FIT-UP PLANS

BLACK RIVER EXCHANGE

61 BROAD STREET

ANGIER , NORTH CAROLINA 27526

THANKS A LATTE

PREPARED FOR

STEVE AND JULIE WILLS
825 WHEEER dRIVE
ANGIER , NC
TELEPHONE 919-218-5435

ENGINEER

GREG BAGLEY
805 COKESBURY ROAD
FUQUAY VARINA, NC
PHONE: (919) 609-0300

SHEET INDEX

NORTH CAROLINA PROFESSIONAL SEAL 12276 6-10-21 ENGINEER C. GREGORY BAGLEY

PLANNING DESIGN GREG BAGLEY ENGINEERING MAPPING SURVEYING

2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: 61 BROAD STREET THANKS A LATTE
Address: ANGIER HARNETT COUNTY NC Zip Code 27501
Proposed Use: C. GREGORY BAGLEY 919-609-0300
Owner/Authorized Agent: GREG BAGLEY Phone # (919) 609 - 0300 E-Mail GDB.GREG@GMAIL.COM
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☒ City ☐ County ☐ State
ANGIER, HARNETT COUNTY NC

LEAD DESIGN PROFESSIONAL: Greg Bagley

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural				( )	
Civil	C. Gregory Bagley, Engineer	Greg Bagley	12276	(919)609-0300	GDB.GREG@GMAIL.COM
Electrical	C. Gregory Bagley, Engineer	Greg Bagley	12276	(919)609-0300	GDB.GREG@GMAIL.COM
Fire Alarm				( )	
Plumbing	C. Gregory Bagley, Engineer	Greg Bagley	12276	(919)609-0300	GDB.GREG@GMAIL.COM
Mechanical	C. Gregory Bagley, Engineer	Greg Bagley	12276	(919)609-0300	GDB.GREG@GMAIL.COM
Sprinkler-Standpipe				( )	
Structural	C. Gregory Bagley, Engineer	Greg Bagley	12276	(919)609-0300	GDB.GREG@GMAIL.COM
Retaining Walls >5' High				( )	
Other				( )	

2012 EDITION OF NC CODE FOR: ☐ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair ☒ Renovation
CONSTRUCTED: (date) _____ **ORIGINAL USE(S)** (Ch. 3): RETAIL
RENOVATED: (date) _____ **CURRENT USE(S)** (Ch. 3): _____
PROPOSED USE(S) (Ch. 3): RETAIL

BASIC BUILDING DATA
Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☒ V-B
Sprinklers: ☐ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☐ Yes (Primary) **Flood Hazard Area:** ☐ No ☐ Yes
Building Height: (feet) 1
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor	3000	3000	3000
Basement			
TOTAL			3000

ALLOWABLE AREA

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

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

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

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427

Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9
Mixed Occupancy: ☒ No ☐ Yes Separation: NONE Hr. Exception: 509.2
☐ Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exceptions).
This separation is not exempt as a Non-Separated Use (see exceptions).
☒ Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (508.4) - See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

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

_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503[3] AREA	(C) AREA FOR FRONTAGE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
1	RETAIL	3000	23000	17250	0		23000

[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 = 160 (F)
b. Total Building Perimefer = 160 (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase $I_f = 100\ [F/P - 0.25] \times W/30$ = .75 (%)
[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent
[3] Unlimited area applicable under conditions of Section 507.
[4] Maximum Building Area = total number of stories in the building x E (506.4).
[5] The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

8160 8160

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V-B		Type V-B	
Building Height in Feet	21'	Feet = H + 20' = 41'		
Building Height in Stories	1	Stories + 1 = 2		

FIRE PROTECTION REQUIREMENTS
NR = Not Required

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0		0002	NR		
Bearing Walls		0		0002	NR		
Exterior		0		0002	NR		
North		0		0002	NR		
East		0		0002	NR		
West		0		0002	NR		
South		0		0002	NR		
Interior							
Nonbearing Walls and Partitions		0		0002	NR		
Exterior walls		0		0002	NR		
North		0		0002	NR		
East		0		0002	NR		
West		0		0002	NR		
South		0		0002	NR		
Interior walls and partitions							
Floor Construction Including supporting beams and joists		0		0002	NR		
Roof Construction Including supporting beams and joists		0		0002	NR		
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: CODE SHEET

☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations
☒ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Existing structures within 30' of the proposed building
☒ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☒ Occupant loads for each area
☐ Exit access travel distances (1016)
☒ Common path of travel distances (1014.3 & 1028.8)
☐ Dead end lengths (1018.4)
☐ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☒ Actual occupant load for each exit door

☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each fire area (902)
☐ The square footage of each smoke compartment (407.4)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
0							

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH: 132" ACCESS AISLE	VAN SPACES WITH: 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
Main Parking	10	10	1		1	1
TOTAL						

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (I_W) .87; Snow (I_S) .8; Seismic (I_E) 1
Live Loads: Roof 20 psf; Mezzanine _____ psf; Floor 125 psf
Ground Snow Load: 10 psf
Wind Load: Basic Wind Speed 110 mph (ASCE-7); Exposure Category C; Wind Base Shears (for MWFRS) Vx = -8.77 Vy = -7.38

SEISMIC DESIGN CATEGORY: ☒ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☒ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_S 2.7 %g S_1 3.7 %g
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data
Basic structural system (check one)
☐ Bearing Wall ☐ Dual w/Special Moment Frame
☒ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Seismic base shear: V_X = V_Y =
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 2000 psf
Pile size, type, and capacity _____

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☒ No

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS MALE	WATERCLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING								
	NEW	1	1		1	1			
	REQUIRED	1	1		1	1			

SPECIAL APPROVALS

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

OCCUPANCY 1004.1.2
FIXED SEATS (1004.4) = 30
WAITING AREA (15 GROSS) 150/15 = 10
KITCHEN (200 GROSS) 364/200 = 2
BUSINESS (100 GROSS) 700/100 = 7
TOTAL OCCUPANCY = 49

THANKS A LATTE

ENERGY SUMMARY

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

Climate Zone: ☒ 3 ☐ 4 ☐ 5

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

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly)
Description of assembly: TRUSS AND MEMBRANE
U-Value of total assembly: _____
R-Value of insulation: 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: 16" BRICK WALLS
U-Value of total assembly: N/A
R-Value of insulation: R-15
Openings (windows or doors with glazing)
U-Value of assembly: N/A
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: N/A

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

Floors over unconditioned space (each assembly)
Description of assembly: CONCRETE 3000 LB
U-Value of total assembly: _____
R-Value of insulation: _____

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

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone 4A
winter dry bulb: 16 F
summer dry bulb: 92 F

Interior design conditions
winter dry bulb: 70 F
summer dry bulb: 75F
relative humidity: 50%

Building heating load: 73 MBH

Building cooling load: 2-48MBH SEE SHEET M 1

Mechanical Spacing Conditioning System
Unitary
description of unit: SPLIT SYSTEM 2- 4 TON UNITS
heating efficiency: 14 SEER
cooling efficiency: 14 SEER
size category of unit: 2- 4 TON
Boiler
Size category. If oversized, state reason.: _____
Chiller
Size category. If oversized, state reason.: _____

List equipment efficiencies: 63%

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)
LED lamp type required in fixture
VARIES number of lamps in fixture
LED ballast type used in the fixture
1 number of ballasts in fixture
40-60 total wattage per fixture
.48 vs. .40 total interior wattage specified vs. allowed (whole building or space by space)
250 total exterior wattage specified vs. 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

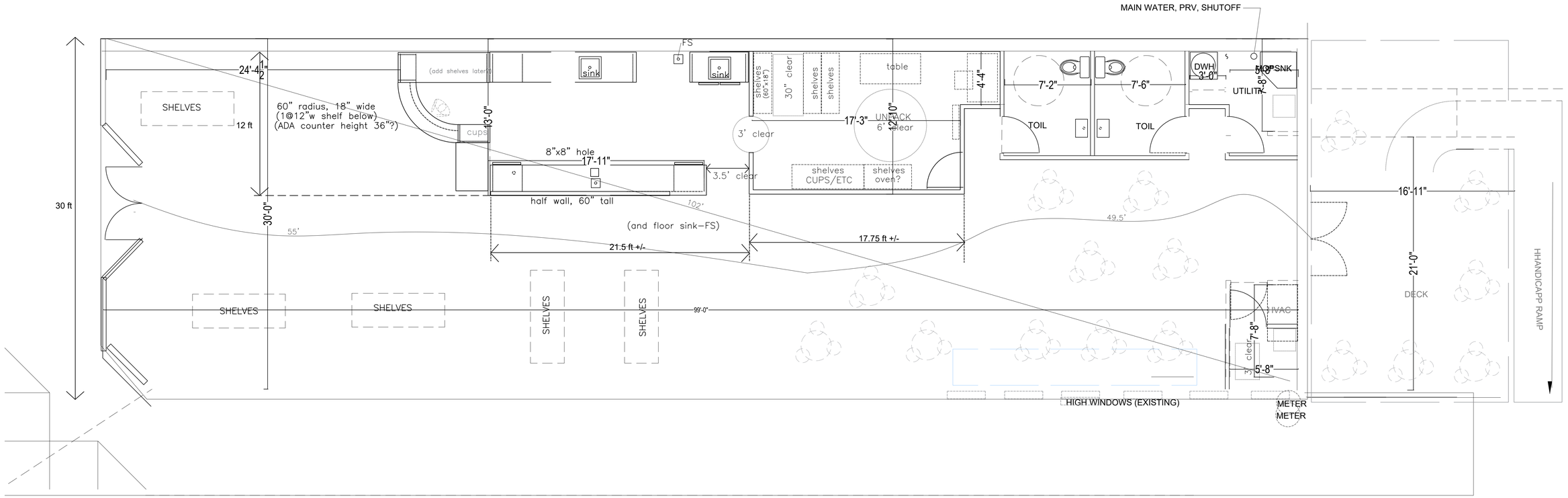
REVISIONS	BY
	CGB

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 12276 6-10-21 C. GREGORY BAGLEY
805 COKESBURY ROAD
ANGIER, NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325
GREG BAGLEY ENGINEER

APPENDIX B

BLACK RIVER EXCHANGE
DEVELOPED FOR
THANKS A LATTE
HARNETT COUNTY N.C.
ANGIER

DATE 11-9-18
SCALE SHOWN
DESIGNED BY CGB
DRAWN BY
SHEET CODE



E. LILLINGTON STREET

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: CODE SHEET

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations
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- ☐ Clear exit widths for each exit door
- ☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
- ☒ Actual occupant load for each exit door

OCCUPANCY 1004.1.2

FIXED SEATS (1004.4) = 30
WAITING AREA (15 GROSS) 150/15 = 10
KITCHEN (200 GROSS) 364/200 = 2
BUSINESS (100 GROSS) 700/100 = 7
TOTAL OCCUPANCY = 49

LIFE SAFETY
SCALE: 1/4" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 12276 6-10-21 C. GREGORY BAGLEY

805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

GREG BAGLEY ENGINEER

LIFE SAFETY PLAN

BLACK RIVER EXCHANGE

DEVELOPED FOR THANKS A LATTE

HARNETT COUNTY N.C.

ANGIER

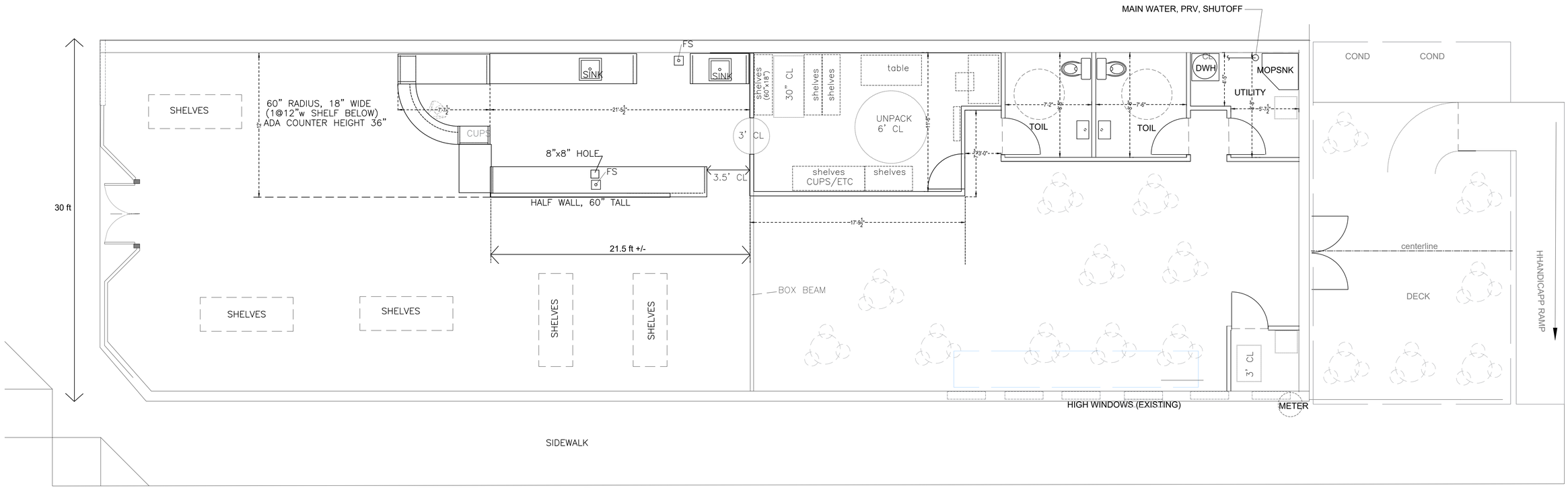
DATE 6-10-21
SCALE SHOWN
DESIGNED BY CGB
DRAWN BY

SHEET
LS1-OF-1
LIFE SAFETY

GENERAL NOTES
COUNTERTOPS SUPPORTED BY STUDWALL, OR BRACKETS
COUNTER HEIGHT 37" CLEAR BELOW=38"

OCCUPANCY 1004.1.2

FIXED SEATS (1004.4)	= 30
WAITING AREA (15 GROSS)	150/15 = 10
KITCHEN (200 GROSS)	364/200 = 2
BUSINESS (100 GROSS)	700/100 = 7
TOTAL OCCUPANCY	= 49



E. LILLINGTON STREET

FLOOR PLAN
SCALE: 1/4" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 1227 6-10-21 CHARLES G. BAGLEY

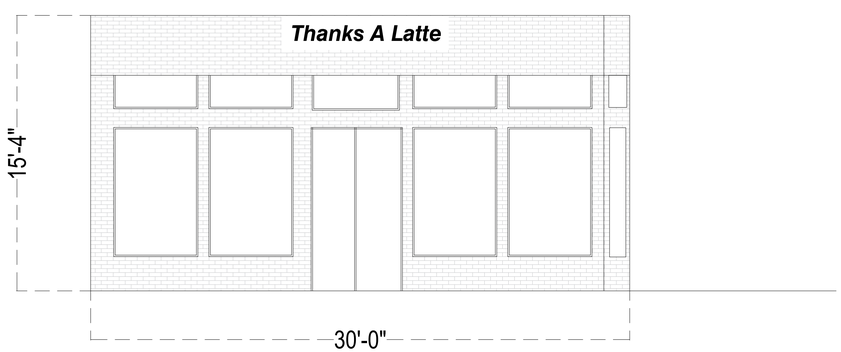
805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

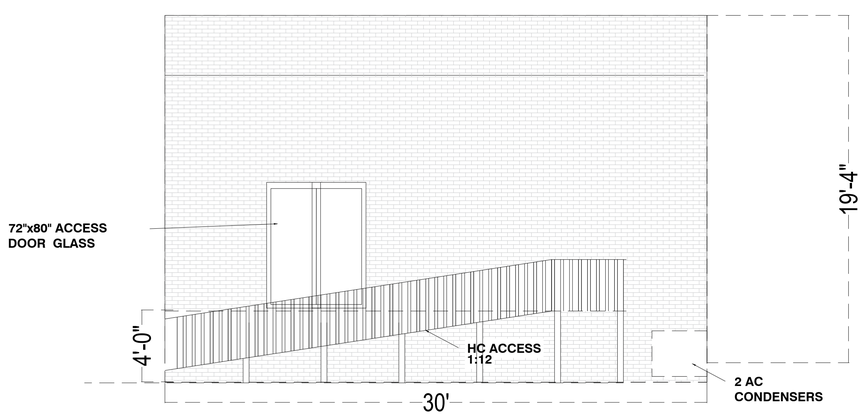
GREG BAGLEY ENGINEER

FLOOR PLAN

BLACK RIVER EXCHANGE
DEVELOPED FOR
THANKS A LATTE
ANGIER
HARNETT COUNTY N.C.

DATE	6-10-21
SCALE	SHOWN
DESIGNED BY	CGB
DRAWN BY	
SHEET	FP1-OF-1
	FLOOR PLAN





ELEVATIONS
SCALE: 1/4" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 1227 6-10-21 C. GREGORY BAGLEY

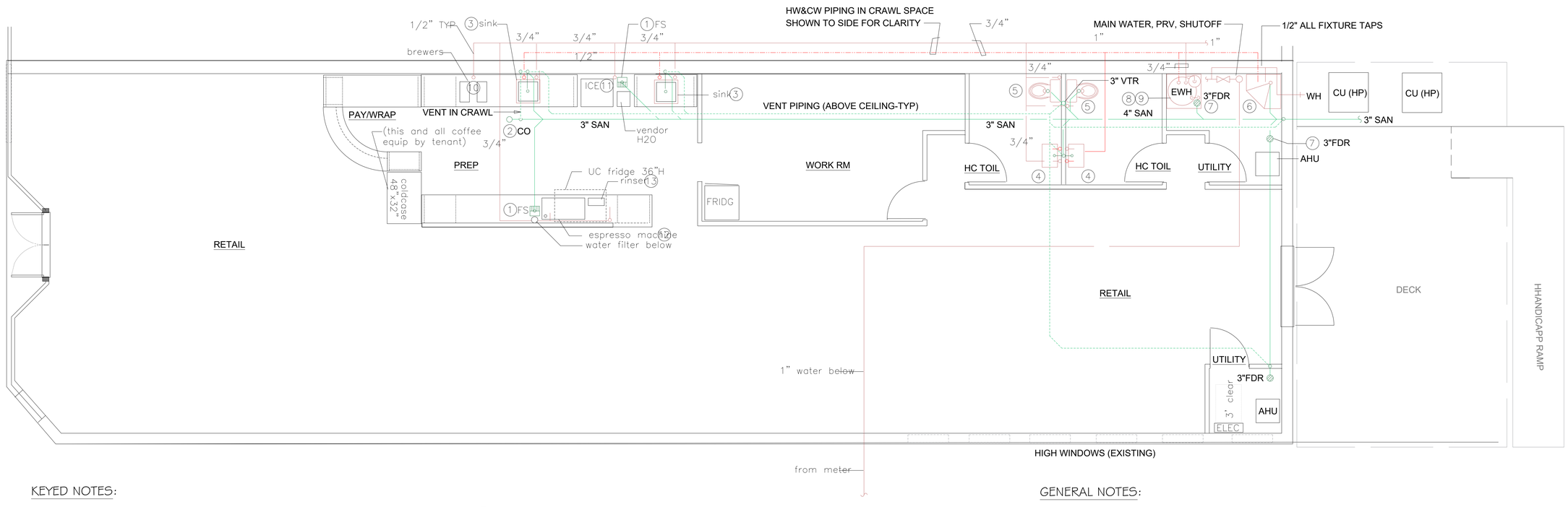
805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

GREG BAGLEY ENGINEER — DESIGN · SURVEYING · PLANNING · MAPPING

ELEVATION PLAN

BLACK RIVER EXCHANGE
DEVELOPED FOR
THANKS A LATTE
HARNETT COUNTY N.C.
ANGIER

DATE: 6-10-21
SCALE: SHOWN
DESIGNED BY: CGB
DRAWN BY:
SHEET: EL1-OF-1
ELEV PLAN



KEYED NOTES:

1. FLOOR SINK: ZURN FD-2370 OR EQUAL, PVC, ½ GRATE
2. FLOOR CLEANOUT: ZURN CO-2401 OR EQUAL, PVC BODY WITH NICKEL SCORIATED COVER AND INTERNAL ABS PLUG
3. SINK: ELKAY DLR-252210 OR EQUAL, STAINLESS STEEL DEEP SINK, 2-HOLES COORDINATE WITH FAUCET FOR SPACING. FAUCET: ZURN Z824B0 OR EQUAL SINGLE HANDLE, GOOSENECK SPOUT, 2.2 GPM, 6.5" HIGH SWIVEL SPOUT. PROVIDE FLEXIBLE SUPPLY AND STOP VALVES.
4. LAVATORY: ALLEN & ROTH PEDESTAL ADA, WHITE, VITREOUS CHINA, ML-20602R (LOWES) OR EQUAL; FAUCET: HOMARY J021096 WATERFALL SPOUT OR EQUAL ELECTRONIC SENSOR FAUCET. PROVIDE FLEXIBLE SUPPLY AND STOP VALVES.
5. WATER CLOSET: AMERICAN STANDARD CHAMPION 4 RIGHT HEIGHT #7311AA.0015, ADA OR EQUAL, 1.28 GPF, ELONGATED BOWL, FLOOR MOUNT, WHITE, INCLUDING SLOW-CLOSE SEAT. PROVIDE FLEXIBLE SUPPLY AND STOP VALVE.
6. UTILITY SINK: FIAT TSBC 6010 SERIES MS 32x32x12 OR EQUAL, W/DOME STRAINER, LINT BASKET WITH 3" DRAIN. FAUCET: SYMMONS S-2490 OR EQUAL, 2 HANDLE, WALL BRACE, VACUUM BREAKER.
7. FLOOR DRAIN: ZURN FD2200 OR EQUAL
8. DRAIN PAN FOR EWH, P/T DISCHARGE, INSTALL FLOOR DRAIN WITHIN DRAIN PAN AND SEAL WATER TIGHT
9. EWH: ELECTRIC WATER HEATER, AO SMITH LOWBOY SIGNATURE MODEL EG-50L45DVB OR EQUAL, 48 GALLON, 2@4500 WATT, 26.5" DIAMETER X 34" HEIGHT, 240V - COORDINATE WITH ELECTRICAL. PROVIDE EXPANSION TANK ON COLD WATER LINE.
10. COFFEE BREWER: ½" CW SUPPLY, ABOVE COUNTER, WITH INLINE BFP: WATTS 9DM OR EQUAL
11. ICE MACHINE: ½" CW SUPPLY, WITH INLINE BFP: WATTS 9DM OR EQUAL
12. ESPRESSO MACHINE: ½" CW SUPPLY, ABOVE COUNTER, WITH INLINE BFP: WATTS 9DM OR EQUAL
13. RINSER: ½" CW SUPPLY, ABOVE COUNTER, WITH INLINE BFP: WATTS 9DM OR EQUAL

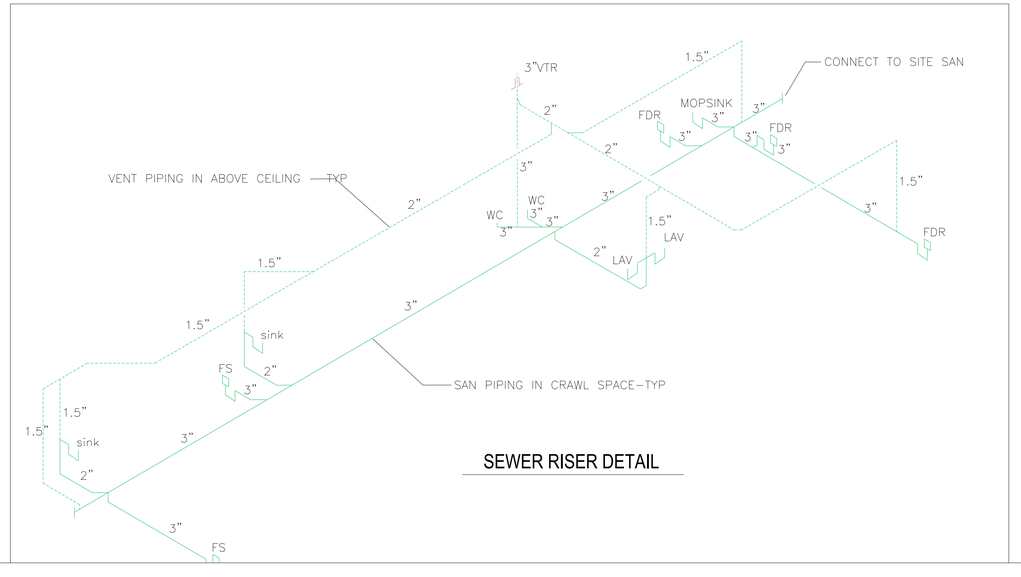
GENERAL NOTES:

A. COMPLY WITH NC PLUMBING CODE, STATE AND LOCAL HEALTH DEPARTMENTS, AND TOWN OF ANGIER REQUIREMENTS.

B. DOMESTIC COLD AND HOT WATER SHALL BE CPVC PIPING AND FITTINGS. SANITARY AND VENT PIPING SHALL BE PVC. SLOPE 1/4" PER FOOT. A/C DRAINAGE PIPING SHALL BE COPPER DWV.

C. PROVIDED PIPE TESTING AND DOMESTIC WATER DISINFECTION PER NCBC, STATE AND LOCAL HEALTH DEPT REQUIREMENTS.

D. PIPING INSULATION ON DOMESTIC HOT AND COLD PIPING SHALL BE ½" THICK ARMAFLEX FELXIBLE UNICELLULAR, FLAME/SMOKE DEV RATING OF 25/50.



SEWER RISER DETAIL

PLUMBING PLAN

SCALE: 3/16" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

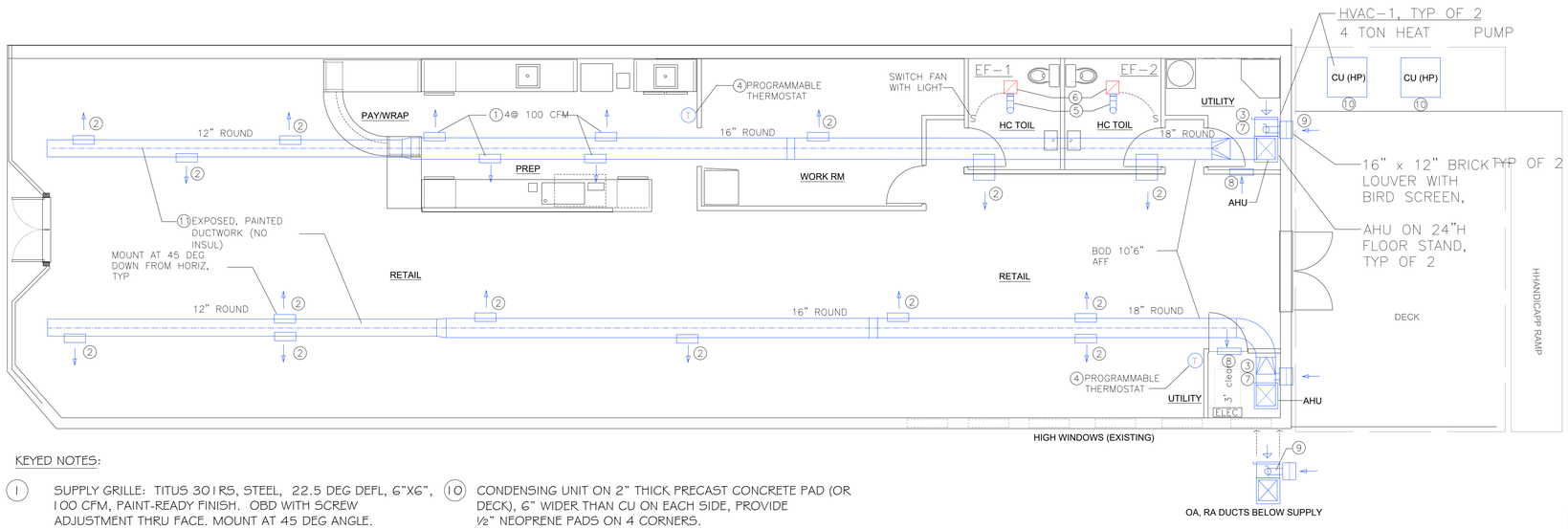
805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

GREG BAGLEY ENGINEER
DESIGN PLANNING MAPPING

PLUMBING DESIGNS

BLACK RIVER EXCHANGE
DEVELOPED FOR THANKS A LATTE
HARNETT COUNTY N.C.
ANGIER

DATE 6-10-21
SCALE SHOWN
DESIGNED BY CGB
DRAWN BY
SHEET P1-OF-1
PLUMBING



KEYED NOTES:

1. SUPPLY GRILLE: TITUS 301RS, STEEL, 22.5 DEG DEFL, 6"X6", 100 CFM, PAINT-READY FINISH. OBD WITH SCREW ADJUSTMENT THRU FACE. MOUNT AT 45 DEG ANGLE.
2. SUPPLY GRILLE: TITUS 301RS, STEEL, 45 DEG DEFL, 12"X6", 200 CFM, PAINT-READY FINISH. OBD WITH SCREW ADJUSTMENT THRU FACE. MOUNT AT 45 DEG ANGLE.
3. ROUTE REFRIGERANT PIPING IN CRAWL SPACE TO OUTDOOR HEAT PUMP CONDENSING UNIT.
4. PROGRAMMABLE THERMOSTAT WITH DIGITAL DISPLAY, 7 DAY SETBACK, INDEPENDENT HEAT AND COOL SETPOINTS. FAN CONTROL WITH AUTO, ON, OFF SETTINGS.
5. 6" DIAMETER GALVANIZED DUCTWORK FROM EXHAUST FAN TO ROOF VENT CAP.
6. EF-1&2: TOILET EXHAUST CEILING FAN, NUTONE OR EQUAL HEAVY DUTY, STEEL, 80 CFM, 6" DIAMETER DUCT WITH BACKDRAFT DAMPER.
7. RETURN DUCT FULL SIZE OF FURNACE CONNECTION WITH VOLUME DAMPER AND WWM, FLAT FILTER WITH HINGED ACCESS DOOR
8. RETURN GRILLE ON EITHER SIDE OF WALL TRANSFER, TITUS 355RL, 35 DEG DEFLECTION, STEEL, 22" X 22"
9. PROVIDE OUTSIDE AIR DUCT WITH 1.5" THICK FIBERGLASS INSULATED DUCT WRAP, CONNECTED TO 16" X12" WALL LOUVER. PROVIDE MANUAL VOLUME DAMPER NEAR CONNECTION TO RETURN DUCT FOR BALANCING.
10. CONDENSING UNIT ON 2" THICK PRECAST CONCRETE PAD (OR DECK), 6" WIDER THAN CU ON EACH SIDE, PROVIDE ½" NEOPRENE PADS ON 4 CORNERS.
11. ALL DUCTWORK, GRILLES, ETC IN CEILING TO BE PAINTED WITH ALL OTHER CEILING ELEMENTS PER ARCHITECTURAL DRAWING/SPECS

GENERAL NOTES:

A. COMPLY WITH NC MECHANICAL CODE AND LOCAL REQUIREMENTS.

B. DO NOT INSTALL EXPOSED PVC PIPING IN RETURN AIR PLENUM

C. DUCTWORK INCLUDING HANGERS SHALL CONFORM WITH THE SMACNA DUCT DESIGN MANUAL LATEST EDITION. EXPOSED ROUND DUCTWORK SHALL BE HUNG WITH SINGLE THREADED RODS AND FULL CIRCUMFRANCE STRAP HANGERS, SPACED PER SMACNA. BOD 10.5' AFF (18" DUCT) TO MATCH TRACK LIGHTS.

D. EXPOSED SUPPLY DUCTWORK SHALL NOT BE INSULATED.

E. FLEXIBLE DUCT CONNECTORS SHALL COMPLY WITH UL-181, CLASS 1.

F. THERMOSTAT WIRING SHALL COMPLY WITH ELECTRICAL CODE AND DRAWINGS.

SCHEDULES

HVAC-1&2: HEAT PUMP: TRANE OR EQUAL HIGH EFFICIENCY SEER 14, VERTICAL UPFLOW INSTALLATION ON 24" GALV FLOOR STAND WITH AUX 15 KW ELEC COIL AND GROUND/DECK-MOUNTED CONDENSING UNIT. DISPOSABLE 30% EFFICIENCY FILTER. 1600 CFM TOTAL, 400 CFM OUTSIDE AIR, 120 V/1PH, ¾ HP. PROVIDE INSULATED REFRIGERANT PIPE SETS AND 1" DIA DWV COPPER, TRAPPED CONDENSATE DRAIN TO FLOOR DRAIN w/ 2" AIRGAP.

EF-1&2: SEE DRAWING NOTE 6.

OUTSIDE AIR CALCULATION:

SPACE TYPE	AREA-SF	# PEOPLE	CFM/SF	CFM	CFM/PER	CFM
RETAIL	1875	28	0.12	225	7.5	211
PREP/SERVE	159	3	0.12	19	7.5	22.5
TOILET	129	2 FIXTURES	0	0	70/FIXTURE	140
STORAGE/WORK	206	1	0.12	25	10	10
SUBTOTAL				269		383
TOTAL						652
PROVIDED					2@400 =	800

CODE COMPLIANCE STATEMENT

MECHANICAL SYSTEM, SERVICE SYSTEMS, AND EQUIPMENT METHOD OF COMPLIANCE

PRESCRIPTIVE: YES ENERGY COST BUDGET: NO

THERMAL ZONE: 4A (HARNETT CTY)

EXTERIOR DESIGN CONDITIONS:
- WINTER DRY BULB 16F
- SUMMER DRY BULB 92F

INTERIOR DESIGN CONDTIONS:
- WINTER DRY BULB 70F
- SUMMER DRY BULB 75F
- RELATIVE HUMIDITY 50%

BUILDING COOLING LOAD 7.3 TONS

BUILDING HEATING LOAD 73.0 MBH

MECHANICAL SPACE CONDITIONING SYSTEM: SEE HVAC-1&2

EQUIPMENT EFFICIENCIES: SEER 14

MOTOR SCHEDULES NONE

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems, and equipment requirements of the North Carolina Energy Code - 2012 Edition

Signed: _____

Name: Greg Bagley, PE

Title: Mechanical Engineer of Record

MECHANICAL PLAN

SCALE: 3/16" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

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ANGIER, NC 27526
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GREG BAGLEY ENGINEER

MECHANICAL DESIGNS

BLACK RIVER EXCHANGE
DEVELOPED FOR
THANKS A LATTE
HARNETT COUNTY N.C.
ANGIER

DATE 6-10-21
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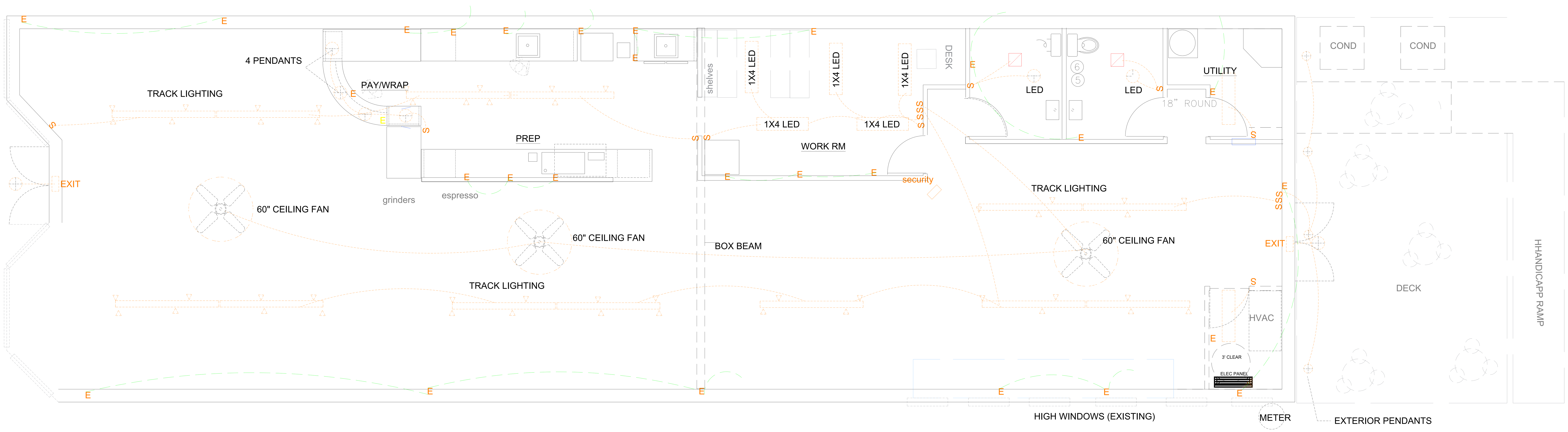
DESIGNED BY CGB
DRAWN BY
SHEET M1-OF-1
HVAC



ELECTRICAL PLAN

$\frac{1}{4}$" = 1'-0"

ELECTRICAL

400 AMP SERVICE
VOLTAGE 220/120V 1 PHASE : 4 WIRE

DEVICE SIZE	DEVICE AMPS TRIP	DEVICE POLES	BRANCH CIRCUIT DESCRIPTION	CKT	PH A	PH B	PH C	PH A	PH B	PH C	CKT	BRANCH CIRCUIT DESCRIPTION	DEVICE POLES	DEVICE AMPS TRIP	SIZE
12	20	1	LIGHTING	1			7	10			2	LIGHTING	1	20	10
10	20	1	RECEPT	3	7				7		4	RECPT. SIGN	1	20	10
10	20	1	RECEPT	5		7		7			9	RECEPT	1	20	10
10	20	1	RECEPT	7			7				8	RECEPT	1	20	10
10	20	1	RECEPT	9		7		7			10	RECEPT	1	20	10
10	20	1	RECEPT	11	7				7		12	RECEPT	1	20	10
12	20	1	LIGHTING	13		10					14	LIGHTING	1	20	12
12	20	1	LIGHTING	15			10				16	LIGHTING	1	20	12
10	20	1	LIGHTING	17	10					11	18		1		10
12	20	1	LIGHTING	19			10		29		20	AIR HANDLER	2	40	12
10	40	2	HVAC	21	29				29		22	AIR HANDLER	2	40	10
12	40	2	HVAC	23	29						24		1		10
12		1		25							26		1		10
12		1		27							28		1		10
12		1		29							30		1		10
12		1		31							32		1		10
10		1		21							22		1		12
12		1		23							24		1		12
12		1		25							26		1		12
12		1		27							28		1		12
12		1		29							30		1		12
12		1		31							32		1		12
12		1		33							34		1		12
12		1		35							36		1		12
12		1		37							38		1		12
			TOTAL		72	24	34	24	72	11					

TOTAL CONNECTED AMPS A -96 B-96 C- 45

LOAD CALCS.

LOAD	CONN (KVA)	DEMAND FACTOR	DEMAND LOAD
LIGHTING	5	125% ****	6.25
RECEPT.	8.4	1ST 10 KV-100% REM-50%	8.4
HVAC	42.5	100%	42.5
SIGN	1.2	125% ****	1.5
TANKLESS WH	30	125%	37.5
TOTAL	87.1	TOTAL	96.4

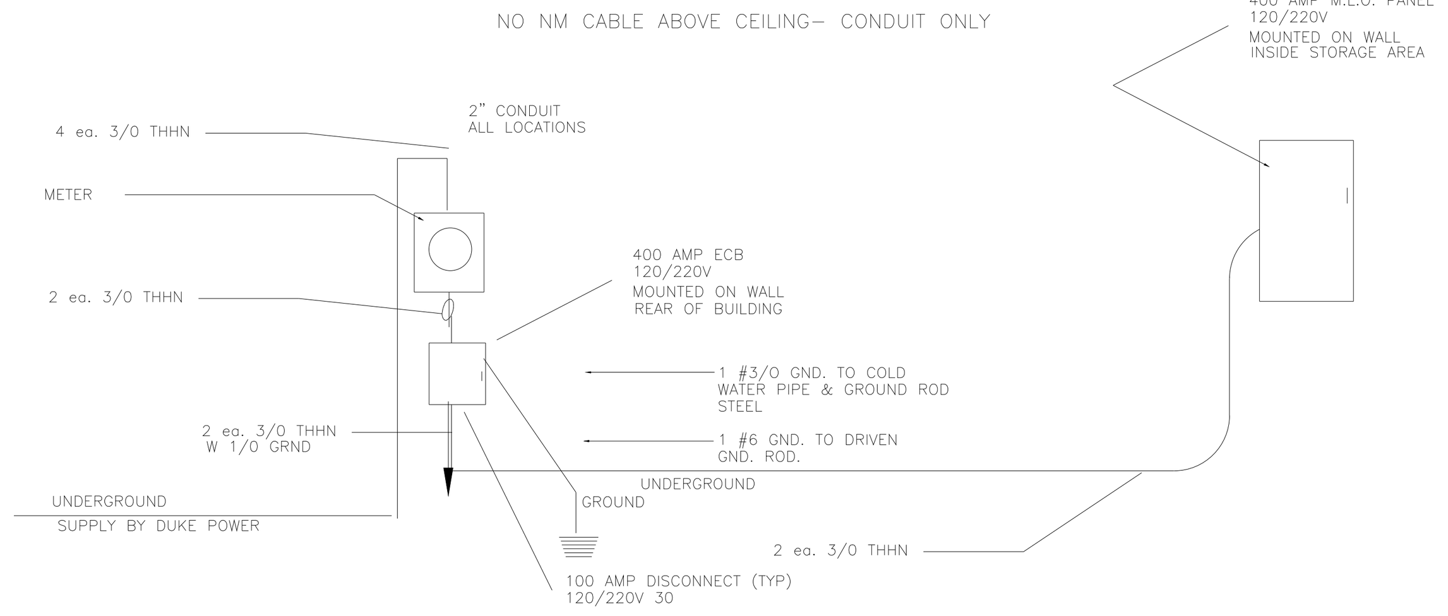
LIGHTING LOAD CALCS.

AREA TYPE	MIN WATTS	SQ FT	REQUIRED	PROVIDED
BATHROOMS	.99	485	480	500
OFFICE	1.4	725	1015	980
	TOTAL	1210	1495	1480

Lighting Requirements:
RETAIL .99x 900 Sq ft = 899 watts
BATH: 1.40x 84 Sq ft =118 watts

Provided:
RETAIL: 1000 watts
BATH: 200 watts

NO NM CABLE ABOVE CEILING- CONDUIT ONLY



ELECTRICAL DIAGRAM

NOT TO SCALE

ELECTRICAL PLAN

SCALE: 3/16" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 12276 6-10-21 C. GREGORY BAGLEY

805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

GREG BAGLEY ENGINEER
DESIGN SURVEYING MAPPING PLANNING

ELECTRICAL DESIGNS

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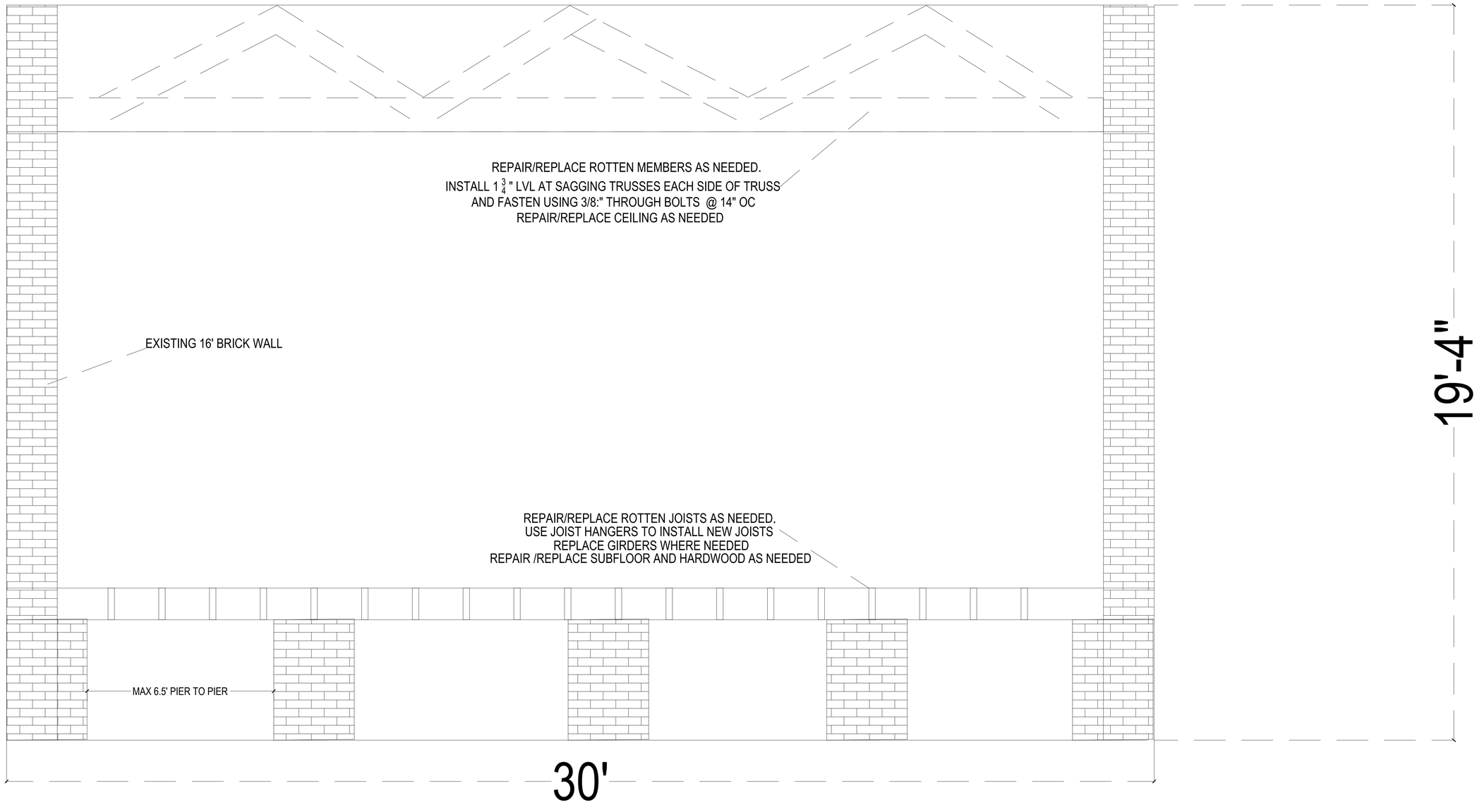

STRUCTURAL
SCALE: 1/4" = 1'

REVISIONS	BY
1-5-18 SECOND SUBMITTAL REV PER FV COMMENTS	CGB

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
SEAL
12276
6-10-21
C. GREGORY BAGLEY

805 COKESBURY ROAD
ANGIER , NC 27526
PHONE: (919) 552-1600
FAX: (919) 552-6325

GREG BAGLEY ENGINEER
DESIGN · PLANNING · SURVEYING · MAPPING

STRUCTURAL PLAN

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