

DERMATOLOGY ASSOCIATES OF COASTAL CAROLINA

MOREHEAD CITY, NORTH CAROLINA



- Architectural Design
- Planning
- Interiors



Member of the American Institute of Architects

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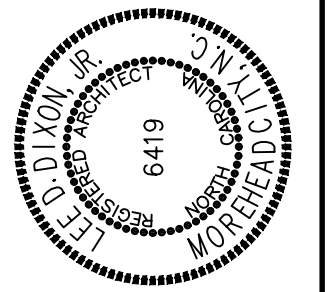
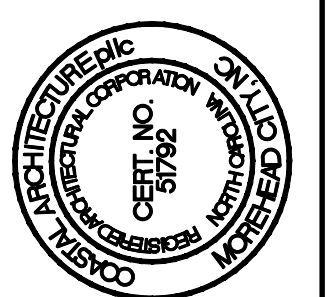
DERMATOLOGY ASSOCIATES
OF COASTAL CAROLINA
MOREHEAD CITY, NORTH CAROLINA

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Coastal Architecture, Drawings, Specifications and Other Documents
The Drawings, Specifications and other documents prepared by Coastal Architecture, the Designer, for this project are instruments of service for use solely with respect to this project and, unless otherwise provided, the Designer shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including copyright protection. The Owner shall be permitted to retain copies of the Designer's drawings, Specifications, and other documents for information and reference in connection with the Owner's use and occupancy of this project. No portion in part or in whole of the Drawings, Specifications and other documents shall be duplicated or used by the Owner or others for additions to this Project, completion of this Project by others, or on other Projects without written consent by the Designer.



COVER SHEET

25001

ISSUED: 03.21.2025

DWG BY: CRF

CKD BY: LDD

REVISIONS

NO.	DESCRIPTION

SHEET NO.

CS-1
OF

APPENDIX B
2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: DERMATOLOGY ASSOCIATES OF COASTAL CAROLINA
Address: MOREHEAD CITY, NORTH CAROLINA Zip Code: 28557
Owner/Authorized Agent: MARK KEANE Phone # (410) 227-0055 E-Mail: KEANEMARK@GMAIL.COM
Owned By: City/County Private State
Code Enforcement Jurisdiction: City, MOREHEAD CITY County State

CONTACT:
DESIGNER: FIRM NAME LICENSE # TELEPHONE # E-MAIL
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Plumbing Burke Design Group Ben Burke 22038 (919) 771-1916 benburke@nc.rr.com
Mechanical Burke Design Group Ben Burke 22038 (919) 771-1916 benburke@nc.rr.com

2018 NC BUILDING CODE: New Building Shell/Core 1st Time Interior Completions
 Addition Phased Construction—Shell Core

2018 NC EXISTING BUILDING CODE: (check all that apply)
 Prescriptive Alteration Level I Historic Property
 Repair Alteration Level II Change of Use
 Chapter 14 Alteration Level III

CONSTRUCTED (date) _____ CURRENT USE(S) (ch. 3): BUSINESS
RENOVATED (date) _____ PROPOSED USE(S) (ch. 3): BUSINESS

OCCUPANCY CATEGORY (Table 1604.5): Current: _____ Proposed: _____

BASIC BUILDING DATA

Construction Type: (check all that apply)
 I-A II-A III-A IV V-A
 I-B II-B III-B V-B

Sprinklers: No Partial NFPA 13 NFPA 13R NFPA 130

Standpipes: No Class III Wet Dry

Primary Fire District: No Yes Flood Hazard Area: No Yes

Special Inspections Required: No Yes

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor			
2nd Floor			
Mezzanine	1,753 (TENANT SPACE)		
1st Floor			
Basement			
TOTAL	1,753		

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 versus the annual energy cost for the proposed design.

Existing building envelope complies with code: (If checked, the remainder of this section is not applicable.)

Exempt Building: Provide code or statutory reference: _____

Climate Zone: 3A 4A 5A

Method of Compliance:
Energy Code: Performance Prescriptive
ASHRAE 90.1: Performance Prescriptive
Other: Performance (specify source) _____

THERMAL ENVELOPE: (Prescriptive method only)
Roof/Ceiling Assembly (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly:
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

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

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

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement:
slab heated: _____

ALLOWABLE AREA

Primary Occupancy Classification(s):
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
I-2 Condition 1 2
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 Occupancy Classification(s): _____
Incidental Uses (Table 509): _____
This separation is not exempt as a Non-separated Use (see exceptions).
Special Uses (Chapter 4—List Code Sections): _____
Special Provisions (Chapter 5—List Code Sections): _____
Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____
Non-separated Use (508.3): _____
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.

Select Code

Actual Area of Occupancy A + Actual Area of Occupancy B
Allowable Area of Occupancy A Allowable Area of Occupancy B ≤

_____ + _____ = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA	(C) AREA FOR FRONTAGE INCREASES 1, 4	(D) ALLOWABLE AREA PER STORY OR UNLIMITED 3

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)
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
4. The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
5. Frontage increase is based on the unspinklered area value in Table 506.2.

STRUCTURAL DESIGN
(SEE ALSO S1.1)

DESIGN LOADS:

Importance Factors: Wind (W) _____
Snow (IS) _____
Seismic (IE) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf
Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE 7)
Exposure Category _____

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.4) I II III IV
Spectral Response Acceleration S 1 _____ %g
Site Classification (ASCE 7) A B C D E F
Data Source: Field Test Presumptive Historical Data

Basic structural system (choose one)
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
Analysis Procedure: Simplified Equivalent Lateral Force Dynamic
Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

EXISTING

BUILDING HEIGHT IN FEET (TABLE 504.3)	ALLOWABLE HEIGHT		CODE REFERENCE
	ALLOWABLE	SHOWN ON PLANS	
Building Height in Feet (Table 504.3)	EXISTING	EXIST	
Building Height in Stories (Table 504.4)			

FIRE PROTECTION REQUIREMENTS

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

MECHANICAL DESIGN
MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: _____
summer dry bulb: _____

Interior design conditions
winter dry bulb: _____
summer dry bulb: _____
humidity ratio: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System
Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category, if oversized, state reason: _____
Chiller
Size category, if oversized, state reason: _____

List equipment efficiencies: _____

ELECTRICAL DESIGN
ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)
lamp type required in fixture: _____
number of lamps per fixture: _____
ballast type used: _____
number of ballasts in fixture: _____
total wattage per fixture: _____
total interior wattage specified versus allowed (whole building or space by space): _____
total exterior wattage specified versus allowed

Additional Prescriptive Compliance
 506.2.1 More Efficient Mechanical Equipment
 506.2.2 Reduced Lighting Power Density
 506.2.3 Energy Recovery Ventilation Systems
 506.2.4 Higher Efficiency Service Water Heating
 506.2.5 On-Site Supply of Renewable Energy
 506.2.6 Automatic Daylighting Control Systems

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
EXISTING	EXISTING		

LIFE SAFETY SYSTEM REQUIREMENTS

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

- LIFE SAFETY PLAN REQUIREMENTS
- Life Safety Plan Sheet # _____ G-2
- Fire and/or smoke rated wall locations (Chapter 7)
 - Assumed and real property line locations (if not on the site plan)
 - Exterior wall opening area with respect to distance to assumed property lines (705.8)
 - Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
 - Occupant loads for each area
 - Exit access travel distances (1017)
 - Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)]
 - Dead end lengths (1020.4)
 - Clear exit widths for each exit door
 - Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
 - Actual occupant load for each exit door
 - A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
 - Location of doors with panic hardware (1010.1.10)
 - Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
 - Location of doors with electromagnetic egress locks (1010.1.9.9)
 - Location of doors equipped with hold-open devices
 - Location of emergency escape windows (1030)
 - The square footage of each fire area (202)
 - The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 - 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
		N/A					

ACCESSIBLE PARKING (SECTION 1106)

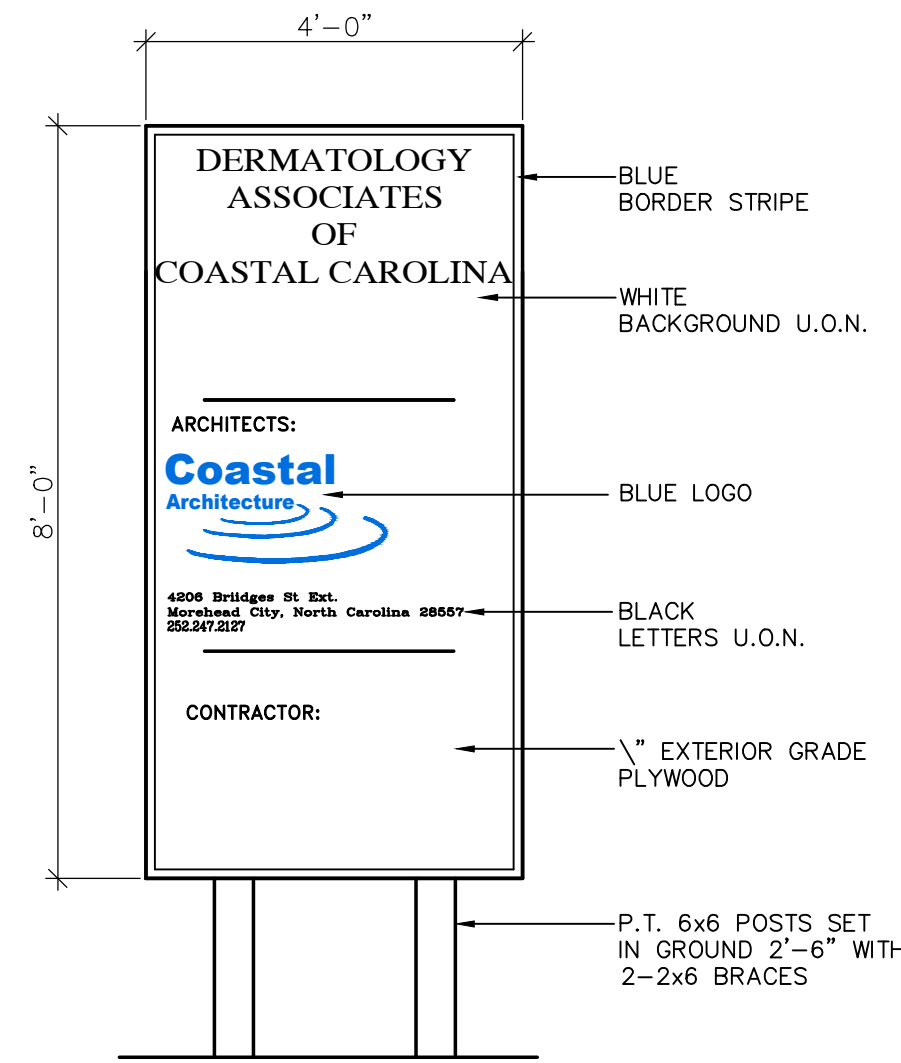
LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE UNITS PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 8' ACCESSIBLE	VAN SPACES WITH 132" ACCESSIBLE	8' ACCESSIBLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	WATERCLOSETS			LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	Male	Female	Unisex	Male	Female	Unisex		Regular	Accessible
REQ'D (BLDG)									
PROVIDED (BLDG)									
REQ'D (POOL)									
PROVIDED (POOL)									

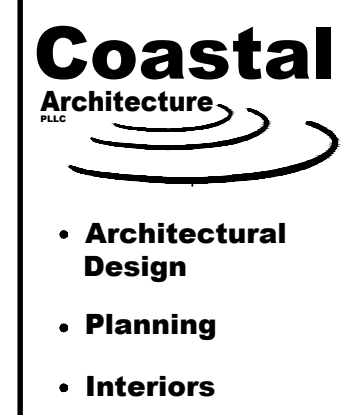
SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)



PROJECT SIGN
NOT TO SCALE

NOTE: SUBMIT SHOP DRAWING FOR COORDINATION OF LETTER HEIGHTS SPECIFIC SIGN COLORS.

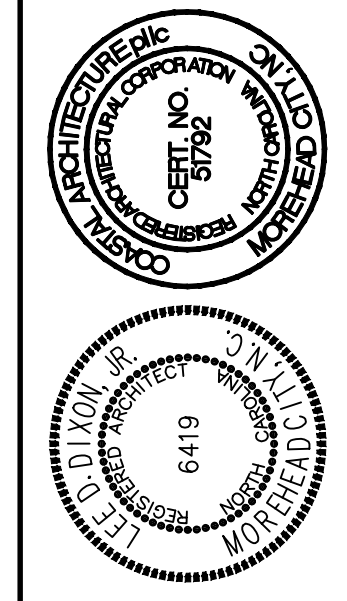


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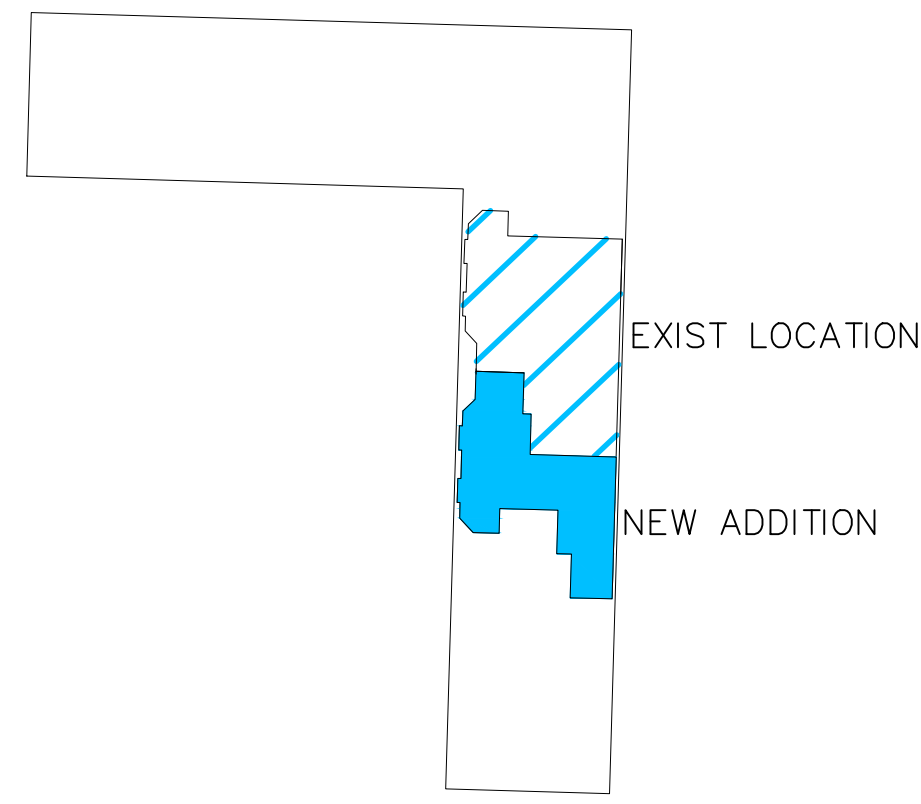
DERMATOLOGY ASSOCIATES
OF COASTAL CAROLINA
MOREHEAD CITY, NORTH CAROLINA



LIFE SAFETY PLAN

ISSUED:	03.21.2025
DWG BY:	CRF
CKD BY:	LDD
REVISIONS	

SHEET NO.
G-1
OF

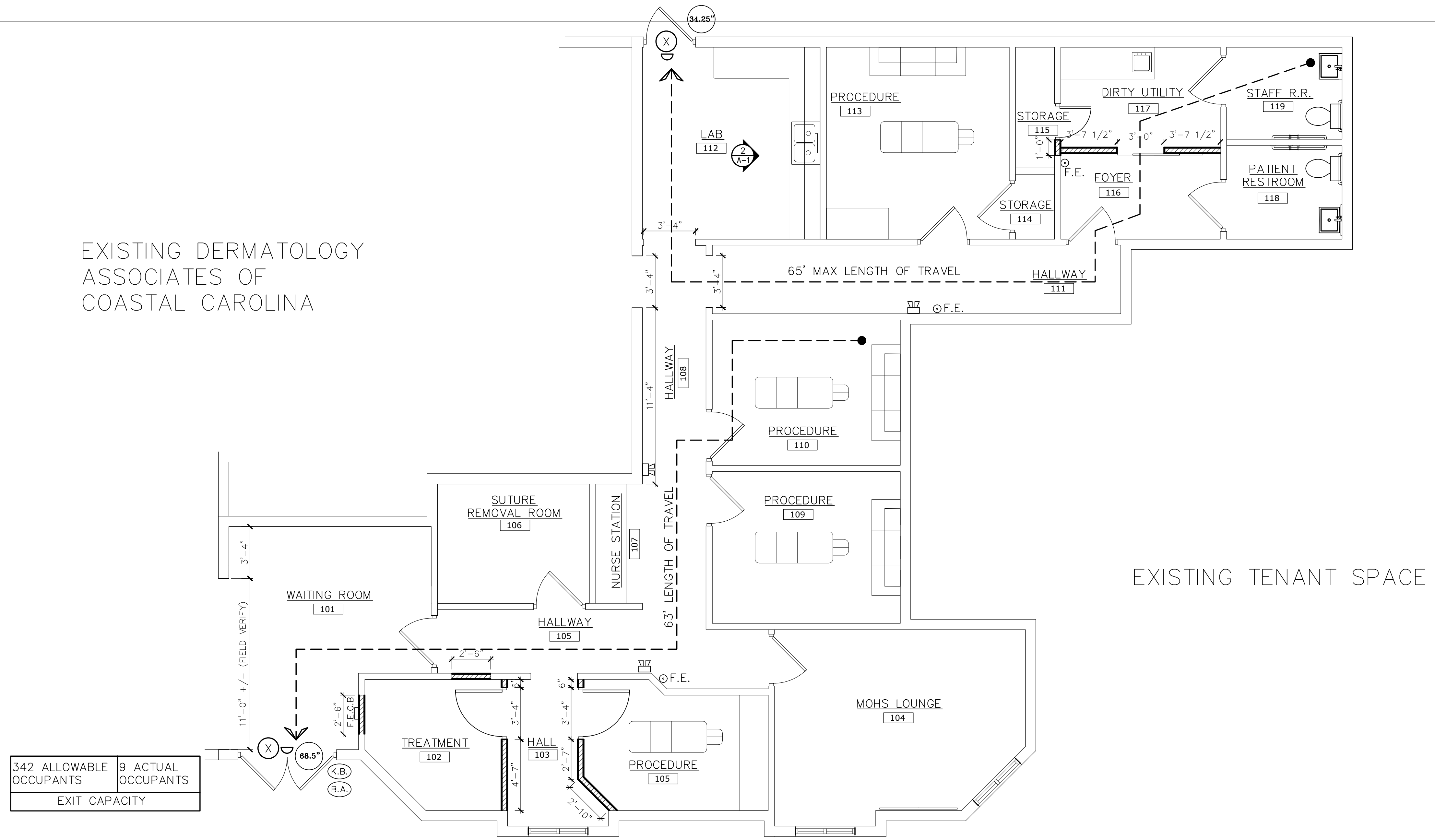


2 EXIST BLDG KEY MAP
6-2 SCALE: 1/4"=1'-0"

171 ALLOWABLE OCCUPANTS	9 ACTUAL OCCUPANTS
EXIT CAPACITY	

EXISTING
NO LIMIT OF OPENING

EXISTING DERMATOLOGY ASSOCIATES OF COASTAL CAROLINA



EXISTING TENANT SPACE

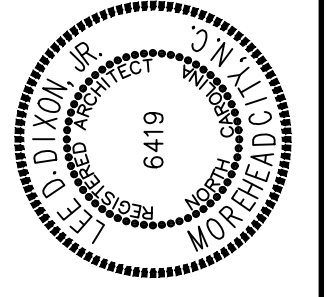
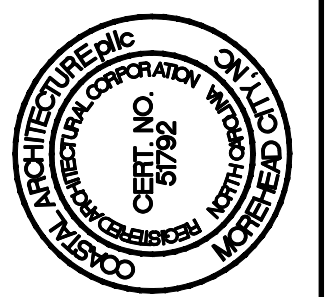
342 ALLOWABLE OCCUPANTS	9 ACTUAL OCCUPANTS
EXIT CAPACITY	

EXISTING
NO LIMIT OF OPENING

LEGEND:

- FE ⊙ = FIRE EXTINGUISHER ON STANDARD HOOK
- F.E.C.B. = FIRE EXTINGUISHER AND CABINET LARSEN SEMI-RECESSED FS 2409-R3 BRUSHED CHROME W/ MP5 FIRE EXTINGUISHER
- 34.25" = CLEAR EXIT WIDTH
- 68.5" = CLEAR EXIT WIDTH
- ⊙ = EXIT
- (B.A.) = BUILDING ADDRESS- 6" MIN. HEIGHT, ON CONTRASTING BACKGROUND, READILY VISIBLE FROM STREET
- (K.B.) = KNOX BOX, FIRE DEPARTMENT KEY LOCK BOX CONFIRM LOCATION W/ FIRE DEPARTMENT
- ⏏ = EMERGENCY LIGHT
- ↪ = EGRESS LIGHT

1 LIFE SAFETY PLAN
6-2 SCALE: 1/4"=1'-0"



LIFE SAFETY PLAN

25001

ISSUED: 03.21.2025

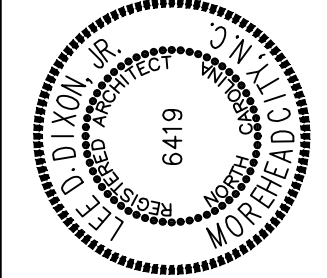
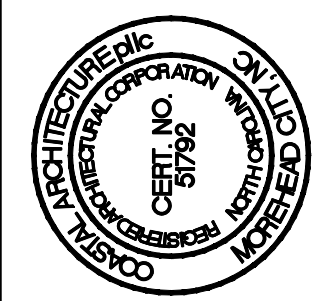
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CKD BY: LDD

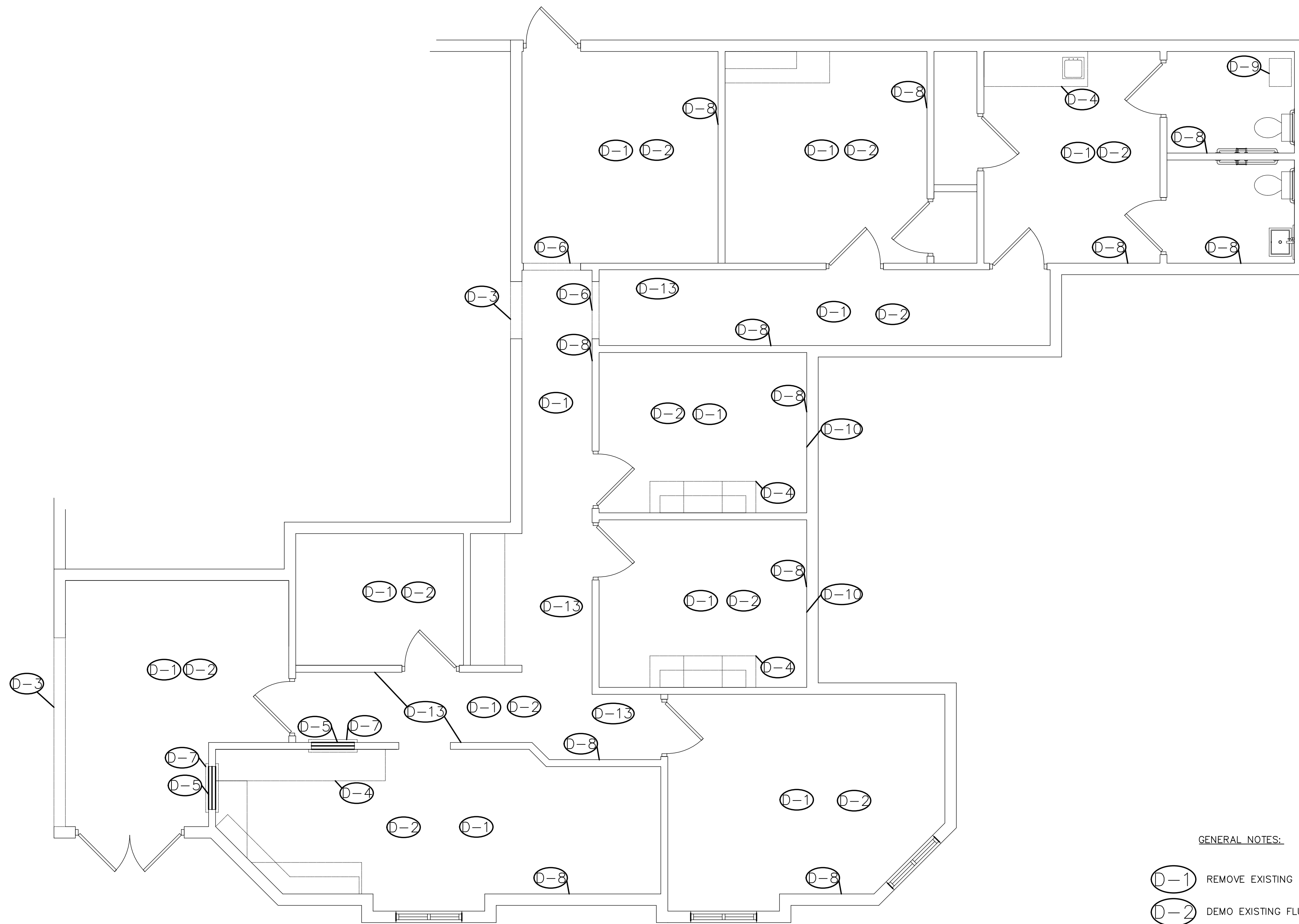
REVISIONS

SHEET NO.

G-2
OF



NO.	DESCRIPTION

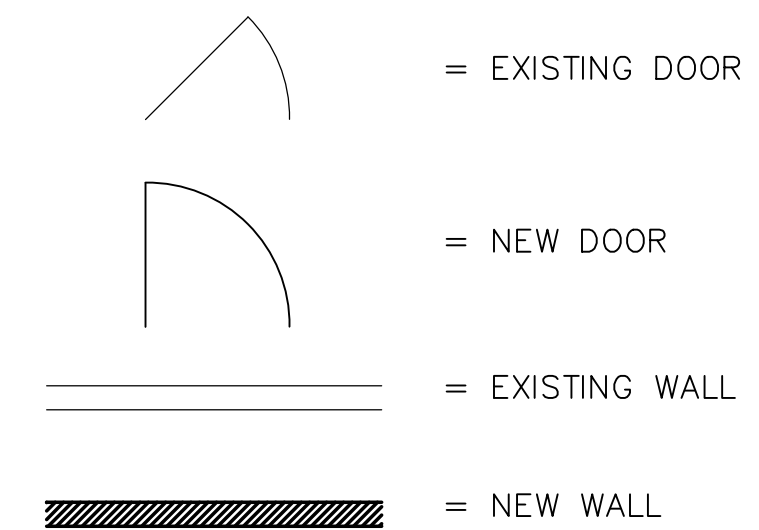


1
D-1 **SELECTIVE DEMO FLOOR PLAN**
SCALE: 1/4"=1'-0"

GENERAL NOTES:

- D-1 REMOVE EXISTING CARPETING. PREP FOR NEW FLOOR FINISH
- D-2 DEMO EXISTING FLUORESCENT LIGHTS
- D-3 REMOVE PORTION OF EXISTING WALL FOR NEW PASSAGEWAY (FIELD VERIFY EXACT SIZE AND LOCATION)
- D-4 DEMO EXIST. CABINETS. SAVE FOR REUSE
- D-5 DEMO EXIST. SERVICE WINDOW. FILL AND PATCH
- D-6 DEMO EXIST DOOR
- D-7 REMOVE EXIST. SERVICE COUNTER
- D-8 REMOVE VINYL BASE AT LOW WALL
- D-9 REMOVE SINK
- D-10 DEMO EXISTING GWB SINGLE SIDE ON EXIST WALL
- D-11 REMOVE ALL EXISTING CHAIR RAILS

LEGEND

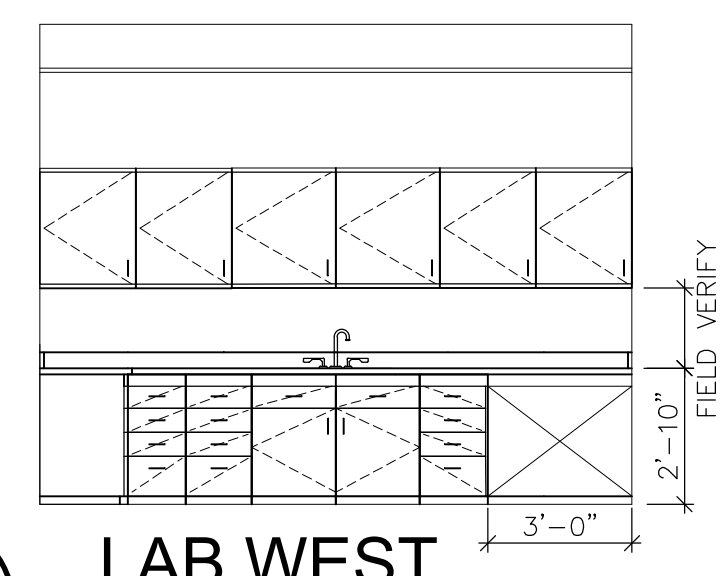


KEY NOTES:

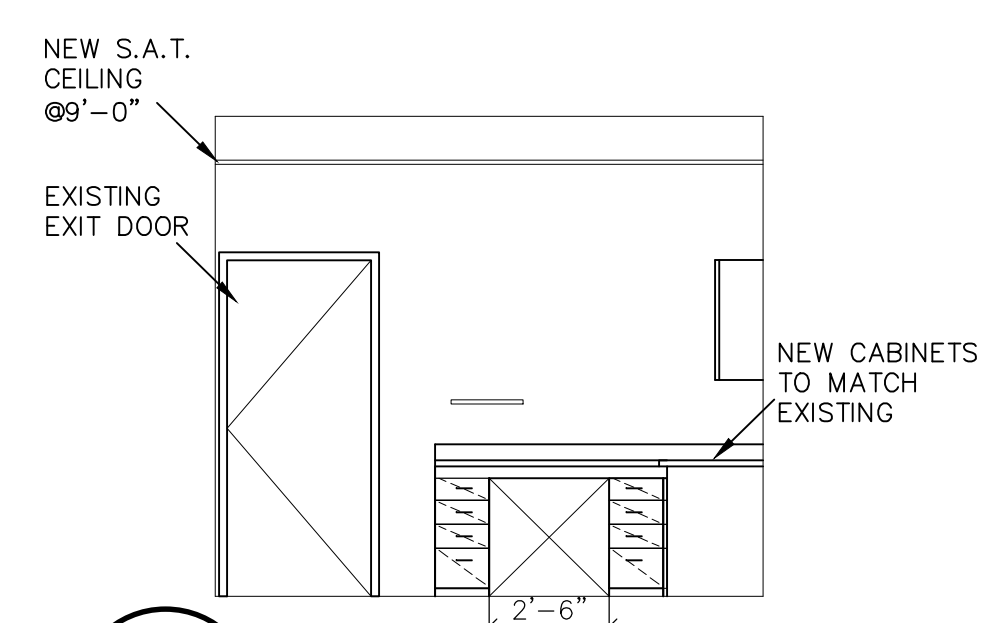
- 1 REPLACE LIGHTS W/ RECESSED LIGHTS- SEE ELECTRICAL
- 2 NEW CARPET
- 3 PATCH AND FILL TO MATCH EXISTING
- 4 NEW LVP FLOOR
- 5 EXISTING TILE TO REMOVE
- 6 RELOCATE EXISTING CABINET (PROVIDE NEW COUNTERTOPS)
- 7 NEW CABINETS (SEE DETAIL X-X.X)
- 8 EXISTING MILLWORK TO REMAIN (PROVIDE NEW COUNTERTOPS)
- 9 NEW HARDWARE ON EXISTING DOOR- EXIT ONLY DOOR
- 10 NEW S.A.T CEILING
- 11 EXISTING CEILING TO BE PAINTED
- 12 NEW LIGHT (PROVIDE BLOCKING)
- 13 NEW LAUNDRY TUB SINK
- 14 NEW BARN DOOR 3'-0" X 7'-0"
- 15 NEW BULKHEAD FOR S.A.T./ GWB TRANSITION AT CEILING
- 16 NEW DOOR 3' X 7' SOLID CORE WOOD DOOR. CONTRACTOR TO MATCH EXISTING DOORS. 2" ALUMINUM FRAME. FRAME PAINTED TO MATCH EXISTING DOOR FRAMES.
- 17 ADD ADDITIONAL SOUND PROOFING INSULATION IN WALL, INSTALL SOUND BREAK SHEET ROCK. MATCH EXISTING FINISH AND PAINT.
- 18 FROST EXISTING WINDOWS
- 19 NEW COUNTER DESK

LEGEND

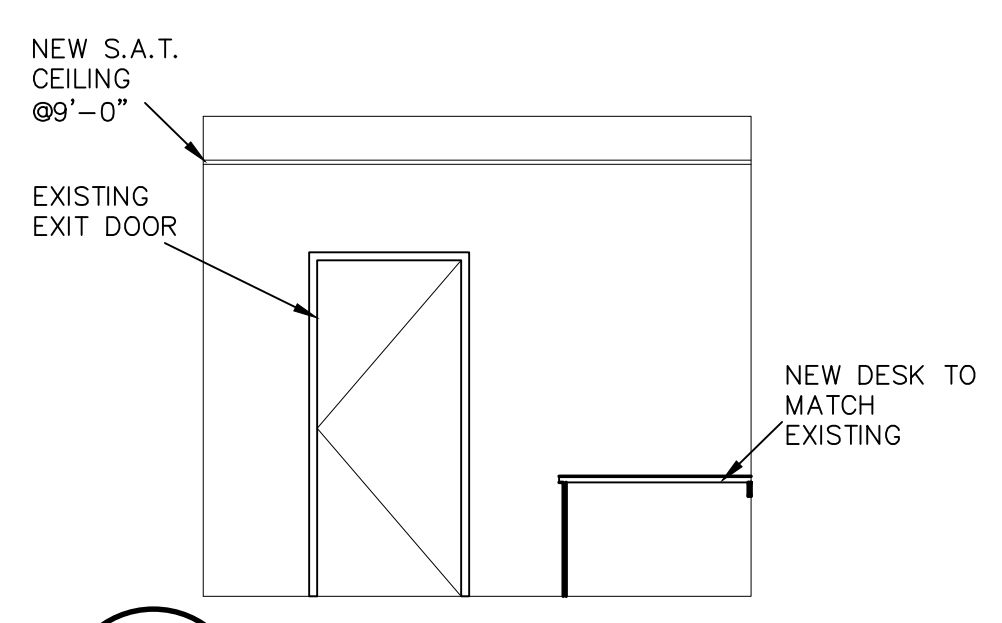
- F.E.C.B FIRE EXTINGUISHER AND CABINET
- F.E. FIRE EXTINGUISHER W/ STANDARD HOOK
- = NEW BARN DOOR
- = EXISTING DOOR
- = NEW DOOR
- EXISTING WALL
- 3" INTERIOR STUD WALLS (5" AT PLUMBING WALLS)
- NEW 1 HOUR RATED WALL TO DECK ABOVE UL U419 OR EQUAL



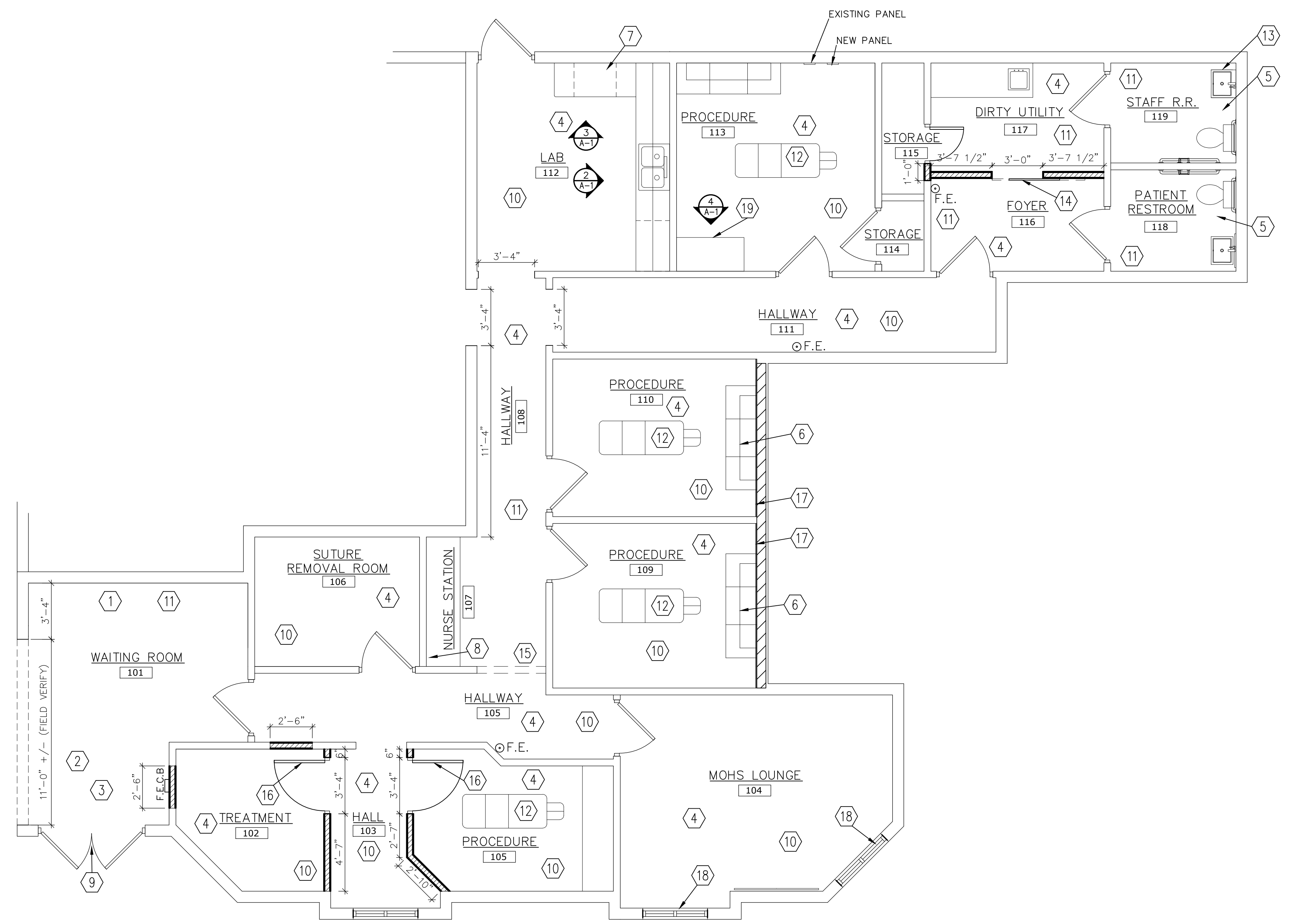
2 LAB WEST
SCALE: 1/4"=1'-0"
A-1



3 LAB NORTH
SCALE: 1/4"=1'-0"
A-1



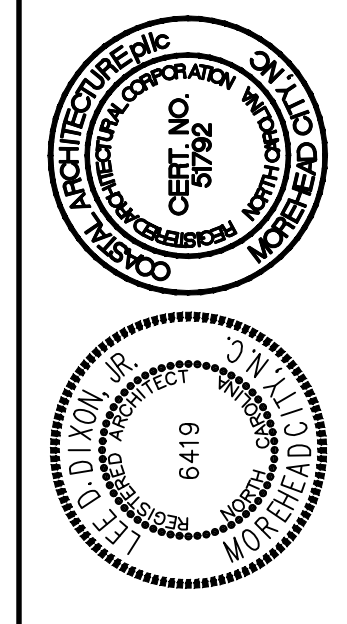
4 PROCEDURE SOUTH
SCALE: 1/4"=1'-0"
A-1



1 FLOOR PLAN
SCALE: 1/4"=1'-0"
A-1

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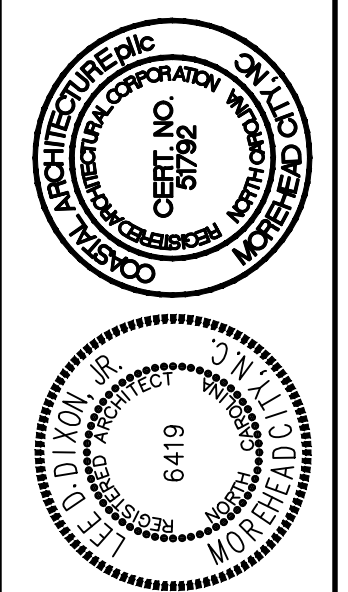
FLOOR PLAN

25001

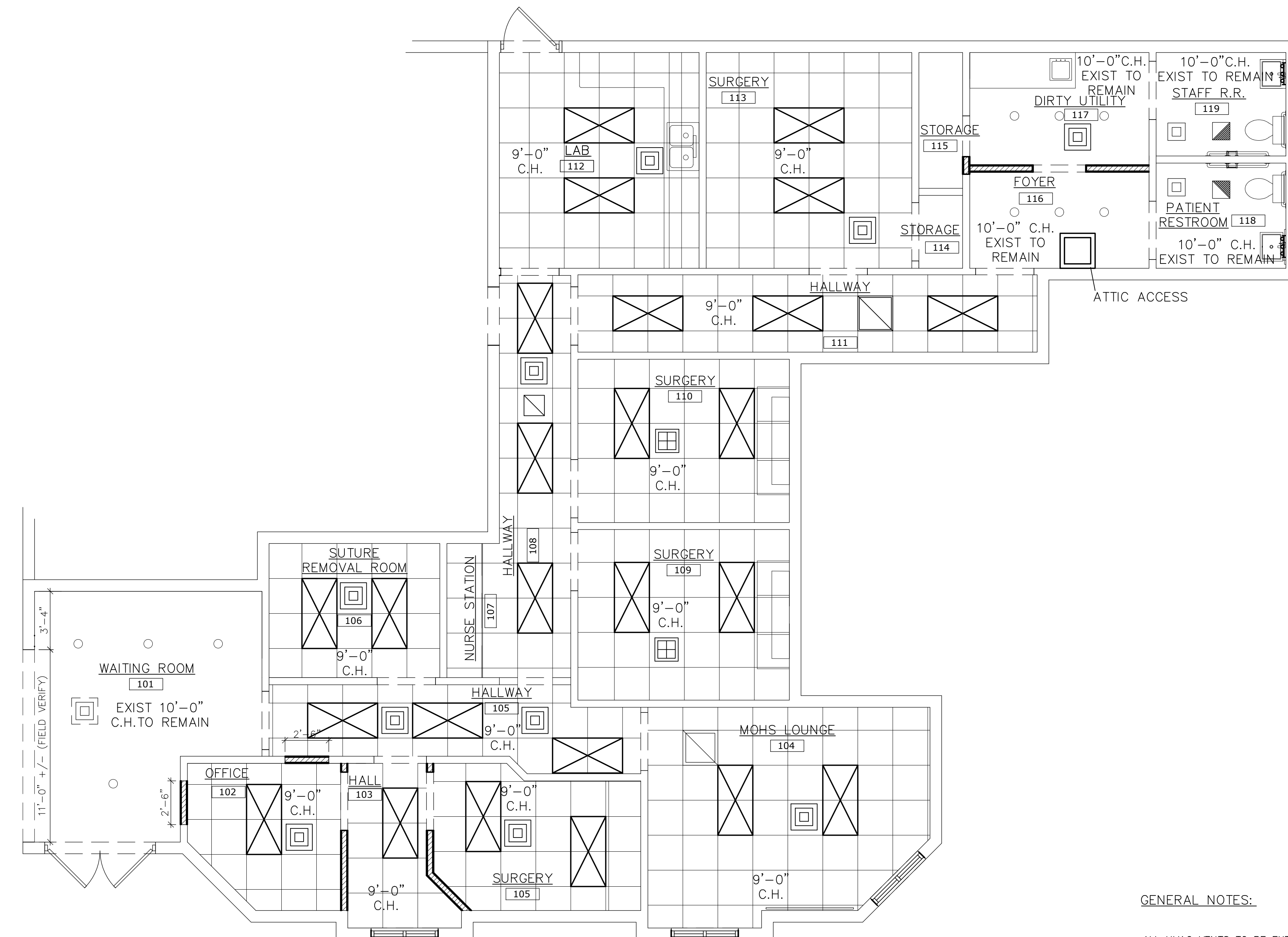
ISSUED: 03.21.2025
 DWG BY: CRF
 CKD BY: LDD

REVISIONS

SHEET NO.
A-1
 OF



NO.	DESCRIPTION



LEGEND:

- CAN LIGHTING
- NEW LED 2X4
- NEW LED 2X2
- WALL LIGHT
- AIR DIFFUSER
- AIR RETURN
- AIR DIFFUSER
- CEILING ACCESS HATCH
- EXHAUST FAN
- NEW 2X2 SUSPENDED ACOUSTICAL TILE CEILING

GENERAL NOTES:

- ALL HVAC VENTS TO BE EXTENDED DOWN TO NEW ADJACENT S.A.T. GRID.
- EXISTING EXPOSED CEILING WHERE SURFACE MOUNTED LIGHTS WERE RELOCATED TO BE PATCHED AND REFINISHED.
- ADDITIONAL SOUND PROOFING TO BE ADDED ON ROOM 109/ ROOM 110

1
A-2 NEW RCP PLAN
SCALE: 1/4"=1'-0"

DIVISION 15A – PLUMBING

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
 1. Plumbing fixtures, water heaters, and any other equipment necessary.
 2. Cold and hot water piping and insulation.
 3. DWV piping.
 4. Connection of all equipment; drain, vent, water.
 - B. All work under this contract shall be installed in compliance with the latest edition of the following codes and standards insofar as they apply.
 1. The National Electrical Code.
 2. 2018 N.C. Building Code: Plumbing, and all applicable category codes.
 3. American Society of Sanitary Engineering Standard 1010.
 4. All local codes and ordinances.
 - C. These codes are minimum standards. If codes require a more stringent method of construction than the specifications require, the codes shall govern.
 - D. The Plumbing Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.
 - E. Obtain all permits, licenses, inspections, etc., required for the work, and pay for the same.
- 1.2 INTENT**
- A. The intent of these specifications and accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Plumbing Contractor shall take this into consideration and include in his base bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner. The PC shall determine and coordinate with existing conditions.
- 1.3 COORDINATION**
- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.
 - B. Locations shown are approximate. The Plumbing Contractor shall refer to the architectural drawings for placement of equipment, fixtures, etc. Where locations are not clear, the Contractor shall obtain the exact locations from the Architect.
 - C. Coordinate all exterior piping connections w/Architect, site contractor/plans. Verify manhole elevations and provide backwater valves as required if flood level rims are below next upstream manhole cover elevation. Fixtures with flood level rims above upstream manhole shall not discharge thru bw valve. Notify engineer of backwater valve requirement, any issue prior to bid.
- 1.4 SHOP DRAWINGS**
- A. Shop drawings shall be submitted for plumbing fixtures and for pipe. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 – PRODUCTS

2.1 FIXTURES

- A. Each fixture shall be properly supported from the building structure as required to the end effect that all fixtures and accessories will be held rigidly in place. Water pipes supplying the fixtures must also be held rigidly in place.
- B. Provide loose key angle stops and chrome plated supply pipe water supplies to fixtures.
- C. All exposed piping traps and accessories for fixtures shall be chrome plated. Provide chrome plated escutcheon plates where pipes enter walls.
- D. Provide shutoff valves for all sinks, water heaters, toilets, washing machines, refrigerator icemaker, exterior hose bibbs and all other plumbing fixtures.
- E. Provide trap primers for all floor drains in areas not served by hose bibbs.

2.2 PIPING

- A. Drain-Waste-Vent: All DWV piping shall be Schedule 40 PVC-DWV u.o.n., with the following exceptions: Use cast iron piping in all return air plenums, penetrations of rated walls/floors/ceilings, and in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings. ABS or cast iron piping shall be used for drainage/discharge with a temperature greater than 140 deg. F for a minimum distance of 10'-0".
 - B. Hot and cold water piping above grade: Type "L" copper w/solder joints (ASTM-B88), hard drawn with wrought copper fittings (ANSI B16.22). PEX piping with copper fittings may be used with owner/tenant approval and as allowed per code. Copper piping shall be used in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings.
 - C. Cold water piping below grade: Type "K" copper (ASTM-B8A) soft drawn.
 - D. Hangers: Use pipe hangers where required on 8-foot centers with saddles to avoid crushing insulation.
 - E. Solder: 95/5. Lead free.
 - F. Unions: Provide unions where indicated on drawings, in long runs of piping (except drainage) and at equipment to provide convenient disassembly. Provide dielectric unions when connecting copper tubing to equipment and piping made of ferrous materials.
- 2.3 CLEANOUTS**
- A. Hex plugs in rough areas: Recessed plugs with cover plates in exposed locations.
- 2.4 SHOCK ARRESTERS**
- A. Provide shock arresters as required by codes, manufacturer's recommendations and accepted industry standards for quality construction. Provide for all quick closing valves.

PART 3 – EXECUTION

3.1 CONNECTIONS

- A. This contract includes complete connection of cold water, hot water, drainage, and vent piping as required. All fittings, valves, accessories, cutoffs, drains, etc., required to complete such connections shall be included.
 - B. The connection to water closets shall be made watertight with gasket and wax ring. Floor flanges shall be caulked into position. Plastic caps shall be provided on the tie down bolts, and shall be secured in place by screwing down on threaded brass washers.
 - C. Where water pipes connect to exposed chrome plated trim, use proper chrome plated escutcheons.
- 3.2 SERVICE ACCESS**
- A. All valves and accessories shall be insulated so that they can be properly serviced. In no case shall the Plumbing Contractor install equipment or other components in situations that do not meet code requirements or manufacturer's requirements. Provide access doors as required to access valves, etc.
- 3.3 ROUTING OF PIPING**
- A. Coordinate routing of piping with others, line up work true to or at right angle to adjacent surfaces and in a workmanlike manner. Support all interior piping from building structure by means of hanger or inserts to maintain pitch of lines, to prevent vibration, and to secure piping place.

- B. Space pipe hangers per NCSBC- Plumbing Sect. 308.5.
- C. Pipe hangers for insulated lines shall have suitable saddles to protect insulation.

3.4 INSULATION

- A. All H/W and C/W piping shall be insulated with a min. of 1" inch elastomeric insulation (R=6.5 min.) in unconditioned areas. See NCSBC-Plumbing Sect. 305 for all protection requirements. All H/W piping of circulating systems shall be insulated with 1" insulation per Sect. C404.4 of the NCSBC 2018 Energy Conservation Code.
- B. Provide pre-fabricated insulation kits for all sink and lavatory exposed drain and supply piping.

3.5 INSPECTIONS AND TESTS

- A. Before being concealed, all water, soil and vent piping shall be tested to determine if they are water- and air-tight.
- B. Prior to placing into service, entire system shall be tested for leaks in strict accordance with state and local codes.

3.6 STERILIZATION OF PIPING

- A. Sterilize the new water piping thoroughly with a solution containing not less than 50 parts per million of available chlorine, using liquid chlorine, or sodium hydrochloride solution, introduced into the system in an approved manner. The sterilizing solution shall remain in the system for a period of 24 hours. After sterilization, flush the solution from the system with clean water until the residual chlorine content is not greater than 0.2 parts per million, unless otherwise directed.

3.7 SERVICE PRESSURE

- A. Provide approved water-pressure reducing valve (PRV) if service pressure exceeds 80 psi to reduce pressure to 80 psi static or less and as required per NCSBC-Plumbing Sect. 604.8.

3.8 DRAINDOWN

- A. Contractor to provide for complete plumbing system drain down.

3.9 CLEAN UP

- A. During construction, keep the site clear of debris and upon completion, and before final inspection, clean up the premises to remove all evidence of his work. In addition, upon completion of construction, clean, wash, and/or polish all fixtures, equipment and exposed material and leave them bright and clean.

3.10 GUARANTEES

- A. Guarantee all materials and labor included in the plumbing work for a period of one year from date of final acceptance by the Owner.
- B. Any defects in the system which become evident during the guarantee period shall be corrected without cost to the Owner. This shall include the replacing of defective materials where required, and the repair of damage caused by leaking pipes, etc., and damage to building surfaces caused in making repairs.

GENERAL NOTES – PLUMBING

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE, ALL LOCAL AND OTHER APPLICABLE CODES.
2. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE PLUMBING CONTRACTOR (PC) SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC).
3. THE PLUMBING PLANS AND SPECIFICATIONS SHALL BE THOROUGHLY REVIEWED PRIOR TO PURCHASING MATERIALS AND INSTALLATION AND ALL DISCREPANCIES OR INTERFERENCES BROUGHT TO THE ENGINEERS ATTENTION.
4. THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. THE PC SHALL PROVIDE ALL MISC. ITEMS NEEDED FOR A COMPLETE SYSTEM REGARDLESS IF NOTED ON THE DRAWINGS OR NOT. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOORPLAN LAYOUTS. DO NOT USE ENGINEERING DRAWINGS FOR ROUGH-INS.
5. THE GC SHALL PROVIDE ALL WALL, FLOOR AND ROOF OPENINGS OF THE SIZE AND LOCATION REQUIRED BY THE PC AND SHALL BE RESPONSIBLE FOR PAINTING AND FLOOR FINISHES. THE PC SHALL PROPERLY SEAL ALL PENETRATIONS AND PROVIDE ESCUTCHEON PLATES AT ALL FINISHED LOCATIONS.
6. ALL NEW WATER PIPING SHALL BE INSTALLED TIGHT TO STRUCTURE, ADEQUATELY SUPPORTED AND PROTECTED AND PROPERLY PITCHED TO ALLOW TOTAL DRAINAGE.
7. ALL WATER PIPING SHALL BE HYDROSTATICALLY TESTED FOR A MINIMUM OF 15 MINUTES AT A MINIMUM OF 100 PSIG BEFORE COVERING AND ALL LEAKS CORRECTED. THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PRIOR TO PLACING IN SERVICE.
8. PROVIDE MIN. 18" SHOCK ABSORBERS WITH STOPS ON ALL HOT AND COLD WATER FIXTURE RUNS AS REQUIRED BY CODE.
9. VENT LINES SHALL SLOPE UP TO ALL STACKS AND TERMINATE A MIN. OF 12" ABOVE ROOF LINE.
10. PROVIDE CUT SHEETS ON ALL PLUMBING FIXTURES FOR ARCHITECT AND OWNER APPROVAL PRIOR TO ORDERING ANY FIXTURES.
11. PROVIDE/VERIFY HIGH TEMPERATURE HOT WATER (HTHW) AT 110 DEGREES F (MAX) U.O.N. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE (TMV- WATTS LFUSG-B 'LEAD FREE' GUARDIAN OR EQUAL) IF REQUIRED FOR LAVATORIES, AS REQUIRED FOR LAB SINK S1. PROVIDE/VERIFY TEPID HOT WATER AT 100 DEGREES F (MAX.) TO S1 (LAB SINK). SEE FIXTURE SCHEDULE- EYEWASH INCLUDED IN UNIT SPECIFICATION. LOCATE TMV FOR S1 IN A MAINTENANCE ACCESSIBLE AREA BELOW FIXTURE, ABOVE CEILING, OR AS REQUIRED.
12. PROVIDE CLEANOUTS AS REQUIRED BY CODE. NOT MORE THAN 100 FEET FOR 4" DRAIN.

SYMBOL LEGEND – PLUMBING

SYMBOL	DESCRIPTION (U.O.N.)
	WASTE PIPING (W)
	VENT PIPING (V)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	SHUT-OFF VALVE
	DIELECTRIC UNION
	CLEANOUT FINISH FLOOR
	WALL/HORIZONTAL CLEANOUT
	CLEANOUT FINISH GRADE
	VENT THRU ROOF (VTR)
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED

FIXTURE SCHEDULE – PLUMBING *

- S1* LAB SINK (W/EYE WASH FAUCET ATTACHMENT)
ELKAY DLR332 SINGLE BASIN STNLS STL SINK 18 GA., SELF-RIMMING, W/FAUCET LK406GN04T4 WITH TWO BLADE HANDLES, AND CENTER DRAIN. PROVIDE CHROME PLATED BRASS P-TRAP AND SHUT-OFF VALVES. COORDINATE EXACT UNIT WITH OWNER AND GENERAL CONTRACTOR. COORDINATE SIZE WITH CABINETS PRIOR TO ORDERING. PROVIDE HANS 7620 FAUCET MOUNTED EYE WASH W/INTREGATED SHUT-OFF IF WATER IS OVER 100 DEG. (F). PROVIDE TMV (WATTS LFUSG-B OR EQUAL) FOR CW AND 100 DEG. (F) HW TO FAUCET.
- S2* NEW BATHROOM SINK
FLORESTONE MODEL FM-1, FLOOR MOUNTED SINK TO COME WITH 4 HEAVY DUTY MOLDED LEGS, WITH 1 1/2" DRAIN OPENING, 20 GALLON CAPACITY. PROVIDE DECK MOUNT FAUCET (PROVIDE FAUCET HOLE DRILLING)- ELKAY LK2000CR, PROVIDE P-TRAP, SHUT-OFF VALVES.

* OR APPROVED EQUAL. SUBMIT ALL ITEMS FOR APPROVAL BY TENANT AND ARCHITECT PRIOR TO ORDERING.
ALL OTHER PLUMBING FIXTURES SHOWN ARE PROVIDED BY THE TENANT AND INSTALLED BY THE PLUMBING CONTRACTOR. SEE PLANS FOR NUMBER AND LOCATION. COORDINATE ALL REQUIREMENTS WITH EQUIPMENT SERVED.



PLUMBING SPECIFICATIONS

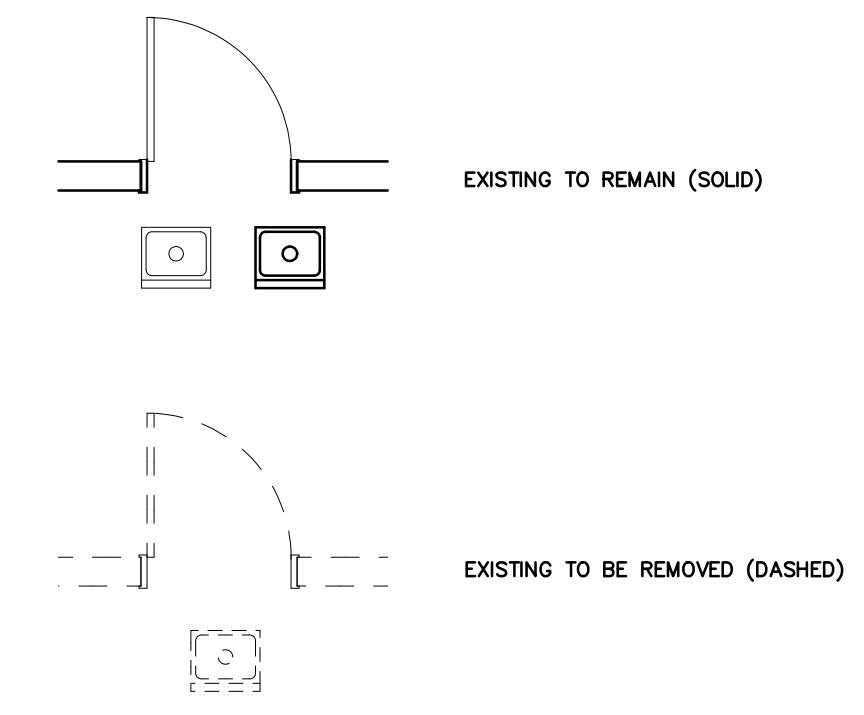
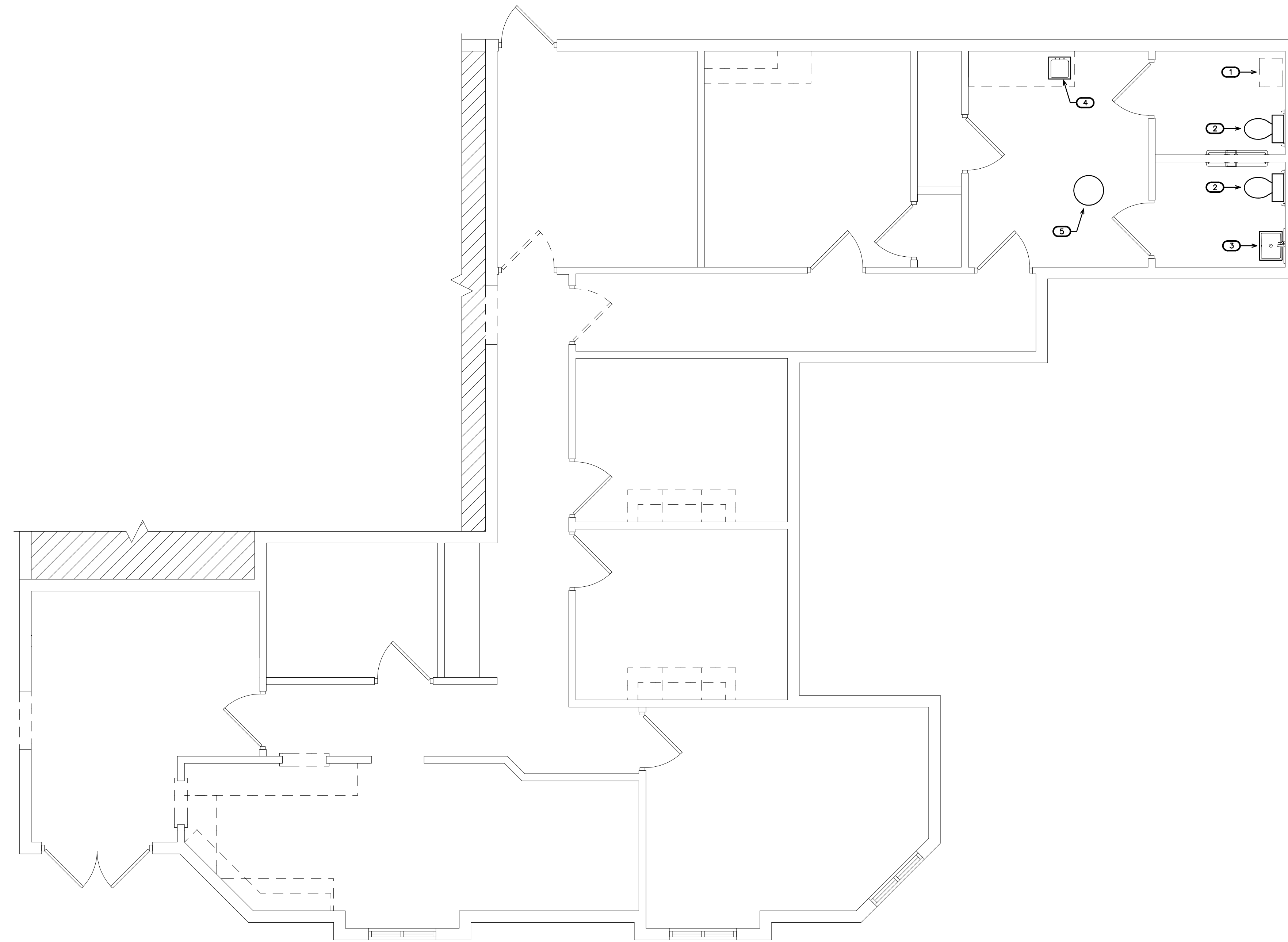
25001

ISSUED: 03/25/2025
DWG BY: MRH
CKD BY: BEB

REVISIONS

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Corp. License # C-2052

SHEET NO.
P1



NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

THE SCOPE OF DEMOLITION IS AS FOLLOWS—
REMOVE EXISTING PLUMBING (FIXTURES/EQUIPMENT, PIPING, ETC.) IN WORK AREA AS SHOWN/NOTED. COORDINATE W/ARCH., TENANT/OWNER, G.C., EXISTING CONDITIONS, NEW PLANS FOR ANY DEMO WORK. REMOVE UNUSED VENT LINES TO ABOVE CEILING AND CAP AT MAIN. REMOVE UNUSED DRAIN STUB-OUTS, REMOVE UNUSED FLOOR SINKS, FLOOR DRAINS, ETC. IF/AS REQUIRED—COORDINATE W/TENANT, AND PROVIDE CLEANOUTS AT FINAL FINISHES TO PREVENT DRAIN DEAD-ENDS AS REQUIRED BY CODE. REMOVE ALL UNUSED CW AND HW LINES/STUB-OUTS, ETC., AND CAP LINES BEHIND FINAL FINISHES.

REMOVE AND REPLACE ALL CONCRETE, ASPHALT, WALL MATERIAL, CEILINGS, ETC., AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES. ALL EXISTING FIXTURES, LINES, ETC., MAY NOT BE SHOWN. COORDINATE WITH G.C., TENANT/BLDG. OWNER, AND ARCHITECT FOR ITEMS TO BE REMOVED. ALL REQUIRED PLUMBING DEMO ITEMS MAY NOT BE INDICATED. VERIFY ITEMS TO BE REMOVED.

IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO LOCATE ANY AND ALL EXISTING BUILDING SYSTEMS IN CONCRETE, FLOORS, WALLS, CEILINGS, ETC., PRIOR TO START OF WORK, THAT MAY BE ENCOUNTERED DURING CONSTRUCTION TO DETERMINE METHODS REQUIRED TO AVOID AND/OR MAINTAIN EXISTING SYSTEMS OPERATION. COORDINATE WITH BLDG. OWNER, ARCH., G.C. THE PLUMBING CONTRACTOR SHALL LOCATE, TRACE, AND INSPECT FOR PROPER DRAINAGE AND CONDITION, ANY/ALL EXISTING BUILDING DRAINAGE LINES AND SYSTEMS (SANITARY, GREASE, ETC.) THAT ARE TO BE UTILIZED BY THE OCCUPANT/NEW CONNECTIONS PER DESIGN DRAWINGS THROUGH USE OF CAMERA, DYES, AND/OR ANY MEANS NECESSARY—PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL REMEDY ANY ISSUES IN ORDER TO ENSURE A PROPER FUNCTIONING, CODE COMPLIANT SYSTEM, WHICH INCLUDES BUT IS NOT LIMITED TO, JETTING OF LINES, REMOVAL OF DEBRIS, REPLACEMENT OF ANY IMPROPER OR DAMAGED PIPING, VERIFY AVAILABLE DEPTH/INVERT REQUIREMENTS, FLOW DIRECTION OF EXISTING LINES. PROVIDE DOCUMENTATION TO THE ENGINEER FOR REVIEW. THE EXISTING AND NEW DRAINAGE SYSTEMS/CONNECTIONS SHALL BE TESTED FOR PROPER OPERATION UPON COMPLETION OF WORK. ALL ISSUES AND SOLUTION OPTIONS ARE TO BE COORDINATED WITH THE DRAINAGE SYSTEM/BUILDING OWNER, G.C., ARCHITECT, AND ENGINEER. PROVIDE AS-BUILT DRAWINGS FOR ENGINEER REVIEW.

COORDINATE WORK WITH BUILDING OWNER SO AS NOT TO IMPACT OPERATION OF ANY ADJACENT SPACES/LEVELS. NIGHT AND WEEKEND WORK MAY BE REQUIRED.

- KEY NOTES FOR SHEET P2
- ① LAVATORY TO BE REMOVED.
 - ② WATER CLOSET TO REMAIN.
 - ③ LAVATORY TO REMAIN.
 - ④ COUNTER SINK TO REMAIN.
 - ⑤ ELECTRIC WATER HEATER (ABOVE CEILING) TO REMAIN.

NOTE:
ALL PLUMBING ITEMS (PIPING, FLOOR DRAINS, EQUIPMENT, WATER HEATERS, ETC.) TO REMAIN OR TO BE REMOVED MAY NOT BE SHOWN. COORDINATE WITH ARCHITECT, OWNER, DEMO/NEW PLANS, FIELD CONDITIONS, ALL TRADES. VERIFY ITEMS/LINES TO BE REMOVED. RE-ROUTE ANY EXISTING WATER SUPPLY AND/OR DWV LINES IF/AS REQUIRED DUE TO DEMO TO PROPERLY MAINTAIN EXISTING SYSTEMS.

1 DEMO PLAN
P2 SCALE: 1/4"=1'-0"

Coastal
Architecture
PLLC

Architectural
Design
Planning
Interiors

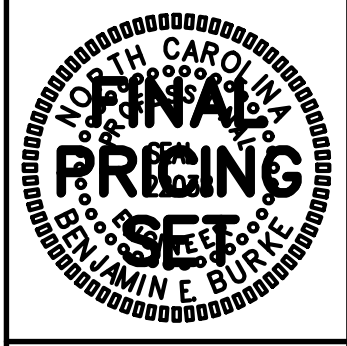
AIA

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**DERMATOLOGY ASSOCIATES
ADDITION
SET
MOREHEAD CITY, NC**



DEMO PLAN

25001

ISSUED: 03/25/2025
DWG BY: MRH
CKD BY: BEB

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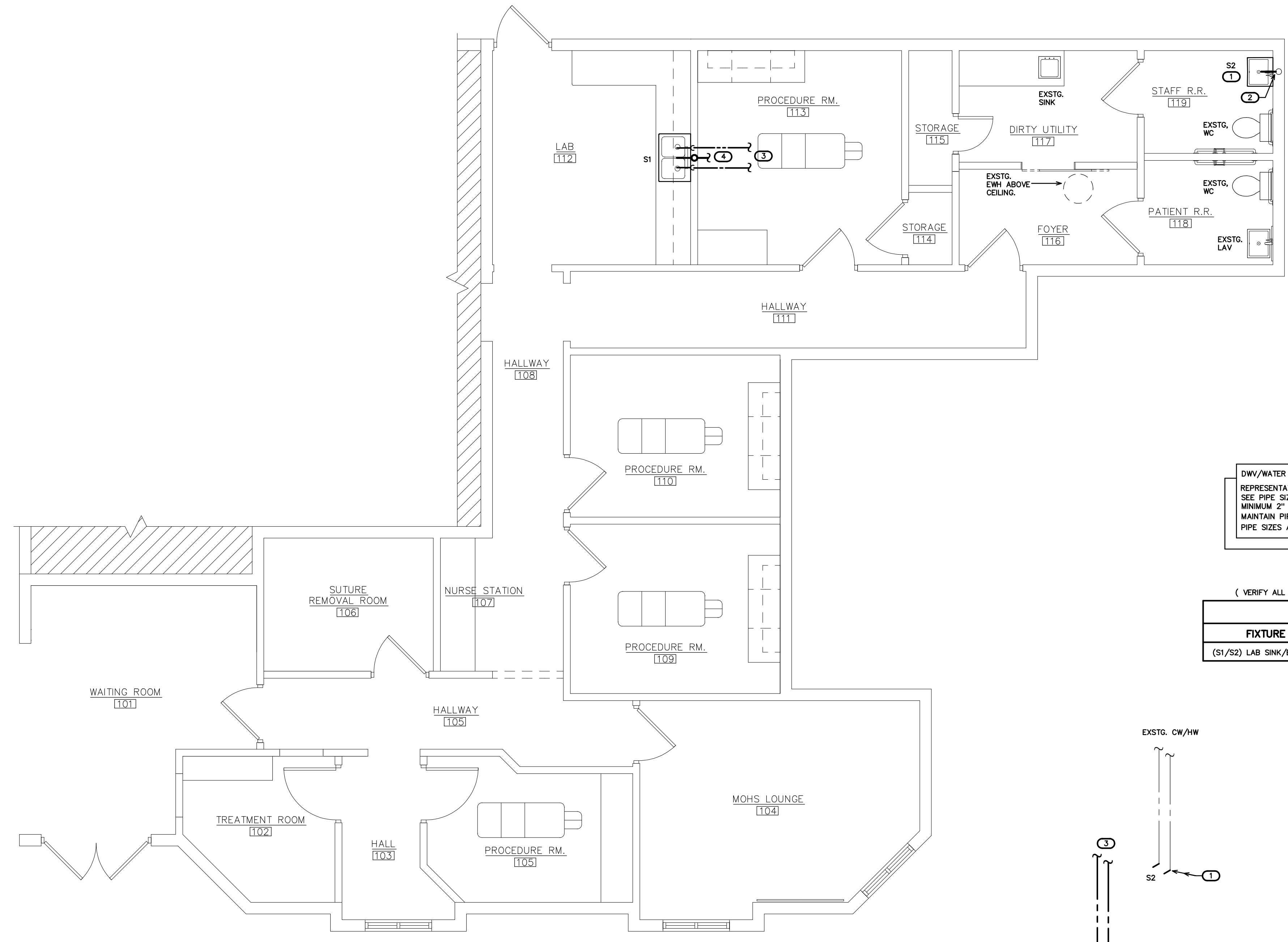
SHEET NO.
P2

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, ASPHALT, WALL MATERIAL, CEILINGS, ETC., AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO LOCATE ANY AND ALL EXISTING BUILDING SYSTEMS IN CONCRETE, FLOORS, WALLS, CEILINGS, ETC. PRIOR TO START OF WORK. THAT MAY BE ENCOUNTERED DURING CONSTRUCTION TO DETERMINE METHODS REQUIRED TO AVOID AND/OR MAINTAIN EXISTING SYSTEMS OPERATION. COORDINATE WITH BLDG. OWNER, ARCH., G.C. THE PLUMBING CONTRACTOR SHALL LOCATE, TRACE, AND INSPECT FOR PROPER DRAINAGE AND CONDITION, ANY/ALL EXISTING BUILDING DRAINAGE LINES AND SYSTEMS (SANITARY, GREASE, ETC.) THAT ARE TO BE UTILIZED BY THE OCCUPANT/NEW CONNECTIONS PER DESIGN DRAWINGS THROUGH USE OF CAMERA, DYES, AND/OR ANY MEANS NECESSARY. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL REMEDY ANY ISSUES IN ORDER TO ENSURE A PROPER FUNCTIONING, CODE COMPLIANT SYSTEM WHICH INCLUDES BUT IS NOT LIMITED TO, SETTING OF LINES, REMOVAL OF DEBRIS, REPLACEMENT OF ANY IMPROPER OR DAMAGED PIPING, VERIFY AVAILABLE DEPTH/INVERT REQUIREMENTS, FLOW DIRECTION OF EXISTING LINES, PROVIDE DOCUMENTATION TO THE ENGINEER FOR REVIEW. THE EXISTING AND NEW DRAINAGE SYSTEMS/CONNECTIONS SHALL BE TESTED FOR PROPER OPERATION UPON COMPLETION OF WORK. ALL ISSUES AND SOLUTION OPTIONS ARE TO BE COORDINATED WITH THE DRAINAGE SYSTEM/BUILDING OWNER, G.C., ARCHITECT, AND ENGINEER. PROVIDE AS-BUILT DRAWINGS FOR ENGINEER REVIEW.

COORDINATE WORK WITH BUILDING OWNER SO AS NOT TO IMPACT OPERATION OF ANY ADJACENT SPACES/LEVELS. NIGHT AND WEEKEND WORK MAY BE REQUIRED.



KEY NOTES FOR SHEET P3

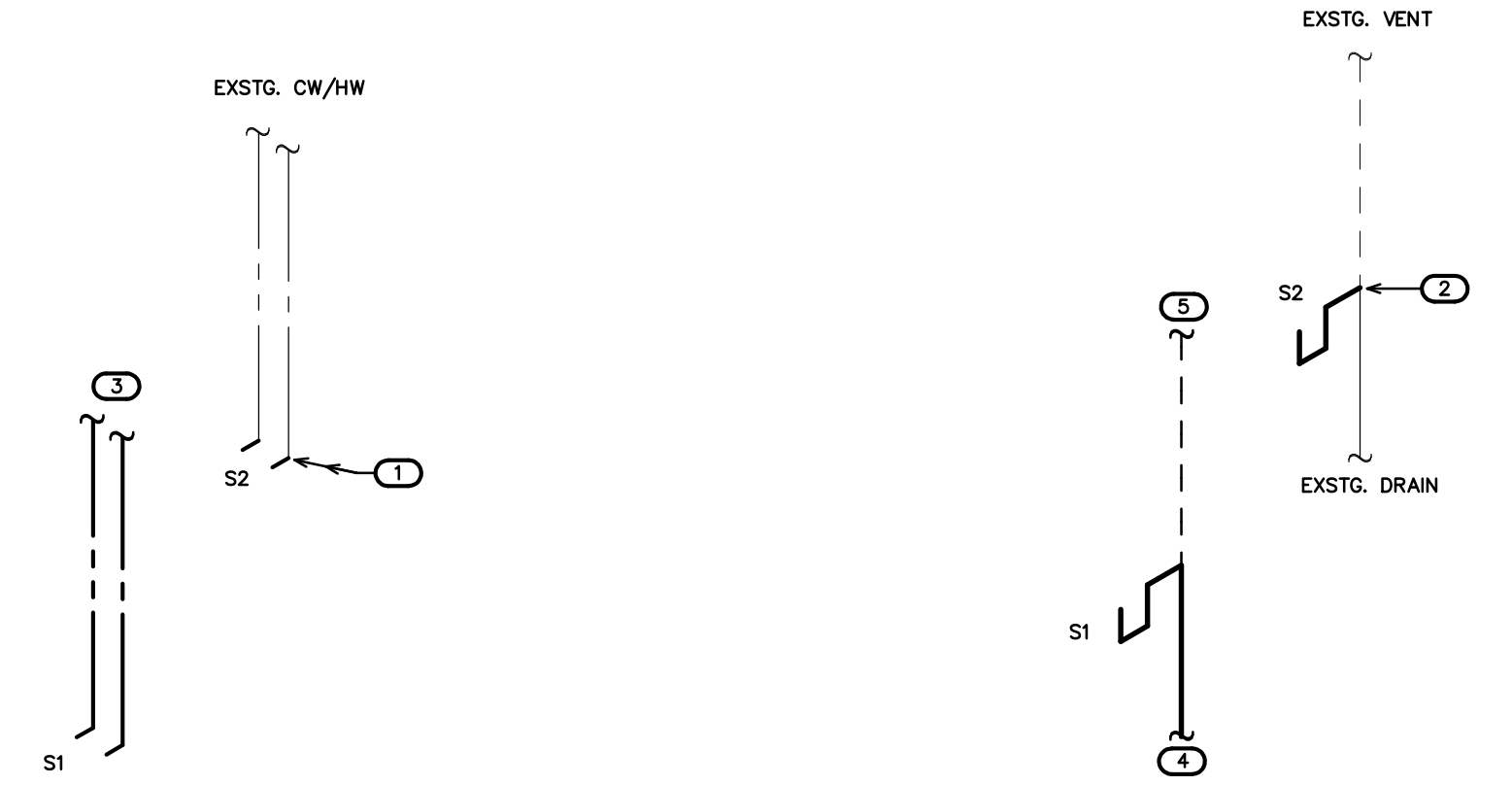
- CONNECT S2 TO EXISTING HW/CW IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING AS REQUIRED. VERIFY EXISTING LINE SIZES REQUIRED PER PIPE SIZING SCHEDULE- THIS SHEET. RE-PIPE FIXTURE SUPPLY TO NEAREST EXISTING HW/CW MAINS IF NECESSARY/AS REQUIRED.
- CONNECT S2 TO EXISTING DWV IN AREA OF REMOVED UNIT. EXTEND/PROVIDE PIPING AS REQUIRED. VERIFY EXISTING LINE SIZES REQUIRED PER PIPE SIZING SCHEDULE- THIS SHEET. RE-PIPE FIXTURE DWV TO NEAREST EXISTING MAINS IF NECESSARY/AS REQUIRED.
- CONNECT TO EXISTING CW/HW MAINS ABOVE CEILING.
- CONNECT TO EXISTING SANITARY WASTE MAIN IN AREA. VERIFY LOCATION.
- CONNECT TO EXISTING 2" (MIN.) VENT MAIN ABOVE CEILING/BELOW ROOF STRUCTURE. VERIFY LOCATION/ROUTING.

NOTE:
EXTEND/SHIFT ANY DWV OR WATER SUPPLY PIPING AS NEEDED DUE TO ANY DEMO OR NEW WORK. COORDINATE WITH ARCH., G.C., OWNER, AND ALL TRADES.

DWV/WATER RISER NOTES:
REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE. SEE PIPE SIZING SCHEDULE. MINIMUM 2" DRAIN LINE SIZE UNDER SLAB. MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED. PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.

(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE				
FIXTURE TYPE	DRAIN	VENT	CW	HW
(S1/S2) LAB SINK/BATHROOM SINK	1-1/2"	1-1/4"	1/2"	1/2"



1 PLUMBING PLAN
P3 SCALE: 1/4"=1'-0"

3 WATER RISER
P3 SCALE: NOT TO SCALE

2 DWV RISER
P3 SCALE: NOT TO SCALE



PLUMBING PLAN
AND RISERS

25001

ISSUED: 03/25/2025
DWG BY: MRH
CKD BY: BEB
REVISIONS

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SHEET NO.
P3

DIVISION 15 B - HEATING, VENTILATING AND AIR CONDITIONING

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
 1. Heating, ventilation, and air conditioning equipment.
 2. Ductwork.
 3. Grilles and diffusers.
 4. Controls and control wiring.
 5. Condensate piping.
- B. All work under this contract shall be installed in compliance with the latest edition of the following codes and standards insofar as they apply:
 1. ASHRAE Guide
 2. National Electric Code.
 3. 2018 NC State Building Code: Mech Code.
 4. The Electrical Specifications for this project.
 5. SMACNA HVAC Duct Construction Standards.
 6. All local codes and ordinances.
 7. ARI rating.
 8. 2018 NC State Building Code: Energy Conservation Code.
- C. These codes are minimum standards. If codes require a more stringent method of construction than the specifications require, the codes shall govern.
- D. The HVAC Contractor shall be licensed in North Carolina and have all local licenses required for the work.

1.2 INTENT

- A. The intent of these specifications and the accompanying drawing is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The HVAC Contractor shall take this into consideration and include in his bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.

1.3 COORDINATION

- A. Coordinate work with other contractors. Notify Owner of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Owner for a decision before resuming operations.
- B. Locations shown are approximate. The HVAC Contractor shall verify with owner, the placement of equipment, fixtures, outlets, etc. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required.
- C. Changes in duct or piping design caused by obstructions shall be submitted to Engineer in sketch form for study and comment prior to execution. Additional cost will not be allowed for this type of work.

1.4 SHOP DRAWINGS

- A. Shop drawings shall be submitted for all major items of equipment. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified. Shop drawings shall include but are not limited to the following:
 1. All equipment and accessories.
 2. Grilles and diffusers.
 3. Unit sizes and requirements.

PART 2 - PRODUCTS

2.1 EQUIPMENT

- A. All air handling devices must have the manufacturer's recommended filter rack, for 1" thick filters.

2.2 PIPING

- A. Condensate drain piping shall be PVC pipe. Provide tee and plug at changes in direction. Route pipe to proper termination point. All condensate piping shall be insulated with flexible elastomeric insulation. Provide copper piping in plenum areas.

2.3 DUCTWORK

- A. Ductwork shall be built in accordance with SMACNA HVAC Duct construction standards. Furnish and install all supply, return, and ventilation ductwork shown, together with splitters, defectors, dampers, etc. This work shall be constructed of new galvanized prime grade steel sheets. The gauges of metal to be used and the construction and bracing of joints shall be in accordance with the SMACNA recommendations.
- B. Seal all sheet metal joints with fiber impregnated mastic.
- C. Support from building structure on strap hangers not over 8 feet apart.
- D. Use manufactured turning vanes in each elbow where required or where indicated on drawings.
- E. Flexible connectors shall be 3 inches wide, of fireproof material and used to isolate noise between equipment and ductwork on supply and return side of all units.
- F. Round runouts, where used, shall be built in accordance with the above standards, and each runout shall also have manufactured side take off, adjustable quadrant damper at all accessible locations and shall be of Owens Corning INL-25 flexible duct with UL label. Flex duct lengths allowed up to 14 feet. Duct must be supported with sufficient hangers in order to prevent sags. Serpentine routing will not be permitted. Quadrant damper to be 22 gauge easily adjustable manually with exterior handle (similar to H&C Kwik-seal) and is not to be mounted in side take-off.

FLEXIBLE DUCTWORK NOTES

- 1) INSTALL FLEXIBLE DUCTWORK RUNS AS STRAIGHT AS POSSIBLE.
- 2) DO NOT ALLOW FLEXIBLE DUCT TO SAG BETWEEN SUPPORTS.
- 3) DO NOT STRETCH A SHORT SECTION TO FIT A SLIGHTLY LONGER SECTION. THIS DISTORTS THE DUCT SHAPE AND IMPEDES AIR FLOW.
- 4) DO NOT CRUSH DUCTWORK TO FIT IN A SPACE SMALLER THAN ITS ORIGINAL OUTSIDE DIAMETER. MAXIMUM ALLOWABLE DEFORMATION IS 15% OF ORIGINAL VOLUME.
- 5) USE RIGID 90 DEGREE ELBOWS AT ANY LOCATION WHERE THE DUCTWORK BECOMES DISTORTED.
- 6) EXTREME CARE SHALL BE TAKEN TO ELIMINATE ANY REDUCTION IN FLOW WITHIN THE FLEXIBLE DUCTS. THE MECH. CONTRACTOR WILL BE REQUIRED TO REPLACE THE FLEXIBLE DUCT WITH RIGID IF PROPER FLOW IS NOT OBTAINED.
- 7) SIZE ALL FLEXIBLE DUCT SO AS NOT TO EXCEED MAXIMUM CFM'S GIVEN IN TABLE.

2.4 DUCT INSULATION (LOW PRESSURE)

- A. All insulation, linings, coverings and adhesives shall have a flame spread classification of 25 or less and a smoke developed rating of not more than 50, exposed exterior piping.
- B. All duct insulation shall comply with Section 604, of the N. C. Building Code: Mechanical Code
- C. All supply and return ductwork shall be completely insulated, either internally or externally.
- D. Rectangular ductwork shall be lined with two-inch thick, 1.5 lb. per cubic foot density, duct liner, Armstrong, CSG Ultraliner, Johns Manville or approved equal.
- E. As an alternative to duct liner, rectangular duct may be wrapped with Class 1 - 2", 3/4 lb. density (R-6.5) thick reinforced foil back fiberglass insulation, Owens-corning Series ED or equal. Tape shall be Kraft reinforced foil tape or equal.
- F. Exhaust air duct does not require insulation, unless otherwise noted on the plans.
- G. Insulation shall be held in place with adhesive and welding pins 16" on center.
- H. Duct dimensions shown on the drawings are Net Inside Dimensions

2.5 THERMOSTATS

- A. Provide programmable electronic thermostats.
- B. Submit proposed thermostats for approval.

2.6 ROOF PENETRATIONS

- A. Provide pre-manufactured roof flashings compatible with equipment served.
- B. Coordinate roof work with roof system used. Provide proper flashing as required.
- C. Provide 1 year warranty on all roof work performed.

2.7 DUCT SMOKE DETECTORS

- A. Duct detectors are not required since units air flows are 2000 cfm or less per NCSCB: Mechanical Code, Section 606.2.

PART 3 - EXECUTION

3.1 PIPING

- A. The HVAC Contractor shall coordinate such routing with others, to line his work true to adjacent spaces and in a workmanlike manner and to use only short radius 90 degree elbows. Where required, piping to be sturdily supported and separated in a manner satisfactory to the Engineer.
- B. The HVAC Contractor shall paint all exterior refrigerant piping, with UV resistant paint as recommended by the closed cell insulation manufacturer.
- C. Insulate all condensate lines for their entire length with 1/2" closed cell insulation. Install insulation per the manufacturers recommendations.

3.2 ELECTRICAL WORK

- A. The electrical contractor shall provide all switches, starters, wire conduit for the air conditioning, heating and ventilation equipment. Control wiring shall be by the heating and air conditioning contractor.
- B. HVAC Contractor is responsible for verifying that power terminals have been properly grounded prior to operating equipment and must find connections to all equipment including control wiring.
- C. All materials and workmanship shall be in accordance with the electrical specifications for the project. All wiring shall be color coded, and as-built wiring diagram prepared showing all connections and colors of wiring and delivered to the Owner.
- D. Furnish certification for acceptance of control wiring from local electrical inspector prior to acceptance.

3.3 CLEAN UP

- A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.
- B. Furnish one box of clean filters, for each size required, at the time of final inspection to the owner.

3.4 OPERATOR'S MANUAL AND DIAGRAM

- A. The HVAC Contractor shall prepare in one copy a manual describing the proper maintenance and operation of the systems. This manual shall not consist of standard factory instructions (although these may be included) but shall be prepared to describe this particular job.
- B. The manual shall be bound, indexed, dated and signed by the HVAC Contractor.
- C. Qualified representative of the HVAC contractor shall meet with the designated representatives of the Owner and the Owner's representative shall be instructed in the proper operation and maintenance of the control system and other systems.

3.5 GUARANTEE

- A. Guarantee all materials and labor included in the HVAC work for a period of one year from date of final acceptance by the owner. In addition, motor compressors shall be a non-prorated five year warranty. Any part or parts of the work or equipment which prove to be defective during the guarantee period shall be replaced at no additional cost to the owner or tenant.
- B. All air flows must be measured and balanced to within 10% of design airflows. All equipment used must have a current certification. Provide two copies of the balance report to the owner at closeout. The HVAC contractor shall return and re-balance to occupant comfort after 90 days from close-out. Provide all balance dampers needed for satisfactory operation regardless if shown on the drawings or not, and adjust thermostat thermostats if required for occupancy comfort.

FLEXIBLE DUCTWORK SIZES

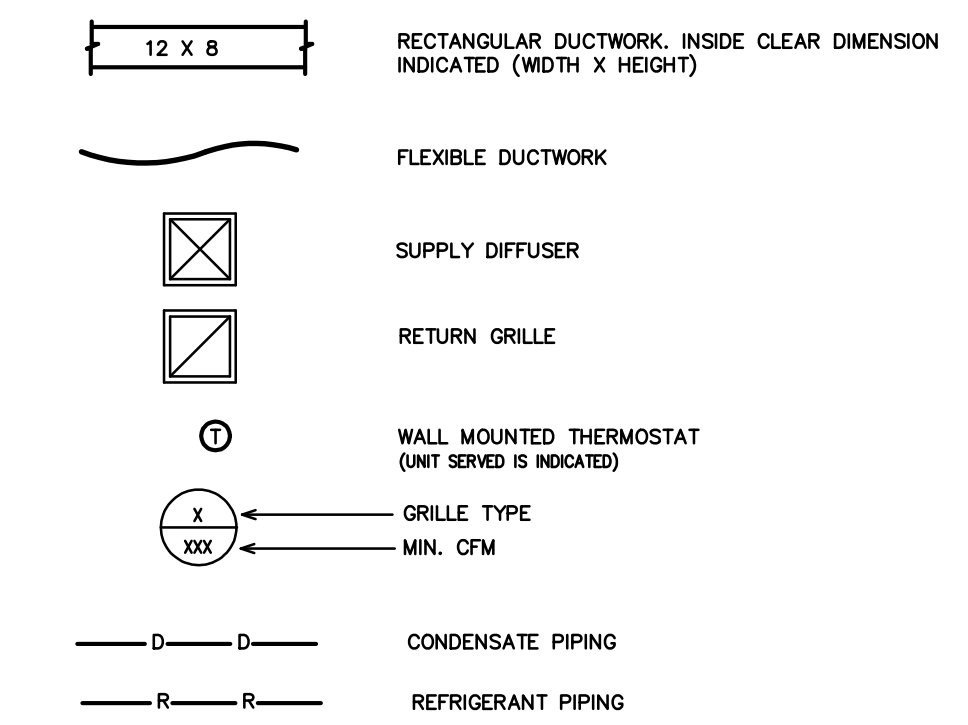
SIZES	SUPPLY	RETURN
6"	100	100
8"	175	175
10"	250	250
12"	400	350
14"	550	500
16"	NA	700

(CHANGE OUT EXISTING FLEX DUCTS AND COLLARS AS REQUIRED TO GET NEW CFM'S SHOWN)

GENERAL NOTES - MECHANICAL

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE AND ALL LOCAL AND OTHER APPLICABLE CODES.
2. ANY PERMITS AND INSPECTION FEES SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR (MC).
3. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE MC SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC) AND OTHER TRADES.
4. THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES.
5. THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. FOR DIMENSIONS REFER TO THE ARCHITECTURAL PLANS.
6. THE MC SHALL BE RESPONSIBLE FOR ALL ELECTRICAL STARTERS INTERLOCKS, CONTROL WIRING CONDUIT AND POWER WIRING FROM DISCONNECTS TO HIS EQUIPMENT, USING A LICENSED ELECTRICIAN.
7. THE MC SHALL USE FIRE DAMPERS FOR PROTECTION OF THE OPENING IN ACCORDANCE WITH STATE AND LOCAL CODES IN ALL LOCATIONS WHERE PENETRATIONS OF RATED WALLS AND FLOORS OCCUR. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS. PROVIDE ACCESS DOORS AT ALL DAMPER LOCATIONS. LOCATE DOORS FOR EASY ACCESS.
8. INSTALL FLEXIBLE CONNECTORS ON SUPPLY AND RETURN DUCTWORK AHU. ALL MECHANICAL EQUIPMENT SHALL OPERATE FREE OF OBJECTIONAL NOISE AND VIBRATION.
9. INSTALL TURNING VANES IN SUPPLY DUCTS AT ALL ELBOWS AND SPLITTER DAMPERS. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE SHOWN OR REQUIRED FOR SYSTEM BALANCING.
10. DUCT DIMENSIONS ARE SHOWN INSIDE CLEAR.
11. THE MC SHALL KEEP THE PREMISES CLEAR OF DEBRIS FROM HIS WORK DURING CONSTRUCTION AND LEAVE THE AREA AND BUILDING CLEAN AT THE COMPLETION OF HIS WORK. HE SHALL ALSO LEAVE CLEAN ALL EXPOSED EQUIPMENT IN HIS CONTRACT.
12. PROVIDE ALL REQUIRED ROOF PENETRATIONS FOR THE INSTALLATION OF THE NEW EQUIPMENT. ALL FLASHINGS ARE BY THE MECHANICAL CONTRACTOR. ALL ROOFING WORK SHALL BE DONE BY A LICENSED ROOFING CONTRACTOR SO AS TO MAINTAIN ORIGINAL WARRANTY.
13. THE M.C. SHALL COORDINATE WITH AND PROVIDE EQUIPMENT SPEC. SHEETS TO THE GENERAL AND ELECTRICAL CONTRACTORS FOR REVIEW PRIOR TO ORDERING EQUIPMENT.
14. PROPERLY SUPPORT ALL DUCT WORK, AND EQUIP FROM STRUCTURE. PROVIDE ALL STRUCTURAL SUPPORTS FOR THE LOADS AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

LEGEND - MECHANICAL



DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE	
DHP-1 OUTDOOR HEAT PUMP UNIT	* MITSUBISHI MODEL #SU2-KA18NA2NA, 1.5 TON OUTDOOR HEAT PUMP UNIT, 20.7 SEER. 240 VOLT, 1 PHASE, CONDENSING UNIT 14A MCA, 24A MOC. FAN COIL UNIT IS POWERED VIA FIELD PROVIDED WIRING FROM OUTDOOR UNIT. SERVES (1) INDOOR FAN-COIL UNIT (DFC-1).
DFC-1 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #SLZ-KF18NA1 CEILING CASSETTE FAN COIL UNIT. NET COOLING CAPACITY = 17,700 BTUH, 300 CFM LO TO 475 CFM HI. 1.5 TON NOMINAL. PROVIDE WIRED PROGRAMMABLE THERMOSTAT, AND CONDENSATE PUMP.
DHP-2 OUTDOOR HEAT PUMP UNIT	* MITSUBISHI MODEL #WX2-4C38NA, 3 TON OUTDOOR HEAT PUMP UNIT, 19.2 SEER. 240 VOLT, 1 PHASE, CONDENSING UNIT 23.1A MCA, 25A MOC. FAN COIL UNIT IS POWERED VIA FIELD PROVIDED WIRING FROM OUTDOOR UNIT. SERVES (4) INDOOR FAN-COIL UNITS (DFC-2.1, DFC-2.2, DFC-2.3, & DFC-2.4).
DFC-2.1 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #SLZ-KF09NA1CEILING CASSETTE FAN COIL UNIT. NET COOLING CAPACITY = 9,000 BTUH, 230 CFM LO TO 300 CFM HI. 0.75 TON NOMINAL. PROVIDE WIRED PROGRAMMABLE THERMOSTAT, AND CONDENSATE PUMP.
DFC-2.2 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #SLZ-KF09NA1CEILING CASSETTE FAN COIL UNIT. NET COOLING CAPACITY = 9,000 BTUH, 230 CFM LO TO 300 CFM HI. 0.75 TON NOMINAL. PROVIDE WIRED PROGRAMMABLE THERMOSTAT, AND CONDENSATE PUMP.
DFC-2.3 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #SLZ-KF09NA1CEILING CASSETTE FAN COIL UNIT. NET COOLING CAPACITY = 9,000 BTUH, 230 CFM LO TO 300 CFM HI. 0.75 TON NOMINAL. PROVIDE WIRED PROGRAMMABLE THERMOSTAT, AND CONDENSATE PUMP.
DFC-2.4 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #SLZ-KF09NA1CEILING CASSETTE FAN COIL UNIT. NET COOLING CAPACITY = 9,000 BTUH, 230 CFM LO TO 300 CFM HI. 0.75 TON NOMINAL. PROVIDE WIRED PROGRAMMABLE THERMOSTAT, AND CONDENSATE PUMP.

* OR APPROVED EQUAL

AIR DISTRIBUTION SCHEDULE							
MARK	* MANUFACTURER	MODEL NO.	NECK SIZE	FACE SIZE	MATERIAL	SERVICE	NOTES
A	CARNES	SPAB224	SEE FLEXIBLE DUCT SCHEDULE	24" X 24"	STEEL	SUPPLY	LAY-IN CEILING, WHITE 4-WAY BLOW
RA	CARNES	SPRB22	SEE FLEXIBLE DUCT SCHEDULE	24" X 24"	STEEL	RETURN	LAY-IN CEILING, WHITE

* OR APPROVED EQUAL

COORDINATE BORDER TYPE WITH THE CEILING TYPE. SEE ARCH SHEETS PROVIDE CUT SHEETS TO OWNER/ARCH. PRIOR TO ORDERING.

DEHUMIDIFICATION CONTROL	
INSTALL DEHUMIDIFICATION CONTROL MODULE FOR EXISTING HEAT PUMP SYSTEMS HP-1/AHU-1 AND HP-2/AHU-2	
FOR EACH SYSTEM PROVIDE "SIMPLE ENGINEERED SOLUTIONS" MODEL #HPDM-XX HEAT PUMP DEHUMIDIFICATION CONTROL MODULE. PROVIDE PROGRAMMABLE ELECTRONIC THERMOSTAT WITH AUTO CHANGEOVER AND HUMIDISTAT FUNCTION. THERMOSTAT SHALL BE COMPATIBLE WITH DEHUMIDIFICATION CONTROL MODULE. PURPOSE OF DEHUMIDIFICATION CONTROL MODULE IS TO INITIATE COOLING MODE WHEN HUMIDISTAT SENSES HUMIDITY OVER SETPOINT AND ENERGIZE AND CONTROL ELECTRIC HEAT TO MAINTAIN SPACE TEMPERATURE. CONTACT SIMPLE ENGINEERED SOLUTIONS FOR INFORMATION ON DEHUMIDIFICATION CONTROL MODULE. (910) 231-9929, email: jnsuggs100@yahoo.com.	

EXHAUST FAN SCHEDULE	
EXHAUST FAN #1 (EF-1)	* CARNES MODEL# VDK-06-J2 IN-LINE DIRECT DRIVE EXHAUST FAN, 300 CFM @ 0.375" SP, 1500 RPM, 1/8 HP, 120V. SINGLE PHASE. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE SWITCH AND WIRE THE UNIT. THE HVAC CONTRACTOR SHALL PROVIDE UNIT, GRAVITY BACKDRAFT DAMPER, AND VIBRATION ISOLATION ON HANGING RODS. LOCATE EXHAUST TERMINATION A MINIMUM OF 10'-0" FROM ANY INTAKES. PROVIDE FACTORY SPEED CONTROLLER FOR BALANCING FAN.

* OR APPROVED EQUAL

NOTE: ALL EXHAUST FANS SHALL HAVE GRAVITY BACKDRAFT DAMPERS PER NCSCB, ENERGY CONSERVATION CODE.





DEMO HVAC PLAN

25001

ISSUED: 03/25/2025

DWG BY: —

CKD BY: BEB

REVISIONS

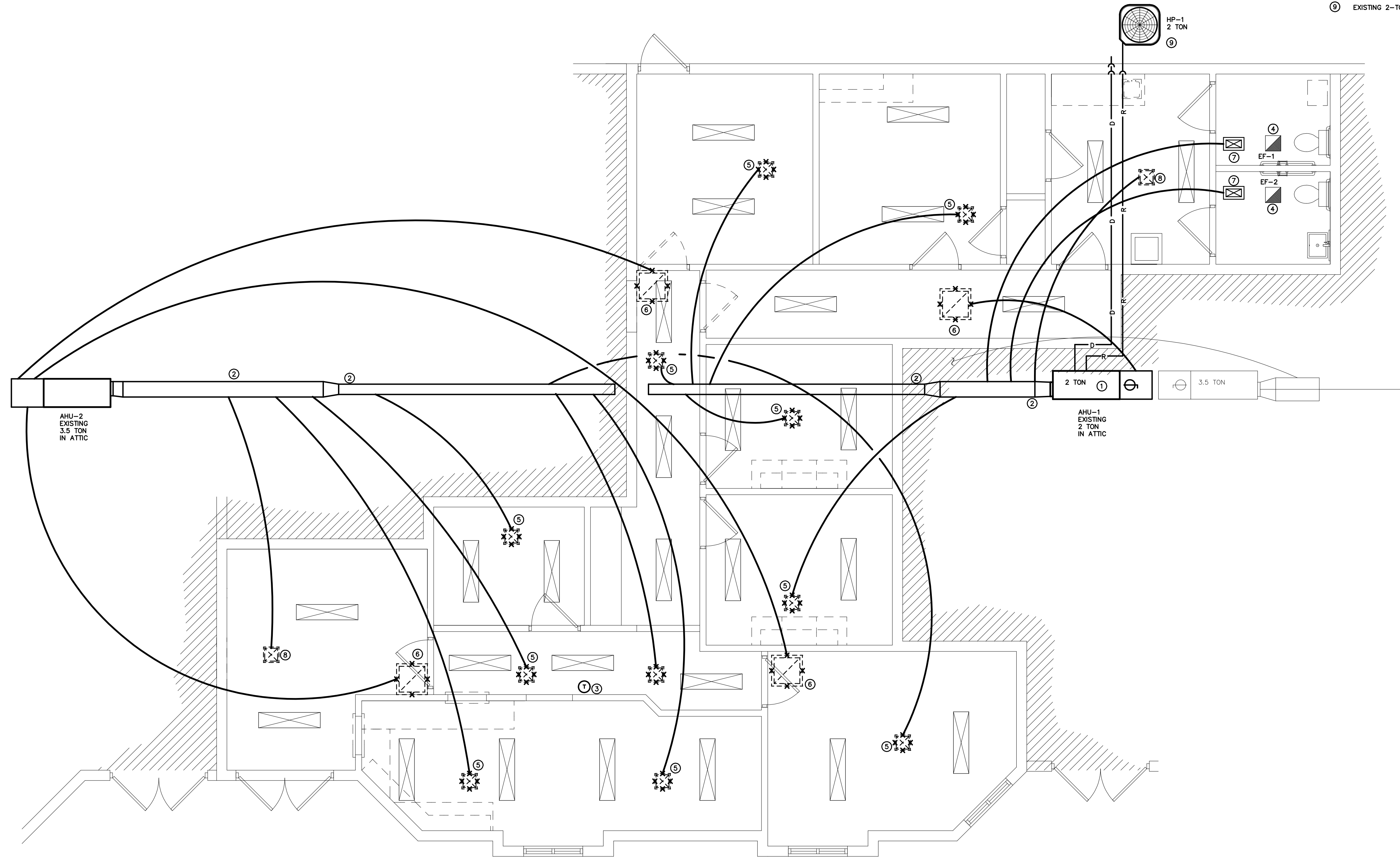
SHEET NO.

M2

- ALL EXISTING MECHANICAL ITEMS TO REMAIN IN PLACE AND BE RECONNECTED AS SHOWN OR CLOSED OFF AND ABANDONED.
- EXISTING MECHANICAL ITEMS TO BE REMOVED AND DISCARDED, PATCH OPENING IN CEILING, WALL OR FLOOR TO MATCH ADJACENT SURFACE.
- ALL EXISTING MECHANICAL ITEMS TO BE RELOCATED. SEE SHEET M3 FOR ADDITIONAL INFORMATION.

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM PREVIOUS PERMIT DRAWINGS AND FIELD INVESTIGATION. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

- KEY NOTES FOR M2
- ① EXISTING 2-TON AIR HANDLING UNIT IN ATTIC SPACE TO REMAIN.
 - ② EXISTING RECTANGULAR RIGID SUPPLY DUCTWORK TO REMAIN.
 - ③ EXISTING THERMOSTAT TO REMAIN.
 - ④ EXISTING TOILET EXHAUST FAN AND DUCTWORK (NOT SHOWN) TO REMAIN.
 - ⑤ REMOVE EXISTING SUPPLY DIFFUSER.
 - ⑥ REMOVE EXISTING RETURN DIFFUSER.
 - ⑦ EXISTING BATHROOM SUPPLY DIFFUSER AND FLEXIBLE DUCT TO REMAIN.
 - ⑧ EXISTING SUPPLY DIFFUSER TO BE RELOCATED.
 - ⑨ EXISTING 2-TON HEAT PUMP TO REMAIN.



① M2 HVAC DEMO PLAN
SCALE: 1/4"=1'-0"



HVAC PLAN

25001

ISSUED: 03/25/2025

DWG BY: -

CKD BY: BEB

REVISIONS

SHEET NO.

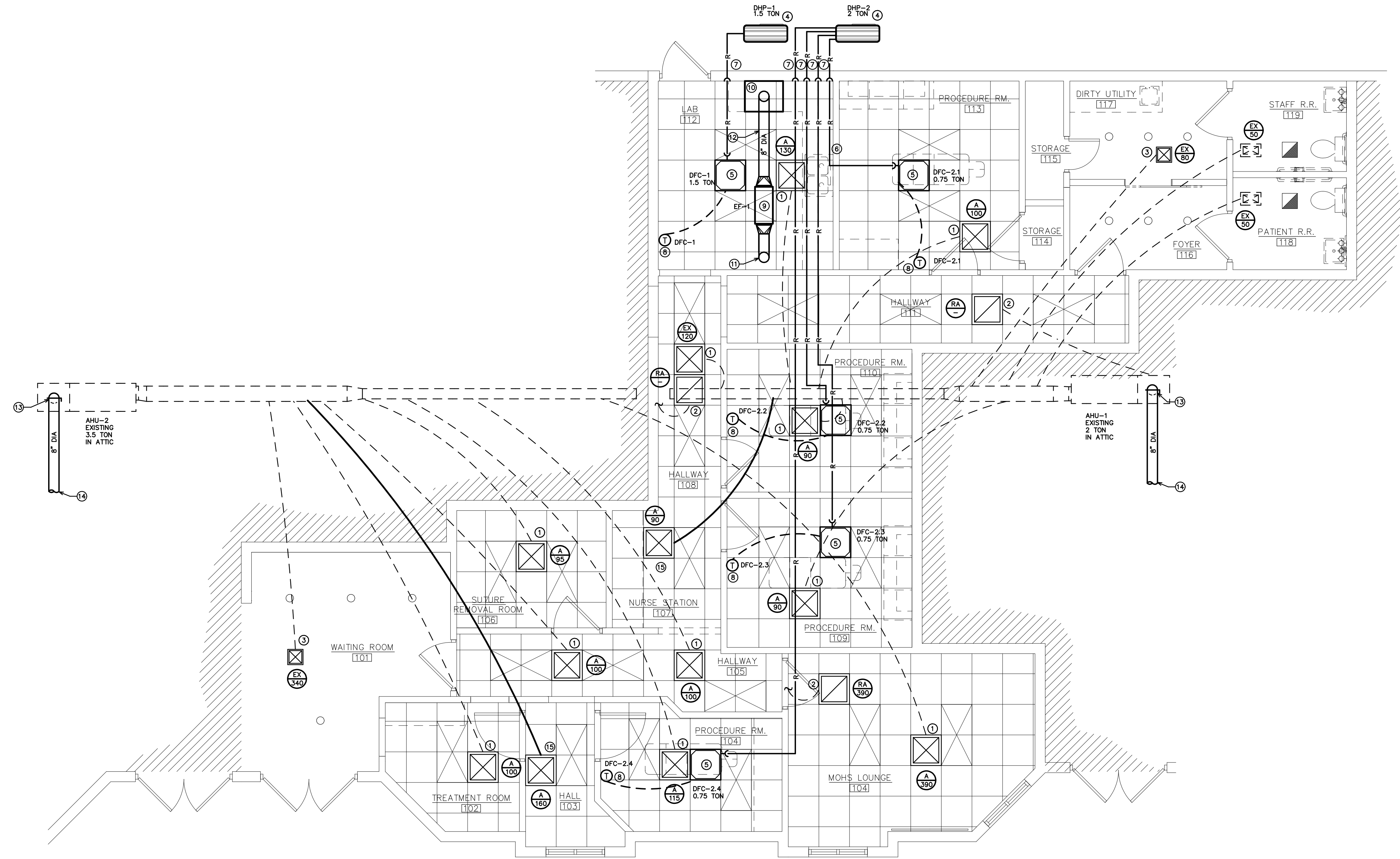
M3

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM PREVIOUS PERMIT DRAWINGS AND FIELD INVESTIGATION.
THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.

EXISTING MECHANICAL ITEMS
SEE SHEET M2 FOR ADDITIONAL INFORMATION.

NEW/RELOCATED MECHANICAL ITEMS
TO BE RECONNECTED AS SHOWN.

- KEY NOTES FOR M3
- NEW SUPPLY AIR DIFFUSER. RECONNECT TO EXISTING FLEXIBLE DUCT AND EXTEND AS REQUIRED.
 - NEW RETURN AIR GRILLE. RECONNECT TO EXISTING FLEXIBLE DUCT AND EXTEND AS REQUIRED.
 - RELOCATED SUPPLY AIR DIFFUSER. MAINTAIN EXISTING FLEXIBLE DUCT AND EXTEND AS REQUIRED.
 - DUCTLESS SPLIT SYSTEM HEAT PUMP MOUNTED ON CONCRETE PAD. MAINTAIN ALL REQUIRED MANUFACTURERS CLEARANCES.
 - DUCTLESS SPLIT SYSTEM FAN COIL UNIT MOUNTED ON WALL, WITH BOTTOM OF UNIT 84" A.F.F.
 - RUN PIPING TIGHT TO UNDERSIDE OF STRUCTURE. (TYPICAL).
 - RUN REFRIGERANT PIPING DOWN CONCEALED IN EXTERIOR WALL.
 - NEW THERMOSTAT, MOUNT AT 48" AFF.
 - NEW-IN-LINE EXHAUST FAN IN ATTIC SPACE. VERIFY FINAL LOCATION OF FAN THAT FAN IS ACCESSIBLE FOR SERVICE, AND COORDINATE FINAL LOCATION WITH EXISTING EQUIPMENT, DUCTWORK, AND STRUCTURE IN ATTIC SPACE.
 - NEW EXHAUST HOOD. HOOD SHALL BE 30" WIDE X 24" DEEP X 12" HIGH. INSTALL HOOD 36" ABOVE COUNTER SURFACE. HOOD SHALL BE MADE OF STAINLESS STEEL WITH WELDED CONSTRUCTION.
 - RUN NEW 8" DIA. EXHAUST DUCT UP TO NEW ROOF MOUNTED EXHAUST CAP. EXHAUST DISCHARGE SHALL BE 10'-0" MIN. FROM ANY OUTSIDE AIR INTAKE.
 - RUN DUCTWORK IN ATTIC SPACE.
 - CONNECT NEW 8" DIA. RIGID ROUND DUCT TO EXISTING RETURN AIR PLENUM ON EXISTING AIR HANDLING UNIT. PROVIDE MANUAL DAMPER WITH LOCKING QUADRANT. 150 CFM OUTSIDE AIR.
 - RUN NEW 8" DIA. RIGID ROUND OUTSIDE AIR DUCT TO A NEW INTAKE GRILLE IN THE EXISTING SOFFIT ON THE FRONT OF THE BUILDING. INTAKE SHALL BE 10'-0" MIN. FROM ANY EXHAUST DISCHARGE.
 - NEW SUPPLY AIR DIFFUSER. PROVIDE NEW FLEXIBLE DUCT FROM DIFFUSER TO EXISTING SUPPLY AIR MAIN DUCT.



M3 HVAC PLAN
SCALE: 1/4"=1'-0"

DIVISION 16 – ELECTRICAL

PART 1 – GENERAL

- 1.1 DESCRIPTION OF THE WORK
- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Electrical service and service equipment.
 2. Lighting and power distribution system.
 3. Provide lighting fixtures selected by owner with lamps to match.
 4. Wiring devices, boxes, cover plates, etc.
 5. Source of power for all items of equipment.
 6. Grounding.
 7. Other requirements and/or systems where shown.
- B. All work shall be complete and items, equipment, etc., shall be electrically connected for proper and correct operation.
- C. All work under this contract shall be installed in accordance with the latest edition of the following codes and standards insofar as they apply:
1. The 2020 National Electrical Code.
 2. The National Electrical Safety Code.
 3. Underwriter's Laboratories, Inc., Standards and approved listings.
 4. Electrical Testing Laboratories standards.
 5. North Carolina Building Code, Latest Edition and Revisions.
 6. All local codes and ordinances.
- D. The Electrical Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.
- E. Obtain all permits, licenses, inspections, etc., required for the work and pay for the same. Furnish final certificate of inspection and approval from the electrical inspector having jurisdiction prior to acceptance of the work.
- F. All work shall be done by skilled mechanics and shall present a neat, trim, workmanlike condition when complete.
- 1.2 INTENT
- A. The intent of these specifications and the accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Electrical Contractor shall take this into consideration and include in his bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.
- 1.3 COORDINATION
- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.
- B. Locations shown are approximate. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required. Coordinate all locations with architect before any rough-in.
- 1.4 SHOP DRAWINGS
- A. Shop drawings shall be submitted for panels and service equipment, lighting, wiring devices, and cover plates. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 – PRODUCTS AND MATERIALS

- 2.1 GENERAL
- A. All material shall be new and shall bear the manufacturer's name, trade name, and UL label where such standard has been established for the particular material. Materials shall be the standard products of manufacturer's regularly engaged in the manufacturer of the required type of equipment and the manufacturer's latest approved design.
1. Boxes installed in concealed locations shall be set flush with the finished surfaces.
 2. Provide rated boxes in all fire barriers & walls installed per code.

- 2.2 NOT USED
- 2.3 CONDUCTORS
- A. Conductors shall be color coded, sizes #8 and larger may be color taped on the job. Color coding shall be Standard Practice.
- B. Conductors shall be manufactured by Dodge, Southwire or approved equal. Conductors shall meet the latest requirements of NEMA and IPCEA and shall be UL approved.
- C. Metallic sheathed "MC" cable may be used where allowed by N.E.C.
- D. Conductors shall be spliced and taped as follows:
1. Size #10 and #12, use Ideal "Wing Nuts" or T&B "Piggy" connectors. Connectors shall be rated for 150 degrees C for use in recessed lighting fixtures.
 2. Size #8 and larger shall be solderless screw and screw-clamping type, smoothly covered and shaped with rubber gum type with final cover vinyl plastic electrical type. In lieu of rubber gum and vinyl plastic type, factory fabricated approved preformed insulating covers may be used. All connectors shall be UL approved.
 3. No spilt-ball type connectors may be used.
- E. All branch wire and connections shall be copper and sized per National Electric Code.
- F. All conductors shall be continuous without splice between junction, outlet, device boxes, etc. No splicing will be permitted in panelboard cabinets, safety switches, etc.
- G. All wiring in mechanical spaces shall be plenum rated.
- H. Provide GFI protection within 6'-0" of any sink.
- I. All multi-wire branch circuits shall comply with 2020 NEC, 210.4(B).
- J. All wiring at medical facilities shall comply with 2020 NEC, 517.1.
- 2.4 PANELBOARDS, SAFETY SWITCHES
- A. Panelboards shall comply with NEMA Standard PB 1 – Latest Edition and as manufactured by Square D or ITE-Siemens.
- B. The contractor shall be responsible for correctly phasing the circuits in the panelboards.
- C. Safety switches shall be general duty type, size and rating as required for load service. Safety switches shall be fused or unfused as shown and/or as required. Safety switches serving motor loads shall be horsepower rated for load served.
- 2.5 NOT USED
- 2.6 WIRING DEVICES
- A. Wiring devices shall be commercial grade by Bryant, Leviton, or approved equal. With matching cover. Color by Architect.
- B. Wiring devices installed under a Kitchen Hood shall have stainless steel covers.
- C. Wiring devices installed over counters shall comply with ANSI A117.1.
- 2.7 NOT USED
- 2.8 CONDUIT
- A. PVC conduit will be allowed where N.E.C. approved.
- B. All service conduit shall be rigid where exposed below 8'-0" AFF or exposed to the elements or hazardous conditions.

PART 3 – EXECUTION

- 3.1 CIRCUIT GROUNDING
- A. All circuits shall contain an insulated, green, copper grounding conductor, sized in accordance with Table 250-95 of the NEC. Grounding conductors shall be connected to equipment grounding bus in panelboard and securely attached and grounded to the device or enclosure at the other end.
- 3.2 GROUNDING TYPE CONVENIENCE OUTLETS AND SWITCHES
- A. Outlets and switches shall be solidly grounded to equipment grounding system with a green colored insulated conductor. Electrical connections shall be continuous from equipment ground bus in panelboard to the hex nut on the convenience outlet or switch.
- 3.3 MOTORS
- A. All motors shall be connected to conduit system with short length (minimum length 24" and maximum length 36") of flexible liquidtight conduit.
- 3.4 NOT USED

3.5 EQUIPMENT LABELING

- A. Provide permanent name plates for all panelboards, safety switches, wiring troughs, etc., for identification of equipment controlled, services, etc. Nameplates shall be securely and permanently attached to equipment with stainless steel screws. Nameplates shall include the name of the equipment and where it is fed from.
- B. All switch plates, receptacle plates and outlet covers shall be labeled with machine printed vinyl labels identifying the circuit(s) within.
- C. All empty conduit runs shall be identified and circled where they terminate.
- D. Provide typewritten directory in each panelboard to clearly identify each circuit, service, etc.

3.6 NOT USED

3.7 NOT USED

3.8 JUNCTION AND/OR PULL BOXES

- A. Boxes shall be installed where necessary to avoid excessive runs and/or too many bends between outlets.

3.9 PULL WIRE

- A. Leave pull wire in each empty conduit run.

3.10 NOT USED

3.11 GROUNDING

- A. All grounding shall be in accordance with Article 250 of the NEC. In addition, the following requirements shall be met:
1. Grounding conductors shall be installed as to permit the shortest and most direct path from equipment to ground. All connections to grounding conductors shall be accessible.
 2. Equipment ground continuity shall be maintained through flexible metal conduit.
 3. All wiring devices equipped with grounding connection shall be solidly grounded to ground system with grounding conductors.
 4. The frame of all lighting fixtures shall be securely grounded to the equipment ground system with grounding conductors.
 5. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.
 6. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

3.12 ELECTRICAL WORK IN CONNECTION WITH OTHER WORK

- A. **PLUMBING WORK:** The Electrical Contractor shall furnish and install switches and devices as shown and electrically connect electric water heaters, etc. All other electrical work required will be performed by the PLUMBING CONTRACTOR.
- B. **HEATING AND AIR CONDITIONING WORK:** The Electrical Contractor shall provide all disconnect switches, starters, and associated hardware for the equipment furnished including all line and load side wiring and conduit. Final connections to the equipment will be by the HVAC contractor. All control wiring will be accomplished by the HVAC contractor. Coordinate all work associated with the HVAC contractor.

3.13 CLEAN UP

- A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.

3.14 GUARANTEE

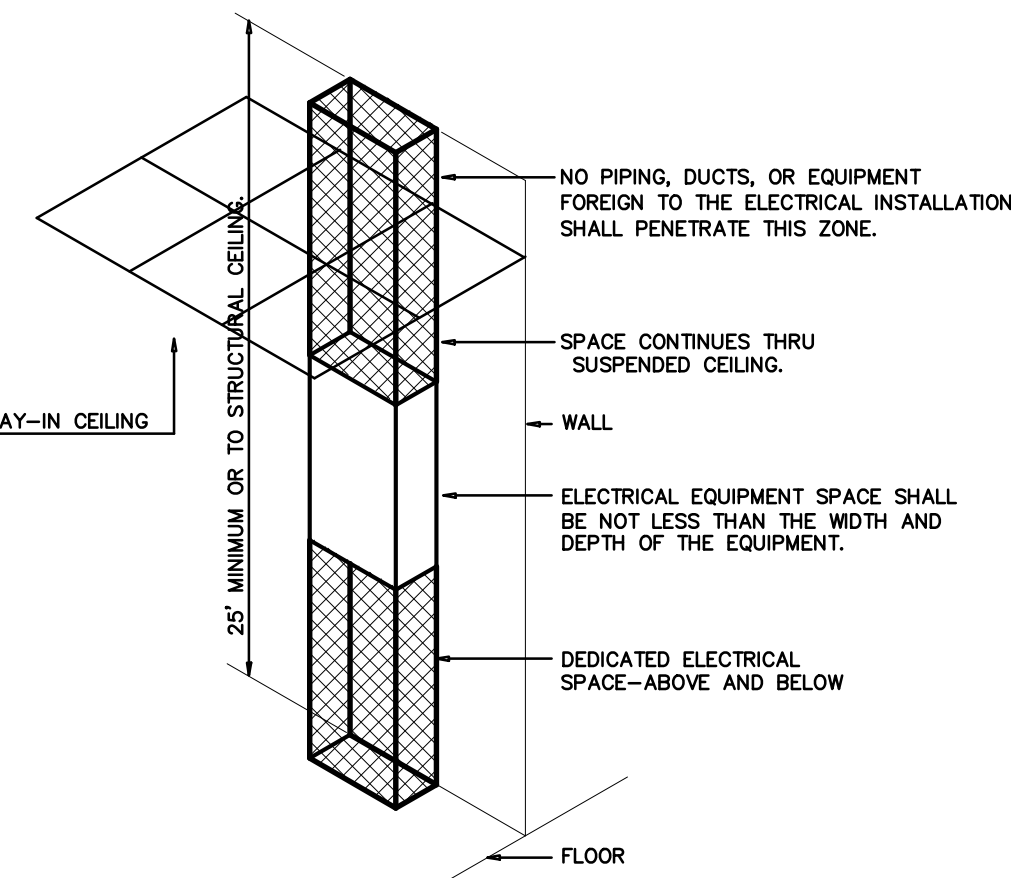
- A. Guarantee all materials and labor included in the electrical work for a period of one year from date of final acceptance by the Owner. Any part or parts of the work or equipment which prove to be defective during the guarantee period shall be replaced at no additional cost to the Owner.

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES HAVING JURISDICTION.
2. ALL BRANCH CIRCUIT CONDUCTORS TO BE COPPER (SERVICE CONDUCTORS MAY BE ALUMINUM WITH SAME AMPACITY AS COPPER CONDUCTORS. RE-SIZE CONDUCTORS AND CONDUIT PER NEC.)
3. ALL CIRCUITS TO BE 2 #12, 1 #12 GND IN 1/2" EMT CONDUIT AS A MINIMUM. PROVIDE WIRING FOR LARGER CIRCUITS AS REQUIRED BY NEC. RIGID CONDUIT IS REQUIRED WHERE EXPOSED BELOW 8'-0" A.F.F.
4. ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FEET SHALL BE PROVIDED WITH A PULL WIRE OR FISH TAPE/CORD.
5. CONTRACTOR SHALL VERIFY THAT ALL DOOR SWINGS ARE CORRECT BEFORE INSTALLING LIGHT SWITCH OUTLETS.
6. ALL BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL BE INCREASED TO THE NEXT LARGER SIZE WHERE THE LENGTH OF THE HOME RUN EXCEEDS 120 FEET ON 120V AND 208V CIRCUITS.
7. THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWINGS OR NOT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANELBOARDS.
9. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH THE GENERAL CONTRACTOR TO INSURE THAT ALL LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.
10. ELECTRICAL REQUIREMENTS INDICATED ON DRAWINGS MAY DIFFER FROM ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON DRAWINGS CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.
11. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT BREAKER REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO ORDERING PANEL. ADJUST BREAKER AND WIRE SIZES AS REQUIRED.
12. PROVIDE BOXES, JACKS, WIRING AND CONDUIT FROM LOCATIONS SHOWN TO MTP LOCATION. VERIFY EXACT REQUIREMENTS WITH OWNER.
13. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECTS FOR MECHANICAL & PLUMBING EQUIPMENT. DISCONNECTS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND FUSED PER NAME PLATE. PROVIDE NEMA 3R ENCLOSURES ON EXTERIOR. COORDINATE FUSE SIZES.
14. THE EC SHALL MEET WITH THE ARCHITECT AND TENANT PRIOR TO INSTALLING OUTLET BOXES TO VERIFY LOCATIONS AND MOUNTING HEIGHTS OF RECEPTACLES AND TELEPHONE OUTLETS.

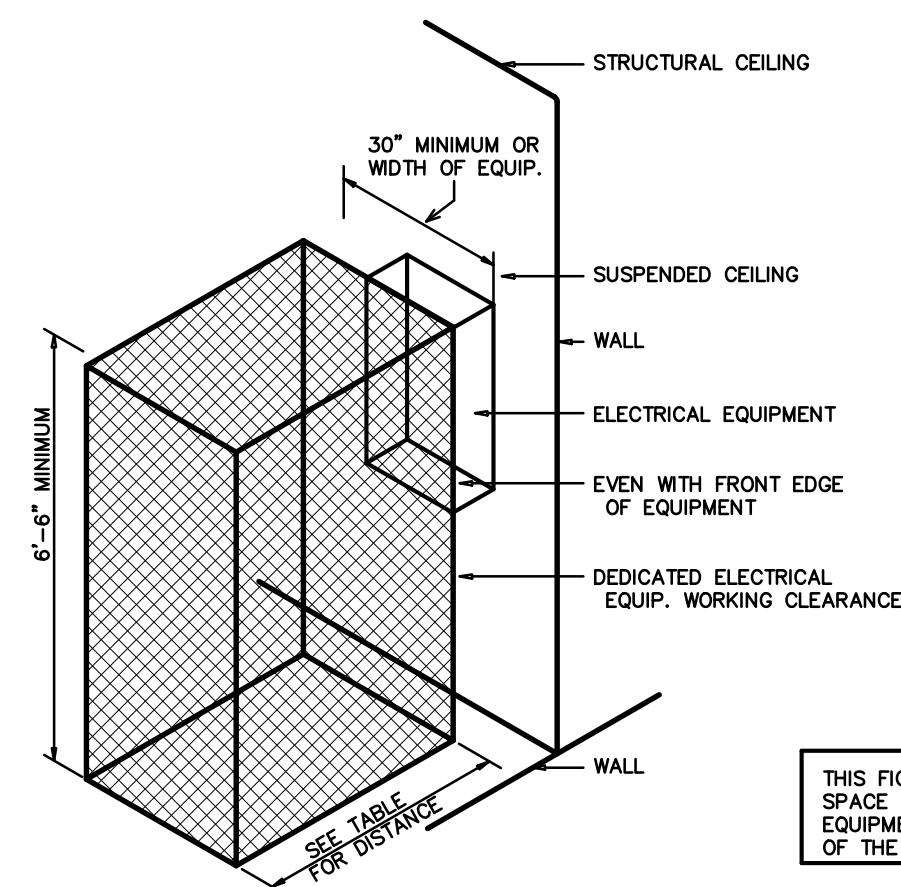
ELECTRICAL LEGEND

- LIGHT FIXTURE: LETTER DENOTES FIXTURE TYPE (REFER TO LIGHTING PLAN AND FIXTURE SCHEDULE). NL = NIGHT LIGHT (NOT SWITCHED/ALWAYS ON)
- DUPLEX RECEPTACLE – 120V; MOUNT 18" TO CENTER AFF UNLESS NOTED OTHERWISE; "WP" INDICATES WEATHER PROOF, "GFI" INDICATES GROUND FAULT CURRENT INTERRUPTER PROTECTED. "U" INDICATES RECEPTACLE WITH (2) USB PORTS.
- QUADRAPLEX RECEPTACLE – 120V
- FLOOR OR CEILING OUTLET (AS NOTED) – 120V
- SPECIAL PURPOSE RECEPTACLE – REFER TO POWER PLAN AND PANEL SCHEDULE
- LIGHT SWITCH
- SWITCH WITH INTEGRAL PIR/US MOTION SENSOR FOR AUTOMATIC SHUT-OFF WITH UP TO 2 HOUR ADJUSTABLE DELAY.
- DIMMABLE LIGHT SWITCH
- MOTOR RATED SWITCH
- JUNCTION BOX
- TELE/DATA OUTLET – PROVIDE JUNCTION BOX WITH CONDUIT BACK TO MTP. PROVIDE (1) TELEPHONE JACK AND (1) CAT 5 DATA JACK
- SINGLE-POLE HOMERUN TO PANELBOARD
- TWO-POLE OR 3-POLE HOMERUN TO PANELBOARD
- EXIT LIGHT
- EMERGENCY EGRESS FIXTURE
- PHOTOCELL (LED COMPLIANT)
- BRANCH CIRCUIT WIRING
- SWITCH LEG
- GROUND CONNECTION
- DISTRIBUTION PANELBOARD
- DISCONNECTING MEANS AS REQUIRED BY CODE



ELECTRICAL EQUIPMENT DEDICATED SPACE PER ARTICLE 110.26.F.1 OF N.E.C.

1 DEDICATED SPACE
SCALE: NTS



ELECTRICAL EQUIPMENT WORKING CLEARANCE PER ARTICLE 110-26 OF N.E.C.

VOLTAGE TO GROUND NOMINAL	WORKING CLEARANCES		
	MIN. CLEAR DISTANCE IN FEET	CONDITION	
0-150	3	2	3
151-600	3	3-1/2	4

2 ELECTRICAL CLEARANCES
SCALE: NTS

WHERE THE CONDITIONS ARE AS FOLLOWS:

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

**APPENDIX B
2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS**

PROVIDE ON THE ELECTRICAL SHEETS (IF APPLICABLE)
ELECTRICAL DESIGN
ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance

Energy Code: Prescriptive Energy Cost Budget

ASHRAE 90.1: Prescriptive Energy Cost Budget

Lighting Schedule

lamp type required in fixture
number of lamps in fixture
ballast type used in fixture
number of ballasts in fixture
total wattage in fixture
total interior wattage specified vs. allowed
total exterior wattage specified vs. allowed

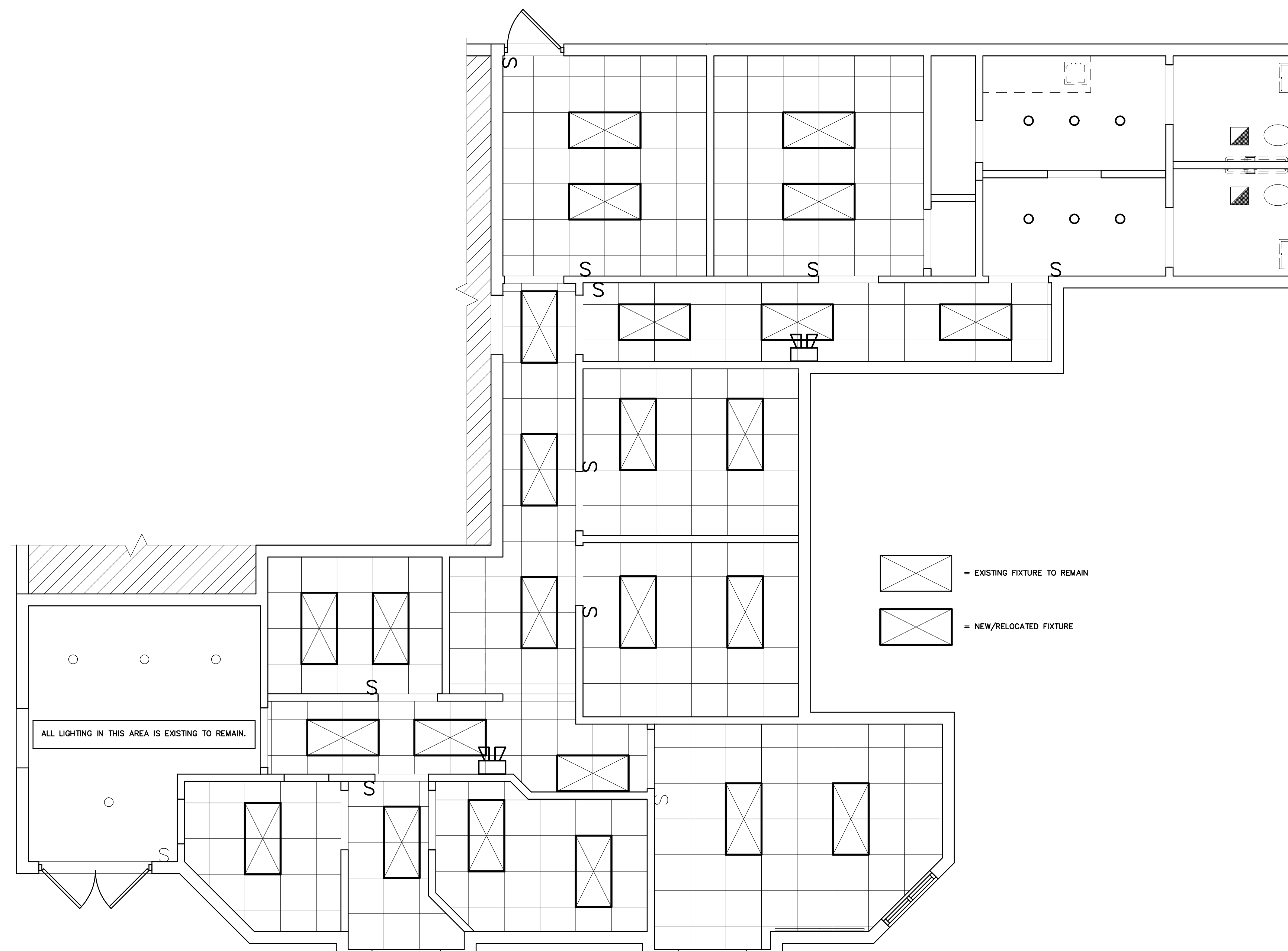
See Light Fixture Schedule
2882VA / 5740VA
202VA / 750VA

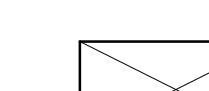

Additional Prescriptive Compliance

- 506.2.1 More Efficient Mechanical Equipment
- 506.2.2 Reduced Lighting Power Density
- 506.2.3 Energy Recovery Ventilation Systems
- 506.2.4 Higher Efficiency Service Water Heater
- 506.2.5 On-Site Supply of Renewable Energy
- 506.2.6 automatic Daylighting Control System

ENGINEER
BURKE DESIGN GROUP
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Corp. License # C-2652

NOTE:
THE INFORMATION SHOWN ON THIS DRAWING IS FROM A FIELD INVESTIGATION.
THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.

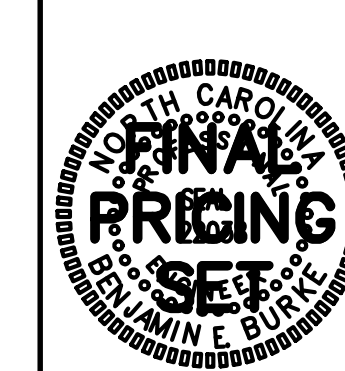


-  = EXISTING FIXTURE TO REMAIN
-  = NEW/RELOCATED FIXTURE

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

ENGINEER
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**DERMATOLOGY ASSOCIATES
ADDITION
MOREHEAD CITY, NC**



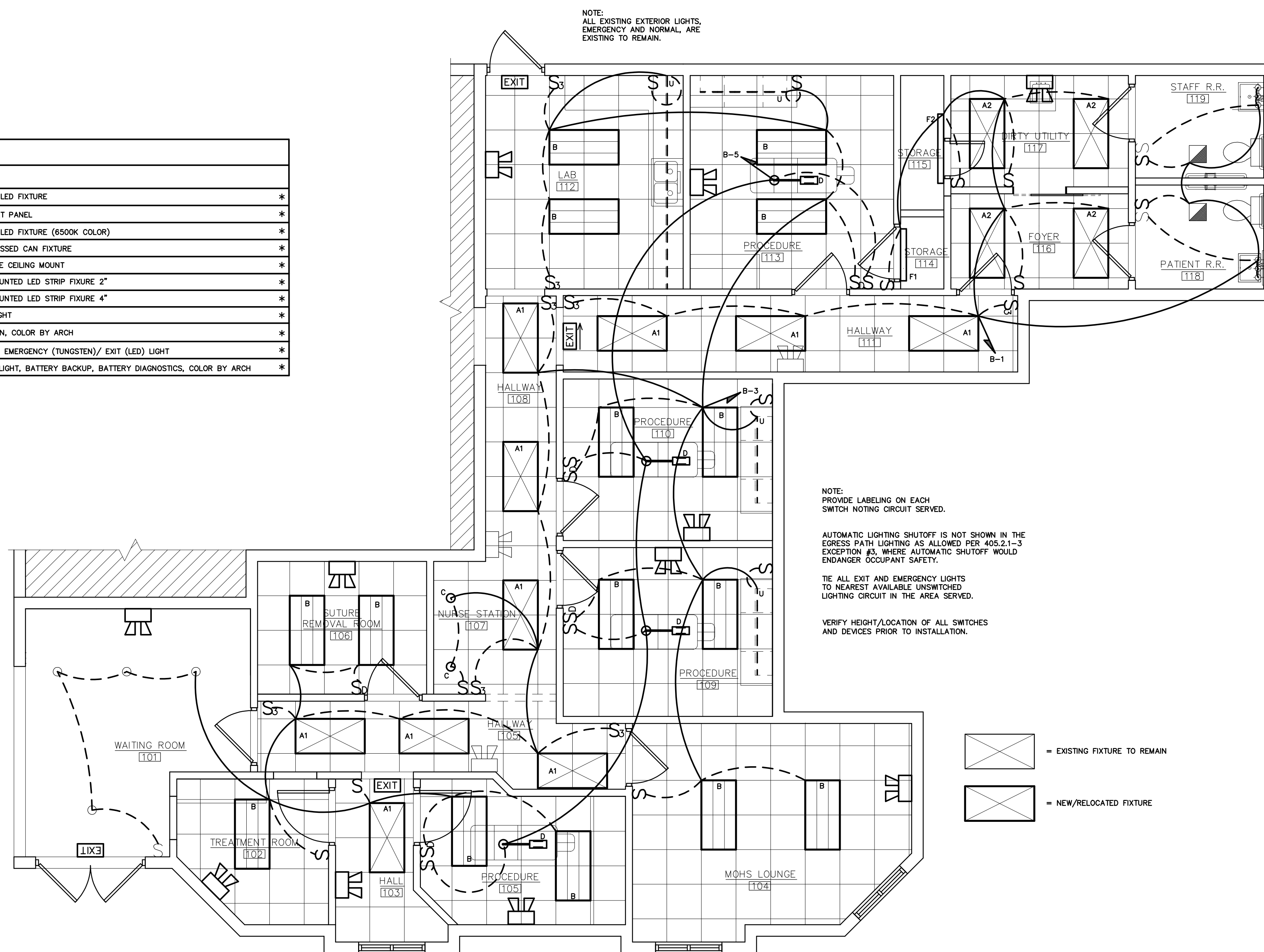
EXISTING LIGHTING
25001
ISSUED: 03/25/2025
DWG BY: RM
CKD BY: BEB
REVISIONS

SHEET NO.
E2

Permitology Addition E3

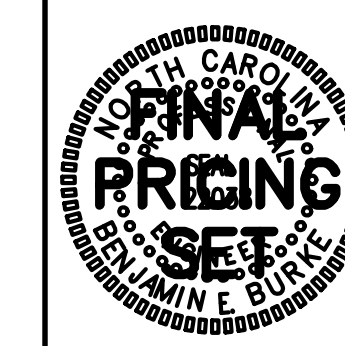
MARK	MANUFACTURER	CATALOG NO.	VOLT.	LAMPS NO.	LAMPS TYPE	BALLAST TYPE	W/ FIXTURE	REMARKS
A1	COLUMBIA	LCAT24-50LWG-EDU	120	-	LED	-	32	2X4 LAY-IN LED FIXTURE *
A2	LITHONIA	CPXTW 2X4 TUWH PROR 4000LM BOCRI SWL MVOLT	120	-	LED	-	32	2X4 LED FLAT PANEL *
B	LITHONIA	LCAT24-2765TLWG-EDU	120	-	LED	-	32	2X4 LAY-IN LED FIXTURE (6500K COLOR) *
C	PRESCOLITE	LTR-6RD-H-SL15L-DM1	120	-	LED	-	19	6" LED RECESSED CAN FIXTURE *
D	OUTPATIENT	OPLDOW	120	-	LED	-	42	OPLD SINGLE CEILING MOUNT *
F1	PLT	PLT-12644	120	-	LED	-	20	SURFACE MOUNTED LED STRIP FIXTURE 2" *
F2	PLT	PLT-90266	120	-	LED	-	30	SURFACE MOUNTED LED STRIP FIXTURE 4" *
U	JESCO	DL-AC-FLEX2-LNSB-4090	120	-	LED	-	5W/FT	LED TAPE LIGHT *
EXIT	LITHONIA	ECBRLEDM6	120	-	LED	-	2	LED EXIT SIGN, COLOR BY ARCH *
EXIT	MULE	AL-1-R-WW-SD	120	-	LED	-	4	COMBINATION EMERGENCY (TUNGSTEN)/ EXIT (LED) LIGHT *
EXIT	MULE	ELW-8B-10L3-DG	120	-	LED	-	10	EMERGENCY LIGHT, BATTERY BACKUP, BATTERY DIAGNOSTICS, COLOR BY ARCH *

* OR APPROVED EQUAL. PROVIDE CUT SHEETS FOR OWNER APPROVAL PRIOR TO ORDERING FIXTURES.
CATALOG NUMBERS ARE FOR REFERENCE ONLY. ACTUAL NUMBERS MAY VARY.
THE EMERGENCY LIGHTS AND EXIT SIGNS MUST HAVE INTEGRAL BATTERIES, CHARGERS AND TEST SWITCHES.



1 LIGHTING PLAN
E2 SCALE: 1/4"=1'-0"

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LIGHTING PLAN

25001

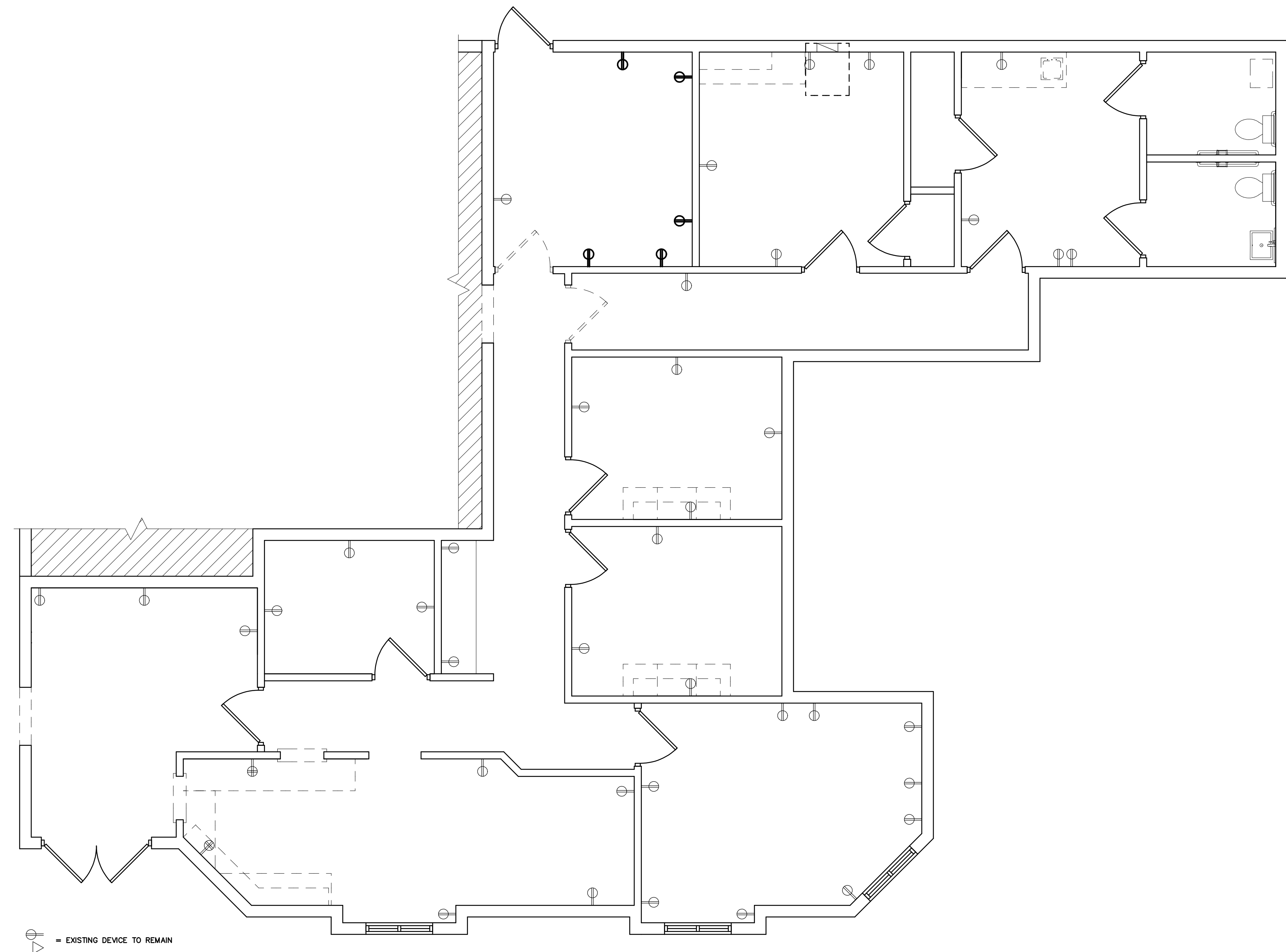
ISSUED: 03/25/2025
DWG BY: RM
CKD BY: BEB



NO.	DESCRIPTION

SHEET NO.

E3

NOTE:
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THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.



 = EXISTING DEVICE TO REMAIN
 = EXISTING DEVICE TO BE RELOCATED/REMOVED

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

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 email: ben@bdg-nc.com
 Corp. License # C-2652

**DERMATOLOGY ASSOCIATES
 ADDITION
 MOREHEAD CITY, NC**



DEMO PLAN

25001

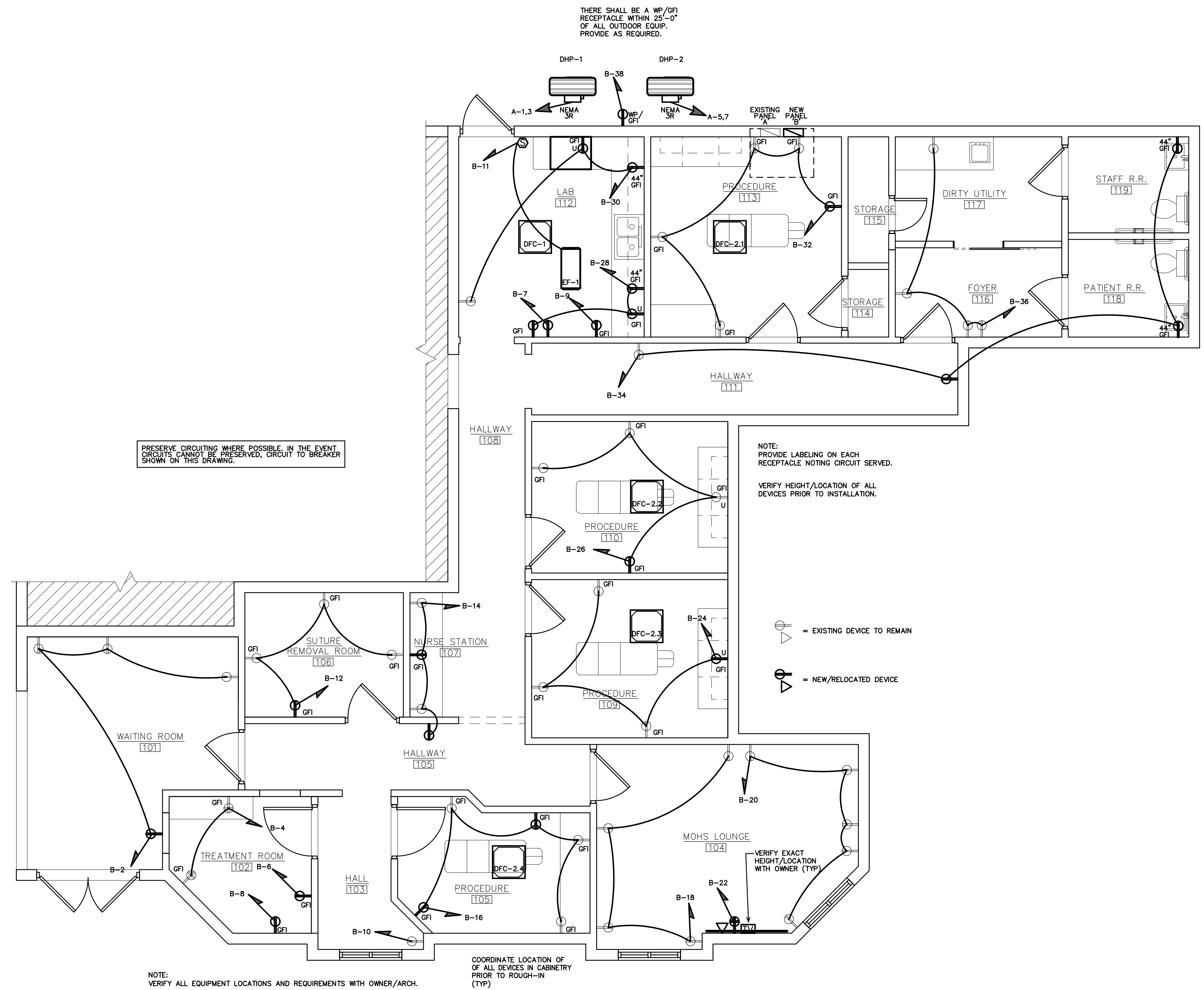
ISSUED: 03/25/2025
 DWG BY: RM
 CKD BY: BEB

REVISIONS

SHEET NO.
E4

NOTE:
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THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.

THERE SHALL BE A WP/GFI
RECEPTACLE WITHIN 25'-0"
OF ALL OUTDOOR EQUIP.
PROVIDE AS REQUIRED.



PRESERVE CIRCUITING WHERE POSSIBLE. IN THE EVENT
CIRCUITS CANNOT BE PRESERVED, CIRCUIT TO BREAKER
SHOWN ON THIS DRAWING.

NOTE:
PROVIDE LABELING ON EACH
RECEPTACLE NOTING CIRCUIT SERVED.
VERIFY HEIGHT/LOCATION OF ALL
DEVICES PRIOR TO INSTALLATION.

- = EXISTING DEVICE TO REMAIN
- = NEW/RELOCATED DEVICE

VERIFY EXACT
HEIGHT/LOCATION
WITH OWNER (TYP)

NOTE:
VERIFY ALL EQUIPMENT LOCATIONS AND REQUIREMENTS WITH OWNER/ARCH.

COORDINATE LOCATION OF
ALL DEVICES IN CABINETRY
PRIOR TO ROUGH-IN
(TYP)

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

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Corp. License # C-2652



POWER PLAN

25001

ISSUED: 03/25/2025
DWG BY: RM
CKD BY: BEB

NO.	REVISIONS

SHEET NO.
E5

NEW PANEL- 'B'		MAKE: EATON		RATING: 120/240V 1 PHASE 3WIRE		M.L.O. MAIN CIRCUIT BREAKER			
FED FROM: PANEL 'A'		TYPE: CH. LOAD CENTER OR APPROVED EQUAL		MOUNTING: FLUSH		EQUIPMENT GROUND BUS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
LOAD SERVICE	CKT BRKR	WATTS PER PHASE A B	CKT NO	NEUTRAL A B	CKT NO	WATTS PER PHASE A B	CKT BRKR	LOAD SERVICE	
LTS- HALLWAY	20A	224	1		2	720	20A	REC- WAITING RM	
LTS- OVERHEAD IN ROOMS	20A	928	3		4	720	20A	REC- TREATMENT RM	
LTS- PROCEDURE LIGHTING	20A	842	5		6	180	20A	REC- TREATMENT RM	
REC- CRYOSTAT	20A	840	7		8	180	20A	REC- TREATMENT RM	
REC- CRYOSTAT	20A	840	9		10	180	20A	REC- HALL	
EF-1	20A	500	11		12	720	20A	REC- SUTURE REMOVAL	
SPARE	20A		13		14	720	20A	REC- NURSE STATION	
SPARE	20A		15		16	900	20A	REC- PROCEDURE 105	
SPARE	20A		17		18	720	20A	REC- MOHS LOUNGE	
SPARE	20A		19		20	900	20A	REC- MOHS LOUNGE	
SPARE	20A		21		22	180	20A	REC- MOHS LOUNGE	
SPARE	20A		23		24	720	20A	REC- PROCEDURE 109	
SPARE	20A		25		26	720	20A	REC- PROCEDURE 110	
SPARE	20A		27		28	540	20A	REC- LAB	
SPARE	20A		29		30	540	20A	REC- LAB	
SPARE	20A		31		32	900	20A	REC- PROCEDURE 113	
SPARE	20A		33		34	720	20A	REC- HALL 111	
SPARE	20A		35		36	720	20A	REC- 116,117	
SPARE	20A		37		38	180	20A	REC- EXTERIOR	
SPARE	20A		39		40		20A	SPARE	
SPARE	20A		41		42		20A	SPARE	
NOTES		SUB-TOTALS 'B'		100A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD	
				100A LUGS		SUB-TOTALS 'B'			
				100A FEED		GRAND TOTAL			
				VERIFY SIZE		--A --A		AMPS/PHASE	

NEC ALLOWABLE DEMAND FACTORS	DIVERSIFIED LOAD SUMMARY		
① DEMAND FACTORS PER NEC 220	LOAD TYPE <td>DEMAND FACTOR</td> <td>A B TOTAL DIVERSIFIED LOAD</td>	DEMAND FACTOR	A B TOTAL DIVERSIFIED LOAD
② LARGEST OF: NEC TABLE 220.12 OR CONNECTED LOAD	GENERAL LIGHTING	125%	---
③ NEC TABLE 220.56	TRACK LIGHTING	125%	---
④ NEC 220.51	GENERAL USE RECEPTACLES	100%	---
⑤ NEC 220.43A, 200 VA/LINEAR FT	MOTORS AND EQUIPMENT	125%	---
⑥ NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED	WATER HEATERS	100%	---
	KITCHEN EQUIPMENT	100%	---
	FIX. ELEC. SPACE HEAT.	100%	---
	SHOW WINDOW LIGHTS	125%	---
	SIGN	125%	---
	MISC	100%	---
	PHASE (TOTAL VA)		
	TOTAL AMPS		--A --A --A TOTAL AMPS

EQUIPMENT WIRING SCHEDULE					
EQUIPMENT	MCA	MOCP	VOLTS	PH	WIRE SIZE
DHP-1	14A	20A	240V	1	2-#12, 1-#12 GND IN 1/2" CONDUIT
DHP-2	23A	25A	240V	1	2-#10, 1-#10 GND IN 3/4" CONDUIT

NOTE: THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN AND RELEASING GEAR. ADJUST BREAKER, WIRE SIZES, ETC. AS REQUIRED.

EXISTING PANEL- 'A'		MAKE: SIEMENS		RATING: 120/240V 1 PHASE 3WIRE		200A MAIN CIRCUIT BREAKER			
		TYPE: SERIES E OR APPROVED EQUAL		MOUNTING: FLUSH		EQUIPMENT GROUND BUS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
LOAD SERVICE	CKT BRKR	WATTS PER PHASE A B	CKT NO	NEUTRAL A B	CKT NO	WATTS PER PHASE A B	CKT BRKR	LOAD SERVICE	
REC	20A		1		2		20A	REC	
LTS	20A		3		4		20A	NEW PHONE BOARD	
REC	20A		5		6		20A	REC	
REC	20A		7		8		20A	EMH	
HP	40A		9		10		40A	HP	
.	60A		11		12		60A	.	
AHU	60A		13		14		60A	AHU	
.	20A		15		16		20A	.	
REC	20A		17		18		20A	LTS	
REC	20A		19		20		40A	HP	
REC DED	20A		21		22		20A	REC	
REC DED	20A		23		24		20A	REC	
REC	20A		25		26		20A	REC- DED	
LTS	20A		27		28		60A	AHU	
LTS	20A		29		30				
NOTES		SUB-TOTALS 'B'		200A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD	
				200A LUGS		SUB-TOTALS 'B'			
				200A FEED		GRAND TOTAL			
				VERIFY SIZE		--A --A		AMPS/PHASE	

REVISED PANEL- 'A'		MAKE: SIEMENS		RATING: 120/240V 1 PHASE 3WIRE		200A MAIN CIRCUIT BREAKER			
		TYPE: SERIES E OR APPROVED EQUAL		MOUNTING: FLUSH		EQUIPMENT GROUND BUS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
LOAD SERVICE	CKT BRKR	WATTS PER PHASE A B	CKT NO	NEUTRAL A B	CKT NO	WATTS PER PHASE A B	CKT BRKR	LOAD SERVICE	
DHP-1	20A	1680	1		2		20A	REC	
DHP-2	25A	2772	3		4		20A	NEW PHONE BOARD	
HP	40A	2772	5		6		20A	REC	
HP	40A		7		8		20A	EMH	
HP	40A		9		10		40A	HP	
AHU	60A		11		12		40A	HP	
REC	20A		13		14		60A	AHU	
REC	20A		15		16		20A	LTS	
REC DED	20A		17		18		40A	HP	
REC DED	20A		19		20		20A	REC	
REC DED	20A		21		22		20A	REC	
REC DED	20A		23		24		20A	REC- DED	
REC	20A		25		26		60A	AHU	
NEW PANEL 'B'	100A		27		28				
NEW PANEL 'B'	100A		29		30				
NOTES		SUB-TOTALS 'B'		200A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD	
				200A LUGS		SUB-TOTALS 'B'			
				200A FEED		GRAND TOTAL			
				VERIFY SIZE		--A --A		AMPS/PHASE	

NEC ALLOWABLE DEMAND FACTORS	DIVERSIFIED LOAD SUMMARY		
① DEMAND FACTORS PER NEC 220	LOAD TYPE <td>DEMAND FACTOR</td> <td>A B TOTAL DIVERSIFIED LOAD</td>	DEMAND FACTOR	A B TOTAL DIVERSIFIED LOAD
② LARGEST OF: NEC TABLE 220.12 OR CONNECTED LOAD	GENERAL LIGHTING	125%	---
③ NEC TABLE 220.56	TRACK LIGHTING	125%	---
④ NEC 220.51	GENERAL USE RECEPTACLES	100%	---
⑤ NEC 220.43A, 200 VA/LINEAR FT	MOTORS AND EQUIPMENT	125%	---
⑥ NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED	WATER HEATERS	100%	---
	KITCHEN EQUIPMENT	100%	---
	FIX. ELEC. SPACE HEAT.	100%	---
	SHOW WINDOW LIGHTS	125%	---
	SIGN	125%	---
	MISC	100%	---
	PHASE (TOTAL VA)		
	TOTAL AMPS		--A --A --A TOTAL AMPS

