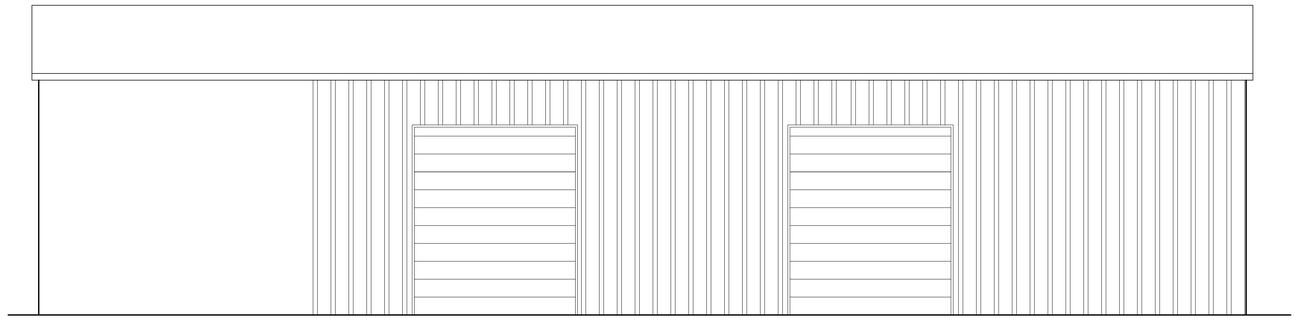
SHEET INDEX:

PROJECT:

New Building for
CLH INVESTMENTS - SOUTHBOUND EXPRESS
2721 U.S. 301 South
Dunn, North Carolina 28334

PIN 1515-19-3735



FRONT ELEVATION

BUILDING DEPARTMENT:

HARNETT COUNTY DEVEOPMENT SERVICES
420 MCKINNEY PARKWAY
LILLINGTON, NC 27546
Phone – 910-893-7525

PROJECT DESIGNER:

GEORGE M. ROSE, P.E.
P.O. BOX 53441
FAYETTEVILLE, NC 28305
910-977-5822
george@gmrpe.com

CODE REVIEW:

APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

2018 NORTH CAROLINA STATE BUILDING CODE for BUILDING

2018 NORTH CAROLINA STATE BUILDING CODE for PLUMBING

2018 NORTH CAROLINA STATE BUILDING CODE for MECHANICAL

2017 NATIONAL ELECTRICAL CODE

2017 STANDARD & COMMENTARY ICC/ANSI A117.1-2009 on ACCESSIBILITY

2018 NORTH CAROLINA STATE BUILDING CODE for ENERGY

2018 NORTH CAROLINA STATE BUILDING CODE for FIRE PREVENTION

BUILDING DATA:

THE FACILITY IS A NEW BUILDING TO BE USED FOR OFFICES AND STORAGE

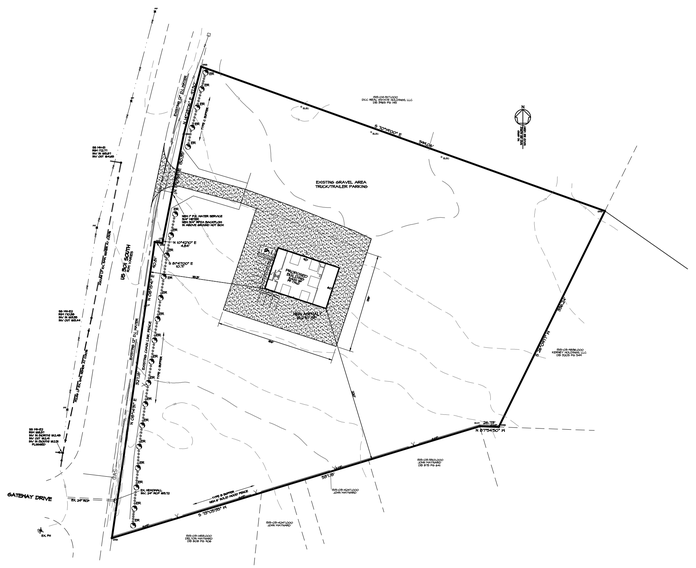
THE BUILDING IS NOT SPRINKLERED.

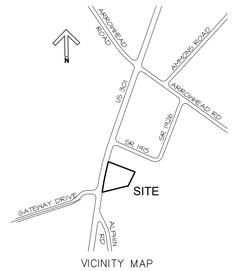
SITE MEETS ALL A.D.A. PARKING & RAMP REQUIREMENTS FOR THE BUILDING.

SEE BUILDING CODE SUMMARY (SHEET BC) FOR ADDITIONAL INFORMATION.

SITE PLAN

SCALE 1" = 100'





VICINITY MAP

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

Name of Project: NEW BUILDING FOR CLH INVESTMENTS - SOUTHBOUND EXPRESS
Address: 2721 U.S. 301 SOUTH, DUNN, NC Zip28334
Proposed Use: WAREHOUSE
Owner or Authorized Agent: LAYTON McPHAIL Phone (910) 990-3725 E-Mail mcphailmetalstructures@yahoo.com
Owned By: ☐ City/County ☑ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ☑ County HARNETT ☐ State NORTH CAROLINA

CONTACT: GEORGE M. ROSE, P.E.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	
Architectural					
Civil	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	11315	910-471-5822	george@gmrpe.com
Electrical	COASTAL PLAINS ENGINEERING	CHRISTOPHER S. LOCKLEAR	20193	910-521-7213	coastalplainseng@gmail.com
Fire Alarm	N/A	N/A			
Plumbing	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	11315	910-471-5822	george@gmrpe.com
Mechanical	COASTAL PLAINS ENGINEERING	CHRISTOPHER S. LOCKLEAR	20193	910-521-7213	coastalplainseng@gmail.com
Sprinkler-Standpipe	N/A	N/A			
Structural :	INLAND BUILDINGS			800-438-1606	bobdavis@inlandbuildings.com
Precast:	N/A	N/A			
Retaining Walls >5' High	N/A	N/A			
Building	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	11315	910-471-5822	george@gmrpe.com

2018 NC CODE FOR: ☑ New Construction
☐ 1st Time Interior Completion
☐ Shell/Core
☐ Phased Construction - Shell/Core
☐ Renovation

2018 NC EXISTING BUILDING CODE: ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: _____ ORIGINAL OCCUPANCY(S) (Ch. 3): _____
RENOVATED: _____ CURRENT OCCUPANCY(S) (Ch. 3): _____
RISK CATEGORY (table 1604.5) Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☑ II ☐ III ☐ IV

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
Special Inspections Required: ☑ No ☐ Yes

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	RENOVATED (SQ FT)	SUB-TOTAL
5th Floor				
5th Floor				
4th Floor				
3rd Floor				
2nd Floor				
Mezzanine				
1st Floor		5,400		
Basement				
TOTAL		5,400		

ALLOWABLE AREA

Primary Occupancy Classification: SELECT ONE
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 Deflagerate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 CONDITION ☐ 1 ☐ 2
☐ I-2 CONDITION ☐ 1 ☐ 2
☐ I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
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): BUSINESS
Incidental Uses (Table 509): _____
Special Uses (Chapter 4 - List Code Sections): _____
Special Provisions (Chapter 5 - List Code Sections): _____
Mixed Occupancy: ☐ No ☑ Yes Separation: 2 Hr. Exception: _____

☐ 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 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	WAREHOUSE	5,400	23,000		

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 = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)
e. Percent of frontage increase I_f = 100 [F/P - 0.25] x W/30 = _____ (%)
2 Unlimited area applicable under conditions of Section 507.
3 Maximum Building Area = total number of stories in the building x D (minimum 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 (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	55'	19'-3"	
Building Height in Stories (Table 504.4)	3	1	

1 Provide code reference if the "Show 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

FIRE PROTECTION REQUIREMENTS

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		○					
Bearing walls Exterior							
North		○					
East		○					
West		○					
South		○					
Interior							
Nonbearing walls and Partitions Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor construction including supporting beams and joists							
Roof construction including supporting beams and joists							
Roof construction including supporting beams and joists							
Roof ceiling Assembly							
Column supporting roof							
Shafts Enclosures - Exit							
Shafts Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant/Dwelling Unit/Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENINGS CALCULATIONS

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

LIFE SAFETY SYSTEM REQUIREMENTS

Life Safety Plan Sheet #: LS

☑ 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 types for each area as it relates to occupant load calculation (Table 1004.1.2)
☑ Occupant loads for each area
☑ Exit access travel distance (1017)
☑ Common path of travel distances (1006.2.1 & 2006.3.2(1)
☑ Dead end lengths (1020.4)
☑ Clear exit widths for each exit door
☑ Maximum calculated occupant load capacity each exit door can accomodate 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 and supporting construction for a fire barrier/fire partition/smoke barrier.
☑ Location of doors with panic hardware (1010.1.10)
☑ Location of doors with electromagnetic egress locks (1010.1.9.9)
☑ 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

Section/Table/Note	Title

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

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

ACCESSIBLE PARKING
(SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXISTING	○	○	○	○	○	○	○	○	○	○
	NEW	1	1	○	○	1	1	○	○	○	○
	REQUIRED	1	1	○	○	1	1	○	○	○	○

SPECIAL APPROVALS

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

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the **North Carolina Energy Conservation 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: ☐ No ☐ Yes (the remainder of this section is not applicable)
Existing building: ☐ No ☐ Yes (Provide Code or Statury reference)
Existing building: No Yes (Provide Code or Statury reference)
Climate Zone: ☑ 3A ☐ 4A ☐ 5A
Method of Compliance: Energy Code ☐ Performance ☑ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)
Roof/ceiling Assembly (each assembly)
Description of assembly: WOOD TRUSSES, PLY SHEATHING, SHINGLES
U-Value of total assembly: 0.026
R-Value of insulation: 38
Skylights in each assembly: NONE
U-Value of skylight: _____
Total square footage of skylights in each assembly: N/A
Exterior Walls (each assembly)
Description of assembly: 3.5" WOOD STUDS, GYP SHEATHING, SHEETROCK
U-Value of total assembly: 0.077
R-Value of insulation: 15
Openings (windows or doors with glazing)
U-Value of assembly: 0.34
Solar heat gain coefficient: 0.64
U-Value of assembly: _____
Projection factor: 0
Door R-Values: 2.00
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: _____
Floor slab on grade
Description of assembly: 4" UNINSULATED CONCRETE SLAB
U-Value of total assembly: N/A
R-Value of insulation: _____
Horizontal/Vertical requirement: _____
R-Value of insulation: N/A
Slab Heated: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.0
Snow (I_E) 1.0
Live Loads: Roof 20 psf
Mezzanine _____ psf
Floor 100 psf
Ground Snow Load: 10 psf
Wind Load: Ultimate Wind Speed 120 mph (ASCE-7)
Exposure Category _____

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 _____ %g S_1 _____ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☑ D
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system ☑ 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 2000 psf
Pile size, type, and capacity _____ psf

SHELL VARIABLE FORM (for all spaces - see plan)
(THIS SECTION REQUIRED FOR ALL SHELL ALTERATIONS TO SHELL AND INTERIOR COMPLETION PROJECTS)

Check each applicable line to match scope of work. Edit as necessary to provide clear detail of installation.

Mechanical
☐ No work
☐ Equipment set ☐ with ☐ without power
☐ Trunk line installed ☐ with ☐ without outlets
☐ Gas Line
☐ Install complete operational system
Other _____

Plumbing
☐ No work
☐ Install water service and sewer
☐ Install building drain ☐ and ☐ or water distribution ☐ main with ☐ without branches
☐ Install complete plumbing system
Other ☐ ROUGH-INS ARE INCOMPLETE, ADD'L IN-SLAB WORK IS REQUIRED.
WATER SERVICE IS EXISTING (PRESENTLY INSTALLED).

Sprinkler
☐ Install complete sprinkler system

Building
☐ Install slab ☐ partial ☐ complete
☐ Install demising walls
☐ Install interior partitioning ☐ partial ☐ complete
☐ Install Ceilings
☐ White box (additional interior completion permits are required for Certificate of Occupancy and power)
Other _____

Electrical
☐ House panel
☐ Service laterals to meter centers/panels located on buildings
☐ Demise wall and ceilings only
☐ Conduit, duct, raceway in slab
☐ Power and lighting circuits to "J" Box
☐ Install light fixtures
☐ Install ☐ Heat/Ac ☐ Elevator ☐ Generator ☐ Parking lot lighting
☐ Install complete system

Other ☐ SUITE PANEL AND SERVICE ARE EXISTING (PRESENTLY INSTALLED).
Please provide full information on any alternate methods and means incorporated into the design of this project. Provide specific details and incorporate into plan submittal any supporting documents or agreement

SPECIAL INSTRUCTIONS (CHAPTER 17)
SPECIAL INSPECTIONS SHALL BE CONDUCTED ON ALL PROJECTS THAT FALL WITHIN BUILDING CATEGORIES AND/OR CONTAIN ELEMENTS SUBJECT TO SPECIAL INSPECTIONS AS PRESCRIBED BY REVISED SECTION 1704.

To schedule a required pre-construction meeting with the City of Fayetteville, please call Doug Maples at (910) 433-1703. The main line number for the Development Services Center is (910) 433-1701.

List whom will inspect the required special inspections:

Fabricator of load bearing components

Soil tests

Concrete, caissons, piles, piers, pre-cast

Post tension concrete

Modular construction

Steel and connections, welds, bolts, anchors

Fire spray tests

Smoke control

Seismic, wind designs, Quality Assurance

Retaining walls

Masonry

Wood

Alternate Methods

EIFS

Other (describe)

Other (describe)

Owner or agent _____

SPECIAL APPROVALS:

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

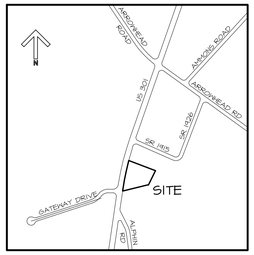
NONE

COUNTY OF HARNETT
2012 APPENDIX B
BUILDING CODE SUMMARY
for:

CLH INVESTMENTS SOUTHBOUND EXPRESS

2721 HIGHWAY 301 SOUTH
DUNN, NORTH CAROLINA 28334

BC



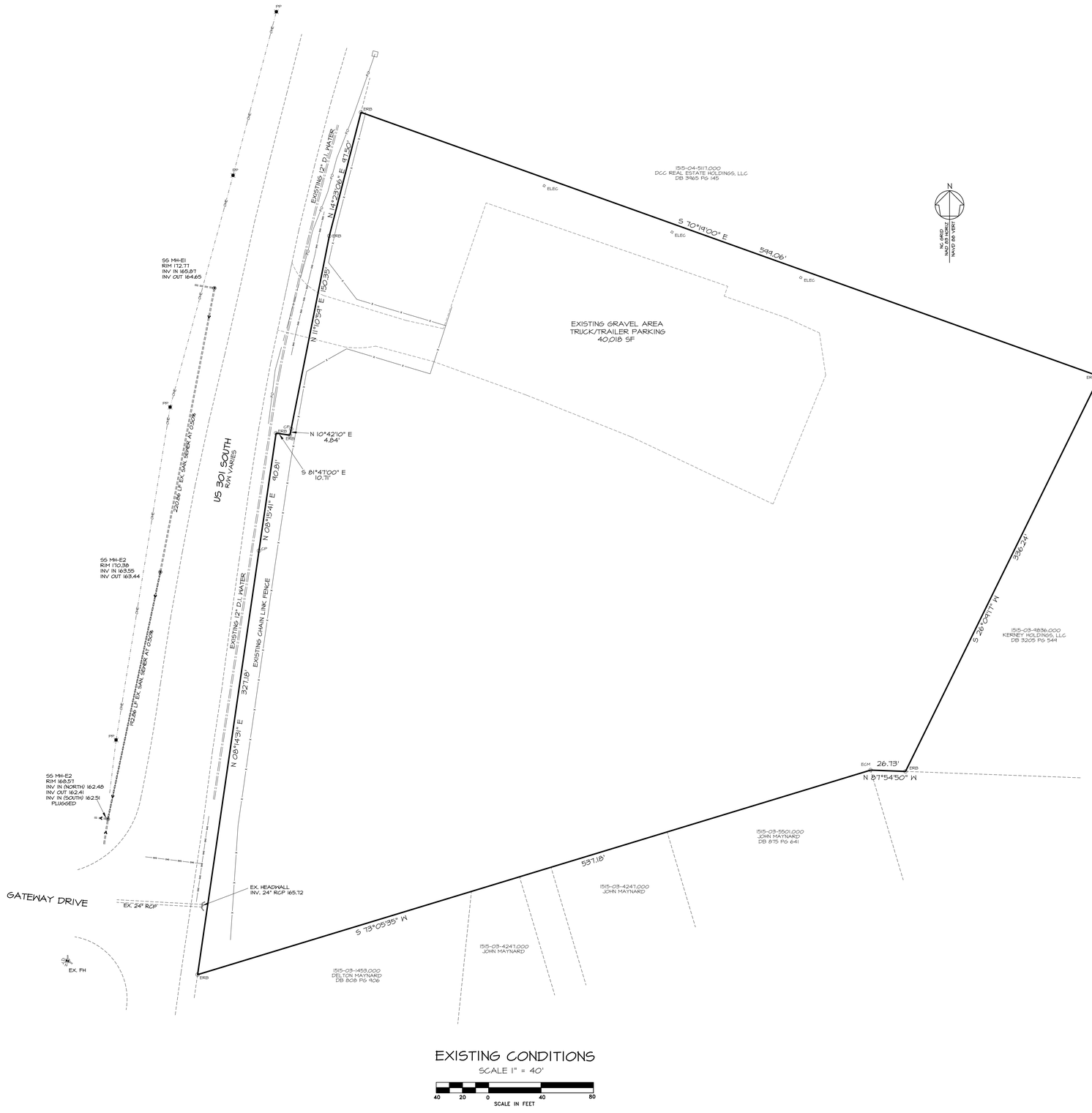
VICINITY MAP
NO SCALE

LEGEND

- ECM EXISTING CONCRETE MONUMENT (PROPERTY CORNER)
- ERB EXIST REBAR (PROPERTY CORNER)
- CP COMPUTED POINT (PROPERTY CORNER)
- EIP EXIST IRON PIPE (PROPERTY CORNER)
- LP EXISTING LIGHT POLE
- PP EXISTING POWER POLE
- GUY EXISTING GUY WIRE
- OHE EXISTING OVERHEAD ELECTRICAL
- FO EXISTING FIBER OPTIC LINE
- EXISTING CHAIN LINK FENCE
- 234 EXISTING CONTOUR
- EXISTING NATURAL GAS LINE

NOTES

1. TOTAL AREA IN TRACT = 271,304 SF = 6.23 ACRES
2. OWNER/DEVELOPER:
   CLH INVESTMENTS, LLC (CHARLIE HOWE)
   716 CHRISTIAN LIGHT ROAD
   FUQUAY-VARINA, NC 27526
   southbounde×p@yahoo.com
   910-623-3447
3. PROPERTY ADDRESS:
   2721 US HIGHWAY 301 SOUTH
   DUNN, NC 28334
   AVERASBORO TOWNSHIP
4. REFERENCE: DB 3491 PG 447; PB 2006 PG 880
5. PIN NO: 1515-03-3735.000
6. PROPERTY IS ZONED INDUSTRIAL, HARNETT COUNTY
7. EXISTING IMPERVIOUS SURFACES:
   GRAVEL 40,018 SF = 0.92 ACRES
   IMPERVIOUS COVERAGE % = 0.92/6.23 = 14.8%



EXISTING CONDITIONS
SCALE 1" = 40'

40 20 0 40 80
SCALE IN FEET

REVISIONS:
6-21-22 GRAVEL, NOTES

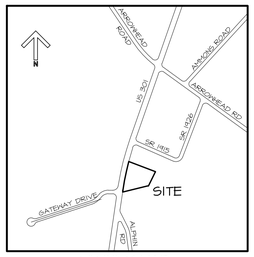
GEORGE M. ROSE, P.E.
P.O. BOX 53441
FAYETTEVILLE, NC 28305
910-977-5822 FAX 910-485-5823 EMAIL george@gmrpe.com

NEW BUILDING FOR
CLH INVESTMENTS – SOUTHBOUND EXPRESS
2721 U.S. 301 SOUTH
DUNN, NC

EXISTING CONDITIONS

DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
SCALE: NOTED

SHEET NO.
SP1



VICINITY MAP
NO SCALE

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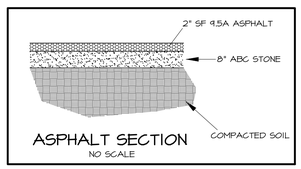
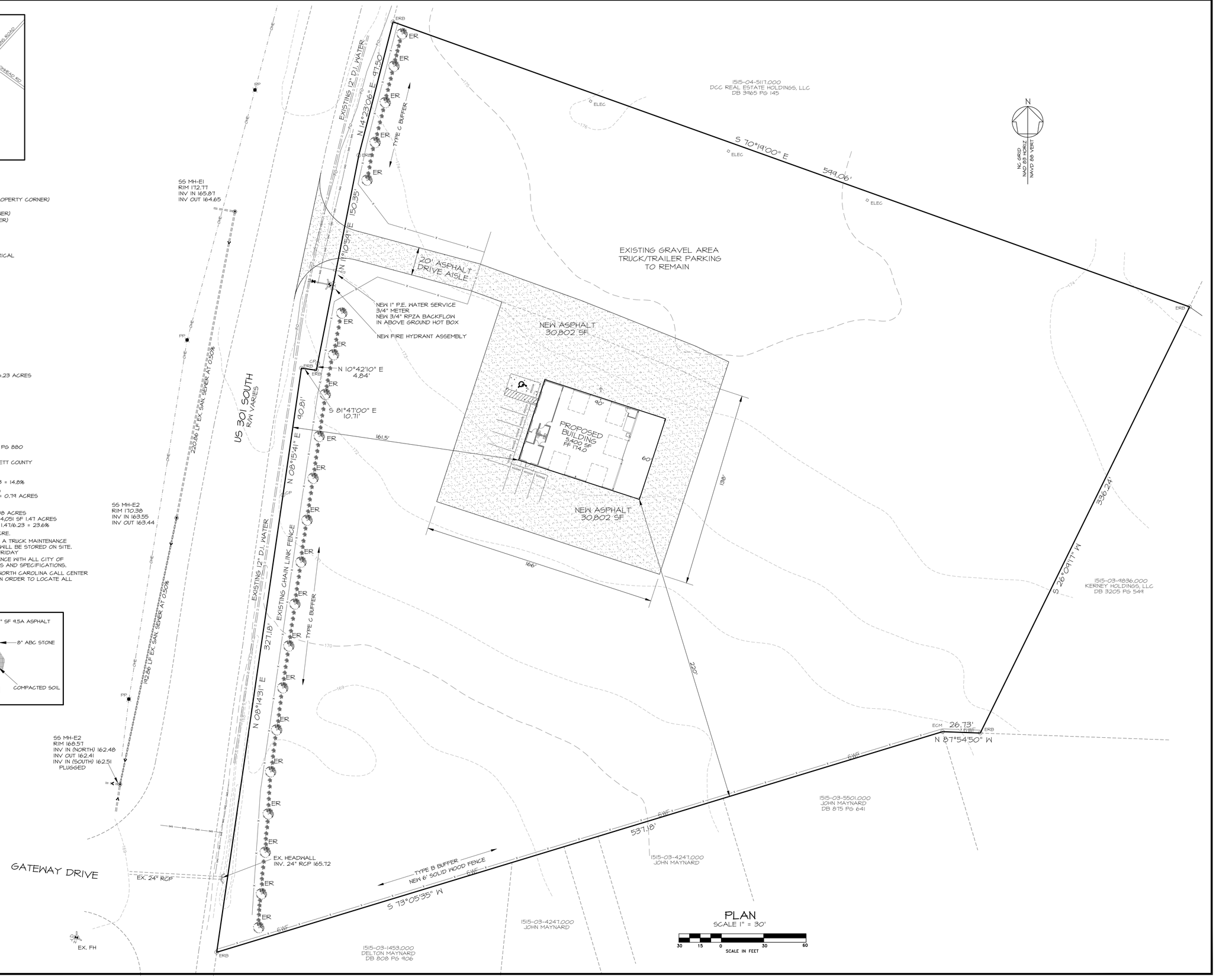
- GUY EXISTING GUY WIRE
- OHE EXISTING OVERHEAD ELECTRICAL
- FO EXISTING FIBER OPTIC LINE
- EXISTING CHAIN LINK FENCE
- 234 EXISTING CONTOUR
- EXISTING NATURAL GAS LINE
- NEW EASTERN REDBUD TREE 6' HEIGHT AT PLANTING
- NEW CLARISSA HOLLY SHRUB 5 EACH PER REDBUD TREE MIN. 18" HEIGHT AT PLANTING

NOTES

1. TOTAL AREA IN TRACT = 271,304 SF = 6.23 ACRES
2. OWNER/DEVELOPER:
   CLH INVESTMENTS, LLC (CHARLIE HOWE)
   716 CHRISTIAN LIGHT ROAD
   FUQUAY-VARINA, NC 27526
   southboundexp@yahoo.com
   910-623-9441
3. PROPERTY ADDRESS:
   2721 US HIGHWAY 301 SOUTH
   DUNN, NC 28334
   AVERASBORO TOWNSHIP
4. REFERENCE: DB 3491 PG 447; PB 2006 PG 880
5. PIN NO: 1515-03-3735.000
6. PROPERTY IS ZONED INDUSTRIAL, HARNETT COUNTY
7. EXISTING IMPERVIOUS SURFACES:
   GRAVEL 40,018 SF = 0.92 ACRES
   IMPERVIOUS COVERAGE % = 0.92/6.23 = 14.8%
7. PROPOSED NEW IMPERVIOUS SURFACES:
   EX. GRAVEL TO REMAIN = 34,256 SF = 0.79 ACRES
   ASPHALT 24,233 SF = 0.55 ACRES
   BUILDING 5,400 SF = 0.12 ACRES
   CONCRETE HCP PAD = 362 SF = 0.008 ACRES
   POST DEVELOPMENT IMPERVIOUS = 64,051 SF 1.47 ACRES
   POST DEVELOPMENT IMPERVIOUS % = 1.47/6.23 = 23.6%
8. DISTURBED AREA IS LESS THAN ONE ACRE.
9. PROPOSED BUILDING IS TO BE USED AS A TRUCK MAINTENANCE FACILITY. NO HAZARDOUS MATERIALS WILL BE STORED ON SITE. HOURS OF OPERATION: 8-5, MONDAY-FRIDAY
10. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF DUNN AND HARNETT COUNTY STANDARDS AND SPECIFICATIONS.
11. THE CONTRACTOR MUST CONTACT THE NORTH CAROLINA CALL CENTER AT 800-632-4444 PRIOR TO DIGGING IN ORDER TO LOCATE ALL EXISTING UTILITIES.



ASPHALT SECTION
NO SCALE



PLAN
SCALE 1" = 30'

SCALE IN FEET
30 15 0 30 60

REVISIONS:
6-10-22 NOTES
6-21-22 ASPHALT LIMITS

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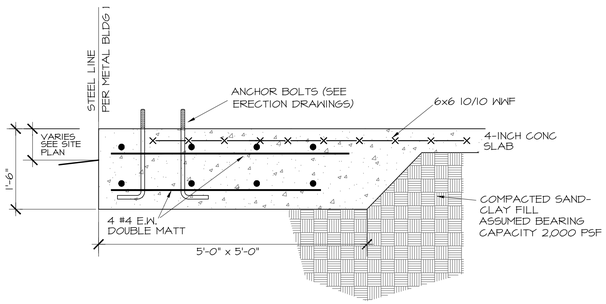
NEW BUILDING FOR
CLH INVESTMENTS – SOUTHBOUND EXPRESS
2721 U.S. 301 SOUTH
DUNN, NC

SITE, UTILITY AND GRADING PLAN

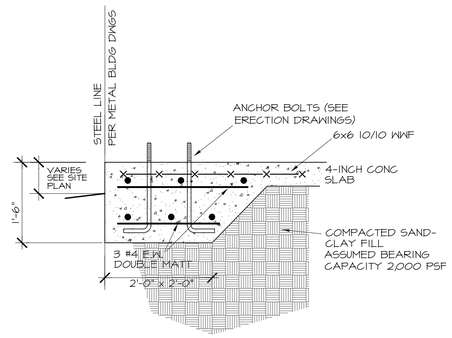
DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
SCALE: NOTED

SHEET NO.
SP2



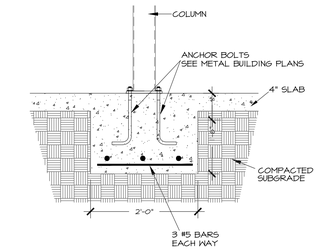
2/S1 FOOTING DETAIL A

3/4" = 1' - 0"



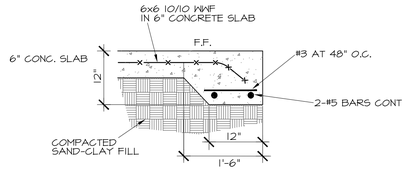
3/S1 FOOTING DETAIL B

3/4" = 1' - 0"



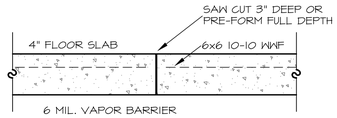
4/S1 FOOTING DETAIL C

3/4" = 1' - 0"



5/S1 PERIMETER FOOTING DETAIL

3/4" = 1' - 0"



6/S1 CONSTRUCTION JOINT

NO SCALE

GENERAL CONDITIONS

THE GENERAL CONTRACTOR SHALL MAKE ADEQUATE SANITARY PROVISIONS.
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY AND COMPLIANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT AS IT MAY REGARD ANY PHASE OF THE WORK ON THIS PROJECT.

SOIL COMPACTION AND TESTING

WHERE DIRECTED BY THE DESIGN ENGINEER, THE GENERAL CONTRACTOR SHALL OBTAIN THE SERVICES OF A TESTING LABORATORY FOR THE PURPOSE OF DETERMINING THE SUITABILITY OF THE SUBSURFACE CONDITIONS AND THE BEARING CAPACITIES OF ALL AREAS BELOW NEW CONCRETE.
THE SOIL AND BEARING REPORT SHALL BE SUBMITTED PRIOR TO EXCAVATING, WHERE POSSIBLE, BUT PRIOR TO PLACEMENT OF ANY REINFORCING AND CONCRETE. SOIL BEARING TO BE MIN. 2,000 PSF.

CONCRETE WORK

ALL CONCRETE FOR THE PROJECT SHALL BE "READY MIX" AND SHALL COMPLY WITH ASTM C-94.
ALL SECTIONS OF THE CONCRETE WORK SHALL COMPLY WITH ALL ASTM AND ACI REQUIREMENTS.

- FORM WORK - ALL FORMS TO BE CAREFULLY BUILT AND SECURED IN PLACE IN SUCH A MANNER AS TO HAVE SUFFICIENT STRENGTH TO CARRY THE DEAD WEIGHT OF THE CONSTRUCTION AS A LIQUID, WITHOUT DEFLECTION OR VIBRATION. FORMS TO BE BUILT TIGHT, TRUE TO POSITION AND DIRECTION, THOROUGHLY BRACED, WIRED AND SPIKED OR OTHERWISE FASTENED TOGETHER.
- CONCRETE - MINIMUM OF 3,000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM OF FIVE SACKS OF CEMENT PER CUBIC YARD OF CONCRETE, MAXIMUM OF 4" SLUMP.
- FINISHING - IN ACCORDANCE WITH THE LATEST A.C.I. CODE, PLUMB, LEVEL, TRUE IN LINE, FREE OF HONEYCOMB. BUILDING SLAB SHALL HAVE A HARD STEEL TROWEL FINISH. WALKS SHALL HAVE BROOMED FINISH, AND EXPANSION JOINTS AT APPROXIMATELY 50' O.C. AND DUMMY JOINTS AS SHOWN ON THE SITE PLAN.
- REMOVAL OF FORMS - FORMS SHALL BE CAREFULLY REMOVED SO AS NOT TO IMPAIR THE FACE OF THE CONCRETE. IMMEDIATELY AFTER THE FORMS ARE REMOVED ALL DAMAGE OF IMPERFECT WORK SHALL BE PATCHED IN A NEAT AND WORKMANLIKE MANNER, OR IF BADLY DAMAGED, IN THE OPINION OF THE OWNER , THE WORK SHALL BE REBUILT. THE MINIMUM TIME BEFORE ANY FORMS CAN BE REMOVED IS SEVEN (7) DAYS FOR SUCH MEMBERS AS ARE SUBJECT TO BENDING STRESSES, SUCH AS SLABS.
- CURING - USE MEMBRANE CURING METHOD. USE MFG. RATE, SPRAY IMMEDIATELY FOLLOWING FINISHING. PROTECT FROM FREEZING WEATHER. CURE A TOTAL OF 28 DAYS USING A.C.I. METHODS.

REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO A.S.T.M. A615, GRADE 60.
ALL REINFORCING STEEL SHALL BE MANUFACTURED, DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. 315R, 318R AND A.C.I. SP 66.
WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A185, IN AS LONG A LENGTH AS IS PRACTICAL. WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST ONE GRID WIDTH PLUS 2".
REINFORCEMENT SHALL BE BENT COLD AND SHALL NOT BE WELDED.

SPLICES:
REINFORCEMENT IN CONCRETE AND MASONRY SHALL HAVE LAP LENGTHS AS FOLLOWS, UNLESS OTHERWISE SPECIFIED ON DRAWINGS:

BAR SIZE:	IN CONCRETE:	IN MASONRY:
#3	1'-6"	2'-0"
#4	2'-0"	2'-6"
#5	2'-6"	3'-0"

PLACEMENT:
REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED BY CONCRETE, METAL, OR OTHER APPROVED CHAIRS, SPACERS OR TIES, AND SECURED AGAINST DISPLACEMENT DURING CONCRETE OR GROUT PLACEMENT.

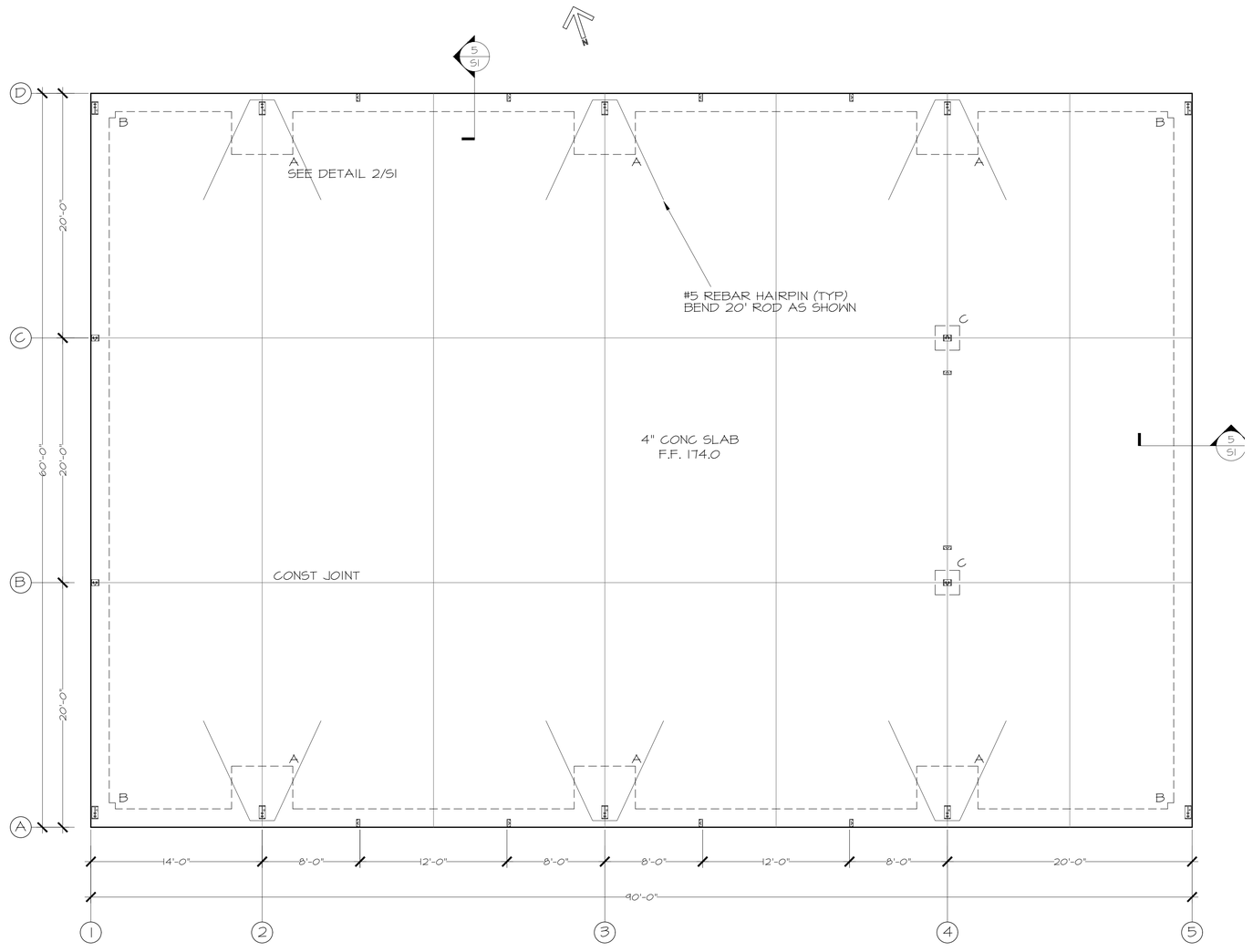
EXCEPT WHERE OTHERWISE NOTED, REINFORCEMENT SHALL HAVE CONCRETE COVER AS FOLLOWS:

CONCRETE DEPOSITED AGAINST EARTH	3"
FORMED CONCRETE AGAINST EARTH	2"
EXTERIOR FACES OF WALLS	1"
TO TOP OF SLABS-ON-GRADE	3/4"

ALL SCALES, LOOSE RUST, GREASE OR DIRT SHALL BE REMOVED FROM THE REINFORCING BEFORE IT IS PLACED.
PROVIDE #4 "HAIRPIN" AS SHOWN ON THE SLAB PLAN VIEW.
ANCHOR BOLTS SHALL BE (A -307T) HIGH STRENGTH.

SOIL TREATMENT

ADMINISTRATION PER INDUSTRY STANDARDS.



1/S1 SLAB PLAN

3/16" = 1' - 0"

REVISIONS:

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NEW BUILDING FOR
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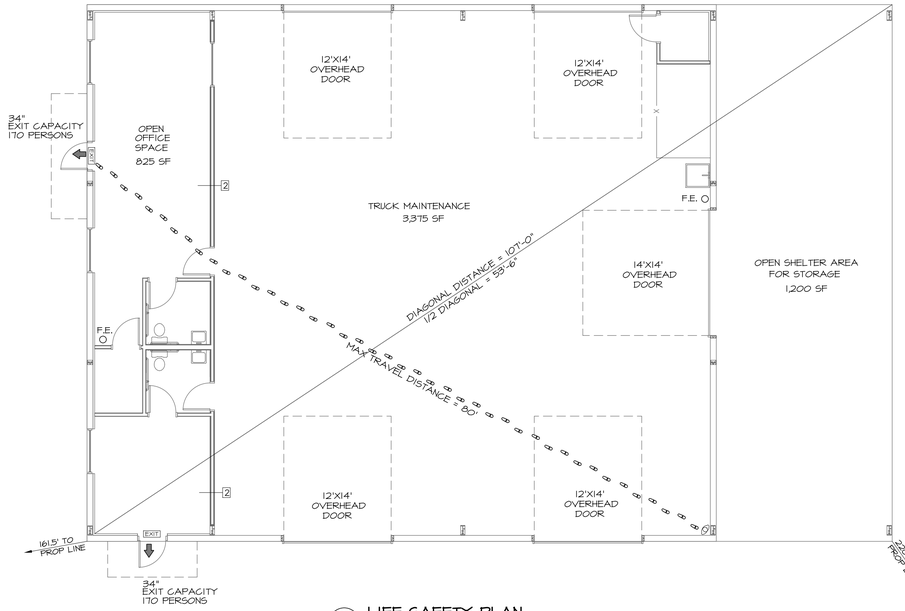
2721 U.S. 301 SOUTH DUNN, NC

SLAB PLAN AND DETAILS

DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
SCALE: NOTED

SHEET NO.
S1



2/G1 LIFE SAFETY PLAN
1/8" = 1' - 0"

OCCUPANCY AND PLUMBING FIXTURE INFORMATION

TYPE OF CONSTRUCTION: II-B
GROSS EXTERIOR SQUARE FOOTAGE = 5,400 SF
SPACE OCCUPANCY BY NET SF USING TABLE 1004.1.2
OFFICE/STORAGE = 825 SF/100 SF PER PERSON = 9 PERSONS
REPAIR GARAGE/STORAGE (S-1) = 4575/500 SF/100 SF PER PERSON = 10 PERSONS
TOTAL = 9 + 10 = 19 PERSONS
= 9 MALES, 10 FEMALES
UNISEX TOILETS REQUIRED = 1 PER 25 (BUSINESS) = 1 TOTAL (2 PROVIDED)
UNISEX LAVATORIES REQUIRED = 1 PER 40 = 1 TOTAL (2 PROVIDED)
MAXIMUM TRAVEL DISTANCE: 80 FEET
MAXIMUM ALLOWABLE TRAVEL DISTANCE: 200 FEET (PER TABLE 1017.2)
THE COMMON PATH OF TRAVEL IS LESS THAN 75 FEET (PER 1029.8)
THERE ARE NO DEAD END CORRIDORS OVER 20 FEET. (PER 1020.4)
MIN. NO. OF EXITS REQ'D: ONE (PER SECTION 1006)
NUMBER OF EXITS PROVIDED: TWO
MAXIMUM DIAGONAL LENGTH = 107'-0" (1/2 DIAGONAL = 53'-6")
DOORS DO HAVE PANIC HARDWARE. (PER 1010.1.10)
DOORS DO NOT HAVE DELAYED EGRESS LOCKS (PER 1010.1.9.6.2)
DOORS DO NOT HAVE ELECTROMAGNETIC EGRESS LOCKS (PER 1010.1.9.9)
DOORS DO NOT HAVE HOLD OPEN DEVICES.
THERE ARE NO EMERGENCY ESCAPE WINDOWS (PER 1030)
EGRESS ILLUMINATION PROVIDED AT EACH EXIT (PER 1008)

THIS SPACE IS NOT PROTECTED BY FIRE SPRINKLERS.

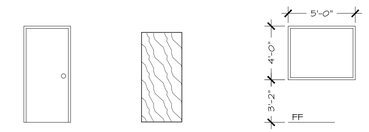
NO. OF FIRE EXTINGUISHERS PROVIDED: 2 TOTAL
PROVIDE FIRE EXTINGUISHERS UNDER THE FOLLOWING CONDITIONS:
1. WITHIN 30' OF COMMERCIAL COOKING EQUIPMENT
2. IN AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED, USED OR DISPENSED.
3. WHERE REQUIRED BY SECTIONS IN SECTION 906
4. SPECIAL-HAZARD AREAS WHERE REQUIRED BY FIRE CODE OFFICIAL.

LEGEND

F.E. O — ABC FIRE EXTINGUISHER SUGGESTED LOCATION
EXIT ROUTE
36" — EXIT WIDTH
EXIT — EXIT SIGN

WALL TYPES

2 — 2-HR RATED FIRE WALL SEE SECTION 1/G3



DOOR STYLE 1
3/0 X 7/0 X 1-3/4" HOLLOW METAL

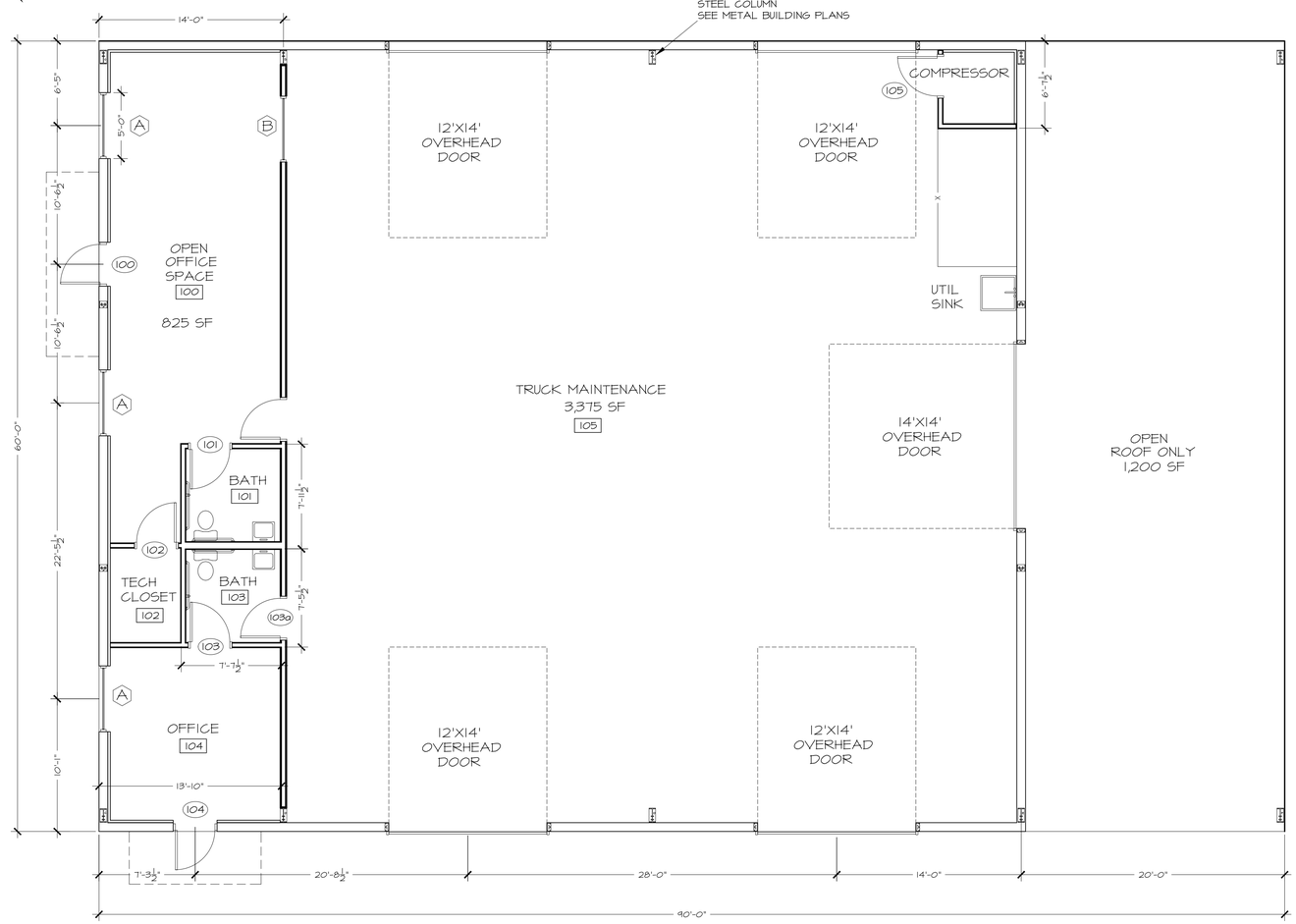
DOOR STYLE 2
1-3/4" SOLID CORE BIRCH

WINDOW STYLE A
3/0 X 7/0 X 1-3/4" HOLLOW METAL

3/G1 DOOR AND WINDOW STYLES
3/16" = 1' - 0"

DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE	ROUGH OPENING	DOOR STYLE	DOOR SWING	JAMB TYPE	LOCK SET	REMARKS
100	3/0X7/0	38"X86"	1	LH	H. METAL	KEYED	WITH THRESHOLD, W/S, CLOSER
101	3/0X7/0	38"X86"	2	RH	H. METAL	PRIVACY	
102	3/0X7/0	38"X86"	2	RH	H. METAL	KEYED	
103	3/0X7/0	38"X86"	2	LH	H. METAL	PRIVACY	
103a	3/0X7/0	38"X86"	2	LH	H. METAL	PRIVACY	
104	3/0X7/0	38"X86"	1	RH	H. METAL	KEYED	WITH THRESHOLD, W/S, CLOSER
105	3/0X7/0	38"X86"	1	RH	H. METAL	KEYED	



LEGEND

100 — ROOM NUMBER
(100) — DOOR NUMBER

NOTE:
INTERIOR DIMENSIONS SHOWN ARE STUD-TO-STUD
PERIMETER DIMENSIONS SHOWN ARE TYPICALLY OUT-TO-OUT

EXCEPT WHERE NOTED OTHERWISE, INTERIOR WALLS ARE 20 GA 3-5/8" X 10' METAL STUDS AT 16" O.C. WITH 5/8" SHEETROCK EACH SIDE.

1/G1 FLOOR PLAN
3/16" = 1' - 0"

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FLOOR PLAN AND LIFE SAFETY PLAN

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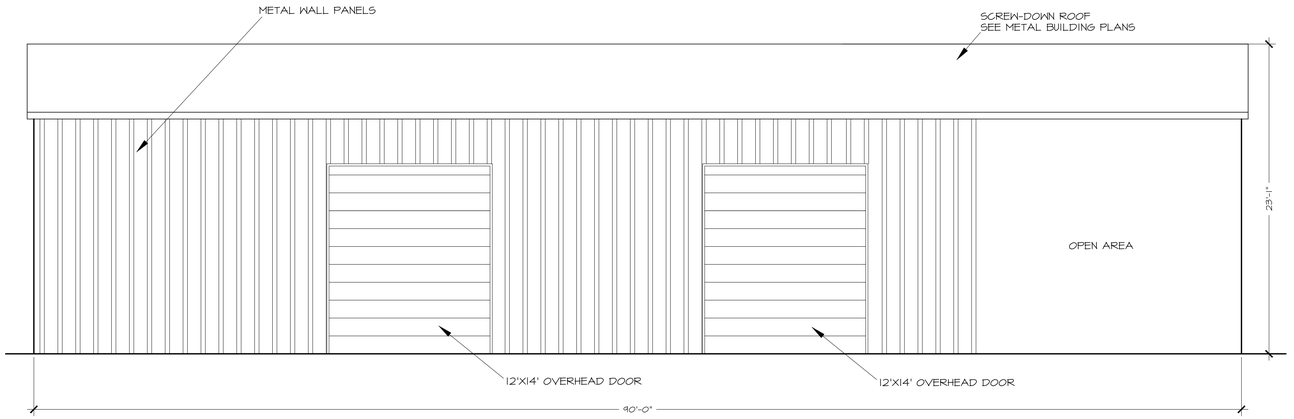
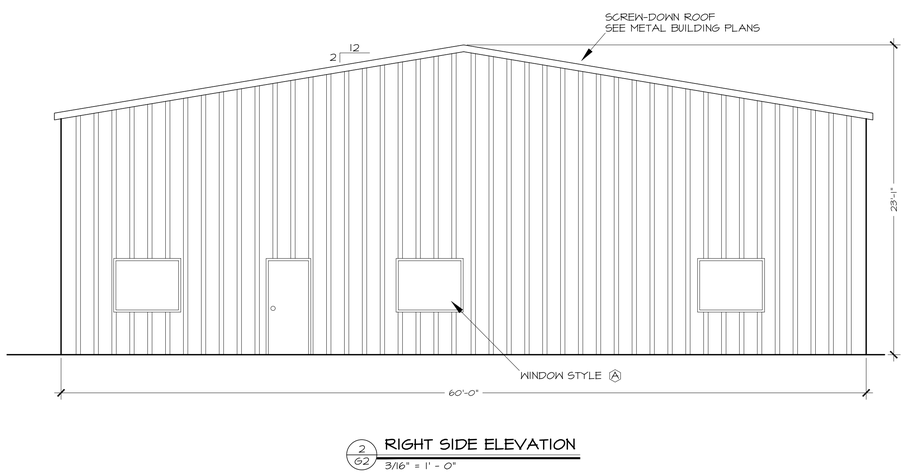
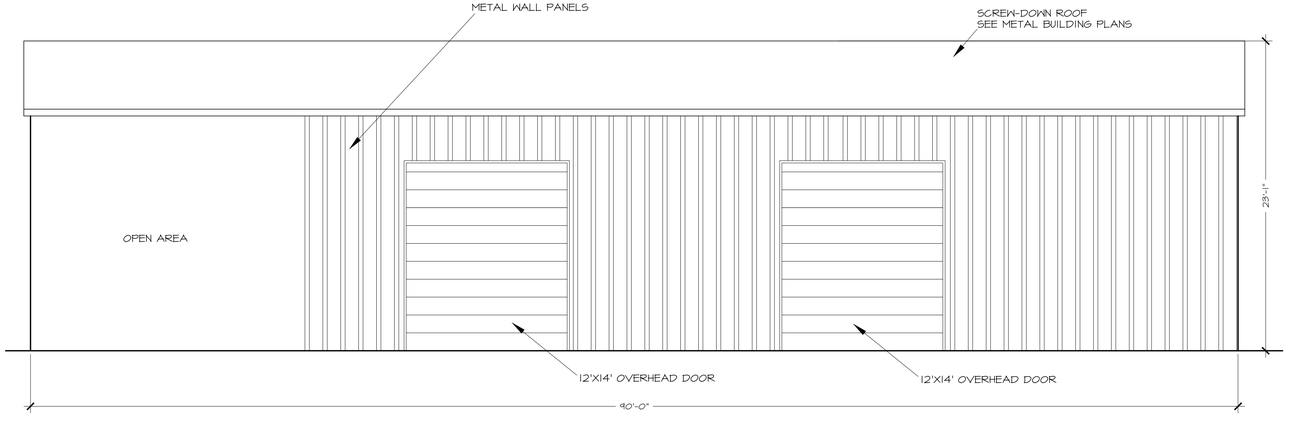
SHEET NO.
G1



3/G2 REAR ELEVATION
3/16" = 1' - 0"



2/G2 RIGHT SIDE ELEVATION
3/16" = 1' - 0"



2/G2 FRONT ELEVATION
3/16" = 1' - 0"

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DUNN, NC

ELEVATIONS

DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
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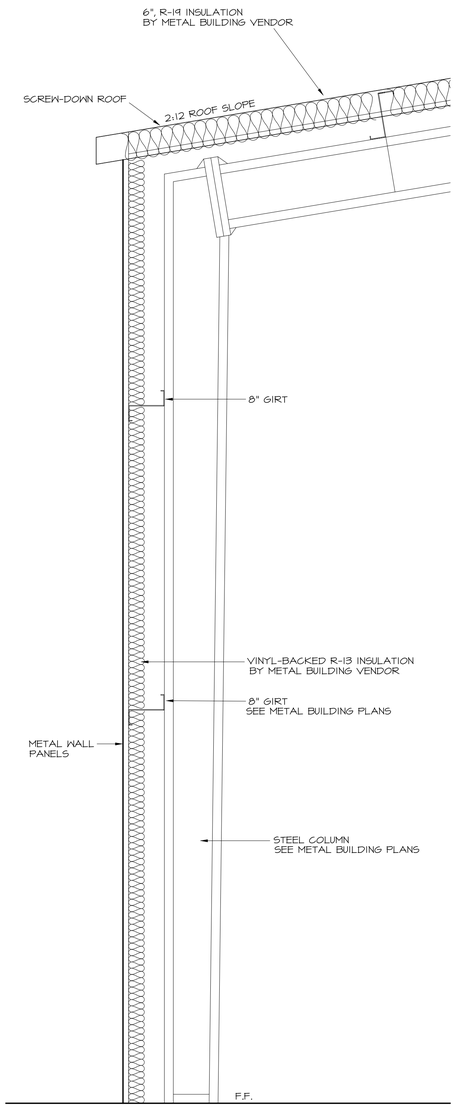
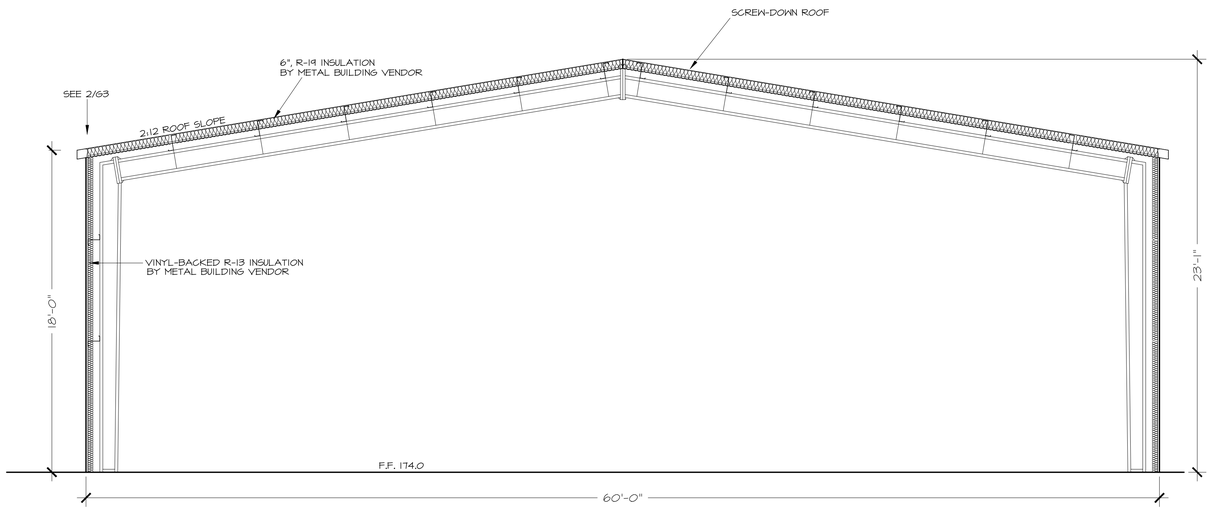
SHEET NO.
G2



2 / G3 WALL SECTION
3/4" = 1' - 0"



1 / G3 BUILDING SECTION
1/4" = 1' - 0"

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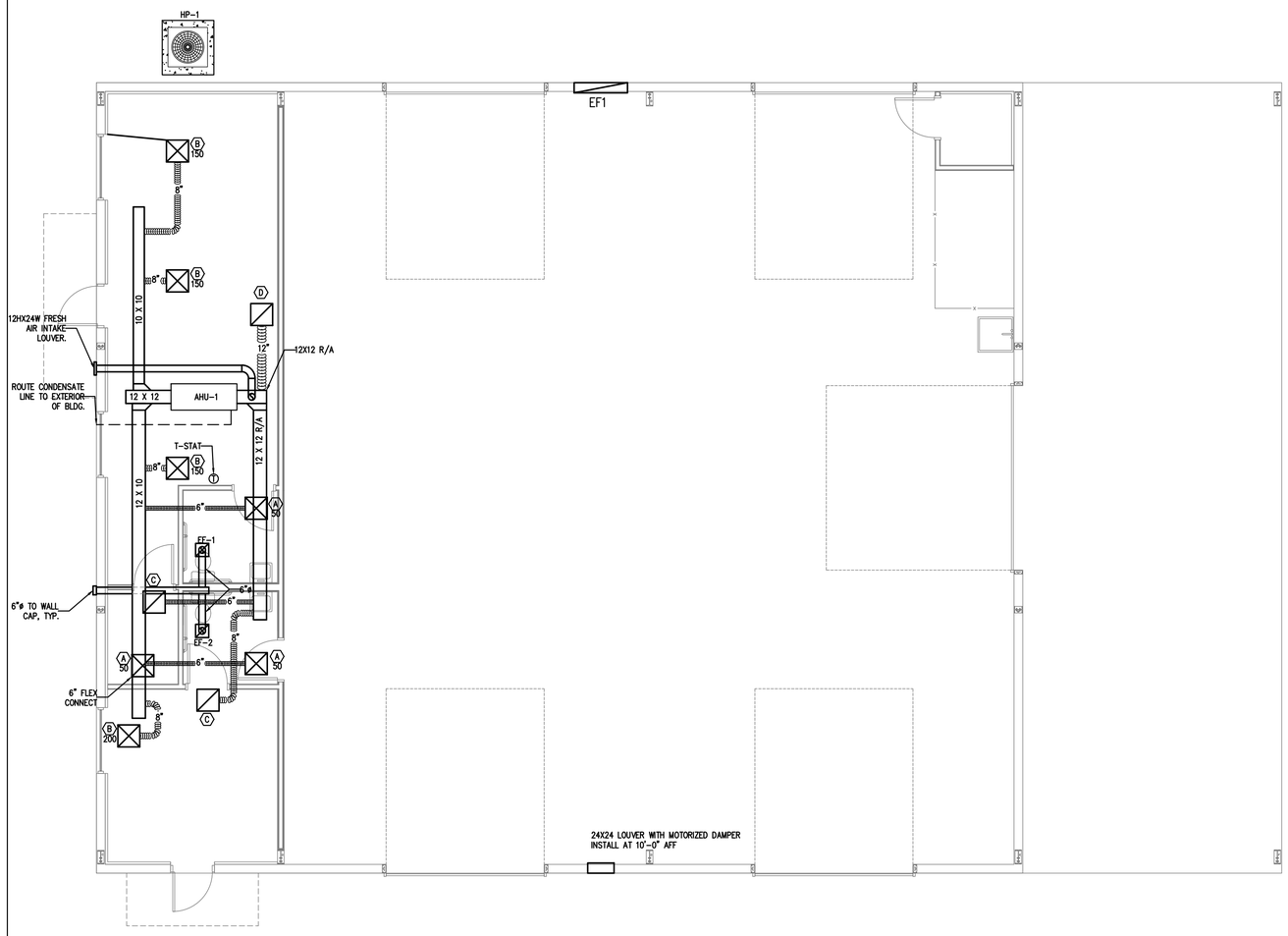
BUILDING AND WALL SECTIONS

DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
SCALE: NOTED

SHEET NO.
G3



1 / M1 **HVAC PLAN**

3/16"=1'-0"

ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 NC MECHANICAL CODE.

ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL IN ACCORDANCE WITH ASHRAE & SMACNA. DUCT SIZES SHOWN ARE NET FREE AREA REQUIRED. ALL SUPPLY AND RETURN DUCTS AND FLEX SHALL BE INSULATED WITH MIN. R-6.0 INSULATION UNLESS OTHERWISE NOTED IN THE DRAWING.

ALL EXPOSED ROUND DUCT SHALL BE DOUBLE WALL INSULATED. EXPOSED RECTANGULAR DUCT SHALL BE INTERNALLY LINED WITH INSULATION

ALL DUCTS SHALL BE AIR TIGHT, RIGID AND FREE FROM VIBRATION AND NOISE. ALL LAP JOINTS SHALL BE IN THE DIRECTION OF FLOW. VOLUME OR SPLITTER DAMPERS SHALL BE INSTALLED WHERE NECESSARY TO GUIDE AND CONTROL THE AIR FLOW. PROVIDE SHEET METAL SLEEVES AND COLLARS WHERE DUCTS PASS THROUGH WALLS.

STRUCTURAL MEMBERS OF THE BUILDING SHALL NOT BE CUT IN ANY MANNER FOR THE INSTALLATION OF ANY EQUIPMENT UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT.

MECHANICAL CONTRACTOR TO CONFIRM BREAKER/DISCONNECT SIZES OF HIS EQUIPMENT WITH THE ELECTRICAL CONTRACTOR.

FURNISH AND INSTALL A DUCT MOUNTED SMOKE DETECTOR IN THE RETURN DUCT OF THE A/C UNIT IN ACCORDANCE WITH 2018 NC MECHANICAL CODE. THE DETECTOR SHALL BE WIRED TO SHUT DOWN THE FAN IN THE EVENT THE DETECTOR IS ACTIVATED. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE DUCT DETECTOR AND RUN THE NECESSARY CONTROL WIRING FROM THE DETECTOR TO HIS EQUIPMENT. SMOKE DETECTORS ARE ONLY REQUIRED FOR UNITS SUPPLYING 2000 CFM OR MORE.

MECHANICAL CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT SYSTEM COMPLIANCE STATEMENT REQUIRES A WRITTEN TAB REPORT. FINAL PROJECT SIGNOFF WILL BE DENIED WITHOUT THIS REPORT

MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS AND ROUTING OF ALL DUCTWORK WITH OTHER TRADES TO AVOID CONFLICTS.

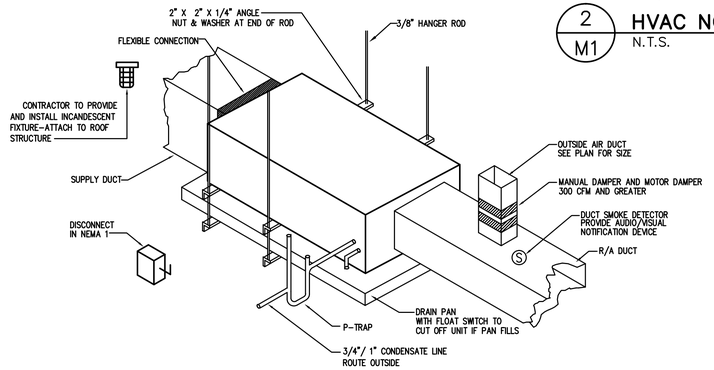
ALL EQUIPMENT MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK OR IN ACCORDANCE WITH THE PARTICULAR MANUFACTURER'S STANDARD GUARANTEE IF LONGER. ANY FAULTY MATERIAL OR WORKMANSHIP OR FAILURE OF ANY PART OF THE SYSTEM DURING NORMAL OPERATIONS UNDER THIS GUARANTEE SHALL BE CORRECTED WITHOUT COST TO THE OWNER.

ALL THERMOSTATS SHALL BE OF A PROGRAMMABLE TYPE.

BUILDING CONTRACTOR SHALL PROVIDE PERMANENT ACCESS TO ROOF STRUCTURE FOR ACCESS TO MECHANICAL EQUIPMENT WHEN ROOF STRUCTURE IS GREATER THAN 16'-0" HIGH.

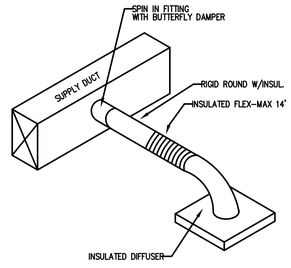
2 / M1 **HVAC NOTES**

N.T.S.



3 / M1 **AIR HANDLER DETAIL**

N.T.S.



4 / M1 **DIFFUSER TAKEOFF DETAIL**

N.T.S.

OUTSIDE AIR CALCULATION -NC 2018 MECHANICAL CODE (TABLE 403.3.1.1) Vbz = RpPz + RaAz

	OCCUPANCY TYPE:	SF (Az)	# OF OCCUPANTS PER 1000 SF	# OF OCCUPANTS (Pz)	O.A. CFM PER PERSON (Rp)	O.A CFM PER SqFt (Ra)	O.A. CFM REQUIRED (Vbz)	EXHAUST CFM REQUIRED
AHU-1	OPEN OFFICE SPACE	426	5	2.13	5	0.06	36	70
	RESTROOM 1	50	0	0	0	0	0	70
	RESTROOM 2	50	0	0	0	0	0	
	TECH CLOSET	38	0	0	0	0.06	2	
	OFFICE	169	5	0.845	5	0.06	14	
	TOTAL CFM REQUIRED						53	140
	TOTAL CFM FURNISHED						53	5631

OUTSIDE AIR CALCULATION -NC 2018 MECHANICAL CODE (TABLE 403.3.1.1) Vbz = RpPz + RaAz

	OCCUPANCY TYPE:	SF (Az)	# OF OCCUPANTS PER 1000 SF	# OF OCCUPANTS (Pz)	O.A. CFM PER PERSON (Rp)	O.A CFM PER SqFt (Ra)	O.A. CFM REQUIRED (Vbz)	EXAUST CFM REQUIRED
EF1	WAREHOUSE	3215	0	0	0	0.06	193	
	TOTAL CFM REQUIRED						193	
	TOTAL CFM FURNISHED						5631	

FAN SCHEDULE

MARK	LOCATION	SERVICE	CFM	S.P.	WATTS	RPM	VOLT	PHASE	DRIVE	REMARKS
EF-1,2	CEILING	TOILETS	70	0.25"	20.2	850	120	1	DIRECT	CEILING MOUNTED FAN. PROVIDE W/B.D.D. AND WALL CAP GREENHECK SPA-70 OR EQ. 6"ø TO WALL CAP
EF1	SIDEWALL	STORAGE	5,631	0.125"	1/2 HP	860	120	1	DIRECT	GREENHECK MODEL # SI 24 437 SIDEWALL MOUNTED FAN

LAY-IN DIFFUSER/RETURN SCHEDULE

MARK ON PLANS	CFM	AIR PATTERN	NECK SIZE	RUNOUT SIZE	REMARKS
A	50-125	4 WAY	6 X 6	6"	PRICE SERIES ASCD OFF WHITE, ALUM.,
B	150-275	4 WAY	8 X 8	8"	PRICE SERIES ASCD OFF WHITE, ALUM.,
C		N/A	12 X 12	SEE PLAN	PRICE SERIES 630FF OFF WHITE, ALUM., FILTER RETURN
D		N/A	20 X 20	SEE PLAN	PRICE SERIES 630FF OFF WHITE, ALUM., FILTER RETURN

AIR HANDLING UNIT SCHEDULE

UNIT NO.	CFM	OA CFM	ESP IN WG	FAN MOTOR HP	VOLTS	PHASE	CYCLE	FLA	MCA	MOCP	MFG. & MODEL	REMARKS
AHU-1	800	53	0.62	1/3	240	1	60	2.8	44	45	TRANE GAM5B0A24	2 TON AIR HANDLER W/ 7.68 KW STRIPS

HEAT PUMP UNIT SCHEDULE

OUTDOOR UNIT									CAPACITIES				
UNIT NO.	COMPRESSOR AMPS	NO. OF COMPR.	FAN AMPS	NO. OF FANS	UNIT VOLT	UNIT PHASE	MOCP	MCA	TOTAL COOLING	MIN. SEER	HEATING	MFG & MODEL	REMARKS
HP-1	10.9	1	0.64	1	240	1	25	14	23,400	14.00	22,400	TRANE 4TWR4024G1	2 TON HEAT PUMP UNIT

APPENDIX B 2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

MECHANICAL DESIGN

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone 4A

winter dry bulb: 27°
summer dry bulb: 94°

Interior design conditions

winter dry bulb: 75°
summer dry bulb: 75°
relative humidity: 50%

Building heating load: 13,400

Building cooling load: 16,895

Mechanical Spacing Conditioning System

Binary

description of unit: SPLIT SYS. HEAT PUMP
heating efficiency: 8.5 HSPF
cooling efficiency: 14.0 SEER
size category of unit: <65,000 BTU

description of units: _____
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: _____

Jun 21, 2022

NORTH CAROLINA PROFESSIONAL SEAL 20193 ENGINEER CHRISTOPHER S. LOCKLEAR

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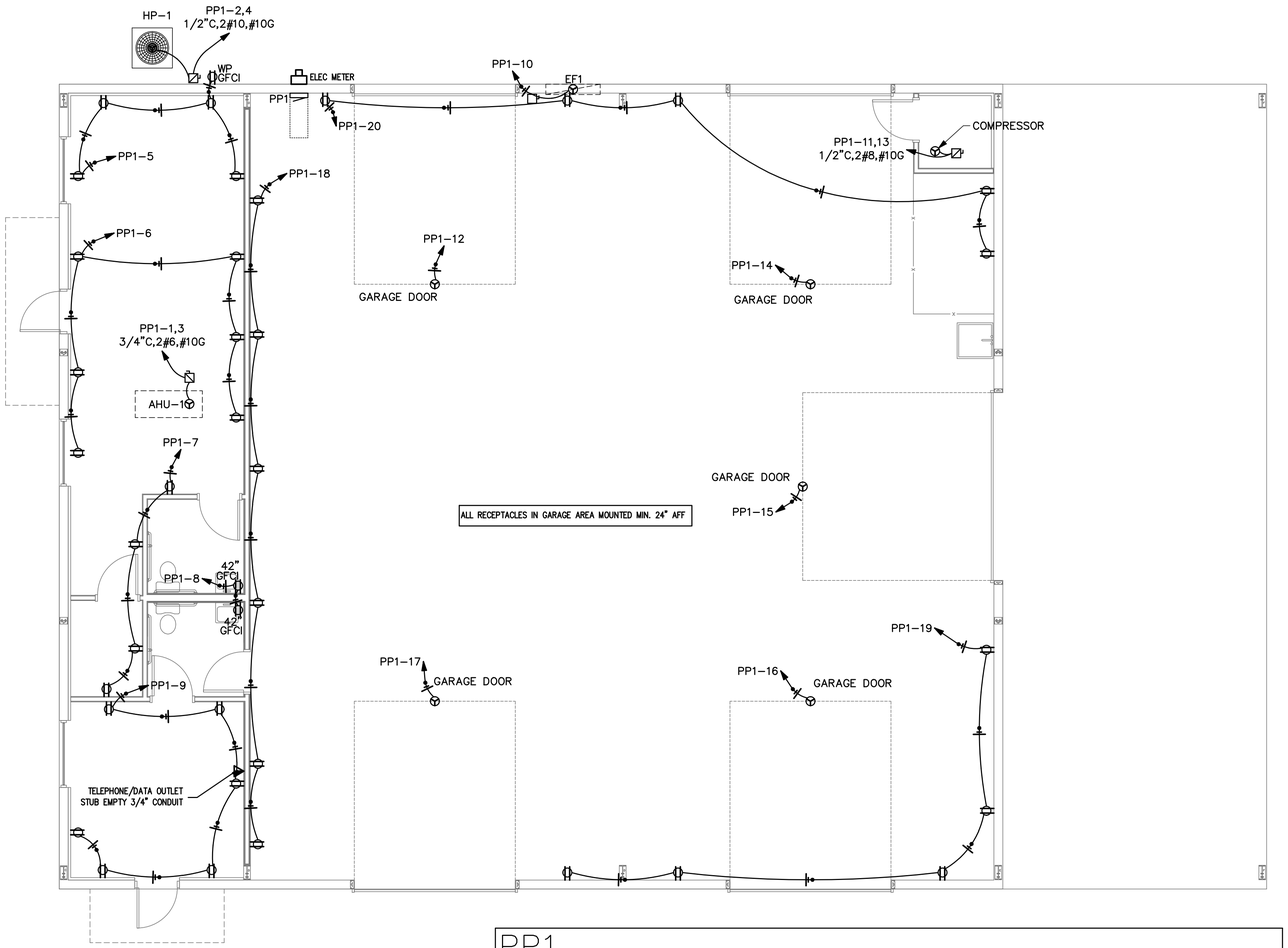
SOUTHBOUND EXPRESS

2721 US 301 S
DUNN NC

PROJECT NO: 2022-098
DRAWN BY: A.J.O
DATE:
REVISIONS:

SHEET NO:
M1



1 / E1 **POWER PLAN**
3/16"=1'-0"

PP1

ROOM
MOUNTING FLUSH
FED FROM UTILITY
NOTE

VOLTS 240/120V 2P 3W
BUS AMPS 200
NEUTRAL 100%

AIC 10,000
MAIN BKR 200
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B
1	45/2	AHU-1	4.27		2	25/2	HP-1	1.38	
3	|			4.27	4	|		1.38
5	20/1	RECEPTACLE	0.9		6	20/1	RECEPTACLE	1.08	
7	20/1	RECEPTACLE		0.72	8	20/1	RECEPTACLE		0.36
9	20/1	RECEPTACLE	1.08		10	20/1	EF1	1.18	
11	40/2	COMPRESSOR		3.36	12	20/1	GARAGE DOOR		0.6
13	|		3.36		14	20/1	GARAGE DOOR	0.6	
15	20/1	GARAGE DOOR		0.6	16	20/1	GARAGE DOOR		0.6
17	20/1	GARAGE DOOR	0.6		18	20/1	RECEPTACLE	1.08	
19	20/1	RECEPTACLE		0.9	20	20/1	RECEPTACLE		0.9
21	20/1	EF-1, EF-2, LIGHTING	0.397		22	20/1	LIGHTING	0.302	
23	20/1	LIGHTING		0.302	24	20/1	LIGHTING		0.302
25	20/1	LIGHTING	0.28		26	20/1	LIGHTING	0.738	
27	20/1	SPACE		0	28	20/1	SPACE		0
29	20/1	SPACE	0		30	20/1	SPACE	0	
31	20/1	SPACE		0	32	20/1	SPACE		0
33	20/1	SPACE	0		34	20/1	SPACE	0	
35	20/1	SPACE		0	36	20/1	SPACE		0
37	20/1	SPACE	0		38	20/1	SPACE	0	
39	20/1	SPACE		0	40	20/1	SPACE		0
41	20/1	SPACE	0		42	20/1	SPACE	0	
							TOTAL CONNECTED KVA BY PHASE	17.3	14.3

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	2.28	2.85	(125%)	RECEPTACLES	7.02	7.02	(50%>10)
LARGEST MOTOR	6.72	1.68	(25%)	HEATING	10.3	10.3	(100%)
MOTORS	12	12	(100%)	COOLING	2.62	0	(0%)
				TOTAL LOAD		33.8	
				BALANCED LOAD		141 A	

CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR SERVICE. A COMPLETE AND WORKING SYSTEM IS REQUIRED FOR COMPLIANCE WITH THESE DOCUMENTS. DETERMINE THE POINT OF CONNECTION TO THE UTILITY WITH THE UTILITY REPRESENTATIVE AND PROVIDE ACCORDINGLY FOR A COMPLETE WORKING SYSTEM.

WIRE AND CABLE SHALL BE INSULATED, TYPE THWN OR THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTORS SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED. NO ROMEX PERMITTED.

EMT SHALL BE GALVANIZED STEEL TUBING, 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS.

PLASTIC CONDUIT SHALL BE RIGID, 3/4-INCH MINIMUM NON-METALLIC, HEAVY DUTY, HIGH IMPACT, POLYVINYLCHLORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2- INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH 72 INCHES FOR LIGHTING AND 36" FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUIDTIGHT OR WATERTIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUIDTIGHT OR WATERTIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TEL. OUTLETS TO BE MOUNTED BACK TO BACK, KEEP AT LEAST 2 INCHES BETWEEN RECEPTACLES AND TEL. OUTLETS.

ALL CONDUCTOR SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA.

CONTRACTOR SHALL ALIGN FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. AT NO TIME WILL AN IONIZATION DETECTOR BE LOCATED WITHIN 3'-0" OF A SUPPLY OR RETURN AIR GRILLE.

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS AND CONDUIT FOR THIS PROJECT THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT WHICH WILL ACTUALLY BE INSTALLED, RECOMPUTING WIRE AND BREAKER SIZES IF REQUIRED BY THE NEC.

ALL CONDUIT TERMINATING IN THE CEILING CAVITIES IS TO BE LABELED.

ALL CONDUIT SHALL BE COLOR CODED WITH 1/2" WIDE TAPE, 10'-0" ON CENTER IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE ARCHITECT AND OWNER, PRIOR TO INSTALLATION, FOR USE WITH ACTUAL EQUIPMENT.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER/ARCHITECT. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL REPLACED AT THE REQUEST OF THE ENGINEER/ARCHITECT AT THE CONTRACTORS EXPENSE.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS.

THE CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO THE INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE.

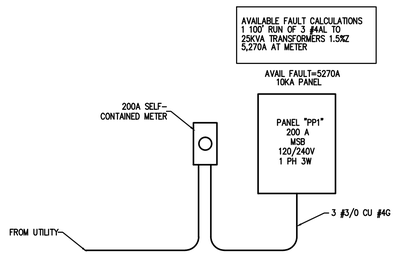
ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

WHERE EQUIPMENT PENETRATES EXTERIOR WALL OR ROOF THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ARCHITECT/ENGINEER.

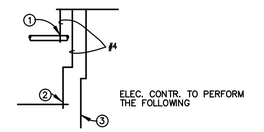
ALL WORK IS TO BE DONE IN STRICT COMPLIANCE WITH THE LATEST VERSION OF THE NEC AND APPLICABLE STATE CODES

RECESSED FIXTURES INSTALLED IN RATED ASSEMBLIES SHALL BE INSTALLED WITH AN ENCLOSURE SO AS TO MAINTAIN THE RATING OF ASSEMBLY

2 / E1 **ELECTRICAL NOTES**
N.T.S.



3 / E1 **ELECTRIC RISER**
N.T.S.



GROUNDING ELECTRODE DETAILS

GROUNDING ELECTRODE CONDUCTORS SHALL BE #1/0BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC 250

1. CONNECT TO METALIC WATER PIPE AS REQ'D.
2. #4 COPPER GROUND TO BUILDING STEEL
3. 3/4"x10' LONG COPPER CLAD GROUNDING ROD W/ #6 COPPER GROUND.

Jun 21, 2022

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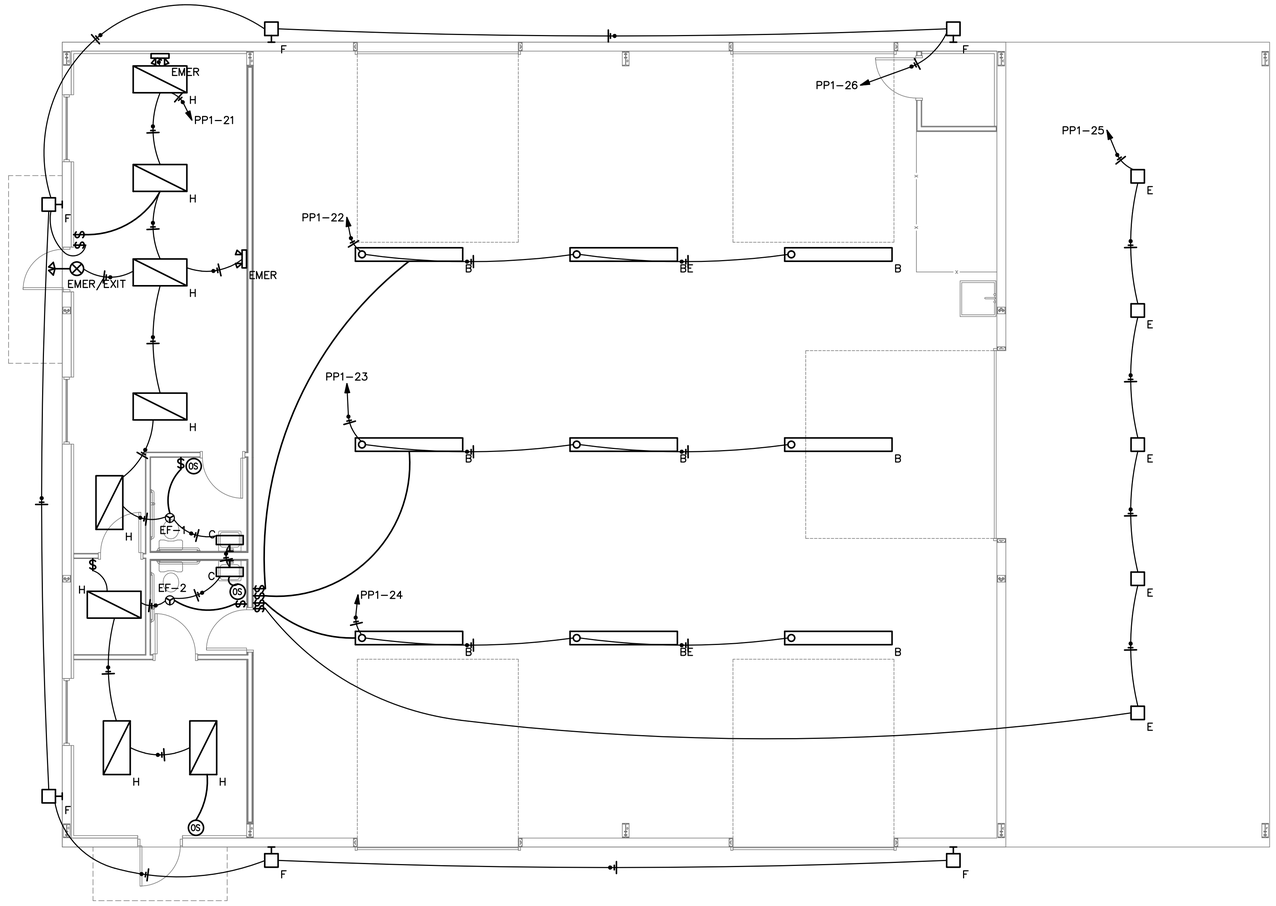

1 / E2 **LIGHTING PLAN**

3/16"=1'-0"

DS BRYANT (HUBBELL) MSD1000WH OR EQUAL WALL SWITCH OCCUPANCY SENSOR PULL (ULTRASONIC AND PASSIVE INFRARED) TECHNOLOGY 1000 SQUARE FOOT COVERAGE 800W INCANDESCENT, 1000W FLUORESCENT AT 120V AC

APPENDIX B 2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN

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 in fixture
ballast type used in the fixture — SEE FIXTURE SCHEDULE
number of ballasts in fixture
total wattage per fixture

1264/2383 total interior wattage specified vs. allowed (whole building or space by space)
0/500 total exterior wattage specified vs. allowed

Additional Prescriptive Compliance
- ☐ 506.2.1 More Efficient HVAC 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

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	INPUT WATTS	VOLTS
B		(1) (1) 4000 CCT, 80 CRI LEDS	8'-0" LED LINEAR BAY FIXTURE	ELECTRONIC	PENDANT/SURFACE	COOPER LIGHTING SOLUTIONS - METALUX (FORMERLY EATON), 8ILED-LD5-14-W-UNV-L840-CD2-U	100.8	120V 1P 2W
BE		(1) (1) 4000 CCT, 80 CRI LEDS	8'-0" LED LINEAR BAY FIXTURE BATTERY BACK UP	ELECTRONIC	PENDANT/SURFACE	COOPER LIGHTING SOLUTIONS - METALUX (FORMERLY EATON), 8ILED-LD5-14-W-UNV-L840-CD2-U	100.8	120V 1P 2W
C		(1) LED	VANITY FIXTURE MAX 25W	ELECTRONIC	WALL	PER OWNER	25	120V 1P 2W
E		(1)	SELECTABLE CANOPY, 60W, 3000K	ELECTRONIC	CEILING	COOPER LIGHTING SOLUTIONS - LUMARK (FORMERLY EATON), CLCS17S-60W-3000K	56	120V 1P 2W
EMER		(2) LED	SQUARE HEAD LED EMERGENCY LIGHT	ELECTRONIC	WALL/CEILING	METALUX AP2SQLED OR EQUAL	1.8	120V 1P 2W
EMER/EXIT		(2) LED	LED COMBINATION EXIT/EMERGENCY LIGHT	ELECTRONIC	WALL/CEILING	METALUX APCH7RSQ OR EQUAL	3.4	120V 1P 2W
F		(1) LED	LED WALL PACK WITH FULL CUTOFF LENS	ELECTRONIC	WALL	METALUX/COOPER AXCL12A-PC-VS/AXCL OR EQUAL	123	120V 1P 2W
H		(168) 17W (168) 4000K CCT, 85 CRI LEDs	2' X 4' LED RECESSED TROFFER	ELECTRONIC	RECESSED	COOPER LIGHTING SOLUTIONS - METALUX (FORMERLY EATON), 24GR-LD5-48-F1-UNV-L840-CD1-U	37.486	120V 1P 2W

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