

SANDAL FACTORY

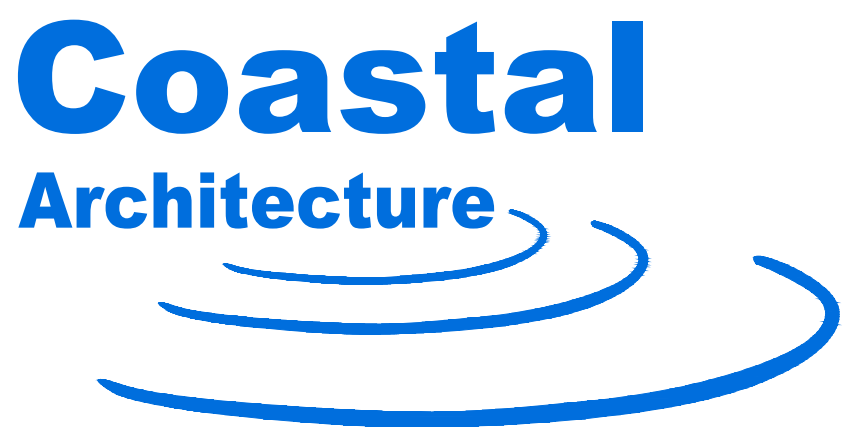
ATLANTIC BEACH BTS

ATLANTIC BEACH, NORTH CAROLINA



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• Architectural
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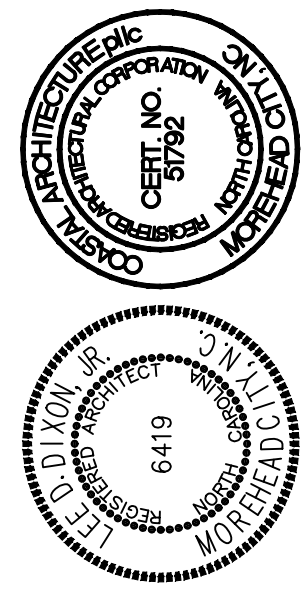
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ATLANTIC BEACH BTS

ATLANTIC BEACH, NORTH CAROLINA



COVER SHEET
22012
ISSUED: 4-21-23
DWG BY: BLS
CKD BY: LDD
REVISIONS
SHEET NO.
CS-1
OF

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

Name of Project: ATLANTIC BEACH BTS
Address: ATLANTIC BEACH, NORTH CAROLINA Zip Code: 28512
Owner/Authorized Agent: JOHN HAMILTON Phone #: (803) 606-2221 E-Mail: john.hamilton@development.com
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☒ City ATLANTIC BEACH ☐ County ☐ State

CONTACT:
DESIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL
Architectural Coastal Architecture Lee Dixon 6419 (252) 241-2121 leed@coastalarchitecture.net
Civil - - - () - -
Electrical Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Fire Alarm Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Plumbing Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Mechanical Burke Design Group Ben Burke 22038 (919) 111-1916 benburke@ncrr.com
Sprinkler-Standpipe - - - () - -
Structural FDR Engineers, PLLC (919) 957-5100
Retaining Walls > 5 feet High - - - () - -
Other - - - () - -
(*Other* should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☒ New Building ☐ Shell/Core ☐ 1st Time Interior Completions
☐ Addition ☐ Phased Construction—Shell Core
2018 NC EXISTING BUILDING CODE: ☐ Prescriptive ☐ Alteration Level I ☐ Historic Property
(check all that apply) ☐ Repair ☐ Alteration Level II ☐ Change of Use
☐ Chapter 14 ☐ Alteration Level III

CONSTRUCTED: (date) _____ CURRENT USE(S) (Ch. 3): _____
RENOVATED: (date) _____ PROPOSED USE(S) (Ch. 3): _____
OCCUPANCY CATEGORY (Table 1604.5): Current: _____ Proposed: _____

BASIC BUILDING DATA		
Construction Type: (check all that apply)	<input type="checkbox"/> I-A <input type="checkbox"/> I-B <input type="checkbox"/> I-C <input type="checkbox"/> I-D <input type="checkbox"/> I-E <input type="checkbox"/> I-F <input type="checkbox"/> I-G <input type="checkbox"/> I-H <input type="checkbox"/> I-I <input type="checkbox"/> I-J <input type="checkbox"/> I-K <input type="checkbox"/> I-L <input type="checkbox"/> I-M <input type="checkbox"/> I-N <input type="checkbox"/> I-O <input type="checkbox"/> I-P <input type="checkbox"/> I-Q <input type="checkbox"/> I-R <input type="checkbox"/> I-S <input type="checkbox"/> I-T <input type="checkbox"/> I-U <input type="checkbox"/> I-V <input type="checkbox"/> I-W <input type="checkbox"/> I-X <input type="checkbox"/> I-Y <input type="checkbox"/> I-Z	<input type="checkbox"/> I-A <input type="checkbox"/> I-B <input type="checkbox"/> I-C <input type="checkbox"/> I-D <input type="checkbox"/> I-E <input type="checkbox"/> I-F <input type="checkbox"/> I-G <input type="checkbox"/> I-H <input type="checkbox"/> I-I <input type="checkbox"/> I-J <input type="checkbox"/> I-K <input type="checkbox"/> I-L <input type="checkbox"/> I-M <input type="checkbox"/> I-N <input type="checkbox"/> I-O <input type="checkbox"/> I-P <input type="checkbox"/> I-Q <input type="checkbox"/> I-R <input type="checkbox"/> I-S <input type="checkbox"/> I-T <input type="checkbox"/> I-U <input type="checkbox"/> I-V <input type="checkbox"/> I-W <input type="checkbox"/> I-X <input type="checkbox"/> I-Y <input type="checkbox"/> I-Z
Sprinklers: <input type="checkbox"/> No <input type="checkbox"/> Partial <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX	<input type="checkbox"/> No <input type="checkbox"/> Partial <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX	<input type="checkbox"/> No <input type="checkbox"/> Partial <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX
Standpipes: <input type="checkbox"/> No <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX	<input type="checkbox"/> No <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX	<input type="checkbox"/> No <input type="checkbox"/> Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> VII <input type="checkbox"/> VIII <input type="checkbox"/> IX <input type="checkbox"/> X <input type="checkbox"/> XI <input type="checkbox"/> XII <input type="checkbox"/> XIII <input type="checkbox"/> XIV <input type="checkbox"/> XV <input type="checkbox"/> XVI <input type="checkbox"/> XVII <input type="checkbox"/> XVIII <input type="checkbox"/> XIX <input type="checkbox"/> XX <input type="checkbox"/> XXI <input type="checkbox"/> XXII <input type="checkbox"/> XXIII <input type="checkbox"/> XXIV <input type="checkbox"/> XXV <input type="checkbox"/> XXVI <input type="checkbox"/> XXVII <input type="checkbox"/> XXVIII <input type="checkbox"/> XXIX <input type="checkbox"/> XXX
Primary Fire District: <input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
Special Inspections Required: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
GROSS BUILDING AREA TABLE		
Floor	Existing (sq ft)	New (sq ft)
3rd Floor		
2nd Floor		
Mezzanine		
1st Floor	6,157	
Basement		
TOTAL	6,157	

ENERGY SUMMARY

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

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

Exempt Building: ☐ Provide code or statutory reference: _____

Climate Zone: ☒ 3A ☐ 4A ☐ 5A

Method of Compliance:

Energy Code: ☐ Performance ☒ Prescriptive
ASHRAE 90.1: ☐ Performance ☐ Prescriptive
Other: ☐ Performance (specify source) _____

THERMAL ENVELOPE: (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: ROOF MEMBRANE ON TAPERED INSULATION
U-Value of total assembly: _____
R-Value of insulation: R-30
Skylights in each assembly: N/A
U-Value of skylight: N/A
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: 2 x 6 STUDS w/ PLYWD, GUS AND R-19 INSULATION
U-Value of total assembly: _____
R-Value of insulation: R-19
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: CONCRETE SLAB ON VAPOR BARRIER w/ 2" PERIMETER INSULATION
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade

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

ALLOWABLE AREA

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

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

This separation is not exempt as a Nonseparated Use (see exceptions).

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____

Mixed Occupancy: ☒ No ☐ Yes Separation: _____ Hr. Exception: _____

Non-separated Use (508.3) _____

Separated Use (508.4)—See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Select one

Actual Area of Occupancy A

Actual Area of Occupancy B

Allowable Area of Occupancy A

Allowable Area of Occupancy B

15

_____ + _____ = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 508.24 AREA	(C) AREA FOR FRONTAGE INCREASES 1, 4	(D) ALLOWABLE AREA PER STORY OR UNLIMITED 3
I	M	6,157	12,500	3,315	15,815

- Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 179 (F)
b. Total Building Perimeter = 341 (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = 30 (W)
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
4. The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
5. Frontage increase is based on the unspinklered area value in Table 506.2.

STRUCTURAL DESIGN

SEE ALSO S1.1

DESIGN LOADS:

Importance Factors: Wind (IW) SEE S1.1
Snow (IS) _____
Seismic (IE) _____
Live Loads: Roof 20 psf
Mezzanine 20 psf
Floor 100 psf
Ground Snow Load: 10 psf
Wind Load: Basic Wind Speed 145 mph (ASCE-7)
Exposure Category D

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 SS SEE S1.1 %g S1.8EE S1.1 %g
Site Classification (ASCE 7) ☐ A ☒ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data
Basic structural system (check one)
☒ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
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) 2000 psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

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

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
humidity ratio: _____
Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason: _____
Chiller
Size category. If oversized, state reason: _____

List equipment efficiencies: _____

ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

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

Additional Prescriptive Compliance

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

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
N 4 E >30	UP, NS	NL	-
W >15 <10	UP, NS	10%	-
S >10 <15	UP, NS	15%	-

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

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

ACCESSIBLE DWELLING UNITS (SECTION 1107)

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

ACCESSIBLE PARKING (SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS PER UNIT (TABLE 2902.1)

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female	Unisex		Regular	Accessible
REQD	-	-	1	-	-	-	1	-	-	-
PROVIDED	-	-	2	-	-	-	2	-	1	1

SPECIAL APPROVALS

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

CIRCLE DISTRICT APPROVAL

Coastal
Architecture

• Architectural
Design

• Planning

• Interiors



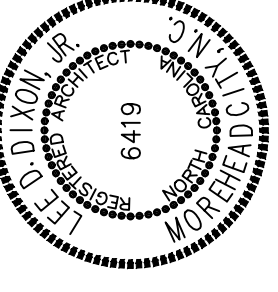
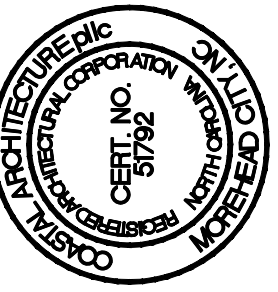
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ATLANTIC BEACH
BTS
ATLANTIC BEACH, NORTH CAROLINA



GENERAL DATA

22012

ISSUED: 04/21/23

DWG BY: MES

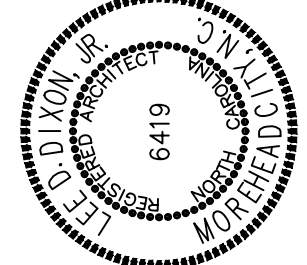
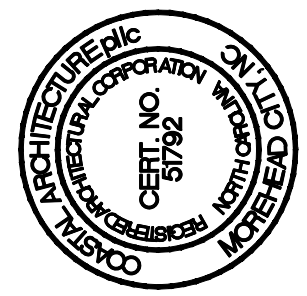
CKD BY: LDD

REVISIONS

SHEET NO.

G-1

OF



LIFE SAFETY PLAN

22012

ISSUED: 04/21/23

DWG BY: BLS/SKC

CKD BY: LDD

REVISIONS

SHEET NO.

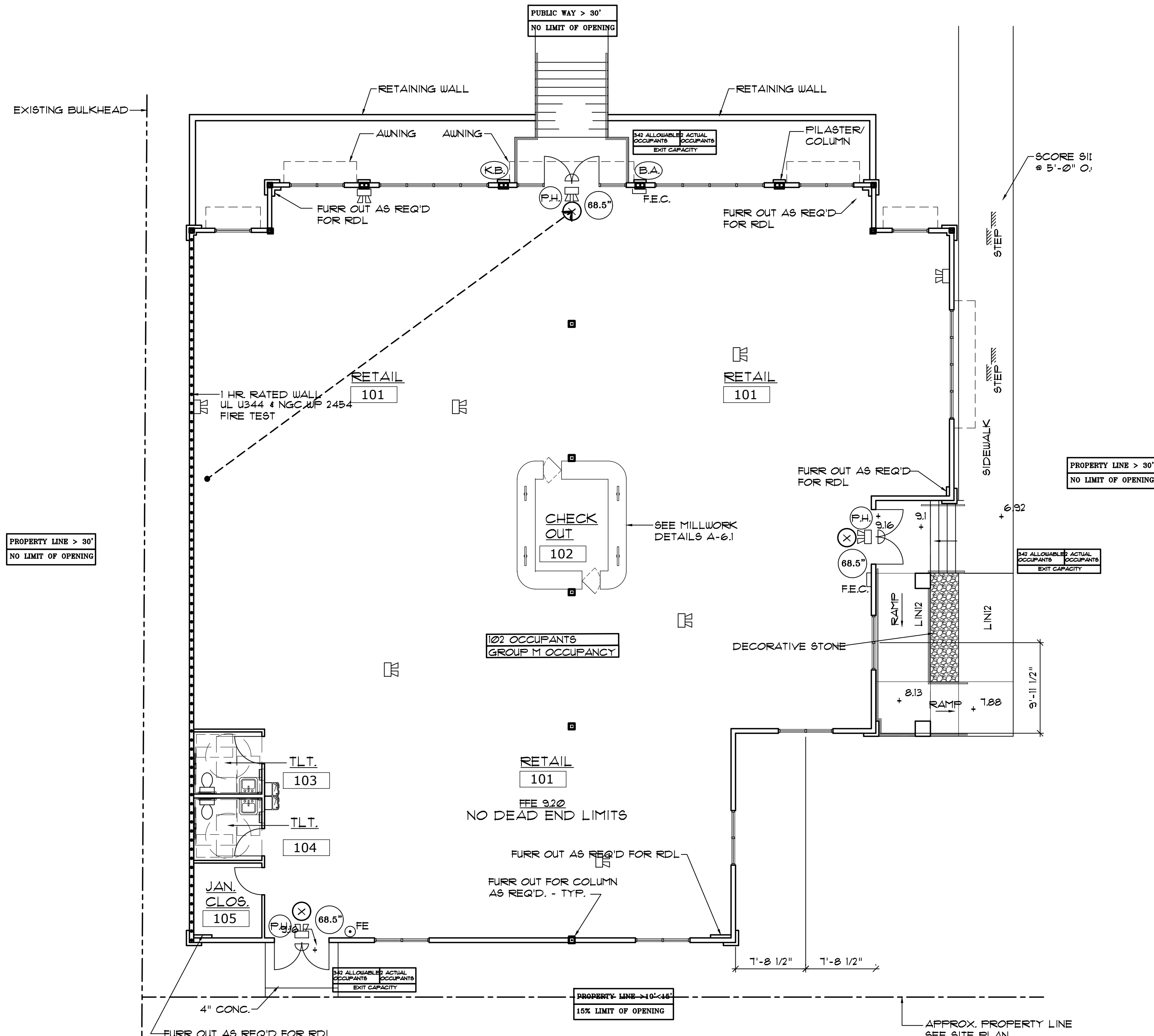
G-2
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OCCUPANCY/LOAD TYPE KEYING:

M = MERCANTILE

LEGEND:

- FE = FIRE EXTINGUISHER ON STANDARD HOOK
- F.E.C. = FIRE EXTINGUISHER AND CABINET
LARGEN SEMI-RECESSED F9 2409-R3
BRUSHED CHROME W/ MPB FIRE EXTINGUISHER
- = 1 HR RATED WALL (UL U305) OR U356 SEE 6/A-5.2
- 34.25" = CLEAR EXIT WIDTH
- 68.5" = CLEAR EXIT WIDTH
- = EXIT
- (B.A.) = BUILDING ADDRESS- 6" MIN. HEIGHT, ON
CONTRASTING BACKGROUND, READILY VISIBLE FROM
STREET
- (K.B.) = KNOX BOX, FIRE DEPARTMENT KEY LOCK BOX
CONFIRM LOCATION W/ FIRE DEPARTMENT
- (P.H.) = PANIC HARDWARE
- = EMERGENCY EXIT SIGN
- = EGRESS LIGHT



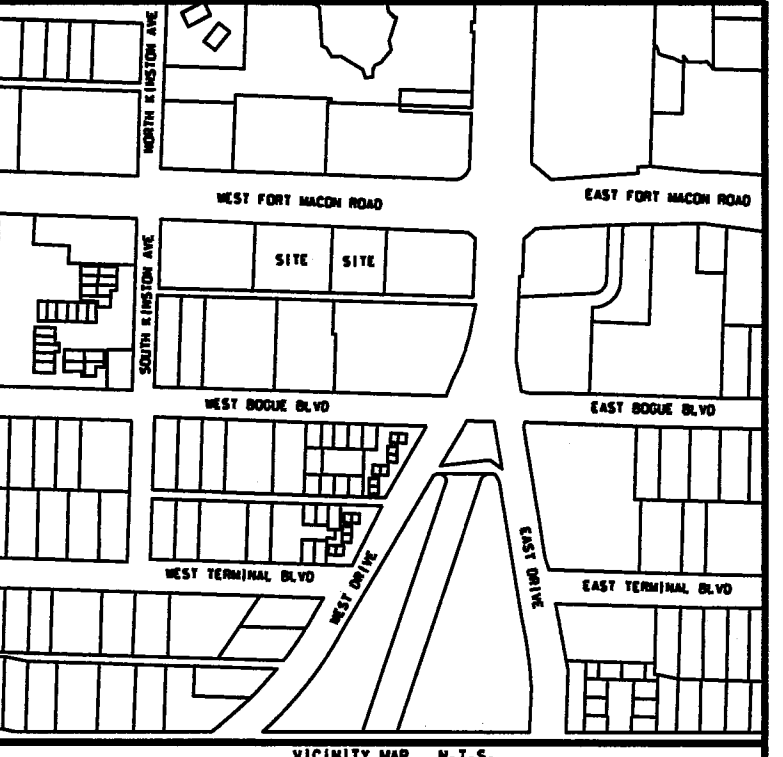
1 LIFE SAFETY PLAN
G-2 SCALE: 1/8" = 1'-0"

NOTES:

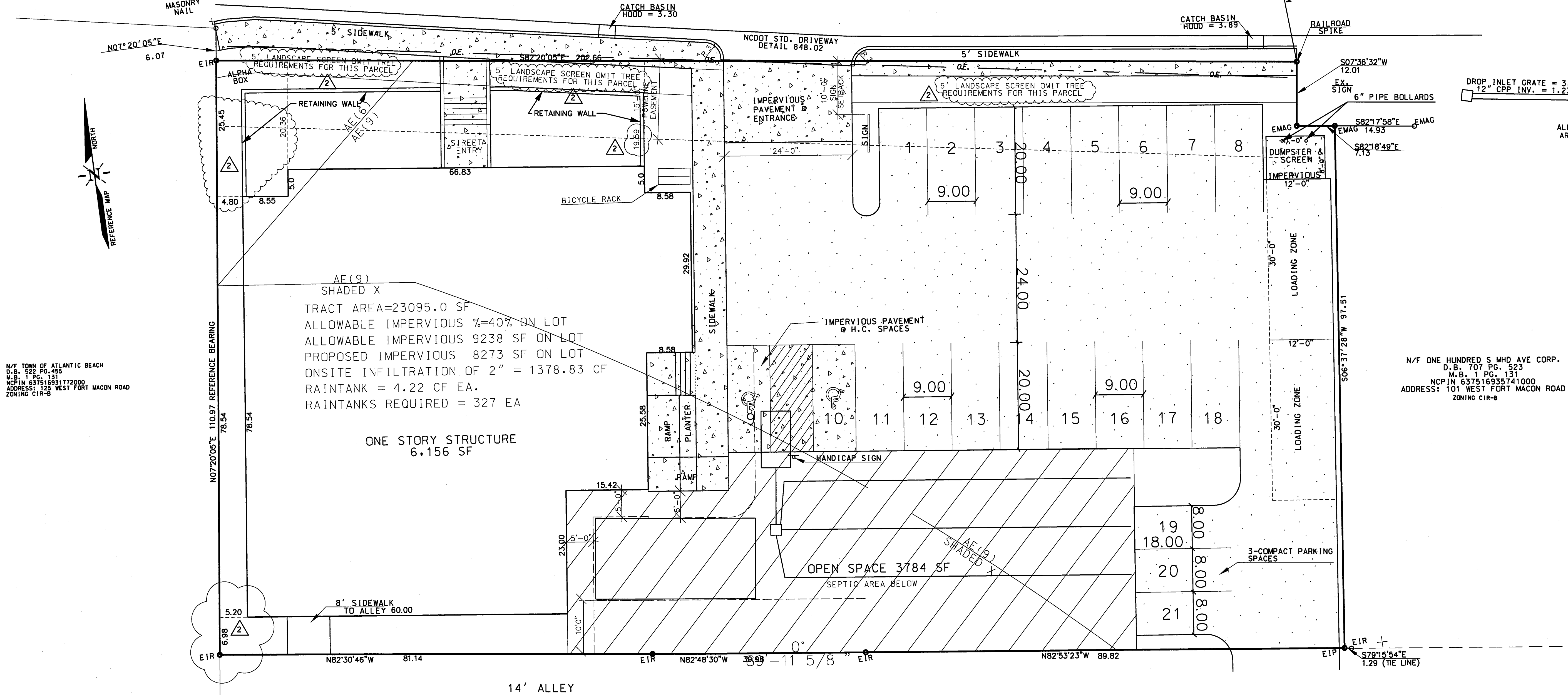
- THIS SURVEY IS OF EXISTING PARCELS OF LAND
- AREA BY COORDINATES
- THIS MAP IS NOT FOR RECORDING
- TRACT AREA = 23,095.0 S.F. OR 0.53 ACRES
- NO UNDERGROUND TANKS OR UTILITIES SURVEYED OR SHOWN UNLESS EXPOSED AT TIME OF SURVEY
- PROPERTY IS LOCATED IN FLOOD ZONE SHADED X- AE(9) & AE(6) PER FIRM MAP NUMBER 3720637500J EFFECTIVE DATE JULY 16, 2003
- ZONING - CIR-B
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES
- FLOOD ZONE LINES SCALED FROM CARTERET COUNTY GIS MAP

SITE LIGHTING NOTE: ALL SITE LIGHTING INCLUDING EXTERIOR BUILDING AND PARKING LOT LIGHTING SHALL BE POSITIONED TO SHIELD DIRECT LIGHTING TO ADJOINING RESIDENTIAL USES.

NOTE: NCDOT HAS SECURED A TEMPORARY EASEMENT FOR WEST FORT MACON ROAD IMPROVEMENTS FROM ATLANTIC BEACH SANDALS VENTURES, LLC. APPROXIMATE DIMENSIONS ARE 15'X12' RECTANGLE LOCATED ALONG THE NORTH LINE OF THIS PARCEL.

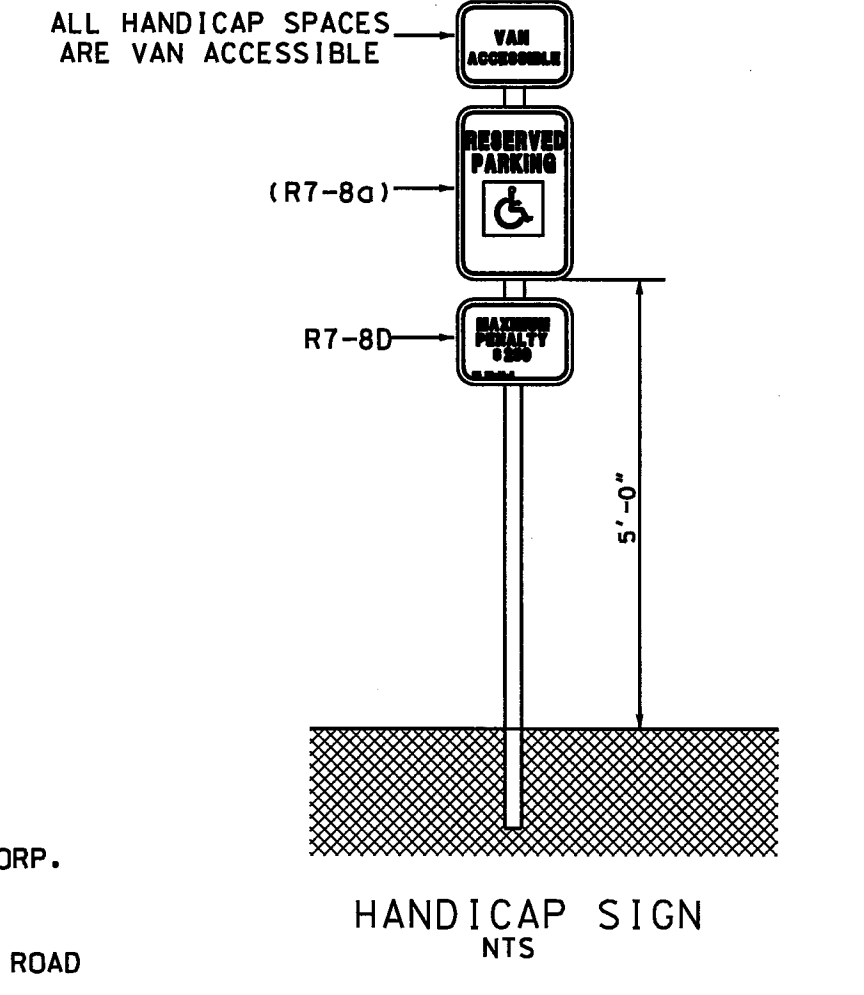


WEST FORT MACON ROAD 76' PUBLIC RIGHT OF WAY



DROP INLET GRATE = 3.35
12" CPP INV. = 1.23

DROP INLET GRATE = 3.47
12" CPP INV. = 1.17

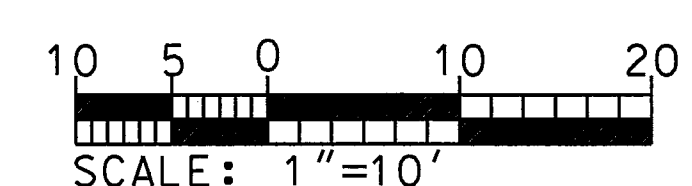
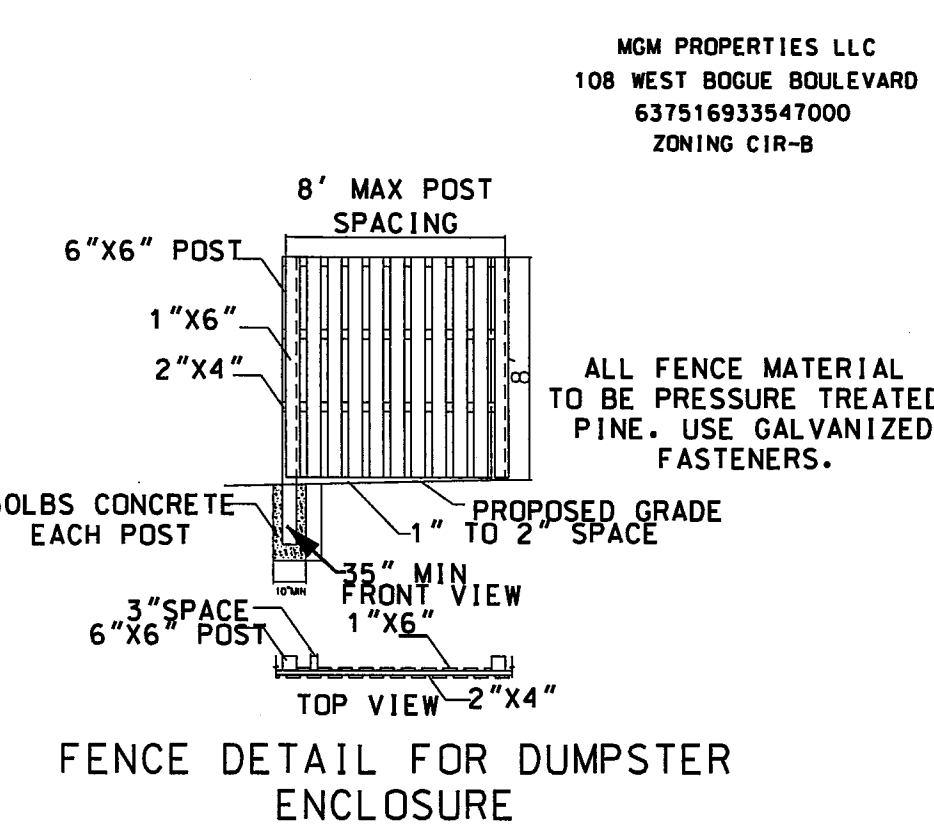


N/F ONE HUNDRED S MHD AVE CORP.
D.B. 707 PG. 523
M.B. 1 PG. 131
NCPIN 637516935741000
ADDRESS: 101 WEST FORT MACON ROAD
ZONING CIR-B

N/F TOWN OF ATLANTIC BEACH
D.B. 522 PG. 455
M.B. 1 PG. 131
NCPIN 637516931772000
ADDRESS: 129 WEST FORT MACON ROAD
ZONING CIR-B

LEGEND

- EIR EXISTING IRON ROD
- EIP EXISTING IRON PIPE
- EPK EXISTING PK NAIL
- ECM EXISTING CONC. MON.
- ERRS EXISTING R/R SPIKE
- SIR SET IRON ROD
- CP CALCULATED POINT
- NHW NORMAL HIGH WATER
- N/F NOW OR FORMERLY
- MB MAP BOOK
- DB DEED BOOK
- PG PAGE
- PP POWER POLE
- LP LIGHT POLE
- DE OVERHEAD ELECTRIC
- ELEC ELECTRICAL PEDESTAL
- TRANS ELEC. TRANSFORMER
- TEL TELEPHONE PEDESTAL
- CATV CABLE TELEVISION
- WM WATER METER
- CO CLEAN OUT
- CPP CORRUGATED PLASTIC PIPE
- WV WATER VALVE
- FH FIRE HYDRANT
- SSMH SANITARY SEWER MANHOLE
- SMAG SET MAGNETIC NAIL
- OPEN SPACE
- PERVIOUS CONCRETE
- CONCRETE



FMB AT THE GROVE LLC
104 WEST BOGUE BOULEVARD
637516934597000
ZONING CIR-B

SITE INFORMATION

- ZONING CIR B
- PARKING 6,156 SF + 300(RETAIL) = 21 SPACES REQ'D
- PLUS (2) 12'X30' LOADING AREA.
 - (21) PROVIDED ONSITE INCLUDING (5) COMPACT SPACES, PLUS (2) 12'X30' LOADING AREA PROVIDED.

SETBACKS

- FRONT 15' MAXIMUM PER CIRCLE DISTRICT CODE - VARIANCE REQUEST TO CHANGE TO 21'
- SIDE 0
- REAR 0
- MAX HEIGHT 55'
- MAX IMPERVIOUS SURFACE COVERAGE 40% = 9,238 SF MAXIMUM ALLOWABLE, 8,241 SF PROVIDED 35.7%
- MAXIMUM F.A.R. LOT 23,095 SF X 0.4 = 9,238 MAX F.A.R. (6156 SF - 1ST FL)
- 50% FRONT WALL TO BE GLASS OR DOORS
- 25% REAR WALL TO BE GLASS OR DOORS - VARIANCE REQUEST TO CHANGE TO 15% TO MEET BUILDING CODE REQUIREMENTS
- SIDEWALK 8'-0" (PROPOSE 6'-0" TO MATCH UP BETTER WITH ADJACENT PROPERTY)
- RECOMBINE LOTS
- LANDSCAPING EXEMPT IN CIR DISTRICT (18.3.5.7g)
- STREET TREES ARE NOT REQUIRED FOR SITE VISIBILITY FOR EMERGENCY VEHICLES FOR TOWN OF ATLANTIC BEACH
- FIRE AND EMS SERVICES.
- 15% OPEN SPACE REQ'D 3,464 SF, 3,784 SF PROVIDED

TIME TABLE PROJECT IS TO BE COMPLETED IN ONE PHASE AND CONSIST OF A TIME TABLE FOR COMPLETION OF APPROXIMATELY 8 MONTHS.

NO.	BY	DATE	DESCRIPTION
1	RDC	5/28/23	TECH REVIEW
2	RDC	4/13/23	VARIANCE REQUEST

MAJOR SITE PLAN-VARIANCE REQUEST

ATLANTIC BEACH BTS

115 WEST FORT MACON ROAD

ATLANTIC BEACH, CARTERET COUNTY, NORTH CAROLINA

CLIENT: AB SANDALS VENTURES LLC

DESIGNED: RDC

ADDRESS: 8235 DOUGLAS AVE

DRAWN: RDC

SUITE 350

DALLAS TX 75225

CHECKED: RDC

PHONE: 843-868-0067

APPROVED: RDC

THE CULLIPHER GROUP, P.A.

ENGINEERING & SURVEYING SERVICES

151A HIGHWAY 24

MOREHEAD CITY, N.C. 28557

DATE: 3/2/23

SCALE: 1"=10'

RONALD D. CULLIPHER, P.E.

SHEET # 1 OF 8

PROJECT #: PM2735-009

DESIGN FILE #: HI-LITES CONSTRUCTION.DGN

SEE SURVEY FOR MGM PROPERTIES, LLC

BY TIDEWATER ASSOCIATES, INC. DATED 08/10/21

Coastal Architecture

- Architectural Design
- Planning
- Interiors

PROJECT ARCHITECT

Lee D. Dixon, Jr., AIA

252-567-2127

lee@coastalarchitecture.net

4206 Bridges St. Ext., Suite C

Morehead City, NC 28557

www.CoastalArchitecture.net

REMOVE SLOPED CONCRETE BACK
OF EX. DOT CURB AND REPLACE
WITH NEW 5' SIDEWALK AS
SHOWN ON SITE PLAN

DEMO EXISTING DRIVEWAY CUTS
AND REPLACE WITH NEW DRIVEWAY
OR DOT STANDARD 30" CURB &
GUTTER

REMOVE SLOPED CONCRETE BACK
OF EX. DOT CURB AND REPLACE
WITH NEW 5' SIDEWALK AS
SHOWN ON SITE PLAN

DEMO EXISTING DRIVEWAY CUTS
AND REPLACE WITH NEW DRIVEWAY
OR DOT STANDARD 30" CURB &
GUTTER

REMOVE SLOPED CONCRETE BACK
OF EX. DOT CURB AND REPLACE
WITH NEW 5' SIDEWALK AS
SHOWN ON SITE PLAN



N07°20'05"E 110.97 REFERENCE BEARING

AE(9)
SHADED X

DEMO EXISTING GRAVEL DRIVE

DEMO EXISTING PAVEMENT

DEMO EXISTING BUILDING

REMOVE EX. OVERHEAD POWER

DEMO EXISTING SLAB

DEMO EXISTING GRAVEL DRIVE
THAT IS ON PROPERTY

AE(9)
SHADED X

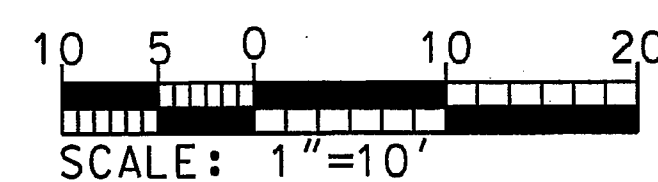
N82°30'46"W 81.14

N82°48'30"W 38.48

0' 5/8" GUY

N82°53'23"W 89.82

S79°15'54"E
1.29 (TIE LINE)



SHEET # 4 OF 8
PROJECT #: PM2735-009
DESIGN FILE #: HI-LITES CONSTRUCTION.DGN

REVISIONS:

No.	BY	DATE	DESCRIPTION

DEMOLITION PLAN	
ATLANTIC BEACH BTS	
115 WEST FORT MACON ROAD	
ATLANTIC BEACH, CARTERET COUNTY, NORTH CAROLINA	
CLIENT: AB SANDALS VENTURES LLC	DESIGNED: RDC
ADDRESS: 8235 DOUGLAS AVE SUITE 350 DALLAS TX 75225	DRAWN: RDC
PHONE: 843-868-0067	CHECKED: RDC
APPROVED: RDC	
DATE: 3/2/23	
SCALE: 1"=10'	

THE CULLIPHER GROUP P.A. ENGINEERING & SURVEYING SERVICES 151A HIGHWAY 24 MOREHEAD CITY, N.C. 28557 (252) 773-0090 LICENSE NO. C-4482 RONALD D. CULLIPHER, P.E.

SEE SURVEY FOR MGM PROPERTIES, LLC
BY TIDEWATER ASSOCIATES, INC. DATED 08/10/21

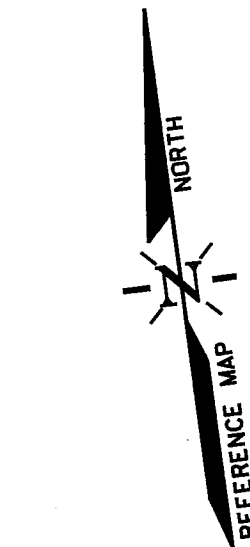
(6" THICK) 2-3 INCH WASHED STONE

EX. EDGE OF
PAVEMENT

12' MINIMUM

50' MINIMUM

STONE CONSTRUCTION ENTRANCE
SCALE: NOT TO SCALE



SILT FENCE AROUND PROJECT EXCEPT
AT PROJECT ENTRANCE

FINISHED FLOOR ELEV. 9.20

INSTALLATION NOTES:

1. THE BASE OF BOTH END POSTS SHOULD BE AT LEAST ONE FOOT HIGHER THAN THE MIDDLE OF THE FENCE. CHECK WITH A LEVEL IF NECESSARY.
2. INSTALL POSTS 4 FEET APART IN CRITICAL AREAS AND 6 FEET APART ON STANDARD APPLICATIONS.
3. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC, ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE.
4. INSTALL POSTS WITH THE NIPPLES FACING AWAY FROM THE SILT FABRIC.
5. ATTACH THE FABRIC TO EACH POST WITH THREE TIES, ALL SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART. ALSO, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
6. WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. NO MORE THAN 24 INCHES OF A 36 INCH FABRIC IS ALLOWED ABOVE GROUND LEVEL.
8. THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATIONS BEFORE COMPACTION.
9. COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQUARE INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE TWICE FOR A TOTAL OF 4 TRIPS.

LEGEND

EIR EXISTING IRON ROD
EIP EXISTING IRON PIPE
EPK EXISTING PK NAIL
ECM EXISTING CONC. MON.
ERRS EXISTING R/R SPIKE
SIR SET IRON ROD
CP CALCULATED POINT
NHW NORMAL HIGH WATER
N/F NOW OR FORMERLY
MB MAP BOOK
DB DEED BOOK
PG PAGE
PP POWER POLE
LP LIGHT POLE
OE OVERHEAD ELECTRIC
ELEC ELECTRICAL PEDESTAL
TRANS ELEC. TRANSFORMER
TEL TELEPHONE PEDESTAL
CATV CABLE TELEVISION
WM WATER METER
CD CLEAN OUT
CPP CORRUGATED PLASTIC PIPE
WV WATER VALVE
FH FIRE HYDRANT
SSMH SANITARY SEWER MANHOLE
SMAG SET MAGNETIC NAIL
OPEN SPACE

PERVIOUS CONCRETE

CONCRETE

7.0' PROPOSED CONTOUR

7.0' EXISTING CONTOUR

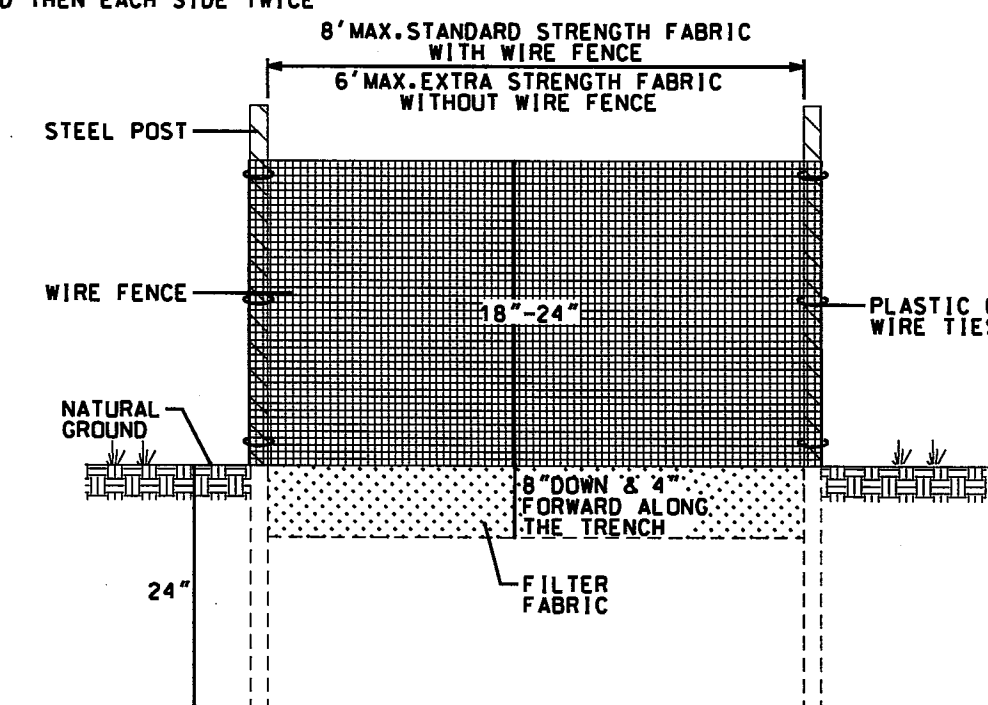
SHEET # 5 OF 8

PROJECT #: PM2735-009

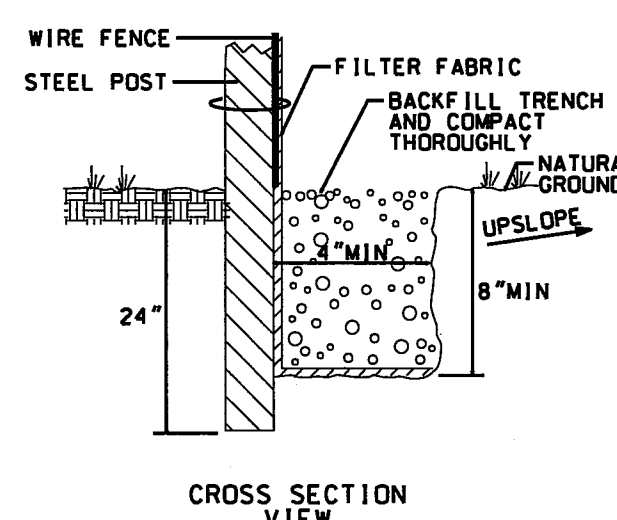
DESIGN FILE #: HI-LITES CONSTRUCTION.DGN

MGM PROPERTIES LLC
108 WEST BOGUE BOULEVARD
637516933547000

FMB AT THE GROVE LLC
104 WEST BOGUE BOULEVARD
637516934597000

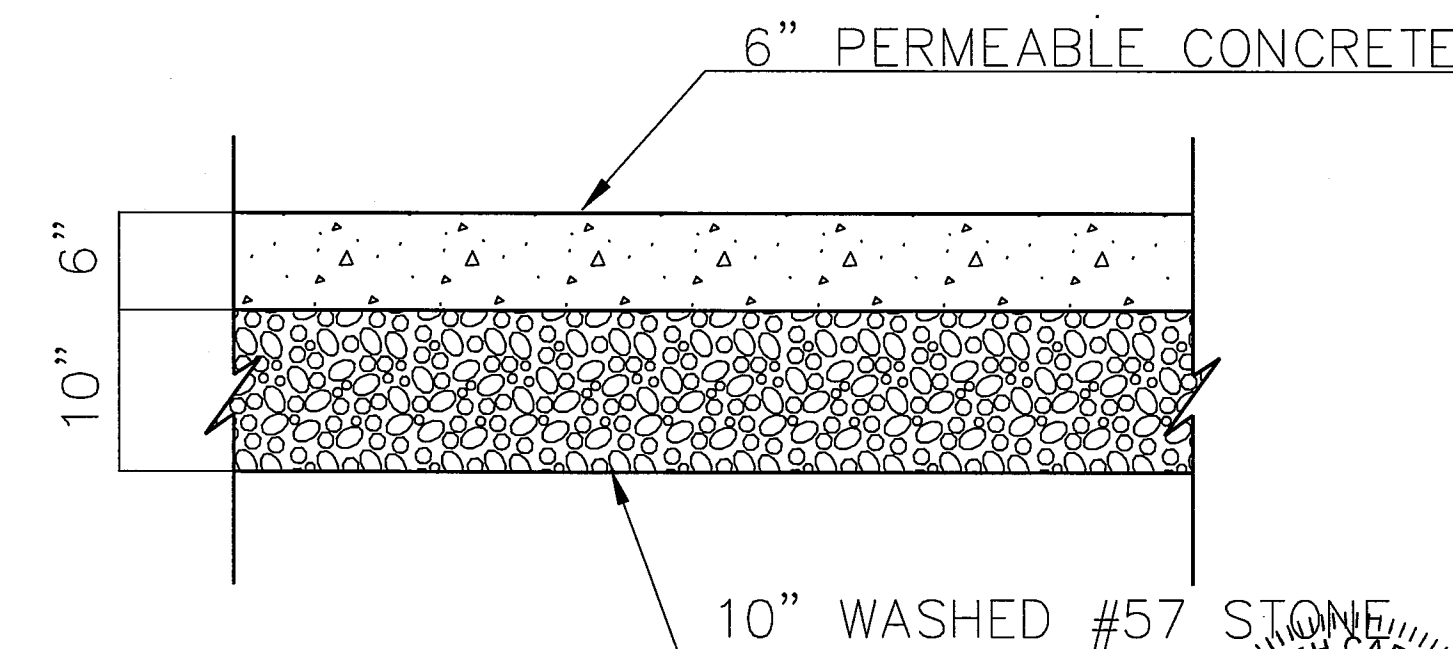


SILT FENCE DETAIL



CROSS SECTION VIEW

10 5 0 10 20
SCALE: 1"=10'



PERMEABLE CONCRETE DETAIL
NTS

Coastal
Architecture

• Architectural
Design
• Planning
• Interiors

Member of the American
Institute of Architects

Lee D. Dixon, Jr., AIA
lee@coastalarchitecture.net

4206 Bridges St. Ext.,
Suite C
Morehead City, NC
28557

www.CoastalArchitecture.net

REVISIONS:

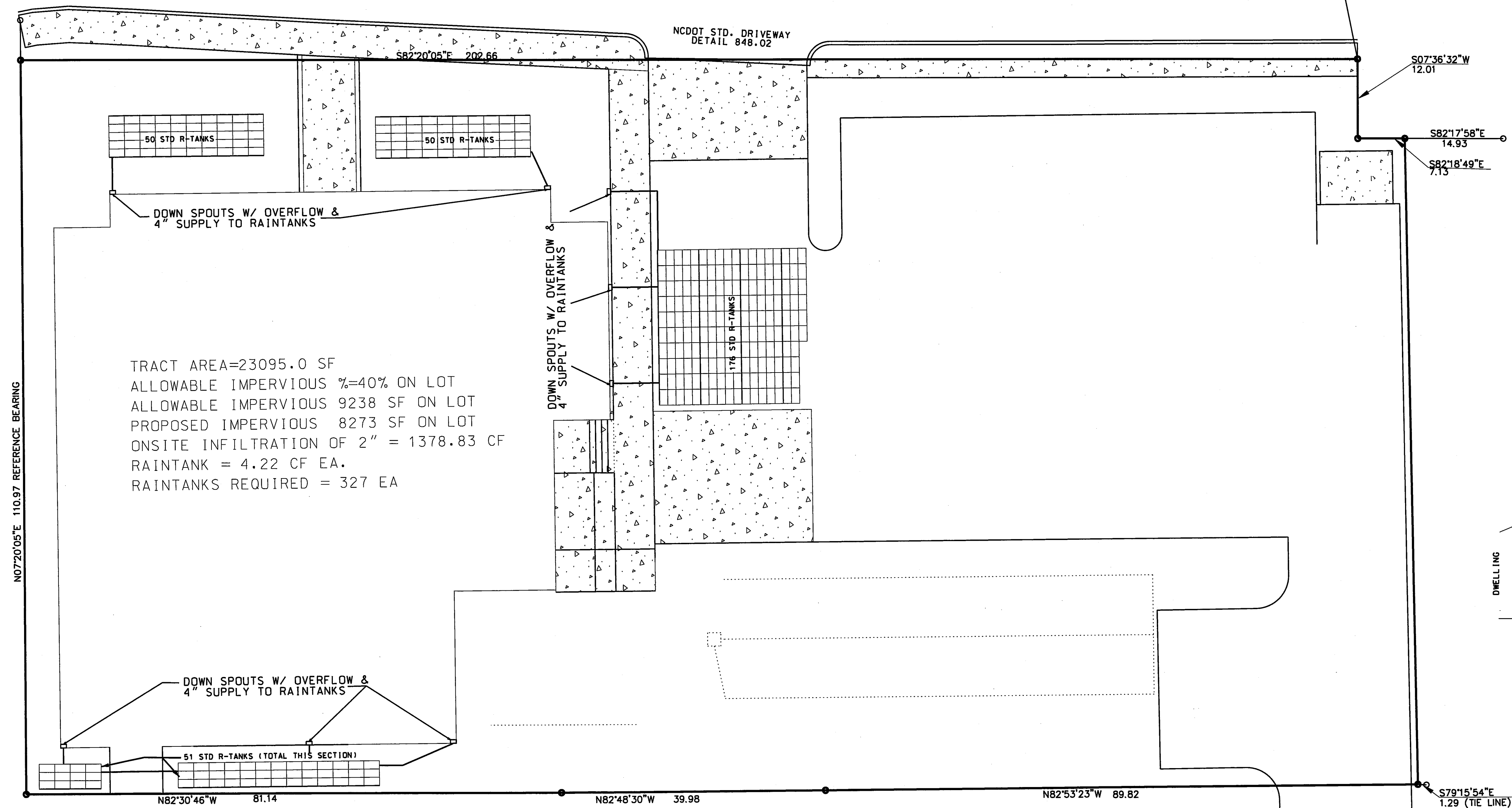
No.	BY	DATE	DESCRIPTION

GRADING PLAN & LAND DISTURBANCE PLAN ATLANTIC BEACH BTS 115 WEST FORT MACON ROAD ATLANTIC BEACH, CARTERET COUNTY, NORTH CAROLINA	
CLIENT: AB SANDALS VENTURES LLC	DESIGNED: RDC
ADDRESS: 8235 DOUGLAS AVE SUITE 350 DALLAS TX 75225	DRAWN: RDC
PHONE: 843-868-0067	CHECKED: RDC
APPROVED: RDC	
DATE: 3/2/23	
SCALE: 1"=10'	

THE CULLIPHER GROUP P.A.
ENGINEERING & SURVEYING SERVICES
151A HIGHWAY 24
MORRHEAD CITY, N.C. 28557
(252) 773-0090
RONALD D. CULLIPHER, P.E.

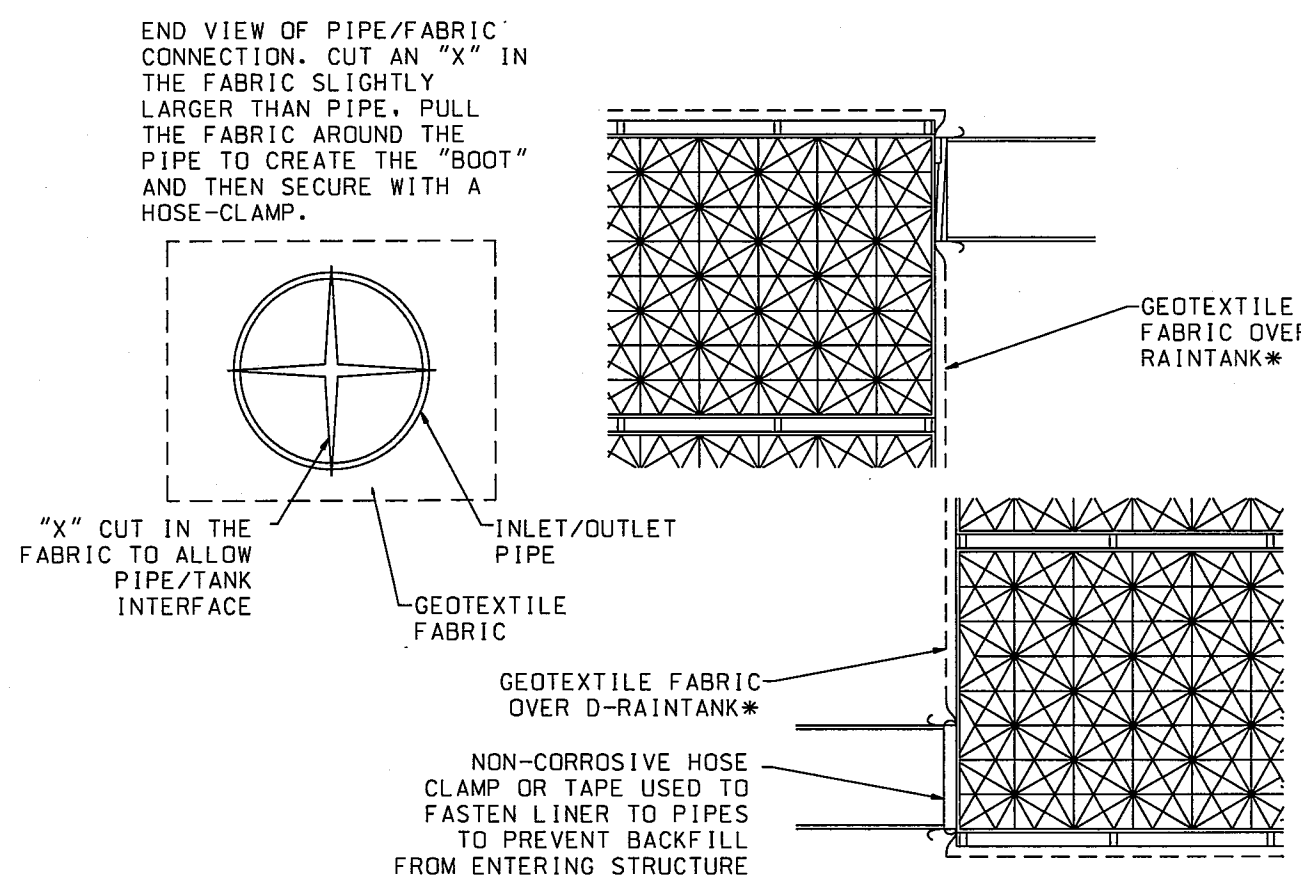
NOTES:

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- AREA BY COORDINATES
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- PROPERTY IS LOCATED IN FLOOD ZONE SHOWN X, AE(1) & AE(16) PER FIRM MAP NUMBER 3720637500J EFFECTIVE DATE JULY 16, 2003.
- ZONING - CIRCLE 8
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
- FLOOD ZONE LINES SCALED FROM CARTERET COUNTY GIS MAP.

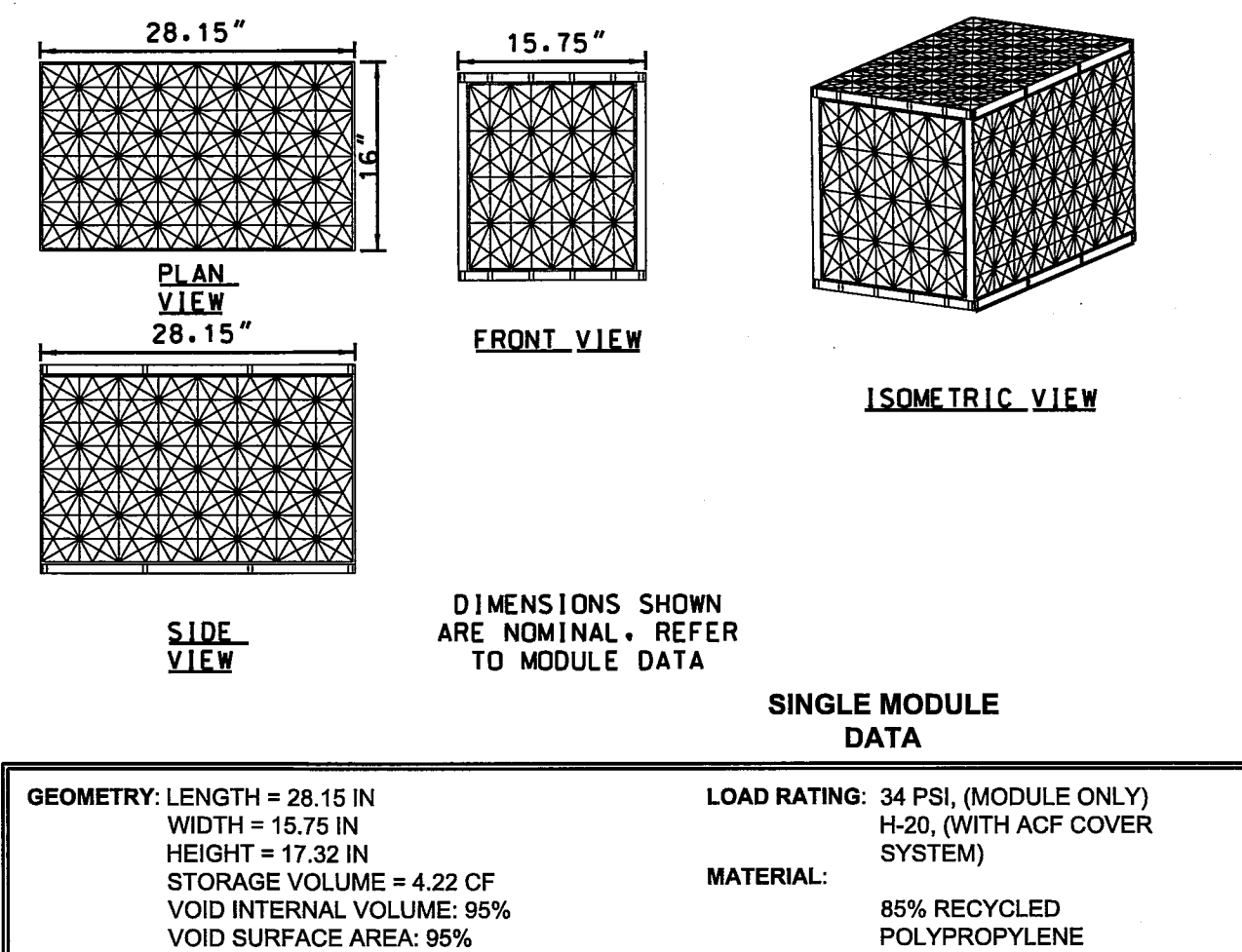


LEGEND

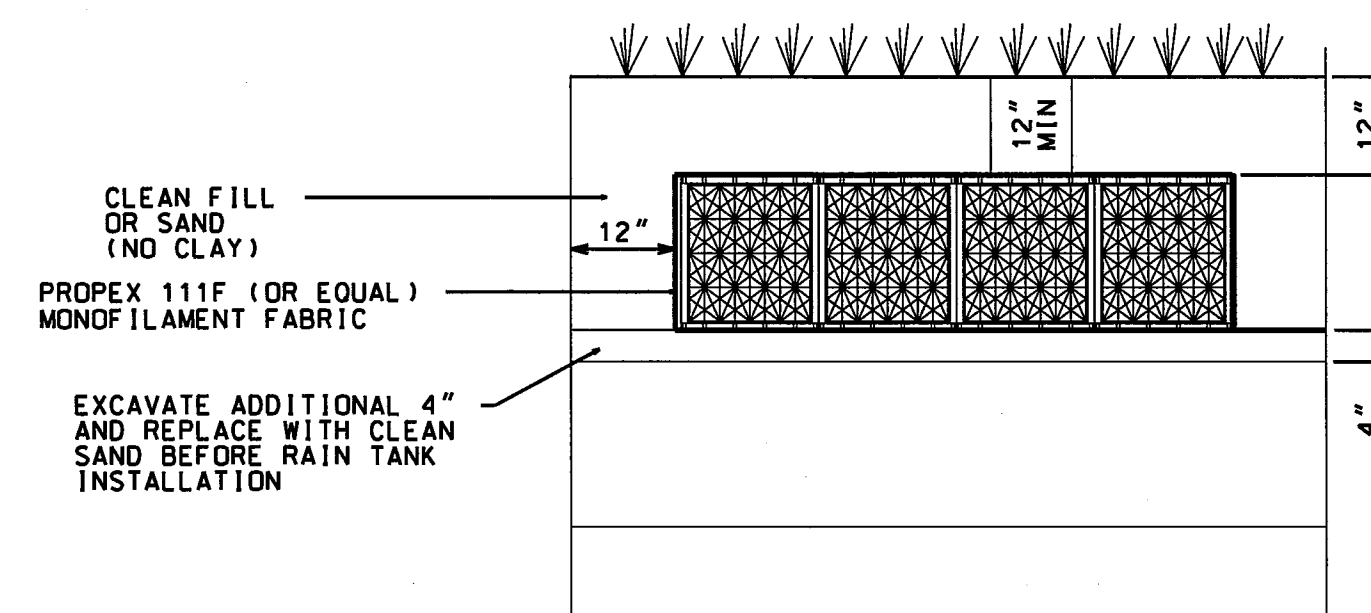
EIR	EXISTING IRON ROD
EIP	EXISTING IRON PIPE
EPK	EXISTING PK NAIL
ECM	EXISTING CONC. MON.
ERRS	EXISTING R/R SPIKE
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N/F	NOW OR FORMERLY
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DB	DEED BOOK
PP	PAGE
PG	POWER POLE
LP	LIGHT POLE
OE	OVERHEAD ELECTRIC
ELEC	ELECTRICAL PEDESTAL
TRANS	ELEC. TRANSFORMER
TEL	TELEPHONE PEDESTAL
CATV	CABLE TELEVISION
WM	WATER METER
CO	CLEAN OUT
CPP	CORRUGATED PLASTIC PIPE
WV	WATER VALVE
FH	FIRE HYDRANT
SSMH	SANITARY SEWER MANHOLE
SMAG	SET MAGNETIC NAIL
OPEN SPACE	
IMPERVIOUS SURFACE	
PERVIOUS SURFACE	



SCALE: NTS



10 5 0 10 20
SCALE: 1"=10'



SCALE: NTS

SEEDING SCHEDULE

SEED BED PREPARATION

LINE----- 2 TONS/AC

10-10-10----- 1,000 LBS/AC

SURFACE ROUGHENING: IF RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE REQUIRED EXCEPT TO BREAK UP LARGE CLODS. IF RAINFALL CAUSES THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISCING, RAKING OR HARROWING. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING.

TEMPORARY SEEDING MIXTURE

(DECEMBER 1 - APRIL 15)

RYE (GRAIN)----- 120 LBS/AC

KOBE LESPEDEZA (SCARIFIED)----- 50 LBS/AC

(OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.)

(APRIL 15 - AUGUST 15)

GERMAN MILLET----- 40 LBS/AC

(AUGUST 15 - DECEMBER 30)

RYE (GRAIN)----- 25 LBS/AC

(IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LBS/AC KOBE.)

PERMANENT SEEDING MIXTURE

TALL FESCUE----- 60 LBS/AC

PENSACOLA BAHIA GRASS----- 50 LBS/AC

SERICEA LESPEDEZA----- 30 LBS/AC

KOBE LESPEDEZA----- 10 LBS/AC

1. FROM SEPTEMBER 1 - MARCH 1, USE UNSCARIFIED SERICEA SEED

2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 LBS/AC

3. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 LBS/AC.

4. BETWEEN APRIL 15 AND AUGUST 15, ADD 10 LB/AC GERMAN MILLET OR 15 LB/AC SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG 15, ADD 25 LB/AC RYE (GRAIN).

PERMANENT SEEDING MIXTURE (SWALES & DITCHES)

COMMON BERMUDAGRASS----- 80 LBS/AC

MULCHING

STRAW (WHEAT, OATS, BARLEY, RYE)----- 1-2 TONS/AC (AFTER SEEDING)

(STRAW QUALITY SHALL BE DRY, UNCHOPPED & UNWEATHERED)

ASPHALT TACK----- 200 GAL./TON OF MULCH

1. APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT. NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

2. A CHANNEL LINING MATERIAL (SEE DETAIL BELOW) SHALL COVER THE BOTTOM OF SWALES & DITCHES. THE LINING SHALL EXTEND ABOVE THE HIGHEST DEPTH OF FLOW WITHIN GIVEN CHANNEL. ON CHANNEL SIDE SLOPES ABOVE THIS HEIGHT APPLY STRAW AS PREVIOUSLY INSTRUCTED.

TIME OF APPLICATION

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE

EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF

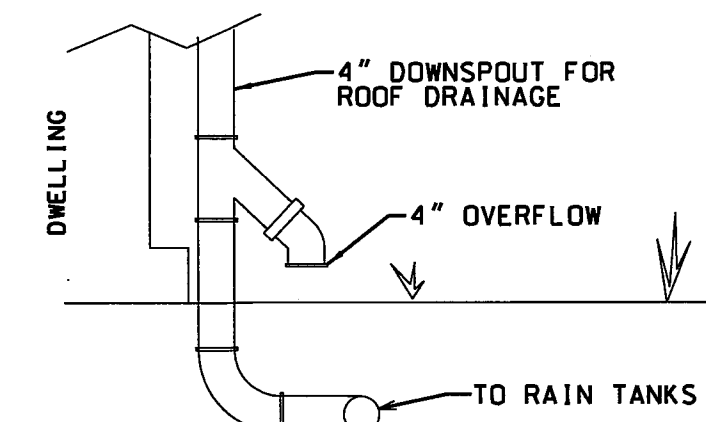
GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN

EROSION.

MAINTENANCE

IF GROWTH IS LESS THAN FULLY ADEQUATE, REPERFERTILIZE IN THE SECOND YEAR WITH 500 LB/AC 10-10-10 FERTILIZER. MOW AS NEEDED WHEN

SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.



DOWN SPOUT

SCALE: NTS

Coastal
Architecture

- Architectural Design
- Planning
- Interiors

Member of the American
Institute of ArchitectsLee D. Dixon, Jr., AIA
252-247-2127
lee@coastalarchitecture.net4206 Bridges St. Ext.,
Suite C
Morehead City, NC
28557

www.CoastalArchitecture.net

REVISIONS:

No.	BY	DATE	DESCRIPTION

STORMWATER/IMPERVIOUS AREA PLAN & DETAILS
ATLANTIC BEACH BTS
115 WEST FORT MACON ROAD

ATLANTIC BEACH, CARTERET COUNTY, NORTH CAROLINA

CLIENT: AB SANDALS VENTURES LLC

ADDRESS: 8235 DOUGLAS AVE

SUITE 350

DALLAS TX 75225

PHONE: 843-868-0067

THE CULLIPHER GROUP, P.A.

ENGINEERING & SURVEYING SERVICES

151A HIGHWAY 24

MOREHEAD CITY, N.C. 28557

Ronald D. Cullipher, P.E.

LICENSE NO. C-4492

DESIGNED:

RDC

DRAWN:

RDC

CHECKED:

RDC

APPROVED:

RDC

DATE:

3/2/23

SCALE:

1"=10'

SHEET # 6 OF 8

PROJECT #: PM2735-009

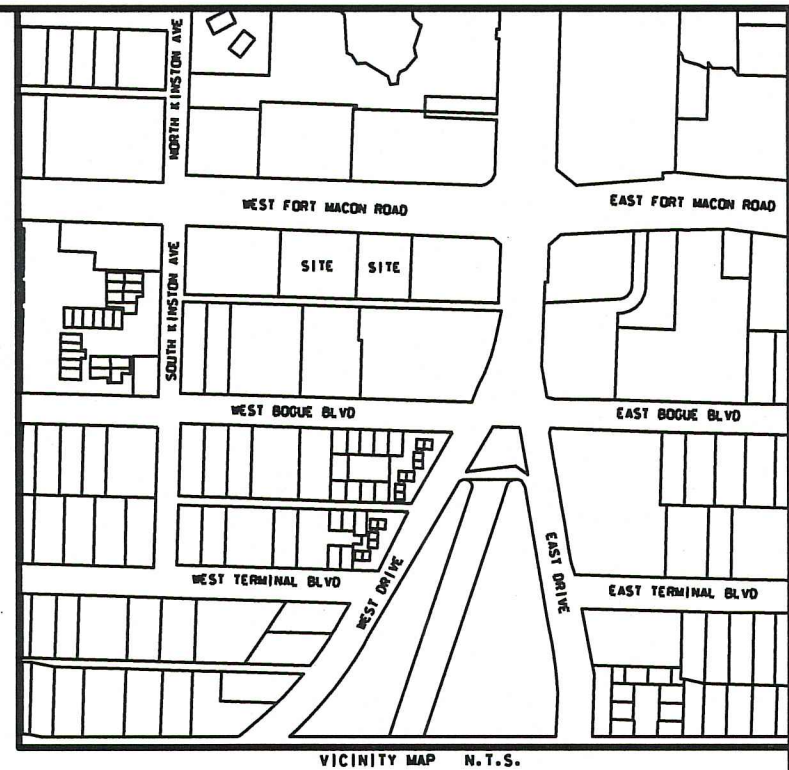
DESIGN FILE #: HI-LITES CONSTRUCTION.DGN

SEE SURVEY FOR MGM PROPERTIES, LLC

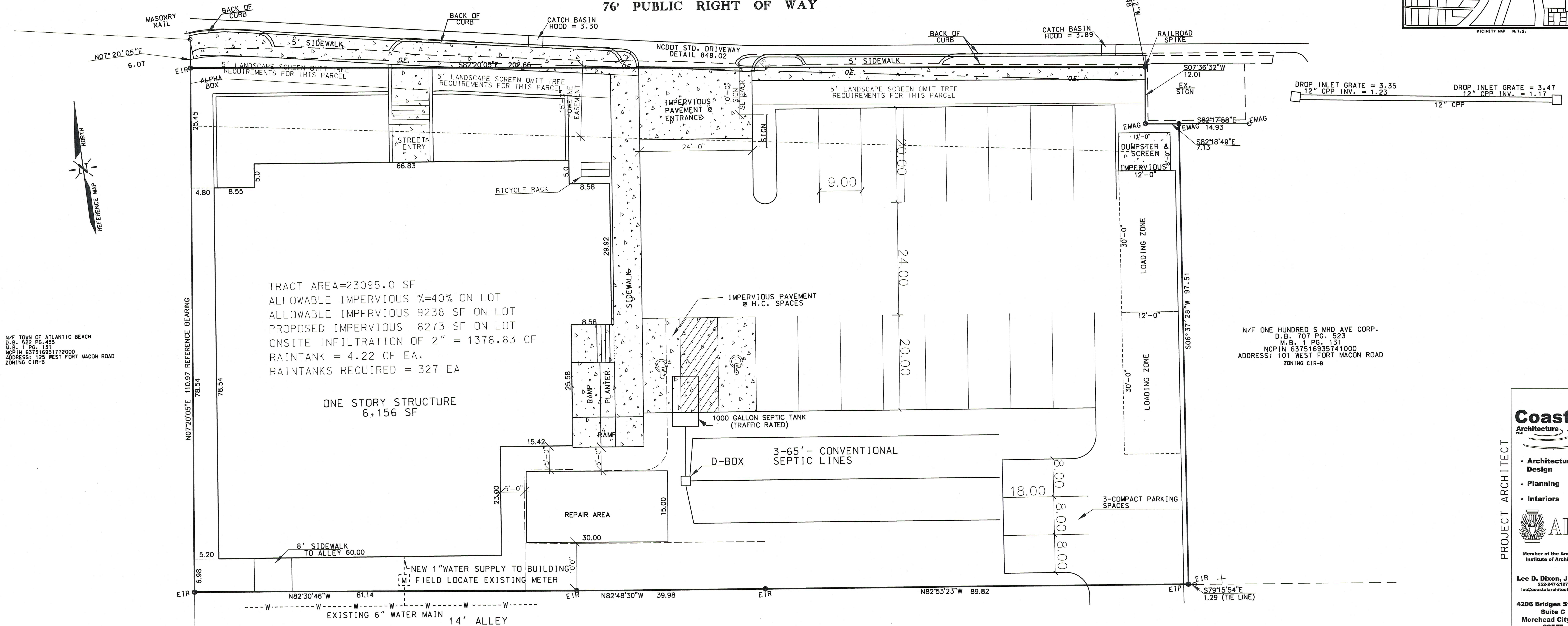
BY TIDEWATER ASSOCIATES, INC. DATED 08/10/21

NOTES:

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- ZONING - CIR-B
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
- FLOOD ZONE LINES SCALED FROM CARTERET COUNTY GIS MAP.



WEST FORT MACON ROAD 76' PUBLIC RIGHT OF WAY



N/F TOWN OF ATLANTIC BEACH
D.B. 522 PG. 495
M.B. 1 PG. 131
NCPIN 63751693172000
ADDRESS: 125 WEST FORT MACON ROAD
ZONING CIR-B

N/F ONE HUNDRED S. MHD AVE CORP.
D.B. 707 PG. 523
M.B. 1 PG. 131
NCPIN 637516935741000
ADDRESS: 101 WEST FORT MACON ROAD
ZONING CIR-B

Coastal
Architecture

- Architectural Design
- Planning
- Interiors



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252-247-2127
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4206 Bridges St. Ext.,
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SHEET # 7 OF 8
PROJECT #: PM2735-009
DESIGN FILE #: HI-LITES CONSTRUCTION.DGN

SEE SURVEY FOR MGM PROPERTIES, LLC
BY TIDEWATER ASSOCIATES, INC. DATED 08/10/21

10 5 0 10 20
SCALE: 1"=10'

SITE INFORMATION

ZONING CIR B
PARKING 6,156 SF + 300(RETAIL) = 21 SPACES REQ'D
- PLUS (2) 12'X30' LOADING AREA.
- (21) PROVIDED ONSITE INCLUDING (5) COMPACT SPACES, PLUS (2) 12'X30' LOADING AREA PROVIDED.

SETBACKS

FRONT 15' MAXIMUM
SIDE 0
REAR 0
MAX HEIGHT 55'
MAX IMPERVIOUS SURFACE COVERAGE 40% = 9,238 SF MAXIMUM ALLOWABLE, 8,405 SF PROVIDED 36.4%
MAXIMUM F.A.R. LOT 23,095 SF X 0.4 = 9,238 MAX F.A.R. (6156 SF - 1ST FL)
50% FRONT WALL TO BE GLASS OR DOORS
25% REAR WALL TO BE GLASS OR DOORS
SIDEWALK 8'-0" (PROPOSE 5'-0" TO MATCH UP BETTER WITH ADJACENT PROPERTY)
RECOMBINE LOTS
LANDSCAPING EXEMPT IN CIR DISTRICT (18.3,5,7glo)
(5) STREET TREES REQ'D (PROPOSE 5 UNDERSTORY TREES DUE TO POWER LINE AND TO MATCH ADJACENT PROPERTY)
15% OPEN SPACE REQ'D 3,464 SF, 4,629 SF PROVIDED

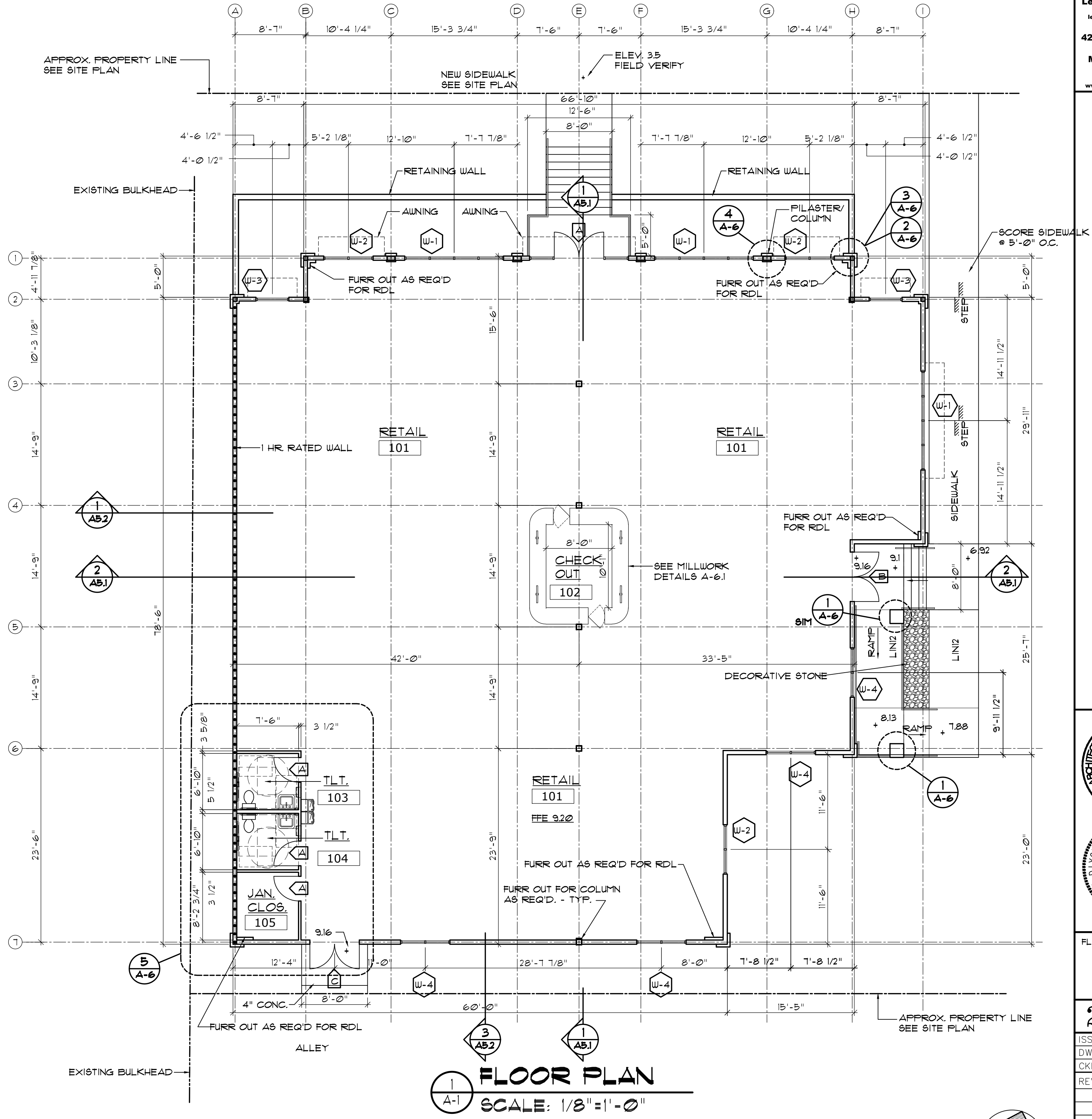
GENERAL NOTES

CONTRACTOR TO DEMOLISH EXISTING BUILDING
(ASBESTOS ABATEMENT BY OWNER)

CONTRACTOR TO VISIT SITE PRIOR TO BID TABULATION

STAKE OUT BUILDING FOR APPROVAL

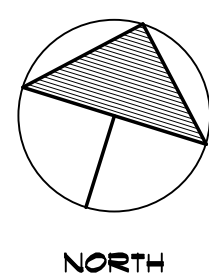
CONTRACTOR TO CONFORM TO ALL BUILDING CODES AND
LOCAL ORDINANCES



FLOOR PLAN
SCALE: 1/8" = 1'-0"

DOOR
FOYER 102

LEGEND
DOOR 102A
DOOR INDICATOR
ROOM *



Coastal Architecture

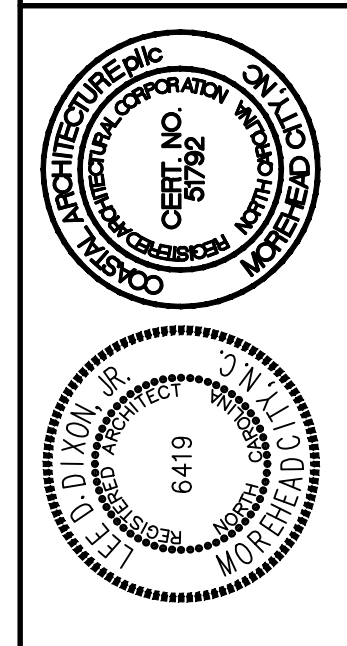
- Architectural Design
- Planning
- Interiors

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FLOOR PLAN

22012

ISSUED: 4-21-23
DWG BY: MES
CKD BY: LDD

REVISIONS

NO.	DESCRIPTION	DATE

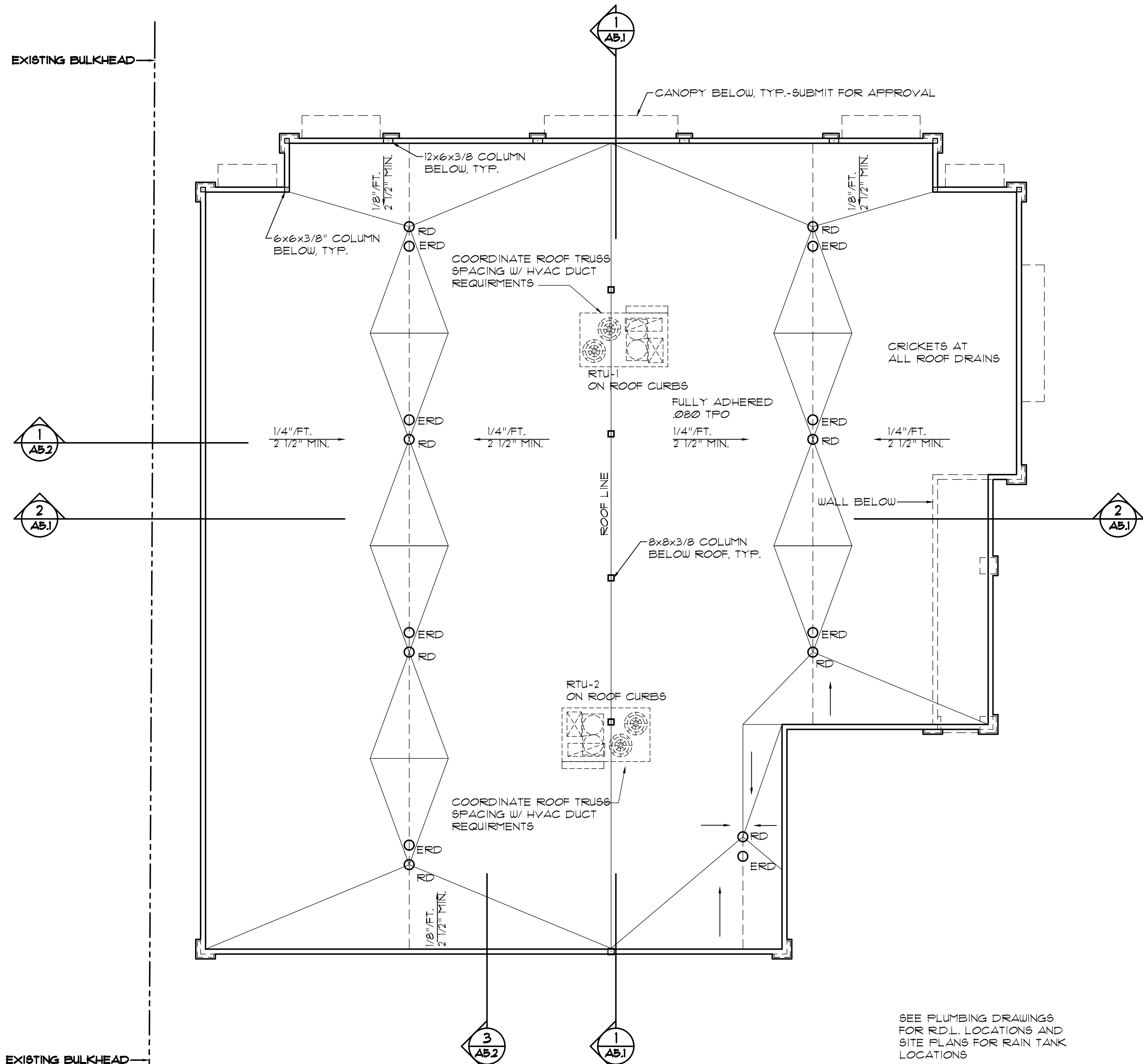
SHEET NO.
A-1
OF

TPO ROOFING SYSTEM AND DESIGN CRITERIA

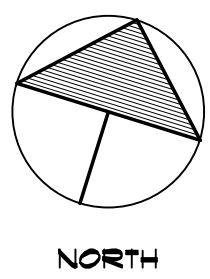
1. PROVIDE COMPLETE SHOP DRAWINGS SHOWING ALL ATTACHMENTS, FLASHING, DETAILS, ETC. ALL ROOF SYSTEMS TO MEET REQUIRED WIND LOADS. SUBMIT TO ARCHITECT FOR APPROVAL.
2. PROVIDE 30 YEAR WARRANTY ON COMPLETE ROOF SYSTEM.
3. MEMBRANE: FIRESTONE ULTRAPLY PLATINUM TPO, .60" THICK, FULLY ADHERE
4. WALKWAY PAD: TPO ECO PAD. PROVIDE WALKWAY PAD AT ALL HATCHES, MECHANICAL EQUIPMENT AND GENERATOR
5. PARAPET COPING AND EDGE METAL SYSTEMS: FIRESTONE ANCHORGUARD PLATINUM FASCIA OR COPING SYSTEM

GENERAL NOTES FOR ROOFING SYSTEMS & DESIGN CRITERIA

1. ROOF DRAINAGE IS SHOWN FOR GENERAL INFORMATION ONLY. SEE PLUMBING DRAWING FOR LOCATION AND SIZE. REFERENCE CIVIL DRAWINGS FOR ROOF DRAIN AND RDL TIE IN.
2. OVERFLOW DRAINS TO DRAIN TO DAYLIGHT THROUGH EXTERIOR WALLS. TERMINATE (ERD) OVERFLOW DRAINS WITH DECORATIVE "SCUPPER".
3. ALL ROOF TOP EQUIPMENT, PLUMBING, VENTS, CONDENSING UNITS, EXHAUST FANS, ETC., ARE TO BE CONCEALED FROM VIEW BEHIND PARAPET WALLS
4. KEEP ROOF MOUNTED EQUIPMENT AWAY FROM ROOF EDGE TO REDUCE SIGHTLINES
5. PROVIDE POWER OUTLETS AROUND PERIMETER AND NEAR HVAC EQUIPMENT FOR SERVICING AND MAINTENANCE
6. INSIDE FACES OF PARAPETS TO BE CLAD IN TPO ROOFING MEMBRANE FROM FRONT EDGE OF TOP, OVER TOP AND DOWN BACKSIDE OF PARAPET
7. PROVIDE DOUBLE LAYER ROOF MEMBRANE UNDER WALKWAY PAD
8. SLOPE TOP OF PARAPETS TOWARDS ROOF AT 1/8" : 12"- TYPICAL.
9. PROVIDE CURBS AND VIBRATION ISOLATION BLOCKS AT ALL ROOF TOP EQUIPMENT.
10. ENSURE POSITIVE DRAINAGE TO ALL ROOF DRAINS AND OVERFLOW DRAINS. MAINTAIN A SLOP OF 1/4" MINIMUM.
11. ALL MECHANICAL DUCT WORK IS TO BE INSULATED IN WHITE WRAP TO MATCH ROOF COLOR
12. NO DUCTWORK OR EQUIPMENT IS TO BE VISIBLE FROM GROUND LEVEL
13. ENSURE STUBS AND COLLECTORS ARE INSTALLED DURING FOUNDATION INSTALLATION TO SUPPORT ROOF DRAINS.
14. SEE PLUMBING DRAWINGS FRO ROOF DRAIN AND OVERFLOW DRAIN DETAILS
15. REFERENCE MECHANICAL, ELECTRICAL, PLUMBING PLANS FOR PENETRATIONS AND EQUIPMENT. PROVIDE WALK SURFACE TO ALL EQUIPMENT FOR MAINTENANCE.
16. PROVIDE PRE-MANUFACTURED INTERIOR & EXTERIOR CORNER CAP/SLEEVE AT ALL CORNERS AND ROUND BOOTS AT ALL PIPE PENETRATIONS WITH TURN-DOWNS AS REQUIRED
17. MECHANICAL EXHAUST ROOF PENETRATIONS TO RECEIVE SHOP FORMED ALUMINUM CHASE CAP, TYPICAL. SE P.M & E DRAWINGS.
18. CONTRACTOR TO PROVIDE TEMPORARY ROOF SYSTEM DURING CONSTRUCTION TO PROTECT CONSTRUCTION ACTIVITIES FROM MOISTURE DAMAGE PRIOR TO FULL BUILDING DRY-IN.



1 A-1.1 ROOF PLAN
SCALE: 1/8" = 1'-0"



- Architectural Design
- Planning
- Interiors



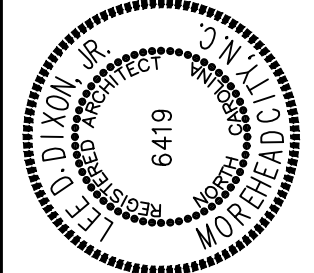
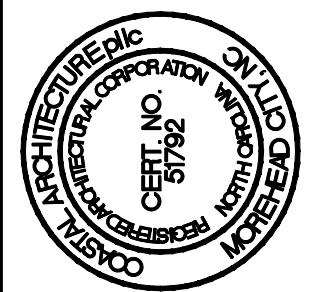
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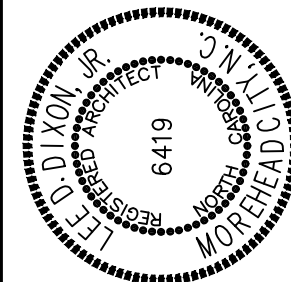
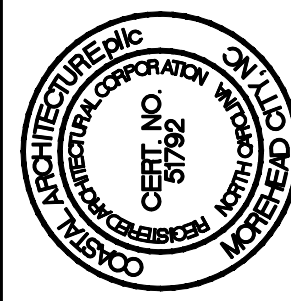
ROOF PLAN

22012

ISSUED: 4-21-23
DWG BY: BLS
CKD BY: LDD

REVISIONS	

SHEET NO.
A-1.1
OF



REFLECTED CEILING
PLAN

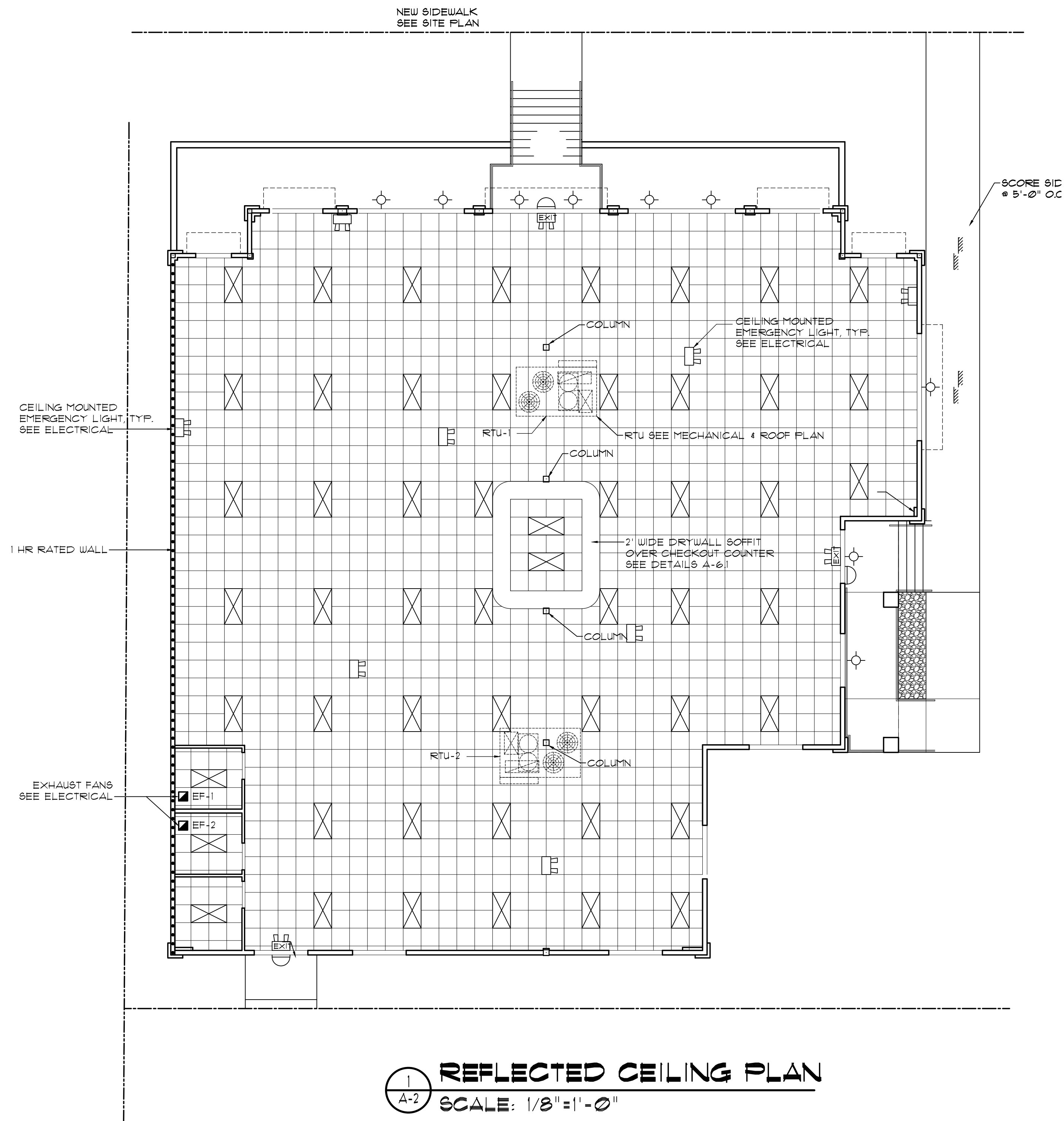
22012

ISSUED: 4-21-23
DWG BY: BLS
CKD BY: LDD

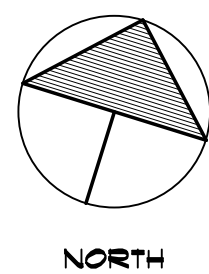
REVISIONS	

SHEET NO.

A-2
OF



1 REFLECTED CEILING PLAN
A-2 SCALE: 1/8" = 1'-0"

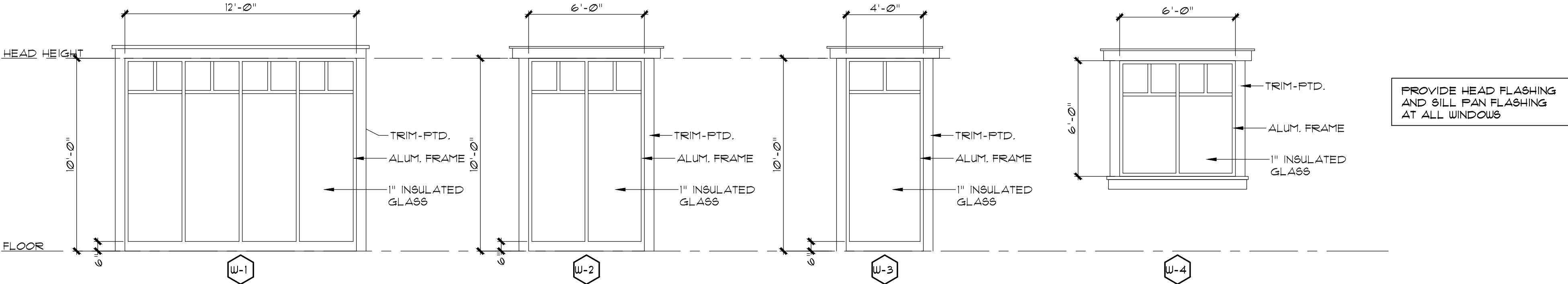


WINDOW SCHEDULE				
MARK	TYPE	SIZE (NOMINAL)	MODEL	REMARKS
W-1	SEE ELEVATION	12'-0"W x 10'-0"H OVERALL	KAUNEER 451-T	MEET REQ'D WIND LOAD
W-2	SEE ELEVATION	6'-0"W x 10'-0"H OVERALL		MEET REQ'D WIND LOAD
W-3	SEE ELEVATION	4'-0"W x 10'-0"H OVERALL		MEET REQ'D WIND LOAD
W-4	SEE ELEVATION	6'-0"W x 6'-0"H OVERALL		MEET REQ'D WIND LOAD
ALL GLAZING TO BE HIGH IMPACT GLAZING				

DOOR SCHEDULE				
DOOR NO.	SIZE	DOOR		REMARKS
		MAT.	TYPE	
101A	(2) 3'-0" x 7'-0"	ALUM	A	SEC 1/A-4
101B	(2) 3'-0" x 7'-0"	ALUM	B	
101C	(2) 3'-0" x 7'-0"	ALUM	C	
103	3'-0" x 7'-0"	WOOD	D	SEC 3/A-4
104	3'-0" x 7'-0"	WOOD	D	
105	3'-0" x 7'-0"	WOOD	D	

1 PANIC HARDWARE AND CLOSERS

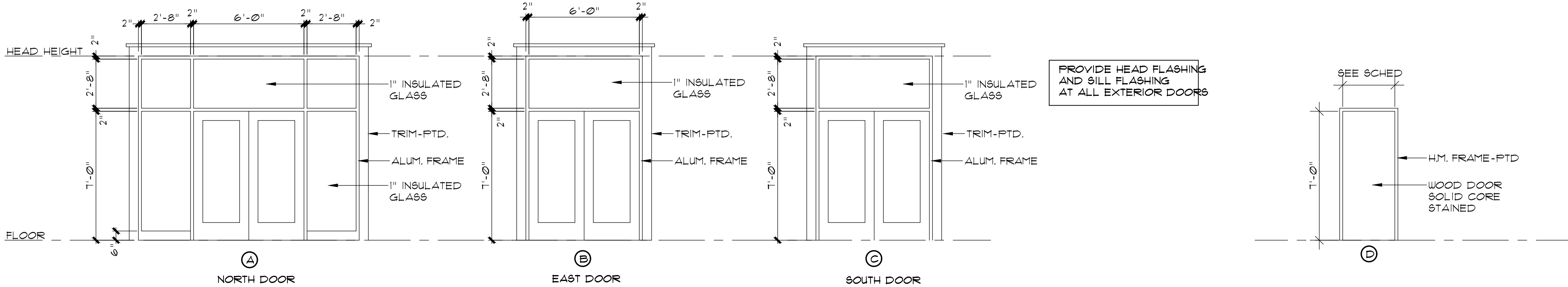
ROOM FINISH SCHEDULE							
ROOM NUMBERS	ROOM	FLOORS	BASE	WALLS	CEILINGS	HEIGHT (NOMINAL)	REMARKS
101	RETAIL	LVP	1 x 6 WD-PTD	GWB-PTD	SAT	11'-6"	
102	TOILET	LVP				9'-0"	
103	TOILET	LVP				9'-0"	
104	JANITOR	LVP				9'-0"	
ALL GWB TO BE MOLD/MILDEW RESISTANCE SUBMIT ALL FINISHES FOR FINAL APPROVAL AND COLOR SELECTION							



2 EXTERIOR WINDOW ELEVATIONS
SCALE: 1/4" = 1'-0"

ALL GLAZING TO BE HIGH IMPACT GLAZING

INTERIOR TRIM 4
EXTERIOR TRIM SIMILAR
INTERIOR WOOD PTD
EXTERIOR CEMENTITIOUS PTD
ALL ALUM STORFRONT TO BE DARK BRONZE ANODIZED



1 EXTERIOR DOOR ELEVATIONS
SCALE: 1/4" = 1'-0"

ALL GLAZING TO BE HIGH IMPACT GLAZING

INTERIOR TRIM 4
EXTERIOR TRIM SIMILAR
INTERIOR WOOD PTD
EXTERIOR CEMENTITIOUS PTD
ALL ALUM STORFRONT TO BE DARK BRONZE ANODIZED

3 INTERIOR DOOR ELEVATION
SCALE: 1/4" = 1'-0"

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Architecture

Architectural
Design

Planning

Interiors

AIA

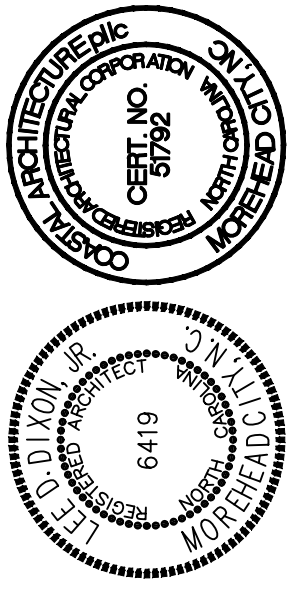
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ATLANTIC BEACH
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ATLANTIC BEACH, NORTH CAROLINA



DOOR & ROOM FINISH
SCHEDULES

22012

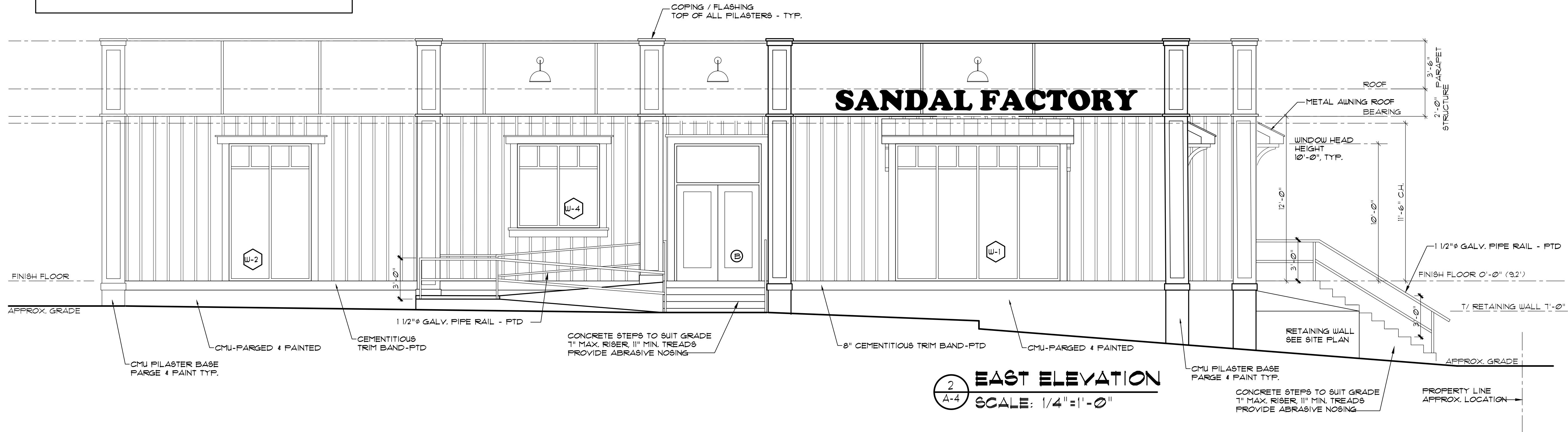
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DWG BY: BLS
CKD BY: LDD

REVISIONS	

SHEET NO.
A-3
OF

NOTE:

ROOF TOP HVAC UNITS, SCREENED BY PARAPET.



FENESTRATION INFORMATION

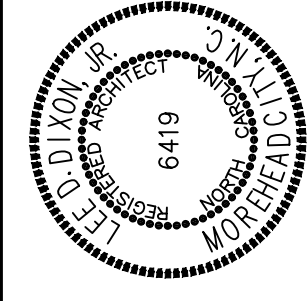
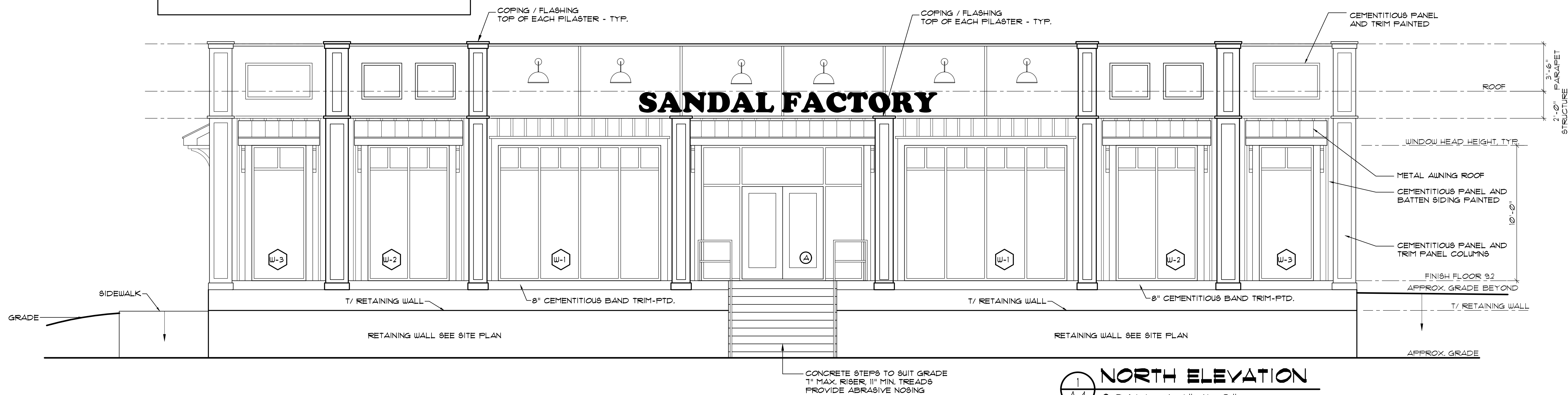
- FRONT FASCADE 50% VISUALLY PERMEABLE OPENINGS
- REAR FASCADE 15% VISUALLY PERMEABLE OPENINGS

SIGNAGE INFORMATION

- FREESTANDING SIGN - 1'X3.5' (15'-0" HIGH AFF.) 2 SIDED (50SF TOTAL) SEE SITE PLAN FOR LOCATION.
- WALL SIGNAGE TO BE PER TABLE 105.10K SIGN STANDARD.
- SIGN ON FRONT SIDE OF BUILDING, 18F PER LINIER FOOT = 849F ALLOWABLE (356F ACTUAL).
- SIGN ON SIDE OF BUILDING, 1/29F PER LINIER FOOT = 426F ALLOWABLE (356F ACTUAL).
- TOTAL SIGNAGE 2009F ALLOWABLE (120 9F ACTUAL).

NOTE:

ROOF TOP HVAC UNITS, SCREENED BY PARAPET.



EXTERIOR ELEVATIONS

22012

ISSUED: 4-21-23

DWG BY: MES

CKD BY: LDD

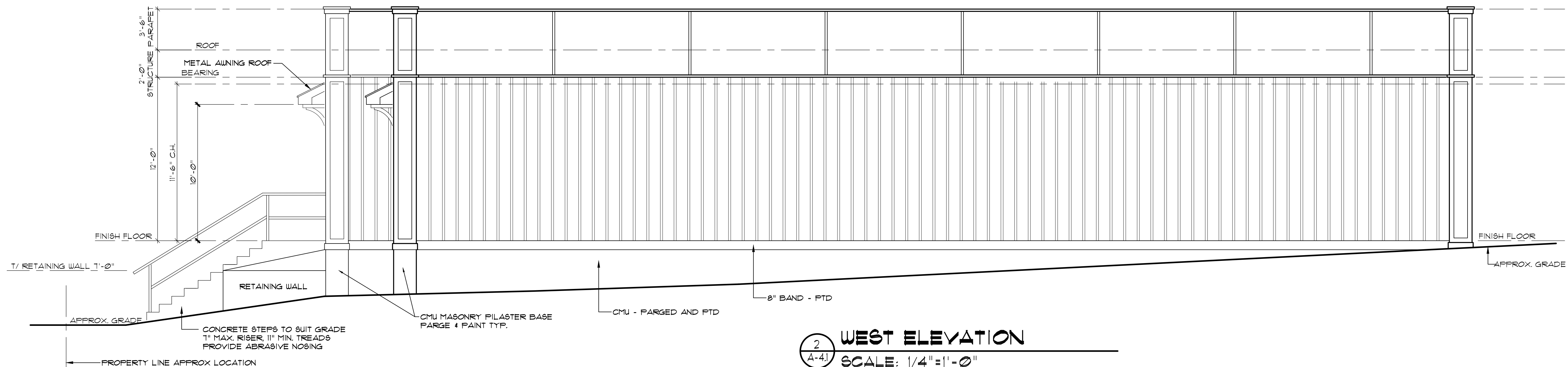
REVISIONS

SHEET NO.

A-4
OF

NOTE:

ROOF TOP HVAC UNITS, SCREENED BY PARAPET.



2
A-4.1

WEST ELEVATION

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

FENESTRATION INFORMATION

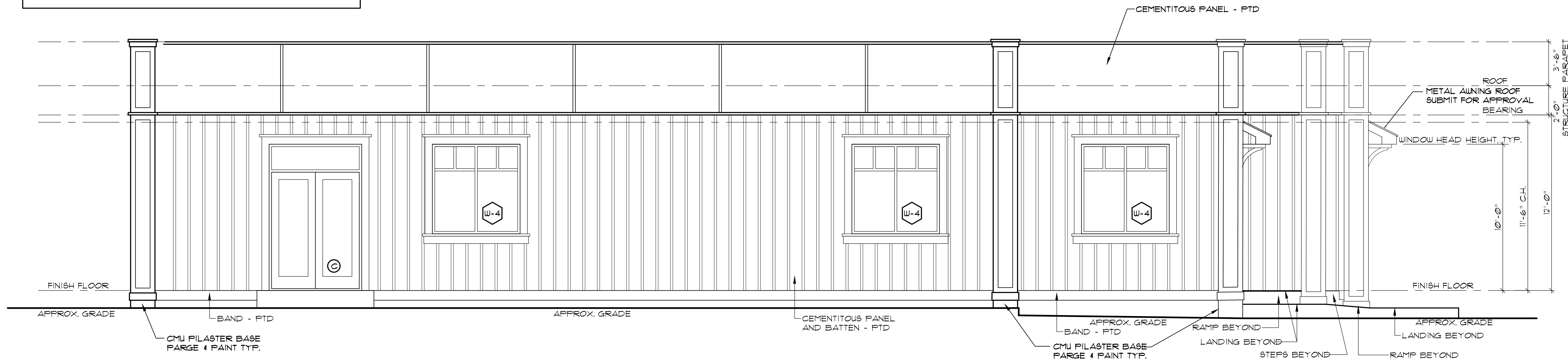
- FRONT FASCIADE 50% VISUALLY PERMEABLE OPENINGS
- REAR FASCIADE 15% VISUALLY PERMEABLE OPENINGS

SIGNAGE INFORMATION

- FREESTANDING SIGN - 7'X3.5' (15'-0" HIGH AFF.) 2 SIDED (50SF TOTAL) SEE SITE PLAN FOR LOCATION.
- WALL SIGNAGE TO BE PER TABLE 105.10K SIGN STANDARD.
- SIGN ON FRONT SIDE OF BUILDING, 18SF PER LINIER FOOT = 84SF ALLOWABLE (35SF ACTUAL).
- SIGN ON SIDE OF BUILDING, 1/2SF PER LINIER FOOT = 42SF ALLOWABLE (35SF ACTUAL).
- TOTAL SIGNAGE 200SF ALLOWABLE (120 SF ACTUAL).

NOTE:

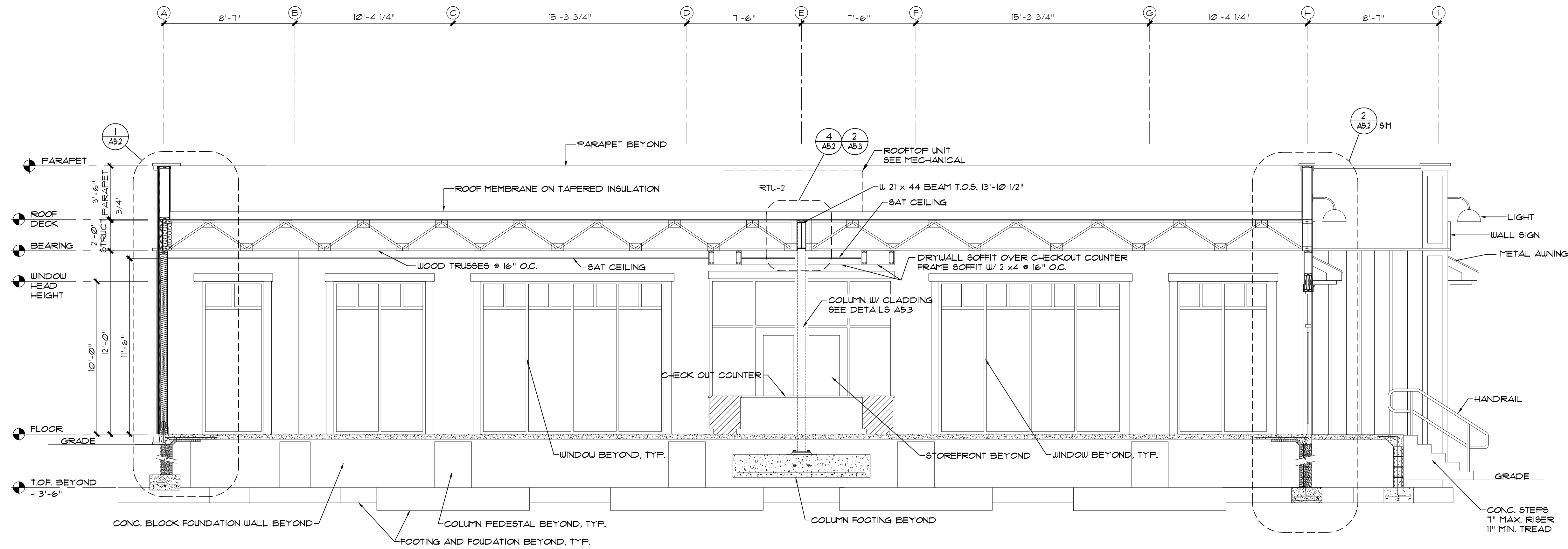
ROOF TOP HVAC UNITS, SCREENED BY PARAPET.



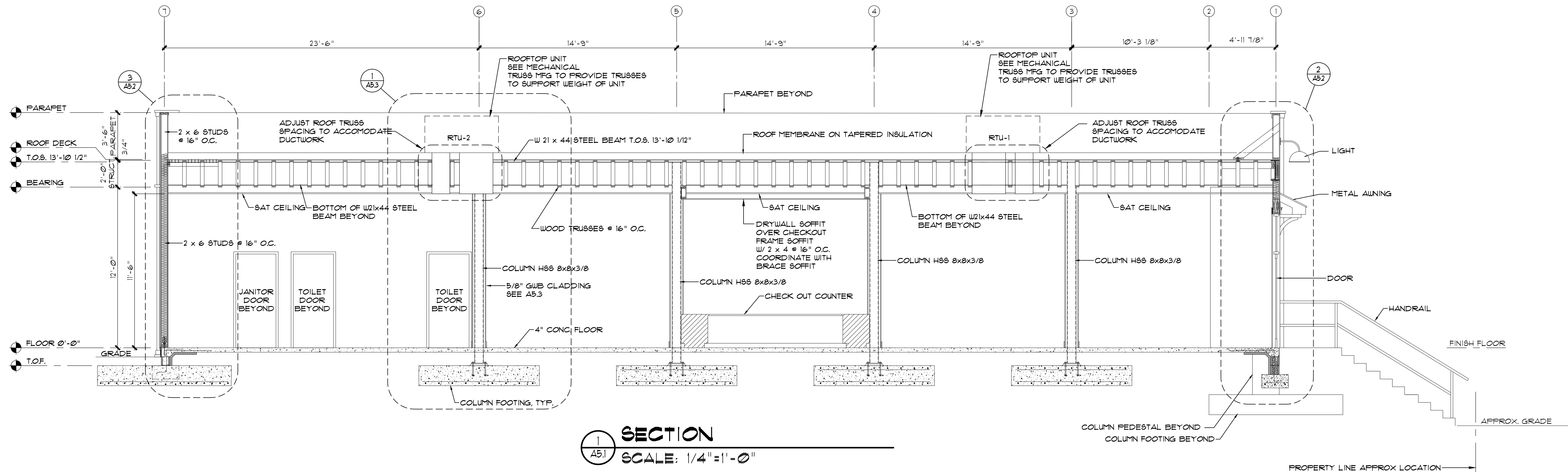
1
A-4.1

SOUTH ELEVATION

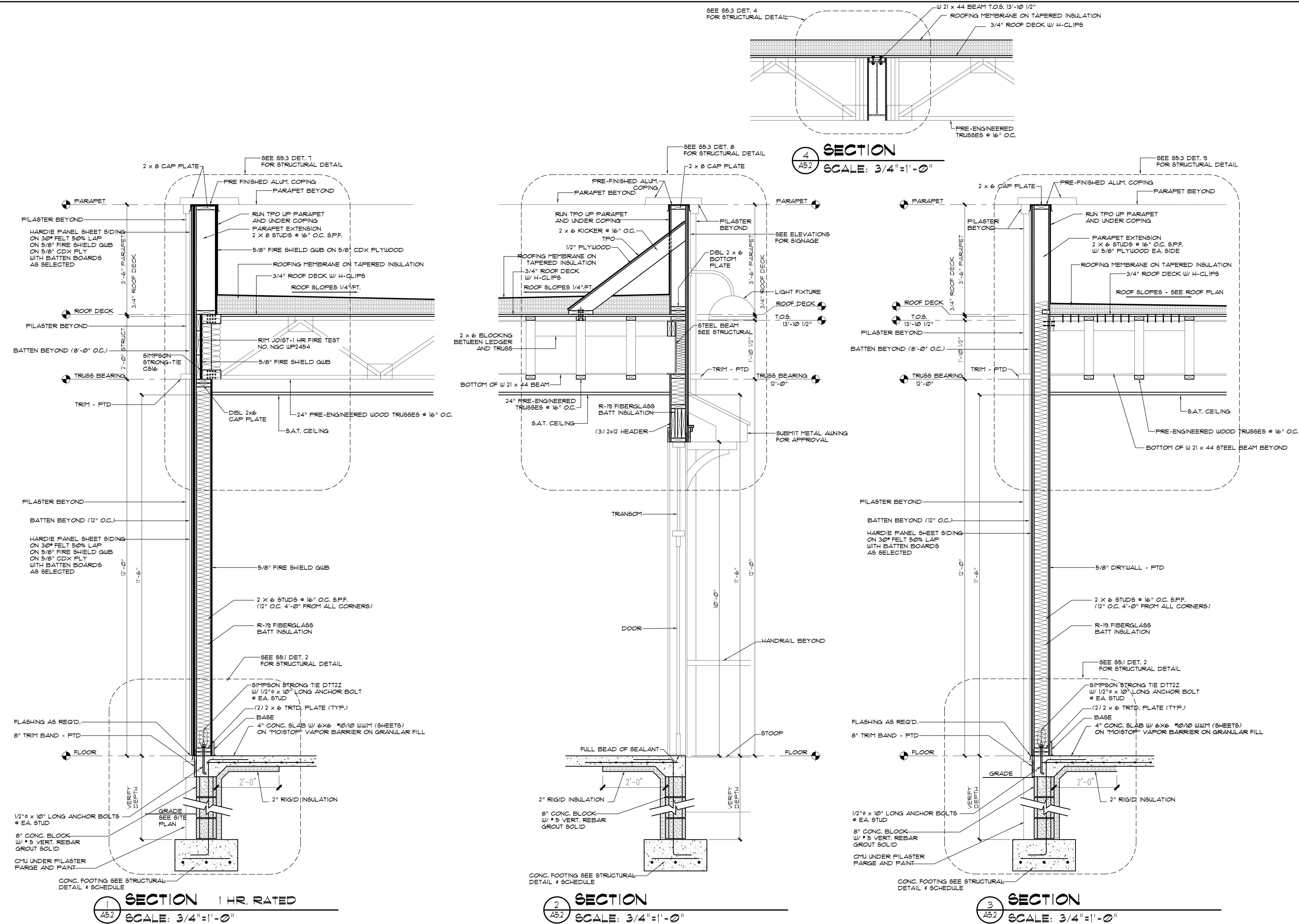
SCALE: 1/4" = 1'-0"

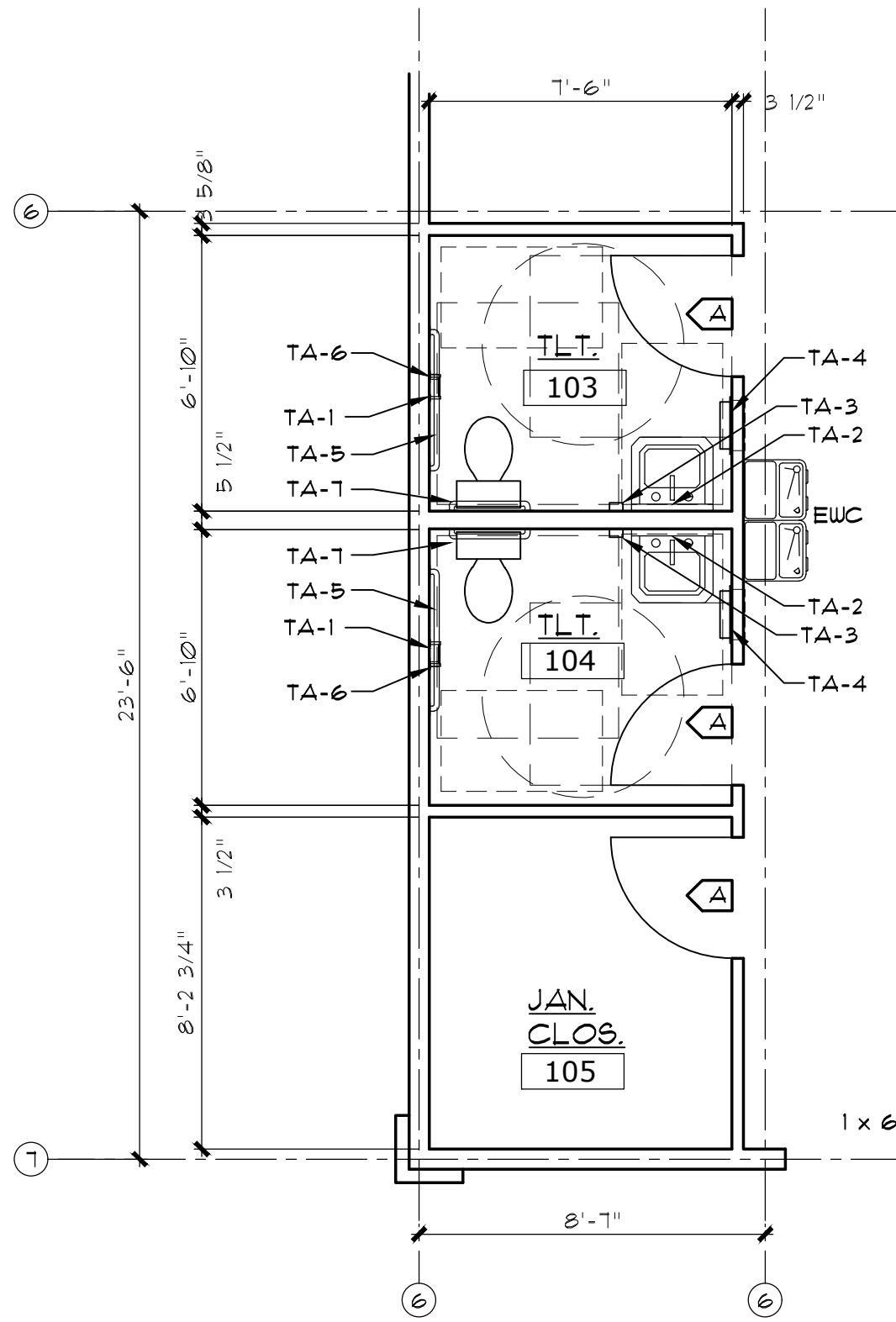


SECTION
SCALE: 1/4" = 1'-0"



SECTION
SCALE: 1/4" = 1'-0"

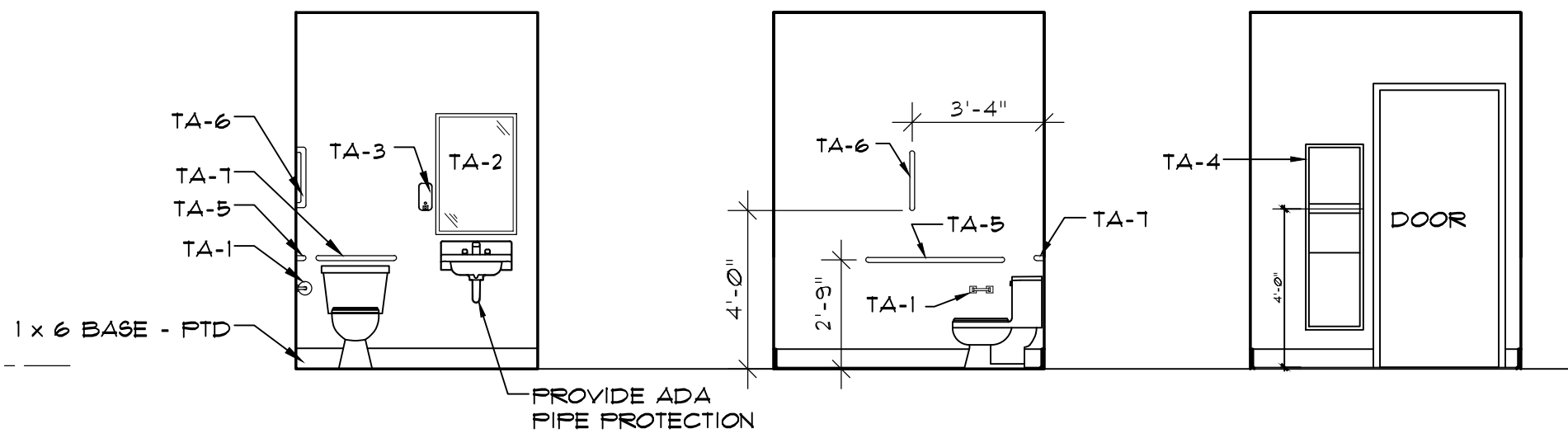




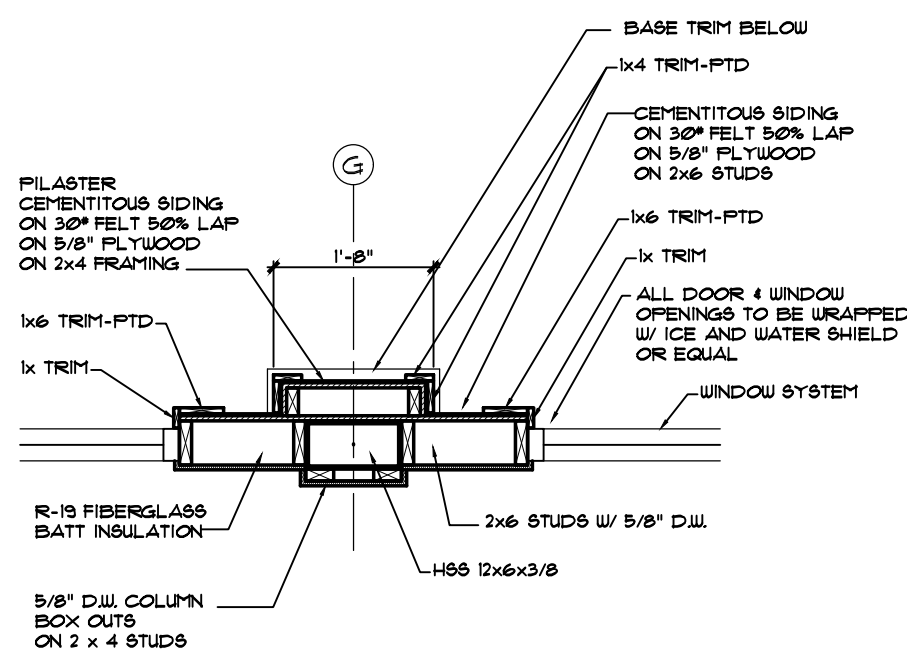
5 ENLARGED TOILET PLAN
A-6 SCALE: 1/4" = 1'-0"

MARK	ITEM	MFG.	MODEL #	MT.H.T.	REMARKS
TA-1	TOILET PAPER HOLDER	BOBRICK	B-685	2'-0"	HT. & 15" MIN. @ 48" MAX. TO PAPER OUTLET AFF.
TA-2	MIRROR	BOBRICK	B-165 1830	3'-0"	HT. TO BOTTOM
TA-3	SOAP DISPENSER	BOBRICK	B-211	3'-6"	HEIGHT TO DISPENSER
TA-4	PAPER TOWEL/TRASH DISPENSER	BOBRICK	B-3942	4'-0"	HEIGHT TO DISP. OUTLET OR DISP. LEVER
TA-5	GRAB BAR 42"	BOBRICK	B-5806-42	3'-0" MAX	HEIGHT TO CENTER
TA-6	GRAB BAR 18" (VERTICAL)	BOBRICK	B-5806-18	3'-3"	HEIGHT TO BOTTOM CENTER OF BAR @ 48" FROM REAR WALL
TA-7	GRAB BAR 24"	BOBRICK	B-5806-24	3'-0" MAX	HEIGHT TO CENTER

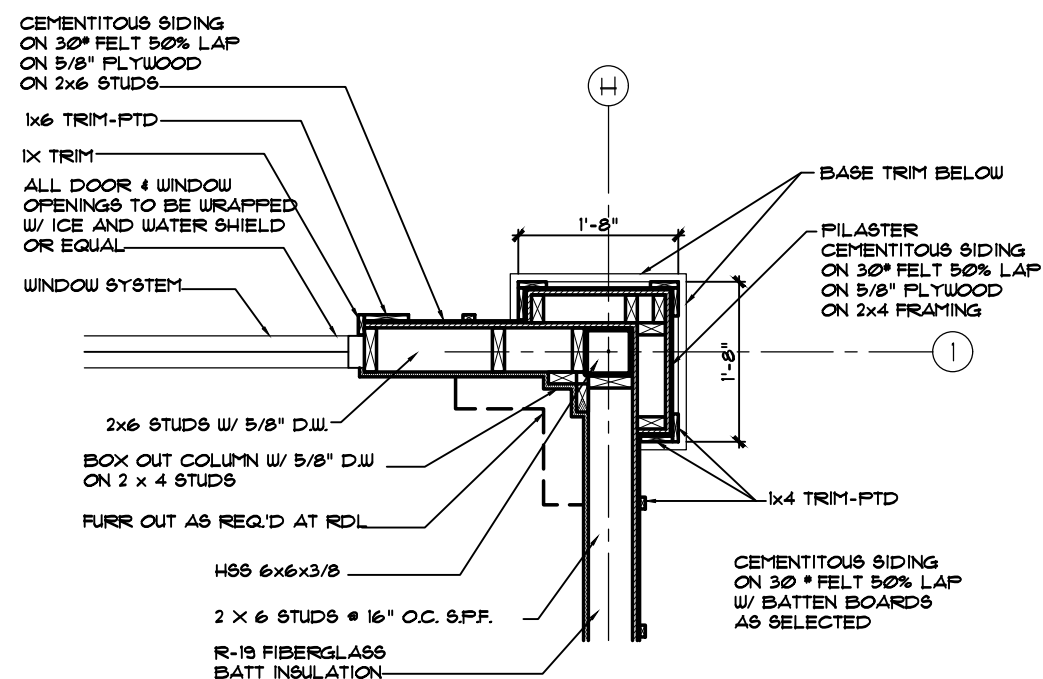
NOTE:
1. ALL MOUNTING HEIGHTS ARE AS SHOWN UNLESS OTHERWISE NOTED.
2. PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES.
3. PROVIDE HANDICAP DOOR SIGNAGE AT TOILET RM. DOOR.
4. SUBMIT ALL ACCESSORIES FOR APPROVAL & FINAL SELECTION BY OWNER.
5. PROVIDE ADA COMPLIANT DRAIN WRAP AT ALL EXPOSED PIPES/DRAINS.



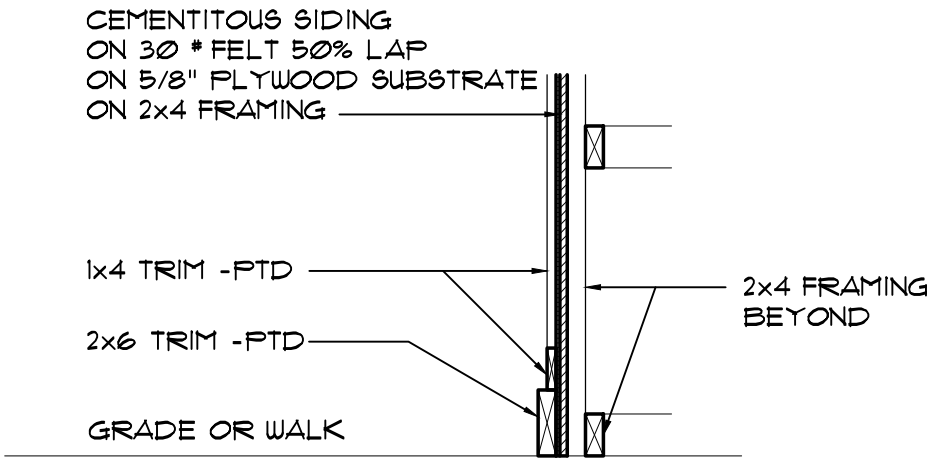
TOILET INTERIOR ELEVATIONS
A-6 SCALE: 1/4" = 1'-0"



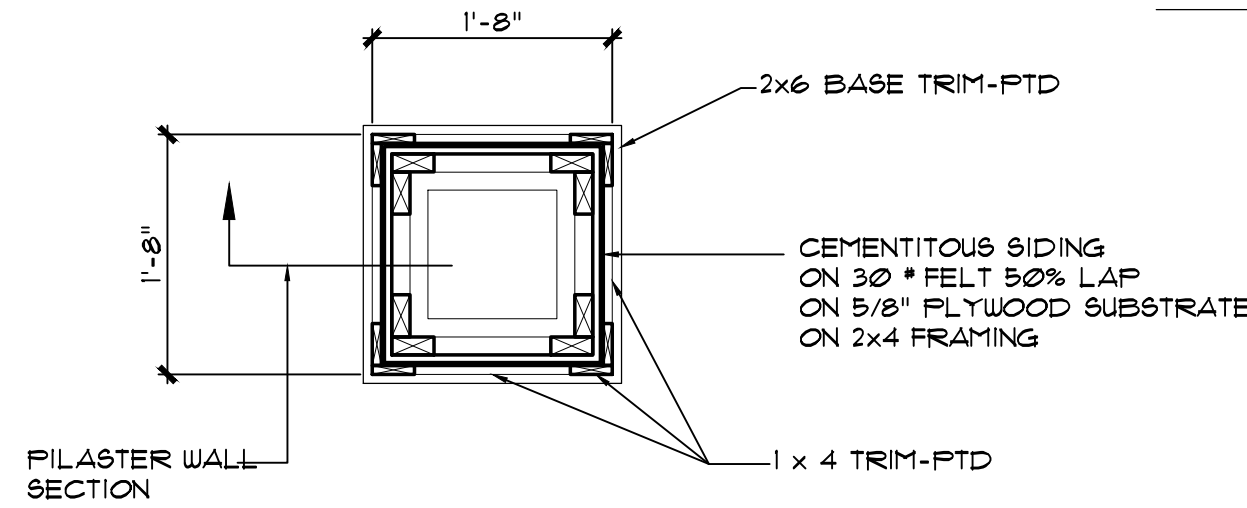
4 PLAN DETAIL
A-6 SCALE: 3/4" = 1'-0"



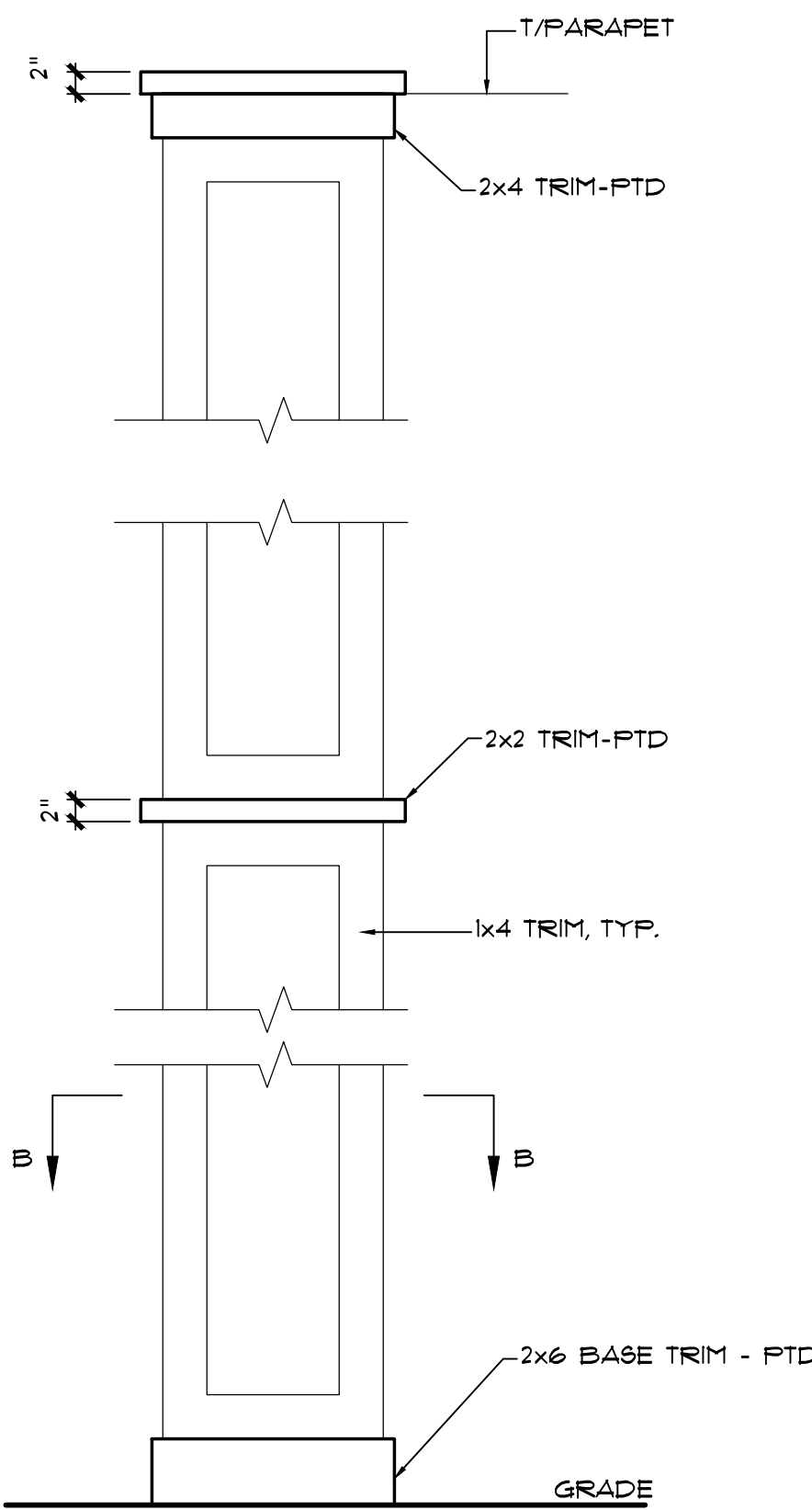
3 PLAN DETAIL
A-6 SCALE: 3/4" = 1'-0"



PILASTER WALL SECTION

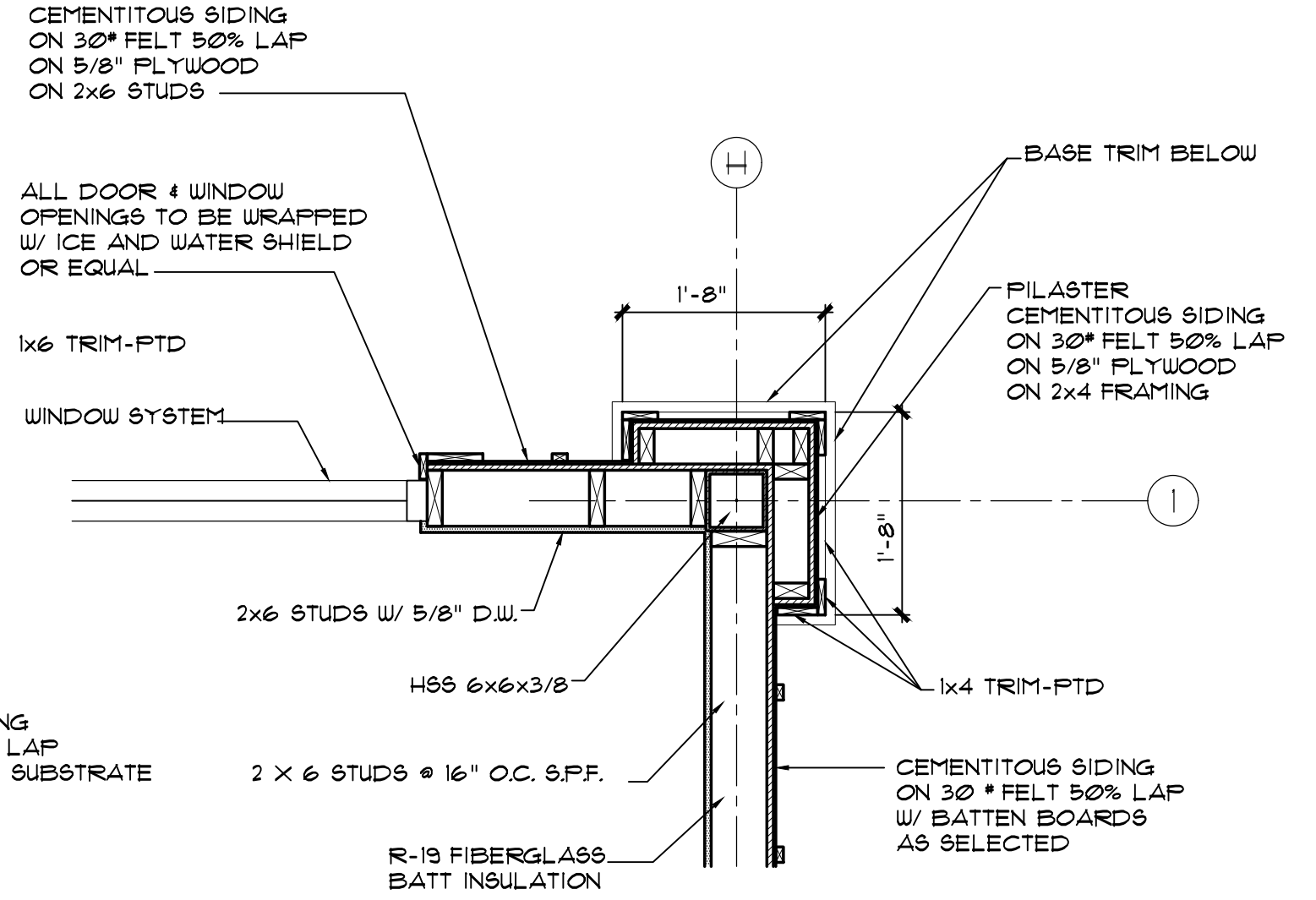


PILASTER PLAN DETAIL B
COLUMNS AT EAST RAMP

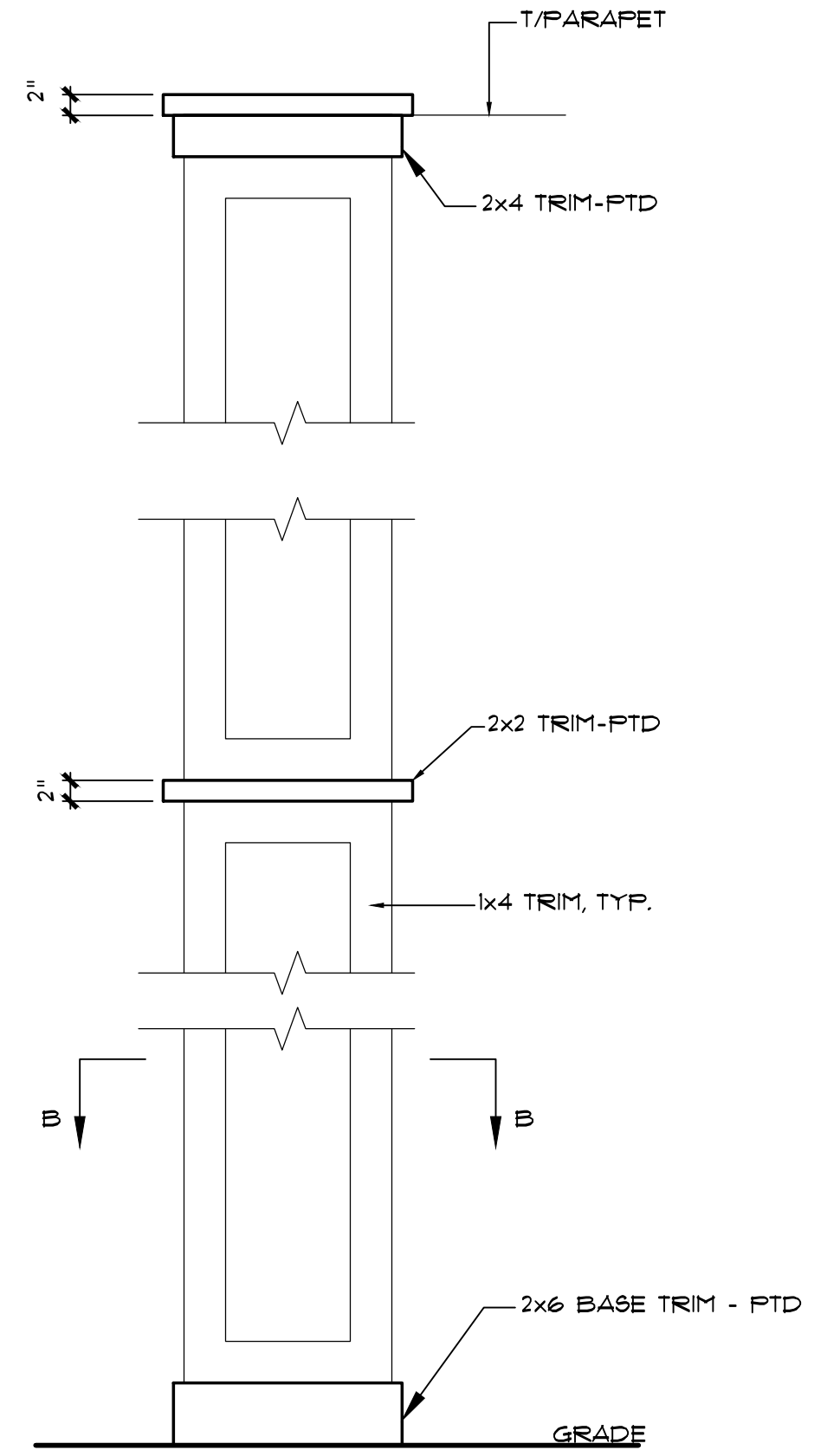


PILASTER ELEVATION B
COLUMNS AT EAST RAMP

2 PILASTER DETAILS
A-6 SCALE: 3/4" = 1'-0"

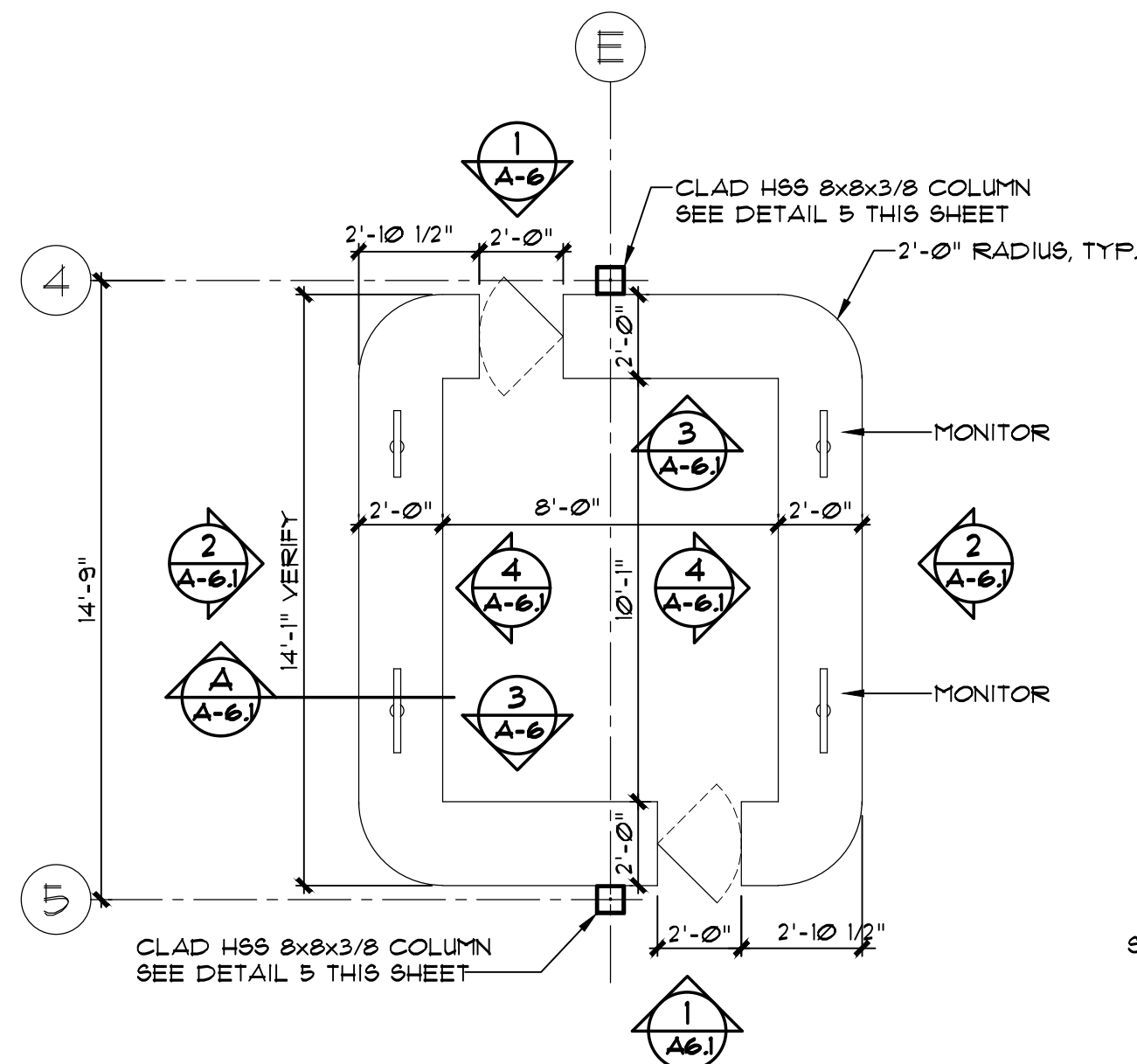


TYPICAL PILASTER PLAN DETAIL A

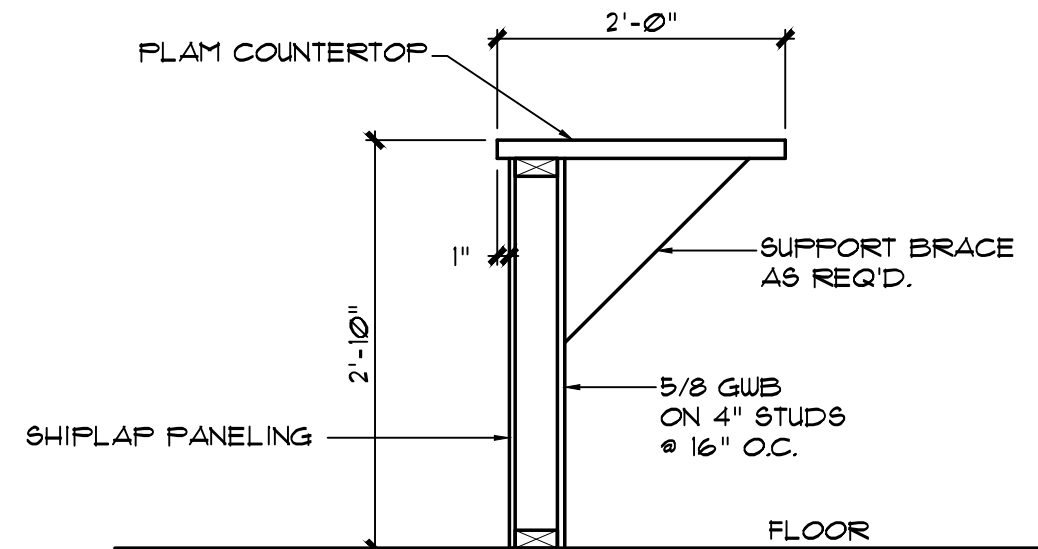


TYPICAL PILASTER ELEVATION A

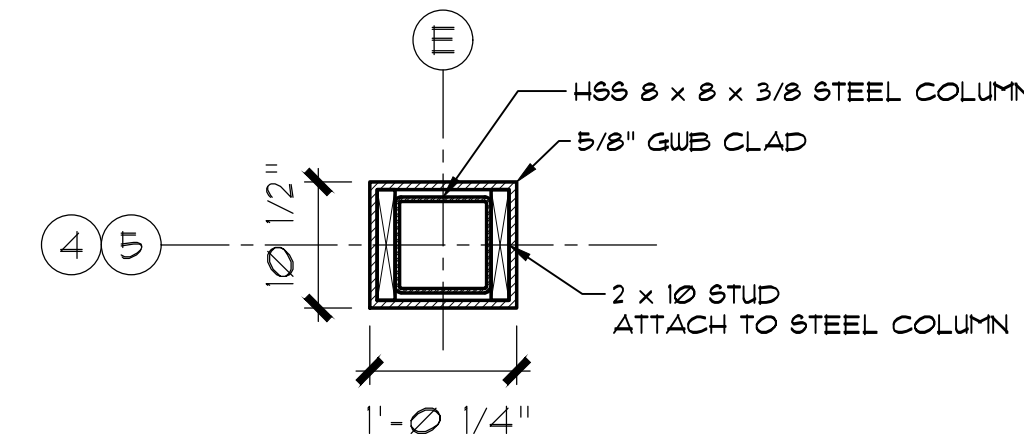
1 TYPICAL PILASTER DETAILS
A-6 SCALE: 3/4" = 1'-0"



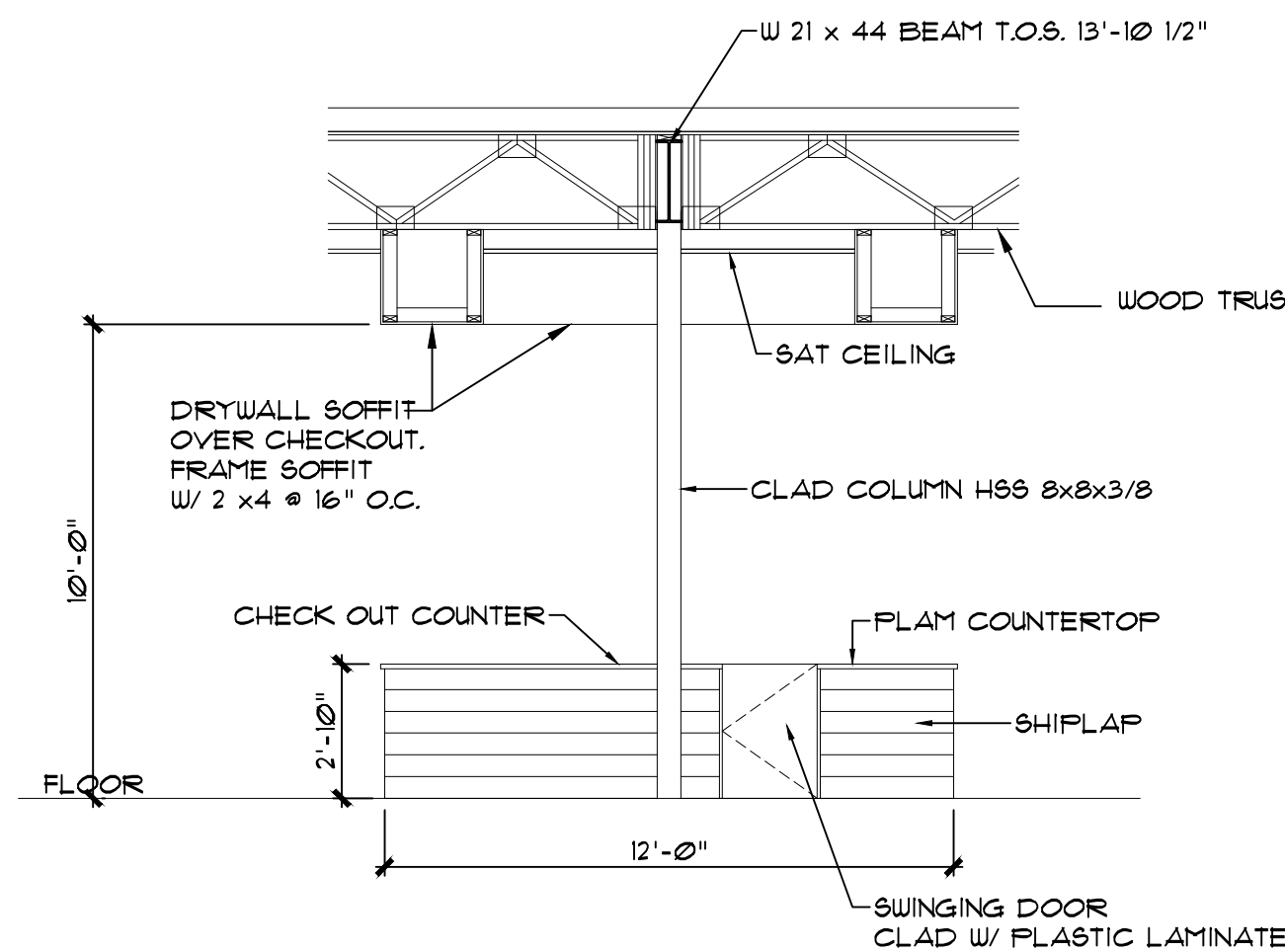
PLAN DETAIL
SCALE: 1/4" = 1'-0"



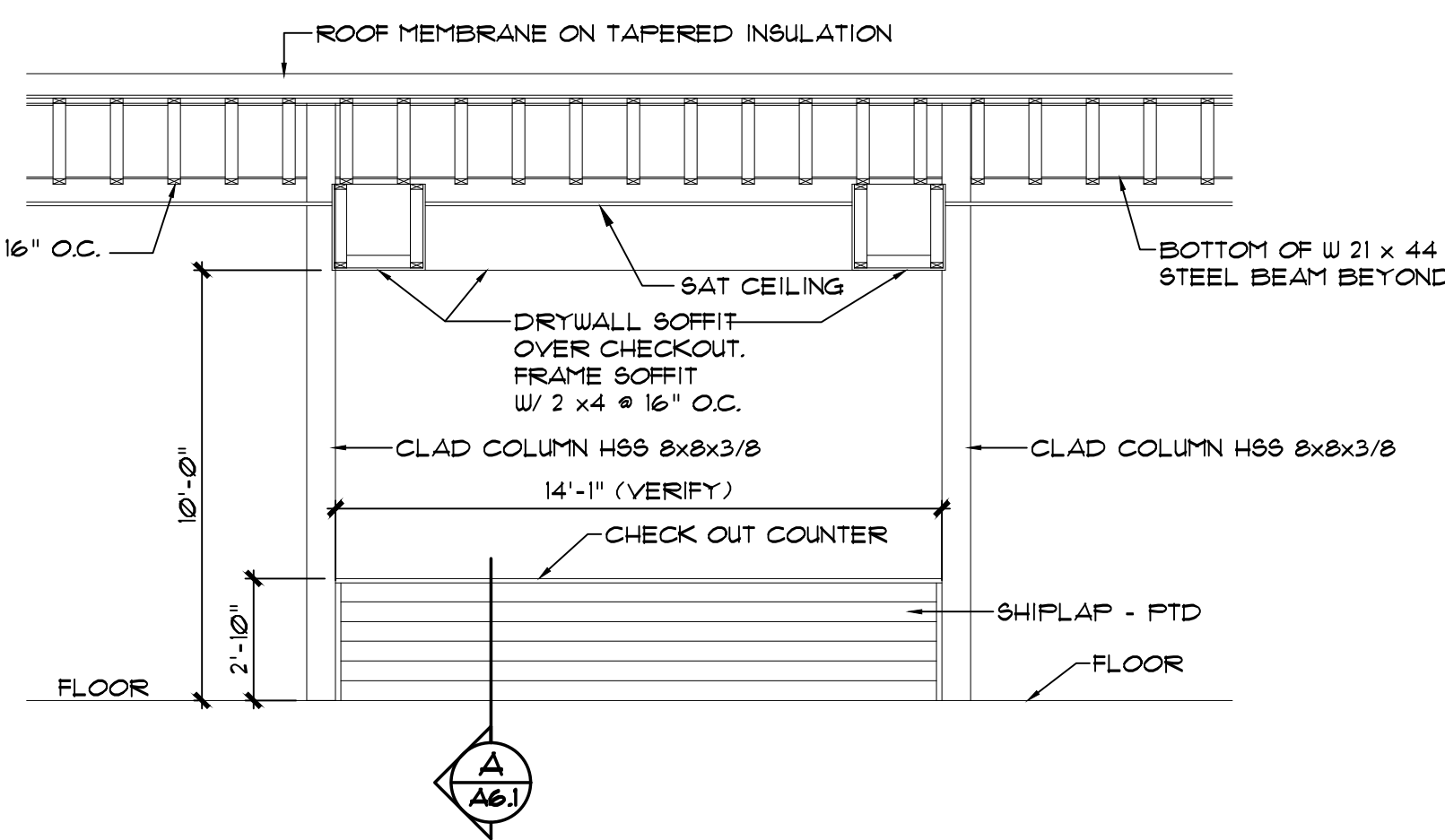
SECTION
SCALE: 3/4" = 1'-0"



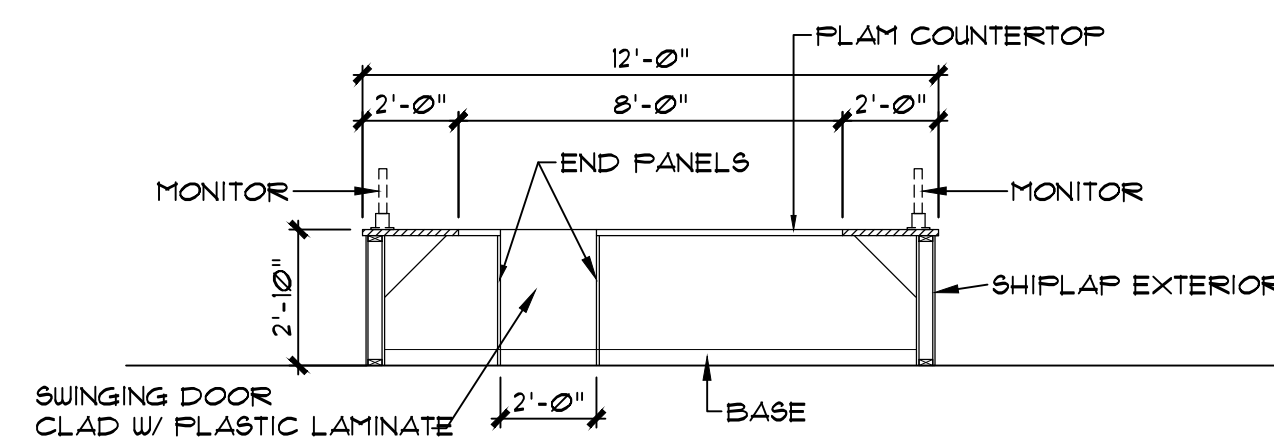
COLUMN COVER DETAIL
SCALE: 3/4" = 1'-0"



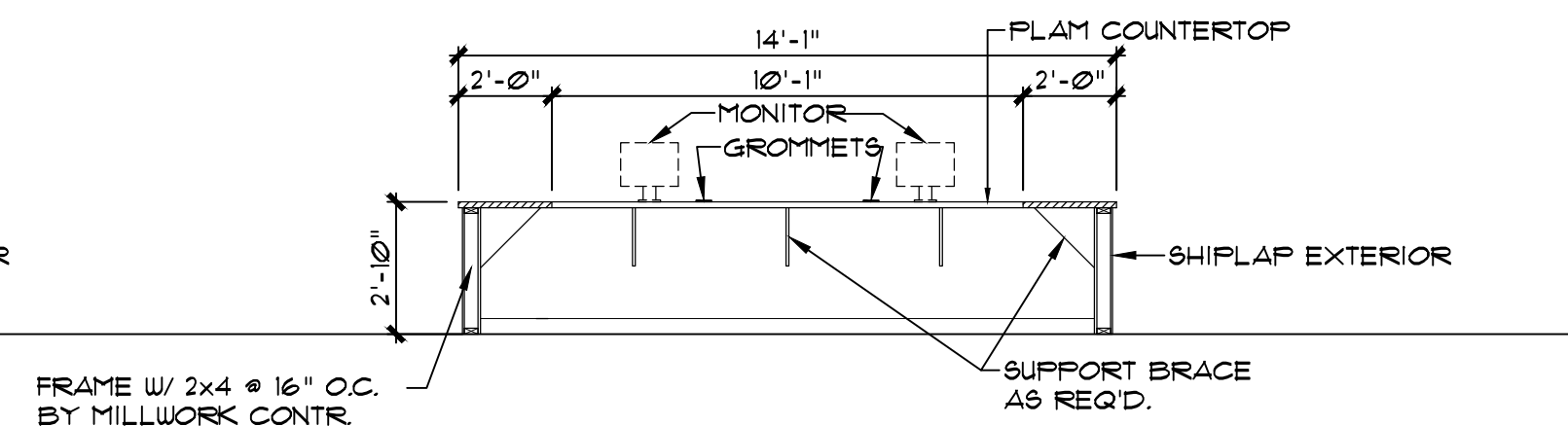
ELEVATION
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 1/4" = 1'-0"

STATEMENT OF SPECIAL INSPECTIONS					
PROJECT INFORMATION		DESIGN PROFESSIONAL INFORMATION		CONSTRUCTION AND SITE	
PROJECT NAME	Atlantic Beach BTS	ARCHITECT/ENGINEER/CONSULTANT	Heath Hendrick, PE	INSPECTION CATEGORIES	Concrete, Structural Steel, Soils
PROJECT DESCRIPTION	Commercial	FIRM	FDR Engineers	SEISMIC DESIGN CATEGORY	B
LOCATION	Atlantic Beach, North Carolina	ADDRESS	121 Kitty Hawk Dr, Morrisville, North Carolina	WIND SPEED	145 MPH
OWNER	[NAME OF OWNER]	PHONE	(919) 957-5100	EXPOSURE CATEGORY	D

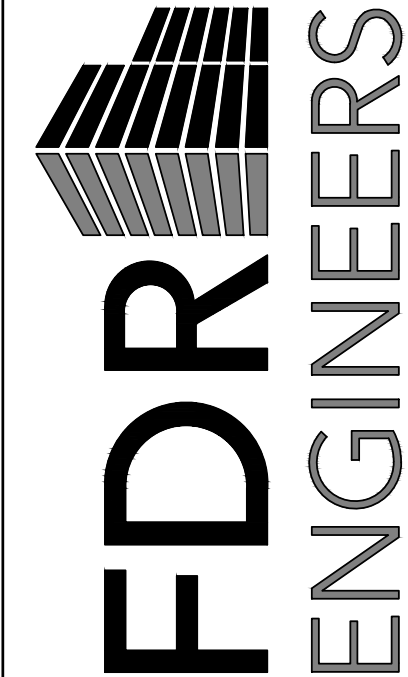
SPECIAL INSPECTION AND TESTING:

- SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN ACCORDANCE WITH 2018 NCSBC, TABLES 1704.3 (STEEL), 1705.3 (CONCRETE), AND 1705.2.3 (OPEN-WEB STEEL JOISTS AND JOIST GIRDERS).
- INSPECTION & TESTING SHALL BE PROVIDED BY AN INDEPENDENT TESTING AGENCY HIRED AT THE OWNER'S EXPENSE. AGENCY INSPECTION PERSONEL SHALL MEET THE INSPECTOR QUALIFICATIONS FOR EACH MATERIAL ITEM AS INDICATED IN THE SPECIFICATIONS. ALL RE-TESTING DUE TO FAILURE OF ORIGINAL TEST SHALL BE PAID FOR BY THE GENERAL CONTRACTOR.
- ANY MATERIAL OR PLACEMENT DEVIATIONS FROM MINIMUMS SHOWN ON THE DRAWINGS OR IN SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

STRUCTURAL STEEL SPECIAL INSPECTIONS (AISC 15th EDITION, CHAPTER N)		
INSPECTION TASK O = RANDOM OBSERVATION P = OBSERVED EACH COMPONENT	QC	QA
HIGH STRENGTH BOLTING		
INSPECTION TASKS PRIOR TO BOLTING		
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O
INSPECTION TASKS DURING BOLTING		
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O
INSPECTION TASKS AFTER BOLTING		
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P
WELDING		
INSPECTION TASKS PRIOR TO WELDING		
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WPS AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM ^[a]	O	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) - JOINT PREPARATIONS - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION) - BACKING TYPE AND FIT (IF APPLICABLE)	O	O
FIT-UP OF CJP GROOVE WELDS OF HSS, T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY) - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	P	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT-UP OF FILLET WELDS - DIMENSIONS (ALIGNMENT, GAPS AT ROOT) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	-
^[a] THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.		
INSPECTION TASKS DURING WELDING		
CONTROL AND HANDLING OF WELDING CONSUMABLES - PACKAGING - EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS - WIND SPEED WITHIN LIMITS - PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED - SETTINGS ON WELDING EQUIPMENT - TRAVEL SPEED - SELECTING WELDING MATERIALS - SHIELDING GAS TYPE/FLOW RATE - PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) - PROPER POSITION (F,V,H, OH)	O	O
WELDING TECHNIQUES - INTERPASS AND FINAL CLEANING - EACH PASS WITH PROFILE LIMITATIONS - EACH PASS MEETS QUALITY REQUIREMENTS	O	O
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P
INSPECTION TASKS AFTER WELDING		
WELDS CLEANED	O	O
SIZE, LENGTH AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA - CRACK PROHIBITION - WELD/BASE-METAL FUSION - CRATER CROSS SECTION - WELD PROFILES - WELD SIZE - UNDERCUT - POROSITY	P	P
ARC STRIKES	P	P
k-AREA ^[a]	P	P
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ^[a]	P	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O
^[a] WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3 in. (75 mm) OF THE WELD.		
^[a] AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1c) AND BUILT-UP HEAVY SHAPES (SEE SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.		

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION				
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	X	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	-	X	AWS D1.4 ACI 318: 26.6.4	-
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND		X		
c. INSPECT ALL OTHER WELDS	X			
3. INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a		X	ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF CONCRETE	X	-	ASTM C172 ASTM C31 ASTM 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR:				
a. APPLICATION OF PRESTRESSING FORCES; AND	X	-	ACI 318: 26.10	-
b. GROUTING OF BONDED PRESTRESSING TENDONS	X	-		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	-	X	ACI 318: CH. 26.8	-
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	X	ACI 318: 26.11.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS		
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY	-	X



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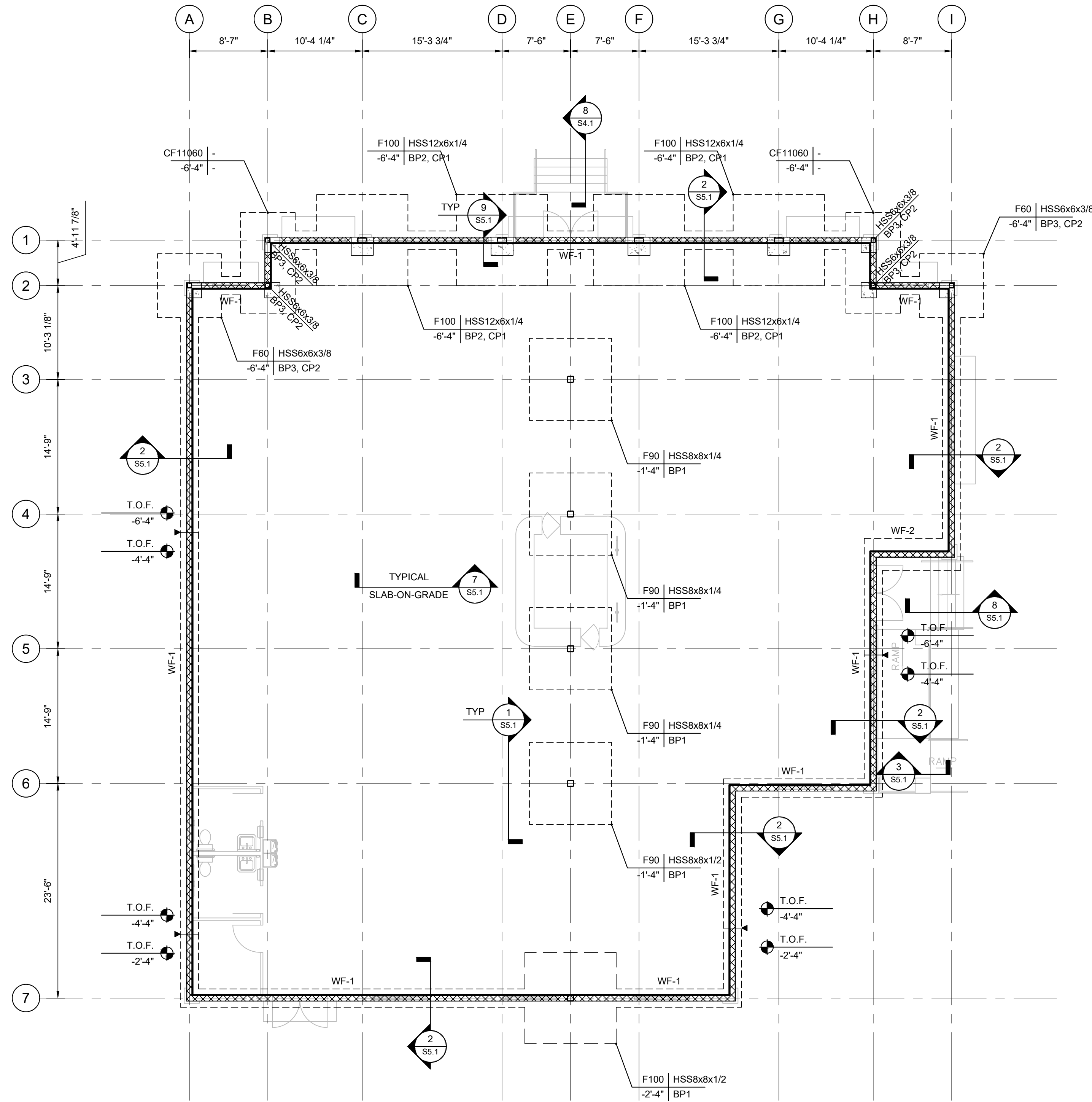
ATLANTIC BEACH BTS

ATLANTIC BEACH, NORTH CAROLINA

SPECIAL INSPECTIONS

DESIGNED BY: JTF
DRAWN BY: JTF
APPROVED BY: HMM
PROJECT #: 23-017
DATE: 05/01/2023
No. Revision Date
Sheet
S1.2

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1 FOUNDATION PLAN
ARCH REF: 1/A-1.2
Scale: 1/8" = 1'-0"

FOOTING MARK
TOP OF FOOTING ELEV.
BELOW FINISHED FLOOR

— F40 | W12x14
-1'-4" | BP1, CP1

COLUMN SIZE

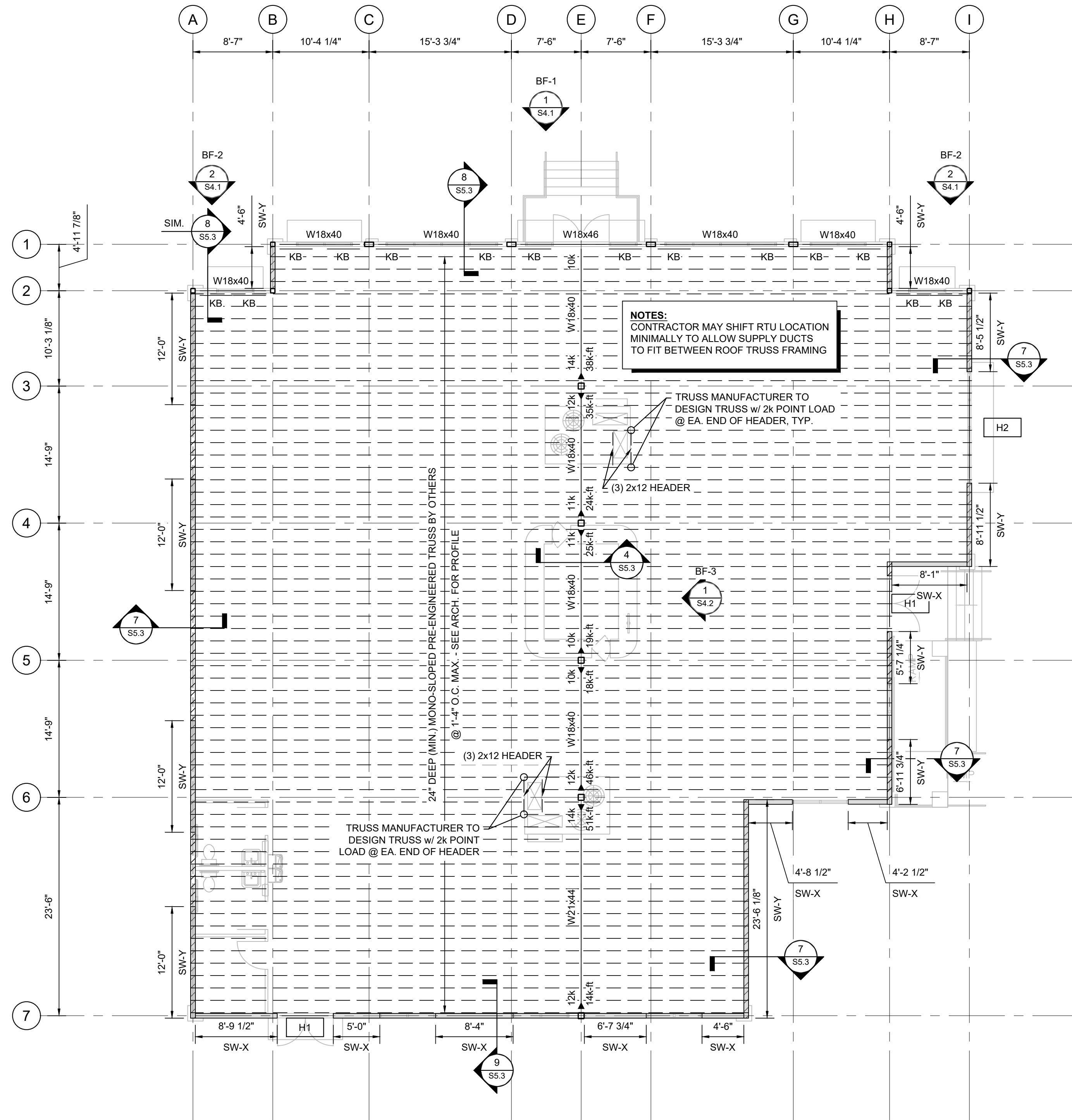
— BASEPLATE MARK
CONCRETE PEDESTAL MARK

KEYED NOTES & LEGEND	
---	WALL & COLUMN FOOTING EXTENTS
---	EDGE OF SLAB
---	CIP CONCRETE PEIR
---	CMU STEM WALL

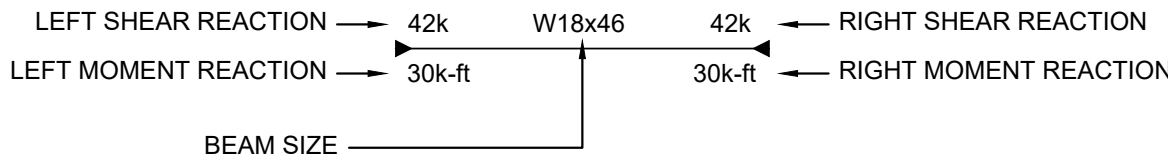
- FOUNDATION PLAN NOTES:**
- FOR GENERAL NOTES AND ABBREVIATIONS, SEE S1.1
 - FINISHED FLOOR REFERENCE ELEVATION 0'-0", UNO.
 - VERIFY ALL DIMENSIONS & ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION COMMENCES.
 - ELEVATIONS ON THE STRUCTURAL DRAWINGS REFER TO THE TOP OF CONCRETE REFERENCE ELEVATION SET AT 0'-0".
 - CENTERLINE OF FOOTING SHALL COINCIDE WITH THE FOUNDATION WALL AND COLUMN CENTERLINE UNO.
 - BACKFILL & COMPACT BOTH SIDES OF FOUNDATION WALL SIMULTANEOUSLY.
 - CENTER STOOPS ON OPENINGS UNLESS SHOWN OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR OPENING LOCATIONS.
 - FOR SIZE AND LOCATION OF ROOF, FLOOR, AND WALL OPENINGS SEE MECHANICAL AND ARCHITECTURAL DRAWINGS.
 - MECHANICAL & EQUIPMENT PADS NOT SHOWN - SEE MECHANICAL DRAWINGS FOR SIZE, LOCATION & DETAILS.
 - CONTRACTORS MUST VISIT THE SITE TO CAREFULLY REVIEW AND VERIFY EXISTING FIELD CONDITIONS PRIOR TO SUBMITTING BIDS. EXISTING CONDITIONS SHOWN MAY VARY FROM ACTUAL FIELD CONDITIONS. PLANS ARE DIAGRAMMATIC.
 - CONCRETE PIER SIZES WERE BASED ON ASSUMED COLUMN BASE PLATE AND ANCHOR BOLT LAYOUTS. GENERAL CONTRACTOR SHALL ENSURE THAT BASEPLATES FIT ON PIERS WHILE MAINTAINING A MINIMUM OF 6" OF CLEARANCE FROM ANY GIVEN ANCHORBOLT TO THE EDGE OF THE PIER. PIER DIMENSIONS SHALL BE INCREASED AS NEEDED TO MAINTAIN CLEARANCE.
 - SLAB ON GRADE CONTROL JOINTS SHALL BE TOOLED OR SAWCUT. THE JOINT PATTERN SHALL BE APPROXIMATELY SQUARE AND LIMITED TO AN AREA NOT TO EXCEED 225 S.F. JOINTS SHALL BE CUT WITHIN 30 HOURS OF POURING SLAB.
 - SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS, AND DRAIN LOCATIONS IN FLOOR SLABS.
 - PROVIDE #3 x 36" DOWELS @ 18" O.C. ALONG ALL SLAB CONSTRUCTION JOINTS.
 - ◄ INDICATES STEP IN FOOTING, SEE TYPICAL FOOTING STEP DETAIL.

SPREAD FOOTING SCHEDULE		
MARK	SIZE	REINFORCING
F60	6'-0"x6'-0"x12"	(6)-#5 E.W. BOT. ONLY
F90	9'-0"x9'-0"x18"	(13)-#5 E.W. BOT. ONLY
F100	10'-0"x10'-0"x18"	(17)-#5 E.W. BOT. ONLY
CF11060	11'-0"x6'-0"x12"	#5 @ 14" E.W. TOP & BOT.

WALL FOOTING SCHEDULE					
MARK	WIDTH	DEPTH	REINFORCING		
			LONGITUDINAL	TRANSVERSE	DOWEL
WF-1	2'-0"	12"	(3) #5	#4 @ 18" O.C.	#5 @ 24" O.C.
WF-2	3'-5"	24"	(3) #5	#4 @ 14" O.C.	#5 @ 18" O.C.



1 FRAMING PLAN
ARCH REF: 1/A-1.2
Scale: 1/8" = 1'-0"



*IF NO REACTIONS ARE PROVIDED, CONNECTIONS ARE TO BE DESIGNED FOR MINIMUM SHEAR REACTION OF 4k AND MINIMUM MOMENT REACTION OF 4k-ft
► DENOTES MOMENT FRAME CONNECTION

- FRAMING PLAN NOTES:**
- FOR GENERAL NOTES AND ABBREVIATIONS, SEE S1.1.
 - FINISHED FLOOR REFERENCE ELEVATION 0'-0", UNO.
 - T.O.S. ELEVATION TO BE 13'-10 1/2"; T.O.S. @ HEADER TO BE 10'-1/2".
 - /// DENOTES LOAD BEARING WALL. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 19/32" APA 2440 SPAN RATED CDX PLYWOOD SHEATHING WITH EDGE BLOCKING. NAIL SHEATHING WITH 8d NAILS @ 4" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. IF LOAD BEARING WAS IS ALSO SHEARWALL, THE WALL SHALL CONFORM TO SPECIFIED SHEARWALL SHEATHING AND FASTENER SPACING.
 - DENOTES SHEARWALL, SEE DETAIL 1/S5.4
 - ALL EXTERIOR WALL FRAMING TO BE 2x6 @ 16" O.C., UNO.
 - ALL STRUCTURAL MEMBERS SHALL BE ATTACHED IN ACCORDANCE WITH TABLE R602.3 (FASTENER SCHEDULE FOR STRUCTURAL MEMBERS) OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
 - (#) INDICATES NUMBER OF STUDS IN POST SUPPORTING FRAMING MEMBER. STUD POSTS SHALL EXTEND FROM BEARING DOWN TO SOLID FOUNDATION AND SHALL INCLUDE SOLID BLOCKING THROUGH FLOOR STRUCTURE DEPTH WHERE APPLICABLE. PROVIDE A MINIMUM OF (3) STUDS AT ALL BEAM BEARING UNO.
 - ALIGN WALL STUDS WITH ROOF TRUSSES UNO.

- TRUSS DESIGN NOTES:**
- TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR FINAL TRUSS DESIGN, TO INCLUDE CALCULATIONS LAYOUT, AND ALL NECESSARY BRACING AND BRIDGING DETAILS AS REQ'D. FOR PERMANENT STABILITY OF TRUSS SYSTEM.
 - TRUSSES AND THEIR COMPONENTS ARE TO BE DESIGNED TO RESIST THE COMPONENT AND CLADDING WIND PRESSURES.
 - TRUSSES ARE TO BE DESIGNED TO SUPPORT THE FOLLOWING SUPERIMPOSED LOADING UNLESS NOTED OTHERWISE:

TOP CHORD LL:	20 PSF
TOP CHORD DL:	10 PSF*
BOTTOM CHORD DL:	10 PSF*
NET UPLIFT:	39 PSF

*DEAD LOADS ARE CONSIDERED TO BE SUPERIMPOSED, AND DO NOT INCLUDE TRUSS SELF-WEIGHT

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ATLANTIC BEACH BTS
ATLANTIC BEACH, NORTH CAROLINA

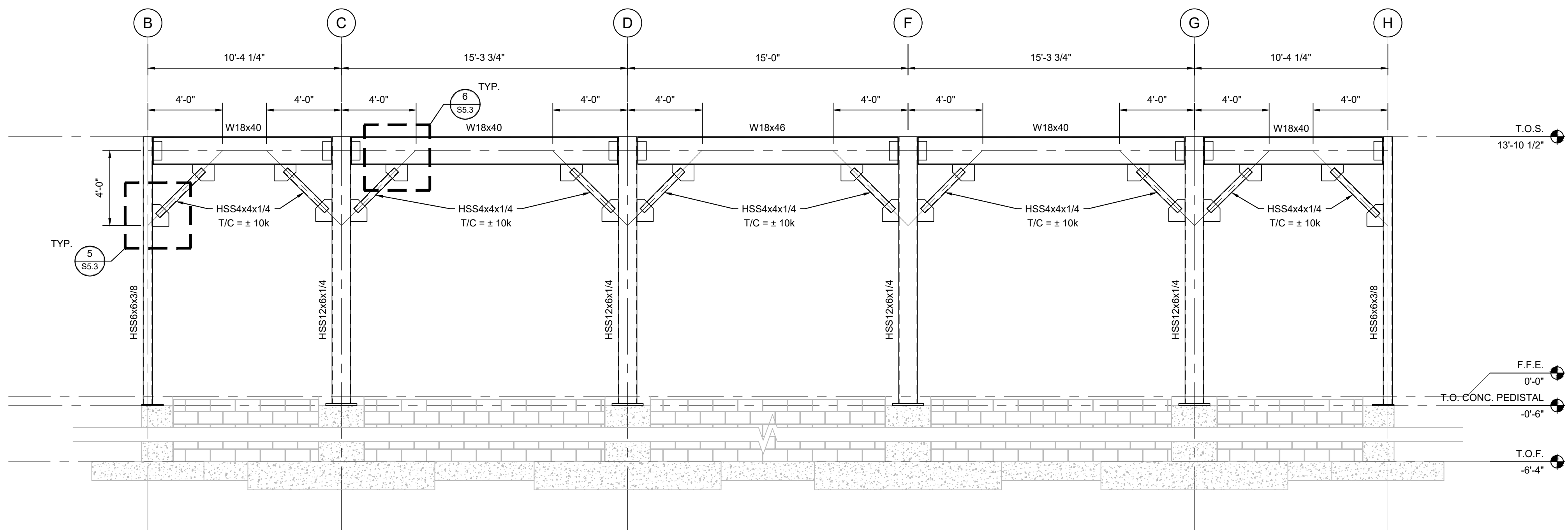
FRAMING PLAN

DESIGNED BY: JTF
DRAWN BY: JTF
APPROVED BY: HMM

PROJECT #: 23-017
DATE: 05/01/2023

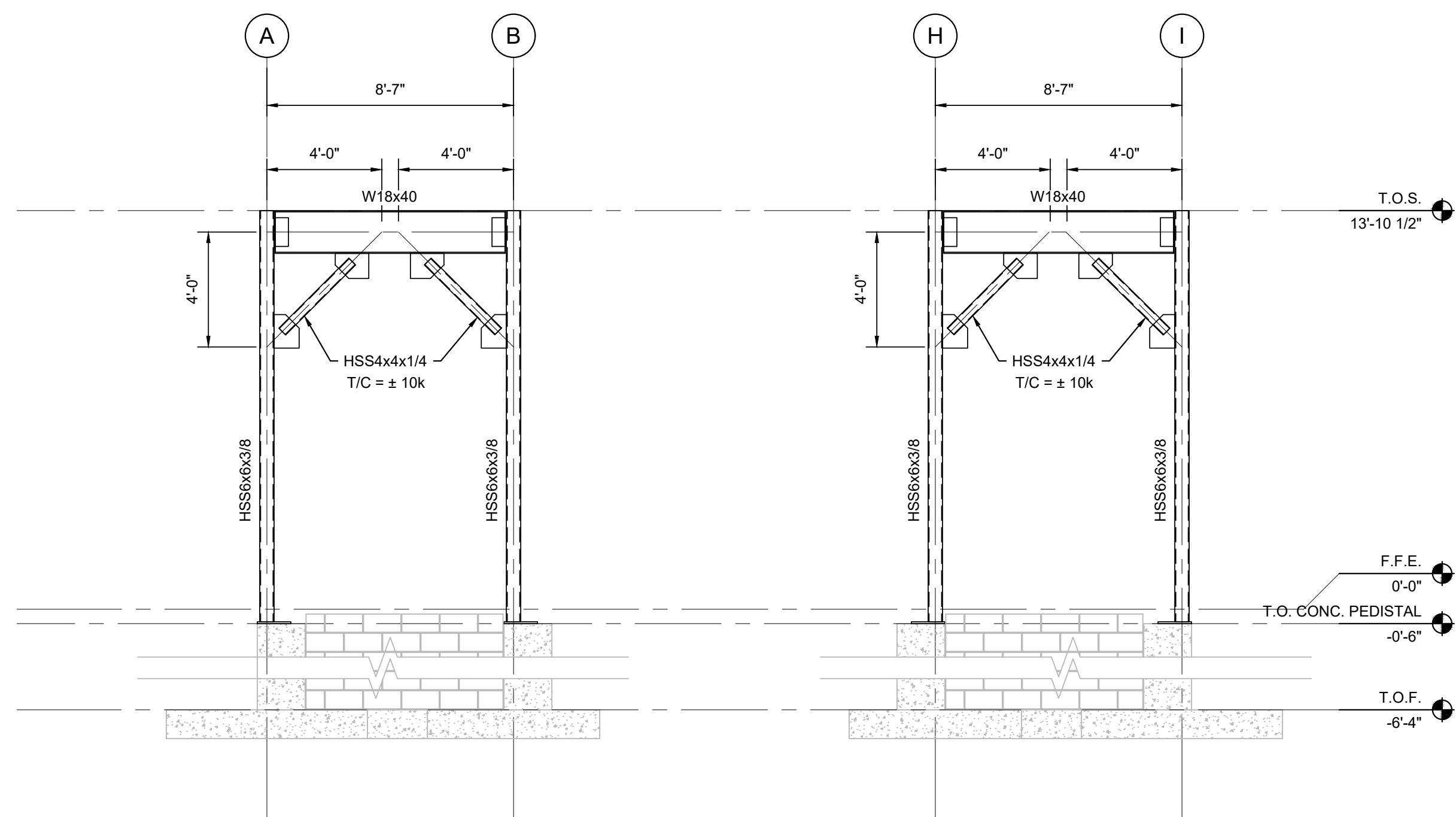
No.	Revision	Date

Sheet
S3.1



1 BF-1

Scale: 1/4" = 1'-0"



2 BF-2

Scale: 1/4" = 1'-0"

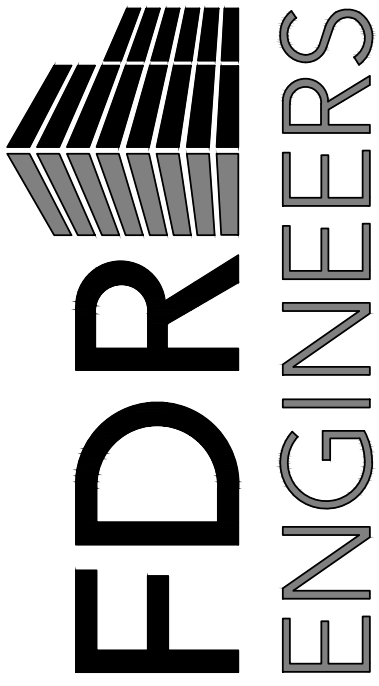
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Project Name
ATLANTIC BEACH BTS
ATLANTIC BEACH, NORTH CAROLINA

Sheet Title
STEEL BRACED FRAME
ELEVATIONS

DESIGNED BY:		JT
DRAWN BY:		JT
APPROVED BY:		HMH
PROJECT #:		23-01
DATE:		05/01/2023
No.	Revision	Date

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S4.1



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ATLANTIC BEACH, NORTH CAROLINA

Project Name

STEEL BRACED FRAME
ELEVATIONS

Sheet Title

DESIGNED BY: JTF

DRAWN BY: JTF

APPROVED BY: HMM

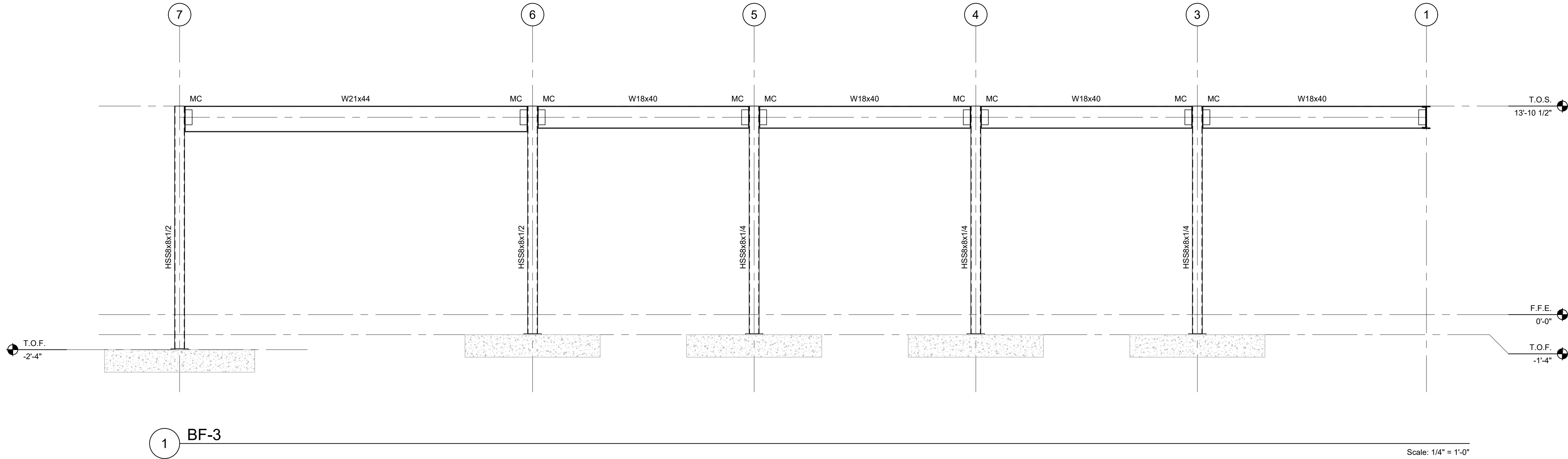
PROJECT #: 23-017

DATE: 05/01/2023

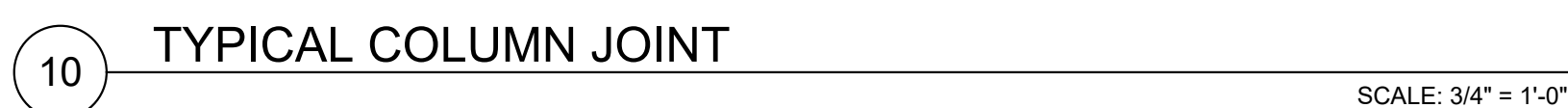
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S4.2



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ATLANTIC BEACH BIS

ATLANTIC BEACH, NORTH CAROLINA

FOUNDATION DETAILS

UNIT 10

DESIGNED BY: JTF

DRAWN BY: JTF

APPROVED BY: HMH

PROJECT #: 23-017

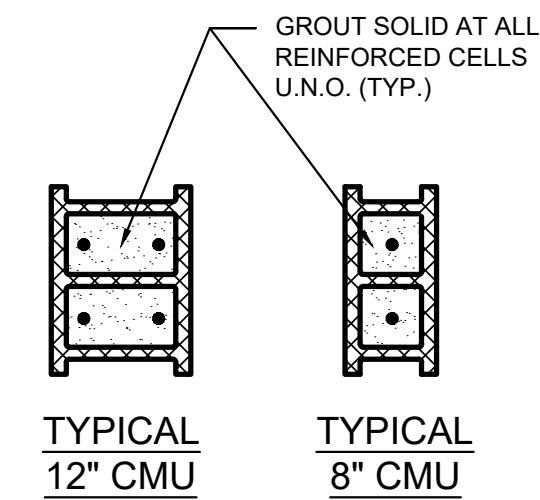
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No.	Revision	Date
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S5.1

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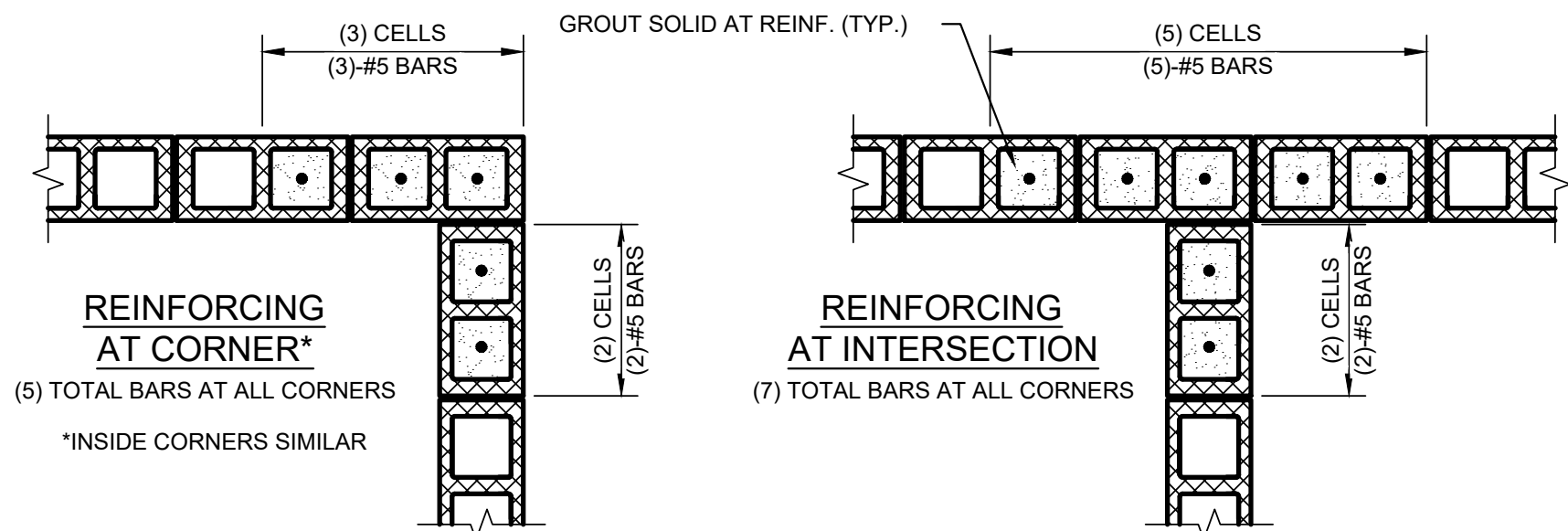


CMU WALL REINFORCING SCHEDULE			
APPLICATION	THICKNESS	VERT REINF	REMARKS
EXTERIOR WALLS	8" CMU	(1) #5 @ 24" O.C.	--
NOTES: 1. ALL MASONRY SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. 2. LAP SPLICES A MINIMUM OF 48 BAR DIAMETERS. 3. PROVIDE DUR-O-WALL (OR EQUAL) LADDER OR TRUSS HORIZONTAL JOINT REINFORCEMENT AT EACH SECOND COURSE IN RUNNING BOND, AND EACH COURSE IN STACKED BOND, UNLESS NOTED OTHERWISE. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINTS. 4. PROVIDE BOND BEAMS REINFORCED WITH (2) #5 BARS EVERY 6'-0" OF VERTICAL WALL, AT TOPS OF ALL MASONRY WALLS, AND WHERE SHOWN ON DRAWINGS. FIRST BOND BEAM MAY BE PLACED AT TOP OF DOOR OPENINGS, 8'-0" MAX. AT BOND BEAM CORNERS AND TEE JOINTS, PROVIDE BENT BARS TO MATCH. QUANTITY AND BAR SIZE IN THE BOND BEAM. LAPS IN BOND BEAMS SHALL BE 48 BAR DIAMETERS OR A MINIMUM OF 2'-0", WHICHEVER IS GREATER.			

1

CMU WALL REINFORCING SCHEDULE

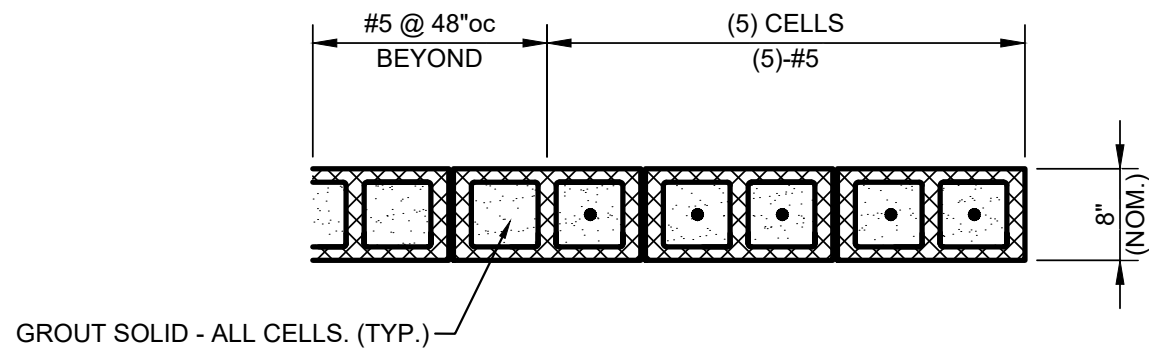
SCALE: 3/4" = 1'-0"



2

ADDITIONAL REINFORCING AT CORNERS AND INTERSECTIONS

SCALE: 3/4" = 1'-0"



3

ADDITIONAL REINFORCING AT SHEARWALL CHORDS

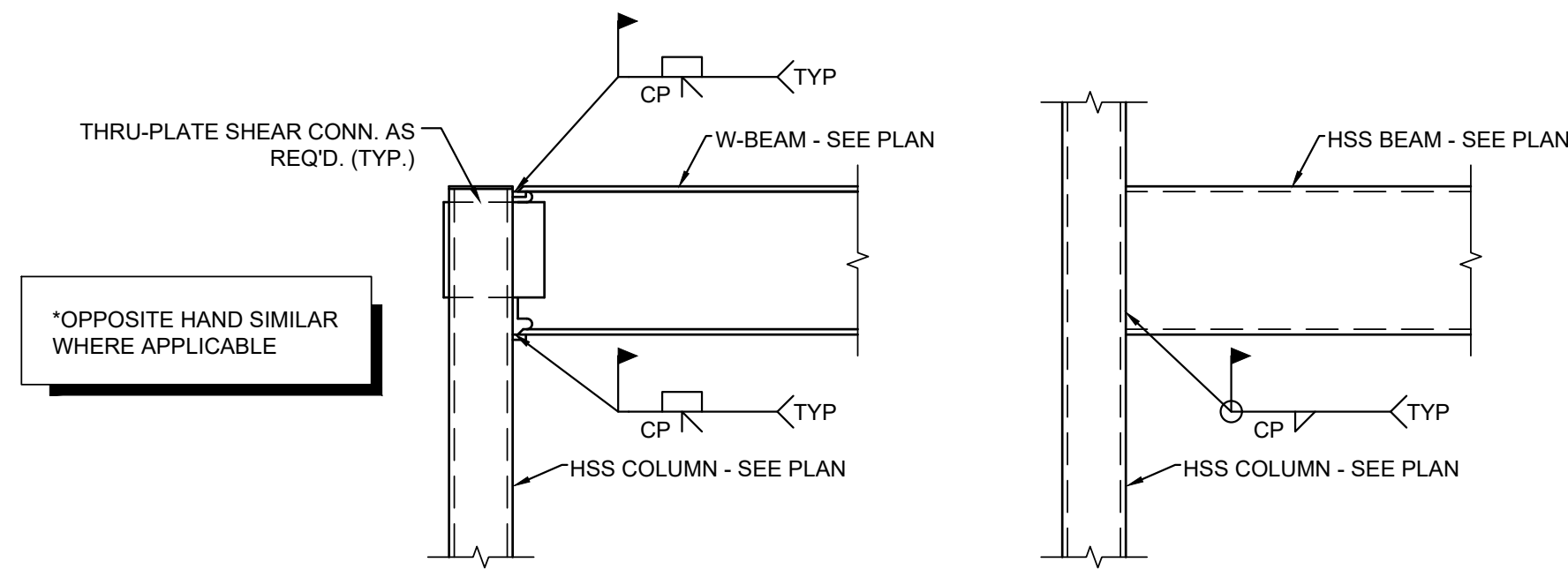
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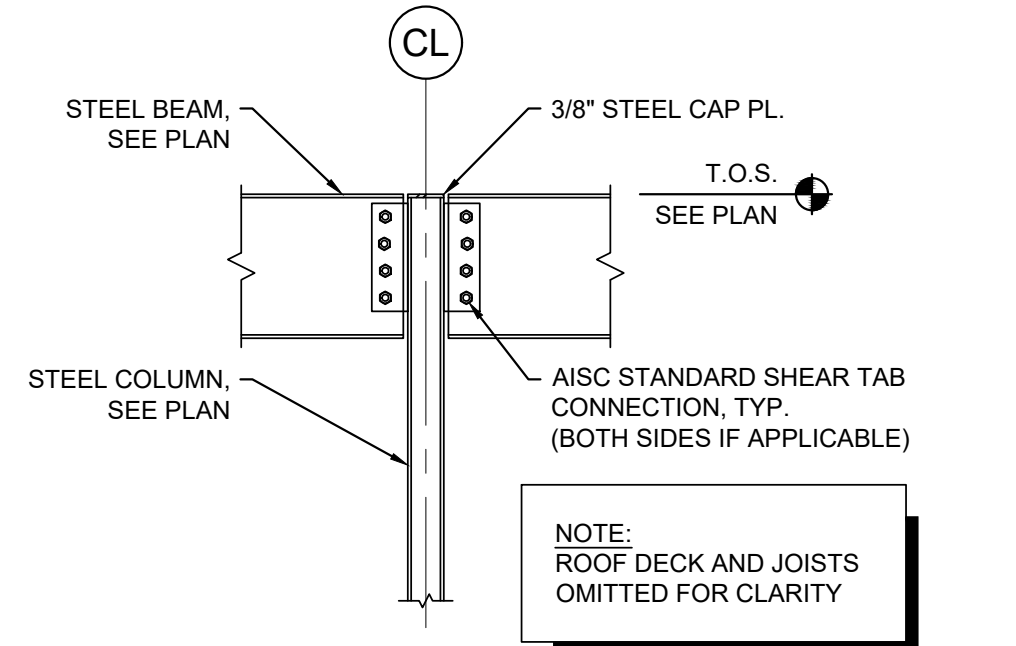
ATLANTIC BEACH BTS
ATLANTIC BEACH, NORTH CAROLINA

FOUNDATION DETAILS

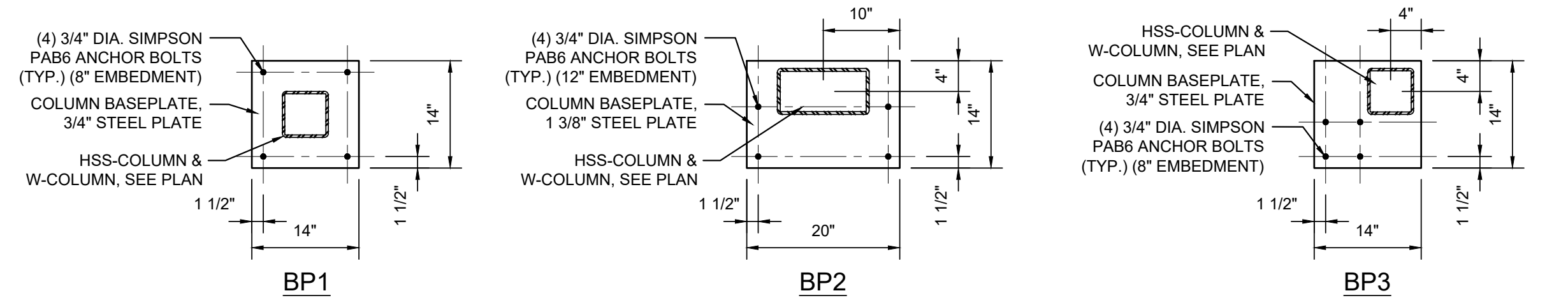
DESIGNED BY: JTF		
DRAWN BY: JTF		
APPROVED BY: HMM		
PROJECT #: 23-017		
DATE: 05/01/2023		
No.	Revision	Date



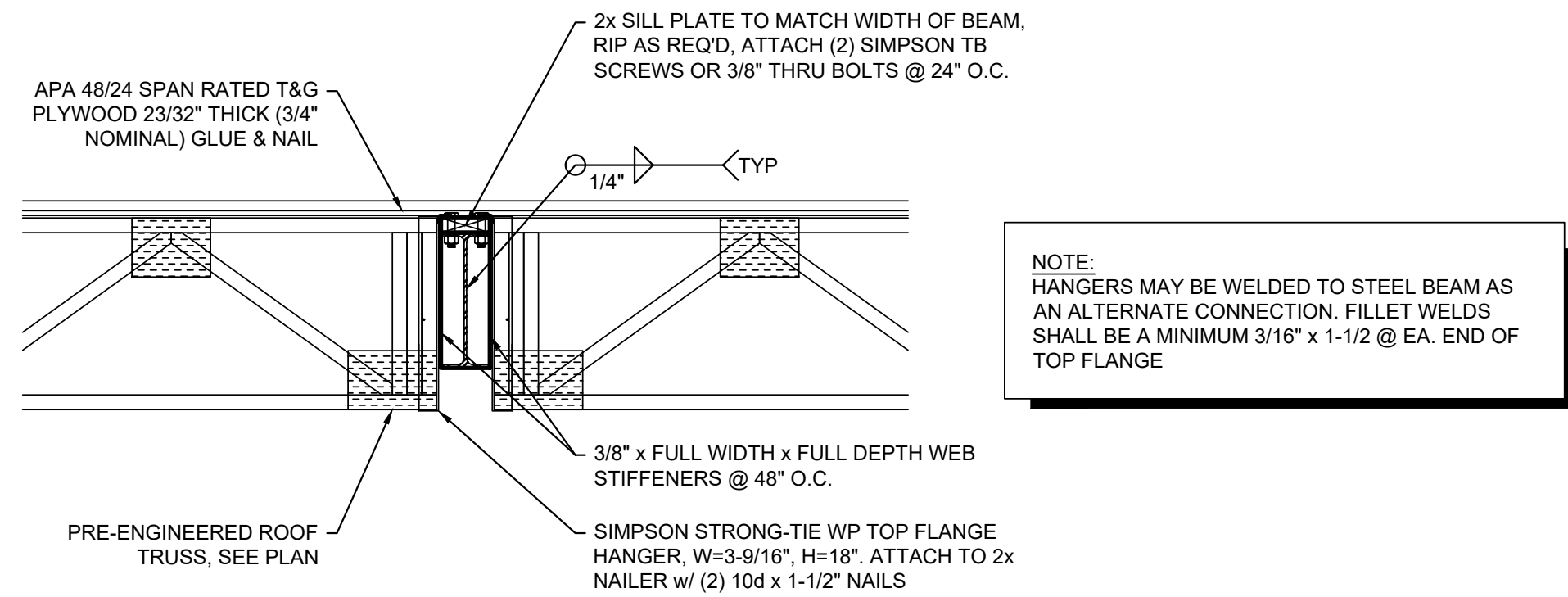
1 TYPICAL BEAM-COLUMN MOMENT CONNECTION-MC
Scale: 3/4" = 1'-0"



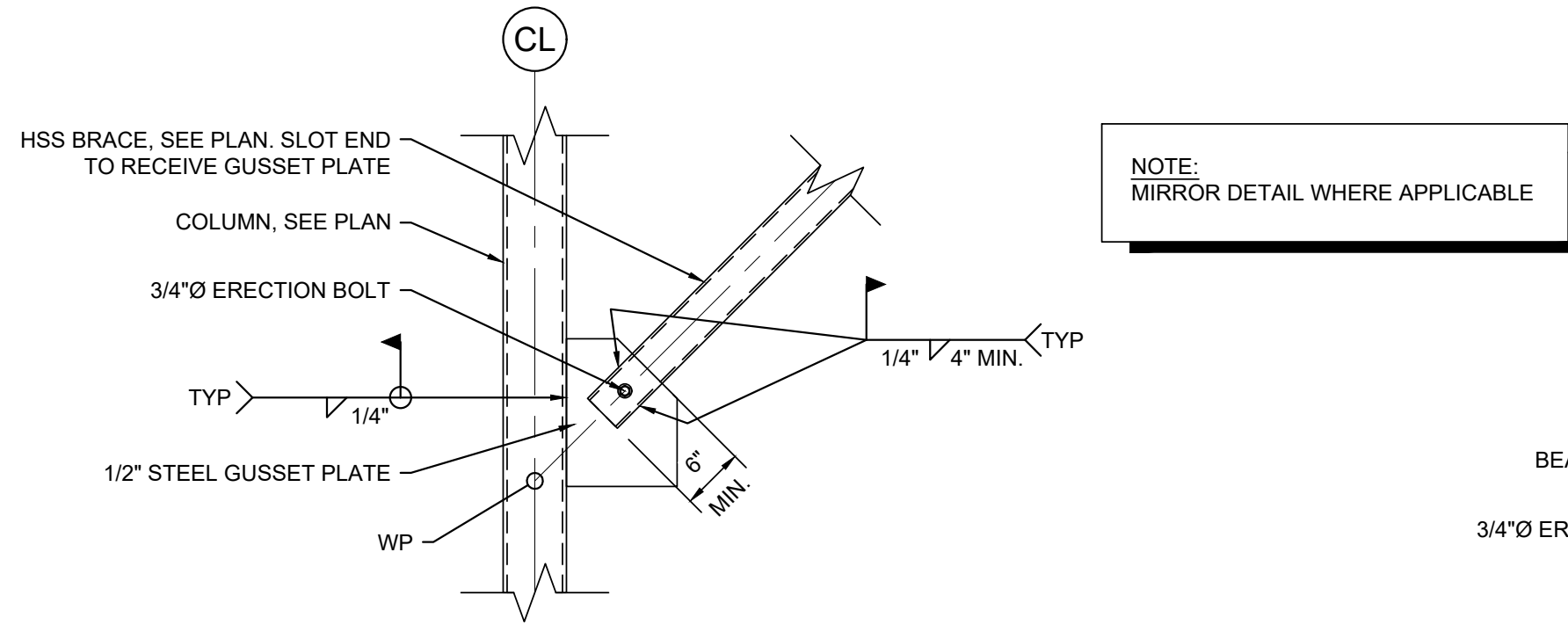
2 TYPICAL BEAM SHEAR CONNECTION
Scale: 3/4" = 1'-0"



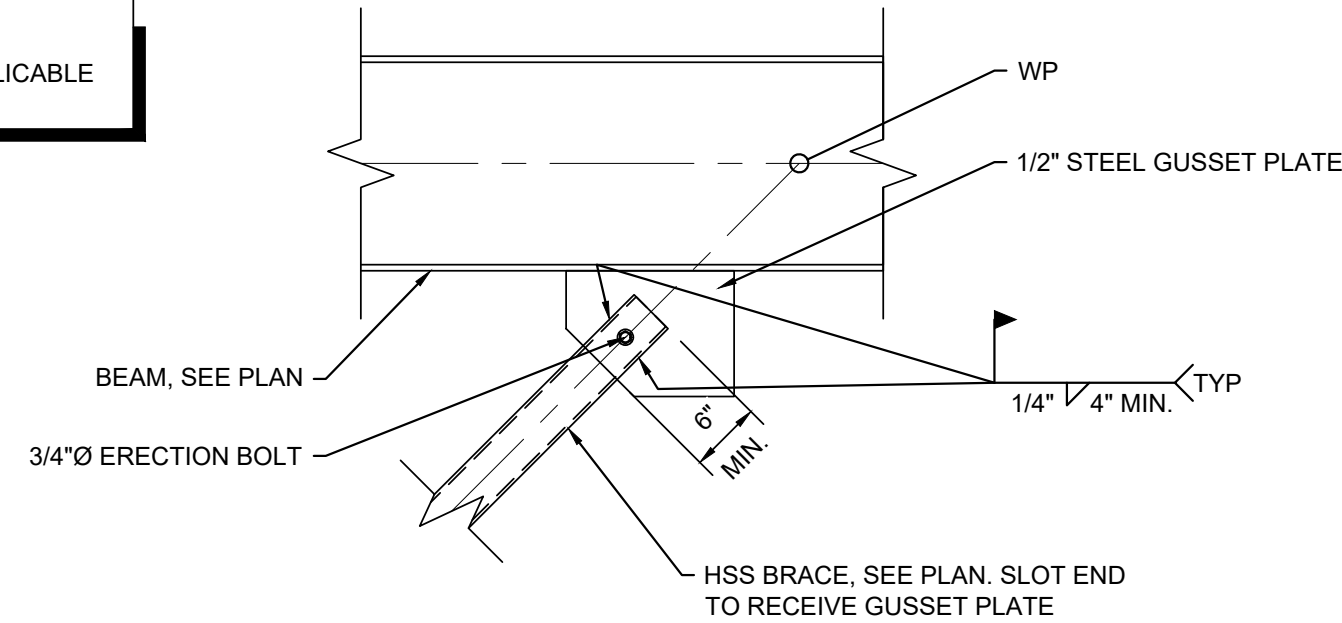
3 STEEL BASE PLATE DETAILS
Scale: 3/4" = 1'-0"



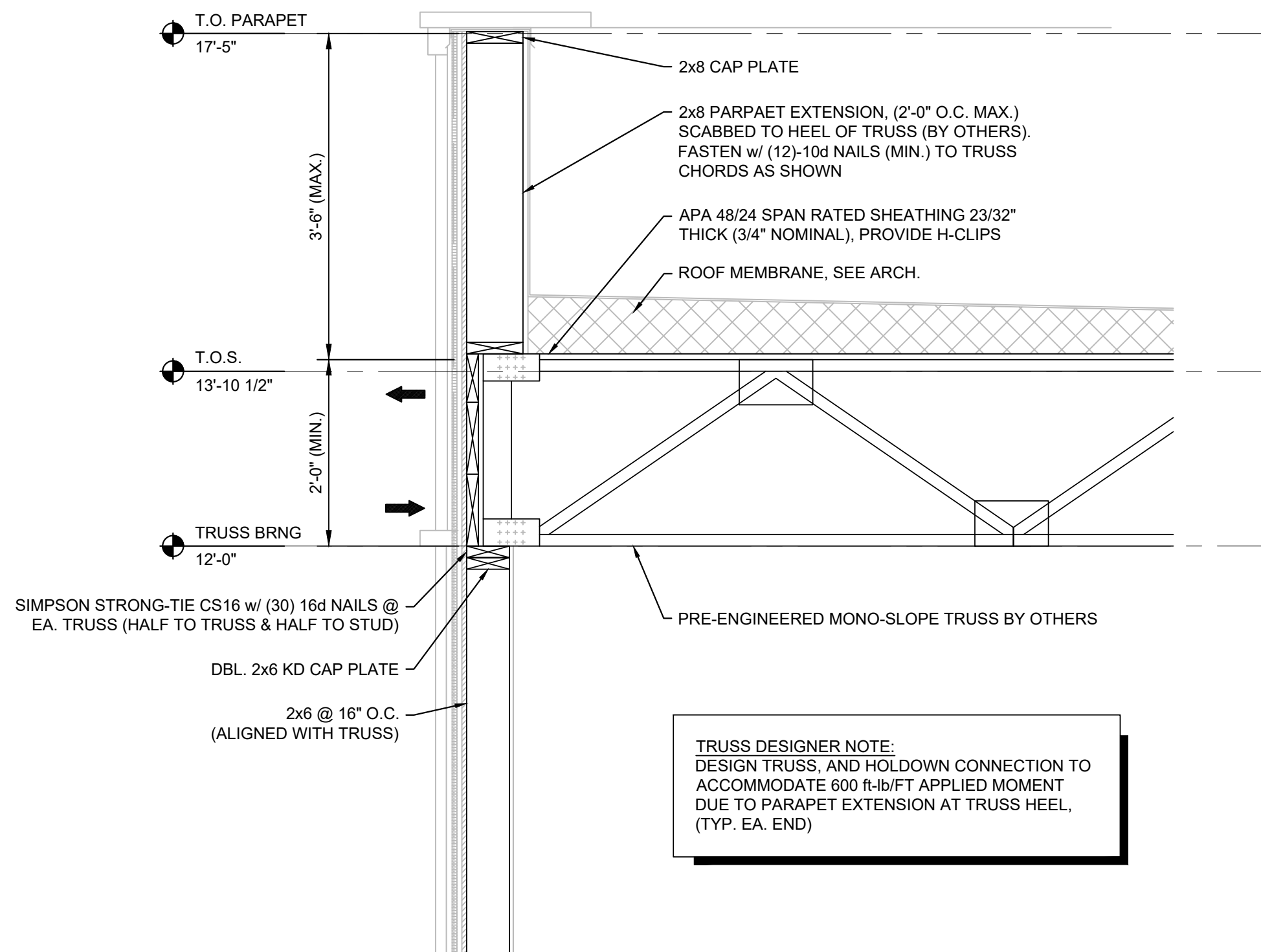
4 WOOD TRUSS TO STEEL BEAM CONNECTION
Scale: 3/4" = 1'-0"



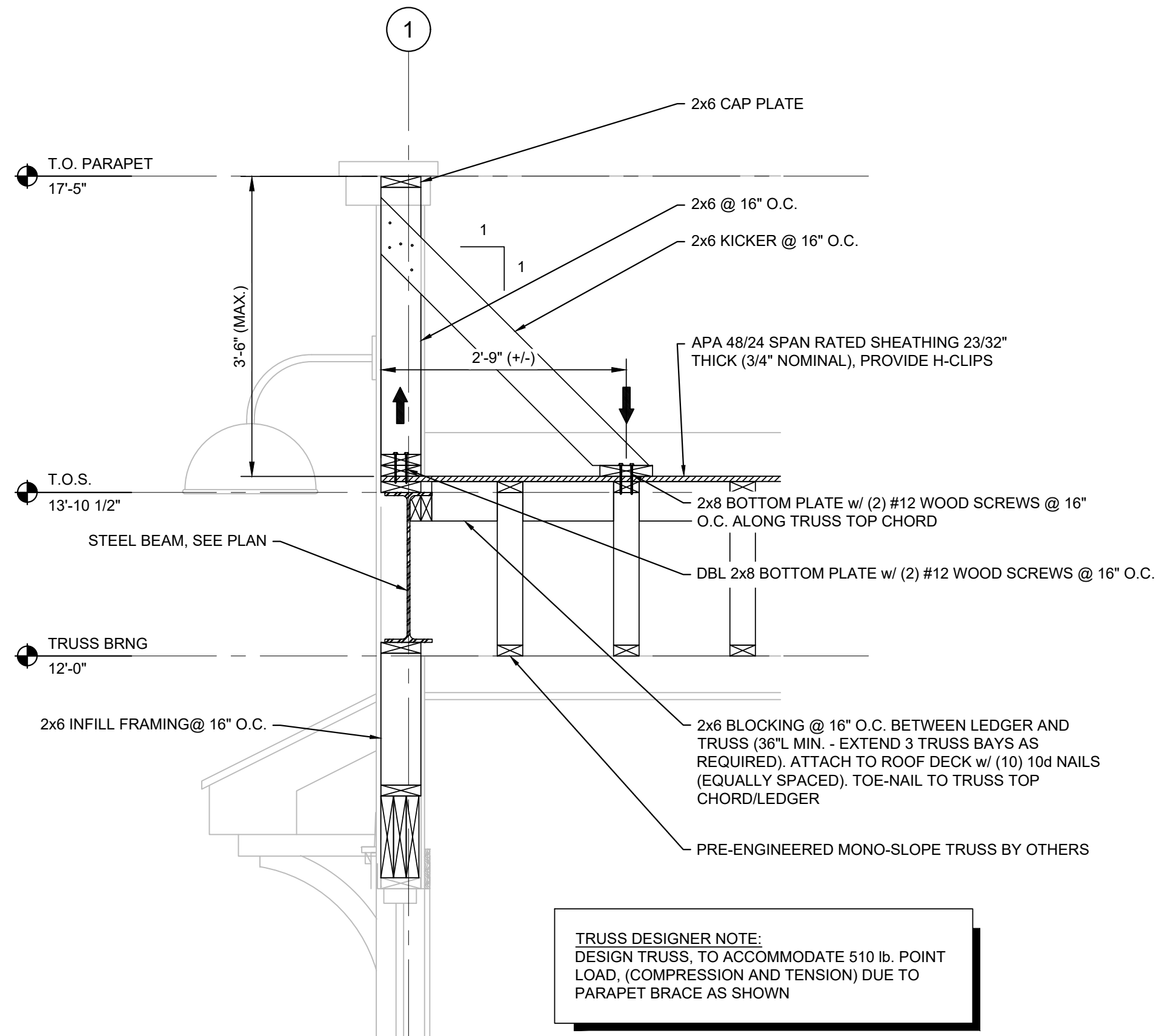
5 KNEE BRACE DETAIL @ MID-COLUMN
Scale: 3/4" = 1'-0"



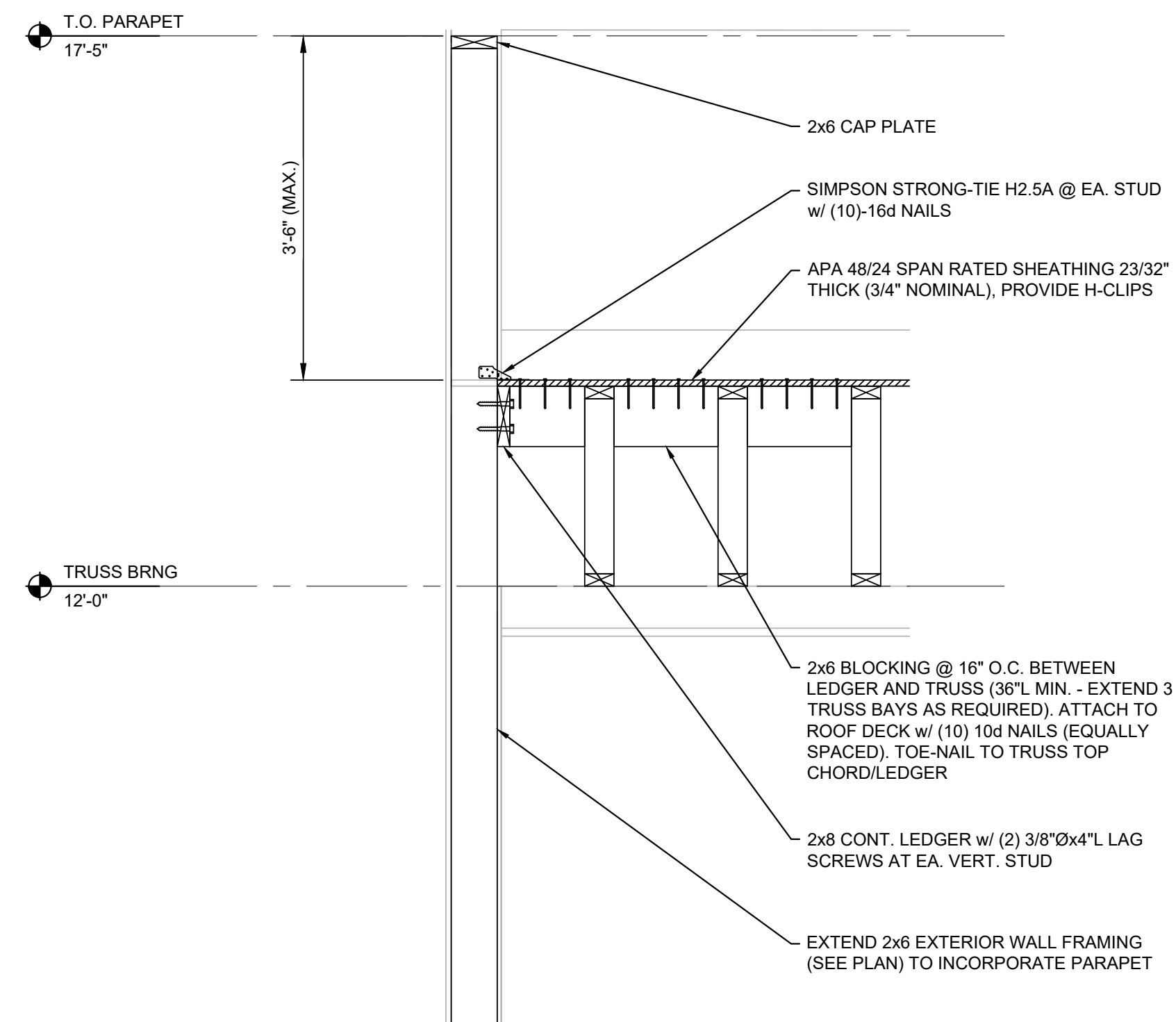
6 KNEE BRACE DETAIL @ MID-BEAM
Scale: 3/4" = 1'-0"



7 WOOD TRUSS BEARING w/ PARAPET
Scale: 3/4" = 1'-0"



8 PARAPET @ FRONT ELEVATION
Scale: 3/4" = 1'-0"

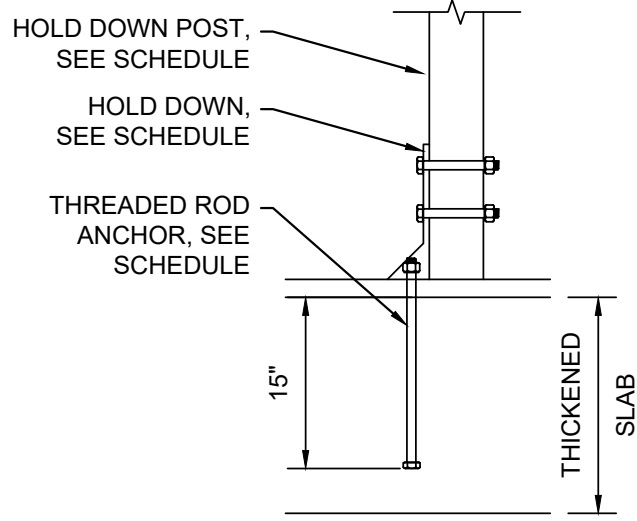
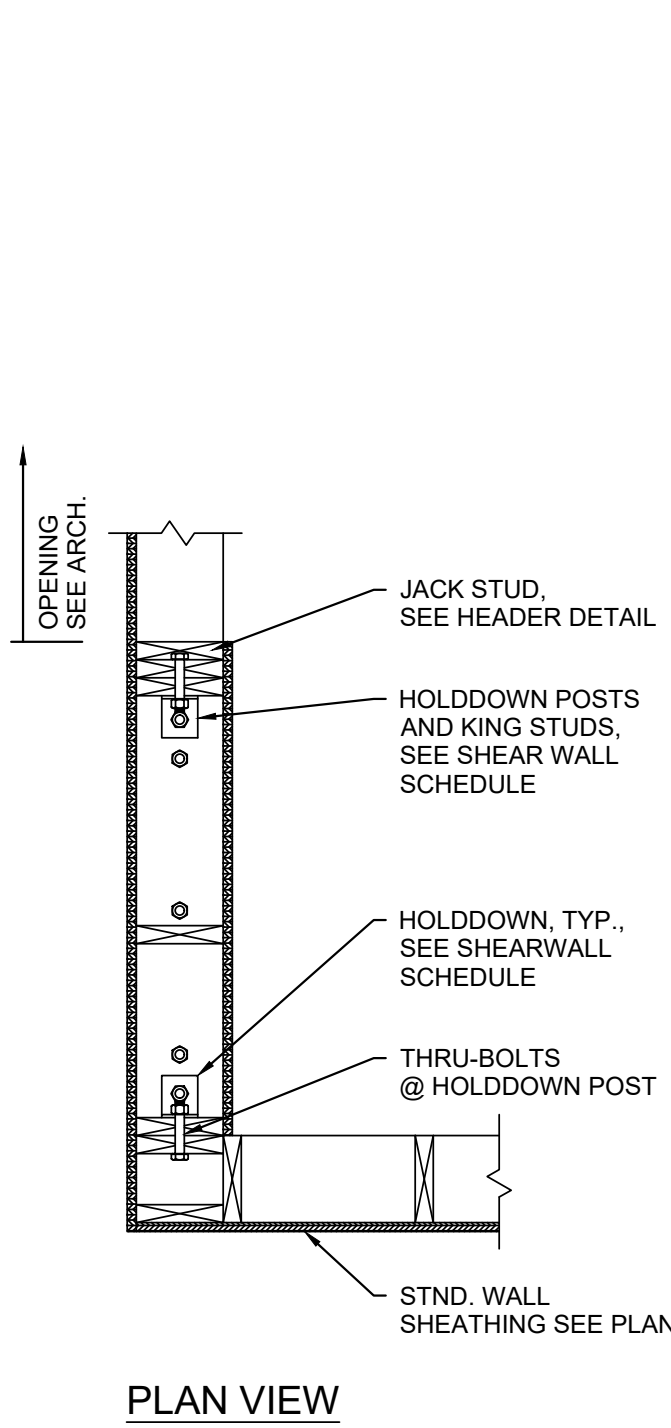


9 PARAPET @ SOUTH ELEVATION
Scale: 3/4" = 1'-0"

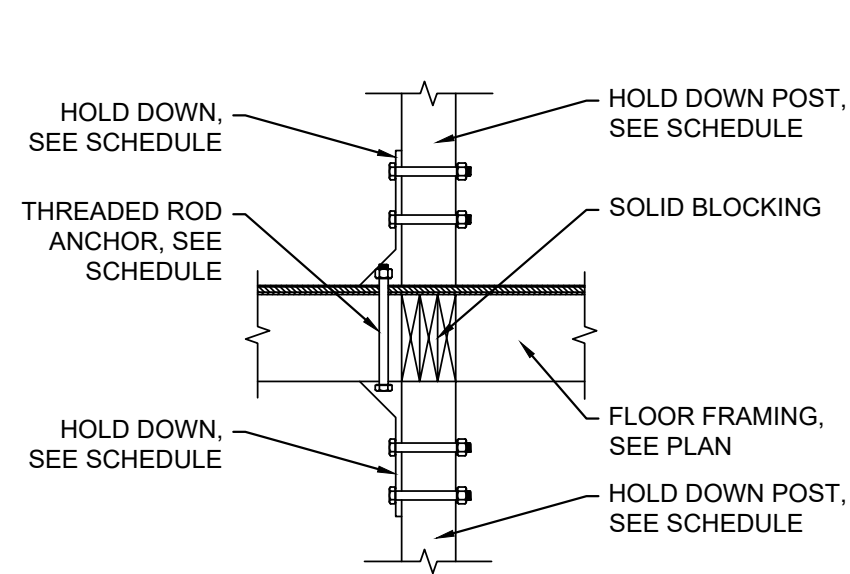
SHEARWALL SCHEDULE									
FLOOR	LAYERS OF SHEATHING	NAIL/SPACING		HOLDDOWN			HOLDDOWN POST # OF STUDS	SILL PLATE ANCHORS	
		EDGE	FIELD	SIZE	THRU BOLTS	ANCHOR/ EMBEDMENT		SIZE	SPACING
1ST	1	10d/ 3"oc	10d/ 12"oc	SIMPSON HD3B	(2)5/8"Ø	5/8"Ø THREADED ROD / N.A.	(2)2x6	16d COMMON NAILS	(2)@16"

NOTES:

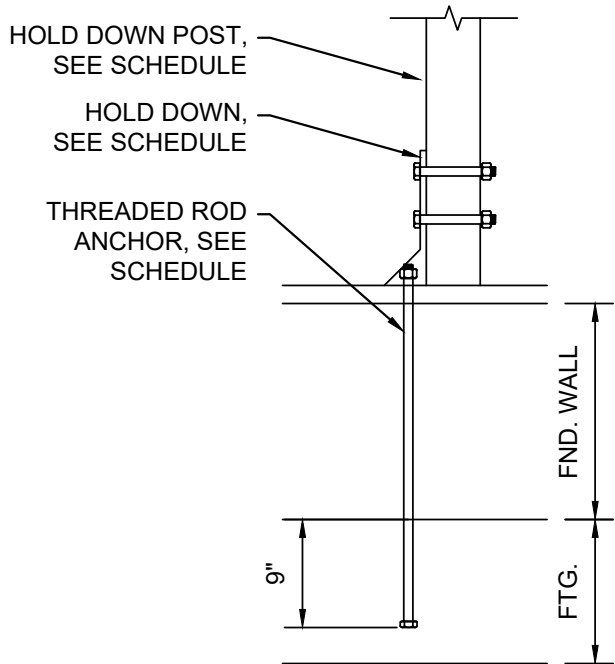
- ALL SHEATHING SHALL BE 19/32" THICK APA 32/16 STRUCTURAL 1 SPAN RATED OSB OR PLYWOOD. AT DOUBLE SIDED SHEARWALLS SHEATHING SHALL BE APPLIED TO BOTH FACES (ONE LAYER EACH SIDE OF WALL).
- ALL SHEATHING MUST BE INSTALLED HORIZONTALLY WITH THE LONG DIMENSION ACROSS THE STUDS.
- WALLS ON ELEVATED FLOORS ARE TO HAVE SPECIFIED HOLDDOWNS INSTALLED AT BOTH THE BASE OF REFERENCED WALL, AS WELL AS AT THE HEAD OF THE WALL BELOW. HOLDDOWNS ARE TO BE CONNECTED WITH THREADED ROD BETWEEN FLOORS AS NOTED.
- DRILL & SET ALL HOLDDOWN ANCHORS W/ HILTI RE-500 EPOXY.
- NAIL SHEATHING TO EACH HOLDDOWN STUD W/ SPECIFIED EDGE NAILING PATTERN.
- NAIL SHEATHING TO EMBED PSL OR LVL COLUMNS WITH (3) ROWS OF SPECIFIED NAILS @ 3" O.C. STAGGERED
- WHERE STEEL COLUMNS ARE EMBEDDED IN SHEARWALLS, PROVIDE (2)FULL HEIGHT STUDS EACH SIDE OF COLUMN AND THRU BOLT WITH 1/2 DIA. BOLTS AT 12" O.C. VERTICALLY.



ANCHORAGE AT THICKENED SLAB



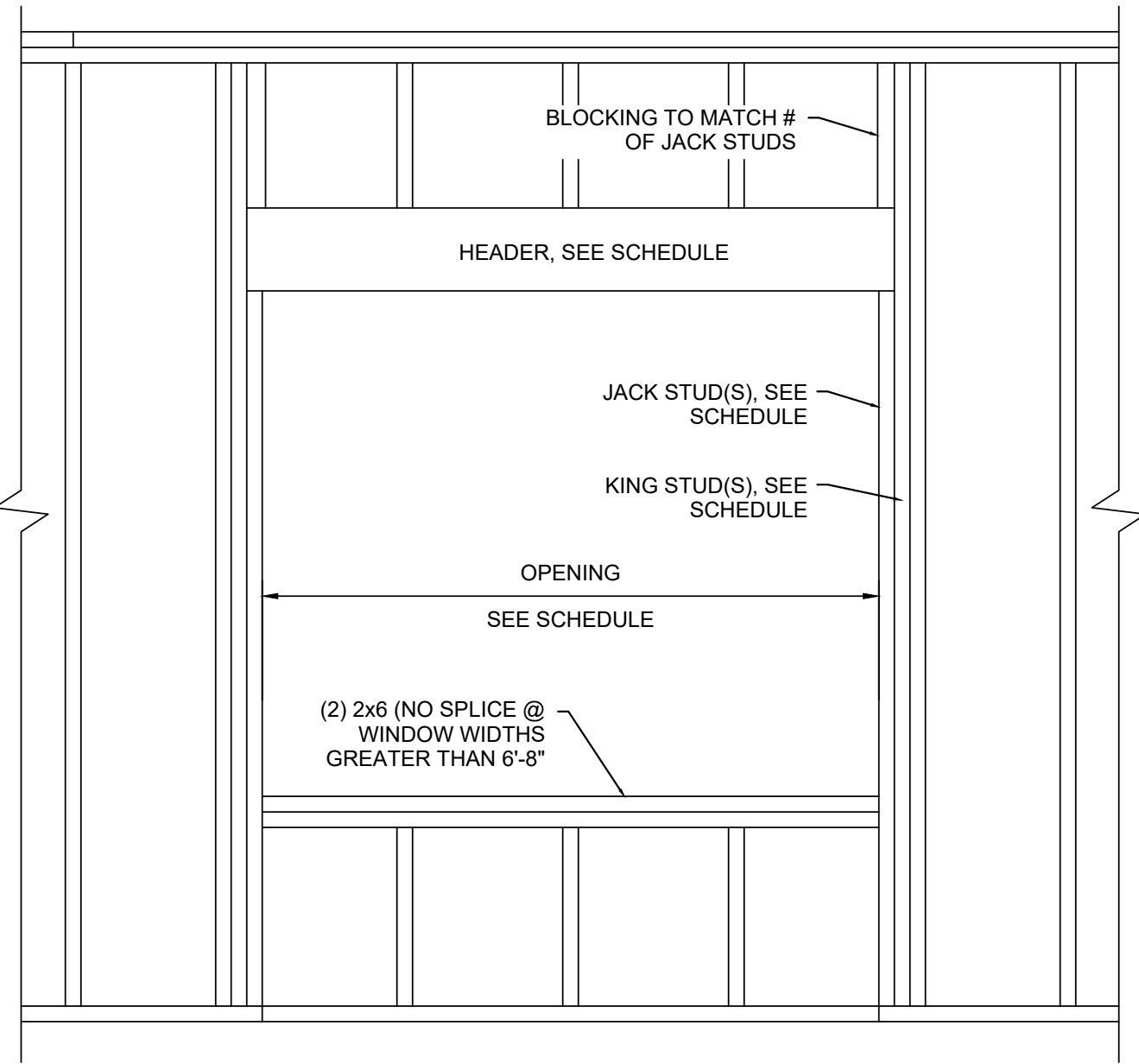
FLOOR TO FLOOR CONNECTION



ANCHORAGE AT WALL

1 SHEARWALL SCHEDULE

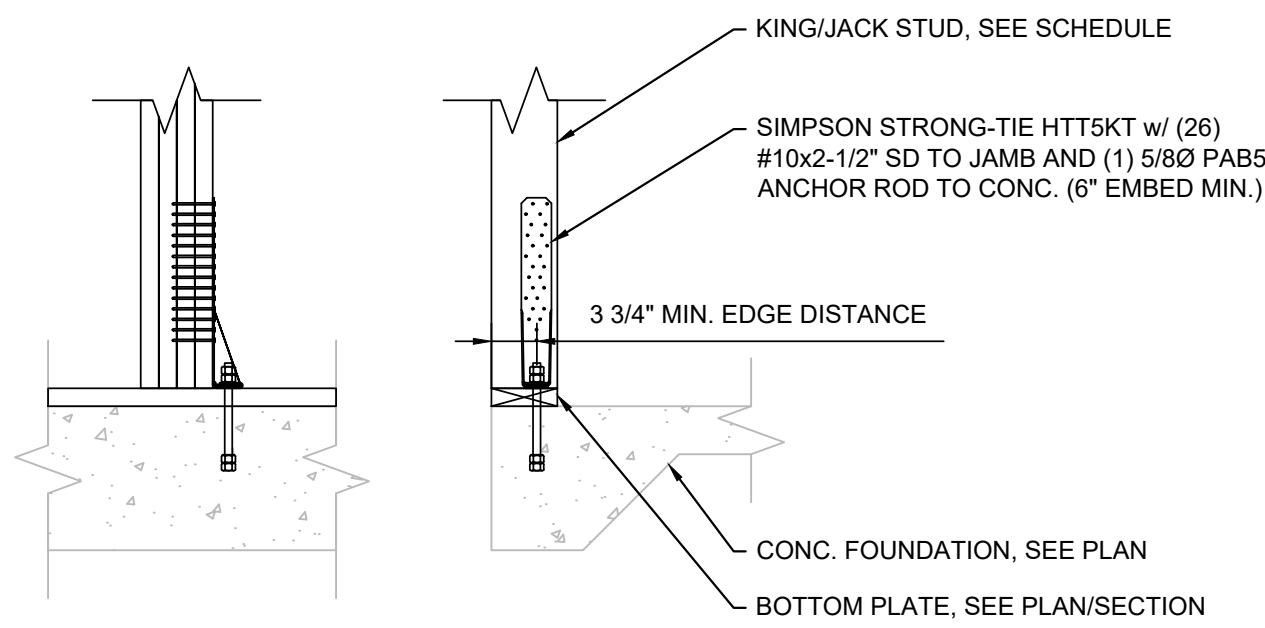
Scale: 3/4" = 1'-0"



2 OPENING SCHEDULE

Scale: 3/4" = 1'-0"

HEADER SCHEDULE			
MARK	HEADER MEMBER	# JACK STUDS	# KING STUDS
H1	(3) 2x12	1	3
H2	(2) 1 3/4"x11 1/4" LVL	2	4



ANCHORAGE AT JAMB

SEALED CONSTRUCTION
DOCUMENTS TO BE ISSUED
ONCE VERIFICATION
COMMENT RESPONSES
ARE RECEIVED

ATLANTIC BEACH BTS

ATLANTIC BEACH, NORTH CAROLINA

Project Name

FRAMING DETAILS

Sheet Title

DESIGNED BY: JTF

DRAWN BY: JTF

APPROVED BY: HMM

PROJECT #: 23-017

DATE: 05/01/2023

No.	Revision	Date

Sheet

S5.4

FOR APPROVAL ONLY

DIVISION 15A – PLUMBING

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Plumbing fixtures, water heaters, and any other equipment necessary.
 2. Cold and hot water piping and insulation.
 3. DWV piping.
 4. Connection of all equipment; drain, vent, water.

- B. All work under this contract shall be installed in compliance with the latest edition of the following codes and standards insofar as they apply.
1. The National Electrical Code.
 2. 2018 N.C. Building Code, Plumbing, and all applicable category codes.
 3. American Society of Sanitary Engineering Standard 1010.
 4. All local codes and ordinances.

- C. These codes are minimum standards. If codes require a more stringent method of construction than the specifications require, the codes shall govern.

- D. The Plumbing Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.

- E. Obtain all permits, licenses, inspections, etc., required for the work, and pay for the same.

1.2 INTENT

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

1.3 COORDINATION

- A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.
- B. Locations shown are approximate. The Plumbing Contractor shall refer to the architectural drawings for placement of equipment, fixtures, etc. Where locations are not clear, the Contractor shall obtain the exact locations from the Architect.

- C. Coordinate all exterior piping connections w/Architect, site contractor/plans. Verify manhole elevations and provide backwater valves as required if flood level rims are below next upstream manhole cover elevation. Fixtures with flood level rims above upstream manhole shall not discharge thru by valve. Notify engineer of backwater valve requirement, any issue prior to bid.

1.4 SHOP DRAWINGS

- A. Shop drawings shall be submitted for plumbing fixtures and for pipe. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 – PRODUCTS

2.1 FIXTURES

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

2.2 PIPING

- A. Drain-Waste-Vent: All DWV piping shall be Schedule 40 PVC-DWV u.c.n., with the following exceptions: Use cast iron piping in all return air plenums, penetrations of rated walls/floors/ceilings, and in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings. ABS or cast iron piping shall be used for drainage/discharge with a temperature greater than 140 deg. F for a minimum distance of 10'-0".
- B. Hot and cold water piping above grade: Type "L" copper w/solder joints (ASTM-B88), hard drawn with wrought copper fittings (ANSI B16.22). PEX piping with copper fittings may be used with owner/tenant approval and as allowed per code. Copper piping shall be used in areas/walls adjacent to cooking equipment exhaust hoods. Review Arch. and Mech. drawings.

- C. Cold water piping below grade: Type "K" copper (ASTM-B88) soft drawn.
- D. Hangers: Use pipe hangers where required on 8-foot centers with saddles to avoid crushing insulation.

- E. Solder: 95/5. Lead free.

- F. Unions: Provide unions where indicated on drawings, in long runs of piping (except drainage) and at equipment to provide convenient disassembly. Provide dielectric unions when connecting copper tubing to equipment and piping made of ferrous materials.

2.3 CLEANOUTS

- A. Hex plugs in rough areas: Recessed plugs with cover plates in exposed locations.

2.4 SHOCK ARRESTERS

- A. Provide shock arresters as required by codes, manufacturer's recommendations and accepted industry standards for quality construction. Provide for all quick closing valves.

PART 3 – EXECUTION

3.1 CONNECTIONS

- A. This contract includes complete connection of cold water, hot water, drainage, and vent piping as required. All fittings, valves, accessories, cutoffs, drains, etc., required to complete such connections shall be included.

- B. The connection to water closets shall be made watertight with gasket and wax ring. Floor flanges shall be caulked into position. Plastic caps shall be provided on the tie down bolts, and shall be secured in place by screwing down on threaded brass washers.

- C. Where water pipes connect to exposed chrome plated trim, use proper chrome plated escutcheons.

3.2 SERVICE ACCESS

- A. All valves and accessories shall be insulated so that they can be properly serviced. In no case shall the Plumbing Contractor install equipment or other components in situations that do not meet code requirements or manufacturer's requirements. Provide access doors as required to access valves, etc.

3.3 ROUTING OF PIPING

- A. Coordinate routing of piping with others, line up work true to or at right angle to adjacent surfaces and in a workmanlike manner. Support all interior piping from building structure by means of hanger or inserts to maintain pitch of lines, to prevent vibration, and to secure piping place.

- B. Space pipe hangers per NCSBC- Plumbing Sect. 308.5.

- C. Pipe hangers for insulated lines shall have suitable saddles to protect insulation.

3.4 INSULATION

- A. All H/W and C/W piping shall be insulated with a min. of 1" inch elastomeric insulation (R=8.5 min.) in unconditioned areas. See NCSBC-Plumbing Sect. 305 for all protection requirements. All H/W piping of circulating systems shall be insulated with 1" insulation per Sect. C404.4 of the NCSBC 2018 Energy Conservation Code.
- B. Provide pre-fabricated insulation kits for all sink and lavatory exposed drain and supply piping.

3.5 INSPECTIONS AND TESTS

- A. Before being concealed, all water, soil and vent piping shall be tested to determine if they are water- and air-tight.

- B. Prior to placing into service, entire system shall be tested for leaks in strict accordance with state and local codes.

3.6 STERILIZATION OF PIPING

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

3.7 SERVICE PRESSURE

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

3.8 DRAINDOWN

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

3.9 CLEAN UP

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

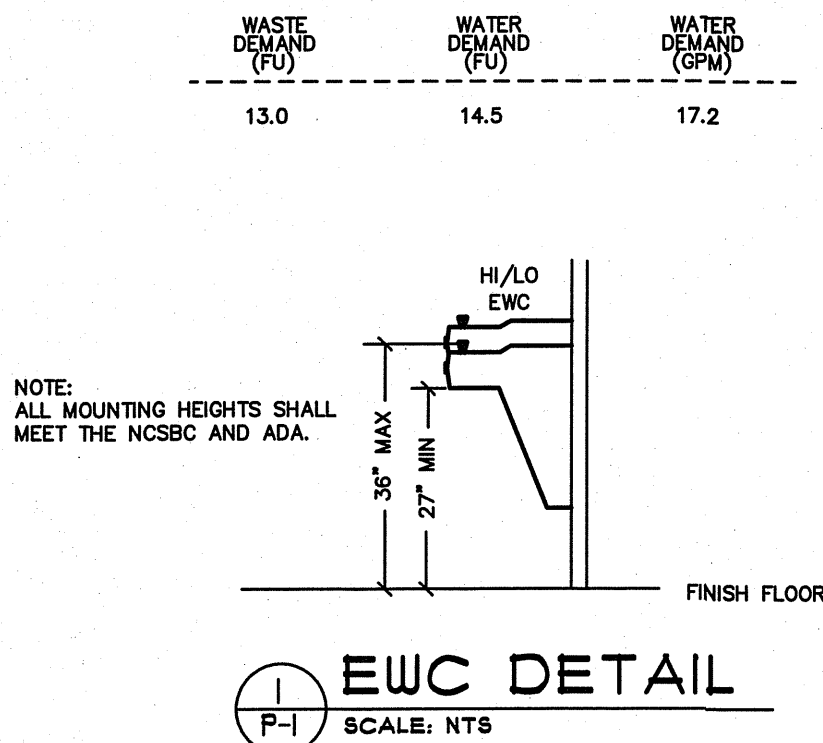
3.10 GUARANTEES

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

GENERAL NOTES – PLUMBING

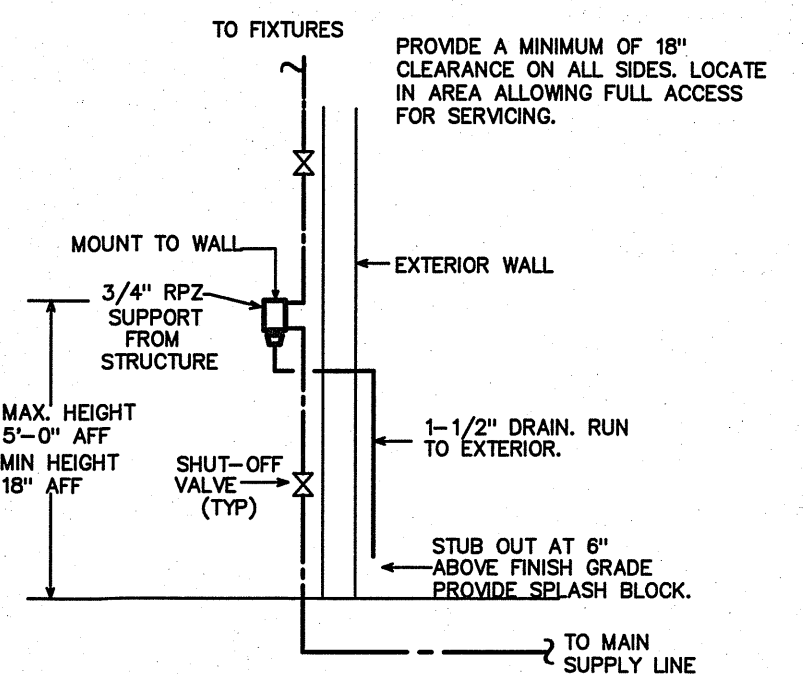
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE, ALL LOCAL AND OTHER APPLICABLE CODES.
2. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE PLUMBING CONTRACTOR (PC) SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC).
3. THE PLUMBING PLANS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

LOAD SUMMARY – PLUMBING



SYMBOL LEGEND – PLUMBING

SYMBOL	DESCRIPTION (U.O.N.)
	WASTE PIPING (W)
	VENT PIPING (V)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	SHUT-OFF VALVE
	DIELECTRIC UNION
	CLEANOUT FINISH FLOOR
	WCO/HCO
	COFG
	-PROVIDE FLUSH
	VENT THRU ROOF (VTR)
	A.F.F.
	U.O.N.
	ONE HOUR FIRE BARRIER



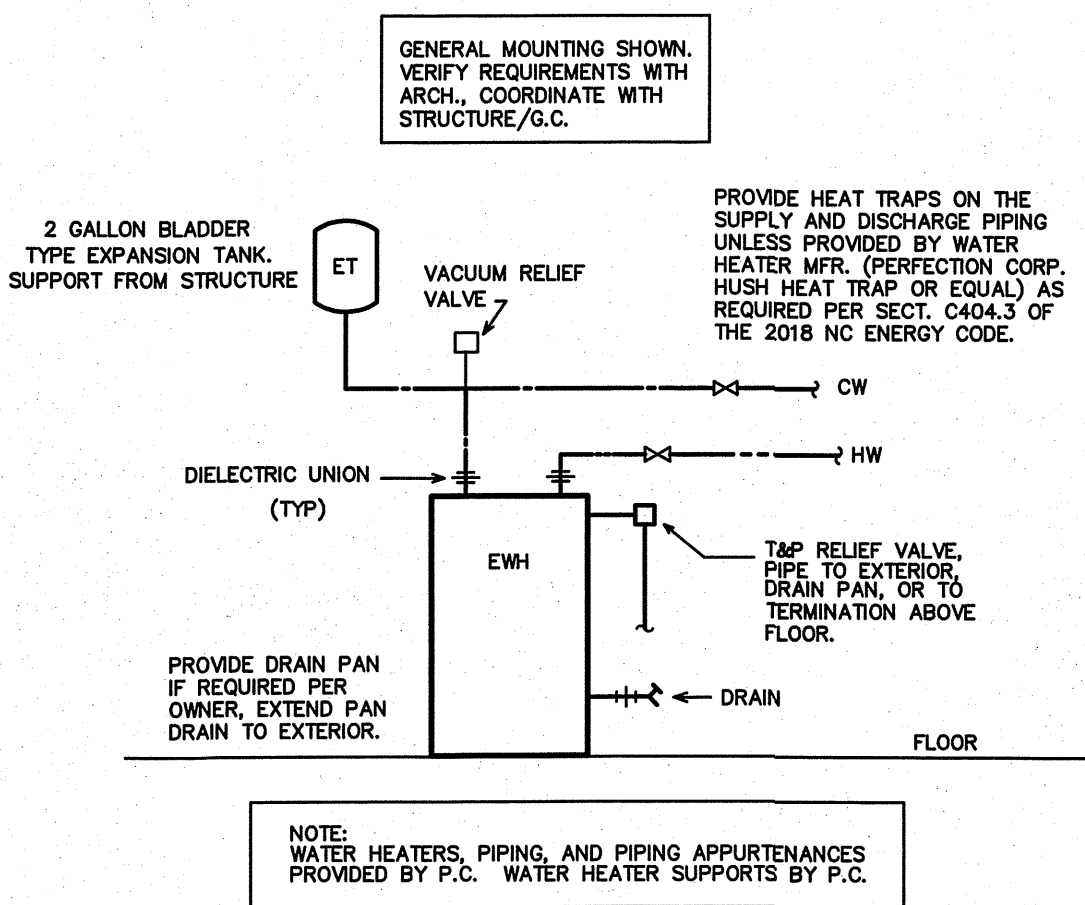
2 RPZ MOUNTING DETAIL
SCALE: NTS

FIXTURE SCHEDULE – PLUMBING *

- ET* EXPANSION TANK
AMTROL MODEL ST-5, 2.0 GALLON, STEEL CONSTRUCTION, NON-ASME RATED.
- EWC* ELECTRIC WATER COOLER
ELKAY BARRIER FREE WATER COOLER MODEL #LZSTL8SC, FILTERED, ADA COMPLIANT. VERIFY MODEL- H/L/O SIDE WITH TENANT, ARCH. PIPE TO SINGLE DRAIN AND SUPPLY LINE.
- EW* ELECTRIC WATER HEATER
A.O. SMITH MODEL EJC-6, 6 GALLON, 1,650 WATTS, 120V, 3/4" INLET AND OUTLET. PROVIDE DRAIN PAN, EXPANSION TANK AND PRESSURE RELIEF VALVE.
- FP* FREEZE PROOF HOSE BIBB
WOODFORD MODEL #19, FREEZE PROOF HOSE BIBB WITH BACKFLOW PREVENTER. COORDINATE MOUNTING W/TENANT. PROVIDE TEE KEY OR LOCK SL-17 IF REQUIRED. VERIFY MOUNTING LOCATION, COORDINATE STEM LENGTH PER WALL THICKNESS.
- LAV* LAVATORY (WALL MOUNT)
KOHLER CHESAPEAKE LAVATORY, K-1728, VITREOUS CHINA, 4" CENTERS, ADA COMPLIANT. PROVIDE DELTA MODEL 523LF-HGMDF FAUCET, 0.5 GPM MAX WITH GRID STRAINER. PROVIDE P-TRAP AND SHUT-OFF VALVES.
- RPZ* 3/4" REDUCED PRESSURE BACKFLOW PREVENTER
WATTS MODEL #LF009M3QT, 3/4" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION. VERIFY INSTALLATION LOCATION/CLEARANCES.
- WC* WATER CLOSET (ADA FLUSH TANK)
KOHLER HIGHLINE WATER CLOSET, K-3979, ADA COMPLIANT 1.6 GPF. PROVIDE PROPER OPEN FRONT ADA SEAT, K-7637 SUPPLY AND STOP, MAX SEAL, CLOSET BOLT KIT. PROVIDE FLUSH CONTROL ON SIDE OPPOSITE GRAB BAR.

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

3 EWH DETAIL
SCALE: NTS

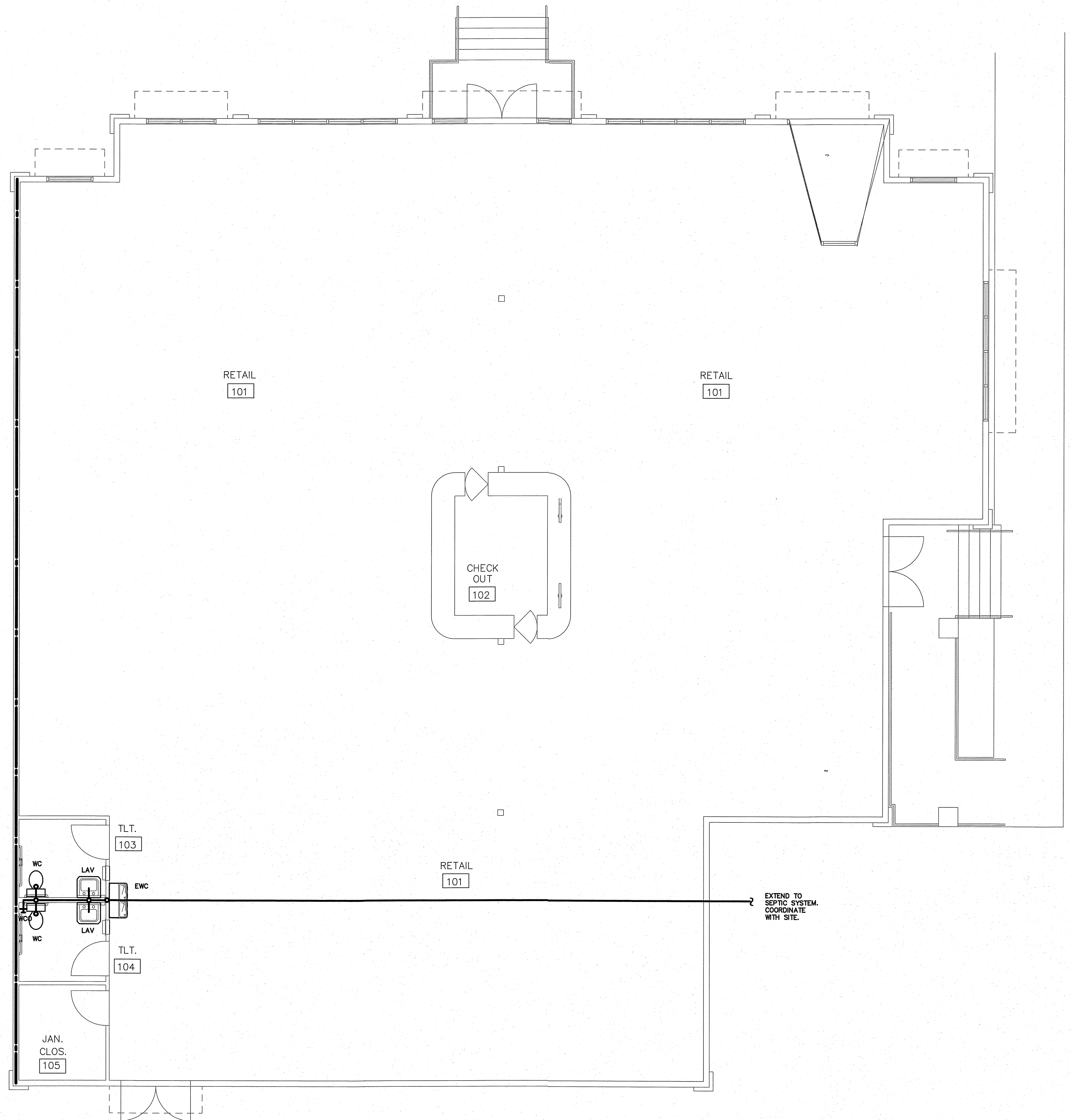
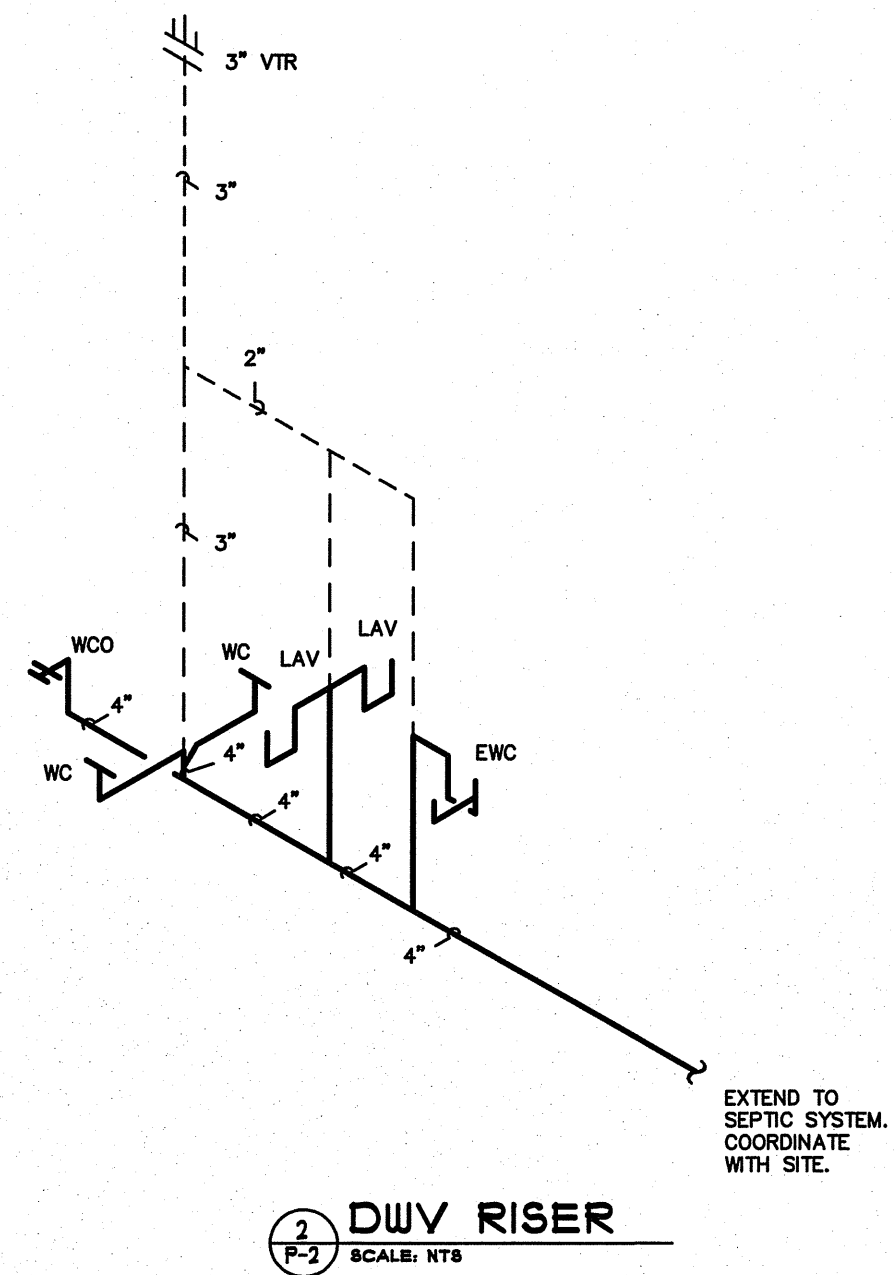


(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE		
FIXTURE TYPE	DRAIN	VENT
(EWC) ELECTRIC WATER COOLER	1 1/4"	1 1/4"
(LAV) LAVATORY	1 1/2"	1 1/4"
(WC) FLUSH TANK WATER CLOSET	3"	1 1/2"

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

NOTE:
PROVIDE PROPER VENT THRU ROOF (VTR).
RUN HORIZONTALLY AS REQUIRED TO
MAINTAIN 10'-0" CLEARANCE FROM ANY
INTAKES. PROPERLY FLASH ANY ROOF
PENETRATION. (TYP)



DWV PLAN
SCALE: 3/16"=1'-0"

(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE		
FIXTURE TYPE	CW	HW
(EWC) ELECTRIC WATER COOLER	1/2"*	-
(FPHB) FREEZE PROOF HOSE BIBB	1/2"	-
(LAV) LAVATORY	1/2"	1/2"
(WC) FLUSH TANK WATER CLOSET	1/2"	-

* PROVIDE BACKFLOW PREVENTER PER NCSDC-PLUMBING SECT. 608.3, EX. ASSE 1024 (WATTS SERIES 7 OR EQUAL) ASSE 1022 (WATTS SERIES SD-3 EQUAL) ETC., WHERE REQUIRED IF NOT AN INTEGRAL PART OF THE EQUIPMENT.

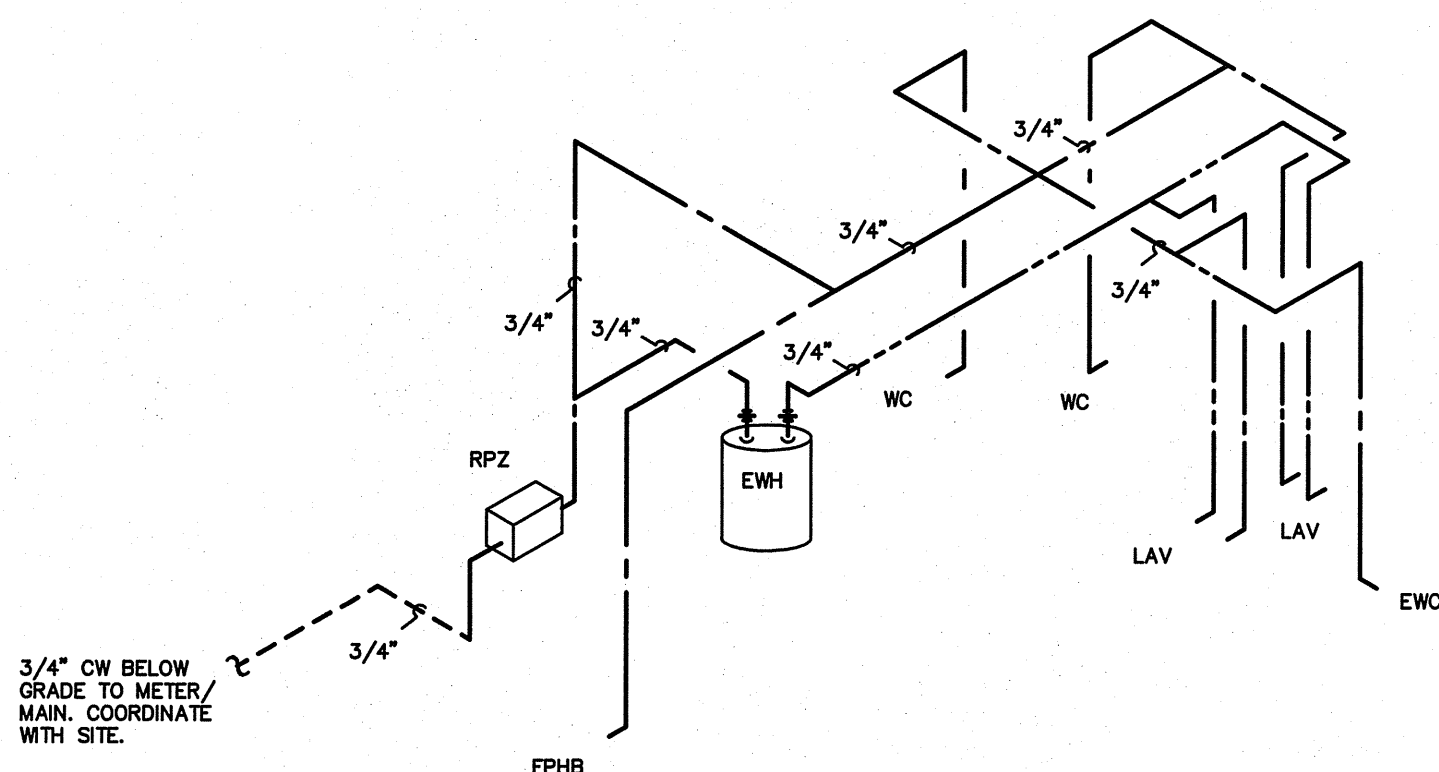
RISER NOTES:

REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE. SEE PIPE SIZING SCHEDULE.

MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED. PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.

NOTE:

SEE PLAN FOR SHUT-OFF VALVE LOCATIONS. COORDINATE LOCATION AND NUMBER WITH LOCAL INSPECTIONS DEPARTMENT. PROVIDE ACCESS DOORS IF REQUIRED.



2 WATER RISER
P-3 SCALE: NTE

RISE TO RUN ABOVE CEILING.

RISE TO RPZ. VERIFY LOCATION.

3/4" CW BELOW GRADE TO METER/MAIN. COORDINATE WITH SITE.

NOTE: VERIFY W/OWNER, SITE, G.C., ETC., IF RPZ IS REQUIRED. PROVIDE LOCAL AHJ WITH ANY REQUIRED RPZ DOCUMENTATION.

NOTE: VERIFY QUANTITY AND MOUNTING LOCATION OF FPHB W/OWNER, ARCH. (TYP)

WATER PLAN
P-3 SCALE: 3/16"=1'-0"

ENGINEER

BURKE DESIGN GROUP
3305-109 DURHAM DRIVE
RALEIGH, NC 27603
PHONE: (919) 771-1916
FAX: (919) 779-0828
email: ben@bdg-nc.com
Corp. License # C-2652

Coastal
Architecture
P.L.L.C.

Architectural
Design
Planning
Interiors

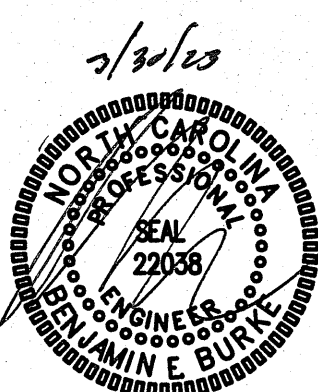


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ATLANTIC BEACH BTS
115 WEST FORT MACON ROAD
ATLANTIC BEACH, NORTH CAROLINA



WATER
PLAN

22012

ISSUED: 3-30-23
DWG BY: DS
CKD BY: BEB

REVISIONS

SHEET NO.

P-3

ROOF DRAIN PLAN SPECIFICATIONS

- RD-1 THRU RD-8 SHALL BE EQUAL TO ZURN MODEL Z100, 15" DIA. CAST IRON ROOF DRAIN, 4" OUTLET/PIPING SIZE U.O.N. DRAIN SHALL BE COMPATABLE WITH THE ROOFING SYSTEM. COORDINATE EXACT MODEL, DOME STYLE, ETC., AND LOCATION WITH ARCHITECT/G.C.
- ERD-1 THRU ERD-3 SHALL BE EQUAL TO ZURN MODEL Z100, 15" DIA. CAST IRON ROOF AND OVERFLOW DRAIN, 6" OUTLET/PIPING SIZE U.O.N. DRAIN SHALL BE COMPATABLE WITH ROOFING SYSTEM. PROVIDE MODEL WITH 2" WATER DAM (MIN.) FOR SECONDARY DRAINAGE HEIGHT. VERIFY DAM HEIGHT, COORDINATE DOME STYLE, LOCATION WITH ARCHITECT/G.C.
- ERD-4 THRU ERD-8 SHALL BE EQUAL TO ZURN MODEL Z100, 15" DIA. CAST IRON ROOF AND OVERFLOW DRAIN, 4" OUTLET/PIPING SIZE U.O.N. DRAIN SHALL BE COMPATABLE WITH ROOFING SYSTEM. PROVIDE MODEL WITH 2" WATER DAM (MIN.) FOR SECONDARY DRAINAGE HEIGHT. VERIFY DAM HEIGHT, COORDINATE DOME STYLE, LOCATION WITH ARCHITECT/G.C.
- ALL ROOF DRAIN PIPING SHALL BE CAST IRON. ALL HORIZONTAL ROOF DRAIN PIPING SHALL BE SLOPED AT 1/4" PER FOOT. ALL HORIZONTAL ROOF DRAIN PIPING SHALL MATCH ROOF DRAIN UNIT OUTLET DIAMETER IF DIRECTLY CONNECTED (U.O.N.), AND ALL HORIZONTAL PIPING CONNECTED TO (DOWNSTREAM OF) VERTICAL ROOF CONDUCTORS SHALL BE SIZED AS NOTED. SEE PLAN FOR (MIN.) SIZES. ALL VERTICAL ROOF DRAIN PIPING SHALL MATCH ROOF DRAIN UNIT OUTLET DIAMETER IF DIRECTLY CONNECTED, OR SHALL MATCH HORIZONTAL RD PIPING AFTER (DOWNSTREAM OF) THE HORIZONTAL PIPING CONNECTION (U.O.N.). PROVIDE PROPER INSULATION ON ALL VERTICAL RD CONDUCTORS THRU ALL FLOORS, AND AS REQUIRED PER NOTE #4. ALL PIPE SIZES SHOWN ARE REQUIRED MINIMUMS, MAINTAIN SIZES UNTIL LARGER SIZE REACHED. VERIFY LOCATION AND ROUTING THRU ALL FLOORS. COORDINATE WITH ARCH/GC, TO PROVIDE ROOF DRAIN CLEANOUT IN VERTICAL PIPING BETWEEN 7" AND 28" A.F.F., G.C. TO PROVIDE WCO AS REQUIRED. WCO NOT SHOWN ON PLANS, LOCATE AT BASE (A.F.F.) OF ALL RD STACKS.
- ALL ROOF DRAIN LEADERS SHALL BE RUN TO 5'-0" (MIN.) OUTSIDE OF BUILDING BY PLUMBING CONTRACTOR. SITE UTILITIES CONTRACTOR SHALL CONNECT TO PIPING AT END LOCATION.
- ALL EMERGENCY ROOF DRAIN PIPING SHALL TERMINATE ABOVE GRADE LEVEL. COORDINATE EXACT LOCATION, ROUTING W/STRUCTURE, ARCH. PROVIDE DOWNSPOUT NOZZLE (DSN) TIGHT AGAINST WALL AT DRAIN PIPE TERMINATION W/SPLASHLOCK (NOT SHOWN) IF REQUIRED. NOZZLE SHALL BE ZURN #2199 OR EQUAL, CAST BRONZE, SIZE TO MATCH PIPE SIZE. COORDINATE LOCATION WITH WINDOWS, DOORS, ETC. COORDINATE EXACT MODEL WITH ARCHITECT/OWNER. ERD TERMINATION/ DOWNSPOUT NOZZLE DISCHARGE TERMINATION LOCATION SHALL BE ABOVE GRADE IN A LOCATION THAT WOULD NORMALLY BE OBSERVED BY THE BUILDING'S OCCUPANTS OR MAINTENANCE PERSONNEL. COORDINATE LOCATION WITH ARCH., BLDG. OWNER.
- PROVIDE PROPER INSULATION ON ALL VERTICAL ROOF DRAIN CONDUCTOR PIPING, AND HORIZONTAL ROOF DRAIN PIPING INITIALLY CONNECTING TO ROOF DRAIN UNIT FROM AND INCLUDING ROOF DRAIN UNIT OUTLET THROUGH TO A MINIMUM OF 15'-0". INSULATION SHALL BE 1" GLASS FIBER INSULATION, WITH JACKETED PVC FITTING COVERS. FACTORY-FABRICATED FITTING COVERS MANUFACTURED FROM 20-MIL THICK, HIGH IMPACT, ULTRA-VIOLET RESISTANT PVC; OR ALUMINUM JACKET IN EXPOSED LOCATIONS: ASTM B 209, 3003 ALLOY, H-14 TEMPER SMOOTH FINISH, 0.020 INCH THICK WITH PRE-FORMED ELBOWS.

ROOF DRAIN SIZING SCHEDULE *

ROOF DRAIN #	DRAINAGE AREA (SQ. FT.)			MINIMUM PIPE DIA. SIZE (IN.) RD/ERD
	ROOF	PARAPETS AND/OR WALLS (1/2 OF TOTAL PER CODE)	TOTAL	
RD-1/ERD-1	842	109	951	4" / 6"
RD-2/ERD-2	898	39	937	4" / 6"
RD-3/ERD-3	908	39	947	4" / 6"
RD-4/ERD-4	775	62	837	3" / 4"
RD-5/ERD-5	775	62	837	3" / 4"
RD-6/ERD-6	880	25	905	3" / 4"
RD-7/ERD-7	707	39	746	3" / 4"
RD-8/ERD-8	407	41	448	3" / 4"

* PRIMARY ROOF DRAIN SIZING PER 2018 NCBC- PLBG, CH. 11. SIZES BASED ON RAINFALL RATE FOR 5"/HR, 2% SLOPE. SECONDARY (EMERGENCY) ROOF DRAIN SIZING BASED ON 8"/HR. ROOF DRAIN UNITS/PIPING DESIGN SIZE MAY BE LARGER THAN (MIN.) SIZES SHOWN. SEE ROOF DRAIN PLAN AND SPECIFICATIONS.

ROOF DRAIN LEGEND

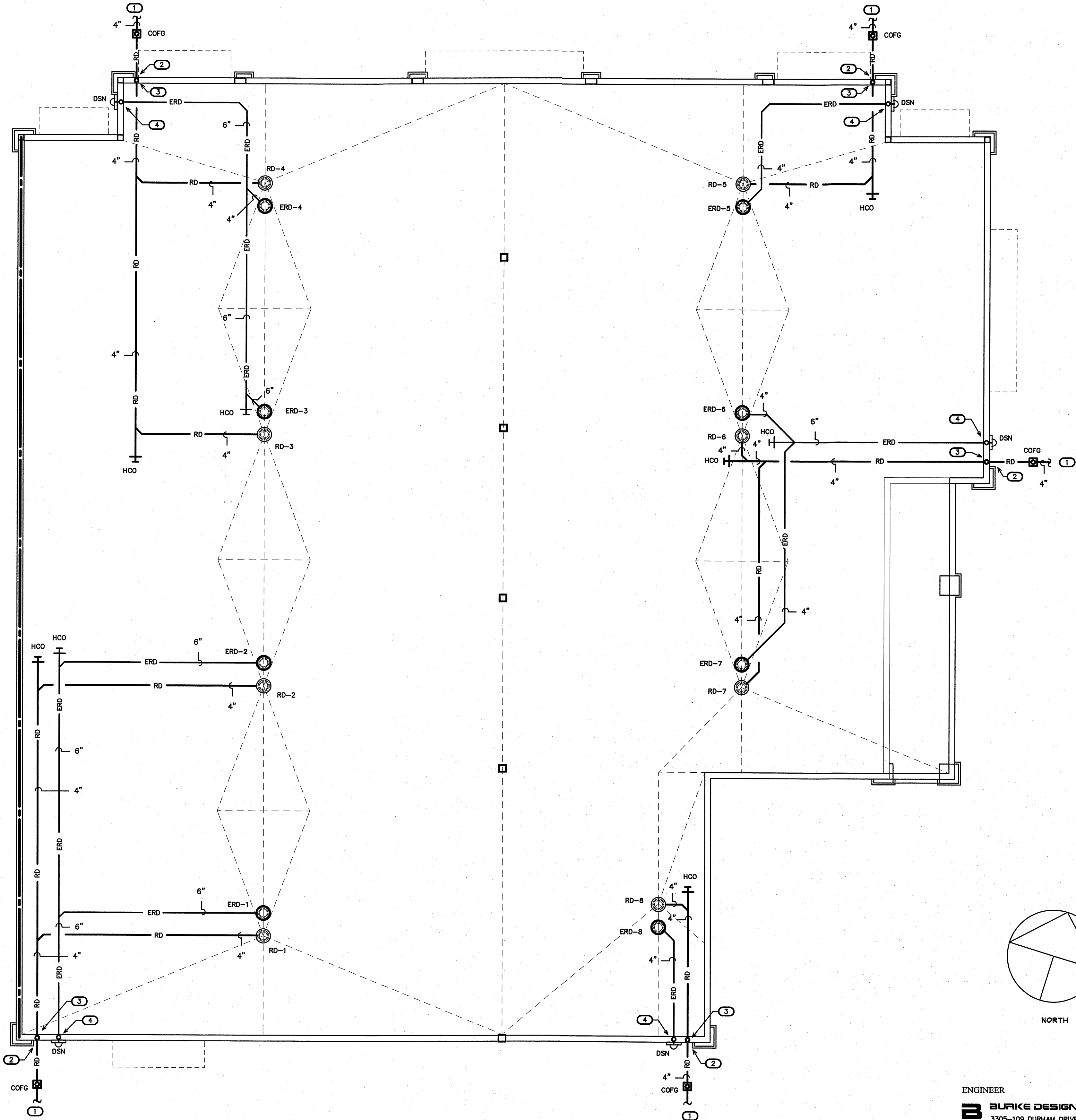
- RD PRIMARY ROOF DRAIN PIPING (RD)
- ERD EMERGENCY ROOF DRAIN PIPING (ERD)
- DSN DOWNSPOUT NOZZLE (DSN)
- RD-X ROOF DRAIN (SEE PLAN/SPECS FOR 'X')
- ERD-X EMERGENCY ROOF DRAIN (SEE PLAN/SPECS FOR 'X')

KEY NOTES FOR SHEET P-4

- RD PIPING BELOW GRADE TO RAINTANKS AS REQUIRED. COORDINATE WITH ARCH., SITE.
- PROVIDE SAME SIZE OVERFLOW OUTLET PIPING FOR RD ABOVE GRADE PER SITE PLANS- SEE SITE STORMWATER/IMPERVIOUS AREA PLAN DETAIL. COORDINATE W/ARCH., G.C., SITE.
- RD PIPING DROP THRU STRUCTURE TO RUN BELOW GRADE. VERIFY LOCATION AND ROUTING THRU THE BUILDING. COORDINATE WITH ARCH., G.C. TO PROVIDE DRAIN STACK CLEANOUT IN VERTICAL PIPING BETWEEN 7" AND 28" A.F.F., G.C. TO PROVIDE WCO ACCESS PANEL IF IN FINISHED WALL.
- ERD PIPING DROP THRU STRUCTURE TO DOWNSPOUT NOZZLE (DN). VERIFY LOCATION AND ROUTING THRU THE BUILDING. COORDINATE TERMINATION LOCATION WITH ARCH., G.C. AND TO PROVIDE ROOF DRAIN CLEANOUT IN VERTICAL PIPING BETWEEN 7" AND 28" A.F.F., G.C. TO PROVIDE WCO ACCESS PANEL IF IN FINISHED WALL.

NOTE: ALL HORIZONTAL/VERTICAL ROOF DRAIN CONDUCTORS SHALL BE CAST IRON AND PROPERLY INSULATED THRU ALL FLOORS. ALL PIPING OFFSETS MAY NOT BE SHOWN. VERIFY ROUTING OF ALL PIPING THRU ALL FLOORS. COORDINATE W/STRUCTURE, ALL TRADES, ETC. COORDINATE ALL EXPOSED PIPING, CLEANOUTS (LOCATIONS, ROUTING, LABELING/INSULATION/PAINTING, ETC.), WITH ARCHITECT, OWNER, GC. (TYP)

NOTE: SEE ARCH. DRAWINGS FOR VERIFICATION OF ROOF PLAN, SLOPES, ETC. COORDINATE WITH G.C., ALL TRADES. ALL ROOF FEATURES, EQUIPMENT, ETC., MAY NOT BE SHOWN.



ROOF DRAIN PLAN
SCALE: 3/16"=1'-0"

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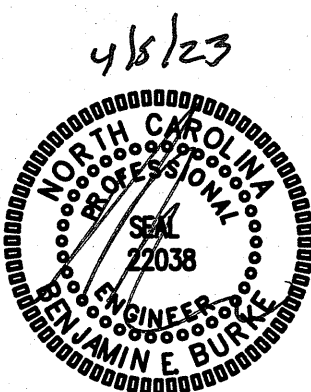
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ROOF DRAIN
PLAN

22012

ISSUED: 4-5-23
DWG BY: DS
CKD BY: BEB
REVISIONS

SHEET NO.
P-4

ROOFTOP UNIT EQUIPMENT SCHEDULE	
ROOFTOP UNIT #1 (RTU-1)	
RTU-1 HEAT PUMP SINGLE PACKAGE UNIT	* CARRIER MODEL #50HCQD08A1A5-0A0A0 SINGLE PACKAGE HEAT PUMP UNIT; 12.8 EER; 90,000 BTUH NET COOLING; 3000 CFM; 208 VOLT, 3 PHASE, COMP (2) @ 13.1 RLA, EA, IFM 5.2 FLA, 12 KW ELEC. HEAT, 33.4 FLA ELECTRIC HEAT, 80 MCA, 80A MOCP, 7.5 TON, PROVIDE PROGRAMMABLE THERMOSTAT AND FILTER RACK IN UNIT. PROVIDE MOTORIZED O.A DAMPER THAT WILL CLOSE WHEN FAN IS NOT RUNNING PER 2012 NC ENERGY CODE, ACCESS PANELS AND COIL GUARDS. PROVIDE ENTHALPY BASED ECONOMIZER.
ROOFTOP UNIT #2 (RTU-2)	
RTU-2 HEAT PUMP SINGLE PACKAGE UNIT	* CARRIER MODEL #50HCQD08A1A5-0A0A0 SINGLE PACKAGE HEAT PUMP UNIT; 12.8 EER; 90,000 BTUH NET COOLING; 3000 CFM; 208 VOLT, 3 PHASE, COMP (2) @ 13.1 RLA, EA, IFM 5.2 FLA, 12 KW ELEC. HEAT, 33.4 FLA ELECTRIC HEAT, 80 MCA, 80A MOCP, 7.5 TON, PROVIDE PROGRAMMABLE THERMOSTAT AND FILTER RACK IN UNIT. PROVIDE MOTORIZED O.A DAMPER THAT WILL CLOSE WHEN FAN IS NOT RUNNING PER 2012 NC ENERGY CODE, ACCESS PANELS AND COIL GUARDS. PROVIDE ENTHALPY BASED ECONOMIZER.

* OR APPROVED EQUAL

AIR DISTRIBUTION SCHEDULE							
MARK	* MANUFACTURER	MODEL NO.	NECK SIZE	FACE SIZE	MATERIAL	SERVICE	NOTES
CA	RUSKIN	CDF-20	S: 20"φ R: 20"φ	48" X 30"	ALUMINUM	CONCENTRIC SUPPLY & RETURN	LAY-IN CEILING, WHITE 4-WAY BLOW, EGG CRATE RETURN

* OR APPROVED EQUAL

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

EXHAUST FAN SCHEDULE	
EXHAUST FAN #1 & 2 (EF-1&2)	* CARNES MODEL# VCDD010C EXHAUST FAN, 93 CFM @ 1/4" SP, 640 RPM, 1.1 AMPS, 120V. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE SWITCH AND WIRE THE UNIT. THE HVAC CONTRACTOR SHALL PROVIDE UNIT, 6" RIGID DUCT TO WALL CAP. LOCATE EXHAUST TERMINATION A MINIMUM OF 10'-0" FROM ANY INTAKES.

* OR APPROVED EQUAL

FLEXIBLE DUCTWORK SIZES MAXIMUM CFM'S		
SIZES	SUPPLY	RETURN
6"	100	100
8"	175	175
10"	250	250
12"	400	350
14"	550	500
16"	NA	900

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

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

GENERAL NOTES - MECHANICAL

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

LEGEND - MECHANICAL

	RECTANGULAR DUCTWORK, INSIDE CLEAR DIMENSION INDICATED (WIDTH X HEIGHT)
	ROUND GALVANIZED STEEL DUCT INSIDE CLEAR DIMENSION INDICATED.
	FLUSH MOUNTED CONCENTRIC SUPPLY & RETURN DIFFUSER
	WALL MOUNTED THERMOSTAT (UNIT SERVED IS INDICATED)
	GRILLE TYPE
	MIN. CFM
	DUCT TYPE SMOKE DETECTOR
	REMOTE ALARM INDICATING DEVICE (RAID) FOR DUCT TYPE SMOKE DETECTOR
	ONE HOUR FIRE BARRIER

APPENDIX B

2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

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

MECHANICAL SYSTEMS, SERVICE SYSTEM AND EQUIPMENT

Thermal Zone

winter dry bulb	16F
summer dry bulb	83F

Interior Design Conditions

winter dry bulb	72F
summer dry bulb	75F
relative humidity	50%

Building Heating Load 128,100 BTU/hr

(Tenant space only)

Building Cooling Load 168,800 BTU/hr

(Tenant space only)

Mechanical Spacing Conditioning System

Unitary -- The tenant space is served the following systems:
(2) new 7.5 Ton rooftop heat pump unit

Boiler -- Not applicable to this project.

Chiller -- Not applicable to this project.

Equipment efficiencies

Efficiencies and outputs are listed on equipment
schedules -- See drawings.

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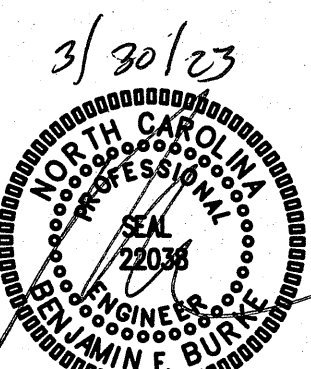
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HVAC NOTES
& SCHEDULES

22012

ISSUED: 03-21-2023

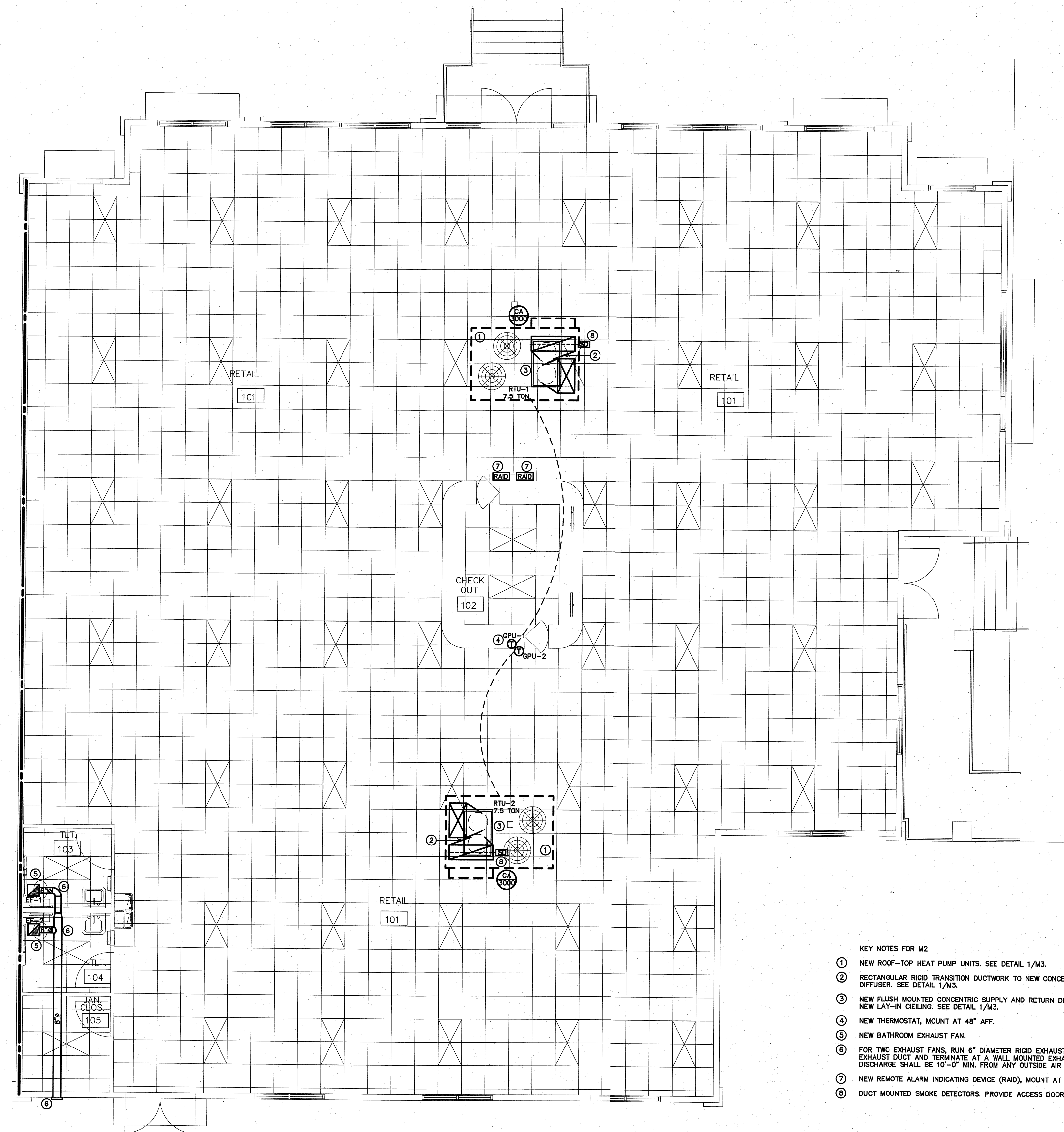
DWG BY: CLS

CKD BY: BEB

REVISIONS

SHEET NO.

M-1



- KEY NOTES FOR M2
- NEW ROOF-TOP HEAT PUMP UNITS. SEE DETAIL 1/M3.
 - RECTANGULAR RIGID TRANSITION DUCTWORK TO NEW CONCENTRIC DIFFUSER. SEE DETAIL 1/M3.
 - NEW FLUSH MOUNTED CONCENTRIC SUPPLY AND RETURN DIFFUSER IN NEW LAY-IN CEILING. SEE DETAIL 1/M3.
 - NEW THERMOSTAT, MOUNT AT 48" AFF.
 - NEW BATHROOM EXHAUST FAN.
 - FOR TWO EXHAUST FANS, RUN 6" DIAMETER RIGID EXHAUST DUCTS TO AN 8" EXHAUST DUCT AND TERMINATE AT A WALL MOUNTED EXHAUST CAP. EXHAUST DISCHARGE SHALL BE 10'-0" MIN. FROM ANY OUTSIDE AIR INTAKE.
 - NEW REMOTE ALARM INDICATING DEVICE (RAID), MOUNT AT 48" AFF.
 - DUCT MOUNTED SMOKE DETECTORS. PROVIDE ACCESS DOOR.

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

DIVISION 15 B - HEATING, VENTILATING AND AIR CONDITIONING

1.1 DESCRIPTION OF THE WORK

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

1.2 INTENT

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

1.3 COORDINATION

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

1.4 SHOP DRAWINGS

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

PART 2 - PRODUCTS

2.1 EQUIPMENT

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

2.2 PIPING

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

2.3 DUCTWORK

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

2.4 DUCT INSULATION (LOW PRESSURE)

- A. All insulation, linings, coverings and adhesives shall have a flame spread classification of 25 or less and a smoke developed rating of not more than 50, exposed exterior piping.
- B. All duct insulation shall comply with Section 604, of the N. C. Building Code: Mechanical Code
- C. All supply and return ductwork shall be completely insulated, either internally or externally.
- D. Rectangular ductwork shall be lined with two-inch thick, 1.5 lb. per cubic foot density, duct liner, Armstrong, GSO Ultraliner, Johns Manville or approved equal.
- E. As an alternative to duct liner rectangular duct may be wrapped with Class I - 2", 3/4 lb. density (R-5.5) thick reinforced foil back fiberglass insulation, Owens-Corning Series ED or equal. Tape shall be Kraft reinforced foil tape or equal.
- F. Exhaust air duct does not require insulation, unless otherwise noted on the plans.
- G. Insulation shall be held in place with adhesive and welding pins 16" on center.
- H. Duct dimensions shown on the drawings are Net Inside Dimensions

2.5 THERMOSTATS

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

2.6 ROOF PENETRATIONS

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

2.7 DUCT SMOKE DETECTORS

- A. Provide duct mounted smoke detectors for each RTU. Provide access doors and RAID's (remote alarm indicating devices) as required by State Building Code.
- B. Provide a duct smoke detection system UL approved for commercial use in duct systems per UL 268A. The duct detector shall be equal to a System Sensor model DHT00ACDCQ and the RAID shall be equal to a System Sensor model SSK451 with PS12/24LENSW add on strobe. Interconnect all duct detectors for common alarm.
- C. Upon alarm the detectors should provide a common audible and visual alarm through the RAID's. The detectors shall shut down the AHU's air flow. Provide for local testing and re-setting at the RAID location. Coordinate the locations of each RAID with the local fire marshal.
- D. A fire code permit may be required from the local building inspections department. The installing contractor must obtain this permit. The contractor must schedule an acceptance test prior to building acceptance with the local fire marshal. If the smoke detection system is monitored offsite a Knox key box system is required. Contact the local fire marshal for details.

PART 3 - EXECUTION

3.1 PIPING

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

3.2 ELECTRICAL WORK

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

3.3 CLEAN UP

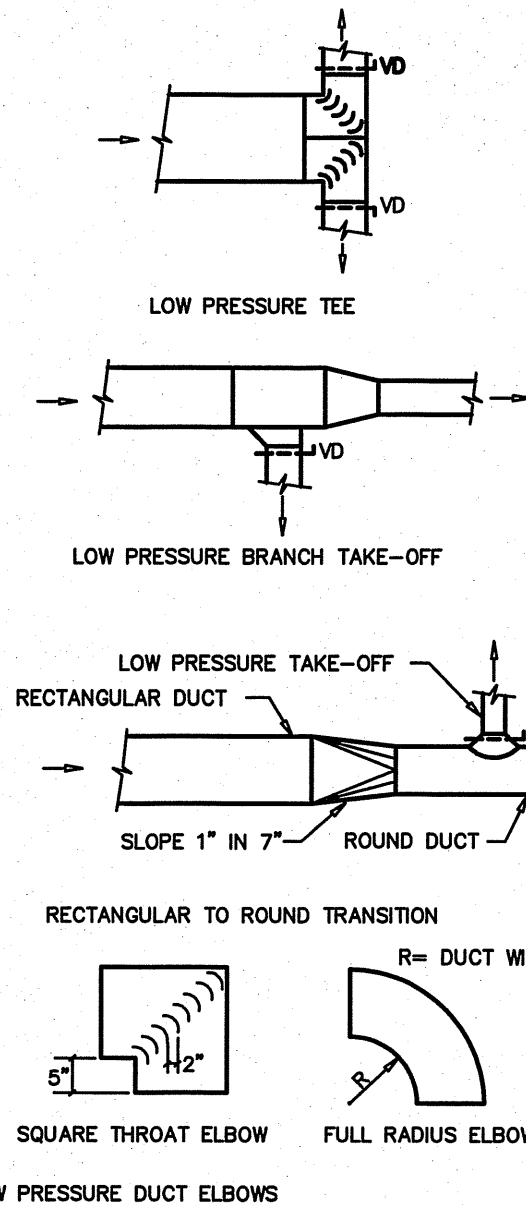
- A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.
- B. Furnish one box of clean filters, for each size required, at the time of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

3.4 OPERATOR'S MANUAL AND DIAGRAM

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

3.5 GUARANTEE

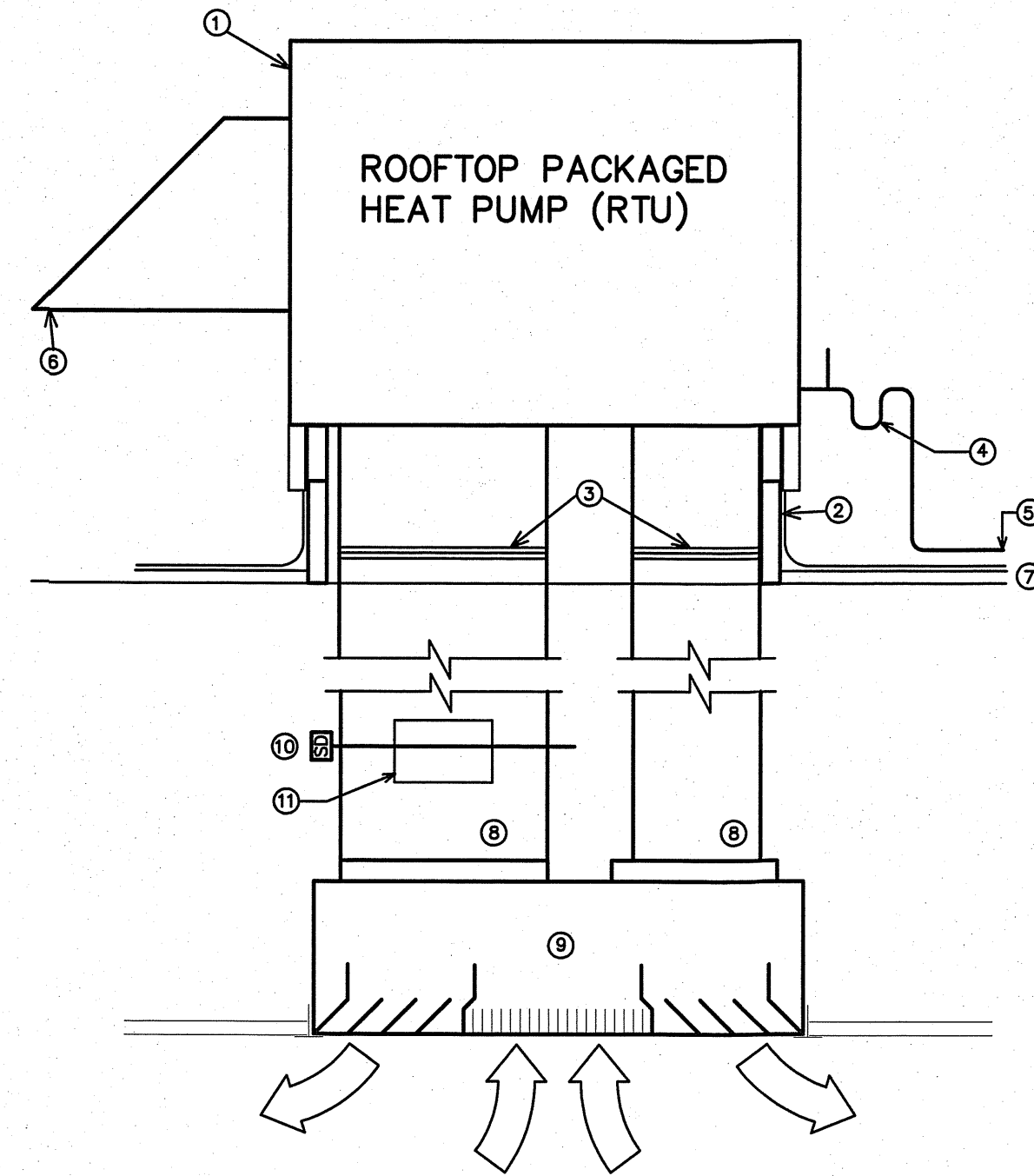
- A. Guarantee all materials and labor included in the HVAC work for a period of one year from date of final acceptance by the owner. In addition, motor compressors shall be a nonprorated five year warranty. Any part or parts of the work or equipment which prove to be defective during the guarantee period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



2

DUCT CONSTRUCTION DETAIL

SCALE: NOT TO SCALE



KEY NOTES FOR 2/M3

1. ROOFTOP SINGLE PACKAGE HEAT PUMP UNIT.
2. ROOF CURB PROVIDED BY HVAC CONTRACTOR FOR ROOF TOP UNIT. ALL ROOF WORK SHALL BE DONE BY LICENSED ROOFING CONTRACTOR HIRED BY THE HVAC CONTRACTOR.
3. FLEXIBLE CONNECTIONS
4. PROVIDE CONDENSATE DRAIN TRAP. SIZE PER MANUFACTURERS RECOMMENDATIONS.
5. CONDENSATE DRAIN. RUN TO ROOF DRAIN.
6. OUTSIDE AIR HOOD.
7. ROOF SYSTEM. COORDINATE TYPE WITH GENERAL CONTRACTOR. ALL WORK MUST MEET ORIGINAL ROOF WARRANTY REQUIREMENTS.
8. DUCT WORK FROM RTU DROP DOWN INTO SPACE AND CONNECT TO FLUSH MOUNTED CONCENTRIC DIFFUSER. SEE DIFFUSER MANUFACTURERS CONNECTION SIZES FOR TRANSITION.
9. FLUSH MOUNTED CONCENTRIC DIFFUSER IN LAY-IN CEILING.
10. INSTALL DUCT SMOKE DETECTOR IN ACCESSIBLE LOCATION. THE DETECTOR SHALL PROVIDE FOR UNIT SHUT DOWN. SEE SPECIFICATIONS. PROVIDE ON ALL ROOF-TOP UNITS
11. PROVIDE ACCESS DOOR. COORDINATE LOCATION WITH DUCT DETECTOR.

1

ROOF-TOP UNIT DETAIL

SCALE: NOT TO SCALE

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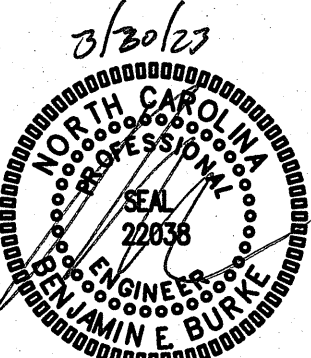


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HVAC SPECS & DETAILS

22012

ISSUED: 3-30-23
DWG BY: CLS
CKD BY: BEB
REVISIONS

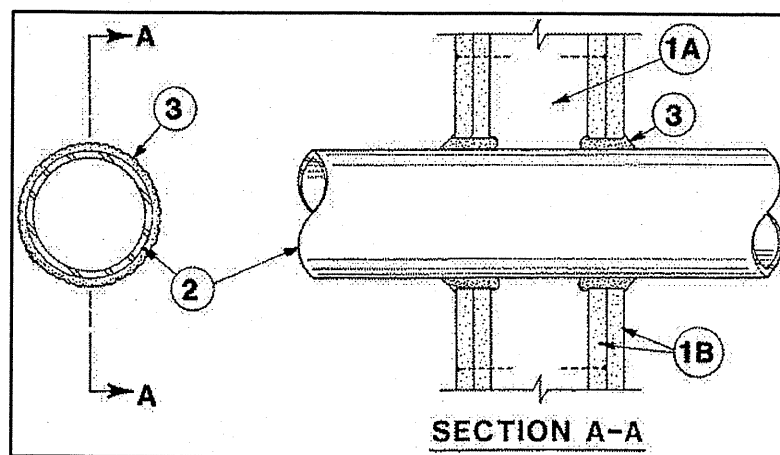
SHEET NO.
M-3

F Ratings — 1, 2, 3 and 4 Hr (See Items 2 and 3)

T Ratings — 0, 1, 2, 3, and 4 Hr (See Item 3)

L Rating At Ambient — less than 1 CFM/sq ft

L Rating At 400 F — less than 1 CFM/sq ft



1. **Wall Assembly** — The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the Individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.

B. **Gypsum Boards** — Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the Individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 28 in.

2. **Through-Penetrant** — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit, or tubing and periphery of opening shall be min of 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 24 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. **Conduit** — Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.

D. **Copper Tubing** — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

E. **Copper Pipe** — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

F. **Through Penetrating Products** — **Flexible Metal Piping** — The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEXLEX

3. Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG LLC

Fill, Void or Cavity Material — **Caulk or Sealant** — Min 5/8, 1-1/4, 1-7/8 and 2-1/2 in. thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In	F RATING Hr	T RATING Hr
1	1 or 2	0+, 1 or 2
1	3 or 4	3 or 4
4	1 or 2	0
6	3 or 4	0
12	1 or 2	0

+When copper pipe is used, T Rating is 0 hr.

3M COMPANY — CP 25WB+ or FB-3000 WT.

+Bearing the UL Classification Mark

DIVISION 18 — ELECTRICAL

PART 1 — GENERAL

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Electrical service and service equipment.
 2. Lighting and power distribution system.
 3. Provide lighting fixtures selected by owner with lamps to match.
 4. Wiring devices, boxes, cover plates, etc.
 5. Source of power for all items of equipment.
 6. Grounding.
 7. Other requirements and/or systems where shown.

B. All work shall be complete and items, equipment, etc., shall be electrically connected for proper and correct operation.

C. All work under this contract shall be installed in accordance with the latest edition of the following codes and standards insofar as they apply:

1. The 2020 National Electrical Code.
2. The National Electrical Safety Code.
3. Underwriter's Laboratories, Inc., Standards and approved listings.
4. Electrical Testing Laboratories standards.
5. North Carolina Building Code, Latest Edition and Revisions.
6. All local codes and ordinances.

D. The Electrical Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.

E. Obtain all permits, licenses, inspections, etc., required for the work and pay for the same. Furnish final certificate of inspection and approval from the electrical inspector having jurisdiction prior to acceptance of the work.

F. All work shall be done by skilled mechanics and shall present a neat, trim, workmanlike condition when complete.

1.2 INTENT

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

1.3 COORDINATION

A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.

B. Locations shown are approximate. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduits, etc., and do not show all offsets and other installation details which may be required. Coordinate all locations with architect before any rough-in.

1.4 SHOP DRAWINGS

A. Shop drawings shall be submitted for panels and service equipment, lighting, wiring devices, and cover plates. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 — PRODUCTS AND MATERIALS

2.1 GENERAL

A. All material shall be new and shall bear the manufacturer's name, trade name, and UL label where such standard has been established for the particular material. Materials shall be the standard products of manufacturer's regularly engaged in the manufacturer of the required type of equipment and the manufacturer's latest approved design.

1. Boxes installed in concealed locations shall be set flush with the finished surfaces.
2. Provide rated boxes in all fire barriers & walls installed per code.

2.2 NOT USED

2.3 CONDUCTORS

- A. Conductors shall be color coded, sizes #8 and larger may be color taped on the job. Color coding shall be: Standard Practice.
- B. Conductors shall be manufactured by Dodge, Southwire or approved equal. Conductors shall meet the latest requirements of NEMA and IPECA and shall be UL approved.
- C. Metallic sheathed "MC" cable may be used where allowed by N.E.C.
- D. Conductors shall be spliced and taped as follows:

1. Size #10 and #12, use Ideal "Wing Nuts" or TAB "Plugs" connectors. Connectors shall be rated for 150 degrees C for use in recessed lighting fixtures.
 2. Size #8 and larger shall be solderless screw and screw-clamping type, smoothly covered and shaped with rubber gum type with final cover vinyl plastic electrical type. In lieu of rubber gum and vinyl plastic type, factory fabricated approved preformed insulating covers may be used. All connectors shall be UL approved.
 3. No split-bolt type connectors may be used.
- E. All branch wire and connections shall be copper and sized per National Electric Code.
- F. All conductors shall be continuous without splice between junction, outlet, device boxes, etc. No splicing will be permitted in panelboard cabinets, safety switches, etc.
- G. All wiring in mechanical spaces shall be plenum rated.
- H. Provide GFI protection within 6'-0" of any sink.
- I. All multi-wire branch circuits shall comply with 2020 NEC, 210.4(B).
- J. All wiring at medical facilities shall comply with 2020 NEC, 517.1.

2.4 PANELBOARDS, SAFETY SWITCHES

- A. Panelboards shall comply with NEMA Standard PB 1 — Latest Edition and as manufactured by Square D or ITE-Siemens.
- B. The contractor shall be responsible for correctly phasing the circuits in the panelboards.
- C. Safety switches shall be general duty type, size and rating as required for load service. Safety switches shall be fused or unfused as shown and/or as required. Safety switches serving motor loads shall be horsepower rated for load served.

2.5 NOT USED

2.6 WIRING DEVICES

- A. Wiring devices shall be commercial grade by Bryant, Leviton, or approved equal. With matching cover. Color by Architect.
- B. Wiring devices installed under a Kitchen Hood shall have stainless steel covers.
- C. Wiring devices installed over counters shall comply with ANSI A117.1.

2.7 NOT USED

2.8 CONDUIT

- A. PVC conduit will be allowed where N.E.C. approved.
- B. All service conduit shall be rigid where exposed below 8'-0" AFF or exposed to the elements or hazardous conditions.

PART 3 — EXECUTION

3.1 CIRCUIT GROUNDING

A. All circuits shall contain an insulated, green, copper grounding conductor, sized in accordance with Table 250-95 of the NEC. Grounding conductors shall be connected to equipment grounding bus in panelboard and securely attached and grounded to the device or enclosure at the other end.

3.2 GROUNDING TYPE CONVENIENCE OUTLETS AND SWITCHES

A. Outlets and switches shall be solidly grounded to equipment grounding system with a green colored insulated conductor. Electrical connections shall be continuous from equipment ground bus in panelboard to the hex nut on the convenience outlet or switch.

3.3 MOTORS

A. All motors shall be connected to conduit system with short length (minimum length 24" and maximum length 36") of flexible liquidtight conduit.

3.4 NOT USED

3.5 EQUIPMENT LABELING

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

3.6 NOT USED

3.7 NOT USED

3.8 JUNCTION AND/OR PULL BOXES

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

3.9 PULL WIRE

A. Leave pull wire in each empty conduit run.

3.10 NOT USED

3.11 GROUNDING

A. All grounding shall be in accordance with Article 250 of the NEC. In addition, the following requirements shall be met:

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

3.12 ELECTRICAL WORK IN CONNECTION WITH OTHER WORK

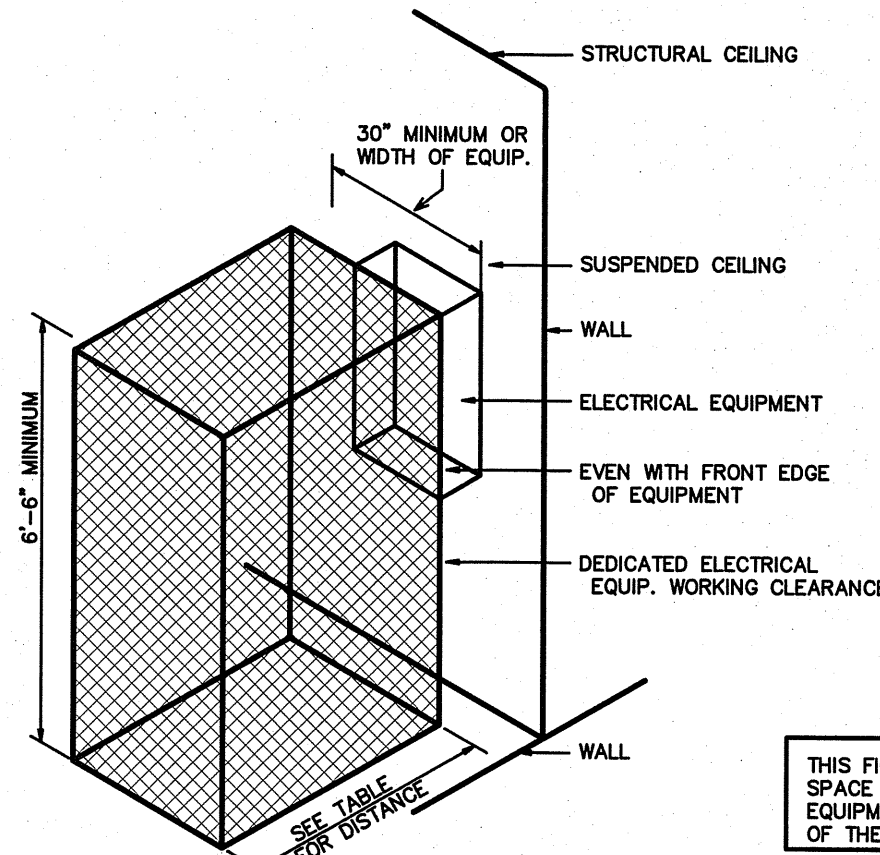
- A. **PLUMBING WORK:** The Electrical Contractor shall furnish and install switches and devices as shown and electrically connect electric water heaters, etc. All other electrical work required will be performed by the PLUMBING CONTRACTOR.
- B. **HEATING AND AIR CONDITIONING WORK:** The Electrical Contractor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

3.13 CLEAN UP

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

3.14 GUARANTEE

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



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

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

WHERE THE CONDITIONS ARE AS FOLLOWS:

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

ELECTRICAL CLEARANCES

1 SCALE: NTS

GENERAL NOTES

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

ELECTRICAL LEGEND

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LIGHTING SCHEDULE *									
MARK	MANUFACTURER	CATALOG NO.	VOLT.	LAMPS NO.	LAMPS TYPE	W	BALLAST TYPE	W/FIXTURE	REMARKS
A	COLUMBIA	CFP24-7535	120	-	LED	-	-	56	2X4 LAY-IN LED FIXTURE *
B	CHOSEN BY OWNER/ARCH, PROVIDED BY EC		120	-	LED	-	-	30	EXTERIOR LED WALL SCONCE *
E	COMPASS	CUSO	120	-	LED	-	-	17	EXTERIOR NORMAL/EMERGENCY LIGHT FIXTURE- COLOR BY ARCH *
EXT	COMPASS	CER	120	-	LED	-	-	2	LED EXIT SIGN, COLOR BY ARCH *
EXIT	COMPASS	CCR	120	-	LED	-	-	4	COMBINATION EMERGENCY (TUNGSTEN)/ EXIT (LED) LIGHT *
TLT	COMPASS	CU2	120	-	LED	-	-	10	EMERGENCY LIGHT, BATTERY BACKUP, BATTERY DIAGNOSTICS, COLOR BY ARCH *

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

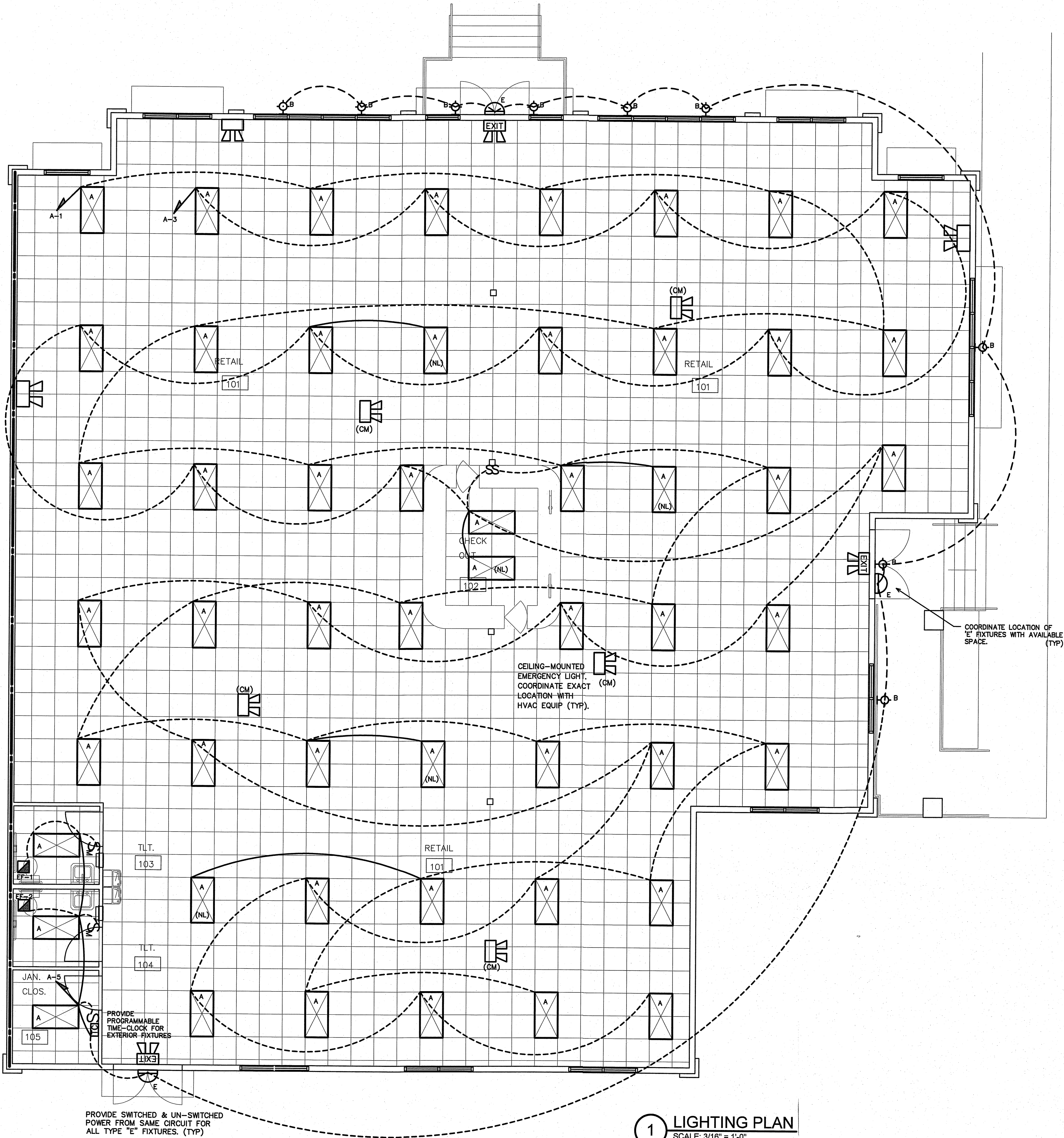
NOTE:
PROVIDE LABELING ON EACH
SWITCH NOTING CIRCUIT SERVED.

AUTOMATIC LIGHTING SHUTOFF IS NOT SHOWN IN THE
EGRESS PATH LIGHTING AS ALLOWED PER 405.2.1-3
EXCEPTION #3, WHERE AUTOMATIC SHUTOFF WOULD
ENDANGER OCCUPANT SAFETY.

TIE ALL EXIT AND EMERGENCY LIGHTS
TO NEAREST AVAILABLE UNSWITCHED
LIGHTING CIRCUIT IN THE AREA SERVED.

VERIFY HEIGHT/LOCATION OF ALL SWITCHES
AND DEVICES PRIOR TO INSTALLATION.

EXHAUST FAN(S) PROVIDED BY HVAC
CONTRACTOR. WIRED BY ELECTRICAL
CONTRACTOR. VERIFY UNITS HAVE
DISCONNECTING MEANS PER NEC.
PROVIDE DISCONNECTS IF NEEDED.



1 LIGHTING PLAN
SCALE: 3/16" = 1'-0"

ENGINEER
BURKE DESIGN GROUP
3305-109 DURHAM DRIVE
RALEIGH, NC 27603
PHONE: (919) 771-1916
FAX: (919) 779-0826
email: ben@bdg-nc.com
Corp. License # C-2652

Version: B07E 013

NEW PANEL- 'A'

MAKE: CUTLER HAMMER
TYPE: PRL1A
OR APPROVED EQUAL

RATING: 208/120V 3 PHASE 4 WIRE
MOUNTING: FLUSH
MINIMUM AIC: VERIFY

MLO MAIN CIRCUIT BREAKER
EQUIPMENT GROUND BUS ☒ YES ☐ NO
SERVICE ENTRY RATED ☐ YES ☒ NO

LOAD SERVICE	CKT BRKR	WATTS PER PHASE A B C	CKT NO	NEUTRAL A B C	CKT NO	WATTS PER PHASE A B C	CKT BRKR	LOAD SERVICE
LTS - RETAIL	20A	1400	1		2	7768		RTU-1
LTS - RETAIL	20A	1400	3		4	7768	80A	
LTS - RR & EXTERIOR	20A	753	5		6	7768		
REC - CHECKOUT	20A	900	7		8	7768		RTU-2
REC - CHECKOUT	20A	900	9		10	7768	80A	
REC - RETAIL	20A		11		12	7768		
REC - RETAIL	20A	720	13		14	1850	20A	EWI
REC - RETAIL	20A	900	15		16	----	20A	SPARE
REC - RETAIL	20A		17		18	----	20A	SPARE
EWI	20A	888	19		20	----	20A	SPARE
REC - EXTERIOR	20A	540	21		22	----	20A	SPARE
SIGN	20A		23		24	----	20A	SPARE
REC - SHOW WINDOW	20A	1200	25		26	----	20A	SPARE
REC - SHOW WINDOW	20A	1200	27		28	----	20A	SPARE
REC - SHOW WINDOW	20A		29		30	----	20A	SPARE
REC - SHOW WINDOW	20A	1200	31		32	----	20A	SPARE
REC - SHOW WINDOW	20A		33		34	----	20A	SPARE
REC - SHOW WINDOW	20A		35		36	----	20A	SPARE
REC - SHOW WINDOW	20A	1200	37		38	----	20A	SPARE
REC - SHOW WINDOW	20A	1200	39		40	----	20A	SPARE
SPARE	20A		41		42	----	20A	SPARE

NOTES

SUB-TOTALS 'B'

7508 7340 8153

400A LUGS 17186 15536 15536

400A LUGS 7508 7340 8153

400A FEED 24694 22876 21689

VERIFY SIZE 208A 191A 181A

SUB-TOTALS 'A'

SUB-TOTALS 'B'

GRAND TOTAL

AMPS/PHASE

GFCI BREAKER

PROVIDE PANEL DIRECTORY/LABELING PER NEC 408.4

TOTAL CONNECTED LOAD

NEC ALLOWABLE DEMAND FACTORS				DIVERSIFIED LOAD SUMMARY				
① DEMAND FACTORS PER NEC 220.1	LOAD TYPE			DEMAND FACTOR(C)	A	B	C	TOTAL DIVERSIFIED LOAD
② LARGEST OF: NEC TABLE 220.12 OR CONNECTED LOAD	GENERAL LIGHTING			① 125%	1750	1750	941	4441
③ NEC TABLE 220.56	TRACK LIGHTING			125%				
④ NEC 220.51	GENERAL USE RECEPTACLES			① 150% VARIOUS	1820	2340	1800	5760
⑤ NEC 220.43A, 200 VA/LINEAR FT	MOTORS AND EQUIPMENT			① 125%	1985	1985	1985	5965
⑥ NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED	WATER HEATERS			100%	5864	5864	5864	17882
	KITCHEN EQUIPMENT			① 100%	2083			2083
	FIX. ELEC. SPACE HEAT.			① 100%	8000	8000	8000	24000
	SHOW WINDOW LIGHTS			① 125%	4500	4500	4500	13500
	SIGN			125%		1500	1500	1500
	MISC			100%	888			888
	PHASE (TOTAL VA)				28750	24819	23170	74439
	TOTAL AMPS				223A	204A	193A	VOLT AMPS VOLTS X 1.732 = 207A
								TOTAL AMPS

NOTES:
(G) GFCI BREAKER
PROVIDE PANEL DIRECTORY/LABELING PER NEC 408.4

NEC ALLOWABLE DEMAND FACTORS	DIVERSIFIED LOAD SUMMARY							
① DEMAND FACTORS PER NEC 220	LOAD TYPE		DEMAND FACTOR			TOTAL DIVERSIFIED LOAD		
② LARGEST OF: NEC TABLE 220.12 OR CONNECTED LOAD	GENERAL LIGHTING	③	125%	1750	1750		941	4441
③ NEC TABLE 220.56	TRACK LIGHTING		125%					
④ NEC 220.51	GENERAL USE RECEPTACLES		⑤	100%	1820	2340	1800	5760
⑤ NEC 220.43A, 200 VA/LINEAR FT	MOTORS AND EQUIPMENT	LARGEST	125%	1965	1965	1965	5895	
⑥ NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED	WATER HEATERS	ALL OTHERS	100%	5984	5984	5984	17952	
	KITCHEN EQUIPMENT		125%	2083			2083	
	FIX. ELEC. SPACE HEAT.		⑥	100%	8000	8000	8000	24000
	SHOW WINDOW LIGHTS		125%	4500	4500		3000	12000
	SIGN		125%			1500	1500	
	MISC		100%	888				888
	PHASE (TOTAL VA)			28750	24519	23170		74439
	TOTAL AMPS			223A	204A	193A		VOLTS X 1.732 = 207A

EQUIPMENT WIRING SCHEDULE					
EQUIPMENT	MCA	MOCP	VOLTS	PH	WIRE SIZE
RTU-1	80A	80A	208V	3	3-#4, 1-#6 GND IN 1 1/4" CONDUIT
RTU-2	80A	80A	208V	3	3-#4, 1-#6 GND IN 1 1/4" CONDUIT

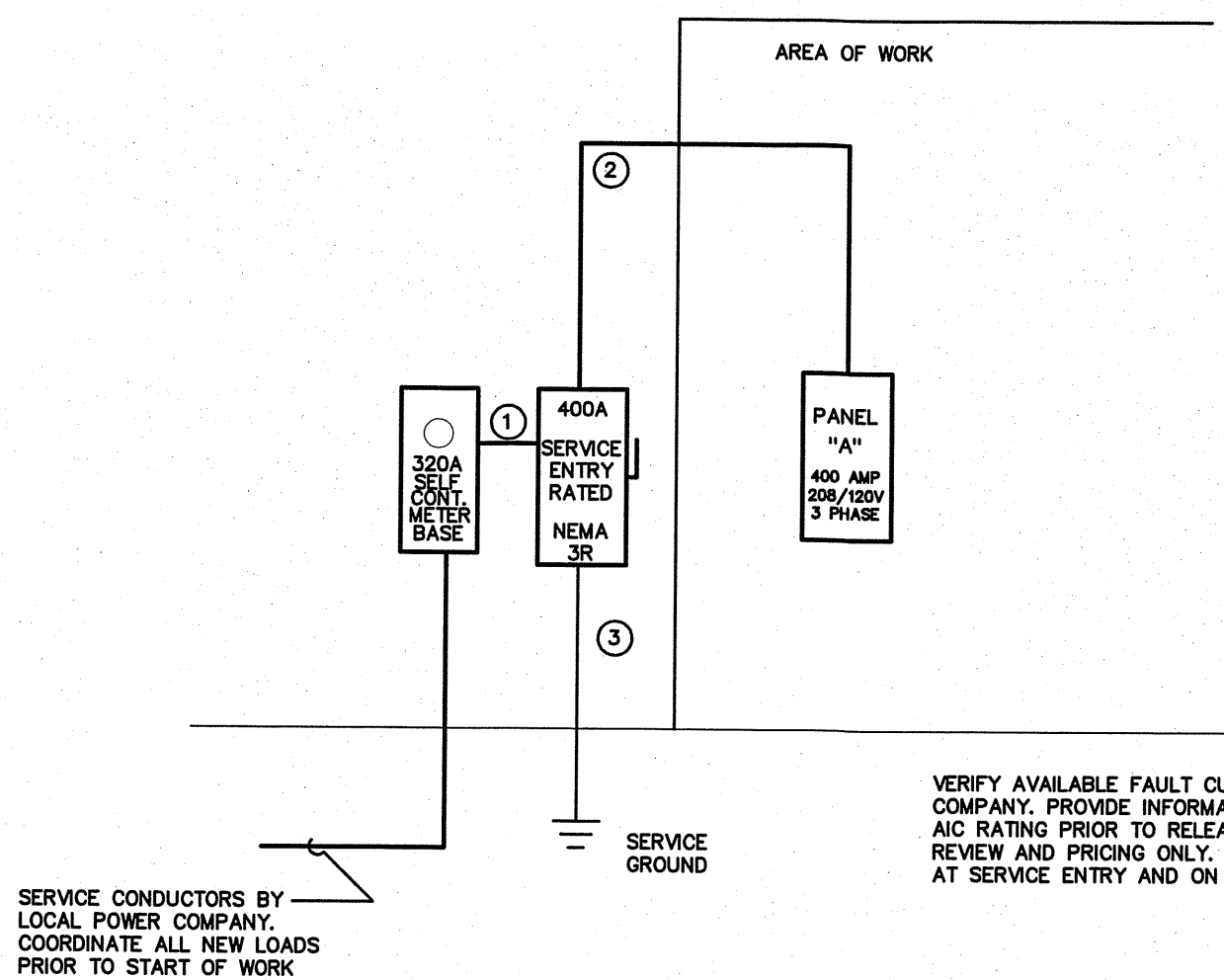
NOTE:
THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN AND RELEASING GEAR. ADJUST BREAKER, WIRE SIZES, ETC. AS REQUIRED.

PROVIDE A MINIMUM OF 24" HORIZONTAL SEPARATION BETWEEN DEVICES IN RATED PARTITIONS OR USE PENETRATION RATED BOX SUITABLE FOR THE RATING OF THE PARTITION. FIELD VERIFY ADJACENT SPACES PRIOR TO ROUGH-IN.

RISER WIRING SCHEDULE

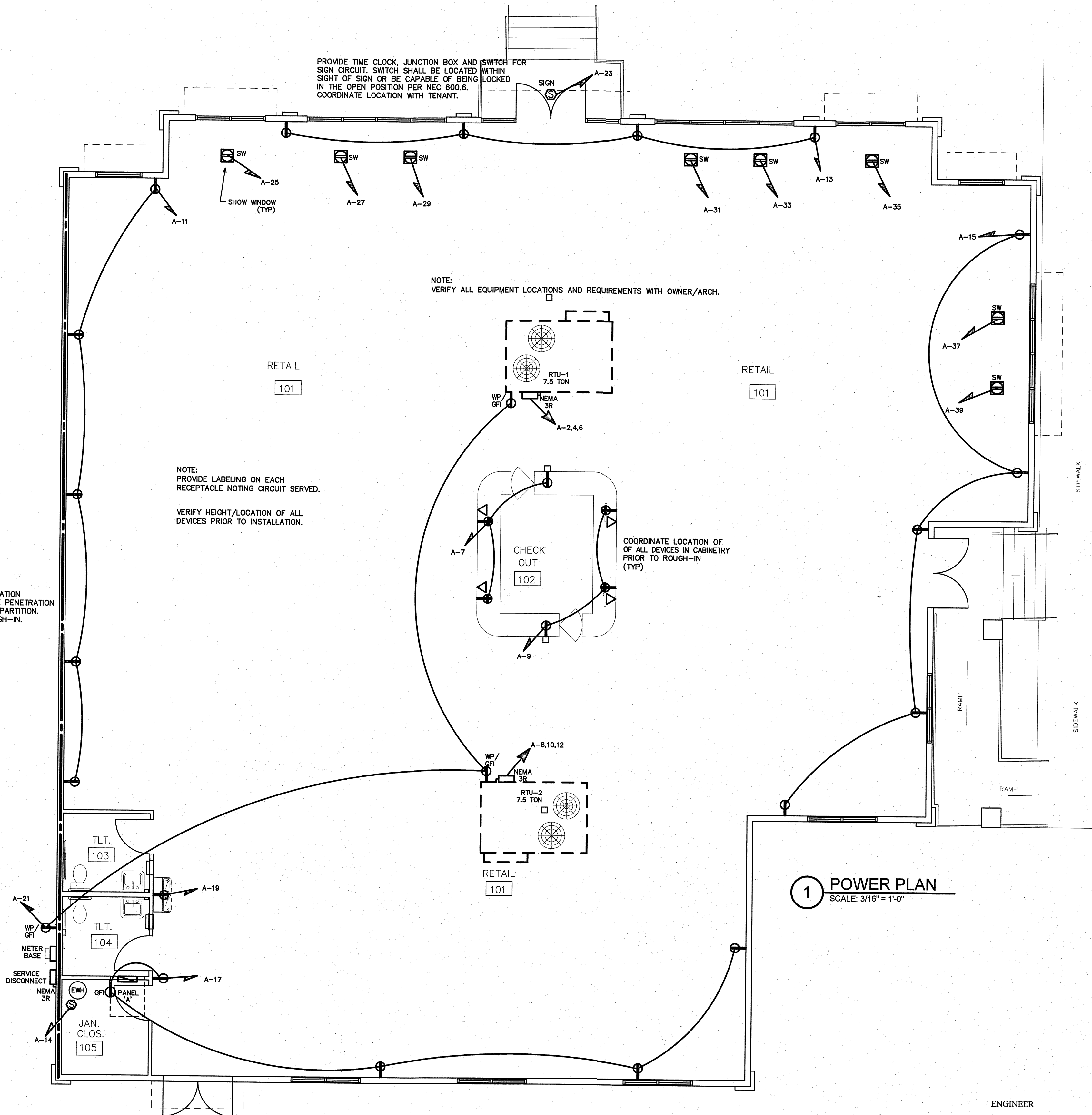
- 400A: 4-#500MCM IN 3" CONDUIT
- 400A: 4-#500MCM, 1-#3 CU GND, IN 3 1/2" CONDUIT
- #1/0 CU GND TO BUILDING STEEL, FOUNDATION STEEL AND METALLIC WATER MAIN AND #6 CU GND TO 10' X 5/8" DRIVEN GROUND ROD

NOTE:
UNLESS OTHERWISE NOTED ALL OTHER CIRCUITS ARE 20A, 120VOLT. PROVIDE 2-#12, 1-#12 CU GND IN 1/2" CONDUIT. SEE EQUIPMENT SCHEDULES FOR ADDITIONAL WIRE SIZES.



ELECTRICAL SERVICE RISER

SCALE: NTS



POWER PLAN

SCALE: 3/16" = 1'-0"

ENGINEER
BURKE DESIGN GROUP
3305-109 DURHAM DRIVE
RALEIGH, NC 27603
PHONE: (919) 771-1916
FAX: (919) 779-0828
email: ben@bdg-nc.com
Corp. License # C-2652

Coastal
Architecture
P.L.L.C.

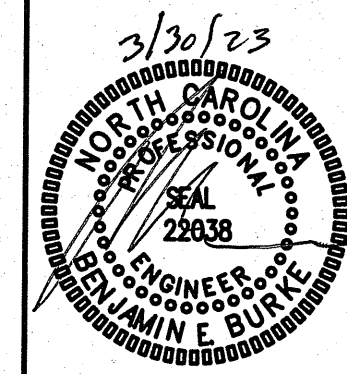
Architectural
Design
Planning
Interiors



Member of the American
Institute of Architects

Lee D. Dixon, Jr., AIA
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lreed@coastalarchitecture.net
4206 Bridges St. Ext.,
Suite C
Morehead City, NC 28557
www.CoastalArchitecture.net

ATLANTIC BEACH BTS
115 WEST FORT MACON ROAD
ATLANTIC BEACH, NORTH CAROLINA



POWER PLAN

22012

ISSUED: 3-30-23

DWG BY:

CKD BY: BEB

REVISIONS

SHEET NO.

E-3