

SHEET INDEX:

- CS COVER AND INDEX TO DRAWINGS
- BC BUILDING CODE SUMMARY

- SP1 EXISTING CONDITIONS
- SP2 SITE, UTILITY AND GRADING PLAN
- SP3 PROFILE AND DETAILS

- S1 FOUNDATION PLAN AND DETAILS

- G1 FLOOR PLAN
- G2 ELEVATIONS
- G3 BUILDING AND WALL SECTIONS

- P1 PLUMBING PLAN AND ISOMETRIC

- M1 MECHANICAL PLAN AND SCHEDULES

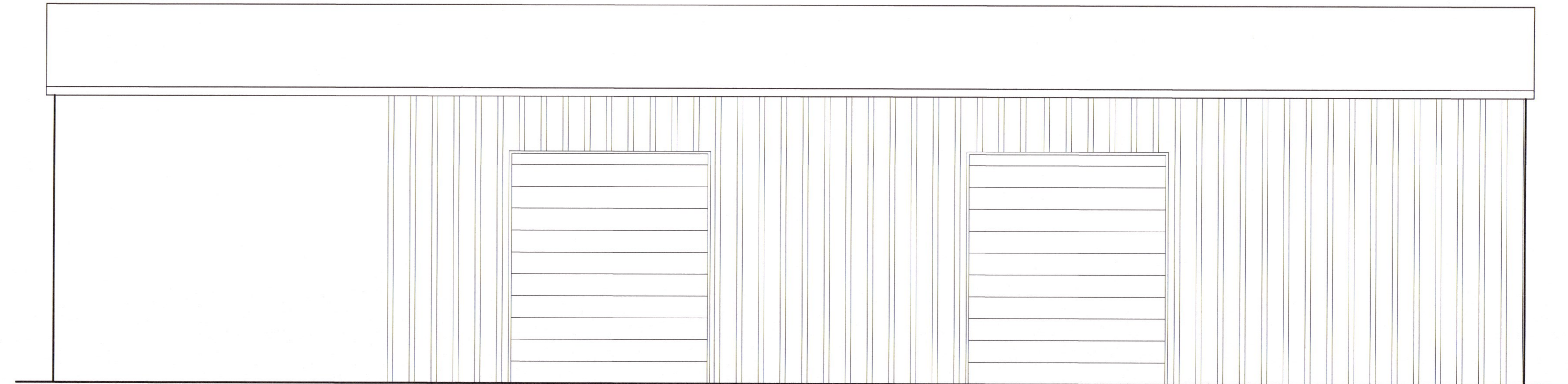
- E1 POWER PLAN AND SCHEDULES
- E2 LIGHTING PLAN

PROJECT:

New Building for CLH INVESTMENTS - SOUTHBOUND EXPRESS

2721 U.S. 301 South
Dunn, North Carolina 28334

PIN 1515-19-3735



FRONT ELEVATION

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 A TRUCK MAINTENANCE FACILITY WITH OFFICES

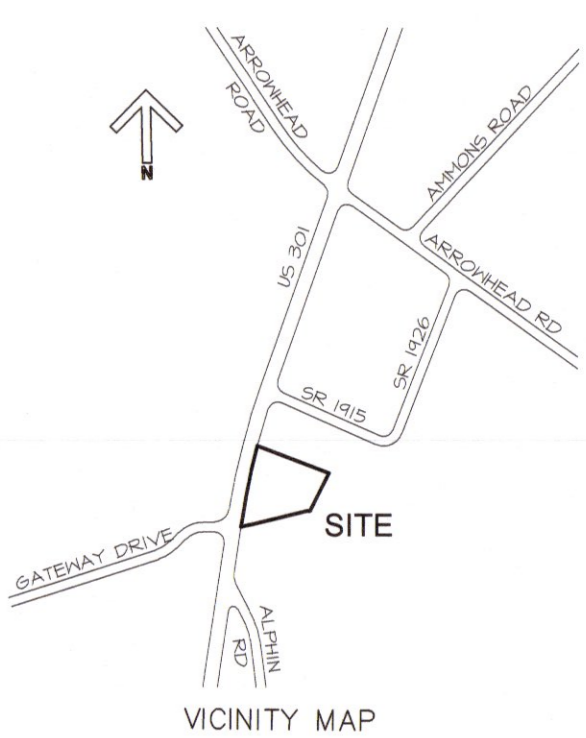
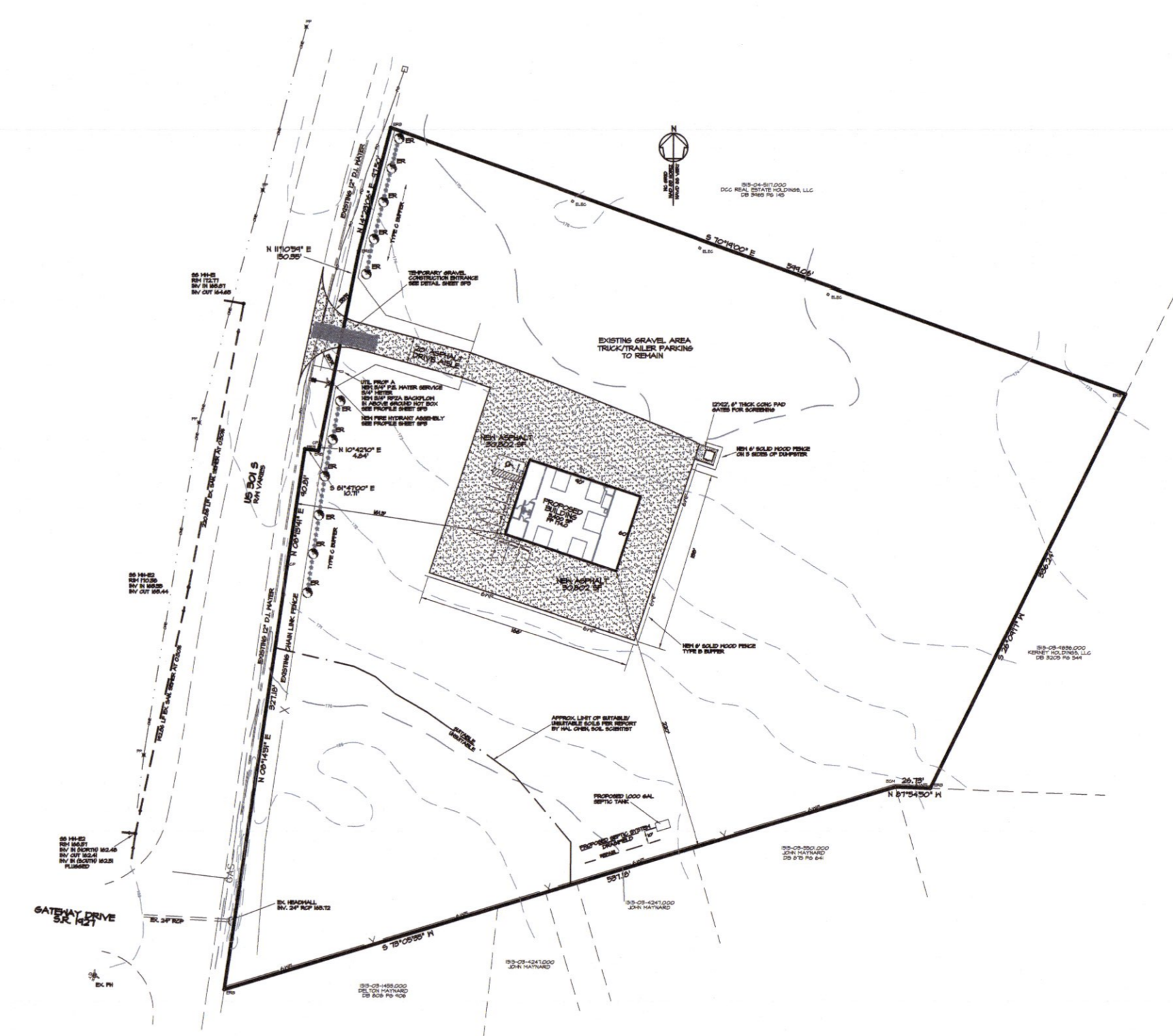
THE BUILDING IS NOT SPRINKLERED.

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'



BUILDING DEPARTMENT:

HARNETT COUNTY DEVELOPMENT 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

**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 US 301 SOUTH DUNN, NC Zip: 28834
 Proposed Use: WAREHOUSE
 Owner or Authorized Agent: LAYTON MCPHAIL Phone: (910) 490-3125 E-Mail: mcpmail@metalstructures@yahoo.com
 Owned By: City/County Private County State State NORTH CAROLINA
 Code Enforcement Jurisdiction: City County HARNETT State

CONTACT: GEORGE M. ROSE, P.E.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	1195	910-411-5022
Civil	COASTAL PLAINS ENGINEERING	CHRISTOPHER S. LOCKLEAR	2093	910-521-1213
Electrical	N/A	N/A		
Fire Alarm	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	1195	910-411-5022
Plumbing	COASTAL PLAINS ENGINEERING	CHRISTOPHER S. LOCKLEAR	2093	910-521-1213
Mechanical	N/A	N/A		
Sprinkler-Standpipe	N/A	N/A		
Structural	INLAND BUILDINGS	N/A		800-436-1606
Specialty	N/A	N/A		
Retaining Walls >5' High	N/A	N/A		
Building	GEORGE M. ROSE, P.E.	GEORGE M. ROSE	1195	910-411-5022

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
 Level I Level II Level III Level III
 Historic Property Change of Use

ALTERATION: Prescriptive Repair Chapter 14
 Level I Level II Level III 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 130

Standpipes: No Yes (Class: I II III Wet Dry

Fire District: No Yes (Primary)

Flood Hazard Area: No Yes

Special Inspections Required: No Yes

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	RENOVATED (SQ FT)	SUB-TOTAL
6th Floor				
5th Floor				
4th Floor				
3rd Floor				
2nd Floor				
Mezzanine				
1st Floor		5400		
Basement				
TOTAL		5400		

ALLOWABLE AREA

Primary Occupancy Classification: **SELECT ONE**

Assembly <input type="checkbox"/>	<input type="checkbox"/> A-1 <input type="checkbox"/> A-2 <input type="checkbox"/> A-3 <input type="checkbox"/> A-4 <input type="checkbox"/> A-5
Business <input type="checkbox"/>	<input type="checkbox"/> B-1 <input type="checkbox"/> B-2 <input type="checkbox"/> B-3 <input type="checkbox"/> B-4 <input type="checkbox"/> B-5
Educational <input type="checkbox"/>	<input type="checkbox"/> E-1 <input type="checkbox"/> E-2 <input type="checkbox"/> E-3 <input type="checkbox"/> E-4 <input type="checkbox"/> E-5
Factory <input type="checkbox"/>	<input type="checkbox"/> F-1 Moderate <input type="checkbox"/> F-2 Low
Hazardous <input type="checkbox"/>	<input type="checkbox"/> H-1 Detonate <input type="checkbox"/> H-2 Deflagrate <input type="checkbox"/> H-3 Combust <input type="checkbox"/> H-4 Health <input type="checkbox"/> H-5 HPM
Institutional <input type="checkbox"/>	<input type="checkbox"/> I-1 CONDITION <input type="checkbox"/> I-2 <input type="checkbox"/> I-3 CONDITION <input type="checkbox"/> I-4
Mercantile <input type="checkbox"/>	<input type="checkbox"/> M-1 <input type="checkbox"/> M-2 <input type="checkbox"/> M-3 <input type="checkbox"/> M-4
Residential <input type="checkbox"/>	<input type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4
Storage <input type="checkbox"/>	<input type="checkbox"/> S-1 Moderate <input type="checkbox"/> S-2 Low <input type="checkbox"/> High-piled
Utility and Miscellaneous <input type="checkbox"/>	<input type="checkbox"/> U-1 <input type="checkbox"/> U-2 <input type="checkbox"/> U-3 <input type="checkbox"/> U-4 <input type="checkbox"/> U-5

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.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B ≤ 1

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	REPAIR GARAGE	5400	17500		

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 $I_f = 100 [(F/P - 0.25)] \times W/30 = ______ (\%)$

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'	23'-1"	
Building Height in Stories (Table 504.4)	2	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		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQ'D	PROVIDED (w/ REDUCTION)				
Structural Frame, including columns, girders, trusses			O				
Bearing walls Exterior			O				
North			O				
East			O				
West			O				
South			O				
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		2		U419			
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant/Dwelling Unit/Sleeping Unit Separation							
Incidental Use Separation							

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 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 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	132" ACCESS AISLE	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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	NEW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	REQUIRED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 Statute reference)

Existing building: No Yes (Provide Code or Statute 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, FLY 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: 0.071
 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: _____
 R-Value of insulation: N/A
 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) 10
 Snow (I_e) 10

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 _____ %
 Site Classification (ASCE 7) A B C D
 Data Source: Field Test Presumptive Historical Data
 Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum
 Simplified Equivalent Lateral Force Dynamic
 Analysis Procedure: 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 install with without outlets
 Gas Line
 install complete operational system

Other _____

Plumbing
 No work
 install water service and sewer
 install building drain add or water distribution main with without branches
 install complete plumbing system

Other ROUGH-INS ARE INCOMPLETE, ADD 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/A/C 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 submitted 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 Department of 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

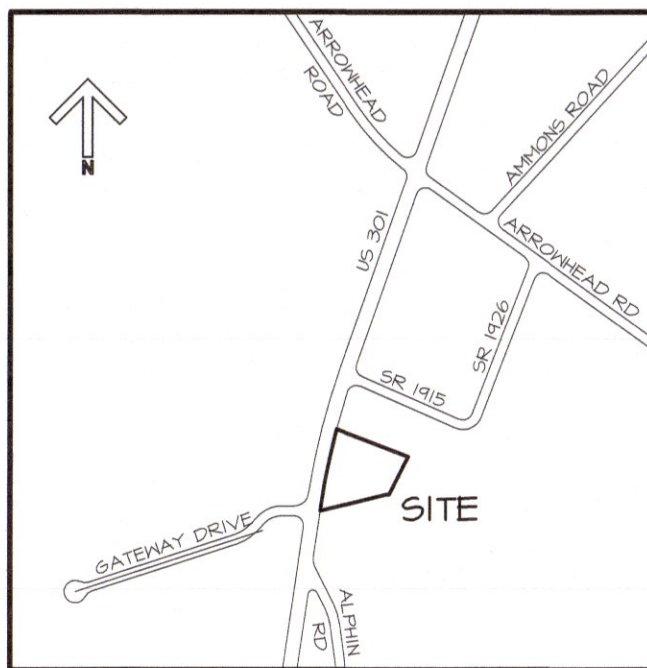
EIFS
 Other (describe)
 Other (describe)
 Owner or agent _____

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



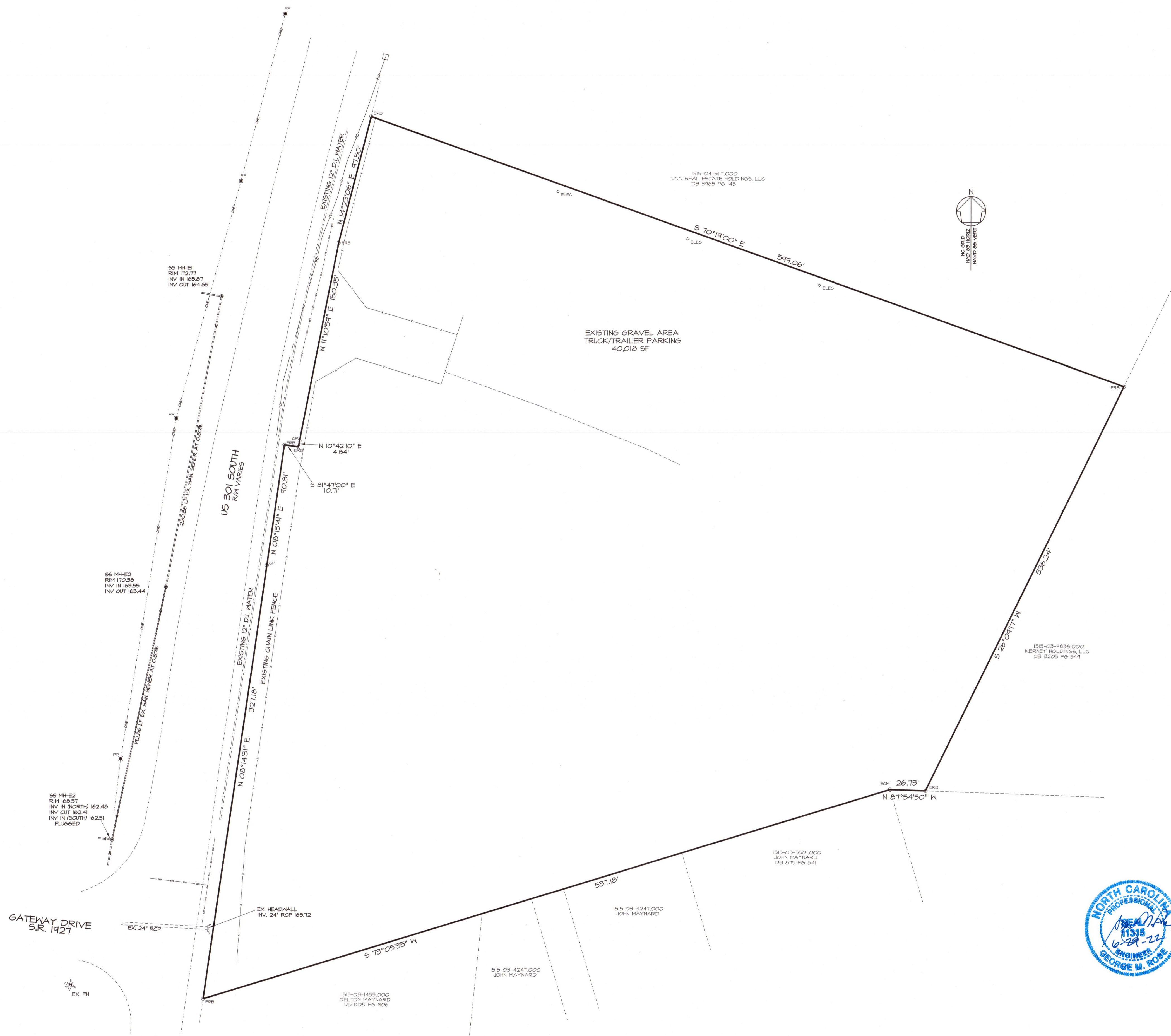
VICINITY MAP
NO SCALE

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
- GW EXISTING GUY WIRE
- OHE EXISTING OVERHEAD ELECTRICAL
- FO EXISTING FIBER OPTIC LINE
- CLF EXISTING CHAIN LINK FENCE
- 234 EXISTING CONTOUR
- NGL EXISTING NATURAL GAS LINE

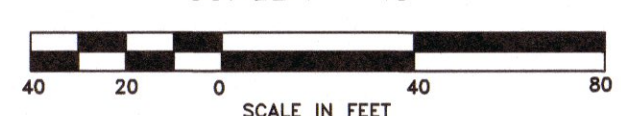
NOTES

1. TOTAL AREA IN TRACT = 271,304 SF = 6.23 ACRES
2. OWNER/DEVELOPER:
CLH INVESTMENTS, LLC (CHARLIE HOYE)
116 CHRISTIAN LIGHT ROAD
FUQUAY-VARINA, NC 27526
southboundexp@johoo.com
919-623-3941
3. PROPERTY ADDRESS:
2721 US HIGHWAY 301 SOUTH
DUNN, NC 28334
AVERASBORO TOWNSHIP
4. REFERENCE: DB 3941 PG 441; PB 2006 PG 880
5. PIN NO: 1515-03-3135.000
6. PROPERTY IS ZONED INDUSTRIAL, HARNETT COUNTY
7. EXISTING IMPERVIOUS SURFACES:
GRAVEL 40,018 SF = 0.12 ACRES
IMPERVIOUS COVERAGE % = 0.92/6.23 = 14.8%



EXISTING CONDITIONS

SCALE 1" = 40'



REVISIONS

6-21-22	GRAVEL NOTES
6-24-22	PHONE NUMBER

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

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

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

SHEET NO.
SP1



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
- 2.34 --- EXISTING CONTOUR
- --- EXISTING NATURAL GAS LINE
- ER NEW EASTERN REDBUD TREE
6' HEIGHT AT PLANTING
- ER NEW CLARISSA HOLLY SHRUB
5 EACH PER REDBUD TREE
MIN. 10' HEIGHT AT PLANTING
- 6WF --- NEW 6' HOOD FENCE
TYPE B BUFFER

NOTES

1. TOTAL AREA IN TRACT = 271,304 SF = 6.23 ACRES
2. OWNER/DEVELOPER:
CLH INVESTMENTS, LLC (CHARLIE HOWE)
776 CHRISTIAN LIGHT ROAD
FUGUY-VARINA, NC 27526
southboundexp@ghnc.com
919-623-3441
3. PROPERTY ADDRESS:
2721 US HIGHWAY 301 SOUTH
DUNN, NC 28334
AVERASBORO TOWNSHIP
4. REFERENCE: DB 3491 PG 441; 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 24,038 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.
12. LAND USE PLAN CLASSIFICATION IS EMPLOYMENT MIXED USE.
13. US 301 IS ON THE HARNETT COUNTY COMPREHENSIVE TRANSPORTATION PLAN.
14. PROPERTY OWNER WILL MAINTAIN THE PARKING AREAS AND LANDSCAPE AND BUFFER AREAS.
15. THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.
15. DAILY EXPECTED WATER USAGE USING WATER SUPPLY FIXTURE UNITS (WSFU):
2 LAVATORIES AT 1.4 = 2.8 WSFU
2 TOILETS AT 2.2 = 4.4 WSFU
1 SERVICE SINK AT 3 = 3.0 WSFU
TOTAL = 8.8 WSFU
PER DEMAND TABLE, WATER USAGE FOR 8.8 WSFU = 13.5 GPM

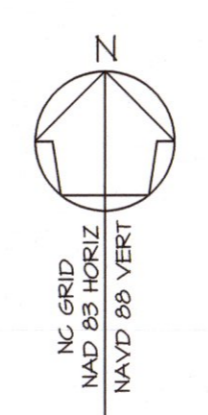
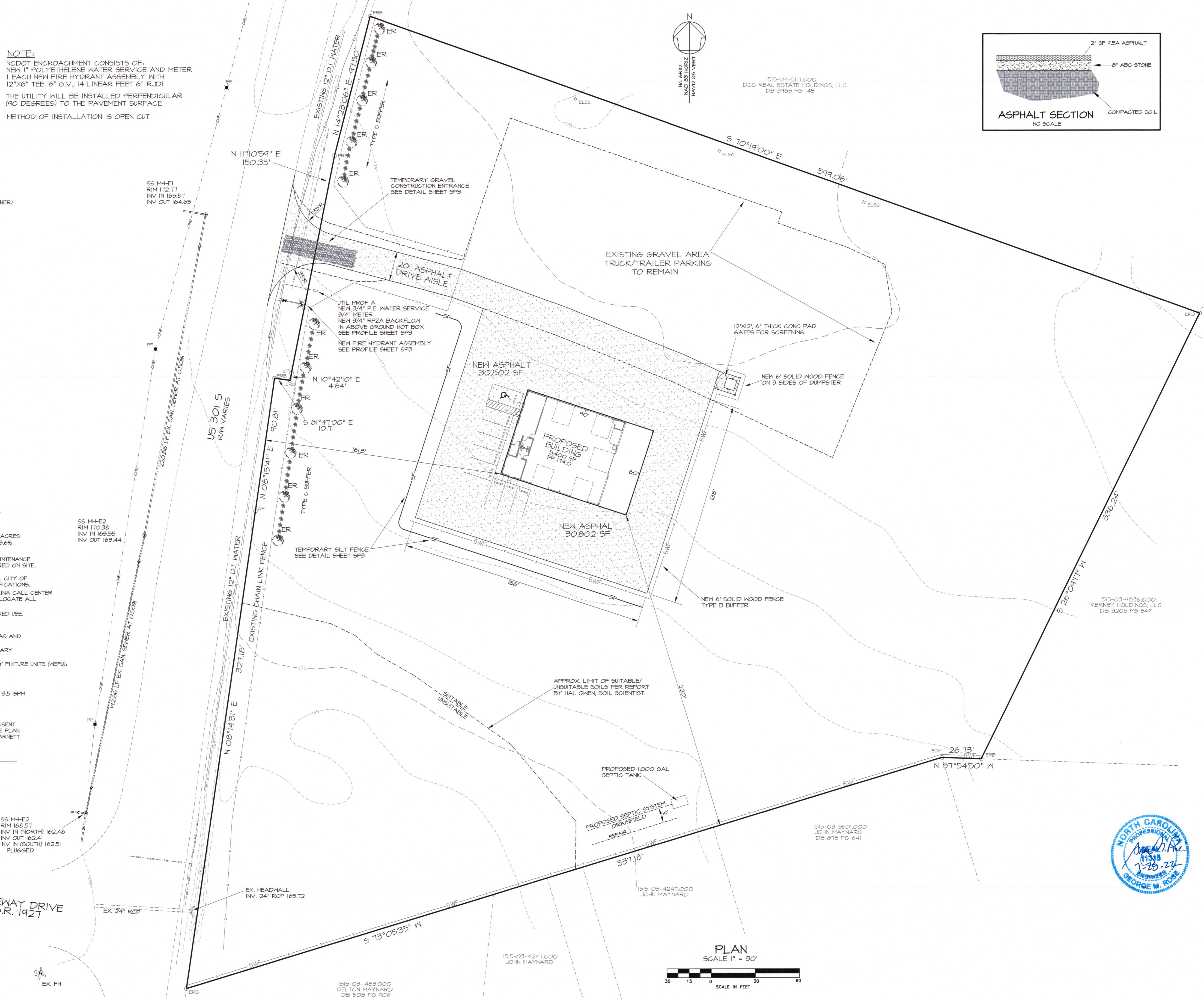
AS THE OWNER OF RECORD, I HEREBY FORMALLY CONSENT TO THE PROPOSED DEVELOPMENT SHOWN ON THIS SITE PLAN AND ALL REGULATIONS AND REQUIREMENTS OF THE HARNETT COUNTY ORDINANCES.

CHARLES L. HOWE
CLH INVESTMENTS, LLC
DATE _____

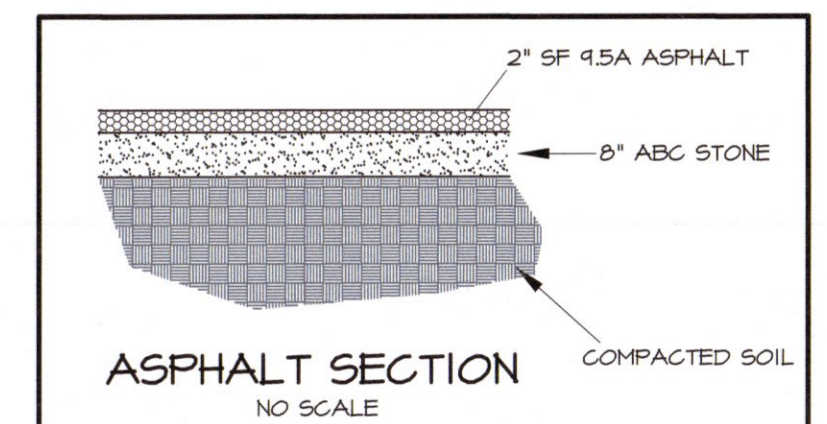
SS MH-E2
RIM 160.51
INV IN (NORTH) 162.48
INV OUT 162.41
INV IN (SOUTH) 162.51
PLUGGED

GATEWAY DRIVE
S.R. 1927

EX. FH



PLAN
SCALE 1" = 30'
SCALE IN FEET



REVISIONS

6-10-22	NOTES
6-21-22	ASPHALT LIMITS
6-22-22	SEPTIC SYSTEM
6-24-22	PHONE NUMBER
7-18-22	NGDOT ENCROACH INFO
7-28-22	BUFFERS, NOTES PER DRB

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NEW BUILDING FOR
CLH INVESTMENTS - SOUTHBOUND EXPRESS
DUNN, NC
2721 U.S. 301 SOUTH
SITE, UTILITY AND GRADING PLAN



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

SHEET NO.
SP2

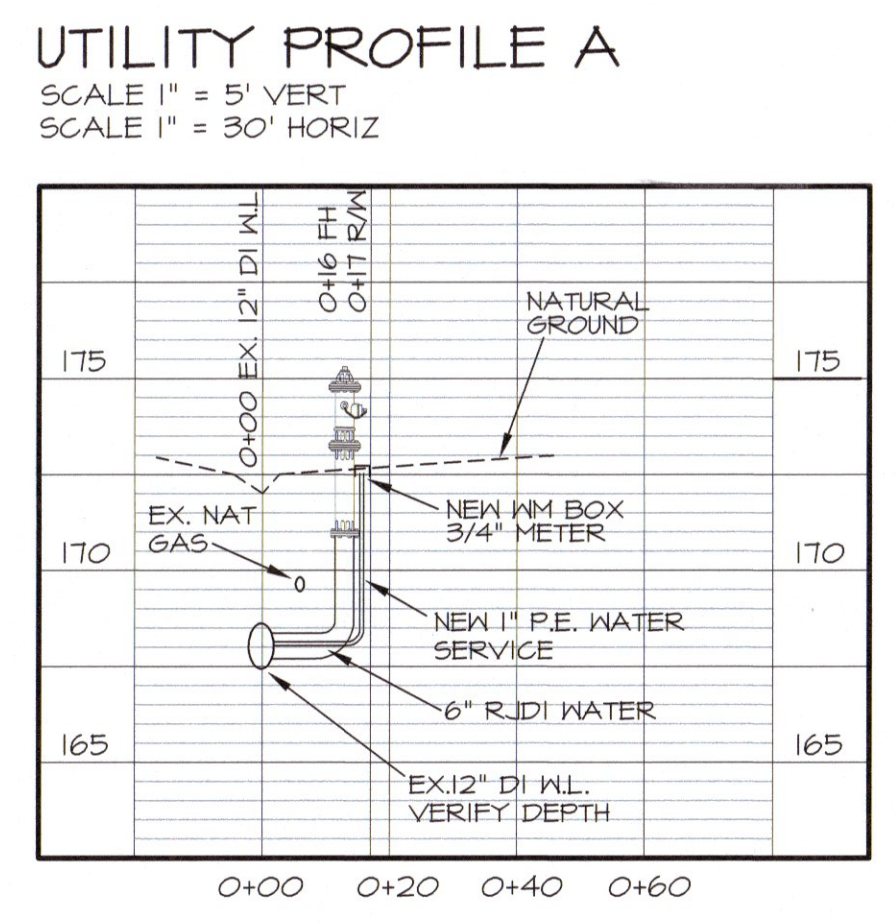
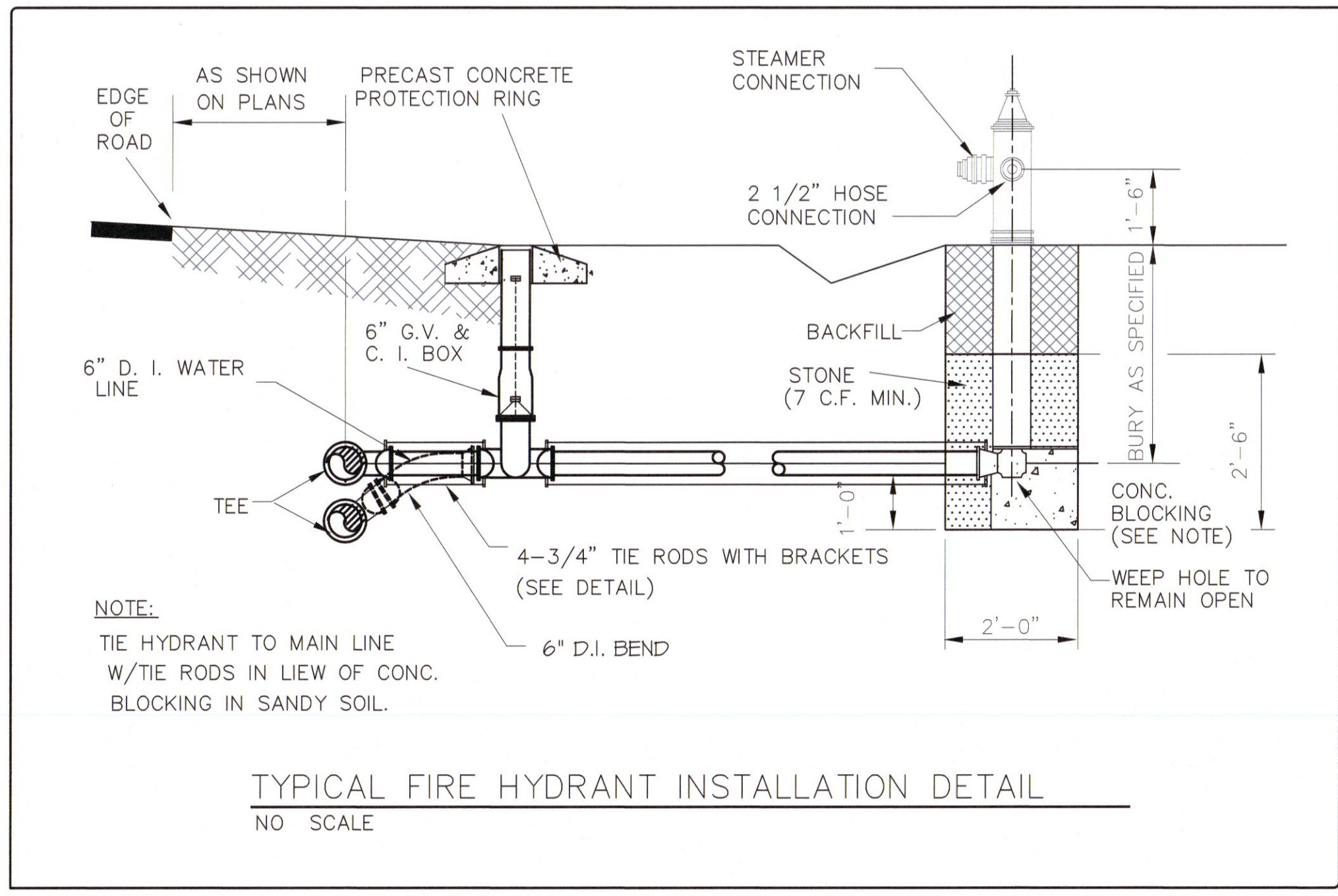
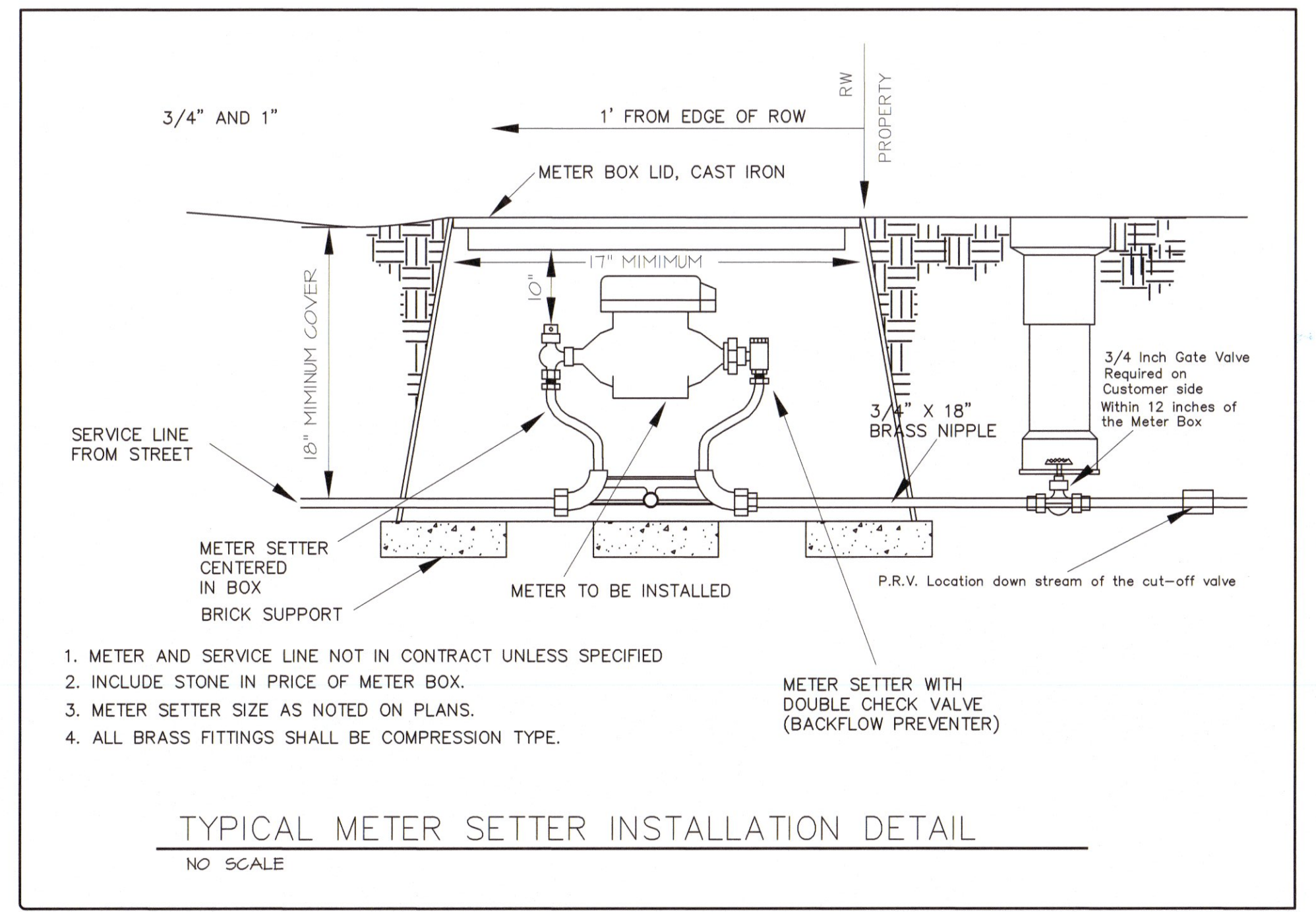
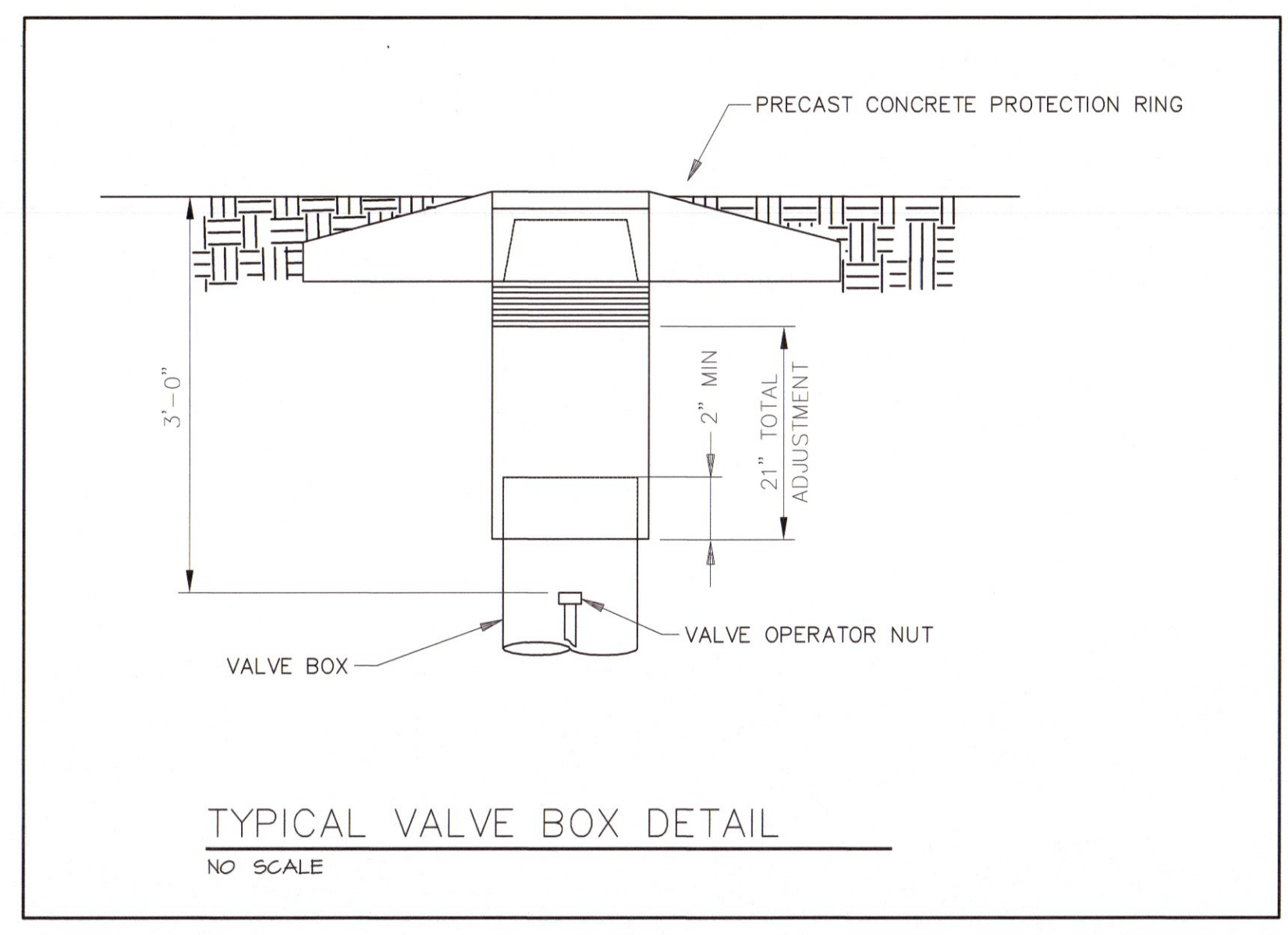
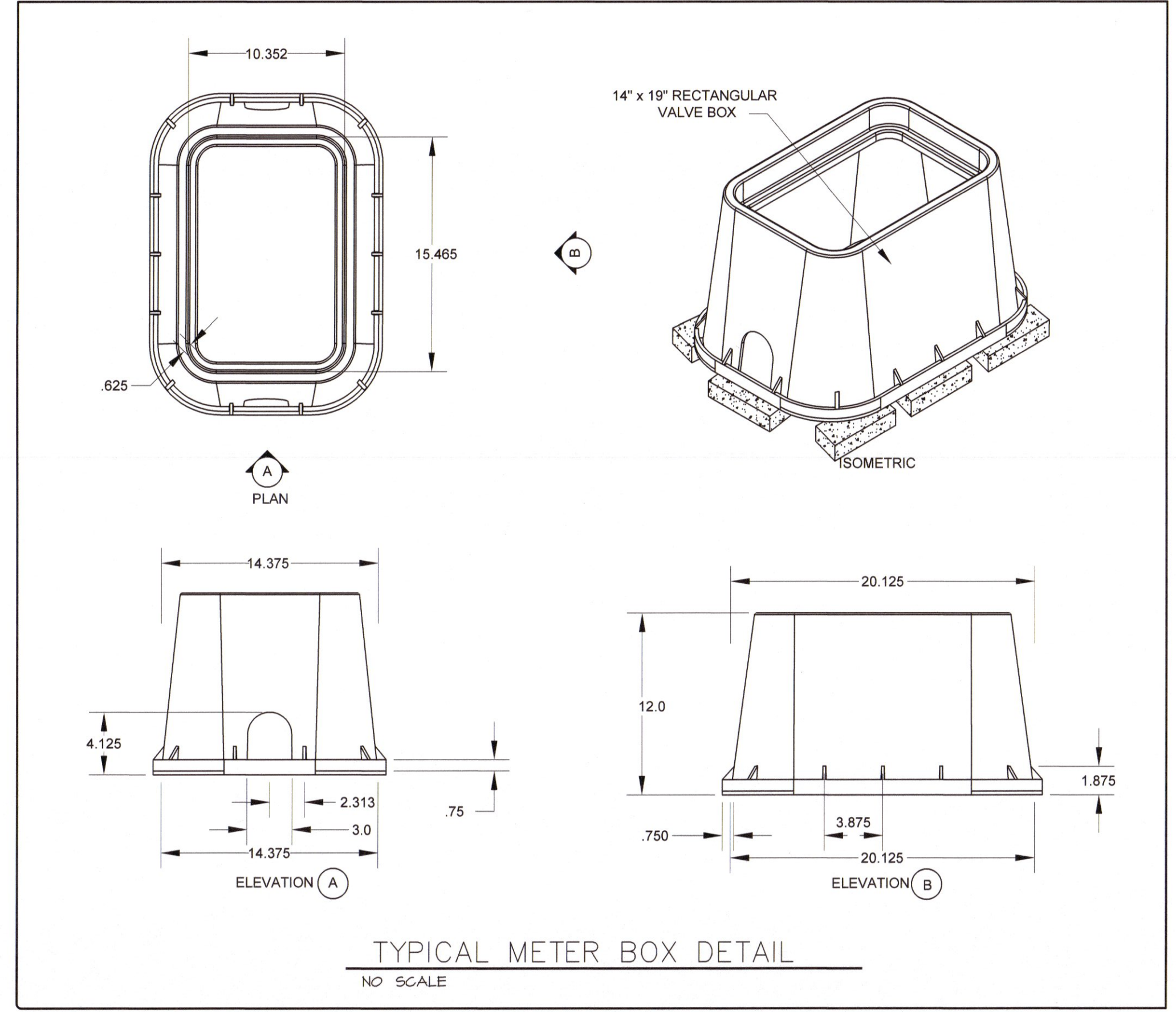
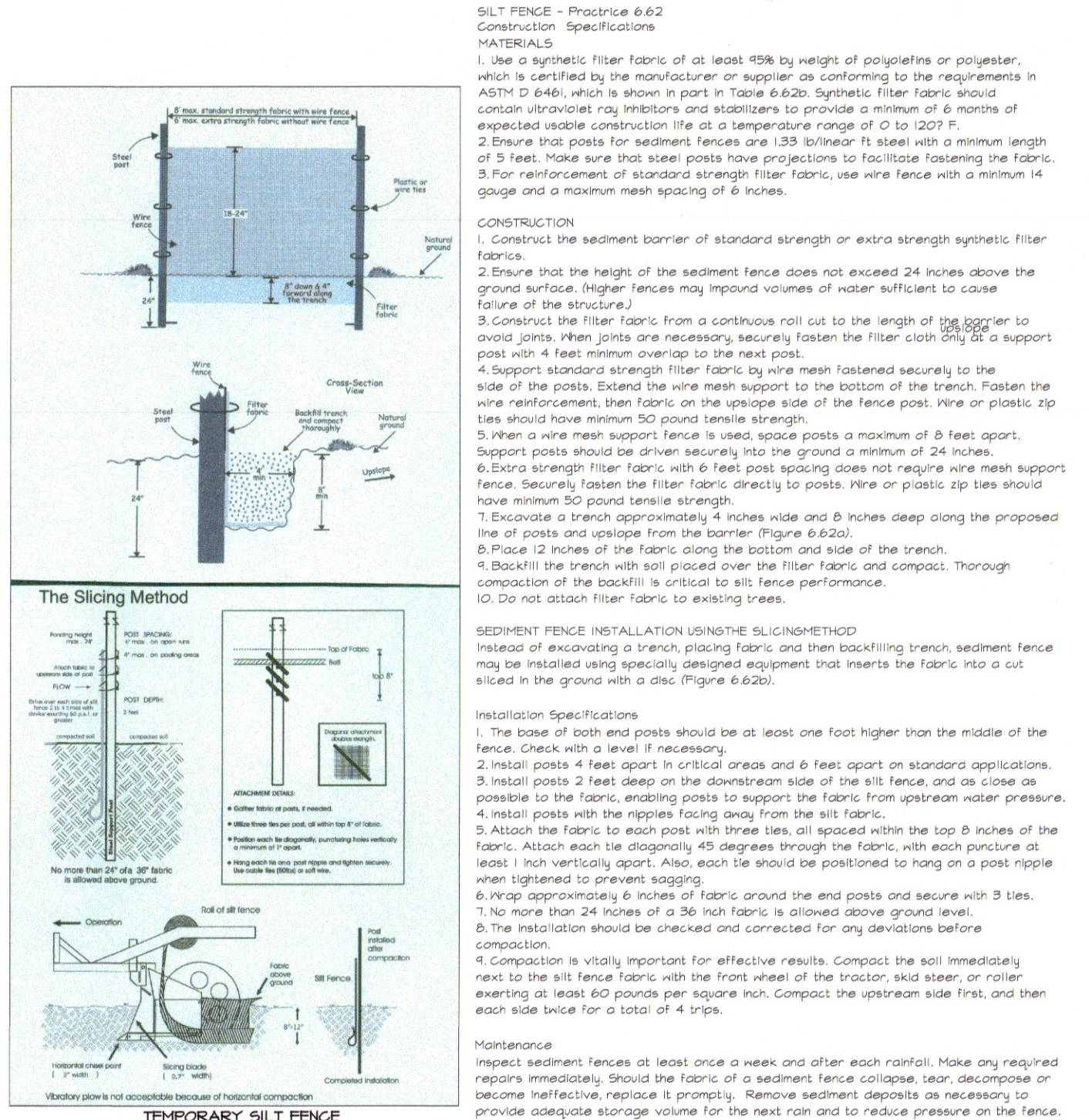
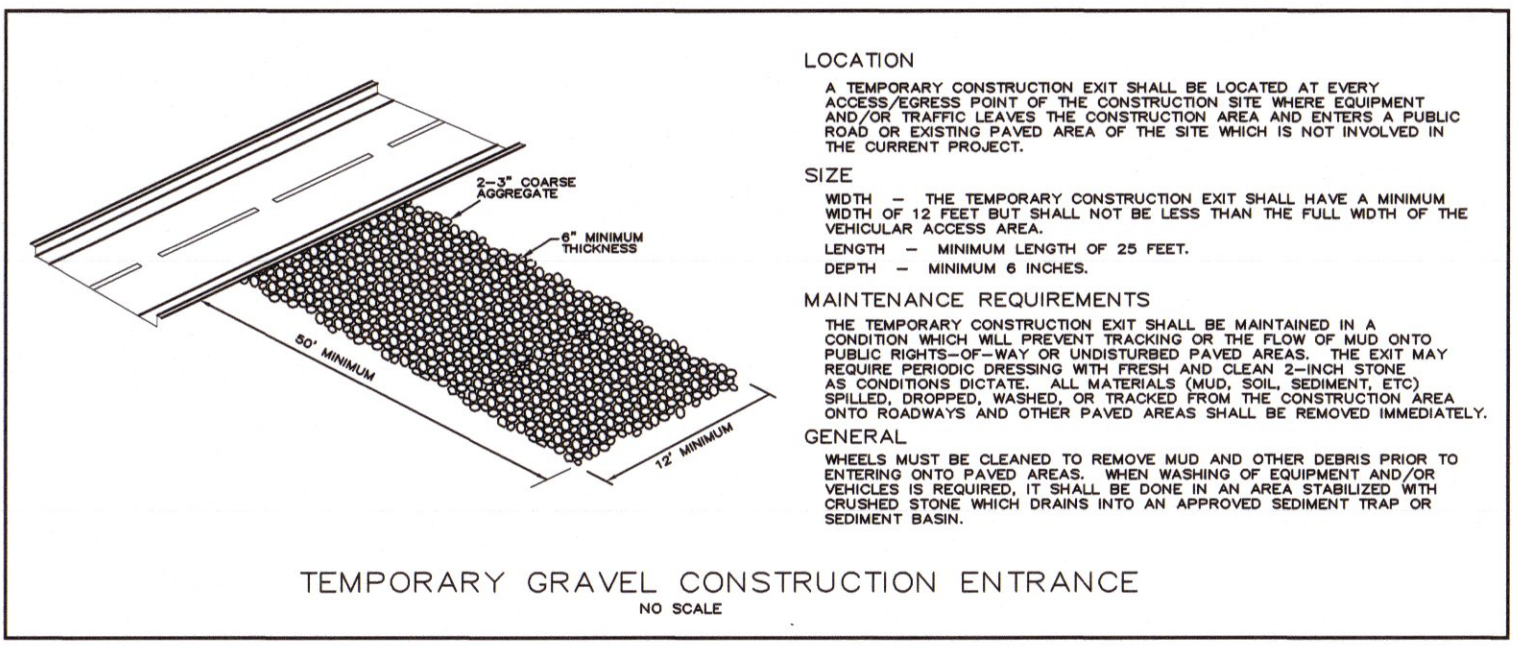
REVISIONS
6-10-22 NOTES
6-21-22 ASPHALT LIMITS
6-22-22 SEPTIC SYSTEM
7-26-22 SF. GRAVEL ENT. DET.

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

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PROFILE AND DETAILS

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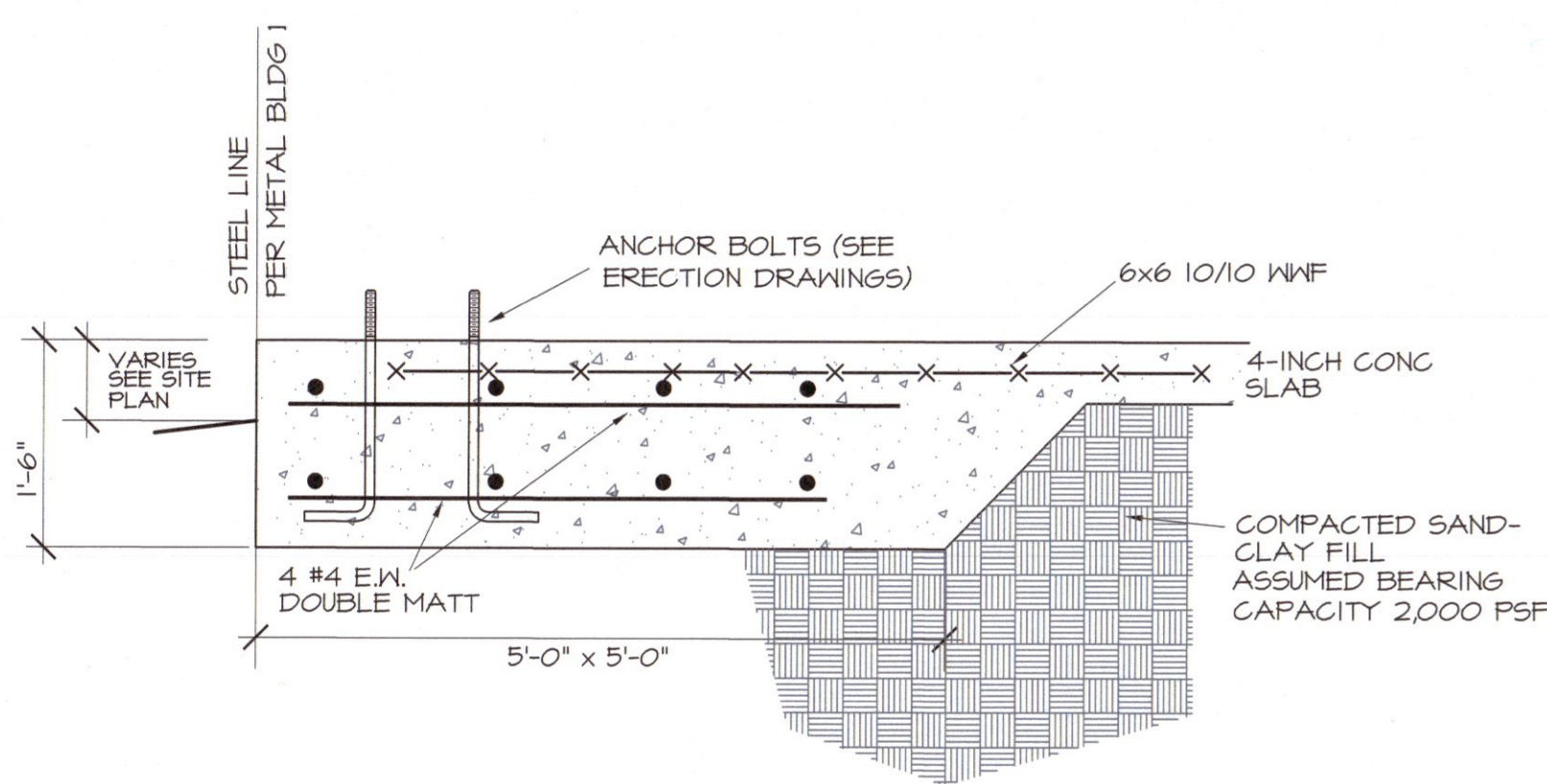
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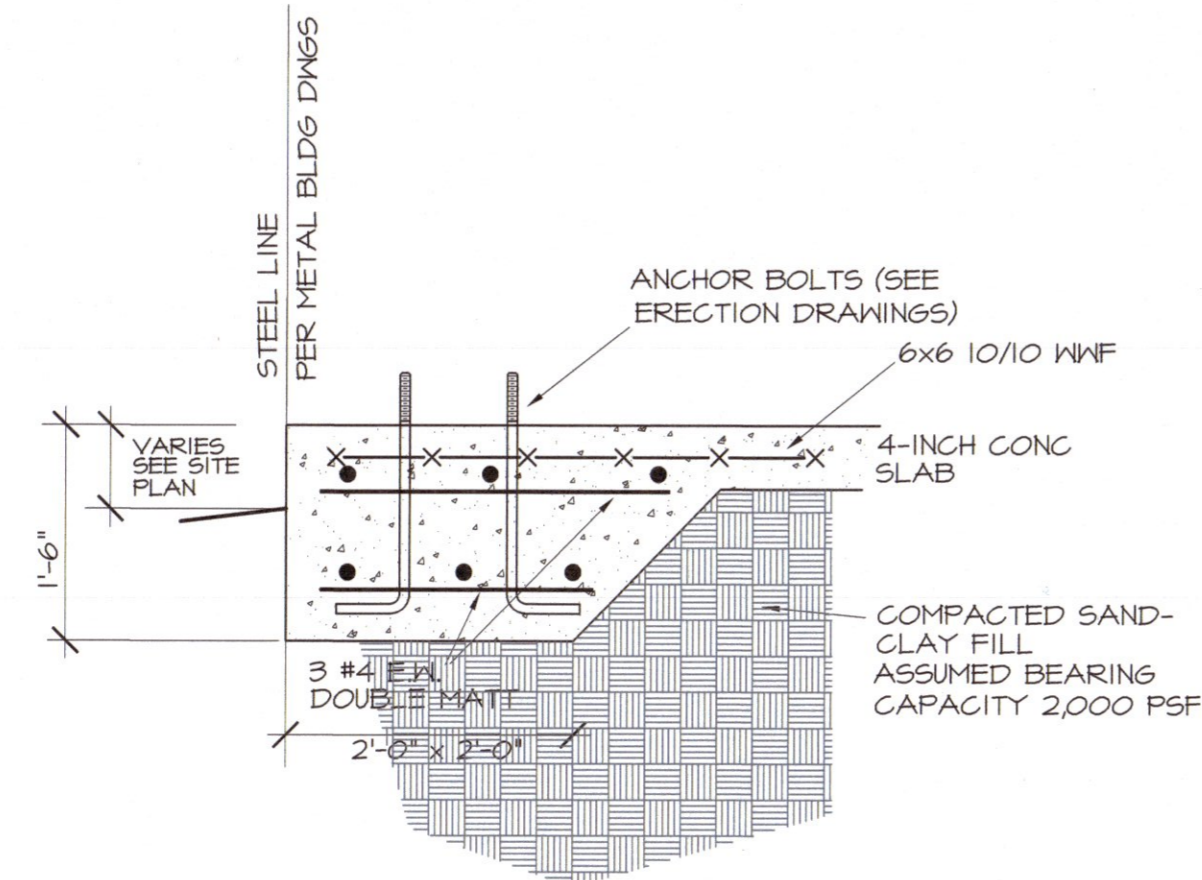
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SCALE: NOTED

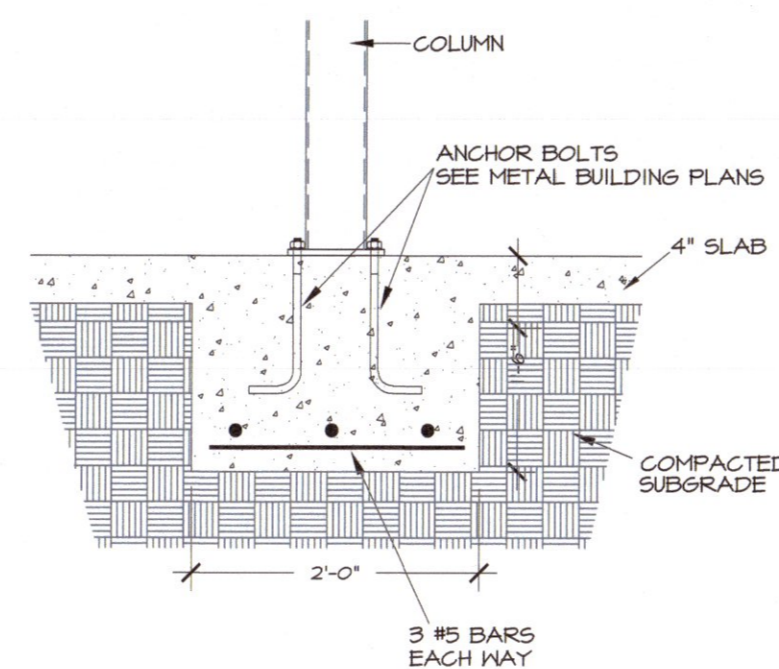
SHEET NO.
SP3



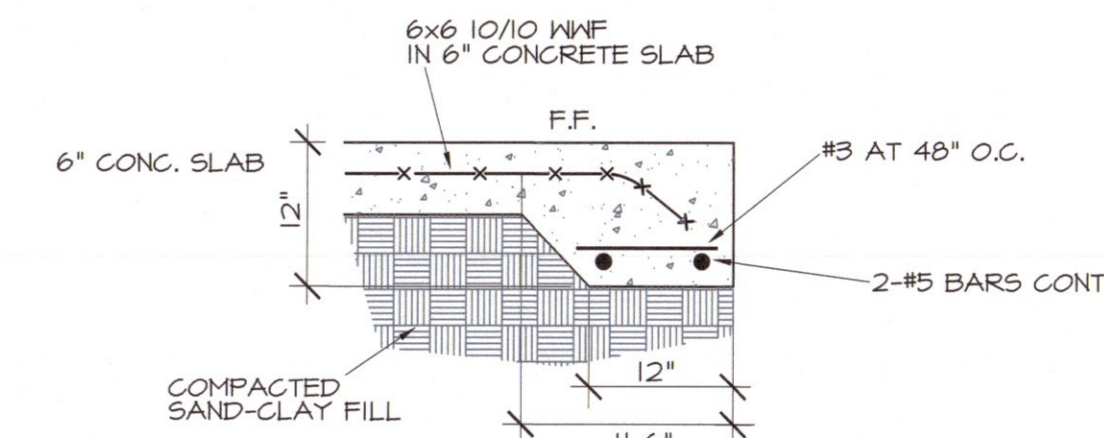
2
SI
FOOTING DETAIL A
3/4" = 1' - 0"



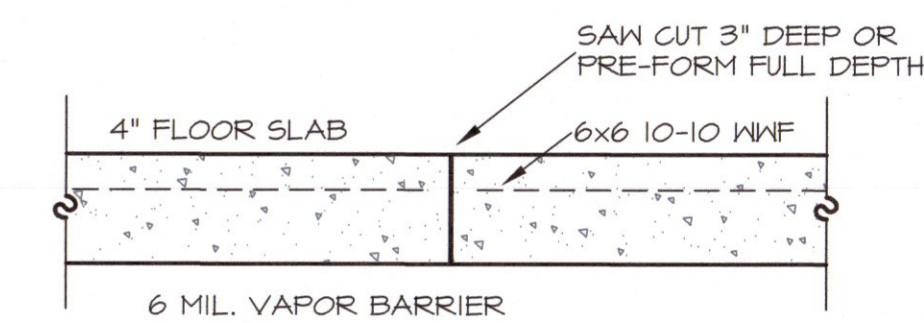
3
SI
FOOTING DETAIL B
3/4" = 1' - 0"



4
SI
FOOTING DETAIL C
3/4" = 1' - 0"



5
SI
PERIMETER FOOTING DETAIL
3/4" = 1' - 0"



6
SI
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.

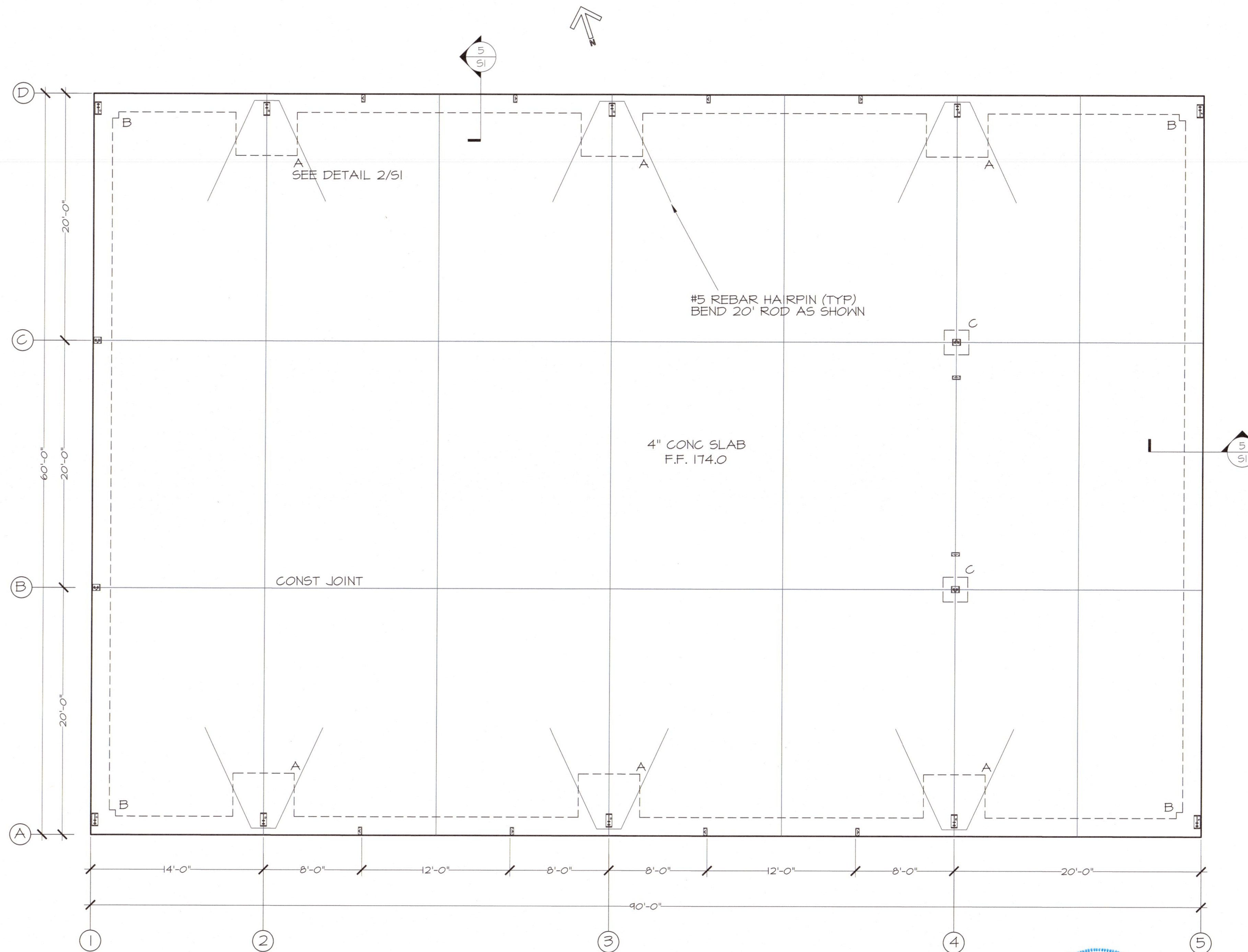
EXCEPT WHERE OTHERWISE NOTED, REINFORCEMENT SHALL HAVE CONCRETE COVER AS FOLLOWS:

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-3077) HIGH STRENGTH.

SOIL TREATMENT

ADMINISTRATION PER INDUSTRY STANDARDS.



1
SI
SLAB PLAN
3/16" = 1' - 0"



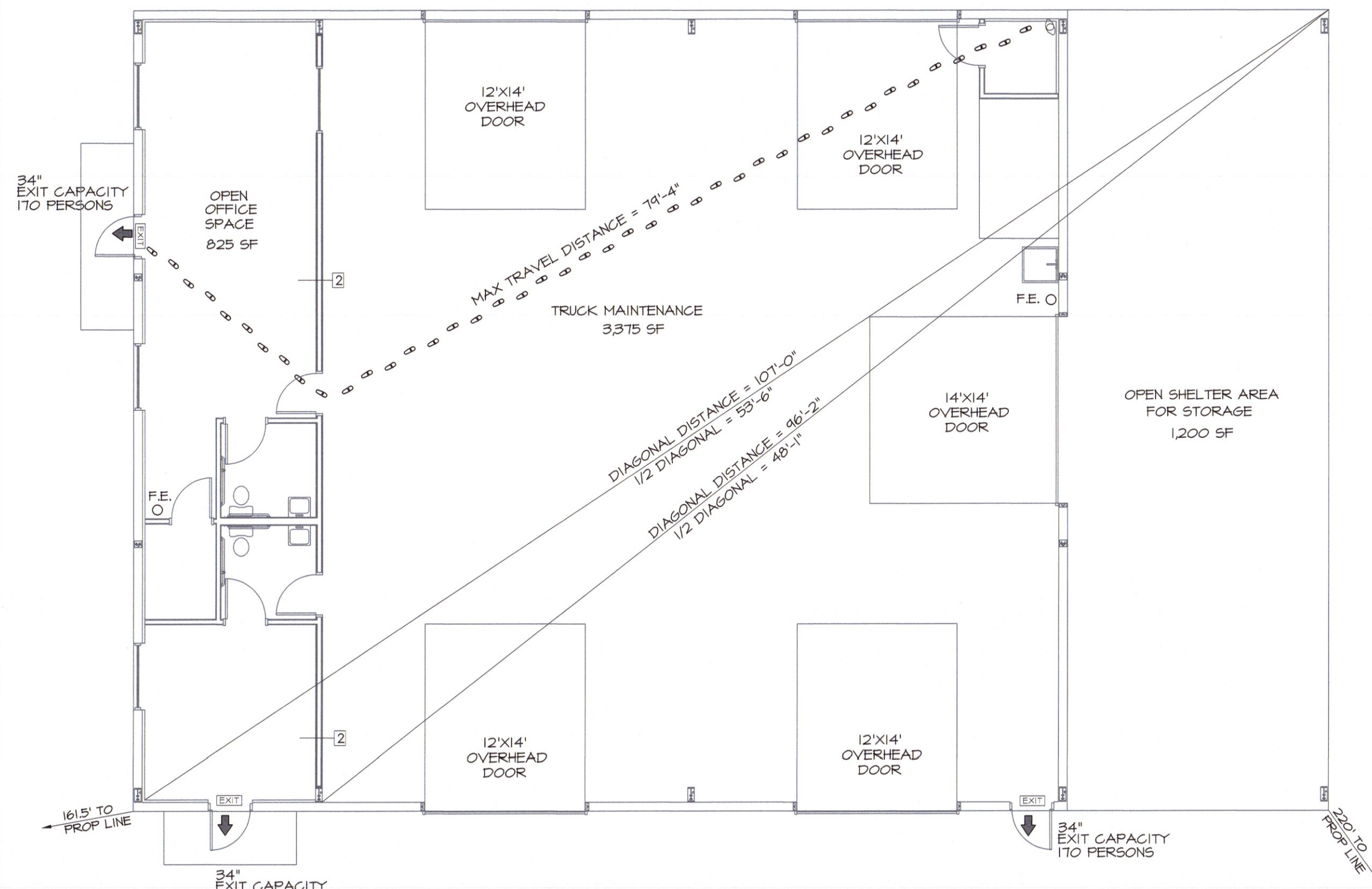
REVISIONS:

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

SLAB PLAN AND DETAILS

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DATE: JUN 2022
DRAWN BY: GMR
CHECKED: GMR
SCALE: NOTED
SHEET NO.
S1

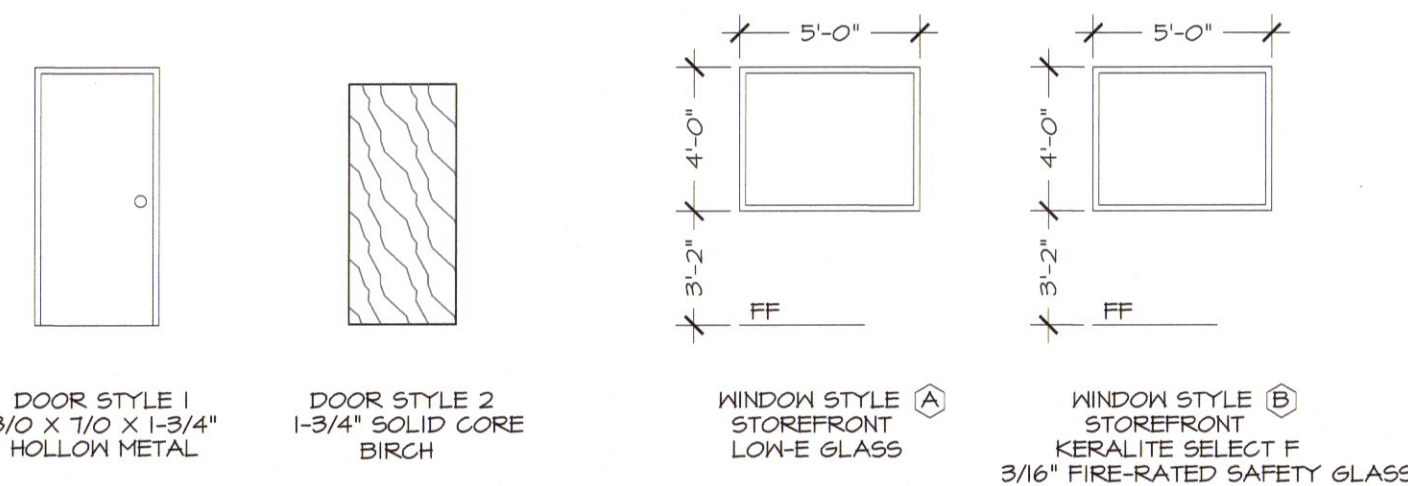
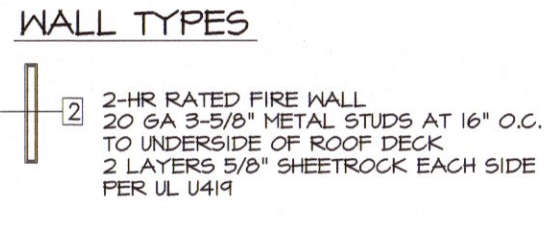
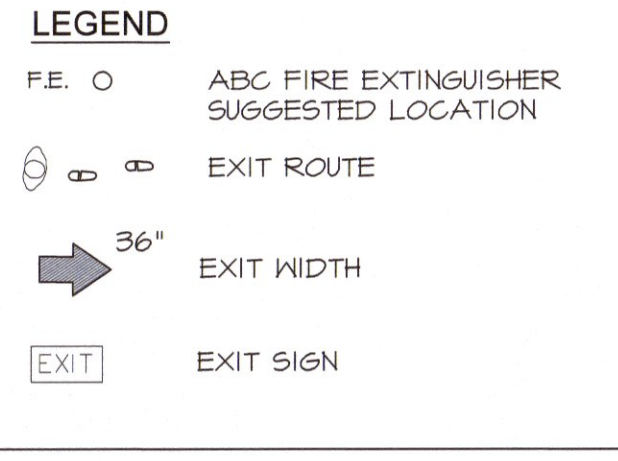


2
G1 LIFE SAFETY PLAN
1/8" = 1' - 0"

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-I) = 4575/500 SF/100 SF PER PERSON = 10 PERSONS
 TOTAL = 9 + 10 = 19 PERSONS

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 406
 4. SPECIAL-HAZARD AREAS WHERE REQUIRED BY FIRE CODE OFFICIAL.



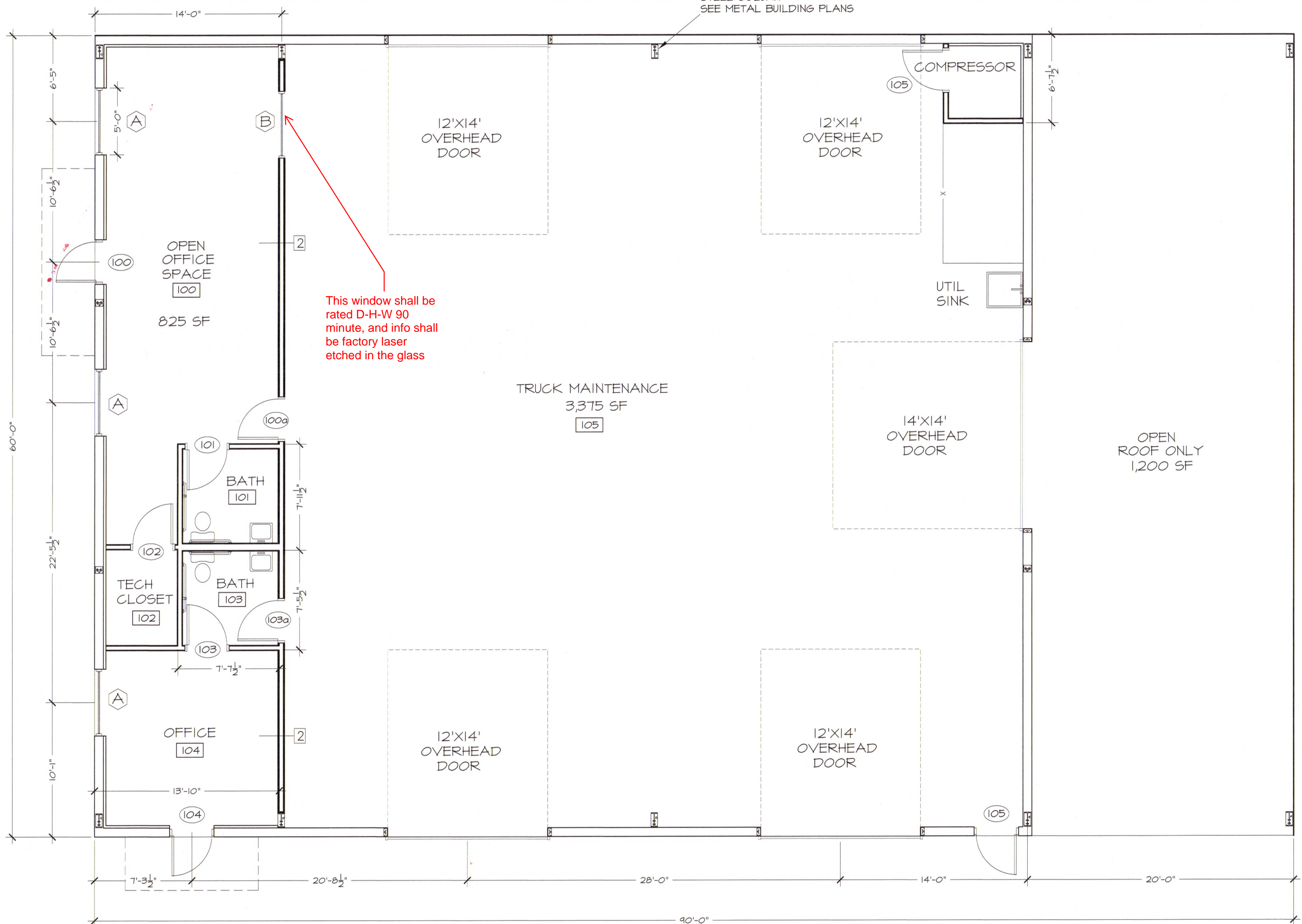
3
G1 DOOR AND WINDOW STYLES
3/16" = 1' - 0"

DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE	ROUGH OPENING	DOOR STYLE	DOOR SWING	JAMB TYPE	LOCK SET	REMARKS
100	3/0X7/0	38"x26"	1	LH	H. METAL	KEYED	WITH THRESHOLD, PVS, CLOSER
100a	3/0X7/0	38"x26"	2	RH	H. METAL	KEYED	90-MINUTE DOOR
101	3/0X7/0	38"x26"	2	RH	H. METAL	PRIVACY	
102	3/0X7/0	38"x26"	2	RH	H. METAL	KEYED	
103	3/0X7/0	38"x26"	2	LH	H. METAL	PRIVACY	
103a	3/0X7/0	38"x26"	2	LH	H. METAL	PRIVACY	90-MINUTE DOOR
104	3/0X7/0	38"x26"	1	RH	H. METAL	KEYED	WITH THRESHOLD, PVS, CLOSER
105	3/0X7/0	38"x26"	1	RH	H. METAL	KEYED	WITH THRESHOLD, PVS, CLOSER



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 9-5/8" X 10" METAL STUDS AT 16" O.C. WITH 5/8" SHEETROCK EACH SIDE.



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



REVISIONS

7-28-22 DOOR LOS, MIN B NOTE

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NEW BUILDING FOR
CLH INVESTMENTS - SOUTHBOUND EXPRESS
 2721 U.S. 301 SOUTH
 DUNN, NC
FLOOR PLAN AND LIFE SAFETY PLAN

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

SHEET NO.
G1

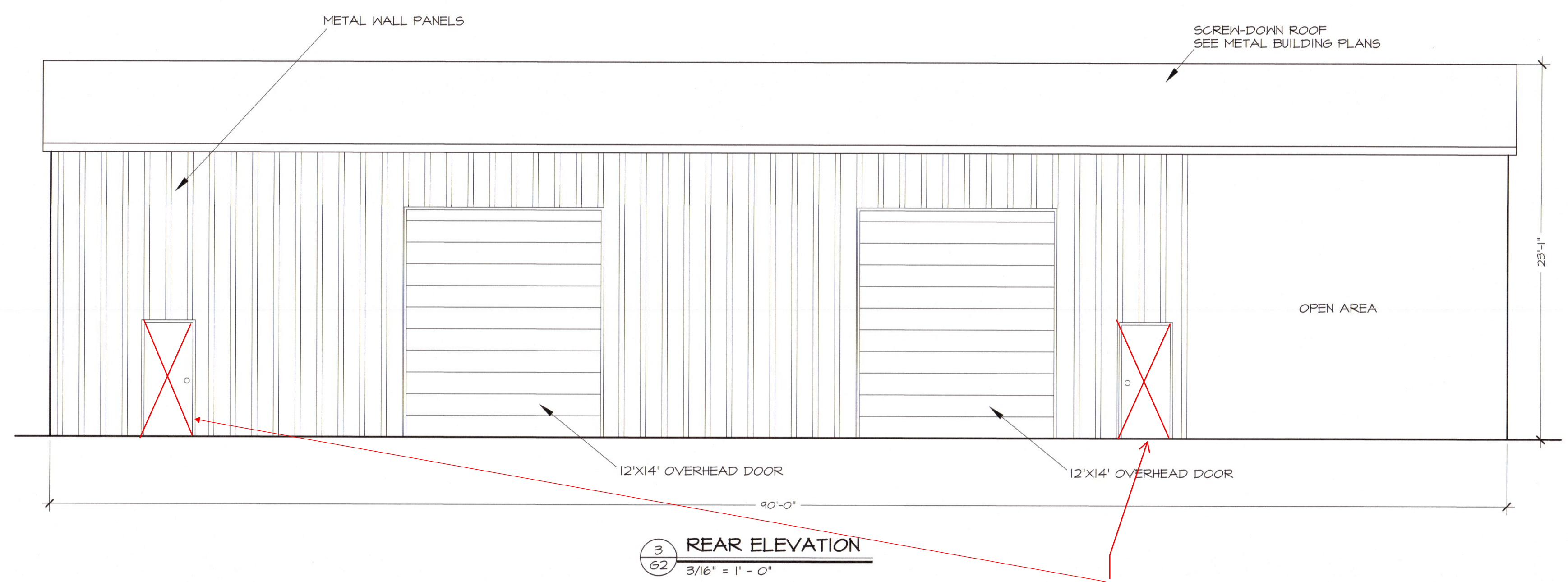
REVISIONS
7-28-22 ADD DOOR

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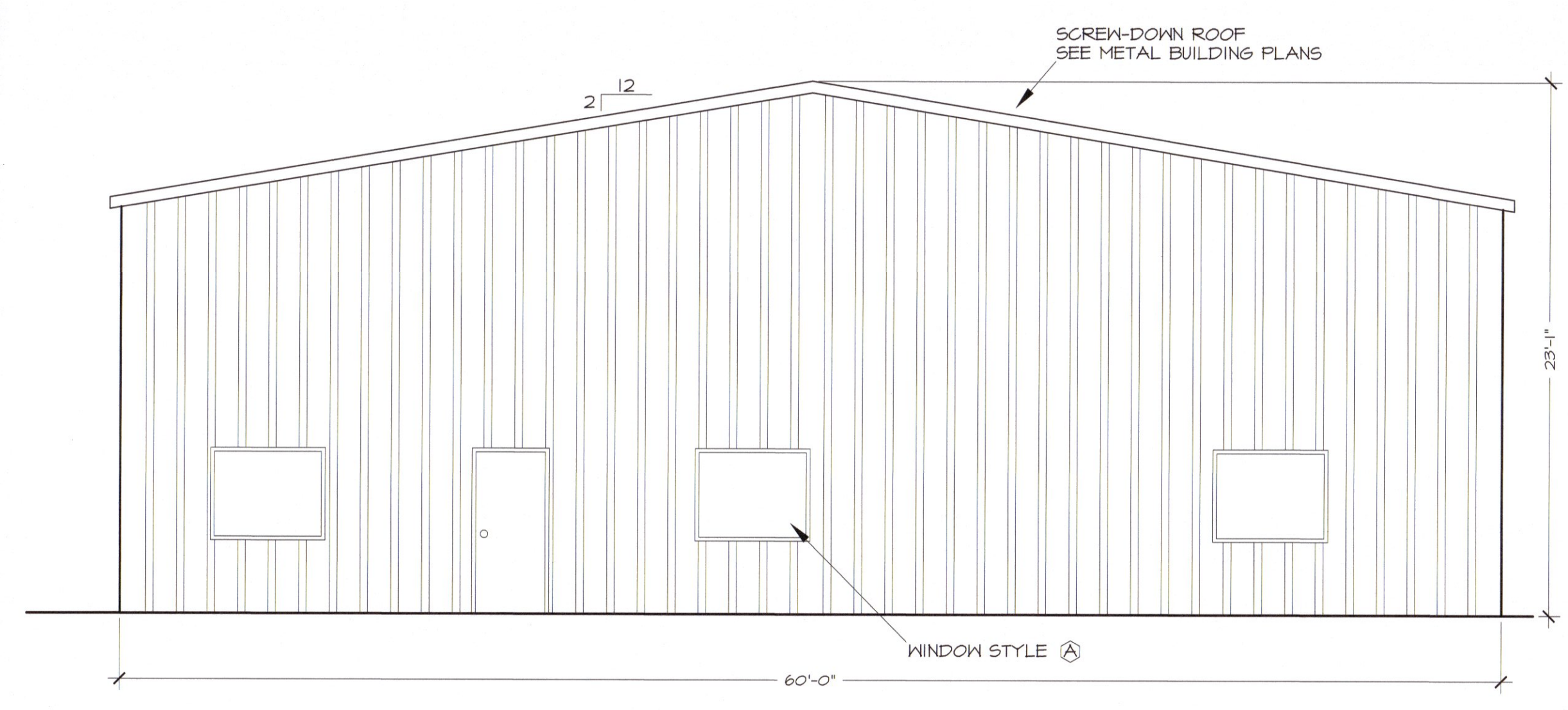
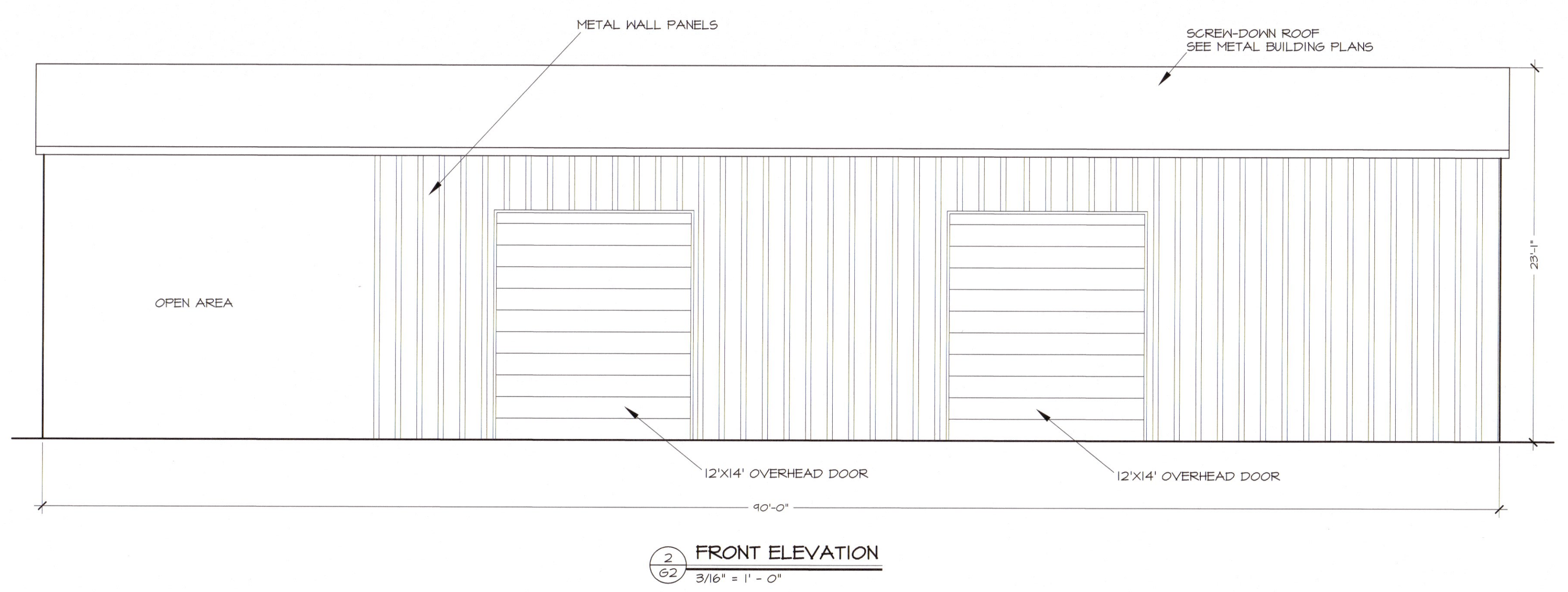
NEW BUILDING FOR
CLH INVESTMENTS - SOUTHBOUND EXPRESS
 DUNN, NC
 2721 U.S. 301 SOUTH
ELEVATIONS

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

SHEET NO.
G2



Omitted. See life safety plan



2
 62
RIGHT SIDE ELEVATION
 3/16" = 1' - 0"

2
 62
FRONT ELEVATION
 3/16" = 1' - 0"



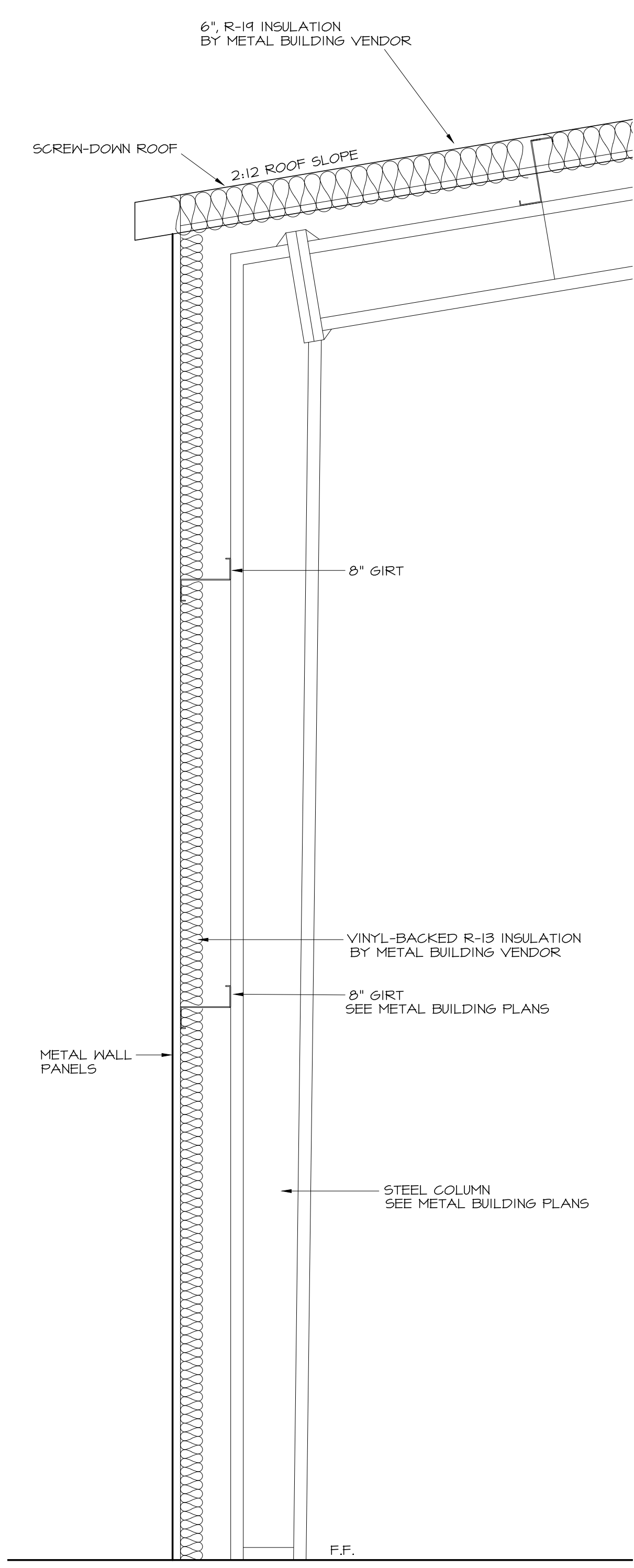
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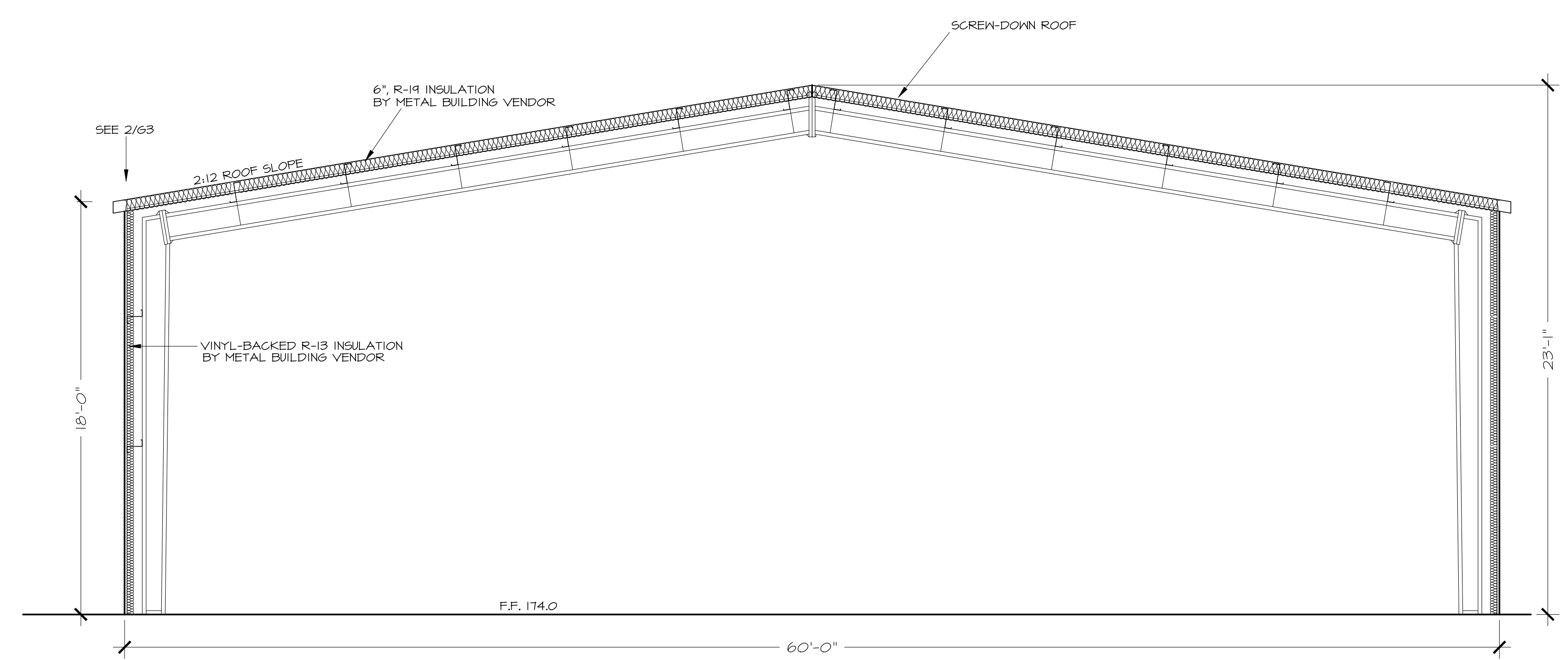
NEW BUILDING FOR
CLH INVESTMENTS - SOUTHBOUND EXPRESS
DUNN, NC
2721 U.S. 301 SOUTH
BUILDING AND WALL SECTIONS

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

SHEET NO.
G3



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



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

REVISIONS	
1-26-22	ADD EXT. DOOR

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

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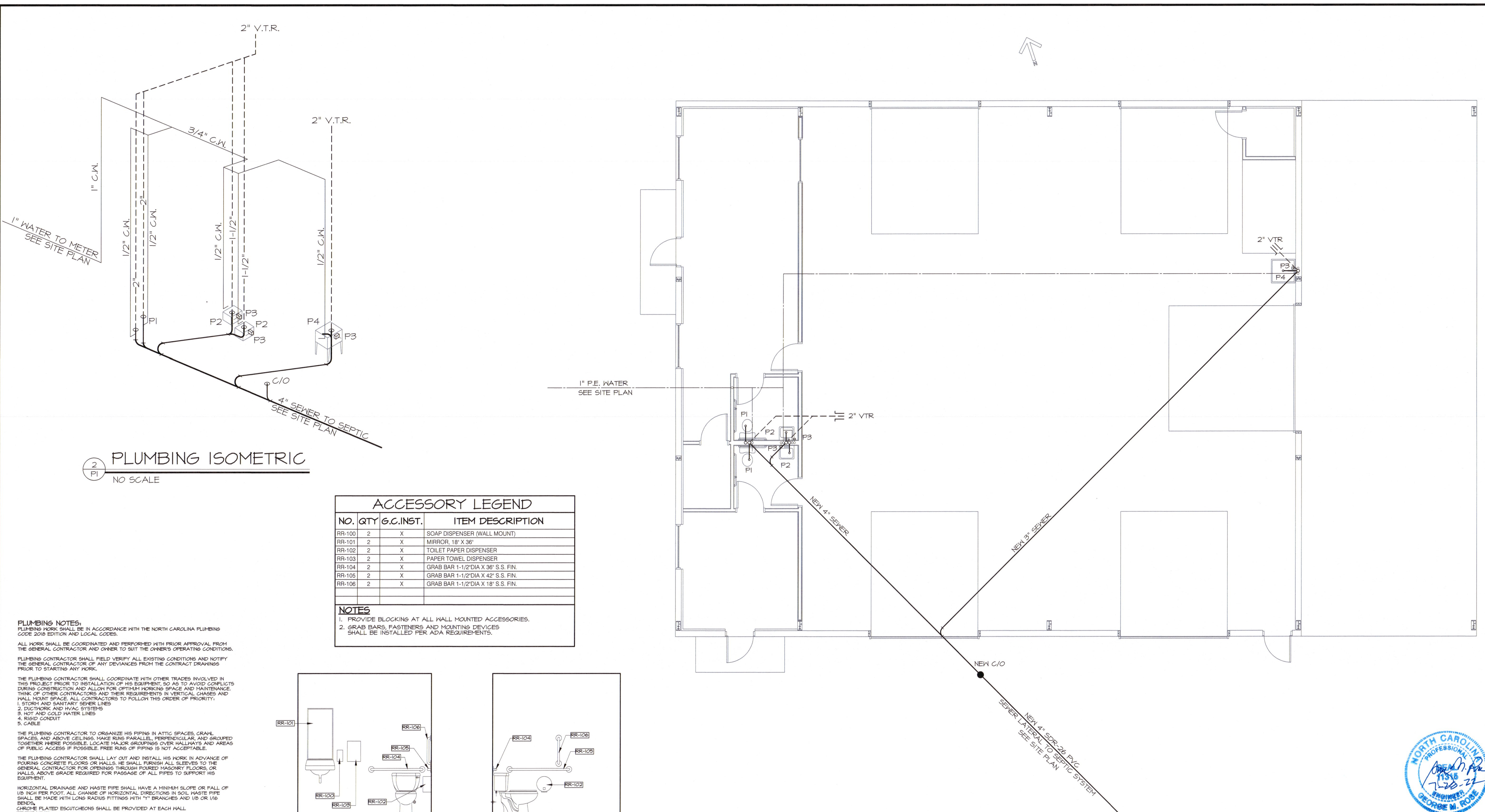
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NEW BUILDING FOR
CLH INVESTMENTS - SOUTHBOUND EXPRESS
 2721 U.S. 301 SOUTH
 DUNN, NC

PLUMBING PLAN

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

SHEET NO.
P1

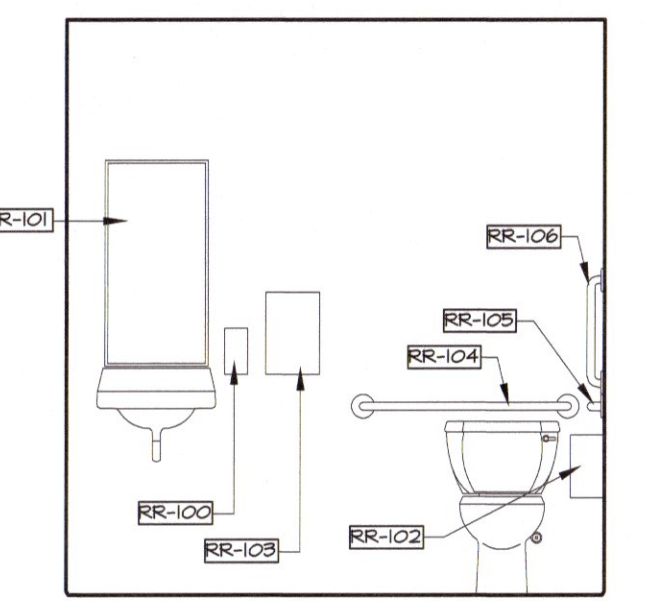


2
 PLUMBING ISOMETRIC
 NO SCALE

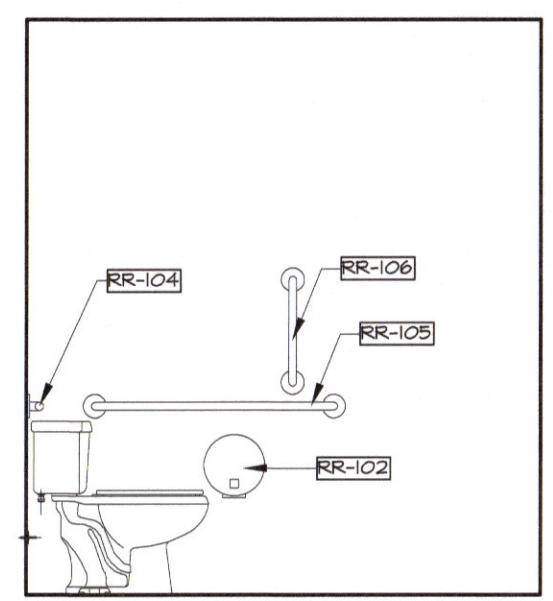
ACCESSORY LEGEND		
NO.	QTY	ITEM DESCRIPTION
RR-100	2	X SOAP DISPENSER (WALL MOUNT)
RR-101	2	X MIRROR, 18" X 36"
RR-102	2	X TOILET PAPER DISPENSER
RR-103	2	X PAPER TOWEL DISPENSER
RR-104	2	X GRAB BAR 1-1/2" DIA X 36" S.S. FIN.
RR-105	2	X GRAB BAR 1-1/2" DIA X 42" S.S. FIN.
RR-106	2	X GRAB BAR 1-1/2" DIA X 18" S.S. FIN.

NOTES
 1. PROVIDE BLOCKING AT ALL WALL MOUNTED ACCESSORIES.
 2. GRAB BARS, FASTENERS AND MOUNTING DEVICES SHALL BE INSTALLED PER ADA REQUIREMENTS.

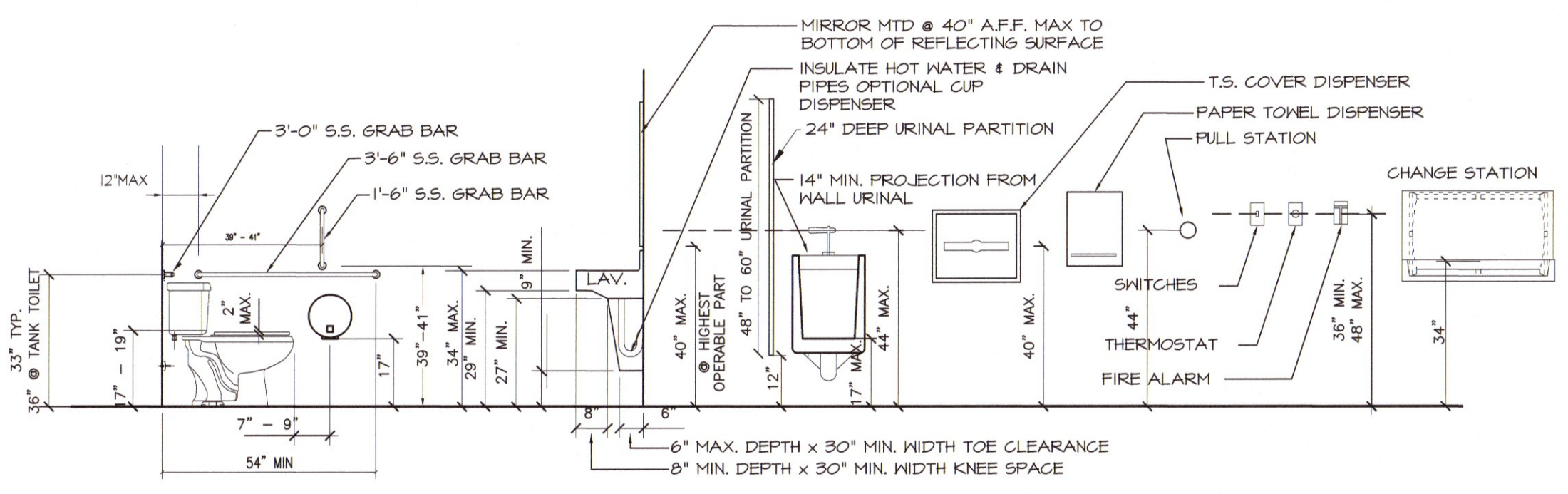
PLUMBING NOTES:
 PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION AND LOCAL CODES.
 ALL WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE GENERAL CONTRACTOR AND OWNER TO SUIT THE OWNER'S OPERATING CONDITIONS.
 PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE GENERAL CONTRACTOR OF ANY DEVIANCES FROM THE CONTRACT DRAWINGS PRIOR TO STARTING ANY WORK.
 THE PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACES. ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:
 1. STORM AND SANITARY SEWER LINES
 2. DUCTWORK AND HVAC SYSTEMS
 3. HOT AND COLD WATER LINES
 4. RIGID CONDUIT
 5. CABLE
 THE PLUMBING CONTRACTOR TO ORGANIZE HIS PIPING IN ATTIC SPACES, CRAWL SPACES, AND ABOVE CEILING, MAKE RUNS PARALLEL, PERPENDICULAR, AND GROUPED TOGETHER WHERE POSSIBLE. LOCATE HANGERS GROUPINGS OVER HALLWAYS AND AREAS OF PUBLIC ACCESS IF POSSIBLE. FREE RUNS OF PIPING IS NOT ACCEPTABLE.
 THE PLUMBING CONTRACTOR SHALL LAY OUT AND INSTALL HIS WORK IN ADVANCE OF POURING CONCRETE FLOORS OR WALLS. HE SHALL FINISH ALL SLEEVES TO THE GENERAL CONTRACTOR FOR OPENINGS THROUGH POURED MASONRY FLOORS, OR WALLS, ABOVE GRADE REQUIRED FOR PASSAGE OF ALL PIPES TO SUPPORT HIS EQUIPMENT.
 HORIZONTAL DRAINAGE AND WASTE PIPE SHALL HAVE A MINIMUM SLOPE OR FALL OF 1/8" PER FOOT. ALL CHANGE OF HORIZONTAL DIRECTIONS IN SOIL WASTE PIPE SHALL BE MADE WITH LONG RADIUS FITTINGS WITH 7" BRANCHES AND 1/8" OR 1/16" BENDS.
 CHANGE PLATED ESCUTCHEONS SHALL BE PROVIDED AT EACH WALL PENETRATION.
 ESCUTCHEONS SHALL BE CHROME PLATED, SPRING TYPE, ON ALL PIPES PASSING THROUGH WALLS AND CEILING IN FINISHED AREAS. FLOOR ESCUTCHEONS SHALL BE CAST BRASS, CHROME PLATED, WITH SET SCREW.
 ESCUTCHEONS SHALL BE OF SUFFICIENT SIZE TO COVER OUTSIDE DIAMETER OF THE PIPE OR THE INSULATION OF THE PIPE.
 FLASHING FOR VENTS THROUGH THE ROOF SHALL BE TWO-PIECE TYPE, 16 OUNCE COPPER OUTER FLASHING AND BASE FLASHING, OR A TWO-PIECE TYPE, 4 POUND LEAD OUTER FLASHING AND BASE FLASHING. THE BASE FLASHING SHALL BE INSTALLED BY THE GENERAL CONTRACTOR WITH THE ROOF SYSTEM.
 VENT FLASHING SHALL EXTEND DOWN AT LEAST 4 INCHES FROM THE TOP OF THE PIPE. FLASHING SHALL EXTEND AT LEAST 12 INCHES IN ALL DIRECTIONS FROM THE PIPE AND SHALL BE PARALLEL TO THE ROOF LINE.
 ALL EQUIPMENT AND INSTALLED MATERIALS SHALL BE THOROUGHLY CLEAN AND FREE OF ALL DIRT, OIL, GREASE, AND ETC.
 ALL PLUMBING SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING FROM THE OWNER.
 COLD AND HOT WATER PIPING ABOVE GRADE SHALL BE POLYETHYLENE TUBING CONFORMING TO ASTM D2055 WITH APPROVED FITTINGS (UNIONS, STRAINERS, ETC.).
 ALL HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK SECTIONAL INSULATION OR FIBERGLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.
 ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBERGLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.
 SANITARY HORIZONTAL WASTE, VENT PIPING, AND FITTINGS ABOVE GRADE SHALL BE SCHEDULE 40 F.W.-DWY PIPE-CELLULAR CORE FROM CHARLOTTE PIPE AND FOUNDRY COMPANY OR APPROVED EQUAL, AND MUST MEET OR EXCEED THE REQUIREMENTS OF ASTM F-88, NSF STANDARD NO. 14, AND IAPMO UPC.
 ALL WASTE STACK PIPING SHALL BE CAST IRON AND INSULATED FOR SOUND IN HALLS.
 ALL WASTE AND STORM PIPING ABOVE CEILING, VERTICAL CHASES, WALLS SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBERGLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE. NO INSULATION REQUIRED IN GYM, SPACE OR BELOW FLOOR SLAB OF ANY WASTE AND STORM PIPING.
 IN LIEU OF FIBERGLASS INSULATION THE PLUMBING CONTRACTOR IS ALLOWED TO USE CLOSED CELL INSULATION 1/2 INCH THICK ARISTON/ARMAFLEX 11 ON ALL COLD WATER PIPES, RIGID (RETANE FOMY INSULATION, 1 INCH THICK ARISTON/ARMAFLEX 11 ON ALL HOT WATER PIPING.
 ALL PLUMBING EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 ALL FIXTURES, DRAINS, TRAPS, ETC. SHALL BE SET PLUMB AND LEVEL.
 ALL HANDICAPPED FIXTURES AND TRIM SHALL BE INSTALLED IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION.



4
 INTERIOR ELEVATION
 3/8" = 1'-0"



5
 INTERIOR ELEVATION
 3/8" = 1'-0"



3
 TYPICAL MOUNTING HTS & CLEARANCES FOR ACCESSIBILITY
 NTS

SYMBOL	DESCRIPTION	MANUFACTUR	MODEL #	ACCESSORIES	SUPPLY	WASTE	VENT	REMARKS
⊘	GRATE VALVE							
—	COLD WATER PIPE							
—	HOT WATER PIPE							
⊥	VENT THROUGH ROOF							
—	VENT PIPE							
—	SANITARY SEWER PIPE							
P1	TOILET WITH TANK (ADA)	HANSFIELD	19T-180	BEHS R55 TOILET SEAT	1/2" C.K.	3"	2"	SEE PLAN FOR LOCATION
P2	HCP HALL HUNG LAVATORY	HANSFIELD	2018 HB-NS	DELTA 520-TRH-DST FAUCET	1/2" H.H. C.K.	2"	2"	SEE PLAN FOR LOCATION
P3	INSTANT HOT	STIEBEL ELTRON	2820RH		1/2" C.K.	-	-	SEE PLAN FOR LOCATION
P4	UTILITY SINK	MUSTEE	18P	DELTA 218LP FAUCET	1/2" H.H. C.K.	2"	1-1/2"	SEE PLAN FOR LOCATION



1
 PLUMBING PLAN
 3/16" = 1' - 0"



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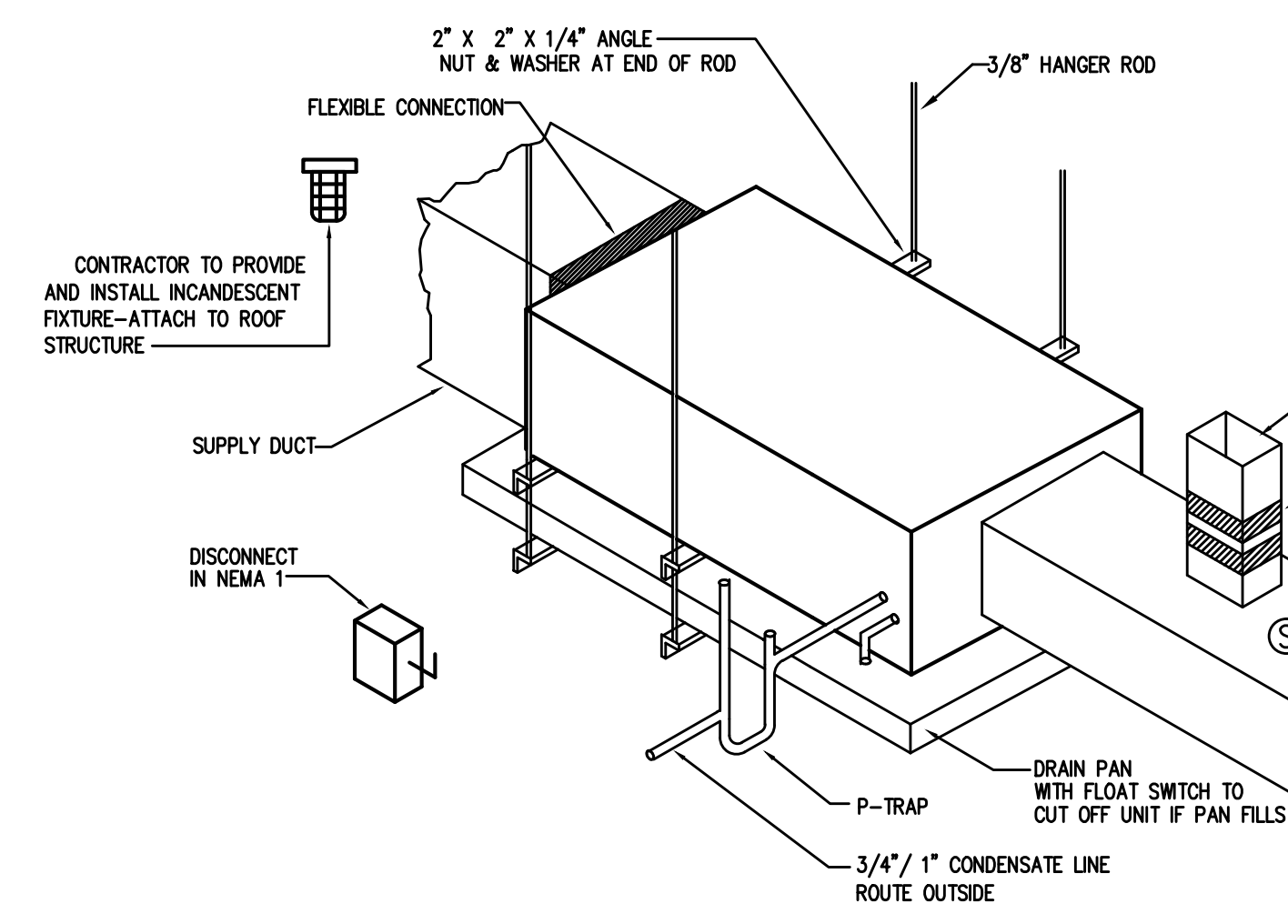
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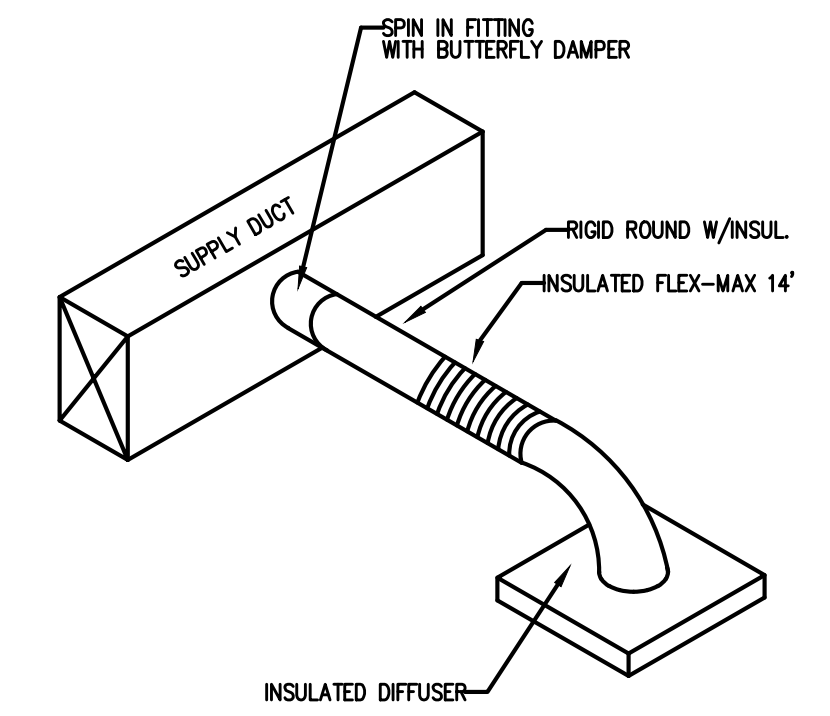
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ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 NC MECHANICAL CODE.
 ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL IN ACCORDANCE WITH ASHRAE & SMACNA. DUCT SIZES SHOWN ARE NET FREE AREA REQUIRED. ALL SUPPLY AND RETURN DUCTS AND FLEX SHALL 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 T&B 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 HVAC NOTES
 N.T.S.



3 AIR HANDLER DETAIL
 N.T.S.



4 DIFFUSER TAKEOFF DETAIL
 N.T.S.

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

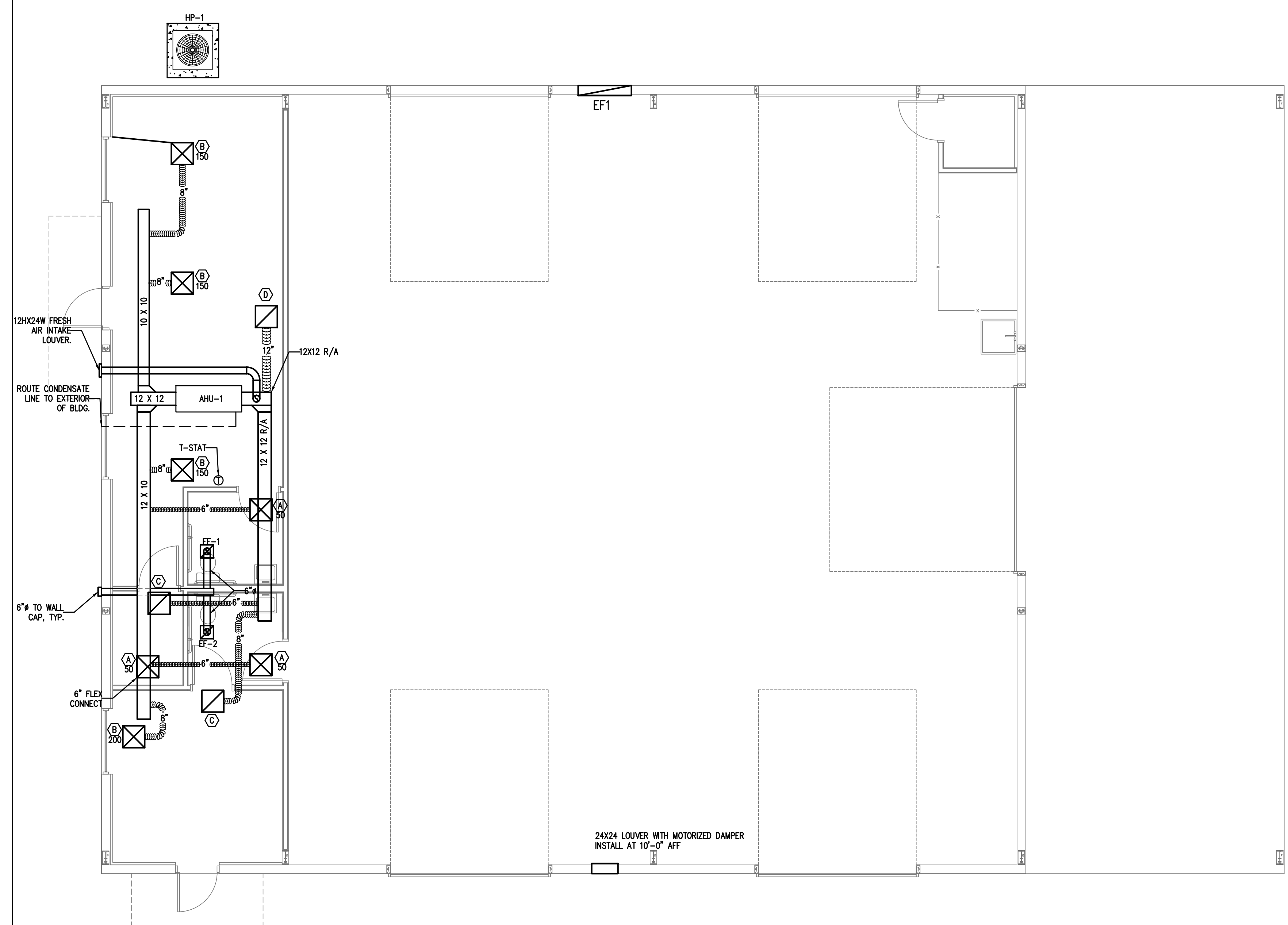
Mechanical Spacing Conditioning System

Binary	description of unit:	SPLIT SYS. HEAT PUMP
heating efficiency:		8.5 HSPF
cooling efficiency:		14.0 SEER
size category of unit:		<=5,000 BTU

Boiler

Chiller

List equipment efficiencies: _____



1 HVAC PLAN
 3/16"=1'-0"

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" TO WALL CAP
EF1	SIDEWALL	STORAGE	5,631	0.125"	1/2 HP	860	120	1	DIRECT	GREENHECK MODE # S1 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					MFG. & MODEL	REMARKS		
				HP	VOLTS	PHASE	CYCLE	FLA			MCA	MOCP
AHU-1	800	53	0.62	1/3	240	1	60	2.8	44	45	TRANE GAM580A24	2 TON AIR HANDLER W/ 7.68 KW STRIPS

HEAT PUMP UNIT SCHEDULE

UNIT NO.	COMPRESSOR AMPS	NO. OF COMPR.	FAN AMPS	NO. OF FANS	UNIT VOLT	UNIT PHASE	MOCP	MCA	CAPACITIES			MFG & MODEL	REMARKS
									TOTAL COOLING	MIN. SEER	HEATING		
HP-1	10.9	1	0.64	1	240	1	25	14	23,400	14.00	22,400	TRANE 4TMR4024G1	2 TON HEAT PUMP UNIT

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

OCCUPANCY TYPE:	SF	# OF OCCUPANTS PER 1000 SF	# OF OCCUPANTS	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
RESTROOM1	50	0	0	0	0	0	70
RESTROOM2	50	0	0	0	0	0	0
TECH CLOSET	38	0	0	0	0.06	2	14
OFFICE	169	5	0.845	5	0.06	53	140
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	# OF OCCUPANTS PER 1000 SF	# OF OCCUPANTS	O.A. CFM PER PERSON (Rp)	O.A. CFM PER SqFt (Ra)	O.A. CFM REQUIRED (Vbz)	EXHAUST CFM REQUIRED
EF1							
WAREHOUSE	3215	0	0	0	0.06	193	193
TOTAL CFM REQUIRED						193	193
TOTAL CFM FURNISHED						193	5631



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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 THHN OR THWN, 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 LIQUDTIGHT OR WATERTIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUDTIGHT 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 BE 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.

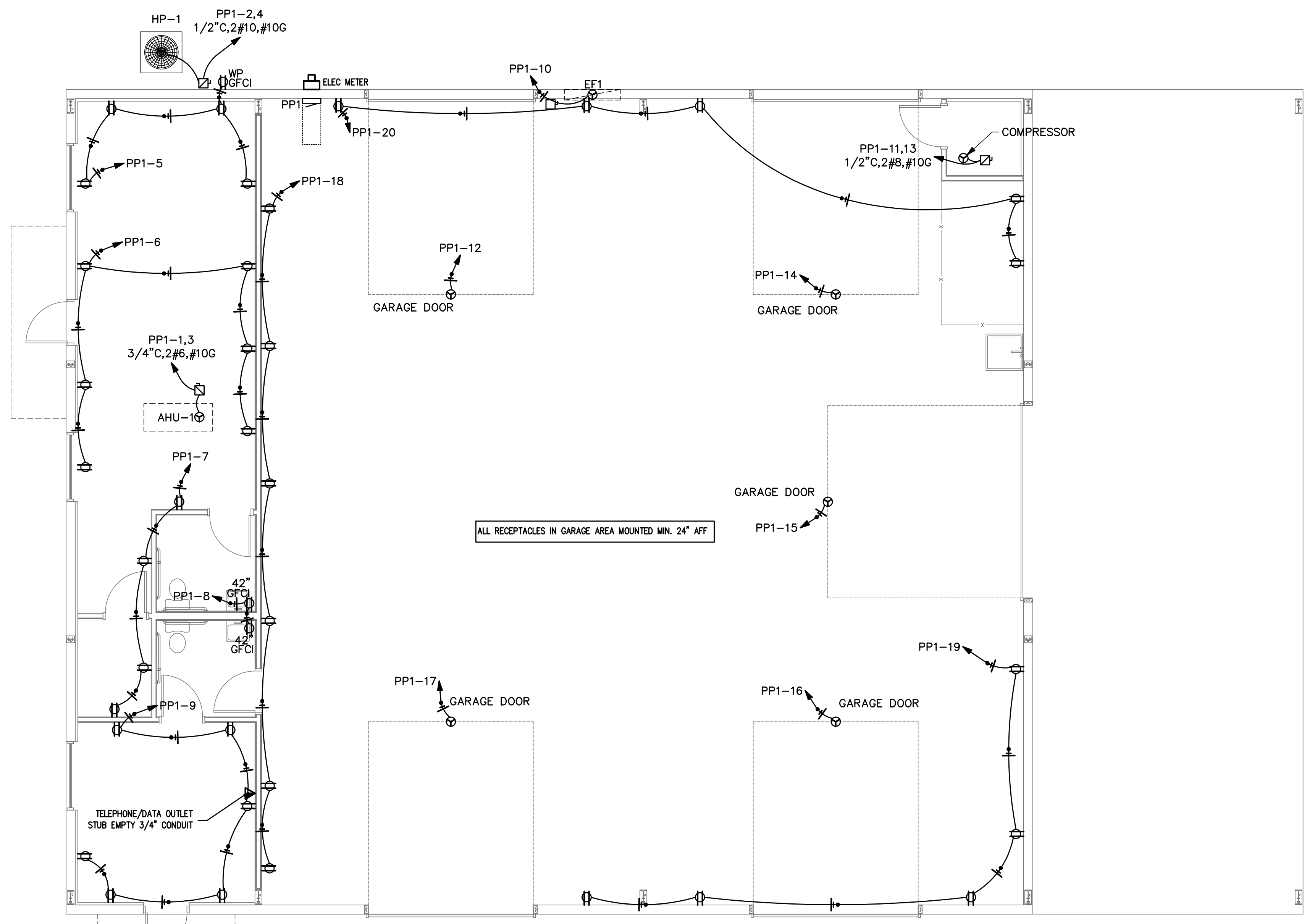
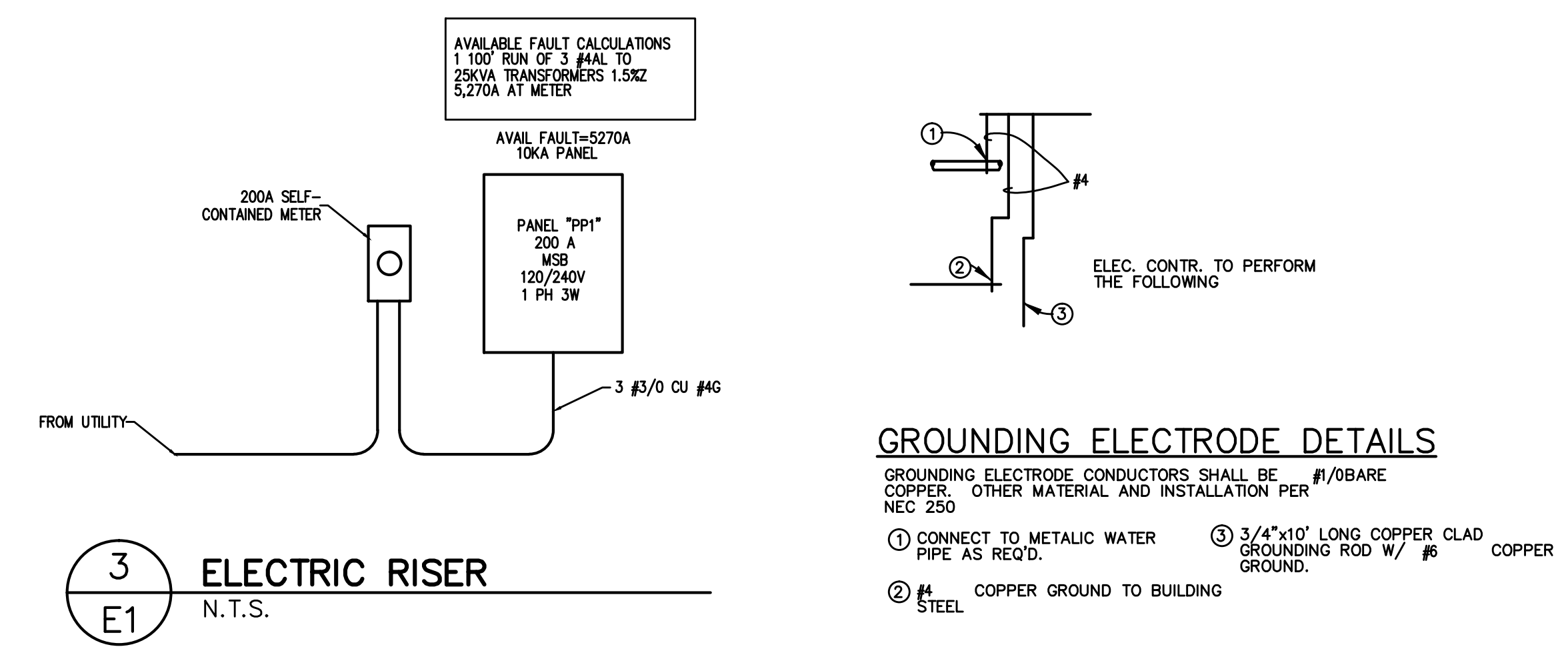
ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

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

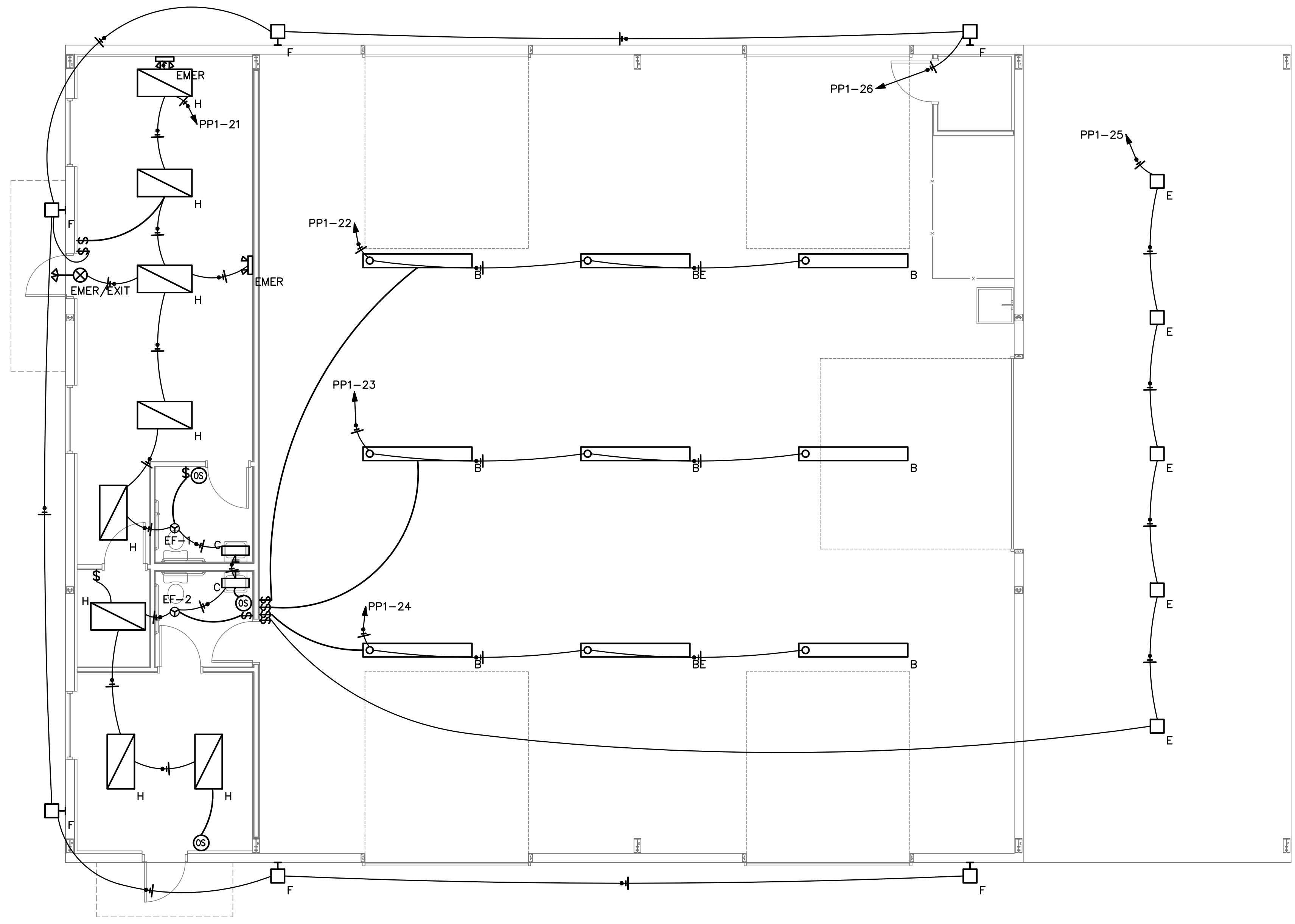
RECESSED FIXTURES INSTALLED IN RATED ASSEMBLIES SHALL BE INSTALLED WITH AN ENCLOSURE SO AS TO MAINTAIN THE RATING OF ASSEMBLY.

2 ELECTRICAL NOTES
 N.T.S.



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

PP1		ROOM	VOLTS	240/120V 2P 3W	AIC	10,000	
		MOUNTING	FLUSH	BUS AMPS	200	MAIN BKR	
		FED FROM UTILITY		NEUTRAL	100%	LUGS	
		NOTE				STANDARD	
CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA
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		



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

1 LIGHTING PLAN
 E2 3/16" = 1'-0"

BRYANT (HUBBELL) MS1000M1 OR EQUAL WALL SWITCH OCCUPANCY SENSOR WITH ULTRASONIC AND PASSIVE INFRARED TECHNOLOGY. 1000 SQUARE FOOT COVERAGE. 800W INCANDESCENT, 1000W FLUORESCENT AT 120V AC.

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 AXGL12A-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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