2018 APPENDIX B BUILDING CO	ODE SUMMARY FOR ALL COMM	ERCIAL PRO	OJECTS		
(EXCEPT 1 AND 2	2-FAMILY DWELLINGS AND TOWNHOUSES)				
Name of Project:  An Interior Fitup for City of Rocky Mount Operations Center  Address:  An Interior Fitup for City of Rocky Mount Operations Center  Zip Code 27801  existing business	FIRE PROTECTION REQUIREMENTS Life Safety Plan Sheet #, if	f Provided <u>LS1</u>	1		
Owner/Authorized Agent: Mr. Brad Walters Phone # (252)467-4827 E-Mail william.walters@rockymountnc.go	SEPARATION REQUIRED DISTANCE	PROVIDED	DETAIL # DESIG AND FOR R SHEET # ASSEM	ATËD FOR RATËD	DESIGN # FOR RATED JOINTS
Owned By: Code Enforcement Jurisdiction:  City/County  Rocky Mount  County:  State  County:  State	Structural frame, including columns,	REDUCTION)	JIILLI II //JJLIV	TENETIV (TON	OOMVIS
DESIGNERFIRMNAMELICENSE# TELEPHONE#E—MAILArchitecturalWilliam H. Dove ArchitectWilliam H. Dove1029 (252) 314-0820 sod1956@aol.com	girders, trusses  Exterior bearing walls  North				
Civil (Surveyor)  Electrical Kilian Engineering Keith Cochran P.E. 048744 (252) 438-8778 kcochran@kilianengineering.cor	- Fact				
Plumbing Kilian Engineering Keith Cochran P.E. 048744 (252) 438-8778 kcochran@kilianengineering.cor  Mechanical Kilian Engineering Keith Cochran P.E. 048744 (252) 438-8778 kcochran@kilianengineering.cor	m linterior bearing wais				
Sprinkler-Standpipe Structural Daniel Proctor, P.E. Daniel Proctor, P.E. 24405 Daniel Proctor, P.E. 24405 Daniel Proctor, P.E. 24405	Exterior nonbearing walls and partitions North East				
Retaining Walls>5' High Other	West South EXISTING	TO REMAII	V		
2012 EDITION OF NC CODE FOR: ☐ New Construction ☐ Addition ☐ Upfit  EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair	Interior nonbearing walls and partitions  Floor construction including supporting beams and joists	CHANGE			
CONSTRUCTED unknown ORIGINAL USE Business ADDITION unknown CURRENT USE Business  BUILDING DATA	Roof construction including supporting beams and joists				
Construction Type:	Shaft Enclosures — Exit Shaft Enclosures — Other (incinerator) Corridor Separation				
Sprinklers:  No Partial Yes NFPA 13 NFPA 13R NFPA 13D  Standpipes:  No Yes Class:	Occupancy Separation Party/Fire Wall Separation				
Fire District: No Yes Flood Hazard Area: No Yes	Smoke Barrier Separation Tenant Separation				
Building Height: Feet <u>28'-0"±</u> Number of Stories <u>2</u> Mezzanine: No Yes	Incidental Use Separation *Indicates section number permitting reduction		OTDUOT: 5 · · · · ·		1
GROSS BUILDING DATA:  FLOOR EXISTING (SQ. FT.) NEW (SQ. FT.) SUB-TOTAL  6th Floor N/A	LIFE SAFETY SYSTEM REQUIREMENTS  Emergency Lighting: □ No ■ Yes Smoke Detection Systems:	☐ No ■ Yes	STRUCTURAL DE DESIGN LOADS:	SIGN	
5th Floor N/A 4th Floor N/A	Exit Signs: No Yes Panic Hardware:  Fire Alarm: No Yes	■ No ☐ Yes	Importance Wind Factors: Snow	(  <sub>W</sub> )	
3rd Floor         N/A           2nd Floor         2,102           Mezzanine         N/A             3,995	EXIT REQUIREMENTS		Seismid Live Loads: Roof	(l <sub>E</sub> )	
1st Floor 7,014  Lower Floor N/A  7,014		MENT MEANS OF EGRESS <sup>1,3</sup> SECTION 1007.1)	Mezzan Floor		0.0 psf
TOTAL 9,116	SPACE DESIGNATION REQUIRED SHOWN ALLOWABLE ACTUAL REQ'D DIS	<u>,                                      </u>	Ceiling  Dead Loads:		0.0 psf 0.0 psf
Primary Occupancy: Assembly A-1 A-2 A-3 A-4 A-5  Business Educational Factory F-1 Moderate F-2 Low	First Floor EXISTING TO REMAIN AS IS; NO CHANGES Second Floor 2 2 200' 67'-11" 60'-1		Wind Loads: Basic V	Wind Speed	(ASCE-7-
Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM Institutional I-1 I-2 I-3 I-4			· ·	re Category ase Shears	V <sub>Y</sub>
I-3 Use Condition 1 2 3 4 5 5 Mercantile Residential R-1 R-2 R-3 R-4	1 Corridor dead ends (Section 1020.4) 2 Single exits (Table 1006.3.2) 3 Common Path of Travel (Section 1006.2)		SEISMIC DESIGN CATEG	SORY A	
Storage S-1 Moderate S-2 Low High-piled Utility and Miscellaneous Parking Garage Open Enclosed Repair Garage	EXIT WIDTH - FIRST FLOOR EXISTING TO REMAIN; NO CHANGES  (a) (b) (c)	EXIT WIDTH (in)2,3,4,5,6,7	Compliance With Secti SEISMIC DESIGN CATEGORY	, <del>-</del>	
Accessory Occupancy: N/A  Special Uses: 402 403 404 405 406 407 408 409 410 411	USE GROUP AREA¹ AREA PER¹ CALCULATED EGRESS WIDTH REQ'D NO SPACE SQ. FT. OCCUPANT OCCUPANT PER OCCUPANT (SECT 10 DESCRIPTION (1004.1.2) LOAD (Table 1005.1) (a/b)	005.1) SHOWN ON PLANS	Seismic Use Group Spectral Response Acc		 _ %g S <sub>1</sub>
412413414415416417418419420421		LEVEL STAIR LEVEL	Basic Structural Syste		ve Historical
Special Provisions: □ 510.2 □ 510.3 □ 510.4 □ 510.5 □ 510.6 □ 510.7 □ 510.8 □ 510.9   Mixed Occupancy: ■ No □ Yes Separation: N/A Hour Exception:	Second Floor         3,995         100 gross         40         .3         .2         12"	8" 34" 34"	Building Frame D	ual W/ Special Moment F ual W/ Intermediate R/C	
☐ Incidental Use Separation (509.2) This separation is not exempt as a Non—Separated Use (see exceptions).  ■ Non—Separated Use (508.3.2) The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of	1 See Table 1004.1.2 to determine whether net or gross area is applicable. 2 See definition "Area, Gross" and "Area, Net" (Section 1002)		☐ Moment Frame ☐ Ir Seismic Base Shear		V <sub>Y</sub>
construction, so determined, shall apply to the entire building.  Separated Use (508.3.3) — See below for area calculations. For each story, the area of the occupancy shall be such that	3 Minimum stairway width (Section 1009.1); min. corridor width (Section 1017.2); min. door width (Sec 4 Minimum width of exit passageway (Section 1021.2) 5 See Section 1004.5 for converging exits. 6 The loss of one means of egress shall not reduce the available capacity to less than 50 percent or		·	· ·	nt Lateral Foi ?
the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.  Actual Area of Occupancy A Actual Area of Occupancy B	7 Assembly occupancies (Section 1025) ACCESSIBLE PARKING:		LATERAL DESIGN CONT	· ·	uake W
$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} = \leq 1$ $\frac{\text{N/A}}{\text{N/A}}  \text{(N/A)} + \frac{\text{N/A}}{\text{N/A}}  \text{(N/A)} = \text{N/A} \leq 1.00$	LOT OR PARKING TOTAL # OF PARKING SPACES # OF ACCESSIBLE SPACES F  REQUIRED PROVIDED PECULAR WITH 5' VAN SPACE  REQUIRED PROVIDED PECULAR WITH 5' VAN SPACE  REQUIRED PROVIDED PECULAR WITH 5' VAN SPACES  REQUIRED PROVIDED PROVIDE	ACCESSIBLE	SOIL BEARING CAPACIT		
N/A  (A)  (B)  (C)  (D)  (E)  (F)  STORY NO. DESCRIPTION BLDG AREA TABLE 506 <sup>2</sup> AREA FOR AREA FOR ALLOWABLE MAXIMUM	PARKING LAISTING TO TALMIATING TOTAL NO CHANGE		Presumptive Bearing ( Pile Size, Type, and C	py of test report) Capacity Capacity	
AND USE PER STORY AREA FRONTAGE SPRINKLER AREA OR BUILDING (ACTUAL) INCREASE 1 INCREASE 2 UNLIMITED 3 AREA 4			SPECIAL APPRO	VALS:	
1         Business         7,014         19,000         N/A         N/A           2         Business         3,995         19,000         N/A         N/A         19,000	PLUMBING FIXTURE REQUIREMENTS  USE WATERCLOSETS URINALS LAVATORIES SHOWERS, TUBS		below)	ent of Insurance, OSC, DPI, DFS	o, ICC, etc., des
1 Frontage area increases from Section 506.2 are computed thus:  a. Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)	MALE         FEMALE         MALE         FEMALE         IUBS           EXISTING         3         1         3         1         1         N/A           NEW         2; uni-sex 1         1         3         2; uni-sex 1         2         N/A	REGULAR ACCESSIBLE			
b. Total Building Perimeter = <u>N/A</u> (P) c. Ratio (F/P) = <b>N/</b> A (F/P)	REQUIRED 2 2 2 N/A	N/A N/A			
d. W = Minimum width of public way = N/A (W)  e. Percent of frontage increase   F = 100 [F/P - 0.25] x W/30= N/A (%)  The sprinkler increase per Section 506.3 is as follows:  a. Multi-story building   S = 200 percent					(64) <sub>469</sub>
b. Single story building $I_s = 300$ percent  3 Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507);  Group A motion picture (507.10); Malls (402.6); and H-2 aircraft paint hangers (507.8).				Numer Dr. E Elin 24 Neutro	r or use
4 Maximum Building Area = total number of stories in the building x E (506.4). 5 The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.				PRODUCT ST. S. S. L. S.	N Church S
ALLOWABLE HEIGHT  ALLOWABLE INCREASE FOR SPRINKLERS SHOWN ON PLANS CODE			Daw <sub>Soy</sub>	181 2 Bank	43 628
(TABLE 503) INCREASE FOR SPRINKLERS SHOWN ON PLANS REFERENCE			noma:	20 25 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ave (2)
Type of ConstructionType III-BType III-BBuilding Height in Feet $75.0$ Feet $H+20' = N/A$ Feet $28'-0$ " Feet			Suns Soling	et Ave W Thomas St N	Goldleat 25
Building Height in Stories 3 Stories Stories + 1 = N/A 2 Stories				Nash s <sub>2</sub> 64	97
			d 5x	Park Pi Mash St 301 West St	
				VICINITY	

# INDEX TO DRAWINGS

APPENDIX 'B' COVER SHEET SECOND FLOOR FRAMING PLAN SECOND FLOOR CLG. FRAMING PLAN NOTES / SECTIONS LIFE SAFETY PLAN - SECOND FLOOR **DEMOLITION PLANS** FIRST FLOOR PLAN A1.1 SECOND FLOOR PLAN PLAN ENLARGEMENTS / DETAILS ELEVATIONS / SECTIONS A3.1 **SCHEDULES** PLUMBING NOTES & SCHEDULES WASTE DEMO PLANS WASTE PLANS SUPPLY PLANS WASTE & SUPPLY RISERS MECHANICAL NOTES & SCHEDULES MECHANICAL DEMO PLANS MECHANICAL PLANS ELECTRICAL NOTES & SCHEDULES LIGHTING DEMO PLANS

> POWER DEMO PLANS LIGHTING PLANS

**POWER PLANS** 

ENERGY SUMMARY
ROCKY MOUNT, NASH COUNTY CLIMATE ZONE 4a

E3

E5

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portion of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

THERMAL ENVELOPE

Prescriptive \_\_\_\_% Glazed Wall Area

Roof/ Ceiling Assembly (each assembly)

Description of assembly: N/A U-Value of total assembly N/A R-Value of insulation: Skylights in each assembly N/A U-Value of skylight N/A

total square footage of skylights in each assembly Description of assembly U-Value of total assembly U-Value of insulation R-Value of insulation Openings (windows or doors with glazing)
U-Value of assembly
Store front

Dest Walter

Door U-Values Entrance door Non Entrance

Walls adjacent to unconditioned space (each assembly) N/A Description of assembly U-Value of total assembly

R-Value of insulation Openings (windows or doors with glazing) U-Value of assembly Low e required, if applicable Door R-Values

Walls below grade (each assembly) N/A Description of assembly U-Value of total assembly R-Value of insulation

Floors over unconditioned space (each assembly) N/A Description of assembly: U-Value of total assembly R-Value of insulation

Horizontal/ vertical requirement

GC SHALL VERIFY ALL DIMENSIONS PRIOR TO CONTRUCTION. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. THIS DRAWING IS THE PROPERTY OF THE ARCHITECT + SHALL NOT BE USED OR COPIED WITHOUT THE ARCHITECTS PERMISSION

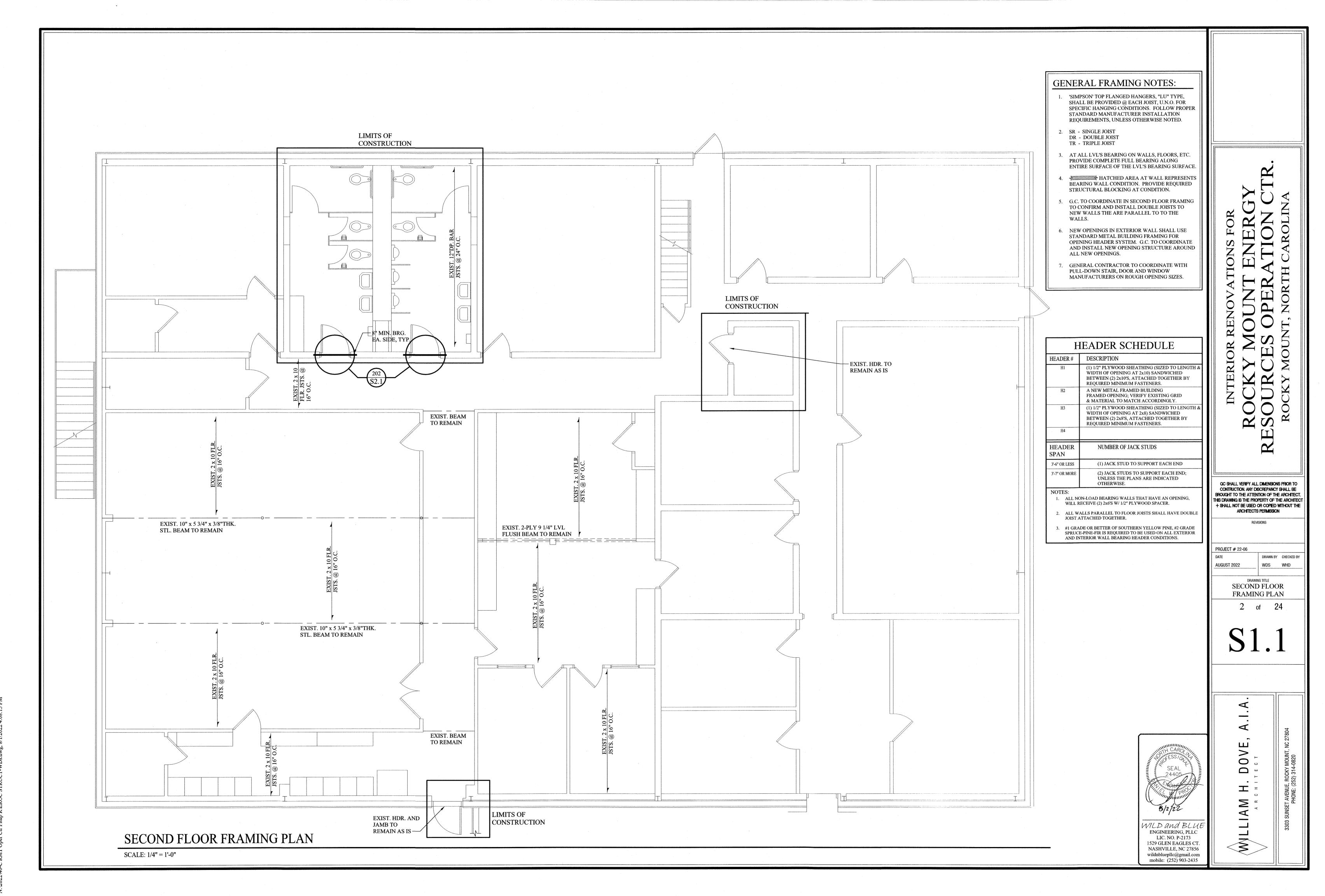
PROJECT # 22-06 DRAWN BY CHECKED BY AUGUST 2022 WDS WHD

> DRAWING TITLE APPENDIX 'B'

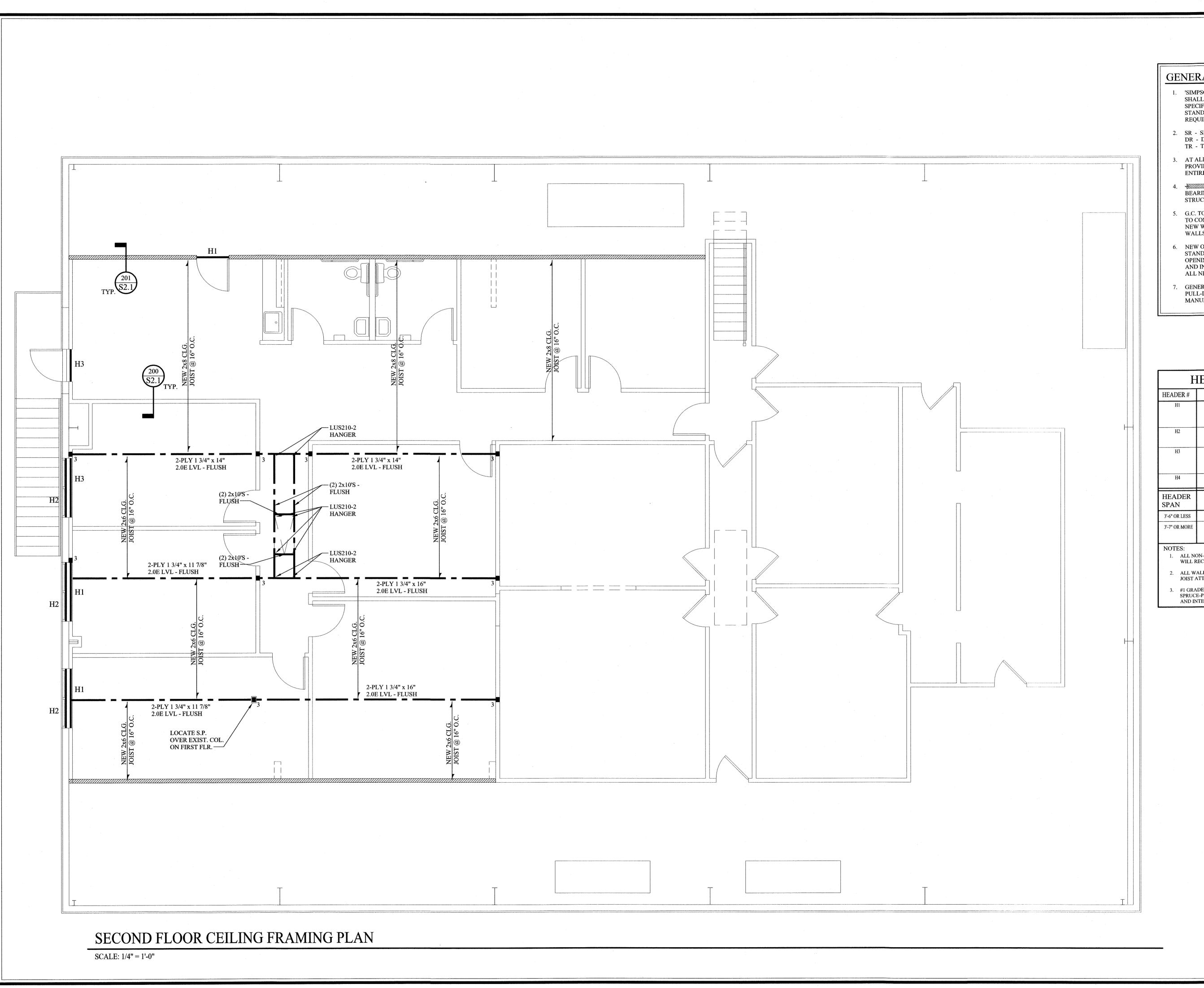
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MLLIAM A B C 



\2002\40 C BNfT O..... Ct. Eith... B\EBOC STBIICT W.D.: 4..... 8/1/2023 4-08-1



# GENERAL FRAMING NOTES:

- 1. 'SIMPSON' TOP FLANGED HANGERS, "LU" TYPE, SHALL BE PROVIDED @ EACH JOIST, U.N.O. FOR SPECIFIC HANGING CONDITIONS. FOLLOW PROPER STANDARD MANUFACTURER INSTALLATION REQUIREMENTS, UNLESS OTHERWISE NOTED.
- 2. SR SINGLE JOIST DR - DOUBLE JOIST TR - TRIPLE JOIST
- 3. AT ALL LVL'S BEARING ON WALLS, FLOORS, ETC. PROVIDE COMPLETE FULL BEARING ALONG ENTIRE SURFACE OF THE LVL'S BEARING SURFACE.
- 4. HATCHED AREA AT WALL REPRESENTS BEARING WALL CONDITION. PROVIDE REQUIRED STRUCTURAL BLOCKING AT CONDITION.
- 5. G.C. TO COORDINATE IN SECOND FLOOR FRAMING TO CONFIRM AND INSTALL DOUBLE JOISTS TO NEW WALLS THE ARE PARALLEL TO TO THE WALLS.
- 6. NEW OPENINGS IN EXTERIOR WALL SHALL USE STANDARD METAL BUILDING FRAMING FOR OPENING HEADER SYSTEM. G.C. TO COORDINATE AND INSTALL NEW OPENING STRUCTURE AROUND ALL NEW OPENINGS.
- 7. GENERAL CONTRACTOR TO COORDINATE WITH PULL-DOWN STAIR, DOOR AND WINDOW MANUFACTURERS ON ROUGH OPENING SIZES.

# HEADER SCHEDULE

	HEADER#	DESCRIPTION
	HI	(1) 1/2" PLYWOOD SHEATHING (SIZED TO LENGT WIDTH OF OPENING AT 2x10) SANDWICHED BETWEEN (2) 2x10'S, ATTACHED TOGETHER BY REQUIRED MINIMUM FASTENERS.
	H2	A NEW METAL FRAMED BUILDING FRAMED OPENING; VERIFY EXISTING GRID & MATERIAL TO MATCH ACCORDINGLY.
	НЗ	(1) 1/2" PLYWOOD SHEATHING (SIZED TO LENGT WIDTH OF OPENING AT 2x8) SANDWICHED BETWEEN (2) 2x8'S, ATTACHED TOGETHER BY REQUIRED MINIMUM FASTENERS.
1	~~.	

HEADER SPAN	NUMBER OF JACK STUDS
3'-6" OR LESS	(1) JACK STUD TO SUPPORT EACH END
3'-7" OR MORE	(2) JACK STUDS TO SUPPORT EACH END UNLESS THE PLANS ARE INDICATED OTHERWISE.

- ALL NON-LOAD BEARING WALLS THAT HAVE AN OPENING,
  WILL RECEIVE (2) 2x6'S W/ 1/2" PLYWOOD SPACER.
- 2. ALL WALLS PARALLEL TO FLOOR JOISTS SHALL HAVE DOUBLE JOIST ATTACHED TOGETHER.
- . #1 GRADE OR BETTER OF SOUTHERN YELLOW PINE, #2 GRADE SPRUCE-PINE-FIR IS REQUIRED TO BE USED ON ALL EXTERIOR AND INTERIOR WALL BEARING HEADER CONDITIONS.

GC SHALL VERIFY ALL DIMENSIONS PRIOR TO CONTRUCTION, ANY DISCREPANCY SHALL BE

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HEVIOLING

PROJECT # 22-06

DATE DRAWN BY CHECKED BY

AUGUST 2022 WDS W

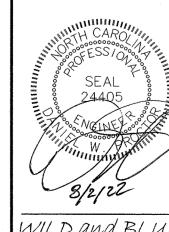
FRAMING PLAN

3 of 24

SECOND FLOOR CEILING

S1.2

LIAM H. DOVE, A.I.A



B/2/22

WILD and BLUE

ENGINEERING, PLLC

LIC. NO. P-2173

1529 GLEN EAGLES CT.

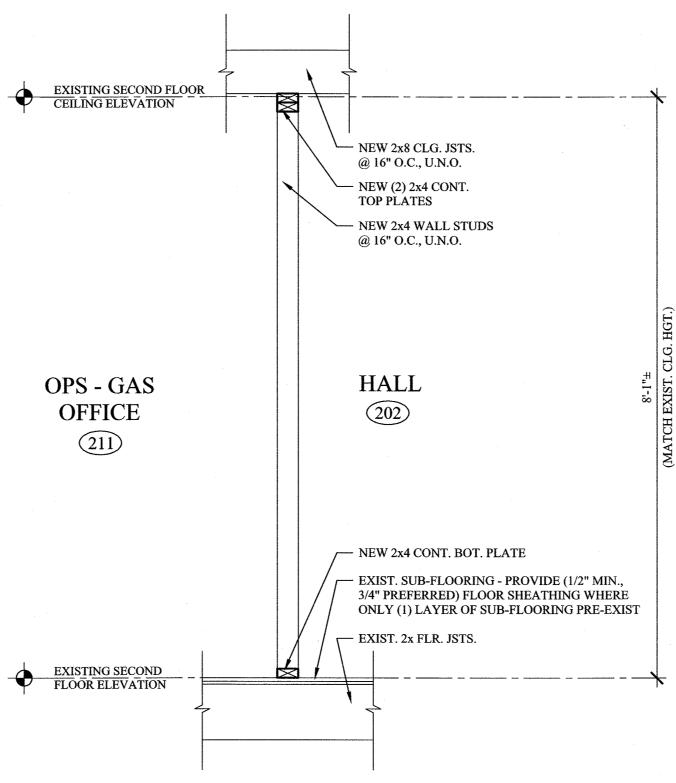
NASHVILLE, NC 27856

wildnbluepllc@gmail.com

mobile: (252) 903-2435

N:\2022\40-C RMT Oner Ctr Fiftin R\FROC STRUCT-WDs dwg 8/1/2022 4:07:

# TYPICAL PARTIAL STRUCTURAL WALL SECTION



EXIST. 8" CMU

**FILLER** 

PROVIDE NEW 8" CMU ON NEW

OPENING JAMB SIDE; COURSE OUT

WALL TO REMAIN

- NEW CMU BLOCK

NEW (2) 3 1/2" x 3 1/2" x

NEW JAMB SIDE - SEE NOTE BELOW

1/4" STL. ANGLE LINTEL; 4" BRG. EA. SIDE

TYPICAL PARTIAL STRUCTURAL WALL SECTION



- ENGINEER'S SEAL (WHEN REQUIRED) APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS,
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE CODE 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER AND DESIGNER WILL NOT BE RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OF PROCEDURES, SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL THE ENGINEER AND DESIGNER BE RESPONSIBLE FOR THE G.C. FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT AND BUILDING CODE DOCUMENTATION.

3.	DESIGN LOADS (RECOMMENDED)	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
	ALL ROOMS ON FIRST FLOOR	50	10	L/360
	ALL ROOMS ON SECOND FLOOR	50	10	L/360
	ATTIC WITH STORAGE	20	10	L/240
	ATTIC WITH-OUT STORAGE	10	10	L/360
	STAIRS	50		L/360
	EXTERIOR BALCONIES	50	10	L/480
	DECKS	50	10	L/480
	GUARDRAILS AND HANDRAILS	200		
	PASSENGER VEHICLE GARAGES	50	10	L/360
	FIRE ESCAPES	50	10	L/360
	SNOW	20	·	

(BASED ON 115 MPH WIND VELOCITY & EXPOSURE B)

ALL SAFETY REGULATIONS TO BE FOLLOWED STRICTLY. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL IS CONTRACTORS RESPONSIBILITY.

- ALLOWABLE SOIL PRESSURE ASSUMED 2000 PSI MINIMUM TO BE VERIFIED WITH LOCAL AND STATE JURISDICATIONS. FOOTINGS SHALL BE CARRIED TO LOWER ELEVATIONS THAN THOSE SHOWN ON THE DRAWINGS IF REQUIRED TO
- COMPACT ALL FILL UNDER BUILDING TO 98% MAXIMUM DENSITY AS DETERMINED BY ASTM D698. PLACE IN LAYERS 9" MAXIMUM LOOSE THICKNESS. VERIFY FIELD DENSITY, ASTM D1556, WITH ONE TEST PER 2000 SQ.FT. PER LAYER.

### STRUCTURAL MASONRY

- LOAD BEARING PIERS OR WALLS, FOUNDATION WALLS AND ANY OTHER MASONRY SO DESIGNATED ON DRAWINGS ARE CONSIDERED HERE TO BE STRUCTURAL MASONRY.
- COMPRESSIVE STRENGTH OF MASONRY UNITS:

SOLID CLAY UNITS 8000 PSI CONCRETE UNITS ...

. 2000 PSI ON NET AREA

- MORTAR TYPE 'S' ASTM C270. GROUT FOR REINFORCED MASONRY - FINE GROUT ASTM C476. MINIMUM 28 DAY COMPRESSIVE STRENGTH - 3000 PSI. MAXIMUM HEIGHT TO WHICH MASONRY SHALL BE LAID BEFORE FILLING IS 5 FT. PROVIDE CLEANOUT OPENINGS AT THE BOTTOM OF EACH GROUT LIFT. CLEANOUT OPENINGS SHALL BE PROVIDED AT EACH CELL TO BE FILLED WITH
- REINFORCING GRADE AND DETAILS AS FOR CONCRETE. TIE IN POSITION AND PLACE CONCRETE AROUND REINFORCING DURING CONSTRUCTION OF MASONRY. DO NOT PUSH REINF. DOWN INTO PREVIOUSLY PLACED GROUT FILL. SET BOLTS SIMILARLY. TIE WYTHES WITH HORIZONTAL REINF. AS SPECIFIED.

1. CONCRETE COMPRESSIVE STRENGTH IN 28 DAYS AIR ENTRAINED PER TABLE 402.2: ALL CONCRETE

SLUMP.... ...5" MAX.

REINFORCING: ASTM A615 - STIRRUPS AND TIES GRADE 40 - ELSEWHERE GRADE 60, U.N.O. ALL REINF. TO BE WELDABLE GRADE WHERE WELDING SHOWN ON DRAWINGS.

CLEAR DISTANCE FROM FACE OF CONCRETE TO MAIN STEEL:

CAST-IN-PLACE CONCRETE: FOOTINGS .. SLABS EXPOSED TO EARTH AND WEATHER ..

STANDARD - WELDED WIRE MESH IN ALL SLABS ON GROUND 1 1/2" FROM TOP OF SLAB:

. 6x6 - W1.4 x W1.4; U.N.O. 6" SLAB ..... .. 6x6 - W4.0 x W4.0; U.N.O.

UNLESS NOTED OTHERWISE OPTIONAL - FIBERGLASS IMPREGNATED IN CONCRETE IN LIEU OF STANDARD WIRE MESH. G.C. SHALL PROVIDE

- ALLOWABLE STRESSES AND GRADES FOR TIMBER FRAMING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'NATIONAL DESIGN SPECIFICATION STRESS-GRADE LUMBER AND ITS FASTENINGS' AS RECOMMENDED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION. THE DESIGN OF ANY AND ALL TIMBER-FRAMING SHALL BE BY OTHERS.
- ALL FRAMING SYP., NO.2, (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO) TRUSSES - AS REQUIRED BY DESIGN

SELECTION OF STANDARD OR OPTIONAL CONCRETE REINFORCING.

ТЛ'S & LVL'S - AS REQUIRED BY DESIGN

FABRICATE AND DESIGN ROOF TRUSSES IN ACCORDANCE WITH THE LATEST EDITION OF 'DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES TPI' OF THE TRUSS PLATE INSTITUTE. SUBMIT DESIGN COMPUTATIONS AND SHOP DRAWINGS SEALED BY A N.C. PROFESSIONAL ENGINEER FOR APPROVAL.

TRUSS DESIGN FOR THE FOLLOWING ROOF LOADS:

ATTIC ACCESS - PULLDOWN STAIRS LIVE LOAD - 20 PSF TOP CHORD DEAD LOAD - 10 PSF CEILING LOAD - 5 PSF

INSPECTION PORT ONLY LIVE LOAD - 10 PSF TOP CHORD DEAD LOAD - 5 PSF CEILING LOAD - 5 PSF

- NET UPLIFT 15 PSF NET UPLIFT - 15 PSF FABRICATE AND DESIGN ALL ENGINEERED LAMINATE VENEER LUMBER IN ACCORDANCE WITH THE LATEST STANDARD UNIVERSAL PRACTICES OF WOOD TRUSSES AND LVL'S. SUBMIT DESIGN COMPUTATIONS, SHOP DRAWINGS AND SEALED BY A N.C. PROFESSIONAL ENGINEER. (AS NECESSARY) L.V.L. SHALL BE LAMINATED VENEER LUMBER OR PARALLEL STRAND LUMBER (PSL) WITH THE MINIMUM FOLLOWING PROPERTIES: Fb = 2800 PSI, Fy = 285 PSI, E = 1.900.000 PSI, INSTALL ALL MATERIALS AND CONNECTIONS PER MANUFACTURERS INSTRUCTIONS. THE AWARDED GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONFIRMING AND CERTIFYING ALL
- ENGINEERED LUMBER SIZES PRIOR TO CONSTRUCTION UNLESS DIRECTED BY SEALED FRAMING PLANS AND DETAILS. THE POSITIVE AND NEGATIVE DESIGN PRESSURES REQUIRED FOR ANY ROOF OR WALL CLADDING APPLICATION NOT SPECIFICALLY ADDRESSED IN THE NORTH CAROLINA STATE CODE - 2009 EDITION SHALL BE AS FOLLOWS:

45.4 PSF - 2.25:12 PITCH OR LESS 34.8 PSF - 2.25:12 TO 7:12 PITCH 21 PSF - 7:12 TO 12:12 PITCH

WALLS: 24.1 PSF - WALLS

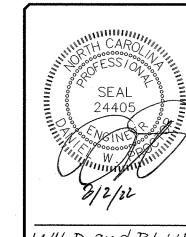
- THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS SHALL BE 25 PSF.
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END. WALL BRACING: BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO SECTION R602.10.3. THE AMOUNT AND LOCATION OF BRACING SHALL COMPLY WITH TABLE R602.10.3, THE LENGTH OF BRACED PANELS SHALL BE

DETERMINED BY SECTION R602.10.4. LATERAL BRACING SHALL BE SATISFIED PER METHOD 3 BY CONTINUOUSLY

- SHEATHING WALLS WITH STRUCTURAL SHEATHING PER TABLE R602.3. NOTE THAT ANY SPECIFIC BRACED WALL DETAIL SHALL BE INSTALLED AS SPECIFIED. ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO). SEALED STRUCTURAL DRAWINGS SHALL SUPERCEDE THIS NOTE.
- "E" PLUS A NUMBER SHOWN AT BEAM AND HEADER SUPPORTS DESIGNATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET.

# STRUCTURAL STEEL

- STRUCTURAL STEEL BEAMS ASTM A992; PLATES, ANGLES, CHANNELS ASTM A36; STL. TUBE ASTM A500; STL. PIPE ASTM A53.
- DESIGN, FABRICATION, AND ERECTION: AISC SPECIFICATIONS FOR BUILDINGS.
- CONNECTIONS NOT DETAILED SHALL BE DESIGNED FOR LOADS SHOWN ON DRAWINGS OR FOR LOADS GIVEN IN STANDARD AISC LOAD TABLES FOR SPAN, SECTION, AND STRENGTH SPECIFIED. SHOP CONNECTIONS: WELDED. FIELD CONNECTIONS: 3/4"Ø BOLTS, ASTM A325. TIGHTEN TO A MINIMUM TORQUE OF 200 FT.-LBS. U.N.O.
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM
- BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN; 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0"; 7"x4"x3/8" STEEL ANGLE WITH 7" LEG VERTICAL FOR A MAX. 18"W, GARAGE DR. SPANS (UNO). AT ALL GARAGE DR. OPNGS. STEEL ANGLE TO BE LAGGED INTO WOOD HEADER USING 1/2" DIA. x 3 1/2"L. SCREWS, 18" STAGGERED.



ENGINEERING, PLLC LIC. NO. P-2173 1529 GLEN EAGLES CT. NASHVILLE, NC 27856 wildnbluepllc@gmail.com mobile: (252) 903-2435



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REVISIONS

DRAWING TITLE

NOTES / SECTIONS

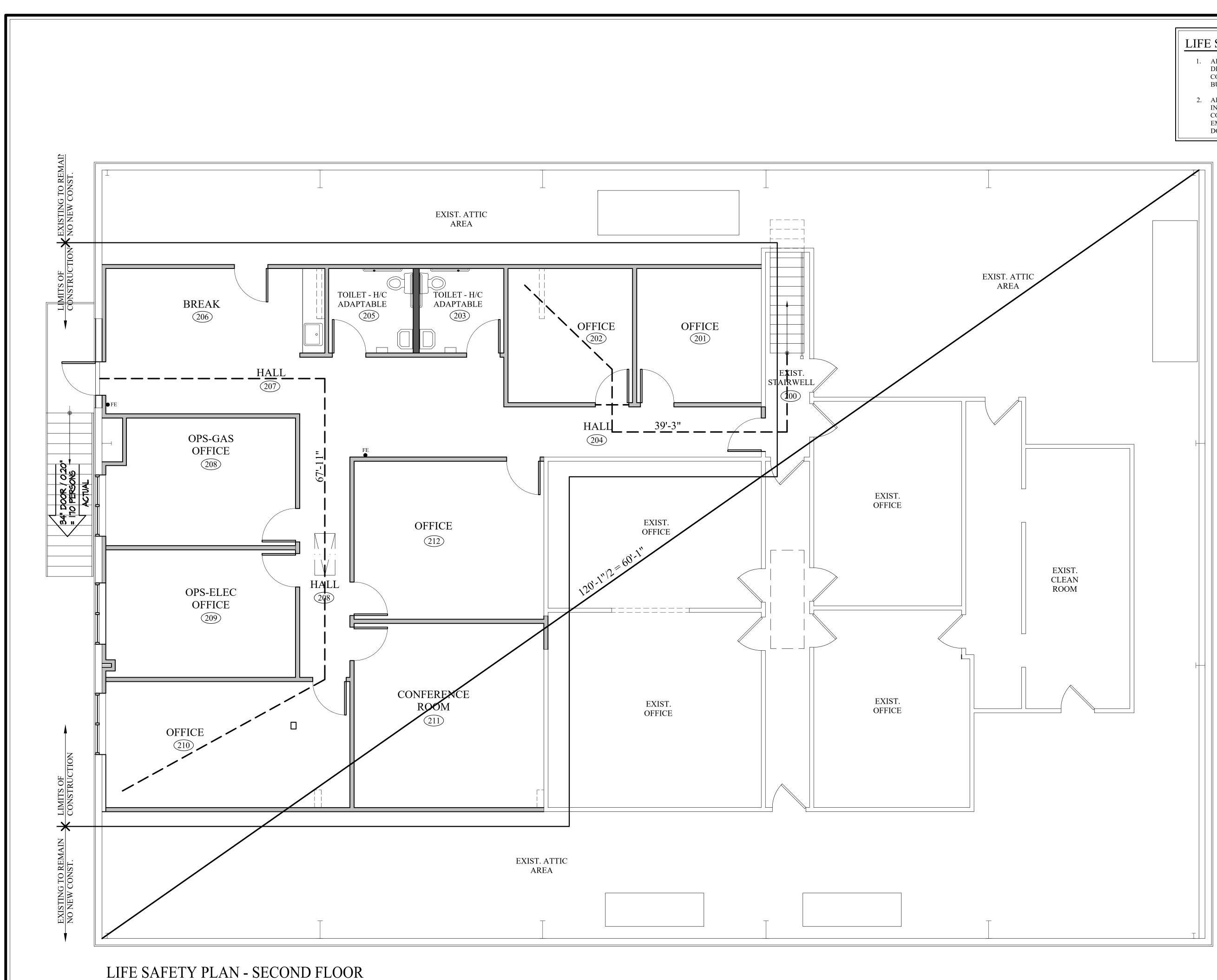
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PROJECT # 22-06

AUGUST 2022



# LIFE SAFETY NOTES:

- 1. ALL EXISTING TRAVEL DISTANCES, EXIT DISTANCES, ETC. OUTSIDE THE LIMITS OF CONSTRUCTION FOR THE NEW FITUP AREA OF THE BUILDING WILL REMAIN AS IS. NO CHANGES.
- ALL EXISTING EXIT DOORS ARE TO REMAIN AS IS, INSIDE AND OUTSIDE OF THE LIMITS OF EMERGENCY LIGHTING AT THE EXIST EGRESS DOORS ARE TO REMAIN AS IS; NO CHANGES.



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PROJECT # 22-06 AUGUST 2022

> DRAWING TITLE
> LIFE SAFETY PLAN -SECOND FLOOR

> > 5 of 24

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DOVE,

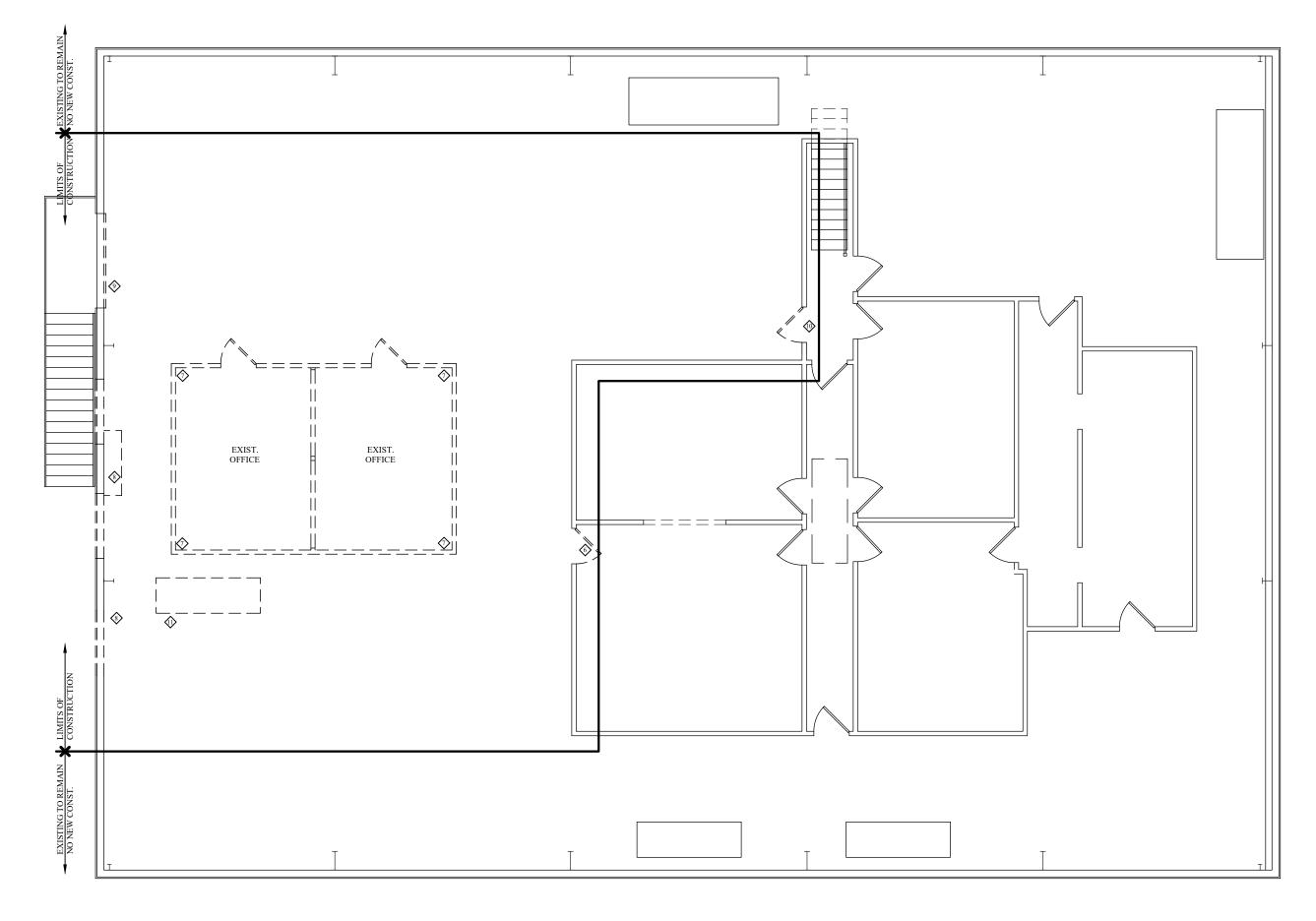
SCALE: 1/4" = 1'-0"

# GENERAL DEMOLITION NOTES:

- 1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND VERIFY EXISTING CONDITIONS. IF ANY EXISTING CONDITIONS VARY FROM INFORMATION INDICATED ON THE DRAWINGS, IT SHALL BE IN WRITTEN FORM AND GIVEN TO
- DEMOLITION SHOULD BE COORDINATED WITH CONSTRUCTION PLAN TO DETERMINE EXTENT OF WORK. THE DRAWINGS DO NOT NECESSARILY SHOW COMPLETE DEMOLITION WORK REQUIRED, BUT RATHER SHOWN INTENT OF DEMOLITION/CONSTRUCTION. DEMOLISH TO A POINT TO PROVIDE SUITABLE "BONDING"/"PATCHING" OF EXISTING WORK TO REMAIN WITH NEW WORK.
- 3. THE CONTRACTOR SHALL CAREFULLY REMOVE ALL ITEMS, COORDINATED WITH OWNER TO BE SAVED. OWNER TO DIRECT CONTRACTOR ON LOCATION OF ANY SALVAGED ITEMS. CONTRACTOR TO TAKE EVERY EFFORT NOT TO DAMAGE ITEMS TO BE SALVAGED AND STORED.
- 4. THE OWNER WILL BE RESPONSIBLE FOR RELOCATING THE EXISTING ELECTRIC METER AND OVERHEAD WIRING TO NEW LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING A TIMELINE WITH THE OWNER ON THE RELOCATION OF THE METER. FROM THE METER INTO THE HOME, THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL THE NECESSARY COMPONENTS REQUESTED AND REQUIRED.
- 5. SELECTIVE NON-STRUCTURAL DEMOLITION AS REQUIRED INCLUDES BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING EXISTING CONSTRUCTION COMPONENTS:
  - A. GYPSUM DRYWALL PARTITIONS AND CEILINGS.
  - B. APPLIED FINISHES SUCH AS CARPET (COORDINATE WITH FINISH PLAN FOR EXTENT), VINYL COMPOSITION TILE, RESILIENT BASE (COORDINATE WITH FINISH PLAN FOR EXTENT), PAINTED COATINGS AND OTHER FINISHES ENCOUNTERED. REMOVE RESIDUE FROM ADHESIVES.
  - C. HOLLOW METAL OR ALUMINUM FRAMES AND RELATED DOORS AND HARDWARE.
  - D. NON-STRUCTURAL MISCELLANEOUS METALS FABRICATION AND RELATED WORK.
  - E. ROUGH AND FINISH CARPENTRY AS NOTED. ALL CHAIR RAILING AND MOLDING TO BE REMOVED.
  - F. ACCESS DOORS AND PANELS.
  - G. DOMESTIC PLUMBING SYSTEM COMPONENTS SUCH AS FIXTURES, PIPING, VALVES AND OTHER CONTROLS. PIPE INSULATION. AND RELATED WORK. SEAL PENETRATIONS THROUGH SLAB TO BE ABANDONED, AS REQUIRED BY CODE.
- H. ELECTRICAL POWER AND COMMUNICATION DISTRIBUTION SYSTEMS COMPONENTS SUCH AS WIRING AND CONDUIT. PANELS AND PANEL BOARDS. TERMINAL STRIPS, BACKBOARDS, JUNCTION AND PULL BOXES, SWITCHES AND OTHER CONTROLS. WIRING DEVICES AND RELATED WORK.
- J. ELECTRICAL LIGHTING SYSTEMS INCLUDING LIGHT FIXTURES, SWITCHES AND RELATED WORK.
- 6. PREPARE SURFACES AS REQUIRED TO RECEIVE NEW FINISHES.
- 7. WHEN EXIST. MATERIALS AND FINISHES TO REMAIN ARE AT THE TRANSITION POINT TO MATERIALS AND FINISHES TO BE REMOVED, TAKE THE UTMOST CARE NOT TO DAMAGE THE ADJOINING SURFACE.
- 8. CONTRACTOR TO CAREFULLY COORDINATE WITH OWNER AND PROVIDE A SCHEDULE / PROCEDURE FOR REMOVAL, AS SPECIFIED, AND CONSTRUCTION TO MINIMIZE THE EXPOSED HOME TO THE ELEMENTS. DISCUSS WITH OWNER ON PROTECTION PROCEDURES FOR THE CHANCE OF INCLEMENT WEATHER FOR THE PROTECTION OF THE BUILDING'S INTERIOR.

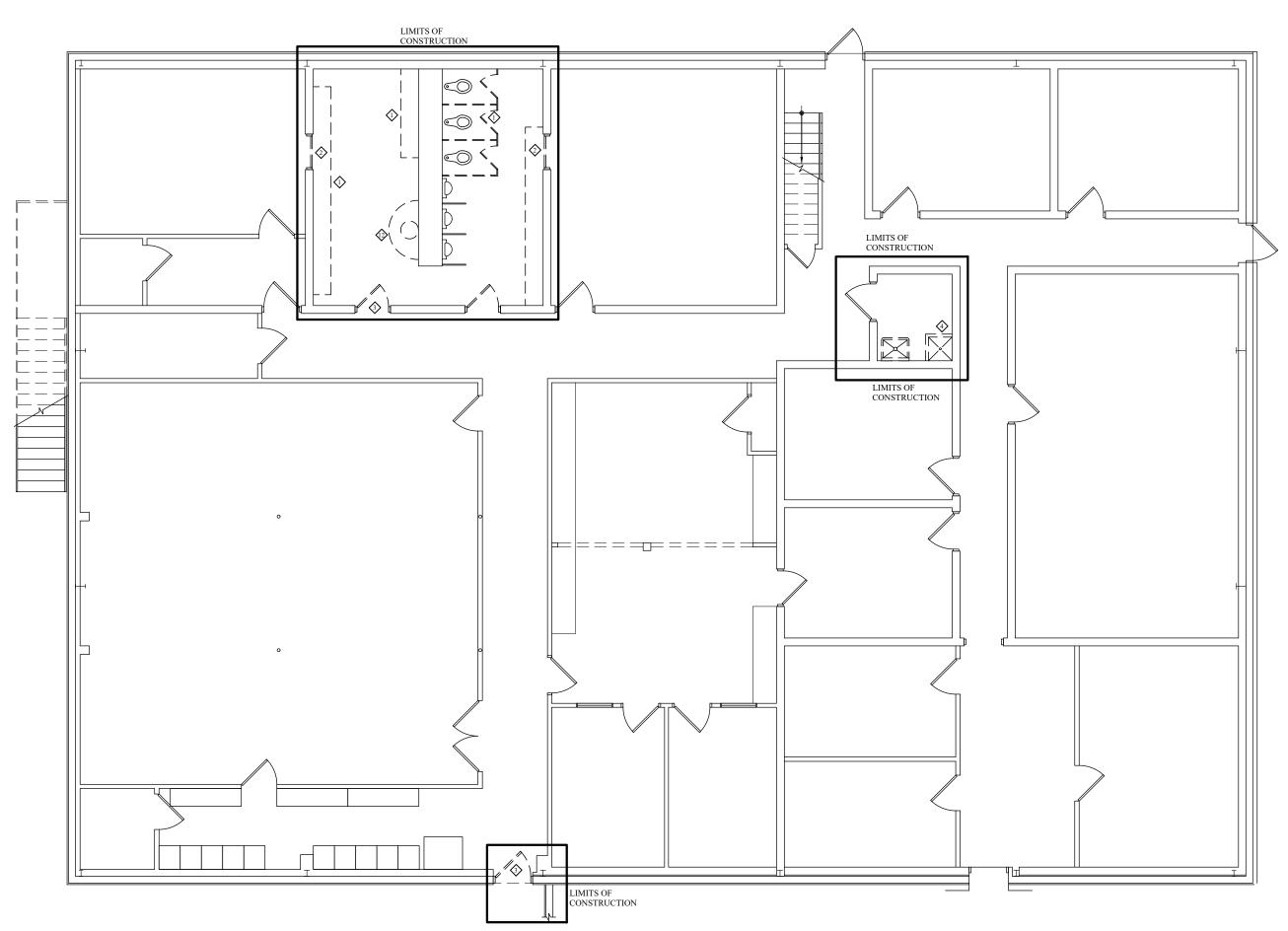
# DEMOLITION KEY NOTES:

- REMOVE LOCKERS AND PREPARE EXISTING SURFACE TO EITHER ACCEPT NEW COMPONENTS OR TO BE REFINISHED.
- REMOVE EXISTING WINDOW GLAZING, FRAME, ETC. IN ITS ENTIRETY. PREPARE SURFACE AREA TO ACCEPT NEW WALL FRAMING.
- CAREFULLY REMOVE EXISTING DOOR, FRAME, AND HARDWARE IN ITS
- ENTIRETY. PREPARE EXISTING OPENING FOR NEW DOOR ASSEMBLY.
- REMOVE ALL GRAB BARS, SINK, AND TOILET FROM THIS AREA. PREPARE DEMOLISHED AREAS FOR NEW PLUMBING FIXTURES AND ASSEMBLY.
- CAREFULLY REMOVE EXISTING DOOR AND PORTION OF WALL AS SHOWN TO ACCEPT NEW DESIGN.
- CAREFULLY REMOVE EXISTING DOOR, FRAME, AND HARDWARE IN ITS ENTIRETY. PREPARE EXISTING OPENING FOR NEW WALL STRUCTURE.
- CAREFULLY REMOVE OFFICE SPACES AS SHOWN PER FLOOR PLANS. PREPARE AREA AS NECESSARY FOR NEW CONSTRUCTION - REFER TO FLOOR PLANS FOR INTENT ON NEW CONSTRUCTION PURPOSES.
- CAREFULLY REMOVE EXISTING PORTIONS OF WALL STRUCTURE AND PREPARE FOR THE NEW INSTALLATION OF WINDOW ASSEMBLY AS INTENDED AND SHOWN PER PLANS
- (9) CAREFULLY REMOVE EXISTING PORTIONS OF WALL STRUCTURE AND PREPARE FOR THE NEW INSTALLATION OF DOOR ASSEMBLY AS INTENDED AND SHOWN PER PLANS
- CAREFULLY REMOVE EXISTING PORTIONS OF WALL STRUCTURE AND EXIST. DOOR TO ACCEPT NEW INSTALLATION OF DOOR ASSEMBLY AS INTENDED.
- EXISTING HVAC UNIT (REMOVED PRIOR TO CONSTRUCTION) NOT IN THIS CONTRACT.
- REMOVE EXISTING SINK AND SINK ASSEMBLY IN ITS ENTIRETY. PREPARE NEW AREA FOR NEW PLUMBING CONSTRUCTION - SEE PLANS



# DEMOLITION PLAN - SECOND FLOOR

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



# DEMOLITION PLAN - FIRST FLOOR

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

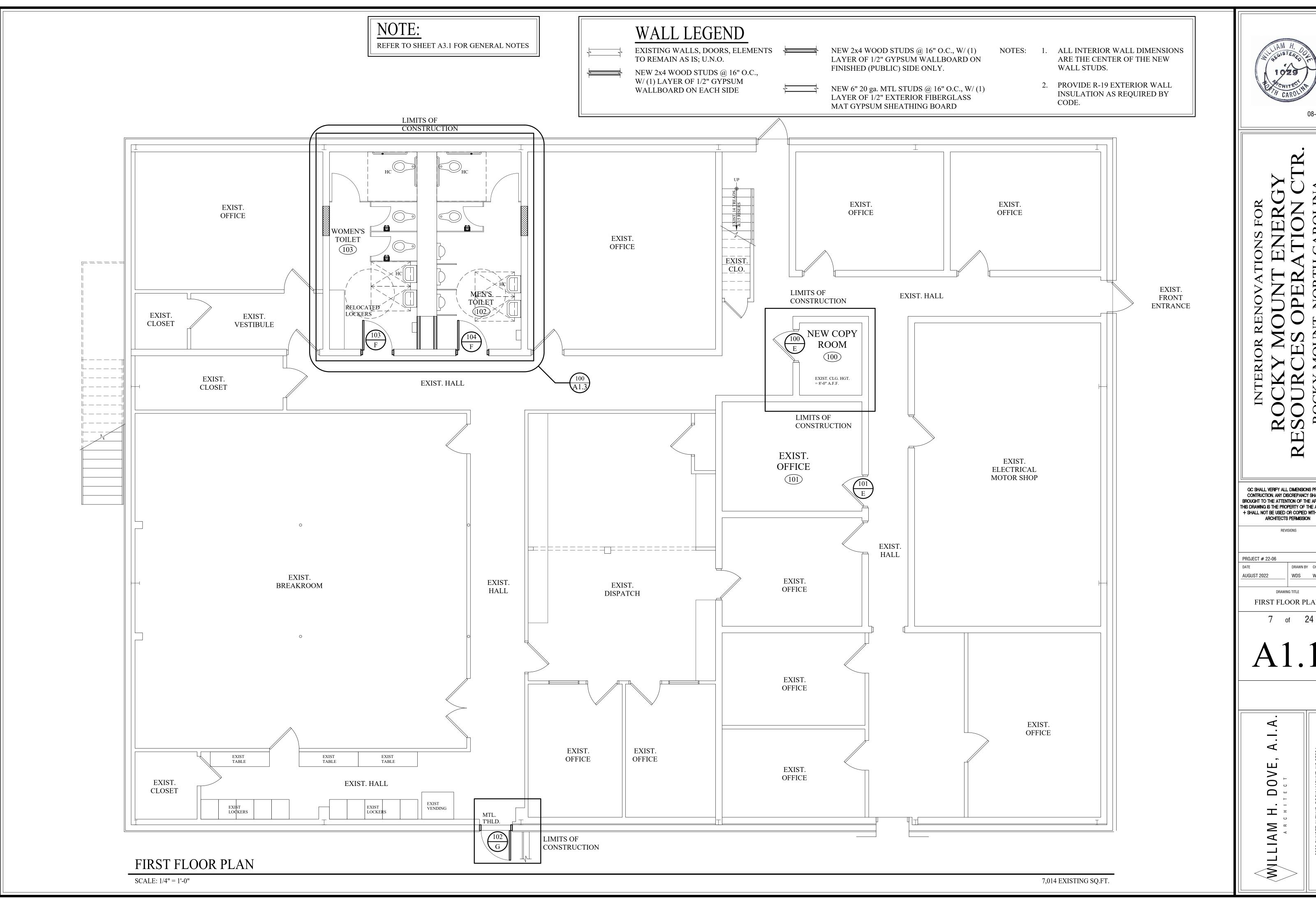


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> DRAWING TITLE **DEMOLITION PLANS** 6 of 24

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FIRST FLOOR PLAN

NOTE: WALL LEGEND REFER TO SHEET A3.1 FOR GENERAL NOTES EXISTING WALLS, DOORS, ELEMENTS ALL INTERIOR WALL DIMENSIONS NEW 2x4 WOOD STUDS @ 16" O.C., W/ (1) NOTES: TO REMAIN AS IS; U.N.O. LAYER OF 1/2" GYPSUM WALLBOARD ON ARE THE CENTER OF THE NEW WALL STUDS. FINISHED (PUBLIC) SIDE ONLY. NEW 2x4 WOOD STUDS @ 16" O.C., W/ (1) LAYER OF 1/2" GYPSUM 2. PROVIDE R-19 EXTERIOR WALL NEW 6" 20 ga. MTL STUDS @ 16" O.C., W/ (1) WALLBOARD ON EACH SIDE INSULATION AS REQUIRED BY LAYER OF 1/2" EXTERIOR FIBERGLASS CODE. MAT GYPSUM SHEATHING BOARD 20'-1 3/4" 8'-0 1/4" 8'-0 1/2" 11'-4 1/4"± EXISTING AIR V.I.F. EXIST. ATTIC HANDLING AREA UNIT SYSTEM EXIST. ATTIC **EXISTING AIR** HANDLING UNIT SYSTEM **AREA** TOILET - H/C \
ADAPTABLE / TOILET - H/C ADAPTABLE BREAK OFFICE OFFICE SINGL. SINK 202 201 EXIST. DR. TO REMAIN 206 D HALL 207 EXIST. STAIRWELL 200 EXIST. DR. TO REMAIN HALL OPS-GAS OFFICE EXIST. 17'-6 7/16"± 17'-2 7/16"± 4'-10 1/2" OFFICE ATTIC (207) B **PULL-DOWN** EXIST. OFFICE **STAIRS** OFFICE EXIST. OUTSIDE STAIRS TO REMAIN 208 B EXIST. EXIST. DR. TO REMAIN EXISTING TO REMAIN -AROUND ATTIC PULL DOWN ACCESS CLEAN PROVIDE SUBFLOORING FOR HALL MECHANICAL UNIT MAINTENANCE ARE. G.C. TO COORDINATE EXTENT WITH ROOM AIR HANDLING OPS-ELEC 208 OWNER AND MECHANICAL CONTRACTOR. OFFICE § UNIT \_\_\_\_\_\_ SYSTEM 209 ABOVE CLG. EXIST. DR. TO REMAIN EXIST. DR. | TO REMAIN EXTENT OF OLD OFFICES BEING REMOVED - PROVIDE SUBFLOORING AS NECESSARY TO BE LEVEL WITH CONFERENCE REST OF ADJACENT FLOOR, TYP. EXIST. EXIST. ROOM OFFICE **OFFICE** 211 OFFICE WOOD TRIM 210 COL. AROUND STRUCT. S.P. PROVIDE GYPSUM WALLBOARD MATERIAL AND WOOD FURRING AROUND EXPOSED EXISTING BUILDING FRAMING, TYP. — EXIST. DR.

EXIST. ATTIC AREA

**EXISTING AIR** 

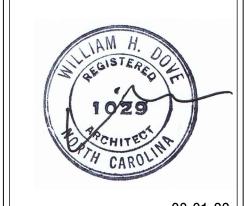
**UNIT SYSTEM** 

HANDLING

**EXISTING AIR** 

**UNIT SYSTEM** 

HANDLING



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DRAWING TITLE SECOND FLOOR PLAN

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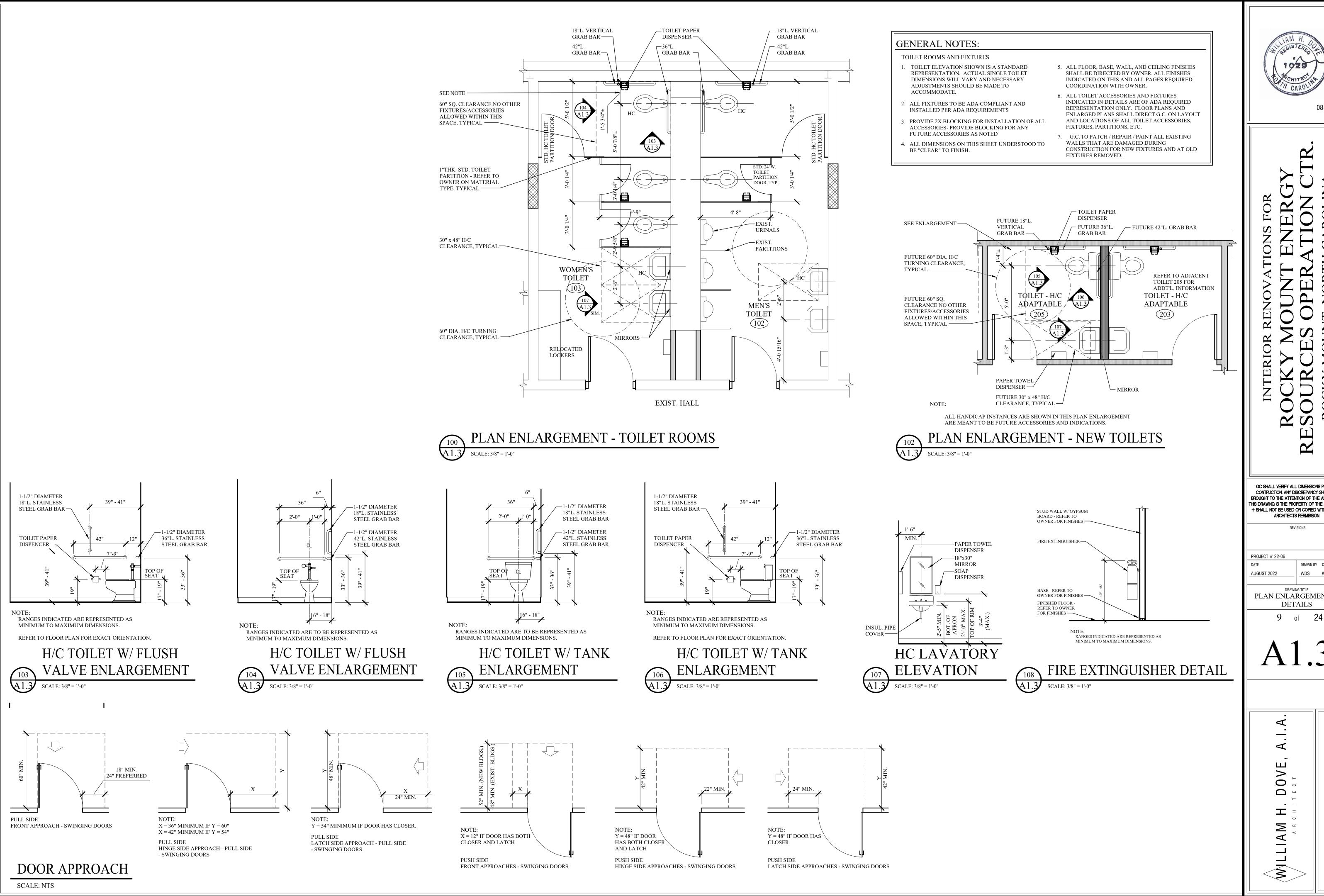
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DOVE 

SECOND FLOOR PLAN

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

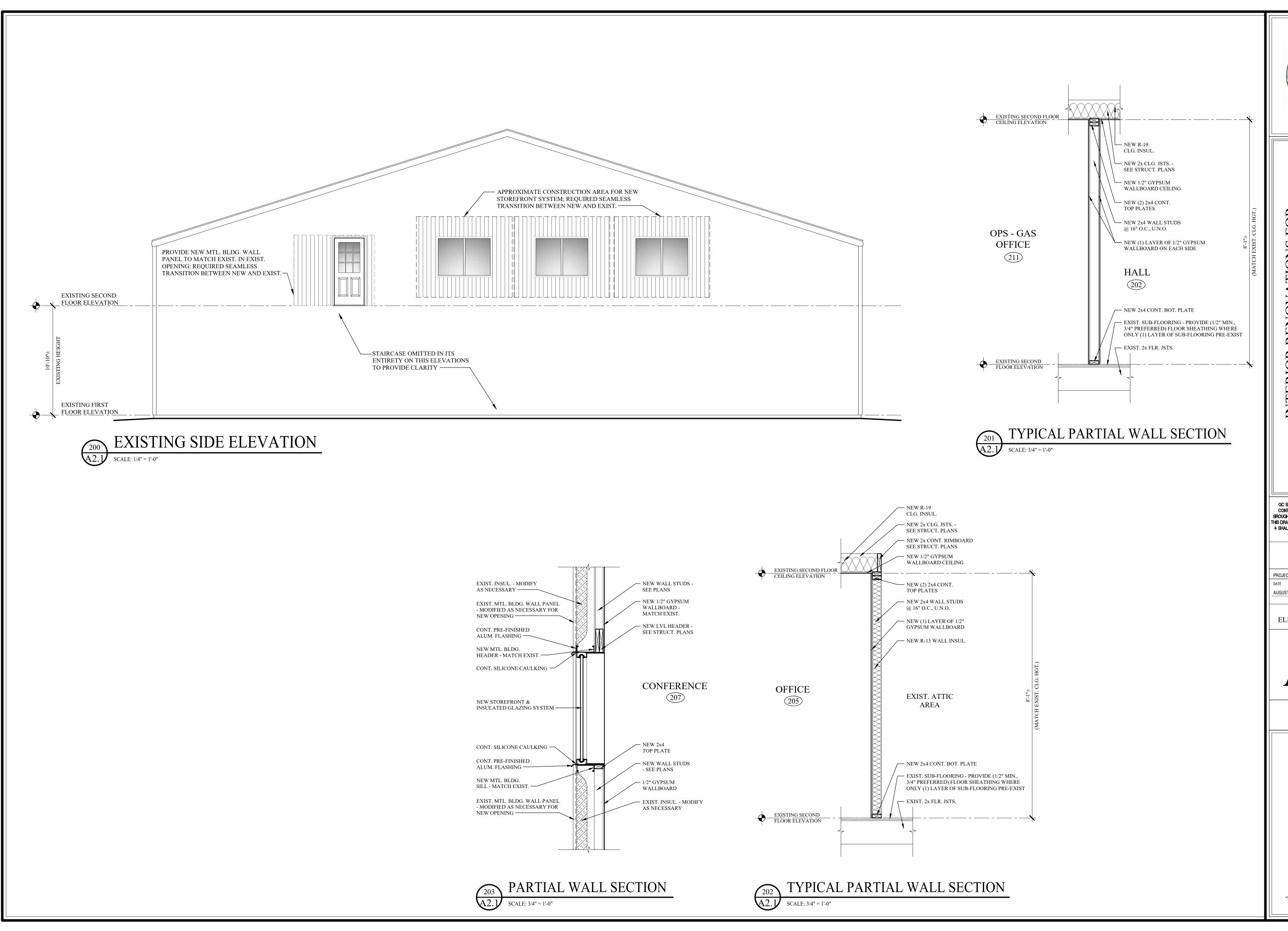
2,102 EXISTING SQ.FT. 1,892 NEW SQ.FT.



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DRAWING TITLE PLAN ENLARGEMENTS **DETAILS** 



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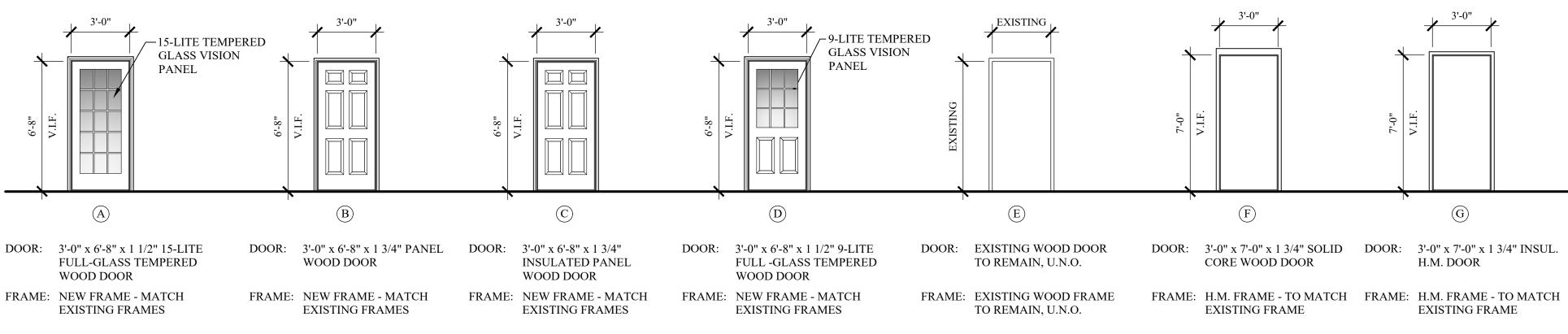
> DRAWING TITLE ELEVATION / SECTIONS 10 of 24

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# **GENERAL NOTES:**

- 1. ALL WALLS, DOORS, WINDOWS, FIXTURES, ETC. IN OUTSIDE OF LIMITS OF CONSTRUCTION IN EXISTING BUILDING SPACE ARE TO REMAIN AS IS UNLESS NOTED OTHERWISE ON DRAWINGS.
- 2. COORDINATE WITH OWNER ON ALL NEW INTERIOR FLOOR, BASE, WALL AND CEILING FINISHES. AS A BASE PROVIDE CARPET FLOORS, VCT IN TOILET AREAS, VINYL COVE BASE, PAINTED WALLS AND PAINTED CEILINGS.
- 3. ANY AND ALL NEW MATERIAL FINISHES SHALL MATCH TO ADJACENT TO EXISTING MATERIAL FINISHES.
- 4. ELECTRICAL NOT BEING USED SHALL BE REMOVED IN ITS ENTIRETY. ELECTRICAL LIGHTING INDICATED ON ELECTRICAL DRAWINGS SHALL BE PLACED IN APPROXIMATE LOCATION ON PLANS IN NEW LAY-IN ACOUSTICAL GRID.
- CONTRACTOR SHALL FOLLOW ALL INDUSTRY CONSTRUCTION AND ELECTRICAL STANDARDS FOR TEMPORARY REMOVAL AND RE-INSTALLATION OF EXISTING SYSTEMS.
- 6. ANY DAMAGE TO EXISTING ADJACENT SYSTEMS TO REMAIN SHALL BE REPAIRED OR REPLACED AS NECESSARY FOR PROPER OPERATION.
- WHILE USING TEMPORARY SUPPORTING STRUCTURE TO INSTALL NEW STRUCTURE, MAINTAIN ALL NECESSARY INDUSTRY PROCEDURES BEFORE, DURING AND END OF CONSTRUCTION.

- 8. EXISTING TOILET AREAS ARE OUTSIDE THE LIMITS OF CONSTRUCTION AND HAVE NOT BEEN FIELD VERIFIED. THERE ARE NO CHANGES TO THE EXISTING TOILET AREAS.
- 9. CABINETRY CONTRACTOR TO COORDINATE WITH OWNER ON CABINETRY LAYOUT.
- 10. TACTILE EXIT SIGNAGE OF CHAPTER 10 'MEANS OF EGRESS', SECTION 1011, 1011.3 WHICH STATES, "A TACTILE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1, SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN AREA OF REFUGE, EXTERIOR AREA OF ASSISTANCE RESCUE, EXIT STAIRWAY, EXIT RAMP, EXIT PASSAGEWAY, AND EXIT DISCHARGE". 'EXIT' SIGNAGE SHALL BE INSTALLED 12" FROM LATCH SIDE OF DOOR FRAME AND A MAX HEIGHT OF 60" A.F.F. AT EXIT DISCHARGE / PASSAGEWAY.
- 11. EXTERIOR FINISH SHALL MATCH EXISTING METAL BUILDING WALL PANEL STYLE AND COLOR.
- 12. EXTERIOR INSULATION SHALL BE R-19 WALL INSULATION AT NEW STUD WALL / EXISTING OPENING.
- 13. PROVIDE A STANDARD METAL TYPE PULL-DOWN DISAPPEARING STAIR IN HALL WITH AN INSULATED COVER FOR MECHANICAL UNIT ACCESS. MAINTAIN UN-COMPRESSED INSULATION UNDER MECHANICAL SERVICES PLATFORM; PROVIDE FURRING AS NECESSARY.



# DOOR SCHEDULE

NOTE: SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION ON INDIVIDUAL DOORS

GENERAL DOOR NOTES:

- 1. GENERAL CONTRACTOR SHALL COORDINATE W/ HARDWARE MANUFACTURER FOR ALL NEW HARDWARE PER CODE.
- 2. INTERIOR WOOD DOORS SHALL RECEIVE A PAINTED FINISH. DOOR FRAMES SHALL BE PAINTED. ALL MATERIALS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO INSTALLATION AND CONSTRUCTION.
- 3. G.C. TO COORDINATE WITH OWNER ON ALL FROSTED GLAZING LOCATION REQUIREMENTS.
- 4. G.C. TO COORDINATE DOOR MANUFACTURER WITH AN INSULATED 9-LITE PANEL CONSTRUCTION PER MANUFACTURER STANDARDS.
- 5. G.C. TO CONFIRM EXISTING DOOR THICKNESS IN FIELD AND PROVIDE SAME THICKNESS TO NEW DOORS.
- 6. G.C. TO CONFIRM DOOR HEIGHT, JAMB, AND STYLE IN EXISTING MASONRY CONSTRUCTION AND EXISTING OPENINGS. PROVIDE FOR INDUSTRY STANDARDS FOR HEIGHT, JAMB AND STYLES.

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

DOOR DESCRIPTION DESCRIPTION NUMBER WIDTH HEIGHT THICKNESS MATERIAL ELEV RATING MATERIAL ELEV RATING HARDWARE GLAZING REMARKS EXISTING DOOR AND FRAME ASSEMBLY TO REMAIN AS IS EXISTING DOOR AND FRAME ASSEMBLY TO REMAIN AS IS EXISTING DOOR AND FRAME ASSEMBLY TO REMAIN AS IS EXISTING DOOR AND FRAME ASSEMBLY TO REMAIN AS IS REMOVE LOCKS AS NECESSARY INSUL. H.M. DOOR PROVIDE NEW HARDWARE 1 3/4" N/A N/A PER CODE 3'-0" 7'-0" 1 3/4" SOLID CORE WOOD DOOR N/A N/A N/A DOOR PER MANUF. PROVIDE NEW HARDWARE 3'-0" 7'-0" 1 3/4" SOLID CORE WOOD DOOR N/A H.M. N/A N/A DOOR PER MANUF. PROVIDE NEW HARDWARE 3'-0" 6'-8" 1 1/2" DOOR PER MANUF. 5/8" INSULATING TEMPERED | A N/A DOOR PER MANUF. N/A N/A DOOR PER MANUF. OOOR PER MANUF. 3'-0" 6'-8" 1 3/4" PANEL WOOD DOOR N/A DOOR PER MANUF. N/A N/A 6'-8" PANEL WOOD DOOR N/A DOOR PER MANUF. N/A DOOR PER MANUF. 3'-0" PANEL WOOD DOOR DOOR PER MANUF. 6'-8" 1 3/4" N/A DOOR PER MANUF. 3'-0" PANEL WOOD DOOR DOOR PER MANUF. 6'-8" 1 3/4" DOOR PER MANUF. 205 3'-0" 6'-8" PANEL WOOD DOOR DOOR PER MANUF. DOOR PER MANUF. 1 3/4" N/A N/A 3'-0" 6'-8" DOOR PER MANUF. 5/8" INSULATING TEMPERED DOOR PER MANUF. OOOR PER MANUF. 3'-0" 6'-8" 1 3/4" PANEL WOOD DOOR N/A DOOR PER MANUF. N/A DOOR PER MANUF. PANEL WOOD DOOR DOOR PER MANUF. 3'-0" 6'-8" 1 3/4" N/A DOOR PER MANUF. PANEL WOOD DOOR OOOR PER MANUF. 3'-0" 6'-8" DOOR PER MANUF. N/A 1 3/4" N/A 3'-0" PANEL WOOD DOOR OOOR PER MANUF. 6'-8" 1 3/4" DOOR PER MANUF. PANEL WOOD DOOR OOOR PER MANUF. 3'-0" 6'-8" 1 3/4" N/A DOOR PER MANUF. PANEL WOOD DOOR DOOR PER MANUF. DOOR PER MANUF. 3'-0" 6'-8" 1 3/4" N/A

WINDOW SCHEDULE

TYPE

" INSUL. GLAZING

REMARKS

DOOR SCHEDULE

# 5'-6" x 4'-0" STOREFRONT GLAZING - PER MANUF.

WINDOW SCHEDULE

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

# **GENERAL WINDOW NOTES:** PROVIDE ALL NECESSARY FRAME ANCHORS AS

- REQUIRED FOR SPECIFIC INSTALLATIONS.
- 2. ALL GLAZING WITHIN 24" OF VERTICAL EDGE OF DOORS, STAIRS, ETC. SHALL BE TEMPERED. TEMPERED GLAZING SHALL BE USED AS NOTED AND AS REQUIRED BY CODE.
- ALL FRAMING SYSTEMS SHALL BE DESIGNED, ENGINEERED AND FABRICATED BY THE SYSTEM MANUFACTURER TO MEET ALL APPLICABLE CODES.
- ALL WINDOW DIMENSIONS INDICATED ARE STANDARD WINDOW DIMENSIONS. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR EXACT DIMENSIONS PER WINDOW MANUFACTURER AT JOB SITE PRIOR TO SELECTION. ROUGH OPENINGS PER SELECTED WINDOW MANUFACTURER.
- 5. G.C. TO COORDINATE NEW HEAD HEIGHTS IN FIELD TO MATCH THE EXISTING ADJACENT HEAD HEIGHTS TO NEW WINDOW LOCATIONS.

GENERAL FINISH NOTES:

SIZE

5'-6" x 4'-0"

MARK

MATERIAL

ALUMINUM

FINISH

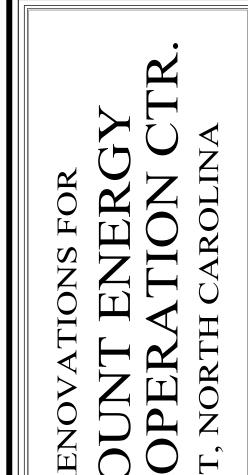
CLEAR - TO BE

APPROVED

CONTRACTOR TO COORDINATE AND CONFIRM ALL INTERIOR AND EXTERIOR MATERIALS AND FINISHES WITH OWNER, PRIOR TO PROVISION AND INSTALLATION.

THICKNESS

PER MANUFACTURER



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NOTES / SCHEDULES

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			PLUMBING FIXTURE SCHEDULE			
SYMBOL	FIXTURE	MANUFACTURER	FITTING	HW	CW	WASTE
P1	FLUSH VALVE WATER CLOSET	TOTO CT705EN OR EQUAL BY AMERICAN STANDARD OR KOHLER	FLOOR MOUNTED, VITREOUS CHINA, 1.28 GPF LOW CONSUMPTION SIPHON JET FLUSHING TOILET COMPLYING WITH ASME 112.19.2. TOILET SHALL BE ELONGATED FRONT BOWL. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. SLOAN CROWN 111-1.28 FLUSHOMETER OR EQUAL BY ZURN OR TOTO.	-	1"	3*
P1HV	ADA FLUSH VALVE WATER CLOSET	TOTO CT705ELN OR EQUAL BY AMERICAN STANDARD OR KOHLER	FLOOR MOUNTED, VITREOUS CHINA, 1.28 GPF LOW CONSUMPTION SIPHON JET FLUSHING TOILET COMPLYING WITH ASME 112.19.2. TOILET SHALL BE ELONGATED FRONT BOWL. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. SLOAN CROWN 111-1.28 FLUSHOMETER OR EQUAL BY ZURN OR TOTO. TOP OF SEAT SHALL BE 17-19 INCHES AFF FOR ADA.	-	1"	3*
P1HT	TWO PIECE TANK TYPE ADA WATER CLOSET	TOTO CST744EL OR EQUAL BY AMERICAN STANDARD OR KOHLER	TWO-PIECE VITREOUS CHINA TOILET WITH HIGH-PROFILE TANK, ELONGATED FRONT BOWL AND CHROME TRIP LEVER. 1.28 GPF. PROVIDE SC534 OPEN FRONT SEAT LESS COVER. ASME 112.19.2 COMPLIANCE. TOP OF SEAT SHALL BE 17-19 INCHES AFF FOR ADA. LEVER MOUNTED ON WIDE SIDE FOR ADA	-	1/2"	3*
P2A	COUNTER MOUNT LAVATORY	TOTO LT511. 4 OR EQUAL BY AMERICAN STANDARD OR KOHLER	VITREDUS CHINA SELF-RIMMING LAVATORY COMPLYING WITH ASME 112, 19, 2, MOUNT SO RIM IS 34 INCHES AFF AND 2 INCHES FROM FRONT EDGE FOR ADA, PROVIDE WITH LAV-GUARD PROTECTORS SUPPLY AND DRAIN LINES. USE A METERING TYPE FAUCET SIMILAR TO CHICAGO 3300-CP.	1/2 <b>"</b>	1/2″	2"
P14	SINK LARGE SINGLE	JUST MFG SL-ADA-2133-A-GR DR EQUAL BY FRANKE, ELKAY DR MDEN	TOP MOUNTED 18 GA STAINLESS STEEL. MAX BOWL DEPTH 6 INCHES FOR WHEEL CHAIR ACCESSIBLITY-USE JUST MFG FAUCET SET JPD-1550 OR EQUAL BY MOEN, DELTA OR KOHLER.	1/2*	1/2"	2"
P3	FLOOR DRAIN	WATTS FD-200-A DR EQUAL BY ZURN DR JR SMITH	ON GRADE EPDXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, WEEP HOLES, ADJUSTABLE ROUND NICKEL BRONZE STRAINER, AND NO HUB OUTLET. PROVIDE TRAP PRIMER CONNECTION OPTION IF NOTED.	-	-	3"
P7	THERMOSTATIC MIXING VALVE	WATTS LFMMV OR EQUAL BY LAWLER OR LEDNARD VALVE	ASSE STANDARD 1069 OR 1070 APPROVED WITH 1/2 INCH FEMALE NPT INLET AND OUTLET CONNECTIONS, BRASS BODY, AND INTEGRAL MOUNTING HOLES. TAMPER RESISTANT THERMOPLASTIC ENCLOSURE. SINGLE REPLACEABLE CARTRIDGE DESIGN.	1/2*	1/2"	-
FCD	FLOOR CLEANOUT	ZURN, WATTS, JR SMITH	EPDXY COATED CAST IRON FLOOR CLEANOUT WITH ROUND ADJUSTABLE GASKETED NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB INLET.	-	ı	4"
WCD	WALL CLEANDUT	ZURN, WATTS, DR JR SMITH	CAST IRON CLEANOUT FERRULE WITH THREADED BRASS COUNTERSUNK CLEANOUT PLUG, STAINLESS STEEL ACCESS COVER, AND VANDAL PROOF STAINLESS STEEL SCREW	-	ı	4"
RD	ROOF DRAIN	ZURN Z121 OR APPROVED EQUAL	12 in DIAMETER ROOF DRAIN. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD AND LOW SILHOUETTE CAST IRON DOME.	-	-	4"
AAV	AIR ADMITTANCE VALVE	STUDOR REDIVENT OR APPROVED EQUAL	ANSI/ASSE 1051 LISTED. NSF STANDARD 14. PROVIDE PVC OR ABS CONNECTOR AS NECESSARY. CONNECT VALVE TO PIPING PER MANUFACTURER. INSTALL IN THE VERTICAL, UPRIGHT POSITION AFTER ROUGH-IN AND PRESSURE TESTING OF THE SYSTEM. PROVIDE WALL BOX IF NOT ABOVE CEILING OR OTHERWISE CONCEALED.	-	ı	2"

		f	PLUMBING LINE	S SIZING TAI	BLE				
FIXTURE TYPE	DCCUPANCY	QTY	DRAINAGE FIX	KTURE UNITS		WATER	SUPPLY FIXTU	RE UNITS	
			EACH	TOTAL	CW	HW	CW & HW	HW TOTAL	TOTAL
WATER CLOSET (FLUSH VALVE)	PUBLIC	3	4. 00	12. 00	10. 00	0, 00	10. 00	0. 00	30. 00
WATER CLOSET (FLUSH TANK)	PUBLIC	2	4. 00	8. 00	5, 00	0. 00	5. 00	0, 00	10. 00
LAVATORY	PUBLIC	5	1. 00	5. 00	1. 50	1. 50	2. 00	7. 50	10. 00
URINAL (¾ FLUSH VALVE)	PUBLIC	2	2. 00	4. 00	5, 00	0, 00	5. 00	0, 00	10, 00
MDP SINK	PUBLIC	0	2. 00	0. 00	2. 25	2. 25	3. 00	0. 00	0. 00
EMERGENCY FLOOR DRAIN	PUBLIC	1	0, 00	0, 00	0, 00	0, 00	0. 00	0. 00	0, 00
DEMAND FIXTURE	GPM	QTY	TOTAL GPM				TOTAL DFU	29.	0
DEMAND FIXTURE	GPM	QTY	TOTAL GPM				TOTAL DFU	29.	0
HOSE BIBBS	5	0	0, 00				TOTAL WFSUs	7. 5	60. 0
							GPM	12. 30	54. 00
						OTHER F	IXTURES' GPM	0, 00	0, 00
							TOTAL GPM	12. 30	54. 00
MINIMUM BUILDING DRAIN SIZE	4"								
MINIMUM WATER LINE SIZE	1 1/2"								

LIN	IETYPE LEGEND
COLD WATER SUPPLY HOT WATER SUPPLY SANITARY SEWER LINE	
VENT LINE	

ABBREV	/IATIONS AND DEFINITIONS
ABBREVIATION	DEFINITION
CWS	COLD WATER SUPPLY
HWS	HOT WATER SUPPLY
SAN	SANITARY SEWER
GL	GREASE LADEN
VTR	VENT TO ROOF
FPHB	FREEZE PROOF HOSE BIBB
IHB	INTERIOR HOSE BIBB
PC	PLUMBING CONTRACTOR
BFP	BACK FLOW PREVENTOR
AFF	ABOVE FINISHED FLOOR
RI	ROUGH IN
CRI	CONCEALED ROUGH IN
ID	INTERIOR DRAIN-STORM
DS	DOWNSPUT-STORM
22	SDIL STACK - SANITARY
FD	FLOOR DRAIN
RD	ROOF DRAIN
FU	FIXTURE UNIT
PT	PLASTER TRAP
PU	PROCTO UNIT
□S&Y	OUTSIDE STEAM AND YOKE
WH	WATER HEATER
O2D	OPEN-SITE DRAIN
VS	VENT STACK (SANITARY)
SA	STACK VENT (SANITARY)
FCD	FLOOR CLEAN OUT
WCD	WALL CLEAN DUT

INE AHEAD OF RPZ.

### GENERAL PLUMBING NOTES:

### ADMINISTRATIVE.

- THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS:
   PC PLUMBING CONTRACTOR, EC ELECTRICAL CONTRACTOR,
   MC MECHANICAL CONTRACTOR, GC GENERAL CONTRACTOR,
- FASC FIRE ALARM SYSTEM CONTRACTOR.

  PROVIDE" MEANS TO FURNISH AND INSTALL. THE PLUMBING
  CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS
  AND THE GENERAL CONTRACTOR.
- THE PC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
   ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED AT AN APPROVED LOCATION. PC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE
- PROPERTY OF THE PC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER.

  5. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. ALL MATERIALS AND EQUIPMENT SHALL BEAR APPROVAL FROM UL OR AN APPROVED THIRD PARTY AGENCY. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, IT IS TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DETERMINED TO BE EQUAL BY
- THE ENGINEER WILL BE ACCEPTED.

  6. THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA PLUMBING CODE AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE REQUIREMENTS.
- 7. THE PC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- 8. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR DIMENSIONS.
- 9. THESE PLANS ARE DIAGRAMMATIC. THE PC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, FIXTURES, PIPING, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE PC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO THE OWNER. THE PC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. TO AVOID POTENTIAL CONFLICTS, COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO ANY DIGGING.
- 10. TRENCHING, COMPACTION, AND BACKFILL SHALL BE BY PC AND SHALL BE IN ACCORDANCE WITH SECTION 306 OF THE NC PLUMBING CODE. UNDERGROUND LINES SHALL BE LOCATED SUCH THAT THEY DO NOT ENDANGER FOOTINGS OR FOUNDATION WALLS.

  11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF
- 11. THE PC SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS OF RATED FLOOR/CEILING ASSEMBLIES AND RATED WALL ASSEMBLIES TO PRESERVE OR RESTORE THE FIRE RESISTANCE RATING. SEAL ALL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THE PROJECT.
- 12. SYSTEM TESTING SHALL BE PERFORMED BY PLUMBING CONTRACTOR IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE, SECTIONS 312.2, 312.3, AND 312.5.
- PC SHALL DISINFECT THE ENTIRE DOMESTIC WATER PIPING SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.
   AT THE COMPLETION OF WORK AND PRIOR TO ACCEPTANCE BY OWNER, THE PC SHALL CLEAN ALL EXPOSED FIXTURES, MATERIALS,
- AND EQUIPMENT UNDER THIS CONTRACT.

  15. PC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- 1. ALL OVERHEAD DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH 95/5 LEAD FREE SOLDER, AND ALL BELOW GRADE WATER PIPING SHALL BE TYPE K COPPER WITH NO JOINTS. ALL PIPING SHALL HAVE MANUFACTURER'S NAME AND THE APPLICABLE STANDARD TO WHICH IT WAS MANUFACTURED CLEARLY MARKED ON EACH LENGTH. PIPING SHALL COMPLY WITH ASTM B-88. USE BRAZED JOINTS ON ALL COPPER PIPING 1-1/2 INCH AND LARGER. ALL PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, USED IN THE WATER DISTRIBUTION SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF .25-PERCENT AND SHALL CONFORM TO NSF 61. HOT WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180°F. COLD WATER DISTRIBUTION PIPE AND

TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 160 PSI AT

73.4°F. DO NOT INSTALL PEX OR CPVC PIPING IN RETURN AIR

VALVES SHALL BE BY NIBCO, WATTS, OR STOCKHAM.

- BALL VALVES SHALL HAVE BRASS BODY, FULL PORT, CHROME PLATED BALL, WITH TEFLON SEATS, 150 PSI WSP, AND COMPLY WITH MSS SP-110. GATE VALVES SHALL HAVE BRONZE BODY, CLASS 150, AND COMPLY WITH MSS SP-80, TYPE 2 STANDARD. VALVE BODY SHALL BE ASTM B 62, BRONZE WITH INTEGRAL SEAT AND UNION RING BONNET. ENDS SHALL BE THREADED OR SOLDER WITH COPPER-SILICON BRONZE STEM AND SOLID-WEDGE BRONZE DISC. INSTALL VALVES IN LOCATIONS THAT PERMIT EASY ACCESS WITHOUT DAMAGE TO BUILDING OR FINISHED MATERIALS; PROVIDE ACCESS DOORS IF REQUIRED.
- 3. COLD WATER LINES SHALL BE INSULATED WITH 1/2 INCH THICK FIBROUS GLASS INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. HOT WATER LINES UP TO 2 INCHES DIAMETER SHALL HAVE 1 INCH THICK INSULATION CONFORMING TO THE SAME STANDARD. PIPING LARGER THAN 2 INCHES SHALL RECEIVE 1-1/2 INCH THICK INSULATION. CLOSED CELL RUBBER INSULATION MEETING THE SMOKE AND FLAME RATINGS ABOVE MAY BE SUBSTITUTED FOR FIBROUS GLASS TYPE IF SO DESIRED. INSULATION INSTALLED ON PIPING OPERATING BELOW AMBIENT TEMPERATURES MUST HAVE A CONTINUOUS VAPOR RETARDER. ALL JOINTS, SEAMS AND FITTINGS MUST BE SEALED. ON SYSTEMS OPERATING ABOVE AMBIENT, THE BUTT JOINTS SHOULD NOT BE SEALED. ON COLD SURFACES WHERE A VAPOR SEAL MUST BE MAINTAINED, INSULATION SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN MOISTURE AND VAPOR RETARDER. ALL HANGERS, SUPPORTS, ANCHORS, OR OTHER PROJECTIONS SECURED TO COLD SURFACES SHALL BE INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED. INSULATION SHALL HAVE A FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LAP. WHITE-KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS; CONFORMING TO ASTM C 1136 TYPE 1: VAPOR RETARDER; WITH A SELF-SEALING ADHESIVE. VERIFY THAT PIPING HAS BEEN TESTED, SURFACES ARE
- ARMACELL, JOHNS-MANVILLE, OR OWENS-CORNING.

  4. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578 91. ALL INSULATION SHALL BE LOW-EMITTING WITH NOT GREATER THAN 0.05 PPM FORMALDEHYDE EMISSIONS. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.

  5. FAUCETS AND FIXTURE FITTINGS SHALL CONFORM TO ASME A112.18.1.

CLEAN AND DRY, AND ALL FOREIGN MATERIALS ARE REMOVED BEFORE

APPLYING INSULATION MATERIALS. INSULATION SHALL BE BY KNAUF,

- FAUCETS AND FIXTURE FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN CONSUMPTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61, SECTION 9. FIXTURE FITTINGS, FAUCETS, AND DIVERTERS SHALL BE INSTALLED AND ADJUSTED SO THAT THE FLOW OF HOT WATER FROM THE FITTINGS CORRESPONDS TO THE LEFT HAND SIDE OF THE FIXTURE FITTING.
- 6. FOR BELOW GRADE SANITARY WASTE PIPING, PC SHALL USE SERVICE WEIGHT CAST IRON PIPE WITH COMPRESSION JOINTS (ASTM A 74). USE MINIMUM 2 INCH SIZE UNDERGROUND. SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE PIPE FITTINGS (ASTM D 3311) MAY ALSO BE USED. DO NOT USE PVC PIPE FOR APPLICATIONS WHERE THE WASTE WATER TEMPERATURE EQUALS OR EXCEEDS 140°F OR IF THE BUILDING HEIGHT EXCEEDS 75 FEET.

  7. FOR ABOVE GRADE SANITARY WASTE AND VENT PIPING, USE SERVICE WEIGHT CAST IRON NO—HUB TYPE WITH COUPLINGS (CISPI 301). SOLID WALL SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET TYPE FITTINGS (ASTM D 3311) MAY BE USED IF PERMITTED BY LOCAL CODE, EXCEPT IN BUILDINGS EXCEEDING 75 FEET IN HEIGHT. DO NOT INSTALL PVC IN RETURN AIR PLENUMS. ALL VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO

THE DRAINAGE PIPE BY GRAVITY. BRANCH VENTS EXCEEDING 40 FEET

IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL SIZE

METHODS:

1. WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE SEPARATED BY 5 FEET OF UNDISTURBED OR COMPACTED EARTH IN ACCORDANCE WITH 603.2. PROVIDE ALL FITTINGS, VALVES, AND OTHER ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION. ALL DOMESTIC WATER PIPING SHALL BE CONCEALED IN FINISHED AREAS. ANY OPEN ENDS SHALL BE PROTECTED UNTIL FINAL CONNECTIONS ARE MADE.

FOR THE ENTIRE DEVELOPED LENGTH OF THE PIPE.

2. ABOVE GRADE DOMESTIC WATER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/32 INCH PER FOOT AND ARRANGED TO DRAIN AT LOW POINTS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. ROUTE PIPING IN AN ORDERLY MANNER-PARALLEL OR PERPENDICULAR TO WALLS WHEN POSSIBLE—AND MAINTAIN GRADIENT. EACH SUPPLY BRANCH LINE SERVING MORE THAN ONE FIXTURE SHALL HAVE A SHUTOFF VALVE INSTALLED TO ISOLATE ALL FIXTURES AND PIECES OF EQUIPMENT SUPPLIED BY THE BRANCH LINE. THE SHUTOFF VALVE SHALL BE LABELED AND LOCATED AS CLOSE TO THE CONNECTION TO THE SUPPLY MAIN AND RISER AS POSSIBLE. PROVIDE A FULL—OPEN VALVE ON THE BASE OF EVERY WATER RISER PIPE AND ON THE TOP OF EVERY WATER DOWN—FEED PIPE. PROVIDE VALVE HANDLE EXTENSIONS AS NECESSARY FOR INSULATION.

3. IT SHALL BE THE RESPONSIBILITY OF THE PC TO SUSPEND AND

SUPPORT ALL PIPING SYSTEMS FOLLOWING RECOGNIZED ENGINEERING

CLEVIS TYPE, STANDARD WEIGHT. FOR PIPING, HANGER SPACING SHALL

- PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT. ALL FIXTURES, DEVICES, AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE FIXTURE OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS, THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT AND PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL DECKING. USE STEEL HANGERS FOR STEEL AND PLASTIC PIPE AND COPPER OR COPPER-PLATED HANGERS FOR COPPER PIPE. PROVIDE PROTECTION FOR COPPER PIPING IN CONTACT WITH DISSIMILAR METALS. WHERE COPPER PIPING IS SUPPORTED ON HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS. IN GENERAL, HANGERS SHALL BE
- BE IN ACCORDANCE WITH TABLE 308.5 OF THE NC PLUMBING CODE. HANGERS AND ACCESSORIES SHALL BE GRINNEL, MASON, OR B-LINE.

  4. SLEEVE ALL PIPES PASSING THROUGH PARTITIONS, WALLS, AND FLOORS. SLEEVES IN FLOORS AND INTERIOR WALLS OF POURED IN PLACE CONCRETE, BRICK, TILE, OR MASONRY SHALL BE SCHEDULE 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD WALLS SHALL BE 22 GAUGE, ROLLED GALVANIZED SHEET METAL. TACK WELD ON THE LONGITUDINAL SEAM. PROVIDE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE AND BELOW CEILINGS. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE
- FLOORS AND WALLS ABOVE AND BELOW CEILINGS. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER. SLEEVES IN WALLS SHALL BE INSTALLED FLUSH WITH THE WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCH ABOVE THE FLOOR-EXCEPT THEY SHALL BE FLUSH FOR 2 HOUR RATED FLOORS-AND SHALL BE FLUSH WITH THE STRUCTURE BELOW. EACH SLEEVE SHALL HAVE AN INSIDE DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE COVERING OF EACH COVERED PIPE TO ALLOW CONTINUOUS INSULATION—BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN EACH UNCOVERED. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER.
- 5. THE TOP OF WATER PIPES INSTALLED BELOW GRADE OUTSIDE THE BUILDING SHALL BE BELOW THE FROST LINE OR A MINIMUM OF 12 INCHES BELOW FINISHED GRADE WHICHEVER IS GREATER. WATER PIPING INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED UTILITY ROOM OR UNCONDITIONED ATTIC SHALL BE INSULATED TO A MINIMUM OF R6.5
- DETERMINED IN ACCORDANCE WITH ASTM C 177.

  6. HOT WATER PROVIDED TO PUBLIC HAND-WASHING FACILITIES/LAVATORIES SHALL BE TEMPERED WATER DELIVERED THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 OR CSA B125.3.

  7. INSULATE ALL EXPOSED WASTE AND SUPPLY PIPING UNDER LAVATORIES, SINKS, ANG ELECTRIC WATER COOLERS WITH THE
- HANDI-LAV GUARD INSULATION KIT BY TRUEBRO OR EQUAL.

  8. POTABLE WATER OUTLETS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH 608.15. PRESSURE TYPE VACUUM BREAKERS SHALL CONFORM TO ASSE 1020 AND SPILPROOF VACUUM BREAKERS SHALL COMPLY WITH ASSE 1056. HOSE—CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE 1011, ASSE 1019, ASSE 1035, OR ASSE 1052. CONNECTIONS TO BEVERAGE DISPENSERS, COFFEE MACHINES, AND NON—CARBONATED BEVERAGE DISPENSERS SHALL BE PROTECTED BY A BACKELOW DREVENTER IN ACCORDANCE WITH ASSE 1022
- BY A BACKFLOW PREVENTER IN ACCORDANCE WITH ASSE 1022.

  9. THE PC SHALL INSTALL WATER HAMMER ARRESTORS ON BRANCH LINES WITH QUICK CLOSING VALVES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WATER HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010.
- THE PC SHALL PROVIDE CHECK VALVES AT ALL FIXTURES WITH THREADED OUTLETS AS REQUIRED BY CODE. TRAP PRIMERS SHALL BE PROVIDED AS SHOWN ON THE PLANS OR AS REQUIRED.
   ADJUST STOPS AND VALVES FOR INTENDED FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.
   BEFORE COMMENCING WORK, CHECK INVERT ELEVATIONS REQUIRED FOR SEWER CONNECTIONS, CONFIRM INVERTS, AND VERIFY THESE CAN BE PROPERLY CONNECTED TO WITH SLOPE FOR DRAINAGE AND COVER
- ESTABLISHED, AND INSTALL ALL DRAINS, STACKS, VENTS, FLOOR DRAINS, AND CLEANOUTS NECESSARY FOR A COMPLETE INSTALLATION.

  13. ALL SANITARY SEWER PIPING IS BELOW GRADE OR WITHIN WALLS UNLESS OTHERWISE NOTED. ALL SANITARY VENT PIPING IS ABOVE THE CEILING OR WITHIN WALLS UNLESS OTHERWISE NOTED. SOIL AND WASTE PIPING SHALL BE INSTALLED TO PROVIDE PROTECTION AGAINST FREEZING PER 305.6.1. WASTE AND SOIL LINES LEAVING THE BUILDING

TO AVOID FREEZING. ONCE INVERTS AND FALL HAVE BEEN

- MUST HAVE A MINIMUM COVER OF 3 INCHES.

  14. SOIL AND WASTE LINES 2-1/2 INCHES AND SMALLER SHALL BE
  SLOPED AT 1/4 INCH PER FOOT MINIMUM. SOIL AND WASTE LINES 3
  INCHES TO 6 INCHES IN DIAMETER SHALL BE SLOPED AT 1/8 INCH
  PER FOOT MINIMUM.

  15. FOR WATER CLOSET WASTE CONNECTIONS, A 4 INCH BY 3 INCH
- CLOSET BEND SHALL BE ACCEPTABLE. WHERE A 3 INCH BEND IS
  UTILIZED ON WATER CLOSETS, A 4 INCH BY 3 INCH FLANGE SHALL BE
  INSTALLED TO RECEIVE THE FIXTURE HORN.

  16. FOR PLASTIC PIPE SIZES GREATER THAN 6 INCHES, AND OTHER PIPE
  SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR

- DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN TWO PIPE SIZES. BRACES, BLOCKS, RODDING BACKFILL AND OTHER SUITABLE METHODS AS SPECIFIED BY THE COUPLING MANUFACTURER SHALL BE UTILIZED.
- COUPLING MANUFACTURER SHALL BE UTILIZED.

  17. BASES OF STACKS SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, VIRGIN OR COMPACTED EARTH, OR OTHER SUITABLE MATERIAL TO SUPPORT THE WEIGHT OF THE PIPING.

  18. HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE.
- 18. HORIZONTAL DRAIN PIPES SHALL HAVE CLEANOUTS IN ACCORDANCE WITH 708.10. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH A MIXTURE OF GRAPHITE AND LINSEED OIL. ENSURE CLEARANCE AT ALL CLEANOUTS FOR RODDING OF DRAINAGE SYSTEM. INSTALL FLOOR CLEANOUTS AT AN ELEVATION TO ACCOMMODATE FINISHED FLOOR. EVERY CLEANOUT SHALL BE INSTALLED TO ALLOW CLEANING IN THE DIRECTION OF FLOW OF THE DRAINAGE PIPE OR AT RIGHT ANGLES THERETO. CLEANOUTS ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A
- ON 6 INCH AND SMALLER PIPES SHALL BE PROVIDED WITH A CLEARANCE OF NOT LESS THAN 18 INCHES FOR RODDING.

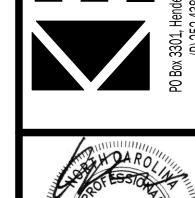
  19. DRAINAGE PIPING FOR FUTURE FIXTURES SHALL TERMINATE WITH AN APPROVED CAP OR PLUG.

  20. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTIN
- 20. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTING REQUIRED BY SECTIONS 312.2 AND 312.3. PROVIDE ACCESS TO ALL AIR ADMITTANCE VALVES PER CODE. INSTALLATION OF ALL AIR ADMITTANCE VALVES SHALL CONFORM TO SECTION 918 OF THE NC PLUMBING CODE. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1050 OR 1051.
- 21. INDIRECT WASTE PIPING THAT EXCEEDS 2 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY, OR 4 FEET IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND THE FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE
- 22. THE PC SHALL PROVIDE UNIONS FOR DISASSEMBLY AND SERVICE OF ALL FIXTURES AND OTHER RELEVANT PLUMBING EQUIPMENT. UNIONS SHALL BE GROUND-JOINT WITH BRASS SEAT. PROVIDE INSULATING UNIONS AT EACH JUNCTION OF DISSIMILAR MATERIALS.
- 23. THE PC SHALL ACCURATELY ROUGH-IN ALL FIXTURES ACCORDING TO MANUFACTURER'S INSTALLATION DIMENSIONS AND INSTRUCTIONS.

  OFFSET ADAPTERS AND FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE. FLUSH HANDLES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS FOR ADA COMPLIANCE. INSTALL EACH FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. SEAL ALL SELF-RIMMING LAVATORIES AND SINKS (VITREOUS CHINA AND STAINLESS STEEL) WITH A COMMERCIAL GRADE PLUMBER'S PUTTY OR ACRYLIC LATEX CAULK APPLIED TO THE UNDERSIDE OF THE FIXTURE RIM IN A GENEROUS AMOUNT SO THAT WHEN FIXTURE IS SET, SEALANT SHALL OOZE OUT.

  24. ALL VENT THRU THE ROOF (VTR) PENETRATIONS SHALL BE
- COORDINATED WITH THE GENERAL CONTRACTOR. PC SHALL PROVIDE FLASHING MATERIAL REQUIRED FOR VTRS. JOINTS AT THE ROOF AND AROUND VENT PIPES, SHALL BE MADE WATER TIGHT BY THE USE OF LEAD, COPPER, GALVANIZED STEEL, ALUMINUM, OR OTHER APPROVED FLASHINGS OR FLASHING MATERIAL. MAINTAIN MINIMUM 10 FEET FROM ALL OUTSIDE AIR INTAKES.

  25 INSTALL FULL OPEN VALVES PER NC PLUMBING CODE 606.1 ON THE
- 25. INSTALL FULL OPEN VALVES PER NC PLUMBING CODE 606.1, ON THE MAIN WATER LINE INTO THE BUILDING. INSTALL CUT OFF VALVES PER NCPC 606.2



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(1)

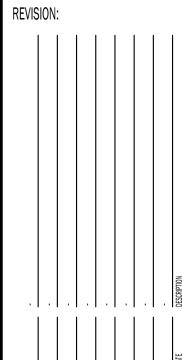
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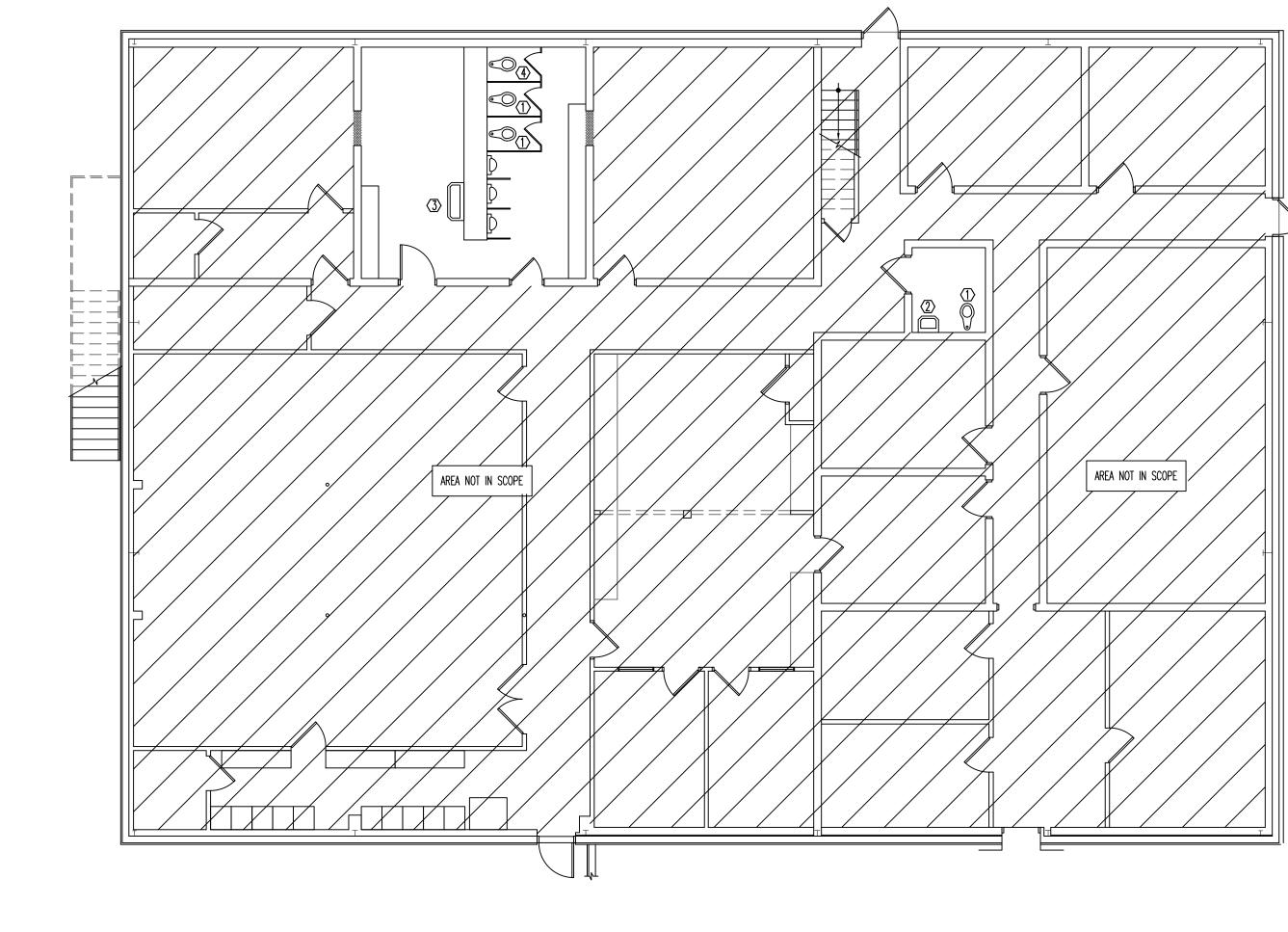


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DRAWN BY: JBT CHECKED BY: KDC PLUMBING NOTES & SCHEDULES

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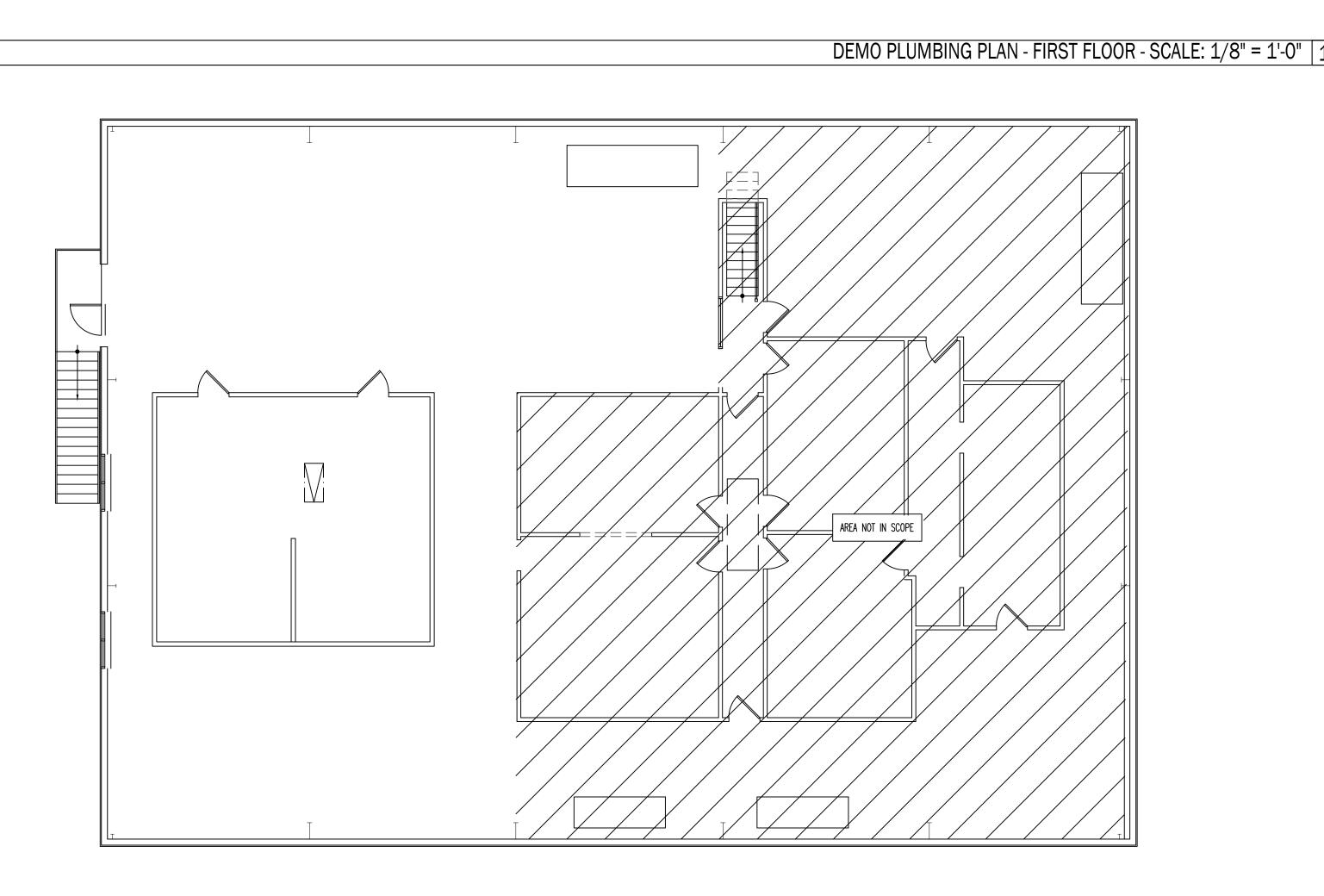
HEX PLAN NOTES

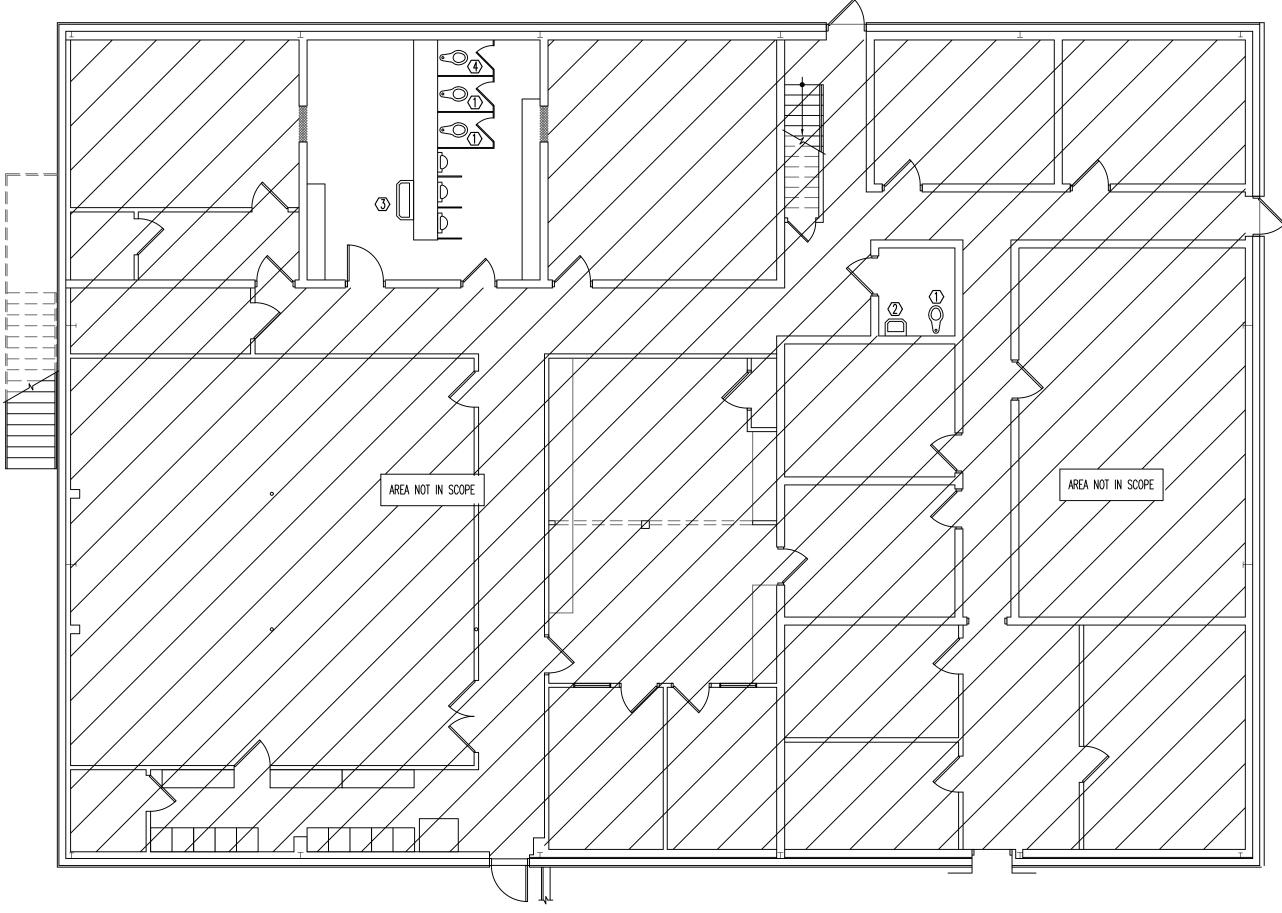
DEMO EXISTING WATER CLOSET. DEMO AND CAP EXISTING CWS AND WASTE LINES.

DEMO EXISTING LAVATORY. DEMO AND CAP EXISTING CWS AND WASTE LINES.

DEMO EXISTING WATER CLOSET. RETAIN EXISTING CWS AND WASTE LINES FOR REUSE LATER.

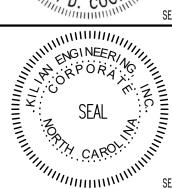
DEMO EXISTING LAVATORY. EXISTING CWS, HWS, AND WASTE LINES TO REMAIN.



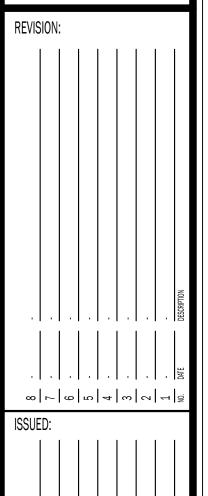


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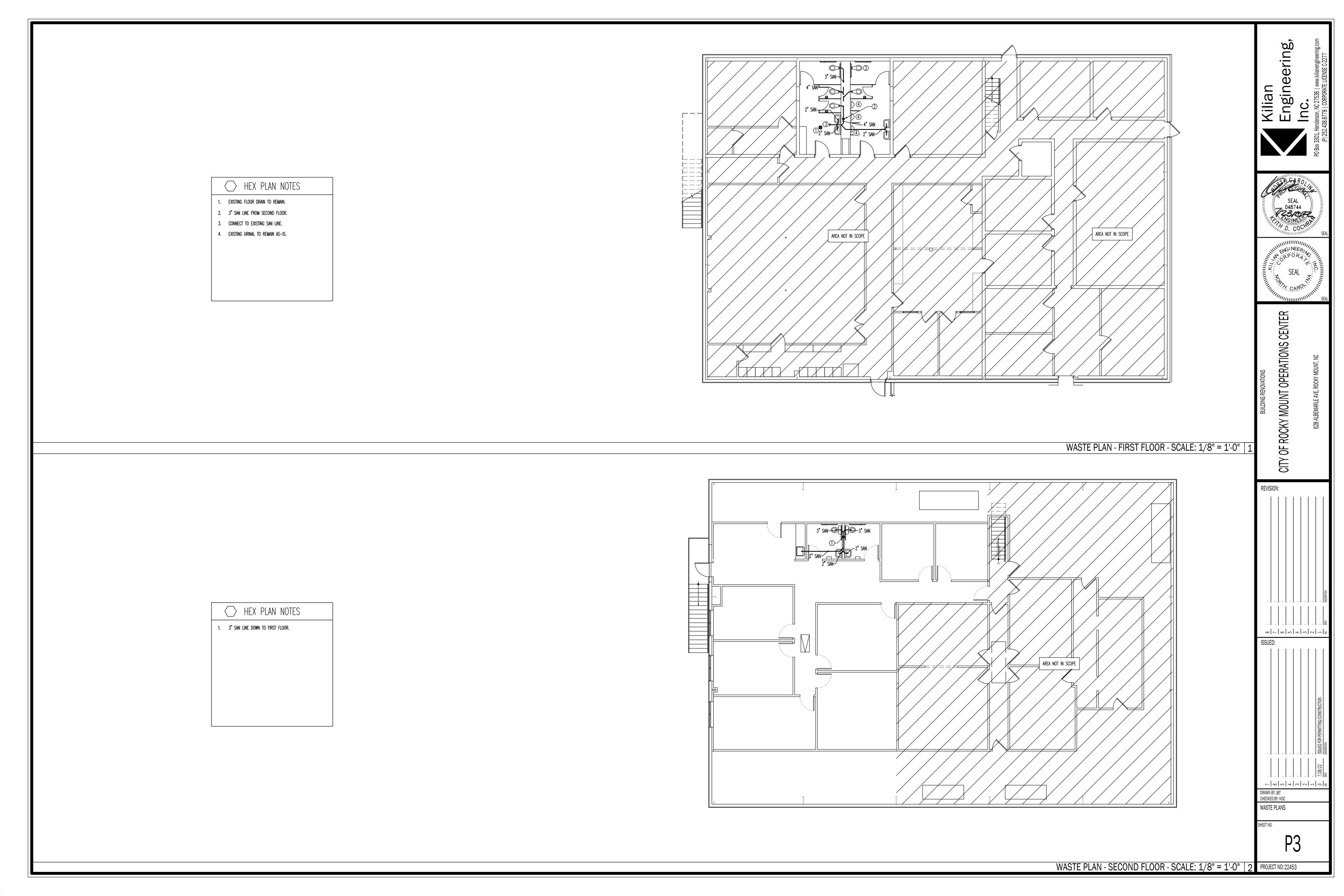


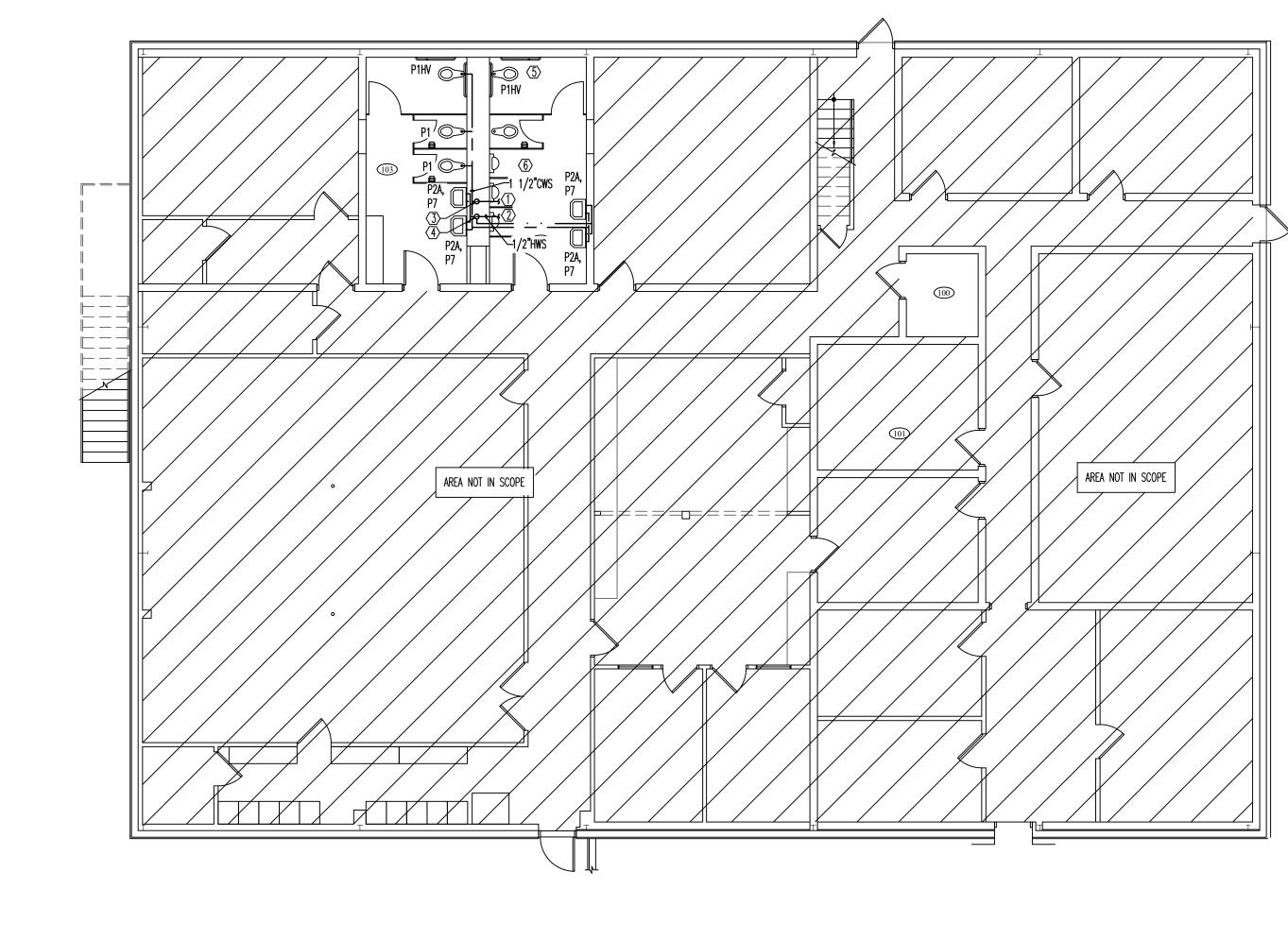
OF ROCKY MOUNT OPERATIONS CENTER  $\Box$ 



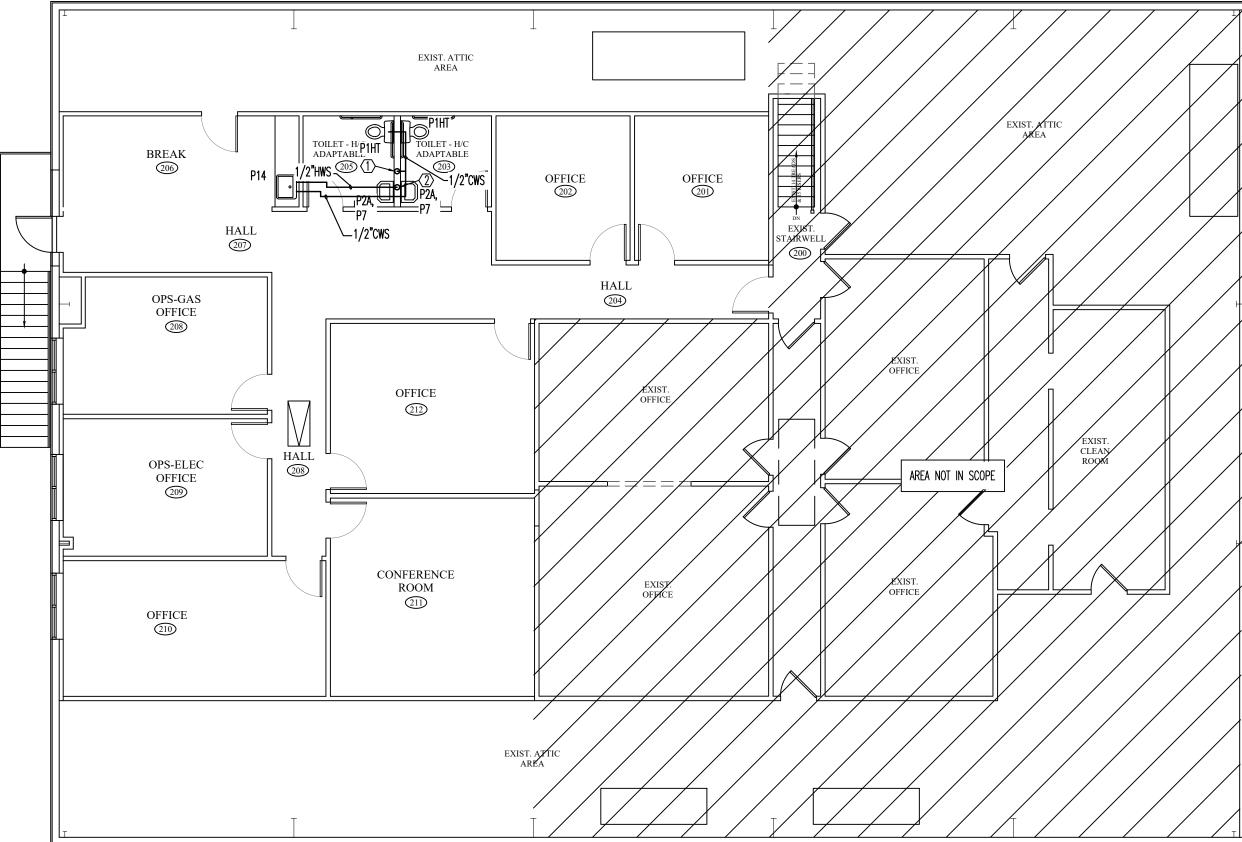
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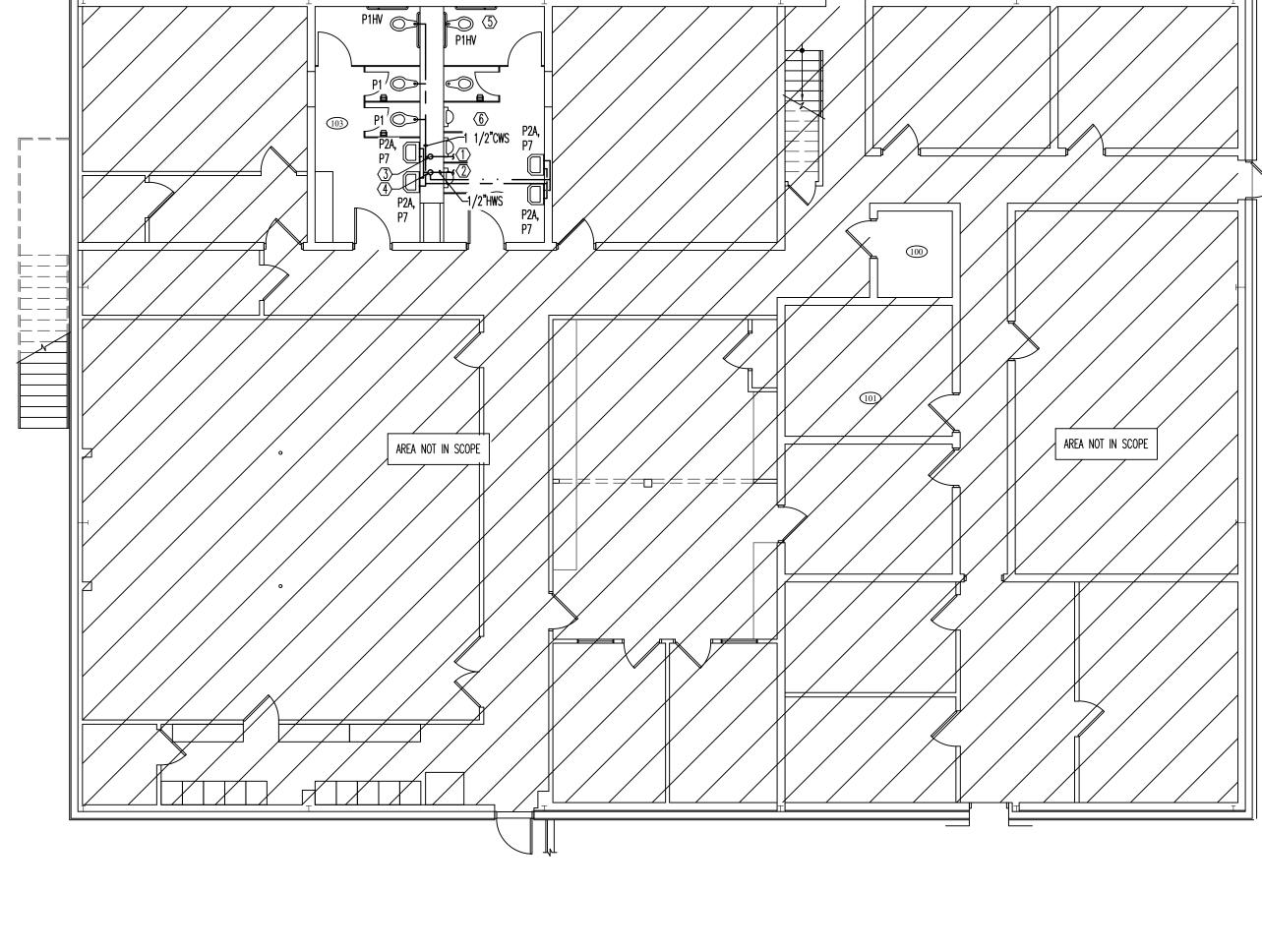
DRAWN BY: JBT CHECKED BY: KDC DEMO PLUMBING PLANS













HEX PLAN NOTES

5. RECONNECT NEW WATER CLOSET TO EXISTING CWS LINE.

6. EXISTING URINALS TO REMAIN AS—IS WITH EXISTING CWS LINES.

1. CONNECT TO EXISTING HWS.

2. CONNECT TO EXISTING CWS

3. 3/4" CWS UP TO SECOND FLOOR.

4. 1/2" HWS UP TO SECOND FLOOR.

- 1. 1/2" HWS UP FROM FIRST FLOOR.
- 2. 3/4" CWS UP FROM FIRST FLOOR.



SUPPLY PLAN - SECOND FLOOR - SCALE: 1/8" = 1'-0" | 2 PROJECT NO: 22453

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TY OF ROCKY MOUNT OPERATIONS CENTER

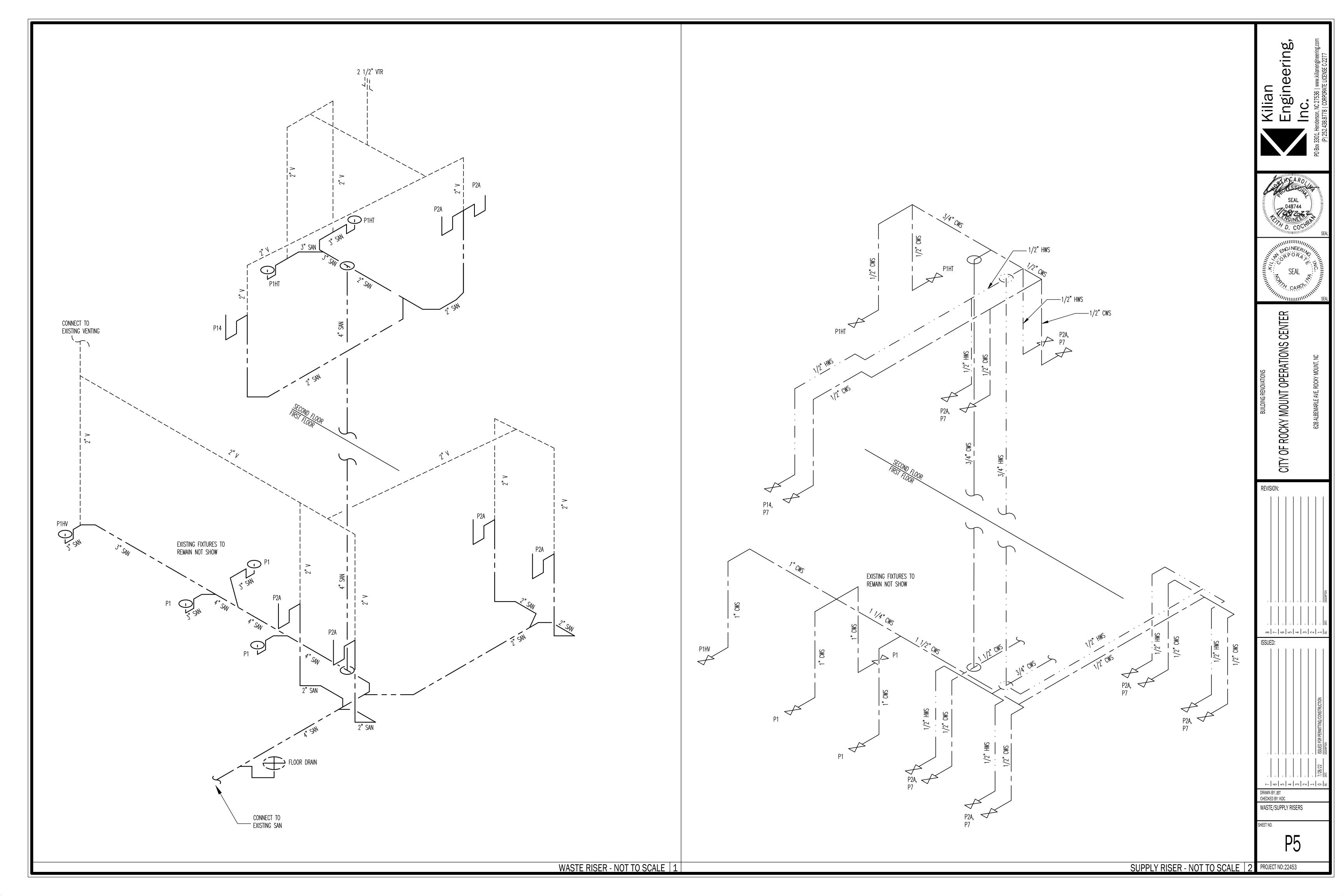
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REVISION:

SEAL

SUPPLY PLANS

SHEET NO.



			SPL	L2Y2 TI_	EM HEAT PUMP	SCHEDULE								
		NOMINAL	REF	LINES	MOTI	JRS	EFFIC	IENCIE	S	EL	ECTRICA	_	VETCUT	
MARK	MFG / MDDEL #	CAPACITY	GAS	1.10	COMPRESSOR	COND. FAN	SEER	COP	HODE	V/PH	MCA	MOCP	WEIGHT	REMARKS
		TONS	] uas	LIQ	ND.	ND.	EER	17*	HSPF	V/PH	MUA	MUCP	LBS	
HP-3	TRANE 4TWR4060D1000	5	1-1/8	3/8	1	1	14/11. 5	2. 4	8. 2	208/1	34	60	295	1-6

- PROVIDE CONCRETE PAD FOR UNIT TO SIT ON
- PROVIDE HAIL GUARDS FOR COIL
- CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT OR EQUAL BY CARRIER, LENNOX, OR YORK
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
- 6. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

	SPLIT SYSTEM AIR HANDLER SCHEDULE																
		NOMINAL AIR FLOW FAN MOTORS HEATING CAPACITY COOLING CAPACITY ELECTRICAL WEIGHT		VETCUT													
MARK	MFG / MODEL #	CAPACITY	SUPPLY	MIN. DA	SUPPLY	ESP	DUTPUT	AUX ELEC H	<del>I</del> EAT	EAT WB/DB	TOTAL	SENSIBLE	V/PH	MCA	MOCP	METALL	REMARKS
		TONS	CFM	CFM	ND.	in wg	MBH	kW	STAGES	*F	MBH	MBH	V/FN	MCA	MUCP	LBS	
AHU-3	TRANE TAM4ADC60S-1S	5	2000	SEE TABLE	1	. 25	33. 9	2. 88	1	67/80	58. 3	44. 4	208/1	31	35	159	1-8

- PROVIDE DUCT DETECTOR IN RETURN DUCT. PROVIDE RELAY FOR KILLING POWER TO UNIT'S FAN.
- PROVIDE HEAT STRIP DUTDOOR TEMPERATURE LOCKOUT TO PREVENT SUPPLEMENTAL HEAT OPERATION IN RESPONSE TO THE THERMOSTAT BEING CHANGED TO A WARMER SETTING. SET NO LOWER THAN 35°F AND NO HIGHER THAN 40°FREPLACE ALL
- FILTERS AT PROJECT'S COMPLETION
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT-TIME SET BACK
- CONSULT MANUFACTURER ON LINE SET LENGTHS EXCEEDING 60FT
- HEATER RATED AT 208V OR EQUAL BY CARRIER, LENNOX, OR YORK
- ANY EQUIPMENT SUBSTITUTIONS MUST EQUAL OR EXCEED EFFICIENCIES LISTED (RATINGS PER ARI)
- 8. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES

(T) THERMOSTAT LOCATION MOUNT AT 48" A.F.F.

- A/D AUDIO VISUAL ANNUNCIATOR WITH RESET FOR DUCT DETECTOR, WALL MOUNT.
- S——— DUCT DETECTOR
- (CO<sub>2</sub>) CO<sub>2</sub> SENSOR LOCATION. INSTALL NEXT TO THERMOSTAT

	EXHAUST FAN SCHEDULE								
MARK	MFG / MDDEL #	TYPE	ESP (in WG)	CFM	VOLT/PH	FLA	SONES	NOTES	
EF-(1-2)	GREENHECK SP-B110	CEILING	0, 40	96	120/1	1. 14	2. 0	1-3	
EF-3	GREENHECK SP-A410	CEILING	0, 40	265	120/1	1. 75	3. 5	1-3	

- PROVIDE WITH PITCHED ROOF CURB & CAP FOR FLAT OR SLOPED ROOF, OR HODDED WALL WITH
- BACKDRAFT DAMPER CAP AS APPLICABLE. PROVIDE WITH SQUARE TO ROUND DUCT ADAPTER AS NECESSARY
- 3. OR EQUAL BY LOREN COOK OR PENNBARRY OR TWIN CITY

	REGISTER & GRILLE SCHEDULE											
MARK	MFG	MODEL #	SIZE	MOUNTING	DESCRIPTION	NOTES						
A	HART & COOLEY	ARE	6X6	SURFACE	ALUMINUM, 4 WAY DIFFUSER, BRIGHT WHITE	1						
В	HART & COOLEY	SRE	9X9	SURFACE	STEEL, 4 WAY DIFFUSER, BRIGHT WHITE	1						
С	HART & COOLEY	SRE	12X12	SURFACE	STEEL, 4 WAY DIFFUSER, BRIGHT WHITE	1						
R1	HART & COOLEY	RH45	12X6	SURFACE	ALUMINUM SURFACE MOUNT RETURN GRILLE	1						
R2	HART & COOLEY	RH45	12X12	SURFACE	ALUMINUM SURFACE MOUNT RETURN GRILLE	1						

1. OR EQUAL BY PRICE, METAL-AIRE, CARNES, TITUS OR NAILOR.

# MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT

MECHANICAL SISTEM, SERVICE SISTEMS, AND EXCITMENT	
METHOD OF COMPLIANCE THERMAL ZONE	PRESCRIPTIVE ZONE 4A
EXTERIOR DESIGN CONDITIONS  HEATING DESIGN DRY BULB  COOLING DESIGN DRY BULB  COOLING DESIGN WET BULB	23. 1°F 91. 7°F 75. 6°F
INTERIOR DESIGN CONDITIONS  HEATING DESIGN DRY BULB  COOLING DESIGN DRY BULB  COOLING RELATIVE HUMIDITY	70°F 75°F 50%
HEATING LOAD:	25,900 BTU/H
SENSIBLE COOLING LOAD: LATENT COOLING LOAD:	29, 100 BTU/H 13, 200 BTU/H
MECHANICAL SPACING CONDITIONING SYSTEM:  UNITARY  DESCRIPTION OF UNIT(S)  BOILER  TOTAL BOILER DUTPUT  CHILLER  TOTAL CHILLER CAPACITY	AIR COOLED DX SPLIT SYSTEM N/A N/A N/A
EQUIPMENT EFFICIENCIES:	SEE SCHEDULES
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS):	SEE SCHEDULES

# DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE. THE MECHANICAL DESIGN FOR THIS BUILDING COMPLIES WITH MECHANICAL AND EQUIPMENT REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE AND 2018 NORTH CAROLINA ENERGY CONSERVATION

### Ventilation Calculation (North 2nd Floor) **Airflow to Zone** Default Room Name(s) **Zone Type** Ez Area (sq.ft.) Ra Occupancy Offices Office Space 1139 0.06 5.70 0.8 1200 Conference Room Meeting/Conference Room 306 0.06 50 15.30 0.8 300 326 0.06 9.78 30 0.8 200 Reception Reception 321 0.00 Corridors 0.06 0 0.8 250 Hallway 58 0.00 0.8 Restroom N/A 50 0.427875 Maximum Zp: K-12 School? 0.7 Actual System Population: 226 cfm Uncorrected Intake 322 cfm **Outdoor Air Intake** Percent of Unit Air 16%

### GENERAL MECHANICAL NOTES:

- 1. THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR, MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR,
- FASC FIRE ALARM SYSTEM CONTRACTOR. "PROVIDE" MEANS TO FURNISH AND INSTALL. MC SHALL ALSO INSTALL MATERIALS FURNISHED BY OTHERS AND GENERAL CONTRACTOR AS SHOWN ON THE PLANS OR
- NECESSARY FOR A COMPLETE INSTALLATION.
- THE MC SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.
- 4. ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE CONTRACTOR AT AN APPROVED LOCATION. THE MC SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE. THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE MC UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE
- 5. THE MC SHALL INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH THE 2018 NORTH CAROLINA MECHANICAL AND BUILDING CODES AND ANY APPLICABLE LOCAL CODES. WHERE A CONFLICT EXISTS BETWEEN THE ABOVE REQUIREMENTS, THE MC SHALL OBTAIN CLARIFICATION FROM THE ENGINEER OR IN THE EVENT ANY PART OF THESE PLANS CONFLICTS WITH THE ABOVE
- THE MC SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT.
- DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR 8. THE MC SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE MC SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE MC SHALL
- COORDINATE WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION. ALL MECHANICAL MATERIALS SHALL BE NEW AND FREE OF DEFECT AND LISTED AND LABELED BY UL OR AN APPROVED THIRD PARTY AGENCY. ANY MATERIALS FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE MC WITHOUT ADDITIONAL COST TO THE OWNER. WHERE A MANUFACTURER AND MODEL NUMBER IS GIVEN, THE CITED EXAMPLE IS INTENDED TO ESTABLISH A STANDARD OF QUALITY AND NOT TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. SUCH EXAMPLES ARE USED TO CONVEY A GENERAL STYLE, TYPE, CHARACTER, AND QUALITY OF THE PRODUCT DESIRED; PRODUCTS DETERMINED TO BE EQUAL BY THE ENGINEER WILL
- BE ACCEPTED. 10. THESE PLANS ARE DIAGRAMMATIC. THE MC SHALL ADJUST THE LOCATIONS OF EQUIPMENT, DUCTS, REGISTERS, GRILLES, ETC, TO ACCOMMODATE PLANNED AND ENCOUNTERED INTERFERENCES. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THE MC SHALL MAKE ALLOWANCES FOR SUCH DEVIATIONS AND CONTINGENCIES IN BID TO IMPLEMENT THEM WITHOUT ADDITIONAL COST TO
- 11. THE MC SHALL VERIFY THE FUNCTIONALITY AND OPERATION OF ALL EXISTING MECHANICAL EQUIPMENT IN THE AREA OF WORK. REPLACE FILTERS, LEAK TEST AND RECHARGE REFRIGERANT LINES, REPLACE OR LUBRICATE BEARINGS, CHECK LINKAGES AND ACTUATORS, AND PERFORM OTHER MAINTENANCE SERVICE AS
- NECESSARY TO GET THE EQUIPMENT IN PROPER ORDER. 12. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING.
- 13. IT IS THE MC'S RESPONSIBILITY TO VERIFY THAT ITEMS FURNISHED FOR THIS CONTRACT WILL FIT IN THE SPACE AVAILABLE. THE MC SHALL MAKE FIELD MEASUREMENTS AS NECESSARY TO DETERMINE SPACE REQUIREMENTS. IF THE MC MUST ALTER EQUIPMENT DUE TO SPACE CONSIDERATIONS, THE MC SHALL PROVIDE SIZES AND SHAPES THAT FIT THE INTENT OF THESE DRAWINGS AND
- 14. MC SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR REGARDING THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING PROVIDED. 15. MAINTAIN CLEARANCES FOR ALL EQUIPMENT ACCORDING TO MANUFACTURER'S
- RECOMMENDATIONS FOR SERVICEABILITY. ALL ROOFTOP EQUIPMENT MUST BE A MINIMUM OF 10 FEET FROM ROOF EDGE. 16. MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE
- INSTRUCTIONS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF THE PROJECT. MC SHALL PROVIDE ALL DOCUMENTATION TO THE OWNER AS NECESSARY TO SUBMIT FOR FACTORY WARRANTIES. 17. CONTRACTOR SHALL PROTECT ALL HVAC EQUIPMENT FROM CONSTRUCTION AND
- SHEET ROCK DUST DURING CONSTRUCTION. ALL FILTERS SHALL BE REPLACED WITH NEW AT THE COMPLETION OF THE PROJECT. 18. ALL EQUIPMENT INSTALLED ON ROOF MUST BE WITHIN THE ROOF SCREEN.

19. IF A ROOF PENETRATION IS REQUIRED AND THE ROOF IS UNDER WARRANTY, USE

- THE AUTHORIZED ROOFER. PROVIDE DOCUMENTATION. 20. ALL PIPING, WIRING, CONDUIT, INSULATION, EQUIPMENT, SUPPORTS, ETC. SHALL BE SUITABLE FOR INSTALLATION IN A RETURN PLENUM AS NECESSARY. COORDINATE
- WITH OTHER TRADES ON LOCATIONS OF ALL PLENUMS. 21. MC SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE ALL APPLICABLE CONSTRUCTION WASTE IS RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

- THE MC SHALL PROVIDE ALL DX UNITARY HEATING AND COOLING EQUIPMENT AS SCHEDULED ON THE DRAWINGS. AIR-COOLED SPLIT SYSTEM HEAT PUMPS AND AIR-CONDITIONERS SHALL BE BY TRANE, CARRIER, OR YORK. THE MC SHALL PROVIDE FACTORY AND FIELD INSTALLED ACCESSORIES AS SCHEDULED OR AS NECESSARY FOR A COMPLETE AND OPERATIONAL HVAC SYSTEM.
- THE MC SHALL PROVIDE ALL EXHAUST AND SUPPLY FANS AS SCHEDULED. FANS SHALL BE BY GREENHECK, LOREN COOK, TWIN CITY, OR PENNBARRY. DUCTWORK IS SHOWN WITH FREE AREA DIMENSIONS. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT
- STANDARD, 2 INCH S.P. EXTERNAL DUCT INSULATION AND FACTORY-INSULATED FLEXIBLE DUCT SHALL BE LEGIBLY PRINTED OR IDENTIFIED AT INTERVALS NOT GREATER THAN 36 INCHES WITH THE NAME OF THE MANUFACTURER, THE THERMAL RESISTANCE R-VALUE AT THE SPECIFIED INSTALLED THICKNESS AND THE FLAME SPREAD AND SMOKE-DEVELOPED INDEXES OF THE COMPOSITE MATERIALS. ALL DUCT INSULATION PRODUCT R-VALUES SHALL BE BASED ON INSULATION ONLY, EXCLUDING AIR FILMS, VAPOR RETARDERS OR OTHER DUCT COMPONENTS, AND SHALL BE BASED ON TESTED C-VALUES AT 75°F MEAN TEMPERATURE AT THE INSTALLED THICKNESS, IN ACCORDANCE WITH RECOGNIZED INDUSTRY PROCEDURES. THE
- SHALL BE DETERMINED AS FOLLOWS: 4.1. FOR DUCT BOARD, DUCT LINER AND FACTORY—MADE RIGID DUCTS NOT NORMALLY SUBJECTED TO COMPRESSION, THE NOMINAL INSULATION THICKNESS SHALL BE USED.

INSTALLED THICKNESS OF DUCT INSULATION USED TO DETERMINE ITS R-VALUES

- 4.2. FOR DUCT WRAP, THE INSTALLED THICKNESS SHALL BE ASSUMED TO BE 75 PERCENT (25-PERCENT COMPRESSION) OF NOMINAL THICKNESS. 4.3. FOR FACTORY-MADE FLEXIBLE AIR DUCTS, THE INSTALLED THICKNESS SHALL BE DETERMINED BY DIVIDING THE DIFFERENCE BETWEEN THE ACTUAL
- OUTSIDE DIAMETER AND NOMINAL INSIDE DIAMETER BY TWO. ALL INSULATION CONTAINING FIBROUS MATERIALS EXPOSED TO AIRFLOW SHALL BE RATED FOR THAT EXPOSURE OR SHALL BE ENCAPSULATED. INSULATING PROPERTIES FOR ALL MATERIALS SHALL MEET OR EXCEED INDUSTRY STANDARDS. POLYSTYRENE PRODUCTS SHALL MEET ASTM C578. ALL INSULATION SHALL HAVE FORMALDEHYDE EMISSIONS NOT GREATER THAN 0.05 PPM. THE MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED INDEX FOR INSULATION SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND ORDINANCES ADOPTED BY THE
- JURISDICTION IN WHICH THE BUILDING IS LOCATED. MASTIC USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A-95 OR UL 181B-98. MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURER OF ADHESIVES, MASTICS, AND INSULATION CEMENTS. DO NOT INSTALL DUCT SEALANT WHEN TEMPERATURES ARE LESS THAT THOSE RECOMMENDED BY THE SEALANT
- ALL ADHESIVES AND SEALANTS SHALL HAVE VOC CONTENT BELOW 20 GRAMS PER LITER AND WHICH MEET THE REQUIREMENTS OF THE MANUFACTURER OF THE PRODUCTS BEING ADHERED OR INVOLVED. ADHESIVES AND SEALANTS SHALL CONTAIN NO HEAVY METALS OR FORMALDEHYDE.
- FACTORY-MADE AIR DUCTS AND CONNECTORS SHALL COMPLY WITH UL 181-96. FLEXIBLE DUCT SHALL BE UL LISTED CLASS 0 OR CLASS 1, INSULATED, AND COMPLY WITH UL 181. FLEXIBLE DUCT SHALL BE FACTORY FORMED, COMPOSED OF SPIRAL WOUND CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER. DUCT SHALL BE FACTORY INSULATED WITH A FOIL VAPOR BARRIER JACKET. CONNECT TO RIGID DUCT WITH SPIN-IN FITTING AND DAMPER. FLEXIBLE DUCTS AND AIR CONNECTORS SHALL NOT PASS THROUGH ANY FIRE RESISTANCE RATED

- 10. THE MC SHALL PROVIDE ALL DIFFUSERS GRILLES, LOUVERS, AND OTHER AIR DISTRIBUTION OUTLETS AND INLETS, LOUVERS, GRILLES, AND DIFFUSERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR LAY-IN CEILINGS, INSTALL SUPPORT FROM THE STRUCTURE FOR EACH DIFFUSER OR DAMPER. AIR DISTRIBUTION OUTLETS AND INLETS SHALL
- BE BY HART & COOLEY, PRICE, METAL—AIRE, NAILOR, OR CARNES. 11. AIR FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 605 OF THE
- 2018 NC MECHANICAL CODE. 12. THE MC SHALL PROVIDE ALL REFRIGERATION PIPING. ALL PIPE AND FITTINGS SHALL BE TYPE ACR HARD COPPER TUBING WITH SWEAT FITTINGS. REFRIGERATION LINES SHALL BE RUN NEATLY. WHERE A GROUP OF LINES ARE RUN, TRAPEZE HANGERS MAY BE USED. DO NOT USE CHAIN OR WIRE HANGERS. WRAP TUBING WITH RUBBER TAPE AT EACH CLAMP OR HANGER. FOR COVERED PIPES, HANGERS SHALL FIT AROUND THE OUTSIDE OF THE COVERING WITH 12 GAUGE GALVANIZED STEEL SHIELDS OF A LENGTH EQUAL TO THE OUTSIDE DIAMETER OF THE INSULATION AND COVERING 3/4 OF THE CIRCUMFERENCE OF THE INSULATION. SAGS SHALL NOT BE PERMISSIBLE. HORIZONTAL LINES SHALL PITCH DOWN NOT LESS THAN 1 INCH IN 40 FEET. INSULATE WITH 1 INCH CLOSED CELL ARMAFLEX TYPE INSULATION WITH A FLAME DENSITY RATING LESS THAN 25 AND A SMOKE DENSITY RATING LESS THAN 50. ALL JOINTS AND SPLICES IN INSULATION SHALL BE TAPED AND AIR TIGHT. SOLDER REFRIGERATION LINES USING 15 PERCENT SILVER SOLDER AND EVACUATE LINES TO 300 MICRONS. PROVIDE MOISTURE INDICATING SIGHT GLASS AND FILTER DRYER IN LIQUID LINE. PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUCTION AND HOT GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND INSURE PROPER LUBRICATION. MC SHALL BE RESPONSIBLE FOR SEALING LINE SET PENETRATIONS OF ANY RATED ASSEMBLIES IN ACCORDANCE WITH A SYSTEM LISTED IN THE UL DIRECTORY FOR THE SPECIFIC ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR A LIST OF ALL UL FIRE RATED ASSEMBLIES.
- 1. INSULATE DUCTWORK WITH FIBERGLASS DUCT WRAP; INSTALLED R-VALUE SHALL BE A MINIMUM R-6. COVERINGS AND LININGS. INCLUDING ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL NEW DUCTWORK SHALL RECEIVE INSULATION ON THE OUTSIDE. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. FOR RECTANGULAR DUCTS, INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. STAPLE SEAMS APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE SENSITIVE TAPE MATCHING THE FACING. FOR RECTANGULAR DUCTS 24 INCHES IN WIDTH OR GREATER, SECURE DUCT WRAP TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SPACED 18 INCHES ON CENTER TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF DUCT WRAP SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. ALL TEARS, PUNCTURES, ETC. OF THE DUCT WRAP INSULATION SHALL BE SEALED WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM. INSULATION SHALL BE BY KNAUF
- VERIFY THAT DUCTS HAVE BEEN TESTED BEFORE APPLYING INSULATION MATERIALS. VERIFY THAT DUCT SURFACES ARE CLEAN, DRY AND FREE OF FOREIGN MATERIAL PRIOR TO INSULATING. DUCT COVERINGS SHALL NOT PENETRATE A WALL OR FLOOR REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR REQUIRED TO BE FIRE

INSULATION, OWENS CORNING CORP, OR CERTAINTEED CORPORATION.

IS SMALLER THAN LOUVER FRAME, PROVIDE BLANK-OUT PANELS SEALING LOUVER AREA AROUND DUCT. USE SAME MATERIAL AS DUCT, PAINTED BLACK ON EXTERIOR SIDE; SEAL TO LOUVER FRAME AND DUCT. 4. FOR STRUCTURES IN FLOOD HAZARD AREAS, DUCTS SHALL BE LOCATED ABOVE

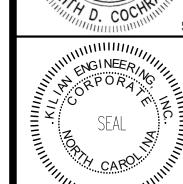
WHERE DUCTS ARE CONNECTED TO EXTERIOR WALL LOUVERS AND DUCT OUTLET

- THE DESIGN FLOOD ELEVATION. DUCT SHALL NOT BE INSTALLED IN OR WITHIN 4 inches of the Earth.
- PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, COMBINATION FIRE AND SMOKE DAMPERS.
- CONSTRUCT T's. BENDS, AND ELBOWS WITH RADII OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT ON CENTERLINE. WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS MUST BE USED, PROVIDE TURNING VANES. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE; MAXIMUM OF 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM.
- 8. IT SHALL BE THE RESPONSIBILITY OF THE MC TO SUSPEND AND SUPPORT ALL EQUIPMENT, DUCTWORK, DIFFUSERS, AND OTHER MATERIALS FOLLOWING RECOGNIZED ENGINEERING PRACTICES AND USING STANDARD, COMMERCIALLY ACCEPTED HANGERS AND SUSPENSION EQUIPMENT. ALL HVAC EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT RELY ON CEILING OR WALL SURFACES FOR SUPPORT. THE SUPPORT ATTACHMENT SHALL SUPPORT THE WEIGHT OF THE EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT ITSELF. SUPPORT FROM THE TOP CHORD OF THE ROOF JOISTS, GIRDERS, AND BEAMS. THE BOTTOM CHORD IS NOT TO BE USED FOR EQUIPMENT OR PIPING SUPPORT. HANGERS SHALL NOT BE ATTACHED TO CORRUGATED STEEL
- 9. DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH SMACNA AT INTERVALS NOT EXCEEDING 10 FEET. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD. SUPPORT DUCTS FROM BAR JOISTS, GIRDERS, OR BEAMS.
- 10. CHECK LOCATIONS OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. COORDINATE WITH SPRINKLER CONTRACTOR IF APPLICABLE.
- PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL MINIMUM 2 DUCT WIDTHS FROM DUCT TAKE-OFF. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER OR REGISTER ASSEMBLY. ADJUST AIR HANDLING AND DISTRIBUTION SYSTEMS TO PROVIDE DESIGN SUPPLY, RETURN, AND
- EXHAUST AIR QUANTITIES AT SITE ALTITUDE. 12. MC SHALL INSTALL FIRE DAMPERS AT EACH PENETRATION OF A RATED WALL AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FIRE DAMPERS SHALL BE UL LABELED (UL 555), CURTAIN TYPE, WITH INTEGRAL FACTORY SLEEVE AND BLADES LOCATED OUTSIDE THE AIR STREAM. INSTALLATION OF ALL FIRE DAMPERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SECTION 607 OF THE 2018 NC MECHANICAL CODE. PROVIDE ACCESS PANELS FOR TESTING AND SERVICE AS NECESSARY, MC SHALL PROVIDE RADIATION DAMPERS AND THERMAL BLANKETS FOR ALL PENETRATIONS OF RATED CEILING ASSEMBLIES. RADIATION DAMPERS SHALL BE UL LABELED (UL 555C) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC INSTALLATION INSTRUCTIONS. FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND CEILING RADIATION DAMPERS SHALL BE BY RUSKIN, NAILOR, OR LLOYD INDUSTRIES.
- 13. MC SHALL INSTALL A SMOKE DETECTOR—UL LISTED FOR DUCT INSTALLATION (UL 268A) IN EACH UNIT'S RETURN UPSTREAM OF ANY FILTERS, OUTSIDE AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72. DUCT SMOKE DETECTOR SUPERVISION SHALL COMPLY WITH 606.4.1 OF THE 2018 NC MECHANICAL CODE IF THE BUILDING IS (TO BE) EQUIPPED WITH A FIRE ALARM SYSTEM, THE FIRE ALARM SYSTEM CONTRACTOR SHALL FURNISH AND WIRE ALL DUCT SMOKE DETECTORS. IF THE BUILDING IS NOT PROVIDED WITH A FIRE ALARM SYSTEM, THE MC SHALL FURNISH AND WIRE THE DUCT SMOKE DETECTORS AND A/V DEVICE. IT SHALL BE THE RESPONSIBILITY OF THE MC TO INSTALL ALL SMOKE DUCT DETECTORS PER NFPA AND MFG'S INSTALLATION INSTRUCTIONS REGARDLESS OF
- WHO FURNISHES THE DEVICES. 14. MC SHALL INSTALL PROGRAMMABLE THERMOSTATS AS SHOWN ON THE PLANS. THERMOSTAT SHALL BE MOUNTED AT 48 INCHES AFF. THERMOSTATS SHALL MEET THE REQUIREMENTS OF SECTION C403.2.4 OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.
- 15. FRESH AIR INTAKES SHALL BE INSTALLED ON ALL UNITS AS SHOWN ON DRAWINGS. MAINTAIN 10 FEET OF DISTANCE BETWEEN FRESH AIR INTAKES AND ALL EXHAUST TERMINATIONS AND PLUMBING VENT THRU ROOFS.
- MC SHALL INSTALL ALL EXHAUST FANS AND VENT TO THE BUILDING'S EXTERIOR. EC SHALL SWITCH FANS WITH LIGHTS OR ON SEPARATE SWITCH AS SHOWN. 17. P-TRAPS MUST BE INSTALLED ON ALL UNITS. MC SHALL INSTALL AUXILIARY DRAIN PANS UNDER OVERHEAD AIR HANDLERS AND AN AUTOMATIC CUT-OFF FLOAT SWITCH FOR EACH. P-TRAPS AND CONDENSATE LINES SHALL BE 1 INCH.
- P-TRAPS AND CONDENSATE LINES MAY BE PVC WHERE NOT LOCATED IN PLENUMS; OTHERWISE, THEY SHALL BE TYPE M COPPER. 18. INSTALL BACKDRAFT DAMPERS ON FRESH AIR AND EXHAUST DUCTS WHERE THEY PENETRATE THE THERMAL ENVELOPE PER NORTH CAROLINA ENERGY CONSERVATION

CODE C402.5.5

 $\Box$ ngi





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**REVISION:** 

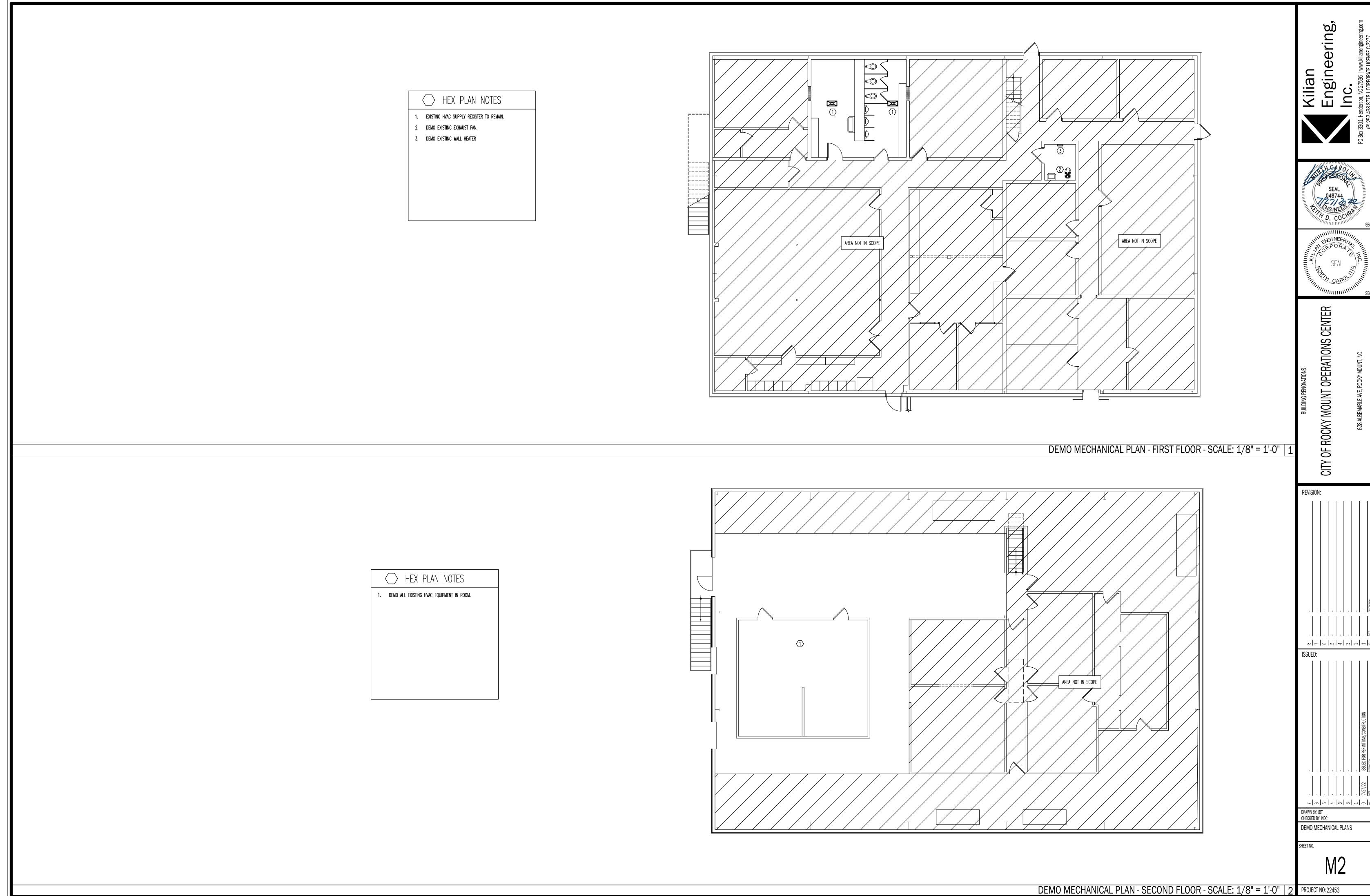
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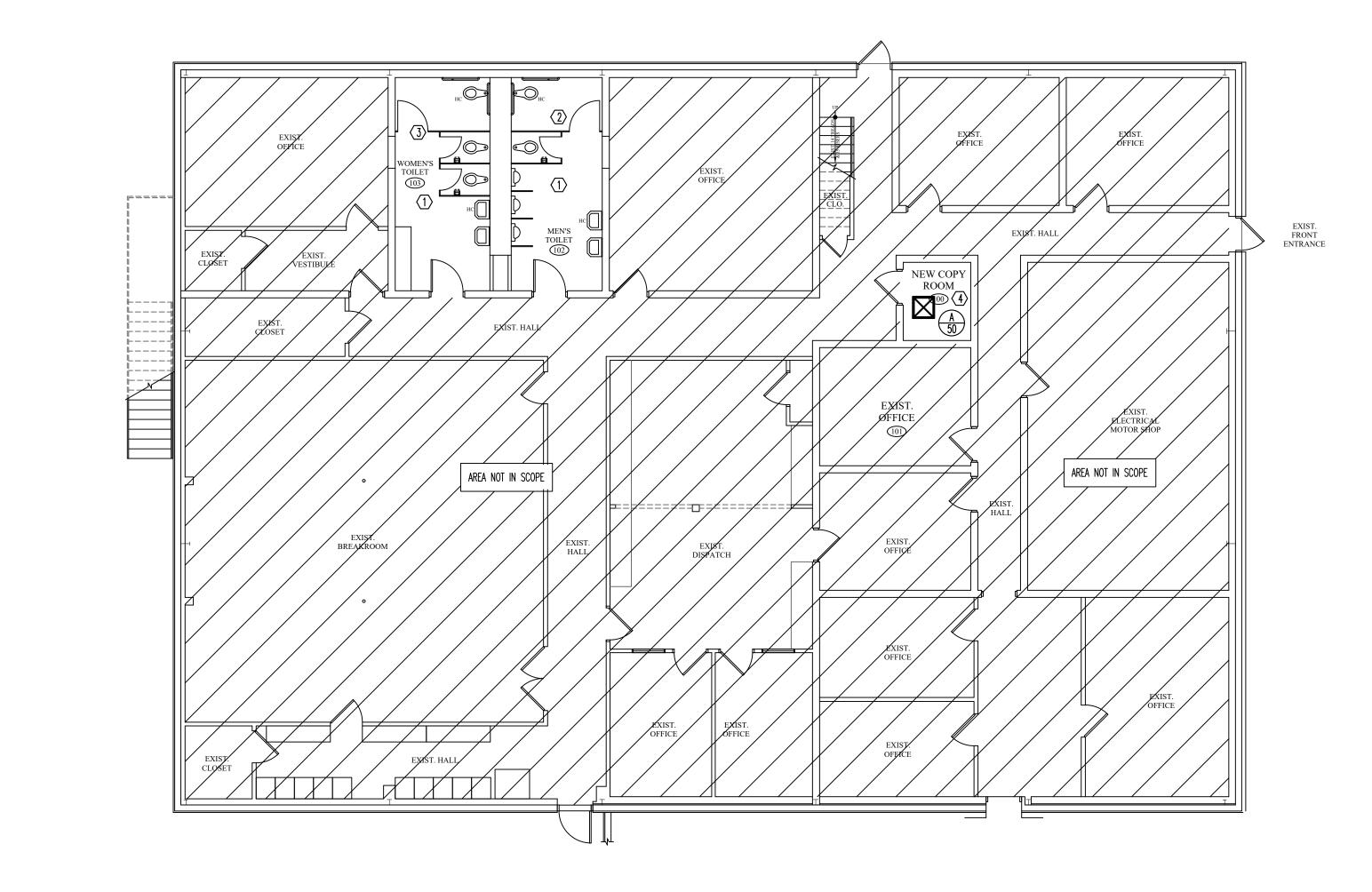
MECHANICAL NOTES & SCHEDULES

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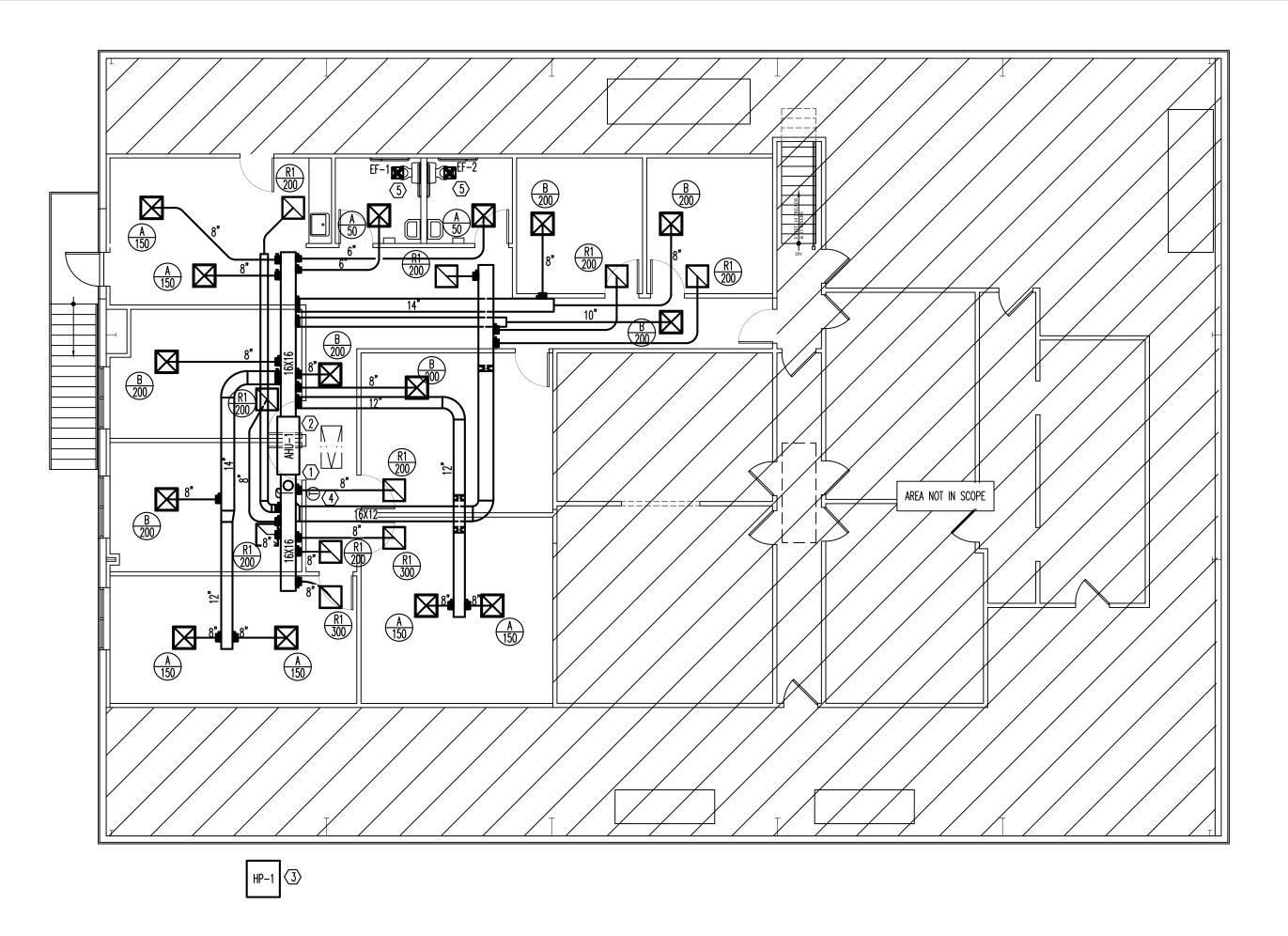
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- 1. EXISTING HVAC TO REMAIN AS IS.
- 2. EXISTING EXHAUST FAN TO REMAIN AS IS.
- 3. MC TO VERIFY THAT EXISTING EXHAUST FAN PULLS 210 CFM. IF NOT REPLACE WITH EF-3 AND SHOWN ON THE EXHAUST FAN TABLE ON SHEET M1, EXHAUST DUCT TO BE 8"ø.
- 4. ADD 50 CFM TO COPIER ROOM. CONNECT TO MAIN TRUNK DUCT VIA 6"Ø DUCT. REBALANCE THE REST OF THE SYSTEM.

# HEX PLAN NOTES

- 1. 10" FRESH AIR DUCT FROM EXTERIOR OF BUILDING. MAITAIN 10' DISTANCE FROM PLUMBING AND EXHAUST
- AHU-1 LOCATED ABOVE CEILING. ROUTE CONDENSATE TO EXTERIOR TO NEAREST ROOF DRAIN LEADER OR TO FRENCH DRAIN.
- 3. HP-1 TO BE LOCATED WITH OTHER OUTDOOR UNITS. VERIFY LOCATION.
- 4. THERMOSTAT FOR AHU-1.
- EXHAUST FAN TO BE DUCTED TO EXTERIOR VIA Ø6" DUCT.

**ROCKY MOUNT** P  $\Box$ REVISION: ISSUED: r | 9 | 2 | 4 | m | m | 1 | 0 | i DRAWN BY: JBT CHECKED BY: KDC

MECHANICAL PLANS

SHEET NO.

Kilian Engineering,

A ROUNT

SEAL 048744 27/2022 VICTORIAL D. COCHRILL

ENGINEER

CARON

OPERATIONS CENTER

MECHANICAL PLAN - SECOND FLOOR - SCALE:1/8" = 1'-0" 2 PROJECT NO: 22453

LED LIGHT FIXTURE SCHEDULE										
MARK	DESCRIPTION	I DIIVED (I EVIC	LAMPS - SYLVANIA		Α	INPUT	T MENUTANA	DEMARKS	ИГС	MODEL
MAKK	DESCRIPTION	LOUVER/LENS	TYPE	ССТ	VULTAGE	VOLTAGE WATTAGE	MOUNTING	REMARKS	MFG	MODEL
Α	LED WRAP ARDUND	ACRYLIC	LED	3500K	120V	32	SURFACE	2	LITHONIA	SBL4-LP835
В	2X4 LED TROFFER	ACRYLIC	LED	3500K	120V	38. 8	RECESSED	2	LITHONIA	EPANL-24-40L-35K
EXH	LED EXIT/COMBO W/ BATTERY BACKUP	ACRYLIC	LED	N/A	120V	4	VARIES	1	LITHONIA	LHQM-LED-R-SD
EM2	DUAL HEAD EMERGENCY FIXTURE	ACRYLIC	LED	N/A	120V	2	VARIES	1	LITHONIA	ELM2-LED-SD
С	EXISTING WRAP ARDUND	-	FLUDRESCENT	N/A	120V	56	SURFACE	-	-	EXISTING
D	EXISTING 2X4 TROFFER	-	FLUDRESCENT	N/A	120V	96	RECESSED	-	-	EXISTING
E	EXISTING 2X4 PARABOLIC TROFFER	-	FLUDRESCENT	N/A	120V	96	RECESSED	-	-	EXISTING
F	EXISTING 8' SHOP LIGHT	-	FLUDRESCENT	N/A	120V	160	SUSPENDED	-	-	EXISTING
G	EXISTING CIRCULAR SURFACE MOUNT LIGHT	-	FLUDRESCENT	N/A	120V	28	SURFACE	-	-	EXISTING
	EXISTING VANITY LIGHT	-	FLUDRESCENT	N/A	120V	28	SURFACE	-	-	EXISTING

FIXTURE SHALL HAVE BATTERY BACKUP FOR 90 MINUTE ILLUMINATION.

OR EQUAL BY COOPER OR DAY—BRITE LIGHTING

				PANEL 0	i				
CKT	LOAD	BKR	LOAD	PH	LOAD	BKR	LOAD		
			kVA		kVA				
1			0, 00	A	0, 00	60/2	AIR HANDLER		
3	MAIN	100/3	0, 00	В	0, 00		TITI THINDELIX		
5			0, 00	С	0. 00	30/2	CONDENSING UNIT		
7	METER SHOP LIGHT	20/1	0, 00	A	0, 00	00, 5			
9	JDEY'S DFFICE	20/1	0, 00	В	0, 00	20/1	GAS METER SHOP SHORT BENCH		
11	RECPS GAS MOTOR SHOP	20/1	0, 00	С	0, 00	20/1	GAS METER SHOP LONG BENCH		
13	LOYD LIGHTS	20/1	0, 00	A	0, 00		VAC PUMP		
15	LOYD REC	20/1	0, 00	В	0, 00	20/3			
17	HAS / FANS	20/1	0, 00	С	0, 00				
19	NICK'S OFFICE REC	20/1	0, 00	A	0, 00	20/1	CONF. ROOM LIGHTS		
21	DAVID'S OFFICE REC	20/1	0, 00	В	0, 00	20/1	DAVID / NICK LIGHTS		
23	SPACE	-	0, 00	С	1. 62	20/1	REC - DFFICE 201, 202/HALL 204, 208		
25	COPY ROOM	20/1	1. 08	Α	0, 90	20/1	REC - RM 206, 207/2ND FLR HVAC SVC		
27	SPACE	-	0, 00	В	1. 44	20/1	REC - CONFERENCE RM 211		
29	SPACE	-	0, 00	С	0, 00	-	SPACE		
			kVA	PH	AMPS				
			2. 0	Α	17				
			1. 4	В	12		NEW LOADS ONLY		
			1.6	С	14				
		VDLTAGE	- /PHΔ<-		2087/1	20V, 3P,		_	
			RATING		EXISTI		···		
	MAIN CIRCU				100A			_	
			RATING		EXISTI				

SERVICE ENTRANCE RATED

ENCLOSURE

MDUNTING SURFACE

\* NEW LOADS ONLY SHOWN

			P	ANEL MI	)P				
СКТ	LOAD	BKR	LOAD	PH	LOAD	BKR	LOAD	СКТ	
CKI	LUAJ	DKK	RKK KA		kVA	DIVK	LUAJ	CKI	
1			0, 00	Α	0, 00			2	
3	PANEL A	100/3	0, 00	В	0, 00	225/3	PANEL B	4	
5			0, 00	С	0, 00			6	
7			0, 00	Α	0, 00			8	
9	PANEL C	125/3	0, 00	В	0, 00	60/3	PANEL D	10	
11			0, 00	С	0, 00			12	
13			0, 00	Α	0, 00			14	
15	PANEL E	125/3	0, 00	В	0, 00	200/3	PANEL F	16	
17			0, 00	С	0, 00			18	
			kVA	PH	AMPS				
			0	A	0				
			0	В	0				
			0	С	0				
		VOLTAGE	E/PHASE		208Y/1	20V, 3P, 4	<u>V</u>		
	BUS	RATING		400A					
	MAIN CIF	CUIT BREAKER	RATING		MLD				
			RATING		EXISTI	NG			
	SER	RVICE ENTRANCE			YES				
		ENG	CLOSURE		NEMA 1				
		MI	JUNTING		SURFAC	Ε			

\* PANEL SHOWN FOR REFERENCE ONLY EACH BREAKER TO REMAIN LABELED SERVICE DISCONNECT

PANEL MDP - NEC ELECTRIC DEMAND SUMMARY 208Y/12OV, 3P, 4W											
COLLIDMENT	DEMAND		kVA		L DAD LAVA	NEC	NUTES (CALCULATIONS				
EQUIPMENT	FACT⊡R	Α	В	С	LOAD KVA	REFERENCE	NDTES/CALCULATIONS				
EXISTING	125%	26. 17	26. 17	26. 17	78. 51	220. 87					
RECEPTACLES < 10 kVA	100%	1. 98	1. 44	1. 62	5, 04	220. 44					
HVAC	100%	3. 40	3, 00	6. 40	12. 80		BASED ON MCA				
DEMAND kVA	PER PHASE	31. 55	30. 61	34. 19							
DEMAND AMPS	PER PHASE	263	255	285							

ELECTRICAL METER READINGS FROM PAST THREE YEARS SHOW MAXIMUM POWER USAGE IS 175 AMPS.

DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS

BUILDING COMPLIES WITH THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE.

ELECTRICAL DESIGNER'S STATEMENT

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE

SEE LIGHTING LEGEND

1763. 00

WATTAGE ALLOWED

1763, 00

1763. 00

WATTS SPECIFIED WATTS ALLOWED

1216. 0

ALLOWANCE (W/sf)

0. 82

PRESCRIPTIVE \_X\_ PERFORMANCE \_\_\_ ENERGY COST BUDGET

LIGHTING SCHEDULE:

| LAMP TYPE REQUIRED IN FIXTURE:

NUMBER OF LAMPS PER FIXTURE

| BALLAST TYPE USED IN FIXTURE:

| NUMBER OF BALLASTS IN FIXTURE:

TOTAL INTERIOR WATTAGE SPECIFIED VS

AREA (sf)

2150

2150

EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)

TOTAL WATTAGE PER FIXTURE:

ALLOWED:

**DCCUPANCY** 

OFFICE

TOTAL

MOTOR TYPE: N/A

| MOTOR HORSEPOVER: N/A

NUMBER OF PHASES: N/A

|MINIMUM EFFICIENCY: N/A

NUMBER OF POLES: N/A

				PANEL A	4				
CKT	LUVD	LDAD BKR		PH	LOAD	BKR	DIAD	LOAD	CKT
CKI	LUAD	LUAN RKK			kVA	DINK	СПАЛ	LKI	
1	FURNACE 60/2		0. 00	A	0, 00	30/2	AIR HANDLER	2	
3	FURNACE	60/2	0. 00	В	0, 00	30/2	HIK LIHINTEK	4	
5	HP-1 50/		3, 36	С	0, 00	20/1	RECPT	6	
7	UL-1	JU/ E	3, 36	A	0, 00	20/1	EXHAUST FAN P.B.	8	
9	AHU-1	30/2	3, 00	В	0, 00	20/1	C. BOOTH LIGHTS	10	
11	HUO-1	30/2	3. 00	С	0, 00	20/1	DRINK MACHINE DUTSIDE	12	
			kVA	PH	AMPS				
		3. 4	A	28					
		3. 0	В	25	NEW LOADS ONLY				
		6. 4	С	53					
		VOLTAGE	Z/PHASE		208Y/1	20V, 3P, 4	W		
	BUS	RATING		100A					
	RCUIT BREAKER	RATING		100A					
	AIC	RATING		EXISTI	NG				
	SEI	RVICE ENTRANCE	RATED		ND				
				ı					

MOUNTING

SURFACE

\* NEW LOADS ONLY SHOWN

					İ		
EXISTING !	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
I PANEL MDP I	I PANEL A I	I PANEL B	I PANEL C	I PANEL D I	I PANEL E I	I PANEL F I	PANEL G
l 120/208V l	<b>l</b> 120/208V <b>l</b>	120/208V	120/208V	120/208V	l 120/208V l	l 120/208V l	<b>l</b> 120/208V
3ø, 4W	3ø, 4W	3ø, 4W	3ø, 4W	3ø, 4W	3ø, 4W	3ø, 4W	3ø, 4W
400A	1 100A 1	1 225A 1	1 125A	1 60A 1	1 125A 1	200A	I 100A
I NEMA I	I NEMA I	I NEMA I	I NEMA I	I NEMA I	I NEMA I	NEMA	NEMA
NEMA 1	NEMA 1	NEMA 1	NEMA 1	NEMA 1	NEMA 1	NEMA 1	NEMA 1

LIGHTING DEVICE LEGEND								
SYMBOL	DESCRIPTION	REMARKS						
\$	SINGLE POLE WALL SWITCH	HEAVY DUTY, AC ONLY, COMMERCIAL GRADE GENERAL USE SNAP SWITCH COMPLYING WITH NEMA WD 6 AND WD 1. IVORY PLASTIC BODY WITH TOGGLE HANDLE. 120-277V, 20A. MEET FEDERAL SPECIFICATION W-S-896.						
\$ M	WALL MOUNTED OCCUPANCY SENSOR	WATTSTOPPER DW-100 LINE VOLTAGE OCCUPANCY SENSOR. ULTRA SONIC AND INFRARED.						
\$ <sub>LV</sub>	LOW VOLTAGE SWITCH	WATTSOPPER LVS-1 LOW VOLTAGE MOMENTARY CONTROL SWITCH.						
(II)	CEILING DCCUPANCY SENSOR	WATTSTOPPER, DT-300 LOW VOLTAGE OCCUPANCY SENSOR. 360° ULTRA SONIC AND INFRARED.						
P	POWER PACK	WATTSTOPPER, BZ-150 LOW VOLTAGE POWER PACK FOR CEILING PACK SENSORS.						
$\bowtie$	EXHAUST FAN	VENT FAN, 120V, CFM AS NOTED MC TO PROVIDE AND VENT, EC TO WIRE.						

		POWER DEVICE LEGEND	MARKING TAPE 6-8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM
SYMBOL	DESCRIPTION	REMARKS	SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT
<b>&gt;</b>	DATA AND TELEPHONE JACK	PHONE/DATA DUTLET. EC TO INSTALL 3/4°C WITH PULL-STRING FROM DUTLET BOX TO ABOVE CEILING FOR FUTURE USE. JACKS AND COMMUNICATION CABLING BY OTHERS.	STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 IN ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT
Ф	DUPLEX RECEPTACLE	NEMA 5-20R, HEAVY DUTY, COMMERCIAL GRADE, 125V, 20A COMPLYING WITH NEMA WD 6 AND WD 1. GFCI OR AFCI IF NOTED. 'WP' DENOTES WEATHERPROOF COVER. 'CH' DENOTES COUNTER HEIGHT. LISTED TAMPERPROOF IF NOTED. MEET FEDERAL SPECIFICATION W-C-596.	PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE
#	QUAD RECEPTACLE	QUAD RECEPTACLE OF SAME CHARACTERISTICS AS DUPLEX TYPE ABOVE.	NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT—TO—POINT. ROUTI
$\Theta$	DUPLEX FLOOR RECEPTACLE	DUPLEX RECEPTACLE OF SAME CHARACTERISTICS AS ABOVE WITH BRASS COVER. MOUNT IN FLOOR. ALL FLOOR BOXES MUST BE LISTED FOR FLOOR APPLICATION.	EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS
ď	FUSIBLE DISCONNECT SWITCH	HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS, FUSE ACCORDING TO NAMEPLATE DATA.	INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.
	DISCONNECT SWITCH	HEAVY DUTY TYPE. TYPE 1 ENCLOSURE IN INTERIOR APPLICATIONS, TYPE 3R ENCLOSURE IN EXTERIOR APPLICATIONS.	10. CABLES, RACEWAYS, OR BOXES, INSTALLED IN EXPOSED OR CONCEALED LOCATIONS UNDER METAL—CORRUGATED SHEET ROOF DECKING, SHALL BE

ELECTRICAL SCHEDULES | 1 |

**GENERAL ELECTRICAL NOTES:** 

THE FOLLOWING ABBREVIATIONS SHALL APPLY TO NOTES AND PLANS: PC - PLUMBING CONTRACTOR, EC - ELECTRICAL CONTRACTOR. MC - MECHANICAL CONTRACTOR, GC - GENERAL CONTRACTOR, FASC — FIRE ALARM SYSTEM CONTRACTOR, AHJ — AUTHORITY HAVING

JURISDICTION. "PROVIDE" MEANS TO FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL ALSO INSTALL MATERIALS AND EQUIPMENT FURNISHED BY OTHERS

AND THE GENERAL CONTRACTOR AS REQUIRED. EC SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY AND REASONABLY INCIDENTAL TO INSURE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. MINOR ITEMS, ACCESSORIES, AND DEVICES REASONABLY INFERABLE AS NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY ELECTRICAL SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WORKMANSHIP SHALL BE IN ACCORDANCE WITH NECA 1 "STANDARD

PRACTICE FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING." ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED TO THE SITE AND UNLOADED BY THE ELECTRICAL CONTRACTOR AT AN APPROVED LOCATION. THE ELECTRICAL CONTRACTOR SHALL PROTECT ALL MATERIALS AND EQUIPMENT FROM BREAKAGE, THEFT, AND THE ELEMENTS. ALL MATERIALS AND EQUIPMENT SHALL REMAIN THE PROPERTY OF THE ELECTRICAL

CONTRACTOR UNTIL THE PROJECT HAS BEEN COMPLETED AND TURNED OVER TO THE OWNER. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS,

FEES. AND INSPECTIONS NECESSARY FOR THE COMPLETION OF THE WORK UNDER THIS CONTRACT. DO NOT SCALE THESE DRAWINGS-REFER TO ARCHITECTURAL SHEETS FOR

TRADE NAMES AND MANUFACTURERS ARE SPECIFIED TO ESTABLISH A QUALITY STANDARD. SUBSTITUTIONS SHALL BE PERMITTED IF APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALL LISTED MODEL NUMBERS SHALL BE VERIFIED WITH THE MANUFACTURER FOR PROPER APPLICATION OF

THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL CONTACT THE ENGINEER TO RESOLVE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE PLANS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES PRIOR TO THE START OF

CONSTRUCTION. 10. GROUNDING AND BONDING SHALL BE PER NEC ARTICLE 250. THE RACEWAY SYSTEM SHALL NOT BE RELIED UPON FOR GROUNDING CONTINUITY. A GREEN EQUIPMENT GROUNDING CONDUCTOR, SIZED PER NEC TABLE 250-122, SHALL BE RUN IN ALL POWER RACEWAYS. FOR NON-ISOLATED GROUND CIRCUITS PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. FOR ISOLATED GROUND CIRCUITS, PROVIDE ONE NEUTRAL AND ONE ISOLATED GROUND WIRE FOR EACH CIRCUIT; IN ADDITION, PROVIDE ONE EQUIPMENT GROUNDING CONDUCTOR PER CONDUIT RUN. MAIN BONDING JUMPERS AND SYSTEM BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH 250.28 OF THE NEC. FOR BUILDINGS OR STRUCTURES SUPPLIED BY FEEDERS OR BRANCH CIRCUITS, GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH 250.32. SEPARATELY DERIVED AC SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH 250.30. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS; ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED PER 250.56 AS NECESSARY. ALL MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE UNDERWRITERS'

RE-EXAMINATION LISTING WHERE SUCH APPROVAL HAS BEEN ESTABLISHED FOR THE TYPE OF DEVICE IN QUESTION. 12. CONDUCTORS, FUSES, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES SHOWN ON THESE PLANS HAVE BEEN SIZED FOR THE SPECIFIED EQUIPMENT. BEFORE ORDERING ELECTRICAL EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON THE SITE

LABORATORIES, INC. STANDARDS OR HAVE UL APPROVAL, OR BEAR UL

AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOULD CONDUCTOR. CIRCUIT BREAKER. OR FUSE SIZES REQUIRE CHANGE. 13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THE FOLLOWING MATERIALS ARE RECYCLED DURING THE CONSTRUCTION PHASE OF THE PROJECT: LIGHT FIXTURES. INCLUDING PROPER DISPOSAL OF BALLASTS, FLUORESCENT LIGHT BULBS, AND TRANSFORMERS, WIRING AND ELECTRICAL EQUIPMENT, AND INSULATION. WASTE MATERIALS CONTAINING LEAD, ASBESTOS, PCBs (FLUORESCENT LAMP BALLASTS). OR OTHER HARMFUL SUBSTANCES SHALL BE HANDLED AND

REQUIREMENTS CONCERNING HAZARDOUS WASTE. 14. ALL WORK SHALL CONFORM TO 2020 NATIONAL ELECTRIC CODE, 2018 STATE BUILDING CODE, AND ALL APPLICABLE LOCAL CODES.

DISPOSED OF IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, RECEPTACLES, TERMINALS, ETC, UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS AND CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS

NOTED OTHERWISE BY OTHER DISCIPLINES. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL DISTRIBUTION EQUIPMENT AS NECESSARY FOR A COMPLETE INSTALLATION. ALL EQUIPMENT IDENTIFIED FOR SERVICE ENTRANCE USE SHALL BE SO LABELED AND UL LISTED FOR SUCH USE. ELECTRICAL CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT WITH CLEARANCES PER NEC 110.26. ELECTRICIAN

SHALL PERMANENTLY LABEL EQUIPMENT PER NEC 110.24. ENCLOSED SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE BY SQUARE D, EATON, OR GE. ENCLOSED SWITCHES SHALL HAVE A HANDLE LOCKABLE IN THE OFF POSITION AND SHALL HAVE A HANDLE INTERLOCKED TO PREVENT OPENING THE FRONT COVER WHILE IN THE ON POSITION. ENCLOSED SWITCHES OF THE FUSIBLE TYPE SHALL BE FUSED IN ACCORDANCE WITH NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN, LITTELFUSE, OR MERSEN.

OCCUPANCY SENSORS SHALL BE BY WATTSTOPPER, LUTRON, LEVITON, SENSOR SWITCH, HUBBELL, OR APPROVED EQUAL.

CIRCUIT BREAKERS SHALL BE MOLDED-CASE, THERMAL MAGNETIC TYPE WITH QUICK-MAKE, QUICK-BREAK MECHANISM, COMMON TRIP ON MULTI-POLE BREAKERS, AND UL LISTED FOR BOTH COPPER AND ALUMINUM CONDUCTORS. CIRCUIT BREAKERS IN PANELS SHALL BE SERIES RATED WITH THE MAIN BREAKER, FULLY RATED FOR THE SYSTEM, OR SERIES RATED WITH THE BREAKER FEEDING THE PANEL FROM THE FACTORY.

ALL WIRE, CONNECTORS, TERMINALS, AND LUGS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE CONDUCTORS ARE RUN IN PARALLEL, LUGS SHALL BE LISTED FOR PARALLEL CONDUCTORS. PUSH WIRE CONNECTORS ARE NOT ALLOWED FOR BUILDING WIRE. PUSH CONNECTORS ARE ONLY ALLOWED, WHEN APPROVED, AS PART OF MANUFACTURED LISTED PRODUCTS. ALL WIRE SHALL BE INSTALLED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.

THE INSULATION TYPE FOR INTERIOR WIRING SHALL BE DUAL RATED THHN/THWN OR XHHW; ALL WIRING INSTALLED BELOW GRADE OR IN MOIST OR WET LOCATIONS SHALL HAVE TYPE THWN OR XHHW INSULATION. INSULATION VOLTAGE RATING SHALL BE 600 VOLTS AND A MINIMUM

TEMPERATURE RATING OF 75°C. CONDUCTORS SHALL BE SOLID OR STRANDED COPPER FOR #10 AWG AND #12 AWG, AND STRANDED COPPER FOR #8 AWG AND LARGER SIZES. ALL WIRING AND CABLE SHALL BE UL LISTED. ALL TERMINATIONS AND DEVICES SHALL BE RATED FOR USE WITH 75°C CONDUCTORS. FINAL CONNECTIONS TO ALL MOTORS AND EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT SHALL BE MADE WITH STRANDED COPPER CONDUCTORS. CONDUCTORS SHALL BE BY CERRO WIRE, INC, INDUSTRIAL WIRE & CABLE, INC, ENCORE WIRE CORPORATION, OR

SOUTHWIRE COMPANY. JOINTS IN SOLID CONDUCTORS SHALL BE SPLICED USING IDEAL "WIRE NUTS", 3M "SCOTCH LOCK", OR T&B "PIGGY" CONNECTORS IN JUNCTION BOXES, OUTLET BOXES, AND LIGHTING FIXTURES. JOINTS IN STRANDED CONDUCTORS SHALL BE SPLICED BY APPROVED MECHANICAL CONNECTORS AND GUM RUBBER TAPE OR FRICTION TAPE. SOLDERLESS MECHANICAL CONNECTORS FOR SPLICES AND TAPS, PROVIDED WITH UL APPROVED INSULATING COVERS, MAY BE USED INSTEAD OF MECHANICAL CONNECTORS PLUS TAPE. IN ALL CASES, CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICING SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS. WHERE CONCENTRIC, ECCENTRIC, OR OVERSIZED KNOCKOUTS ARE ENCOUNTERED, A GROUNDING TYPE INSULATED BUSHING SHALL BE PROVIDED.

ALL LUMINAIRES SHALL BE LISTED. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED AS SUITABLE FOR THE RESPECTIVE USE. EMERGENCY LIGHTING SHALL BE INSTALLED AS SHOWN. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR PRIOR TO INSTALLATION. ALL FLUORESCENT FIXTURES SHALL HAVE ELECTRONIC BALLASTS MEETING ANSI C82.11 FOR ELECTRONIC BALLAST PERFORMANCE. ALL BALLASTS SHALL BE UL LISTED AND MEET FEDERAL AND STATE EFFICIENCY REQUIREMENTS.

10. ALL CONDUIT, FITTINGS, COUPLINGS, AND SUPPORTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CONDUIT FITTINGS AND COUPLINGS SHALL BE BY APPLETON, RACO, OR O-Z/GEDNEY, COUPLINGS SHALL BE THREADED, SET-SCREW, OR COMPRESSION TYPE, INDENTER OR CRIMP TYPE ARE NOT PERMITTED. CONDUIT FITTINGS AT ALL ELECTRICAL BOXES INCLUDING PULL, JUNCTION, AND OUTLET BOXES, SHALL HAVE INSULATED THROATS TO PREVENT INSULATION SCORING. DIE CAST FITTINGS ARE NOT

EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE-AMERICAN NATIONAL STANDARD FOR STEEL ELECTRICAL METALLIC TUBING (EMT). ANSI C80.3 AND UL 797. RIGID METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR ELECTRICAL RIGID STEEL CONDUIT (ERSC), ANSI C80.1 AND UL 6. INTERMEDIATE METAL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI-AMERICAN NATIONAL STANDARD FOR

INTERMEDIATE METAL CONDUIT ANSI C80.6 AND UL 1242. METAL CONDUIT SHALL BE BY ALLIED TUBING & CONDUIT. BECK MANUFACTURING, INC, OR WHEATLAND TUBE COMPANY. FLEXIBLE METAL CONDUIT. LIQUID-TIGHT FLEXIBLE METAL CONDUIT, AND NONMETALLIC CONDUIT SHALL BE BY AFC CABLE SYSTEMS, INC, ELECTRI-FLEX COMPANY, OR INTERNATIONAL METAL HOSE.

1. EC SHALL REVIEW THE MECHANICAL PLANS TO ESTABLISH POINTS OF CONNECTION AND THE EXTENT OF THE ELECTRICAL WORK TO BE PROVIDED IN THE CONTRACT.

ALL CIRCUIT BREAKERS FEEDING HVAC EQUIPMENT SHALL BE HACR BREAKERS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG IN 3/4 in CONDUIT. EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE SOURCE PER NEC 210.4(B). GROUP ALL CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT PER 210.4(D) WITH WIRE TIES OR SIMILAR MEANS. DO NOT EXCEED THREE HOMERUNS PER CONDUIT. DO NOT INSTALL ISOLATED GROUND AND NON-ISOLATED GROUND CIRCUITS IN THE SAME CONDUIT. INSTALL CONDUCTORS OF DIFFERENT VOLTAGES IN SEPARATE CONDUITS.

COLOR CODE CONDUCTORS PER NEC. FEEDERS SHALL BE IDENTIFIED IN ACCORDANCE WITH NEC 215.12. USE BLACK, RED, AND BLUE FOR PHASES A. B. AND C RESPECTIVELY ON 208Y/120 VOLT THREE-PHASE Y SYSTEMS AND WHITE FOR THE NEUTRAL. ISOLATED GROUND WIRES SHALL BE GREEN WITH YELLOW BANDS OR STRIPES. THIS IDENTIFICATION SHALL BE MADE AT EACH POINT WHERE A CONNECTION IS MADE. COLORS SHALL BE FACTORY APPLIED FOR CONDUCTORS #6 AWG AND SMALLER. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN IN COLOR AND MINIMUM #12 AWG. THE EC SHALL PROVIDE PLENUM RATED CABLE FOR ANY ELECTRICAL. TELEPHONE, COMMUNICATION, OR OTHER CABLE THAT ENTERS CEILING RETURN PLENUMS.

ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING. COORDINATE LIGHTING LAYOUT WITH CEILING GRID. MECHANICAL EQUIPMENT, DUCTWORK AND SPRINKLER HEADS AS NECESSARY. SEE REFLECTED CEILING PLAN FOR DETAILS. FLUORESCENT FIXTURES UTILIZING DOUBLE-ENDED LAMPS MUST HAVE A DISCONNECTING MEANS

COMPLYING WITH NEC 410.130(G). MOUNT LIGHT SWITCHES AT 48 in AFF. MULTIPLE SWITCHES AT SAME LOCATION SHALL BE UNDER ONE WALL PLATE. VERIFY WALL PLATE COLOR AND MATERIAL WITH THE ARCHITECT/OWNER. INSTALL SWITCHES WITH off POSITION DOWN. ALL SWITCHES SHALL BE HEAVY DUTY, IVORY PLASTIC WITH TOGGLE HANDLE, RATED 120-277V AC, AND COMPLYING WITH NEMA WD 6 AND WD 1. SWITCHES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. PROVIDE BOX DEVICE PARTITION/DIVIDERS FOR MULTI-GANG BOXES FOR COMPLIANCE WITH NEC

ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE-STOPPING AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND WALLS TO PRESERVE OR RESTORE THE FIRE—RESISTANCE RATING. SEAL PENETRATIONS USING A UL LISTED SYSTEM FOUND IN THE UL DIRECTORY SPECIFIC TO THE UL LISTING OF THE ASSEMBLY BEING PENETRATED. SEE ARCHITECTURAL PLANS FOR UL RATED ASSEMBLIES SPECIFIC TO THIS PROJECT.

ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLES IN KITCHENS, RESTROOMS, OUTDOORS, AND IN SHOP AREAS AS REQUIRED BY NEC. REFRIGERATORS AND WATER COOLERS MUST HAVE A DEDICATED GFCI Breaker. Each outdoor hvac unit must have a GFCI receptacle WITHIN 25 FEET FOR SERVICING. GFCI RECEPTACLES SHALL CONFORM TO UL 943 CLASS A AND UL 498 STANDARDS. RECEPTACLES SHALL BE BY COOPER WIRING DEVICES, LEVITON MANUFACTURING, PASS & SEYMOUR, OR HUBBELL. ALL RECEPTACLES SHALL BE 125V RATED, HEAVY DUTY, AND COMPLY WITH NEMA WD 6 AND WD 1.

LOCATIONS AND HEIGHTS OF ALL WALL-MOUNTED DEVICES SHALL BE

COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. CONCEAL ALL CONDUIT EXCEPT IN MECHANICAL ROOMS OR UNFINISHED AREAS AS NOTED. USE EMT CONDUIT FOR ALL BRANCH CIRCUITS AND FEEDERS INSIDE THE BUILDING. TYPE MC CABLE AND TYPE AC CABLE MAY BE INSTALLED WITHIN WALLS IF ALL NEUTRAL WIRES, ISOLATED GROUND WIRES, AND EQUIPMENT GROUND WIRES AS LISTED ABOVE ARE CONTAINED IN THE CABLE. FLEXIBLE CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SHALL BE MADE USING WEATHERPROOF FLEXIBLE CONDUIT. FOR LAY-IN LIGHT FIXTURES, USE MAXIMUM OF SIX (6) FEET OF FLEXIBLE MC CABLE (OR THE FLEXIBLE CONDUIT PROVIDED BY THE FIXTURE MANUFACTURER). SCHEDULE 40 PVC CONDUIT MAY BE USED FOR THE SECONDARY UNDERGROUND SERVICE, UNDERGROUND TELEPHONE SERVICE AND BRANCH AND FEEDER CIRCUITS UNDER SLAB OR EXTERIOR TO THE BUILDING. EXPOSED EXTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED WITH UNDERGROUND LINE MARKING TAPE 6-8 in BELOW GRADE DIRECTLY ABOVE THE RACEWAY. PROVIDE PULL WIRE IN EMPTY CONDUITS. UPSIZE CONDUIT FROM MINIMUM SIZE AS NECESSARY FOR LONGER PULLS. UNDERGROUND RACEWAYS THAT STUB INTO THE BOTTOM OF SWITCHBOARDS, OUTDOOR TRANSFORMERS, GENERATORS, ETC., SHALL RISE AT LEAST 2 in ABOVE THE FINISHED SLAB TO PREVENT WATER FROM DRAINING INTO THE RACEWAYS. RACEWAYS THAT PENETRATE EXTERIOR WALLS OR INTERIOR PARTITIONS SEPARATING SPACES THAT WILL BE AT SIGNIFICANTLY DIFFERENT TEMPERATURES SHALL BE SEALED IN ACCORDANCE WITH 300.5(G), 300.7(A), AND 300.50(E) OF THE NEC. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. ROUTE EXPOSED CONDUIT AND CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. COMPLETELY AND THOROUGHLY SWAB ALL RACEWAYS BEFORE INSTALLING WIRE. PULL ALL CONDUCTORS INTO EACH RACEWAY AT ONE TIME. USE A SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE #4 AWG AND LARGER.

INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1-1/2 in MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX. A CABLE, RACEWAY, OR BOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL-CORRUGATED, SHEET DECKING-TYPE ROOF. SEE NEC 300.4(E).

11. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL OUTLET, JUNCTION, PULL BOXES, FITTINGS, AND SUPPORTS. ALL OUTLET AND JUNCTION BOXES SHALL BE GALVANIZED STEEL TYPE BY APPLETON, STEEL CITY, OR RACO. EXTERIOR BOXES SHALL BE TYPE FS. VAPORTITE BOXES SHALL BE TYPE GS. WHERE SURFACE MOUNTED BOXES ARE USED, THOSE BOXES AND THEIR FACEPLATES SHALL HAVE ROUNDED CORNERS. BOXES INSTALLED IN FLOORS SHALL BE RATED FOR THE APPLICATION. MOUNT JUNCTION AND OUTLET BOXES FLUSH WITH FINISH SURFACES UNLESS OTHERWISE NOTED WHERE MOUNTING HEIGHTS ARE GIVEN, THEY SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE BOX. ALL BOXES SHALL BE SIZED PER NEC ARTICLE 314. ALL OUTLET AND JUNCTION BOXES SHALL HAVE A COVER PLATE, PROVIDED BY THE ELECTRICAL CONTRACTOR. OUTLET BOXES IN RATED WALLS SHALL BE INSTALLED IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE 714.3.2 (MAXIMUM BOX SIZE IS 16 SQUARE in AND MAXIMUM OF SIX (6) BOXES PER 100 SQUARE FEET). INSTALL OUTLET BOXES IN RATED WALLS SUCH THAT OPENINGS OCCUR IN ONE SIDE ONLY WITHIN ANY GIVEN STUD SPACE. ALL CLEARANCES BETWEEN THE OUTLET BOX AND THE GYPSUM BOARD SHALL BE FILLED WITH JOINT COMPOUND OR OTHER APPROVED FIRE STOP MATERIAL. FLUSH MOUNTED JUNCTION BOXES IN ADJACENT ROOMS SHALL NOT BE MOUNTED BACK-TO-BACK. SURFACE MOUNTED FIXTURES SHALL BE FED THROUGH FLUSH MOUNTED 4X4 OCTAGONAL OR SQUARE BOXES.

12. ALL CONDUIT, BOXES, AND ELECTRICAL EQUIPMENT SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURAL MEMBERS OR EMBEDDED IN CONCRETE OR MASONRY. ELECTRICAL SUPPORTS SHALL NOT BE ATTACHED TO DUCTWORK, PIPING, OR THEIR SUPPORTS. HANGERS SHALL BE CATALOG ITEMS COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. FOR METAL ROOF DECK INSTALLATIONS 1 in EMT CONDUIT MAXIMUM AND 4 in JUNCTION BOXES MAXIMUM MAY BE SUPPORTED BY DECKING. THE SUSPENDED CEILING SYSTEM SHALL NOT BE USED FOR THE SUPPORT OF ELECTRICAL RACEWAY SYSTEMS OR SUPPORT OF COMMUNICATIONS OR DATA SYSTEMS WIRING. CONTRACTOR SHALL COMPLY WITH 1613 OF THE NORTH CAROLINA GENERAL CONSTRUCTION BUILDING CODE.

13. ABANDONED CONDUIT AND BOXES SHALL HAVE ALL ELECTRICAL WIRING REMOVED COMPLETELY AND NOT JUST "MADE SAFE." CONDUIT AND BOXES SHALL BE REMOVED WHERE PRACTICAL WITHOUT CREATING ADDITIONAL DEMOLITION/RESTITUTION WORK FOR OTHER TRADES.

14. WHERE CONDUCTORS ARE RUN IN PARALLEL, THE EC SHALL COMPLY WITH NEC 310.4. 15. INSTALL ONE (1) 3/4 in FIRE RETARDANT TREATED PLYWOOD BACKBOARD WHERE INDICATED ON THE DRAWINGS FOR THE USE BY THE TELEPHONE SYSTEM. PROVIDE A 120 VOLT RECEPTACLE ADJACENT TO THE TELEPHONE

BOARD. GROUND ALL TELEPHONE AND COMMUNICATIONS CIRCUITS PER NEC

16. ALL TELEPHONE AND COMMUNICATIONS OUTLETS AND RACEWAYS ARE ROUGH-INS ONLY. EACH TELEPHONE AND COMMUNICATIONS OUTLET SHALL BE A 4 in SQUARE BY 2-1/8 in DEEP BOX WITH 3/4 in KNOCK-OUTS AND A 3/4 in CONDUIT STUBBED FROM THE OUTLET BOX TO ABOVE THE CEILING. PROVIDE A NON-METALLIC INSULATING BUSHING ON ALL CONDUITS STUBBED ABOVE THE CEILING. PROVIDE A BLANK COVER PLATE ON ALL

17. ELECTRICAL CONTRACTOR SHALL INSTALL DISCONNECT SWITCHES IN SIGHT OF ALL HARDWIRED EQUIPMENT AND APPLIANCES OR PROVIDE BREAKERS CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER NEC 422.31. FOR MOTOR DRIVEN APPLIANCES, PROVIDE A DISCONNECTING MEANS PER NEC 422.31 AND 430 PART IX. WHERE AN INDIVIDUAL DISCONNECT SWITCH, CIRCUIT BREAKER, STARTER, ETC, IS SHOWN ON THE PLANS ADJACENT TO ITS LOAD AND NOT LOCATED ON A WALL, PROVIDE NECESSARY MATERIALS AND LABOR TO SUPPORT THE DEVICE.

18. ELECTRICAL CONTRACTOR SHALL FIELD IDENTIFY ALL SWITCH BOARD, PANEL BOARDS, CONTROL PANELS, METER SOCKETS, ETC., TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS PER 110.16 OF

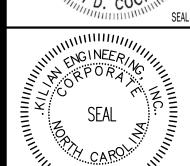
19. ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC. BLACK FRONT, AND BACK WITH WHITE CORE. WHITE ENGRAVED LETTERS (1/4 in MINIMUM) ETCHED INTO THE WHITE CORE. ELECTRICAL CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD THAT ACCURATELY IDENTIFIES CIRCUITS INSIDE EACH PANEL. HANDWRITTEN LABELS ARE NOT ACCEPTABLE.

WGINEER

**(1)** 

**(1)** 

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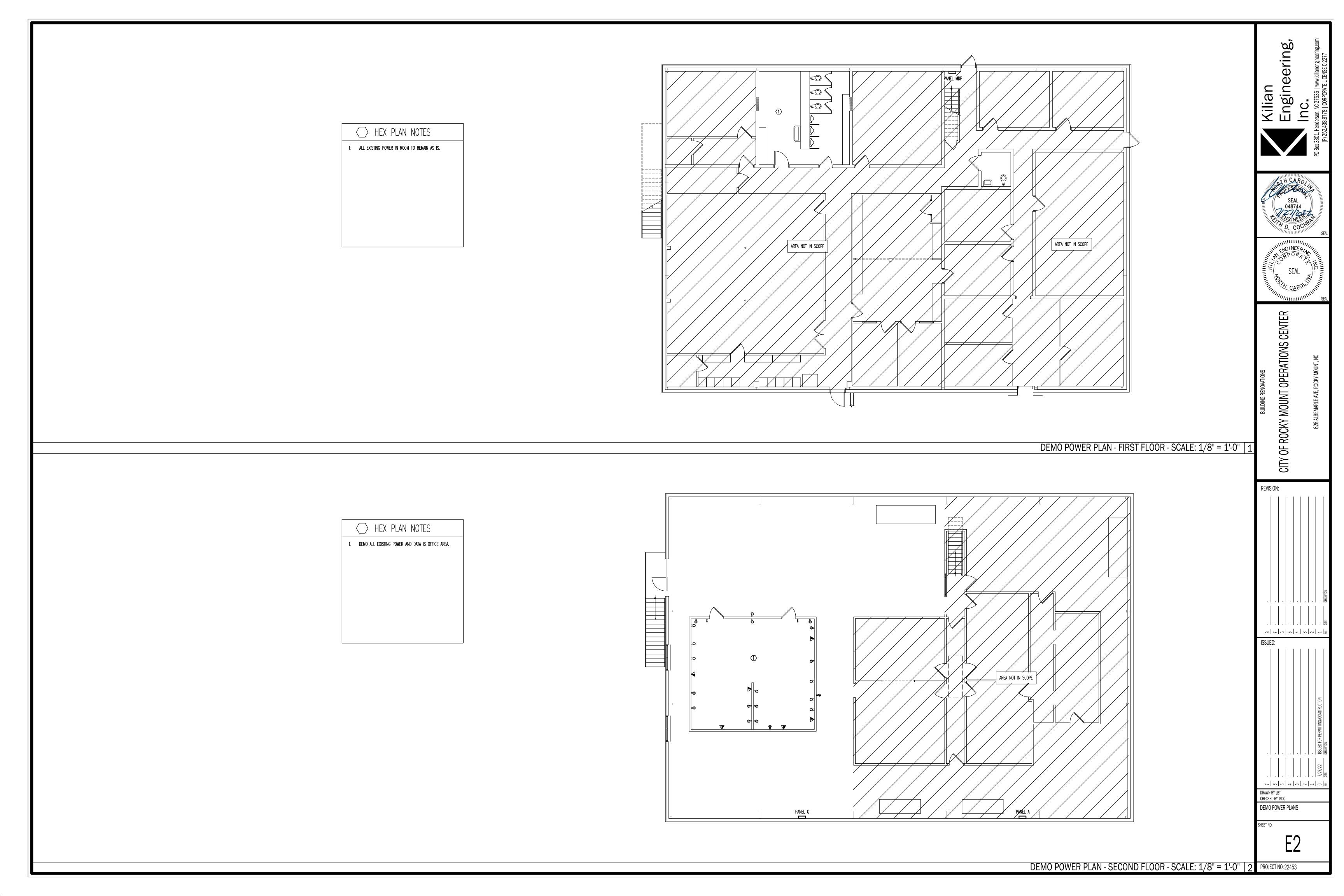


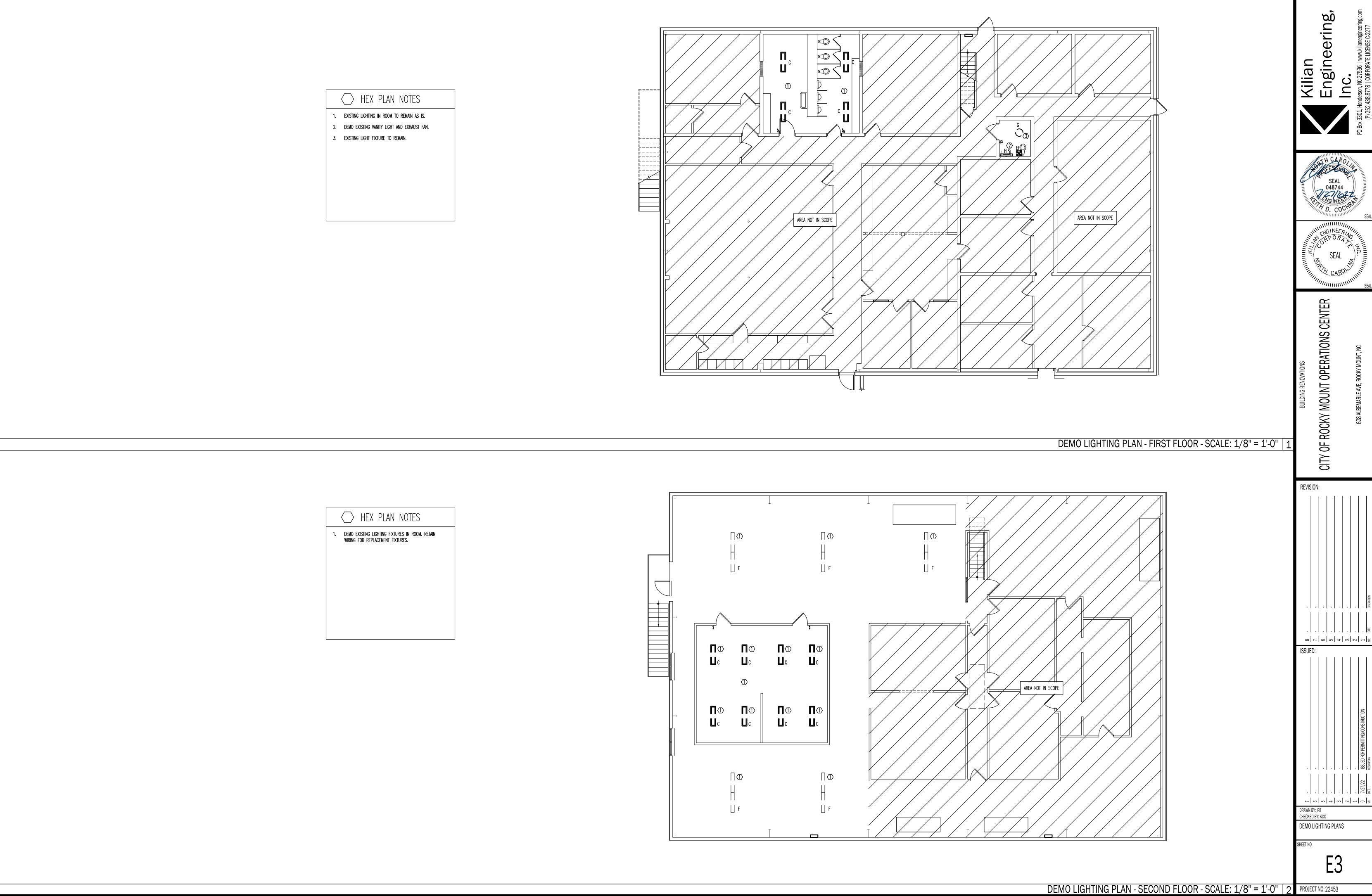
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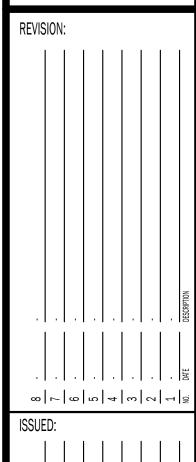
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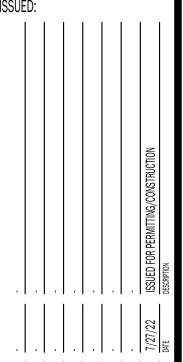
V 9 2 4 8 7 1 0 DRAWN BY: JBT CHECKED BY: KDC **ELECTRICAL NOTES & SCHEDULES** 

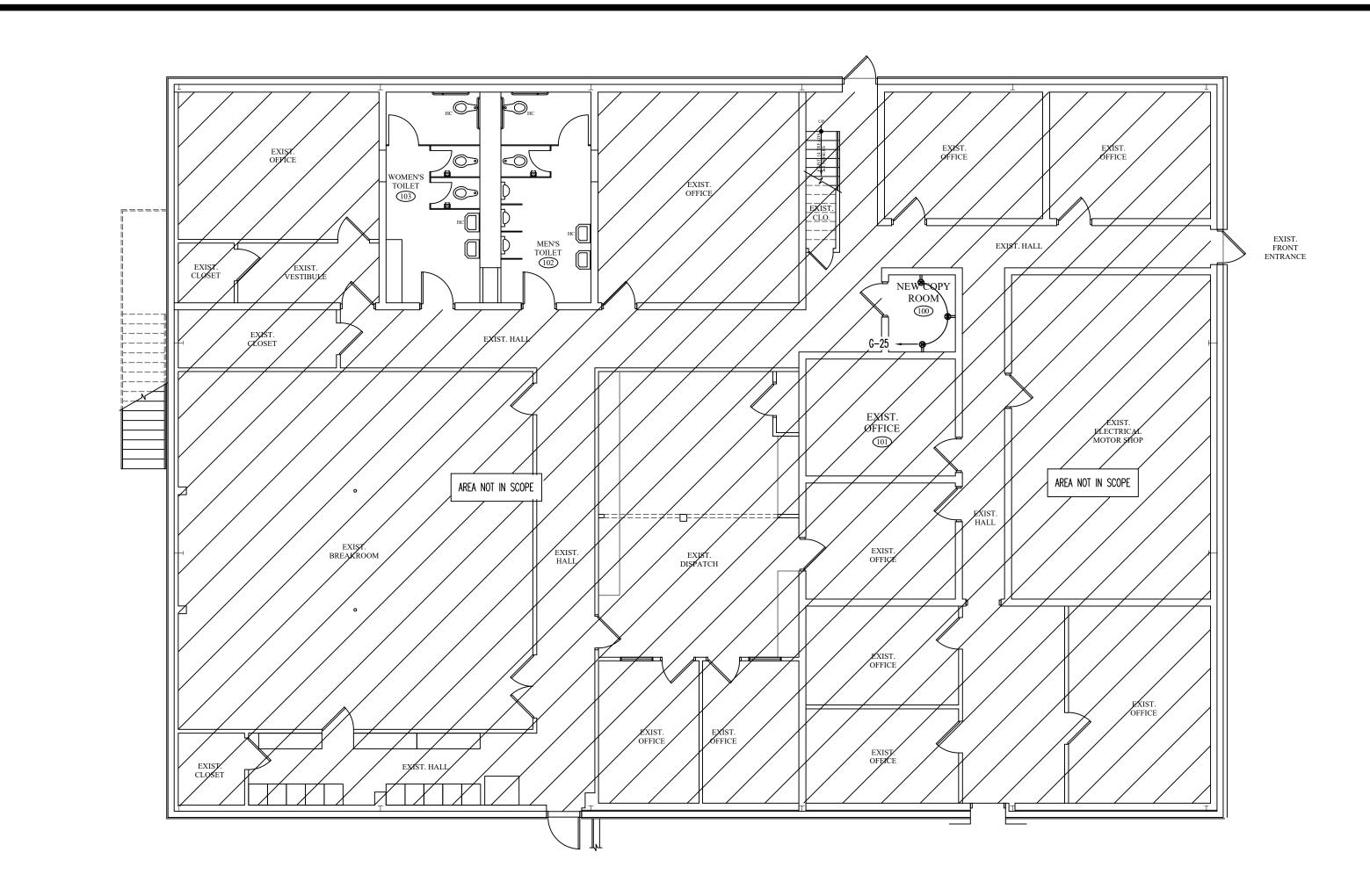
ELECTRICAL NOTES 2 PROJECT NO: 22453



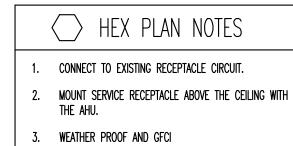








POWER PLAN - FIRST FLOOR - SCALE: 1/8" = 1'-0" | 1



HEX PLAN NOTES

1. EXISTING POWER IN ROOM TO REMAIN AS IS.

- 4. NETWORK AND PHONE
- 5. FLOOR MOUNTED POWER, NETWORK, AND PHONE.

20 DUPLEX AT 180 WATTS/DUPLEX

1 QUAD AT 360 WATTS/FIXTURE

(20 D)(180 W/D) + (1 Q)(360 W/Q) = 3936 WATTS

• RECEPTACLE LOAD ADDED TO EXISTING CIRCUITS:

20 DUPLEX AT 180 WATTS/DUPLEX

(20 D)(180 W/D) = 3600 WATTS

• NET RECEPTACLE LOAD ON EXISTING CIRCUITS:

3936 WATTS REMOVED

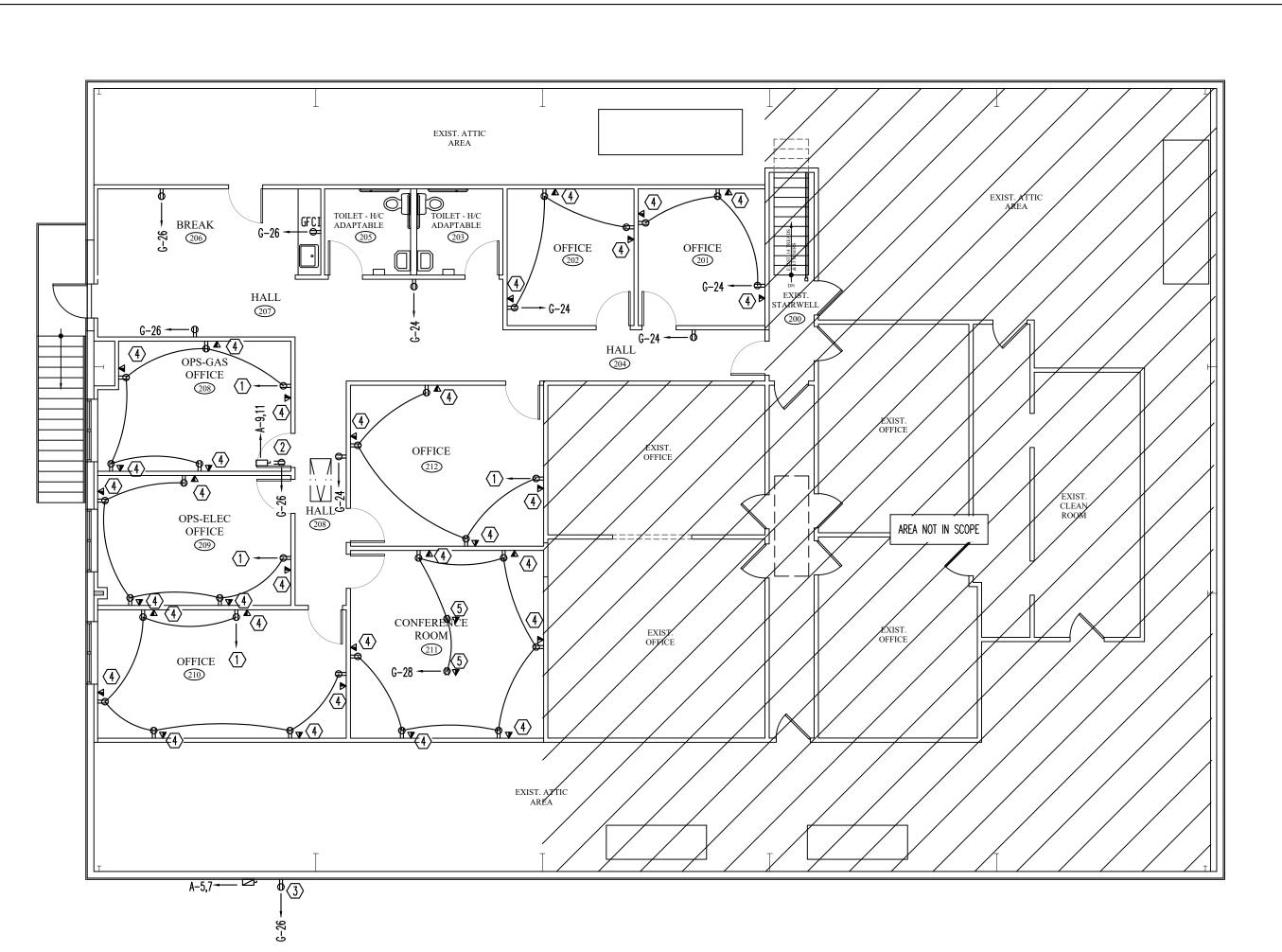
3600 WATTS ADDED

3600 W - 3936 W = -336 WATTS

NET RECEPTACLE LOAD REDUCTION

RECEPTACLE LOAD

• RECEPTACLE LOAD REMOVED FROM EXISTING CIRCUITS:



BUILDING RENOVATIONS

ENGINE MOUNT OPERATIONS CENTER

ENGINE MANUAL PERATIONS CENTER

ENGINE MANUAL PROCKY MOUNT, NC

ENGINE M

DRAWN BY: JBT
CHECKED BY: KDC

POWER PLANS

SHEET NO.

POWER PLAN - SECOND FLOOR - SCALE: 1/8" = 1'-0" 2 PROJECT NO: 22453

