PHARMACY USP 797 & 800 UPGRADES

CENTRAL HARNETT HOSPITAL

LILLINGTON, NORTH CAROLINA

CONSTRUCTION DOCUMENTS
27 AUGUST 2018

one thirty seconth inch = one foot
one sixteenth inch = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

LTC ASSOCIATES ARCHITECTS

1213 LADY ST. SUITE 400
COLUMBIA, SC 29201

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L.T.C. Associates, Inc. d/b/a LTC Associates Architects
REGISTERED ARCHITECTURAL CORPORATION
CERT NO. 51893
NORTH CAROLINA
COLUMBIA, SC

LAWRENCE E. TAYLOR
REGISTERED ARCHITECT
9097
8/28/18
NORTH CAROLINA
COLUMBIA, SC

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

COVER SHEET

REVISIONS

No.	Description	Date

JOB NUMBER: 18026

A0.0

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:24:11 PM

one thirty secondth inch = one foot
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160342012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **Central Harnett Hospital: USP 797 & 800 Pharmacy Upgrades**
Address: **Lillington, North Carolina** Zip Code **27546**
Proposed Use: **Hospital**
Owner/Authorized Agent: **Douglas Freeman** Phone # 910.615.4784
EMail: dfree3@capefearvalley.com
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ☒ County **Harnett** ☐ State

LEAD DESIGN PROFESSIONAL:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	LTC Associates	Lawrence E Kogut	9097	(803) 254-9082	lkogut@ltcarch.com
Civil	N/A				
Electrical	The East Group	David J. Delany, PE	16569	(919) 784-9330	dave.delany@eastgroup.com
Fire Alarm	The East Group	David J. Delany, PE	16569	(919) 784-9330	dave.delany@eastgroup.com
Plumbing	The East Group	Anthony Murray, PE	38676	(919) 784-9330	anthony.murray@eastgroup.com
Mechanical	The East Group	Anthony Murray, PE	38676	(919) 784-9330	anthony.murray@eastgroup.com
Sprinkler-Standpipe	The East Group	Anthony Murray, PE	38676	(919) 784-9330	anthony.murray@eastgroup.com
Structural	N/A				
Retaining Walls >5' High					
Other					

2012 EDITION OF NC CODE FOR: ☐ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair ☒ Renovation
CONSTRUCTED: 05/2006 **ORIGINAL USE(S)** (Ch. 3): **I-2**
RENOVATED: **CURRENT USE(S)** (Ch. 3): **I-2**
PROPOSED USE(S) (Ch. 3): **I-2**

BASIC BUILDING DATA
Construction Type: (Check all that apply) ☐ I-A ☒ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
Sprinklers: ☐ No ☐ Partial ☒ Yes ☒ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No ☒ Yes Class ☒ I ☐ II ☐ III ☒ Wet ☐ Dry
Fire District: ☒ No ☐ Yes (Primary) **Flood Hazard Area:** ☒ No ☐ Yes
Building Height: (feet) **85'-4"**
Gross Building Area: 550 SF for renovation area

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor	550		
Ground Floor			
TOTAL	550		

2012 NC Administrative Code and Policies

☐ Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exceptions).
☐ Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (508.4) - See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

______ + ______ + ... = ______ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503[5] AREA	(C) AREA FOR FRONTAGE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
1st Floor	**Outpatient**	74774	UL	NA	UL	UL	UL

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = ______ (F)
b. Total Building Perimeter = ______ (P)
c. Ratio (F/P) = ______ (F/P)
d. W = Minimum width of public way = ______ (W)
e. Percent of frontage increase $I_f = 100\,[F/P - 0.25] \times W/30$ = ______ (%)
[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent
[3] Unlimited area applicable under conditions of Section 507.
[4] Maximum Building Area = total number of stories in the building x E (506.4).
[5] The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction		I-B		
Building Height in Feet	UL	Feet = H + 20' = **105'**		
Building Height in Stories		Stories + 1 = ______		

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☒ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☒ Existing structures within 30' of the proposed building
☒ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☒ Occupant loads for each area
☒ Exit access travel distances (1016)
☒ Common path of travel distances (1014.3 & 1028.8)
☒ Dead end lengths (1018.4)
☒ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☒ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☒ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☒ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☒ The square footage of each fire area (902)
☒ The square footage of each smoke compartment (407.4)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING
(SECTION 1106)

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

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(TABLE 2902.1)

USE		WATERCLOSETS MALE	WATERCLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING								
	NEW								
	REQUIRED								

SPECIAL APPROVALS

Special approval: (Local Jurisdic[illegible] Depart[illegible] of Insu[illegible] OSC, DPI, DHHS, ICC, etc., describe below)

NA

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MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 22
summer dry bulb: 93

Interior design conditions
winter dry bulb: 72
summer dry bulb: 75
relative humidity: 50%-60%

Building heating load: New/Reno Total – 194 MBH
Building cooling load: New/Reno Total – 375 MBH

Mechanical Spacing Conditioning System
Unitary
description of unit: WSHP/VRV
[illegible]ting eff[illegible]ncy: [illegible]chedule sheet M7.1
[illegible]ing eff[illegible]ncy: [illegible]hedule sheet M7.1
[illegible]tego[illegible]f unit: [illegible]edule sheet M7.1
B[illegible]r
[illegible]ze c[illegible] If o[illegible] reason.: N/A
C[illegible]er
[illegible]ze categ[illegible] If [illegible]rsized, sta[illegible]son.: N/a
List equipment efficiencies: See Schedule sheet M7.1

NA

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ALLOWABLE AREA

Occupancy:
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☒ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancies:
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Incidental Uses (Table 508.2.5):
☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located in occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☒ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427
Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

Mixed Occupancy: ☒ No ☐ Yes Separation: ____ Hr. Exception: ______________
2012 NC Administrative Code and Policies

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_706.4 NOTE A_* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	N/A	2	N/A	N/A	-		
Bearing Walls		2	N/A	-	-		
Exterior	>30'	2	N/A	-	-		
North	>30'	2	N/A	-	-		
East	>30'	2	N/A	-	-		
West	>30'	2	N/A	-	-		
South	>30'	2	N/A	-	-		
Interior	>30'	2	N/A	NOT USED	-		
Nonbearing Walls and Partitions Exterior walls	N/A	0	N/A	-	-		
North	N/A	0	N/A	-	-		
East	N/A	0	N/A	-	-		
West	N/A	0	N/A	-	-		
South	N/A	0	N/A	-	-		
Interior walls and partitions		0	N/A	-	-		
Floor Construction Including supporting beams and joists	N/A	2	2	N/A	-		
Roof Construction Including supporting beams and joists	N/A	1	N/A	N/A	-		
Shaft Enclosures - Exit	N/A	2	2	N/A	-		
Shaft Enclosures - Other	N/A	N/A	N/A	-	-		
Corridor Separation	N/A	N/A	N/A	-	-		
Occupancy Separation	N/A	N/A	N/A	-	-		
Party/Fire Wall Separation	N/A	N/A	N/A	N/A	-		
Smoke Barrier Separation	N/A	1	1	A0.5	U465		
Tenant Separation	N/A	NA	N/A				
Incidental Use Separation	N/A	N/A	N/A				

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm: ☐ No ☒ Yes
Smoke Detection Systems: ☐ No ☒ Yes ☐ Partial ______
Panic Hardware: ☐ No ☒ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: A0.4
☒ Fire and/or smoke rated wall locations (Chapter 7)
☒ Assumed and real property line locations
2012 NC Administrative Code and Policies

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (I_W) 1.15; Snow (I_S) 1.20; Seismic (I_E) 1.50
Live Loads: Roof 20 psf; Mezzanine N/A psf; Floor 100 psf
Ground Snow Load: 10 psf
Wind Load: Basic Wind Speed 95 mph (ASCE-7); Exposure Category B; Wind Base Shears (for MWFRS) V_x = N/A, V_y = N/A

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☒ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☒ III ☐ IV
Spectral Response Acceleration S_S 0.316 %g S_1 0.124 %g
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F
[illegible] Source: ☐ Field [illegible] ☐ Presumptive ☒ Historical Data
Basic structural sys[illegible]**check**[illegible]
☐ Bearing[illegible] ☐ Dual[illegible] Moment Frame
☒ Building[illegible] ☐ Du[illegible]diate R/C or Special Steel
☐ Moment[illegible] ☐ In[illegible]m
Seismic base shear: V_x = [illegible] V_y = [illegible]
Analysis Procedure[illegible] ☐ [illegible] ☒ Equiv[illegible] Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☒ Yes ☐ No

NA

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☒

SOIL BEARING CAPACITIES: NA
Field Test (provide copy of test report) - N/A
Presumptive Bearing capacity
Pile size, type, and capacity

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☒ No

PLUMBING FIXTURE REQUIREMENTS
2012 NC Administrative Code and Policies

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Climate Zone: ☒ 3 ☐ 4 ☐ 5

Method of Compliance:
☐ Prescriptive (Energy Code)
☐ Performance (Energy Code)
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly)
Description of assembly: Gyp. Bd., Metal Trusses, Sheathing and Shingles
U-Value of total assembly: 0.025
R-Value of insulation: 34.38
Skylights in each assembly: NA
U-Value of skylight: NA
total square footage o[illegible]lights in[illegible]h assemb[illegible] NA

Exterior Walls (each assembl[illegible]
Description of assemb[illegible] [illegible] Me[illegible]stud, [illegible]y-Foam Insulation, Sheathing, Ridged [illegible]on a[illegible]
U-Value of total asse[illegible] 0[illegible]
R-Value of insulation: 38[illegible]
Openings (windows or doors with glazing)
U-Value of assembly: .32
Solar heat gain coefficient: .21
projection factor: .17
Door R-Values: 3.7

NA

Walls below grade (each assembly)
Description of assembly: NA
U-Value of total assembly: ______
R-Value of insulation: ______

Floors over unconditioned space (each assembly)
Description of assembly: NA
U-Value of total assembly: ______
R-Value of insulation: ______

Floors slab on grade
Description of assembly: Concrete Slab on Grade w/ Perimeter Ridged Insulation
U-Value of total assembly: NA
R-Value of insulation: R-10
Horizontal/vertical requirement: 24"
slab heated: NA

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ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type): See Light Fixture Schedule sheet E0.0
lamp type required in fixture: See Light Fixture Schedule sheet E0.0
number of lamps in fixture: See Light Fixture Schedule sheet E0.0
ballast type used in the fixture: See Light Fixture Schedule sheet E0.0
number of ballasts in fixture: See Light Fixture Schedule sheet E0.0
total wattage per fixture: See Light Fixture Schedule sheet E0.0
total interior wattage specified vs. allowed :
total exterior wattage s[illegible]fied vs. [illegible]wed:

Additional Prescriptive Comp[illegible]
☐ 506.2.1 More Effici[illegible] M[illegible] Equip[illegible]
☐ 506.2.2 Reduced Li[illegible]ng [illegible]ensity
☐ 506.2.3 Energy Rec[illegible]y Ve[illegible]n S[illegible]
☐ 506.2.4 Higher Effi[illegible]cy Serv[illegible] Wa[illegible]eating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

NA

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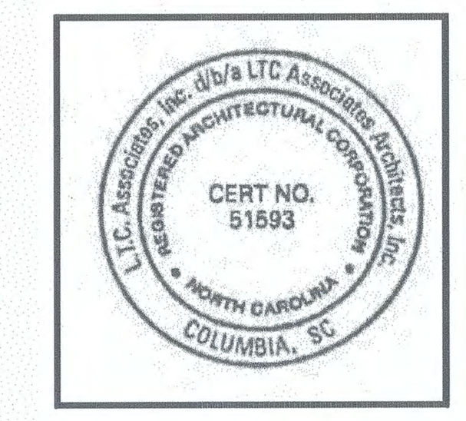
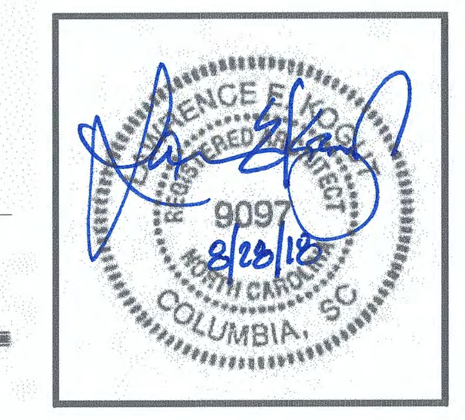




PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

CODE REVIEW SHEET

REVISIONS		
No.	Description	Date

JOB NUMBER:

A0.1

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:32:35 PM

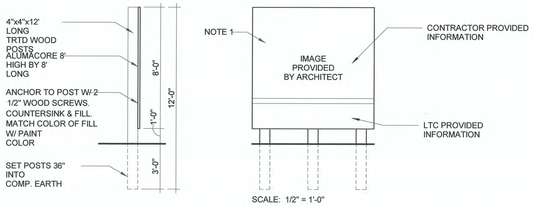
GENERAL NOTES

1. NOTIFY THE ARCHITECT IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT ARE CONTRARY TO THOSE REPRESENTED WITHIN THE DRAWINGS
2. NEW WORK SHALL ALIGN WITH AND MATCH EXISTING WORK EXCEPT WHERE OTHERWISE DIMENSIONED OR DETAILED.
3. ALL NEW VERTICAL AND HORIZONTAL DUCTS, PIPES, CONDUITS, ETC. (WHETHER SHOWN OR NOT) IN FINISHED ROOMS OR AREAS THROUGH OUT BUILDING, NOT CONCEALED, SHALL BE FURRED IN, AND FINISHED TO MATCH ROOM FINISH.
4. ALL NEW PARTITIONS, UNLESS OTHERWISE SHOWN OR DETAILED, SHALL BE METAL STUDS OF THICKNESS TO ADEQUATELY COVER PIPING, CONDUITS, ETC.
5. PROVIDE AN EDGE STRIP, AS DETAILED, UNDER ALL DOORS WHERE NEW OR EXISTING FINISHES AND ADJACENT FLOOR ARE AT DIFFERENT LEVELS AND WHERE ADJACENT FLOOR FINISHES ARE OF DIFFERENT MATERIALS. SEE DETAIL 6/A0.3.
6. EXISTING DOORS, WHICH SWING INTO ROOMS WHERE NEW FLOOR FINISH IS ABOVE ADJACENT FLOORS, SHALL BE CUT OFF AT BOTTOM TO CLEAR NEW FINISHED FLOOR. DOOR BOTTOM SHALL BE SEALED AND FINISHED TO MATCH EXISTING FINISH.
7. OFFSET ALL DOORS 6" FROM ADJACENT WALLS UNLESS OTHERWISE NOTED.
8. NEW TILE FINISHES APPLIED TO EXISTING WALLS AND PARTITIONS SHALL BE APPLIED DIRECTLY TO PLASTER OR GYP.BD. WALLS BY THE THIN SET METHOD. NEW PARTITIONS AND CLOSURES OF OPENINGS IN ROOMS HAVING TILE BASE AND/OR TILE WAINSCOT SHALL BE FINISHED WITH TILE TO MATCH EXISTING. WHEN TILE CANNOT BE MATCHED, FURNISH ARCHITECT WITH SAMPLES OF EXISTING TILE TO PERMIT SELECTION OF SUBSTITUTE TILE.
9. PROVIDE ACCESS PANELS, 24" X 24", OR OF SIZES REQUIRED, WHERE PLUMBING AND HEATING VALVES, WATER SWITCHES, OXYGEN PRESSURE SWITCHES, VENTILATION SPLITTER DAMPERS, ETC. ARE SHOWN ON PLUMBING, HEATING, AND VENTILATION DRAWINGS. SUCH ACCESS PANELS TO BE INSTALLED IN THE FOLLOWING:
   (A) SUSPENDED PLASTER OR GYPSUM WALLBOARD CEILINGS
   (B) METAL STUD OR MASONRY PARTITIONS
10. WHEREVER EXISTING EQUIPMENT, PIPING, DUCTS, ETC. ARE REQUIRED TO BE REMOVED, SUCH REMOVAL SHALL INCLUDE ALL ANCHORS, HANGERS, FOUNDATIONS ETC. AFTER REMOVAL, FLOORS, WALLS AND CEILINGS SHALL BE FINISHED TO MATCH ADJOINING SURFACES OR AS INDICATED ON ROOM FINISH SCHEDULE.
11. WALL ASSEMBLIES SHALL BE MAINTAINED AT ALL RECESSED FIRE EXTINGUISHER CABINETS AND ALL RECESSED EQUIPMENT.
12. WHERE PAINT IS CALLED FOR ON WALLS IN RENOVATED ROOMS IN THE EXISTING BUILDING, ALL WALLS ARE TO BE PAINTED.
13. WHERE NO PAINT IS INDICATED IN AREAS WHERE PATCHING IS REQUIRED, NEW WORK IS TO BE PAINTED TO MATCH EXISTING ADJOINING SURFACES.
14. WHERE THE ROOM FINISH SCHEDULE CALLS FOR A NEW CEILING, THE EXISTING CEILING AND SUSPENSION SYSTEM IS TO BE COMPLETELY REMOVED.
15. PROVIDE FIRE EXTINGUISHING CABINETS OF THE TYPE SPECIFIED. REFER TO FLOOR PLANS (A2.0) FOR LOCATIONS.
16. WHERE THE ROOM FINISH SCHEDULE FOR EXISTING CONSTRUCTION CALLS FOR A NEW MATERIAL, THE ENTIRE ROOM IS TO RECEIVE THE NEW MATERIAL. WHERE THE ROOM FINISH SCHEDULE CALLS FOR BOTH PATCHING AND A NEW MATERIAL, THE NEW MATERIAL IS LIMITED TO AREAS OF NEW CONSTRUCTION WITHIN THAT ROOM ONLY.
17. SUPPLY BLOCKING AT ALL WALL HUNG EQUIPMENT (I.E.. GRAB BARS, CASEWORK MEDICAL EQUIPMENT. ETC.)
18. WHERE A NEW DOOR, VIEW WINDOW OR OPENING IS CUT THROUGH AN EXISTING MASONRY WALL, PROVIDE A LOOSE LINTEL AS REQUIRED ON THE LOOSE LINTEL SCHEDULE INDICATED ON THE STRUCTURAL DRAWINGS.
19. ALL DIMENSIONS SHOWN IN RENOVATED AREAS ARE TO BE VERIFIED IN THE FIELD BEFORE PROCEEDING WITH WORK.
20. IN ALL ROOMS BELOW AREAS WHICH RECEIVE UNDER FLOOR SERVICES, REMOVE A PORTION OF EXISTING CEILING AS REQUIRED. PATCH FINISHES TO MATCH EXISTING OR AS INDICATED ON ROOM FINISH SCHEDULE.
21. WHERE THE ROOM FINISH SCHEDULE CALLS FOR A ROOM TO BE PAINTED AND THAT ROOM CONTAINS WALL PAPER AND/OR VINYL CHAIR RAILS, THESE SHALL BE COMPLETELY REMOVED FROM WALLS AND ANY HOLES OR BUMPS SHALL BE FILLED OR SANDED SMOOTH BEFORE APPLYING NEW COAT OF PAINT.
22. ALL SHAFT PARTITIONS EXTEND FROM FLOOR SLAB TO UNDERSIDE OF SLAB ABOVE. EXPOSED BEAMS WITHIN SHAFTS ARE TO BE FIREPROOFED WITH 2-HOUR GYP.BD. ENCLOSURE.
23. THE FIRE RATINGS OF ALL FIRE RATED WALLS SHALL BE STENCILED ABOVE CEILINGS, EACH SIDE OF WALL, BOTH SIDES OF CORRIDORS AND AS REQ'D BY IBC.

JOB SIGN DETAILS

NOTE NO. 1:
EXACT LAYOUT, FONTS, SIZE OF ARCHITECT'S LOGO TO BE PROVIDED TO THE GC BY THE ARCHITECT (LTC).

GRAPHIC IMAGES WILL BE PROVIDED BY ARCHITECT. ALLOW $1,500.00 FOR PURCHASE OF SIGNAGE. INSTALLATION BY GENERAL CONTRACTOR.



SCALE: 1/2" = 1'-0"

LIST OF SHEETS

ARCHITECTURAL

A0.0	COVER SHEET
A0.1	CODE REVIEW SHEET
A0.2	PROJECT INFORMATION SHEET
A0.3	PROJECT STANDARD SHEET
A0.4	LIFE SAFETY PLAN
A0.5	U.L. RATING DETAILS
A1.0	FIRST FLOOR DEMOLITION FLOOR PLAN
A2.1	FIRST FLOOR PLAN
A7.1	REFLECTED CEILING PLAN
A7.2	CEILING SEISMIC DETAILS

STRUCTURAL

NA

MECHANICAL

M0.1	MECHANICAL SYMBOLS AND ABBREVIATIONS
M1.1	PARTIAL FIRST FLOOR DEMOLITION PLANS - MECHANICAL
M2.1	PARTIAL FIRST FLOOR PLANS - MECHANICAL
M3.1	PARTIAL SECOND FLOOR/ROOF PLAN - MECHANICAL
M6.1	MECHANICALCONTROL DIAGRAMS
M7.1	MECHANICAL DETAILS
M7.2	MECHANICAL DETAILS
M7.3	MECHANICAL DETAILS
M8.1	MECHANICAL SCHEDULES

PLUMBING

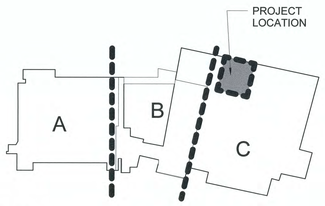
P0.1	PLUMBING SYMBOLS, ABBREVIATIONS, SCHEDULES AND RISER DIAGRAMS
P1.1	PARTIAL FIRST FLOOR DEMOLITION PLANS - PLUMBING
P2.1	PARTIAL FIRST FLOOR PLANS AND DETAILS - PLUMBING

FIRE PROTECTION

F0.1	FIRE PROTECTION SYMBOLS, ABBREVIATIONS AND DETAILS
F2.1	PARTIAL FIRST FLOOR PLAN - FIRE PROTECTION

ELECTRICAL

E0.1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E1.1	PARTIAL FIRST FLOOR DEMOLITION PLANS - ELECTRICAL
E2.1	PARTIAL FIRST FLOOR PLANS - ELECTRICAL
E3.1	PARTIAL SECOND FLOOR/ROOF PLAN - POWER
E5.1	OVERALL FLOOR PLAN
E6.1	PARTIAL ELECTRICAL RISER
E7.1	ELECTRICAL DETAILS

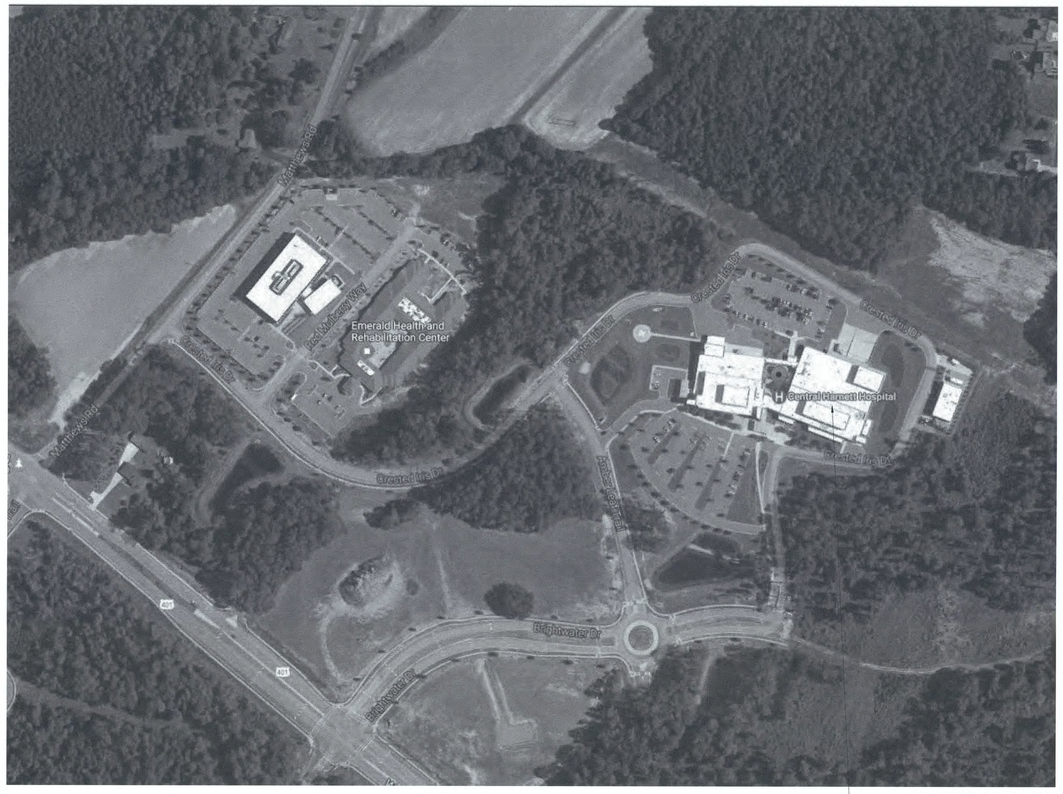


PROJECT NORTH

KEY PLAN

VICINITY MAP

CAMPUS MAP



LTC ASSOCIATES ARCHITECTS
1213 LADY ST. SUITE 400
COLUMBIA, SC 29201
803 254 9082 VOX
www.LTCarch.com

CERT NO. 51593

PROFESSIONAL ENGINEER 9097 8/28/18 NORTH CAROLINA COLUMBIA, SC

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
PROJECT INFORMATION SHEET

REVISIONS

No.	Description	Date

JOB NUMBER: 18026

A0.2

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:24:24 PM

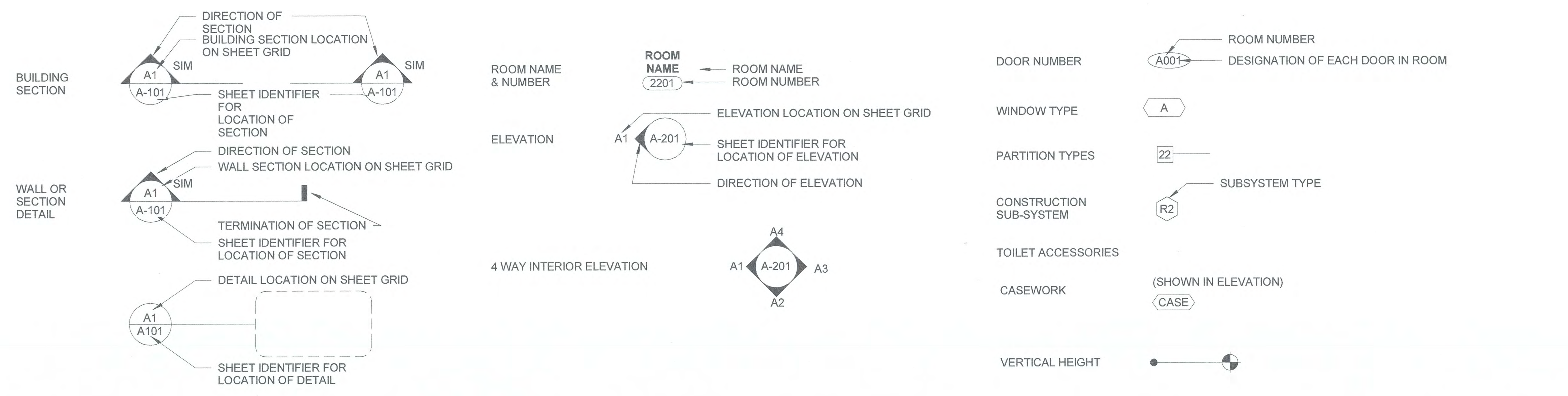
(U.N.O. SEE SHEET LEGENDS NOT ALL MATERIALS APPLICABLE)

PLAN AND SECTION

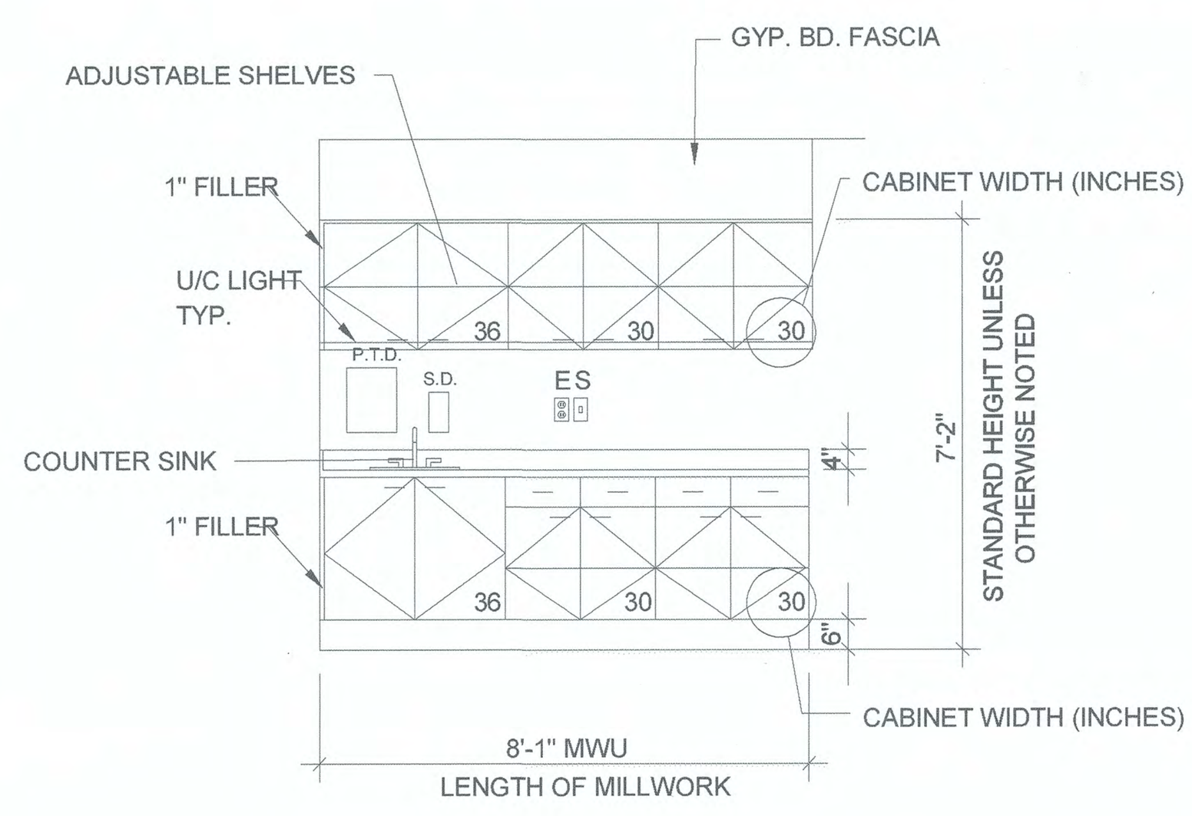
- EARTH
- POROUS FILL (STONE OR GRAVEL)
- LIGHTWEIGHT CONCRETE (OR CONCRETE FILL)
- STRUCTURAL CONCRETE (CAST IN PLACE, ETC.)
- BRICK (COMMON OR FACE)
- CONC. MASONRY UNITS (C.M.U.)
- PLASTER, CEMENT, SAND, GROUT
- STEEL, IRON
- ALUMINUM
- WOOD (FINISH)
- WOOD (ROUGH)
- WOOD BLOCKING
- PLYWOOD
- SPRAY-ON FIREPROOFING
- BATT/LOOSE FILL INSULATION
- RIGID INSULATION
- GYPSUM WALLBOARD

ELEVATION

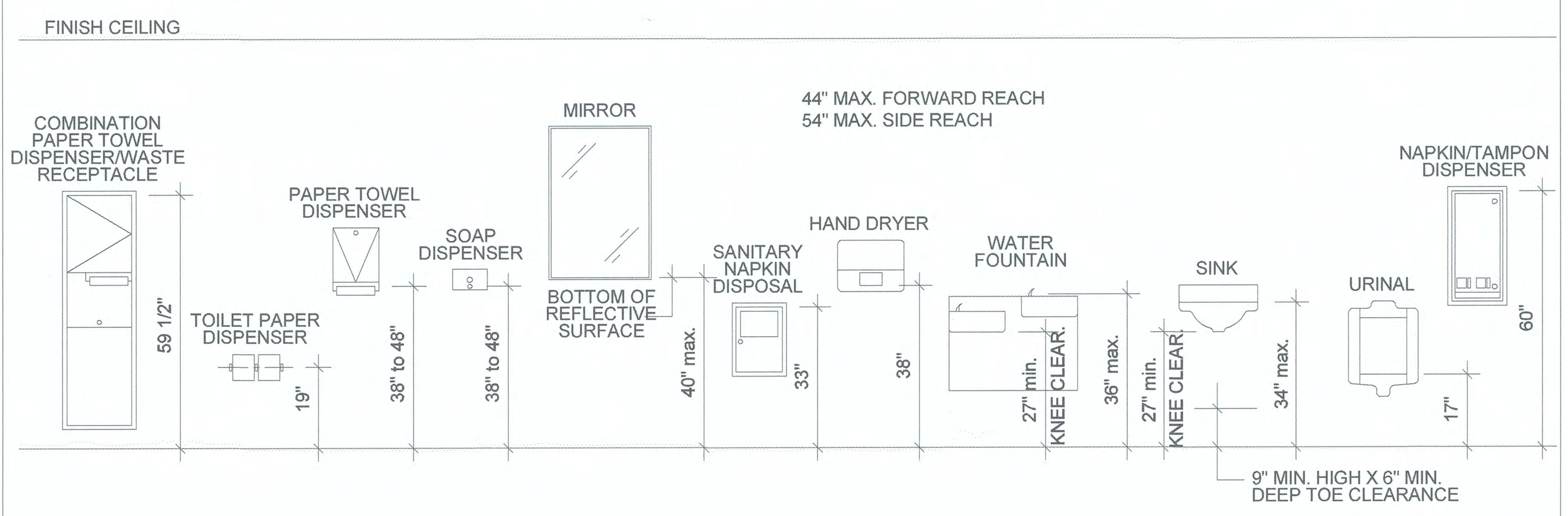
- BRICK
- CERAMIC TILE
- CONCRETE / PLASTER / STUCCO



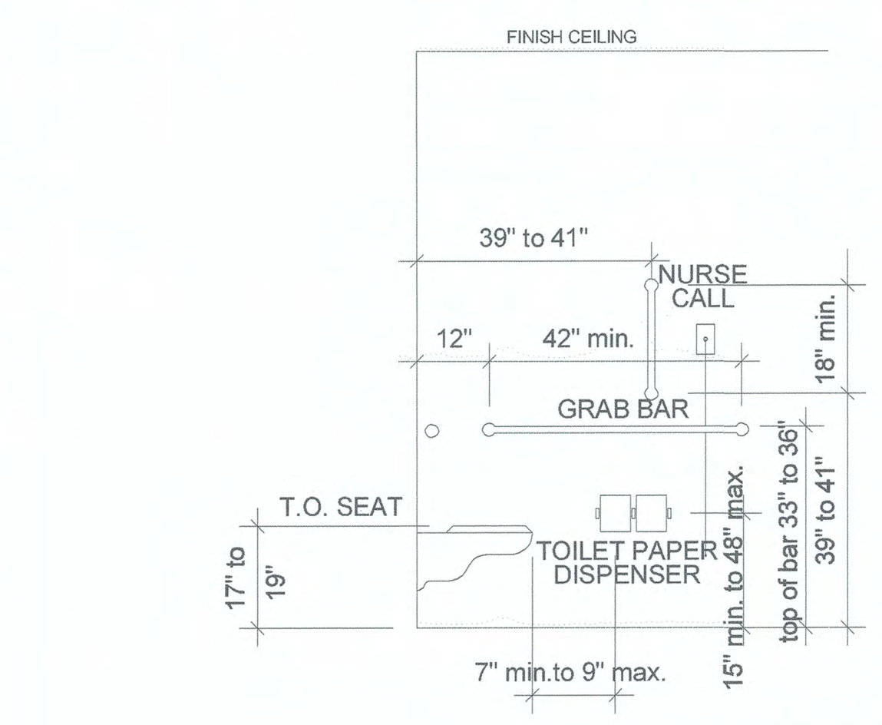
A/C	AIR CONDITION(ING)	FT	FOOT, FEET	PRKG	PARKING
ADMIN	ADMINISTRATION	FTG	FOOTING	PSF	POUNDS PER SQUARE FOOT
AFF	ABOVE FINISHED FLOOR	FURN	FURNISH, FURNITURE	PSI	POUNDS PER SQUARE INCH
ALT	ALTERNATE	FV	FIELD VERIFY	PT	PAINT, POST-TENSIONED, PRE-TREATED
ALUM	ALUMINUM	GA	GAGE		
APPROX	APPROXIMATE(LY)	GALV	GALVANIZED	PVC	POLYVINYL CHLORIDE (PLASTIC)
ARCH	ARCHITECT(URAL)	GC	GENERAL CONTRACTOR	QTR	QUARTER
AUTO	AUTOMATIC	GYP BD	GYPSUM BOARD	QTY	QUANTITY
AUX	AUXILIARY	GYP PLAS	GYPSUM PLASTER	R	RADIUS, RISER
AV	AUDIOVISUAL	HC	HANDICAP	RCP	REFLECTED CEILING PLAN
BITUM	BITUMINOUS	HD	HEAVY DUTY	RD	ROOF DRAIN
BL	BUILDING LINE	HDWD	HARDWOOD	REF	REFRIGERATOR, REFERENCE
BLDG	BUILDING	HDWR	HARDWARE	REQD	REQUIRED
BOS	BOTTOM OF STEEL	HM	HOLLOW METAL	RL	ROOF LEADER
BOT	BOTTOM	HORIZ	HORIZONTAL	RM	ROOM
CAB	CABINET	HT	HEIGHT	RO	ROUGH OPENING
CJ	CONTROL JOINT	HVAC	HEATING, VENTILATION & AIR CONDITIONING	ROW	RIGHT OF WAY
CL	CENTER LINE			S	SOUTH
CLG	CEILING	ID	INSIDE DIAMETER	SC	SOLID CORE
CLG HT	CEILING HEIGHT	INCL	INCLUDE(D), (ING)	SD	STORM DRAIN
CLO	CLOSET	INFO	INFORMATION	SECT	SECTION
CLR	CLEAR(ANCE)	INSUL	INSULATION	SF	SQUARE FEET
CMU	CONCRETE MASONRY UNIT	INT	INTERIOR	SIM	SIMILAR
COL	COLUMN	JAN CLO	JANITOR CLOSET	SPEC	SPECIFICATION
CONC	CONCRETE	KIT	KITCHEN	SPKR	SPEAKER
CONF	CONFERENCE	KO	KNOCKOUT	SQ	SQUARE
CONT	CONTINUE. CONTINUOUS	LAB	LABORATORY	SS	STAINLESS STEEL
CORR	CORRIDOR	LAM	LAMINATE	STD	STANDARD
CU FT	CUBIC FOOT	LAU	LAUNDRY	STOR	STORAGE
CU YD	CUBIC YARD	LAV	LAVATORY	SUSP	SUSPENDED
DEMO	DEMOLISH	LF	LINEAR FEET	SYS	SYSTEM
DEPT	DEPARTMENT	LVR	LOUVER	T	TREAD
DET	DETAIL	MAINT	MAINTENANCE	TEL	TELEPHONE
DF	DRINKING FOUNTAIN	MATL	MATERIAL	TEMP	TEMPORARY
DIA	DIAMETER	MAX	MAXIMUM	TFF	TOP OF FINISH FLOOR
DIAG	DIAGONAL	MECH	MECHANICAL	THK	THICKNESS
DIM	DIMENSION	MEZZ	MEZZANINE	THRU	THROUGH
DIV	DIVISION	MFG	MANUFACTURING	TO	TOP OF
DS	DOWNSPOUT	MFR	MANUFACTURER	TOB	TOP OF BEAM
E	EAST	MIN	MINIMUM	TOC	TOP OF CONCRETE, CURB
EA	EACH	MISC	MISCELLANEOUS	TOF	TOP OF FOOTING
EIFS	EXTERIOR INSULATION & FINISH SYSTEM	MO	MASONRY OPENING	TOJ	TOP OF JOIST
		MR	MOISTURE RESISTANT	TOM	TOP OF MASONRY
EJ	EXPANSION JOINT	MTD	MOUNTED	TOP	TOP OF PARAPET
EL	ELEVATION	MTG	MOUNTING	TOS	TOP OF SLAB
ELEC	ELECTRIC(AL)	MTL	METAL	TOW	TOP OF WALL
ELEV	ELEVATOR	N	NORTH	TRTD	TREATED
ENCL	ENCLOSE(D)	NIC	NOT IN CONTRACT	TV	TELEVISION
EOS	EDGE OF SLAB	NOM	NOMINAL	TYP	TYPICAL
EQ	EQUAL	NON COMB	NON-COMBUSTIBLE	UL	UNDERWRITERS LABORATORIES
EQUIP	EQUIPMENT				
EWC	ELECTRIC WATER COOLER	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
EXIST	EXISTING	OC	ON CENTER	VERT	VERTICAL
EXP JT	EXPANSION JOINT	OD	OUTSIDE DIAMETER	VEST	VESTIBULE
EXT	EXTERIOR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	VIF	VERIFY IN FIELD
F/F	FACE TO FACE			W	WEST, WIDE
FD	FLOOR DRAIN	OFOI	OWNER FURNISHED OWNER INSTALLED	W/	WITH
FE	FIRE EXTINGUISHER			W/O	WITHOUT
FEC	FIRE EXTINGUISHER CABINET	OPP	OPPOSITE	W/W	WALL TO WALL
FF EL	FINISH FLOOR ELEVATION	OPT	OPTION(AL)	WC	WATER CLOSET
FHC	FIRE HOSE CABINET	PCF	POUNDS PER CUBIC FEET	WD	WOOD
FIN FLR	FINISHED FLOOR	PLAM	PLASTIC LAMINATE	WP	WORKING POINT, WATERPROOFING
FLR	FLOOR, FILLER	PLF	POUNDS PER LINEAR FEET		
FOC	FACE OF CURB	PLYWD	PLYWOOD	WR	WATER REPELLENT
FOF	FACE OF FINISH	PNL	PANEL	WT	WEIGHT
FOM	FACE OF MASONRY	PR	PAIR	WWF	WELDED WIRE FABRIC
FOS	FACE OF SLAB, FACE OF STUD	PREFAB	PREFABRICATED	YD	YARD
FOW	FACE OF WALL	PREFIN	PREFINISH		



3 INTERIOR ELEVATION CONVENTIONS
N.T.S.

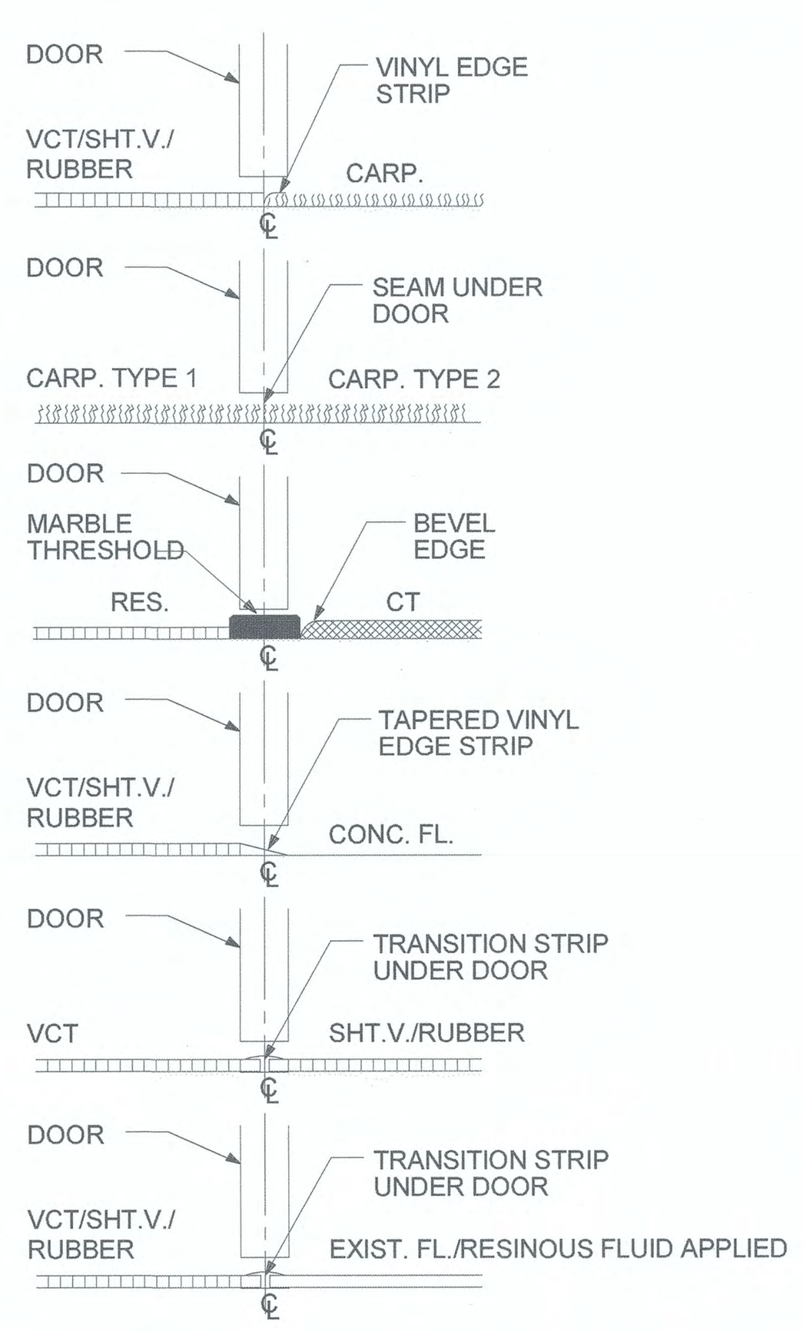


4 BARRIER-FREE FIXTURE MOUNTING HEIGHTS
3/8" = 1'-0"



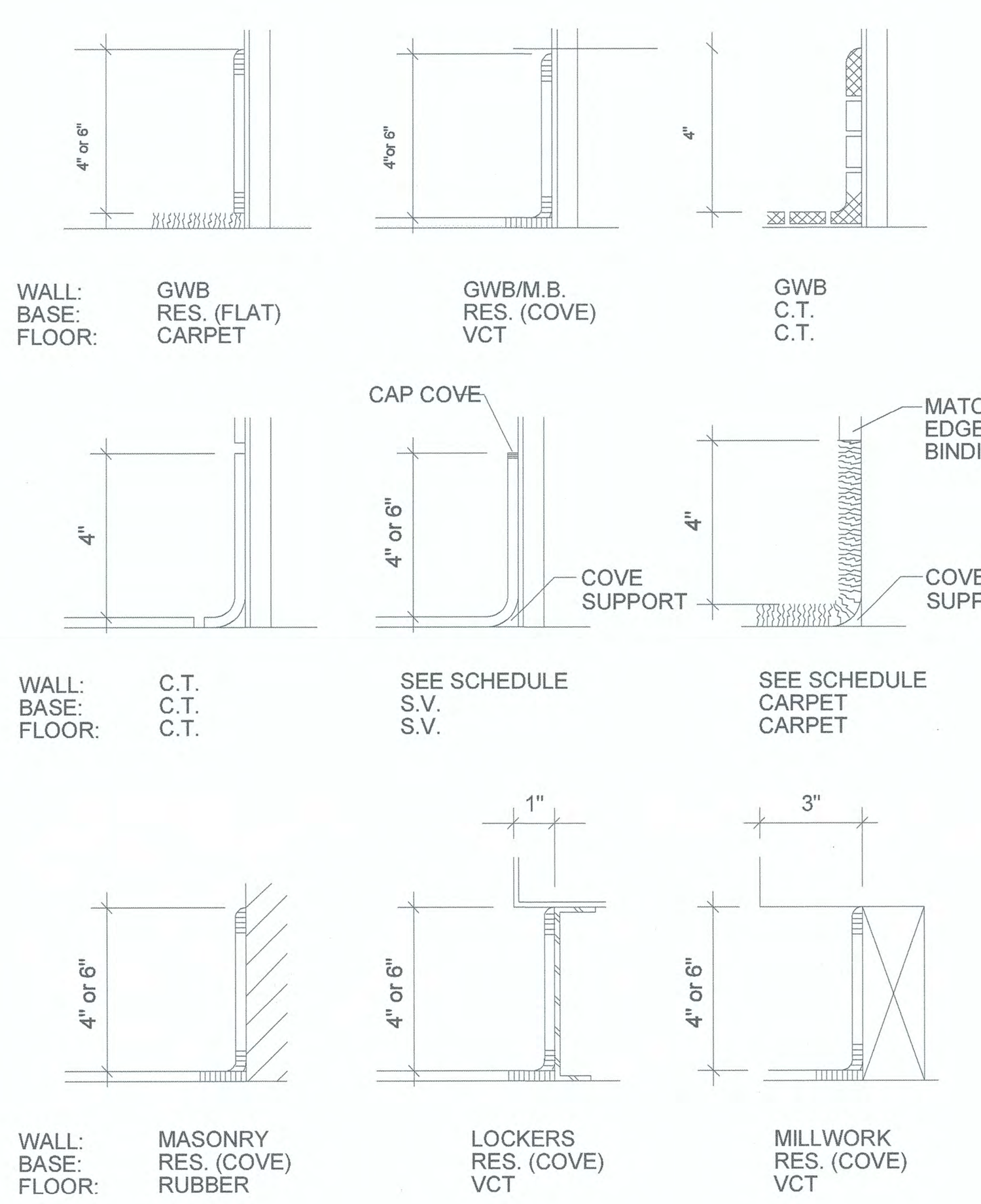
NOTE: GRAB BARS TO BE ON BOTH SIDE WALLS OF TOILET PART. OF 36" WIDE., TOILET PART. GREATER THAN 36", GRAB BAR TO APPEAR ON BACK 36" MIN. WIDE AND SIDE AS INDICATED.

5 BARRIER-FREE WATER CLOSET MOUNTING HEIGHTS
3/8" = 1'-0"



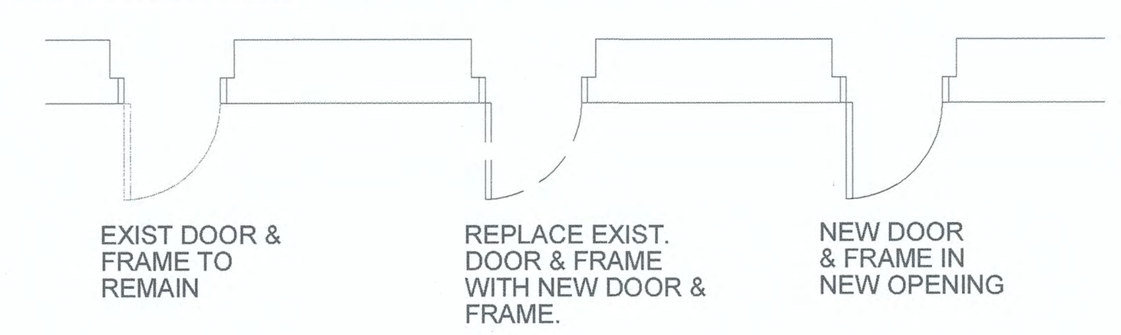
NOTE: CENTER SEAMS AND/OR VINYL EDGE STRIPS UNDER DOOR UNLESS OTHERWISE NOTED.

6 FLOOR DIVISION DETAILS
N.T.S.



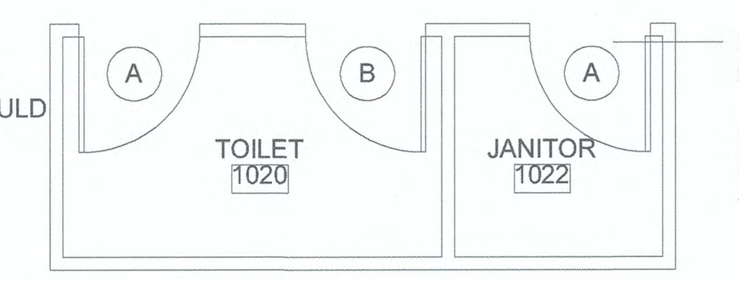
7 TYPICAL BASE DETAILS
N.T.S.

DOOR & FRAME PLAN SYMBOLS



DOOR NUMBERING LEGEND

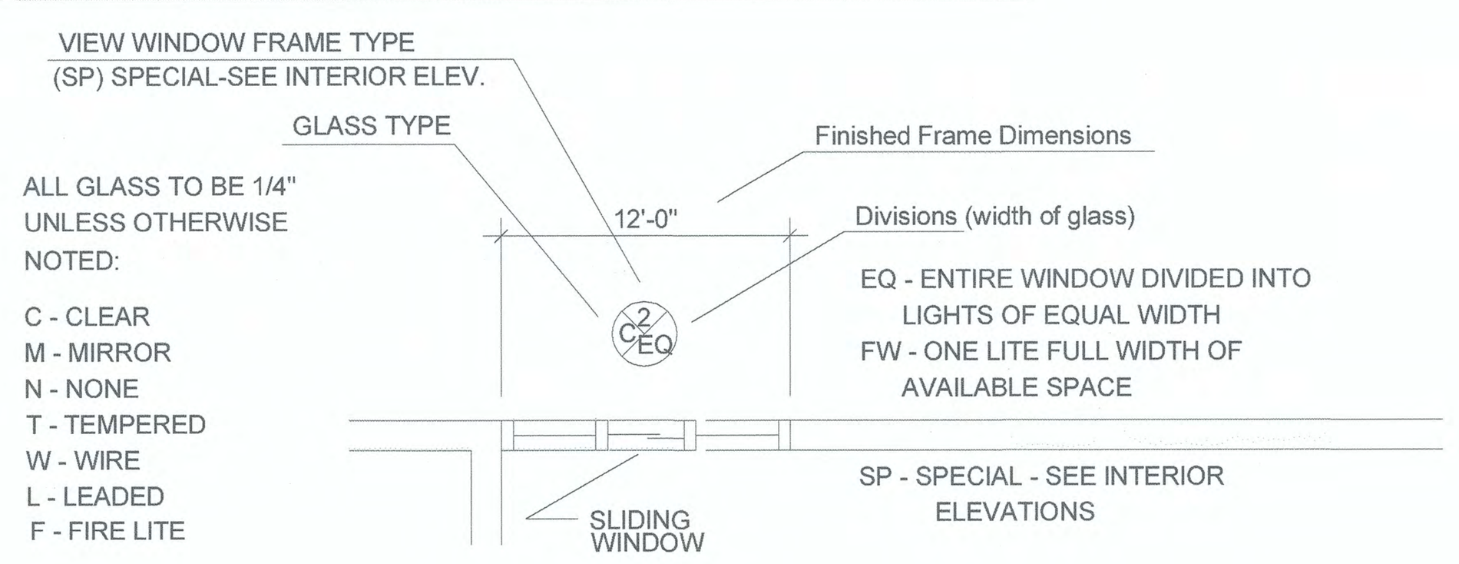
ROOMS WITH MULTIPLE DOORS HAVE "A", "B", ETC. DESIGNATIONS DOORS SHOWN AT THE RIGHT WOULD BE SCHEDULED AS "1020A" AND "1020B", RELATED TO THE ROOM WHERE (A) AND (B) ARE SHOWN.



ROOMS WITH ONLY ONE DOOR HAVE "A" DESIGNATION.

RELATED TO THE ROOM NUMBER WHERE (A) IS SHOWN.

VIEW WINDOW SYMBOLS (ON PLANS)



ALL GLASS TO BE 1/4" UNLESS OTHERWISE NOTED:

C - CLEAR
M - MIRROR
N - NONE
T - TEMPERED
W - WIRE
L - LEADED
F - FIRE LITE

EQ - ENTIRE WINDOW DIVIDED INTO LIGHTS OF EQUAL WIDTH
FW - ONE LITE FULL WIDTH OF AVAILABLE SPACE

SP - SPECIAL - SEE INTERIOR ELEVATIONS

8 INTERIOR OPENING SYMBOLS DOORS & VIEW WINDOWS
N.T.S.

DENOTES GENERAL PROJECT AREA. SOME WORK MAY OCCUR OUTSIDE PROJECT AREA AS IT IS INDICATED ON FLOOR PLAN.

EXISTING PARTITION TO REMAIN

EXISTING PARTITION TO BE REMOVED. REFER TO NOTE INDICATED FOR INSTRUCTIONS (ON DEMOLITION PLAN).

PARTITION:

LEAD LINED PARTITION. NOTE : NUMBER TO INDICATE THICKNESS AND HEIGHT ON SCHEDULE.

SMOKE TIGHT PARTITION (BUT NOT SMOKE RATED.)

1 HOUR FIRE RESISTIVE CONSTRUCTION

1 HOUR FIRE RESISTIVE CONSTRUCTION & SMOKE BARRIER

2 HOUR FIRE RESISTIVE CONSTRUCTION

2 HOUR FIRE RESISTIVE CONSTRUCTION & SMOKE BARRIER

4 HOUR FIRE RESISTIVE CONSTRUCTION

HOUR RATING

FIRE RATING

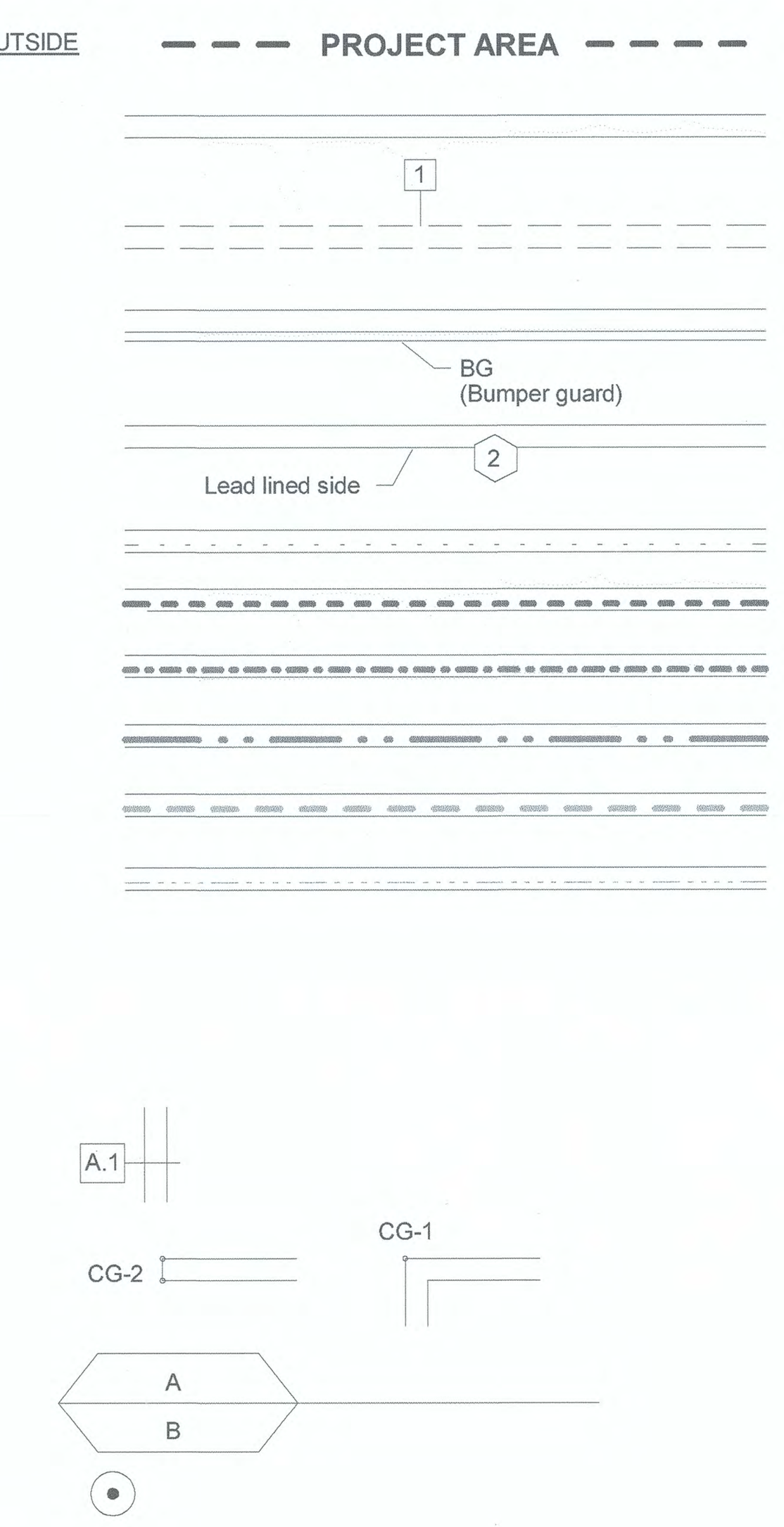
FIRE / SMOKE RATING

PARTITION TYPE (SEE PARTITION SCHEDULE DWG. A2.1)

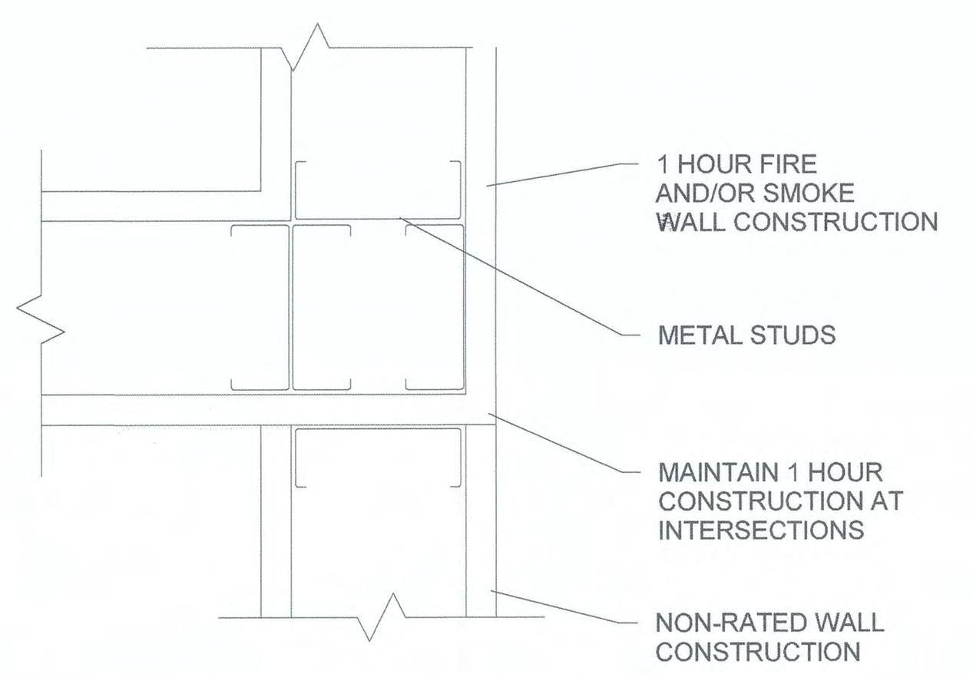
CORNER GUARD

MATCH LINE

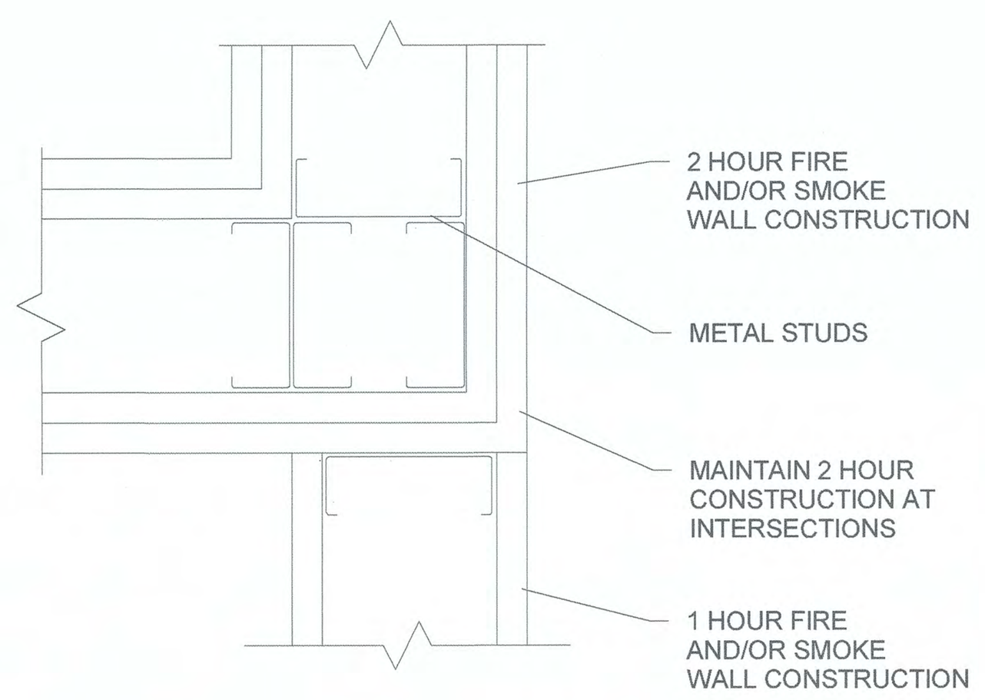
FIRE EXTINGUISHER



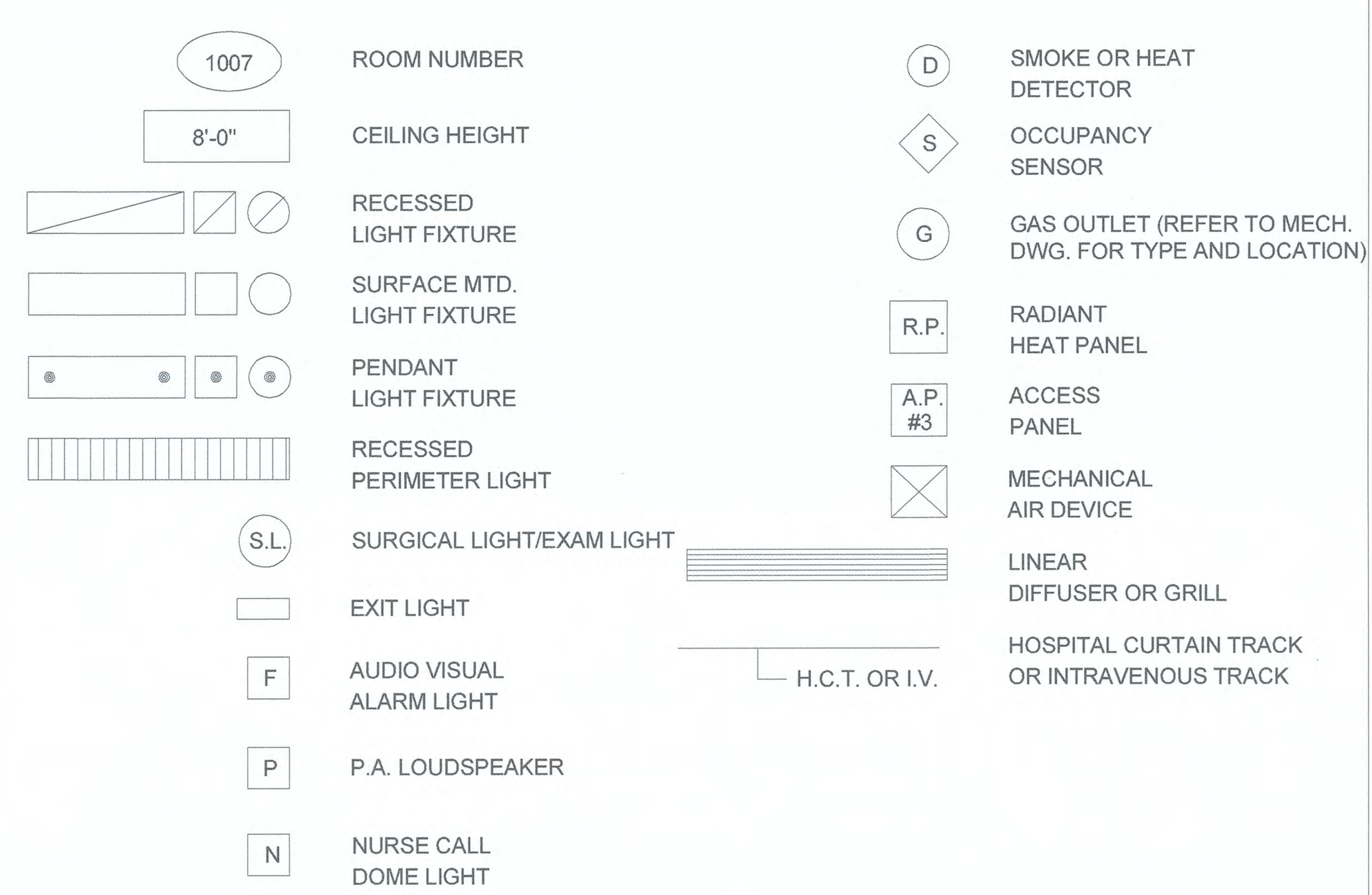
9 PARTITION SYMBOLS



12 DETAIL AT INTERSECTION OF A 1 HOUR AND A NON-RATED WALL
3"=1'-0"

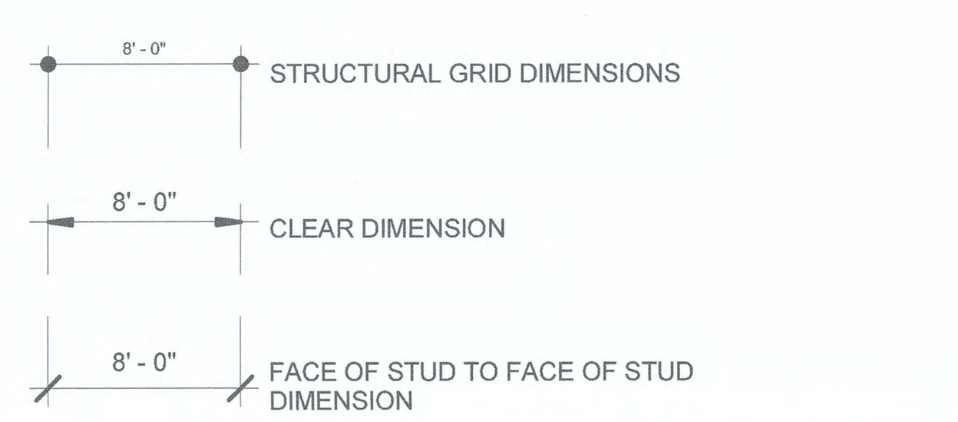


13 DETAIL AT INTERSECTION OF A 2 HOUR AND A 1HOUR/NON-RATED WALL
3"=1'-0"



14 REFLECTED CEILING PLAN SYMBOLS

DIMENSIONING INFORMATION



LTC ASSOCIATES ARCHITECTS

1213 LADY ST. SUITE 400
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CERT NO. 51593
COLUMBIA, SC

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
PROJECT STANDARD SHEET

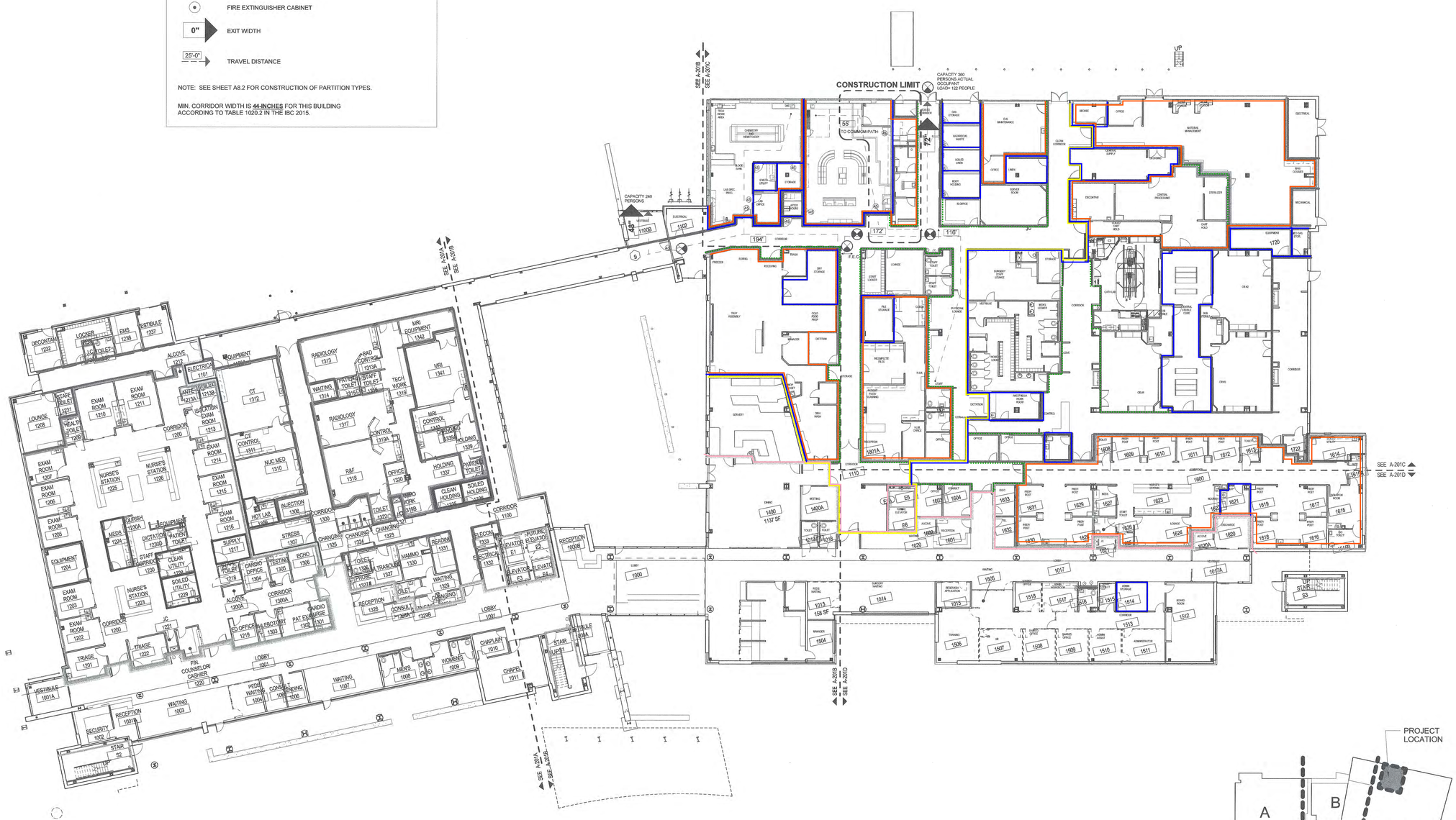
REVISIONS		
No.	Description	Date

JOB NUMBER: 18020

A0.3

DATE: 27 AUGUST, 2018

8/27/2018 4:24:31 PM
Plot Date



LIFE SAFETY LEGEND

▬	SUITE DESIGNATION
▬	LIMIT TRANSFER OF SMOKE (NO FIRE RISTANCE RATING)
▬	SMOK BARRIER W/ ONE HOUR MIN. FIRE RATED BARRIER
▬	ONE HOUR FIRE BARRIER
▬	TWO HOUR FIRE BARRIER
▬	SMOKE BARRIER W/ TWO HOUR FIRE RATED BARRIER
(45)	45 MINUTE RATED DOOR ASSEMBLY
(90)	90 MINUTE RATED DOOR ASSEMBLY
△ XXX	NO. OF PEOPLE EXITING AT THAT LOCATION
FEC	FIRE EXTINGUISHER CABINET W/FIRE EXTINGUISHER
⊗	EXIT SIGN W/ DIRECTION AND ARROWS (IF NECESSARY)
⊙	FIRE EXTINGUISHER CABINET
0" ▶	EXIT WIDTH
25'-0" →	TRAVEL DISTANCE

NOTE: SEE SHEET A8.2 FOR CONSTRUCTION OF PARTITION TYPES.

MIN. CORRIDOR WIDTH IS **44-INCHES** FOR THIS BUILDING ACCORDING TO TABLE 1020.2 IN THE IBC 2015.

GENERAL NOTES

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL COMPLY WITH THE BUILDING CODE AND NFPA.
2. PENETRATIONS SHALL BE FIRE STOPPED WITH 3M BRAND FIRE BARRIER PRODUCTS AS REQUIRED TO MAINTAIN FIRE RATINGS. INSTALL IN ACCORDANCE WITH UL ASSEMBLIES AND MANUFACTURER'S INSTRUCTIONS FOR THEIR USE.
3. CONTRACTOR MAY USE OTHER UL LISTED FIRE STOP MATERIALS WHEN APPROVED IN WRITING BY THE ARCHITECT AND OWNER.
4. PROVIDE SHOP DRAWINGS FOR APPROVAL SHOWING PENETRATIONS, MATERIALS USED FOR FIRE RATING AND UL ASSEMBLY NO.
5. PROVIDE BLOCKING AT PARTITIONS AS REQUIRED FOR MOUNTING OF FURNISHED AND NON-FURNISHED WALL-MOUNTED ITEMS.
6. ALIGN FINISHED FACE OF CONTINUOUS PARTITIONS THAT CHANGE PARTITION TYPES ALONG A STRAIGHT RUN.
7. PROVIDE SUPPLEMENTAL FRAMING, INSULATION, AND FINISHED MATERIALS AS REQUIRED TO MAINTAIN PARTITION FIRE-RESISTANCE RATING AT RECESSED ITEMS.
8. REFER TO SHEET A2.1 FOR DOOR SCHEDULE AND DOOR TYPES.

1 FIRST LEVEL FLOOR LIFE SAFETY PLAN
1/16" = 1'-0"

PROJECT NORTH

KEY PLAN

LTC
ASSOCIATES
ARCHITECTS

1213 LADY ST. SUITE 400
COLUMBIA, SC 29201

803 254 9082 VOX
www.LTCarch.com

CERT NO.
51593

9097
8/28/18

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

LIFE SAFETY PLAN

REVISIONS		
No.	Description	Date

JOB NUMBER: 16026

A0.4

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:24:47 PM

one thirty second inch = one foot
one sixteenth inch = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

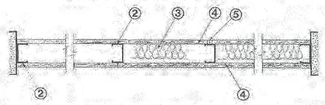
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U465

October 23, 2015

Nonbearing Wall Rating — 1 HR.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners** — (Not shown) — Channel shaped runners, 2-5/8 in. deep (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runners** — (Not shown) — As an alternate to Item 1, Channel shaped, min 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC max.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

1B. **Framing Members* - Floor and Ceiling Runners** — Not shown - In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max:

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

CRACO MFG INC — SmartTrack20™

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

PHILLIPS MFG CO L L C — Viper20™ Track

1C. **Floor and Ceiling Runners** — (Not shown) — For use with Item 2C- Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1D. **Framing Members* — Floor and Ceiling Runners** — Not shown - In lieu of Items 1 through 1C — For use with Item 2D and 4G only, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

TELLING INDUSTRIES L L C — Viper20™ Track

1J. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 - For use with Item 2L- Channel shaped, attached to floor and ceiling with fasteners 24 in. OC max.

BAILEY METAL PRODUCTS LTD — Type PLATINUM PLUS

2. **Steel Studs** — Channel shaped, 3-5/8 in. deep (min), formed from min No. 25 MSG galv steel spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

2A. **Framing Members* — Steel Studs** — As an alternate to Item 2 - Channel shaped studs, min 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

2B. **Framing Members* - Steel Studs** — Not shown - In lieu of Item 2 — For use with Item 1B, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

Item 1J, channel shaped, min 3-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/8 in 3/4 in. less than assembly height.

BAILEY METAL PRODUCTS LTD — Type PLATINUM PLUS

3. **Batts and Blankets*** — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

See **Batts and Blankets** (BZJZ) category for names of Classified companies.

3A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lbs/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lbs/ft^3, in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — INS738 & INS745 for use with wet or dry application. INS765LD and INS770LD are to be used for dry application only.

3B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

3C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL.

3D. **Batts and Blankets*** — For use with Item 8. Nom 3 in. thick, minimum 3.4 pcf mineral wool batts, friction fit between the studs and floor and ceiling runners.

See **Batts and Blankets** (BZJZ) category for names of manufacturers.

3E. **Batts and Blankets*** — For use with Item 4P. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A, LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types DAP, DAPC, DGG, DS.

THAI GYPSUM PRODUCTS PCL — Type X, Type C.

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX (Joint tape and compound, Item 3, optional for use with Type USGX).

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 3, optional for use with Type USGX).

3H. **Batts and Blankets*** — (As an alternate to Items 4 and 4A, and 4B - Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered or backed by steel framing.

USG MEXICO S A DE C V — Type ULX

4L. **Gypsum Board*** — (Not Shown) - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4M. **Gypsum Board*** — (For use with Item 8) - 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 8) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 8). Secured to outermost studs and floor and ceiling runners with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound.

AMERICAN GYPSUM CO — Type AG-C

alternate to Item 6, furring channel and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6f8a) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 8-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members** — (Optional, Not Shown)* - Furring channels and resilient sound isolation clip as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 4. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. **Steel Framing Members*** — Resilient sound isolation clip used to attach furring channels (Item 6Ca) to studs. Clips spaced 24 in. OC., and secured to studs with No. 10 x 2-1/2 in. course drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7. **Wall and Partition Facings and Accessories*** — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

1G. **Framing Members* — Floor and Ceiling Runners** — Not shown - In lieu of Items 1 through 1F — For use with Item 2, channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide, attached to floor and ceiling with fasteners spaced 24 in. OC max.

STUDCO BUILDING SYSTEMS — CROCSTUD Track

1H. **Floor and Ceiling Runners** — (Not shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.02 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.

MARINOWARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100.

1I. **Framing Members* - Floor and Ceiling Runners** — Not shown - In lieu of Item 1 — For use with Item 2H, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A, LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types DAP, DAPC, DGG, DS, GPFSS, LS, . Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soft1t - Type X, TG-C, GreenGlass Type X, Type X ComfortGuard Sound Deadening Gypsum Board, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W.

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSMR-C, FSW-C, FSW-O, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSL.

GEORGIA-PACIFIC GYPSUM L L C — Type DGG, GreenGlass Type X.

4D. **Gypsum Board*** — As an alternate to Items 4, 4A, 4B, and 4C - Nom. 5/8 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Gypsum panels fastened to framing with 1 in. long Type S steel screws 8 in. OC along vertical edges and 12 in. OC in the field when panels are applied vertically. When gypsum panels applied horizontally, fasten to framing with 1 in. long Type S steel screws spaced 8 in. OC along vertical edges and in the field. Screws spaced a max. 12 in. along the top and bottom edges of the wall for both vertical and horizontal applications.

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSL, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSMR-C.

4E. **Gypsum Board*** — (As an alternate to Items 4 through 4D) - Installed as described in Item 4, 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 1 in. long, Type S steel screws spaced, 8 in. OC. Not to be used with item 6.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

4F. **Gypsum Board*** — (Not Shown) - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

RAY-BAR ENGINEERING CORP — Type RB-LBG

4G. **Gypsum Board*** — (As an alternate to Items 4 through 4F) — For use with Items 1D and 2D only, 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A, LGFC-C/A

NATIONAL GYPSUM CO — Types FSW

USG MEXICO S A DE C V — Type ULX

4L. **Gypsum Board*** — (Not Shown) - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4M. **Gypsum Board*** — (For use with Item 8) - 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 8) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 8). Secured to outermost studs and floor and ceiling runners with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound.

AMERICAN GYPSUM CO — Type AG-C

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C.

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

4N. **Wall and Partition Facings and Accessories*** — (As an alternate to Item 4) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

4O. **Gypsum Board*** — As an alternate to Items 4, 4A, 4B, and 4C - Two layers Nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Horizontal joints on the same side need not be staggered. When applied horizontally, both layers of gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC and staggered 4 in. OC between layers. When applied vertically, both layers of gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field, staggered 4 in. OC between layers. Screws spaced a max 12 in. along the top and bottom edges of the wall.

NATIONAL GYPSUM CO — Type FSW.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

8. **Mineral and Fiber Board*** — (Optional, Not shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1-5/8 in. long Type S steel screws, spaced 12 in. OC and 24 in. OC along all intermediate framing. The required UL Classified gypsum board layer (Item 4M) is to be installed over the Mineral and Fiber Boards. Batts and Blankets, Item 3D, and Adhesive, Item 11, are required.

HOMASOTE CO — Homasote Type 440-32

9. **Lead Batten Strips** — (Not Shown, For Use With Item 4E) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4D) and optional at remaining stud locations.

10. **Lead Discs or Tabs** — (Not Shown, For Use With Item 4E) - Used in lieu of or in addition to the lead batten strips (Item 8) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or min 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4E) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs** — (Not Shown, for use with Item 4J) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Adhesive** — Not Shown - (For use with Item 8) - Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 8).

12. **Wall and Partition Facings and Accessories*** — (Optional, Not Shown) — For use with Items 1 to 11, Items 2 to 2J, Item 3, Items 4 to 4I, Item 5 and Item 6. For maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 4 to Item 4I), install ReflexXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When ReflexXor membrane is used an additional layer of Gypsum Board that is identical to the one used in the first layer and as specified in Item 4 to Item 4I shall be installed over the membrane. The additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 4 to Item 4I except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 3. On the other side of the wall, prior to the installation of the Gypsum Board, install Resilient Channels as per Item 6. Over the Resilient Channels install ⅋ inch thick SONOpan panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 4 to Item 4I with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

MSL — ReflexXor membrane, SONOpan panel

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2015-10-23

LTC ASSOCIATES ARCHITECTS
1213 LADY ST. SUITE 400
COLUMBIA, SC 29201
803 254 9082 VOX
www.LTCarch.com

CERT NO. 51593

PROFESSIONAL ENGINEER — 30967 — NORTH CAROLINA — COLUMBIA, SC

REVISIONS

No.	Description	Date

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

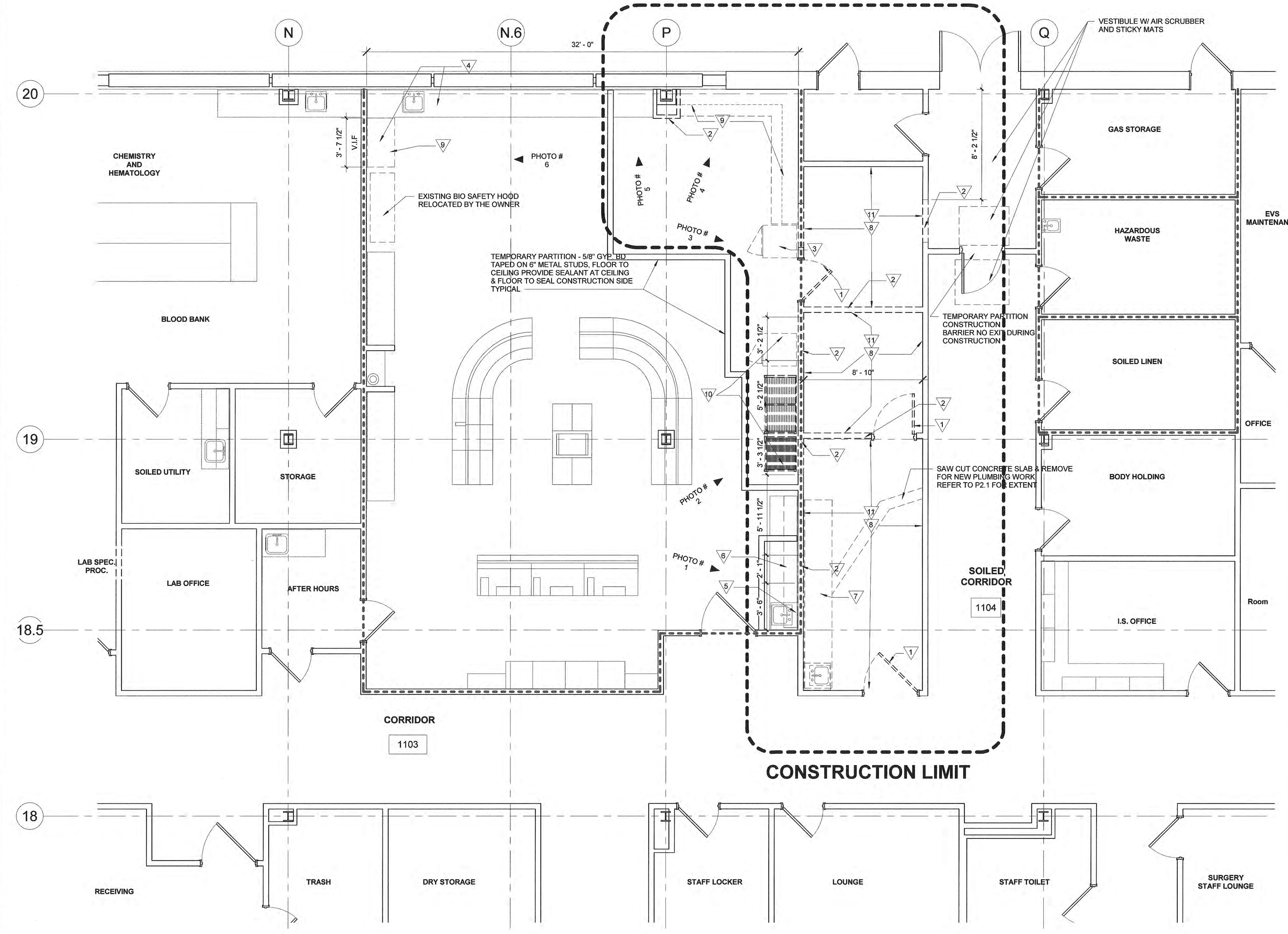
U.L. RATING DETAILS

JOB NUMBER: 16020

A0.5

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:24:57 PM

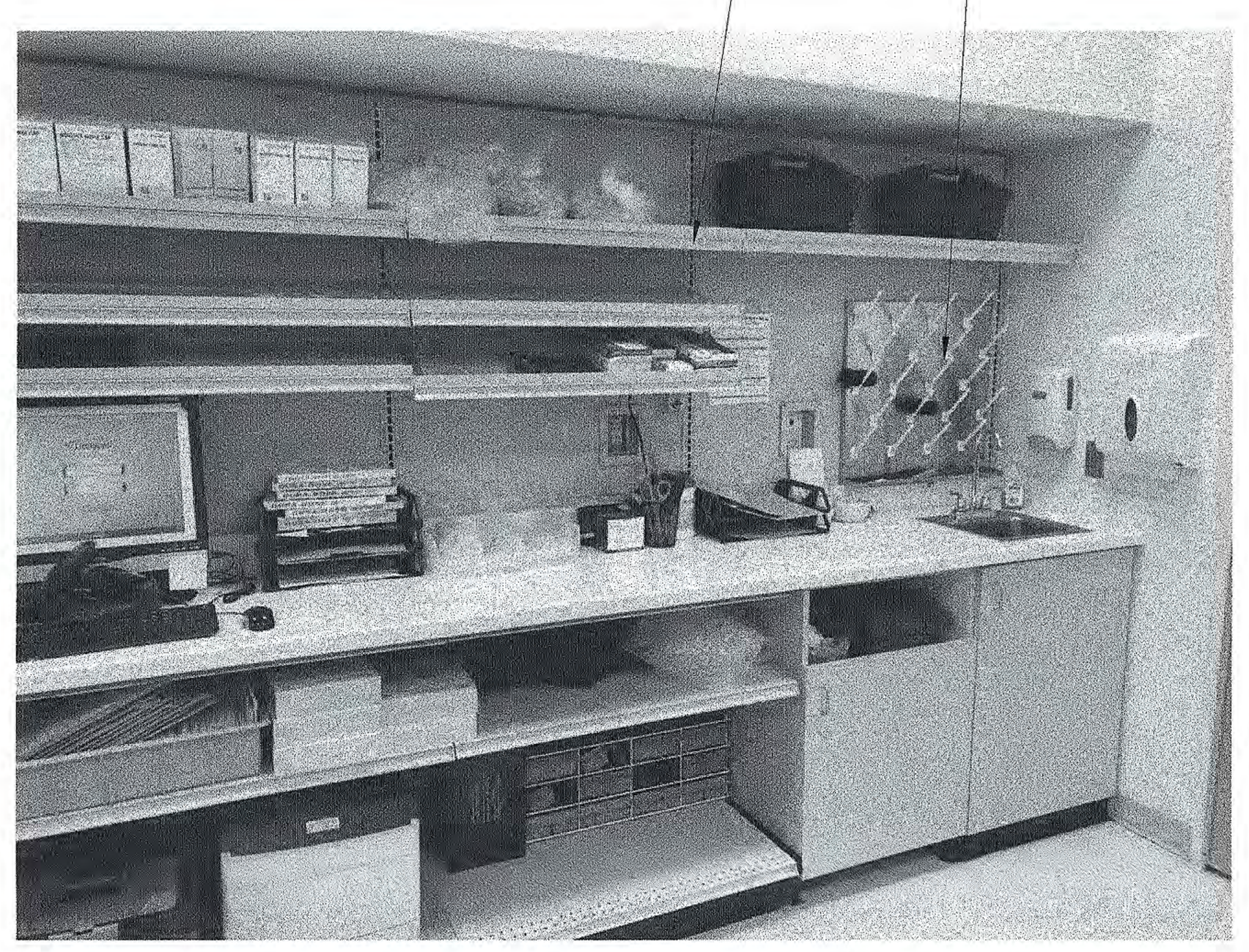


1 FIRST FLOOR DEMOLITION PLAN

1/4" = 1'-0"

PHOTO # 6

PHOTO # 5



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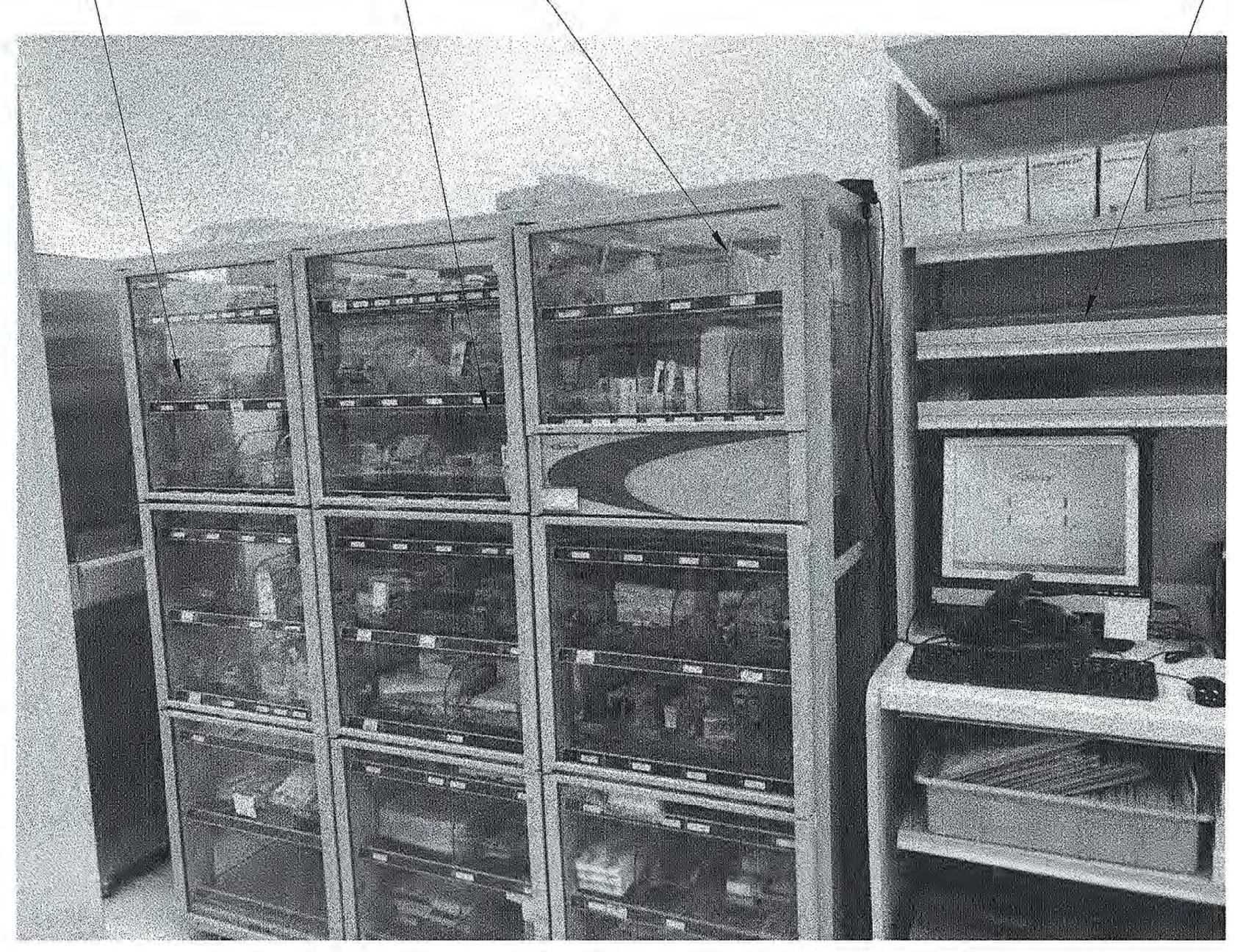

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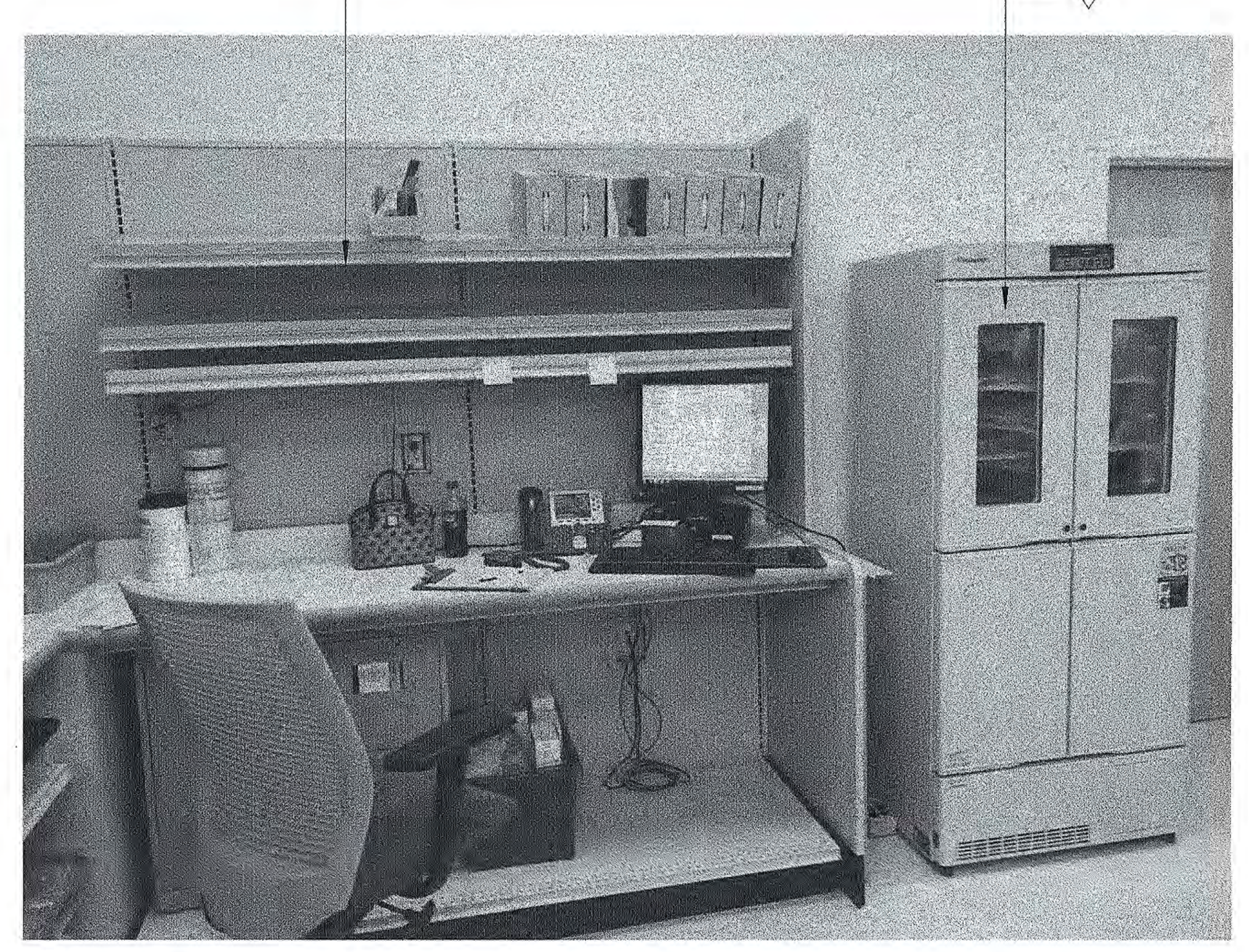

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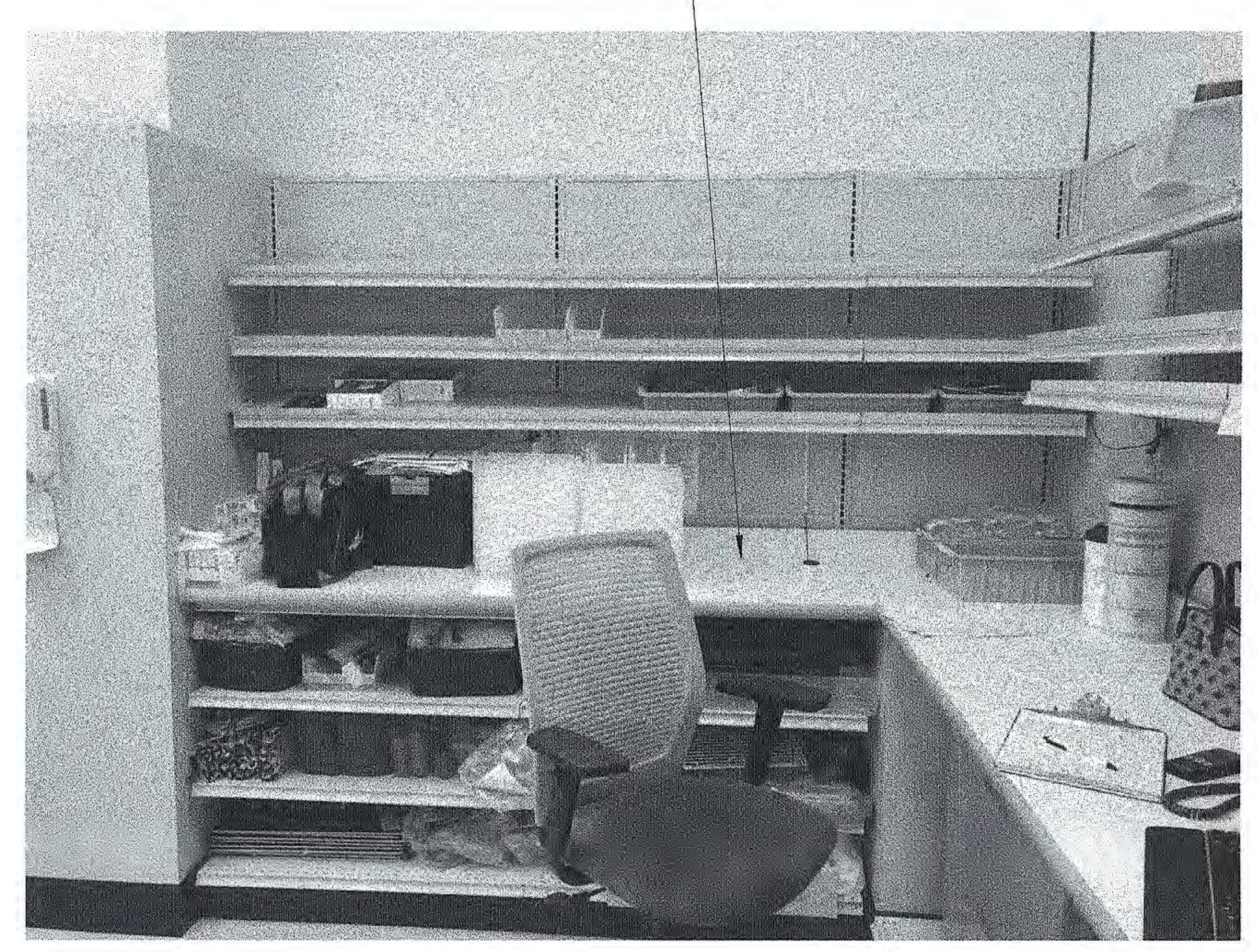


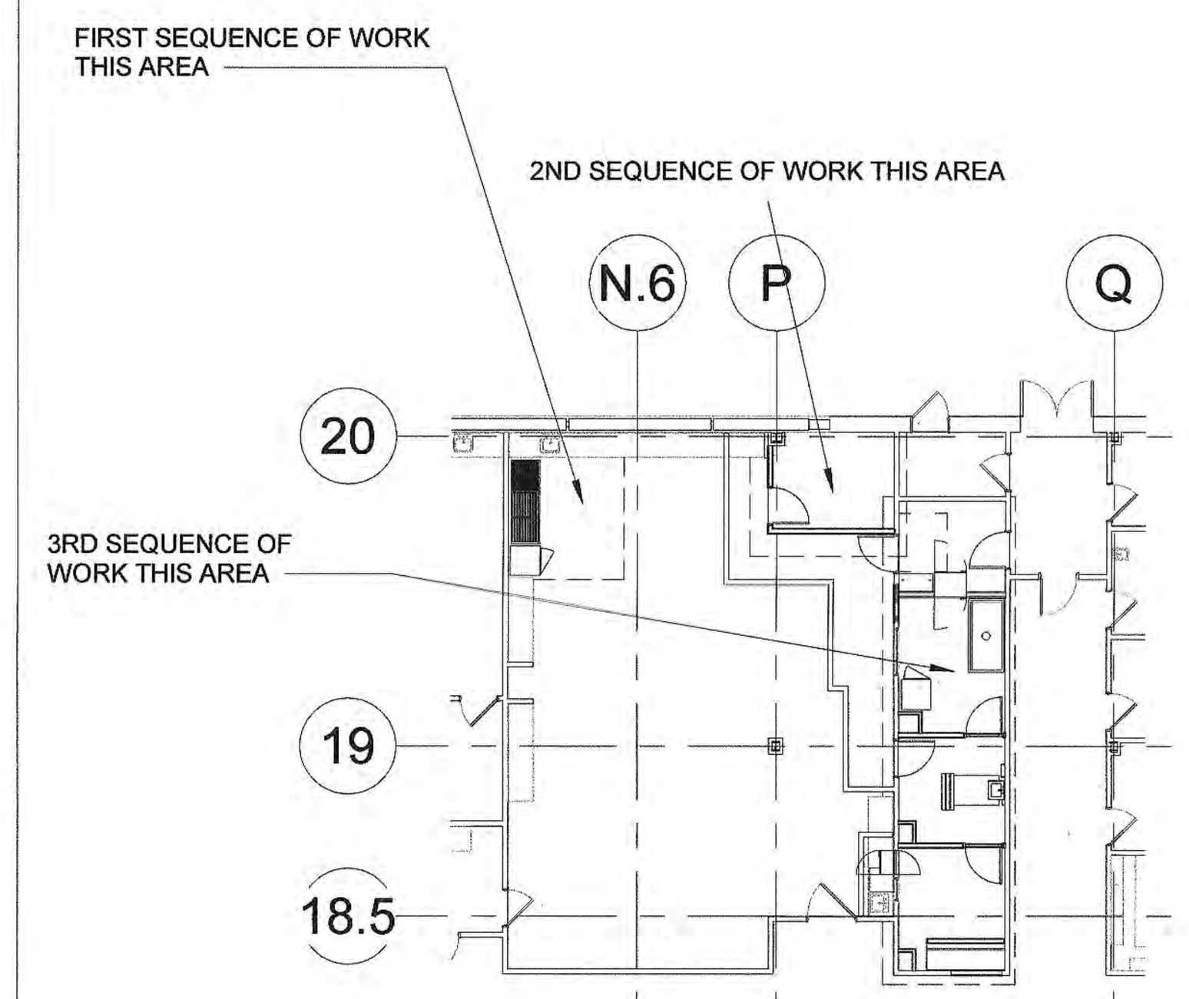
PHOTO # 4

GENERAL DEMOLITION NOTES

1. LIFE-SAFETY EGRESS FROM EXISTING AREAS EITHER RENOVATED OR HAVING THE EGRESS AFFECTED BY THE RENOVATION SHALL BE MAINTAINED CLEAR OF OBSTRUCTION AND IMPEDIMENT TO EXITING AND SHALL BE SUPPLANTED TO PROVIDE REQUIRED LIFE-SAFETY COVERAGE AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.
2. DUST-PROOF TEMPORARY WALLS SHALL BE ERECTED PRIOR TO DEMOLITION AND SHALL REMAIN IN PLACE UNTIL ALL WORK (DEMOLITION & NEW CONSTRUCTION IS COMPLETE. THE TEMPORARY WALL SHALL RESIST THE PASSAGE OF SMOKE.
3. CREATE A CLEAN CUT AT BUILDING BEING DEMOILISHED AND BUILDING TO REMAIN. HAND DEMOLISH TO THE EXTENT NECESSARY TO PROTECT THE INTEGRITY OF THE EXISTING BUILDING TO REMAIN.
4. INTERIOR FINISHES, MATERIALS, FURNITURE EQUIPMENT, ETC. IN AREAS TO REMAIN SHALL BE PROTECTED AS NECESSARY TO ELIMINATE THE POSSIBILITY OF MOISTURE, DUST DEBRIS DAMAGE. COVER AND PROTECT AS NECESSARY.
5. ALL DEMOLITION SHALL BE PERFORMED WITH "DUE CARE AND DILIGENCE". ALL SUCH DISCOVERIES OF UTILITIES DURING DEMOLITION WHICH ARE IN A DIFFERENT LOCATION FROM THAT INDICATED, CHANGE DIRECTION FROM FLOOR TO FLOOR, ETC., OR ARE UNIDENTIFIED SHALL BE REPORTED TO THE ARCHITECT BEFORE DISTURBANCE OR REMOVAL.
6. ANY DAMAGE TO EXISTING CONDITIONSCAUSED BY DEMOLITION AND/OR NEW WORK SHALL BE REPAIRED AS DETAILED, OR WHERE NO DETAIL IS SHOWN, RESTORED BACK TO ITS ORIGINAL FINISHED CONDITION BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.
7. DIMENSIONS SHOWN ON RENOVATION PLANS ARE SHOWN AS REFERENCE FOR CONTRACTORS AND SHALL BE CONSIDERED +/-. IF EXACT DIMENSIONS ARE REQUIRED, FIELD MEASUREMENTS SHALL BE TAKE BY EACH CONTRACTOR.
8. ALL HOLES MADE IN EXISTING WALLS OR FLOORS OR MADE BY THE REMOVAL OF ANY EQUIPMENT OF FIXTURES SHALL BE PATCHED TO MATCH EXISTING. INSTALL NEW MATERIAL FLUSH WITH EXISTING ON BOTH SIDES.
9. EXISTING WALLS SHALL REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
10. NOTIFY THE ARCHITECT IMMEDIATELY UPON DISCIVERY OF EXISTING CONDITIONS DIFFERENT THAB THOSE REPRESENTED BY THESE DOCUMENTS.
11. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR DEMOLITION OF SPECIFIC ITEMS AND EQUIPMENT RELATED TO RESPECTIVE TRADES AS NECESSARY.
12. ALL WORK SHALL CONFORM WITH ALL LOCAL AND FEDERAL (INCLUDING ADA AGENCIES HAVING JURISDICTION.

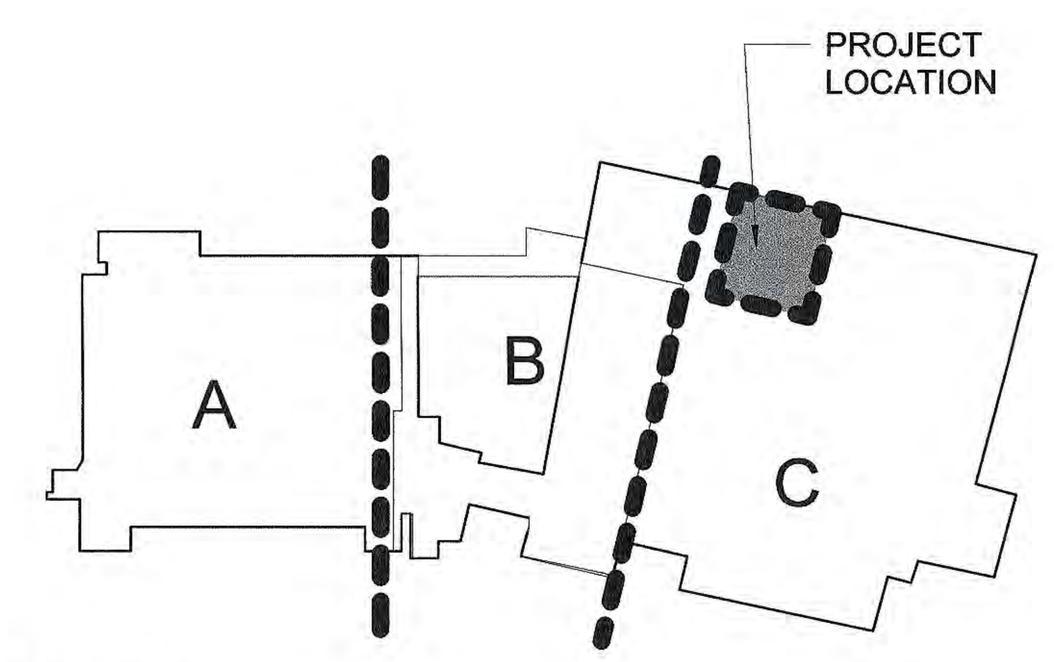
NUMBERED NOTES - DEMO

1 REMOVE EXISTING DOOR AND HARDWARE. FRAME NEW INFILL WALL. MATERIAL TO MATCH EXISTING CONDITIONS.
2 REMOVE EXISTING INTERIOR WALL CONSTRUCTION COMPLETE, INCLUDING DOORS, WINDOWS, ACCESSORIES, SUPPORTS, ETC. PATCH EXISTING WALL AFTER DEMOLITION. PATCH FLOOR TO MATCH EXISTING.
3 REMOVE AND RELOCATED REFRIGERATOR
4 EXISTING CABINET AND COUNTER TOP TO REMAIN AT LINEAR DIRECTION. CUT COUNTERTOP AT CHANGED IN DIRECTION AND REFINISH EXPOSED EDGES OF COUNTERTOP TO REMAIN.
5 REMOVE EXISTING GLASS RACK AND TURN OVER TO OWNER.
6 REMOVE EXISTING WALL SHELVING AND PANEL SYSTEM ABOVE WORK SURFACE AND TURN OVER TO THE OWNER.
7 REMOVE EXISTING BASE & WALL CABINETS COMPLETE.
8 REMOVE EXISTING FLOORING, BASE & ADHESIVES AND PREPARE FOR NEW FINISHES.
9 REMOVE EXISTING SYSTEM FURNITURE AND TURN OVER TO THE OWNER.
10 RELOCATE OMNI CELL SYSTEM
11 REMOVE CEILING SYSTEM IN THIS ROOM. SEE NEW CEILING LAYOUT ON REFECTED CEILING PLAN.



2 FIRST FLOOR PLAN - SEQUENCE OF WORK

1/16" = 1'-0"



KEY PLAN

LTC ASSOCIATES ARCHITECTS

1213 LADY ST. SUITE 400
COLUMBIA, SC 29201

803 254 9082 VOX
www.LTCarch.com

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
FIRST FLOOR DEMOLITION FLOOR PLAN

REVISIONS		
No.	Description	Date

JOB NUMBER:

A1.0

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:25:12 PM

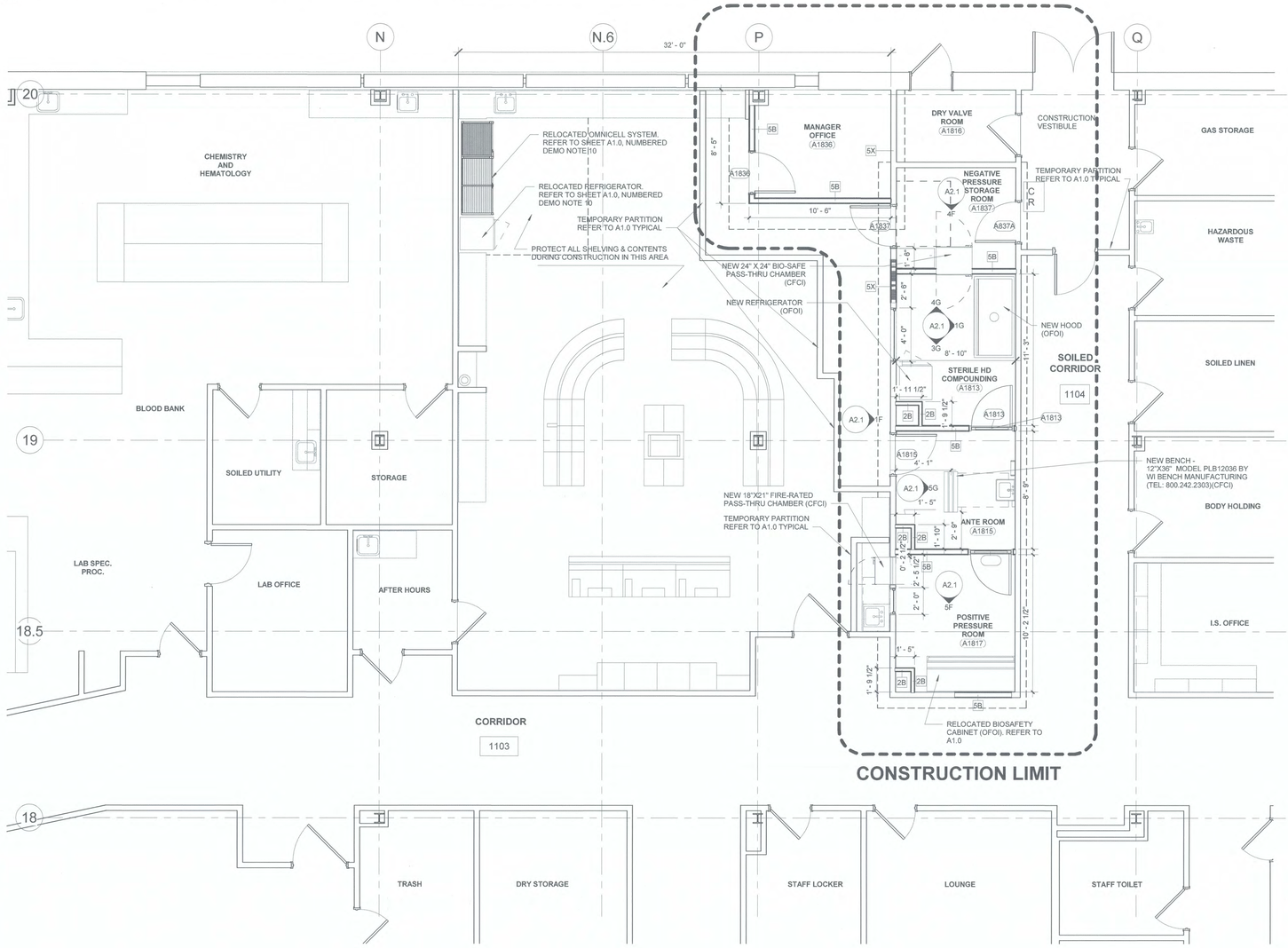
DOOR AND FRAME SCHEDULE- CENTRAL HARNETT- CATH LAB

DOOR NUMBER	FROM ROOM: NAME	DOOR MATL	DOOR TYPE	DOOR FINISH	DOOR WIDTH	DOOR HEIGHT	HARDWARE SET	FRAME LABEL	FRAME MATL	FRAME TYPE	FRAME FINISH	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	REMARKS
A837A	NEGATIVE PRESSURE STORAGE ROOM	HM	A	PT	3' - 0"	7' - 0"	STORAGE		HM	AA	PT	H1	J1	SEE STANDARD A0.3	CARD READER
A1813	ANTE ROOM		S		3' - 0"	7' - 0"								SEE STANDARD A0.3	HANDS FREE AUTOMATIC DOOR OPERATOR
A1814	ANTE ROOM		A		3' - 0"	7' - 0"								SEE STANDARD A0.3	HANDS FREE AUTOMATIC DOOR OPERATOR
A1815	ANTE ROOM	HM	A	PT	3' - 0"	7' - 0"	PASSAGE	45 MIN	HM	AA	PT	H1	J1	SEE STANDARD A0.3	HANDS FREE AUTOMATIC DOOR OPERATOR
A1836	MANAGER OFFICE	WD	A	ST	3' - 0"	7' - 0"	OFFICE		HM	AA	PT	H1	J1	SEE STANDARD A0.3	
A1837	NEGATIVE PRESSURE STORAGE ROOM	HM	A	PT	3' - 0"	7' - 0"	STORAGE	45 MIN	HM	AA	PT	H1	J1	SEE STANDARD A0.3	

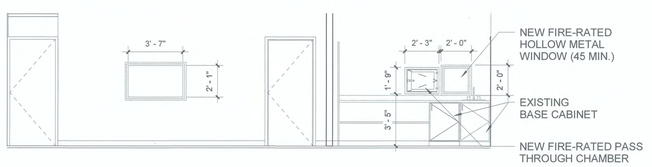
Grand total: 6

ROOM FINISH SCHEDULE - FIRST FLOOR

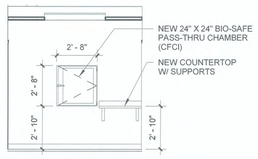
ROOM NUMBER	ROOM NAME	FINISH FLOOR	FINISH BASE	FINISH CEILING	Wall Finish - East	Wall Finish - North	Wall Finish - South	Wall Finish - West	REMARKS
A1813	STERILE HD COMPOUNDING	RESINOUS	INTEGRAL	ACT-1	FRP PANELS	FRP PANELS	FRP PANELS	FRP PANELS	
A1815	ANTE ROOM	RESINOUS	INTEGRAL	ACT-1	FRP PANELS	FRP PANELS	FRP PANELS	FRP PANELS	
A1816	DRY VALVE ROOM	EXISTING	EXISTING	EXISTING	PAINT	PAINT	PAINT	PAINT	
A1817	POSITIVE PRESSURE ROOM	RESINOUS	INTEGRAL	ACT-1	FRP PANELS	FRP PANELS	FRP PANELS	FRP PANELS	
A1836	MANAGER OFFICE	SHT. VINYL	RESILIENT	ACT-2	PAINT	PAINT	PAINT	PAINT	
A1837	NEGATIVE PRESSURE STORAGE ROOM	SHT. VINYL	RESILIENT	ACT-2	EPOXY PAINT	EPOXY PAINT	EPOXY PAINT	EPOXY PAINT	



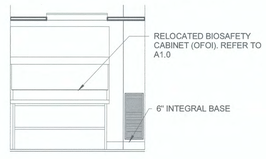
1 FIRST LEVEL FLOOR PLAN
1/4" = 1'-0"



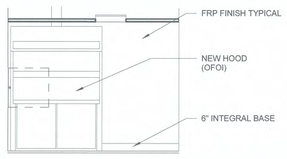
1F PHARMACY INT. ELEV. 1
1/4" = 1'-0"



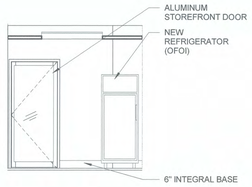
4F A1837 INT. ELEV. 1
1/4" = 1'-0"



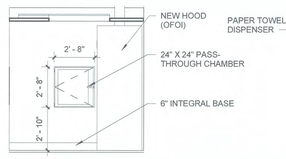
5F A1817 INT. ELEV. 1
1/4" = 1'-0"



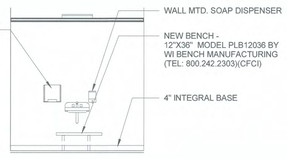
1G A1813 INT. ELEV. 1
1/4" = 1'-0"



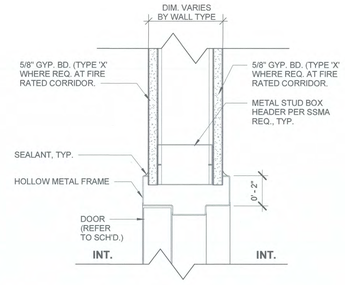
3G A1813 INT. ELEV. 2
1/4" = 1'-0"



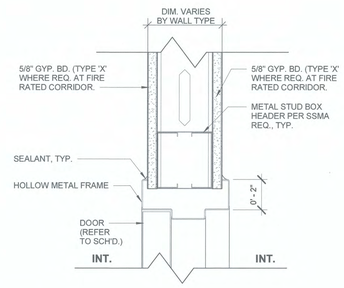
4G A1813 INT. ELEV. 3
1/4" = 1'-0"



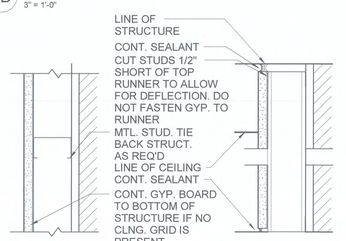
5G A1815 INT. ELEV. 1
1/4" = 1'-0"



7B H.M.- JAMB @ INT. PARTITION (J1)
3" = 1'-0"

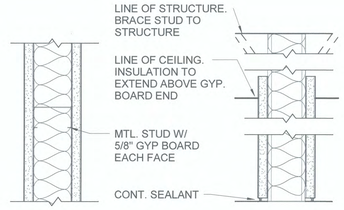


7D H.M.- HEAD @ INT. PARTITION (H1)
3" = 1'-0"



PART. TAG	STD SIZE	UL NO.S
2A	2-1/2"	--
2B	3-5/8"	--
2C	6"	--

2 FREE STANDING FURRED PARTITION
3"=1'-0"



PART. TAG	STD SIZE	UL NO.S
5A	2-1/2"	--
5B	3-5/8"	--
5C	4"	--
5D	6"	--
5X	3-5/8"	U465

5 SINGLE LAYER PARTITION INSULATED
3"=1'-0"

GENERAL NOTES

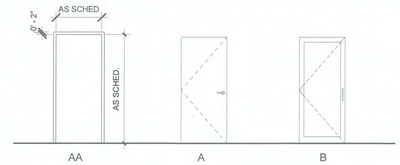
A. INTERIOR WALL DIMENSIONS ARE TO FACE OF METAL STUD, U.N.O.

B. SEE SHEETS ***A7.1*** SERIES FOR REFLECTED CEILING PLANS.

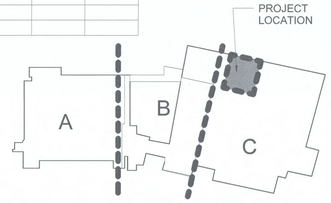
C. GYPSUM BOARD WALLS AND CEILINGS SHALL BE MEET THE NATIONAL GYPSUM ASSOCIATION GUIDLINES. CEILINGS EXCEEDING 2500 SQ. FT. IN AREA, AND PARTION WALLS, AND WALL FURRING RUNS EXCEEDING 30 FT. ALL REQUIRE CONTROL JOINTS. DO NOT EXCEED 50 FT. BETWEEN CEILING CONTROL JOINTS IN EITHER DIRECTION. INSTALL A CONTROL JOINT WHEREVER CEILING FRAMING OR FURRING CHANGES DIRECTION. DO NOT EXCEED 30 FT. BETWEEN CONTROL JOINTS IN WALLS OR WALL FURRING.

SYMBOL LEGEND

A.1	WALL PARTITION, SEE SHEET A2.1.
X	WINDOW TAG
XXX	DOOR, SEE DOOR SCHEDULE ON SHEET A2.1.
FEC	FIRE EXTINGUISHER AND CABINET (SEMI-RECESSED U.N.O.)
EWC	ELECTRIC WATER COOLER.
CR	CARD READER



DOOR FRAME + TYPE ELEVATIONS



KEY PLAN

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PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
FIRST FLOOR PLAN

REVISIONS

No.	Description	Date

JOB NUMBER: 18020
A2.1
DATE: 27 AUGUST, 2018
Plot Date 8/29/2018 2:57:19 PM

one thirty seconth inch = one foot
one sixteenth inch = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

SHEET NOTES

SYMBOL LEGEND

- 0'-0" — HEIGHT (FEET, INCHES) ABOVE FINISH FLOOR
- 2X2 LAY-IN ACOUSTICAL CEILING PANEL
- GYPSUM BOARD
- CLG ACCESS PANEL- (PTD), COORDINATE FINAL LOCATION WITH MECH DWGS. (18" X 18")
- 1 X 4 FLUORESCENT FIXTURE (LAY-IN)
- 2 X 4 LED FIXTURE (LAY-IN)
- 2 X 2 FLUORESCENT FIXTURE (LAY-IN)
- FLUORESCENT FIXTURE - SURFACE MOUNTED (SEE ELEC. FOR LENGTH)
- FLUORESCENT FIXTURE - PENDANT (SEE ELEC. FOR LENGTH)
- RECESSED ROUND DOWNLIGHT
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- EXHAUST FAN

GENERAL NOTES

A. FINISHED CEILING HEIGHT IS REFERENCED FROM THE FINISH FLOOR. ROOMS WHERE SLOPED RAMPS OCCUR, THE FINISH CEILING HEIGHT IS FROM THE HIGHEST FINISH FLOOR.

B. TYPICAL CEILING HEIGHT SHALL BE 9'-6" UNLESS NOTED OTHERWISE.

C. SEE FLOOR PLANS FOR WALL RATING INFORMATION.

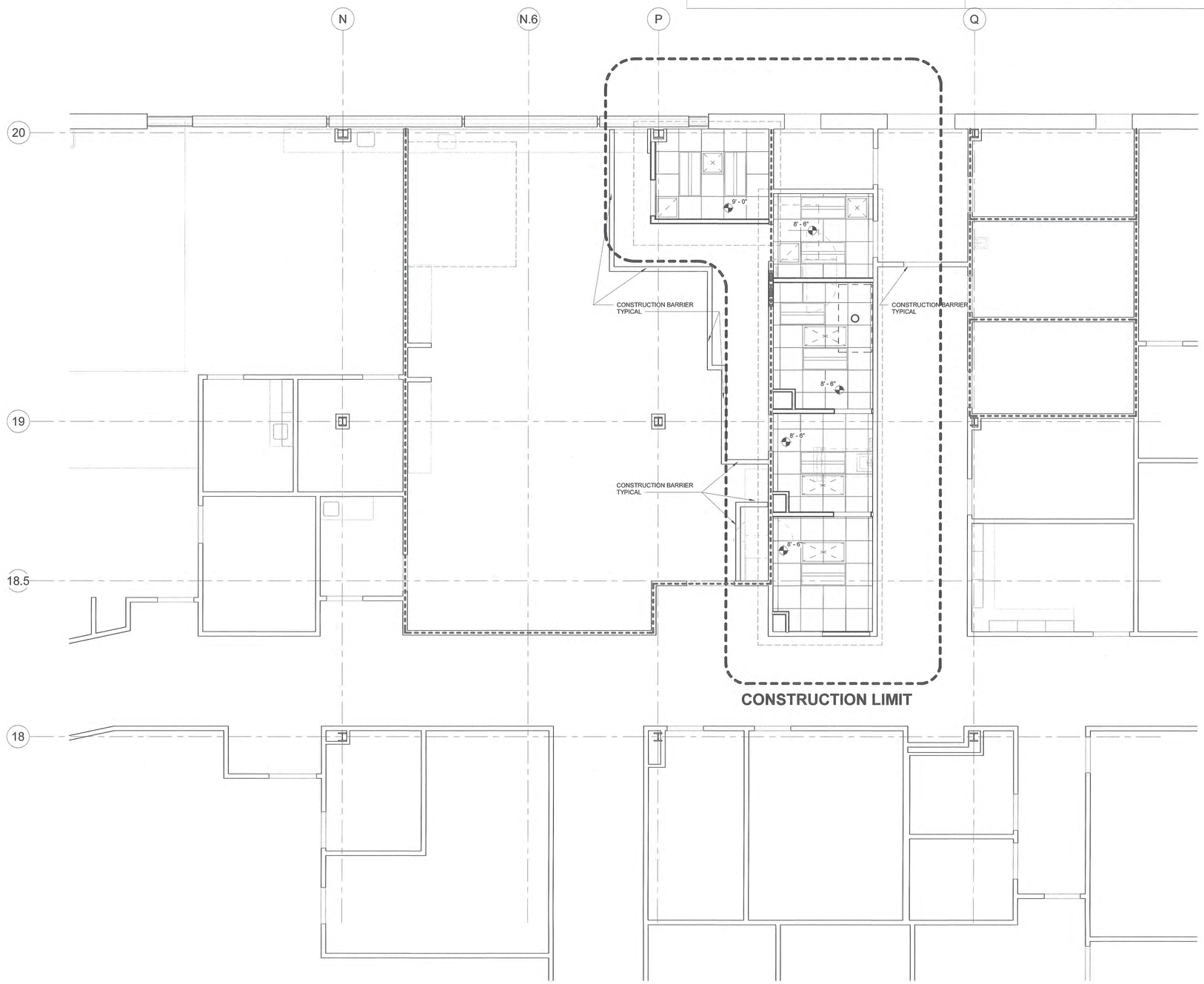
D. INSTALL 2-0" WIDE SOUND ATTENUATION BLANKETS ABOVE ACOUSTICAL CEILINGS AT PERIMETER OF ALL OFFICES.

E. PAINT ALL EXPOSED STEEL LINTELS TO MATCH BRICK OR CMU COLOR ABOVE IT U.N.O.

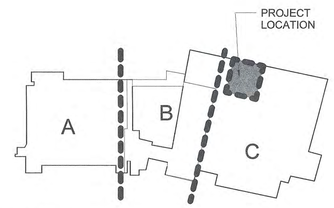
F. CEILING INSTALLATIONS SHALL MEET CISCA'S "GUIDELINES FOR SEISMIC RESTRAINT, ZONE "D" AND THE IBC, CHAPTER 16. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE PROVISIONS OF THESE STANDARDS. IN CASE OF A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. REFERENCE SHEET A-205 FOR STANDARD DETAILS.

G. REFER TO FINISH SCHEDULE AND SPECIFICATIONS FOR EXACT CEILING MATERIAL.

H. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPE, SPECIAL SYSTEMS, AUDIO/VISUAL INFORMATION, AND EXTERIOR LIGHTING LOCATIONS.



1 FIRST LEVEL REFLECTED CEILING PLAN
1/4" = 1'-0"



PROJECT NORTH

KEY PLAN

one thirty seconth inch = one foot
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one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot

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CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

REFLECTED CEILING PLAN

REVISIONS

No.	Description	Date

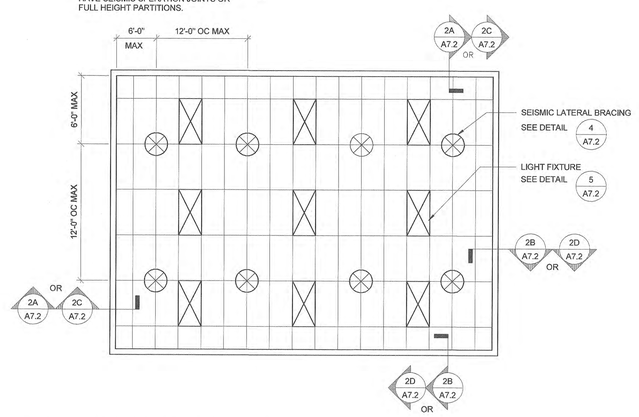
JOB NUMBER: 18026

A7.1

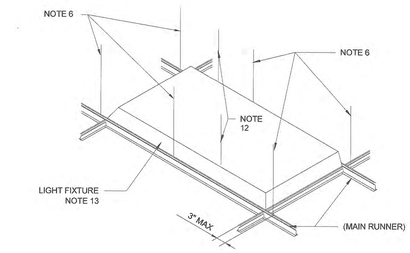
DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:25:28 PM

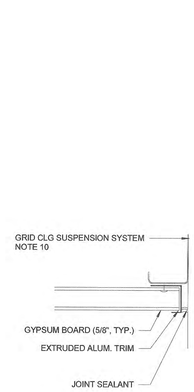
NOTES: CEILING AREAS OVER 1,000 SF MUST HAVE HORIZONTAL RESTRAINT WIRE OR RIGID BRACING. CEILING AREAS OVER 2,500 SF MUST HAVE SEISMIC SPERATION JOINTS OR FULL HEIGHT PARTITIONS.



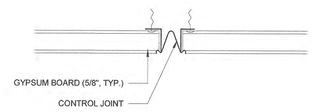
5 TYPICAL SEISMIC CEILING PLAN
12" = 1'-0"



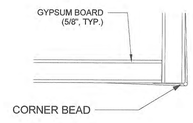
6 TYPICAL CEILING DETAIL-LIGHT FIXTURE RESTRAINT
12" = 1'-0"



TYPE : G1

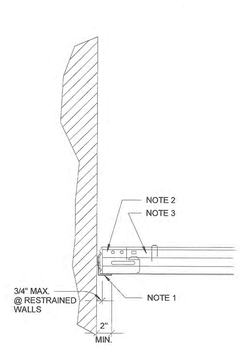


TYPE : G2

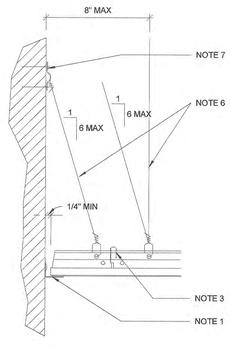


TYPE : G3

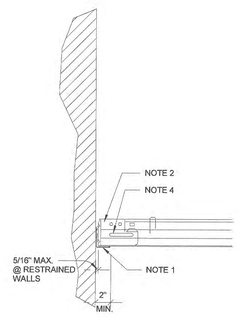
1 TYPICAL CEILING JOINTS IN GYP BD
1 1/2" = 1'-0"



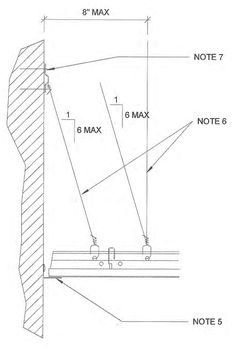
B DETAIL @ WALL (TERMINAL END CLIP @ MAIN BEAM)



D DETAIL @ WALL (TERMINAL END WIRE)

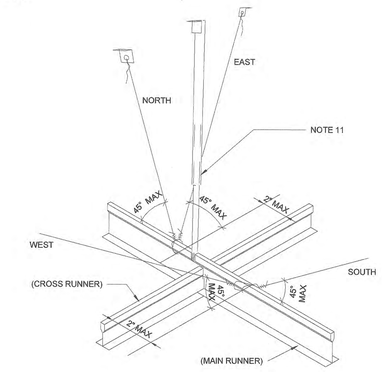


A DETAIL @ WALL (TERMINAL END CLIP @ CROSS-TEE)

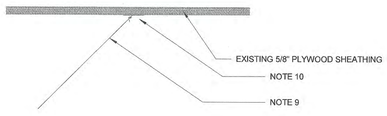


C DETAIL @ WALL (TERMINAL END WIRE)

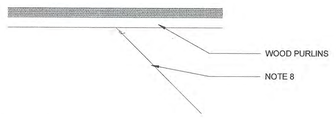
2 TYPICAL CEILING GRID SEISMIC DETAILS
12" = 1'-0"



4 TYPICAL CEILING DETAIL-SEISMIC LATERAL BRACING
12" = 1'-0"



B DETAIL @ SHEATHING



A DETAIL @ ROOF PURLIN

3 TYPICAL CEILING DETAIL-BRACING WIRE CONNECTIONS
12" = 1'-0"

GENERAL NOTES

A. CEILING SEISMIC DETAILS ARE PROVIDED TO ILLUSTRATE THE GENERAL REQUIREMENTS OF CISCA'S "GUIDELINES FOR SEISMIC RESTRAINT, SEISMIC DESIGN CATEGORY "D" AND THE IBC, CHAPTER 16. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE PROVISIONS OF THESE STANDARDS. IN CASE OF A CONFLICT, THE MORE STRINGENT REQUIREMENT WILL BE ENFORCED.

B. CEILING SEISMIC DETAILS SHOWN ARE FOR CEILING SYSTEMS (INCLUDING ALL DEVICES SUPPORTED BY THE SYSTEM) WITH A COMBINED AVERAGE WEIGHT OF OVER 2.5 LBS/SF.

C. DETAILS SHOWN ARE GENERAL DETAILS NOT SPECIFIC TO A MANUFACTURER. PROPRIETARY SEISMIC DETAILS NOT SHOWN MUST BE SUBMITTED BY CONTRACTOR DURING CONSTRUCTION FOR ARCHITECT'S REVIEW.

SHEET NOTES

1. WALL ANGLE. ATTACH TO WALL ONLY.
2. BEAM END RETAINING CLIP.
3. STABILIZER BAR
4. 1/2" DIA S-12 SCREW
5. WALL ANGLE. ATTACH TO RUNNER/TEE & WALL.
6. 12 GA HANGER WIRE. INSTALL EITHER SLOPED OR VERTICALLY WITH MAX SLOPE TO BE 1 IN 6 (10 DEGREES)
7. 18 GA x 3/4" METAL STRAP. ANCHOR TO WALL W/ HILTI SDF 22-7/8" LONG (OR EQUAL). ANCHOR TO STUD WALL WITH 20 GA S-12 SCREWS.
8. 12 GA SEISMIC RESTRAINT WIRES. WRAP & TIE @ TOP OF WEB MEMBERS.
9. 12 GA SEISMIC RESTRAINT WIRES. TIE TO METAL STRAP.
10. 18 GA x 3/4" METAL STRAP. ANCHOR TO WALL WITH 2-#8 x 1/2" METAL TAPPING SCREWS.
11. PROVIDE COMPRESSION POST (BY CLG MANUF.) ANCHORED TO MAIN RUNNER & TO STRUCTURE ABOVE.
12. 12 GA HANGER WIRE. CONNECT TO LIGHT FIXTURE & STRUCTURE ABOVE. PROVIDE 2 MIN PER FIXTURE. WIRES MAY BE LEFT SLACK.
13. ATTACH FIXTURE TO SUSPENDED GRID SYSTEM OR INDEPENDENTLY SUPPORT FIXTURE FROM STRUCTURE ABOVE.

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CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA

CEILING SEISMIC DETAILS

REVISIONS

No.	Description	Date

JOB NUMBER: 18020

A7.2

DATE: 27 AUGUST, 2018

Plot Date 8/27/2018 4:31:58 PM

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

PIPE TURNING UP	℄ CENTER LINE	HGR. HANGER	
PIPE TURNING DOWN	℞ PLATE	H.CAB. HOSE CABINET	
TEE DOWN	∠ ANGLE	HOA HAND-OFF-AUTOMATIC	
TEE UP	⌀ ROUND, DIAMETER OR PHASE	HORZ. HORIZONTAL	
45° OFFSET	# POUNDS OR NUMBER	HP HIGH PRESSURE OR HORSEPOWER	
DIRECTION OF FLOW IN PIPE	A COMPRESSED AIR	HR HOUR	
PIPE SLOPED IN DIRECTION OF ARROW	ABV.CLG. ABOVE CEILING	HTG. HEATING	
PIPE CAP	ACFM ACTUAL CUBIC FEET PER MINUTE	HVAC HEATING, VENTILATING AND AIR CONDITIONING	
CONCENTRIC REDUCER	ACU AIR CONDITIONING UNIT	HYD. HYDRANT	
ECCENTRIC REDUCER	AFF ABOVE FINISHED FLOOR	I.D. INSIDE DIAMETER	
PIPE UNION	AFG ABOVE FINISHED GRADE	IN. INCH	
GATE VALVE	AHU AIR HANDLING UNIT	KW KILOWATT	
CHECK VALVE	ALUM. ALUMINUM	MAX. MAXIMUM	
BUTTERFLY VALVE	ANSI AMERICAN NATIONAL STANDARD ASSOCIATION	MECH. MECHANICAL	
BALL VALVE	AP ACCESS PANEL	MEZZ MEZZANINE	
SOLENOID VALVE	APPROX. APPROXIMATE	MFG. MANUFACTURING	
PRESSURE REDUCING VALVE	ARCH. ARCHITECTURAL	MFR. MANUFACTURER	
SAFETY RELIEF VALVE	ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MIN. MINIMUM	
BACKFLOW PREVENTER ASSEMBLY (TYPE INDICATED)	ASV AUTOMATIC SPRINKLER VALVE	MJ MECHANICAL JOINT	
Y-TYPE STRAINER	AUTO AUTOMATIC	MTD MOUNTED	
BASKET STRAINER	AWWA AMERICAN WATER WORKS ASSOCIATION	NC NORMALLY CLOSED	
PRESSURE GAUGE (WITH 1/2" BALL VALVE)	BFF BELOW FINISHED FLOOR	NEC NATIONAL ELECTRIC CODE	
PIPE ANCHOR	BFP BACKFLOW PREVENTER	NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	
FLEXIBLE PIPE CONNECTION	BHP BRAKE HORSEPOWER	NFPA NATIONAL FIRE PROTECTION ASSOCIATION	
PUMP	BOP BOTTOM OF PIPE	N.I.C. NOT IN CONTRACT	
FIRE HOSE CABINET	C CELSIUS	NO NORMALLY OPEN	
PENDANT SPRINKLER HEAD	C/C CENTER TO CENTER	NO. NUMBER	
CONCEALED SPRINKLER HEAD	CI CAST IRON	NPSH NET POSITIVE SUCTION HEAD	
UPRIGHT SPRINKLER HEAD	CLG. CEILING	N.R.S. NON RISING STEM	
DRY PENDANT SPRINKLER HEAD	CONC. CONCRETE	N.T.S. NOT TO SCALE	
SIDEWALL SPRINKLER HEAD	CONFIG. CONFIGURATION	O.C. ON CENTER	
DRY SIDEWALL SPRINKLER HEAD	CONN. CONNECTION	O.D. OUTSIDE DIAMETER	
UPRIGHT SPRINKLER HEAD WITH GUARD	CON'T. CONTINUATION	OPNG OPENING	
PENDANT SPRINKLER HEAD WITH GUARD	CONST. CONSTRUCTION	O.R. OPERATING ROOM	
DRY PILOT DETECTION HEAD	CONTR. CONTRACTOR	OSD OPEN SIGHT DRAIN	
PLUGGED TEE	COORD. COORDINATE	O.S.&Y. OUTSIDE SCREW AND YOKE	
HYDRAULIC CALCULATION NODE (SPRINKLER SYSTEM)	COP COEFFICIENT OF PERFORMANCE	P PUMP	
HYDRAULIC CALCULATION NODE (STANDPIPE SYSTEM)	CTR CENTER	P.C. PLUMBING CONTRACTOR	
ALARM CHECK VALVE	CU COPPER	PICU PEDIATRIC INTENSIVE CARE UNIT	
DRY PIPE VALVE WITH EXHAUSTER OR ACCELERATOR	CU.FT. CUBIC FOOT	PLBG. PLUMBING	
DELUGE VALVE	CW COLD WATER OR CITY WATER	PRS PRESSURE REDUCING STATION	
PREACTION VALVE	CU.YD. CUBIC YARD	PRV PRESSURE REDUCING VALVE	
HOSE END VALVE	D.I. DUCTILE IRON	PS PRESSURE SWITCH	
TAMPER SWITCH (SHOWN ON VALVE)	DIA. DIAMETER	PSI POUNDS PER SQUARE INCH	
PRESSURE SWITCH	DN. DOWN	PSIA POUNDS PER SQUARE INCH ABSOLUTE	
FLOW SWITCH	DWG. DRAWING	PSIG POUNDS PER SQUARE INCH GAUGE	
DOUBLE DETECTOR CHECK VALVE	E.C. ELECTRICAL CONTRACTOR	PVC POLYVINYL CHLORIDE	
ANGLE VALVE (ELEVATION VIEW)	ECC ECCENTRIC	QTY. QUANTITY	
ANGLE VALVE (PLAN VIEW)	EFF EFFICIENCY	REINF. REINFORCING	
FIRE HYDRANT WITH OS&Y VALVE IN ROADWAY BOX	EJ EXPANSION JOINT	REQ'D REQUIRED	
SIAMESE CONN., FIRE DEPT. CONN., FIRE PUMP TEST HEADER	EL ELEVATION	REV. REVISION	
HOSE TEST HEADER	ELEC. ELECTRICAL	RM. ROOM	
WATER MOTOR GONG ASSEMBLY	EQUIP. EQUIPMENT	RPM REVOLUTIONS PER MINUTE	
EXISTING TO BE REMOVED	EQ. EQUAL	RPZ REDUCED PRESSURE ZONE BACKFLOW PREVENTER	
EXISTING BRANCH TO REMAIN (LIGHT LINE TYPE)	EQUIV. EQUIVALENT	R.S. RISING STEM	
EXISTING MAIN TO REMAIN (LIGHT LINE TYPE)	EXIST. EXISTING	S.C. SITE CONTRACTOR	
NEW BRANCH (HEAVY LINE TYPE)	FIN. FINISHED	SCH. SCHEDULE	
NEW MAIN (HEAVY LINE TYPE)	FL FLOOR	SECT. SECTION	
FP-DRY DRY MAIN	FLEX FLEXIBLE	SPEC. SPECIFICATION	
	FLG FLANGE	SPR SPRINKLER	
	F.P.C. FIRE PROTECTION CONTRACTOR	SQ. SQUARE	
	FPM FEET PER MINUTE	STA. STEEL	
	FPS FEET PER SECOND	STRUCT. STRUCTURAL	
	FS FLOW SWITCH	SYM SYMBOL OR SYMMETRICAL	
	FT FOOT/FEET	SYS. SYSTEM	
	FTG. FOOTING	T.O.P. TOP OF PIPE	
	GA. GAGE	T.O.S. TOP OF STEEL	
	GAL. GALLONS	TS TAMPER SWITCH	
	GALV. GALVANIZED	TYP. TYPICAL	
	G.C. GENERAL CONTRACTOR	U.F. UNDER FLOOR	
	GPM GALLONS PER MINUTE	UL UNDERWRITERS LABORATORIES	
	H.C. HEATING, VENTILATING, AND AIR CONDITIONING CONTRACTOR, HANDICAP	UNO UNLESS NOTED OTHERWISE	
		VERT. VERTICAL	
		VLV. VALVE	
		W/ WITH	
		W/O WITHOUT	

GENERAL SYMBOLS

- SHEET LETTER
- SHOWN ON SHEET NUMBER / ELEVATION LETTER
- SHOWN ON SHEET NUMBER / SECTION LETTER
- DIMENSION LINE
- SHEET NUMBER WITH DETAIL LETTER
- A1 COLUMN NUMBER OR LETTER
- 1 KEYED NOTE NUMBER
- CPR 7 REVISION NUMBER
- CONNECT TO EXISTING
- REMOVE TO THIS POINT
- MAGNETIC NORTH / PLAN NORTH NORTH ARROW

RATED WALLS

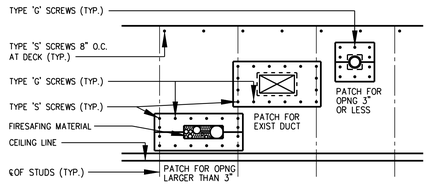
- NON-RATED SMOKE PARTITION SEAL ALL PENETRATIONS
- 1-HOUR RATED FIRE PARTITION SEAL ALL PENETRATIONS
- 1-HOUR RATED SMOKE BARRIER SEAL ALL PENETRATIONS
- 2-HOUR RATED FIRE BARRIER SEAL ALL PENETRATIONS
- 2-HOUR RATED FIRE BARRIER AND SMOKE BARRIER COMBINATION SEAL ALL PENETRATIONS

SPRINKLER HEAD/MATERIAL LEGEND

- ● RECESSED TYPE PENDENT SPRINKLER HEAD: QUICK-RESPONSE; GLASS BULB; ADJUSTABLE; CHROME FINISH; CHROME ESCUTCHEON; 1/2"/155°/SSP/K=5.6.
- ○ UPRIGHT TYPE SPRINKLER HEAD: QUICK-RESPONSE; EXPOSED; GLASS BULB; BRASS FINISH; 1/2"/155°/SSP/K=5.6.

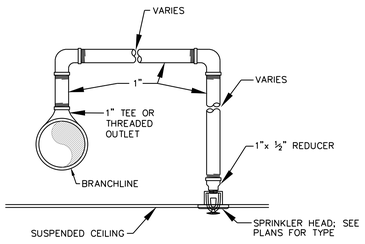
GENERAL NOTES

1. UNLESS NOTED OTHERWISE, DRAWINGS ARE DIAGRAMMATIC IN NATURE. COORDINATE INSTALLATION OF SYSTEM COMPONENTS WITH ACTUAL FIELD CONDITIONS; THE WORK OF OTHER TRADE CONTRACTORS; AND FOR MAINTENANCE ACCESS. INSTALL COMPONENTS SO THAT THEY DO NOT BLOCK ACCESS TO OTHER SYSTEM COMPONENTS REQUIRING MAINTENANCE. GIVE PRIORITY TO SYSTEMS THAT REQUIRE A SPECIFIED SLOPE.
2. EXAMINE THE PROJECT SITE PRIOR TO SUBMITTING BIDS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE EXTENT AND NATURE OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR FAILURE TO THOROUGHLY EXAMINE EXISTING CONDITIONS TO DETERMINE THE EXACT SCOPE OF THIS PROJECT; INCLUDING DEMOLITION WORK.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS, AND LABOR AS REQUIRED FOR THE COMPLETE PROJECT UNLESS CERTAIN PORTIONS OF THE WORK ARE SPECIFICALLY IDENTIFIED AS "BY OTHERS", "BY OWNER", "NOT IN CONTRACT", OR SIMILAR WORDING.
4. CONTRACTOR IS RESPONSIBLE FOR CUTTING, CORE DRILLING, PATCHING, ETC. FOR PROPER EXECUTION AND COMPLETION OF THE WORK. WHEN CUTTING OR CORE DRILLING THROUGH EXISTING BUILDING ASSEMBLIES, CONTRACTOR SHALL VERIFY LOCATION OF ALL STRUCTURAL ELEMENTS PRIOR TO CUTTING OR CORE DRILLING. PATCH BUILDING ASSEMBLIES TO MATCH EXISTING ADJACENT FINISHES UNLESS NOTED OTHERWISE.
5. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON THIS DRAWING.
6. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH NON-RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.).
7. COORDINATE ALL WORK WITH THE OWNER. WORK ABOVE, BELOW, NEAR, OR INSIDE OCCUPIED AREAS MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). SCHEDULE ALL OFF-HOURS WORK IN ADVANCE WITH THE OWNER. INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID. WHEN WORKING INSIDE OCCUPIED AREAS, COVER AND PROTECT ALL FURNITURE, EQUIPMENT, ETC. WITH FIRE-RETARDANT PLASTIC SHEETING. THOROUGHLY CLEAN THE PROJECT AREA AFTER WORK IS COMPLETED.
8. COORDINATE INSTALLATION OF WALL MOUNTED DEVICES. WHEN MULTIPLE DEVICES ARE INDICATED TO BE INSTALLED IN THE SAME WALL AT THE SAME ELEVATION, USE A LASER LEVEL TO SET THE ELEVATION OF THE DEVICES. COORDINATE WITH OTHER TRADE CONTRACTORS TO ENSURE ALL DEVICES ARE ALIGNED AND INSTALLED AT THE PROPER ELEVATION(S).
9. COORDINATE INSTALLATION OF CEILING MOUNTED DEVICES. WHEN INSTALLED IN LAY-IN CEILINGS, DEVICES SHALL BE CENTERED WITHIN CEILING TILES. WHEN INSTALLED IN GYPSUM BOARD CEILINGS, DEVICES SHALL BE COORDINATED AND ALIGNED WITH THE WORK OF OTHER TRADE CONTRACTORS.
10. COORDINATE INSTALLATION OF WORK ABOVE EXISTING CEILINGS THAT ARE NOT INDICATED TO BE REMOVED AS PART OF THIS PROJECT. REMOVE, STORE, AND REINSTALL EXISTING LAY-IN CEILING TILES AND/OR GRID; AND/OR CUT AND PATCH EXISTING GYPSUM BOARD CEILINGS AS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
11. COORDINATE AND SCHEDULE ALL SHUTDOWNS OF EXISTING UTILITIES TWO WEEKS IN ADVANCE WITH THE OWNER. ALL OR SOME OF THIS WORK MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID.
12. EXISTING AREAS OF THE FACILITY (WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS) DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. EXISTING SYSTEM COMPONENTS INDICATED ON THE DRAWINGS ARE BASED ON CURSORY FIELD INVESTIGATIONS AND EXISTING DRAWINGS, AND MAY OR MAY NOT BE LOCATED OR LABELED CORRECTLY. EXAMINE ALL AREAS OF THE PROJECT AND FIELD IDENTIFY / VERIFY ALL SYSTEM COMPONENTS PRIOR TO COMMENCING DEMOLITION OR NEW CONSTRUCTION. IDENTIFICATION AND VERIFICATION SHALL INCLUDE TRACING EACH SYSTEM COMPONENT TO DETERMINE ITS EXACT ORIGIN AND THE AREA OR EQUIPMENT THE SYSTEM COMPONENT SERVES. REPORT TO THE ARCHITECT AND/OR ENGINEER ALL SUCH DISCOVERIES OF SYSTEM COMPONENTS THAT ARE UNIDENTIFIED OR ARE FOUND TO BE IN A DIFFERENT LOCATION FROM THAT INDICATED.
14. UNLESS NOTED OTHERWISE, DEMOLISH AND REMOVE ALL SYSTEM COMPONENTS INDICATED ON THE DEMOLITION DRAWINGS. UNLESS NOTED OTHERWISE, ALL SYSTEM COMPONENTS SHALL BE REMOVED BACK TO THE SOURCE AND CAPPED APPROPRIATELY.
15. DEMOLITION WORK SHALL BE PERFORMED WITH DUE CARE AND DILIGENCE. TAKE ALL NECESSARY MEASURES TO PREVENT THE ARBITRARY INTERRUPTION OR DESTRUCTION OF CONCEALED SYSTEM COMPONENTS THAT ARE TO REMAIN OPERATIONAL, AND THE ROUTING OF WHICH COULD NOT BE PREDETERMINED UNTIL THE COMMENCEMENT OF DEMOLITION WORK.
16. EXISTING SYSTEM COMPONENTS INDICATED TO BE RELOCATED AND/OR REUSED SHALL BE INSPECTED FOR PROPER OPERATION, THOROUGHLY CLEANED, AND PREPARED FOR REINSTALLATION.
17. THE OWNER HAS THE RIGHT OF FIRST REFUSAL ON ALL SYSTEM COMPONENTS REMOVED DURING DEMOLITION. SYSTEM COMPONENTS NOT DESIRED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.
18. SYSTEM COMPONENTS SERVING AREAS OF THE PROJECT OCCUPIED BY THE OWNER DURING CONSTRUCTION SHALL BE MAINTAINED UNTIL THE OWNER VACATES THE AREA.
19. ALL AFF/AFG DIMENSIONS ARE REFERENCED TO THE CENTER OF THE EQUIPMENT OR DEVICE UNLESS NOTED OTHERWISE.
20. UNLESS NOTED OTHERWISE, ALL SPRINKLER PIPING SERVING INDIVIDUAL HEADS SHALL BE 1" SCHEDULE 40 BLACK STEEL.
21. PROVIDE MINIMUM PITCH OF PIPING REQUIRED TO DRAIN SYSTEM. PITCH PIPING TOWARDS INSPECTOR'S TEST STATION AND/OR MAIN RISER.
22. PROVIDE MANUAL AIR VENTS AT HIGH POINTS OF SYSTEM TO EVACUATE AIR FROM THE SYSTEM.
23. FIRE PROTECTION INSTALLATIONS SHALL MEET THE REQUIREMENTS OF NFPA 13, 2016 EDITION, AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

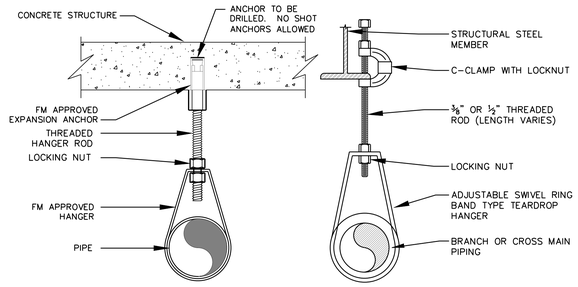


NOTES:
1. ALL SCREWS SHALL BE SPACED 3" O.C. MAX.
2. ALL SCREW HEADS SHALL BE LEFT EXPOSED.
3. ALL PATCHES TO BE SET IN FULL BED OF DRYWALL COMPOUND.
4. MAX SPACE AROUND OBJECT AND NEW PATCH SHALL BE ¼".
5. 2 LAYERS OF GB AT 2-HR WALLS.
6. FOAM GLASS INSULATION IS ONLY INSULATION MATERIAL PERMITTED TO PENETRATE WALLS.

1 TYP. 5/8" GB WALL PATCH DETAIL
NOT TO SCALE

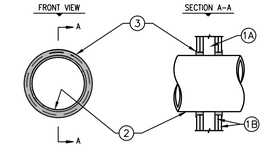


2 TYPICAL SPRINKLER RETURN BEND DETAIL
NOT TO SCALE



3 TYPICAL SPRINKLER PIPE HANGER DETAIL
NOT TO SCALE

U.L. SYSTEM NO. WL1054
METAL PIPE THROUGH 1 & 2 HR. GYPSUM WALL
F RATING = 1 & 2 HR. (SEE ITEMS 1 & 3)
T RATING = 0 HR.
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING AT 400 F = 4 CFM/SQ. FT.



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN. 2 1/2 IN. WIDE AND SPACED MAX. 24 IN. O.C. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. WIDER AND 4 TO 6 IN. HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE THE FRAMING ON ALL FOUR SIDES.
   B. WALLBOARD, GYPSUM* - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE U.L. FIRE RESISTANCE DIRECTORY. MAX. DIAM. OF OPENING IS 32-1/4 IN. FOR STEEL STUD WALLS. MAX. DIAM. OF OPENING IS 14-1/2 IN. FOR WOOD STUD WALLS.
   THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.
2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY NE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUIT OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE - NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAM STEEL CONDUIT.
   D. COPPER TUBING - NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE - NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV. OF HILTI INC-FS-ONE SEALANT

*BEARING THE U.L. CLASSIFICATION MARK

4 U.L. DETAIL
NOT TO SCALE

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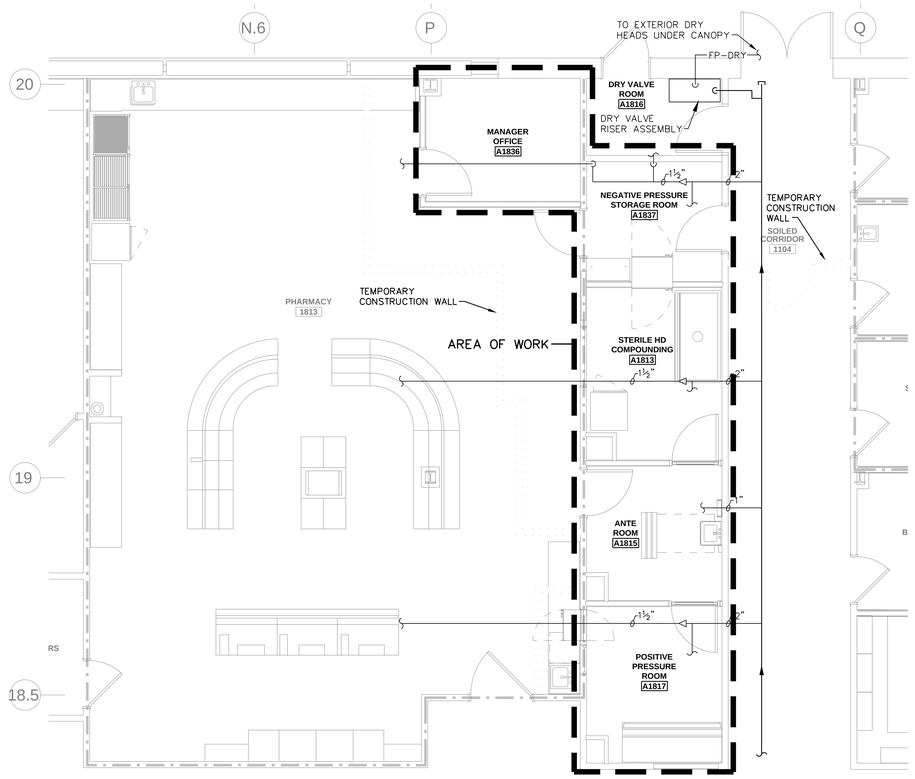
PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
FIRE PROTECTION SYMBOLS, ABBREVIATIONS, AND DETAILS

REVISIONS

No.	Description	Date

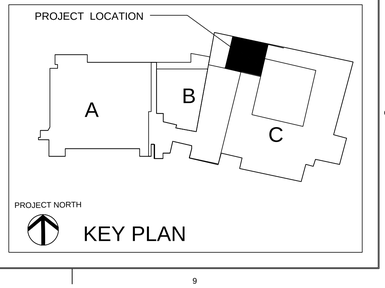
JOB NUMBER: 18028
F0.1
DATE: 27 AUGUST, 2018



1 PARTIAL FIRST FLOOR PLAN – FIRE PROTECTION
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE/REWORK EXISTING SPRINKLER PIPING AND SPRINKLER HEADS IN AREA SHOWN AS REQUIRED TO ACCOMMODATE NEW CEILING LAYOUT/DESIGN. PROVIDE COMPLETE FIRE SPRINKLER SYSTEM INCLUDING ALL PIPING, SPRINKLER HEADS, HANGERS, AND ALL OTHER REQUIRED MATERIAL AND DEVICES, ETC. FOR THE ENTIRE RENOVATED PROTECTED AREA PER NFPA 13, 2016 EDITION.
2. ALL NEW FIRE SPRINKLER HEADS SHALL BE INSTALLED IN CENTER OF CEILING TILE.
3. ALL SPRINKLER HEADS SHALL BE RECESSED TYPE PENDENT SPRINKLER HEADS, UNLESS NOTED OTHERWISE.
4. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
5. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING FO.1. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.



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PARTIAL FIRST FLOOR PLAN - FIRE PROTECTION

REVISIONS

No.	Description	Date

JOB NUMBER: 18028

F2.1

DATE: 27 AUGUST, 2018

PLUMBING SYMBOLS AND ABBREVIATIONS

PIPE TURNING UP
PIPE TURNING DOWN
TEE DOWN
TEE UP
45° OFFSET
DIRECTION OF FLOW IN PIPE
PIPE CAP
CONCENTRIC REDUCER
GATE VALVE
CHECK VALVE
PLUG VALVE
BALL VALVE
SOLENOID VALVE
PRESSURE REDUCING VALVE
CALIBRATED FLOW BALANCING VALVE (GPM INDICATED) (XX)
AUTOMATIC FLOW BALANCING VALVE (AF)
Y-TYPE STRAINER
PRESSURE GAUGE (W/¼" BALL VALVE)
IN-LINE PUMP
WATER HAMMER ARRESTER – ELEV. W/P.D.I. SIZE NOTED
WATER HAMMER ARRESTER – PLAN W/P.D.I. SIZE NOTED
HOSE BIBB or WALL HYDRANT
FLOOR CLEANOUT (FCO)
WALL CLEANOUT (WCO)
GRADE CLEANOUT (WITH 18"x18"x4" CONCRETE PAD) (GCO)
IN-LINE CLEANOUT (CO)
FLOOR DRAIN – SQUARE STRAINER
FLOOR DRAIN – ROUND STRAINER
FLOOR SINK
ROOF DRAIN
SECONDARY STORM DISCHARGE NOZZLE
MEDICAL GAS OUTLET
P-XX PLUMBING FIXTURE DESIGNATION
EXISTING TO BE REMOVED
EXISTING TO REMAIN (LIGHT LINE TYPE)
NEW WORK (HEAVY LINE TYPE)
AW — ACID WASTE
AV — ACID VENT
CV — CLINIC SINK VENT
PW — PUMPED WASTE
GW — GREASE WASTE
SANITARY SEWER
SANITARY VENT
SVW — SANITARY VACUUM WASTE
SVE — SANITARY VACUUM EXHAUST
RL — ROOF LEADER
SRL — SECONDARY ROOF LEADER
SD — STORM DRAIN
PS — PUMPED STORM
COLD WATER
HOT WATER SUPPLY
HOT WATER RETURN
140° — 140 DEGREE HOT WATER SUPPLY
140° — 140 DEGREE HOT WATER RETURN
T — TEMPERED WATER
DI — DEIONIZED WATER
RO — REVERSE OSMOSIS SUPPLY
ROR — REVERSE OSMOSIS RETURN
NPCW — NON-POTABLE COLD WATER
G — NATURAL GAS
GV — NATURAL GAS VENT
A — COMPRESSED AIR
IA — INSTRUMENT AIR
LA — LABORATORY AIR
MA — MEDICAL AIR
AI — AIR INTAKE
OX — OXYGEN
DV — DENTAL VACUUM
MV — MEDICAL VACUUM
VE — VACUUM EXHAUST
CO2 — CARBON DIOXIDE
He — HELIUM
H — HYDROGEN
N — NITROGEN
NO — NITROUS OXIDE
WAGD — WASTE ANESTHETIC GAS DISPOSAL (EVAC)

∠	ANGLE
℄	CENTER LINE
℘	PLATE
#	POUNDS OR NUMBER
ø	ROUND, DIAMETER OR PHASE
⌀	SQUARE FEET
A	COMPRESSED AIR
ABV.CLG.	ABOVE CEILING
ACFM	ACTUAL CUBIC FEET PER MINUTE
A.D.	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ANSI	AMERICAN NATIONAL STANDARD ASSOCIATION
AP	ACCESS PANEL
A.P.	ALARM PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AV	ACID VENT
AVTR	ACID VENT THRU ROOF
AW	ACID WASTE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BTUH	BRITISH THERMAL UNIT PER HOUR
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CLG.	CEILING
CO	CLEANOUT
CONN.	CONNECTION
COORD.	COORDINATE
CU.FT.	CUBIC FOOT
CW	DOMESTIC COLD WATER OR CITY WATER
DEG.	DEGREES
D.I.	DUCTILE IRON
DIA.	DIAMETER
DN.	DOWN
DS	DOWNSPOUT
DWG.	DRAWING
EA.	EACH
E.C.	ELECTRICAL CONTRACTOR
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL
EQUIP.	EQUIPMENT
EQ.	EQUAL
EWC	ELECTRIC WATER COOLER
EXIST.	EXISTING
F	FAHRENHEIT
FACP	FIRE ALARM CONTROL PANEL
FCO	FLOOR CLEANOUT
F.D.	FLOOR DRAIN
FIN.	FINISHED
FL	FLOOR
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
F.P.C.	FIRE PROTECTION CONTRACTOR
F.S.	FLOOR SINK
FT	FOOT
FTG.	FOOTING
F.U.	FIXTURE UNIT
G	NATURAL GAS
GA.	GAUGE
GAL.	GALLONS
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	NATURAL GAS VENT
GW	GREASE WASTE
H	HYDROGEN
HB	HOSE BIBB
H.C.	HEATING, VENTILATING, AND AIR CONDITIONING CONTRACTOR, HANDICAP
H.D.	HUB DRAIN
HP	HORSEPOWER
H.P.	HIGH PRESSURE
HR	HOUR
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
HYD.	HYDRANT
IA	INSTRUMENT AIR

ID	INDIRECT DRAIN
IN.	INCH
INV.	INVERT
IW	INDIRECT WASTE
JAN.	JANITOR
KW	KILOWATT
LA	LABORATORY AIR
LB/HR	POUNDS PER HOUR
LN	LIQUID NITROGEN
LOX	LIQUID OXYGEN
L.P.	LOW PRESSURE
LPG	LIQUID PETROLEUM GAS
MA	MEDICAL AIR
MAX.	MAXIMUM
MBH	BTUH x 1000
MECH.	MECHANICAL
MFR.	MANUFACTURER
M.H.	MANHOLE
MIN.	MINIMUM
MTD	MOUNTED
MV	MEDICAL VACUUM
N	NITROGEN
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NO	NITROUS OXIDE
NO.	NUMBER
NPCW	NON-POTABLE COLD WATER
NSF	NATIONAL SANITATION FOUNDATION
NTS	NOT TO SCALE
O.C.	ON CENTER
OX	OXYGEN
P.C.	PLUMBING CONTRACTOR
P.D.I.	PLUMBING AND DRAINAGE INSTITUTE
PLBG.	PLUMBING
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
R.D.	ROOF DRAIN
RECIRC.	RECIRCULATING
REQ'D	REQUIRED
REV.	REVISION
RL	ROOF LEADER
RM.	ROOM
RO	REVERSE OSMOSIS WATER
ROR	REVERSE OSMOSIS RETURN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SCFM	STANDARD CUBIC FEET PER MINUTE
SD	STORM DRAIN
SPEC.	SPECIFICATION
SPR	SPRINKLER
S.R.D.	SECONDARY (EMERGENCY) ROOF DRAIN
SRL	SECONDARY (EMERGENCY) ROOF LEADER
SQ.	SQUARE
SS	SANITARY SEWER
S.S.	STAINLESS STEEL
STRUCT.	STRUCTURAL
SVW	SANITARY VACUUM WASTE
SVE	SANITARY VACUUM EXHAUST
T.D.	TRENCH DRAIN
TPC	TRAP PRIMER CONNECTION
TYP.	TYPICAL
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VENT
VAC	VACUUM (SUCTION)
VOL.	VOLUME
VTR	VENT THRU ROOF
W	SANITARY, SOIL OR WASTE SEWER
W/	WITH
W/O	WITHOUT
WAGD	WASTE ANESTHETIC GAS DISPOSAL
W.C.	WATER COLUMN
WCO	WALL CLEANOUT
WH	WATER HEATER
ZVB	ZONE VALVE BOX

GENERAL SYMBOLS

PLAN NUMBER
ELEVATION NUMBER SHOWN ON SHEET NUMBER
SECTION NUMBER SHOWN ON SHEET NUMBER
DIMENSION LINE
EXISTING COLUMN NUMBER OR LETTER (A)
NEW COLUMN NUMBER OR LETTER (A1)
KEYED NOTE NUMBER (1)
CHANGE PROPOSAL REQUEST (REVISION) (CPR-#)
ADDENDUM (REVISION) (ADD-#)
CONNECT TO EXISTING
REMOVE TO THIS POINT
WASTE & VENT RISER DESIGNATION (WV #)
DOMESTIC WATER RISER DESIGNATION (DW #)
ROOF LEADER RISER DESIGNATION (RL #)
NATURAL GAS RISER DESIGNATION (NG #)
MEDICAL GAS RISER DESIGNATION (MG #)

RATED WALLS

NON-RATED SMOKE PARTITION SEAL ALL PENETRATIONS
1-HOUR RATED FIRE PARTITION SEAL ALL PENETRATIONS
1-HOUR RATED SMOKE BARRIER SEAL ALL PENETRATIONS
2-HOUR RATED FIRE BARRIER SEAL ALL PENETRATIONS
2-HOUR RATED FIRE BARRIER AND SMOKE BARRIER COMBINATION SEAL ALL PENETRATIONS

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, DRAWINGS ARE DIAGRAMMATIC IN NATURE. COORDINATE INSTALLATION OF SYSTEM COMPONENTS WITH ACTUAL FIELD CONDITIONS; THE WORK OF OTHER TRADE CONTRACTORS; AND FOR MAINTENANCE ACCESS. INSTALL COMPONENTS SO THAT THEY DO NOT BLOCK ACCESS TO OTHER SYSTEM COMPONENTS REQUIRING MAINTENANCE. GIVE PRIORITY TO SYSTEMS THAT REQUIRE A SPECIFIED SLOPE.
2. EXAMINE THE PROJECT SITE PRIOR TO SUBMITTING BIDS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE EXTENT AND NATURE OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR FAILURE TO THOROUGHLY EXAMINE EXISTING CONDITIONS TO DETERMINE THE EXACT SCOPE OF THIS PROJECT; INCLUDING DEMOLITION WORK.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS, AND LABOR AS REQUIRED FOR THE COMPLETE PROJECT UNLESS CERTAIN PORTIONS OF THE WORK ARE SPECIFICALLY IDENTIFIED AS "BY OTHERS", "BY OWNER", "NOT IN CONTRACT", OR SIMILAR WORDING.
4. CONTRACTOR IS RESPONSIBLE FOR CUTTING, CORE DRILLING, PATCHING, ETC. FOR PROPER EXECUTION AND COMPLETION OF THE WORK. WHEN CUTTING OR CORE DRILLING THROUGH EXISTING BUILDING ASSEMBLIES, CONTRACTOR SHALL VERIFY LOCATION OF ALL STRUCTURAL ELEMENTS PRIOR TO CUTTING OR CORE DRILLING. PATCH BUILDING ASSEMBLIES TO MATCH EXISTING ADJACENT FINISHES UNLESS NOTED OTHERWISE.
5. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING P2.1.
6. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH NON-RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.).
7. COORDINATE ALL WORK WITH THE OWNER. WORK ABOVE, BELOW, NEAR, OR INSIDE OCCUPIED AREAS MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). SCHEDULE ALL OFF-HOURS WORK IN ADVANCE WITH THE OWNER. INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID. WHEN WORKING INSIDE OCCUPIED AREAS, COVER AND PROTECT ALL FURNITURE, EQUIPMENT, ETC. WITH FIRE-RETARDANT PLASTIC SHEETING. THOROUGHLY CLEAN THE PROJECT AREA AFTER WORK IS COMPLETED.
8. COORDINATE INSTALLATION OF ALL WALL MOUNTED DEVICES. WHEN MULTIPLE DEVICES ARE INDICATED TO BE INSTALLED IN THE SAME WALL AT THE SAME ELEVATION, USE A LASER LEVEL TO SET THE ELEVATION OF THE DEVICES. COORDINATE WITH OTHER TRADE CONTRACTORS TO ENSURE ALL DEVICES ARE ALIGNED AND INSTALLED AT THE PROPER ELEVATION(S).
9. COORDINATE INSTALLATION OF CEILING MOUNTED DEVICES. WHEN INSTALLED IN LAY-IN CEILINGS; DEVICES SHALL BE CENTERED WITHIN CEILING TILES. WHEN INSTALLED IN GYPSUM BOARD CEILINGS, DEVICES SHALL BE COORDINATED AND ALIGNED WITH THE WORK OF OTHER TRADE CONTRACTORS.
10. COORDINATE INSTALLATION OF WORK ABOVE EXISTING CEILINGS THAT ARE NOT INDICATED TO BE REMOVED AS PART OF THIS PROJECT. REMOVE, STORE, AND REINSTALL EXISTING LAY-IN CEILING TILES AND/OR GRID; AND/OR CUT AND PATCH EXISTING GYPSUM BOARD CEILINGS AS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
11. COORDINATE AND SCHEDULE ALL SHUTDOWNS OF EXISTING UTILITIES TWO WEEKS IN ADVANCE WITH THE OWNER. ALL OR SOME OF THIS WORK MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID.
12. EXISTING AREAS OF THE FACILITY (WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS) DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. EXISTING SYSTEM COMPONENTS INDICATED ON THE DRAWINGS ARE BASED ON CURSORY FIELD INVESTIGATIONS AND EXISTING DRAWINGS, AND MAY OR MAY NOT BE LOCATED OR LABELED CORRECTLY. EXAMINE ALL AREAS OF THE PROJECT AND FIELD IDENTIFY / VERIFY ALL SYSTEM COMPONENTS PRIOR TO COMMENCING DEMOLITION OR NEW CONSTRUCTION. IDENTIFICATION AND VERIFICATION SHALL INCLUDE TRACING EACH SYSTEM COMPONENT TO DETERMINE ITS EXACT ORIGIN AND THE AREA OR EQUIPMENT THE SYSTEM COMPONENT SERVES. REPORT TO THE ARCHITECT AND/OR ENGINEER ALL SUCH DISCOVERIES OF SYSTEM COMPONENTS THAT ARE UNIDENTIFIED OR ARE FOUND TO BE IN A DIFFERENT LOCATION FROM THAT INDICATED.
14. UNLESS NOTED OTHERWISE, DEMOLISH AND REMOVE ALL SYSTEM COMPONENTS INDICATED ON THE DEMOLITION DRAWINGS. UNLESS NOTED OTHERWISE, ALL SYSTEM COMPONENTS SHALL BE REMOVED BACK TO THE SOURCE AND CAPPED APPROPRIATELY.
15. DEMOLITION WORK SHALL BE PERFORMED WITH DUE CARE AND DILIGENCE. TAKE ALL NECESSARY MEASURES TO PREVENT THE ARBITRARY INTERRUPTION OR DESTRUCTION OF CONCEALED SYSTEM COMPONENTS THAT ARE TO REMAIN OPERATIONAL, AND THE ROUTING OF WHICH COULD NOT BE PREDETERMINED UNTIL THE COMMENCEMENT OF DEMOLITION WORK.
16. EXISTING SYSTEM COMPONENTS INDICATED TO BE RELOCATED AND/OR REUSED SHALL BE INSPECTED FOR PROPER OPERATION, THOROUGHLY CLEANED, AND PREPARED FOR REINSTALLATION.
17. THE OWNER HAS THE RIGHT OF FIRST REFUSAL ON ALL SYSTEM COMPONENTS REMOVED DURING DEMOLITION. SYSTEM COMPONENTS NOT DESIRED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.
18. SYSTEM COMPONENTS SERVING AREAS OF THE PROJECT OCCUPIED BY THE OWNER DURING CONSTRUCTION SHALL BE MAINTAINED UNTIL THE OWNER VACATES THE AREA.
19. ALL AFF/AFG DIMENSIONS ARE REFERENCED TO THE CENTER OF THE EQUIPMENT OR DEVICE UNLESS NOTED OTHERWISE.
20. EXCEPT WHERE NOTED OTHERWISE OR SHOWN ON DRAWINGS AS "TO BE RETAINED, RELOCATED" OR HEREINAFTER NOTED, ALL EXISTING EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED WHERE THEY INTERFERE WITH PROPOSED NEW CONSTRUCTION AND/OR INTERFERE WITH PROPOSED USAGE OF SPACE BY OWNER AS FOLLOWS:
    A. REMOVE ANY PIPES PROTRUDING ABOVE FINISHED FLOORS OR THROUGH WALLS AND CAP AND FINISH OVER WITH MATERIAL TO MATCH EXISTING.
    B. REMOVE ALL FIXTURES, CARRIERS, EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC. AS NOTED. CAP BRANCH PIPING AT NEAREST ACTIVE MAIN. SUPPLY AND RETURN MAINS SHALL BE VALVED AND CAPPED AT A LOCATION TO AVOID DEAD LEGS.
    C. IN REMODELED/ALTERED AREAS, ANY PIPING PASSING THROUGH THE REMODELED AREAS TO SERVE (OR BEING SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING AREA THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
    D. PENETRATIONS THROUGH EXISTING WALLS AND FLOORS FORMERLY OCCUPIED BY REMOVED PIPING SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION.

PLUMBING FIXTURE SCHEDULE

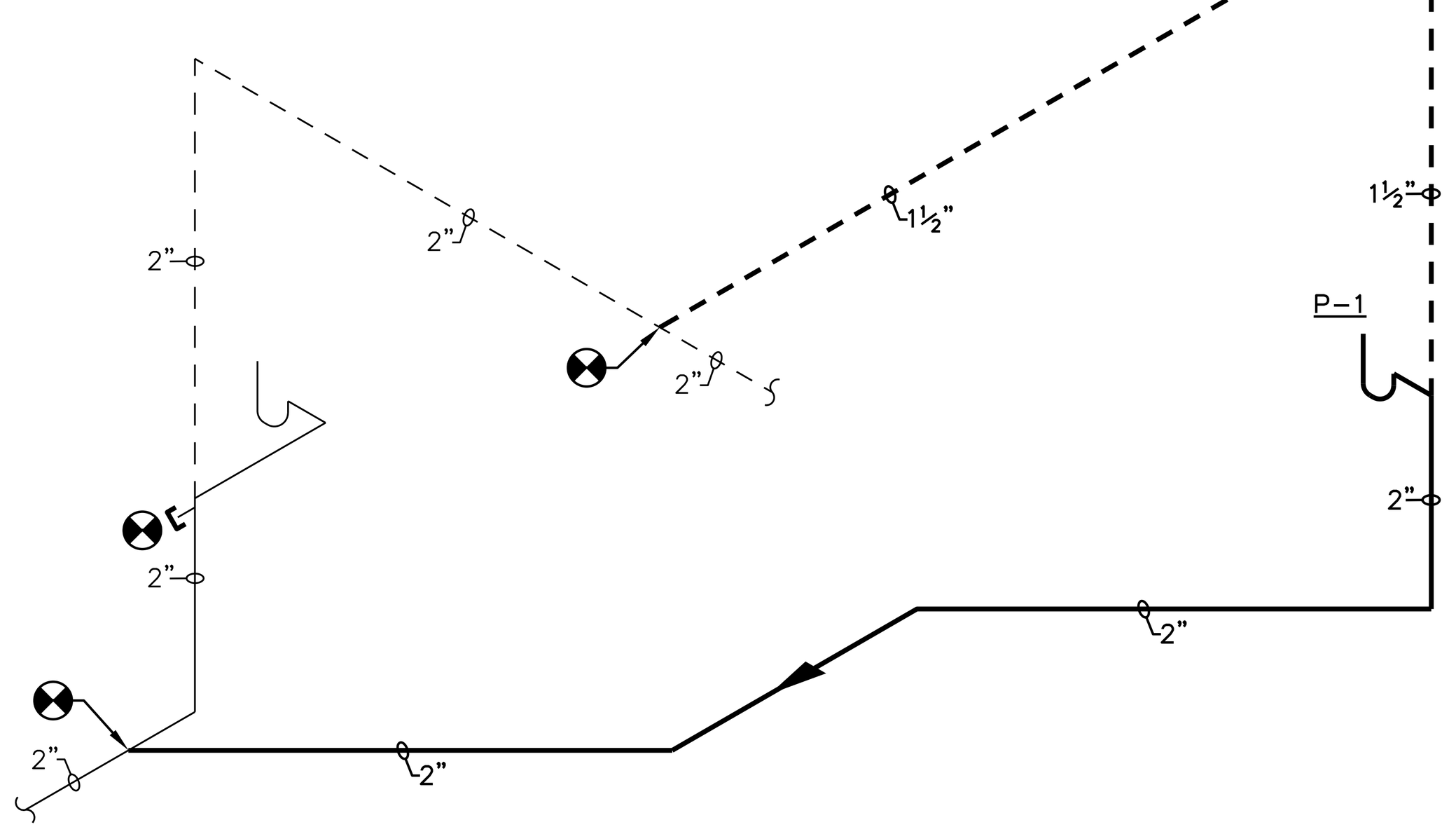
MARK	DESCRIPTION	COMPONENTS PROVIDED BY P.C.	PROTOTYPE: BASIC FIXTURE	PROTOTYPE: TRIM & ACCESSORIES	WASTE	VENT	CW	HW	OTHER	REMARKS
P-1	ADA VITREOUS CHINA LAVATORY, WALL HUNG, WHITE	COMPLETE UNIT WITH ALL TRIM & ACCESSORIES	1) KOHLER #K-2005 2) AMERICAN STANDARD #0355.012	SPOUT: CHICAGO #626-E36VPABCP, 5.25" GOOSENECK SPOUT, 1.5 GPM AERATOR FOOT PEDAL CONTROLS: CHICAGO #834-EPABCP SUPPLY: McGUIRE #M66C DRAIN: McGUIRE #155WC P-TRAP: McGUIRE #B8872C CARRIER: ZURN Z-1200 SERIES	2"	1 1/2"	1/2"	1/2"		CAULK AT WALL CONTACT WITH WHITE SILICONE SEALANT. PROVIDE TRUEBRO LAV SHIELD ENCLOSURE MODEL #2018-KO-K. MOUNT AT ADA HEIGHT SEE DETAIL 5/P2.1.

(WASTE, VENT, CW, HW, OTHER = FIXTURE ROUGH-IN SIZE)

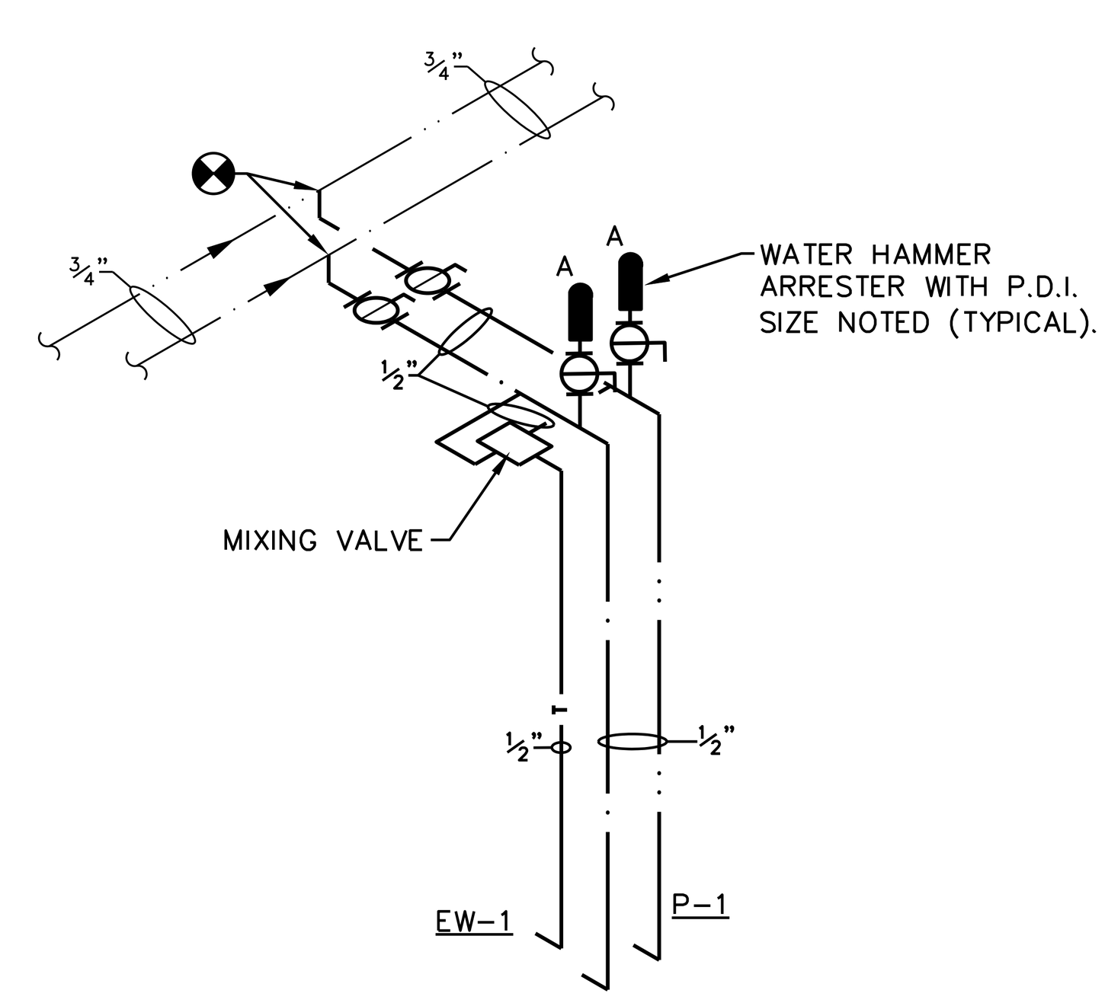
PLUMBING SPECIALTIES SCHEDULE

MARK	DESCRIPTION	COMPONENTS PROVIDED BY P.C.	PROTOTYPE: BASIC FIXTURE	PROTOTYPE: TRIM & ACCESSORIES	WASTE	VENT	CW	HW	OTHER	REMARKS
EW-1	HAND HELD EYE/FACE WASH; WALL MOUNTED	COMPLETE UNIT WITH ALL TRIM & ACCESSORIES	1) GUARDIAN #G5026BP-TMV OR APPROVED EQUAL	DUAL SPRAY HEADS, SQUEEZE HANDLE, 8 FOOT COILED HOSE, IN-LINE DUAL CHECK BACKFLOW PREVENTER, AND WALL MOUNTING BRACKET. PROVIDE WITH GUARDIAN #G3600 MIXING VALVE. OUTLET TEMPERATURE SHALL BE SET AT 85°F.	–	–	1/2"	1/2"	1/2"	INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT.
	WATER HAMMER ARRESTER	COMPLETE UNIT WITH ALL TRIM & ACCESSORIES	1) JAY R. SMITH "HYDROTROL" 2) JOSAM "ABSORBOTRON II" 3) MIFAB "HAMMERGARD" 4) WATTS WATER TECHNOLOGIES 5) ZURN "SHOKTROL"	(see sizing table below)						SIZES TO MATCH FIXTURE UNITS SUPPLYING MAINS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE A BALL VALVE PRECEDING EACH ARRESTER INSTALLED.

P.D.I. SIZE	PIPE SIZE	FIXTURE UNITS	JAY R. SMITH	JOSAM	MIFAB	WATTS	ZURN
A	½"	1-11	5005	75001-S	MWH-A	15M2-A	100
B	¾"	12-32	5010	75002-S	MWH-B	15M2-B	200
C	1"	33-60	5020	75003-S	MWH-C	15M2-C	300
D	1"	61-113	5030	75004-S	MWH-D	15M2-D	400
E	1"	114-154	5040	75005-S	MWH-E	15M2-E	500
F	1"	155-330	5050	75006-S	MWH-F	15M2-F	600



1 WASTE & VENT RISER DIAGRAM
NOT TO SCALE



2 DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE

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PLUMBING SYMBOLS, ABBREVIATIONS, SCHEDULES, AND RISER DIAGRAMS

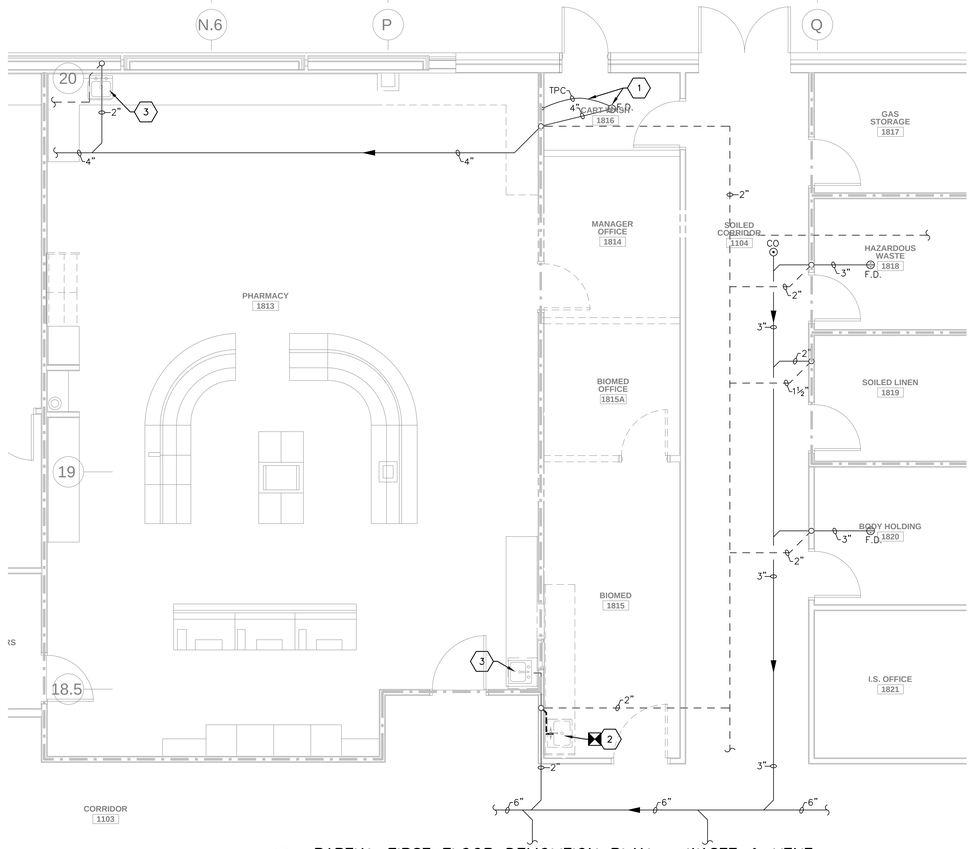
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

P0.1

DATE: 27 AUGUST, 2018



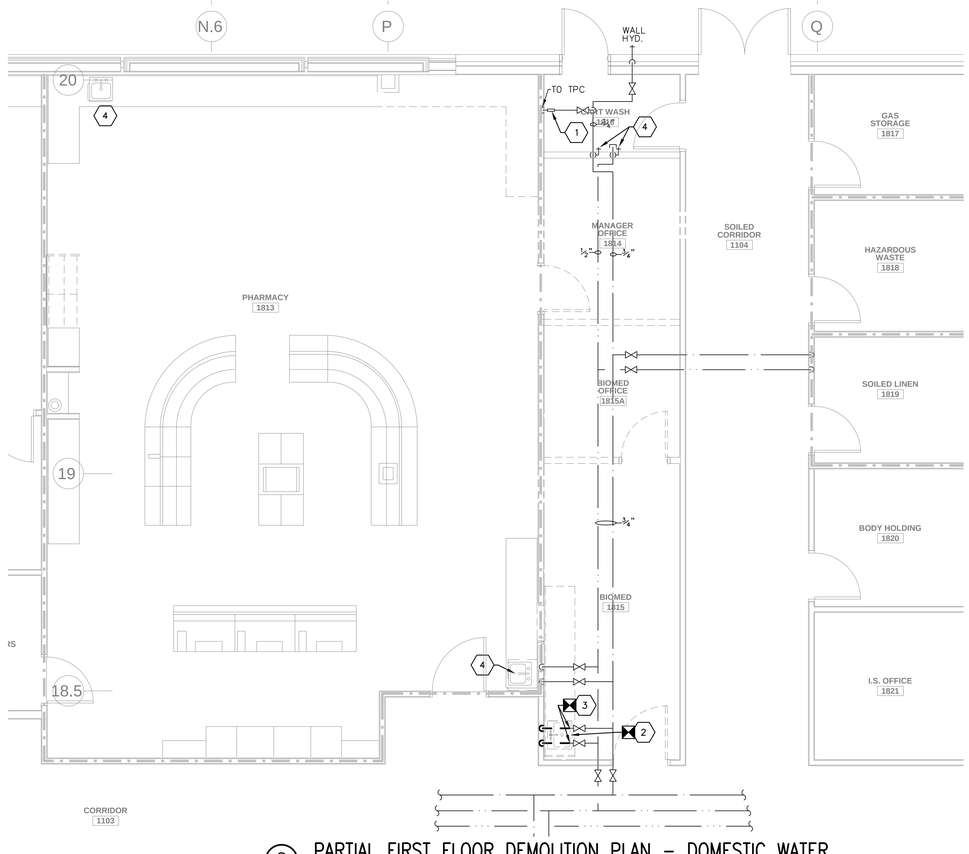
1 PARTIAL FIRST FLOOR DEMOLITION PLAN – WASTE & VENT
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC., SHOWN — — — UNLESS NOTED OTHERWISE.
2. U.N.O. ALL WASTE PIPING SHOWN IS LOCATED BELOW GRADE.
3. U.N.O. ALL VENT PIPING SHOWN IS LOCATED WITHIN THE FIRST FLOOR CEILING CAVITY.

NOTES KEYED TO PLAN 1/P1.1:

1. EXISTING FLOOR DRAIN AND TRAP PRIMER TO REMAIN.
2. REMOVE EXISTING SINK AND ALL ASSOCIATED PIPING AND APPURTENANCES. CAP WASTE PIPING IN WALL.
3. EXISTING PLUMBING FIXTURE TO REMAIN.



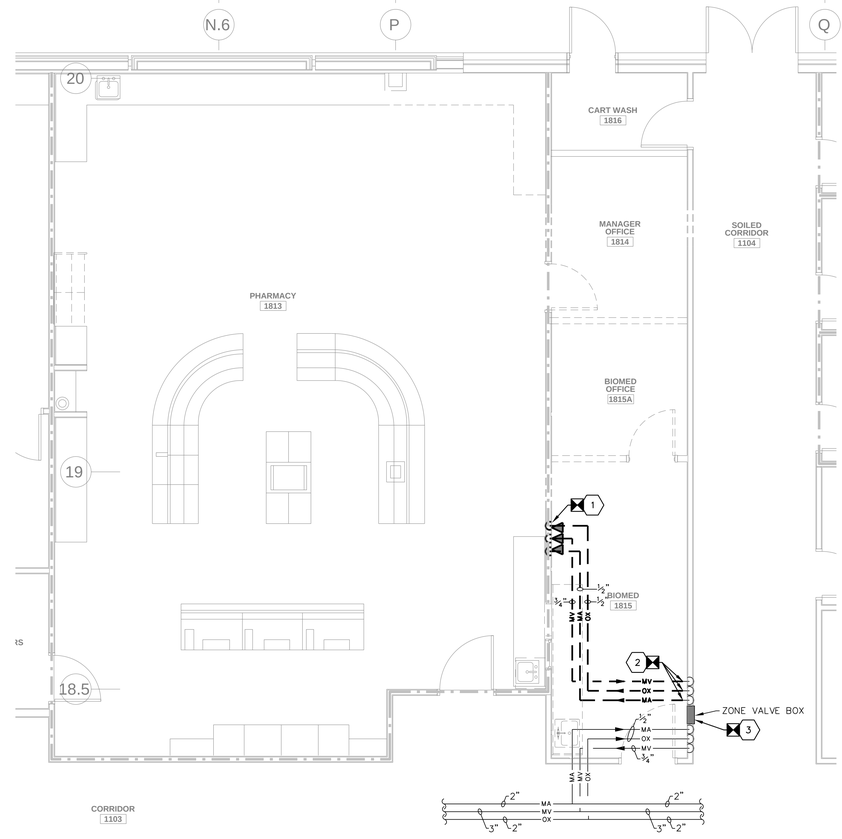
2 PARTIAL FIRST FLOOR DEMOLITION PLAN – DOMESTIC WATER
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC., SHOWN — — — UNLESS NOTED OTHERWISE.
2. U.N.O. ALL DOMESTIC WATER PIPING SHOWN IS LOCATED WITHIN THE FIRST FLOOR CEILING CAVITY.

NOTES KEYED TO PLAN 2/P1.1:

1. EXISTING TRAP PRIMER VALVE AND ALL ASSOCIATED PIPING TO REMAIN.
2. REMOVE EXISTING SINK AND ALL ASSOCIATED PIPING AND APPURTENANCES.
3. REMOVE EXISTING CW AND HW PIPING BACK TO POINT SHOWN AND CAP.
4. EXISTING PLUMBING FIXTURE TO REMAIN.



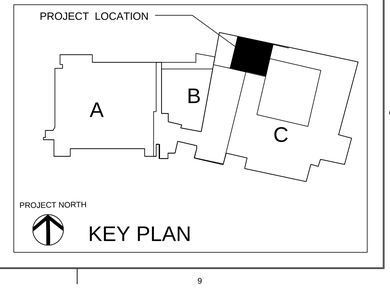
3 PARTIAL FIRST FLOOR DEMOLITION PLAN – MEDICAL GAS
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC., SHOWN — — — UNLESS NOTED OTHERWISE.
2. U.N.O. ALL MEDICAL GAS PIPING SHOWN IS LOCATED WITHIN THE FIRST FLOOR CEILING CAVITY.

NOTES KEYED TO PLAN 3/P1.1:

1. REMOVE EXISTING MEDICAL GAS OUTLETS AND ALL ASSOCIATED PIPING AND APPURTENANCES.
2. REMOVE EXISTING MV, MA AND OX PIPING BACK TO POINT SHOWN AND CAP.
3. EXISTING ZONE VALVE BOX TO REMAIN. CLOSE MV, MA AND OX VALVES AND REMOVE HANDLES. RE-LABEL EXISTING ZONE VALVE BOX "NOT IN USE" AND PER NFPA 99, LATEST EDITION REQUIREMENTS.



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PARTIAL FIRST FLOOR DEMOLITION PLANS - PLUMBING

REVISIONS		
No.	Description	Date

JOB NUMBER: 18028

P1.1

DATE: 27 AUGUST, 2018

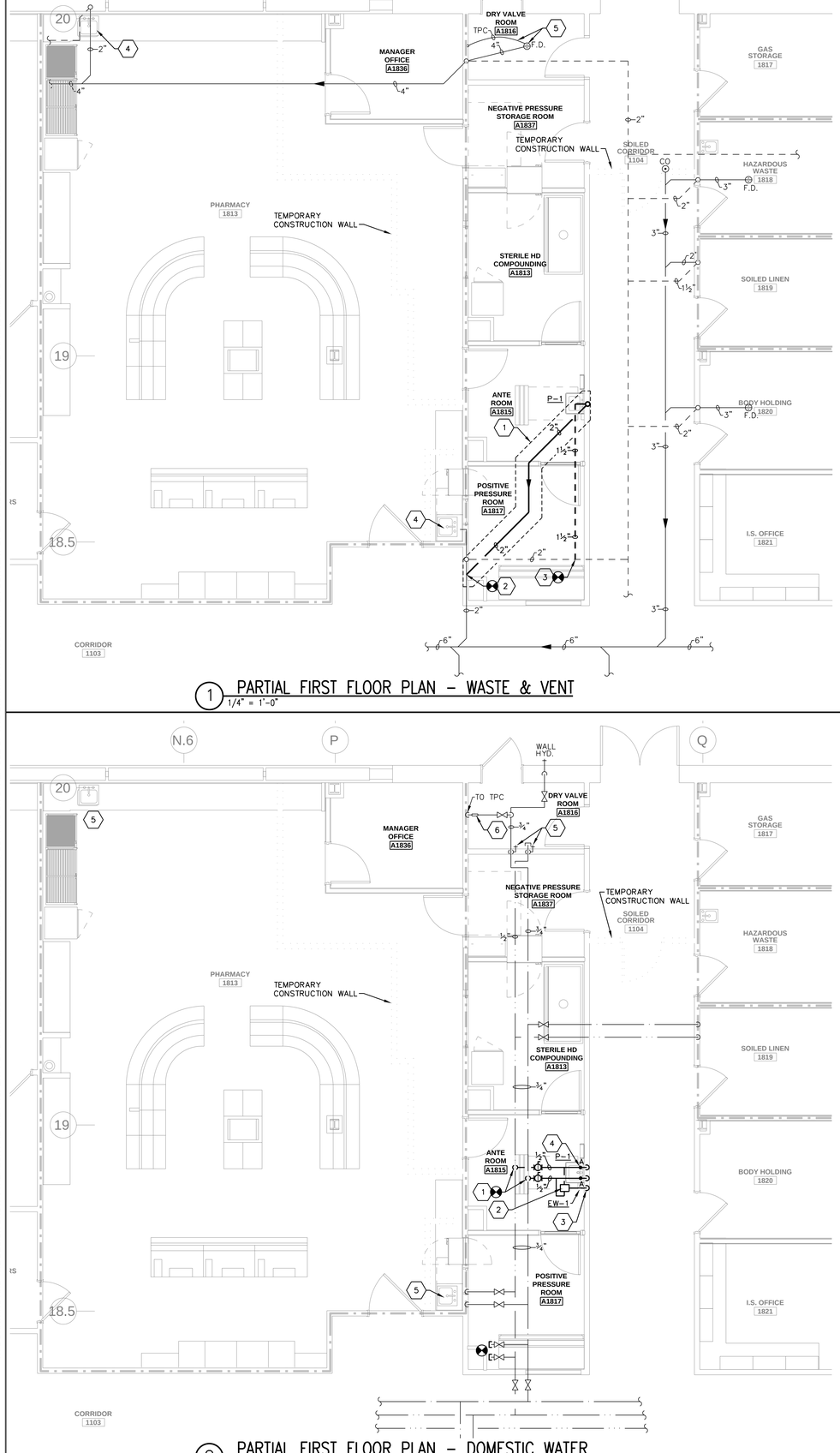
1 PARTIAL FIRST FLOOR PLAN - WASTE & VENT
1/4" = 1'-0"

GENERAL NOTES:

1. U.N.O. ALL WASTE PIPING SHOWN IS LOCATED BELOW SLAB.
2. U.N.O. ALL VENT PIPING SHOWN IS LOCATED WITHIN THE FIRST FLOOR CEILING CAVITY.
3. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
4. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON THIS DRAWING. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.

NOTES KEYED TO PLAN 1/P2.1:

1. SAWCUT FLOOR AS REQUIRED FOR INSTALLATION OF NEW WASTE PIPING (TYPICAL). BACKFILL AND PATCH TO MATCH EXISTING.
2. CONNECT NEW WASTE PIPING TO EXISTING WASTE PIPING.
3. CONNECT NEW VENT PIPING TO EXISTING VENT PIPING.
4. EXISTING PLUMBING FIXTURE TO REMAIN.
5. EXISTING FLOOR DRAIN AND TRAP PRIMER TO REMAIN.



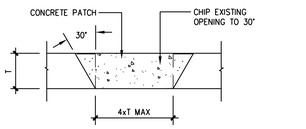
2 PARTIAL FIRST FLOOR PLAN - DOMESTIC WATER
1/4" = 1'-0"

GENERAL NOTES:

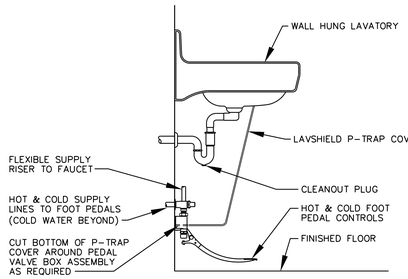
1. U.N.O. ALL DOMESTIC WATER PIPING SHOWN IS LOCATED WITHIN THE FIRST FLOOR CEILING CAVITY.
2. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
3. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON THIS DRAWING. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.

NOTES KEYED TO PLAN 2/P2.1:

1. CONNECT NEW CW AND HW PIPING TO EXISTING CW AND HW PIPING.
2. EYEWASH/DRENCH HOSE MIXING VALVE LOCATED ABOVE CEILING. 1/2" CW & HW INLETS, 1/2" TEMPERED WATER OUTLET. OUTLET TEMPERATURE SHALL BE SET AT 85° F. SEE DETAIL 8/P2.1.
3. 1/2" TEMPERED WATER PIPING DOWN IN WALL TO WALL MOUNTED EYEWASH/DRENCH HOSE.
4. WATER HAMMER ARRESTER WITH P.D.I. SIZE NOTED (TYPICAL).
5. EXISTING PLUMBING FIXTURE TO REMAIN.
6. EXISTING TRAP PRIMER VALVE AND ALL ASSOCIATED PIPING TO REMAIN.

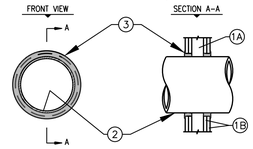


3 SLAB OPENING PATCH DETAILS
NOT TO SCALE



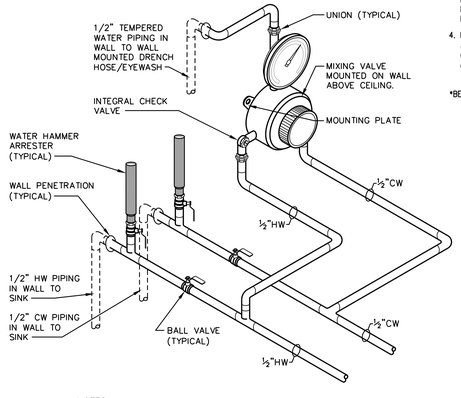
5 FOOT PEDAL CONTROLS DETAIL
NOT TO SCALE

U.L. SYSTEM NO. WL1054
METAL PIPE THROUGH 1 & 2 HR. GYPSUM WALL
F RATING = 1 & 2 HR. (SEE ITEMS 1 & 3)
T RATING = 0 HR.
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ. FT.
L RATING AT 400 F - 4 CFM/SQ. FT.



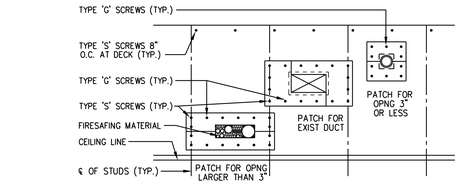
1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN. 2 1/2 IN. WIDE AND SPACED MAX. 24 IN. O.C. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. WIDER AND 4 TO 6 IN. HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE THE FRAMING ON ALL FOUR SIDES.
   B. WALLBOARD, GYPSUM* - 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES, THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE U.L. FIRE RESISTANCE DIRECTORY. MAX. DIAM. OF OPENING IS 32-1/4 IN. FOR STEEL STUD WALLS. MAX. DIAM. OF OPENING IS 14-1/2 IN. FOR WOOD STUD WALLS.
   THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.
2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT, PIPE, CONDUIT OR TUBING MAY NE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUIT OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE - NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAM STEEL CONDUIT.
   D. COPPER TUBING - NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE - NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV. OF HILTI INC-FS-ONE SEALANT
*BEARING THE U.L. CLASSIFICATION MARK

6 U.L. DETAIL
NOT TO SCALE



NOTES:
1. ORIENTATION OF EQUIPMENT AND FIXTURES MAY DIFFER FROM PLAN. THIS DETAIL IS INTENDED TO SHOW A GENERAL LOCATION FOR ALL DEVICES.
2. MIXING VALVE OUTLET TEMPERATURE SHALL BE SET AT 85°F.

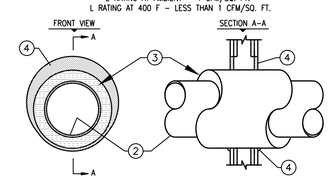
8 DRENCH HOSE/ EYEWASH MIXING VALVE DETAIL
NOT TO SCALE



NOTES:
1. ALL SCREWS SHALL BE SPACED 3" O.C. MAX.
2. ALL SCREW HEADS SHALL BE LEFT EXPOSED.
3. ALL PATCHES TO BE SET IN FULL BED OF DRYWALL COMPOUND.
4. MAX SPACE AROUND OBJECT AND NEW PATCH SHALL BE 1/4".
5. 2 LAYERS OF GB AT 2-HR WALLS.
6. FOAM GLASS INSULATION IS ONLY INSULATION MATERIAL PERMITTED TO PENETRATE WALLS.

4 TYP. 5/8" GYP BOARD PATCHES AT NEW & EXIST. OPENINGS
NOT TO SCALE

U.L. SYSTEM NO. WL5029
METAL PIPE THROUGH 1 & 2 HR. GYPSUM WALL
F RATING = 1 & 2-HR. (SEE ITEM 1)
T RATING = 1/2, 3/4, 1, 1-1/2 & 1-3/4 HR. (SEE ITEM 3)
L RATING AT AMBIENT - 4 CFM/SQ. FT.
L RATING AT 400 F - LESS THAN 1 CFM/SQ. FT.



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN. 2 1/2 IN. WIDE AND SPACED MAX. 24 IN. O.C.
   B. WALLBOARD, GYPSUM* - 5/8 IN. THICK, 4 FT WIDE, WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX. DIAM. OF OPENING IS 18-5/8 IN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. THROUGH PENETRANTS - ONE METALLIC PIPE OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. COPPER TUBING - NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   C. COPPER PIPE - NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. PIPE COVERING* - NOM 1, 1-1/2 OR 2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT.
   SEE PIPE AND EQUIPMENT COVERING - MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIAL DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE U.L. CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.
   THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT ON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, THE SIZE AND TYPE OF THROUGH PENETRANT AND THE PIPE COVERING THICKNESS, AS SHOWN IN THE TABLE BELOW:

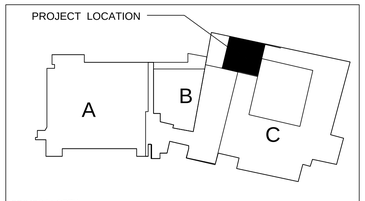
Wall Assembly Rating Hr	Through Penetrant		Pipe Covering Thkns In.	Annular Space		T Rating Hr
	Type +	Max Diam In.		Min In.	Max In.	
1	A	4	1	0	1-1/2	1/2
1	B or C	2	1 or 1-1/2	0	1-1/2	1/2
1	A	4	1-1/2	0	1-1/2	1
1	A	12	2	0	1-7/8	3/4
1	B or C	6	2	0	1-7/8	1
2	A	4	1	0	1-1/2	1
2	B or C	4	1 or 1-1/2	0	1-1/2	1
2	B or C	6	2	0	1-7/8	1
2	A	4	1-1/2	0	1-1/2	1-3/4
2	A	12	2	0	1-7/8	1-1/2
2	B or C	6	2	0	1-7/8	1

+ INDICATES PENETRANT TYPE AS ITEMIZED IN ITEM 2.

3A. PIPE COVERING* - (NOT SHOWN) - AS AN ALTERNATE TO ITEM 3, MAX 2 IN. THICK CYLINDRICAL CALCIUM SILICATE (MIN 14 PCF) UNITS SIZED TO THE OUTSIDE DIAM OF THE PIPE OR TUBE MAY BE USED. PIPE INSULATION SECURED WITH STAINLESS STEEL BANDS OR MIN 8 AWG STAINLESS STEEL WIRE SPACES MAX 12 IN. O.C. WHEN THE ALTERNATE PIPE COVING IS USED, THE T RATING SHALL BE DETERMINED FROM THE TABLE ABOVE.
SEE PIPE AND EQUIPMENT COVERING - MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIAL DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE U.L. CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

4. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND COVERING GYPSUM BOARD, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE COVERING/GYPSUM BOARD INTERFACE ON BOTH SIDES OF WALL.
   HILTI CONSTRUCTION CHEMICALS, DIV. OF HILTI INC-FS-ONE SEALANT
*BEARING THE U.L. CLASSIFICATION MARK

7 U.L. DETAIL
NOT TO SCALE



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CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
PARTIAL FIRST FLOOR PLANS AND DETAILS - PLUMBING

REVISIONS

No.	Description	Date

JOB NUMBER: 18028
P2.1
DATE: 27 AUGUST, 2018

MECHANICAL SYMBOLS AND ABBREVIATIONS

PIPE TURNING UP
PIPE TURNING DOWN
TEE DOWN
TEE UP
45° OFFSET
DIRECTION OF FLOW IN PIPE
PIPE SLOPED UP IN DIRECTION OF ARROW
PIPE CAP
CONCENTRIC REDUCER
ECCENTRIC REDUCER
PIPE UNION
GATE VALVE
GLOBE VALVE
CHECK VALVE
TRIPLE-DUTY VALVE
BUTTERFLY VALVE
PLUG VALVE
BALL VALVE
FLEXIBLE CONNECTION
MOTORIZED VALVE
SOLENOID VALVE
CONTROL VALVE (2-WAY)
CONTROL VALVE (3-WAY)
PRESSURE REDUCING VALVE
SAFETY RELIEF VALVE
CALIBRATED FLOW BALANCING VALVE
FLOW METER
FLOW SENSOR/SWITCH
SUCTION DIFFUSER
BACKFLOW PREVENTER ASSEMBLY
Y-TYPE STRAINER
BASKET STRAINER
PRESSURE GAUGE (W/¼" BALL VALVE)
STEAM PRESSURE GAUGE (W/¼" BALL VALVE AND PIGTAIL SIPHON)
THERMOMETER
TEMPERATURE SENSOR
P/T PLUG
STEAM TRAP
EXPANSION COMPENSATOR
ALIGNMENT GUIDE
PIPE ANCHOR
FLEXIBLE PIPE CONNECTION
EXPANSION LOOP WITH GUIDES
PUMP

CLPS — CLEAN LOW PRESSURE STEAM
LPS — LOW PRESSURE STEAM
HPS — HIGH PRESSURE STEAM
PC — PUMPED CONDENSATE
LPC — LOW PRESSURE CONDENSATE
HPC — HIGH PRESSURE CONDENSATE
CD — CONDENSATE DRAIN
D — DRAIN
SRV — SAFETY RELIEF VENT
BBD — BOILER BLOWDOWN
BFW — BOILER FEED WATER
HWS — HEATING WATER SUPPLY
HWR — HEATING WATER RETURN
CHWS — CHILLED WATER SUPPLY
CHWR — CHILLED WATER RETURN
CWS — CONDENSER WATER SUPPLY
CWR — CONDENSER WATER RETURN
FOS — FUEL OIL SUPPLY
FOR — FUEL OIL RETURN
FOV — FUEL OIL VENT
G — NATURAL GAS
GV — NATURAL GAS VENT
LPG — LIQUID PETROLEUM GAS
RL — REFRIGERANT LIQUID
RS — REFRIGERANT SUCTION

SUPPLY OR OUTSIDE AIR DUCT SECTION
RETURN OR EXHAUST DUCT SECTION
12x6 — SHEET METAL DUCT DIMENSIONS, (INCHES) FIRST DIMENSION IS SIDE SHOWN
DIRECTION OF FLOW IN DUCT
TRANSITION
R — DUCT SLOPED UP IN DIRECTION OF ARROW
SPIN-IN FITTING AND SEPARATE VOLUME DAMPER WITH LOCKING QUADRANT
DUCT ACCESS PANEL
SIDEWALL SUPPLY GRILLE OR REGISTER

SIDEWALL RETURN OR EXHAUST GRILLE OR REGISTER
ROUND SUPPLY DIFFUSER
SQUARE SUPPLY DIFFUSER
EXHAUST OR RETURN GRILLE OR REGISTER
SQUARE ELBOW WITH MULTIPLE TURNING VANES
ROUND ELBOW, R = 1½ D
DUCT TURNING UP
DUCT TURNING DOWN
FLEXIBLE CONNECTION
TRANSFER OPENING IN WALL ABOVE CEILING (SIZE SHOWN ON PLANS)
EXISTING FLEXIBLE DUCT
FLEXIBLE DUCT
—CSA— COLD SUPPLY AIR (COLD DECK)
—HSA— HOT SUPPLY AIR (HOT DECK)
VD — VOLUME DAMPER WITH MANUAL OPERATOR
M — CONTROL DAMPER WITH MOTOR OPERATOR
FD(E) — EXISTING FIRE DAMPER
FD — FIRE DAMPER
SD(E) — EXISTING SMOKE DAMPER
SD — SMOKE DAMPER
S/FD(E) — EXISTING COMBINATION FIRE AND SMOKE DAMPER
S/FD — COMBINATION FIRE AND SMOKE DAMPER
BD — BACKDRAFT DAMPER (ARROW INDICATES DIRECTION OF FLOW)
DD — DUCT MOUNTED SMOKE DETECTOR
HD — DUCT MOUNTED HEAT DETECTOR
DUCT MOUNTED STEAM HUMIDIFIER
AFCV-1 — AIR FLOW CONTROL VALVE
HWC-1 — DUCT MOUNTED HOT WATER COIL
VARIABLE OR CONSTANT VOLUME TERMINAL UNIT WITH REHEAT
VARIABLE OR CONSTANT VOLUME TERMINAL UNIT WITHOUT REHEAT
ESS — EMERGENCY STOP SWITCH FOR AIR HANDLING UNIT
100 100 100 100 — DIFFUSER, REGISTER, OR GRILLE SYMBOL-NUMBER INDICATES CFM
T — THERMOSTAT-MOUNT ℄ AT 48" AFF
H — HUMIDISTAT-MOUNT ℄ AT 48" AFF
50 — DIRECTION AND QUANTITY OF AIR FLOW UNDER DOOR (CFM)

℄	CENTER LINE
R	PLATE
∠	ANGLE
ø	ROUND, DIAMETER OR PHASE
#	POUNDS OR NUMBER
A	COMPRESSED AIR
ABV.CLG.	ABOVE CEILING
ACCU	AIR COOLED CONDENSING UNIT
ACFM	ACTUAL CUBIC FEET PER MINUTE
ACU	AIR CONDITIONING UNIT
AC/HR	AIR CHANGES PER HOUR
A.D.	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFMS	AIRFLOW MONITORING STATION
AHU	AIR HANDLING UNIT
ALUM.	ALUMINUM
AMCA	AIR MOVEMENT AND CONTROL ASSOCIATION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AUTO	AUTOMATIC
BBD	BOILER BLOWDOWN
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BFW	BOILER FEED WATER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C/C	CENTER TO CENTER
CD	CONDENSATE DRAIN
CF	CHEMICAL FEED
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG.	CEILING
CLPS	CLEAN LOW PRESSURE STEAM
C.O.	CLEAN OUT
CONC.	CONCRETE
CONN.	CONNECTION
CON'T.	CONTINUATION
CONST.	CONSTRUCTION
CONTR.	CONTRACTOR
COORD.	COORDINATE
COP	COEFFICIENT OF PERFORMANCE
CSA	COLD SUPPLY AIR (COLD DECK)
CTR	CENTER
CU	COPPER
CU.FT.	CUBIC FOOT
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CU.YD.	CUBIC YARD
DB	DRY BULB
DG	DOOR GRILLE
DH	DUCT HEATER
D.I.	DUCTILE IRON
DHW	DOMESTIC HOT WATER
DIA.	DIAMETER
DN.	DOWN
DD	DUCT MOUNTED SMOKE DETECTOR
D.P.	DIFFERENTIAL PRESSURE
DPR	DAMPER
DWG.	DRAWING
D.W.V.	DRAIN, WASTE AND VENT
DX	DIRECT EXPANSION
EA	EXHAUST AIR
E.A.T.	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EF	EXHAUST FAN
EFF	EFFICIENCY
EH	ELECTRIC HEATER
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL
EQUIP.	EQUIPMENT
EQ.	EQUAL
EQUIV.	EQUIVALENT
ER	EXHAUST REGISTER
E.S.P.	EXTERNAL STATIC PRESSURE
E.W.T.	ENTERING WATER TEMPERATURE
EXH.	EXHAUST
EXIST.	EXISTING
F	FAHRENHEIT
FACP	FIRE ALARM CONTROL PANEL
FC	FLOW CONTROLLER
FCU	FAN COIL UNIT
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER
FE	FLOW ELEMENT
FL	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE
FO	FLAT OVAL
FOB	FLAT ON BOTTOM
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOSA	FLAT OVAL SUPPLY AIR
FOT	FLAT ON TOP
FOV	FUEL OIL VENT
FP	FIRE PROTECTION
F.P.C.	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH/SENSOR
F&T	FLOAT & THERMOSTATIC
FT	FLOW TRANSMITTER
FTG.	FOOTING
FV	FLOW VALVE
G	NATURAL GAS
GA.	GAGE
GAL.	GALLONS
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	NATURAL GAS VENT
HC	HUMIDITY CONTROLLER
HD	HEAT DETECTOR
HGR.	HANGER
HOA	HAND-OFF-AUTOMATIC
HORZ.	HORIZONTAL
HP	HIGH PRESSURE OR HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HR	HOUR
HS	HUMIDITY SENSOR
HSA	HOT SUPPLY AIR (HOT DECK)
H'STAT	HUMIDISTAT
HT	HUMIDITY TRANSMITTER
HTG.	HEATING
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
IA	INSTRUMENT AIR
I.B.	INVERTED BUCKET
I.D.	INSIDE DIAMETER
IN.	INCH
INSUL.	INSULATED
INV.	INVERT
KW	KILOWATT
L.A.T.	LEAVING AIR TEMPERATURE
LB/HR	POUNDS PER HOUR
LCD	LINEAR CEILING DIFFUSER
LSH/L	LEVEL SWITCH HIGH/LOW
LV	LEVEL VALVE
L.W.T.	LEAVING WATER TEMPERATURE
L.P.	LOW PRESSURE
LPC	LOW PRESSURE CONDENSATE
LPG	LIQUID PETROLEUM GAS
LPS	LOW PRESSURE STEAM
MA	MEDICAL AIR
MAX.	MAXIMUM
MBH	BTUH x 1000
MECH.	MECHANICAL
MEZZ	MEZZANINE
MFG.	MANUFACTURING
MFR.	MANUFACTURER
M.H.	MANHOLE
MIN.	MINIMUM
MJ	MECHANICAL JOINT
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.I.C.	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NPSH	NET POSITIVE SUCTION HEAD
N.R.S.	NON RISING STEM
N.T.S.	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG	OPENING
O.S.&Y.	OUTSIDE SCREW AND YOKE
P	PUMP
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
P.C.	PLUMBING CONTRACTOR
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PLBG.	PLUMBING
PPH	POUNDS PER HOUR
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH/SENSOR
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE TRANSMITTER
PVC	POLYVINYL CHLORIDE
QTY.	QUANTITY
RA	RETURN AIR
RD.	ROUND
R.C.P.	REINFORCED CONCRETE PIPE
RECIRC.	RECIRCULATING
REINF.	REINFORCING
REQ'D	REQUIRED
REV.	REVISION
RF	RETURN FAN
RM.	ROOM
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RL	REFRIGERANT LIQUID
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RS	REFRIGERANT SUCTION
R.S.	RISING STEM
SA	SUPPLY AIR
SC	SPEED CONTROLLER
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH.	SCHEDULE
SD	SMOKE DAMPER
SECT.	SECTION
SF	SUPPLY FAN
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
S.P.	STATIC PRESSURE
SPEC.	SPECIFICATION
SPR	SPRINKLER
SQ.	SQUARE
STA.	STATION
STL	STEEL
STM	STEAM
STRUCT.	STRUCTURAL
SYM	SYMBOL OR SYMMETRICAL
SYS.	SYSTEM
T & B	TOP AND BOTTOM
TAB	TEST AND BALANCE
TBD	TO BE DETERMINED
TC	TEMPERATURE CONTROLLER
T.O.C.	TOP OF CURB
T.O.D.	TOP OF DUCT
T.O.P.	TOP OF PIPE
T.O.S.	TOP OF STEEL
TS	TEMPERATURE SENSOR
T'STAT	THERMOSTAT
TT	TEMPERATURE TRANSMITTER
TU	TERMINAL UNIT
TV	TEMPERATURE VALVE
TYP.	TYPICAL
U.F.	UNDER FLOOR
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
V	VENT
VD	MANUAL VOLUME DAMPER
VERT.	VERTICAL
VLV.	VALVE
VOL.	VOLUME
VS	VARIABLE SPEED
VSD	VARIABLE SPEED DRIVE
VTR	VENT THRU ROOF
W/	WITH
W/O	WITHOUT
WB	WET BULB
WG	WATER GAUGE

GENERAL SYMBOLS

PLAN NUMBER
ELEVATION NUMBER SHOWN ON SHEET NUMBER
SECTION NUMBER SHOWN ON SHEET NUMBER
DIMENSION LINE
A — EXISTING COLUMN NUMBER OR LETTER
A1 — NEW COLUMN NUMBER OR LETTER
1 — KEYED NOTE NUMBER
CPR-# — CHANGE PROPOSAL REQUEST (REVISION)
ADD-# — ADDENDUM (REVISION)
CONNECT TO EXISTING
REMOVE TO THIS POINT
EXISTING TO BE REMOVED OR RELOCATED
EXISTING TO REMAIN (LIGHT LINE TYPE)
NEW OR RELOCATED WORK (HEAVY LINE TYPE)

RATED WALLS

NON-RATED SMOKE PARTITION SEAL ALL PENETRATIONS
1-HOUR RATED FIRE PARTITION SEAL ALL PENETRATIONS
1-HOUR RATED SMOKE BARRIER SEAL ALL PENETRATIONS
2-HOUR RATED FIRE BARRIER SEAL ALL PENETRATIONS
2-HOUR RATED FIRE BARRIER AND SMOKE BARRIER COMBINATION SEAL ALL PENETRATIONS

CONTROL SYMBOLS

FT — FUNCTION I.D.
PNEUMATIC ANALOG SIGNAL
PNEUMATIC BINARY SIGNAL
ELECTRIC ANALOG SIGNAL
ELECTRIC BINARY SIGNAL
AI — ANALOG INPUT
AO — ANALOG OUTPUT
BI — BINARY INPUT
BO — BINARY OUTPUT
ELECTRIC TO PNEUMATIC SIGNAL CONVERTER
RESTRICTOR
PNEUMATIC ACTUATOR

CONTROL ABBREVIATIONS

BAS	BUILDING AUTOMATION SYSTEM
FC	FLOW CONTROLLER
FCV	FLOW CONTROL VALVE
FE	FLOW ELEMENT
FI	FLOW INDICATOR
FS	FLOW SENSOR
FT	FLOW TRANSMITTER
FV	FLOW VALVE
HC	HUMIDITY CONTROLLER
HS	HUMIDITY SENSOR
HT	HUMIDITY TRANSMITTER
LS	LIMIT SWITCH
LSH/L	LEVEL SWITCH HIGH/LOW
LV	LEVEL VALVE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PS	PRESSURE SENSOR
PT	PRESSURE TRANSMITTER
SC	SPEED CONTROLLER
TC	TEMPERATURE CONTROLLER
TS	TEMPERATURE SENSOR
TT	TEMPERATURE TRANSMITTER
TV	TEMPERATURE VALVE
VS	VIBRATION SWITCH
XS	AUXILIARY DEVICE

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, DRAWINGS ARE DIAGRAMMATIC IN NATURE. COORDINATE INSTALLATION OF SYSTEM COMPONENTS WITH ACTUAL FIELD CONDITIONS; THE WORK OF OTHER TRADE CONTRACTORS; AND FOR MAINTENANCE ACCESS. INSTALL COMPONENTS SO THAT THEY DO NOT BLOCK ACCESS TO OTHER SYSTEM COMPONENTS REQUIRING MAINTENANCE. GIVE PRIORITY TO SYSTEMS THAT REQUIRE A SPECIFIED SLOPE.
2. EXAMINE THE PROJECT SITE PRIOR TO SUBMITTING BIDS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE EXTENT AND NATURE OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR FAILURE TO THOROUGHLY EXAMINE EXISTING CONDITIONS TO DETERMINE THE EXACT SCOPE OF THIS PROJECT; INCLUDING DEMOLITION WORK.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS, AND LABOR AS REQUIRED FOR THE COMPLETE PROJECT UNLESS CERTAIN PORTIONS OF THE WORK ARE SPECIFICALLY IDENTIFIED AS "BY OTHERS", "BY OWNER", "NOT IN CONTRACT", OR SIMILAR WORDING.
4. CONTRACTOR IS RESPONSIBLE FOR CUTTING, CORE DRILLING, PATCHING, ETC. FOR PROPER EXECUTION AND COMPLETION OF THE WORK. WHEN CUTTING OR CORE DRILLING THROUGH EXISTING BUILDING ASSEMBLIES, CONTRACTOR SHALL VERIFY LOCATION OF ALL STRUCTURAL ELEMENTS PRIOR TO CUTTING OR CORE DRILLING. PATCH BUILDING ASSEMBLIES TO MATCH EXISTING ADJACENT FINISHES UNLESS NOTED OTHERWISE.
5. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING M7.1.
6. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH NON-RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.).
7. COORDINATE ALL WORK WITH THE OWNER. WORK ABOVE, BELOW, NEAR, OR INSIDE OCCUPIED AREAS MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). SCHEDULE ALL OFF-HOURS WORK IN ADVANCE WITH THE OWNER. INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID. WHEN WORKING INSIDE OCCUPIED AREAS, COVER AND PROTECT ALL FURNITURE, EQUIPMENT, ETC. WITH FIRE-RETARDANT PLASTIC SHEETING. THOROUGHLY CLEAN THE PROJECT AREA AFTER WORK IS COMPLETED.
8. COORDINATE INSTALLATION OF WALL MOUNTED DEVICES. WHEN MULTIPLE DEVICES ARE INDICATED TO BE INSTALLED IN THE SAME WALL AT THE SAME ELEVATION, USE A LASER LEVEL TO SET THE ELEVATION OF THE DEVICES. COORDINATE WITH OTHER TRADE CONTRACTORS TO ENSURE ALL DEVICES ARE ALIGNED AND INSTALLED AT THE PROPER ELEVATION(S).
9. COORDINATE INSTALLATION OF CEILING MOUNTED DEVICES. WHEN INSTALLED IN LAY-IN CEILINGS, DEVICES SHALL BE CENTERED WITHIN CEILING TILES. WHEN INSTALLED IN GYPSUM BOARD CEILINGS, DEVICES SHALL BE COORDINATED AND ALIGNED WITH THE WORK OF OTHER TRADE CONTRACTORS.
10. COORDINATE INSTALLATION OF WORK ABOVE EXISTING CEILINGS THAT ARE NOT INDICATED TO BE REMOVED AS PART OF THIS PROJECT. REMOVE, STORE, AND REINSTALL EXISTING LAY-IN CEILING TILES AND/OR GRID; AND/OR CUT AND PATCH EXISTING GYPSUM BOARD CEILINGS AS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
11. COORDINATE AND SCHEDULE ALL SHUTDOWNS OF EXISTING UTILITIES TWO WEEKS IN ADVANCE WITH THE OWNER. ALL OR SOME OF THIS WORK MAY HAVE TO BE PERFORMED DURING OFF-HOURS (NIGHTS AND WEEKENDS). INCLUDE OVERTIME LABOR FOR OFF-HOURS WORK IN THE BASE BID.
12. EXISTING AREAS OF THE FACILITY (WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS) DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. EXISTING SYSTEM COMPONENTS INDICATED ON THE DRAWINGS ARE BASED ON CURSORY FIELD INVESTIGATIONS AND EXISTING DRAWINGS, AND MAY OR MAY NOT BE LOCATED OR LABELED CORRECTLY. EXAMINE ALL AREAS OF THE PROJECT AND FIELD IDENTIFY / VERIFY ALL SYSTEM COMPONENTS PRIOR TO COMMENCING DEMOLITION OR NEW CONSTRUCTION. IDENTIFICATION AND VERIFICATION SHALL INCLUDE TRACING EACH SYSTEM COMPONENT TO DETERMINE ITS EXACT ORIGIN AND THE AREA OR EQUIPMENT THE SYSTEM COMPONENT SERVES. REPORT TO THE ARCHITECT AND/OR ENGINEER ALL SUCH DISCOVERIES OF SYSTEM COMPONENTS THAT ARE UNIDENTIFIED OR ARE FOUND TO BE IN A DIFFERENT LOCATION FROM THAT INDICATED.
14. UNLESS NOTED OTHERWISE, DEMOLISH AND REMOVE ALL SYSTEM COMPONENTS INDICATED ON THE DEMOLITION DRAWINGS. UNLESS NOTED OTHERWISE, ALL SYSTEM COMPONENTS SHALL BE REMOVED BACK TO THE SOURCE AND CAPPED APPROPRIATELY.
15. DEMOLITION WORK SHALL BE PERFORMED WITH DUE CARE AND DILIGENCE. TAKE ALL NECESSARY MEASURES TO PREVENT THE ARBITRARY INTERRUPTION OR DESTRUCTION OF CONCEALED SYSTEM COMPONENTS THAT ARE TO REMAIN OPERATIONAL AND THE ROUTING OF WHICH COULD NOT BE PREDETERMINED UNTIL THE COMMENCEMENT OF DEMOLITION WORK.
16. EXISTING SYSTEM COMPONENTS INDICATED TO BE RELOCATED AND/OR REUSED SHALL BE INSPECTED FOR PROPER OPERATION, THOROUGHLY CLEANED, AND PREPARED FOR REINSTALLATION.
17. THE OWNER HAS THE RIGHT OF FIRST REFUSAL ON ALL SYSTEM COMPONENTS REMOVED DURING DEMOLITION. SYSTEM COMPONENTS NOT DESIRED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.
18. SYSTEM COMPONENTS SERVING AREAS OF THE PROJECT OCCUPIED BY THE OWNER DURING CONSTRUCTION SHALL BE MAINTAINED UNTIL THE OWNER VACATES THE AREA.
19. ALL AFF/AFG DIMENSIONS ARE REFERENCED TO THE CENTER OF THE EQUIPMENT OR DEVICE UNLESS NOTED OTHERWISE.
20. HVAC DESIGN IS IN ACCORDANCE WITH ASHRAE STANDARD 170-2017, VENTILATION OF HEALTH CARE FACILITIES, INCLUDING CURRENT ADDENDA.
21. DUCTWORK AND PIPING LOCATIONS SHOWN ARE DIAGRAMMATIC. ACTUAL LOCATIONS MAY VARY DEPENDING ON SPACE REQUIREMENTS. COORDINATE DUCTWORK AND PIPING INSTALLATIONS WITH OTHER TRADES AND ADJUST LOCATIONS AS NECESSARY. PROVIDE ADDITIONAL OFFSETS AND FITTINGS IF/AS REQUIRED.
22. UNLESS NOTED OTHERWISE, FLEXIBLE DUCT RUNOUTS TO TERMINAL UNITS AND AIR DISTRIBUTION DEVICES SHALL BE THE SAME SIZE AS THE NECK OF THE DEVICE SERVED. SEE EQUIPMENT SCHEDULES FOR SIZES.
23. ALL DUCT RUNOUTS TO AIR DISTRIBUTION DEVICES SHALL BE PROVIDED WITH A PREFABRICATED SPIN-IN FITTING AND VOLUME DAMPER (FLEXMASTER MODEL PLAIN FL SPIN-IN FITTING AND RUSKIN MODEL MDRS25 VOLUME DAMPER OR APPROVED EQUAL) FOR CONNECTION TO LOW PRESSURE DUCTWORK. FIELD FABRICATED SPIN-IN FITTINGS AND VOLUME DAMPERS ARE NOT ACCEPTABLE.
24. LOCATE GROUPS OF PIPING PARALLEL TO EACH OTHER, SPACED TO PERMIT APPLYING INSULATION WITH A MINIMUM 1-INCH SEPARATION BETWEEN INSULATED PIPING AND SPACED TO PERMIT SERVICING OF VALVES.
25. UNLESS NOTED OTHERWISE, PIPING RUNOUTS TO TERMINAL UNITS SHALL BE THE SAME SIZE AS THE REHEAT COIL CONNECTION, BUT NOT LESS THAN 3/4-INCH. SEE EQUIPMENT SCHEDULES FOR SIZES.
26. UNLESS NOTED OTHERWISE, PROVIDE TWO-WAY CONTROL VALVES FOR ALL TERMINAL UNIT REHEAT COILS.

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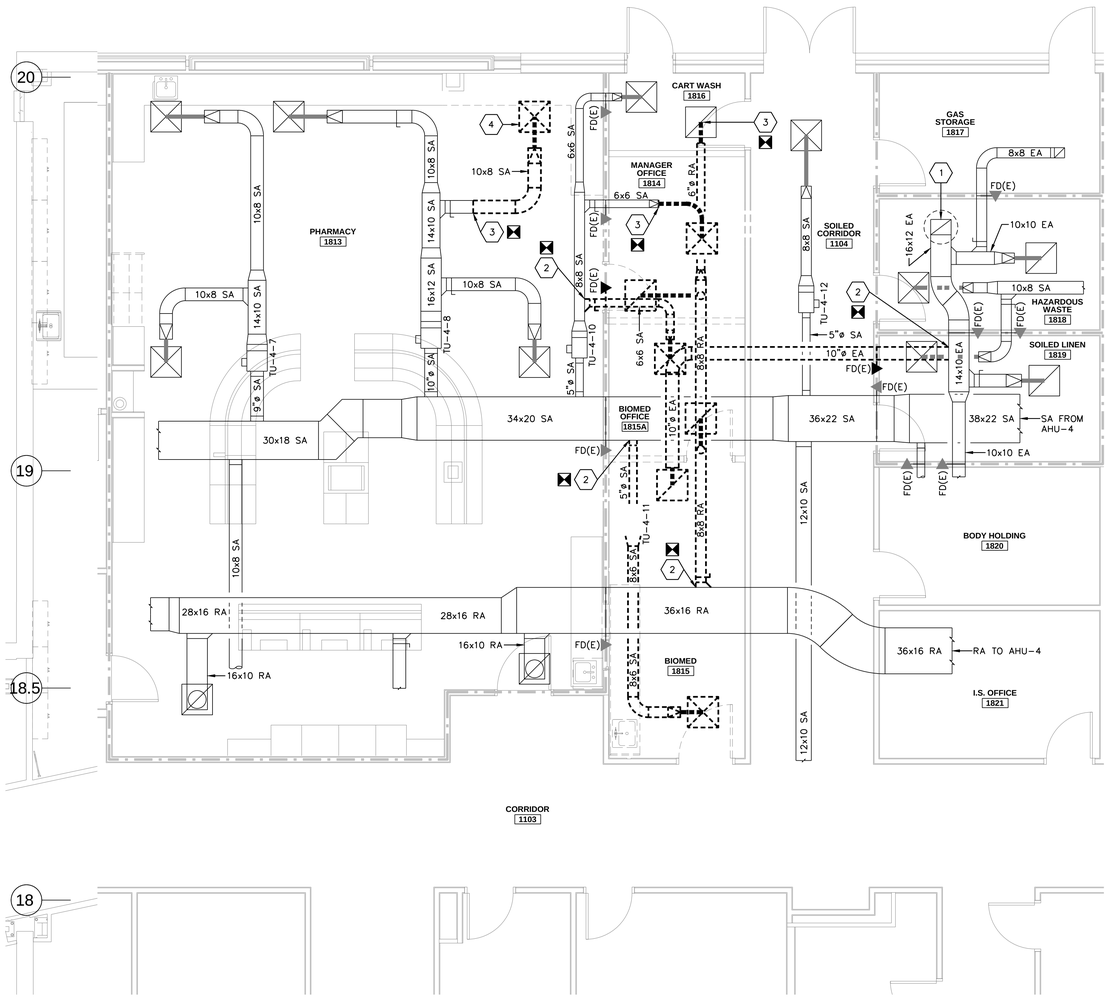
MECHANICAL SYMBOLS AND ABBREVIATIONS

REVISIONS

No.	Description	Date

JOB NUMBER: 18028
M0.1
DATE: 27 AUGUST, 2018



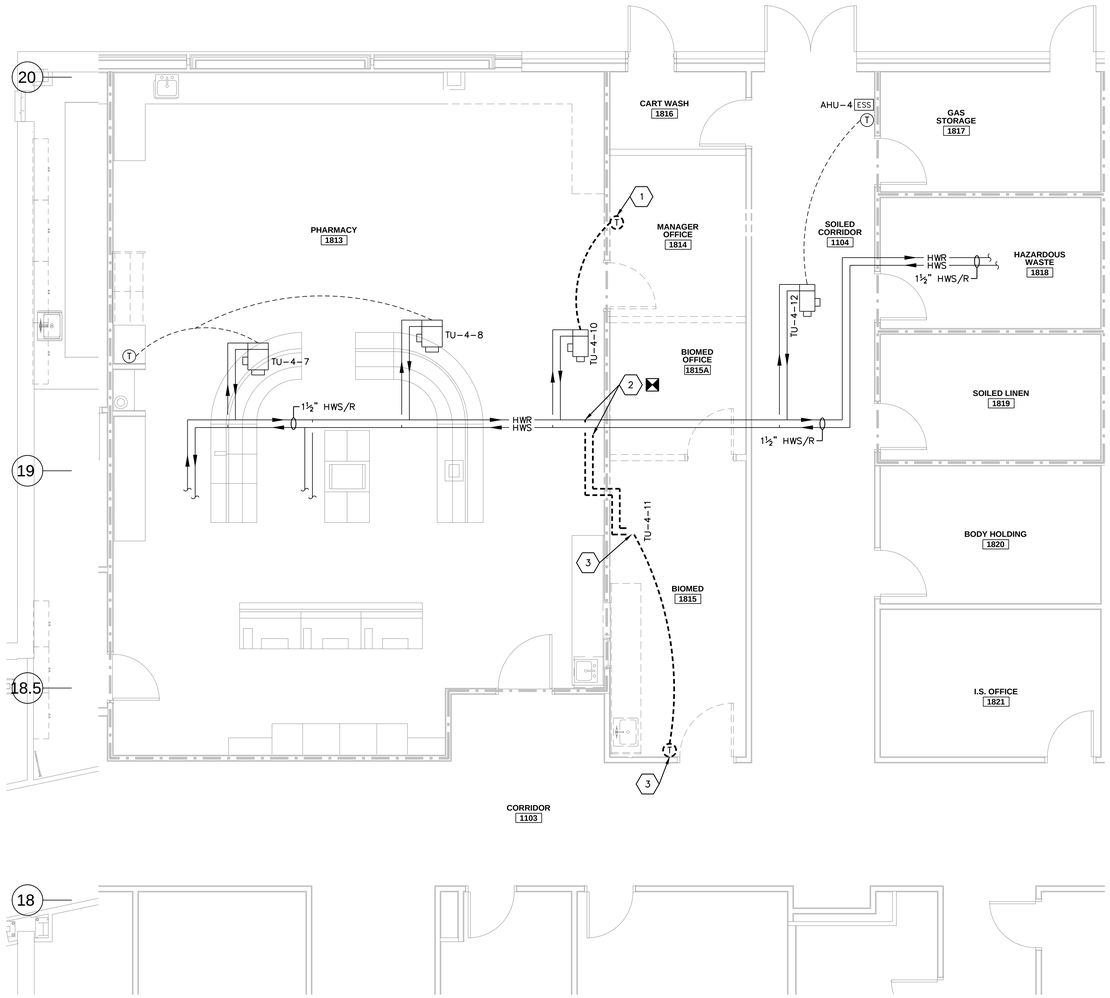
1 PARTIAL FIRST FLOOR DEMOLITION PLAN – DUCTWORK
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, DUCTWORK, INSULATION, SUPPORTS, ETC., SHOWN – – – – UNLESS NOTED OTHERWISE.
2. REPAIR AND/OR PATCH ALL OPENINGS WHERE MECHANICAL ITEMS ARE DEMOLISHED. USE SIMILAR MATERIALS AS EXISTING CONSTRUCTION.

NOTES KEYED TO PLAN 1/M1.1:

1. EXISTING 16x12 EXHAUST AIR UP TO ROOF MOUNTED EXHAUST FAN EF-15.
2. REMOVE EXISTING DUCT BACK TO POINT INDICATED AND CAP. SEAL DUCT AIRTIGHT AND PATCH INSULATION (IF APPLICABLE) TO MATCH EXISTING.
3. REMOVE EXISTING DUCT BACK TO POINT INDICATED. SEE PLAN 2/M2.1 FOR RECONNECTION.
4. EXISTING DIFFUSER/GRILLE TO BE RELOCATED. SEE PLAN 2/M2.1 FOR NEW LOCATION.



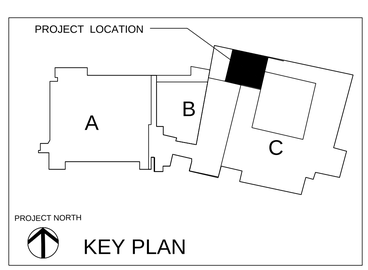
2 PARTIAL FIRST FLOOR DEMOLITION PLAN – PIPING
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC., SHOWN – – – UNLESS NOTED OTHERWISE.
2. REPAIR AND/OR PATCH ALL OPENINGS WHERE MECHANICAL ITEMS ARE DEMOLISHED. USE SIMILAR MATERIALS AS EXISTING CONSTRUCTION.

NOTES KEYED TO PLAN 2/M1.1:

1. EXISTING WALL MOUNTED THERMOSTAT TO BE RELOCATED. REMOVE EXISTING CONTROL WIRING BACK TO TERMINAL UNIT.
2. REMOVE EXISTING HWS/R BACK TO POINT INDICATED AND CAP. PATCH INSULATION TO MATCH EXISTING.
3. REMOVE EXISTING TERMINAL UNIT AND ALL ASSOCIATED PIPING, SUPPORTS, AND CONTROLS.



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PARTIAL FIRST FLOOR DEMOLITION PLANS - MECHANICAL

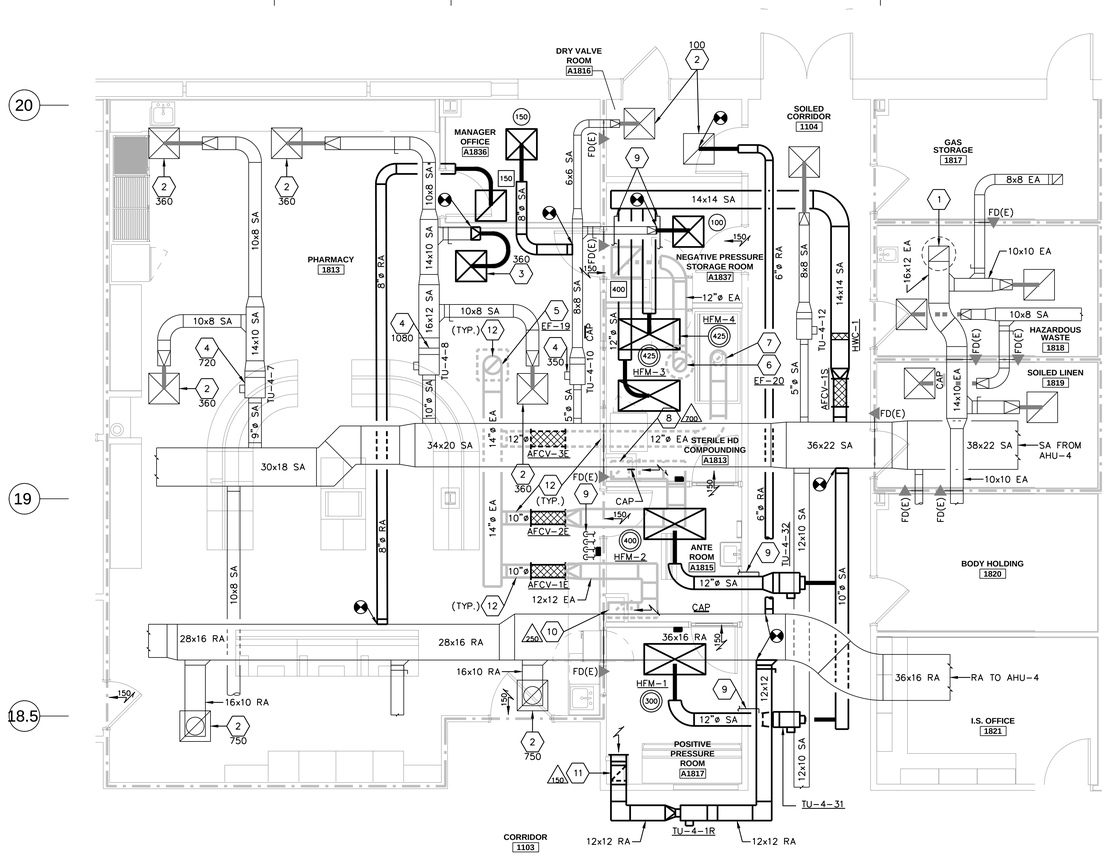
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

M1.1

DATE: 27 AUGUST, 2018



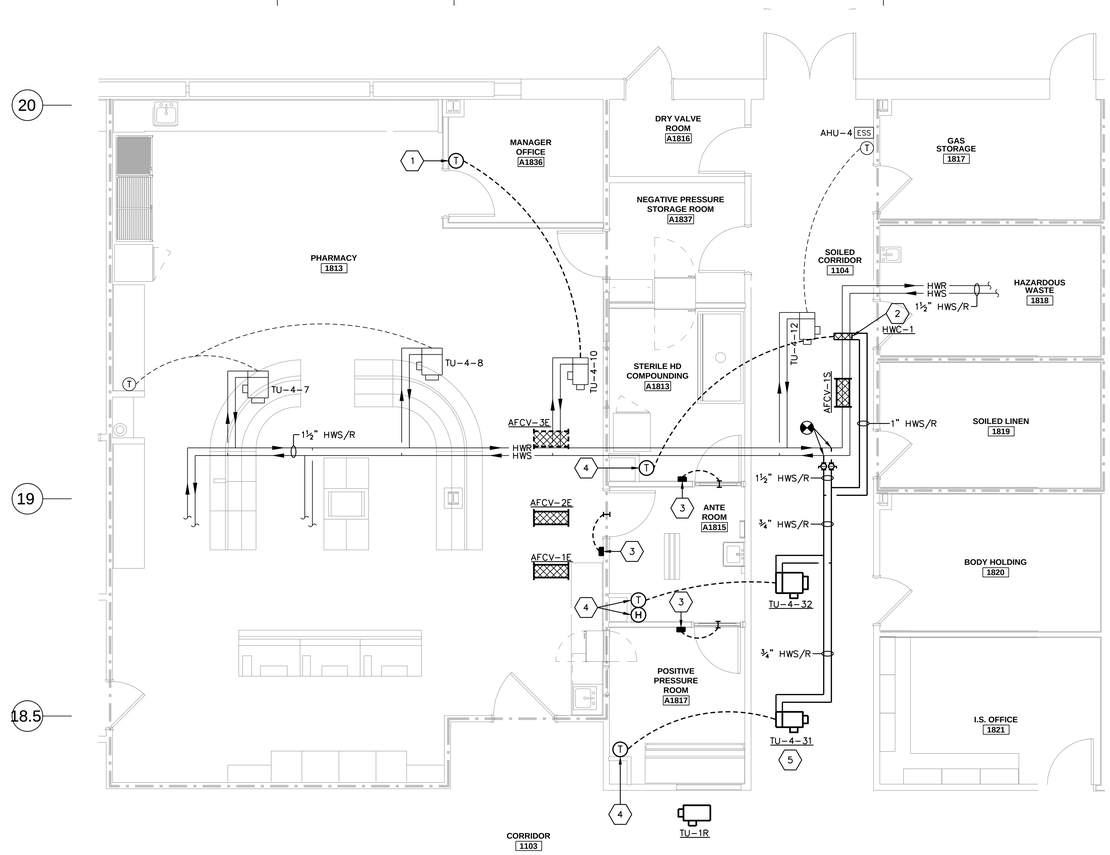
1 PARTIAL FIRST FLOOR PLAN – DUCTWORK
1/4" = 1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING DUCT SIZES WHERE NEW DUCT CONNECTIONS ARE TO BE MADE.

NOTES KEYED TO PLAN:

1. EXISTING 16x12 EXHAUST AIR UP TO ROOF MOUNTED EXHAUST FAN EF-15.
2. BALANCE EXISTING DIFFUSER/GRILLE TO CFM INDICATED ON PLAN.
3. NEW LOCATION OF EXISTING DIFFUSER/GRILLE REMOVED DURING DEMOLITION. PROVIDE NEW RUNOUT DUCT AND BALANCE TO CFM INDICATED ON PLAN.
4. INSPECT EXISTING TERMINAL UNIT FOR PROPER OPERATION AND REPORT ANY DEFICIENCIES TO THE OWNER. BALANCE TO SUPPLY CFM INDICATED ON PLAN.
5. 14"ø ALL WELDED STAINLESS STEEL EXHAUST AIR UP TO ROOF MOUNTED EXHAUST FAN EF-19. SEE SHEET M3.1 FOR CONTINUATION. SEE DETAIL 6/M7.2.
6. 12"ø EXHAUST AIR UP TO ROOF MOUNTED EXHAUST FAN EF-20. SEE SHEET M3.1 FOR CONTINUATION. SEE DETAIL 7/M7.2.
7. 12"ø ALL-WELDED STAINLESS STEEL EXHAUST AIR UP FROM BIOLOGICAL SAFETY CABINET. SEE DETAIL 5/M7.2.
8. 14x14 EXHAUST AIR UP IN CHASE FROM LOW WALL EXHAUST GRILLE. MOUNT BOTTOM OF GRILLE 6" A.F.F.
9. PROVIDE CEPA OPERATIONS, INC. (PHONE NUMBER: 909-923-1988) MODEL NUMBER CP-0500 AEROSOL INJECTION PORT ASSEMBLY KIT FOR EACH HEPA FILTER MODULE (HFM). PROVIDE 3/4" I.D. FLEXIBLE CLEAR PVC TUBING BETWEEN EACH CEILING INJECTION PORT AND DUCT INJECTION PORT. SECURE TUBING TO INJECTION PORTS WITH STAINLESS STEEL HOSE CLAMPS. LABEL EACH CEILING INJECTION PORT WITH A MULTI-COLOR PLASTIC LABEL TO IDENTIFY THE ROOM NAME, ROOM NUMBER, AND HEPA FILTER MODULE (HFM) THAT IT SERVES. LABEL EACH HEPA FILTER MODULE (HFM) WITH A MULTI-COLOR PLASTIC LABEL PER THE DESIGNATIONS NOTED ON THE DRAWING. INSTALL AEROSOL INJECTION PORT ASSEMBLY KITS PER THE MANUFACTURERS RECOMMENDATIONS. MOUNT CEILING INJECTION PORTS IN THE EXISTING LAY-IN CEILING. SEE DETAIL 4/M7.2.
10. 12x12 EXHAUST AIR UP IN CHASE FROM LOW WALL EXHAUST GRILLE. MOUNT BOTTOM OF GRILLE 6" A.F.F.
11. 12x12 RETURN AIR UP IN CHASE FROM LOW WALL RETURN GRILLE. MOUNT BOTTOM OF GRILLE 6" A.F.F.
12. HAZARDOUS EXHAUST SYSTEM SHALL NOT CONTAIN FIRE DAMPERS. CONTINUOUSLY WRAP ENTIRE EXHAUST DUCT SYSTEM AND ASSOCIATED AIRFLOW CONTROL VALVES WITH FIRE RATED BLANKET INSULATION FROM EXISTING ONE HOUR FIRE BARRIER PENETRATIONS TO ROOF PENETRATION TO MAINTAIN A CONTINUOUS ONE-HOUR RATING-SEE DETAIL 4/M7.3.



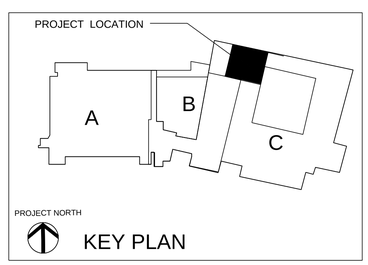
2 PARTIAL FIRST FLOOR PLAN – PIPING
1/4" = 1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING PIPE SIZES WHERE NEW PIPE CONNECTIONS ARE TO BE MADE.
2. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
3. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING M7.1. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.

NOTES KEYED TO PLAN 2/M2.1:

1. NEW LOCATION OF EXISTING WALL MOUNTED THERMOSTAT REMOVED DURING DEMOLITION. PROVIDE NEW CONTROL WIRING BACK TO EXISTING TERMINAL UNIT. INSPECT EXISTING THERMOSTAT FOR PROPER OPERATION AND REPORT ANY DEFICIENCIES TO THE OWNER.
2. DUCT MOUNTED HOT WATER COIL. SEE DETAIL 1/M7.3 FOR SIMILAR INSTALLATION.
3. ROOM DIFFERENTIAL PRESSURE DISPLAY/ALARM UNIT MOUNTED ON WALL. SEE DIAGRAM 5/M6.1.
4. MOUNT THERMOSTAT/HUMIDITY SENSOR ABOVE LOW WALL EXHAUST/RETURN GRILLE AT 48" A.F.F.
5. PROVIDE TERMINAL UNIT WITH 3-WAY CONTROL VALVE.



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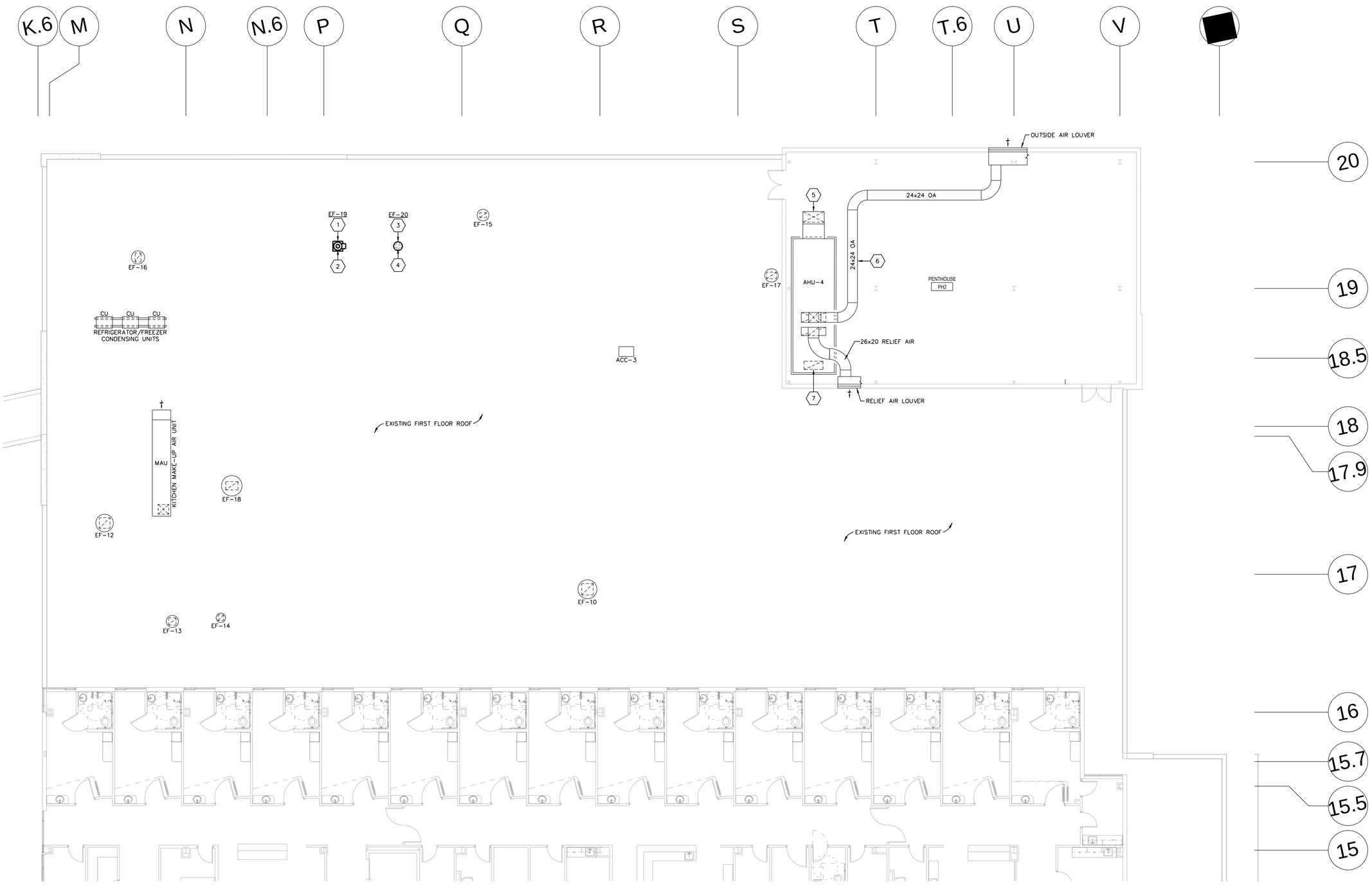
PARTIAL FIRST FLOOR PLANS - MECHANICAL

REVISIONS		
No.	Description	Date

JOB NUMBER: 18028

M2.1

DATE: 27 AUGUST, 2018



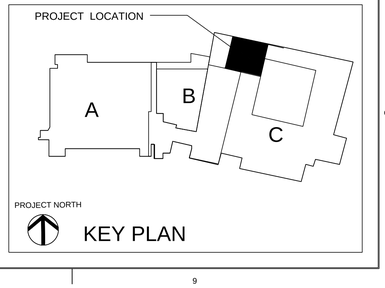
1 PARTIAL SECOND FLOOR/ROOF PLAN – MECHANICAL
1/8" = 1'-0"

GENERAL NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ROOF FLASHING REQUIREMENTS.

NOTES KEYED TO PLAN:

1. ROOF MOUNTED HIGH PLUME EXHAUST FAN. COORDINATE EXACT LOCATION WITH EXISTING STRUCTURAL STEEL–SEE DETAIL 6/M7.2.
2. TRANSITION 14"ø ALL WELDED STAINLESS STEEL EXHAUST DUCT AND CONNECT TO EXHAUST FAN INLET. SEE PLAN 1/M2.1 FOR CONTINUATION.
3. ROOF MOUNTED UPBLAST EXHAUST FAN. COORDINATE EXACT LOCATION WITH EXISTING STRUCTURAL STEEL–SEE DETAIL 7/M72.
4. TRANSITION 10"ø EXHAUST DUCT AND CONNECT TO EXHAUST FAN INLET. SEE PLAN 1/M2.1 FOR CONTINUATION.
5. EXISTING 56x26 SUPPLY AIR DOWN TO FLOOR BELOW.
6. BALANCE/ADJUST EXISTING AHU–4 MINIMUM OUTSIDE AIR TO PROVIDE AN ADDITIONAL 1,425 CFM.
7. EXISTING 46x20 RETURN AIR UP FROM FLOOR BELOW.



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PARTIAL SECOND FLOOR/ROOF PLAN - MECHANICAL

REVISIONS

No.	Description	Date

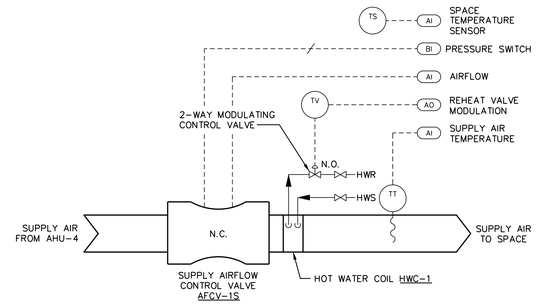
JOB NUMBER: 18028

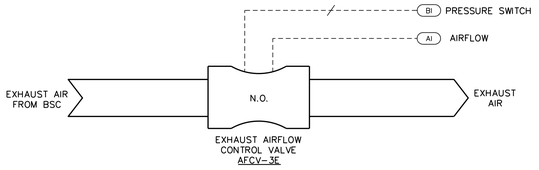
M3.1

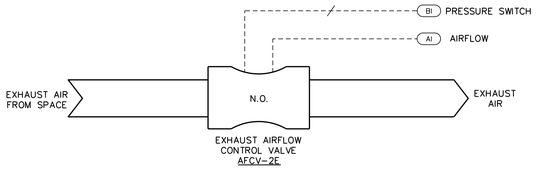
DATE: 27 AUGUST, 2018

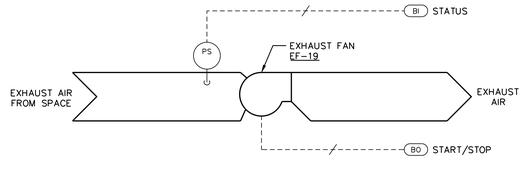
STERILE HD COMPOUNDING A1813 ROOM AIRFLOW SCHEDULE

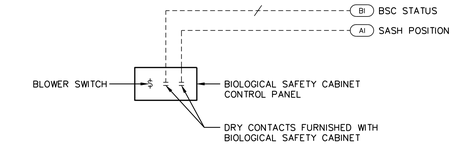
BIOLOGICAL SAFETY CABINET (BSC) STATUS	STANDBY	COMPOUNDING
ROOM SUPPLY-CFM (AFCV-1S)	850	850
ROOM EXHAUST-CFM (AFCV-2E)	700	0
BSC EXHAUST-CFM (AFCV-3E)	300	1000



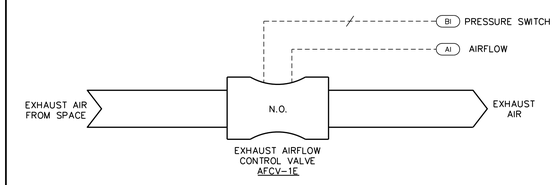


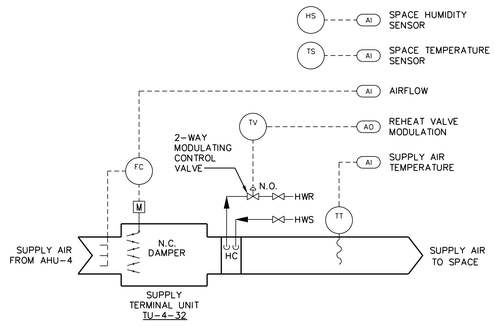




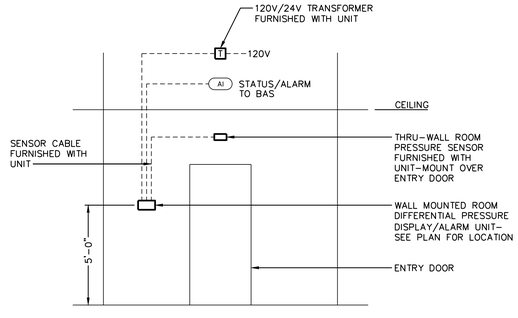


1 STERILE HD COMPOUNDING A1813 AIRFLOW CONTROL DIAGRAM
NOT TO SCALE





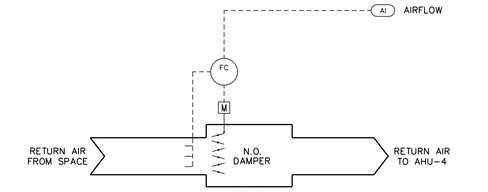
2 ANTEROOM A1815 AIRFLOW CONTROL DIAGRAM
NOT TO SCALE

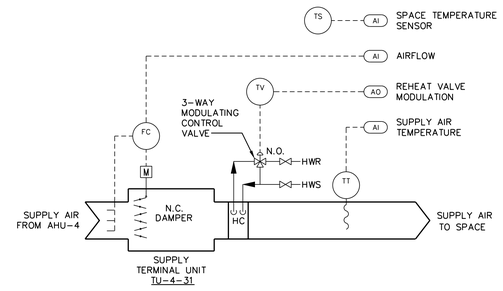


WALL ELEVATION

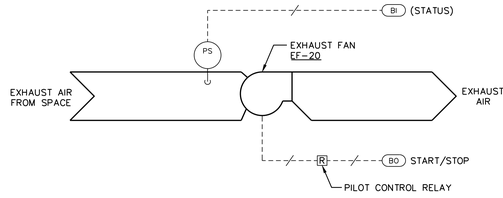
NOTES:
1. ROOM DIFFERENTIAL PRESSURE DISPLAY/ALARM UNIT SHALL BE TSI MODEL RPM10 OR APPROVED EQUAL. REMOTE THRU-WALL ROOM PRESSURE SENSORS SHALL BE TSI MODEL 800243 OR APPROVED EQUAL. PROVIDE WITH SENSOR CABLES OF SUITABLE LENGTH AND 120V/24V TRANSFORMER.
2. MOUNT UNIT ON WALL PER MANUFACTURER'S INSTRUCTIONS.

5 TYPICAL ROOM DIFFERENTIAL PRESSURE DISPLAY/ALARM UNIT CONTROL DIAGRAM
NOT TO SCALE





3 POSITVE PRESSURE ROOM A1817 AIRFLOW CONTROL DIAGRAM
NOT TO SCALE



4 EXHAUST FAN EF-20 CONTROL DIAGRAM
NOT TO SCALE

L.T.C.
1213 LADY ST. SUITE 40
COLUMBIA, SC 29201
803 254 9082 VOX
MECHANICAL - ELECTRICAL - PLUMBING
THE EAST GROUP, P.A.
Engineering•Architecture•Surveying•Technology
4325 Lake Boone Trail, Suite 311
Raleigh, NC 27607
Phone: 919.784.9330 Fax: 919.784.9331
NC Engineering License No. C-0206
www.eastgroup.com
TEG Project Number: 20180146

NORTH CAROLINA PROFESSIONAL 38676 ENGINEER ANTHONY W. MURRAY 8-27-18

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
MECHANICAL CONTROL DIAGRAMS

REVISIONS

No.	Description	Date

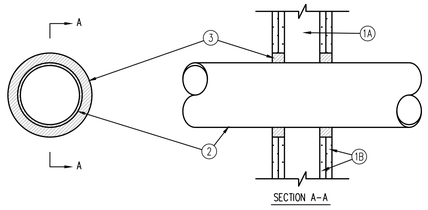
JOB NUMBER: 18028

M6.1

DATE: 27 AUGUST, 2018

System No. W-L-1054

F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/Sq Ft
L Rating At 400 F - 4 CFM/Sq Ft



1. WALL ASSEMBLY -- THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS -- WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE ERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. WIDER AND 4 TO 6 IN. HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* -- 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 32-1/4 IN. FOR STEEL STUD WALLS. MAX DIAM OF OPENING IS 14-1/2 IN. FOR WOOD STUD WALLS. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.

2. THROUGH-PENETRANTS -- ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE -- NOM 30 IN DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE -- NOM 30 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT -- NOM 4 IN DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAM STEEL CONDUIT.
   D. COPPER TUBING -- NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE -- NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

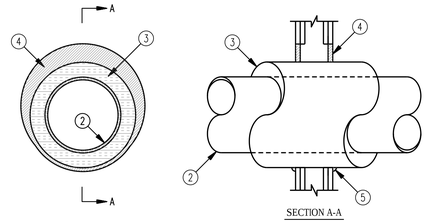
3. FILL, VOID OR CAVITY MATERIAL* -- SEALANT -- MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL .

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE SEALANT
*BEARING THE UL CLASSIFICATION MARK

1 U.L. DETAIL
NOT TO SCALE

System No. W-L-5029

F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1/2, 3/4, 1, 1-1/2 and 1-3/4 Hr (See Item 3)
L Rating At Ambient - 4 CFM/Sq Ft
L Rating At 400 F - Less Than 1 CFM/Sq Ft



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN. OC.
   B. GYPSUM BOARD* - 5/8 IN. THICK, 4 FT WIDE, WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 18-5/8 IN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. THROUGH PENETRANTS - ONE METALLIC PIPE OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED:
   A. STEEL PIPE - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. COPPER TUBING - NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   C. COPPER PIPE - NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

3. PIPE COVERING* - NOM 1, 1-1/2 OR 2 IN. THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT TAPE SUPPLIED WITH THE PRODUCT. SEE PIPE AND EQUIPMENT COVERING - MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIAL DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT ON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, THE SIZE AND TYPE OF THROUGH PENETRANT AND THE PIPE COVERING THICKNESS, AS SHOWN IN THE TABLE BELOW:

Wall Assembly Rating Hr	Through Penetrant		Pipe Covering Thkns In.	Annular Space		T Rating Hr
	Type +	Max Diam In.		Min In.	Max In.	
1	A	4	1			
1	B or C	2	1 or 1-1/2			
1	A	4	1-1/2	0	1-1/2	1/2
1	A	12	2	0	1-1/2	1/2
1	B or C	6	2	0	1-1/2	1
2	A	4	1	0	1-7/8	3/4
2	B or C	4	1 or 1-1/2	0	1-7/8	1
2	B or C	6	2	0	1-1/2	1
2	A	4	1-1/2	0	1-1/2	1
2	A	12	2	0	1-7/8	1
2	B or C	6	2	0	1-1/2	1-3/4
				0	1-7/8	1-1/2
				0	1-7/8	1

+INDICATES PENETRANT TYPE AS ITEMIZED IN ITEM 2.

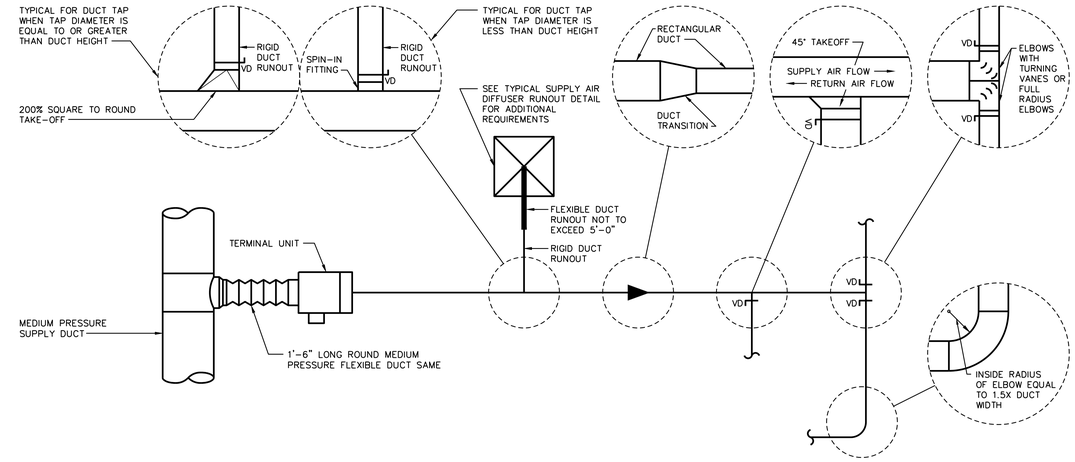
3A. PIPE COVERING* - (NOT SHOWN) - AS AN ALTERNATE TO ITEM 3, MAX 2 IN. THICK CYLINDRICAL CALCIUM SILICATE (MIN 14 PCF) UNITS SIZED TO THE OUTSIDE DIAM OF THE PIPE OR TUBE MAY BE USED. PIPE INSULATION SECURED WITH STAINLESS STEEL BANDS OR MIN 8 AWG STAINLESS STEEL WIRE SPACED MAX 12 IN. OC. WHEN THE ALTERNATE PIPE COVERING IS USED, THE T RATING SHALL BE DETERMINED FROM THE TABLE ABOVE.

SEE PIPE AND EQUIPMENT COVERING - MATERIALS (BRGU) CATEGORY IN THE BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

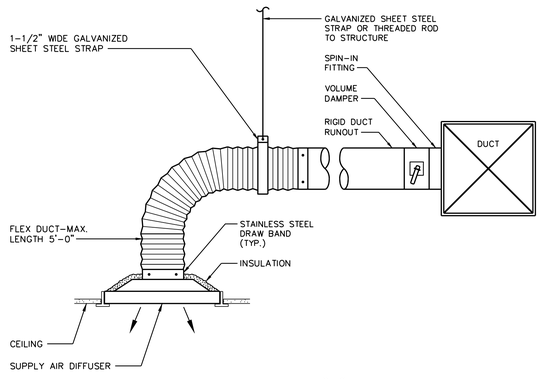
4. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE COVERING AND CYPSUM BOARD, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE COVERING/CYPSUM BOARD INTERFACE ON BOTH SURFACES OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE SEALANT
*BEARING THE UL CLASSIFICATION MARK

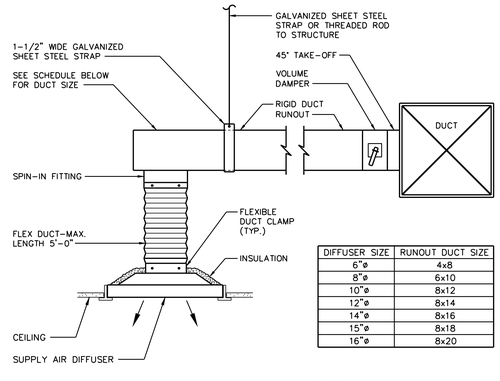
2 U.L. DETAIL
NOT TO SCALE



3 TYPICAL SINGLE LINE DUCT DETAILS
NOT TO SCALE



DETAIL "A"

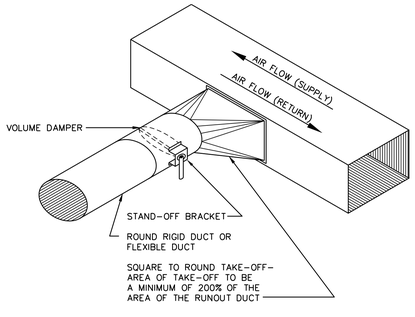


DIFFUSER SIZE	RUNOUT DUCT SIZE
6"ø	4x8
8"ø	6x10
10"ø	8x12
12"ø	8x14
14"ø	8x16
15"ø	8x18
16"ø	8x20

DETAIL "B"

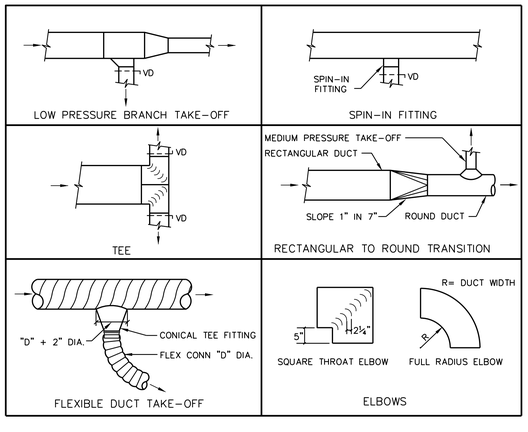
NOTES:
1. DETAIL "A" SHALL BE USED IN ALL LOCATIONS EXCEPT WHERE SPACE ABOVE THE CEILING REQUIRES THE USE OF DETAIL "B".
2. ALL DUCT RUNOUTS TO AIR DISTRIBUTION DEVICES SHALL BE PROVIDED WITH A PREFABRICATED SPIN-IN FITTING AND VOLUME DAMPER (FLEXMASTER MODEL PLAIN FL SPIN-IN FITTING AND RUSKIN MODEL MDRS25 VOLUME DAMPER OR APPROVED EQUAL) FOR THE CONNECTION TO THE LOW PRESSURE DUCTWORK. FIELD FABRICATED SPIN-IN FITTINGS AND VOLUME DAMPERS ARE NOT ACCEPTABLE.
3. RETURN AIR AND EXHAUST AIR GRILLES SHALL BE INSTALLED SIMILAR TO DETAIL ABOVE EXCEPT WITHOUT INSULATION ON THE BACK (TOP SIDE) OF GRILLE SHELL.

4 TYPICAL SUPPLY AIR DIFFUSER RUNOUT DETAILS
NOT TO SCALE



NOTE:
THIS DETAIL APPLIES TO ALL RUNOUT DUCTS WHERE THE DIAMETER OF THE RUNOUT DUCT IS EQUAL TO OR LARGER THAN THE RECTANGULAR DUCT DIMENSION.

5 TYPICAL 200% SQUARE TO ROUND TAKE-OFF DETAIL
NOT TO SCALE



6 TYPICAL DUCT FITTING DETAILS
NOT TO SCALE

LTC
1213 LADY ST. SUITE 40
COLUMBIA, SC 29201
803 254 9082 VOX
MECHANICAL - ELECTRICAL - PLUMBING
THE EAST GROUP, P.A.
Engineering•Architecture•Surveying•Technology
4325 Lake Boone Trail, Suite 311
Raleigh, NC 27607
Phone: 919.784.9330 Fax: 919.784.9331
NC Engineering License No. C-0206
www.eastgroup.com
TEG Project Number: 20180146

NORTH CAROLINA PROFESSIONAL 38676 ENGINEER ANTHONY W. MURRAY
8-27-18

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
MECHANICAL DETAILS

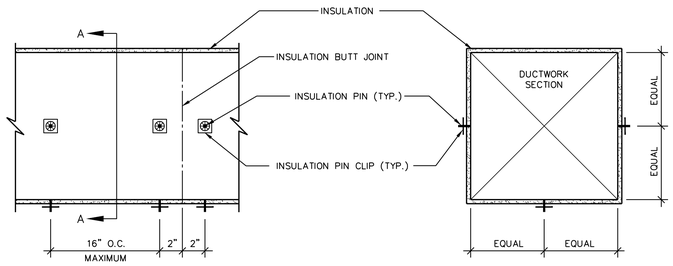
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

M7.1

DATE: 27 AUGUST, 2018

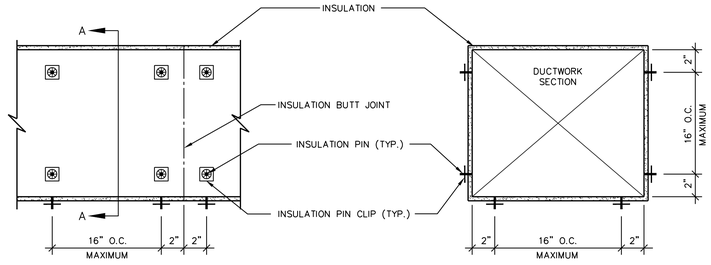


ELEVATION VIEW

SECTION VIEW "A–A" (HORIZONTAL DUCT)

NOTES:
1. FOR HORIZONTAL RECTANGULAR DUCTWORK 17" WIDE AND SMALLER, PROVIDE INSULATION PINS ON SIDES AND BOTTOM OF DUCTWORK SPACED AS SHOWN ABOVE.
2. FOR VERTICAL RECTANGULAR DUCTWORK 17" WIDE AND SMALLER, PROVIDE INSULATION PINS ON ALL FOUR SIDES OF DUCTWORK SPACED AS SHOWN ABOVE.
3. TRIM INSULATION PINS AND COVER WITH VAPOR BARRIER TO MATCH INSULATION.

1 TYPICAL DUCTWORK INSULATION PIN INSTALLATION DETAL (RECTANGULAR DUCTWORK 17" WIDE AND SMALLER)
NOT TO SCALE

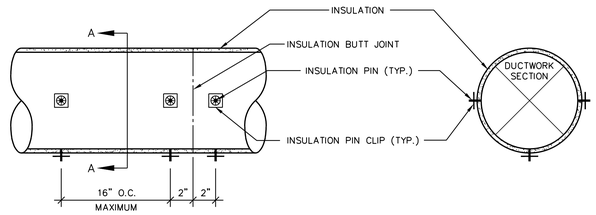


ELEVATION VIEW

SECTION VIEW "A–A" (HORIZONTAL DUCT)

NOTES:
1. FOR HORIZONTAL RECTANGULAR DUCTWORK 18" WIDE AND LARGER, PROVIDE INSULATION PINS ON SIDES AND BOTTOM OF DUCTWORK SPACED AS SHOWN ABOVE.
2. FOR VERTICAL RECTANGULAR DUCTWORK 18" WIDE AND LARGER, PROVIDE INSULATION PINS ON ALL FOUR SIDES OF DUCTWORK SPACED AS SHOWN ABOVE.
3. TRIM INSULATION PINS AND COVER WITH VAPOR BARRIER TO MATCH INSULATION.

2 TYPICAL DUCTWORK INSULATION PIN INSTALLATION DETAL (RECTANGULAR DUCTWORK 18" WIDE AND LARGER)
NOT TO SCALE

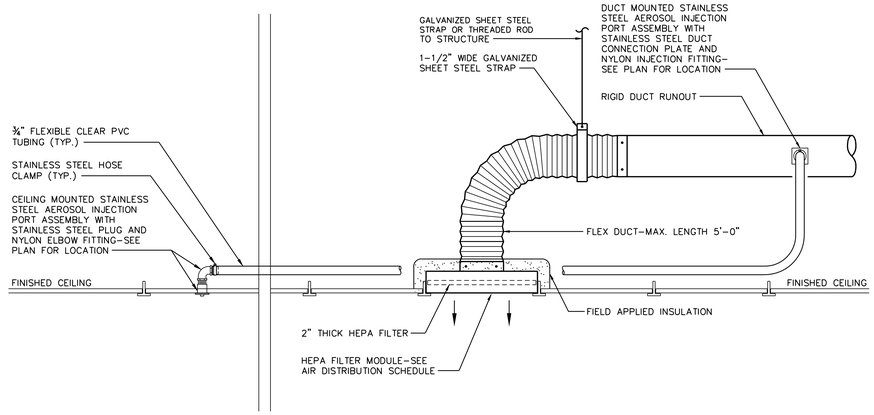


ELEVATION VIEW

SECTION VIEW "A–A"

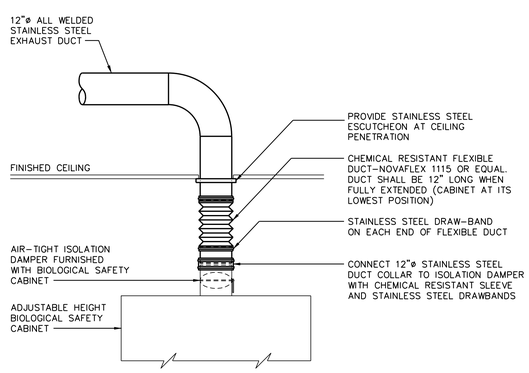
NOTES:
1. FOR HORIZONTAL ROUND DUCTWORK 9" AND LARGER, PROVIDE INSULATION PINS ON SIDES AND BOTTOM OF DUCTWORK AT 3–O'CLOCK, 6–O'CLOCK, AND 9–O'CLOCK POSITIONS SPACED AS SHOWN ABOVE.
2. FOR VERTICAL ROUND DUCTWORK 9" AND LARGER, PROVIDE INSULATION PINS ON ALL FOUR SIDES OF DUCTWORK AT 3–O'CLOCK, 6–O'CLOCK, 9–O'CLOCK, AND 12–O'CLOCK POSITIONS SPACED AS SHOWN ABOVE.
3. ROUND DUCTWORK 8" DIAMETER AND SMALLER DOES NOT REQUIRE INSULATION PINS.
4. TRIM INSULATION PINS AND COVER WITH VAPOR BARRIER TO MATCH INSULATION.

3 TYPICAL DUCTWORK INSULATION PIN INSTALLATION DETAL (ROUND DUCTWORK 9" DIAMETER AND LARGER)
NOT TO SCALE

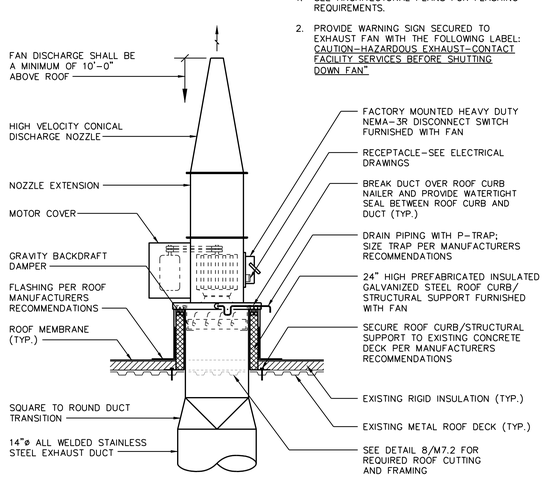


NOTES:
1. AEROSOL INJECTION PORT ASSEMBLY KIT SHALL BE CEPA OPERATIONS, INC. MODEL NUMBER CP–0500. (PHONE NUMBER: 909–923–1988).
2. PROVIDE 3/4" I.D. FLEXIBLE CLEAR PVC TUBING BETWEEN EACH CEILING INJECTION PORT AND DUCT INJECTION PORT. SUPPORT/ATTACH TUBING TO CONTINUOUS HORIZONTAL UNISTRUT TO MINIMIZE LOW POINTS.
3. SECURE TUBING TO INJECTION PORTS WITH STAINLESS STEEL HOSE CLAMPS.
4. LABEL EACH CEILING INJECTION PORT WITH A MULTI–COLOR PLASTIC LABEL TO IDENTIFY THE ROOM NAME, ROOM NUMBER, AND HEPA FILTER MODULE (HFM) THAT IT SERVES.
5. LABEL EACH HEPA FILTER MODULE (HFM) WITH A MULTI–COLOR PLASTIC LABEL PER THE DESIGNATIONS NOTED ON THE FLOOR PLAN.
6. INSTALL AEROSOL INJECTION PORT ASSEMBLY KITS PER THE MANUFACTURERS RECOMMENDATIONS.

4 TYPICAL AEROSOL INJECTION PORT INSTALLATION DETAIL
NOT TO SCALE

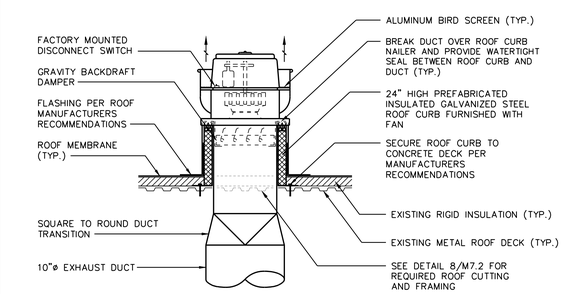


5 BIOLOGICAL SAFETY CABINET DUCT CONNECTION DETAIL
NOT TO SCALE



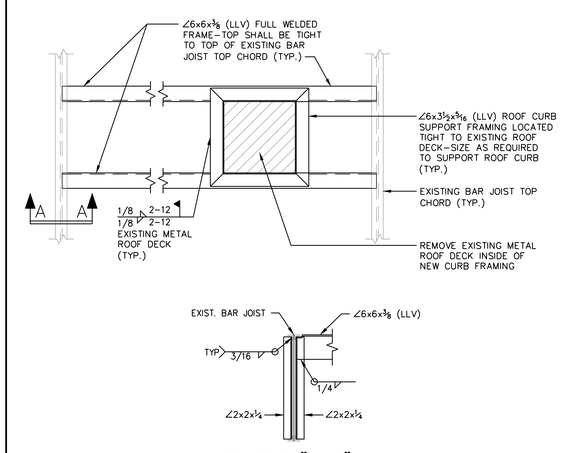
NOTES:
1. SEE ARCHITECTURAL PLANS FOR FLASHING REQUIREMENTS.
2. PROVIDE WARNING SIGN SECURED TO EXHAUST FAN WITH THE FOLLOWING LABEL: CAUTION–HAZARDOUS EXHAUST–CONTACT FACILITY SERVICES BEFORE SHUTTING DOWN FAN"

6 HIGH PLUME EXHAUST FAN EF–19 DETAIL
NOT TO SCALE



NOTE:
SEE ARCHITECTURAL PLANS FOR FLASHING REQUIREMENTS.

7 UPBLAST EXHAUST FAN EF–20 DETAIL
NOT TO SCALE



SECTION "A–A"

NOTE:
THIS DETAIL TO BE USED AT EACH CONNECTION POINT.

8 TYPICAI ROOF PENETRATION FRAMING DETAIL
NOT TO SCALE

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8-27-18

PHARMACY USP 797 & 800 UPGRADES
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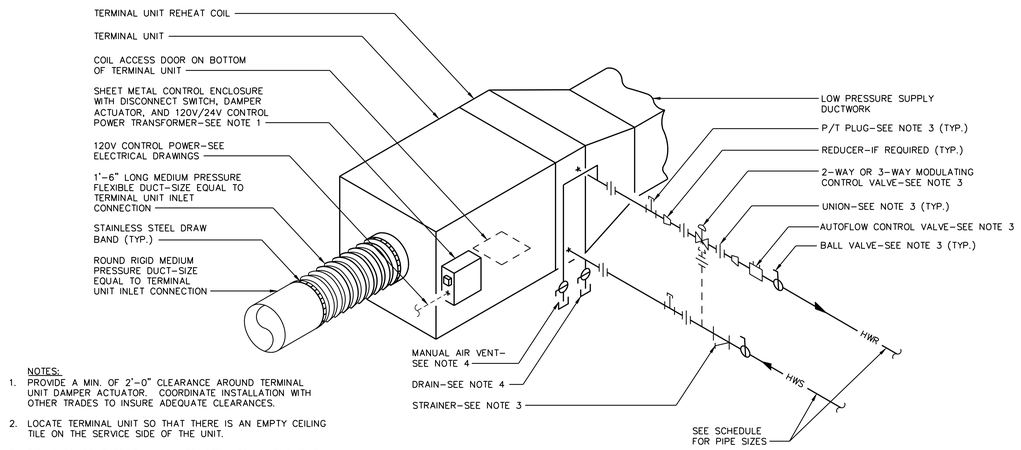
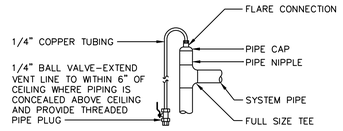


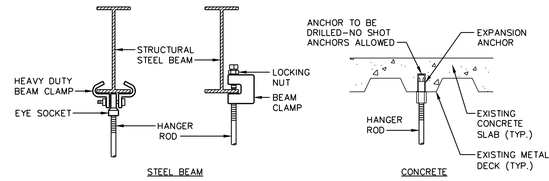
NOTES:
1. PROVIDE A MIN. OF 2'–0" CLEARANCE AROUND TERMINAL UNIT DAMPER ACTUATOR. COORDINATE INSTALLATION WITH OTHER TRADES TO INSURE ADEQUATE CLEARANCES.
2. LOCATE TERMINAL UNIT SO THAT THERE IS AN EMPTY CEILING TILE ON THE SERVICE SIDE OF THE UNIT.
3. PIPING COMPONENTS (BALL VALVES, STRAINER, UNIONS, P/T PORTS, AND AUTOFLOW CONTROL VALVE SHALL BE PROVIDED AS COIL PIPING PACKAGES.
4. SEPARATE MANUAL AIR VENT AND DRAIN ARE NOT NOT REQUIRED IF INTEGRAL VENT AND DRAIN ARE FURNISHED WITH AUTO FLOW CONTROL VALVE ASSEMBLY.
5. DUCT MOUNTED HOT WATER COIL SHALL BE INSTALLED SIMILAR TO THIS DETAIL.

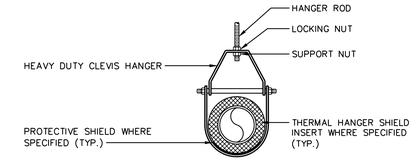
1 TYPICAL TERMINAL UNIT DETAIL
NOT TO SCALE



NOTE:
TERMINAL UNIT DRAIN SHALL BE INSTALLED SIMILAR TO DETAIL ABOVE.

2 TYPICAL TERMINAL UNIT VENT DETAIL
NOT TO SCALE

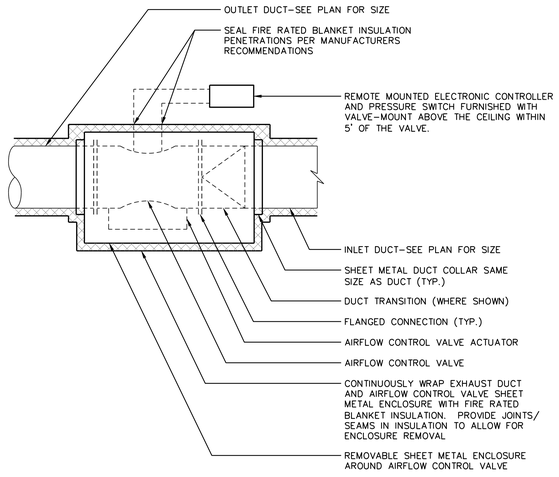




CLEVIS HANGER

NOTE:
REPAIR ALL EXISTING SPRAY–ON FIRE PROOFING INSULATION DAMAGED OR REMOVED FROM EXISTING STRUCTURAL MEMBERS/ROOF DECK TO MATCH EXISTING.

3 TYPICAL INDIVIDUAL PIPE SUPPORT DETAIL
NOT TO SCALE



4 TYPICAL EXHAUST AIRFLOW CONTROL VALVE ENCLOSURE DETAIL
NOT TO SCALE

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ROOM AIRFLOW SCHEDULE

ROOM NUMBER	ROOM NAME	SUPPLY AIR FLOW (CFM)	RETURN AIR FLOW (CFM)	EXHAUST AIR FLOW (CFM)	ROOM VOLUME (CU FT)	MINIMUM REQUIRED TOTAL AIR CHANGES PER HOUR (REMARK 1)	DESIGN TOTAL AIR CHANGES PER HOUR (REMARK 2)	MINIMUM REQUIRED OUTSIDE AIR CHANGES PER HOUR (REMARK 1)	DESIGN OUTSIDE AIR CHANGES PER HOUR (REMARK 3)	ROOM PRESSURE RELATIONSHIP TO ADJACENT AREAS	REQUIRED TEMPERATURE AND RELATIVE HUMIDITY (°F DB/% RH)	DESIGN TEMPERATURE AND RELATIVE HUMIDITY (°F DB/% RH)
1813	EXISTING PHARMACY	1,800	1,600	–	14,616	4	7.4	2	3.5	POSITIVE	NR/NR	72/50
A1813	STERILE HD COMPOUNDING	850	–	1,000	912	30	65.8	2	65.8	NEGATIVE	68/NR	68/50
A1815	ANTE ROOM	400	–	250	713	30	33.7	2	33.7	POSITIVE	NR/NR	72/50
A1817	POSITIVE PRESSURE ROOM	300	150	–	836	30	42.0 (REMARK 4)	2	10.1	POSITIVE	68/NR	68/50
A1837	NEGATIVE PRESSURE STORAGE ROOM	100	–	400	790	12	30.4	2	30.4	NEGATIVE	68/NR	68/50

REMARKS:
1. REQUIRED AIR CHANGES AND ROOM CONDITIONS ARE BASED ON THE FOLLOWING: ASHRAE STANDARD 170–2017 TABLE 7.1, USP 797–2016, AND USP 800–2016.
2. DESIGN TOTAL AIR CHANGES BASED ON ROOM SUPPLY AIR FLOW FOR NEUTRAL AND POSITIVELY PRESSURIZED ROOMS. DESIGN TOTAL AIR CHANGES BASED ON ROOM EXHAUST AIR FLOW FOR NEGATIVELY PRESSURIZED ROOMS.
3. DESIGN OUTSIDE AIR CHANGES BASED ON:
   a. ROOMS WITH RETURN AIR: ROOM SUPPLY AIR FLOW AND PERCENTAGE OF OUTSIDE AIR FLOW AT AIR HANDLING UNIT SERVING ROOM.
   b. ROOMS WITH EXHAUST AIR: DESIGN TOTAL AIR CHANGES PER HOUR.
4. DESIGN TOTAL AIR CHANGES ARE CALCULATED USING 21.5 ACPH OF HEPA FILTERED SUPPLY AIR FROM TERMINAL UNIT TU–4–31 (300 CFM) AND 20.5 ACPH OF RECIRCULATED HEPA FILTERED AIR FROM LAMINAR FLOW CLEAN BENCH (285 CFM).

FAN SCHEDULE

DESIGNATION	EF–19	EF–20
FAN TYPE	HIGH–PLUME CENTRIFUGAL	UPBLAST PRV
SERVICE	HAZARDOUS EXHAUST	GENERAL EXHAUST
MANUFACTURER	GREENHECK	GREENHECK
MODEL NUMBER	VEKTOR–H–12	CUE–075–VG
CAPACITY – CFM	1,250	400
E.S.P. – IN. H_2O	4.5	0.25
DRIVE TYPE	BELT	DIRECT
MOTOR HORSEPOWER	5	1/10
VOLTAGE/PHASE	460/3	120/1
REMARKS	PROVIDE WITH 24" HIGH ROOF CURB/ STRUCTURAL SUPPORT, GRAVITY BACKDRAFT DAMPER, TWO GROOVE PULLEY AND BELT SYSTEM, 8" NOZZLE, AND FACTORY MOUNTED HEAVY DUTY NEMA–3R DISCONNECT SWITCH.	PROVIDE WITH 24" HIGH ROOF CURB, GRAVITY BACKDRAFT DAMPER, ALUMINUM BIRD SCREEN, EC MOTOR WITH SPEED ADJUSTMENT DIAL, AND FACTORY MOUNTED TOGGLE DISCONNECT SWITCH.

SUPPLY/EXHAUST AIRFLOW CONTROL VALVE SCHEDULE

DESIGNATION	SERVICE	MANUFACTURER	MODEL NUMBER	TYPE	CONSTRUCTION	FAIL POSITION	SIZE	CONFIGURATION	CFM	MOUNTING ORIENTATION	ACTUATOR SPEED	A.P.D. IN. H_2O	REMARKS
AFCV–1S	ROOM SUPPLY	PHOENIX CONTROLS	MAVAF10M–SMEHC–PSL	VENTURI SHUT–OFF	NON–CORROSIVE	CLOSED	10"	SINGLE	850	HORIZONTAL	HIGH	0.75"	1,2
AFCV–1E	ROOM EXHAUST	PHOENIX CONTROLS	EXVCF10M–SMEHO–PSL	VENTURI SHUT–OFF	CORROSIVE	OPEN	10"	SINGLE	250	HORIZONTAL	HIGH	0.75"	1,3
AFCV–2E	ROOM EXHAUST	PHOENIX CONTROLS	EXVCF10M–SMEHO–PSL	VENTURI SHUT–OFF	CORROSIVE	OPEN	10"	SINGLE	0/700	HORIZONTAL	HIGH	0.75"	1,3
AFCV–3E	BSC	PHOENIX CONTROLS	EXVCF12M–SMEHO–PSL	VENTURI SHUT–OFF	CORROSIVE	OPEN	12"	SINGLE	300/1000	HORIZONTAL	HIGH	0.75"	1,3

REMARKS:
1. PROVIDE AIRFLOW CONTROL VALVE WITH 120V/24V CONTROL POWER TRANSFORMER AND DUCT FLANGES.
2. PROVIDE CLOSED–CELL INSULATION ON VALVE ASSEMBLY.
3. VALVE WILL BE INSTALLED IN A SHEET METAL ENCLOSURE AND EXTERNALLY WRAPPED WITH FIRE RATED BLANKET INSULATION. PROVIDE VALVE WITH REMOTE MOUNTED ELECTRONIC CONTROLLER AND PRESSURE SWITCH.

DUCT MOUNTED HOT WATER COIL SCHEDULE

DESIGNATION	AIR FLOW CFM	SIZE	HEATING CAPACITY MBH	ENTERING WATER TEMP DEG. F.	LEAVING WATER TEMP DEG. F.	WATER FLOW GPM	MAXIMUM COIL AIR PRESSURE DROP IN. H_2O	MAXIMUM COIL WATER PRESSURE DROP FT. H_2O	PIPE RUNOUT SIZE	REMARKS
HWC–1	850	14x14	36.9	180	160	3.7	0.30	5.0	1"	1

REMARKS:
1. HEATING CAPACITY IS BASED ON ENTERING AIR TEMPERATURE OF 55°F. AND LEAVING AIR TEMPERATURE OF 95°F.

DIFFUSER, REGISTER & GRILLE SCHEDULE

DESIG.	TYPE	MANUFACTURER & MODEL	MODULE	CFM RANGE	NECK SIZE	REMARKS
(100)	SUPPLY DIFFUSER–LOUVERED FACE, 4–WAY BLOW, CEILING T–BAR LAY–IN	PRICE INDUSTRIES: MODEL AMD–3PA	24"x24"	100	6"ø	ALL ALUMINUM CONSTRUCTION, WHITE POWDER COAT FINISH– PROVIDE SQUARE TO ROUND NECK ADAPTOR
			24"x24"	150	8"ø	
(100)	SUPPLY DIFFUSER/HEPA FILTER MODULE–PERFORATED FLUSH FACE, RADIAL FLOW, NON–ASPIRATING, CEILING/SURFACE MOUNTED	PRICE INDUSTRIES: MODEL AFRFDC	24"x48"	300–425	12"ø	ALL ALUMINUM CONSTRUCTION, QUICK RELEASE LATCHES, 2" THICK 99.99% HEPA FILTER WITH ROOM SIDE ACCESS, SAFETY CHAINS, FACTORY SEALED AND LEAK TESTED HOUSING, VOLUME DAMPER WITH REMOTE CABLE OPERATOR, WHITE POWDER COAT FINISH–SEE REMARK 2
100	RETURN/EXHAUST GRILLE–CUBED CORE FACE, CEILING T–BAR LAY–IN	PRICE INDUSTRIES: 81–TB	24"x24"	150	8"ø	ALL ALUMINUM CONSTRUCTION, WHITE POWDER COAT FINISH– PROVIDE SQUARE TO ROUND NECK ADAPTOR
			24"x24"	400	12"ø	
100	RETURN/EXHAUST GRILLE–45° SINGLE DEFLECTION, 1/2" BLADE SPACING, LOW SIDEWALL SURFACE MOUNTED	PRICE INDUSTRIES: 635–N–S–A	14"x14"	150–250	12"x12"	ALL ALUMINUM CONSTRUCTION, WHITE POWDER COAT FINISH
			16"x30"	700	14"x28"	

REMARKS:
1. MAXIMUM NOISE CRITERIA (NC) SHALL BE 20 AT HIGH RANGE OF CFM LISTED.
2. PROVIDE CLOSED–CELL SILICONE GASKETS FOR SEALING DIFFUSERS TO THE CEILING STRUCTURE.

SUPPLY/RETURN TERMINAL UNIT SCHEDULE

DESIGNATION	INLET SIZE	MAXIMUM AIR FLOW (CFM)	MINIMUM AIR FLOW (CFM)	MAXIMUM UNIT AIR PRESSURE DROP (IN. H_2O)	REHEAT COIL							
					HEATING CAPACITY (MBH)	ENTERING WATER TEMP. (DEG. F.)	LEAVING WATER TEMP. (DEG. F.)	WATER FLOW (GPM)	MAXIMUM COIL AIR PRESSURE DROP (IN. H_2O)	MAX. COIL WATER PRESSURE DROP (FT. H_2O)	HOT WATER RUNOUT SIZE	REMARKS
TU–4–31	6"	300	300	0.50	13.0	180	160	1.3	0.30	5.0	3/4"	1–5
TU–4–32	8"	400	400	0.50	17.4	180	160	1.7	0.30	5.0	3/4"	1–4
TU–4–1R	6"	150	150	0.50	–	–	–	–	–	–	–	1,6

REMARKS:
1. TERMINAL UNIT SHALL BE PRICE INDUSTRIES MODEL SDV–5000 OR EQUAL.
2. TERMINAL UNIT AIR PRESSURE DROP INCLUDES DROP ACROSS TERMINAL UNIT DAMPER AND REHEAT COIL.
3. TERMINAL UNIT HEATING CAPACITY IS BASED ON MINIMUM AIR FLOW, ENTERING AIR TEMPERATURE OF 55° F., AND LEAVING AIR TEMPERATURE OF 95° F.
4. PROVIDE TERMINAL UNIT WITH COIL ACCESS DOOR, 120V/24V CONTROL POWER TRANSFORMER, DISCONNECT SWITCH, AND SHEET METAL CONTROL ENCLOSURE.
5. PROVIDE TERMINAL UNIT WITH 3–WAY MODULATING CONTROL VALVE.
6. PROVIDE TERMINAL UNIT WITH 120V/24V CONTROL POWER TRANSFORMER, DISCONNECT SWITCH, AND SHEET METAL CONTROL ENCLOSURE.

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M8.1

DATE: 27 AUGUST, 2018

ELECTRICAL SYMBOLS

○	WALL MTD LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – NORMAL POWER
⊘	WALL MTD LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – CRITICAL
	WALL MTD LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – LIFE SAFETY POWER
○	CEILING/PENDENT MTD/RECESSED LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – NORMAL POWER
⊘	CEILING/PENDENT MTD/RECESSED LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – CRITICAL POWER
	CEILING/PENDENT MTD/RECESSED LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – LIFE SAFETY POWER
⊗	WALL MTD EXIT SIGN AND OUTLET – LIFE SAFETY POWER
⊗	CEILING MTD EXIT SIGN AND OUTLET, SINGLE FACE. ARROW INDICATES DIRECTION – LIFE SAFETY POWER
⊗	CEILING MTD EXIT SIGN AND OUTLET, DOUBLE FACE. ARROW INDICATES DIRECTION – LIFE SAFETY POWER
	COMBINATION EMERGENCY/EXIT LIGHT; CEILING–MOUNTED; SHADED PORTION INDICATES FACE(S) WITH DIRECTIONAL ARROWS AS SHOWN; SEE LIGHT FIXTURE SCHEDULE
⊠	WALL MTD SIGN "X–RAY IN USE."
	WALL MTD FLUORESCENT LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – NORMAL POWER
▽ ▽ ▽	CEILING MOUNTED TRACK LIGHTING
G F	CEILING MTD OR LAY–IN TYPE FLUORESCENT LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – NORMAL POWER
G F	CEILING MTD OR LAY–IN TYPE FLUORESCENT LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – CRITICAL POWER
G F	CEILING MTD OR LAY–IN TYPE FLUORESCENT LIGHTING FIXTURE AND OUTLET, LETTER DESIGNATES FIXTURE TYPE – LIFE SAFETY POWER
	EMERGENCY LIGHT BATTERY PACK – TWO HEAD UNIT FLOODLIGHT AND OUTLET
	AREA LUMINAIRE AND STANDARD
⊕	BOLLARD LIGHT FIXTURE
Ⓙ	WALL MTD OUTLET BOX WITH BLANK COVER
Ⓙ	CEILING MTD OR A.F.C. OUTLET BOX WITH BLANK COVER
Ⓓ	CEILING MTD OR A.F.C. OUTLET BOX WITH BLANK COVER DATA
ΦXX	FLUSH MTD DUPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W MODIFIERS: GF = GROUND FAULT RECEPTACLE TR = TAMPER RESISTANT RECEPTACLE U = RECEPTACLE WITH ADDED USB OUTLET(S) WP = WEATHERPROOF COVER
⊕XX	FLUSH MTD QUADRUPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W.
ΦXX	FLUSH MTD DUPLEX RECEPTACLE AND OUTLET 20A, 125V, 3W, INSTALLED 4" ABOVE BACKSPLASH OR COUNTER IF NO BACKSPLASH EXISTS.
⊕XX	FLUSH MOUNTED QUADRUPLEX RECEPTACLE AND OUTLET 20A, 125V, 3W, INSTALLED 4" ABOVE BACKSPLASH OR COUNTER IF NO BACKSPLASH EXISTS.
Φ	FLOOR MTD OUTLET WITH DUPLEX RECEPTACLE AND FITTING, 20A, 125V, 3W
Φ	FLUSH MTD SIMPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W
■□■□■	MULTI OUTLET ASSEMBLY
●X	SPECIAL OUTLET WITH NEMA DESIGNATION
S^{a}_{XX}	SINGLE POLE SWITCH ON NORMAL CIRCUIT; WALL–MOUNTED AT 48" AFF UNO; WHERE SHOWN, "a" INDICATES LAMPS CONTROLLED BY SWITCH; WHERE SHOWN, "XX" INDICATES MODIFIER AS LISTED BELOW; SEE WIRING DEVICE SCHEDULE MODIFIERS: 3 = 3–WAY SWITCH 4 = 4–WAY SWITCH D = DIMMER SWITCH WP = WEATHERPROOF COVER T = TIMER SWITCH O = OCCUPANCY SENSING DO = DIMMER OCCUPANCY SENSOR
▼ ▼	WALL MTD TELEPHONE OUTLET WITH 1"C FROM OUTLET TO CORRIDOR ACCESSIBLE CEILING SPACE • DENOTES INSTALLED 4" ABOVE BACKSPLASH OR COUNTER IF NO BACKSPLASH EXISTS.
▽ ▽	WALL MTD DATA OUTLET WITH 1"C FROM OUTLET TO CORRIDOR ACCESSIBLE CEILING SPACE • DENOTES INSTALLED 4" ABOVE BACKSPLASH OR COUNTER IF NO BACKSPLASH EXISTS.
▼ ▼	COMBINATION TELEPHONE AND DATA OUTLET WITH 1"C FROM OUTLET TO CORRIDOR ACCESSIBLE CEILING SPACE • DENOTES INSTALLED 4" ABOVE BACKSPLASH OR COUNTER IF NO BACKSPLASH EXISTS.
▼	FLOOR MTD TELEPHONE OUTLET WITH OUTLETS AND CABLES
▽	FLOOR MTD DATA OUTLET WITH OUTLETS AND CABLES
▼	COMBINATION TELEPHONE AND DATA FLOOR OUTLET, 1 GANG, 3/4" TO ACCESSIBLE CEILING SPACE WITH OUTLETS AND CABLES
▽	PATIENT MONITOR WALL OUTLET W/ 4"/16" SQ. BOX, ONE GANG PLASTER RING WITH 1 1/4"C TO CABLE TRAY
▽D	WALL MTD DICTATION OUTLET WITH 3/4" TO CEILING SPACE
W	WIRELESS CEILING MOUNT
▬	BASKET TYPE CABLE TRAY– CONT. (TYP) SHOWN BROKEN FOR CLARITY ONLY.
	PANELBOARD, FLUSH MOUNTED
	PANELBOARD, SURFACE MOUNTED
	CONCEALED RACEWAY. INDICATES A MINIMUM OF 2 #12 AND 1 #12 GROUND 3/4" CONDUIT. (PROVIDE ALL SWITCHED AND NON SWITCHED CONDUCTORS AS REQUIRED BY SWITCHING SHOWN ON PLANS)
	CONCEALED RACEWAY. INDICATES A MINIMUM HOMERUN TO PANEL WITH 2#12 AND 1#12 GROUND IN 3/4" CONDUIT. (PROVIDE ALL SWITCHED AND NON SWITCHED CONDUCTORS AS REQUIRED BY SWITCHING SHOWN ON PLANS)
2,4	CONCEALED RACEWAY. INDICATES A MINIMUM OF 2 #12, 2#12 NEUTRAL AND 1 #12 GROUND 3/4" CONDUIT. (PROVIDE ALL SWITCHED AND NON SWITCHED CONDUCTORS AS REQUIRED BY SWITCHING SHOWN ON PLANS)
N–2,4,6	CONCEALED RACEWAY. INDICATES A MINIMUM 3#12, 3#12 NEUTRAL AND 1#12 GROUND IN 3/4"C. 3#12, 1#12 NEUTRAL AND 1#12 GROUND IN 3/4"C. (PROVIDE ALL SWITCHED AND NON SWITCHED CONDUCTORS AS REQUIRED BY SWITCHING SHOWN ON PLANS)
3 #8, 1 #10G. – 1"C	CONCEALED RACEWAY. ALL RACEWAYS WITH OTHER THAN #12 CONDUCTORS WILL HAVE WIRE AND CONDUIT SIZES DESIGNATED ON PLAN OR RISER DIAGRAMS.
	CONCEALED RACEWAY INSTALLED IN OR UNDER FLOOR OR GROUND. INDICATES A MINIMUM 1#12, 1#12 NEUTRAL AND 1#12 GROUND IN 3/4" CONDUIT. (PROVIDE ALL SWITCHED AND NON SWITCHED CONDUCTORS AS REQUIRED BY SWITCHING SHOWN ON PLANS)

RACEWAY NOTES:

1. IF NO HOME RUN OR CIRCUIT SYMBOL IS SHOWN, PROVIDE 2#12, 1#12G–3/4"C TO THE CIRCUIT NUMBER INDICATED ADJACENT TO FIXTURE OR OUTLET

ELECTRICAL SYMBOLS

NF/30	30 AMP NON–FUSED DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.
20/30	30 AMP FUSED DISCONNECT SWITCH, FUSED AT 20 AMP. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.
NF/30 WP	30 AMP NON–FUSED, WEATHERPROOF DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED.
⊠	COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR STARTER
■	FURNISHED DISCONNECT
◪	ENCLOSED CIRCUIT BREAKER
⊠	MAGNETIC MOTOR STARTER
⧄	MANUAL MOTOR STARTER WITH OVERLOAD HEATERS
VFD	VARIABLE FREQUENCY DRIVE
SPDA	SURGE PROTECTION DEVICE – TYPE A
SPDB	SURGE PROTECTION DEVICE – TYPE B
①	A.C. MOTOR, NUMERAL INDICATES HP
EPO	EMERGENCY POWER OFF BUTTON
ⓔ	EQUIPMENT CONNECTION
TR	DRY TYPE TRANSFORMER
R	RELAY
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
FS	FLOW SWITCH
RL	REMOTE INDICATOR LAMP
F	WALL MTD FIRE ALARM PULL STATION
DH	FIRE ALARM DOOR HOLD OPEN
EB	ELECTRIC BELL FOR FIRE SPRINKLER
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
○B	BUZZER BELL CHIME/STROBE
F	WALL MOUNTED WITH 75CD, UNO ANNUNCIATOR/STROBE
F C	CEILING MOUNTED WITH 75CD, UNO
▷F	WALL MOUNTED FIRE ALARM HORN/STROBE WITH 75CD, UNO
⊡	PUSH BUTTON
⌖	FIRE ALARM STROBE LIGHT WITH 75CD, UNO EXCEPT FOR ALL RESTROOM WHICH ARE 15CD ALARM
SD	SMOKE DETECTOR, CEILING MTD.
DD	SMOKE DETECTOR, DUCT MTD
CM	CONTROL MODULE
MM	MONITOR MODULE
R	FIRE ALARM REMOTE CONTROL RELAY
EDR	EMERGENCY DOOR RELEASE
PN	PANIC BUTTON 3/4"C FROM OUTLET TO CORRIDOR ACCESSIBLE CEILING SPACE. PROVIDE WIREMOLD UNDER DESK TO CONCEAL WIRES TO WALL
CB	CALL BOX
PTZ	CCTV PAN TILT CAMERA LOCATION (CAMERAS BY OTHERS)
MOD	MOTORIZED DOOR
CR	DOOR SECURITY CARD READER; WALL MOUNTED AT 48" AFF
DC	SECURITY DOOR DETECTOR
DL	DOOR LOCK
ML	MAGNETIC DOOR LOCK
ER	DOOR EXIT REQUEST HARDWARE
KP	SECURITY KEY PAD
PP	DOOR PUSH PAD OPENER
KS	KEY OVERRIDE SWITCH
RB	DOOR RELEASE BUTTON AT NURSE STATION.
EL	ELECTRIC STRIKE WITH STOREROOM FUNCTION MORTISE LOCK
EM	ELECTRIC MORTISE WITH ELECTRIC HINGE
EK	ELECTRONIC PUSH BUTTON ACCESS LOCK
VR	VERTICAL RODS WITH PANIC DEVICE
MS	MOTION SENSOR
M/I	COLOR MASTER MONITOR
C/I	SEMI–FLUSH MOUNTED PAN TILT COLOR DOOR STATION
P/C	PHOTOCELL, 2000 WATT UNLESS NOTED OTHERWISE
Ⓢ D	GENERAL PAGING SPEAKER LOCATION D DENOTES DEPARTMENTAL PAGING SPEAKER
IC	INTERCOM STATION
V	FLUSH MTD VOLUME CONTROL FOR SPEAKER
TV	TELEVISION OUTLET
H A	HEADWALL ELEVATION "A"
TM	ASSET TRACKING MONITOR
M	NURSE CALL MASTER STATION
SA	NURSE CALL STAFF ASSIST
S	NURSE CALL STAFF STATION
D	NURSE CALL DUTY STATION
P	NURSE CALL SINGLE PATIENT STATION
T	NURSE CALL TOILET STATION
	NURSE CALL DOME ZONE LIGHT, WALL MTD, UNO
	NURSE CALL DOME LIGHT, WALL MTD, UNO
L	NURSE CALL LOCATOR
B	NURSE CALL CODE BLUE STATION
E	NURSE CALL EMERGENCY CALL STATION
R	NURSE CALL REGISTER STATION 48" AFF
SB	BATH/SHOWER PULL CORD 72" AFF
NCEC	NURSE CALL EQUIPMENT CABINET
S	SURGE ARRESTOR
N E L	TRANSFER SWITCH
	CONTACTOR
	SWITCH
⏚	GROUND PER NEC

ELECTRICAL ABBREVIATIONS

ø	ROUND, DIAMETER OR PHASE
3/C	NUMBER OF CONDUCTORS
A	AMPERES
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPABILITY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
CATV	COMMUNITY ANTENNA TELEVISION SYSTEM
CB	CIRCUIT BREAKER
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION SYSTEM
CLG	CEILING
CPT	CONTROL POWER TRANSFORMER
CT'S	CURRENT TRANSFORMERS
CTTS	CLOSED TRANSITION TRANSFER SWITCH
CU	COPPER
ED	EMERGENCY DEPARTMENT
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ER	EXISTING RELOCATE
F	FUSED
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
F.F.E.	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FVNR	FULL VOLTAGE NON–REVERSING
G	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GF	GROUND FAULT
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID STEEL CONDUIT
HOA	HAND–OFF–AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IMC	INTERMEDIATE METAL CONDUIT
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
MATV	MASTER ANTENNA TELEVISION SYSTEM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MCS	MOLDED CASE SWITCH
MH	METAL HALIDE
MLO	MAIN LUG ONLY
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON–FUSED
NFPA	NATIONAL FIRE PROTECTION AGENCY
N.I.C.	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
N.T.S.	NOT TO SCALE
PB	PULL BOX
PO	PLANT OPERATIONS
RMC	RIGID METAL CONDUIT
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SS	STAINLESS STEEL
SWGR	SWITCHGEAR
SWBD	SWITCHBOARD
TTB	TELEPHONE TERMINAL BOARD
TYP.	TYPICAL
TV	TELEVISION
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UP	UTILITY PLANT
WP	WEATHERPROOF
XP	EXPLOSION PROOF
Y–Δ	WYE–DELTA

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, DRAWINGS ARE DIAGRAMMATIC IN NATURE. COORDINATE INSTALLATION OF SYSTEM COMPONENTS WITH ACTUAL FIELD CONDITIONS; THE WORK OF OTHER TRADE CONTRACTORS; AND FOR MAINTENANCE ACCESS. INSTALL COMPONENTS SO THAT THEY DO NOT BLOCK ACCESS TO OTHER SYSTEM COMPONENTS REQUIRING MAINTENANCE. GIVE PRIORITY TO SYSTEMS THAT REQUIRE A SPECIFIED SLOPE.
2. EXAMINE THE PROJECT SITE PRIOR TO SUBMITTING BIDS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE EXTENT AND NATURE OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR FAILURE TO THOROUGHLY EXAMINE EXISTING CONDITIONS TO DETERMINE THE EXACT SCOPE OF THIS PROJECT; INCLUDING DEMOLITION WORK.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS, AND LABOR AS REQUIRED FOR THE COMPLETE PROJECT UNLESS CERTAIN PORTIONS OF THE WORK ARE SPECIFICALLY IDENTIFIED AS "BY OTHERS", "BY OWNER", "NOT IN CONTRACT", OR SIMILAR WORDING.
4. CONTRACTOR IS RESPONSIBLE FOR CUTTING, CORE DRILLING, PATCHING, ETC. FOR PROPER EXECUTION AND COMPLETION OF THE WORK. WHEN CUTTING OR CORE DRILLING THROUGH EXISTING BUILDING ASSEMBLIES, CONTRACTOR SHALL VERIFY LOCATION OF ALL STRUCTURAL ELEMENTS PRIOR TO CUTTING OR CORE DRILLING. PATCH BUILDING ASSEMBLIES TO MATCH EXISTING ADJACENT FINISHES UNLESS NOTED OTHERWISE.
5. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON THE DRAWING E7.1.
6. SEAL ALL PIPING AND/OR CONDUIT PENETRATIONS THROUGH NON–RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.).
7. COORDINATE ALL WORK WITH THE OWNER. WORK ABOVE, BELOW, NEAR, OR INSIDE OCCUPIED AREAS MAY HAVE TO BE PERFORMED DURING OFF–HOURS (NIGHTS AND WEEKENDS). SCHEDULE ALL OFF–HOURS WORK IN ADVANCE WITH THE OWNER. INCLUDE OVERTIME LABOR FOR OFF–HOURS WORK IN THE BASE BID. WHEN WORKING INSIDE OCCUPIED AREAS, COVER AND PROTECT ALL FURNITURE, EQUIPMENT, ETC. WITH FIRE–RETARDANT PLASTIC SHEETING. THOROUGHLY CLEAN THE PROJECT AREA AFTER WORK IS COMPLETED.
8. COORDINATE INSTALLATION OF WALL MOUNTED DEVICES. WHEN MULTIPLE DEVICES ARE INDICATED TO BE INSTALLED IN THE SAME WALL AT THE SAME ELEVATION, USE A LASER LEVEL TO SET THE ELEVATION OF THE DEVICES. COORDINATE WITH OTHER TRADE CONTRACTORS TO ENSURE ALL DEVICES ARE ALIGNED AND INSTALLED AT THE PROPER ELEVATION(S).
9. COORDINATE INSTALLATION OF CEILING MOUNTED DEVICES. WHEN INSTALLED IN LAY–IN CEILINGS, DEVICES SHALL BE CENTERED WITHIN CEILING TILES. WHEN INSTALLED IN GYPSUM BOARD CEILINGS, DEVICES SHALL BE COORDINATED AND ALIGNED WITH THE WORK OF OTHER TRADE CONTRACTORS.
10. COORDINATE INSTALLATION OF WORK ABOVE EXISTING CEILINGS THAT ARE NOT INDICATED TO BE REMOVED AS PART OF THIS PROJECT. REMOVE, STORE, AND REINSTALL EXISTING LAY–IN CEILING TILES AND/OR GRID; AND/OR CUT AND PATCH EXISTING GYPSUM BOARD CEILINGS AS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
11. COORDINATE AND SCHEDULE ALL SHUTDOWNS OF EXISTING UTILITIES TWO WEEKS IN ADVANCE WITH THE OWNER. ALL OR SOME OF THIS WORK MAY HAVE TO BE PERFORMED DURING OFF–HOURS (NIGHTS AND WEEKENDS). INCLUDE OVERTIME LABOR FOR OFF–HOURS WORK IN THE BASE BID.
12. EXISTING AREAS OF THE FACILITY (WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS) DAMAGED DUE TO CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. EXISTING SYSTEM COMPONENTS INDICATED ON THE DRAWINGS ARE BASED ON CURSORY FIELD INVESTIGATIONS AND EXISTING DRAWINGS, AND MAY OR MAY NOT BE LOCATED OR LABELED CORRECTLY. EXAMINE ALL AREAS OF THE PROJECT AND FIELD IDENTIFY / VERIFY ALL SYSTEM COMPONENTS PRIOR TO COMMENCING DEMOLITION OR NEW CONSTRUCTION. IDENTIFICATION AND VERIFICATION SHALL INCLUDE TRACING EACH SYSTEM COMPONENT TO DETERMINE ITS EXACT ORIGIN AND THE AREA OR EQUIPMENT THE SYSTEM COMPONENT SERVES. REPORT TO THE ARCHITECT AND/OR ENGINEER ALL SUCH DISCOVERIES OF SYSTEM COMPONENTS THAT ARE UNIDENTIFIED OR ARE FOUND TO BE IN A DIFFERENT LOCATION FROM THAT INDICATED.
14. UNLESS NOTED OTHERWISE, DEMOLISH AND REMOVE ALL SYSTEM COMPONENTS INDICATED ON THE DEMOLITION DRAWINGS. UNLESS NOTED OTHERWISE, ALL SYSTEM COMPONENTS SHALL BE REMOVED BACK TO THE SOURCE AND CAPPED APPROPRIATELY.
15. DEMOLITION WORK SHALL BE PERFORMED WITH DUE CARE AND DILIGENCE. TAKE ALL NECESSARY MEASURES TO PREVENT THE ARBITRARY INTERRUPTION OR DESTRUCTION OF CONCEALED SYSTEM COMPONENTS THAT ARE TO REMAIN OPERATIONAL, AND THE ROUTING OF WHICH COULD NOT BE PREDETERMINED UNTIL THE COMMENCEMENT OF DEMOLITION WORK.
16. EXISTING SYSTEM COMPONENTS INDICATED TO BE RELOCATED AND/OR REUSED SHALL BE INSPECTED FOR PROPER OPERATION, THOROUGHLY CLEANED, AND PREPARED FOR REINSTALLATION.
17. THE OWNER HAS THE RIGHT OF FIRST REFUSAL ON ALL SYSTEM COMPONENTS REMOVED DURING DEMOLITION. SYSTEM COMPONENTS NOT DESIRED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.
18. SYSTEM COMPONENTS SERVING AREAS OF THE PROJECT OCCUPIED BY THE OWNER DURING CONSTRUCTION SHALL BE MAINTAINED UNTIL THE OWNER VACATES THE AREA.
19. ALL AFF/AFG DIMENSIONS ARE REFERENCED TO THE CENTER OF THE EQUIPMENT OR DEVICE UNLESS NOTED OTHERWISE.
20. NOTIFY THE OWNER ONE WEEK PRIOR TO WORK IN ANY ELECTRICAL PANELS, SWITCHGEAR, OR EQUIPMENT. SCHEDULE OWNER'S ENGINEERING PERSONNEL TO BE PRESENT WHEN WORKING IN EXISTING PANELS, SWITCHGEAR, OR EQUIPMENT.
21. IN GENERAL ALL ELECTRICAL CONDUIT WILL BE RUN JUST BELOW THE BOTTOM OF STRUCTURAL BEAMS. OFFSET ELECTRICAL CONDUIT TO AVOID INTERFERENCE WITH DUCTWORK, OR MECHANICAL PIPING. COORDINATE CONDUIT AND RACEWAY LOCATIONS WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
22. ALL 20 AMP 277V LIGHTING HOME RUNS GREATER THAN 200 FT. SHALL BE #10 AWG, U.N.O.
23. ALL 20 AMP 120V POWER HOME RUNS GREATER THAN 75 FT. SHALL BE #10 AWG U.N.O.
24. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 70 AND NFPA 70E.
25. CONSTRUCTION PROCEDURES AND/OR EQUIPMENT SHALL NOT BLOCK ACCESS OR NEC ARTICLE 110 REQUIRED WORKING SPACE FOR NEW OR EXISTING ELECTRICAL PANELS, SWITCHGEAR, OR EQUIPMENT.
26. ELECTRICAL BOXES IN RATED WALL OPENINGS: OPENINGS IN ASSEMBLIES OF 2 HOURS OR LESS, FOR METALLIC ELECTRICAL BOXES NOT EXCEEDING 16 SQ. INCHES ARE PERMITTED PROVIDED THE AREA OF SUCH OPENINGS DOES NOT AGGREGATE MORE THAN 100 SQ. IN. FOR ANY 100 SQ. FT. OF FIRE RESISTANT WALL AREA OR SHAFT ENCLOSURE WALL AREA. THE WALLBOARD FACE MUST BE CUT SO THAT THE CLEARANCE FROM THE ELECTRICAL BOX DOES NOT EXCEED 1/8 INCH. OUTLET BOXES ON OPPOSITE SIDES OF THE FIRE RESISTANT WALL OR SHAFT ENCLOSURE SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, OR BE COMPLETELY COVERED WITH 3M PUTTY PADS PER THE UL DETAILS.
27. REFEED ALL AREAS DOWNSTREAM OF DEMOLITION AREAS. WHEN ANY PORTION OF A POWER, LIGHTING, OR COMMUNICATION CIRCUIT OR SYSTEMS IS REMOVED, EVEN TEMPORARILY DURING CONSTRUCTION, THE DOWNSTREAM DEVICES SHALL BE RECONNECTED AND RETESTED TO ENSURE FULL AND COMPLETE OPERATION.
28. ALL ELECTRICAL NEW AND EXISTING WIRING AND DEVICES SHALL BE TESTED BY E.C. IN ACCORDANCE WITH NFPA 99 6.3.3.2. SHALL PROVIDE ARCHITECT WITH WRITTEN DOCUMENTATION OF COMPLETION OF THESE TESTS.
29. FLEXIBLE METAL CONDUIT (FMC) IS NOT PERMITTED ON EMERGENCY SYSTEMS PER NEC 517.30 (C)(3). FMC IS PERMITTED UP TO SIX FEET IN LENGTH WHERE CONNECTED TO A LIGHT FIXTURE.
30. PROVIDE ALL INTERIOR ABOVE GRADE EMERGENCY SYSTEM WIRING IN E.M.T. AND WHERE INDICATED PROVIDE ALL INTERIOR BELOW GRADE WIRING IN G.R.S.
31. WHEN ADDING CIRCUIT BREAKERS TO EXISTING PANELS OR SWITCHBOARDS, PROVIDE CIRCUIT BREAKERS OF THE SAME MANUFACTURER OF THE EXISTING PANEL OR SWITCHBOARD , MATCH THE HIGHEST RATED AIC RATING OF ANY EXISTING CIRCUIT BREAKERS IN THE PANEL OR SWITCHBOARDS. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED TO MOUNT THE CIRCUIT BREAKER. PROVIDE DUAL BREAKER MOUNTING HARDWARE TO MOUNT NEW AND ADJACENT EXISTING CIRCUIT BREAKER IF/AS NECESSARY.DRAWINGS INDICATE THE TRIP SIZE OF THE CIRCUIT BREAKER REQUIRED, NOT THE FRAME SIZE. PROVIDE CIRCUIT BREAKER FRAME SIZE TO FIT THE SPACE AVAILABLE, IF THE SPACE AVAILABLE REQUIRES A LARGER FRAME SIZE THAN TRIP RATING CALLED FOR, PROVIDE THE LARGER FRAME SIZE WITH A TRIP UNIT SIZED AS SPECIFIED. PROVIDE ALL BLANK FILLER PLATES AS REQUIRED TO COMPLETELY COVER THE REMAINING PANEL TRIM. RELOCATE EXISTING CIRCUIT BREAKERS AND EXTEND EXISTING CIRCUITS AS REQUIRED TO MAKE ROOM FOR NEW CIRCUIT BREAKER. PROVIDE NEW TYPED PANEL OR SWITCHBOARD SCHEDULE SHOWING ALL PANEL OR SWITCHBOARD CIRCUIT CHANGES. IF CIRCUIT BREAKERS FOR PANEL OR SWITCHBOARDS ARE NO LONGER AVAILABLE FROM THE MANUFACTURER, PROVIDE CERTIFIED REBUILD CIRCUIT BREAKERS.VISIT THE JOBSITE AND INSPECT THE EXISTING PANELS AND SWITCHBOARDS THAT CIRCUIT BREAKERS ARE TO BE ADDED TO PRIOR TO BID, PROVIDE AID OF PANEL OR SWITCHBOARD MANUFACTURE AS REQUIRED TO DETERMINE CORRECT CIRCUIT BREAKER TYPE FOR THE PANEL OR SWITCHBOARD. PROVIDE GROUND FAULT CIRCUIT BREAKER IF OTHER CIRCUIT BREAKERS IN PANEL OF SWITCHBOARD HAVE GROUND FAULT.
32. IN ALL CASES WHERE THE CONDUCTOR SIZE HAS BEEN INCREASED TO COMPENSATE FOR VOLTAGE DROP AND/OR THE CONDUCTOR SIZE IS LARGER THAN THE AVAILABLE LUG SIZE ON A NEW OR EXISTING TERMINATION, PROVIDE A NEC SIZED JUNCTION BOX JUST AHEAD OF THAT TERMINATION AND REDUCE THE WIRE SIZE DOWN TO THE MAXIMUM WIRE SIZE LISTED FOR THE TERMINATION LUG. KEEP THE REDUCED WIRE SIZE LENGTH TO THE MINIMUM LENGTH POSSIBLE. PROVIDE UL LISTED INSULATED IN LINE HYPRESS COMPRESSION SPLICES IN THE JUNCTION BOX WITH HEAT SHRINK INSULATION. SPLIT BOLT SPLICES SHALL NOT BE PERMITTED. DO NOT CUT STRANDS OFF A STRANDED CONDUCTOR TO ALLOW IT TO FIT INTO A LUG. IN ALL CASES THE REDUCED WIRE SIZE SHALL HAVE AMPACITY LARGER THAN THE CIRCUIT BREAKER OR FUSE PROTECTING THE CIRCUIT.
33. SOME WORK ON THIS PROJECT MAY BE REQUIRED TO BE PERFORMED WHILE THE EQUIPMENT IS ENERGIZED IN ORDER TO MAINTAIN HOSPITAL OPERATIONS. COORDINATE WITH THE HOSPITAL FACILITIES DIRECTOR FOR SHUTDOWN/ENERGIZED WORK REQUIREMENTS.
34. CONSTRUCTION PROCEDURES AND/OR EQUIPMENT SHALL NOT BLOCK ACCESS OR NEC ARTICLE 110 REQUIRED WORKING SPACE FOR NEW OR EXISTING ELECTRICAL PANELS, SWITCHGEAR, OR EQUIPMENT.
35. WORK SHOWN AS EXISTING TO REMAIN ON THESE ELECTRICAL RISER DIAGRAMS HAS BEEN PROVIDED TO DESIGNER BY THE HOSPITAL AND IS OUTSIDE THE SCOPE OF THESE DESIGN DOCUMENTS.

GENERAL SYMBOLS

1	NOTE NUMBER
A E5.1	TITLE MARK DETAIL TAG SHEET NUMBER
A E5.1	TITLE MARK PLAN/ELEVATION/SECTION/DETAIL TAG SHEET NUMBER
A E5.1	TITLE MARK ELEVATION TAG SHEET NUMBER
A B C D 1 E5.1	ELEVATION DESIGNATION TITLE MARK INTERIOR ELEVATION TAG SHEET NUMBER
A E5.1	TITLE MARK SECTION TAG SHEET NUMBER
Ⓐ A	COLUMN TAG (NEW/EXISTING)
CPR–1	REVISION TAG AND CLOUD
N	NORTH ARROW
- - - - - -	EXISTING TO BE REMOVED (ON DEMOLITION PLAN)
─	EXISTING TO REMAIN (LIGHT LINE TYPE)
━	NEW WORK (HEAVY LINE TYPE)

HOURLY RATING

· · · · · · · · · · ·	NON–RATED SMOKE PARTITION SEAL ALL PENETRATIONS
— - — - —	1–HOUR RATED FIRE BARRIER SEAL ALL PENETRATIONS
— — · —	1–HOUR RATED FIRE PARTITION SEAL ALL PENETRATIONS
· · · · · ·	1–HOUR RATED SMOKE BARRIER SEAL ALL PENETRATIONS
— · — · —	1–HOUR RATED FIRE BARRIER AND SMOKE BARRIER COMBINATION SEAL ALL PENETRATIONS
— - - — - - —	2–HOUR RATED FIRE BARRIER SEAL ALL PENETRATIONS
— · · — · · —	2–HOUR RATED FIRE BARRIER AND SMOKE BARRIER COMBINATION SEAL ALL PENETRATIONS
—— 2HR ——	2–HOUR FIRE WALL SEAL ALL PENETRATIONS
—— 3HR ——	3–HOUR FIRE WALL SEAL ALL PENETRATIONS
—— 4HR ——	4–HOUR FIRE WALL SEAL ALL PENETRATIONS
— X — X — X —	FENCE
— G — G — G —	ELECTRICAL GROUND WIRE

LTC

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COLUMBIA, SC 29201

803 254 9082 VOX

MECHANICAL - ELECTRICAL - PLUMBING

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PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
ELECTRICAL SYMBOLS AND ABBREVIATIONS

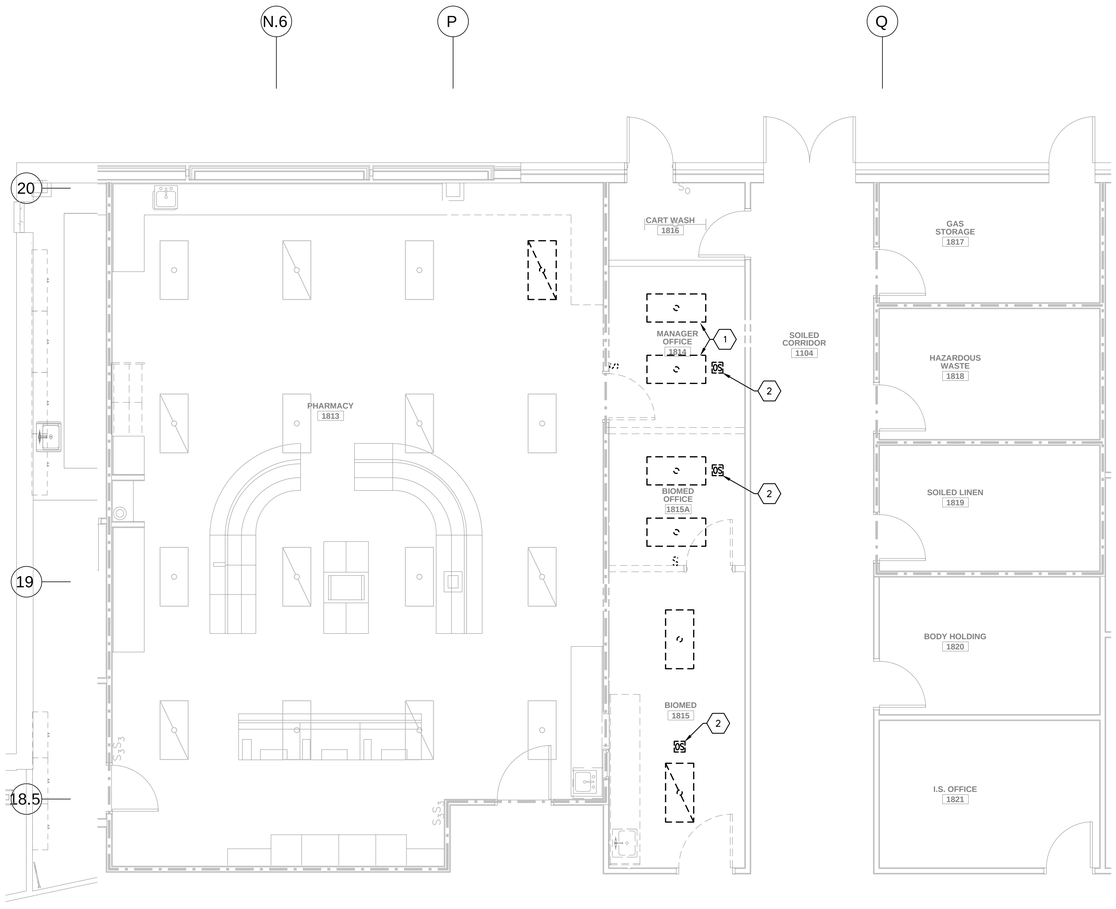
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

E0.1

DATE: 27 AUGUST, 2018



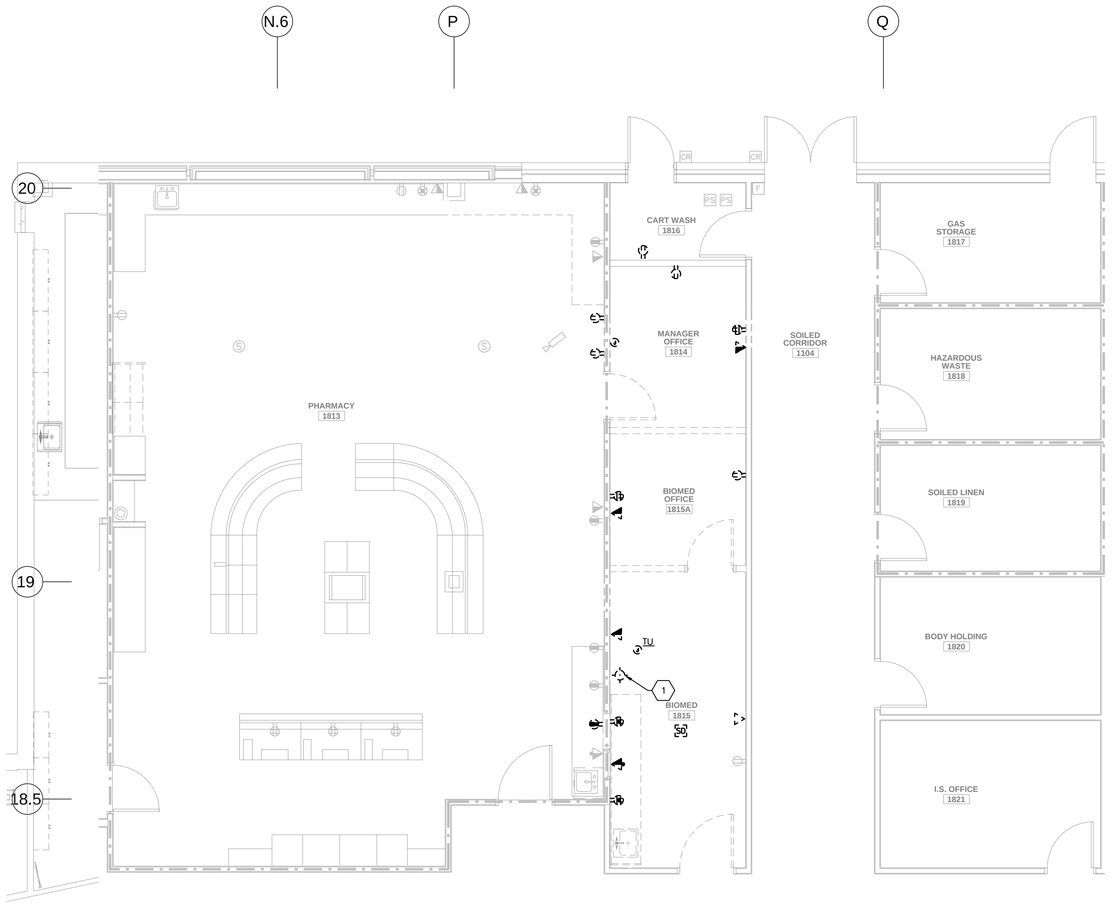
1 PARTIAL FIRST FLOOR DEMOLITION PLAN – LIGHTING
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, FIXTURES, RACEWAYS, SUPPORTS, ETC., SHOWN - - - - - UNLESS NOTED OTHERWISE.
2. REPAIR AND/OR PATCH ALL OPENINGS WHERE ELECTRICAL ITEMS ARE DEMOLISHED. USE SIMILAR MATERIALS AS EXISTING CONSTRUCTION.
3. TRACE AND MARK ALL EXISTING ELECTRICAL AND COMMUNICATION CONDUITS, BOXES AND CIRCUITS IN AND AROUND THE PROJECT AREA. TRACE ALL EXISTING CIRCUITS IN OR PASSING THRU THE PROJECT AREA, TO THE FINAL UTILIZATION EQUIPMENT AND TO THE PANEL OF ORIGIN. CLEARLY IDENTIFY AND MARK ALL CONDUITS, BOXES AND CIRCUITS TO BE DEMOLISHED. CLEARLY IDENTIFY AND MARK ALL CONDUITS, BOXES AND CIRCUITS FEEDING AREAS OTHER THAN THE DEMOLITION AREA WHICH ARE TO REMAIN OR BE RELOCATED. MARK ALL EXISTING TO REMAIN CONDUITS AND BOXES WITH ORIGINATING PANEL AND ITEM FED. MARKINGS SHALL BE PER THE SPECIFICATIONS.
4. RELOCATE ALL EXISTING JUNCTION BOXES, DISCONNECT SWITCHES OR SIMILAR ITEMS THAT WILL BE RENDERED INACCESSIBLE BY NEW CONSTRUCTION FURNISHED UNDER ANY DIVISION OF THIS PROJECT. PROVIDE ANY AND ALL TEMPORARY ELECTRICAL SUPPLY (SUPPLIES) AS NEEDED TO MEET THIS REQUIREMENT.
5. REMOVE ALL ABANDONED CONDUITS, CABLES AND CIRCUITS BACK TO THE POINT OF SUPPLY OR BACK TO THE POINT WHERE OTHER REMAINING LOADS ARE CONNECTED.
6. LABEL ANY OVERCURRENT DEVICES THAT BECOME UNUSED DUE TO DEMOLITION AS "SPARE". REMOVE ALL EQUIPMENT LABELS FROM ANY UNUSED OVERCURRENT DEVICES.
7. RELOCATE ALL EXISTING TO REMAIN CONDUIT, BOXES, OR ELECTRICAL EQUIPMENT IF/AS REQUIRED TO ALLOW SPACE FOR INSTALLATION OF, AND ACCESS TO, NEW EQUIPMENT, PIPING OR DUCTWORK OF ALL TRADES. EXTEND CIRCUITS IF/AS REQUIRED USING MATCHING RACEWAY AND CABLE SIZE AND TYPE.
8. REMOVE ALL ELECTRICAL CONDUIT, CABLE, WIRING, DEVICES, JUNCTION BOXES, FITTINGS, AND RELATED ITEMS FROM ALL WALLS, CEILINGS, FLOORS, AND/OR PORTIONS OF SAME INDICATED AS BEING DEMOLISHED BY ANY DIVISION OF THE CONTRACT DOCUMENT SET OR INDICATED ELSEWHERE IN THE CONTRACT DOCUMENT SET AS REQUIRING ELECTRICAL DEMOLITION.
9. WHERE EQUIPMENT OR DEVICES ARE REMOVED AND NOT REPLACED BY A SIMILAR ITEM OR EQUIPMENT, REPAIR WALL, FLOOR, AND CEILING SURFACES TO MATCH EXISTING SURROUNDING SURFACE. PAINT AS REQUIRED TO MATCH EXISTING FINISHES. PATCH ALL HOLES WERE CONDUIT IS REMOVED TO MATCH EXISTING WALL OR FLOOR RATINGS.
10. PROVIDE NEW SUPPORT(S) OR RE-SUPPORT ALL EXISTING CONDUIT, JUNCTION BOXES, CABLES, LIMUNAIRES, AND OTHER ELECTRICAL ITEMS IF/AS NECESSARY WITH IN THE PROJECT LIMITS TO MEET THE SUPPORT REQUIREMENTS OF THE PRESENT PROJECT SPECIFICATIONS AND CODES.
11. WHERE EXISTING LUNINAIRES OR FIXTURES ARE TO BE REUSED, USE MILD DETERGENT AND CLEAN ALL INTERIOR AND EXTERIOR SURFACES AND LENSES. REPLACE ALL LAMPS AND ANY DEFECTIVE BALLASTS AND ANY MISSING OR BROKEN ELECTRICAL PARTS. LAMP COLOR SHALL MATCH LAMPS IN NEW LUMINAIRES. IF THERE ARE NO NEW LUMINAIRES ON PROJECT, MATCH LAMP COLOR OF ADJACENT AREA.
12. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING ALL PHASES OF CONSTRUCTION.
13. EXISTING ELECTRICAL ITEMS SHOWN TO BE REMOVED SHALL INCLUDE ALL WIRING, CONDUIT AND ASSOCIATED ELECTRICAL ITEMS. RELOCATE JUNCTION BOX AND CIRCUIT IF/AS REQUIRED TO FEED EXISTING OR NEW DOWNSTREAM ELECTRICAL ITEMS.
14. PROVIDE NEW, OR REWORK EXISTING, FIRE STOPPING AT ALL THROUGH-PENETRATIONS OF CONDUIT OR OTHER ELECTRICAL ITEMS THAT WILL REMAIN AT THE CONCLUSION OF THE PROJECT WITHIN THE PROJECT AREA. FIRE STOPPING PROVIDED FOR EXISTING ITEMS SHALL MEET THE REQUIREMENTS OF THE PRESENT PROJECT.

NOTES KEYED TO LIGHTING PLAN:

1. REMOVE AND RELOCATE EXISTING LIGHT FIXTURE. REFER TO PLAN 1/E2.1.
2. REMOVE EXISTING CEILING MOUNTED OCCUPANCY SENSOR/CONTROLLER.



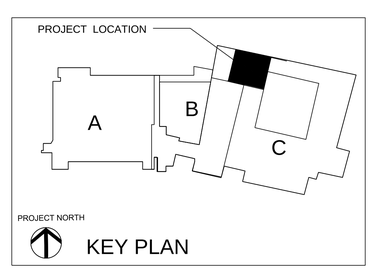
2 PARTIAL FIRST FLOOR DEMOLITION PLAN – POWER & SPECIAL SYSTEMS
1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EQUIPMENT, FIXTURES, RACEWAYS, SUPPORTS, ETC., SHOWN - - - - - UNLESS NOTED OTHERWISE.
2. REPAIR AND/OR PATCH ALL OPENINGS WHERE ELECTRICAL ITEMS ARE DEMOLISHED. USE SIMILAR MATERIALS AS EXISTING CONSTRUCTION.
3. TRACE AND MARK ALL EXISTING ELECTRICAL AND COMMUNICATION CONDUITS, BOXES AND CIRCUITS IN AND AROUND THE PROJECT AREA WHICH INCLUDES THE KITCHEN AND THE CRAWLSPACE BELOW THE KITCHEN. TRACE ALL EXISTING CIRCUITS IN OR PASSING THRU THE PROJECT AREA, TO THE FINAL UTILIZATION EQUIPMENT AND TO THE PANEL OF ORIGIN. CLEARLY IDENTIFY AND MARK ALL CONDUITS, BOXES AND CIRCUITS TO BE DEMOLISHED. CLEARLY IDENTIFY AND MARK ALL CONDUITS, BOXES AND CIRCUITS FEEDING AREAS OTHER THAN THE DEMOLITION AREA WHICH ARE TO REMAIN OR BE RELOCATED. MARK ALL EXISTING TO REMAIN CONDUITS AND BOXES WITH ORIGINATING PANEL AND ITEM FED. MARKINGS SHALL BE PER THE SPECIFICATIONS.
4. RELOCATE ALL EXISTING JUNCTION BOXES, DISCONNECT SWITCHES OR SIMILAR ITEMS THAT WILL BE RENDERED INACCESSIBLE BY NEW CONSTRUCTION FURNISHED UNDER ANY DIVISION OF THIS PROJECT. PROVIDE ANY AND ALL TEMPORARY ELECTRICAL SUPPLY (SUPPLIES) AS NEEDED TO MEET THIS REQUIREMENT.
5. REMOVE ALL ABANDONED CONDUITS, CABLES AND CIRCUITS BACK TO THE POINT OF SUPPLY OR BACK TO THE POINT WHERE OTHER REMAINING LOADS ARE CONNECTED. REMOVE ALL ABANDONED CONDUIT HANGERS.
6. LABEL ANY OVERCURRENT DEVICES THAT BECOME UN-USED DUE TO DEMOLITION AS "SPARE". REMOVE ALL EQUIPMENT LABELS FROM ANY UNUSED OVERCURRENT DEVICES.
7. RELOCATE ALL EXISTING TO REMAIN CONDUIT, BOXES, OR ELECTRICAL EQUIPMENT IF/AS REQUIRED TO ALLOW SPACE FOR INSTALLATION OF, AND ACCESS TO, NEW EQUIPMENT, PIPING OR DUCTWORK OF ALL TRADES. EXTEND CIRCUITS IF/AS REQUIRED USING MATCHING RACEWAY AND CABLE SIZE AND TYPE.
8. REMOVE ALL ELECTRICAL CONDUIT, CABLE, WIRING, DEVICES, JUNCTION BOXES, FITTINGS, AND RELATED ITEMS FROM ALL WALLS, CEILINGS, FLOORS, AND/OR PORTIONS OF SAME INDICATED AS BEING DEMOLISHED BY ANY DIVISION OF THE CONTRACT DOCUMENT SET OR INDICATED ELSEWHERE IN THE CONTRACT DOCUMENT SET AS REQUIRING ELECTRICAL DEMOLITION.
9. WHERE EQUIPMENT OR DEVICES ARE REMOVED AND NOT REPLACED BY A SIMILAR ITEM OR EQUIPMENT, REPAIR WALL, FLOOR, AND CEILING SURFACES TO MATCH EXISTING SURROUNDING SURFACE. PAINT AS REQUIRED TO MATCH EXISTING FINISHES. PATCH ALL HOLES WERE CONDUIT IS REMOVED TO MATCH EXISTING WALL OR FLOOR RATINGS.
10. PROVIDE NEW SUPPORT(S) OR RE-SUPPORT ALL EXISTING CONDUIT, JUNCTION BOXES, CABLES, LIMUNAIRES, AND OTHER ELECTRICAL ITEMS IF/AS NECESSARY WITH IN THE PROJECT LIMITS TO MEET THE SUPPORT REQUIREMENTS OF THE PRESENT PROJECT SPECIFICATIONS AND CODES.
11. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING ALL PHASES OF CONSTRUCTION.
12. EXISTING ELECTRICAL ITEMS SHOWN TO BE REMOVED SHALL INCLUDE ALL WIRING, CONDUIT AND ASSOCIATED ELECTRICAL ITEMS. RELOCATE JUNCTION BOX AND CIRCUIT IF/AS REQUIRED TO FEED EXISTING OR NEW DOWNSTREAM ELECTRICAL ITEMS.
13. PROVIDE NEW, OR REWORK EXISTING, FIRE STOPPING AT ALL THROUGH-PENETRATIONS OF CONDUIT OR OTHER ELECTRICAL ITEMS THAT WILL REMAIN AT THE CONCLUSION OF THE PROJECT WITHIN THE PROJECT AREA. FIRE STOPPING PROVIDED FOR EXISTING ITEMS SHALL MEET THE REQUIREMENTS OF THE PRESENT PROJECT.

NOTES KEYED TO PLAN:

1. REMOVE AND RELOCATE EXISTING FIRE ALARM DEVICE. REFER TO PLAN 2/E2.1.



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8-31-18

PHARMACY USP 797 & 800 UPGRADES
CENTRAL HARNETT HOSPITAL
LILLINGTON, NORTH CAROLINA
PARTIAL FIRST FLOOR DEMOLITION PLANS - ELECTRICAL

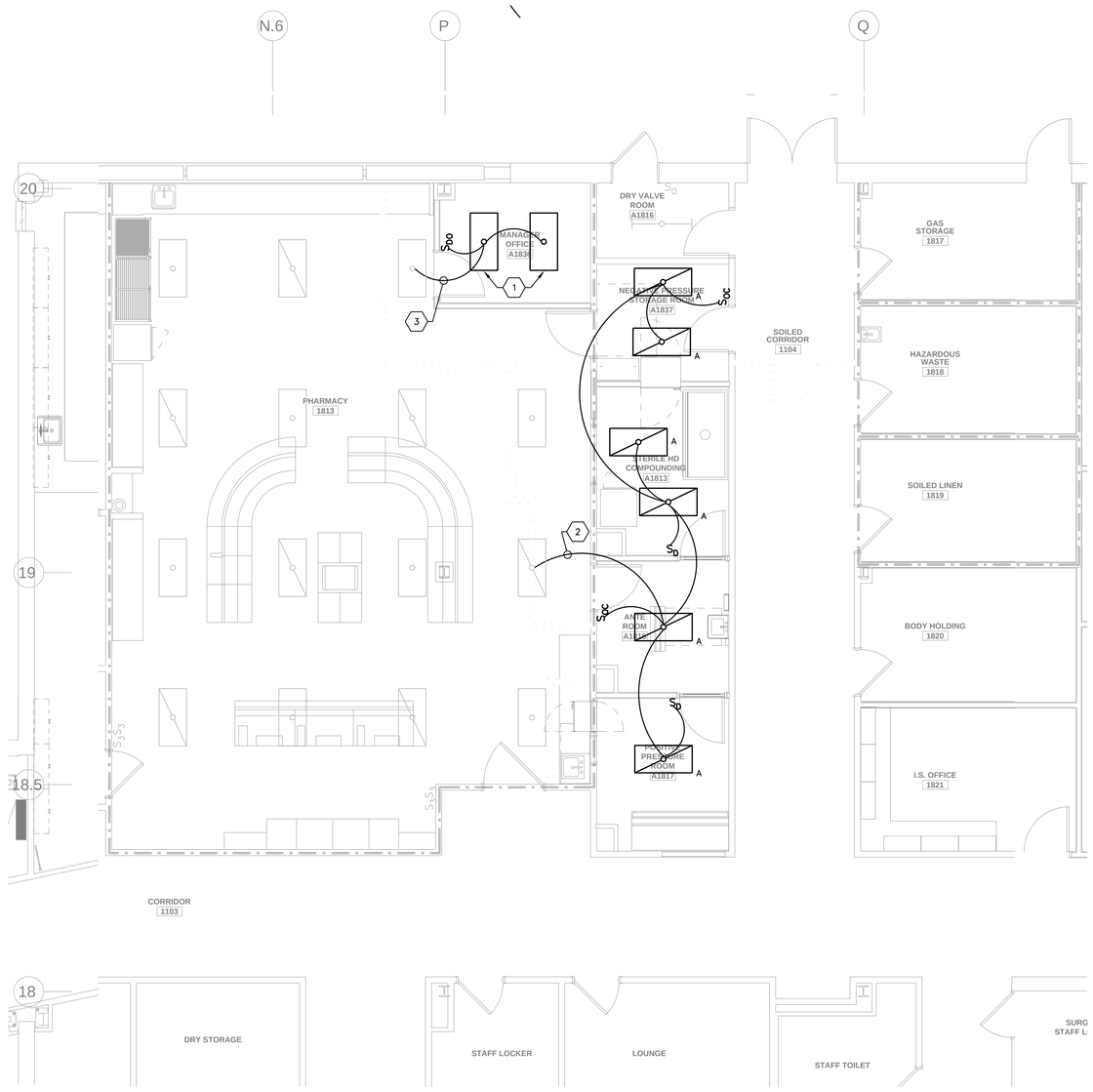
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

E1.1

DATE: 27 AUGUST, 2018



1 PARTIAL FIRST FLOOR PLAN – LIGHTING
1/4" = 1'-0"

GENERAL NOTES:

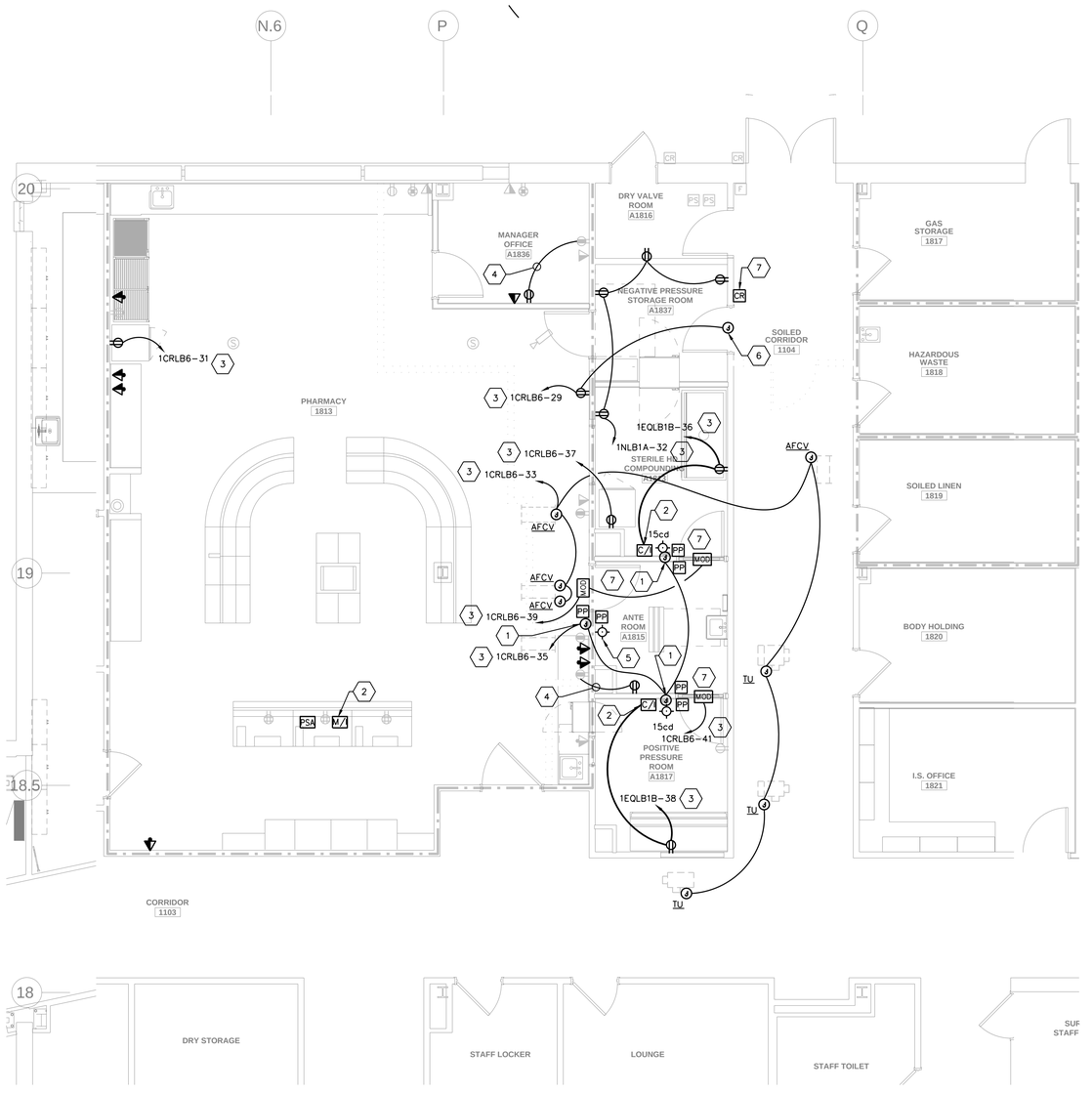
1. ALL DIMMER SWITCHES SHALL SHALL BE COMPATIBLE TO LIGHT FIXTURES THAT THEY ARE CONTROLLING. DIMMERS SHALL BE EQUAL TO LEGRAND MODEL #PW-311 OR EQUAL. INSTALL PER MANUFACTURER WIRING REQUIREMENTS TO GET FUNCTIONAL CONTINUOUS DIMMING. REFER TO DETAILS.
2. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
3. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING E7.1. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.

NOTES KEYED TO PLAN:

1. RELOCATED LIGHT FIXTURE. RECONNECT TO THE NORMAL LIGHTING CIRCUIT SERVING THIS AREA.
2. CONNECT TO EXISTING CRITICAL LIGHTING CIRCUIT SERVING THIS AREA.
3. CONNECT TO EXISTING NORMAL LIGHTING CIRCUIT SERVING THIS AREA.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	VOLTS	LAMP	BALLAST	WATTS	MOUNTING	NOTES
A	KENALL LIGHTING	CSEDI-2467L35K-DCC-DV-PAF-PAH-SYM (OR APPROVED EQUAL)	277	LED	DIMMING DRIVER	67	CEILING RECESSED GRID	2X4 LED RECESSED CLEANROOM FIXTURE



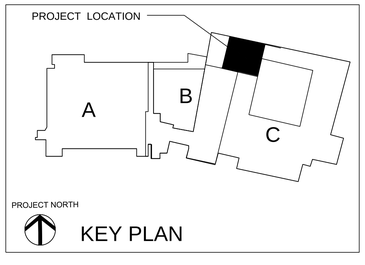
2 PARTIAL FIRST FLOOR PLAN – POWER & SPECIAL SYSTEMS
1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO POWER RISER DIAGRAM ON DWG. E6.1.
2. COORDINATE INSTALLATION OF ELECTRICAL WORK IN CEILING WITH HVAC DUCTS, LIGHTS AND STRUCTURAL MEMBERS. PROVIDE ADDITIONAL OFFSETS/FITTINGS AS REQUIRED.
3. PROVIDE NEW TYPED INDEXES IN EXISTING PANELBOARDS UPON COMPLETION AND VERIFICATION OF CIRCUITS.
4. PROVIDE CONDUIT FOR TELEPHONE AND DATA STUBBED INTO THE CEILING SPACE. THE CONTRACTOR SHALL ENGAGE THE OWNER'S DATA AND COMMUNICATIONS VENDOR NETCOM TO PERFORM THE DATA AND COMMUNICATIONS WORK DESCRIBED IN THE CONTRACT DOCUMENTS.
5. THE FIRE ALARM SYSTEM, MANUFACTURED BY SIMPLEX IS IN PLACE THROUGHOUT THE BUILDING. EXPAND EXISTING SYSTEM PROVIDING CONDUIT, WIRE, SYSTEM EQUIPMENT, AND DEVICES. THE CONTRACTOR SHALL ENGAGE THE OWNER'S PREFERRED FIRE ALARM VENDOR SIMPLEX-GRINNELL TO PERFORM THE FIRE ALARM WORK DESCRIBED IN THE CONTRACT DOCUMENTS.
6. TEST AND RECERTIFY CONSTRUCTION AREA EXISTING FIRE ALARM SYSTEM AFTER MAKING ALTERATIONS.
7. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW NON-RATED SMOKE ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) WITH MATERIALS CONSISTENT WITH THE ASSEMBLY CONSTRUCTION (GYPSUM WALLBOARD, JOINT COMPOUND, MORTAR, GROUT, CAULK, ETC.). REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW NON-RATED SMOKE ASSEMBLIES.
8. SEAL ALL EXISTING PIPING AND/OR CONDUIT PENETRATIONS THROUGH NEW THROUGH FIRE RATED ASSEMBLIES (WALLS, PARTITIONS, FLOORS, ETC.) IN ACCORDANCE WITH THE UL LISTED SYSTEMS SHOWN ON DRAWING E7.1. REFER TO THE LIFE SAFETY PLANS AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW FIRE RATED ASSEMBLIES.

NOTES KEYED TO PLAN:

1. ROOM DIFFERENTIAL PRESSURE DISPLAY/ALARM UNIT.
2. PHARMACY INTERCOM PHONE. REFER TO DIAGRAM 6/E7.1
3. CONNECT TO EXISTING 20A, 1 POLE CIRCUIT BREAKER IN EXISTING PANEL.
4. CONNECT TO EXISTING RECEPTACLE CIRCUIT.
5. RELOCATED FIRE ALARM DEVICE.
6. POWER SUPPLIES FOR ELECTRICAL DOOR CARD READERS. REFER TO ARCHITECTURAL DOOR HARDWARE SCHEDULE.
7. REFER TO DOOR DETAILS ON E7.1



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PARTIAL FIRST FLOOR PLANS - ELECTRICAL

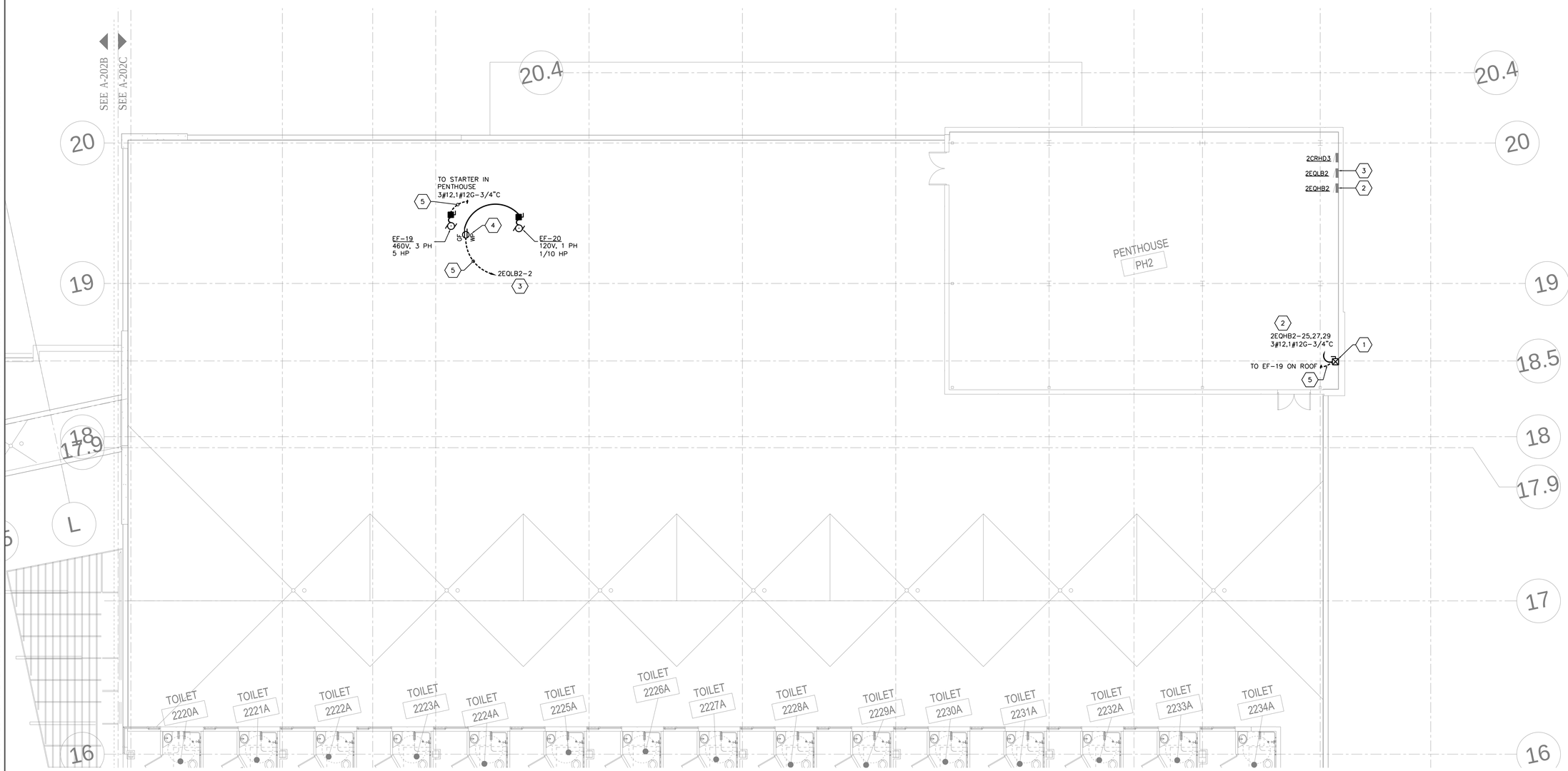
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

E2.1

DATE: 27 AUGUST, 2018



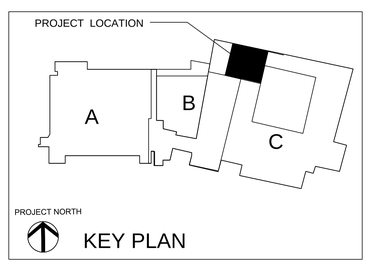
1 PARTIAL SECOND FLOOR ROOF PLAN - POWER
1/8" = 1'-0"

GENERAL NOTES:

1. LIGHTNING PROTECTION DESIGN AND INSTALLATION SHALL BE PROVIDED PER SPECIFICATIONS. CONNECT EF-19 AND EF-20 TO EXISTING LIGHTING PROTECTION SYSTEM.
2. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICUOUS MANNER SO THAT ALL COMPONENTS WILL BLEND IN WITH THE APPEARANCE OF THE BUILDING.
3. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DWGS. FOR ROOF AND ROOF EQUIPMENT DETAILS. PROJECT CONDITIONS MAY REQUIRE SLIGHT VARIATION IN TYPE OF MATERIALS, LOCATION, AND MOUNTING OF EQUIPMENT, AND COURSING OF DOWNLEADS.
4. ALL ELECTRICAL CONDUITS FEEDING MECHANICAL EQUIPMENT ON ROOF SHALL BE RUN IN THE CEILING SPACE BELOW ROOF AND STUB-UP AT THE EQUIPMENT IT SERVERS.

NOTES KEYED TO PLAN:

1. PROVIDE CIRCUIT BREAKER COMBINATION DISCONNECT STARTER WITH CPT, HOA, R & G LIGHTS FOR EXHAUST FAN EF-19. REFER TO MECHANICAL DRAWINGS.
2. REMOVE (3) 1P-20A CIRCUIT BREAKERS IN EXISTING PANEL 2EQHB2 AND PROVIDE NEW 3P-15A CIRCUIT BREAKER. NEW CIRCUIT BREAKERS SHALL BE THE SAME MANUFACTURER AS THE EXISTING PANEL, AND SHALL HAVE SHORT-CIRCUIT RATING EQUAL TO OR EXCEEDING THE HIGHEST RATED EXISTING BREAKER.
3. CONNECT TO EXISTING 20A, 1 POLE CIRCUIT BREAKER IN EXISTING PANEL.
4. PROVIDE GFI, WEATHER PROOF RECEPTACLE MOUNTED ADJACENT TO EF-19 MECHANICAL FURNISHED DISCONNECT. SEAL ALL ROOF OPENINGS.
5. RUN IN CEILING SPACE BELOW.



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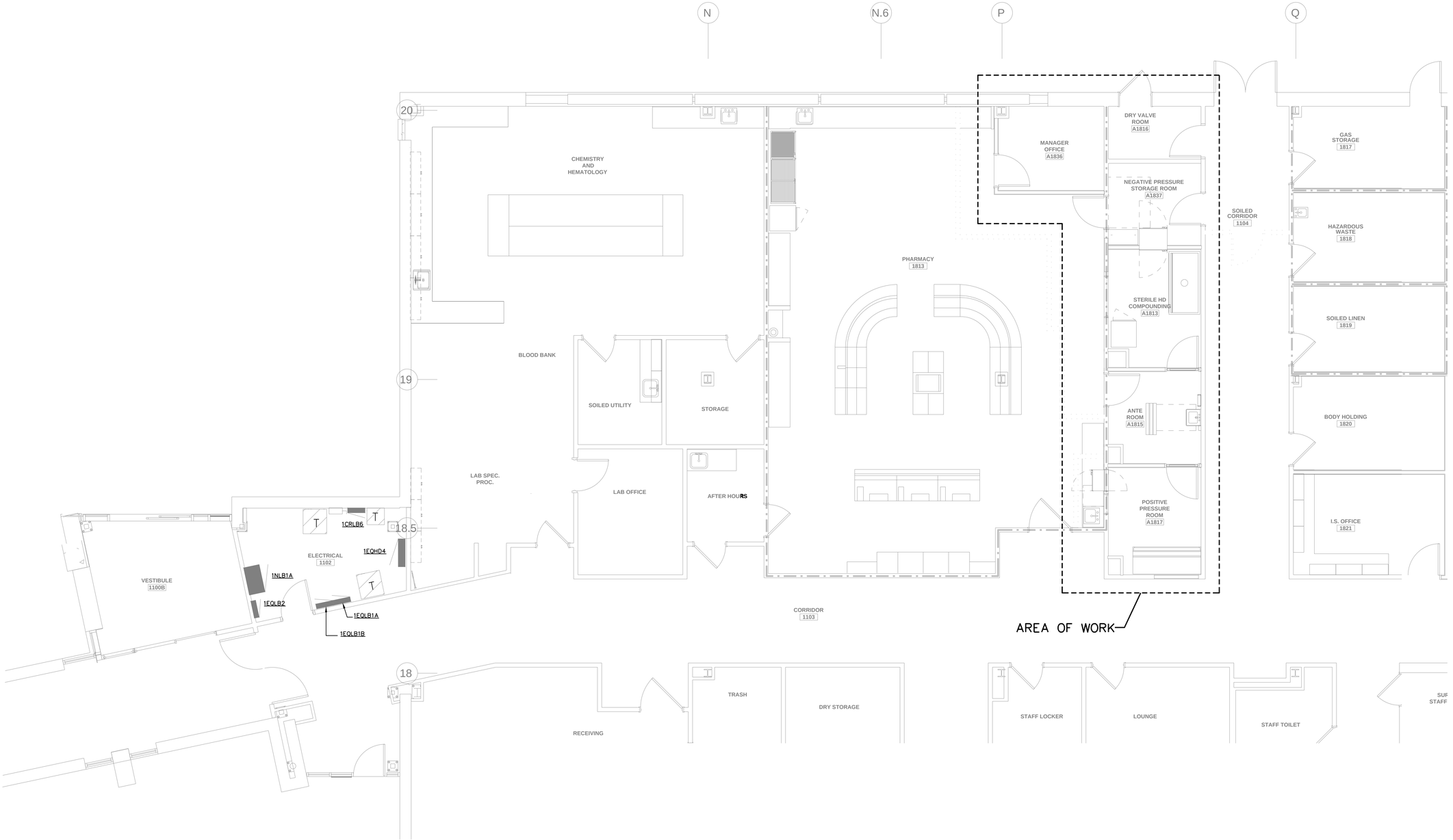
PARTIAL SECOND FLOOR ROOF PLAN - POWER

REVISIONS		
No.	Description	Date

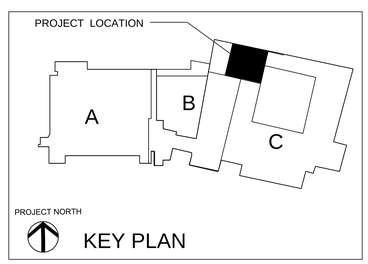
JOB NUMBER: 18028

E3.1

DATE: 27 AUGUST, 2018



1 OVERALL FLOOR PLAN
1/4" = 1'-0"



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OVERALL FLOOR PLAN

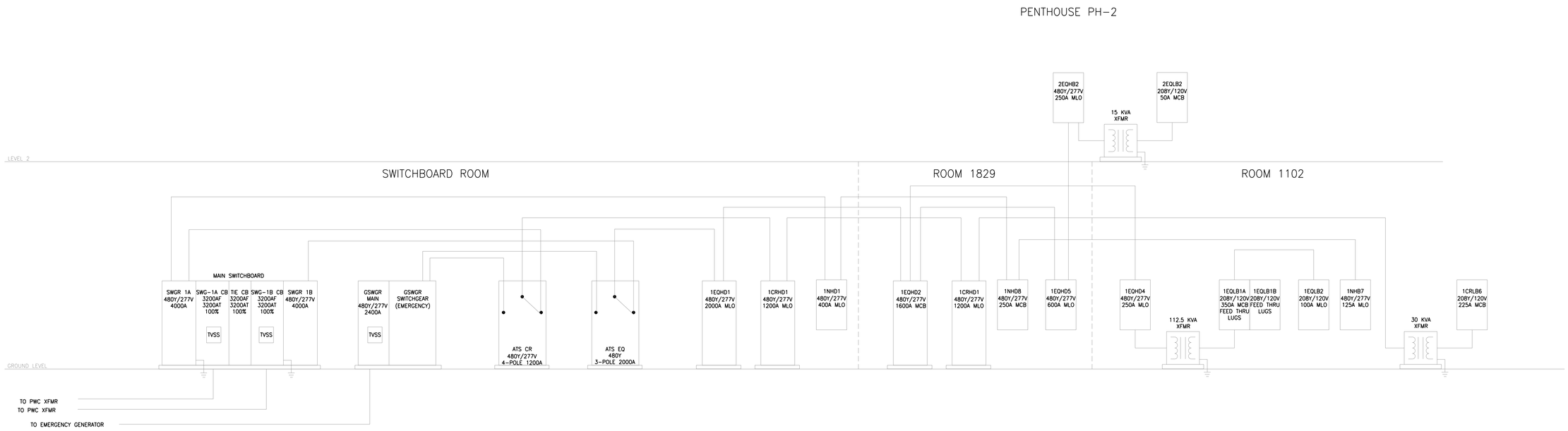
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

E5.1

DATE: 27 AUGUST, 2018



1 PARTIAL EXISTING ELECTRICAL RISER DIAGRAM
SCALE: NTS

LEGEND

	EXISTING TO REMAIN
- - - -	EXISTING TO BE DEMO
———	NEW WORK

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PARTIAL ELECTRICAL RISER

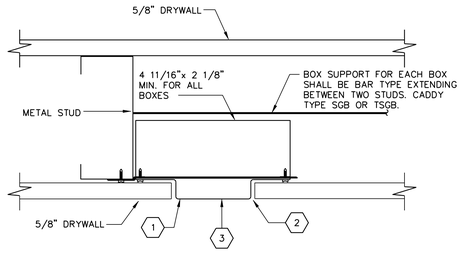
REVISIONS

No.	Description	Date

JOB NUMBER: 18028

E6.1

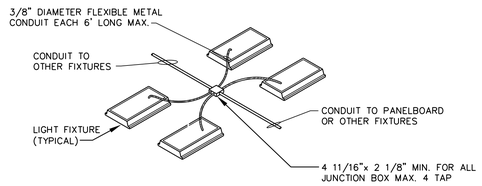
DATE: 27 AUGUST, 2018



NOTES:

1. PROVIDE MUD RING 1/8" DEEPER THAN DRYWALL THICKNESS TO ASSURE MUD RING IS FLUSH WITH FACE OF DRYWALL. (EXAMPLE: USE 3/4" DEEP MUD RING WHEN USING 5/8" DRYWALL)
2. CUT DRYWALL SO THAT GAP BETWEEN DRYWALL AND MUD RING IS NO MORE THAN 1/8". FILL ALL GAPS WITH DRYWALL COMPOUND.
3. PROVIDE CADDY 'RC' DEVICE LEVELER AND RETAINER FOR ALL OUTLET BOXES WHERE FACE OF MUD RING IS NOT EXACTLY FLUSH WITH FACE OF DRYWALL.

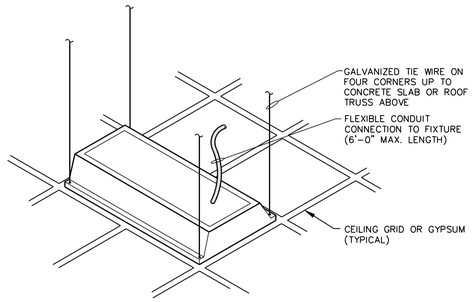
1 DRYWALL OUTLET BOX INSTALLATION DETAIL
NO SCALE



NOTE:

1. FLEXIBLE METAL CONDUIT FROM FIXTURE TO FIXTURE IS NOT PERMITTED.

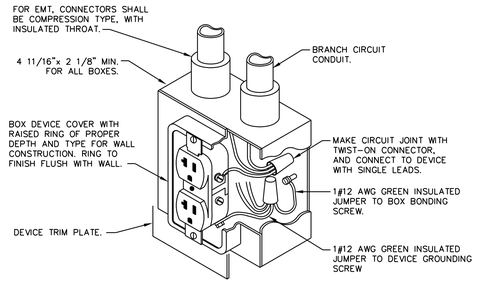
2 RECESSED LIGHT FIXTURE WIRING TAP DETAIL
NO SCALE



NOTE:

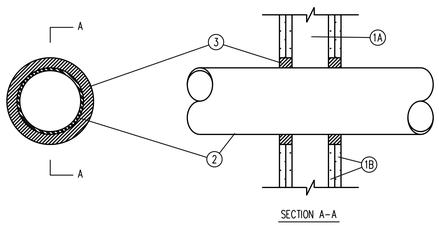
1. ATTACH FOUR CORNERS OF FIXTURE TO THE MAIN RUNNERS OF THE LAY-IN CEILING TRACT WITH UL LISTED CLIPS DESIGNED FOR THE PURPOSE.

3 TYPICAL RECESS FIXTURE SUPPORT DETAIL
NO SCALE



4 RECEPTACLE WIRING DETAIL
NTS

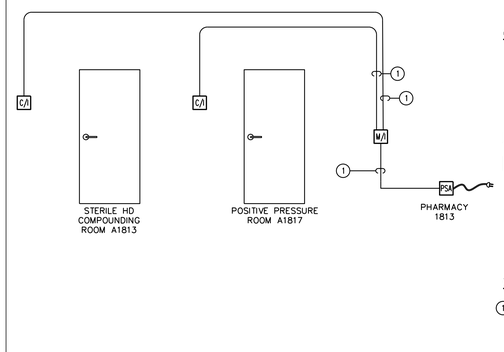
System No. W-L-1054
F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/Sq Ft
L Rating At 400 F - 4 CFM/Sq Ft



SECTION A-A

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
   B. Gypsum Board* -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
   The F Rating of the firestop system is equal to the fire rating of the wall assembly.
2. Through-Penetrants -- One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe -- Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe -- Nom 30 in. diam (or smaller) cast or ductile iron pipe.
   C. Conduit -- Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
   D. Copper Tubing -- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe -- Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material* -- Sealant -- Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall .
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC -- FS-One Sealant
*Bearing the UL Classification Mark

5 WALL FIRE RATING DETAIL
NOT TO SCALE



GENERAL DOOR SECURITY NOTES:

1. VERIFY ALL CONDUIT REQUIREMENTS WITH INTERCOM PHONE VENDOR PRIOR TO ROUGH IN. MINIMUM SIZE CONDUIT IS 3/4"

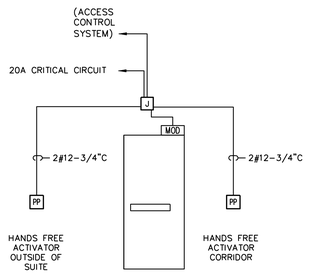
LEGEND FOR INTERCOM PHONE DIAGRAM

- PS/A — POWER SUPPLY MOUNTED ON FLOOR. PLUG INTO NEARST 120V CRITICAL RECEPTACLE. AIPHONE MODEL #PS-1820UL
- MECHANICAL HANDLE (DOOR HARDWARE)
- M/I — COLOR MASTER MONITOR FLUSH MOUNTED ON WALL. AIPHONE MODEL #JK-1MED
- C/I — FLUSH MOUNT PAN TILT COLOR DOOR STATION. MOUNT AT 60"A.F.F. AIPHONE MODEL #JK-DVF

WIRE SIZE FOR INTERCOM PHONE:

(1) PROVIDE WIRING IN 3/4" CONDUIT PER MANUFACTURERS REQUIREMENTS.

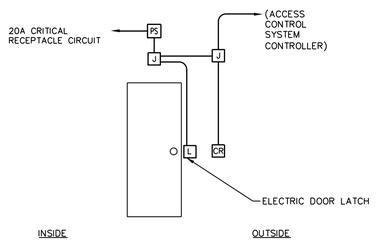
6 PHARMACY INTERCOM PHONE SYSTEM
NTS



OPERATION NARRATIVE:

1. EXIT OUT SHALL BE ALWAYS FREE BY MEANS OF MECHANICAL DOOR HARDWARE.
2. REFER TO ARCHITECTURAL SPECIFICATIONS FOR DOOR OPERATION.

7 DOORS A1813, A1815 AND A1817 SECURITY DETAIL
NTS



OPERATION NARRATIVE:

1. EXIT OUT IS ALWAYS FREE BY MEANS OF MECHANICAL DOOR HARDWARE.
2. REFER TO ARCHITECTURAL SPECIFICATIONS FOR DOOR OPERATION.

GENERAL DOOR SECURITY NOTES:

1. AS BUILT COPIES OF THIS SCHEMATIC AND SEQUENCE OF OPERATION SHALL BE PLACED IN A 10X12" BROWN ENVELOPE IN THE CEILING ABOVE THE DOOR PRIOR TO PUNCH LIST AND FINAL INSPECTION.
2. VERIFY ALL CONDUIT REQUIREMENTS WITH DOOR SECURITY VENDOR PRIOR TO ROUGH IN. MINIMUM SIZE CONDUIT IS 3/4"

LEGEND FOR SECURITY DIAGRAMS

- PS — POWER SUPPLY MOUNTED ON FLOOR. PLUG INTO NEAREST 120V CRITICAL RECEPTACLE. (DOOR HARDWARE)
- PP — HANDS FREE ACTIVATOR FOR AUTO DOORS (DOOR HARDWARE).
- CR — CARD READER
- MOD — MOTORIZED OPERATOR (DOOR HARDWARE)
- L — ELECTRIC DOOR LATCH (DOOR HARDWARE).

8 DOOR A837A SECURITY DETAIL
NTS

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ELECTRICAL DETAILS

REVISIONS

No.	Description	Date

JOB NUMBER: 18028

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DATE: 27 AUGUST, 2018