CONSTRUCTION DOCUMENTS FOR:

BEAUFORT COUNTY COMMUNITY COLLEGE

LAW ENFORCEMENT BUILDING ADDITION

WASHINGTON, NC

SCO ID #23-26921-01A; NCCCS #2781

JKF PROJECT NO. 2023-08

FEBRUARY 21 , 2024

JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 (252)355-1068 PHONE

JOHN K. FARKAS
REGISTERED ARCHITECT
5/27/2024
5922
GREENVILLE, N.C.

JKF ARCHITECTURE, P.C.
REGISTERED ARCHITECTURAL CORPORATION
CERT. NO. 51351
NORTH CAROLINA
GREENVILLE, NC

RPA ENGINEERING, PA
STRUCTURAL ENGINEER
1 COMMERCE SQUARE, SUITE 202
WASHINGTON, NC 27889
252-321-6027

ENGINEERING SOURCE
MECHANICAL & ELECTRICAL ENGINEERS
102 REGENCY BLVD., SUITE A2
GREENVILLE, NC 27834
252-439-0338

ROOM FINISH SCHEDULE (SEE FLOOR PLANS)

ROOM NAME
101
A | B | C
- WALL FINISH
- BASE MATERIAL/FINISH
- FLOOR MATERIAL/FINISH

FLOOR MATERIALS/FINISH

AF	ATHLETIC FLOORING
CR	CARPET TILE
CT	CERAMIC TILE
LV	LUXURY VINYL TILE
VCT	VINYL COMPOSITION TILE

BASE MATERIALS

R	RUBBER

WALL MATERIALS/FINISH

CT	CERAMIC TILE, GLAZED WALL
P	PAINTED GYPSUM BOARD

REFLECTED CEILING PLAN LEGEND

- ROOM NO.
- CLG. HGT= FIN. CLG. HEIGHT AFF.
- CEILING MATERIAL
- LED LIGHT FIXTURE (SEE ELECTRICAL DRAWINGS FOR SIZE AND TYPE)
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- EXHAUST AIR GRILLE
- WALL SCONCE OR MOUNTED FIXTURE
- EXIT SIGN
- SIGN FACE
- DIRECTION ARROW IF NEEDED
- HEAT DETECTOR
- SMOKE DETECTOR
- OCCUPANCY SENSOR
- FIRE ALARM HORN STROBE
- X'-X" XXX — DATUM ABOVE FIN. FLOOR; CEILING MATERIAL (SEE LEGEND)

CEILING MATERIALS LEGEND

APC	ACOUSTICAL PANEL CEILING (IF FOLLOWED BY A NUMERAL DENOTES SPECIAL TYPE AS SPECIFIED)

GENERAL PROJECT LEGEND

- A1 / A3J — REFERENCE NO. / DRAWING NO.
- DENOTES CHANGE IN FINISH FLOOR MATERIAL
- A1 / A4 A4J A2 / A3 — ELEVATION REFERENCE
- 100 — DOOR NO.
- DOOR ASSEMBLY DESIGNATION
- HARDWARE SET NO.
- DOOR GROUP NO.
- 4X — PARTITION TYPE (SEE DRAWING A7.1)
- DOT DENOTES SIDE W/SPECIAL FINISH
- A — GENERAL NOTE REFERENCE NUMBERS DESIGNATE DEMOLITION, LETTERS DESIGNATE CONSTRUCTION.
- NEW CONSTRUCTION
- T — THERMOSTAT

ARCHITECTURAL ABBREVIATIONS

APC	ACOUSTICAL PANEL CEILING
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ALT	ALTERNATE
AN	ANODIZED
ATTN	ATTENUATION
BD	BOARD
BIT	BITUMINOUS
BLKG	BLOCKING
BLKT	BLANKET
BM	BEAM
BOP	BOTTOM OF PLATE
BOS	BOTTOM OF STEEL
BRG	BEARING
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN
C	CENTERLINE
CJ	CONTROL JOINT
CLG HT	CEILING HEIGHT
CLR	CLEAR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CT	CERAMIC TILE
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRICAL
ENCL	ENCLOSURE
EOS	EDGE OF SLAB
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXPD	EXPOSED
EXP JT	EXPANSION JOINT
EXGTR	EXISTING GUTTER
EXGRT	EXISTING GRATE
EXT	EXTERIOR
EXTC	EXISTING TOP OF CURB
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FFE	FINISHED FLOOR ELEVATION
FL	FLOOR
FRP	FIBERGLASS REINFORCED POLYESTER
FT	FIRE RETARDANT TREATED
FTG	FOOTING
FUR	FURRING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GL	GLASS
GN	GENERAL NOTE
GYP BD	GYPSUM BOARD
HDW	HARDWARE
HM	HOLLOW METAL
HT	HEIGHT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
INT	INTERIOR
INSUL	INSULATION
INV	INVERT
JT	JOINT
LAV	LAVATORY
MANUF	MANUFACTURER
MC	MECHANICAL CONTRACTOR
MH	MANHOLE
MECH	MECHANICAL
MIN	MINIMUM
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
O/C	ON CENTER
OH	OVERHANG
OHD	OVERHEAD
OPNG	OPENING
PART	PARTITION
PC	PLUMBING CONTRACTOR
PGB	PAINTED GYPSUM BOARD
PGBR	PAINTED GYPSUM BOARD WITH REVEAL
PL	PLATE
P	PAINTED
REF	REFRIGERATOR
REINF	REINFORCE / REINFORCING
REQD	REQUIRED
RM	ROOM
RO	ROUGH OPENING
RSW	RAIL & STILE WOOD
SCHED	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURE / STRUCTURAL
SUSP	SUSPENDED
TC	TOP CURB
TF	TRANSPARENT FINISH
TG	TOP GRATE
TEMP	TEMPERED
THK	THICK
TJ	TOP OF JOIST
TOC	TOP OF CURB
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
T/S	TOP OF STEEL
TS	TUBE STEEL
UNO	UNLESS OTHERWISE NOTED
VAR	VARIES
VERT	VERTICAL
VIF	VERIFY IN FIELD
WD	WOOD
WDW	WINDOW
WSC	WOOD SOLID CORE
WWF	WELDED WIRE FABRIC
W/	WITH

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

Name of Project: BCCC LAW ENFORCEMENT BUILDING NO 10A ADDITION
Address: 5337 US HWY 264 EAST BEAUFORT CO. COMMUNITY COLLEGE, WASHINGTON, NC
Zip Code: 27889
Owner/Authorized Agent: MARK NELSON Phone #(252) 940-6213 E-Mail: mark.nelson@beaufortcc.edu
Owned By: County
Code Enforcement Jurisdiction: County

CONTACT: John K. Farkas, AIA

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	JKF Architecture	John K. Farkas, AIA	NC 5922	(252) 355-1068	jkf@jkf-arch.com
Civil	JKF Architecture	John K. Farkas, AIA	NC 5922	(252) 355-1068	jkf@jkf-arch.com
Electrical	Engineering Source	Wilson Pou, P.E.	NC 21993	(252) 439-0338	wilson@engsource.com
Fire Alarm	Engineering Source	Wilson Pou, P.E.	NC 21993	(252) 439-0338	wilson@engsource.com
Plumbing	Engineering Source	Wilson Pou, P.E.	NC 21993	(252) 439-0338	wilson@engsource.com
Mechanical	Engineering Source	Wilson Pou, P.E.	NC 21993	(252) 439-0338	wilson@engsource.com
Structursl	RPA Engineering	Mark Roy, P.E.	NC 17348	(252) 321-6027	Mark.roy@rpaengineering.com

2018 NC BUILDING CODE: Addition
CONSTRUCTED: (date) 2008 **CURRENT OCCUPANCY(S)** (Ch. 3): B
RENOVATED: (date) 2024-Pending **PROPOSED OCCUPANCY(S)** (Ch. 3): B
OCCUPANCY CATEGORY (Table 1604.5): **Current:** II **Proposed:** II

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: No
Standpipes: No
Primary Fire District: No **Flood Hazard Area:** No
Special Inspections Required: No

Gross Building Area Table

FLOOR	EXISTING (SQ.FT)	NEW (SQ.FT)	SUB-TOTAL
1ST Floor	4,080	1,600	5,680
TOTAL	4,080	1,600	5,680

ALLOWABLE AREA
Primary Occupancy Classification(s): Business
Accessory Occupancy Classification(s): NONE
Incidental Uses (Table 509): NONE
Mixed Occupancy: No
Non-Separated Use (508.3)

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[1] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	B-EDUCATION ABOVE THE 12TH GRADE	5,316	23,000	0	23,000

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	55	18	
Building Height in Stories (Table 504.4)	3	1	

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (w/ ____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0					
Bearing Walls	N/A						
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions		0					
Exterior walls							
North	>30	0					
East	>30	0					
West	>30	0					
South	>30	0					
Interior walls and partitions							
Floor Construction Including supporting beams and joists		0					
Floor Ceiling Assembly		0					
Columns Supporting Floors		0					
Roof Construction, including supporting beams and joists		0					
Roof Ceiling Assembly		0					
Columns Supporting Roof		0					
Shaft Enclosures - Exit		N/A					
Shaft Enclosures - Other		N/A					
Corridor Separation		0					
Occupancy/Fire Barrier Separation		0					
Party/Fire Wall Separation		0					
Smoke Barrier Separation		0					
Smoke Partition		0					
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A					
Incidental Use Separation		N/A					

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENING PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30	NO LIMIT	NO LIMIT	NO LIMIT

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: No
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: BCI.1

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

ACCESSIBLE DWELLING UNITS – N/A

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
ADJACENT	0	74	0	0	6	6
TOTAL	0	74	0	0	6	6

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS		URINALS	LAVATORIES			SHOWERS	DRINKING FOUNTAINS	
		MALE	FEMALE		MALE	FEMALE	UNISEX	/TUBS	REGULAR	ACCESSIBLE
SPACE	#/OCC	2	2	0	2	2	0	0	1	1
	NEW	1	1	0	0	0	0	0	0	0
	REQ'D	3	3	0	2	2	0	0	1	1

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, EHHS, etc., describe below)
SCO, BEAUFORT CO. INSPECTIONS

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: Yes (The remainder of this section is not applicable)

Exempt Building: No

Climate Zone: 3A

Method of Compliance: Energy Code - Prescriptive

THERMAL ENVELOPE (Prescriptive method only)

Roof/Ceiling Assembly (each assembly)
Description of assembly: PRE-ENGINEERED METAL BUILDING ROOF
U-Value of total assembly: U-0.041
R-Value of insulation: R-10 + R-19 FC
Skylights in each assembly: NONE
U-Value of skylight: N/A
total square footage of skylights in each assembly: N/A

Exterior Walls (each assembly)
Description of assembly: PRE-ENGINEERED METAL BUILDING EXTERIOR WALLS
U-Value of total assembly: U-0.072
R-Value of insulation: R-0 + R9 ffCI Required, R-19 + R9 ffCI Provided

Openings (windows or doors with glazing)	Exterior FRP Door	Alum. Entrance	Windows
U-Value of Assembly:	0.125	0.38	0.38
Solar heat gain coefficient:	N/A	0.25	0.25
Projection factor:	N/A	0	0
Door R-Values:	8.0	3.5	N/A

Walls below grade (each assembly) – N/A

Floors over unconditioned space (each assembly) – N/A

Floors slab on grade
Description of assembly: SLAB ON GRADE
U-Value of total assembly: 0.730
R-Value of insulation: NR
Horizontal/vertical requirement: YES
slab heated: NO

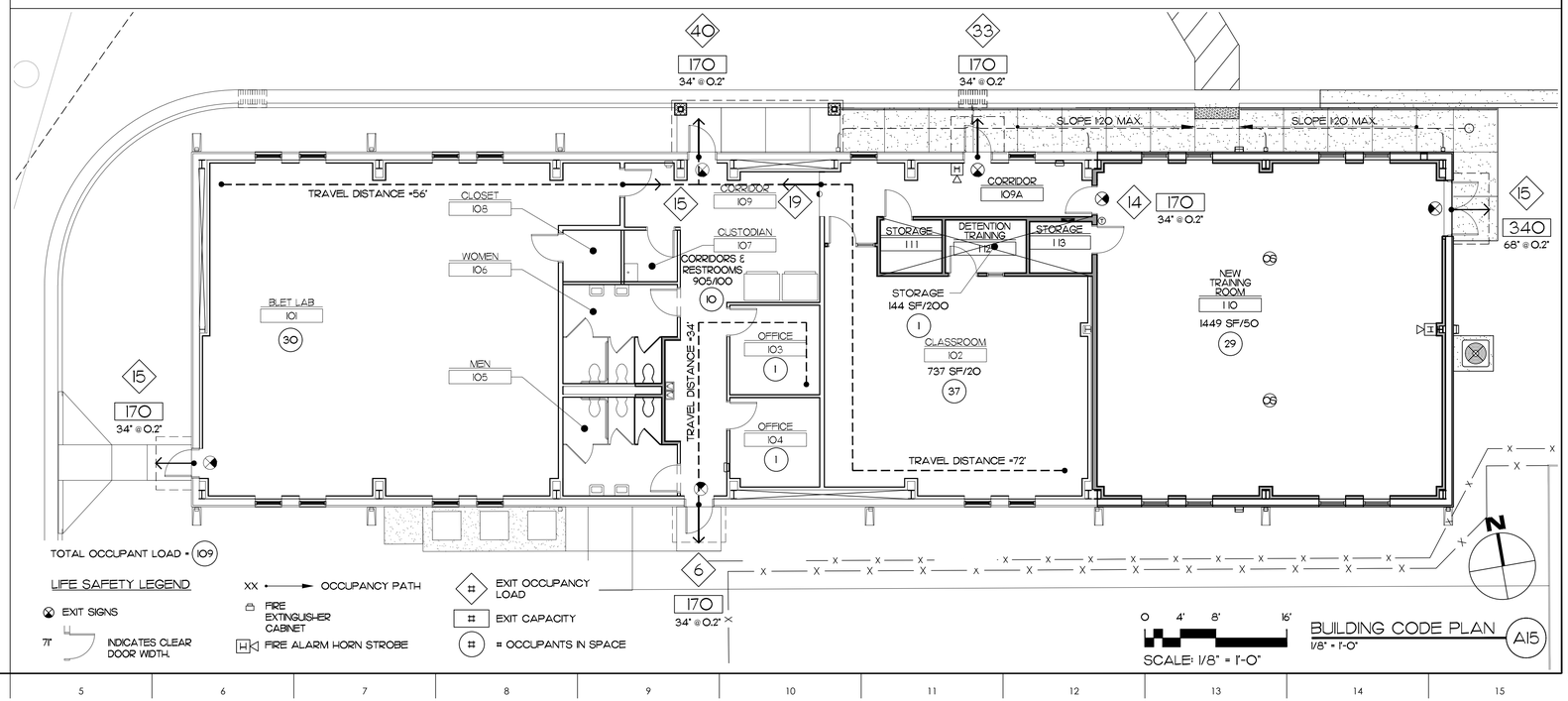
2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:
Importance Factors: Snow (I_{sn}) 1.0
Seismic (I_E) 1.0
Live Loads: Roof 20 psf
Floor 100 psf
Ground Snow Load: 10 psf
Wind Load: Ultimate Wind Speed 125 mph (ASCE-7-10)
Exposure Category B

SEISMIC DESIGN CATEGORY: B
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) II
Spectral Response Acceleration S_s 11.4 %g S_1 5.8 %g
Site Classification (ASCE 7) D
Data Source: Presumptive
Basic structural system Moment Frame
Analysis Procedure: Equivalent Lateral Force

LATERAL DESIGN CONTROL: N/A

SOIL BEARING CAPACITIES:
Presumptive Bearing Capacity 1500 psf
File size, type, and Capacity N/A



BUILDING CODE PLAN A1.5
1/8" = 1'-0"

MATERIALS KEYING LEGEND

DRAWING INDEX:

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL
JOHN K. FARKAS REGISTERED ARCHITECT 5922 NORTH CAROLINA GREENVILLE, N.C. 5/27/2024

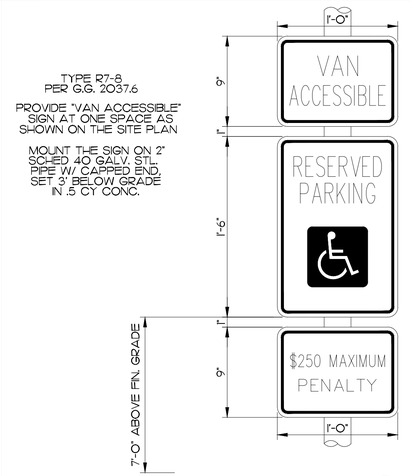
JKF ARCHITECTURE

625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
BUILDING CODE ANALYSIS LEGENDS, SYMBOLS & ABBREVIATIONS

SCALE	AS NOTED
DRAWN	MCZ
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08
DRAWING NO	BCI.1

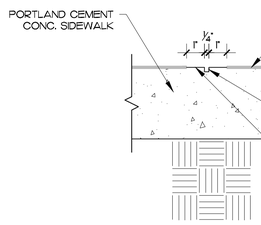


TYPE R7-8
PER G.G. 2037.6

PROVIDE "VAN ACCESSIBLE" SIGN AT ONE SPACE AS SHOWN ON THE SITE PLAN

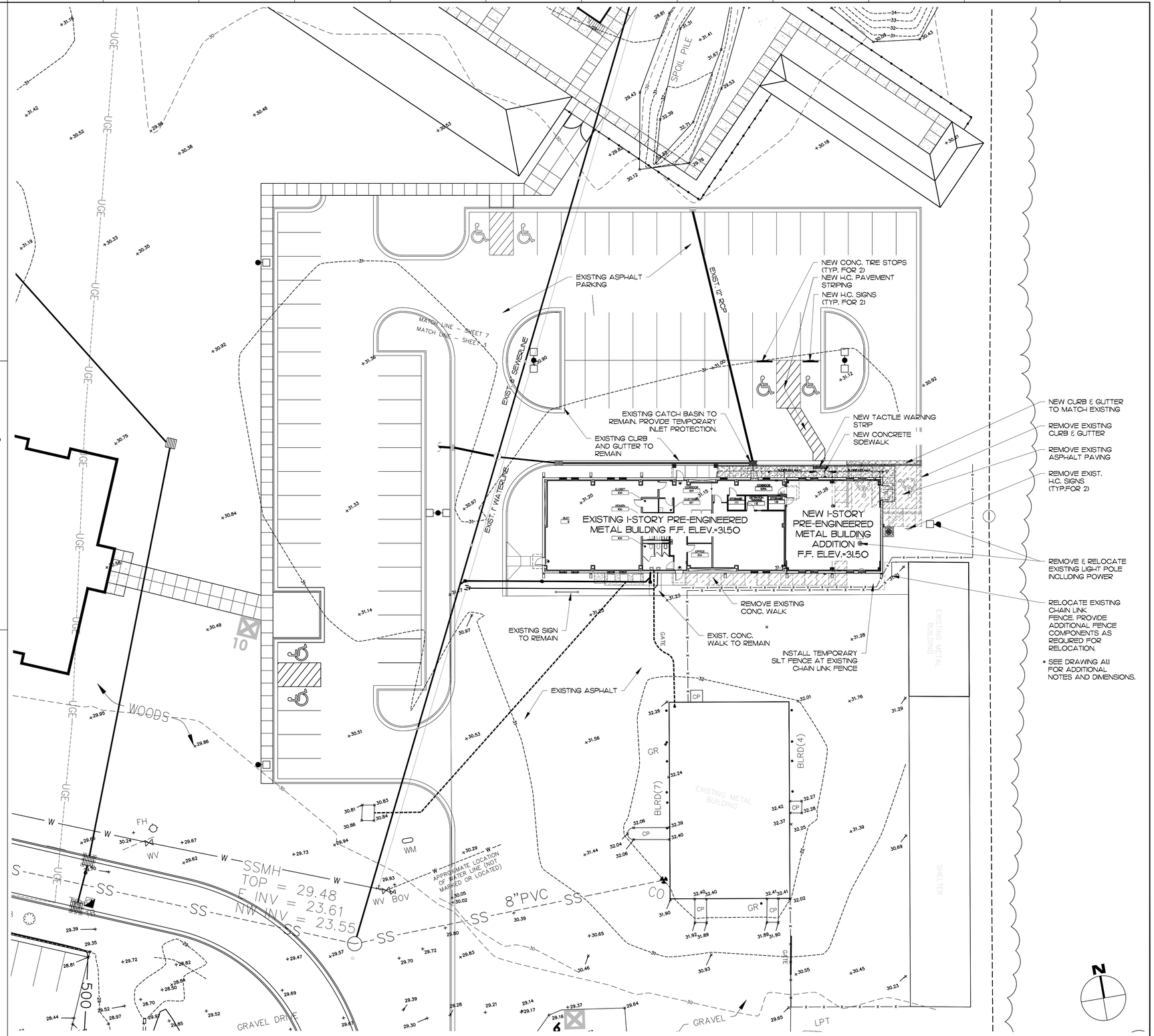
MOUNT THE SIGN ON 2" SCHED 40 GALV. STL. PIPE W/ CAPPED END, SET 3' BELOW GRADE IN .5 CY CONC.

TYP. HANDICAP PARKING SIGN — J3
N.T.S.



• 1/4" PER FOOT MAX. CROSS SLOPE

TYP. SIDEWALK CONTROL JOINT — F3
N.T.S.



0 10' 20' 40'
SCALE: 1" = 20'-0"

SITE PLAN — A15
1" = 20'-0"

MATERIALS KEYING LEGEND

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL FIELD CONDITIONS PRIOR TO STARTING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
2. PROVIDE INLET PROTECTION AT ALL CATCH BASINS IN AREA OF CONSTRUCTION. ERECT TEMPORARY SILT FENCE AS INDICATED.
3. SEED AND STRAW ALL AREAS DISTURBED BY NEW CONSTRUCTION.
4. PATCH & REPAIR ALL AREAS DISTURBED NEW CONSTRUCTION INCLUDING ASPHALT & CONCRETE
5. SURVEY INFORMATION BASE ON THE EAST GROUP SURVEY DATED 2-14-2001, AND PROPOSED PARKING LOT AS PREPARED BY JKF ARCHITECTURE PROJECT # 2002-16, DATED 2-28-2003.

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL
JOHN K. FARKAS
REGISTERED ARCHITECT
5922
5/27/2024
GREENVILLE, N.C.

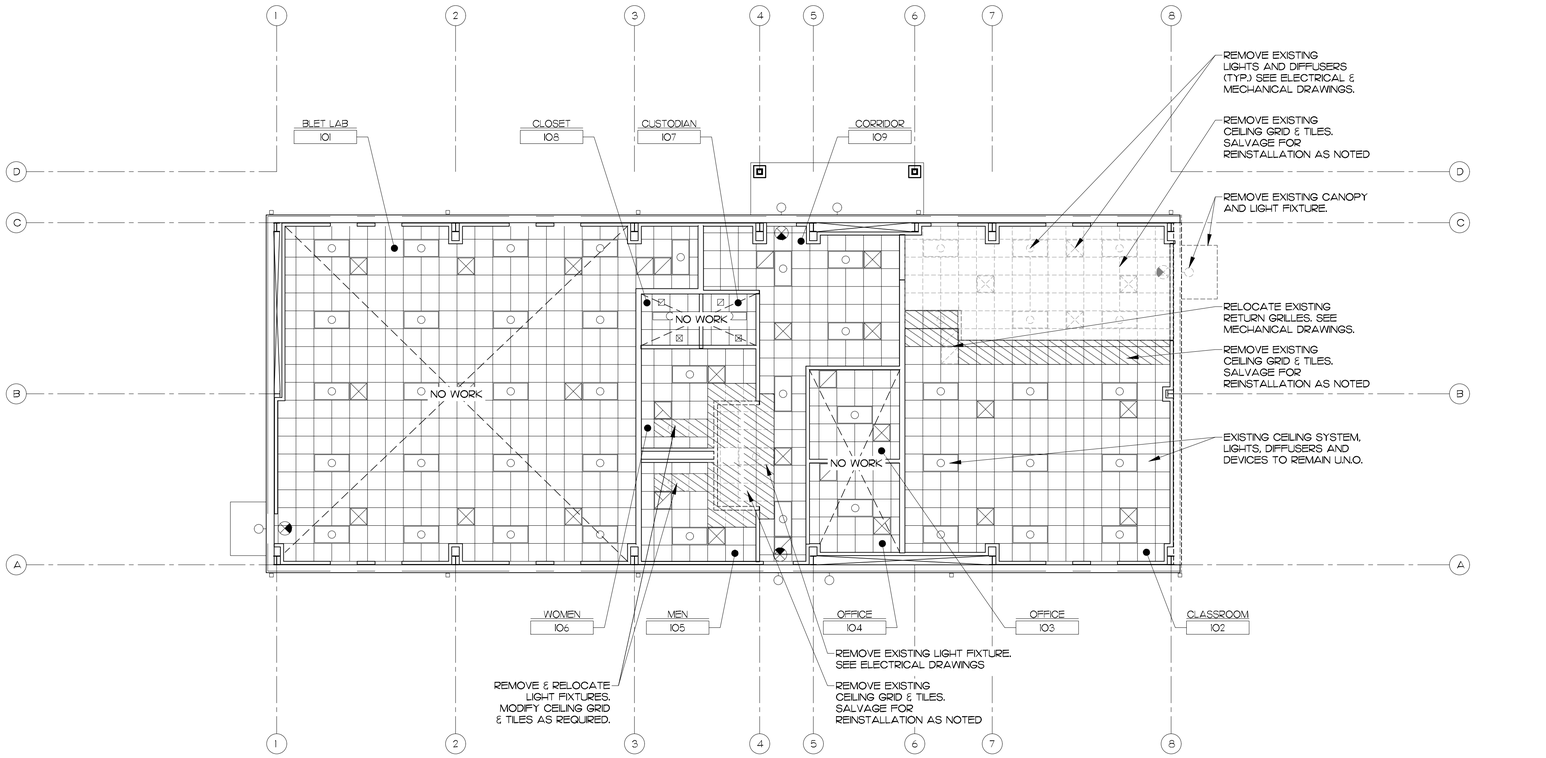
JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

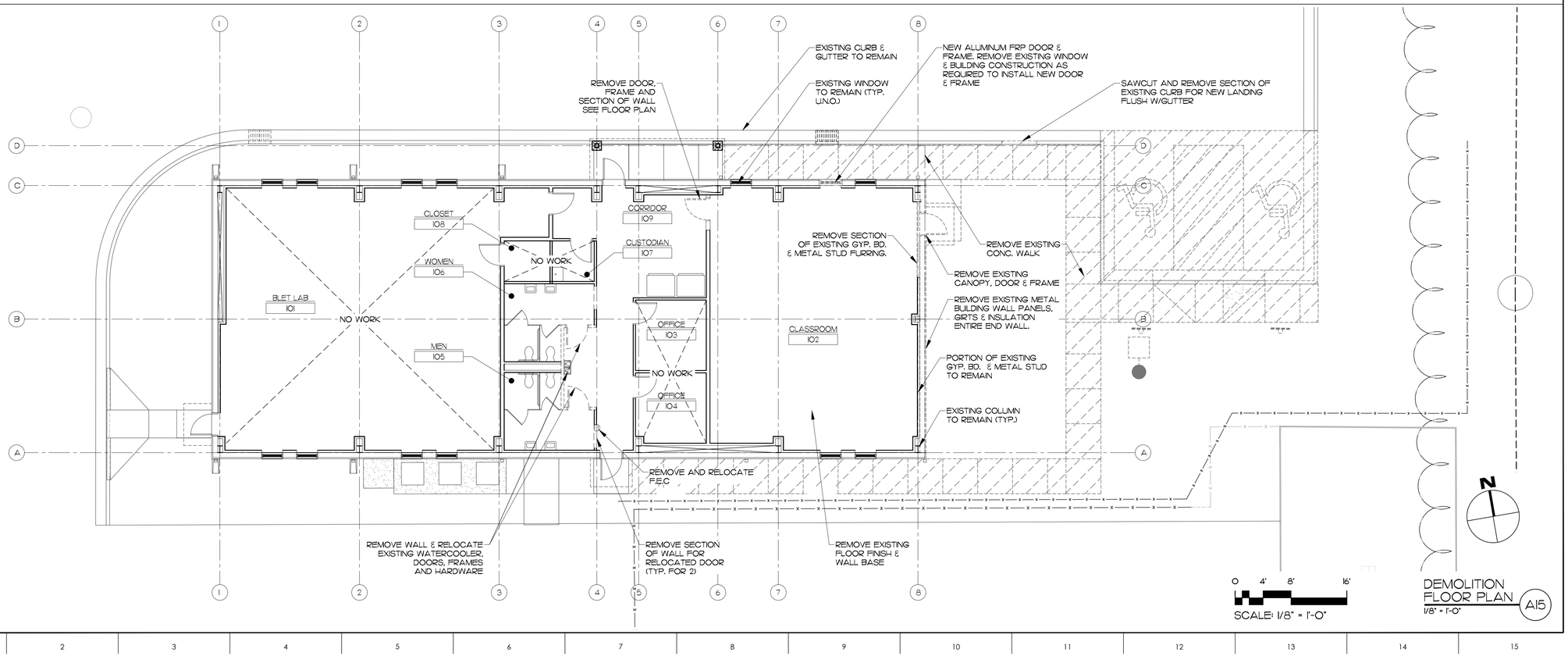
BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
SITE PLAN & SITE CONSTRUCTION DETAILS

SCALE	DRAWING NO
AS NOTED	ASP1.1
DRAWN: MCZ	
CHECKED: JKF	
DATE: 2-21-2024	
PROJECT NO.: 2023-08	



DEMOLITION REFLECTED CEILING PLAN G15
1/8" = 1'-0"



DEMOLITION FLOOR PLAN A15
1/8" = 1'-0"

MATERIALS KEYING LEGEND

APC CEILING GRID AND TILES TO BE REMOVED, MODIFIED AND REINSTALLED AS REQUIRED

GENERAL NOTES

1. PROTECT ALL MATERIALS AND FINISHES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
2. ALL SURFACES, FINISHES, AND EXISTING CONSTRUCTION DISTURBED BY NEW CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION.

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL
JOHN K. FARKAS REGISTERED ARCHITECT 5922 GREENVILLE, N.C. 5/27/2024

JKF ARCHITECTURE

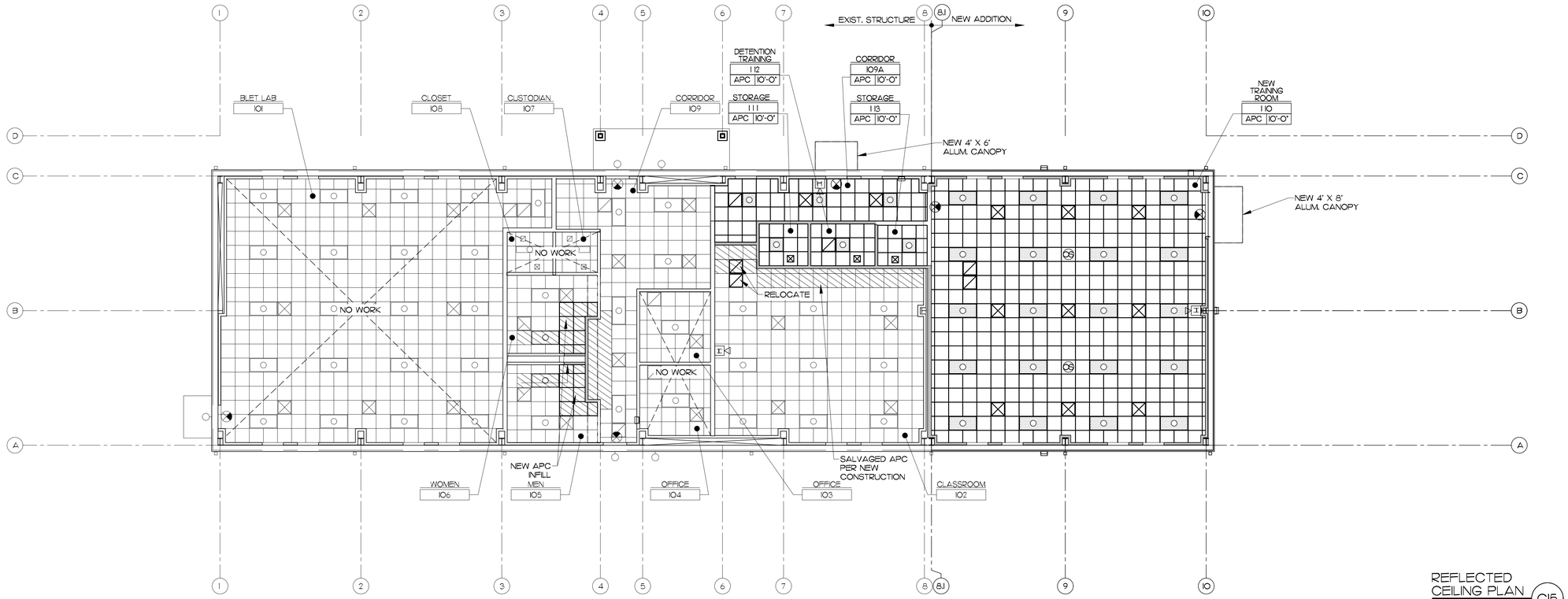
625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

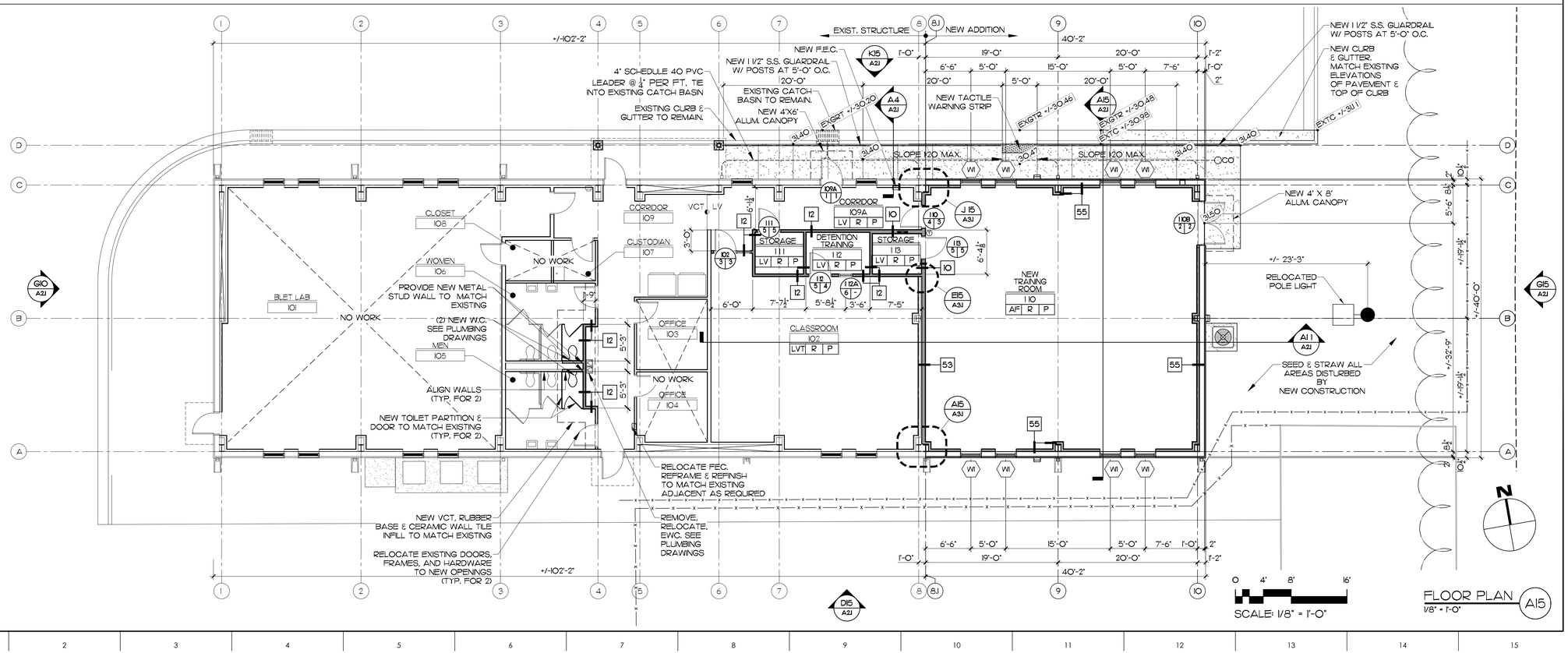
DRAWING TITLE
DEMOLITION FLOOR PLAN
DEMOLITION REFLECTED CEILING PLAN

SCALE	1/8" = 1'-0"
DRAWN	MCZ
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08

DRAWING NO
A0.1



REFLECTED CEILING PLAN G15
1/8" = 1'-0"



FLOOR PLAN A15
1/8" = 1'-0"

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

MATERIALS KEYING LEGEND

APC CEILING GRID AND TILES TO BE REMOVED, MODIFIED AND REINSTALLED AS REQUIRED

GENERAL NOTES

1. ALL INTERIOR DIMENSIONS ARE TO FACE OF STUD U.N.O. W/ DOT LEADER ⌖ (FINISH FACE)
2. ANY EXISTING ADJACENT CONSTRUCTION OR FINISHES DISTURBED OR DAMAGED BY DEMOLITION OR NEW CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION.

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

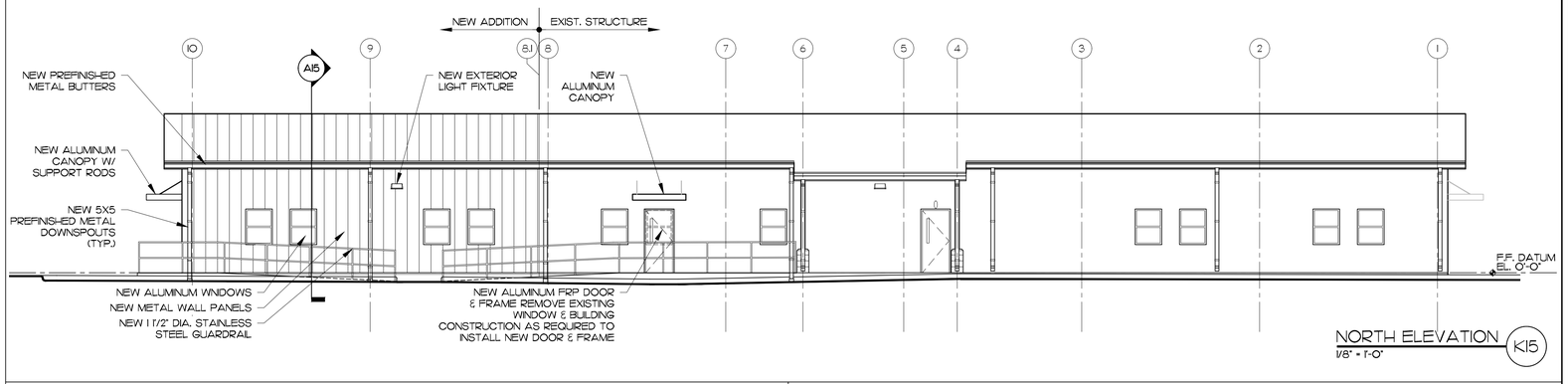
SEAL
JOHN K. FARKAS
REGISTERED ARCHITECT
5/27/2024
5922
GREENVILLE

JKF ARCHITECTURE
625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

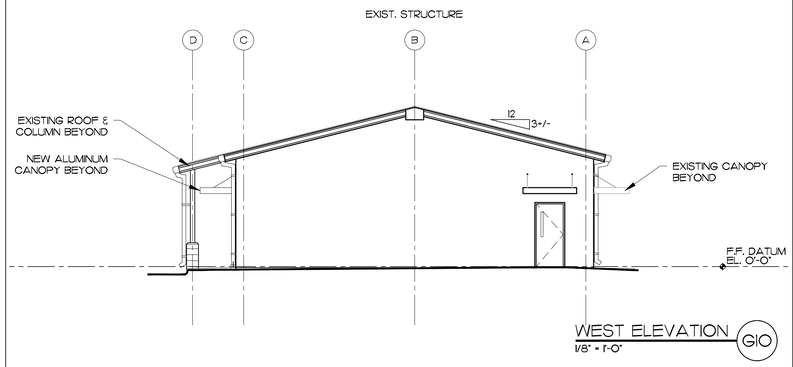
BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
FLOOR PLAN, REFLECTED CEILING PLAN

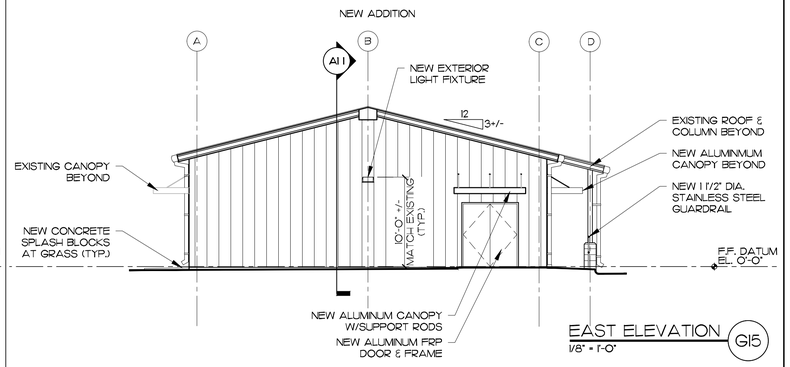
SCALE	1/8" = 1'-0"
DRAWN	MCZ
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08
DRAWING NO	A1.1



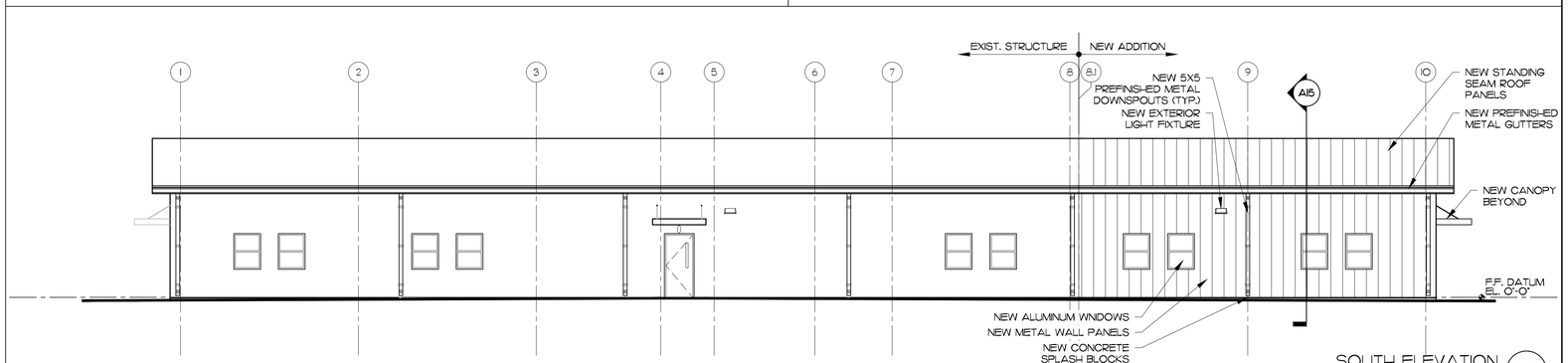
NORTH ELEVATION K15
1/8" = 1'-0"



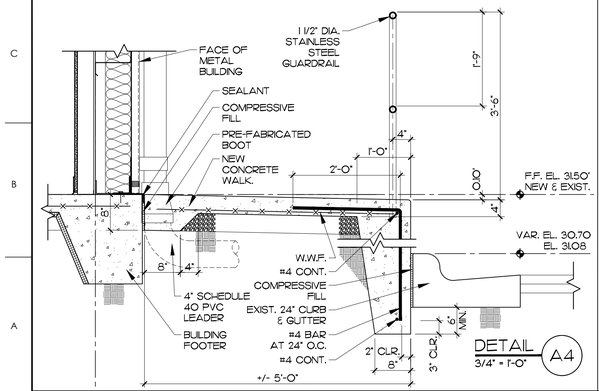
WEST ELEVATION G10
1/8" = 1'-0"



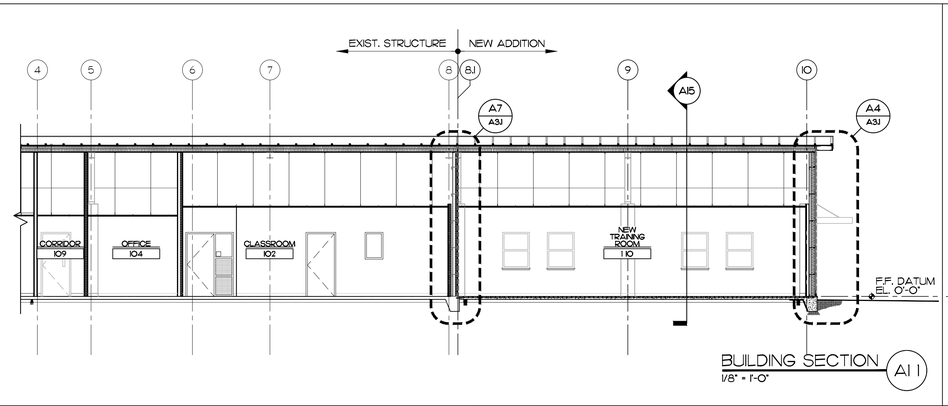
EAST ELEVATION G15
1/8" = 1'-0"



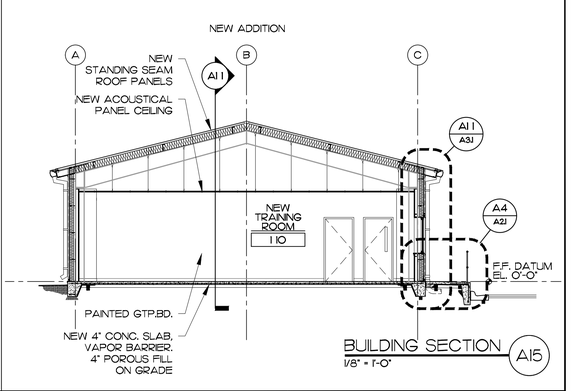
SOUTH ELEVATION D15
1/8" = 1'-0"



DETAIL A4
3/4" = 1'-0"



BUILDING SECTION A1.1
1/8" = 1'-0"



BUILDING SECTION A15
1/8" = 1'-0"

MATERIALS KEYING LEGEND

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JOHN K. FARKAS REGISTERED ARCHITECT GREENVILLE, N.C. 5/27/2024 5922

JKF ARCHITECTURE

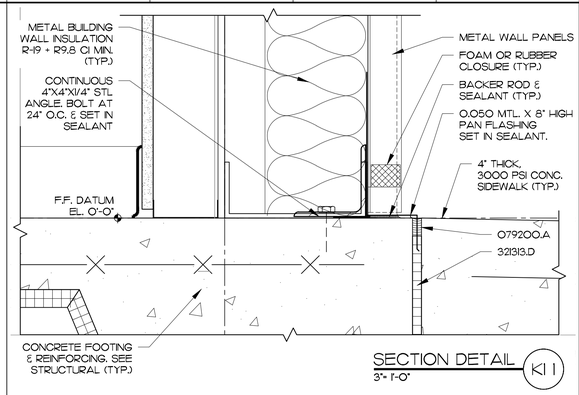
P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

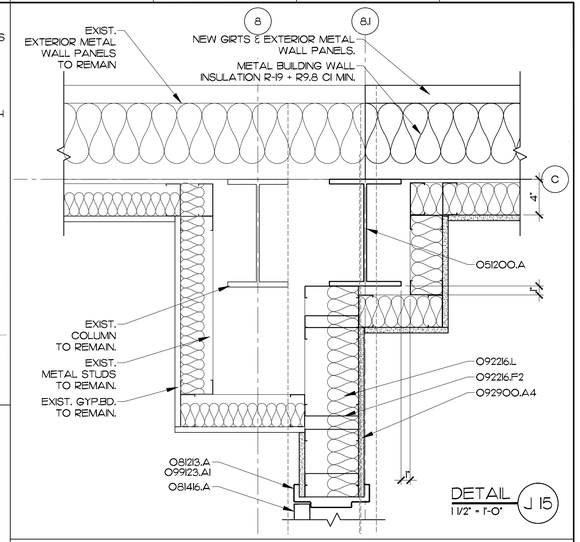
DRAWING TITLE
EXTERIOR ELEVATIONS, BUILDING SECTIONS & DETAILS

SCALE	AS NOTED
DRAWN	MCZ
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08

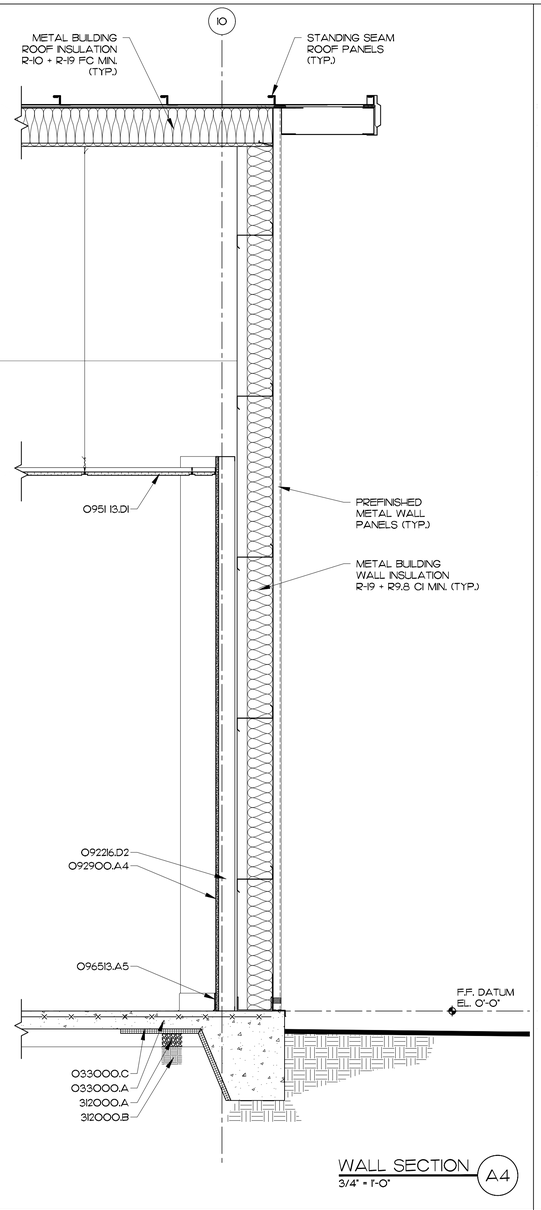
DRAWING NO
A2.1



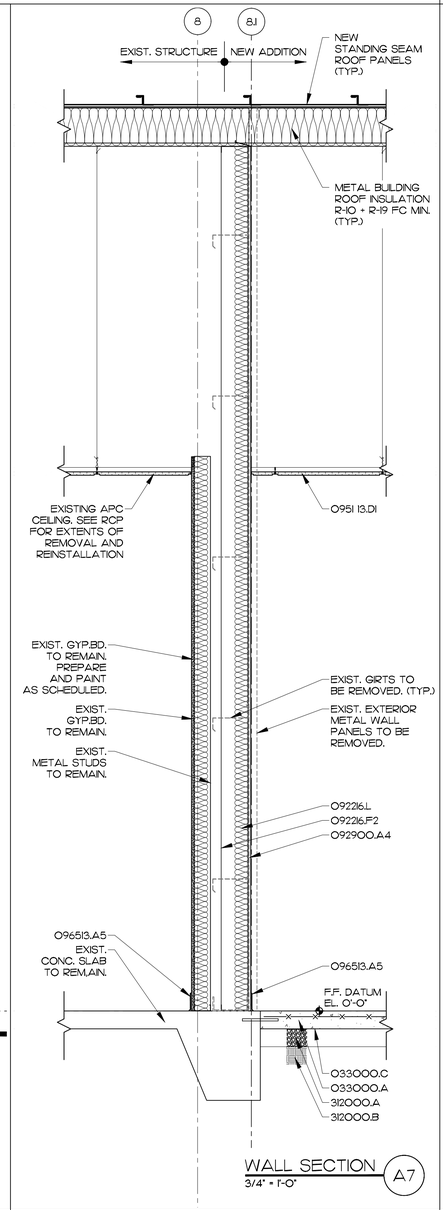
SECTION DETAIL K1 1
3"= 1'-0"



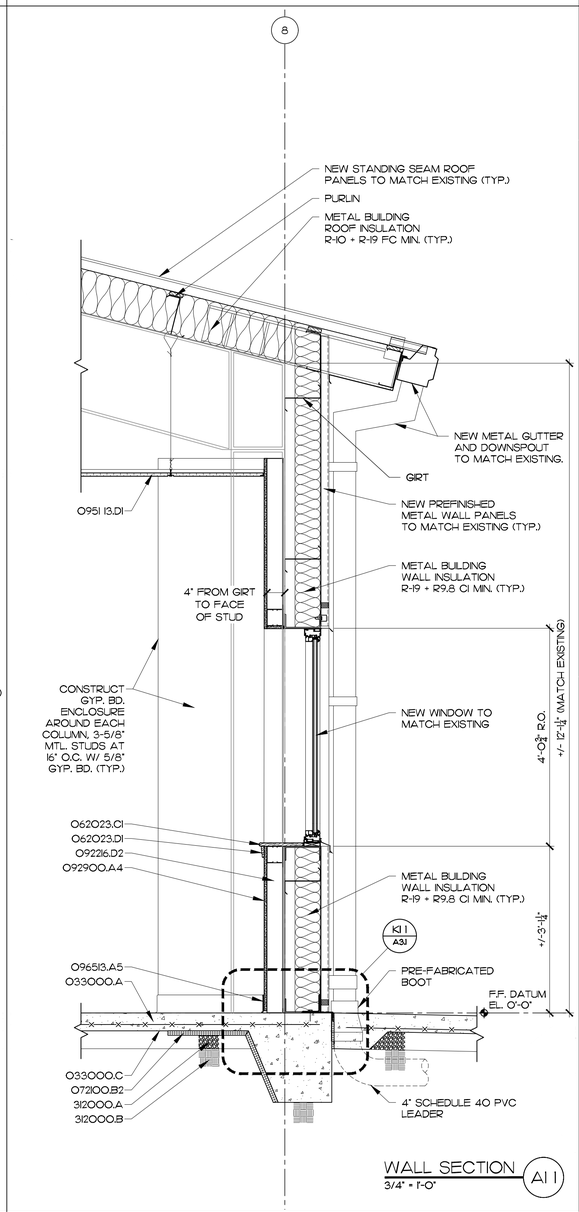
DETAIL J 15
1 1/2" = 1'-0"



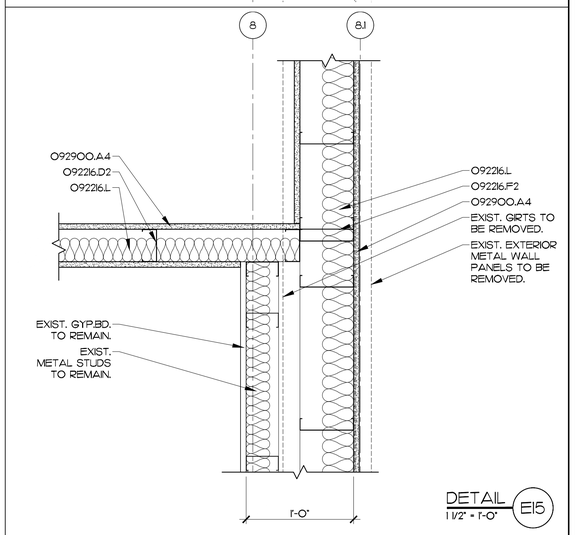
WALL SECTION A4
3/4" = 1'-0"



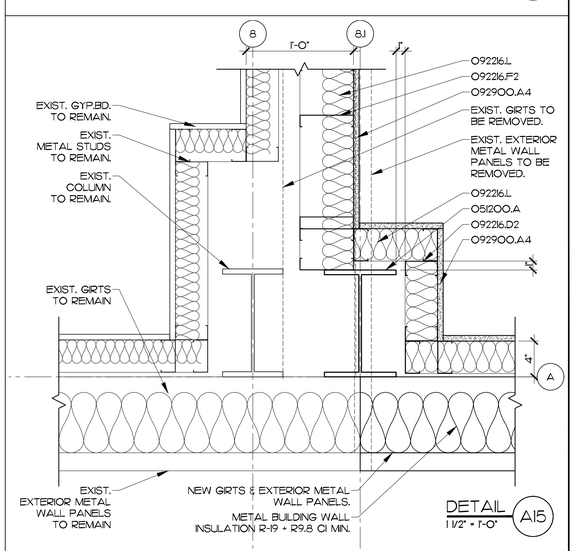
WALL SECTION A7
3/4" = 1'-0"



WALL SECTION A1 1
3/4" = 1'-0"



DETAIL E15
1 1/2" = 1'-0"



DETAIL A15
1 1/2" = 1'-0"

MATERIALS KEYING LEGEND

033000.A	- CONCRETE SLAB ON GRADE, SEE STRUCTURAL
033000.C	- VAPOR BARRIER
051200.A	- STRUCTURAL STEEL, SEE STRUCTURAL DRAWINGS
062023.CI	- INTERIOR WOOD TRIM, WINDOW SILL, TRANSPARENT FINISH
062023.DI	- INTERIOR WOOD TRIM, APRON, TRANSPARENT FINISH
072100.B2	- 1" RIGID INSULATION
079200.A	- SEALANT
081213.A	- HOLLOW METAL FRAME
081416.A	- SOLID CORE WOOD DOOR, FLUSH
092216.D2	- 3 5/8" METAL STUDS AT 16" O.C.
092216.F2	- 6" METAL STUDS AT 16" O.C.
092216.L	- ACOUSTICAL BLANKET, THICKNESS AS NOTED IN PARTITION TYPES
092900.A4	- 5/8" GYPSUM WALLBOARD
0951 13.DI	- ACOUSTICAL PANEL CEILING TILE, 2X2
096513.A5	- 4" RESILIENT TOP SET BASE
099123.AI	- PAINT FINISH, INTERIOR SYSTEM
312000.A	- POROUS FILL
312000.B	- COMPACTED FILL
321313.A	- CONCRETE SIDEWALK, 4" THICK
321313.D	- COMPRESSIBLE FILL

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JOHN K. FARKAS REGISTERED ARCHITECT 5922 GREENVILLE, N.C. 5/27/2024

JKF ARCHITECTURE

625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
SECTIONS AND DETAILS

SCALE	AS NOTED
DRAWN	MBD
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08

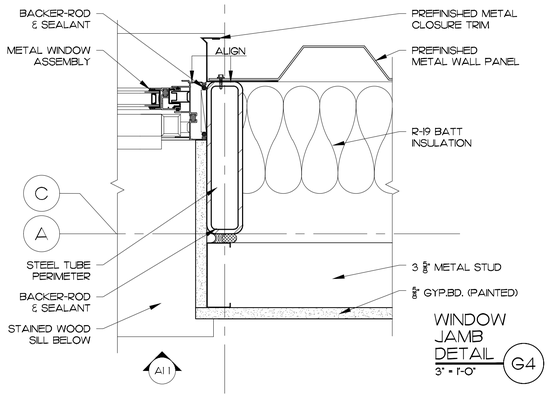
DRAWING NO
A3.1

WINDOW SCHEDULE

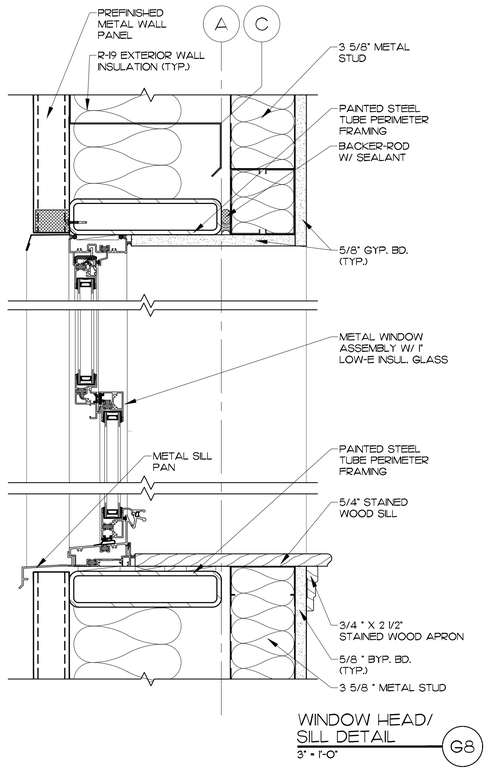
WINDOW GROUP NO.	WINDOW UNIT SIZE (W X H)	WINDOW TYPE	MATERIAL	FINISH	FRAME ELEVATION	UNIT THICKNESS	DETAILS J	DETAILS H	DETAILS S	GLASS	FIRE RATING (HRS)	REMARKS
WI	3'-0" X 4'-0"	ALUMINUM SINGLE HUNG	AL	P	WI	3 1/4"	G4 -	G8 -	G8 -	1" LOW-E	-	- -

WINDOW TYPES

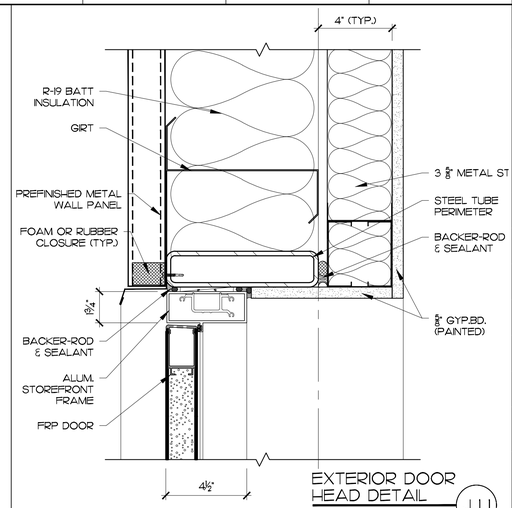
WI



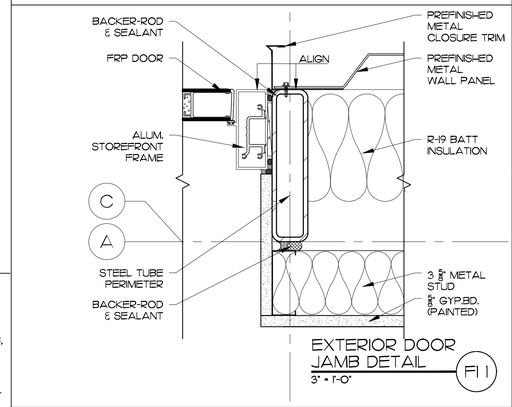
WINDOW JAMB DETAIL G4
3" = 1'-0"



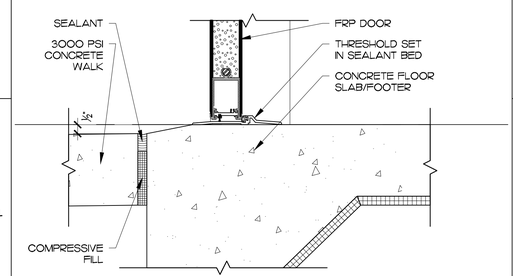
WINDOW HEAD/ SILL DETAIL G8
3" = 1'-0"



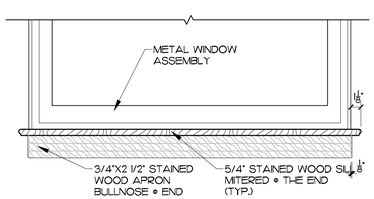
EXTERIOR DOOR HEAD DETAIL J11
3" = 1'-0"



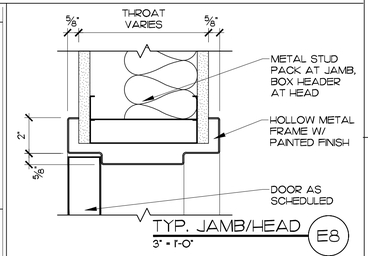
EXTERIOR DOOR JAMB DETAIL F11
3" = 1'-0"



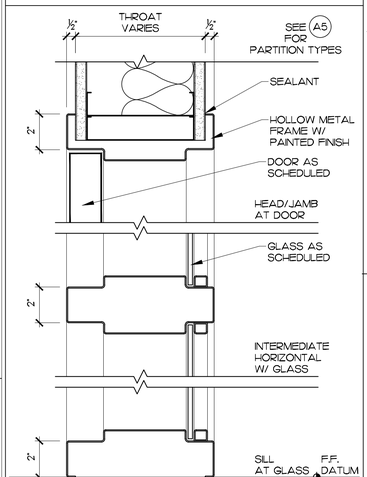
EXTERIOR DOOR SILL DETAIL C11
3" = 1'-0"



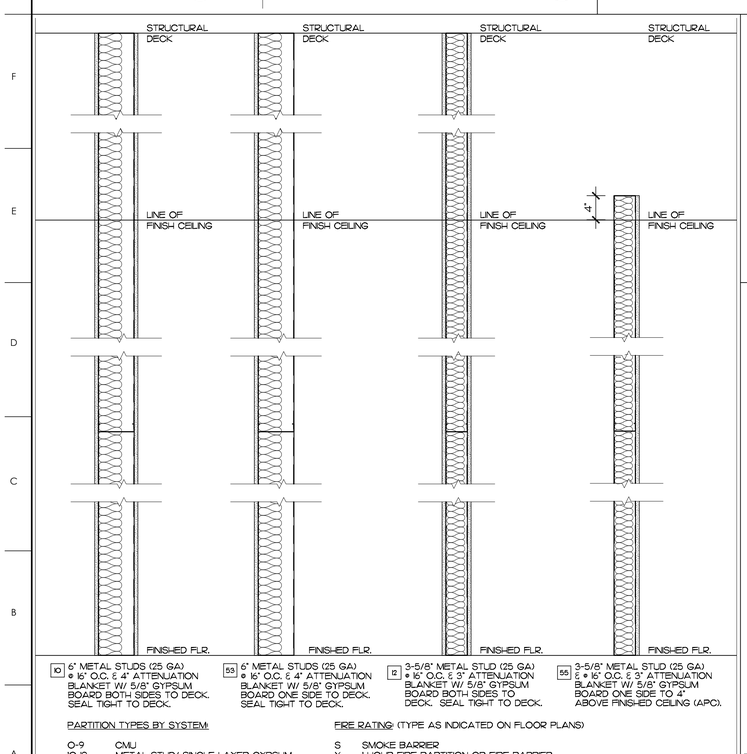
WINDOW SILL ELEVATION A11
3" = 1'-0"



TYP. JAMB/HEAD E8
3" = 1'-0"



SILL, HEAD, JAMB DETAIL A8
3" = 1'-0"



10	6" METAL STUDS (25 GA) @ 16" O.C. & 4" ATTENUATION BLANKET W/ 5/8" GYPSUM BOARD BOTH SIDES TO DECK. SEAL TIGHT TO DECK.	50	6" METAL STUDS (25 GA) @ 16" O.C. & 4" ATTENUATION BLANKET W/ 5/8" GYPSUM BOARD ONE SIDE TO DECK. SEAL TIGHT TO DECK.
12	3-5/8" METAL STUD (25 GA) @ 16" O.C. & 3" ATTENUATION BLANKET W/ 5/8" GYPSUM BOARD BOTH SIDES TO DECK. SEAL TIGHT TO DECK.	52	3-5/8" METAL STUD (25 GA) @ 16" O.C. & 3" ATTENUATION BLANKET W/ 5/8" GYPSUM BOARD ONE SIDE TO 4" ABOVE FINISHED CEILING (APC).

PARTITION TYPES BY SYSTEM:

0-9	CMU
10-19	METAL STUD/ SINGLE LAYER GYPSUM
20-29	METAL STUD/ DOUBLE LAYER GYPSUM
30-39	METAL STUD/ TRIPLE LAYER GYPSUM
40-49	METAL STUD/ SHAFTWALL/ CHASE
50-59	METAL FURRED/ ONE-SIDED GYPSUM
60-69	WOOD STUD/ SINGLE LAYER GYPSUM

FIRE RATING: (TYPE AS INDICATED ON FLOOR PLANS)

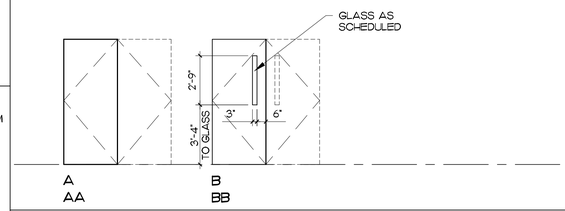
S	SMOKE BARRIER
X	1-HOUR FIRE PARTITION OR FIRE BARRIER
Y	2-HOUR FIRE BARRIER
Z	3-HOUR FIRE BARRIER

PARTITION TYPES A5
N.T.S.

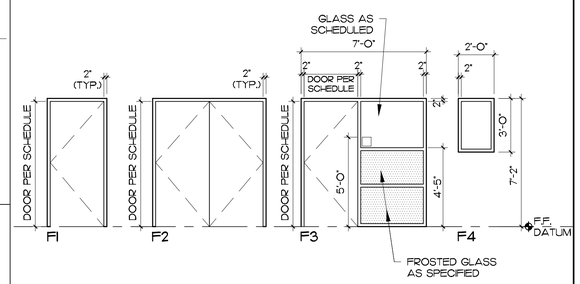
DOOR SCHEDULE

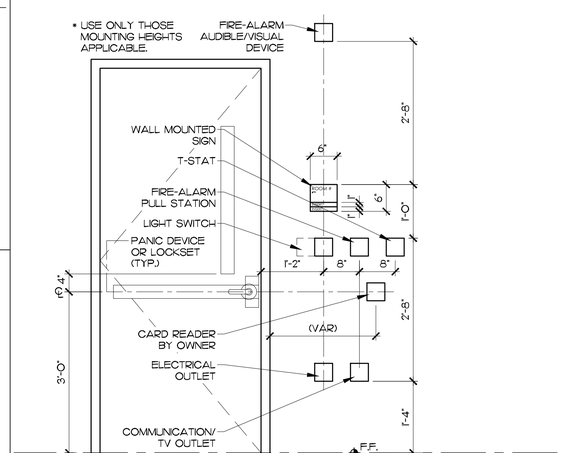
DOOR GROUP NO.	DOOR OPENING SIZE (W X H)	DOOR TYPE	DOOR THICKNESS (1-3/4" U.N.O.)	DOOR MATERIAL	DOOR FINISH	FRAME ELEVATION	FRAME MATERIAL	FRAME FINISH	FRAME DETAILS J	FRAME DETAILS H	FRAME DETAILS S	GLASS	FIRE RATING (HRS)	REMARKS
1	3'-0" X 7'-0"	B	1.75"	FRP	AL	F1	AL	AN	F1 1	J 11	C1 1	1" INS. TEMP.	-	- -
2	(2)3'-0" X 7'-0"	AA	1.75"	FRP	AL	F2	DL	AN	F1 1	J 11	C1 1	-	-	- -
3	3'-0" X 7'-0"	A	1.75"	SWC	TF	F3	HM	P	A8	A8	A8	1/4" TEMP.	-	- -
4	3'-0" X 7'-0"	B	1.75"	SWC	TF	F1	HM	P	E8	E8	-	1/4" TEMP.	-	- -
5	3'-0" X 7'-0"	A	1.75"	SWC	TF	F1	HM	P	E8	E8	-	-	-	- -
6	2'-0" X 3'-0"	-	-	-	-	F4	HM	P	SIM E8	SIM E8	-	1/4" TEMP.	-	GLASS TO BE ONE-WAY MIRRORED GLASS

DOOR TYPES



FRAME TYPES





TYP. MOUNTING HEIGHTS A15
3/4" = 1'-0"

MATERIALS KEYING LEGEND

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JOHN K. FARKAS REGISTERED ARCHITECT 5822 GREENVILLE, N.C. 5/22/2024

JKF ARCHITECTURE

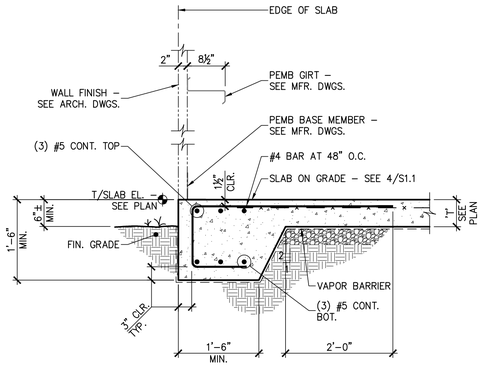
P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

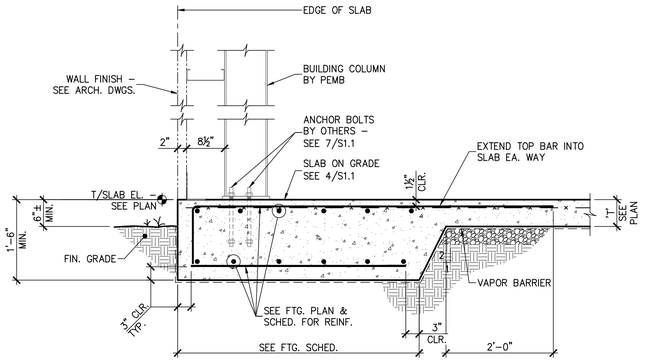
DRAWING TITLE
DOOR & WINDOW SCHEDULE & DETAILS

SCALE	AS NOTED
DRAWN	MCZ
CHECKED	JKF
DATE	2-21-2024
PROJECT NO.	2023-08

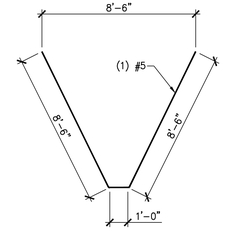
DRAWING NO
A8.1



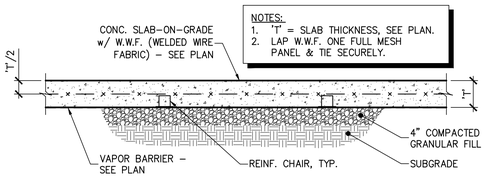
1 S1.1 SECTION - TYP. PERIMETER GRADE BEAM
N.T.S.



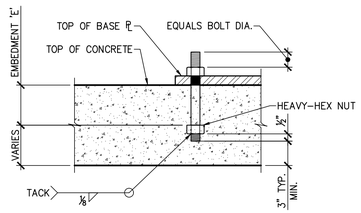
2 S1.1 SECTION - TYP. COLUMN FOOTING
N.T.S.



3 S1.1 DETAIL - TYP. HAIRPIN
N.T.S.

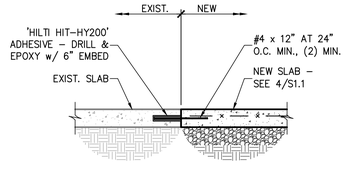


4 S1.1 SECTION - TYP. SLAB ON GRADE
N.T.S.

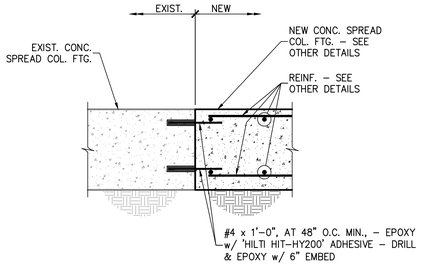


BOLT DIA. 'D'	EMBEDMENT 'E'	REMARKS
⅝"	0'-7½"	–
¾"	0'-9"	–
1"	1'-0"	–

7 S1.1 TYPICAL ANCHOR BOLT DETAL
N.T.S.



8 S1.1 SECTION - TYP. EXIST. / NEW SLAB INTERFACE
N.T.S.



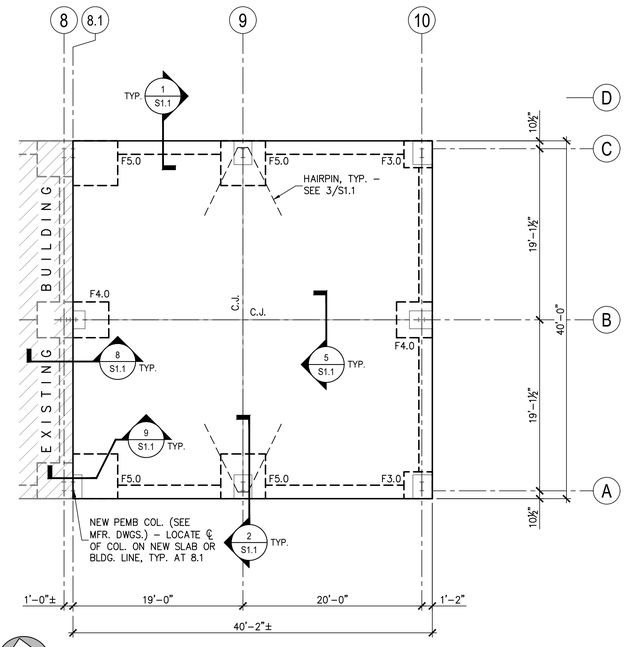
9 S1.1 SECTION - TYP. EXIST. / NEW CONC. FTG. INTERFACE
N.T.S.

CONCRETE SPREAD FOOTING SCHEDULE		
MARK	FTG. SIZE	REINFORCEMENT
F3.0	3'-0" x 3'-0" x 1'-0"	(4) #5 EA. WAY, BOTT.
F4.0	4'-0" x 4'-0" x 1'-0"	(5) #5 EA. WAY, BOTT.
F5.0	5'-0" x 5'-0" x 1'-0"	(6) #5 EA. WAY, BOTT.
F6.0	6'-0" x 6'-0" x 1'-6"	(8) #5 EA. WAY, TOP & BOTT.

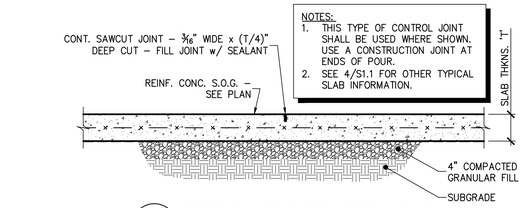
FOUNDATION PLAN LEGEND	
F4.0	CONCRETE FOOTING WITH FOOTING MARK – SEE FOOTING SCHEDULE ON THIS SHEET FOR SIZE AND REINFORCING
C.J.	SLAB ON GRADE CONSTRUCTION OR SAWCUT CONTROL JOINT – SEE DETAILS 7/S1.1 AND 8/S1.1 FOR ADDTIONAL INFORMATION
	DENOTES A METAL STUD WALL – SEE FOUNDATION DETAILS FOR ADDITIONAL INFORMATION
PEMB	PRE-ENGINEERED METAL BUILDING
U.O.N.	DENOTES 'UNLESS OTHERWISE NOTED'

FOUNDATION PLAN NOTES:

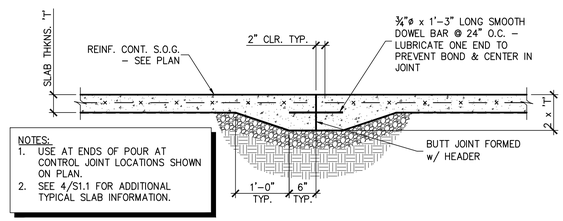
1. SEE SHEET S1.2 FOR DESIGN CRITERIA, GENERAL STRUCTURAL NOTES, AND SCHEDULES.
2. TOP OF SLAB REFERENCE ELEVATION = 0'-0" UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ACTUAL SITE ELEVATIONS.
3. TOP OF MONOLITHIC SLAB COLUMN FOOTING ELEVATIONS ARE 0'-0", UNLESS OTHERWISE NOTED.
4. CONCRETE FLOOR SLAB IS 4" THICK, WITH 6 x 6 – W 2.1 x W 2.1 WELDED WIRE FABRIC, TYPICAL. PROVIDE 10 MIL VAPOR BARRIER AND 4" COMPACTED GRANULAR BASE UNDER SLAB. SEE 4/S1.1 FOR ADDITIONAL INFORMATION.
5. THE BOTTOM OF ALL FOOTINGS SHALL BE 12" MINIMUM BELOW GRADE UNLESS OTHERWISE NOTED.
6. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENINGS NOT SHOWN.
7. SEE MECHANICAL DRAWINGS FOR POTENTIAL ROOF TOP OR HANGING MECHANICAL LOADS THAT WILL BE APPLIED TO PEMB FRAMING.
8. GRADE BEAM/FOOTING DEPTHS MAY BE INCREASED TO SUIT ACTUAL SITE FINISHED GRADING CONDITIONS PROVIDED MINIMUMS ARE HELD.
9. SUBMIT PRE-ENGINEERED METAL BUILDING (PEMB) DRAWINGS TO ENGINEER OF RECORD FOR REVIEW OF FINAL COLUMN REACTIONS. SUBJECT TO REVIEW, FOOTING SIZES AND REINFORCING CHANGES MAY BE REQUIRED.



PROJECT NORTH
FOUNDATION PLAN
1/8" = 1'-0"



5 S1.1 SECTION - TYP. CONTROL JOINT
N.T.S.



6 S1.1 SECTION - TYP. CONSTRUCTION JOINT
N.T.S.

MATERIALS KEYING LEGEND

GENERAL NOTES

SCO ID #23-26921-01A; NCCCS #2781

KEY PLAN

NO	REVISION	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 17348 ENGINEER MARK STATEN ROSE

RPA ENGINEERING, P.A.
Structural Engineering Solutions
Engineering License Certificate No. C-2734
1 Commerce Square, Suite 202, Washington, NC 27889
Phone : 252-321-6027
Fax : 252-355-2179
RPA Project No.: 2023303

JKF ARCHITECTURE
625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
FOUNDATION PLAN, PLAN LEGEND, PLAN NOTES, SECTIONS & DETAILS

SCALE	DRAWING NO.
AS NOTED	S1.1
DRAWN: MBM	
CHECKED: MSR	
DATE: 2-29-2024	
PROJECT NO.: 2023-08	

STRUCTURAL DESIGN CRITERIA:

1. DESIGN LOADS:

		MAX	MIN (FOR UPLIFT)
1.1.	ROOF DEAD LOAD	4 PSF	2 PSF
	ROOFING & INSULATION	4 PSF	3 PSF
	ROOF FRAMING	4 PSF	3 PSF
	PIPING, DUCT, ETC.	2 PSF	0 PSF
		10 PSF	5 PSF

1.2. LIVE LOADS
ROOF LIVE LOAD – ALL AREAS GREATER OF 20 PSF MINIMUM OR SNOW LOAD
1ST FLOOR LIVE LOAD _____ 100 PSF

1.3. SNOW LOAD
GROUND SNOW LOAD = 10 PSF (WASHINGTON, NC)
SNOW LOAD IMPORTANCE FACTOR: I = 1.0
SNOW EXPOSURE FACTOR = 1.0
SNOW THERMAL FACTOR = 1.0
ROOF SNOW LOAD = 7 PSF
BASIC DESIGN ROOF SNOW LOAD = 7.0 PSF

NOTE:
SEE PRE–ENGINEERED METAL BUILDING DRAWINGS FOR INFORMATION NOT SHOWN.

1.4. WIND LOAD
BASIC WIND SPEED: Vult = 125 MPH (WASHINGTON, NC)
RISK CATEGORY: ___ I ___X_ II ___ III ___ IV
WIND EXPOSURE CATEGORY: 'B' (ASCE 7–10)
WIND BASE SHEAR (FOR MWFRS): Vx = Vy =
INTERNAL PRESSURE COEFFICIENT: ±0.55

1.5. SEISMIC LOADS (N.C. STATE BLDG. CODE):
SEISMIC IMPORTANCE FACTOR: I = 1.0
RISK CATEGORY: ___ I ___X_ II ___ III ___ IV
SEISMIC DESIGN CATEGORY: ___ A ___X_ B ___ C ___ D
MAPPED SPECTRAL RESPONSE ACCELERATION: Ss 11.4 % g S1 5.8 % g
SPECTRAL RESPONSE COEFFICIENTS: Sds 12.1 % Sd1 9.3 %
SEISMIC RESPONSE COEFFICIENT: Cs _____
RESPONSE MODIFICATION FACTOR, R _____
SITE CLASSIFICATION: ___ A ___ B ___ C ___X_ D ___ E ___ F
BASIC STRUCTURAL SYSTEM:
___ BEARING WALL _____ DUAL w/ SPECIAL MOMENT FRAME
___ BUILDING FRAME _____ DUAL w/ INTERMEDIATE R/C OR SPECIAL STEEL
___X_ MOMENT FRAME _____ INVERTED PENDULUM
SEISMIC BASE SHEAR Vx = 10K Vy = 10K
ANALYSIS PROCEDURE: ___ SIMPLIFIED ___X_ EQUIVALENT LATERAL FORCE ___ MODAL
ARCHITECTURAL, MECHANICAL COMPONENTS ANCHORED? ___ YES ___X_ NO
LATERAL DESIGN CONTROL: _____EARTHQUAKE _____ WIND

1.6. ALL DESIGN LOADS ARE PER NORTH CAROLINA STATE BUILDING CODE 2018 EDITION.

1.7. WIND LOADS CONTROL THE LATERAL LOAD DESIGN. THE BUILDING UTILIZES MOMENT FRAMES AND DIAGONAL BRACING FOR LATERAL LOAD RESISTANCE.

2. FOUNDATION DESIGN CRITERIA:

2.1. MINIMUM FOOTING BEARING DEPTH BELOW GRADE IS 12 INCHES.

2.2. FOUNDATION DESIGN IS BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 1,500 PSF.

2.3. CONTRACTOR SHALL FIELD VERIFY THE SOIL BEARING CAPACITY PRIOR TO START OF CONSTRUCTION.

CONCRETE MATERIALS SCHEDULE

LOCATION	MINIMUM COMPRESSIVE STRENGTH (AT 28 DAYS)	REMARKS
FOUNDATIONS	3000 PSI	–
SLAB ON GRADE	4000 PSI	–
MISCELLANEOUS	3000 PSI	–

EXPOSED CONCRETE FINISH SCHEDULE

AREA	FINISH	COMMENTS
ALL EXTERIOR WALLS, CURBS, UNLESS OTHERWISE NOTED	SMOOTH FORM	–
EXTERIOR CONCRETE PAVEMENT, SIDEWALKS	COARSE BROOM	–
SLAB ON GRADE	TROWEL	–
EXT. EQUIP. PADS	COARSE BROOM	–
EXTERIOR STAIRS	COARSE BROOM	–
–	–	–

CONCRETE REBAR SPLICE SCHEDULE

BAR SIZE	LAP LENGTH (in.) f'c = 3000 psi	f'c = 4000 psi	f'c = 5000 psi
#4	22	19	17
#5	28	24	21
#6	32	29	26
#7	48	42	37
#8	55	48	43
#9	62	54	48
#10	68	60	53
#11	76	66	59

NOTES:
1. CONCRETE IS NORMAL WEIGHT CONCRETE. IF LIGHTWEIGHT CONCRETE IS USED, MULTIPLY LENGTHS IN TABLE BY 1.3.
2. BAR YIELD STRENGTH (fy) IS 60 KSI.
3. BAR SPACING AND COVER REQUIREMENTS OF ACI SECTION 25.4.2.2 ARE ASSUMED TO BE MET. IF NOT, MULTIPLY LENGTHS IN TABLE BY 1.5.
4. REDUCTION OF EXCESS REINFORCEMENT NOT TAKEN.
5. IF MORE THAN 12" OF FRESH CONCRETE IS CAST IN MEMBER BELOW HORIZONTAL SPLICE, MULTIPLY LENGTHS IN TABLE BY 1.3.

GENERAL STRUCTURAL NOTES:

1. GENERAL NOTES

1.1. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

1.2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS OR OPENINGS NOT HEREIN INDICATED.

1.3. COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS.

1.4. VERIFY ALL FLOOR AND ROOF OPENING SIZES AND LOCATIONS, EQUIPMENT PAD SIZES AND LOCATIONS, ANCHOR BOLT LAYOUTS, ETCETERA, WITH EQUIPMENT SELECTED.

1.5. VERIFY BUILDING LOCATION AND ORIENTATION WITH OWNER AND LOT SETBACK REQUIREMENTS BEFORE ANY CONSTRUCTION IS STARTED ON THE PROJECT.

1.6. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION DIMENSIONS WHICH IMPACT NEW CONSTRUCTION PRIOR TO FABRICATING ANY REBAR, STEEL, TRUSSES, ETCETERA.

1.7. DO NOT CUT, NOTCH, OR OTHERWISE MODIFY ANY STRUCTURAL MEMBERS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS WITHOUT APPROVAL OF THE ENGINEER OF RECORD.

1.8. CUTTING OF STEEL MEMBERS AND INSTALLATION OF HOLES IN STEEL MEMBERS SHALL BE DONE BY CUTTING OR DRILLING. DO NOT USE TORCHES FOR CUTTING UNLESS APPROVED BY THE ENGINEER OF RECORD.

1.9. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL SHORING REQUIRED TO SUPPORT NEW AND EXISTING STRUCTURAL ELEMENTS.

2. FOUNDATION

2.1. ALL FOOTINGS SHALL BE ON UNDISTURBED SOIL OR 98% COMPACTED FILL PER ASTM D698.

2.2. NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL.

2.3. EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 6 MIL. POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING.

2.4. ADVERSE FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION SUCH AS SOFT SOILS, ORGANIC MATTER, ETCETERA, SHALL BE REPORTED TO THE ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

2.5. IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH LEAN CONCRETE MIX. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.

3. CONCRETE

3.1. ALL PLACED CONCRETE, SHALL HAVE NORMAL WEIGHT COARSE AGGREGATES UNLESS OTHERWISE NOTED, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE.

3.2. GROUT FOR BASE PLATES SHALL BE NON–METTALIC, NON–SHRINKABLE GROUT, AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH, AT 28 DAYS, OF 5000 PSI.

3.3. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

3.4. CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH ¾" x 45 DEGREE CHAMFER, UNLESS OTHERWISE NOTED.

3.5. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS, AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED, WITH A CLASS B TENSION SPLICE, AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 12" OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR.

3.6. SEE ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING / DAMPPROOFING DETAILS.

3.7. ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

3.8. SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF FLOOR FINISHES.

3.9. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS FOR ADDITIONAL WALL / SLAB OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

3.10. ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.

3.11. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

3.12. DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH THE ACI DETAILING MANUAL.

3.13. IN–PLACE REINFORCING STEEL, SHALL BE REVIEWED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

3.14. AT CORNERS AND INTERSECTIONS, PROVIDE BARS OF THE SAME NUMBER AND SIZE AS THE LONGITUDINAL BARS IN THE FOOTING.

3.15. CONCRETE MATERIALS SHALL BE AS FOLLOWS:
3.15.1. USE TYPE I/II PORTLAND CEMENT CONFORMING TO ASTM C150
3.15.2. AGGREGATE SHALL CONFORM TO ASTM C33 (FINE AND COURSE AGGREGATES)
3.15.3. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260
3.15.4. PLASTICIZER CAN BE USED TO IMPROVE WORKABILITY IF REQUIRED

3.16. CONCRETE MIX DESIGN:
3.16.1. MAXIMUM WATER/CEMENT RATIO – 0.50 FOR SLAB, 0.55 FOR FOOTINGS AND OTHER CONCRETE UNLESS OTHERWISE NOTED.
3.16.2. SLUMP SHALL BE 4 INCHES TO 6 INCHES (WITHOUT PLASTICIZER)
3.16.3. AIR ENTRAINMENT SHALL BE 4% TO 6% (EXTERIOR CONCRETE)

3.17. CONCRETE SLAB SHALL BE CURED USING A WATER–BASED CURING COMPOUND. CURING COMPOUND SHALL BE APPLIED TO ALL HORIZONTAL SURFACES. ONCE THE SURFACE WATER DISSIPATES AND THE SURFACE IS NOT MARRED BY WALKING, APPLY PER MANUFACTURER'S SPECIFICATIONS.

3.18. CONDUCT SLUMP, AIR, AND STRENGTH TESTS OF CONCRETE IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
3.18.1. SECURE SAMPLES IN ACCORDANCE WITH "METHOD OF SAMPLING FRESH CONCRETE" (ASTM C 172). MOLD AND CURE FIVE SPECIMENS FROM EACH SAMPLE IN ACCORDANCE WITH "METHOD OF MAKING ANS CURING CONCRETE COMPRESSION AND FLEXURE SPECIMENS IN THE FIELD" (ASTM C 31). FIVE SPECIMENS COMPRISE ONE TEST. TEST TWO SPECIMENS AT 7 DAYS (ASTM C 39). TEST TWO SPECIMENS AT 28 DAYS IN ACCORDANCE WITH "METHOD OF TEST FOR COMPRESSIVE STRENGTH OF MOLDED CONCRETE CYLINDERS" (ASTM C 39). TEST EVALUATION SHALL BE CONDUCTED IN ACCORDANCE WITH PROVISIONS OF ACI 318–05. KEEP ONE SPECIMEN IN RESERVE.
3.18.2. MAKE ONE STRENGTH TEST FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF FOR EACH MIX DESIGN OF CONCRETE PLACED IN ONE DAY, EXCEPT THAT IN NO CASE SHALL A GIVEN MIX DESIGN BE REPRESENTED BY LESS THAN THREE TESTS.

4. STRUCTURAL STEEL

4.1. DETAILING OF STRUCTURAL STEEL CONNECTIONS, MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS, SUCH AS THE "AISC STEEL CONSTRUCTION MANUAL, 16TH EDITION", "DETAILING FOR STEEL CONSTRUCTION", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION".

4.2. MEMBERS AND CONNECTIONS NOT FULLY DEVELOPED ON THE CONTRACT DRAWINGS, AND CONNECTIONS FOR ANY PORTION OF THE STRUCTURE NOT SHOWN ON THE CONTRACT DRAWINGS, SHALL BE DESIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER, AND DETAILED ON THE SHOP DRAWINGS.

4.3. ALTERNATIVE CONNECTION DETAILS, MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR, ONLY IF ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS, PREPARED AND SEALED BY AN ENGINEER, LICENSED IN THE PROJECT'S JURISDICTION. FAILURE TO SUBMIT SUCH CALCULATIONS FOR REVIEW, CONCURRENT WITH SHOP DRAWING ERECTION PLANS AND DETAILS, WILL BE CAUSE FOR REJECTION OF THAT SUBMITTAL.

4.4. CALCULATIONS FOR DETAILS, MUST SHOW A RATIONAL ANALYSIS OF A COMPLETE LOAD PATH, INCLUDING LOCAL EFFECTS ON WEBS, FLANGES ETC., OF THE CONNECTED MEMBERS AND THE DEVICES (PLATES, SEATS, BRACKETS, BOLTS, WEBS, ETC.) AFFECTING ALL CONNECTIONS.

4.5. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION, SHALL CONFORM TO THE "AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AUGUST 1, 2022), AND THE "AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (MAY 9, 2022).

4.6. 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.

4.7. SHOP AND FIELD TESTING OF WELDS AND BOLTS, SHALL BE PERFORMED AS OUTLINED IN THE SPECIFICATIONS.

4.8. ALL FILLET WELDS SHALL BE A MINIMUM OF ¼ INCH, UNLESS OTHERWISE NOTED.

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

4.10. ALL STRUCTURAL STEEL SHAPES USED, SHALL BE IN ACCORDANCE WITH ASTM A992 SPECIFICATIONS (Fy = 50 KSI). ALL STRUCTURAL TUBING USED, SHALL BE IN ACCORDANCE WITH ASTM A500, GRADE B (Fy = 46 KSI). ALL PIPE USED, SHALL BE IN ACCORDANCE WITH ASTM A53 (Fy = 35 KSI). ALL MISCELLANEOUS STEEL USED, SHALL BE IN ACCORDANCE WITH ASTM A36 (Fy = 36 KSI).

4.11. ALL FIELD BOLTED CONNECTIONS, SHALL BE BEARING TYPE CONNECTIONS (THREADS INCLUDED IN THE SHEAR PLANE), WITH ¾" DIAMETER, ASTM A325 HIGH STRENGTH BOLTS, UNLESS OTHERWISE NOTED ON THE DRAWING. ALL BOLTS SHALL BE TIGHTENED TO A "SNUG–TIGHT" CONDITION, UNLESS OTHERWISE NOTED.

4.12. FOR ALL FLOOR AND ROOF OPENINGS, THE CONTRACTOR SHALL VERIFY OPENING LOCATIONS WITH EQUIPMENT SELECTED, AND MAKE ANY NECESSARY MODIFICATIONS AT NO ADDITIONAL COST. IT IS THE RESPONSIBILITY OF FABRICATOR, TO RECEIVE ALL NECESSARY INFORMATION, PRIOR TO FABRICATION OF ANY STEEL.

4.13. ALL STRUCTURAL STEEL WHICH IS TO BE SPRAYED WITH FIREPROOFING SHALL NOT BE PRIMED OR PAINTED. STEEL WHICH IS NOT SPRAYED WITH FIREPROOFING SHALL BE PRIMED AND PAINTED. DO NOT PAINT SURFACES TO BE EMBEDDED IN CONCRETE.

4.14. BEAM END CONNECTIONS, SHALL BE DESIGNED FOR A MINIMUM GRAVITY LOAD OF 50% U.D.L., PER THE "AISC MANUAL OF STEEL CONSTRUCTION, 16TH EDITION", UNLESS OTHERWISE INDICATED.

4.15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED, TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT, UNTIL ALL PERMANENT BRACING, ROOF & WALL SHEATHING, OR METAL ROOF DECK ARE IN PLACE, TO RESIST LATERAL MOVEMENT OF THE FRAME.

5. PRE–ENGINEERED METAL BUILDINGS

5.1. PRE–ENGINEERED METAL BUILDING VENDOR SHALL SUBMIT SEALED AND SIGNED DRAWINGS AND CALCULATIONS, TO THE ENGINEER OF RECORD AND ARCHITECT, FOR REVIEW PRIOR TO FABRICATION OF THE BUILDING AND INSTALLATION OF THE FOUNDATIONS.

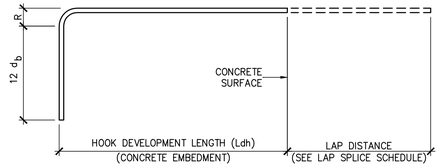
5.2. CONFIGURATION, COLUMN LOCATIONS, EAVE HEIGHTS, ROOF SLOPE, ETCETERA, SHALL BE AS SHOWN ON THE DRAWINGS. SHOULD BUILDING MANUFACTURER WISH TO FURNISH A SYSTEM THAT WILL DIFFER FROM THAT SHOWN, WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ARCHITECT/ENGINEER OF RECORD PRIOR TO BIDDING.

5.3. BUILDING DESIGN AND LOAD APPLICATION SHALL CONFORM TO THE CURRENT NORTH CAROLINA STATE BUILDING CODE. THE COLLATERAL LOAD SHALL NOT BE USED TO REDUCE THE EFFECTS OF WIND LOADS ON THE BUILDING. REFER TO THE 'GENERAL' SECTION OF THE STRUCTURAL NOTES FOR ADDITIONAL LOADING INFORMATION.

5.4. THE METAL BUILDING FRAMES SHALL BE DESIGNED SUCH THAT THE MAXIMUM HORIZONTAL DRIFT DUE TO WIND AND SEISMIC LOADING SHALL SATISFY AN H /180 CRITERIA. THE MAXIMUM VERTICAL DEFLECTION OF PRIMARY AND SECONDARY FRAMING MEMBERS SHALL BE WITHIN THE TOLERANCES PROSCRIBED BY THE NC STATE BUILDING CODE. MANUFACTURER SHALL VERIFY THAT THE DEFLECTION CRITERIA ARE COMPATIBLE WITH EXTERIOR AND INTERIOR FINISHES SUPPORTED BY THE METAL BUILDING STRUCTURE.

5.5. THE FOOTING DESIGN IS BASED UPON AN ASSUMED LOADING OF THE METAL BUILDING SUPER–STRUCTURE. THE FOUNDATIONS SHALL NOT BE CONSTRUCTED UNTIL THE STRUCTURAL ENGINEER HAS REVIEWED THE ACTUAL DESIGN REACTIONS SUPPLIED BY THE MANUFACTURER.

BEND RADIUS (R)
$4d_b$ – No.3 – No.8
$5d_b$ – No.9 – No.11
$6d_b$ – No.14 – No.18



STANDARD HOOKS IN TENSION (PER ACI 318–02)

BAR SIZE	HOOK DEVELOPMENT LENGTH Ldh (INCHES) f'c 3000 psi	f'c 4000 psi	f'c 5000 psi
#3	9	7	7
#4	11	10	9
#5	14	12	11
#6	17	15	13
#7	19	17	15
#8	22	19	17
#9	25	22	19
#10	28	24	22
#11	31	26	24

NOTES:
1. CONCRETE IS NORMAL WEIGHT CONCRETE. IF LIGHTWEIGHT CONCRETE IS USED, MULTIPLY LENGTHS IN TABLE BY 1.3.
2. BAR YIELD STRENGTH (fy) IS 60 KSI.
3. SIDE COVER REQUIREMENTS OF ACI SECTION 25.4.3.2 ARE ASSUMED TO NOT BE MET.
4. TIE OR STIRRUP REQUIREMENTS OF ACI SECTION 25.4.3.2 ARE ASSUMED TO NOT BE MET.
5. REDUCTION OF EXCESS REINFORCEMENT IS NOT TAKEN.
6. HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

d_b = BAR DIAMETER

MATERIALS KEYING LEGEND

RPA ENGINEERING, P.A.
Structural Engineering Solutions
Engineering License Certificate No. C-2734
1 Commerce Square Suite 202 Washington, NC 27889
Phone : 252-321-6027
Fax : 252-355-2179
RPA Project No.: 2023303

GENERAL NOTES

SCO ID #23-26921-01A; NCCCS #2781

KEY PLAN

NO	REVISION	DATE

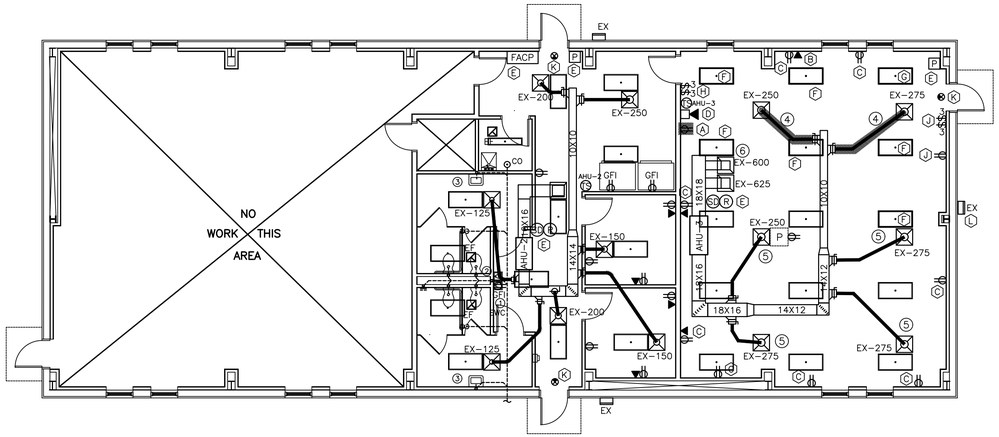
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 17348 ENGINEER MARK STEVEN RICE

JKF ARCHITECTURE
625 LYNNDALE CT., SUITE F, GREENVILLE, NC 27858 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
STRUCTURAL DESIGN CRITERIA, GENERAL STRUCTURAL NOTES & SCHEDULES

SCALE	AS NOTED
DRAWN	MBM
CHECKED	MSR
DATE	2-29-2024
PROJECT NO.	2023-08
DRAWING NO.	S1.2



PLUMB, MECH & ELEC DEMOLITION PLAN

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

GENERAL PLMB, MECH & ELEC DEMOLITION PLAN NOTES:

1. ANY EXISTING HVAC DEVICE OR SYSTEM NOT REMOVED SHALL REMAIN OPERATIONAL FOLLOWING COMPLETION OF PROJECT.
2. EXISTING EQUIPMENT & PIPING IS SHOWN IN APPROXIMATE LOCATIONS TAKEN FROM AS-BUILTS. FIELD VERIFY PRIOR TO CONSTRUCTION.
3. ANY EXISTING ELECTRICAL FIXTURE, DEVICE, GEAR OR SYSTEM NOT REMOVED SHALL REMAIN OPERATIONAL AT COMPLETION OF PROJECT.
4. EXISTING ELEC. GEAR AND CIRCUITING IS SHOWN IN APPROXIMATE LOCATIONS AND TAKEN FROM AS-BUILTS. FIELD VERIFY PRIOR TO CONSTRUCTION.

POWER, LTG & FA DEMO KEY NOTES:

- (A) APPROX LOCATION OF EXISTING POWER OUTLET TO BE REMOVED. REMOVE WIRING TO CLOSEST J-BOX ABOVE CEILING AND MAINTAIN CKT FOR REUSE.
- (B) APPROX LOCATION OF EXISTING DATA OUTLET TO BE REMOVED. TEMPORARILY COIL DATA CABLE ABOVE CEILING AND SECURE TO STRUCTURE. LABEL EACH CABLE WITH ROUTER PORT ADDRESS. REUSE IN NEW OFFICE. SEE E1.1
- (C) MAINTAIN POWER TO ALL EXISTING RECEPTACLES TO REMAIN. REWORK FEEDS AS NECESSARY. SEE E1.1
- (D) APPROX LOCATION OF EXISTING FIRE ALARM DEVICE TO BE RELOCATED. SEE E.1. FOR NEW LOC.
- (E) EXISTING FA DEVICE TO REMAIN
- (F) EXISTING LIGHT TO BE REMOVED AND TURNED OVER TO OWNER FOR SURPLUS. MAINTAIN UN-SWITCHED LEG OF CKT AT J-BOX ABOVE CEILING FOR REUSE.
- (G) APPROC. LOCATION OF EXISTING LIGHT TO BE RELOCATED. SEE E1.2 FOR NEW LOC. REWORK DUAL SWITCH LEGS AS NECESSARY FOR PROPER FUNCTION.
- (H) APPROX LOCATION OF EXISTING LIGHTING DEVICE TO BE REMOVED WITH ASSOCIATED SWITCHED LEG WIRING. SEE E1.2 FOR NEW SWITCH ARRANGEMENT.
- (J) EXISTING ELECTRICAL DEVICE TO REMAIN. ADJUST DEVICE LOCATION TO NEW WALL.
- (K) EXISTING EXIT LIGHT TO REMAIN
- (L) EXISTING EXTERIOR LIGHT TO BE RELOCATED. SEE E1.2

PLUMB & MECH DEMO KEY NOTES:

1. P.C. SHALL REMOVE WATER COOLER & STORE ON SITE FOR REUSE. SEE P1.1 & P1.2 FOR NEW LOC.
2. P.C. SHALL REWORK EXISTING ABOVE GROUND PIPING AS NECESSARY TO ADD THE NEW WALL MOUNTED WC FIXTURES AND TIE BACK TO EXISTING MAIN BELOW FLR.
3. OPEN WALL AS REQUIRED AND MODIFY EXISTING VERTICAL PIPING TO ARM OVER AND TIE IN THE NEW LAVATORIES.
4. REMOVE EXISTING DIFFUSER AND ASSOCIATED BRANCH DUCT BACK TO TAP. MAINTAIN TAPS FOR REUSE AS INDICATED OR CAP AT MAIN IF NOT REUSED. (SEE M1.1)
5. EXISTING DIFFUSER TO REMAIN. RE-BALANCE TO NEW AIR FLOW PER M1.1 PLAN.
6. REMOVE EXISTING RETURN GRILLE AND ASSOCIATED DUCTWORK AS REQUIRED. SEE M1.1 FOR NEW CONNECTIONS TO EXISTING RETURN MAIN.

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA
SEAL
021908
5/21/24
PROFESSIONAL ENGINEER
WILSON POU

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

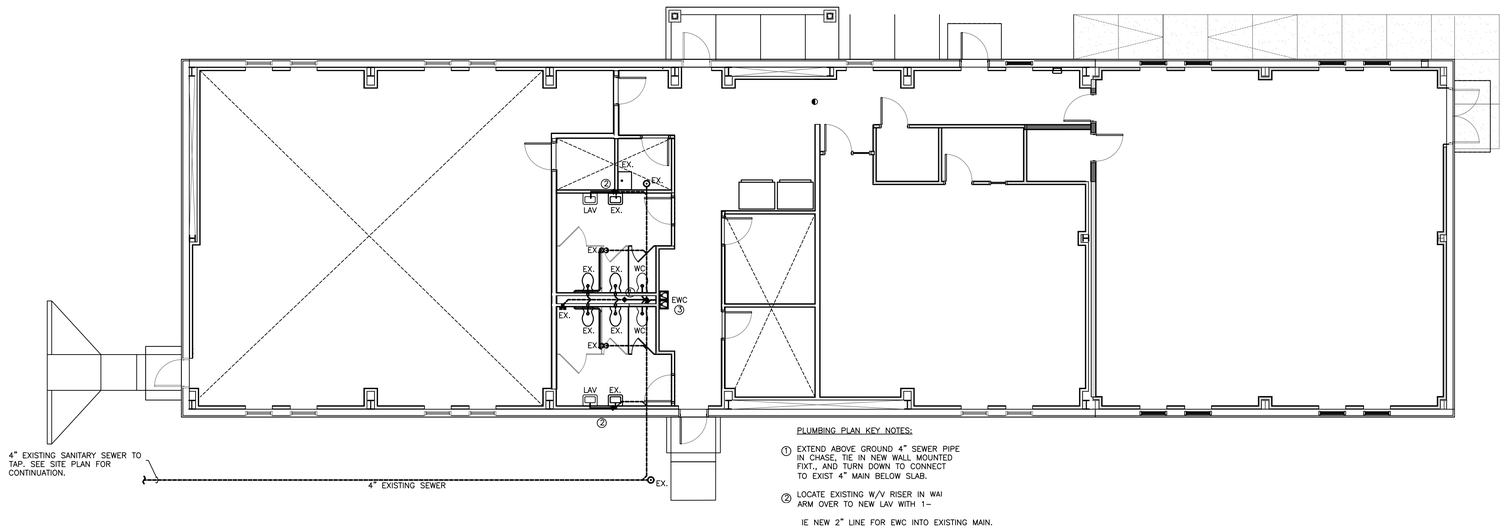
SEAL

JKF
ARCHITECTURE
P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
DEMO PLAN

SCALE	DRAWING NO
AS NOTED	PME1.0
DRAWN: DWP	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO: 2023-08	ENGINEERING SOURCE PROJECT NO: ES23074



PLUMBING PLAN KEY NOTES:

① EXTEND ABOVE GROUND 4" SEWER PIPE IN CHASE, TIE IN NEW WALL MOUNTED FIXT., AND TURN DOWN TO CONNECT TO EXIST 4" MAIN BELOW SLAB.

② LOCATE EXISTING W/V RISER IN WAI ARM OVER TO NEW LAV WITH 1-

IE NEW 2" LINE FOR EWC INTO EXISTING MAIN.

SANITARY SEWER PLAN

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

PLUMBING GENERAL NOTES:

1. THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH N.C. PLUMBING CODE AND LOCAL PLUMBING INSPECTOR.

2. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.

3. THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, TEES, ELBOWS, ETC. FOR A COMPLETE WORKING PLUMBING SYSTEM.

4. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC.

5. CONTRACTOR SHALL COORDINATE ANY PLUMBING SYSTEM REQUIRING SHUTDOWN WITH THE OWNER 48 HOURS IN ADVANCE.

6. ALL DOMESTIC WATER PIPING SHOWN IS ABOVE BETWEEN FLOOR JOIST/WITHIN WALLS, AND IN CRAWL SPACES UNLESS OTHERWISE NOTED.

7. ALL DOMESTIC WATER PIPING (ABOVE SLAB) SHALL BE TYPE "L" COPPER WITH 95/5 LEAD FREE SOLDER. (SEE SPECIFICATIONS). ALL WATER SERVICE PIPING BELOW SLAB/GRADE SHALL BE TYPE "K" SOFT COPPER WITH NO JOINTS (MIN. 10'-0" OF LENGTH). COMPLY WITH ASTM B 75/88/251/447.

8. ALL WATER PIPING SHALL BE INSULATED WITH CLOSED CELL (ARMAFLEX) TYPE INSULATION WITH THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1/2" THICK. THICKNESS FOR HOT WATER & RETURN PIPING SHALL BE 1" THICK. INSTALL SADLES AS REQUIRED IN ALL LOCATIONS TO PREVENT COMPRESSION OF INSULATION.

9. ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY, FULL PORT, CHROME PLATED BALL. TEFLON SEATS 150 # WSP, FOR SIZES 1/2" THRU 2". PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.

10. ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.

11. ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D 2661. ALL JOINTS SHALL BE SOLVENT WELDED TYPE CONFORMING TO ASTM D 2665/2949/3034, ASTM F 891, CSA B182.2,CSA CAN/CSA-B182.4

12. ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY NC PLUMBING CODE.

13. ALL PIPING PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL.

14. ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED PER N.C. PLUMBING CODE.

15. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL UNDER SLAB PIPING WITH ALL STRUCTURAL FOUNDATIONS, P.C. SHALL COORDINATE ALL UNDER SLAB PLUMBING WITH ELEVATION INVERTS WITH THE SITE UTILITY INVERTS.

16. ALL EXPOSED WATER SUPPLY AND WASTE LINES UNDER OPEN SINKS/LAVATORIES SHALL HAVE PROTECTIVE DEVICES INSTALLED TO MEET LATEST NCSBC AND ADA REQUIREMENTS.

17. THE ENTIRE PLUMBING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH NC PLUMBING CODE.

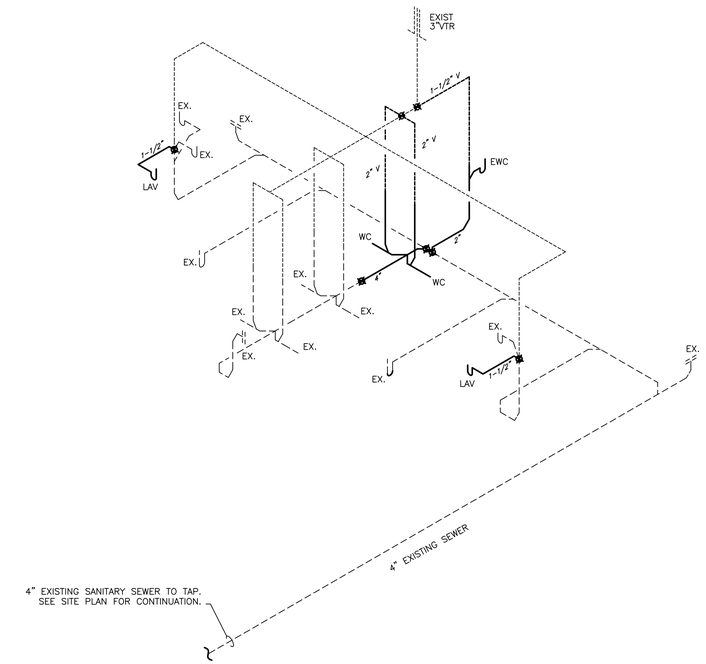
18. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT WASTE LINES, VENT LINES, AND WATER SUPPLY LINES.

19. WATER HEATERS SHALL COMPLY WITH N.C ENERGY CODE SECTION 504 OF THE NC BUILDING CODE

20. ALL FLOOR DRAINS, HUB DRAINS, AND FLOOR SINKS SHALL HAVE TRAP PRIMERS OR HOSE BIBBS, INSTALLED AS SPECIFIED IN THE N.C. PLUMBING CODE SECTION 412.6.

21. P.C. SHALL VERIFY AND SET THE MAXIMUM OUTLET TEMPERATURES AT ALL NON-COMMERCIAL KITCHEN EQUIPMENT INCLUDING HAND SINKS LOCATED IN THE KITCHEN TO NOT EXCEED 120°F BY INSTALLATION OF POINT OF USE ANTI-SCALD MIXING VALVES IF NECESSARY.

22. ALL ACCESS COVERS INCLUDING BUT NOT LIMITED TO IN-GRADE CLEANOUTS, MANHOLES, AND WATER METER BOXES SHALL BE FLUSH WITH FINISHED GRADE UNLESS OTHERWISE SPECIFIED



DWV RISER DIAGRAM

SCALE: N.T.S

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021958 5/21/24 JOHNNY K. FARKAS

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

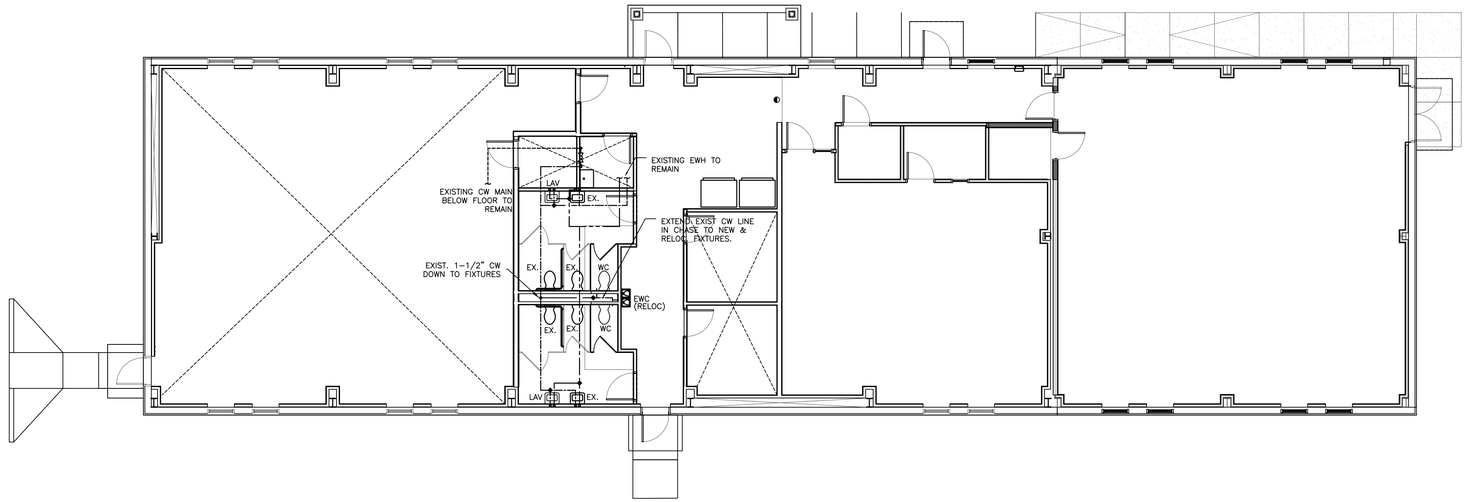
JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

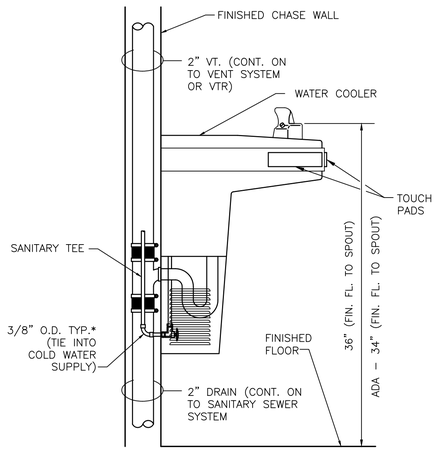
DRAWING TITLE
WASTE PLAN

SCALE: AS NOTED	DRAWING NO: P1.1
DRAWN: BVM	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO: 2023-08	ENGINEERING SOURCE PROJECT NO. ES23074



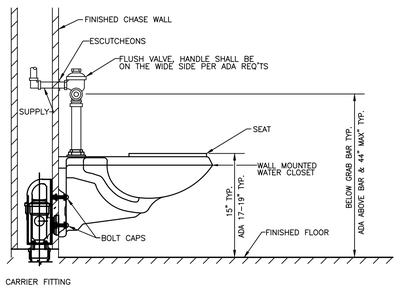
POTABLE WATER PLAN

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



ELECTRIC WATER COOLER

SCALE: N.T.S.



CARRIER FITTING

NOTES:

INSTALL PER MANUFACTURERS INSTRUCTIONS, LOCATE HANDLE ON WIDE SIDE OF STALL.

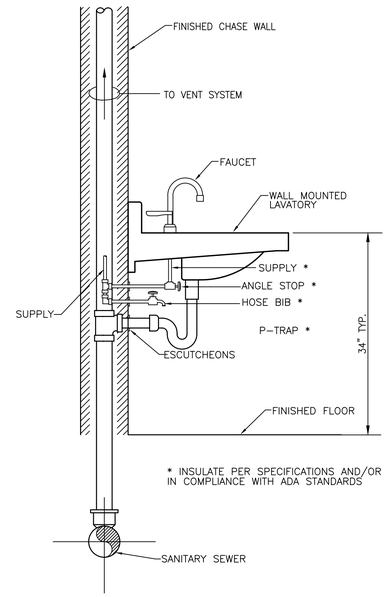
CARRIER FITTING AS REQUIRED TO BE FURNISHED BY P.C.

WASTE OUTLET SEAL RING MUST BE NEOPHENE OR GRAPHITE-FELT (WAX RING NOT RECOMMENDED).

COORDINATE EXACT CARRIER REQUIRED WITH ARCHITECTURAL WALL TYPES, PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.

WALL HUNG FLUSH VALVE TYPE WATER CLOSET

SCALE: NTS



* INSULATE PER SPECIFICATIONS AND/OR IN COMPLIANCE WITH ADA STANDARDS

LAVATORY - WALL MOUNTED

SCALE: N.T.S.

PLUMBING FIXTURE SCHEDULE

ITEM	DESCRIPTION	FINISH	COLD	HOT	VENT	WASTE	ADA
WC	WATER CLOSET – KOHLER WALL MTD KINGSTON 16-1/8" UNIVERSAL HEIGHT EL 1.6 ELONGATED FLUSH VALVE WC	WHITE			2"	4"	
	SEAT – KOHLER K-4666-SA ANTI-MICROBIAL OPEN FRONT SEAT W/ SELF SUSTAINING CHECK HINGE	WHITE					
	FLUSH VALVE – MATCH EXISTING – BASIS OF DESIGN ZURN Z6000AV-WS1	CHROME	1"				
LAV	LAVATORY – KOHLER "HUDSON" WALL HUNG LAVATORY MODEL NO. K-2867 ENAMELD CAST IRON	WHITE	–	–	1 1/2"	2"	YES
	FAUCET – MOEN NO. 8862 TWO-HANDLE METERING OR EQUAL BY KOHLER	CHROME	1/2"	1/2"			YES
	TRUEBRO HANDI LAV-GUARD INSULATION KIT M# 102W (OR EQUAL FROM MANUFACTURERS SPECIFICATIONS).	WHITE					
EWC	ELECTRIC WATER COOLER IN HIGH LOW CONFIGURATION– RELOC. EXIST. FIXTURE TO LOCATION INDICATED	EXIST	3/4"		1-1/2"	2"	YES
	8 GPH OF 50 ° F WATER @ 80° F INLET WATER AND 90° F ROOM TEMPERATURE.						

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

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021952 5/21/24 PIONEER WILSON POU

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
WATER PLAN

SCALE: AS NOTED	DRAWING NO: P1.2
DRAWN: BVM	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO: 2023-08	ENGINEERING SOURCE PROJECT NO: ES23074

MECHANICAL GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE NC BUILDING CODE & CONTR. SHALL NOTIFY ENGINEER IN WRITING REGARDING ANY CODE DISCREPANCIES FOUND ON PLANS. CONTR. IS RESPONSIBLE FOR PERMITS, INSPECTIONS AND FEES.

2. SYSTEMS INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL PROVIDE NECESSARY HANGERS, FASTENERS ETC. TO PROVIDE A COMPLETE AND WORKING SYSTEM.

3. CONTRACTOR SHALL SEAL ALL DUCTWORK WITH A PAINT ON MASTIC. ALL WALL PENETRATIONS SHALL BE SEALED AIR TIGHT.

4. CONTRACTOR SHALL FIELD MEASURE ACTUAL INSTALLED CONDITIONS AND COORDINATE DUCT SIZES PRIOR TO FABRICATION OR INSTALLATION OF EQUIP. & DUCTWORK.

5. CONTRACTOR SHALL COORDINATE ALL DUCTWORK, DIFFUSER AND GRILLE LOCATION WITH OTHER CEILING MOUNTED DEVICES SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN.

6. CONTRACTOR SHALL INSTALL BALANCING DAMPERS IN EACH BRANCH DUCT TO PROVIDE PROPER AIRFLOW TO EACH ZONE.

7. LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" A.F.F. (CENTER OF BOX FOR GYP BRD, TOP OF BOX FOR MASONRY) IN LOCATION INDICATED ON PLANS.

8. ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS.

9. CONTRACTOR SHALL COORDINATE ALL ROOF AND FLOOR PENETRATION LOCATIONS AND SIZES.

10. FABRICATE AND INSTALL ALL DUCT WORK PER SMACNA 1.5" W.C. PRESSURE. ALL ELBOWS SHALL HAVE 1.5R CENTERLINE. ALL DUCT UNDER SLAB SHALL BE FIBERGLASS.

11. ALL FLEXIBLE ROUND DUCT SHALL BE PRE-INSULATED DOUBLE WALLED WITH SPIRAL METAL RIB, AND SHALL HAVE MIN. RESISTANCE VALUE OF R-6. MAXIMUM LENGTH SHALL BE 10'-0" UNLESS SHOWN SPECIFICALLY OTHERWISE IN PLAN. SECURE ENDS WITH NYLON BANDS AND TAPE.

12. ALL SUPPLY AND RETURN DUCT SHALL BE INSULATED WITH A MINIMUM OF 2-3/16" ¾ LB. OR 2" OF 1.0 LB. DENSITY FIBERGLASS WRAP. PIPING INSULATION (REFRIGERANT OR WATER) SHALL BE A MINIMUM OF 1-1/2" THICK OR PER LATEST NC ENERGY CODE, WHICHEVER IS GREATER.

13. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALUMINUM JACKET PROTECTIVE COVERING FOR ALL REFRIGERANT PIPE INSULATION INSTALLED ON THE BUILDING EXTERIOR.

14. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN CONNECTIONS TO HVAC UNITS.

15. PROVIDE AUXILIARY CONDENSATE DRAIN PAN FOR ALL AIR HANDLING UNITS, FAN COIL UNITS, FURNACE WITH COOLING COIL, ETC. CONTRACTOR SHALL PROVIDE AND INSTALL WATER LEVEL FLOAT SWITCH IN AUXILIARY DRAIN PAN. FLOAT SWITCH SHALL SHUT DOWN INDOOR AND ASSOCIATED OUTDOOR UNIT WHEN ACTIVATED. DRAIN PAN OUTLET SHALL BE PIPED TO BUILDING EXTERIOR.

16. CONDENSATE PIPE SHALL BE SCHEDULE 40 PVC OR HARD DRAWN COPPER. INSTALL WITH PROPER SLOPE AND NO SAGS. COPPER PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION. SCHEDULE 40 PVC PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION.

17. ALL DUCTWORK AND PIPING SHALL BE CONCEALED ABOVE CEILINGS, TRUSSES AND SOFFITS EXCEPT IN MECHANICAL ROOMS, UTILITY PLATFORMS AND WHERE NOTED OTHERWISE.

18. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL WIRING & CONNECTIONS TO HIS EQUIPMENT. COOR'D. FEEDER AND FUSE SIZES FOR SPECIFIC EQUIPMENT PROVIDED WITH ELECTRICIAN. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL WORK AND EQUIPMENT REQUIRED TO PROVIDE FEEDERS FOR EQUIPMENT THAT EXCEEDS THE AMP RATINGS LISTED IN THE SCHEDULE.

19. MECHANICAL CONTRACTOR MAY USE ROUND DUCT OF EQUIV. AREA IN LIEU OF RECTANGULAR. COOR'D. ROUND DUCT SIZES W/ ENGR. USE INSULATED DOUBLE WALLED SPIRAL DUCT WITH PAINT GRIP FINISH WHERE DUCT IS TO BE EXPOSED.

20. MECHANICAL CONTRACTOR SHALL PROVIDE ENGR. WITH AN AIR BALANCE REPORT INDICATING INITIAL AND FINAL READINGS AT EACH DIFFUSER AND TOTAL CFM PER UNIT, INCLUDE IN DOCUMENTS PROVIDED TO OWNER AT JOB CLOSEOUT.

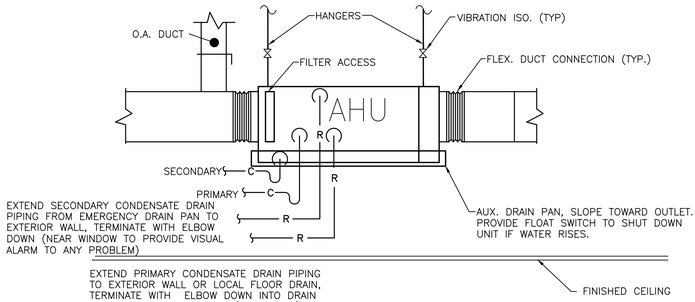
21. MECHANICAL CONTRACTOR SHALL LABEL ALL EQUIPMENT WITH ENGRAVED PLASTIC LAMINATE, SCREWED TO PIECE OF EQUIPMENT.

22. UNIT CONTROLLER OR PROGRAMMABLE THERMOSTAT SHALL HAVE 7 DAY PROGRAMING, TIMED OVER-RIDE AND THE ABILITY TO RUN FANS IN OCCUP. MODE & CYCLE FANS IN UN-OCCUP. MODE.

23. MECHANICAL CONTRACTOR SHALL CHANGE UNIT FILTERS AFTER EACH TWO WEEKS OF RUN TIME, AND SHALL LEAVE ONE CHANGE OF FILTERS FOR OWNER TO USE FOR NEXT FILTER CHANGE.

24. MECHANICAL CONTRACTOR SHALL NOT ALLOW DUCTWORK TO CONTACT LAY-IN LIGHT FIXTURES. ROUTE ACCORDINGLY.

25. PROVIDE HEAT PUMP WITH CONTROLS TO PREVENT HEAT STRIP FROM OPERATING WHEN OUTSIDE AIR TEMP. IS ABOVE 40°F. (C403.2.4.1.1 NCEC)



AHU CONNECTION DETAIL

SCALE: NTS

HEAT PUMP SEQUENCE OF OPERATION

SYSTEM DESCRIPTION :

THE HEATING AND COOLING SYSTEM SHALL BE A PACKAGED SPLIT SYSTEM. CONSISTING OF AN AIR HANDLER UNIT AND A PAD MOUNTED HEAT PUMP. THE AIR HANDLER SHALL HAVE AUXILIARY ELECTRIC RESISTANCE HEAT, FILTER FRAME A DUAL TEMPERATURE DX COIL AND A SUPPLY FAN WITH MOTOR AS SCHEDULED. PROVIDE AIR HANDLER WITH SINGLE POINT OF CONNECTION. THE HEAT PUMP SHALL BE AIR COOLED, 208V-3ø, AND HAVE METAL CONDENSER COIL GUARDS.

SYSTEM SHALL BE CONTROLED BY AN AUTOMATED CONTROL SYSTEM THAT IS COMPATIBLE WITH THE EXISTING NOVAR OR AUTOMATRIX SYSTEMS CURRENTLY BEING UTILIZED ON CAMPUS. SYSTEM SHALL REPORT BACK TO EXISTING MAIN CONTROL COMPUTER IN THE MAITENANCE BUILDING. SEE SITE PLAN FOR BUILDING LOCATION. SPACE SHALL HAVE A WALL MOUNTED TEMPERATURE SENSOR THAT HAS MAX. 2°F ADJUSTMENT FROM SETPOINT. PROVIDE EACH SYSTEM WITH SUPPLY AIR SENSOR, RETURN AIR SENSOR AND PROOFS FOR FAN AND HEAT PUMP OPERATION.

OCCUPIED MODE OF OPERATION

BASED ON AN OWNER SPECIFIED SCHEDULE, THE PROGRAMMABLE THERMOSTAT SHALL SIGNAL THE HEAT PUMP CONTROLLER TO ENERGIZE THE SUPPLY FAN AND SHALL SEQUENCE THE HEAT PUMP AS REQUIRED TO MAINTAIN OCCUPIED ROOM TEMPERATURE SET POINTS AS INDICATED. THE SUPPLY FAN SHALL RUN CONTINUOUSLY.

UNOCCUPIED MODE OF OPERATION

BASED ON AN OWNER SPECIFIED SCHEDULE, THE PROGRAMMABLE THERMOSTAT SHALL SIGNAL THE HEAT PUMP CONTROLLER TO ENERGIZE THE SUPPLY FAN AND SHALL SEQUENCE THE HEAT PUMP AS REQUIRED TO MAINTAIN UNOCCUPIED ROOM TEMPERATURE SET POINTS AS INDICATED. THE SUPPLY FAN SHALL RUN AS REQUIRED.

HEAT PUMP OPERATION

COOLING MODE OF OPERATION

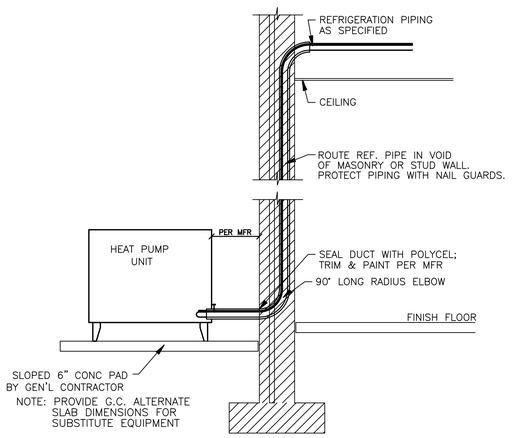
UPON SENSING A TEMPERATURE ABOVE COOLING SET POINT (75° F), THE HEAT PUMP CONTROLLER SHALL SEQUENCE ON THE HEAT PUMP COMPRESSORS AS REQUIRED TO MAINTAIN COOLING SET POINT.

UPON SENSING A TEMPERATURE BELOW COOLING SET POINT (75° F), THE HEAT PUMP CONTROLLER SHALL SEQUENCE OFF THE HEAT PUMP COMPRESSORS AS REQUIRED TO MAINTAIN COOLING SET POINT

HEATING MODE OF OPERATION

UPON SENSING A TEMPERATURE BELOW HEATING SET POINT (72° F), THE HEAT PUMP CONTROLLER SHALL SEQUENCE ON THE HEAT PUMP COMPRESSORS AS REQUIRED TO MAINTAIN HEATING SET POINT. WITH EACH COMPRESSOR ENERGIZED AND UPON SENSING A ROOM TEMPERATURE BELOW SET POINT, THE HEAT PUMP CONTROLLER SHALL SEQUENCE ON THE ELECTRIC RESISTANCE HEAT AS REQUIRED TO MAINTAIN SET POINT.

UPON SENSING A TEMPERATURE ABOVE HEATING SET POINT (72° F), THE HEAT PUMP CONTROLLER SHALL SEQUENCE OFF THE ELECTRIC RESISTANCE HEAT AND HEAT PUMP COMPRESSORS AS REQUIRED TO MAINTAIN HEATING SET POINT.



HEAT PUMP INSTALLATION DETAIL

SCALE: NTS

"EXISTING TO REMAIN"

FAN SCHEDULE

SYMBOL	AREA SERVED	MANUF./MODEL	SERVICE	TYPE ASSEMBLY	CFM	SP (IN. W.G.)	DRIVE TYPE	WATTS	VOLT/PH	REMARKS
EF-A	REST ROOM	GREENHECK/SP-A190	EXHAUST	CABINET	175	.125	DIRECT	113	120/1	1,2,3

NEW SPLIT-SYSTEM HEAT PUMP SCHEDULE

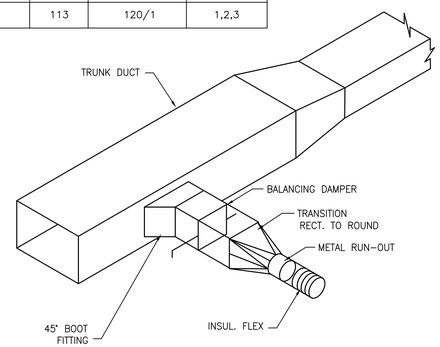
		SUPPLY FAN						COOLING								HEATING	
MARK	OA	CFM	ESP (IN. W.G.)	FAN HP	VOLT/PH	MCA	MOCP	MARK	VOLT/PH	MCA	MOCP	EAT db	NOM. TC (BTUH)	NOM. SC (BTUH)	SEER	MIN. BTUH	STRIP KW @208V
AHU-4	400	2,000	.50	1.0	208/3	46.0	50	HP-4	208/1	31.0	50	79.75	60,000	42,000	16.0	36,900	10.8

1. HEATING AND COOLING CAPACITIES ARE MINIMUM ACCEPTABLE VALUES
2. PROVIDE WITH FILTERS AND FILTER FRAMES.
3. PROVIDE WITH SINGLE POINT OF CONNECTION KIT.
4. SPECIFICATIONS BASED UPON "TRANE", EQUALS BY "CARRIER" AND "LENNOX" ACCEPTABLE.
5. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH E.C. FUSES REQUIRED FOR EQUIPMENT PURCHASED.
6. AMP RATINGS GIVEN ARE MAXIMUM VALUES.
7. ESP INCLUDES .35" FOR DIRTY FILTER ALLOWANCE.

"EXISTING TO REMAIN"

EXIST SPLIT-SYSTEM HEAT PUMP SCHEDULE

		SUPPLY FAN						COOLING								HEATING		
MARK	OA	CFM	ESP (IN. W.G.)	FAN HP	VOLT/PH	MCA	MOCP	MARK	VOLT/PH	MCA	MOCP	EAT db	NOM. TC (BTUH)	NOM. SC (BTUH)	SEER	MIN. BTUH @ 17°F	MIN. BTUH @ 47°F	STRIP KW @208V
AHU-1	475	2,000	.50	1/2	208/3	45.0	45	HP-1	208/3	23.0	40	79.75	60,000	42,000	13.0	40,000	58,000	11.53
AHU-2	250	1,200	.50	1/3	208/3	37.0	40.0	HP-2	208/3	14.0	20	79.17	36,000	25,200	13.0	23,000	35,400	7.20
AHU-3	375	1,600	.50	1/2	208/3	45.0	45	HP-3	208/3	20.0	30	77.50	48,000	33,600	13.0	29,400	46,500	11.53



LOW PRESSURE BRANCH CONNECTION

SCALE: NTS

NCBC VENTILATION CALCULATIONS

OCCUPANCY TYPE	SQ. FT.	# OF OCCUPANTS	CFM/(SF OR PERSON)	TOTAL O.A. CFM
CLASS SPACE	1,495	53	7.5	398
*	*	*	*	*
TOTAL REQUIRED FOR BUILDING				398
TOTAL PROVIDED FOR BUILDING				400

MATERIALS KEYING LEGEND

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

ENGINEERING SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 • Fax (252) 439-0462 • Firm# C-1973

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021958 5/21/24 JOHN KEVIN FARKAS

SEAL

JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

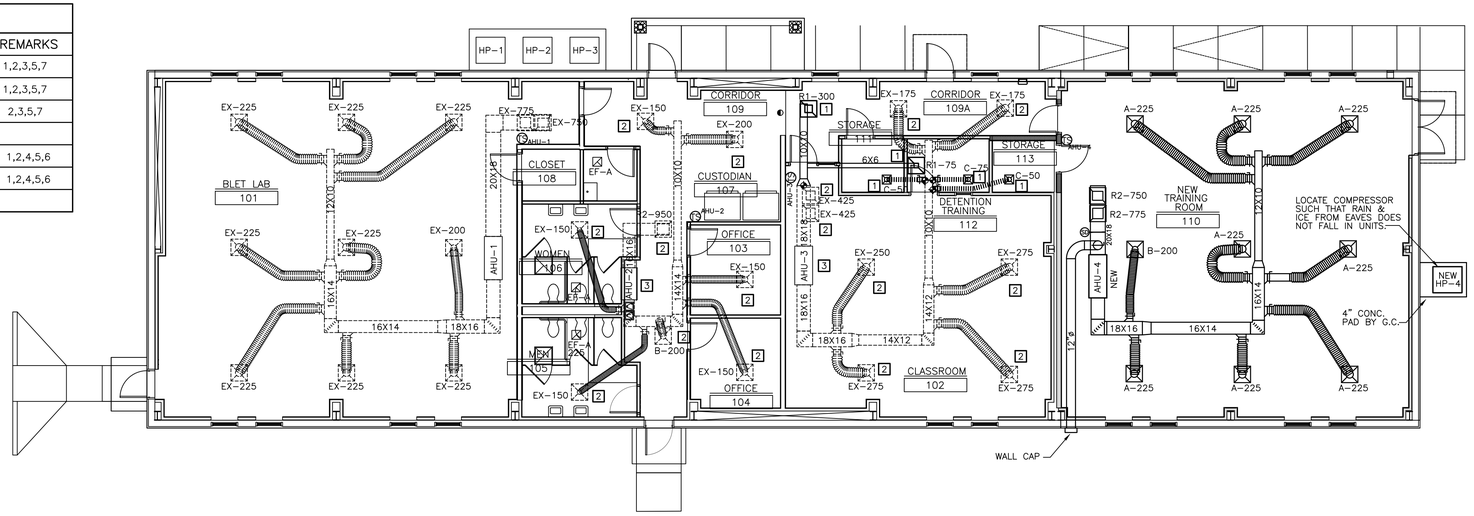
BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
MECHANICAL DEMO

SCALE	DRAWING NO
AS NOTED	M0.1
DRAWN: DEW	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074

AIR DISTRIBUTION						
MARK	MAX. CFM	FRAME	NECK SIZE	MODEL	MANUF.	REMARKS
A	400	T-BAR	10"ø	SMD	PRICE	1,2,3,5,7
B	200	T-BAR	8"ø	SMD	PRICE	1,2,3,5,7
C	100	T-BAR	12X12 6"ø	SMD	PRICE	2,3,5,7
R1	550	T-BAR	12x12	80TB	PRICE	1,2,4,5,6
R2	1400	T-BAR	22x22	80TB	PRICE	1,2,4,5,6

1. ALL T-BAR GRILLES SHALL HAVE 24"x24" FACE.
2. NC SHALL NOT EXCEED NC 25.
3. MAX. SP SUPPLY - 0.10" W.G.
4. MAX. SP RETURN - 0.05" W.G.
5. ALL RUN-OUTS AND FLEX TO BE EQUAL TO NECK SIZE FOR SUPPLY.
6. PAINT INSIDE PAN FLAT BLACK.
7. CONTRACTOR SHALL INSULATE BACK OF SUPPLY GRILLE PAN.



PLAN KEY NOTES:

1. INSTALL NEW AIR DIFFUSER IN LOCATION INDICATED. RUN NEW FLEX DUCT BACK TO EXISTING MAIN DUCT IN SPACE. CONTRACTOR SHALL CUT IN NEW TAP AT MAIN.
2. APPROXIMATE LOCATION EXISTING DIFFUSER TO REMAIN. RE-BALANCE TO CFM INDICATED.
3. M.C. SHALL BALANCE EACH SYSTEM, NEW AND EXISTING, TO CFM'S INDICATED. PROVIDE A TEST & BALANCE REPORT FROM AN INDEPENDENT TAB COMPANY TO ENGINEER FOR REVIEW PRIOR TO JOB CLOSE-OUT.

M.C. SHALL CLEAN EXISTING CEILING GRILLES & BALANCE AIR , REUSE EXISTING LOCAL FLEX DUCT WHERE IN GOOD CONDITION AND OF APPROPRIATE SIZE.

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

GENERAL MECHANICAL PLAN NOTES:

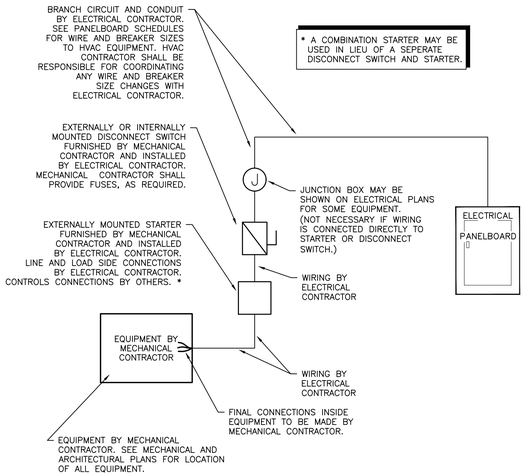
1 M.C. SHALL THOROUGHLY TEST ALL EXISTING HVAC SYSTEMS INDICATED TO REMAIN PRIOR TO THE BEGINNING OF DEMOLITION. DOCUMENT ANY INOPERABLE SYSTEM.

2 M.C. SHALL BE RESPONSIBLE FOR RELOCATION OF ALL HVAC EQUIP. HINDERING THE PROGRESS OF OTHER TRADES.

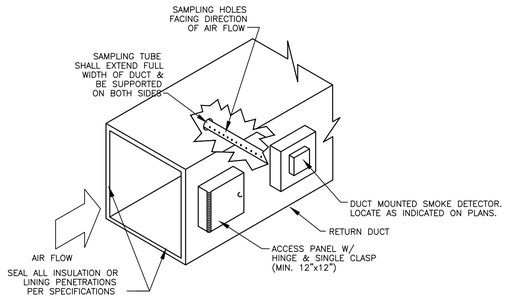
3 ANY EXISTING HVAC DEVICE OR SYSTEM NOT REMOVED SHALL REMAIN OPERATIONAL FOLLOWING COMPLETION OF PROJECT.

4 EXISTING DUCT IS SHOWN IN APPROXIMATE LOCATIONS. FIELD VERIFY SIZES AND LOCATIONS PRIOR BEGINNING ANY DUCT CONSTRUCTION OR ORDERING ANY EQUIPMENT/MATERIAL.

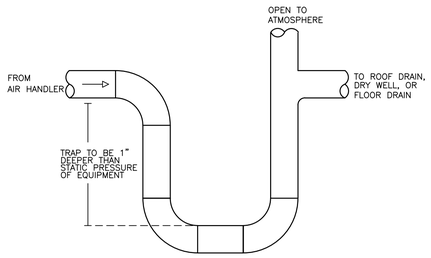
5 SEE ARCHITECTURAL PLANS FOR CEILING TYPES AND ORIENTATIONS PRIOR TO ORDERING AIR DISTRIBUTION. COORDINATE GRILLE LOCATION WITH ARCHITECTURAL RCP.



MECHANICAL EQUIP CONNECTION DETAIL
SCALE: N.T.S.



DUCT MOUNTED SMOKE DETECTOR DETAIL
SCALE: N.T.S.



CONDENSATE TRAP DETAIL
SCALE: NTS

MECHANICAL LEGEND

G.C.	GEN. CONTR.
E.C.	ELEC. CONTR.
P.C.	PLUMB. CONTR.
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
18x16	WRAPPED RIGID DUCT
	INSULATED FLEXIBLE DUCT
	SUPPLY DIFFUSER
	RETURN AIR GRILLE
	CEILING EXHAUST GRILLE OR FAN
T AHU-1	THERMOSTAT & UNIT SERVED.
H AHU-1	HUMIDISTAT & UNIT SERVED.
A-400	DIFFUSER TYPE-CFM
	MANUAL DAMPER
SD	DUCT MOUNTED SMOKE DETECTOR
SD	CEILING MOUNTED SMOKE DETECTOR
	FIRE ALARM HORN/STROBE (SEE GENERAL NOTES)
	CONN. TO EXIST.
G	GAS PIPING
FD	SPRING LOADED FIRE DAMPER
C AHU-1	CO2 SENSOR (800 PPM) & UNIT SERVED.
$T	TWIST TIMER SWITCH
M	120V MOTORIZED DAMPER
CN AHU-1	CO & NO SENSOR & UNIT SERVED. CONSPEC CN50-CON02

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE:

PRESCRIPTIVE ☒ ENERGY COST BUDGET ☐

CLIMATE ZONE: IBC - 3A

THERMAL ZONE
WINTER DRY BULB: 18°F
SUMMER DRY BULB: 93°F

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

BUILDING HEATING LOAD: 42.0 MBH

BUILDING COOLING LOAD: 60.0 MBH

MECHANICAL SPACE CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT: SPLIT-SYSTEM HEAT PUMP
HEATING EFFICIENCY: 3.0 COP
COOLING EFFICIENCY: 16.0 SEER
HEAT OUTPUT OF UNIT: SEE SCHEDULE
COOLING OUTPUT OF UNIT: SEE SCHEDULE
BOILER
TOTAL BOILER OUTPUT: (If oversized, state reason)
CHILLER
TOTAL CHILLER OUTPUT: (If oversized, state reason)

LIST EQUIPMENT EFFICIENCIES

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

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2018 North Carolina energy conservation code.

SIGNED: D. Wilson Pou

NAME: D. WILSON POU, P.E.

TITLE: PRESIDENT

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021950 5/21/24 D. WILSON POU

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
MECHANICAL PLAN

SCALE: AS NOTED	DRAWING NO: M1.1
DRAWN: DEW	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074

ELECTRICAL LEGEND (REFER TO MOUNTING HEIGHT SCHEDULE FOR MOUNTING HEIGHT INFORMATION)

- FLUORESCENT LIGHT FIXTURE, 2x4 FT.
- FLUORESCENT LIGHT FIXTURE NIGHT LIGHT
- FLUORESCENT STRIP LIGHT, 8 FT.
- FLUORESCENT STRIP LIGHT, 4 FT.
- FLUORESCENT LIGHT FIXTURE, 1x4 FT.
- FLUORESCENT LIGHT FIXTURE, 2'x2'
- POLE MOUNTED LIGHT FIXTURE, AS SPECIFIED (LIGHT)
- FLUORESCENT LIGHT FIXTURE WALL SCONCE
- OWNER SELECTED PENDANT MOUNTED
- EXTERIOR TWO-HEAD LIGHT
- EXTERIOR DOOR LIGHT
- LIGHT AND EXHAUST FAN COMBINATION
- EXHAUST FAN
- H.I.D. LIGHT FIXTURE, AS SPECIFIED.
- RECESSED OR SURFACE MOUNTED ROUND FIXTURE
- RECESSED NIGHT LIGHT
- H.I.D. WALL PACK
- BOLLARD EXTERIOR LIGHT
- EXTERIOR GROUND MOUNTED FLOOD LIGHT
- JUNCTION BOX
- TELEPHONE OUTLET WITH COVER. SEE DETAIL FOR INSTALLATION INSTRUCTIONS.
- DATA/LAN OUTLET WITH COVER. SEE DETAIL FOR INSTALLATION INSTRUCTIONS.
- EXIT LIGHT
- EMERGENCY EXIT LIGHT
- EMERGENCY LIGHT WALL MOUNTED UNLESS NOTED OTHERWISE.
- DUPLEX RECEPTACLE, 20 AMP, 120 V., "SPEC. GRADE"
- GFI DUPLEX RECEPTACLE, 20 AMP, 120 V., "SPEC. GRADE"
- 220 V. RECEPTACLE, MATCH APPLIANCE PLUG
- FLUSH MOUNTED FLOOR DUPLEX RECEPTACLE
- FLUSH MOUNTED FLOOR DATA/LAN OUTLET
- QUAD RECEPTACLE, 20 AMP, 120 V., "SPEC. GRADE"

- $ WALL SWITCH, SINGLE POLE, 20 AMP, 120 V., "SPEC. GRADE"
- $D WALL SWITCH, DIMMER, 20 AMP, 120 V., "SPEC. GRADE"
- $3 WALL SWITCH, 3-WAY, 20 AMP, 120 V., "SPEC. GRADE"
- $M MANUAL MOTOR STARTER, 20A, 120V
- $$ DOUBLE GANG WALL SWITCH, 20 AMP, 120V., "SPEC. GRADE"
- WALL MOUNTED OCCUPANCY SENSOR
- CEILING MOUNTED OCCUPANCY SENSOR
- NON-FUSED DISCONNECT SWITCH, 240V, 30A, U.N.O.
- FUSED DISCONNECT SWITCH (FUSE — DISCONNECT FUSE SIZE; FRAME — DISCONNECT FRAME SIZE)
- P FIRE ALARM MANUAL PULL STATION
- FIRE ALARM HORN/STROBE
- FIRE ALARM STROBE
- S SMOKE DETECTOR
- H HEAT DETECTOR, CEILING MOUNTED
- SD DUCT SMOKE DETECTOR
- FACP FIRE ALARM CONTROL PANEL, FLUSH MOUNTED.
- GROUND - EXTEND AND CONNECT TO APPROVED GROUND
- ELECTRICAL PANEL - SURFACE MOUNTED.
- ELECTRICAL PANEL - FLUSH MOUNTED.
- UNSWITCHED CIRCUIT, 2#12 & 1 #12 G. IN 3/4" C., U.N.O.
- SWITCHED CIRCUIT
- ?-# PANEL NAME-CIRCUIT #
- WP WEATHER PROOF
- GFI GROUND FAULT INTERRUPTER
- A.F.F. ABOVE FINISHED FLOOR
- NL NIGHT LIGHT
- U.N.O. UNLESS NOTED OTHERWISE
- IG ISOLATED GROUND
- LC LIGHTING CONTACTOR
- EWC ELECTRIC WATER COOLER
- AC ABOVE COUNTER
- BC BELOW COUNTER

PANELBOARD SCHEDULE - "A"

MAIN: 400A | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | BUS BARS: COPPER

CKT #	BKR TRIP	POLE	WIRE SIZE	GRND SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHAS A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	GRND SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1										5.4										2.8										2
3	45	3	6	10	1"	AHU-1				5.4										2.8				HP-1	3/4"	10	8	3	40	4
5										5.4										2.8										6
7										4.4										1.7										8
9	40	3	8	10	3/4"	AHU-2				4.4										1.7				HP-2	3/4"	12	12	3	20	10
11										4.4										1.7										12
13										5.4										2.4										14
15	45	3	6	10	1"	AHU-3				5.4										2.4				HP-3	3/4"	10	10	3	30	16
17										5.4										2.4										18
19	20	2	12	12	3/4"	EWH				1.0								1.2						RECEPT - CLASS	3/4"	12	12	1	20	20
21										1.0								2.2						RECEPT - CLASS	3/4"	12	12	1	20	22
23	20	1	12	12	3/4"	VENDING MACHINE			1.0									1.1						RECEPT - CLASS	3/4"	12	12	1	20	24
25	20	1	12	12	3/4"	VENDING MACHINE			1.0									0.9						RECEPT - CLASS, HALL	3/4"	12	12	1	20	26
27	20	1	12	12	3/4"	EWC (GFI)					0.6							1.1						RECEPT - OFFICE	3/4"	12	12	1	20	28
29	20	1	12	12	3/4"	FACP							0.2					0.5						CLASS PROJECTOR	3/4"	12	12	1	20	30
31	20	1	12	12	3/4"	LIGHTING CONTACTOR							0.3					0.5						CLASS PROJECTOR	3/4"	12	12	1	20	32
33	20	1	12	12	3/4"	LTS - CLASS	1.5										1.5							LTS - EXTERIOR	3/4"	12	12	1	20	34
35	20	1	12	12	3/4"	LTS - CLASS	1.2										1.4							LTS - HALL, OFFICE	3/4"	12	12	1	20	36
37	20	1	12	12	3/4"	LTS - CLASS	0.8										0.9	1.2		5.5										38
39	20	1	12	12	3/4"	SPARE											0.0	0.8		8.7				* NEW PANEL B	1 1/2"	6	1	3	125	40
41	20	1	12	12	3/4"	SPARE												0.2		8.7										42
LIGHTING (KVA): 7.4							3.5	0.0	2.0	47.7	0.6	0.0	0.4				3.9	9.7	0.0	43.4	0.0	0.0	0.0	CONNECTED LOAD (KVA): 111.2						
RECEPTACLES (KVA): 9.7																								DEMAND LOAD (KVA): 113.1						
MOTORS (KVA): 2.0														PHASE A			35	294.3												
A/C (KVA): 91.2														PHASE B			39	328.7						CONNECTED LOAD (AMPS): 308.7						
HEATING (KVA): 0.6														PHASE C			36	303.8						DEMAND LOAD (AMPS): 313.8						
KITCHEN (KVA): 0.0																	KVA	AMPS												
MISCELLANEOUS (KVA): 0.4																														

NOTES: * INDICATES A NEW BREAKER IN AN EXISTING SPACE

PANELBOARD SCHEDULE - "B"

MAIN: 125 | VOLTAGE: 208/120 | PHASE: 3 | WIRE: 4 | MOUNTING: SURFACE | AIC: 22,000 | BUS BARS: COPPER

CKT #	BKR TRIP	POLE	WIRE SIZE	GRND SIZE	COND SIZE	DESCRIPTION	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	PHAS A	B	C	LOAD (KVA) LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	COND SIZE	WIRE SIZE	WIRE SIZE	POLE	BKR TRIP	CKT #
1	20	1	12	12	3/4"	LTG - 110	0.9											1.2						RECEPT - 110	3/4"	12	12	1	20	2
3	20	1		12		SPARE												0.8						RECEPT - 110 TEACHER	3/4"	12	12	1	20	4
5	20	1		12		SPARE												0.2						REC - EXTERIOR	3/4"	12	12	1	20	6
7	20	1		12		SPARE																		SPARE				1	20	8
9	20	1		12		SPARE																		SPARE				1	20	10
11		1				SPACE																		SPARE				1	20	12
13		1				SPACE														5.5										14
15	50	2	6	10	1"	HP-4				3.2										5.5				AHU-4	1"	10	6	3	50	16
17										3.2										5.5										18
LIGHTING (KVA): 0.9							0.9	0.0	0.0	6.4	0.0	0.0	0.0				0.0	2.2	0.0	16.5	0.0	0.0	0.0	CONNECTED LOAD (KVA): 26.0						
RECEPTACLES (KVA): 2.2																								DEMAND LOAD (KVA): 26.3						
MOTORS (KVA): 0.0														PHASE A			8	63.5												
A/C (KVA): 22.9														PHASE B			10	79.2						CONNECTED LOAD (AMPS): 72.2						
HEATING (KVA): 0.0														PHASE C			9	74.2						DEMAND LOAD (AMPS): 72.9						
KITCHEN (KVA): 0.0																	KVA	AMPS												
MISCELLANEOUS (KVA): 0.0																														

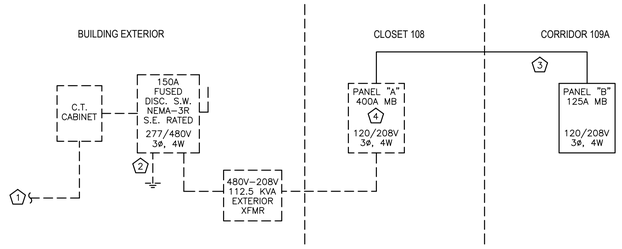
NOTES:

A DEMAND CALCS

LIGHTING	7.38	KVA	X	125 %	=	**9.2 KVA**
RECEPTAC TOTAL	9.70	KVA				
1ST	10.00	KVA	X	100 %	=	**9.7 KVA**
REMAIN	0.00	KVA	X	50 %	=	**0.0 KVA**
MOTORS	2.00	KVA	X	100 %	=	**2.0 KVA**
LARGEST	0.00	KVA	X	125 %	=	**0.0 KVA**
A/C	91.15	KVA	X	100 %	=	**91.2 KVA**
HEATING	0.55	KVA	X	100 %	=	**0.6 KVA**
EXIST CKTS	0.00	KVA	X	100 %	=	**0.0 KVA**
KITCHEN	0.00	KVA	X	65 %	=	**0.0 KVA**
MISCELLANEOUS	0.43	KVA	X	100 %	=	**0.4 KVA**
TOTAL =	**313.8 amps**				=	**113.1 KVA**

B DEMAND CALCS

LIGHTING	0.92	KVA	X	125 %	=	**1.2 KVA**
RECEPTAC TOTAL	2.20	KVA				
1ST	10.00	KVA	X	100 %	=	**2.2 KVA**
REMAIN	0.00	KVA	X	50 %	=	**0.0 KVA**
MOTORS	0.00	KVA	X	100 %	=	**0.0 KVA**
LARGEST	0.00	KVA	X	125 %	=	**0.0 KVA**
A/C	22.90	KVA	X	100 %	=	**22.9 KVA**
HEATING	0.00	KVA	X	100 %	=	**0.0 KVA**
EXIST CKTS	0.00	KVA	X	100 %	=	**0.0 KVA**
KITCHEN	0.00	KVA	X	65 %	=	**0.0 KVA**
MISCELLANEOUS	0.00	KVA	X	100 %	=	**0.0 KVA**
TOTAL =	**72.9 amps**				=	**26.3 KVA**



ELECTRICAL RISER NOTES:

1. EXIST SERVICE ENTRANCE
2. EXIST S.E. GROUND
3. 4-#1 & 1-#6G IN 2"C
4. PROVIDE & INSTALL A 3P-125A BREAKER IN PANEL.

ELECTRICAL RISER

SCALE: N.T.S.

THIS DRAWING IS THE PROPERTY OF ENGINEERING SOURCE of NC, P.A. THIS DRAWING IS NOT TO BE COPIED IN WHOLE OR IN PART. THIS DRAWING OR THE INFORMATION HEREUPON IS NOT TO BE USED ON ANY OTHER PROJECT AND MUST BE RETURNED TO ENGINEERING SOURCE of NC, P.A. UPON REQUEST. DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.

MATERIALS KEYING LEGEND

ENGINEERING SOURCE of NC, P.A.

102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021958 5/2/24 ENGINEERING SOURCE

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

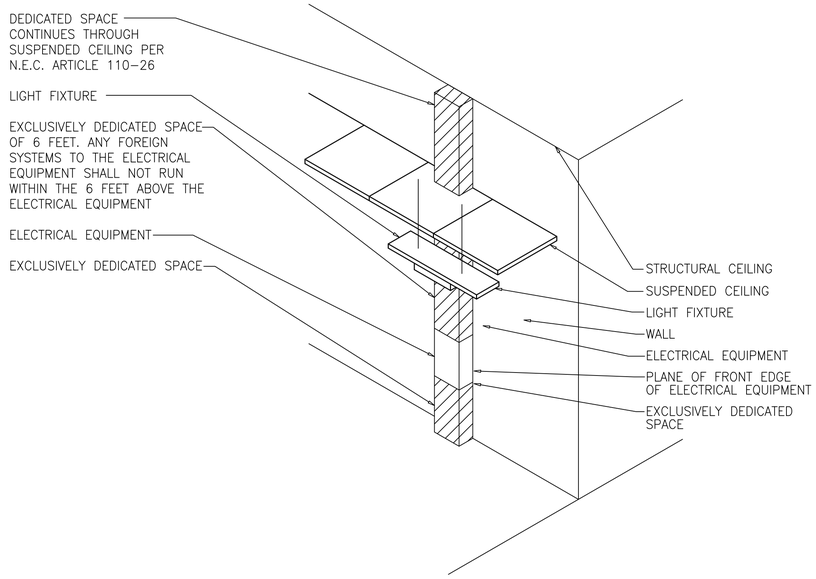
BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE: SCHEDULES & DETAILS

SCALE	DRAWING NO.
AS NOTED	E0.1
DRAWN: JLP	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074

ELECTRICAL NOTES:

1. DO NOT SCALE THESE DRAWINGS; REFER TO LARGEST SCALE ARCHITECTURAL PLANS.
2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW MINOR DETAILS AND EXACT LOCATIONS. DESIGN ADJUSTMENTS SHALL BE ANTICIPATED BY THE CONTRACTOR TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CURRENT NEC/NFPA 70. CONTRACTOR SHALL NOTIFY ENGINEER REGARDING ANY CODE DISCREPANCIES SHOWN ON PLAN. ANY PERMIT OR INSPECTION FEES ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
4. CONTRACTOR SHALL INSTALL, GROUND AND BOND SYSTEM PER THE CURRENT NEC.
5. CONTRACTOR SHALL NOT PUT MORE THAN SIX (6) DUPLEX RECEPTACLES ON ANY GIVEN 1P–20A CIRCUIT UNLESS SHOWN OTHERWISE.
6. MINIMUM WIRE SIZE SHALL BE #12 AWG., MINIMUM CONDUIT SIZE SHALL BE 3/4".
7. CONTRACTOR SHALL COORDINATE TELEPHONE AND DATA OUTLETS REQUIRED WITH OWNER PRIOR TO GYP. BOARD BEING INSTALLED.
8. HALLWAY AND MAINTENANCE RECEPTACLES SHALL NOT BE CIRCUITED WITH OFFICE OR OTHER GENERAL PURPOSE RECEPTACLES.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE HACR RATED CIRCUIT BREAKERS ON ALL HVAC EQUIPMENT.
10. CONDUCTORS SHALL BE TYPE THHN, THWN, OR THW. BRANCH CIRCUIT CONDUCTOR SHALL NOT BE SMALLER THAN No. 12 AWG., EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. HOME RUNS ORIGINATING MORE THAN 80' AT 120V FROM PANEL LOCATION SHALL BE No. 10 AWG MINIMUM SIZE. WIRES No. 10 AWG AND SMALLER SHALL BE SOLID; WIRES No. 8 AWG AND LARGER SHALL BE STRANDED. PROVISIONS OF CURRENT NEC SECTION 210–5 COLOR CODE SHALL BE STRICTLY COMPLIED WITH AND BE CONSISTENT THROUGHOUT ENTIRE SYSTEM.
11. ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH CURRENT NEC TABLE 250–122. HASHMARK FOR GROUNDING CONDUCTOR IS NOT INDICATED ON THESE DRAWINGS. RACEWAY SHALL NOT BE USED AS EQUIPMENT GROUND.
12. IN ADDITION TO MECHANICAL FASTENING TO CEILING TRACK, SUPPORT LIGHT FIXTURES AT EACH CORNER INDEPENDENTLY OF SUSPENDED CEILING WITH 12 GAUGE WIRE. CONNECT TO STRUCTURAL SYSTEM OF BUILDING.
13. 13. ALL CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL EMPTY CONDUIT SHALL HAVE A PULL WIRE.
14. ALL CONDUIT FITTINGS SHALL BE COMPRESSION TYPE WITH INSULATED THROATS. ALL EXTERIOR CONDUIT FITTINGS SHALL BE LISTED FOR USE IN WET LOCATIONS PER 2020 NEC ARTICLE 314.
15. SERVICE ENTRANCE CONDUCTORS SHALL BE IN CONDUIT (RIGID OR PVC). EXTERIOR CONDUIT EXPOSED ABOVE SLAB SHALL BE RIGID. INTERIOR CONDUIT EXPOSED SHALL BE ELECTRICAL METALLIC TUBING (EMT). EMT SHALL BE COLD–ROLLED STEEL TUBING WITH A COATING ON THE OUTSIDE AND PROTECTED ON THE INSIDE BY A ZINC, ENAMEL, OR EQUIVALENT CORROSION RESISTANT COATING AND CONFORMING TO THE REQUIREMENTS OF ANSI C 80.3–1996 OR LATER EDITION. ALL UNDERGROUND CONDUIT SHALL BE UL LISTED SCHD 40 PVC CONFORMING TO ARTICLES 352 & 300 OF THE NEC. WHERE SCHD 40 PVC IS INSTALLED BELOW GRADE OR UNDER FLOOR SLABS, THE ELBOWS REQUIRED TO TURN THE RACEWAY UP INTO CABINETS, EQUIPMENT, ETC., SHALL BE OF RIGID STEEL AND SHALL CONTINUE AS RIGID STEEL TO THE CABINET, EQUIPMENT, ETC. FEEDER CIRCUITS SHALL BE IN CONDUIT. BRANCH CIRCUITS MAY BE MC CABLE WHERE CONCEALED AND AS ALLOWED BY NEC ARTICLE 330.
16. ALL JUNCTION OR DEVICE BOXES SHALL HAVE A COVER.
17. ALL 1P–20A CIRCUITS SHALL BE 2–#12 & 1–#12G IN 3/4"C U.N.O.
18. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL VOLUMES OF THE NCSBC, INSPECTORS HAVING JURISDICTION, AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
19. EACH PIECE OF ELECTRICAL GEAR, EQUIPMENT, ETC., SHALL BEAR A "UL" LABEL.
20. METAL ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT ELECTRICAL ITEMS.
21. ALL EMERGENCY AND EXIT LIGHTS SHALL BE CONNECTED TO THE UNINTERRUPTED SIDE OF THE LOCAL LIGHTING CIRCUIT.
22. PROVIDE AND INSTALL ENGRAVED PHENOLIC LABELS ON ALL ELECTRICAL GEAR, DISCONNECTS, ETC. FASTEN WITH SCREW FASTENERS.
23. E.C. SHALL INSTALL HEAVY DUTY NEMA–1 DISCONNECTS AT ALL INTERIOR LOCATIONS INDICATED AND HEAVY DUTY NEMA–3R DISCONNECTS AT ALL EXTERIOR LOCATIONS INDICATED ON THESE DRAWINGS.
24. VERIFY WITH OWNER LOCATION/TYPE OF ALL FIXTURES, PANEL BOXES, OUTLET PLACEMENT, ETC. BY HOLDING AN ELECTRICAL WALKTHROUGH ON THE BUILDING SITE ONCE FRAMING IS COMPLETED.
25. ELECTRICAL BOXES INSTALLED IN U.L. RATED WALLS SHALL BE LOCATED A MINIMUM OF 2'–0" FROM ANY OTHER ELECTRICAL BOX IN THAT WALL.
26. LIGHTING SWITCHES, RECEPTACLES AND/OR DATA OUTLETS SHALL NOT BE MOUNTED BACK TO BACK IN ANY WALL.
27. CABLE LOCATED IN PLENUMS SHALL BE PLENUM–RATED. ALL CABLE INSTALLED IN AREAS WITH EXPOSED STRUCTURE SHALL BE IN CONDUIT.
28. E.C. SHALL INSTALL COMPLY WITH ANSI A117.1 FOR OUTLET AND CONTROL SWITCH MOUNTING HEIGHTS FOR ADA ACCESSIBILITY.
29. E.C. SHALL BE RESPONSIBLE FOR ALL LINE SIDE AND LOAD SIDE WIRING ON ALL EQUIPMENT REQUIRING ELECTRICAL POWER. EXTERNALLY MOUNTED DISCONNECT SWITCHES AND ALL REQUIRED FUSES SHALL BE FURNISHED BY THE CONTRACTOR PROVIDING THE EQUIPMENT. E.C. SHALL BE RESPONSIBLE FOR INSTALLING EXTERNALLY MOUNTED DISCONNECT SWITCHES AND PROVIDING LOAD SIDE WIRING AND CONDUIT TO EQUIPMENT. ALL FINAL CONNECTIONS TO EQUIPMENT SHALL BE DONE BY THE CONTRACTOR PROVIDING THE EQUIPMENT. SEE "ELECTRICAL CONNECTION DETAIL".
30. E.C. IS RESPONSIBLE FOR DEMOLITION OF EXISTING LIGHTS FIXTURES THAT ARE INDICATED TO BE REPLACED. E.C. SHALL FIELD VERIFY EXISTING SWITCH CIRCUITING AND REWORK SWITCH WIRING TO PROVIDE CONTROL OF LIGHTS AS INDICATED ON PLANS.
31. RACEWAYS AND JUNCTION BOXES MUST BE INSTALLED AND SUPPORTED AT LEAST 1.5" BELOW LOWEST PORTION OF ROOF DECK PER NEC 300.4 (E) WHERE INSTALLED UNDER A CORRUGATED METAL ROOF DECK.



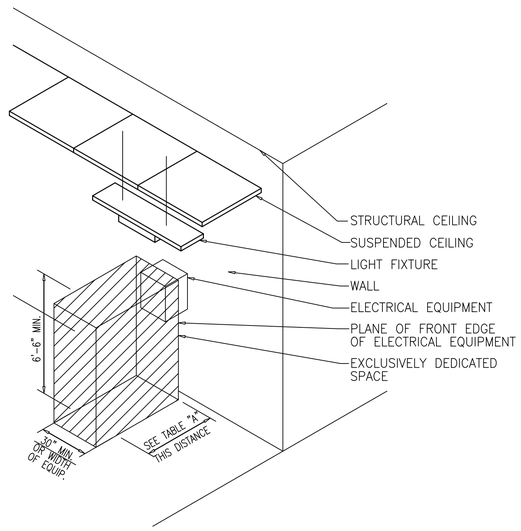
ELECTRICAL EQUIPMENT DEDICATED SPACE DETAIL

SCALE: NTS

TABLE A-WORKING CLEARANCES				
VOLTAGE TO GROUND NOMINAL	MINIMUM CLEAR DISTANCE (FEET) CONDITION:	1	2	3
0–150		3	3	3
151–600		3	3½	4

WHERE THE "CONDITIONS" ARE AS FOLLOWS:

1) EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS
2) EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE
3) EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN



ELECTRICAL EQUIPMENT WORKING CLEARANCE DETAIL

SCALE: NTS

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102–A2 Regency Blvd., Greenville, NC 27834
E–Mail Address: • engrsmail@engrsource.com
Voice (252) 439–0338 • Fax (252) 439–0462 • Firm# C–1973

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 021958 5/21/24 JOHN K. FARKAS

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

SEAL

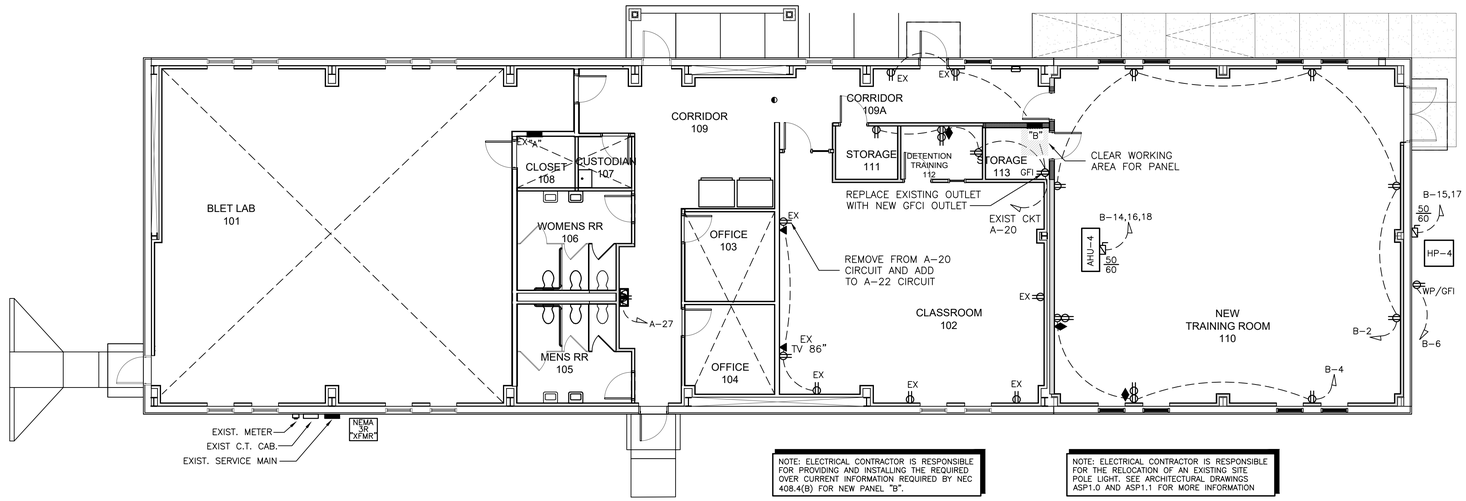
JKF ARCHITECTURE

P.O. BOX 20662 GREENVILLE NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
NOTES & DETAILS

SCALE	DRAWING NO
AS NOTED	E0.2
DRAWN: JLB	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO. 2023-08	ENGINEERING SOURCE PROJECT NO. ES23074



NOTE: ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE REQUIRED OVER CURRENT INFORMATION REQUIRED BY NEC 408.4(B) FOR NEW PANEL "B".

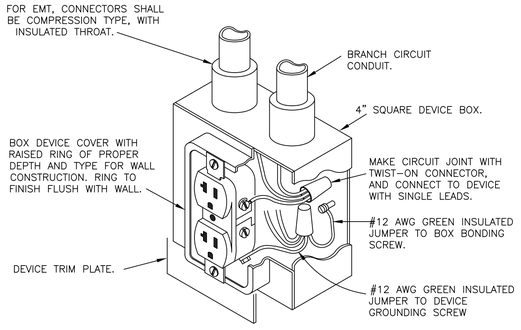
NOTE: ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION OF AN EXISTING SITE POLE LIGHT. SEE ARCHITECTURAL DRAWINGS ASP1.0 AND ASP1.1 FOR MORE INFORMATION

POWER PLAN

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

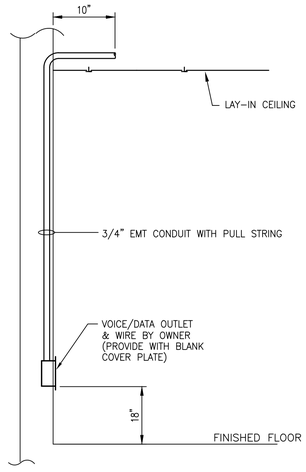
ELECTRICAL EQUIPMENT MOUNTING HEIGHTS		
DEVICE	MT HEIGHT	TO
PANEL BOARDS	6'-6" AFF	TOP
TOGGLE SWITCH (GYP BOARD)	4'-0" AFF	$\mathcal{L}$
TOGGLE SWITCH (MASONRY)	4'-0" AFF	TOP
RECEPTACLES	1'-6" AFF	$\mathcal{L}$
RECEPTACLES (AT BASE CABINETS)	7" ACT	$\mathcal{L}$
VOICE/DATA OUTLETS	1'-6" AFF	$\mathcal{L}$
FIRE ALARM PULL STATIONS	4'-6" AFF	TOP
EMERGENCY LIGHTS	12" BFC	TOP
STROBE/HORNS	12" BFC OR 96" AFF MAX	TOP
REMOTE ANNUNCIATOR PANEL	4'-8" AFF	$\mathcal{L}$
THERMOSTATS (GYP BRD)	4'-0" AFF	$\mathcal{L}$
THERMOSTATS (MASONRY)	4'-0" AFF	TOP
MANUAL HVAC SHUTDOWN SW (GYP BRD)	4'-0" AFF	$\mathcal{L}$
MANUAL HVAC SHUTDOWN SW (MASONRY)	4'-0" AFF	TOP

NOTES:
1) TYPICAL MOUNTING HEIGHTS ARE LISTED U.N.O.
2) BFC=BELOW FINISHED CEILING, ACT=ABOVE CABINET TOP
3) THE ABOVE LISTED EQUIPMENT IS SHOWN FOR CLARITY OF MOUNTING HEIGHT ONLY. ALL DEVICES MAY NOT BE USED ON THIS PROJECT OR SHOWN ON THESE DRAWINGS.



TYPICAL DUPLEX RECEPTACLE INSTALLATION

SCALE: NONE



VOICE/DATA DETAIL

SCALE: NTS

MATERIALS KEYING LEGEND

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA
SEAL
021958
5/21/24
ENGINEER
WILSON POU

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

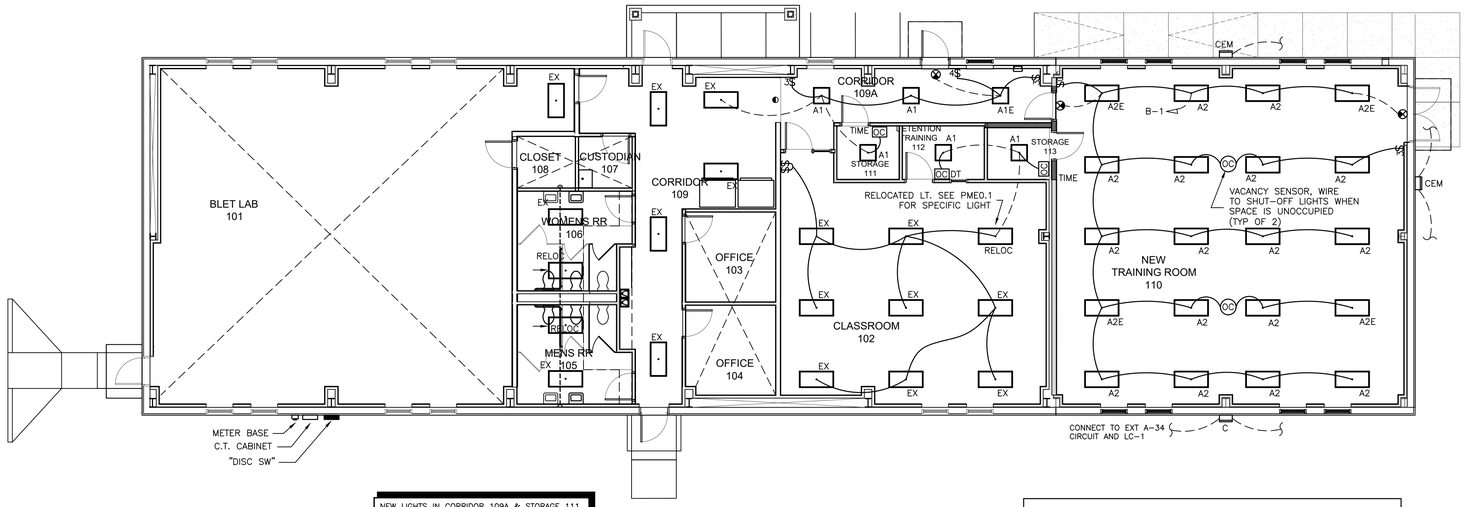
SEAL

JKF
ARCHITECTURE
P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
POWER PLAN

SCALE	DRAWING NO
AS NOTED	E1.1
DRAWN: JLB	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074



NEW LIGHTS IN CORRIDOR 109A & STORAGE 111 CONNECT TO EX CIRCUIT A-36

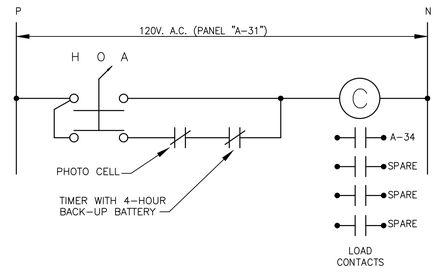
NEW LIGHTS IN DETENTION TRAINING 112 & STORAGE 113 CONNECT TO EX CIRCUIT A-33

LIGHTING PLAN

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

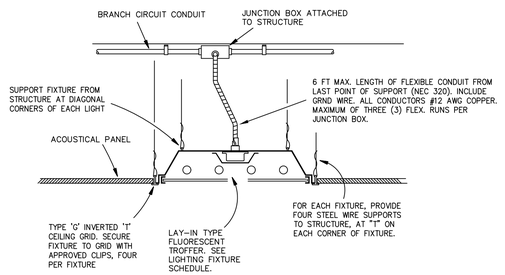
LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	VOLTS	WATTS	B.F.
A	RELOCATED 2'X4' RECESSED FLUORESCENT FIXTURE WITH .125" ACRYLIC PRISMATIC LENS, LOW PROFILE, AND FLUSH MOUNTED STEEL DOOR FRAME. PROVIDE (2)-2 TUBE ELECTRONIC BALLAST. PROVIDE DAYBRITE #: 2SPG432-FS12-120-2/2EB OR EQUAL BY WILLIAMS, LITHONIA OR COLUMBIA	4-F32T8	MVOLT	128	.91
A1 A1E	2'X2' ARCHITECTURAL LED LIGHT FIXTURE WITH FROSTED PRISMATIC LENS AND ROLLED-EDGE STEEL CHANNEL AND DEEP REINFORCEMENT RIBS. DRIVER FOR 0-10 DIMMING. PROVIDE WILLIAMS: AHTG-22-L40/835-A-UNV OR EQUAL BY LITHONIA, COLUMBIA OR PHILLIPS/DAYBRITE. ("E" INDICATES BATT. BACKUP EMERG. LIGHT)	LED	MVOLT	34.2	-
A2 A2E	2'X4' ARCHITECTURAL LED LIGHT FIXTURE WITH FROSTED PRISMATIC LENS AND ROLLED-EDGE STEEL CHANNEL AND DEEP REINFORCEMENT RIBS. DRIVER FOR 0-10 DIMMING. PROVIDE WILLIAMS: AHTG-24-LEDPH40/835-A-UNV OR EQUAL BY LITHONIA, COLUMBIA OR PHILLIPS/DAYBRITE. ("E" INDICATES BATT. BACKUP EMERG. LIGHTS.)	LED	MVOLT	46	-
C CEM	EXTERIOR LED WALL PACK TO MATCH EXISTING FIXTURES DIE-CAST ALUMINUM HOUSING WITH CLEAR PRISMATIC BOROSILICATE GLASS LENS. MEDIUM SIZE AND UL LISTED AS WET LOCATION. PROVIDE #: HUBBELL WGH2-LSCS-40 WILLIAMS #: WP1-L44/850-PC-FCS-UNV OR LITHONIA #: TWR1-LED-3-40K-MVOLT-PE "EM" INDICATES LIGHT WITH BATT. BACK UP FOR EXTERIOR EMERGENCY EGRESS LIGHTING	LED	MVOLT	40W	-
	AUTOMATIC, SELF-CONTAINED, SELF DIAGNOSTIC, MAINTENANCE FREE 2-HEAD EMERGENCY LIGHT. UL 924 LISTED AND NFPA 101 COMPLIANT. ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS. SELF DIAGNOSTICS SHALL INCLUDE CONTINUOS SELF CHECKS AND 30 MINUTE FULL LOAD TEST WITH CHARGER OFF EVERY 30 DAYS. PROVIDE HUBBELL #: CU2SD OR WILLIAMS #: EMER/LED-WHT-HL-SDT OR LITHONIA #: EU2-LED-M12	2-10W	MVOLT	20W	N/A
	CEILING OR WALL MOUNTED LED EXIT LIGHT CONFORMING TO NFPA 101 STANDARDS, w/ BATTERY & SOLID STATE CHARGER, SELF DIAGNOSTICS w/ A TEST CYCLE EVERY 30 DAYS MINIMUM, SELF-CONTAINED, DOUBLE OR SINGLE WHITE FACE/BODY, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS, TEST SWITCH, & 90 MIN. EMERGENCY RUN TIME; EXIT SIGN SHALL HAVE 5 YEAR WARRANTY. PROVIDE EXITRONIX #: VEX-U-BP-WB-WH OR WILLIAMS #: EXIT-R-EM-WHT-SDT OR LITHONIA #: LQM-S-W-3-R-120/277-ELN-SD	RED LED	MVOLT	5	N/A
	WALL MOUNTED SCONCE LIGHT WITH PREMIUM MARINE GRADE DIE-CAST ALUMINUM HOUSING AND POLYCARBONATE GASKETED LENS TO WITHSTAND EXTREME WEATHER CONDITIONS. MOUNT ABOVE EXTERIOR DOOR. EMERGENCY LIGHT SHALL CONFORM WITH NFPA 101 STANDARDS AND NEC-700.16. PROVIDE HUBBELL #: CUWZ-PC OR WILLIAMS #: EMER/DECO-DBR-LT OR LITHONIA #: AFN-DB-EXT	2-6W	MVOLT	12W	-



LIGHTING CONTACTOR 'LC-1' DETAIL

SCALE: NTS



FLUORESCENT / LED TROFFER INSTALLATION

SCALE: NONE

OC. SENSOR SCHEDULE

TYPE	DESCRIPTION
PIR	PASSIVE INFRARED -WALL MOUNT - WATT STOPPER #PW-100 - HUBBLE #LH-IR - LEVITON #ODW-IR -CEILING MOUNT - WATT STOPPER #CI-305 W/BZ-150 PPAK - HUBBLE OMNI-IR-UVPP - LEVITON #ODC15-IDW
US	ULTRASONIC -WALL MOUNT - WATT STOPPER #UW-100 - HUBBLE #LH-US - LEVITON #ODW12-UDW -CEILING MOUNT - WATT STOPPER #UT-305 W/BZ-150 PPAK - HUBBLE #OMNI-US-UVPP - LEVITON #ODC10-UDW
DT DT-DR	DUAL TECHNOLOGY -WALL MOUNT - WATT STOPPER #DW-100 - HUBBLE #LH-MT - LEVITON #ODW12-MDW -WALL MOUNT DUAL RELAY - WATT STOPPER #DW-200 - HUBBLE #LH-MT-D2 - LEVITON #OSSMT-MDW-DR -CEILING MOUNT - WATT STOPPER #DT-305 W/BZ-150 PPAK - HUBBLE #OMNI-DT-UVPP - LEVITON #ODC10-MDW -CEILING MOUNT DUAL RELAY - WATT STOPPER #DT-305 W/(2) BZ-150 PPAK - HUBBLE #OMNI-DT- w/ (2) UVPP - LEVITON #O2C15-IDW
TIME	PUSH BUTTON TIMER -WALL MOUNT - WATT STOPPER #TS-400 - HUBBLE #TD-200 - LEVITON #TSJOO-DW

* ALL OCCUPANCY SENSORS SPECIFICED USE 120/277V AC POWER. EQUALS ACCEPTED, MAKE AND MODEL USED TO SET STANDARD OF PERFORMANCE & QUALITY.

* ALL OCCUPANCY SENSORS ARE INSTALLED AND CIRCUITED PER PLANS.

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: PRESCRIPTIVE ☒ PERFORMANCE ☐
ASHRAE 90.1: PRESCRIPTIVE ☐ PERFORMANCE ☐

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
NUMBER OF LAMPS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
BALLAST TYPE IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
NUMBER OF BALLASTS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
TOTAL WATTAGE PER FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)
TOTAL INTERIOR WATTAGE SPECIFIED .VS. ALLOWED: * 1,505W VS. 2,569W *
EXTERIOR LIGHTING ZONE: 3
EXTERIOR LIGHTING WATTAGE SPECIFIED .VS. ALLOWED: ** 120W VS. 172W **

ADDITIONAL PRESCRIPTIVE COMPLIANCE

- ☐ 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 Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina Building Code, Energy Conservation Code.

SIGNED: D. Wilson Pou
NAME: D. WILSON POU, P.E.
TITLE: PROFESSIONAL ENGINEER

* 192 SF @ 0.86 W/SF FOR CORRIDOR + 83 SF @ 0.63 W/SF FOR STORAGE + 54 SF @ 1.11 W/SF FOR ENCLOSED OFFICE + 1,461 SF @ 1.24 W/SF FOR CLASSROOM *
** 1526 SF @ .113W/SF FOR ZONE 3 BUILDING FACADES **

MATERIALS KEYING LEGEND

GENERAL NOTES

ENGINEERING
SOURCE of NC, P.A.
102-A2 Regency Blvd., Greenville, NC 27834
E-Mail Address: generalmail@engrsource.com
Voice (252) 439-0338 * Fax (252) 439-0462 * Firm# C-1973

NORTH CAROLINA
SEAL
021958
5/21/24
ENGINEER
D. WILSON POU

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

NO	REVISION	DATE

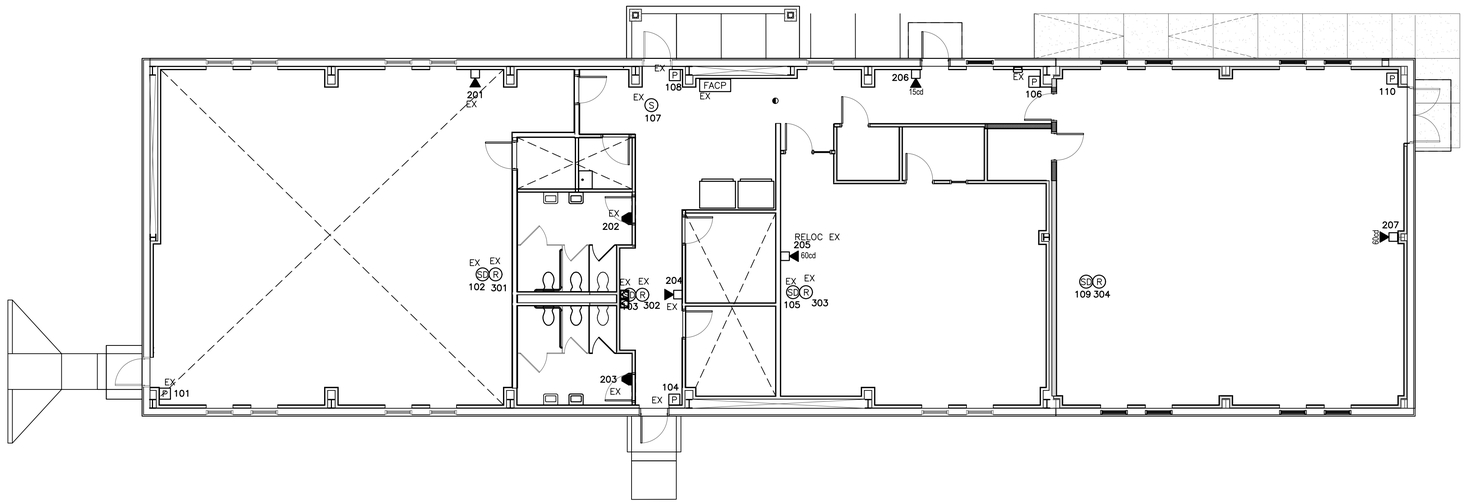
SEAL

JKF
ARCHITECTURE
P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
LIGHTING PLAN

SCALE	DRAWING NO.
AS NOTED	E1.2
DRAWN: JLP	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074



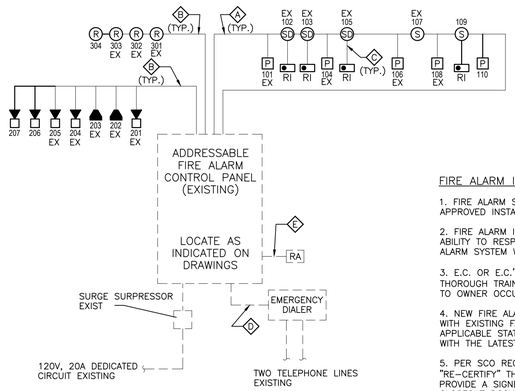
WIRE LEGEND

- A — 1 PAIR #16 SHIELDED CABLE
- B — 2 COND. #14 THHN
- C — 4 COND. #14 THHN
- D — 8 COND. #22
- E — 2 PAIR #18 SHIELDED + 2 COND. # 14 THHN

FIRE ALARM SYMBOL LEGEND

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

- P — FIRE ALARM MANUAL PULL STATION
- FIRE ALARM HORN/STROBE
- FIRE ALARM STROBE
- S — SMOKE DETECTOR
- SD — DUCT MOUNTED SMOKE DETECTOR, PROVIDED AND WIRED BY E.C., INSTALLED BY M.C.
- H — HEAT DETECTOR, CEILING MOUNTED
- FACP — FIRE ALARM CONTROL PANEL, FLUSH MOUNTED
- RA — REMOTE ANNUNICATOR PANEL, FLUSH MOUNTED
- R — RELAY
- RI — DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATOR LIGHT MOUNTED IN CEILING PROVIDED AND INSTALLED BY E.C., LABEL ACCORDING TO MECHANICAL UNIT SERVED.



FIRE ALARM RISER

SCALE: NTS

FIRE ALARM INSTALLATION NOTES:

1. FIRE ALARM SHALL BE INSTALLED BY A MANUFACTURER APPROVED INSTALLATION COMPANY.
2. FIRE ALARM INSTALLATION COMPANY SHALL HAVE THE ABILITY TO RESPOND TO ANY TROUBLES WITH THE FIRE ALARM SYSTEM WITHIN ONE HOUR OF CALL TO INSTALLER.
3. E.C. OR E.C.'S REPRESENTATIVE SHALL PERFORM THOROUGH TRAINING WITH OWNER'S REPRESENTATIVES PRIOR TO OWNER OCCUPANCY OF THE BUILDING.
4. NEW FIRE ALARM SYSTEM DEVICES SHALL BE COMPATIBLE WITH EXISTING FACP AND INSTALLED IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS AND IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 72.
5. PER SCO REQUIREMENTS, FA CONTRACTOR SHALL "RE-CERTIFY" THE EXISTING FIRE ALARM SYSTEM AND PROVIDE A SIGNED NFPA 72 COMPLIANCE FORM WITH THE CLOSEOUT DOCUMENTS. 100% OF ALL NEW DEVICES AND 10% OF ALL EXISTING DEVICES MUST BE TESTED. ENGINEER OF RECORD AND LOCAL AHJ SHALL WITNESS CERTIFICATION TEST AND SHALL BE NOTIFIED A MIN. OF 48 HOURS PRIOR TO TESTING.
6. ALL WIRING SHALL BE IN CONDUIT.
7. ELECTRICAL CONTRACTOR SHALL FURNISH DUCT SMOKE DETECTORS. THE MECHANICAL CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTORS IN DUCT WORK. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL RELATED CONTROL WIRING.
8. ALL AIR HANDLING UNITS 2000 CFM AND ABOVE SHALL HAVE DUCT SMOKE DETECTORS INSTALLED IN RETURN DUCTS.

MATERIALS KEYING LEGEND

ENGINEERING
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 021958 5/21/24 PIONEER WILSON POU

GENERAL NOTES

KEY PLAN

SCO ID #23-26921-01A; NCCCS #2781

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P.O. BOX 20662 GREENVILLE, NC 27858 PHONE 252-355-1068

BCCC
LAW ENFORCEMENT BUILDING ADDITION
WASHINGTON, NC

DRAWING TITLE
FIRE ALARM PLAN

SCALE: AS NOTED	DRAWING NO: FA1.1
DRAWN: JLP	
CHECKED: DWP	
DATE: 2-22-2024	
PROJECT NO.: 2023-08	ENGINEERING SOURCE PROJECT NO.: ES23074