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CONSULTANT



COVER SHEET
Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street, Covington, Georgia 30014

JOB NO.: 2320
DRAWN BY: GM
CHECKED BY: GM

DESCRIPTION: SCH-REVIEW
DATE: 02.27.24

DESCRIPTION: DD-REVIEW
DATE: 03.11.24

DESCRIPTION: CD-REVIEW
DATE: 03.25.24

DESCRIPTION: BID & CONSTRUCTION
DATE: 04.08.24

REVISIONS:

1 04.22.24

2 05.03.24

3 07.08.24 VE

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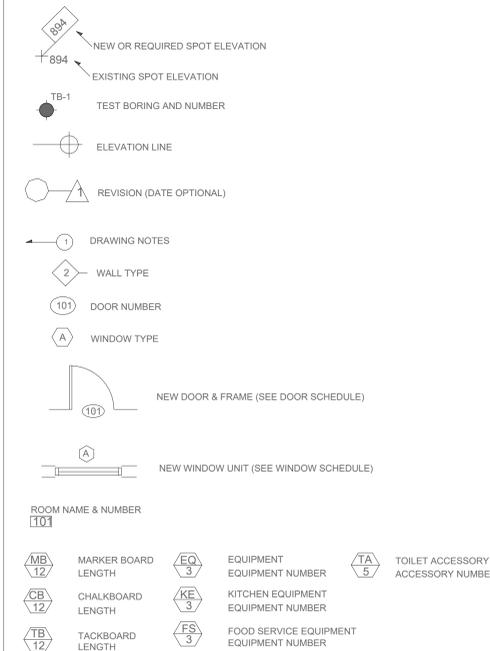
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GENERAL NOTES:
1. DRAWING DIMENSIONS GOVERN OVER SCALE. DIMENSIONS ARE TAKEN FROM FACE OF NEW MASONRY, CONCRETE, STUD AND FACE OF EXISTING FINISHES. VERIFY ALL ROUGH OPENING DIMENSIONS FOR DOORS, WINDOWS, LOUVERS, MECHANICAL REQUIREMENTS AND OTHER MISCELLANEOUS OPENINGS BEFORE INSTALLATION OF CONCRETE, MASONRY OR FRAMING.
2. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE BEFORE COMMENCING ANY PORTIONS OF THE WORK. THE CONTRACTOR SHALL COMPARE ACTUAL CONDITIONS WITH DRAWINGS TO ASCERTAIN CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL CHECK AND CONFIRM LOCATIONS OF EXISTING STRUCTURES, EQUIPMENT, UTILITIES, AND SITE CONDITIONS WHICH MAY AFFECT THE WORK. COMMENCEMENT OF THE WORK SHALL CONSTITUTE FULL ACCEPTANCE OF EXISTING CONDITIONS. THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO THE ARCHITECT PRIOR TO THE COMMENCEMENT OF THE WORK.

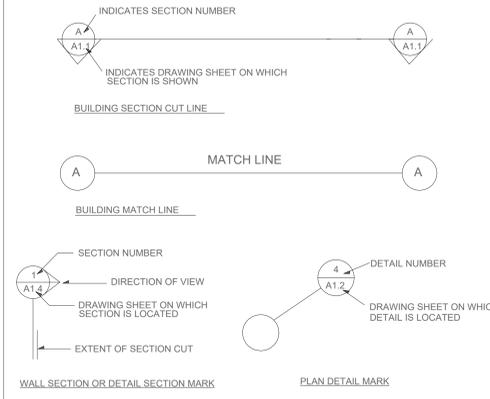
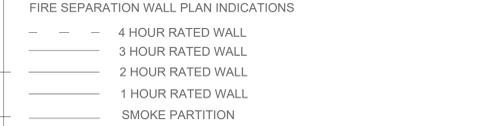
SYMBOLS



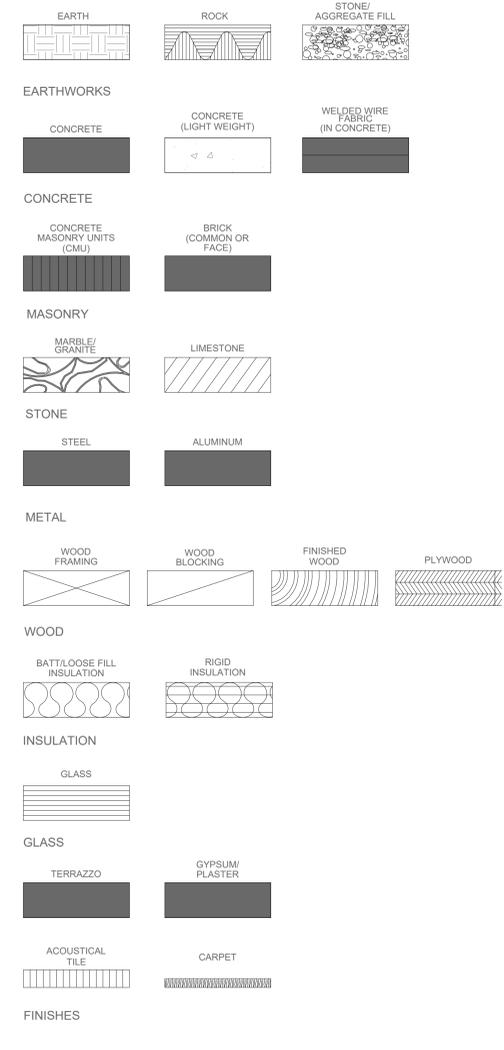
GRAPHIC SYMBOLS



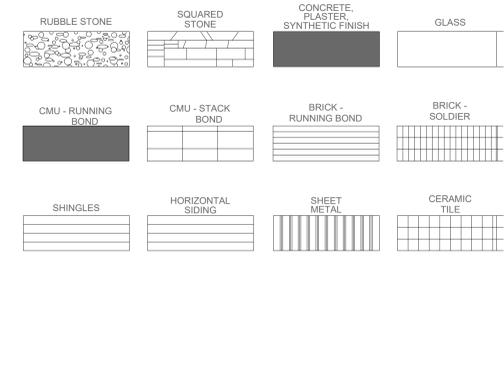
FIRE SEPARATION GENERAL NOTES
1. WHERE PIPING, DUCTWORK, ETC. PASS THRU SMOKE OR FIRE-RATED ASSEMBLIES, THESE AND ALL PENETRATIONS SHALL BE FIRE AND SMOKED STOPPED.
2. ALL SMOKE AND FIRE PARTITIONS OR WALLS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF FLOOR OR ROOF DECK, UNLESS OTHERWISE NOTED.



PLAN AND SECTION INDICATIONS



ELEVATION INDICATIONS



ABBREVIATIONS

*E PRECEDING THE ABBREVIATIONS BELOW REFERS TO AN EXISTING ITEM.			
ABV ABOVE	DBL DOUBLE	KPL KICKPLATE	REM REMOVE
AFF ABOVE FINISHED FLOOR	DH DOUBLE HUNG	KIT KITCHEN	REQD REQUIRED
AFS ABOVE FLOOR SLAB	DS DOWNSPOUT	KO KNOCKOUT	RES RESILIENT
ACC ACCESS	DN DOWN		RET RETURN
AC ACOUSTICAL	DRB DRAINBOARD		RA RETURN AIR
ACP ACOUSTICAL CEILING	DT DRAIN TILE	LBL LABEL	RVS REVERSE (SIDE)
ACPL ACOUSTICAL PLASTER	DWR DRAWER	LAB LABORATORY	REV REVISION (S), REVISED
ACT ACOUSTICAL CEILING TILE	DWG DRAWING	LAM LAMINATE (D)	RH RIGHT HAND
	DF DRINKING FOUNTAIN	LAV LAVATORY	ROW RIGHT OF WAY
ACR ACRYLIC PLASTIC		LH LEFT HAND	RISER
ADD ADDENDUM		LT LENGTH	RVT RIVET
ADH ADHESIVE	EA EACH	LL LIGHT	RD ROOF DRAIN
ADJT ADJACENT	EAF EACH FACE	LTL LINTEL	RFG ROOFING
ADJ ADJUSTABLE	EW EACH WAY	LL LIVE LOAD	BM BRIM
AGG AGGREGATE	E EAST	LVR LOUVER	RO ROUGH OPENING
AIC AIR CONDITIONING	ELEC ELECTRICAL	LLV LONG LEG VERTICAL	RW RAIN WATER LEADER
ALT ALTERNATE	EP ELECTRIC PANELBOARD	LLH LONG LEG HORIZONTAL	
AL ALUMINUM	EWC ELECTRIC WATER COOLER		
ANC ANCHOR, ANCHORAGE	EL ELEVATION		
AB ANCHOR BOLT	ELEV ELEVATOR	MH MANHOLE	SCH SCHEDULE
ANOD ANODIZED	EMER EMERGENCY	MFR MANUFACTURER	SECT SECTION
APX APPROXIMATE	ENC ENCLOSE (URE)	MKBD MARKERBOARD	SS SERVICE SINK
ARCH ARCHITECT (URAL)	EQ EQUAL	MRB MARBLE	SHT SHEET
AD AREA DRAIN	EQP EQUIPMENT	MAS MASONRY	SIM SIMILAR
ASB ASBESTOS	EST ESTIMATE	MO MASONRY OPENING	SKL SKYLIGHT
ASPH ASPHALT	EXH EXHAUST	MAT MATERIAL	SC SOLID CORE
AUTO AUTOMATIC	EXTG EXISTING	MAX MAXIMUM	SP SOUNDPROOF
	EXP EXPANSION	MECH MECHANIC (AL)	SPK SPEAKER
	EJ EXPANSION JOINT	MEM MEMBER	SPL SPECIAL
BSMT BASEMENT	EXT EXTERIOR	MTL METAL	SPEC SPECIFICATION (S)
BRG BEARING		MWK MILLWORK	SQ SQUARE INCH
BEL BELIEF MARK/BEAM		MIN MINIMUM	SF SQUARE FEET
BET BETWEEN		MIR MIRROR	SSTL STAINLESS STEEL
BVL BEVELED	FB FACE BRICK	MISC MISCELLANEOUS	STD STANDARD
BIT BITUMINOUS	FOC FACE OF CONCRETE	MOD MODULAR	STA STATION
BLK BLOCK	FOF FACE OF FINISH	MLD MOLDING, Moulding	STL STEEL
BLKG BLOCKING	FOM FACE OF MASONRY	MIR MIRROR	STOR STORAGE
BO BOARD	FOS FACE OF STUDS	MT MOUNT (ED) (ING)	STR STRUCTURE (AL)
BS BOTH SIDES	FBD FIBERBOARD	MOV MOVABLE	SD STORM DRAIN
BW BOTH WAYS	FGL FIBERGLASS	MILL MILLION	SDR STRUCTURE (AL)
BOT BOTTOM	FIN FINISH (ED)	MULL MULLION	SCT STRUCTURAL CLAY TILE
BRK BRICK	FFE FINISH FLOOR		SUSP SUSPENDED
BRZ BRONZE	ELEV ELEVATION		SYM SYMMETRY (ICAL)
BLDG BUILDING	FA FIRE ALARM		SYN SYNTHETIC
BUR BUILT UP ROOFING	FBRK FIRE BRICK		SYS SYSTEM
	FE FIRE EXTINGUISHER	NAT NATURAL	
	FEC FIRE EXTINGUISHER & CABINET	NOM NOMINAL	
	FHC FIRE HOSE CABINET	NTS NOT IN CONTRACT	
CAB CABINET	FLG FLASHING	NO. NUMBER	TKBD TACKBOARD
CPT CARPET (ED)	FLX FLEXIBLE		TKS TACKSTRIP
CSMT CASEMENT	FLR FLOOR (ING)		TEL TELEPHONE
CI CAST IRON	FD FLOOR DRAIN		TV TELEVISION
CPC CAST-IN PLACE CONCRETE	FPL FLOOR PLATE	OFF OFFICE	TEMP TEMPERED
	FLUR FLUORESCENT	OC ON CENTER	TC TERRA COTTA
CST CAST STONE	FTG FOOTING	OPNG OPENING	TZ TERRAZZO
CB CATCH BASIN	FND FOUNDATION	OPP OPPOSITE	THK THICK (NESS)
CK CALK (ING), CAULK (ING)	FR FRAME (D), (ING)	OD OUTSIDE DIAMETER	THR THRESHOLD
CLG CEILING	FS FULL SIZE	OA OVERALL	TA TOILET ACCESSORY
CEM CEMENT	FBO FURNISHED BY OTHERS	OH OVERHEAD	TPTN TOILET PARTITION
CTR CENTER	FUR FURRED (ING)		TTD TOILET TISSUE
CER CERAMIC TILE	FUT FUTURE	PNT PAINT (ED)	TR TRANSOM
CT CERAMIC TILE		PR PAIR	T&G TONGUE AND GROOVE
CMT CERAMIC MOSAIC (TILE)		PR PANEL	TOS TOP OF SLAB
CKBD CHALKBOARD		PS PANIC BAR	TSTL TOP OF STEEL
CHAM CHAMFER		PTD PAPER TOWEL DISPENSER	TOW TOP OF WALL
CR CHROMIUM (PLATED)		PTR PAPER TOWEL RECEPTOR	TB TOWEL BAR
CIR CIRCLE	GA GAGE, GAUGE		TR TRANSOM
CIRC CIRCUMFERENCE	GALV GALVANIZED	PKG PARKING	TREAD TREAD
CLR CLEAR (ANCE)	GKT GASKET (ED)	PKB PARTICLE BOARD	TRT-WD TREATED WOOD
CLO CLOSET	GL GLASS, GLAZING	PTN PARTITION	TRTYP TYPICAL
CLS CLOSURE	GCMU GROUT	PVG PAVING	TOF TOP OF FOOTING
COL COLUMN	GB GRAB BAR	PVMT PAVEMENT	
COMB COMBINATION	GD GRADE, GRADING	PERF PERFORATE (D)	
COMPT COMPARTMENT	GRN GRANITE	PLAS PLASTER	
COMP COMPOSITION (COMPOSITE)	GVL GRAVEL	BLAM PLASTIC LAMINATE	
CONC CONCRETE	GT GROUT	PL PLATE	
CMU CONCRETE MASONRY UNIT	GYP BD GYPSUM BOARD	PWF UNFIN UNFINISHED	
	GYP L GYPSUM LATH	UNO UNLESS NOTED	
	GYP PL GYPSUM PLASTER	UR UNFIN UNFINISHED	
CONST CONSTRUCTION	GYPT GYPSUM TILE	PCF POUNDS PER CUBIC FOOT	
CONT CONTINUOUS, CONTINUE		PGR POUNDS PER	
CONTR CONTRACTOR/CONTRACTOR		VAR VARNISH(ED)	
CLL CONTRACT LIMIT LINE		VNR VENEER	
CG CONTROL JOINT		LINEAL FOOT	
CFR COFFER	HBD HARDBOARD	PSF POUNDS PER SQUARE FOOT	
CJ CORNER GUARD	HDW HARDWARE	PSI POUNDS PER SQUARE INCH	
CORR CORRIDOR	HWL HARDWOOD	PCC SQUARE INCH PRECAST CONCRETE	
CMP CORRUGATED METAL PIPE	HDR HEADER	PFB PREFABRICATE (D)	
	HG HEATING	PVD PRESSURE TREATED WOOD	
CFL COUNTERPLASTING	HVAC HEATING/VENTILATING/AIR CONDITIONING	PFN PREFINISHED	
CS COUNTERS	HD HEAVY DUTY	PRFM PREFORMED	
CRS COURSE (S)	HT HEIGHT	PRL PROPERTY LINE	
CF CUBIC FOOT	HC HOLLOW CORE	WTW WALL TO WALL	
CY CUBIC YARD	HM HOLLOW METAL	WH WALL HUNG	
	HK HOOK (S)	WC WATER CLOSET	
	HORZ HORIZONTAL	WP WATERPROOFING	
	HB HOSE BIBB	WR WATER REPELLENT	
	HWH HOT WATER HEATER	WS WATERSTOP	
		WT WEIGHT	
		WWF WELDED WIRE FABRIC	
DPR DAMPER		W WIDTH, WIDE, WEST	
DP DAMPROOFING		WDW WINDOW	
DL DEAD LOAD		WG WIRE GLASS	
DKG DECKING		WTH WITH	
DEMO DEMOLISH, DEMOLITION		W/O WITHOUT	
DMT DEMOUNT(ABLE)	INCL INCLUDE (D) (ING)	WD WOOD	
DGA DENSE GRADE	ID INSIDE DIAMETER	WB WOOD BASE	
DGG DENSE GRADE	INSUL INSULATE (D) (ION)	WI WROUGHT IRON	
DEP DEPRESSED	INT INTERIOR		
DET DETAIL	INV INVERT		
DIAG DIAGONAL			
DIA DIAMETER			
DIM DIMENSION	JAN JANITOR		
DIV DIVIDE/DIVISION	JT JOINT		
DR DOOR	JST JOIST		



ARCHITECT

CONSULTANT



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SHEET

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OF

CODE COMPLIANCE PLAN LEGEND

OL	OCCUPANT LOAD
31	EGRESS LOAD & DIRECTION
TD 100'	TRAVEL DISTANCE
FEC	FIRE EXTINGUISHER & CABINET
FEB	FIRE EXTINGUISHER & BRACKET
EXIT	EXIT LIGHT SIGN (SEE LIGHTING PLANS)
EL	EMERGENCY LIGHTING APPLIANCE, HALL MOUNTED (SEE LIGHTING PLANS)
---	1-HOUR RATED PARTITION
---	2-HOUR RATED PARTITION
---	3-HOUR RATED PARTITION
---	4-HOUR RATED PARTITION

MANDATORY CODES

- 2018 INTERNATIONAL BUILDING CODE, WITH GEORGIA AMENDMENTS (2020)
- 2018 INTERNATIONAL FIRE CODE, WITH GEORGIA AMENDMENTS (2014)
- 2018 INTERNATIONAL PLUMBING CODE, WITH GEORGIA AMENDMENTS (2020)
- 2018 INTERNATIONAL MECHANICAL CODE, WITH GEORGIA AMENDMENTS (2020)
- 2018 INTERNATIONAL FUEL GAS CODE, WITH GEORGIA AMENDMENTS (2020)
- 2020 NATIONAL ELECTRICAL CODE, WITH NO GEORGIA AMENDMENTS
- 2019 INTERNATIONAL ENERGY CONSERVATION CODE, WITH GEORGIA SUPPLEMENTS & AMENDMENTS (2020)
- 2018 NFPA 101 LIFE SAFETY CODE
- 2012 GEORGIA ACCESSIBILITY CODE

CODE REVIEW

STORAGE FACILITY

OCCUPANCY TYPE(S): NFPA 101 LIFE SAFETY CODE 2018
STORAGE (ORDINARY HAZARD)

CONSTRUCTION TYPE(S): IBC 2018 / NFPA 101 LIFE SAFETY CODE 2018
TYPE II / II-000
NON-COMBUSTIBLE / UNPROTECTED / SPRINKLERED

BUILDING LEVELS AND HEIGHTS: ONE STORY / 19'-6" +/-
TOTAL AREA: 5,000 GSF

OCCUPANCY LOAD: NFPA 101 LIFE SAFETY CODE 2018
STORAGE (MP): 10

EGRESS WIDTH REQUIRED / PROVIDED:
0.2' / PERSON X 10 PERSONS = 2' REQUIRED / 63' PROVIDED

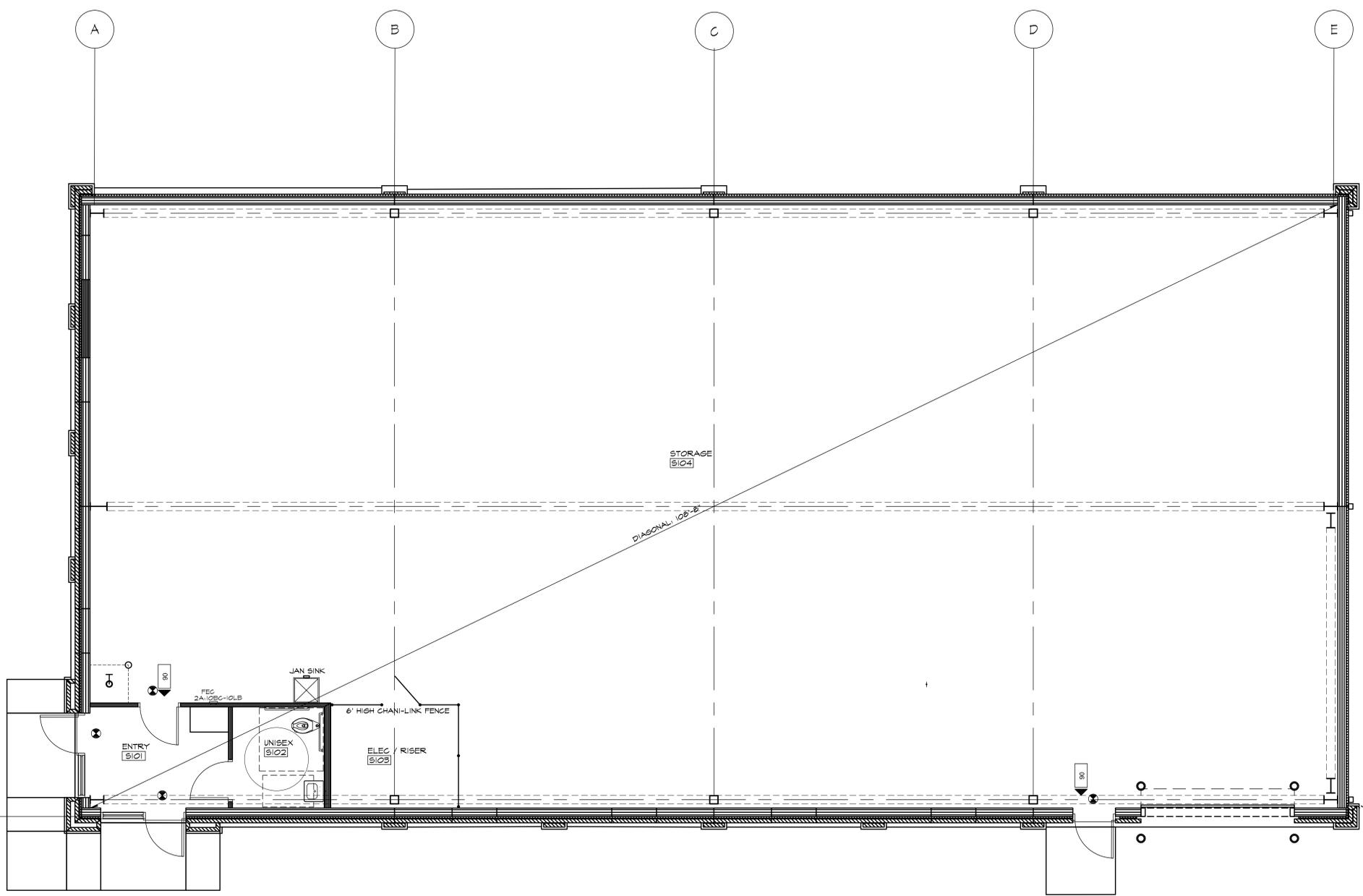
SEE CODE COMPLIANCE PLAN FOR EGRESS / EXITING

TRAVEL DISTANCES: NFPA 101 LIFE SAFETY 2018
STORAGE: 400' ALLOWED / 75' ACTUAL (TO EXIT).

PLUMBING FIXTURE REQUIREMENTS:
PLUMBING FIXTURE CALCULATIONS IFC 2018

OCCUPANT LOAD: 10 PERSONS

WATER CLOSETS (1/100): 10/100 = 1 REQUIRED / 1 PROVIDED
LAVATORIES (1/100): 10/100 = 1 REQUIRED / 1 PROVIDED
DRINKING FOUNTAINS: NOT REQUIRED (SECTION 410 LOW OCCUPANCY)
JANITOR SINKS: 1 REQUIRED / 1 PROVIDED



ALPHA BLDG SET 08-21-2024

PROJ NORTH
CODE COMPLIANCE PLAN: STORAGE FACILITY
SCALE: 1/4" = 1'-0"





STAMP INVALID UNLESS SIGNED

CONSULTANT

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FIRST FLOOR PLAN: STORAGE FACILITY

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PLAN LEGEND

- NEW CONCRETE WALL
- NEW C. M. U. WALL OR PARTITION
- NEW BRICK WALL OR PARTITION
- NEW WOOD STUD WALL OR PARTITION
- PORTION OF EXISTING STUD OR MASONRY WALL OR PARTITION TO BE REMOVED.
- EXISTING STUD OR MASONRY WALL OR PARTITION TO REMAIN.

PARTITION TYPES

- NON-STRUCTURAL METAL FRAMING PARTITIONS (DELEGATED DESIGN)
- 3-5/8" STEEL STUD PARTITIONS
- 9.4.1 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD ON ROOM SIDE FACE ONLY.
 - 9.4.2 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE & SOUND ATTENUATION INSULATION.
 - 9.4.2.1 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE (4'-0" HIGH WALL)
 - 9.4.3 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON ROOM SIDE FACE ONLY & SOUND ATTENUATION INSULATION.
 - 9.4.4 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
 - 9.4.5 3-5/8" STEEL STUDS AT 16" O. C. WITH 2 LAYERS 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
- 6" STEEL STUD PARTITIONS
- 9.6.1 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD ON ROOM SIDE FACE ONLY.
 - 9.6.2 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE & SOUND ATTENUATION INSULATION.
 - 9.6.3 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON ROOM SIDE FACE ONLY & SOUND ATTENUATION INSULATION.
 - 9.6.4 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
 - 9.6.5 6" STEEL STUDS AT 16" O. C. WITH 2 LAYERS 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.

GENERAL PARTITIONS NOTES:

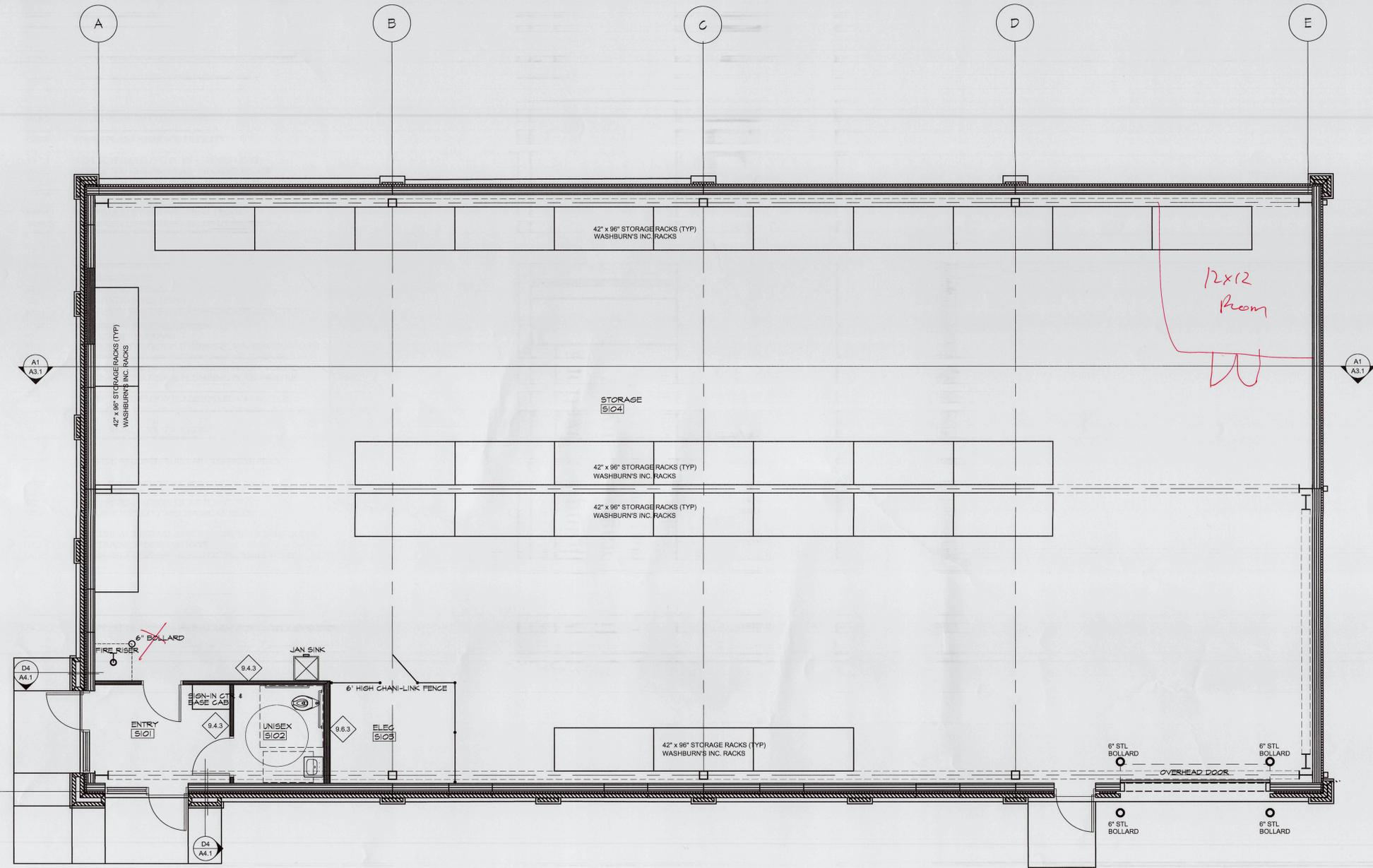
(1) ALL PARTITIONS TO TERMINATE AT UNDERSIDE OF ROOF STRUCTURE FLOOR AND/OR ROOF DECK, UNLESS OTHERWISE NOTED.

(2) TENANT SEPARATION WALLS FOR OTHER MERCANTILE OCCUPANCIES SHALL BE MINIMUM ONE (1) HOUR RATED CONSTRUCTION THAT EXTENDS FROM THE FLOOR TO THE UNDERSIDE OF THE ROOF OR FIRE RATED FLOOR DECK WITH ALL OPENINGS SEALED TIGHT PER THE 2012 GWINNETT COUNTY ORDINANCE FOR FIRE PREVENTION AND PROTECTION ORDINANCE SECTION 46-41.

(3) TENANT SEPARATION WALLS FOR ALL OTHER OCCUPANCIES SHALL BE MINIMUM TWO (2) HOUR RATED CONSTRUCTION THAT EXTENDS FROM THE FLOOR TO THE UNDERSIDE OF THE ROOF OR FIRE RATED FLOOR DECK WITH ALL WALL OPENINGS SEALED TIGHT PER THE 2012 GWINNETT COUNTY ORDINANCE FOR FIRE PREVENTION AND PROTECTION ORDINANCE SECTION 46-41.

(4) FIRE STOP SYSTEMS AND DEVICES: PENETRATIONS FOR CABLES, CABLE TRAYS, CONDUITS, PIPES, TUBES, COMBUSTION VENTS AND EXHAUST VENTS, WIRES, AND SIMILAR ITEMS TO ACCOMMODATE ELECTRICAL, MECHANICAL, PLUMBING, AND COMMUNICATIONS SYSTEMS THAT PASS INTO OR THROUGH A WALL, FLOOR, OR FLOOR/CEILING ASSEMBLY CONSTRUCTED AS A FIRE BARRIER SHALL BE PROTECTED BY A FIRE STOP SYSTEM OR DEVICE LIFE SAFETY CODE SECTION 8.3.5.1 OF THE 2018 EDITION. FIRE STOP SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) HOUR F-RATING, BUT NOT LESS THAN THE REQUIRED FIRE RESISTIVE RATING OF THE FIRE BARRIER PENETRATED SECTION 8.3.5.1.3. PENETRATIONS IN FIRE RATED HORIZONTAL ASSEMBLIES SHALL HAVE A MINIMUM ONE (1) HOUR F-RATING, BUT NOT LESS THAN THE RESISTIVE RATING OF THE HORIZONTAL ASSEMBLY, SECTION 8.3.5.1.4. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DETAILS.

(5) IDENTIFICATION OF FIRE BARRIERS SHALL BE BY SIGNS OR STENCILING PERMANENTLY INSTALLED ON ALL RATED BARRIERS OR WALLS ABOVE ANY DECORATIVE CEILING AND/OR IN CONCEALED SPACES. THE LETTERING SHALL BE 2" IN HEIGHT AND SPACED EVERY 12 FEET. THE FOLLOWING WORDING IS RECOMMENDED: "ONE (1) (OR TWO-2) HOUR FIRE AND SMOKE BARRIER PROTECT ALL OPENINGS."



ALPHA BLDG SET 08-21-2024

PROJ NORTH
FLOOR PLAN: STORAGE FACILITY
SCALE: 1/4" = 1'-0"





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FIRST FLOOR PLAN: STORAGE FACILITY

Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners

1113 Usher Street
Covington, Georgia 30014

JOB NO:	02520
DRAWN BY:	GM
CHECKED BY:	GM
DESCRIPTION:	SCH-REVIEW
DATE:	02.27.24
DESCRIPTION:	DC-REVIEW
DATE:	03.11.24
DESCRIPTION:	CD-REVIEW
DATE:	03.25.24
DESCRIPTION:	BID-CONSTRUCTION
DATE:	04.02.24
REVISIONS:	
1	04.22.24
2	05.03.24
3	07.04.24
4	08.15.24
5	10.25.24

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SHEET

A1.4

OF 1 2 3

PLAN LEGEND

- NEW CONCRETE WALL
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- NEW BRICK WALL OR PARTITION
- NEW WOOD STUD WALL OR PARTITION
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- EXISTING STUD OR MASONRY WALL OR PARTITION TO REMAIN.

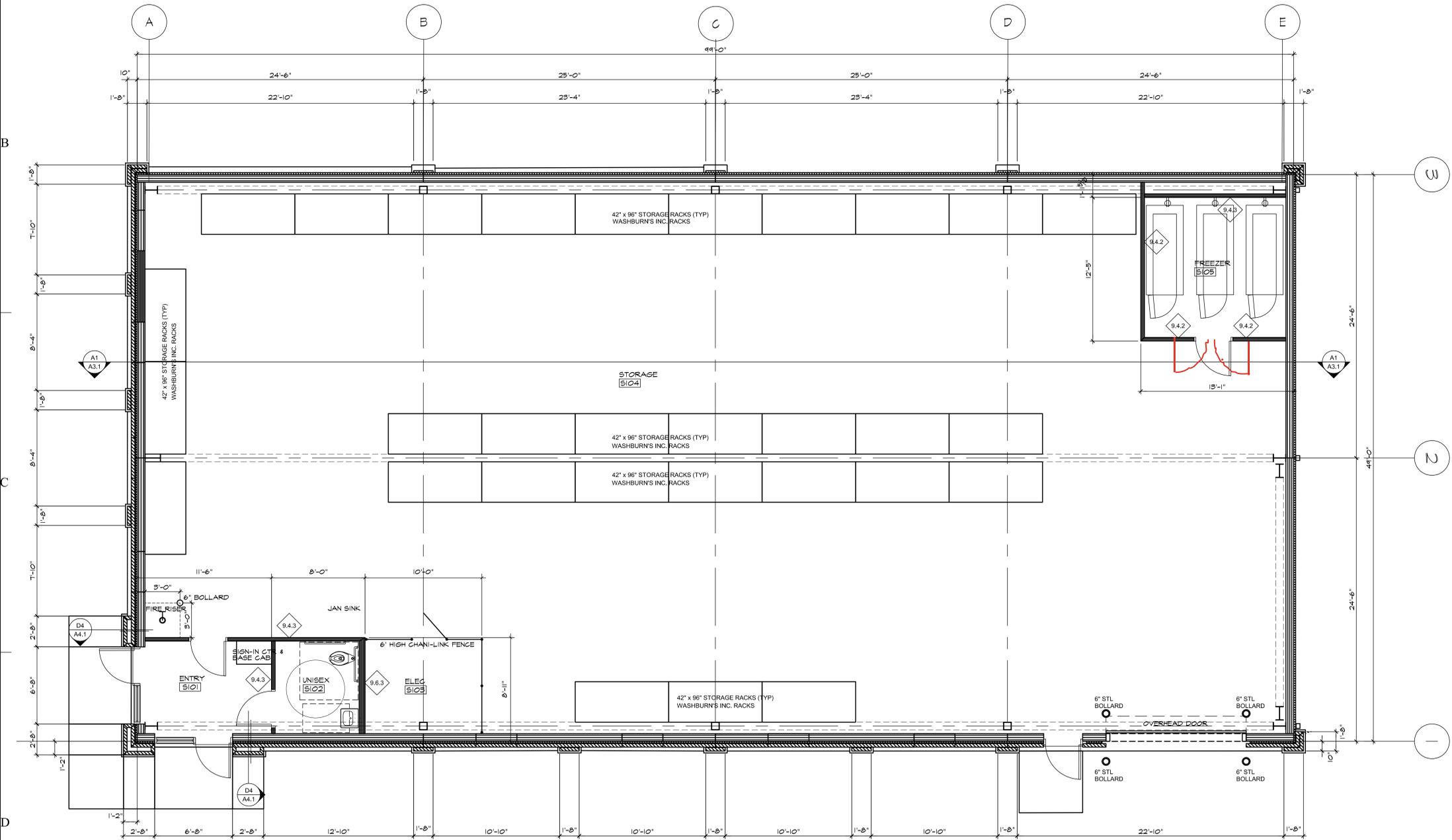
PARTITION TYPES

NON-STRUCTURAL METAL FRAMING PARTITIONS (DELEGATED DESIGN)

- 3-5/8" STEEL STUD PARTITIONS**
- 9.4.1 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD ON ROOM SIDE FACE ONLY.
- 9.4.2 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE & SOUND ATTENUATION INSULATION.
- 9.4.2a 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE (4'-0" HIGH WALL)
- 9.4.3 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON ROOM SIDE FACE ONLY & SOUND ATTENUATION INSULATION.
- 9.4.4 3-5/8" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
- 9.4.5 3-5/8" STEEL STUDS AT 16" O. C. WITH 2 LAYERS 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
- 6" STEEL STUD PARTITIONS**
- 9.6.1 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD ON ROOM SIDE FACE ONLY.
- 9.6.2 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON EACH FACE & SOUND ATTENUATION INSULATION.
- 9.6.3 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" GYPSUM BOARD TYPE "X" ON ROOM SIDE FACE ONLY & SOUND ATTENUATION INSULATION.
- 9.6.4 6" STEEL STUDS AT 16" O. C. WITH 1 LAYER 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.
- 9.6.5 6" STEEL STUDS AT 16" O. C. WITH 2 LAYERS 5/8" TYPE "X" GYPSUM BOARD ON EACH FACE & SOUND ATTENUATION INSULATION (UL DESIGN NO. U419) ONE HOUR RATED ASSEMBLY.

GENERAL PARTITIONS NOTES:

- (1) ALL PARTITIONS TO TERMINATE AT UNDERSIDE OF ROOF STRUCTURE FLOOR AND/OR ROOF DECK, UNLESS OTHERWISE NOTED.
- (2) TENANT SEPARATION WALLS FOR OTHER MERCANTILE OCCUPANCIES SHALL BE MINIMUM ONE (1) HOUR RATED CONSTRUCTION THAT EXTENDS FROM THE FLOOR TO THE UNDERSIDE OF THE ROOF OR FIRE RATED FLOOR DECK WITH ALL OPENINGS SEALED TIGHT PER THE 2012 GWINNETT COUNTY ORDINANCE FOR FIRE PREVENTION AND PROTECTION ORDINANCE SECTION 46-41.
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- (5) IDENTIFICATION OF FIRE BARRIERS SHALL BE BY SIGNS OR STENCILING PERMANENTLY INSTALLED ON ALL RATED BARRIERS OR WALLS, ABOVE ANY DECORATIVE CEILING AND/OR IN CONCEALED SPACES. THE LETTERING SHALL BE 2" IN HEIGHT AND SPACED EVERY 12 FEET. THE FOLLOWING WORDING IS RECOMMENDED: "ONE-1 (OR TWO-2) HOUR FIRE AND SMOKE BARRIER PROTECT ALL OPENINGS."



PROJ NORTH
FLOOR PLAN: STORAGE FACILITY
SCALE: 1/4" = 1'-0"





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Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

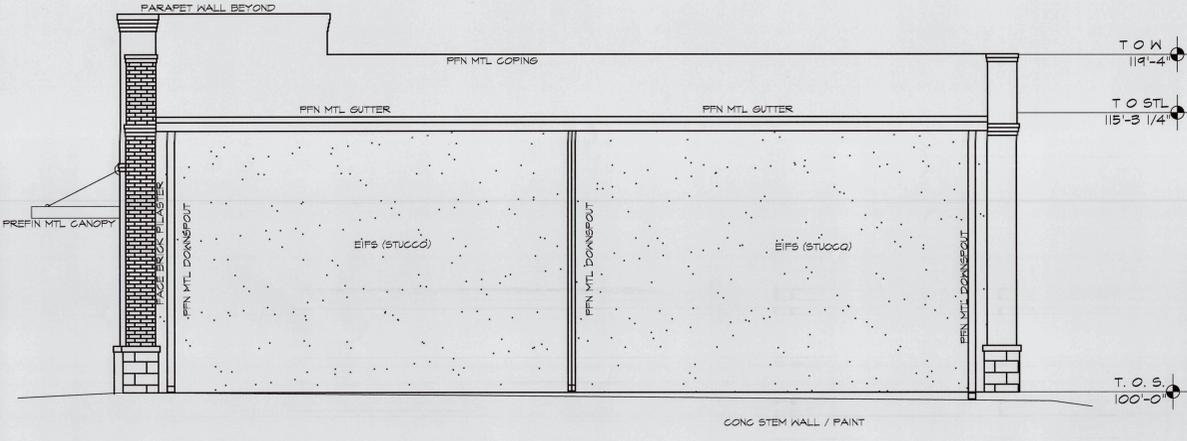
BUILDING ELEVATIONS

JOB NO.:	02520
DRAWN BY:	GM
CHECKED BY:	GM
DESCRIPTION:	SCH-REVIEW
DATE:	02-21-24
DESCRIPTION:	DD-REVIEW
DATE:	03-11-24
DESCRIPTION:	CD-REVIEW
DATE:	03-28-24
DESCRIPTION:	BP-C-CONSTRUCTION
DATE:	04-08-24
REVISIONS:	
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2	05-03-24
3	07-04-24
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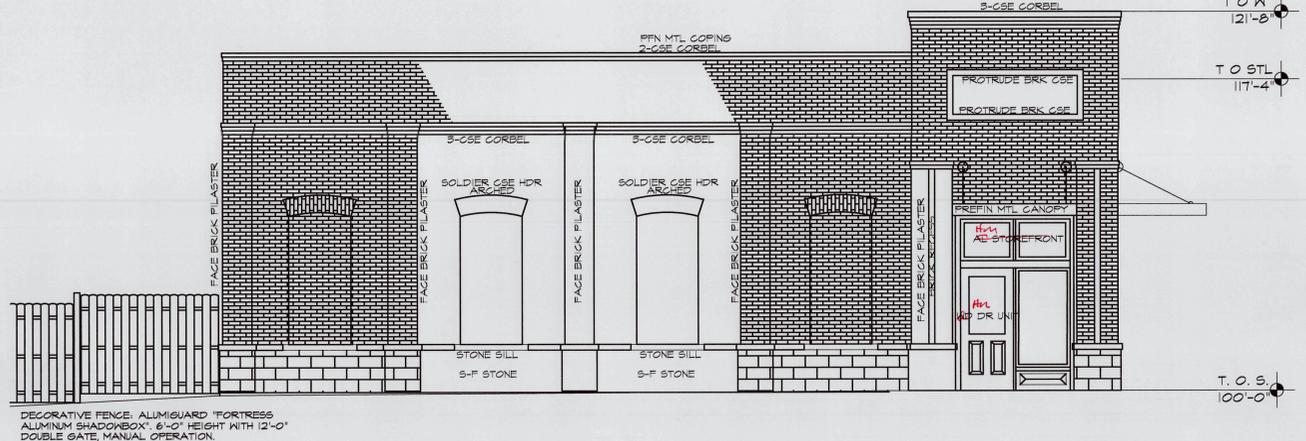
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OF 1 2 3

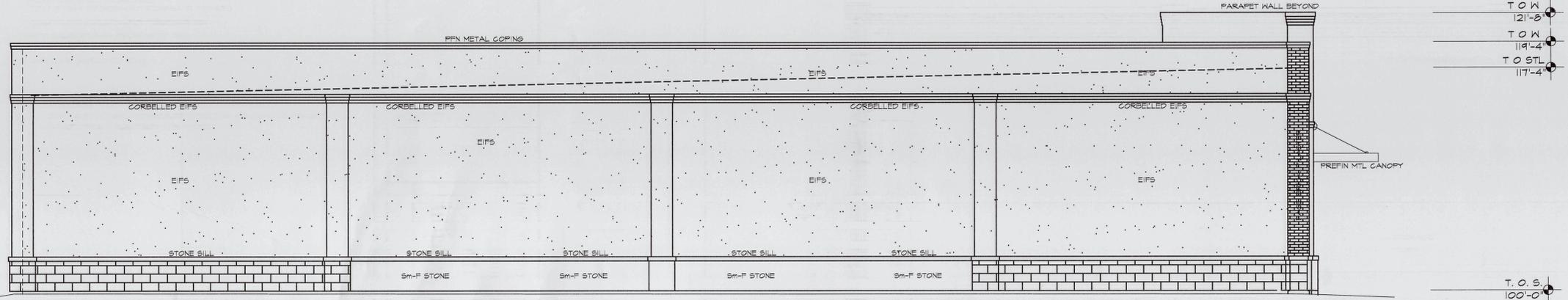


NORTH ELEVATION: FUTURE EXPANSION
SCALE: 1/4" = 1'-0"



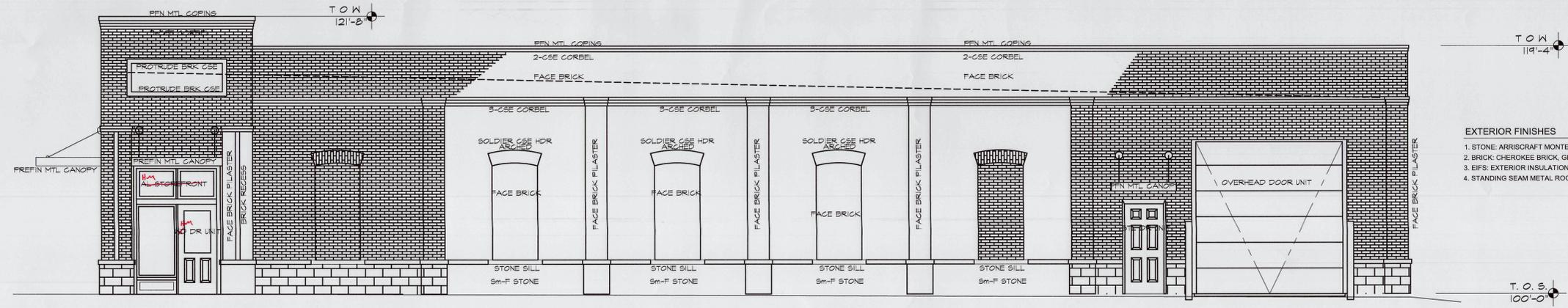
SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

DECORATIVE FENCE, ALUMIGUARD 'FORTRESS' ALUMINUM SHADOWBOX, 6'-0" HEIGHT WITH 12'-0" DOUBLE GATE, MANUAL OPERATION.



WEST ELEVATION: FUTURE EXPANSION
SCALE: 1/4" = 1'-0"

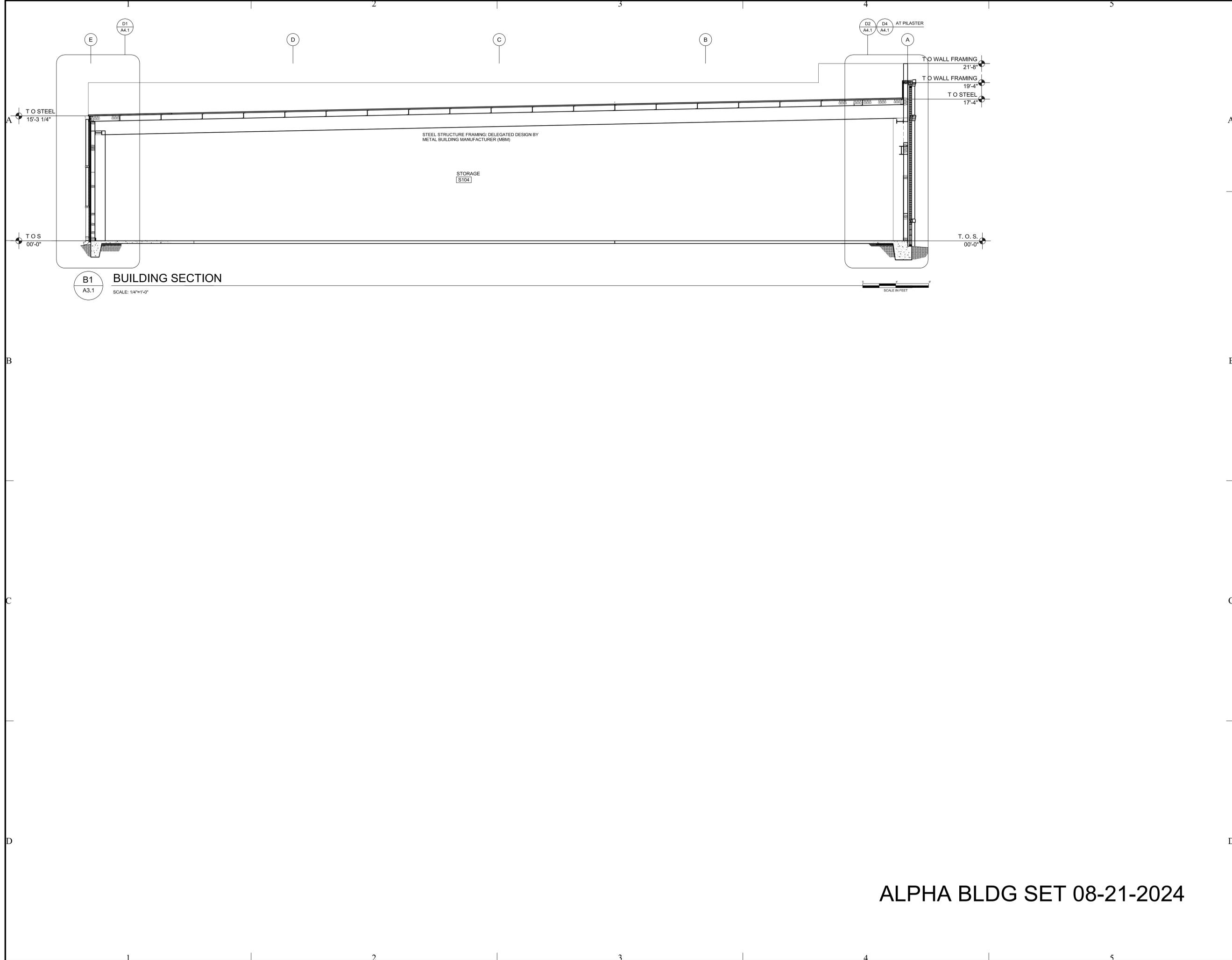
ALPHA BLDG SET 08-21-2024



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

- EXTERIOR FINISHES**
1. STONE: ARRISCRFT MONTEGITO, SMOOTH-FACED, PROTUDING MORTAR JOINT OR EQUALS.
 2. BRICK: CHEROKEE BRICK, GEORGIAN 'MAROON', W/ IVORY MORTAR JOINT OR EQUALS.
 3. EIFS: EXTERIOR INSULATION FINISH SYSTEM- "OUTSULATION" OR EQUAL.
 4. STANDING SEAM METAL ROOF: BUTLERIB II ROOF SYSTEM OR EQUAL.





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BUILDING SECTIONS

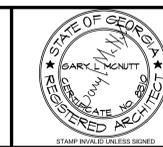
Administrative Building Renovations
Centralize Storage Facility
 Newton County Board of Commissioners
 1113 Usher Street
 Covington, Georgia 30014

JOB NO.:	02520
DRAWN BY:	GM
CHECKED BY:	GM
DESCRIPTION:	SCH-REVIEW
DATE:	02.21.24
DESCRIPTION:	DC-REVIEW
DATE:	05.11.24
DESCRIPTION:	CD-REVIEW
DATE:	08.28.24
DESCRIPTION:	BID-CONSTRUCTION
DATE:	04.02.24

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3	07.04.24
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WALL SECTIONS & DETAILS

Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

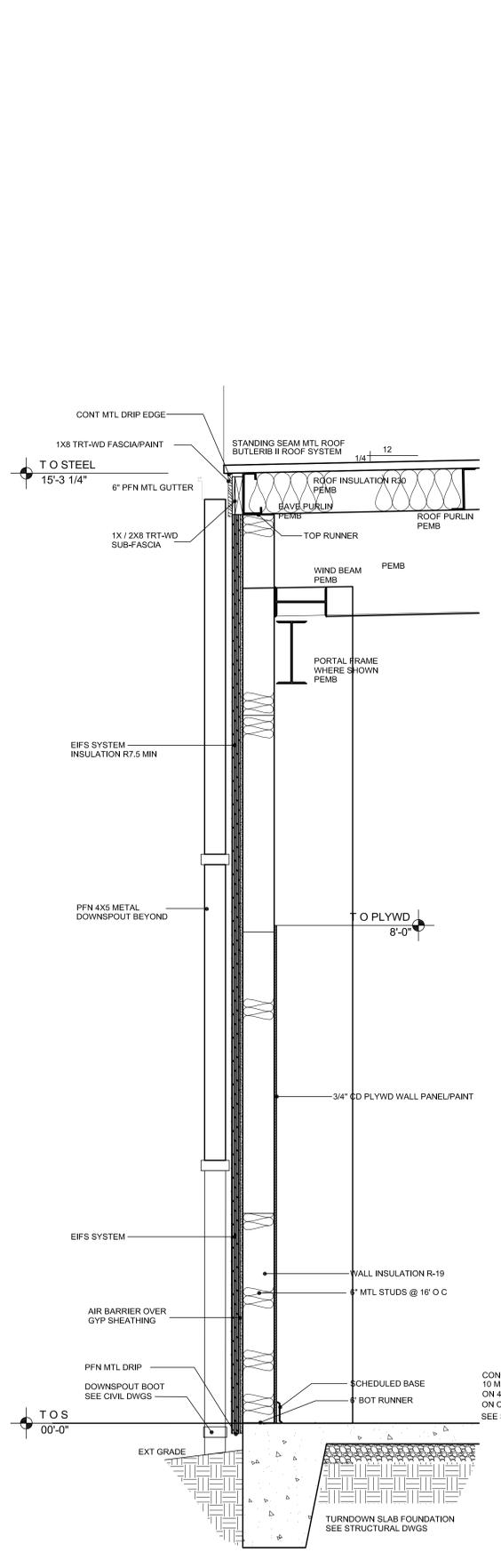
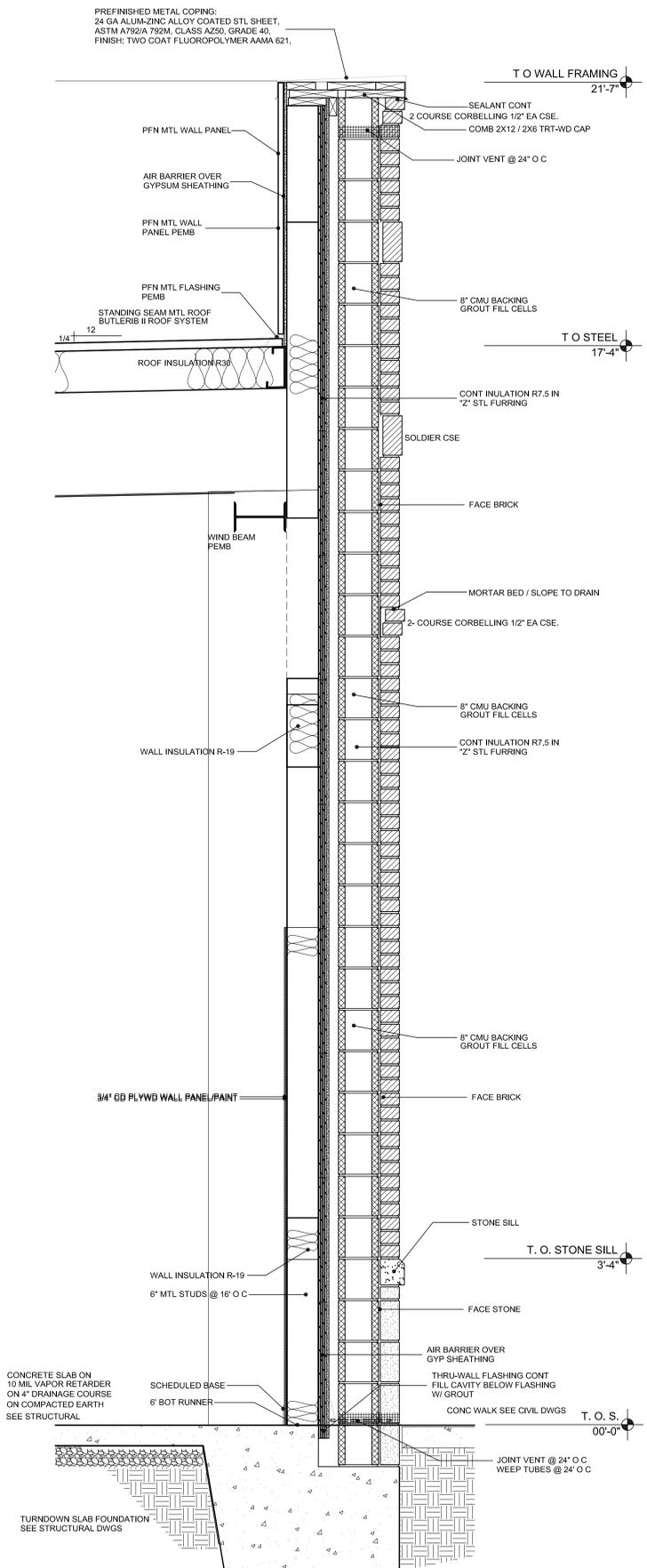
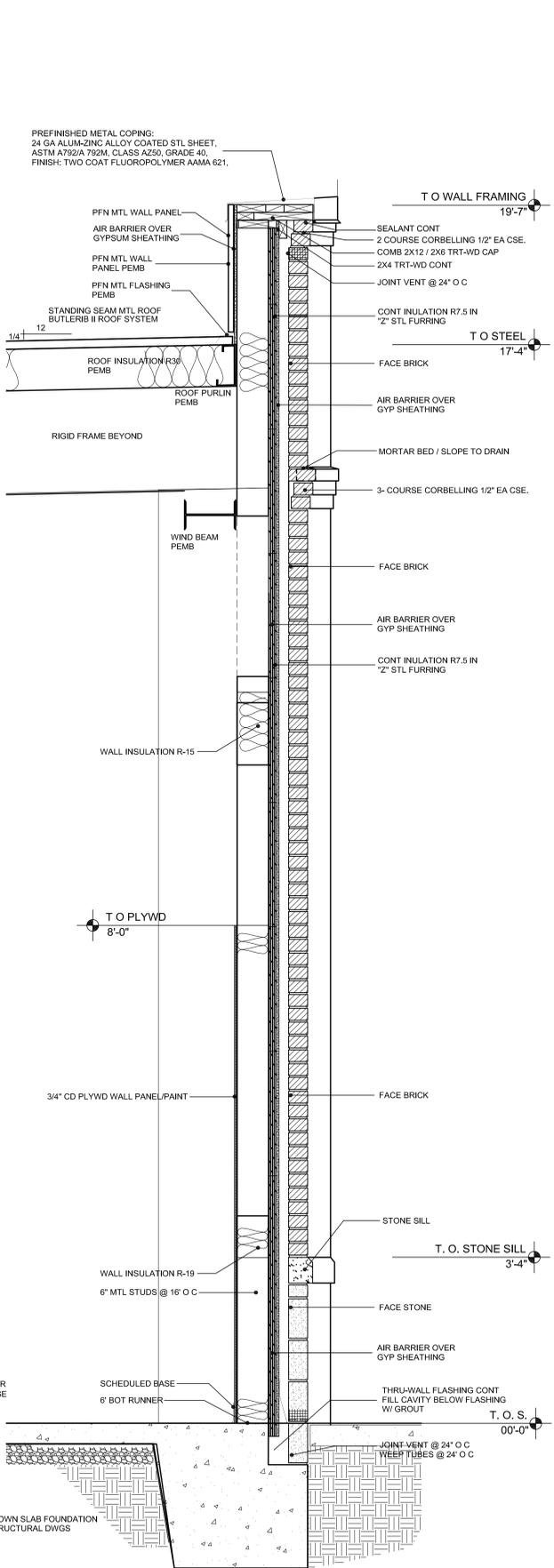
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REVISIONS:	
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SHEET

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OF 3





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Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street
Covington, Georgia 30014

JOB NO.: 02520

DRAWN BY: GM

CHECKED BY: GM

DESCRIPTION: SCH-REVIEW

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DOOR, WINDOW & FRAME SCHEDULES
Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street
Covington, Georgia 30014

JOB NO.: 02520

DRAWN BY: GM

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DESCRIPTION: SCH-REVIEW

DATE: 02.21.24

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DATE: 03.11.24

DESCRIPTION: CD-REVIEW

DATE: 03.25.24

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DATE: 04.02.24

REVISIONS:

1 04.22.24

2 05.03.24

3 07.04.24

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ALPHA BLDG SET 08-21-2024



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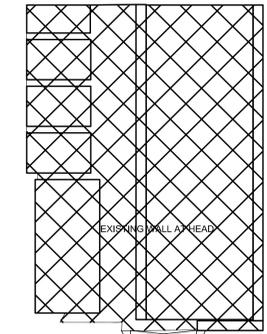
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Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

JOB NO.:	02520
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SHEET

A8.3.1
1 2 3



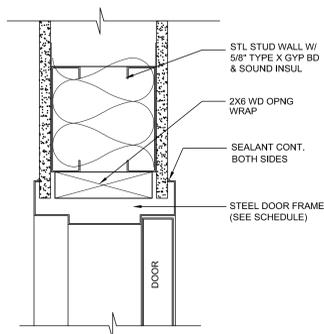
EXISTING WALL AT HEAD
CONT SEALANT BED BOTH SIDES

STOREFRONT SYSTEM

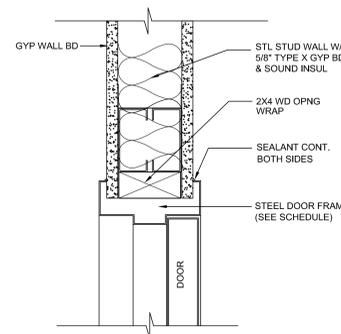
ENTRY DOOR UNIT

STOREFRONT SYSTEM

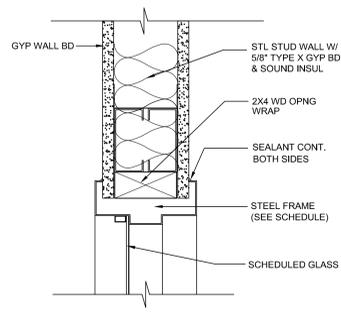
ENTRY DOOR UNIT



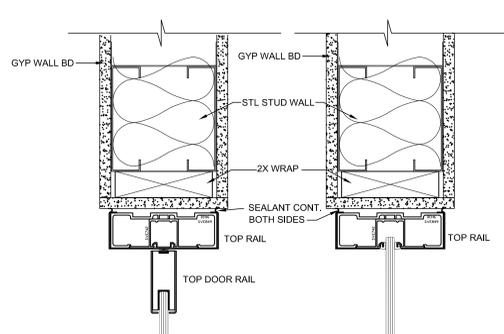
B1 HEAD
A8.3.1 SCALE: 3" = 1'-0"



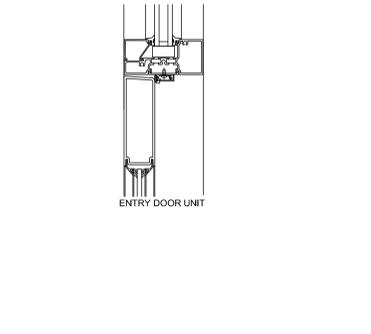
B2 HEAD
A8.3.1 SCALE: 3" = 1'-0"



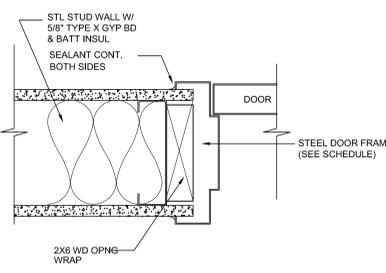
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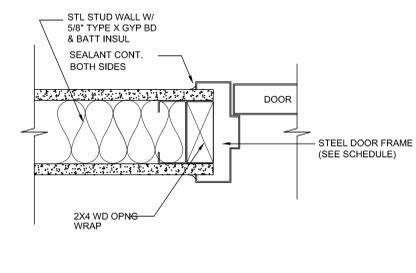
B4 HEAD
A8.3.1 SCALE: 3" = 1'-0"



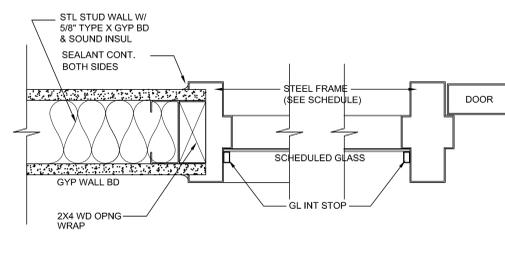
B5 HEAD
A8.3.1 SCALE: 3" = 1'-0"



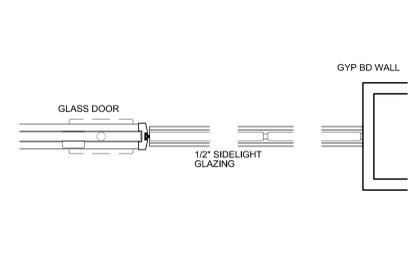
C1 JAMB
A8.3.1 SCALE: 3" = 1'-0"



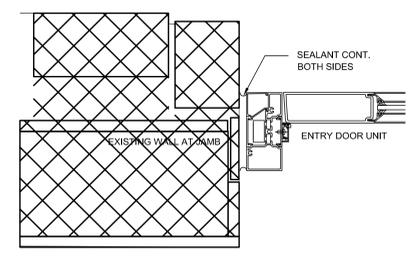
C2 JAMB
A8.3.1 SCALE: 3" = 1'-0"



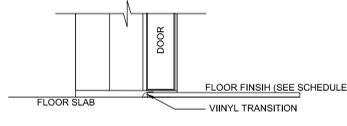
C3 JAMB
A8.3.1 SCALE: 3" = 1'-0"



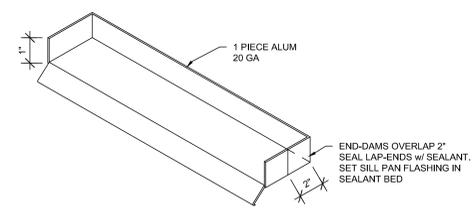
C4 JAMB
A8.3.1 SCALE: 3" = 1'-0"



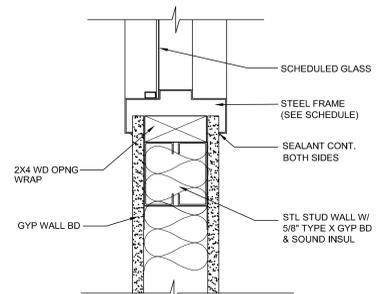
C5 JAMB
A8.3.1 SCALE: 3" = 1'-0"



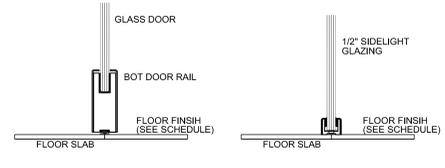
D1 SILL
A8.3.1 SCALE: 3" = 1'-0"



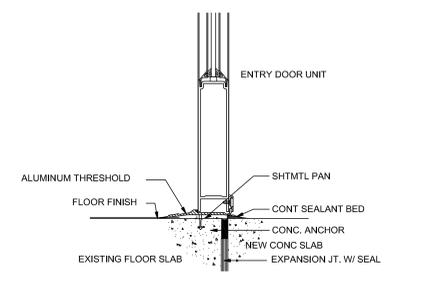
D2 TYP PAN DETAIL
N T S SCALE: 3" = 1'-0"



D3 SILL
A8.3.1 SCALE: 3" = 1'-0"



D4 SILL
A8.3.1 SCALE: 3" = 1'-0"



D5 SILL
A8.3.1 SCALE: 3" = 1'-0"



ARCHITECT

CONSULTANT

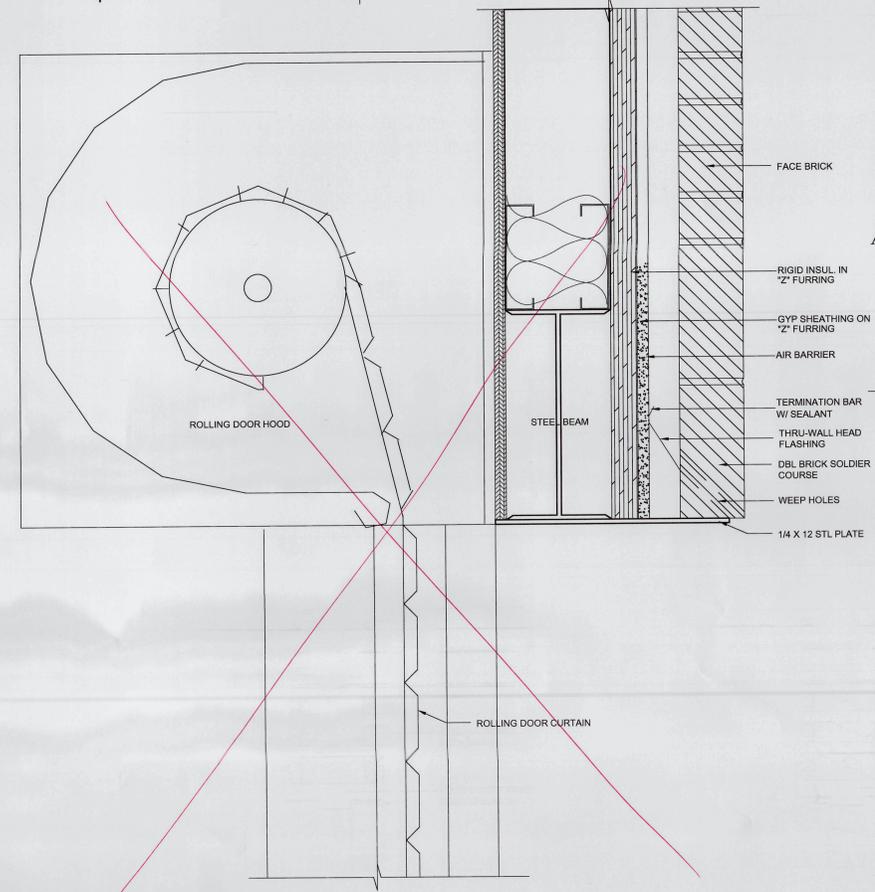


Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

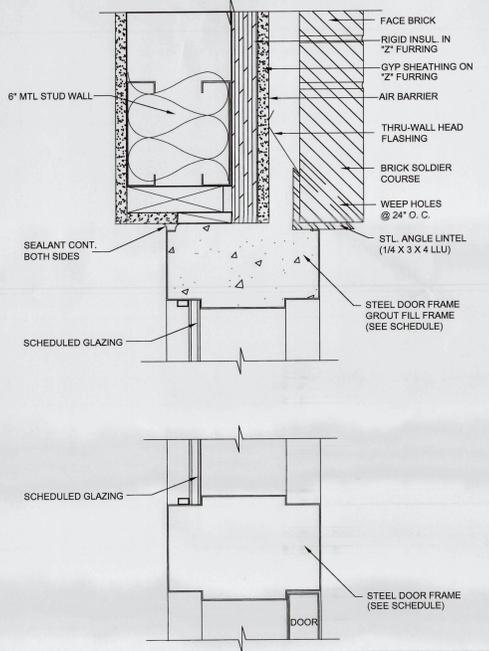
OPENING DETAILS

JOB NO.:	02320
DRAWN BY:	GM
CHECKED BY:	GM
DESCRIPTION:	SCH-REVIEW
DATE:	02.21.24
DESCRIPTION:	DD-REVIEW
DATE:	03.11.24
DESCRIPTION:	CD-REVIEW
DATE:	03.28.24
DESCRIPTION:	BC-CONSTRUCTION
DATE:	04.08.24
REVISIONS:	
1	04.22.24
2	05.08.24
3	07.04.24
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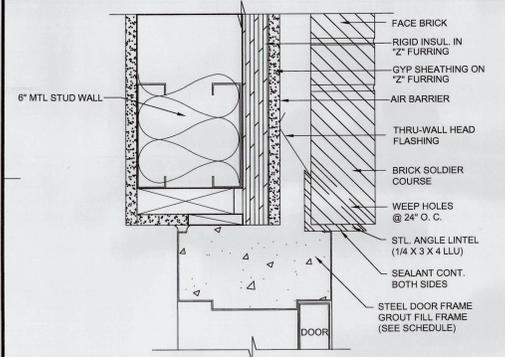
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B5 HEAD *Not Used*
SCALE: 3" = 1'-0"

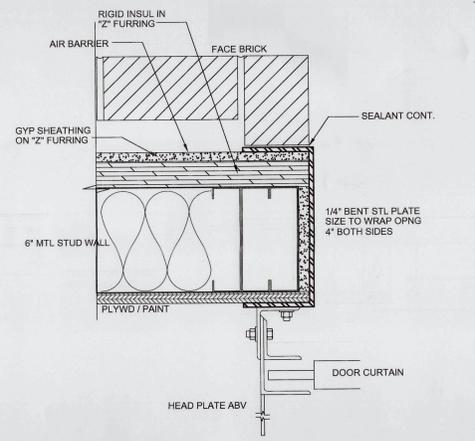


B2 HEAD
SCALE: 3" = 1'-0"

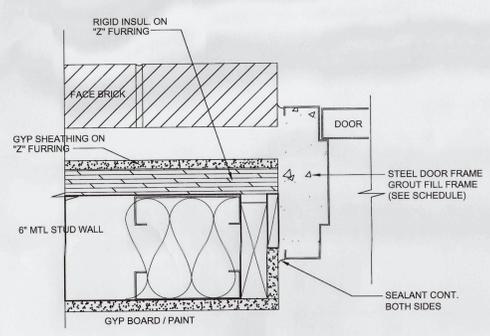


B1 HEAD
SCALE: 3" = 1'-0"

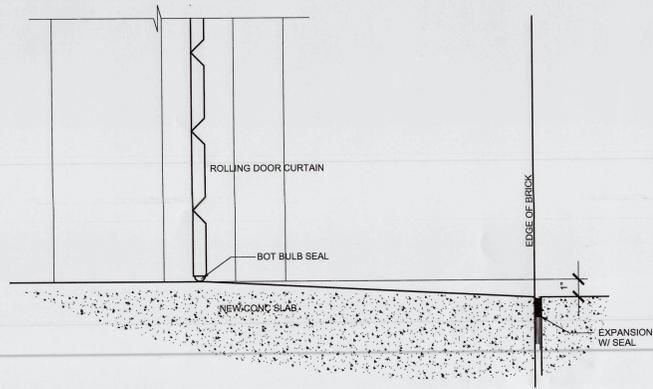
ALPHA BLDG SET 08-21-2024



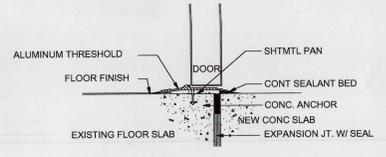
C5 JAMB
SCALE: 3" = 1'-0"



C1 JAMB
SCALE: 3" = 1'-0"



D5 SILL
SCALE: 3" = 1'-0"



D1 SILL
SCALE: 3" = 1'-0"

FINISH SCHEDULE - STORAGE FACILITY

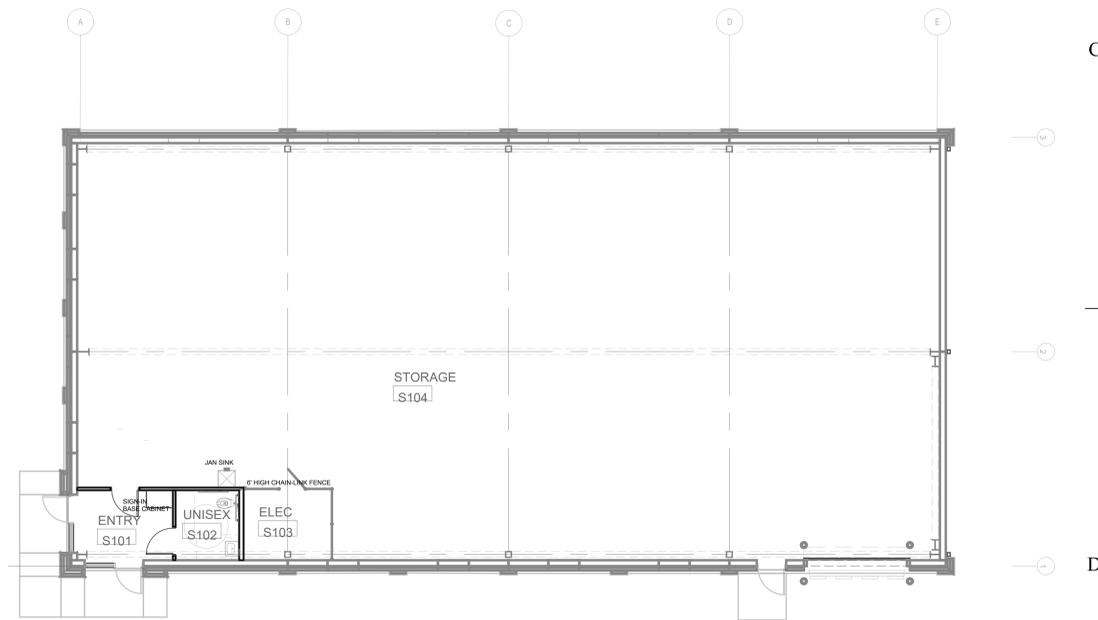
ABBREVIATIONS:

ACP	ACOUSTICAL CEILING PANELS	EPT	ENAMEL PAINT	IHP	INTERIOR HIGH PERFORMANCE COATING	RCP	REFLECTED CEILING PLAN	UND.	UNDERLAYMENT BOARD
BRK	BRICK	EHP	EXTERIOR HIGH PERFORMANCE COATING	IPT	INTERIOR PAINT SYSTEM	SHTG	SHEATHING	VRN	VARNISH
CFT	CERAMIC FLOOR TILE	EPT	EXTERIOR PAINT SYSTEM	MAR	MARBLE	SLT	SLATE	VCT	VINYL COMPOSITION TILE
CWT	CERAMIC WALL TILE	ES	EXPOSED STRUCTURE	N/A	NOT APPLICABLE (NONE)	S	STAIN	VS	VINYL SHEET FLOORING
CMU	CONCRETE MASONRY UNIT	FF	FACTORY FINISH	PC	POLISHED CONCRETE	SR	STEEL RAILING	WC	WALL COVERING
CPT	CARPET - BROADLOOM	GBB	GYPSON BACKING BOARD	PLAS.	PLASTER	SFS	STOREFRONT SYSTEM	WD.	WOOD
CPT-T	CARPET TILE	GFP	GLASS FIBER PANEL	PT.	PAINT	SS	SOLID SURFACE MATERIAL	WP	WOOD PANEL
CS	CONC. SEALER	GYP	GYPSON BOARD	PLYWD.	PLYWOOD	STN	STONE	LVT	LUXURY VINYL TILE
CONC.	CONCRETE	GYP.X	GYPSON BOARD, TYPE "X"	QT	QUARRY TILE	TRZ	TERRAZZO		
CPNL	COOLER PANEL	HPC	HIGH PERFORMANCE COATING	RB	RUBBER BASE	U	UNFINISHED		

NOTE: AN ABBREVIATION PRECEDED WITH AN "E" INDICATES AN EXISTING CONDITION, MATERIAL, FINISH, ETC.

RM.NO.	SPACE	FLOOR	BASE			WAINSCOT								WALLS								CEILING				REMARKS
			MAT'L.	FIN	TYPE	MAT'L.	FIN	TYPE	C.R. TYPE	NORTH	EAST	SOUTH	WEST	MAT'L.	FIN	MAT'L.	FIN	MAT'L.	FIN	MAT'L.	FIN	HEIGHT	CORN TYPE			
STORAGE FACILITY																										
S101	ENTRY	LVT	FF	RB	FF	-	-	-	-	-	GYPX	PT	GYPX	PT	GYPX	PT	GYPX	PT	GYPX	PT	10'-0"	-				
S102	UNISEX	CFT	FF	CWT	FF	-	-	-	-	-	CWT	FF	CWT	FF	CWT	FF	CWT	FF	GYPX	PT	9'-0"	-				
S103	ELEC	CONC	CS	RB	FF	-	-	-	-	-	GYPX	PT	GYPX	PT	GYPX	PT	GYPX	PT	-	-	ES	-				
S104	STORAGE	CONC	CS	RB	FF	-	-	-	-	-	PLYWD	PT	PLYWD	PT	PLYWD	PT	PLYWD	PT	-	-	ES	-				

ALPHA BLDG SET 08-21-2024



STORAGE FACILITY

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

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janelle@aeryndesign.com
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CONSULTANT



Administrative Building Renovations

Centralize Storage Facility

Newton County Board of Commissioners

1113 Usher Street, Covington, Georgia 30014

JOB NO.: 2320

DRAWN BY: GM

CHECKED BY: GM

DATE: 02-27-24

DESCRIPTION: SCH-REVIEW

DATE: 03-11-24

DESCRIPTION: DD-REVIEW

DATE: 03-25-24

DESCRIPTION: CD-REVIEW

DATE: 04-08-24

DESCRIPTION: BID & CONSTRUCTION

DATE: 04-22-24

REVISIONS:

1 04-22-24

2 05-03-24

3 07-08-24 VE

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Administrative Building Renovations

Centralize Storage Facility

Newton County Board of Commissioners
1113 Usher Street, Covington, Georgia 30014

FINISH PLAN - STORAGE FACILITY

JOB NO.: 2320

DRAWN BY: GM

CHECKED BY: GM

DATE: 02.27.24

DESCRIPTION: SCH-REVIEW

DATE: 03.11.24

DESCRIPTION: CD-REVIEW

DATE: 03.25.24

DESCRIPTION: BID & CONSTRUCTION

DATE: 04.08.24

REVISIONS:

1 04.22.24

2 05.03.24

3 07.08.24 VE

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SUNBELT BUILDERS

REFLECTED CEILING PLAN - STORAGE FACILITY
Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street, Covington, Georgia 30014

JOB NO.: 2320

DRAWN BY: GM

CHECKED BY: GM

DATE: 02-27-24

DESCRIPTION: SCH-REVIEW

DATE: 03-11-24

DESCRIPTION: CD-REVIEW

DATE: 03-25-24

DESCRIPTION: BID & CONSTRUCTION

DATE: 04-08-24

REVISIONS:

1 04-22-24

2 05-03-24

3 07-08-24 VE

4

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SHEET

A9.3.4

OF 1 2 3

FINISH NOTES:

1. PROPER PREPARATION OF SURFACES AND ADEQUATE CLEANING FOR BONDING OF PAINT IS AN ABSOLUTE NECESSITY. START OF PAINTING INSTALLATION AND OPERATIONS INDICATES ACCEPTANCE OF SUBSTRATE SURFACE CONDITIONS AND FULL RESPONSIBILITY FOR COMPLETED WORK.

2. COORDINATE EXACT LOCATION OF CEILING LIGHTS, CEILING SUPPLY AND RETURN WITH MECHANICAL AND ELECTRICAL SUB-CONTRACTORS' LAYOUT.

3. WHERE DIFFERENT FLOOR FINISHES MEET, PROVIDE & INSTALL VINYL TRANSITION UNLESS OTHERWISE NOTED.

RCP LEGEND

2X4 LIGHT FIXTURE

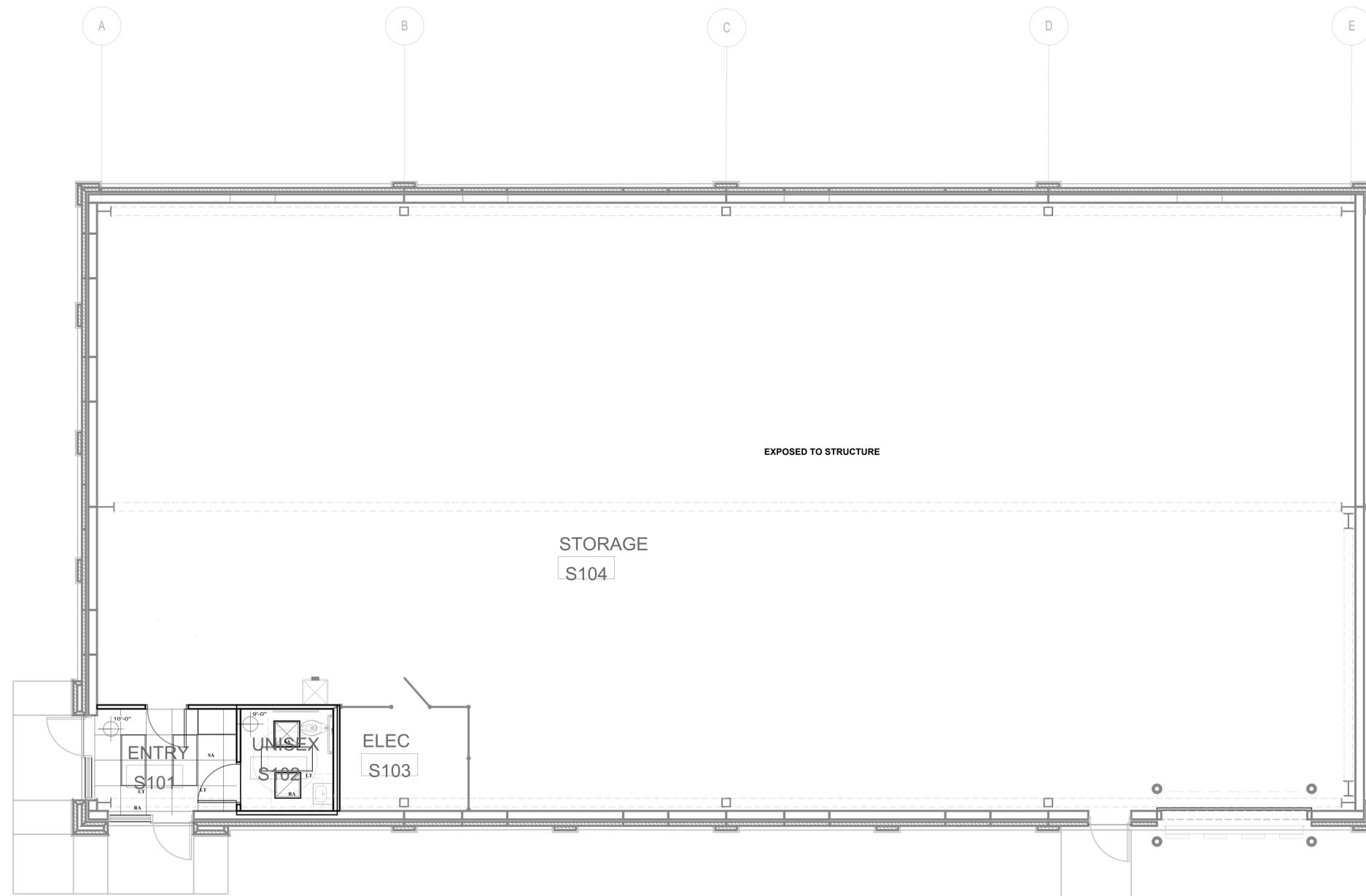
2X2 LIGHT FIXTURE

NEW SUPPLY AIR (SEE MECH LAYOUT)

NEW RETURN AIR (SEE MECH LAYOUT)

NEW EXHAUST FAN

NEW PENDANT LIGHT FIXTURE



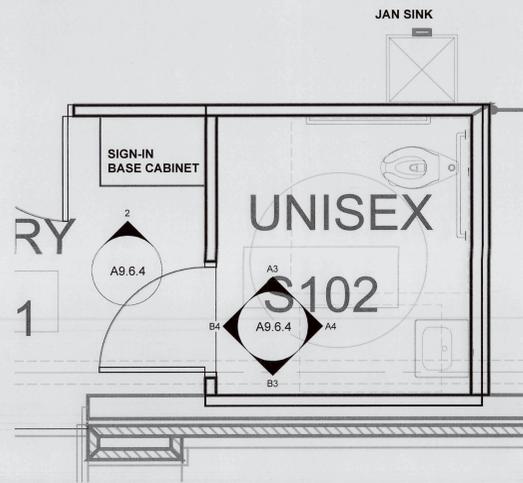
ALPHA BLDG SET 08-21-2024

REFLECTED CEILING PLAN - STORAGE FACILITY

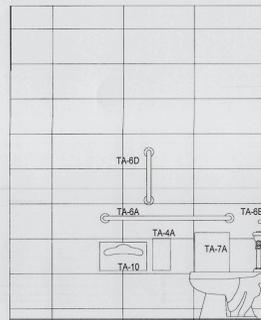
SCALE: 1/4" = 1'-0"



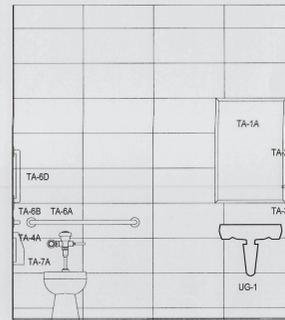
PROJ NORTH



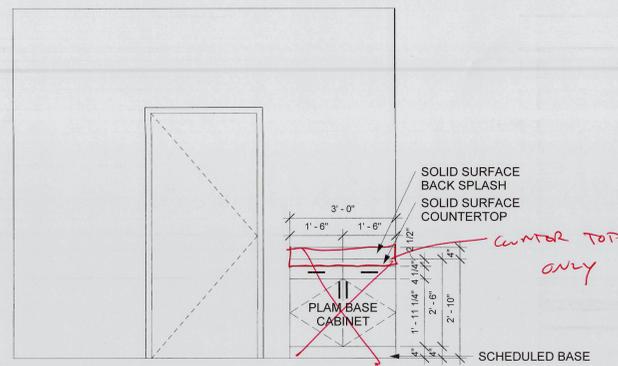
A1 ENLARGED PLAN - ENTRY S101 / UNISEX S102
A9.6.4 SCALE: 1/2" = 1'-0"



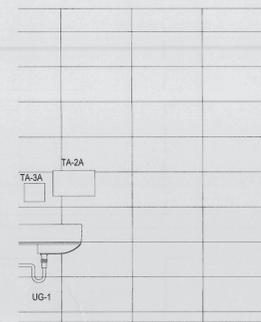
A3 ELEVATION - UNISEX S102 - (2)
A9.6.4 SCALE: 1/2" = 1'-0"



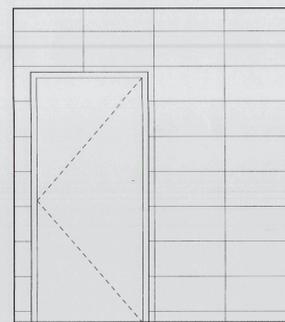
A4 ELEVATION - UNISEX S102 - (4)
A9.6.4 SCALE: 1/2" = 1'-0"



C1 MILLWORK ELEVATION - ENTRY S101
A9.6.4 SCALE: 1/2" = 1'-0"



B3 ELEVATION - UNISEX S102 - (3)
A9.6.4 SCALE: 1/2" = 1'-0"



B4 ELEVATION - UNISEX S102 - (5)
A9.6.4 SCALE: 1/2" = 1'-0"

ACCESSORY SCHEDULE	
TA-1A	MIRROR UNIT: 24X36
TA-1B	MIRROR UNIT: CUSTOM SIZE
TA-2A	PAPER TOWEL DISPENSER (FOLDED)
TA-2B	PAPER TOWEL DISPENSER (ROLLED)
TA-3A	SOAP DISPENSER
TA-4A	TOILET TISSUE DISPENSER (ROLLED)
TA-4B	COMBINATION TOILET TISSUE DISPENSER (ROLLED)
TA-4C	TOILET TISSUE DISPENSER (FOLDED)
TA-4D	TOILET TISSUE DISPENSER (JUMBO ROLLED)
TA-5A	COMBINATION TOWEL DISPENSER (FOLDED) / WASTE RECEPTACLE
TA-5B	COMBINATION TOWEL DISPENSER (ROLLED) / WASTE RECEPTACLE
TA-5C	MULTIPURPOSE SOAP / TOWEL DISPENSER
TA-6A	GRAB BAR 42
TA-6B	GRAB BAR 36
TA-6C	GRAB BAR 24
TA-6D	GRAB BAR 18
TA-7A	SANITARY NAPKIN DISPOSAL (WALL MOUNT)
TA-7B	SANITARY NAPKIN DISPOSAL (PARTITION MOUNT/DUAL ACCESS)
TA-8	ROBE HOOK
TA-9	WASTE RECEPTACLE
TA-10	SEAT COVER DISPENSER
TA-11	VENDING
TA-12	BAG SHELF
TA-13	HAND DRYER
CA-1	CHANGING STATION
CA-2	CHILD PROTECTION SEAT
UG-1	UNDERLAVATORY GUARDS
JA-1	MOP AND BROOM HOLDER
JA-2	PAPER TOWEL DISPENSER

SIGNAGE NOTE: SIGNAGE FOR RESTROOMS SHALL BE RAISED AND BRAILLE CHARACTERS AND PICTORIAL SYMBOL SIGNS. SIGN SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT SHALL BE 60 INCHES ABOVE THE FINISHED FLOOR TO THE CENTERLINE OF THE SIGN. 2010 ADA STANDARD FOR ACCESSIBLE DESIGN. ALL SIGNAGE BY GENERAL CONTRACTOR.

GM

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CONSULTANT



Administrative Building Renovations

Centralize Storage Facility

Newton County Board of Commissioners

Covington, Georgia 30014

INTERIOR ELEVATIONS - STORAGE FACILITY

JOB NO.	2520
DRAWN BY:	GM
CHECKED BY:	GM
DESCRIPTION:	SCH-REVIEW
DATE:	02.27.24
DESCRIPTION:	DD-REVIEW
DATE:	03.11.24
DESCRIPTION:	CD-REVIEW
DATE:	03.25.24
DESCRIPTION:	BID & CONSTRUCTION
DATE:	04.08.24

REVISIONS:	
1	04.22.24
2	05.03.24
3	07.08.24 VE
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SHEET

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OF

ALPHA BLDG SET 08-21-2024



ARCHITECT

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CONSULTANT



Interior Elevations - Mounting & Location Requirements
Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street, Covington, Georgia 30014

JOB NO.: 2320
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GENERAL

- SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. COORDINATE THESE DRAWINGS WITH EXISTING CONDITIONS AND COORDINATE ALL DIMENSIONS AND WALL LOCATIONS WITH THE ARCHITECTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS.
- THE STRUCTURAL DRAWINGS SHOULD NOT BE USED TO SIZE OR LOCATE DOORS, WINDOWS, TOILET PARTITIONS, OR NON-LOAD BEARING WALLS.
- SEE ARCHITECTURAL FOR ALL EXPANSION JOINT COVERS.
- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS.
- DESIGN LOADS: A. USED REACTIONS FROM KIRBY BUILDING SYSTEMS
B. WEIGHT OF MOVABLE PARTITION = 15 PSF x 11' x 165 PLF ALLOWABLE DEFLECTION = 5"
- ALL THE SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING, AND FRAMEWORK, ETC. AS REQUIRED.
- DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE IS ANY QUESTION ABOUT DETAILS OR DIMENSIONS, CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER FOR CLARIFICATION.
- WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.
- ISOMETRIC VIEWS ARE FOR ILLUSTRATIVE PURPOSES ONLY. NO INFORMATION ABOUT THE STRUCTURE OR ITS COMPONENTS SHALL BE TAKEN OR ASSUMED FROM THEM.
- CONTRACTOR SHALL TAMP THE VIRGIN SOIL AFTER EXCAVATION UNTIL NO VISIBLE SOIL RUTTING OCCURS FOR THE FULL SIZE OF THE FOOTING. IF SOIL TAMPING DOES NOT COMPLY TO THIS CRITERIA, THE ENGINEER SHALL BE NOTIFIED TO DETERMINE SOIL REMEDIATION REQUIREMENTS.

CONCRETE

- ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI 318- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
- CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS.

DESCRIPTION	28 DAY STRENGTH (PSI)	WEIGHT PER CUBIC FOOT (PCF)	SUMP AT POINT OF PLACEMENT	AGGREGATE	FIBERMESH OR WJM
FOOTING AND FOUNDATION WALLS	3000	145	4" +/- 1"	ASTM C33	NONE
SLAB ON GRADE	3000	145	4" +/- 1"	ASTM C33	FIBERMESH @ 15LB PER CUBIC YARD OF CONC.
EXTERIOR SLAB ON GRADE	4500	145	4" +/- 1"	ASTM C33	WJM 6X6 W4 X W4

FLY ASH SHALL NOT BE USED. WATER REDUCING ADMIXTURES MAY BE USED TO ACHIEVE SUMP REQUIREMENTS.

- SEE ARCHITECTURAL DOCUMENTS FOR JOINT SIZES AND FILLER MATERIALS.
- LOCATION OF ALL CONSTRUCTION JOINTS, EXCLUDING SLABS ON GRADE, SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL, SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER SUCH AS BEAMS, WALLS, SLABS, COLUMNS OR FOOTINGS. THIS IS NOT REQUIRED FOR SLABS ON GRADE OF 4" OR LESS IN THICKNESS.
- CONCRETE SLAB FLATNESS AND LEVELNESS TOLERANCES SHALL BE IN CONFORMANCE WITH ACI 117, AND SHALL BE SPECIFIED BY THE OWNER, UNLESS SUPERSEDED BY THE OWNER'S CRITERIA, CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
 - PROVIDE A FLOOR SURFACE WHICH IS TRUE AND LEVEL AND ACHIEVES F NUMBERS OF FF = 30 AND FL = 20 MINIMUM OVERALL COMPOSITE AND FF = 20 AND FL = 15 MINIMUM AT ANY INDIVIDUAL SECTION WHEN TESTED IN ACCORDANCE WITH ASTM E1155. REMOVE SURFACE IRREGULARITIES TO PROVIDE A CONTINUOUS SMOOTH FINISH.
 - ALL INTERIOR SLABS TO RECEIVE A SMOOTH TROUPEL FINISH UNLESS NOTED.
- UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATION, TESTING OF CONCRETE SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF ACI 318 SECTION 5.6 "EVALUATION AND ACCEPTANCE OF CONCRETE".
- CONSTRUCTION JOINTS (CNJT.) ARE TO BE LOCATED ON THE THRESHOLD SIDE OF A WALL.
- SEE DETAIL "TYPICAL SLAB ON GRADE JOINT LAYOUT".
- THE FOLLOWING PROCEDURES SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS.

STRUCTURAL STEEL

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CODE-REFERENCED AISC MANUAL OF STEEL CONSTRUCTION, SPECIFICATION FOR STEEL BUILDINGS, AND CODE OF STANDARD PRACTICE.
- STEEL FABRICATOR SHALL BE CURRENTLY CERTIFIED BY THE AISC QUALITY CERTIFICATION PROGRAM FOR STRUCTURAL STEEL FABRICATORS AND DESIGNATED AS "AISC CERTIFIED BUILDING FABRICATOR CATEGORY BU." CONTRACTOR SHALL SUBMIT IN WRITING TO THE STRUCTURAL ENGINEER, AT THE TIME OF PROOF OF CERTIFICATION FOR THE STEEL FABRICATOR'S SUPPLYING STRUCTURAL STEEL.
- MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
 - W-SHAPES + ASTM 992
 - HOLLOW STRUCTURAL SHAPES + ASTM A500 GRADE B
 - PLATES, BARS, ANGLES, C-SHAPES, MC-SHAPES + ASTM A36
 - PIPES + ASTM A53, GRADE B
 - WELDING ELECTRODES + E70XX
- ALL ANCHOR BOLTS SHALL BE SIZE AND STRENGTH SPECIFIED ON THESE DRAWINGS.
- ALL BEAM END CONNECTIONS SHALL BE AISC DOUBLE ANGLE BOLTED-WELDED CONNECTIONS WITH 3/4" DIA. A325N BOLTS UNO. THE WELD SHALL BE 1/4" WELD FULL LENGTH OF ANGLE PLUS 1" TOP AND BOTTOM. DESIGN SHEAR SHALL BE THE GREATER OF:
 - THE SHEAR REACTION SHOWN ON DRAWINGS (IF ANY).
 - 50% OF THE VALUE FROM THE "MAXIMUM TOTAL UNIFORM LOAD IN KIPO" TABLES OF THE AISC 13TH EDITION (BLACK BOOK) OR
 - THE MINIMUM NUMBER OF BOLTS IN SINGLE SHEAR AS FOLLOWS:

BEAM SHAPE	* OF 3/4" DIA. A325 BOLTS	LENGTH OF LL 3/2"x3 1/2"x5/16"
W8, W10	4	5 1/2
W12, W14	6	8 1/2
W16, W18	8	11 1/2
W21	10	14 1/2
W24	12	17 1/2
W27	14	20 1/2
W30	16	23 1/2

WHERE CONNECTIONS ARE SKEWERED OR THE DOUBLE ANGLE CONNECTIONS ABOVE WILL NOT FIT, THE FOLLOWING CONNECTIONS SHALL BE USED:

END OF BEAM CONNECTIONS

BEAM SHAPE	* OF 3/4" DIA. A325 BOLTS	1/2" SHEAR TAB LENGTH**
W8, W10	2	5 1/2
W12, W14	3	8 1/2
W16, W18	4	11 1/2
W21	5	14 1/2
W24	6	17 1/2
W27	7	20 1/2
W30	8	23 1/2

*WHEN THE SHEAR TAB CONNECTION ABOVE DOES NOT FIT IN THE BEAM WEB, USE THE ADJACENT SMALLER CONNECTION AND CLOUD ON SHOP DRAWINGS.

**WELD PLATE TO SUPPORTING MEMBER WITH 5/16" WELD ALL AROUND. SHEAR TAB TO BE 1/2" THICK X 4" WIDE.

- ALL BOLTED CONNECTION SHALL BE FULLY PRETENSIONED ACCORDING TO THE REQUIREMENTS OF "AISC MANUAL OF STEEL CONSTRUCTION" UTILIZING DIRECT TENSION INDICATORS OR AN APPROVED INSTALLATION METHOD IN WRITING FROM THE ENGINEER OF RECORD.
- WELDS SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY FOR THE TYPE OF WELD REQUIRED. WELDER CERTIFICATION SHALL BE SUBMITTED FOR REVIEW.
- WELD LENGTHS NOT NOTED SHALL BE FULL LENGTH. TERMINATE WELDS IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION AND AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE - STEEL (D11).
- HOLES LARGER THAN 1" DIA. SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER. HOLES SHALL BE PUNCHED OR DRILLED, EXCEPT AS OTHERWISE PERMITTED THE STRUCTURAL ENGINEER.
- PROTECT COLUMNS, BASE PLATES, ANCHOR BOLTS, AND ANY STEEL BELOW GRADE WITH AN APPROVED INORGANIC OR EPOXY ANTI-CORROSION COATING FIELD APPLIED PER MANUFACTURER'S INSTRUCTIONS.
- ALL EXPOSED STRUCTURAL STEEL INCLUDING LINTELS, AND AS NOTED ON DRAWINGS, SHALL BE GALVANIZED IN CONFORMANCE WITH ASTM A653 PARTNERS AND SHALL PARTS REQUIRING GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A153.
- THE CONTRACTORS SHALL DETERMINE, FURNISH AND INSTALL ALL TEMPORARY SUPPORTS SUFFICIENT TO SECURE THE STRUCTURAL STEEL FRAMING AGAINST LOADS PRESENT DURING ERECTION. TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL ALL CONNECTIONS TO THE LATERAL LOAD RESISTING SYSTEM, INCLUDING HORIZONTAL DIAPHRAGMS, ARE COMPLETE.
- THE GENERAL CONTRACTOR SHALL VERIFY THAT THE CORRECT BEAM AND GIRDER CAMBER IS PRESENT AFTER ERECTION AND BEFORE FLOOR SLAB IS Poured.
- SPlice CONTINUOUS STEEL ANGLES AND PLATES WITH PARTIAL-JOINT-PENETRATION SQUARE GROOVE WELDS (JOINT DESIGNATION B-FIA) UNO.
- STRUCTURAL STEEL FABRICATOR AND DETAILER SHALL SEE THE ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL STEEL NOT SHOWN OR CALLED OUT IN THESE DRAWINGS. IF SIZE IS NOT SHOWN IN ARCHITECTURAL DRAWINGS A REQUEST OR INFORMATION SHALL BE SENT TO THE STRUCTURAL ENGINEER THROUGH THE PROPER CHANNELS.
- GENERAL CONTRACTOR SHALL COORDINATE CONNECTIONS OF JOIST AND JOIST GIRDERS TO STRUCTURAL STEEL.

FOUNDATIONS

- THE FOUNDATION IS DESIGNED USING AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF PER GEOTECHNICAL REPORT BY G.E.C. DATED MARCH 28, 2019. JOB NUMBER: 1706992011. IF THE BEARING CONDITIONS VARY FROM WHAT IS SHOWN, OR IF THE SOIL BEARING CAPACITY IS QUESTIONABLE, THE ARCHITECT AND STRUCTURAL ENGINEER ARE TO BE NOTIFIED IMMEDIATELY.
- ALL BUILDING AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AT OPTIMUM OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM D698, CURRENT EDITION.
- A REGISTERED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER SHALL BE PRESENT TO MONITOR COMPACTION AND SETTLEMENT AND VERIFY THE BEARING CAPACITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ON-SITE GEOTECHNICAL ENGINEER.
- REMOVE ALL TOPSOIL, ROOT SYSTEM OR OTHER DELETERIOUS MATERIAL UNDER PROPOSED SLABS AND COLUMN FOOTINGS AND REPLACE WITH SUITABLE COMPACTED FILL OR CRUSHED STONE. STRUCTURAL ENGINEER'S DECISION ON QUESTIONABLE MATERIAL SHALL BE FINAL.
- BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING. WALK BEHIND COMPACTION EQUIPMENT IS REQUIRED WITHIN A DISTANCE OF TWO TIMES THE WALL HEIGHT.
- BACKFILL AGAINST STRUCTURAL WALLS SHALL NOT BE PERFORMED UNTIL WALL AND SLAB ON GRADE HAS OBTAINED SPECIFIED STRENGTH.
- IF REQUIRED BY THE GEOTECHNICAL REPORT OR THE ON-SITE GEOTECHNICAL ENGINEER, THE GROUND WATER TABLE SHALL BE LOWERED.
- ALL FOOTINGS TO BE CENTERED UNDER THE COLUMNS OR WALLS THEY SUPPORT, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL IN WRITING. THE CONTRACTOR SHALL LOCATE ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION.
- INSPECTIONS BY GEOTECH FIRM ARE REQUIRED FOR EXISTING SOILS CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS:
 - SITE PREPARATION: PRIOR TO PLACEMENT OF PREPARED FILL, THE INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE ABOVE-REFERENCED GEOTECHNICAL REPORT.
 - FILL PLACEMENT: DURING PLACEMENT AND COMPACTION OF FILL MATERIAL, THE INSPECTOR SHALL DETERMINE THAT THE PROPER FILL MATERIAL IS BEING USED AND THAT THE MAXIMUM LIFT THICKNESS IS FOLLOWED IN ACCORDANCE WITH THE ABOVE-REFERENCED GEOTECHNICAL REPORT.
 - EVALUATION OF IN-PLACE DENSITY: THE INSPECTOR SHALL DETERMINE, AT THE FREQUENCIES DETERMINED IN THE SOILS REPORT AND PROJECT SPECIFICATIONS, THAT THE IN-PLACE DENSITY OF THE COMPACTED FILL COMPLIES WITH THE ABOVE-REFERENCED GEOTECHNICAL REPORT.

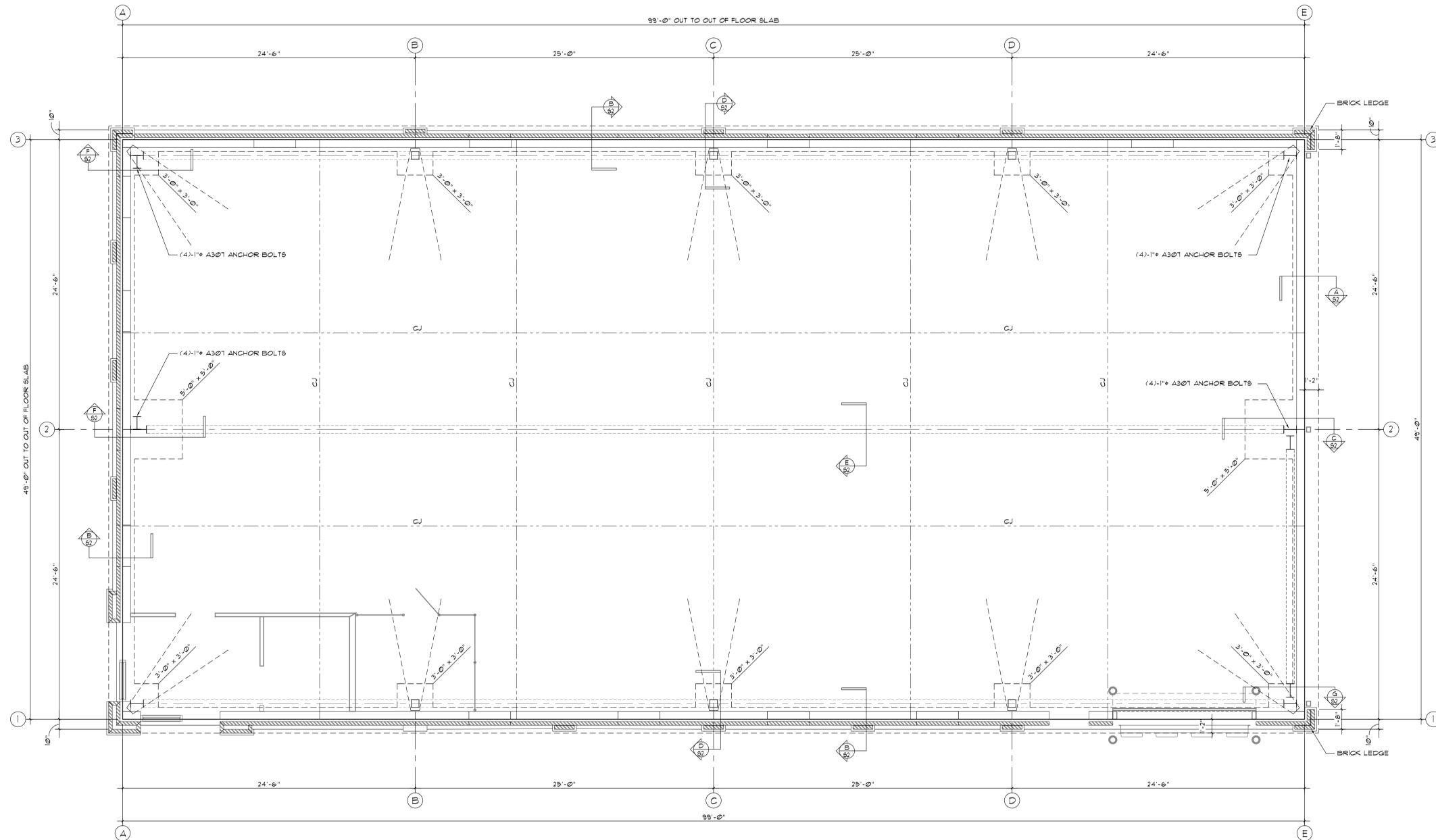
REINFORCING STEEL

- REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, AND SHALL BE FREE FROM ANY FORM RELEASE AGENTS.
- REINFORCING BENDS SHALL CONFORM TO CRSI.
- WELDED WIRE FABRIC SHALL BE SHEETS OF NEW BILLET STEEL COLD DRAWN, CONFORMING TO ASTM SPECIFICATION A185, GRADE 60.
- REINFORCING IS TO BE SUPPORTED AND SPACED WITH WIRE BAR SUPPORTS ACCORDING TO CRSI "PLACING REINFORCING BARS" UNLESS NOTED OTHERWISE.
- BAR SUPPORTS DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
- SPICES FOR CONTINUOUS BARS SHALL BE CLASS B, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
- PROVIDE BENT HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF ALL WALLS AND FOOTINGS. BENT BARS ARE TO MATCH THE SIZE AND SPACING OF HORIZONTAL BARS IN WALL OR FOOTING. USE CLASS B SPICE EACH SIDE.
- PROVIDE DIAGONAL BARS AT CORNERS OF OPENINGS IN SLABS AND CONCRETE WALLS. SEE DETAILS "RECTANGULAR OPENING WALL SLAB" AND "CIRCLE OPENING WALL SLAB." PROVIDE 2" CLEAR COVER BETWEEN THE OPENING AND THE CORNER REINFORCING BARS.
- WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN FOOTING.
- EXTEND ALL FOOTING REINFORCEMENT TO FAR SIDE OF FOOTING. SEE NOTE BELOW FOR CONCRETE COVERAGE.
- PROVIDE DOUELS IN WALL FOOTING TO MATCH WALL VERTICALS UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE CLASS B SPICE. USE STANDARD ACI 909 DISCREE HOOK WITH 3" CLEAR TO BOTTOM OF FOOTING UNLESS NOTED OTHERWISE. SEE DETAIL "CORNER BAR 4 SPICE LENGTH DETAIL (IN CONCRETE)".

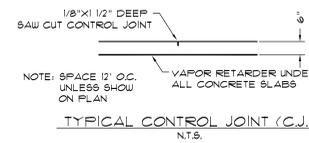
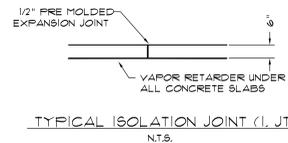
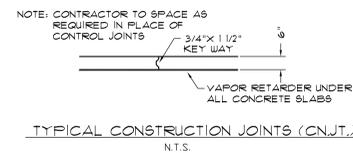
CLASS B SPICE OR CORNER BAR PER ACI 318

BAR #	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE	
	MIN. SPICE (INCHES)	MIN. (BAR DIA.)	MIN. SPICE (INCHES)	MIN. (BAR DIA.)	MIN. SPICE (INCHES)	MIN. (BAR DIA.)
4	29		29		24	
5	36	51	31	50	28	45
6	43		37		34	
7	63		54		49	
8	72		62		56	
9	81	72	70	62	63	56
10	89		78		69	
11	98		85		76	

- MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS. IF CONSTRUCTION DOCUMENTS INDICATE A LARGER COVERAGE, IT SHALL BE USED. IF STIRRUPS, TIES, OR SPIRALS ARE USED, COVERAGE SHALL BE TO THE OUTERMOST FACE OF THESE ELEMENTS.
 - FOOTINGS, CAISSONS, AND OTHER MEMBERS WHERE CONCRETE IS DEPOSITED AGAINST SOIL (EXCEPT SLABS ON GRADE) + 3"
 - CONCRETE EXPOSED TO WEATHER OR SOIL BUT IS NOT DEPOSITED AGAINST SOIL:
 - 6" BAR AND LARGER + 2"
 - 5" BAR AND SMALLER + 1 1/2"
 - CONCRETE NOT EXPOSED TO WEATHER OR SOIL:
 - SLABS, WALLS, JOISTS + 4" BAR AND LARGER + 1 1/2"
 - SLABS, WALLS, JOISTS + 1" BAR AND SMALLER + 3/4"
 - BEAMS AND COLUMNS + 1 1/2"

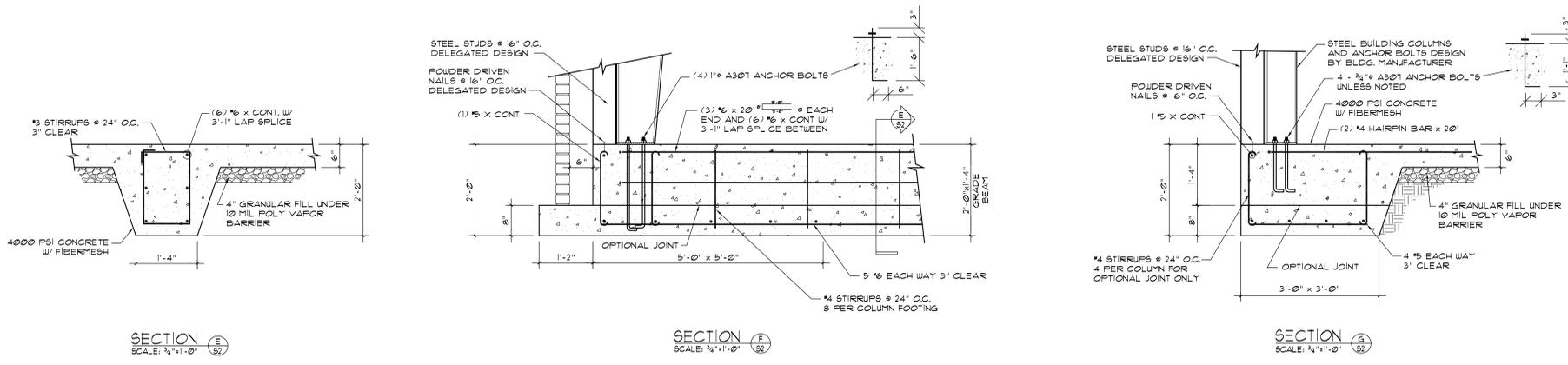
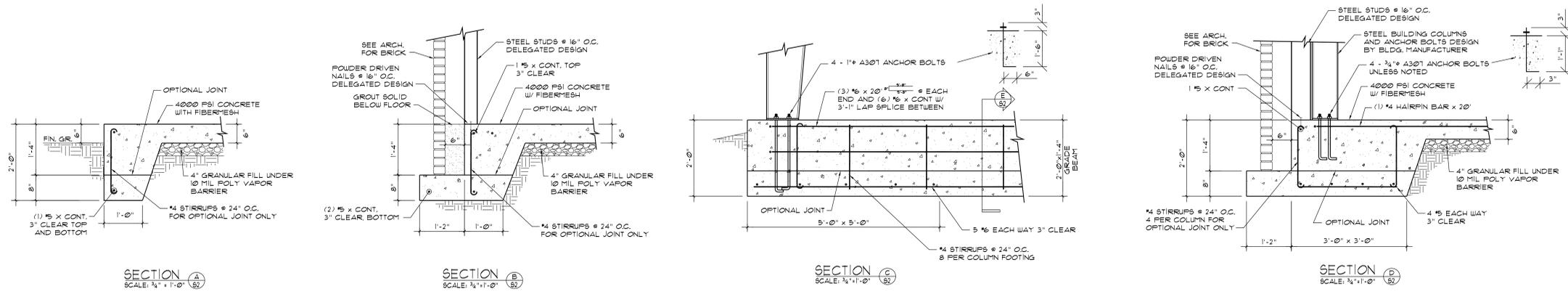


FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



SAW CUTTING CONTROL JOINTS IS AN ATTEMPT TO PARTIALLY CONTROL THE SHRINKAGE CRACKS THAT NATURALLY OCCURS IN CONCRETE DURING THE CURING PROCESS. SOMETIMES THE CONCRETE WILL CRACK BETWEEN CONTROL JOINTS.

ALPHA BLDG SET 08-21-2024



JOB NO.:	02320
DRAWN BY:	M. STEFANO
CHECKED BY:	G. KORNEGAY
DESCRIPTION:	SCH-REVIEW
DATE:	02.27.24
DESCRIPTION:	DD-REVIEW
DATE:	03.11.24
DESCRIPTION:	CD-REVIEW
DATE:	03.25.24
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REVISIONS:	
1	00.00.24
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PLUMBING SPECIFICATIONS

Provide all plumbing items indicated on the drawings, described herein or otherwise required for a complete and proper installation, including:
 A. Plumbing fixtures, fittings and equipment.
 B. Hot and cold water systems.
 C. Drain waste and vent piping systems.
 D. Indirect waste piping, including all valves, traps, piping and accessories for all equipment. Size per equipment requirements.

Comply with all applicable codes, standards and ordinances, including requirements of the Georgia State Minimum Standard Plumbing Code (2018 International Plumbing Code with all Georgia State Amendments), Georgia State Minimum Standard Gas Code (2018 International Gas Code with all Georgia State Amendments), and the DOJ 2010 ADA Standards for Accessible Design with Georgia Amendments of Rule 120-3-20.

The contractor shall not attempt to precisely size dimensions from these drawings to obtain construction dimensions and clearances. The contractor shall verify all actual dimensions and clearances. Although these plans are diagrammatic in nature, they shall be followed as closely as site conditions, new construction, and work by other trades shall permit. Deviations from these drawings, which are required to conform to the available space or to actual building construction, shall be made at no additional cost to the owner.

The submission of a bid or proposal will be construed as evidence that the contractor has familiarized himself with the plans and building site. Claims made subsequent to the proposal for materials and/or labor due to difficulties encountered will not be recognized unless these difficulties could not have been foreseen, even though proper examination had been made.

Fabrication or ordering of any material or equipment prior to verification of site conditions shall be done at the contractor's risk.

All equipment and material shall be new and of first quality. Equipment and material shall be the same or equal to the basis of design listed on these drawings.

Coordinate with all trades and verify all equipment rough-in items and locations with the equipment supplier or contractor. All re-work and corrections required due to lack of coordination shall be the contractor's responsibility, and done at no cost to the owner.

Submit shop drawings and material data submittals to the engineer for approval before installation. No substitutions shall be allowed without prior approval by the engineer. Product data for piping, insulation, valves, specialties and all fixtures and equipment scheduled and specified here. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

All equipment and flue materials shall be U.L. listed.

Installation shall comply with manufacturer requirements including all clearances recommended for proper operation of service. All serviceable parts shall be readily accessible.

Administrative building sewer and vent piping shall be cast iron or PVC with plenum wrap. See below for requirements of each. Cast-iron Storage Facility sewer and vent piping shall be PVC. See below for requirements of each.

Cast Iron Domestic ASTM A 888 or CSPI 301 hubless cast iron soil pipe and fittings with heavy duty ASTM C 1277 and ASTM C 1540 hubless-piping couplings; and coupled joints. Install cast-iron soil piping according to CSPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings." Slope at 1/8 inch per foot continuously toward public sewer. All aboveground piping shall be adequately supported.

PVC Underground: Solid-wall ASTM D2685 schedule 40 PVC. Install underground, PVC plastic drainage piping according to ASTM D2321. Above ground: Cellular-core ASTM F891 schedule 40 PVC. Install aboveground PVC piping according to ASTM D 2685. All aboveground piping shall be adequately supported. Wrap piping in return air plenums with fire barrier plenum rated wrap. Fittings: PVC Socket Fittings (ASTM D 2865, made to ASTM D 3311, drain, waste, and vent patterns) and to fit Schedule 40 pipe). Slope pipe sizes 6" and under at 1/8 inch per foot continuously toward public sewer. Slope pipe sizes 8" and larger at 1/16 inch per foot continuously toward public sewer.

Insulate aboveground floor drains, traps, and sanitary drain piping within 10 feet of drain receiving condensate and equipment drain water below 60" with 1" thick type I performed glass-fiber pipe insulation, 1-1/2" cellular glass, or 1" flexible elastomeric.

All above ground domestic water distribution piping shall be ASTM D 2846, SDR11, schedule 40 CPVC with socket fittings. All piping shall be adequately supported. Disinfect all domestic water piping after installation. All underground domestic water distribution piping 1" and smaller shall be ASTM D 876 & ASTM F 877 PEX with no fittings underground. All underground domestic water distribution piping 1-1/2" and larger shall be ASTM D 1785 schedule 40 PVC with ASTM D 2466 PVC socket fittings. Wrap piping larger than 2" in return air plenums with fire barrier plenum rated wrap.

DOMESTIC WATER PIPING CLEANING

A. Clean and disinfect potable domestic water piping as follows:

- Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
- Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either ANWA C651 or ANWA C652 or follow procedures described below:
 - Flush piping system with clean, potable water until dirty water does not appear at outlets.
 - Fill and isolate system according to either of the following:
 - Fill system or part thereof with water/chlorine solution with at least 50 ppm (50 mg/L) of chlorine. Isolate with valves and allow to stand for 24 hours.
 - Fill system or part thereof with water/chlorine solution with at least 200 ppm (200 mg/L) of chlorine. Isolate and allow to stand for three hours.
 - Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
 - Repeat procedures if biological examination shows contamination.
 - Submit water samples in sterile bottles to authorities having jurisdiction.
- Prepare and submit reports of purging and disinfecting activities. Include copies of water-sample approvals from authorities having jurisdiction.
- Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

Domestic water piping shall be insulated with Owens Corning type ASJ/SSL-II heavy density fiber glass with all service jacket. Insulation shall have a flame spread rating not to exceed 25 and a smoke density not to exceed 50 when tested in accordance with U.B.C. standard 42-1. Provide mastic on all joints and exposed ends of insulation. Insulate domestic cold water piping in unconditioned spaces such as exterior corridors, attic, basements, etc with 1/2" thick insulation for piping 1-1/4" & smaller and 1" thick insulation for piping 1-1/2" & larger. Insulate all domestic hot water supply and return piping with 1" thick insulation for piping 1-1/4" & smaller and 1-1/2" thick insulation for piping 1-1/2" & larger.

HW & CW Valves: Use pipe size valves, as shown below:

- Ball: Watts LFFBV-3C.
- Check: Watts #600 or #601S.

Fixture tailpieces, wall escutcheons, and traps for lavatories and sinks shall be brass tubing, semi-cast, or cast iron. All brass tubing shall be 17 gage, chrome plated. Exception: If the fixture tailpieces and traps are located in cabinets, the tailpiece & trap shall be PVC. Grid drains for public lavatories. Basket strainers for break room sinks.

Water Hammer Arresters shall comply with standard ASSE 1010, metal bellows type or copper piston type.

Lavatory Supports shall be type II, lavatory carrier with concealed arms and tie rod for wall-mounting, lavatory-type fixture. Include steel uprights with feet. For accessible-fixture support include rectangular steel uprights.

Lavatory/ Sink supply fittings: NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components - Health Effects," for supply-fitting materials that will be in contact with potable water. Standard: ASME A112.18.1/CSA B125.1. Supply Stops: Chrome-plated-brass, one-quarter-turn, ball-type valve with inlet connection matching supply piping. Wheel handle operation. Risers: Chrome-plated, soft-copper flexible tube for exposed applications and ASME A112.18.6, braided- or corrugated-stainless-steel, flexible hose for concealed behind cabinet applications.

Provide ADA Supply and Drain Protective Shielding Guards on ADA fixtures that piping is exposed. Supply and Drain Protective Shielding Guards shall comply with ICC A117.1 and Americans with Disabilities Act (ADA) requirements. Manufactured plastic wraps shall cover hot and cold water supplies, trap, and drain piping.

All pipe hangers, clamps and channels shall be adequately sized to carry pipe loads and prevent sagging.

All other materials not specifically described but required for a complete and proper installation of work of this section, shall be new, first quality of their respective kinds, and as selected by the contractor subject to acceptance by the engineer.

Lay out the plumbing system in careful coordination with the drawings, determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactory functioning system. Follow the general layout shown on the drawings in all cases except where other work may interfere. Unless shown otherwise, lay out all pipes to fall within partition, wall, floor, or roof cavities, and to not require furring other than as shown on the drawings.

Do not cut into or reduce the size of any load-carrying member without the prior approval of the architect. Install all pipes to clear all beams and obstructions.

Extend all plumbing vents above roof to parapet height.

Permanently close and make weatherproof any openings or penetrations of the building envelope made for plumbing systems. All wall and floor penetrations shall be sleeved. All exterior wall or foundation wall penetrations shall use a mechanical seal.

Coordinate all roof penetrations with architectural plans and building and roofing trades.

Provide shut-off balls valves and unions at all water connections to equipment and appliances.

Isolate all dissimilar metals with "EPOC" dielectric unions, except for brass or bronze valves with steel pipe.

Protect the potable water supply against backflow and siphonage from equipment, fixtures, etc., using approved backflow and anti-siphon devices.

Thoroughly clean all piping and equipment. Removing all dirt, rust, oil, and plaster.

Test Sanitary and storm drainage piping by plugging all openings and filling with water to a height equal to a 10 foot head. Allow to stand one hour or longer as required. Repair leaking joints and then re-test.

No work shall be covered until it has been inspected and accepted by the local authority and the engineer.

Domestic water piping tests: Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. Leave new, altered, extended, or replaced domestic water piping uncovered and unconnected until it has been tested and approved. Expose work that was covered or concealed before it was tested. Cap and subject piping to static water pressure of 50 psig (345 kPa) above operating pressure, without exceeding pressure rating of piping system materials; isolate test source and allow it to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired. Repair leaks and defects with new materials, and retest piping or portion thereof until satisfactory results are obtained.

The entire system shall be warranted for a period of one (1) year beginning with Owner's acceptance of the work. All labor and materials necessary to repair or replace the system, or portions thereof, during that time shall be warranted for a period of one (1) year from the repair or replacement.

Install piping in concealed locations, unless otherwise indicated and except in equipment rooms, and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Install piping to permit valve servicing. Install piping at indicated slopes. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install piping to allow application of insulation. Select system components with pressure rating equal to or greater than system operating pressure. Install escutcheons for penetrations of walls, ceilings, and floors. Verify final equipment locations for roughing-in.

Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

Seal fixtures to wall and floor surfaces with sealant, color to match fixture.

All vents thru roof (VTR) shall be offset a minimum of 10'-0" from all outside air intakes.

Provide Plastic Pipe Markers on all new aboveground plumbing piping that Comply with ASME A13.1. Minimum information indicating flow direction arrow and identification of fluid being conveyed. Install labeling on pipe at intervals of not more than 20 feet and at least once in each room.

Provide a complete through penetration fire stopping assembly for fire resistance rated wall assemblies. The through penetration assembly must be listed by an approved third-party test agency (UL), and include the entire listed assembly with all notations. Refer to architectural drawings for fire wall locations.

Approved manufactures: (Items submitted shall be approved by architect and engineer. Architect and engineer reserve the right to reject any item substituted for basis of design item for any reason.)

China Fixtures: American Standard, Kohler, Toto, Zurn, Sloan
 Faucets: Delta, 1&S Brass, Chicago Faucets, Zurn, Kohler, Grohe, Moen, Speakman, Symmons
 Supplies & Traps: Engineered Brass CO, McGuire, Charlotte Pipe, Brasscraft, IPS, Watts, Zurn
 Flush Valves: Sloan, Delany, Zurn, American Standard
 Floor Drains & Cleanouts: Zurn, Jay R Smith, Proset, Watts, Mifab, Wade, Jossam, Sioux Chief, Oatey
 Water Heaters: A.O. Smith, Lochinor, Bradford White, Watts, Rheem
 Tankless Electric Water Heaters: A.O. Smith, Rheem, Eemax, Chromatite
 Toilet Seats: Bemis, Centocore, Church Seats, Otonline, Benke, Zurn, Mainline
 Stainless Steel Sinks: Dayton, Elkay, Just, Kohler, Moen, Sterling, Franke
 ADA Protective Shielding Pipe Covers: Engineered Brass, McGuire, Plumberex, TRUEBRO, Zurn, Oatey
 Fixture Supports: MIFAB, Jay R. Smith, Wade, Watts, Zurn
 Wall Hydrants/ Hose Bibbs: MIFAB, Jay R. Smith, Wade, Watts, Woodford, Zurn
 Expansion Tanks: AMTROL, State, Watts, Wilkins
 Water Hammer Arresters: AMTROL, Jossam, MIFAB, PPP, Sioux Chief, Jay R. Smith, Wade, Watts, Zurn
 Outlet Boxes: Acorn, IPS, Oatey
 Brass Valves: American, Crane, Watts, Apollo
 Pumps: Myers, Zoeller, Blue Angel, Liberty
 Map Sinks: Stern Williams, Acorn, Fiat

FIXTURE AND EQUIPMENT SCHEDULE								
#	FIXTURE TYPE	WASTE BELOW FIXTURE FLOOR		WATER SUPPLY		WATER FIX. CONN.		MANUFACTURE AND NOTES
		COLD	HOT	COLD	HOT	COLD	HOT	
WC	ADA WATER CLOSET 1.28 GPF	3"	3"	1"		1"		KOHLER K-96057-B WATER CLOSET. SLOAN REGAL 111 SFSM-1.28 FLUSH VALVE. BEMIS 1655SSCT SEAT.
WC2	ADA TANK TYPE WATER CLOSET W/ RIGHT HAND TRIP LEVER 1.28 GPF	3"	3"	1/2"		1/2"		KOHLER K-3999-RA WATER CLOSET. BEMIS 1655SSCT SEAT.
LAV	ADA WALL-HUNG LAVATORY 0.5 GPM	2"	1-1/4"	1/2"	1/2"	1/2"	1/2"	KOHLER K-2005 LAVATORY. MOEN 8413F05 FAUCET.
SNK1	ADA DROP-IN CONFERENCE ROOM SINK 1.5 GPM	2"	1-1/2"	1/2"	1/2"	1/2"	1/2"	ELKAY DAYTON D11516 SINK. MOEN 5995 FAUCET.
SNK2	ADA TWO COMPARTMENT DROP-IN BREAK ROOM SINK 1.5 GPM	2"	1-1/2"	1/2"	1/2"	1/2"	1/2"	ELKAY DAYTON GE23321 SINK. MOEN 7594 FAUCET.
MOP	TERRAZZO MOP SINK	3"	3"	1/2"	1/2"	1/2"	1/2"	STERN WILLIAMS MTB-3624, T-10-VB FAUCET, T-3S HOSE & WALL HOOK, T-40 MOP HANGER, BP PANELS.
NFWH	NON-FREEZE WALL HYDRANT			3/4"		3/4"		WOODFORD B65.
EP	EQUIPMENT PLATFORM	1"						HOLDRITE 50-SIMP-W.
FD	FLOOR DRAIN WITH WATERLESS TRAP PRIMERS	2"	2"					WATTS FD-190-PR-60 FLOOR DRAIN. RECTORSAL "SURESEAL PLUS" WATERLESS TRAP PRIMERS.
OB	ICE MAKER BOX WITH WATER HAMMER ARRESTOR			1/2"		1/2"		WATER TITE AB0701HA. USE GUY GRAY FRB12AB01HA FIRE RATED BOX ON FIRE RATED WALLS. REFER TO ARCHITECTURAL PLANS FOR FIRE RATED WALLS.
FCO	FLOOR CLEANOUT	SEE DWG.	SEE DWG.					WATTS C012. PROVIDE CARPET MARKER WHEN INSTALLED UNDER CARPET.
GD	GRADE CLEANOUT	SEE DWG.	SEE DWG.					WATTS CO-200-RX-4-60.

GENERAL PLUMBING NOTES:

THE WORK INDICATED IS INTENDED TO SHOW THE GENERAL SCOPE OF DEMOLITION/NEW WORK AND IN NO WAY RELIEVES THE CONTRACTOR FROM PROVIDING ANY AND ALL WORK REQUIRED TO COMPLETE THE DEMOLITION/NEW WORK.

WHERE SURFACES ARE DAMAGED BY DEMOLITION, SHALL BE REPAIRED TO MATCH EXISTING (IN MATERIAL, SIZE, ALIGNMENT, JOINT WORK, FINISHES, COLOR, TEXTURE, QUALITY, ETC.) SUCH SURFACES IT DOES NOT INTERFERE WITH NEW WORK OF OTHER TRADES.

WATER HEATER & TANK SCHEDULE										
MARK	MANUFACTURER	MODEL NUMBER	TYPE	GALLON	ACTIVATION GPM	VOLTS	PHASE	AMPS	KW	SERVES
WH1	CHROMOTITE	CM-40L/277	TANKLESS ELECTRIC	N/A	0.20	277	1	40	11.080	CONFERENCE ROOM #108.
WH2	CHROMOTITE	R-63L/277	TANKLESS ELECTRIC	N/A	0.35	277	1	63	17.450	BREAKROOM #304.
WH3	CHROMOTITE	CM-15L/277	TANKLESS ELECTRIC	N/A	0.20	277	1	15	4.150	LACT #305.
WH4	A.O. SMITH	ENS-30	TANK TYPE ELECTRIC	30	N/A	208	1	30	4.5	CENTRALIZE STORAGE FACILITY

CONTRACTOR SHALL CONSULT THE ELECTRICAL DOCUMENTS FOR VOLTAGE AND PHASE.

PUMP SCHEDULE									
MARK	PUMP TYPE	BASIS OF DESIGN MANUFACTURER	MODEL NUMBER	RPM	WATTS	GPM	FEET HEAD	*ELECTRICAL	
								VOLTS	PHASE
DPI	DRAIN PUMP	LIBERTY	406	3450	1/8	2	15	120	1

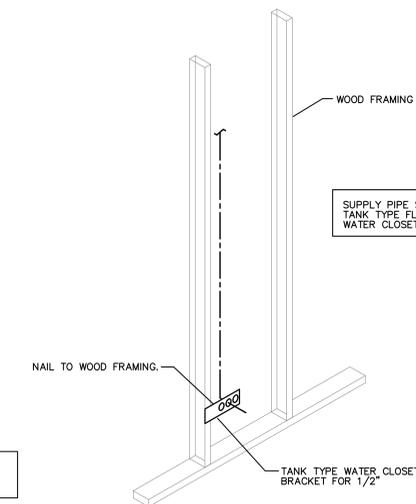
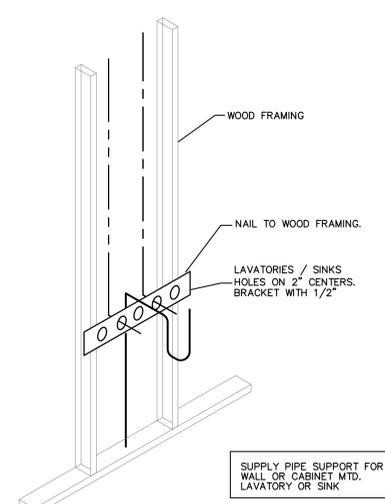
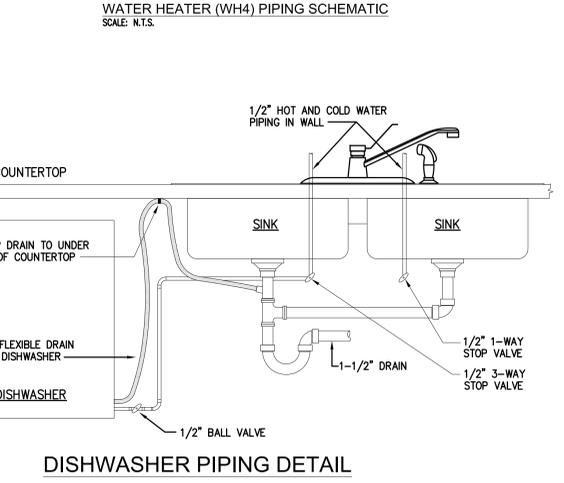
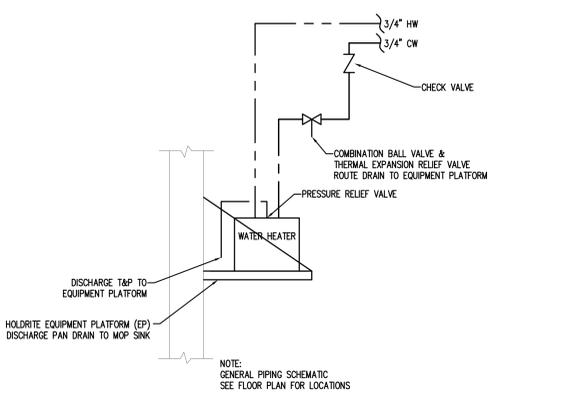
GENERAL FIRE PROTECTION NOTES:

Fire protection sprinkler system design is delegated to the contractor. The fire protection subcontractor is responsible for code compliance, research, design, coordination, and installation of a complete and functional hydraulically calculated sprinkler system (and standpipe system, if required) that meets the approval of and is in accordance with all applicable regulations and requirements of the following and as further specified:

Current edition of NFPA
 Applicable Codes
 Authorities having jurisdiction.

LEGEND

	SHUTOFF VALVE	-----	COLD WATER	(TYP)	TYPICAL	VTR	VENT THRU ROOF	
	CHECK VALVE	-----	HOT WATER	C.T.	COUNTER-TOP	AFF	ABOVE FINISHED FLOOR	
	PIPE UP	-----	HOT WATER RETURN	DN	DOWN	CW	COLD WATER	
	PIPE DOWN	-----	SEWER VENT	CONN.	CONNECTION	HW	HOT WATER	
	PDI UNIT	-----	SEWER	NTS	NOT TO SCALE	B.F.F.	BELOW FINISH FLOOR	
	DWGS.	-----	F	FIRE SPRINKLER	VT	VENT	FLR	FLR
	GREASE	-----	G	GAS		FFE	FINISHED FLOOR ELEVATION	
	OVERFLOW ROOF DRAINAGE	-----	S	STORM				



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ARCHITECT

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CONSULTANT

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PLUMBING SPECIFICATIONS

Administrative Building Renovations Centralize Storage Facility

Newton County Board of Commissioners
 1113 Usher Street
 Covington, Georgia 30014

JOB NO.: 02320
 DRAWN BY: JWK & KMP
 CHECKED BY: KMP
 DATE: 02.27.24
 DESCRIPTION: SGH-REVIEW
 DATE: 02.27.24
 DESCRIPTION: DD-REVIEW
 DATE: 00.00.24
 DESCRIPTION: CD-REVIEW
 DATE: 4.09.24
 DESCRIPTION: BID-CONSTRUCTION
 DATE: 00.00.24

REVISIONS:

1	00.00.24
2	05.24.24
3	07.09.24 VE
4	08.12.24
5	
6	
7	

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OF

FIRE PROTECTION BASIC MATERIALS AND METHODS (FIRE PROTECTION SECTION 1 OF 2)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Pipe, fittings, valves, and connections for combination sprinkler and standpipe systems.

1.2 REFERENCES

- A. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; The American Society of Mechanical Engineers.
B. ASME B16.3 - Malleable Iron Threaded Fittings: The American Society of Mechanical Engineers.
C. ASME B16.4 - Gray Iron Threaded Fittings: The American Society of Mechanical Engineers.
D. ASME B16.5 - Pipe Flanges and Flanged Fittings: The American Society of Mechanical Engineers; (ANSI/ASME B16.5).
E. ASTM A 47/A 47M - Standard Specification for Ferritic Malleable Iron Castings.
F. ASTM A 53/A 53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
G. ASTM A 795/A 795M - Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use.
H. NFPA 13 - Standard for the Installation of Sprinkler Systems; National Fire Protection Association.
I. NFPA 24 - Standard for the Installation of Private Fire Service Mains and Their Appurtenances; National Fire Protection Association.
J. NFPA 72 - National Fire Alarm Code.
K. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures.
L. 2018 International Fire Code (as adopted and amended by the Rules and Regulations of the Safety Fire Commissioner Chapter 120-3-3-04(3))
M. UL (FPEd) - Fire Protection Equipment Directory; Underwriters Laboratories Inc.; current edition.
N. UL 262 - Gate Valves for Fire-Protection Service; Underwriters Laboratories Inc..
O. Chapter 120-3-3 of the Rules of the Safety Fire Commissioner.
P. Georgia State Minimum Standard Building Code (International Building Code 2018 Edition, with Georgia State Amendments). NFPA Code, where more stringent, shall take precedence.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturers catalogue information. Indicate valve data and ratings.
B. Shop Drawings: Indicate pipe materials used, joining methods, supports, floor and wall penetration seals. Indicate installation, layout, weights, mounting and support details, and piping connections.
C. Project As-Built Documents: Record actual locations of components and tag numbering.
D. Operation and Maintenance Data: Include installation instructions and spare parts lists.

1.4 QUALITY ASSURANCE

- A. Fire Protection
1. The Contractor expressly warrants that the company performing the installation of the fire protection systems has demonstrated proficiency in the installation, start-up and adjustment of such systems by the successful performance of work of the nature specified herein on at least 5 commercial or institutional buildings, each containing minimum of 10,000 R2 of protected area or greater.
2. The Contractor further warrants that the aforesaid subcontractor has trained personnel, instruments, tools, and equipment to perform the installation specified.
3. The Contractor also warrants that the aforesaid installer has been in business performing services of the nature specified herein for at least five-years.
4. Provide a certificate of competency as issued by the Georgia State Fire Marshal's Office.
B. Conform to UL and FM requirements.
C. Valves: Bear UL and FM label or marking. Provide manufacturer's name and pressure rating marked on valve body.
D. Products Requiring Electrical Connection: Listed and classified as suitable for the purpose specified and indicated.

1.5 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver and store valves in shipping containers, with labeling in place.
B. Provide temporary protective coating on cast iron and steel valves.
C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

1.6 EXTRA MATERIALS

A. Provide additional materials as provided in these specifications and by NFPA.

PART 2 PRODUCTS

2.1 GENERAL SYSTEM AND PRODUCT REQUIREMENTS

- A. Sprinkler Systems: Conform work to NFPA 13.
B. Standpipe and Hose Systems: Conform to NFPA 14.
C. Welding Materials and Procedures: Conform to ASME Code.
D. Building is light hazard, ordinary hazard group, and extra hazard group. Pipe sizes shall be hydraulically calculated based upon flow test to be conducted by contractor.
E. Provide hydraulic calculations over the most remote 1500 square feet providing density required for hazard as indicated in NFPA 13. Minimum discharge pressure shall be 7.0 PSI. Minimum residual pressure at city water main in the street shall be 20.0 PSI. Provide 10.0 PSI minimum safety margin in hydraulic calculations at design point. Design area reduction per NFPA 13 is not allowed.
F. Basis of design: Contractor shall perform, or have performed, at the same time, a Fire Flow and Twenty Four Hour Static Test to assure flow equals or exceeds specified basis of design flow rate prior to preparing shop drawings, installing system or performing calculations. Prepare calculations based on confirmed flow data or basis of design flow data, whichever is lowest. Flow test shall be performed in accordance with NFPA 13 and Rules and Regulations of Safety Fire Commissioner, O.C.G.A. Chapter 120-3-3. Modify flow test pressures (static and residual), if pressure recorded in 24 hour test is lower than flow test pressures for one hour duration, to lowest hour test pressure.
G. No pipe shall be routed above electrical panels and equipment as required by National Electrical Code, on control side or beneath suspended mechanical equipment except where specifically required by Code, in which case, provisions shall be made for service access.
H. Inspectors test connection(s) shall discharge to the outside of the building in location(s) acceptable to the Architect.
I. Inside auxiliary drains, if needed, shall discharge in location(s) acceptable to the Architect. Drain and test connection piping, if in finished space, shall be installed concealed.

2.2 BURIED PIPING

A. Refer to Civil plans and specifications for piping type.

2.3 ABOVE GROUND WET SYSTEM PIPING

- A. Steel Pipe: ASTM A 795 Schedule 10 or ASTM A 53 Schedule 40, black. Piping 2" and smaller shall be threaded. Piping 2 1/2" and larger shall be grooved with rigid couplings.
1. Cast Iron Fittings: ASME B16.1, flanges and flanged fittings and ASME B16.4, threaded fittings.
2. Malleable Iron Fittings: ASME B16.3, threaded fittings and ASTM A 47/A 47M.
3. Mechanical Grooved Couplings: Rigid malleable iron housing clamps to engage and lock, "C" shaped elastomeric sealing gasket, steel bolts, nuts, and washers; galvanized for galvanized pipe. Reducing couplings are NOT allowed.
B. PIPE HANGERS AND SUPPORTS
A. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
B. Hangers for Pipe Sizes 2-inches and Over: Carbon steel, adjustable, clevis.
C. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
D. Vertical Support: Steel riser clamp.
E. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
F. Provide support for any vertical pipe 36" in length or greater except armovers. Provide supports 12"-0" O.C. maximum or at floor levels.
G. Threaded rods shall NOT be bent. Bending is permitted only in unthreaded sections of hanger rods. Bending shall occur as close to the hanger as possible. Provide a swivel assembly if required.

2.5 GATE VALVES

- A. Up to and including 2 inches:
1. Manufacturers:
a. Nibco Scott; Product T-104-0
b. Jenkins; Product 275U
c. Hammond; Product 18681
d. Stockham; Product B-133
e. Kennedy; Product Fig. 66
2. Bronze body, bronze trim, rising stem, handwheel, solid wedge or disc, threaded ends.
B. Over 2 inches:
1. Manufacturers:
a. Nibco Scott; Product F-607-OTS
b. Crane; Product 467
c. Jenkins; Product 825-A
d. Hammond; Product 1R1154
e. Stockham; Product G-634
f. Kennedy; Product Fig. 68
2. Iron body, bronze trim, rising stem pre-grooved for mounting tamper switch, handwheel, OS&Y, solid rubber covered bronze or cast iron wedge, flanged ends.

2.6 GLOBE VALVES

- A. Bronze body, rubber disc, union bonnet, 174 W.W.P., threaded ends.
B. Up to and including 2 inches:
1. Manufacturers:
a. Nibco-Scott; Product KT-65.
b. Kennedy; Product 97SD.
c. United; Product 125S.
d. Fairbanks; Product 4691-3.

2.7 ANGLE VALVES

- A. Bronze body, rubber disc, union bonnet, 174 non-shock cold water, threaded ends.
B. Up to and including 2 inches:
1. Manufacturers:
a. Nibco-Scott; Product T-301-W.
b. Kennedy; Product 985D.
c. United; Product 126S.
d. Fairbanks; Product 4691-3.

2.8 BUTTERFLY VALVES: Not allowed.

2.9 CHECK VALVES

- A. Iron body, U.L. Listed - F.M. Approved, swing type, bronze trimmed, bronze seat and disc, flanged ends.
B. Manufacturers:
1. Jenkins; Product 629
2. Crane; Product 375
3. Stockham; Product G-939
4. Mueller; Product A-2120-6
5. Kennedy; Product #126

2.10 INDICATOR POSTS

A. Cast iron base, top section, & cap; malleable iron wrench and locking device; steel stem; cast iron coupling; bronze target holder with aluminum "shut" and "open" targets; Underwriters Laboratories listed, and Factory Mutual approved; available for varying trench depth; and with adjustable depth features.

B. Manufacturers:

- 1. Kennedy Fig. Series 741.
2. Nibco NIP-1.
3. Stockham G-951.
4. Mueller A-2004.

2.11 UNDERGROUND GATE VALVES

A. 1/2"-inch and larger, iron body, non-rising stem, bronze stem, iron mounted disc with bronze rings, cast iron 2-inch square operating nut, flange, ends, AWWA spec. C-500.

B. Manufacturers:

- 1. Kennedy Fig. 701X.
2. Nibco F-609.
3. Stockham G-635.
4. Mueller A-2075-20.
5. M & H Fig. 3067.

PART 3 EXECUTION

3.1 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
B. Remove scale and foreign material, from inside and outside, before assembly.
C. Prepare piping connections to equipment with flanges or unions.
D. Storage: All piping shall be stored above ground and protected to prevent dirt and debris from entering pipe.

3.2 INSTALLATION

- A. Install sprinkler system and service main piping, hangers, and supports in accordance with NFPA 13 and these specifications.
B. Install standpipe piping, hangers, and supports in accordance with NFPA 14.
C. Install post indicator valve (PIV) upstream of backflow device.
D. Route piping in orderly manner, plumb and parallel to building structure. Maintain gradient.
E. Install piping to conserve building space, to not interfere with use of space and other work.
F. Group piping whenever practical at common elevations.
G. All piping shall be installed above ceilings in a concealed manner except where no ceilings are present
H. Sleeve pipes passing through partitions, walls, and floors.
I. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
J. Reducing Tees: Weld-on threaded outlet tees and Coupolet-300 by Bonney Forge Division of Enery Products Group, Central Sprink 701, "TEE-LET" 300 by Wert Manufacturing Corp., NAP-300 by North Alabama Pipe Corp., F400 by Grinnel Corp. may be used for side outlet reducing tees more than two pipe sizes smaller than main. Discs shall be retrieved and connected to pipe at point of cutting. Cutting shall comply with NFPA 13, Chapter 6.5.2.3.
K. Couplings may be used on gridded systems at only one end of each gridded branch line or on 2 1/2" or larger riser nipple to 2" or smaller branch line to facilitate connection provided that the coupling is connected to piping by a cut groove. Rolled grooves are not acceptable.
L. Pipe Hangers and Supports:
1. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
2. Place hangers within 12 inches of each horizontal elbow.
3. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
4. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
5. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
M. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.
N. Prepare pipe, fittings, supports, and accessories for finish painting. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
O. Do not penetrate building structural members unless indicated.
P. Provide sleeves when penetrating floors and walls. Seal pipe and sleeve penetrations to achieve fire resistance equivalent to fire separation required.
Q. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary jining fittings. Ensure flanges, union, and couplings are consistently provided.
R. Die cut threaded joints with full cut standard taper pipe threads with red lead and linseed oil or other non-toxic joint compound applied to male threads only.
S. Install valves with stems upright or horizontal, not inverted. Remove protective coatings prior to installation.
T. Provide gate valves for shut-off or isolating service. No valve shall be installed with the centerline, if horizontal, or wheel, if vertical, more than 9'-0" AFF.
U. Provide drain valves of main shut-off valves, low points of piping and apparatus.

3.3 CLEANING AND PROTECTION

- A. All materials, equipment and mechanical rooms shall be cleaned prior to the Final Inspection.
B. Wash down and scrub clean all mechanical room floors, walls, equipment bases and equipment.
C. Paint equipment where finish has been damaged requiring retouching of finish to match factory finish.
D. Chipped or scraped paint shall be retouched to match original finish.
E. All dents and sags in equipment casing shall be straightened.
F. All equipment, pipe, pipe fittings and appurtenances shall be free of rust and stains prior to substantial completion.
3.4 FINISHING EQUIPMENT AND MATERIAL
A. Use point systems specified in Division 9 for the substrates to be finished.
B. Paint shop-primed equipment.
C. Re-install electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
D. Paint all exposed pipes, unless otherwise indicated.
E. All ferrous fasteners and hanger supports not having a corrosion resistant plated finish shall be painted to prevent rust.
F. Paint all equipment, including that which is factory-finished, exposed to weather or to view on the roof and outdoors.
G. Paint all exposed un-insulated ferrous materials.

END OF SECTION

FIRE SUPPRESSION SPRINKLERS (FIRE PROTECTION SECTION 2 OF 2)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wet Type Sprinkler System
B. Dry-pipe sprinkler system.
C. System design, installation, and certification.
D. Fire department connections.

1.2 REFERENCES

- A. NFPA 13 - Standard for the Installation of Sprinkler Systems; National Fire Protection Association.
B. NFPA 14 - Standard for the Installation of Standpipe and Hose Systems; National Fire Protection Association.

1.3 SUBMITTALS

- A. Product Data: Provide data on sprinklers, valves, and specialties, including manufacturers catalog information. Submit performance ratings, rough-in details, weights, support requirements, and piping connections.
B. Shop Drawings:
1. Indicate hydraulic calculations, detailed pipe layout, hangers and supports, sprinklers, components and accessories. Indicate system controls.
2. Submit shop drawings, product data, and hydraulic calculations to Fire Marshall for approval and to Architect for review. Submit to Architect prior to submitting to Fire Marshal. Submit proof of approval to the Architect.
C. Project As-Built Documents: Record actual locations of sprinklers and deviations of piping from drawings. Indicate drain and test locations. Provide two (2) CD and three (3) paper copies of as-built drawings.
D. Manufacturer's Certificate: Certify that system has been tested and meets or exceeds specified requirements and code requirements. All certificates shall be signed by certificate holder.
E. Operation and Maintenance Data: Include components of system, servicing requirements, record drawings, inspection data, replacement part numbers and availability, and location and numbers of service depot.

1.4 QUALITY ASSURANCE

- A. Maintain one copy of referenced design and installation standard on site.
B. Conform to UL requirements.
C. Equipment and Components: Provide products that bear UL label or marking.
D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.
1.5 DELIVERY, STORAGE, AND PROTECTION
A. Store products in shipping containers and maintain in place until installation. Provide temporary inlet and outlet caps. Maintain caps in place until installation.
B. Store piping off floor and out of elements. Provide cover for piping to prevent dirt and debris from entering piping. Piping and fittings shall be rust free when installed.

1.6 EXTRA MATERIALS

- A. Provide extra sprinklers of type and size matching those installed, in quantity required by referenced NFPA design and installation standard.
B. Provide suitable wrenches for each sprinkler type.
C. Provide metal storage cabinet located at piping entrance to building.

PART 2 PRODUCTS

2.1 SPRINKLER SYSTEM REQUIREMENTS

- A. Sprinkler System: Provide coverage for entire building.
B. Occupancy: comply with NFPA 13.
C. Water Supply: Contractor shall perform or have performed an NFPA-13 water flow test data and a 24 hour static pressure test. Adjust flow test to lowest pressure recorded by 24 hour test of one hour duration.
D. Interface system with building fire alarm system.
E. Provide fire department connections where indicated on FP and civil drawings.
2.2 SPRINKLERS
A. Type and off/lets, Automatic Sprinkler, Reliable, Viking.
B. All sprinklers installed shall be by the same manufacturer.
C. Contractor shall select temperature ratings in accordance with NFPA 13, paragraph 8.3.2.
D. Suspended Ceiling Type: Recessed pendant type with matching flush push on escutcheon plate.
1. Finish: Chrome plated.
2. Escutcheon Plate Finish: Chrome plated.
3. Quick response Glass bulb type temperature rated for specific area hazard.
E. Gypsum Board Ceiling Type: Concealed pendant type with matching push on escutcheon plate.
1. Finish: Brass.
2. Escutcheon Plate Finish: Enamel, Verify color with architect.
F. Exposed Area Type: Standard upright type.
1. Finish: Brass.
2. Fusible Link: Quick Response Fusible solder link type temperature rated for specific area hazard.

2.3 PIPING SPECIALTIES

- A. Dry Pipe Sprinkler Alarm Valve: Check type valve with divided seat ring, rubber faced clapper to automatically actuate water motor alarm and electric alarm, with accelerator; with test and drain valve.
B. Water Motor Alarm: Hydraulically operated impeller type alarm with aluminum alloy chrome plated gong and motor housing, nylon bearings, and inlet strainer. By same manufacturer as Alarm Valve.
C. Electric Alarm: Electrically operated chrome plated gong with pressure alarm switch.
D. Water Flow Switch: Vane type switch for mounting horizontal or vertical, with two contacts; rated 10 amp at 125 volt AC and 2.5 amp at 24 volt DC. Notifier, Simplex, Potter, Grinnel.
E. Tamper Switch: Switch designed for installation on indicator valves with cased aluminum housing with red finish. Notifier, Simplex, Potter, Grinnel.
F. Fire Department Connections: Elkhart, Craker Standard, Potter Reamer.
1. Type: Free standing type with ductile iron pedestal chrome plated finish.
2. Outlets: Two way with thread size to suit fire department hardware; threaded dust cap and chain of matching material and finish.
3. Drain: 3/4 inch automatic drip, outside.
4. Label: "Sprinkler - Fire Department Connection".

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with referenced NFPA design and installation standard and these specifications.
B. Sprinklers shall be in line with and centered between down lights unless shown otherwise.
C. Install equipment in accordance with manufacturer's instructions.
D. Each floor of multi story buildings shall be zoned.
E. All dry system piping shall be galvanized down stream of dry valve.
F. Install buried shut-off valves in valve box. Provide post indicator.
G. Provide approved double detector check assembly at sprinkler system water source connection.
H. Locate fire department connection within forty (40'-0") feet of nearest fire hydrant and with sufficient clearance from walls, obstructions, or adjacent siamese connectors to allow full swing of fire department wrench handle.
I. Locate outside alarm gong on building wall at piping entrance to building.
J. Place pipe runs to minimize obstruction to other work.
K. Place piping in concealed spaces above finished ceilings.
L. Center sprinklers in two directions in ceiling tile and provide piping offsets as required.
M. Apply masking tape or paper cover to ensure concealed sprinklers, cover plates, and sprinkler escutcheons do not receive field paint finish. Remove after painting. Replace pointed sprinklers.
N. Where sprinklers are required under rectangular duct, the centerline of the sprinkler shall be minimum 6" under duct
O. Install air compressor on vibration isolators.
P. Flush entire piping system of foreign matter.
Q. Hydrostatically test entire system.
R. Require test be witnessed by Fire Marshal.
S. All drain piping shall discharge to the outside 6" maximum above grade unless noted otherwise.
T. Where sprinklers are required under oval or round duct, the centerline of the sprinkler shall be under the centerline of the duct.

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Ensure required tamper and flow devices are installed and connected as required to fire alarm system including but not limited to floor control valves, alarm check valve, elevator shaft isolation valve, Post Indicator Valve (PIV) and backflow device valves.

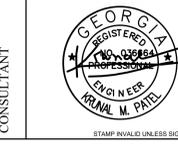
3.3 SCHEDULES

- A. System Hazard Areas:
1. Office & Public Areas and similar occupancies - Light Hazard Design; 0.10 GPM/sq. ft. over the most remote 1500 square foot.
2. Building Service Areas, Electrical Equipment Rooms, General Storage Areas, Mechanical Equipment Rooms, and similar occupancies - Ordinary Hazard Group 1 Design; 0.15 GPM/sq.ft. over the most remote 1500 square foot.

END OF SECTION



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Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners

Covington, Georgia 30014
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Table with 2 columns: JOB NO., DRAWN BY, CHECKED BY, DATE, DESCRIPTION, DATE, DATE, DESCRIPTION, DATE, DATE, DESCRIPTION, DATE, REVISIONS. Includes details for job 02320, drawing by JWK & KMP, and various revision dates from 02.27.24 to 07.09.24.

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SHEET
P0.2
OF

ALPHA BLDG SET 08-21-2024

MECHANICAL SPECIFICATIONS

- 1) Provide all heating, ventilation and air conditioning items indicated on the drawings, described in this specification or required for a complete and proper installation.
2) Comply with all pertinent codes, ordinances and regulations. Refer to website for Dept. of Community Affairs for current Codes Editions.
3) The contractor shall not attempt to precisely scale dimensions from these drawings to obtain construction dimensions and clearances.
4) Furnish without extra charge, any additional material and labor required to comply with the above codes and standards, even though the work may not be described in the contract documents.
5) All equipment and material shall be new and of first quality.
6) Cooperate and coordinate with other trades in order that all systems in the work may be installed in the best arrangement.
7) Examine the areas and conditions under which work of this section will be installed.
8) Avoid interference with structure, and with work of other trades.
9) All other materials not specifically described but required for a complete and proper installation shall be as selected by the contractor subject to acceptance by the Engineer.
10) All ductwork shall be fabricated from galvanized sheet metal duct and conform to SMACNA HVAC Duct Construction Standards—Metal and Flexible.
11) Flexible duct: Flex master; Atco UPC#36(R-6.0); Atco UPC#31 (R-8) or Thermaflex, Type 3, insulated, 5'-0" Maximum length unless noted otherwise.

DUCTWORK & SEALANTS:

MATERIALS

- A. Galvanized Steel Ducts: Hot-dipped galvanized steel sheet, ASTM A 653/A 653M FS Type B, with G90/Z275 coating.
B. Steel Ducts: ASTM A 1008/A 1008M, Designation CS, cold-rolled commercial steel.
D. Joint Sealers and Sealants: Non-hardening, water resistant, mildew and mold resistant.
Type: Heavy mastic or liquid used alone or with tape, suitable for joint configuration and compatible with substrates, and recommended by manufacturer for pressure class of ducts.
Surface Burning Characteristics: Flame spread of zero, smoke developed of zero, when tested in accordance with ASTM E 84.
Manufacturers: Hard coat Sure Grip 404, Marathon, Miracle D-618, MMM-800, Tuff-Bond No.29, United McGill United.
Non-hardening, water resistant, fire resistive, compatible with mating materials; liquid used alone or with tape, or heavy mastic.

DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible, and as indicated.
B. All dimensions are net inside metal measurements in inches unless otherwise shown.
C. Duct sizes shown include allowance for liner thickness unless otherwise noted, except sizes shown for lined round spiral and flat oval duct are sizes of perforated inner duct.
D. Longitudinal seams for Rectangular Duct: Fig 2-2 L-1(Pittsburgh) or L-2(button punch snap lock) for corner seams.
E. Where rectangular elbows and Ts are used, provide turning vanes in accordance with Figs 4-3 and 4-4.
F. Supply branch connections:
Low Pressure Rectangular Branch and Rectangular Diffuser Runouts: Fig 4-6, 45-degree entry with flange and gasket for connection to trunk with a minimum of six screws.
Low Pressure Round Runouts from Rectangular ducts: Manufactured fitting with 45-degree entry, flanged & gasket for connection to trunk with a minimum of six screws.
Branches From Medium Pressure Trunks: Conical tees (round and rectangular ducts).
Medium Pressure Round runouts from round ducts: Manufactured conical tee fitting, conical tap, Fig 3-6; or 45-degree conical lateral fitting, Fig 3-5 as indicated on drawings.
Round runouts to diffusers from round duct shall be manufactured fittings, conical tee fitting, conical tap, Fig 3-6; or 45-degree conical lateral fitting, Fig 3-5 as indicated on drawings.
Runout to Sidewall Grille/Register: Fig 4-6, 45 Degree entry.
Volume Control Dampers: Provide volume control damper with locking quadrant at branch connection fitting for runout to diffuser, unless:
Fitting is located over inaccessible ceiling (Refer to Grille Schedule on Drawings for neck mounted volume dampers).
Where otherwise noted.
K. Branch Duct Split: Fig 4-5 with volume control dampers.
L. Transitions (unless otherwise noted): Fig 4-7; Changes in duct sizes shall be made by transitions. Increase duct sizes gradually, not exceeding 15 degrees divergence whenever possible; maximum 30 degree divergence upstream of equipment and 45 degree convergence downstream. Transitions shall be provided between equipment and duct where sizes are not the same.

MEDIUM PRESSURE DUCTWORK AND FITTINGS (Spiral and Rectangular Duct)

- A. Manufacture or shop fabricate in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures as scheduled.

INSTALLATION

Install in accordance with manufacturer's instructions. Duct sizes indicated are net metal sizes, except for medium pressure rectangular, flat oval and spiral ducts. Duct sizes for runouts to Air Terminals and grilles, registers and diffusers shall match the size of the device unless otherwise noted. Install and seal metal and flexible ducts in accordance with SMACNA HVAC Duct Construction Standards – Metal and Flexible. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities. Seal all transverse joints in metal supply, exhaust and return ducts. Connect diffusers to concealed low pressure ducts with 5 feet maximum length of flexible duct held in place with metal strap or clamp. Secure flexible ducts to metal ducts with adhesive (except at terminal unit connection) and draw band or clamp.

SCHEDULES

- A. Ductwork Material:
1.Low Pressure Supply: Galvanized Steel.
2.Low Pressure Supply: Galvanized Steel, manufactured duct.
B. Ductwork Pressure Class:
Supply System downstream of Terminal Units: (Low Pressure) 2 inches.
Supply System upstream of Air Terminal Units: (Medium Pressure) 6 inches with Class A seal.
Return and Relief: 2 inch positive and negative.
General Exhaust: 2 inch negative.

- 14) Thermostats: New thermostat shall be provided by building HVAC control provider for the added terminal units.
15) Provide fire and smoke rated flexible connections between fans and ducts.
16) Install all equipment in accordance with manufacturer's instructions and recommendations including clearances recommended for proper operation or service.
17) Indoor duct insulation: Foil-faced fiberglass, Owens Corning type 75 or equal, 2.2" thick(R-6), unless the insulated duct is outside building insulation envelope (attic, crawlspace or unconditioned space) in which case the duct insulation thickness shall be 3P thick(R-8). Duct shall have a flame spread rating of not more than 25 and smoke developed rating of not more than 50.

18) Outside duct insulation: Insulate ducts and fittings with two, staggered layers of 7-inch foamed plastic sheet insulation, (Arma-Flex sheets) 6-pound density, having a thermal conductivity of not more than 0.28 at 75°F. Apply insulation with smooth side out of coating both surfaces to be joined completely with a thin coat of waterproof instant bonding adhesive.

19) All supply air ducts shall be insulated. Install acoustical duct liner on the interior surface of the first five (5) linear feet of supply duct downstream of all terminal units and fan powered units.

20) All low-pressure duct branches shall contain manual balancing dampers. Manual balancing dampers shall also be installed in the continuation of the main, if the main duct is smaller or the same size as the branch duct, or if the continuation of the main serves only one device.

21) Duct sizes shown on plans are clear, interior dimensions. Duct sizes shown has been enlarged to allow for liner at locations of interior liner.
22) Do not cut into or reduce the size of any structural member without the permission of the Architect.

23) Provide weather-proof flashing at all duct and pipe penetrations through the building walls and roof. As a minimum, flashings shall be designed and installed in accordance with SMACNA standards. Flashings shall be guaranteed weatherproof.

24) Support all HVAC units, ductwork, piping and other appurtenances from structure, provide vibration isolation at all fans which are not internally isolated. Provide hanger rod with built in rubber-in-shear isolator. Between drain pan and unit provide 4 shear rubber-in-shear isolator. Do not attach vibration isolator to drain pan. Do not screw or drive fasteners into non-structural components such as roof decks or non-load bearing walls.

25) Thoroughly clean all components and remove all dirt, scale, oil, and other foreign substances. Provide clean air filters for all equipment.

26) Perform all tests necessary to demonstrate the integrity of the complete installation to the approval of the Engineer and all other authorities having jurisdiction. Make all adjustments necessary and balance the completed system in accordance with the data shown. Balance the systems in accordance with NEBB or AABC standards. Acceptable tolerances shall be minus ten percent to plus five percent of all measurements. Balancing shall be done by an independent licensed (by NEBB or AABC) TAB contractor.

- a) Airflow rate at each supply, return and exhaust outlet or inlet.
b) Total airflow rate and total static pressure for each supply and exhaust fan. Test exhaust fans with room doors closed.
c) Motor speed, for multiple speed fans (e.g. high, medium, low).
d) For direct drive fans, provide speed settings and actual rpm, including ECM motor driven fans
e) Provide fan and motor rpm for belt driven fans. Provide sheave sizes.
f) Outside airflow rate to each HVAC unit and supply fan.
g) Motor current (and compare with nameplate data) at all motors.
h) Entering and leaving air dry-bulb and wet-bulb conditions at all cooling coils.
i) Heat output capacity for unit heaters, heating devices and coils (kW or MBH).
j) Manufacturer, model and serial number for each piece of HVAC equipment scheduled on drawings.
k) Calibrate thermostats to be within one degree of actual temperature at thermostat.
l) Verify that all HVAC devices operate as scheduled or indicated (i.e. ON-OFF, 2-stage, variable output (SCR heaters), etc.

27) The entire system shall be warranted for a period of one (1) year beginning with Owner's acceptance of the work. Compressors shall include a minimum of five (5) year parts only warranty from the manufacturer. All labor and materials necessary to repair or replace the system or portions thereof, during that time shall be warranted for a period of one (1) year from the repair or replacement.

SUBMITTALS AND SUBMITTAL PROCEDURES:

- a. Contractor shall review the submittal data and check for the purpose of compliance with safety requirements, verification of dimensions, contract documents and methods and means prior to submitting to design professional.
b. Transmittal each submittal electronically in PDF format.
c. Sequentially number submittal files and transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
d. Identify Project, the Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
e. Apply the Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
f. Submittal data for all items in project shall be submitted at one time.
g. Deliver submittals electronically to the Design Professional.
h. Schedule submittals to expedite the Project, and coordinate submission of related items.
i. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
j. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
k. Provide space for the Contractor and the Architect/ review stamps.
l. When revised for resubmission, identify all changes made since previous submission.
m. Distribute copies of reviewed submittals as appropriate.
n. Submittals not requested will not be recognized or processed.
o. Provide files containing only related items (such as piping, equipment, air distribution, etc.)

28) Instruct Owner's representative in the operation of the systems, using the operation and maintenance manual as a teaching aid.

30) Provide an operation and maintenance manual. As a minimum, the manual shall contain:

- a. A complete list of all equipment and appurtenances with equipment designations (per Drawings), manufacturers, and catalog numbers.
b. Copies of manufacturers' brochures and instructions for operation and maintenance of all mechanical equipment, including replacement parts lists.
c. Typed system operation and maintenance instructions, including inspection, lubrication, and service instructions and schedules.
d. List of names, addresses and phone numbers of distributors of all equipment and appurtenances.
e. Manufacturers' warranties.

31) Fire damper; curtain type with blades outside air stream except when located behind grilles when blades may be in air stream. Provide 1-1/2 hr class unless noted otherwise, vertical or horizontal mounting as shown on drawings with re-placable, rated, fusible link. Duct-Mounted Access Doors: Provide access doors for access to fire or smoke dampers having fusible links, doors shall be pressure relief access doors; and shall be outward operation for access doors installed upstream from dampers and inward operation for access doors installed downstream from dampers adjacent to and close enough to fire or smoke dampers, to reset or reinstall fusible links.

32) Grilles, Registers and Diffusers: Grilles, registers, and diffusers as indicated on the drawings have been selected from the catalog of the manufacturer noted as the basis of design. Sizes, types, and performance of the devices to be provided must be coordinated to insure conformity with design basis. Sidewall supply grilles and registers shall have vertical front blades; sidewall return grilles shall have horizontal blades. Grilles and registers with borders shall have felt or rubber gaskets cemented to the back face and holding screws not over 18 inches on centers around the perimeter. Holding screws shall be counter-sunk to fit flush with face of grille or register. Grilles passing air through partitions shall be as described for wall return grilles, one for each side of partition. Register dampers shall be of the gong-operated, opposed blade type, operated through the face of the register. Operating mechanism shall not project through the register face. Mounting frame shall be coordinated with architectural reflected ceiling plans. Construction shall be of steel or aluminum as scheduled, with frame type to match ceiling construction. Sidewall supply grilles and registers shall be double-deflection type, with vertical front vanes. Construction shall be of steel, with 3/4-inch blade spacing. Return air grilles, return air registers, exhaust grilles, exhaust registers and transfer air grilles located in ceilings shall be constructed of aluminum with "egg-crate" design, with 1/2-inch x 1/2-inch x 1/2-inch grids. Frame style shall be compatible with ceiling construction. Install wall grilles and registers with horizontal edges parallel to ceiling. Conicentric diffuser assemblies at roof top units shall have point-ready exterior finish and 1-inch lined supply and return ducts that transition to diffuser size within 24 inches vertically of the bottom of roof top unit curb.

33) Basic motor requirements: basic requirements apply to mechanical equipment motors, unless otherwise indicated. Motors 1/2 hp and larger: Polyphase, unless otherwise scheduled. Motors smaller than 1/2 hp: single phase. Frequency rating: 60 Hz. Service factor: according to NEMA MG 1, general purpose continuous duty, design type "B." Enclosure: open drip-proof, unless otherwise indicated. Efficiency: motors shall have a higher efficiency rating than industry standard average motor as delineated in IEEE Standard 112, test method 13. Thermal protection: where indicated or required, internal protection automatically opens power supply circuit to motor when winding temperature exceeds a safe value calibrated to temperature rating of motor insulation. Thermal protection device automatically resets when motor temperature returns to normal range, unless otherwise indicated.

34) Hangers and supports: Building attachments: concrete inserts or structural-steel fasteners appropriate for building materials, and beam clamps. Hanger materials: galvanized, sheet steel or round, threaded steel rod. Hangers installed in corrosive atmospheres: electrogalvanized, all-thread rod or galvanized rods with threads pointed after installation. Straps and rod sizes: comply with SMACNA's HVAC Duct Construction Standards--Metal and Flexible" for sheet steel width and thickness and for steel rod diameters. Duct attachments: sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials. Trapeze and riser support galvanized steel shapes and plates: steel shapes complying with ASTM A 36/A 36M.

35) Packaged Units: Outdoor packaged units, ground mounted, electrically controlled, electric cooling with supplemental electric heat units, as scheduled, utilizing inverter (for cooling) scroll hermetic compressor(s) with continuous unloading for cooling duty. Heating shall be accomplished with an electric heat section for supplemental heat. For unit with hot-gas reheat coil heating shall be done via electric heating coil. Unit shall discharge supply air horizontally. Unit shall exceed ASHRAE 90.1-2001 Energy Standards, be rated in accordance with ARI Standards 210/240 or 360 and 270, in accordance with UL Standard 199S, conform to ASHRAE 15, latest revision, be UL-tested and certified in accordance with ANSI Z21.47 Standards. Factory assembled, single-piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge, and thermal expansion valve. Unit cabinet shall be constructed of phosphatized/powderized galvanized steel coated with a baked enamel finish on all externally exposed surfaces. Coating shall be capable of withstanding 500 hours in salt spray. Coils shall have aluminum fins mechanically bonded to copper tubing. Evaporator fan compartment interior cabinet surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb. density, flexible fiberglass insulation, neoprene coated on the air side. Cabinet insulation shall meet ASHRAE Standard G2P, insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation. Cabinet panels shall be easily removable for servicing. Condenser coils shall have factory mounted, protective louvers guards. Unit shall have a factory-installed, sloped condensate drain pan made of a non-corrosive material, with a minimum 3/4-inch connection and comply with ASHRAE Standard 62. Unit shall have 1-inch pleated MERV 7 removable, disposable filters and filter access panel to provide filter unit controls shall consist of a self-contained low voltage control circuit. Provide crankcase heater. Refer to schedule for layout basis. Substitutions shall match the features of specified model. Provide condensate overflow switch (Rector seal Safe-T-Switch Model SSI or equivalent) wired to shut unit down in case of condensate overflow. Provide economizer with Honeywell W7220 controller for 2-stage operation. Refer to Schedule on Drawings for additional specifications.

36) All HVAC equipment such as AH, CU, EF, AC, HP, and RTU shall have visible nameplates with their associated marks on them.

1) SINGLE DUCT VARIABLE VOLUME UNITS

- A. Manufacturers:
1.Titus ESV
2.Other acceptable manufacturers offering equivalent products: Aerostat VF-PWM, Buenos BU20, Envrotech SDRWC, Krueger LMHS, Metal-Aire TH, EH Price, Trane VC, Tuttle Bailey SDV, Nalor Model 3001.
B. Basic Assembly:
1. Coatings: Minimum 22 gage galvanized steel.
2. Lining: Minimum 1/2-inch-thick neoprene or vinyl coated fibrous glass insulation, 1.5 lb./cu ft density, meeting NFPA 90A requirements and UL 181 erection requirements.
3. Plenum Air Inlets: Round stub connections for duct attachment.
4. Plenum Air Outlets: S slip and drive connections.
C. Basic Unit:
1. Configuration: Air volume damper assembly inside unit casing. Locate control components inside protective metal shroud.
2.Volume Damper: Construct of galvanized steel with peripheral gasket and self-lubricating bearings; maximum damper leakage: 2 percent of design air flow at 6 inches inlet static pressure.
3. Airflow Sensor: All terminals shall be equipped with a factory furnished and mounted multi-point, flow ring or cross arrangement inlet averaging aluminum or stainless-steel sensor which will provide a differential pressure signal that represents actual air flow within an accuracy of +5% regardless of inlet configuration. This accuracy shall be maintained when inlet duct varies from straight up to 90 elbow entrance conditions for both flexible and rigid metal duct applications. Straight inlet duct shall not be required for specified accuracy.
D. Electric Heating Coil:
1. Construction: ETL listed, slip-in type, proportionally modulated, open coil design 80/20 nickel/chrome elements, integral control box factory wired and installed on the terminal by the terminal manufacturer.
2. Controls:
a. Door interlock disconnect switch
b. Line and Control terminal blocks
c. Auto reset primary and manual reset secondary over temperature protection
d. Proportional electronic airflow proof sensor integrated with SCR controller
e. Control transformer.
f. Heater control panel housed in a NEMA 1 enclosure with hinged access door. Door shall be sized to allow easy access to all control components.
3. Proportional SCR Controller:
a. Airflow sensor: Proportional electronic airflow sensor shall be totally independent of the duct static pressure sensors/controls. Controller shall accept input from Building Automation System (BAS) to adjust the heater capacity based on the available airflow and heating demand. The heaters shall deliver up to maximum heating capacity (controlled by input signal from BAS) when air flow is at scheduled minimum with 55 degree entering air temperature. BAS shall reduce capacity (regardless of control signal) to limit leaving air temperature to a maximum of 95 degrees F.
b. Capacity control: Proportional SCR controller shall modulate the heater output according to the temperature control (BAS) signal. Controller shall be able to utilize at least one of the following control signals as input to modulate heater: Variable 0-10 volts, pulse width modulation or variable 2-20 mA variable current.
E. Automatic Damper Operator:
1. Electric Actuator: Modulating 24 volt with high limit.
F. Controller:
1. Digital: Factory mount DDC controller and damper actuator supplied by building automation control manufacturer within unit mounted enclosure.
2. Wiring:
a. Factory mount and wire controls. Mount electrical components in control box with removable cover. Incorporate single point electrical connection to power source.
b. Factory mount transformer for control voltage on electric and electronic control units. Provide terminal strip in control box for field wiring of thermostat and power source.
c. Wiring Terminations: Wire controls to terminal strip. Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
d. Provide transformer to power DDC controller. Wire to power circuit for system.

2) Ceiling Ventilator shall have corrosion resistant galvanized steel housing with four-point mounting capability. It shall be ducted to a cap on wall or roof using round ductwork. Blower assembly shall be removable, have a centrifugal-type blower wheel and a permanently lubricated motor designed for continuous operation. Non-metallic damper/duct connector shall be included. Fan and heater shall be separately controllable. Fan shall contain electric heater Air delivery shall be no less than scheduled and sound level no greater than listed in the schedule. All air and sound ratings shall be certified by HVI.

3) Acceptable Manufacturers are:

Table with 2 columns: Equipment Type and Manufacturer. Includes Air Handlers & Heat Pumps, Grilles, Registers & Diffusers, Fans, Dampers/Fire Dampers, Controls-provided with unit, and Controls-VAV.



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Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

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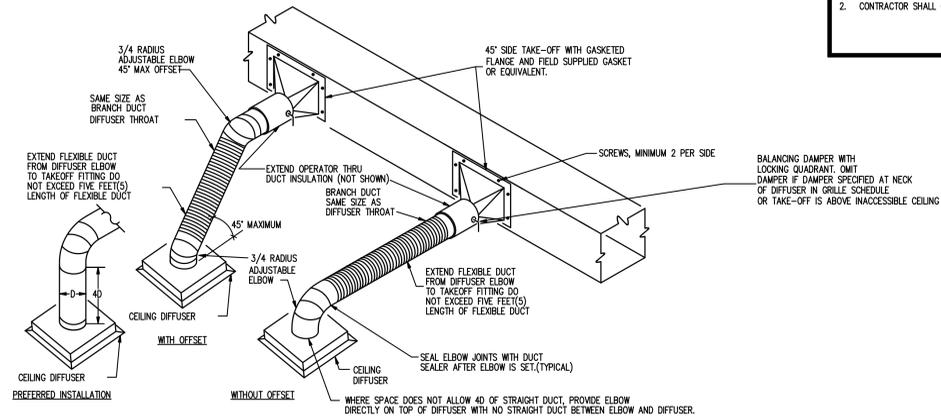
ALPHA BLDG SET 08-21-2024

TERMINAL UNIT SCHEDULE							
MARK	TITUS SIZE	MAX. CFM	MIN. CFM	MIN. INLET DUCT SIZE	COIL KW	MIN. # STAGES	VOLTAGE
TU 1-17	12	1,160	350	12	4.0	SCR	277/1
TU 2-15	10	750	250	10	2.0	SCR	277/1

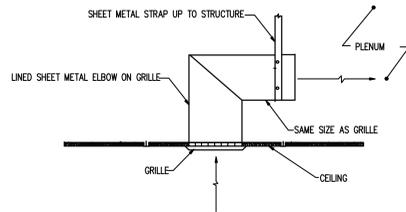
GENERAL NOTES:
1. CONTRACTOR SHALL COORDINATE WITH BUILDING CONTROL SYSTEM(BMS) PROVIDE BEFORE ORDERING TERMINAL UNITS.
2. CONTRACTOR SHALL COORDINATE WITH CONTROL SYSTEM PROVIDER TO INTEGRATE TERMINAL UNITS WITH DDC BMS SYSTEM.

GROUND MOUNTED PACKAGED UNIT SCHEDULE																			
MARK	AIRFLOW	SUPPLY AIR CFM	MIN. OUTSIDE AIR CFM	EXT. SP. IN. W.G.	NOMINAL TONS	EVAP. COIL		EVAP. COIL		SYSTEM COOLING		OUTSIDE AIR TEMP. CONDITIONS DB F	HEAT PUMP HEATING CAP MBH	ELEC. HEAT KW	POWER VAC/PH	SERVES	BASIS OF DESIGN CARRIER	WEIGHT LBS	NOTES
						ENTERING AIR DESIGN CONDITIONS DB F	LEAVING AIR DESIGN CONDITIONS WB F	ENTERING AIR DESIGN CONDITIONS DB F	LEAVING AIR DESIGN CONDITIONS WB F	TOTAL	SENSIBLE								
PU-1	HORIZONTAL	1750	250	0.60	5.0	77.6	64.7	55.0	54.0	57.5	43.5	95	---	12.0	208/3	103 STORAGE	50JC-W06M2A5-3ADAO	900	1:2:3:4:5:6

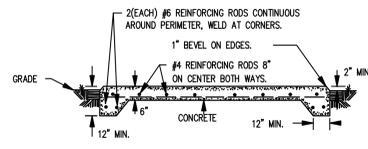
1. PROVIDE FILTERS, CONDENSATE TRAP AND PIPING, FLEXIBLE CONNECTIONS, SIDE CONNECTIONS, PROGRAMMABLE T-STAT, AND CONDENSATE P-TRAP TO DISCHARGE INTO ROOF DRAIN.
2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
3. PROVIDE MANUFACTURER'S CONDENSATE OVERFLOW SWITCH AND SUPPLY AIR SMOKE DETECTOR. ELECTRICAL SHALL INTERLOCK SMOKE DETECTOR WITH BUILDING FIRE ALARM SYSTEM.
4. PROVIDE MANUFACTURER'S ECOLUBE DIRECT DRIVE MEDIUM STATIC ECM MOTOR WITH VANE AXIAL INDOOR FAN. PROVIDE MOTORIZED OUTSIDE AIR DAMPER INTERLOCK TO OPEN WITH EVAPORATOR FAN. PROVIDE HORIZONTAL LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF.
5. PROVIDE MANUFACTURER'S HUMID-MIXER HOT GAS REHEAT COIL. UNDER HEATING EVAPORATOR FAN SHALL BE AT 100% OF SUPPLY AIR VOLUME.
6. VARIABLE SPEED COMPRESSOR COOLING ONLY UNIT. PROVIDE PHASE MONITOR/PROTECTION AND MANUFACTURER'S SYSTEM VU CONTROLS.



1 DIFFUSER RUN OUT DETAIL
SCALE: N.T.S.



2 RETURN AIR GRILLE DETAIL
SCALE: N.T.S.



3 EXTERIOR BASE FOR GROUND MOUNTEE PACKAGED UNIT DETAIL
SCALE: N.T.S.

MECHANICAL SYMBOLS & ABBREVIATIONS LEGEND	
NEW PIPE, DUCTWORK OR EQUIPMENT	DUCT SIZE: FIRST DIMENSION IS SIDE DRAWN
FLEXIBLE ROUND DUCTWORK	
FIRE DAMPER, SMOKE DAMPER, SMOKE DETECTOR	
CEILING SUPPLY DIFFUSER	
CEILING RETURN OR EXHAUST AIR	
S/A DUCT OUT OF TU BOX WITH DUCT LINER FOR THR FIRST FIVE FEET OF DUCT OUT OF TU BOX	
SIDEWALL REGISTER OR GRILLE	
CHANGE IN PIPE OR DUCT SIZE OR SHAPE	
REFRIGERANT PIPING	
CONDENSATE OR OTHER DRAIN PIPING	
ELBOW TURNED DOWN OR TURNED UP IN PIPING	
TERMOSTAT, ARROW SHOWS CONTROL WIRING PATH	
TIME CLOCK	
DIAMETER	
U.C. UNDER-CUT DOOR 3/4", UNLESS OTHER SIZE NOTED	
INDICATES EQUIPMENT ON PLANS; TOP ITEM SHOWS TYPE OF EQUIPMENT AND BOTTOM ITEM SHOWS SPECIFIC MARK NUMBER	
ITEM IN HEXAGON SHOWS AIR DEVICE MARK NUMBER. ITEM ABOVE LINE SHOWS NECK SIZE, ITEM BELOW LINE SHOWS AIR FLOW THROUGH DEVICE, AND NUMBER IN FRONT SHOWS QUANTITY IF MORE THAN ONE	
4 (S) 8" 300	
AFF ABOVE FINISHED FLOOR	
AH AIR HANDLING UNIT	
BD BYPASS DAMPER	
BTU, MBH BRITISH THERMAL UNITS, THOUSAND BRITISH THERMAL UNITS	
CAP CAPACITY	
CFM CUBIC FEET PER MINUTE	
CLG CEILING	
CU CONDENSING UNIT	
DB, WB DRY BULB TEMPERATURE, WET BULB TEMPERATURE	
EA, EG EXHAUST AIR, EXHAUST GRILLE	
EF EXHAUST FAN	
EXT SP EXTERNAL STATIC PRESSURE (USUALLY EXPRESSED IN INCHES OF WATER IN GAGE)	
HP HEAT PUMP UNIT	
MVD, VD MANUAL VOLUME DAMPER	
OA OUTSIDE AIR	
RA, RG RETURN AIR, RETURN GRILLE	
RTU PACKAGED ROOFTOP UNIT	
SA SUPPLY AIR	
VAC, PH VOLTS ALTERNATING CURRENT, NUMBER OF PHASES	
W, KW WATTS, KILOWATTS	
UH UNIT HEATER	
AUDIBLE/VISUAL ALARM DEVICE CONNECTED TO DUCT SMOKE DETECTOR	
AD ACCESS DOOR	
RADIUS ELBOW (R=1.5)	
VANED ELBOW	
MVD MANUAL VOLUME DAMPER (MVD), MOTOR OPERATED DAMPER (MOD)	

DUCTED DEHUMIDIFICATION UNIT									
MARK	CFM	POWER AMPS	CONDENSATION PPDB06F/602RH	REFRIGERANT	POWER/PHASE	BASIS OF DESIGN	NOTES		
DD-1	310	8.3A	130	R410A	115/1	APRILAIRE 8191	1:2:3:4:5:6:7:8:9		
DD-2	310	8.3A	130	R410A	115/1	APRILAIRE 8191	1:2:3:4:5:6:7:8:9		

1. PROVIDE CORD AND PLUG FOR DISCONNECT. PROVIDE MODEL 76 WALL MOUNTED ELECTRONIC HUMIDISTAT/CONTROLLER. MOUNT AT 4'-0" AFF. PROVIDE BUILT IN DIGITAL CONTROL WITH DISPLAY.
2. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
3. INLET AIR OPERATING CONDITIONS(DEHUMIDIFICATION) : 50T-90F.
4. NON-DUCTED DEHUMIDIFIER UNIT WEIGHT 115 LBS.
5. ROUTE CONDENSATE DRAIN AS SHOWN ON DRAWING.
6. A NORMALLY CLOSED DAMPER APRILAIRE MODEL 6506 SHALL BE INSTALLED IN THE INTAKE DUCT.
7. PROVIDE INLET GRILL WITH FREE FLOW DISCHARGE SUSPEND UNIT AT 9'-0" AFF.
8. PROVIDE COIL OUTLET SWITCH WIRED IN SERIES WITH FLOAT ACTIVATED SWITCH LOCATED AT DRAIN PAN. REFER TO DETAIL PROVIDED.
9. FLOAT ACTIVATED AND COIL OUTLET CONDENSATE SWITCHES SHALL BE PROVIDED AND INSTALLED BY HVAC CONTRACTOR.

FAN SCHEDULE									
MARK	CFM	EXT. SP IN W.G.	DRIVE TYPE	MOTOR WATTS/HP	MAX FAN RPM	MAX TIP SPEED FPM	POWER/PHASE	BASIS OF DESIGN	NOTES
FF-1	70	0.25	DIRECT	20 W	690	115/1	GREENHECK SP-B90		1:2:3

1. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
2. FAN SHALL BE INTERLOCKED WITH LIGHT SUCH THAT FAN COMES ON WHEN LIGHTS ARE ON. PROVIDE 15 MINUTE TIME DELAY.
3. CENTRIFUGAL CEILING MOUNTED FAN. PROVIDE MANUFACTURER'S GRILLE, ROUND DUCT CONNECTION, SOLID STATE SPEED CONTROL AND MOTOR WITH THERMAL OVERLOAD.

AIR DEVICE SCHEDULE										
MARK	SERVICE	NECK SIZE	FACE SIZE	MATERIAL	TYPE	PATTERN	MOUNTING TYPE	LAYOUT BASIS	TITUS	NOTES
S1	SUPPLY	SEE PLANS	24"x24"	STEEL	SQUARE CONC.	4-WAY	LAY-IN	TMS		1:2:3
S2	SUPPLY	SEE PLANS	NECK + 1-3/4"	STEEL	DOUBLE DEFLECTION REGISTER	2-WAY	DUCT MOUNT	300RS		1:3:4
S3	SUPPLY	SEE PLANS	24"x24"	STEEL	SQUARE CONC.	4-WAY	SURFACE	TMS		1:2:3
R1	RETURN	SEE PLANS	24"x24"	ALUMINUM	EGGRATE	---	SURFACE	50F		1:5
R2	RETURN	SEE PLANS	24"x12"	ALUMINUM	EGGRATE	---	LAY-IN	50F		1:5
R3	RETURN	SEE PLANS	24"x24"	ALUMINUM	EGGRATE	---	LAY-IN	50F		1:5
R4	RETURN	SEE PLANS	NECK + 1-3/4"	ALUMINUM	FULL LOUVERED FACE	---	SURFACE	350R		1:2
E1	RETURN	SEE PLANS	24"x12"	ALUMINUM	EGGRATE	---	LAY-IN	50F		1:6

1. PROVIDE STANDARD WHITE FINISH.
2. INSULATE BACK OF DEVICE.
3. BALANCE AIRFLOW TO QUANTITY SHOWN.
4. PROVIDE MANUFACTURER'S FACE OPERATED DAMPER THAT IS ACCESSIBLE FROM THE FACE OF DIFFUSER. PROVIDE 22.5-DEGREE DOUBLE DEFLECTION. OMIT FACE DAMPER WHERE NOTED ON DRAWINGS.
5. PROVIDE FULL SIZE LINED ELBOW ON TOP OF GRILLE.
6. PROVIDE FULL SIZE PLENUM ON TOP OF GRILLE FOR DUCT CONNECTION.

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STORAGE FACILITY MECHANICAL PLAN

Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners

1113 Usher Street
Covington, Georgia 30014

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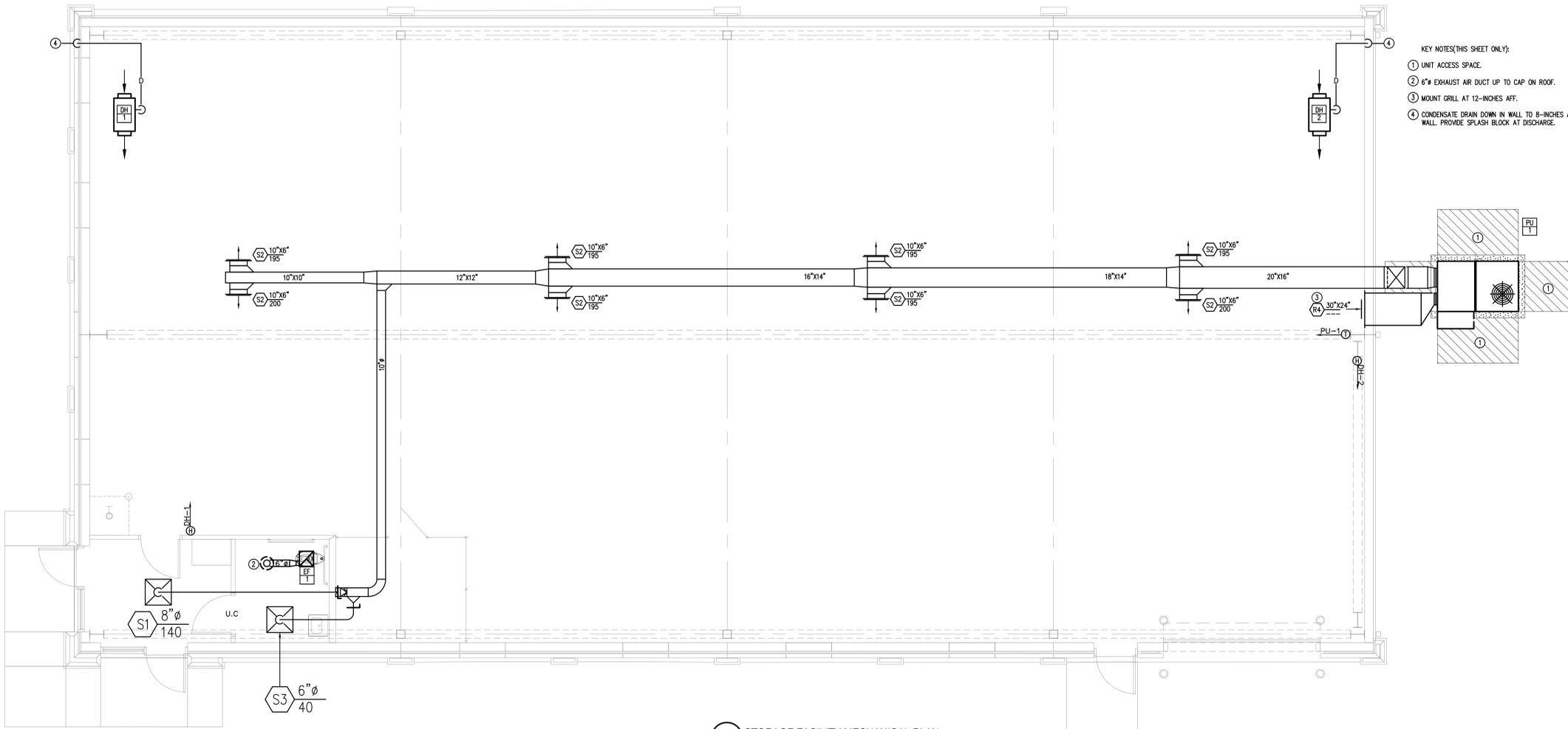
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- KEY NOTES (THIS SHEET ONLY):
- ① UNIT ACCESS SPACE.
 - ② 6" EXHAUST AIR DUCT UP TO CAP ON ROOF.
 - ③ MOUNT GRILL AT 12-INCHES AFF.
 - ④ CONDENSATE DRAIN DOWN IN WALL TO 8-INCHES AFF. PROVIDE 45-DEGREE ELBOW AT END OF PIPE TO GUIDE CONDENSATE AWAY FROM EXTERIOR WALL. PROVIDE SPLASH BLOCK AT DISCHARGE.

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

ALPHA BLDG SET 08-21-2024

ELECTRICAL SPECIFICATIONS

DIVISION 26
ELECTRICAL
SECTION A: GENERAL ELECTRICAL REQUIREMENTS

1. THESE PLANS AND SPECIFICATIONS APPLY TO ADMINISTRATIVE BUILDING RENOVATIONS AND CENTRALIZE STORAGE FACILITY, CONNINGTON, GEORGIA, THE WORK DESCRIBED BY THESE PLANS AND SPECIFICATIONS APPLY TO INDICATED PORTIONS AND MAY NOT BE MODIFIED OR REUSED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
2. ALL WORK SHALL BE PERFORMED BY LICENSED ELECTRICAL CONTRACTOR WITH MINIMUM OF TWO YEARS OF EXPERIENCE LIST OF PREVIOUS JOBS AND REFERENCES SHALL BE MADE AVAILABLE UPON REQUEST, CONTRACTOR SHALL PROVIDE ADEQUATE INSURANCE FOR PERSONNEL AND SHALL REPAIR ANY DAMAGE OCCURRING AS THE RESULT OF THIS PROJECT SITE AND RELATED PROPERTY.
3. ALL WORK SHALL BE PERFORMED IN A PROFESSIONAL MANNER IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE NFPA 70, ADA CODE, GA ACCESSIBILITY CODE, STATE OF GEORGIA ENERGY CODE AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
4. ALL PERMITS AND FEES SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
5. ALL EQUIPMENT, MATERIAL, AND DEVICES SHALL BE LISTED OR RECOGNIZED BY UNDERWRITERS LABORATORY OR ELECTRICAL TESTING LABORATORY AND USED AND INSTALLED IN ACCORDANCE WITH ITS LISTING.

6. ALL WORK PERFORMED SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION DATE EXCEPT FOR FUSES AND LAMPS IN LIGHT FIXTURES. UPON NOTIFICATION OF A PROBLEM, THE CONTRACTOR SHALL INVESTIGATE THE PROBLEM WITHIN 48 HOURS UNLESS A DIFFERENT TIME PERIOD IS AGREED TO, THE CONTRACTOR SHALL INVESTIGATE, REPAIR OR REPLACE ALL FAULTY EQUIPMENT WITHIN A REASONABLE TIME PERIOD WITHOUT CHARGE TO THE OWNER.
7. THE TERM "PROVIDE" SHALL BE UNDERSTOOD TO MEAN OBTAIN THE ITEM DESCRIBED, INSTALL ITEM IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND MANUFACTURER'S RECOMMENDATIONS.
8. ALL PENETRATIONS MADE IN FIRE RATED BUILDING PORTIONS SHALL BE SEALED WITH A LISTED RESISTANT MATERIAL SUITABLE FOR THE APPLICATION.

9. ALL INSTALLATIONS OF ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION.
10. PLANS ARE DIAGRAMMATIC AND SHOW THE LOCATION OF THE EQUIPMENT, RACEWAY AND FIXTURES, AND ARE NOT TO BE SCALED, ALL DIMENSIONS SHALL BE VERIFIED AT THE BUILDING SITE.

11. CONTRACTOR SHALL VERIFY AND COORDINATE ALL EQUIPMENT AND DEVICE LOCATIONS WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
12. EQUIPMENT BREAKER AND WIRING REQUIREMENTS: THE CONTRACTOR SHALL SUBMIT FOR REVIEW A TABULATED LIST OF BREAKER AND WIRING REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT REQUIRING POWER AS SPECIFIED IN DIVISION 23. REQUIREMENTS SHALL BE IDENTIFIED BY HORSEPOWER OR KW OPERATING AMPERAGE, REQUIRED VOLTAGE AND PHASE REQUIREMENTS, AND MANUFACTURER'S SUGGESTED OVERCURRENT CIRCUIT PROTECTION DEVICE SIZE AND MINIMUM CIRCUIT AMPACITY SIZE, WHERE THE ELECTRICAL REQUIREMENTS DIFFERS FROM THE MANUFACTURER'S REQUIREMENTS FROM THE BRANCH CIRCUITRY SHOWN ON THE ELECTRICAL DRAWINGS (WHEN USING THE BASIS OF DESIGN UNIT LISTED IN THE MECHANICAL SCHEDULES/SPECIFICATIONS OR A SIMILAR UNIT OF THE SAME SIZE OR RATED MANUFACTURERS, THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS TO THE BRANCH CIRCUITRY PER THE CURRENT NEC. NO ADDITIONAL COST TO THE OWNER, ARCHITECT/ENGINEER APPROVED VALUE ENGINEERING CHANGES TO EQUIPMENT, THE COST MUST BE INCLUDED IN THE VALUE ENGINEERING OVERALL CHANGE ORDER. COSTS DUE TO ADJUSTMENT IN BRANCH CIRCUITRY TO EQUIPMENT DUE TO VALUE ENGINEERING CHANGES WILL NOT BE ALLOWED FOR THE OVERALL VALUE ENGINEERING CHANGE ORDER HAS BEEN APPROVED. IN ALL CASES, BREAKER AND WIRING REQUIREMENTS FOR MECHANICAL EQUIPMENT MUST BE PROVIDED TO THE ENGINEER BEFORE OR AT THE SAME TIME AS THE SHOP DRAWINGS FOR THE ELECTRICAL DISTRIBUTION GEAR OR EQUIPMENT, IN NO CASE SHALL THE ELECTRICAL DISTRIBUTION GEAR OR EQUIPMENT BE ORDERED OR BRANCH CIRCUITRY ROUGHED IN PRIOR TO ENGINEER REVIEW AND COMMENT ON THIS DOCUMENT, ANY EQUIPMENT ORDERED OR BRANCH CIRCUITRY ROUGHED IN ON THE JOBSITE WITHOUT THIS REVIEW AND COMMENT WILL BE TOTALLY AT THE CONTRACTORS RISK.

SECTION B: BASIC MATERIALS
1. ALL CONDUCTORS USED FOR 600 VOLTS OR LESS SHALL BE HIGH GRADE COPPER CONDUCTORS WITH 75 DEGREE C THIN OR THIN THERMOPLASTIC INSULATION. ALL CONDUCTORS SHALL BE MADE IN THE USA. ALL CONDUCTORS ROUTED IN UNDERGROUND CONDUIT SHALL BE RATED FOR WET LOCATIONS.
2. ALL INTERIOR WIRING SHALL BE 15 AMP POWER AND LIGHTING WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR "MC" CABLE (IF NOT EXPOSED) FOR ALL INTERIOR CIRCUITS UNLESS OTHERWISE NOTED. IF "MC" CABLE IS USED, HOMERUNS SHALL BE IN 1/4 IN. EMT. POWER CIRCUITS FOR HVAC EQUIPMENT SHALL BE IN 3/4" ELECTRICAL METALLIC CONDUIT MINIMUM. ALL CONDUIT SHALL BE SUPPORTED FROM BUILDING STRUCTURE. IT SHALL NOT BE SUPPORTED FROM DUCTWORK, PIPING, CEILING GRID OR CEILING GRID SUPPORTS, OR ANY OTHER NON-STRUCTURAL ITEM. CONDUIT SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC. CONDUIT IN EXPOSED STRUCTURE AREAS SHALL BE EMT. GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN AREAS WHERE IT WILL BE EXPOSED TO PHYSICAL DAMAGE.
3. CONDUIT UNDERGROUND SHALL BE SCHEDULE 40 PVC. IF MORE THAN ONE CONDUIT IS PROVIDED IN A SINGLE TRENCH, THE CONDUIT SHALL BE RACKED WITH SPACERS EVERY FOUR FEET TO MAINTAIN A MINIMUM SPACING BETWEEN CONDUIT OF TWO INCHES. BACKFILL USED FOR UNDERGROUND INSTALLATIONS SHALL BE FREE OF FOREIGN MATTER, WHERE EXPOSED TO WEATHER, CONDUIT SHALL BE GALVANIZED RIGID STEEL OR INTERMEDIATE METALLIC CONDUIT. THE CONDUIT SHALL BE TERMINATED WITH LISTED FITTINGS AND ALL CONDUIT ENDS SHALL BE REAMED AND SMOOTH. ALL CONDUIT ENDS IN BOXES SHALL BE PROVIDED WITH INSULATED BUSHINGS.
4. A #12 INSULATED COPPER GROUND CONDUCTOR SHALL BE INCLUDED IN ALL BRANCH CIRCUITS RATED 20 AMPERES. ALL OTHER CIRCUITS AND FEEDERS WILL BE PROVIDED WITH AN INSULATED COPPER CONDUCTOR SIZED AS NOTED OR IN ACCORDANCE WITH THE NEC, WHICHEVER IS GREATER.
5. THE MINIMUM SIZE OF ALL CONDUCTORS NOT OTHERWISE INDICATED IS #12 AND THE MINIMUM SIZE OF ALL CONDUIT UNLESS OTHERWISE INDICATED IS 1/2 IN.
6. ALL JUNCTION BOXES SHALL BE PROVIDED WITH COVERS AND ALL UNUSED OPENINGS SHALL BE PLUGGED. ALL JUNCTION BOXES SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE. COVERS OF BOXES SHALL BE LABELED WITH THE CIRCUIT NUMBER WITH A BLACK PERMANENT MARKER IN 3/4 IN. HIGH LETTERS (LEGIBLE HANDWRITTEN LETTERING IS ACCEPTABLE).
7. ALL OUTLET BOXES SHALL BE SQUARE METAL BOXES. PROVIDE PLASTER RINGS FOR ALL OUTLET BOXES CONTAINING DEVICES TO PROVIDE A FIRM MOUNTING SUPPORT FOR THE DEVICE.
8. ALL CONVENIENCE RECEPTACLES SHALL BE SPECIFICATION GRADE 20 AMP RECEPTACLES, OWNER TO SELECT COLOR, TAMPER RESISTANT (TYPE "TR").
9. ALL LIGHT SWITCHES SHALL BE SPECIFICATION GRADE 20 AMP TOGGLE SWITCHES FULL LOAD RATED FOR TUNGSTEN-HALOGEN LAMPS, OWNER TO SELECT COLOR.
10. PROVIDE FACEPLATES FOR ALL RECEPTACLES AND SWITCHES. COORDINATE STYLE AND COLOR WITH OWNER'S PROJECT MANAGER.
11. PROVIDE BETWEEN 12 AND 24 INCHES OF LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN RIGID CONDUIT AND ANY EQUIPMENT CONTAINING MOTORS, THE FLEXIBLE CONDUIT SHALL BE SUPPORTED TO PREVENT THE CONDUIT FROM RESTING ON THE GROUND OR CONCRETE PAD.
12. PROVIDE WEATHERPROOF RECEPTACLE WITHIN 25 FEET OF EACH PIECE OF EXTERIOR EQUIPMENT. THIS RECEPTACLE SHALL BE MOUNTED HORIZONTALLY WITH METAL HINGED "N" USE COVER MOUNTED TO OPEN UP. THIS OUTLET SHALL BE A GFCI RECEPTACLE. THIS RECEPTACLE SHALL BE MOUNTED IN DIE CAST NON CORRODING METAL BOX.
13. WHEN OUTLETS OR BOXES ARE INDICATED INSTALLED ON OPPOSITE SIDES OF THE SAME WALL, THE CONTRACTOR SHALL ADJUST THE LOCATION TO OFFSET THE OUTLETS WITH A WALL STUD PROVIDING SEPARATION.

SECTION C: DISTRIBUTION EQUIPMENT

1. CONTRACTOR SHALL PROVIDE CONDUCTORS AND CONDUIT FOR ALL FEEDERS IN ACCORDANCE WITH THE PLANS.
2. SEPARATELY MOUNTED CIRCUIT BREAKERS SHALL BE MOUNTED IN NEMA TYPE 1 ENCLOSURES IN INDOOR APPLICATIONS AND IN NEMA 3R ENCLOSURES IN EXTERIOR OR WET LOCATIONS. ALL CIRCUIT BREAKER ENCLOSURES SHALL BE PROVIDED WITH HINGED COVERS AND PROVISIONS FOR PADLOCKING THE COVERS.
3. ALL EQUIPMENT CONTAINING MOTORS SHALL BE PROVIDED WITH A DISCONNECTING MEANS WITHIN TEN FEET OF THE UNIT UNLESS OTHERWISE NOTED. THIS DISCONNECTING MEANS SHALL AS A MINIMUM BE A NON-FUSED SWITCH OR TOGGLE SWITCH SIZED TO MATCH THE EQUIPMENT. PROVIDE OTHER DEVICES AS NOTED ON THE PLANS. PROVIDE NEMA TYPE ENCLOSURES INDOORS AND NEMA 3R OUTDOORS.
4. PROVIDE GFCI CIRCUIT BREAKERS AND RECEPTACLES AS INDICATED ON THE PLANS AND IN THESE SPECIFICATIONS. THESE DEVICES SHALL BE CLASS A GFCI DEVICES.

6. PROVIDE PANELS AS SCHEDULED ON PLANS. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC BREAKERS WITH A MINIMUM INTERRUPTING RATING OF 10,000 AIC FOR 120/208V AND 14,000 AIC FOR 277/480V OR AS INDICATED ON THE PLANS. CIRCUIT BREAKERS SHALL HAVE 65/75 DEGREE C RATED TERMINATIONS. PANEL NOTED SHALL BE SERVICE ENTRANCE RATED. MOUNT PANELS WITH TOP OF PANEL 6 FT. ABOVE FLOOR. PROVIDE 3/4 IN. GREY PAINTED PLYWOOD BACKBOARD FOR ALL PANELS SECURED TO WALLS WITH 1/4 IN. TOGGLE BOLTS. PANEL MANUFACTURERS SQUARE D, GENERAL ELECTRIC (GE), SIEMENS, AND EATON. ALL CURRENT CARRYING PARTS SHALL BE COATED WITH AN EPOXY FINISH.
7. PROVIDE EACH PANELBOARD WITH A TYPEWRITTEN CIRCUIT BREAKER DIRECTORY CARD INSIDE A PLASTIC COVERING EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. THE IDENTIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. THE DIRECTORY AND COVERING SHALL BE LOCATED INSIDE A STEEL FRAME PROVIDED INSIDE THE DOOR OF EACH PANELBOARD. THE DIRECTORY SHALL BE TYPED TO IDENTIFY THE LOAD FED BY EACH CIRCUIT BREAKER AND THE AREAS SERVED.
8. PROVIDE NAMEPLATES FOR ALL PANELBOARDS, DISCONNECT SWITCHES, ENCLOSED CIRCUIT BREAKERS, COMBINATION STARTERS, CONTACTORS, AND ALL OTHER ELECTRICAL DISTRIBUTION EQUIPMENT PANELS. MOUNT NAMEPLATES ON EXTERIOR OF THE DOOR OF ALL SURFACE MOUNTED PANELS AND EQUIPMENT. NAME PLATES SHALL BE LAMINATED PLASTIC PLATES WITH 3/16 IN. HIGH WHITE LETTERS ETCHED ON BLACK BACKGROUND. NAME PLATES SHALL BE INSTALLED PARALLEL TO EQUIPMENT LINES. THE NAME OR USAGE OF EACH DEVICE OR BRANCH CIRCUIT SHALL BE ETCHED IN THE NAMEPLATE. CONTRACTOR TO COORDINATE EXACT EQUIPMENT IDENTIFICATION WITH THE OWNER. SECURE NAMEPLATES VIA EPOXY GLUE.

SECTION D: LIGHTING
1. TYPES AND SPECIFIC REQUIREMENTS ARE PROVIDED ON THE LIGHTING FIXTURE SCHEDULE ON THE PLANS. ALL LIGHT FIXTURES SHALL BE PROVIDED WITH LAMPS, DRIVERS, BALLASTS, AND FULLY FUNCTIONING AT COMPLETION OF PROJECT.
2. ALL LED FIXTURES SHALL BE UL LISTED AND HAVE A MINIMUM OF 5 YEAR ON-SITE REPLACEMENT WARRANTY FOR DEFECTIVE OR NON-STARTING LED SOURCE ASSEMBLIES. DRIVERS, AND FOR LUMINAIRE EXHIBITING INADEQUATE LUMEN OUTPUT, IT SHALL COVER MATERIAL, FIXTURE FINISH, WORKMANSHIP, AND SHIPPING. ON-SITE REPLACEMENT SHALL INCLUDE TRANSPORTATION AND INSTALLATION OF NEW FIXTURE.
3. RATED LUMINAIRE WATTAGE SHALL BE ACTUAL, ACCOUNTING FOR ANY REDUCTION IN EFFICIENCY DUE TO SUB-OPTIMAL LOADING OF DRIVERS.
4. DRIVERS SHALL BE CAPABLE OF ACCEPTING THE VOLTAGE INDICATED ON THE LIGHTING FIXTURE SCHEDULE AND CAPABLE OF DIMMING IF REQUIRED. DRIVERS SHALL HAVE A CLASS A RATING, TOTAL HARMONIC DISTORTION OF LESS THAN 20%, AND SHALL NOT CONTAIN ANY POLYCHLORINATED BIPHENYL (PCB).
5. ALL LED FIXTURES SHALL BE TESTED TO IES LM-79 AND IES LM-80 STANDARDS. OUTDOOR FIXTURES SHALL BE IP65 RATED. LED'S, DRIVERS AND ALL COMPONENTS SHALL HAVE A SYSTEM LIFETIME OF 60,000 HOURS OR MORE AT 25 DEGREES CELSIUS AND SHALL MAINTAIN A MINIMUM OF 80% OF INITIAL LUMEN OUTPUT AFTER 50,000 HOURS OF OPERATION. LED'S SHALL HAVE COLOR RENDERING INDEX (CRI) OF 80 OR GREATER.
6. SURFACE MOUNTED FIXTURES SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE. ALL CEILING MOUNTED FIXTURES SHALL BE SUPPORTED FROM STRUCTURE AND BRACED TO PREVENT MOVEMENT IF IMPACTED.
7. ALL RECESSED FIXTURES LAY IN THE CEILING SHALL BE PROVIDED WITH GRID CLIPS TO FASTEN FIRMLY TO CEILING SUPPORT GRID. THE CEILING GRID SHALL BE SUPPORTED AT EACH CORNER OF A FIXTURE.
8. CONNECTION IN ALL FIXTURES IN LAWN CEILING SHALL BE BY FLEXIBLE CONDUIT OF FOUR TO SIX FEET IN LENGTH. A GROUND CONDUCTOR WILL BE INCLUDED WITH THIS CONNECTION.
9. ALL LENSES ON FIXTURES SHALL BE 0.25 INCH THICK MINIMUM. ALL HOUSINGS SHALL BE 1/2 GAUGE STEEL MIN. AND HAVE A POST FABRICATION HIGH REFLECTIVE WHITE FINISH.

SECTION E: FIRE ALARM SYSTEM (THE SPECIFICATION BELOW IS FOR STORAGE BUILDING. SEE ADMIN BUILDING FIRE ALARM SPEC ON SHEET E-41)
1. ACCEPTABLE MANUFACTURERS: NOTIFIER, FIRE LITE, EDWARDS, SIMPLEX, OR SILENT KNIGHT.
2. PROVIDE A COMPLETE OPERABLE FIRE ALARM SYSTEM FOR THIS PROJECT. THE MAIN PANEL SHALL BE LOCATED AS SHOWN. THE FIRE ALARM SYSTEM SHALL BE DESIGNED FOR CLASS B OPERATION. THE WIRING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN 1/2" RIGID METALLIC TUBING. THE CONTRACTOR SHALL PROVIDE COORDINATION ON ALL CONDUIT ENDS. THE FIRE ALARM SHALL BE MADE IN THE USA AND BE UL LISTED. ALL WIRING AND DEVICES FOR THE SYSTEM SHALL BE SUPERVISED. COLOR CODE THE CONDUIT EVERY 24 IN. WITH RED MARKINGS EXCEPT WHERE EXPOSED.
3. THE MAIN PANEL SHALL HAVE A BATTERY BACKUP AND BE SURGE PROTECTED. THE BATTERY SHALL BE CAPABLE OF PROVIDING NORMAL OPERATION FOR A PERIOD OF 24 HOURS WITH ENOUGH RESERVE TO ANNUNCIATE A BUILDING ALARM FOR 90 MINUTES.
4. NEW DEVICES SHALL BE PROVIDED WITH RECESSED METAL BOXES. ALL DEVICES SHALL BE MOUNTED FLUSH WITH WALL EXCEPT FOR PULL STATIONS WHICH SHALL BE SEMI-RECESSED.
5. NEW HORN/STROBE DEVICES SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. THE SPEAKER SHALL PRODUCE A SOUND LEVEL OF 90 DECIBELS AND THE STROBE SHALL PRODUCE A FLASHING PULSE OF LIGHT OF 75 CANDELA.
6. STROBE DEVICES SHALL PRODUCE A FLASHING PULSE OF LIGHT OF 75 CANDELA.
7. NEW PULL STATIONS SHALL BE NON-GLASS-BREAK TYPE AND KEYS THE SAME AS THE FIRE ALARM PANEL.
8. THE SMOKE DETECTORS SHALL BE THE PHOTOELECTRIC TYPE POWERED FROM THE MAIN FIRE ALARM PANEL.
9. THE GENERAL BUILDING ALARM WILL SOUND WHEN ACTIVATED AT THE CONTROL PANEL. BY SMOKE OR HEAT DETECTORS, OR BY A PULL STATION. ALARM WILL ALSO SOUND WHEN ACTIVATED BY A DUCT SMOKE DETECTOR OR SPRINKLER.
10. THE MAIN PANEL SHALL PROVIDE INDICATION OF EACH INITIATING DEVICE LOCATION FOR ALARM, TROUBLE AND SUPERVISORY CONDITIONS. THE PANEL SHALL HAVE LAMP TEST, ALARM SILENCE, TROUBLE AND SUPERVISORY SILENCE, SYSTEM RESET, AND ALARM INITIATE CONTROLS. THE PANEL SHALL ALSO INDICATE VOLTAGE AND BATTERY TEST. THE PANEL SHALL ALSO INCLUDE AN LCD DISPLAY. PANEL SHALL BE IN A SURFACE MOUNTED ENCLOSURE WITH LOCKABLE SEE THROUGH HINGED FRONT COVER.
11. THE FIRE ALARM PANEL SHALL BE EQUIPPED WITH A DIGITAL TRANSMITTER AND CELLULAR COMMUNICATOR FOR OFF PREMISES REMOTE MONITORING (FIRE DEPARTMENT) DURING ALARM CONDITION. PROVIDE 3/4 IN. CONDUIT FROM FIRE ALARM PANEL TO TELEPHONE BACKBOARD FIELD COORDINATE.
12. PROVIDE REMOTE ANNUNCIATOR PANEL AS SHOWN ON PLANS. THE ANNUNCIATOR PANEL SHALL BE PROVIDED WITH AN LCD DISPLAY AND COMPLETE CONTROL PUSH BUTTONS INCLUDING, BUT NOT LIMITED TO, ALARM ACKNOWLEDGE, ALARM SILENCE, RESET, ETC.
13. PROVIDE PHOTO ELECTRIC TYPE DUCT MOUNTED SMOKE DETECTORS WHERE SHOWN IN HVAC SUPPLY DUCT. UNIT SHALL HAVE SAMPLING TUBES THAT EXTEND THE WIDTH OF THE DUCT. PROVIDE REMOTE INDICATOR ACCESSIBLE IN NEAREST MECH/ELEC ROOM FOR EACH DETECTOR, WHICH WILL INDICATE WHICH DETECTOR IS ACTIVATED.
14. FLOW AND TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED UNDER DIVISION 25 AND CONNECTED TO FIRE ALARM UNDER DIVISION 26. POWER SUPPLY SHALL BE 24 V.D.C. SUPPLIED BY FIRE ALARM SYSTEM. PROVIDE ADDRESSABLE MONITORING MODULE FOR ALL DEVICES / SWITCHES.
15. SEE FIRE ALARM SUBCONTRACTOR SUBMITTAL TO AUTHORITY HAVING JURISDICTION ON SHEET E-4.4 FOR ADDITIONAL REQUIREMENTS. FIRE ALARM SUBCONTRACTOR IS RESPONSIBLE FOR ALL ADDITIONAL DEVICES AND EQUIPMENT AS REQUIRED TO MEET ALL NFPA, IBC, GEORGIA STATE, AND LOCAL CODES.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER
A	2 FT. X 2 FT. ECONOMY RECESSED LOW PROFILE ARCHITECTURAL TROFFER WITH ACRYLIC CENTER LENS; STANDARD 0-10 DIMMING; PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. LAMPS: LED, 5000 LUMENS, 43 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	METALUX "ACHEVA" SER., LITHONIA "STACK" SER., COLUMBIA "CCL" SER., OR APPROVED EQUAL
B	2 FT. X 2 FT. ECONOMY RECESSED LOW PROFILE ARCHITECTURAL TROFFER WITH ACRYLIC CENTER LENS; STANDARD 0-10 DIMMING; PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. LAMPS: LED, 3000 LUMENS, 25 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	METALUX "ACHEVA" SER., LITHONIA "STACK" SER., COLUMBIA "CCL" SER., OR APPROVED EQUAL
C	2 FT. X 4 FT. ECONOMY RECESSED LOW PROFILE ARCHITECTURAL TROFFER WITH ACRYLIC CENTER LENS; STANDARD 0-10 DIMMING; PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. LAMPS: LED, 4000 LUMENS, 34 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	METALUX "ACHEVA" SER., LITHONIA "STACK" SER., COLUMBIA "CCL" SER., OR APPROVED EQUAL
D	4 FT. LED STRIPLIGHT WITH EXTRUDED ROUND ACRYLIC LENS, SURFACE/PENDANT MOUNTED, STANDARD 0-10 DIMMING. PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. COORDINATE FINISH WITH OWNER. LAMPS: LED, 3600 LUMENS, 36 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	PRUDENTIAL LIGHTING "SNAP" SER., BARTCO "ISS205" SER., AWS LIGHTING "AIR LED" SER., OR APPROVED EQUAL
E	4 FT. LED STRIPLIGHT WITH DIFFUSE ACRYLIC LENS, SURFACE/PENDANT MOUNTED, STANDARD 0-10 DIMMING. PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. LAMPS: LED, 4000 LUMENS, 36 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	METALUX "SNL" SER., LITHONIA "CS" SER., COLUMBIA "CS" SER., OR APPROVED EQUAL
F	NOMINAL 6" ROUND SURFACE MOUNTED PANEL/SLEEK ULTRA LOW PROFILE; DIFFUSING LENS PROVIDING LIGHT UNIFORMITY; PROVIDE 90 MINUTE EMERGENCY BATTERY PACK WHERE INDICATED ON THE DRAWINGS. LAMPS: LED, 1000 LUMENS, 13 WATTS, 3500 DEGREE K DRIVER: UNV. VOLT	HALO "SMDS" SER., JUNO "SP" SER., PRESCOLITE "LISE" SER., OR APPROVED EQUAL
G	LED HIGHBAY WITH SEMI-DIFFUSE ACRYLIC LENS, ALUMINUM CONSTRUCTION TO PERFORM AT WARM AMBIENT TEMPERATURES. PROVIDE FIXTURE WITH WIREGUARD OPTION AND 360 DEGREE INTEGRATED OCCUPANCY SENSOR OPTION. LAMPS: LED, 18000 LUMENS, 134 WATTS, 4000 DEGREE K DRIVER: UNV. VOLT	LITHONIA "CPH" SER., METALUX "VHB" SER., COLUMBIA "CLB" SER., OR APPROVED EQUAL
OA	16 IN. EXTERIOR WALL FIXTURE, GOOSENECK MOUNTED; WET LOCATION LISTED. COORDINATE FINISH AND GOOSENECK OPTION WITH OWNER/ARCHITECT. LAMPS: LED, 1600 LUMENS, 17 WATTS, 4000 DEGREE K DRIVER: UNV. VOLT	BARN LIGHT ELECTRIC "BLE-GWH36" SER., OR APPROVED EQUAL
OB	ARCHITECTURAL WALL PACK WITH DIE CAST ALUMINUM HOUSING; R3 DISTRIBUTION; WET LOCATION LISTED. COORDINATE FINISH WITH OWNER. MOUNT FIXTURE SUCH THAT BOTTOM ELEVATION IS 13'0" AFF. LAMPS: LED, 6000 LUMENS, 41 WATTS, 4000 DEGREE K DRIVER: UNV. VOLT	LITHONIA "WDGE" SER., MCGRAW "HST" SER., OR APPROVED EQUAL
OC	LED THERMOPLASTIC EXT. IMPACT/SCRATCH RESISTANT AND CORROSION PROOF; TOP END, OR BACK MOUNTING STANDARD UNIVERSAL FIELD SELECTABLE SINGLE OR DOUBLE FACE. (PROVIDE 90 MIN. BACK-UP BATTERY). LAMPS: LED, 3 WATTS BALLAST: UNV. VOLT	SURE-LITES "LFX" SER., LITHONIA "LHM" SER., COMPASS "CC" SER., OR APPROVED EQUAL
OC	LED INTEGRATED THERMOPLASTIC COMBO EXIT/EMERGENCY, IMPACT RESISTANT HOUSING; TOP END OR BACK MOUNTING STANDARD UNIVERSAL FIELD SELECTABLE SINGLE OR DOUBLE FACE. (PROVIDE 90 MIN. BACK-UP BATTERY). LAMPS: LED (2), 3 WATTS BALLAST: UNV. VOLT	SURE-LITES "LFX-C" SER., LITHONIA "LHM" SER., COMPASS "CC" SER., OR APPROVED EQUAL
OD	EXTERIOR ARCHITECTURAL STYLED LOW PROFILE LED EMERGENCY LIGHTING UNIT, SELF DIAGNOSTICS STANDARD, WET LOCATION WITH FULLY GASKETED HOUSING, PRISMATIC POLYCARBONATE REFRACTOR. (PROVIDE 90 MIN. BACK-UP BATTERY). WHITE / BRONZE / BLACK LAMPS: LED, 3 WATTS BALLAST: UNV. VOLT	PATHWAY "FB" SER., LITHONIA "AIO" SER., "MANKO" SER., OR APPROVED EQUAL

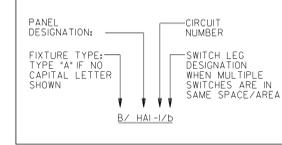
LIGHTING FIXTURE SCHEDULE NOTES:
1. CONTRACTOR TO VERIFY ALL VOLTAGES, GRID AND CEILING TYPES WITH THE ARCHITECT AND COORDINATE FIXTURE DIMENSION SIZE TO ENSURE PROPER FIT IN ALL CEILING TYPES PRIOR TO ORDERING.
2. ALL LUMENS LISTED ARE DELIVERED LUMENS, ALL EQUALS TO SPECIFIED FIXTURES SHALL NOT BE ANY LOWER THAN 5% OF SPECIFIED LUMENS. WATTAGE SHALL NOT BE HIGHER THAN 5% OF SPECIFIED WATTAGE.
3. LISTING OF MANUFACTURERS DOES NOT EQUAL AUTOMATIC APPROVAL. ALL CHARACTERISTICS NOTED IN DESCRIPTION SECTION MUST BE MET IN ORDER TO BE APPROVED. WHERE VENDOR/REP DOES NOT HAVE ONE MANUFACTURER LISTED, PRIOR APPROVAL IS REQUIRED TO BE SUBMITTED TO ENGINEER TEN (10) DAYS PRIOR TO BID.

GENERAL NOTES:

- ALL FLUSH RECESSED OUTLET BOXES SHALL BE INSTALLED SUCH THAT FRONT EDGE OF THE BOX WILL NOT BE SET BACK OF THE FINISHED SURFACE MORE THAN 1/4 IN. IN ORDER TO COMPLY WITH N.E.C. 314-20. SUPPORT OF OUTLET BOX BY RECEPTACLE AND COVERPLATE IS NOT ACCEPTABLE. CAREFULLY COORDINATE ROUGH-IN WITH BLOCK MASONS AND GROUT-IN CELL CONTAINING OUTLET BOX.
- DO NOT SCALE DRAWINGS TO LOCATE EQUIPMENT OR OUTLETS. MOUNTING HEIGHTS AS INDICATED ON THE DRAWINGS SHALL BE FROM THE FINISHED FLOOR TO THE CENTER LINE OF THE OUTLET BOX.
- THE ELECTRICAL DRAWINGS ARE ONLY A PART OF THE CONTRACT DOCUMENTS. ALL OF THE DRAWINGS AND SPECIFICATIONS MUST BE REVIEWED FOR THEIR INTERRELATIONSHIP AND REQUIRED COORDINATION BETWEEN DISCIPLINES.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT (TYPE "TR").

LIGHT FIXTURE DESIGNATION DESCRIPTION

EXAMPLE: B/HAI-1/6



PROVIDE ALL BRANCH CIRCUIT CONDUIT/CONDUCTORS AS NECESSARY TO CONNECT ALL DEVICES SHOWN ON THE CIRCUIT. PROVIDE DEDICATED NEUTRALS FOR ALL CIRCUITS. (STRIPED NEUTRAL WITH PHASE COLOR STRIPING)

ELECTRICAL LEGEND

LIGHTING AND POWER	
	CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALL. HASH MARKS INDICATE NUMBER OF CONDUCTORS. (3 WIRE UNLESS SHOWN)
	CONDUIT RUN CONCEALED BELOW FLOOR SLAB, OR UNDERGROUND.
	HOMERUN TO PANELBOARD, LETTER OR LETTERS INDICATE PANELBOARD. NUMBERS INDICATES CIRCUIT NUMBERS.
	LIGHT FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR MOUNTING AND TYPE.
	LIGHT FIXTURE. SEE SCHEDULE FOR MOUNTING AND TYPE. PROVIDE WITH 100 LUMEN, 90 MINUTE BATTERY PACK. FIXTURE NORMALLY SWITCHED WITH OTHER FIXTURES IN THIS AREA.
	LIGHTING FIXTURE, WALL BRACKET MOUNTED. (MOUNTING HEIGHT AS NOTED ON DRAWINGS OR AS SHOWN ON ARCHITECTURAL ELEVATIONS.)
	DUPLEX CONVENIENCE OUTLET, 18 IN. ABOVE FLOOR UNLESS OTHERWISE NOTED.
	CEILING MOUNTED OUTLET WITH ONE T1/2 LOCK SIMPLEX OUTLET. SUPPORT BOX BY 3/8 IN. THREADED ROD TO STRUCTURE. PROVIDE
	DUPLEX CONVENIENCE OUTLET, 8 IN. ABOVE COUNTER TOP OR 42 IN. MOUNTING HEIGHT UNLESS OTHERWISE NOTED.
	QUADRUPLEX CONVENIENCE OUTLET, 18 IN. ABOVE FLOOR UNLESS OTHERWISE NOTED.
	DUPLEX CONVENIENCE OUTLET, GF1 TYPE, 18 IN. MOUNTING HEIGHT. "WP" WHERE SHOWN INDICATES WEATHERPROOF. PROVIDE METAL IN-USE WEATHERPROOF COVERPLATE.
	DUPLEX CONVENIENCE OUTLET, GF1 TYPE, MOUNTED 8 INCHES ABOVE COUNTER OR AT 42 IN. ABOVE FLOOR UNLESS OTHERWISE NOTED.
	JUNCTION BOX, FLUSH WALL MOUNTED. AT 18 IN. TO CENTERLINE UNLESS OTHERWISE NOTED.
	SPECIAL RECEPTACLE TO SUIT EQUIPMENT BEING FURNISHED.
	FLUSH FLOOR BOX WITH DUPLEX CONVENIENCE OUTLET, AND COMBINATION TELEPHONE AND DATA OUTLET IN FLUSH FLOOR BOX. PROVIDE WALKER 880 OMNIBOX SERIES TWO GANG CAST IRON OR PLASTIC FLOOR BOX WITH BRASS FLANGE AND COVERPLATE.
	FLUSH FLOOR BOX WITH DUPLEX CONVENIENCE OUTLET, PROVIDE WALKER 880 OMNIBOX SERIES IRON OR PLASTIC FLOOR BOX WITH BRASS FLANGE AND COVERPLATE.
	SINGLE POLE TOGGLE SWITCH, 42 IN. ABOVE FLOOR.
	THREE WAY SWITCH AS INDICATED, 42 IN. MOUNTING HEIGHT.
	0-10 VOLT SLIDE TYPE DIMMER 2015 IEC COMPLIANT. (MANUAL ON TO 50% DIM, 100% AUTO OFF, MUST BE COMPATIBLE WITH VAC SENSOR AND POWER PACK.) 42 IN. ABOVE FLOOR.
	THREE WAY 0-10 VOLT SLIDE TYPE DIMMER, 42 IN. ABOVE FLOOR, 2015 IEC COMPLIANT. (MANUAL ON TO 50% DIM, 100% AUTO OFF, MUST BE COMPATIBLE WITH VAC SENSOR AND POWER PACK.)
	TRANSFORMER, SEE RISER DIAGRAM FOR SIZE AND VOLTAGE.
	PANELBOARD, SEE SCHEDULE.
	DISCONNECT SWITCH.

TELEPHONE/DATA/TV SYSTEMS	
	COMBINATION COMPUTER AND TELEPHONE OUTLET, 18 IN. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE. (2 DATA, 1 TEL)
	COMPUTER OUTLET, 18 IN. ABOVE FLOOR UNLESS NOTED OTHERWISE. (2 DATA)
	COMPUTER OUTLET, MOUNTED 8 INCHES ABOVE COUNTER OR AT 42 IN. ABOVE FLOOR UNLESS OTHERWISE NOTED. (2 DATA)
	WIRELESS ACCESS POINT. (2 DATA)
	TELEVISION OUTLET, 18 IN. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
	PLYWOOD BACKBOARD, 'TB' INDICATES TELEPHONE BOARD.

LIGHTING CONTROL SENSORS	
	COMBINATION 360 DEGREE ULTRASONIC AND PASSIVE INFRARED SENSOR (WATT STOPPER 'DT-300', GREENGATE, NOVITAS, HUBBELL, LEVITON, SENSOR SWITCH, "V" INDICATES VACANCY SENSOR, UNIT MUST COMPLY WITH IEC 2015 REQUIREMENTS AND BE COMPATIBLE WITH DIMMER)
	PASSIVE INFRARED SENSOR (WATT STOPPER "PIR", GREENGATE, NOVITAS, HUBBELL, LEVITON, SENSOR SWITCH)
	ULTRASONIC OCCUPANCY SENSOR (WATT STOPPER "UT-2250", GREENGATE, NOVITAS, HUBBELL, LEVITON, SENSOR SWITCH)
	WALL MOUNTED SENSOR SWITCH, 42 IN. MOUNTING HEIGHT (WATTSTOPPER DSW-30), GREENGATE, NOVITAS, HUBBELL, LEVITON, SENSOR SWITCH.

FIRE ALARM SYSTEM (VOICE EVAC IN ADMIN BLDG ONLY, NOT IN STORAGE BUILDING)	
	FIRE ALARM CONTROL PANEL, SURFACE MOUNTED.
	FIRE ALARM ANNUNCIATOR, FLUSH MOUNTED.
	STROBE LIGHT, 80 IN. ABOVE FLOOR TO THE BOTTOM OF THE LENS.
	FIRE ALARM SIGNAL, SPEAKER AND FLASHING LIGHT. 6 FT.-8 IN. MOUNTING HEIGHT.
	FIRE ALARM SIGNAL, HORN AND FLASHING LIGHT. 6 FT.-8 IN. MOUNTING HEIGHT.
	FIRE ALARM PULL STATION, WALL MOUNTED 42 IN. ABOVE FLOOR.
	SMOKE DETECTOR, PHOTOELECTRIC TYPE.
	FIRE ALARM DUCT SMOKE DETECTOR LOCATED IN HVAC SUPPLY AIR DUCT, PROVIDE IN UNITS 2000 CFM AND GREATER. DETECTOR SHALL SHUT DOWN UNIT UPON ACTIVATION.
	TAMPER SWITCH, FURNISHED AND INSTALLED WITH SPRINKLER SYSTEM, INTERLOCK WITH FIRE ALARM SYSTEM BY ELECTRICAL.
	FLOW SWITCH, FURNISHED AND INSTALLED WITH SPRINKLER SYSTEM, INTERLOCK WITH FIRE ALARM SYSTEM BY ELECTRICAL.

SECURITY SYSTEM (RACEWAY AND BOXES ONLY)	
	WALL MOUNTED CCTV SECURITY CAMERA. PROVIDE JUNCTION BOX AND RACEWAY WITH PULL STRING TO SECURITY EQUIPMENT LOCATION. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL (RACEWAY AND BOXES ONLY)
	CEILING MOUNTED 360 DEGREE CCTV SECURITY CAMERA. PROVIDE JUNCTION BOX AND RACEWAY WITH PULL STRING TO SECURITY EQUIPMENT LOCATION. COORDINATE MOUNTING LOCATION WITH ARCHITECTURAL (RACEWAY AND BOXES ONLY)

NOTES:
1. ALL MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTERLINE OF OUTLET OR DEVICE.
2. ALL RECEPTACLES SHALL BE TAMPER RESISTANT (TYPE "TR").

ALPHA BLDG SET 08-21-2024

JOB NO.:	02520
DRAWN BY:	TAM
CHECKED BY:	JHM
DESCRIPTION:	BID-CONSTRUCTION
DATE:	04.09.24
DESCRIPTION:	
DATE:	
DESCRIPTION:	
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REVISIONS:	
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Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street
Covington, Georgia 30014

ELECTRICAL SPECIFICATIONS

**SECTION F
STRUCTURED CABLING SYSTEM FOR VOICE AND DATA**

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Provisions for a complete structured cabling system for the new Storage Building and an extension of an existing complete operable cabling system for the Admin Building including:

1. Communication outlets as detailed on drawings
2. Cabling (Category 6 and fiber)
3. Conduit and boxes
4. Data patch panels, termination hardware, equipment cabinets, relay racks and overhead cable tray
5. Plywood backboards
6. Inter-building connectivity
7. Grounding

1.02 SCOPE OF PROJECT STANDARDS AND DESCRIPTION

A. The structured cabling placed on this undertaking shall be Category 6 compliant, Plenum-rated, "Unshielded Twisted Pair" type and conform to the requirements contained in the latest editions of the National Electric Code (NEC) and the latest editions of the following American National Standards Institute (ANSI) specifications:

1. TIA/EIA-568-B.2.1 Commercial Building Telecommunications Wiring Standard
2. TIA/EIA-569-A Commercial Building Standard for Telecommunications Pathways and Spaces
3. TIA/EIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
4. TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications
5. Supplements to EIA/TIA-568 Technical Systems Bulletins
6. TSB-36 Additional Transmission Specifications for Unshielded Twisted Pair Cables
7. TSB-40 Additional Transmission Specifications for Unshielded Twisted Pair Hardware

1.03 WORKMANSHIP

A. All work shall be performed in a workmanlike manner. Architect, Engineer, and/or Owner may observe the work procedures and workmanship of the Contractor but such observation will not relieve the contractor from responsibility for performance.

1.04 WARRANTY

A. The Contractor shall furnish a written warranty from the manufacturer that describes

the network cabling and associated equipment supplied under these specifications will be free from defects of materials and workmanship for a period of twenty five years and the cable plant/labor will be free from defects of materials and workmanship for a period of twenty five years from the date of final acceptance unless otherwise specified and that all defects occurring within that period shall be corrected in a timely manner at no cost to the Owner.

1.05 CONTRACTOR'S QUALIFICATIONS

A. Contractor shall be required, before awarding of contract, to demonstrate to the complete satisfaction of the Architect that they have the necessary facilities, ability and financial resources to execute the work in a satisfactory manner and within the time specified; that they that they have been in the structured cabling business for 3 years and references which will assure the Owner of his qualifications for executing the work.

B. Contractor shall submit a copy of a valid low-voltage license in the State of Georgia (Low-Voltage Telecommunications or Low-Voltage Unrestricted as issued by the State Construction Industry Licensing Board of Low-Voltage Contractors).

C. Contractor shall submit a copy of a BICSI (Building Industry Consulting Service International) certificate certified and a RCDD (Registered Communications Distributions Designer) certificate.

D. Comprehensive list of references: Attach a detailed list of references along with contact person, dates of work, mailing address, telephone numbers.

E. Contractor must provide proof of installation in a minimum of five sites using a Category 6, compliant structured cabling system with 300 or more active (working) nodes installed.

1.06 SUBMITTALS

A. Provide a complete digital shop drawing package of the system (PDF format).

B. Provide clearly legible as-built drawings.

C. Submit shop drawings in a neatly bound comb or three-ring binder with protective covers. Indicate on the front cover the date submitted, project name, specification section number, electrical contractor's name, address, telephone number and the submitting equipment supplier's address and telephone number. Allow enough clear area on the title sheet for shop drawing review stamps.

D. Provide a letter describing the training program on installing extended performance data cabling systems.

E. Submit 1/8" scale PDF and AutoCad files with floor plans showing all rooms, stairways, corridors, and horizontal exits. Include all voice and data outlet locations. Indicate all wire sizes and types, wire counts, conduit sizes and routing through the building.

F. Submit the following riser/wiring/connection diagrams:

1. Single line riser drawing indicating all system components and the vertical wiring necessary to connect the components. Indicate conduit sizes and wire counts and a legend indicating the type of wiring.

2. Indicate the cable routing of each cable, and the approximate anticipated length of each cable.
3. Branch circuit wiring at each communications closet and other devices in the system requiring 120-volt power.

G.

Submit original prints of the manufacturer product sheets with complete technical data for each item being provided. Circle, arrow, or provide other permanent marking on each data sheet to clearly indicate the specific product included in the submittal. Remove or crosshatch out any product on the data sheets not applicable to the project or not being submitted for review.

H.

Shop drawings not containing all the information listed above will be rejected without review.

I.

Documentation of testing on all wiring and terminations as per TIA/EIA standards.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The acceptable manufacturers noted shall be installed by the authorized local factory dealer/representative for that product.

B. The contractor shall hold a current Georgia low voltage contractor's license and RCDD certificate. Any other interested parties shall submit a company resume showing years in business, certification stating that he is an authorized representative for the manufacturer of the equipment he is submitting for approval and that he maintains a fully equipped and stocked service shop and shall respond to service calls within 12 normal working hours, list of key personnel, copies of appropriate licenses and list of recently completed jobs.

C. Acceptable Manufacturer's AMP, Ortronics or Panduit structured cabling systems. The structured cabling solutions must be "end-to-end" and covered under the manufacturer's warranty as a complete system. Mixed manufacturers under different warranties are not acceptable.

2.02 COMMUNICATION OUTLET SPECIFICATIONS

A. Provide communications outlets (jacks for data/voice) as detailed on the drawings.

B. Outlet faceplate for this arrangement shall be configured in the following fashion:

1. The jacks used shall fit properly in the outlet openings of the faceplate. The jacks used shall be capable of supporting LAN data rates of 350 MHz and also conform to parameters set in TIA/EIA 568, TSB36 and TSB40A.
2. Any vacant faceplate or communication outlet position shall be reserved for future growth and should have a dust cover/blank inserted.

2.03 HORIZONTAL CABLING WIRING SPECIFICATIONS

A. This section covers the cable from the communications outlet to the patch panel. These cables shall be Category 6 compliant, Plenum-rated, Unshielded Twisted Pair cable. Each cable shall be placed in a "point-to-point" fashion from the outlet to the wiring closet for each communications outlet needed. There shall be no intermediate splices or cross connects in these cables.

B. The cable shall meet or exceed the following requirements:

1. TIA/EIA 568-B.2.1 "Commercial Building Wiring Standard," Horizontal Cable Section.
2. TIA/EIA TSB-36 "Technical System Bulletin Additional Cable Specifications for Unshielded Twisted Pair Cables, "Category 6."
3. Proposed ANSI X3T9.5 Requirements for UTP at 350 MHz.
4. Certified Category 6 Cable under UL's LAN Cable Certification Program.
5. IEEE 802.3
6. ICEA S80-576
7. UL Subject 444
8. PUB 48007
9. TA-TS000133
10. National Electric Code - Article 800

C. Provide 12 strand hybrid fiber with 6 strands of multimode fiber and 6 strands of single mode fiber, 62.5/125 micron, plenum-rated hybrid fiber to site mark point from the MDF. All fibers must be housed in rack mounted fiber enclosures. All fiber strands shall be terminated with SC fiber connectors and certified with a db loss meter. Provide two SC-to-SC MM or SC to LC (Actual type to be specified by the Technology Department) fiber jumpers (2 meters) for each closet requiring fiber. Fiber must be installed in 1" plenum rated innerduct or interlok jacket. Cable must be rated for exterior use.

2.04 DATA PATCH PANEL/PATCH CABLE AND EQUIPMENT RACK SPECIFICATIONS

A. This section covers the termination hardware located in the MDF/IDFs. The termination hardware shall provide the capability to patch connectors between ports on the LAN hardware and the horizontal cables to the outlets (electronics by owner, N.I.C.).

B. The Patch panels shall be Category 6 compliant 48 position RJ45 jack panels.

C. Provide additional racks as required in the Admin building. Field locate. In the Storage building, provide one new wall mounted rack for data/tel cabling. The configuration of the patch panels shall be in an arrangement that minimizes patch cord lengths. Provisions for cable management (organization of horizontal and vertical cable and patch cords) on the rack should be included. If more than half of the rack space is occupied by patch panels, an additional rack must be installed for equipment.

D. Potential horizontal cables to the outlets will be directly connected to 110 insulation displacement hardware associated with each jack on the patch panel. The jacks on the patch panel shall be wired to the EIA 568B wiring standard.

E. Two Category 6 compliant MHz factory-built, manufacturer tested patch cords shall be provided for each cable installed. Patch cords should be from the same manufacturer as the structured cabling solution. Check with Technology Services regarding exact lengths required.

F. Provide two 24" x 38" x 84" equipment cabinets with locking, plexiglass front doors and mesh back doors and 10" exhaust fan in the MDF and IDF locations as shown on drawings. The MDF and IDF cabinets shall be equipped with two sets of 19" mounting rails and a power strip with a minimum of 16 outlets. Mounting rails shall be suitable for mounting of servers and other electronic equipment. Installer shall check with the Technology Services Department for mounting rail requirements as square cutouts vs. round threaded holes may be required. Two 19" equipment racks shall be provided for mounting patch panels and LAN electronics (provided by owner) and shall be mounted in conjunction with ladder racks as shown on drawings. Provide horizontal wire managers between each patch panel. Include 6" wide vertical wire managers on each side of each rack (Chatsworth 11374-7-03)

2.05 TELEPHONE BACKBONE (FEEDER CABLE)

A. The one 50 pair, 24 AWG Category 3, Plenum rated (CMP) feeder cable provided from site mark point to the MDF terminating on a 48 port patch panel (2 ports short for a 50 pair cable). The MDF end of the feeder shall be punched down on 48 patch panels inside the MDF cabinet designated for phones. Cable must conform to normal requirements for campus type distribution systems as required by BICSI. Cable must be rated for exterior use.

2.06 CONDUIT, RACEWAY, AND BACKBOARDS

A. Recessed Outlet Locations: Provide recessed 4 inch square box and 3/4 inch EMT conduit to above accessible ceiling as noted on drawings for interior recessed stand alone outlet locations. Provide single gang or double gang plaster ring to fit recessed box as detailed on drawing.

B. Surface Raceway Outlet Locations: See detail on drawing.

C. Exterior Service Conduits: Provide PVC conduit with galvanized rigid steel transitions to above grade (including elbows) in locations noted on drawings. The service entrance facility shall be provided and installed according to the attached site plan using the details shown in sketches. The total number of bends in a conduit section run shall not exceed two 90 degree bends or equivalent of sweeps and radius bends. Each bend shall have a minimum radius in accordance with existing standards. The conduit shall be installed at a minimum depth of 36" and backfilled with selected fill material. Encase conduit(s) in concrete where minimum depth cannot be attained. Conduits terminating inside a building shall be installed so that the conduit extends 4" aff beyond the surface from which it emanates. Conduits shall be plugged with inserts to ensure that foreign matter does not enter. The ends of metallic conduit shall be reamed, bushed, and grounded according to the NEC. All conduits shall have a non-corrosive pull tape installed.

D. Backboard: Provide 3/4", trade size a-c plywood backboard as described under "Supporting Devices" in these electrical specifications. Mount two sheets, 8 feet high and rigidly fasten plywood to wall to ensure that it can support attached equipment. Communications equipment backboards should be painted with fire resistant, washable, low gloss paint the same color as the walls and installed in a timely manner so that final terminations of service cabling.

2.07 GROUNDING

A. All equipment racks and cabinets shall be electrically grounded to the building ground with an insulated #6 copper ground wire.

B. A grounding bus bar shall be attached to the plywood backboard in the MDF. The bus bar shall be connected to the building ground with a #6 insulated copper ground wire

PART 3 - EXECUTIONS

3.01 PULL AND JUNCTION BOX COVER IDENTIFICATION

A. See "Section B: Basic Materials" in the Electrical Division of the specifications.

3.02 LABELING

A. System shall be completely labeled, with circuit numbers indicated on the patch panel and communication outlets. Provide a list indicating circuit numbers installed to each space. Faceplate must have protective covers that will allow for a permanent label solution. "Stick-on" labels of any kind are not acceptable.

B. Number each jack as follows:

MDF/IDF number + Patch Panel letter + Port number

3.03 TESTING AND CERTIFICATION

A. Testing copper distribution systems are crucial in assuring the overall integrity and satisfactory performance of the network. Test results quantify system quality, identify system faults, and establish the baseline accountability performance of the system. Proper testing also maximizes the longevity of the system, minimizes downtime and maintenance, and facilitates system upgrades or reconfiguration.

B. The Contractor shall provide proof of communications wiring systems certification and testing certification.

C. All data wiring and terminations shall be tested and must pass EIA/TIA standards for Category 6 compliant wiring.

D. All test results must be printed and provided to the owner in CD-ROM and/or floppy format and show the following results:

1. Impedance (TDR)
2. Cable Length
3. Attenuation
4. Near End Cross Talk (NEXT)
5. Line Mapping
6. DC Ohms
7. OTDR

3.04 GUARANTEES

A. All communication outlets wired and serviceable must be tested and certified in compliance with the ANSI/IEEE 802.3 and EIA/TIA 568 Category 6 compliant specifications. Testing must be "end-to-end". Test results shall be forwarded to Architect a minimum of one week prior to final inspection.

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CONSULTANT



STAMP INVALID UNLESS SIGNED



ENLARGED STORAGE FACILITY PLAN - LIGHTING

Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners

1113 Usher Street
Covington, Georgia 30014

JOB NO.: 02520

DRAWN BY: TAJ

CHECKED BY: JHM

DESCRIPTION: BID-CONSTRUCTION

DATE: 04.09.24

DESCRIPTION:

DATE:

DESCRIPTION:

DATE:

DESCRIPTION:

DATE:

REVISIONS:

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SHEET

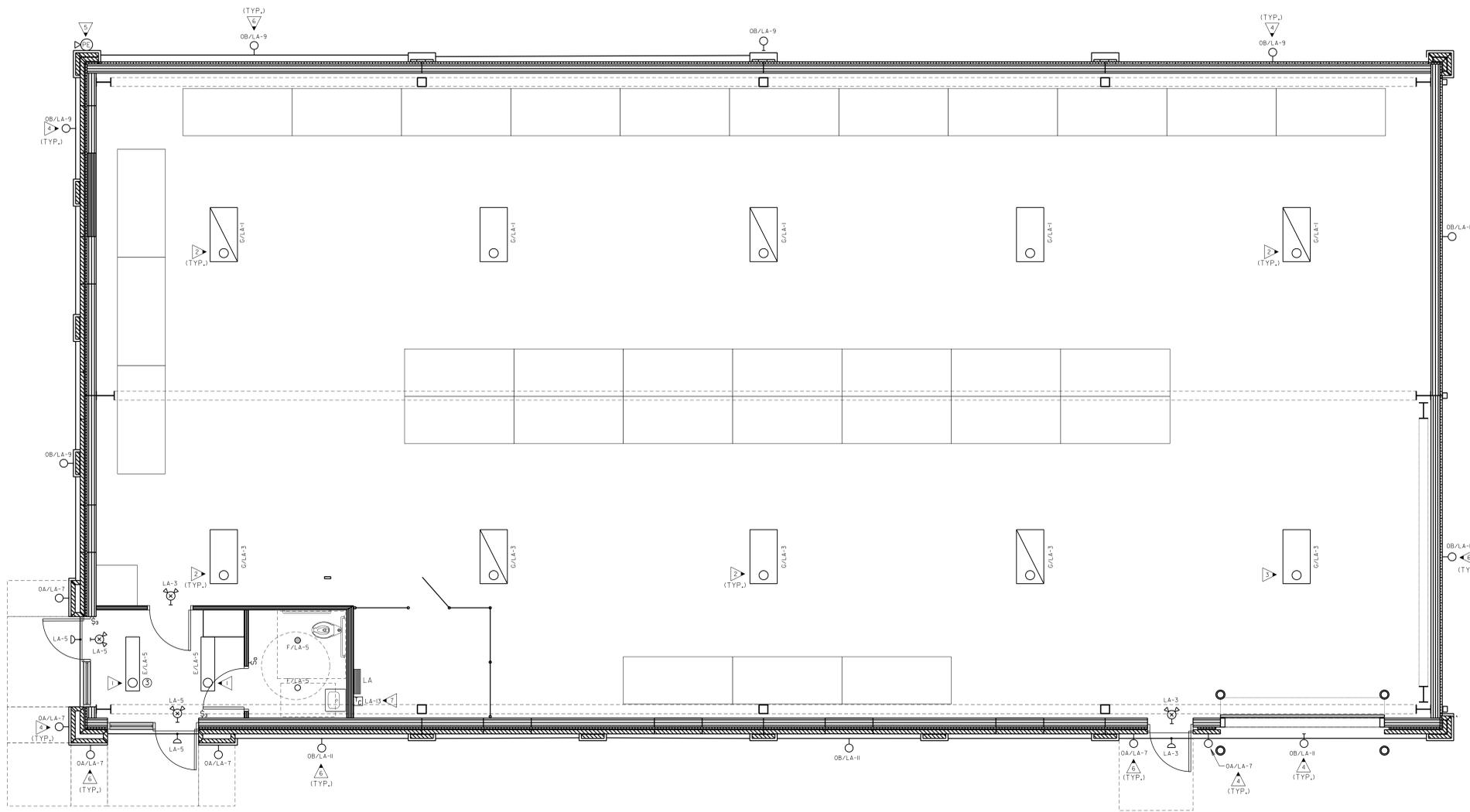
E2.4

OF

ALPHA BLDG SET 08-21-2024

KEYED NOTES: (THIS SHEET ONLY)

- ▽ SUSPEND FIXTURE SUCH THAT BOTTOM ELEVATION IS 12'-0" A.F.F. VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL PRIOR TO ROUGH-IN.
- ▽ SUSPEND FIXTURE SUCH THAT BOTTOM ELEVATION IS 18'-0" A.F.F. VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL PRIOR TO ROUGH-IN.
- ▽ ADJUST LOCATION OF LIGHT FIXTURE AS REQUIRED FOR UNIMPEDED OPERATION OF OVERHEAD DOOR.
- ▽ COORDINATE EXACT MOUNTING HEIGHT PRIOR TO ELECTRICAL ROUGH-IN.
- ▽ LOCATE P.E. CELL FACING NORTH, CLEAR OF MAN MADE LIGHT SOURCES, J-BOX TO HOUSE P.E. CELL SHALL BE RECESSED MOUNTED WITH STAINLESS STEEL COVER.
- ▽ ROUTE VIA 6 POLE EXTERIOR LIGHTING CONTACTOR/TIMELOCK LOCATED ADJACENT PANELS. PHOTO CELL SHALL CONTROL DUSK TILL DAWN OPERATION. TIMELOCK SHALL INTERRUPT CIRCUIT DURING MIDNIGHT HOURS. SEE KEYED NOTE 6. USE #10'S ENTIRE CIRCUIT IN 3/4 IN. CONDUIT UNLESS NOTED OTHERWISE. PROVIDE MANUAL OVERRIDE SWITCH. COORDINATE FINAL LOCATION WITH OWNER.
- ▽ PROVIDE 365 DAY DIGITAL PROGRAMMABLE TYPE ELECTRONIC CONTROL TIME CLOCK WITH MINIMUM 6 CONTACTS AND MINIMUM 96 ON/OFF EVENTS PER WEEK. CONTACTS RATED FOR MINIMUM 30 AMPS AND 120 VOLTS. PROVIDE WITH NEMA TYPE 1 ENCLOSURE AND CAPACITOR BACKUP. PROVIDE WITH AUTO-ON-OFF FUNCTION. PROVIDE AUXILIARY INPUT FROM PHOTO CELL FOR OVERRIDE ON-OR-OFF CONTROL.
- ▽ REFER TO NEW STORAGE BUILDING POWER RISER DIAGRAM, I/E5.2.



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CONSULTANT



STAMP INVALID UNLESS SIGNED



ENLARGED STORAGE FACILITY PLAN - POWER & TEL/DATA/TV SYSTEMS
Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street
Covington, Georgia 30014

JOB NO.: 02520

DRAWN BY: TAK

CHECKED BY: JHM

DESCRIPTION: BID-CONSTRUCTION

DATE: 04.09.24

DESCRIPTION:

DATE:

DESCRIPTION:

DATE:

DESCRIPTION:

DATE:

REVISIONS:

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ALPHA BLDG SET 08-21-2024

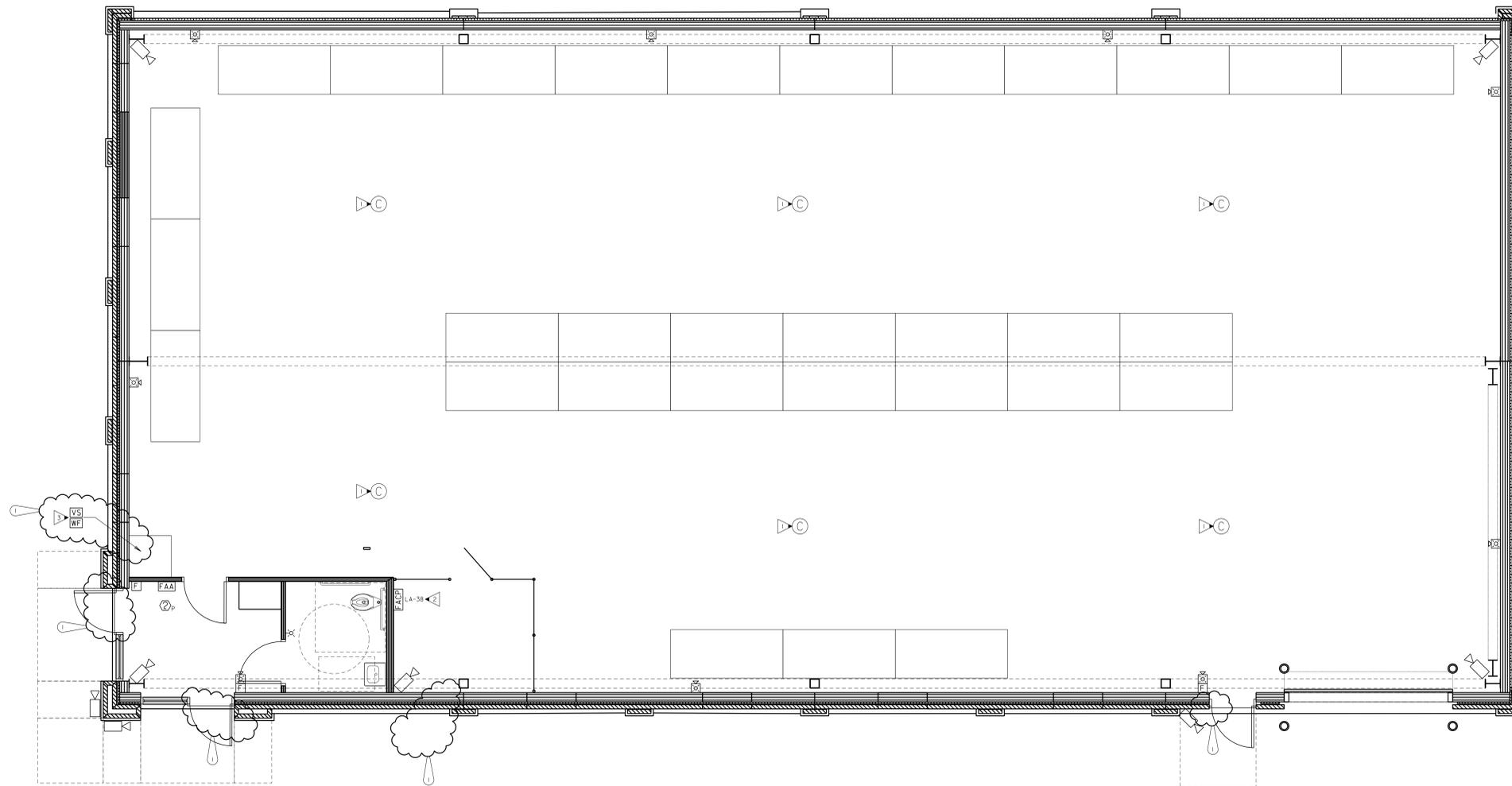
SECTION E0: FIRE ALARM SUBCONTRACTOR SUBMITTAL REQUIREMENTS TO AUTHORITY HAVING JURISDICTION:

IN ACCORDANCE WITH CHAP 7, NFPA 72 THE FOLLOWING LIST REPRESENTS THE MINIMUM DOCUMENTATION REQUIRED BY THE AUTHORITY HAVING JURISDICTION FOR ALL FIRE ALARM SYSTEMS:

1. THE PRINTED NAME, SIGNATURE AND COPY OF CURRENT GEORGIA LICENSE OF THE LOW VOLTAGE CONTRACTOR WHO IS SUBMITTING THE FIRE ALARM PLANS FOR REVIEW AND WHO WILL BE RESPONSIBLE FOR INSTALLATION.
2. WRITTEN NARRATIVE PROVIDING INTENT AND SYSTEM DESCRIPTION.
3. A FIRE ALARM RISER DIAGRAM.
4. A FLOOR PLAN LAYOUT WITH ROOM NAMES, DOOR LOCATIONS, FIXTURES (DRAWN TO SCALE) SHOWING LOCATION OF ALL DEVICES AND CONTROL EQUIPMENT, DEVICES AND EQUIPMENT SHOWN ON DRAWINGS IS THE MINIMUM REQUIRED; PROVIDE ALL ADDITIONAL DEVICES AND EQUIPMENT AS REQUIRED TO MEET ALL NFPA, IBC, GEORGIA STATE AND LOCAL CODES.
5. THE FIRE ALARM SYSTEM WIRING LAYOUT DESIGN WHICH INCLUDES THE GAUGE(S) OF WIRING INSTALLED.
6. THE SEQUENCE OF OPERATION IN EITHER INPUT/OUTPUT MATRIX OR NARRATIVE FORM.
7. EQUIPMENT TECHNICAL DATA SHEETS FOR ALL COMPONENTS SPECIFIED IN THE FIRE ALARM SYSTEM DESIGN.
8. MANUFACTURERS PUBLISHED INSTRUCTIONS, INCLUDING OPERATION AND MAINTENANCE INSTRUCTIONS.
9. BATTERY CALCULATIONS.
10. A SET OF NAC VOLTAGE DROP/LOAD CALCULATIONS.
11. SPEAKER WATTAGES AND DECIBEL RATINGS FOR BOTH HORN ALARM AND VOICE EVACUATION SYSTEM COMPONENTS.
12. THE CANDELA RATING SHOWN FOR DRAWINGS FOR EACH STROBE/VISUAL DEVICE AND EACH ILLUMINATED EMERGENCY EXIT SIGN FIRE ALARM SYSTEM MUST COMPLY WITH THE GEORGIA ACCESSIBILITY CODE (GO-3-20), LIFE SAFETY CODE (NFPA 10) AND THE NATIONAL FIRE ALARM CODE (NFPA 72).

KEYED NOTES: (THIS SHEET ONLY)

- ▶ CEILING MOUNT 360 DEGREE SECURITY CAMERA BETWEEN SHELF ROWS. COORDINATE EXACT MOUNTING LOCATION WITH OWNER PRIOR TO INSTALLATION.
- ▶ FIRE ALARM CONTROL PANEL, MARK CIRCUIT BREAKER FOR FACP IN PANEL PER 2020 NEC, PROVIDE HASP, LOCK ON BREAKER.
- ▶ PROVIDE FIRE ALARM SYSTEM MONITORING MODULES AT ALL FIRE SPRINKLER FLOW AND TAMPER SWITCHES AT FIRE RISER, COORDINATE EXACT LOCATIONS AND QUANTITIES WITH FIRE PROTECTION DRAWINGS.



1 ENLARGED STORAGE FACILITY PLAN - FIRE ALARM & SECURITY SYSTEMS
E3.4 SCALE: 1/4"=1'-0"



PROVIDE ALL BRANCH CIRCUIT CONDUIT/CONDUCTORS AS NECESSARY TO CONNECT ALL DEVICES SHOWN ON THE CIRCUIT; PROVIDE DEDICATED NEUTRALS FOR ALL CIRCUITS, (STRIPED NEUTRAL WITH PHASE COLOR STRIPING)



Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
1113 Usher Street
Covington, Georgia 30014



Administrative Building Renovations
Centralize Storage Facility
Newton County Board of Commissioners
Covington, Georgia 30014
1113 Usher Street

JOB NO.: 02520
DRAWN BY: TAK
CHECKED BY: JHM

DESCRIPTION: BID-CONSTRUCTION
DATE: 04/08/24

DESCRIPTION:
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DESCRIPTION:
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DESCRIPTION:
DATE:

REVISIONS:
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SHEET

E5.4

OF

COMcheck Software Version 4.1.5.5
Interior Lighting Compliance Certificate

Project Information
Energy Code: 2015 IECC
Project Title: Newton Co Administrative Building Renovations
Project Type: Alteration
Construction Site: 1113 Usher Street, Covington, GA 30014
Owner/Agent: [Redacted]
Designer/Contractor: Electrical Design Consultants, 175 New Street, Suite 1, Macon, GA 31201

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Office	26071	0.82	21378
Total Allowed Watts =		21378	

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt. (C X D)	E (C X D)
Office (26071 sq ft)				
A. A. 2 FT. X 2 FT. TROFFER LED Panel 44W	1	67	43	2881
B. B. 2 FT. X 2 FT. TROFFER LED Panel 33W	1	171	27	4617
C. C. 2 FT. X 4 FT. TROFFER LED Panel 33W	1	60	31	1860
D. D. 4 FT. LED STRIPLIGHT LED Other Fixture Unit 30W	1	68	36	2448
E. E. 4 FT. LED STRIPLIGHT LED Other Fixture Unit 30W	1	6	36	216
F. F. 6 IN ROUND SURFACE PANEL LED Other Fixture Unit 13W	1	70	13	910
Total Proposed Watts =		12932		

Interior Lighting PASSES: Design 54% better than code

Interior Lighting Compliance Statement
Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jeffrey H. McGee, PE
Name - Title: [Redacted] Signature: [Redacted] Date: 07/02/24

Project Title: Newton Co Administrative Building Renovations
Data filename: Z:\2024 CAD\M24017 Newton Co Admin Reno and Storage\WORKING DRAWINGS\ELECTRICAL\Lighting\Admin COMcheck.cck
Report date: 07/02/24

COMcheck Software Version 4.1.5.5
Interior Lighting Compliance Certificate

Project Information
Energy Code: 2015 IECC
Project Title: Newton County Centralized Storage Facility
Project Type: New Construction
Construction Site: 1113 Usher Street, Covington, GA 30014
Owner/Agent: [Redacted]
Designer/Contractor: Electrical Design Consultants, 175 New Street, Suite 1, Macon, GA 31201

Additional Efficiency Package(s)
Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Warehouse	4704	0.66	3105
Total Allowed Watts =		3105	

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt. (C X D)	E (C X D)
1-Warehouse				
E. E. 4 FT. LED STRIPLIGHT LED Other Fixture Unit 30W	1	2	36	72
F. F. 6 IN ROUND SURFACE PANEL LED Other Fixture Unit 13W	1	2	13	26
G. G. LED HIGHBAY- Other	1	10	134	1340
Total Proposed Watts =		1438		

Interior Lighting PASSES: Design 54% better than code

Interior Lighting Compliance Statement
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jeffrey H. McGee, PE
Name - Title: [Redacted] Signature: [Redacted] Date: 04/08/24

Project Title: Newton County Centralized Storage Facility
Data filename: Z:\2024 CAD\M24017 Newton Co Admin Reno and Storage\WORKING DRAWINGS\ELECTRICAL\Lighting\Storage COMcheck.cck
Report date: 04/08/24

COMcheck Software Version 4.1.5.5
Exterior Lighting Compliance Certificate

Project Information
Energy Code: 2015 IECC
Project Title: Newton County Centralized Storage Facility
Project Type: New Construction
Exterior Lighting Zone: 2 (Neighborhood business district (LZZ))
Construction Site: 1113 Usher Street, Covington, GA 30014
Owner/Agent: [Redacted]
Designer/Contractor: Electrical Design Consultants, 175 New Street, Suite 1, Macon, GA 31201

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
BUILDING EXTERIOR (Walkway < 10 feet wide)	300 ft of	0.7	Yes	210
Total Allowed Watts =		210		
Total Tradable Watts (a) =		210		
Total Allowed Supplemental Watts (b) =		600		

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt. (C X D)	E (C X D)
BUILDING EXTERIOR (Walkway < 10 feet wide 300 ft of walkway length): Tradable Wattage				
OA. OA. GOOSENECK FIXTURE LED Other Fixture Unit 16W	1	6	17	102
OB. OB. WALL PACK LED Other Fixture Unit 40W	1	10	41	410
Total Tradable Proposed Watts =		512		

Exterior Lighting PASSES: Design 37% better than code

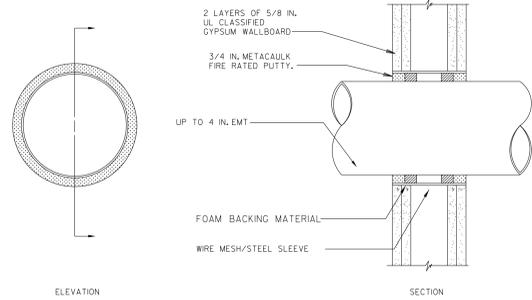
Exterior Lighting Compliance Statement
Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jeffrey H. McGee, PE
Name - Title: [Redacted] Signature: [Redacted] Date: 04/08/24

Project Title: Newton County Centralized Storage Facility
Data filename: Z:\2024 CAD\M24017 Newton Co Admin Reno and Storage\WORKING DRAWINGS\ELECTRICAL\Lighting\Storage COMcheck.cck
Report date: 04/08/24

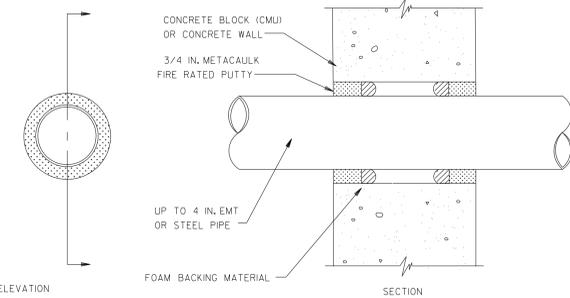
ALPHA BLDG SET 08-21-2024

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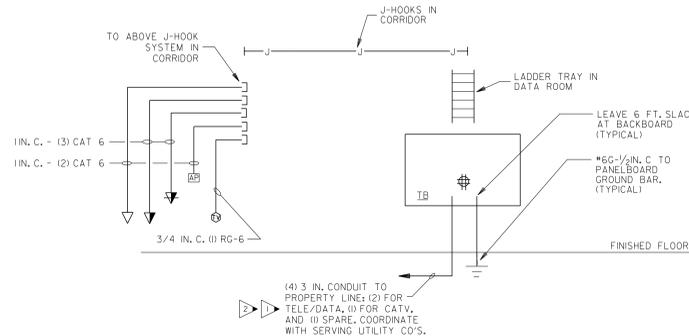
NOTE: WHERE CONDUIT IS USED AS A SLEEVE FOR ROUTING LOW VOLTAGE CABLES THROUGH A RATED WALL, LOCATE CONDUCTORS IN CENTER OF SLEEVE AND FILL OPENING WITH FIRE RATED PUTTY AT EACH END OF SLEEVE.

4 DETAIL - GYPSUM WALLBOARD PENETRATION
E6.I NOT TO SCALE



NOTE: WHERE CONDUIT IS USED AS A SLEEVE FOR ROUTING LOW VOLTAGE CABLES THROUGH A RATED WALL, LOCATE CONDUCTORS IN CENTER OF SLEEVE AND FILL OPENING WITH FIRE RATED PUTTY AT EACH END OF SLEEVE.

5 DETAIL - CONCRETE WALL PENETRATION
E6.I NOT TO SCALE



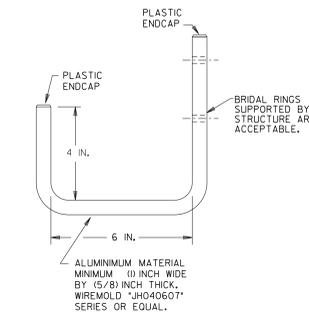
1 TELEPHONE/DATA/CATV RISER
E6.I NOT TO SCALE

KEYED NOTES: (DETAIL 1/E-7.2 ONLY)

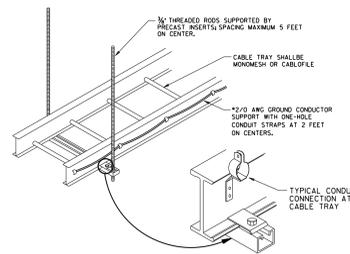
- ▶ PROVIDE (2) - 3 IN. CONDUITS FOR DATA/TEL; (1) CONDUIT FOR 50 PAIR EXTERIOR RATED, GEL FILLED COPPER CAT 6; (1) CONDUIT FOR 12 STRAND HYBRID FIBER. COORDINATE WITH OWNER FOR EXACT FIBER SPECIFICATIONS AND TERMINATIONS. COORDINATE EXACT DATA/TEL STUB OUT LOCATIONS AT STREET WITH SERVING UTILITY COMPANIES.
- ▶ PROVIDE (1) - 3 IN. CONDUIT WITH PULL STRING FOR CATV SYSTEM. COORDINATE EXACT STUB OUT LOCATION AT STREET WITH SERVING UTILITY COMPANY.

WIRE MANAGEMENT NOTES

- NOTES:
- A. ALL J-HOOKS SHALL BE SPACED NO MORE THAN 48 INCHES APART AND NO MORE THAN 12 INCHES FROM THE CORNER OF ANY SPACE.
 - B. PROVIDE J-HOOKS NO MORE THAN 12 INCHES AWAY FROM CONDUIT SLEEVES.
 - C. WHERE J-HOOKS ARE (2) ROWS; SPACING BETWEEN THE ROWS SHALL BE 12 INCHES.
 - D. CONDUIT SLEEVES SHALL BE AT THE SAME LEVEL AS THE ROWS OF J-HOOKS.
 - E. FIRE SEAL AROUND ALL CONDUIT SLEEVES. SEE ARCHITECTURAL SHEET FOR REQUIRED RATINGS.
 - F. COORDINATE THE EXACT LEVEL OF J-HOOKS AND CONDUIT SLEEVES WITH OTHER TRADES PRIOR TO ROUGHING.
 - G. J-HOOKS SHALL NOT BE SUPPORTED BY GYPSUM WALL BOARD. J-HOOKS SHALL BE SUPPORTED BY BLOCK WALL OR STUD. SEE ARCHITECTURAL PLAN FOR WALL MATERIALS.
 - H. ALL CABLING SHALL BE NEATLY BUNDLED UTILIZING "NOT A CINCH" TYPE RATED VELCRO TIE WRAPS.
 - I. J-HOOKS SHALL SUPPORT CABLING FOR: FIRE ALARM, DATA, TELEPHONE, CABLETV, AND SECURITY.
 - J. ONE ROW SHALL SUPPORT DATA/TELEPHONE CABLING, ONE ROW SHALL SUPPORT CABLETV CABLING, ONE ROW SHALL SUPPORT FIRE ALARM SYSTEM, ONE ROW SHALL SUPPORT SECURITY CABLING.
 - K. SEE DETAIL - CONCRETE WALL PENETRATION, 5/E6.I.
 - L. SEE DETAIL - GYPSUM WALLBOARD PENETRATION, 4/E6.I.
 - M. WHERE J-HOOKS ARE SHOWN ABOVE SOLID SOFFITS MORE THAN TWO FEET WIDE, PROVIDE J-HOOKS HUNG FROM STRUCTURE (4 HOOKS PER 3/8 IN THREADED ROD).
 - N. PROVIDE (2) 2 INCH CONDUIT SLEEVES INTO ALL SPACES FROM CORRIDOR WHERE RATED WALLS OCCUR.



2 J-HOOK DETAIL
E6.I NOT TO SCALE



3 LADDER CABLE TRAY
E6.I NOT TO SCALE

NOTE: LADDER TRAY ONLY IN DATA AND LOW VOLTAGE ROOMS.

GENERAL NOTES:(DATA CABLING)

- 1. ADDITIONAL WALL SLEEVES AND WALL PENETRATIONS WILL BE REQUIRED FOR NETWORK CABLING. PROVIDE AS NECESSARY AND FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS.
- 2. ALL JACKS SHALL BE PROVIDED WITH ICON DENOTING DATA OR VOICE OUTLET. OUTLET SHALL BE LABELED WITH FOLLOWING NOMENCLATURE:
D M XXX
D OR V INDICATING VOICE OR DATA OUTLET.
ALL PATCH PANELS AND I/O BLOCKS SHALL BE CORRESPONDINGLY LABELED.
- 3. PROVIDE METAL D-RING OR RING RUNS AS NECESSARY TO PROPERLY LACE AND SUPPORT ALL CABLING AT BACKBOARDS.
- 4. REFER TO 02/01N PLANS SHOWING OUTLET LOCATIONS, PANEL LOCATIONS, CEILING TYPES, ETC.
- 5. GROUND ALL RACKS WITH #6 COPPER LOCATED AT EACH BACKBOARD. CONTRACTOR SHALL ROUTE #6G-3/4 IN. C. TO GROUND PLATE. PROVIDE 12 IN. CABLE RUNWAY SPANNING FROM TOP OF RACK TO WALL AND TURNED UP TO ABOVE DROP TILE CEILING IN ORDER TO ROUTE CABLE TO RACK. AT EACH RACK LOCATION PROVIDE A 3/4 IN. X 4 FT. X 8 FT. BACKBOARD PAINTED WITH TWO COATS OF BLACK FIRE RETARDANT PAINT.
- 6. TY-WRAPS SHALL NOT BE CINCHED DOWN TIGHT ENOUGH TO DEFORM CABLES. MAINTAIN MINIMUM BEND RADIUS ON FIBER, TIE CABLES, STATION WIRES, AND PATCH CORDS.
- 7. REFER TO SPECIFICATIONS FOR CABLING. ALL CABLING SHALL BE PLENUM RATED.
- 8. PROVIDE VELCRO CABLE WRAPS AT RACKS TO PROPERLY LACE AND TRAIN PATCH CORDS AT RACKS IN AN ORDERLY FASHION.
- 9. FIELD VERIFY MOUNTING SPACE IN DATA RACK ROOM. PROVIDE WALL MOUNTED RACKS WHERE NECESSARY.
- 10. CABLING FOR COMPUTER DATA SHALL BE ROUTED VIA CABLE TRAY SYSTEM. PROVIDE CONDUIT TO 6 IN. ABOVE ACCESSIBLE CEILING. BUNDLE CABLES, SLEEVE THROUGH CORRIDOR WALL USING 4 IN. C.
- 11. NETWORK HUBS AND ELECTRONICS, RACK MOUNTED UPS, PATCH CORDS AND FIBER OPTIC PATCH CORDS ARE INCLUDED IN CONTRACT.
- 12. REFER TO POWER SHEETS FOR ADDITIONAL INFORMATION.
- 13. SEE WIRE MANAGEMENT NOTES.

ALPHA BLDG SET 08-21-2024