



BUILDING PLAN
FOR
TOTAL BODY THERAPY & WELLNESS
260 PINE STATE STREET
LILLINGTON, NORTH CAROLINA

PREPARED FOR

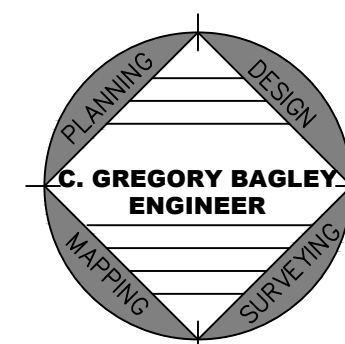
TOTAL BODY THERAPY & WELLNESS
2 THE SQUARE at LILLINGTON
LILLINGTON, NC
Ph. (910) 893-2850

ENGINEER

C. GREGORY BAGLEY
805 COKESBURY ROAD
FUQUAY VARINA, NC 27526
PHONE: (919) 609-300

SHEET INDEX

COVER
CODE
BOUNDARY MAP
FLOOR PLAN
ELEVATIONS
FOUNDATION PLAN
PLUMBING PLAN
MECHANICAL PLAN
ELECTRICAL PLAN



2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: SAVA WOODSON
Address: 280 PINE STATE STREET
Owner/Authorized Agent: GREG BAGLEY, Phone # (919) 552-4300, E-Mail: greg@gregbagley.com

CONTACT:
DESIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL
Architectural C. Gregory Bagley, Engineer Greg Bagley 12276 (919) 552-4300 GREG@GREGBAGLEY.COM

2018 NC BUILDING CODE: Select one NEW CONSTRUCTION
2018 NC EXISTING BUILDING CODE: Select one Select one Select one
CONSTRUCTED (date) CURRENT OCCUPANCY(S) (Ch. 3) VACANT
RENOVATED (date) PROPOSED OCCUPANCY(S) (Ch. 3) BUSINESS

2018 NC EXISTING BUILDING CODE: Select one Select one Select one
CONSTRUCTED (date) CURRENT OCCUPANCY(S) (Ch. 3) VACANT
RENOVATED (date) PROPOSED OCCUPANCY(S) (Ch. 3) BUSINESS
RISK CATEGORY (Table 1604.5): Current: Select one Proposed: Select one

2018 NC Administrative Code and Policies

ALLOWABLE AREA

Primary Occupancy Classification(s): Select one Select one Select one Select one Select one
Accessory Occupancy Classification(s):
Incidental Uses (Table 509):
Special Uses (Chapter 4 - List Code Sections):
Special Provisions (Chapter 5 - List Code Sections):

Mixed Occupancy: Select one Separation, Select one Exception:
Select one
Actual Area of Occupancy A + Actual Area of Occupancy B
Allowable Area of Occupancy A Allowable Area of Occupancy B < 1

STORY NO. DESCRIPTION AND USE
1 BUSINESS 1000 21,000 N/A 21,000

1 Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)
b. Total Building Perimeter = N/A (P)
c. Ratio (F/P) = N/A (F/P)
d. W = Minimum width of public way = N/A (W)
e. Percent of frontage increase If = 100(F/P - 0.25) x W/30 = N/A (%)
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.
5 Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

ALLOWABLE SHOWN ON PLANS CODE REFERENCE 1
Building Height in Feet (Table 504.3) 2 60 12
Building Height in Stories (Table 504.4) 3 1

1 Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
2 The maximum height of air traffic control towers must comply with Table 412.3.1.
3 The maximum height of open parking garages must comply with Table 406.5.4.

2018 NC Administrative Code and Policies

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT FIRE SEPARATION DISTANCE (FEET) RATED DETAIL AND SHEET # FOR RATED ASSEMBLY SHEET # FOR RATED PENETRATION SHEET # FOR RATED JOINTS

2018 NC Administrative Code and Policies

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES DEGREE OF OPENINGS PROTECTION (TABLE 705.5) ALLOWABLE AREA (%) ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Select one NO
Exit Signs: Select one NO
Fire Alarms: Select one NO
Smoke Detection Systems: Select one YES
Carbon Monoxide Detection: Select one NO

LIFE SAFETY PLAN REQUIREMENTS

- Life Safety Plan Sheet #:
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))
Door 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 1-2 (407.5)
Note any code exceptions or table notes that may have been utilized regarding the items above

2018 NC Administrative Code and Policies

ACCESSIBLE DWELLING UNITS (SECTION 1107)

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

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA TOTAL # OF PARKING SPACES REQUIRED PROVIDED REGULAR WITH # ACCESSIBLE VAN SPACES WITH # ACCESSIBLE TOTAL # ACCESSIBLE SPACES PROVIDED

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE WATERCLOSETS URINALS LAVATORIES SHOWERS DRINKING FOUNTAINS MALE FEMALE UNisex MALE FEMALE UNisex

SPECIAL APPROVALS

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

2018 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.

Existing building envelope complies with code: Select one
Exempt Building: Select one Provide code or statutory reference:

Climate Zone: 4
Method of Compliance: Select one
PERSCRPTIVE

THERMAL ENVELOPE (Prescriptive method only)

Roof/Ceiling Assembly (each assembly)
Description of assembly: METAL ROOFING
U-Value of total assembly: .025
R-Value of insulation: COMPOSITE R-30+
Skylights in each assembly:
U-Value of skylight:
total square footage of skylights in each assembly:
Exterior Walls (each assembly)
Description of assembly: METAL SIDING
U-Value of total assembly: .025
R-Value of insulation: R-15
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: R-4 AS PER SECTION 502.2.4 TABLES 1.2.3
U-Value of total assembly: .25
R-Value of insulation: R-4
Horizontal/vertical requirement:
slab heated:

2018 NC Administrative Code and Policies

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Snow (IS) Select one .87
Seismic (IE) Select one .8
Live Loads: Roof 20 psf
Mezzanine 50 psf
Floor 50 psf 100 PSF FOR COMMON PORCHES
Ground Snow Load: 15 psf
Wind Load: Ultimate Wind Speed 110 mph (ASCE-7)
Exposure Category Select one C

SEISMIC DESIGN CATEGORY: Select one

Risk Category (Table 1604.5) Select one I
Spectral Response Acceleration SS 2.7 %g S1 3.7 %g
Site Classification (ASCE 7) Select one E
Data Source: PRESUMPTIVE
Basic structural system Select one BUILDING FRAME
Analysis Procedure: Select one SIMPLIFIED
Architectural, Mechanical, Components anchored? Select one

LATERAL DESIGN CONTROL: Select one

SOIL BEARING CAPACITIES:
Select one 2000 psf
Pile size, type, and capacity _____

2018 NC Administrative Code and Policies

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

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: 20
summer dry bulb: 92

Interior design conditions

winter dry bulb: 20
summer dry bulb: 92
relative humidity: 70

Building heating load: 42050

Building cooling load: 61325

Mechanical Spacing Conditioning System

Unitary description of unit: (2) SPLIT SYSTEMS
heating efficiency: 13 SEERS
cooling efficiency: 42
size category of unit: 58000
Boiler Size category: if oversized, state reason: N/A
Chiller Size category: if oversized, state reason: N/A

List equipment efficiencies: 44 %

2018 NC Administrative Code and Policies

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Select one PERSCRPTIVE
Lighting schedule (each fixture type) PER DRAWINGS
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

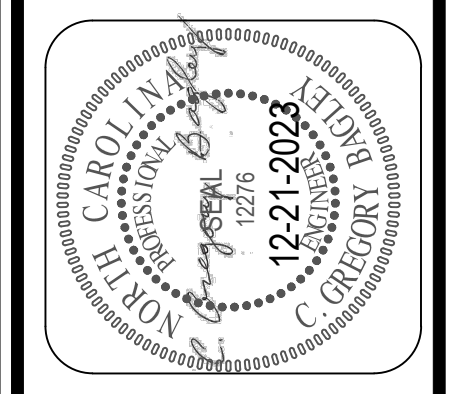
Additional Efficiency Package Options

- (When using the 2018 NCECC, not required for ASHRAE 90.1)
C406.2 More Efficient HVAC Equipment Performance
C406.3 Reduced Lighting Power Density
C406.4 Enhanced Digital Lighting Controls
C406.5 On-Site Renewable Energy
C406.6 Dedicated Outdoor Air System
C406.7 Reduced Energy Use in Service Water Heating

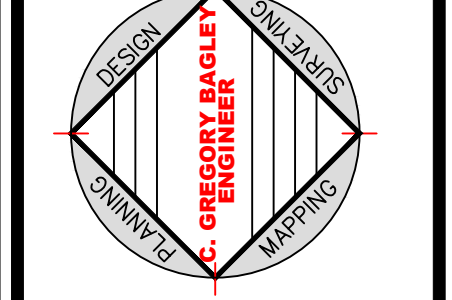
2018 NC Administrative Code and Policies

Project #:
Date:
Drawn/Design By:
Scale:

REVISIONS
No. Date: Remarks



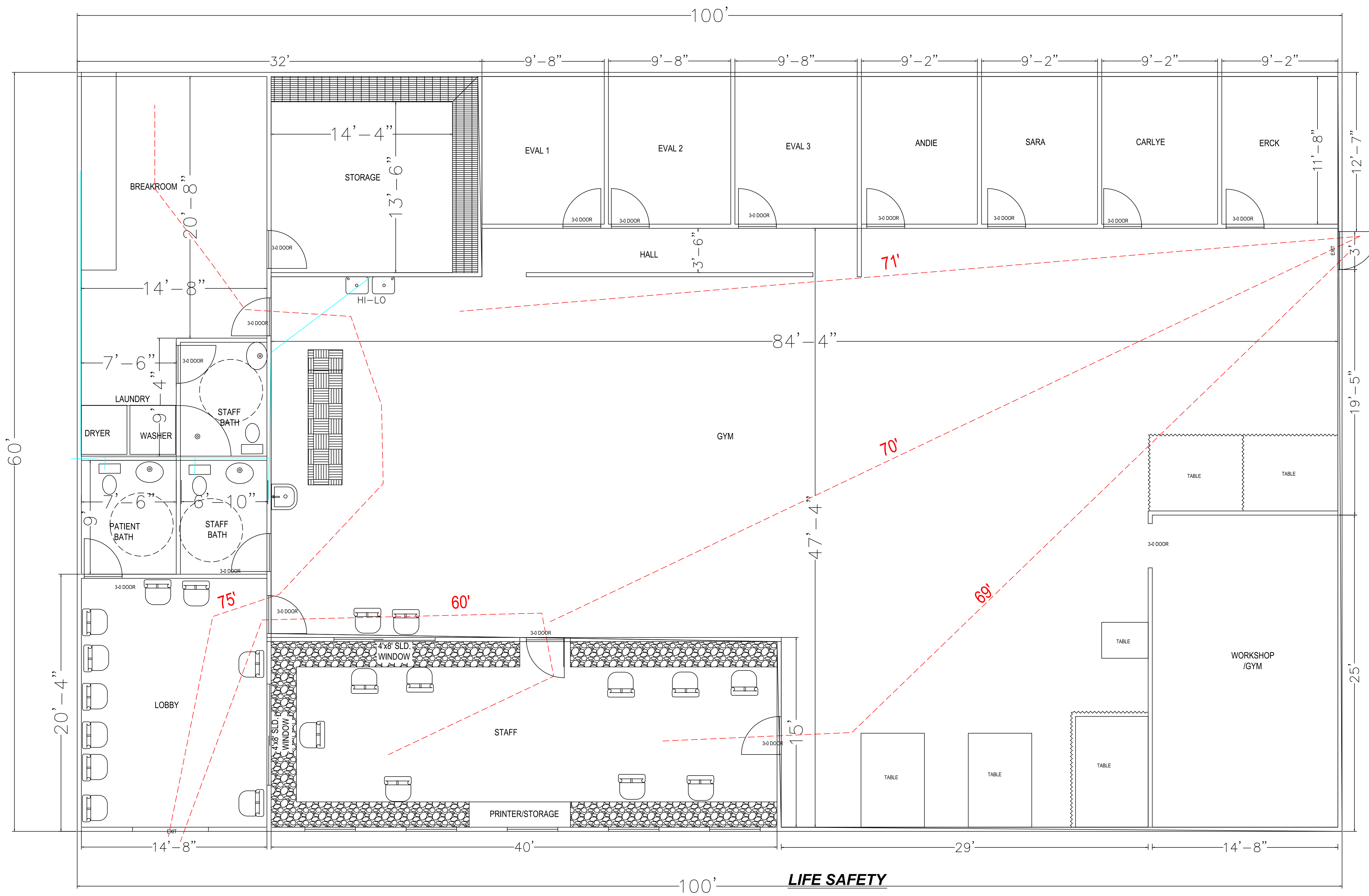
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CODE SHEET

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS PINE STREET LILLINGTON, NC

Sheet Number CODE of 1



OCCUPANT LOAD

LOCATION	TYPE	AREA	OCCUPANCY
EMPLOYEE	BUSINESS	4000 SQ.FT.	10
INDOOR SEATING AREA	BUSINESS	300 SQ.FT.	12
STORAGE (EMPLOYEE)	BUSINESS	140 SQ.FT.	2
TOTAL			24

DOOR SCHEDULE

TYPE	LOCATION	KEYED/Y/N	RH/LH	DESCRIPTION	SIZE
LEVER	INTERIOR	3 Y/12 N	3/12	SOLID CORE HMF	36"
LOCK	INTERIOR BATH	3 Y/12 N		SOLID CORE HMF	36"
LOCK	EXTERIOR	2 Y		STORE FRNT	72"

LIFE SAFETY

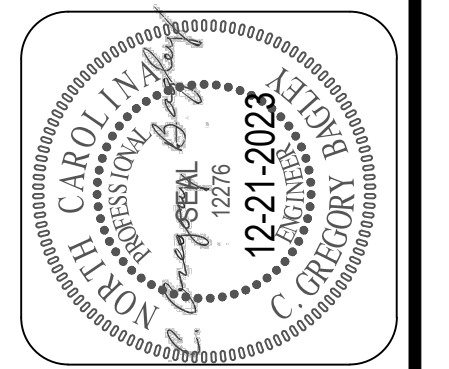
$\frac{3}{16}'' = 1'-0''$

- LIFE SAFETY PLAN REQUIREMENTS**
- Life Safety Plan Sheet #: _____
- 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 (706.2)
 - Occupancy Use for each area as it relates to occupant load calculation (Table 1010.1.9.1)
 - 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 occupant load
 - Actual occupant load for each exit door
 - A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure 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 (1010.1.9.2)
 - Location of doors with electromagnetic egress locks (1010.1.9.3)
 - 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-4
 - Note any code exceptions or table notes that may have been utilized regarding the

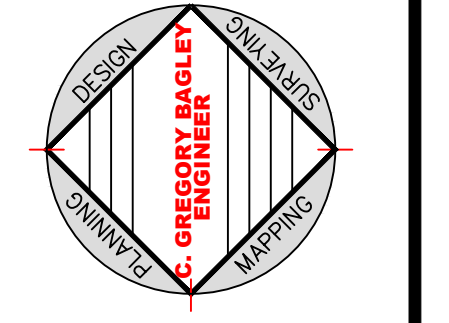
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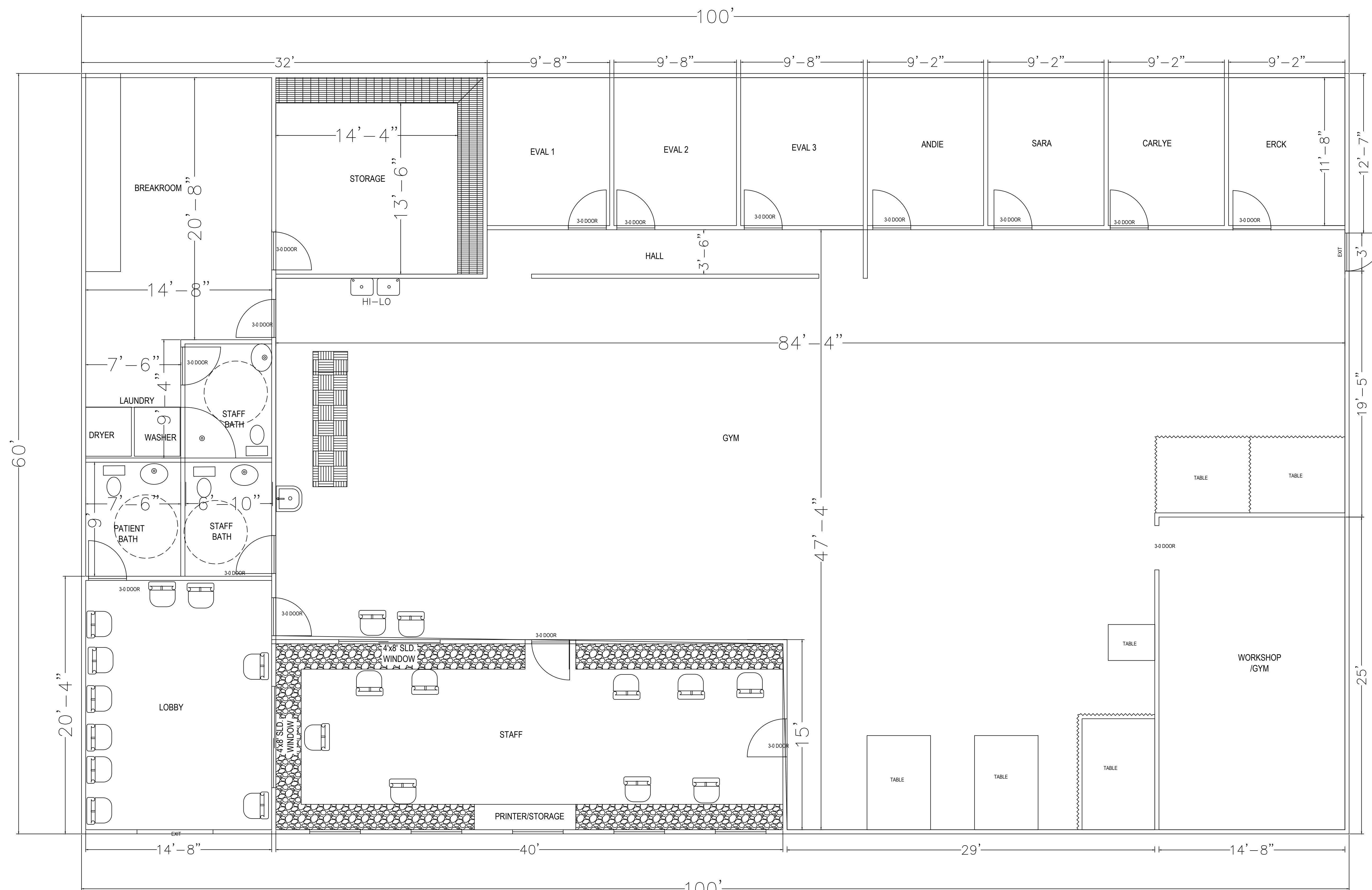


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LIFE SAFETY

FACILITIES FOR
TOTAL BODY THERAPY & WELLNESS
PINE STREET LILLINGTON, NC



OCCUPANT LOAD

LOCATION	TYPE	AREA	OCCUPANCY	OCCUPANCY
EMPLOYEE	BUSINESS	4000 SQ FT	100 SQ FT pp	40
INDOOR SEATING AREA	BUSINESS	1800 SQ FT	100 SQ FT pp	18
STORAGE (EMPLOYEE)	BUSINESS	140 SQ FT	100 SQ FT pp	2
TOTAL				60

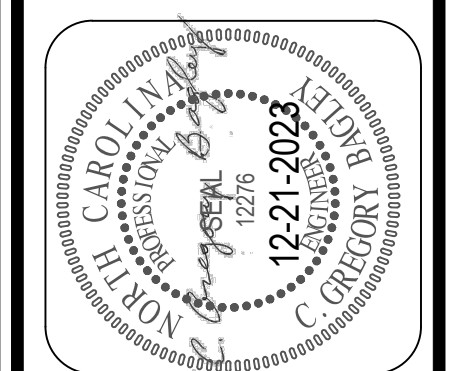
DOOR SCHEDULE

TYPE	LOCATION	KEYED/Y/N	RH/LH	DESCRIPTION	SIZE
LEVER	INTERIOR	3 Y/12 N	3/12	SOLID CORE HMF	36"
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LOCK	EXTERIOR	2 Y		STORE FRNT	72"

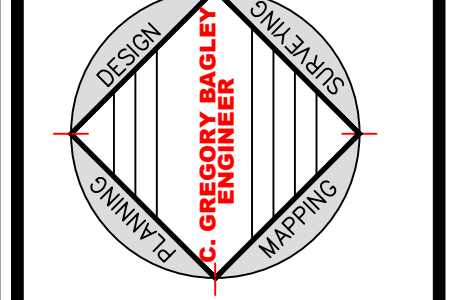
FLOOR PLAN
1/4" = 1'-0"

Project #:
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Drawn/Design By:
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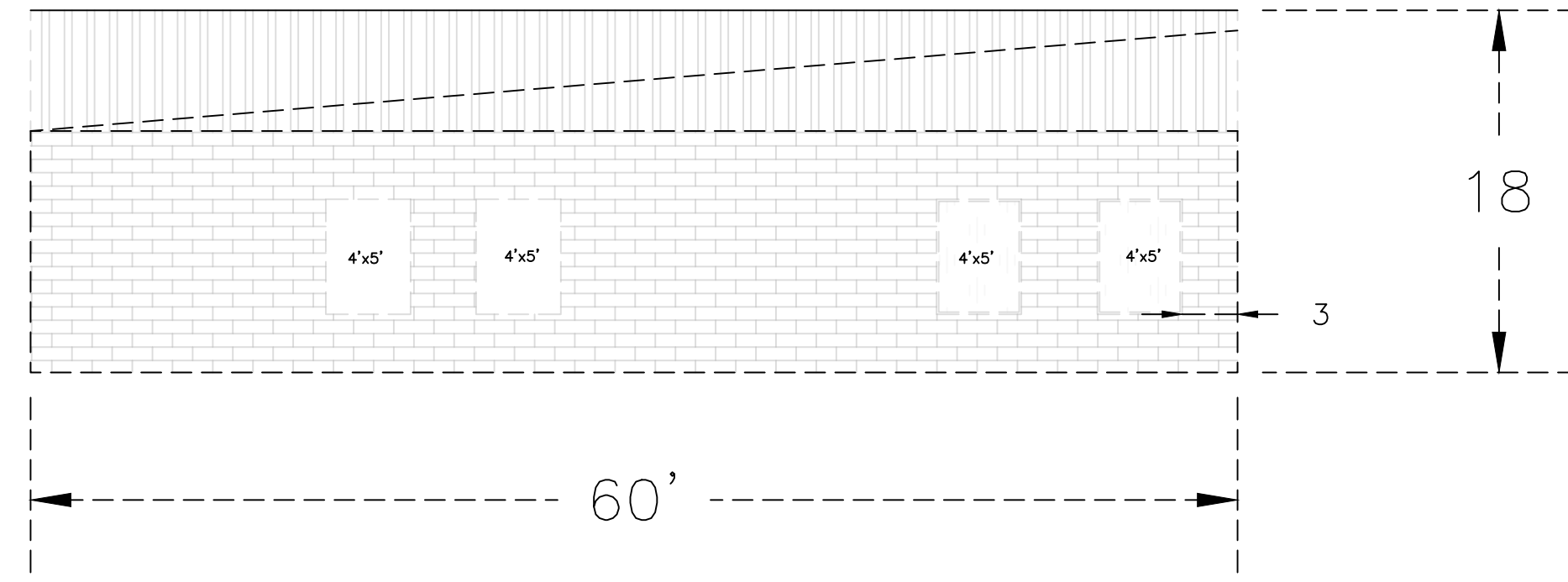
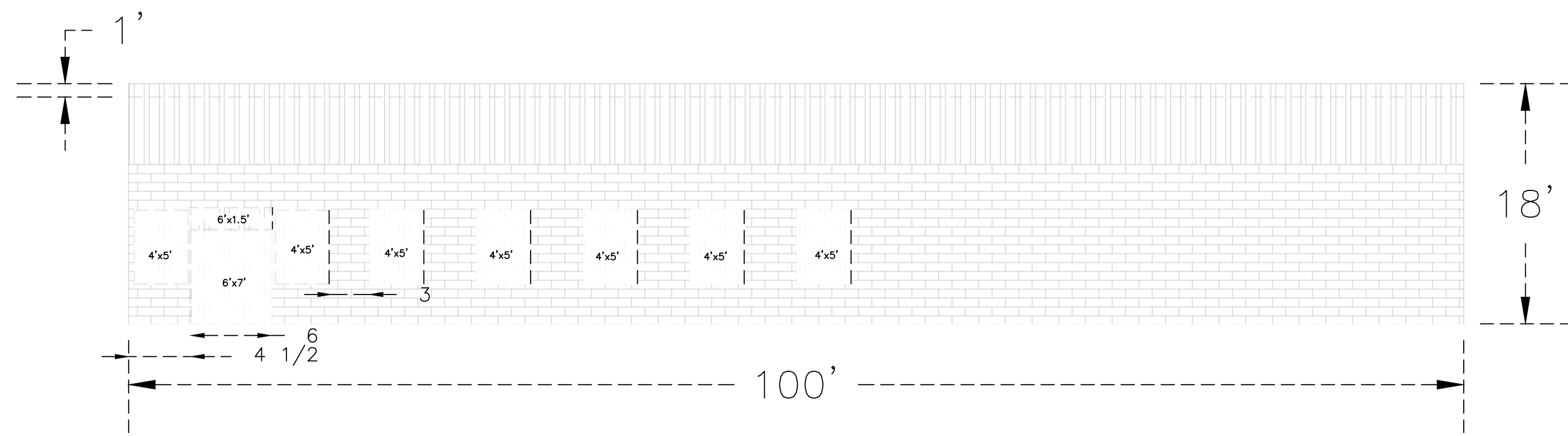


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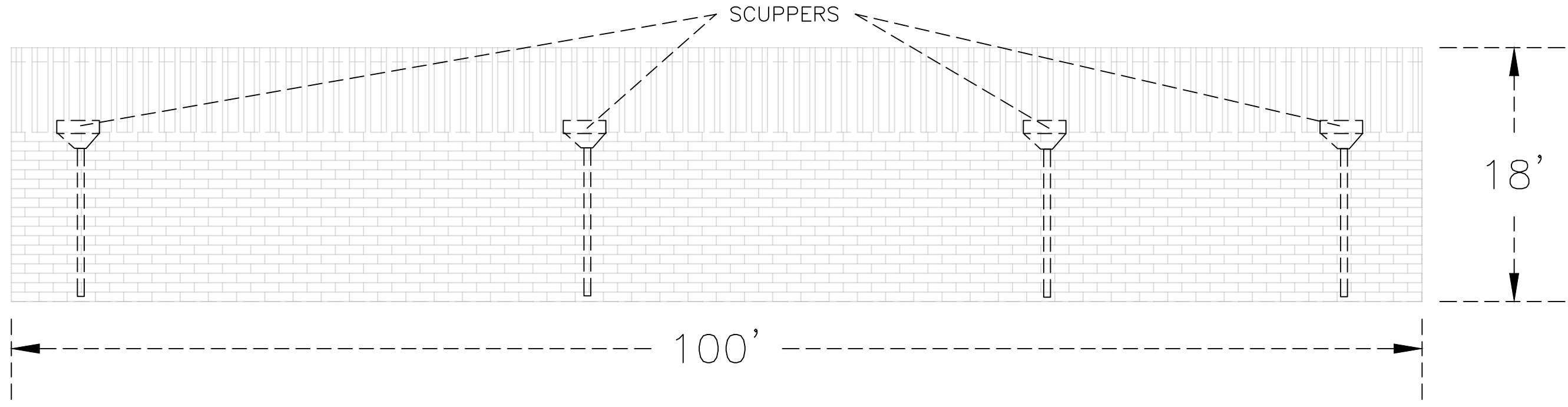
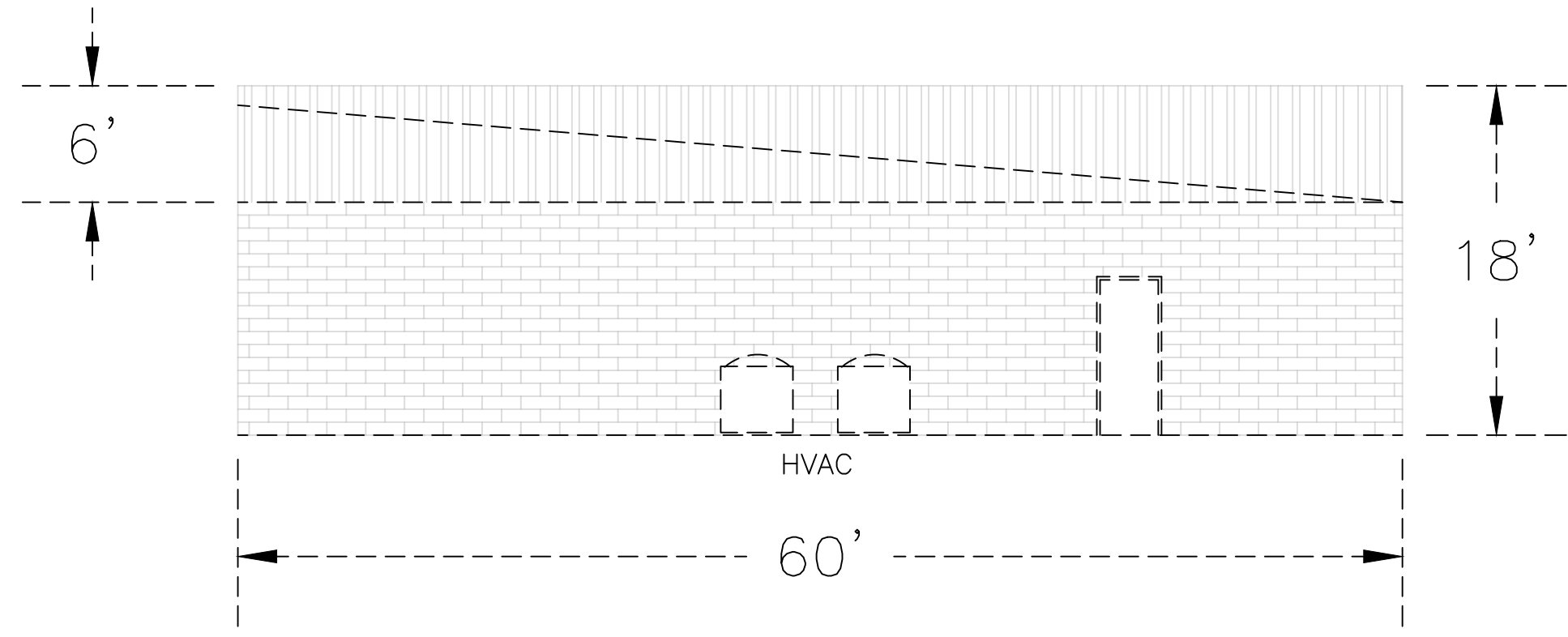


FLOOR PLAN

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS
PINE STREET LILLINGTON, NC



THE ARCHITECTURAL DESIGN EXCEEDS 65% OF THE EXTERIOR WITH BRICK WHICH IS PER THE UDO LILLINGTON.



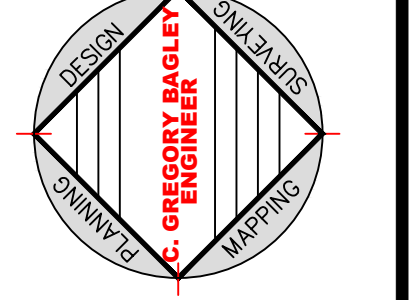
ELEVATIONS
1/8" = 1'-0"

Project #:
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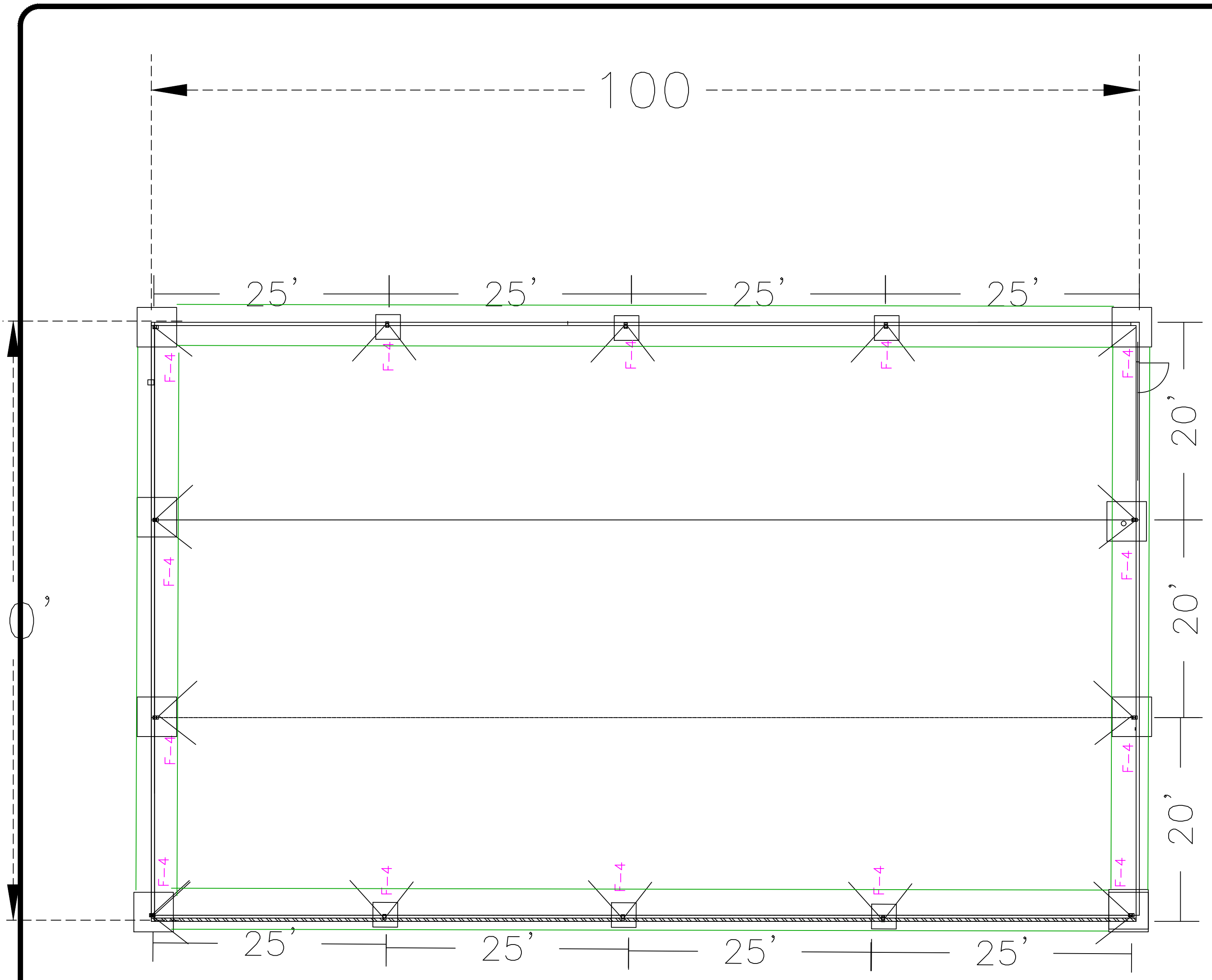


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ELEVATIONS

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS
PINE STREET LILLINGTON, NC



GENERAL NOTES

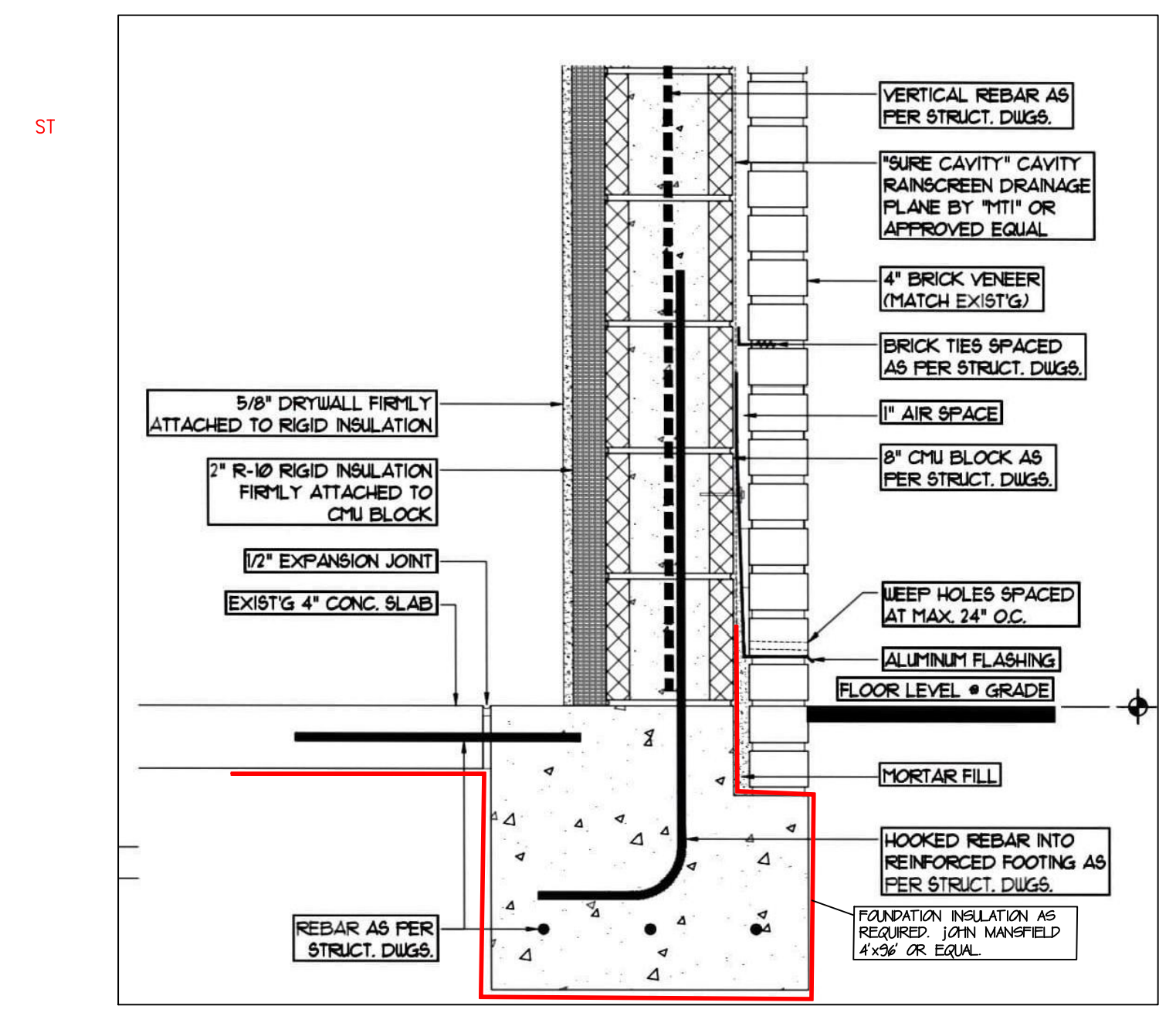
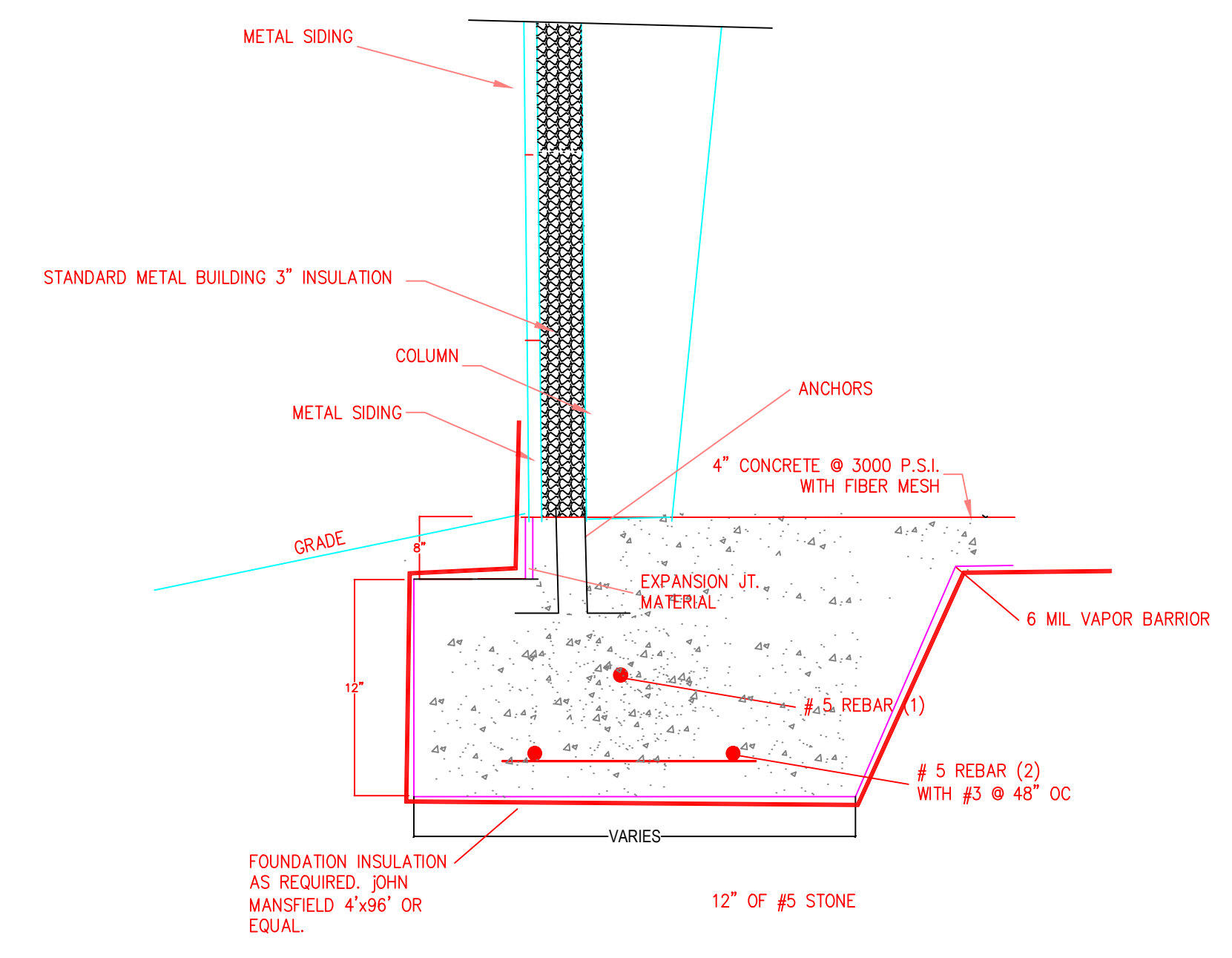
1. REQUIRED CODE JURISDICTION
NORTH CAROLINA BUILDING CODE, 2018 EDITION
ACI BUILDING CODE REQUIREMENT CONCRETE STRUCTURES (ACI 318-99)
ASCE 7-98 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
2. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY.
3. REACTIONS PROVIDED BY DESIGN BUILD COMPANY.
4. SEE BUILDINGS DRAWINGS FOR COLUMN AND BASE PLATE SIZES.
5. ANCHOR BOLT DESIGN PROVIDED BY BUILDING DESIGNER.
6. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS: 3000 PSI 28 DAY 6" SLUMP
7. REINFORCING STEEL SHALL BE PER ASTM A-615 GRADE 60

FOUNDATION REACTION SCHEDULE
PER METAL BUILDING MANUFACTURER

FOOTING SCHEDULE			
SYMBOL	SIZE	DEPTH	STEEL REINF.
F-4	4'x4'	20"	5 No. 5 E.W. BTM.

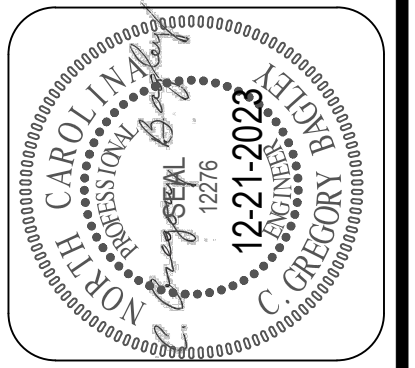
ANCHOR BOLT SCHEDULE	
SYMBOL	SIZE
A-2	3/4" x 18"

FOUNDATION
1/8" = 1'-0"

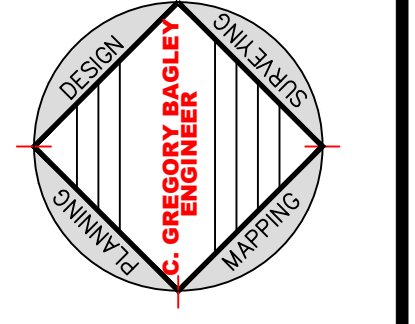


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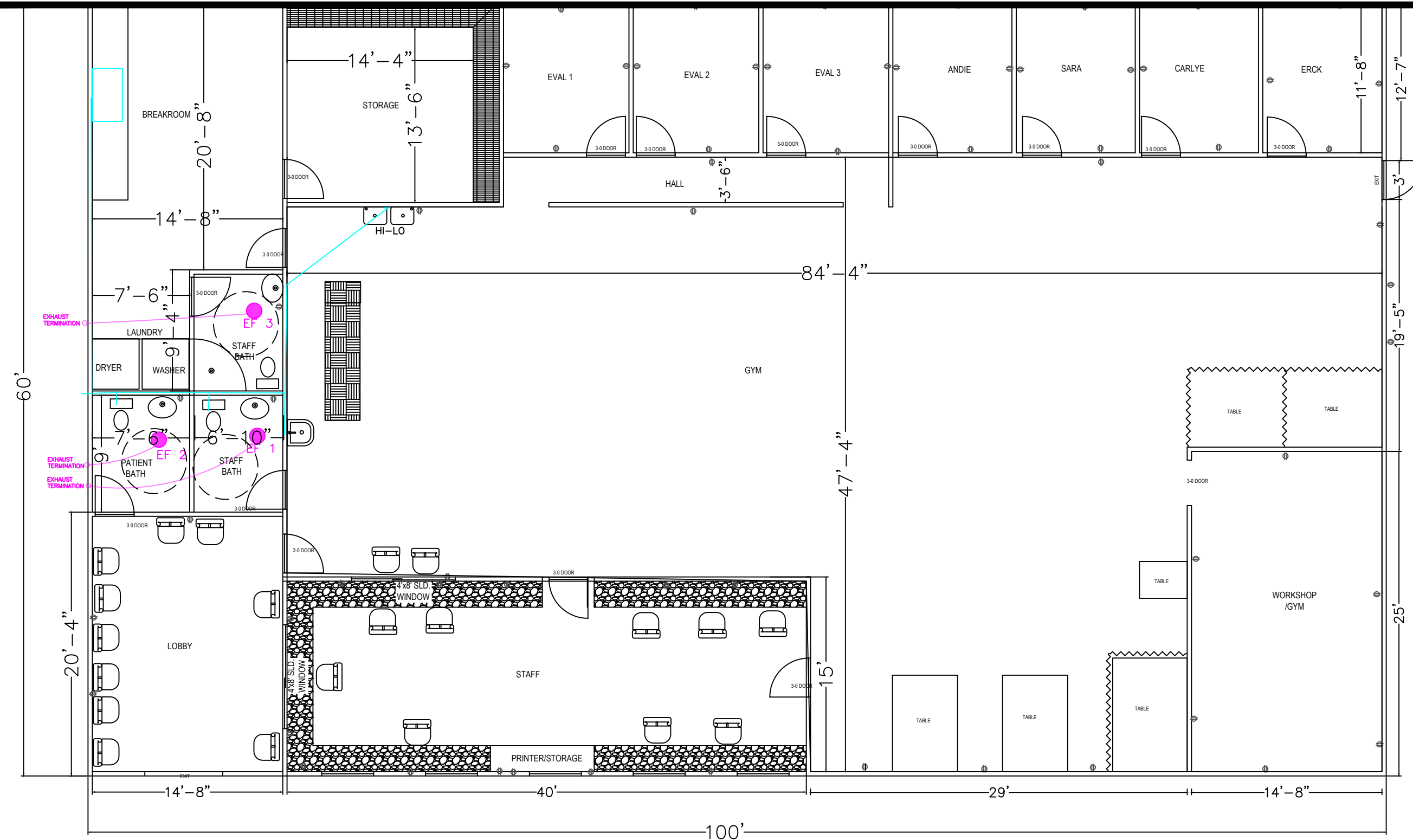


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FOUNDATION

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS
PINE STREET LILLINGTON, NC

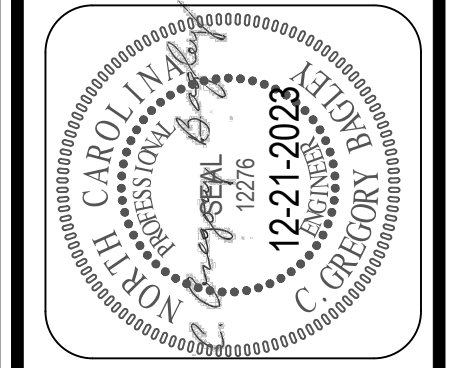


PLUMBING NOTES

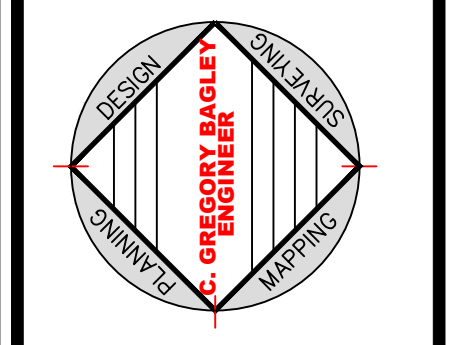
1. ALL VENTS SHALL BE 3" IN SIZE.
2. BACKFLOW PREVENTER SHALL BE LOCATED IN UTILITY ROOM NEXT TO HOT WATER HEATERS.
3. AIRFLOW CHAMBERS ARE NOT REQUIRED.

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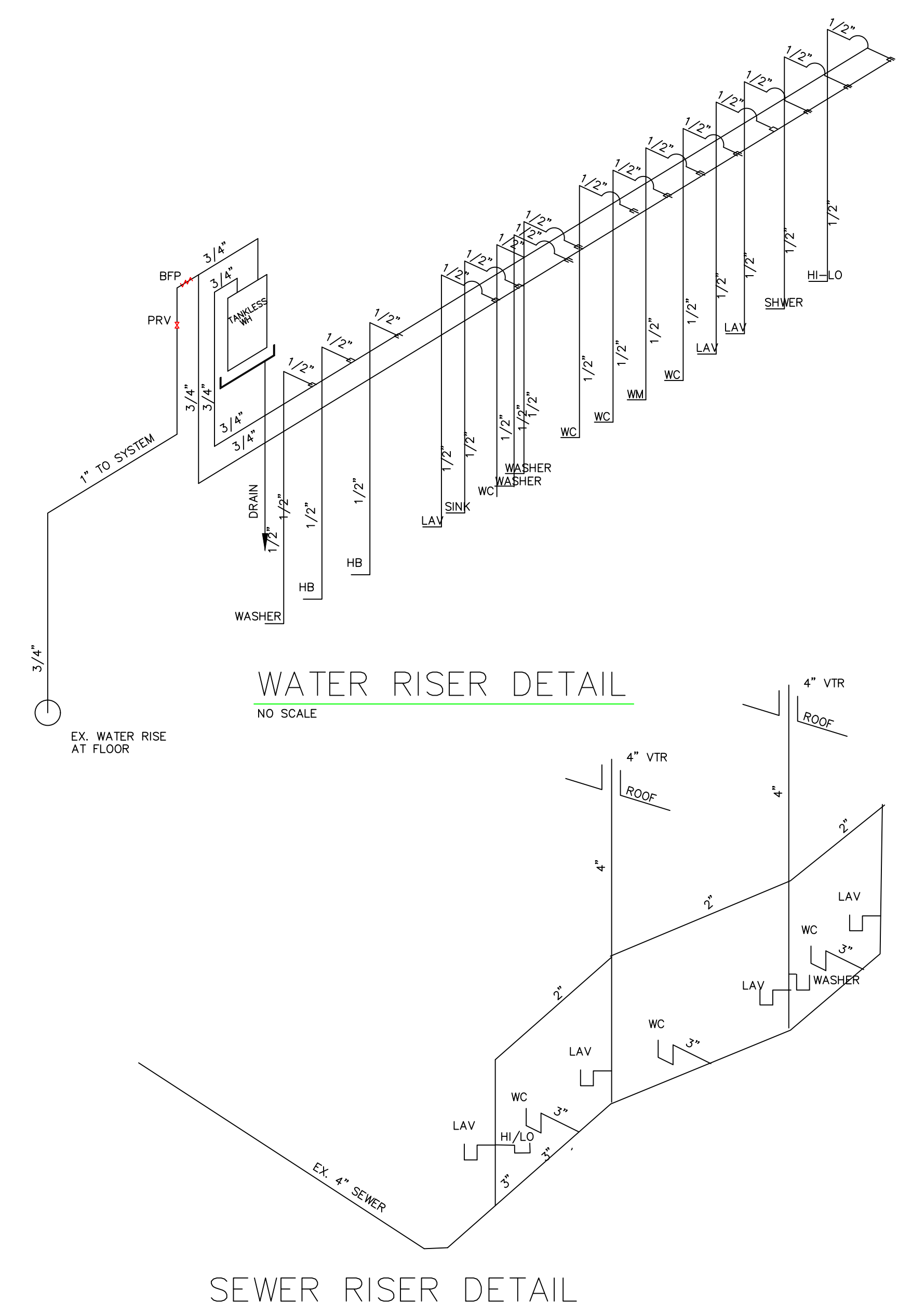
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PLUMBING

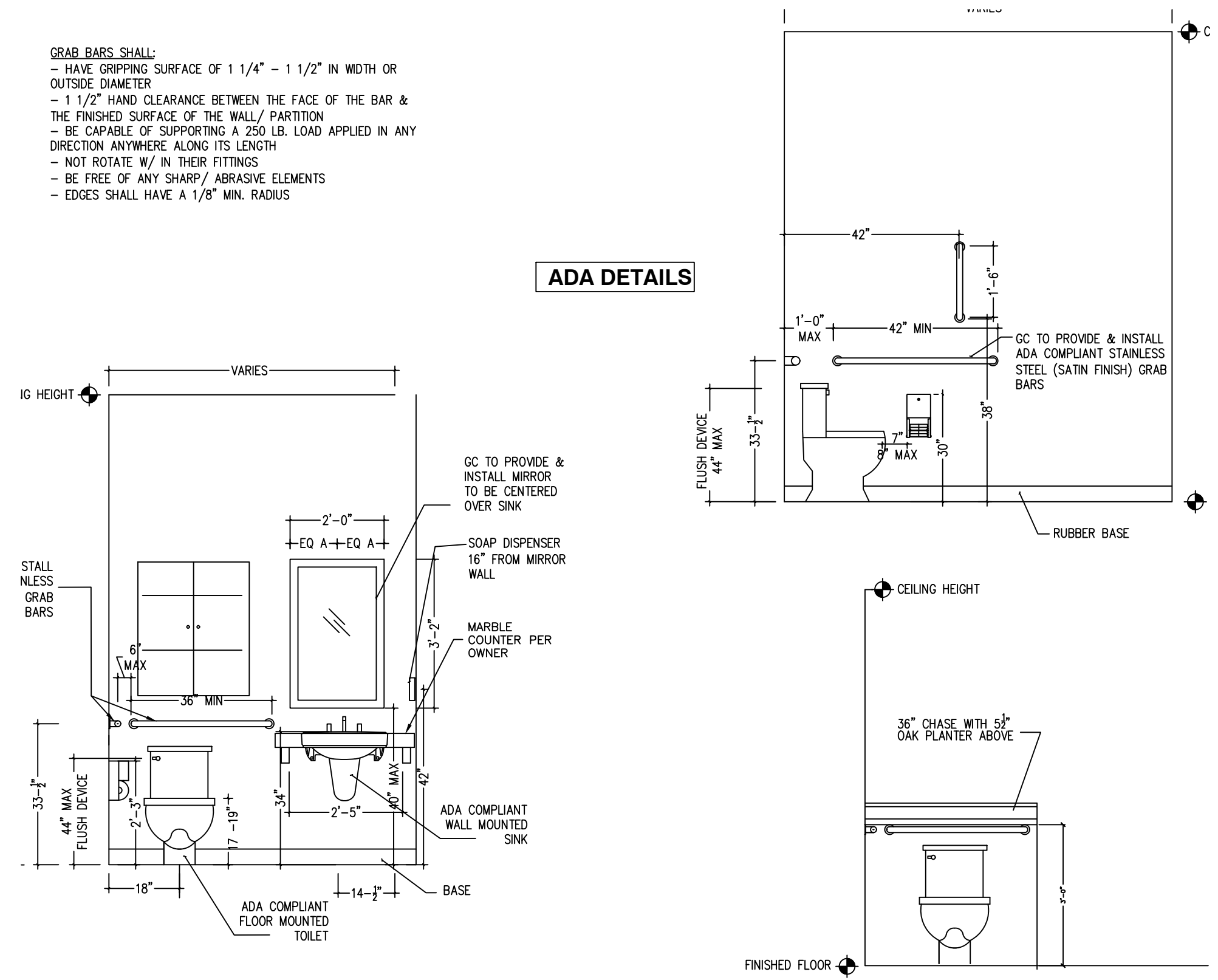
FACILITIES FOR TOTAL BODY THERAPY & WELLNESS
PINE STREET LILLINGTON, NC

Sheet Number
PLUMB 1

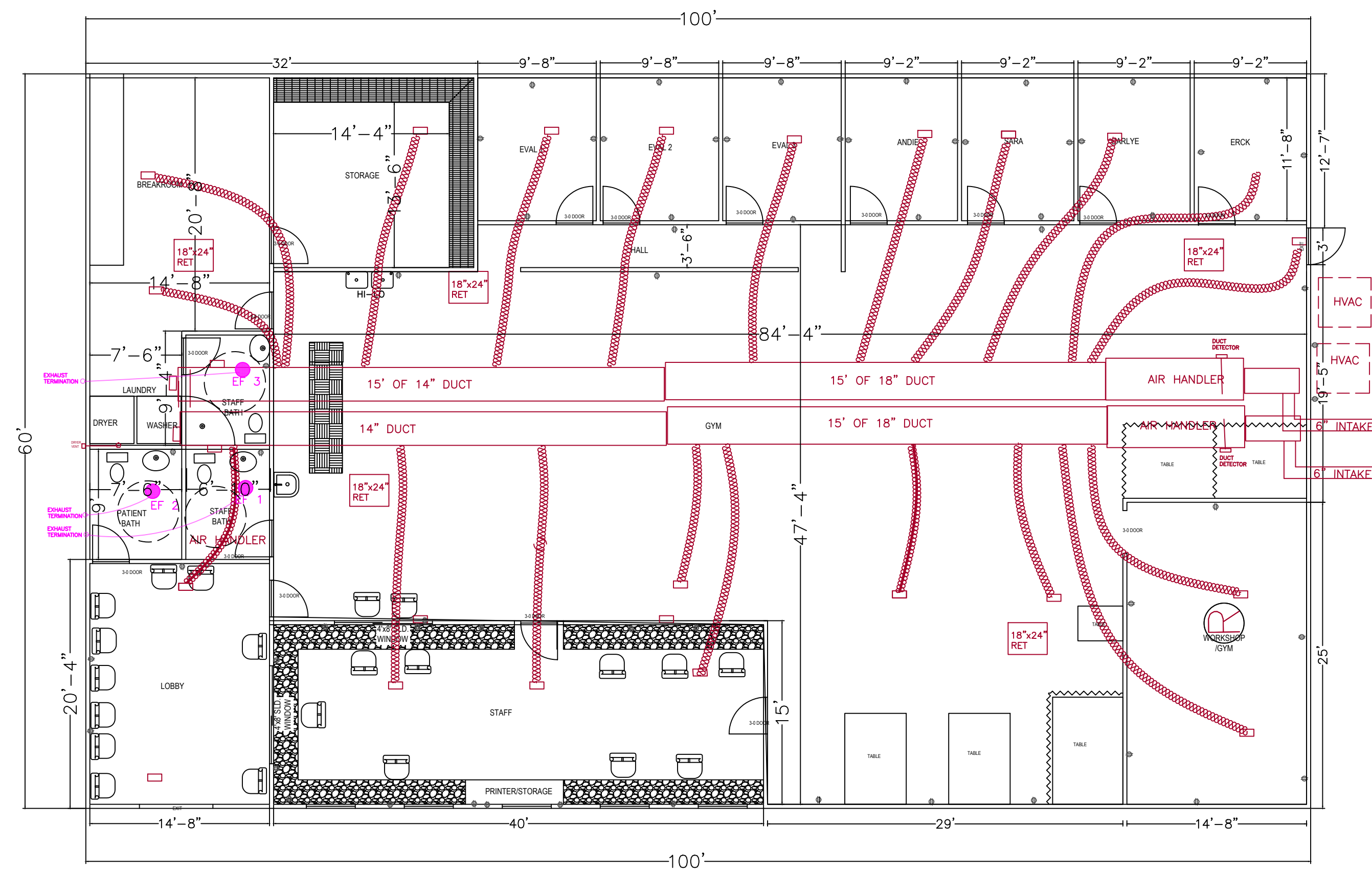


- GRAB BARS SHALL:**
- HAVE GRIPPING SURFACE OF 1 1/4" - 1 1/2" IN WIDTH OR OUTSIDE DIAMETER
 - 1 1/2" HAND CLEARANCE BETWEEN THE FACE OF THE BAR & THE FINISHED SURFACE OF THE WALL/PARTITION
 - BE CAPABLE OF SUPPORTING A 250 LB. LOAD APPLIED IN ANY DIRECTION ANYWHERE ALONG ITS LENGTH
 - NOT ROTATE W/ IN THEIR FITTINGS
 - BE FREE OF ANY SHARP/ ABRASIVE ELEMENTS
 - EDGES SHALL HAVE A 1/8" MIN. RADIUS

ADA DETAILS



PLUMBING
1/8" = 1'-0"



HVAC

MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE	PRESCRIPTIVE
THERMAL ZONE	IV
EXTERIOR DESIGN CONDITIONS	
winter dry bulb	16 F
summer dry bulb	92 F
INTERIOR DESIGN CONDITIONS	
winter dry bulb	70 F
summer dry bulb	74 F
relative humidity	50 %
BUILDING HEATING LOAD	75000/150000 BTU
BUILDING COOLING LOAD	123000 BTU
MECHANICAL SPACE CONDITIONING SYSTEMS	
Unitary	
description of unit	DX COOLING/HEAT
heating efficiency	12.2 IEER
cooling efficiency	12.2 IEER
heating output of units	60750 BTU
cooling output of units	119,000 BTU
LIST EQUIPMENT EFFICIENCIES	SEE SCHEDULE
EQUIPMENT SCHEDULES WITH MOTORS	SEE SCHEDULE

OUTSIDE AIR CALCULATIONS

	CFM/PERSON	TOTAL CFM
50 CLIENTS	5	250

USE 8" FLEX FOR OUTSIDE DUCT TO EACH UNIT

TOTAL CFM PRODUCED = 7200
 (30) 8" VENTS
 30 VENTS @ 220 CFM / VENT
 = 6600 CFM OUTPUT
 STATIC PRESSURE = 0.1in-wg

HVAC EQUIPMENT NOTES

- USE 9-10 TON 14 SEER UNITS HEAT PUMPS.
- UNIT TO BE ON CONC SLAB OUTSIDE BUILDING.
- 3/4" CONDENSATE LINE WITH P-TRAP ROUTED TO OUTSIDE AND FASTENED TO WALL.
- OUTSIDE AIR INTAKE TO BE ROUTED UP WALL FRAMING AND TERMINATED ABOVE ROOF.
- INTAKE MUST BE A MINIMUM OF 10' FROM OUTLET OR EXHAUST.
- MOUNT PROGRAMMABLE THERMOSTAT ON WALL 48" AFF. AS PER ADA REQUIREMENTS
- BATHROOM FANS TO BE 125 CFM WITH 4" DUCT.
- DISCHARGE EXHAUST OUTSIDE OF BUILDING.
- USE 8" FLEX FOR OUTSIDE AIR INTAKE DUCT

GENERAL HVAC NOTES

- PROVIDE ELECTRIC HEAT PUMP - SEE BELOW
- MIN REQUIREMENTS TO BE MET AS NOTED ABOVE MET FROM NOTES ABOVE
- LOCATE PROGRAMMABLE THERMOSTATS AS NEEDED FOR PROPER EFFECT
- FANS SHALL RUN CONTINUOUSLY DURING OCCUPANCY TO PROVIDE OUTSIDE AIR.
- DUCT DETECTORS REQUIRED ON ALL UNITS
- REMOTE ALARM INDICATOR DEVICES (RAIDS) REQUIRED FOR EACH UNIT AND TO BE INSTALLED
- NEAR UNIT NO MORE THAN 72" AFF
- DUCT SMOKE DETECTORS TO OPERATE GLOBALLY. ie WHEN ONE DETECTOR ACTIVATES, ALL AIR HANDLING UNITS SHUT DOWN.

MECHANICAL
 1/8" = 1'-0"

MECHANICAL SCHEDULE

HEAT PUMP AND AIR HANDLER					
TYPE	RATING	TON	MODEL NO	MCA	MOCF
CARRIER HP	14 SEER	2-10	25HBRxxxxxxx	27.6	40 AMPS
CARRIER AHU		10 KW	FC4DNFxxxxx	57.5	60 AMPS

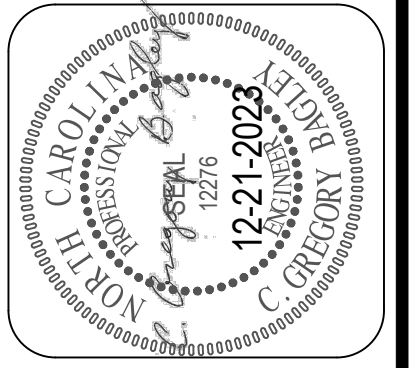
LIGHTING SCHEDULE

TYPE	LOCATION	MANUF	MODEL NO	QUANTITY
LED	GYM	LITHONIA	LE 2174X	10
LED	OFFICE	LITHONIA	DLE 135X	1/150 SQ FT

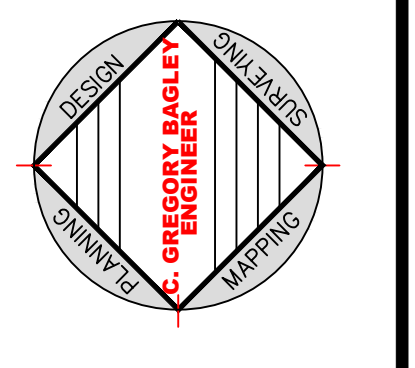
THERE SHALL BE NO HAZARDOUS MATERIAL PER NEC 500 STORED, USED ,HANDLED OR MFG. IN THIS FACILITY.

Project #:
 Date:
 Drawn/Design By:
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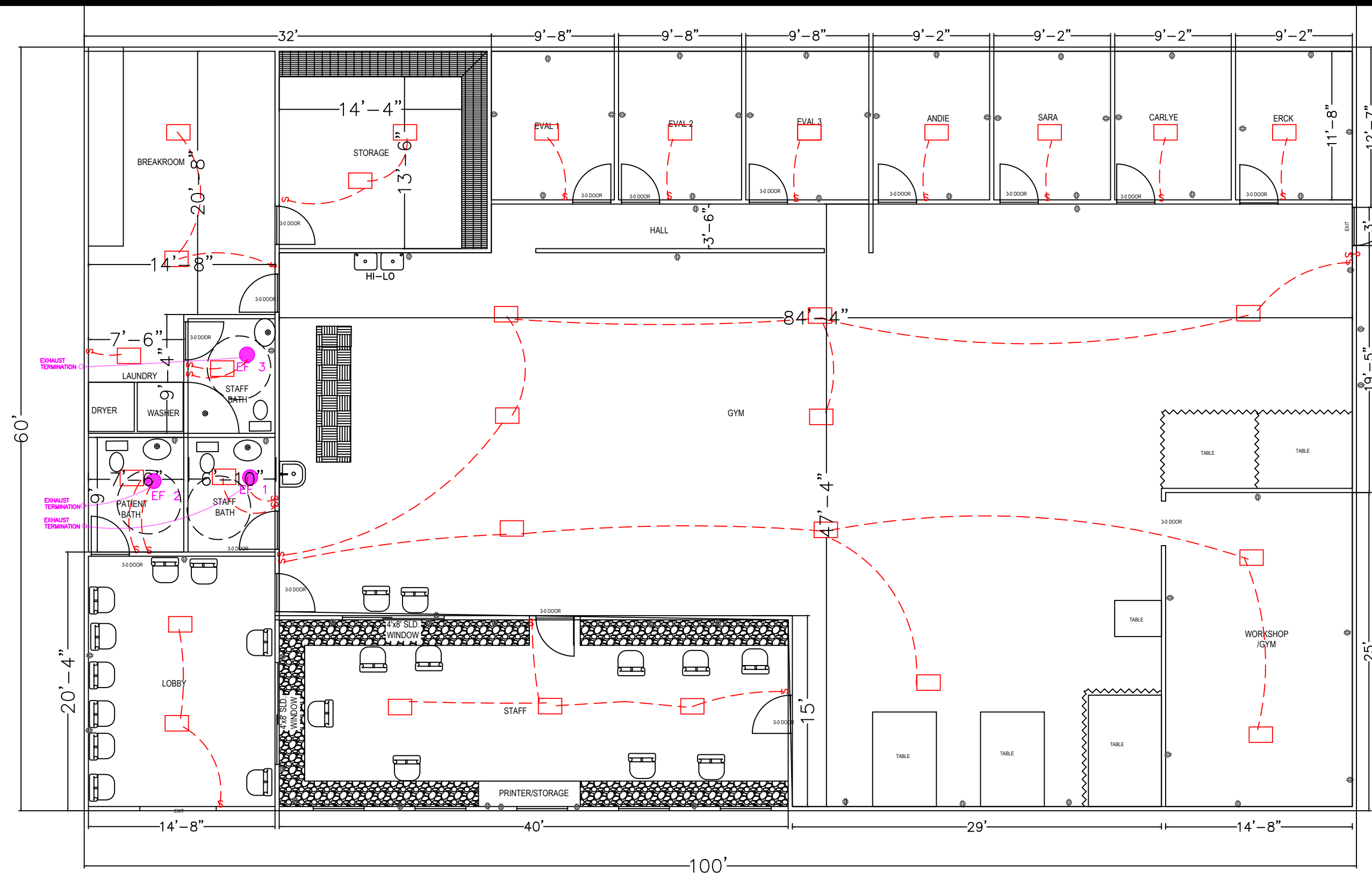
C. Gregory Bagley, Engineer
 805 Cokesbury Road
 Fuquay Varina, N.C. 27526
 Office: (919)552-1600
 Fax: (919) 552-6325



MECHANICAL

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS
 PINE STREET LILLINGTON, NC

Sheet Number
MECH 1
 of 1



LIGHTING SCHEDULE

TYPE	LOCATION	MANUF	MODEL NO	QUANTITY
LED	GYM	LITHONIA	LE 2174X	10
LED	OFFICE	LITHONIA	DLE 135X	1/150 SQ FT

ELECTRICAL DETAILS AND NOTES FOR HEALTHCARE FACILITY

2020 NORTH CAROLINA STATE ELECTRICAL CODE

This is a recreated compact version of the 2020 State Electrical Code Amendment Package. The official version is located in the archives of the Building Code Council's website. Report errors to the State Electrical Division of the North Carolina Department of Insurance, Office of State Fire Marshal, JOS 6110201.

Article 10 - ADMINISTRATIVE SECTION

10.1 TITLE
These Administrative Regulations along with the requirements included in the 2020 Edition of the National Electrical Code (NFPA 70 - 2020) as adopted by the North Carolina Building Code Council on June 8, 2021, to be effective October 1, 2021, with the following amendments:

(1) 110.26(E)(2)	(12) 230.67	(23) 334.15(C)
(2) 210.8	(13) 230.71(B)	(24) 408.4(D)(4)
(3) 210.8(A)	(14) 230.85	(25) 410.2
(4) 210.8(B)(2)	(15) 230.90	(26) 410.10(C)
(5) 210.8(A)(3)	(16) 230.53(A)(2)	(27) 555.10(3)
(6) 210.8(A)(4)	(17) 230.140	(28) 555.29(A)(3)
(7) 210.8(B)(4)	(18) 230.142(B)	(29) 680.4
(8) 210.8(F)	(19) 300.3(B)	(30) 682.2(D)
(9) 210.10(2)	(20) Table 300.5	(31) 685.2
(10) 210.52(B)(2)	(21) 300.8	(32) 685.3
(11) 210.52(C)(2)	(22) 320.23(A)	

shall be known as the North Carolina Electrical Code, and may be cited as such or as the State Electrical Code; all will be referred to herein as "this code" or "this code."

10.2 SCOPE
Action for Administration and Enforcement of the code is hereby not adopted and does not apply for this code. For Scope and Exceptions to Applicability of Technical Codes, refer to the North Carolina Administrative Code and Statutes.

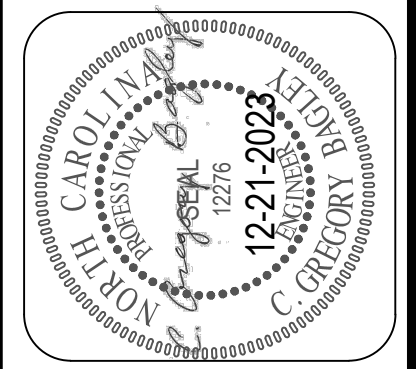
10.3 PURPOSE
The purpose of the code is to provide minimum standards, provisions and requirements of safe and stable design, methods of construction and uses of materials in buildings or structures hereafter erected, constructed, enlarged, altered, repaired, moved, converted to other uses of demolished and to regulate the electrical systems, equipment, maintenance, use and occupancy of all buildings or structures. All regulations contained in this code have a reasonable and substantial connection with the public health, safety, morals, or general welfare, and their provisions shall be construed liberally to those ends.

10.4 ADMINISTRATION
For administrative regulations pertaining to inspection (rough-ins and final), permits and Certificates of Electrical Completion, see local ordinances and the North Carolina Administrative Code and Statutes. When the provisions of other codes are determined to be contrary to the requirements of this code, this code shall prevail.

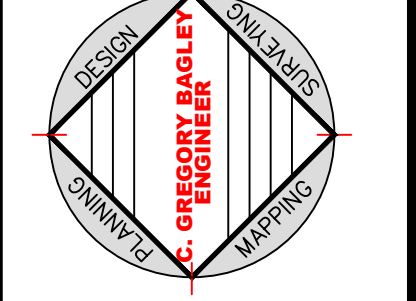
10.5 DEFINITION
Unless the context indicates otherwise, whenever the word "building" is used in this chapter, it shall be deemed to include the word "structure," and all installations such as plumbing systems, heating systems, cooling systems, electrical systems, elevators and other installations which are parts of, or permanently affixed to, the building or structure.

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ELECTRICAL

FACILITIES FOR TOTAL BODY THERAPY & WELLNESS LILLINGTON, NC

Sheet Number
ELEC 1

ELECTRICAL
1/8" = 1'-0"

OCCUPANCY SENSORS AT ALL LOCATIONS
RECEPTACLES SHOWN ON PLAN ABOVE.

ELECTRICAL

400 AMP SERVICE
VOLTAGE 208/120V 3 PHASE : 4 WIRE

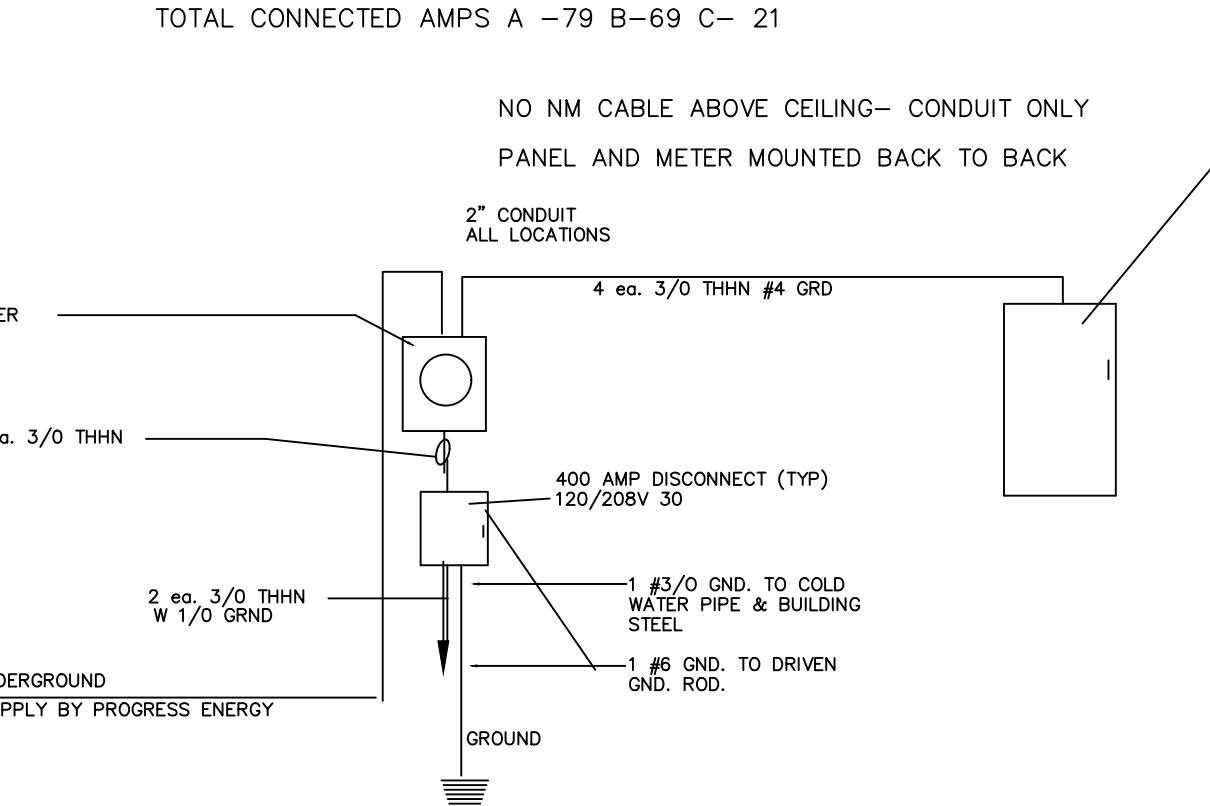
SIZE	AMPS TRIP	DEVICES	BRANCH CIRCUIT												DEVICES	AMPS TRIP	SIZE						
			Ø	A	B	C	D	E	F	G	H	I	J	K				L					
12	20	1	RECEPT	1													2	RECPT.	1	20	12		
10	20	1	RECEPT	3	37												10	4	RECPT.	1	20	12	
10	20	1	RECEPT	5		32											10	6	RECPT. BATH GFI	1	20	12	
12	40	1	RECEPT 220	7	7												11	8	RECPT. 220	1	40	12	
12	20	1	LIGHTING BATH	9		7											11	10	BATH FAN	1	40	10	
12	20	1	EXIT	11	7												12	12	WATER HTR.	1	40	10	
12	20	1	DRYER	13		7											14	14	WASHER	1	20	12	
12	20	1	SIGN	15													16	16	LIGHTING WALL PK	1	20	12	
10	60	1		17													17	17		2	30	10	
10	60	1		19													20	20		2	30	10	
			TOTAL	51	48	0	28	21	21														
			TOTAL CONNECTED AMPS A - 79 B - 69 C - 21																				

LOAD CALCS.

LOAD	CONN (KVA)	DEMAND FACTOR	DEMAND LOAD
LIGHTING	5	125% ****	6.25
RECEPT	8.4	151 TO KV - 100% REM - 50%	8.4
HVAC	42.5	100%	42.5
SIGN	1.2	125% ****	1.5
WH	30	125%	37.5
TOTAL	87.1		96.5

LIGHTING LOAD CALCS.

AREA TYPE	MIN WATTS	SQ FT	REQUIRED	PROVIDED
BATH	3.5	64	224	240
STORAGE	1.5	1936	2904	3000



ELECTRICAL DIAGRAM
NOT TO SCALE

ELECTRICAL DETAILS AND NOTES FOR HEALTHCARE FACILITY

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 250.140
250.140 Frames of Ranges and Clothes Dryers. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be connected to the equipment grounding conductor in the manner specified by 250.134 or 250.136.

Exception No. 1: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, the frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be permitted to be connected to the grounded circuit conductor if all the following conditions are met:

- (1) The supply circuit is 120/240-volt, single-phase, 3-wire, or 208Y/120-volt derived from a 3-phase, 4-wire, wye-connected system.
- (2) The grounded conductor is not smaller than 10 AWG copper or 8 AWG aluminum.
- (3) Any of the following:
 - a. The grounded conductor is insulated;
 - b. The grounded conductor is uninsulated and part of a Type SE service-entrance cable and the branch circuit originates at the service;
 - c. The grounded conductor is uninsulated and part of a cable assembly and all current-carrying conductors are protected by a ground fault circuit interrupter at the origination of the branch circuit; or
 - d. A new 3-wire cable assembly not smaller than the existing conductors shall be permitted to be extended from the service to an enclosure where the existing conductors shall be spliced together and provisions are made so that the grounded conductors are insulated by tape, heat-shrink or other approved means inside the enclosure.
- (4) Grounding contacts of receptacles furnished as part of the equipment are bonded to the equipment.

Exception No. 2: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, an equipment grounding conductor sized in accordance with 250.122 shall be permitted to be run separately from the circuit conductors.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 250.142(B)
(B) Load-Side Equipment. Except as permitted in 250.30(A)(1), 250.32(B)(1), Exception No. 1, and Part X of Article 250, a grounded circuit conductor shall not be connected to non-current-carrying metal parts of equipment on the load side of the service disconnecting means or on the load side of a separately derived system disconnecting means or the overcurrent devices for a separately derived system not having a main disconnecting means.

Exception No. 1: The frames of ranges, wall-mounted ovens, counter-mounted cooking units, and clothes dryers under the conditions permitted for existing installations by 250.140 shall be permitted to be connected to the grounded circuit conductor.

- Exception No. 2: It shall be permissible to connect meter enclosures to the grounded circuit conductor on the load side of the service disconnect if all of the following conditions apply:
- (1) Ground-fault protection of equipment is not installed.
 - (2) All meter enclosures are located immediately adjacent to the service disconnecting means.
 - (3) The size of the grounded circuit conductor is not smaller than the size specified in Table 250.122 for equipment grounding conductors.

Exception No. 3: Electrode-type boilers operating at over 1000 volts shall be grounded as required in 490.72(E)(1) and 490.74.

Exception No. 4: It shall be permissible to ground an existing panelboard enclosure by connection to the grounded circuit conductor for a one- and two-family dwelling where all the following conditions apply:

- (1) When relocating or installing an additional main disconnecting means;
- (2) Enacting 250.142(B) Exception No. 5; (1) redefines the existing service entrance conductors as a feeder in Article 100;
- (3) An equipment grounding conductor in the existing panelboard is not present;
- (4) Replacement of the existing service entrance conductors requires either the removal of the building finish or deemed impractical by the AHJ;
- (5) All grounding electrode conductors are removed completely from the existing panelboard; and
- (6) The grounded conductors are insulated by tape, heat-shrink, or other approved means except where covered by the sheathing of a cable assembly or as needed for joints, splices, and termination purposes.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 300.3(B)
(B) Conductors of the Same Circuit. All conductors of the same circuit and, where used, the grounded conductor and all equipment grounding conductors and bonding conductors shall be contained within the same raceway, auxiliary gutter, cable tray, cablebus assembly, trench, cable, or cord, unless otherwise permitted in accordance with 300.3(B)(1) through (B)(4).

(1) Parallelled Installations. Conductors shall be permitted to be run in parallel in accordance with the provisions of 310.10(G). The requirement to run all circuit conductors within the same raceway, auxiliary gutter, cable tray, trench, cable, or cord shall apply separately to each portion of the parallelled installation, and the equipment grounding conductors shall comply with 250.122. Connections, taps, or extensions made from parallelled conductors shall connect to all conductors of the parallelled set, grounded and ungrounded, as applicable. Parallel runs in cable trays shall comply with the provisions of 392.20(C).

Exception: Conductors installed in nonmetallic raceways run underground shall be permitted to be arranged as isolated phase, neutral, and grounded conductor installations. The raceways shall be installed in close proximity, and the isolated phase, neutral, and grounded conductors shall comply with the provisions of 300.20(B).

(2) Grounding and Bonding Conductors. Equipment grounding conductors shall be permitted to be installed outside a raceway or cable assembly where in accordance with the provisions of 250.130(C) for certain existing installations or in accordance with 250.134, Exception No. 2, for dc circuits. Equipment bonding conductors shall be permitted to be installed on the outside of raceways in accordance with 250.102(E).

(3) Nonferrous Wiring Methods. Conductors in wiring methods with a nonmetallic or other nonmagnetic sheath, where run in different raceways, auxiliary gutters, cable trays, trenches, cables, or cords, shall comply with 300.20(B). Conductors in single-conductor Type MI cable with a nonmagnetic sheath shall comply with the provisions of 332.31. Conductors of single-conductor Type MC cable with a nonmagnetic sheath shall comply with 330.31, 330.116, and 300.20(B).

(4) Column-Width Panelboard Enclosures. Where an auxiliary gutter runs between a column-width panelboard and a pull box, and the pull box includes neutral terminations, the neutral conductors of circuits supplied from the panelboard shall be permitted to originate in the pull box.

- (5) Existing Dwelling Panelboards. An equipment grounding conductor for the supply feeder of an existing panelboard in one-and-two-family dwellings shall be permitted to be installed separately and outside of the raceway or cable assembly where all the following conditions apply:
- (a) When relocating or installing an additional service disconnecting means;
 - (b) Enacting 300.3(B)(5)(a) redefines the existing service entrance conductors as a feeder in Article 100; and
 - (c) Replacement of the existing service entrance conductors requires the removal of the building finish or deemed impractical by the AHJ.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT Table 300.5
Table 300.5 Minimum Cover Requirements, 0 to 1000 Volts, Nominal, Burial in Millimeters (Inches)

Location of Wiring Method or Circuit	Type of Wiring Method or Circuit									
	Column 1 Direct Burial Cables or Conductors		Column 2 Rigid Metal Conduit or Intermediate Metal Conduit		Column 3 Nonmetallic Raceways Listed for Direct Burial Without Concrete Encasement or Other Approved Raceways		Column 4 Residential Branch Circuits Rated 250 Volts or Less with GFCI Protection and Maximum Overcurrent Protection of 30 Amperes		Column 5 Circuits for Control of Irrigation and Landscape Lighting Limited to Not More Than 30 Volts and Installed with Type UF or in Other Identified Cable or Raceway	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
All locations not specified below	600	24	150	6	450	18	300	12	150	6
In trench below 5 mm (2 in.) thick concrete or equivalent	450	18	150	6	300	12	150	6	150	6
Under a building	0	0	0	0	0	0	0	0	0	0
(In raceway or Type MC or Type MI cable identified for direct burial)	450	18	100	4	100	4	150	6	150	6
(In raceway or Type MC or Type MI cable identified for direct burial)	450	18	100	4	100	4	150	6	100	4
Under minimum of 102 mm (4 in.) thick concrete exterior slab with no vehicular traffic and the slab extending not less than 152 mm (6 in.) beyond the underground installation	600	24	600	24	600	24	600	24	600	24
Under streets, highways, roads, alleys, driveways, and parking lots	450	18	450	18	450	18	300	12	450	18
One- and two-family dwelling driveways and outdoor parking areas, and used only for dwelling-related purposes	400	18	450	18	450	18	450	18	450	18
In or under airport runways, including adjacent areas where trespassing prohibited	400	18	450	18	450	18	450	18	450	18

A lesser depth shall be permitted where specified in the installation instructions of a listed low-voltage lighting system. A depth of 150 mm (6 in.) shall be permitted for pool, spa, and fountain lighting, installed in a nonmetallic raceway, limited to not more than 30 volts where part of a listed low-voltage lighting system.

- Notes:
- 1. Cover is defined as the shortest distance in mm (in.) measured between a point on the top surface of any direct-buried conductor, cable, conduit, or other raceway and the top surface of finished grade, concrete, or similar cover.
 - 2. Raceways approved for burial only where concrete encased shall require concrete encasement not less than 50 mm (2 in.) thick.
 - 3. Lesser depths shall be permitted where cables and conductors list for terminations or splices or where access is otherwise required.
 - 4. Where one of the wiring methods listed in Columns 1 through 3 is used for one of the circuit types in Columns 4 and 5, the shallowest depth of burial shall be permitted.
 - 5. Where solid rock prevents compliance with the cover depths specified in this table, the wiring shall be installed in a metal raceway, or a nonmetallic raceway permitted for direct burial. The raceways shall be covered by a minimum of 50 mm (2 in.) of concrete extending down to rock.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 300.9

300.9 Raceways in Wet Locations Abovegrade. Where raceways are installed in wet locations abovegrade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with 310.10(C).

Exception: The interior of these raceways shall not be considered a wet location if:

- (1) The section of raceway routed in a wet location above grade does not exceed 1.8 m (6 ft) in length;
- (2) Any fittings or conduit bodies are watertight and listed for use in wet locations; and
- (3) All termination points of the raceway are only open in any of the following:
 - a. A dry location;
 - b. Equipment suitable for outdoor use; or
 - c. Equipment listed for use in a wet location.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 320.23(A)
320.23 In Accessible Attics. Type AC cables in accessible attics or roof spaces shall be installed as specified in 320.23(A) and (B).

(A) Cables Run Across the Top of Floor Joists. The cable shall be protected by guard strips that are at least as high as the cable where one of the following applies:

- (1) Where this space is accessible by permanent stairs or ladders, protection shall be required in the area directly over a permanent floor not exceeding 2.1 m (7 ft) vertically from the floor, or where run across the top of floor joists.
- (2) Where this space is not accessible by permanent stairs or ladders, protection shall be required within 1.8 m (6 ft) horizontally of the nearest edge of the scuttle hole or attic entrance where run across the top of any flooring, or flooring or ceiling joists. Protection is not required where run across the face of overhead roofing trusses or rafters.

Exception: For the purpose of this section, pull-down type stairs and portable ladders are not to be considered as permanent stairs or ladders.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 334.15(C)

(C) In Unfinished Basements and Crawl Spaces. Where cable is run at angles with joists in unfinished basements, it shall be permissible to secure cables not smaller than two 6 AWG or three 8 AWG conductors directly to the lower edges of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. Nonmetallic-sheathed cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with 300.4. Conduit or tubing shall be provided with a suitable insulating bushing or adapter at the point the cable enters the raceway. The sheath of the nonmetallic-sheathed cable shall extend through the conduit or tubing and into the outlet or device box not less than 6 mm (1/4 in.). The cable shall be secured within 300 mm (12 in.) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor complying with the provisions of 250.86 and 250.148.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 406.4(D)(4)
(4) Arc-Fault Circuit-Interrupter Protection, Deleted.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 410.2
410.2 Definition. The definition in this section shall apply only within this article.
Clothes Closet Storage Space. The volume bounded by the sides and back closet walls and planes extending from the closet floor vertically to a height of 1.8 m (6 ft) or to the highest clothes-hanging rod and parallel to the walls at a horizontal distance of 800 mm (24 in.) from the sides and back of the closet walls, respectively, and continuing vertically to the closet ceiling parallel to the walls at a horizontal distance of 300 mm (12 in.) or the width of the shelf, whichever is greater; for a closet that permits access to both sides of a hanging rod, this space includes the volume below the highest rod extending 300 mm (12 in.) on either side of the rod on a plane horizontal to the floor extending the entire length of the rod. See Figure 410.2.

Exception: Where a shelf is not present in the area of wall above the closet's entrance opening or doorway extending from the top of such opening or doorway vertically to the ceiling, including the area of ceiling extending perpendicular from the area of wall directly above the closet's entrance opening or doorway to a horizontal distance of 300 mm (12 in.), shall not be defined as closet storage space. See Figure 410.2 Exception.

Continued on Next Page --->

2020 NORTH CAROLINA STATE ELECTRICAL CODE

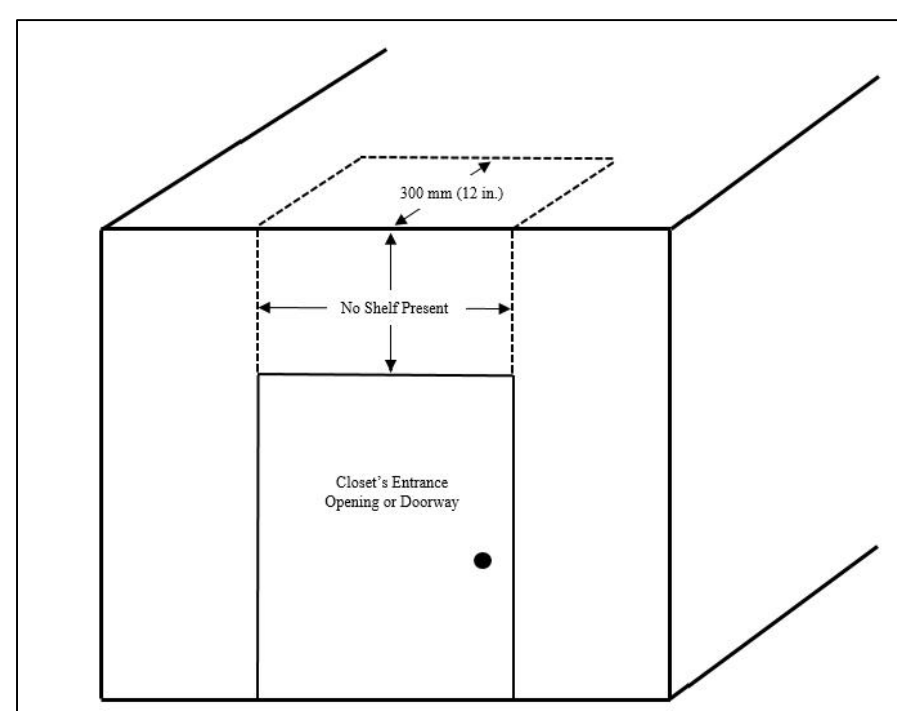


Figure 410.2 Exception Clothes Closet Storage Space Exception

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 410.16(C)

(C) Location. The minimum clearance between luminaires installed in clothes closets and the nearest point of a clothes closet storage space shall be as follows:

- (1) 300 mm (12 in.) for surface-mounted incandescent or LED luminaires with a completely enclosed light source installed on the wall above the door or on the ceiling;
- (2) 150 mm (6 in.) for surface-mounted fluorescent luminaires installed on the wall above the door or on the ceiling;
- (3) 150 mm (6 in.) for recessed incandescent or LED luminaires with a completely enclosed light source installed in the wall or the ceiling;
- (4) 150 mm (6 in.) for recessed fluorescent luminaires installed in the wall or the ceiling;
- (5) Surface-mounted fluorescent or LED luminaires shall be permitted to be installed within the clothes closet storage space where identified for this use;
- (6) LED luminaires with a completely enclosed light source or fluorescent luminaires shall be permitted to be installed within the area defined in 410.2 Exception.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 555.10(3)

(3) The signs shall state "WARNING — POTENTIAL SHOCK HAZARD — ELECTRICAL CURRENTS MAY BE PRESENT IN THE WATER — NO SWIMMING."

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 555.35(A)(3)

(3) Feeder and Branch Circuit Conductors with GFPE. Feeder and branch-circuit conductors that are installed on docking facilities shall be provided with GFPE set to open at currents not exceeding 100 milliamperes for feeders and 30 milliamperes for branch circuits. Coordination with downstream GFPE shall be permitted at the feeder overcurrent device.

Exception to (3): Transformer secondary conductors of a separately derived system that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 680.4
680.4 Inspections After Installation, Deleted.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 680.21(D)
(D) Existing Pool Pump Motors, Branch-Circuits, and Overcurrent Protection.

(1) Pool Pump Motor Replacement. Where a pool pump motor in 680.21(C) is replaced for maintenance or repair, the replacement pump motor shall be provided with ground-fault circuit-interrupter protection.

(2) Existing Pool Pump Motor Branch Circuit and Overcurrent Protection. All branch circuits and overcurrent devices that supply power to a pool pump motor by direct connection or outlet shall comply with the provisions of 680.21(C) when the branch circuits or overcurrent devices are altered, installed, modified, relocated, repaired, or replaced.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 695.2

695.2 Definitions. The definitions in this section shall only apply within this article.

Fault-Tolerant External Control Circuits. Those control circuits either entering or leaving the fire pump controller enclosure, which if broken, disconnected, or shorted will not prevent the controller from starting the fire pump from all other internal or external means and may cause the controller to start the pump under these conditions.

On-Site Power Production Facility. The normal supply electric power for the site that is expected to be constantly producing power.

On-Site Standby Generator. A facility producing electric power on site as the alternate supply of electric power. It differs from an on-site power production facility in that it is not constantly producing power.

Reliable Source of Power. A source of power that possesses all of the following characteristics:

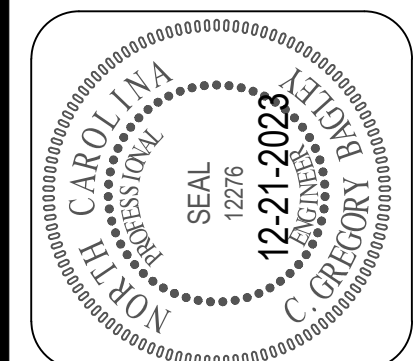
- (1) The electric utility supplying the power has not conducted any intentional shutdowns longer than 10 continuous hours in the year prior to the plan submittal and is verified in writing by that electric utility.
- (2) The source of power is not supplied by overhead conductors within 60 feet of the building(s) equipped with fire pump(s).
- (3) Only the disconnect switches and overcurrent protection devices permitted in Article 695 and NFPA 20-2013 section 9.3.2 are installed in the normal source of power to the fire pump controller.

2020 NORTH CAROLINA STATE ELECTRICAL CODE
AMENDMENT 695.3
695.3 Power Source(s) for Electric Motor-Driven Fire Pumps.
Electric motor-driven fire pumps shall have a reliable source of power.

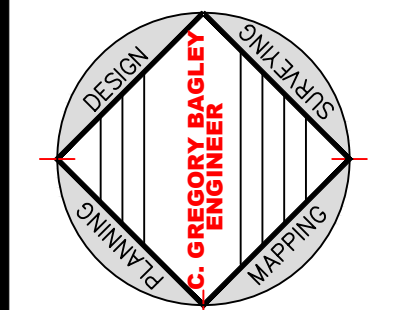
Informational Note: Deleted
Notice: This Amendment only removes the Informational Note in the NEC; subsections (A) through (I) to section 695.3 remain applicable. JDS 6/11/2021

Project #:
Date:
Drawn/Design By:
Scale:

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ELECTRICAL 2

FACILITIES
FOR
TOTAL BODY THERAPY & WELLNESS
PINE STREET
LILLINGTON, NC

Sheet Number
ELEC 2
of 1

IN ALL PATIENT CARE AREAS, EQUIPMENT GROUNDING SHALL COMPLY WITH NEC 517.13 (THIS INCLUDES LIGHTS AND SWITCHES). THE METAL RACEWAY SYSTEM, METALLIC CABLE ARMOR, OR SHEATH ASSEMBLY SHALL ITSELF QUALIFY AS AN EQUIPMENT GROUNDING CONDUCTOR PER NEC 250.118.

TOWN OF LILLINGTON

RE: TOTAL BODY WELLNESS AND THERAPY

Joshua,

Please see the below response to comments for the above-referenced project.

- Occupant load not calculated correctly. **Occupant load is corrected.**
- Need detail for slab insulation. **Slab insulation shown on footers in foundation.**
- RS-15 for walls not correct for IIB building o R-13 + R 7.5 continuous (recommend com-check to stray from prescriptive code. **Com Check is included with Submittal.**
- Plumbing plan shows no high low on riser plan. **Riser shows hi-lo on Plumbing Plan.**
- No laundry on diagram. **Laundry added on all sheets including risers.**
- Return air size? **Returns (5) are 18"x24" as shown on HVAC Pan.**
- Dryer Duct location? **Dryer duct shown on HVAC Plan.**
- Exhaust Fans? Where do they terminate. **Terminations are shown on plans.**
- Does not appear system will be balanced with two air returns. **The system has 5 Returns which balances.**
- Smoke detectors in HVAC? **Dryer duct added to HVAC**
- No layout for electrical receptacles. **Electrical Receptacles shown on Electrical 1 Plan .**
- Occupant sensors? **Occupancy sensors are installed throughout ad noted on the Electrical 1 Plan.**

Please let me know if you have any questions.

Thanks,
Greg Bagley
Engineer



Envelope Compliance Certificate

Project Information

Energy Code: 2015 IECC
 Project Title: Total Body Wellness And Therapy
 Location: Fuquay-Varina, North Carolina
 Climate Zone: 4a
 Project Type: New Construction
 Vertical Glazing / Wall Area: 5%

Construction Site:
 260 Pine State Street
 Lillington, NC 27546

Owner/Agent:
 Sarah Morrison
 Lillington, NC 27546
 919-235-2506

Designer/Contractor:
 Greg Bagley
 Greg Bagley, Engineer
 32 E Depot Street
 Angier, NC 27501
 919-609-0300
 gdb.greg@gmail.com

Additional Efficiency Package(s)

Enhanced Interior Lighting Controls

Building Area	Floor Area
1-Office : Nonresidential	2000

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ^(a)
Roof 1: Metal Building, Standing Seam, Single Insulation Layer with Thermal Blocks (d), [Bldg. Use 1 - Office]	6200	38.0	38.0	0.020	0.035
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Office] (c)	320	---	---	0.730	0.540
WEST					
Exterior Wall 1: Metal Building Wall, Single Layer Mineral Fiber (compressed at girt), [Bldg. Use 1 - Office]	6000	19.0	19.0	0.039	0.052
Window 1: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Ix452, SHGC 0.40, [Bldg. Use 1 - Office] (b)	280	---	---	0.650	0.380

- (a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
- (b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
- (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
- (d) Thermal spacer block with minimum R-3.5 must be installed above the purlin/batt, and the roof deck secured to the purlins.

Envelope PASSES: Design 4% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.2.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.



ENGINEER

Name - Title

E Gregory Bayley
Signature

3-19-24
Date



Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
 Project Title: Total Body Wellness And Therapy
 Project Type: New Construction

Construction Site:
 260 Pine State Street
 Lillington, NC 27546

Owner/Agent:
 Sarah Morrison
 Lillington, NC 27546
 919-235-2506

Designer/Contractor:
 Greg Bagley
 Greg Bagley, Engineer
 32 E Depot Street
 Angier, NC 27501
 919-609-0300
 gdb.greg@gmail.com

Additional Efficiency Package(s)

Enhanced Interior Lighting Controls

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Healthcare Facility:Exam/Treatment	4000	1.66	6640
Total Allowed Watts =			6640

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Healthcare Facility:Exam/Treatment LED 1: LED Panel 40W:	2	29	40	1160
Total Proposed Watts =				1160

Interior Lighting PASSES: Design 83% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.2.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

 Name - Title *ENGINEER*

 Signature *C. Gregory Bagley*

 Date *3-19-24*





Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
 Project Title: Total Body Wellness And Therapy
 Project Type: New Construction
 Exterior Lighting Zone: 3 (Other)

Construction Site:
 260 Pine State Street
 Lillington, NC 27546

Owner/Agent:
 Sarah Morrison
 Lillington, NC 27546
 919-235-2506

Designer/Contractor:
 Greg Bagley
 Greg Bagley, Engineer
 32 E Depot Street
 Angier, NC 27501
 919-609-0300
 gdb.greg@gmail.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	3230 ft2	0.1	Yes	323
Total Tradable Watts (a) =				323
Total Allowed Watts =				323
Total Allowed Supplemental Watts (b) =				750

- (a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
- (b) A supplemental allowance equal to 750 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Parking area (3230 ft2): Tradable Wattage				
LED 1: LED Roadway-Parking Unit 130W:	2	3	130	390
Total Tradable Proposed Watts =				390

Exterior Lighting PASSES: Design 64% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.2.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ENGINEER Name - Title
C Gregory Bagley Signature
3-19-24 Date





Mechanical Compliance Certificate

Project Information

Energy Code: 2015 IECC
 Project Title: Total Body Wellness And Therapy
 Location: Fuquay-Varina, North Carolina
 Climate Zone: 4a
 Project Type: New Construction

Construction Site:
 260 Pine State Street
 Lillington, NC 27546

Owner/Agent:
 Sarah Morrison
 Lillington, NC 27546
 919-235-2506

Designer/Contractor:
 Greg Bagley
 Greg Bagley, Engineer
 32 E Depot Street
 Angier, NC 27501
 919-609-0300
 gdb.greg@gmail.com

Additional Efficiency Package(s)

Enhanced Interior Lighting Controls

Mechanical Systems List

Quantity System Type & Description

- 1 HVAC System 1 (Single Zone):
 Heating: 1 each - Central Furnace, Electric, Capacity = 10 kBtu/h
 No minimum efficiency requirement applies
 Cooling: 1 each - Single Package DX Unit, Capacity = 10 kBtu/h, Air-Cooled Condenser, Unknown Economizer
 Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER
 Fan System: None
- 1 HVAC System 2 (Single Zone):
 Heating: 1 each - Central Furnace, Electric, Capacity = 10 kBtu/h
 No minimum efficiency requirement applies
 Fan System: None

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.2.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ENGINEER
 Name - Title

C. Gregory Bagley
 Signature

3-19-24
 Date

