

GENERAL DEMOLITION NOTES:

1. GENERAL CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS/EQUIPMENT AS REQUIRED TO COMPLETE DEMOLITION AND REMOVAL OF ALL ITEMS AS INDICATED.
2. G.C. SHALL BE RESPONSIBLE FOR AND COORDINATE DEMOLITION WORK REQUIRED.
3. G.C. IS RESPONSIBLE FOR ALL DEMOLITION, SHORING & BRACING, CUTTING, CORING, NEEDLING ETC.
4. IN AREA OF WORK, G.C. SHALL BE RESPONSIBLE TO PATCH AND REPAIR ALL EXISTING CONSTRUCTION WHICH IS TO REMAIN.
5. G.C. SHALL BE RESPONSIBLE FOR ALL ASSOCIATED DEMOLITION WORK LOCATED OUTSIDE THE "AREA OF WORK", REQUIRED TO PROVIDE COMPLETE INSTALLATION OF ALL BUILDING SYSTEMS IDENTIFIED IN THE PROJECT SCOPE.
6. IF ANY QUESTIONS ARISE AS TO THE REMOVAL OF ANY MATERIAL, CLARIFY THE POINT IN QUESTION WITH THE ARCHITECT BEFORE PROCEEDING.
7. DEMOLITION IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON DRAWINGS. THE INTENT IS TO INDICATE THE GENERAL SCOPE OF DEMOLITION REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
8. ALL DRAWINGS ARE DIAGRAMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT BUILDING BEFORE ANY DEMOLITION WORK IS TO BE STARTED. PROMPTLY REPORT ANY DISCREPANCIES TO ARCHITECT.
9. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH LOCAL ORDINANCES AND ALL APPLICABLE CODES.
10. AIA GENERAL CONDITIONS A-201 1997 IS INCORPORATED BY REFERENCE.
11. THE G.C. SHALL FURNISH A SYSTEM OF TEMPORARY LIGHT AND POWER IN THE SPACE DURING DEMOLITION AND CONSTRUCTION. LIGHTING IS TO BE ADEQUATE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR FUTURE FIT-OUT, AND LEFT SWITCHED IN THE "ON" POSITION.
12. AFTER COMPLETED DEMOLITION, SPACE TO REMAIN WEATHER & WATER TIGHT, LIGHTED (TEMP.), & SECURED BY LOCKING. (BROOM CLEAN) WITH NO UNSAFE CONDITIONS REMAINING AS DETERMINED BY OWNER AND/OR ARCHITECT.
13. NOT USED.
14. REMOVE ALL PARTITIONS, DOORS, FINISHES, FIXTURES AND EQUIPMENT INDICATED BY DASHED LINES.
15. ALL DOORS, FRAMES, HARDWARE, MECHANICAL ITEMS, PLUMBING FIXTURES, LIGHT FIXTURES, AND SPECIAL EQUIPMENT SHOWN TO BE REMOVED SHALL BE CLEAN AND FREE OF DEFECTS, PROTECTED, SAVED, AND RE-USED AS DIRECTED HEREIN, RETURNED TO BUILDING STOCK, OR DISPOSED OF AS DIRECTED.
16. NOT USED.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND/OR REPAIRING ANY DAMAGE CAUSED BY THEM OR THEIR SUBCONTRACTORS TO ANY EXISTING CONDITIONS IN COMMON STAIRS, ELEVATOR LOBBIES, PUBLIC CORRIDORS, RESTROOMS, OR OTHER TENANT SPACES. REFINISH TO MATCH EXISTING ADJACENT FINISH, OR AS NOTED HEREIN. IT SHALL BE THE G.C.'S RESPONSIBILITY TO DOCUMENT ANY PREEXISTING DAMAGE AND NOTIFY ARCHITECT OF ANY SUCH DAMAGE PRIOR TO PRICING OR BIDDING.
18. REMOVE ALL EXISTING IRREGULAR MATERIALS WHICH CAUSE RISES OR DEPRESSIONS IN FLOORING SURFACE, SUCH AS FASTENERS, OUTLET CORES, COVER PLATES, RESILIENT FLOOR COVERINGS, CARPET, CARPET PAD, FLASH PATCH, CONCRETE FILL, PLYWOOD, ETC. CONTRACTOR TO PREPARE EXISTING SLAB AS REQUIRED FOR NEW FLOOR FINISHES.
19. CONTRACTOR TO PREPARE EXISTING SLAB AS REQUIRED FOR NEW FLOOR FINISHES.
20. ALL FLOORING OPENINGS ARE TO BE SEALED TEMPORARILY AND MADE STRUCTURALLY SAFE UNTIL NEEDED FOR NEW CONSTRUCTION.
21. ANY/ALL EXISTING FIREPROOFING FOUND ON EXISTING STRUCTURE (COLUMNS, BEAMS, SLABS,) SHALL BE PROTECTED & REMAIN INTACT. (DO NOT REMOVE).
22. STAIRWAYS MUST REMAIN ACCESSIBLE AT ALL TIMES DURING DEMOLITION.
23. CAREFULLY REMOVE ALL EXISTING WALL FINISHES AT EXISTING PARTITIONS AND/OR COLUMNS, AS NOTED. PROTECT SUBSTRATE. REMOVE ALL EXISTING FLOOR AND CEILING FINISHES THROUGHOUT. PATCH AND REPAIR AS NEEDED TO ACCEPT NEW FINISHES.
24. NOT USED.
25. NOT USED.
26. NOT USED.
27. NOT USED.

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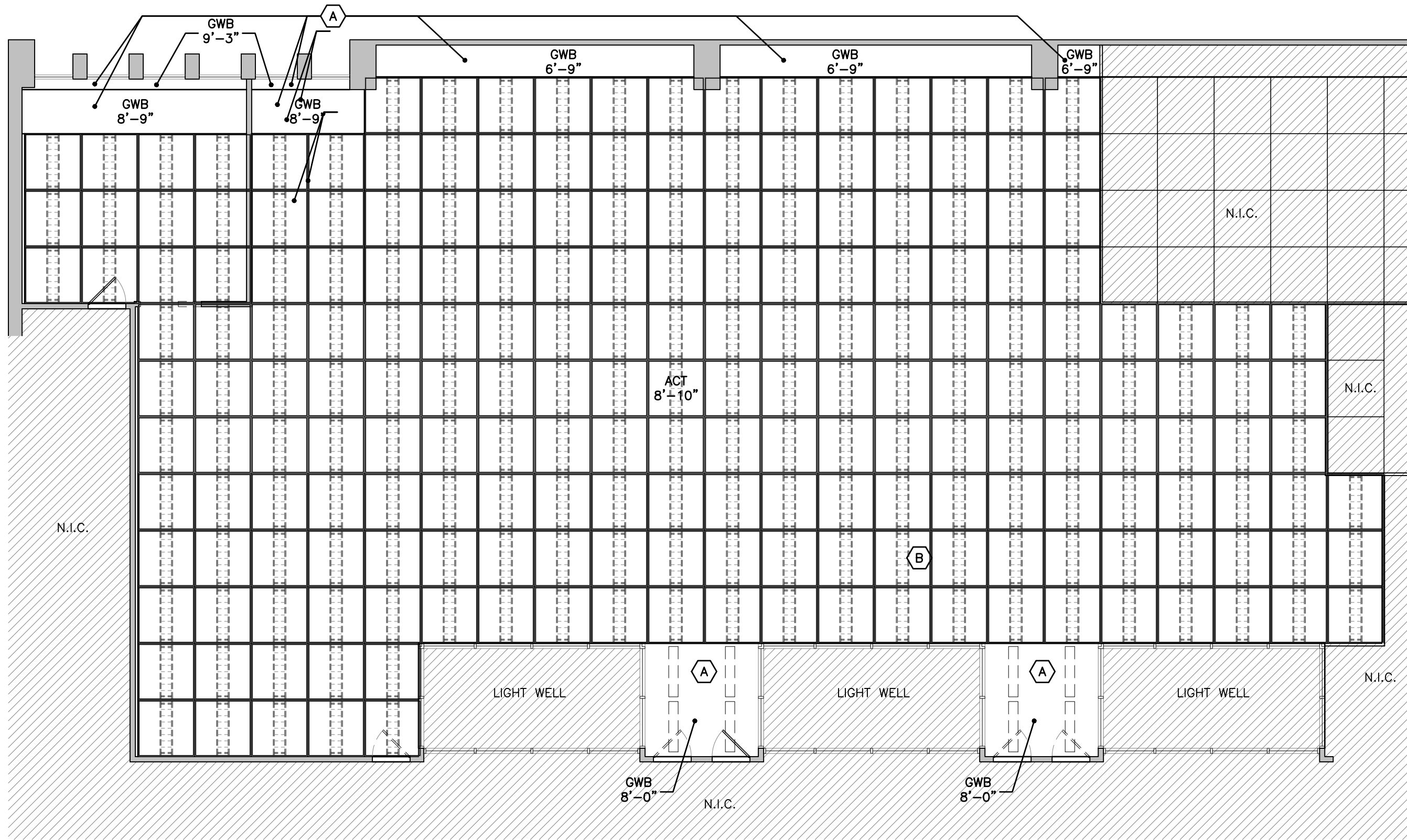
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|--|---|--|--|
| | EXISTING WALL TO REMAIN | | EXISTING WALL TO BE REMOVED |
| | EXISTING DOOR TO REMAIN | | EXISTING DOOR TO BE REMOVED |
| | EXISTING WINDOW TO REMAIN | | EXISTING WINDOW TO BE REMOVED |
| | EXISTING FIXTURES/CASEWORK TO REMAIN | | EXISTING FIXTURES/CASEWORK TO BE REMOVED |
| | EXISTING 54"x54" SLOTTED CEILING GRID TO REMAIN | | EXISTING GRID-INTEGRATED LINEAR HVAC AIR DIFFUSER, SEE MECHANICAL PLAN FOR MORE INFO |
| | REMOVE EXISTING LIGHT & END FILLER PANELS | | |
| | REMOVE EXISTING 22"x54" ACT PANELS | | |

FLOOR DEMO KEY NOTES

- 1 EXISTING SYSTEMS FURNITURE & CHAIRS TO BE REMOVED BY OWNER (N.I.C.)
- 2 EXISTING HIGH-DENSITY FILES TO BE REMOVED & STORED BY OWNER FOR RE-INSTALLATION AFTER PROPOSED WORK IS COMPLETE (N.I.C.)
- 3 EXISTING OFFICE FURNITURE TO BE REMOVED BY OWNER (N.I.C)
- 4 REMOVE EXISTING INTERIOR SYSTEMS PARTITIONS AND DOORS
- 5 EXISTING PERIMETER SYSTEMS PARTITIONS TO REMAIN
- 6 REMOVE PORTION OF EXISTING STUD WALL TO ALLOW FOR NEW DOOR & SIDELITE
- 7 REMOVE ALL CARPET THROUGHOUT
- 8 REMOVE EXISTING GWB AT ONE SIDE OF EXISTING WALL TO ALLOW FOR NEW ACOUSTIC BATT INSULATION.
- 9 REMOVE EXISTING SYSTEMS PARTITION, DOOR, AND ELECTRIC STRIKE/CARD READER. CAP ELECTRICAL NEW ENTRY DOOR, ELECTRIC STRIKE, AND CARD READER INSTALLATION.

CEILING DEMO KEY NOTES

- A EXISTING GWB CEILING/SOFFIT TO REMAIN, REMOVE EXISTING LIGHTS, PATCH & REPAIR AS REQ'D TO COORDINATE WITH PROPOSED WORK
- B EXISTING 54"x54" CEILING GRID TO REMAIN, REMOVE EXISTING LIGHTING, ACT, INTERMEDIATE GRID, AND METAL FILLER PANELS. SEE LEGEND FOR ADDITIONAL INFORMATION

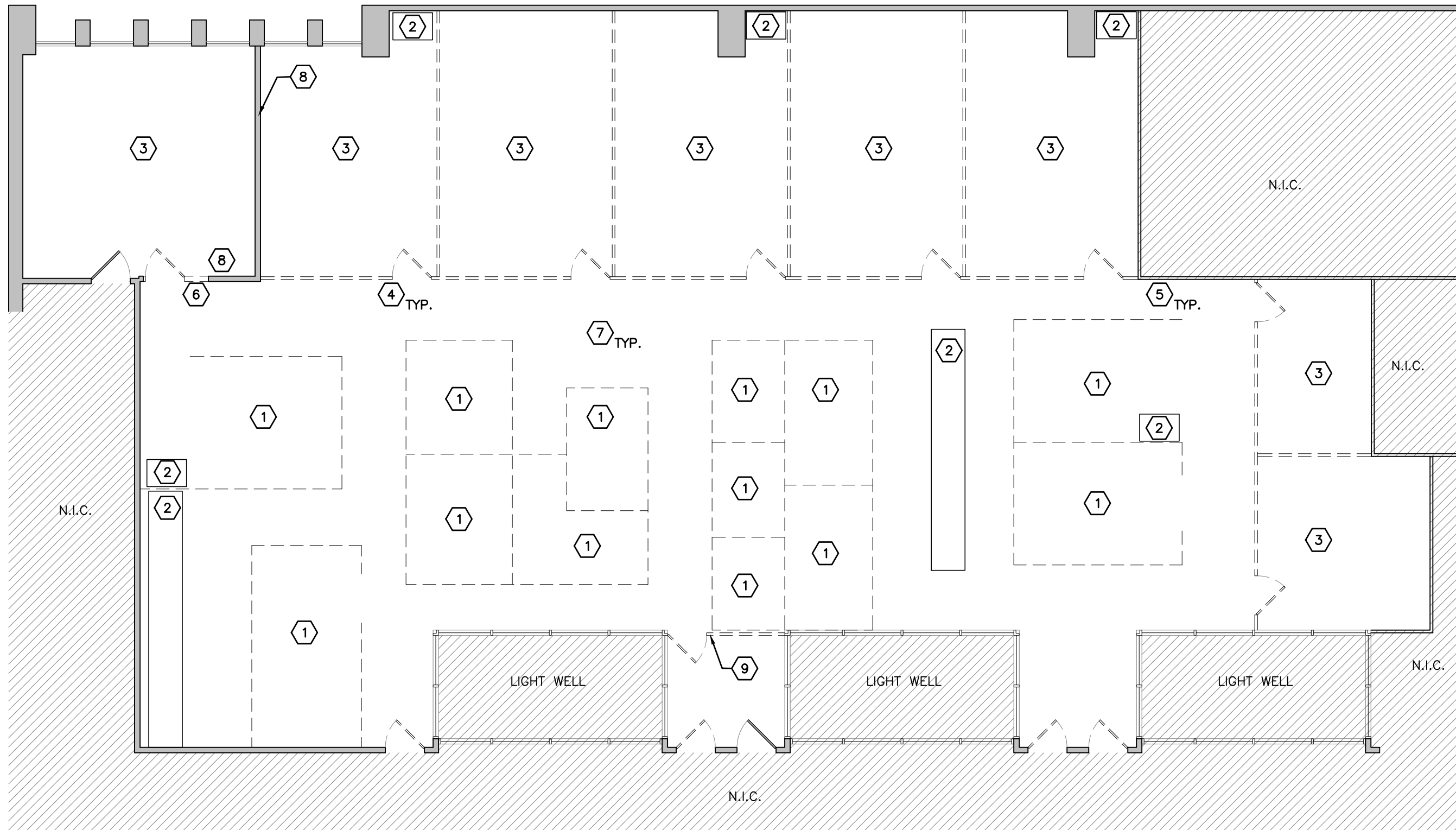


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DEMO CEILING PLAN

D-1

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



1

DEMO FLOOR PLAN

D-1

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

DEMOLITION PLANS

HR SUITE EQUIPMENT RECONFIGURATION

DELAWARE COUNTY GOVERNMENT CENTER

201 W. FRONT STREET

MEDIA, PA 19063

ARCHITECTS

ARCHITECTURE

140 N. PROVIDENCE ROAD

MEDIA, PENNSYLVANIA 19063

TEL: 610-566-7044

FAX: 610-566-3258

ENGINEERING

SITE PLANNING

CODE SERVICES

REVISIONS

NO.

DESCRIPTION

DATE

01.02.24

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DRAWN BY:

GP

CHECKED BY:

MJK

PROJ. NO.:

23922

SHEET NO.:

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SHEET 2 OF 5

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RCP LEGEND:

NOTE: LIGHTING FIXTURES SHOWN FOR LOCATION ONLY. SEE ELECTRICAL AND MECHANICAL DRAWINGS FOR FIXTURE SPECS AND LOCATIONS OF EMERGENCY/EXIT LIGHTING.

- RECESSED HI-HAT LED LIGHT
- RECESSED WALL WASHER LED LIGHT
- ▮ 24x24 LAY-IN INDIRECT TROFFER LED LIGHT
- LINEAR SUSPENDED LED LIGHT
- ▣ 24x24 HVAC SUPPLY AIR DIFFUSER
- ▤ 24x24 HVAC RETURN AIR DIFFUSER
- 48x6 LINEAR HVAC SUPPLY AIR DIFFUSER
- EXISTING GRID-INTEGRATED LINEAR HVAC AIR DIFFUSER, SEE MECHANICAL PLAN FOR MORE INFO
- ⦿ ILLUMINATED EXIT SIGN
- ⚡ EMERGENCY LIGHT W/ BATTERY PACK

- ▮ NEW 5/8" ARMSTRONG INTERMEDIATE CEILING GRID
- ▮ NEW 24"x54" OPTIMA LAY-IN ACOUSTIC CEILING TILE CENTER PANEL
- ▮ NEW 15"x54" OPTIMA LAY-IN ACOUSTIC CEILING TILE SIDE PANELS

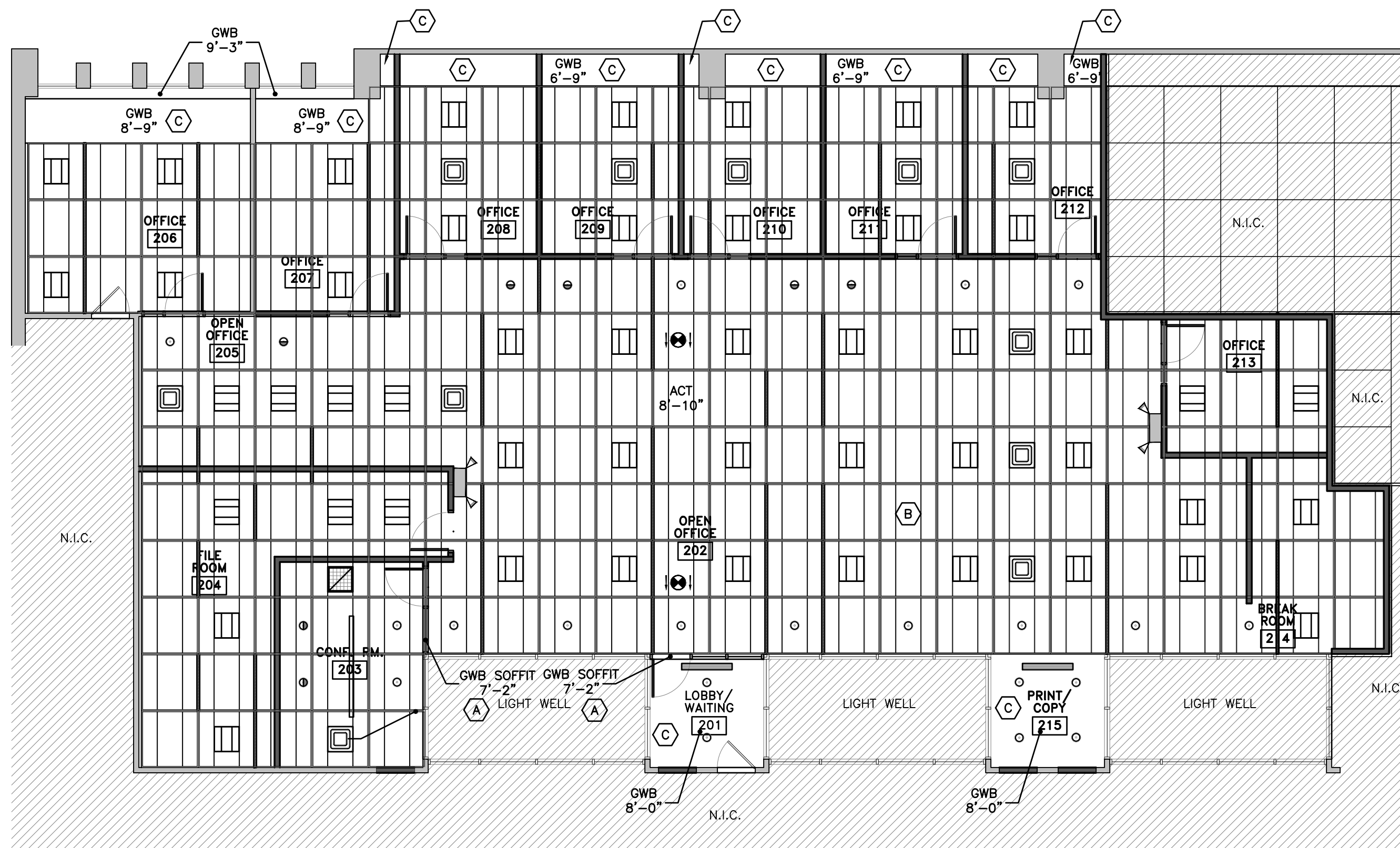
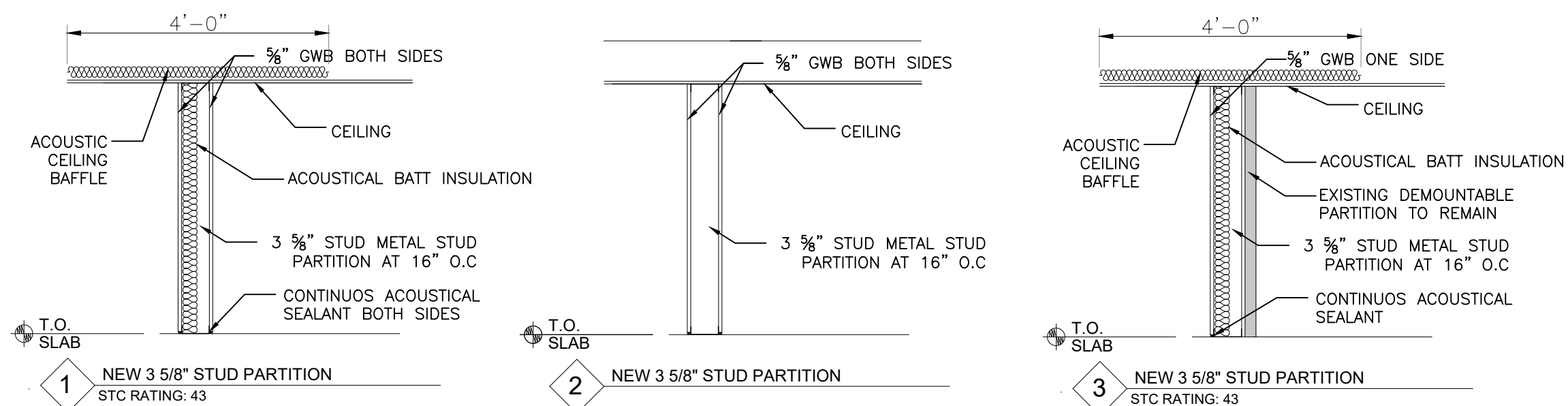
CEILING PLAN KEY NOTES

- (A) PROVIDE 5" WIDE FRAMED GWB CEILING BULKHEAD FOR NEW STOREFRONT FRAME BELOW.
- (B) EXISTING 54"x54" CEILING GRID TO REMAIN, INFILL W/ NEW INTERMEDIATE GRID, ACT, AND LIGHTING. SEE RCP LEGEND FOR ADDITIONAL INFO.
- (C) PRIME/PAINT ALL NEW AND EXISTING GWB CEILINGS, SEE FINISH SCHEDULE.

FLOOR PLAN KEY NOTES

- (1) CENTER NEW PARTITION ON EXISTING CEILING GRID ABOVE.
- (2) CENTER NEW PARTITION BETWEEN EXISTING CEILING GRID ABOVE.
- (3) PROVIDE BLOCKING IN WALL-MOUNTED CABINETS AND EQUIPMENT, SEE DETAILS.
- (4) REMOVE AND REPLACE GWB AT ONE SIDE OF EXISTING STUD WALL TO ALLOW ACOUSTIC BATT INSULATION INSTALLATION.

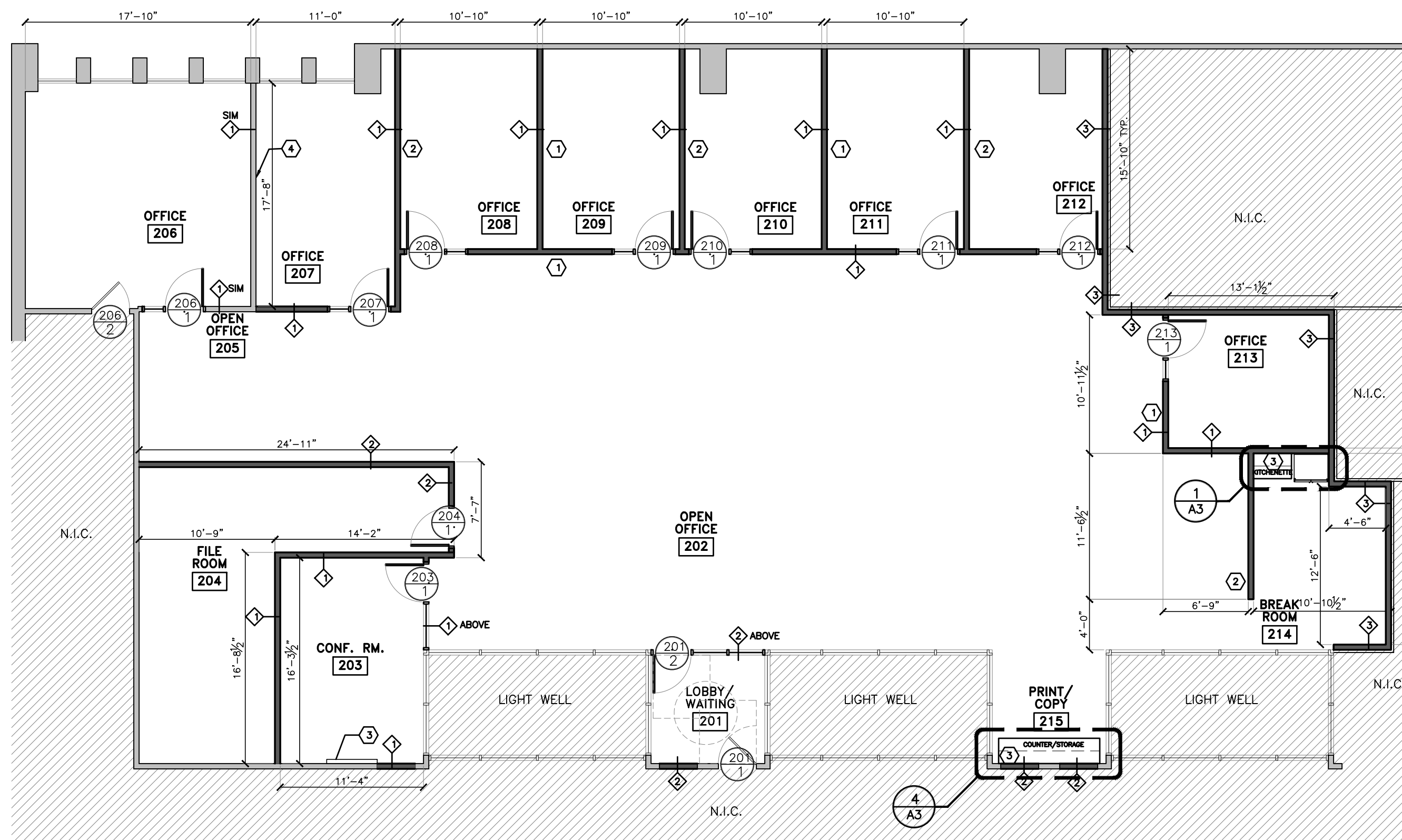
WALL TYPES



2

REFLECTED CEILING PLAN

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



1

PROPOSED FLOOR PLAN

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

LINN ARCHITECTS

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258

PROPOSED FLOOR PLAN & CEILING PLANS

HR SUITE EQUIPMENT RECONFIGURATION

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1	01.02.24	ISSUE FOR BID
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4		CHECKED BY: MJK
5	2/3/22	PROJ. NO.:

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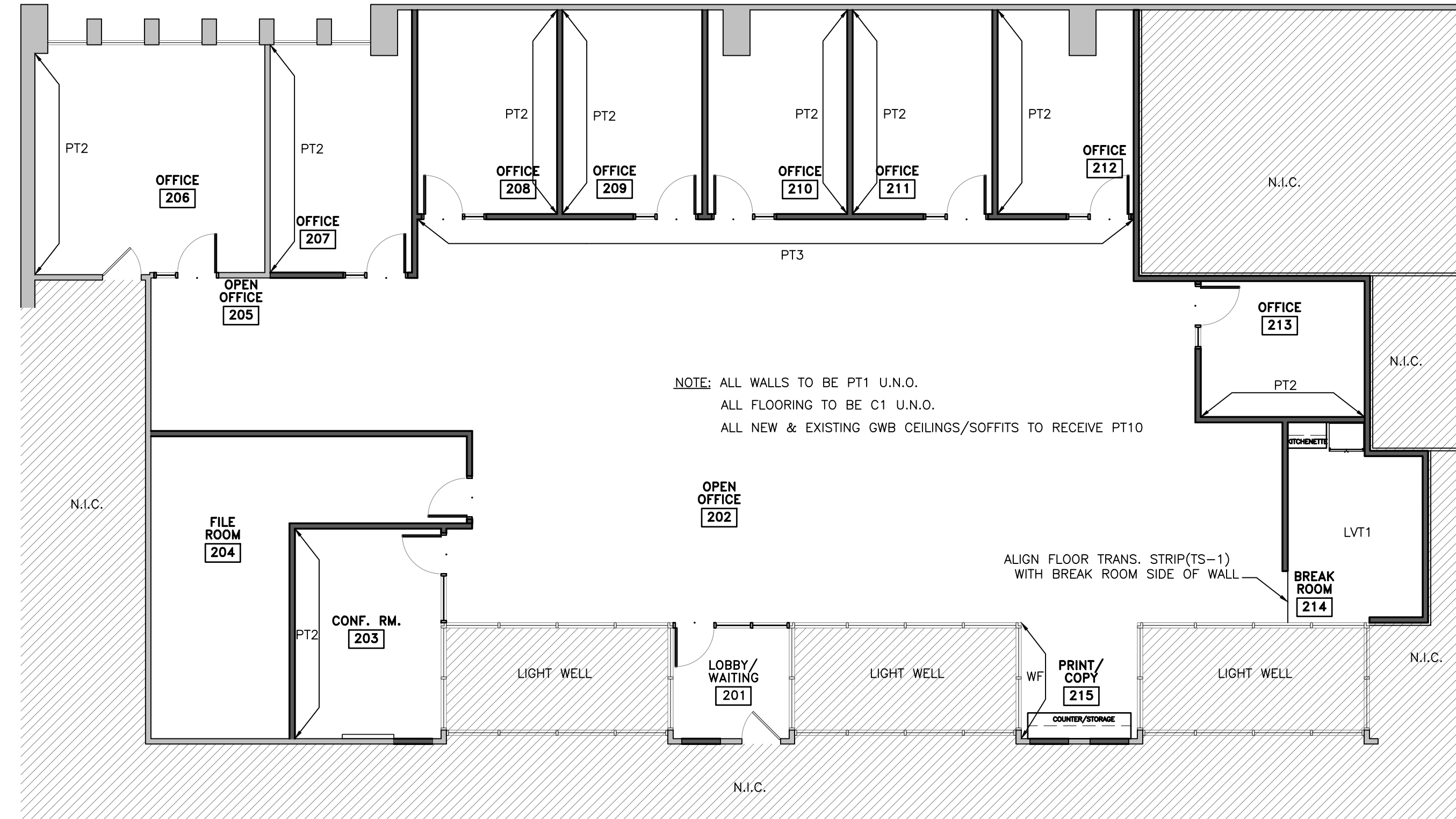
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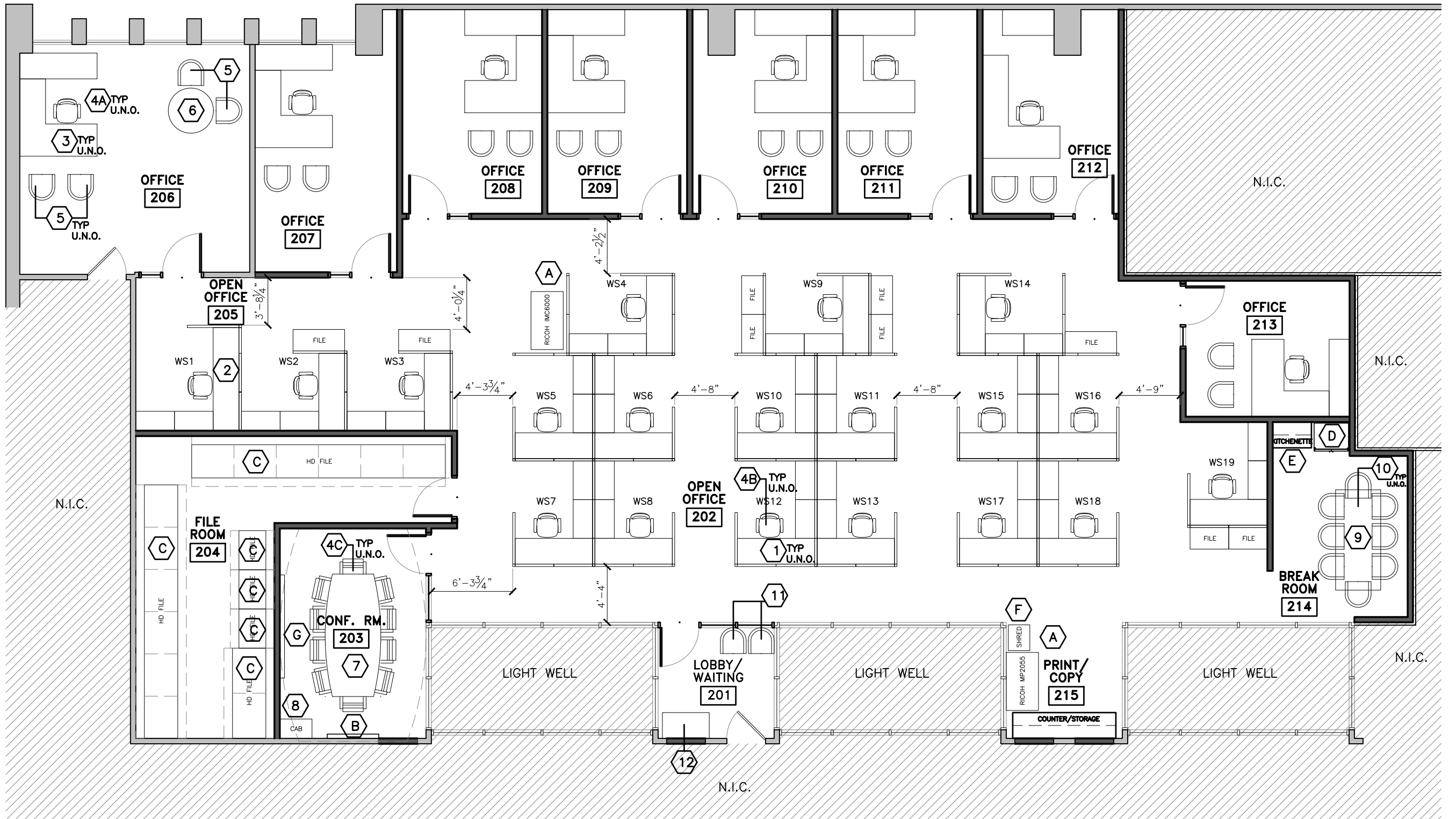
INTERIOR ROOM FINISH SCHEDULE										
ROOM		FLOORS	BASES	WALLS				CEILINGS		
ROOM NAME		MATERIALS	MATERIALS	PAINT FINISHES				MATERIALS		
		LVT CARPET	TSI	VINYL BASE	N	S	E	W	ACOUSTIC TILE GWB(PT 10)	REMARKS
201	LOBBY/WAITING				PT 1	PT 1	PT 1	PT 1		
202	OPEN OFFICE	●	●		PT 1/PT 3	PT 1	PT 1	PT 1		
203	CONF. ROOM	●	●		PT 1	PT 1	PT 1	PT 1		
204	FILE ROOM	●	●		PT 1	PT 1	PT 1	PT 1		
205	OPEN OFFICE	●	●		PT 1	PT 1	PT 1	PT 1		
206	OFFICE	●	●		PT 1	PT 1	PT 1	PT 2	●	
207	OFFICE	●	●		PT 1	PT 1	PT 1	PT 2	●	
208	OFFICE	●	●		PT 1	PT 1	PT 2	PT 1	●	
209	OFFICE	●	●		PT 1	PT 1	PT 1	PT 2	●	
210	OFFICE	●	●		PT 1	PT 1	PT 2	PT 1	●	
211	OFFICE	●	●		PT 1	PT 1	PT 1	PT 2	●	
212	OFFICE	●	●		PT 1	PT 1	PT 2	PT 1	●	
213	OFFICE	●	●		PT 1	PT 2	PT 1	PT 1	●	
214	BREAK ROOM	●	●		PT 1	PT 1	PT 1	PT 1	●	
215	PRINT/COPY ROOM	●	●		PT 1	PT 1	PT 1	PT 1	●	

MATERIAL SPECIFICATIONS				
ITEM	MANUFACTURER	STYLE OR CATALOG #	COLOR	REMARKS
FLOORS				
LVT (LVT1)	SHAWCONTRACT	RESIDE 20 MIL	ABODE 94506	STAGGER INSTALL PATTERN
CARPET 1(C1)	SHAWCONTRACT	SURROUND TILE 5T125	BLUE HERRING 1748	QUARTER TURN INSTALL PATTERN, ADD ALTERNATE: SUPPLIER TO PROVIDE 10% ATTIC STOCK.
TRANSITION STRIP (TS-1)	ROPPE	#34 UNDERLAP CARPET EDGE 3/16"	667 GALACTIC	
BASE				
RUBBER BASE	ROPPE	PINACLE 4 1/2"x1/8" RUBBER COVE BASE	667 GALACTIC	
WALLS				
PAINT 1 (PT 1)	SHERWIN WILLIAMS	TBD	TBD	BASE COLOR
PAINT 2 (PT 2)	SHERWIN WILLIAMS	TBD	TBD	ACCENT COLOR #1
PAINT 3 (PT 3)	SHERWIN WILLIAMS	TBD	TBD	ACCENT COLOR #2
PAINT 4 (PT 4) NOT USED	SHERWIN WILLIAMS	TBD	TBD	ACCENT COLOR #2
PAINT 5 (PT 5)	SHERWIN WILLIAMS	TBD	TBD	HOLLOW METAL DOOR/WINDOW FRAMES, SEMI-GLOSS FINISH
CEILING				
ACOUSTIC CEILING TILE PAINT 10 (PT 10)	ARMSTRONG SHERWIN WILLIAMS	OPTIMA SW 7007	WHITE CEILING BRIGHT WHITE	CUSTOM SIZES: 24"x54" & 15"x54", 9/16" ARMSTRONG INTERMEDIATE GRID. ADD ALTERNATE: SUPPLIER TO PROVIDE 10% ATTIC STOCK. GWB CEILINGS & SOFFITS, FLAT FINISH
MILLWORK				
PLAM 1 (PL 1)	WILSONART	D354-60	DESIGNER WHITE	WHITE
PLAM 2 (PL 2)	WILSONART	4830K-18	SATIN STAINLESS	SILVER
PLAM 3 (PL 3)	WILSONART	D379-60	INDIGO	BLUE
PLAM 4 (PL4)	TBD	TBD	TBD	INTERIOR/CONCEALED SURFACES
MISCELLANEOUS				
WINDOW FILM (WF)	3M	7725SE-314	DUSTED CRYSTAL	APPLY TO GLASS UP TO 42" A.F.F.

FURNITURE & EQUIPMENT SCHEDULE			
NOTE: ALL FURNITURE & EQUIPMENT TO BE PROVIDED AND INSTALLED BY OWNER			
	DESIGNATION	ITEM	REMARKS
FURNITURE	①	6X8 WORK STATION (BY OWNER)	
	②	8X8 WORK STATION (BY OWNER)	
	③	OFFICE WORK STATION (BY OWNER)	
	4A	OFFICE TASK CHAIR (BY OWNER)	
	4B	OPEN OFFICE TASK CHAIR (BY OWNER)	
	4C	MEETING CHAIR (BY OWNER)	
	⑤	OFFICE GUEST CHAIR (BY OWNER)	
	⑥	42" DIA. TABLE (BY OWNER)	
	⑦	MEETING TABLE (BY OWNER)	
	⑧	MEETING CABINET (BY OWNER)	
	⑨	BREAK ROOM TABLE (BY OWNER)	
	⑩	BREAK ROOM CHAIR (BY OWNER)	
EQUIPMENT	⑪	WAITING CHAIR (BY OWNER)	
	⑫	LAPTOP TABLE (BY OWNER)	
	A	PRINTER/COPIER (BY OWNER)	EXISTING TO BE RELOCATED
	B	TV SCREEN (BY OWNER)	GC TO PROVIDE WOOD WALL BLOCKING BETWEEN 42"-72" A.F.F.
	C	HIGH DENSITY STORAGE UNIT (BY OWNER)	EXISTING TO BE RELOCATED
	D	30" REFRIGERATOR	
	E	TRASH/RECYCLING BINS	
	F	SHREDDER(BY OWNER)	
	G	GLASS WHITEBOARD	96X48



2
A-2
FINISH PLAN
SCALE: 1/8"=1'-0"



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140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
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FURNITURE & FINISH PLANS

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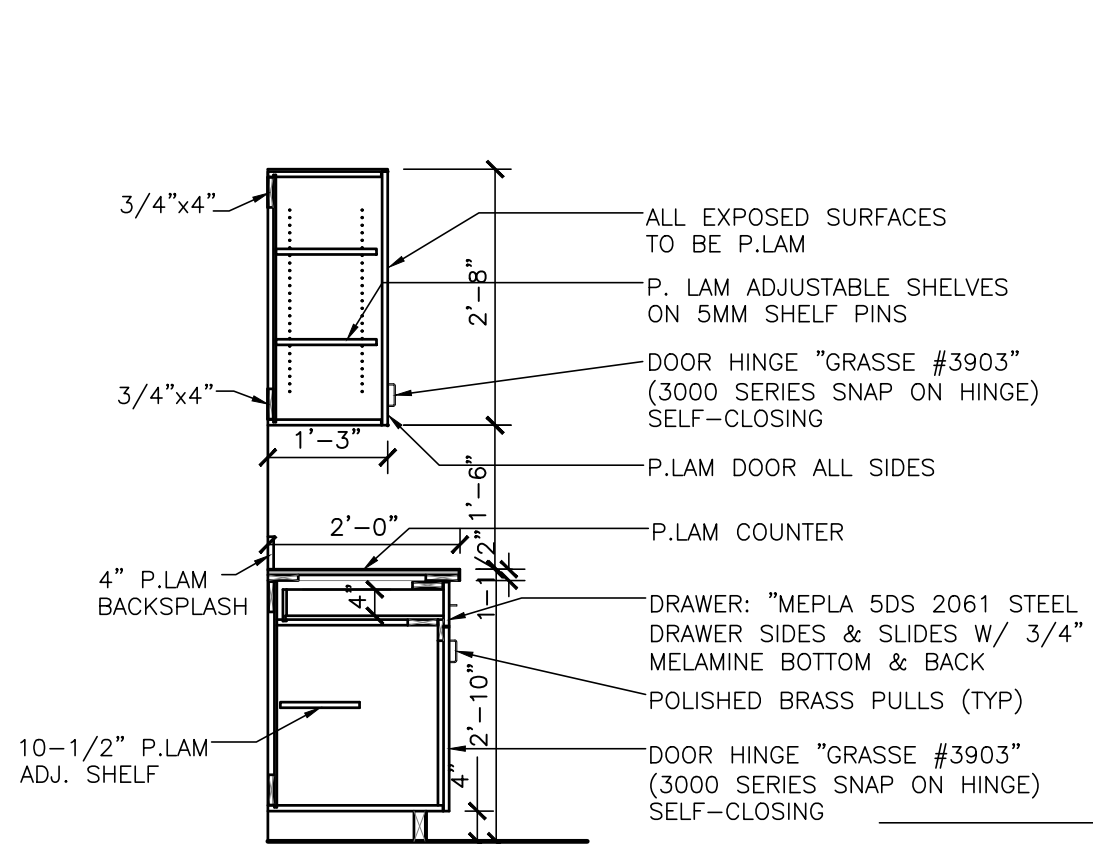
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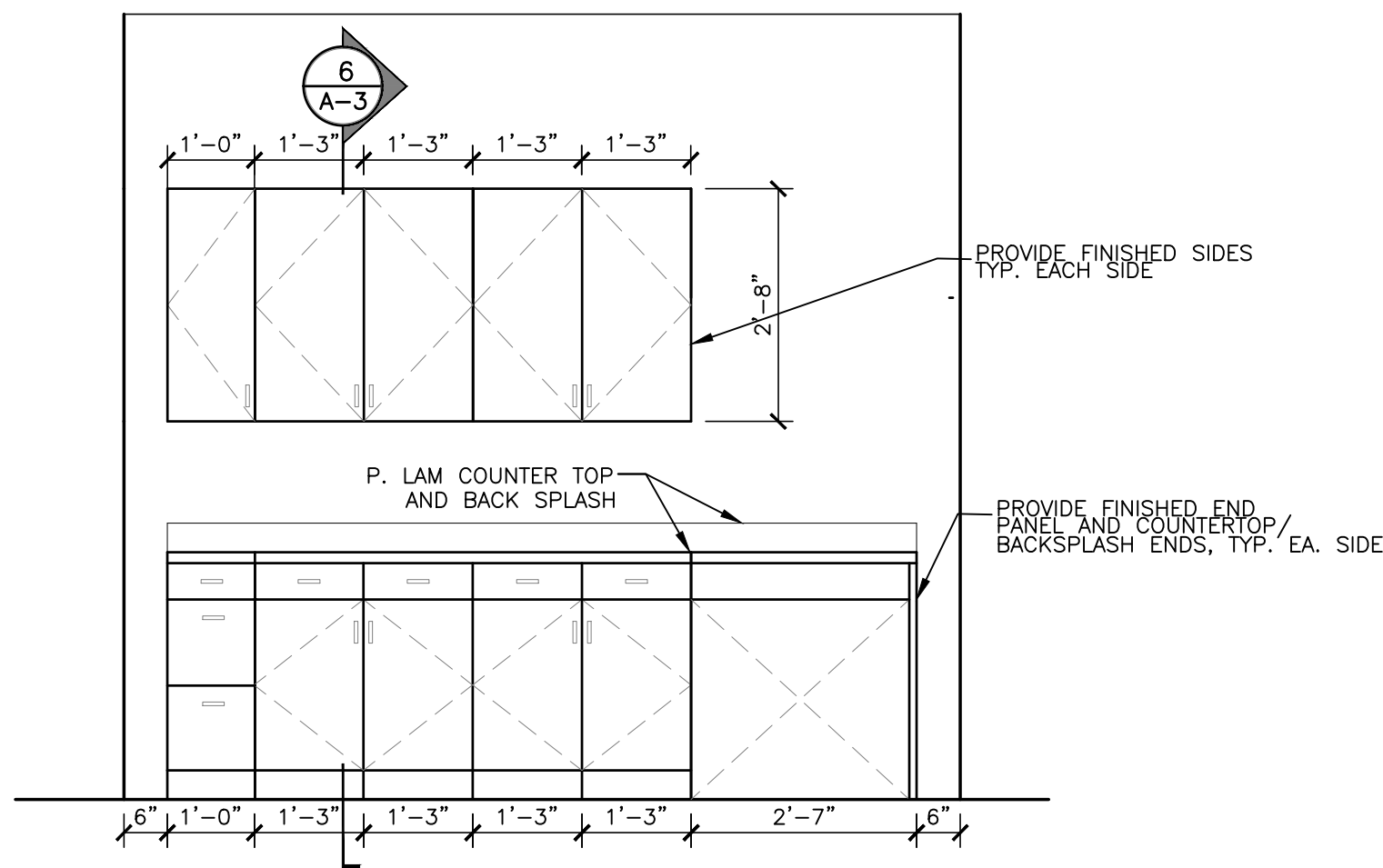
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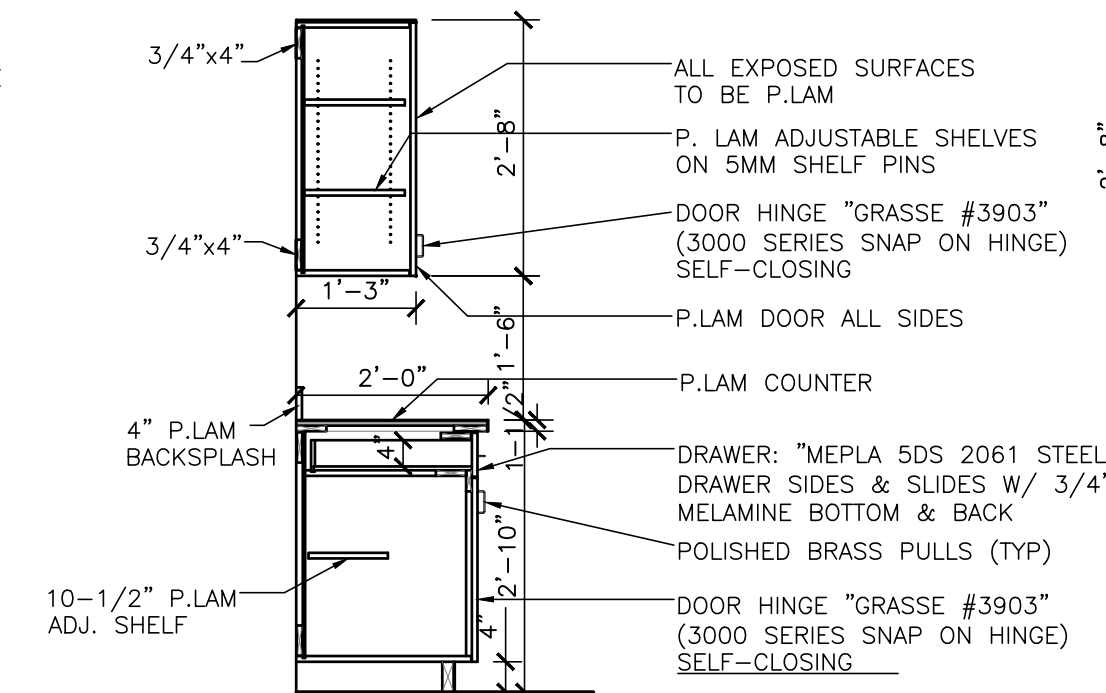
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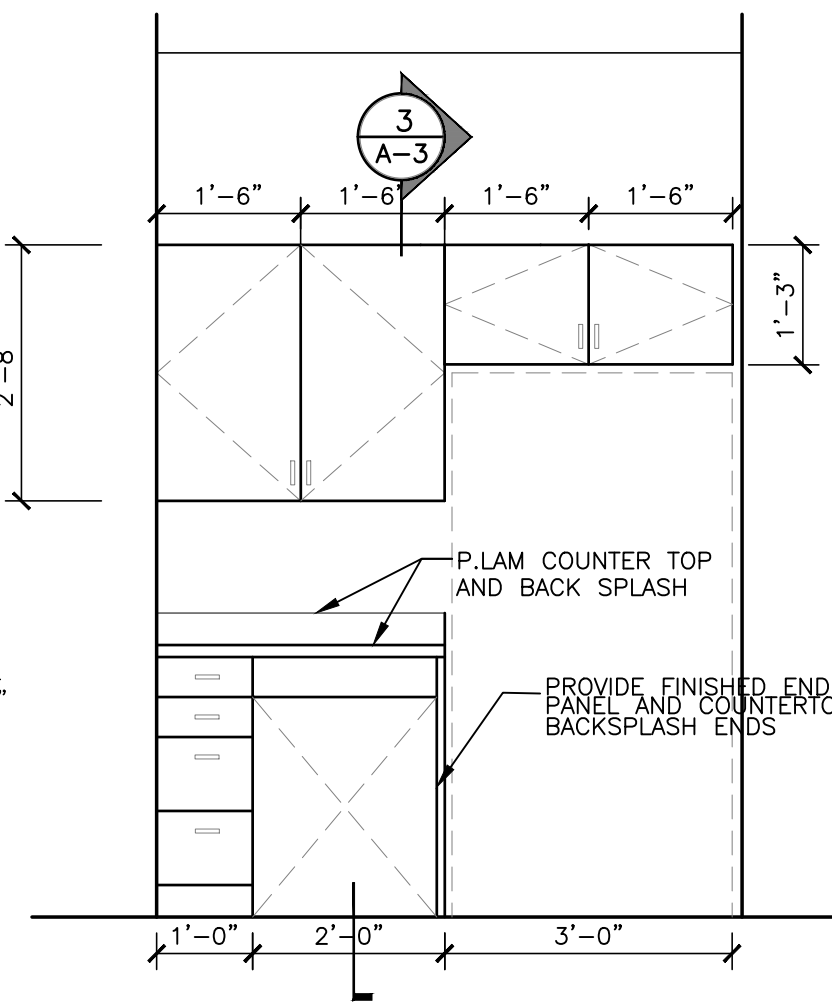
6 PRINT/COPY ROOM SECTION
A-3
SCALE: 1/2"=1'-0"



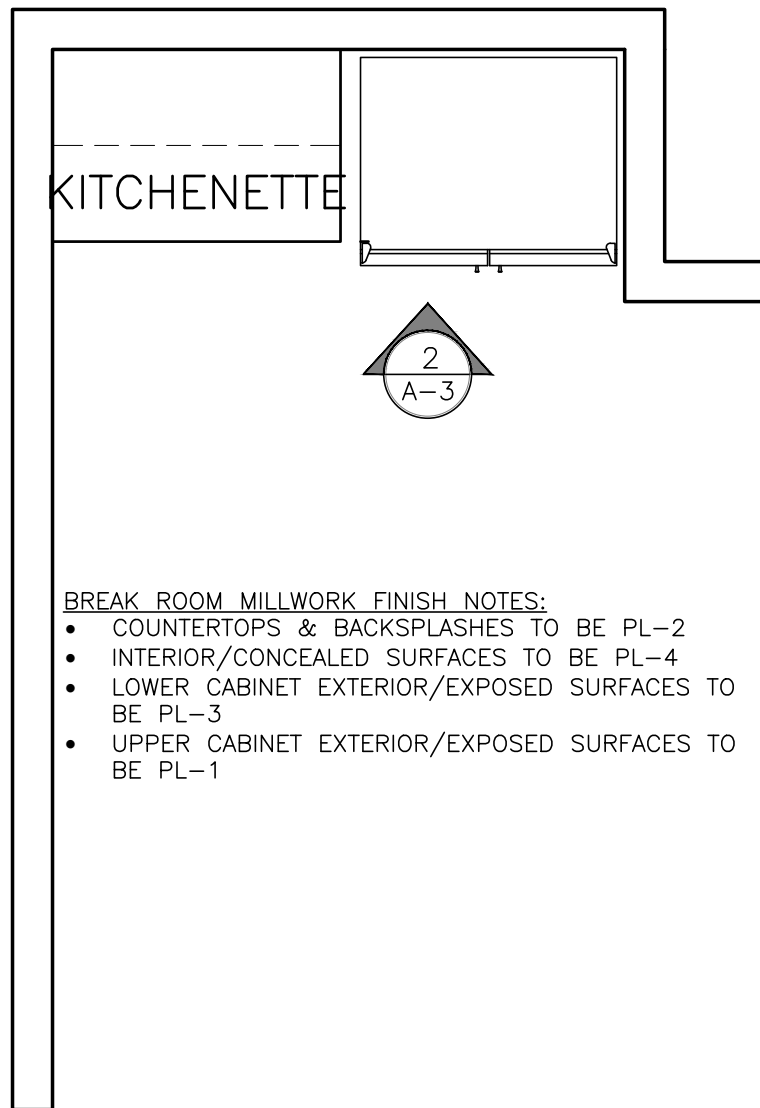
5 PRINT/ COPY ROOM ELEVATION
A-3
SCALE: 1/2"=1'-0"



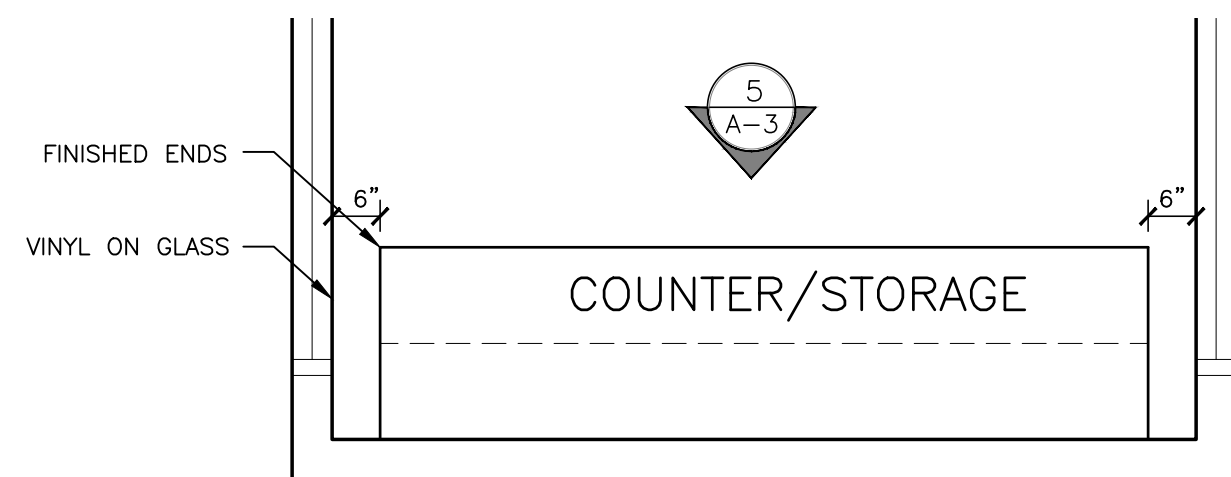
3 BREAK ROOM SECTION
A-3
SCALE: 1/2"=1'-0"



2 BREAK ROOM ELEVATION
A-3
SCALE: 1/2"=1'-0"



1 BREAK ROOM PLAN
A-3
SCALE: 1/2"=1'-0"



4 PRINT/COPY ROOM PLAN
A-3
SCALE: 1/2"=1'-0"

DOOR AND FRAME SCHEDULE																
D O O R			F R A M E										HARDWARE SET	SIGN TYPE	DOOR STOP TYPE	REMARKS
FROM / TO	NO.	W	H	T	TYPE	MAT.	CORE	GLASS	TYPE	MAT.	DETAILS HEAD & JAMB					
CORRIDOR/WAITING	201-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		1	HM		3	3	FLOOR	EXISTING DOOR/FRAME TO REMAIN WOOD DOOR VENEER TO MATCH EXISTING DOOR 201-1	
WAITING/OPEN OFFICE	201-2	3 ⁰	7 ⁰	1 3/4	A	WD	SC		3	HM		2	3	FLOOR		
OFFICE/CONF. ROOM	203-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		4	HM		4	2	WALL		
OPEN OFFICE/OFFICE	204-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		1	HM		5	2	WALL		
OPEN OFFICE/OFFICE	206-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	—		
OPEN OFFICE/OFFICE	206-2	3 ⁰	7 ⁰	1 3/4	A	WD	SC		1	HM		3	—	—	EXISTING DOOR/FRAME TO REMAIN	
OPEN OFFICE/OFFICE	207-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	208-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	209-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	210-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	211-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	212-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
OPEN OFFICE/OFFICE	213-1	3 ⁰	7 ⁰	1 3/4	A	WD	SC		2	HM		1	1	WALL		
NOTE: GC TO COORDINATE AND VERIFY OPENING SIZES WITH NEW DOORS IN FIELD																

HARDWARE MANUFACTURERS

HINGES - HAGER #BB1279, 4 1/2" X 4 1/2"
LOCKS - SARGENT 10XLINE, B LEVER
CLOSERS - LCN 4110 SERIES PARALLEL
DOOR STOPS - FLOOR - ROCKWOOD 480
WALL - ROCKWOOD 608
SILENCER - ROCKWOOD 608

SET 1:
1 LEVER PRIVACY LOCK SET (A.D.A COMPLIANT)
3 BUTT HINGES
3 SILENCERS

SET 2:
1 LEVER ENTRANCE LOCK SET (A.D.A COMPLIANT)
3 BUTT HINGES (INC. FINISH)
3 SILENCERS
1 DOOR CLOSER
1 ELECTRIC STRIKE (FAIL-SECURE FUNCTION)
1 CARD/KEYPAD, PROVIDED BY OWNER (GC TO PROVIDE POWER AS REQUIRED)

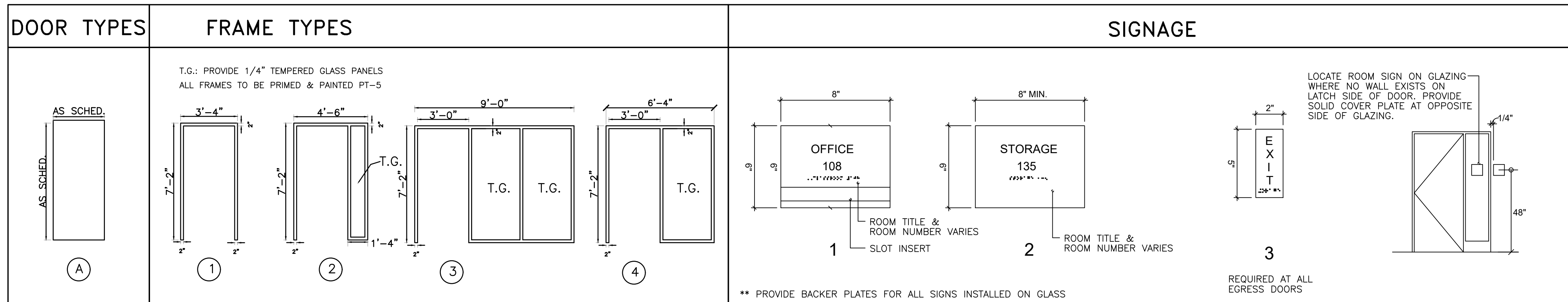
SET 3:
1 LEVER ENTRANCE LOCK SET (A.D.A COMPLIANT)
3 BUTT HINGES
3 SILENCERS
1 DOOR CLOSER

SET 4:
1 LEVER PASSAGE LOCK SET (ADA COMPLIANT)
3 BUTT HINGES
3 SILENCERS

SET 5:
1 LEVER PASSAGE LOCK SET (ADA COMPLIANT)
3 BUTT HINGES
3 SILENCERS
1 DEAD BOLT

HARDWARE NOTES

- ALL DOORS TO BE PROVIDE WITH LEVER HANDLES
- ALL HOLLOW METAL DOORS TO BE 16 GAUGE. ALL EXTERIOR HOLLOW METAL FRAMES TO BE 14 GAUGE. ALL HOLLOW METAL FRAMES SHALL BE PROVIDED WITH REINFORCING AT THE HINGE, JAMB STRIKE, AND CLOSER LOCATIONS. HOLLOW METAL FRAMES IN FRAME OPENINGS SHALL BE KNOCKDOWN FRAMES.
- ALL HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED PER COLOR LISTED
- ALL RATED DOORS TO HAVE UL LABELS
- THRESHOLDS, WEATHERSTRIPPING & SWEEPS TO BE INSTALLED PER MANF. INSTRUCTIONS
- ALL INTERIOR DOOR TO BE USA WOOD DOOR, LIVESAWN RED OAK VENEER, 'CANE' STAIN COLOR FINISH.
- FIRE GLASS IN RATED DOOR AND SIDELITES AS INDICATED IN THE DOOR AND FRAME TYPES SHALL MAINTAIN A 45 MIN RATING FOR INSTALLING IN A 1 HOUR RATED DEMISING WALL ASSEMBLY. USE FIRELITE PLUS OR APPROVED EQUAL.
- ALL DOOR HARDWARE TO RECEIVE A.D.A. COMPLIANT LEVER SET @ 36" A.F.F. U.N.O
- ALL NEW DOOR CLOSERS SHALL BE A.D.A COMPLIANT. CLOSERS SHALL TAKE 3 SECONDS TO OPERATE FROM AN OPEN POSITION OF 70° TO A POINT 3" FROM THE LATCH. MAXIMUM OPENING FORCE IS NOT TO EXCEED 5 LBS.
- ALL DOOR HARDWARE TO BE 609/US5 SATIN BRASS, BLACKENED, SATIN RELIEVED, CLEAR COATED.



ARCHITECTS

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DRAWN BY: GP

CHECKED BY: MJK

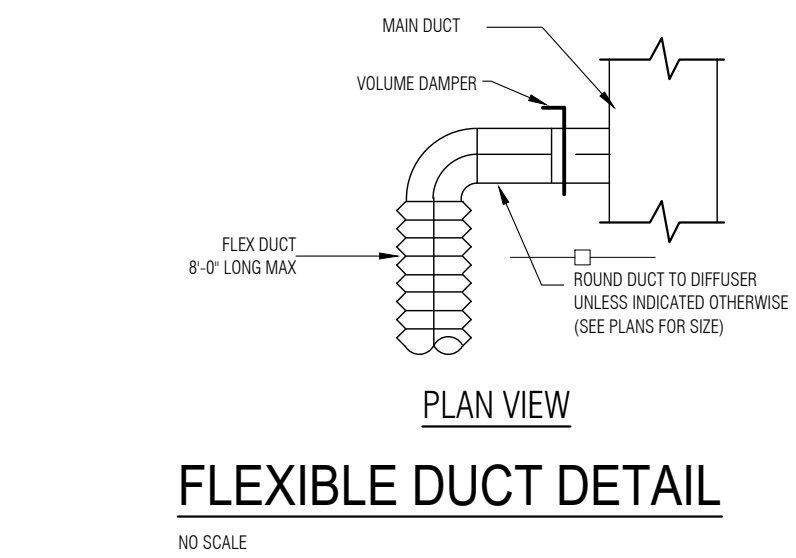
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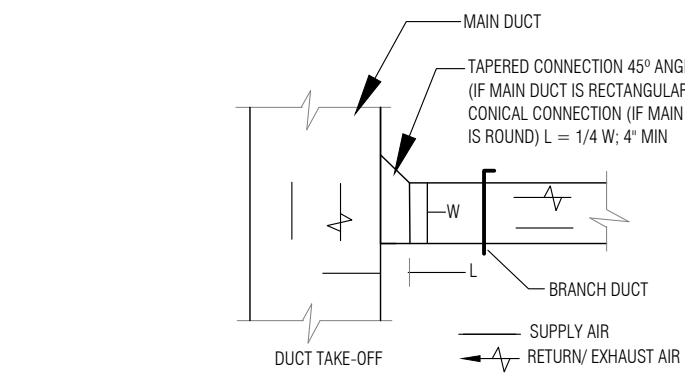
GENERAL SPECIFICATIONS	
1.	DRAWINGS AND SPECIFICATIONS FORM COMPLEMENTARY REQUIREMENTS. PROVIDE WORK SPECIFIED AND NOT SHOWN, AND WORK SHOWN BUT NOT SPECIFIED AS THOUGH EXPPLICITLY REQUIRED BY BOTH. ALTHOUGH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES, DEVICES AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
2.	THE DRAWINGS AND SPECIFICATIONS INDICATE A PERFORMANCE SPECIFICATION FOR BIDDING PURPOSES FOR FIRE PROTECTION AND FIRE ALARM SYSTEMS. AWARDING CONTRACTORS ARE RESPONSIBLE FOR DETAILED DESIGN AND PREPARATION OF SIGNED AND SEALED ENGINEERING DOCUMENTS FOR REVIEW/ APPROVAL FROM OWNERS INSURANCE CARRIER AND LOCAL AUTHORITY HAVING JURISDICTION.
3.	DRAWINGS ARE DIAGNOSTIC. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL COMPONENTS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM. DETERMINE LOCATIONS OF COMPONENTS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. COORDINATE WITH ARCHITECTURAL, DRAWINGS AND OTHER TRADES.
4.	ADDRESS QUESTIONS REGARDING DRAWINGS TO ARCHITECT IN WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECT'S INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
5.	THE INTENTION IS FOR INSTALLATION OF COMPLETE AND OPERATING SYSTEMS INSTALLED IN ACCORDANCE WITH THE ASSOCIATED MANUFACTURERS' INSTRUCTIONS. NOT EVERY COMPONENT REQUIRED IS SHOWN. THE CONTRACTOR SHALL INCLUDE ALL COMPONENTS NORMALLY ASSOCIATED WITH THE PARTICULAR SYSTEM AND AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE SYSTEM SHALL BE FULLY COMMISSIONED AND SIGNED OFF BY AN OFFICER OF THE RESPECTIVE CONTRACTOR. PRIOR TO FINAL OWNER ACCEPTANCE TESTING, PROVIDE PERSONNEL TO ASSIST IN 24 HOURS OF ACCEPTANCE TESTING.
6.	GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION AS REQUIRED TO PERFORM WORK IN ACCORDANCE WITH ALL LEGAL REQUIREMENTS AND WITH THE DESIGN DOCUMENTS.
7.	PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE ARCHITECT FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED. SCHEDULE AT LEAST TEN WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, FOR SUBMITTAL REVIEW SHALL BE ALLOWED.
8.	MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY ASME AND AGA FOR INTENDED SERVICE.
9.	THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, AND FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
10.	COORDINATE WORK OF THIS SECTION WITH THAT OF OTHER SECTIONS.
11.	ALL MATERIALS, EQUIPMENT AND METHOD OF INSTALLATION SHALL BE ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAW OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE JURISDICTION.
12.	IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE THEIR WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC, SPRINKLER, PLUMBING, STRUCTURAL, AND GENERAL ARCHITECTURE. OFFSETS IN PIPING AND OFFSETS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
13.	DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER. WHENEVER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE OR OTHER CAUSE, THE CONTRACTOR IS RESPONSIBLE. FOR AN COSTS INCURRED AS A RESULT OF THE CHANGES NEEDED TO ACCOMMODATE THE SUBSTITUTED EQUIPMENT INCLUDING THE WORK OF OTHER TRADES.
14.	EACH CONTRACTOR IS RESPONSIBLE FOR ITS CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF ITS NEW WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER. PATCHING MATERIALS SHALL MATCH EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH-UP TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.
15.	CONTRACTOR SHALL COORDINATE ITS RESPECTIVE CEILING MOUNTED EQUIPMENT WITH OTHER TRADE CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS.
16.	WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS, SO THAT COMPLETED INSTALLATION SHALL OPERATE SAFELY AND EFFICIENTLY.
17.	ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
18.	ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS NOTED OTHERWISE.
19.	MANUFACTURERS' MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
20.	SUBSTITUTED PRODUCTS SUBMITTED AND APPROVED FOR USE THAT NECESSITATE CHANGES TO THE SAID CONTRACTOR'S WORK OR THE WORK OF OTHER TRADES OF CONTRACT SHALL BE COORDINATED AND ARRANGED BY THE CONTRACTOR WHO SUBMITTED THE SUBSTITUTION WITHOUT ADDITIONAL COST TO THE OWNER.
21.	SHOP DRAWINGS MUST BE SUBMITTED, REVIEWED AND APPROVED PRIOR TO INSTALLATION OF EQUIPMENT/MATERIALS.
22.	PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
23.	EACH RESPECTIVE CONTRACTOR SHALL PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12" X 12" OR AS NEEDED FOR APPROPRIATE ACCESS. TO BE SUPPLIED TO GENERAL CONTRACTOR FOR INSTALLATION.
24.	ALL EQUIPMENT, PIPING, INSULATION, ETC., INSTALLED IN HVAC PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
25.	AS WORK PROGRESSES AND FOR DURATION OF CONTRACT, MAINTAIN COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE AT ALL TIMES. RECORD WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS CLEARLY AND ACCURATELY INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN TURN OVER ALL OPERATING MANUALS, MAINTENANCE MANUALS, AND "AS BUILT" DRAWINGS TO OWNER AT CONCLUSION OF CONSTRUCTION.
26.	DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. SUPPORT ALL EQUIPMENT AND PIPING FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ALL WEIGHTS AND METHODS OF SUPPORT.
27.	RUN PIPING/WIRING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING/WIRING.
28.	ANY REFERENCE TO ELECTRICAL AND HVAC CONTRACTORS, NOTED ON THESE DRAWINGS OR STATED IN THE SPECIFICATIONS SHALL NOT BE MISCONSTRUED AS AN INTENTION TO DEFINE SEPARATE CONTRACTORS FOR THE RESPECTIVE WORK. THE GENERAL CONTRACTOR SHALL COORDINATE AND PROVIDE A COMPLETE BUILDING WITH COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS, REGARDLESS OF ANY SPECIFICATION REFERENCES TO OTHER CONTRACTORS.
29.	GUARANTEE WORK OF THIS CONTRACTOR IN WRITING FOR ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. PROMPTLY REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATIONS THAT DEVELOP DEFECTS WITHIN THIS PERIOD. PROMPTLY AND TO OWNERS SATISFACTION, CORRECT DAMAGE CAUSED BY MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO ADDITIONAL COST TO OWNER. SUBMIT GUARANTEE TO ARCHITECT BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERRUPTED TO LIMIT OWNERS RIGHTS UNDER LAW AND THIS CONTRACT.

MECHANICAL EQUIPMENT NOTES	
1.	INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT. WHERE THERMOSTATS ARE LOCATED IN PUBLIC AREAS, PROVIDE PASSWORK PROTECTED MODELS OR LOCKING COVERS.
2.	TESTING AND BALANCING SHALL BE PROVIDED BY A COMPANY SPECIALIZING IN THE TESTING AND BALANCING OF HVAC SYSTEMS. THE TEST AND BALANCE COMPANY SHALL BE A MEMBER OF ASBO OR NEBB. BALANCE AIRFLOWS TO WITHIN 10% OF SCHEDULED AIR FLOWS AT ALL DIFFUSERS. IF AIR FLOW CANNOT BE BALANCED TO 10% TOLERANCE UP TO TWO PILOT TUBE TRAVERSERS, AS DIRECTED BY OWNERS REPRESENTATIVE TO DETERMINE THE CAUSE OF THE DEFICIENCY. SUBMIT SIX COPIES OF THE BALANCING REPORT FOR REVIEW PRIOR TO FINAL INSPECTIONS.
3.	CONTROL PNEUMATIC TUNING FOR HVAC EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL/CONTROLS CONTRACTOR. DESIGN CONDITIONS ARE AS FOLLOWS (PHILADELPHIA, PA): OUTDOOR SUMMER: 80.9 DEG DB, 74.0 DEG WB (ASHRAE 15%) INDOOR SUMMER: 74.0 DEG DB, 55% RH OUTDOOR WINTER: 17.8 DEG DB (ASHRAE 99.6%) INDOOR WINTER: 70 DEG DB

CODE SUMMARY	
MUNICIPALITY	BOROUGH OF MEDIA, MEDIA, PA
USE AND OCC. CLASSIFICATION	(B) BUSINESS
APPLICABLE CODES	BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE MECHANICAL CODE: 2018 INTERNATIONAL MECHANICAL CODE PLUMBING CODE: 2018 INTERNATIONAL PLUMBING CODE FUEL GAS CODE: 2018 INTERNATIONAL FUEL GAS CODE ELECTRICAL CODE: 2018 NATIONAL ELECTRICAL CODE (BY REFERENCE) FIRE CODE: 2018 INTERNATIONAL FIRE CODE ENERGY CODE: 2018 INTERNATIONAL ENERGY CONSERVATION CODE (ASHRAE 90.1-2016)

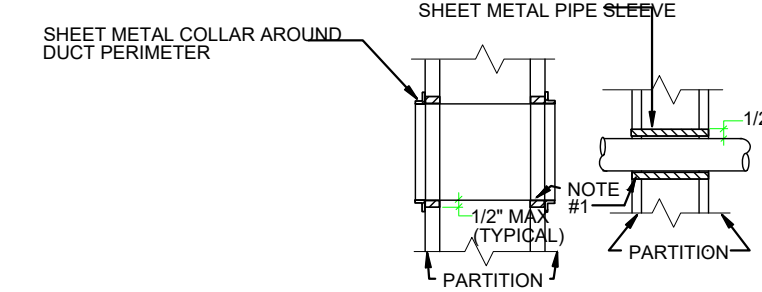


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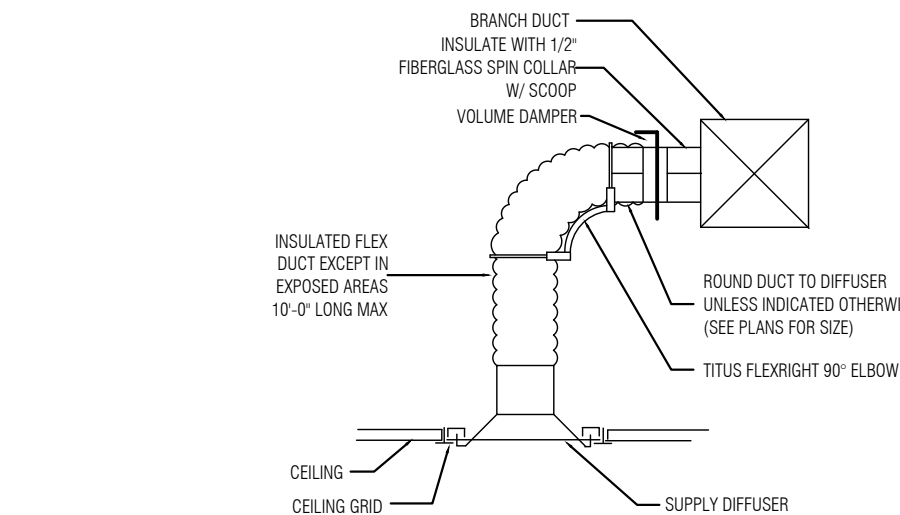
NO SCALE

BRANCH TAKE-OFFS



DUCT PENETRATION DETAIL

NO SCALE



TAKEOFF AND DIFFUSER DETAIL

NO SCALE

DUCTWORK SYMBOLOLOGY	
SINGLE LINE	ACTUAL CONSTRUCTION

PIPING SYMBOLS	
SYMBOL	DESCRIPTION
	SHUT-OFF VALVE
	BALL VALVE
	GLOBE VALVE
	CHECK VALVE
	FLOW SETTER
	ANGLE GATE VALVE
	RELIEF OR SAFETY VALVE
	SOLENOID VALVE
	THERMAL EXPANSION VALVE
	BACK PRESSURE VALVE
	BUTTERFLY VALVE
	BUTTERFLY CONTROL VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	UNION
	STRAINER W/ FLOW OFF & CAP
	FLOW SENSOR
	SIGHT GLASS
	PIPE GUIDE
	PIPE ANCHOR
	FLEXIBLE CONNECTOR
	EXPANSION JOINT
	THERMOMETER
	PRESSURE GAUGE W/OOCK
	MANUAL AIR VENT
	ORIFICE PLATE
	FLOAT AND THERMOSTATIC TRAP
	DIRECTION OF FLOW
	CONCENTRIC REDUCER
	PIPE UP
	PIPE DOWN
	PIPE THROUGH
	TOP TAKE-OFF
	BUCKET TRAP
	END OF MAIN DRIP
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW WORK
	A/C CONDENSATE DRAINAGE
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	DUAL TEMP SUPPLY
	DUAL TEMP RETURN
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	FUEL OIL VENT
	LOW PRESSURE STEAM
	LOW PRESSURE STEAM CONDENSATE
	PUMPED CONDENSATE RETURN
	HEAT PUMP SUPPLY
	HEAT PUMP RETURN
	HEATING HOT WATER SUPPLY
	HEATING HOT WATER RETURN
	REFRIGERANT LIQUID/SUCTION
	VENT LINE

GENERAL ABBREVIATIONS	
AC	AIR CONDITIONING
ACV	AUTOMATIC CONTROL VALVE
AD	ACCESS DOOR
ADDL	ADDITIONAL
AFB	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT
BHP	BRAKE HORSEPOWER
BMD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CL	CENTERLINE
CLG	CEILING
CO	CLEAN OUT
COL	COLUMN
CONN	CONNECTION
CONTR	CONTRACTOR
CW	COLD WATER
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DA	DAMETER OFF DUCT
DM	DIMENSION ON DOWN
DX	DUCT EXPANSION
DL	DOOR LOWER
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ENT	ENTERING WATER TEMPERATURE
ENR	ENR
(F)	FUTURE FA FREE AREA
FLOOR	FLOOR DRAIN
FFM	FEET PER MINUTE
FSD	COMBINATION FIRE/SMOKE DAMPER
FT	FEET
FURN	FURNISHED
GA	GAUGE
GAL	GALLONS
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GR	GRILLE
HB	HOSE BIBB CONN W/ CHAINED CAP
HD	HAND DAMPER
HGT	HEIGHT HP HORSEPOWER
HPS	HEAT PUMP LOOP SUPPLY
HPR	HEAT PUMP LOOP RETURN HP HOUR
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ IN INCHES KW KILOWATT
LAT	LEAVING AIR TEMPERATURE
LPR	LOW PRESSURE COND. RETURN
LPS	LOW PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE MAX MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MOD	MOTOR OPERATED DAMPER
MIN	MINIMUM
MTD	MOUNTED
MAV	MANUAL AIR VENT
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
PD	PRESSURE DROP
PLBG	PLUMBING
PSIA	POUNDS PER SQ INCH ABSOLUTE
PSIG	POUNDS PER SQ INCH GAUGE
(R)	RELICATED
REG	REGISTER RET RETURN
RETO	RETURN
RGD	RETURN GRILLE
RH	RELATIVE HUMIDITY
RL	RELOCATE
ROOM	ROOM
RPM	REVOLUTIONS PER MINUTE
SA	SOUND ATTENUATOR
SCH	SCHEDULE
SCR	SCREEN
SD	SMOKE DAMPER
SF	SQUARE FOOT SPECS SPECIFICATIONS
SR	SUPPLY REGISTER
STR	STEAM TRAP
STL	STEEL
STM	STEAM
SUP	SUPPLY
TEMP	TEMPERATURE
TR	TRANSFER
TYP	TYPICAL
UC	UNDERCUT DOOR
V	VENT
VO	VOLUME DAMPER
VTD	VARIABLE FREQUENCY DRIVE
W	WIDTH
W/	WITH
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
WWS	WELD-WIRE MESH SCREEN (1/4")
W/O	WITHOUT
Ø	DIAMETER

CALL OUT SYMBOLS	
	REVISION NUMBER INDICATES A REVISED FEATURE
	TEMPERATURE SENSOR OR THERMOSTAT
	AVERAGING TEMPERATURE SENSOR OR THERMOSTAT
	VARIABLE SPEED FAN SWITCH
	XXX- EQUIPMENT ABBREVIATION. SEE BELOW
AHU	BUILT-UP HYDRONIC OR LARGE SPLIT (-5 TONS)
AH	SPLIT SYSTEM AIR HANDLER
AC	MINISPLIT INDOOR UNIT
B	BOILER
BB	HYDRONIC BASEBOARD HEATER
C	CONDENSER
CH	CHILLER
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CDP	CONDENSATE PUMP
DOAS	DEDICATED OUTSIDE AIR UNIT
EF	EXHAUST FAN/ELECTRIC HEATER
ERU	ENERGY RECOVERY UNIT
FCU	FAN COIL UNIT
FB	FAN POWERED VAV BOX
GF	GAS-FIRED FURNACE
HP	HYBRID HEAT PUMP
HP	HEAT PUMP
HUM	HUMIDIFIER
HX	HEAT EXCHANGER
R	GAS-FIRED INFRARED/RADIANT HEATER
KEF	KITCHEN EXHAUST FAN
KAMU	KITCHEN MAKE-UP AIR UNIT
KCU	VAV MODE CONTROL BOX P
TAC	PACKAGED TERMINAL DX UNIT
P	PUMP
RTU	PACKAGED ROOFTOP UNIT
SF	SUPPLY FAN
UH	GAS-FIRED OR HYDRONIC FAN FORCED HEATER
VF	VARIABLE REFRIGERANT FLOW INDOOR UNIT
VFO	VARIABLE REFRIGERANT FLOW OUTDOOR UNIT
VTC	DUCTED PACKAGED TERMINAL DX COOLING UNIT
VTHP	DUCTED PACKAGED TERMINAL HEAT PUMP
VAV	VARIABLE AIR VOLUME BOX
WSP	WATER SOURCE HEAT PUMP
MDX	MOTOR OPERATED DAMPER/ZONE DAMPER
HD	HAND DAMPER
FSD	COMBINATION FIRE SMOKE DAMPER
FD	SELF-CLOSING FIRE DAMPER W/ ACCESS DOOR
SD	SMOKE DAMPER WITH ACCESS DOOR
OR	BLANKED FOR 3-WAY BLOW SUPPLY DIFFUSER
UC	UNDERCUT DOOR
LVS	LOUVERED DOOR
RD	RETURN OR EXHAUST AIR FLOW
EF	SUPPLY AIR FLOW
EXH	EXHAUST FAN
EX	NEW CONNECTION TO EXISTING
CDX	TERMINATION OF DEMOLITION
CO2	CARBON DIOXIDE SENSOR
CO2	CARBON MONOXIDE SENSOR
DP	DIFFERENTIAL PRESSURE SENSOR
SD	SMOKE DETECTOR ON AC UNITS
MS	MOTION SENSOR
BT	BUTTERFLY VALVE
BV	BALL VALVE
TM	THERMOMETER
PG	PRESSURE GAUGE
FM	FLOW METER

MECHANICAL DUCTWORK NOTES	
1.	ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION) STANDARDS.
2.	PRIOR TO COMMENCING THE WORK, SHEET METAL SHOP DRAWINGS MUST BE PREPARED AND SUBMITTED FOR REVIEW AND APPROVAL TO THE ARCHITECT/ENGINEER. SHEET METAL SHOP DRAWINGS SHALL INCLUDE ALL ELEMENTS OF THE EQUIPMENT, DUCTWORK, AIR DEVICES AND REFLECTED CEILING PLAN FOR COORDINATION OF CRITICAL DIMENSIONS OF ARCHITECTURAL/STRUCTURAL COMPONENTS.
3.	SHEET METAL FITTINGS SHOWN ARE TO BE PROVIDED. NO SUBSTITUTIONS ALLOWED WITHOUT PRIOR CONSENT FROM ENGINEER AND WILL BE REQUIRED TO BE REPLACED IF INSTALLED.
4.	RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE AND CLEAR OF CEILING INSERTS. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF BEAMS AND JOISTS.
5.	ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
6.	VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATING.
7.	SUPPORT ALL EQUIPMENT, PIPING AND DUCTWORK FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION. NOTIFY STRUCTURAL ENGINEER OF ALL WEIGHTS AND METHODS OF SUPPORT.
8.	REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR TERMINAL DEVICES. 10. INTERNAL AIR FLOW DIMENSIONS ARE SHOWN FOR DUCTS. CONTRACTOR SHALL INCREASE SIZE FOR UNIFORM APPLICABLE.
9.	PROVIDE FLEXIBLE CONNECTIONS ON ALL DUCTS CONNECTING TO VAVS AND FANS.
10.	THE INSIDE OF ALL UNLINED DUCTWORK VISIBLE THROUGH A GRILLE SHALL BE PAINTED FLAT BLACK.
11.	INSULATE SUPPLY AIR DUCTS AND PLenums WITH MINIMUM OF R-6 INSULATION.
12.	FLEXIBLE DUCT IS ALLOWABLE ON SUPPLY AIR SYSTEMS ABOVE ACCESSIBLE CEILINGS ONLY. MINIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 10 FEET. FLEXIBLE DUCT SHALL BE FABRIC COVERED GALVANIZED STEEL HELIX MECHANICALLY LOCKED TO THE FABRIC. THE FABRIC SHALL BE A LAMINATE OF ALUMINUM FOIL, FIBERGLASS R-6 INSULATION AND ALUMINIZED POLYESTER RATED AT 2500 RPM WITH FLEX MASTER USA TYPE 3 OR EQUAL. 1" EXTERNAL FIBERGLASS R-6 INSULATION AND VAPOR BARRIER JACKET. SUPPLY AIR SYSTEMS ABOVE NON-ACCESSIBLE CEILINGS AND ALL RETURN EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE HARD DUCTED.
13.	THOROUGHLY CLEAN ALL NEW DUCTWORK AFTER INSTALLATION.
14.	NO DUCTWORK SHALL BE LOCATED ABOVE ELECTRICAL PANELS/GEAR.
15.	VOLUME DAMPERS SHALL BE PROVIDED AT THE BRANCH TAKE-OFF OF THE MAIN.
16.	DUCTWORK SCHEDULE: LOW PRESSURE - ALL OTHER SUPPLY, RETURN EXHAUST AND OUTSIDE AIR DUCTWORK TO BE 2" CONSTRUCTION, 2" STATIC LEAKAGE CLASS B, SEA, CLASS 12. MATERIAL TO BE GALVANIZED STEEL UNLESS NOTED OTHER WISE.

DELAWARE COUNTY HR SUITE MEP - DRAWING INDEX		DRAWING TITLE	
DRAWING NO.			
M-1	MECHANICAL COVER SHEET	●	●
M-2	MECHANICAL PARTIAL FLOOR PLAN AND SCHEDULES	●	●
MD-2	MECHANICAL PARTIAL FLOOR DEMOLITION PLAN	●	●

ARCHITECTS

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063

ARCHITECTURE
ENGINEERING
SITE PLANNING
CODE SERVICES



5500 Pennell Road | Media, PA 19063

Project No. 23040

MECHANICAL COVER SHEET

HR SUITE RECONFIGURATION

DELAWARE COUNTY GOVERNMENT CENTER

201 W. FRONT STREET

MEDIA, PA 19063

REVISIONS

DESCRIPTION

ISSUE FOR BID

DATE :
01/02/24

SCALE :
AS NOTED

DRAWN BY:
JH

CHECKED BY:
GW

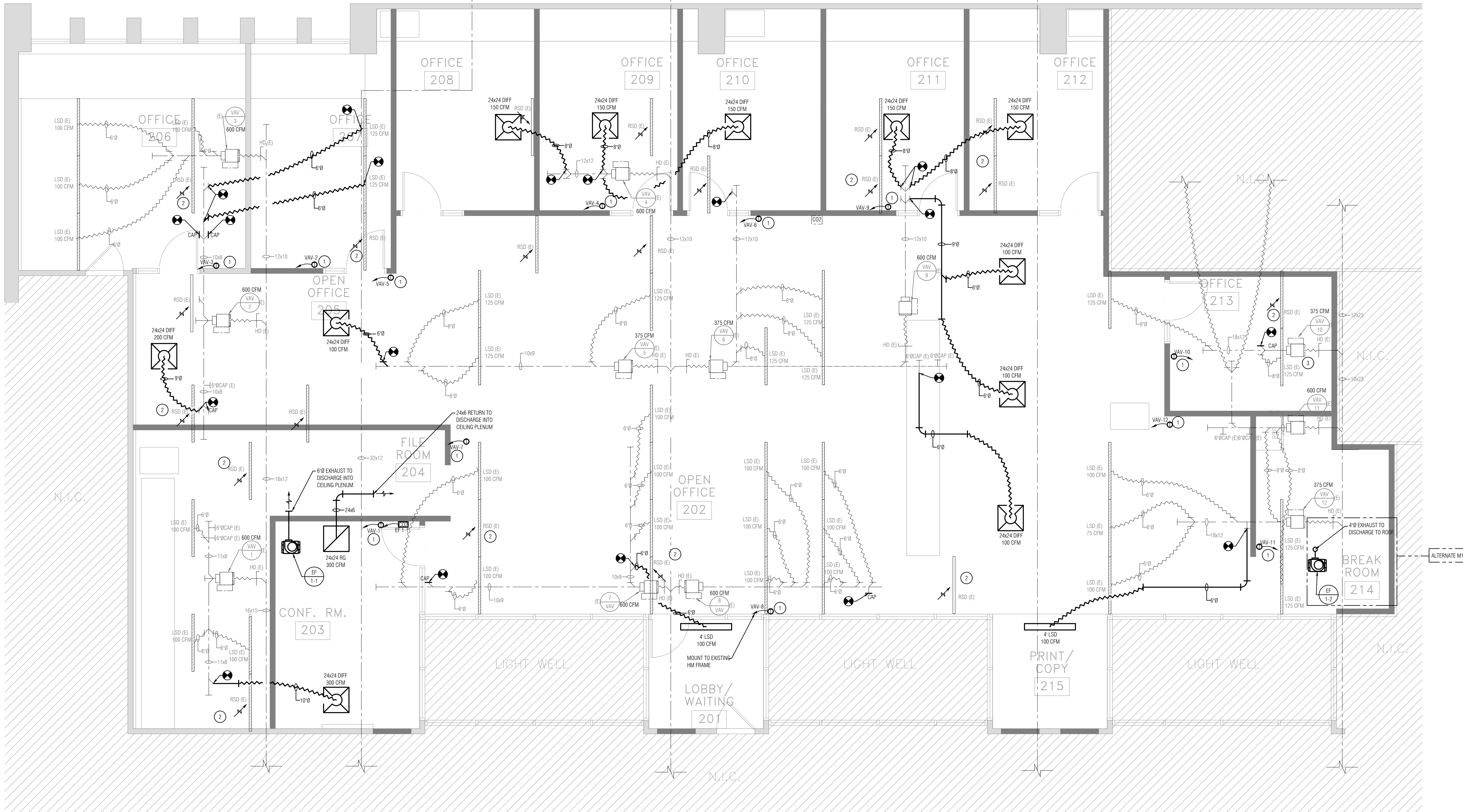
PROJ. NO. :
23040

SHEET NO.

OF

M-1

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1 MECHANICAL PARTIAL FLOOR PLAN
M-2 SCALE - 1/4" = 1'-0"

GENERAL MECHANICAL CONSTRUCTION NOTES

1. INTEGRAL OPPOSED BLADE DAMPERS SHALL BE PROVIDED AT ALL NEW AIR DEVICES. FINAL SUPPLY AIR DEVICE BALANCING SHALL BE PERFORMED VIA INTEGRAL AIR DEVICE DAMPER.
2. ALL DUCT PENETRATIONS THRU RATED ASSEMBLIES SHALL BE PROVIDED WITH RADIANT DAMPERS.
3. ALL NEW FLEX DUCT WORK LENGTHS SHALL BE LIMITED TO 10'
4. REFER TO M-1 FOR ADDITIONAL REQUIREMENTS FOR DUCTWORK, EQUIPMENT, PIPING, AND GENERAL SYSTEMS.
5. ALL RETURN/EXHAUST REGISTERS SHALL HAVE 45° FIXED BLADES.
6. ALL SUPPLY MAINS AND BRANCH DUCTWORK SHALL BE EXTERNALLY WRAPPED. FLEX DUCT TO HAVE 1" EXTERNAL INSULATION WITH VAPOR JACKET.
7. ALL DUCT SIZES ARE INSIDE DUCT DIMENSIONS.
8. COORDINATE THERMOSTAT LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.

HVAC NEW WORK NOTES

1. AT INCEPTION OF WORK, CONTRACTOR TO HAVE AIR READINGS TAKEN, DOCUMENTED AND SUBMITTED TO DESIGN ENGINEER TO CONFIRM FUNCTIONALITY AND PERFORMANCES OF EXISTING AIR DEVICES.
2. ALL VAV BOXES HAVE PNEUMATIC THERMOSTATS THAT ARE TO BE REPLACED WITH NEW. THE THERMOSTATS SHALL INTEGRATE INTO THE EXISTING PNEUMATIC CONTROL SYSTEM. COORDINATE MANUFACTURER, MODEL NO. WITH THE FACILITY CONTROL MAINTENANCE CONTRACTOR TO ASSURE COMPATIBILITY. THE ROOM SENSOR IS TO BE A BLANK WHITE ENCLOSURE WITH REMOTE SETPOINTS CAPABILITY INTEGRATED INTO THE BUILDING PNEUMATIC CONTROL INFRASTRUCTURE.
3. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO PRESERVE, OR IN THE EVENT OF ACCIDENTAL DEMOLITION, REPLACE, AIR SYSTEM MATERIALS WHERE EXISTING DUCTWORK IS SHOWN AS REUSED OR RELOCATED.
4. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND FUNCTIONAL CHECK OF THE CENTRAL SYSTEM OF THE BUILDING. THE RETROFITTING OF THE EXISTING VAVS WITHIN THE SPACE WITH NEW PNEUMATIC THERMOSTATS TO SERVE THE PROPOSED REMODELED SPACE.
5. ALL WIRING AND PNEUMATIC TUBING INSTALLED IN THE CEILING RETURN AIR PLENUM SHALL BE PLENUM RATED.

MECHANICAL NEW WORK NOTES BY SYMBOL

- 1 EXISTING VAVS TO BE EQUIPPED WITH NEW PNEUMATIC THERMOSTATS. TAG AND LABEL VAVS WITH CORRESPONDING THERMOSTATS. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
- 2 UNUSED AIR DEVICES TO BE DISCONNECTED AT BRANCH TAKE OFF AND REMAIN IN PLACE. CAP AND SEAL EXISTING UNUSED BRANCH TAKE OFFS AIRTIGHT.

FAN SCHEDULE

UNIT NO.	DUTY	TYPE	CFM	ESP	HP	RPM	FLA	ELECTRICAL CHARACTERISTICS	WEIGHT	CONTROL	STANDARD OF DESIGN		REMARKS
											MFGR	MODEL	
EF 1-1	203 CONF RM	CEILING	50	0.31	0.01	900	0.16	115/1/60	9	CO2 SENSOR	GREENHECK	SP-B80	1
EF 1-2 (ALTERNATE M1)	214 BREAK RM	CEILING	50	0.31	0.01	900	0.16	115/1/60	9	CONTINUOUS	GREENHECK	SP-B80	1

1 PROVIDE VIBRATION ISOLATION HANGERS, DISCONNECT SWITCH, INTEGRAL GRAVITY BACKDRAFT DAMPER, SPEED CONTROLLER.

ARCHITECTS

LINN

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258

ARCHITECTURE
ENGINEERING
SITE PLANNING
CODE SERVICES



5501 Pennell Road | Media, PA 19063

Project No. 23040

MECHANICAL PARTIAL FLOOR PLAN

HR SUITE RECONFIGURATION

DELAWARE COUNTY GOVERNMENT CENTER

201 W. FRONT STREET

MEDIA, PA 19063

REVISIONS

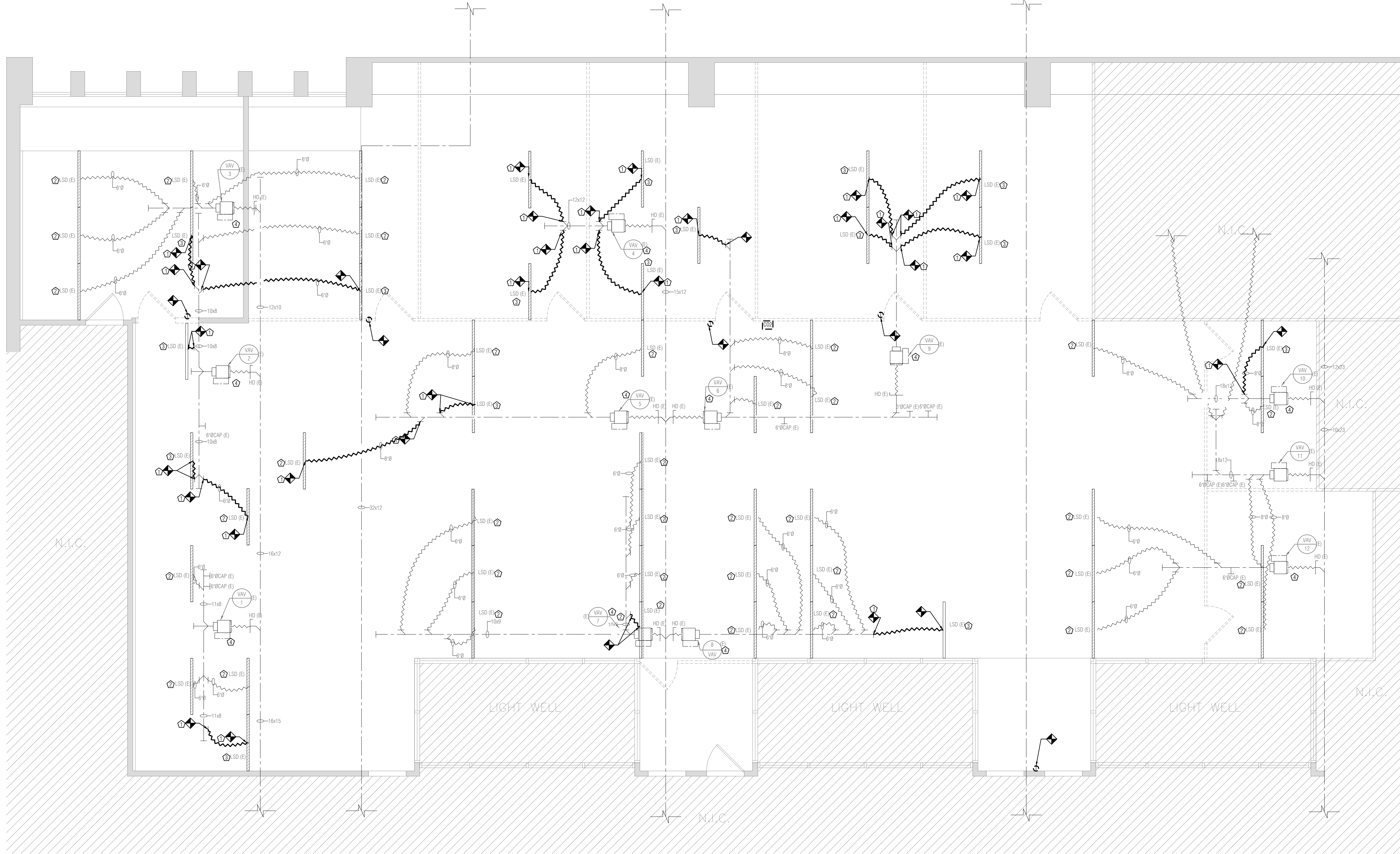
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SHEET NO.

M-2

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SHEET 2 OF 3



1 MECHANICAL PARTIAL FLOOR PLAN - DEMO
MD-2 SCALE - 1/4" = 1'-0"

- HVAC DEMOLITION NOTES**
1. PROJECT CONDITIONS
1.1. THE CONTRACTOR SHALL COMPLETELY FAMILIARIZE HIMSELF WITH ALL EXISTING BUILDING AND SITE CONDITIONS AND LIMITATIONS WHICH MAY HAVE A BEARING ON THE OPERATIONS HEREIN SPECIFIED, AND SHALL INCLUDE ALL WORK REQUIRED TO COMPLETE THE PROJECT AS SHOWN ON THE DRAWINGS. NO EXTRA COMPENSATION WILL BE ALLOWED FOR UNFORESEEN CONDITIONS THAT CAN BE DETERMINED FROM A CAREFUL EXAMINATION OF THE SITE, BUILDING AND DRAWINGS.
1.2. ITEMS OF VALUE WHICH ARE NOT INDICATED TO BE RETURNED TO THE OWNER, SHALL BECOME THE PROPERTY OF THE CONTRACTOR. STORAGE OR SALE OF ITEMS ON THE PROJECT SITE IS PROHIBITED.
1.3. PROTECTION: ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST.
1.4. UTILITIES: MAINTAIN ALL UTILITIES EXCEPT THOSE REQUIRING REMOVAL OR RELOCATION. KEEP UTILITIES IN SERVICE AND PROTECT FROM DAMAGE. DO NOT INTERRUPT UTILITIES SERVING USED AREAS WITHOUT FIRST OBTAINING PERMISSION FROM OWNER.
 2. REGULATION REQUIREMENTS
2.1. STRICTLY COMPLY WITH APPLICABLE CODES, REGULATIONS AND REQUIREMENTS OR AUTHORITY HAVING JURISDICTION.
 3. HANDLING OF MATERIALS
3.1. REMOVE DEBRIS FROM THE SITE AS IT ACCUMULATES. DO NOT STORE, SELL, BURN, OR OTHERWISE DISPOSE OF DEBRIS ON SITE. REMOVE ALL MATERIAL IN SUCH MANNER AS TO PREVENT SPILLAGE.
4. TRANSFER OF RESPONSIBILITY AND DISPOSITION OF MATERIALS
4.1. UPON RECEIPT OF NOTICE TO PROCEED WITH THE WORK, THE TITLE TO ALL MATERIALS FOR DEMOLITION SHALL BE VESTED. THE CONTRACTOR WHEREUPON THE OWNER WILL NOT BE RESPONSIBLE FOR THE CONDITION, LOSS, OR DAMAGE TO SAID PROPERTY. ALL SUCH ITEMS SHALL BE REMOVED FROM THE OWNERS PROPERTY.
 5. DISPOSAL OF DEMOLISHED MATERIALS
5.1. REMOVE UNUSED FIXTURES AND ALL PIPING / DUCTWORK SERVING EQUIPMENT INCLUDING ABANDONED PIPING / DUCTWORK NOT ASSOCIATED WITH SAID EQUIPMENT. REMOVE PIPING / DUCTWORK BACK TO THE NEXT LIVE BRANCH WHICH WILL NOT OBSTRUCT THE NEW WORK AND CAP AIRTIGHT. TRANSPORT AND LEGALLY DISPOSE OF MATERIALS OFF SITE.
5.2. ANY DEMOLITION SHALL BE COORDINATED WITH OWNER, ENGINEER, AND GENERAL CONTRACTOR. ALL DEBRIS SHALL BE CLEANED UP AND REMOVED FROM THE SITE BY THE END OF EVERY WORK DAY. PRIOR TO DISPOSAL OF EQUIPMENT AND MATERIALS, TURN OVER TO OWNER ANY REMOVED EQUIPMENT AND MATERIALS PER OWNERS REQUEST.
 6. CLEAN UP AND REPAIR
6.1. UPON COMPLETION OF DEMOLITION WORK, REMOVAL TOOLS, EQUIPMENT AND DEMOLISHED MATERIALS FROM SITE. REMOVE PROTECTION AND LEAVE INTERIOR AREAS BROOM CLEAN.
6.2. REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED, RETURN STRUCTURES AND SURFACES TO REMAIN IN CONDITION EXISTING PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION WORK. REPAIR ADJACENT CONSTRUCTION OR SURFACES SOILED OR DAMAGED BY SELECTIVE DEMOLITION WORK.

- MECHANICAL DEMOLITION NOTES BY SYMBOL**
- ① EXISTING DUCTWORK TO BE DISCONNECTED AT POINT OF DEMOLITION TO THE NEXT POINT OF DEMOLITION. NEW AIR DEVICES TO BE CONNECTED AND INSTALLED ALONG WITH REPLACEMENT FLEX DUCT.
 - ② EXISTING AIR DEVICES TO REMAIN AND BE REUSED WITH EXISTING DUCTWORK.
 - ③ EXISTING UNUSED AIR DEVICE TO BE DISCONNECTED AT POINT OF DEMOLITION AND ABANDONED IN PLACE WITHIN EXISTING CEILING GRID. CAP AND SEAL CONNECTION AT MAIN TRUNK. ALL EXISTING AIR DEVICES TO REMAIN WITHIN CEILING GRID.
 - ④ EXISTING EQUIPMENT TO REMAIN.

LINN	ARCHITECTS	140 N. PROVIDENCE ROAD MEDIA, PENNSYLVANIA 19063 TEL: 610-566-7044 FAX: 610-566-3258
	ARCHITECTURE ENGINEERING SITE PLANNING CODE SERVICES	



MECHANICAL PARTIAL FLOOR PLAN - DEMO	
HR SUITE RECONFIGURATION	
DELAWARE COUNTY GOVERNMENT CENTER	
201 W. FRONT STREET MEDIA, PA 19063	

DATE:	01/02/24	REVISIONS	DESCRIPTION	DATE
SCALE:	AS NOTED	ISSUE FOR BID	01/02/24	
DRAWN BY:	JH			
CHECKED BY:	GW			
PROJ. NO.:	23040			

SHEET NO. **MD-2** OF 3

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- GENERAL SPECIFICATIONS**
- DRAWINGS AND SPECIFICATIONS FORM COMPLEMENTARY REQUIREMENTS. PROVIDE WORK SPECIFIED AND NOT SHOWN, AND WORK SHOWN BUT NOT SPECIFIED AS THOUGH EXPLICITLY REQUIRED BY BOTH. ALTHOUGH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES, DEVICES AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
 - THE DRAWINGS AND SPECIFICATIONS INDICATE A PERFORMANCE SPECIFICATION FOR BIDDING PURPOSES FOR FIRE PROTECTION AND FIRE ALARM SYSTEMS. AWARDED CONTRACTORS ARE RESPONSIBLE FOR DETAILED DESIGN AND PREPARATION OF SIGNED AND SEALED ENGINEERING DOCUMENTS FOR REVIEW/APPROVAL FROM OWNERS INSURANCE CARRIER AND LOCAL AUTHORITY HAVING JURISDICTION.
 - DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL COMPONENTS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM. DETERMINE LOCATIONS OF COMPONENTS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. COORDINATE WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES.
 - ADDRESS QUESTIONS REGARDING DRAWINGS TO ARCHITECT IN WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECTS INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
 - THE INTENTION IS FOR INSTALLATION OF COMPLETE AND OPERATING SYSTEMS INSTALLED IN ACCORDANCE WITH THE ASSOCIATED MANUFACTURERS INSTRUCTIONS. NOT EVERY COMPONENT REQUIRED IS SHOWN. THE CONTRACTOR SHALL INCLUDE ALL COMPONENTS NORMALLY ASSOCIATED WITH THE PARTICULAR SYSTEM AND/OR REQUIRED BY THE MANUFACTURERS INSTALLATION INSTRUCTIONS. THE SYSTEM SHALL BE FULLY COMMISSIONED AND SIGNED OFF BY AN OFFICER OF THE RESPECTIVE CONTRACTOR.
 - GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION AS REQUIRED TO PERFORM WORK IN ACCORDANCE WITH ALL LEGAL REQUIREMENTS AND WITH THE DESIGN DOCUMENTS.
 - PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE ARCHITECT FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED. SCHEDULE AT LEAST TEN WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, FOR SUBMITTAL REVIEW SHALL BE ALLOWED.
 - MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY ASME AND ADA FOR INTENDED SERVICE.
 - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, AND FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
 - COORDINATE WORK OF THIS SECTION WITH THAT OF OTHER SECTIONS.
 - ALL MATERIALS, EQUIPMENT AND METHOD OF INSTALLATION SHALL BE ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAW OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
 - IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC, SPRINKLER, AND GENERAL ARCHITECTURE. OFFSETS IN PIPING AND OFFSETS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
 - DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER. WHENEVER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE OR OTHER CAUSE, THE CONTRACTOR IS RESPONSIBLE FOR ANY COSTS INCURRED FOR ANY CHANGES NEEDED TO ACCOMMODATE THE SUBSTITUTED EQUIPMENT INCLUDING THE WORK OF OTHER TRADES.
 - EACH CONTRACTOR IS RESPONSIBLE FOR ITS CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF ITS NEW WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER. PATCHING MATERIALS SHALL MATCH EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH UP TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.
 - CONTRACTOR SHALL COORDINATE ITS RESPECTIVE CEILING MOUNTED EQUIPMENT WITH OTHER TRADE CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS.
 - WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES, DUCTS, AND CONDUIT EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS, SO THAT COMPLETED INSTALLATION SHALL OPERATE SAFELY AND EFFICIENTLY.
 - EACH RESPECTIVE CONTRACTOR SHALL FIRE STOP ALL NEW GLEEVES THROUGH CONCRETE FLOORS AND FIRE RATED WALLS OR PARTITIONS WITH UL RATED ASSEMBLIES WITH EQUAL FIRE RATING. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
 - ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
 - ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS NOTED OTHERWISE.
 - MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
 - SUBSTITUTED PRODUCTS SUBMITTED AND APPROVED FOR USE THAT NECESSITATE CHANGES TO THE SAID CONTRACTORS WORK OR THE WORK OF OTHER TRADES OF CONTRACT SHALL BE COORDINATED AND ARRANGED BY THE CONTRACTOR WHO SUBMITTED THE SUBSTITUTION WITHOUT ADDITIONAL COST TO THE OWNER.
 - SHOP DRAWINGS MUST BE SUBMITTED, REVIEWED AND APPROVED PRIOR TO INSTALLATION OF EQUIPMENT/MATERIALS.
 - PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
 - EACH RESPECTIVE CONTRACTOR SHALL PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12" X 12" OR AS NEEDED FOR APPROPRIATE ACCESS. TO BE SUPPLIED BY GENERAL CONTRACTOR FOR INSTALLATION.
 - CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS APPLICABLE EQUIPMENT WITH THE ELECTRICAL CONTRACTOR.
 - ALL EQUIPMENT, PIPING, INSULATION, ETC., INSTALLED IN HVAC PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
 - AS WORK PROGRESSES AND FOR DURATION OF CONTRACT, MAINTAIN COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE AT ALL TIMES. RECORD WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS CLEARLY AND ACCURATELY INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN TURN OVER ALL OPERATING MANUALS, MAINTENANCE MANUALS, AND AS-BUILT DRAWINGS TO OWNER AT CONCLUSION OF CONSTRUCTION.
 - DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. SUPPORT ALL EQUIPMENT AND PIPING FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ALL WEIGHTS AND METHODS OF SUPPORT.
 - RUN PIPING/WIRING CONCEALED UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING/WIRING.
 - ANY REFERENCE TO ELECTRICAL, PLUMBING AND HVAC CONTRACTORS, NOTED ON THESE DRAWINGS OR STATED IN THE SPECIFICATIONS SHALL NOT BE MISCONSTRUED AS AN INTENTION TO DEFINE SEPARATE CONTRACTORS FOR THE RESPECTIVE WORK. THE GENERAL CONTRACTOR SHALL COORDINATE AND PROVIDE A COMPLETE BUILDING WITH COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS, REGARDLESS OF ANY SPECIFICATION REFERENCES TO OTHER CONTRACTORS.
 - GARANTEE WORK OF THIS CONTRACTOR IN WRITING FOR ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE OR CERTIFICATE OF SUBSTANTIAL COMPLETION, PROMPTLY REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP, AND INSTALLATIONS THAT DEVELOP DEFECTS WITHIN THIS PERIOD. PROMPTLY, AND TO OWNERS SATISFACTION, CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPAIRMENTS UNDER GUARANTEE AT NO ADDITIONAL COST TO OWNER. SUBMIT GUARANTEE TO ARCHITECT BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERRUPTED TO LIMIT OWNERS RIGHTS UNDER LAW AND THIS CONTRACT.

FIRE ALARM SYSTEM GENERAL NOTES:

PROVIDE MODIFICATIONS TO THE EXISTING FIRE ALARM SYSTEM TO ACCOMPLISH THE FOLLOWING PARAMETERS AND MAINTAIN FULL SYSTEM FUNCTIONALITY.

- ALL NEW FIRE ALARM EQUIPMENT SHALL BE OFF SAME MANUFACTURER AND COMPATIBLE WITH EXISTING INSTALLED FIRE ALARM SYSTEM. THE FIRE ALARM CONTRACTOR SHALL BE AN APPROVED REPRESENTATIVE OF THE EXISTING FIRE ALARM MANUFACTURER.
- PRIOR TO ANY MODIFICATION TO THE BUILDING FIRE ALARM SYSTEM, THE FIRE ALARM CONTRACTOR SHALL PERFORM A FULL COMPREHENSIVE SYSTEM TEST DEMONSTRATING COMPLETE SATISFACTORY OPERATION. ANY MALFUNCTIONS, FAILURES, AND UNSATISFACTORY RESULTS SHALL BE FORMALLY REPORT TO THE OWNER AND ENGINEER. ANY REQUIRED WORK TO BRING THE REMEDIATE THE SYSTEM TO PROPER OPERATION SHALL BE INDICATED AND APPROVED BY THE OWNER AND THE ENGINEER BEFORE DESIGN MODIFICATIONS ARE EXECUTED.
- SCOPE OF SYSTEM MODIFICATION
 - REMOVAL OF COMPONENTS RELATED TO DEMOLITION.
 - THE FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMPONENTS SHOWN HEREIN AS WELL AS ALL MISCELLANEOUS ADJUSTMENTS REQUIRED TO FULLY MODIFY THE EXISTING FIRE ALARM SYSTEM, EVEN IF NOT INDICATED BY NOTES, SPECIFICATIONS, OR BRANING.
- ALL COMPONENTS OF THE SYSTEM SHALL BE UL LISTED FOR FIRE ALARM USE.
- ALL WIRING TO BE IN CONDUIT, WIREMOLD, OR PLENUM RATED CABLE WHERE ALLOWED BY AHJ.
- THE CONTRACTOR IS RESPONSIBLE FOR DETAILED DESIGN AND MODIFICATION OF EXISTING AS-BUILT ENGINEERING DOCUMENTS FOR REVIEW/APPROVAL FROM OWNERS INSURANCE CARRIER AND LOCAL AUTHORITY HAVING JURISDICTION.
- ALL MODULES, RELAYS, INTERFACING WIRING, SIGNALS, SIGNAL LIGHTS AND PROGRAMMING SHALL BE INCLUDED IN THE FIRE ALARM CONTRACTORS SCOPE OF WORK.
- SYSTEM SHALL MAINTAIN COMPLIANCE WITH NFPA 72, ICC CODES, NATIONAL ELECTRIC CODE, NFPA 101, 90A, ADA, AND THE AUTHORITY HAVING JURISDICTION (AHJ).

ABBREVIATIONS		
A	AMPS	LTG. LIGHTING
A.F.F.	ABOVE FINISHED FLOOR	L.V. LOW VOLTAGE
A.H.U.	AIR HANDLER UNIT	M.C. MECHANICAL CONTRACTOR
CLG.	CEILING	MCB MAIN CIRCUIT BREAKER
E.C.	ELECTRICAL CONTRACTOR	MECH. MECHANICAL
E.F.	EXHAUST FAN	MLO MAIN LOSS ONLY
EM	INDICATES LIGHT FIXTURE OR DEVICE WHEID TO EMERGENCY CIRCUIT	MOD MOTOR OPERATED DOOR
		N.L. NIGHT LIGHTING
FACP	FIRE ALARM CONTROL PANEL	TYP. TYPICAL
FSD	FIRE SMOKE DAMPER	U.O.N. UNLESS OTHERWISE NOTED
G.F.I.	GROUND FAULT INTERRUPT	WP WEATHERPROOF
GND.	GROUND	XMR. TRANSFORMER
HP	HORSE POWER	(E) EXISTING TO REMAIN
KVA	KILOVOLT-AMPERE	(R) REMOVE EXISTING
KW	KILOWATT	(RL) RELOCATED EXISTING

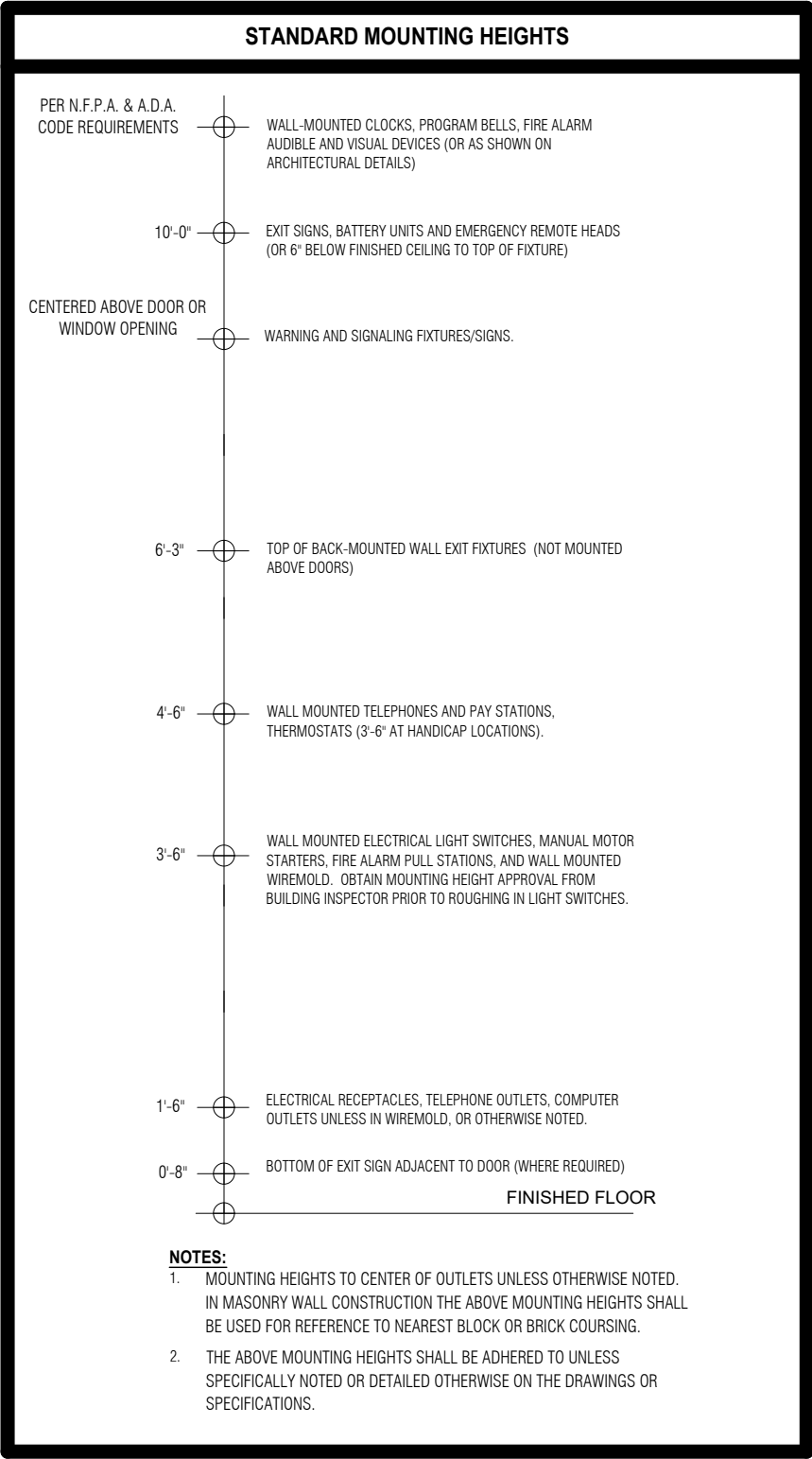
TYPICAL FIRE ALARM EQUIPMENT MOUNTING NOTES:

- THESE MOUNTING DIMENSIONS COMPLY WITH THE FOLLOWING:
- NFPA 72 CHAPTER 5 & 7
 - CARBONAS A11.7.1
 - IBC CHAPTER 9
 - ADA PARAGRAPH 4.2.5 & 4.2.6
 - THE ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS & FACILITIES (ADAAG)

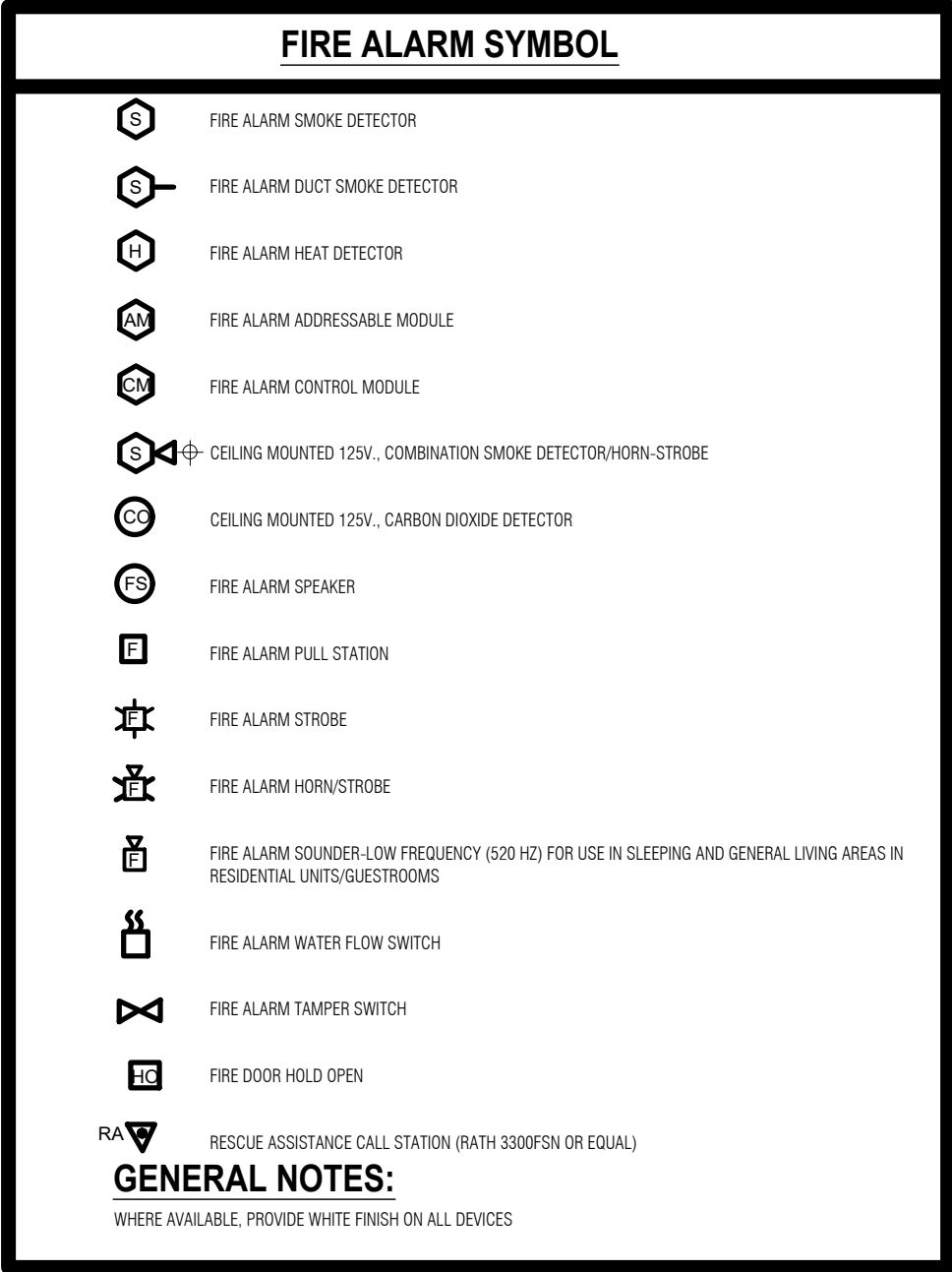
FOR LOW CEILINGS WHERE THE PRESCRIBED MOUNTING HEIGHTS FOR THE SIGNALING APPLIANCES CAN NOT BE MET, INSTALL THE APPLIANCE 8" FROM THE CEILING.

ALL DEVICE & APPLIANCE HEIGHTS SHOULD BE CONSISTENT FOR THE ENTIRE PROJECT.

FOR COMBINATION AUDIO/ VISUAL APPLIANCES, THE STROBE PLACEMENT TAKES PRECEDENCE



CODE SUMMARY	
MUNICIPALITY	BOROUGH OF MEDIA, MEDIA PA
USE AND OCC. CLASSIFICATION	R-2 (RESIDENTIAL)
APPLICABLE CODES	BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE MECHANICAL CODE: 2018 INTERNATIONAL MECHANICAL CODE PLUMBING CODE: 2018 INTERNATIONAL PLUMBING CODE FUEL GAS CODE: 2018 INTERNATIONAL FUEL GAS CODE ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (BY REFERENCE) FIRE CODE: 2018 INTERNATIONAL FIRE CODE ENERGY CODE: 2018 INTERNATIONAL ENERGY CONSERVATION CODE (AS/ASHRAE 90.1-2016)



DELAWARE COUNTY HR SUITE MEP - DRAWING INDEX		
DRAWING NO.	DRAWING TITLE	
E-1	ELECTRICAL COVER SHEET	
E-1.1	ELECTRICAL DETAILS/SCHEDULES	
E-2	ELECTRICAL PARTIAL FLOOR PLAN - POWER	
E-3	ELECTRICAL PARTIAL FLOOR PLAN - LIGHTING	
E-4	ELECTRICAL SHEET SPECIFICATIONS	

BRANCH & FEEDER CIRCUIT SCHEDULE					
COPPER (CU)			ALUMINUM (AL)		
WIRE ID	# OF WIRES	GROUND CONDUIT	# OF WIRES	GROUND CONDUIT	
20W2	2# 12	1# 12 G 3/4"	2# 10	1# 12 G 3/4"	
30W2	2# 10	1# 10 G 3/4"	2# 8	1# 8 G 3/4"	
20W3	3# 12	1# 12 G 3/4"	3# 10	1# 10 G 3/4"	
100W3	3# 2	1# 8 G 1"	3# 1	1# 6 G 1 1/4"	
120W3	3# 1	1# 6 G 1 1/4"	3# 2/0	1# 6 G 1 1/2"	

TYPE	DESCRIPTION	MANUFACTURER & MODEL NUMBER	SPECIFIED BY	VOLTAGE	QUANTITY	LAMP				MOUNTING	CLG TYPE (GYPI/ACT)	REMARKS
						TYPE	WATTAGE	DIMMABLE	COLOR TEMP	LUMEN		
L1	LED 4IN DIA RECESSED DOWNLIGHT, 78 DEG EXTRA WIDE BEAM	PRESCOLITE LTR-4RD-H-SL10L-DM1/LTR-4RD-T-SL35K8XWS	ARCH	UNV 120-277	1	LED	12	0-10V	3500K	1062	RECESSE D	SELECT INTEGRATED BATTERY BACK UP FOR FIXTURES DESIGNATED 'EM' ON FLOOR PLAN.
L2	LED 4IN DIA RECESSED OPEN WALLWASHER	PRESCOLITE LTR-4RD-H-SL10L-DM1/LTR-4RW-T-SL35K8WWS	ARCH	UNV 120-277	1	LED	12	0-10V	3500K	991	RECESSE D	
L3	LED RECESSED 2X2 WITH CENTER LENS	COLUMBIA LIGHTING LCAT22-35MLG-EDU	ARCH	UNV 120-277	1	LED	26	0-10V	3500K	3493	RECESSE D	SELECT INTEGRATED BATTERY BACK UP FOR FIXTURES DESIGNATED 'EM' ON FLOOR PLAN.
L4	LED 3IN X 8FT DIRECT-INDIRECT PENDANT, BATWING UPLIGHT, LOW OUTPUT 505LM/FT UP, 472 LM/FT DN	CORONET INC CRD3-UPDN-8FT-35-LOW-LOW-UNV-DB-XXX-AC-AV-BW-SD-EMPCK	ARCH	UNV 120-277	1	LED	40	0-10V	3500K	4040	PENDANT	ARCH TO SELECT FINISH.
L5	LED RECESSED 2X2 WITH CENTER LENS	COLUMBIA LIGHTING LCAT22-35HLG-EDU	ARCH	UNV 120-277	1	LED	35	0-10V	3500K	4739	RECESSE D	
X	EDGE LIT EXIT SIGN	LITHONIA EDGR-XX-2-RMR-EL	AEI	277	1	LED	4.1	NA	NA	NA	RECESSE D	CONFIRM CEILING MOUNT CAPABILITY PRIOR TO PURCHASE.
X2	EXIT SIGN WITH EMERGENCY LIGHTS	LITHONIA LHQM-LED-R-HO	AEI	120-277	1	LED	1.5	NA	NA	NA	CEILING	CONFIRM CEILING MOUNT CAPABILITY PRIOR TO PURCHASE.
EM1	EMERGENCY LIGHT WITH BATTERY BACK UP	TOPAZ EL2/LED/WH	OWNER	120-277	1	LED	2	NA	NA	NA	SURFACE	CONFIRM CEILING MOUNT CAPABILITY PRIOR TO PURCHASE.

LIGHTING FIXTURE SCHEDULE NOTES

- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN(S) FOR THE CEILING TYPE AND EXACT LOCATION OF ALL LIGHT FIXTURES.
- PROVIDE PLASTER/GWB CEILING FRAMING KITS WHERE APPLICABLE.
- ALL LAMPS SHALL HAVE A COLOR RENDERING OF 3000 DEGREES KELVIN, UNLESS OTHERWISE NOTED.
- PROVIDE ALL ACCESSORIES NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM
- ALL FIXTURES RECESSED WITHIN A FIRE RATED CEILING SHALL BE INSTALLED IN A FIRE RATED ENCLOSURE TO MAINTAIN THE CEILING FIRE RATING. THIS CAN BE DONE BY EITHER A FIRE RATED FIXTURE, A TENMAT ENCLOSURE, OR A
- EC IS RESPONSIBLE FOR PROVIDING ALL POWER SUPPLIES, CONTROLS, HARDWARE, ETC. NEEDED FOR A COMPLETE INSTALLATION

ARCHITECTS

ARCHITECTURE

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063

TEL: 610-566-7044
FAX: 610-566-3258

ENGINEERING

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Project No. 23040

ELECTRICAL COVER SHEET

HR SUITE RECONFIGURATION

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REVISIONS

DATE

DESCRIPTION

ISSUE FOR BID

DATE :

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SCALE :

AS NOTED

DRAWN BY:

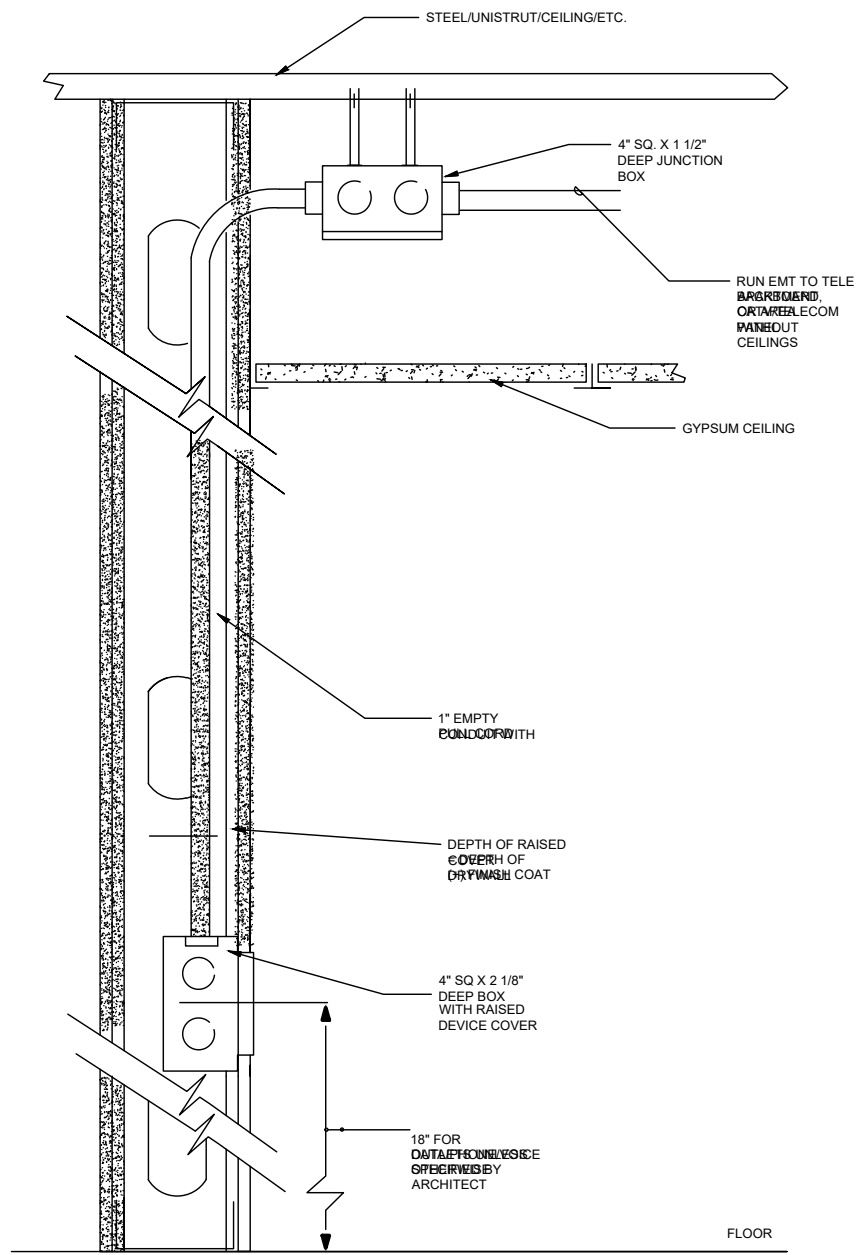
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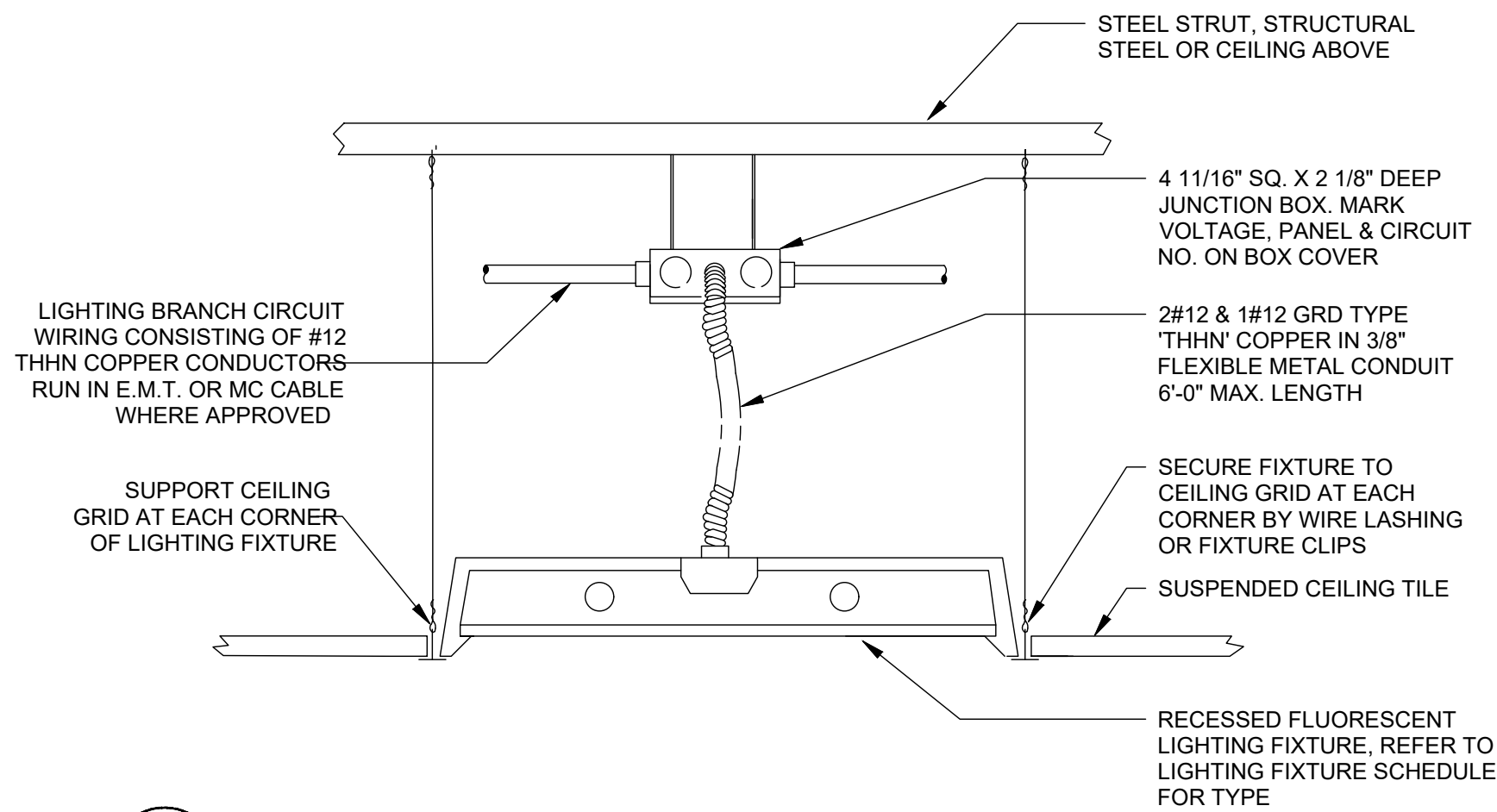
SHEET NO.

E-1

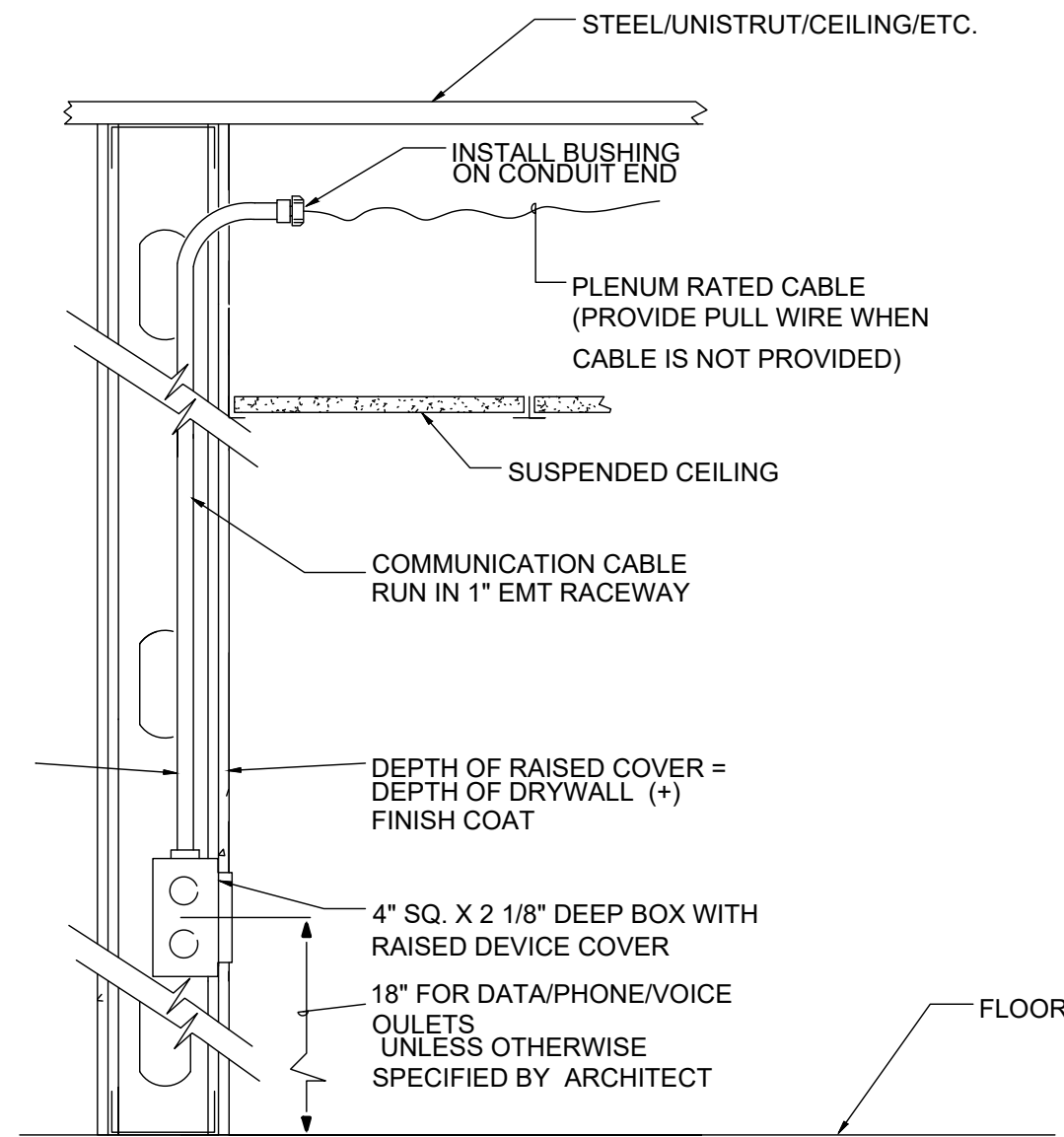
SHEET 1 OF 5



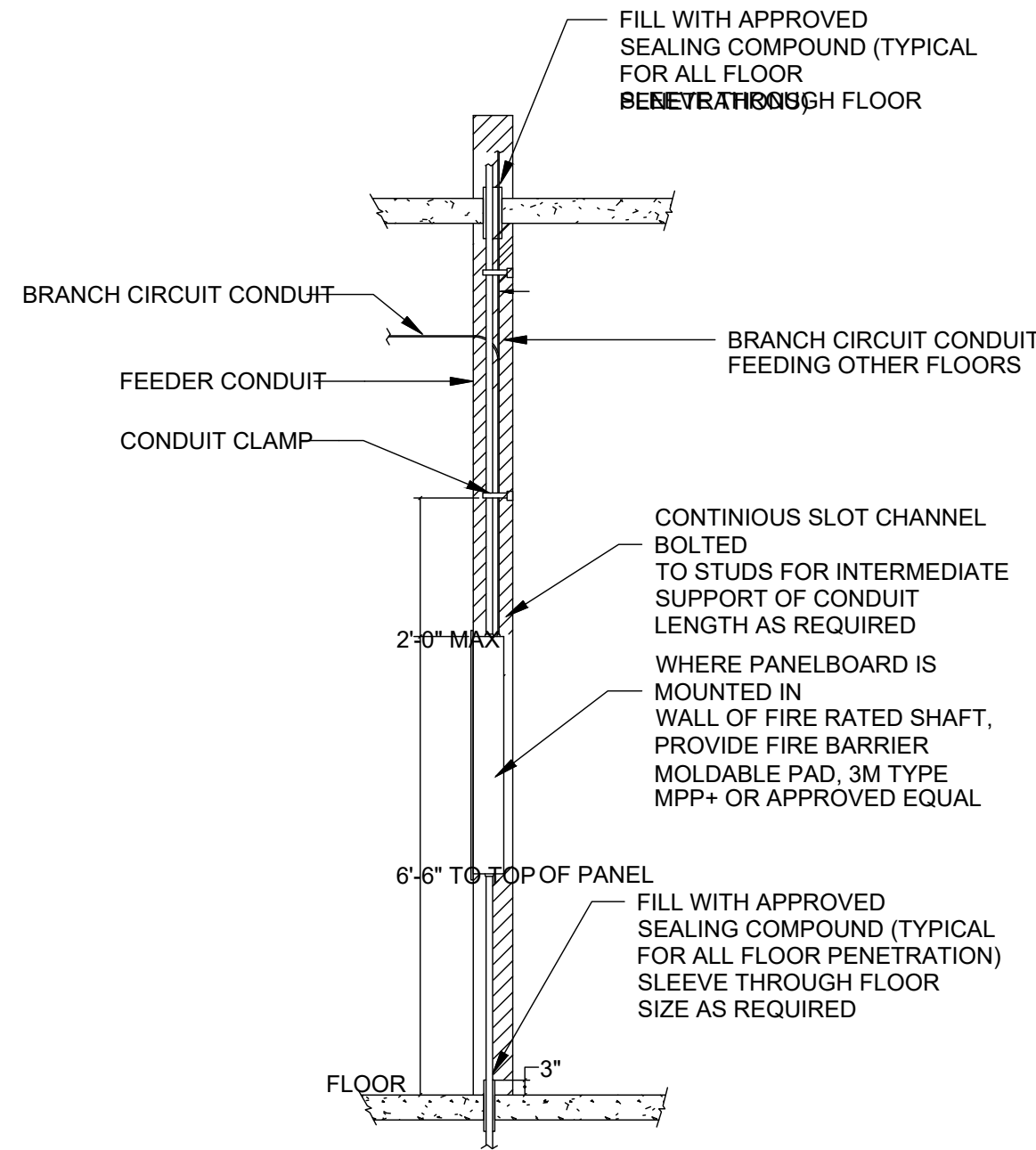
1 DEVICE INSTALLATION IN HOLLOW PARTITIONS(DATA AND VOICE)
E-1.1 SCALE - 1/4" = 1'-0"



2 TYPICAL RECESSED LIGHT FIXTURE INSTALLATION DETAIL
E-1.1 SCALE - 1/4" = 1'-0"



3 DEVICE INSTALLATION IN HOLLOW PARTITIONS
E-1.1 SCALE - 1/4" = 1'-0"



4 TYPICAL FLUSH MOUNTED PANELBOARD MOUNTING DETAIL
E-1.1 SCALE - 1/4" = 1'-0"

PANEL 11A(EXISTING)										VOLTAGE: 120/208 V, 3ø, 4W						
LOCATION: FIRST FLOOR ELECTRICAL ROOM										MAIN : 225A MLO						
CKT NO.	WIRE ID	CB AMP/POLE	DESCRIPTION	LOAD (KW)						DESCRIPTION	CB AMP/POLE	WIRE ID	CKT NO.			
				A	B	C	A	B	C							
1		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		2			
3		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		4			
5		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		6			
7		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		8			
9		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		10			
11		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		12			
13		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		14			
15		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		16			
17		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		18			
19		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		20			
21		20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		22			
23	125W 3	125A/2P	PANEL HR								SPARE*	20A/1P		24		
25												EXISTING CIRCUIT	20A/1P		26	
27				20A/1P	SPARE*							SPARE*	20A/1P		28	
29				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		30	
31				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		32	
33				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		34	
35				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		36	
37				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		38	
39				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		40	
41				20A/1P	EXISTING CIRCUIT							EXISTING CIRCUIT	20A/1P		42	
SUB TOTAL KW				0	0	0	0	0	0	SUB TOTAL KW						
TOTAL CONNECTED KW LOAD				0.0 KVA												
TOTAL CONNECTED AMPERE LOAD				EC TO CONFIRM SPARE CIRCUITS THROUGH CIRCUIT TRACE.												
				CIRCUIT NUMBERS SHOWN DO NOT INDICATE EXACT SPARE BRANCH POSITIONS IN PANEL 11A. EC SHALL EXAMINE EXISTING CONDITION AT PANEL 11A TO DETERMINE THE EXACT POLE POSITIONS WHICH ARE AVAILABLE FOR LOADS INDICATED. EC SHALL PROVIDE A COMPLETED SCHEDULE FOR PANEL 11A RECONCILING ALL EXISTING AND NEW LOAD POSITIONS FOR APPROVAL PRIOR TO INSTALLATION.												
				NEW CIRCUITS IN BOLD												

PANEL HR (NEW)										VOLTAGE: 120/208 V, 1ø, 3 WIRE		
LOCATION: HR SUITE BREAK ROOM										MAIN : 125 A MCB		
MOUNTING: RECESSED										NEUTRAL: 100%		
				LOAD (KW)								
CKT NO.	WIRE ID	CB AMP/POLE	DESCRIPTION	A	B	A	B	DESCRIPTION	CB AMP/POLE	WIRE ID	CKT NO.	
1	20W2	20A/1P	OFFICE 212 POWER	500		500		OFFICE 211 POWER	20A/1P	20W2	2	
3	20W2	20A/1P	OFFICE 210 POWER		500		500	OFFICE 209 POWER	20A/1P	20W2	4	
5	20W2	20A/1P	OFFICE 208 POWER	500		500		OFFICE 207 POWER	20A/1P	20W2	6	
7	20W2	20A/1P	OFFICE/CORRIDIOR CONV RECEPTS		1260		1440	OFFICE/CORRIDIOR CONV RECEPTS	20A/1P	20W2	8	
9	20W2	20A/1P	OFFICE 213 POWER	360		500		OFFICE 213 POWER	20A/1P	20W2	10	
11	20W2	20A/1P	BREAK ROOM RECEPTS/EXHAUST FAN		360		1800	BREAK ROOM KIT COUNTER QUAD	20A/1P	20W2	12	
13	20W2	20A/1P	BREAK ROOM KIT COUNTER	1700		900		CONFERENCE ROOM RECEPTS	20A/1P	20W2	14	
15	20W2	20A/1P	RICOH MULTI FUNCTION PRINTER(RM. 215)		1440		1200	SHREDDER (RM. 215)	20A/1P	20W2	16	
17	20W2	20A/1P	PRINT/COPY COUNTER RECEPTS	540		1025		SYSTEMS FURNITURE POWER	20A/1P	20W2	18	
19	20W2	20A/1P	SYSTEMS FURNITURE POWER				1025	SYSTEMS FURNITURE POWER	20A/1P	20W2	20	
21	20W2	20A/1P	SYSTEMS FURNITURE POWER	375		1025		SYSTEMS FURNITURE POWER	20A/1P	20W2	22	
23	20W2	20A/1P	SYSTEMS FURNITURE POWER		375		1025	SYSTEMS FURNITURE POWER	20A/1P	20W2	24	
25	20W2	20A/1P	SYSTEMS FURNITURE POWER	375		750		SYSTEMS FURNITURE POWER	20A/1P	20W2	26	
27	20W2	20A/1P	SYSTEMS FURNITURE POWER		625		750	SYSTEMS FURNITURE POWER	20A/1P	20W2	28	
29	20W2	20A/1P	SYSTEMS FURNITURE POWER	625		750		SYSTEMS FURNITURE POWER	20A/1P	20W2	30	
31	20W2	20A/1P	SYSTEMS FURNITURE POWER		625		750	SYSTEMS FURNITURE POWER	20A/1P	20W2	32	
33	20W2	20A/1P	SYSTEMS FURNITURE POWER	625							34	
35											36	
37											38	
39											40	
41											42	
43											44	
45											46	
47											48	
49											50	
51											52	
53											54	
SUB-TOTAL KW				5.6	5.6	6.0	8.5	SUB-TOTAL KW				
TOTAL CONNECTED KVA LOAD				25.6 KVA								
TOTAL CONNECTED AMP LOAD				123.1 A								
TOTAL DEMAND AMP LOAD				86 A								
NOTES:												

ARCHITECTS

LINN

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258



550 Pennell Road | Media, PA 19063

Project No. 23040

ELECTRICAL DETAILS

HR SUITE RECONFIGURATION

DELAWARE COUNTY GOVERNMENT CENTER

201 W. FRONT STREET

MEDIA, PA 19063

REVISIONS

DATE

DESCRIPTION

ISSUE FOR BID

DATE :

01/02/24

SCALE:

AS NOTED

DRAWN BY:

AH

CHECKED BY:

PROJ. NO.:

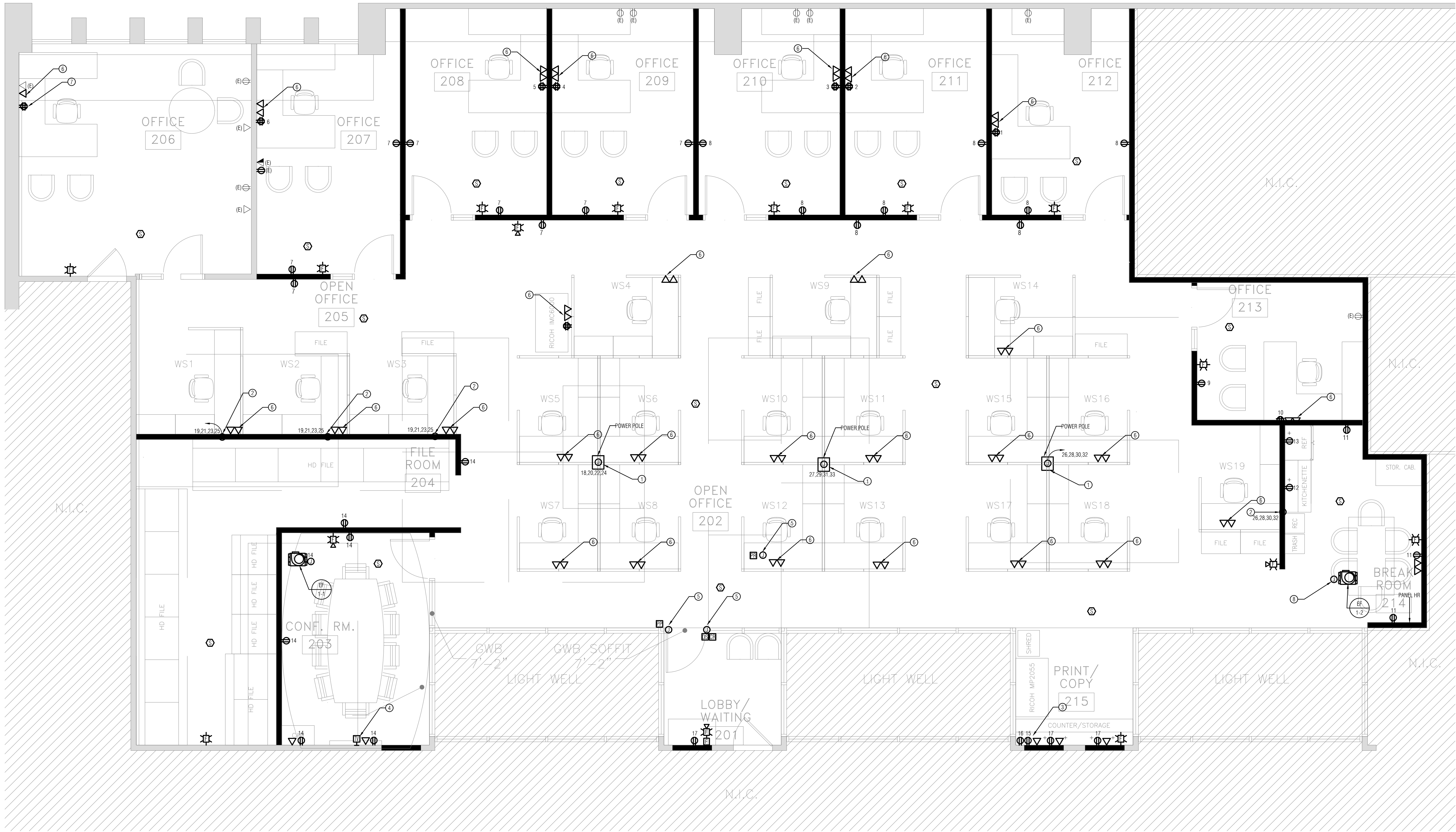
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SHEET NO.

E-1.1

SHEET 2 OF 5

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1 ELECTRICAL PARTIAL FLOOR PLAN - POWER
E-2 SCALE - 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

- EC TO TRACE ALL EXISTING HR SUITE CIRCUITS IN FIELD. DISCONNECT AND REMOVE CONDUIT AND WIRE BACK TO SOURCE OF EXISTING SYSTEMS FURNITURE. EC TO TEST FUNCTIONALITY OF CIRCUIT BREAKER. RETAIN CIRCUIT BREAKER FOR FUTURE WORK IF IN FUNCTIONING CONDITION. DEMO EXISTING POWER POLES.
- EC TO TRACE ALL EXISTING HR SUITE CIRCUITS IN FIELD. RETAIN RECEPTACLES/DATA POWER, CONDUIT, WIRING, AND DEVICES LOCATED IN WALLS EXISTING TO REMAIN(U.O.N). REMOVE ALL RECEPTACLES/DATA OUTLETS THAT ARE NOT IN FUNCTIONING CONDITION AND REPLACE IN KIND.
- REVISE PANEL SCHEDULES LABELING ACCORDING TO CHANGES MADE DURING DEMOLITION/ INVESTIGATIVE FINDINGS.

GENERAL ELECTRICAL NOTES

- SYSTEMS FURNITURE INSTALLER RESPONSIBLE FOR PROPER BALANCING OF LOADS ACROSS FURNITURE BUS.
- COORDINATE WIRING REQUIREMENTS WITH SYSTEMS FURNITURE MANUFACTURER PRIOR TO INSTALLATION.
- CONNECT NEW FIRE ALARM DEVICES TO EXISTING BUILDING FIRE ALARM SYSTEM. MODIFY SYSTEM TO ACCOMMODATE NEW DEVICE CONNECTIONS.
- ALL WIRING AND CABLE NEEDS TO BE PLENUM RATED.

ELECTRICAL KEY NOTES

- JUNCTION BOX FOR POWER AND DATA CONNECTION TO OFFICE FURNITURE SYSTEM(CONDUIT AND WIRE THROUGH POWER POLE). COORDINATE POWER AND DATA REQUIREMENTS AND EXACT LOCATION WITH ARCHITECT AND FURNITURE VENDOR. COORDINATE FINAL POWER POLE LOCATION WITH ARCHITECT.
- JUNCTION BOX FOR POWER AND DATA CONNECTION TO OFFICE FURNITURE SYSTEM(MHP LOCATED IN WALL). COORDINATE POWER AND DATA REQUIREMENTS AND EXACT LOCATION WITH ARCHITECT, IT DEPARTMENT, AND FURNITURE VENDOR.
- CONDUIT IN CHASE CASEWORK BELOW COUNTER FOR POWER AND DATA. CIRCUIT PRINTER TO CIRCUIT 15 ON HR SUITE SUBPANEL. CIRCUIT SHREDDER TO CIRCUIT 16.
- COORDINATE POWER/DATA REQUIREMENTS AND LOCATIONS WITH IT DEPARTMENT/ARCHITECT FOR CONFERENCE ROOM TV PRIOR TO ROUGH-IN.
- PROVIDE 3/4" EMPTY CONDUIT FOR SECURITY DOOR POWER/CONTROLS. COORDINATE/CONFIRM POWER REQUIREMENTS WITH OWNER SECURITY VENDOR. COORDINATE NUMBER OF CONDUITS/CONDUIT DROP LOCATIONS WITH OWNER SECURITY VENDOR.
- PROVIDE 2 DATA OUTLETS AT EACH WORKSTATION. COORDINATE FINAL LOCATION WITH IT DEPARTMENT.
- REPLACE EXISTING DUPLEX RECEPTACLE WITH NEW QUAD RECEPTACLE. RETAIN EXISTING CONDUIT, WIRING, AND CIRCUITING.
- ADD ALTERNATE M-1. JUNCTION BOX FOR EXHAUST FAN 1-2. CIRCUIT TO NEAREST RECEPTACLE CIRCUIT.

LINN ARCHITECTS

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258



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Project No. 23040

ELECTRICAL PARTIAL FLOOR PLAN - POWER

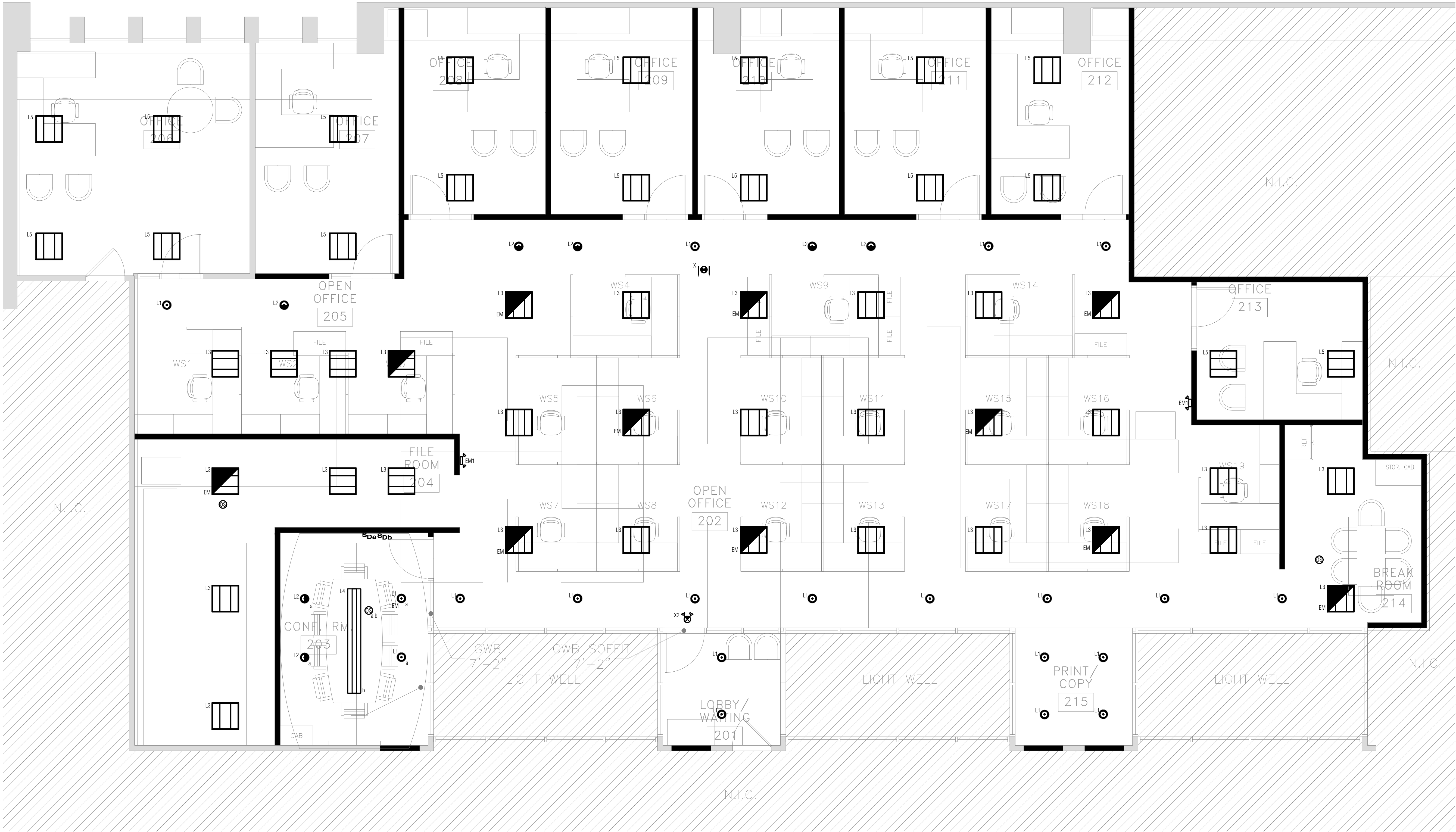
HR SUITE RECONFIGURATION
DELAWARE COUNTY GOVERNMENT CENTER

201 W. FRONT STREET
MEDIA, PA 19063

DATE :	REVISIONS	DESCRIPTION	DATE
01/02/24	NO.		
SCALE:	AS NOTED		
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PROJ. NO.:	23040		

SHEET NO.
E-2
SHEET 3 OF 5

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1 ELECTRICAL PARTIAL FLOOR PLAN - LIGHTING
E-3 SCALE - 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXISTING LIGHTING FIXTURES. RETAIN EXISTING CONDUIT AND WIRE AND EXTEND TO NEW FIXTURE LOCATIONS.

GENERAL LIGHTING NOTES

1. PATH OF EGRESS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. FINAL LOCATION OF EXIT SIGNS SHALL BE COORDINATED ACCORDINGLY.
2. CONFIRM LIGHTING CONTROL COMPONENT FINAL LOCATIONS WITH OWNERSHIP/ARCHITECT PRIOR TO ROUGH-IN. PROVIDE A POWER/RELAY PACK FOR EACH CONTROL ZONE INDICATED ON DRAWINGS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR FINAL LIGHT FIXTURE LOCATIONS.
4. LIGHTING IN HR SUITE TO BE CONTROLLED BY EXISTING BUILDING AUTOMATION SYSTEM. RETAIN EXISTING OVERRIDE SWITCH LOCATED ADJACENT TO ELEVATOR.
5. EC TO TRACE EXISTING HR SUITE LIGHTING CIRCUITS IN FIELD. CIRCUIT EMERGENCY LIGHT FIXTURES AND EXIT SIGNS TO HR SUITE EMERGENCY LIGHTING CIRCUIT. EC TO CONFIRM SUFFICIENT CAPACITY ON EMERGENCY LIGHTING CIRCUIT FOR ADDITIONAL FIXTURES.
6. FIXTURES, SWITCHES, AND OCCUPANCY SENSORS SHALL BE GROUPED TOGETHER BY ZONE DESIGNATION AS INDICATED ON DRAWING.
7. WHERE CONTROL SWITCH IS SHOWN WITH OCCUPANCY SENSOR, THE SWITCH SHALL BE USED FOR OCCUPANCY SENSOR OVERRIDE.
8. ALL OCCUPANCY SENSORS SHALL BE PROVIDED, INSTALLED, AIMED, AND CALIBRATED BY THE E.C. ALL OCCUPANCY SENSORS AND POWER PACKS SHALL BE INSTALLED AND WIRED PER MANUFACTURERS RECOMMENDATIONS.
9. CIRCUIT EXIT SIGNS TO NEAREST LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
10. ALL WIRING AND CABLE NEEDS TO BE PLENUM RATED.

DATE : 01/02/24		REVISIONS		ELECTRICAL PARTIAL FLOOR PLAN - LIGHTING	
SCALE : AS NOTED		DESCRIPTION		HR SUITE RECONFIGURATION	
DRAWN BY: AH		ISSUE FOR BID		DELAWARE COUNTY GOVERNMENT CENTER	
CHECKED BY:				201 W. FRONT STREET	
PROJ. NO. : 23040				MEDIA, PA 19063	
SHEET NO. : E-3		SHEET 4 OF 5		PROJECT NO. 23040	
© 2023		LINN ARCHITECTS		ARCHITECTURE ENGINEERING SITE PLANNING CODE SERVICES	
		140 N. PROVIDENCE ROAD MEDIA, PENNSYLVANIA 19063 TEL: 610-566-7044 FAX: 610-566-3258		ADVANCED ENGINEERING, INC. www.aei-engineering.com 5501 Pennell Road Media, PA 19063	

ELECTRICAL SPECIFICATIONS NOTES:

GENERAL REQUIREMENTS:

- A. GENERAL - THE CONDITIONS OF CONTRACT AND SPECIAL CONDITIONS ARE A PART OF THIS CONTRACT FOR ELECTRICAL WORK.
- B. SCOPE OF WORK - FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, INSURANCES, PERMITS, AND INSPECTIONS NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS AS SHOWN AS SPECIFIED. THE SCOPE OF THE WORK SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- B.1. REVISE HR SUITE POWER INCLUDING NEW PANELBOARD
- B.2. REVISE LIGHTING
- B.3. REVISE FIRE ALARM SYSTEM
- B.4. GROUNDING OF ENTIRE SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE SECTION 250.
- C. REGULATIONS - ALL WORK SHALL CONFORM TO THE NEC, NFPA, ADA, AND LOCAL AUTHORITIES HAVING JURISDICTION. SUBMIT CERTIFICATES OF UNDERWRITER INSPECTION FROM A RECOGNIZED AGENCY UPON COMPLETION OF THE WORK.
- D. FASTENINGS AND SUPPORTS AS FOLLOWS:
- D.1. HOLLOW TIE - TOGGLE BOLTS
- D.2. WOOD - LAG SCREWS OR BOLTS
- D.3. SOLID MASONRY - METALLIC EXPANSION SHIELDS AND MACHINE BOLTS.
- D.4. DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORT SHALL COME FROM BUILDING STRUCTURE.
- E. SUBMIT ELECTRICAL EQUIPMENT SHOP DRAWINGS ELECTRONICALLY FOR APPROVAL.
- F. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT ENVIRONMENTAL REGULATIONS. CONTRACTOR TO FOLLOW LOCK-OUT/TAG-OUT PROCEDURES.
- G. PRODUCTS SUBMITTED & APPROVED FOR USE THAT NECESSITATE CHANGES TO THE WORK OF OTHER TRADES OF CONTRACT SHALL BE COORDINATED & ARRANGED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
- H. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EACH TRADE CONTRACTOR FOR THE ELECTRICAL REQUIREMENTS OF THEIR WORK PRIOR TO THE SHOP DRAWINGS SUBMISSIONS.
- I. ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL AN APPROVED FIRE STOP SEALANT TOTALLY ENCLOSING ALL CONDUIT PENETRATION THRU CEILINGS, WALLS, AND FLOORS. THIS CODE REQUIREMENT DOES NOT ALLOW ANY EXCEPTIONS.
- J. ELECTRICAL CONTRACTOR SHALL COORDINATE CEILING MOUNTED EQUIPMENT WITH OTHER TRADE CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS.
- K. ELECTRICAL CONTRACTOR SHALL UPON COMPLETION OF THE PROJECT SUBMIT A SET OF RECORD DRAWINGS ("AS BUILT'S" DRAWINGS) SHOWING ALL CHANGES FROM THE CONTRACT DRAWINGS MADE DURING INSTALLATION OF ELECTRICAL EQUIPMENT AND SHOWING DIMENSIONED LOCATIONS OF BURIED, OR CONCEALED, EQUIPMENT.
- L. ELECTRICAL CONTRACTOR TO VERIFY LOCATIONS AND CONDITIONS OF ALL EXISTING DEVICES
- M. ELECTRICAL CONTRACTOR TO VERIFY LOCATION OF ALL NEW DEVICES IN COMPLIANCE WITH NFPA/NEC, ADA, AND LOCAL JURISDICTIONS.

WIRING METHODS AND MATERIALS

- A. WIRING TYPES AND SIZING
- A.1. SIZE #10 AND SMALLER SOLID, #8 AND LARGER - STANDARD. MINIMUM SIZE FOR POWER AND LIGHTING WIRING - #12 UNLESS OTHERWISE NOTED. ALL INTERIOR BUILDING WIRE SHALL BE COPPER CONDUCTORS, TYPE THWN-2/THHN(DUAL LISTED), 90°C INSULATION, APPLIED AT 75°C AMPACITY.
- A.2. USE PROPERLY INSULATED CABLES IN LOCATIONS SUBJECT TO EXCESSIVE HEAT.
- A.3. PROVIDE AN INSULATED GROUNDING CONDUCTOR OF NOT LESS THAN #12 AWG FOR ALL EQUIPMENT, LIGHTING, & OUTLETS UNLESS OTHERWISE NOTED.
- A.4. CABLING SHALL BE INCREASED IN SIZE AS NEEDED TO LIMIT VOLTAGE DROP ACROSS THE COMBINATION OF FEEDERS AND BRANCH CIRCUITS TO A MAXIMUM OF 5%.
- B. RACEWAYS
- B.1. USE ONLY U.L. APPROVED RACEWAYS - MINIMUM SIZE 3/4".
- B.2. ELECTRICAL METALLIC TUBING (EMT) - THINWALL GALVANIZED.
1. MAY BE USED ANYWHERE IN DRY LOCATIONS FOR FEEDERS, AND BRANCH CIRCUITS 480 VOLTS AND UNDER TO GROUND.
2. SHALL NOT BE INSTALLED IN WET OR DAMP LOCATIONS.
3. ALL FEEDERS AND BRANCH CIRCUITS ON THE EXTERIOR OF THE BUILDING SHALL BE INSTALLED WITHIN GALVANIZED RIGID STEEL CONDUIT.
4. PROVIDE INSULATED BUSHINGS ON ALL BOX CONNECTORS. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL ELECTRICAL METALLIC TUBING.
5. E.M.T. SHALL BE USED FOR ALL FEEDERS. IT SHALL BE USED WHEREVER M.C. CABLE IS NOT PERMITTED.

- B.1. METAL CLAD SHALL BE PERMITTED ON A LIMITED BASIS AS FOLLOWS:
1. M.C. CABLE SHALL NOT BE USED FOR SINGLE OR 3 PHASE 480-VOLT CIRCUITS OF ANY AMPERAGE.
2. M.C. CABLE SHALL NOT BE USED ANYWHERE IT IS EXPOSED OUTSIDE OF ELECTRICAL ROOMS SUCH AS NON FINISHED AREAS OR AREAS WITHOUT A DROP CEILING.
3. CAN BE USED FOR ALL BRANCH CIRCUITS WHERE ALLOWED BY CODE.
4. FITTINGS USED FOR CONNECTING TYPE M.C. CABLE TO BOXES AND LIGHT FIXTURES SHALL BE LISTED AND IDENTIFIED FOR SUCH USE. NO SNAP IN CONNECTORS, OR INTERNAL BOX CLAMPS ARE PERMITTED. ALL M.C. CONNECTORS SHALL BE OF THE LOCKNUT TYPE, DESIGNED TO SECURE THE CONNECTOR TO A BOX OR ENCLOSURE.
5. ANTI-SHORT (RED DEVILS) SHALL BE INSERTED INTO THE ENDS OF ALL M.C. CABLE.
6. ONLY TOOLS SPECIFICALLY DESIGNED TO CUT M.C. CABLE SHALL BE PERMITTED ON THE PROJECT.
7. THE JACKET OF M.C. CABLE SHALL NOT BE PERMITTED TO BE USED AS AN EQUIPMENT GROUND PATH. ALL M.C. CABLE SHALL CONTAIN A SEPARATE EQUIPMENT GROUND CONDUCTOR. WHERE ISOLATED GROUNDING IS REQUIRED THEN (TWO GROUND CONDUCTORS WITHIN THE CABLE SHALL BE USED.
8. ALL M.C. CABLE SHALL BE RUN TO BUILDING STRUCTURE AT RIGHT ANGLES. ALL CABLE SHALL BE SUPPORTED TO STRUCTURE THROUGH A SYSTEM OF M.C. CABLE SUPPORTS, OR CADDY BRIDLE RINGS. CABLE MAY ALSO BE SUPPORTED DIRECTLY TO STRUCTURE. ALL CABLE SHALL BE SUPPORTED A (6) SIX FOOT INTERVALS. WHERE BUILDING STRUCTURE DOES NOT EXIST TO MEET THE 6-FOOT SUPPORT REQUIREMENT THE CONTRACTOR SHALL FURNISH AND INSTALL STEEL CHANNEL TO TRAVERSE EXISTING STRUCTURE AND HANG CABLE AT THE REQUIRED (6) FOOT INTERVAL.
9. AT NO POINT SHALL M.C. CABLE COME IN CONTACT WITH A DROPPED CEILING.
- B.4. RIGID GALVANIZED STEEL CONDUIT(GRS)
1. GALVANIZED RIGID STEEL (GRS) CONDUIT ELBOWS AND RISERS, OF THE TYPE LISTED FOR UNDERGROUND, SHALL BE USED AS THE TRANSITION FROM THE UNDERGROUND SERVICE FEEDERS UP INTO EQUIPMENT IN THE 1ST MAIN ELECTRICAL ROOM. RIGID STEEL ELBOWS SHALL BE USED FOR ALL UNDERGROUND CONDUIT RISERS.
2. MAY BE USED OUTSIDE OF THE BUILDING.
3. GRS' MAY BE USED ON THE ROOF.
4. GRS' SHALL BE USED TO CONNECT C.T. CABINETS TO UTILITY METERS.
5. ALL CONDUIT SHALL BE INSTALLED AND SUPPORTED IN ACCORDANCE WITH THE N.E.C.
- B.5. LIQUIDTIGHT FLEXIBLE METAL CONDUIT
1. SHALL BE USED FOR ALL FLEXIBLE CONNECTIONS REQUIRED ON THE EXTERIOR OF THE BUILDING OR ROOF.
2. LENGTH SHALL NOT EXCEED 18 INCHES FOR CONNECTION TO MOTORS AND 48 INCHES FOR CONNECTION TO HVAC EQUIPMENT.
3. AN INTERNAL EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITHIN AL WATER TIGHT CONDUIT.
- B.6. RIGID NON-METALLIC CONDUIT
1. MAY BE USED ANYWHERE AS PERMITTED BY CODE.
2. MINIMUM SIZE RNC TO BE USED IS 1".
3. CONDUIT BENDS SHALL BE MADE WITH AN APPROVED HEAT BLANKET OR HOT BOX BENDER. FACTORY ELBOWS SHALL BE USED FOR CONDUIT LARGER THAN 2".
4. ALL CUT ENDS OF RNC SHALL BE TRIMMED OR OTHERWISE FINISHED TO REMOVE ANY SHARP EDGES.
5. ALL RIGID NONMETALLIC CONDUIT ON THIS JOB SHALL BE SCHEDULE 80.
6. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL RIGID NONMETALLIC CONDUIT.
- B.7. RIGID ALUMINUM CONDUIT
1. MAY BE USED ANYWHERE AS PERMITTED BY CODE, AND SHALL BE INSTALLED WHERE SPECIFICALLY INDICATED ON PLANS.
2. SHALL BE PERMITTED TO BE USED IN MECHANICAL SPACES, AND PENTHOUSES.
3. SHALL NOT BE USED IN ANY CONCRETE ENCASEMENT. RIGID ALUMINUM CONDUIT SHALL NOT BE USED FOR ANY UNDERGROUND USE, OR BE ALLOWED TO COME IN CONTACT WITH THE GROUND.
4. PROVIDE BUSHINGS AT ALL CONDUIT ENDS IN ACCORDANCE WITH NOTES #A3 AND A4 ABOVE.
5. AN INTERNAL EQUIPMENT GROUND SHALL BE RUN WITHIN ALL RIGID ALUMINUM CONDUIT.
- B.8. NONMETALLIC SHEATHED CABLE (NM)
1. MAY BE USED ANYWHERE AS PERMITTED BY CODE, AND SHALL BE INSTALLED WHERE SPECIFICALLY INDICATED ON PLANS.
2. SHALL NOT BE USED IN ANY CONCRETE ENCASEMENT.
3. SHALL NOT BE USED FOR ANY UNDERGROUND USE, OR BE

- ALLOWED TO COME IN CONTACT WITH GROUND
- C. WIRING METHODS AND EQUIPMENT
- C.1. NM CABLE IS ONLY PERMITTED IN TYPE III,IV,V CONSTRUCTION AND SHALL BE LIMITED TO AREAS SPECIFICALLY PERMITTED BY CODE.
- C.2. METAL CLAD (MC) CABLE AND CONDUIT SHALL BE PROVIDED WHERE PERMISSIBLE BY CODE, AND/OR WHERE NM CABLE IS SUBJECT TO PHYSICAL DAMAGE.
- C.3. USE EMT FOR EXPOSED AND CONCEALED WIRING IN DRY LOCATIONS.
- C.4. EXPOSED CONDUITS WILL BE PERMITTED ONLY IN UNFINISHED AREAS. (FINAL APPROVAL BY ARCHITECT)
- C.5. PROVIDE FLEXIBLE CONDUIT AND FITTINGS FOR FINAL CONNECTIONS TO MOTORS.
- C.6. USE PRESSED STEEL WALL BOXES OR WIREMOLD FOR EACH OUTLET INDICATED, SIZED FOR NO. OF WIRES CONTAINED. USE 4" OCTAGON BOX WITH 3/8" FIXTURE STUD FOR LIGHTING FIXTURES.
- C.7. ALL SPLICING TO BE DONE IN OUTLET, JUNCTION BOXES OR WIREMOLD. USE WIRE NUTS ON #8 AND SMALLER WIRE. USE COMPRESSION 'LUGS' FOR SPLICES ON #6 AND LARGER, WITH RUBBER AND PLASTIC TAPE APPLIED OVER JOINT.
- C.8. PROVIDE SEPARATE GROUND CONDUCTORS FOR ALL BRANCH CIRCUITS.
- D. WIRING FOR MECHANICAL EQUIPMENT
- D.1. PROVIDE POWER WIRING FOR ALL EQUIPMENT FURNISHED AND INSTALLED BY THE MECHANICAL TRADES.
- D.2. CONTROL FEEDERS TO MECHANICAL AND PROCESS EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY OTHERS UNLESS OTHERWISE NOTED.
- D.3. WIRING CONNECTIONS ON EQUIPMENT WHICH PRODUCES VIBRATION OR NOISE SHALL HAVE AT LEAST THREE (3) FEET OF LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.
- E. WIRING DEVICES
- E.1. LOCAL SWITCHES - 20 AMPERE, 120/277 VOLT, FLUSH TUMBLER QUIET OPERATING SINGLE THREE WAY AND FOUR WAY AS REQUIRED.
- E.2. DUPLEX RECEPTACLES - GROUNDING TYPE 20 AMPERE, 125 VOLTS. - SEE FLOOR PLAN FOR LOCATION
- E.3. COORDINATE DEVICE PLATES WITH ARCHITECTS

ACCESSIBILITY

- A. ALL DEVICES AND OUTLET BOXES SHALL BE ACCESSIBLE. ANY DEVICES LOCATED ABOVE A DRYWALL/HARD CEILING SHALL BE EITHER RELOCATED OR AN ACCESS PANEL INSTALLED.
- B. BOXES, ENCLOSURES AND CONDUIT BODIES SHALL BE INSTALLED SO THAT THE WIRING CONTAINED WITHIN CAN BE RENDERED ACCESSIBLE WITHOUT REMOVING ANY PART OF THE BUILDING. (NEC 314.29)

BREAKERS

- A. ALL PANELBOARD BREAKERS FOR LIGHTING LOADS SHALL BE SWITCH DUTY RATED.
- B. ALL PANELBOARD BREAKERS FOR HVAC EQUIPMENT SHALL BE HVAC RATED

GENERAL

- A. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND ROUGHING IN DIMENSIONS OF ALL EQUIPMENT AND SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
- B. ALTHOUGH ALL BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED. THERE SHALL BE NO COMMON NEUTRALS(EXCEPT IN SYSTEMS FURNITURE).
- C. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
- D. PROVIDE PADLOCK LOCKOUT DEVICES ON ALL CIRCUIT BREAKERS.
- E. THE CONTRACTOR SHALL PROVIDE ARC FLASH LABELS ON ALL PANEL BOARDS, SAFETY SWITCHES, STARTERS, MOTOR CONTROL CENTERS AND CONTROL PANELS AS REQUIRED BY NEC ARTICLE 110.16.
- F. ALL DISTRIBUTION PANELBOARDS, ENCLOSED CIRCUIT BREAKERS, LIGHTING AND POWER PANELBOARDS, SAFETY SWITCHES, COMBINATION STARTERS, STARTERS, AND TRANSFORMERS SHALL BE SQUARE-D FOR SWITCHGEAR STANDARD. ALL PHYSICAL SIZES, CAPACITIES AND LUG TERMINATIONS ARE BASED ON SQUARE-D EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL APPROVED SUBSTITUTIONS WILL PHYSICALLY FIT INTO THE SPACE ALLOTTED AND THAT ALL CAPACITIES ARE MET OR EXCEEDED AND THAT ALL LUGS ARE SUITABLE FOR FEEDERS AND BRANCH CIRCUITS BEING INSTALLED.
- G. ALL POWER PANELS, LIGHTING PANELS, DISTRIBUTION PANELS, DISCONNECT SWITCHES, STARTERS, VFD'S, TRANSFORMERS, MOTOR CONTROL CENTERS, AND CONTROL PANELS, ETC. SHALL HAVE A WHITE LAMINATED PLASTIC I.D. NAMEPLATE WITH 1/4

- INCH HIGH BLACK LETTERS. INDICATING THE NAME OF THE DEVICE, VOLTAGE CONTAINED WITHIN, AND WHERE THE DEVICE IS FED FROM. THE I.D. NAMEPLATE SHALL BE ATTACHED TO THE COVER USING EPOXY CEMENT.
- H. CONTRACTOR SHALL GROUND ALL NEW ELECTRICAL WORK WITHIN THE WORK AREA PER NEC SECTION 250. THE CONTRACTOR SHALL ALSO NOTE ANY EXISTING GROUNDING ISSUES AND TURN THEM OVER TO THE BUILDING REPRESENTATIVE.
- I. CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR APPLICABLE CODES, PERMITTING AND INSPECTIONS.
- J. WHERE MULTIPLE SWITCHES ARE INDICATED AT THE SAME LOCATION, THEY SHALL BE MOUNTED BEHIND A COMMON FACEPLATE.
- K. THE CONTRACTOR IS REQUIRED TO PROVIDE SHEETING AND SHORING IN ALL TRENCHES AND EXCAVATIONS AS NECESSARY IN ACCORDANCE WITH OSHA.
- L. EXISTING BUILDINGS ONLY: INDICATED EXISTING PANEL IDENTIFICATION AND CIRCUIT NUMBERS ARE BASED ON REVIEW OF EXISTING DOCUMENTATION AND FIELD OBSERVATIONS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THAT THE CIRCUITS ARE AVAILABLE FOR USE AS INDICATED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK. INDICATED EXISTING PANEL IDENTIFICATION AND CIRCUIT NUMBERS ARE BASED ON REVIEW OF EXISTING DOCUMENTATION AND FIELD OBSERVATIONS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THAT THE CIRCUITS ARE AVAILABLE FOR USE AS INDICATED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK. WHERE ACTUAL FIELD CONDITIONS REQUIRE DIFFERENT CIRCUIT NUMBERS THAN THOSE INDICATED ON PLANS, THE CONTRACTOR SHALL ADVISE OWNER OF CHANGES ON REQUIRED AS-BUILT DRAWINGS.

IDENTIFICATION

- A. REGARDLESS OF VOLTAGE, ALL JUNCTION BOXES, AND PULL BOXES FOR BRANCH CIRCUITS, SUB FEEDERS, AND FEEDERS SHALL IDENTIFY THE CIRCUITS WITHIN BY CIRCUIT NUMBER AND PANEL OF ORIGIN. IDENTIFICATION SHALL BE ACCOMPLISHED WITH A BLACK PERMANENT FELT TIP MARKER.
- B. ALL INDIVIDUAL PHASE, AND NEUTRAL BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED WITHIN ALL PULL BOXES, JUNCTION BOXES, AND AT THE POINT OF USE WITH THE BRANCH CIRCUIT POLE POSITION CONNECTED TO AT THE POWER OR LIGHTING PANEL.
- C. ALL WIRING DEVICES (RECEPTACLES AND LIGHT SWITCHES) SHALL HAVE P-TOUCH (CLEAR W/BBLACK) LABELS AFFIXED TO THEIR COVERPLATE. IDENTIFY THE CONNECTED BRANCH CIRCUIT BY PANEL AND CIRCUIT NUMBER. (NON RESIDENTIAL APPLICATIONS)

LIGHTING FIXTURES

- A. GENERAL
- A.1. INSTALL LIGHTING EQUIPMENT AS INDICATED ON THE DRAWINGS INCLUDING ALL LENSES, LOUVERS, LAMPS, PLASTER/GWB CEILING FRAMING KITS AND ACCESSORIES. PROVIDE SELF-ALIGNING HANGERS AND STRAPS FOR ALL SUSPENDED FIXTURES. PROVIDE ADDITIONAL BRACKETS AND SUPPORTS AS REQUIRED.
- A.2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TEMPORARY POWER & LIGHTING SYSTEM FOR THE PROJECT. LIGHTING SHALL BE AT LEAST .25W/FT ^ 2 AND OSHA APPROVED.

PENETRATIONS

- A. PRIOR TO CORE DRILLING THROUGH THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL VISUALLY SURVEY BOTH SIDES TO SEE IF THERE ARE ANY PIPES, DUCTS, OR ELECTRICAL SERVICES THAT MAY PRESENT AN OBSTACLE. IN ADDITION TO A VISUAL SURVEY, THE ELECTRICAL CONTRACTOR SHALL HAVE THE FLOOR X-RAYED, TO DETERMINE IF THERE ARE ANY HIDDEN OBSTACLES IN THE FLOOR. AFTER IT HAS BEEN DETERMINED THAT THERE ARE NOT ANY OBSTACLES, THE FLOOR CAN THEN BE CORE DRILLED.
- B. ALL CONDUIT PENETRATIONS THRU THE ROOF, AND WALLS TO THE OUTSIDE SHALL BE SEALED WATERTIGHT.
- C. ALL CONDUIT PENETRATIONS THRU FIRE RATED FLOORS AND WALLS SHALL BE SEALED IN ACCORDANCE WITH UL REQUIREMENTS.

BRANCH CIRCUIT PANELBOARDS

- A. THE MINIMUM SHORT-CIRCUIT RATING FOR THE BRANCH CIRCUIT PANELBOARDS SHALL BE AS SPECIFIED AS INDICATED ON THE DRAWINGS. PANELBOARDS SHALL BE FULLY RATED.
- B. BRANCH CIRCUIT PANELBOARDS SHALL BE SEIMENS P SERIES OR APPROVED EQUAL.
- C. PLUG-ON TYPE, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK, SINGLE- AND MULTI-POLE CIRCUIT BREAKERS OF THE TYPES SPECIFIED HEREIN, SHALL BE PROVIDED FOR EACH CIRCUIT WITH

- TOGGLE HANDLES THAT INDICATE WHEN UNIT HAS TRIPPED.
- D. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC TYPE WITH COMMON TYPE HANDLE FOR ALL MULTIPLE POLE CIRCUIT BREAKERS. CIRCUIT BREAKERS SHALL BE MINIMUM 100-AMPERE FRAME AND THROUGH 100-AMPERE TRIP SIZES SHALL TAKE UP THE SAME POLE SPACING. CIRCUIT BREAKERS SHALL BE UL LISTED AS TYPE SWD FOR LIGHTING CIRCUITS.
- E. CIRCUIT BREAKER HANDLE LOCKS SHALL BE PROVIDED FOR ALL CIRCUITS THAT SUPPLY EXIT SIGNS, EMERGENCY LIGHTS, ENERGY MANAGEMENT, AND CONTROL SYSTEMS (ECMS) PANELS AND FIRE ALARM PANELS.

VOICE/DATA

- A. ALL VOICE/DATA CABLE WORK ON THIS PROJECT SHALL BE ACCOMPLISHED BY OTHERS AND IS NOT PART OF THE ELECTRICAL CONTRACT, UNLESS NOTED OTHERWISE.

WIRE TERMINATIONS

- A. CONDUCTORS #10 AND SMALLER - SOLID WIRE CONDUCTORS #10 AND SMALLER SHALL BE TERMINATED UNDER THE TERMINAL SCREW OF THE DEVICE. THE CONTRACTOR SHALL NOT USE THE PRESSURE PUSH-IN WIRING TERMINALS ON THE DEVICE. THE TERMINATION SHALL BE MADE USING STANDARD INDUSTRY PRACTICES, AND THE TORQUE-TIGHTENED SCREWS SHALL BE TO THE MANUFACTURER'S RECOMMENDATIONS.
- B. CONDUCTORS #10 AND SMALLER - STRANDED WIRE CONDUCTORS #10 AND SMALLER SHALL BE TERMINATED USING CRIMP-ON TERMINALS, UNLESS THE TERMINATION LUG OR SCREW IS SPECIFICALLY DESIGNED FOR STRANDED CONDUCTOR TERMINATION. THE CRIMP-ON TERMINATION SHALL BE VINYL INSULATED, SPADE TYPE, TURNED UP AT THE TIPS, TIN-PLATED COPPER, AND RATED Cu/AL, 105°C, AND UL LISTED. THE TERMINALS SHALL BE SIZED AS CLOSELY AS POSSIBLE TO THE CONDUCTOR SIZE AND TERMINATION LUG OR SCREW SIZE.
- C. CONDUCTORS #8 AND LARGER TERMINATION OF CONDUCTORS #8 AND LARGER SHALL BE MADE WITH SOLDERLESS COMPRESSION TYPE LUGS. LUGS SHALL BE CONSTRUCTED OF HIGH CONDUCTIVITY ELECTRO-TIN PLATED WROUGHT COPPER, 600 VOLT APPLICATION AND UL LISTED. LUGS SHALL BE SIZED AS CLOSELY TO CONDUCTOR SIZE AND EQUIPMENT TERMINATION REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TERMINATION LUGS FOR ALL EQUIPMENT NOT PROVIDED WITH THE PROPER TERMINATIONS AS DESCRIBED IN THIS SPECIFICATION. ANY EQUIPMENT PROVIDED WITH LUGS OR TERMINATIONS NOT CONFORMING TO THIS SPECIFICATION SHALL REMOVE THE PROVIDED TERMINATIONS, AND PROVIDE THE CORRECT TERMINATION OR LUG THAT MEETS THIS SPECIFICATION.
- D. MOTOR TERMINATION TERMINATIONS AT MOTORS SHALL BE MADE WITH THE QUICK DISCONNECT TYPE MOTOR CONNECTORS. THE CONNECTORS TO THE MOTOR LEADS AND SUPPLY CABLES SHALL BE SOLDERLESS COMPRESSION CONNECTORS, THOMAS & BETTS PIGTAIL TYPE. A MOLDED NEOPRENE SPLICE INSULATOR SHALL COVER THE ASSEMBLED CONNECTORS. THE TERMINATION SHALL BE UL LISTED FOR ENGAGE/DISENGAGE, CURRENT CYCLING, VIBRATION, GROUND FAULT, AND FLAMMABILITY. TERMINATIONS SHALL BE SIZED AS CLOSELY AS POSSIBLE TO THE MOTOR LEAD, AND SUPPLY CABLE CONDUCTOR SIZE AS POSSIBLE.

CONTRACTOR RESPONSIBLE STUDIES

- A. OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO DETERMINE OVERCURRENT PROTECTIVE DEVICES AND TO DETERMINE OVERCURRENT PROTECTIVE DEVICE SETTINGS FOR SELECTIVE TRIPPING.
- B. FAULT CURRENT STUDY TO DETERMINE THE MINIMUM INTERRUPTING CAPACITY OF CIRCUIT PROTECTIVE DEVICES.
- C. ARC-FLASH STUDY TO DETERMINE THE ARC-FLASH HAZARD DISTANCE AND THE INCIDENT ENERGY TO WHICH PERSONNEL COULD BE EXPOSED DURING WORK ON OR NEAR ELECTRICAL EQUIPMENT.

ARCHITECTS

ARCHITECTURE

ENGINEERING

SITE PLANNING

CODE SERVICES

140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063

TEL: 610-566-7044

FAX: 610-566-3258

PROJECT NO. 23040

DATE: 01/02/24

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SHEET NO. 5

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