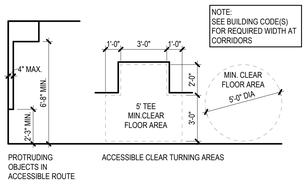
GREENVILLE UTILITIES COMMISSION

RENOVATIONS TO OPERATIONS CENTER

3355 NC-43, GREENVILLE, NC 27834

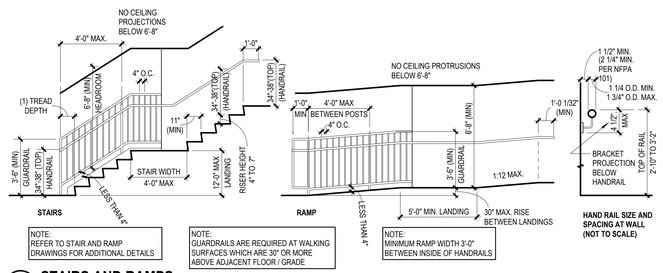
1 DOORWAY FEATURES

NOT TO SCALE



2 ACCESSIBLE CLEARANCES

NOT TO SCALE

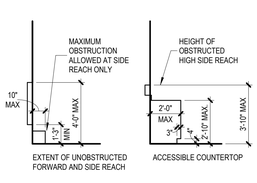


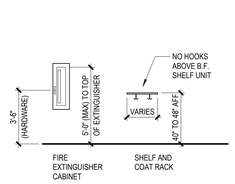
5 STAIRS AND RAMPS

NOT TO SCALE

3 MISCELLANEOUS DEVICES

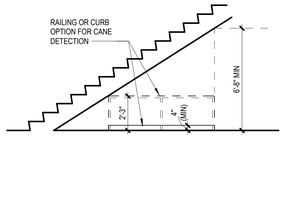
NOT TO SCALE





4 MISC. ACCESSORIES

NOT TO SCALE



6 REDUCED VERTICAL CLEARANCE

NOT TO SCALE

PROGRESSIVE AE GENERAL SYMBOLOGY

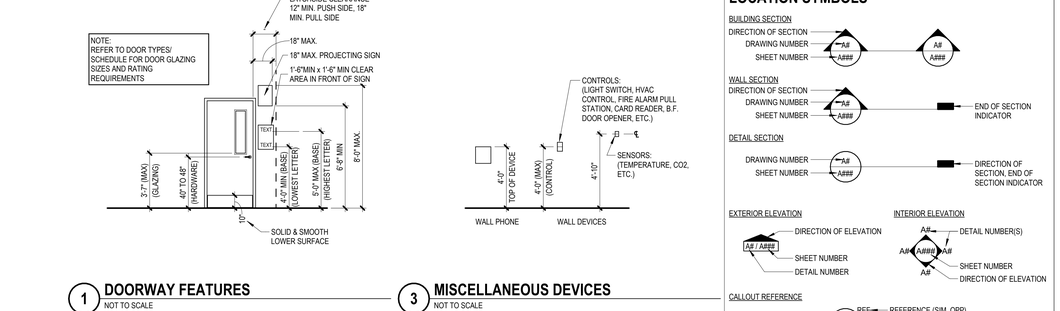
DRAWING TITLES

PLAN TITLE

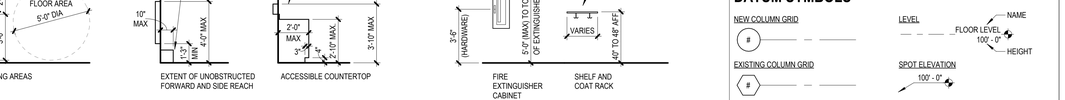
PLAN CALLOUT / SECTION / ELEVATION TITLE

REVISION SYMBOLS

LOCATION SYMBOLS



DATUM SYMBOLS



TAGS

SYMBOLS

BREAK LINE

PROGRESSIVE AE GENERAL ABBREVIATIONS

A/C	AIR CONDITIONING
A/V	AUDIO / VIDEO, AUDIO / VISUAL
ACC	ACCESSIBLE, ACCESSIBILITY
ACM	ALUMINUM COMPOSITE PANELS
ACP	ACOUSTICAL CEILING PANELS
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
ARCH	ARCHITECT, ARCHITECTURAL
AUTO	AUTOMATIC
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BO	BOTTOM OF
BRG	BEARING
CAB	CABINET, CABINETRY
CCTV	CLOSED-CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED / OWNER INSTALLED
CFMF	COLD FORMED METAL FRAMING
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR, CLEARANCE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION
COORD	COORDINATE
CPT	CARPET
CR	CARD READER
CSMT	CASEMENT
CTR	CENTER
CTV	CABLE TELEVISION
D	DEEP, DEPTH
DEFS	DIRECT-APPLIED EXTERIOR FINISH SYSTEM
DEG	DEGREE(S)
DEMO	DEMOLISH, DEMOLITION
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION, DIMENSIONAL
DIST	DISTANCE
DIV	DIVISION, DIVIDE
DN	DOWN
DR	DOOR, DRIVE
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING(S)
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENG	ENGINEER
EO	EDGE OF
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXT	EXTERIOR
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISHED FLOOR ELEVATION
FO	FACE OF
FRT	FIRE RETARDANT TREATED
FT, '	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FV	FIELD VERIFY
GA	GAUGE, GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR, GENERAL CONTRACT
GYP	GYPSUM
HD	HEAVY DUTY
HDW	HARDWARE
HM	HOLLOW METAL
HORZ	HORIZONTAL
HT	HEIGHT
HVAC	HEATING / VENTILATION / AIR CONDITIONING
ID	INSIDE DIAMETER
IMP	INSULATED METAL PANEL
IN, "	INCH
INS	INSULATE, INSULATION
INT	INTERIOR
J-BOX	JUNCTION BOX
LAV	LAVATORY
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LH	LEFT HAND, LEFT HANDED
LT	LITE, LIGHT
LVL	LAMINATED VENEER LUMER
LVT	LUXURY VINYL TILE
MATL	MATERIAL(S)
MAX	MAXIMUM
MCM	METAL COMPOSITE MATERIAL
MECH	MECHANICAL
MFR	MANUFACTURER, MANUFACTURED
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED, CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OHD	OVERHEAD DOOR
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
PERF	PERFORATE, PERFORATED
PERP	PERPENDICULAR
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PNT	PAINT, PAINTED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
QT	QUARRY TILE
QTY	QUANTITY
R	RISER
RD	ROOF DRAIN, ROAD
REF	REFRIGERATOR
REQ	REQUIRED, REQUIREMENT
REV	REVISE, REVISION
RH	RIGHT HAND, RIGHT HANDED
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTU	ROOF TOP UNIT
SCHED	SCHEDULE
SH	SHOWER
SIM	SIMILAR
SIP	STRUCTURAL INSULATED PANEL
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQ	SQUARE
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STOR	STORAGE
STR	STRUCTURAL
T	TREAD
T&G	TONGUE AND GROOVED
TEMP	TEMPORARY
THK	THICK, THICKNESS
TO	TOP OF
TYP	TYPICAL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL, VERTICALLY
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WP	WORK POINT, WORKING POINT
WT	WEIGHT

DRAWING INDEX - OVERALL

Sheet Number	Sheet Name
GENERAL	
TD001	TITLE DRAWING
G001	PROJECT PHASING PLAN

DRAWING INDEX - BUILDING 2

Sheet Number	Sheet Name
GENERAL	
2G101	CODE COMPLIANCE PLAN
2G102	CODE DECISION DIAGRAM
2G103	LIFE SAFETY PLAN -LEVEL 1
2G104	LIFE SAFETY PLAN - LEVEL 2
2G105	LOGISTICS PLAN
STRUCTURAL	
2S001	GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES
2S002	SPECIAL INSPECTIONS
2S101	STRUCTURAL PLANS AND DETAILS
ARCHITECTURAL	
2AD101	DEMOLITION PLAN
2AD102	DEMOLITION ENLARGED PLANS
2AD200	DEMOLITION REFLECTED CEILING PLAN
2A101	FLOOR PLAN
2A102	ENLARGED RENOVATION FLOOR PLAN - TRAINING ROOM
2A103	ENLARGED RENOVATION FLOOR PLAN - FITNESS AREA
2A200	REFLECTED CEILING PLAN
2A201	REFLECTED CEILING PLAN
2A202	REFLECTED CEILING PLAN
2A600	INTERIOR ELEVATIONS
2A601	DOOR SCHEDULE, ELEVATIONS, AND DETAILS
2A800	FINISH PLAN AND MATERIALS LIST SCHEDULE
FIRE PROTECTION	
2FP001	GENERAL FIRE PROTECTION INFORMATION
2FP101	FIRE PROTECTION PLAN
PLUMBING	
2P001	GENERAL PLUMBING INFORMATION
2P101	PLUMBING PLAN, SCHEDULES AND DETAILS
MECHANICAL	
2M001	GENERAL MECHANICAL INFORMATION
2MD101	FITNESS AND BREAK ROOM MECHANICAL DEMOLITION PLAN
2MD102	TRAINING ROOM MECHANICAL DEMOLITION PLAN
2M101	FITNESS AND BREAK ROOM HVAC PLAN
2M102	TRAINING ROOM HVAC PLAN
2M501	MECHANICAL DETAILS
2M601	MECHANICAL SCHEDULES
2M701	MECHANICAL CONTROLS
ELECTRICAL	
2E001	ELECTRICAL NOTES AND ABBREVIATIONS
2ED101	FIRST FLOOR DEMOLITION PLAN
2EP101	FIRST FLOOR POWER PLAN
2EL101	FIRST FLOOR LIGHTING PLAN
2E501	ELECTRICAL ONE-LINE DIAGRAMS

DRAWING INDEX - BUILDING 3

Sheet Number	Sheet Name
GENERAL	
3G101	CODE COMPLIANCE PLAN
3G104	LIFE SAFETY PLAN & CODE DECISION DIAGRAM
3G105	LOGISTICS PLAN
STRUCTURAL	
3S001	GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES
3S002	SPECIAL INSPECTIONS
3S101	STRUCTURAL PLANS AND DETAILS
3S102	STRUCTURAL PLANS AND DETAILS - ALTERNATE 3
3S201	TYPICAL DETAILS
ARCHITECTURAL	
3AD101	OVERALL DEMOLITION PLANS
3AD102	ENLARGED DEMOLITION FLOOR PLAN
3AD201	ENLARGED DEMOLITION RCP
3A100	OVERALL RENOVATION FLOOR PLANS
3A101	ENLARGED FLOOR PLAN - NEW FACILITES
3A102	ENLARGED FLOOR PLAN FACILITES MANAGEMENT OFFICES
3A103	MEZZANINE (ALTERNATE 3)
3A112	RENOVATION REFLECTED CEILING PLAN
3A201	INTERIOR ELEVATIONS & DETAILS
3A202	DETAILS ALTERNATE 3
3A601	DOOR SCHEDULE, ELEVATIONS, AND DETAILS
3A800	FINISH PLAN AND MATERIALS LIST
FIRE PROTECTION	
3FP001	GENERAL FIRE PROTECTION INFORMATION
3FP101	FIRST FLOOR FIRE PROTECTION PLAN
PLUMBING	
3P001	GENERAL PLUMBING INFORMATION
3PD101	PLUMBING DEMOLITION PLAN
3P101	PLUMBING PLAN AND DETAILS
MECHANICAL	
3M001	GENERAL MECHANICAL INFORMATION
3MD101	FACILITITES AND OFFICES MECHANICAL DEMOLITION PLAN
3M101	FACILITIES AND OFFICES HVAC PLAN
3M102	FACILITITIES AND ELECTRIC DISTRIBUTION BAYS HVAC PLAN ALTERNATIVE 2
3M501	MECHANICAL DETAILS
3M601	MECHANICAL SCHEDULES
3M701	MECHANICAL CONTROLS
ELECTRICAL	
3E001	ELECTRICAL NOTES AND ABBREVIATIONS
3ED101	FIRST FLOOR DEMOLITION PLAN
3EP101	FIRST FLOOR POWER PLAN
3EL101	FIRST FLOOR LIGHTING PLAN
3E501	ELECTRICAL ONE-LINE DIAGRAMS

PROGRESSIVE AE
PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
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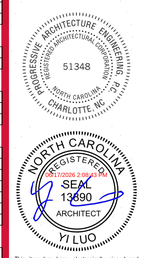
GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATIONS CENTER
3355 NC-43, GREENVILLE, NC 27834



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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21500003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
Y. LUO
CHECKED BY
Y. LUO

TITLE DRAWING
TD001

6/17/2026 2:07:03 PM Autodesk Docs://21500003 - GUC Operations Center Renovations/21500002 - GUC Ops Center Overall.rvt
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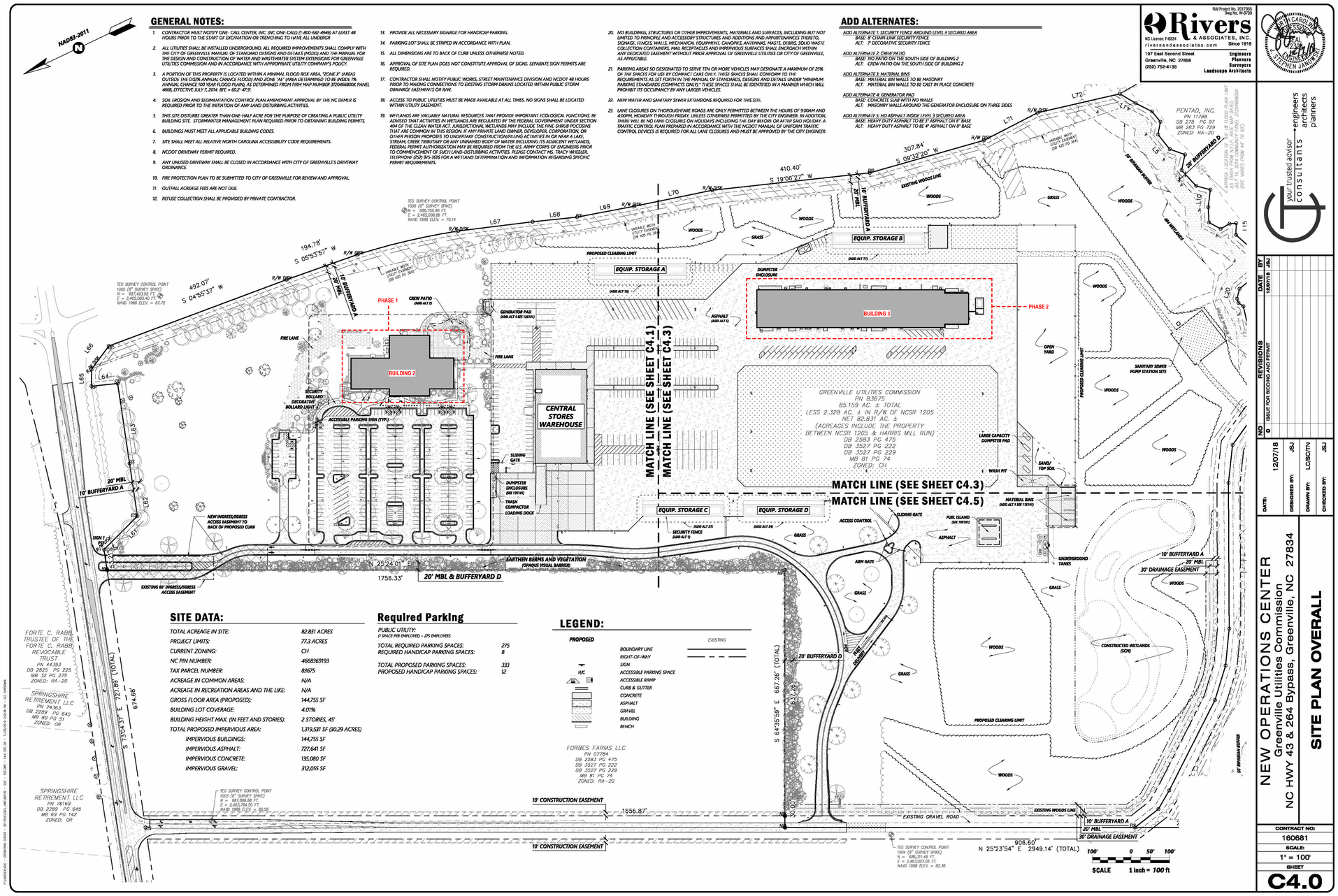
SITE PLAN FOR REFERENCE ONLY



1 PHASING PLAN
1" = 100'-0"

NO	REVISIONS	DATE	BY
0	ISSUE FOR BIDDING AND PERMIT	12/07/18	JSJ

DATE: 12/07/18
DESIGNED BY: JSJ
DRAWN BY: LC/SC/TN
CHECKED BY: JSJ

NEW OPERATIONS CENTER
Greenville Utilities Commission
NC HWY 43 & 264 Bypass, Greenville, NC 27834

SITE PLAN OVERALL

CONTRACT NO: 160681
SCALE: 1" = 100'
SHEET: C4.0

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RENOVATIONS TO OPERATIONS CENTER
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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER 2130003
PROJECT MANAGER A. IDOL
PROFESSIONAL Y. LUO
DRAWN BY Y. LUO
CHECKED BY Y. LUO

PROJECT PHASING PLAN
G001

6/17/2026 2:07:55 PM Autodesk Docs://2130003 - GUC Operations Center Renovations/2130002 - GUC Op Center Overall.rvt
5 - C4D1
PHASING PLAN

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2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OR 2)

NAME OF PROJECT: GUC OPERATIONS CENTER RENOVATIONS - ENGINEERING & OPERATIONS BLDG.
ADDRESS: NC HWY 43 & HWY 264 BYPASS, GREENVILLE, NC 27834 ZIP CODE:
PROPOSED USE: BUSINESS
OWNER OR AUTHORIZED AGENT: PHONE #: E-MAIL:
OWNED BY: [ ] CITY/COUNTY [X] PRIVATE [ ] STATE
CODE ENFORCEMENT JURISDICTION: [X] CITY: GREENVILLE [ ] COUNTY: PITT [ ] STATE:

LEAD DESIGN PROFESSIONAL PROGRESSIVE COMPANIES

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE	E-Mail
ARCHITECTURAL:	PROGRESSIVE COMPANIES	YI LUO	13890	919-682-2870	yluo@weareprogressive.com
CIVIL:					
ELECTRICAL:	PROGRESSIVE COMPANIES	DANE STIVERS	054688	704-731-8088	dstivers@weareprogressive.com
FIRE ALARM:					
PLUMBING:	PROGRESSIVE COMPANIES	RUBEN BAZIYANTS	049047	828-318-0530	rbaziyants@weareprogressive.com
MECHANICAL:	PROGRESSIVE COMPANIES	RUBEN BAZIYANTS	049047	828-318-0530	rbaziyants@weareprogressive.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	PROGRESSIVE COMPANIES	LOGAN T. MUSE	060496	704-724-9660	lmuse@weareprogressive.com
RETAINING WALLS >5' HIGH:					
OTHER:					

"OTHER" should include firms and individuals such as truss, precast, pre-engineering, interior designers, etc.)

2018 NC BUILDING CODE:
[ ] NEW BUILDING [ ] ADDITION [X] RENOVATION
[ ] 1ST TIME INTERIOR COMPLETION [ ] SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS
[ ] PHASED CONSTRUCTION - SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: EXISTING: [ ] PRESCRIPTIVE [ ] REPAIR [ ] CHAPTER 14
[ ] LEVEL I [X] LEVEL II [ ] LEVEL III
[ ] HISTORIC PROPERTY [ ] CHANGE OF USE

CONSTRUCTED *(date)* 2018 **CURRENT OCCUPANCY(S)** *(Ch. 3)* BUSINESS
RENOVATED *(date)* **PROPOSED OCCUPANCY(S)** *(Ch. 3)* BUSINESS

RISK FACTOR *(Table 1604.5)*: **Current:** [ ] I [ ] II [ ] III [X] IV
Proposed: [ ] I [ ] II [ ] III [X] IV

BASIC BUILDING DATA:
CONSTRUCTION TYPE: *(Check all that apply)* [ ] I-A [ ] I-B [ ] II-A [X] II-B [ ] III-A [ ] III-B [ ] IV [ ] V-A [ ] V-B
SPRINKLERS: [ ] NO [ ] PARTIAL [ ] YES [X] NFPA 13 [ ] NFPA 13R [ ] NFPA 13D
STANDPIPES: [X] NO [ ] YES CLASS: [ ] I [ ] II [ ] III [ ] WET [ ] DRY
FIRE DISTRICT: [ ] NO [X] YES FLOOD HAZARD AREA: [X] NO [ ] YES
SPECIAL INSPECTIONS REQUIRED: [ ] NO [X] YES CONTACT THE LOCAL INSPECTION JURISDICTION FOR ADDITIONAL PROCEDURES AND REQUIREMENTS

GROSS BUILDING AREA TABLE:

FLOOR	EXISTING (SQ. FT.)	NEW WORK AREA (SQ. FT.)	SUB TOTAL
7TH FLOOR:			
6TH FLOOR:			
5TH FLOOR:			
4TH FLOOR:			
3RD FLOOR:			
2ND FLOOR:	28,081		28,081
MEZZANINE:			
1ST FLOOR:	28,079	6,031	28,079
BASEMENT:			
TOTAL:	56,160	6,031	56,160

ALLOWABLE AREA

PRIMARY OCCUPANCY: *(SELECT ONE)*
ASSEMBLY [ ] A-1 [ ] A-2 [ ] A-3 [ ] A-4 [ ] A-5
BUSINESS [X]
EDUCATIONAL [ ]
FACTORY [ ] F-1 Moderate [ ] F-2 Low
HAZARDOUS [ ] H-1 Detonate [ ] H-2 Deflagrate [ ] H-3 Combust [ ] H-4 Health [ ] H-5 HPM
INSTITUTIONAL [ ] I-1 CONDITION [ ] 1 [ ] 2
[ ] I-2 CONDITION [ ] 1 [ ] 2
[ ] I-3 CONDITION [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
[ ] I-4
MERCANTILE [ ]
RESIDENTIAL [ ] R-1 [ ] R-2 [ ] R-3 [ ] R-4
STORAGE [ ] S-1 Moderate [ ] S-2 Low [ ] High-piled
[ ] Parking Garage [ ] Open [ ] Enclosed [ ] Repair Garage
UTILITY & MISC. [ ]

ACCESSORY OCCUPANCY CLASSIFICATION(S): ASSEMBLY (A-3) 4,291 SF < 10%
INCIDENTAL USES *(Table 509)*:
SPECIAL USES (Chapter 4 - List Code Sections):
SPECIAL PROVISIONS: (Chapter 5 - List Code Sections):
MIXED OCCUPANCY: [ ] YES [X] NO SEPARATION: HR: EXCEPTION:

[ ] NON-SEPARATED USE (508.3) - THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.

[ ] SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A	+	ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B	=	< 1.00	=	< 1.00
	+		+		=	< 1.00

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2* AREA	(C) AREA FOR FRONTAGE INCREASE**	(D) ALLOWABLE AREA PER STORY OR UNLIMITED***
1	BUSINESS + ACCESSORY A-3	27,985 SF	28,500	N/A	N/A
2	BUSINESS	28,081 SF	28,500	N/A	N/A

* FRONTAGE AREA INCREASE FROM SECTION 506.3 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A 'F' OR 'C' WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = 424 (F)
B. TOTAL BUILDING PERIMETER = 848 (P)
C. RATIO (F/P) = .2 (F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY = 30 (W)
E. PERCENT OF FRONTAGE INCREASE I = 100 (F/P-0.25) x W/30 = 50 (%)
** UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
*** MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (506.2).
* MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.
* FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT:

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE *
BUILDING HEIGHT IN FEET (Table 504.3)*	NO CHANGE		
BUILDING HEIGHT IN STORIES (Table 504.4)*			

* PROVIDE CODE REFERENCE IF THE "SHOWN ON PLANS" QUANTITY IS NOT BASED ON TABLE 504.3 OR 504.4
* THE MAXIMUM HEIGHT OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH TABLE 412.3.1.
* THE MAXIMUM HEIGHT OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.5.5.

FIRE PROTECTION REQUIREMENTS:

Notes:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ ____ HR REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS		0					
EXTERIOR		0					
NORTH							
EAST							
WEST							
SOUTH							
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS EXTERIOR WALLS		0					
NORTH							
EAST							
WEST							
SOUTH							
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS		0					
FLOOR CEILING ASSEMBLY		0					
COLUMNS SUPPORTING BEAMS		0					
ROOF CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS		0					
ROOF CEILING ASSEMBLY		0					
COLUMNS SUPPORTING BEAMS		0					
SHAFT ENCLOSURES - EXIT		1	0 (NCBC 1019.3.1)				
SHAFT ENCLOSURES - OTHER		1					
CORRIDOR SEPARATION		0					
OCCUPANCY/FIRE BARRIER SEPARATION		0					
PARTY/FIRE WALL SEPARATION							
SMOKE BARRIER SEPARATION							
SMOKE PARTITION							
TENANT/DWELLING UNIT/SLEEPING UNIT SEPARATION							
INCIDENTAL USE SEPARATION							

* INDICATE SECTION NUMBER PERMITTING REDUCTION

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: [ ] NO [X] YES
EXIT SIGNS: [ ] NO [X] YES
FIRE ALARM: [ ] NO [X] YES
SMOKE DETECTION SYSTEMS: [ ] NO [ ] YES [ ] Partial
PANIC HARDWARE: [ ] NO [X] YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: 2G103 & 2G104

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

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*:

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL # ACCESSIBLE UNITS PROVIDED
				NOT APPLICABLE			

ACCESSIBLE PARKING *(Section 1106)*:

LOT OR PARKING AREA	TOTAL NUMBER OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # OF ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
	0	0	0 NO CHANGE	0	0	0
	0	0	0	0	0	0
TOTAL:	0	0	0	0	0	0

PLUMBING FIXTURE REQUIREMENTS *(SECTION 2902.1)*:

USE:		WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	8	7	6	7	7	4	6	0	4	4
	NEW	0	0	0	0	0	0	0	0	0	0
	REQUIRED	8	8	0	0	7	4	0	0	4	4

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

ENERGY SUMMARY:

ENERGY REQUIREMENTS:
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 PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: [ ] NO [X] YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)

CLIMATE ZONE [X] 3A [ ] 4A [ ] 5A
METHOD OF COMPLIANCE: ENERGY CODE [ ] PERFORMANCE [ ] PRESCRIPTIVE
ASHRAE 90.1 [X] PERFORMANCE [ ] PRESCRIPTIVE
IF "OTHER" SPECIFY SOURCE HERE

THERMAL ENVELOPE

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
SKYLIGHT IN EACH ASSEMBLY: NO CHANGE
u-value of skylight:
total square footage of skylights in each assembly:

EXTERIOR WALLS (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (windows or doors with glazing)
u-value of assembly:
Solar heat gain coefficient:
projection factor:
Door R-Values:

WALLS BELOW GRADE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:

FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:

FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
Horizontal / vertical requirement:
Slab heated? (Y/N)

STRUCTURAL DESIGN *(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)*

DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (Is) 1.2 SEISMIC (Ie) 1.5
LIVE LOADS: ROOF 20 psf MEZZANINE 125 psf FLOOR 100 psf
GROUND SNOW LOAD: 10 psf
WIND LOAD: ULTIMATE WIND SPEED 129 mph (ASCE-7) EXPOSURE CATEGORY C

SEISMIC DESIGN CATEGORY: [ ] A [ ] B [ ] C [X] D

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) [ ] I [ ] II [ ] III [X] IV
SPECTRAL RESPONSE ACCELERATION: Sds= %g Sd1= %g
SITE CLASSIFICATION: (ASCE 7) [ ] A [ ] B [ ] C [ ] D [X] E [ ] F
Data Source: [ ] FIELD TEST [X] PRESUMPTIVE [ ] HISTORICAL DATA
BASIC STRUCTURAL SYSTEM [ ] BEARING WALL [ ] DUAL WITH SPECIAL MOMENT FRAME
[ ] BUILDING FRAME [ ] DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
[X] MOMENT FRAME [ ] INVERTED PENDULUM
ANALYSIS PROCEDURE: [ ] SIMPLIFIED [X] EQUIVALENT LATERAL FORCE [ ] DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? [ ] YES [X] NO.

LATERAL DESIGN CONTROL: EARTHQUAKE [ ] WIND [X]

SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT) psf
PRESUMPTIVE BEARING CAPACITY 3,000 psf
PILE SIZE, TYPE, AND CAPACITY psf

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE
WINTER DRY BULB: 24.8°F
SUMMER DRY BULB: 91.9°F

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

BUILDING HEAT LOAD: 75 MBH
BUILDING COOLING LOAD: 237 MBH

MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT:
HEATING EFFICIENCY: SEE MECHANICAL
COOLING EFFICIENCY: PLANS
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY, IF OVERSIZED, STATE REASON: N/A
CHILLER
SIZE CATEGORY, IF OVERSIZED, STATE REASON: N/A
LIST EQUIPMENT EFFICIENCIES SEE MECHANICAL PLANS

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE
NUMBER OF LAMPS IN FIXTURE
BALLAST TYPE USED IN THE FIXTURE REFER TO LIGHTING FIXTURE SCHEDULE
NUMBER OF BALLASTS IN FIXTURE
TOTAL WATTAGE PER FIXTURE
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED (WHOLE BUILDING OR SPACE BY SPACE)
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED

ADDITIONAL PRESCRIPTIVE COMPLIANCE (When using the 2018 NCECC; not required for ASHRAE 90.1)
[ ] C406.2 More Efficient Mechanical Equipment
[X] C406.3 Reduced Lighting Power Density
[ ] C406.4 Enhanced Digital Lighting Controls
[ ] C406.5 On-Site Supply of Renewable Energy
[ ] C406.6 Dedicated Outdoor Air System
[ ] C406.7 Reduced Energy Use in Service Water Heating

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RENOVATIONS TO OPERATION CENTER
BUILDING 2
3355 NC-43, GREENVILLE, NC 27834

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PROFESSIONAL
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M.FUENTES
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CODE COMPLIANCE PLAN
2G101

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2 - 2G101 COMPLIANCE PLAN

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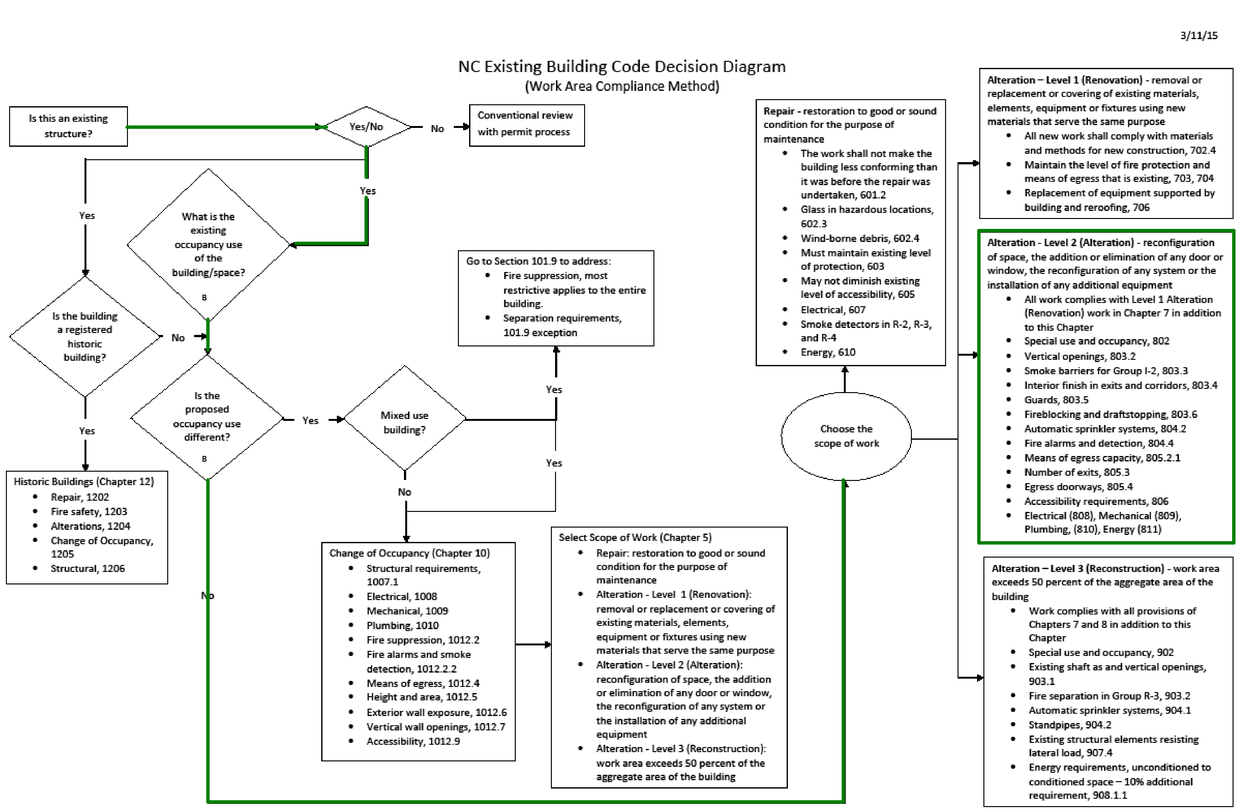
24.2.022

3/11/15

NC Existing Building Code Decision Diagram
(Work Area Compliance Method)



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5 - 2G102
CODE DECISION DIAGRAM

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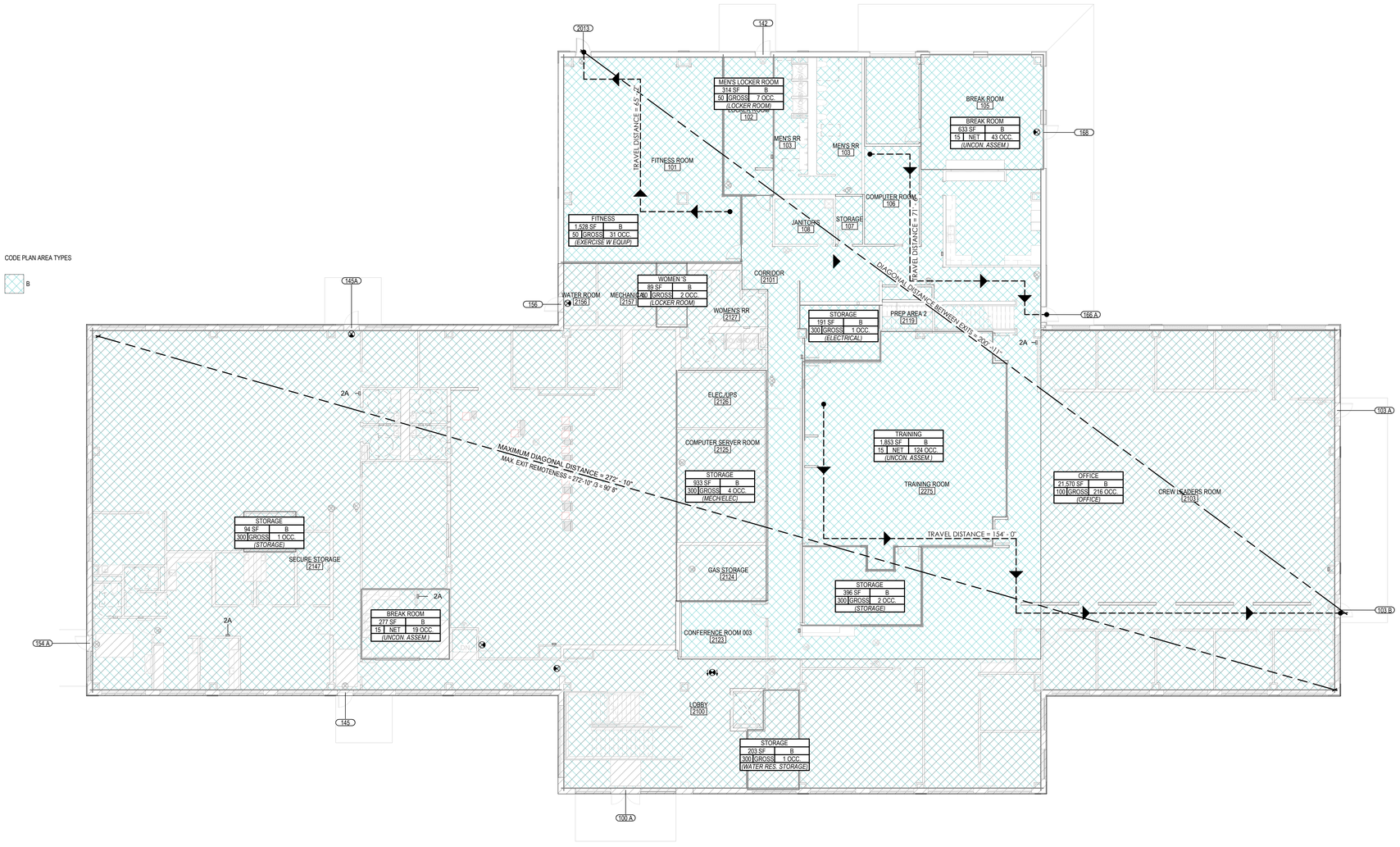
CODE DECISION DIAGRAM
2G102



CODE PLAN AREA TYPES

B

E3 **LIFE SAFETY AND EGRESS PLAN - LEVEL 1**

3/32" = 1'-0"

AREA SCHEDULE

Level	Occupancy Designation	Function of Space	Occupancy Load Factor	Area	Max Occ Load
FIRST FLOOR	B	ELECTRICAL	300	191 SF	1
FIRST FLOOR	B	EXERCISE W EQUIP	50	1,528 SF	31
FIRST FLOOR	B	LOCKER ROOM	50	89 SF	2
FIRST FLOOR	B	LOCKER ROOM	50	314 SF	7
FIRST FLOOR	B	MECH/ELEC	300	933 SF	4
FIRST FLOOR	B	OFFICE	100	21,570 SF	216
FIRST FLOOR	B	STORAGE	300	94 SF	1
FIRST FLOOR	B	STORAGE	300	396 SF	2
FIRST FLOOR	B	UNCON. ASSEM.	15	277 SF	19
FIRST FLOOR	B	UNCON. ASSEM.	15	633 SF	43
FIRST FLOOR	B	UNCON. ASSEM.	15	1,853 SF	124
FIRST FLOOR	B	WATER RES. STORAGE	300	203 SF	1
TOTAL				28,079 SF	451

CODE PLAN LEGEND

- EXIT ACCESS PATH OF TRAVEL
- PATH OF TRAVEL STARTING/ENDING POINT
- DIRECTION OF EGRESS
- EXIT SIGN
- A1 — FIRE EXTINGUISHER / FIRE EXTINGUISHER CABINET

CODE PLAN AREA TAG

	AREA NAME	
SQUARE FOOTAGE	#,### SF	X ### GROSS/NET — OCCUPANCY CLASS
OCCUPANT LOAD FACTOR	### SF	### PEOPLE — OCCUPANT COUNT
	FUNCTION OF SPACE	

EGRESS DOOR SCHEDULE

DOOR NO.	SIZE WTH	SIZE HGT	EGRESS INFO CLEAR WTH	EGRESS INFO CAPACITY	EGRESS INFO ACTUAL	EGRESS INFO PANIC HW
100 A	6' - 0"	8' - 0"	72"	360	52	Yes
103 A	3' - 0"	7' - 0"	34"	170	97	No
103 B	3' - 0"	7' - 0"	34"	170	102	No
142	3' - 0"	7' - 0"	34"	170	7	No
145	3' - 0"	8' - 0"	34"	170	50	No
145A	3' - 0"	7' - 0"	34"	170	50	No
154 A	3' - 0"	8' - 0"	34"	170	13	Yes
166 A	3' - 0"	7' - 0"	34"	170	10	Yes
168	3' - 0"	8' - 0"	34"	170	48	Yes
2013	3' - 0"	7' - 0"	34"	170	31	Yes

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NORTH CAROLINA REGISTERED 6/17/2026 SEAL 13690 ARCHITECT YI LUO

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21350003
PROJECT MANAGER
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PROFESSIONAL
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LIFE SAFETY PLAN -LEVEL 1

2G103

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1 - 21350
E1 - LIFE SAFETY PLAN - LEVEL 1
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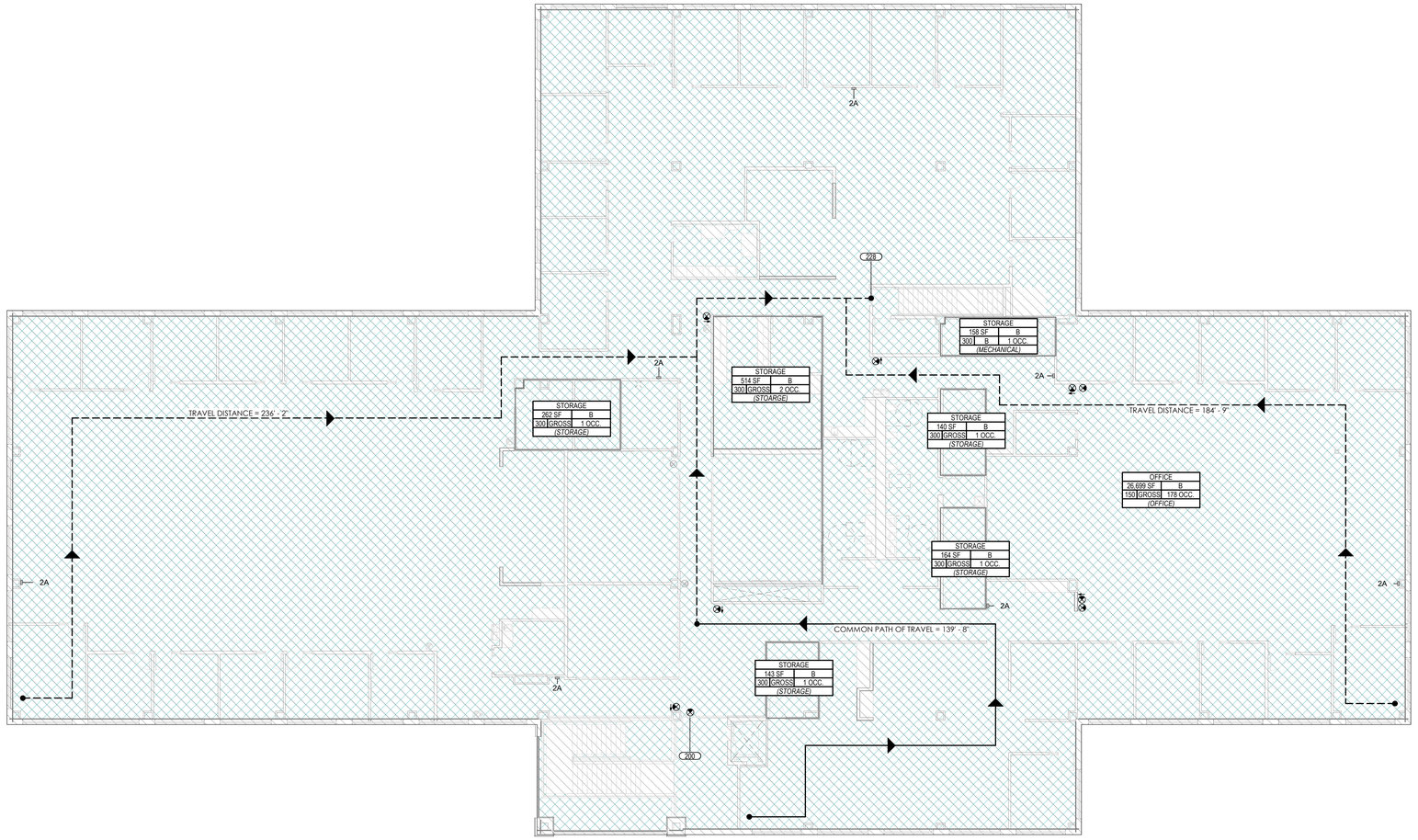

CODE PLAN AREA TYPES

B

E3 **LIFE SAFETY AND EGRESS PLAN - LEVEL 2**
3/32" = 1'-0"

AREA SCHEDULE					
Level	Occupancy Designation	Function of Space	Occupancy Load Factor	Area	Max Occ Load
LEVEL 2	B	MECHANICAL	300	158 SF	1
LEVEL 2	B	OFFICE	150	26,699 SF	178
LEVEL 2	B	STOARGE	300	514 SF	2
LEVEL 2	B	STORAGE	300	140 SF	1
LEVEL 2	B	STORAGE	300	143 SF	1
LEVEL 2	B	STORAGE	300	164 SF	1
LEVEL 2	B	STORAGE	300	262 SF	1
TOTAL				28,081 SF	185

CODE PLAN LEGEND

- EXIT ACCESS PATH OF TRAVEL
- PATH OF TRAVEL STARTING/ENDING POINT
- DIRECTION OF EGRESS
- EXIT SIGN
- A1 — FIRE EXTINGUISHER / FIRE EXTINGUISHER CABINET

CODE PLAN AREA TAG

	AREA NAME	
SQUARE FOOTAGE	#,### SF	X ### GROSS/NET — OCCUPANCY CLASS
OCCUPANT LOAD FACTOR	### SF	### PEOPLE — OCCUPANT COUNT
	FUNCTION OF SPACE	

EGRESS DOOR SCHEDULE - L2

DOOR NO.	SIZE WTH	SIZE HGT	EGRESS INFO CLEAR WTH	CAPACITY	ACTUAL	PANIC HW
200	3' - 0"	8' - 0"	34"	170	94	No
228	3' - 0"	7' - 0"	34"	170	94	No

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LIFE SAFETY PLAN - LEVEL 2
2G104

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LIFE SAFETY PLAN - LEVEL 2

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LOGISTICS NOTES & KEY

1. PROPOSED CONTRACTOR PARKING, TEMPORARY TOILET, LAY DOWN AREA, AND DUMPSTER TO BE LOCATED WITHIN THE PARKING LOT LIMITS INDICATED BY THE OWNER. COORDINATE WITH OWNER THE EXTENT OF SPACE REQUIRED. LOADING AND UNLOADING WILL ALSO TAKE PLACE IN THIS SAME ZONE.
2. PARKING LOT DESIGNATED IS ADJACENT TO THE BUILDING.
3. CONTRACTOR TO COORDINATE CARD ACCESS TO THE GATE ACCESS AND TO THE BUILDING WITH OWNER.
4. ITEMS MAY BE STORED IN THE BUILDING, ONLY INSIDE THE PROJECT AREAS, OR LAY DOWN AREA. G.C. RESPONSIBLE FOR SECURING ALL ITEMS RELATED TO THE PROJECT.
5. ALL INTERIOR FINISHES TO BE PROTECTED AS NECESSARY DURING WORK STOP PERIODS. G.C. SHALL CLEAN UP PROJECT AREAS AND ANY ROUTES INTO THE BUILDING WITH CONSTRUCTION DEBRIS.

PARKING & LAY DOWN AREA (FOR DUMPSTER, UNLOADING, ETC.)

APPROXIMATE PROJECT AREA LOCATION INSIDE THE BUILDING

ENTRANCE TO PARKING DESIGNATED ZONE AND BUILDING

1 LOGISTICS PLAN BUILDING 2
NOT TO SCALE

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LOGISTICS PLAN
2G105

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5 - 2G105
LOGISTICS PLAN

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GENERAL NOTES

GN.1 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN CRITERIA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.

GN.2 COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.

GN.3 REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.

GN.4 FOR SECTIONS AND DETAILS NOT EXPLICITLY INDICATED ON THE DRAWINGS, USE TYPICAL DETAILS PROVIDED FOR CONDITIONS THAT ARE SIMILAR, OTHERWISE BRING TO THE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD FOR CLARIFICATION.

GN.5 ANY ALTERATION TO A STRUCTURAL ITEM OR MEMBER SHALL BE APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD.

GN.6 SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DRYWALL NON-LOAD BEARING PARTITIONS.

GN.7 TYPICAL DETAILS ARE NOTED AS SUCH AND SHALL APPLY AT ALL RELATED CONDITIONS, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTION REQUIREMENTS

SP.1 SPECIAL INSPECTIONS AND STRUCTURAL TESTING ARE REQUIRED AND SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, LATEST EDITION, AND THE CASE NATIONAL PRACTICE GUIDELINE FOR SPECIAL INSPECTIONS.

SP.2 THE PROGRAM OF SPECIAL INSPECTIONS AND TESTING IS A QUALITY ASSURANCE PROGRAM INTENDED TO ENSURE THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, TO INFORM THE CONTRACTOR OF THE OWNER'S QUALITY ASSURANCE PROGRAM AND THE EXTENT OF THE CONTRACTOR'S RESPONSIBILITIES.

SP.3 THE OWNER SHALL ENGAGE AND PAY FOR THE SERVICES OF THE SPECIAL INSPECTOR, AGENT OF THE SPECIAL INSPECTOR, AND TESTING LABORATORY.

SP.4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY RETESTING OR REINSPECTION OF WORK WHICH FAILS TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SP.5 THE CONTRACTOR SHALL COOPERATE WITH THE SPECIAL INSPECTOR AND HIS AGENTS SO THAT THE SPECIAL INSPECTIONS AND TESTING MAY BE PERFORMED WITHOUT HINDRANCE.

SP.6 THE CONTRACTOR SHALL REVIEW THE STATEMENT OF SPECIAL INSPECTIONS AND BE RESPONSIBLE FOR COORDINATING AND SCHEDULING INSPECTIONS AND TESTS. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR OR TESTING LABORATORY AT LEAST 24 HOURS IN ADVANCE OF A REQUIRED INSPECTION OR TEST. UNINSPECTED WORK THAT REQUIRED INSPECTION MAY BE REJECTED SOLELY ON THAT BASIS.

SP.7 THE CONTRACTOR SHALL PROVIDE INCIDENTAL LABOR AND FACILITIES TO PROVIDE ACCESS TO THE WORK TO BE INSPECTED OR TESTED, TO OBTAIN AND HANDLE SAMPLES AT THE SITE OR AT SOURCE OF PRODUCTS TO BE TESTED, TO FACILITATE TESTS AND INSPECTIONS, STORAGE AND CURING OF TEST SAMPLES.

SP.8 THE CONTRACTOR SHALL KEEP AT THE PROJECT SITE THE LATEST SET OF CONSTRUCTION DRAWINGS, FIELD SKETCHES, APPROVED SHOP DRAWINGS, AND SPECIFICATIONS FOR USE BY THE INSPECTORS AND TESTING TECHNICIANS.

SP.9 THE SPECIAL INSPECTION PROGRAM SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR FROM IMPLEMENTING AN EFFECTIVE QUALITY CONTROL PROGRAM. ALL WORK THAT IS TO BE SUBJECTED TO SPECIAL INSPECTIONS SHALL FIRST BE REVIEWED BY THE CONTRACTOR'S QUALITY CONTROL PERSONNEL.

SP.10 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SITE SAFETY.

FOUNDATION NOTES

FN.1 SEE THE DESIGN CRITERIA SHEET FOR GEOTECHNICAL INFORMATION FOR THIS PROJECT.

FN.2 PRIOR TO THE PLACEMENT OF CONCRETE FOR THE BUILDING FOUNDATIONS, THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A CERTIFIED TESTING AGENCY TO VERIFY THE SOIL REQUIREMENTS OUTLINED IN THE DOCUMENTS, AND GEOTECHNICAL REPORT. VALUES THAT DO NOT MEET OR EXCEED THOSE INDICATED SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR RESOLUTION.

FN.3 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

FN.4 NO FOUNDATIONS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE, OR LOOSE MATERIAL.

FN.5 INTERIOR SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER SOIL SUPPORTED HORIZONTAL SURFACES SHALL BE PLACED OVER A GRANULAR SUBBASE; MINIMUM THICKNESS OF 6" OR AS OUTLINED IN THE GEOTECHNICAL REPORT. AGGREGATE SUBBASE SHALL BE SMOOTH AND LEVEL, TO WITHIN 1/4" BELOW DESIGN ELEVATION JUST PRIOR TO CONCRETE PLACEMENT, AND COMPACTED PER THE GEOTECHNICAL REPORT OR A MIN OF 95% OF THE MAX DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557), WHICHEVER IS STRICTER.

FN.6 SEE PLUMBING, MECHANICAL, ELECTRICAL, AND CIVIL DOCUMENTS FOR REQUIRED UNDERSLAB UTILITIES.

FN.7 SEE ARCHITECTURAL DOCUMENTS FOR ALL WATERPROOFING DETAILS AND MATERIALS AS REQUIRED.

FN.8 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 2500 PSI CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.

REINFORCED CONCRETE

RC.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'_c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE. THE CONTRACTOR SHALL SUBMIT MIX DESIGNS WITH SUBSTANTIATING STRENGTH TEST DATA FOR REVIEW FOR EACH MIX DESIGN USED PER SPECIFICATION REQUIREMENTS PRIOR TO CONCRETE PLACEMENT.

RC.2 MIX DESIGNS ARE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR/SUPPLIER FOLLOWING THE REQUIREMENTS OUTLINED IN THIS SPECIFICATION AND FOR THE LOCATION IN WHICH THE CONCRETE IS BEING DEPOSITED. MAXIMUM AGGREGATE SIZE SHALL BE SELECTED TO FALL WITHIN THE RANGE SPECIFIED FOR THE REQUIRED STRENGTH INDICATED AS WELL AS TO FACILITATE PLACEMENT CONSIDERING REBAR SPACING AND CONFINEMENT, PLACEMENT AND CONSOLIDATION METHOD, AND CONSTRUCTION SEQUENCING. SLUMPS INDICATED ARE RECOMMENDATIONS FOR TYPICAL CONDITIONS ENCOUNTERED AND SHALL BE VERIFIED AND MODIFIED WITH APPROVAL FOR ACTUAL FIELD CONDITIONS.

RC.3 ENTRAIN AIR FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOUNDATIONS, SLAB TURNDOWNS, EXTERIOR SLABS AND SLABS-ON-GRADE, AND EXTERIOR RETAINING WALLS.)

RC.4 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

RC.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.

RC.6 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" x 45 DEGREE CHAMFER, UNLESS NOTED OTHERWISE.

RC.7 CONCRETE REINFORCEMENT BARS SHALL BE DEFORMED AND CONFORM TO ASTM A615, GRADE 60. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE DOCUMENTS. ALL LAPS SHALL BE TENSION SPLICES UNLESS NOTED OTHERWISE.

RC.8 SLABS-ON-GRADE SHALL MEET THE FLOOR FLATNESS & LEVELNESS CRITERIA OUTLINED IN THE DOCUMENTS. VALUES SHALL BE VERIFIED BY A CERTIFIED TESTING AGENCY PER ASTM E1155 AFTER WORK IS COMPLETE. ELEVATED STRUCTURAL SLABS TO MEET THE FLOOR FLATNESS CRITERIA ONLY.

RC.9 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.

RC.10 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

RC.11 SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES.

RC.12 PROVIDE CONCRETE POUR STOPS OR FORM EDGES AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK.

STRUCTURAL STEEL

SS.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIALS SCHEDULE. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A6.

SS.2 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 3/4"Ø A325-N, UNLESS NOTED OTHERWISE, AND SHALL CONFORM TO ASTM A325; NUTS SHALL CONFORM TO ASTM A563; WASHERS SHALL CONFORM TO ASTM F436. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED.

SS.3 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH THE AISC MANUAL OF STEEL CONSTRUCTION, OR THE AISC DETAILING FOR STEEL CONSTRUCTION MANUAL.

SS.4 ALTERNATIVE CONNECTION DETAILS MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR ONLY IF ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER AND SUBMITTED FOR REVIEW.

SS.5 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD AND REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.

SS.6 PREHEATING OF BASE MATERIAL SHALL BE PERFORMED WHEN REQUIRED BY AWS D1.1. PREHEAT TEMPERATURE TO BE A MINIMUM OF AWS D1.1 REQUIREMENTS AND SHALL BE ADEQUATE TO PROHIBIT CRACKING. PREHEAT SHALL BE APPLIED UNIFORMLY TO THE JOINT. WHEN SELECTING METHOD OF APPLYING PREHEAT THICKNESS OF MATERIAL, SIZE OF WELD AND HEATING EQUIPMENT TO BE USED SHALL BE CONSIDERED.

SS.7 SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED PER THE PROJECT SPECIFICATIONS.

SS.8 ALL WELDS NOT INDICATED SHALL BE THE MINIMUM SIZE FILLET WELD PER AISC GUIDELINES.

SS.9 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

SS.10 ALL STRUCTURAL STEEL SHALL RECEIVE A SHOP PRIME FINISH PER THE PROJECT SPECIFICATIONS, EXCEPT THE FOLLOWING:
- SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES.
- SURFACES TO BE FIELD WELDED.
- GALVANIZED SURFACES.
- MEMBERS TO RECEIVE SPRAY-APPLIED FIREPROOFING.

ALL EXTERIOR EXPOSED STEEL AND STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.

SS.11 ALL PLATES NOT INDICATED SHALL BE 5/16" MINIMUM THICKNESS. ALL ANGLES NOT INDICATED SHALL BE L3x3x5/16" MINIMUM.

SS.12 ALL MEMBERS NOTED AS CONTINUOUS SHALL BE EITHER PROVIDED AS A SINGLE PIECE CONTINUOUS FOR THE EXTENT OF ITS LENGTH OR PROVIDED IN SEGMENTS AND RE-ATTACHED WITH ADJACENT PIECES VIA FULL PENETRATION WELDS SUCH THAT THE MEMBER FUNCTIONS AS CONTINUOUS IN ITS FINAL POSITION.

POST INSTALLED ANCHORS

PA.1 POST INSTALLED ANCHORS SHALL BE MANUFACTURED BY HILTI, INC. INTERNATIONAL CODE COUNCIL (ICC) APPROVED SUBSTITUTIONS (ALTERNATES) ARE ALLOWED AND MAY BE SUBMITTED FOR REVIEW AND APPROVAL, BUT PROPER DOCUMENTATION MUST BE PROVIDED WHICH CLEARLY INDICATES EQUIVALENCY BETWEEN MANUFACTURERS, INCLUDING ANY ICC APPROVAL DOCUMENTATION, NECESSARY REDUCTIONS FOR SPACING, EDGE DISTANCES, ETC. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR COORDINATING AND VERIFYING EQUIVALENCE FOR SUBSTITUTIONS. PROPER DOCUMENTATION MUST INCLUDE LOCATIONS, DETAIL REFERENCES, AND SPECIFIED BOLT VERSUS REQUESTED BOLT CAPACITIES. SUBMITTAL OF THE ALTERNATE MANUFACTURER'S STANDARD LOAD TABLES ALONE IS NOT ACCEPTABLE AND WILL BE REJECTED UNTIL PROPER DOCUMENTATION HAS BEEN PROVIDED.

PA.2 THE FOLLOWING ANCHORS SHALL BE USED FOR THE VARIOUS APPLICATIONS LISTED UNLESS NOTED OTHERWISE. SEE THE DRAWINGS FOR SIZE, SPACING AND REQUIRED EMBEDMENT. PROVIDE MINIMUM 3/4" DIAMETER ANCHORS AT LOCATIONS NOT INDICATED. PROVIDE STANDARD EMBEDMENT AT LOCATIONS NOT INDICATED.

ATTACHMENT TO CONCRETE:
-EXPANSION ANCHORS: HILTI KWIK BOLT TZ2.
-ADHESIVE ANCHORS: HILTI HAS RODS WITH HIT-HY 200 V3 INJECTION ADHESIVE.
-SCREW ANCHORS: HILTI KWIK HUS-EZ
-REINFORCING BAR: HILTI HIT-HY200 V3

PA.3 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AS WELL AS ANY NECESSARY INSTALLATION TOOLS REQUIRED FOR PLACEMENT OF ANCHORS. HOLE INSTALLATION CONDITIONS SHALL BE HAMMER DRILL DRY.

PA.4 POST INSTALLED ANCHORS (EXPANSION AND ADHESIVE TYPES) USED IN SLIP (MOVEMENT) CONNECTIONS SHALL BE STUD TYPE UNLESS NOTED OTHERWISE. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S TORQUE REQUIREMENTS TO ALLOW PROPER SEATING OF THE ANCHOR PRIOR TO BACKING OFF THE NUT TO FINGER-TIGHT.

COLD FORMED METAL FRAMING (CFMF)

MF.1 COLD FORMED METAL FRAMING SIZES SPECIFIED FOLLOW THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) STANDARD DESIGNATION.
MEMBER DEPTH (1/100") - STYLE - FLANGE WIDTH (1/100") - MATERIAL THICKNESS (1/1000")
FOR EXAMPLE, A 600S162-54 DESIGNATION INDICATES A 6-INCH DEEP STUD SHAPE WITH 1 5/8" FLANGES, 54 MILS THICK.

MF.2 THE COLD FORMED METAL FRAMING SHALL BE MANUFACTURED FROM STRUCTURAL QUALITY STEEL HAVING A MINIMUM YIELD STRENGTH OF 33 ksi UNLESS NOTED OTHERWISE AND HAVE MINIMUM PROTECTION COATING EQUAL TO G-60 GALVANIZED FINISH CONFORMING TO ASTM A1003.

MF.3 THE STRUCTURAL FRAMING SHALL MEET ASTM C955 AND HAVE ENGINEERING PROPERTIES CALCULATED IN CONFORMANCE WITH THE AISI SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL STEEL MEMBERS AND HAVE MINIMUM PROPERTIES AS PUBLISHED BY THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA).

MF.4 FASTENING OF COMPONENTS SHALL BE WELDED OR SCREWED WITH SELF TAPPING SCREWS OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION.

MF.5 SUBMIT VENDOR'S PUBLISHED LITERATURE, TEST DATA AND INSTALLATION INSTRUCTIONS FOR METAL STUDS ASSEMBLY AND ACCESSORIES INCLUDING OTHER DATA AS MAY BE REQUIRED TO CERTIFY COMPLIANCE WITH THE REQUIREMENTS SPECIFIED HEREIN.

EXISTING BUILDING/DEMOLITION NOTES

EB.1 STRUCTURAL LAYOUT INCLUDING DIMENSIONS, ELEVATIONS AND STRUCTURAL SIZES FOR THE EXISTING BUILDING WERE OBTAINED FROM THE ORIGINAL CONSTRUCTION DOCUMENTS AND SHALL BE FIELD VERIFIED. IF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE AS-BUILT CONDITIONS ARE DISCOVERED, NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.

EB.2 COORDINATE DEMOLITION OF ALL STRUCTURE WITH THESE DRAWINGS, ARCHITECTURAL, DEMOLITION, AND EXISTING DRAWINGS.

EB.3 CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING BUILDING DURING NEW CONSTRUCTION.

EB.4 CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY OR PERMANENT SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

EB.5 PRIOR TO CORE-DRILLING OR PLACING POST-INSTALLED ANCHORS INTO EXISTING CONCRETE, LOCATE REINFORCEMENT STEEL WITH GROUND PENETRATING RADAR OR OTHER APPROVED METHOD. EXISTING REINFORCEMENT SHALL NOT BE CUT UNDER ANY CIRCUMSTANCES UNLESS SPECIFICALLY INDICATED. IF AREAS OF CONFLICT ARE ENCOUNTERED, NOTIFY THE ENGINEER OF RECORD FOR RESOLUTION.

STEEL MATERIALS SCHEDULE

STRUCTURAL ELEMENT	MINIMUM YIELD STRENGTH F_y (ksi)	REMARKS
BEAMS, GIRDERS, ALL W-SHAPES	50	ASTM A572 ASTM A992
PLATES, ANGLES, CHANNELS, ALL OTHERS	36	ASTM A36

CONCRETE MATERIALS AND MIX DESIGN SCHEDULE

STRUCTURAL ELEMENT	ACI EXPOSURE CLASS	MAX W/C RATIO	f'_c (PSI)	AIR-ENTRAINMENT REQUIRED [SEE NOTE 3]	REMARKS
EXTERIOR CONCRETE	F1	0.5	4000	YES	-

NOTES:
1. FINAL MIX DESIGN TO BE BY THE CONCRETE SUPPLIER FOLLOWING THIS TABLE AS A MINIMUM.
2. SEE REINFORCED CONCRETE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. SEE ACI 318 FOR AIR ENTRAINMENT RECOMMENDATIONS BASED ON EXPOSURE TYPE AND MAXIMUM AGGREGATE SIZE.

CONCRETE COVER SCHEDULE

LOCATION		CLEAR COVER
CONCRETE PLACED AGAINST EARTH		3"
CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH	#5 BARS AND SMALLER	1 1/2"
	#6 BARS AND LARGER	2"
COLUMNS, PIERS		1 1/2"
SLABS OR WALLS NOT EXPOSED TO WEATHER OR EARTH		3/4"

NOTES:
1. MINIMUM CONCRETE COVER APPLIES TO OUTER-MOST LAYER OF REINFORCING BARS.
2. SPECIFIC DIMENSIONS FOR BAR PLACEMENT SHOWN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM SCHEDULED REQUIREMENTS.
3. PROVIDE ACCESSORIES AS REQUIRED TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE FABRIC TO MAINTAIN CONCRETE PROTECTION SPECIFIED.

MINIMUM LAP SPLICES SCHEDULE OF REINFORCING BARS IN TENSION (INCHES)

	CONC COVER \ BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
f'_c = 4000 psi	3/4"	16	19	28	37	60	74	90	108	127
	1"	16	16	22	31	50	62	76	92	108
	1 1/2"	16	16	19	22	37	47	57	70	84
	2"	16	16	19	22	33	37	46	57	68

NOTES:
1. SCHEDULE IS FOR TYPICAL SPLICE LENGTHS FOR VERTICAL OR HORIZONTAL REINFORCEMENT. REINFORCEMENT WHICH IS PLACED ABOVE 12" OR MORE OF FRESH CONCRETE IS CONSIDERED "TOP" BARS AND THE SCHEDULE VALUES ARE MULTIPLIED BY 1.3.
2. ALL SPLICES SHALL BE WIRED IN CONTACT. HORIZONTAL BARS TO BE STACKED VERTICAL UNLESS NOTED OTHERWISE.
3. ALL SPLICES ARE TENSION SPLICES WITH LENGTHS PER SCHEDULE UNLESS NOTED OTHERWISE. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED.
4. SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZED BARS.
5. CLEAR COVER APPLIES TO BAR BEING LAPPED, NOT NECESSARILY MINIMUM COVER AS SHOWN IN CONCRETE COVER SCHEDULE.
6. STRAIGHT DEVELOPMENT LENGTH OF AN UNLAPPED BAR IS EQUAL TO VALUE FROM SCHEDULE DIVIDED BY 1.3.
7. SCHEDULE ASSUMES CONCRETE IS NORMAL WEIGHT WITH YIELD STRENGTH OF REINFORCEMENT, f_y, EQUAL TO 60 ksi. FOR LIGHT WEIGHT CONCRETE, MULTIPLY THE SCHEDULED VALUES BY 1.3.
8. CENTER TO CENTER SPACING OF BARS IS ASSUMED TO BE GREATER THAN TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
9. THE TRANSVERSE REINFORCEMENT INDEX Ktr IS ASSUMED TO BE ZERO.
10. FOR EPOXY-COATED BARS WITH COVER LESS THAN 3x BAR DIAMETER OR CLEAR SPACING LESS THAN 6x BAR DIAMETER MULTIPLY THE SCHEDULED VALUES BY 1.5. FOR ALL OTHER EPOXY-COATED BARS MULTIPLY THE SCHEDULED VALUES BY 1.2.

SLAB ON GRADE SCHEDULE

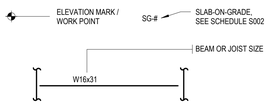
TYPE	THICKNESS	REINFORCEMENT	VAPOR RETARDER	FLOOR FLATNESS F (F)	FLOOR FLATNESS F (L)	REMARKS
SG-1	6"	#4 @ 18" OC	NO	35	-	-

NOTES:
1. ALL SLABS TO BE PLACED OVER VAPOR RETARDER (WHERE INDICATED) OVER 6" MINIMUM COMPACTED GRANULAR SUBBASE (UNLESS NOTED OTHERWISE IN GEOTECH REPORT).
2. WHERE WWR OR BARS INDICATED, PLACE 1/2" FROM BOTTOM OF CONTROL JOINT CUT, UNLESS NOTED OTHERWISE.

ABBREVIATIONS

AB	ANCHOR BOLT
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ALT	ALTERNATE
ARCH	ARCHITECT, ARCHITECTURAL
BFE	BOTTOM OF FOOTING ELEVATION
BLDG	BUILDING
BOT	BOTTOM
BSE	BOTTOM OF STEEL ELEVATION
CFMF	COLD FORMED METAL FRAMING
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION WELD
CL	CENTERLINE
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS; CONTINUATION
COORD	COORDINATE
CTJ	CONSTRUCTION JOINT
CTR	CENTER
DBE	DECK BEARING ELEVATION
DEG	DEGREES
DIA	DIAMETER
DL	DEAD LOAD
DWG	DRAWING
EA	EACH
EF	EACH FACE
EOR	EDGE OF ROOF
EOS	EDGE OF SLAB
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
FT	FOOT, FEET
FTG	FOOTING
FV	FIELD VERIFY
GA	GAUGE, GAGE
GALV	GALVANIZED
GT	GIRDER TRUSS
HORIZ	HORIZONTAL
HSS	HOLLOW STEEL SECTION
HT	HEIGHT
KB	KNEE BRACE
LL	LIVE LOAD
LLH	LONG LEG, HORIZONTAL
LLV	LONG LEG, VERTICAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LVL	LAMINATED VENEER LUMER
LW	LONG WAY
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
NIC	NOT IN CONTRACT
OC	ON CENTER
OPP	OPPOSITE
PJP	PARTIAL JOINT PENETRATION WELD
PL	PLATE
PP	PARTIAL PENETRATION WELD
PSI	POUNDS PER SQUARE INCH
PT	POINT
QTY	QUANTITY
RAD	RADIUS
REQ	REQUIRED, REQUIREMENT
REV	REVISE, REVISION
SIM	SIMILAR
SL	SNOW LOAD
SPEC	SPECIFICATION
SSH	SHORT SIDE HORIZONTAL
SSV	SHORT SIDE VERTICAL
SW	SHORT WAY
T&B	TOP AND BOTTOM
TBD	TO BE DETERMINED
TCE	TOP OF CONCRETE ELEVATION
TFE	TOP OF FOOTING ELEVATION
TLE	TOP OF LEDGE ELEVATION
TPE	TOP OF PIER ELEVATION
TSE	TOP OF STEEL ELEVATION
TWE	TOP OF WALL ELEVATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VDB	VERTICAL DIAGONAL BRACE
VERT	VERTICAL
VXB	VERTICAL X-BRACE
W/	WITH
WL	WIND LOAD
WP	WORK POINT
WWR	WELDED WIRE REINFORCEMENT

STRUCTURAL SYMBOL LEGEND



STRUCTURAL DESIGN CRITERIA

1. ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.

2. ASSUMED EXISTING DEAD LOADS
4" CONCRETE ON 1 1/2" METAL DECK (60 PSF) PLUS 20 PSF SUPERIMPOSED — 80 PSF

3. LIVE LOAD
EXISTING ELEVATED FLOOR (ASSUMED) — 100 PSF (NON-REDUCIBLE)
NEW SLAB ON GRADE — 100 PSF (NON-REDUCIBLE)
NEW PARTITION WALL — 120 PLF

4. SNOW LOAD
GROUND SNOW LOAD, Pg — 10 PSF
SNOW LOAD IMPORTANCE FACTOR — 1.2
SNOW EXPOSURE FACTOR, Ce — 1.0
SNOW THERMAL FACTOR, Ct — 1.0
MINIMUM FLAT ROOF SNOW, Pf — 13.4 PSF

5. WIND LOAD
BASIC WIND SPEED,Vult — 129 MPH
RISK CATEGORY — IV
WIND EXPOSURE CATEGORY — C

6. SEISMIC LOAD
SEISMIC RISK CATEGORY — IV
IMPORTANCE FACTOR, I_e — 1.50
MAPPED RESPONSE PARAMETER, S_s — 0.125
MAPPED RESPONSE PARAMETER, S1 — 0.063
SITE CLASS — E
DESIGN RESPONSE PARAMETER, SDS — 0.2083
DESIGN RESPONSE PARAMETER, SD1 — 0.1470
DESIGN CATEGORY — D
SEISMIC RESISTING SYSTEM — STEEL ORDINARY MOMENT FRAMES
DESIGN BASE SHEAR, V — 197.4k
SEISMIC RESPONSE COEFFICIENT, Cs — 0.089
RESPONSE MOD FACTOR — 3.5
ANALYSIS PROCEDURE — EQUIVALENT LATERAL FORCE ANALYSIS

7. SOIL
ALLOWABLE BEARING — 3,000 PSF OBTAINED FROM VALUES FROM THE ORIGINAL CONSTRUCTION DOCUMENTS BY CT CONSULTANTS, INC., DATED 12/07/2018

PROGRESSIVE COMPANIES
PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 2

3336 NC-43, GREENVILLE, NC 27834

This item has been electronically signed and sealed by Logan Thomas Muse using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES

2S001

6/17/2026 11:36:27 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - B2_STR.rvt
22 - 2S001 GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES
PROGRESSIVE COMPANIES
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REQUIRED SPECIAL INSPECTIONS OF TESTS OF SOILS

REQUIRED IF CHECKED	INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
☑	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	☐	☑
☑	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	☐	☑
☑	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	☐	☑
☑	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	☑	☐
☑	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	☐	☑

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

REQUIRED IF CHECKED	INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
☑	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS AND VERIFY PLACEMENT	☐	☑
☐	REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS	☐ ☐ ☑	☑ ☑ ☐
☐	INSPECT ANCHORS CAST IN CONCRETE	☐	☑
☑	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN a.	☑ ☐	☐ ☑
☑	VERIFY USE OF REQUIRED DESIGN MIX	☐	☑
☑	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	☑	☐
☑	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	☑	☐
☑	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	☐	☑
☐	INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS	☑ ☑	☐ ☐
☐	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	☐	☑
☐	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	☐	☑
☑	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	☐	☑

SPECIAL INSPECTION TASKS PRIOR TO WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	☑	☐
☑	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	☑	☐
☑	MATERIAL IDENTIFICATION (TYPE/GRADE)	☐	☑
☑	WELDER IDENTIFICATION SYSTEM	☐	☑
☑	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	☐	☑
☑	CONFIGURATION AND FINISH OF ACCESS HOLES	☐	☑
☑	FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	☐	☑

SPECIAL INSPECTION TASKS DURING WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	USE OF QUALIFIED WELDERS	☐	☑
☑	CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	☐	☑
☑	NO WELDING OVER CRACKED TACK WELDS	☐	☑
☑	ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	☐	☑
☑	WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) • PROPER POSITION (F, V, H, OH)	☐	☑
☑	WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	☐	☑

SPECIAL INSPECTION TASKS AFTER WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	WELDS CLEANED	☐	☑
☑	SIZE, LENGTH AND LOCATION OF WELDS	☑	☐
☑	WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	☑	☐
☑	ARCH STRIKES	☑	☐
☑	k-AREA	☑	☐
☑	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	☑	☐
☑	REPAIR ACTIVITIES	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	☑	☐

SPECIAL INSPECTION TASKS PRIOR TO BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	☑	☐
☑	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	☐	☑
☑	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	☐	☑
☑	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	☐	☑
☑	CONNECTING ELEMENTS INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	☐	☑
☑	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	☐	☑
☑	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	☐	☑

SPECIAL INSPECTION TASKS DURING BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	FASTENER ASSEMBLIES OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	☐	☑
☑	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	☐	☑
☑	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	☐	☑
☑	FASTENERS ARE PRETENSION IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	☐	☑

SPECIAL INSPECTION TASKS AFTER BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	☑	☐

SPECIAL INSPECTION OF FABRICATED ITEMS

REQUIRED IF CHECKED	INSPECTION TASK
☑	SPECIAL INSPECTIONS OF FABRICATED ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 1704.2.5 OF IBC. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION, UNLESS ONE OF THE TWO EXEMPTIONS BELOW APPLY:
	EXCEPTION 1: SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAIL FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND BUILDING CODES. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTIONS OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. APPROVAL BY THE BUILDING OFFICIAL REQUIRED TO USE THIS EXCEPTION.
	EXCEPTION 2: SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED AGENCY (AN ESTABLISHED AND RECOGNIZED AGENCY THAT IS REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, WHERE SUCH AGENCY HAS BEEN APPROVED BY THE BUILDING OFFICIAL).
☑	STRUCTURAL STEEL
☐	STEEL JOISTS & GIRDERS
☐	PRE-CAST/PRESTRESSED CONCRETE
☐	METAL BUILDING SYSTEMS
☐	WOOD TRUSSES
☐	WOOD WALL PANELS
☐	COLD-FORMED STEEL TRUSSES
☑	COLD-FORMED STEEL FRAMING

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BUILDING 2

3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING P.C. REGISTERED ENGINEERING CORPORATION C-2326 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 060496 ENGINEER LOGAN T. MUSE
Jun 17, 2026
Logan Muse

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

SPECIAL INSPECTIONS
2S002

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25 - 2S002
SPECIAL INSPECTIONS
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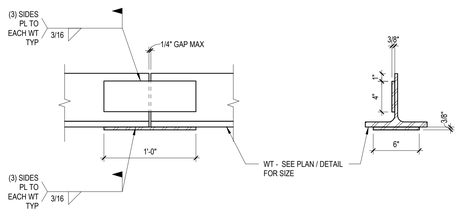
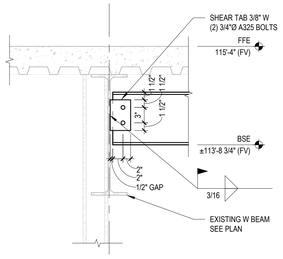
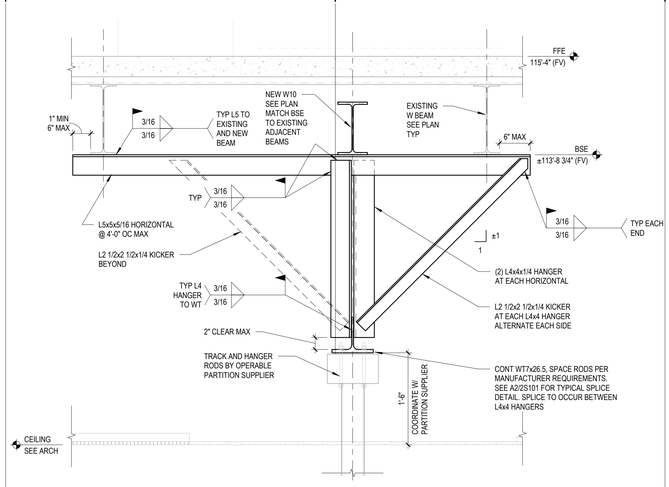


B6 WT SPLICE DETAIL
NOT TO SCALE



B5 DETAIL
1" = 1'-0"



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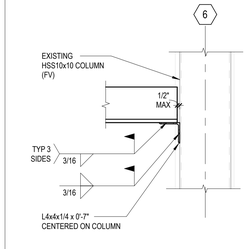
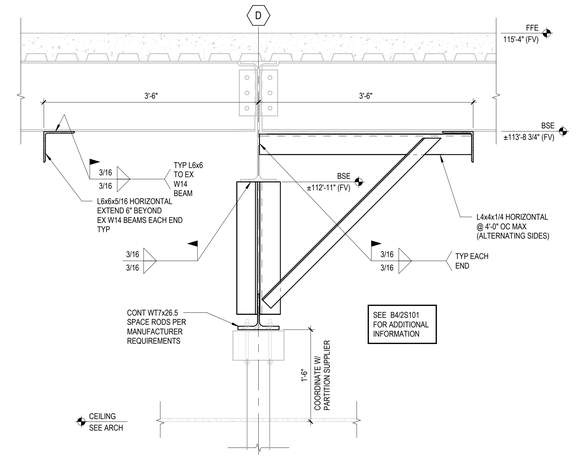
1" = 1'-0"



C5 DETAIL
1" = 1'-0"



C4 DETAIL
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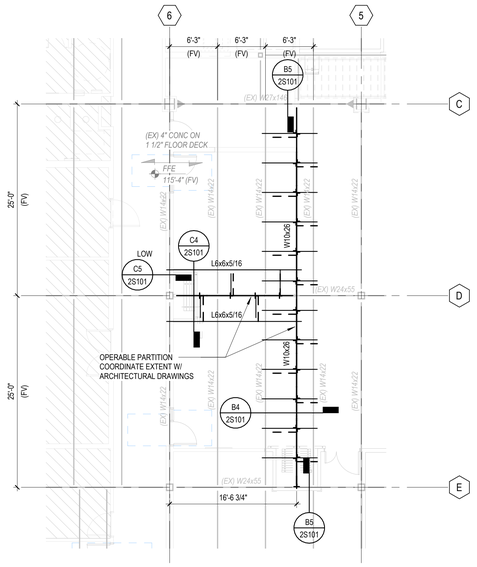
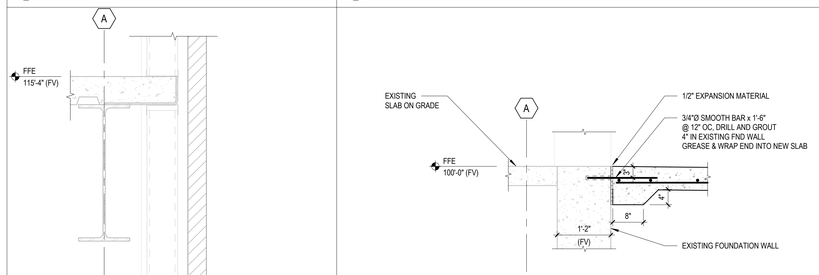
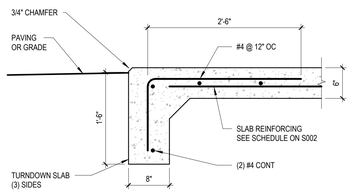


1 PARTIAL SECOND FLOOR FRAMING PLAN
1/8" = 1'-0"

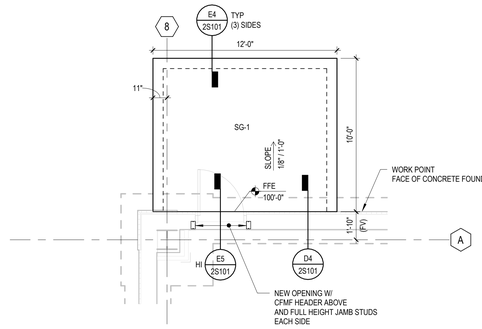


E5 DETAIL
1" = 1'-0"

D4 DETAIL
3/4" = 1'-0"



E4 DETAIL
1" = 1'-0"



1 ENLARGED PARTIAL FOUNDATION PLAN
1/4" = 1'-0"

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REGISTERED ENGINEERING COMPANY
C-2326
NORTH CAROLINA
CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL
Jun 17, 2026
SEAL
060496
ENGINEER
LOGAN T. MUSE

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

STRUCTURAL PLANS AND DETAILS
2S101

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22 - 2S101 - PLANS AND DETAILS
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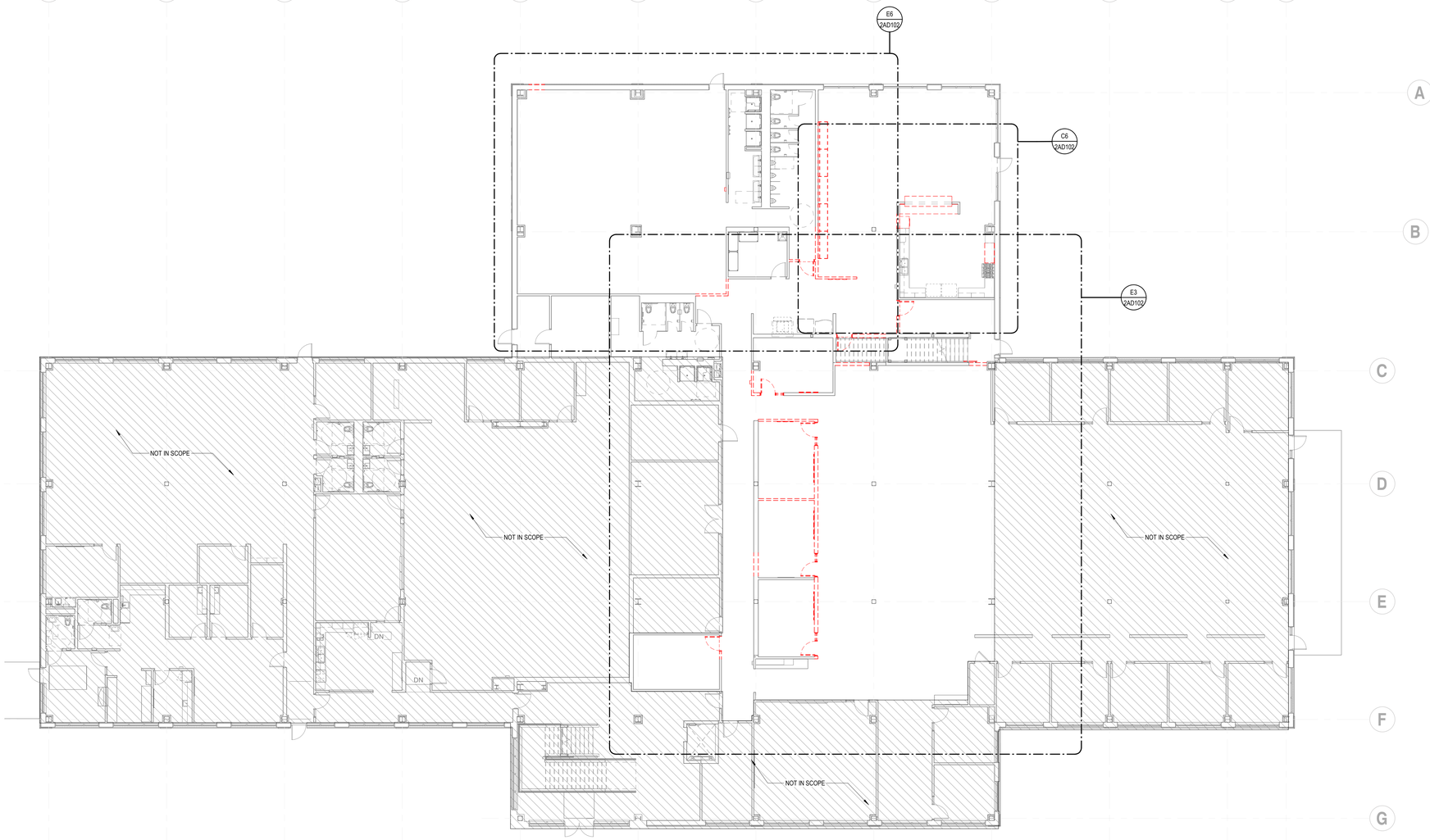
24.2.002

DEMOLITION NOTES AND LEGEND

1. EXISTING BUILDING CONDITION BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
2. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
3. COORDINATE DEMOLITION WITH ALL CONTRACTORS WORKING IN AREAS BEING RENOVATED.
4. DURING DEMOLITION, PROTECT ALL ADJACENT CONSTRUCTION TO REMAIN.
5. ANY ASBESTOS CONTAINING MATERIALS THAT ARE ENCOUNTERED ARE TO BE REMOVED BY THE OWNER.
6. REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ITEMS TO BE REMOVED NOT SHOWN HERE.
7. COORDINATE THE RETURN AND STORAGE OF ALL ITEMS DESIGNATED AS SALVAGE WITH THE OWNER'S REP.
8. PROVIDE TEMPORARY SHORING AND/OR STAGING OF THE DEMOLITION WORK.
9. COORDINATE CONSTRUCTION BARRIER LOCATIONS, NOISY DEMOLITION / CONSTRUCTION, AND WORK NOTED "INTERMITTENT" WITH OWNER.

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE REMOVED



E3 FIRST FLOOR DEMOLITION PLAN
3/32" = 1'-0"

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PROFESSIONAL ARCHITECTURE ENGINEERING P.C. 51348 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO

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PROJECT NUMBER
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PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

DEMOLITION PLAN
2AD101

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3D - 2AD101
DEMOLITION PLAN

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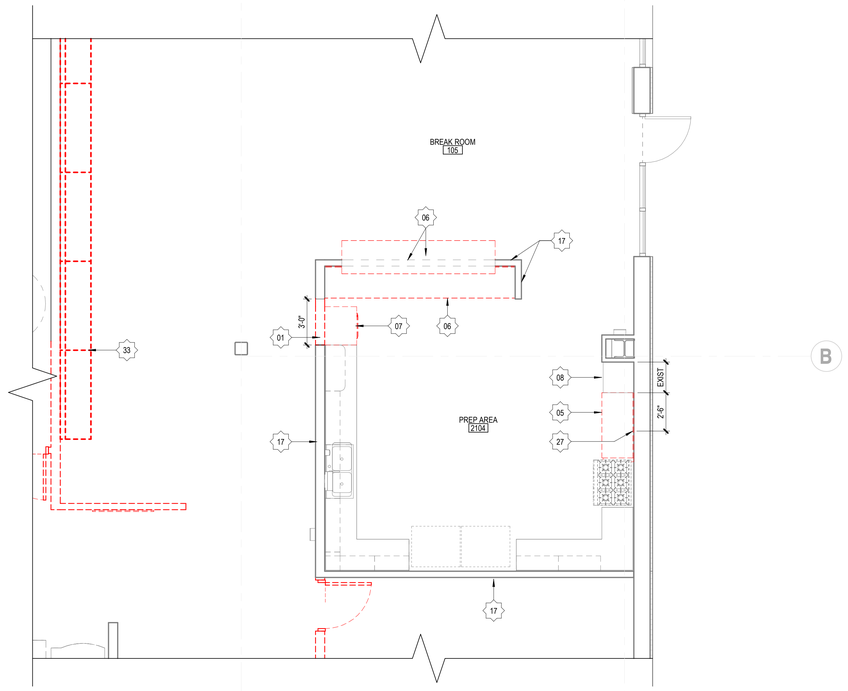
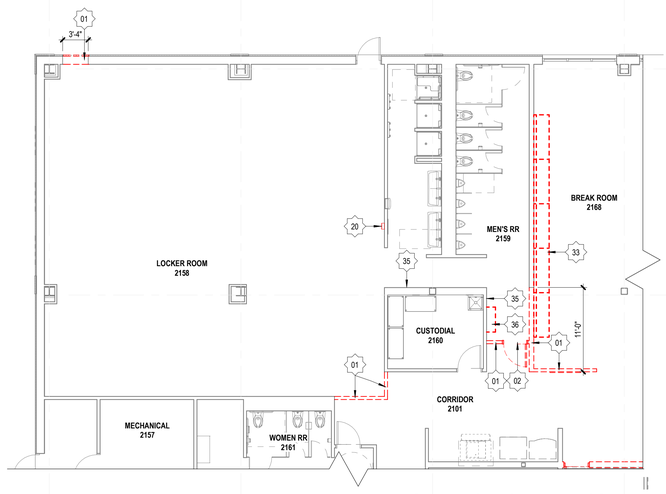


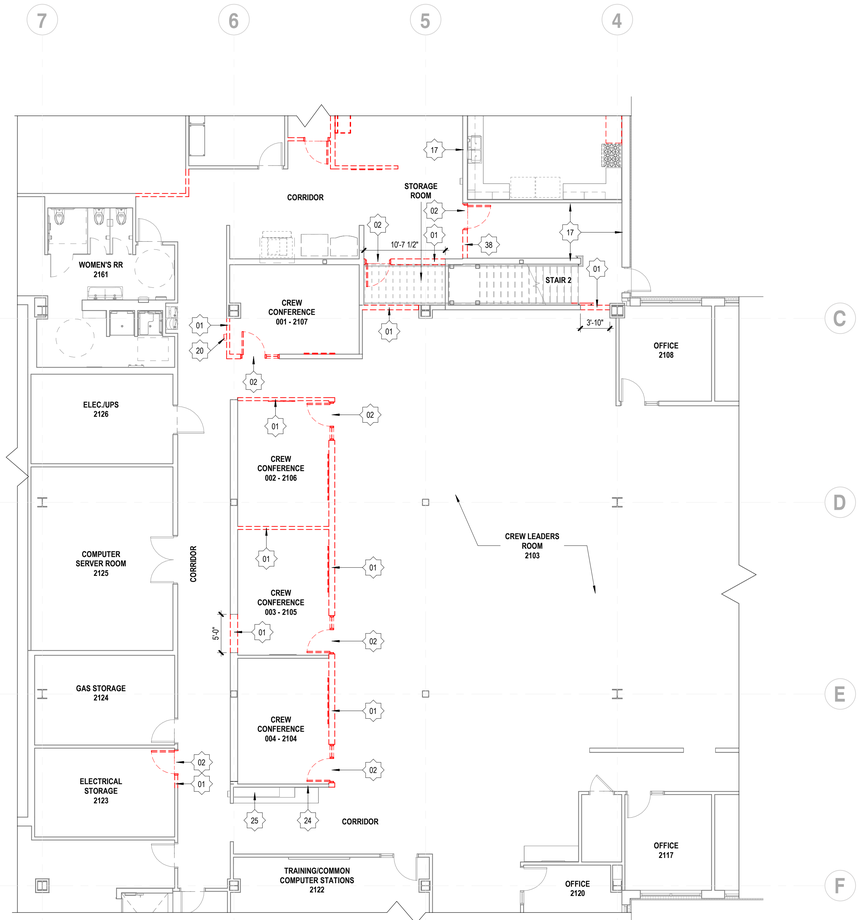
ENLARGED DEMOLITION PLAN - PREP AREA

C6 1/4" = 1'-0"



ENLARGED DEMOLITION PLAN - LOCKER ROOM

E6 1/8" = 1'-0"



ENLARGED DEMOLITION PLAN - CREW LEADERS ROOM

E3 1/8" = 1'-0"

DEMOLITION NOTES AND LEGEND

1. ALL DIMENSIONS ARE FROM FACE OF EXISTING.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION CONDITIONS AND FINISHES PRIOR TO THE START OF ANY WORK. DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR EVALUATION BEFORE CONTINUING WITH WORK.
3. CONTRACTOR TO COORDINATE WITH OTHER TRADES AND THIRD PARTIES INVOLVED IN DEMOLITION AND REMOVAL OF ITEMS.
4. COORDINATE THE RETURN AND STORAGE OF ALL ITEMS DESIGNATED AS SALVAGE WITH THE OWNER.
5. SELECTIVE DEMOLITION IS TO INCLUDE, NOT LIMITED TO, ITEMS DASHED ON DEMOLITION DRAWINGS AND AS NOTED.
6. COVER AND PROTECT EXISTING FLOORING TO REMAIN AS REQUIRED.
7. TAKE NECESSARY MEASURES TO PROTECT EXISTING FINISHES TO REMAIN. PATCH AND REPAIR ALL EXISTING WALLS AS NECESSARY THAT ARE DAMAGED DURING COURSE OF WORK.
8. IF ANY STRUCTURE NOT IDENTIFIED BY THE DESIGN TEAM IN THE DRAWINGS IS FOUND DURING DEMOLITION, THE G.C. SHALL CEASE DEMOLITION IN THE EFFECTED AREA AND NOTIFY THE DESIGN TEAM.
9. SHOULD ANY ENTITY OTHER THAN THOSE UNDER CONTRACT FOR THIS SCOPE OF WORK DAMAGE ANY ITEMS WITHIN THE LIMITS OF DISTURBANCE FOR THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.
10. COORDINATE CONSTRUCTION BARRIER LOCATIONS, NOISY DEMOLITION / CONSTRUCTION, AND WORK NOTED "INTERMITTENT" WITH OWNER.
11. OWNER IS RESPONSIBLE OF REMOVING EXISTING FURNITURE, FIRST AID & AED CABINETS AND SHALL RELOCATE TO THEIR PREFERENCE. SEE FLOOR PLAN FOR SUGGESTED LOCATION OF BENCHES NEEDED IN NEW LOCKER ROOM.

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE REMOVED

PLAN NOTES

NUMBER	NOTE
01	DEMOLISH WALL OR PORTION OF WALL & ASSOCIATED DEVICES AS INDICATED BY DASHED DEMOLITION LINES.
02	REMOVE EXISTING DOORS, HARDWARE, AND FRAMES. COORDINATE TO BE REPURPOSED, RETURNED TO OWNER OR DISPOSED. REMOVE ASSOCIATED DEVICES AND COORDINATE TO BE REPURPOSED.
05	DEMOLISH EXISTING CASEWORK AND ATTACHMENTS. SAVE COUNTERTOP & BACKSPLASH; TO BE REINSTALLED.
06	DEMOLISH EXISTING COUNTERTOP & PORTION OF WALL AS NEEDED TO INSTALL NEW COUNTERTOP.
07	REMOVE OVEN CASEWORK TO BE REINSTALLED ON OPPOSITE WALL (SEE RENOVATION FLOOR PLANS)
08	EXISTING TO REMAIN. PATCH AND REPAIR AS NEEDED TO RECEIVE NEW CONSTRUCTION.
17	DEMOLISH EXISTING BOTTOM WALL PANELS. PREP SURFACE TO RECEIVE NEW PAINT. SAVE WALL BASE AND CORNERGUARDS TO BE REINSTALL. SEE FINISH FLOOR PLANS.
20	REMOVE FEC AND SAVE TO BE REINSTALL IN NEW LOCATION.
24	REMOVE EXISTING WALLCOVERING. PREP SURFACE TO RECEIVE NEW PAINT. SAVE WALL BASE AND CORNERGUARDS TO BE REINSTALLED. SEE FINISH FLOOR PLAN FOR NEW FINISHES.
25	EXISTING CASEWORK TO REMAIN; PROTECT DURING DEMOLITION.
27	CUT BACK EXISTING WALL TILE BACK TO POINT INDICATED; ALL OTHER WALL TILE IS TO REMAIN BEYOND THIS POINT. REFER TO REVONATION FLOOR PLAN, ELEVATIONS AND FINISH PLAN.
33	REMOVE BUILT-IN BENCH SEAT. TO BE REINSTALLED IN BUILDING 3; COORDINATE STORAGE & RELOCATION WITH OWNER.
35	REMOVE EXISTING FRP WALL FINISH ON INDICATED WALL. PREP SURFACE TO RECEIVE NEW PAINT.
36	REMOVE & SAVE EXISTING WALL-MOUNTED SHELF. TO BE REINSTALLED, CONFIRM NEW LOCATION WITH OWNER.
38	DEMOLISH WALL UP TO 8'-10" A.F.F TO MATCH ADJACENT BULKHEAD IN CORRIDOR. BUILT BULKHEAD AS NEEDED TO SUPPORT REMAINING WALL.

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PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y.LUO
DRAWN BY
M.FUENTES
CHECKED BY
Checker

DEMOLITION ENLARGED PLANS

2AD102

6/17/2026 8:53:08 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - B2_ARCH.rvt
SET: 2AD102
DISCIPLINE: ARCHITECTURAL-ENLARGED PLANS
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E3 **DEMOLITION - REFLECTED CEILING PLAN**
1/8" = 1'-0"

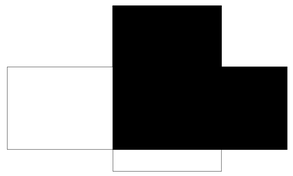
DEMOLITION RCP NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION CONDITIONS AND FINISHES PRIOR TO THE START OF ANY WORK. DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR EVALUATION BEFORE CONTINUING WITH WORK.
2. CONTRACTOR TO COORDINATE WITH OTHER TRADES AND THIRD PARTIES INVOLVED IN DEMOLITION AND REMOVAL OF ITEMS.
3. COORDINATE THE RETURN AND STORAGE OF ALL ITEMS DESIGNATED AS SALVAGE WITH THE OWNER, OR ITEMS TO BE REINSTALLED IN NEW LOCATIONS.
4. SELECTIVE DEMOLITION IS TO INCLUDE, NOT LIMITED TO, ITEMS DASHED ON DEMOLITION DRAWINGS AND AS NOTED.
5. ITEMS NOT BEING SALVAGED SHALL BE TRANSPORTED AND DISPOSED OF IN A LEGAL MANNER IN ACCORDANCE WITH ALL APPLICABLE CODES. RETAIN ALL DISPOSAL RECORDS
6. TAKE NECESSARY MEASURES TO PROTECT EXISTING FINISHES AND FIXTURES TO REMAIN.
7. FOR ADDITIONAL EQUIPMENT NOT SHOWN ON REFLECTED CEILING PLAN OR EXPOSED CEILINGS, REFER TO ELECTRICAL AND MECHANICAL DRAWINGS.

PLAN NOTES

NUMBER	NOTE
03	DEMOLISH PORTION, BULKHEAD OR ENTIRE EXISTING CEILING FINISH.
09	REMOVE EXIT SIGN AND RETURN TO OWNER.
45	UNINSTALL CAREFULLY LIGHT FIXTURES AND ASSOCIATED DEVICES TO BE REINSTALL IN NEW CEILING FINISH.

KEY PLAN



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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER BUILDING 2
3355 NC-43, GREENVILLE, NC 27834

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY
Y. LUO

DEMOLITION REFLECTED CEILING PLAN
2AD200

6/17/2026 8:53:11 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC-OP CTR - B2_ARCH.rvt
3D - 2AD200
DEMOLITION - REFLECTED CEILING PLAN

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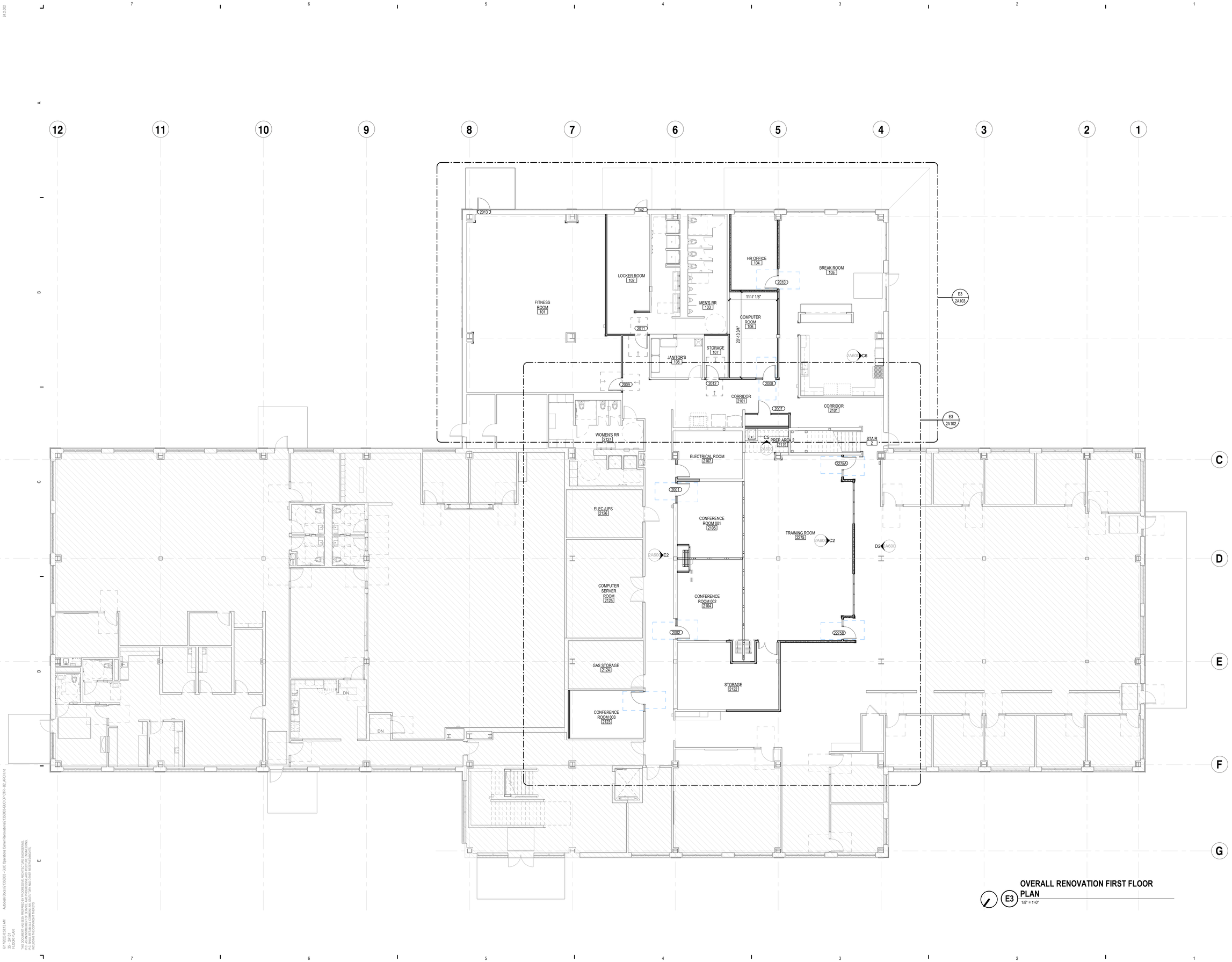

OVERALL RENOVATION FIRST FLOOR PLAN

E3 1/8" = 1'-0"

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JS_JS MC
2026 ARCH
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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 2

3355 NC-43, GREENVILLE, NC 27834

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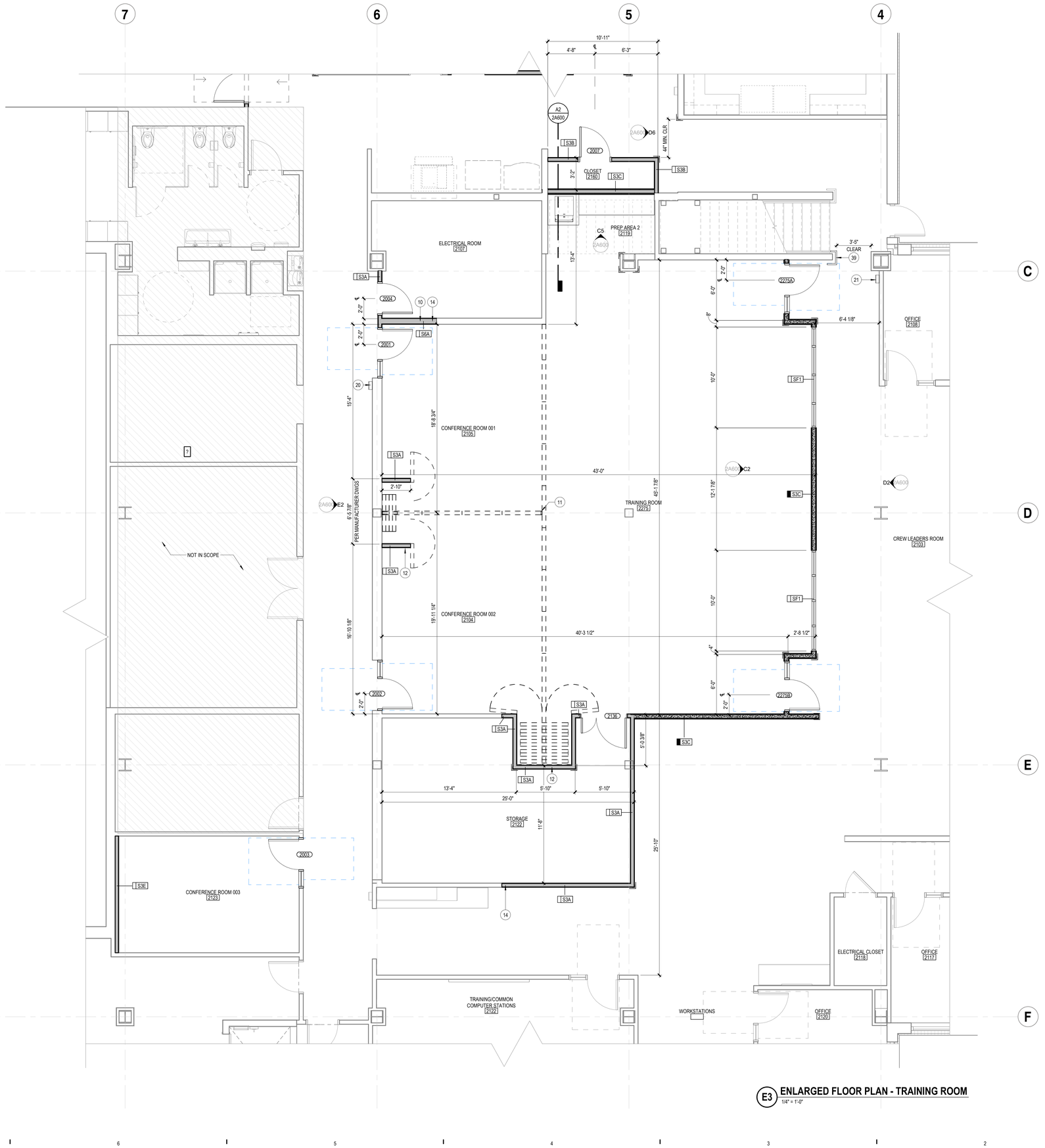
ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

FLOOR PLAN
2A101



E3 ENLARGED FLOOR PLAN - TRAINING ROOM

1/4" = 1'-0"

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. EXISTING BUILDING CONDITIONS BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
3. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
4. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
5. ABBREVIATIONS, TYPICAL MOUNTING DIMENSIONS, AND ANNOTATION SYMBOLOGY ARE SHOWN ON GENERAL INFORMATION DRAWINGS.
6. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
8. PATCH ALL DISTURBED SURFACES WITH MATERIALS TO MATCH ADJACENT SURFACE CONSTRUCTION.
9. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
10. REFER TO INTERIORS FOR FINISHES INCLUDING WALL PROTECTION ITEMS.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

CORE SIZE (NOMINAL)

S-M12A

S	
2	2 1/2"
3	3 5/8"
4	4"
5	
6	6"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
B	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
C	(2) LAYERS 5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK. WITH 3" MINERAL WOOL INSULATION IN STUD CAVITIES.
D	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE, SIDE OF THE TAG. EXTEND TO DECK
E	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE. EXTEND TO 4" ABOVE CEILING

PLAN NOTES

NUMBER	NOTE
10	INFILL WALL TO MATCH ADJACENT
11	FOLDABLE PARTITIONS
12	VERIFY POCKET DIMENSIONS WITH FOLDABLE PORTATION MANUFACTURER
14	ALIGN WALLS WITH EXISTING ADJACENT
20	REMOVE FEC AND SAVE TO BE REINSTALL IN NEW LOCATION.
21	PROVIDE NEW FIRE EXTINGUISHER CABINET.
39	PROVIDE NEW WELDED HANDRAIL EXTENSION INTEGRATED TO MATCH EXISTING. EXTENSION TO GO AROUND WALL. SHOP DRAWINGS TO BE APPROVED BY DESIGN TEAM.

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3355 NC-43, GREENVILLE, NC 27834

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NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO

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ISSUANCE

06/17/2025 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

ENLARGED RENOVATION FLOOR PLAN - TRAINING ROOM

2A102

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ENLARGED RENOVATION FLOOR PLAN - TRAINING ROOM
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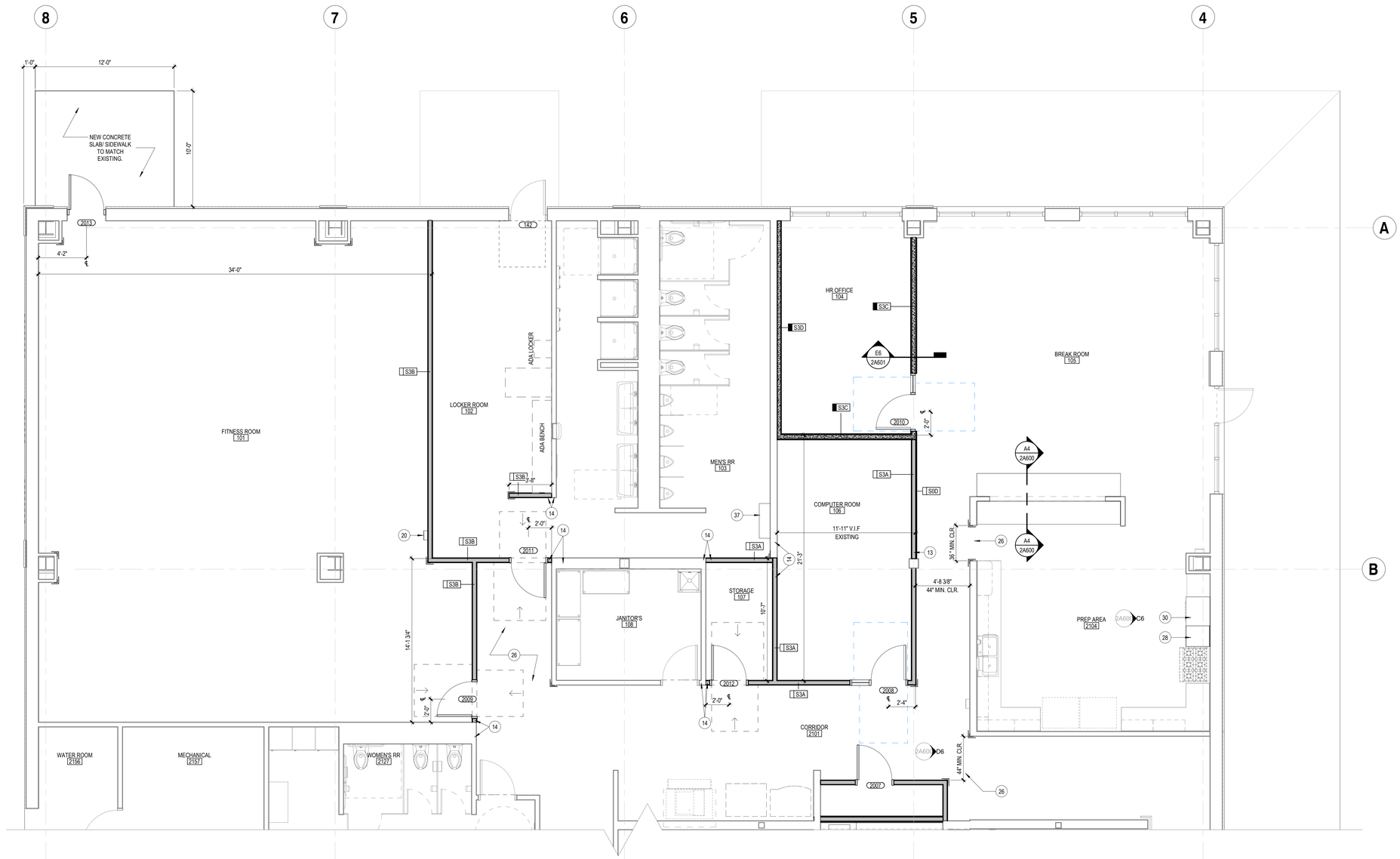

E3 ENLARGED FLOOR PLAN - BREAK ROOM

1/4" = 1'-0"

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. EXISTING BUILDING CONDITIONS BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
3. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
4. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
5. ABBREVIATIONS, TYPICAL MOUNTING DIMENSIONS, AND ANNOTATION SYMBOLOGY ARE SHOWN ON GENERAL INFORMATION DRAWINGS.
6. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
8. PATCH ALL DISTURBED SURFACES WITH MATERIALS TO MATCH ADJACENT SURFACE CONSTRUCTION.
9. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
10. REFER TO INTERIORS FOR FINISHES INCLUDING WALL PROTECTION ITEMS.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

M12A

CORE SIZE (NOMINAL)

	S
2	2 1/2"
3	3 5/8"
4	4"
5	
6	6"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
B	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
C	(2) LAYERS 5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK. WITH 3" MINERAL WOOL INSULATION IN STUD CAVITIES.
D	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE. SIDE OF THE TAG: EXTEND TO DECK
E	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE: EXTEND TO 4" ABOVE CEILING

PLAN NOTES

NUMBER	NOTE
13	NEW WALL TO RUN TO BOTTOM OF EXISTING BULKHEAD. PROVIDE ONE LAYER OF 5/8" GYPSUM BOARD ON THE SIDE OF THE TAG TO FLUSH WALLS ON THE CORRIDOR. THIS LAYER SHALL RUN TO BOTTOM OF DECK AND DIE ON THE COLUMN.
14	ALIGN WALLS WITH EXISTING ADJACENT
20	REMOVE FEC AND SAVE TO BE REINSTALL IN NEW LOCATION.
26	PATCH & REPAIR CONCRETE AS REQUIRED; PAINT/SEAL TO MATCH EXISTING.
28	NEW BASE CASEWORK. CUT TO SIZE & REINSTALL THE SOLID SURFACE COUNTERTOP & BACKSPLASH SAVED DURING DEMOLITION.
30	RELOCATED OVEN CABINET.
37	REINSTALL WALL-MOUNTED SHELF. CONFIRM FINAL LOCATION WITH OWNER.

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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 2

3359 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
51348
NORTH CAROLINA
CHARLOTTE, NC

NORTH CAROLINA
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13690
ARCHITECT
YI LUO

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ISSUANCE

09/17/2025 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

ENLARGED RENOVATION FLOOR PLAN - FITNESS AREA
2A103

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2A103 ENLARGED RENOVATION FLOOR PLAN - FITNESS AREA
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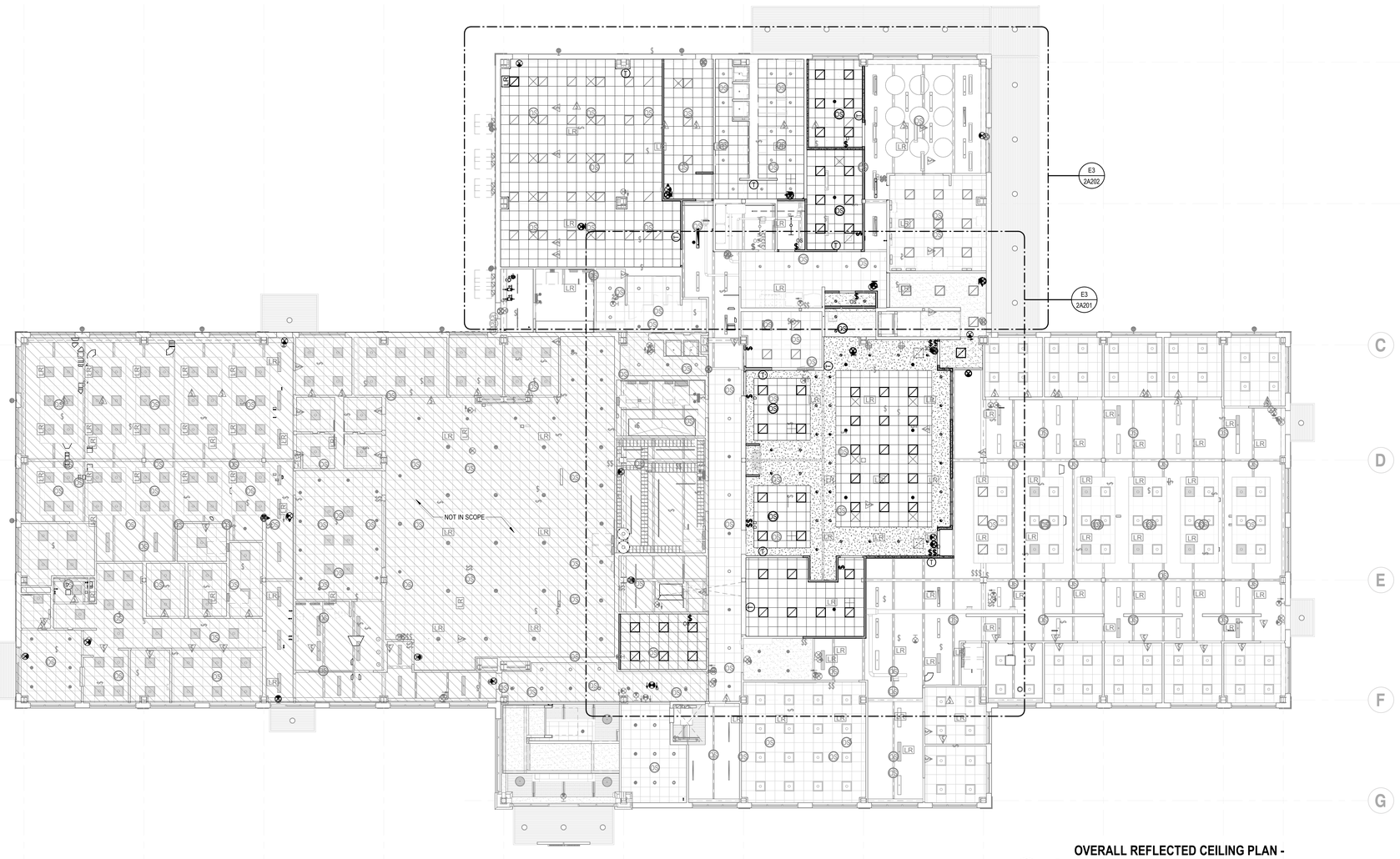

OVERALL REFLECTED CEILING PLAN - FIRST FLOOR
E3 — 3/32" = 1'-0"

REFLECTED CEILING PLAN LEGEND

1. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM / AREA OR ALIGNED WITH ADJACENT ROOM / AREA AS INDICATED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHTS INDICATED ARE DIMENSIONED FROM THE FINISHED FLOOR BELOW.
3. ALL LIGHT FIXTURES, SPRINKLER HEADS, RETURN AIR GRILLES AND SUPPLY AIR GRILLES ARE TO BE LOCATED IN THE CENTER OF THE CEILING PAD, UNLESS NOTED OTHERWISE.
4. COORDINATE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TO ASSURE PROPER CLEARANCES AND LAYOUT.
5. MECHANICAL, ELECTRICAL AND FIRE PROTECTION CONTRACTORS TO PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE SIZE AND LOCATIONS OF ACCESS PANELS TO MINIMIZE QUANTITIES. CONTRACTOR IS REQUIRED TO PROVIDE LAYOUT TO ARCHITECT FOR REVIEW PRIOR TO INSTALLATION, UNLESS NOTED OTHERWISE.
6. REFER TO FINISH SCHEDULE(S) FOR CEILINGS AND/OR EXPOSED STRUCTURE TO BE PAINTED.

- EXPOSED
- GYPSUM BOARD
- 2X2 ACOUSTIC CEILING PANEL
- EXISTING GYPSUM BOARD
- EXISTING 2X2 ACOUSTIC CEILING PANEL
- RECESSED ROUND LIGHT FIXTURE (SIZE MAY VARY) (EMERGENCY FIXTURES SHADED)
- 2X2 LIGHT FIXTURE
- HVAC SUPPLY GRILLE
- HVAC RETURN GRILLE
- FIRE EXIT SIGN LOCATION
- CEILING MOUNTED PROJECTOR

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RENOVATIONS TO OPERATION CENTER
BUILDING 2
3359 NC-43, GREENVILLE, NC 27834

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y.LUO
DRAWN BY
M.FUENTES
CHECKED BY

REFLECTED CEILING PLAN
2A200

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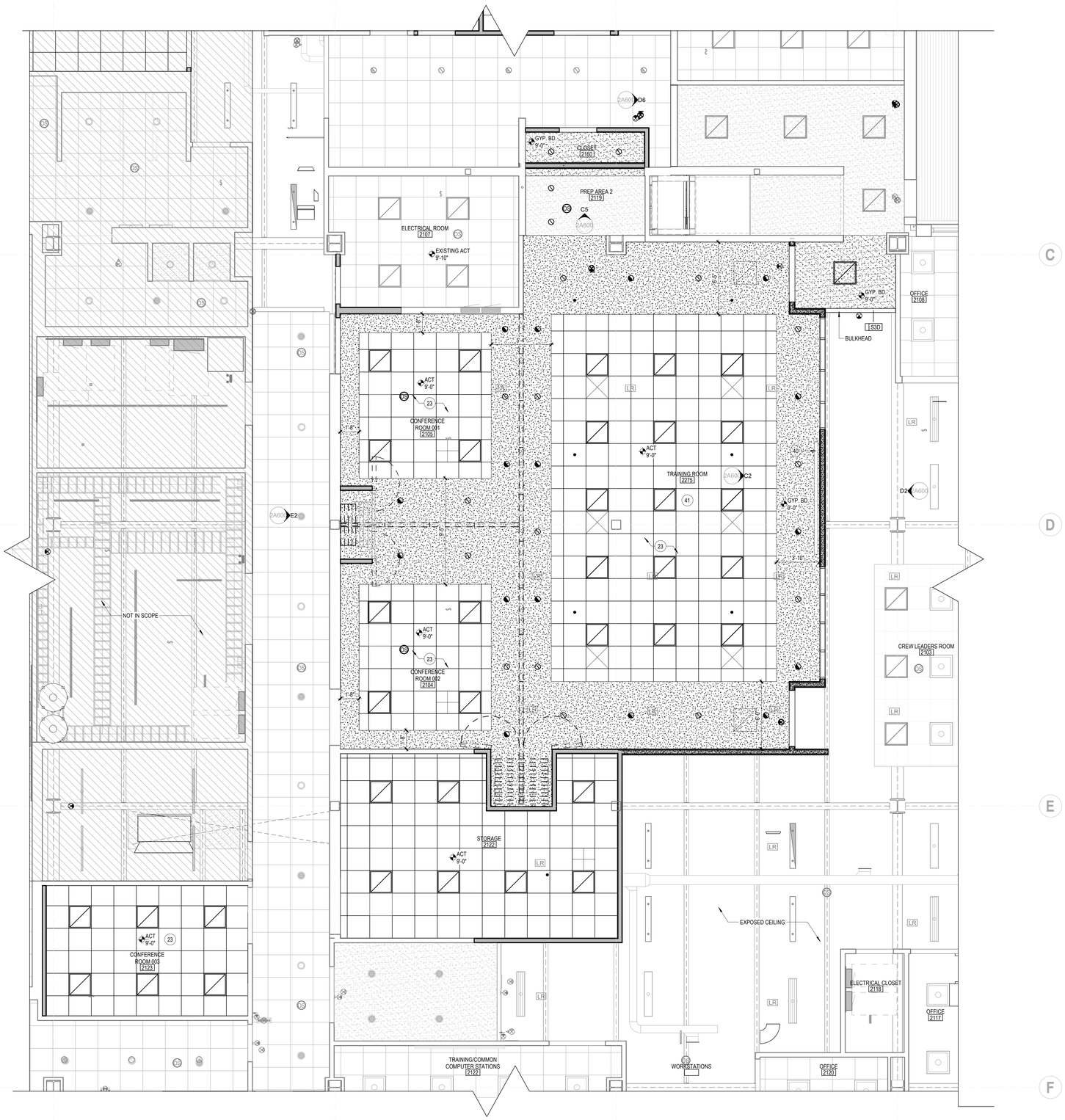
RS - 3/32"
REFLECTED CEILING PLAN



ENLARGED REFLECTED CEILING PLAN - TRINING ROOM

E3 1/4" = 1'-0"

REFLECTED CEILING PLAN LEGEND

1. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM / AREA OR ALIGNED WITH ADJACENT ROOM / AREA AS INDICATED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHTS INDICATED ARE DIMENSIONED FROM THE FINISHED FLOOR BELOW.
3. ALL LIGHT FIXTURES, SPRINKLER HEADS, RETURN AIR GRILLES AND SUPPLY AIR GRILLES ARE TO BE LOCATED IN THE CENTER OF THE CEILING PAD, UNLESS NOTED OTHERWISE.
4. COORDINATE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TO ASSURE PROPER CLEARANCES AND LAYOUT.
5. MECHANICAL, ELECTRICAL AND FIRE PROTECTION CONTRACTORS TO PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE SIZE AND LOCATIONS OF ACCESS PANELS TO MINIMIZE QUANTITIES. CONTRACTOR IS REQUIRED TO PROVIDE LAYOUT TO ARCHITECT FOR REVIEW PRIOR TO INSTALLATION, UNLESS NOTED OTHERWISE.
6. REFER TO FINISH SCHEDULE(S) FOR CEILINGS AND/OR EXPOSED STRUCTURE TO BE PAINTED.

- EXPOSED
- GYPSUM BOARD
- 2X2 ACOUSTIC CEILING PANEL
- EXISTING GYPSUM BOARD
- EXISTING 2X2 ACOUSTIC CEILING PANEL
- RECESSED ROUND LIGHT FIXTURE (SIZE MAY VARY) (EMERGENCY FIXTURES SHADED)
- 2X2 LIGHT FIXTURE
- HVAC SUPPLY GRILLE
- HVAC RETURN GRILLE
- FIRE EXIT SIGN LOCATION
- CEILING MOUNTED PROJECTOR

PLAN NOTES

NUMBER	NOTE
23	PROVIDE BATT INSULATION ABOVE NEW CEILING TILES IN TRAINING ROOM AND CONFERENCE ROOMS.
40	NEW CEILING-MOUNTED RETRACTABLE PROJECTOR SCREEN. INSTALL PER MANUFACTURER SPECIFICATIONS.
41	REINSTALL CEILING-MOUNTED PROJECTOR THAT IS TO BE REMOVED FROM BUILDING 3. COORDINATE MOUNTING LOCATION WITH AV/PROJECTOR REQUIREMENTS.

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PROGRESSIVE COMPANIES
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GREENVILLE UTILITIES COMMISSION

RENOVATIONS TO OPERATION CENTER BUILDING 2

3359 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING P.C. 51348 NORTH CAROLINA CHARLOTTE, NC

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350033
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

REFLECTED CEILING PLAN

2A201

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2A201
REFLECTED CEILING PLAN
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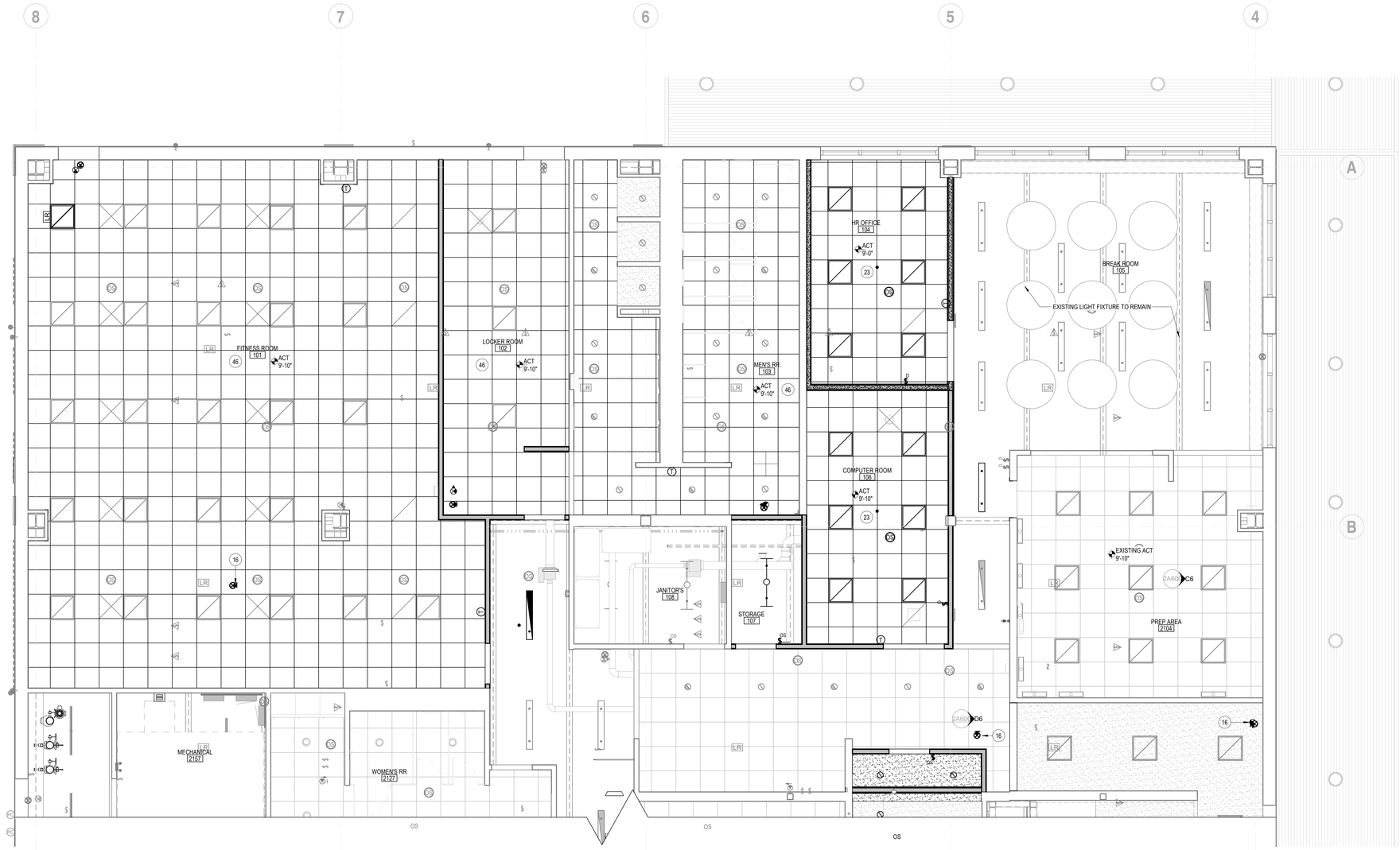

ENLARGED REFLECTED CEILING PLAN - BREAK ROOM & FITNESS AREA

E3 1/4" = 1'-0"

REFLECTED CEILING PLAN LEGEND

1. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM / AREA OR ALIGNED WITH ADJACENT ROOM / AREA AS INDICATED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHTS INDICATED ARE DIMENSIONED FROM THE FINISHED FLOOR BELOW.
3. ALL LIGHT FIXTURES, SPRINKLER HEADS, RETURN AIR GRILLES AND SUPPLY AIR GRILLES ARE TO BE LOCATED IN THE CENTER OF THE CEILING PAD, UNLESS NOTED OTHERWISE.
4. COORDINATE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TO ASSURE PROPER CLEARANCES AND LAYOUT.
5. MECHANICAL, ELECTRICAL AND FIRE PROTECTION CONTRACTORS TO PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE SIZE AND LOCATIONS OF ACCESS PANELS TO MINIMIZE QUANTITIES. CONTRACTOR IS REQUIRED TO PROVIDE LAYOUT TO ARCHITECT FOR REVIEW PRIOR TO INSTALLATION, UNLESS NOTED OTHERWISE.
6. REFER TO FINISH SCHEDULE(S) FOR CEILINGS AND/OR EXPOSED STRUCTURE TO BE PAINTED.

- EXPOSED
- GYPSUM BOARD
- 2X2 ACOUSTIC CEILING PANEL
- EXISTING GYPSUM BOARD
- EXISTING 2X2 ACOUSTIC CEILING PANEL
- RECESSED ROUND LIGHT FIXTURE (SIZE MAY VARY) (EMERGENCY FIXTURES SHADED)
- 2X2 LIGHT FIXTURE
- HVAC SUPPLY GRILLE
- HVAC RETURN GRILLE
- FIRE EXIT SIGN LOCATION
- CEILING MOUNTED PROJECTOR

PLAN NOTES

NUMBER	NOTE
16	PROVIDE NEW EXIT SIGN. VERFY IN FIELD IF FIXTURES CANNOT BE REPURPOSED IN LOCATION OR IN ANOTHER LOCATION WITHIN THE PROJECT SCOPE.
23	PROVIDE BATT INSULATION ABOVE NEW CEILING TILES IN TRAINING ROOM AND CONFERENCE ROOMS.
46	REINSTALL LIGHT FIXTURES AND DEVICES PREVIOUSLY UNISTALLED. THE INTENT IS TO MATCH PREVIOUS LAYOUT.

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GREENVILLE UTILITIES COMMISSION
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NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO
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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

REFLECTED CEILING PLAN
2A202

6/17/2026 8:53:24 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - B2_ARCH.rvt
36 - 1/4"x1'
REFLECTED CEILING PLAN
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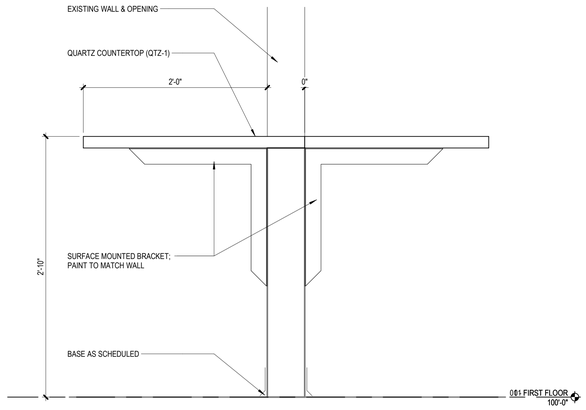
INTERIOR ELEVATION GENERAL NOTES

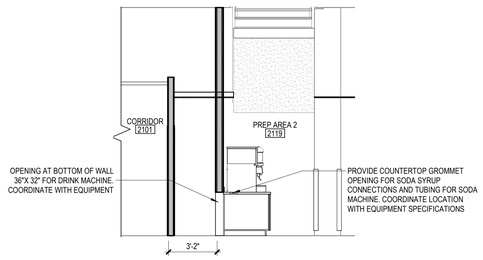
1. REFER TO DRAWING 2A800 FOR FINISH MATERIAL LIST AND DETAILED FINISH INFORMATION.
2. REFER TO CASEWORK LEGEND ON THIS SHEET FOR TYPICAL CASEWORK ANNOTATIONS AND SYMBOLOGY.
3. ALL COUNTERTOPS SHALL BE 34" AFF (AS REQUIRED FOR ACCESSIBILITY) UNLESS NOTED OTHERWISE.
4. EXPOSED OUTSIDE CORNERS OF COUNTERTOPS SHALL BE EASED.

CASEWORK LEGEND AND NOTES

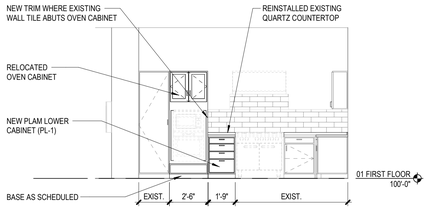
1. ALL SHELVES ARE ADJUSTABLE, UNLESS NOTED OTHERWISE.
2. PROVIDE EQUAL SIZED FILLER PANELS AT CABINET ELEVATIONS. MINIMUM 1" AND MAXIMUM 6" UNLESS NOTED OTHERWISE.
3. PROVIDE FINISH BASE AT ALL BASE CABINETS TO MATCH ADJACENT WALL BASE, UNLESS NOTED OTHERWISE.
4. PROVIDE SEALANT AT BOTTOM, TOP AND ENDS OF BACKSPLASHES AND SIDESPLASHES.



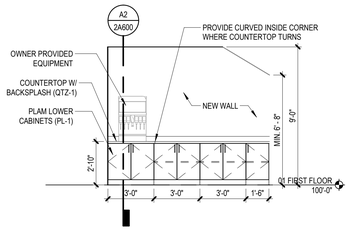
A4 SECTION - COUNTER TOP BREAK ROOM PREP AREA
1 1/2" = 1'-0"



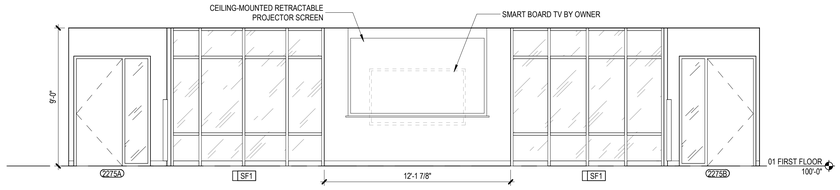
A2 SECTION - PREP AREA & STORAGE IN NEW TRAINING ROOM
1/4" = 1'-0"



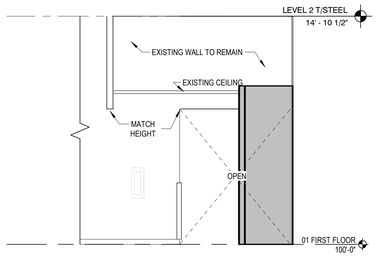
C6 NEW CASEWOR ELEVATION IN BREAKROOM PREP AREA
1/4" = 1'-0"



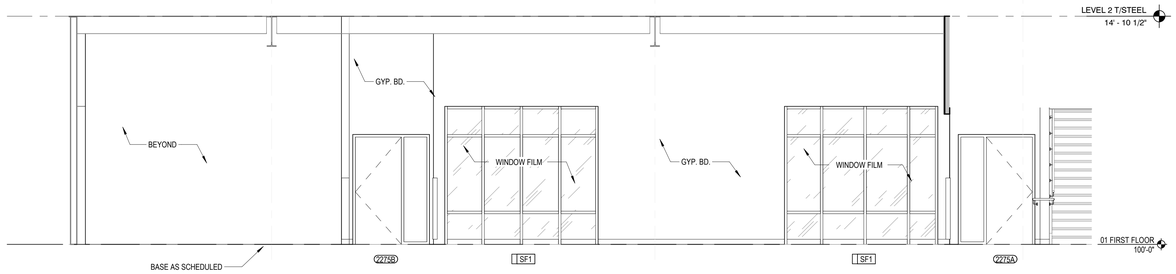
C5 INTERIOR ELEVATION - PREP AREA IN TRAINING ROOM
1/4" = 1'-0"



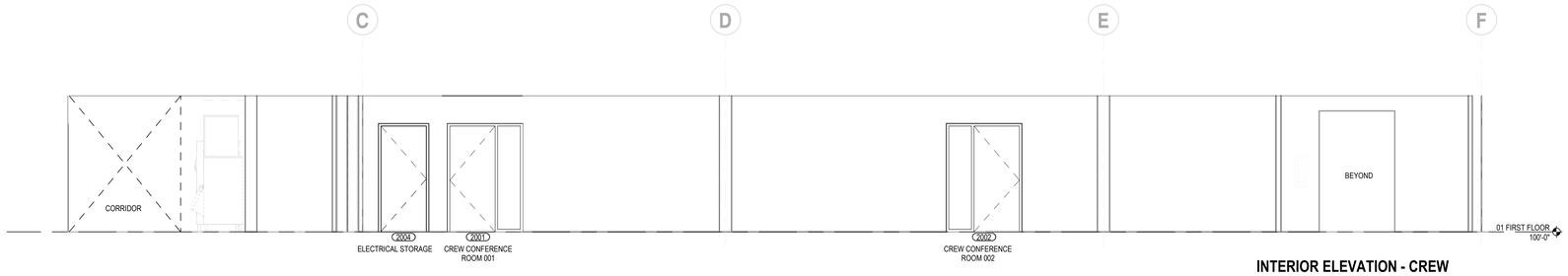
C2 TRAINING ROOM 2275 - PRESENTATION WALL
1/4" = 1'-0"



D6 INTERIOR ELEVATION - CORRIDOR OUTSIDE BREAKROOM
1/4" = 1'-0"



D2 INTERIOR ELEVATION - TRAINING ROOM
1/4" = 1'-0"



E2 INTERIOR ELEVATION - CREW CONFERENCE ROOMS
1/4" = 1'-0"

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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER BUILDING 2
3355 NC-43, GREENVILLE, NC 27834

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A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES/R. WOOLARD
CHECKED BY

INTERIOR ELEVATIONS
2A600

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30" = 24X36
INTERIOR ELEVATIONS
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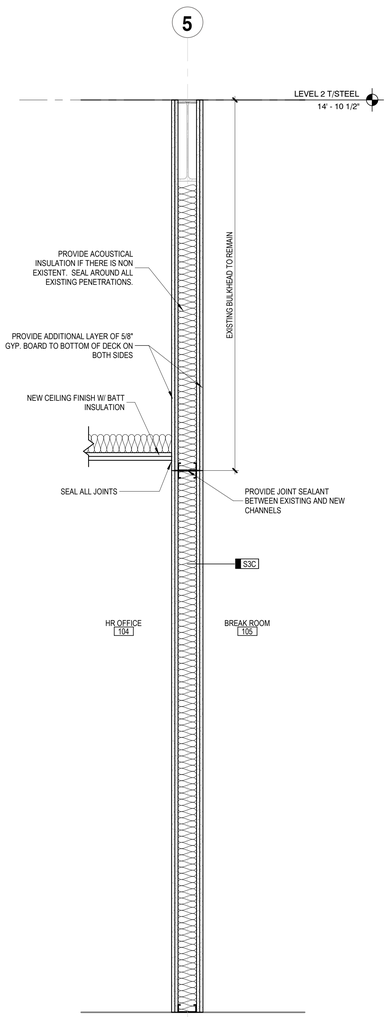
24.2.022

DOOR SCHEDULE NOTES

1	EXISTING FRAME AND DOOR (HARDWARE MODIFICATIONS ONLY)
2	EXISTING FRAME AND DOOR
3	EXISTING HARDWARE
4	CARD ACCESS
5	FULL (170 DEGREE) SWING
6	
7	1/4" TEMPERED GLASS
8	1/4" TEMPERED WINDOW FILM
9	1" CLEAR TEMPERED, LOW-E INSUALTING
10	

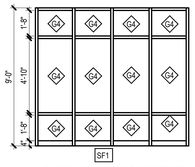
DOOR SCHEDULE

MARK	ROOM NAME	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HDW	DETAILS HEAD	DETAILS JAMB	NOTES
FIRST FLOOR													
2001	CONFERENCE ROOM 001	3'-0"	7'-0"	F	EX	EXISTING	SL	EX	EX	EX 4	E3	E3	#1 FROM ROOM E0.1.32 (2104)
2002	CONFERENCE ROOM 002	3'-0"	7'-0"	F	EX	EXISTING	SL	EX	EX	EX 4	E3	E3	#1 FROM ROOM E0.1.34 (2106)
2003	CONFERENCE ROOM 003	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	4	E3	E3	#7
2004	ELECTRICAL ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	1	E3	E3	
2007	CLOSET	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	EX 1	E3	E3	#3 & # 5 FROM E0.1.61
2008	COMPUTER ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	4	E3	E3	#7
2009	FITNESS ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	2	E3	E3	#4 / EXIST. CARD READER REINSTALLED
2010	HR OFFICE	3'-0"	7'-0"	F	EX	EX	EX	EX	EX	3	E3	E3	#2 FROM ROOM E0.1.33 (2105)
2011	LOCKER ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	EX 8	E3	E3	#3 FROM MEN'S RR ENTRANCE
2012	STORAGE	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	1	E3	E3	
2013	FITNESS ROOM	3'-0"	7'-0"	F	ALUMN.		S	HM	PAINT	6	E2	E2	#4, #8
2136	STORAGE	4'-6"	6'-8"	UN	WD	CLR	S	HM	PAINT	5	E3	E3	NO MULLION, FLUSH BOLT (INACTIVE LEAF)
2275A	TRAINING ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	4	E3	E3	#7
2275B	TRAINING ROOM	3'-0"	7'-0"	F	WD	CLR	SL	HM	PAINT	4	E3	E3	#7

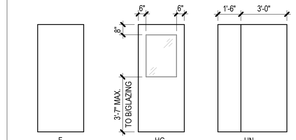


E6 **WALL SECTION - HR OFFICE**
1" = 1'-0"

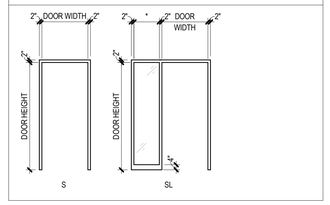
INTERIOR STOREFRONT FRAME TYPES

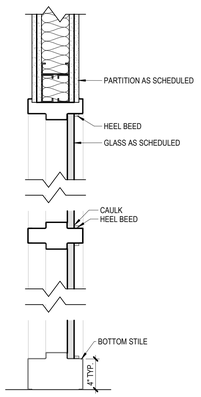


DOOR TYPES

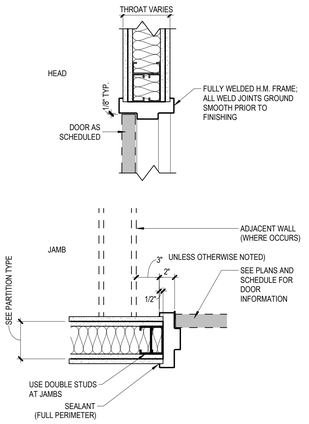


FRAME TYPES

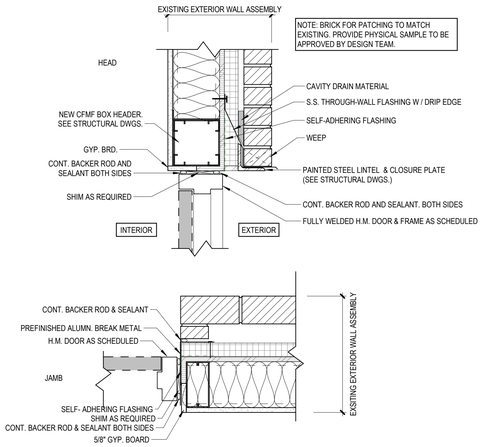




E5 **TYP. STOREFRONT METAL FRAME**
1 1/2" = 1'-0"



E3 **INTERIOR HOLLOW METAL FRAME**
1 1/2" = 1'-0"



E2 **EXTERIOR HOLLOW METAL HEAD & JAMB**
1 1/2" = 1'-0"

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M.FUENTES
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DOOR SCHEDULE, ELEVATIONS, AND DETAILS
2A601

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3D - 3 MEP
DOOR SCHEDULE, ELEVATIONS, AND DETAILS
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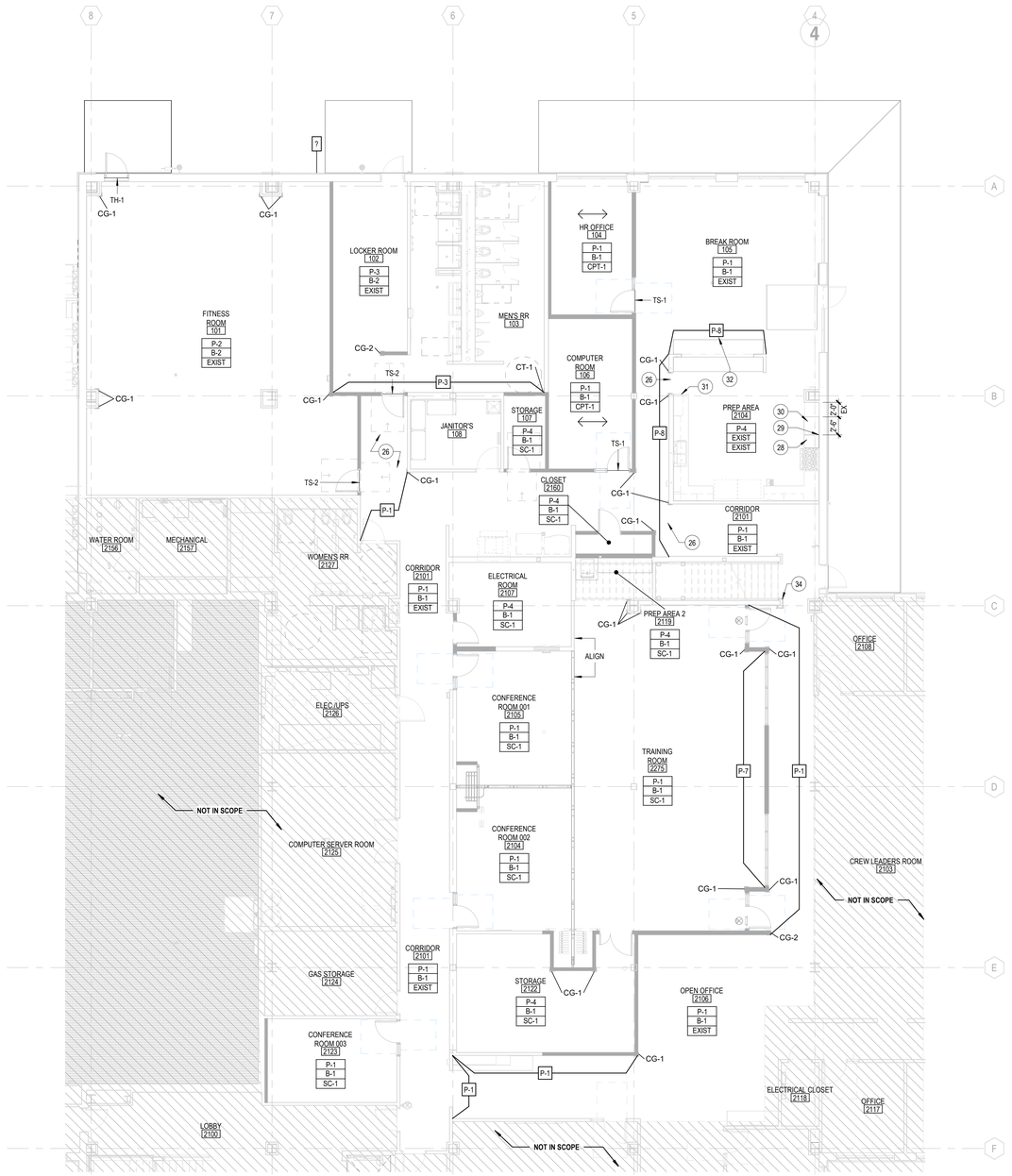
FINISH MATERIAL LIST

MARK	TYPE	MANUFACTURER	STYLE / PATTERN / FINISH	SIZE	COLOR	NOTES
10 FLOORS						
CPT-1	CARPET TILE	MILLIKEN	JOURNAL - FREEHAND	50 X 50 CM	FRE19-106 COMPOSE W/ QUARTZ/NAVY	ASHLAR INSTALLATION
SC-1	SEALED CONCRETE	-	-	-	MATCH EXISTING	MATCH COLOR OF EXISTING PAINTED/SEALED CONCRETE FLOORS
20 BASE						
B-1	RUBBER COVE BASE	JOHNSONITE	COVE	4"	71 STORM CLOUD	
B-2	FLASH COVE BASE	GERFLOR	MIPOLAM ELEGANCE	6'-6" WIDE SHEETS	0344 NUTMEG	INCLUDE FULL COVE FORMER TRIM; HEAT WELD SEAMS
30 WALLS						
P-1	PAINT - FIELD	PPG	EGG SHELL	-	TINSEL - PPG1012-3	
P-2	PAINT - FITNESS ROOM	PPG	SEMI-GLOSS	-	MOUNTAIN STREAM - PPG1149-4	
P-3	PAINT - LOCKERS	PPG	SEMI-GLOSS	-	GRAY FROST - PPG1012-4	
P-4	PAINT	PPG	SEMI-GLOSS	-	TINSEL - PPG1012-3	
P-5	PAINT - EXPOSED CEILINGS	-	-	-	MATCH EXISTING	ALL EXPOSED CEILING LOCATIONS AS REQUIRED
P-6	PAINT- GYP CEILINGS	PPG	FLAT		CEILING WHITE	ALL GYP CEILING LOCATIONS & BULKHEADS WHERE NOTED
P-7	PAINT - ACCENT	SHERWIN WILLIAMS	SEMI-GLOSS	-	SURF GREEN - SW 6473	
P-8	PAINT - ACCENT	SHERWIN WILLIAMS	SEMI-GLOSS	-	GRAND CANAL - SW 6488	
P-9	PAINT - DOOR FRAMES	PPG	SEMI-GLOSS	-	555-6 VOLCANIC ASH	
40 CEILING						
ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	ULTIMA SQUARE LAY-IN PANELS	2' X 2'	MATCH EXISTING	W/ PRELUDE XL GRID
50 CASEWORK						
PL-1	PLASTIC LAMINATE	NEVAMAR	TEXTURED FINISH	-	CLEAR MAPLE - WM8340T	
QTZ-1	QUARTZ	CORIAN	LEATHERED FINISH	-	DOVE GREY	MATCH THICKNESS OF EXISITNG COUNTERS
60 MISCELLANEOUS						
CG-1	CORNER GUARD	CS SPECIALTIES	CO-8 90 DEGREE CORNER	4'-0" HEIGHT	#4 STAINLESS STEEL FINISH	SEE FINISH PLAN FOR LOCATIONS; REINSTALL ANY SAVED CORNER GUARDS FIRST
CG-2	END GUARD	CS SPECIALTIES	SCO-8 CHANNEL GUARD	4'-0" HEIGHT	#4 STAINLESS STEEL FINISH	SEE FINISH PLAN FOR LOCATIONS; REINSTALL ANY SAVED END GUARDS FIRST
CT-1	INSIDE CORNER TRIM	SCHLUTER	ALUMINUM	-	-	IN MEN'S RESTROOM; SEE FINISH PLAN FOR LOCATION
MT-1	METAL TRIM	SCHLUTER	MATCH EXISTING	-	MATCH EXISTING	INSTALL WHERE WALL TILE IS BEING CUT TO SIZE. SEE FINISH PLAN
TH-1	THRESHOLD - EXTERIOR DOOR	-	ALUMINUM	-	-	1/2" MAX
TS-1	TRANSITION STRIP - RUBBER	JOHNSONITE	-	-	MATCH EXISTING	CARPET TO CONCRETE LOCATIONS; 1/2" MAX
TS-2	TRANSITION STRIP - ALUMINUM	-	-	-	MATCH EXISTING	VINYL TO CONCRETE LOCATIONS, 1/2" MAX

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOORS FINISH	FLOORS BASE	WALLS FINISH	CEILING FINISH	REMARKS
FIRST FLOOR						
101	FITNESS ROOM	EXIST	B-2	P-2	EXIST	
102	LOCKER ROOM	EXIST	B-2	P-3	EXIST	
103	MEN'S RR	EXIST	EXIST	EXIST, P-3	EXIST	REFER TO FINISH PLAN FOR NEW PAINT LOCATION
104	HR OFFICE	CPT-1	B-1	P-1	EXIST	
105	BREAK ROOM	EXIST	B-1	P-1, P-8	EXIST	
106	COMPUTER ROOM	CPT-1	B-1	P-1	EXIST	
107	STORAGE	SC-1	B-1	P-4	EXPOSED	PAINT TO MATCH EXISITNG EXPOSED CEILINGS (P-5)
2101	CORRIDOR	EXIST	B-1	P-1	VARIES	REFER TO RCP, MATCH EXISTING FINISHES
2104	PREP AREA	EXIST	EXIST	P-4	EXIST	
2104	CONFERENCE ROOM 002	SC-1	B-1	P-1	ACT-1, GYP	FACE & UNDERSIDE OF BULKHEAD PAINTED WHITE (P-6)
2105	CONFERENCE ROOM 001	SC-1	B-1	P-1	ACT-1, GYP	FACE & UNDERSIDE OF BULKHEAD PAINTED WHITE (P-6)
2106	OPEN OFFICE	EXIST	B-1	P-1	EXIST	
2107	ELECTRICAL ROOM	SC-1	B-1	P-4	EXIST	
2119	PREP AREA 2	SC-1	B-1	P-4	GYP (P-6)	
2122	STORAGE	SC-1	B-1	P-4	ACT-1	
2123	CONFERENCE ROOM 003	SC-1	B-1	P-1	ACT-1	
2160	CLOSET	SC-1	B-1	P-4	GYP (P-6)	
2275	TRAINING ROOM	SC-1	B-1	P-1	ACT-1, GYP	FACE & UNDERSIDE OF BULKHEAD PAINTED WHITE (P-6)



E2 FIRST FLOOR FINISH PLAN
1/8" = 1'-0"

FINISH GENERAL NOTES

1. GENERAL
   A. REPAIR ALL EXISTING MATERIALS SCHEDULED TO REMAIN, USING OWNER'S ATTIC STOCK. IF NO ATTIC STOCK EXISTS, USE NEW MATERIAL TO MATCH EXISTING.
2. FLOORING:
   A. INSTALL FLOORING MATERIAL IN DIRECTION INDICATED ON FINISH PLAN.
   B. PROVIDE A CEMENTITIOUS COMPOUND BETWEEN FLOOR MATERIALS OF DIFFERENT THICKNESS. FEATHER FLOOR FOR SMOOTH TRANSITION.
   C. USE ALUMINUM TILE TRANSITION STRIPS BETWEEN SHEET VINYL / SEALED CONCRETE.
   D. USE RESILIENT TRANSITION STRIPS BETWEEN CARPET / SEALED CONCRETE.
   E. PATCH & REPAIR EXISTING HOMOGENOUS FLOORING AS REQUIRED FOR NEW WALLS & FLOOR BOXES. MATCH EXISTING FLOORING & WELD ROD COLOR.
   F. PATCH HOLES IN HOMOGENOUS FLOORING LEFT BY FLOOR-MOUNTED BENCHES. FOLLOW MANUFACTURER INSTRUCTIONS FOR REPAIRS/PATCHES TO EXISTING INSTALLED PRODUCT.
   G. PATCH & REPAIR ALL CONCRETE FLOORS IMPACTED BY DEMOLITION OR NEW WORK. PAINT/SEAL TO MATCH EXISTING.
3. BASE:
   A. TYPICAL BASE PROFILE AT CARPET SHALL BE COVE (B-1).
   B. TYPICAL BASE PROFILE AT RESILIENT FLOORING SHALL BE COVE (B-1).
   C. WHERE SHEET MATERIALS ARE USED, STANDARD BASE DETAIL SHALL BE FLASH COVE (B-2).
   D. TYPICAL BASE PROFILE AT CASEWORK SHALL BE COVE (B-1).
   E. EXISTING SHEET VINYL FLOORING IS TO REMAIN NEW LOCKERS & FITNESS ROOM, INSTALL NEW FLASH COVE TO MATCH EXISTING. HEAT WELD ALL SEAMS AND REFER TO MANUFACTURER RECOMMENDATIONS FOR INSTALLATION.
4. WALLS:
   A. PAINT FIRE EXTINGUISHER CABINETS TO MATCH ADJACENT WALL COLOR, UNLESS STAINLESS STEEL OR BRUSHED ALUMINUM FINISH.
   B. REPAINT ENTIRE WALL SECTION WHERE DEMOLITION OCCURS TO PROVIDE THE BEST FINISH LOOK. COLOR TO MATCH ADJACENT WALL UNLESS OTHERWISE INDICATED.
   C. ALL HANDRAILS SHALL BE MOUNTED AT 36" A.F.F.
   D. REFER TO FINISH PLAN FOR CORNER GUARD LOCATIONS.
   E. IN AREAS WITH EXPOSED CEILINGS, ALL NEW PAINT IS TO STOP AT EXISTING HEIGHT.
   F. IF EXISTING WALLCOVERING IS DISCOVERED IN AREAS NOT SPECIFICALLY IDENTIFIED BY KEYNOTE, REMOVE WALLCOVERING AND PREP SURFACE FOR NEW PAINT FINISH. VERIFY EXTENT WITH OWNER/ARCHITECT PRIOR TO REMOVAL
5. EXPOSED COLUMNS (N/A)
6. BULKHEADS:
   A. PAINT BULKHEAD UNDERSIDES. COLOR TO MATCH ADJACENT WALL UNLESS OTHERWISE INDICATED.
   B. PAINT BULKHEAD FACE TO MATCH ADJACENT WALL COLOR. UNLESS OTHERWISE INDICATED.
7. CEILINGS:
   A. IN ALL LOCATIONS WHERE DEMOLITION AND/OR NEW WORK DISTURBS EXPOSED CEILINGS, PAINT TO MATCH EXISTING.
   B. REPLACE ANY CEILING TILES DAMAGED DURING DEMOLITION; MATCH EXISTING.
8. DOORS AND FRAMES:
   A. PAINT ALL INTERIOR HOLLOW METAL DOOR FRAMES. COLOR TO BE P-9.
   B. PAINT ALL INTERIOR HOLLOW METAL DOORS. COLOR TO BE P-9.
   C. STAIN ALL INTERIOR WOOD SLAB DOORS. MATCH EXISTING.
   D. PAINT EXTERIOR HOLLOW METAL DOORS.
      a. INTERIOR COLOR TO BE P-9.
      b. EXTERIOR COLOR TO MATCH EXISTING.
   E. FRAME COLOR TRANSITION TO TAKE PLACE AT INSIDE CORNER OF STOP ON DOOR SIDE.
9. DIFFUSERS AND COVERS:
   A. PAINT WALL DIFFUSER AND AIR GRILLE COVERS TO MATCH ADJACENT WALL.
10. CASEWORK:
   A. ALL COUNTERTOP OUTSIDE & INSIDE CORNERS ARE TO BE CURVED.
   B. IF QUARTZ COUNTERTOPS CANNOT BE SALVAGED & REINSTALLED WHERE NOTED; PROVIDE NEW QUARTZ COUNTERTOP TO MATCH EXISTING.

FINISH PLAN LEGEND

- F-1 — FLOOR / WALL FINISH INDICATOR
- FLOORING PATTERN DIRECTION
- WT-1 — WINDOW TREATMENT LOCATION INDICATOR (WINDOW TREATMENTS TO SPAN ENTIRE LENGTH OF OPENING)
- WALL PROTECTION
- W-1 — WALL FINISH EXTENTS
- FLOOR FINISH EXTENTS
- ROOM NAME 101 / WALL BASE FLOOR — ROOM FINISH TAG

PLAN NOTES

NUMBER	NOTE
26	PATCH & REPAIR CONCRETE AS REQUIRED; PAINT/SEAL TO MATCH EXISTING.
28	NEW BASE CASEWORK. CUT TO SIZE & REINSTALL THE SOLID SURFACE COUNTERTOP & BACKSPLASH SAVED DURING DEMOLITION.
29	PROVIDE NEW SCHLUTER TRIM WHERE EXISTING WALL TILE IS CUT BACK TO THE REINSTALLED OVEN CABINET.
30	RELOCATED OVEN CABINET.
31	NEW PLAM END CABINET PANEL TO MATCH EXISTING; REFER TO FINISH SCHEDULE.
32	NEW QUARTZ COUNTERTOP; REFER TO FINISH SCHEDULE.
34	PAINT NEW SECTION OF HANDRAIL TO MATCH EXISTING.

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BUILDING 2
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NORTH CAROLINA REGISTERED SEAL 13590 ARCHITECT YI LUO
Yi Luo 2:02:22 PM

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ISSUANCE
06/17/2025 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
R. WOOLARD
CHECKED BY

FINISH PLAN AND MATERIALS LIST SCHEDULE
2A800

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39 - JARDA
FINISH PLAN AND MATERIALS LIST SCHEDULE
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FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
▷	SIDEWALL HEAD
▷	SIDEWALL HEAD - DRY
●	PENDENT HEAD
●	PENDENT HEAD WITH GUARD
✳	CONCEALED HEAD
○	UPRIGHT HEAD
○	UPRIGHT HEAD WITH GUARD
◴	WINDOW COVERAGE HEAD
●N	NEW HEAD
●E	EXISTING HEAD
●D	DEMOLISHED HEAD
●R	RELOCATED HEAD
—FP—	FIRE PROTECTION PIPING
—FP-D—	FIRE PROTECTION PIPING - DRY
—FP-PA—	FIRE PROTECTION PIPING - PRE-ACTION
	FIRE DEPARTMENT CONNECTION
	DRY SPRINKLER COVERAGE REQUIRED

FIRE PROTECTION ABBREVIATIONS

BAS	BUILDING AUTOMATION SYSTEM
BV	BALL VALVE
CV	CHECK VALVE
DPR	DAMPER
EMCS	EMERGENCY MONITORING AND CONTROL SYSTEM
EX	EXISTING
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHV	FIRE HOSE VALVE
FPM	FIRE PROTECTION MAIN
FVC	FIRE VALVE CABINET
GPDWF	GYPSUM DRYWALL, FIRE-RATED
PRV	PRESSURE REDUCING VALVE
SPKR	SPRINKLER
VB	VALVE BOX
ZVB	ZONE VALVE BOX

FIRE SPRINKLER GENERAL NOTES

1. ALL ROOMS/AREAS PART OF THIS REMODEL PROJECT ARE CURRENTLY SPRINKLED. THIS CONTRACTOR SHALL BE RESPONSIBLE TO MODIFY THE EXISTING FIRE SPRINKLER SYSTEM AS REQUIRED DUE TO CHANGES IN WALLS, CEILINGS, LIGHTING AND HVAC. ALL ROOMS/AREAS WITHIN THE BOUNDARY OF THIS REMODEL SHALL BE SPRINKLED. ALL NEW WORK SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13, STATE CODES, LOCAL CODES AND LOCAL ORDINANCES. ALL COMPONENTS SHALL BE UL LISTED AND FM APPROVED.
2. AN AUTOMATIC WET SPRINKLER SYSTEM SHALL BE PROVIDED IN ALL CONDITIONED SPACES. A DRY SPRINKLER SYSTEM SHALL BE PROVIDED FOR UNCONDITIONED AREAS SUBJECT TO FREEZING.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING CURRENT HYDRANT TEST DATA (PERFORMED WITHIN LAST SIX MONTHS) AND PERFORMING HYDRAULIC CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE FIRE SPRINKLER PIPING BASED ON THE HYDRAULIC CALCULATIONS. DESIGN CALCULATIONS FOR NEW SPRINKLERS SHALL ALLOW FOR 10 PERCENT SAFETY FACTOR.
4. ALL NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE.
5. EXISTING SPRINKLERS WILL REMAIN IF THEY ARE NOT REQUIRED TO BE MOVED. NEW SPRINKLER LOCATIONS WILL REQUIRE NEW SPRINKLER HEADS (NO REALLOCATIONS REQUIRING RE-THREADING HEAD INTO NEW DROP PIPE.)
6. REFER TO "G" DRAWINGS AND TITLE SHEET "T" FOR CODE COMPLIANCE AND ADDITIONAL INFORMATION.
7. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS.
8. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES ETC.
9. ARCHITECTURAL, HVAC AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES' WORK.
10. AUTOCAD (DWG) COMPATIBLE FILES WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN ELECTRONIC FORMAT UPON REQUEST.
11. SYSTEM MODIFICATIONS SHALL BE DESIGNED AND SIZED HYDRAULICALLY IN ACCORDANCE WITH NFPA 13, OWNER'S INSURER, AND ALL STATE AND LOCAL CODES AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
12. ALL NEW SYSTEM PIPING SHALL BE INSTALLED TO ALLOW DRAINAGE BACK TO THE SYSTEM RISERS WHEN POSSIBLE. WHERE IMPRACTICAL, AUXILIARY DRAINS SHALL BE INSTALLED AND DRAINED TO AN ACCEPTABLE LOCATION AS AGREED TO BY THE OWNER AND ENGINEER. EXISTING DRAINS SHALL REMAIN.
13. COORDINATE SPRINKLER HEAD LOCATIONS AND PIPE ROUTING WITH OTHER TRADES TO AVOID INTERFERENCE. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND THE MECHANICAL AND ELECTRICAL PLANS FOR LOCATIONS OF CEILINGS, DIFFUSERS, LIGHTS AND OTHER CEILING ORNAMENTATION.
14. ALL MAINS RUNNING PARALLEL WITH BUILDING JOISTS/BEAMS SHALL BE HUNG USING HANGERS ATTACHED TO SUPPORTING STEEL SUPPORTED AT PANEL POINTS OF JOISTS AND IN ACCORDANCE WITH NFPA STANDARDS.
15. REFER TO GENERAL AND SUPPLEMENTAL CONDITIONS OF BID INSTRUCTIONS FOR CUTTING AND PATCHING OF WALLS AND ROOFS. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR ALL PENETRATIONS REQUIRED TO COMPLETE THE WORK. SEE SPECIFICATIONS FOR PIPE SEALS, WATERPROOFING, SLEEVES, AND ESCUTCHEON REQUIREMENTS.
16. WHERE CEILINGS ARE PRESENT, STANDARD SPRINKLER TO BE CONCEALED HEAD WITH WHITE ESCUTCHEON PLATE. CENTER HEAD IN LAY-IN CEILING TILE OR ALIGNED WITH ADJACENT LIGHTS OR DEVICES IN HARD LID CEILINGS, UNLESS OTHERWISE INDICATED
17. ALL FIRE PROTECTION PIPING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13, THREADING OF LIGHT WALL PIPING (LESS THAN SCHEDULE 40) SHALL BE PROHIBITED. OUTLETS AND TEES BEING APPLIED TO EXISTING PIPING MUST BE WELDED, THREADED OR GROOVED DESIGN. "TAP-ON" TYPE TEES THAT ARE NOT FULL CIRCUMFERENCE, BOLTED TYPE CONNECTIONS WILL NOT BE ALLOWED.
18. ALL SPRINKLERS SHALL BE UL LISTED AND FM APPROVED FOR THE INTENDED APPLICATION WHEN APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S LISTINGS. SPRINKLERS SHALL BE GLASS BULB TYPE AND SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 13.
19. REFER TO ARCHITECTURAL DRAWINGS, SPECIFICALLY WALL SECTIONS AND REFLECTED CEILING PLANS. THE CONTRACTOR SHALL ROUTE NEW FIRE SPRINKLER PIPING AT ELEVATION EQUAL TO EXISTING, COORDINATING WITH NEW AND EXISTING DUCTWORK, PLUMBING AND ELECTRICAL CONDUIT. DESIGN INTENT IS FOR FP PIPING TO ROUTE AROUND EXISTING MECHANICAL CONDITIONS.

FIRE SPRINKLER DESIGN CRITERIA

CLASSIFICATION:	**RESIDENTIAL**	**SYMBOL**
DENSITY CRITERIA	0.10 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	(R)
MAX HEAD SPACING:	15 FT.	
CLASSIFICATION:	**LIGHT HAZARD**	
DENSITY CRITERIA:	0.10 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	(LT)
MAX HEAD SPACING:	15 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.15 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	(OH1)
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.20 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	(OH2)
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.30 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	2,500 SQ.FT.	(EH1)
SYSTEM AREA LIMIT:	40,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.40 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	2,500 SQ.FT.	(EH2)
SYSTEM AREA LIMIT:	40,000 SQ.FT.	

NOTE:
SPRINKLER HEAD TEMPERATURE RATING TO BE BASED ON MAXIMUM CEILING TEMPERATURE PER NFPA 13 TABLE 7.2.4.1

SPRINKLER HEAD SCHEDULE

CEILING / ROOM CONDITION	SPRINKLER TYPE
SUSPENDED CEILINGS	CONCEALED PENDENT QUICK RESPONSE, STANDARD COVERAGE
EXPOSED AREAS	UPRIGHT HEAD QUICK RESPONSE, STANDARD COVERAGE
AREAS W/O CEILINGS	SIDEWALL HEAD QUICK RESPONSE, STANDARD COVERAGE
STORAGE AREAS	UPRIGHT HEAD WITH GUARD STANDARD RESPONSE AND COVERAGE
AREAS SUBJECT TO FREEZING	DRY PENDENT QUICK RESPONSE, STANDARD COVERAGE

NOTES:
- ACCEPTABLE MANUFACTURER'S
  1. VIKING
  2. TYCO
  3. VICTAULIC
- K-VALUES TO BE SELECTED BY FIRE PROTECTION ENGINEER OF RECORD THAT IS RESPONSIBLE FOR PREPARING HYDRAULIC CALCULATIONS AND SHOP DRAWINGS.

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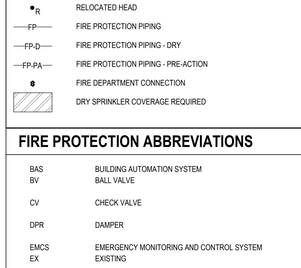
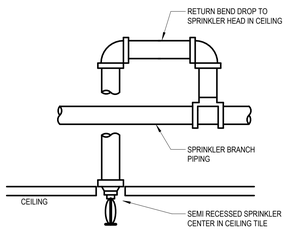
FIRE PROTECTION SHEET INDEX

NUMBER	DESCRIPTION
2FP001	GENERAL FIRE PROTECTION INFORMATION
2FP101	FIRE PROTECTION PLAN

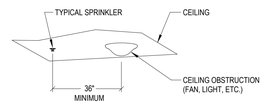
4 **UPRIGHT SPRINKLER HEAD PIPING DETAIL**
NOT TO SCALE



2 **CONCEALED SPRINKLER HEAD DETAIL**
NOT TO SCALE



3 **PENDANT SPRINKLER HEAD PIPING DETAIL**
NOT TO SCALE



1 **SPRINKLER CLEARANCE DETAIL**
NOT TO SCALE

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PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. REGISTERED ENGINEERING CORPORATION C-2326 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 049047 ENGINEER RUBEN A. BAZIYANTS

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ISSUANCE
09/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

GENERAL FIRE PROTECTION INFORMATION
2FP001

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FIRE PROTECTION PLAN
1/8" = 1'-0"

FIRE SPRINKLER DESIGN CRITERIA

CLASSIFICATION:	**RESIDENTIAL**	**SYMBOL**
DENSITY CRITERIA	0.10 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
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CLASSIFICATION:	**ORDINARY HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.15 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	OH1
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.20 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	OH2
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.30 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	2,500 SQ.FT.	
SYSTEM AREA LIMIT:	40,000 SQ.FT.	EH1
CLASSIFICATION:	**EXTRA HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.40 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	2,500 SQ.FT.	EH2
SYSTEM AREA LIMIT:	40,000 SQ.FT.	

NOTE:
SPRINKLER HEAD TEMPERATURE RATING TO BE BASED ON MAXIMUM CEILING TEMPERATURE PER NFPA 13 TABLE 7.2.4.1

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NORTH CAROLINA PROFESSIONAL SEAL 049047 ENGINEER RUBEN A. BAZIYANTS
Rubén A. Baziyants
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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

FIRE PROTECTION PLAN
2FP101

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FIRE PROTECTION PLAN
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ABBREVIATIONS - PLUMBING

AC	AIR COMPRESSER
AC	ARCHITECTURAL CONTRACTOR
ADA	AMERICANS WITH DISABILITIES ACT
AVS	ACID VENT STACK
AW	ACID WASTE
B	BOILER
BV	BALL VALVE
CB	CATCH BASIN
CBS	COMBINATION BALANCE & SHUTOFF VALVE
CIP	CAST IRON PIPE
CO	CLEANOUT
COMP	COMPARTMENT
CS	CLINICAL SINK
CV	CHECK VALVE
CW	COLD WATER
D&T	DRIP AND TRAP
DB	DIALYSIS WASTE & SUPPLY BOX
DCP	DOMESTIC WATER CIRCULATING PUMP
DCR	DOMESTIC COLD WATER RETURN
DN	DISCHARGE NOZZLE
DSN	DOWNSPOUT NOZZLE
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EWT	ENTER WATER TEMPERATURE
EX	EXISTING
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
G	GAS
GLR	GROUND LOOP RETURN
GLS	GROUND LOOP SUPPLY
HB	HOSE BIBB
HO	HUB OUTLET
HTP	HEAT PUMP
HW	HOT WATER
HWR	HOT WATER RETURN (DOMESTIC)
HYD	HYDRANT
IE	INVERT ELEVATION
IW	INDIRECT WASTE
KVAR	KILOVOLT-AMPERES REACTIVE
L	LAVATORY
LAV	LAVATORY
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LWT	LEAVING WATER TEMPERATURE
MB	MOP BASIN
MCA	MINIMUM CIRCUIT AMPS
MH	MANHOLE
MOP	MAXIMUM OVERCURRENT PROTECTION
NG	NATURAL GAS
OHD	OVERHEAD DOOR
ORD	OVERFLOW ROOF DRAIN
PF	PUMP - FIRE PROTECTION
PP	PUMP - PLUMBING
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RD	ROOF DRAIN, ROAD
RIO	ROUGH-IN ONLY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RR	REST ROOM
RV	RELIEF VENT
S	SINK
SAN	SANITARY
SCW	SOFT COLD WATER
SD	STORM DRAIN
SG	SPECIFIC GRAVITY
SH	SHOWER
SK	SINK
SNS	SANITARY SEWER
SPHD	SPRINKLER HEAD
SPKR	SPRINKLER
SS	SERVICE SINK
SSK	SERVICE SINK
ST	STORM
TD	TRENCH DRAIN
THERM	100 CUBIC FEET OF NATURAL GAS
TOW	TOP OF WALL
UR	URINAL
V	VENT
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHTR	WATER HEATER
WS	WASTE STACK
ZVB	ZONE VALVE BOX

PLUMBING SYMBOLS

- ANGLE RELIEF VALVE
- ANGLED STOP CHECK VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- BALL VALVE
- CHECK VALVE W/ARROW INDICATING FLOW
- GATE VALVE
- GLOBE VALVE
- LINEAR STOP CHECK VALVE
- GAS VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SOLENOID VALVE
- PRESSURE REGULATING VALVE - TWO WAY
- PRESSURE REGULATING VALVE - THREE WAY
- MOTORIZED CONTROL VALVE - 2-WAY
- MOTORIZED CONTROL VALVE - 3-WAY
- FLOW MEASURING DEVICE
- HOSE BIBB
- MANUAL AIR VENT
- PRESSURE INDICATOR
- TEMPERATURE INDICATOR
- THERMOMETER
- ANCHOR
- CAP
- CB — CATCH BASIN
- CO — END OF LINE, CLEANOUT
- CO — FLOOR, CLEANOUT
- WCO — WALL, CLEANOUT
- EXPANSION COMPENSATOR OR EXPANSION JOINT
- FLEXIBLE PIPE CONNECTOR
- FD — FLOOR DRAINS
- PIPE GUIDE
- MH — MANHOLE
- MGS — MASTER GAS SHUT OFF
- PRS — PRESSURE REDUCING STATION
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
- STRAINER
- UNION

PLUMBING GENERAL NOTES

1. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS.
2. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES.
4. PROVIDE ROUGH-INS AND FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT FURNISHED BY LAB EQUIPMENT CONTRACTOR. USE ONLY APPROVED EQUIPMENT AND FIXTURE SHOP DRAWINGS, FROM FSEC, FOR ROUGH-IN SIZES AND LOCATIONS.
5. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE. MINIMIZE INTERRUPTION OF EXISTING SERVICES. VERIFY ALL SYSTEMS BEFORE STARTING DEMOLITION TO ASSURE OTHER AREAS WILL NOT LOSE SERVICE.
6. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS SUBJECT TO EVAPORATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
7. PROVIDE ASSE 1070 MIXING VALVE AT ALL BARRIER FREE SINKS AND ALL HAND WASHING SINKS TO PROVIDE TEMPERED WATER TO HOT WATER SIDE OF FAUCET.
8. PIPING INSTALLED IN THE WAY OF ACCESS OR MAINTENANCE TO EQUIPMENT SHALL BE RELOCATED AT THE EXPENSE OF THE INSTALLING CONTRACTOR.
9. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.
10. COORDINATE ALL FLOOR CUTTING WITH STRUCTURAL TRADES BEFORE CUTTING.
11. COORDINATE LOCATIONS OF FLOOR DRAINS AND FLOOR SINKS WITH LOCATIONS OF EQUIPMENT AND EQUIPMENT HOUSEKEEPING PADS. COORDINATE WITH SLOPING OF FLOOR SO THAT RIM OF DRAIN IS FLUSH WITH FINISH FLOOR.
12. COORDINATE HANGING AND SUPPORT OF PIPING WITH STRUCTURAL.
13. COORDINATE FLOOR, WALL, AND ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES. PROVIDE TEMPORARY WATER TIGHT SEAL FOR ALL EXTERIOR WALL AND ROOF PENETRATION AS NECESSARY.
14. PROVIDE PIPE SLEEVES WHERE PIPES PENETRATE WALLS.
15. HOLES AND PENETRATIONS IN RATED WALLS SHALL BE PATCHED WITH APPROPRIATE FIRESTOP MATERIALS FOR RATING REQUIRED.
16. PROVIDE PIPE SLEEVES WHERE PIPES RUN BELOW FOOTING.
17. INSTALL EXTERIOR CLEAN OUTS FLUSH WITH SURFACE.
18. INSTALL PIPING IN AN ORGANIZED MANNER. DO NOT ROUTE IN FRONT OF WINDOWS.
19. THE INSTALLATION OF ALL PIPING SHALL BE CLOSELY COORDINATED WITH NEW SHEET METAL, HVAC PIPING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. THE LOCATION OF SANITARY, STORM AND VENT LINES SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
20. PROVIDE WATER HAMMER ARRESTORS PER PDI WH-201 AND UP STREAM OF ALL AUTOMATIC AND FAST CLOSING VALVES INCLUDING BUT NOT LIMITED TO SOLENOID VALVES.
21. ALL EMERGENCY EYEWASH UNITS AND EMERGENCY SHOWERS SHALL BE PROVIDED WITH TEMPERED WATER AND SHALL BE IN COMPLIANCE WITH ANSI Z358.1.

PHASING

- EXISTING - TO REMAIN
- EXISTING - FOR DEMOLITION
- POINT OF DISCONNECTION BETWEEN EXISTING AND DEMOLITION
- POINT OF CONNECTION BETWEEN PROPOSED AND EXISTING

PLUMBING SYMBOLOGY

- CW — COLD WATER
- HW — HOT WATER
- HR — HOT WATER RETURN
- SAN — SANITARY WASTE
- AW — ACID WASTE
- ST — STORM
- OD — STORM (OVERFLOW DRAINAGE)
- AV — ACID WASTE VENT
- V — VENT
- CD — CONDENSATE DRAIN
- CA — COMPRESSED AIR
- G — NATURAL GAS
- G(EPS) — NATURAL GAS, EMERGENCY POWER

PLUMBING DEMOLITION NOTES

1. NO ITEMS TO BE ABANDONED IN PLACE.
2. ALL ITEMS TO BE DEMOLISHED TO BE REMOVED AND REMAINING OPEN SYSTEMS TO BE PATCHED, CAPPED AND SEALED TO PROVIDE A FINISHED SYSTEM.
3. DEMOLISHED PLUMBING LINE SHALL NOT BE ALLOWED TO REMAIN OPEN, CAP AND PROTECT TO AVOID CONTAMINATION TO AND FROM THE SURROUNDING AREAS.
4. ALL SYSTEMS OPENED DURING DEMOLITION SHALL BE CLOSED AND RETURNED TO OPERATION BY END OF SHIFT, NO SYSTEMS ALLOWED TO BE LEFT OPEN WHEN NOT BEING SUPERVISED BY CONTRACTOR RESPONSIBLE FOR THAT WORK TRADE.

PLUMBING SHEET INDEX

NUMBER	DESCRIPTION
2P001	GENERAL PLUMBING INFORMATION
2P101	PLUMBING PLAN, SCHEDULES AND DETAILS

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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

GENERAL PLUMBING INFORMATION
2P001

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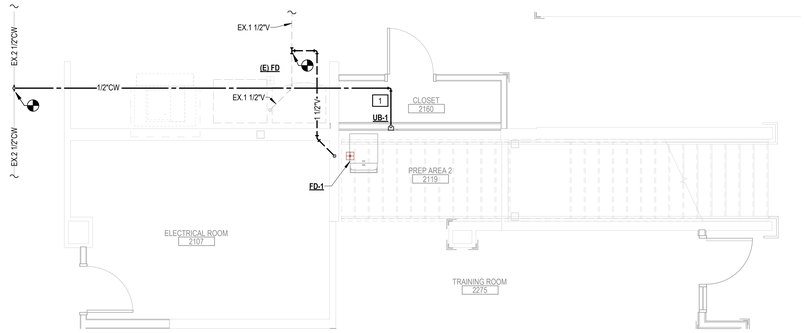
60 - 2P001
GENERAL PLUMBING INFORMATION

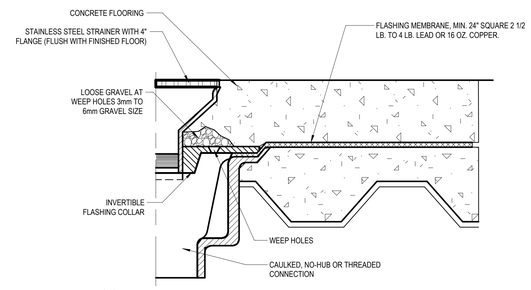
PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL	CONNECTION TYPE				MANUFACTURER:MODEL
			COLD	HOT	WASTE	VENT	
FD-1	ZURN	ZN415B-NH-VP			3"	1-1/2"	FLOOR DRAIN, CAST IRON BODY, NICKEL BRONZE VANDAL PROOF TOP, PAIRED WITH BARRIER TRAP SEAL
UB-1	OATEY COMPANY	37679	1/2"				ICE MAKER, 1-VALVE, COPPER



FIRST FLOOR PLUMBING PLAN

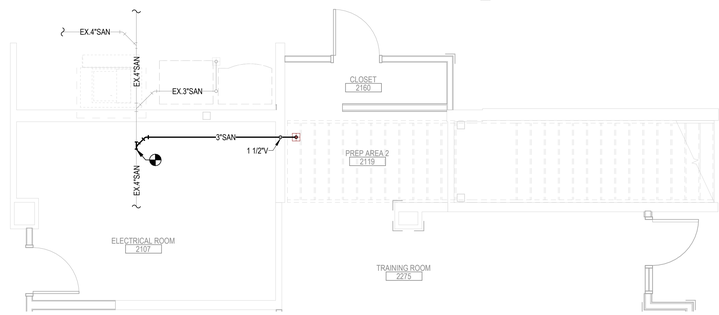
1/4" = 1'-0"



NOTE:
1. SLOPE MEMBRANE LINER 2% TO DRAIN.
2. PROVIDE FLASHING MEMBRANE WHEN DRAIN IS INSTALLED IN A NON MEMBRANE FLOOR

3 TYPICAL FLOOR DRAIN DETAIL

NOT TO SCALE



UNDERGROUND PLUMBING PLAN

1/4" = 1'-0"

? PLUMBING KEYNOTES

1. PROVIDE ZURN MODEL 740 BACKFLOW PREVENTER FOR ICE MACHINE.

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PLUMBING PLAN, SCHEDULES AND DETAILS
2P101

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ABBREVIATIONS - HVAC

Φ	FLAT OVAL DUCT	CWS	CHILLED WATER SUPPLY	HTP	HEAT PUMP	RAF	RETURN AIR FAN
				HTR	HEATER	RC	RE-HEAT COIL
AC	AIR COMPRESSER	DB	DRY BULB	HUM	HUMIDIFIER	RCP	RADIANT CEILING PANEL
AC	ARCHITECTURAL CONTRACTOR	DB	DIALYSIS WASTE & SUPPLY BOX	HW	HOT WATER	RG	RETURN AIR GRILLE
ACL	ACOUSTICALLY LINED	DDC	DIRECT DIGITAL CONTROLS	HWP	HYDRONIC WATER PUMP	RP	RADIANT PANEL
ACU	AIR CONDITIONING UNIT	DDTU	DUAL DUCT TERMINAL UNIT	HX	HEAT EXCHANGER	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ACV	AIR CONTROL VALVE	DIFF	DIFFUSER	HZ	HERTZ		
AD	ACCESS DOOR	DISC	DISCONNECT			RPM	REVOLUTIONS PER MINUTE
ADA	AMERICANS WITH DISABILITIES ACT	DPR	DAMPER	INS	INSULATE, INSULATION	RR	RETURN AIR REGISTER
AFS	AIR FLOW SWITCH	DT	DOUBLE THROW	IR	INFRARED	RR	REST ROOM
AFT	AIR FLOW TRANSMITTER					RTU	ROOFTOP UNIT
AHU	AIR HANDLING UNIT	EA	EXHAUST AIR	KVAR	KILOVOLT-AMPERES REACTIVE	RV	RELIEF VENT
AP	ACCESS PANEL	EDB	ENTERING DRY BULB				
APD	AIR PRESSURE DROP	EF	EXHAUST FAN	L	REFRIGERATION LIQUID	S	REFRIGERATION SUCTION
APPROX	APPROXIMATE	EG	EXHAUST AIR GRILLE	LAB	LABORATORY	SA	SUPPLY AIR
AQ-STAT	AQUA STAT	EHC	ELECTRIC HEATING COIL	LAT	LEAVING AIR TEMPERATURE	SAF	SUPPLY AIR FAN
AS	AMP SWITCH	EIH	ELECTRIC INFARED HEATER	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN	SAT	SATURATED
ATS	AUTOMATIC TRANSFER SWITCH	EM	EMERGENCY			SC	STEAM COIL
ATT	SOUND ATTENUATOR	ENT	ENTERING	LVR	LOUVER	SD	SUPPLY AIR DIFFUSER
AVS	ACID VENT STACK	ERC	ENERGY RECOVERY COIL	LWT	LEAVING WATER TEMPERATURE	SG	SUPPLY AIR GRILLE
AW	ACID WASTE	ESP	EXTERNAL STATIC PRESSURE			SG	SPECIFIC GRAVITY
		ET	EXPANSION TANK	MA	MIXED AIR	SK	SINK
B	BOILER	EWB	ENTERING WET BULB	MAV	MANUAL AIR VENT	SM	SURFACE MOUNTED
BAS	BUILDING AUTOMATION SYSTEM	EWT	ENTERING WATER TEMPERATURE	MAX	MAXIMUM	SMM	SNOW MELT MANIFOLD
BBD	BOILER BLOWDOWN	EX	EXISTING	MB	MOP BASIN	SMR	SNOW MELT RETURN
BC	BOOSTER COIL	EXH	EXHAUST	MBH	THOUSAND BRITISH THERMAL UNIT	SMS	SNOW MELT SUPPLY
BDD	BACKDRAFT DAMPER	EXP	EXPLOSION PROOF	MCA	MINIMUM CIRCUIT AMPS	SR	SUPPLY AIR REGISTER
BFP	BOILER FEEDWATER PUMP			MD	MOTORIZED DAMPER, MOTION DETECTOR	STL	STEEL
BHP	BREAK HORSEPOWER	F&T	FLOAT & THERMOSTATIC STEAM TRAP			STM	STEAM
BMS	BUILDING MANAGEMENT SYSTEM	FC	FLEXIBLE CONNECTION	MOP	MAXIMUM OVERCURRENT PROTECTION	STOR	STORAGE
BP	BACKFLOW PREVENTER	FCU	FAN COIL UNIT				
		FD	FIRE DAMPER	NC	NORMALLY CLOSED	TERM	TERMINAL
C	CONVECTOR	FDS	FUSED DISCONNECT SWITCH	NF	NONFUSED	TF	TRANSFER FAN
CAB	CABINET	FM	FORCEMAIN	NFDS	NONFUSED DISCONNECT SWITCH	TG	TRANSFER AIR GRILLE
CAP	CAPACITY	FOR	FUEL OIL RETURN	NG	NATURAL GAS	THERM	100 CUBIC FEET OF NATURAL GAS
CC	COOLING COIL	FOS	FUEL OIL SUPPLY	NO	NORMALLY OPEN	TOC	TOP OF CURB
CD	COLD DECK	FPM	FEET PER MINUTE			TR	TAMPER RESISTANT
CD	CONDENSATE DRAIN	FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR	OA	OUTSIDE AIR	TSE	TOP OF STEEL ELEVATION
CF	CEILING FAN			OHD	OVERHEAD DOOR	TU	TERMINAL UNIT
CF	CUBIC FOOT	FT	FIN TUBE	OPG	OPENING		
CFH	CUBIC FEET PER HOUR			ORD	OVERFLOW ROOF DRAIN	U/V	UNIT VENTILATOR
CFM	CUBIC FEET PER MINUTE	G	GAS	OV	OUTLET VELOCITY	UH	UNIT HEATER
CH	CABINET HEATER	GEN	GENERATOR				
CLR	CLEAR, CLEARANCE	GLR	GROUND LOOP RETURN	P	PUMP	V	VOLTS
CMP	CORRUGATED METAL PIPE	GLS	GROUND LOOP SUPPLY	P/T	PETE'S PLUG	VAV	VARIABLE AIR VOLUME
CMPR	COMPRESSOR	GPH	GALLONS PER HOUR	PC	PUMPED CONDENSATE	VCD	VOLUME CONTROL DAMPER
CNR	CONDENSER WATER RETURN	GPM	GALLONS PER MINUTE	PCR	PUMPED CONDENSATE RETURN	VFD	VARIABLE FREQUENCY DRIVE
CNS	CONDENSER WATER SUPPLY	GV	GATE VALVE	PD	PRESSURE DROP	VI	VIBRATION ISOLATOR
COMP	COMPARTMENT			PF	PUMP - FIRE PROTECTION	VOL	VOLUME
COND	CONDENSATE	HC	HEATING COIL	PH	PHASE		
CONV	CONVECTOR	HG	REFRIGERATION HOT GAS	PP	PUMP - PLUMBING	WB	WET BULB
COORD	COORDINATE	HP	HORSEPOWER	PR	PERIMETER RADIATION	WHTR	WATER HEATER
CP	CIRCULATING PUMP	HP STM	HIGH PRESSURE STEAM	PRV	PRESSURE REDUCING VALVE		
CT	COOLING TOWER	HPR	HEAT PUMP WATER RETURN	PRV	POWER ROOF VENTILATOR	XFER	TRANSFER
CTR	COOLING TOWER RETURN	HPS	HEAT PUMP WATER SUPPLY	PSIG	POUNDS PER SQUARE INCH GAUGE		
CTS	COOLING TOWER SUPPLY	HR	HEATING WATER RETURN, HOUR				
CU	COPPER	HS	HEATING WATER SUPPLY	R	RISER		
CV	CONTROL VALVE	HSKP	HOUSEKEEPING PAD	RA	RETURN AIR		
CWR	CHILLED WATER RETURN	HTG	HEATING				

MECHANICAL SYMBOLS

- SD#
###: SUPPLY DIFFUSER, SD#, ### CFM
ARROWS INDICATE DIRECTION OF THROW
- SD#
###: SUPPLY DIFFUSER (4-WAY)
- RG#
###: RETURN OR EXHAUST REGISTER
TYPE 'RG#' ### CFM
- EG#
###: EXHAUST REGISTER
TYPE 'EG#' ### CFM
- ###
###: SIDEWALL SUPPLY, RETURN, OR EXHAUST REGISTER
TYPE ### , ### CFM
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN DUCT UP
- RETURN DUCT DOWN
- EXHAUST DUCT UP
- EXHAUST DUCT DOWN
- AIRFLOW / SA: SUPPLY AIR BRANCH CONNECTION
WITH VOLUME DAMPER
- AIRFLOW / EXHAUST AIR: RETURN AIR/EXHAUST AIR BRANCH CONNECTION
WITH VOLUME DAMPER
- HORIZONTAL FIRE DAMPER
- VERTICAL FIRE DAMPER
- S: SMOKE HORIZONTAL FIRE DAMPER
- S: SMOKE VERTICAL FIRE DAMPER
- FS: COMBINATION FIRE/SMOKE HORIZONTAL FIRE DAMPER
- FS: COMBINATION FIRE/SMOKE VERTICAL FIRE DAMPER
- ATT-#: SOUND ATTENUATOR
- 6P-###: PUMP(SCHEMATIC)
- ###-#: MECHANICAL EQUIPMENT (EXAMPLE ACV-##)
SEE SCHEDULE FOR ADDITIONAL
- FT-##: FINNED TUBE RADIATION
(SEE DETAIL AND SCHEDULE)
- CUH-#: CABINET UNIT HEATER, TYPE 'CUH-#'
- C-#: CONVECTOR, TYPE 'C-#'
- VOLUME DAMPER
- MOTORIZED CONTROL DAMPER

SHEET METAL SYMBOLOGY

- SA: SUPPLY AIR
- HDS: HOT DECK SUPPLY AIR
- CDS: COLD DECK SUPPLY AIR
- RA: RETURN AIR
- EA: EXHAUST AIR
- LHEA: LAB HOOD EXHAUST AIR
- GHEA: GENERAL LAB HOOD EXHAUST AIR
- OA: OUTSIDE AIR
- REL: RELIEF AIR
- MA: MIXED AIR

PHASING

- EXISTING - TO REMAIN
- EXISTING - FOR DEMOLITION
- POINT OF DISCONNECTION BETWEEN EXISTING AND DEMOLITION
- POINT OF CONNECTION BETWEEN PROPOSED AND EXISTING

MECHANICAL GENERAL NOTES

1. COMPLY WITH ALL APPLICABLE LOCAL, STATE AND/OR REGULATORY AGENCIES, CODES AND REGULATIONS FOR NEW WORK.
2. DO NOT INSTALL EQUIPMENT, PIPING OR DUCTWORK OVER ANY ELECTRICAL EQUIPMENT OR COMMUNICATION ROOMS.
3. DO NOT RUN ANY PIPING OR DUCTWORK INTO THE ELECTRICAL ROOM UNLESS DEDICATED TO SERVE THAT ROOM.
4. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
5. LOCATE THERMOSTAT/TEMPERATURE SENSORS 48" ABOVE FINISHED FLOOR OR AS NOTED ON THE PLANS.
6. WORK IDENTIFIED WITH MECHANICAL AND ELECTRICAL NOTES AND KEY NOTES SHALL BE PERFORMED BY QUALIFIED MECHANICAL AND ELECTRICAL CONTRACTORS RESPECTIVELY UNDER DIRECTION OF THE CONSTRUCTION MANAGER. COORDINATE WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER.
7. INSTALL SMOKE DETECTOR IN DUCTWORK AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.
8. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
9. COORDINATE WORK WITH OTHER TRADES AND WITH THE CONSTRUCTION MANAGER.
10. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER, MINIMIZE INTERRUPTION OF EXISTING SERVICES.
11. PROVIDE ALL MISCELLANEOUS STEEL AND ITEMS REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPE, SHEET METAL AND EQUIPMENT.
12. COORDINATE FLOOR, WALL & ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES. PROVIDE TEMPORARY WATER TIGHT SEAL FOR ALL EXTERIOR WALL AND ROOF PENETRATION AS NECESSARY.
13. FIRESTOP SHALL BE PROVIDED IN HOLES AND PENETRATIONS IN RATED ASSEMBLIES.

SHEET METAL NOTES

1. THE INSTALLATION OF ALL DUCTWORK SHALL BE CLOSELY COORDINATED WITH NEW PLUMBING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED ON DRAWINGS, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. ALTERNATE DUCT ROUTING SHALL BE APPROVED BY ARCHITECT/ENGINEER BEFORE PROCEEDING IN ORDER TO ENSURE THAT THE AVAILABLE STATIC PRESSURE REMAINS ADEQUATE. DUCTWORK LOCATION SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
2. REFER TO DUCT TAKEOFF DETAILS. SPIN-IN TYPE WITH SCOOPS SHALL NOT BE ACCEPTED. A MINIMUM OF 2 FEET SHALL BE PROVIDED BETWEEN RUNOUT TAKEOFFS FROM TRUNK DUCTS.
3. THERMOSTAT AND SENSORS LOCATIONS WITHIN DUCTWORK SHALL BE VERIFIED WITH ARCHITECT/ ENGINEER BEFORE ROUGH -IN.
4. RUNOUT BALANCING DAMPERS SHALL BE MOUNTED AS CLOSE TO MAIN DUCT AS POSSIBLE.
5. DUCTWORK LAYOUT HAS BEEN DESIGNED TO ABSORB NOISE. ALL FITTINGS SHALL BE PROVIDED AS INDICATED.
6. TERMINAL UNITS SHALL BE MOUNTED TO NOT IMPAIR ACCESS TO FILTERS, COILS AND CONTROLS.
7. WATERTIGHT CONCRETE CURBS SHALL BE PROVIDED AROUND ELEVATED FLOOR SLAB PENETRATIONS.
8. DUCTWORK AND ASSOCIATED COMPONENTS SHALL CLEAR DOORS AND WINDOWS.
9. UNLESS OTHERWISE NOTED, ALL DUCTWORK ABOVE CEILING OR EXPOSED IS OVERHEAD AND AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION WHERE REQUIRED.
10. LOCATE MECHANICAL EQUIPMENT SUCH THAT THERE IS UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS AND VALVING.
11. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO MECHANICAL EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE NOTED.
12. DUCTWORK SIZES ARE INSIDE CLEAR DIMENSIONS.
13. ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS UNLESS OTHERWISE NOTED. RADIUS ELBOWS SHALL HAVE CENTERLINE RADIUS OF CURVATURE 1.5 TIMES THE DUCT DIAMETER OR WIDTH IN THE PLANE OF TURN. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES.
14. DUCTS CONNECTED TO EQUIPMENT SHALL EQUAL EQUIPMENT CONNECTION SIZE UNLESS NOTED OTHERWISE.
15. MAXIMUM LENGTH ON FLEXIBLE DUCT SHALL BE 5'-0", UNLESS OTHERWISE NOTED ON DETAILS OR SPECIFICATION.
16. REFER TO ARCH REFLECTED CEILING PLANS FOR EXACT DIFFUSER LOCATIONS IN AREAS WITH A CEILING.

MECHANICAL DESIGN CRITERIA

APPLICABLE CODES:
- 2018 NORTH CAROLINA BUILDING CODE
- 2018 NORTH CAROLINA MECHANICAL CODE
- 2018 NORTH CAROLINA PLUMBING CODE
- 2018 NORTH CAROLINA ENERGY CONSERVATION CODE
- 2018 NORTH CAROLINA FUEL GAS CODE
- 2018 NORTH CAROLINA FIRE PREVENTION CODE

DESIGN CONDITIONS:
- LOCATION: CHARLOTTE, NC
- CLIMATE ZONE: 3A
- BASED ON 2021 ASHRAE CLIMATIC DESIGN CONDITIONS FOR CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT (CLT), 1% COOLING, 99% HEATING
- HEATING DESIGN DAY: 24.8°F db
- COOLING DESIGN DAY: 91.9°F db, 74.0°F wb
- INDOOR CONDITIONS:
  - OCCUPIED SPACES
    - COOLING: 75°F, 50%RH
    - HEATING: 70°F
  - UNOCCUPIED SPACES
    - COOLING: 80°F, 40% TO 60%RH
    - HEATING: 60°F

NOTES:
- ALL SPACES ARE TO BE HEATED FOR FREEZE PROTECTION. NO WINTERIZATION OF PLUMBING SYSTEMS IS PLANNED.
- MECHANICAL VENTILATION PER NCMC CHAPTER 4.

MECHANICAL SHEET INDEX

NUMBER	DESCRIPTION
2M001	GENERAL MECHANICAL INFORMATION
2MD101	FITNESS AND BREAK ROOM MECHANICAL DEMOLITION PLAN
2MD102	TRAINING ROOM MECHANICAL DEMOLITION PLAN
2M101	FITNESS AND BREAK ROOM HVAC PLAN
2M102	TRAINING ROOM HVAC PLAN
2M501	MECHANICAL DETAILS
2M601	MECHANICAL SCHEDULES
2M701	MECHANICAL CONTROLS

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GENERAL MECHANICAL INFORMATION
2M001

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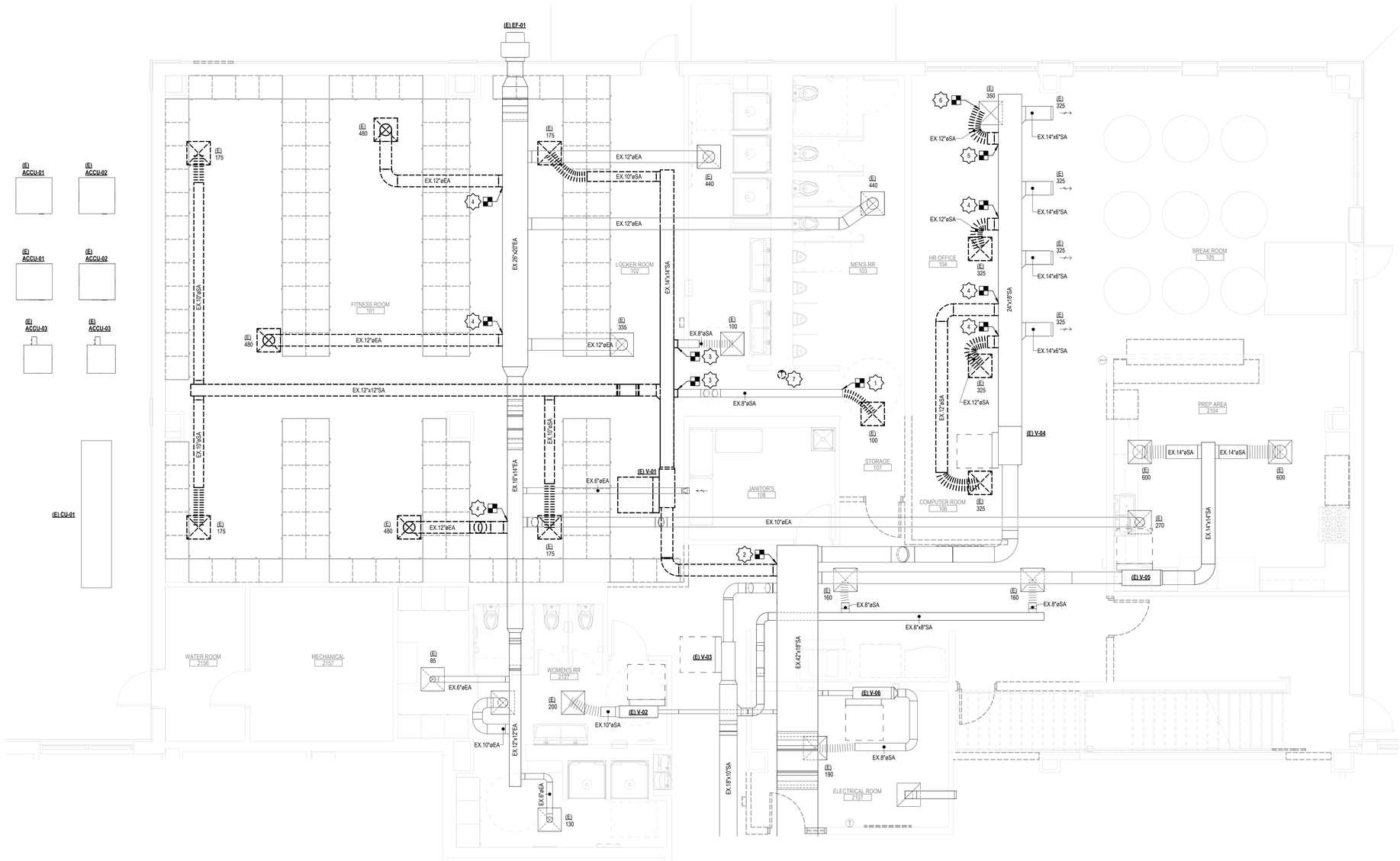

FITNESS AND BREAK ROOM MECHANICAL DEMOLITION PLAN

1/4" = 1'-0"

MECHANICAL DEMOLITION KEYNOTES

1. EXISTING DIFFUSER TO BE RELOCATED TO NEW LOCATION SHOWN ON M101.
2. EXISTING TERMINAL UNIT, ASSOCIATED DIFFUSERS AND DUCTWORK TO BE DEMOLISHED.
3. EXISTING DUCTWORK TO BE RECONNECTED TO NEW DUCT SHOWN ON M101.
4. EXISTING DUCTWORK AND DIFFUSER TO BE DEMOLISHED.
5. EXISTING DUCTWORK TO BE DEMOLISHED.
6. EXISTING DIFFUSER TO BE RECONNECTED TO NEW DUCT SHOWN ON M101.
7. EXISTING THERMOSTAT TO BE DEMOLISHED.
8. EXISTING THERMOSTAT TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.
9. EXISTING TRANSFER GRILL AND DUCTWORK TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.
10. EXISTING TERMINAL UNIT, ASSOCIATED DIFFUSERS AND DUCTWORK TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.

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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

FITNESS AND BREAK ROOM MECHANICAL DEMOLITION PLAN

2MD101

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FILE: 2MD101 FITNESS AND BREAK ROOM MECHANICAL DEMOLITION PLAN
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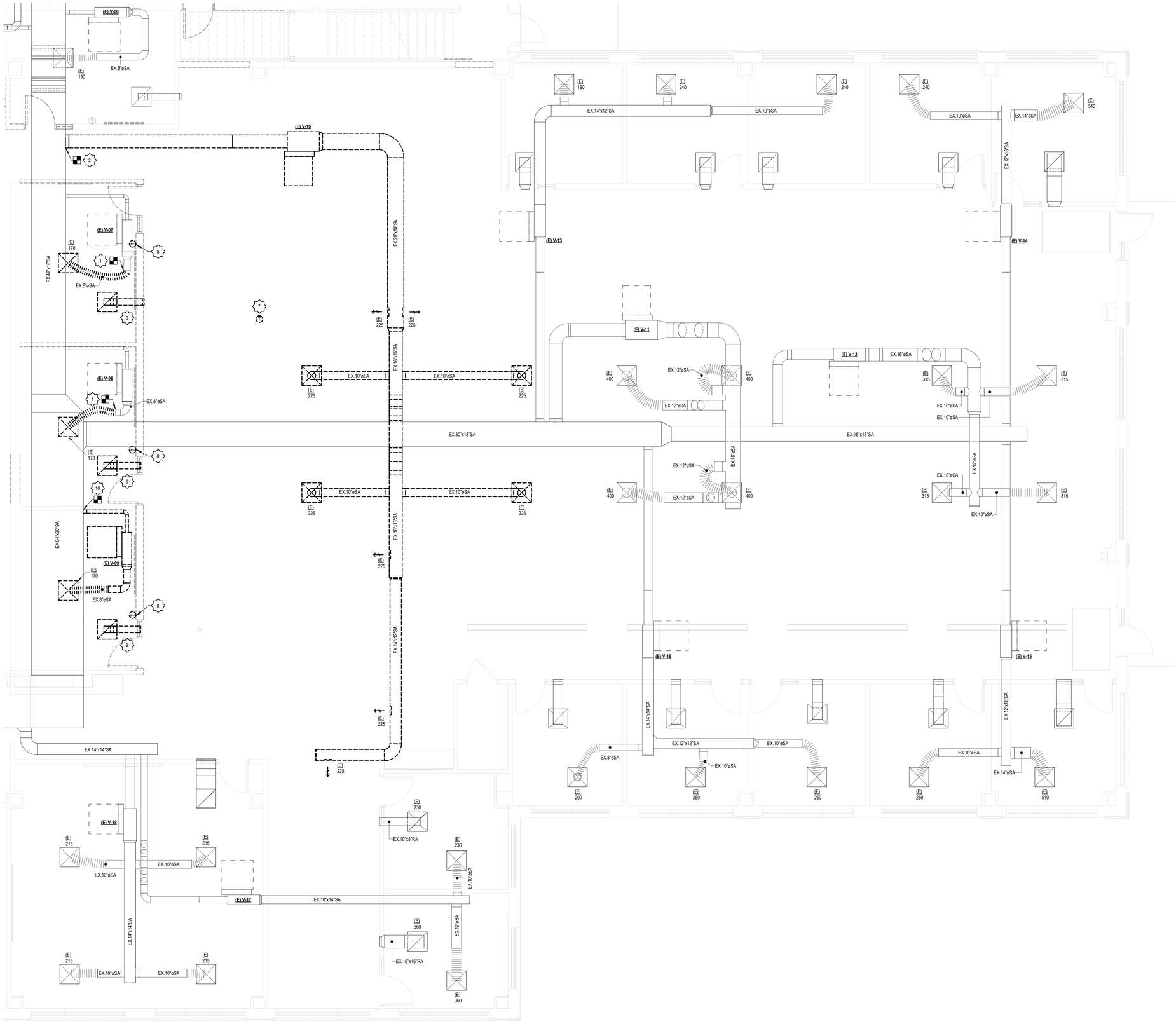

MECHANICAL DEMOLITION KEYNOTES

1. EXISTING DIFFUSER TO BE RELOCATED TO NEW LOCATION SHOWN ON M101.
2. EXISTING TERMINAL UNIT, ASSOCIATED DIFFUSERS AND DUCTWORK TO BE DEMOLISHED.
3. EXISTING DUCTWORK TO BE RECONNECTED TO NEW DUCT SHOWN ON M101.
4. EXISTING DUCTWORK AND DIFFUSER TO BE DEMOLISHED.
5. EXISTING DUCTWORK TO BE DEMOLISHED.
6. EXISTING DIFFUSER TO BE RECONNECTED TO NEW DUCT SHOWN ON M101.
7. EXISTING THERMOSTAT TO BE DEMOLISHED.
8. EXISTING THERMOSTAT TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.
9. EXISTING TRANSFER GRILL AND DUCTWORK TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.
10. EXISTING TERMINAL UNIT, ASSOCIATED DIFFUSERS AND DUCTWORK TO BE RELOCATED TO NEW LOCATION SHOWN ON M102.

TRAINING ROOM MECHANICAL DEMOLITION PLAN

1/4" = 1'-0"

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TRAINING ROOM MECHANICAL DEMOLITION PLAN
2MD102

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SD - 2MD102
TRAINING ROOM MECHANICAL DEMOLITION PLAN
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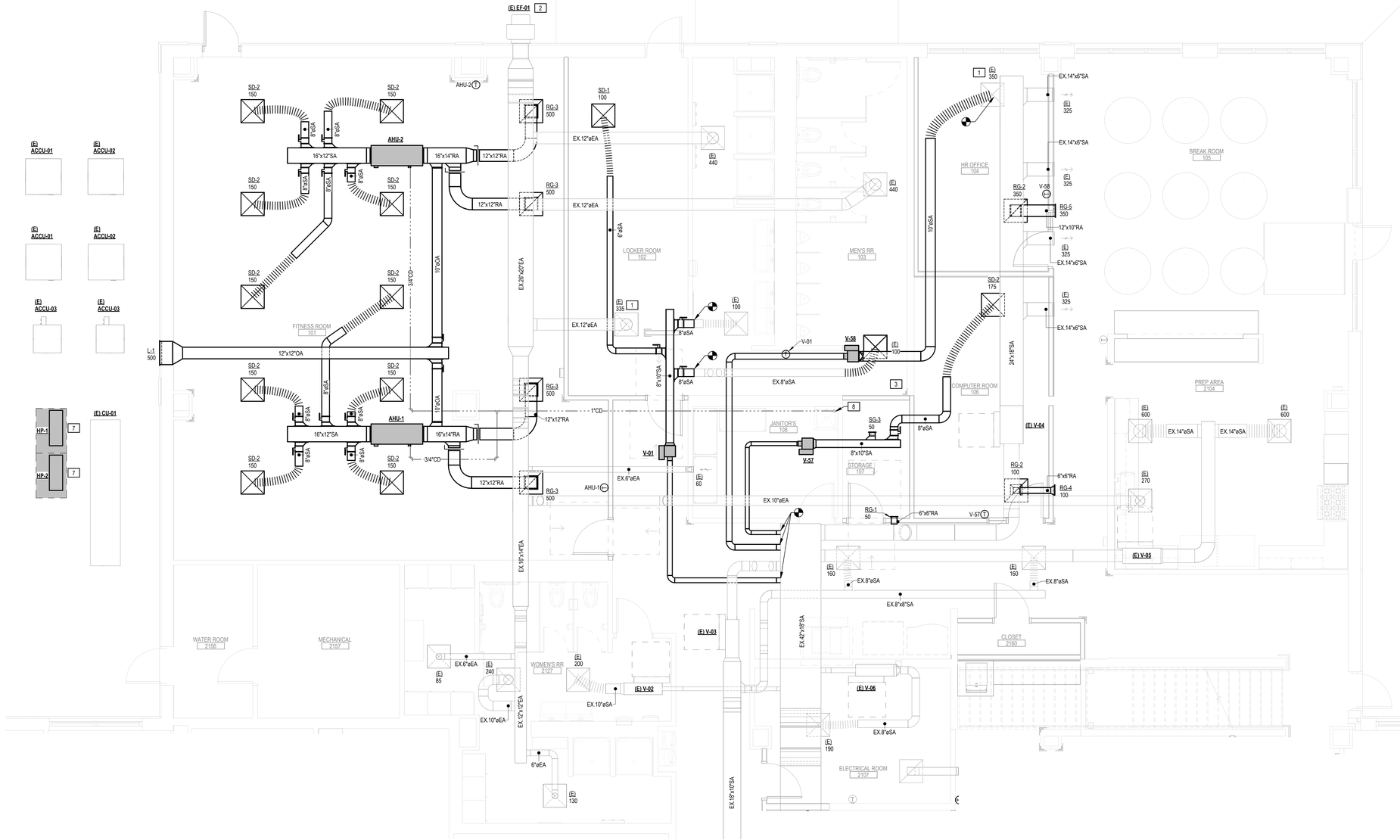
HVAC KEYNOTES

1. RELOCATE AND REBALANCE EXISTING GRILL TO NEW CFM VALUE SHOWN.
2. ADJUST FAN VFD TO EXHAUST 2,000 CFM.
3. EXISTING DIFFUSER RELOCATED.
4. EXISTING TRANSFER GRILL AND DUCTWORK RELOCATED.
5. EXISTING THERMOSTAT RELOCATED.
6. EXISTING TERMINAL UNIT RELOCATED.
7. PROVIDE 4" THICK CONCRETE PAD FOR OUTDOOR UNIT. PADS SHALL BE 6" LARGER THAN OUTDOOR UNIT ON ALL SIDES.
8. ROUTE CONDENSATE DOWN TO MOP SINK.



HVAC PLAN - FITNESS AND BREAK ROOM

1/4" = 1'-0"

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FITNESS AND BREAK ROOM HVAC PLAN

2M101

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83 - 28x36
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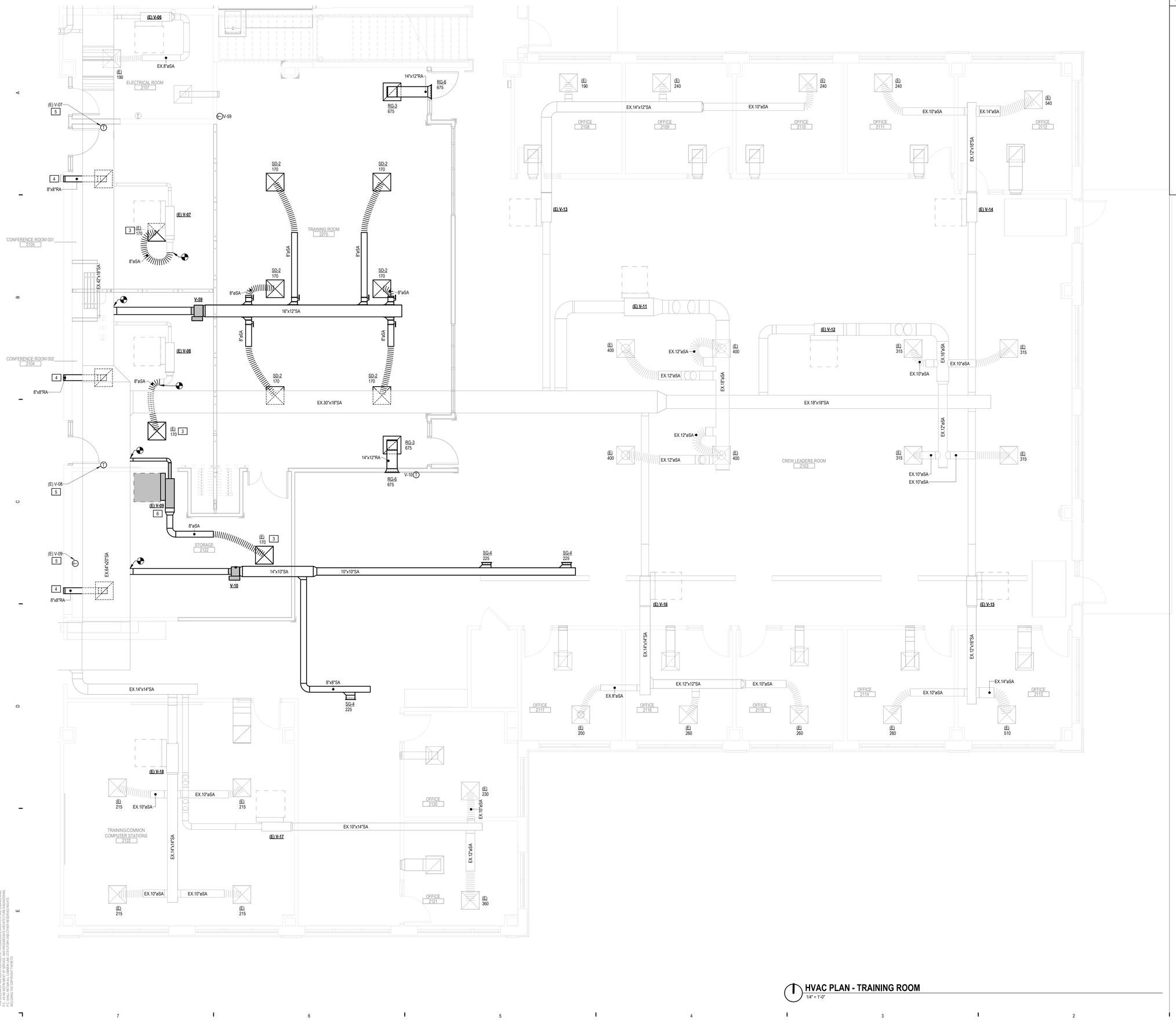

HVAC KEYNOTES

1. RELOCATE AND REBALANCE EXISTING GRILL TO NEW CFM VALUE SHOWN.
2. ADJUST FAN VFD TO EXHAUST 2,000 CFM.
3. EXISTING DIFFUSER RELOCATED.
4. EXISTING TRANSFER GRILL AND DUCTWORK RELOCATED.
5. EXISTING THERMOSTAT RELOCATED.
6. EXISTING TERMINAL UNIT RELOCATED.
7. PROVIDE 4" THICK CONCRETE PAD FOR OUTDOOR UNIT. PADS SHALL BE 6" LARGER THAN OUTDOOR UNIT ON ALL SIDES.
8. ROUTE CONDENSATE DOWN TO MOP SINK.

HVAC PLAN - TRAINING ROOM

1/4" = 1'-0"

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BS1 - 24x36
TRAINING ROOM - HVAC PLAN

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CHARLOTTE, NC

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SEAL
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ENGINEER
RUBEN A. BAZIYANTS

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TRAINING ROOM HVAC PLAN

2M102

D4 RECTANGULAR DUCT FITTINGS DETAIL

NOT TO SCALE

D3 DUCT TAKEOFF DETAIL

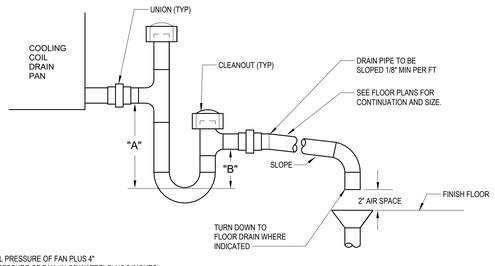
NOT TO SCALE

D2 DUCT SUPPORT DETAIL

NOT TO SCALE

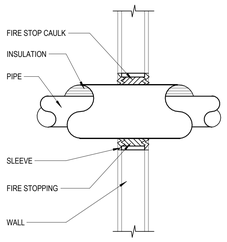
D1 RECTANGULAR DUCT WALL PENETRATION

NOT TO SCALE



2 COOLING COIL CONDENSATE TRAP

NOT TO SCALE



E3 PIPE WALL PENETRATION DETAIL

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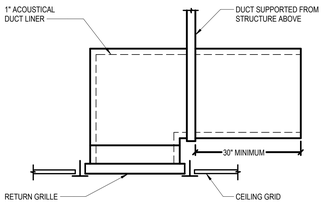
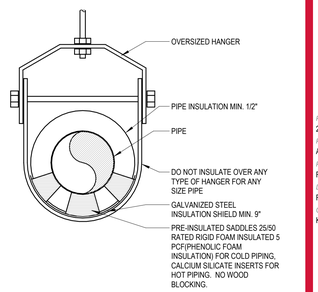


1 RETURN BOOT DETAIL

NOT TO SCALE



E1 PIPE HANGER DETAIL

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MECHANICAL DETAILS

2M501

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MECHANICAL DETAILS
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AIR HANDLING UNIT SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	AIRFLOW (CFM)	AIRFLOW (CFM)	ESP (IN-WG)	ELECTRICAL DATA							OPERATING WEIGHT (LBS)	REMARKS
							AUX HEATER (kW)	V	PH	HZ	MCA	MOP	DISC MEANS BY	DISCONNECT	
AHU-1	FITNESS ROOM (101)	DAIKIN	DFVE36CP1308A	1000	250	0.25	8	208	3	60	43	45	E.C.	Yes	140	1
AHU-2	FITNESS ROOM (101)	DAIKIN	DFVE36CP1308A	1000	250	0.25	8	208	3	60	43	45	E.C.	Yes	140	1

REMARKS:
1. PROVIDE WITH CONDENSATE PUMP, DRAIN LINE SENSOR, OVERFLOW SENSOR TO SHUTDOWN UNIT, WALL MOUNTED THERMOSTAT, DISCONNECT SWITCH AND LINESET.

HEAT PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	UNIT SIZE	REFRIGERANT	COOLING DATA			HEATING DATA		ELECTRICAL					UNIT WEIGHT (LBS)	REMARKS
					TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	SEER	CAPACITY @ 47°F (MBH)	CAPACITY @ 17°F (MBH)	V	PH	HZ	MCA	MAX FUSE		
HP-1	DAIKIN	DH6VSA3610	3 TON	R-32	33.0	18.8	16.6	34.6	26.0	208	1	60	22.4	25 A	137	
HP-2	DAIKIN	DH6VSA3610	3 TON	R-32	33.0	18.8	16.6	34.6	26.0	208	1	60	22.4	25 A	137	

TERMINAL UNIT WITH ELECTRIC HEAT SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	INLET Ø"	AIRFLOW		HEATING COIL						REMARKS
					MAX CFM	MIN CFM	TYPE	KW	EAT [°F]	LAT [°F]	V	PH	HZ	
V-01	TITUS	DESV	LOCKER (102)	5"	300	150	ELECTRIC	2	55	90	277 V	1	60 Hz	1
V-10	TITUS	DESV	CREW LEADERS ROOM (2103)	8"	690	345	ELECTRIC	4	55	90	277 V	1	60 Hz	1
V-57	TITUS	DESV	LOCKER (102)	5"	225	115	ELECTRIC	2	55	90	277 V	1	60 Hz	1
V-58	TITUS	DESV	MEN'S RR (103)	6"	350	175	ELECTRIC	2	55	90	277 V	1	60 Hz	1
V-59	TRANE	DESV	TRAINING ROOM (2275)	10"	1020	510	ELECTRIC	6	55	90	480 V	3	60 Hz	1

REMARKS:
1. PROVIDE NON-FUSED DOOR INTERLOCKING DISCONNECT SWITCH, 1/2" THICK FIBRE FREE LINER, SCR CONTROLLED ELECTRIC HEATER.

LOUVER SCHEDULE

MARK	LOCATION	SERVICE	MANUFACTURER	MODEL	WIDTH	HEIGHT	FREE AREA (SF)	AREA RATIO (%)	AIRFLOW (CFM)	APD (IN-WG)	REMARKS
L-1	(101) FITNESS ROOM	OUTSIDE AIR	GREENHECK	ESD-635	24"	18"	1.1	58.8	500	0.05	1

REMARKS:
1. PROVIDE WITH INSECT SCREEN.

DIFFUSER, REGISTER, & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL	NECK SIZE			FACE SIZE		MOUNTING	PATTERN	MATERIAL	COLOR	REMARKS
			Ø"	L"	W"	L"	W"					
RG-1	TITUS	350R		6"	6"	8"	8"	SIDEWALL	SINGLE DEFLECTION	STEEL	PAINT TO MATCH WALL	
RG-2	TITUS	PAR		12"	12"	24"	24"	LAY-IN	4-WAY	STEEL	WHITE	
RG-3	TITUS	PAR		14"	14"	24"	24"	LAY-IN	4-WAY	STEEL	WHITE	
RG-4	TITUS	350R		10"	6"	12"	8"	SIDEWALL	SINGLE DEFLECTION	STEEL	PAINT TO MATCH WALL	
RG-5	TITUS	350R		12"	10"	14"	12"	SIDEWALL	SINGLE DEFLECTION	STEEL	PAINT TO MATCH WALL	
RG-6	TITUS	350R		18"	12"	20"	14"	SIDEWALL	SINGLE DEFLECTION	STEEL	PAINT TO MATCH WALL	
SD-1	TITUS	OMNI	6"			24"	24"	LAY-IN	4-WAY	STEEL	WHITE	
SD-2	TITUS	OMNI	8"			24"	24"	LAY-IN	4-WAY	STEEL	WHITE	
SG-3	TITUS	300FL		6"	6"	8"	8"	SIDEWALL	DOUBLE DEFLECTION	STEEL	BLACK	
SG-4	TITUS	300FL		12"	6"	14"	8"	SIDEWALL	DOUBLE DEFLECTION	STEEL	BLACK	

GENERAL NOTES:
1. COORDINATE MOUNTING TYPE WITH ARCHITECTURAL CEILING PLANS.
2. PROVIDE REMOTE CABLE ACTUATOR FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILING.

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MECHANICAL SCHEDULES
2M601

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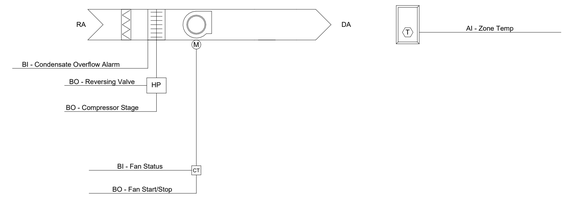


SPLIT SYSTEM HEAT PUMP:

SEQUENCE OF OPERATION:

HEAT PUMP SHALL RUN ACCORDING TO ITS OWN INTERNAL CONTROLS.
COOLING SETPOINT SHALL BE 75°F (ADJ.)
HEATING SETPOINT SHALL BE 72°F (ADJ.)

DDC CONTROLLER SHALL MONITOR SPACE TEMPERATURE AND ACTIVE ALARM IF HIGH OR LOW LIMIT SETPOINTS ARE REACHED.
COOLING HIGH TEMPERATURE ALARM: 85°F (ADJ.)
HEATING LOW TEMPERATURE ALARM: 62°F (ADJ.)

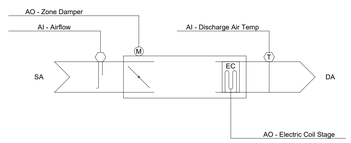
CONDENSATE PUMP AUXILIARY CUT-OUT CONTACTS ARE INTERLOCKED TO FAN MOTOR STARTER AND SHALL BE MONITORED BY DDC CONTROLLER. SHOULD WATER LEVEL REACH SETPOINT, HEAT PUMP SHALL SHUT DOWN AND DDC SHALL ACTIVE LEAK ALARM.

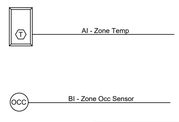
	Hardware Points				Software Points					
Point Name	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show On Graphic**
Zone Temp	x								x		x
Fan Status			x						x		x
Emergency Shutdown			x						x	x	x
High Zone Temp										x	
Low Zone Temp										x	
Totals	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**3**
Total Hardware (3)					**Total Software (6)**						

NOTE: NEW CONTROL POINTS SHALL BE INTEGRATED INTO EXISTING JCI CONTROLS BUILDING AUTOMATION SYSTEM.

SPLIT SYSTEM HEAT PUMP UNIT CONTROL DIAGRAM

2 NOT TO SCALE





GENERAL DESCRIPTION:
TERMINAL UNIT:
THE UNIT SHALL RUN IN OCCUPIED/UNOCCUPIED MODE AS SCHEDULED OR AS DETERMINED FROM ROOM OCCUPANCY SENSOR. DURING OCCUPIED MODE THE UNIT DAMPER SHALL OPEN TO MAXIMUM VALUE AS SCHEDULED AND DURING UNOCCUPIED MODE THE UNIT DAMPER SHALL OPEN TO MINIMUM VALUE AS SCHEDULED. DURING NIGHT SETBACK MODE THE UNIT DAMPER SHALL CLOSE UNLESS ZONE CALLS FOR COOLING OR HEATING.

SEQUENCE OF OPERATION:
RUN CONDITIONS –
THE UNIT DAMPER SHALL MAINTAIN CONSTANT MAXIMUM VOLUME WHEN IN OCCUPIED MODE. IF THE SPACE OCCUPANCY SENSOR SIGNALS OCCUPANCY DURING A SCHEDULED UNOCCUPIED TIME, THE UNIT DAMPER SHALL OPEN TO MAXIMUM VOLUME UNTIL THE OCCUPANCY SENSOR SIGNALS NO OCCUPANCY PLUS A 15 MIN (ADJ.) TIME DELAY. THE UNIT DAMPER SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM AIRFLOWS WHEN SCHEDULED AS UNOCCUPIED OR IN NIGHT SETBACK MODE.

THE UNIT SHALL MAINTAIN:
- A 75°F (ADJ.) COOLING SETPOINT
- A 70°F (ADJ.) HEATING SETPOINT

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

ZONE SETPOINT ADJUST:
THE BMS SHALL MAINTAIN ZONE TEMPERATURE HEATING AND COOLING SETPOINTS.

OCCUPANCY SCHEDULE:
EACH ZONE SHALL HAVE ITS OWN OCCUPANCY SCHEDULE (ADJ.). DEFAULT IS AHU OCCUPANCY SCHEDULE.

REHEAT COIL:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND SHALL STAGE ON THE REHEAT COIL TO MAINTAIN ITS HEATING SETPOINT. DURING UNOCCUPIED AND NIGHT SETBACK MODE, THE DAMPER SHALL MODULATE TO MINIMUM POSITION BEFORE STAGING ON HEAT.

M-CONTROLS - TERMINAL UNIT WITH SEQUENCE

1 NOT TO SCALE

	Hardware Points				Software Points					
Point Name	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show On Graphic**
Airflow	x								x		x
Discharge Air Temp	x								x		x
Zone Setpoint Adjust	x										x
Zone Temp	x								x		x
Zone Humidity	x								x		x
Zone Damper		x							x		x
Zone Override			x						x		x
Heating SCR		x							x		x
Airflow Setpoint					x				x		x
Cooling Setpoint					x				x		x
DAT Heating Limit					x						
Heating Setpoint					x				x		
Heating Mode						x			x		
Schedule								x			
High Discharge Air Temp										x	
High Zone Temp										x	
Low Discharge Air Temp										x	
Low Zone Temp										x	
Totals	**5**	**2**	**1**	**0**	**4**	**1**	**0**	**1**	**11**	**4**	**10**
Total Hardware (8)					**Total Software (21)**						

NOTE: NEW CONTROL POINTS SHALL BE INTEGRATED INTO EXISTING JCI CONTROLS BUILDING AUTOMATION SYSTEM.

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MECHANICAL CONTROLS
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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
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K. JAGER

MECHANICAL CONTROLS
2M701

ELECTRICAL ABBREVIATIONS

A	AMPERES
ACU	AIR CONDITIONING UNIT
AFG	ABOVE FINISH GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS PANEL
APPROX	APPROXIMATE
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILARY
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BF	BARRIER FREE
BFG	BELOW FINISHED GRADE
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DEVICE
BSMT	BASEMENT
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED-CIRCUIT TELEVISION
CF	CEILING FAN
CH	CABINET HEATER
CL	CENTERLINE
CLR	CLEAR, CLEARANCE
CMPR	COMPRESSOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CR	CARD READER
CT	COOLING TOWER
CU	COPPER
DEPT	DEPARTMENT
DET	DETAIL
DISC	DISCONNECT
DIST	DISTRIBUTION
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EF	EXHAUST FAN
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
F	FAHRENHEIT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FLEXIBLE CONNECTION
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FLUORESCENT
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FURN	FURNISH, FURNISHED
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTOR
GND	GROUND
HP	HORSEPOWER
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
IBC	INTERNATIONAL BUILDING CODE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JBOX	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
KWH	KILOWATT-HOURS
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LTG	LIGHTING
LV	LOW VOLTAGE
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFDS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MSBD	MAIN SWITCH BOARD
MT	MOUNT
MTR	MOTOR, MOTORIZED
MTS	MANUAL TRANSFER SWITCH
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NL	NIGHT-LIGHT
OH	OVERHEAD
OHD	OVERHEAD DOOR
P	PUMP
PH	PHASE
PNL	PANEL
PP	POWER POLE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
RECEPT	RECEPTACLE
RTU	ROOFTOP UNIT
TEL	TELEPHONE
TR	TAMPER RESISTANT
TV	TELEVISION
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WH	WATER HEATER
XFER	TRANSFER
XFMR	TRANSFORMER
Ø	PHASE

DATA SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
▽#	DATA/PHONE OUTLET, # INDICATES QUANTITY OF ANTICIPATED JACKS	18"
▼#	ABOVE COUNTERTOP DATA/PHONE OUTLET, MOUNT 4" ABOVE BACKSPLASH. # INDICATES QUANTITY OF ANTICIPATED JACKS	46"
#WM	MULTIOUTLET WIREMOLD ASSEMBLY, MOUNT 4" ABOVE BACKSPLASH OR PROVIDE DATA OUTLETS AS SHOWN ON DRAWING. # INDICATES QUANTITY OF ANTICIPATED JACKS	46"
#F	FLOOR DATA/PHONE OUTLET. # INDICATES QUANTITY OF ANTICIPATED JACKS	
#C	CEILING DATA/PHONE OUTLET. # INDICATES QUANTITY OF ANTICIPATED JACKS	
WAP CLG	CEILING WIRELESS ACCESS POINT	
WAP ▼	WIRELESS ACCESS POINT	46"
TV ▽	TELEVISION OUTLET	18"
C	CLOCK	84"
IC	INTERCOM OUTLET LOCATION	46"
IC AV	INTERCOM - AUDIO/VISUAL	46"
S	SPEAKER (WALL OR CEILING MT.)	84"
E	SOUND MASKING EMITTER (WALL OR CEILING MT.)	84"
$V	VOLUME CONTROL	46"
M	MICROPHONE OUTLET	18"
P	PROJECTOR CONTROL OUTLET	18"
H	HUMIDISTAT	46"
T	THERMOSTAT	46"
W	OUTLET IN FLOOR (MICROPHONE SHOWN)	

NOTE: SYMBOLS REPRESENT EQUIPMENT SPECIFIED BYOTHERS, THE SCOPE OF WORK REPRESENTED IN THESE DRAWINGS INCLUDES DEVICE BACKBOX AND CONDUIT FROM BACKBOX TO ABOVE ACCESSIBLE CEILING TERMINATED WITH INSULATED BUSHING (UNLESS NOTED OTHERWISE).

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
P	WALL PULLSTATION DEVICE	46"
▽ V	WALL AUDIO/VISUAL DEVICE (CANDELAS NOTED)	90"
▽ V	WALL VISUAL DEVICE (CANDELAS NOTED)	90"
▽ F	WALL AUDIO STATION	90"
▽ V	CEILING AUDIO/VISUAL DEVICE (CANDELAS NOTED)	
V	CEILING VISUAL DEVICE (CANDELAS NOTED)	
F	CEILING AUDIO STATION	
SD	WALL SMOKE DETECTOR	WITHIN 12" OF CEILING
▽ SD	WALL AUDIO/VISUAL SMOKE DETECTOR	WITHIN 12" OF CEILING
CD	WALL COMBO SMOKE/CO DETECTOR	WITHIN 12" OF CEILING
HD	WALL HEAT DETECTOR	90"
SD	CEILING SMOKE DETECTOR	
▽ SD	CEILING AUDIO/VISUAL SMOKE DETECTOR	
CD	CEILING COMBO SMOKE/CO DETECTOR	
HD	CEILING HEAT DETECTOR	
DR	DUCT SMOKE DETECTOR (RETURN SIDE)	
DS	DUCT SMOKE DETECTOR (SUPPLY SIDE)	
FS	SPRINKLER FLOW SWITCH	
TS	SPRINKLER VALVE TAMPER SWITCH	
MH	WALL MAGNETIC HOLD OPEN	80"
RT	REMOTE TEST SWITCH	46"
FD	FIRE FIGHTER TELEPHONE	46"
FACP	FIRE ALARM CONTROL PANEL	80"
FAAP	FIRE ALARM ANNUNCIATOR PANEL	46"
NAC	FIRE ALARM NAC PANEL	46"

LIGHTING SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
$	SINGLE POLE SWITCH	46"
$3	3-WAY SWITCH	46"
$4	4-WAY SWITCH	46"
$D	DIMMER SWITCH	46"
$OS	OCCUPANCY SENSOR SWITCH	46"
$MC	MOMENTARY CONTACT SWITCH	46"
$T	TIMER SWITCH	46"
$OSD	COMBINATION: OCCUPANCY SENSOR / 0-10V DIMMER SWITCH	46"
$MCD	COMBINATION: MOMENTARY CONTACT SWITCH / 0-10V DIMMER SWITCH	46"
$CF	COMBINATION: LIGHT SWITCH / CEILING FAN CONTROLLER	46"
$LV#	LIGHTING CONTROL SYSTEM PUSH BUTTON STATION	46"
$DSZ	DUAL RELAY OCCUPANCY SENSOR SWITCH	46"
$K	KEYED SWITCH	46"
GTD	GENERATOR TRANSFER DEVICE	
OS	CEILING OCCUPANCY SENSOR	
LS	CEILING LIGHT LEVEL SENSOR	
PC	PHOTOCELL	
	POLE MOUNTED LIGHT (TYPE DENOTED)	PER SCHED
A	WALL MOUNTED LIGHT (TYPE DENOTED)	AS NOTED
	RECESSED LIGHT (TYPE DENOTED)	
	SURFACE LIGHT (TYPE DENOTED)	
P1 P2	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)	
	TRACK AND TRACK LIGHT (TYPES DENOTED)	AS NOTED
	EMERGENCY DOUBLE HEAD WALL LIGHT (TYPE DENOTED)	96"
	EXIT SIGN (TYPE DENOTED)	
	LIGHT FIXTURE ON (EM) LIFE SAFETY OR CRITICAL BRANCH	AS NOTED

WIRING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	CONDUIT CONCEALED IN WALL OR OVERHEAD
	CONDUIT CONCEALED BELOW FLOOR
	CONDUIT EXPOSED
	CONDUIT TRANSITION UP
	CONDUIT TRANSITION DOWN
	CONDUIT STUBBED OUT
UF	UNDERFLOOR RACEWAY SYSTEM
	CABLE TRAY (TYPE DENOTED)
3	CONDUIT SLEEVE (SIZE DENOTED)
	BRANCH CIRCUIT HOME RUN
	LOW VOLTAGE POWER WIRING
UGE	UNDERGROUND ELECTRICAL
OHE	OVERHEAD ELECTRIC
P	UTILITY SERVICE POWER POLE (SITE)
G	GROUND CONDUCTOR
	LIGHTNING PROTECTION AIR TERMINAL
	LIGHTNING PROTECTION CONDUCTOR SPLICE
	GROUND ROD (PLAN VIEW)
	GROUND CONNECTION TO STEEL OR STRUCTURE
	GROUND CONNECTION - EXOTHERMIC WELD

POWER SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
	SINGLE RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "TR" = TAMPER RESISTANT)	18"
	GFCI RATED SINGLE RECEPT	18"
	ISOLATED GROUND SINGLE RECEPT	18"
	SWITCHED SINGLE RECEPT	18"
	DUPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS "TR" = TAMPER RESISTANT)	18"
	GFCI RATED DUPLEX RECEPT ("WP" = WEATHER RESISTANT)	18"
	ISOLATED GROUND DUPLEX RECEPT	18"
	SWITCHED DUPLEX RECEPT (SPLIT-WIRE)	18"
	USB/DUPLEX RECEPT	18"
	ABOVE COUNTERTOP DUPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	ABOVE COUNTERTOP GFCI RATED DUPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	FOURPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS)	18"
	GFCI RATED FOURPLEX RECEPT	18"
	ISOLATED GROUND FOURPLEX RECEPT	18"
	SWITCHED FOURPLEX RECEPT (SPLIT-WIRE)	18"
	ABOVE COUNTERTOP FOURPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	SPECIAL RECEPT OR CONNECTION, PROVIDE DIRECT POWER CONNECTION OR MATCHING RECEPTACLE AS REQUIRED, COORDINATE W/ EQUIPMENT MANUFACTURER	18"
#WM	MULTIOUTLET WIREMOLD ASSEMBLY, MOUNT 4" ABOVE BACKSPLASH OR PROVIDE POWER RECEPTS AS SHOWN ON DRAWING	46"
	FLOOR RECEPT (DUPLEX SHOWN)	
	CEILING RECEPT (DUPLEX SHOWN)	
J J J	JUNCTION BOX (FLOOR, WALL, CEILING SHOWN RESPECTIVELY)	AS NOTED
	PUSH BUTTON STATION	46"
	FLOOR MOUNT FURNITURE CONNECTION -POWER AND DATA	
	WALL MOUNT FURNITURE CONNECTION -POWER AND DATA	18"
M	MOTOR HORSEPOWER RATED SWITCH	46"
F	FUSED SWITCH	46"
	SAFETY DISCONNECT SWITCH (NON-FUSED)	72"
	SAFETY DISCONNECT SWITCH (FUSED)	72"
	COMBO MOTOR STARTER/DISCONNECT SWITCH (FUSED)	72"
VFD	VARIABLE FREQUENCY DRIVE	
	SINGLE PHASE MOTOR (SEE SCHEDULE)	
	THREE PHASE MOTOR (SEE SCHEDULE)	
	CIRCUIT BREAKER PANEL	72"
	POWER OR DISTRIBUTION PANEL	72"
	SPECIAL CABINET (TYPE DENOTED)	72"
T	TRANSFORMER (TYPE DENOTED)	

SECURITY SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
DC	DOOR CONTACT	84"
CR	CARD READER	46"
KP	KEYPAD	46"
ES	ELECTRIC STRIKE	46"
EL	ELECTRIC LATCH	46"
ET	ELECTRIC TRANSFER	46"
ML	MAGNETIC LOCK	84"
RE	REQUEST TO EXIT	84"
MS	MOTION SENSOR	84"
GB	GLASS BREAK	
	WALL CCTV CAMERA	90"
HTR PTZ	WALL CCTV CAMERA - DOME, HEATER, PAN-TILT-ZOOM	90"
	CEILING CCTV CAMERA	
HTR PTZ	CEILING CCTV CAMERA - DOME, HEATER, PAN-TILT-ZOOM	

NOTE: SYMBOLS REPRESENT EQUIPMENT SPECIFIED BY OTHERS, THE SCOPE OF WORK REPRESENTED IN THESE DRAWINGS INCLUDES DEVICE BACKBOX AND 3/4" CONDUIT FROM BACKBOX TO ABOVE ACCESSIBLE CEILING TERMINATED WITH INSULATED BUSHING (UNLESS NOTED OTHERWISE)

GENERAL ELECTRICAL NOTES

1. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS ADOPTED BY THE AHJ FOR THE PROJECT LOCATION. INCLUDING (NOT LIMITED TO) ELECTRICAL CODES, BUILDING CODES, ENERGY CODES, ETC.
2. COORDINATE INSTALLATION WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REFLECTED CEILING PLANS FOR DEVICE AND FIXTURE PLACEMENT, AS WELL AS FIRE RATED PARTITIONS, EXPANSION JOINTS, ETC.
3. COORDINATE INSTALLATION OF MECHANICAL EQUIPMENT POWER CONNECTIONS WITH MECHANICAL/PLUMBING PLANS, SCHEDULES AND PRODUCT DATA SUBMITTALS.
4. COORDINATE INSTALLATION WITH VENDOR/ CONTRACTOR SHOP DRAWINGS WHERE APPROPRIATE.
5. FIELD COORDINATE INSTALLATION WITH THE INSTALLATION OF OTHER TRADES TO AVOID CLASHES AND CONFLICTS.
6. WHERE MOUNTING HEIGHTS ARE SHOWN, THEY ARE TO BE CONSIDERED TO BE TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.
7. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY OR PART OF A LISTED CABLE ASSEMBLY SUITABLE FOR THE INSTALLED PURPOSE AND LOCATION, AND ALLOWED BY PROJECT SPECIFICATIONS.
8. ALL CABLES AND CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. CABLES ABOVE ACCESSIBLE CEILINGS MAY BE ROUTED IN CABLE SUPPORT HOOKS/RINGS. CABLES TO BE ROUTED IN CABLE TRAY WHERE SHOWN.
9. FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 75 FEET AND #8 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
10. FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
11. WHERE CONFLICTS EXIST IN DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, ISSUE REQUEST FOR INTERPRETATION TO DESIGN TEAM FOR CLARIFICATION PRIOR TO INSTALLATION.
12. TV OUTLETS, VOLUME CONTROLS, TELEPHONE OUTLETS, DATA OUTLETS, AND FIRE ALARM DEVICES SHALL CONSIST OF A BACK BOX WITH CONDUIT STUBBED ABOVE THE ACCESSIBLE CEILING. VERIFY SIZE OF BACK BOX REQUIRED WITH DEVICE TO BE INSTALLED.
13. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY.
14. FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWISE:

3/4"C	TV OUTLETS
3/4"C	VOLUME CONTROLS
3/4"C	TELEPHONE OUTLETS
3/4"C	INFORMATION OUTLETS
3/4"C	FIRE ALARM DEVICES

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
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CHECKED BY
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ELECTRICAL NOTES AND ABBREVIATIONS
2E001

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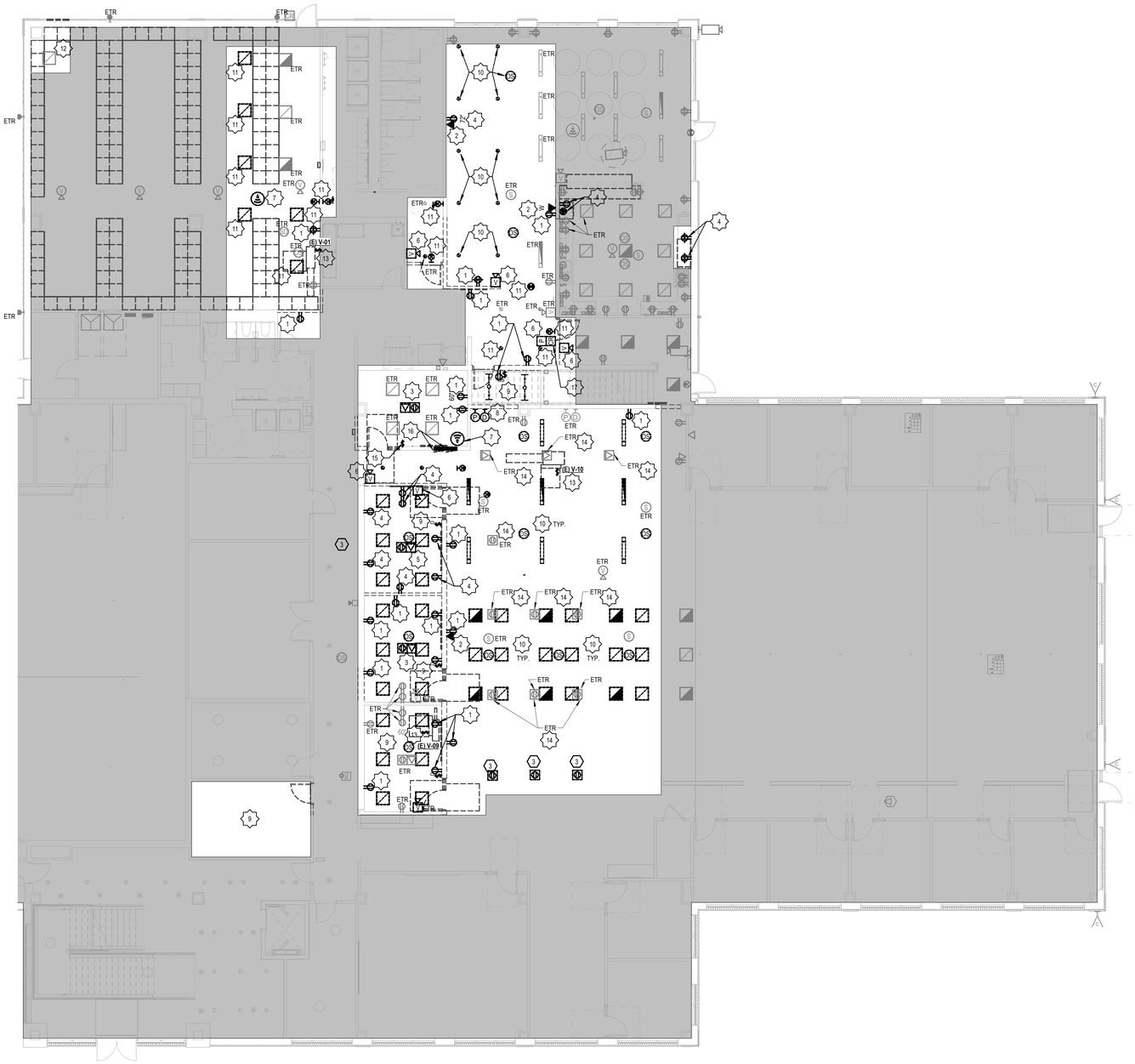

FIRST FLOOR DEMOLITION PLAN
1/8" = 1'-0"

DEMOLITION GENERAL NOTES

A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.

B. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.

C. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.

D. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

E. FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

F. DISCONNECT AND REMOVE LIGHT SWITCHES IN DEMOLITION AREAS AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.

G. DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S).

H. FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE RECEPTACLE I N ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST DEVICE ON CIRCUIT TO REMAIN.
2. DISCONNECT AND REMOVE TELECOM DEVICE IN ITS ENTIRETY. REMOVE CABLING BACK TO IT ROOM.
3. DISCONNECT AND REMOVE POWER AND DATA FLOOR BOX. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST DEVICE ON CIRCUIT TO REMAIN. REMOVE TELECOM CABLING BACK TO IT ROOM. PATCH FLOOR TO MATCH EXISTING FLOOR FINISH.
4. DISCONNECT AND REMOVE RECEPTACLE I N ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. LABEL BREAKER AS SPARE AND SWITCH TO "OFF" POSITION FOR RE-USE.
5. DISCONNECT AND REMOVE POWER AND DATA FLOOR BOX. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. LABEL BREAKER AS SPARE AND SWITCH TO "OFF" POSITION FOR RE-USE. REMOVE TELECOM CABLING BACK TO IT ROOM. PATCH FLOOR TO MATCH EXISTING FLOOR FINISH.
6. DISCONNECT AND REMOVE FIRE ALARM DEVICE IN ITS ENTIRETY. REMOVE LOW VOLTAGE WIRING BACK TO NEAREST FIRE ALARM DEVICE ON LOOP.
7. DISCONNECT AND REMOVE WIRELESS ACCESS POINT IN ITS ENTIRETY. REMOVE CABLING BACK TO IT ROOM.
8. DISCONNECT AND REMOVE SYSTEM FURNITURE FEED IN ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST DEVICE ON CIRCUIT TO REMAIN. REMOVE TELECOM CABLING BACK TO IT ROOM. PATCH FLOOR TO MATCH EXISTING FLOOR FINISH.
9. DISCONNECT AND REMOVE ALL LIGHTING FIXTURES AND LIGHTING CONTROLLER IN AREA. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST LIGHTING FIXTURE ON CIRCUIT TO REMAIN.
10. DISCONNECT AND REMOVE LIGHTING FIXTURES, LIGHTING RELAYS AND CEILING OCCUPANCY SENSORS IN AREA SHOWN. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST LIGHTING FIXTURE ON CIRCUIT TO REMAIN.
11. DISCONNECT AND REMOVE LIGHTING FIXTURE IN ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST FIXTURE ON CIRCUIT TO REMAIN.
12. EXISTING LIGHTING FIXTURE TO REMAIN. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST FIXTURE ON CIRCUIT TO REMAIN. LIGHT FIXTURE TO BE CONNECTED TO EMERGENCY LIGHTING CIRCUIT IN AREA DURING CONSTRUCTION PHASE. REFER TO SHEET EL101 FOR ADDITIONAL INFORMATION.
13. DISCONNECT AND REMOVE BRANCH CIRCUIT WIRING FROM HVAC UNIT BEING REMOVED. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. SWITCH BREAKER TO 'OFF' POSITION AND LABEL AS SPARE.
14. REMOVE FLOOR BOX COVER PLATE FOR REPLACEMENT. CONTRACTOR TO VERIFY QUANTITY OF FLOOR BOXES. REFER TO NEW WORK PLAN EP101 FOR ADDITIONAL INFORMATION.
15. DISCONNECT AND REMOVE LIGHTING CONTROL SWITCH FOR RELOCATION. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST FIXTURE IN ROOM. COIL FOR RECONNECTION AT NEW SWITCH LOCATION. REFER TO SHEET 2EL101 FOR ADDITIONAL INFORMATION.
16. DISCONNECT AND REMOVE EXISTING PANELBOARDS AND SURGE PROTECTION DEVICE (SPD) IN THEIR ENTIRETY FOR RELOCATION IN NEW ELECTRICAL ROOM DISCONNECT FEEDERS FOR RECONNECTION ONCE PANELBOARD AND SPD HAS BEEN RELOCATED. CONTRACTOR TO ENSURE ALL BRANCH CIRCUIT WIRES ARE LABELED FOR RECONNECTION DURING NEW WORK PHASE. REFER TO SHEET 2EP101 FOR ADDITIONAL INFORMATION.
17. DISCONNECT AND REMOVE CARD READER IN ITS ENTIRETY. CARD READER TO BE SAVED FOR RELOCATION DURING NEW WORK PHASE. REFER TO SHEET 2EP101 FOR ADDITIONAL INFORMATION.

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
D. STIVERS, PE
DRAWN BY
D. HARRIS-WILLIAMS
CHECKED BY
D. STIVERS, PE

FIRST FLOOR DEMOLITION PLAN
2ED101

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REVIT FLOOR DEMOLITION PLAN

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	POWER	VOLTAGE	PHASE	FEEDER	DISCONNECTING MEANS	DISC FURNISH/INSTALL	NOTES
AHU-1	AIR HANDLING UNIT	12393 VA	208 V	3	4#6, 1#10G, 1" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
AHU-2	AIR HANDLING UNIT	12393 VA	208 V	3	4#6, 1#10G, 1" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
HP-1	HEAT PUMP	3727 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
HP-2	HEAT PUMP	3727 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
V-01	TERMINAL UNIT	2000 VA	277 V	1	2#12, #12, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
V-10	TERMINAL UNIT	4000 VA	277 V	1	2#12, #12, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
V-57	TERMINAL UNIT	2000 VA	277 V	1	2#12, #12, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
V-58	TERMINAL UNIT	2000 VA	277 V	1	2#12, #12, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	
V-59	TERMINAL UNIT	6002 VA	480 V	3	4#12, #12G, 3/4" C.	PROVIDED WITH UNIT	DIV 23/DIV 23	

STARTER TYPES:

FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
2-SPD	TWO SPEED
VFD	VARIABLE FREQUENCY DRIVE
RVS	REDUCED VOLTAGE

COMBINATION DISCONNECT TYPES:

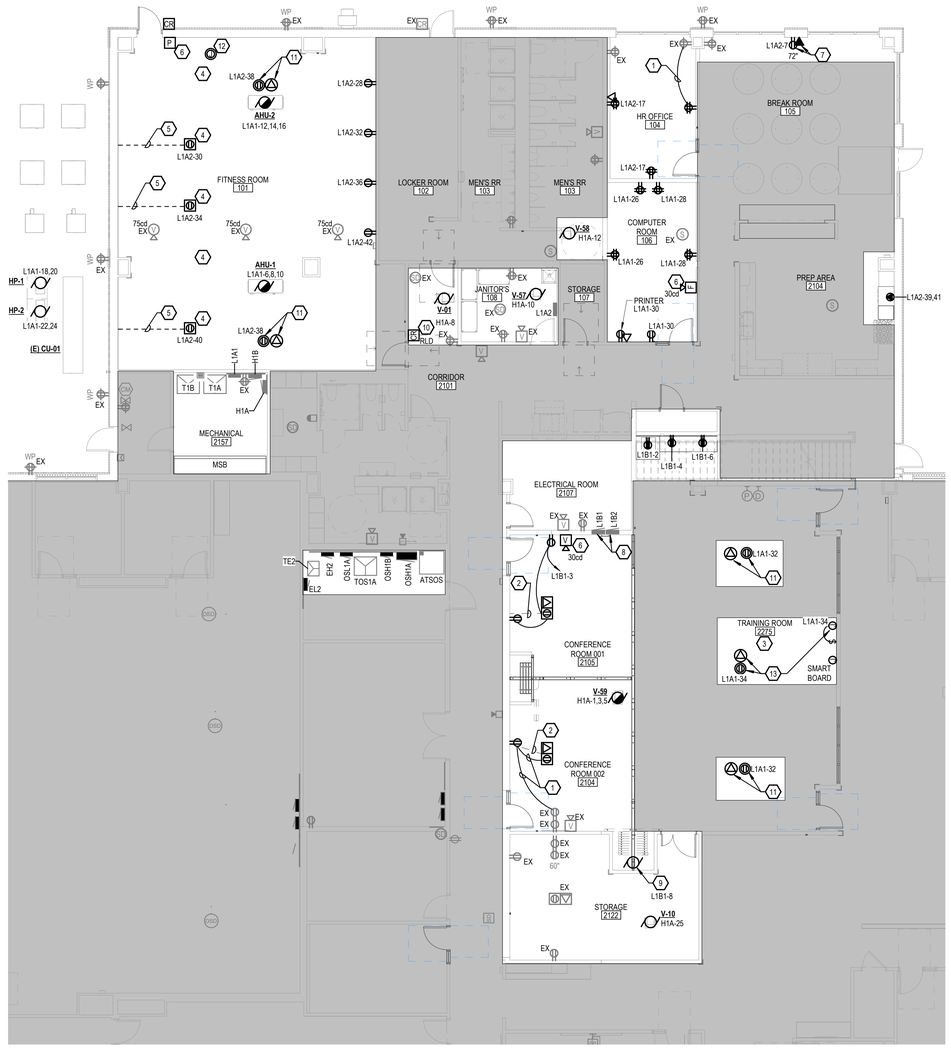
FS	FUSED SWITCH
NFS	NON-FUSED SWITCH
MCP	MOTOR CIRCUIT PROTECTOR
CB	CIRCUIT BREAKER

CONTROL DEVICES:

HOA	HAND-OFF-AUTO SWITCH
RP	RED (RUN) PILOT LIGHT
GP	GREEN (POWER) PILOT LIGHT
0/0	ON-OFF SELECTOR SWITCH
S/S	STOP-START PUSHBUTTONS

NOTES:

1. INPUT AND OUTPUT CONDUCTORS TO AND FROM VFD'S SHALL BE INSTALLED IN SEPARATE RACEWAYS, INDEPENDENT FROM ANY OTHER CONDUCTORS, AND SHALL NOT PASS THRU ANY COMMON WIREWAY OR RACEWAY.



FIRST FLOOR POWER PLAN

1/8" = 1'-0"

POWER GENERAL NOTES

A. WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

B. VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.

C. PROVIDE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED AND GRADE MOUNTED ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL DETAIL DRAWINGS FOR TRANSFORMER, GENERATOR, OR SWITCHGEAR PADS THAT MAY EXCEED REQUIREMENTS LISTED IN SPECIFICATIONS.

D. CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.

E. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.

F. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

POWER KEYNOTES

1. FURNISH AND INSTALL A NEW RECEPTACLE AT INDICATED LOCATION. ROUTE NEW BRANCH CIRCUIT WIRING FROM NEAREST EXISTING RECEPTACLE FOR TIE IN TO CIRCUIT.
2. TRENCH FROM WALL TO FLOOR BOX LOCATION. ROUTE 3/4" CONDUIT FOR POWER AND CONNECT TO INDICATED CIRCUIT. ROUTE 1-1/4" CONDUIT WITH PULLSTRING FOR DATA CONNECTION.
3. CONTRACTOR TO PROVIDE NEW FLUSH COVER PLATES AT EXISTING FLOOR BOX LOCATIONS. COLOR TO MATCH EXISTING FINISH COLOR IN AREA. COORDINATE FINISH COLOR WITH ARCHITECTURE PRIOR TO ORDERING.
4. FURNISH AND INSTALL NEW FLOOR BOX FOR GYM EQUIPMENT. COORDINATE FINAL LOCATION OF FLOOR BOX WITH EQUIPMENT VENDOR LAYOUT PRIOR TO ROUGH-IN.
5. TRENCH FROM WALL TO FLOOR BOX FOR ROUTING OF 3/4" CONDUIT FOR BRANCH CIRCUIT WIRING. CONNECT TO CIRCUIT INDICATED. COORDINATE FINAL LOCATION OF FLOOR BOX WITH EQUIPMENT VENDOR LAYOUT.
6. FURNISH AND INSTALL NEW FIRE ALARM DEVICE. ROUTE NEW LOW VOLTAGE WIRING AND CONNECT TO NEAREST DEVICE ON LOOP FOR TIE-IN TO EXISTING FIRE ALARM SYSTEM.
7. POWER AND DATA FOR RELOCATED MONITOR. COORDINATE EXACT HEIGHT AND LOCATION WITH ARCHITECTURE PRIOR TO ROUGH-IN.
8. REINSTALL EXISTING PANELS AND SURGE PROTECTION DEVICE REMOVED DURING DEMOLITION AT INDICATED LOCATION. RECONNECT FEEDERS AND ALL BRANCH CIRCUIT WIRING TO ALIGN WITH ORIGINAL LAYOUT. IN THE EVENT ANY FEEDER WIRING OR BRANCH CIRCUIT WIRING IS INSUFFICIENT IN LENGTH, PROVIDE NEW.
9. **ALTERNATE #1:** POWER CONNECTION FOR MOTORIZED PARTITION. COORDINATE EXACT LOCATION WITH EQUIPMENT MANUFACTURER REQUIREMENTS. ROUTE LOW VOLTAGE CONTROL WIRING FROM CONTROL BOX TO CONTROL SWITCH. COORDINATE CONTROL SWITCH LOCATION WITH ARCHITECTURE PRIOR TO ROUGH-IN.
10. INSTALL CARD READER REMOVED DURING DEMOLITION PHASE TO INDICATED LOCATION. ROUTE 1" C WITH PULL STRING AND END BUSHING AND STUB TO ABOVE ACCESSIBLE CEILING.
11. POWER AND DATA FOR FUTURE CEILING MOUNT TV MONITOR. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
12. CEILING JUNCTION BOX FOR FUTURE CAMERA. ROUTE 1" CONDUIT WITH PULL STRING BACK TO IT CLOSET.
13. POWER AND DATA FOR FUTURE CEILING MOUNT PROJECTOR. PROJECTOR TO BE FURNISHED AND INSTALLED BY OWNER. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. COORDINATE PROJECTOR CONTROLLER LOCATION AND MOUNTING HEIGHT WITH OWNER. ROUTE 3/4" CONDUIT WITH PULLSTRING FROM JUNCTION BOX LOCATION TO CONTROLLER LOCATION.

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RENOVATIONS TO OPERATION CENTER
BUILDING 2

3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING P.C. C-2326 REGISTERED ENGINEERING CORPORATION NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 054688 ENGINEER DANE STIVERS
Dane A. Stivers 2026.06.17 15:54:57 -04'00'

This item has been electronically signed and sealed by Dane A. Stivers using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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FIRST FLOOR POWER PLAN
2EP101

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PRINTED FLOOR POWER PLAN
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2018 Appendix B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN & SUMMARY
Electrical Systems and Equipment

METHOD OF COMPLIANCE:
- ☐ No Change to Existing Systems
- ■ Prescriptive (NCECC 2018)
- ☐ Performance (NCECC 2018)
- ☐ Prescriptive (ASHRAE 90.1-2013)
- ☐ Performance (ASHRAE 90.1-2013)

Lighting Schedule:

Fixture Type: REFER TO LIGHTING FIXTURE SCHEDULE
Lamp Type Required: REFER TO LIGHTING FIXTURE SCHEDULE
Number of Lamps: REFER TO LIGHTING FIXTURE SCHEDULE
Ballast Type Used: REFER TO LIGHTING FIXTURE SCHEDULE
Number of Ballasts: REFER TO LIGHTING FIXTURE SCHEDULE
Total Watts / Fixture: REFER TO LIGHTING FIXTURE SCHEDULE

Allowable Lighting Power:
- ■ Whole Building Method
- ☐ Space by Space Method

INTERIOR LIGHTING
Allowed Lighting Power: 4764 W
Designed Lighting Power: 2119 W
Difference: 2645 W

EXTERIOR LIGHTING
Allowed Lighting Power: 0 W
Designed Lighting Power: 0 W
Difference: 0 W

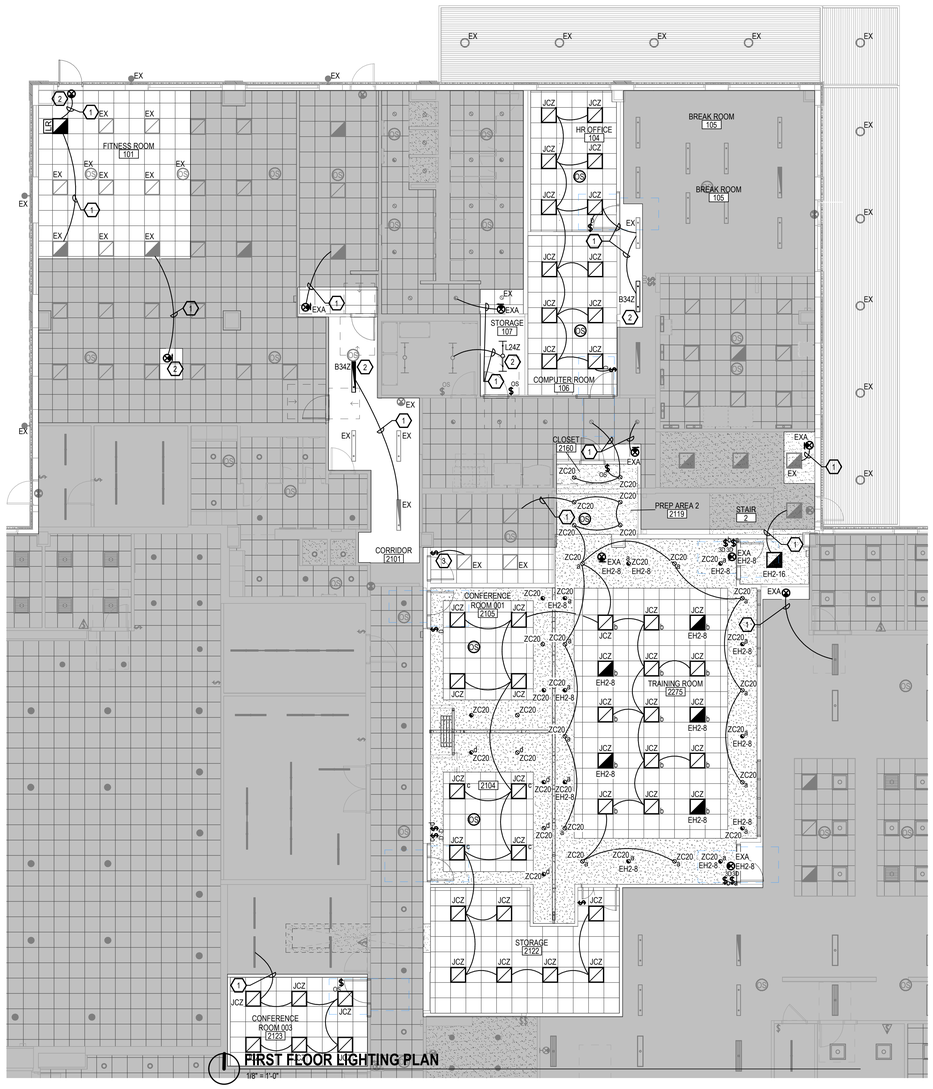
Additional Efficiency Package Options:

FOR 2018 NCECC COMPLIANCE PATHS. NOT REQUIRED FOR ASHRAE 90.1 COMPLIANCE PATHS.

- ☐ C406.2 More Efficient HVAC Equipment Performance
- ■ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outside Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating
- ☐ Not Applicable

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMP	VOLT	WATT	MANUFACTURER	CATALOG NUMBER	NOTE
B34Z	LINEAR DIRECT/INDIRECT LED PENDANT	SUSPEND ALIGN WITH ADJACENT FIXTURE	LED	277 V	52 W	FINELITE	S12 LED ID	
JCZ	LED RECESSEDC VOLUMETRIC - COMMERCIAL GRADE	RECESSED	LED	277 V	30 W	LITHONIA	2BLT2-2X2BLT-33L-ADP-MVOLT-LP835-LA TC	
L24Z	LED SPECIFICATION STRIP	SUSPEND @ 9'-0" AFF	LED	277 V	42 W	LITHONIA	ZLID	
ZC20	RECESSED LED DOWNLIGHT	RECESSED	LED	277 V	21 W	HALO	PD6	



1 FIRST FLOOR LIGHTING PLAN
1/8" = 1'-0"

LIGHTING GENERAL NOTES

A. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.

B. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.

C. CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.

D. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

E. ALL EMERGENCY AND EXIT LIGHTING WITH INTEGRAL BATTERIES TO BE FED FROM AN UNSWITCHED LEG OF THE BRANCH CIRCUIT FEEDING LIGHTING IN THE SAME SPACE. BATTERY TO HAVE CAPACITY FOR 90 MINUTES OF BACK-UP POWER.

F. ALL FOUR CORNERS OF LAY-IN FIXTURES TO BE SUPPORTED PER AHJ REQUIREMENTS.

LIGHTING KEYNOTES

1. PROVIDE NEW BRANCH CIRCUIT WIRING FROM EXISTING FIXTURE TO INDICATED FIXTURES FOR CONNECTION TO CIRCUIT AND CONTROLLER.
2. INSTALL NEW LIGHT FIXTURE TO MATCH EXISTING AT INDICATED LOCATION.
3. INSTALL EXISTING LIGHTING CONTROL SWITCH REMOVED DURING DEMOLITION TO INDICATED LOCATION. RECONNECT WIRING COILED TO SWITCH FOR CONTROL OF LIGHTS IN AREA. IF COILED WIRING IS INSUFFICIENT IN LENGTH, PROVIDE NEW.

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NORTH CAROLINA PROFESSIONAL SEAL 054688 ENGINEER DANE STIVERS
Digitally signed by Dane A. Stivers
DN: cn=Dane A. Stivers, o=Progressive Architecture Engineering, P.C., ou=Engineering, email=dstivers@progressiveae.com, c=US
Date: 2026.03.17 07:56:17 -04'00'

This item has been electronically signed and sealed by Dane A. Stivers using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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FIRST FLOOR LIGHTING PLAN
2EL101

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FIRST FLOOR LIGHTING PLAN
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ONE-LINE GENERAL NOTES

A. CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM ARE FOR FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS.

B. ALL DISCREPANCIES BETWEEN INFORMATION DEPICTED IN DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

C. AVAILABLE FAULT CURRENT VALUES ARE PRELIMINARY AND SHALL BE USED FOR BIDDING PURPOSES ONLY. FINAL SHORT CIRCUIT CURRENT RATINGS TO BE HIGHER THAN AVAILABLE FAULT CURRENT VALUES FROM POWER SYSTEM STUDY (SEE SPECIFICATION SECTION 26 0573).

D. THE SERVICE EQUIPMENT FOR THE PROJECT HAS BEEN REVIEWED FOR COMPLIANCE WITH THE NEC. CONSULT WITH THE UTILITY PROVIDER FOR THEIR SPECIFIC REQUIREMENTS IN REGARDS TO DELIVERY OF POWER. ANY ALTERATIONS FROM THE APPROVED DESIGN MAY REQUIRE RE-SUBMITTAL TO DETERMINE COMPLIANCE WITH THE NORTH CAROLINA ELECTRICAL CODE.

E. CONTRACTOR TO FIELD VERIFY EXISTING LOADS.

EXISTING PANELBOARD: H1A

LOCATION: MECHANICAL 2157
MOUNTING: RECESSED Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS: 225 AMPS
MAIN DEVICE: 225 A MAIN CB
A.I.C. RATING: 14,000 AMPS SYMMETRICAL
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
					1	2001	4000					2	20 A	1		MTR	EX. TRAINING V-17
NEW V-59	MTR		3	20 A	3			2001	5000			4	20 A	1		MTR	EX. TRAINING V-18
					5					2001	6000	6	30 A	1		MTR	EX. STORAGE V-19
EX. WOMEN V-02	MTR		1	20 A	7	1000	2000					8	20 A	1		MTR	NEW V-01
EX. CORRIDOR V-03	MTR		1	30 A	9			6000	2000			10	20 A	1		MTR	NEW V-57
					11					4333	2000	12	20 A	1		MTR	NEW V-58
EX. BREAKROOM V-04	MTR		3	20 A	13	4333	0					14					
					15			4333	0			16	20 A	3		--	NEW SPARE
EX. KITCHEN V-05	MTR		1	20 A	17					5000	0	18					
EX. CREW CONFERENCE V-06	MTR		1	20 A	19	1000	7000					20	35 A	1		MTR	EX. CREW LEADERS V-12
EX. CREW CONFERENCE V-07	MTR		1	20 A	21			1000	5000			22	20 A	1		MTR	EX. CREW LEADERS V-13
EX. CREW CONFERENCE V-08	MTR		1	20 A	23					1000	6000	24	30 A	1		MTR	EX. CREW LEADERS V-14
NEW V-10	MTR		1	20 A	25	4000	5000					26	20 A	1		MTR	EX. CREW LEADERS V-15
SPARE	--		1	20 A	27			0	5000			28	20 A	1		MTR	EX. CREW LEADERS V-16
SPARE	--		1	20 A	29					0	0	30	20 A	1		--	SPARE
SPARE	--		1	20 A	31	0	0					32	20 A	1		--	SPARE
SPARE	--		1	20 A	33			0	0			34	20 A	1		--	SPARE
SPARE	--		1	20 A	35					0	1260	36	20 A	1		--	EX. OUTDOOR LIGHTING SW
					37	0	1440					38	20 A	1		--	EX. OUTDOOR LIGHTING NW
SPD	--		3	30 A	39			0	1620			40	20 A	1		--	EX. OUTDOOR SECURITY
					41					0	400	42	20 A	1		--	EX. OUTDOOR FLAG POLES
					43	3743	--					44	--	1		--	SPACE
EX. PANEL H1B	LTS; RCPT		3	225 A	45			2234	--			46	--	1		--	SPACE
					47					2497		48					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	4720 VA	100.00%	4720 VA	
RECEPTACLE	0 VA	0.00%	0 VA	**CONNECTED LOAD:** 100196 VA
LIGHTING	8474 VA	125.00%	10593 VA	**EST. DEMAND LOAD:** 105565 VA
MOTORS	87002 VA	103.74%	90252 VA	
OTHER	0 VA	0.00%	0 VA	**CONNECTED CURRENT:** 121 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 127 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: H1B

LOCATION: MECHANICAL 2157
MOUNTING: RECESSED Type 1
FED FROM: H1A
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS: 400 AMPS
MAIN DEVICE: 225 A MAIN CB
A.I.C. RATING: 14,000 AMPS SYMMETRICAL
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX. LIGHTS	LTS		1	20 A	1	600	0					2	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	3			1040	0			4	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	5					1150	0	6	20 A	1		--	SPARE
EX. LIGHTS	LTS; RCPT		1	20 A	7	1758	0					8	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	9			720	0			10	20 A	1		--	SPARE
SPACE	--		1	--	11					--	0	12	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	13	503	0					14	20 A	1		--	SPARE
EX.LIGHTS	LTS		1	20 A	15			474	0			16	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	17					1347	0	18	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	19	882	0					20	20 A	1		--	SPARE
SPARE	--		1	20 A	21			0	0			22	20 A	1		--	SPARE
SPARE	--		1	20 A	23					0	0	24	20 A	1		--	SPARE
SPARE	--		1	20 A	25	0	0					26	20 A	1		--	SPARE
SPARE	--		1	20 A	27			0	0			28	20 A	1		--	SPARE
SPARE	--		1	20 A	29					0	0	30	20 A	1		--	SPARE
SPARE	--		1	20 A	31	0	0					32	20 A	1		--	SPARE
SPARE	--		1	20 A	33			0	0			34	20 A	1		--	SPARE
SPARE	--		1	20 A	35					0	0	36	20 A	1		--	SPARE
					37	0	0					38					
SPD	--		3	30 A	39			0	0			40	20 A	1		--	SPARE
					41					0	0	42	20 A	1		--	SPARE

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	0 VA	0.00%	0 VA	
RECEPTACLE	0 VA	0.00%	0 VA	**CONNECTED LOAD:** 8474 VA
LIGHTING	8474 VA	125.00%	10593 VA	**EST. DEMAND LOAD:** 10593 VA
MOTORS	0 VA	0.00%	0 VA	
OTHER	0 VA	0.00%	0 VA	**CONNECTED CURRENT:** 10 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 13 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: EH2

LOCATION: ELEC./ UPS 2126
MOUNTING: SURFACE Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 100 A
A.I.C. RATING: 14000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
					1	0	106					2	20 A	1		LTS	EX. LIGHTS
SPARE	--		3	70 A	3			0	718			4	20 A	1		LTS; RCPT	EX. LIGHTS
					5					0	324	6	20 A	1		LTS	EX. LIGHTS
EX. LIGHTS	LTS		1	20 A	7	328	1453					8	20 A	1		LTS; RCPT	EX. LIGHTS
EX. LIGHTS	LTS		1	20 A	9			286	0			10	20 A	1		--	SPARE
EX. LIGHTS	LTS		1	20 A	11					56	168	12	20 A	1		LTS	EX. LIGHTS
SPARE	--		1	20 A	13	0	255					14	20 A	1		LTS	EX. LIGHTS
SPARE	--		1	20 A	15			0	589			16	20 A	1		LTS	EX. LIGHTS
SPARE	--		1	20 A	17					0	464	18	20 A	1		LTS	EX. LIGHTS
SPARE	--		1	20 A	19	0	1390					20	20 A	1		--	EX. LIGHTS
SPARE	--		1	20 A	21			0	830			22	20 A	1		--	EX. LIGHTS
SPARE	--		1	20 A	23					0	1060	24	20 A	1		--	EX. LIGHTS
					25	0	400					26	20 A	1		--	EX. LIGHTS
SPD	--		3	30 A	27			0	120			28	20 A	1		--	EX. LIGHTS
					29					0	490	30	20 A	1		--	EX. LIGHTS

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	4290 VA	100.00%	4290 VA	
RECEPTACLE	0 VA	0.00%	0 VA	**CONNECTED LOAD:** 9037 VA
LIGHTING	4747 VA	125.00%	5934 VA	**EST. DEMAND LOAD:** 10224 VA
MOTORS	0 VA	0.00%	0 VA	
OTHER	0 VA	0.00%	0 VA	**CONNECTED CURRENT:** 11 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 12 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1A1

LOCATION: MECHANICAL 2157
MOUNTING: SURFACE Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS: 400 AMPS
MAIN DEVICE: 400 A MAIN CB
A.I.C. RATING: 10,000 AMPS SYMMETRICAL
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX. RECEPT	RCPT		1	20 A	1	360	1					2	20 A	2			NEW EX. EF-01
EX. RECEPT LOBBY 2100	RCPT		1	20 A	3			540	1			4					
EX. RECEPT LOBBY 2100	RCPT		1	20 A	5					900	4131	6					
EX. SEP1 LOBBY 2100	MTR		1	20 A	7	180	4131					8	20 A	3		MTR	NEW AHU-1
EX. RECEPT LOBBY 2100	RCPT		1	20 A	9			180	4131			10					
EX. RECEPT ELEC. STOR 2123	RCPT		1	20 A	11					900	4131	12					
EX. RECEPT GAS STOR 2124	RCPT		1	20 A	13	900	4131					14	20 A	3		MTR	NEW AHU-2
EX. RECEPT	RCPT		1	20 A	15			720	4131			16					
EX. RECEPT WATER ROOM...	RCPT		1	20 A	17					180	1864	18					
EX. RECEPT MECHANICAL...	RCPT		1	20 A	19	180	1864					20	20 A	2		MTR	NEW HP-1
EX. RECEPT	RCPT		1	20 A	21			720	1864			22					
EX. RECEPT	RCPT		1	20 A	23					540	1864	24	20 A	2		MTR	NEW HP-2
EX. AC1 WATER ROOM 2156	MTR		1	20 A	25	2000	720					26	20 A	1		RCPT	NEW RECEPT- COMPUTER...
EX. PC1 WATER ROOM 2156			1	20 A	27			500	720			28	20 A	1		RCPT	NEW RECEPT- COMPUTER...
EX. PC1 WATER ROOM 2156			1	20 A	29					500	780	30	20 A	1		RCPT	NEW RECEPT- COMPUTER...
EX. RECEPT 2102	RCPT		1	20 A	31	900	400					32	20 A	1		RCPT	NEW MONITORS- TRAINING...
EX. RECEPT CORRIDOR 2101	RCPT		1	20 A	33			720	380			34	20 A	1		RCPT	NEW PROJ. - TRAINING RM
EX. RECEPT	--		1	20 A	35					180	0	36	20 A	1		--	SPARE
EX. CAB LIGHTING	--		1	20 A	37	500	8360					38					
EX. OUTDOOR HOT BOX...	--		1	20 A	39			2000	11080			40	125 A	3		OTHR; LTS; RCPT;	L1A2
EX. OUTDOOR HOT BOX...	--		1	20 A	41					2000	11424	42					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	4680 VA	100.00%	4680 VA	
RECEPTACLE	38320 VA	63.05%	24160 VA	**CONNECTED LOAD:** 81706 VA
LIGHTING	84 VA	125.00%	105 VA	**EST. DEMAND LOAD:** 70665 VA
MOTORS	34420 VA	109.00%	37519 VA	
OTHER	3200 VA	100.00%	3200 VA	**CONNECTED CURRENT:** 227 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 196 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1A2

LOCATION: CUSTODIAL 2160
MOUNTING: SURFACE Type 1
FED FROM: L1A1
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS: 125 AMPS
MAIN DEVICE: 125 A MAIN CB
A.I.C. RATING: 10,000 AMPS SYMMETRICAL
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX. RECEPT 2158, 2159	RCPT		1	20 A	1	720	0					2	20 A	1		--	SPARE (GFI)
EX. RECEPT 2159	RCPT		1	20 A	3			540	360			4	20 A	1		RCPT	EX. RECEPT 2166, 2165
EX. LIGHTS KITCHEN 2167	LTS		1	20 A	5					84	800	6	20 A	1		RCPT	EX. VENDING 2164 (GFI)
NEW MONITOR BREAKROOM	RCPT		1	20 A	7	180	800					8	20 A	1		RCPT	EX. VENDING 2164 (GFI)
EX. RECEPT 2161, 2160, 2101	RCPT		1	20 A	9			720	800			10	20 A	1		RCPT	EX. VENDING 2164 (GFI)
EX. RECEPT BREAK ROOM...	RCPT		1	20 A	11					720	1000	12	20 A	2		RCPT	EX VENDING 2164 (GFI)
EX. RECEPT BREAK ROOM...	RCPT		1	20 A	13	720	1000					14					
EX. RECEPT 2167, 2168	RCPT		1	20 A	15			720	--			16	--	1		--	SPACE
Receptacle	RCPT		1	20 A	17					720	0	18	20 A	1		--	SPARE
EX. RECEPT KITCHEN 2167	RCPT		1	20 A	19	540	0					20	20 A	2			EX. EWH-02 STAIR 2 2166
EX. RECEPT KITCHEN 2167...	RCPT		1	20 A	21			180	0			22					
EX. KITCHEN 2167 (GFI)	RCPT		1	20 A	23					800	0	24	20 A	1		--	SPARE
EX. KITCHEN 2167 (GFI)	RCPT		1	20 A	25	800	0					26	20 A	1		--	SPARE
EX. RECEPT KITCHEN 2167	RCPT		1	20 A	27			360	800			28	20 A	1		OTHR	NEW FITNESS EQUIPMENT
EX. RECEPT KITCHEN 2167	RCPT		1	20 A	29					540	800	30	20 A	1		RCPT	NEW FITNESS EQUIPMENT
EX. DISP KITCHEN 2167 (GFI)	RCPT		1	20 A	31	1200	800					32	20 A	1		OTHR	NEW FITNESS EQUIPMENT
EX. DW KITCHEN 2167 (GFI)	RCPT		1	20 A	33			1000	800			34	20 A	1		RCPT	NEW FITNESS EQUIPMENT
EX. RECEPT KITCHEN 2167	RCPT		1	20 A	35					360	800	36	20 A	1		OTHR	NEW FITNESS EQUIPMENT
EX. MICRO KITCHEN 2167...	RCPT		1	20 A	37	1200	400					38	20 A	1		RCPT	NEW FITNESS EQUIPMENT
NEW OVEN- KITCHEN 2167	RCPT		2	50 A	39			4000	800			40	20 A	1		RCPT	NEW FITNESS EQUIPMENT
					41					4000	800	42	20 A	1		OTHR	NEW FITNESS EQUIPMENT

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	0 VA	0.00%	0 VA	
RECEPTACLE	27580 VA	68.13%	18790 VA	**CONNECTED LOAD:** 30864 VA
LIGHTING	84 VA	125.00%	105 VA	**EST. DEMAND LOAD:** 22095 VA
MOTORS	0 VA	0.00%	0 VA	
OTHER	3200 VA	100.00%	3200 VA	**CONNECTED CURRENT:** 86 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 61 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1B1

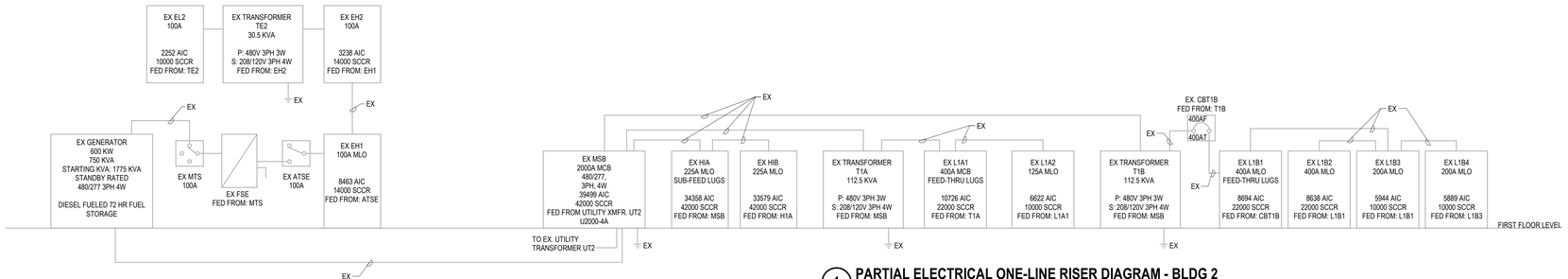
LOCATION: CREW LEADERS ROOM 2103
MOUNTING: RECESSED Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM

PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS: 400 AMPS
MAIN DEVICE: 400 A MAIN CB
A.I.C. RATING: 10,000 AMPS SYMMETRICAL
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
Receptacle CREW...	RCPT		1	20 A	1	900	180					2	20 A	1		RCPT	NEW SODA MACHINE
Receptacle	RCPT		1	20 A	3			720	180			4	20 A	1		RCPT	NEW COFFEE MAKER
Receptacle CREW LEADERS...	RCPT		1	20 A	5					180	180	6	20 A	1		RCPT	NEW RECEPTACLE
Receptacle CREW CONF. 1...	RCPT		1	20 A	7	720	1176					8	20 A	1		MTR	MOVABLE PARTITION
					9			240	0			10	20 A	1		--	SPARE
Receptacle CREW LEADERS ROOM 2103	RCPT		3	20 A	11					240	0	12	20 A	1		--	SPARE
					13	240	0					14	20 A	1		--	SPARE
Receptacle CREW LEADERS...	RCPT		1	20 A	15			360	0			16	20 A	1		--	SPARE
Receptacle Room 2, 3	RCPT		1	20 A	17					540	0	18	20 A	1		--	SPARE
Receptacle Room 2108	RCPT		1	20 A	19	900	0					20	20 A	1		--	SPARE
Receptacle WR SYSTEMS...	RCPT		1	20 A	21			900	0			22	20 A	1		--	SPARE
Receptacle Room 2110	RCPT		1	20 A	23					900	0	24	20 A	1		--	SPARE
Receptacle WR SYSTEMS...	RCPT		1	20 A	25	900	0					26	20 A	1		--	SPARE
Receptacle WR SYSTEMS...	RCPT		1	20 A	27			900	0			28	20 A	1		--	SPARE
Receptacle	RCPT		1	20 A	29					360	0	30	20 A	1		--	SPARE
Non-Continuous CREW...	RCPT		1	20 A	31	180	0					32	20 A	1		--	SPARE
SPARE	--		1	20 A	33			0	0			34	20 A	1		--	SPARE
SPARE	--		1	20 A	35					0	0	36	20 A	1		--	SPARE
					37	0	9260					38					
SPD	--		3	30 A	39			0	7560			40	200 A	3		RCPT;	L1B3
					41					0	6120	42					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EXISTING LOADS	0 VA	0.00%	0 VA	
RECEPTACLE	31860 VA	65.69%	20930 VA	**CONNECTED LOAD:** 33836 VA
LIGHTING	0 VA	0.00%	0 VA	**EST. DEMAND LOAD:** 23200 VA
MOTORS	1176 VA	125.00%	1470 VA	
OTHER	0 VA	0.00%	0 VA	**CONNECTED CURRENT:** 94 A
KITCHEN	0 VA	0.00%	0 VA	**EST. DEMAND CURRENT:** 64 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:



1 **PARTIAL ELECTRICAL ONE-LINE RISER DIAGRAM - BLDG 2**
NOT TO SCALE

PROGRESSIVE COMPANIES
PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 2
3355 NO 4L GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. C-2326 NORTH CAROLINA CERTIFICATE OF AUTHORIZATION CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 054688 ENGINEER DANE STIVERS
P.E.07/2026 1:27:07 PM

This item has been electronically signed and sealed by Dane A. Stivers using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
D. STIVERS, PE
DRAWN BY
D. HARRIS-WILLIAMS
CHECKED BY
D. STIVERS, PE

ELECTRICAL ONE-LINE DIAGRAMS
2E501

6/16/2026 1:05:33 PM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - B2 ELEC.rvt
06 - 2E501A_ONE-LINE DIAGRAMS
ELECTRICAL
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2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OF 2)

NAME OF PROJECT: GUC OPERATIONS CENTER RENOVATIONS - ENGINEERING & OPERATIONS BLDG.
ADDRESS: NC HWY 43 & HWY 264 BYPASS, GREENVILLE, NC 27834 ZIP CODE:
PROPOSED USE: B, F-1
OWNER OR AUTHORIZED AGENT: PHONE #: E-MAIL:
OWNED BY: ☐ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ☐ CITY: GREENVILLE ☐ COUNTY: PITT ☐ STATE:

LEAD DESIGN PROFESSIONAL PROGRESSIVE COMPANIES

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE	E-Mail
ARCHITECTURAL:	PROGRESSIVE COMPANIES	YI LUO	13890	919-682-2870	yluo@weareprogressive.com
CIVIL:					
ELECTRICAL:	PROGRESSIVE COMPANIES	DANE STIVERS	054688	704-731-8088	dstivers@weareprogressive.com
FIRE ALARM:					
PLUMBING:	PROGRESSIVE COMPANIES	RUBEN BAZIYANTS	049047	828-318-0530	rbaziyants@weareprogressive.com
MECHANICAL:	PROGRESSIVE COMPANIES	RUBEN BAZIYANTS	049047	828-318-0530	rbaziyants@weareprogressive.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	PROGRESSIVE COMPANIES	LOGAN T. MUSE	060496	704-724-9660	lmuse@weareprogressive.com
RETAINING WALLS >5' HIGH:					
OTHER:					

"OTHER" should include firms and individuals such as truss, precast, pre-engineering, interior designers, etc.)

2018 NC BUILDING CODE: ☐ NEW BUILDING ☐ ADDITION [X] RENOVATION
☐ 1ST TIME INTERIOR COMPLETION ☐ SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS
☐ PHASED CONSTRUCTION - SHELL/CORE - CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14
☐ LEVEL I [X] LEVEL II ☐ LEVEL III
☐ HISTORIC PROPERTY [X] CHANGE OF USE

CONSTRUCTED *(date)* 2018 **CURRENT OCCUPANCY(S)** *(Ch. 3)* A-2, B
RENOVATED *(date)* **PROPOSED OCCUPANCY(S)** *(Ch. 3)* B, F-1

RISK FACTOR *(Table 1604.5)*: **Current:** ☐ I ☐ II ☐ III [X] IV
Proposed: ☐ I ☐ II ☐ III [X] IV

BASIC BUILDING DATA:
CONSTRUCTION TYPE: *(Check all that apply)* ☐ I-A ☐ I-B ☐ II-A [X] II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
SPRINKLERS: ☐ NO ☐ PARTIAL ☐ YES [X] NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: [X] NO ☐ YES CLASS: ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☐ NO [X] YES FLOOD HAZARD AREA: [X] NO ☐ YES
SPECIAL INSPECTIONS REQUIRED: ☐ NO ☐ YES CONTACT THE LOCAL INSPECTION JURISDICTION FOR ADDITIONAL PROCEDURES AND REQUIREMENTS

GROSS BUILDING AREA TABLE:

FLOOR	EXISTING (SQ. FT.)	NEW WORK AREA (SQ. FT.)	SUB TOTAL
7TH FLOOR:			
6TH FLOOR:			
5TH FLOOR:			
4TH FLOOR:			
3RD FLOOR:			
2ND FLOOR:			
MEZZANINE:	2,830	560 (ALTERNATE 3)	3,390
1ST FLOOR:	51,619	1,708 (RENOVATION)	51,619
BASEMENT:			
TOTAL:	54,449	2,268	55,009

ALLOWABLE AREA
PRIMARY OCCUPANCY: *(SELECT ONE)*
ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS [X]
EDUCATIONAL
FACTORY [X] F-1 Moderate ☐ F-2 Low
HAZARDOUS ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 CONDITION ☐ 1 ☐ 2
☐ I-2 CONDITION ☐ 1 ☐ 2
☐ I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE [X] S-1 Moderate [X] S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
UTILITY & MISC. ☐

ACCESSORY OCCUPANCY CLASSIFICATION(S):
INCIDENTAL USES *(Table 509)*:
SPECIAL USES (Chapter 4 - List Code Sections):
SPECIAL PROVISIONS: (Chapter 5 - List Code Sections):
MIXED OCCUPANCY: [X] YES ☐ NO SEPARATION: HR: EXCEPTION:

[X] NON-SEPARATED USE (508.3) - THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.

☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B = = < 1.00
= < 1.00

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2* AREA	(C) AREA FOR FRONTAGE INCREASE**	(D) ALLOWABLE AREA PER STORY OR UNLIMITED***
1	BUSINESS	19,254	92,000		UNLIMITED (507.4)
1	(S-1)	4,779	70,000		UNLIMITED (507.4)
1	(S-2)	16,207	104,000		UNLIMITED (507.4)
1	F-1	14,209	62,000		UNLIMITED (507.4)

* FRONTAGE AREA INCREASE FROM SECTION 506.3 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = ____(F)
B. TOTAL BUILDING PERIMETER = ____(P)
C. RATIO (F/P)= ____(F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY= ____(W)
E. PERCENT OF FRONTAGE INCREASE I = 100 [F/P-0.25] x W/30 = ____(%)
** UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
*MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (506.2).
* MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.
* FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT:

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE *
BUILDING HEIGHT IN FEET (Table 504.3)*	75'	41' - 2"	
BUILDING HEIGHT IN STORIES (Table 504.4)*	2 (MOST RESTRICTIVE)	1	

* PROVIDE CODE REFERENCE IF THE "SHOWN ON PLANS" QUANTITY IS NOT BASED ON TABLE 504.3 OR 504.4
* THE MAXIMUM HEIGHT OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH TABLE 412.3.1.
* THE MAXIMUM HEIGHT OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.5.5.

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_____ REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS		0					
EXTERIOR		0					
NORTH							
EAST							
WEST							
SOUTH							
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS		0					
NORTH							
EAST							
WEST							
SOUTH							
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS		0					
FLOOR CEILING ASSEMBLY		0					
COLUMNS SUPPORTING BEAMS		0					
ROOF CONSTRUCTION, INCLUDING SUPPORTING BEAMS AND JOISTS		0					
ROOF CEILING ASSEMBLY		0					
COLUMNS SUPPORTING BEAMS		0					
SHAFT ENCLOSURES - EXIT							
SHAFT ENCLOSURES - OTHER							
CORRIDOR SEPARATION		0					
OCCUPANCY/FIRE BARRIER SEPARATION		0	0				
PARTY/FIRE WALL SEPARATION							
SMOKE BARRIER SEPARATION							
SMOKE PARTITION							
TENANT/DWELLING UNIT/SLEEPING UNIT SEPARATION							
INCIDENTAL USE SEPARATION		1HR	1HR				

* INDICATE SECTION NUMBER PERMITTING REDUCTION

Notes:

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: ☐ NO [X] YES
EXIT SIGNS: ☐ NO [X] YES
FIRE ALARM: ☐ NO [X] YES
SMOKE DETECTION SYSTEMS: ☐ NO ☐ YES ☐ Partial
PANIC HARDWARE: ☐ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: 3G104

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

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*:

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL # ACCESSIBLE UNITS PROVIDED
			N/A				

ACCESSIBLE PARKING *(Section 1106)*:

LOT OR PARKING AREA	TOTAL NUMBER OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # OF ACCESSIBLE SPACES PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
	0	0	0	0	0	0
	0	0	EXISTING - NO CHANGE	0	0	0
TOTAL:	0	0	0	0	0	0

PLUMBING FIXTURE REQUIREMENTS *(SECTION 2902.1)*:

USE: _____		WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	5	4	3	0	7	3	0	0	0	0
	NEW	0	0	0	0	EXISTING - NO CHANGE	0	0	0	0	0
	REQUIRED	6	5	0	0	5	3	0	0	0	0

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

ENERGY SUMMARY:

ENERGY REQUIREMENTS:
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 PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ NO [X] YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)

CLIMATE ZONE ☐ 3A ☐ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ☐ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE
IF "OTHER" SPECIFY SOURCE HERE

THERMAL ENVELOPE

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
SKYLIGHT IN EACH ASSEMBLY
u-value of skylight:
total square footage of skylights in each assembly:
EXTERIOR WALLS (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (windows or doors with glazing)
u-value of assembly:
Solar heat gain coefficient:
projection factor:
Door R-Values:

WALLS BELOW GRADE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
Horizontal / vertical requirement:
Slab heated? (Y/N)

STRUCTURAL DESIGN *(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)*

DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (Is) 1.0 SEISMIC (Ie) 1.0
LIVE LOADS: ROOF 20 psf MEZZANINE 125 psf FLOOR 100 psf
GROUND SNOW LOAD: 10 psf
WIND LOAD: ULTIMATE WIND SPEED 120 mph (ASCE-7) EXPOSURE CATEGORY C

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C [X] D

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I [X] II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION: Sds= 20.8 %g Sd1= 14.7 %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D [X] E ☐ F
Data Source: ☐ FIELD TEST [X] PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM ☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME ☒ STRUCTURAL STEEL NOT SPECIFICALLY DESIGNED FOR SEISMIC RESISTENCE
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED [X] EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES [X] NO

LATERAL DESIGN CONTROL: EARTHQUAKE ☐ WIND [X]

SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT) psf
PRESUMPTIVE BEARING CAPACITY 3,000 psf
PILE SIZE, TYPE, AND CAPACITY psf

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE
WINTER DRY BULB: 24.8°F
SUMMER DRY BULB: 91.9°F
INTERIOR DESIGN CONDITIONS
WINTER DRY BULB: 70°F
SUMMER DRY BULB: 75°F
RELATIVE HUMIDITY: 50% RH
BUILDING HEAT LOAD: 98 MBH
BUILDING COOLING LOAD: 58 MBH

MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT: SEE MECHANICAL PLANS
HEATING EFFICIENCY:
COOLING EFFICIENCY:
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY, IF OVERSIZED, STATE REASON: N/A
CHILLER
SIZE CATEGORY, IF OVERSIZED, STATE REASON: N/A
LIST EQUIPMENT EFFICIENCIES SEE MECHANICAL PLANS

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE
NUMBER OF LAMPS IN FIXTURE
BALLAST TYPE USED IN THE FIXTURE
NUMBER OF BALLASTS IN FIXTURE
TOTAL WATTAGE PER FIXTURE
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED (WHOLE BUILDING OR SPACE BY SPACE)
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED

ADDITIONAL PRESCRIPTIVE COMPLIANCE
(When using the 2018 NCECC; not required for ASHRAE 90.1)
☐ C406.2 More Efficient Mechanical Equipment
[X] C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Supply of Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

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5 - 3D101
5 - 3D101 COMPLIANCE PLAN

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BUILDING 3
3358 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING P.C. 51348 NORTH CAROLINA REGISTERED CHARLOTTE, NC

NORTH CAROLINA REGISTERED SEAL 13890 ARCHITECT YI LUO
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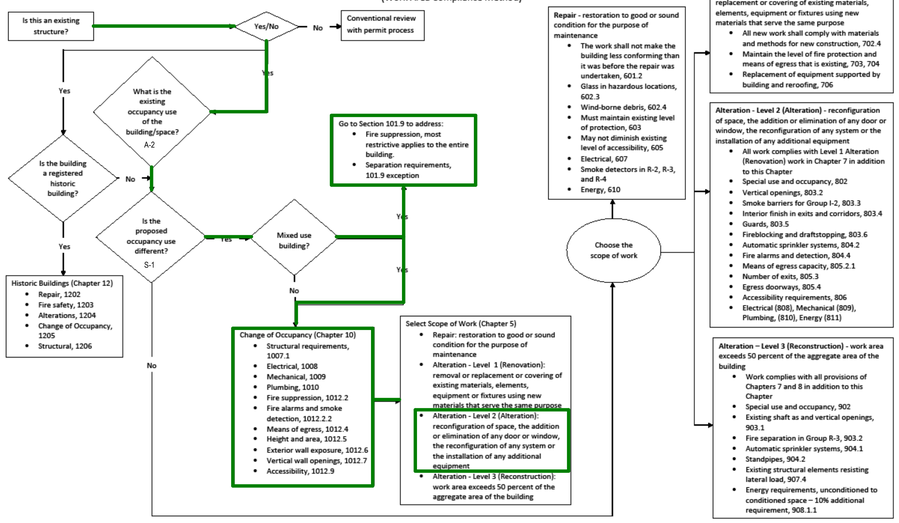
PROJECT NUMBER 21350003
PROJECT MANAGER A. IDOL
PROFESSIONAL Y. LUO
DRAWN BY M. FUENTES
CHECKED BY

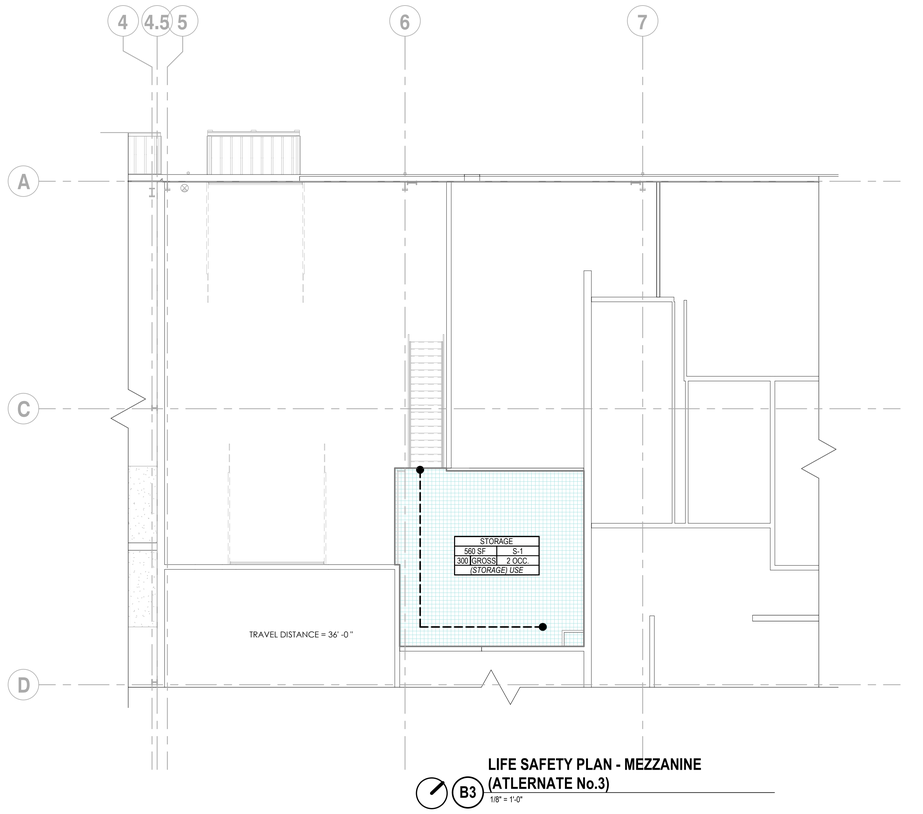
CODE COMPLIANCE PLAN
3G101

24.2.022

3/11/15

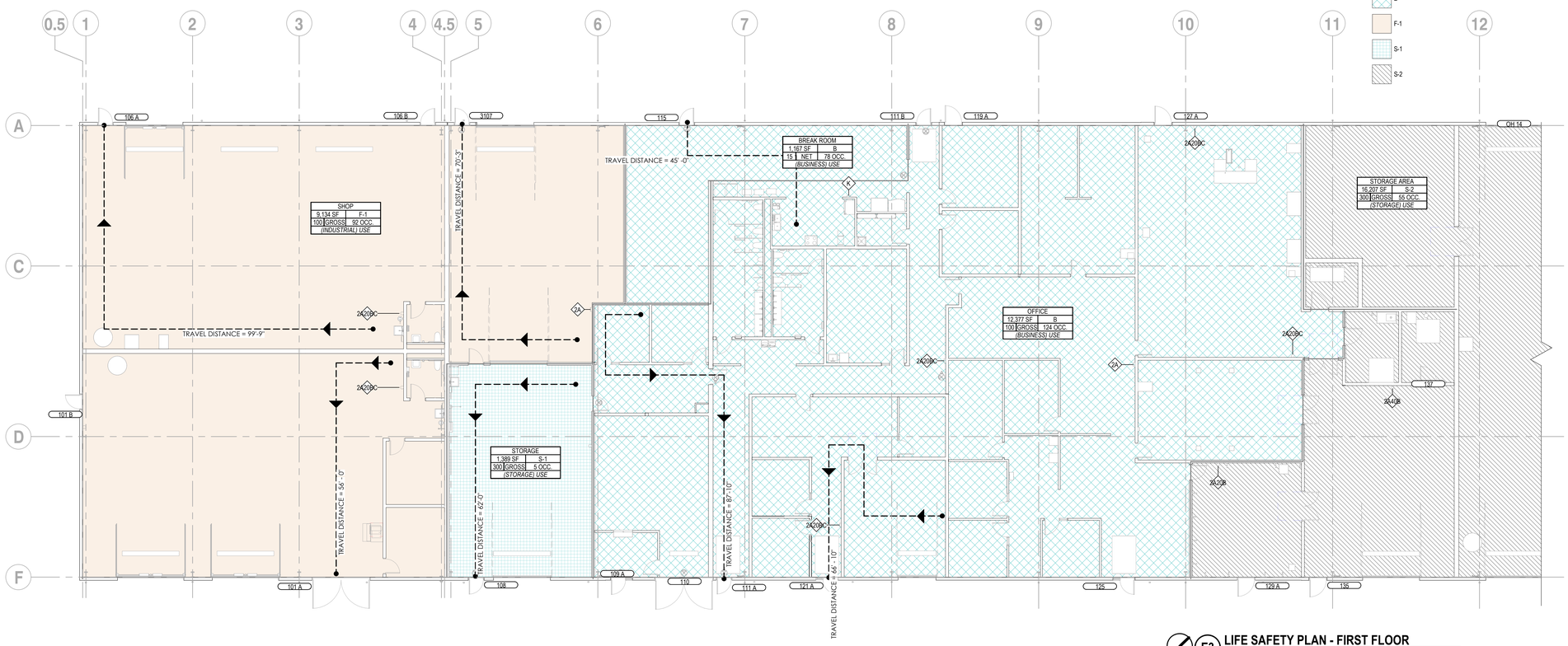
NC Existing Building Code Decision Diagram
(Work Area Compliance Method)





LIFE SAFETY PLAN - MEZZANINE (ATLERNATE No.3)
B3 1/8" = 1'-0"

CODE PLAN AREA TYPES
B
F-1
S-1
S-2



LIFE SAFETY PLAN - FIRST FLOOR
E3 3/32" = 1'-0"

AREA SCHEDULE

Level	Occupancy Designation	Function of Space	Occupancy Load Factor	Area	Max Occ Load
LEVEL 1	B	BUSINESS	100	12,377 SF	124
LEVEL 1	B	BUSINESS	100	5,710 SF	58
LEVEL 1	B	BUSINESS	15	1,167 SF	78
LEVEL 1	F-1	INDUSTRIAL	100	9,134 SF	92
LEVEL 1	F-1	INDUSTRIAL	100	5,075 SF	51
LEVEL 1	S-1	STORAGE	300	1,389 SF	5
LEVEL 1	S-2	STORAGE	300	16,207 SF	55
MEZZANINE_A (ALT 3)	S-1	STORAGE	300	560 SF	2
TOTAL				51,620 SF	465

CODE PLAN LEGEND

- EXIT ACCESS PATH OF TRAVEL
- PATH OF TRAVEL STARTING/ENDING POINT
- DIRECTION OF EGRESS
- EXIT SIGN
- A1 — FIRE EXTINGUISHER / FIRE EXTINGUISHER CABINET

CODE PLAN AREA TAG

SQUARE FOOTAGE — #,### SF | AREA NAME | X ### GROSS/NET — OCCUPANCY CLASS
OCCUPANT LOAD FACTOR — ### SF | FUNCTION OF SPACE | ### PEOPLE — OCCUPANT COUNT

EGRESS DOOR SCHEDULE

Level	DOOR NO.	SIZE WTH	SIZE HGT	EGRESS INFO CLEAR WTH	CAPACITY	ACTUAL	PANIC HW
LEVEL 1	101 A	6' - 0"	7' - 0"	72"	360	18	Yes
LEVEL 1	101 B	3' - 0"	7' - 0"	34"	170	19	Yes
LEVEL 1	106 A	3' - 0"	7' - 0"	34"	170	18	Yes
LEVEL 1	106 B	3' - 0"	7' - 0"	34"	170	19	Yes
LEVEL 1	108	3' - 0"	7' - 0"	34"	170	5	Yes
LEVEL 1	110	6' - 0"	7' - 0"	72"	360	10	Yes
LEVEL 1	111 A	3' - 0"	7' - 0"	34"	170	7	Yes
LEVEL 1	111 B	3' - 0"	7' - 0"	34"	170	50	Yes
LEVEL 1	115	3' - 0"	7' - 0"	34"	170	51	Yes
LEVEL 1	121 A	3' - 0"	7' - 0"	34"	170	13	Yes
LEVEL 1	3107	3' - 0"	7' - 0"	34"	170	4	Yes

KEY PLAN

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BUILDING 3

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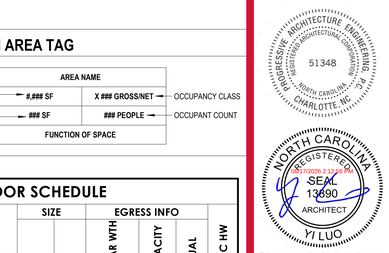

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

LIFE SAFETY PLAN & CODE DECISION DIAGRAM
3G104

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LIFE SAFETY PLAN & CODE DECISION DIAGRAM
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LOGISTICS NOTES & KEY

1. PROPOSED CONTRACTOR PARKING, TEMPORARY TOILET, LAY DOWN AREA, AND DUMPSTER TO BE LOCATED WITHIN THE PARKING LOT LIMITS INDICATED BY THE OWNER. COORDINATE WITH OWNER THE EXTENT OF SPACE REQUIRED. LOADING AND UNLOADING WILL ALSO TAKE PLACE IN THIS SAME ZONE.
2. PARKING LOT DESIGNATED IS ADJACENT TO THE BUILDING.
3. CONTRACTOR TO COORDINATE CARD ACCESS TO THE GATE ACCESS AND TO THE BUILDING WITH OWNER.
4. ITEMS MAY BE STORED IN THE BUILDING, ONLY INSIDE THE PROJECT AREAS, OR LAY DOWN AREA. G.C. RESPONSIBLE FOR SECURING ALL ITEMS RELATED TO THE PROJECT.
5. ALL INTERIOR FINISHES TO BE PROTECTED AS NECESSARY DURING WORK STOP PERIODS. G.C. SHALL CLEAN UP PROJECT AREAS AND ANY ROUTES INTO THE BUILDING WITH CONSTRUCTION DEBRIS.

PARKING & LAY DOWN AREA (FOR DUMPSTER, UNLOADING, ETC.)

APPROXIMATE PROJECT AREA LOCATION INSIDE THE BUILDING

ENTRANCE TO PARKING DESIGNATED ZONE AND BUILDING

E2 **LOGISTIC PLAN**
NOT TO SCALE

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GREENVILLE UTILITIES COMMISSION
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BUILDING 3
3305 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING BUSINESS ARCHITECTURAL CORPORATION P.C. 51348 NORTH CAROLINA CHARLOTTE, NC

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PROJECT MANAGER
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PROFESSIONAL
Y. LUO
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M. FUENTES
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LOGISTICS PLAN
3G105

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3G105 LOGISTICS PLAN
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24.2.002

GENERAL NOTES

GN.1 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN CRITERIA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.

GN.2 COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.

GN.3 REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.

GN.4 FOR SECTIONS AND DETAILS NOT EXPLICITLY INDICATED ON THE DRAWINGS, USE TYPICAL DETAILS PROVIDED FOR CONDITIONS THAT ARE SIMILAR, OTHERWISE BRING TO THE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD FOR CLARIFICATION.

GN.5 ANY ALTERATION TO A STRUCTURAL ITEM OR MEMBER SHALL BE APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD.

GN.6 SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY WALLS, MASONRY OPENINGS AND DRYWALL NON-LOAD BEARING PARTITIONS.

GN.7 ALL COLUMNS, FOOTINGS, AND PIERS ARE CENTERED ON GRID LINES UNLESS DIMENSIONED OTHERWISE.

GN.8 BEAM OR JOIST SPACING IS EQUAL BETWEEN GRID LINES UNLESS DIMENSIONED OTHERWISE.

GN.9 TYPICAL DETAILS ARE NOTED AS SUCH AND SHALL APPLY AT ALL RELATED CONDITIONS, UNLESS NOTED OTHERWISE.

GN.10 PROVIDE SLEEVES FOR PLUMBING PENETRATIONS THROUGH CAST-IN-PLACE CONCRETE SLABS, TYPICAL. COORDINATE WITH PLUMBING DRAWINGS FOR SIZE AND LOCATIONS. CORE DRILLING IS ALLOWED FOR OPENINGS 6" OR LESS IN DIAMETER ONLY. SEE TYPICAL SLAB OPENING DETAIL FOR REINFORCING.

SPECIAL INSPECTION REQUIREMENTS

SP.1 SPECIAL INSPECTIONS AND STRUCTURAL TESTING ARE REQUIRED AND SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, LATEST EDITION, AND THE CASE NATIONAL PRACTICE GUIDELINE FOR SPECIAL INSPECTIONS.

SP.2 THE PROGRAM OF SPECIAL INSPECTIONS AND TESTING IS A QUALITY ASSURANCE PROGRAM INTENDED TO ENSURE THAT THE WORK IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, TO INFORM THE CONTRACTOR OF THE OWNER'S QUALITY ASSURANCE PROGRAM AND THE EXTENT OF THE CONTRACTOR'S RESPONSIBILITIES.

SP.3 THE OWNER SHALL ENGAGE AND PAY FOR THE SERVICES OF THE SPECIAL INSPECTOR, AGENT OF THE SPECIAL INSPECTOR, AND TESTING LABORATORY.

SP.4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY RETESTING OR REINSPECTION OF WORK WHICH FAILS TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SP.5 THE CONTRACTOR SHALL COOPERATE WITH THE SPECIAL INSPECTOR AND HIS AGENTS SO THAT THE SPECIAL INSPECTIONS AND TESTING MAY BE PERFORMED WITHOUT HINDRANCE.

SP.6 THE CONTRACTOR SHALL REVIEW THE STATEMENT OF SPECIAL INSPECTIONS AND BE RESPONSIBLE FOR COORDINATING AND SCHEDULING INSPECTIONS AND TESTS. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR OR TESTING LABORATORY AT LEAST 24 HOURS IN ADVANCE OF A REQUIRED INSPECTION OR TEST. UNINSPECTED WORK THAT REQUIRED INSPECTION MAY BE REJECTED SOLELY ON THAT BASIS.

SP.7 THE CONTRACTOR SHALL PROVIDE INCIDENTAL LABOR AND FACILITIES TO PROVIDE ACCESS TO THE WORK TO BE INSPECTED OR TESTED, TO OBTAIN AND HANDLE SAMPLES AT THE SITE OR AT SOURCE OF PRODUCTS TO BE TESTED, TO FACILITATE TESTS AND INSPECTIONS, STORAGE AND CURING OF TEST SAMPLES.

SP.8 THE CONTRACTOR SHALL KEEP AT THE PROJECT SITE THE LATEST SET OF CONSTRUCTION DRAWINGS, FIELD SKETCHES, APPROVED SHOP DRAWINGS, AND SPECIFICATIONS FOR USE BY THE INSPECTORS AND TESTING TECHNICIANS.

SP.9 THE SPECIAL INSPECTION PROGRAM SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR FROM IMPLEMENTING AN EFFECTIVE QUALITY CONTROL PROGRAM. ALL WORK THAT IS TO BE SUBJECTED TO SPECIAL INSPECTIONS SHALL FIRST BE REVIEWED BY THE CONTRACTOR'S QUALITY CONTROL PERSONNEL.

SP.10 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SITE SAFETY.

FOUNDATION NOTES

FN.1 SEE THE DESIGN CRITERIA SHEET FOR GEOTECHNICAL INFORMATION FOR THIS PROJECT.

FN.2 PRIOR TO THE PLACEMENT OF CONCRETE FOR THE BUILDING FOUNDATIONS, THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A CERTIFIED TESTING AGENCY TO VERIFY THE SOIL REQUIREMENTS OUTLINED IN THE DOCUMENTS, AND GEOTECHNICAL REPORT. VALUES THAT DO NOT MEET OR EXCEED THOSE INDICATED SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR RESOLUTION.

FN.3 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

FN.4 NO FOUNDATIONS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE, OR LOOSE MATERIAL.

FN.5 INTERIOR SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER SOIL SUPPORTED HORIZONTAL SURFACES SHALL BE PLACED OVER A GRANULAR SUBBASE; MINIMUM THICKNESS OF 6" OR AS OUTLINED IN THE GEOTECHNICAL REPORT. AGGREGATE SUBBASE SHALL BE SMOOTH AND LEVEL, TO WITHIN 1/4" BELOW DESIGN ELEVATION JUST PRIOR TO CONCRETE PLACEMENT, AND COMPACTED PER THE GEOTECHNICAL REPORT OR A MIN OF 95% OF THE MAX DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557), WHICHEVER IS STRICTER.

FN.6 SEE PLUMBING, MECHANICAL, ELECTRICAL, AND CIVIL DOCUMENTS FOR REQUIRED UNDERSLAB UTILITIES.

FN.7 SEE ARCHITECTURAL DOCUMENTS FOR ALL WATERPROOFING DETAILS AND MATERIALS AS REQUIRED.

FN.8 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 2500 PSI CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.

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22 - 3S001
GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES

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REINFORCED CONCRETE

RC.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'_c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE. THE CONTRACTOR SHALL SUBMIT MIX DESIGNS WITH SUBSTANTIATING STRENGTH TEST DATA FOR REVIEW FOR EACH MIX DESIGN USED PER SPECIFICATION REQUIREMENTS PRIOR TO CONCRETE PLACEMENT.

RC.2 MIX DESIGNS ARE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR/SUPPLIER FOLLOWING THE REQUIREMENTS OUTLINED IN THIS SPECIFICATION AND FOR THE LOCATION IN WHICH THE CONCRETE IS BEING DEPOSITED. MAXIMUM AGGREGATE SIZE SHALL BE SELECTED TO FALL WITHIN THE RANGE SPECIFIED FOR THE REQUIRED STRENGTH INDICATED AS WELL AS TO FACILITATE PLACEMENT CONSIDERING REBAR SPACING AND CONFINEMENT, PLACEMENT AND CONSOLIDATION METHOD, AND CONSTRUCTION SEQUENCING. SLUMPS INDICATED ARE RECOMMENDATIONS FOR TYPICAL CONDITIONS ENCOUNTERED AND SHALL BE VERIFIED AND MODIFIED WITH APPROVAL FOR ACTUAL FIELD CONDITIONS.

RC.3 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

RC.4 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.

RC.5 CONCRETE REINFORCEMENT BARS SHALL BE DEFORMED AND CONFORM TO ASTM A615, GRADE 60. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE DOCUMENTS. ALL LAPS SHALL BE TENSION SPLICES UNLESS NOTED OTHERWISE.

RC.6 SLABS-ON-GRADE SHALL MEET THE FLOOR FLATNESS & LEVELNESS CRITERIA OUTLINED IN THE DOCUMENTS. VALUES SHALL BE VERIFIED BY A CERTIFIED TESTING AGENCY PER ASTM E1155 AFTER WORK IS COMPLETE. ELEVATED STRUCTURAL SLABS TO MEET THE FLOOR FLATNESS CRITERIA ONLY.

RC.7 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.

RC.8 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

RC.9 SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES.

RC.10 FOR ALL WALLS AND PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERTICAL REINFORCEMENT BAR. UNLESS NOTED OTHERWISE, DOWEL SIZE SHALL BE SAME AS VERTICAL REINFORCEMENT.

RC.11 PROVIDE CONCRETE POUR STOPS OR FORM EDGES AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK.

RC.12 PROVIDE SMOOTH DOWELS BETWEEN NEW AND EXISTING CONCRETE FLOOR SLABS UNLESS NOTED OTHERWISE.

CONCRETE MASONRY

CM.1 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS.

CM.2 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476. GROUT LIFTS SHALL NOT EXCEED LIMITS SET FORTH BY ACI 530, LATEST EDITION. CONSOLIDATE GROUT POURS EXCEEDING 12" IN HEIGHT BY MECHANICAL VIBRATION AND RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

CM.3 THE SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'_m) ON THE NET AREA SHALL BE A MINIMUM OF 2000 PSI UNLESS NOTED OTHERWISE.

CM.4 PROVIDE (2) #5 BARS CONTINUOUS IN ALL BOND BEAMS, UNLESS OTHERWISE INDICATED IN THE DRAWINGS. SEE TYPICAL MASONRY WALL ELEVATION DETAIL FOR BOND BEAM REINFORCEMENT DETAILS AT CONTROL JOINTS. SPLICE BARS AS SPECIFIED IN THE MASONRY LAP SPLICE SCHEDULE.

CM.5 PROVIDE VERTICAL REINFORCEMENT IN ALL WALLS AT SPACING INDICATED. SEE PLAN FOR WALL TYPES AND MASONRY WALL REINFORCING SCHEDULE FOR MINIMUM REINFORCING REQUIREMENTS. ALL VERTICAL REINFORCEMENT EXTENDS FULL HEIGHT OF WALL. SPLICE BARS AS SPECIFIED IN THE MASONRY LAP SPLICE SCHEDULE.

CM.6 MASONRY CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS SHALL BE PLACED IN CENTERS OF BLOCK CELLS UNLESS NOTED OTHERWISE.

CM.7 PROVIDE LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" OC MAX OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

CM.8 PROVIDE CONTROL JOINTS AT MAJOR CHANGES IN WALL HEIGHT, CHANGES IN WALL THICKNESS, AT FLOOR CONTROL JOINTS, AT WALL OPENINGS, AND NEAR RETURN ANGLES OF L, T, AND U-SHAPED STRUCTURES. CONTROL JOINT SPACING SHALL NOT EXCEED 25'-0" OR THE DISTANCES INDICATED ON THE ARCHITECTURAL DRAWINGS.

CM.9 FILL ALL BOND BEAMS AND FIRST COURSES ABOVE LINTELS WITH GROUT. FILL ALL CELLS CONTAINING VERTICAL REINFORCEMENT WITH GROUT AND ALL OTHER CELLS NOTED ON THE CONTRACT DOCUMENTS.

CM.10 USE MORTAR TYPE AS INDICATED IN SPECIFICATIONS.

CM.11 STRUCTURAL CONCRETE MASONRY UNITS SHALL BE 2-CORE OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

CM.12 ALL CELLS, OPEN CAVITIES, AND AIR SPACES BELOW GRADE OR FINISHED SLAB-ON-GRADE SHALL BE GROUTED.

CM.13 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SIZE AND LOCATION OF OPENINGS. SEE TYPICAL MASONRY WALL ELEVATION DETAIL FOR OPENING REINFORCEMENT.

CM.14 MASONRY FOUNDATION AND RETAINING WALLS SHALL NOT BE BACK FILLED WITH SOIL PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS.

CM.15 ALL CMU WALLS SHALL BE LATERALLY SUPPORTED AT TOP OR AT INTERFACE WITH STRUCTURAL MEMBERS UNLESS NOTED OTHERWISE.

CM.16 LINTELS AND WALL OPENINGS REQUIRED BUT NOT DETAILED ON THE DRAWINGS SHALL BE CONSTRUCTED FOLLOWING THE TYPICAL STEEL LINTEL SCHEDULE.

CM.17 AT NON-STRUCTURAL CMU WALLS, PROVIDE 1" MIN GAP BETWEEN CMU AND BOTTOM OF SLAB OR STEEL ABOVE AND PROVIDE COMPRESSIBLE FILLER IN GAP THAT MAINTAINS FIRE RATING.

CM.18 VERTICAL REINFORCING SHALL BE CONTINUOUS THROUGH BOND BEAMS.

CM.19 PROVIDE ADDITIONAL REINFORCING AT WALL OPENINGS, INTERSECTIONS, CORNERS AND ENDS PER TYPICAL DETAILS.

CM.20 ALL STEEL LINTELS AND STEEL MEMBERS IN EXTERIOR CMU WALLS OR EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED UNLESS NOTED OTHERWISE.

CM.21 PROVIDE CMU BOND BEAMS W/ 2-#5 CONTINUOUS BARS AT FLOOR AND ROOF DIAPHRAGMS FOR ATTACHMENT UNLESS NOTED OTHERWISE. STEP BOND BEAMS AS REQUIRED AT SLOPING ROOF DIAPHRAGM LOCATIONS PER TYPICAL DETAILS.

CM.22 PROVIDE CMU BOND BEAMS W/ 2-#5 CONTINUOUS BELOW ALL WALL OPENINGS GREATER THAN 2'-0" IN WIDTH. EXTEND BOND BEAM MINIMUM 2'-0" BEYOND EDGE OF OPENING, UNLESS NOTED OTHERWISE. SEE TYPICAL WALL ELEVATION FOR ADDITIONAL REQUIREMENTS.

CM.23 CMU WALL DESIGN HAS BEEN PERFORMED ASSUMING ROOF/FLOOR DIAPHRAGMS PROVIDE CONTINUOUS LATERAL SUPPORT. CONTRACTOR SHALL PROVIDE AND MAINTAIN WALL SUPPORT DURING CONSTRUCTION TO MAINTAIN STRUCTURAL INTEGRITY UNTIL CONSTRUCTION IS COMPLETE.

CM.24 ALL NON-STRUCTURAL CMU WALLS SHALL BE REINFORCED WITH #4 @ 48" OC. UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL

SS.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIALS SCHEDULE. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A6.

SS.2 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 3/4"Ø A325-N, UNLESS NOTED OTHERWISE, AND SHALL CONFORM TO ASTM A325; NUTS SHALL CONFORM TO ASTM A563; WASHERS SHALL CONFORM TO ASTM F436. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED.

SS.3 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH THE AISC MANUAL OF STEEL CONSTRUCTION, OR THE AISC DETAILING FOR STEEL CONSTRUCTION MANUAL.

SS.4 ALTERNATIVE CONNECTION DETAILS MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR ONLY IF ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER AND SUBMITTED FOR REVIEW.

SS.5 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD AND REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.

SS.6 PREHEATING OF BASE MATERIAL SHALL BE PERFORMED WHEN REQUIRED BY AWS D1.1. PREHEAT TEMPERATURE TO BE A MINIMUM OF AWS D1.1 REQUIREMENTS AND SHALL BE ADEQUATE TO PROHIBIT CRACKING. PREHEAT SHALL BE APPLIED UNIFORMLY TO THE JOINT. WHEN SELECTING METHOD OF APPLYING PREHEAT THICKNESS OF MATERIAL, SIZE OF WELD AND HEATING EQUIPMENT TO BE USED SHALL BE CONSIDERED.

SS.7 SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED PER THE PROJECT SPECIFICATIONS.

SS.8 ALL WELDS NOT INDICATED SHALL BE THE MINIMUM SIZE FILLET WELD PER AISC GUIDELINES.

SS.9 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

SS.10 ALL STRUCTURAL STEEL SHALL RECEIVE A SHOP PRIME FINISH PER THE PROJECT SPECIFICATIONS, EXCEPT THE FOLLOWING:
- SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES.
- SURFACES TO BE FIELD WELDED.
- GALVANIZED SURFACES.
- MEMBERS TO RECEIVE SPRAY-APPLIED FIREPROOFING.

ALL EXTERIOR EXPOSED STEEL AND STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.

SS.11 ALL PLATES NOT INDICATED SHALL BE 5/16" MINIMUM THICKNESS. ALL ANGLES NOT INDICATED SHALL BE L3x3x5/16" MINIMUM.

SS.12 ALL MEMBERS NOTED AS CONTINUOUS SHALL BE EITHER PROVIDED AS A SINGLE PIECE CONTINUOUS FOR THE EXTENT OF ITS LENGTH OR PROVIDED IN SEGMENTS AND RE-ATTACHED WITH ADJACENT PIECES VIA FULL PENETRATION WELDS SUCH THAT THE MEMBER FUNCTIONS AS CONTINUOUS IN ITS FINAL POSITION.

SS.13 GROUT FOR BASE PLATES SHALL BE NON-SHRINK GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 7000 PSI, UNLESS NOTED OTHERWISE.

COMPOSITE BEAM SHEAR STUDS

BS.1 SEE FLOOR DECK SCHEDULE FOR SHEAR STUD SIZE AND LENGTH.

BS.2 SHEAR STUDS SHALL BE PLACED WITH A UNIFORM SPACING ALONG THE BEAM. SEE FRAMING PLANS FOR STUD QUANTITIES PER BEAM. IF NO STUDS ARE SPECIFIED PROVIDE AT 24" SPACING MAX ALONG LENGTH OF BEAM. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING THE STUD CONNECTOR QUANTITIES AND PLACEMENT PER BEAM.

BS.3 IF STUDS CANNOT BE PLACED WITH A UNIFORM SPACING ALONG THE BEAM, THE GREATEST NUMBER SHOULD OCCUR AT THE ENDS.

BS.4 IF NUMBER OF STUDS IS LESS THAN NUMBER OF RIBS, START AT BEAM ENDS AND PLACE A SINGLE STUD IN EVERY OTHER FLUTE: WORKING TOWARD THE CENTER OF THE BEAM. IF STUDS REMAIN, FILL EMPTY RIBS, AGAIN STARTING AT BEAM ENDS. ADDITIONAL STUDS OR "PUDDLE WELDS" MUST BE USED FOR REMAINING EMPTY FLUTES.

BS.5 IF NUMBER OF STUDS IS MORE THAN NUMBER OF RIBS, PLACE DOUBLE OR TRIPLE ROW AS NEEDED STARTING FROM BEAM ENDS AND WORKING TOWARD THE CENTER OF THE BEAM. A MINIMUM OF ONE STUD SHALL BE PLACED IN EVERY FLUTE.

BS.6 SHEAR STUDS SHALL COMPLY WITH AMERICAN WELDING SOCIETY (AWS D1.1).

BS.7 REMOVE CERAMIC FERRULES, OR OTHER ARC SHIELDS, USED IN STUD WELDING PROCESS PRIOR TO INSPECTIONS AND CONCRETE POUR.

STEEL FLOOR DECK

FD.1 FLOOR DECK SHALL HAVE THE MINIMUM DESIGN PROPERTIES AND ATTACHMENTS AS SHOWN IN THE FLOOR DECK SCHEDULE ON THE DESIGN CRITERIA SHEET.

FD.2 FLOOR DECK SHALL BE ASTM A653/A (HOT DIP GALVANIZED). PROVIDE MINIMUM YIELD STRENGTHS AS SPECIFIED IN THE FLOOR DECK SCHEDULE AND IN COMPLIANCE WITH THE STEEL DECK INSTITUTE DESIGN MANUAL.

FD.3 STEEL FLOOR DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED IN THE FLOOR DECK SCHEDULE.

FD.4 ALL ENDLAPS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS.

POST INSTALLED ANCHORS

PA.1 POST INSTALLED ANCHORS SHALL BE MANUFACTURED BY HILTI, INC. INTERNATIONAL CODE COUNCIL (ICC) APPROVED SUBSTITUTIONS (ALTERNATES) ARE ALLOWED AND MAY BE SUBMITTED FOR REVIEW AND APPROVAL, BUT PROPER DOCUMENTATION MUST BE PROVIDED WHICH CLEARLY INDICATES EQUIVALENCY BETWEEN MANUFACTURERS, INCLUDING ANY ICC APPROVAL DOCUMENTATION, NECESSARY REDUCTIONS FOR SPACING, EDGE DISTANCES, ETC. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR COORDINATING AND VERIFYING EQUIVALENCE FOR SUBSTITUTIONS. PROPER DOCUMENTATION MUST INCLUDE LOCATIONS, DETAIL REFERENCES, AND SPECIFIED BOLT VERSUS REQUESTED BOLT CAPACITIES. SUBMITTAL OF THE ALTERNATE MANUFACTURER'S STANDARD LOAD TABLES ALONE IS NOT ACCEPTABLE AND WILL BE REJECTED UNTIL PROPER DOCUMENTATION HAS BEEN PROVIDED.

PA.2 THE FOLLOWING ANCHORS SHALL BE USED FOR THE VARIOUS APPLICATIONS LISTED UNLESS NOTED OTHERWISE. SEE THE DRAWINGS FOR SIZE, SPACING AND REQUIRED EMBEDMENT. PROVIDE MINIMUM 3/4" DIAMETER ANCHORS AT LOCATIONS NOT INDICATED. PROVIDE STANDARD EMBEDMENT AT LOCATIONS NOT INDICATED.

ATTACHMENT TO CONCRETE:
-EXPANSION ANCHORS: HILTI KWIK BOLT TZ2.
-ADHESIVE ANCHORS: HILTI HAS RODS WITH HIT-HY 200 V3 INJECTION ADHESIVE.
-SCREW ANCHORS: HILTI KWIK HUS-EZ
-REINFORCING BAR: HILTI HIT-HY200 V3

ATTACHMENT TO GROUT-FILLED (SOLID) MASONRY (APPLIES TO ALL STRUCTURAL ATTACHMENTS):
-EXPANSION ANCHORS: HILTI KWIK BOLT TZ2.
-ADHESIVE ANCHORS: HILTI HAS RODS WITH HIT-HY 270 INJECTION ADHESIVE.

PA.3 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AS WELL AS ANY NECESSARY INSTALLATION TOOLS REQUIRED FOR PLACEMENT OF ANCHORS. HOLE INSTALLATION CONDITIONS SHALL BE HAMMER DRILL DRY.

PA.4 POST INSTALLED ANCHORS (EXPANSION AND ADHESIVE TYPES) USED IN SLIP (MOVEMENT) CONNECTIONS SHALL BE STUD TYPE UNLESS NOTED OTHERWISE. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S TORQUE REQUIREMENTS TO ALLOW PROPER SEATING OF THE ANCHOR PRIOR TO BACKING OFF THE NUT TO FINGER-TIGHT.

EXISTING BUILDING/DEMOLITION NOTES

EB.1 STRUCTURAL LAYOUT INCLUDING DIMENSIONS, ELEVATIONS AND STRUCTURAL SIZES FOR THE EXISTING BUILDING WERE OBTAINED FROM THE ORIGINAL CONSTRUCTION DOCUMENTS AND SHALL BE FIELD VERIFIED. IF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND THE AS-BUILT CONDITIONS ARE DISCOVERED, NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.

EB.2 COORDINATE DEMOLITION OF ALL STRUCTURE WITH THESE DRAWINGS, ARCHITECTURAL, DEMOLITION, AND EXISTING DRAWINGS.

EB.3 CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING BUILDING DURING NEW CONSTRUCTION.

EB.4 CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY OR PERMANENT SHORING OF EXISTING STRUCTURE DURING CONSTRUCTION.

EB.5 PRIOR TO CORE-DRILLING OR PLACING POST-INSTALLED ANCHORS INTO EXISTING CONCRETE, LOCATE REINFORCEMENT STEEL WITH GROUND PENETRATING RADAR OR OTHER APPROVED METHOD. EXISTING REINFORCEMENT SHALL NOT BE CUT UNDER ANY CIRCUMSTANCES UNLESS SPECIFICALLY INDICATED. IF AREAS OF CONFLICT ARE ENCOUNTERED, NOTIFY THE ENGINEER OF RECORD FOR RESOLUTION.

STEEL MATERIALS SCHEDULE

STRUCTURAL ELEMENT	MINIMUM YIELD STRENGTH F_y (ksi)	REMARKS
BEAMS, GIRDERS, ALL W-SHAPES	50	ASTM A572 ASTM A992
PLATES, ANGLES, CHANNELS, ALL OTHERS	36	ASTM A36
HOLLOW STRUCTURAL SECTIONS (HSS) - SQUARE & RECTANGULAR	50	ASTM A500 GRADE C

CONCRETE MATERIALS AND MIX DESIGN SCHEDULE

STRUCTURAL ELEMENT	ACI EXPOSURE CLASS	MAX W/C RATIO	f'_c (PSI)	AIR-ENTRAINMENT REQUIRED [SEE NOTE 3]	REMARKS
INTERIOR SLAB ON GRADE	F0	0.5	4000	NO	-
INTERIOR FOOTINGS	F0	0.5	4000	NO	-
SLAB ON METAL DECK	F0	0.5	3500	NO	-

NOTES:
1. FINAL MIX DESIGN TO BE BY THE CONCRETE SUPPLIER FOLLOWING THIS TABLE AS A MINIMUM.
2. SEE REINFORCED CONCRETE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CONCRETE COVER SCHEDULE

LOCATION		CLEAR COVER
CONCRETE PLACED AGAINST EARTH		3"
CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH	#5 BARS AND SMALLER	1 1/2"
	#6 BARS AND LARGER	2"
COLUMNS, PIERS		1 1/2"
SLABS OR WALLS NOT EXPOSED TO WEATHER OR EARTH		3/4"

NOTES:
1. MINIMUM CONCRETE COVER APPLIES TO OUTER-MOST LAYER OF REINFORCING BARS.
2. SPECIFIC DIMENSIONS FOR BAR PLACEMENT SHOWN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM SCHEDULED REQUIREMENTS.
3. PROVIDE ACCESSORIES AS REQUIRED TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE FABRIC TO MAINTAIN CONCRETE PROTECTION SPECIFIED.

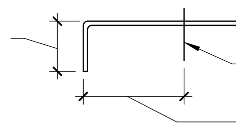
MINIMUM LAP SPLICES SCHEDULE OF REINFORCING BARS IN TENSION (INCHES)

	CONC COVER \ BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
f'_c = 4000 psi	3/4"	16	19	28	37	60	74	90	108	127
	1"	16	16	22	31	50	62	76	92	108
	1 1/2"	16	16	19	22	37	47	57	70	84
	2"	16	16	19	22	33	37	46	57	68

NOTES:
1. SCHEDULE IS FOR TYPICAL SPLICE LENGTHS FOR VERTICAL OR HORIZONTAL REINFORCEMENT. REINFORCEMENT WHICH IS PLACED ABOVE 12" OR MORE OF FRESH CONCRETE IS CONSIDERED "TOP" BARS AND THE SCHEDULE VALUES ARE MULTIPLIED BY 1.3.
2. ALL SPLICES SHALL BE WIRED IN CONTACT. HORIZONTAL BARS TO BE STACKED VERTICAL UNLESS NOTED OTHERWISE.
3. ALL SPLICES ARE TENSION SPLICES WITH LENGTHS PER SCHEDULE UNLESS NOTED OTHERWISE. LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF LAP LENGTHS SCHEDULED.
4. SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPLICING DIFFERENT SIZED BARS.
5. CLEAR COVER APPLIES TO BAR BEING LAPPED, NOT NECESSARILY MINIMUM COVER AS SHOWN IN CONCRETE COVER SCHEDULE.
6. STRAIGHT DEVELOPMENT LENGTH OF AN UNLAPPED BAR IS EQUAL TO VALUE FROM SCHEDULE DIVIDED BY 1.3.
7. SCHEDULE ASSUMES CONCRETE IS NORMAL WEIGHT WITH YIELD STRENGTH OF REINFORCEMENT, fy, EQUAL TO 60 ksi. FOR LIGHT WEIGHT CONCRETE, MULTIPLY THE SCHEDULED VALUES BY 1.3.
8. CENTER TO CENTER SPACING OF BARS IS ASSUMED TO BE GREATER THAN TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
9. THE TRANSVERSE REINFORCEMENT INDEX Ktr IS ASSUMED TO BE ZERO.
10. FOR EPOXY-COATED BARS WITH COVER LESS THAN 3x BAR DIAMETER OR CLEAR SPACING LESS THAN 6x BAR DIAMETER MULTIPLY THE SCHEDULED VALUES BY 1.5. FOR ALL OTHER EPOXY-COATED BARS MULTIPLY THE SCHEDULED VALUES BY 1.2.

HOOK DEVELOPMENT LENGTH SCHEDULE (INCHES)

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
f 'c 4000 PSI	6	7	8	10	12	13	15	17	19



NOTES:
1. HOOK DEVELOPMENT LENGTH ALSO APPLIES FOR 180 DEGREE HOOKED BARS.
2. SIDE COVER IS ASSUMED TO BE GREATER THAN 2 1/2". IF THIS CRITERIA IS NOT MET, MULTIPLY SCHEDULED VALUES BY 1.4.
3. COVER BEYOND HOOK IS ASSUMED TO BE GREATER THAN 2".
4. SCHEDULE ASSUMES CONCRETE IS NORMAL WEIGHT WITH YIELD STRENGTH OF REINFORCEMENT, fy EQUAL TO 60 ksi. FOR LIGHT WEIGHT CONCRETE, MULTIPLY THE SCHEDULE VALUES BY 1.3.

SLAB ON GRADE SCHEDULE

TYPE	THICKNESS	REINFORCEMENT	VAPOR RETARDER	FLOOR FLATNESS F (F)	FLOOR FLATNESS F (L)	REMARKS
SG-1	7"	PER DETAIL	YES	35	25	-

NOTES:
1. ALL SLABS TO BE PLACED OVER VAPOR RETARDER (WHERE INDICATED) OVER 6" MINIMUM COMPACTED GRANULAR SUBBASE.

FLOOR DECK SCHEDULE

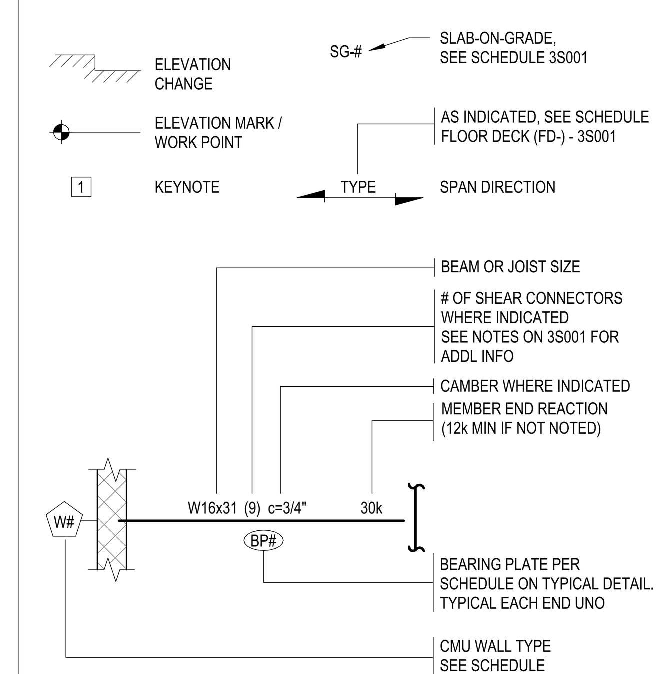
FLOOR DECK DESIGNATION	DECK TYPE	GAGE	MIN YIELD F_y	COMPOSITE SHEAR STUDS	CONCRETE SLAB: THICKNESS ABOVE DECK	CONCRETE SLAB: TOTAL SLAB THICKNESS	CONCRETE SLAB: MAXIMUM WET UNIT WEIGHT (PCF)	CONCRETE SLAB: REINFORCEMENT	MIN. DECK SECTION PROPERTIES (PER FOOT WIDTH): I_p (in^4/ft)	S_p (in^3/ft)	I_n (in^4/ft)	S_n (in^3/ft)	DECK FASTENERS: WELD PATTERN	DECK FASTENERS: # SIDELAP FASTENERS	MIN SPAN COND	REMARKS
FD-1	1.5 VL	20	50 ksi	3/4"Øx4"	3 1/2"	5"	150	6x6 W2.9xW2.9 WWR	0.182	0.218	0.216	0.226	36/4	4 PER SPAN	2-SPAN	GALVANIZED

NOTES:
1. FLOOR DECK SHALL BE WELDED TO SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS IN THE BOTTOM OF THE FLUTES USING THE WELD PATTERN INDICATED AT LOCATIONS WHERE SHEAR STUDS DO NOT OCCUR.
2. FLOOR DECK SIDELAPS SHALL BE FASTENED USING #10 TEK SCREWS WITH THE MINIMUM NUMBER OF FASTENERS PER SPAN AS INDICATED.
3. FLOOR DECK SHALL BE ATTACHED TO ALL PERIMETER EDGE ANGLES, EAVE STRUTS, OR MEMBERS AROUND OPENINGS AND PENETRATIONS WITH 5/8 " DIAMETER PUDDLE WELDS IN THE BOTTOM OF THE FLUTES AT 12" OC UNLESS NOTED OTHERWISE.
4. CONCRETE SLAB SHALL BE CONSTRUCTED TO THE UNIFORM TOTAL SLAB THICKNESS SPECIFIED, EVEN IF BEAMS OR DECK STRUCTURE DEFLECTS DURING CONCRETE POUR. MAXIMUM LOCAL THICKNESS OVERAGE NOT TO EXCEED 1/2"
5. PROVIDE 1 1/2" COVER FROM TOP OF SLAB TO WELDED WIRE REINFORCEMENT. SET WWR ON CHAIRS (OR OTHER SUITABLE SUPPORT ACCESSORY). DO NOT LIFT INTO PLACE DURING CONCRETE POUR.
6. ANY FINISHING OR OTHER CONSTRUCTION EQUIPMENT MAY NOT EXCEED THE DESIGN UNIFORM LIVE LOAD OF THE FLOOR SYSTEM SHOWN IN THE DESIGN CRITERIA.

ABBREVIATIONS

AB	ANCHOR BOLT	LLV	LONG LEG, VERTICAL
AFF	ABOVE FINISHED FLOOR	LSH	LONG SIDE HORIZONTAL
AL	ALUMINUM	LSV	LONG SIDE VERTICAL
ALT	ALTERNATE	LVL	LAMINATED VENEER LUMER
ARCH	ARCHITECT, ARCHITECTURAL	LW	LONG WAY
BFE	BOTTOM OF FOOTING ELEVATION	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BOT	BOTTOM	MTD	MOUNTED
BSE	BOTTOM OF STEEL ELEVATION	NIC	NOT IN CONTRACT
CFMF	COLD FORMED METAL FRAMING	OC	ON CENTER
CJ	CONTROL JOINT	OPP	OPPOSITE
CJP	COMPLETE JOINT PENETRATION WELD	PJP	PARTIAL JOINT PENETRATION WELD
CL	CENTERLINE	PL	PLATE
COL	COLUMN	PP	PARTIAL PENETRATION WELD
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONST	CONSTRUCTION	PT	POINT
CONT	CONTINUOUS; CONTINUATION	QTY	QUANTITY
COORD	COORDINATE	RAD	RADIUS
CTJ	CONSTRUCTION JOINT	REQ	REQUIRED, REQUIREMENT
CTR	CENTER	REV	REVISE, REVISION
DBE	DECK BEARING ELEVATION	SIM	SIMILAR
DEG	DEGREES	SL	SNOW LOAD
DIA	DIAMETER	SPEC	SPECIFICATION
DL	DEAD LOAD	SSH	SHORT SIDE HORIZONTAL
DWG	DRAWING	SSV	SHORT SIDE VERTICAL
EA	EACH	SW	SHORT WAY
EF	EACH FACE	T&B	TOP AND BOTTOM
EOR	EDGE OF ROOF	TBD	TO BE DETERMINED
EOS	EDGE OF SLAB	TCE	TOP OF CONCRETE ELEVATION
EQ	EQUAL	TFE	TOP OF FOOTING ELEVATION
EW	EACH WAY	TLE	TOP OF LEDGE ELEVATION
EX	EXISTING	TPE	TOP OF PIER ELEVATION
EXP	EXPANSION	TSE	TOP OF STEEL ELEVATION
FDN	FOUNDATION	TWE	TOP OF WALL ELEVATION
FFE	FINISHED FLOOR ELEVATION	TYP	TYPICAL
FT	FOOT, FEET	UNO	UNLESS NOTED OTHERWISE
FTG	FOOTING	VDB	VERTICAL DIAGONAL BRACE
FV	FIELD VERIFY	VERT	VERTICAL
GA	GAUGE, GAGE	VXB	VERTICAL X-BRACE
GALV	GALVANIZED	W/	WITH
GT	GIRDER TRUSS	WL	WIND LOAD
HORIZ	HORIZONTAL	WP	WORK POINT
HSS	HOLLOW STEEL SECTION	WWR	WELDED WIRE REINFORCEMENT
HT	HEIGHT		
KB	KNEE BRACE		
LL	LIVE LOAD		
LLH	LONG LEG, HORIZONTAL		

STRUCTURAL SYMBOL LEGEND



STRUCTURAL DESIGN CRITERIA

1. ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
2. DEAD LOAD
   STORAGE MEZZANINE — 80 PSF
3. LIVE LOAD
   STORAGE MEZZANINE — 125 PSF (NON-REDUCIBLE)
4. SNOW LOAD
   GROUND SNOW LOAD, Pg — 10 PSF
   SNOW LOAD IMPORTANCE FACTOR — 1.0
   SNOW EXPOSURE FACTOR, Ce — 1.0
   SNOW THERMAL FACTOR, Ct — 1.0
   MINIMUM FLAT ROOF SNOW, Pf — 1.0 PSF
5. WIND LOAD
   BASIC WIND SPEED,Vult — 120 MPH
   RISK CATEGORY — II
   WIND EXPOSURE CATEGORY — C
6. SEISMIC LOAD
   SEISMIC RISK CATEGORY — II
   SDS — 0.2083
   SD1 — 0.1470
   SITE CLASS — D
   IMPORTANCE FACTOR — 1.00
   DESIGN CATEGORY — C
   RESPONSE MOD FACTOR — 3.0
   ANALYSIS PROCEDURE — EQUIVALENT LATERAL FORCE
7. SOIL
   ALLOWABLE BEARING — 3,000 PSF OBTAINED FROM VALUES FROM THE ORIGINAL CONSTRUCTION DOCUMENTS BY: CT CONSULTANTS, INC., DATED 12/07/2018

DEFERRED SUBMITTALS

DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THESE ITEMS CANNOT BE INSTALLED UNTIL APPROVED.

THE FOLLOWING LIST CONSTITUTES THE EXPECTED DEFERRED SUBMITTALS AS PART OF THE PROJECT WORK:

DS.1 METAL STAIRS

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER BUILDING 3
3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. REGISTERED ENGINEERING CORPORATION C-2326 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 060496 ENGINEER LOGAN T. MUSE Jun 17, 2026

This item has been electronically signed and sealed by Logan Thomas Muse using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER 21350003
PROJECT MANAGER A. IDOL
PROFESSIONAL L. MUSE
DRAWN BY M. KOLL
CHECKED BY E. FLANNERY

GENERAL NOTES, DESIGN CRITERIA AND SCHEDULES
3S001

REQUIRED SPECIAL INSPECTIONS OF TESTS OF SOILS

REQUIRED IF CHECKED	INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
☑	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	☐	☑
☑	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	☐	☑
☑	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	☐	☑
☑	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	☑	☐
☑	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	☐	☑

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

REQUIRED IF CHECKED	INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
☑	INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS AND VERIFY PLACEMENT	☐	☑
☐	REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS	☐ ☐ ☑	☑ ☑ ☐
☑	INSPECT ANCHORS CAST IN CONCRETE	☐	☑
☑	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN a.	☑ ☐	☐ ☑
☑	VERIFY USE OF REQUIRED DESIGN MIX	☐	☑
☑	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	☑	☐
☑	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	☑	☐
☑	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	☐	☑
☐	INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS	☑ ☑	☐ ☐
☐	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	☐	☑
☐	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	☐	☑
☑	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	☐	☑

SPECIAL INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	PLACEMENT AND INSTALLATION OF STEEL DECK	☑	☐
☑	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	☑	☐

SPECIAL INSPECTION TASKS PRIOR TO WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	☑	☐
☑	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	☑	☐
☑	MATERIAL IDENTIFICATION (TYPE/GRADE)	☐	☑
☑	WELDER IDENTIFICATION SYSTEM	☐	☑
☑	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	☐	☑
☑	CONFIGURATION AND FINISH OF ACCESS HOLES	☐	☑
☑	FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	☐	☑

SPECIAL INSPECTION TASKS DURING WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	USE OF QUALIFIED WELDERS	☐	☑
☑	CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	☐	☑
☑	NO WELDING OVER CRACKED TACK WELDS	☐	☑
☑	ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	☐	☑
☑	WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) • PROPER POSITION (F, V, H, OH)	☐	☑
☑	WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	☐	☑

SPECIAL INSPECTION TASKS AFTER WELDING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH WELDED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	WELDS CLEANED	☐	☑
☑	SIZE, LENGTH AND LOCATION OF WELDS	☑	☐
☑	WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	☑	☐
☑	ARCH STRIKES	☑	☐
☑	k-AREA	☑	☐
☑	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	☑	☐
☑	REPAIR ACTIVITIES	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	☑	☐

SPECIAL INSPECTION TASKS PRIOR TO BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	☑	☐
☑	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	☐	☑
☑	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	☐	☑
☑	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	☐	☑
☑	CONNECTING ELEMENTS INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	☐	☑
☑	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	☐	☑
☑	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	☐	☑

SPECIAL INSPECTION TASKS DURING BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	FASTENER ASSEMBLIES OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	☐	☑
☑	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	☐	☑
☑	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	☐	☑
☑	FASTENERS ARE PRETENSION IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	☐	☑

SPECIAL INSPECTION TASKS AFTER BOLTING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM TASKS FOR EACH BOLTED JOINT OR MEMBER	OBSERVE ITEMS ON RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS
☑	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	☑	☐

INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM	OBSERVE
☑	VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	☑	☐

INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM	OBSERVE
☑	VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	☑	☐
☑	VERIFY DECK MATERIALS ARE REPRESENDED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	☑	☐

INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM	OBSERVE
☑	MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS	☐	☑
☑	PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION	☐	☑
☑	PROPER STORAGE FOR MECHANICAL FASTENERS	☐	☑

INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM	OBSERVE
☑	FASTENERS ARE POSITIONED AS REQUIRED	☐	☑
☑	FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	☐	☑

INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING

REQUIRED IF CHECKED	INSPECTION TASK	PERFORM	OBSERVE
☑	CHECK SPACING, TYPE AND INSTALLATION OF SUPPORT FASTENERS	☑	☐
☑	CHECK SPACING, TYPE AND INSTALLATION OF SIDELAP FASTENERS	☑	☐
☑	CHECK SPACING, TYPE AND INSTALLATION OF PERIMETER FASTENERS	☑	☐
☑	VERIFY REPAIR ACTIVITIES	☑	☐
☑	DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	☑	☐

SPECIAL INSPECTION FOR MASONRY LEVEL B QUALITY ASSURANCE

REQUIRED IF CHECKED	INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
☑	1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	☐	☑
☑	2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
☑	a. PROPORTIONS OF SITE-PREPARED MORTAR	☐	☑
☑	b. CONSTRUCTION OF MORTAR JOINTS	☐	☑
☑	c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	☐	☑
☑	d. LOCATION OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES	☐	☑
☑	e. PRESTRESSING TECHNIQUE	☐	☑
☑	f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	☑	☑
☑	3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
☑	a. GROUT SPACE	☐	☑
☑	b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING AND ANCHORAGES	☐	☑
☑	c. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES	☐	☑
☑	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	☐	☑
☑	e. CONSTRUCTION OF MORTAR JOINTS	☐	☑
☑	4. VERIFY DURING CONSTRUCTION:		
☑	a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	☐	☑
☑	b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	☐	☑
☑	c. WELDING OF REINFORCEMENT	☑	☐
☑	d. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (44°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	☐	☑
☑	e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	☑	☐
☑	f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	☑	☐
☑	g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	☑	☑
☑	5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	☐	☑

SPECIAL INSPECTION OF FABRICATED ITEMS

REQUIRED IF CHECKED	INSPECTION TASK
☑	SPECIAL INSPECTIONS OF FABRICATED ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 1704.2.5 OF IBC. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION, UNLESS ONE OF THE TWO EXEMPTIONS BELOW APPLY:
	EXCEPTION 1: SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAIL FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND BUILDING CODES. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTIONS OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. APPROVAL BY THE BUILDING OFFICIAL REQUIRED TO USE THIS EXCEPTION.
	EXCEPTION 2: SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED AGENCY (AN ESTABLISHED AND RECOGNIZED AGENCY THAT IS REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, WHERE SUCH AGENCY HAS BEEN APPROVED BY THE BUILDING OFFICIAL).
☑	STRUCTURAL STEEL
☐	STEEL JOISTS & GIRDERS
☐	PRE-CAST/PRESTRESSED CONCRETE
☐	METAL BUILDING SYSTEMS
☐	WOOD TRUSSES
☐	WOOD WALL PANELS
☐	COLD-FORMED STEEL TRUSSES
☐	COLD-FORMED STEEL FRAMING

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RENOVATIONS TO OPERATION CENTER
BUILDING 3

3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. REGISTERED ENGINEERING CORPORATION NORTH CAROLINA C-2326 CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 060496 LOGAN T. MUSE
Jun 17, 2026
Logan Muse

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

SPECIAL INSPECTIONS
3S002

6/17/2026 11:42:41 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - BS_STR.rvt
22 - 3S002 SPECIAL INSPECTIONS
SCHOLL
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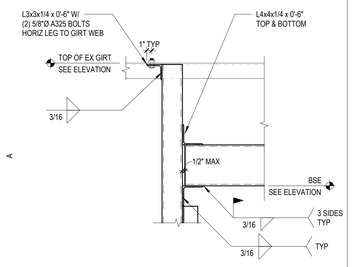

A7 DETAIL
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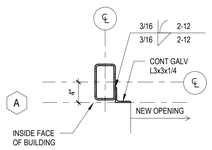

A6 DETAIL
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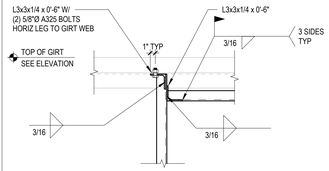

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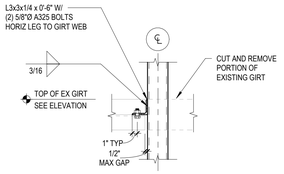

B7 DETAIL
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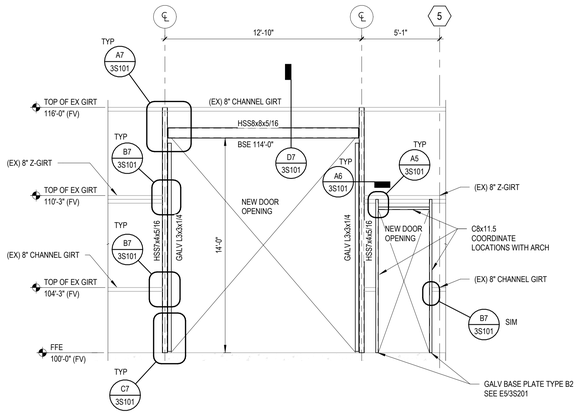
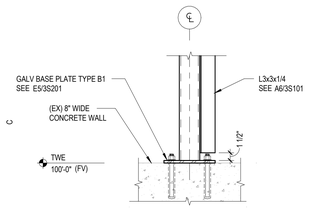
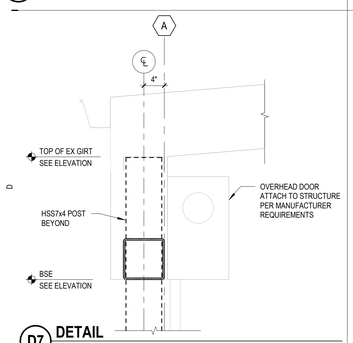


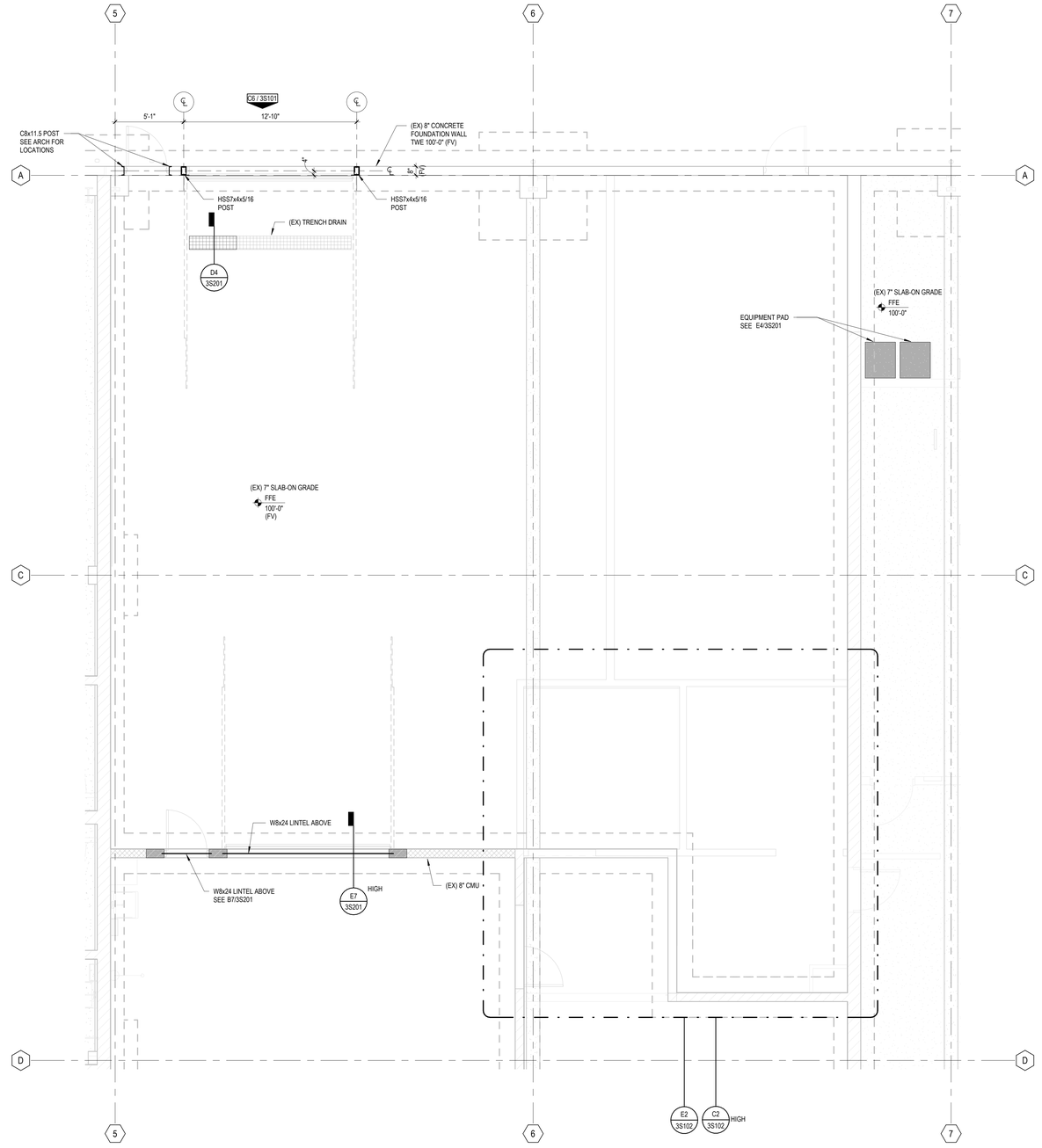


C7 DETAIL
1" = 1'-0"

C6 STEEL ELEVATION - GRID A
1/4" = 1'-0"



D7 DETAIL
1" = 1'-0"



FOUNDATION PLAN - NEW FACILITIES
1/4" = 1'-0"

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PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. REGISTERED ENGINEERING COMPANY NORTH CAROLINA C-2326 CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL ENGINEER LOGAN T. MUSE SEAL 060496 Jun 17, 2026

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
2135003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

STRUCTURAL PLANS AND DETAILS

3S101

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21350003 STRUCTURAL PLANS AND DETAILS
3S101
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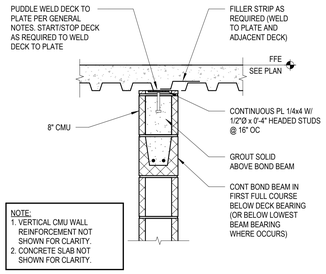
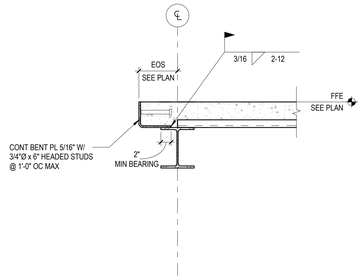


A7 DETAIL
1" = 1'-0"



A5 DETAIL
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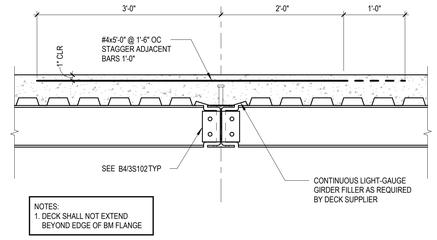
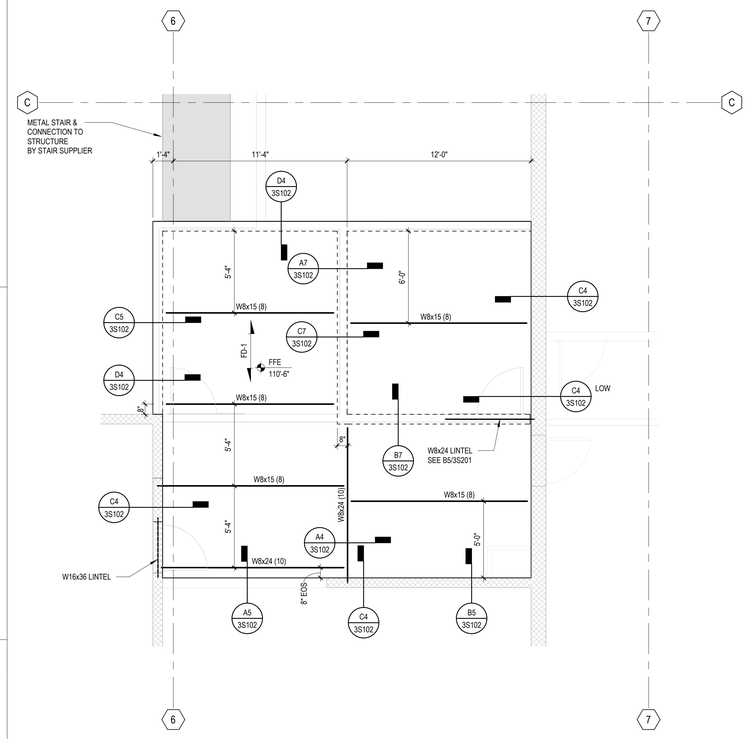
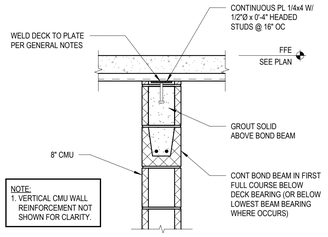


A4 TYPICAL COMPOSITE GIRDER
NOT TO SCALE



C2 MEZZANINE FRAMING PLAN - ALTERNATE 3
1/4" = 1'-0"



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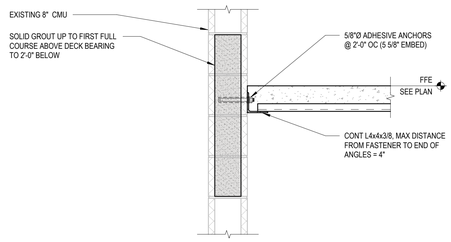
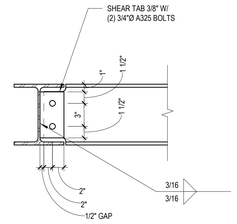
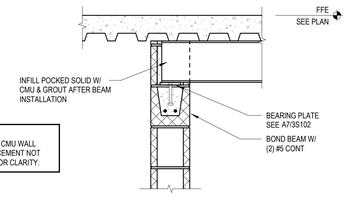
1" = 1'-0"



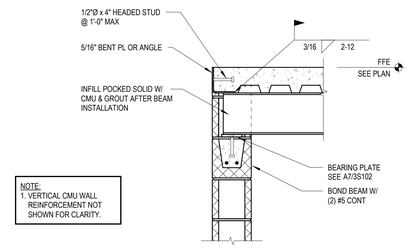
B5 DETAIL
1" = 1'-0"



B4 TYPICAL SHEAR CONNECTION
NOT TO SCALE



C7 DETAIL
1" = 1'-0"



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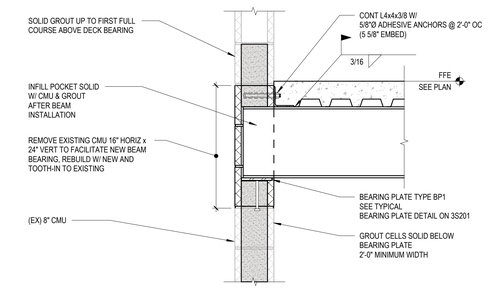
1" = 1'-0"



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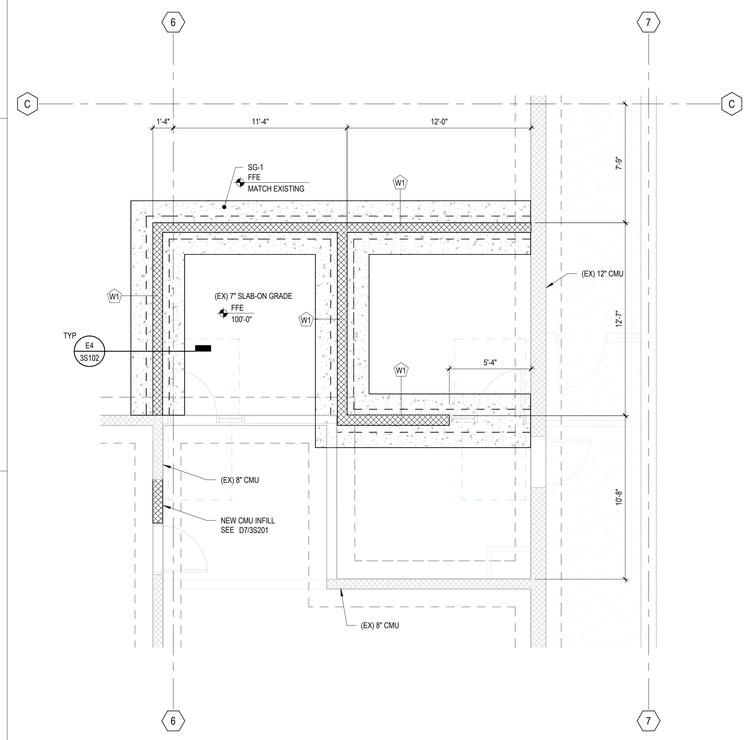
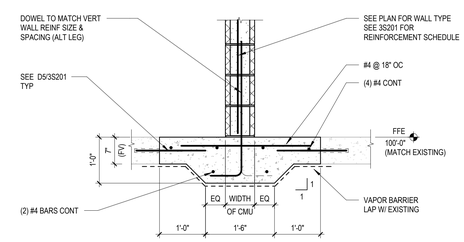
1" = 1'-0"



E2 MEZZANINE FOUNDATION PLAN - ALTERNATE 3
1/4" = 1'-0"



D4 DETAIL
1" = 1'-0"

E4 DETAIL
3/4" = 1'-0"

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RENOVATIONS TO OPERATION CENTER
BUILDING 3

3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. REGISTERED ENGINEERING CORPORATION NORTH CAROLINA C-2326 CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 060496 LOGAN T. MUSE
Jun 17, 2026

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ISSUANCE

05/17/2026	CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
L. MUSE
DRAWN BY
M. KOLL
CHECKED BY
E. FLANNERY

STRUCTURAL PLANS AND DETAILS - ALTERNATE 3

3S102

6/17/2026 11:42:45 AM Autodesk Docs://21350003 - GUC Operations Center Renovation/21350003-GUC OP CTR - B3_STR.rvt
23 - STRUCTURAL PLANS AND DETAILS - ALTERNATE 3
3S102
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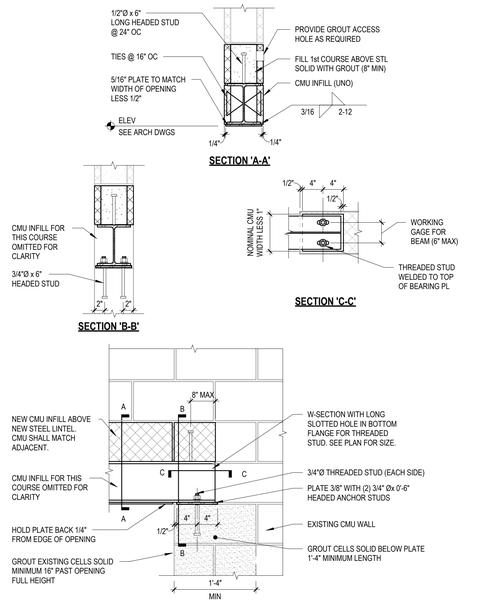
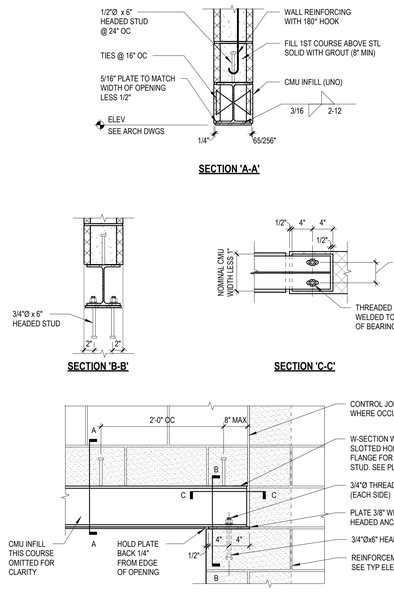
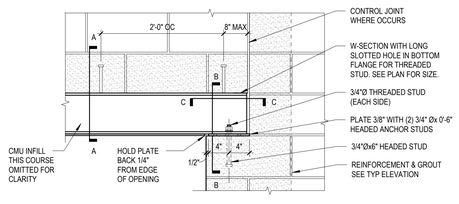


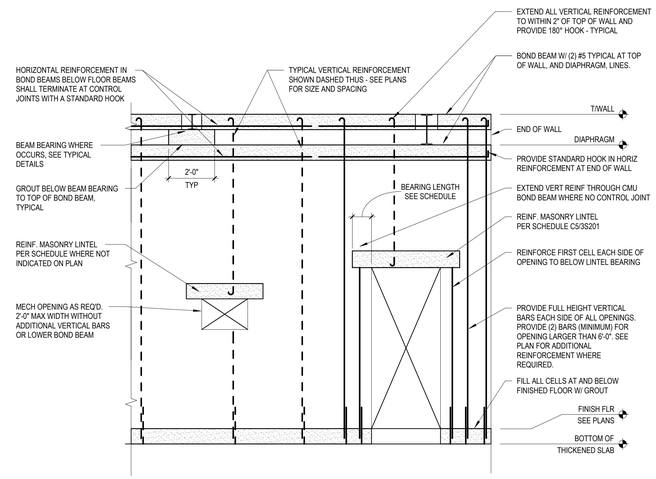
B7 TYPICAL WIDE FLANGE LINTEL IN EXISTING MASONRY
1" = 1'-0"

NOTE:
1. LINTEL SIZE TO BE W8x24 UNLESS NOTED OTHERWISE.
2. SEE ARCH FOR OPENING LOCATIONS





B5 TYPICAL WIDE FLANGE LINTEL SUPPORT
NOT TO SCALE



NOTES:
1. REINFORCING SHOWN AS SOLID LINES IS IN ADDITION TO TYPICAL WALL REINFORCING CALLED OUT ON DRAWINGS. SIZE OF ADDITIONAL BARS SHALL MATCH TYPICAL WALL REINFORCING SIZE UNLESS NOTED OTHERWISE.
2. WALL ELEVATION IS TYPICAL FOR STRUCTURAL & NON-STRUCTURAL CMU WALLS.
3. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-STRUCTURAL CMU WALLS.
4. PROVIDE "LADDER" TYPE HORIZONTAL MASONRY REINFORCEMENT AT 16" OC IN CMU AND BRICK VENEER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. SEE LAP SPLICE SCHEDULE FOR LAP LENGTHS.

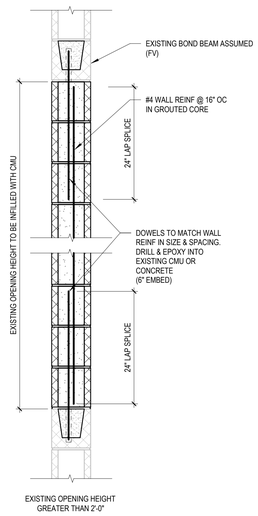
B4 TYPICAL CMU WALL ELEVATION
NOT TO SCALE

MASONRY WALL REINFORCING SCHEDULE

WALL TYPE	CMU SIZE	REINFORCING		GROUT SPACING	REMARKS
		VERTICAL	BOND BEAMS		
W1	8"	#5 @ 32" OC	-	32"	-

TYPICAL SCHEDULE NOTES (APPLY TO ALL WALL TYPES):
1. REINFORCING DEFINED IN SCHEDULE IS THE MINIMUM REQUIRED. SEE PLANS, TYPICAL DETAILS AND NOTES FOR ADDITIONAL REINFORCING REQUIRED.
2. SEE THIS SHEET FOR TYPICAL MASONRY DETAILS, ALL OF WHICH APPLY UNLESS NOTED OTHERWISE.

NOTE: PROVIDE ADDITIONAL VERTICAL BAR IN GROUTED CORE AT EACH END OF OPENING TO MATCH WALL REINFORCING SIZE.

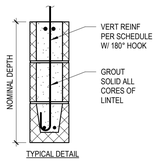


NOTE:
1. SEE ARCH FOR INFILL LOCATIONS

D7 TYPICAL CMU INFILL DETAIL
NOT TO SCALE

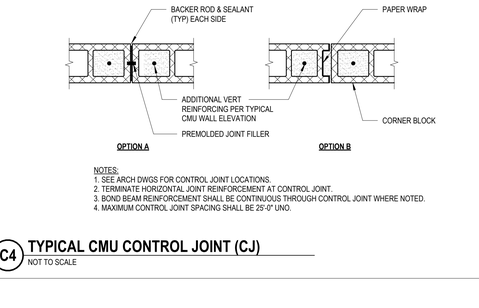
REINFORCED MASONRY LINTEL SCHEDULE

CLEAR SPAN	NOMINAL DEPTH	REINFORCING
UP TO 4'-0"	8"	(2) # 4 BOT
>4'-0" TO 6'-8"	16"	(2) # 4 T&B
>6'-8" TO 8'-8"	24"	(2) # 5 T&B
>8'-8" TO 10'-8"	32"	(2) # 6 T&B
>10'-8" TO 12'-8"	40"	(2) # 6 T&B



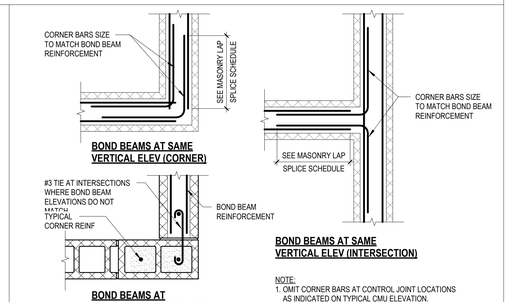
NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR OPENING LOCATIONS AND CLEAR SPANS.
2. LINTELS ARE CONTINUOUS FULL WIDTH OF OPENING.
3. PROVIDE 8" MINIMUM BEARING FOR CLEAR SPANS 8'-0" OR LESS; 16" MINIMUM BEARING FOR CLEAR SPANS GREATER THAN 8'-0".
4. EXTEND BOTTOM REINFORCEMENT TO END OF BEARING EACH SIDE. EXTEND TOP REINFORCEMENT WITH STANDARD HOOK AT CONTROL JOINTS OR FREE EDGES.
5. SEE TYPICAL CMU WALL ELEVATION FOR ADDITIONAL REQUIREMENTS.

C5 TYPICAL REINFORCED MASONRY LINTEL SCHEDULE
NOT TO SCALE



NOTES:
1. SEE ARCH DWGS FOR CONTROL JOINT LOCATIONS.
2. TERMINATE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINT.
3. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINT WHERE NOTED.
4. MAXIMUM CONTROL JOINT SPACING SHALL BE 25'-0" UNO.

C4 TYPICAL CMU CONTROL JOINT (CJ)
NOT TO SCALE



NOTE:
1. OMIT CORNER BARS AT CONTROL JOINT LOCATIONS AS INDICATED ON TYPICAL CMU ELEVATION.

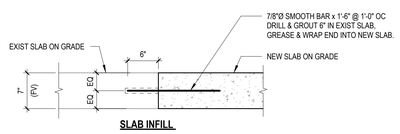
C2 TYP CMU BOND BEAM REINFORCEMENT
NOT TO SCALE

MASONRY LAP SPLICE SCHEDULE
(F'm=2000 PSI)

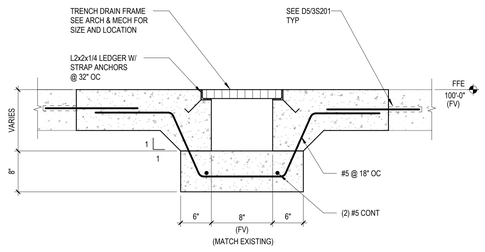
BAR SIZE \ PLACEMENT	CENTER		EDGE
	8" CMU	12" CMU	ALL CMU
#3	18"	18"	18"
#4	24"	24"	24"
#5	30"	30"	30"
#6	38"	36"	57"
#7	-	42"	80"
#8	-	50"	-

NOTE:
1. SEE ARCH FOR INFILL LOCATIONS

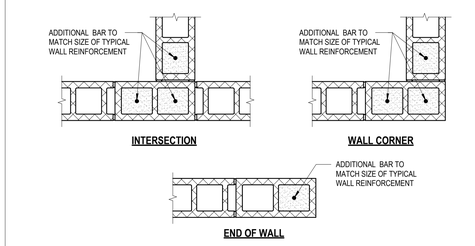
D7 TYPICAL CMU INFILL DETAIL
NOT TO SCALE



D5 DETAIL
NOT TO SCALE



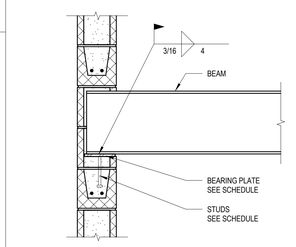
D4 TYPICAL TRENCH DRAIN DETAIL
NOT TO SCALE



D2 TYPICAL CMU VERTICAL REINFORCEMENT
NOT TO SCALE

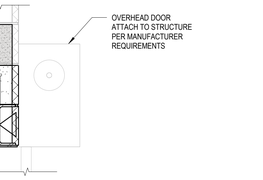
BEARING PLATE SCHEDULE

MARK	SIZE (PL thick x width x length)	STUDS	REMARKS
BP1	PL 1/2" x 6" x 0'-8"	(2) 1/2"Ø x 0'-4"	

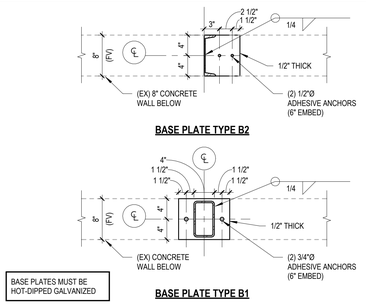


NOTES:
1. ALL BEARING PLATES ARE TYPE "BP1" UNLESS NOTED ON PLAN BELOW BEAM DESIGNATION.
2. VERTICAL CMU WALL REINFORCEMENT NOT SHOWN FOR CLARITY.
3. DECK OR EDGE ANGLE NOT SHOWN FOR CLARITY.
4. SEE TYP CMU WALL ELEVATION FOR BOND BEAM LOCATION REQUIREMENTS.

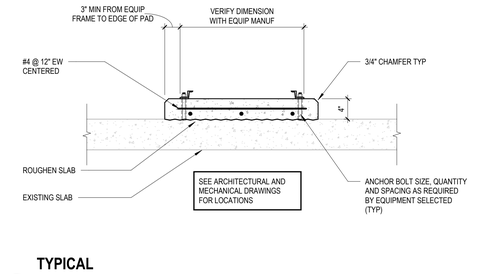
E1 TYPICAL BEARING PLATE
NOT TO SCALE



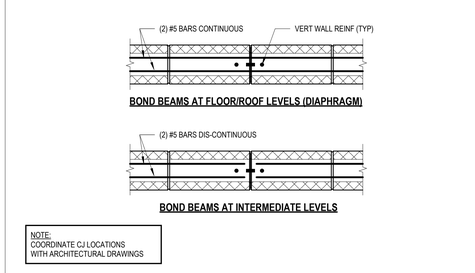
E7 DETAIL
1" = 1'-0"



E5 TYPICAL BASE PLATES
1" = 1'-0"



E4 TYPICAL SLAB ON GRADE EQUIPMENT BASE
1" = 1'-0"



NOTE:
COORDINATE CJ LOCATIONS WITH ARCHITECTURAL DRAWINGS

E2 TYP BOND BEAMS AT CONTROL JOINTS
NOT TO SCALE

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23 - 3S201 TYPICAL DETAILS
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RENOVATIONS TO OPERATION CENTER
BUILDING 3
3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING P.C. REGISTERED 2019 ENGINEERING CORPORATION C-2326 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL SEAL 060496 ENGINEER LOGAN T. MUSE
Jun 17, 2026
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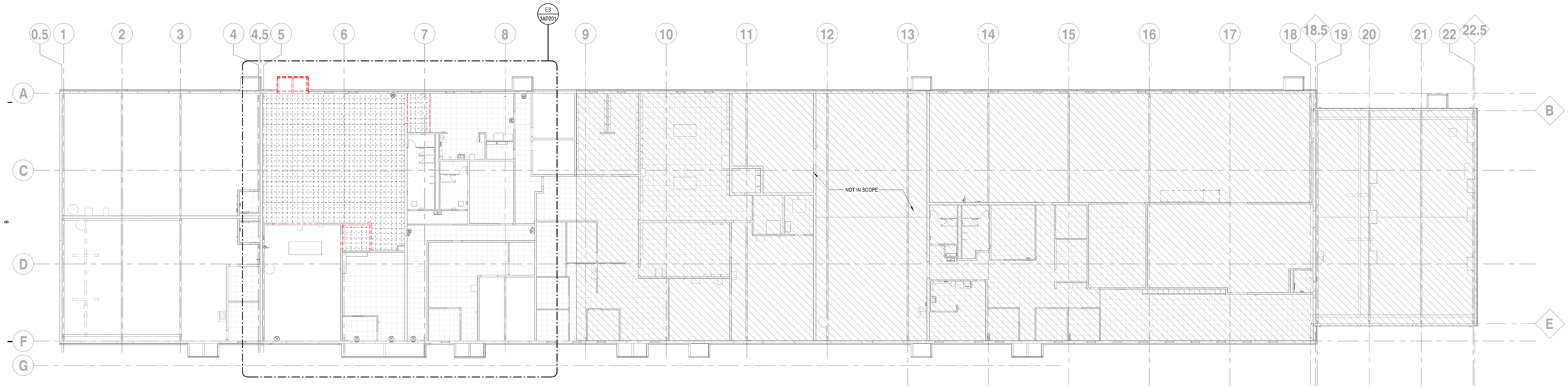
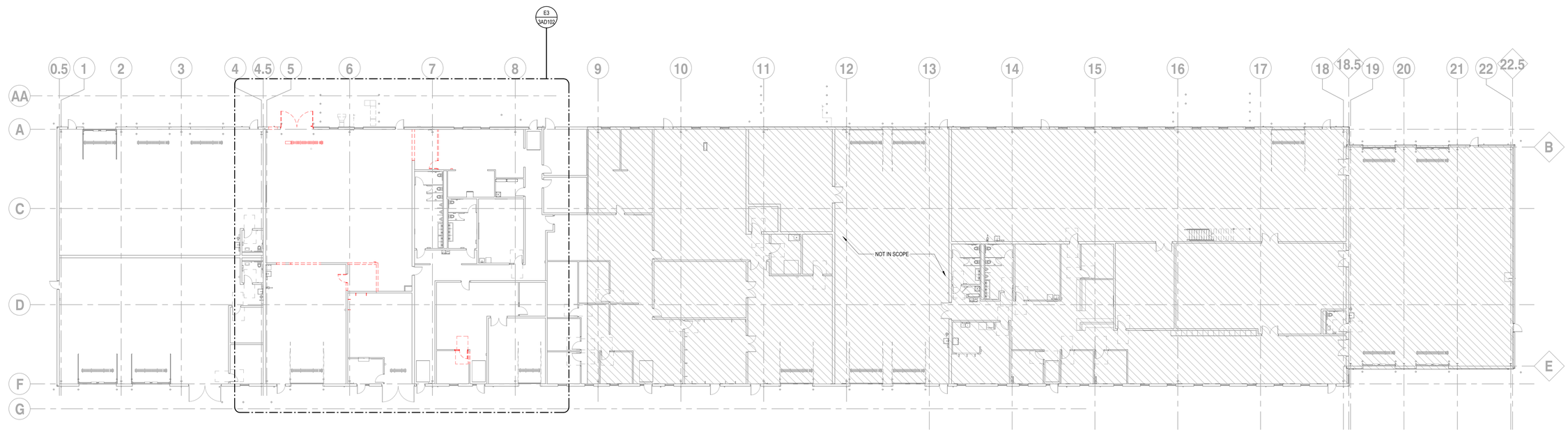
ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER 21350003
PROJECT MANAGER A. IDOL
PROFESSIONAL L. MUSE
DRAWN BY M. KOLL
CHECKED BY E. FLANNERY

TYPICAL DETAILS
3S201



OVERALL DEMOLITION REFLECTED CEILING PLAN
C2 1/16" = 1'-0"



OVERALL DEMOLITION FIRST FLOOR PLAN
E2 1/16" = 1'-0"

24.2.002

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3D - 3AD101
OVERALL DEMOLITION PLANS

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RENOVATIONS TO OPERATION CENTER
BUILDING 3
3335 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C. 51348 NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO
05/17/2026 12:27 PM

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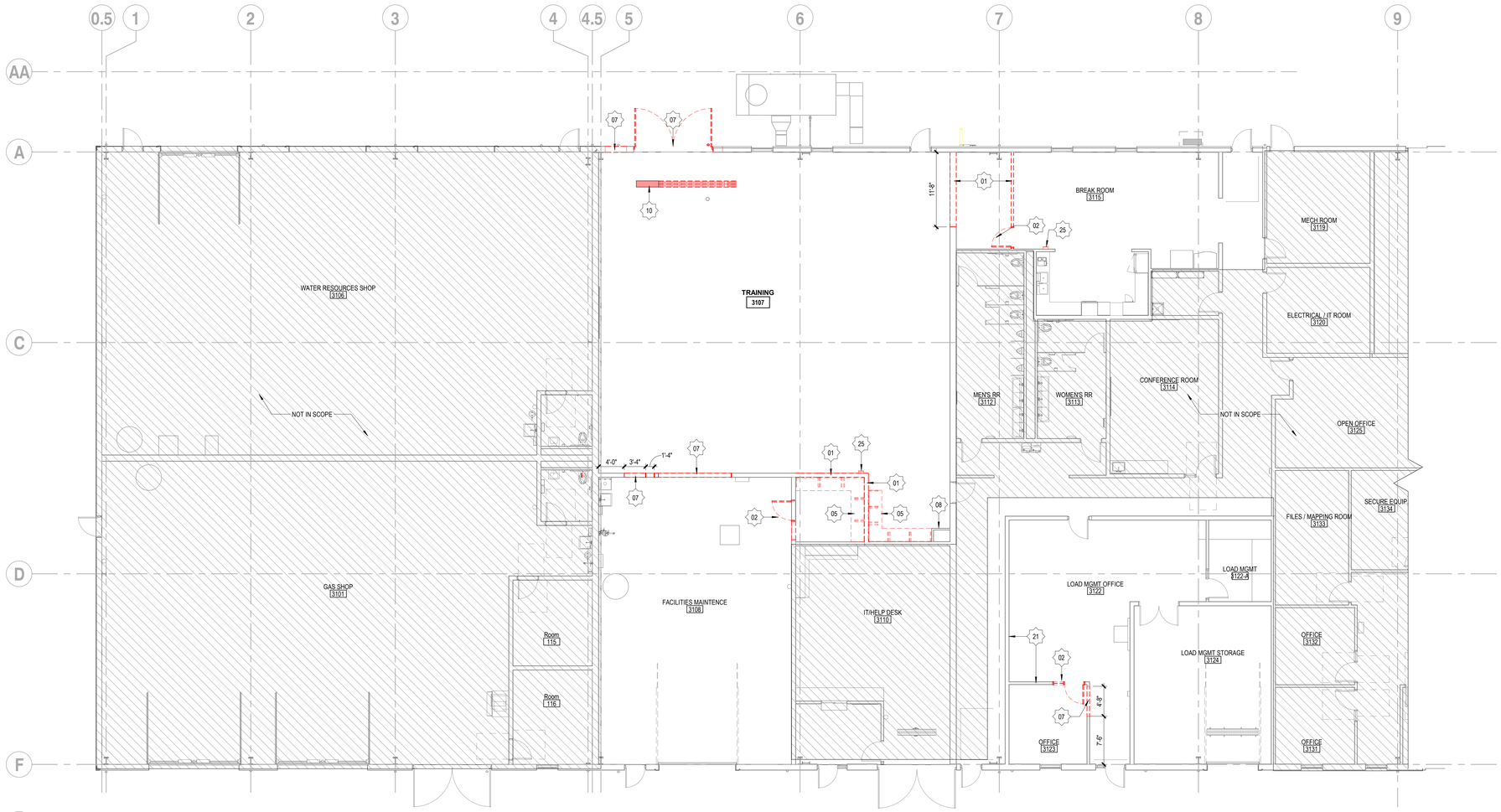
ISSUANCE

05/17/2026	CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

OVERALL DEMOLITION PLANS
3AD101



E3 **FIRST FLOOR DEMOLITION PLAN**
1/8" = 1'-0"

DEMOLITION NOTES AND LEGEND

1. EXISTING BUILDING CONDITION BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
2. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
3. COORDINATE DEMOLITION WITH ALL CONTRACTORS WORKING IN AREAS BEING RENOVATED.
4. DURING DEMOLITION, PROTECT ALL ADJACENT CONSTRUCTION TO REMAIN.
5. ANY ASBESTOS CONTAINING MATERIALS THAT ARE ENCOUNTERED ARE TO BE REMOVED BY THE OWNER.
6. REFER TO STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ITEMS TO BE REMOVED NOT SHOWN HERE.
7. COORDINATE THE RETURN AND STORAGE OF ALL ITEMS DESIGNATED AS SALVAGE WITH OWNER'S REP.
8. PROVIDE TEMPORARY SHORING AND/OR STAGING OF THE DEMOLITION WORK.
9. COORDINATE CONSTRUCTION BARRIER LOCATIONS, NOISY DEMOLITION / CONSTRUCTION, AND WORK NOTED "INTERMITTENT" WITH OWNER.

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE REMOVED

PLAN NOTES

NUMBER	NOTE
01	DEMOLISH WALL OR PORTION OF WALL & ASSOCIATED DEVICES AS INDICATED BY DASHED DEMOLITION LINES.
02	DEMOLISH EXISTING DOORS, HARDWARE AND FRAMES.
05	DEMOLISH EXISTING CASEWORK, COUNTERTOPS AND ATTACHMENTS.
07	DEMOLISH EXISTING DOORS AND/OR WALL TO RECEIVE NEW DOOR. REFER TO DOOR SCHEDULE.
08	EXISTING TO REMAIN. PATCH AND REPAIR AS NEEDED TO RECEIVE NEW CONSTRUCTION
10	DEMOLISH CONCRETE SLAB AS NEEDED TO RELOCATE TRENCH DRAIN TO ALIGN WITH NEW OVERHEAD DOOR.
21	REMOVE ACOUSTIC WALL PANELS AND SAVE TO BE REINSTALLED IN NEW LOCATION AND/OR TO RETURN TO THE OWNER.
25	RELOCATED FIRE EXTINGUISHER CABINET.

KEY PLAN

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 3
3355 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING CORPORATE SEAL 51348 REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA CHARLOTTE, NC

NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO
SIGNATURE 2/22/26

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M.FUENTES
CHECKED BY

ENLARGED DEMOLITION FLOOR PLAN
3AD102

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3/2 - 3AD102
ENLARGED DEMOLITION FLOOR PLAN
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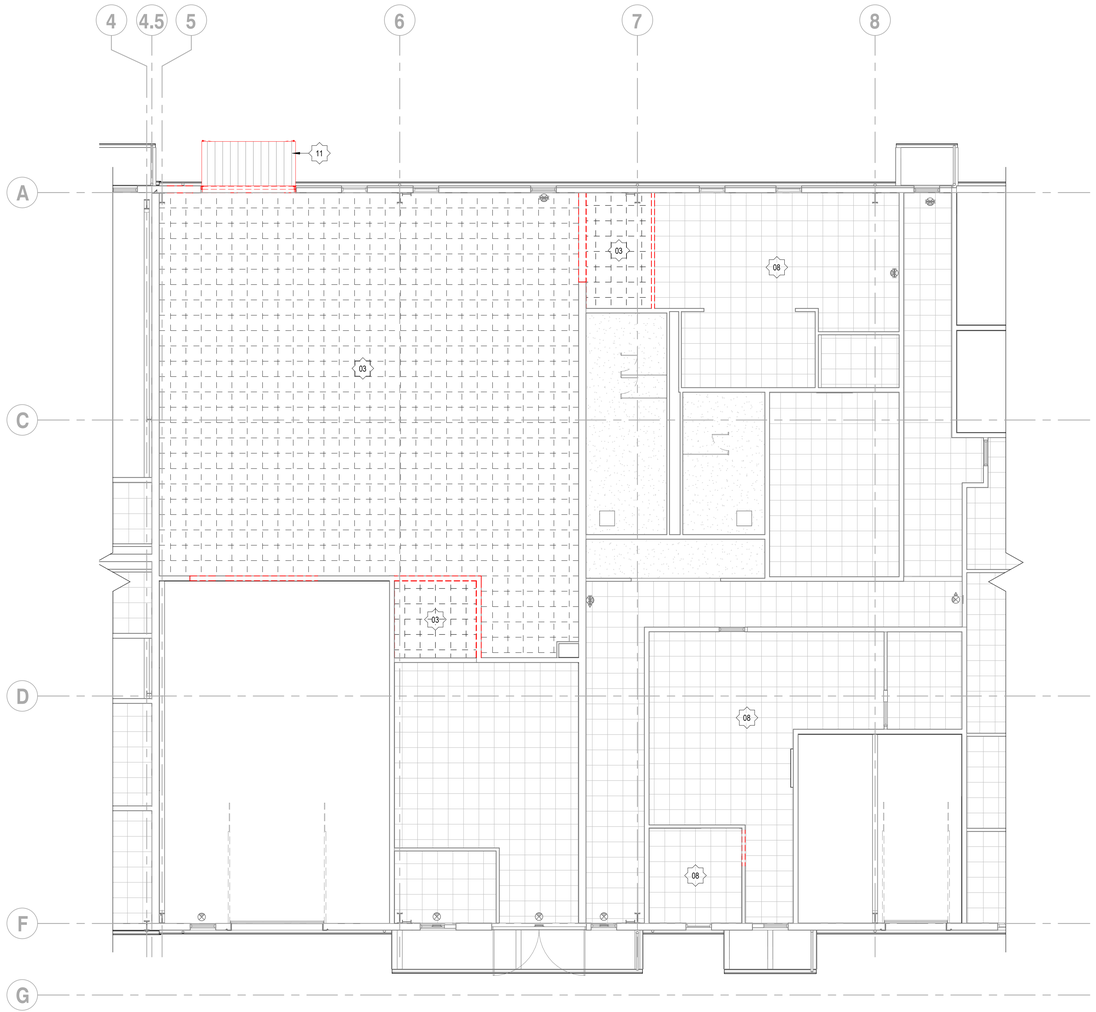
24.2.002



ENLARGED DEMOLITION RCP TRAINING ROOM
E3 1/8" = 1'-0"

REFLECTED CEILING PLAN LEGEND

1. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM / AREA OR ALIGNED WITH ADJACENT ROOM / AREA AS INDICATED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHTS INDICATED ARE DIMENSIONED FROM THE FINISHED FLOOR BELOW.
3. ALL LIGHT FIXTURES, SPRINKLER HEADS, RETURN AIR GRILLES AND SUPPLY AIR GRILLES ARE TO BE LOCATED IN THE CENTER OF THE CEILING PAD, UNLESS NOTED OTHERWISE.
4. COORDINATE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TO ASSURE PROPER CLEARANCES AND LAYOUT.

- EXPOSED
- 2X2 ACOUSTIC CEILING PANEL
- EXISTING GYPSUM BOARD
- EXISTING 2X2 ACOUSTIC CEILING PANEL
- 2X2 LIGHT FIXTURE
- LINEAR LIGHT FIXTURE
- HVAC SUPPLY GRILLE
- HVAC RETURN GRILLE
- FIRE EXIT SIGN LOCATION

KEYNOTES

NUMBER	NOTE
03	DEMOLISH PORTION OR ENTIRE EXISTING CEILING TILES AND GRID.
08	EXISTING TO REMAIN. PATCH AND REPAIR AS NEEDED TO RECEIVE NEW CONSTRUCTION
11	DEMOLISH AWNING AND ASSOCIATED DOWNSPOUTS

KEY PLAN

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER BUILDING 3
3359 NC-43, GREENVILLE, NC 27834

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ISSUANCE
05/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
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ENLARGED DEMOLITION RCP
3AD201

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3AD201
BUILDING 3 DEMOLITION RCP
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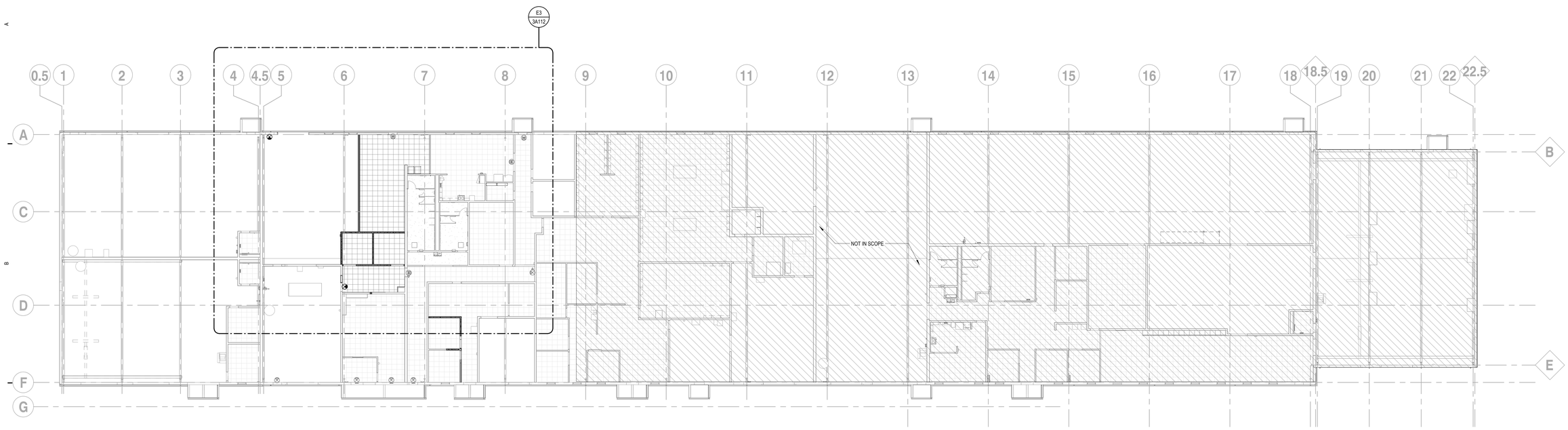
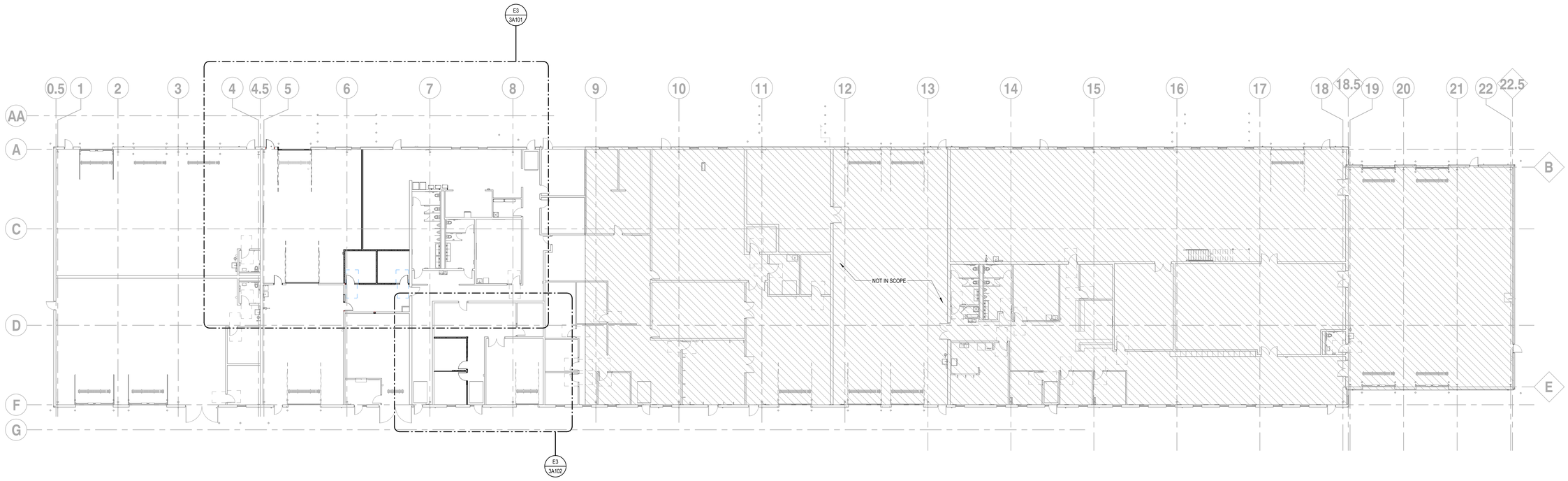


C2 **OVERALL REFLECTED CEILING PLAN**
1/16" = 1'-0"



E2 **OVERALL FIRST FLOOR PLAN**
1/16" = 1'-0"

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3D - 3A100
DOWNTOWN RENOVATION FLOOR PLANS

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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 3
3358 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING PROGRESSIVE ARCHITECTURAL ENGINEERING P.C. 51348 NORTH CAROLINA CHARLOTTE, NC

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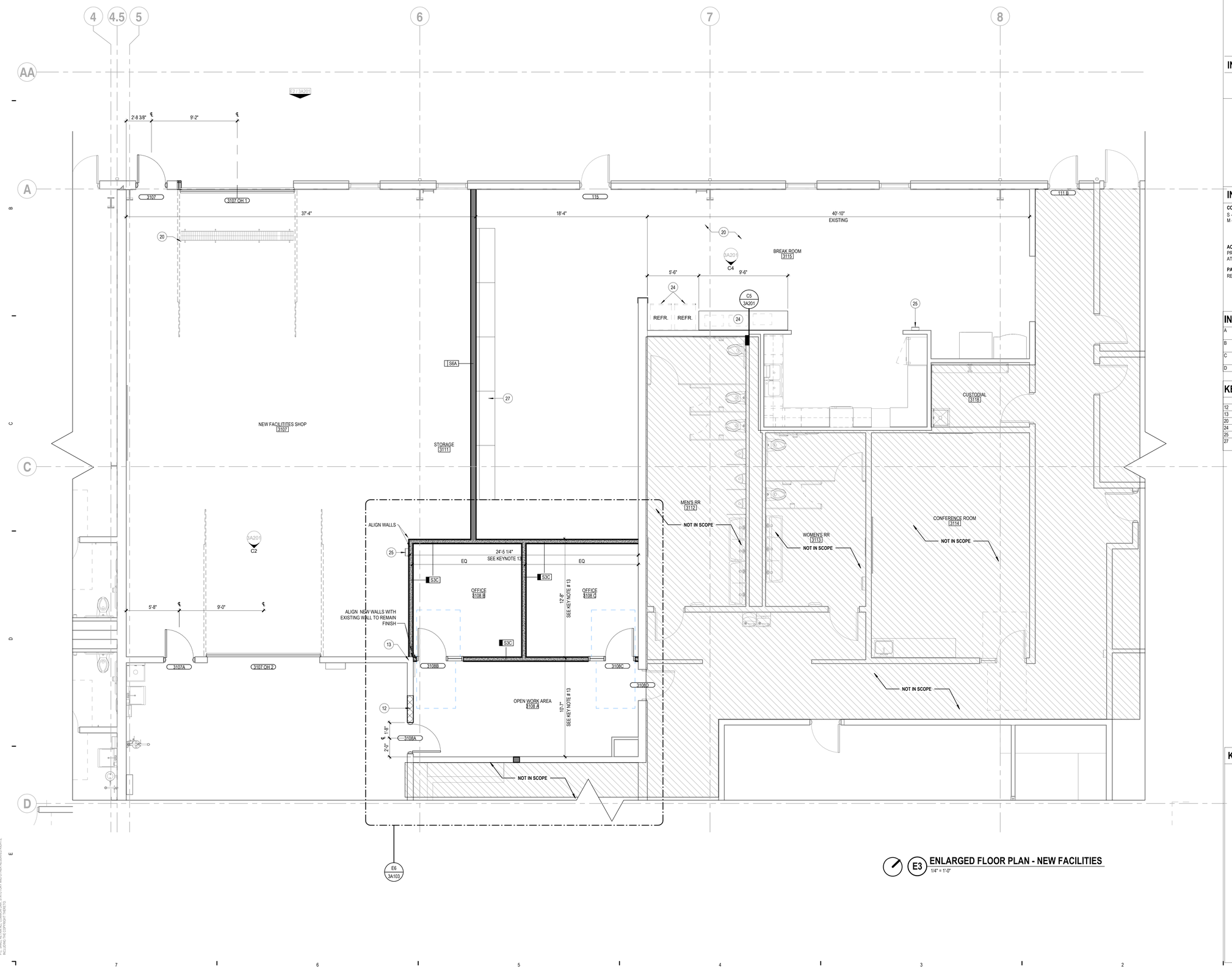
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

OVERALL RENOVATION FLOOR PLANS
3A100



E3 **ENLARGED FLOOR PLAN - NEW FACILITIES**
1/4" = 1'-0"

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. FINISH FLOOR ELEVATION = 100' - 0".
3. EXISTING BUILDING CONDITIONS BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
4. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
5. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
6. ABBREVIATIONS, TYPICAL MOUNTING DIMENSIONS, AND ANNOTATION SYMBOLOGY ARE SHOWN ON GENERAL INFORMATION DRAWINGS.
7. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
9. PATCH ALL DISTURBED SURFACES WITH MATERIALS TO MATCH ADJACENT SURFACE CONSTRUCTION.
10. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
11. REFER TO INTERIORS FOR FINISHES INCLUDING WALL PROTECTION ITEMS.

INTERIOR PARTITION GENERAL NOTES

EXISTING WALL CONSTRUCTION

NEW STUD WALL CONSTRUCTION

NEW MASONRY WALL CONSTRUCTION

1. PROVIDE FIRESTOPPING/ SMOKE SEALANT AT ALL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT ASSEMBLIES, CORRIDORS, AND FLOORS WITH OCCUPIABLE SPACES ABOVE AND BELOW.
2. PROVIDE ACOUSTICAL SEALANT AT ALL WALLS WITH ACOUSTICAL INSULATION.
3. REFER TO STRUCTURAL DRAWINGS FOR MASONRY REINFORCING AND GROUTING.
4. PROVIDE BULLNOSE CONCRETE MASONRY UNITS AT EXPOSED SILLS AND AT ALL INTERIOR EXPOSED VERTICAL CORNERS, INCLUDING WINDOW AND DOOR JAMBS.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS
M - MASONRY

CORE SIZE (NOMINAL)

M12A

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

	S	M
0	7/8"	
1	1 5/8"	
2	2 1/2"	
3	3 5/8"	
4	4"	4"
5		
6	6"	6"
7		
8	8" CFMF	8"
9		
10		10"
11		
12		12"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
B	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
C	(2) LAYERS 5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING. WITH 3" MINERAL WOOL INSULATION IN STUD CAVITIES.
D	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE ; EXTEND TO 4: ABOVE CEILING

KEYNOTES

NUMBER	NOTE
12	INFILL WALL TO MATCH ADJACENT WALL ASSEMBLY.
13	ALIGN NEW WALL WITH ADJACENT EXISTING WALL TO REMAIN.
20	PATCH & REPAIR CONCRETE AS REQUIRED; STAIN/SEAL TO MATCH EXISTING.
24	OWNER PROVIDED EQUIPMENT.
25	RELOCATED FIRE EXTINGUISHER CABINET.
27	REINSTALL BENCH SEAT THAT WAS REMOVED FROM BUILDING 2; COORDINATE FINAL LOCATION WITH OWNER.

KEY PLAN

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 3
3359 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING, P.C. NORTH CAROLINA CORPORATION C-2683 CHARLOTTE, NC 51348

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ISSUANCE
05/11/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

ENLARGED FLOOR PLAN - NEW FACILITES
3A101

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3A101 ENLARGED FLOOR PLAN - NEW FACILITES
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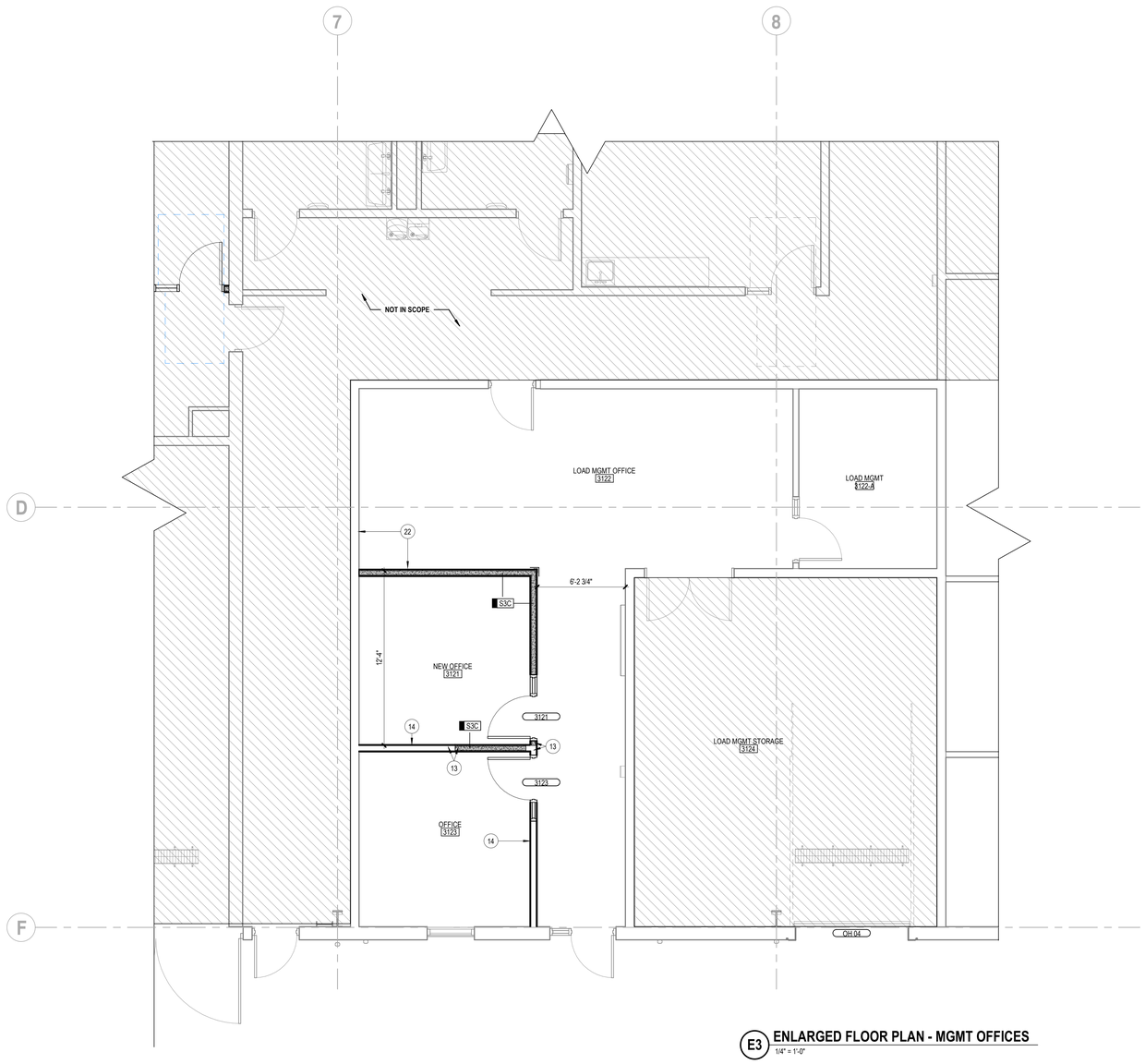

E3 **ENLARGED FLOOR PLAN - MGMT OFFICES**
1/4" = 1'-0"

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. FINISH FLOOR ELEVATION = 100' - 0".
3. EXISTING BUILDING CONDITIONS BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
4. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
5. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
6. ABBREVIATIONS, TYPICAL MOUNTING DIMENSIONS, AND ANNOTATION SYMBOLOGY ARE SHOWN ON GENERAL INFORMATION DRAWINGS.
7. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
9. PATCH ALL DISTURBED SURFACES WITH MATERIALS TO MATCH ADJACENT SURFACE CONSTRUCTION.
10. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
11. REFER TO INTERIORS FOR FINISHES INCLUDING WALL PROTECTION ITEMS.

INTERIOR PARTITION GENERAL NOTES

EXISTING WALL CONSTRUCTION

NEW STUD WALL CONSTRUCTION

NEW MASONRY WALL CONSTRUCTION

1. PROVIDE FIRESTOPPING/ SMOKE SEALANT AT ALL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT ASSEMBLIES, CORRIDORS, AND FLOORS WITH OCCUPIABLE SPACES ABOVE AND BELOW.
2. PROVIDE ACOUSTICAL SEALANT AT ALL WALLS WITH ACOUSTICAL INSULATION.
3. REFER TO STRUCTURAL DRAWINGS FOR MASONRY REINFORCING AND GROUTING.
4. PROVIDE BULLNOSE CONCRETE MASONRY UNITS AT EXPOSED SILLS AND AT ALL INTERIOR EXPOSED VERTICAL CORNERS, INCLUDING WINDOW AND DOOR JAMBS.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS
M - MASONRY

CORE SIZE (NOMINAL)

M12A

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

	S	M
0	7/8"	
1	1 5/8"	
2	2 1/2"	
3	3 5/8"	
4	4"	4"
5		
6	6"	6"
7		
8	8" CFMF	8"
9		
10		10"
11		
12		12"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
B	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
C	(2) LAYERS 5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING. WITH 3" MINERAL WOOL INSULATION IN STUD CAVITIES.
D	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE ; EXTEND TO 4: ABOVE CEILING

KEYNOTES

NUMBER	NOTE
13	ALIGN NEW WALL WITH ADJACENT EXISTING WALL TO REMAIN.
14	EXISTING METAL STUDS TO REMAIN. REMOVE GYP ON ONE SIDE TO INSTALL BATT INSULATION BETWEEN WALL CAVITIES. COVER WITH (2) LAYERS OF GYP. PROVIDE ADDITIONAL LAYER OF GYP ON OTHER SIDE. FINAL WALL ASSEMBLY TO MATCH S3C WALL TYPE.
22	REINSTALL ACOUSTIC WALL PANELS. CONFIRM FINAL LOCATION WITH THE OWNER.

KEY PLAN

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
weareprogressive.com

GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 3
3355 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING, P.C. REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA 51348 CHARLOTTE, NC

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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

ENLARGED FLOOR PLAN FACILITES MANAGEMENT OFFICES

3A102

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3A_3A102
ENLARGED FLOOR PLAN FACILITES MANAGEMENT OFFICES

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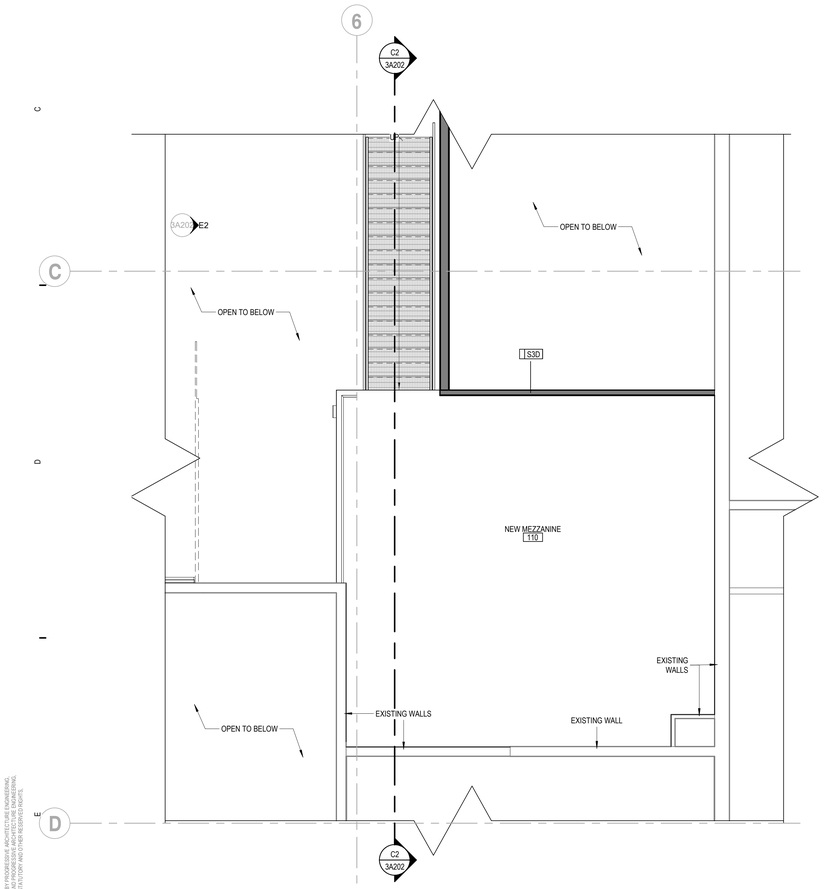
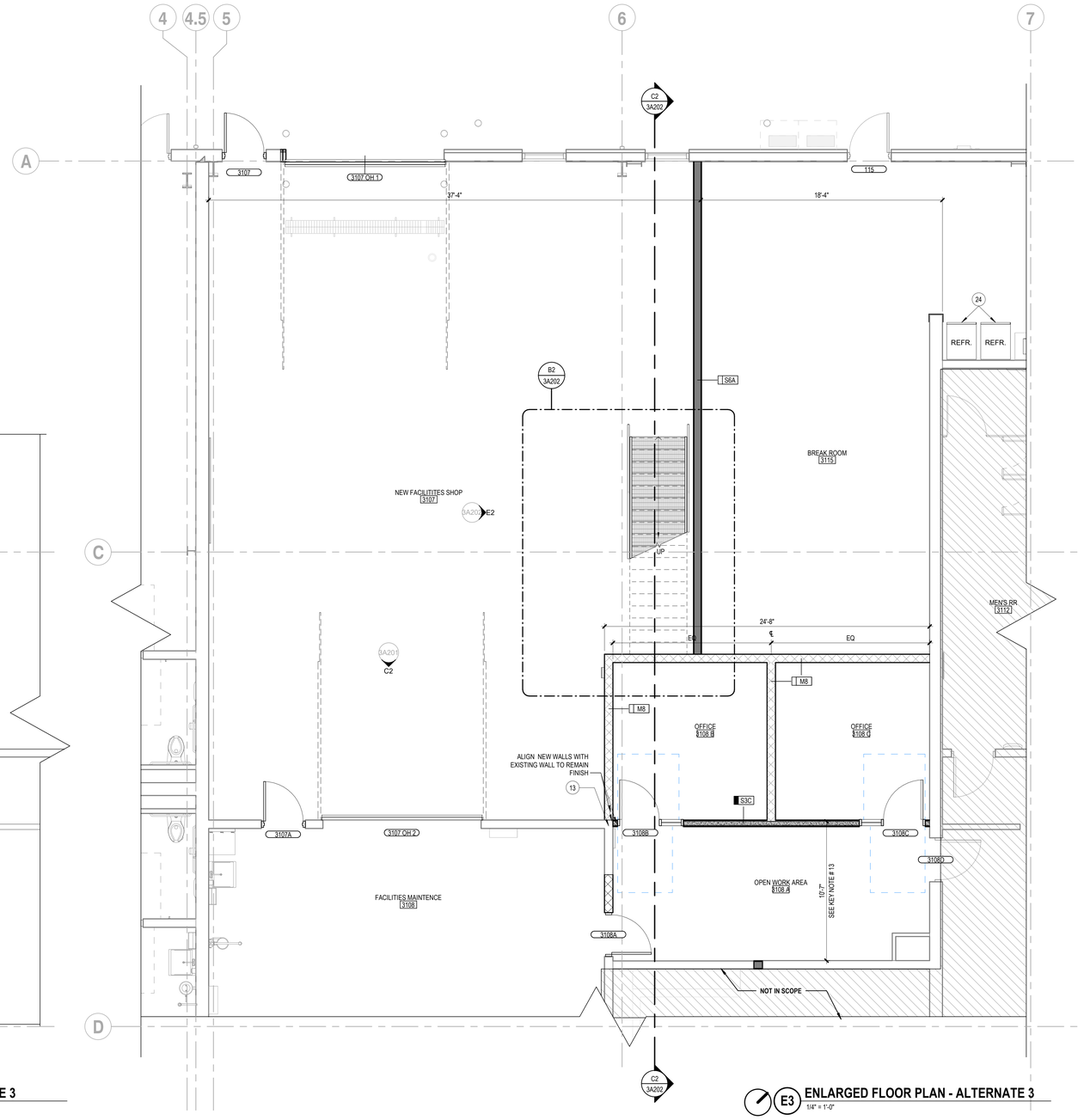


E6 **MEZZANINE LEVEL - ALTERNATE 3**
1/4" = 1'-0"



E3 **ENLARGED FLOOR PLAN - ALTERNATE 3**
1/4" = 1'-0"

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. FINISH FLOOR ELEVATION = 100' - 0".
3. EXISTING BUILDING CONDITIONS BASED ON OWNER PROVIDED DRAWINGS AND LIMITED FIELD VERIFICATION. VERIFY EXACT CONDITIONS IN FIELD. SHOULD DISCREPANCIES OCCUR, NOTIFY ARCHITECT FOR CLARIFICATIONS.
4. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
5. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
6. ABBREVIATIONS, TYPICAL MOUNTING DIMENSIONS, AND ANNOTATION SYMBOLOGY ARE SHOWN ON GENERAL INFORMATION DRAWINGS.
7. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
9. PATCH ALL DISTURBED SURFACES WITH MATERIALS TO MATCH ADJACENT SURFACE CONSTRUCTION.
10. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
11. REFER TO INTERIORS FOR FINISHES INCLUDING WALL PROTECTION ITEMS.

INTERIOR PARTITION GENERAL NOTES

EXISTING WALL CONSTRUCTION

NEW STUD WALL CONSTRUCTION

NEW MASONRY WALL CONSTRUCTION

1. PROVIDE FIRESTOPPING/ SMOKE SEALANT AT ALL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT ASSEMBLIES, CORRIDORS, AND FLOORS WITH OCCUPIABLE SPACES ABOVE AND BELOW.
2. PROVIDE ACOUSTICAL SEALANT AT ALL WALLS WITH ACOUSTICAL INSULATION.
3. REFER TO STRUCTURAL DRAWINGS FOR MASONRY REINFORCING AND GROUTING.
4. PROVIDE BULLNOSE CONCRETE MASONRY UNITS AT EXPOSED SILLS AND AT ALL INTERIOR EXPOSED VERTICAL CORNERS, INCLUDING WINDOW AND DOOR JAMBS.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS
M - MASONRY

CORE SIZE (NOMINAL)

M12A

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

	S	M
0	7/8"	
1	1 5/8"	
2	2 1/2"	
3	3 5/8"	
4	4"	4"
5		
6	6"	6"
7		
8	8" CFMF	8"
9		
10		10"
11		
12		12"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
B	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
C	(2) LAYERS 5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO 4" ABOVE CEILING. WITH 3" MINERAL WOOL INSULATION IN STUD CAVITIES.
D	(1) LAYER 5/8" GYPSUM BOARD ON ONE SIDE ; EXTEND TO 4: ABOVE CEILING

KEYNOTES

NUMBER	NOTE
13	ALIGN NEW WALL WITH ADJACENT EXISTING WALL TO REMAIN.
24	OWNER PROVIDED EQUIPMENT.

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
PROGRESSIVE COMPANIES
Charlotte, NC | Detroit, MI | Grand Rapids, MI
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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER
BUILDING 3

3355 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING, P.C. REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA 51348 CHARLOTTE, NC

NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO

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A. IDOL
PROFESSIONAL
Y.LUO
DRAWN BY
M. FUENTES
CHECKED BY

MEZZANINE (ALTERNATE 3)
3A103

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35 - 3A103
MEZZANINE (ALTERNATE 3)
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KEYNOTES

NUMBER	NOTE
17	NEW BULKHEAD AT 9'8" AFF. AND RUNS MINIMUM 4" ABOVE CEILING.
18	RELOCATE LIGHT FIXTURES AS NEEDED WITHIN THE SPACE. EXISTING CEILING TO REMAIN.
19	PROVIDE NEW EXIT SIGN
28	PROVIDE BATT INSULATION ABOVE ACT CEILINGS. DISREGARD NOTE IF ALTERNATE 3 (MEZZANINE) IS APPROVED.

REFLECTED CEILING PLAN LEGEND

1. ALL CEILING GRIDS ARE TO BE CENTERED IN ROOM / AREA OR ALIGNED WITH ADJACENT ROOM / AREA AS INDICATED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHTS INDICATED ARE DIMENSIONED FROM THE FINISHED FLOOR BELOW.
3. ALL LIGHT FIXTURES, SPRINKLER HEADS, RETURN AIR GRILLES AND SUPPLY AIR GRILLES ARE TO BE LOCATED IN THE CENTER OF THE CEILING PAD, UNLESS NOTED OTHERWISE.
4. COORDINATE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TO ASSURE PROPER CLEARANCES AND LAYOUT.

EXPOSED

2X2 ACOUSTIC CEILING PANEL

EXISTING GYPSUM BOARD

EXISTING 2X2 ACOUSTIC CEILING PANEL

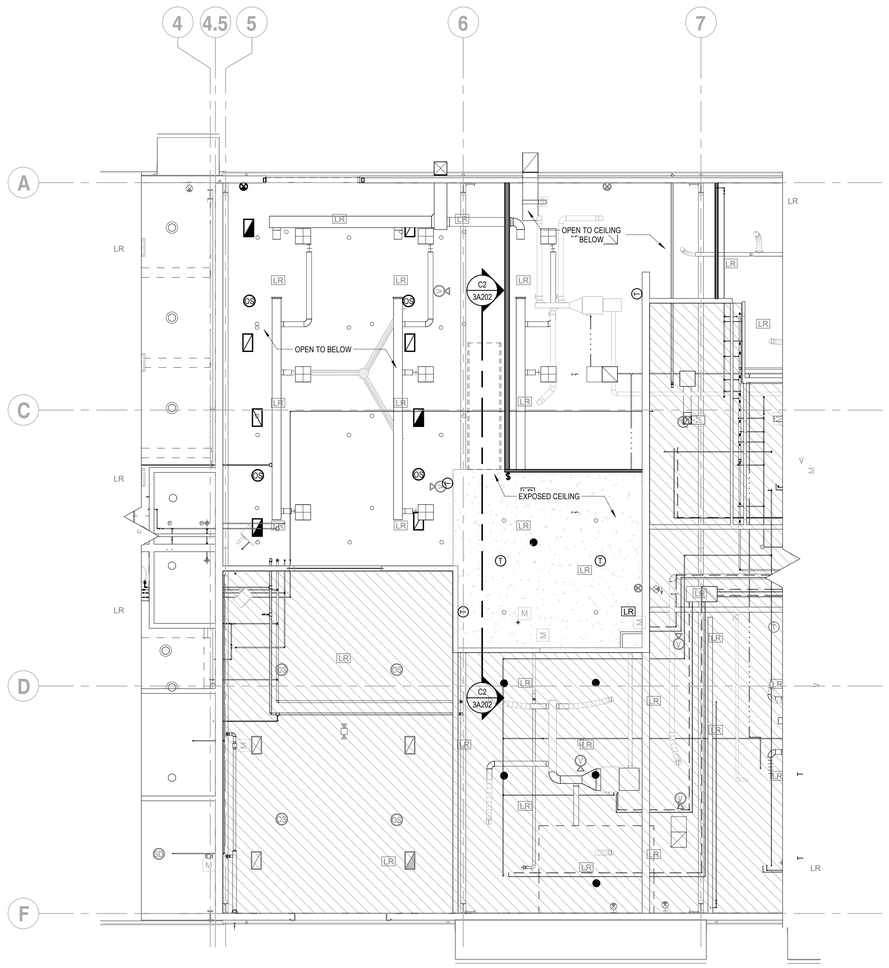
2X2 LIGHT FIXTURE

LINEAR LIGHT FIXTURE

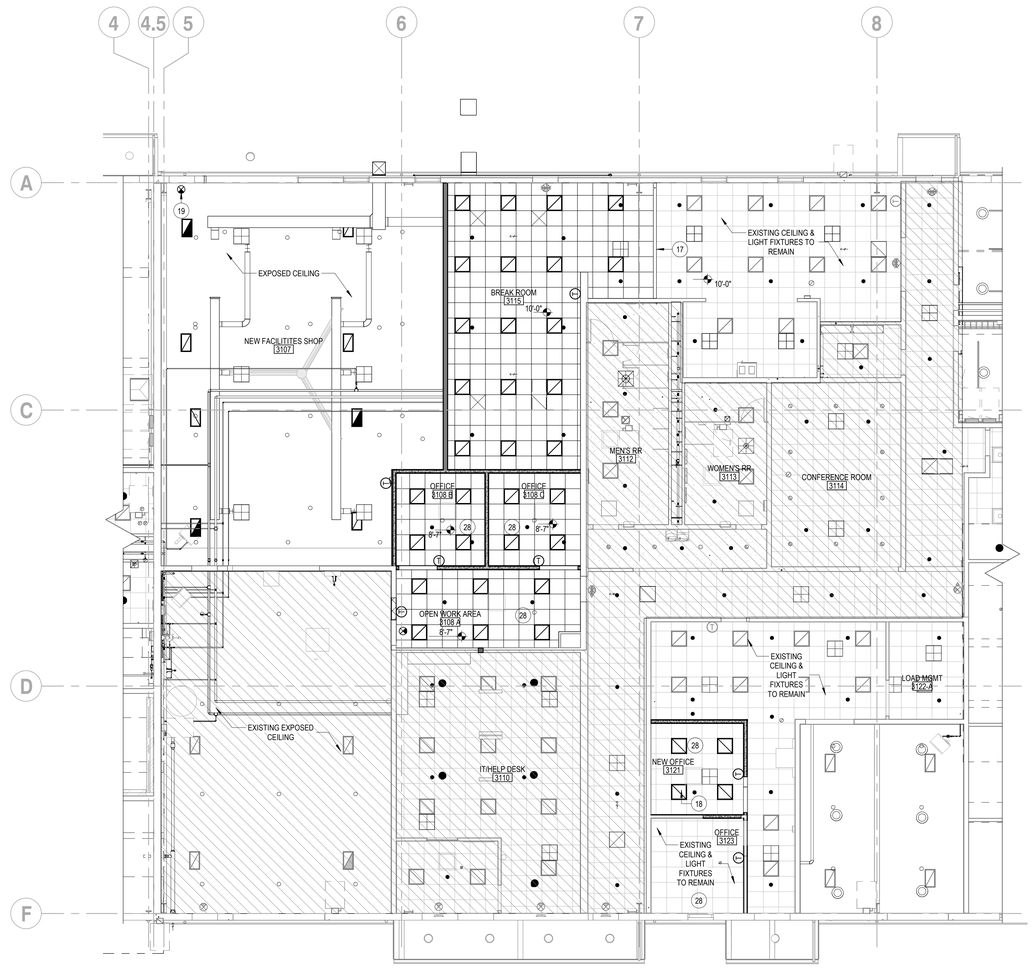
HVAC SUPPLY GRILLE

HVAC RETURN GRILLE

FIRE EXIT SIGN LOCATION



E5 ENLARGED REFLECTED CEILING PLAN - MEZZANINE (ALT 3)
1/8" = 1'-0"



E3 ENLARGED RENOVATION RCP
1/8" = 1'-0"

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RENOVATIONS TO OPERATION CENTER BUILDING 3
3358 NC-43, GREENVILLE, NC 27834

PROFESSIONAL ARCHITECTURE ENGINEERING CORPORATE ARCHITECTURAL CORPORATE NORTH CAROLINA 51348 CHARLOTTE, NC

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

RENOVATION REFLECTED CEILING PLAN
3A112

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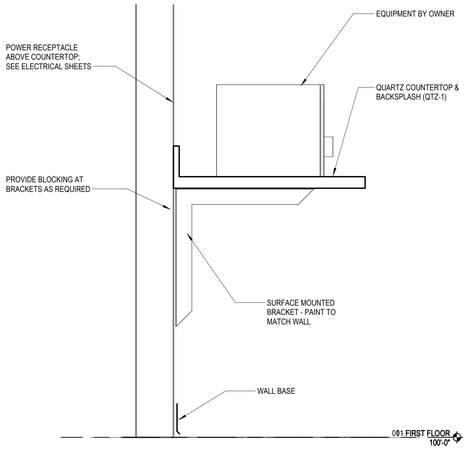
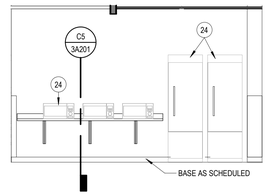
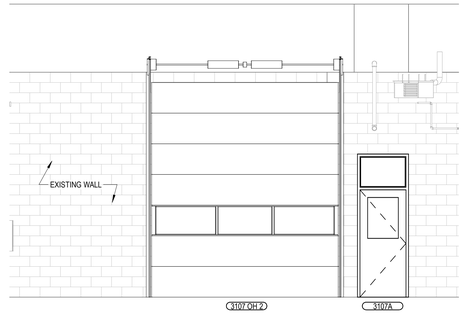
3D - 3A112
RENOVATION REFLECTED CEILING PLAN



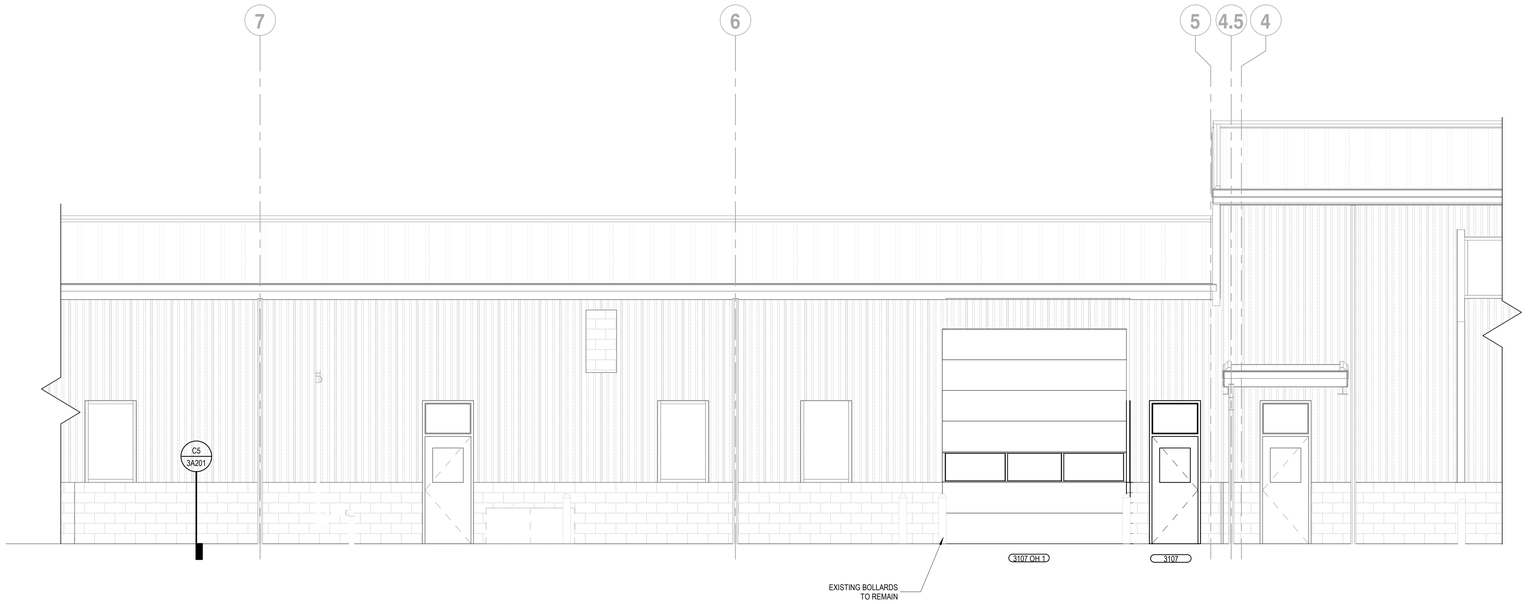
C5 TYPICAL WORK SURFACE
1 1/2" = 1'-0"



C4 BREAK ROOM ELEVATION - NEW COUNTER
1/4" = 1'-0"



C2 INTERIOR ELEVATION - INTERIOR OVERHEAD DOOR
1/4" = 1'-0"



E2 EXTERIOR ELEVATION - NEW FACILITIES SHOP
1/4" = 1'-0"

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3A201 - 3A201
INTERIOR ELEVATIONS & DETAILS

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PROFESSIONAL
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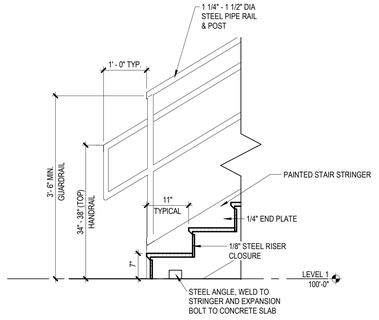
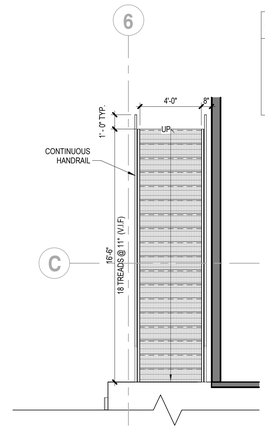
DRAWN BY
M. FUENTES/ R. WOOLARD
CHECKED BY

INTERIOR ELEVATIONS & DETAILS
3A201

24.2.002



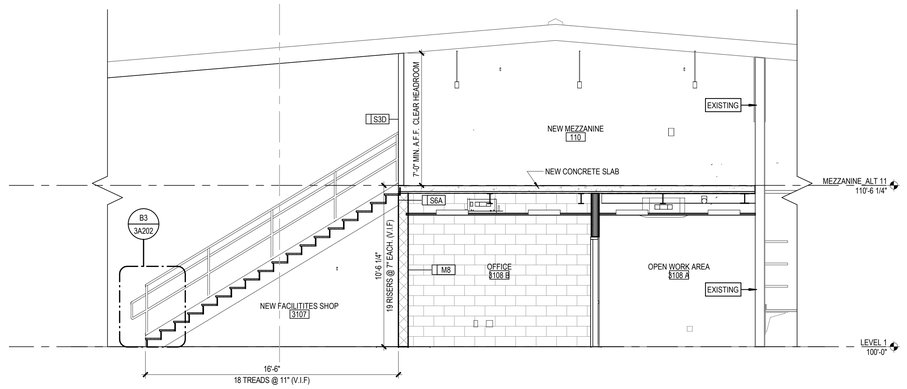
B3 STAIR DETAIL
3/4" = 1'-0"



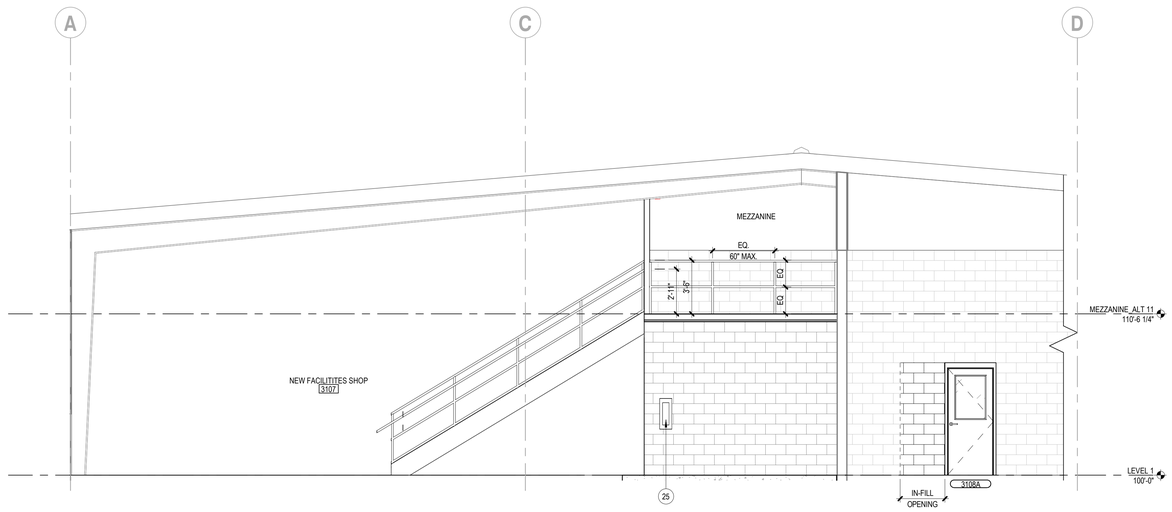
B2 STAIR (MEZZANINE 3)
1/4" = 1'-0"

GENERAL STAIR NOTES

1. ALL EXPOSED STEEL ON STAIRS SHALL BE PRIMED AND PAINTED.
2. HANDRAILS SHALL BE CONTINUOUS FROM LEVEL TO FLOOR LEVEL.
3. STAIRS TO BE DELEGATED DESIGN; DESIGN INTENT IS TO MATCH EXISTING STAIRS IN TRANSFORMERS WAREHOUSE (ROOM 3151) MEZZANINE.



C2 MEZZANINE SECTION
1/4" = 1'-0"



E2 INTERIOR ELEVATION - NEW FACILITIES SHOP
1/4" = 1'-0"

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3D - 3A202
DETAILS ALTERNATE 3
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PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

DETAILS ALTERNATE 3
3A202

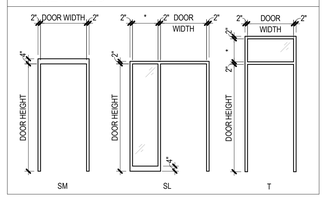
DOOR SCHEDULE NOTES

1	EXISTING FRAME, DOOR AND HARDWARE
2	EXISTING FRAME AND DOOR
3	EXISTING HARDWARE
4	CARD ACCESS
5	FULL (170 DEGREE) SWING
6	
7	1/4" TEMPERED GLASS
8	1/4" TEMPERED WINDOW FILM
9	1" CLEAR TEMPERED, LOW-E INSULATING
10	

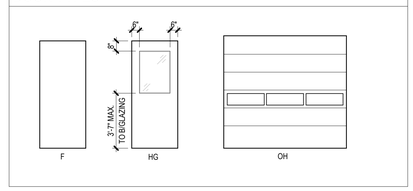
DOOR SCHEDULE

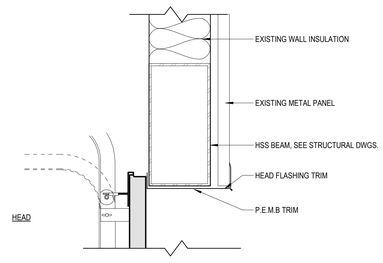
MARK	Location	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MATERIAL	FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HDW	DETAILS HEAD	DETAILS JAMB	NOTES
3107	NEW FACILITITES SHOP (EXTERIOR)	3'-0"	7'-0"	HG	HM	PT	T	HM	PT	6	E4	E4	4, 9
3107 OH 1	NEW FACILITITES SHOP (EXTERIOR)	12'-0"	14'-0"	01	GS	RIBBED, TEXTURED	OH	SS	#4	7	D2	D2	FULL VERTICAL TRACKS TO MATCH 3108
3107 OH 2	BETWEEN FACILITES SHOPS (INTERIOR)	12'-0"	14'-0"	01	GS	RIBBED, TEXTURED	OH	SS	#4	7	D3	D3	FULL VERTICAL TRACKS TO MATCH 3108
3107A	SWING DOOR 3107/3108	3'-0"	7'-0"	F	HM	PT	T	HM	PT	9	E3		7
3108A	OPEN WORK AREA	3'-0"	7'-0"	HG	HM	PT	SL	HM	PT	9	E3		7
3108B	OFFICE	3'-0"	7'-0"	F	HM	PT	SL	HM	PT	3	E2		7
3108C	OFFICE	3'-0"	7'-0"	F	HM	PT	SL	HM	PT	3	E2		7
3121	OFFICE	3'-0"	7'-0"	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST	EXIST (3)	E2		#1 FROM SS.1.17
3123	OFFICE	3'-0"	7'-0"	F	HM	CLR	SL	HM	PT	3	E2		7

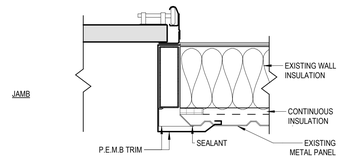
FRAME TYPES



DOOR TYPES

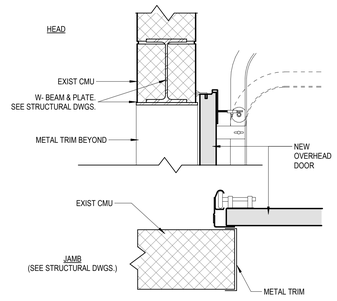






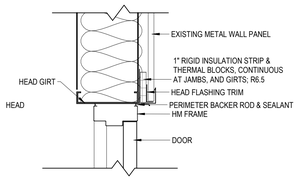
OVERHEAD DOOR - HEAD AND JAMB IN P.E.M.B

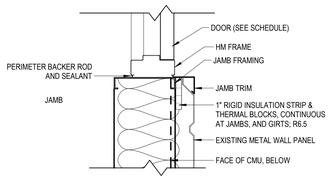
D2 1 1/2" = 1'-0"



OVERHEAD DOOR - HEAD AND JAMB

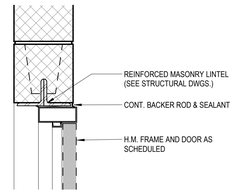
D3 1 1/2" = 1'-0"





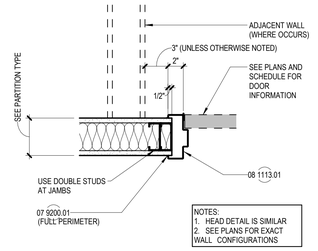
INTERIOR HOLLOW METAL FRAME- HEAD AND JAMB

E4 1 1/2" = 1'-0"



INTERIOR HOLLOW METAL FRAME AT CMU

E3 1 1/2" = 1'-0"



INTERIOR HOLLOW METAL FRAME

E2 1 1/2" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 13690 ARCHITECT YI LUO

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06/17/2026. CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
M. FUENTES
CHECKED BY

DOOR SCHEDULE, ELEVATIONS, AND DETAILS
3A601

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3A601-DOOR SCHEDULE, ELEVATIONS, AND DETAILS
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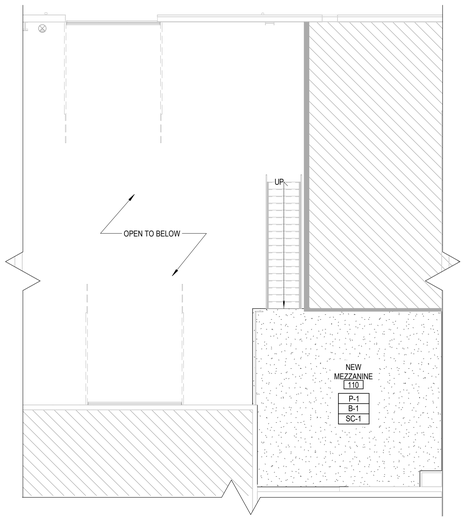
ROOM FINISH SCHEDULE

ROOM FINISH SCHEDULE	ROOM		FLOORS		WALL	CEILING	REMARKS
Level	NO.	NAME	FINISH	BASE	FINISH	FINISH	
LEVEL 1	3107	NEW FACILITITES SHOP	EX	N/A	P-1	EX	
LEVEL 1	3108	FACILITIES MAINTENCE	SC-1	N/A	P-1		
LEVEL 1	3108 A	OPEN WORK AREA	CPT-1	B-1	P-1	ACT-1	
LEVEL 1	3108 B	OFFICE	CPT-1	B-1	P-1	ACT-1	
LEVEL 1	3108 C	OFFICE	CPT-1	B-1	P-1	ACT-1	
LEVEL 1	3115	BREAK ROOM	SC-1	B-1	P-1	ACT-1, EX.	REFER TO RENOVATION RCP
LEVEL 1	3121	NEW OFFICE	CPT-1	B-1	P-1	ACT-1	
LEVEL 1	3122	LOAD MGMT OFFICE	CPT-1	B-1	P-1	EX	
LEVEL 1	3123	OFFICE	CPT-1	B-1	P-1	EX	

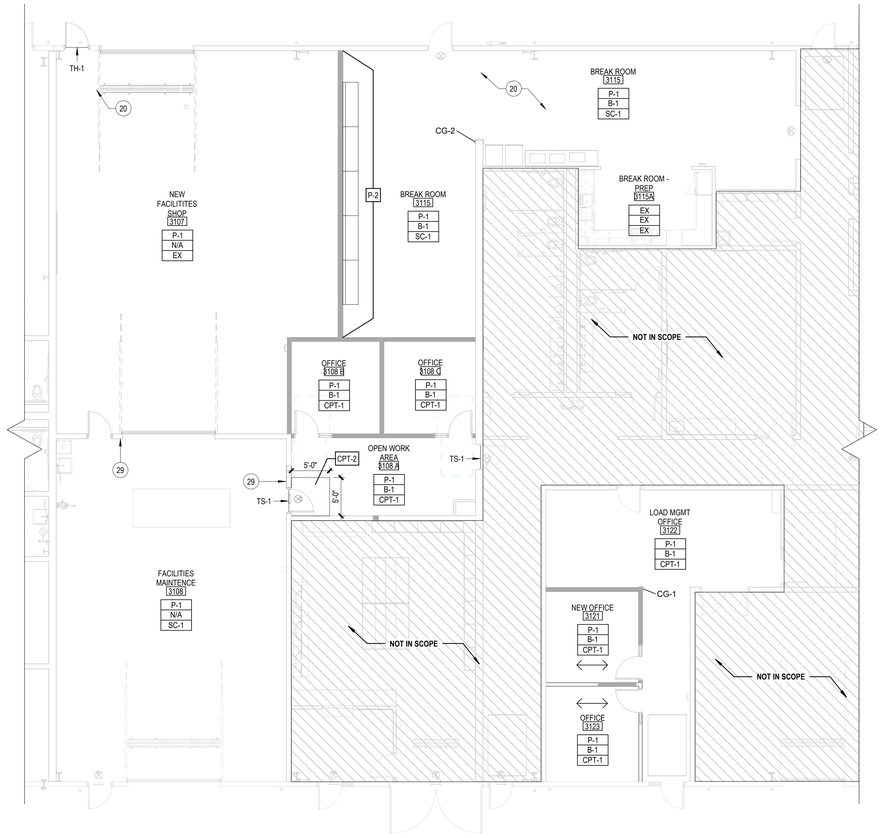
FINISH MATERIAL LIST

FINISH MATERIAL LIST GROUP	MARK	TYPE	MANUFACTURER	STYLE / PATTERN / FINISH	SIZE	COLOR	NOTES
10 FLOORS							
10 FLOORS	CPT-1	CARPET TILE	MILLIKEN	JOURNAL - FREEHAND	19.69" X 19.69"	FRE19-106 COMPOSE W/ QUARTZ/NAVY	ASHLAR INSTALLATION
10 FLOORS	CPT-2	WALK-OFF CARPET	MILLIKEN	OBEX TILE, CUT / GRAIN - GRC235	39.37" X 9.84"	DESIGNER TO SELECT FROM FULL COLOR LINE	
10 FLOORS	SC-1	SEALED CONCRETE	-	-	-	-	MATCH EXISTING STAINED/SEALED CONCRETE IN SURROUNDING AREAS
20 BASE							
20 BASE	B-1	RUBBER BASE	JOHNSONITE	COVE	4"	71 STORM CLOUD	
30 WALLS							
30 WALLS	P-1	PAINT - FIELD	PPG	EGG SHELL	-	TINSEL - PPG 1012-3	
30 WALLS	P-2	PAINT - ACCENT	SHERWIN WILLIAMS	SEMI-GLOSS	-	SURF GREEN - SW 6473	
30 WALLS	P-3	PAINT - DOOR FRAMES & HANDRAILS	PPG	SEMI-GLOSS	-	VOLCANIC ASH - PPG 555-6	
40 CEILING							
40 CEILING	ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	ULTIMA SQUARE LAY-IN PANELS	2' X 2'		W/ PRELUDE XL GRID
40 CEILING	P-4	PAINT - EXPOSED CEILINGS	-	-	-	MATCH EXISTING	ALL EXPOSED CEILING LOCATIONS AS REQUIRED
50 CASEWORK							
50 CASEWORK	QTZ-1	QUARTZ	CORIAN	LEATHERED FINISH	-	DOVE GREY	MATCH THICKNESS OF EXISITNG COUNTERS
60 MISCELLANEOUS							
60 MISCELLANEOUS	CG-1	CORNER GUARD	CS SPECIALTIES	CO-8 90 DEGREE CORNER	4'-0" HEIGHT	#4 STAINLESS STEEL	SEE FINISH PLAN FOR LOCATIONS; REINSTALL ANY SAVED CORNER GUARDS
60 MISCELLANEOUS	CG-2	END GUARD	CS SPECIALTIES	SCO-8 CHANNEL GUARD	4'-0" HEIGHT	#4 STAINLESS STEEL	SEE FINISH PLAN FOR LOCATIONS; REINSTALL ANY SAVED END GUARDS
60 MISCELLANEOUS	TH-1	THRESHOLD - EXTERIOR DOOR	-	-	-	ALUMINUM	SEE SPECIFICATIONS FOR DETAILS
60 MISCELLANEOUS	TS-1	TRANSITION STRIP - RUBBER	JOHNSONITE	-	-	MATCH EXISTING	CAARPET TO CONCRETE LOCATIONS; 1/2" MAX



2 MEZZANINE_ALTERNATE 3 - FINISH PLAN

1/8" = 1'-0"



1 FIRST FLOOR FINISH PLAN

1/8" = 1'-0"

FINISH GENERAL NOTES

1. GENERAL
   A. REPAIR ALL EXISTING MATERIALS SCHEDULED TO REMAIN, USING OWNER'S ATTIC STOCK. IF NO ATTIC STOCK EXISTS, USE NEW MATERIAL TO MATCH EXISTING.
2. FLOORING:
   A. INSTALL FLOORING MATERIAL IN DIRECTION INDICATED ON FINISH PLAN.
   B. PROVIDE A CEMENTITIOUS COMPOUND BETWEEN FLOOR MATERIALS OF DIFFERENT THICKNESS. FEATHER FLOOR FOR SMOOTH TRANSITION.
   C. USE RESILIENT TRANSITION STRIPS BETWEEN CARPET / CONCRETE.
   D. PATCH & REPAIR ALL CONCRETE FLOOR LOCATIONS IMPACTED BY DEMOLITION OR NEW WORK. STAIN/SEAL TO MATCH EXISTING.
3. BASE:
   A. TYPICAL BASE PROFILE AT CARPET SHALL BE COVE.
   B. TYPICAL BASE PROFILE AT RESILIENT FLOORING SHALL BE COVE.
   C. WHERE SHEET MATERIALS ARE USED, STANDARD BASE DETAIL SHALL BE FLASH COVE.
4. WALLS:
   A. REPAINT ENTIRE WALL SECTION WHERE DEMOLITION OCCURS TO PROVIDE THE BEST FINISH LOOK. COLOR TO MATCH ADJACENT WALL. REFER TO FINISH PLAN.
   B. REFER TO FINISH PLAN FOR CORNER GUARD LOCATIONS.
5. CEILINGS:
   A. IN ALL LOCATIONS WHERE DEMOLITION AND/OR NEW WORK DISTURBS EXPOSED CEILINGS, PAINT TO MATCH EXISTING.
   B. REPLACE ANY CEILING TILES DAMAGED DURING DEMOLITION; MATCH EXISTING
6. EXPOSED COLUMNS:
   A. PAINT ALL EXPOSED COLUMNS. REFER TO FINISH PLAN.
7. BULKHEADS:
   A. PAINT BULKHEAD UNDERSIDES . COLOR TO MATCH ADJACENT WALL. UNLESS OTHERWISE INDICATED.
   B. PAINT BULKHEAD FACE TO MATCH ADJACENT WALL COLOR.
8. DOORS AND FRAMES:
   A. PAINT ALL INTERIOR HOLLOW METAL DOOR FRAMES. COLOR TO BE P-3.
   B. PAINT ALL INTERIOR HOLLOW METAL DOORS. COLOR TO BE P-3.
   C. PAINT EXTERIOR HOLLOW METAL DOORS.
      a. INTERIOR COLOR TO BE P-3.
      b. EXTERIOR COLOR TO MATCH EXISTING.
   D. FRAME COLOR TRANSITION TO TAKE PLACE AT INSIDE CORNER OF STOP ON DOOR SIDE.
9. WINDOW SILLS: (N/A)
10. DIFFUSERS AND COVERS:
    A. PAINT WALL DIFFUSER AND AIR GRILLE COVERS TO MATCH ADJACENT WALL.

FINISH PLAN LEGEND

- F-1 — FLOOR / WALL FINISH INDICATOR
- ⟷ — FLOORING PATTERN DIRECTION
- W-1 — WALL FINISH EXTENTS
- ——— — FLOOR FINISH EXTENTS
- ROOM NAME 101 / WALL / BASE / FLOOR — ROOM FINISH TAG

KEYNOTES

NUMBER	NOTE
20	PATCH & REPAIR CONCRETE AS REQUIRED; STAIN/SEAL TO MATCH EXISTING.
29	PATCH WALL & FLOOR FINISHES AS REQUIRED TO MATCH EXISTING.

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BUILDING 3
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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
Y. LUO
DRAWN BY
R. WOOLARD
CHECKED BY

FINISH PLAN AND MATERIALS LIST
3A800

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FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	SIDEWALL HEAD
	SIDEWALL HEAD - DRY
	PENDENT HEAD
	PENDENT HEAD WITH GUARD
	CONCEALED HEAD
	UPRIGHT HEAD
	UPRIGHT HEAD WITH GUARD
	WINDOW COVERAGE HEAD
N	NEW HEAD
E	EXISTING HEAD
D	DEMOLISHED HEAD
FP	FIRE PROTECTION PIPING
FP-D	FIRE PROTECTION PIPING - DRY
FP-PA	FIRE PROTECTION PIPING - PRE-ACTION
	FIRE DEPARTMENT CONNECTION
	DRY SPRINKLER COVERAGE REQUIRED

FIRE PROTECTION ABBREVIATIONS

BAS	BUILDING AUTOMATION SYSTEM
BV	BALL VALVE
CV	CHECK VALVE
DPR	DAMPER
EMCS	EMERGENCY MONITORING AND CONTROL SYSTEM
EX	EXISTING
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHV	FIRE HOSE VALVE
FPM	FIRE PROTECTION MAIN
FVC	FIRE VALVE CABINET
GPDWF	GYPSUM DRYWALL, FIRE-RATED
PRV	PRESSURE REDUCING VALVE
SPKR	SPRINKLER
VB	VALVE BOX
ZVB	ZONE VALVE BOX

FIRE SPRINKLER GENERAL NOTES

1. ALL ROOMS/AREAS PART OF THIS REMODEL PROJECT ARE CURRENTLY SPRINKLED. THIS CONTRACTOR SHALL BE RESPONSIBLE TO MODIFY THE EXISTING FIRE SPRINKLER SYSTEM AS REQUIRED DUE TO CHANGES IN WALLS, CEILINGS, LIGHTING AND HVAC. ALL ROOMS/AREAS WITHIN THE BOUNDARY OF THIS REMODEL SHALL BE SPRINKLED. ALL NEW WORK SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13, STATE CODES, LOCAL CODES AND LOCAL ORDINANCES. ALL COMPONENTS SHALL BE UL LISTED AND FM APPROVED.
2. AN AUTOMATIC WET SPRINKLER SYSTEM SHALL BE PROVIDED IN ALL CONDITIONED SPACES. A DRY SPRINKLER SYSTEM SHALL BE PROVIDED FOR UNCONDITIONED AREAS SUBJECT TO FREEZING.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING CURRENT HYDRANT TEST DATA (PERFORMED WITHIN LAST SIX MONTHS) AND PERFORMING HYDRAULIC CALCULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE FIRE SPRINKLER PIPING BASED ON THE HYDRAULIC CALCULATIONS. DESIGN CALCULATIONS FOR NEW SPRINKLERS SHALL ALLOW FOR 10 PERCENT SAFETY FACTOR.
4. ALL NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE.
5. EXISTING SPRINKLERS WILL REMAIN IF THEY ARE NOT REQUIRED TO BE MOVED. NEW SPRINKLER LOCATIONS WILL REQUIRE NEW SPRINKLER HEADS (NO REALLOCATIONS REQUIRING RE-THREADING HEAD INTO NEW DROP PIPE.)
6. REFER TO "G" DRAWINGS AND TITLE SHEET "T" FOR CODE COMPLIANCE AND ADDITIONAL INFORMATION.
7. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS.
8. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES ETC.
9. ARCHITECTURAL, HVAC AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES' WORK.
10. AUTOCAD (DWG) COMPATIBLE FILES WILL BE MADE AVAILABLE TO THE SUCCESSFUL FIRE SPRINKLER CONTRACTOR IN ELECTRONIC FORMAT UPON REQUEST.
11. SYSTEM MODIFICATIONS SHALL BE DESIGNED AND SIZED HYDRAULICALLY IN ACCORDANCE WITH NFPA 13, OWNER'S INSURER, AND ALL STATE AND LOCAL CODES AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
12. ALL NEW SYSTEM PIPING SHALL BE INSTALLED TO ALLOW DRAINAGE BACK TO THE SYSTEM RISERS WHEN POSSIBLE. WHERE IMPRACTICAL, AUXILIARY DRAINS SHALL BE INSTALLED AND DRAINED TO AN ACCEPTABLE LOCATION AS AGREED TO BY THE OWNER AND ENGINEER. EXISTING DRAINS SHALL REMAIN.
13. COORDINATE SPRINKLER HEAD LOCATIONS AND PIPE ROUTING WITH OTHER TRADES TO AVOID INTERFERENCE. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND THE MECHANICAL AND ELECTRICAL PLANS FOR LOCATIONS OF CEILINGS, DIFFUSERS, LIGHTS AND OTHER CEILING ORNAMENTATION.
14. ALL MAINS RUNNING PARALLEL WITH BUILDING JOISTS/BEAMS SHALL BE HUNG USING HANGERS ATTACHED TO SUPPORTING STEEL SUPPORTED AT PANEL POINTS OF JOISTS AND IN ACCORDANCE WITH NFPA STANDARDS.
15. REFER TO GENERAL AND SUPPLEMENTAL CONDITIONS OF BID INSTRUCTIONS FOR CUTTING AND PATCHING OF WALLS AND ROOFS. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR ALL PENETRATIONS REQUIRED TO COMPLETE THE WORK. SEE SPECIFICATIONS FOR PIPE SEALS, WATERPROOFING, SLEEVES, AND ESCUTCHEON REQUIREMENTS.
16. WHERE CEILINGS ARE PRESENT, STANDARD SPRINKLER TO BE CONCEALED HEAD WITH WHITE ESCUTCHEON PLATE. CENTER HEAD IN LAY-IN CEILING TILE OR ALIGNED WITH ADJACENT LIGHTS OR DEVICES IN HARD LID CEILINGS, UNLESS OTHERWISE INDICATED.
17. ALL FIRE PROTECTION PIPING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13, THREADING OF LIGHT WALL PIPING (LESS THAN SCHEDULE 40) SHALL BE PROHIBITED. OUTLETS AND TEES BEING APPLIED TO EXISTING PIPING MUST BE WELDED, THREADED OR GROOVED DESIGN. "TAP-ON" TYPE TEES THAT ARE NOT FULL CIRCUMFERENCE, BOLTED TYPE CONNECTIONS WILL NOT BE ALLOWED.
18. ALL SPRINKLERS SHALL BE UL LISTED AND FM APPROVED FOR THE INTENDED APPLICATION WHEN APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S LISTINGS. SPRINKLERS SHALL BE GLASS BULB TYPE AND SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 13.
19. REFER TO ARCHITECTURAL DRAWINGS, SPECIFICALLY WALL SECTIONS AND REFLECTED CEILING PLANS. THE CONTRACTOR SHALL ROUTE NEW FIRE SPRINKLER PIPING AT ELEVATION EQUAL TO EXISTING, COORDINATING WITH NEW AND EXISTING DUCTWORK, PLUMBING AND ELECTRICAL CONDUIT. DESIGN INTENT IS FOR FP PIPING TO ROUTE AROUND EXISTING MECHANICAL CONDITIONS.

FIRE SPRINKLER DESIGN CRITERIA

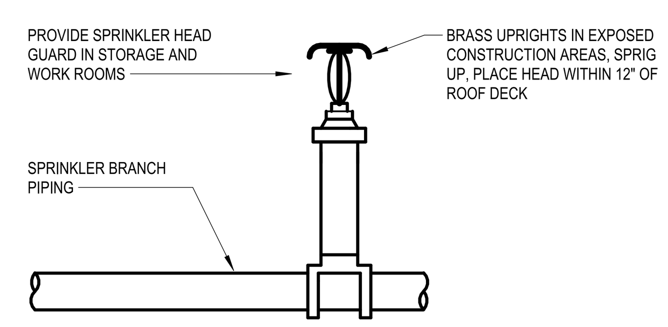
CLASSIFICATION:	RESIDENTIAL	SYMBOL
DENSITY CRITERIA	0.10 GPM/SQ.FT.	R
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	
MAX HEAD SPACING:	15 FT.	
CLASSIFICATION:	**LIGHT HAZARD**	
DENSITY CRITERIA:	0.10 GPM/SQ.FT.	LT
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	
MAX HEAD SPACING:	15 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.15 GPM/SQ.FT.	OH1
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.20 GPM/SQ.FT.	OH2
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.30 GPM/SQ.FT.	EH1
TYPICAL OPERATING AREA:	2,500 SQ.FT.	
SYSTEM AREA LIMIT:	40,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.40 GPM/SQ.FT.	EH2
TYPICAL OPERATING AREA:	2,500 SQ.FT.	
SYSTEM AREA LIMIT:	40,000 SQ.FT.	

NOTE:
SPRINKLER HEAD TEMPERATURE RATING TO BE BASED ON MAXIMUM CEILING TEMPERATURE PER NFPA 13 TABLE 7.2.4.1

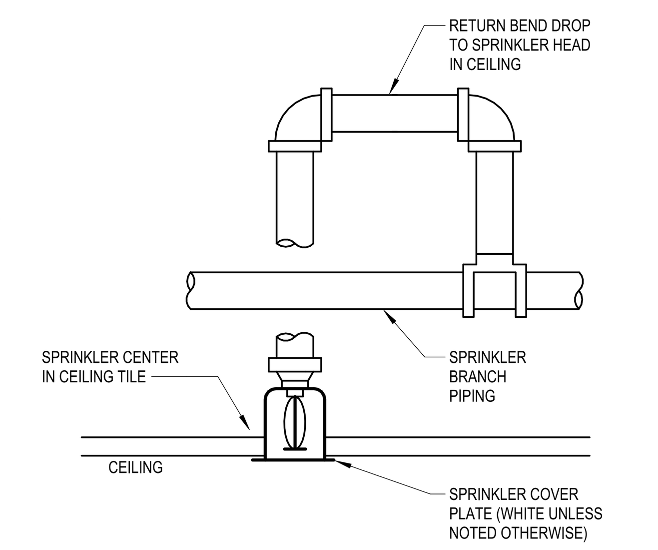
SPRINKLER HEAD SCHEDULE

CEILING / ROOM CONDITION	SPRINKLER TYPE
SUSPENDED CEILINGS	CONCEALED PENDENT QUICK RESPONSE, STANDARD COVERAGE
EXPOSED AREAS	UPRIGHT HEAD QUICK RESPONSE, STANDARD COVERAGE
AREAS W/O CEILINGS	SIDEWALL HEAD QUICK RESPONSE, STANDARD COVERAGE
STORAGE AREAS	UPRIGHT HEAD WITH GUARD STANDARD RESPONSE AND COVERAGE
AREAS SUBJECT TO FREEZING	DRY PENDENT QUICK RESPONSE, STANDARD COVERAGE

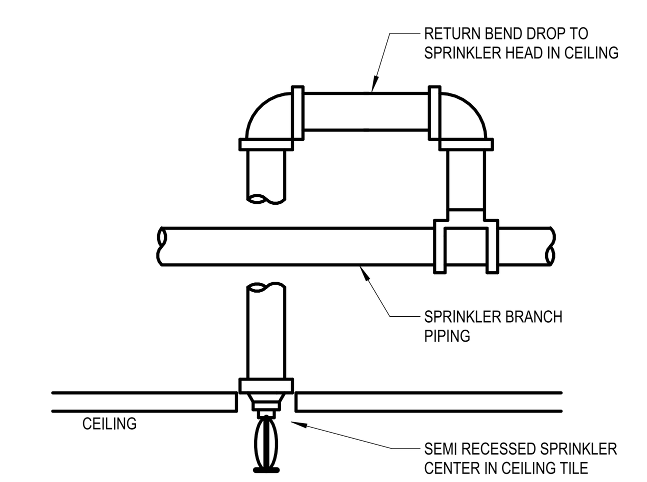
NOTES:
- ACCEPTABLE MANUFACTURER'S
  1. VIKING
  2. TYCO
  3. VICTAULIC
- K-VALUES TO BE SELECTED BY FIRE PROTECTION ENGINEER OF RECORD THAT IS RESPONSIBLE FOR PREPARING HYDRAULIC CALCULATIONS AND SHOP DRAWINGS.



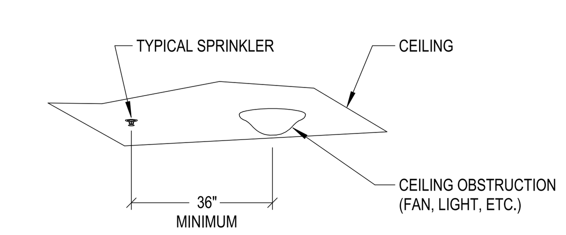
4 UPRIGHT SPRINKLER HEAD PIPING DETAIL
NOT TO SCALE



2 CONCEALED SPRINKLER HEAD DETAIL
NOT TO SCALE



3 PENDANT SPRINKLER HEAD PIPING DETAIL
NOT TO SCALE



1 SPRINKLER CLEARANCE DETAIL
NOT TO SCALE

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FIRE PROTECTION SHEET INDEX

NUMBER	DESCRIPTION
3FP001	GENERAL FIRE PROTECTION INFORMATION
3FP101	FIRST FLOOR FIRE PROTECTION PLAN

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PROGRESSIVE COMPANIES
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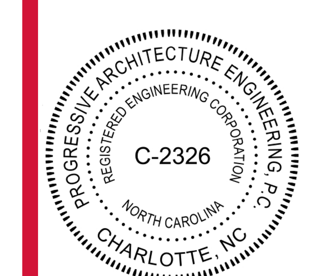

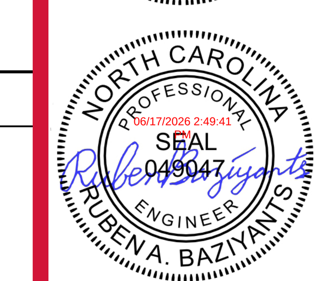

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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

GENERAL FIRE PROTECTION INFORMATION
3FP001

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GENERAL FIRE PROTECTION INFORMATION
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MEZZANINE - ALTERNATIVE 1

3/16" = 1'-0"

FIRST FLOOR FIRE PROTECTION PLAN

3/16" = 1'-0"

FIRE SPRINKLER DESIGN CRITERIA

CLASSIFICATION:	**RESIDENTIAL**	**SYMBOL**
DENSITY CRITERIA	0.10 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	R
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CLASSIFICATION:	**LIGHT HAZARD**	
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MAX PROTECTION AREA:	225 SQ.FT. PER HEAD	LT
MAX HEAD SPACING:	15 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.15 GPM/SQ.FT.	
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MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	OH1
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**ORDINARY HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.20 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	1,500 SQ.FT.	
MAX PROTECTION AREA:	130 SQ.FT. PER HEAD	OH2
MAX HEAD SPACING:	12 FT.	
SYSTEM AREA LIMIT:	52,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 1)**	
DENSITY CRITERIA:	0.30 GPM/SQ.FT.	
TYPICAL OPERATING AREA:	2,500 SQ.FT.	EH1
SYSTEM AREA LIMIT:	40,000 SQ.FT.	
CLASSIFICATION:	**EXTRA HAZARD (GROUP 2)**	
DENSITY CRITERIA:	0.40 GPM/SQ.FT.	
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NOTE:
SPRINKLER HEAD TEMPERATURE RATING TO BE BASED ON MAXIMUM CEILING TEMPERATURE PER NFPA 13 TABLE 7.2.4.1

? FIRE PROTECTION KEYNOTES

1. PROVIDE SPRINKLER BENEATH STAIRWAY.

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NORTH CAROLINA PROFESSIONAL SEAL 049047 ENGINEER RUBEN A. BAZIYANTS

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ISSUANCE

06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
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PROJECT MANAGER
A. IDOL
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FIRST FLOOR FIRE PROTECTION PLAN

3FP101

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ABBREVIATIONS - PLUMBING

AC	AIR COMPRESSER
AC	ARCHITECTURAL CONTRACTOR
ADA	AMERICANS WITH DISABILITIES ACT
AVS	ACID VENT STACK
AW	ACID WASTE
B	BOILER
BV	BALL VALVE
CB	CATCH BASIN
CBS	COMBINATION BALANCE & SHUTOFF VALVE
CIP	CAST IRON PIPE
CO	CLEANOUT
COMP	COMPARTMENT
CS	CLINICAL SINK
CV	CHECK VALVE
CW	COLD WATER
D&T	DRIP AND TRAP
DB	DIALYSIS WASTE & SUPPLY BOX
DCP	DOMESTIC WATER CIRCULATING PUMP
DCR	DOMESTIC COLD WATER RETURN
DN	DISCHARGE NOZZLE
DSN	DOWNSPOUT NOZZLE
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EWT	ENTER WATER TEMPERATURE
EX	EXISTING
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
G	GAS
GLR	GROUND LOOP RETURN
GLS	GROUND LOOP SUPPLY
HB	HOSE BIBB
HO	HUB OUTLET
HTP	HEAT PUMP
HW	HOT WATER
HWR	HOT WATER RETURN (DOMESTIC)
HYD	HYDRANT
IE	INVERT ELEVATION
IW	INDIRECT WASTE
KVAR	KILOVOLT-AMPERES REACTIVE
L	LAVATORY
LAV	LAVATORY
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LWT	LEAVING WATER TEMPERATURE
MB	MOP BASIN
MCA	MINIMUM CIRCUIT AMPS
MH	MANHOLE
MOP	MAXIMUM OVERCURRENT PROTECTION
NG	NATURAL GAS
OHD	OVERHEAD DOOR
ORD	OVERFLOW ROOF DRAIN
PF	PUMP - FIRE PROTECTION
PP	PUMP - PLUMBING
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RD	ROOF DRAIN, ROAD
RIO	ROUGH-IN ONLY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
RR	REST ROOM
RV	RELIEF VENT
S	SINK
SAN	SANITARY
SCW	SOFT COLD WATER
SD	STORM DRAIN
SG	SPECIFIC GRAVITY
SH	SHOWER
SK	SINK
SNS	SANITARY SEWER
SPHD	SPRINKLER HEAD
SPKR	SPRINKLER
SS	SERVICE SINK
SSK	SERVICE SINK
ST	STORM
TD	TRENCH DRAIN
THERM	100 CUBIC FEET OF NATURAL GAS
TOW	TOP OF WALL
UR	URINAL
V	VENT
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHTR	WATER HEATER
WS	WASTE STACK
ZVB	ZONE VALVE BOX

PLUMBING SYMBOLS

- ANGLE RELIEF VALVE
- ANGLED STOP CHECK VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- BALL VALVE
- CHECK VALVE W/ARROW INDICATING FLOW
- GATE VALVE
- GLOBE VALVE
- LINEAR STOP CHECK VALVE
- GAS VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SOLENOID VALVE
- PRESSURE REGULATING VALVE - TWO WAY
- PRESSURE REGULATING VALVE - THREE WAY
- MOTORIZED CONTROL VALVE - 2-WAY
- MOTORIZED CONTROL VALVE - 3-WAY
- FLOW MEASURING DEVICE
- HOSE BIBB
- MANUAL AIR VENT
- PRESSURE INDICATOR
- TEMPERATURE INDICATOR
- THERMOMETER
- ANCHOR
- CAP
- CB — CATCH BASIN
- CO — END OF LINE, CLEANOUT
- CO — FLOOR, CLEANOUT
- WCO — WALL, CLEANOUT
- EXPANSION COMPENSATOR OR EXPANSION JOINT
- FLEXIBLE PIPE CONNECTOR
- FD FD — FLOOR DRAINS
- PIPE GUIDE
- MH — MANHOLE
- MGS — MASTER GAS SHUT OFF
- PRS — PRESSURE REDUCING STATION
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
- STRAINER
- UNION

PLUMBING GENERAL NOTES

1. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS.
2. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES.
4. PROVIDE ROUGH-INS AND FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT FURNISHED BY LAB EQUIPMENT CONTRACTOR. USE ONLY APPROVED EQUIPMENT AND FIXTURE SHOP DRAWINGS, FROM FSEC, FOR ROUGH-IN SIZES AND LOCATIONS.
5. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE. MINIMIZE INTERRUPTION OF EXISTING SERVICES. VERIFY ALL SYSTEMS BEFORE STARTING DEMOLITION TO ASSURE OTHER AREAS WILL NOT LOSE SERVICE.
6. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS SUBJECT TO EVAPORATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
7. PROVIDE ASSE 1070 MIXING VALVE AT ALL BARRIER FREE SINKS AND ALL HAND WASHING SINKS TO PROVIDE TEMPERED WATER TO HOT WATER SIDE OF FAUCET.
8. PIPING INSTALLED IN THE WAY OF ACCESS OR MAINTENANCE TO EQUIPMENT SHALL BE RELOCATED AT THE EXPENSE OF THE INSTALLING CONTRACTOR.
9. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.
10. COORDINATE ALL FLOOR CUTTING WITH STRUCTURAL TRADES BEFORE CUTTING.
11. COORDINATE LOCATIONS OF FLOOR DRAINS AND FLOOR SINKS WITH LOCATIONS OF EQUIPMENT AND EQUIPMENT HOUSEKEEPING PADS. COORDINATE WITH SLOPING OF FLOOR SO THAT RIM OF DRAIN IS FLUSH WITH FINISH FLOOR.
12. COORDINATE HANGING AND SUPPORT OF PIPING WITH STRUCTURAL.
13. COORDINATE FLOOR, WALL, AND ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES. PROVIDE TEMPORARY WATER TIGHT SEAL FOR ALL EXTERIOR WALL AND ROOF PENETRATION AS NECESSARY.
14. PROVIDE PIPE SLEEVES WHERE PIPES PENETRATE WALLS.
15. HOLES AND PENETRATIONS IN RATED WALLS SHALL BE PATCHED WITH APPROPRIATE FIRESTOP MATERIALS FOR RATING REQUIRED.
16. PROVIDE PIPE SLEEVES WHERE PIPES RUN BELOW FOOTING.
17. INSTALL EXTERIOR CLEAN OUTS FLUSH WITH SURFACE.
18. INSTALL PIPING IN AN ORGANIZED MANNER. DO NOT ROUTE IN FRONT OF WINDOWS.
19. THE INSTALLATION OF ALL PIPING SHALL BE CLOSELY COORDINATED WITH NEW SHEET METAL, HVAC PIPING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. THE LOCATION OF SANITARY, STORM AND VENT LINES SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
20. PROVIDE WATER HAMMER ARRESTORS PER PDI WH-201 AND UP STREAM OF ALL AUTOMATIC AND FAST CLOSING VALVES INCLUDING BUT NOT LIMITED TO SOLENOID VALVES.
21. ALL EMERGENCY EYEWASH UNITS AND EMERGENCY SHOWERS SHALL BE PROVIDED WITH TEMPERED WATER AND SHALL BE IN COMPLIANCE WITH ANSI Z358.1.

PHASING

- EXISTING - TO REMAIN
- EXISTING - FOR DEMOLITION
- POINT OF DISCONNECTION BETWEEN EXISTING AND DEMOLITION
- POINT OF CONNECTION BETWEEN PROPOSED AND EXISTING

PLUMBING SYMBOLOGY

- CW — COLD WATER
- HW — HOT WATER
- HR — HOT WATER RETURN
- SAN — SANITARY WASTE
- AW — ACID WASTE
- ST — STORM
- OD — STORM (OVERFLOW DRAINAGE)
- AV — ACID WASTE VENT
- V — VENT
- CD — CONDENSATE DRAIN
- CA — COMPRESSED AIR
- G — NATURAL GAS
- G(EPS) — NATURAL GAS, EMERGENCY POWER

PLUMBING DEMOLITION NOTES

1. NO ITEMS TO BE ABANDONED IN PLACE.
2. ALL ITEMS TO BE DEMOLISHED TO BE REMOVED AND REMAINING OPEN SYSTEMS TO BE PATCHED, CAPPED AND SEALED TO PROVIDE A FINISHED SYSTEM.
3. DEMOLISHED PLUMBING LINE SHALL NOT BE ALLOWED TO REMAIN OPEN, CAP AND PROTECT TO AVOID CONTAMINATION TO AND FROM THE SURROUNDING AREAS.
4. ALL SYSTEMS OPENED DURING DEMOLITION SHALL BE CLOSED AND RETURNED TO OPERATION BY END OF SHIFT, NO SYSTEMS ALLOWED TO BE LEFT OPEN WHEN NOT BEING SUPERVISED BY CONTRACTOR RESPONSIBLE FOR THAT WORK TRADE.

PLUMBING SHEET INDEX

NUMBER	DESCRIPTION
3P001	GENERAL PLUMBING INFORMATION
3PD101	PLUMBING DEMOLITION PLAN
3P101	PLUMBING PLAN AND DETAILS

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NORTH CAROLINA PROFESSIONAL SEAL 049047 ENGINEER RUBEN A. BAZIYANTS
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06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

GENERAL PLUMBING INFORMATION
3P001

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60 - 3P001
GENERAL PLUMBING INFORMATION

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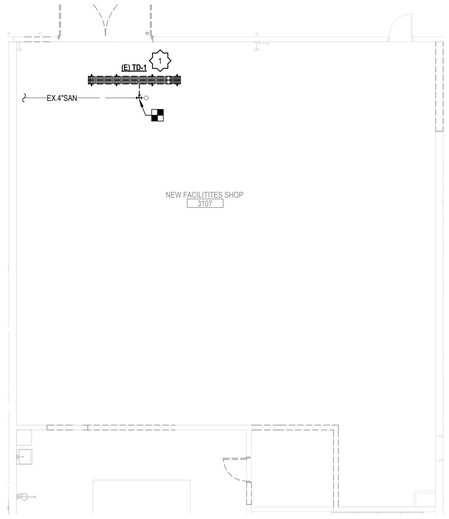
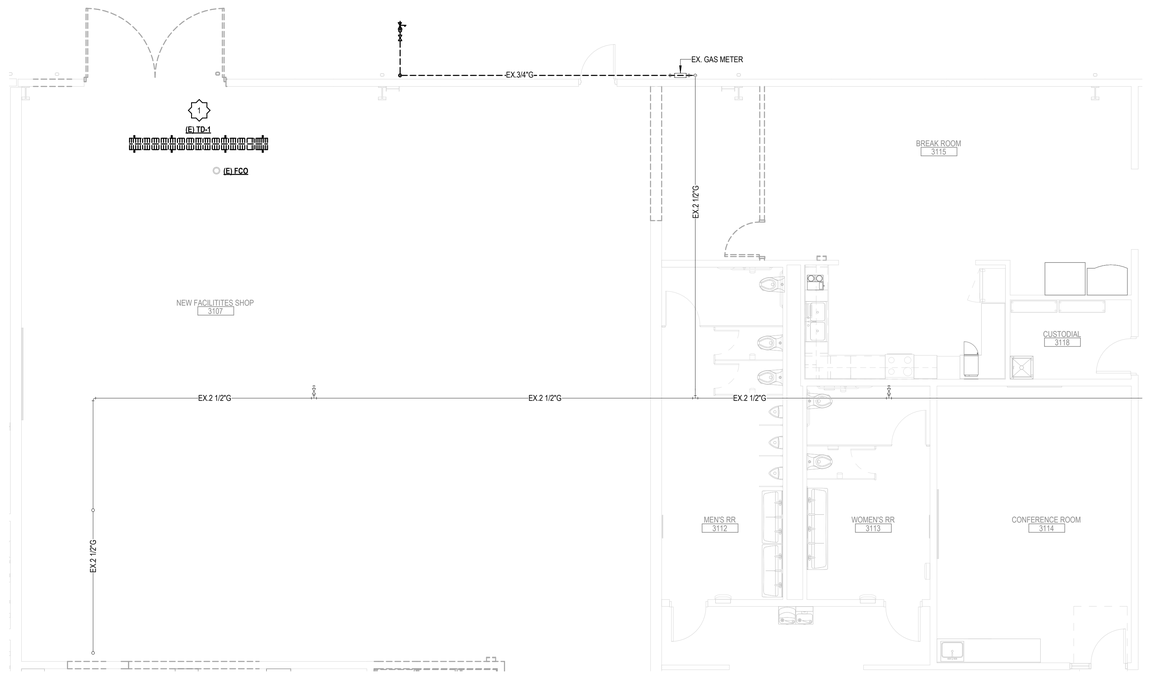


UNDERFLOOR PLUMBING DEMOLITION PLAN
1/8" = 1'-0"



FIRST FLOOR PLUMBING DEMOLITION PLAN
3/16" = 1'-0"

PLUMBING DEMOLITION KEYNOTES

1. EXISTING TRENCH DRAIN TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3P101.

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ENGINEER
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PLUMBING DEMOLITION PLAN
3PD101

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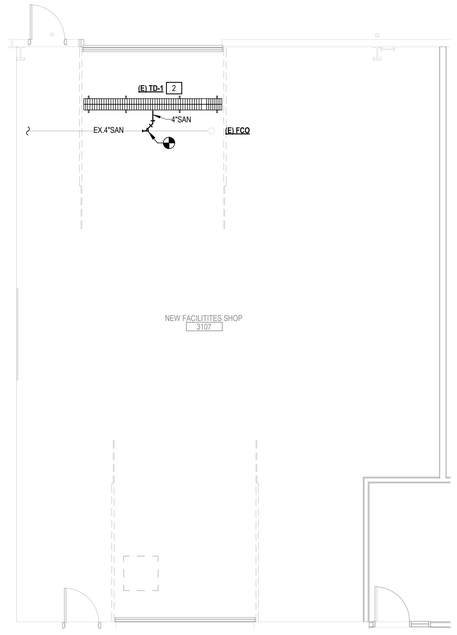
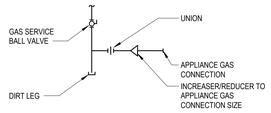


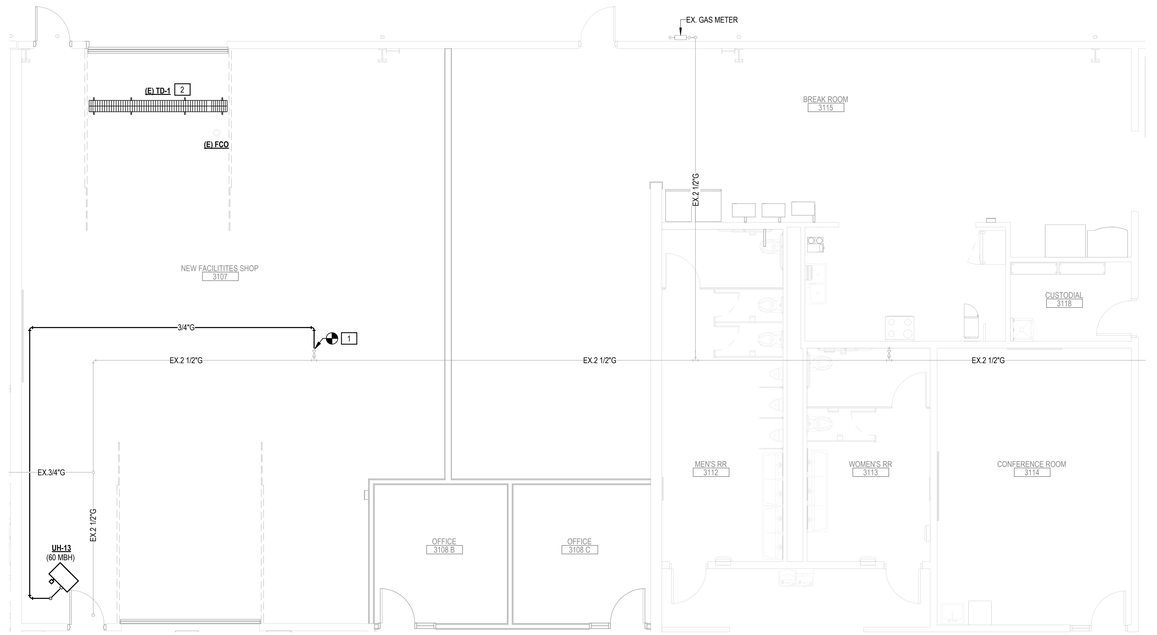
UNDERFLOOR PLUMBING PLAN
3/16" = 1'-0"

? PLUMBING KEYNOTES

1. CONNECT TO EXISTING CAPPED OUTLET.
2. EXISTING TRENCH DRAIN RELOCATED TO NEW LOCATION.



3 GAS PIPING DIAGRAM
NOT TO SCALE



FIRST FLOOR PLUMBING PLAN
3/16" = 1'-0"

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K. JAGER

PLUMBING PLAN AND DETAILS
3P101

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83 - 3P101 PLUMBING PLAN AND DETAILS
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ABBREVIATIONS - HVAC

Φ	FLAT OVAL DUCT	CWS	CHILLED WATER SUPPLY	HTP	HEAT PUMP	RAF	RETURN AIR FAN
				HTR	HEATER	RC	RE-HEAT COIL
AC	AIR COMPRESSER	DB	DRY BULB	HUM	HUMIDIFIER	RCP	RADIANT CEILING PANEL
AC	ARCHITECTURAL CONTRACTOR	DB	DIALYSIS WASTE & SUPPLY BOX	HW	HOT WATER	RG	RETURN AIR GRILLE
ACL	ACOUSTICALLY LINED	DDC	DIRECT DIGITAL CONTROLS	HWP	HYDRONIC WATER PUMP	RP	RADIANT PANEL
ACU	AIR CONDITIONING UNIT	DDTU	DUAL DUCT TERMINAL UNIT	HX	HEAT EXCHANGER	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ACV	AIR CONTROL VALVE	DIFF	DIFFUSER	HZ	HERTZ		
AD	ACCESS DOOR	DISC	DISCONNECT			RPM	REVOLUTIONS PER MINUTE
ADA	AMERICANS WITH DISABILITIES ACT	DPR	DAMPER	INS	INSULATE, INSULATION	RR	RETURN AIR REGISTER
AFS	AIR FLOW SWITCH	DT	DOUBLE THROW	IR	INFRARED	RR	REST ROOM
AFT	AIR FLOW TRANSMITTER					RTU	ROOFTOP UNIT
AHU	AIR HANDLING UNIT	EA	EXHAUST AIR	KVAR	KILOVOLT-AMPERES REACTIVE	RV	RELIEF VENT
AP	ACCESS PANEL	EDB	ENTERING DRY BULB				
APD	AIR PRESSURE DROP	EF	EXHAUST FAN	L	REFRIGERATION LIQUID	S	REFRIGERATION SUCTION
APPROX	APPROXIMATE	EG	EXHAUST AIR GRILLE	LAB	LABORATORY	SA	SUPPLY AIR
AQ-STAT	AQUA STAT	EHC	ELECTRIC HEATING COIL	LAT	LEAVING AIR TEMPERATURE	SAF	SUPPLY AIR FAN
AS	AMP SWITCH	EIH	ELECTRIC INFARED HEATER	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN	SAT	SATURATED
ATS	AUTOMATIC TRANSFER SWITCH	EM	EMERGENCY			SC	STEAM COIL
ATT	SOUND ATTENUATOR	ENT	ENTERING	LVR	LOUVER	SD	SUPPLY AIR DIFFUSER
AVS	ACID VENT STACK	ERC	ENERGY RECOVERY COIL	LWT	LEAVING WATER TEMPERATURE	SG	SUPPLY AIR GRILLE
AW	ACID WASTE	ESP	EXTERNAL STATIC PRESSURE			SG	SPECIFIC GRAVITY
		ET	EXPANSION TANK	MA	MIXED AIR	SK	SINK
B	BOILER	EWB	ENTERING WET BULB	MAV	MANUAL AIR VENT	SM	SURFACE MOUNTED
BAS	BUILDING AUTOMATION SYSTEM	EWT	ENTERING WATER TEMPERATURE	MAX	MAXIMUM	SMM	SNOW MELT MANIFOLD
BBD	BOILER BLOWDOWN	EX	EXISTING	MB	MOP BASIN	SMR	SNOW MELT RETURN
BC	BOOSTER COIL	EXH	EXHAUST	MBH	THOUSAND BRITISH THERMAL UNIT	SMS	SNOW MELT SUPPLY
BDD	BACKDRAFT DAMPER	EXP	EXPLOSION PROOF	MCA	MINIMUM CIRCUIT AMPS	SR	SUPPLY AIR REGISTER
BFP	BOILER FEEDWATER PUMP			MD	MOTORIZED DAMPER, MOTION DETECTOR	STL	STEEL
BHP	BREAK HORSEPOWER	F&T	FLOAT & THERMOSTATIC STEAM TRAP			STM	STEAM
BMS	BUILDING MANAGEMENT SYSTEM	FC	FLEXIBLE CONNECTION	MOP	MAXIMUM OVERCURRENT PROTECTION	STOR	STORAGE
BP	BACKFLOW PREVENTER	FCU	FAN COIL UNIT				
		FD	FIRE DAMPER	NC	NORMALLY CLOSED	TERM	TERMINAL
C	CONVECTOR	FDS	FUSED DISCONNECT SWITCH	NF	NONFUSED	TF	TRANSFER FAN
CAB	CABINET	FM	FORCEMAIN	NFDS	NONFUSED DISCONNECT SWITCH	TG	TRANSFER AIR GRILLE
CAP	CAPACITY	FOR	FUEL OIL RETURN	NG	NATURAL GAS	THERM	100 CUBIC FEET OF NATURAL GAS
CC	COOLING COIL	FOS	FUEL OIL SUPPLY	NO	NORMALLY OPEN	TOC	TOP OF CURB
CD	COLD DECK	FPM	FEET PER MINUTE			TR	TAMPER RESISTANT
CD	CONDENSATE DRAIN	FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR	OA	OUTSIDE AIR	TSE	TOP OF STEEL ELEVATION
CF	CEILING FAN			OHD	OVERHEAD DOOR	TU	TERMINAL UNIT
CF	CUBIC FOOT	FT	FIN TUBE	OPG	OPENING		
CFH	CUBIC FEET PER HOUR			ORD	OVERFLOW ROOF DRAIN	U/V	UNIT VENTILATOR
CFM	CUBIC FEET PER MINUTE	G	GAS	OV	OUTLET VELOCITY	UH	UNIT HEATER
CH	CABINET HEATER	GEN	GENERATOR				
CLR	CLEAR, CLEARANCE	GLR	GROUND LOOP RETURN	P	PUMP	V	VOLTS
CMP	CORRUGATED METAL PIPE	GLS	GROUND LOOP SUPPLY	P/T	PETE'S PLUG	VAV	VARIABLE AIR VOLUME
CMPR	COMPRESSOR	GPH	GALLONS PER HOUR	PC	PUMPED CONDENSATE	VCD	VOLUME CONTROL DAMPER
CNR	CONDENSER WATER RETURN	GPM	GALLONS PER MINUTE	PCR	PUMPED CONDENSATE RETURN	VFD	VARIABLE FREQUENCY DRIVE
CNS	CONDENSER WATER SUPPLY	GV	GATE VALVE	PD	PRESSURE DROP	VI	VIBRATION ISOLATOR
COMP	COMPARTMENT			PF	PUMP - FIRE PROTECTION	VOL	VOLUME
COND	CONDENSATE	HC	HEATING COIL	PH	PHASE		
CONV	CONVECTOR	HG	REFRIGERATION HOT GAS	PP	PUMP - PLUMBING	WB	WET BULB
COORD	COORDINATE	HP	HORSEPOWER	PR	PERIMETER RADIATION	WHTR	WATER HEATER
CP	CIRCULATING PUMP	HP STM	HIGH PRESSURE STEAM	PRV	PRESSURE REDUCING VALVE		
CT	COOLING TOWER	HPR	HEAT PUMP WATER RETURN	PRV	POWER ROOF VENTILATOR	XFER	TRANSFER
CTR	COOLING TOWER RETURN	HPS	HEAT PUMP WATER SUPPLY	PSIG	POUNDS PER SQUARE INCH GAUGE		
CTS	COOLING TOWER SUPPLY	HR	HEATING WATER RETURN, HOUR				
CU	COPPER	HS	HEATING WATER SUPPLY	R	RISER		
CV	CONTROL VALVE	HSKP	HOUSEKEEPING PAD	RA	RETURN AIR		
CWR	CHILLED WATER RETURN	HTG	HEATING				

MECHANICAL SYMBOLS

- SD# / ### — SUPPLY DIFFUSER, SD#, ### CFM ARROWS INDICATE DIRECTION OF THROW
- SD# / ### — SUPPLY DIFFUSER (4-WAY)
- RG# / ### — RETURN OR EXHAUST REGISTER TYPE 'RG#' ### CFM
- EG# / ### — EXHAUST REGISTER TYPE 'EG#' ### CFM
- ### / ### — SIDEWALL SUPPLY, RETURN, OR EXHAUST REGISTER TYPE ### , ### CFM
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN DUCT UP
- RETURN DUCT DOWN
- EXHAUST DUCT UP
- EXHAUST DUCT DOWN
- AIRFLOW / SA — SUPPLY AIR BRANCH CONNECTION WITH VOLUME DAMPER
- AIRFLOW / EXHAUST — RETURN AIR/EXHAUST AIR BRANCH CONNECTION WITH VOLUME DAMPER
- HORIZONTAL FIRE DAMPER
- VERTICAL FIRE DAMPER
- S — SMOKE HORIZONTAL FIRE DAMPER
- S — SMOKE VERTICAL FIRE DAMPER
- FS — COMBINATION FIRE/SMOKE HORIZONTAL FIRE DAMPER
- FS — COMBINATION FIRE/SMOKE VERTICAL FIRE DAMPER
- ATT-# — SOUND ATTENUATOR
- AP-### — PUMP(SCHEMATIC)
- ###-# — MECHANICAL EQUIPMENT (EXAMPLE ACV-##) SEE SCHEDULE FOR ADDITIONAL
- FT-## — FINNED TUBE RADIATION (SEE DETAIL AND SCHEDULE)
- CUH-# — CABINET UNIT HEATER, TYPE 'CUH-#'
- C-# — CONVECTOR, TYPE 'C-#'
- VOLUME DAMPER
- MD — MOTORIZED CONTROL DAMPER

SHEET METAL SYMBOLOGY

- SA — SUPPLY AIR
- HDS — HOT DECK SUPPLY AIR
- CDS — COLD DECK SUPPLY AIR
- RA — RETURN AIR
- EA — EXHAUST AIR
- LHEA — LAB HOOD EXHAUST AIR
- GHEA — GENERAL LAB HOOD EXHAUST AIR
- OA — OUTSIDE AIR
- REL — RELIEF AIR
- MA — MIXED AIR

PHASING

- EXISTING - TO REMAIN
- EXISTING - FOR DEMOLITION
- POINT OF DISCONNECTION BETWEEN EXISTING AND DEMOLITION
- POINT OF CONNECTION BETWEEN PROPOSED AND EXISTING

MECHANICAL GENERAL NOTES

1. COMPLY WITH ALL APPLICABLE LOCAL, STATE AND/OR REGULATORY AGENCIES, CODES AND REGULATIONS FOR NEW WORK.
2. DO NOT INSTALL EQUIPMENT, PIPING OR DUCTWORK OVER ANY ELECTRICAL EQUIPMENT OR COMMUNICATION ROOMS.
3. DO NOT RUN ANY PIPING OR DUCTWORK INTO THE ELECTRICAL ROOM UNLESS DEDICATED TO SERVE THAT ROOM.
4. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
5. LOCATE THERMOSTAT/TEMPERATURE SENSORS 48" ABOVE FINISHED FLOOR OR AS NOTED ON THE PLANS.
6. WORK IDENTIFIED WITH MECHANICAL AND ELECTRICAL NOTES AND KEY NOTES SHALL BE PERFORMED BY QUALIFIED MECHANICAL AND ELECTRICAL CONTRACTORS RESPECTIVELY UNDER DIRECTION OF THE CONSTRUCTION MANAGER. COORDINATE WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER.
7. INSTALL SMOKE DETECTOR IN DUCTWORK AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.
8. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
9. COORDINATE WORK WITH OTHER TRADES AND WITH THE CONSTRUCTION MANAGER.
10. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER, MINIMIZE INTERRUPTION OF EXISTING SERVICES.
11. PROVIDE ALL MISCELLANEOUS STEEL AND ITEMS REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPE, SHEET METAL AND EQUIPMENT.
12. COORDINATE FLOOR, WALL & ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES. PROVIDE TEMPORARY WATER TIGHT SEAL FOR ALL EXTERIOR WALL AND ROOF PENETRATION AS NECESSARY.
13. FIRESTOP SHALL BE PROVIDED IN HOLES AND PENETRATIONS IN RATED ASSEMBLIES.

SHEET METAL NOTES

1. THE INSTALLATION OF ALL DUCTWORK SHALL BE CLOSELY COORDINATED WITH NEW PLUMBING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED ON DRAWINGS, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. ALTERNATE DUCT ROUTING SHALL BE APPROVED BY ARCHITECT/ENGINEER BEFORE PROCEEDING IN ORDER TO ENSURE THAT THE AVAILABLE STATIC PRESSURE REMAINS ADEQUATE. DUCTWORK LOCATION SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
2. REFER TO DUCT TAKEOFF DETAILS. SPIN-IN TYPE WITH SCOOPS SHALL NOT BE ACCEPTED. A MINIMUM OF 2 FEET SHALL BE PROVIDED BETWEEN RUNOUT TAKEOFFS FROM TRUNK DUCTS.
3. THERMOSTAT AND SENSORS LOCATIONS WITHIN DUCTWORK SHALL BE VERIFIED WITH ARCHITECT/ ENGINEER BEFORE ROUGH -IN.
4. RUNOUT BALANCING DAMPERS SHALL BE MOUNTED AS CLOSE TO MAIN DUCT AS POSSIBLE.
5. DUCTWORK LAYOUT HAS BEEN DESIGNED TO ABSORB NOISE. ALL FITTINGS SHALL BE PROVIDED AS INDICATED.
6. TERMINAL UNITS SHALL BE MOUNTED TO NOT IMPAIR ACCESS TO FILTERS, COILS AND CONTROLS.
7. WATERTIGHT CONCRETE CURBS SHALL BE PROVIDED AROUND ELEVATED FLOOR SLAB PENETRATIONS.
8. DUCTWORK AND ASSOCIATED COMPONENTS SHALL CLEAR DOORS AND WINDOWS.
9. UNLESS OTHERWISE NOTED, ALL DUCTWORK ABOVE CEILING OR EXPOSED IS OVERHEAD AND AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION WHERE REQUIRED.
10. LOCATE MECHANICAL EQUIPMENT SUCH THAT THERE IS UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS AND VALVING.
11. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO MECHANICAL EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE NOTED.
12. DUCTWORK SIZES ARE INSIDE CLEAR DIMENSIONS.
13. ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS UNLESS OTHERWISE NOTED. RADIUS ELBOWS SHALL HAVE CENTERLINE RADIUS OF CURVATURE 1.5 TIMES THE DUCT DIAMETER OR WIDTH IN THE PLANE OF TURN. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES.
14. DUCTS CONNECTED TO EQUIPMENT SHALL EQUAL EQUIPMENT CONNECTION SIZE UNLESS NOTED OTHERWISE.
15. MAXIMUM LENGTH ON FLEXIBLE DUCT SHALL BE 5'-0", UNLESS OTHERWISE NOTED ON DETAILS OR SPECIFICATION.
16. REFER TO ARCH REFLECTED CEILING PLANS FOR EXACT DIFFUSER LOCATIONS IN AREAS WITH A CEILING.

MECHANICAL DESIGN CRITERIA

APPLICABLE CODES:
- 2018 NORTH CAROLINA BUILDING CODE
- 2018 NORTH CAROLINA MECHANICAL CODE
- 2018 NORTH CAROLINA PLUMBING CODE
- 2018 NORTH CAROLINA ENERGY CONSERVATION CODE
- 2018 NORTH CAROLINA FUEL GAS CODE
- 2018 NORTH CAROLINA FIRE PREVENTION CODE

DESIGN CONDITIONS:
- LOCATION: CHARLOTTE, NC
- CLIMATE ZONE: 3A
- BASED ON 2021 ASHRAE CLIMATIC DESIGN CONDITIONS FOR CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT (CLT), 1% COOLING, 99% HEATING
- HEATING DESIGN DAY: 24.8°F db
- COOLING DESIGN DAY: 91.9°F db, 74.0°F wb
- INDOOR CONDITIONS:
  - OCCUPIED SPACES
    - COOLING: 75°F, 50%RH
    - HEATING: 70°F
  - UNOCCUPIED SPACES
    - COOLING: 80°F, 40% TO 60%RH
    - HEATING: 60°F

NOTES:
- ALL SPACES ARE TO BE HEATED FOR FREEZE PROTECTION. NO WINTERIZATION OF PLUMBING SYSTEMS IS PLANNED.
- MECHANICAL VENTILATION PER IMC CHAPTER 4.

MECHANICAL SHEET INDEX

NUMBER	DESCRIPTION
3M001	GENERAL MECHANICAL INFORMATION
3MD101	FACILITITES AND OFFICES MECHANICAL DEMOLITION PLAN
3M101	FACILITIES AND OFFICES HVAC PLAN
3M102	FACILITIES AND ELECTRIC DISTRIBUTION BAYS HVAC PLAN ALTERNATIVE 2
3M501	MECHANICAL DETAILS
3M601	MECHANICAL SCHEDULES
3M701	MECHANICAL CONTROLS

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K. JAGER

GENERAL MECHANICAL INFORMATION
3M001

6/17/2026 11:59:10 AM Autodesk Docs://21350003 - GUC Operations Center Renovations/21350003-GUC OP CTR - 83_MP.rvt
BY: JAMES
DOCUMENT: MECHANICAL INFORMATION
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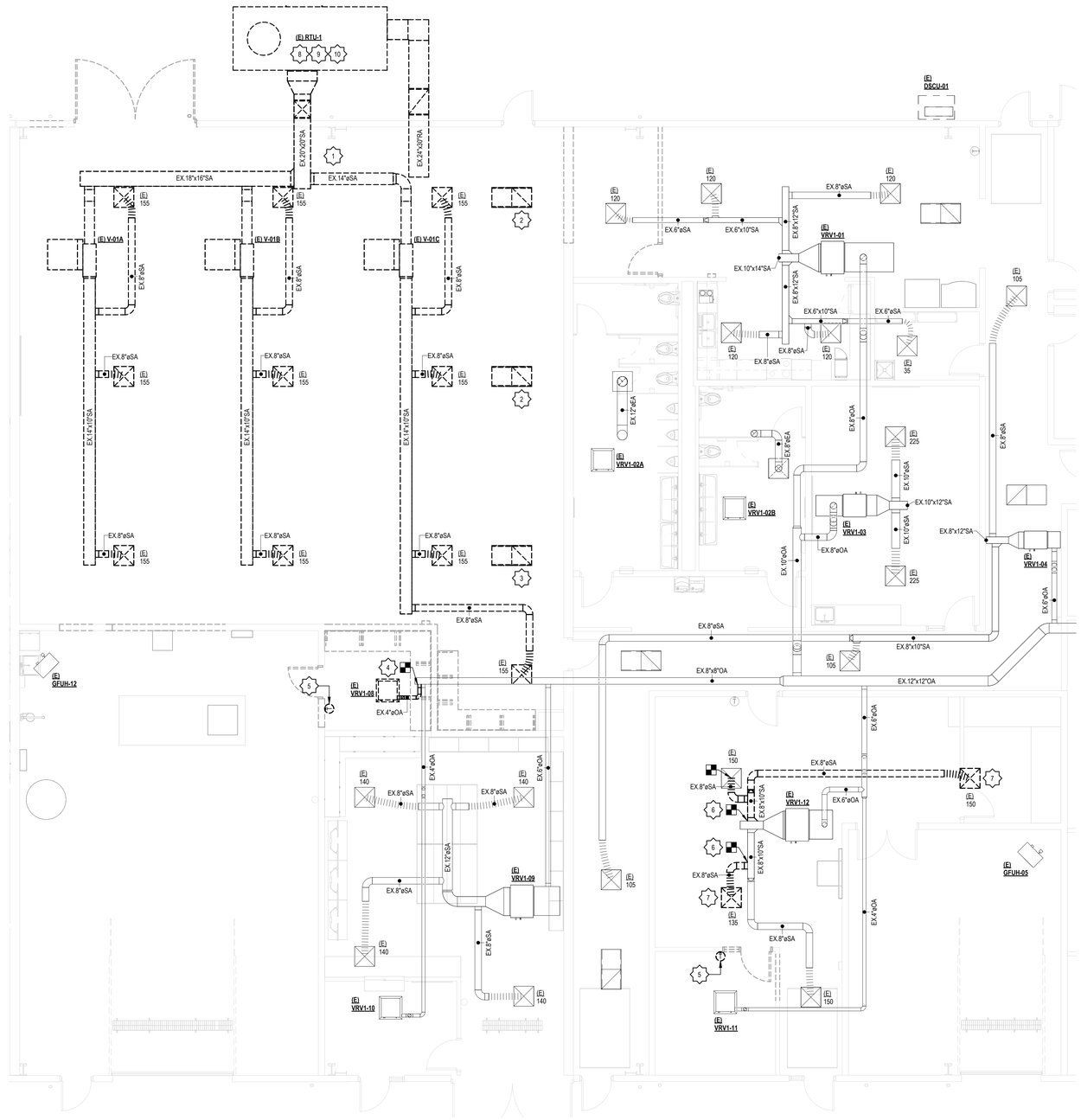

FACILITITES AND OFFICES MECHANICAL DEMOLITION PLAN

3/16" = 1'-0"

MECHANICAL DEMOLITION KEYNOTES

1. EXISTING TERMINAL UNITS, DUCTWORK AND DIFFUSERS TO BE DEMOLISHED.
2. EXISTING RETURN GRILL TO BE DEMOLISHED.
3. EXISTING RETURN GRILL TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3M101.
4. EXISTING INDOOR UNIT TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3M101.
5. EXISTING THERMOSTAT TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3M101.
6. EXISTING DUCTWORK TO BE DEMOLISHED.
7. EXISTING DIFFUSER TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3M101.
8. EXISTING RTU TO BE REMOVED AND STORED AT NEW LOCATION FOR FUTURE USE. COORDINATE STORAGE LOCATION WITH OWNER.
9. [ALTERNATIVE 2] INSTALL NEMA 3R RATED MALE PANEL MOUNT CAM-TYPE RECEPTACLES WITH PROTECTIVE SNAP COVERS ON RTU EXTERIOR. INTERNALLY WIRE RECEPTACLES TO RTU FOR POWER CONNECTION.
10. [ALTERNATIVE 2] INSTALL MULTI-PIN CONNECTOR ON RTU EXTERIOR. INTERNALLY WIRE CONNECTOR TO RTU CONTROLS FOR THERMOSTAT WIRING.

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A. IDOL
PROFESSIONAL
R. BAZIYANTS
DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

FACILITITES AND OFFICES MECHANICAL DEMOLITION PLAN

3MD101

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FACILITITES AND OFFICES MECHANICAL DEMOLITION PLAN
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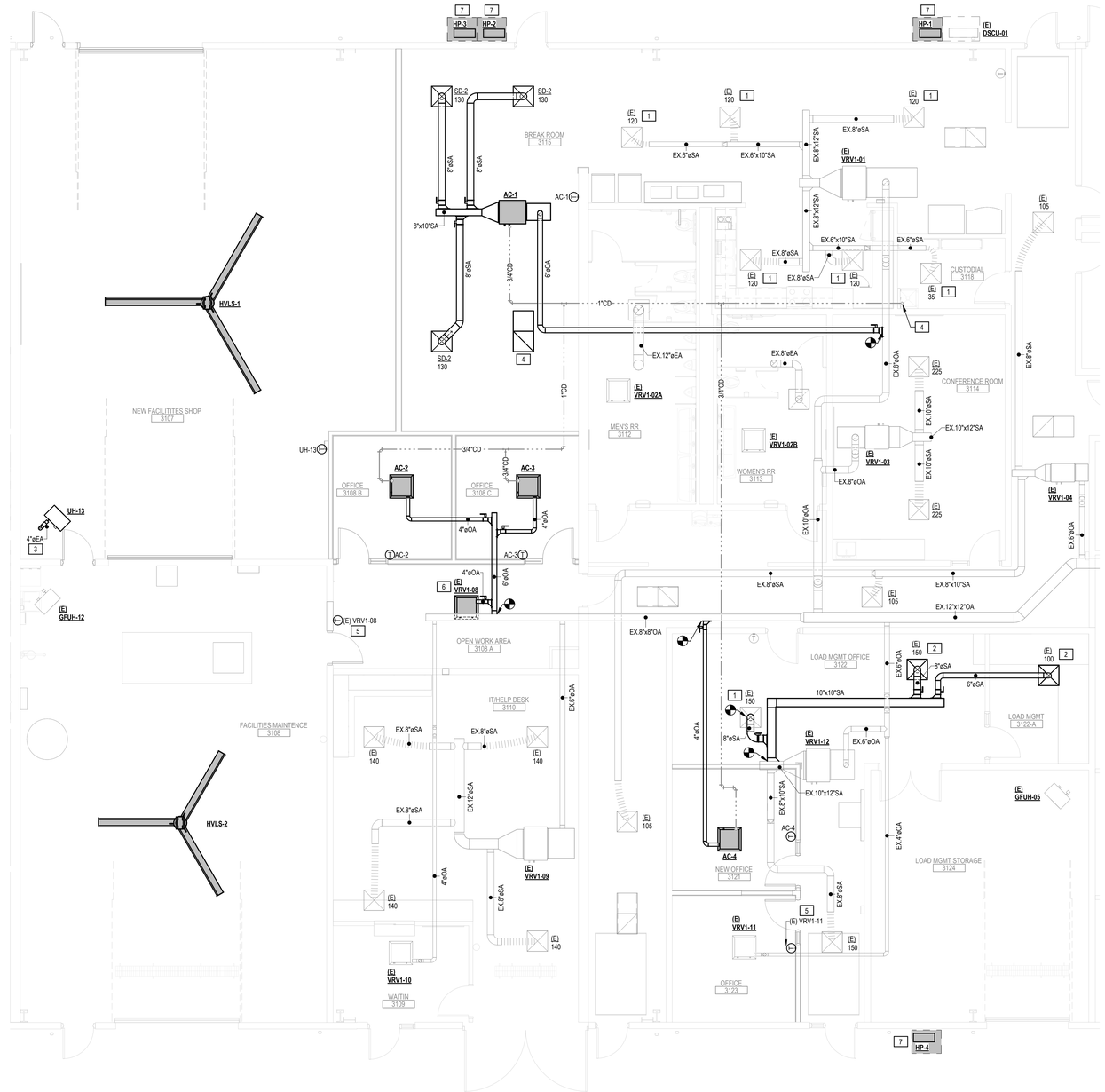

FACILITIES AND OFFICES HVAC PLAN

3/16" = 1'-0"

HVAC KEYNOTES

1. REBALANCE EXISTING DIFFUSER TO NEW CFM VALUE SHOWN.
2. EXISTING DIFFUSER RELOCATED.
3. ROUTE FLUE VENT THROUGH ROOF AND TERMINATE WITH VENT CAP.
4. ROUTE CONDENSATE DOWN TO MOP SINK.
5. EXISTING THERMOSTAT RELOCATED TO NEW LOCATION.
6. EXISTING INDOOR UNIT RELOCATED TO NEW LOCATION.
7. PROVIDE 4" THICK CONCRETE PAD FOR OUTDOOR UNIT. PADS SHALL BE 6" LARGER THAN OUTDOOR UNIT ON ALL SIDES.

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FACILITIES AND OFFICES HVAC PLAN

3M101

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R3 - 3M101
FACILITIES AND OFFICES HVAC PLAN

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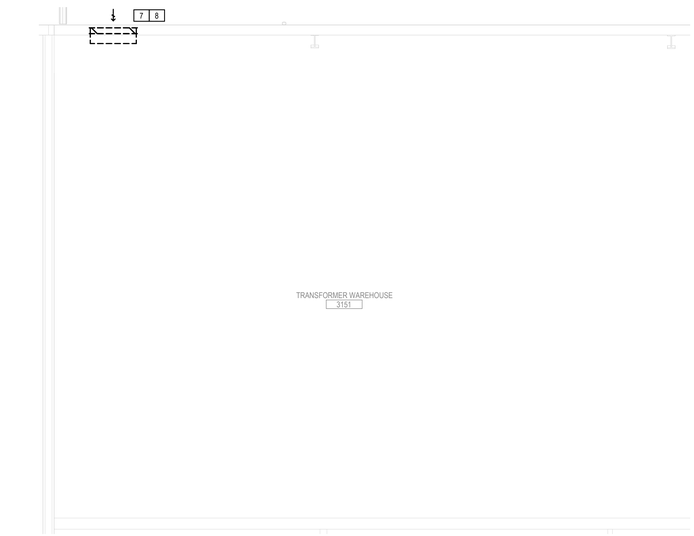
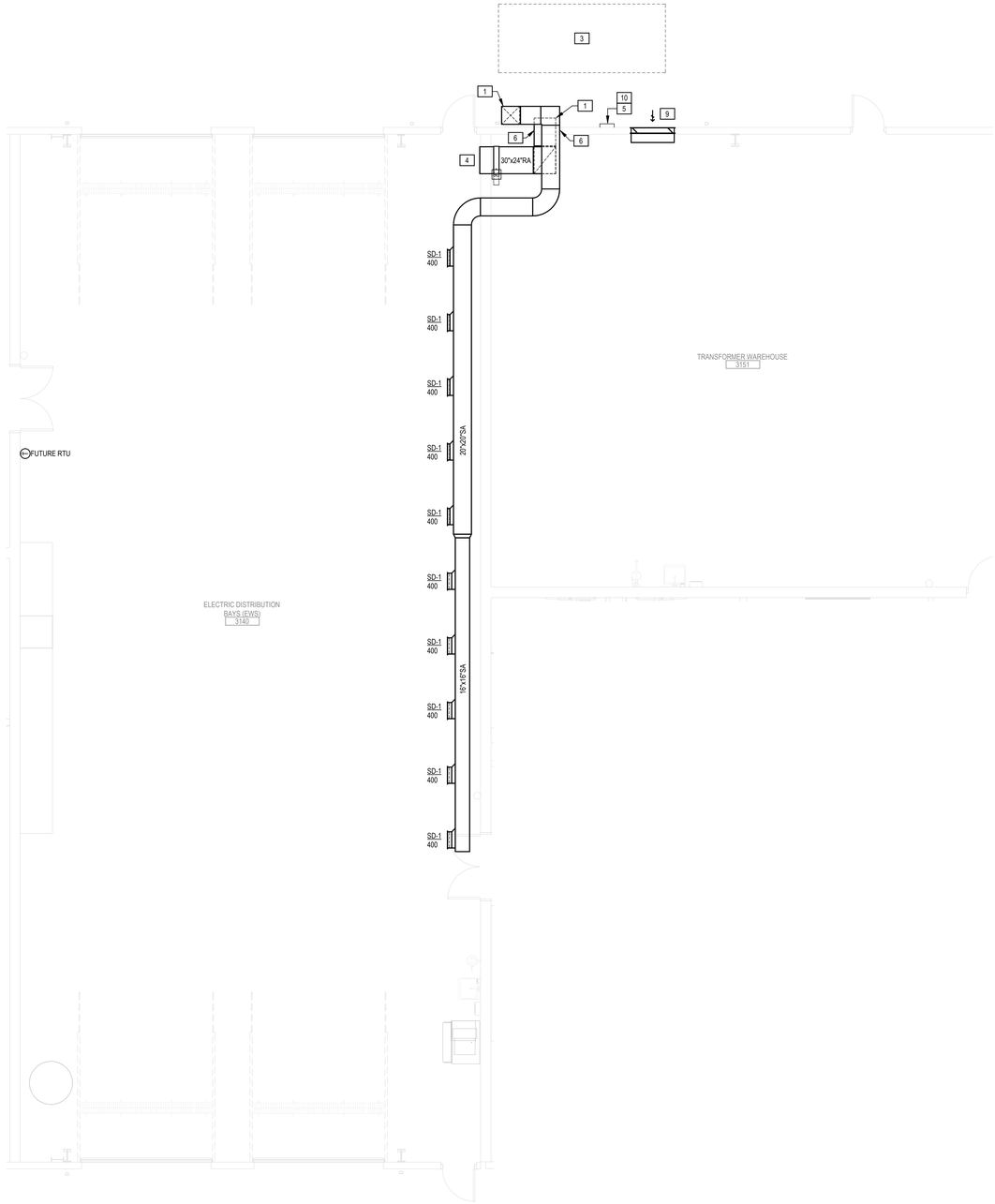
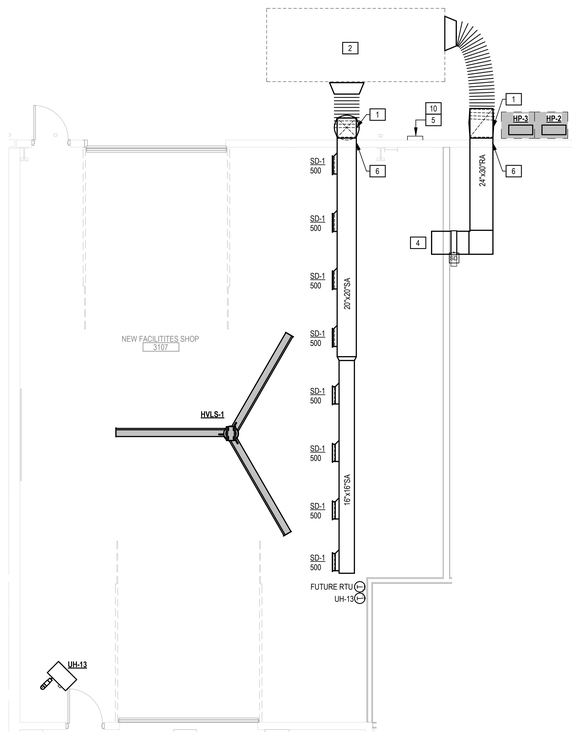


ELECTRIC DISTRIBUTION BAYS HVAC DEMOLITION PLAN - ALTERNATIVE 2

3/16" = 1'-0"





FACILITIES AND OFFICES HVAC PLAN - ALTERNATIVE 2

3/16" = 1'-0"

ELECTRIC DISTRIBUTION BAYS HVAC PLAN - ALTERNATIVE 2

3/16" = 1'-0"

7 HVAC KEYNOTES

1. TERMINATE DUCTWORK 4'-0" ABOVE GRADE. PROVIDE WITH CONTROL DAMPER WITH FACTORY INSTALLED MANUAL OPERATING LEVER.
2. LOCATION OF FUTURE RTU. EXISTING CONCRETE PAD TO REMAIN.
3. LOCATION OF FUTURE RTU. PROVIDE CONCRETE PAD.
4. PROVIDE 1/2"X1/2" MESH SCREEN AT RETURN AIR DUCT OPENING.
5. NEW NEMA 3R RATED CAM-LOCK POWER OUTPUT PANEL WITH FEMALE RECEPTACLES. TO PROVIDE POWER FOR FUTURE RTU.
6. ROUTE DUCTWORK THROUGH EXISTING BUILDING OPENING. PATCH AND SEAL OPENING AROUND NEW DUCT PENETRATION.
7. DEMO EXISTING WINDOW ASSEMBLY. PATCH AND SEAL OPENING AROUND NEW DUCT PENETRATION.
8. EXISTING LOUVER TO BE RELOCATED TO NEW LOCATION SHOWN ON SHEET 3M102. PATCH AND SEAL OPENING AROUND NEW DUCT PENETRATION.
9. EXISTING LOUVER RELOCATED TO NEW LOCATION.
10. THERMOSTAT WIRING TO TERMINATE INSIDE NEMA 3R RATED JUNCTION BOX TO MULTI PIN DISCONNECT PLUG.

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K. JAGER

FACILITIES AND ELECTRIC DISTRIBUTION BAYS HVAC PLAN ALTERNATIVE 2

3M102

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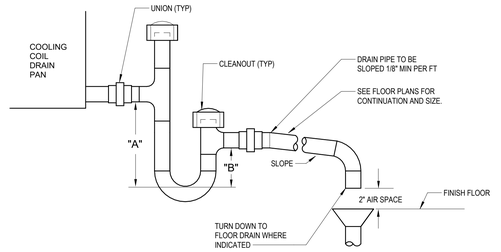
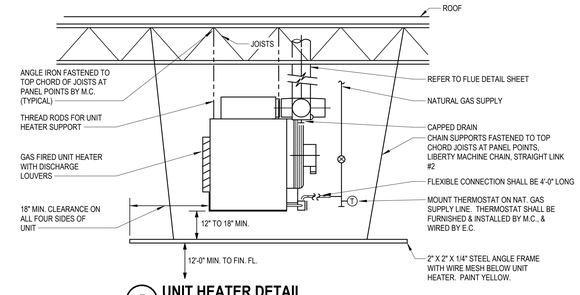
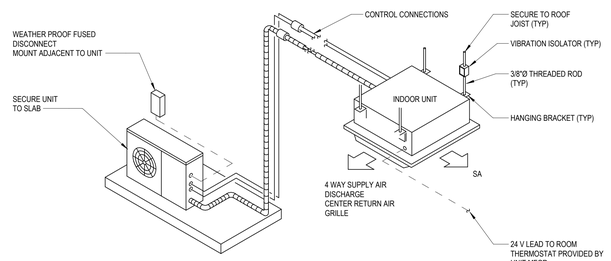


NOTES:
1. "A" = 2 X TOTAL PRESSURE OF FAN PLUS 4"
2. "B" = TOTAL PRESSURE OF FAN (IN OF WATER) PLUS 3 INCHES

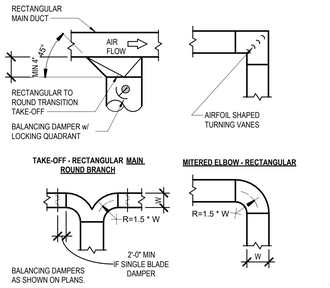
6 COOLING COIL CONDENSATE TRAP
NOT TO SCALE



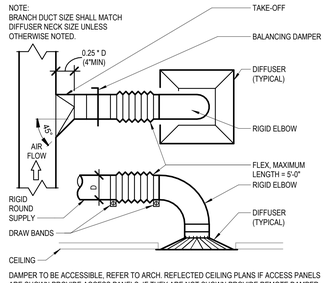
5 UNIT HEATER DETAIL
NOT TO SCALE



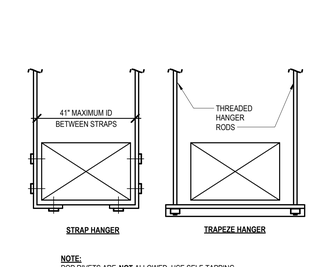
3 DUCTLESS CASSETTE AC UNIT DETAIL
NOT TO SCALE



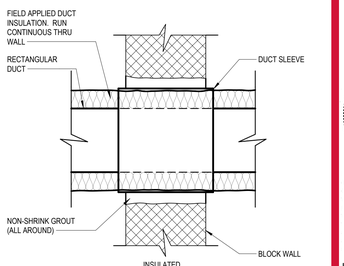
D4 RECTANGULAR DUCT FITTINGS DETAIL
NOT TO SCALE



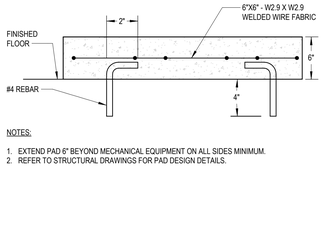
D3 DUCT TAKEOFF DETAIL
NOT TO SCALE



D2 DUCT SUPPORT DETAIL
NOT TO SCALE

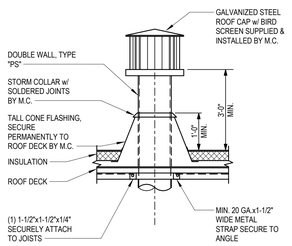


D1 RECTANGULAR DUCT WALL PENETRATION
NOT TO SCALE

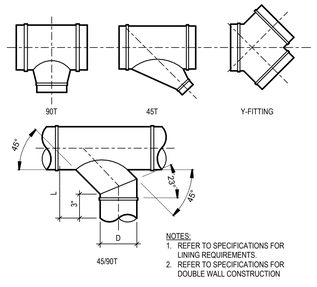


NOTES:
1. EXTEND PAD 6" BEYOND MECHANICAL EQUIPMENT ON ALL SIDES MINIMUM.
2. REFER TO STRUCTURAL DRAWINGS FOR PAD DESIGN DETAILS.

4 CONCRETE SUPPORT PAD DETAIL
NOT TO SCALE

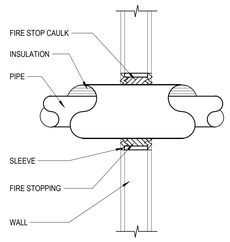


2 M-DUCT-FLUE DETAIL
NOT TO SCALE

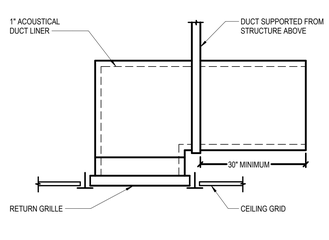


NOTES:
1. REFER TO SPECIFICATIONS FOR LINING REQUIREMENTS.
2. REFER TO SPECIFICATIONS FOR DOUBLE WALL CONSTRUCTION

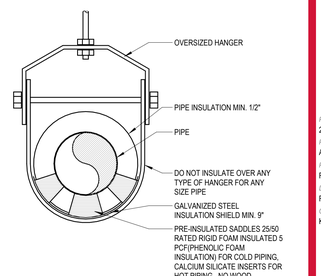
E4 SPIRAL DUCT FITTINGS DETAIL
NOT TO SCALE



E3 PIPE WALL PENETRATION DETAIL
NOT TO SCALE



1 RETURN BOOT DETAIL
NOT TO SCALE



E1 PIPE HANGER DETAIL
NOT TO SCALE

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M6 - 3M501 - DETAILS
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NORTH CAROLINA PROFESSIONAL SEAL 049047 ENGINEER RUBEN A. BAZIYANTS
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DRAWN BY
R. BAZIYANTS
CHECKED BY
K. JAGER

MECHANICAL DETAILS
3M501

HEAT PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	UNIT SIZE	REFRIGERANT	COOLING DATA			HEATING DATA	ELECTRICAL					UNIT WEIGHT	REMARKS
					TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	SEER	CAPACITY @ 5°F (MBH)	V	PH	HZ	MCA	MAX FUSE	(LBS)	
HP-1	DAIKIN	JU9RXP12AVJU9	1.0	R-32	10.8	8.3	16	9.5	208	1	60	14.6	15 A	72	
HP-2	DAIKIN	RXV12AVJU9	1.0	R-32	10.8	8.3	19.5	9.5	208	1	60	14.6	15 A	72	
HP-3	DAIKIN	RXV12AVJU9	1.0	R-32	10.8	8.3	19.5	9.5	208	1	60	14.6	15 A	72	
HP-4	DAIKIN	RXV12AVJU9	1.0	R-32	10.8	8.3	19.5	9.5	208	1	60	14.6	15 A	72	

GAS UNIT HEATER SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	AIRFLOW (CFM)	INPUT (MBH)	OUTPUT (MBH)	TEMPERATURE RISE	INTAKE SIZE (IN)	VENT SIZE (IN)	ELECTRICAL				MOUNTING HEIGHT (FT)	UNIT WEIGHT (LBS)	REMARKS
										FLA	VOLT	PH	HZ			
UH-13	(3107) NEW FACILITITES SHOP	REZNOR	UDXC-TSL60	769	60	49.8	60	1/2	4	2.4	120 V	1	60	14	71	1 - 2

REMARKS:
1. PROVIDE WITH WALL MOUNTED THERMOSTAT
2. FACTORY INSTALLED DISCONNECT SWITCH.

SPLIT SYSTEM AIR CONDITIONING UNIT

MARK	MANUFACTURER	MODEL	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	COOLING CAPACITY (BTUH)	ELECTRICAL			DIMENSIONS (IN)			UNIT WEIGHT (LBS)	PAIRED UNIT	REMARKS
						FAN MOTOR (W)	V	PH	W	L	H			
AC-1	DAIKIN	FDMA12AVJU9	390	60	10.8	96	208	1	27 9/16"	31 1/2"	9 5/8"	64	HP-1	1 - 2
AC-2	DAIKIN	FFA12AVJU9	370	20	10.8	50	208	1	22 1/2"	22 1/2"	10 1/4"	36	HP-2	1 - 2
AC-3	DAIKIN	FFA12AVJU9	370	20	10.8	50	208	1	22 1/2"	22 1/2"	10 1/4"	36	HP-3	1 - 2
AC-4	DAIKIN	FFA12AVJU9	370	20	10.8	50	208	1	22 1/2"	22 1/2"	10 1/4"	36	HP-4	1 - 2

REMARKS:
1. PROVIDE WITH CONDENSATE PUMP, DRAIN LINE SENSOR, OVERFLOW SENSOR TO SHUTDOWN UNIT, WALL MOUNTED THERMOSTAT, DISCONNECT SWITCH AND LINESET.
2. INDOOR UNIT POWERED BY OUTDOOR UNIT.

DIFFUSER, REGISTER, & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL	NECK SIZE			FACE SIZE		MOUNTING	PATTERN	MATERIAL	COLOR	REMARKS
			Ø"	L"	W"	L"	W"					
SD-1	TITUS	350FL		18"	8"	20"	10"	SIDEWALL	DOUBLE DEFLECTION	STEEL	WHITE	1, 2
SD-2	TITUS	OMNI	6"			24"	24"	LAY-IN	4-WAY	STEEL	WHITE	1, 2

REMARKS:
1. COORDINATE MOUNTING TYPE WITH ARCHITECTURAL CEILING PLANS.
2. PROVIDE REMOTE CABLE ACTUATOR FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILING.

HVLS FAN SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	FAN SIZE (DIA)	FAN RPM	ELECTRICAL					OPERATING WEIGHT	REMARKS
						HP	V	PH	HZ	MCA		
HVLS-1	(3107) NEW FACILITIES SHOP	MACROAIR	AVD3	10'	170	0.75	460	3	60	0.9	107.3	1
HVLS-2	(3108) FACILITITES MAINTENANCE	MACROAIR	AVD3	8'	178	0.75	460	3	60	0.6	102.2	1

REMARKS:
1. PROVIDE WITH WALL-MOUNTED CONTROLLER.

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NORTH CAROLINA
CHARLOTTE, NC

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Date: 2026.05.18 13:53:00 -04'00'

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K. JAGER

MECHANICAL SCHEDULES
3M601

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SPLIT SYSTEM HEAT PUMP:

SEQUENCE OF OPERATION:

HEAT PUMP SHALL RUN ACCORDING TO ITS OWN INTERNAL CONTROLS.
COOLING SETPOINT SHALL BE 75°F (ADJ.)
HEATING SETPOINT SHALL BE 72°F (ADJ.)

DDC CONTROLLER SHALL MONITOR SPACE TEMPERATURE AND ACTIVE ALARM IF HIGH OR LOW LIMIT SETPOINTS ARE REACHED.
COOLING HIGH TEMPERATURE ALARM: 85°F (ADJ.)
HEATING LOW TEMPERATURE ALARM: 62°F (ADJ.)

CONDENSATE PUMP AUXILIARY CUT-OUT CONTACTS ARE INTERLOCKED TO FAN MOTOR STARTER AND SHALL BE MONITORED BY DDC CONTROLLER. SHOULD WATER LEVEL REACH SETPOINT, HEAT PUMP SHALL SHUT DOWN AND DDC SHALL ACTIVE LEAK ALARM.

	Hardware Points					Software Points					
Point Name	**AI**	**AO**	**BI**	**BO**	**AV**	**BV**	**Loop**	**Sched**	**Trend**	**Alarm**	**Show On Graphic**
Zone Temp	x								x		x
Fan Status			x						x		x
Emergency Shutdown			x						x	x	x
High Zone Temp										x	
Low Zone Temp										x	
Totals	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**3**
	Total Hardware (3)								**Total Software (6)**		

NOTE: NEW CONTROL POINTS SHALL BE INTEGRATED INTO EXISTING JCI CONTROLS BUILDING AUTOMATION SYSTEM.

SPLIT SYSTEM HEAT PUMP UNIT CONTROL DIAGRAM

1 NOT TO SCALE

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MECHANICAL CONTROLS
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06/17/2026 CONSTRUCTION DOCUMENTS

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MECHANICAL CONTROLS
3M701

ELECTRICAL ABBREVIATIONS

A	AMPERES
ACU	AIR CONDITIONING UNIT
AFG	ABOVE FINISH GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AP	ACCESS PANEL
APPROX	APPROXIMATE
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILARY
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BF	BARRIER FREE
BFG	BELOW FINISHED GRADE
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DEVICE
BSMT	BASEMENT
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED-CIRCUIT TELEVISION
CF	CEILING FAN
CH	CABINET HEATER
CL	CENTERLINE
CLR	CLEAR, CLEARANCE
CMPR	COMPRESSOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CR	CARD READER
CT	COOLING TOWER
CU	COPPER
DEPT	DEPARTMENT
DET	DETAIL
DISC	DISCONNECT
DIST	DISTRIBUTION
DW	DISHWASHER
DWH	DOMESTIC WATER HEATER
EF	EXHAUST FAN
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
F	FAHRENHEIT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FLEXIBLE CONNECTION
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FLUORESCENT
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FMC	FLEXIBLE METAL CONDUIT
FURN	FURNISH, FURNISHED
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTOR
GND	GROUND
HP	HORSEPOWER
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
IBC	INTERNATIONAL BUILDING CODE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JBOX	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
KWH	KILOWATT-HOURS
LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
LTG	LIGHTING
LV	LOW VOLTAGE
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFDS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MSBD	MAIN SWITCH BOARD
MT	MOUNT
MTR	MOTOR, MOTORIZED
MTS	MANUAL TRANSFER SWITCH
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NL	NIGHT-LIGHT
OH	OVERHEAD
OHD	OVERHEAD DOOR
P	PUMP
PH	PHASE
PNL	PANEL
PP	POWER POLE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
RECEPT	RECEPTACLE
RTU	ROOFTOP UNIT
TEL	TELEPHONE
TR	TAMPER RESISTANT
TV	TELEVISION
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WH	WATER HEATER
XFER	TRANSFER
XFMR	TRANSFORMER
Ø	PHASE

DATA SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
▽#	DATA/PHONE OUTLET, # INDICATES QUANTITY OF ANTICIPATED JACKS	18"
▼#	ABOVE COUNTERTOP DATA/PHONE OUTLET, MOUNT 4" ABOVE BACKSPLASH. # INDICATES QUANTITY OF ANTICIPATED JACKS	46"
#~~	MULTIOUTLET WIREMOLD ASSEMBLY, MOUNT 4" ABOVE BACKSPLASH OR PROVIDE DATA OUTLETS AS SHOWN ON DRAWING. # INDICATES QUANTITY OF ANTICIPATED JACKS	46"
#▽	FLOOR DATA/PHONE OUTLET. # INDICATES QUANTITY OF ANTICIPATED JACKS	
#▽	CEILING DATA/PHONE OUTLET. # INDICATES QUANTITY OF ANTICIPATED JACKS	
WAP CLG	CEILING WIRELESS ACCESS POINT	
WAP ▼	WIRELESS ACCESS POINT	46"
TV ▽	TELEVISION OUTLET	18"
	CLOCK	84"
C	INTERCOM OUTLET LOCATION	46"
C AV	INTERCOM - AUDIO/VISUAL	46"
S	SPEAKER (WALL OR CEILING MT.)	84"
E	SOUND MASKING EMITTER (WALL OR CEILING MT.)	84"
$V	VOLUME CONTROL	46"
M	MICROPHONE OUTLET	18"
P	PROJECTOR CONTROL OUTLET	18"
H	HUMIDISTAT	46"
T	THERMOSTAT	46"
U	OUTLET IN FLOOR (MICROPHONE SHOWN)	

NOTE: SYMBOLS REPRESENT EQUIPMENT SPECIFIED BYOTHERS, THE SCOPE OF WORK REPRESENTED IN THESE DRAWINGS INCLUDES DEVICE BACKBOX AND CONDUIT FROM BACKBOX TO ABOVE ACCESSIBLE CEILING TERMINATED WITH INSULATED BUSHING (UNLESS NOTED OTHERWISE).

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
P	WALL PULLSTATION DEVICE	46"
▽ V	WALL AUDIO/VISUAL DEVICE (CANDELAS NOTED)	90"
V	WALL VISUAL DEVICE (CANDELAS NOTED)	90"
▽ F	WALL AUDIO STATION	90"
▽ V	CEILING AUDIO/VISUAL DEVICE (CANDELAS NOTED)	
V	CEILING VISUAL DEVICE (CANDELAS NOTED)	
▽ F	CEILING AUDIO STATION	
SD	WALL SMOKE DETECTOR	WITHIN 12" OF CEILING
▽ SD	WALL AUDIO/VISUAL SMOKE DETECTOR	WITHIN 12" OF CEILING
CD	WALL COMBO SMOKE/CO DETECTOR	WITHIN 12" OF CEILING
HD	WALL HEAT DETECTOR	90"
SD	CEILING SMOKE DETECTOR	
▽ SD	CEILING AUDIO/VISUAL SMOKE DETECTOR	
CD	CEILING COMBO SMOKE/CO DETECTOR	
HD	CEILING HEAT DETECTOR	
DR	DUCT SMOKE DETECTOR (RETURN SIDE)	
DS	DUCT SMOKE DETECTOR (SUPPLY SIDE)	
FS	SPRINKLER FLOW SWITCH	
TS	SPRINKLER VALVE TAMPER SWITCH	
MH	WALL MAGNETIC HOLD OPEN	80"
RT	REMOTE TEST SWITCH	46"
FD	FIRE FIGHTER TELEPHONE	46"
FACP	FIRE ALARM CONTROL PANEL	80"
FAAP	FIRE ALARM ANNUNCIATOR PANEL	46"
NAC	FIRE ALARM NAC PANEL	46"

LIGHTING SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
$	SINGLE POLE SWITCH	46"
3 $	3-WAY SWITCH	46"
4 $	4-WAY SWITCH	46"
D $	DIMMER SWITCH	46"
OS $	OCCUPANCY SENSOR SWITCH	46"
MC $	MOMENTARY CONTACT SWITCH	46"
T $	TIMER SWITCH	46"
OSD $	COMBINATION: OCCUPANCY SENSOR / 0-10V DIMMER SWITCH	46"
MCD $	COMBINATION: MOMENTARY CONTACT SWITCH / 0-10V DIMMER SWITCH	46"
CF $	COMBINATION: LIGHT SWITCH / CEILING FAN CONTROLLER	46"
LV# $	LIGHTING CONTROL SYSTEM PUSH BUTTON STATION	46"
DSZ $	DUAL RELAY OCCUPANCY SENSOR SWITCH	46"
K $	KEYED SWITCH	46"
GTD	GENERATOR TRANSFER DEVICE	
OS	CEILING OCCUPANCY SENSOR	
LS	CEILING LIGHT LEVEL SENSOR	
PC	PHOTOCELL	
	POLE MOUNTED LIGHT (TYPE DENOTED)	PER SCHED
A	WALL MOUNTED LIGHT (TYPE DENOTED)	AS NOTED
	RECESSED LIGHT (TYPE DENOTED)	
	SURFACE LIGHT (TYPE DENOTED)	
P1 P2	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)	
	TRACK AND TRACK LIGHT (TYPES DENOTED)	AS NOTED
	EMERGENCY DOUBLE HEAD WALL LIGHT (TYPE DENOTED)	96"
	EXIT SIGN (TYPE DENOTED)	
	LIGHT FIXTURE ON (EM) LIFE SAFETY OR CRITICAL BRANCH	AS NOTED

WIRING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	CONDUIT CONCEALED IN WALL OR OVERHEAD
	CONDUIT CONCEALED BELOW FLOOR
	CONDUIT EXPOSED
	CONDUIT TRANSITION UP
	CONDUIT TRANSITION DOWN
	CONDUIT STUBBED OUT
UF	UNDERFLOOR RACEWAY SYSTEM
	CABLE TRAY (TYPE DENOTED)
3	CONDUIT SLEEVE (SIZE DENOTED)
	BRANCH CIRCUIT HOME RUN
	LOW VOLTAGE POWER WIRING
UGE	UNDERGROUND ELECTRICAL
OHE	OVERHEAD ELECTRIC
P	UTILITY SERVICE POWER POLE (SITE)
G	GROUND CONDUCTOR
	LIGHTNING PROTECTION AIR TERMINAL
	LIGHTNING PROTECTION CONDUCTOR SPLICE
	GROUND ROD (PLAN VIEW)
	GROUND CONNECTION TO STEEL OR STRUCTURE
	GROUND CONNECTION - EXOTHERMIC WELD

POWER SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
	SINGLE RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "TR" = TAMPER RESISTANT)	18"
	GFCI RATED SINGLE RECEPT	18"
	ISOLATED GROUND SINGLE RECEPT	18"
	SWITCHED SINGLE RECEPT	18"
	DUPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS "TR" = TAMPER RESISTANT)	18"
	GFCI RATED DUPLEX RECEPT ("WP" = WEATHER RESISTANT)	18"
	ISOLATED GROUND DUPLEX RECEPT	18"
	SWITCHED DUPLEX RECEPT (SPLIT-WIRE)	18"
	USB/DUPLEX RECEPT	18"
	ABOVE COUNTERTOP DUPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	ABOVE COUNTERTOP GFCI RATED DUPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	FOURPLEX RECEPT ("EM" = EMERGENCY, "HG" = HOSPITAL GRADE, "U" = CONNECTED TO UPS)	18"
	GFCI RATED FOURPLEX RECEPT	18"
	ISOLATED GROUND FOURPLEX RECEPT	18"
	SWITCHED FOURPLEX RECEPT (SPLIT-WIRE)	18"
	ABOVE COUNTERTOP FOURPLEX RECEPT, MOUNT 4" ABOVE BACKSPLASH OR 44"	
	SPECIAL RECEPT OR CONNECTION, PROVIDE DIRECT POWER CONNECTION OR MATCHING RECEPTACLE AS REQUIRED, COORDINATE W/ EQUIPMENT MANUFACTURER	18"
#~~	MULTIOUTLET WIREMOLD ASSEMBLY, MOUNT 4" ABOVE BACKSPLASH OR PROVIDE POWER RECEPTS AS SHOWN ON DRAWING	46"
	FLOOR RECEPT (DUPLEX SHOWN)	
	CEILING RECEPT (DUPLEX SHOWN)	
J	JUNCTION BOX (FLOOR, WALL, CEILING SHOWN RESPECTIVELY)	AS NOTED
	PUSH BUTTON STATION	46"
	FLOOR MOUNT FURNITURE CONNECTION -POWER AND DATA	
	WALL MOUNT FURNITURE CONNECTION -POWER AND DATA	18"
M $	MOTOR HORSEPOWER RATED SWITCH	46"
F $	FUSED SWITCH	46"
	SAFETY DISCONNECT SWITCH (NON-FUSED)	72"
	SAFETY DISCONNECT SWITCH (FUSED)	72"
	COMBO MOTOR STARTER/DISCONNECT SWITCH (FUSED)	72"
VFD	VARIABLE FREQUENCY DRIVE	
	SINGLE PHASE MOTOR (SEE SCHEDULE)	
	THREE PHASE MOTOR (SEE SCHEDULE)	
	CIRCUIT BREAKER PANEL	72"
	POWER OR DISTRIBUTION PANEL	72"
	SPECIAL CABINET (TYPE DENOTED)	72"
T	TRANSFORMER (TYPE DENOTED)	

SECURITY SYMBOL LEGEND

SYMBOL	DESCRIPTION	HEIGHT TO MIDDLE OF DEVICE (U.N.O.)
DC	DOOR CONTACT	84"
CR	CARD READER	46"
KP	KEYPAD	46"
ES	ELECTRIC STRIKE	46"
EL	ELECTRIC LATCH	46"
ET	ELECTRIC TRANSFER	46"
ML	MAGNETIC LOCK	84"
RE	REQUEST TO EXIT	84"
MS	MOTION SENSOR	84"
GB	GLASS BREAK	
	WALL CCTV CAMERA	90"
HTR PTZ	WALL CCTV CAMERA - DOME, HEATER, PAN-TILT-ZOOM	90"
	CEILING CCTV CAMERA	
HTR PTZ	CEILING CCTV CAMERA - DOME, HEATER, PAN-TILT-ZOOM	

NOTE: SYMBOLS REPRESENT EQUIPMENT SPECIFIED BY OTHERS, THE SCOPE OF WORK REPRESENTED IN THESE DRAWINGS INCLUDES DEVICE BACKBOX AND 3/4" CONDUIT FROM BACKBOX TO ABOVE ACCESSIBLE CEILING TERMINATED WITH INSULATED BUSHING (UNLESS NOTED OTHERWISE)

GENERAL ELECTRICAL NOTES

1. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS ADOPTED BY THE AHJ FOR THE PROJECT LOCATION. INCLUDING (NOT LIMITED TO) ELECTRICAL CODES, BUILDING CODES, ENERGY CODES, ETC.
2. COORDINATE INSTALLATION WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REFLECTED CEILING PLANS FOR DEVICE AND FIXTURE PLACEMENT, AS WELL AS FIRE RATED PARTITIONS, EXPANSION JOINTS, ETC.
3. COORDINATE INSTALLATION OF MECHANICAL EQUIPMENT POWER CONNECTIONS WITH MECHANICAL/PLUMBING PLANS, SCHEDULES AND PRODUCT DATA SUBMITTALS.
4. COORDINATE INSTALLATION WITH VENDOR/ CONTRACTOR SHOP DRAWINGS WHERE APPROPRIATE.
5. FIELD COORDINATE INSTALLATION WITH THE INSTALLATION OF OTHER TRADES TO AVOID CLASHES AND CONFLICTS.
6. WHERE MOUNTING HEIGHTS ARE SHOWN, THEY ARE TO BE CONSIDERED TO BE TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.
7. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY OR PART OF A LISTED CABLE ASSEMBLY SUITABLE FOR THE INSTALLED PURPOSE AND LOCATION, AND ALLOWED BY PROJECT SPECIFICATIONS.
8. ALL CABLES AND CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. CABLES ABOVE ACCESSIBLE CEILINGS MAY BE ROUTED IN CABLE SUPPORT HOOKS/RINGS. CABLES TO BE ROUTED IN CABLE TRAY WHERE SHOWN.
9. FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 75 FEET AND #8 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
10. FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS, USE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS LONGER THAN 150 FEET, UNO. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.
11. WHERE CONFLICTS EXIST IN DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS, ISSUE REQUEST FOR INTERPRETATION TO DESIGN TEAM FOR CLARIFICATION PRIOR TO INSTALLATION.
12. TV OUTLETS, VOLUME CONTROLS, TELEPHONE OUTLETS, DATA OUTLETS, AND FIRE ALARM DEVICES SHALL CONSIST OF A BACK BOX WITH CONDUIT STUBBED ABOVE THE ACCESSIBLE CEILING. VERIFY SIZE OF BACK BOX REQUIRED WITH DEVICE TO BE INSTALLED.
13. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY.
14. FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWISE:

3/4"C	TV OUTLETS
3/4"C	VOLUME CONTROLS
3/4"C	TELEPHONE OUTLETS
3/4"C	INFORMATION OUTLETS
3/4"C	FIRE ALARM DEVICES

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06/17/2026 CONSTRUCTION DOCUMENTS

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CHECKED BY
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ELECTRICAL NOTES AND ABBREVIATIONS
3E001

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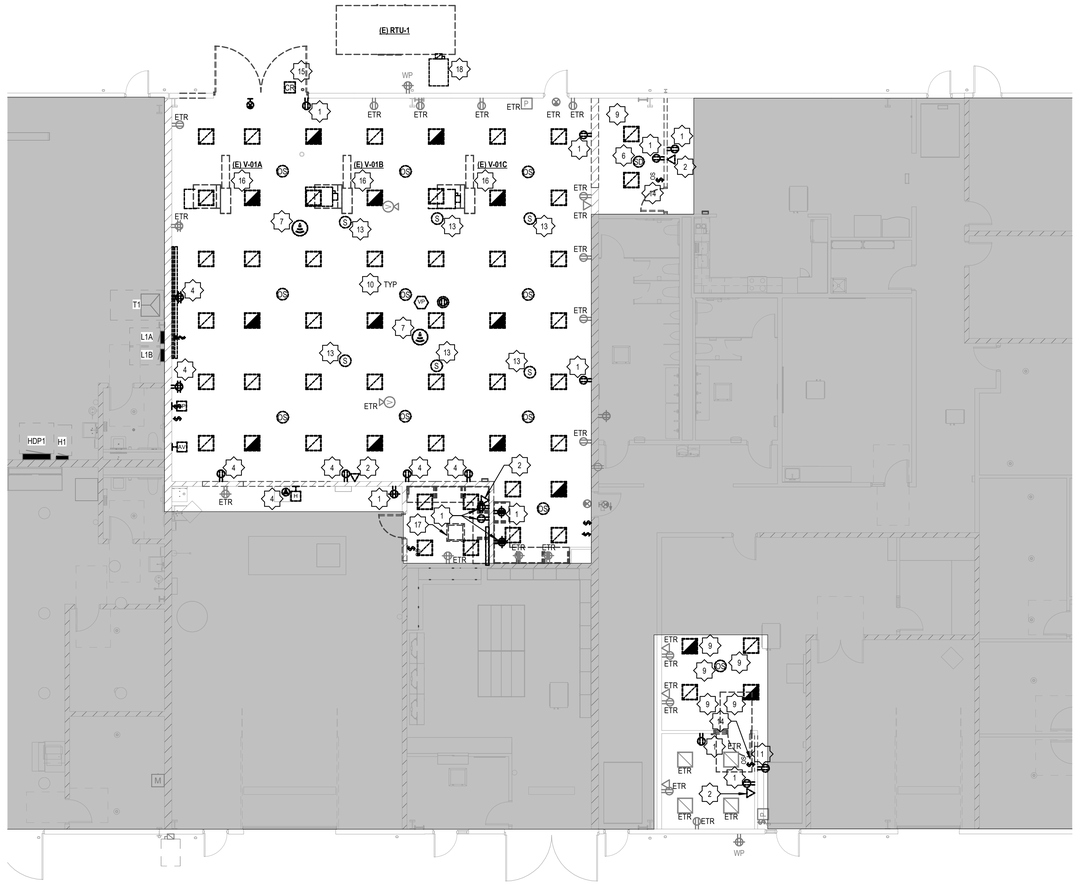

FIRST FLOOR DEMOLITION PLAN
1/8" = 1'-0"

DEMOLITION GENERAL NOTES

A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.

B. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES IN DEMOLITION AREAS UNLESS NOTED OTHERWISE.

C. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.

D. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

E. FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

F. DISCONNECT AND REMOVE LIGHT SWITCHES IN DEMOLITION AREAS AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.

G. DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S).

H. FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

DEMOLITION KEYNOTES

1. DISCONNECT AND REMOVE RECEPTACLE I N ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST DEVICE ON CIRCUIT TO REMAIN.
2. DISCONNECT AND REMOVE TELECOM DEVICE IN ITS ENTIRETY. REMOVE CABLING BACK TO IT ROOM.
3. NOT USED.
4. DISCONNECT AND REMOVE RECEPTACLE IN ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. LABEL BREAKER AS SPARE AND SWITCH TO "OFF" POSITION FOR RE-USE.
5. NOT USED.
6. DISCONNECT AND REMOVE FIRE ALARM DEVICE IN ITS ENTIRETY. REMOVE LOW VOLTAGE WIRING BACK TO NEAREST FIRE ALARM DEVICE ON LOOP.
7. DISCONNECT AND REMOVE WIRELESS ACCESS POINT IN ITS ENTIRETY. REMOVE CABLING BACK TO IT ROOM.
8. NOT USED.
9. DISCONNECT AND REMOVE ALL LIGHTING FIXTURES AND LIGHTING CONTROLLER IN AREA. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST LIGHTING FIXTURE ON CIRCUIT TO REMAIN.
10. DISCONNECT AND REMOVE LIGHTING FIXTURES, LIGHTING RELAYS AND CEILING OCCUPANCY SENSORS IN AREA SHOWN. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST LIGHTING FIXTURE ON CIRCUIT TO REMAIN.
11. DISCONNECT AND REMOVE LIGHTING FIXTURE IN ITS ENTIRETY. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST FIXTURE ON CIRCUIT TO REMAIN.
12. NOT USED.
13. DISCONNECT AND REMOVE CEILING MOUNT SPEAKERS IN THEIR ENTIRETY. REMOVE LOW VOLTAGE WIRING BACK TO SOURCE.
14. DISCONNECT AND REMOVE LIGHTING CONTROLLER IN ITS ENTIRETY. REFER TO SHEET EL101 FOR ADDITIONAL INFORMATION.
15. DISCONNECT AND REMOVE ACCESS CONTROL DEVICE IN ITS ENTIRETY. REMOVE LOW VOLTAGE WIRING BACK T SOURCE.
16. DISCONNECT AND REMOVE EXISTING CONNECTION TO HVAC UNIT BEING REMOVED. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. SWITCH BREAKER TO 'OFF' POSITION AND LABEL AS SPARE FOR RE-USE.
17. DISCONNECT AND REMOVE EXISTING CONNECTION TO HVAC UNIT BEING REMOVED. REMOVE BRANCH CIRCUIT WIRING BACK TO NEAREST UNIT ON CIRCUIT TO REMAIN.
18. DISCONNECT AND REMOVE CONNECTION TO RTU BEING REMOVED. REMOVE BRANCH CIRCUIT WIRING BACK TO ORIGINAL POWER SOURCE. SWITCH BREAKER TO 'OFF' POSITION AND LABEL AS SPARE FOR RE-USE.

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DANE STIVERS
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ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
D. STIVERS, PE
DRAWN BY
D. HARRIS-WILLIAMS
CHECKED BY
D. STIVERS, PE

FIRST FLOOR DEMOLITION PLAN
3ED101

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3ED101 FLOOR DEMOLITION PLAN
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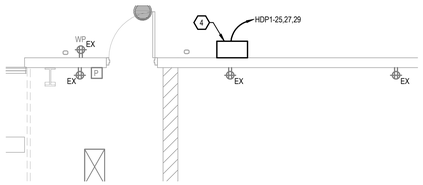

3 ALTERNATE 2 ENLARGED PLAN
1/4" = 1'-0"

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

TAG	DESCRIPTION	POWER	VOLTAGE	PHASE	FEEDER	DISCONNECTING MEANS	DISC FURNISH/INSTALL	NOTES
(i.e. EF-1)	(i.e. Exhaust Fan #1)	599 VA	480 V	3	(i.e. 4#12+G-3/4"C)	(i.e. PROVIDE 30A/3P FUSIBLE DISCONNECT)	(i.e. DIV. 26 / DIV. 26)	
HP-1	HEAT PUMP	2429 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT.	DIV 23/DIV 23	
HP-2	HEAT PUMP	2429 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT.	DIV 23/DIV 23	
HP-3	HEAT PUMP	2429 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT.	DIV 23/DIV 23	
HP-4	HEAT PUMP	2429 VA	208 V	1	3#10, 1#10G, 3/4" C.	PROVIDED WITH UNIT.	DIV 23/DIV 23	
UH-13	GAS UNIT HEATER	288 VA	120 V	1	2#12, 1#12G, 3/4" C.	PROVIDED WITH UNIT.	DIV 23/DIV 23	

STARTER TYPES:
- FVNR FULL VOLTAGE NON-REVERSING
- FVR FULL VOLTAGE REVERSING
- 2-SPD TWO SPEED
- VFD VARIABLE FREQUENCY DRIVE
- RVS REDUCED VOLTAGE

COMBINATION DISCONNECT TYPES:
- FS FUSED SWITCH
- NFS NON-FUSED SWITCH
- MCP MOTOR CIRCUIT PROTECTOR
- CB CIRCUIT BREAKER

CONTROL DEVICES:
- HOA HAND-OFF-AUTO SWITCH
- RP RED (RUN) PILOT LIGHT
- GP GREEN (POWER) PILOT LIGHT
- 0/0 ON-OFF SELECTOR SWITCH
- S/S STOP-START PUSHBUTTONS

NOTES:

1. INPUT AND OUTPUT CONDUCTORS TO AND FROM VFD'S SHALL BE INSTALLED IN SEPARATE RACEWAYS, INDEPENDENT FROM ANY OTHER CONDUCTORS, AND SHALL NOT PASS THRU ANY COMMON WIREWAY OR RACEWAY.

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

POWER GENERAL NOTES

A. WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

B. VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.

C. PROVIDE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED AND GRADE MOUNTED ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL DETAIL DRAWINGS FOR TRANSFORMER, GENERATOR, OR SWITCHGEAR PADS THAT MAY EXCEED REQUIREMENTS LISTED IN SPECIFICATIONS.

D. CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.

E. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.

F. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

POWER KEYNOTES

1. FURNISH AND INSTALL A NEW RECEPTACLE AT INDICATED LOCATION. ROUTE NEW BRANCH CIRCUIT WIRING FROM NEAREST EXISTING RECEPTACLE FOR TIE IN TO CIRCUIT.
2. INDOOR AC UNIT FED FROM ASSOCIATED OUTDOOR HP UNIT.
3. OUTDOOR HP UNIT FEEDS ASSOCIATED INDOOR AC UNIT.
4. **ALTERNATE 2:** PROVIDE A NEW NEMA 3R 480V/3-PHASE CAM LOCK POWER PANEL WITH FEMALE RECEPTACLES FOR POWER TO FUTURE RTU. POWER ASSEMBLIES 'CCS-01-DFSL6' OR APPROVED EQUIVALENT. COORDINATE EXACT LOCATIONS AND CONNECTION TYPE WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
5. POWER AND DATA FOR OWNER PROVIDED/OWNER INSTALLED WALL TV MONITOR. COORDINATE LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.

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GREENVILLE UTILITIES COMMISSION
RENOVATIONS TO OPERATION CENTER BUILDING 3
3355 NC-43, GREENVILLE, NC 27834

PROGRESSIVE ARCHITECTURE ENGINEERING P.C. C-2326 NORTH CAROLINA REGISTERED ENGINEERING CORPORATION CHARLOTTE, NC

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054688 DANE STIVERS
Dane A. Stivers 1:26:26 PM EST

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FIRST FLOOR POWER PLAN
3EP101

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FIRST FLOOR POWER PLAN

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2018 Appendix B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN & SUMMARY
Electrical Systems and Equipment

METHOD OF COMPLIANCE:

- ☐ No Change to Existing Systems
- ■ Prescriptive (NCECC 2018)
- ☐ Performance (NCECC 2018)
- ☐ Prescriptive (ASHRAE 90.1-2013)
- ☐ Performance (ASHRAE 90.1-2013)

Lighting Schedule:

Fixture Type: REFER TO LIGHTING FIXTURE SCHEDULE
Lamp Type Required: REFER TO LIGHTING FIXTURE SCHEDULE
Number of Lamps: REFER TO LIGHTING FIXTURE SCHEDULE
Ballast Type Used: REFER TO LIGHTING FIXTURE SCHEDULE
Number of Ballasts: REFER TO LIGHTING FIXTURE SCHEDULE
Total Watts / Fixture: REFER TO LIGHTING FIXTURE SCHEDULE

Allowable Lighting Power:

- ■ Whole Building Method
- ☐ Space by Space Method

INTERIOR LIGHTING
Allowed Lighting Power: 2422 W
Designed Lighting Power: 2324 W
Difference: 98 W

EXTERIOR LIGHTING
Allowed Lighting Power: 0 W
Designed Lighting Power: 0 W
Difference: 0 W

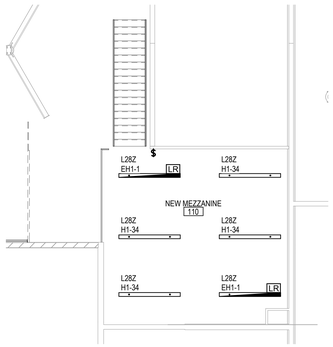
Additional Efficiency Package Options:

FOR 2018 NCECC COMPLIANCE PATHS. NOT REQUIRED FOR ASHRAE 90.1 COMPLIANCE PATHS.

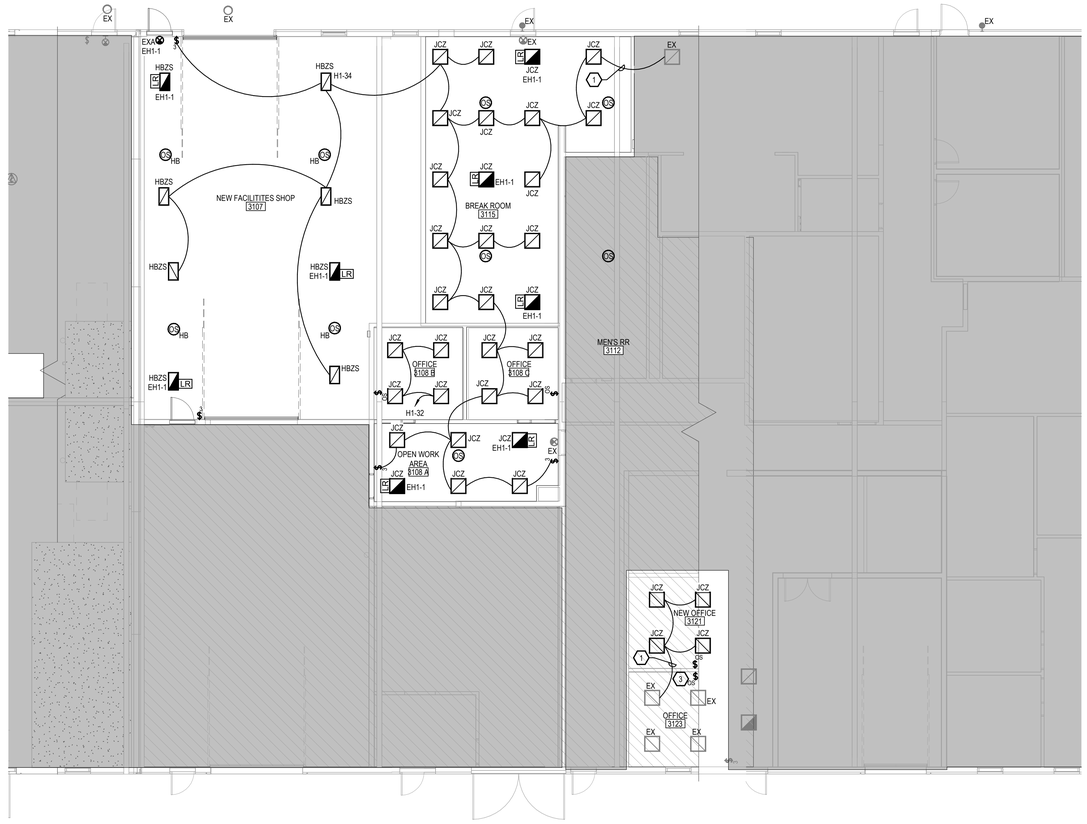
- ☐ C406.2 More Efficient HVAC Equipment Performance
- ■ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outside Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating
- ☐ Not Applicable

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMP	VOLT	WATT	MANUFACTURER	CATALOG NUMBER	NOTE
HBZS	LINEAR LED HIGH BAY	RECESSED	LED	277 V	137 W	GE	ABV3	
JCZ	LED RECESSED VOLUMETRIC - COMMERCIAL GRADE	RECESSED	LED	277 V	30 W	LITHONIA	2BLT	
L28Z	LED SPECIFICATION STRIP	SUSPEND @ X'-X" AFF	LED	277 V	121 W	LITHONIA	ZLID	



3 **MEZZ**
1/8" = 1'-0"



1 **FIRST FLOOR LIGHTING PLAN**
1/8" = 1'-0"

LIGHTING GENERAL NOTES

A. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.

B. SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHTS OF EXTERIOR LIGHTING FIXTURES.

C. CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.

D. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

E. ALL EMERGENCY AND EXIT LIGHTING WITH INTEGRAL BATTERIES TO BE FED FROM AN UNSWITCHED LEG OF THE BRANCH CIRCUIT FEEDING LIGHTING IN THE SAME SPACE. BATTERY TO HAVE CAPACITY FOR 90 MINUTES OF BACK-UP POWER.

F. ALL FOUR CORNERS OF LAY-IN FIXTURES TO BE SUPPORTED PER AHJ REQUIREMENTS.

LIGHTING KEYNOTES

1. PROVIDE NEW BRANCH CIRCUIT WIRING FROM EXISTING FIXTURE TO INDICATED FIXTURES FOR CONNECTION TO CIRCUIT AND CONTROLLER.
2. INSTALL NEW LIGHT FIXTURE TO MATCH EXISTING AT INDICATED LOCATION.
3. INSTALL A NEW LIGHTING CONTROL SWITCH. ROUTE NEW BRANCH CIRCUIT WIRING AND CONNECT TO EXISTING LIGHTING FIXTURES IN ROOM FOR CONTROL.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054688 DANE STIVERS

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FIRST FLOOR LIGHTING PLAN
3EL101

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FIRST FLOOR LIGHTING PLAN
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EXISTING PANELBOARD: L1A

LOCATION: WATER RESOURCES SHOP 3106
MOUNTING: SURFACE Type 1
FED FROM: T1
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 400 A
A.I.C. RATING: 22000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX. RECEPT 3106	RCPT		1	20 A	1	540	576					2	20 A	1			EX. GFUH-03, GFUH-04 3106
EX. RECEPT	RCPT		1	20 A	3			540	864			4	20 A	1			EX. GFUH- 01, 02, 12 3108
EX. RECEPT 3106	RCPT		1	20 A	5					720	624	6	20 A	1		MTR	EX. EF-03, EF-04 3105
EX. RECEPT 3106	RCPT		1	20 A	7	720	1020					8	20 A	1		MTR;	EX. CP1 GWH1 3107
EX. RECEPT GAS SHOP 3101	RCPT		1	20 A	9			360	843			10	20 A	2		MTR	EX. DSCU-02
EX. RECEPT GAS SHOP 3101	RCPT		1	20 A	11					540	843	12					
EX. RECEPT RESTROOM 3105	RCPT		1	20 A	13	360	843					14	20 A	2		MTR	EX. DSCU-03
EX. RECEPT GAS SHOP 3101	RCPT		1	20 A	15			540	843			16					
EX. RECEPT GAS SHOP 3101	RCPT		1	20 A	17					540	120	18	20 A	2		MTR	EX. DS-02, DS-03 3103, 3102
EX. RECEPT	RCPT		1	20 A	19	360	120					20					
EX. RECEPT 3102	RCPT		1	20 A	21			720	1133			22	20 A	3		MTR	EX. DP WATER RESOURCES SHOP 3106
EX. RECEPT 3103, 3102, 3101	RCPT		1	20 A	23					900	1133	24					
EX. NON CONTINUOUS 3103			1	20 A	25	540	1133					26					
EX. NON CONTINUOUS 3103			1	20 A	27			540	1200			28	20 A	1		RCPT	EX. BENCH GRINDER 3106
EX. NON CONTINUOUS 3103			1	20 A	29					540	720	30	20 A	1		RCPT	NEW RECEPT
EX. NON CONTINUOUS 3103			1	20 A	31	540	1000					32	20 A	2			EX. SHOP VAC FACILITIES MAINT. 3108
NEW UH-13	MTR		1	20 A	33			288	1000			34					
EX. RECEPT 3108, 3108A	RCPT		1	20 A	35					360	540	36	20 A	1		RCPT	NEW RECEPT
EX. RECEPT 3108	RCPT		1	20 A	37	720	15138					38	20 A	3		MTR; RCPT;	EX.PANEL L1C
EX. ICE GAS SHOP 3101 (GFI)			1	20 A	39			1200	16291			40					
Receptacle	RCPT		1	20 A	41					360	20933	42					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	56640 VA	58.83%	33320 VA	CONNECTED LOAD:	106685 VA
LIGHTING	0 VA	0.00%	0 VA	EST. DEMAND LOAD:	84215 VA
MOTORS	21825 VA	103.89%	22675 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	296 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	234 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1B

LOCATION: WATER RESOURCES SHOP 3106
MOUNTING: SURFACE Type 1
FED FROM: L1A
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 400 A
A.I.C. RATING: 22000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
NEW REFRIGERATOR (GFI) *	RCPT		1	20 A	1	1000	747					2	20 A	2		MTR;	EX VRV1-02A, 02B, VR1-08 THRU VR1-12
NEW REFRIGERATOR (GFI) *	RCPT		1	20 A	3			1000	747			4					
EX RECEPT TRAINING 3107	RCPT		1	20 A	5					540	624	6	20 A	1		MTR	EX EF-05, EF-06
NEW MICROWAVE	RCPT		1	20 A	7	1000	0					8	20 A	3		--	NEW SPARE
NEW MICROWAVE	RCPT		1	20 A	9			1000	0			10					
EX RECEPT TRAINING 3107	RCPT		1	20 A	11					360	0	12					
EX RECEPT TRAINING 3107	RCPT		1	20 A	13	720	200					14	20 A	1		RCPT	EX RECEPT 3108 (GFI)
EX RECEPT TRAINING 3107	RCPT		1	20 A	15			720	1080			16	20 A	1			EX RECEPT 3110
EX RECEPT WAITING 3109	RCPT		1	20 A	17					540	1080	18	20 A	1			EX RECEPT 3110
EX RECEPT WAITING 3109	RCPT		1	20 A	19	360	0					20	20 A	1		--	SPARE
EX RECEPT IT/HELP DESK...	RCPT		1	20 A	21			360	--			22	--	1		--	SPACE
EX RECEPT	RCPT		1	20 A	23					540	--	24	--	1		--	SPACE
EX RECEPT	RCPT		1	20 A	25	540	1713					26	20 A	2			EX DSCU-07
EX RECEPT IT/HELP DESK...	RCPT		1	20 A	27			540	1713			28					
EX RECEPT IT/HELP DESK...	RCPT		1	20 A	29					720	1215	30	15 A	2		MTR	HP-1/AC-1 *
EX RECEPT IT/HELP DESK...	RCPT		1	20 A	31	720	1215					32					
NEW MICROWAVE	RCPT		1	20 A	33			1000	1215			34	15 A	2		MTR	HP-2/AC-2 *
EX EWC (GFI)	RCPT		1	20 A	35					180	1215	36					
EX RECEPT 3113, 3112	RCPT		1	20 A	37	360	1215					38	15 A	2		MTR	HP-3/AC-3 *
EX RECPT 3111, 3107, 3106			1	20 A	39			200	1215			40					
EX RECEPT 3121, 4, 3109,...			1	20 A	41					250	0	42	20 A	1		--	SPARE

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	12400 VA	90.32%	11200 VA	CONNECTED LOAD:	27841 VA
LIGHTING	0 VA	0.00%	0 VA	EST. DEMAND LOAD:	27249 VA
MOTORS	9129 VA	106.65%	9737 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	77 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	76 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: EH1

LOCATION: ELEC. DISTRIBUTION SECURE STORAGE...
MOUNTING: SURFACE Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 50 A
A.I.C. RATING: 14000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX. LIGHTING	LTS; RCPT		1	20 A	1	2299	0					2	20 A	1		--	SPARE
EX. LIGHTING	LTS		1	20 A	3			2932	0			4	20 A	1		--	SPARE
EX. LIGHTING WAREHOUSE...	LTS		1	20 A	5					3034	0	6	20 A	1		--	SPARE
EX. LIGHTING	--		1	20 A	7	580	--					8	--	1		--	SPACE
SPACE	--		1	--	9			--	--			10	--	1		--	SPACE
SPACE	--		1	--	11					--	--	12	--	1		--	SPACE
SPACE	--		1	--	13	--	--					14	--	1		--	SPACE
SPACE	--		1	--	15			--	--			16	--	1		--	SPACE
SPACE	--		1	--	17					--	--	18	--	1		--	SPACE
SPACE	--		1	--	19	--	--					20	--	1		--	SPACE
SPACE	--		1	--	21			--	--			22	--	1		--	SPACE
SPACE	--		1	--	23					--	--	24	--	1		--	SPACE
SPACE	--		1	--	25	--						26					
SPACE	--		1	--	27			--				28					
SPACE	--		1	--	29					--		30					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	580 VA	100.00%	580 VA		
RECEPTACLE	0 VA	0.00%	0 VA	CONNECTED LOAD:	8845 VA
LIGHTING	8265 VA	125.00%	10331 VA	EST. DEMAND LOAD:	10911 VA
MOTORS	0 VA	0.00%	0 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	11 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	13 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1C

LOCATION: ELECTRICAL / IT ROOM 3120
MOUNTING: SURFACE Type 1
FED FROM: L1A
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 225 A
A.I.C. RATING: 10000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX RECEPT	RCPT		1	20 A	1	900	720					2	20 A	1		RCPT	EX RECEPT 3117
EX RECEPT OFFICE 3123	RCPT		1	20 A	3			720	180			4	20 A	1		RCPT	EX RECEPT CORRIDOR 1
EX RECEPT OPEN OFFICE...	RCPT		1	20 A	5					1260	540	6	20 A	1		RCPT	EX RECEPT CORRIDOR 1
EX RECEPT OPEN OFFICE...	RCPT		1	20 A	7	540	1200					8	20 A	1			EX MICROWAVE
EX. RECEPT	RCPT		1	20 A	9			540	4000			10	50 A	2			EX RANGE
EX. NON CONTINUOUS LOAD			1	20 A	11					540	4000	12					
EX RECEPT STORAGE3124	RCPT		1	20 A	13	360	540					14	20 A	1		RCPT	EX RECEPT CORRIDOR 1
EX RECEPT STORAGE 3124	RCPT		1	20 A	15			360	800			16	20 A	1		RCPT	EX REFRIGERATOR (GFI)
EX RECEPT OFFICE 3131	RCPT		1	20 A	17					720	1200	18	20 A	1		RCPT	EX ICE MACHINE (GFI)
EX RECEPT OFFICE 3132	RCPT		1	20 A	19	720	800					20	20 A	1		RCPT	EX VENDING (GFI)
EX RECEPT 3133	RCPT		1	20 A	21			540	800			22	20 A	1		RCPT	EX VENDING (GFI)
EX RECEPT 3133	RCPT		1	20 A	23					360	908	24	15 A	2		MTR	EX BS-01, BS-02, BS-03, VRV1
EX RECEPT 3134	RCPT		1	20 A	25	540	908					26					
EX RECEPT 3125	RCPT		1	20 A	27			360	576			28	15 A	1			EX GFUH-05, GFUH-06 3124
EX COPIER			2	20 A	29					800	750	30	20 A	2			EX DSCU-01
					31	800	750					32					
EX RECEPT 3125	RCPT		1	20 A	33			540	180			34	20 A	1		RCPT	EX COPIER- OPEN OFFICE...
EX RECEPT 3114	RCPT		1	20 A	35					900	0	36	20 A	3		MTR	EX TB
EX RECEPT 3114	RCPT		1	20 A	37	540	0					38					
EX RECEPT 3114	RCPT		1	20 A	39			380	0			40					
EX RECEPT 3118, 3111	RCPT		1	20 A	41					720	1200	42	20 A	1			EX ICE (GFI)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	33500 VA	64.93%	21750 VA	CONNECTED LOAD:	52361 VA
LIGHTING	0 VA	0.00%	0 VA	EST. DEMAND LOAD:	41219 VA
MOTORS	4245 VA	114.31%	4853 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	145 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	114 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

EXISTING PANELBOARD: L1D

LOCATION: ELECTRICAL / IT ROOM 3120
MOUNTING: SURFACE Type 1
FED FROM: L1C
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 208Y/120V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 225 A
A.I.C. RATING: 10000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX MOTOR ELECTRICAL / IT ROOM 3120	MTR		2	20 A	1	0	960					2	20 A	3		RCPT	EX FURNITURE SYSTEM 3125
					3			0	960			4					
EX MOTOR ELECTRICAL / IT ROOM 3120	MTR		2	20 A	5					0	960	6					
					7	0	960					8	20 A	3		RCPT	EX FURNITURE SYSTEM 3125
EX MOTOR ELECTRICAL / IT ROOM 3120	MTR		2	20 A	9			0	960			10					
					11					0	960	12					
EX RECEPT 3120	RCPT		1	20 A	13	360	480					14	20 A	3		RCPT	EX FURNITURE SYSTEM 3125
EX RECEPT 3120	RCPT		1	20 A	15			540	480			16					
EX RECEPT 3119	RCPT		1	20 A	17					900	480	18					
EX. RECEPT	RCPT		1	20 A	19	360	720					20	20 A	1		RCPT	EX RECEPT OFFICE 3130
EX RECEPT 3126	RCPT		1	20 A	21			540	1215			22	15 A	2		MTR	NEW HP-4/AC-4 *
EX RECEPT 3126	RCPT		1	20 A	23					540	1215	24					
EX RECEPT 3126	RCPT		1	20 A	25	720	0					26	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	27			540	0			28	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	29					720	0	30	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	31	540	0					32	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	33			540	0			34	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	35					720	0	36	20 A	1		--	SPARE
EX RECEPT 3126, 3125	RCPT		1	20 A	37	720	0					38	20 A	1		--	SPARE
EX RECEPT 3125	RCPT		1	20 A	39			540	0			40	20 A	1		--	SPARE
EX RECEPT 3126	RCPT		1	20 A	41					540	0	42	20 A	1		--	SPARE

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	16740 VA	79.87%	13370 VA	CONNECTED LOAD:	19169 VA
LIGHTING	0 VA	0.00%	0 VA	EST. DEMAND LOAD:	16407 VA
MOTORS	2429 VA	125.00%	3037 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	53 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	46 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

ONE-LINE GENERAL NOTES

A. CONDUCTOR LENGTHS INDICATED ON THE SINGLE LINE DIAGRAM ARE FOR FAULT CURRENT CALCULATIONS ONLY. ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND ACTUAL ROUTES OF FEEDERS.

B. ALL DISCREPANCIES BETWEEN INFORMATION DEPICTED IN DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

C. AVAILABLE FAULT CURRENT VALUES ARE PRELIMINARY AND SHALL BE USED FOR BIDDING PURPOSES ONLY. FINAL SHORT CIRCUIT CURRENT RATINGS TO BE HIGHER THAN AVAILABLE FAULT CURRENT VALUES FROM POWER SYSTEM STUDY (SEE SPECIFICATION SECTION 26 0573).

D. THE SERVICE EQUIPMENT FOR THE PROJECT HAS BEEN REVIEWED FOR COMPLIANCE WITH THE NEC. CONSULT WITH THE UTILITY PROVIDER FOR THEIR SPECIFIC REQUIREMENTS IN REGARDS TO DELIVERY OF POWER. ANY ALTERATIONS FROM THE APPROVED DESIGN MAY REQUIRE RE-SUBMITTAL TO DETERMINE COMPLIANCE WITH THE NORTH CAROLINA ELECTRICAL CODE.

E. CONTRACTOR TO FIELD VERIFY EXISTING LOADS.

EXISTING PANELBOARD: HDP1

LOCATION: WATER RESOURCES SHOP 3106
MOUNTING: SURFACE Type 1
FED FROM:
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 1200 A
A.I.C. RATING: 35000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX PANEL H1	LTS; MTR; RCPT;		3	225 A	1	46461	0					2	70 A	3		--	SPARE
					3			47349	0			4					
					5					44619	0	6					
EX XFMR T1	MTR; RCPT;		3	175 A	7	33399	0					8	200 A	3		--	SPARE
					9			37150	0			10					
					11					36136	0	12					
EX CRANE GAS SHOP 3101	MTR		3	100 A	13	19953	0					14	200 A	3		--	SPARE
					15			19953	0			16					
					17					19953	0	18					
ALTERNATE 2: FUTURE RTU (LOCATION 1)	MTR		3	100 A	19	10925	--					20	--	1		--	SPACE
					21			10925	--			22	--	1		--	SPACE
					23					10925	--	24	--	1		--	SPACE
ALTERNATE 2: FUTURE RTU (LOCATIOIN 2)	MTR		3	100 A	25	10925	--					26	--	1		--	SPACE
					27			10925	--			28	--	1		--	SPACE
					29					10925	--	30	--	1		--	SPACE
SPACE	--		1	--	31	--	--					32	--	1		--	SPACE
SPACE	--		1	--	33			--	--			34	--	1		--	SPACE
SPACE	--		1	--	35					--	--	36	--	1		--	SPACE
SPACE	--		1	--	37	--	--					38	--	1		--	SPACE
SPACE	--		1	--	39			--	--			40	--	1		--	SPACE
SPACE	--		1	--	41					--	--	42	--	1		--	SPACE

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	56640 VA	58.83%	33320 VA	CONNECTED LOAD:	370523 VA
LIGHTING	4572 VA	125.00%	5715 VA	EST. DEMAND LOAD:	355311 VA
MOTORS	241091 VA	106.21%	256056 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	446 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	427 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:

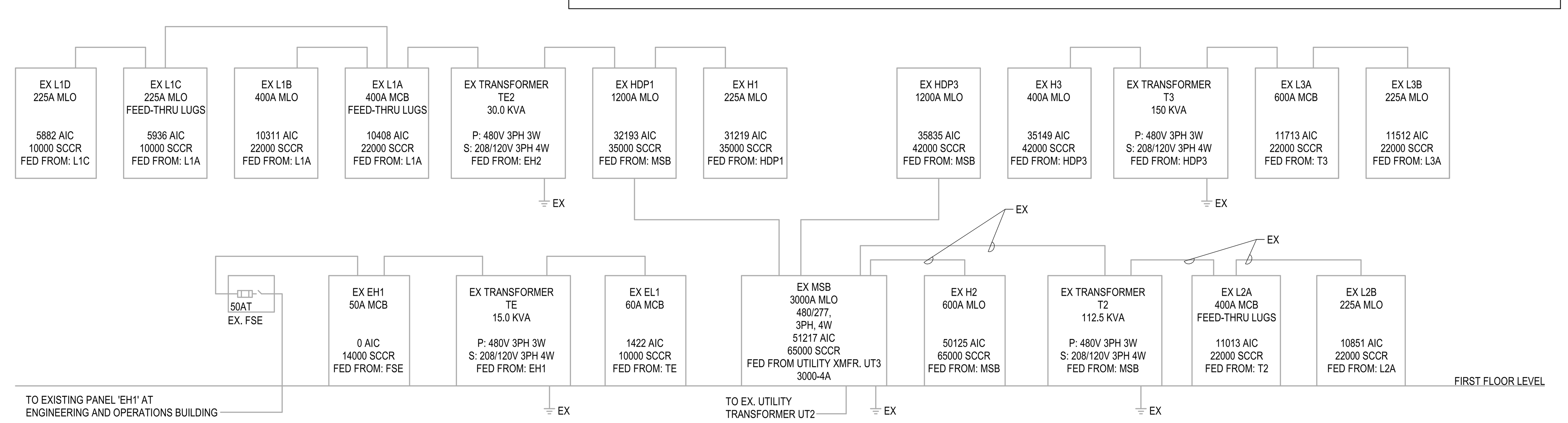
EXISTING PANELBOARD: H1

LOCATION: WATER RESOURCES SHOP 3106
MOUNTING: SURFACE Type 1
FED FROM: HDP1
FEEDER: SEE ONE-LINE DIAGRAM
PANEL TYPE:
VOLTAGE: 480Y/277V / 3 ø / 4W
BUS AMPS:
MAIN DEVICE: 225 A
A.I.C. RATING: 35000
SPECIAL:

LOAD DESCRIPTION	LOAD TYPE	BREAKER MOD	P	TRIP	CKT	A		B		C		CKT	TRIP	P	BREAKER MOD	LOAD TYPE	LOAD DESCRIPTION
EX AC1 WATER RESOURCES SHOP 3106	MTR		3	20 A	1	7482	200					2	15 A	3		MTR	NEW HVLS-1 FACILITIES SHOP 3107
					3			7482	200			4					
					5					7482	200	6					
EX WELDER GAS SHOP 3101			3	30 A	7	6667	0					8	15 A	3		--	SPARE
					9			6667	0			10					
					11					6667	0	12					
EX WELDER GAS SHOP 3101			3	30 A	13	6667	0					14	20 A	3		--	SPARE
					15			6667	0			16					
					17					6667	0	18					
EX MOTOR OHD WATER RESOURCES SHOP 3106	MTR; RCPT		3	15 A	19	1746	4683					20	20 A	3		MTR	EX DBP1 MECH ROOM 3119
					21			1746	4683			22					
					23					1746	4683	24					
EX MOTOR OHD GAS SHOP 3101	MTR		3	15 A	25	2328	7482					26	20 A	3		MTR	EX AC1 FACILITIES MAINT. 3108
					27			2328	7482			28					
					29					2328	7482	30					
EX AC3 GAS SHOP 3101	MTR		3	20 A	31	3867	1842					32	20 A	1		LTS	EX. LIGHTING 3106
					33			3867	2730			34	20 A	1		LTS	EX. LIGHTING
					35					3867	2333	36	15 A	3		MTR	NEW OHD DOOR *
EX HVLS-01 GAS SHOP 3101	MTR		3	15 A	37	1164	2333					38					
					39			1164	2333			40					
					41					1164	0	42	20 A	1		--	SPARE

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EXISTING LOADS	0 VA	0.00%	0 VA		
RECEPTACLE	0 VA	0.00%	0 VA	CONNECTED LOAD:	138429 VA
LIGHTING	4572 VA	125.00%	5715 VA	EST. DEMAND LOAD:	137183 VA
MOTORS	93857 VA	105.98%	99468 VA		
OTHER	0 VA	0.00%	0 VA	CONNECTED CURRENT:	167 A
KITCHEN	0 VA	0.00%	0 VA	EST. DEMAND CURRENT:	165 A

BREAKER MODIFIER LEGEND:
(G) - GROUND FAULT CIRCUIT INTERRUPTER. (A) - ARC FAULT CIRCUIT INTERRUPTER. (L) - LOCK-OUT PROVISIIONS. (S) - SHUNT-TRIP.
(F) - FIRE ALARM CIRCUIT - PROVIDE LOCK-ON DEVICE AND PERMANENT RED MARKING AND LABELING AS "FIRE ALARM CIRCUIT".
NOTES:



(1) PARTIAL ELECTRICAL ONE-LINE DIAGRAM - BLDG3
NOT TO SCALE

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
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NORTH CAROLINA PROFESSIONAL SEAL 054688 ENGINEER DANE STIVERS
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This item has been electronically signed and sealed by Dane A. Stivers using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
06/17/2026 CONSTRUCTION DOCUMENTS

PROJECT NUMBER
21350003
PROJECT MANAGER
A. IDOL
PROFESSIONAL
D. STIVERS, PE
DRAWN BY
D. HARRIS-WILLIAMS
CHECKED BY
D. STIVERS, PE

ELECTRICAL ONE-LINE DIAGRAMS
3E501

24.2.002

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ELECTRICAL ONE-LINE DIAGRAMS

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