

CITY OF CHARLESTON
KANAWHA COUNTY, WEST VIRGINIA
CHARLESTON POLICE DEPARTMENT RENOVATION

ADDENDUM #1
October 8, 2021

THRASHER PROJECT #010-10145

TO WHOM IT MAY CONCERN:

A Pre-Bid Conference was held on Thursday, October 7, 2021 on the above-referenced project, a copy of the sign in sheet is included in this Addendum. The following are clarifications and responses to questions posed by contractors for the above reference project.

A. **GENERAL**

None

B. **SPECIFICATIONS**

None

C. **DRAWINGS**

The plans have had the word Preliminary removed from this.

D. **QUESTIONS AND RESPONSES**

None on this Addendum

E. **CLARIFICATIONS**

None

If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, bids will be received until 2:00 p.m. on Thursday, October 21, 2021 at the City Manager's Office located at 501 Virginia Street, East, Room 101 Charleston, WV 25301. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.

Philip M. Freeman, Architect
Project Manager



**CITY OF CHARLESTON
KANAWHA COUNTY, WEST VIRGINIA
CHARLESTON POLICE DEPARTMENT RENOVATION**

PRE-BID CONFERENCE

Thursday, October ~~8~~⁷, 2021

Thrasher Project #010-10145

Name	Representing	Phone #	Email Address
CHRIS SHAW	AGSTEN	304-343-5400	cshaw@agstenconstruction.com
Matthew Willis	Danhill Construction Co.	304-719-1450	Matthew.willis@danhillconstruction.com
Allen Carr	Swope Construction	304-325-8246	achildress@SwopeCo.com
CHRIS SAMPLES	IBEW 466	304-342-0800	CHRIS@IBEW466.ORG
TAITE GALETTI	START TO FINISH CONSTRUCTION	304-786-0158	s2fconstruction@yahoo.com
Tom Simms	BBL CARLTON, LLC	304-345-1300	tsimms@bbllcarlton.com



CONSTRUCTION DOCUMENTS DRAWINGS FOR City of Charleston - Police Renovations

Charleston, West Virginia

SEPTEMBER 29, 2021

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E3.00	LIGHTING PLAN

PROJECT INFORMATION

PROJECT NUMBER:010-10145

VICINITY MAP



PROJECT DATA

INTERIOR RENOVATION OF OFFICE SPACE.

IBC CONSTRUCTION TYPE: II-B
 IBC OCCUPANCY TYPE: (B) BUSINESS
 NFPA CONSTRUCTION TYPE: II (000)
 NFPA OCCUPANCY GROUP: (B) BUSINESS
 FULLY SPRINKLED: NO

TOTAL OCCUPANCY AREA: 1,331 SF

GENERAL CODE COMPLIANCES

2015 INTERNATIONAL BUILDING CODE
 2015 INTERNATIONAL PLUMBING CODE
 2015 INTERNATIONAL MECHANICAL CODE
 2018 NFPA 101 - LIFE SAFETY CODE
 2017 NFPA 70 - NATIONAL ELECTRIC CODE
 2017 ICC A117.1 STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
 ASHRAE 90.1-2010 ENERGY STANDARD FOR BUILDINGS
 WV STATE FIRE CODE - ADOPTED AUG. 1, 2020
 WV STATE BUILDING CODE - ADOPTED AUG 1, 2020

OWNER INFORMATION



THE CITY OF CHARLESTON
 501 VIRGINIA STREET EAST
 CHARLESTON, WV 25301
 304.348.8000
 JONATHAN T. STORAGE, ESQ. CITY MANAGER

CONSULTANT INFORMATION

THRASHER 600 WHITE OAKS BLVD.
 BRIDGEPORT, WV 26330

PROJECT ARCHITECT:
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 PFREEMAN@THETHRASHERGROUP.COM
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ARCHITECTURE

CIVIL

MEP

PROJECT MANAGER: KEN SMITH
 KESMITH@THETHRASHERGROUP.COM
 304.343.7601



- FOR AGENCY REVIEW DATE: _____ BY: _____
- FOR BIDDING DATE: _____ BY: _____
- FOR CONSTRUCTION DATE: _____ BY: _____

LAYOUT TAB: GENERAL INFORMATION
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USER: Author

9/13/2021 8:04:32 AM

STANDARD ABBREVIATIONS

ABV	ABOVE	MATL	MATERIAL
ACT	ACOUSTIC CEILING TILE	MAX	MAXIMUM
AD	AREA DRAIN	MCJ	MASONRY CONTROL JOINT
AFF	ABOVE FINISHED FLOOR	MDF	MEDIUM DENSITY FIBERBOARD
ALT	ALTERNATE	MECH	MECHANICAL
ALUM	ALUMINUM	MFR	MANUFACTURER
ANOD	ANODIZED	MIN	MINIMUM
APPROX	APPROXIMATELY	MISC	MISCELLANEOUS
ARCH	ARCHITECTURAL(TECT)	MO	MASONRY OPENING
AWRB	AIR & WATER - RESISTIVE BARRIER	MOS	MANUALLY OPERATED SHADE
BIT	BITUMINOUS	MP	METAL PANEL
BLDG	BUILDING	MR	MOISTURE-RESISTANT
BLK	BLOCK	MTD	MOUNTED
BLW	BELOW	MTL	METAL
BOF	BOTTOM OF FOOTING	NC	NOISE CRITERIA
BRG	BEARING	NIC	NOT IN CONTRACT
BRK	BRICK	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CI	CONTINUOUS INSULATION	NO	NUMBER
CJ	CONTROL JOINT	NOM	NOMINAL
CL	CENTER LINE	NTS	NOT TO SCALE
CLG	CEILING	OC	ON CENTER
CPT	CARPET	OH	OVERHEAD OR OPPOSITE HAND
CT	CERAMIC TILE	ORD	OVERFLOW ROOF DRAIN
CTB	CERAMIC TILE BASE	OSB	ORIENTED STRAND BOARD
CMU	CONCRETE MASONRY UNIT	PERF	PERFORATED
COL	COLUMN	PLT	PLATE
COMP	COMPACTED	PLAM	PLASTIC LAMINATE
CONC	CONCRETE	PLYWD	PLYWOOD
CONT	CONTINUOUS	PR TRTD	PRESSURE TREATED
DEMO	DEMOLITION	PT	PAINT
DIA	DIAMETER	PTD	PAINTED
DN	DOWN	QTY	QUALITY
DR	DOOR	R	RADIUS OR RISER
DS	DOWNSPOUT	RB	RUBBER BASE
D/W	DISHWASHER	RCP	REFLECTED CEILING PLAN
DWG	DRAWING	RD	ROOF DRAIN
EA	EACH	REFG	REFRIGERATOR
EJ	EXPANSION JOINT	REQ'D	REQUIRED
EL	ELEVATOR	RM	ROOM
ELEV	ELEVATION	RO	ROUGH OPENING
EQ	EQUAL	RTU	ROOF TOP UNIT
EXP	EXPANSION	SD	SMOKE DETECTOR
EXT	EXTERIOR	SECT	SECTION
EXIST	EXISTING	SF	SQUARE FEET
FF	FINISHED FLOOR	SHWR	SHOWER
FFE	FINISHED FLOOR ELEVATION	SHT	SHEET
FEC	FIRE EXTINGUISHER CABINET	SHTHG	SHEATHING
FND	FOUNDATION	SIM	SIMILAR
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR	SOG	SLAB ON GRADE
FRP	FIBERGLASS REINFORCED PLASTIC	SPEC	SPECIFICATION OR SPECIFIED
FRT	FIRE-RATE RADIANT TREATED	SPFI	SPRAY FOAM INSULATION
FT	FOOT OR FEET	SPKR	SPEAKER
FTG	FOOTING	SQ	SQUARE
GALV	GALVANIZED	SS	SOLID SURFACE OR STAINLESS STEEL
GC	GENERAL CONTRACTOR	STC	SOUND TRANSMISSION COEFFICIENT
GCT	GLAZED CERAMIC TILE	STD	STANDARD
GL	GLAZING OR GLASS	STL	STEEL
GR	GRADE(ING)	STOR	STORAGE
GWB	GYPSUM WALL BOARD	STRUCT	STRUCTURE OR STRUCTURAL
HB	HOSE BIB (CONNECTION)	SUSP	SUSPENDED
HC	HOLLOW CORE	T & G	TONGUE AND GROOVE
H/C	HANDICAPPED	TBD	TO BE DETERMINED
HM	HOLLOW METAL	TOF	TOP OF FOOTING
HORIZ	HORIZONTAL	TOM	TOP OF MASONRY
HR	HOUR	TOR	TOP OF ROOF
HT	HEIGHT	TOS	TOP OF STEEL
HVAC	HEATING, VENTILATION, AIR CONDITIONING	TYP	TYPICAL
HVT	HOMOGENEOUS VINYL TILE	UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE	UTIL	UTILITY
IN	INCH(ES)	VB	VAPOR BARRIER
INSUL	INSULATION	VCT	VINYL COMPOSITION TILE
INT	INTERIOR	VEST	VESTIBULE
JAN/JC	JANITOR/JANITOR'S CLOSET	VERT	VERTICAL
JT	JOINT	VIF	VERIFY IN FIELD
LAV	LAVATORY	NET	VINYL ENHANCED TILE
LF	LINEAR FEET	VSF	VINYL SHEET FLOORING
LKR	LOCKER	VR	VAPOR RETARDER
LTG	LIGHTING	WI	WITH
LVR	LOUVER	W/O	WITHOUT
LVT	LUXURY VINYL TILE	WB	WOOD BASE
LVL	LAMINATED VENEER LUMBER	WC	WATER CLOSET
MAS	MASONRY	WD	WOOD
		WA	WAINSCOT
		WT	WALL COVERING/TEXTILE

STANDARD DRAWING SYMBOLS

BUILDING SECTION	
WALL SECTION	
EXTERIOR ELEVATION	
INTERIOR ELEVATION	
WALL TAG	
DOOR TAG	
WINDOW TAG	
ROOM TAG	
MATERIAL TAG	
REVISION TAG	
PAINT TAG	
ACCESSORY TAG	
REFERENCE NOTE TAG	
GENERAL SURFACE CONSTRUCTION NOTE	
SPECIFIC CONSTRUCTION NOTE	
SPOT ELEVATION	
STRUCTURAL COLUMN GRID LINE	
DOOR AND FRAME	
EXISTING DOOR AND FRAME	
DENOTES ABOVE, BELOW, AND BEHIND	
DENOTES EXISTING CONSTRUCTION TO BE DEMOLISHED	

THRASHER

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NO.	BY	DATE	DESCRIPTION

City of Charleston - Police Office Renovations
 501 Virginia Street East Charleston, WV 25301
 September 29, 2021
 Bid Documents

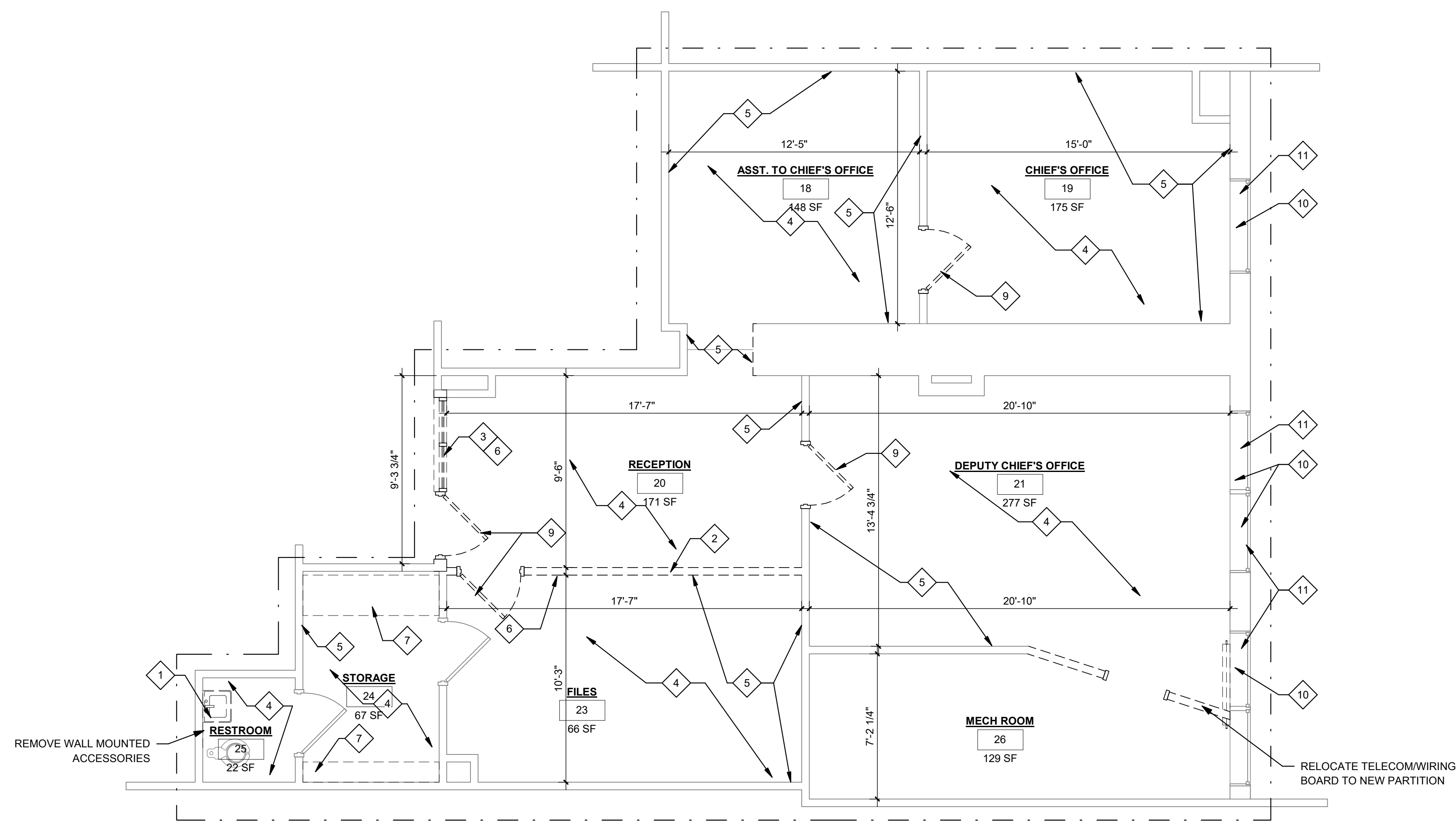
DRAWN: CFC DATE: 09/29/21
 CHECKED: TTG DATE: 09/29/21
 APPROVED: TTG DATE: 09/29/21

PROJECT No. 010-10145

GENERAL INFORMATION

SHEET No. **G1.01**

LAYOUT TAB: DEMOLITION PLAN
CAD FILE: R:\0106101\0146101\City of Charleston\Police Renovations\City of Charleston\Police Renovations\City of Charleston\Police Renovations.dwg
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1
D1.01
DEMOLITION PLAN
1/4" = 1'-0"

NOTE:
- DIMENSIONS SHOWN ON THESE PLANS ARE TYPICALLY TAKEN FROM FACE OF FINISHED WALL TO FACE OF FINISHED WALL UNLESS NOTHED OTHERWISE.
- ALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD.

KEY PLAN



DEMOLITION NOTES

NOTE #	DESCRIPTION
1	REMOVE AND DISPOSE OF LAVATORY/SINK
2	REMOVE EXISTING WALL FOR NEW DOOR
3	REMOVE EXISTING STOREFRONT, WINDOW BLINDS, AND ASSOCIATED MASONRY
4	REMOVE AND DISPOSE OF FLOORING, BASE, AND ADHESIVE
5	REMOVE AND DISPOSE OF WALL PANELS, PLYWOOD PANELS, WOOD PANELING, STUD FRAMING AND ASSOCIATED TRIM
6	REMOVE AND DISPOSE OF GLAZED FACED CMU
7	REMOVE AND DISPOSE OF SHELVING
8	REMOVE AND DISPOSE OF CEILING, CEILING GRID, LIGHT FIXTURE, SPEAKERS, FIRE DETECTION DEVICES, DIFFUSERS, GRILLES
9	REMOVE DOOR, DOOR FRAME, AND DOOR HARDWARE
10	REMOVE WINDOW STOOL AND ANY ASSOCIATED DAMAGED STOOL FRAMING
11	REMOVE EXISTING INTERIOR PERIMETER SEALANT/CAULKING

DEMOLITION PLAN LEGEND

- PROJECT BOUNDARY
- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- EXTENTS TO BE DEMOLISHED
- ITEMS TO BE RELOCATED

DEMOLITION PLAN GENERAL NOTES:

-THE INTENT OF THE DEMOLITION PLANS IS TO SHOW THE GENERAL NATURE OF THE DEMOLITION SCOPE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE JOB SITE AND VERIFYING THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHOULD NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

-REMOVE ALL EXISTING CONSTRUCTIONS AND FINISHES NECESSARY FOR THE COMPLETION OF THE WORK AS DEPICTED ON THE DRAWINGS. INCLUDING BUT NOT LIMITED TO, ITEMS SHOWN ON THE PLANS WITH DASHED LINES. NECESSARY DISCONNECTS AND ALTERATIONS TO EXISTING MECHANICAL, ELECTRICAL, FIRE PROTECTION AND ALARM SYSTEMS SHALL BE INCLUDED.

-PATCH AS REQUIRED ALL CONSTRUCTIONS TO REMAIN IN ACCORDANCE WITH THE CONTRACT DRAWINGS. WHERE CONTRACTOR IS DESIGNATED TO MAKE REMOVALS, DISPOSAL OF MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. VERIFY WITH OWNER, THE DISPOSAL AND REMOVAL OF ANY COMPONENTS OF SALVAGEABLE VALUE.

-ALL REMOVALS AND SALVAGE: SALVAGED ITEMS SHALL FIRST BE OFFERED TO THE OWNER. SALVAGED ITEMS THAT ARE NOT RETAINED BY THE OWNER SHALL BECOME PROPERTY OF THE CONTRACTOR & SHALL BE LEGALLY DISPOSED OF OFF SITE.

-PATCH AND REPAIR ALL SURFACES TO ACCEPT NEW FINISHES.

-PATCH AND REPAIR FLOOR SUBSTRATE AS REQ'D TO ACCEPT NEW FINISHES.

-REFERENCE MEP DRAWINGS FOR SCOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING DEMOLITION.

-REMOVE ONLY NONLOAD BEARING CONSTRUCTION AND PARTITIONS. CONTRACTOR TO VERIFY, PRIOR TO REMOVAL, THAT NO STRUCTURAL COMPONENTS, I.E. BEARING WALLS, BEAMS, HEADERS, ETC. SUPPORTING FLOOR, ROOF OR CEILING JOISTS ARE DESIGNATED FOR REMOVAL. CONTACT THE ARCHITECT PRIOR TO REMOVAL OF ANY CONSTRUCTION IN QUESTION OR DEVIATING FROM THE DESIGN INTENT. CONTRACTOR'S NONCONTACT OF ARCHITECT PRIOR TO REMOVAL OF ANY WORK INDICATES HIS COMPLETE UNDERSTANDING THAT NO LOAD BEARING OR STRUCTURAL WORK IS BEING ALTERED UNDER THIS CONTRACT.

-PATCH ALL FINISHES TO MATCH EXISTING, INCLUDING BUT NOT LIMITED TO, GYPSUM BOARD, PLASTER, ACOUSTIC SYSTEMS, WOOD TRIM, COVERS, BASE, PANELS, RAILS AND WAINSCOT. VERIFY MATCH OF NEW FINISH MATERIALS TO EXISTING IN COLOR, TEXTURE, THICKNESS, CUT, ETC. TO SATISFACTION OF OWNER PRIOR TO INSTALLATIONS. PROVIDE OTHER MATERIALS TO MATCH EXISTING WHEN REQUIRED. TO BE APPROVED BY ARCHITECT.

-PATCH EXISTING WALLS, GYPSUM DRYWALL, OR PLASTER TO MATCH EXISTING OF SUFFICIENT THICKNESS TO MAINTAIN UNIFORM WALL THICKNESS. ALL EXPOSED PORTIONS OF WALL SHALL BE FINISHED WITH THREE (3) COATS OF SPECKLING, SANDED AND LEFT IN A PAINT READY CONDITION.

-WHERE APPLICABLE, LEVEL ALL EXISTING FLOORS AS REQUIRED TO RECEIVE NEW FLOOR FINISHES. INSTALL REQUIRED TRANSITION PIECES BETWEEN VARIOUS FLOOR FINISHES SUITABLE FOR CONDITIONS AND ACCEPTABLE TO THE ARCHITECT. MATCH EXISTING WHEREVER POSSIBLE.

NO.	BY	DATE	DESCRIPTION

City of Charleston - Police Office Renovations
501 Virginia Street East Charleston, WV 25301
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Bid Documents

DRAWN: CFC DATE: 09/29/21
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PROJECT No. 010-10145

DEMOLITION PLAN

SHEET No.

D1.01

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DEMOLITION NOTES

NOTE #	DESCRIPTION
1	REMOVE AND DISPOSE OF LAVATORY/SINK
2	REMOVE EXISTING WALL FOR NEW DOOR
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10	REMOVE WINDOW STOOL AND ANY ASSOCIATED DAMAGED STOOL FRAMING
11	REMOVE EXISTING INTERIOR PERIMETER SEALANT/CAULKING

DEMOLITION PLAN LEGEND

- PROJECT BOUNDARY
- ▭ EXISTING TO REMAIN
- - - - - EXISTING TO BE DEMOLISHED
- ▨ EXTENTS TO BE DEMOLISHED
- ▨ ITEMS TO BE RELOCATED

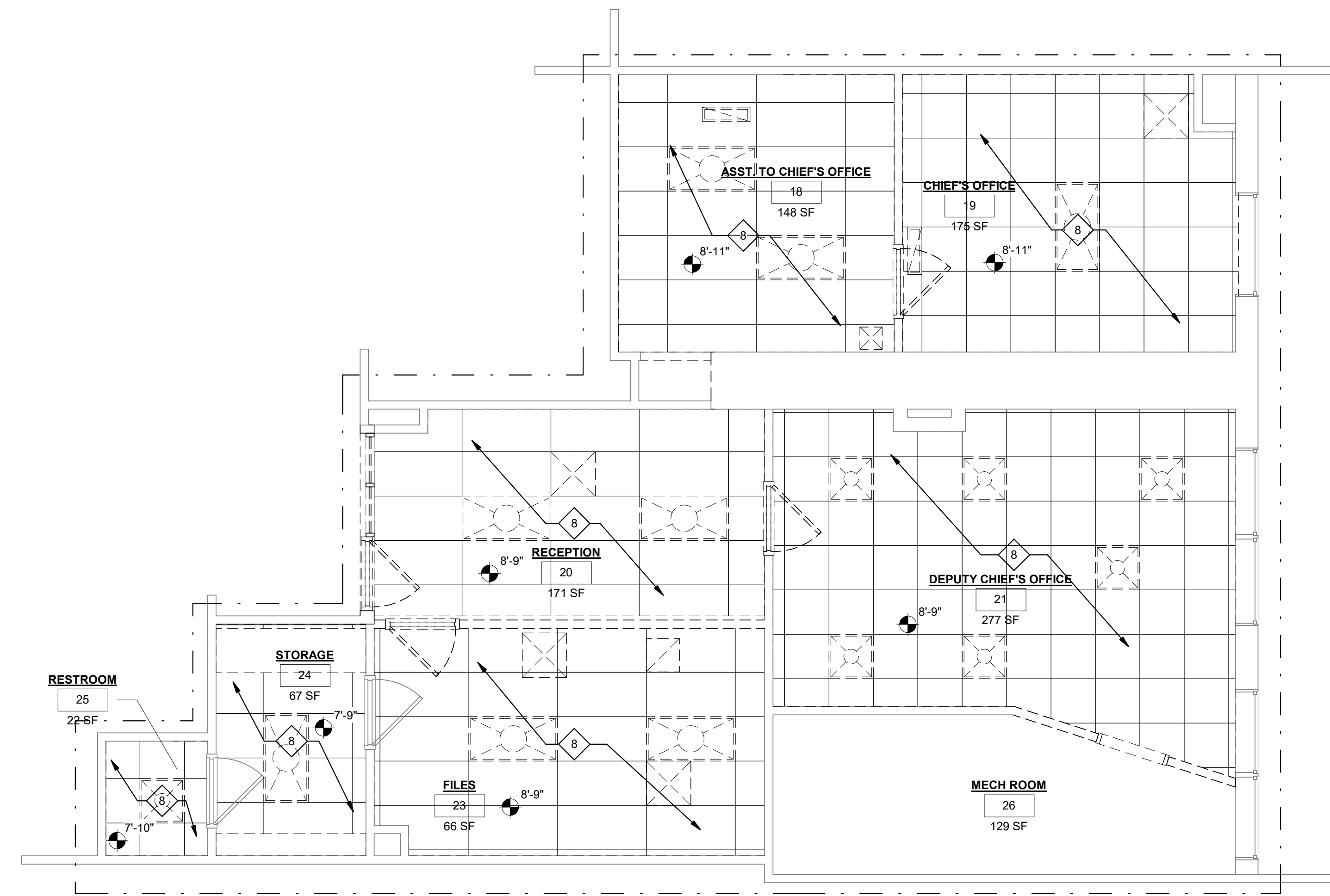
DEMOLITION REFLECTED CEILING PLAN LEGEND

NOTE: CONTRACTOR TO COORDINATE RCP BETWEEN ARCHITECTURAL AND MEP DRAWINGS

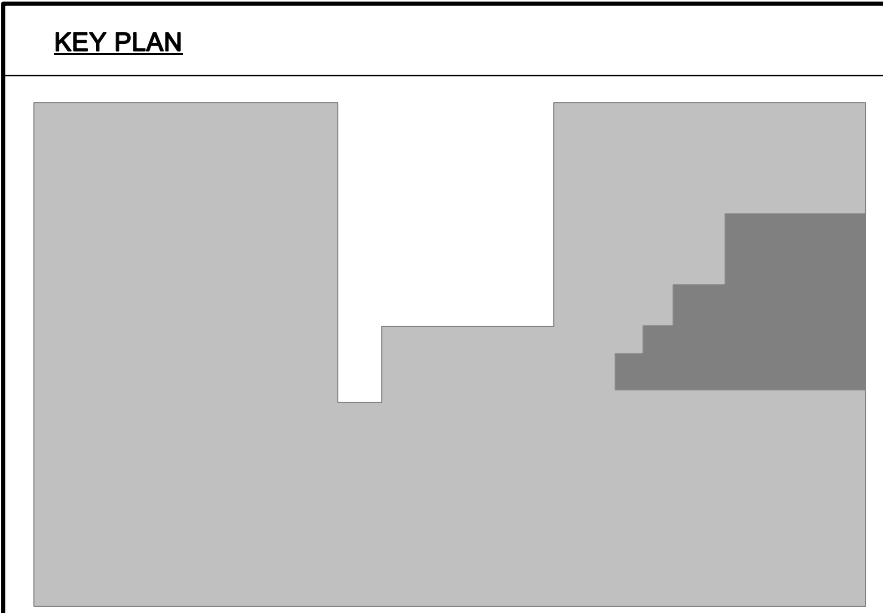
- ▭ 2'x2' LAY-IN CEILING TILE
- ▭ 2'x4' LAY-IN CEILING TILE
- ▭ 2'x4' LIGHT FIXTURE
- ▭ 2'x2' LIGHT FIXTURE
- ▨ GYPSUM BOARD CEILING
- ▨ DIFFUSERS
- ▨ RETURN GRILL
- ▨ BULK HEAD
- ▨ WALLS BELOW

DEMOLITION PLAN GENERAL NOTES:

- THE INTENT OF THE DEMOLITION PLANS IS TO SHOW THE GENERAL NATURE OF THE DEMOLITION SCOPE. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VISITING THE JOB SITE AND VERIFYING THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHOULD NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
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- PATCH AS REQUIRED ALL CONSTRUCTIONS TO REMAIN IN ACCORDANCE WITH THE CONTRACT DRAWINGS. WHERE CONTRACTOR IS DESIGNATED TO MAKE REMOVALS, DISPOSAL OF MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. VERIFY WITH OWNER, THE DISPOSAL AND REMOVAL OF ANY COMPONENTS OF SALVAGEABLE VALUE.
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- PATCH AND REPAIR ALL SURFACES TO ACCEPT NEW FINISHES.
- PATCH AND REPAIR FLOOR SUBSTRATE AS REQ'D TO ACCEPT NEW FINISHES.
- REFERENCE MEP DRAWINGS FOR SCOPE OF MECHANICAL, ELECTRICAL, AND PLUMBING DEMOLITION.
- REMOVE ONLY NONLOAD BEARING CONSTRUCTION AND PARTITIONS. CONTRACTOR TO VERIFY, PRIOR TO REMOVAL, THAT NO STRUCTURAL COMPONENTS, I.E. BEARING WALLS, BEAMS, HEADERS, ETC. SUPPORTING FLOOR, ROOF OR CEILING JOISTS ARE DESIGNATED FOR REMOVAL. CONTACT THE ARCHITECT PRIOR TO REMOVAL OF ANY CONSTRUCTION IN QUESTION OR DEVIATING FROM THE DESIGN INTENT. CONTRACTOR'S NONCONTACT OF ARCHITECT PRIOR TO REMOVAL OF ANY WORK INDICATES HIS COMPLETE UNDERSTANDING THAT NO LOAD BEARING OR STRUCTURAL WORK IS BEING ALTERED UNDER THIS CONTRACT.
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- WHERE APPLICABLE, LEVEL ALL EXISTING FLOORS AS REQUIRED TO RECEIVE NEW FLOOR FINISHES. INSTALL REQUIRED TRANSITION PIECES BETWEEN VARIOUS FLOOR FINISHES SUITABLE FOR CONDITIONS AND ACCEPTABLE TO THE ARCHITECT. MATCH EXISTING WHEREVER POSSIBLE.



1 DEMOLITION PLAN - RCP
1/4" = 1'-0"
0' 2'-6" 5' 10'



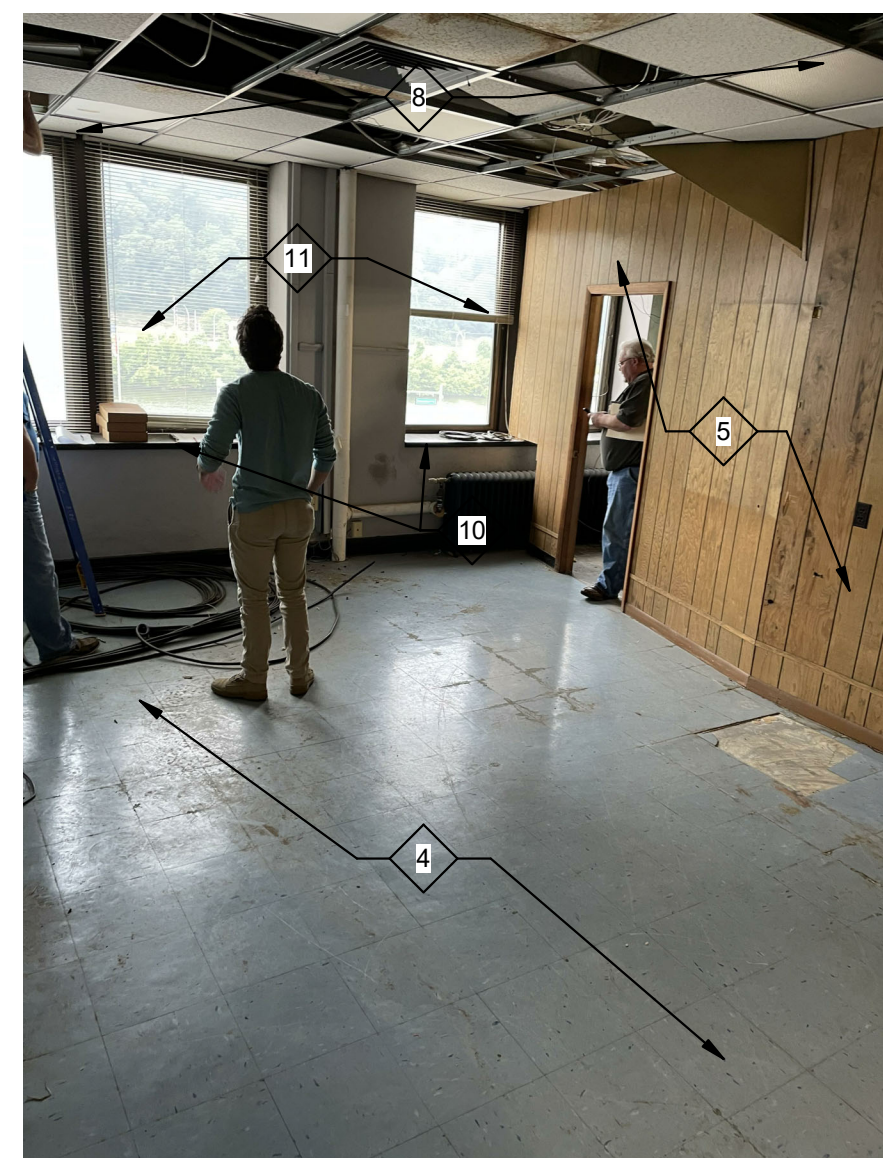
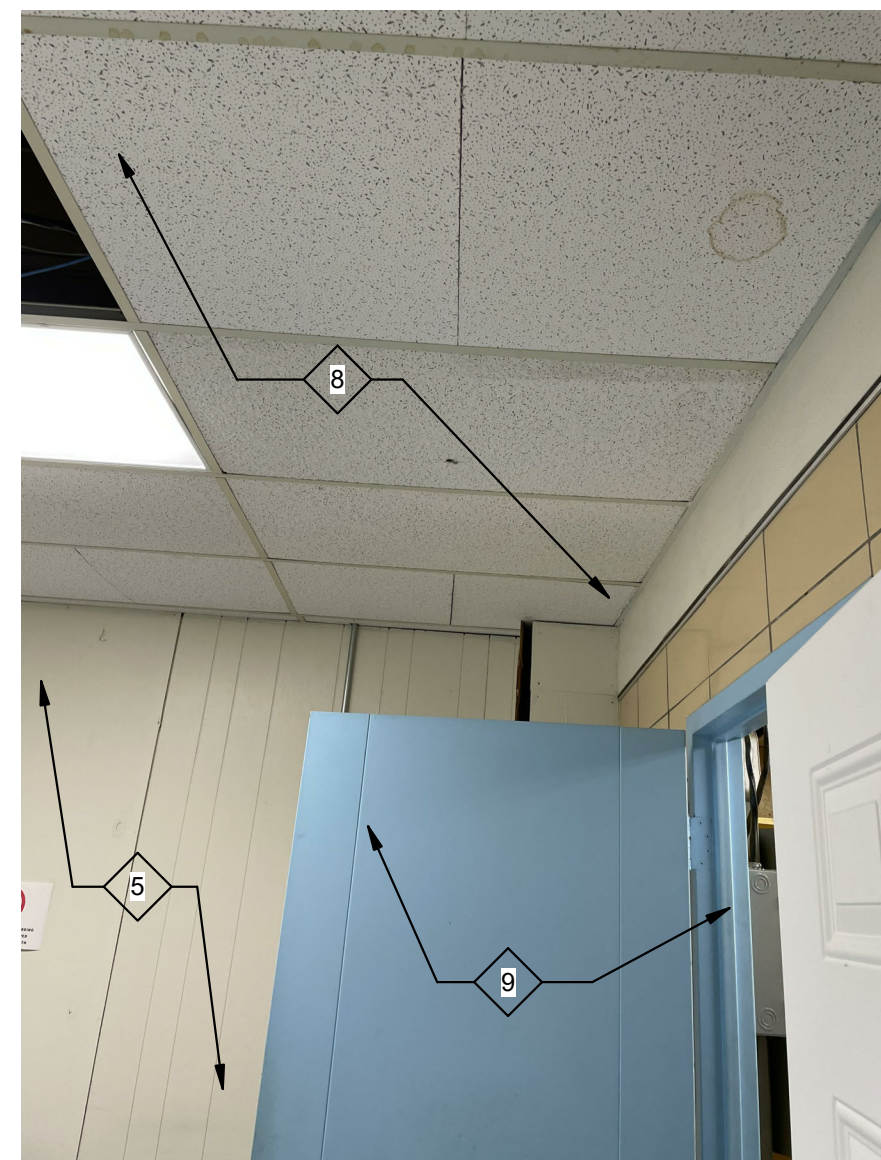
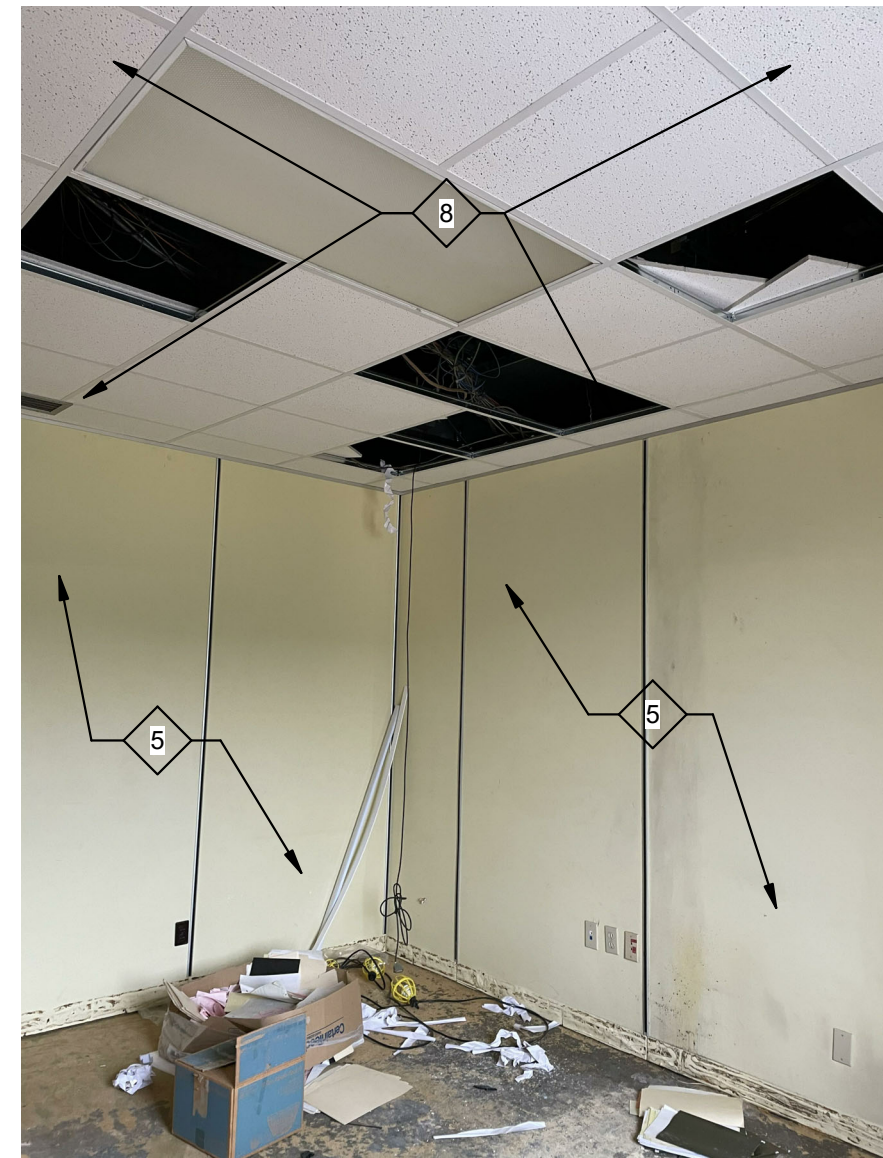
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PROJECT No. 010-10145

DEMOLITION RCP
SHEET No. **D1.02**



LAYOUT TAB: DEMOLITION PHOTOS
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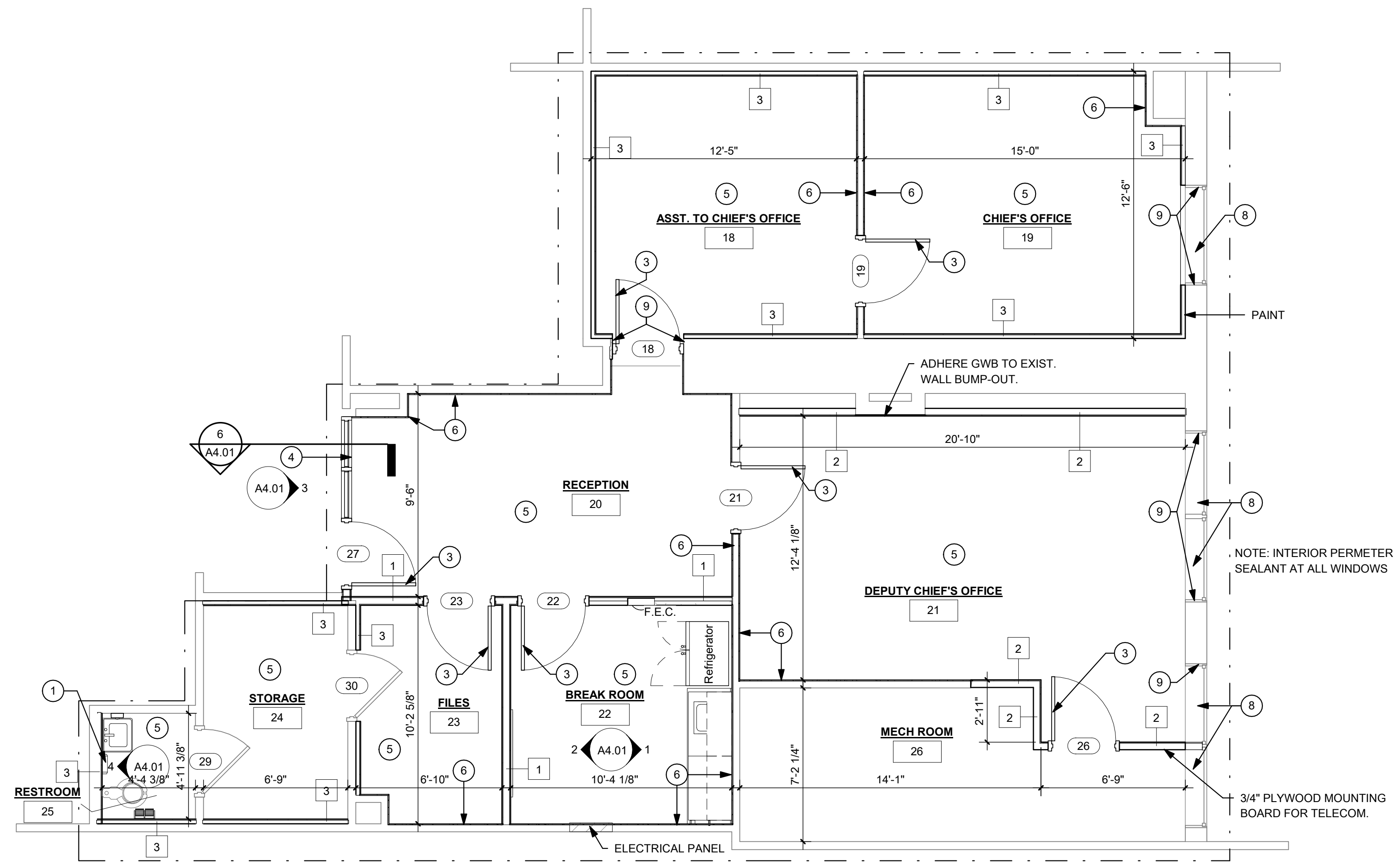
PROJECT No. 010-10145

DEMOLITION PHOTOS

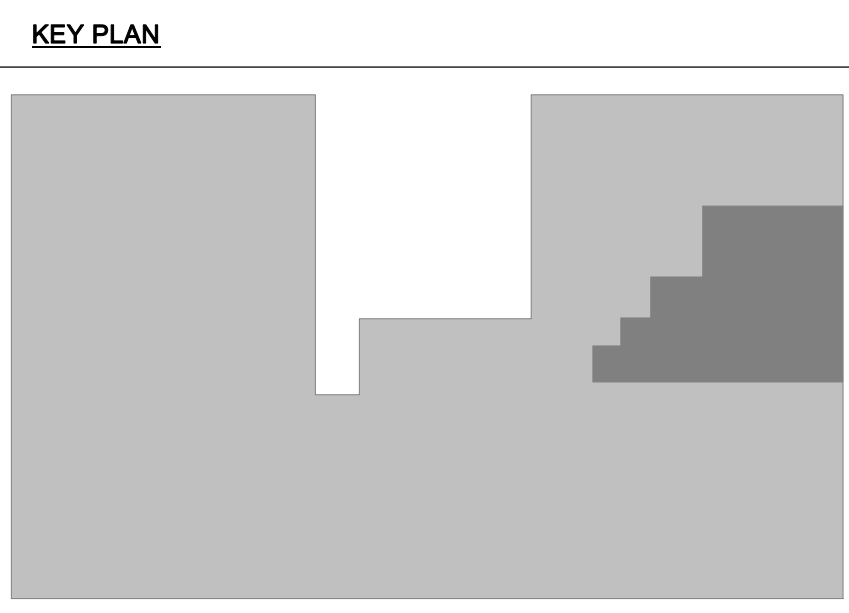
SHEET No.

D1.03

NOTE #	DESCRIPTION
1	REMOVE AND DISPOSE OF LAVATORY/SINK
2	REMOVE EXISTING WALL FOR NEW DOOR
3	REMOVE EXISTING STOREFRONT, WINDOW BLINDS, AND ASSOCIATED MASONRY
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11	REMOVE EXISTING INTERIOR PERIMETER SEALANT/CAULKING



1 FLOOR PLAN - NEW CONSTRUCTION
A1.01 1/4" = 1'-0"



CONSTRUCTION NOTES	
NOTE #	DESCRIPTION
1	NEW LAVATORY AND FIXTURES
3	NEW DOOR, DOOR FRAME AND HARDWARE. SEE DOOR SCHEDULE
4	NEW HOLLOW METAL FRAMED TRANSACTION WINDOW
5	NEW FLOORING. SEE FINISH SCHEDULE
6	NEW GYP. WALL BOARD TO EXISTING STUDS - PAINT. SEE FINISH SCHEDULE
7	NEW CEILING, CEILING GRID AND COMPONENTS. SEE 'M' SHEETS
8	NEW 1/2" SOLID SURFACE WINDOW STOOL
9	RETURN GWB TO FRAME

NEW CONSTRUCTION PLAN LEGEND	
	PROJECT BOUNDARY
	EXISTING TO REMAIN
	NEW CONSTRUCTION

GENERAL NOTES:

- THE SCOPE OF THE WORK IS GENERALLY LIMITED TO THE AREAS SHOWN ON THESE PLANS. WORK NECESSARY TO RUN ELECTRICAL SERVICE TO EXISTING PANELS OR EXTEND OR REROUTE OTHER UTILITY LINES IS ALSO INCLUDED
- VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF ANY ON SITE ACTIVITIES.
- DIMENSIONS SHOWN ON THESE PLANS ARE TYPICALLY FROM FACE OF FINISHED WALL TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE
- PATCH EXISTING WALLS WHERE DEMOLITION OR OTHER CUTTING OF WALL SURFACES IS REQ'D TO MATCH EXISTING CONSTRUCTION AND FINISHES, INCLUDING INSULATION MAT'L.
- TYPICAL NEW WALLS SHALL BE 6" ABOVE FINISHED CEILING HEIGHT. VERIFY CEILING HEIGHTS ON ROOM FINISH SCHEDULE. CONTRACTOR SHALL MATCH EXISTING CONSTRUCTION (STUD SIZE AND GWB THICKNESS) WHERE APPROPRIATE TO FILL IN GAPS IN WALL OR EXTEND EXISTING WALLS.
- CONTRACTOR SHALL SCHEDULE NOISY, NOXIOUS, OR DISRUPTIVE ACTIVITIES OUTSIDE OF BUSINESS HOURS.
- ALL NEW PARTITIONS TO BE TYPE (1) UNLESS NOTED OTHERWISE.
- INSTALL WOOD BLOCKING IN NEW WALLS TO RECEIVE WALL-MOUNTED ITEMS. WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED
- PREPARE ALL NEW AND EXISTING WALL SURFACES TO RECEIVE SCHEDULED FINISH. REF: ROOM FINISH SCHEDULE, SHEET A1.02
- FINISH FLOOR MAT'L TRANSITIONS SHALL OCCUR AT CENTERLINE OF DOOR.
- THE OTHER AREAS OF THE BUILDING WILL REMAIN IN OPERATION FOR THE DURATION OF THE CONSTRUCTION CONTRACT. COOPERATION AND CONSIDERATION BY THE CONTRACTOR AND WORKMEN ON SITE WILL BE REQ'D. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE WORK ACTIVITIES WITH THE OWNER.

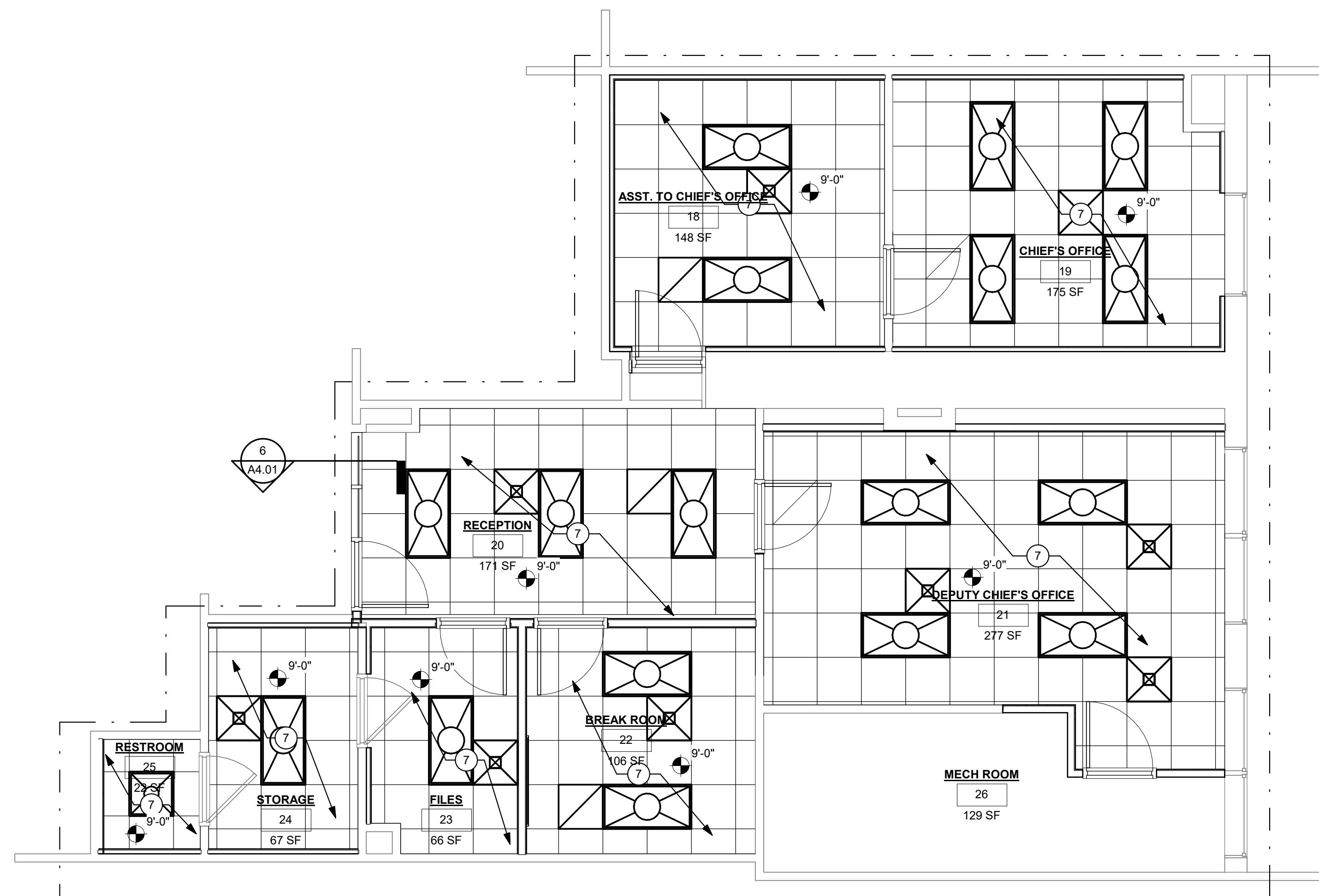
NO.	BY	DATE	DESCRIPTION

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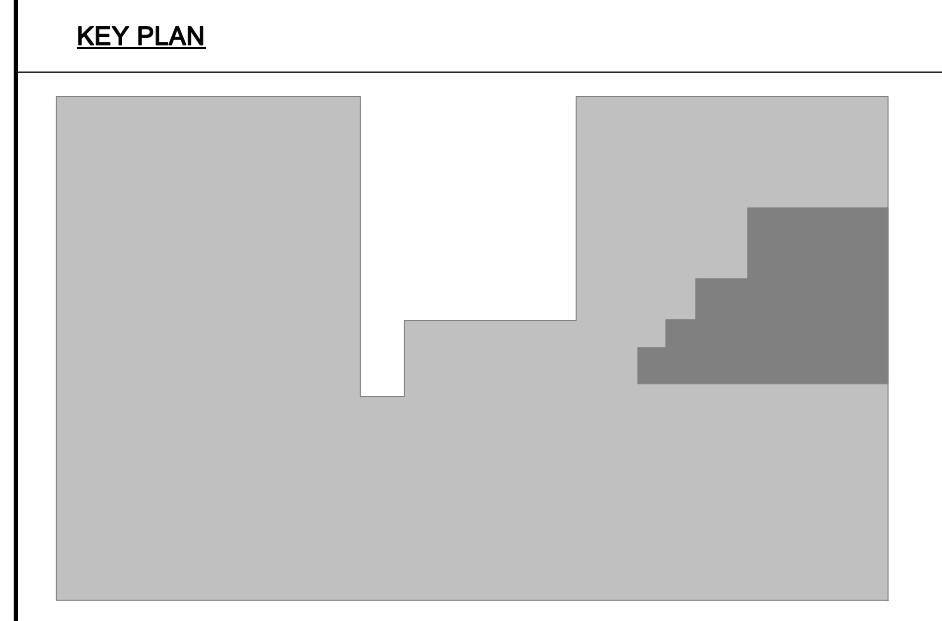
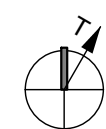
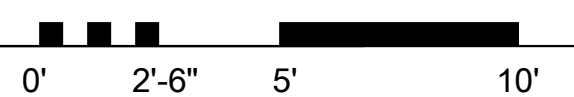
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PROJECT No. 010-10145

FLOOR PLAN
SHEET No. **A1.01**



1 RCP - NEW CONSTRUCTION
A1.02 1/4" = 1'-0"



CONSTRUCTION NOTES	
NOTE #	DESCRIPTION
1	NEW LAVATORY AND FIXTURES
3	NEW DOOR, DOOR FRAME AND HARDWARE. SEE DOOR SCHEDULE
4	NEW HOLLOW METAL FRAMED TRANSACTION WINDOW
5	NEW FLOORING. SEE FINISH SCHEDULE
6	NEW GYP. WALL BOARD TO EXISTING STUDS - PAINT. SEE FINISH SCHEDULE
7	NEW CEILING, CEILING GRID AND COMPONENTS. SEE 'M' SHEETS
8	NEW 1/2" SOLID SURFACE WINDOW STOOL
9	RETURN GWB TO FRAME

NEW CONSTRUCTION PLAN LEGEND	
	PROJECT BOUNDARY
	EXISTING TO REMAIN
	NEW CONSTRUCTION

REFLECTED CEILING PLAN LEGEND	
NOTE: CONTRACTOR TO COORDINATE RCP BETWEEN ARCHITECTURAL AND MEP DRAWINGS	
	2'x2' LAY-IN CEILING TILE
	DIFFUSERS
	2'x4' LIGHT FIXTURE
	RETURN GRILL
	2'x2' LIGHT FIXTURE

	BULK HEAD
	WALLS BELOW

GENERAL NOTES:

- THE SCOPE OF THE WORK IS GENERALLY LIMITED TO THE AREAS SHOWN ON THESE PLANS. WORK NECESSARY TO RUN ELECTRICAL SERVICE TO EXISTING PANELS OR EXTEND OR REROUTE OTHER UTILITY LINES IS ALSO INCLUDED
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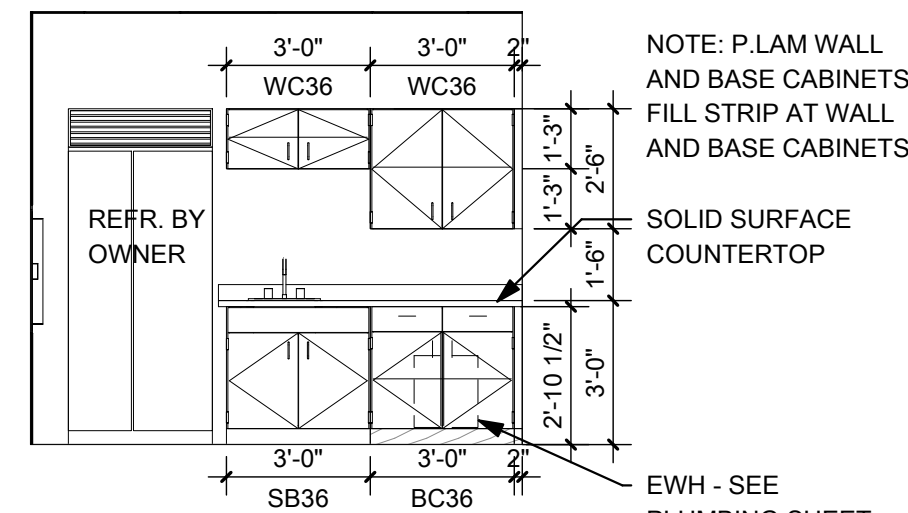
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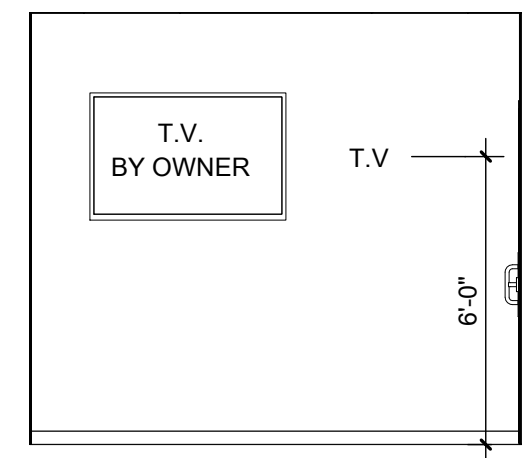
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SHEET No.

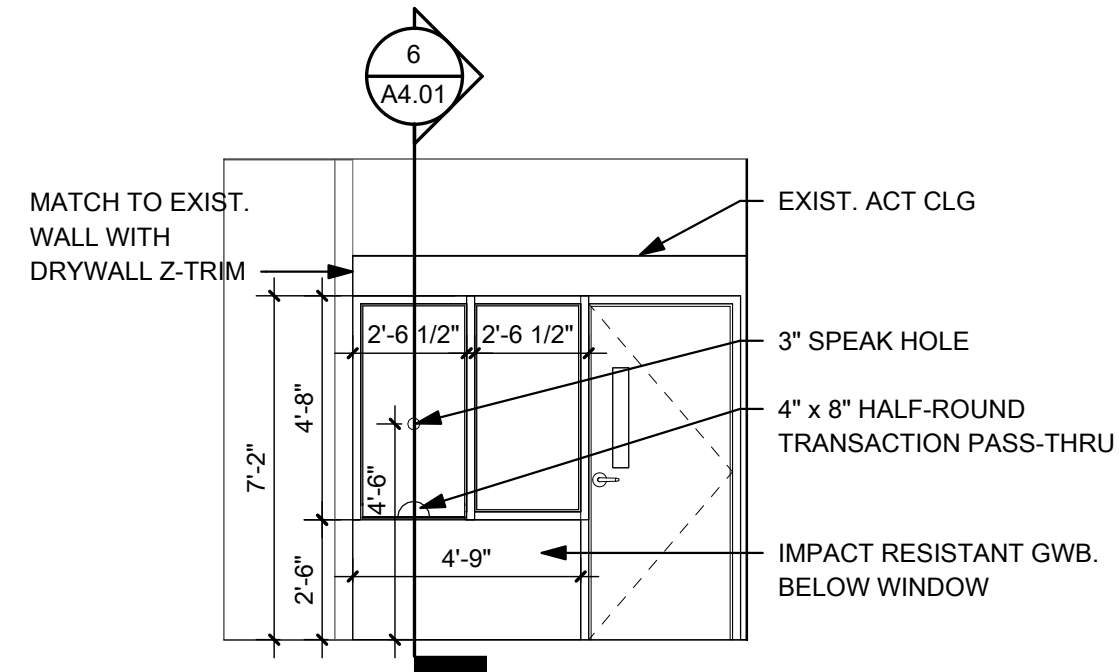
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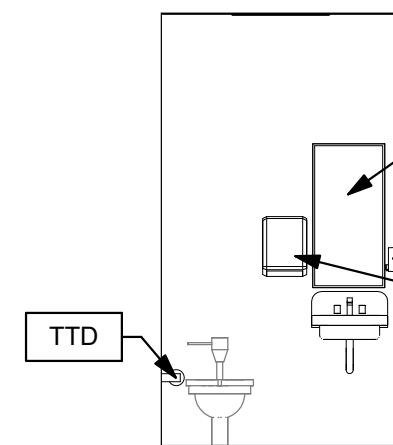
1 BREAKROOM ELEVATION
A4.01 1/4" = 1'-0"



2 BREAKROOM ELEVATION
A4.01 1/4" = 1'-0"

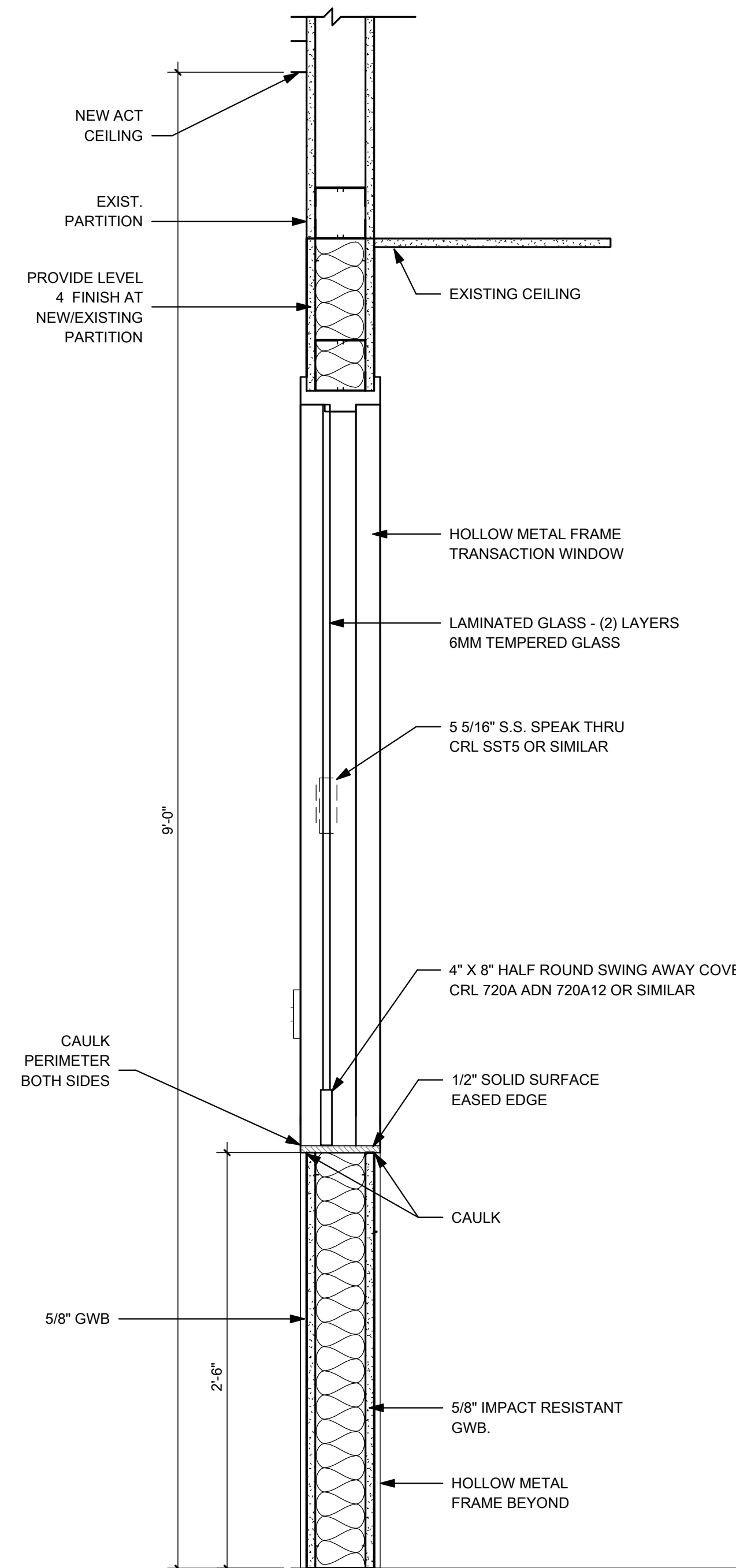


3 TRANSACTION WINDOW ELEVATION
A4.01 1/4" = 1'-0"

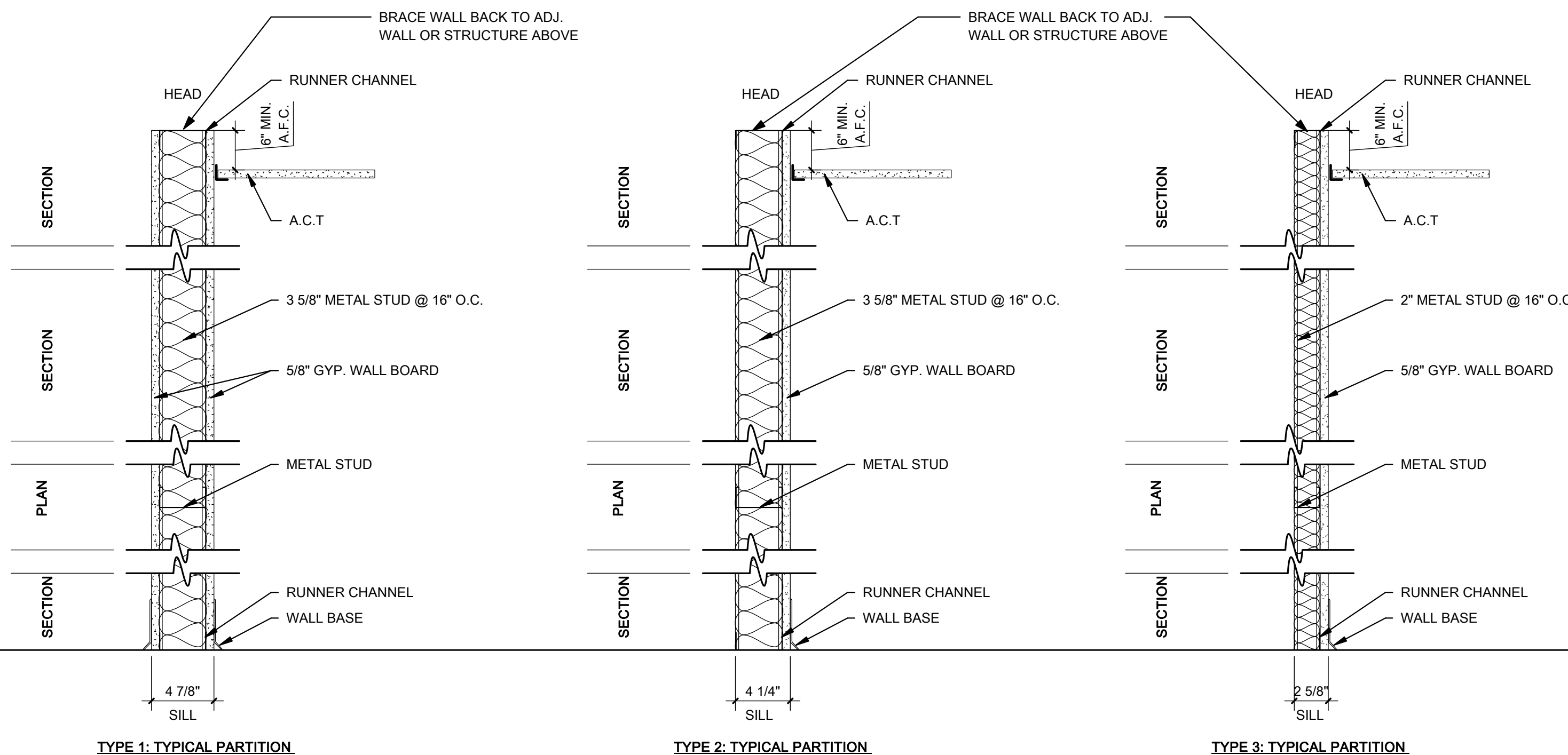


RESTROOM ACCESSORY SCHEDULE	
NOTE #	DESCRIPTION
M	MIRROR
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TTD	TOILET TISSUE DISPENSER

4 RESTROOM ELEVATION
A4.01 1/4" = 1'-0"



6 TRANSACTION WINDOW DETAIL
A4.01 1 1/2" = 1'-0"



5 TYP. INT. PARTITION TYPES
A4.01 1 1/2" = 1'-0"

NOTE: WHERE STUD FRAMING OF EXISTING PARTITIONS IS SUITABLE APPLY GWB DIRECTLY TO EXISTING STUDS.

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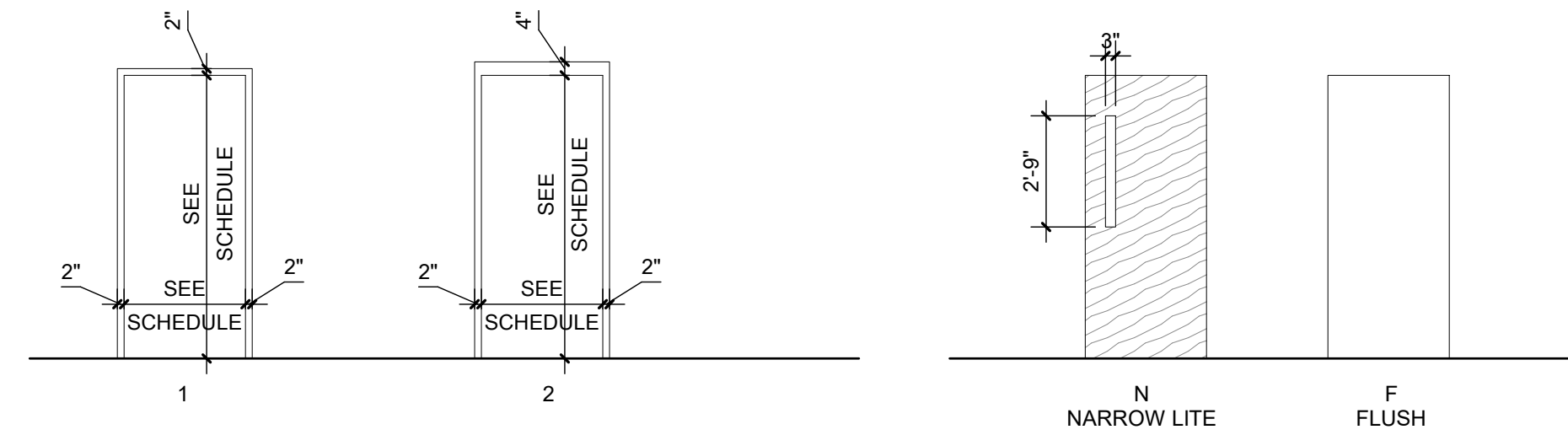
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INT. ELEVATIONS & DETAILS

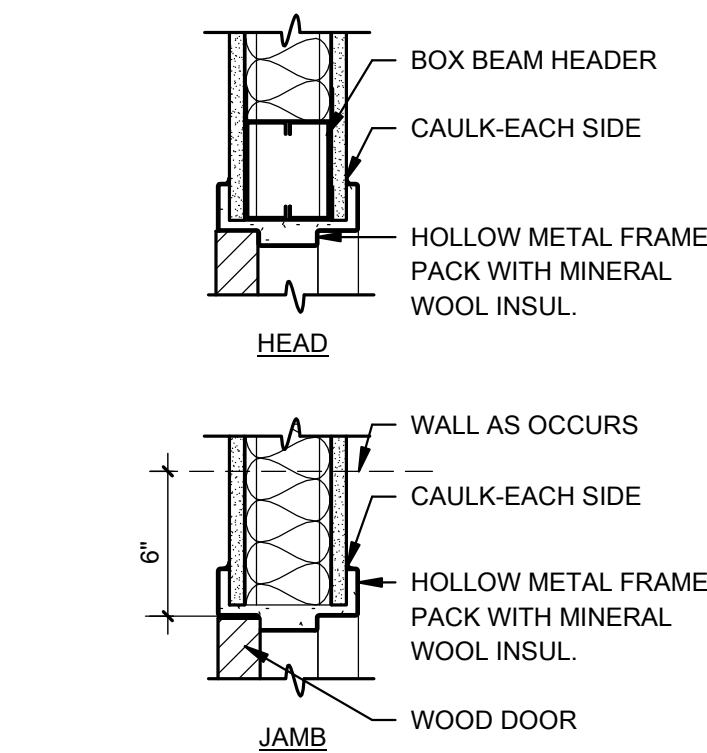
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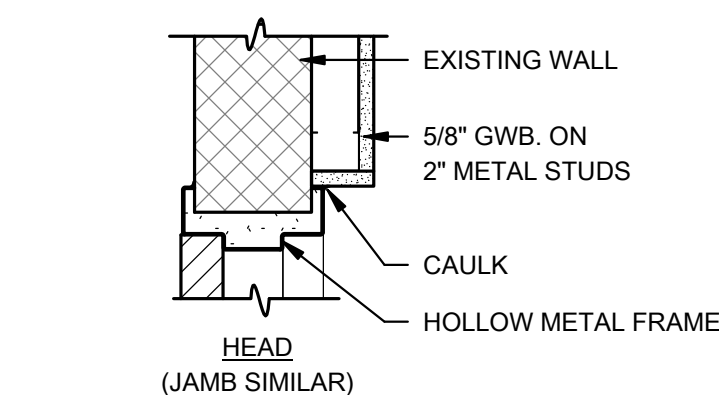
#	DOOR						FRAME			ASSEMBLY		REMARKS
	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	TYPE	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE SET	
18	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
19	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
21	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
22	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
23	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
26	3'-0"	7'-0"	1 3/4"	SCWD	STAIN	F	1	H.M.	PAINT			
27	3'-0"	7'-0"	1 3/4"	H.M.	PAINT	N	1	H.M.	PAINT			EXISTING
29	3'-0"	7'-0"	1 3/4"	H.M.	PAINT	F	1	H.M.	PAINT			EXISTING
30	3'-0"	7'-0"	1 3/4"	H.M.	PAINT	F	1	H.M.	PAINT			EXISTING



ROOM #	ROOM NAME	FLOOR FINISH	BASE	WALL FINISH				CEILING FINISH	REMARKS
				NORTH	EAST	SOUTH	WEST		
18	ASST. TO CHIEF'S OFFICE	LVT	RUBBER	PAINT 2	PAINT 1	PAINT 1	PAINT 1	A.C.T	
19	CHIEF'S OFFICE	LVT	RUBBER	PAINT 2	PAINT 1	PAINT 1	PAINT 1	A.C.T	
20	RECEPTION	LVT	RUBBER	PAINT 1	PAINT 1	PAINT 1	PAINT 1	A.C.T	
21	DEPUTY CHIEF'S OFFICE	LVT	RUBBER	PAINT 2	PAINT 1	PAINT 1	PAINT 1	A.C.T	
22	BREAK ROOM	LVT	RUBBER	PAINT 1	PAINT 1	PAINT 1	PAINT 2	A.C.T	
23	FILES	LVT	RUBBER	PAINT 1	PAINT 1	PAINT 1	PAINT 1	A.C.T	
24	STORAGE	LVT	RUBBER	PAINT 1	PAINT 1	PAINT 1	PAINT 1	A.C.T	
25	RESTROOM	LVT	RUBBER	PAINT 1	PAINT 1	PAINT 1	PAINT 1	A.C.T	
26	MECH ROOM	-	-	-	-	-	-	-	NO NEW FINISHES

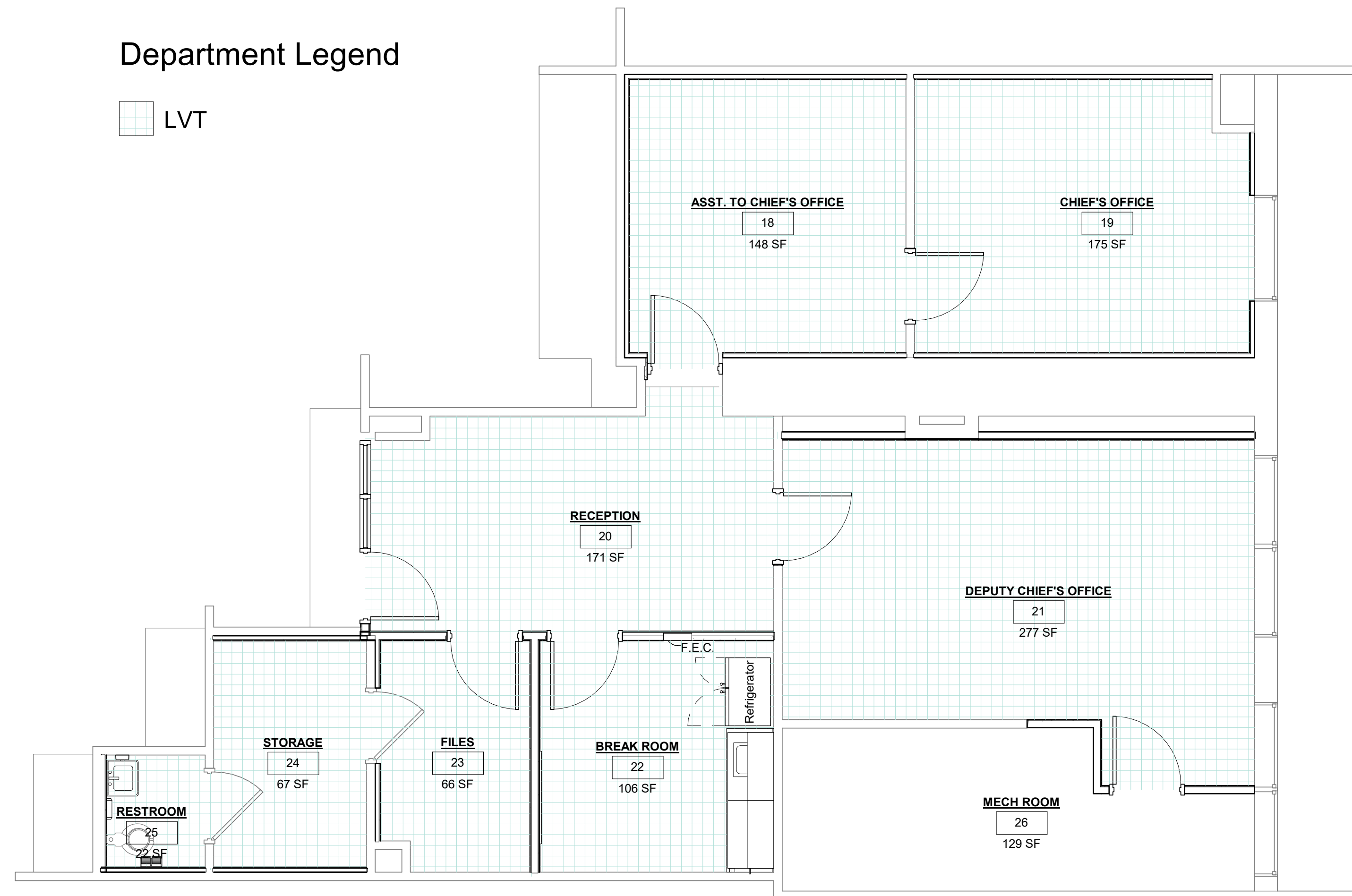


1 DOOR DETAIL - NEW PARTITION
A6.01 1 1/2" = 1'-0"



2 DOOR DETAIL - EXIST PARTITION
A6.01 1 1/2" = 1'-0"

Department Legend



3 FINISH PLAN
A6.01 1/4" = 1'-0"

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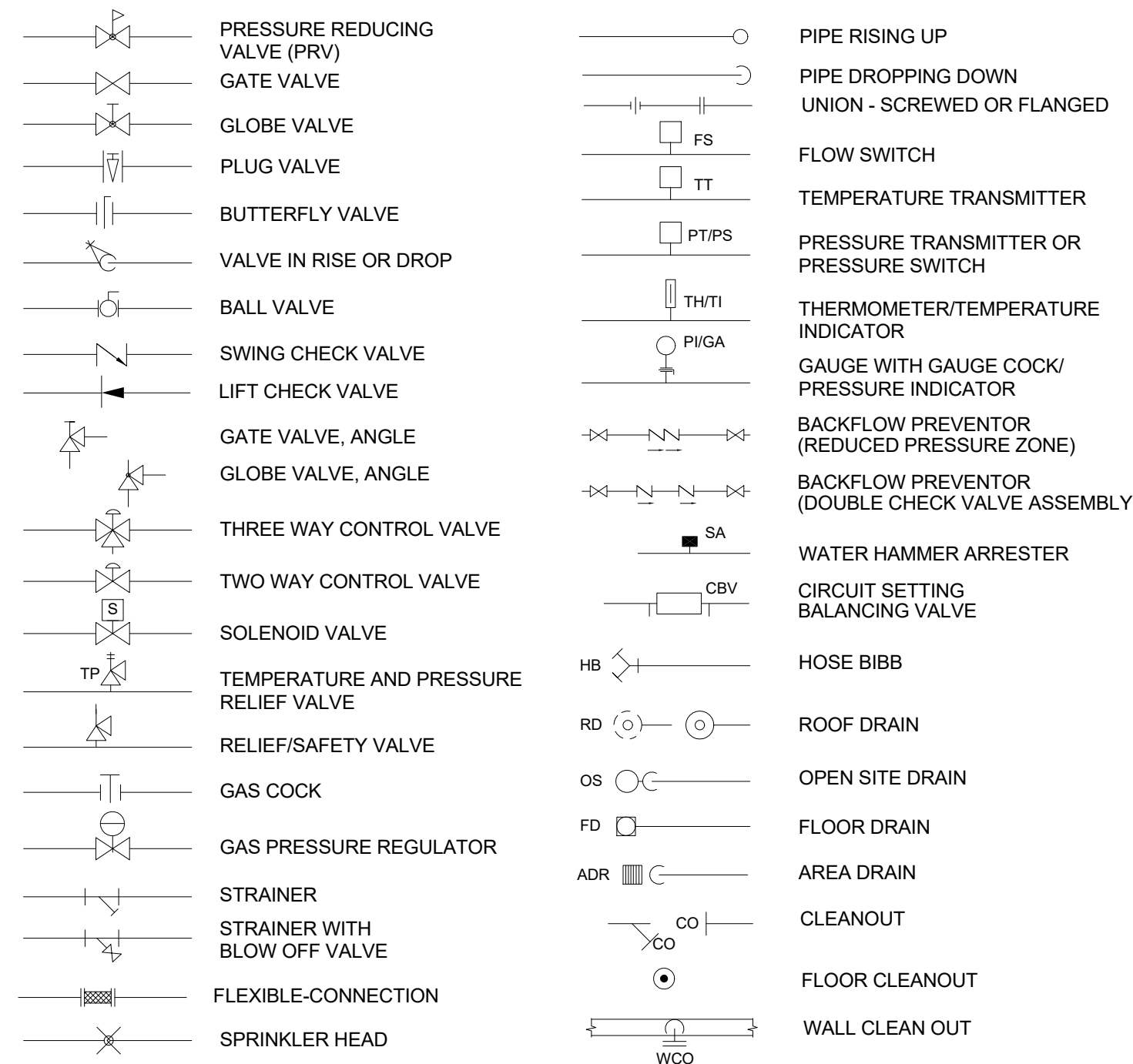
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SCHEDULES & DIAGRAMS

SHEET No.

A6.01

PIPING ELEMENTS / VALVING



PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	- DOMESTIC COLD WATER PIPING (CW)
	- DOMESTIC HOT WATER PIPING (HW)
	- SANITARY SEWER PIPING
	- SANITARY VENT PIPING (V)
	- POINT OF CONNECTION TO EXISTING

PLUMBING ABBREVIATIONS

SYMBOL	DESCRIPTION
A/C	- ABOVE CEILING
AFF	- ABOVE FINISH FLOOR
AP	- ACCESS PANEL
BFF	- BELOW FINISHED FLOOR
CD	- CONDENSATE DRAIN
CFH	- CUBIC FEET PER HOUR
CO	- CLEANOUT
CONT	- CONTINUATION
CW	- DOMESTIC COLD WATER
DN	- DOWN
DWG	- DRAWING
(E)	- EXISTING
°F	- DEGREE FAHRENHEIT
FCO	- FLOOR CLEANOUT
FD	- FLOOR DRAIN
G	- GAS
GPM	- GALLONS PER MINUTE
HW	- DOMESTIC HOT WATER
HWC	- DOMESTIC HOT WATER CIRCULATION
IE	- INVERT ELEVATION
KW	- KILOWATT
LBS	- POUNDS
MG	- MEDIUM PRESSURE GAS
NTS	- NOT TO SCALE
OSD	- OVERFLOW STORM DRAIN
PD	- PUMP DISCHARGE
PSI	- POUNDS PER SQUARE INCH
PVC	- POLYVINYL CHLORIDE PIPE
RPBP	- REDUCED PRESSURE BACKFLOW PREVENTER
SD	- STORM DRAIN
SS	- SANITARY SEWER
SF	- SQUARE FEET
UNO	- UNLESS NOTED OTHERWISE
V	- VENT
VTR	- VENT THRU ROOF
WCO	- WALL CLEANOUT

PLUMBING GENERAL NOTES

- DO NOT SCALE FROM THESE DRAWINGS. EXACT DIMENSIONS SHALL BE TAKEN FROM ARCHITECTURAL DRAWINGS.
- ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE CODES AND REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE AND LOCAL ORDINANCES WHICH MAY BE IN EFFECT. ALL PLUMBING MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION, AND IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
- IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH AN OWNER REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE OWNER MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- THE PLUMBING CONTRACTOR MUST VISIT THE SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS CONDITIONS TO BE MET PRIOR TO BID SUBMISSION. LACK OF A THOROUGH UNDERSTANDING OF THE PROJECT SCOPE AND CONDITIONS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR FOR A REQUEST FOR EXTRA COMPENSATION.
- IT IS CRITICAL THAT THE PLUMBING CONTRACTOR FIELD VERIFIES ALL EXISTING INVERT ELEVATIONS PRIOR TO BID SUBMISSION. IF ANY CONFLICTS EXIST BETWEEN THE NEW PLUMBING SYSTEMS AND THE EXISTING SITE LEVEL SYSTEMS, THEY SHOULD BE BROUGHT TO THE ATTENTION OF AN OWNER'S REPRESENTATIVE AND THE ENGINEER PRIOR TO BID SUBMISSION. EXTRA COMPENSATION WILL NOT BE GRANTED FOR ANY EXTRA WORK OR MATERIAL WHICH RESULTS FROM AN INABILITY TO MEET THE INVERTS OF THE EXISTING SITE LEVEL PIPING SYSTEMS.
- THE PLUMBING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPING, PIPING CONNECTIONS AND ACCESS DOORS. THESE DRAWINGS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM THE BID DOCUMENTS.
- RUN ALL DOMESTIC WATER, WASTE AND VENT PIPING AS HIGH AS POSSIBLE THROUGHOUT THE ENTIRE BUILDING. INSTALL LONG RUNS OF PIPING WITHIN STEEL JOIST SPACE AND OTHER PIPING TIGHT TO BOTTOM OF STEEL. COORDINATE AND VERIFY WITH OTHER CONTRACTORS AS NOT TO INTERFERE WITH DUCTWORK, FIRE PROTECTION PIPING, LIGHTING SYSTEMS, ETC.
- ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ ELECTRICAL FEEDS. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH AN OWNER REPRESENTATIVE AND ARCHITECT PRIOR TO INSTALLATION.
- ALL DOMESTIC WATER BRANCH LINES SHALL HAVE THEIR OWN RESPECTIVE SHUT-OFF VALVES WHETHER OR NOT SHOWN ON THE DRAWINGS.
- THE PLUMBING CONTRACTOR SHALL RUN OUT ALL BUILDING DRAINAGE AND WASTE LINES WHERE SHOWN ON THE DRAWINGS AND MAKE ALL CONNECTIONS TO SITE LEVEL SYSTEMS.
- ALL NON-DRAINAGE PIPING SHALL BE RUN LEVEL AND GENERALLY FREE OF TRAPS AND UNNECESSARY BENDS, ARRANGED TO CONFORM TO THE BUILDING REQUIREMENTS AND TO SUIT THE NECESSITIES OF CLEARANCES FOR OTHER MECHANICAL WORK. PROVIDE VALVED DRAINAGE OUTLETS IN AREAS OF PIPING WHICH WOULD BE UNDRAINABLE DURING MAINTENANCE OR REPAIRS.
- ALL REQUIRED OFFSETS, RISES AND DROPS DUE TO POSSIBLE OBSTRUCTIONS OF PIPE RUNS ARE NOT NECESSARILY SHOWN. PLUMBING CONTRACTOR SHALL PROVIDE ALL REQUIRED OFFSETS NECESSARY FOR FINAL COORDINATION WITH OTHER TRADES AND STRUCTURE.
- THROUGH PENETRATIONS OF FIRE RESISTANCE RATED HORIZONTAL ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (2.49 PA). THE SYSTEM SHALL HAVE AN F RATING/RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. SEE ARCHITECTURAL DRAWINGS FOR RATED ASSEMBLY LOCATIONS, RATINGS AND DETAILS.

EXCEPTIONS:
A. FLOOR PENETRATIONS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL ABOVE THE FLOOR OR BELOW THE FLOOR DO NOT REQUIRE A T RATING.
B. FLOOR PENETRATIONS BY FLOOR DRAINS, TUB DRAINS OR SHOWER DRAINS CONTAINED AND LOCATED WITHIN THE CONCEALED SPACE OF A HORIZONTAL ASSEMBLY DO NOT REQUIRE A T RATING.
- CLEANOUTS SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS
- ALL PLUMBING EQUIPMENT, INSULATION, PIPING, ETC. INSTALLED IN HVAC RETURN AIR PLENUMS SHALL MEET CODE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS (FLAME 25 / SMOKE 50), WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 273.
- ALL PLUMBING EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S REQUIREMENTS. MANUFACTURER RECOMMENDATIONS ARE DEEMED REQUIREMENTS.
- WHERE REQUIRED FOR ACCESS TO VALVES AND ACCESSORIES ABOVE HARD CEILINGS OR IN WALLS, ACCESS PANELS SHALL BE PROVIDED BY THIS CONTRACTOR. PANELS IN RATED ASSEMBLIES SHALL HAVE LISTED RATINGS EQUAL TO OR GREATER THAN THE ASSEMBLY THEY ARE INSTALLED IN.
- ALL VALUE ENGINEERING OR DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE DESIGN TEAM FOR REVIEW AND APPROVAL PRIOR TO ACCEPTANCE OR IMPLEMENTATION. ANY COST INCURRED AS A RESULT OF ANY DEVIATIONS FROM THE BASIS OF DESIGN INDICATED IN THE CONTRACT DOCUMENTS (E.G. PLUMBING MODIFICATIONS TO ACCOMMODATE ALTERNATE EQUIPMENT SELECTIONS, DESIGN RELATED EXPENSES FOR REQUIRED DRAWING MODIFICATIONS, ETC.) SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR. NO INCREASE IN CONTRACT COST WILL BE GRANTED UNLESS BORNE BY AND APPROVED IN WRITING BY THE OWNER. CONTRACT DOCUMENTS ARE DEFINED TO INCLUDE ALL DISCIPLINES AND DIVISIONS OF THE CONTRACT.

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LEGENDS & GENERAL NOTES

SHEET No.

P1.01

PLUMBING FIXTURE SCHEDULE									
* REFER TO DRAWINGS FOR SPECIFIC VENTING METHOD AND SIZES									
MARK	FIXTURE	DESCRIPTION	MAKE AND MODEL	PIPE SIZE (INCH)				ACCESSORIES	
				WASTE	VENT	C.W.	H.W.		
S-1	SINK-EMPLOYEE BREAK ROOM	TYPE 304 STAINLESS STEEL TOP MOUNT SINK, 17"x15"x6" DEEP, WITH CENTERMOUNT CHROME PLATED BRASS FAUCET WITH SINGLE HANDLE FAUCET AND GOOSENECK SPOUT, 1.8 GPM	SINK: ELKAY LRAD1517 FAUCET: DELTA 9159-DST	1 1/2	1 1/2	1/2	1/2	DRAIN ASSEMBLY WITH 1-1/4 INCH O.D. TAILPIECE AND P-TRAP, SUPPLY STOPS WITH FLEXIBLE RISERS AND ESCUTCHEONS, CRUMB-CUP STRAINER	
LVH	LAVATORY (ADA) FAUCET	VITREOUS CHINA WALL HUNG LAVATORY, 21-1/4" X 18-1/8", 4" CENTERSET CHROME PLATED BRASS FAUCET WITH SINGLE LEVER HANDLE, 0.5 GPM. PROVIDE WITH FLOOR MOUNTED CONCEALED ARM CARRIER FOR THE LAVATORY.	LAVATORY - KOHLER K-2005 FAUCET - ZURN ZT443-XL-CST-FC CARRIER: ZURN OR EQUAL	X	X	1/2	1/2	PROVIDE WITH OFFSET GRID DRAIN ASSEMBLY, 17 GAUGE 1-1/4" TAILPIECE, 1-1/4" X 1-1/2" 17 GA P-TRAP WITH WASTE ARM AND WALL ESCUTCHEON, LOOSE-KEY BRASS ANGLE STOPS WITH ANNEALED SUPPLIES, POLISHED CHROME FINISH, MCGUIRE OR EQUAL. PROVIDE PRE-MOLDED INSULATION KITS FOR ALL EXPOSED DRAINAGE AND SUPPLY PIPING AND TRIM BELOW LAV, TRUEBRO OR EQUAL.	
HD	HUB DRAIN	PVC COATED BODY WITH BOTTOM OUTLET, SMOOTH, SOFT, FLEXIBLE, ELASTOMERIC PVC MATERIAL MOLDED INTO SHAPE OF DUCK'S BILL, OPEN ON TOP WITH CURL CLOSURE AT BOTTOM ALLOWS WASTEWATER TO OPEN AND ADEQUATELY DISCHARGE FLOOR DRAIN THROUGH ITS INTERIOR THEN CLOSES AND RETURNS TO ORIGINAL MOLDED SHAPE AFTER WASTEWATER DISCHARGE IS COMPLETE.	PROSET SYSTEMS - T23FHDRS-SSW	2	*	X	X		
IM	ICE MAKER WALL BOX	HIGH IMPACT PLASTIC BOX WITH 1/4 TURN BALL VALVE	OATEY	X	X	1/2	X		

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 PROJECT No. 010-10145

PLUMBING SPECIFICATIONS

1. GENERAL CONDITIONS : ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE 2018 AND ALL OTHER APPLICABLE LOCAL AND STATE CODES.

MATERIALS: NEW, UNUSED, BEST OF THEIR RESPECTIVE KINDS AND FREE FROM DEFECTS AS INDICATED ON THE DRAWINGS, BASIS OF QUALITY SHALL BE LATEST STANDARDS OF ASTM, ASA, FEDERAL SPECIFICATIONS OR OTHER ACCEPTABLE STANDARDS.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK. CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.

THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS AND OBTAIN ALL PERMITS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH ALL WORK UNDER THIS CONTRACT. HE SHALL COMPLY WITH ALL NATIONAL AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS AND THE STATE ENERGY CODE.

SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF ALL MATERIAL. FOUR COPIES OF EACH SUBMITTAL ARE REQUIRED. THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECT, THE PHASING PROCEDURE OF THE CONSTRUCTION WORK.

2. CUTTING AND PATCHING : THE CONTRACTOR SHALL DO ALL PATCHING AND CUTTING REQUIRED TO SATISFACTORILY PERFORM HIS WORK. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

3. DEMOLITION AND/OR REMOVALS : CONTRACTOR SHALL NOT DEMOLISH OR REMOVE FROM PREMISES ANY ITEMS WHICH ARE NOT SPECIFICALLY CALLED FOR BY THE SPECIFICATIONS AND PLUMBING DRAWINGS. SHOULD SUCH ITEMS BE DISCONNECTED, DEMOLISHED OR REMOVED, THE CONTRACTOR SHALL PROMPTLY AND PROPERLY REINSTATE SUCH ITEMS TO THE SATISFACTION OF THE OWNER.

ANY DAMAGE CAUSED TO THE STRUCTURE AND/OR PROPERTY SHALL BE PROPERLY REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE AND TO THE COMPLETE SATISFACTION OF THE OWNER.

4. WORK INCLUDED : THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS ARE INTENDED TO SECURE THE PROVISION OF ALL MATERIALS AND LABOR NECESSARY FOR ALL PLUMBING WORK AS CALLED FOR HEREIN AND AS INDICATED ON THE DRAWINGS. SYSTEMS SHALL BE COMPLETE WITH ALL NECESSARY APPURTENANCES AND MINOR AUXILIARIES REQUIRED TO MAKE EACH SYSTEM COMPLETE IN EVERY RESPECT.

ALL WORK DESCRIBED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS OR VICE VERSA SHALL BE FURNISHED IN COMPLETE WORKING ORDER.

THE FOLLOWING IS A GENERAL DESCRIPTION OF WORK TO BE PROVIDED AND INSTALLED BY THIS CONTRACTOR:

NEW DOMESTIC HOT & COLD WATER DISTRIBUTION SYSTEM.

NEW SANITARY WASTE AND VENT SYSTEM.

NEW PLUMBING EQUIPMENT, FIXTURES AND TRIM.

TESTS, ADJUSTMENTS, SHOP AND AS-BUILT DRAWINGS, PERMITS, CERTIFICATES AND APPROVALS.

PIPE INSULATION ON ALL WATER AND DRAINAGE PIPING AS REQUIRED.

HANGERS AND SUPPORTS.

ROUGH CUTTING AND PATCHING.

ALL REQUIRED VALVES, CONTROLS AND VALVE ACCESS DOORS.

5. GENERAL CONSTRUCTION : UNDER NO CIRCUMSTANCES WILL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED BY THE OWNER FOR SUCH PURPOSES. STORE MATERIALS ONLY IN SPACES DESIGNATED BY OWNER.

REMOVE RUBBISH FROM PREMISES AS OFTEN AS NECESSARY OR AS DIRECTED BY OWNER.

BEFORE SUBMITTING A PROPOSAL, PROSPECTIVE BIDDERS SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES ASSOCIATED WITH THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED.

PREPARE AND FURNISH TO THE OWNER CAO GENERATED "AS-BUILT" PLANS FOR ALL WORK INSTALLED.

ALL PARTS OF THE WORK SHALL BE TESTED AND ADJUSTED TO WORK PROPERLY AND BE LEFT IN PERFECT OPERATING CONDITION. CORRECT DEFECTS DISCLOSED BY THESE TESTS WITHOUT ANY ADDITIONAL COST TO THE OWNER.

6. INSPECTIONS AND TESTS : THE OPERATION OF THE EQUIPMENT AND PIPING INSTALLATION DOES NOT CONSTITUTE AN ACCEPTANCE OF THE WORK BY THE OWNER. THE FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS SYSTEM AND DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS AND HAS FURNISHED REQUIRED CERTIFICATES.

UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL FURNISH CERTIFICATES OF APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION. HE SHALL DEMONSTRATE THAT ALL WORK IS COMPLETE AND IN PERFECT OPERATING ORDER AND THAT THE ENTIRE INSTALLATION IS FREE FROM ANY PHYSICAL DEFECTS.

TEST ALL SYSTEMS IN FULL ACCORDANCE WITH LOCAL, STATE AND UTILITY COMPANY REQUIREMENTS.

7. GUARANTEE : CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE FINAL DATE OF ACCEPTANCE IN WRITING.

8. PIPING, FITTINGS AND JOINTS :

WATER DISTRIBUTION:

ABOVE SLAB DOMESTIC WATER PIPING SHALL BE TYPE L COPPER WITH LEAD-FREE SOLDERED JOINTS. EXCEPT AS NOTED, CPVC PIPE AND FITTINGS MAY BE USED FOR DOMESTIC COLD WATER AND LOW TEMPERATURE HOT WATER (120°F OR LESS) SUPPLY PIPING. TYPE L COPPER SHALL BE USED FOR ALL PIPING WITH OPERATING TEMPERATURES OF 140°F OR HIGHER.

2" AND SMALLER CPVC SHALL BE COPPER TUBE SIZE, SDR-11. CPVC PIPING SHALL BE AS MANUFACTURED BY LUBRIZOL AND SHALL BE EQUAL TO THE FLOWGUARD GOLD AND CORZAN PIPING SYSTEMS. FITTINGS SHALL BE MATCHING CPVC AND SHALL BE SOLVENT WELDED WITH PRIMER AND CPVC SPECIFIC CEMENT. PRESSURE TEST SYSTEM AT TWO TIMES SYSTEM OPERATING PRESSURE FOR A PERIOD OF 24 HOURS.

SOIL, WASTE AND VENT PIPING SHALL BE SOLID WALL SCHEDULE 40 PVC (ASTM 1784 AND 1785) WITH DWV PATTERN FITTINGS (ASTM 2665) WITH CEMENT JOINTS. (ASTM D2564-96A).

EXCEPTION: SOIL, WASTE AND VENT PIPING ABOVE SLAB IN AIR PLENUMS SHALL BE NO-HUB CAST IRON PIPE AND FITTINGS WITH HEAVY DUTY NO-HUB COUPLINGS (HUSKY OR EQUAL). ALL CAST IRON PIPE AND FITTINGS SHALL BE OF DOMESTIC SOURCE AND BEAR THE CAST IRON SOIL PIPE INSTITUTE (CISPI) TRADEMARK.

9. PIPE INSTALLATION : LOCATIONS AND SIZES OF EXISTING PIPING ON PLAN ARE APPROXIMATE. EXACT SIZES AND LOCATIONS FOR NEW CONNECTIONS TO ALL EXISTING PIPING SHALL BE VERIFIED BEFORE STARTING WORK.

THE WORD 'PIPING' IN THIS SPECIFICATION REFERS TO ALL PIPE, FITTINGS, NIPPLES AND VALVES AND SHALL BE CONSIDERED AS SUCH IN THE INSTALLATION.

ALL WATER PIPING SHALL BE RUN LEVEL AND GENERALLY FREE OF TRAPS AND UNNECESSARY BENDS, ARRANGED TO CONFORM TO THE BUILDING REQUIREMENTS AND TO SUIT THE NECESSITIES OF CLEARANCES FOR OTHER WORK.

ALL HOT AND COLD WATER PIPING SHALL BE SEPARATED BY AT LEAST 6" (CENTER TO CENTER) AND INSTALLED SO THAT THE PIPES DO NOT COME IN CONTACT. WHERE THE PIPING IS PARALLEL, AMPLE SPACE SHALL BE PROVIDED BETWEEN PIPING FOR THE PROPER THICKNESS OF COVERING AND PROPER OPERATION OF VALVES.

ALL PIPING SHALL HAVE REDUCING FITTINGS WHERE ANY CHANGE IN THE PIPE SIZES OCCUR. NO BUSHINGS WILL BE ALLOWED. NO VALVE STEM SHALL BE INSTALLED BELOW THE CENTERLINE OF THE PIPING IT SERVES.

CONNECTIONS BETWEEN WATER PIPE, FITTINGS AND EQUIPMENT OF FERROUS AND NON-FERROUS METALS SHALL BE MADE WITH DI-ELECTRIC INSULATING COUPLINGS.

10. HANGERS AND SUPPORTS : ALL PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE BY MEANS OF APPROVED HANGERS AND SUPPORTS. PIPING SHALL BE SUPPORTED TO MAINTAIN REQUIRED GRADING AND PITCHING OF LINES TO PREVENT VIBRATION AND SECURE PIPING IN PLACE AND SHALL BE SO ARRANGED AS TO PROVIDE FOR EXPANSION AND CONTRACTION. SUPPORT LOCATIONS AND HANGING METHODS MUST BE SHOWN ON SHOP DRAWINGS AND APPROVED BY ARCHITECT AND STRUCTURAL ENGINEER BEFORE STARTING WORK. THE SPACING OF HANGERS SHALL BE IN ACCORDANCE WITH PREVAILING CODES.

MALLEABLE IRON BRACKETS OF APPROVED TYPE SHALL BE USED ALONG WALLS. ADDITIONAL HANGERS SHALL BE INSTALLED AT ALL FITTINGS.

PIPING SHALL NOT BE HUNG FROM OTHER PIPING, DUCTWORK OR CONDUITS OF OTHER TRADES.

HANGERS AND SUPPORTS SHALL BE AS FOLLOWS: BARE HORIZONTAL FERROUS AND NON-FERROUS PIPING SHALL BE HUNG WITH STEEL, ADJUSTABLE-TYPE CLEVIS HANGERS OR "GANGED" ON SUITABLE TRAPEZE-TYPE SUPPORTS. HANGERS IN CONTACT WITH COPPER SHALL BE COPPER -PLATED. INSERTS, ANCHORS, CLAMPS, ETC., FOR SECURING HANGERS SHALL BE MAINTAINED BY THIS CONTRACTOR IN THE PROPER LOCATIONS DURING ALL PHASES OF CONSTRUCTION.

11. EQUIPMENT CONNECTIONS : CONTRACTOR SHALL FURNISH ALL REQUIRED VALVES, FITTINGS, VACUUM BREAKERS, TRAPS, ETC., NECESSARY FOR THE COMPLETE HOOKUP TO PROVIDE PROPER OPERATION OF EACH PIECE OF EQUIPMENT. IN CONNECTING TO EQUIPMENT, MANUFACTURER'S RECOMMENDATIONS AS TO SIZE AND ARRANGEMENT OF CONNECTIONS SHALL BE FOLLOWED, BUT WITH SIZES SHOWN ON PLAN BEING FOLLOWED.

12. VALVES : DOMESTIC HOT AND COLD WATER SHUT-OFF VALVES SHALL BE BRASS QUARTER TURN BALL VALVES WITH INJECTION MOLDED BRASS THREAD TO CPVC SOLVENT WELD ADAPTERS AND SHALL BE FULL PORT. PROVIDE BRASS VALVE TAGS WITH SCHEDULE IDENTIFYING VALVE SERVICE AND LOCATION.

13. INSULATION : PROVIDE PREFORMED FIBERGLASS INSULATION ON ALL HOT AND COLD WATER PIPING (COLD WATER PIPING TO HAVE VAPOR BARRIER), VALVES, AND EQUIPMENT. ALL INSULATION JACKET, ADHESIVES, ETC., SHALL HAVE A FLAME SPREAD RATING NOT OVER 25 AND A SMOKE DEVELOPED RATING NOT OVER 50. INSULATION R' VALUES SHALL BE AS REQUIRED BY PREVAILING CODES AND ENERGY RELATED STANDARDS.

FINISHES: EXPOSED PIPE INSULATION SHALL BE VINYL COATED WITH AN EMBOSSED LAMINATE VAPOR BARRIER JACKET. LAPS AND END STRIPS SHALL BE ADHERED WITH INSULACOUSTIC IC-225. CONCEALED PIPE INSULATION SHALL HAVE A WHITE VAPOR BARRIER JACKET SECURED WITH ALUMINUM BANDS. INSULATED PIPE WITHIN MAIN MECHANICAL ROOMS AND SIMILAR AREAS THAT IS BELOW 7'-0" SHALL BE PROVIDED WITH ALUMINUM JACKETS AND BANDS FOR PROTECTION. INSULATION SUPPORT (TO PREVENT COLLAPSE OF INSULATION) SHALL BE PROVIDED BETWEEN PIPING AND PIPE HANGING SHIELDS. RIGID POLYURETHANE FOAM OR NATURAL CORK INSERTS MAY BE USED FOR SUPPORT. ALL PIPE SUPPORT APPARATUS MUST BE MOUNTED ON THE OUTSIDE OF ALL INSULATION.

INSUALTION FOR DOMESTIC WATER PIPING SHALL BE 1" THICKNESS FOR 2" AND SMALLER PIPING

PROVIDE PREFORMED INSULATION GUARDS ON ALL EXPOSED PLUMBING ELEMENTS UNDER ADA COMPLIANT LAVS AND SINKS AS REQUIRED BY ADA REQUIREMENTS, TRUEBRO OR EQUAL.

14. PIPING IDENTIFICATION : ALL PIPING SHALL BE IDENTIFIED WITH SEMI-RIGID PLASTIC PRESSURE-SENSITIVE IDENTIFICATION MARKERS (NOTE PRESSURE-SENSITIVE VINYL PIPE MARKERS WILL NOT BE ACCEPTED). DIRECTION OF FLOW ARROWS ARE TO BE INCLUDED ON EACH MARKER AND SHALL BE IN CONFORMANCE WITH "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS" (ANSI A13.1-1975).

LOCATIONS FOR PIPE MARKERS TO BE AS FOLLOWS:

- ADJACENT TO EACH VALVE AND FITTING (EXCEPT ON EQUIPMENT).
- AT EACH BRANCH TAKE-OFF.
- AT EACH PIPE PASSAGE THROUGH WALL AND CEILING CONSTRUCTION.
- ON ALL HORIZONTAL PIPE RUNS - MARKED EVERY 20'. SETMARK PIPE

MARKERS AND BRASS VALVE TAGS AS MANUFACTURED BY SETON NAME PLATE CORP. (OR APPROVED EQUAL).

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NO.	BY	DATE	DESCRIPTION

City of Charleston - Police Office Renovations
501 Virginia Street East Charleston, WV 25301
September 29, 2021
Bid Documents

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010-10145

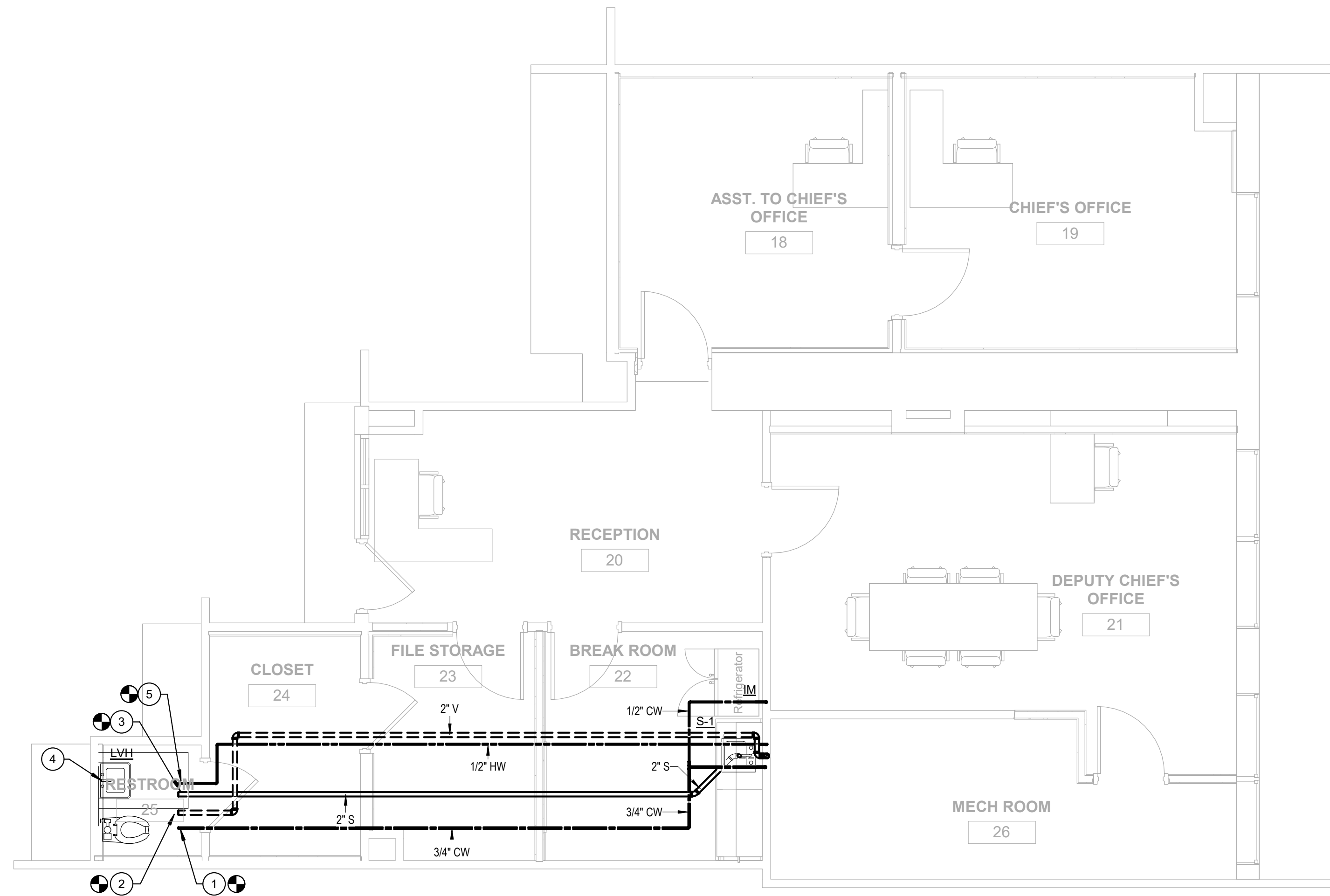
PLUMBING
SPECIFICATIONS

SHEET No.

P1.03

PLUMBING KEY NOTES

1. CONECT NEW 3/4" COLD WATER LINE TO EXISTING 3/4" OR LARGER COLD WATER LINE AT THIS LOCATION. FIELD VERIFY EXACT LOCATION BEFORE STARTING CONSTRUCTION.
2. CONNECT NEW 2" VENT LINE TO EXISTING 2" OR LARGER VENT LINE AT THIS LOCATION. FIELD VERIFY EXACT LOCATION BEFORE STARTING CONSTRUCTION.
3. CONNECT NEW 2" WASTE LINE BELOW FLOOR TO EXISTING 2" OR LARGER WASTE LINE AT THIS LOCATION. FIELD VERIFY EXACT LOCATION AND ELEVATION BEFORE STARTING CONSTRUCTION.
4. REMOVE EXISTING LAVATORY AND FAUCET AND REPLACE AS NOTED. VIELD VERIFY EXISTING STOPS AND HOSES ARE IN GOOD WORKING ORDER. IF DAMAGED OR LEAKING REPLACE EXISTING STOPS, HOSES AND PIPING AS REQUIRED.
5. CONECT NEW 1/2" HOT WATER LINE TO EXISTING 1/2" OR LARGER HOT WATER LINE AT THIS LOCATION. FIELD VERIFY EXACT LOCATION BEFORE STARTING CONSTRUCTION.



1 PLUMBING - NEW WORK PLAN
P3.01 1/4" = 1'-0"

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FLOOR PLAN

SHEET No.

P3.01

SPLIT SYSTEM HEAT PUMP SCHEDULE

INDOOR UNIT									OUTDOOR UNIT												
MARK	MANUFACTURER	MODEL NO.	WEIGHT (LB)	CFM	VOLT. PHASE	MCA	MOCP	NOTES	MARK	MANUFACTURER	MODEL NO.	WEIGHT (LB)	COOLING CAPACITY			HEATING CAPACITY		VOLT. PHASE	MCA	MOCP	NOTES
													TOTAL MBH	SENSIBLE MBH	SEER	TOTAL MBH	HSPF				
AC-1	TRANE	TEM6A0C36H31	155	1150	208/3	30	30	1,4	HP-1	TRANE	4TWA4036A3	250	25.5	23.0	15	14.6	8.5	208/3	13	20	3,6
AC-2	mitsubishi	NTXAMT12A112AA	106	405	208/1	13.5	20	2,5	HP-2	MITSUBISHI	NTXSKS12A112AA	100	10.5	8.4	15	3.8	8.5	208/1	9.0	20	3,6

NOTES:
 1) HORIZONTAL MOUNT AIR HANDLER, PROVIDE WITH 5 KW ELECTRIC HEATER, CLEANABLE FILTER, CONDENSATE OVERFLOW SWITCH AND PROGRAMMABLE THERMOSTAT.
 2) HORIZONTAL MOUNT AIR HANDLER, PROVIDE WITH 2.3 KW ELECTRIC HEATER, CLEANABLE FILTER, CONDENSATE OVERFLOW SWITCH AND PROGRAMMABLE THERMOSTAT. POWERED FROM OUTDOOR UNIT. HEATER REQUIRES SEPARATE POWER FEED.
 3) AIR COOLED CONDENSING UNIT, PROVIDE INSULATED REFRIGERANT LINE SET, LOW AMBIENT CONTROL (30° F), COIL GUARD, POWER DISCONNECT AND ROOF EQUIPMENT RAIL.
 4) CAPACITY BASED ON EAT OF 73.7/61.3 AND LAT OF 54.5/53.3.
 5) CAPACITY BASED ON EAT OF 75.8/63.7 AND LAT OF 55.7/54.6.
 6) CONDENSER RATED AT 95° F.

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL NO.	USE	DESCRIPTION	NOTES
D1	TITUS	TMS	SUPPLY	SQUARE FULL LOUVER FACE CEILING DIFFUSER WITH FRAME TYPE - 3 FOR LAY-IN CEILING.	1,2
R1	TITUS	PAR	RETURN	SQUARE FLUSH PERFORATED FACE CEILING DIFFUSER WITH FRAME TYPE - 3 FOR LAY-IN CEILING.	1,2
E1	TITUS	PAR	EXHAUST	SQUARE FLUSH PERFORATED FACE CEILING DIFFUSER WITH FRAME TYPE - 3 FOR LAY-IN CEILING.	1,2

NOTES:
 1. STEEL
 2. WHITE FINISH

GENERAL NOTES:
 A. SIZE OF NECK FOR ABOVE ARE SHOWN ON PLAN.
 B. SIZE OF GRILLE FOR ABOVE ARE SHOWN ON PLAN.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MOD. NO.	WEIGHT (LBS)	CFM	S.P. (IN)	RPM	SONES	HP OR WATTS	VOLTS/PHASE	FLA	MCA	MOCP	NOTES
EF-1	GREENHECK	SP-A70	12	70	0.375	838	0.9	23.3 WATTS	120/1	0.3	0.4	20A	1,2

NOTES:
 1) DIRECT DRIVE CEILING EXHAUST FAN WITH BACKDRAFT DAMPER, VIBRATION ISOLATORS, POWER DISCONNECT AND WALL CAP (MODEL WC-6).
 2) SOLID STATE SPEED CONTROLLER FOR BALANCING.

GENERAL MECHANICAL NOTES:

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- CERTAIN ITEMS SUCH AS RISES AND DROPS IN DUCTWORK, ACCESS DOORS, VOLUME DAMPERS, ETC., ARE INDICATED FOR CLARITY IN CERTAIN AREAS. THIS DOES NOT RELIEVE THE CONTRACTOR OF PROVIDING THESE ITEMS NOT SHOWN IN OTHER AREAS AS REQUIRED FOR A COMPLETE INSTALLATION.
- UNLESS NOTED OTHERWISE, LOCATE ALL ROOM THERMOSTATS 5'-0" ABOVE FINISH FLOOR.
- ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.
- ALL DUCTWORK DIMENSIONS, AS SHOWN ON DRAWINGS, ARE INTERNAL CLEAR DIMENSIONS. DUCT SIZE SHALL BE INCREASED IN SIZE TO COMPENSATE FOR INTERNAL LININGS.
- COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL PLANS, LIGHTING, AND OTHER ITEMS LOCATED IN CEILING.
- LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
- PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO AIR HANDLING UNITS, FANS, AND OTHER EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION UNLESS NOTED OTHERWISE.
- RUNS OF FLEXIBLE DUCTWORK SHALL NOT EXCEED 5 FEET.
- ALL DUCTS SHALL BE GROUNDED ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS.
- TURNING VANES SHALL BE INSTALLED IN ALL RECTANGULAR DUCT ELBOWS THAT EXCEED 45° CHANGE IN DIRECTION.
- INSTALL 1" DUCTLINER IN FIRST 15' OF ALL RETURN AIR DUCTS.
- SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL INSTALL THE SMOKE DETECTOR IN THE DUCTWORK.
- CONTROL RELAYS SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE RELAY IN THE EQUIPMENT.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MAU	MAKE-UP AIR UNIT
BF	BELOW FLOOR	MH	MOUNTING HEIGHT
BCU	BLOWER COIL UNIT	MBH	THOUSAND BTU/HR
CFM	CUBIC FEET PER MINUTE	MOD	MOTORIZED DAMPER
COP	COEFFICIENT OF PERFORMANCE	NIC	NOT INCLUDED IN CONTRACT
CU	CONDENSING UNIT	NTS	NOT TO SCALE
DN	DOWN	O.A.	OUTSIDE AIR
DB	DRY BULB	PC	PLUMBING CONTRACTOR
DU	DUCTLESS UNIT	PD	PRESSURE DROP
EA	EXHAUST AIR	RA	RETURN AIR
EAT	ENTER AIR TEMPERATURE	RH	RELATIVE HUMIDITY
EC	ELECTRICAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
ECH	ELECTRIC CEILING HEATER	RTU	ROOFTOP UNIT
EER	ENERGY EFFICIENCY RATIO	SA	SUPPLY AIR
EF	EXHAUST FAN	SD	SMOKE DETECTOR
ESP	EXTERIOR STATIC PRESSURE	SF	SUPPLY FAN
EUH	ELECTRIC UNIT HEATER	STR	STARTER (MOTOR)
EWB	ELECTRIC WALL HEATER	TS	TIP SPEED
FD	FIRE DAMPER	TSP	TOTAL STATIC PRESSURE
FPD	FEET PER MINUTE	(TYP)	TYPICAL
GC	GENERAL CONTRACTOR	TZ	TRANSFORMER
GUH	GAS UNIT HEATER	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	WH	WATER HEATER
KW	KILOWATTS	W/	WITH
L	LOUVER	WB	WET BULB
LAT	LEAVING AIR TEMPERATURE	W/O	WITHOUT
		WP	WEATHER PROOF

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	EQUIPMENT SYMBOL - SEE LIST ON DWGS.
	RIGID AIR DUCT SYSTEM
	FLEXIBLE DUCT
	MANUAL CONTROL DAMPER (W/LOCKING DEVICE)
	CEILING SUPPLY DIFFUSER
	CEILING RETURN OR EXHAUST GRILLE
	DUCT SIZE INSIDE DIMENSIONS - 24"W x 10"D
	DUCT SIZE - 10" DIAMETER
	THERMOSTAT / SENSOR
	PLAN NOTE

	DIFFUSER SYMBOL - SEE SCHEDULE
	NECK SIZE
	DESIGN CUBIC FEE PER MINUTE OF AIR QUANTITY FOR ROOM OR SPACE

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GENERAL NOTES,
 LEGENDS &
 SCHEDULES

M1.01

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MECHANICAL SPECIFICATIONS:

HEATING, VENTILATING AND AIR CONDITIONING GENERAL

- I. DESCRIPTION OF THE WORK:
- THE CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT AS INDICATED ON THE DRAWINGS. ITEMS NOT LISTED OR DETAILED, BUT REQUIRED FOR INSTALLATION OF COMPLETE, FULLY FUNCTIONAL HEATING, AIR CONDITIONING AND VENTILATION SYSTEM SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
 - THE EXTENT OF THE MECHANICAL WORK IS INDICATED ON THE DRAWINGS. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FACTORY PROVIDED ACCESSORIES.
 - THE ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, APPLICABLE REQUIREMENTS OF THE MANUFACTURERS OF THE EQUIPMENT AND LOCAL CODE REQUIREMENTS, AND IN ACCORDANCE WITH SMACNA STANDARDS AND THE LATEST EDITIONS OF THE STATE BUILDING CODES, NFPA-90A, AND NFPA-101.
- II. OPERATION MANUALS
- MAINTENANCE MANUALS AND INSTRUCTIONS: FURNISH THREE (3) SETS OF COMPLETE OPERATING INSTRUCTIONS COVERING ENTIRE HEATING, VENTILATING AND AIR CONDITIONING SYSTEM.
- III. SYSTEM REQUIREMENTS
- NOISE AND VIBRATION: EQUIPMENT SHALL OPERATE QUIETLY AND THE DESIGN OF THE SUPPORTS SHALL BE SUCH THAT THE OPERATION OF THE EQUIPMENT SHALL CAUSE NO PERCEPTIBLE VIBRATION IN THE FLOORING ADJACENT TO THE EQUIPMENT, NOR CAUSE, DIRECTLY OR INDIRECTLY, VIBRATION OR OBJECTIONABLE NOISE IN ANY OTHER PORTION OF THE BUILDING AND/OR IN THE BUILDING STRUCTURE ITSELF.
 - FLASHING: ALL FLASHING REQUIRED FOR PENETRATION OF ROOF SURFACES BY HVAC SYSTEM, VENTS, PIPE CURBS, ETC. SHALL BE INCLUDED UNDER THE GENERAL CONTRACTOR'S SCOPE OF WORK AND SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE ROOFING MANUFACTURER.
 - FOUNDATIONS: FURNISH ALL FOUNDATIONS FOR EQUIPMENT COVERED IN THE SPECIFICATIONS, AS A PART OF THIS SECTION, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- IV. WARRANTY:
- FURNISH A FIVE (5) YEAR WARRANTY ON ALL COMPRESSORS, A 10 YEAR WARRANTY ON HEAT EXCHANGERS, AND A ONE (1) YEAR SERVICE AND GUARANTEE ON ALL CONTROLS, COMPRESSORS, EQUIPMENT AND MATERIALS.
- V. MECHANICAL SUBMITTALS
- PROVIDE SIX COPIES OF EACH SUBMITTAL.
 - SUBMITTALS ARE REQUIRED ON THE FOLLOWING ITEMS:
 - FLEXIBLE DUCT AND FITTINGS
 - DUCT INSULATION
 - EXHAUST FANS
 - ROOF TOP UNITS
 - MAKE-UP AIR UNITS
 - DIFFUSERS/GRILLES
 - HEATERS
 - CIRCULATING FANS
- VI. AS BUILT DRAWINGS
- FURNISH THE OWNER WITH 3 SETS OF AS-BUILT DRAWINGS UPON COMPLETION OF THE WORK.

- PART 2 - PRODUCTS
- I. SHEET METAL WORK. NOTE: THE INSTALLATION OF THE HVAC SYSTEM, INCLUDING BUT NOT LIMITED TO, RETURN AND SUPPLY DROPS, TRUNK LINES, BRANCH LINES AND DIFFUSERS SHALL BE COMPLETED IN SUCH A MANNER TO PRESENT A SYSTEM SUITABLE FOR THE INTENDED PURPOSE. ANY PART OF THE SYSTEM NOT CONFORMING TO THE ABOVE PURPOSE SHALL BE REMOVED AND REPLACED BY THIS CONTRACTOR.
- SUPPLY GALVANIZED SHEET METAL WORK IN ACCORDANCE WITH ASHRAE OR SMACNA STANDARDS. SIZE OF DUCT INDICATED ON DRAWINGS IS FINISHED INSIDE DIMENSION.
 - PROVIDE OFFSETS, ELBOWS, AND TRANSITIONS IN DUCTWORK WHERE NECESSARY, WHETHER OR NOT SHOWN.
 - USE WELDED, RIGID JOINTS, AND ALL DETAILS IN ACCORDANCE WITH SMACNA.
 - RECTANGULAR DUCTS OVER 12 INCHES WIDE SHALL BE CROSS BROKEN EXCEPT WHERE DUCTWORK IS TO BE INSULATED.
 - MAKE INTERIOR OF DUCT SMOOTH AND JOINTS AIR TIGHT. WHERE NECESSARY TO ENSURE TIGHTNESS, CAULK JOINTS. MAKE THE ENTIRE INSTALLATION RIGID WITH DUCTWORK FREE FROM RATTLES AND AIR NOISES WHEN IN OPERATION.
 - MAKE ELBOWS WITH INSIDE RADIUS EQUAL TO THE WIDTH OF THE DUCT EXCEPT WHERE OTHERWISE SPECIFIED OR NECESSITATED BY UNAVOIDABLE SPACE CONDITIONS. WHERE INSIDE RADIUS IS LESS THAN 3/4 (THREE FOURTHS) THE DUCT WIDTH, MULTIPLE TURNING VANES SHALL BE PROVIDED. PROVIDE SQUARE ELBOWS WITH TUTTLE AND BAILEY "DUCTURNS" OR BARBER COLEMAN "AIRTURNS".
 - INCLUDE ANGLE OF DIVERGENCE FOR ENLARGEMENT NOT TO EXCEED 15 DEGREES WHERE SPACE CONDITIONS PERMIT. INCLUDED ANGLE OF CONVERGENCE FOR CONTRACTING NOT TO EXCEED 30 DEGREES.
 - PROVIDE FLEXIBLE DUCT CONNECTIONS AT CONNECTION POINTS TO AC UNITS FOR BOTH SUPPLY AND RETURN DUCTS, EXHAUST FANS, AND AT OTHER LOCATIONS INDICATED ON THE DRAWINGS. FLEXIBLE CONNECTIONS ARE TO BE MADE WITH WOVEN CANVAS COLLARS NOT LESS THAN TWO INCHES (2") LONG. SECURE COLLARS TO THE DUCT AND FAN CONNECTIONS BY GALVANIZED CHANNELS. PROVIDE A BRAIDED COPPER BRIDGE STRAP ACROSS FLEXIBLE CONNECTIONS. PROVIDE FLEXIBLE CONNECTIONS AT CONNECTION TO EACH FAN.
 - INSTALL REGISTERS, GRILLES AND DIFFUSERS AS INDICATED.
 - SUPPLY BARBER-COLEMAN CO. "DEFLECTROL'S" OR TUTTLE AND BAILEY, "SANITROLS" WITH ALL DIFFUSERS, REGISTERS AND WHERE OTHERWISE INDICATED.
 - ALL TAPS INTO MAIN DUCT FOR BRANCH LINES SHALL BE MADE WITH SPIN-IN FITTINGS WITH DAMPERS. SPIN-IN FITTINGS SHALL BE METALAIRE MBSD.
- II. INSULATED FLEXIBLE DUCT
- INSULATED FLEXIBLE DUCT MAY BE USED IN MAXIMUM LENGTHS OF 5'-0" PER BRANCH RUN. THE BALANCE OF THE RUN SHALL BE HARD PIPE WITH 1" INSULATED SLEEVE. FLEXIBLE DUCT SHALL BE OWENS CORNING INL25.
- III. MANUAL DAMPERS
- PROVIDE MANUAL LOUVER DAMPERS WHERE SHOWN ON THE PLANS AND WHERE NECESSARY FOR THE PROPER REGULATION OF THE AIR HANDLING SYSTEM, AND SO LOCATE AS TO BE ACCESSIBLE AFTER THE BUILDING IS COMPLETED, I.E., BY REMOVING A MARKED TILE, ACCESS PANEL OR OTHER APPROVED METHOD. DAMPERS SHALL BE AIR BALANCE NO. AC116.
 - WHERE LOUVER DAMPERS OR SPLITTER DAMPERS ARE LOCATED IN CONCEALED CUTS, PROVIDE WITH MODEL 301, 302, 900, 901, OR 914 OPERATORS, AS REQUIRED. MANUFACTURER: YOUNG REGULATOR COMPANY.
 - FOR ALL OTHER MANUAL DAMPERS, PROVIDE A HAND LEVER WITH A QUADRANT AND SET SCREW. PROVIDE BEARINGS AT BOTH ENDS OF THE SHAFT. CLEARLY MARK ALL DAMPER OPERATORS TO INDICATE "OPEN" AND "CLOSED" POSITIONS.
 - INSTALL NFPA APPROVED AND LISTED FIRE DAMPERS IN ALL LOCATIONS INDICATED OR REQUIRED BY LOCAL AND OTHER ORDINANCES AND CODES AND REQUIREMENTS. APPROVAL OF OWNER FOR ACCESS DOOR LOCATION REQUIRED.

- IV. BOLTS, INSERTS, SLEEVES AND ESCUTCHEONS
- INSTALL SLEEVES WHERE PIPES PASS THROUGH WALLS, COLUMNS, BEAMS, OR FLOORS. SLEEVES: GALVANIZED STEEL OR WROUGHT IRON PIPE. CUT SLEEVES PASSING THROUGH WALLS AND FLOORS ABOVE GRADE FLUSH WITH THE WALL. INSTALL SLEEVES OF SUFFICIENT DIAMETER TO ALLOW FOR EXPANSION AND CONTRACTION AND PIPE COVERING.
 - PROVIDE NICKLE-PLATED CAST IRON ESCUTCHEONS WHERE PIPES PASS THROUGH FLOORS, CEILINGS OR WALLS IN FINISHED AREAS.
- V. MOTORS
- MOTORS FOR ALL EQUIPMENT COVERED BY THESE SPECIFICATIONS SHALL BE INSTALLED BY THIS CONTRACTOR. WHERE OVERSIZE MOTORS ARE SPECIFIED, THIS CONTRACTOR SHALL INCLUDE THE COST OF INSTALLING THE OVERSIZE MOTOR. KITS.
 - OPEN FRAME MOTORS SHALL BE RATED ON A 40 DEGREES C TEMPERATURE RISE BASIS. TOTALLY ENCLOSED MOTORS SHALL BE RATED ON A 55 DEGREES C TEMPERATURE RISE BASIS. THE LOAD TO WHICH EACH MOTOR IS CONNECTED SHALL NOT CAUSE THE MOTOR RUNNING CURRENT TO EXCEED THE NAMEPLATE AMPERAGE.
 - MOTORS: INDUCTION TYPE OF DESIGN SUITED TO THE SERVICE FOR WHICH THEY ARE USED UNLESS OTHERWISE SPECIFIED.
 - WINDINGS: PROVIDE COPPER WINDINGS IN ALL MOTORS.
- VI. PIPING
- CONDENSATE DRAIN LINES FOR HVAC EQUIPMENT SHALL BE SCHEDULE 40 PVC.
- VII. INSULATION
- INSULATE ALL SUPPLY AND RETURN AIR DUCTS WITH 2" OWENS-CORNING FIBERGLASS ALL SERVICE FACED DUCT WRAP. APPLY PER MANUFACTURER'S RECOMMENDATIONS. ALL INSULATION SHALL BE R-6 OR GREATER.
 - ALL EXTERIOR DUCT SHALL RECEIVE
- VIII. GRILLES, REGISTERS AND DIFFUSERS
- ALL SUPPLY DIFFUSERS, AND RETURN GRILLES SHALL BE AS SCHEDULED ON DRAWINGS, WITH OFF-WHITE BAKED ON ENAMEL FINISH.
 - ALL EXHAUST GRILLES SHALL BE AS SCHEDULED ON THE DRAWINGS, WITH OFF-WHITE BAKED ON ENAMEL FINISH.
 - CONTRACTOR SHALL INSULATE BACKS OF ALL SUPPLY DIFFUSERS.
- XI. SPLIT-SYSTEM HEAT PUMPS
- AIR HANDLING UNITS
 - CONCEALED EVAPORATOR COMPONENTS:
 - CHASSIS: GALVANIZED STEEL WITH FLANGED EDGES, REMOVABLE PANELS FOR SERVICING, AND INSULATION ON BACK OF PANEL.
 - INSULATION: FACED, GLASS FIBER DUCT LINER.
 - REFRIGERANT COIL: COPPER TUBE, WITH MECHANICALLY BONDED ALUMINUM FINS AND THERMAL-EXPANSION VALVE. COMPLY WITH ARI 206/110.
 - AIRSTREAM SURFACES: SURFACES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH REQUIREMENTS IN ASHRAE 62.1.
 - FILTERS: REPLACEABLE, MERV 8.
 - CONDENSATE DRAIN PANS:
 - FABRICATED WITH TWO PERCENT SLOPE IN AT LEAST TWO PLANES TO COLLECT CONDENSATE FROM COOLING COIL AND TO DIRECT WATER TOWARD DRAIN CONNECTION.
 - DEPTH: A MINIMUM OF 2 INCHES (50 MM) DEEP.
 - DRAIN CONNECTION: LOCATED AT LOWEST POINT OF PAN AND SIZED TO PREVENT OVERFLOW. TERMINATE WITH THREADED NIPPLE ON BOTH ENDS OF PAN.
 - MINIMUM CONNECTION SIZE: NPS 1.
 - CONDENSING UNITS
 - AIR-COOLED, COMPRESSOR-CONDENSER COMPONENTS:
 - CASING: STEEL, FINISHED WITH BAKED ENAMEL, WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. PROVIDE BRASS SERVICE VALVES, FITTINGS, AND GAGE PORTS ON EXTERIOR OF CASING.
 - COMPRESSOR: HERMETICALLY SEALED WITH CRANKCASE HEATER AND MOUNTED ON VIBRATION ISOLATION DEVICE. COMPRESSOR MOTOR SHALL HAVE THERMAL- AND CURRENT-SENSITIVE OVERLOAD DEVICES, START CAPACITOR, RELAY, AND CONTACTOR.
 - COMPRESSOR TYPE: SCROLL.
 - REFRIGERANT: R-410A.
 - REFRIGERANT COIL: COPPER TUBE, WITH MECHANICALLY BONDED ALUMINUM FINS AND LIQUID SUBCOOLER. COMPLY WITH ARI 206/110.
 - HEAT-PUMP COMPONENTS: REVERSING VALVE AND LOW-TEMPERATURE-AIR CUTOFF THERMOSTAT.
 - FAN: ALUMINUM-PROPELLER TYPE, DIRECTLY CONNECTED TO MOTOR.
 - MOTOR: PERMANENTLY LUBRICATED, WITH INTEGRAL THERMAL-OVERLOAD PROTECTION.
 - LOW AMBIENT KIT: PERMITS OPERATION DOWN TO 30 DEG F.
 - ACCESSORIES
 - THERMOSTAT: PROGRAMMABLE TO REMOTELY CONTROL COMPRESSOR AND EVAPORATOR FAN, WITH THE FOLLOWING FEATURES:
 - COMPRESSOR TIME DELAY.
 - 24-HOUR TIME CONTROL OF SYSTEM STOP AND START.
 - LIQUID-CRYSTAL DISPLAY INDICATING TEMPERATURE, SET-POINT TEMPERATURE, TIME SETTING, OPERATING MODE, AND FAN SPEED.
 - FAN-SPEED SELECTION INCLUDING AUTO SETTING.
 - AUTOMATIC-RESET TIMER TO PREVENT RAPID CYCLING OF COMPRESSOR.
 - REFRIGERANT LINES: SOFT-ANNEALED COPPER SUCTION AND LIQUID LINES FACTORY CLEANED, DRIED, PRESSURIZED, AND SEALED; FACTORY-INSULATED SUCTION LINE WITH FLARED FITTINGS AT BOTH ENDS.
 - DRAIN HOSE: FOR CONDENSATE.
 - CONDENSATE OVERFLOW SENSOR SWITCH TO SHUT UNIT OFF IN EVENT OF OVERFLOW.

- X. MANUFACTURERS
- MANUFACTURERS LISTED SHALL BE CONSIDERED AS ACCEPTABLE.
 - AC UNITS:
 - YORK
 - TRANE
 - CARRIER
 - EXHAUST FANS:
 - GREENHECK
 - LOREN COOK COMPANY
 - PERN VENTILATION
 - GRILLES, REGISTERS, AND DIFFUSERS:
 - PRICE INDUSTRIES
 - TITUS
 - NAILOR INDUSTRIES, INC.

- PART 3 - EXECUTION
- I. SUPERVISION OF ELECTRICAL WORK
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR SUPERVISION OF ALL WIRING (INCLUDING CONTROL WIRING) OF EQUIPMENT INCLUDED IN THIS SECTION AND SHALL FURNISH ALL NECESSARY DIAGRAMS REQUIRED, INCLUDING CONTROL WIRING DIAGRAMS. THIS CONTRACTOR SHALL MOUNT OR SUPERVISE MOUNTING OF ALL CONTROL DEVICES.
- II. PAINTING
- EXCEPT AS SPECIFIED HEREIN, ALL PAINTING WILL BE DONE BY OTHERS. LEAVE WORK FREE FROM RUST, DIRT, GREASE AND PLASTER.
 - EQUIPMENT WITH A FACTORY APPLIED FINISH SHALL HAVE SCRATCHES, CHIPS, ETC. PRIMED AND TOUCHED UP WITH MATERIALS WHICH WILL PROTECT THE SURFACE AND MATCH THE ADJACENT AREAS.
 - INTERIOR OF SHEETMETAL DUCT WHICH IS VISIBLE THROUGH REGISTERS OR GRILLES SHALL BE PAINTED FLAT BLACK BY THIS CONTRACTOR.
- III. CLEANING AND ADJUSTMENTS.
- UPON COMPLETION OF WORK, CLEAN, OIL AND GREASE ALL FANS, MOTORS, OTHER RUNNING EQUIPMENT AND APPARATUS AND MAKE CERTAIN THAT ALL SUCH APPARATUS AND MECHANISMS ARE IN PROPER WORKING ORDER AND MADE READY FOR TEST.
- IV. IDENTIFICATION
- FURNISH AND INSTALL NAMEPLATES ON ALL HVAC EQUIPMENT PROVIDED BY OWNER AND CONTRACTOR. NAMEPLATES SHALL BE MADE FROM WHITE ENGRAVING STOCK WITH BLACK LETTERS AND BLACK FOUR EDGE BEVEL. WORDING SHALL DESCRIBE ITEMS USING SAME DESIGNATION AS THE ELECTRICAL PANEL SCHEDULE, AND NAMEPLATES SHALL BE ATTACHED USING PROPER SIZE AND TYPE STAINLESS-STEEL BOLTS OR SELF-DRILLING SCREWS.
 - GLUE-ON, TAPE-ON OR TAPE TYPE NAMEPLATES ARE NOT ACCEPTABLE.
- V. TEST AND BALANCE
- PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM.
 - CUT INSULATION AND DUCTS FOR INSTALLATION OF TEST PROBES TO THE MINIMUM EXTENT NECESSARY TO ALLOW ADEQUATE PERFORMANCE OF PROCEDURES AFTER TESTING AND BALANCING, CLOSE PROBE HOLES AND PATCH INSULATION WITH NEW MATERIALS IDENTICAL TO THOSE REMOVED. RESTORE VAPOR BARRIER AND FINISH ACCORDING TO THE INSULATION SPECIFICATIONS FOR THIS PROJECT.
 - MARK EQUIPMENT SETTINGS WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL, INCLUDING DAMPER CONTROL POSITIONS, VALVE INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES TO SHOW FINAL SETTINGS.
 - MAKE ANY CHANGES IN THE PULLEYS, BELTS AND DAMPERS AS REQUIRED FOR CORRECT BALANCE AS RECOMMENDED BY THE TEST AND BALANCE AGENCY AT NO ADDITIONAL COST TO THE OWNER.
 - TAB REPORTS: SUBMIT TESTING, ADJUSTING, AND BALANCING REPORTS. THE REPORTS SHALL BE CERTIFIED PROOF THAT THE SYSTEM HAS BEEN TESTED, ADJUSTED AND BALANCED; ARE ACCURATE REPRESENTATION OF HOW THE SYSTEM HAS BEEN INSTALLED; ARE A TRUE REPRESENTATION HOW THE SYSTEMS ARE OPERATING AT THE COMPLETION OF THE TESTING, ADJUSTING, AND BALANCING PROCEDURES; AND ARE AN ACCURATE RECORD OF ALL FINAL QUANTITIES MEASURED, TO ESTABLISH NOMINAL OPERATING VALUES OF THE SYSTEMS.



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NO.	BY	DATE	DESCRIPTION

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September 29, 2021
Bid Documents

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PROJECT No. 010-10145

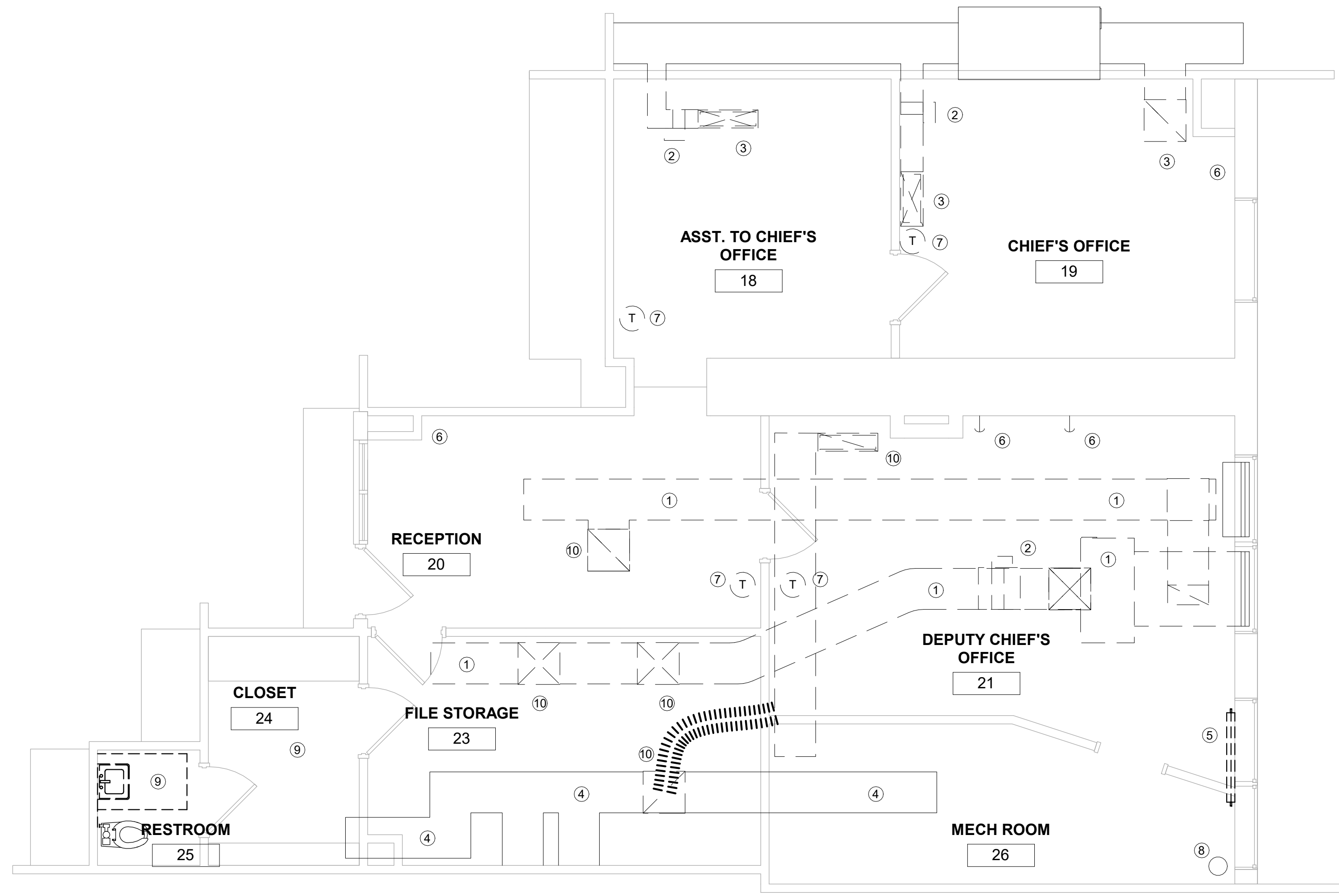
SPECIFICATIONS

SHEET No.

M1.02

PLAN NOTES:

- ① REMOVE EXISTING AIR HANDLER AND ASSOCIATED DUCTWORK, CONTROLS, ROOF MOUNTED CONDENSER, REFRIGERANT PIPING AND HANGERS, COMPLETE.
- ② REMOVE EXISTING DUCT HEATER AND CONTROLS COMPLETE.
- ③ REMOVE EXISTING SUPPLY / RETURN AIR DEVICE AND ASSOCIATED DUCTWORK. CAP CONNECTION TO MAIN DUCT AND SEAL AIRTIGHT.
- ④ EXISTING DUCT TO REMAIN AND BE REUSED.
- ⑤ REMOVE EXISTING HOT WATER RADIATOR. CAP CONNECTIONS FLUSH TO WALL AND SEAL WATER TIGHT.
- ⑥ REMOVE EXISTING PIPING AND CAP FLUSH TO WALL AND SEAL WATER TIGHT.
- ⑦ EXISTING THERMOSTAT TO BE REMOVED.
- ⑧ EXISTING CONDENSATE DRAIN RISER TO REMAIN AND BE REUSED.
- ⑨ EXISTING TO REMAIN IN THIS AREA.
- ⑩ REMOVE EXISTING SUPPLY / RETURN AIR DEVICE AND ASSOCIATED DUCTWORK.



① PARTIAL THIRD FLOOR MECHANICAL DEMOLITION PLAN
 MD3.01 1/4" = 1'-0"

USER: KES

PLOT DATETIME: 9/3/2021 9:57:18 AM

LAYOUT TAB: PARTIAL THIRD FLOOR MECHANICAL DEMOLITION PLAN
 CAD FILE: C:\Users\kes\Documents\CityOfCharleston-PoliceRenovations_anno.rvt

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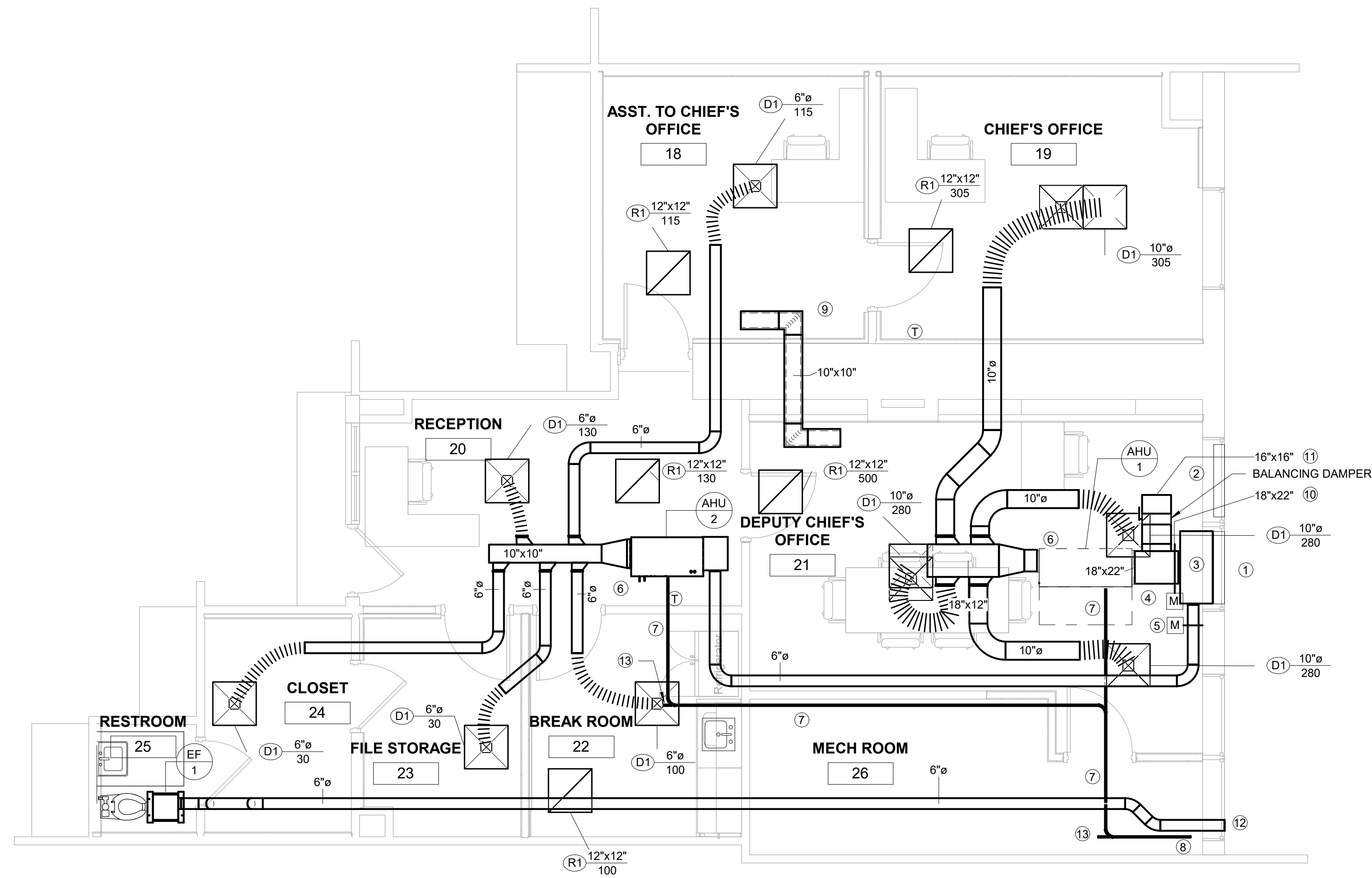
PROJECT No. 010-10145

PARTIAL THIRD FLOOR MECHANICAL DEMOLITION PLAN
 SHEET No.

MD3.01
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PLAN NOTES:

- ① EXISTING 40 X 20 OUTSIDE AIR INTAKE LOUVER.
- ② EXISTING 40 X 20 LOUVER. PROVIDE INSULATED CAP AND SEAL AIRTIGHT.
- ③ 40 X 20 X 18 LONG INSULATED OUTSIDE AIR PLENUM.
- ④ MOTORIZED DAMPER INTERLOCKED WITH AHU-1. BALANCE TO 50 CFM.
- ⑤ MOTORIZED DAMPER INTERLOCKED WITH AHU-2. BALANCE TO 60 CFM.
- ⑥ REFRIGERANT PIPING TO ROOF MOUNTED CONDENSING UNIT. FOLLOW PATH OF EXISTING REFRIGERANT PIPING.
- ⑦ 1" CONDENSATE DRAIN PIPING WITH ELASTOMERIC INSULATION.
- ⑧ CONNECT 1" CONDENSATE DRAIN TO EXISTING 1-1/2" CONDENSATE RISER.
- ⑨ TRANSFER AIR DUCT WITH 1" SOUND LINING ABOVE CEILING.
- ⑩ DUCT TO BE FULL SIZE OF UNIT INLET WITH TRANSITION TO PLENUM AS REQUIRED.
- ⑪ OPEN END RETURN AIR DUCT.
- ⑫ TERMINATE EXHAUST DUCT WITH WALL CAP A MINIMUM OF 10 FEET FROM OUTSIDE AIR INTAKE LOUVER.
- ⑬ PROVIDE CLEANOUT IN CONDENSATE PIPING.



1 PARTIAL THIRD FLOOR MECHANICAL NEW WORK PLAN
M3.01 1/4" = 1'-0"

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PARTIAL THIRD FLOOR MECHANICAL NEW WORK PLAN
SHEET No.

M3.01



2 MECHANICAL ROOF NEW WORK PLAN
M3.02 1/8" = 1'-0"



1 MECHANICAL ROOF DEMO PLAN
M3.02 1/8" = 1'-0"

USER: KES

PLOT DATE/TIME: 9/30/2021 8:56:53 AM

LAYOUT TAB: MECHANICAL ROOF PLAN
CAD FILE: C:\Users\kranthi\Documents\CityofCharleston-PhotoRenovations_a.mxd

NO.	BY	DATE	DESCRIPTION

**City of Charleston - Police Office
Renovations**
501 Virginia Street East Charleston, WV 25301
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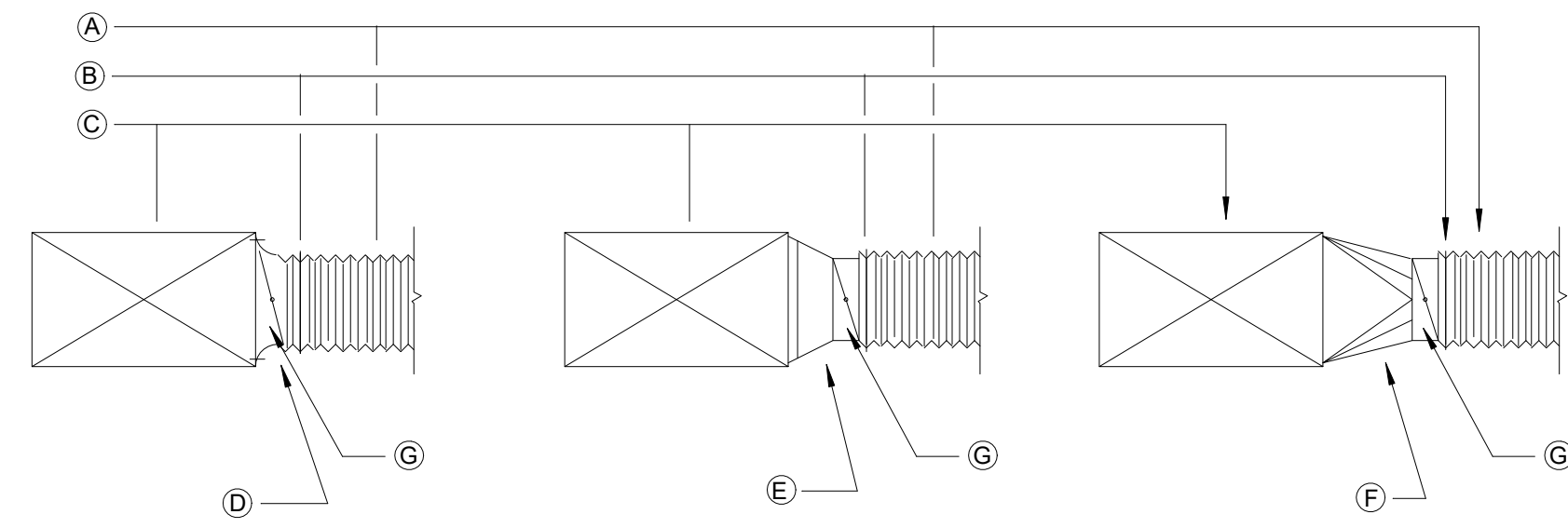
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MECHANICAL ROOF
PLAN

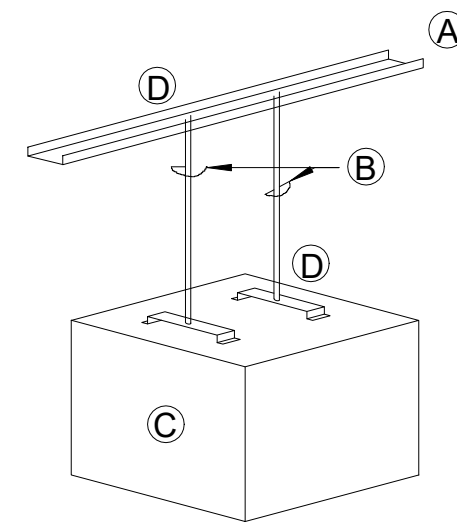
SHEET No.

M3.02



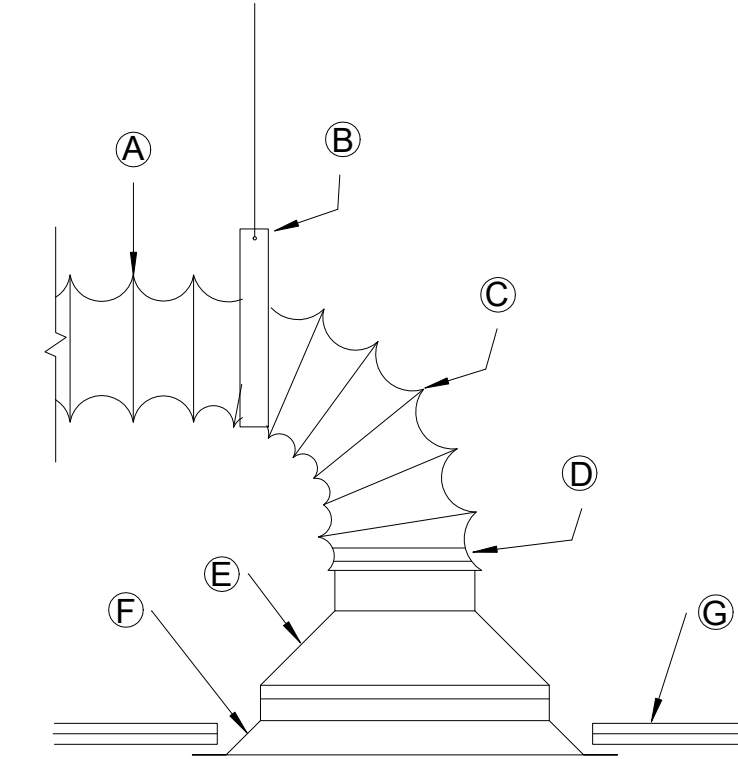
- A FLEX DUCT
- B PLASTIC TIE BAND
- C DUCT MAIN
- D BELLMOUTH TAKE-OFF BUCKLEY AIR PRODUCTS TYPE BM-D OR EQUAL WITH DAMPER
- E CONICAL SPIN-IN FITTING WITH DAMPER-GENFLEX MODEL SM-2D OR EQUAL
- F FABRICATED SQUARE TO ROUND TAP WITH DAMPER-AREA OF TAP TO BE 1.5xAREA OF BRANCH
- G VOLUME DAMPER

1 ALTERNATE METHODS OF FELX DUCT CONNECTIONS
M5.01 NO SCALE



- A PROVIDE STEEL SUPPORTS BETWEEN JOISTS AS REQUIRED.
- B 3/8" HANGER ROD, ONE AT EACH CORNER (MIN). MINIMIZE LENGTH OF ROD AND PROVIDE SWAY BRACING AS REQUIRED.
- C SUSPENDED EQUIPMENT
- D ATTACH THREADED ROD TO STEEL SUPPORT AND EQUIPMENT SUPPORT WITH NUTS AND LOCK WASHERS

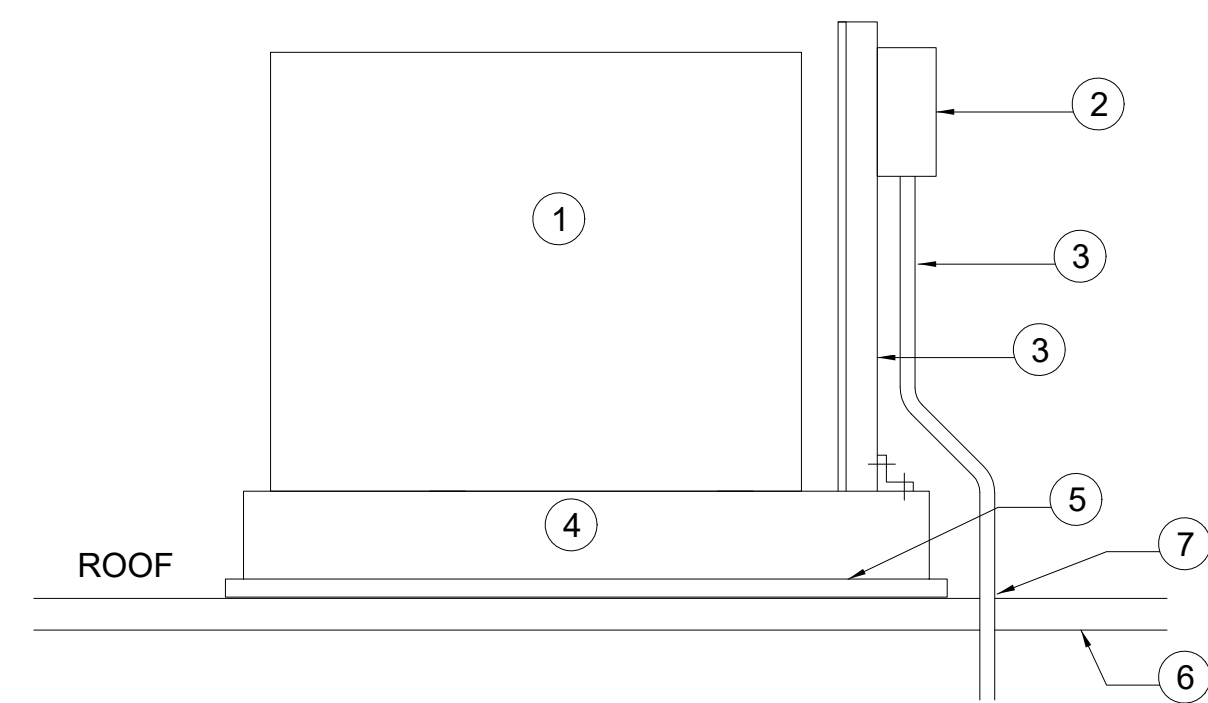
2 DETAIL OF SUSPENDED EQUIPMENT
M5.01 NO SCALE



- A INSULATED FLEXIBLE DUCT (8'-0" MAX. LENGTH)
- B HANGER BANDS IN ACCORDANCE WITH FLEX MANUFACTURERS INSTRUCTIONS
- C ALL BENDS TO BE LONG RADIUS
- D PLASTIC OR STAINLESS STEEL TIE BAND SQUARE TO ROUND ADAPTER OR ROUND TRANSITION (WHERE REQ'D.)
- E CEILING DIFFUSER OR GRILLE
- F CEILING

ELEVATION

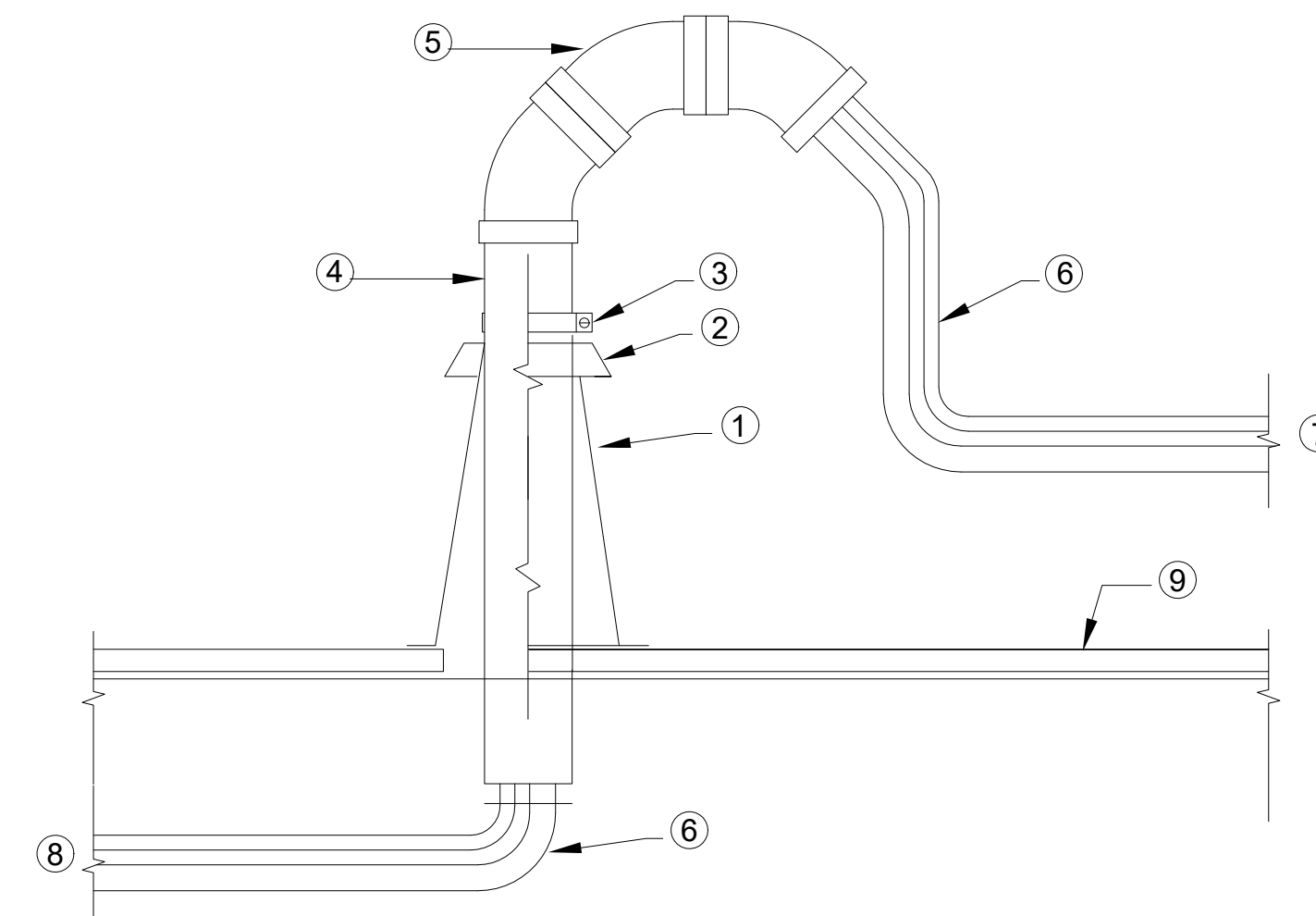
3 INSTALLATION DETAILS FOR FLEXIBLE DUCTS
M5.01 NO SCALE



NOTES:

- 1 CONDENSING UNIT
- 2 FUSED SAFETY SWITCH
- 3 GALVANIZED STEEL UNISTRUT WITH BOLTED CONNECTIONS
- 4 TREATED 6"X6" TIMBER WITH BOTTOM CORNERS ROUNDED
- 5 18"X18" WALKWAY PADS
- 6 ROOF
- 7 SEALED PER ROOF MANUFACTURER

4 DETAILS OF CONDENSING UNIT SUPPORT ON ROOF
M5.01 NO SCALE



- 1 TALL CONE FLASHING
- 2 STORM COLLAR
- 3 STAINLESS STEEL BAND
- 4 4" SCH. 40 PVC PIPE
- 5 4" SCH. 40 PVC 45° ELBOW FITTING
- 6 REFRIGERANT PIPING
- 7 TO CONDENSING UNIT
- 8 TO DUCTLESS UNIT
- 9 ROOF

5 DETAILS OF REFRIGERANT PIPING THROUGH ROOF
M5.01 NO SCALE

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MECHANICAL DETAILS

SHEET No.

M5.01

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	MTG. HEIGHT UNO
GENERAL / RACEWAY SYSTEMS		
(A)	PLAN NOTE	
(X)	EQUIPMENT SYMBOL - SEE LIST ON DWGS.	
POWER AND LIGHTING SYSTEMS		
☒	DIRECT CONNECTION	
14-15R	SINGLE RECEPTACLE, THREE PHASE, NEMA CONFIGURATION NUMBER DENOTES TYPE	
EWC	DENOTES: RECEPTACLE FOR ELECTRIC WATER COOLER MOUNT TO BE CONCEALED BY WATER COOLER	
⊕	GROUNDING TYPE DUPLEX RECEPTACLE	18" AFF
WP⊕	DUPLEX RECEPTACLE WITH WEATHERPROOF COVER.	18" AFF
⊕	DOUBLE DUPLEX RECEPTACLE MOUNTED IN TWO-GANG BOX	66" AFF
GFI⊕	GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE	
○	CEILING MOUNTED LED LIGHT FIXTURE	
⊥	WALL MOUNTED LED LIGHT FIXTURE	
◻	SURFACE OR RECESSED LED LIGHT FIXTURE	
◻	SURFACE OR RECESSED LED LIGHT FIXTURE WITH EMERGENCY BATTERY PACK	
⚡	WALL MOUNTED EMERGENCY LIGHTING UNIT	
CLG. WALL	CEILING OR WALL MOUNTED, SINGLE OR DOUBLE FACE, LIGHTED EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, SHADED PORTION INDICATES POSITION OF FACE(S).	
⊕	CEILING OR WALL MOUNTED, SINGLE OR DOUBLE FACE, LIGHTED EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, AND REMOTE WEATHERPROOF HEAD. SHADED AREA INDICATES POSITION OF FACE(S).	
S	SINGLE POLE TOGGLE SWITCH	48" AFF
S ₃	THREE-WAY TOGGLE SWITCH	48" AFF
S _M	MANUAL MOTOR SWITCH WITHOUT THERMAL OVERLOAD PROTECTION	
S _T	MANUAL MOTOR SWITCH WITH THERMAL OVERRIDE PROTECTION	
—	PANELBOARD, SEE PANEL SCHEDULES ON DRAWINGS FOR RATING AND SIZE	72" AFF
⊕	MOTOR CONNECTION	72" AFF
S	SPEAKER	
☒	COMBINATION MAGNETIC MOTOR STARTER AND FUSIBLE DISCONNECT SWITCH	72" AFF
☒	FUSED SAFETY DISCONNECT SWITCH, HEAVY DUTY, "NFSS" DENOTES NON-FUSED SAFETY SWITCH.	
TELEPHONE / DATA SYSTEMS		
▼ ²	TELEPHONE AND DATA OUTLET, SINGLE-GANG BOX W/ 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING, NUMBER DENOTES QUANTITY OF R-45 JACKS	18" AFF
▼	TELEPHONE AND/OR DATA OUTLET, SINGLE-GANG BOX W/ 1" EMPTY CONDUIT TO ABOVE ACCESSIBLE CEILING	18" AFF
FIRE ALARM SYSTEM/EMERGENCY GENERATOR		
☒	MANUAL FIRE ALARM PULL STATION	48" AFF
⊕	SMOKE DETECTOR	
F	COMBINATION AUDIBLE/VISUAL (STROBE) FIRE ALARM SIGNAL. NUMBER DENOTES CANDELA	
CR	CARD READER	
FS	SPRINKLER WATER FLOW SWITCH, FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR	
TS	TOUCH SENSOR EXIT PAD	
ANN	FIRE ALARM SYSTEM REMOTE ANNUNCIATOR PANEL	
FACP	FIRE ALARM CONTROL PANEL	
H	HEAT DETECTOR	

GENERAL ELECTRICAL NOTES

- COORDINATE LOCATIONS OF CEILING-MOUNTED LIGHTING FIXTURES, SPEAKERS AND OTHER ITEMS WITH THE CEILING PATTERN AND MECHANICAL EQUIPMENT.
- CENTER WALL-MOUNTED LIGHTING FIXTURES DIRECTLY OVER ANY RELATED LAVATORY, MIRROR OR OTHER EQUIPMENT.
- LOCATE FLOOR SERVICE FITTINGS, FLOOR BOXES AND FLOOR CONDUIT TERMINATIONS APPROXIMATELY AS INDICATED, EXACTLY AS NECESSARY OR AS DIRECTED TO COORDINATE WITH THE ASSOCIATED FURNISHINGS OR EQUIPMENT.
- LOCATE DUPLEX RECEPTACLES DESIGNATED "EWC" TO BE CONCEALED BY THE ASSOCIATED WATER COOLER.
- LOCATE SNAP SWITCHES APPROXIMATELY 4 TO 6 INCHES FROM THE LATCH SIDE OF THE RELATED DOOR FRAME WHERE POSSIBLE, EXCEPT AS NOTED OTHERWISE.
- LOCATE SNAP SWITCHES DIRECTLY UNDER THERMOSTATS WHERE THEY ARE SHOWN IN CLOSE PROXIMITY (SEE MECHANICAL DRAWINGS).
- LOCATE WALL BOXES APPROXIMATELY AS INDICATED, EXACTLY AS DIRECTED OR AS NECESSARY TO ACHIEVE SYMMETRY AND COORDINATED WITH THE BUILDING, FINISHES AND EQUIPMENT.
- LOCATE ALL BOXES TO BE ACCESSIBLE.
- MOUNT FLUSH BOXES WITH THEIR FRONT EDGES EVEN WITH THE FINISHED SURFACE OF COMBUSTIBLE MATERIALS, WITHIN 1/4 INCH OF NON-COMBUSTIBLE MATERIALS.
- MOUNT SINGLE-GANG BOXES WITH THE LONGER DIMENSION VERTICLE EXCEPT AS NOTED OTHERWISE. MOUNT ALL BOXES AND PLATES PLUM.
- DO NOT INSTALL BOXES BACK TO BACK ON BOTH SIDES OF A PARTITION. OFFSET BOXES A MINIMUM OF 6 INCHES EXCEPT AS NOTED OTHERWISE.
- LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH THE REMOVAL OF CEILING TILE, OR WITH ACCESS TO EQUIPMENT THAT REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.
- DO NOT SUPPORT RACEWAYS OR EQUIPMENT FROM PIPES, DUCTS, OR A CEILING SUSPENSION SYSTEM.
- ALL WIRE SIZE SHALL BE #12 AWG THHW MINIMUM AND SIZED TO MANUFACTURERS SPECIFICATIONS.
- INSTALL FEEDER RACEWAYS WITH NO MORE THAN 3 CURRENT-CARRING CONDUCTORS PLUS A NEUTRAL CONDUCTOR, PLUS A GROUND CONDUCTOR.
- INDICATED BRANCH CIRCUIT CONDUCTOR SIZES ARE BASED ON NO MORE THAN 3 CURRENT-CARRYING CONDUCTORS AND A NON-CURRENT-CARRYING NEUTRAL CONDUCTOR IN EACH RACEWAY. WHERE THE NUMBER OF CONDUCTORS EXCEEDS THIS AMOUNT, ADJUST THE CONDUCTOR SIZES IF AND AS NECESSARY TO ACCOUNT FOR DERATING THEIR AMPACITY IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- FOR EACH INDICATED CONNECTION TO EQUIPMENT PROVIDE AN OUTLET BOX AND FLEXIBLE CONDUIT AS APPROPRIATE FOR THE ASSOCIATED EQUIPMENT. WHERE THE EQUIPMENT INCLUDES A CORD AND PLUG, PROVIDE A COMPATIBLE RECEPTACLE. WHERE REQUIRED BE CODE PROVIDE AN ADJACENT DISCONNECT SWITCH.
- IN MECHANICAL ROOMS ADJUST LIGHTING FIXTURE LOCATIONS AS NECESSARY TO COORDINATE WITH EQUIPMENT AND TO PROVIDE OPTIMUM ILLUMINATION.
- LOCATE TV AND DATA OUTLETS APPROXIMATELY AS SHOWN ON DRAWINGS. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
- WHERE EMERGENCY LIGHTING FIXTURES ARE CONTROLLED BY ONE OR MORE WALL SWITCHES, PROVIDE AN UNSWITCHED CIRCUIT CONDUCTOR FOR OPERATION OF THE EMERGENCY CONTROLS.
- WHERE LIGHTING FIXTURES ARE SHOWN CONTROLLED BY TWO SWITCHES, FOR TWO LEVEL CONTROL, CONNECT THE OUTSIDE LAMPS TO ONE SWITCH AND THE INSIDE LAMPS TO THE OTHER SWITCH.
- PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH DIMMED LIGHTING CIRCUIT.
- COORDINATE OUTLET LOCATIONS AND CIRCUIT RATINGS WITH THE EQUIPMENT SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS AND WITH ALL EQUIPMENT AND FURNISHINGS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH SPECIFICATIONS AND AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
- ALL WORK SHALL COMPLY WITH NFPA 70.
- ELECTRICAL BRANCH CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL.
- SIZE ALL FUSES FOR FUSED SAFETY SWITCHES WITH EQUIPMENT MANUFACTURER.

GENERAL FIRE ALARM NOTES

- PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL A COMPLETE AND OPERABLE FIRE ALARM SYSTEM DEVICES AS INDICATED ON THE DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL WORK AS REQUIRED BY LOCAL AHJ AT NO ADDITIONAL COST TO THE OWNER.
- IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO PROVIDE A FIRE ALARM SYSTEM IN FULL COMPLIANCE WITH THE LATEST EDITION OF (NFPA 72, WV STATE FIRE CODE, AND ADA).
- THIS BUILDING WILL BE FULLY SPRINKLED PER NFPA 13.
- SUPPLY A 120 VOLT CONNECTION AS REQUIRED AT ALL SYSTEMS EQUIPMENT.
- DEVICES SHOWN ARE APPROXIMATE LOCATIONS. FIELD VERIFY ACTUAL CONDITIONS.
- DO NOT SUPPORT RACEWAYS FROM PIPES DUCTS OR CEILING SUSPENSION SYSTEM.
- EXPOSED RACEWAY AND BLANK COVERS SHALL BE PAINTED TO MATCH EXISTING SURFACES.
- SURFACES DAMAGED BY THIS CONTRACTOR SHALL BE REPAIRED.
- WHERE SURFACES ARE REQUIRED TO BE PATCHED OR REPAIRED, SURFACE SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
- ALL JUNCTION BOX COVERS IN FIRE ALARM RACEWAY SHALL BE PAINTED RED.
- MOUNTING HEIGHT OF FIRE ALARM STROBE SHALL BE 80" AFF.
- SYSTEM SHALL INTERFACE WITH HOOD SUPPRESSION SYSTEM PER NFPA.

FIRE ALARM SYSTEM NOTES

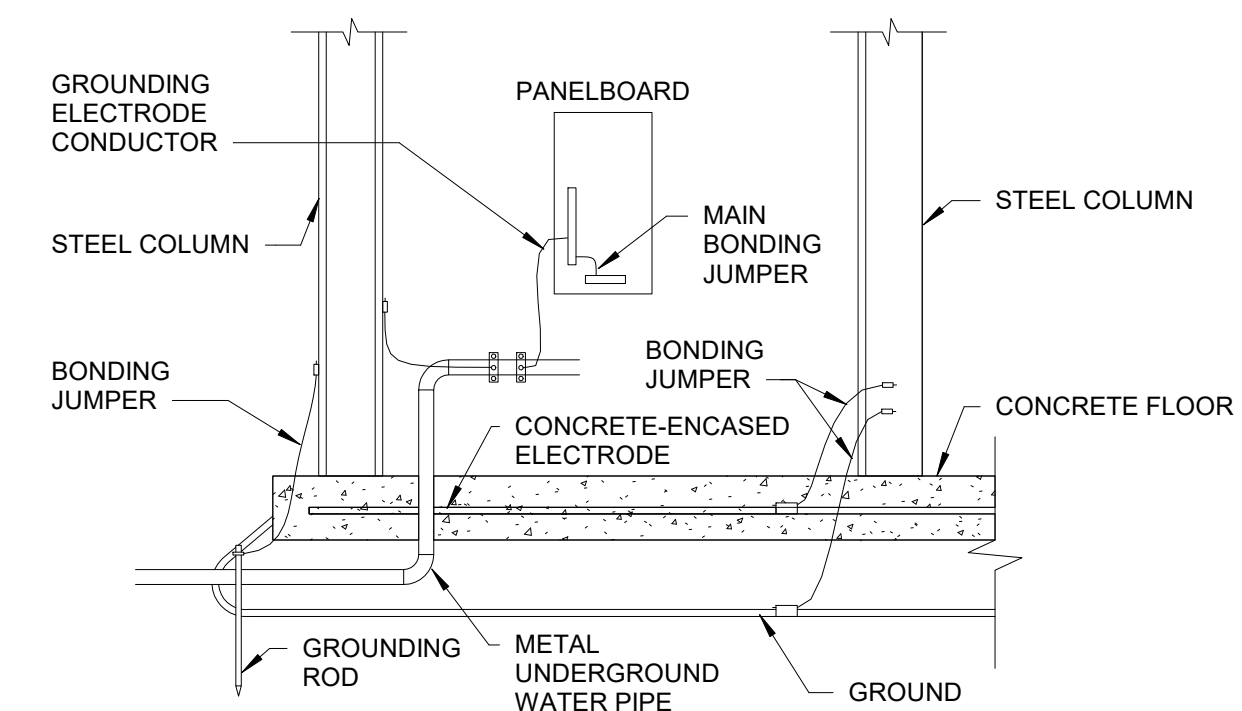
- ALL EXTERIOR DOORS SHALL HAVE A PULL STATION MOUNTED ADJACENT TO THE DOOR. SPACING OF PULL STATIONS SHALL NOT EXCEED 200' ALONG PATH OF EGRESS.
- FIELD VERIFY LOCATION AND QUANTITY OF AIR HANDLING UNITS GREATER THAN 2000 CFM. PROVIDE A DUCT SMOKE DETECTOR IN THE RETURN AIR DUCT OF EACH UNIT. EACH AIR HANDLER DUCT SMOKE DETECTOR SHALL BE SEPARATELY ANNUNCIATED BY THE FIRE ALARM PANEL AND THE ANNUNCIATOR. PROVIDE REMOTE LED INDICATOR AT CEILING BELOW EACH DETECTOR.
- FIELD VERIFY LOCATION AND QUANTITY OF ELECTRICAL PANELS. PROVIDE A SMOKE DETECTOR IN EACH OF THESE ROOMS.
- PROVIDE SMOKE DETECTORS IN CORRIDOR A MAXIMUM 15' FROM EACH END AND A MAXIMUM OF 30' ON CENTER.
- PROVIDE STROBES IN ALL TOILETS.
- PROVIDE HORN/STROBES AS REQUIRED BY NFPA 72. SPACING AND SOUND LEVEL SHALL BE SUCH THAT THE AUDIBLE ALARM CAN BE EFFECTIVELY HEARD ABOVE THE AMBIENT NOISE LEVEL OBTAINED UNDER NORMAL OCCUPIED CONDITIONS.
- PROVIDE STROBES IN ALL PUBLIC SPACES EXCEPT COMMON AREAS AS DEFINED IN THE AMERICAN WITH DISABILITIES ACT. SPACING SHALL BE PER NFPA 72.

LIGHTING FIXTURE SCHEDULE

MARK	LAMP TYPE	MOUNTING	VOLT	MANUFACTURER	SERIES	DESCRIPTION	LUMENS	INPUT WATTS
F1	LED	CEILING, PANEL	120	LITHONIA	2TL2 33L FW xxx xxx LP840	2'X2' TROFFER LED WITH DIMMABLE CAT5 PLUG AND PLAY DRIVER	3,340	29
F2	LED	CEILING, PANEL	120	LITHONIA	2TL4 30L FW xxx xxx LP840	2'X4' TROFFER LED WITH DIMMABLE CAT5 PLUG AND PLAY DRIVER	3,000	34

GENERAL NOTES PERTAINING TO ALL FIXTURES:

- VERIFY CEILING CONSTRUCTION TYPE WITH ARCHITECTURAL DRAWINGS TO DETERMINE WHETHER RECESSED LIGHTING FIXTURES SHALL BE FLANGE OR GRID TYPE MOUNTING.
- ALL LIGHTING AND CONTROLS SHALL COMPLY WITH ASHRAE 2010.
- LIGHTING FIXTURES SHALL COME COMPLETE WITH NECESSARY MOUNTING HARDWARE, DRIVERS AND CONTROLS.
- ALL LIGHTS SHALL BE LED AND READILY AVAILABLE BY LOCAL VENDOR SUPPLY



GROUNDING AND BONDING DETAIL
1/16" = 1'-0"

DESCRIPTION

DATE

BY

NO.

**City of Charleston - Police Office
Renovations**

501 Virginia Street East Charleston, WV 25301

September 29, 2021

Bid Documents

DRAWN: KES DATE: 09/03/21
CHECKED: TTG DATE: 09/03/21
APPROVED: TTG DATE: 09/03/21

PROJECT No.
010-10145

LEGEND AND FIXTURE
SCHEDULE

SHEET No.

E1.01

ELECTRICAL SPECIFICATIONS

I. GENERAL

A. THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETELY INSTALL ELECTRICAL AND RELATED WORK INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

II. CODES

A. ALL EQUIPMENT, WIRING AND THE ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C.), O.S.H.A. REQUIREMENTS, LIFE SAFETY CODE AND ALL APPLICABLE LOCAL AND STATE LAWS AND ORDINANCES.

B. THE CONTRACTOR SHALL PAY ALL INSPECTION FEES AND PURCHASE ALL PERMITS REQUIRED FOR THIS WORK.

III. LOCATION OF EQUIPMENT

A. THE CONTRACTOR SHALL NOTE THAT THE ELECTRICAL DRAWINGS ARE INTENDED TO INDICATE ONLY THE EXTENT DIAGRAMMATICALLY, GENERAL CHARACTER AND LOCATION OF THE WORK, WORK INTENDED, BUT HAVING MINOR DETAILS OBVIOUSLY OMITTED, SHALL BE FURNISHED AND INSTALLED COMPLETE BY THIS CONTRACTOR AT HIS EXPENSE.

IV. ROUGH-IN

A. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH SHOP DRAWINGS, FIELD MEASUREMENTS, AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED PRIOR TO ROUGH-IN.

B. OWNER RESERVES TO RELOCATE ELECTRICAL SERVICES, OUTLETS, ETC., UP TO 36" IN ANY DIRECTION WITHOUT ADDITIONAL CHARGES FOR SUCH RELOCATION.

C. OBTAIN FROM OWNER AND GENERAL CONTRACTOR COPIES OF "EQUIPMENT BROCHURE" AND A SET OF SHOP DRAWINGS OF EQUIPMENT, BEFORE ROUGHING IN ANY CONDUITS, OUTLET BOXES, CONNECTIONS, ETC. CHANGES RESULTING FROM FAILURE TO OBTAIN THIS INFORMATION WILL NOT RESULT IN ADDITIONAL COST.

V. INSTALLATION

A. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN A NEAT AND FIRST CLASS MANNER, LEVEL AND PLUMB, AND SECURELY SUPPORTED.

B. ALL WIRING SHALL BE IN CONDUIT. THE USE OF E.N.T., BX, NM, ETC. OR PRE-MANUFACTURED CABLE ASSEMBLIES OR ALUMINUM WIRE WILL NOT BE PERMITTED.

C. COORDINATE CONNECTION OF ELECTRICAL SYSTEMS WITH UTILITIES AS INDICATED ON THE DRAWINGS.

VI. AS-BUILT DRAWINGS

A. FURNISH THE OWNER WITH 3 SETS OF AS-BUILT DRAWINGS UPON COMPLETION OF THE WORK.

VII. ELECTRICAL SUBMITTALS

A. PROVIDE SIX COPIES OF SUBMITTALS ARE REQUIRED FOR THE FOLLOWING ITEMS:

1. LIGHT FIXTURES
2. SWITCHBRARDS
3. MOTOR CONTROL CENTERS
4. PANELBOARDS
5. SURFACE RACEWAY WIRING DEVICES
6. DISCONNECT SWITCHES

VIII. IDENTIFICATION

A. FURNISH AND INSTALL NAMEPLATES ON ALL NEW ITEMS OF ELECTRICAL EQUIPMENT. NAMEPLATES SHALL BE MADE FROM WHITE ENGRAVING STOCK WITH BLACK LETTERS AND BLACK FOUR EDGE BEVEL. WORDING SHALL SUITABLY DESCRIBE ITEMS AND NAMEPLATES SHALL BE ATTACHED USING PROPER SIZE AND TYPE STAINLESS STEEL BOLTS. GLUE ON, TAPE ON OR TAPE TYPE NAMEPLATES ARE NOT ACCEPTABLE.

IX. WARRANTIES

A. GUARANTEE ALL ELECTRICAL SYSTEM MATERIALS AND WORKMANSHIP TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE AND PROPERLY CORRECT LATENT DEFECTS ARISING WITHIN THIS PERIOD.

X. TEST AND ADJUSTMENT

A. FURNISH ALL LABOR, INSTRUMENTS, AND OTHER SERVICES REQUIRED FOR COMPLETE AND SATISFACTORY TEST AND ADJUSTMENT OF ELECTRICAL SYSTEMS AND RELATED WORK FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

1. CHECK ALL MOTORS AND ROTATING EQUIPMENT FOR PROPER ROTATION.
2. TEST ALL FEEDERS AND MEGGER PRIOR TO ENERGIZING TO ASSURE CODE RESISTANCE IS MET.
3. CHECK ALL FUSES AND OVERLOADS FOR PROPER SIZING.
4. CHECK ALL ELECTRICAL POWER AND CONTROL WIRING, INTERLOCKS, ETC., RELATED TO MECHANICAL INSTALLATIONS TO DETERMINE THAT ALL WIRING IS CORRECT.
5. ALL EQUIPMENT FURNISHED BY THIS CONTRACTOR WHICH TEST PROVE TO BE DEFECTIVE OR OPERATING IMPROPERLY SHALL BE REMEDIED BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

PART 2 - PRODUCTS

I. RACEWAYS

A. EXTENT OF RACEWAY WORK IS INDICATED DIAGRAMMATICALLY ON THE DRAWINGS AND IN THE SCHEDULES.

1. WHEN SIZE IS NOT INDICATED ON PLANS, CONDUIT SHALL BE SIZED FOR CONDUCTORS IN ACCORDANCE WITH THE N.E.C.
2. THE ROUTING AND METHOD OF INSTALLATION OF ALL CONDUITS SHALL BE COORDINATED SO AS NOT TO INTERFERE WITH OTHER EQUIPMENT INSTALLATIONS AND SHALL MEET WITH THE COMPLETE SATISFACTION OF OWNER'S REPRESENTATIVE.
3. THE USE OF ELECTRICAL NON-METALLIC TUBING (ENT), ARMORED CABLE (AC), METAL CLAD CABLE (MC) OR MANUFACTURED CABLE ASSEMBLIES SHALL NOT BE INCORPORATED INTO THE WORK.
4. USE ONLY THE TYPES OF RACEWAYS SPECIFIED HEREIN.

B. TYPES OF RACEWAYS SPECIFIED IN THIS SECTION INCLUDE THE FOLLOWING:

1. ELECTRICAL METALLIC TUBING (EMT); MINIMUM TRADE SIZE 1/2"
2. FLEXIBLE METAL CONDUIT, MINIMUM TRADE SIZE 3/4"
3. LIQUID-TIGHT FLEXIBLE METAL CONDUIT (SEALTIGHT) MINIMUM TRADE

SIZE 3/4".

4. RIGID METAL CONDUIT, MINIMUM TRADE SIZE 3/4".
5. RIGID NONMETALLIC CONDUIT (PVC), SCHEDULE 40, MINIMUM TRADE SIZE 3/4".

C. FITTINGS

1. FITTINGS FOR EMT SHALL BE STEEL SET SCREW OR COMPRESSION TYPE WITH FACTORY INSTALLED INSULATED THROAT CONNECTORS, DIE CAST OR POT METAL FITTINGS ARE NOT ACCEPTABLE.
2. FITTINGS FOR FLEXIBLE CONDUIT SHALL BE STEEL OR CAST IRON.
3. FITTINGS FOR RIGID CONDUIT SHALL BE STEEL THREADED TYPE.
4. FITTINGS FOR PVC SHALL BE SCHEDULE 40 GLUE-ON TYPE.

II. INSTALLATION OF RACEWAYS

A. ALL CONDUITS SHALL BE INSTALLED CONCEALED.

B. A SEPARATE GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH CIRCUITS AND FEEDERS. THE CONDUCTOR SHALL BE SIZED AS INDICATED IN THE N.E.C. ALL GROUNDING CONDUCTORS SHALL HAVE A GREEN OUTER COVERING, OR GREEN MARKING TAPE OVER THEIR ENTIRE EXPOSED LENGTHS.

C. MECHANICALLY FASTEN TOGETHER METAL CONDUITS, ENCLOSURES, AND RACEWAYS FOR CONDUCTORS TO FORM A CONTINUOUS ELECTRICAL CONDUCTOR. CONNECT TO ELECTRICAL BOXES, FITTINGS AND CABINETS TO PROVIDE ELECTRICAL CONTINUITY AND FIRM MECHANICAL ASSEMBLY.

D. AVOID USE OF DISSIMILAR METALS THROUGH SYSTEM TO ELIMINATE POSSIBILITY OF ELECTROLYSIS.

E. PROVIDE NYLON PULL CORD IN ALL EMPTY CONDUITS.

F. CONDUIT INSTALLATION

1. USE RIGID METAL CONDUIT FOR ALL WEATHER EXPOSED WORK, FOR ALL STUB-UPS, FOR ALL ROOF PENETRATIONS THROUGH PATE PLUGS AND FOR FREEZER/COOLER PENETRATIONS.
2. USE E.M.T. FOR ALL INTERIOR CONCEALED AND FOR EXPOSED WORK NOT SUBJECT TO MECHANICAL INJURY.
3. USE PVC FOR ALL UNDERGROUND WORK OR WORK INSTALLED IN CONCRETE. USE RIGID METAL CONDUIT ELBOW AT STUB-UP LOCATIONS.
4. USE FLEXIBLE METAL CONDUIT FROM OUTLET BOXES TO RECESSED LIGHTING FIXTURE AND FINAL 24" OF CONNECTION TO ITEMS SUBJECT TO MOVEMENT OR VIBRATION.
5. USE LIQUID-TIGHT FLEXIBLE CONDUIT FOR FINAL 24" CONNECTION TO ITEMS WHERE SUBJECTED TO ONE OR MORE OF THE FOLLOWING CONDITIONS:
 - a. EXTERIOR LOCATION
 - b. MOIST OR HUMID ATMOSPHERE WHERE CONDENSATE CAN BE EXPECTED TO ACCUMULATE.
 - c. CORROSIVE ATMOSPHERE.
 - d. SUBJECTED TO WATER SPRAY OR DRIPPING OIL, WATER OR GREASE.
 - e. FINAL CONNECTION TO ROTATING OR VIBRATING EQUIPMENT.

6. CUT CONDUITS STRAIGHT, PROPERLY BEAM AND CUT THREADS FOR HEAVY WALL CONDUIT DEEP AND CLEAN.

7. FIELD BEND CONDUIT WITH BENDERS DESIGNED FOR THE PURPOSE SO AS NOT TO DISTORT NOR VARY INTERNAL DIAMETER.

III. CONDUCTORS

A. ALL WIRE SHALL BE COPPER WITH THWN INSULATION.

B. THE USE OF ARMORED CABLE, BX, NM, OR ANY MANUFACTURED CABLE ASSEMBLY SHALL NOT BE INCORPORATED INTO THE WORK.

C. ALL WIRING SHALL BE IN CONDUIT.

D. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:

1. 277/480V SYSTEMS
 - a. PHASE A - BROWN
 - b. PHASE B - ORANGE
 - c. PHASE C - YELLOW
 - d. NEUTRAL - WHITE/GREEN
 - e. GROUND - GREEN
2. 120/240V SYSTEMS
 - a. PHASE A - BLACK
 - b. PHASE B - RED
 - c. PHASE C - BLUE
 - d. NEUTRAL - WHITE
 - e. GROUND - GREEN
3. 120/208V SYSTEMS
 - a. PHASE A - BLACK
 - b. PHASE B - RED
 - c. PHASE C - BLUE
 - d. NEUTRAL - WHITE
 - e. GROUND - GREEN

IV. WIRE CONNECTIONS

A. ALL BRANCH WIRING CONNECTIONS SHALL BE 3M SCOTCH LOCK CONNECTORS OR ACCEPTABLE EQUIVALENT.

B. WHERE CABLE CONNECTIONS REQUIRE INSULATION, SCOTCH #33, ELECTRICAL TAPE SHALL BE USED FOR WRAPPING.

V. BOXES AND FITTINGS

A. EXTENT OF ELECTRICAL BOX AND ASSOCIATED FITTING WORK IS INDICATED BY DRAWINGS AND SCHEDULES.

B. OUTLET BOXES

1. CEILING: 4" SQUARE, 2-1/8" DEEP FOR EXPOSED OR FURRED WORK.
2. WALL: 4" SQUARE, 2-1/8" DEEP BOXES: PROVIDE EXTENSION RINGS OR COVERS OF SUFFICIENT DEPTH TO BRING COVERS FLUSH WITH THE FINISHED SURFACE.
3. MASONRY: FOR FLUSH MOUNTED BOXES IN EXPOSED MASONRY OR TILE, PROVIDE COVERS WITH SQUARE CORNERS ON THE

RAISED PORTION AND WITH SUFFICIENT DEPT TO TRIM OUT FLUSH WITH EXPOSED SURFACE.

4. EXPOSED: PROVIDE FS OR FD BOXES WITH SUITABLE WEATHERPROOF COVERS.

C. JUNCTION AND PULL BOXES

1. PROVIDE BOXES WHERE REQUIRED TO FACILITATE THE PULLING OF WIRES OR CABLES.

D. ACCESSORIES

1. PROVIDE CORROSION-RESISTANT KNOCKOUT CLOSURES, CONDUIT LOCKNUTS AND MALLEABLE IRON CONDUIT BUSHINGS, OFFSET CONNECTORS, OF TYPES AND SIZES TO SUIT RESPECTIVE INSTALLATION REQUIREMENTS AND APPLICATIONS.

E. INSTALLATION OF BOXES AND FITTINGS

A. POSITION RECESSED OUTLET BOXES ACCURATELY TO ALLOW FOR SURFACE FINISH THICKNESS.

2. FASTEN ELECTRICAL BOXES FIRMLY AND RIGIDLY TO SUBSTRATES OR STRUCTURAL SURFACES TO WHICH ATTACHED OR SOLIDLY EMBED ELECTRICAL BOXES IN CONCRETE OR MASONRY.

F. LOCATION OF OUTLETS

1. IN GENERAL THE VARIOUS OUTLETS ARE TO BE LOCATED AT THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR TO THE CENTER LINE OF BOX, UNLESS NOTED OTHERWISE AT AN INDIVIDUAL OUTLET ON THE DRAWINGS:
 - a. WALL SWITCHES (VERT. MTD.) 48"
 - b. RECEPTACLES (VERT. MTD.) 18"
 - c. PHONE OUTLETS (VERT. MTD.) 48" U.N.O.
 - d. OUTLETS ABOVE COUNTERS (HORZ. MTD.) 6" ABOVE BACK-SPLASH
2. OUTLET MOUNTING HEIGHTS INDICATED ON THE DRAWINGS AT OUTLETS TAKE PRECEDENCE. REFER TO DRAWINGS FOR DETAILS OF OTHER EQUIPMENT MOUNTING HEIGHTS. MOUNTING HEIGHTS FOR FLUSH OUTLETS IN BLOCK WALLS MAY BE CHANGED FOR INSTALLATION. CONSULT OWNER'S REPRESENTATIVE IN FIELD PRIOR TO ANY SUCH INSTALLATION.

VI. CONNECTIONS FOR EQUIPMENT

A. GENERAL: FOR EACH ELECTRICAL CONNECTION INDICATED PROVIDE COMPLETE ASSEMBLY OF MATERIALS, INCLUDING BUT NOT NECESSARILY LIMITED TO, PRESSURE CONNECTORS, TERMINALS (LUGS), ELECTRICAL INSULATING TAPE, HEAT-SHRINKABLE INSULATING TUBING, CABLE TIES, SOLDERLESS WIRE-NUTS, AND OTHER ITEMS AND ACCESSORIES AS NEEDED TO COMPLETE SPLICES AND TERMINATIONS OF TYPES INDICATED.

VII. WIRING DEVICES

A. THE EXTENT OF WIRING DEVICE WORK IS INDICATED BY THE DRAWINGS AND SCHEDULES.

B. PROVIDE WIRING DEVICES WHICH ARE U.L. LISTED AND LABELED.

C. ACCEPTABLE MANUFACTURERS.

1. HARVEY HUBBELL CO.
2. GENERAL ELECTRIC CO.
3. LEVITON MFG. CO.
4. FABRICATED WIRING DEVICES

1. SWITCHES SHALL BE 20 AMP, 120/277 VOLT RATED, HUBBELL #1221 - IVORY.
2. RECEPTACLES SHALL BE 20 AMP 125 VOLT RATED HUBBELL #5362 - IVORY. FOR OTHER APPLICATIONS REFER TO THE DRAWINGS.
3. PROVIDE SMOOTH FINISH PLATES FOR ALL DEVICES WITH APPROPRIATE MOUNTING ARRANGEMENTS FOR GAUGED DEVICES.

VIII. MOTOR DISCONNECTS

A. DISCONNECT SWITCHES

1. GENERAL DUTY SWITCHES: PROVIDE SURFACE MOUNTED SHEET STEEL ENCLOSED SWITCHES, OF TYPES, SIZES AND WITH ELECTRICAL CHARACTERISTICS INDICATED, INCORPORATING QUICK-MAKE QUICK-BREAK TYPE SWITCHES.
2. SWITCH BLADE SHALL BE VISIBLE IN "OFF" POSITION WITH THE DOOR OPEN. EQUIPMENT WITH OPERATING HANDLE WHICH IS INTEGRAL PART OF ENCLOSURE BASE AND WHOSE OPERATING POSITION IS CLEARLY INDICATED.
3. CONSTRUCT CURRENT CARRYING PARTS OF HIGH-CONDUCTIVITY COPPER AND SILVER-TUNGSTEN TYPE SWITCH CONTACTS. PROVIDE NEMA TYPE 3R ONLY.

IX. PANELBOARDS

A. DESCRIPTION OF WORK

1. TYPES OF PANELBOARDS FOR THIS PROJECT ARE AS FOLLOWS:
 - a. 277/480V - 3 PHASE 4W - SN; SQUARE D "NF" AND I-LINE.
 - b. 120/240V - 3 PHASE 4W - SN; SQUARE D "NQOD".
 - c. 120/208V - 3 PHASE 4W - SN; SQUARE D "NQOD".

B. ACCEPTABLE MANUFACTURERS

1. SQUARE D COMPANY
2. SIEMENS
3. CUTLER-HAMMER
4. GENERAL ELECTRIC

C. PANELBOARDS:

1. PROVIDE DEAD-FRONT SAFETY CONSTRUCTED FACTORY-ASSEMBLED CIRCUIT BREAKER TYPE PANELBOARDS IN SIZES AND RATINGS AS INDICATED).
2. PANELBOARD ENCLOSURE: MINIMUM DEPTH OF 5-3/4" AND MINIMUM WIDTH OF 20" FOR "NQOD" PANELS.
3. BUSS SHALL BE COPPER.

X. TRANSFORMER:

A. TRANSFORMER SHALL BE RATED FOR 150 DEGREE CELSUS TEMPERATURE RISE. TRANSFORMER SHALL BE PROVIDED WITH

RUBBER VIBRATION ISOLATION PADS.

B. ACCEPTABLE MANUFACTURERS

1. SQUARE D COMPANY
2. SIEMENS
3. CUTLER-HAMMER
4. GENERAL ELECTRIC

XI. SWITCHBOARD:

A. ACCEPTABLE MANUFACTURERS

1. SPARE D COMPANY
2. SIEMENS
3. CUTLER-HAMMER
4. GENERAL ELECTRIC

XII. MOTOR CONTROL CENTER:

A. ACCEPTABLE MANUFACTURERS

1. SQUARE D COMPANY
2. SIEMENS
3. CUTLER-HAMMER
4. GENERAL ELECTRIC

XIII. LIGHTING FIXTURES

A. HANDLE LIGHTING FIXTURES CAREFULLY TO PREVENT DAMAGE, BREAKING AND SCORING. DO NOT INSTALL DAMAGED FIXTURES OR COMPONENTS. REPLACE WITH NEW.

B. STORE LIGHTING FIXTURES IN A CLEAN DRY PLACE. PROTECT FROM WEATHER, DIRT, FUMES, WATER, CONSTRUCTION DEBRIS AND PHYSICAL DAMAGE.

C. SHIP FIXTURES FACTORY ASSEMBLED, WITH PARTS REQUIRED FOR A COMPLETE INSTALLATION.

D. PROVIDE FIXTURES AND/OR FIXTURE OUTLET BOXES WITH HANGERS TO PROPERLY SUPPORT FIXTURE WEIGHT.

E. INSTALL FLUSH MOUNTED FIXTURES TO ELIMINATE LIGHT LEAKAGE BETWEEN FRAME AND FINISHED SURFACE.

F. AT DATE OF SUBSTANTIAL COMPLETION PROVIDE OWNER A COMPLETE SET OF LAMPS SUFFICIENT TO RE-LAMP EACH FIXTURE.

THRASHER

600 WHITE OAKS BLVD.
P.O. BOX 940
BRIDGEPORT, WV 26330

P (304) 624-4108
F (304) 624-7831

www.thrashergroup.com

NO.	BY	DATE	DESCRIPTION

City of Charleston - Police Office Renovations

501 Virginia Street East Charleston, WV 25301

September 29, 2021

Bid Documents

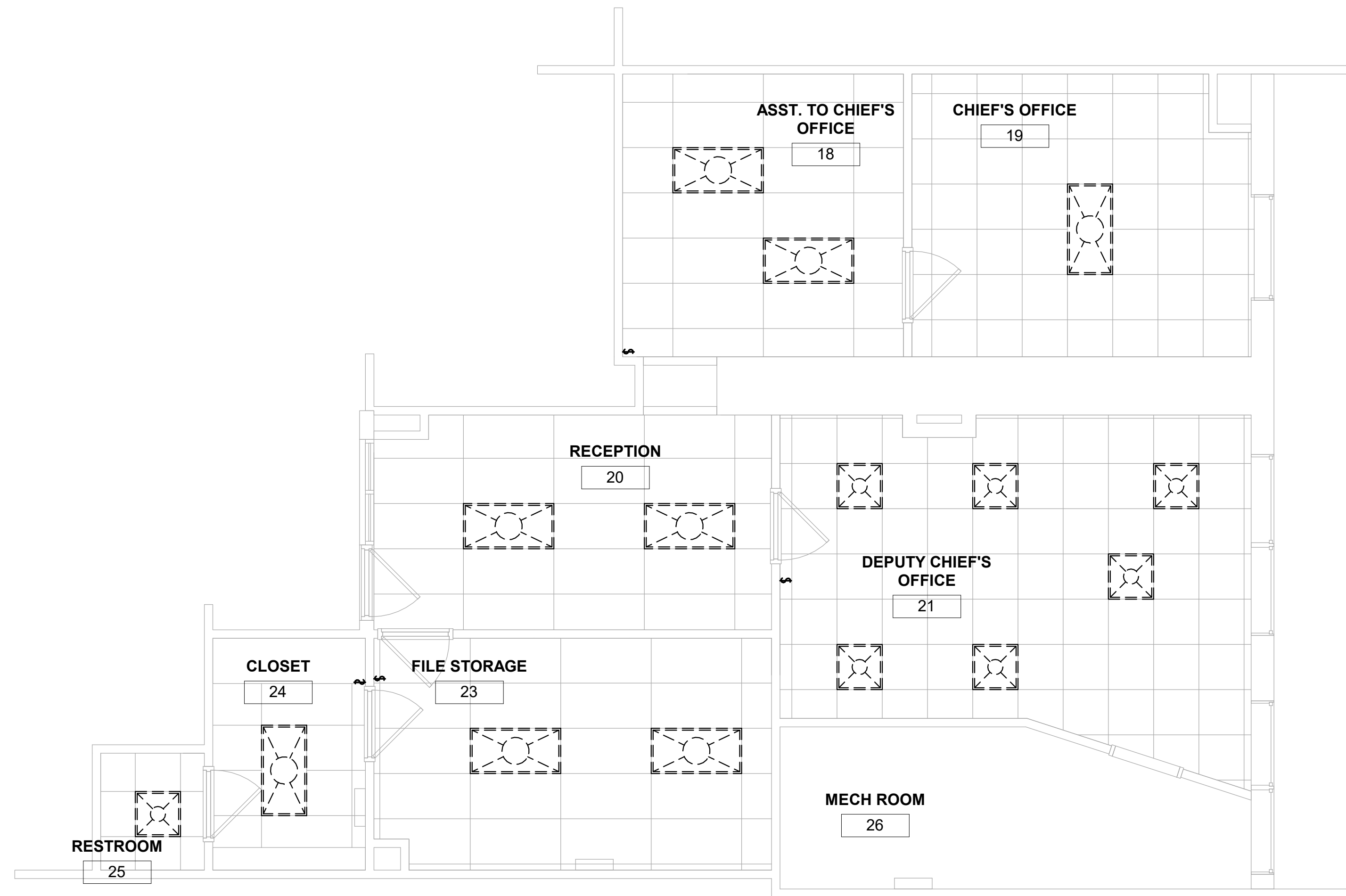
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CHECKED: TTG	DATE: 09/03/21
APPROVED: TTG	DATE: 09/03/21
PROJECT No. 010-10145	

ELECTRICAL SPECIFICATION

SHEET No.

E1.02

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1 LIGHTING - DEMOLITION
ED3.00 1/4" = 1'-0"

USER: Author

PLOT DATE/TIME: 9/30/2021 9:55:57 AM

LAYOUT TAB: LIGHTING DEMOLITION PLAN
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NO.	BY	DATE	DESCRIPTION

**City of Charleston - Police Office
Renovations**
501 Virginia Street East Charleston, WV 25301
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010-10145

LIGHTING DEMOLITION
PLAN

SHEET No.

ED3.00



1 SYSTEMS - DEMOLITION
ED4.00 1/4" = 1'-0"

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City of Charleston - Police Office Renovations
501 Virginia Street East Charleston, WV 25301
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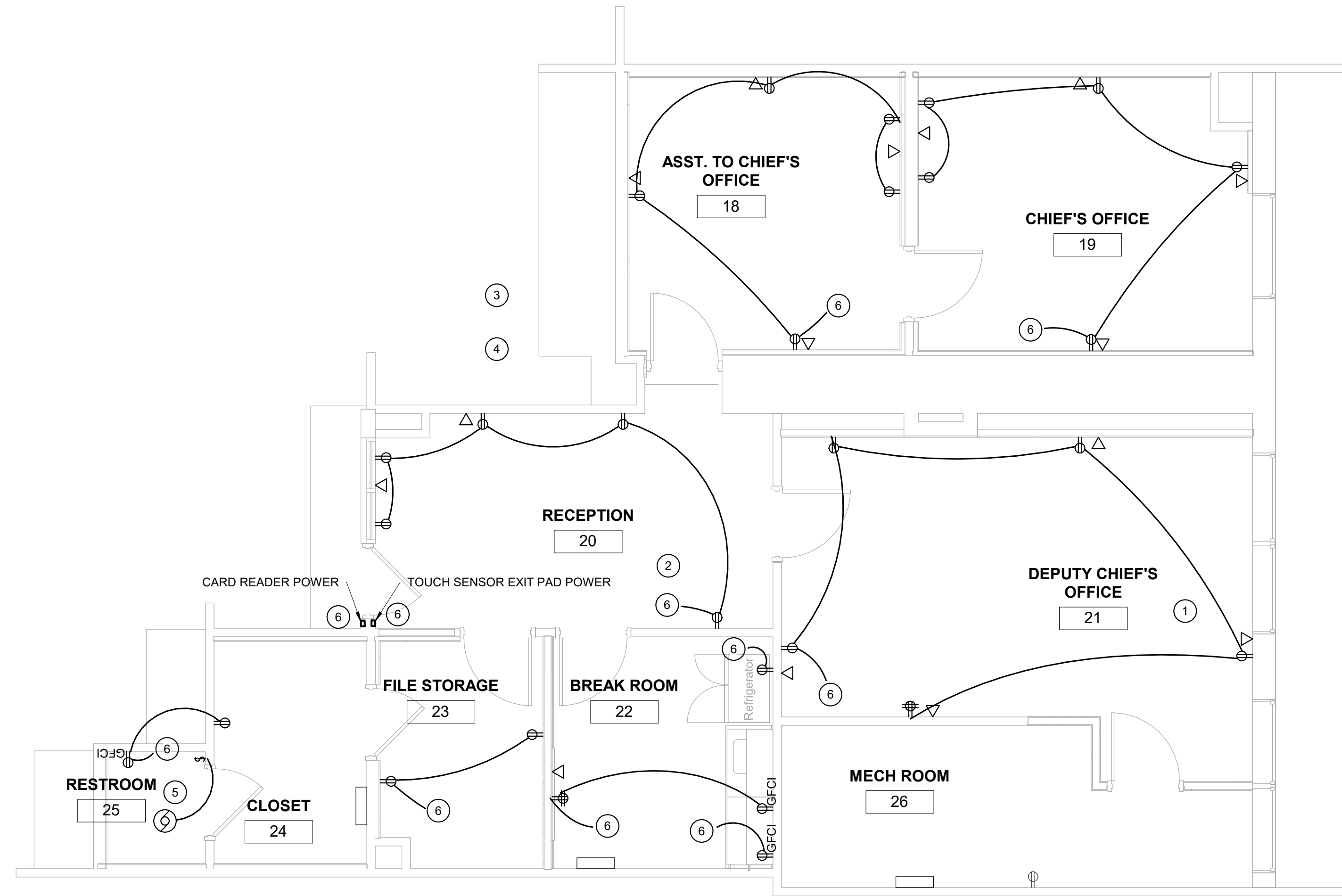
PROJECT No.
010-10145

SYSTEMS DEMOLITION PLAN

SHEET No.

ED4.00

POWER KEYNOTES	
NOTE #	DESCRIPTION
1	AHU-1 3/4" CONDUIT WITH 2-#8 WIRES AND 1-#10 GROUND. CONNECT TO NEAREST AVAILABLE 208V PANEL USING A 2P/50A BREAKER.
2	AHU-2 3/4" CONDUIT WITH 2-#12 WIRES AND 1-#12 GROUND. CONNECT TO NEAREST AVAILABLE 208V PANEL USING A 2P/20A BREAKER.
3	ON ROOF HP-1 3/4" CONDUIT WITH 3-#10 WIRES AND 1-#10 GROUND. CONNECT TO NEAREST AVAILABLE 208V PANEL USING A 3P/20A BREAKER.
4	ON ROOF HP-2 3/4" CONDUIT WITH 2-#12 WIRES AND 1-#12 GROUND. CONNECT TO NEAREST AVAILABLE 208V PANEL USING A 2P/20A BREAKER.
5	EF-1 3/4" CONDUIT WITH 2-#12 WIRES AND 1-#12 GROUND. CONNECT TO RESTROOM LIGHT SWITCH.
6	CONNECT TO NEAREST 120V/ 20AMP CIRCUIT BREAKER.



1 POWER - NEW
E2.00 1/4" = 1'-0"

NO.	BY	DATE	DESCRIPTION

City of Charleston - Police Office Renovations
501 Virginia Street East Charleston, WV 25301
September 29, 2021
Bid Documents

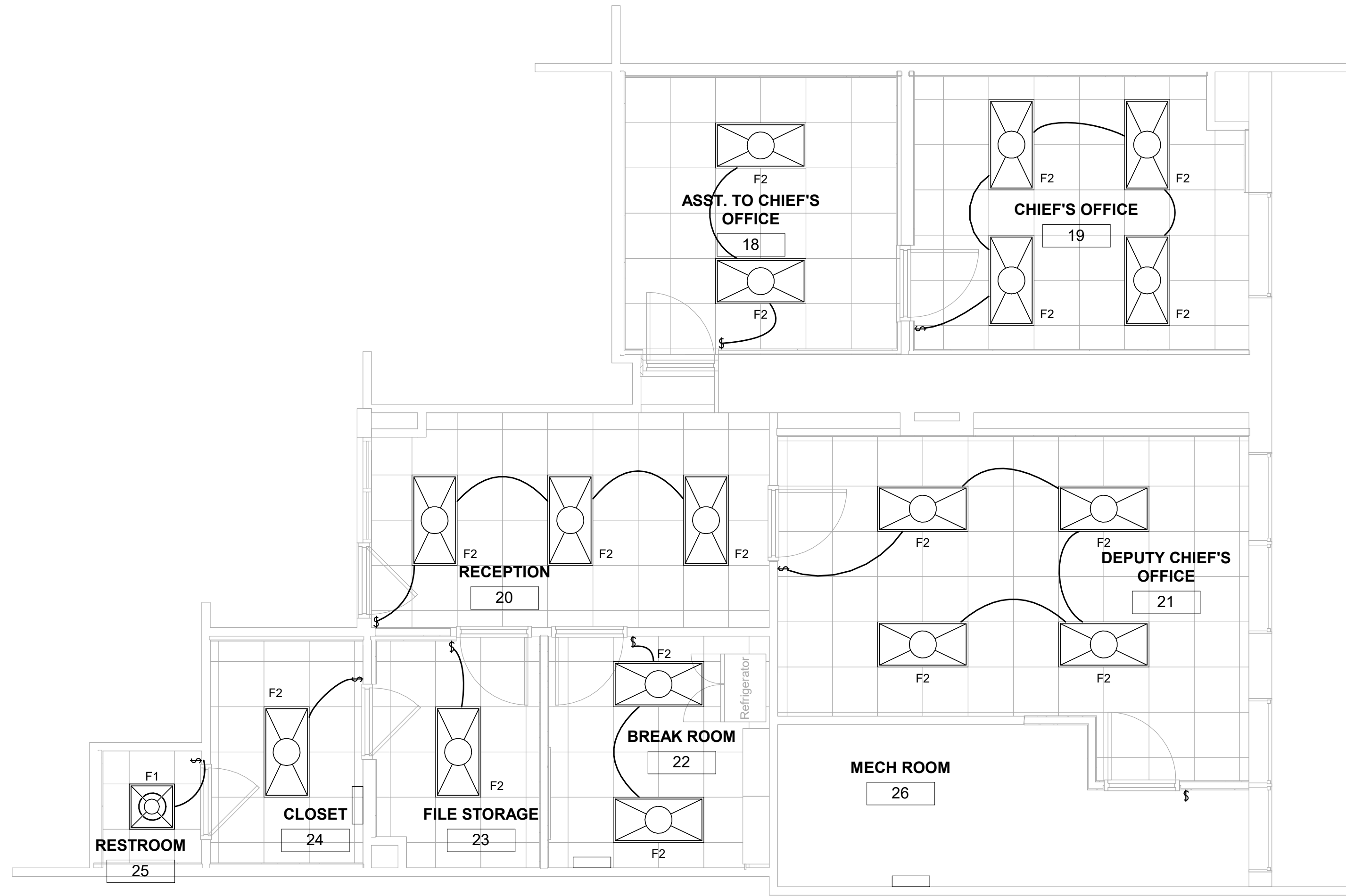
DRAWN: KES DATE: 09/03/21
CHECKED: TTG DATE: 09/03/21
APPROVED: TTG DATE: 09/03/21

PROJECT No. 010-10145

POWER PLAN

SHEET No.

E2.00



1 LIGHTING - NEW
 E3.00 1/4" = 1'-0"

LAYOUT TAB: LIGHTING PLAN
 CAD FILE: C:\Users\amr\Documents\CityofCharleston-Photos\Renovations_a.mcrak.rvt
 USER: Author
 PLOT DATETIME: 9/30/2021 10:53:32 AM

NO.	BY	DATE	DESCRIPTION

**City of Charleston - Police Office
 Renovations**
 501 Virginia Street East Charleston, WV 25301
 September 29, 2021
 Bid Documents

DRAWN: KES DATE: 09/03/21
 CHECKED: TTG DATE: 09/03/21
 APPROVED: TTG DATE: 09/03/21

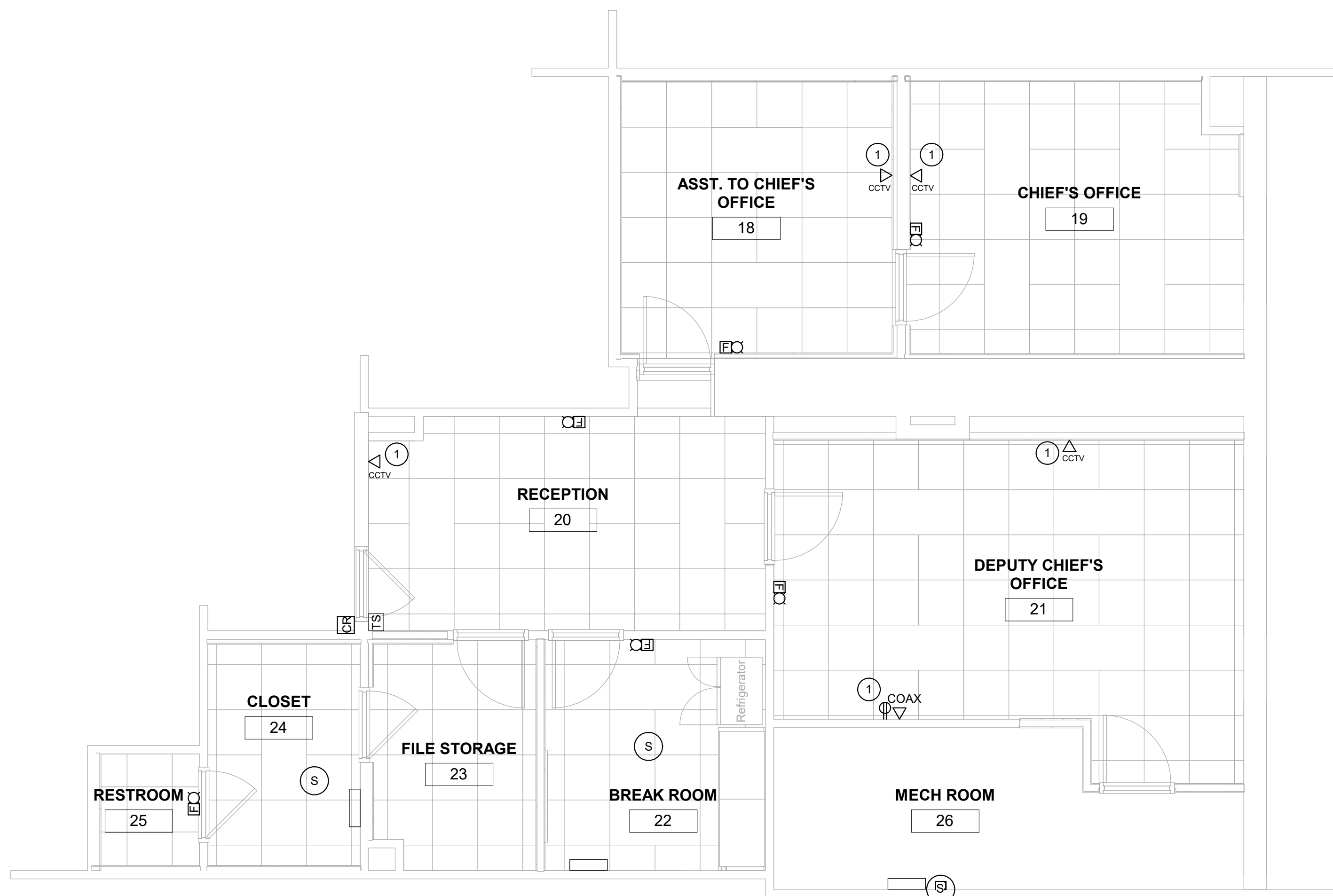
PROJECT No. 010-10145

LIGHTING PLAN

SHEET No.

E3.00

SYSTEMS KEYNOTES	
NOTE #	DESCRIPTION
1	CONFIRM LOCATION WITH OWNER.



1 SYSTEMS - NEW
 E4.00 1/4" = 1'-0"

PLOT DATE/TIME: 9/30/2021 11:53:39 AM

USER: Author

LAYOUT TAB: SYSTEMS PLAN
 CAD FILE: C:\Users\arand\Documents\Civil\Charleston-Police-Renovations_2021.rvt

NO.	BY	DATE	DESCRIPTION

**City of Charleston - Police Office
 Renovations**
 501 Virginia Street East Charleston, WV 25301
 September 29, 2021
 Bid Documents

DRAWN: KES DATE: 09/03/21
 CHECKED: TTG DATE: 09/03/21
 APPROVED: TTG DATE: 09/03/21

PROJECT No. 010-10145

SYSTEMS PLAN

SHEET No.

E4.00