The NC Coastal Federation's

Center for Coastal Protection and Restoration

Ocean, North Carolina



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FIRE PROTECTION:

FP101 COASTAL RESOURCE CENTER FIRE SPRINKLER PLAN
FP103 EVENT CENTER FIRE SPRINKLER PLAN
FP104 EVENT CENTER ATTIC FIRE SPRINKLER PLAN

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254 North Front Street
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Interior Design:
Big Sky Design Inc.
5815 Oleander Dr. #250
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(910) 793-3992

Fire Protection:
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The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

FINAL PRICING SET (UNSEALED SET)

Cover Sheet

JOB NUMBER

DRAWN BY
MEG

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

SHEET NUMBER
CS-1

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: Center for Coastal Protection and Restoration - Main Building
Address: Highway 24, Ocean (Newport), North Carolina Zip Code --
Proposed Use: Offices and Event Space
Owner or Authorized Agent: Agent
Phone #: (910) 000-0000 E-mail: email@email.com
Owned By: ☐ City / County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☐ City: ☒ County: Carteret ☐ State

LEAD DESIGN PROFESSIONAL: George "Chip" Hemingway, AIA

DESIGNER	FIRM	NAME	LIC#	TELE#	E-MAIL
Architectural	Bowman Murray Hemingway Arch.	George Hemingway	7487	910.762.2621	hemingway@bmharch.com
Civil	The John R. McAdams Company, Inc.	Eric M. Domonell	047504	919.361.5000	domonell@mcadamsco.com
Electrical	CBHF Engineers, PLLC	R.Duncan McFadyen	8422	910.791.4000	dmcfadyen@cbhfengineers.com
Fire Alarm	CBHF Engineers, PLLC	R.Duncan McFadyen	8422	910.791.4000	jbenson@cbhfengineers.com
Plumbing	CBHF Engineers, PLLC	James R. Benson, III	10592	910.791.4000	jbenson@cbhfengineers.com
Mechanical	CBHF Engineers, PLLC	James R. Benson, III	10592	910.791.4000	jbenson@cbhfengineers.com
Sprinkler/Standpipe	PBFPE	David Stacey	---	919.600.7780	dstacey@pbfpe.com
Structural	Woods Engineering	Don R. Woods	19457	910.343.8007	donwoods@woodseng.com
Retaining Walls > 5' High					
Other	Big Sky Design	Jennifer Kraner	--	910.793.3992	jennifer@bigskydesignonline.com

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell / Core
☐ Phased Construction

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

CONSTRUCTED: (date) n/a **CURRENT OCCUPANCY(S)** (Ch. 3): n/a
RENOVATED: (date) **PROPOSED OCCUPANCY(S)** (Ch. 3): n/a
RISK CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☒ III ☐ IV

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

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Sub Total (sq ft)	Upfit (sq ft)
Second Floor		---		
Mezzanine				
First Floor		13,350		
Basement				
Total		13,350		

ALLOWABLE AREA

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

Accessory Occupancy Classification(s): A-3 Lecture (within Business Occupancy)
Incidental Uses (Table 509):
Special Uses (Chapter 4 – List Code Sections):
Special Provisions: (Chapter 5 – List Code Sections):
Mixed Occupancy: ☐ No ☒ Yes Separation: 0 Hr. Exception:
☒ Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (508.4) See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

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

$$\frac{\text{n/a}}{\text{n/a}} + \frac{\text{n/a}}{\text{n/a}} + + = \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA[4]	(C) [1,5] AREA FOR FRONTAGE INCREASE	(D) [2,3] ALLOWABLE AREA PER STORY OR UNLIMITED
1	A2 Assembly	14,063	24,000	4,500	28,500
	(Non-Separated Mixed Use)				

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = --- (F)
b. Total Building Perimeter = --- (P)
c. Ratio (F/P) = 1.0 (F/P)
d. W = Maximum width of public way = 30+ (W)
e. Percent of frontage increase It = 100 [F/P - 0.25] x W/30 = 75 (%)

[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 unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	60	22	--
Building Height in Stories (Table 504.4)	2	1	

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns,girders,& trusses		0-hr	0-hr				
Bearing walls							
Exterior							
North	30+	0-hr	0-hr				
East	30+	0-hr	0-hr				
West	30+	0-hr	0-hr				
South	30+	0-hr	0-hr				
Interior							
Nonbearing walls and partitions							
Exterior Walls							
North	30+	0-hr	0-hr				
East	30+	0-hr	0-hr				
West	30+	0-hr	0-hr				
South	30+	0-hr	0-hr				
Interior Walls		0-hr	0-hr				
Floor Construction Including beams & joists		0-hr	0-hr				
Floor Ceiling Assembly		0-hr	0-hr				
Columns Supporting Floors		0-hr	0-hr				
Roof Construction Including beams & joists		0-hr	0-hr				
Roof Ceiling Assembly		0-hr	0-hr				
Columns Supporting Roof		0-hr	0-hr				
Shaft Enclos.- Exit		n/a	--				
Shaft Enclos.- Other		n/a	--				
Corridor Separation		0-hr	0-hr				
Occupancy / Fire Barrier Separation		0-hr	0-hr				
Party / Fire Wall Separation		n/a	--				
Smoke Barrier Separation		n/a	--				
Smoke Partition		n/a	--				
Tenant/Dwelling Unit/Sleeping Separation		n/a	--				
Incidental Use Separation		0-hr	0-hr				

* Indicate section number permitting reduction

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 (%)
30+	Unprotected, Sprinklered	No Limit	n/a

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting	☐ No	☒ Yes
Exit Signs	☐ No	☒ Yes
Fire Alarms	☐ No	☒ Yes
Smoke Detection Systems	☐ No	☒ Yes ☐ Partial
Carbon Monoxide Detection	☒ No	☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: SEE #1/CS-2 FOR EVENT CENTER & #1/CS-3 FOR COASTAL RESOURCE CENTER

☐ Fire and / or smoke rated wall locations (Chapter 7)
☒ Assumed and real property line locations (if not onthe 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)
[NOT APPLICABLE]

ACCESSIBLE PARKING
(SECTION 1106)
[SEE CIVIL DRAWINGS]

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR W/ 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
X	X	--	--	--	--	
TOTAL	--	--	--		-	--

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS M	WATER CLOSETS F	WATER CLOSETS UNI	URINALS	LAVATORIES M	LAVATORIES F	LAVATORIES UNI	SHOWERS & TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING										
	NEW			3				3		1	1
	REQUIRED			3				3		1	1

FIXTURE CALCULATIONS:

Administration / Offices

Business Use: (B) 6,640 SF at 1:100 = 66.4 = 67 occ.
WC @ 1 per 25 = 67/25 = 2.68
LAV @ 1 per 40 = 67/40 = 1.68
D.F. @ 1 per 100 = 67/100 = 0.67

Classroom Use: (A-3) 521 SF (net) @ 1:20 = 26 =13 occ. each sex
Accessory to Business Use
WC male @ 1 per 125 = 13/125 = 0.11
WC female @ 1 per 65 = 13/65 = 0.20
LAV @ 1 per 200 = 26/200 = 0.13
D.F. @ 1 per 500 = 26/500 = 0.05

Required Fixtures for Administration:
Unisex 2.68 (B) + 0.11 (A-3 M) + 0.20 (A-3 F) = 2.99 = 3 WC
0.85 (B) + 0.13 (A-3) = 0.98 = 1 LAV
Provided (3) Unisex Restrooms with (1) WC and (1) LAV each.

Drinking Fountain = 0.67 (B) + 0.05 (A-3) = 0.72 = 1 Bi-Level D.F.
Provided (1) Bi-Level D.F.

Event Center / Assembly (Multi-purpose A-2/A-3)

Assembly Use: A-3 Standing only - Exhibit / Lecture
2,280 SF @ 1:5 = 456 = 228 each sex
WC male @ 1 per 125 = 228/125 = 1.82 = 2
WC female @ 1 per 65 = 228/65 = 3.51 = 4
LAV @ 1 per 200 = 228/200 = 1.14 = 2 each sex
D.F. @ 1 per 500 = 456/500 = .91 = 1

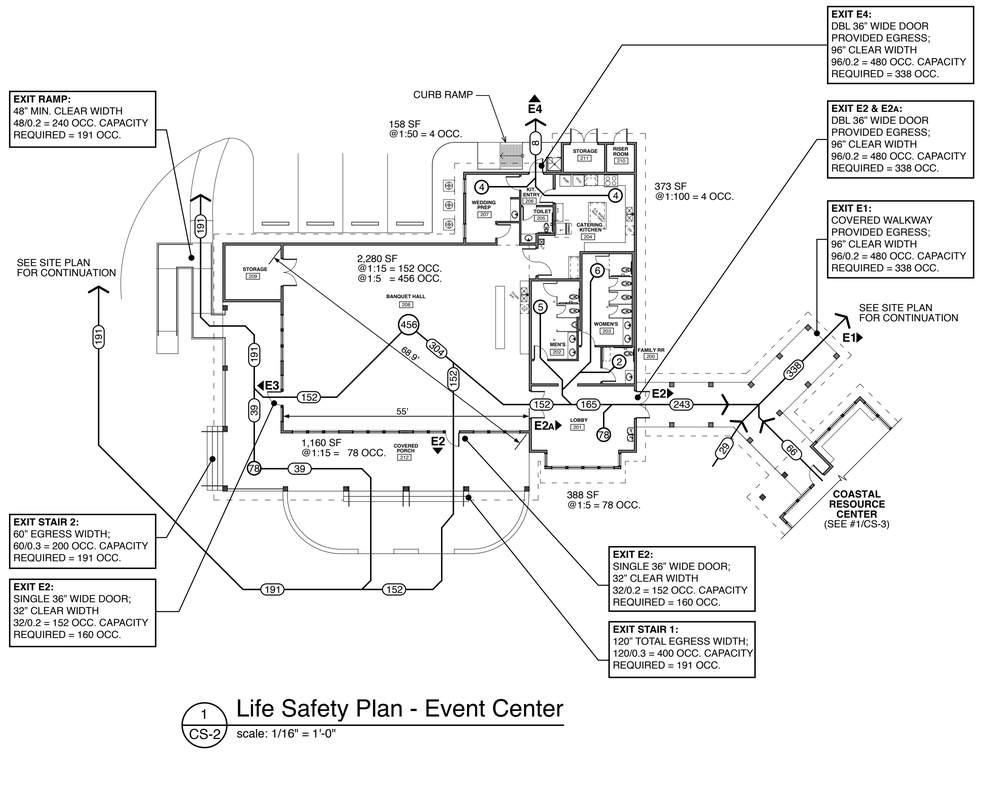
A-2 Tables and Chairs - Banquet Hall
2,280 SF @ 1:15 = 152 = 76 each sex
WC male @ 1 per 75 = 76/75 = 1.01 = 1
WC female @ 1 per 65 = 76/75 = 1.01 = 1
LAV @ 1 per 200 = 76/200 = 0.38 = 1
D.F. @ 1 per 500 = 152/500 = 0.30 = 1

Required Fixtures for Assembly Use: (Highest usage is A-3)
Male: (2) WC and (2) LAV minimum. Provided (2) WC, (1) Urinal and (2) LAV
Female: (4) WC and (2) LAV minimum. Provided (4) WC and (2) LAV

Drinking Fountain: (1) Bi-Level D.F. minimum. Provided (1) Bi-Level D.F.

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, etc., describe below.)
Carteret County



1 / CS-2 Life Safety Plan - Event Center
scale: 1/16" = 1'-0"

ENERGY SUMMARY

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

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder of this section is not applicable)
Exempt Building: ☐ No ☐ Yes (Provide code or statutory reference:)
Climate Zone ☒ 3A ☐ 4A ☐ 5A
Method of Compliance: Energy Code ☐ Performance ☒ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here)

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly) Standing seam metal roof on AWB on plywood deck w/ closed cell foam insulation on underside of deck
Description of assembly
U-Value of total assembly
R-Value of insulation R-38
Skylights in each assembly none - n/a

Exterior Walls (each assembly) Wood siding on AWB on 1/2 wood sheathing on 2x6 wood frame wall with full batt unfaced insulation
Description of assembly
U-Value of total assembly
R-Value of insulation R-20
Openings (windows or doors with glazing)
U-Value of assembly: 0.45 max.
Solar heat gain coefficient: 0.25 max.
projection factor: PF < 0.25
Door R-Values: 0.77 max

Walls below grade (each assembly)
Description of assembly none - n/a

Floors over unconditioned space (each assembly) none - n/a

Floor Slab on Grade
Description of assembly 4" Reinforced concrete on grade

STRUCTURAL DESIGN
[SEE STRUCTURAL - SHEET S1.01]

MECHANICAL SUMMARY
[SEE MECHANICAL - SHEET #M-0.1]

ELECTRICAL SUMMARY
[SEE ELECTRICAL - SHEET #E-0.8]

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The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

Building Data
Appendix B
Coastal Resource Center
& Event Space

JOB NUMBER
DRAWN BY: Tyhacz
CHECKED BY: Hemingway
DATE: June 12, 2023
REVISIONS

SHEET NUMBER
CS-2

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: Center for Coastal Protection and Restoration - Workshop/Garage

Address: Highway 24, Ocean (Newport), North Carolina Zip Code --

Proposed Use: Workshop

Owner or Authorized Agent Agent

Phone #: (910) 000-0000 E-mail email@email.com

Owned By: ☐ City / County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☐ City: _____ ☒ County: Carteret ☐ State

LEAD DESIGN PROFESSIONAL: George "Chip" Hemingway, AIA

DESIGNER	FIRM	NAME	LIC#	TELE#	E-MAIL
Architectural	Bowman Murray Hemingway Arch.	George Hemingway	7487	910.762.2621	hemingway@bmharch.com
Civil	The John R. McAdams Company, Inc.	Eric M. Domonell	047504	919.361.5000	------
Electrical	CBHF Engineers, PLLC	R.Duncan McFadyen	8422	910.791.4000	dmcfadyen@cbhfengineers.com
Fire Alarm	CBHF Engineers, PLLC	R.Duncan McFadyen	8422	910.791.4000	jbenson@cbhfengineers.com
Plumbing	CBHF Engineers, PLLC	James R. Benson, III	10592	910.791.4000	jbenson@cbhfengineers.com
Mechanical	CBHF Engineers, PLLC	James R. Benson, III	10592	910.791.4000	------
Sprinkler/Standpipe	PBFPE	David Stacey	---	919.600.7780	dstacey@pbfpe.com
Structural	Woods Engineering	Don R. Woods	19457	910.343.8007	donwoods@woodseng.com
Retaining Walls > 5' High					
Other	Big Sky Design	Jennifer Kraner	--	910.793.3992	jennifer@bigskydesignonline.com

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell / Core
☐ Phased Construction

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

CONSTRUCTED: (date) n/a **CURRENT OCCUPANCY(S)** (Ch. 3): n/a

RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S) (Ch. 3):** n/a

RISK CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☒ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☒ V-A ☒ V-B

Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No ☐ Yes **Class:** ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☒ No ☐ Yes **Flood Hazard Area:** ☒ No ☐ Yes

Special Inspections Required: ☐ No ☐ Yes

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Sub Total (sq ft)	Upfit (sq ft)
Second Floor		---		
Mezzanine				
First Floor		1,515		
Basement				
Total		1,515		

ALLOWABLE AREA

Primary Occupancy Classification(s):

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

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

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) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

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

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

--- / -- + -- / --- + + = ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA[4]	(C) [1,5] AREA FOR FRONTAGE INCREASE	(D) [2,3] ALLOWABLE AREA PER STORY OR UNLIMITED
1	Garage/Workshop	1,515	6,000	4,500	10,500

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = --- (F)
b. Total Building Perimeter = --- (P)
c. Ratio (F/P) = 1.0 (F/P)
d. W = Maximum width of public way = 30+ (W)
e. Percent of frontage increase I = 100 [F/P - 0.25] x W/30 = 75 (%)

[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 unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	60	16	--
Building Height in Stories (Table 504.4)	2	1	

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ REDUCTION	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns,girders,& trusses		0-hr	0-hr				
Bearing walls							
Exterior							
North	30+	0-hr	0-hr				
East	30+	0-hr	0-hr				
West	30+	0-hr	0-hr				
South	30+	0-hr	0-hr				
Interior							
Nonbearing walls and partitions							
Exterior Walls							
North	30+	0-hr	0-hr				
East	30+	0-hr	0-hr				
West	30+	0-hr	0-hr				
South	30+	0-hr	0-hr				
Interior Walls		0-hr	0-hr				
Floor Construction Including beams & joists		0-hr	0-hr				
Floor Ceiling Assembly		0-hr	0-hr				
Columns Supporting Floors		0-hr	0-hr				
Roof Construction Including beams & joists		0-hr	0-hr				
Roof Ceiling Assembly		0-hr	0-hr				
Columns Supporting Roof		0-hr	0-hr				
Shaft Enclos.- Exit		n/a	--				
Shaft Enclos.- Other		n/a	--				
Corridor Separation		n/a	--				
Occupancy / Fire Barrier Separation		n/a	--				
Party / Fire Wall Separation		n/a	--				
Smoke Barrier Separation		n/a	--				
Smoke Partition		n/a	--				
Tenant/Dwelling Unit/Sleeping Separation		n/a	--				
Incidental Use Separation		0-hr	0-hr				

* Indicate section number permitting reduction

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 (%)
30+	Unprotected, Sprinklered	No Limit	n/a

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting	☐ No	☒ Yes
Exit Signs	☐ No	☒ Yes
Fire Alarms	☐ No	☒ Yes
Smoke Detection Systems	☐ No	☒ Yes ☐ Partial
Carbon Monoxide Detection	☒ No	☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: SEE #2/CS-3

☐ Fire and / or smoke rated wall locations (Chapter 7)
☒ Assumed and real property line locations (if not onthe 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)
[NOT APPLICABLE]

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR W/ 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
x	X	--	--	--	--	
TOTAL	--	--	--		-	--

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS M	WATER CLOSETS F	WATER CLOSETS UNI	URINALS	LAVATORIES M	LAVATORIES F	LAVATORIES UNI	SHOWERS & TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING										
	NEW			1				1		1	1
	REQUIRED			1				1		1	1

FIXTURE CALCULATIONS:

Business Use: 1,515 SF at 1:100 = 15.2 = 16 occ.
WC @ 1 per 25 = 16/25 = 0.64 = 1
LAV @ 1 per 40 = 16/40 = 0.40 = 1
D.F. @ 1 per 100 = 16/100 = 0.16 = 1 High/Low
(Less than 25 occ. , provide (1) unisex)

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, etc., describe below.)
Carteret County

STRUCTURAL DESIGN
[SEE STRUCTURAL]

MECHANICAL SUMMARY
[SEE MECHANICAL]

ELECTRICAL SUMMARY
[SEE ELECTRICAL]

ENERGY SUMMARY

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

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Provide code or statutory reference): _____

Climate Zone ☒ 3A ☐ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ☒ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

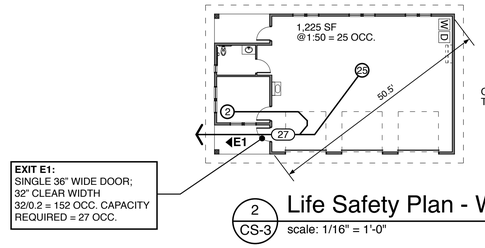
Roof/ceiling Assembly (each assembly)
Description of assembly: Standing seam metal roof on AWB on plywood deck
U-Value of total assembly: _____
R-Value of insulation: R-38
Skylights in each assembly: none - n/a

Exterior Walls (each assembly)
Description of assembly: Wood siding on AWB on 1/2 wood sheathing on 2x6 wood frame wall with full batt unfaced insulation
U-Value of total assembly: _____
R-Value of insulation: R-20
Openings (windows or doors with glazing)
U-Value of assembly: 0.45 max.
Solar heat gain coefficient: 0.25 max.
projection factor: PF < 0.25
Door R-Values: 0.77 max

Walls below grade (each assembly)
Description of assembly: none - n/a

Floors over unconditioned space (each assembly): none - n/a

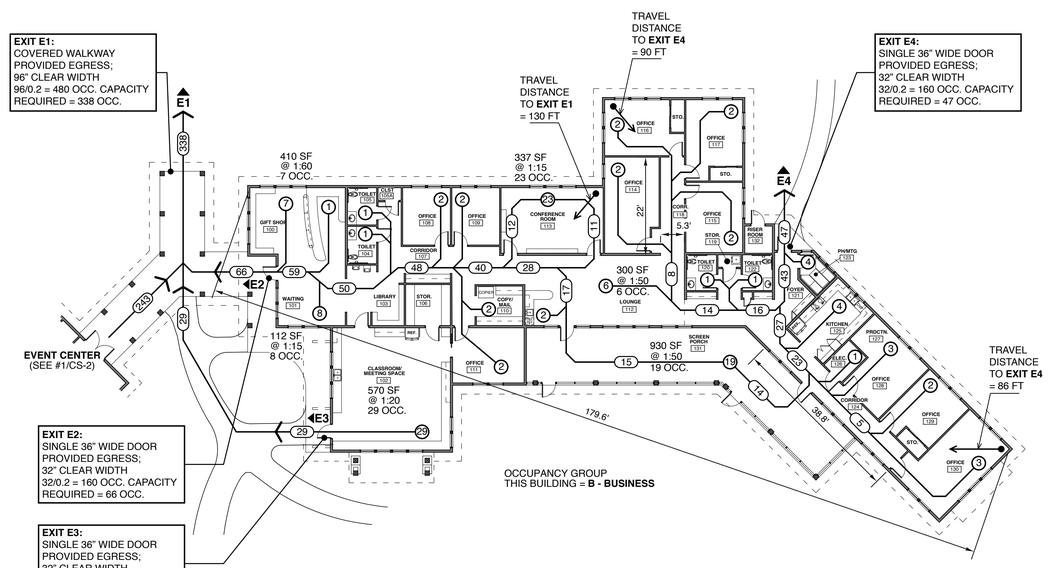
Floor Slab on Grade
Description of assembly: 4" Reinforced concrete on grade



EXIT E1:
SINGLE 36" WIDE DOOR;
32" CLEAR WIDTH
32/0.2 = 152 OCC. CAPACITY
REQUIRED = 27 OCC.

OCCUPANCY GROUP
THIS BUILDING = **B - BUSINESS**

2 / CS-3 **Life Safety Plan - Workshop**
scale: 1/16" = 1'-0"



1 / CS-3 **Life Safety Plan - Coastal Resource Center**
scale: 1/16" = 1'-0"

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ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

BOWMAN, MURRAY, HEMINGWAY ARCHITECTS, P.C. REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA CERT. NO. 50424 WILMINGTON, N. C.

The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

Building Data
Appendix B
Workshop

JOB NUMBER

DRAWN BY
Tyhacz

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

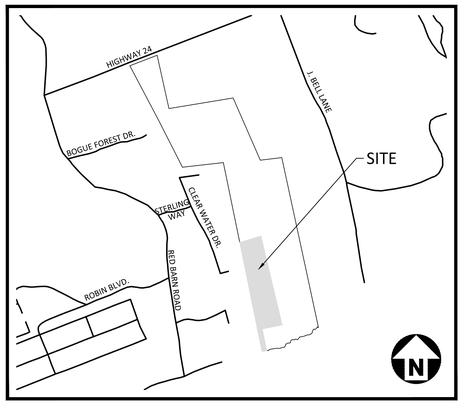
SHEET NUMBER
CS-3

NC COASTAL FEDERATION
CENTER FOR COASTAL PROTECTION AND RESTORATION

HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA 28570

90% CONSTRUCTION DRAWINGS

PROJECT NUMBER: NCF22001
DATE: 06.01.2023



VICINITY MAP
N.T.S.

SHEET INDEX

C0.00	PROJECT NOTES
C1.00	EXISTING CONDITIONS
C1.01	DEMOLITION PLAN
C2.00	OVERALL SITE PLAN
C2.01	SITE PLAN - AREA A
C2.02	SITE PLAN - AREA B
C3.00	OVERALL GRADING PLAN
C3.01	GRADING PLAN - AREA A
C3.02	GRADING PLAN - AREA B
C4.00	OVERALL UTILITY PLAN
C4.01	UTILITY PLAN - AREA A
C4.02	UTILITY PLAN - AREA B
C6.00	EROSION CONTROL NOTES
C6.01	EROSION CONTROL - STAGE 1 AREA A
C6.02	EROSION CONTROL - STAGE 1 AREA B
C6.03	EROSION CONTROL - STAGE 2 AREA A
C6.04	EROSION CONTROL - STAGE 2 AREA B
C6.05	EROSION CONTROL DETAILS
C6.06	EROSION CONTROL DETAILS
C6.07	EROSION CONTROL DETAILS
C6.08	EROSION CONTROL DETAILS
C6.09	EROSION CONTROL DETAILS
C6.10	EROSION CONTROL DETAILS
C8.00	SITE DETAILS
C9.00	STORMWATER CONTROL MEASURE DETAILS
L5.01	LANDSCAPE PLAN - AREA A
L5.02	LANDSCAPE PLAN - AREA B
L5.03	LANDSCAPE DETAILS

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ERIC DOMONELL, PE
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PHONE: 910.762.2621

PROJECT DIRECTORY

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERING AND SURVEYING CERTIFICATE OF AUTHORIZATION THE JOHN R. McADAMS COMPANY, INC. C-0293

NORTH CAROLINA PROFESSIONAL SEAL 047504 ENGINEER ERIC M. DOMONELL NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE
1	
2	
3	
4	
5	
6	

DESIGN DEVELOPMENT PLAN FOR:
CENTER FOR COASTAL PROTECTION AND RESTORATION
NEWPORT, NORTH CAROLINA 28570
PROJECT NUMBER: NCF22001

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

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HIGHWAY 24

CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
THE JOHN R. McADAMS COMPANY, INC.
C-0293

NORTH CAROLINA PROFESSIONAL SEAL
047604
ENGINEER
ERIC M. DOMONELL
NOT FOR CONSTRUCTION

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-N1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	
DATE	06. 01. 2023

SHEET

PROJECT NOTES

C0.00

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LEGEND

◉	EXISTING IRON PIPE	♿	ACCESSIBLE PARKING
○	IRON PIPE SET		IRRIGATION CONTROL VALVE
▲	CALCULATED POINT	◀	FLOOD LIGHT
	BORE HOLE	M	MAIL BOX
S	SANITARY SEWER MANHOLE	⊗	MONITORING WELL
C	SANITARY SEWER CLEANOUT		SIAMESE CONNECTION
	WATER VALVE		SIGN
	WATER METER	W	WELL
	FIRE HYDRANT		WATER MANHOLE
T	TELEPHONE PEDESTAL		LIGHT SINGLE
T	TELEPHONE MANHOLE		LIGHT DOUBLE
E	ELECTRIC BOX		CABLE BOX
	LIGHT POLE		FIBER OPTIC VAULT
	POWER POLE		SPRINKLER HEAD
	CURB INLET	SD	STORM DRAIN PIPE
D	STORM DRAINAGE MANHOLE	OU	OVERHEAD UTILITY LINES
	YARD INLET	W	WATER LINE
AC	AIR CONDITIONER	SS	SANITARY SEWER LINE
XXXX	ADDRESS BOX	T	TELEPHONE LINE
●	BOLLARD	G	GAS LINE
	FIRE CONNECTION	UE	UNDERGROUND ELECTRIC
	FIBER OPTIC MARKER	UT	UNDERGROUND TELEPHONE
G	GREASE PIT	X	FENCE LINE

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NO.	DATE

PLAN INFORMATION

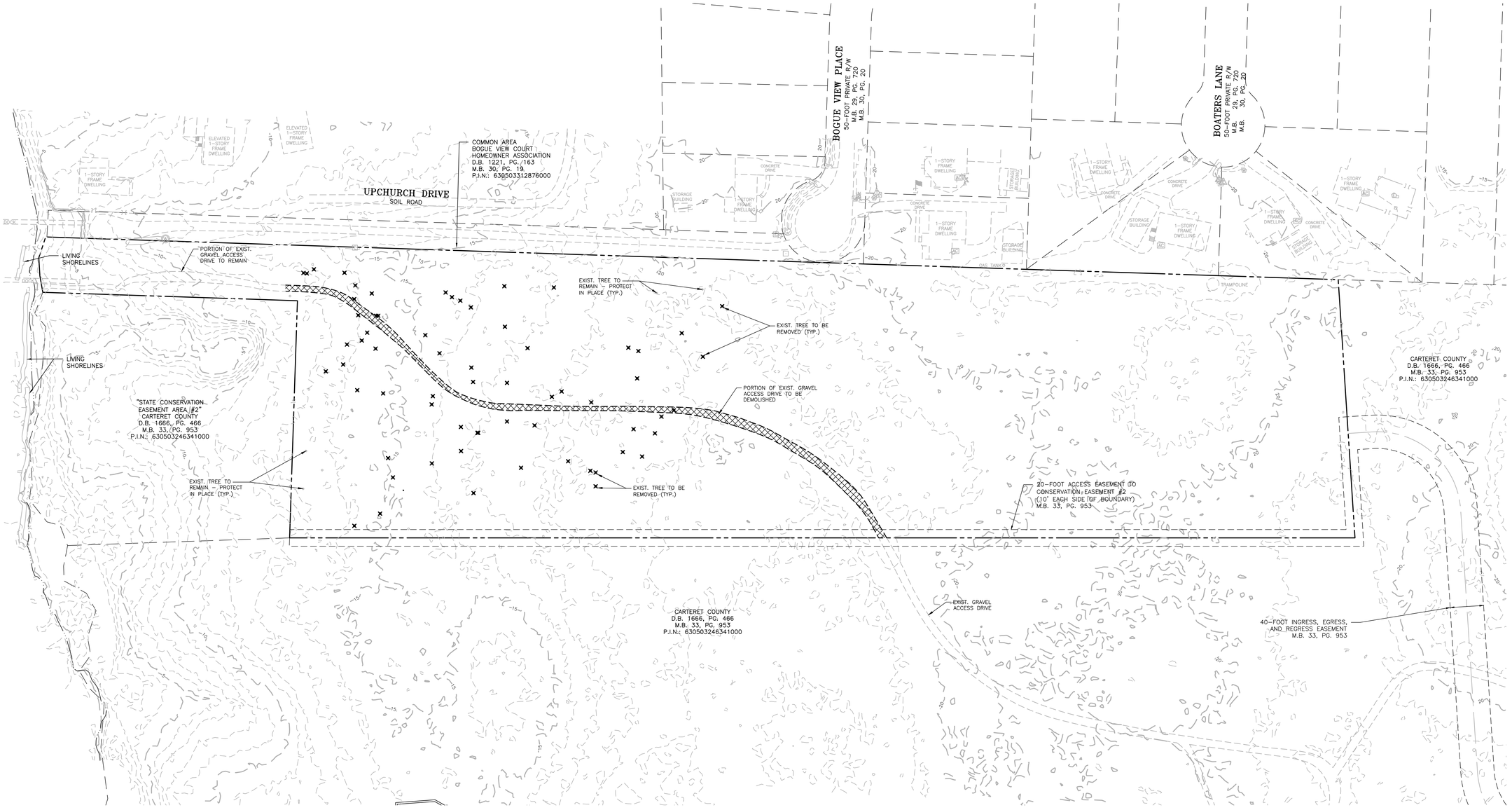
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FILENAME	NCF22001-XC1
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SCALE	1" = 60'
DATE	06. 01. 2023

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EXISTING CONDITIONS PLAN

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DEMOLITION LEGEND

TREE	TREE OR OTHER VEGETATION TO BE REMOVED
UTIL	UNDERGROUND UTILITY TO BE REMOVED
	AREA TO BE REMOVED (SIDEWALK, CURB AND GUTTER, STRUCTURES, ASPHALT, CONCRETE PAVING, ETC.)

NOTE: SEE PLAN FOR DETAILED DEMOLITION PROCEDURES, SEQUENCING AND SPECIFICATIONS.

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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HIGHWAY 24

CARTERET COUNTY, NORTH CAROLINA, 28570

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NORTH CAROLINA PROFESSIONAL SEAL 047504 ENGINEER ERIC M. DOMONELL

NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

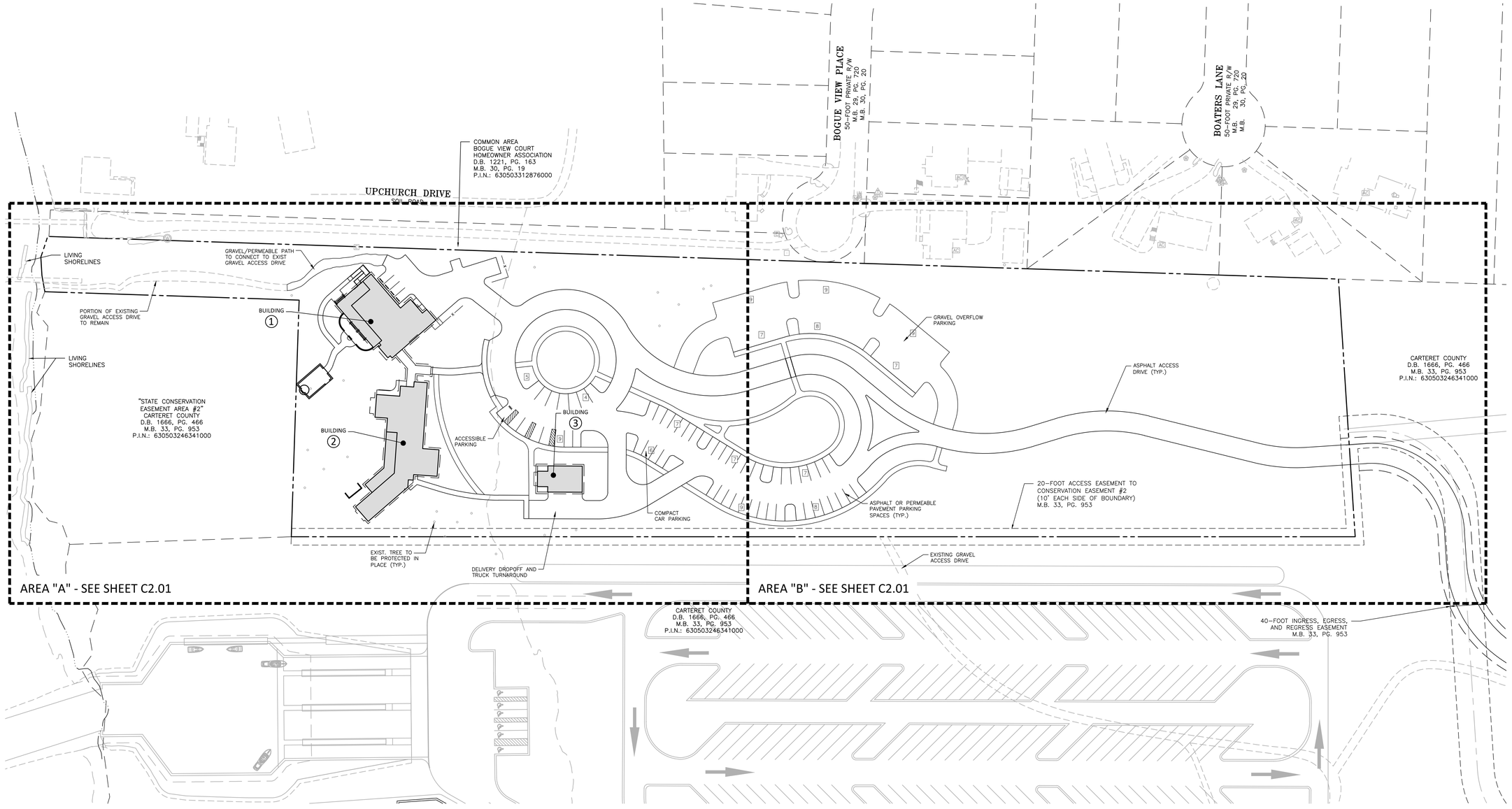
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FILENAME	NCF22001-DM1
CHECKED BY	EMD
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SCALE	1" = 60'
DATE	06. 01. 2023

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DEMOLITION PLAN

C1.01

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SITE LEGEND

	SIGNAGE
	YARD LIGHTS
	LIGHT POLE
	POWER POLE
	TRAFFIC DIRECTIONAL ARROW
ACC	ACCESSIBLE PARKING STALL
VAN	VAN ACCESSIBLE PARKING STALL
XX	PARKING SPACE COUNT
TYPE Ⓐ TYPE Ⓑ TYPE Ⓒ	ACCESSIBLE RAMPS
	ACCESSIBLE ROUTE
	PHASE LINE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	LOT LINE
	EASEMENT LINE
	CENTERLINE

MATERIALS LEGEND

SYMBOL	TYPE	STYLE/MANUFACTURER	COLOR/FINISH
	BRICK PAVERS	TBD	TBD
	ADA ACCESSIBLE CRUSHED GRAVEL OR PERMEABLE PAVERS	TBD	TBD
	GRAVEL PARKING	TBD	TBD
	HEAVY DUTY ASPHALT	SEE DETAIL ## SHEET C8.00	SEE DETAIL ## SHEET C8.00
	ASPHALT OR PERMEABLE PAVEMENT	TBD	TBD

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

90% CONSTRUCTION DRAWINGS

HIGHWAY 24

CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION THE JOHN R. McADAMS COMPANY, INC. C-0293

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047504 ERIC M. DOMONELL

NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

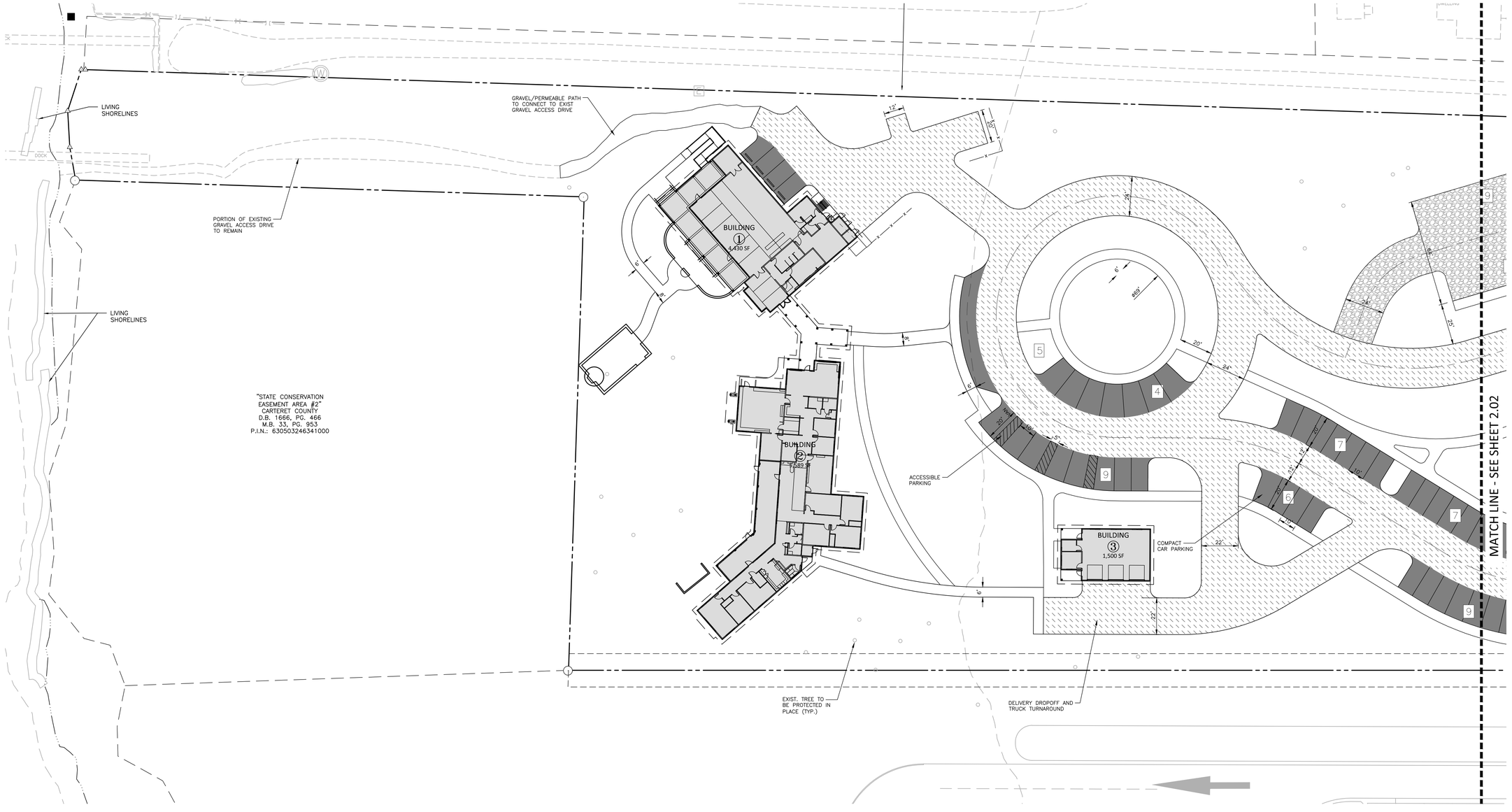
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-OAS1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 60'
DATE	06. 01. 2023

SHEET

OVERALL SITE PLAN

C2.00



SITE LEGEND

	SIGNAGE
	YARD LIGHTS
	LIGHT POLE
	POWER POLE
	TRAFFIC DIRECTIONAL ARROW
ACC	ACCESSIBLE PARKING STALL
VAN	VAN ACCESSIBLE PARKING STALL
XX	PARKING SPACE COUNT
TYPE Ⓐ TYPE Ⓑ TYPE Ⓒ	ACCESSIBLE RAMPS
	ACCESSIBLE ROUTE
	PHASE LINE
	PROPERTY LINE
	RIGHT–OF–WAY LINE
	LOT LINE
	EASEMENT LINE
	CENTERLINE

MATERIALS LEGEND

SYMBOL	TYPE	STYLE/MANUFACTURER	COLOR/FINISH
	BRICK PAVERS	TBD	TBD
	ADA ACCESSIBLE CRUSHED GRAVEL OR PERMEABLE PAVERS	TBD	TBD
	GRAVEL PARKING	TBD	TBD
	HEAVY DUTY ASPHALT	SEE DETAIL ## SHEET C8.00	SEE DETAIL ## SHEET C8.00
	ASPHALT OR PERMEABLE PAVEMENT	TBD	TBD

GRAPHIC SCALE
0 15 30 60
1 inch = 30 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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90% CONSTRUCTION DRAWINGS

HIGHWAY 24

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PLAN INFORMATION

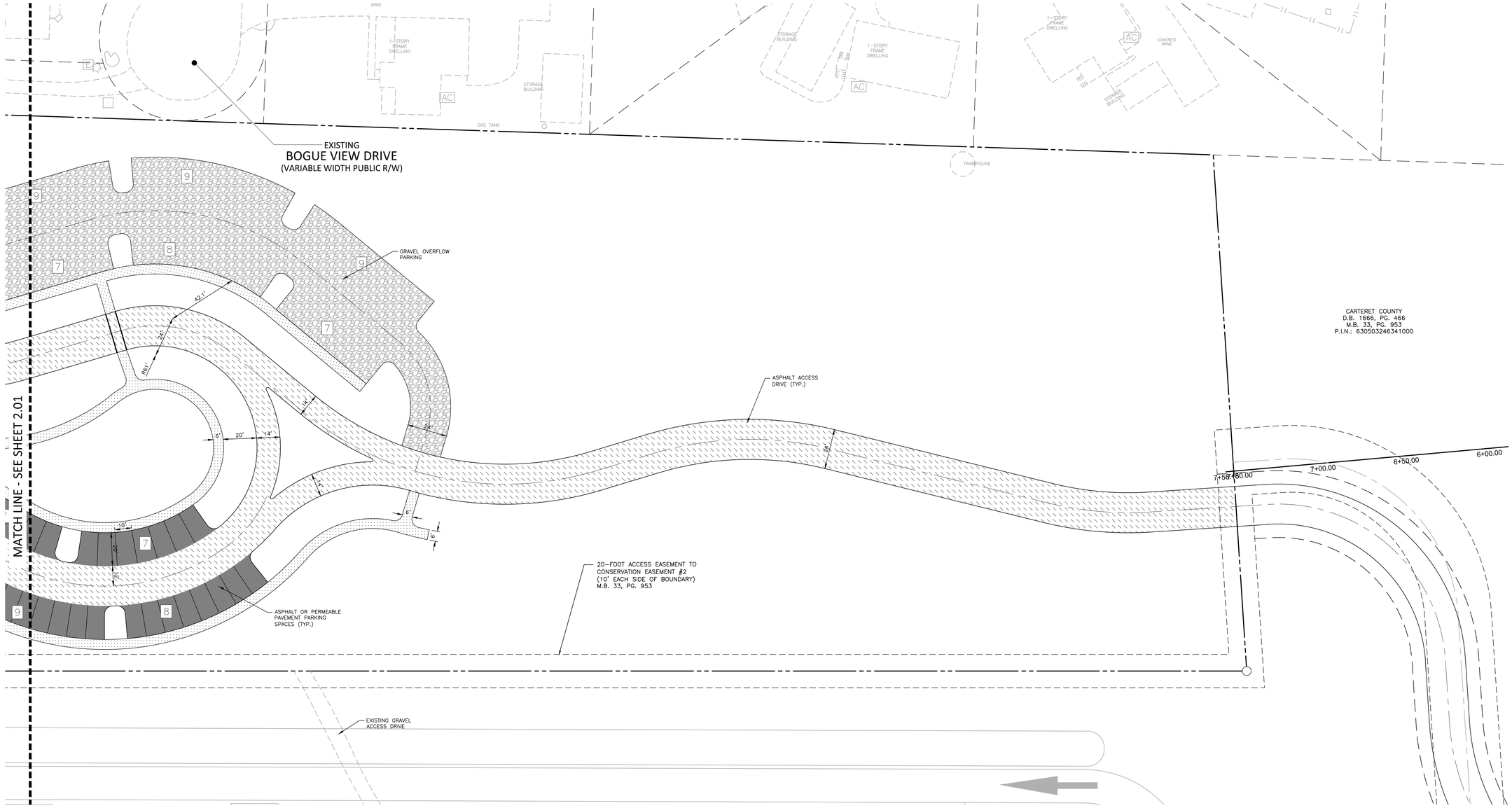
PROJECT NO.	NCF22001
FILENAME	NCF22001-S1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 30'
DATE	06. 01. 2023

SHEET

SITE PLAN AREA A

C2.01

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SITE LEGEND

- SIGNAGE
- YARD LIGHTS
- LIGHT POLE
- POWER POLE
- TRAFFIC DIRECTIONAL ARROW
- ACC — ACCESSIBLE PARKING STALL
- VAN — VAN ACCESSIBLE PARKING STALL
- XX — PARKING SPACE COUNT
- ACCESSIBLE RAMPS (TYPE A, TYPE B, TYPE C)
- ACCESSIBLE ROUTE
- PHASE LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- LOT LINE
- EASEMENT LINE
- CENTERLINE

MATERIALS LEGEND

SYMBOL	TYPE	STYLE/MANUFACTURER	COLOR/FINISH
	BRICK PAVERS	TBD	TBD
	ADA ACCESSIBLE CRUSHED GRAVEL OR PERMEABLE PAVERS	TBD	TBD
	GRAVEL PARKING	TBD	TBD
	HEAVY DUTY ASPHALT	SEE DETAIL ## SHEET C8.00	SEE DETAIL ## SHEET C8.00
	ASPHALT OR PERMEABLE PAVEMENT	TBD	TBD

GRAPHIC SCALE
0 15 30 60
1 inch = 30 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA — THE JOHN R. McADAMS COMPANY, INC. — C-0293 — CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047804 EMERIC M. DOMONELL — NOT FOR CONSTRUCTION

REVISIONS

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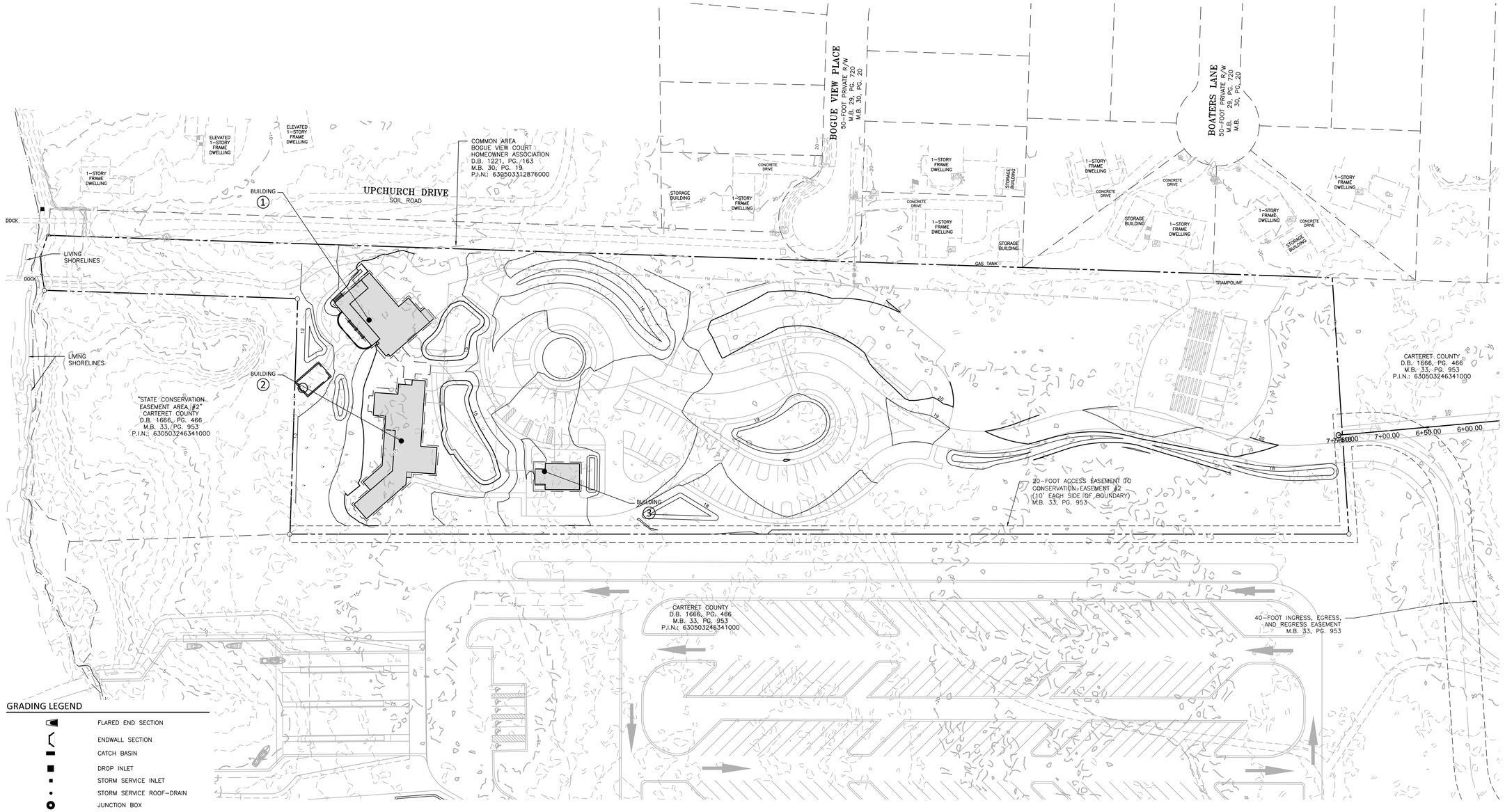
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-S1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 30'
DATE	06. 01. 2023

SHEET

SITE PLAN AREA B

C2.02



GRADING LEGEND

	FLARED END SECTION
	ENDWALL SECTION
	CATCH BASIN
	DROP INLET
	STORM SERVICE INLET
	STORM SERVICE ROOF-DRAIN
	JUNCTION BOX
	DRAINAGE FLOW ARROW
	LINE BREAK SYMBOL
250.50 / 250.00	TOP & BOTTOM CURB ELEVATIONS
TW=223.00 / BW=213.00	TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION (NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)
+ 250.60	SPOT ELEVATION
	STORM DRAINAGE
	STORM SERVICE LINE
RD RD RD	ROOF DRAIN, 8" ADS NON-PERFORATED TUBING OR EQUAL 1.0% MIN. SLOPE 3' MIN. COVER PVC SCHEDULE 40 IN TRAFFIC AREAS
TP TP TP	TREE PROTECTION FENCE
LD LD	LIMITS OF DISTURBANCE
	WOODED AREA
250	MAJOR CONTOUR
252	MINOR CONTOUR
250	EXISTING MAJOR CONTOUR
252	EXISTING MINOR CONTOUR
	EASEMENT LINE
	ACCESSIBLE PARKING AREA (2% MAX. SLOPE IN ALL DIRECTIONS)

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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90% CONSTRUCTION DRAWINGS

HIGHWAY 24

CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION — THE JOHN R. McADAMS COMPANY, INC. C-0293

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047604 — ERIC M. DOMONELL — NOT FOR CONSTRUCTION

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PLAN INFORMATION

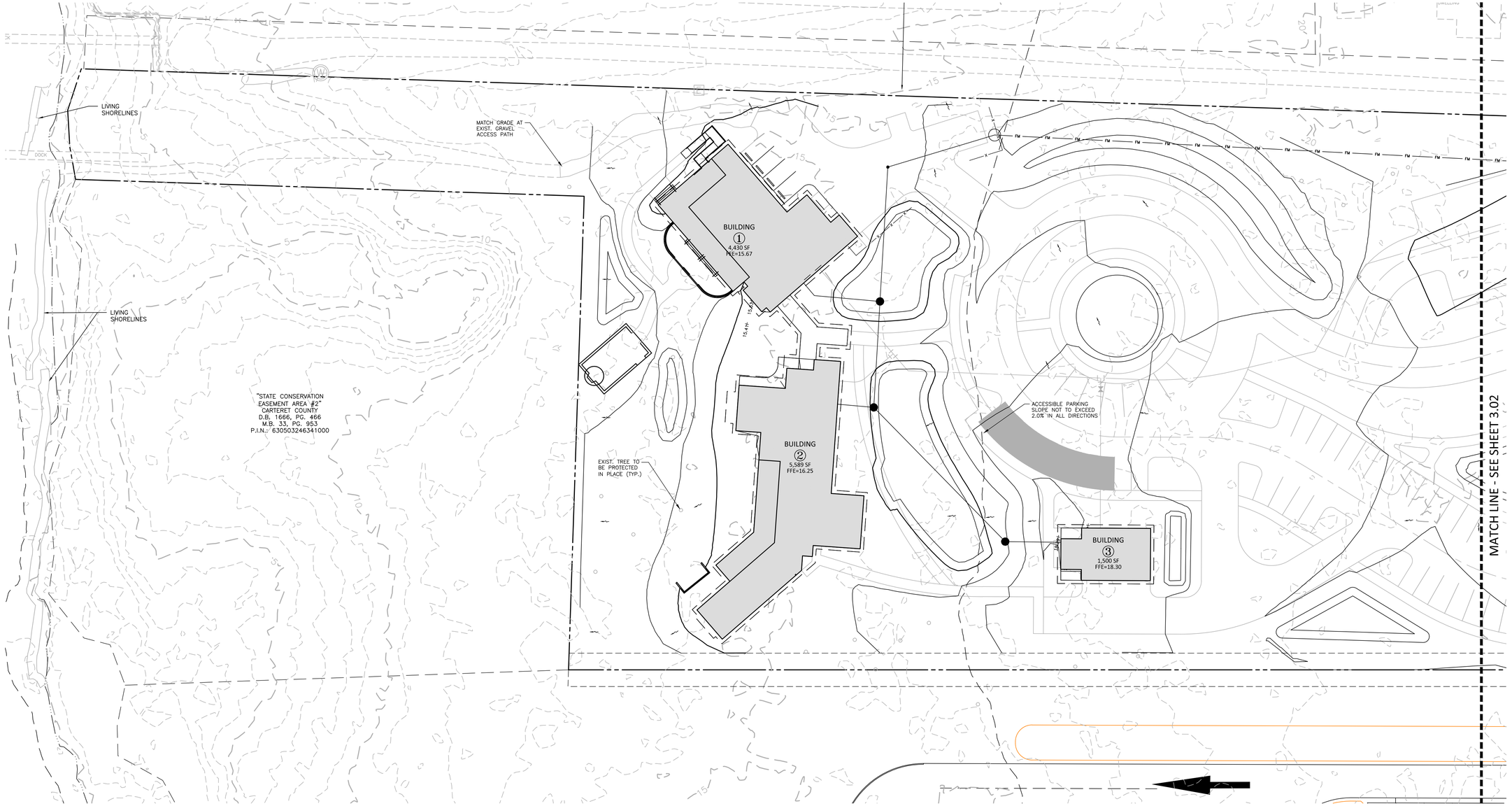
PROJECT NO.	NCF22001
FILENAME	NCF22001-OAG1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 60'
DATE	06. 01. 2023

SHEET

OVERALL GRADING AND STORM DRAINAGE PLAN

C3.00

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GRADING LEGEND

FLARED END SECTION	STORM SERVICE LINE
ENDWALL SECTION	RD RD RD — ROOF DRAIN, 8" ADS NON-PERFORATED TUBING OR EQUAL 1.0% MIN. SLOPE 3' MIN. COVER PVC SCHEDULE 40 IN TRAFFIC AREAS
CATCH BASIN	
DROP INLET	
STORM SERVICE INLET	TP TP TP — TREE PROTECTION FENCE
STORM SERVICE ROOF-DRAIN	LD LD — LIMITS OF DISTURBANCE
JUNCTION BOX	WOODED AREA
DRAINAGE FLOW ARROW	250 — MAJOR CONTOUR
LINE BREAK SYMBOL	252 — MINOR CONTOUR
250.50 / 250.00 — TOP & BOTTOM CURB ELEVATIONS	250 — EXISTING MAJOR CONTOUR
	252 — EXISTING MINOR CONTOUR
TW=223.00 / BW=213.00 — TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION (NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)	EASEMENT LINE
	ACCESSIBLE PARKING AREA (2% MAX. SLOPE IN ALL DIRECTIONS)
+ 250.60 — SPOT ELEVATION	
STORM DRAINAGE	

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

DESIGN DEVELOPMENT
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA — THE JOHN R. McADAMS COMPANY, INC. — C-0293 — CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042604 ERIC M. DOMONELL

REVISIONS

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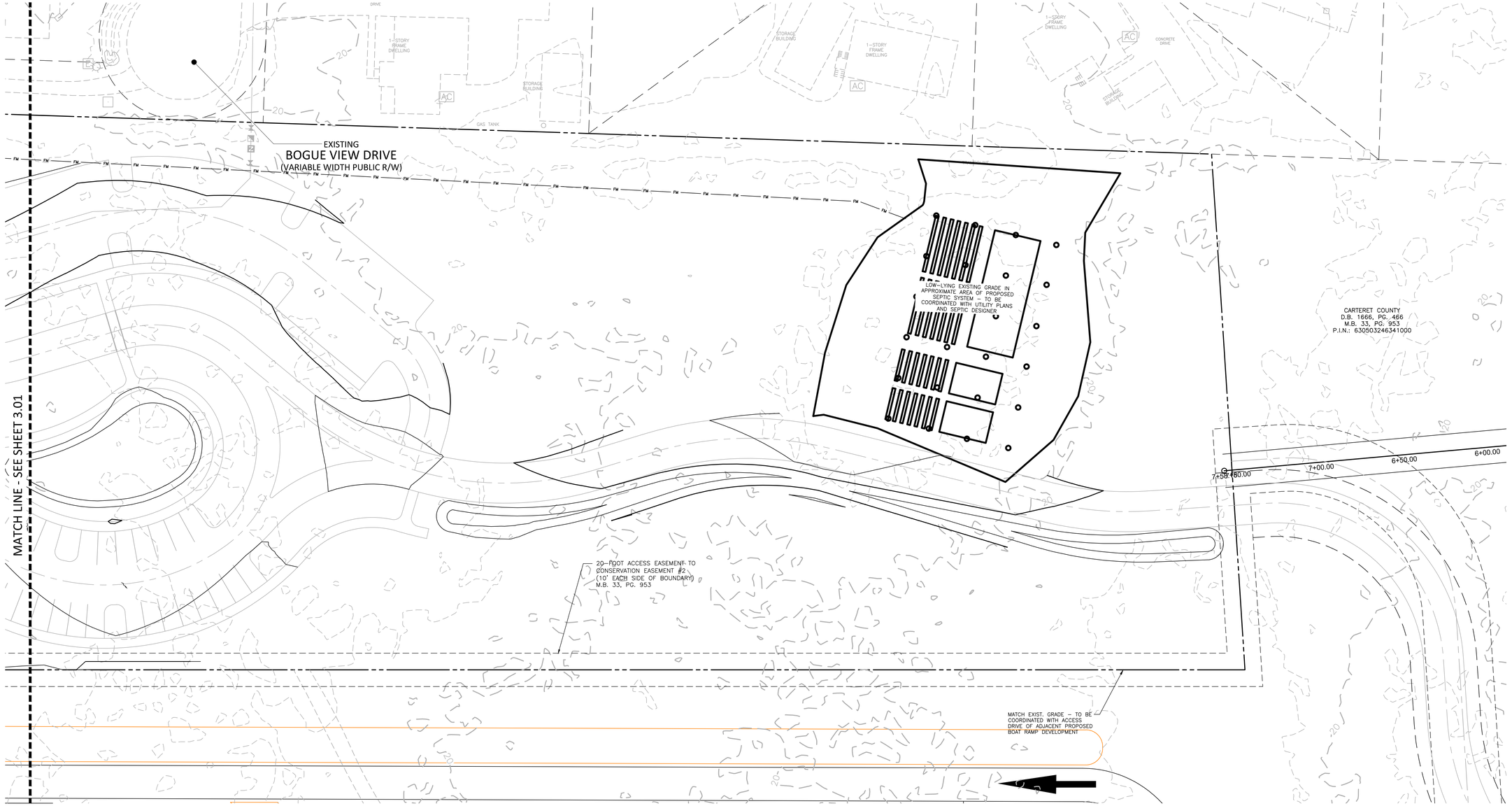
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-G1
CHECKED BY	EMD
DRAWN BY	SME
SCALE	1" = 30'
DATE	11. 08. 2022

SHEET

GRADING AND STORM DRAINAGE PLAN - AREA A

C3.01



GRADING LEGEND

FLARED END SECTION	STORM SERVICE LINE
ENDWALL SECTION	ROOF DRAIN, 8" ADS NON-PERFORATED TUBING OR EQUAL 1.0% MIN. SLOPE 3' MIN. COVER PVC SCHEDULE 40 IN TRAFFIC AREAS
CATCH BASIN	TREE PROTECTION FENCE
DROP INLET	LIMITS OF DISTURBANCE
STORM SERVICE INLET	WOODED AREA
STORM SERVICE ROOF-DRAIN	MAJOR CONTOUR
JUNCTION BOX	MINOR CONTOUR
DRAINAGE FLOW ARROW	EXISTING MAJOR CONTOUR
LINE BREAK SYMBOL	EXISTING MINOR CONTOUR
TOP & BOTTOM CURB ELEVATIONS	EASEMENT LINE
TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION (NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)	ACCESSIBLE PARKING AREA (2% MAX. SLOPE IN ALL DIRECTIONS)
SPOT ELEVATION	
STORM DRAINAGE	

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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DESIGN DEVELOPMENT
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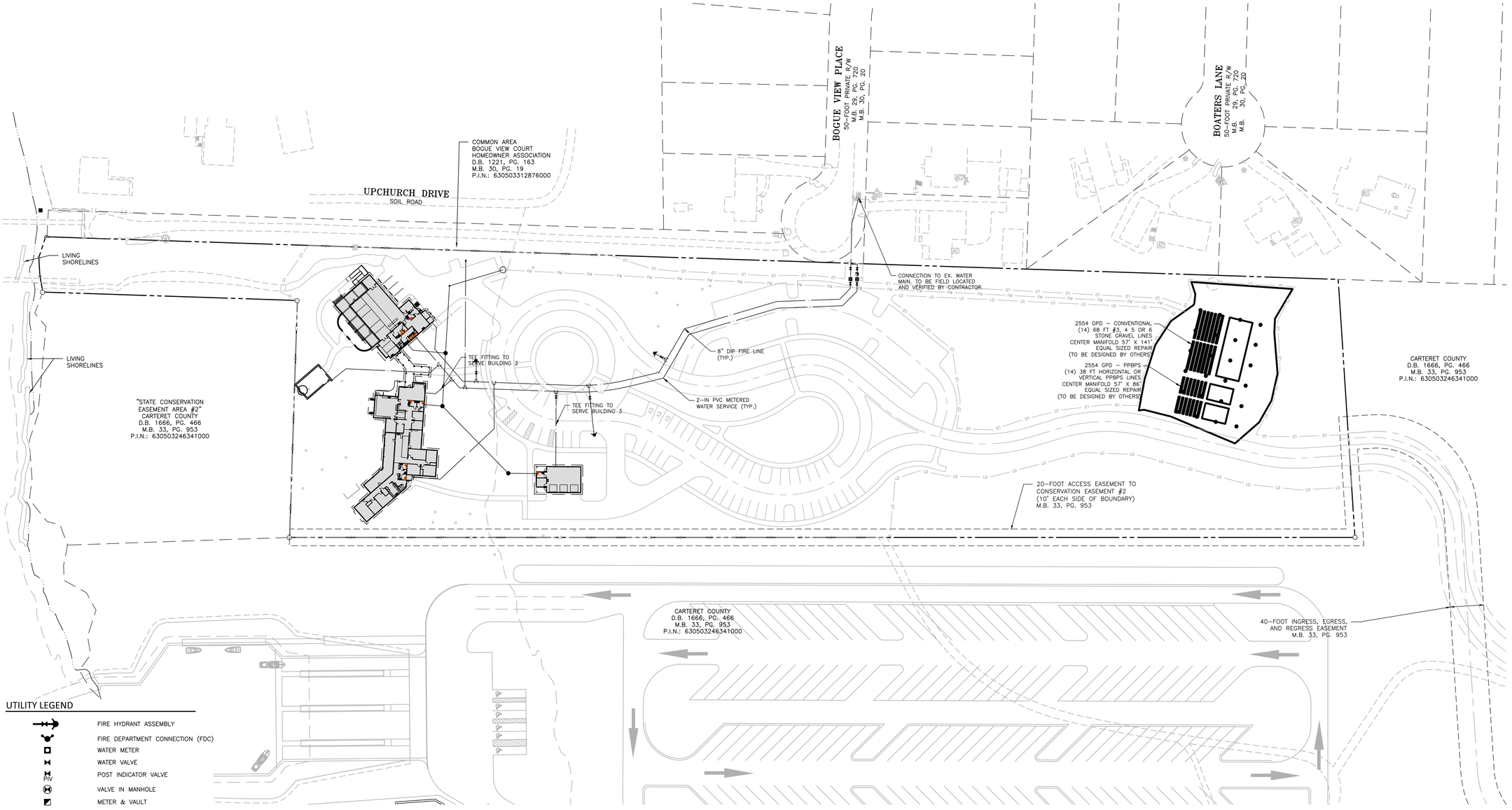
PROJECT NO.	NCF22001
FILENAME	NCF22001-G1
CHECKED BY	EMD
DRAWN BY	SME
SCALE	1" = 30'
DATE	11. 08. 2022

SHEET

GRADING AND STORM DRAINAGE PLAN - AREA B

C3.02

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UTILITY LEGEND

- FIRE HYDRANT ASSEMBLY
- FIRE DEPARTMENT CONNECTION (FDC)
- WATER METER
- WATER VALVE
- POST INDICATOR VALVE
- VALVE IN MANHOLE
- METER & VAULT
- BACKFLOW PREVENTER
- REDUCER
- PLUG
- BLOW-OFF ASSEMBLY
- SANITARY SEWER MANHOLE
- SEWER CLEAN-OUT
- GREASE TRAP
- SEWER FLOW DIRECTION ARROW
- YARD LIGHTS
- LIGHT POLE
- POWER POLE
- LINE BREAK SYMBOL
- WATERLINE
- WATER SERVICE LINE
- UTILITY SLEEVE
- SANITARY SEWER
- SEWER SERVICE LINE
- SEWER FORCE MAIN
- GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- TELEPHONE
- EASEMENT LINE

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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90% CONSTRUCTION DRAWINGS

HIGHWAY 24

CARTERET COUNTY, NORTH CAROLINA, 28570

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NORTH CAROLINA PROFESSIONAL SEAL 047604 ENGINEER ERIC M DOMONELL NOT FOR CONSTRUCTION

REVISIONS

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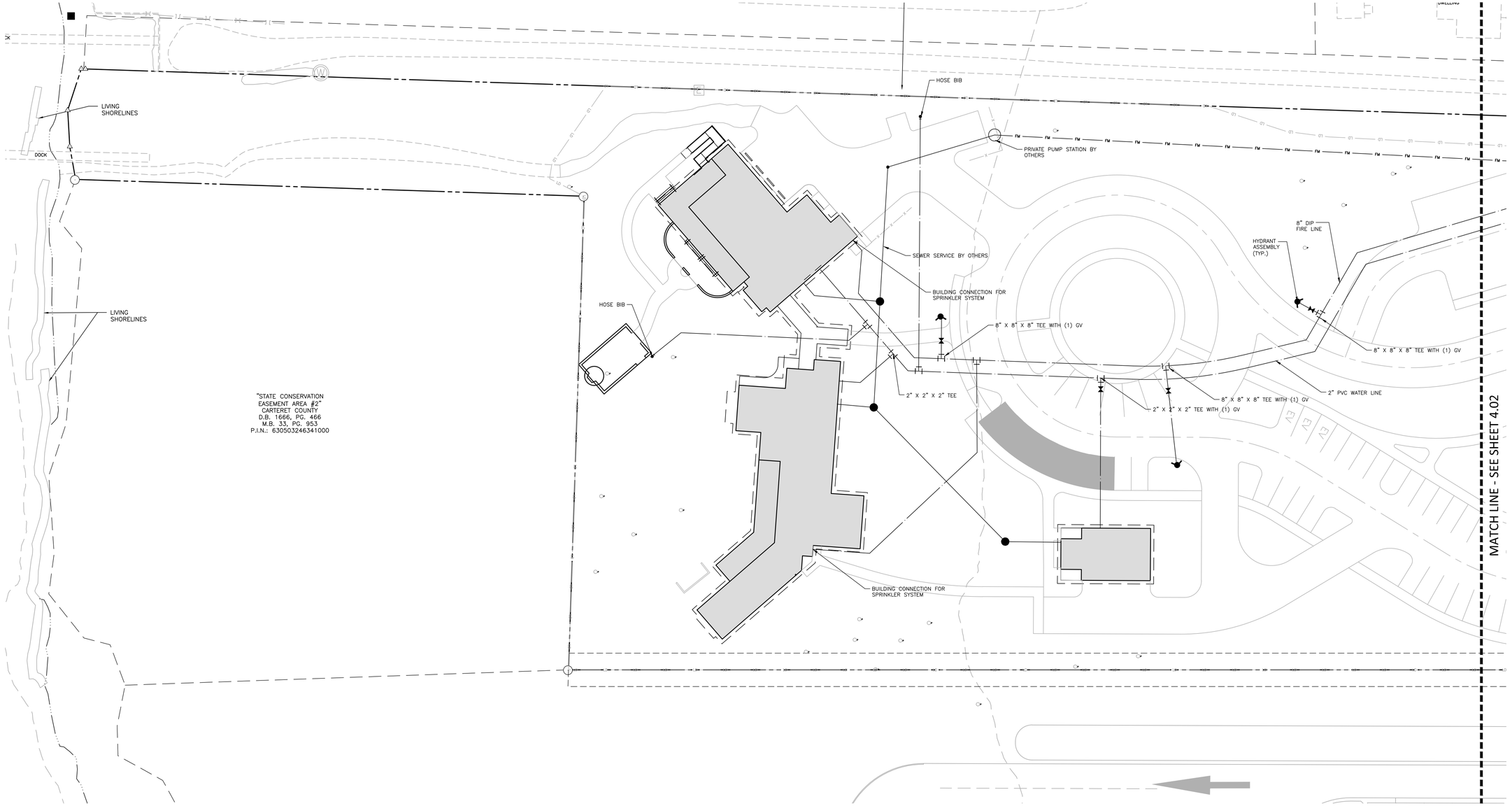
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-OAU1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 60'
DATE	06. 01. 2023

SHEET

OVERALL UTILITY PLAN

C4.00



UTILITY LEGEND

- FIRE HYDRANT ASSEMBLY
- FIRE DEPARTMENT CONNECTION (FDC)
- WATER METER
- WATER VALVE
- POST INDICATOR VALVE (PIV)
- VALVE IN MANHOLE
- METER & VAULT
- BACKFLOW PREVENTER
- REDUCER
- PLUG
- BLOW-OFF ASSEMBLY
- SANITARY SEWER MANHOLE
- SEWER CLEAN-OUT
- GREASE TRAP
- SEWER FLOW DIRECTION ARROW
- YARD LIGHTS
- LIGHT POLE
- POWER POLE
- LINE BREAK SYMBOL

- WATERLINE
- WATER SERVICE LINE
- UTILITY SLEEVE
- SANITARY SEWER
- SEWER SERVICE LINE
- FM — FM — SEWER FORCE MAIN
- G — G — G — G — GAS LINE
- OU — OU — OVERHEAD UTILITY
- UE — UE — UNDERGROUND ELECTRIC
- T — T — T — T — TELEPHONE
- EASEMENT LINE

GRAPHIC SCALE
0 30 60 120
1 inch = 60 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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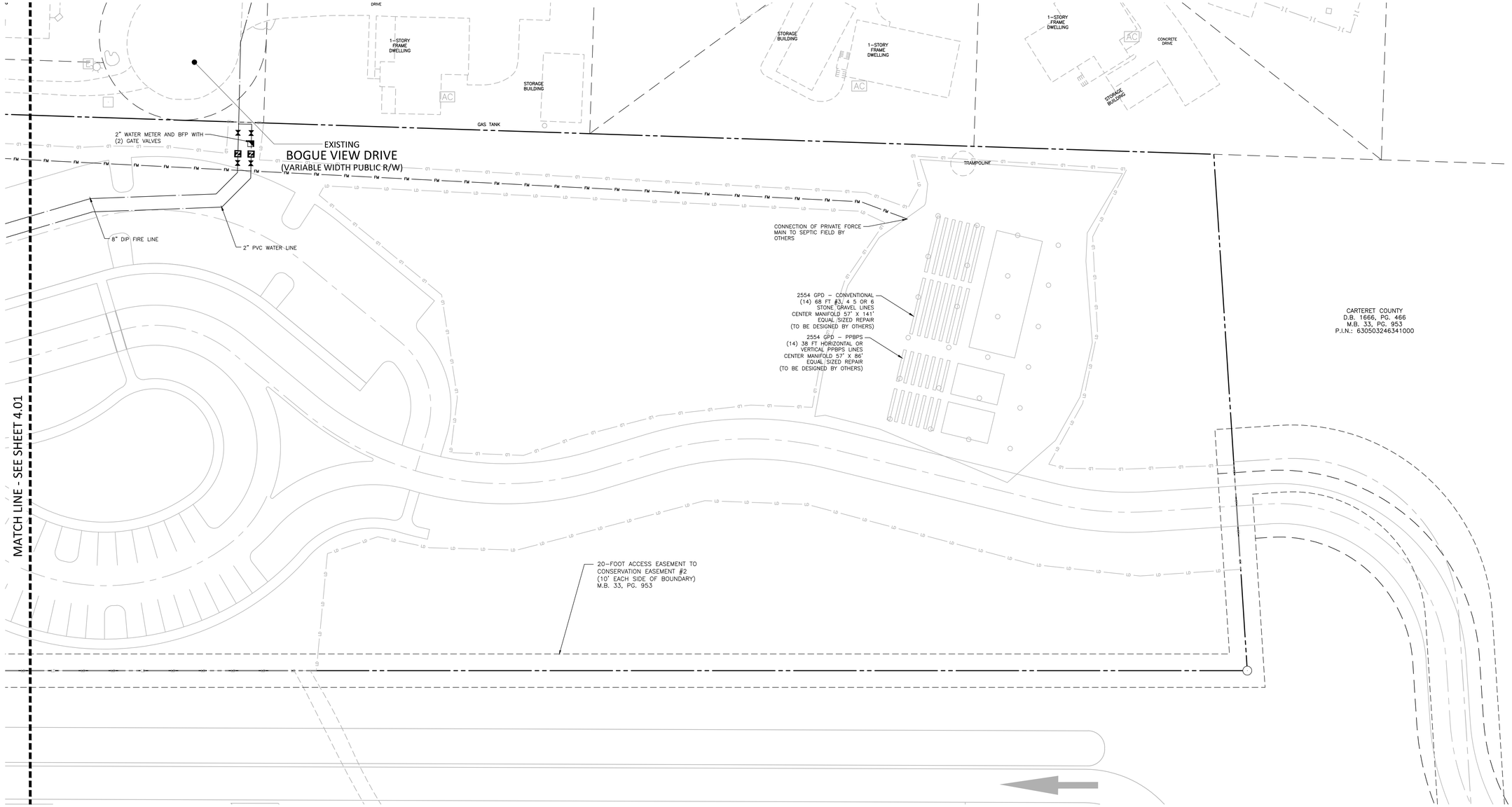
PLAN INFORMATION

PROJECT NO.	NCF22001
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DRAWN BY	~~CKB~~
SCALE	1" = 30'
DATE	06. 01. 2023

SHEET

UTILITY PLAN - AREA A

C4.01



UTILITY LEGEND

- FIRE HYDRANT ASSEMBLY
- FIRE DEPARTMENT CONNECTION (FDC)
- WATER METER
- WATER VALVE
- POST INDICATOR VALVE
- VALVE IN MANHOLE
- METER & VAULT
- BACKFLOW PREVENTER
- REDUCER
- PLUG
- BLOW-OFF ASSEMBLY
- SANITARY SEWER MANHOLE
- SEWER CLEAN-OUT
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- LINE BREAK SYMBOL

- WATERLINE
- WATER SERVICE LINE
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GRAPHIC SCALE
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UTILITY PLAN - AREA B

C4.02

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SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. PER ONE TIME ONLY, APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL–PULVERIZED, FIRM REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. AFTER PERMANENT COVER IS ESTABLISHED.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT.

TEMPORARY SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
JAN 1 – MAY 1	RYE (GRAIN)	120 LBS/AC
	KOBE LESPEDEZA	50 LBS/AC
MAY 1 – AUG 15	GERMAN MILLET	40 LBS/AC
AUG 15 – DEC 30	RYE (GRAIN)	120 LBS/AC

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 750 LB/AC 10–10–10 FERTILIZER (FROM AUG 15 – DEC 30, INCREASE 10–10–10 FERTILIZER TO 1000 LB/AC).

MULCH
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.

MAINTENANCE
JAN 1 – AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

AUG 15 – DEC 30 : REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

PERMANENT SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
AUG 25 – OCT (BEST) FEB – APR 15 (POSSIBLE)	TALL FESCUE	200 LBS/AC

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1000 LB/AC 10–10–10 FERTILIZER.

MULCH
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.

MAINTENANCE
INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR; USE SOIL TESTS OR APPLY 150 LB/AC 10–10–10 FERTLIZER. MOW REGULARLY TO A HEIGHT OF 2–4 INCHES.

EROSION CONTROL CONSTRUCTION SEQUENCE:

1. OBTAIN LAND DISTURBING PERMIT.
2. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR.
3. THE NCDEQ LAND QUALITY SECTIONS OFFICE MUST BE CALLED BY THE FINANCIAL RESPONSIBLE OBLIGATOR BEFORE WORK BEGINS ON THIS PROJECT. SCHEDULE A PRE-CON CONFERENCE WITH CONSERVATION INSPECTOR (910) 796-7215.
4. INSTALL CONSTRUCTION ENTRANCE, TREE PROTECTION, SILT FENCE, AND SILT FENCE OUTLETS. CLEARING ONLY AS NECESSARY FOR INSTALLATION. TEMPORARILY SEED AND MULCH ALL AREAS IMMEDIATELY AFTER ANY DISTURBANCE.
5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL DESIGN MANUAL. TEMPORARILY SEED, MULCH, AND ANCHOR ALL MEASURES UPON INSTALLATION.
6. CALL NCDEQ, LAND QUALITY SECTION AT (910) 796-7215, FOR ON-SITE INSPECTION AND OBTAIN CERTIFICATE OF COMPLIANCE.
7. BEGIN CLEARING, GRUBBING AND GENERAL EXCAVATION, FILLING AND MASS GRADING OF SITE. AS THE SITE IS BEING EXCAVATED / FILLED, THE CONTRACTOR IS TO ENSURE THAT POSITIVE DRAINAGE TO EROSION CONTROL MEASURES IS MAINTAINED.
8. STABILIZE GRADED AREAS AS THEY ARE BROUGHT TO FINAL GRADE. TEMPORARILY SEED AND MULCH DENUDED AREAS WITHIN 14 DAYS OF ANY COMPLETED PHASE OF CONSTRUCTION. ONCE FINAL GRADE HAS BEEN ACHIEVED, PERMANENTLY SEED ALL AREAS AND SLOPES PER NCDEQ'S EROSION SEDIMENT CONTROL PLANNING AND DESIGN MANUAL VERSION 6/06, SECTION 6.10 AND 6.11.
9. ONCE ALL MASS GRADING IS COMPLETE, CALL NCDEQ, LAND QUALITY SECTION AT (910) 796-7215, FOR ON-SITE INSPECTION.
10. IF SITE IS APPROVED, REMOVE ANY REMAINING EROSION CONTROL MEASURES. PAVE OR SEED ANY REMAINING BARE AREAS AND CALL FOR FINAL INSPECTION BY ENVIRONMENTAL OFFICER AND RECEIVE CERTIFICATE OF COMPLETION.
11. WHEN THE PROJECT IS COMPLETE, THE PERMITTEE SHALL CONTACT DEMLR TO CLOSE OUT THE E&EC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT DEQ.NC.GOV/NCGO1 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A $100 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.

GENERAL NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
2. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, CONSTRUCTION FENCE OR TREE PROTECTION FENCING (IF APPLICABLE) SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
3. ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING, OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
4. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
5. CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF NC811. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
6. EXISTING UTILITIES AND STRUCTURES SHOWN BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS, BOTH HORIZONTAL AND VERTICAL, PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. CONTRACTOR SHALL ROOT SPADE WITHIN ALL TREE DRIPLINES AND TAKE ALL PRECAUTIONS NECESSARY TO SAVE TREES NOT SHOWN TO BE DEMOLISHED.
8. ALL GROUND COVER SHALL BE APPLIED PER CONDITIONS OF THE NPDES PERMIT OR IN CRITICAL AREAS AT THE END OF EACH DAY.

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEERING OF ANY CONFLICTS/DISCREPANCIES.
2. NEW EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AS SHOWN ON PLANS AND INSPECTED PRIOR TO ANY GRADING OR DEMOLITION ON SITE. MAINTENANCE AND REPAIR SHALL BE MADE, AS NECESSARY, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CALL FOR AN INSPECTION ONCE INITIAL MEASURES ARE IN PLACE.
3. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
4. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
5. INSTALL A RAIN GAUGE (6" CAPACITY OR GREATER) ONSITE.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL UPSLOPE DRAINAGE AREAS HAVE BEEN STABILIZED AND PERMANENT VEGETATION HAS BEEN ESTABLISHED.
7. CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED. ANY DEWATERING ASSOCIATED WITH THIS PROJECT IS TO BE DONE THROUGH A SILT BAG. CONTRACTOR SHALL WORK IN DRY CONDITIONS TO THE MAXIMUM EXTENT POSSIBLE.
8. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE EROSION CONTROL PERMIT AND IS SUBJECT TO A FINE. ANY NEED TO DISTURB BEYOND THE APPROVED PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, ENGINEER AND EROSION CONTROL INSPECTOR.
9. 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 7 OR 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVISES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PERMANENT GROUNDCOVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN. ALL GRADED SLOPES STEEPER THAN 3:1 MUST BE SEEDED & COMPOST LAID WITHIN 7 DAYS OF COMPLETION OF GRADING. ALL REMAINING DISTURBED AREAS ARE TO BE SEEDED AND COMPOST LAID WITHIN 14 DAYS. PERMANENT SWALES ARE TO BE STABILIZED WITHIN 7 DAYS. SEE THE GROUND STABILIZATION CHART FOR ADDITIONAL REQUIREMENTS.
10. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY REPRESENTATIVE OF THE NCDEQ DEMLR DEPARTMENT. ADDITIONAL SILT FENCE OUTLETS AT LOW AREAS MAY BE INSTALLED BY CONTRACTOR AS REQUIRED. E&SC MEASURES ARE TO BE INSTALLED AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREA.
11. PROTECTION OF EXISTING VEGETATION (IF APPLICABLE): AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
12. INSTALLATION AND MAINTENANCE OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE NCDEQ DEMLR INSPECTOR AND THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
13. CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS.
14. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
15. REQUIRED CONSTRUCTION/SAFETY FENCING SHALL BE INSTALLED PRIOR TO BEGINNING LAND DISTURBANCE.
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP ALL DIRT OFF PAVED ROADS. HEAVY MATS MAY BE USED IN LIEU OF ROCK CONSTRUCTION ENTRANCES AS DETERMINED BY THE ON-SITE INSPECTOR.
17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP ALL SEDIMENT ON SITE AND ENSURE NO SEDIMENT LEAVES THE LIMITS OF DISTURBANCE OF THE PROJECT. THIS MAY REQUIRE INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES ABOVE AND BEYOND WHAT IS SHOWN ON THE PLANS. IF ENVIRONMENTAL OR SITE CONDITIONS WARRANT ADDITIONAL EROSION CONTROL MEASURES, CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM DEP REPRESENTATIVE. EROSION CONTROL MEASURES DAMAGED OR REQUIRED DUE TO CONTRACTOR ACTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION AT NO ADDITIONAL COST TO DEP.
18. ALL CONSTRUCTION DEBRIS SHALL BE TESTED AND DISPOSED OF OFF-SITE IN A STATE PERMITTED LINED LANDFILL.
19. ALL EARTHEN MATERIAL BROUGHT TO OR REMOVED FROM THE PROJECT SITE SHALL COME FROM OR BE DELIVERED TO A SITE THAT HAS A CURRENT EROSION AND SEDIMENTATION CONTROL.

OFFSITE SPOIL NOTE:

IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A LAND-DISTURBANCE PERMIT.

GROUND STABILIZATION		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

BUILDING WASTES HANDLING
• NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS
• DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
• EARTHEN-MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
• WET CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATER, WETLANDS, OR BUFFERS.

Know what's below. Call before you dig.

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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THE JOHN R. McADAMS COMPANY, INC. C-0293 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047504 PATRICK M. DOMONELL

REVISIONS

NO.	DATE

PLAN INFORMATION

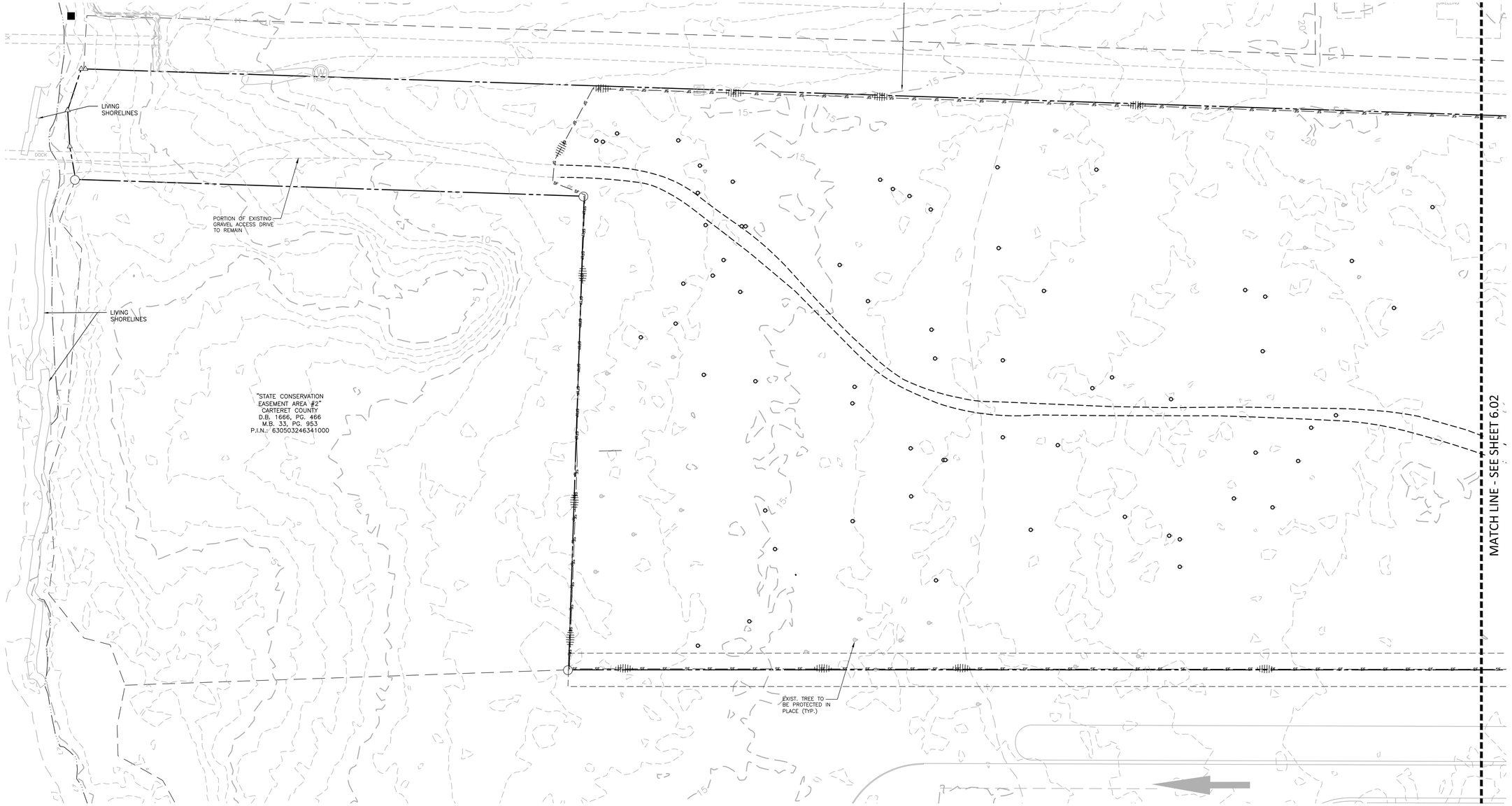
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DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

SHEET

EROSION CONTROL NOTES

C6.00

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GRAPHIC SCALE
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NORTH CAROLINA PROFESSIONAL SEAL 042604 ENGINEER ERIC M. DOMONELL

REVISIONS

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PROJECT NO.	NCF22001
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SCALE	1" = 30'
DATE	06. 01. 2023

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EROSION CONTROL - STAGE 1 AREA A

C6.01

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NORTH CAROLINA
PROFESSIONAL
SEAL
042604
ENGINEER
ERIN M. DOMONELL

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PLAN INFORMATION

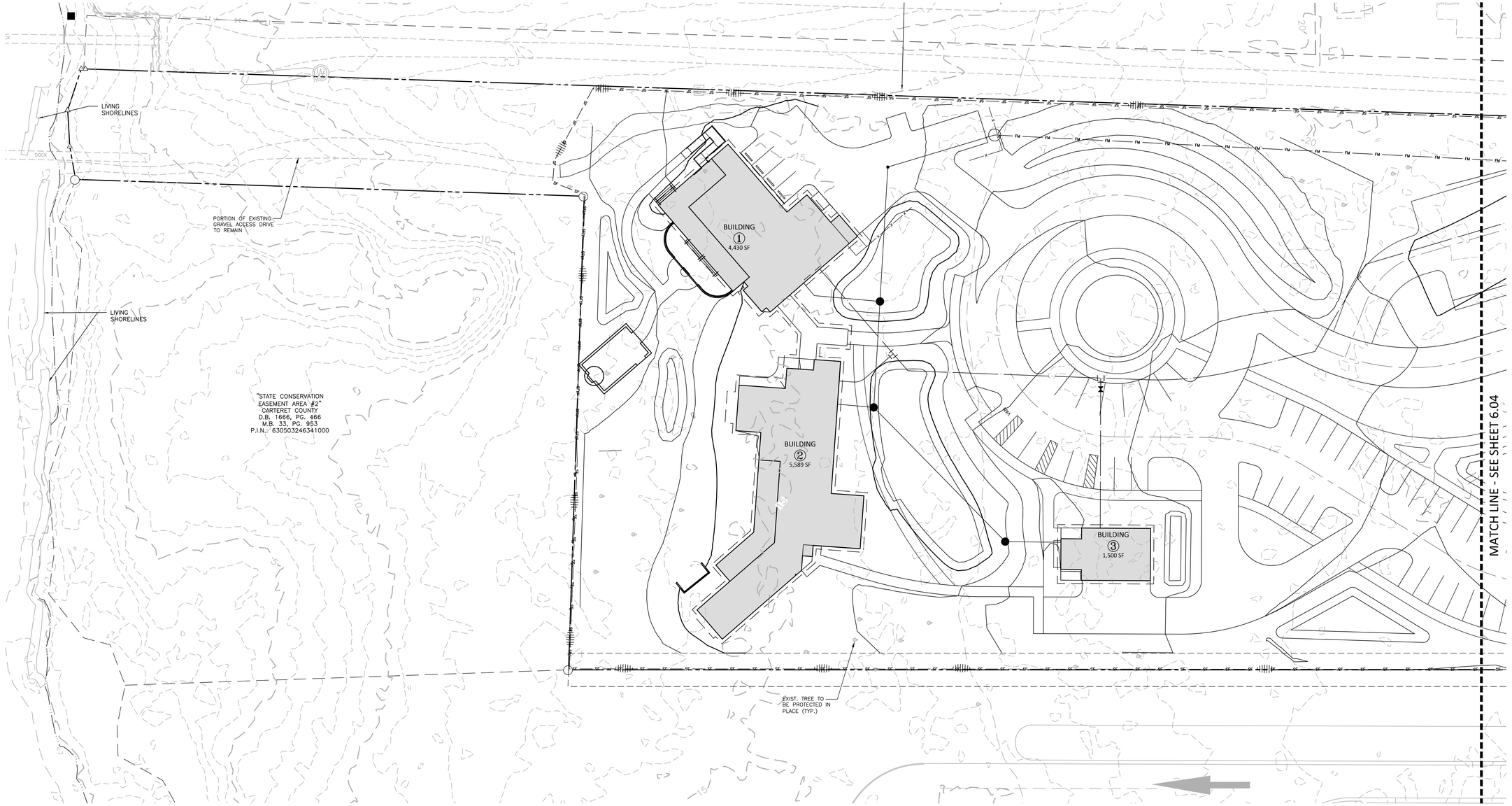
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EROSION CONTROL - STAGE 1 AREA B

C6.02

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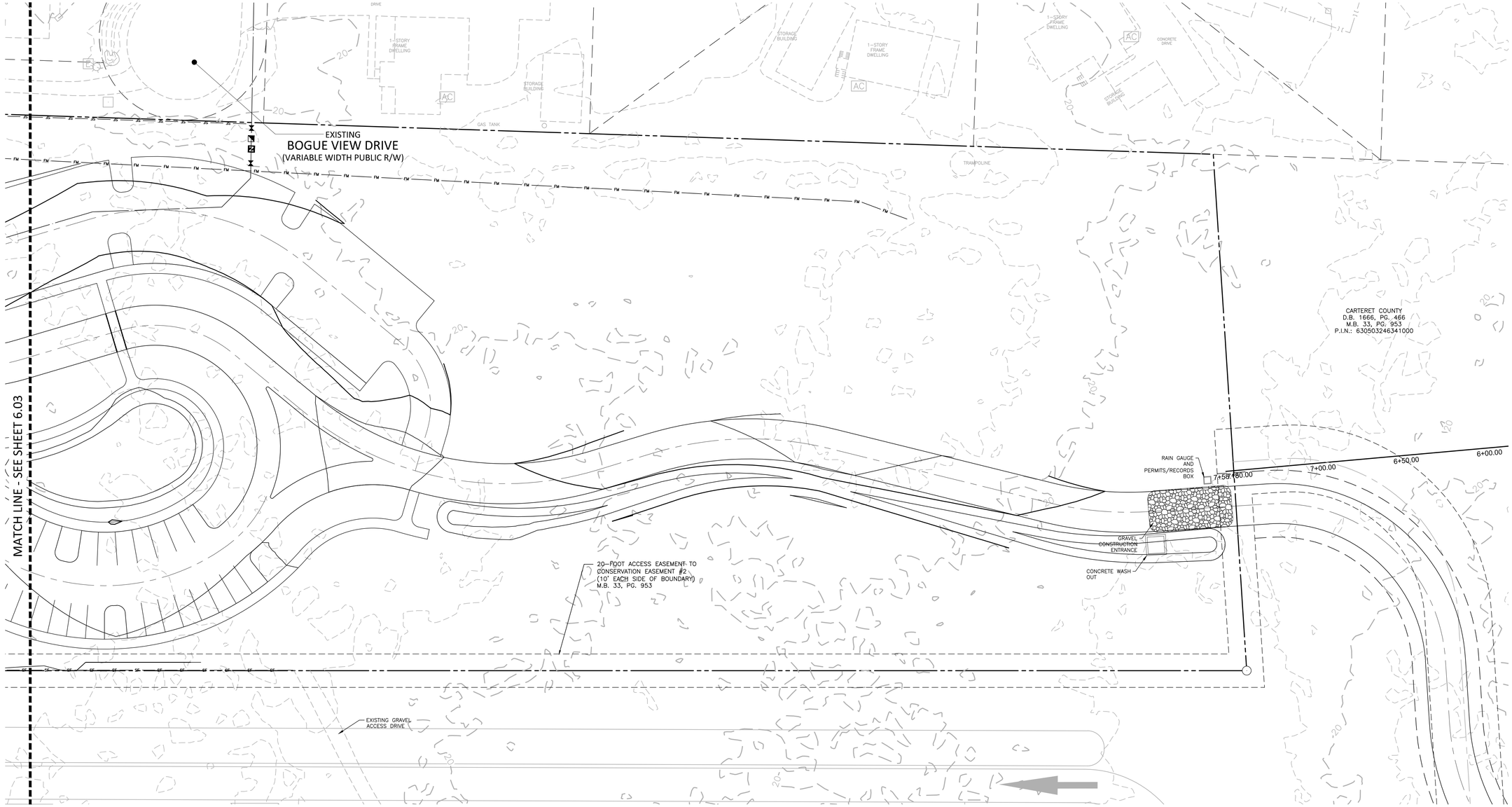
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EROSION CONTROL - STAGE 2 AREA A

C6.03

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C-0293

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ERIC M. DOMONELL

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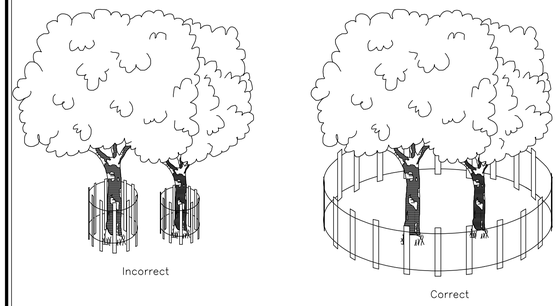
EROSION CONTROL - STAGE 2 AREA B

C6.04

NOTES:

In spite of precautions, some damage to protected trees may occur. In such cases repair any damage to the crown, truck or root system immediately.

- Repair roots by cutting off the damaged areas and painting them with tree paint. Spread peat moss or moist topsoil over exposed roots.
- Repair damage to bark by trimming around the damaged areas as shown in Figure 6.04b, taper the cut to provide drainage, and paint with tree paint.
- Cut off all damaged tree limbs above the tree collar at the trunk or main branch. Use three separate cuts as shown in Figure 6.05c to avoid peeling bark from healthy areas of the tree.



Barrier should be installed at the drip line of tree branches (modified from NJ).

NOTES:

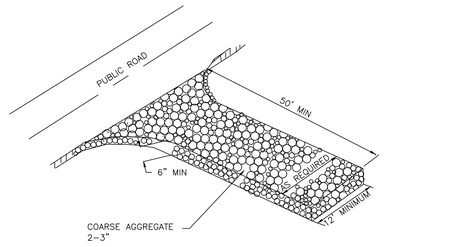
a. GRAVEL PAD TO BE 12'x 50' AND 6" THICK MINIMUM

b. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.

c. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.

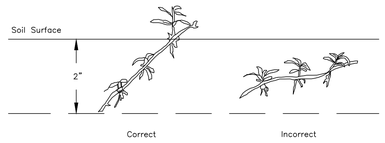
d. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE SILL BE NECESSARY; KEEP SOME HANDY.

e. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.

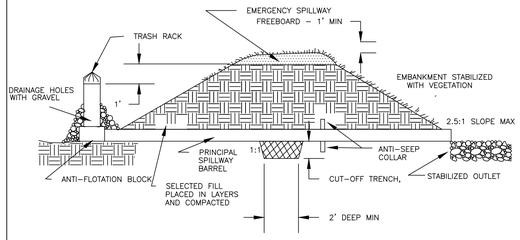


NOTES: APPLICABLE AT ALL POINTS OF INGRESS & EGRESS UNTIL SITE IS STABILIZED, FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

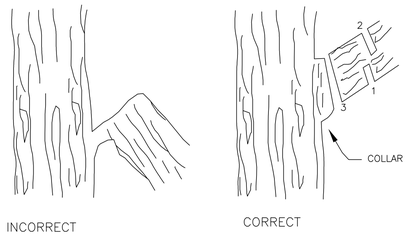
TEMPORARY CONSTRUCTION ENTRANCE/EXIT



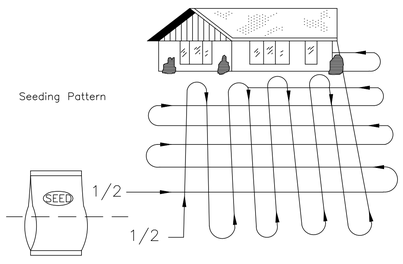
Proper placement of grass sprigs. Each sprig should have at least one node (modified from NCAES Bulletin AG–69).



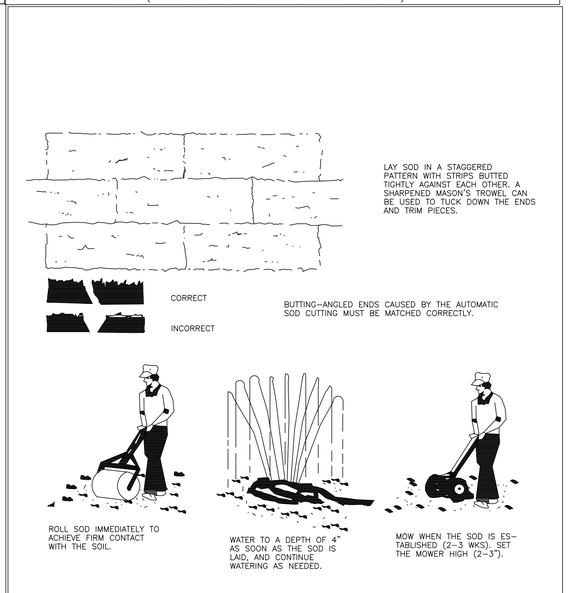
Section through embankment and basin control



PRUNE DAMAGED BRANCHES WITH THREE CUTS TO AVOID PEELING BARK FROM THE TREE TRUNK WHEN LIMB FALLS.



Suggested pattern for broadcasting seed and fertilizer (source:NCAES Bulletin AG–69).



Proper installation of grass sod (modified from Va SWCC)

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
THE JOHN R. McADAMS COMPANY, INC.
C–0293

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047504 EMILIO M DOMONELL
NOT FOR CONSTRUCTION
PRELIMINARY

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

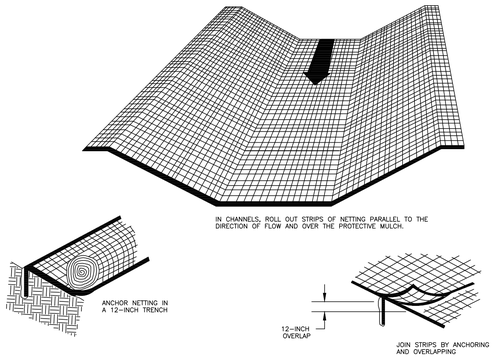
SHEET

EROSION CONTROL DETAILS

C6.05

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

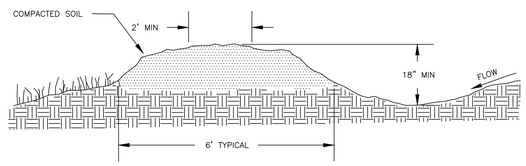
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CONSTRUCTION SPECIFICATIONS:
1. APPLY LIME, FERTILIZER, AND SEED BEFORE LAYING THE NET OR MAT.
2. START LAYING THE NET FROM THE TOP OF THE CHANNEL OR SLOPE, AND UNROLL IT DOWN THE GRADE. ALLOW NETTING TO LAY LOOSELY ON THE SOIL OR MULCH COVER BUT WITHOUT WRINKLES--DO NOT STRETCH.
3. TO SECURE THE NET, BURY THE UPSLOPE END IN A SLOT OR TRENCH NO LESS THAN 6 INCHES DEEP, COVER WITH SOIL, AND TAMP FIRMLY AS SHOWN ABOVE. STAPLE THE NET EVERY 12 INCHES ACROSS THE TOP END AND EVERY 3 FT AROUND THE EDGES AND BOTTOM. WHERE 2 STRIPS OF NET ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHOULD BE OVERLAPPED 3 INCHES AND STAPLED TOGETHER. EACH STRIP OF NETTING SHOULD ALSO BE STAPLED DOWN THE CENTER, EVERY 3 FT. DO NOT STRETCH THE NET WHEN APPLYING STAPLES.
4. TO JOIN TWO STRIPS, CUT A TRENCH TO ANCHOR THE END OF THE NEW NET. OVERLAP THE END OF THE PREVIOUS ROLL 18 INCHES, AS SHOWN ABOVE, AND STAPLE EVERY 12 INCHES JUST BELOW THE ANCHOR SLOT.

MAINTENANCE:
INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR RILL EROSION, DISLOCATION OR FAILURE. WHERE EROSION IS OBSERVED, APPLY ADDITIONAL MULCH. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

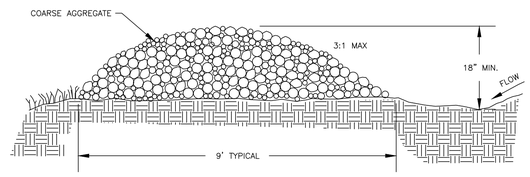
Installation of netting and matting (modified from Va. Div. of Forestry)



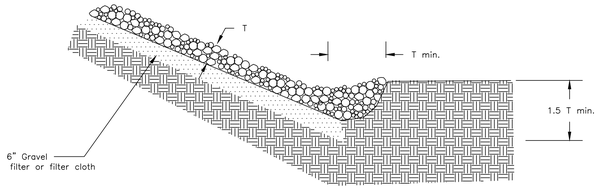
CONSTRUCTION SPECIFICATIONS:
1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
4. PROVIDE SUFFICIENT ROOM AROUND THE DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.
6. INSTALL ANY LINER DESIGNED FOR THE SPECIFIC DIVERSION DIKE/DITCH.

MAINTENANCE:
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

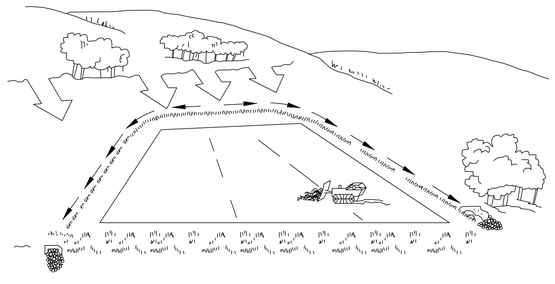
Temporary earthen diversion dike



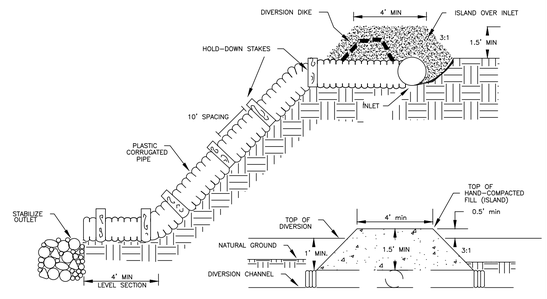
Temporary gravel diversion dike for vehicle crossing (modified from Va SWCC)



RIPRAP SLOPE PROTECTION



Perimeter dikes prevent surface runoff from entering construction sites



Cross section of temporary slope drain

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NORTH CAROLINA PROFESSIONAL SEAL 047504 ENGINEER ERIC M DOMONELL NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

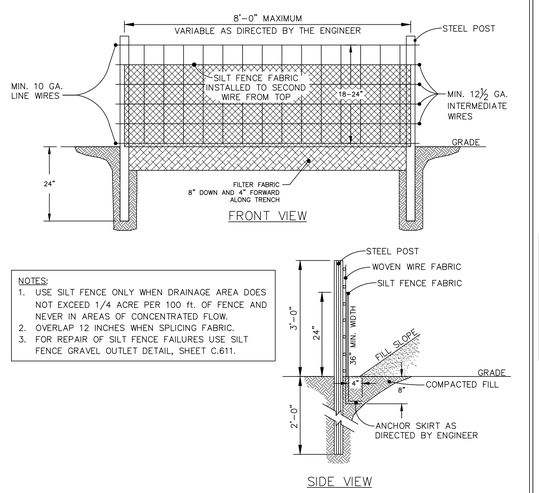
SHEET

EROSION CONTROL DETAILS

C6.06

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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SILT FENCE MAINTENANCE

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY

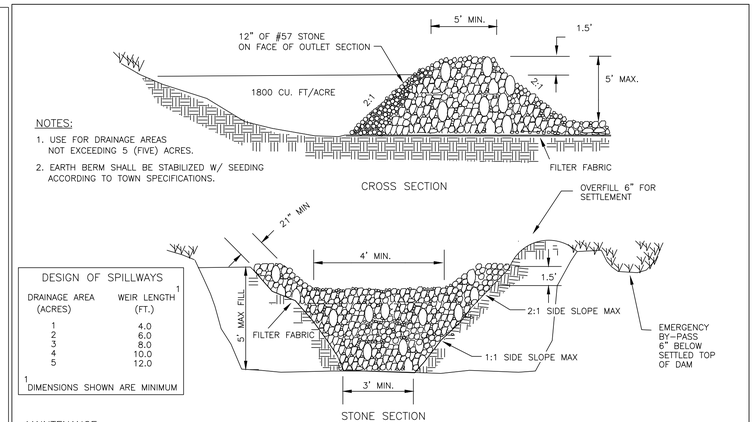
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

STANDARD TEMPORARY SILT FENCE

N.T.S.



NOTES:

1. USE FOR DRAINAGE AREAS NOT EXCEEDING 5 (FIVE) ACRES.
2. EARTH BERM SHALL BE STABILIZED W/ SEEDING ACCORDING TO TOWN SPECIFICATIONS.

DESIGN OF SPILLWAYS

DRAINAGE AREA (ACRES)	WEIR LENGTH [1] (FT.)
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

[1] DIMENSIONS SHOWN ARE MINIMUM

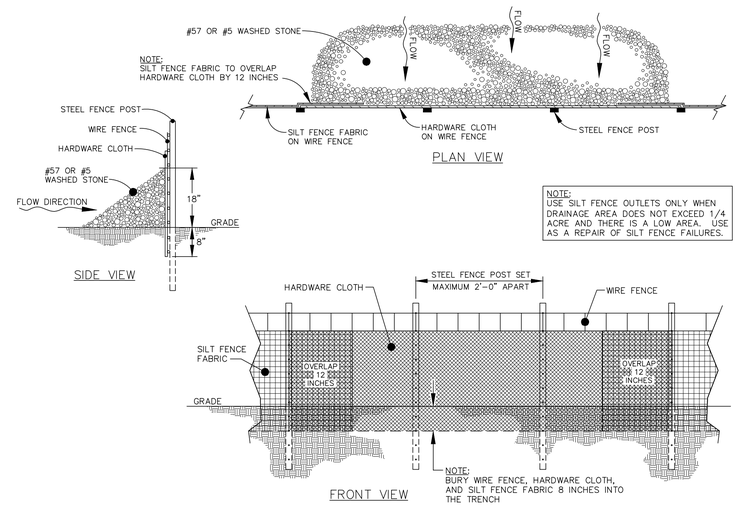
MAINTENANCE

INSPECT TEMPORARY SEDIMENT TRAPS AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN A DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FT. BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIP RAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION WITH SEEDING.

GRAVEL AND RIP RAP FILTER BASIN



SILT FENCE OUTLET MAINTENANCE

REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.

REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY

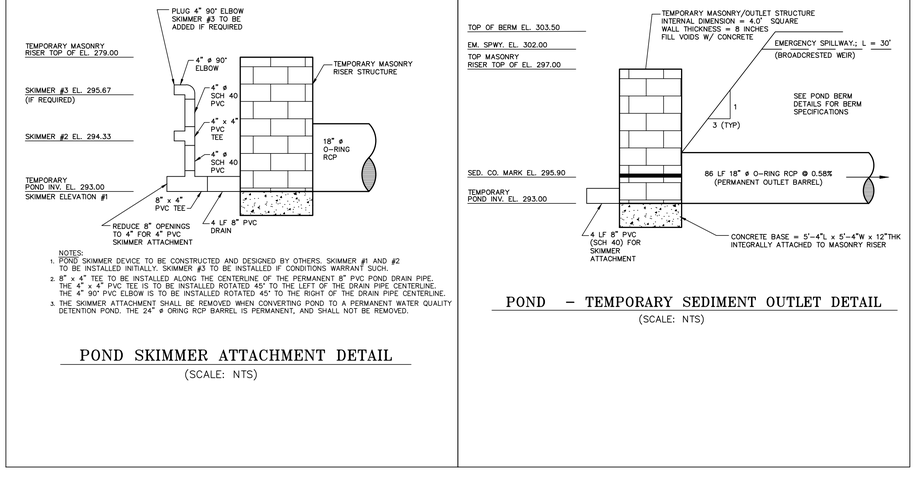
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE GRAVEL OUTLET

N.T.S.

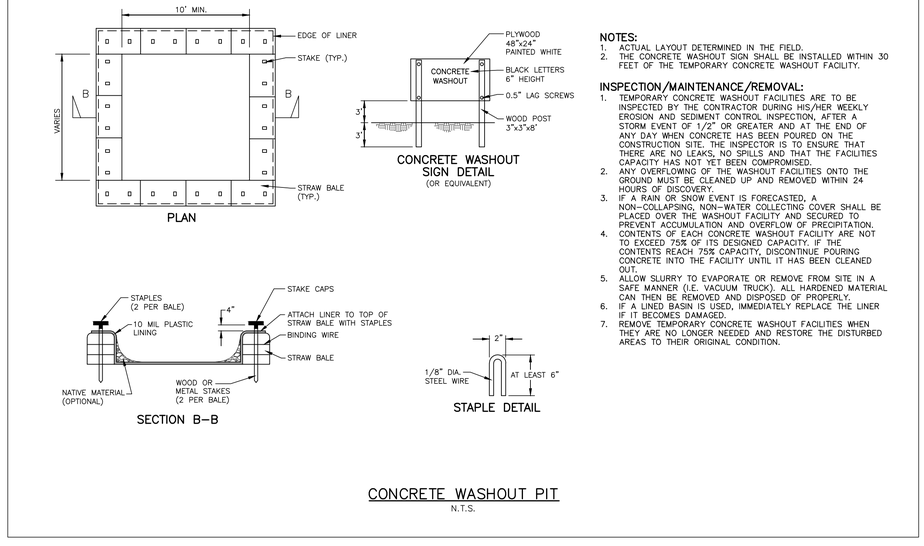


POND SKIMMER ATTACHMENT DETAIL

(SCALE: NTS)

POND - TEMPORARY SEDIMENT OUTLET DETAIL

(SCALE: NTS)



NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

INSPECTION/MAINTENANCE/REMOVAL:

1. TEMPORARY CONCRETE WASHOUT FACILITIES ARE TO BE INSPECTED BY THE CONTRACTOR DURING HIS/HER WEEKLY EROSION AND SEDIMENT CONTROL INSPECTION, AFTER A STORM EVENT OF 1/2" OR GREATER AND AT THE END OF ANY DAY WHEN CONCRETE HAS BEEN POURED ON THE CONSTRUCTION SITE. THE INSPECTOR IS TO ENSURE THAT THERE ARE NO LEAKS, NO SPILLS AND THAT THE FACILITIES CAPACITY HAS NOT YET BEEN COMPROMISED.
2. ANY OVERFLOWING OF THE WASHOUT FACILITIES ONTO THE GROUND MUST BE CLEANED UP AND REMOVED WITHIN 24 HOURS OF DISCOVERY.
3. IF A RAIN OR SNOW EVENT IS FORECASTED, A NON-COLLAPSING, NON-WATER COLLECTING COVER SHALL BE PLACED OVER THE WASHOUT FACILITY AND SECURED TO PREVENT ACCUMULATION AND OVERFLOW OF PRECIPITATION.
4. CONTENTS OF EACH CONCRETE WASHOUT FACILITY ARE NOT TO EXCEED 75% OF ITS DESIGNED CAPACITY. IF THE CONTENTS REACH 75% CAPACITY, DISCONTINUE POURING CONCRETE INTO THE FACILITY UNTIL IT HAS BEEN CLEANED OUT.
5. ALLOW SLURRY TO EVAPORATE OR REMOVE FROM SITE IN A SAFE MANNER (I.E. VACUUM TRUCK). ALL HARDENED MATERIAL CAN THEN BE REMOVED AND DISPOSED OF PROPERLY.
6. IF A LINED BASIN IS USED, IMMEDIATELY REPLACE THE LINER IF IT BECOMES DAMAGED.
7. REMOVE TEMPORARY CONCRETE WASHOUT FACILITIES WHEN THEY ARE NO LONGER NEEDED AND RESTORE THE DISTURBED AREAS TO THEIR ORIGINAL CONDITION.

CONCRETE WASHOUT PIT

N.T.S.

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REVISIONS

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PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

SHEET

EROSION CONTROL DETAILS

C6.07

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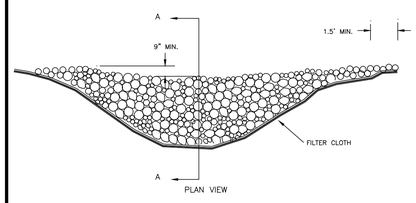
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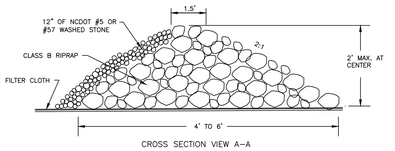


NOTES:

Space check dam in a channel so that the crest of downstream dam is at elevation of the toe of upstream dam

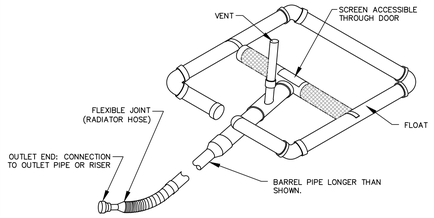
Check dam spacing





Stone should be placed over the channel banks to keep water from cutting around the dam.

Stone Check dam



MAINTENANCE:

IF THE SKIMMER IS CLOGGED WITH WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY A FEW JERKS ON THE ROPE TO MAKE THE SKIMMER BOB UP AND DOWN WILL DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK PULL THE SKIMMER OVER TO THE SIDE (IT'S EASIER TO DO WHAEN THE BASIN PARTIALLY FULL) AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

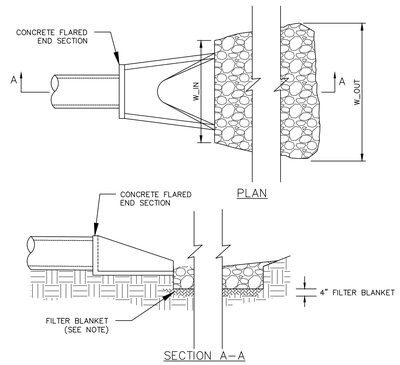
SEDIMENT UNDER THE SKIMMER. IF SEDIMENT ACCUMULATES TO THE POINT THE SKIMMER CANNOT SETTLE LOW ENOUGH TO DRAIN THE ENTIRE BASIN BULL THE SKIMMER OVER TO ONE SIDE AND EXCAVATE THE SEDIMENT WITH A BACKHOE.

CLOGGED BARREL OR PIPE THROUGH THE DAM. IF THE SKIMMER IS CLOGGED DESPITE REMOVING DEBRIS AND IT APPEARS THAT EITHER THE BARREL BETWEEN THE ORIFICE AND THE FLEXIBLE JOINT OR THE PIPE THROUGH THE DAM IS CLOGGED TAKE THE FOLLOWING STEPS TO CLEAR THE BLOCKAGE (SEDIMENT WILL SOMETIMES ACCUMULATE IN THE PIPE).

- *PULL THE SKIMMER OVER TO THE SIDE.
- *REMOVE THE PIN AND OPEN THE DOOR TO ACCESS THE ORIFICE.
- *REMOVE THE ORIFICE PLUG OR CAP.
- *RAISE THE INLET AS HIGH AS PRACTICAL.
- *FILL THE BARREL WITH WATER (USE A BUCKET AND FUNNEL OR A PUMP) TO REMOVE THE CLOG USING THE WATER AND PRESSURE.
- *AFTER THE OBSTRUCTION IS REMOVED CONTINUE POURING WATER INTO THE BARREL TO FLUSH OUT ACCUMULATED DEBRIS AND SEDIMENT TO PREVENT FUTURE CLOGGING.
- *A PLUMBERS SNAKE CAN BE USED BUT FLUSHING OUT THE SEDIMENT AND DEBRIS IS RECOMMENDED FIRST.

SKIMMER DETAIL

N.T.S.



NOTES:

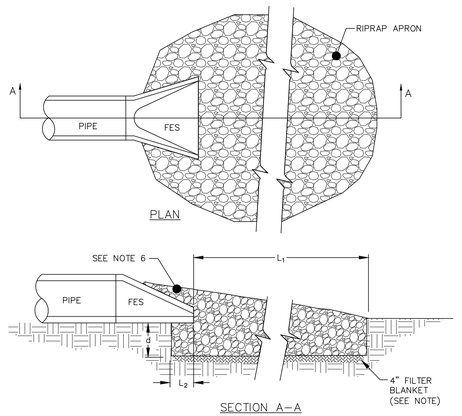
1. A FILTER BLANKET IS TO BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION. THE FILTER BLANKET WILL CONSIST OF A MINIMUM 4" THICK LAYER OF STONE (NCDOT #57) UNDERLAIN WITH MIRAFI FILTER WEAVE 700 OR ENGINEER APPROVED EQUIVALENT.
2. INSPECT VELOCITY DISSIPATOR WEEKLY AND AFTER EVERY 1/2 INCH OR GREATER RAINFALL TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

RIP RAP MAINTENANCE

INSPECT CHANNELS AT REGULAR INTERVALS AS WELL AS AFTER MAJOR RAINS, AND MAKE REPAIRS PROMPTLY. GIVE SPECIAL ATTENTION TO THE OUTLET AND INLET SECTIONS AND OTHER POINTS WHERE CONCENTRATED FLOW ENTERS. CAREFULLY CHECK STABILITY AT ROAD CROSSINGS, AND LOOK FOR INDICATIONS OF PIPING, SCOUR HOLES, OR BANK FAILURES. MAKE REPAIRS IMMEDIATELY. MAINTAIN ALL VEGETATION ADJACENT TO THE CHANNEL IN A HEALTHY, VIGOROUS CONDITION TO PROTECT THE AREA FROM EROSION AND SCOUR DURING OUT–OF–BANK FLOW.

FLARED END SECTION VELOCITY DISSIPATOR

N.T.S.



NOTES:

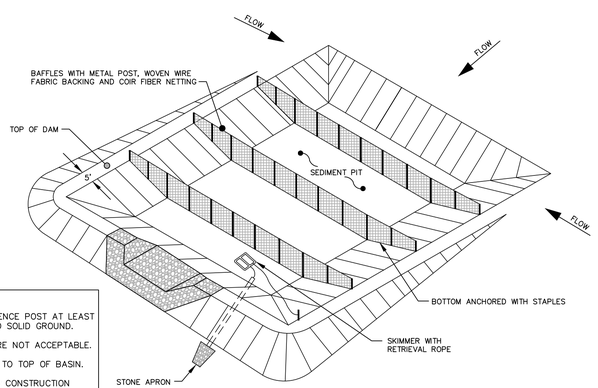
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3. L_1 = LENGTH OF THE RIPRAP APRON
4. L_2 = 1/3 THE LENGTH OF THE FLARED END SECTION (FES)
5. d = GREATER OF 1.5 TIMES MAX. STONE DIAMETER OR 6"
6. IN A WELL–DEFINED CHANNEL, EXTEND APRON UP CHANNEL BANKS TO THE LESSER OF AN ELEVATION 6" ABOVE THE MAX. TAILWATER DEPTH OR TOP OF BANK.

RIP RAP MAINTENANCE

INSPECT CHANNELS AT REGULAR INTERVALS AS WELL AS AFTER MAJOR RAINS, AND MAKE REPAIRS PROMPTLY. GIVE SPECIAL ATTENTION TO THE OUTLET AND INLET SECTIONS AND OTHER POINTS WHERE CONCENTRATED FLOW ENTERS. CAREFULLY CHECK STABILITY AT ROAD CROSSINGS, AND LOOK FOR INDICATIONS OF PIPING, SCOUR HOLES, OR BANK FAILURES. MAKE REPAIRS IMMEDIATELY. MAINTAIN ALL VEGETATION ADJACENT TO THE CHANNEL IN A HEALTHY, VIGOROUS CONDITION TO PROTECT THE AREA FROM EROSION AND SCOUR DURING OUT–OF–BANK FLOW.

FLARED END SECTION VELOCITY DISSIPATOR TO WELL–DEFINED CHANNEL

N.T.S.



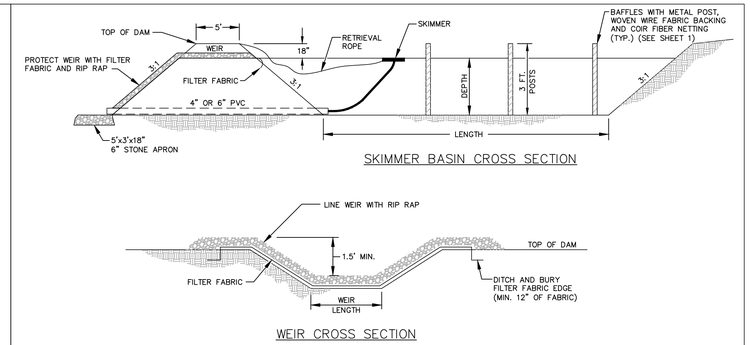
NOTES:

1. DRIVE STEEL FENCE POST AT LEAST 18 INCHES INTO SOLID GROUND.
2. WOOD POST ARE NOT ACCEPTABLE.
3. DIRECT WATER TO TOP OF BASIN.
4. SEE C6.19 FOR CONSTRUCTION SPECIFICATIONS

PERSPECTIVE VIEW

STANDARD TEMPORARY SKIMMER BASIN

N.T.S.



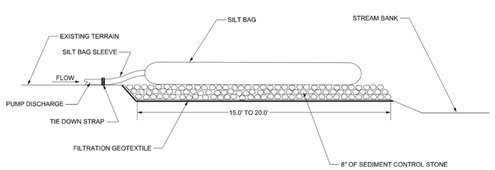
STANDARD TEMPORARY SKIMMER BASIN

N.T.S.

SEDIMENT BASIN MAINTENANCE

INSPECT TEMPORARY SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE–HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS.

CHECK THE EMBANKMENT, SPILLWAY, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREAS.



NOTES:
1. USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
2. PROVIDE STABILIZED OUTLET TO STREAM BANK.
4. THE SIZE AND NUMBER OF SILT BAGS SHOULD BE BASED ON THE DEWATERING PUMP AND MANUFACTURER RECOMMENDATIONS.
5. TIGHTLY SECURE THE PUMP DISCHARGE TO THE SILT BAG SLEEVE WITH A STRAP OR SIMILAR DEVICE TO PREVENT WATER/SEDIMENT FROM LEAKING WITHOUT TREATMENT.
6. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE SILT BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITHIN SEDIMENT, REDUCE THE PUMP RATE.
7. REPLACE THE SILT BAG WHEN ONE HALF (1/2) FULL OF SEDIMENT.
8. SILT BAG DEVICE MUST BE ≥ 50FT FROM THE TOP OF THE STREAM BANK AND WATER MUST BE DISCHARGED IN A DIFFUSE MANNER.

SILT BAG MUST BE CONTINUOUSLY MONITORED DURING OPERATION.

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

THE JOHN R. McADAMS COMPANY, INC. C–0293 — NORTH CAROLINA CERTIFICATE OF AUTHORIZATION

ERIC M. DOMONELL — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047504 — NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

SHEET

EROSION CONTROL DETAILS

C6.08

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

Temporary and Permanent Groundcover*

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2011)

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

*-For Falls Lake watershed, in disturbed areas where grading activities are incomplete, provide temporary groundcover no later than seven (7) days for slopes steeper than 3:1; ten (10) days for slopes equal to or flatter than 3:1; fourteen (14) days for areas with no slope.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

NORTH CAROLINA *Environmental Quality*

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number of waste containers on site to manage the quantity of waste produced.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow.
8. Dispose waste off-site at an approved disposal facility.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

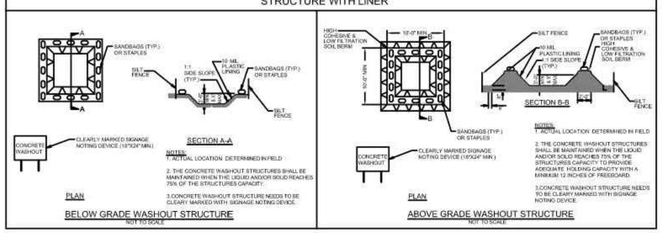
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 03/01/19

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NORTH CAROLINA CERTIFICATION THE JOHN R. McADAMS COMPANY, INC. C-0293 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL SEAL 047604 ENGINEER ERIC M. DOMONELL NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

SHEET

EROSION CONTROL DETAILS

C6.09

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	**Frequency (during normal business hours)**	**Inspection records must include** [40 CFR 122.41]**:**
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Corrective actions taken, and 7. Date of actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Actions taken to correct/prevent sedimentation, and 7. Date of actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Date of actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Evidence and actions taken to reduce sediment contributions, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	**Documentation Requirements**
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	**Reporting Timeframes (After Discovery) and Other Requirements**
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 03/01/19

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CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047604 EMILIO M. DOMONELL — NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-ECN1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	N/A
DATE	06. 01. 2023

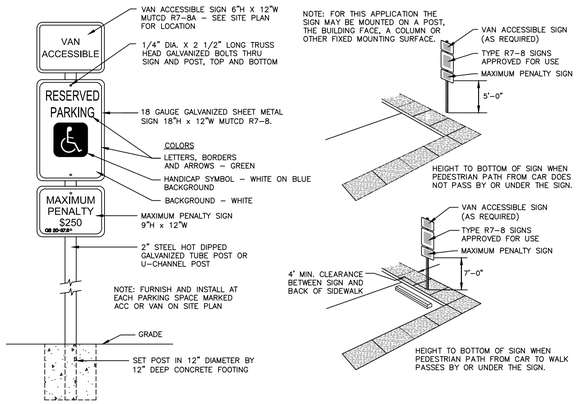
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EROSION CONTROL DETAILS

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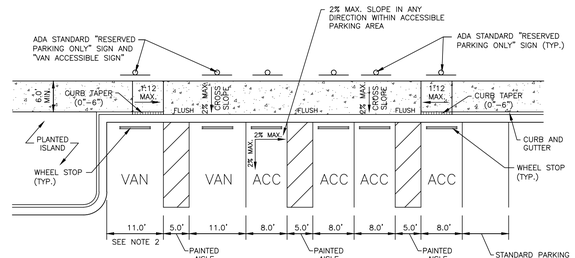
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PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



ACCESSIBLE PARKING SPACE SIGN

N.T.S.

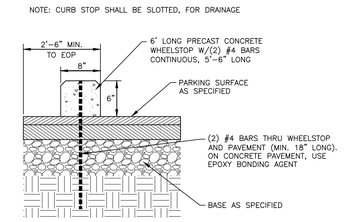


LEGEND:
"VAN" = VAN ACCESSIBLE SPACE
"ACC" = STANDARD ACCESSIBLE SPACE

NOTES:
1. CURB AND GUTTER, WALK AND RAMP TO BE PLACED SEPARATELY.
2. ACCESSIBLE PARKING SPACE WIDTH TO BE MEASURED FROM THE EDGE OF PAVEMENT WHERE CURB AND GUTTER IS ADJACENT TO THE ACCESSIBLE SPACE.
3. ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE-GROUND SIGNS ONLY.
4. STRIPING IS WHITE ON DARK PAVEMENT AND BLACK ON LIGHT PAVEMENT.
5. VAN ACCESSIBLE SPACES TO BE 11.0' MINIMUM WIDTH.

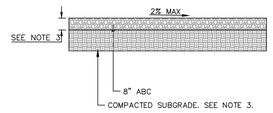
TYPICAL ACCESSIBLE PARKING SPACE LAYOUT, RAMP AND SIGN LOCATIONS

N.T.S.



WHEEL STOP

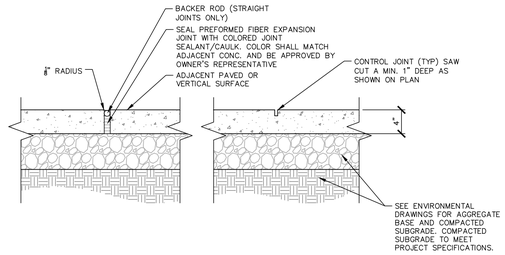
N.T.S.



NOTES:
1. COMPACT AND PREPARE SUBGRADE PER GEOTECHNICAL REPORT.
2. GRAVEL PAVEMENT SECTION PER GEOTECHNICAL ENGINEER RECOMMENDATIONS. SEE GEOTECHNICAL REPORT.
3. COMPACT SUBGRADE PER GEOTECHNICAL ENGINEER RCOMMENDATIONS. SEE GEOTECHNICAL REPORT.

GRAVEL DRIVE AND PARKING LOT

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

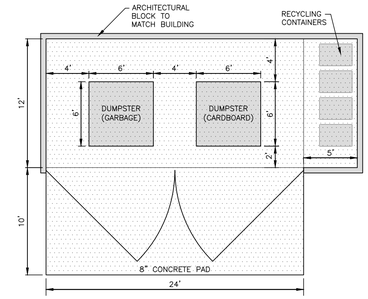


NOTES:
1. EXPANSION JOINTS SHALL BE INSTALLED WHERE CONCRETE PAVEMENT ABUTS ALL VERTICAL SURFACES INCLUDING BUT NOT LIMITED TO ALL BUILDINGS, STRUCTURES, STAIRS, CURBS, COLUMNS, WALLS, LIGHT POLES, ETC.
2. WHERE WALK ABUTS RIGID STRUCTURE, JOINT SHALL BE WATERTIGHT.
3. PROVIDE EXPANSION JOINTS @ 10' O.C. MAX UNLESS OTHERWISE SHOWN/ REQUIRED. (SEE MATERIALS & STAKING PLAN)
4. CONTROL JOINT SPACING SHALL BE EQUAL TO SIDEWALK WIDTH BUT IN NO INSTANCE EXCEED 6'. SEE MATERIALS & STAKING PLAN FOR ALL OTHER JOINT SPACING)
5. SAW CUT TO A MIN. DEPTH OF 1". CONTRACTOR TO CLOSELY COORDINATE LOCATIONS AND DESIGNS PRIOR TO AND DURING CONSTRUCTION.
6. ALL CONCRETE SHALL BE 4,000 PSI UNLESS OTHERWISE REQUIRED BY PROJECT SPECIFICATIONS.

CONCRETE PAVEMENT (PEDESTRIAN)

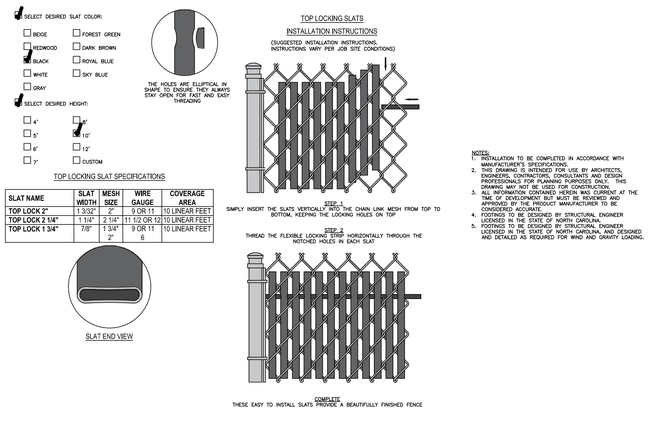
SCALE: 1"=1'-0"

NOTES:
1. DUMPSTER PAD AND APPROACH PAD SHOULD BE 8" THICK CONCRETE REINFORCED WITH REBAR PER GEOTECHNICAL ENGINEER'S RECOMMENDATION
2. CURBS OR BUMPERS AT THE REAR OF EACH DUMPSTER ARE REQUIRED.
3. SEE ARCHITECTURAL DRAWINGS FOR ENCLOSURE AND GATE MATERIALS AND CONSTRUCTION INSTRUCTIONS.
4. IF THE 2 GATES ARE INCLUDED FOR EACH DUMPSTER WITH A POST IN THE CENTER, THE PAD MUST BE AN ADDITIONAL 4' WIDE.
5. ENCLOSURE WALLS SHALL BE A MINIMUM 6" HIGHER THAN THE DUMPSTERS, BUT NO LESS THAN 6' HIGH.



STANDARD DUMPSTER ENCLOSURE

N.T.S.

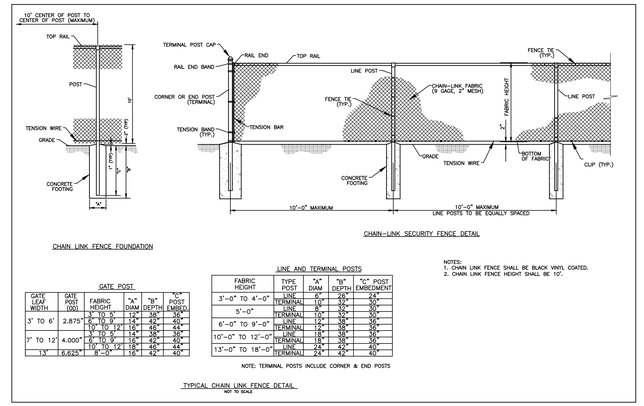


TOP LOCKING SLAT SPECIFICATIONS

SLAT NAME	SLAT WIDTH	MESH SIZE	WIRE GAUGE	COVERAGE AREA
TOP LOCK 2"	1 3/32"	2"	9 OR 11	10 LINEAR FEET
TOP LOCK 2 1/4"	1 1/4"	2 1/4"	11 1/2 OR 12	10 LINEAR FEET
TOP LOCK 1 3/4"	7/8"	1 3/4"	9 OR 11	10 LINEAR FEET
		2"	6	

SLAT END VIEW

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS AND OTHER BUILDING DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
3. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND CONFIRMED WITH THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
4. FOOTINGS TO BE DESIGNED BY STRUCTURAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.
5. FOOTINGS TO BE DESIGNED BY STRUCTURAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA AND DESIGNED AND DETAILED AS REQUIRED FOR WIND AND CANARY LOADING.



CHAIN LINK FENCE FOUNDATION

CHAIN-LINK SECURITY FENCE DETAIL

GATE POST

GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
3' TO 6'	2.875"	3' TO 5'	12"	38"	36"
		6' TO 7'	14"	45"	40"
		10' TO 12'	16"	48"	44"
7' TO 12'	4.000"	3' TO 5'	14"	45"	36"
		6' TO 7'	16"	48"	40"
		10' TO 12'	18"	48"	44"
13'	6.625"	8'–0"	16"	42"	40"

LINE AND TERMINAL POSTS

FABRIC HEIGHT	TYPE POST	"A" DIAM	"B" DEPTH	"C" POST EMBEDMENT
3'–0" TO 4'–0"	LINE	6"	24"	24"
	TERMINAL	10"	42"	40"
5'–0"	LINE	8"	32"	30"
	TERMINAL	10"	42"	40"
6'–0" TO 9'–0"	LINE	12"	38"	36"
	TERMINAL	12"	48"	44"
10'–0" TO 12'–0"	LINE	18"	48"	36"
	TERMINAL	18"	48"	44"
13'–0" TO 18'–0"	LINE	24"	42"	40"
	TERMINAL	24"	42"	40"

NOTE: TERMINAL POSTS INCLUDE CORNER & END POSTS

NOTES:
1. CHAIN LINK FENCE SHALL BE BLACK VINYL COATED.
2. CHAIN LINK FENCE HEIGHT SHALL BE 10'.

TYPICAL CHAIN LINK FENCE DETAIL
NOT TO SCALE

CHAIN LINK FENCE WITH PRIVACY SLATS

SCALE: N.T.S.

GRAPHIC SCALE
0 20 40 80
1 inch = 40 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

DESIGN DEVELOPMENT
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
THE JOHN R. McADAMS COMPANY, INC.
C-0293

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 047604
ERIC M. DOMONELL
NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-D1
CHECKED BY	EMD
DRAWN BY	SME
SCALE	#########
DATE	11. 08. 2022

SHEET

SITE DETAILS

C8.00

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INFILTRATION BASIN CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

1. PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY.

2. THE FINAL CERTIFICATION FOR THIS FACILITY WILL INCLUDE A CERTIFICATION BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE PROJECT WAS CONSTRUCTED PER THE APPROVED PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ON-SITE GEOTECHNICAL ENGINEER FOR OBSERVATION AND TESTING SUCH THAT THE ON-SITE GEOTECHNICAL ENGINEER CAN CERTIFY THE CONSTRUCTION OF THE MEDIA AND SPILLWAY. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE MEDIA AND SPILLWAY.

3. ALL CONSTRUCTION ACTIVITY RELATED TO THE PROPOSED STORMWATER CONTROL MEASURE SHALL BE PER THE DETAILS AND SPECIFICATIONS SHOWN IN THESE DRAWINGS. SOILS, COMPACTION, AND OTHER MISCELLANEOUS DETAILS AND SPECIFICATIONS MAY BE MODIFIED PER THE RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER. HOWEVER, PRIOR TO IMPLEMENTATION, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATION FROM THESE DESIGN DRAWINGS, INCLUDING SHOP DRAWINGS FOR ANY PROPOSED MODIFICATION.

4. DURING THE INITIAL STAGES OF CONSTRUCTION, THE STORMWATER CONTROL MEASURE MAY BE USED AS A SEDIMENT BASIN FOR EROSION CONTROL PURPOSES. IF SO, THE CONTRACTOR SHALL FOLLOW THE GENERAL CONSTRUCTION SEQUENCE BELOW:
   - A. THE CONTRACTOR SHALL CONSTRUCT THE ENTIRE FACILITY (PERMANENT OUTLET STRUCTURE, DAM, KEY TRENCH, ETC.) WITH THE EXCEPTION OF THE INTERIOR FINE GRADING AND THE BIORETENTION MEDIA FOR THE FACILITY. THE INTERIOR FINE GRADING AND BIORETENTION MEDIA WILL BE CONSTRUCTED ONCE THE EROSION CONTROL PHASE IS COMPLETE.
   - B. THE TEMPORARY DRAW DOWN RISER (OR SKIMMER) SHALL BE CONNECTED TO THE 4" UNDERDRAIN OUTLET ORIFICE.
   - C. ONCE THE UPSTREAM DRAINAGE AREA IS STABILIZED AND THE EROSION CONTROL INSPECTOR APPROVES THE REMOVAL OF THE SEDIMENT BASIN, THE CONTRACTOR SHALL REMOVE THE TEMPORARY DRAW DOWN RISER (OR SKIMMER) AND CLEAN OUT THE BASIN. ALL SEDIMENT, TRASH, ETC. SHALL BE DISPOSED OF PROPERLY (I.E. - PLACED IN A LANDFILL) AND NOT STOCKPILED IN AN AREA WHERE WATER QUALITY COULD BE ADVERSELY AFFECTED.
   - D. ONCE THE BASIN IS CLEANED OUT, AND ALL EROSION CONTROL DEVICES REMOVED, THE CONTRACTOR SHALL CONSTRUCT THE INTERIOR GRADING SHOWN ON THIS SHEET.
   - E. ONCE THE GRADING IS COMPLETE, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION AND AN AS-BUILT SURVEY PRIOR TO INSTALLATION OF THE STORMWATER CONTROL MEASURE PLANTS. IF THE CONTRACTOR PLANTS THE PROPOSED VEGETATION PRIOR TO AN AS-BUILT SURVEY (AND SUBSEQUENT APPROVAL), ANY CHANGES TO THE GRADING / RE-PLANTING OF PLANTS WILL BE AT THE CONTRACTOR'S EXPENSE.
   - F. ONCE THE ENGINEER HAS APPROVED THE AS-BUILT GRADING, THE CONTRACTOR SHALL PLANT THE PROPOSED STORMWATER CONTROL MEASURE PLANTS SHOWN ON THE LANDSCAPE PLAN FOR THE FACILITY. AFTER COMPLETION OF THE PLANTING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE A LETTER TO THE ENGINEER CERTIFYING THAT THE PLANTS HAVE BEEN INSTALLED PER THE APPROVED STORMWATER CONTROL MEASURE PLANTING PLAN. THE CONTRACTOR SHALL PROVIDE A ONE-YEAR WARRANTY FOR ALL PLANTS INSTALLED.

5. ALL OSHA REQUIREMENTS FOR EXCAVATIONS (SHORING, DEPTH, ETC.) ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE AN EXCAVATION PLAN TO BE SEALED BY A NC P.E. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE IF AN EXCAVATION PLAN IS REQUIRED. THE JOHN R. MCADAMS COMPANY ASSUMES NO RESPONSIBILITY FOR ANY EXCAVATION DESIGN RELATED TO SAFETY OR OSHA REQUIREMENTS.

6. DEWATERING MAY BE NECESSARY IN THE EXCAVATION AREAS (E.G. - SUB GRADE, INTERIOR PORTIONS OF THE STORMWATER CONTROL MEASURE, ETC.). THEREFORE, THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE STORMWATER CONTROL MEASURE SITE. DURING PLACEMENT OF FILL WITHIN THESE AREAS, THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION / CONSTRUCTION AREAS. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE, WITH NO SEDIMENT DISCHARGED FROM THE SITE (I.E. PUMPED WATER MAY NEED TO BE DIRECTED TO AN APPROVED EROSION CONTROL DEVICE SUCH AS A DIRT BAG (ACF ENVIRONMENTAL), OR ENGINEER APPROVED EQUIVALENT, PRIOR TO DISCHARGE).

7. PRIOR TO CONSTRUCTION, THE ONSITE GEOTECHNICAL ENGINEER SHALL VERIFY THE FILTRATION AND PERMEABILITY ASPECTS OF THE DENSE COVER AND IN-SITU SOILS.

8. ANY EXPOSED EDGE/SIDE OF THE INFILTRATION BASIN SHALL BE SODDED OR STABILIZED AS SOON AS POSSIBLE AFTER CONSTRUCTION IS COMPLETE. PLEASE REFER TO THE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.

CONSTRUCTION SEQUENCE FOR INFILTRATION BASIN

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES AS NEEDED.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER CONTROLS AS SHOWN IN THE CONSTRUCTION DRAWINGS.
4. CONSTRUCT BASIN OUTLET/OUTFALL AS SHOWN IN THE CONSTRUCTION DRAWINGS. DEWATERING SHOULD BE COMPLETED AS NEEDED IN ACCORDANCE WITH THE GENERAL NOTES.
5. COMPLETE BASIN EXCAVATION TO MAINTAIN A MINIMUM OF 1-FOOT COVER ABOVE THE PERMANENT BOTTOM ELEVATION. NO HEAVY EQUIPMENT SHALL BE USED WITHIN 1-FOOT OR AT THE PERMANENT BOTTOM ELEVATION OF THE BASIN (TOP OF DENSE COVER).
6. AFTER INSTALLATION OF THE INFILTRATION BASIN, AN INFILTRATION TEST SHALL BE PERFORMED. THE MINIMUM INFILTRATION RATE OF THE INFILTRATION BASIN IS 1.0 IN/HR.
7. THE INFILTRATION BASIN SHALL NOT BE MECHANICALLY COMPACTED. IT IS RECOMMENDED TO EITHER WATER OR WALK ON THE PLANTING SURFACE OF THE INFILTRATION BASIN TO ALLOW SOILS TO SETTLE TO FINISHED GRADE AS IT IS PLACE.
8. SIDE SLOPES, MAINTENANCE ACCESS ROAD, AND/OR FOREBAYS SHALL BE CONSTRUCTED AS PER FINAL DESIGN ELEVATION AND CONFIGURATION.
9. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION SHALL BE VEGETATED PER THE LANDSCAPE PLAN.

CONSTRUCTION OF THE INFILTRATION BASIN

1. CONTRACTION SHALL MINIMIZE THE COMPACTION OF BOTH THE BASE OF THE INFILTRATION BASIN. WHEN POSSIBLE, CONTRACTOR SHALL USE EXCAVATION HOES TO REMOVE THE ORIGINAL SOIL. IF THE INFILTRATION BASIN IS EXCAVATED USING A LOADER, THE CONTRACTOR SHALL USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. COMPACTION AT THE BASE OF THE INFILTRATION BASIN CAN BE ALLEVIATED BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
2. ROTOTILL 2 TO 3 INCHES OF CLEAN SAND INTO THE BASE OF THE INFILTRATION BASIN. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.
3. DO NOT USE HEAVY EQUIPMENT WITHIN THE INFILTRATION BASIN AREA. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER TO SUPPLY SOILS AND SAND. GRADE INFILTRATION BASIN WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

SIDE SLOPE SOIL AND COMPACTION SPECIFICATIONS

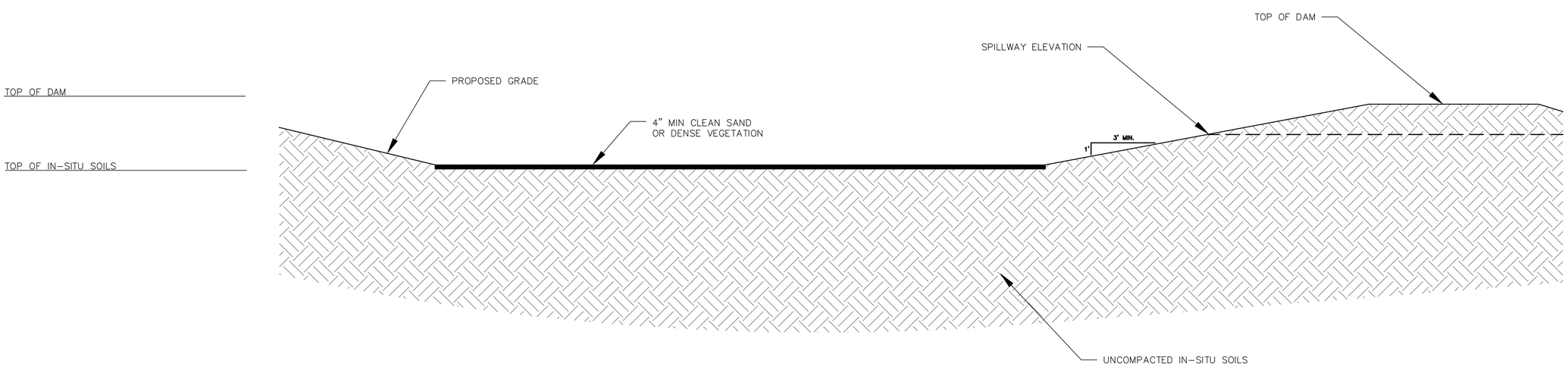
1. PRIOR TO CONSTRUCTION, THE ON-SITE GEOTECHNICAL ENGINEER SHALL IDENTIFY BORROW / FILL AREAS AND VERIFY THEIR SUITABILITY FOR USE WITHIN THE STORMWATER CONTROL DEVICE. ALSO, THE ON-SITE GEOTECHNICAL ENGINEER SHALL PERFORM STANDARD PROCTORS ON THE PROPOSED BORROW MATERIAL TO ENSURE THAT OPTIMUM MOISTURE CONTENT AND COMPACTION CAN BE ACHIEVED / CONTROLLED DURING CONSTRUCTION.
2. ALL FILL MATERIALS TO BE USED FOR THE SIDE SLOPES SHALL BE TAKEN FROM BORROW AREAS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE FILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, STONES GREATER THAN 6", AND FROZEN OR OTHER OBJECTIONABLE MATERIAL. THE FOLLOWING SOIL TYPES ARE SUITABLE FOR USE AS FILL WITHIN THE SIDE SLOPES: WANDO SERIES. ALL FILL MATERIALS SHALL BE APPROVED BY THE ONSITE GEOTECHNICAL ENGINEER FOR THE INTENDED USE.
3. FILL PLACEMENT FOR THE SIDE SLOPES SHALL NOT EXCEED A MAXIMUM 8" LIFT (UNCOMPACTED). EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF EMBANKMENT. BEFORE PLACEMENT OF FILL, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND THE SURFACE PROPERLY PREPARED FOR FILL PLACEMENT. FILL MATERIAL ADJACENT TO ALL SPILLWAY AND DRAINAGE STRUCTURES SHALL BE PLACED IN 4-INCH (UNCOMPACTED) LIFTS AND HAND-COMPACTED TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE SLOPE.
4. ALL FILL SOILS USED IN THE SIDE SLOPE CONSTRUCTION SHALL BE MINIMALLY COMPACTED. THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN -1 TO +3 PERCENT OF ITS OPTIMUM MOISTURE CONTENT. COMPACTION BY SATURATION IS PREFERRED TO ENSURE THAT MINIMAL SETTLEMENT WILL OCCUR AFTER CONSTRUCTION BUT THAT INFILTRATION RATES CAN BE PRESERVED. COMPACTION TESTS SHALL BE PERFORMED BY THE ON-SITE GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY THAT THE PROPER COMPACTION LEVEL HAS BEEN REACHED. IN ORDER TO PREVENT DAMAGE TO THE SOIL, NO COMPACTION EQUIPMENT SHALL BE USED IN THE FOOTPRINT OF THE INFILTRATION BASINS UNLESS DIRECTED BY THE GEOTECHNICAL ENGINEER.
5. THE DESIGN ENGINEER SHALL BE PROVIDED WITH REPORTS AND CERTIFICATION, BY THE ON-SITE GEOTECHNICAL ENGINEER, THAT THE GEOTECHNICAL ASPECTS OF THE FACILITY HAVE BEEN CONSTRUCTED PER PLAN. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE SIDE SLOPES. THESE REPORTS AND CERTIFICATION WILL BE NEEDED DURING THE AS-BUILT CERTIFICATION PROCESS FOR THIS STORMWATER CONTROL MEASURE. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE TESTING AND OBSERVATION WITH THE ON-SITE GEOTECHNICAL ENGINEER.
6. TESTING OF THE NEW FILL MATERIALS SHALL BE PERFORMED TO VERIFY THAT THE RECOMMENDED LEVEL OF COMPACTION IS ACHIEVED DURING CONSTRUCTION. THEREFORE, ONE INFILTRATION TEST SHALL BE PERFORMED FOR EVERY 2,500 SQUARE FEET OF INFILTRATION BASIN AREA OR AS RECOMMENDED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH REPORTS TO VERIFY THAT THE DAM EMBANKMENT MEETS THE SPECIFIED COMPACTION REQUIREMENTS. THEREFORE, IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPACTION TESTS ARE PROPERLY PERFORMED DURING CONSTRUCTION.

STATEMENT OF RESPONSIBILITY

ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.

INFILTRATION BASIN DESIGN SUMMARY

SCM #	Total DA (ac)	Storm Depth (in)	Volume Required (cf)	Infiltration Rate (in/hr)	Min SA (sf)	SA Provided (sf)	% Oversized	Planting Surface El. (ft)	Top of Dam El. (ft)	Ponding Depth (in)	Side Slopes X:1
INF1	0.80	3.65	4,150	2.80	494	3,856	781%	18	19	12	5
INF2	0.64	3.65	3,319	2.80	395	801	203%	17	18	12	5
INF3	0.15	3.65	1,119	2.80	133	257	193%	16	17	12	3
INF4	0.26	3.65	1,107	2.80	132	1,886	1431%	16	17	12	5
INF5	1.04	3.65	6,098	2.80	726	3,595	495%	14	15	12	5
INF6	0.52	3.65	4,029	2.80	480	2,257	470%	14	15	12	5
INF7	0.58	3.65	1,364	2.80	162	282	174%	12	13	12	5
INF8	0.22	3.65	556	2.80	66	260	393%	11	12	12	5
INFSW1	0.42	3.65	3,360	2.80	400	1,163	291%	18	19	12	5
INFSW2	0.76	3.65	3,610	2.80	430	1,556	362%	16	17	12	5



01 INFILTRATION BASIN CROSS-SECTION
SCALE: N.T.S.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION
DESIGN DEVELOPMENT
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-D1
CHECKED BY	HF
DRAWN BY	RMB
SCALE	NTS
DATE	06. 01. 2023

SHEET

SCM DETAILS

9.00

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PERMEABLE PAVEMENT AREA CONSTRUCTION SPECIFICATIONS

PERMEABLE PAVEMENT NOTES

1. CONTRACTOR TO INSTALL PERMEABLE PAVEMENT AFTER ASPHALT, CONCRETE, AND GRADING WORK IS COMPLETE AND THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
2. STONE SUBBASE AND BASE SHALL BE INSTALLED PRIOR TO OVERLAY OF PARKING. THE CONTRACTOR IS RESPONSIBLE TO PROTECT PERMEABLE PAVEMENT DURING OVERLAY PROCESS. DIG THE FINAL 9 TO 12 IN. BY USING THE TEETH OF THE EXCAVATOR BUCKET TO LOOSEN UNDERLYING SOIL.
3. BEDDING COURSE MAY NOT BE INSTALLED UNTIL UPSTREAM SURFACES ARE COMPLETE AND FULLY STABILIZED. PERMEABLE PAVEMENT AREAS SHALL BE IDENTIFIED AND SHALL NOT EXPERIENCE ANY LOADING BY VEHICLES FROM THE TIME THE SUBBASE IS EXCAVATED UNTIL FINAL PAVERS ARE PLACED. ADDITIONALLY, MINIMAL COMPACTION SHOULD BE PERFORMED ON THE SUBGRADE SOILS TO PRESERVE INFILTRATION CAPACITY.
4. ALL PLANT WASHED PERMEABLE PAVEMENT AGGREGATE (NO. 8, NO. 57, AND NO. 2) SHALL BE WASHED ONSITE PRIOR TO INSTALLATION. CONDUCT A DIRECT MEASUREMENT OF THE SOIL'S INFILTRATION RATE IMMEDIATELY AFTER EXCAVATION AND BEFORE THE AGGREGATE IS PLACED. INFILTRATION RATE TESTING SHALL BE CONDUCTED BY A SOIL SCIENTIST OR GEOTECHNICAL ENGINEER. IF THE SOIL INFILTRATION RATE IS LESS THAN 1.0 INCHES PER HOUR, THEN RIP OR TRENCH THE SUBGRADE FURTHER TO RESTORE THE ORIGINAL INFILTRATION RATE, AND RETEST.
5. PERMEABLE CONCRETE CURING TIMES VARY. CONTACT THE CONCRETE SUPPLIER OR GEOTECHNICAL ENGINEER FOR GUIDANCE, INSPECTION AND APPROVAL.

INSPECTIONS AND CERTIFICATIONS NOTES

1. AN INFILTRATION TEST OF THE PERMEABLE PAVEMENT SURFACE SHALL BE CONDUCTED ONCE CONSTRUCTION IS COMPLETE AND THE RESULTS WILL BE PROVIDED TO ENGINEER TO DEMONSTRATE COMPLIANCE WITH MINIMUM DESIGN CRITERIA.

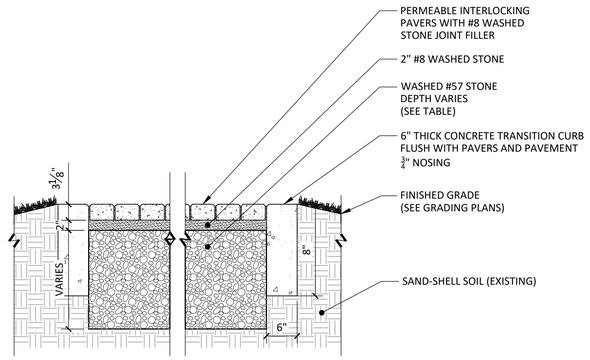
1.1. TESTING THE PAVEMENT SURFACE PERMEABILITY SHOULD USE THE NCSU SIMPLE INFILTRATION TEST (SEE NCDEQ STORMWATER DESIGN MANUAL, 5. PERMEABLE PAVEMENT, MAINTENANCE SECTION PG 22) OR OTHER APPROPRIATE TEST, SUCH AS ASTM C1701 STANDARD TEST METHOD FOR INFILTRATION RATE OF IN-PLACE PERVIOUS CONCRETE.

STATEMENT OF RESPONSIBILITY

ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.

PERMEABLE PAVEMENT DESIGN SUMMARY

SCM #	Total DA (ac)	PP Footprint (sf)	Volume Required (cf)	Void %	Min. Dwq (in)	Depth Provided (in)	Infiltration Rate (in/hr)	Drawdown Time (T) (hrs)	% Oversized
PP1	0.47	20,405	5,896	40%	8.67	10	2.80	6.19	115%
PP2	0.40	8,921	4,626	40%	15.56	18	4.10	7.59	116%
PP3	0.04	1,750	506	40%	8.67	10	6.35	2.73	115%

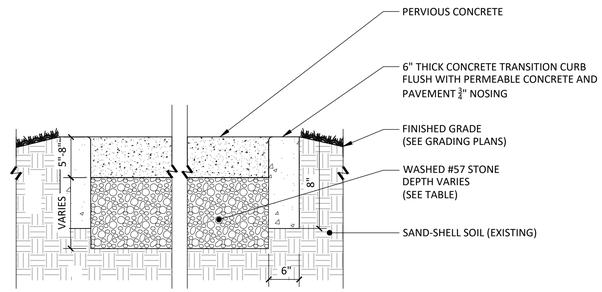


NOTES:

1. COMPACT AFTER APPLYING EACH STONE LAYER WITH A VIBRATING PLATE COMPACTOR. IF INDIVIDUAL STONE LAYER DEPTH IS GREATER THAN 6" THEN IT SHALL BE COMPACTED ON AVERAGE WITH 4" LIFTS.
2. KEEP SURFACE CLEAR FROM SILT AFTER INSTALLING PAVERS TO PREVENT JOINTS FROM CLOGGING.
3. DEPENDING ON CONDITIONS JOINT MAINTENANCE WILL VARY BETWEEN 1-5 YEARS. CONTRACTOR SHOULD PROVIDE A ONE YEAR MAINTENANCE PERIOD AND SHALL CLEAN JOINTS IF CLOGGED IN LESS THAN A YEAR FOLLOWING CONSTRUCTION.

02 PERMEABLE PAVER SECTION

SCALE: N.T.S.

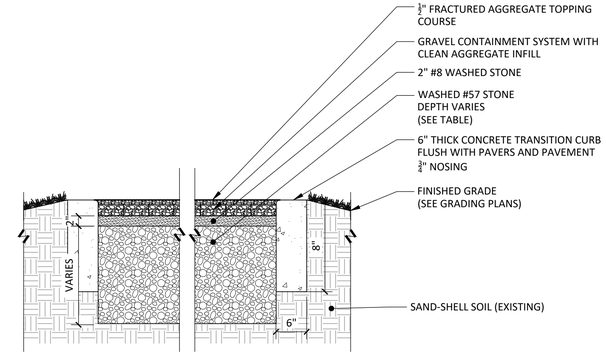


NOTES:

1. COMPACT AFTER APPLYING EACH STONE LAYER WITH A VIBRATING PLATE COMPACTOR. IF INDIVIDUAL STONE LAYER DEPTH IS GREATER THAN 6" THEN IT SHALL BE COMPACTED ON AVERAGE WITH 4" LIFTS.
2. KEEP SURFACE CLEAR FROM SILT AFTER INSTALLING CONCRETE TO PREVENT CLOGGING.
3. SEE TECHNICAL SPECIFICATIONS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.

03 PERVIOUS CONCRETE SECTION

SCALE: N.T.S.



NOTES:

1. COMPACT AFTER APPLYING EACH STONE LAYER WITH A VIBRATING PLATE COMPACTOR. IF INDIVIDUAL STONE LAYER DEPTH IS GREATER THAN 6" THEN IT SHALL BE COMPACTED ON AVERAGE WITH 4" LIFTS.
2. KEEP SURFACE CLEAR FROM SILT AFTER INSTALLING AGGREGATE TO PREVENT CLOGGING.
3. DEPENDING ON CONDITIONS, MAINTENANCE WILL VARY BETWEEN 1-5 YEARS. CONTRACTOR SHOULD PROVIDE A ONE YEAR MAINTENANCE PERIOD AND SHALL CLEAN AGGREGATE IF CLOGGED IN LESS THAN A YEAR FOLLOWING CONSTRUCTION.

04 STABILIZED AGGREGATE PAVEMENT SECTION

SCALE: N.T.S.

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CLIENT

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 MARKET STREET
WILMINGTON, NORTH CAROLINA 28401
CHIP HEMINGWAY
PHONE: 910. 762. 2621

NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION
DESIGN DEVELOPMENT
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

REVISIONS

NO.	DATE

PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-D1
CHECKED BY	HF
DRAWN BY	RMB
SCALE	NTS
DATE	06. 01. 2023

SHEET

SCM DETAILS

9.01

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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PLANT SCHEDULE AREA A

TREES	COMMON NAME
	Eastern Redbud
	Cherokee Princess Dogwood
	Common Persimmon
	Burk Eastern Redcedar
	Taylor Eastern Redcedar
	Sweetbay Magnolia
	Red Splyndor® Tupelo
	Southern Live Oak
	Shawnee Brave™ Bald Cypress

DECIDUOUS SHRUBS	COMMON NAME
	American Beautyberry
	Ruby Spice Summersweet
	Alice Oakleaf Hydrangea
	Henry's Garnet Sweetspire
	Spicebush
	Gro-Low Fragrant Sumac
	Legacy Highbush Blueberry
	Winterthur Viburnum

EVERGREEN SHRUBS	COMMON NAME
	Nigra Inkberry Holly
	Red Sprite Winterberry
	Southern Gentleman Winterberry
	Grey Owl Eastern Redcedar
	Wax Myrtle
	David Viburnum

ORNAMENTAL GRASSES	COMMON NAME
	Blonde Ambition Blue Grama
	Gray's Sedge
	Lurid Sedge
	Northern Sea Oats
	Slender Woodoats
	Common Rush
	White Cloud Muhly Grass
	Blaze Little Bluestem
	Indian Steel Indian Grass

PERENNIALS	COMMON NAME
	Butterfly Milkweed
	Lanceleaf Tickseed
	Coneflower
	Annual Gaillardia
	Luna Red™ Rose Mallow
	Seashore Mallow
	Kobold Blazing Star
	Black-eyed Susan
	Narrow Leaved Chain Fern

GRAPHIC SCALE
0 10 20 40
1 inch = 20 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION

90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2023 ERIN LOUNGE DONOHOE NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

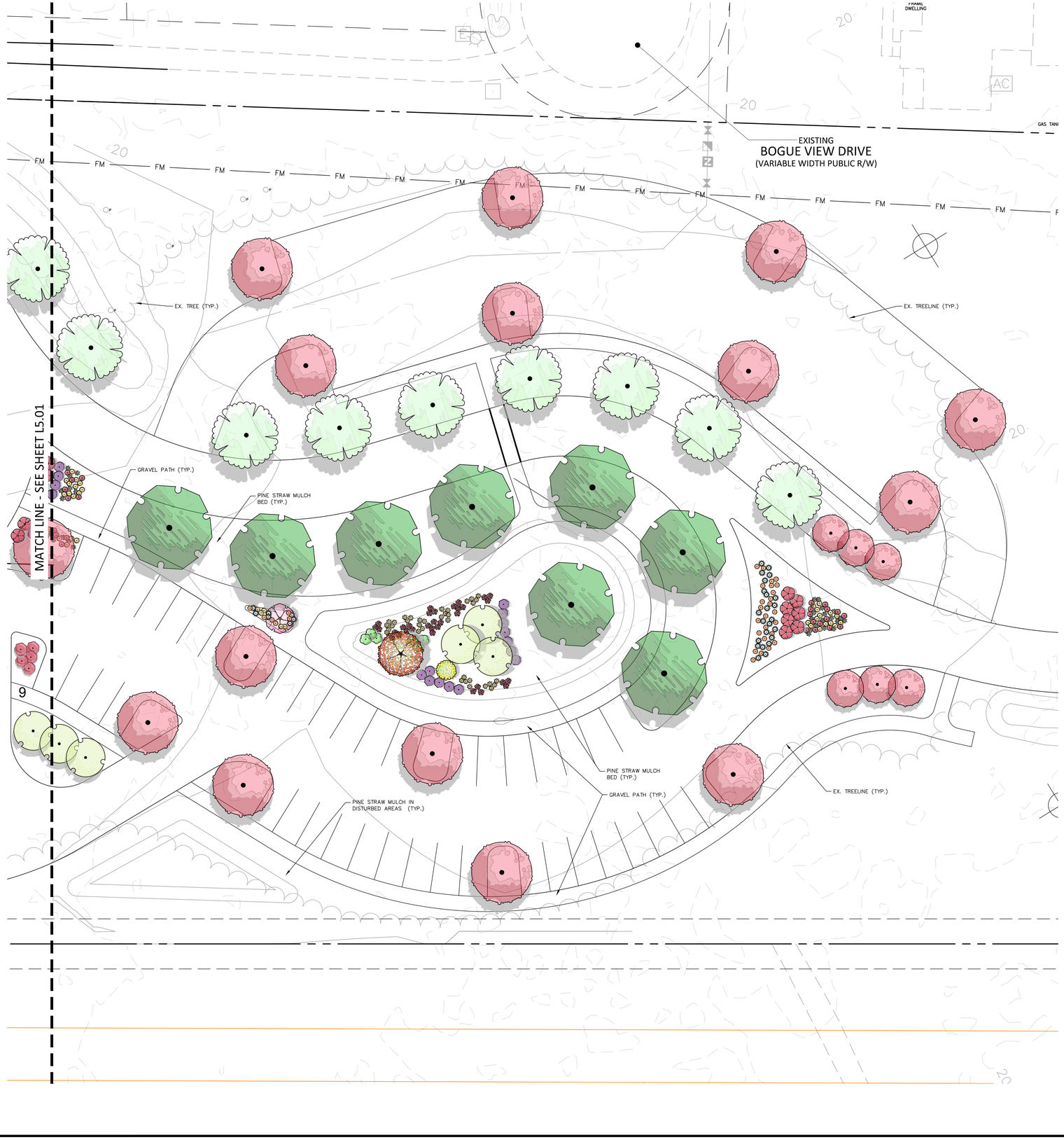
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-LandArch-LP1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 20'
DATE	06. 01. 2023

SHEET

LANDSCAPE PLAN
AREA A
L5.01

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PLANT SCHEDULE AREA B

TREES	COMMON NAME
	Autumn Brilliance Serviceberry
	Eastern Redbud
	Cherokee Princess Dogwood
	Common Persimmon
	Red Splyndor® Tupelo
	Southern Live Oak
	Shawnee Brave™ Bald Cypress
DECIDUOUS SHRUBS	**COMMON NAME**
	American Beautyberry
	Spicebush
	Winterthur Viburnum
EVERGREEN SHRUBS	**COMMON NAME**
	David Viburnum
ORNAMENTAL GRASSES	**COMMON NAME**
	Blonde Ambition Blue Grama
	Blaze Little Bluestem
	Indian Steel Indian Grass
PERENNIALS	**COMMON NAME**
	Butterfly Milkweed
	Lanceleaf Tickseed
	Annual Gaillardia
	Luna Red™ Rose Mallow

GRAPHIC SCALE
0 10 20 40
1 inch = 20 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2027 EMILY DUNGE DOMOKE NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

PLAN INFORMATION

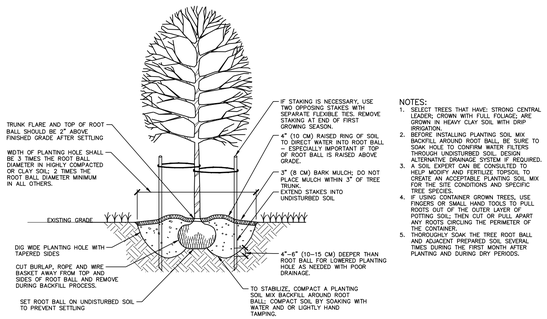
PROJECT NO.	NCF22001
FILENAME	NCF22001-LandArch-LP1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	1" = 20'
DATE	06. 01. 2023

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LANDSCAPE PLAN
AREA B

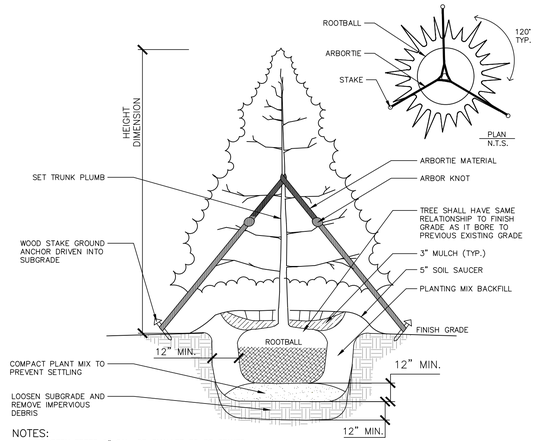
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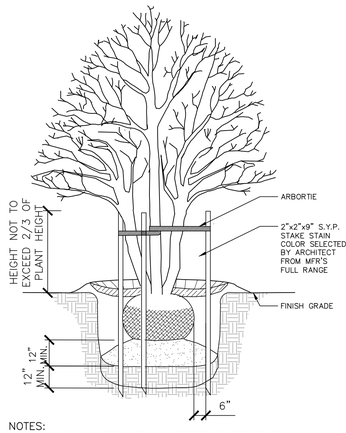
NOTES:
1. SELECT TREES THAT HAVE: STRONG CENTRAL LEADER, CROWN WITH FULL FOLIAGE; ARE GROWING IN HEAVY CLAY SOIL WITH DRIP IRRIGATION.
2. BEFORE INSTALLING PLANTING SOIL MIX BACKFILL AROUND ROOT BALL, BE SURE TO SOAK HOLE TO CONFIRM WATER FILTERS THROUGH UNDISTURBED SOIL. DESIGN ALTERNATIVE DRAINAGE SYSTEM IF REQUIRED.
3. A SOIL EXPERT CAN BE CONSULTED TO HELP MODIFY AND FERTILIZE TOPSOIL TO CREATE THE MOST DESIRABLE PLANTING SOIL MIX FOR THE SITE CONDITIONS AND SPECIFIC TREE SPECIES.
4. IF USING CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
5. THOROUGHLY SOAK THE TREE ROOT BALL AND BACKFILL WITH PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND DURING DRY PERIODS.

01 TREE INSTALLATION
SCALE: 3/8"=1'-0"



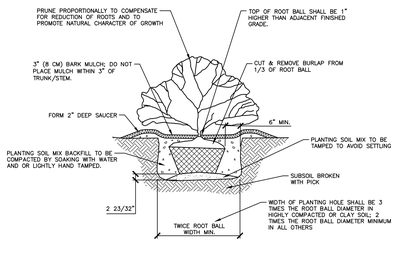
NOTES:
1. EVERGREEN TREES 2" CAL. OR SMALLER TO BE STAKED.
2. STAKING BASIS OF DESIGN PRODUCT: ARBORTIE OR APPROVED EQUAL.
3. STAKING TO BE REMOVED AFTER 2 GROWING SEASONS PER MANUFACTURER'S SPECIFICATIONS.
4. PROVIDE WATER CRYSTALS PER MANUFACTURER'S RECOMMENDATIONS FOR PINE TREES.

02 EVERGREEN TREE INSTALLATION
SCALE: 3/8"=1'-0"

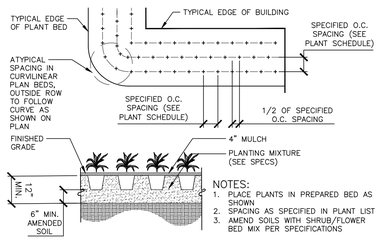


NOTES:
1. STAKING BASIS OF DESIGN PRODUCT: ARBORTIE OR APPROVED EQUAL.
2. STAKING FOR TREES 2" CAL. EA. TRUNK OR SMALLER.
3. REMOVE TREE STAKING AFTER 2 GROWING SEASONS PER MANUFACTURER'S SPECIFICATIONS.

03 MULTI-TRUNK TREE INSTALLATION
SCALE: 3/8"=1'-0"

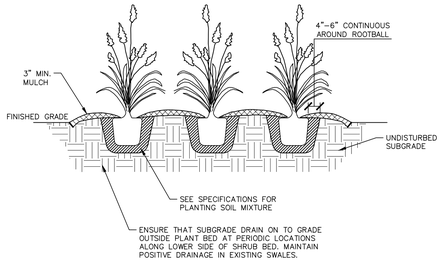


04 SHRUB INSTALLATION
SCALE: 3/8"=1'-0"



NOTES:
1. PLACE PLANTS IN PREPARED BED AS SHOWN
2. SPACING AS SPECIFIED IN PLANT LIST
3. AMEND SOILS WITH SHRUB/FLOWER BED MIX PER SPECIFICATIONS

05 GROUNDCOVER PLANTING
SCALE: 3/8"=1'-0"



06 ORNAMENTAL GRASS PLANTING
SCALE: 1/2"=1'-0"

GENERAL LANDSCAPE NOTES:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR THE SITE INSPECTION BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
3. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE BEGINNING DEMOLITION OR INSTALLATION.
4. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
5. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. THIS PLAN IS FOR PLANTING PURPOSES ONLY. FOR INFORMATION REGARDING BUILDINGS, GRADING, WALLS, ETC., REFER TO ARCHITECTURE, SITE AND GRADING PLANS.
7. VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
8. CONTRACTOR TO ENSURE PROPER STABILIZATION AND SEEDING OF THE SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
9. LANDSCAPE MATERIAL SHALL BE WELL FORMED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS AND DISEASES. MATERIAL SHALL EQUAL OR SURPASS #1 QUALITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
10. ALL PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES AND/OR FOLIAGE OF THE PLANT. MISHANDLED PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
11. ALL PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFICIENT PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
12. ALL PLANTS TO BE A MINIMUM OF WHAT IS SPECIFIED IN THE PLANT SCHEDULE. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO ANY HOLE BEING DUG.
13. CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/SEED/SOD IF NOT SPECIFICALLY SHOWN ON PLANS.
14. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL PLANTING AREAS.
15. PROPOSED TREES TO BE PLANTED A MINIMUM 10 FEET FROM ANY LIGHT POLE AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
16. PROPOSED TREES TO BE PLANTED A MINIMUM 5 FEET FROM ANY FIRE HYDRANT AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
17. CONTRACTOR SHALL COMPLETE SOIL TEST IN ALL PLANTING AREAS TO DETERMINE SOIL AMENDMENT REQUIREMENTS UNLESS WAIVED BY OWNER'S REPRESENTATIVE. CONTRACTOR SHALL ADJUST PH AND FERTILITY BASED UPON THE SOIL TEST RESULTS.
18. TOPSOIL SHALL BE FREE OF MATERIAL LARGER THAN 1.0 INCH IN DIAMETER OR LENGTH AND SHALL NOT CONTAIN SLAG, CINDERS, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH, OR OTHER EXTRANEOUS MATERIAL.
19. LOOSEN SUBGRADE / SURFACE SOIL TO A MINIMUM DEPTH OF 6 INCHES. APPLY SOIL AMENDMENTS AND FERTILIZERS AS REQUIRED BY THE SOIL TEST RESULTS TO ACHIEVE A HEALTHY GROWING MEDIA AND MIX THOROUGHLY INTO TOP 4 INCHES OF SOIL. SPREAD PLANTING SOIL MIX TO A DEPTH OF 6 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
20. IF IMPORTED TOPSOIL IS REQUIRED, THE SUBGRADE SHALL BE SCARIFIED OR TILLED TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO INSTALLATION OF IMPORTED TOPSOIL. FOLLOWING INSTALLATION OF IMPORTED TOPSOIL, THE TOPSOIL SHALL BE TILLED TO INTEGRATE THE SOIL PROFILES.
21. PLANT MATERIALS ARE TO BE GUARANTEED FOR A PERIOD OF 12 MONTHS. PLANT MATERIALS WHICH REMAIN UNHEALTHY WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR BEFORE THE EXPIRATION OF THE GUARANTEE PERIOD OR IMMEDIATELY IF SO DIRECTED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
22. ALL TREE PLANTINGS SHALL BE MULCHED TO A DEPTH OF 3 INCHES, AND WITH A MINIMUM 3 FOOT RADIUS FROM BASE OF TREE OR TO DRIPLINE. MULCH SHALL BE FREE OF TRASH AND MAINTAINED WEED FREE. MULCH SHALL NOT COVER THE ROOT FLARE. CONFIRM MULCH SPECIFICATIONS WITH OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT.
23. DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF EXTERIOR PLANTS DURING DELIVERY. DO NOT DROP EXTERIOR PLANTS DURING DELIVERY AND HANDLING.
24. DELIVER EXTERIOR PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IMMEDIATELY AFTER UNLOADING, STAND THE TREES UP TO REDUCE THE RISK OF SUN SCALD. PROPERLY STAGED TREES ARE STANDING, UNTIED AND SPACED. UNLESS IMMEDIATELY INSTALLED, SET EXTERIOR PLANTS AND TREES IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
25. SEE LANDSCAPE DETAILS FOR TREE STAKING REQUIREMENTS.
26. EXCAVATE EDGES OF ALL PLANTING BEDS TO 2 INCH DEPTH TO FORM A NEAT AND CRISP DEFINITION.
27. CONTRACTOR SHALL REMOVE DEBRIS AND FINE GRADE ALL PLANTING AREAS PRIOR TO INSTALLATION.
28. REMOVE GUY WIRES AND STAKES AT END OF WARRANTY PERIOD OR ESTABLISHMENT.
29. FINISH GRADING: GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISHED GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.

PLANTING SPECIFICATIONS:

GENERAL
1. REFER TO CIVIL DRAWINGS FOR NOTES AND DETAILS ON SITE GRADING AND EROSION AND SEDIMENT CONTROL. REFER TO SEEDING AND SODDING NOTES FOR TURF GRASS INSTALLATION.
2. CONTRACTOR TO SUBMIT A LIST OF PLANT MATERIALS AND SOURCES FOR REVIEW BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. CONTRACTOR TO COORDINATE ANY DISCREPANCIES OR SUBSTITUTIONS WITH LANDSCAPE ARCHITECT.
3. DURING DELIVERY, STORAGE AND HANDLING, CONTRACTOR TO PROTECT AND MAINTAIN PLANT LIFE UNTIL PLANTED. PROVIDE PROTECTIVE COVERING OVER ALL PLANTINGS DURING TRANSPORT. ADEQUATELY PROTECT PLANTS FROM DRYING OUT, EXPOSURE OF ROOTS TO SUN, WIND OR EXTREMES OF HEAT AND COLD TEMPERATURES. IF PLANTING IS DELAYED MORE THAN 24 HOURS AFTER DELIVERY, STORE PLANTS IN LOCATION PROTECTED FROM SUN AND WIND AND PROVIDE ADEQUATE WATER TO THE ROOT BALL PACKAGE. PLANT MATERIAL DAMAGED AS A RESULT OF DELIVERY, STORAGE OR HANDLING WILL BE REJECTED.
4. PLANTS, INCLUDING TREES, SHRUBS, GROUNDCOVERS, VINES AND ORNAMENTAL GRASSES, TO BE INSTALLED BETWEEN THE FOLLOWING DATES:
SPRING PLANTING SEASON: MARCH 15 TO JUNE 1
FALL PLANTING SEASON: SEPTEMBER 15 TO DECEMBER 1
5. PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT. PLANT TREES AND SHRUBS AFTER FINISH GRADES ARE ESTABLISHED AND BEFORE PLANTING LAWNS. PROTECT LAWN AREAS TO REMAIN AND PROMPTLY REPAIR DAMAGE CAUSED BY PLANTING OPERATIONS.
6. CONTRACTOR SHALL CAREFULLY EXAMINE THE CIVIL, RECORD AND SURVEY DRAWINGS TO BECOME FAMILIAR WITH EXISTING UNDERGROUND CONDITIONS BEFORE DIGGING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF ALL SURFACE AND SUBSURFACE CONDITIONS, AND TO NOTIFY THE LANDSCAPE ARCHITECT OF ANY CIRCUMSTANCES THAT WOULD NEGATIVELY IMPACT UNDERGROUND CONDITIONS OR THE HEALTH OF THE PLANTINGS.

PRODUCTS
1. TREE AND SHRUB MATERIAL: FURNISH NURSERY-GROWN, TYPICAL OF THEIR SPECIES OR VARIETY, WITH NORMAL GROWTH HABIT, WELL-DEVELOPED BRANCH STRUCTURE, HEALTHY FOLIAGE, AND VIGOROUS ROOT SYSTEMS IN ACCORDANCE WITH APPLICABLE REQUIREMENTS IN ANSIZ60.1 "AMERICAN STANDARD FOR NURSERY STOCK". PLANTS SHALL BE FREE FROM DEFECTS OR DAMAGE, INCLUDING BUT NOT LIMITED TO, DISFIGURING KNOTS, SUNSCALD INJURIES, FROST CRACKS, ABRASION OF THE BARK, PLANT DISEASES, INSECT EGGS, BORERS, FIRE ANTS, AND ALL FORMS OF INFESTATION.
2. SOIL: ASTM D 5268 TOPSOIL, pH RANGE OF 5.5 TO 7, A MINIMUM OF 6 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.
3. SOIL AMENDMENTS:
A. ORGANIC COMPOST: WELL-COMPOSTED, STABLE AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4" SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISIEMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS.
B. INORGANIC SOIL AMENDMENTS: COMMERCIAL GRADE, FREE OF TOXIC MATERIALS.
4. FERTILIZER: GRANULAR OR PELLET SLOW-RELEASE FERTILIZER CONSISTING OF 50 PERCENT WATER-INSOLUBLE NITROGEN, PHOSPHOROUS AND POTASSIUM IN THE COMPOSITION AS DIRECTED BY SOIL ANALYSIS TESTING.
5. ORGANIC MULCH: SHREDDED HARDWOOD IN NATURAL BROWN COLOR; 3" MAXIMUM SIZE IN LONGEST DIMENSION; FREE FROM DELETERIOUS MATERIALS AND SUITABLE FOR A TOP DRESSING OF TREES AND SHRUBS.
6. STAKES AND GUYS: DEEPROOT ARBORTIE STAKING AND GUYING MATERIAL OR APPROVED EQUAL.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CAL	HEIGHT
	AXG	6	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1.5" min	
	CCA	10	Cercis canadensis	Eastern Redbud	1" min	5` min
	CFP	9	Cornus florida 'Cherokee Princess'	Cherokee Princess Dogwood	1.5" min	
	DVP	4	Diospyros virginiana	Common Persimmon	1.5" min	
	JVB	3	Juniperus virginiana 'Burkii'	Burk Eastern Redcedar	-	5` min
	JVT	3	Juniperus virginiana 'Taylor'	Taylor Eastern Redcedar	-	5` min
	MVS	7	Magnolia virginiana	Sweetbay Magnolia	1.5" min	
	NST	17	Nyssa sylvatica 'NSMTF'	Red Sylyndor® Tupelo	1.5" min	
	QVK	19	Quercus virginiana	Southern Live Oak	3" min	14` min
	TDB	15	Taxodium distichum 'Mickelson'	Shawnee Brave™ Bald Cypress	2" min	

DECIDUOUS SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	HEIGHT
	CAAM	50	Callicarpa americana	American Beautyberry	-	18" Min.
	CASW	22	Clethra alnifolia 'Ruby Spice'	Ruby Spice Summersweet	-	18" Min.
	HQAK	24	Hydrangea quercifolia 'Alice'	Alice Oakleaf Hydrangea	-	18" Min.
	IVGS	15	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	-	18" min.
	LIND	16	Lindera benzoin	Spicebush	-	36" Min.
	RAFS	31	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	-	12" Min.
	VCBB	32	Vaccinium corymbosum 'Legacy'	Legacy Highbush Blueberry	-	18" Min.
	VNWR	17	Viburnum nudum 'Winterthur'	Winterthur Viburnum	-	24" Min.

EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	HEIGHT
	IGHN	3	Ilex glabra 'Nigra'	Nigra Inkberry Holly	-	18" Min.
	IRSW	12	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	-	18" min.
	ISGW	3	Ilex verticillata 'Southern Gentleman'	Southern Gentleman Winterberry	-	18" min.
	JVGO	23	Juniperus virginiana 'Grey Owl'	Grey Owl Eastern Redcedar	-	18" Min.
	MCWM	11	Morella cerifera	Wax Myrtle	-	36" Min.
	VIDA	15	Viburnum davidii	David Viburnum	-	18" min.

ORNAMENTAL GRASSES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	HEIGHT
	BGBA	94	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama	1 gallon	
	CGGS	75	Carex grayi	Gray's Sedge	1 gallon	
	CXLS	56	Carex lurida	Lurid Sedge	1 gallon	
	CLSO	56	Chasmanthium latifolium	Northern Sea Oats	1 gallon	
	CLWX	59	Chasmanthium laxum	Slender Woodoats	1 gallon	
	JECR	17	Juncus effusus	Common Rush	1 gallon	
	MCWC	17	Muhlenbergia capillaris 'White Cloud'	White Cloud Muhly Grass	1 gallon	
	SSLB	105	Schizachyrium scoparium 'Blaze'	Blaze Little Bluestem	1 gallon	
	SGNG	136	Sorghastrum nutans `Indian Steel`	Indian Steel Indian Grass	1 gallon	

PERENNIALS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	HEIGHT
	ASCT	74	Asclepias tuberosa Spacing: 24" o.c. Host plant for caterpillars	Butterfly Milkweed	1 Gal	
	CORL	81	Coreopsis lanceolata Spacing: 24" o.c.	Lanceleaf Tickseed	1 Gal	
	ECHP	53	Echinacea purpurea Spacing: 24" o.c.	Coneflower	1 Gal	
	GPLA	25	Gaillardia pulchella	Annual Gaillardia	1 Gal	
	HLRM	97	Hibiscus moscheutos	Luna Red™ Rose Mallow	1 Gal	
	KVSM	18	Kosteletzkya virginica	Seashore Mallow	1 Gal	
	LSKB	12	Liatris spicata 'Kobold'	Kobold Blazing Star	1 gal	
	RDBK	44	Rudbeckia hirta Spacing: 24" o.c.	Black-eyed Susan	1 Gal	
	WACF	41	Woodwardia areolata	Narrow Leaved Chain Fern	1 Gal	

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license number: C-0293, C-187
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CHIP HEMINGWAY
PHONE: 910. 762. 2621

NC COASTAL FEDERATION CENTER FOR COASTAL PROTECTION AND RESTORATION
90% CONSTRUCTION DRAWINGS
HIGHWAY 24
CARTERET COUNTY, NORTH CAROLINA, 28570

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2027 EDWARD MURRAY DONNINGER NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE

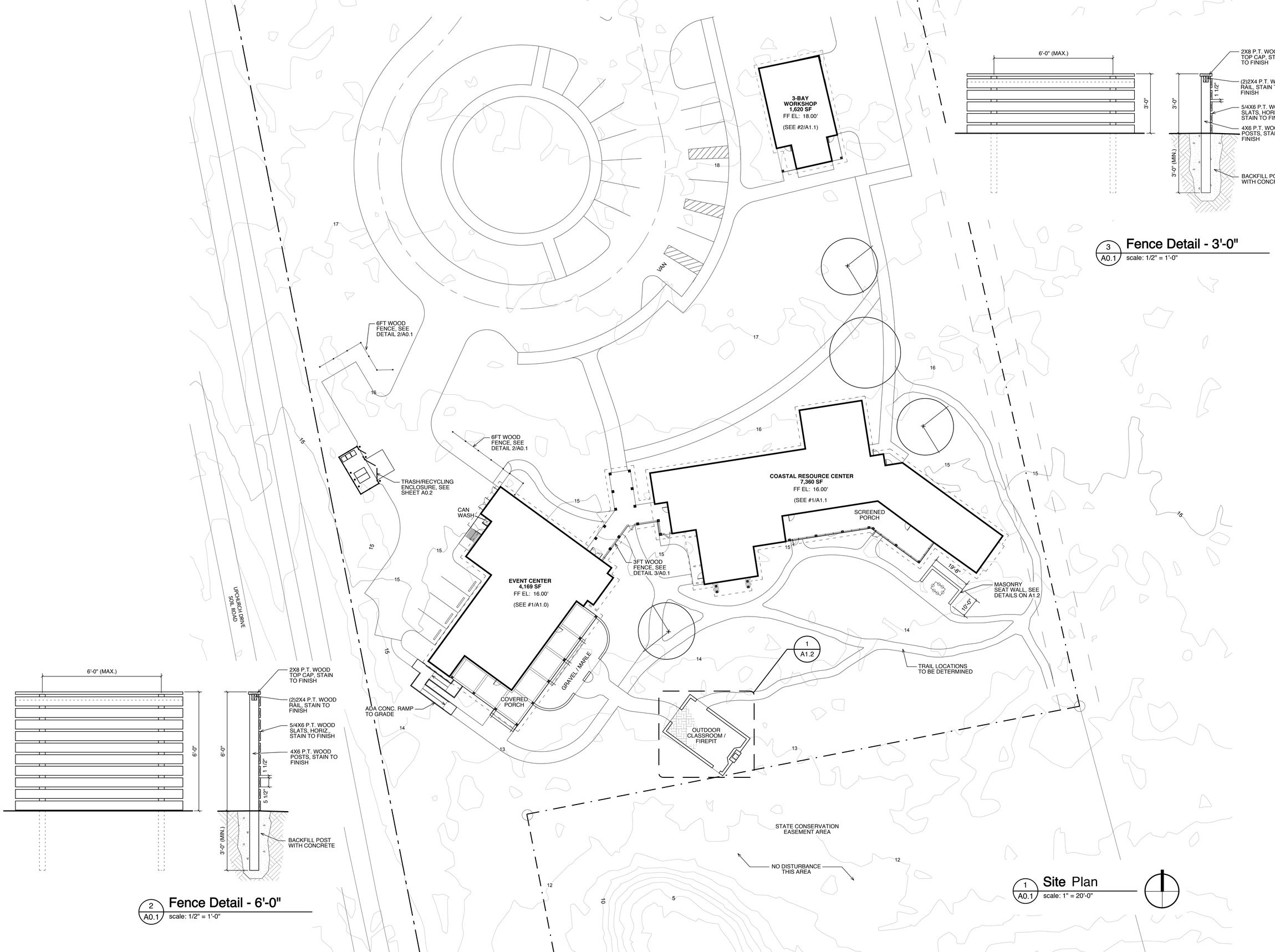
PLAN INFORMATION

PROJECT NO.	NCF22001
FILENAME	NCF22001-LandArch-LP1
CHECKED BY	EMD
DRAWN BY	OGT
SCALE	#########
DATE	06. 01. 2023

SHEET
LANDSCAPE DETAILS
L5.03

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

M:\Projects\NCFNCF22001\04-Production\Planning and LA\NCF22001-LandArch-LP1.dwg, 6/1/2023 5:37:08 PM, Julie Young



3 A0.1 **Fence Detail - 3'-0"**
scale: 1/2" = 1'-0"

2 A0.1 **Fence Detail - 6'-0"**
scale: 1/2" = 1'-0"

1 A0.1 **Site Plan**
scale: 1" = 20'-0"

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Ocean, North Carolina

Architectural Site Plan

JOB NUMBER

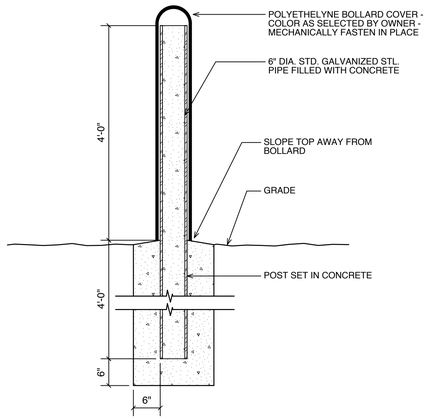
DRAWN BY
Tyhacz

CHECKED BY
Hemingway

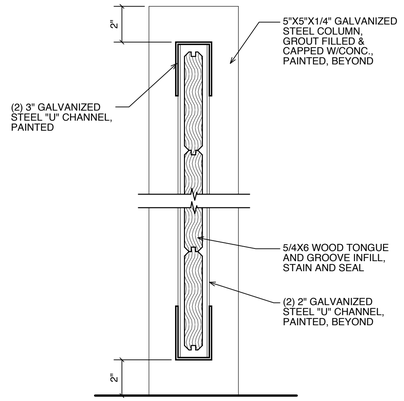
DATE
June 12, 2023

REVISIONS
03.29.2023

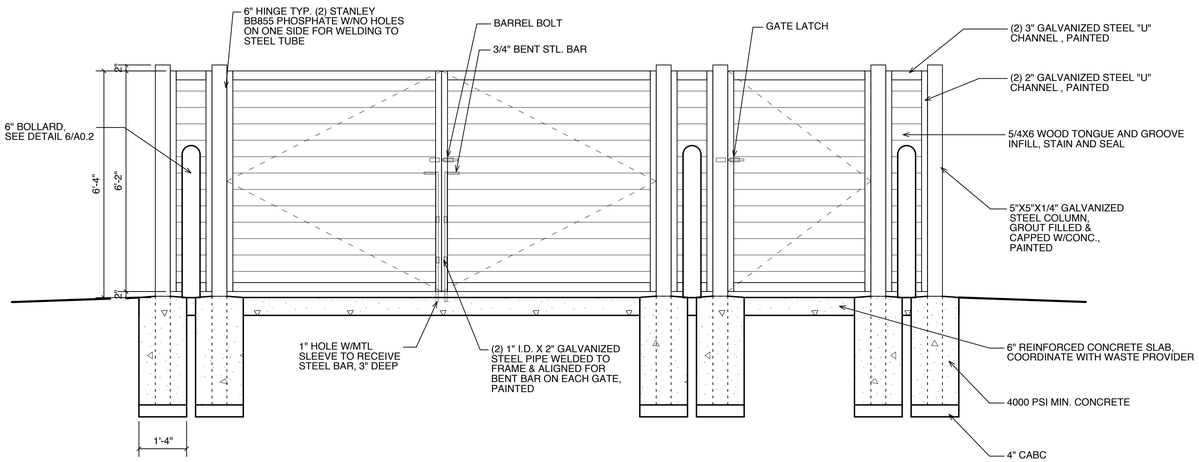
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A0.1



6 A0.2 **Bollard Detail**
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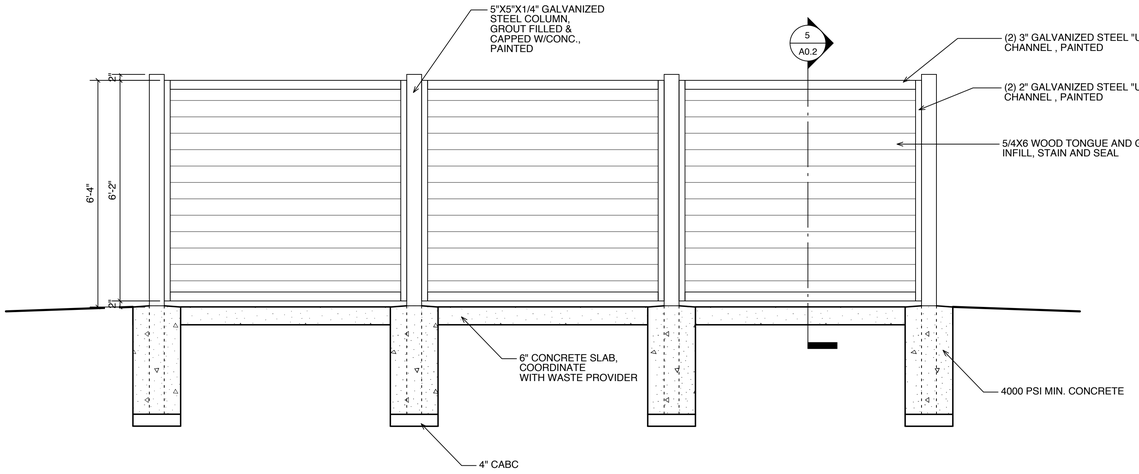


5 A0.2 **Screen Section**
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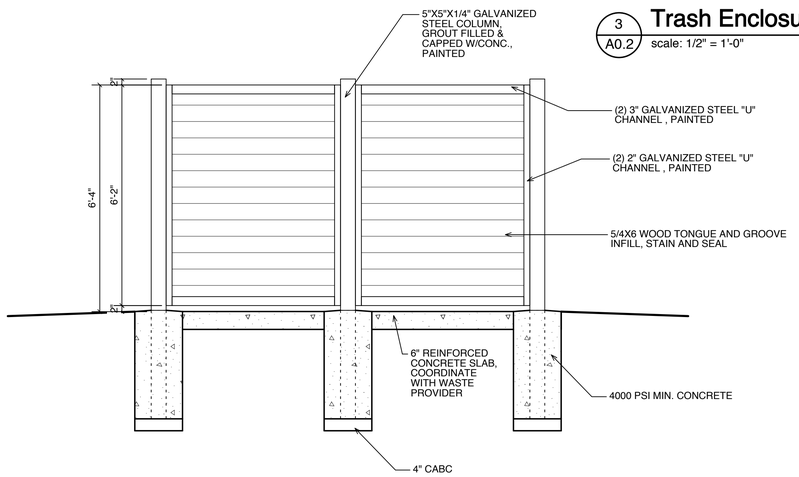


4 A0.2 **Trash Enclosure Elevation**
scale: 1/2" = 1'-0"

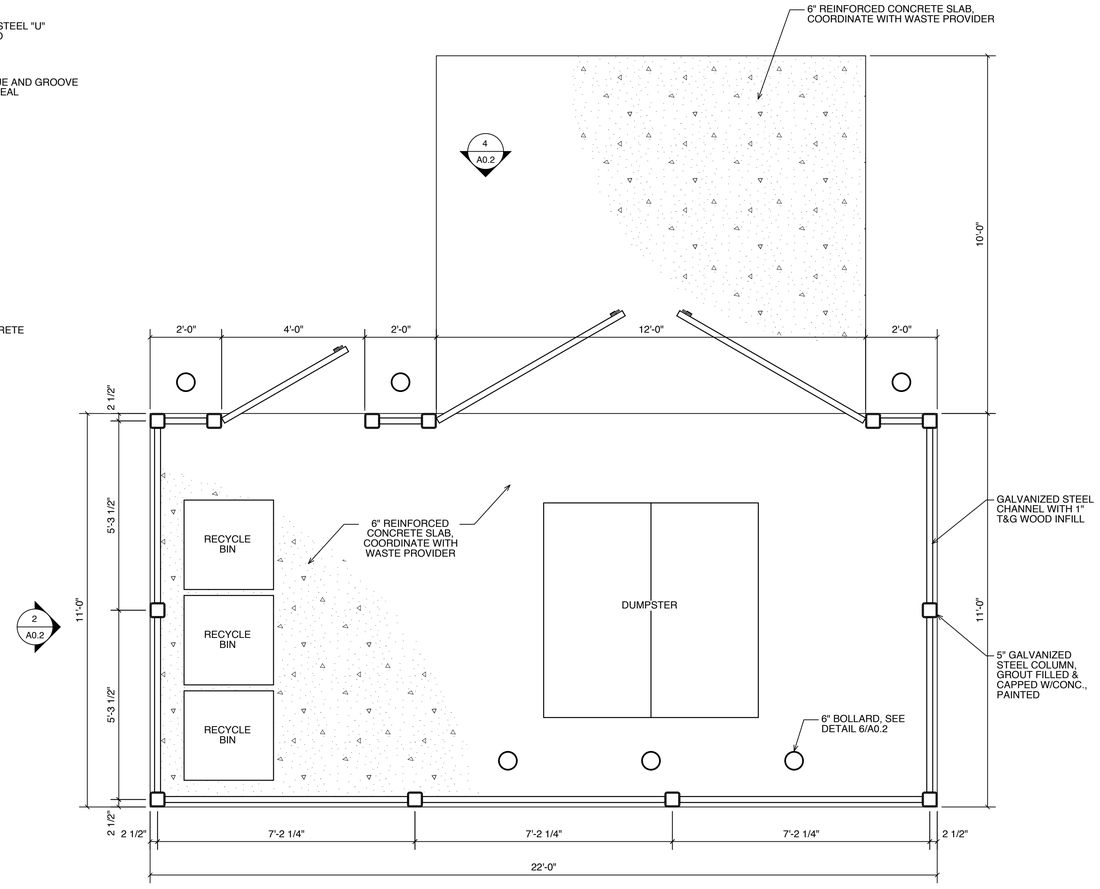
BOLLARD NOTE: SEE PLAN 1/A0.2 FOR BOLLARD LOCATION.



3 A0.2 **Trash Enclosure Elevation**
scale: 1/2" = 1'-0"



2 A0.2 **Trash Enclosure Elevation**
scale: 1/2" = 1'-0"



1 A0.2 **Trash Enclosure Plan**
scale: 1/2" = 1'-0"

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Site Details

JOB NUMBER

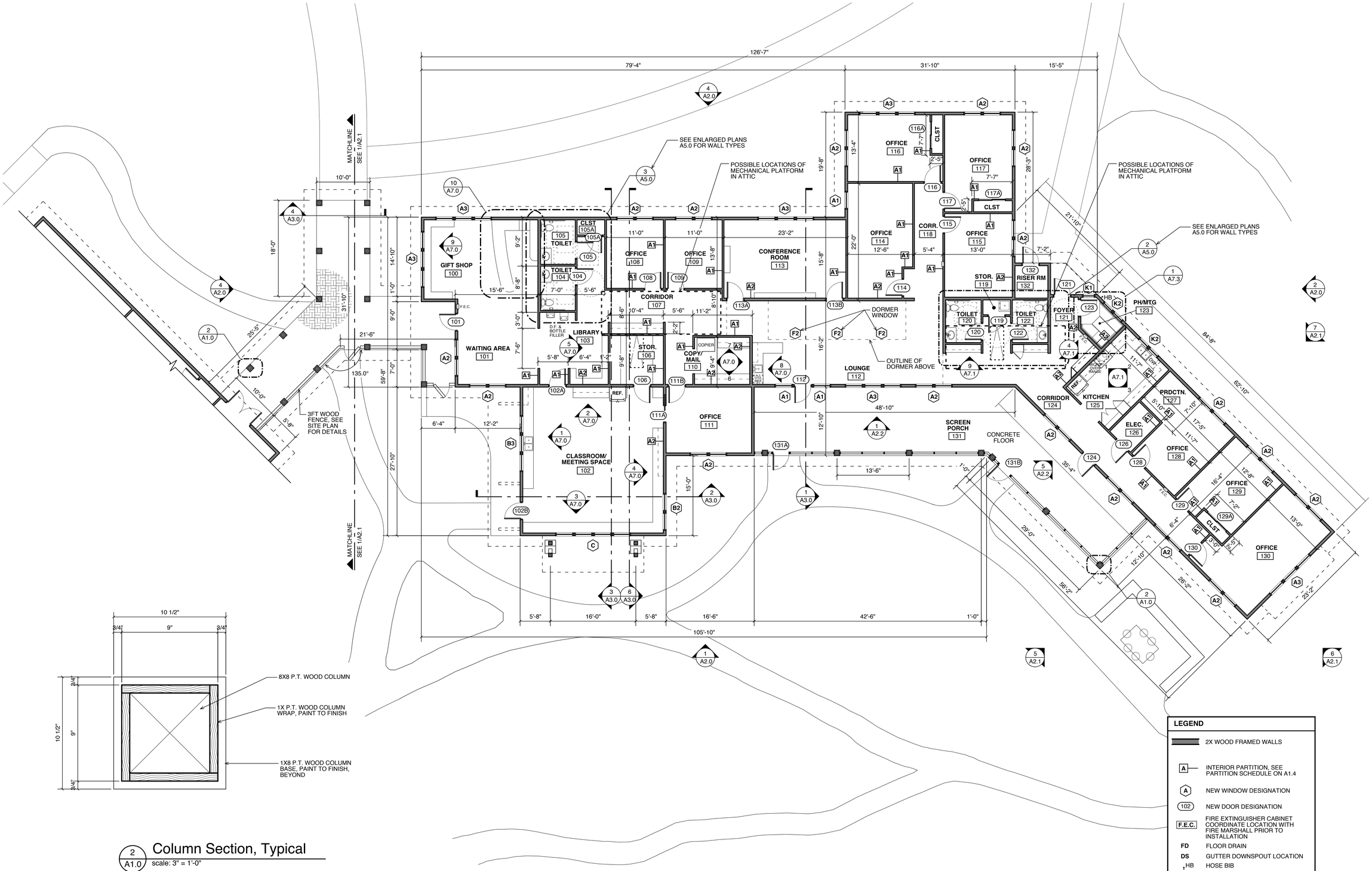
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Tyhacz

CHECKED BY
Hemingway

DATE
June 12, 2023

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03.29.2023

SHEET NUMBER
A0.2



2 A1.0 Column Section, Typical
scale: 3" = 1'-0"

LEGEND

- 2X WOOD FRAMED WALLS
- A — INTERIOR PARTITION, SEE PARTITION SCHEDULE ON A1.4
- A — NEW WINDOW DESIGNATION
- 102 — NEW DOOR DESIGNATION
- F.E.C. — FIRE EXTINGUISHER CABINET COORDINATE LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION
- FD — FLOOR DRAIN
- DS — GUTTER DOWNSPOUT LOCATION
- HB — HOSE BIB

1 A1.0 Coastal Resource Center Floor Plan
scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

- SEE FINISH SCHEDULE ON A6.0 FOR WAINSCOTING LOCATIONS.

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Coastal Resource Center Floor Plan

JOB NUMBER

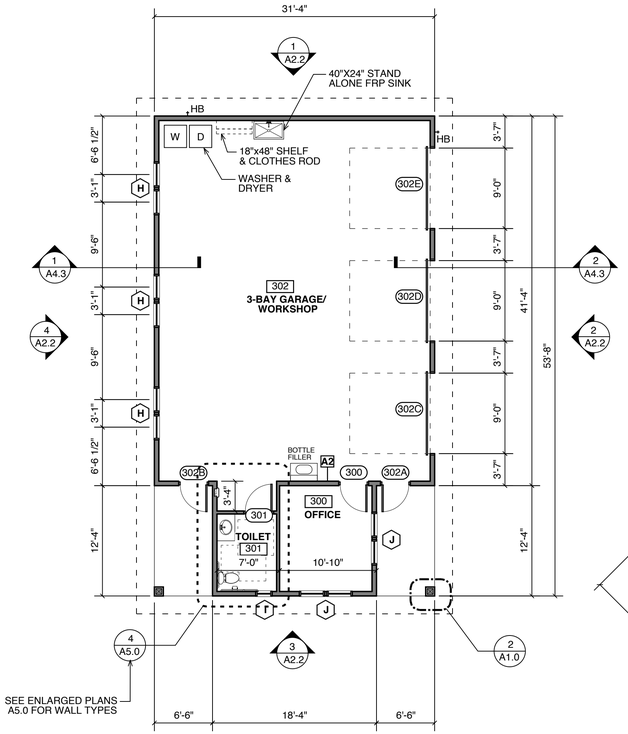
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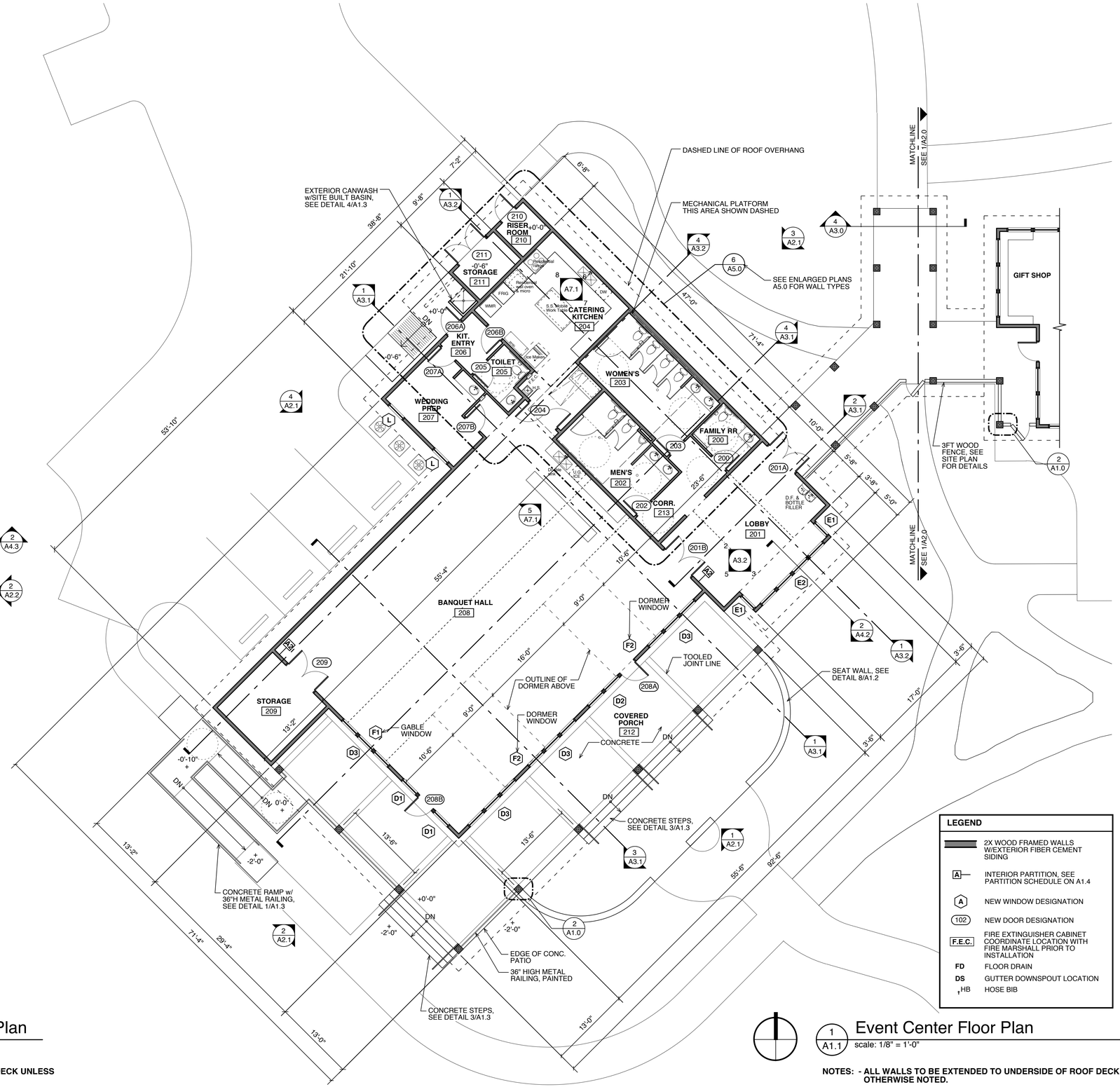
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DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A1.0





2 / A1.1 — 3 Bay Garage / Workshop Floor Plan

scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

- SEE FINISH SCHEDULE ON A6.0 FOR WAINSCOTING LOCATIONS.

1 / A1.1 — Event Center Floor Plan

scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

- SEE FINISH SCHEDULE ON A6.0 FOR WAINSCOTING LOCATIONS.

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Event Center and Workshop Floor Plans

JOB NUMBER

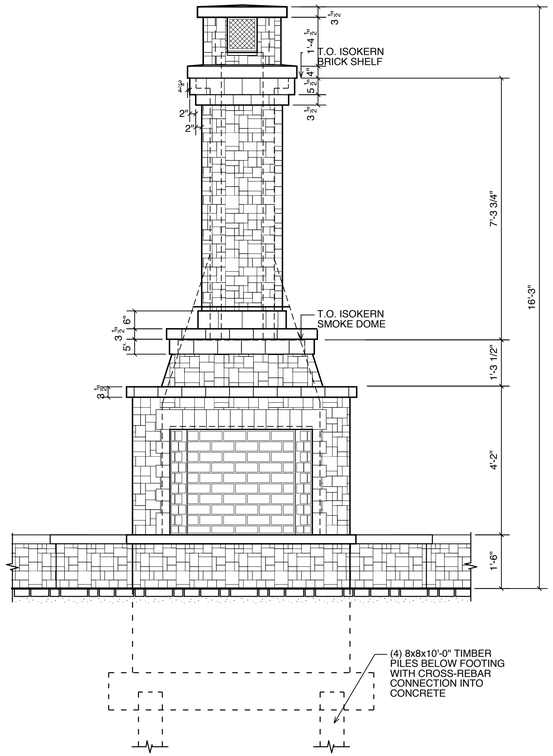
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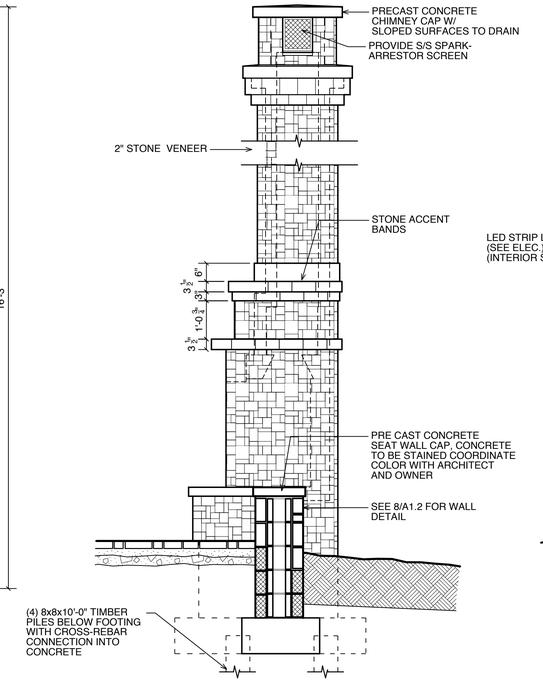
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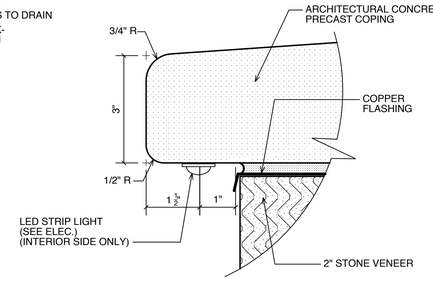
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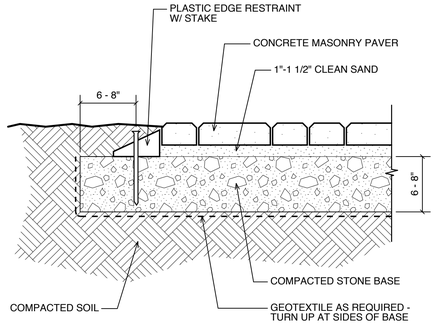




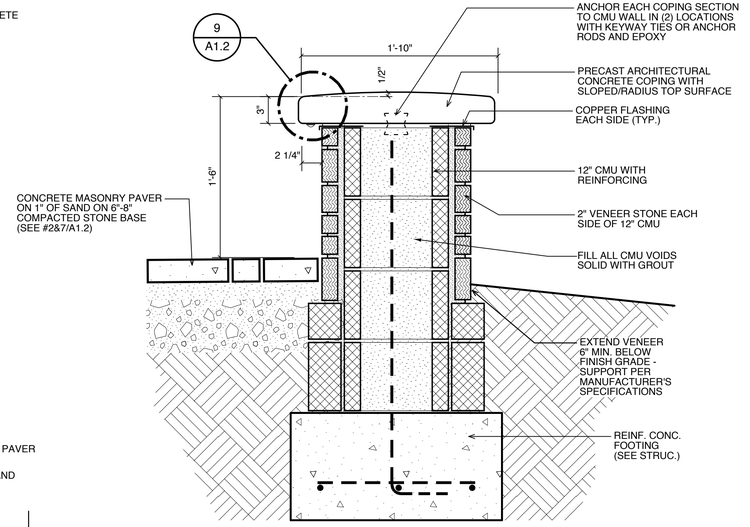
6 A1.2 **Outdoor Fireplace Elevations**
scale: 1/2" = 1'-0"



9 A1.2 **Coping Detail**
scale: 6" = 1'-0"

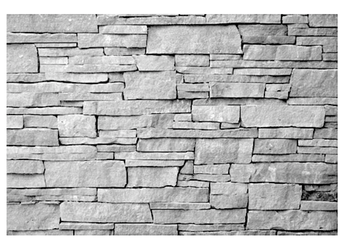


7 A1.2 **Section @ Masonry Paver**
scale: 1 1/2" = 1'-0"



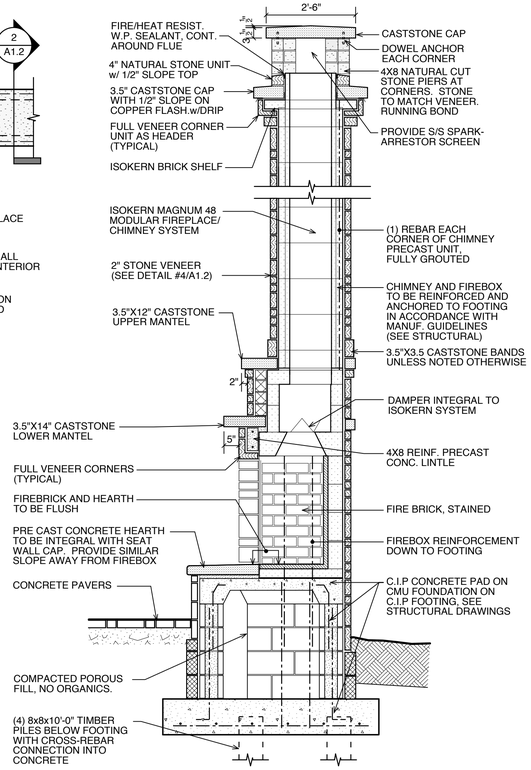
8 A1.2 **Masonry Seat Wall Detail**
scale: 1 1/2" = 1'-0"

5 A1.2 **Outdoor Fireplace Plan**
scale: 1/2" = 1'-0"

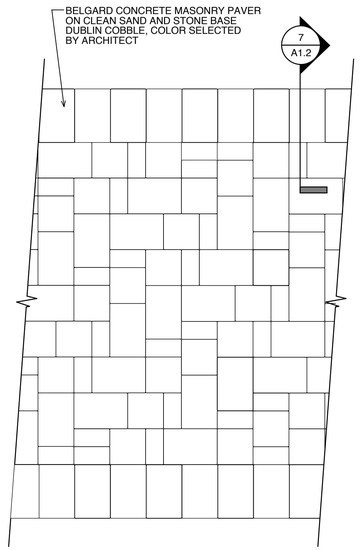


NATURAL STONE THIN VENEER
- DRY STACK PATTERN WITH VARYING HEIGHTS
- PROVIDE 1/4" MINIMUM JOINTS, RAKED
- STONE HEIGHTS: 1.5", 3", 4", 6" MIXED
- STONE THICKNESS: 3/4" MIN. TO 1-1/2" MAX.
- 3" MIN. CORNER RETURNS, FULL DEPTH HEADER RETURNS
- SPLIT FACE

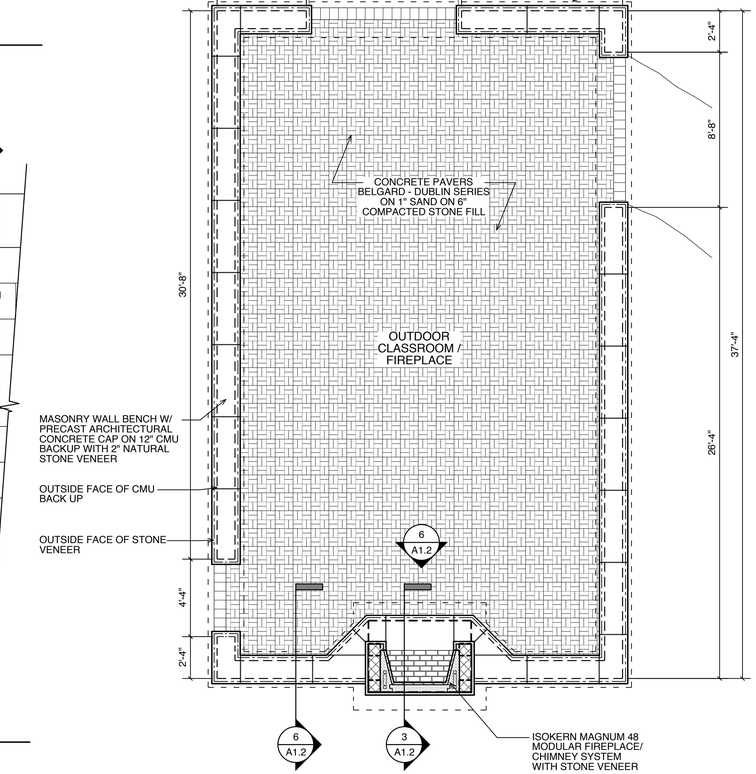
4 A1.2 **Stone Veneer Pattern**
not to scale



3 A1.2 **Outdoor Fireplace Section**
scale: 1/2" = 1'-0"



2 A1.2 **Typical Masonry Paver Plan**
scale: 1" = 1'-0"



1 A1.2 **Outdoor Classroom and Fireplace Floor Plan**
scale: 1/4" = 1'-0"

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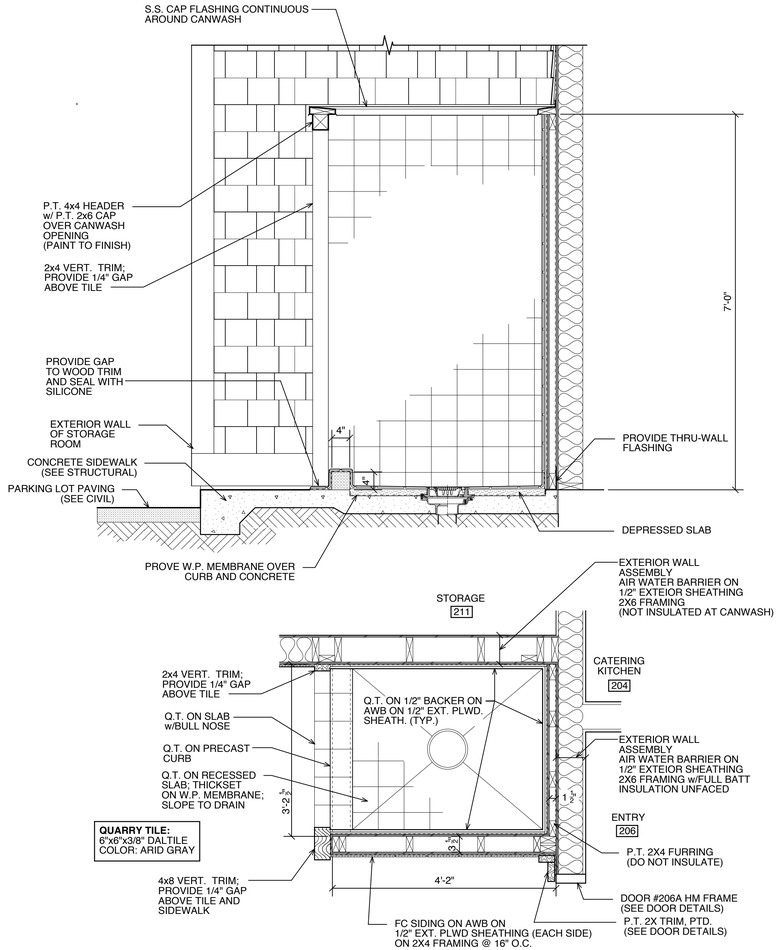
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Outdoor Classroom and Fireplace Details

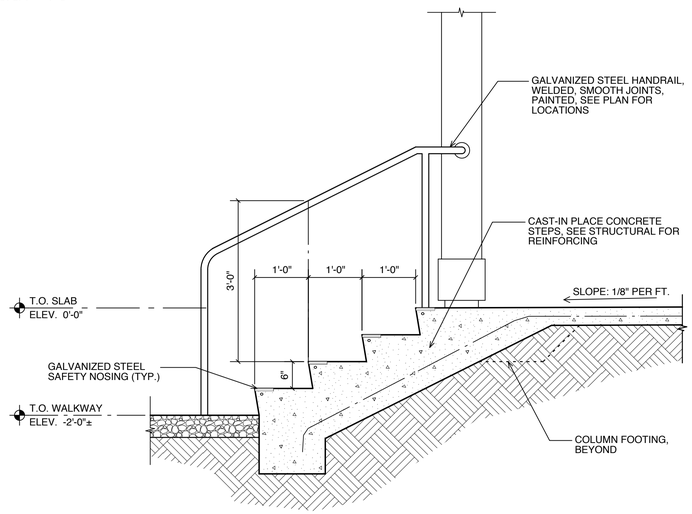
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CHECKED BY
Hemingway
DATE
June 12, 2023
REVISIONS

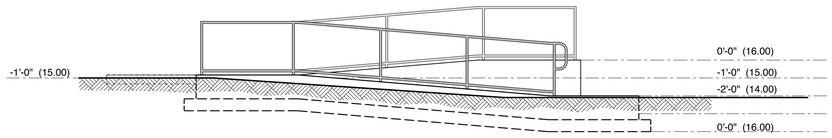
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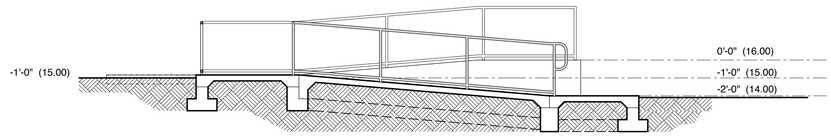
4 A1.3 **Canwash Enlarged Plans & Sections**
scale: 3/4" = 1'-0"



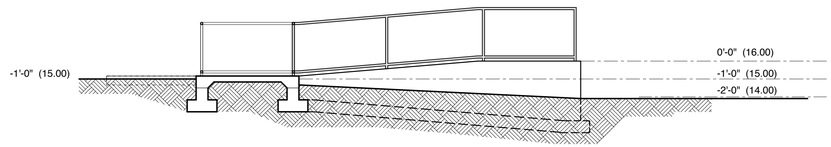
3 A1.3 **Concrete Stair Detail**
scale: 3/4" = 1'-0"



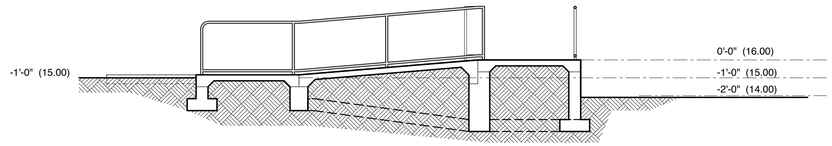
"SECTION A"



"SECTION B"

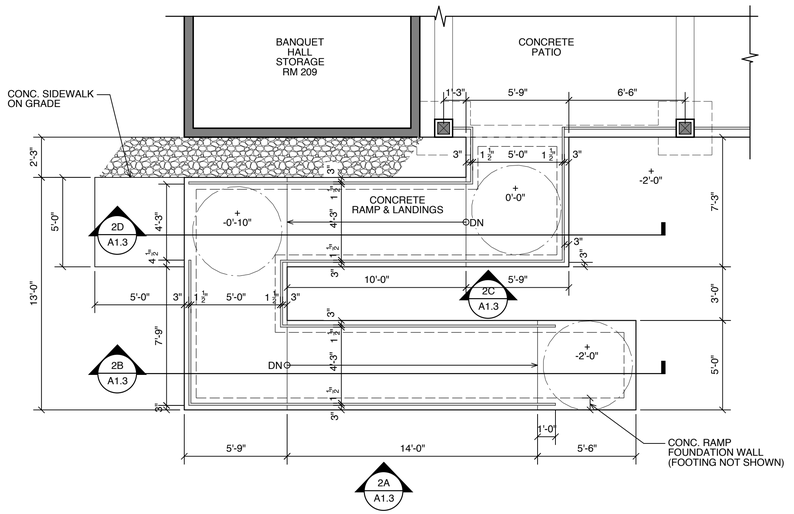


"SECTION C"



"SECTION D"

2 A1.3 **Enlaged Ramp Elevations**
scale: 1/4" = 1'-0"



1 A1.3 **Enlaged Ramp Plan**
scale: 1/4" = 1'-0"

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Exterior Ramp & Railing Details

JOB NUMBER

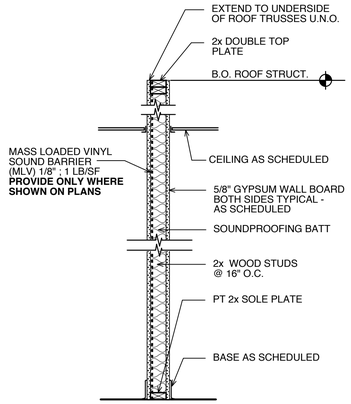
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Hemingway

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Hemingway

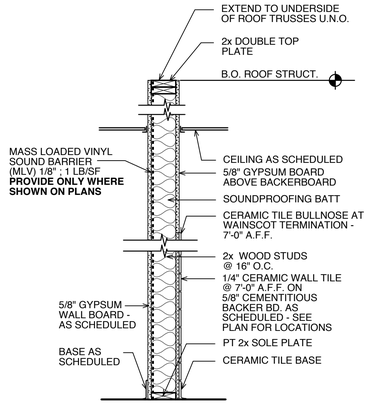
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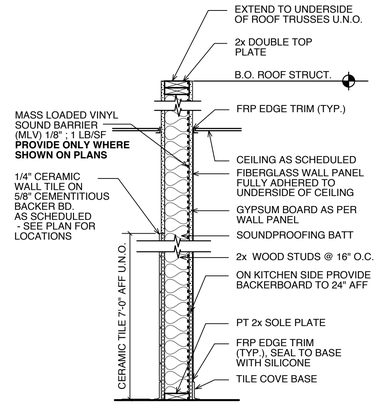
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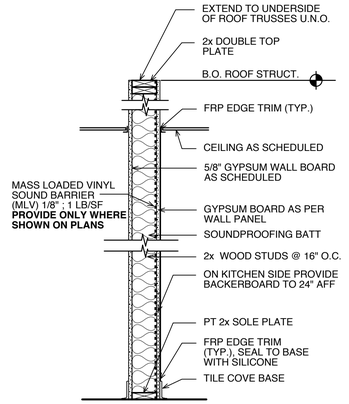
WALL ASSEMBLY TYPE 'A'
A1 - 2x4 Framing
A2 - 2x6 Framing



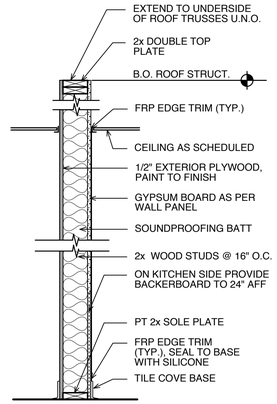
WALL ASSEMBLY TYPE 'B'
B1 - 2x4 Framing
B2 - 2x6 Framing



WALL ASSEMBLY TYPE 'E'
E1 - 2x4 Framing
E2 - 2x6 Framing



WALL ASSEMBLY TYPE 'F'
F1 - 2x4 Framing
F2 - 2x6 Framing



WALL ASSEMBLY TYPE 'G'
G1 - 2x4 Framing
G2 - 2x6 Framing

WALL ASSEMBLY TYPE 'H'
H1 - 2x4 Framing
H2 - 2x6 Framing

WALL ASSEMBLY TYPE 'S'
S1 - 2x4 Framing
S2 - 2x6 Framing

WALL ASSEMBLY TYPE 'SA'
SA1 - 2x4 Framing
SA2 - 2x6 Framing

ACOUSTIC MATERIAL SPECIFICATIONS:

MLV - "AudioSeal" by Acoustical Solutions

ACOUSTIC GLUE - "Green Glue Noiseproofing Compound" by Acoustical Solutions

SOUNDPROOFING BATT - Use full depth unfaced fiberglass batt thermal insulation.

WALL ASSEMBLY TYPE 'SB'
SB1 - 2x4 Framing
SB2 - 2x6 Framing

WALL ASSEMBLY TYPE 'SC'
SC1 - 2x4 Framing
SC2 - 2x6 Framing

1 / A1.4 **Partition Types**
Not to Scale

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Partition Types and Details

JOB NUMBER

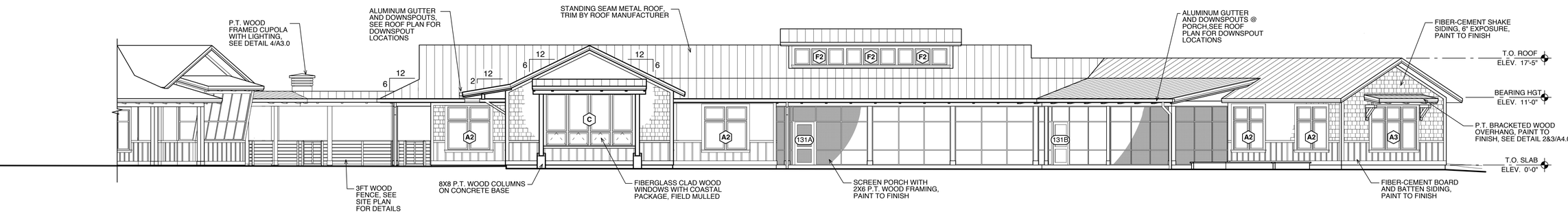
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Hemingway

CHECKED BY
Hemingway

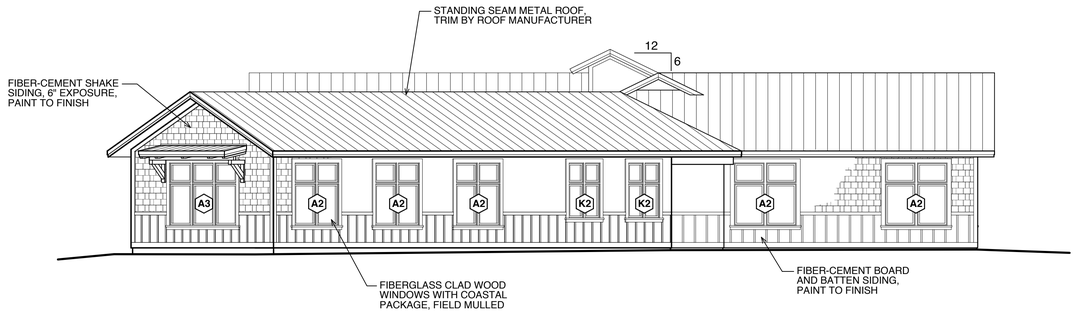
DATE
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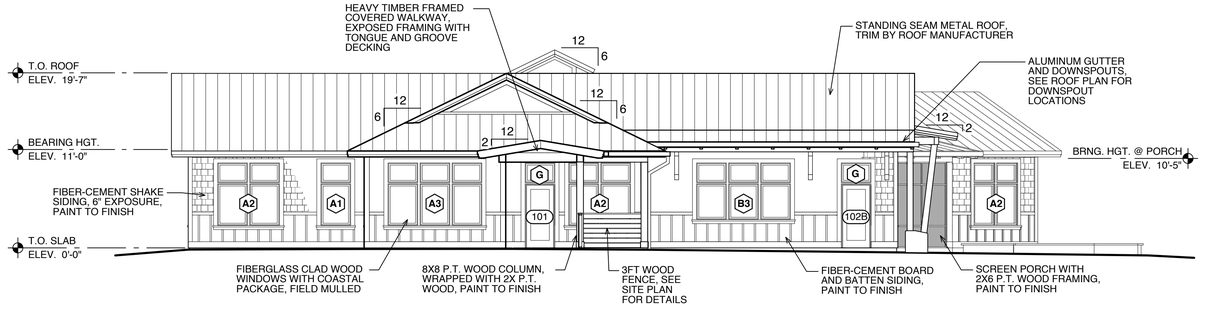
SHEET NUMBER
A1.4



1 A2.0 **South Elevation**
scale: 1/8" = 1'-0"



2 A2.0 **East Elevation**
scale: 1/8" = 1'-0"



3 A2.0 **West Elevation**
scale: 1/8" = 1'-0"



4 A2.0 **North Elevation**
scale: 1/8" = 1'-0"

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Coastal Resource Center Elevations

JOB NUMBER

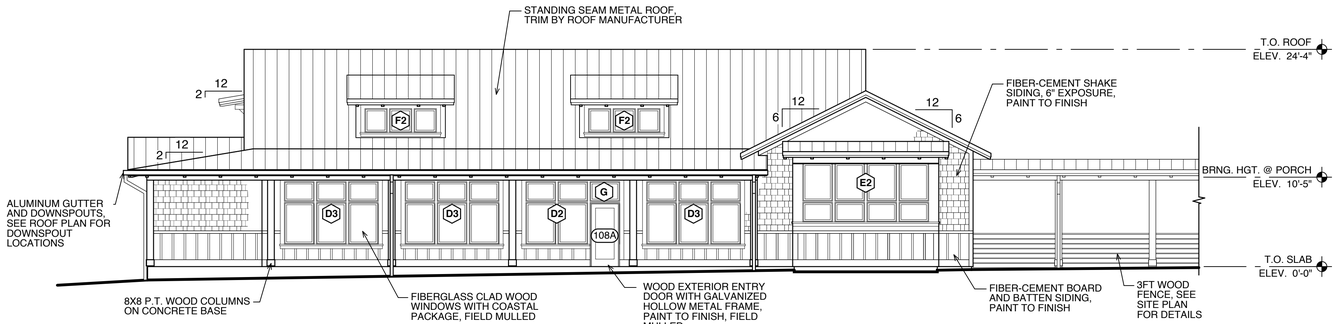
DRAWN BY
MG, AT

CHECKED BY
Hemingway

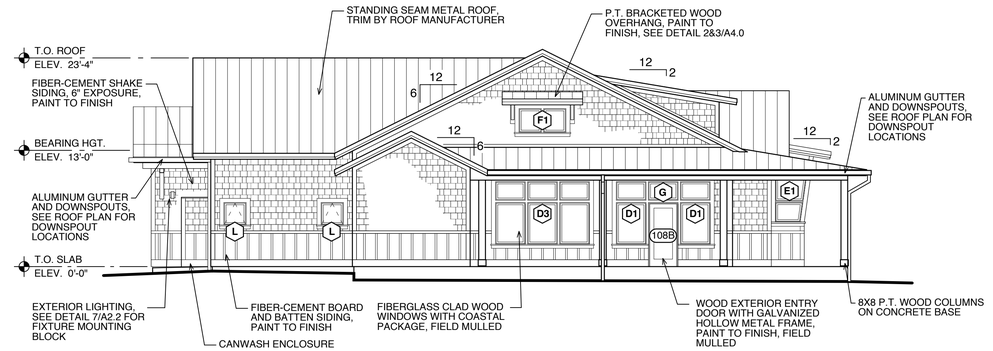
DATE
June 12, 2023

REVISIONS

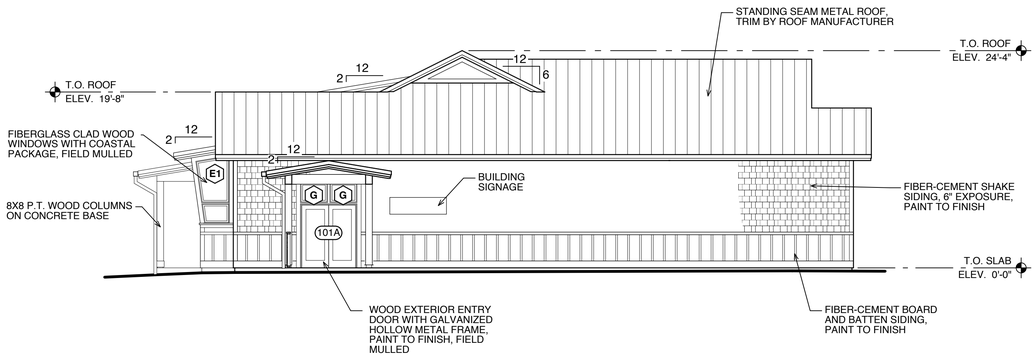
SHEET NUMBER
A2.0



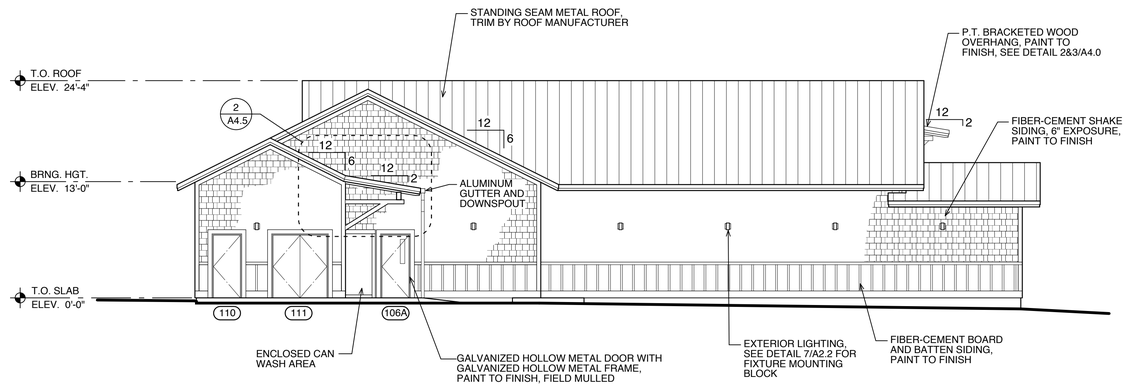
1 A2.1 **East Elevation - Event Center**
scale: 1/8" = 1'-0"



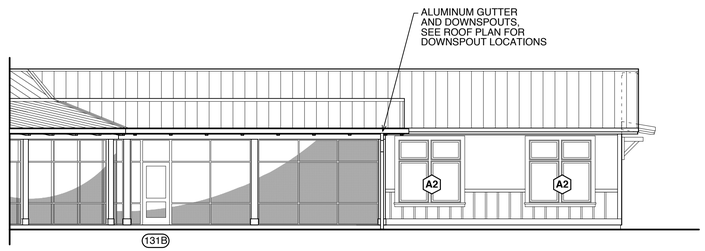
2 A2.1 **South Elevation - Event Center**
scale: 1/8" = 1'-0"



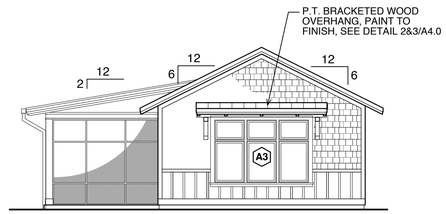
3 A2.1 **North Elevation - Event Center**
scale: 1/8" = 1'-0"



4 A2.1 **West Elevation - Event Center**
scale: 1/8" = 1'-0"



5 A2.1 **South Elevation 2 - Resource Center**
scale: 1/8" = 1'-0"



6 A2.1 **East Elevation 2 - Resource Center**
scale: 1/8" = 1'-0"



7 A2.1 **North Elevation 2 - Resource Center**
scale: 1/8" = 1'-0"

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The NC Coastal Federation's
Coastal Protection and Restoration Center for Coastal Resources
Ocean, North Carolina

Event Center & Cultural Resource Center Elevations

JOB NUMBER

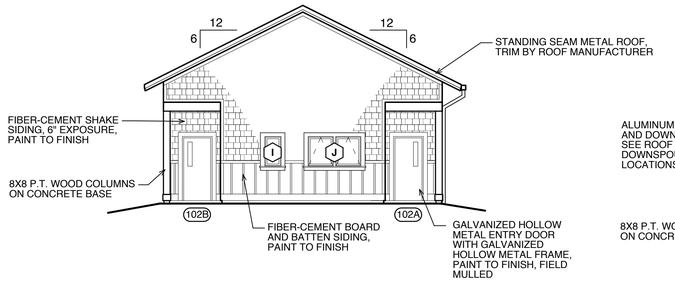
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MG, AT

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Hemingway

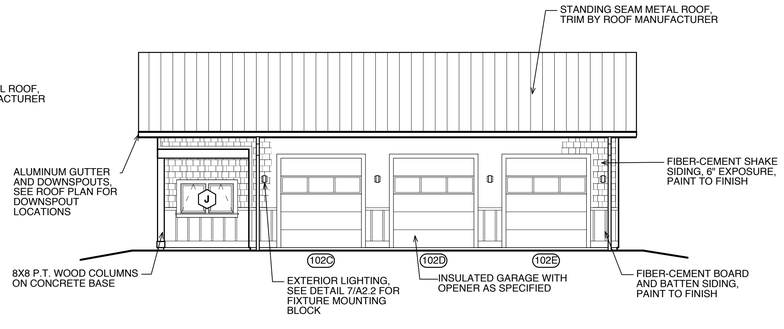
DATE
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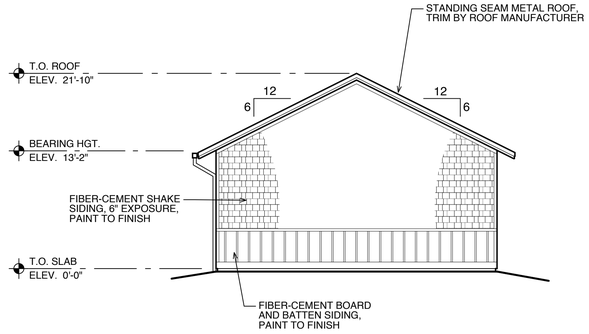
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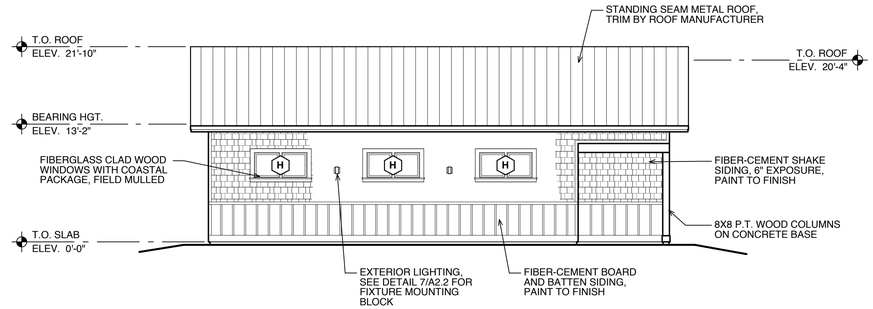
3 A2.2 **South Elevation**
scale: 1/8" = 1'-0"



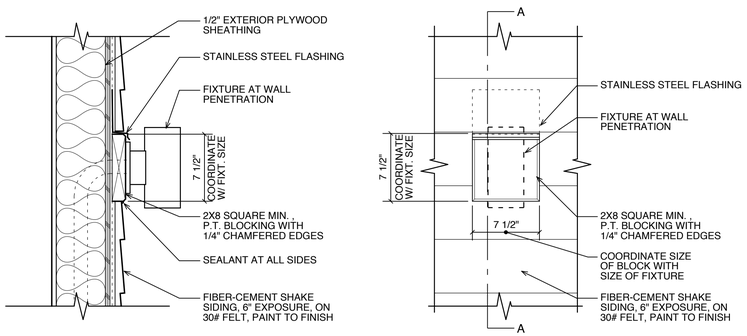
2 A2.2 **East Elevation**
scale: 1/8" = 1'-0"



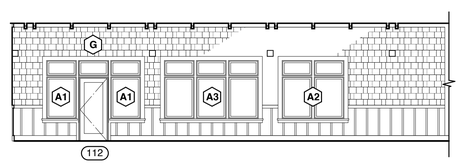
1 A2.2 **North Elevation**
scale: 1/8" = 1'-0"



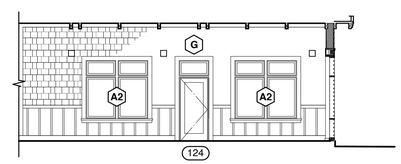
4 A2.2 **West Elevation**
scale: 1/8" = 1'-0"



7 A2.2 **Mounting Block Siding Detail @ Exterior Wall**
scale: 1 1/2" = 1'-0"



5 A2.2 **Exterior Wall 1 - Patio Interior**
scale: 1/8" = 1'-0" Cultural Resouce Center



6 A2.2 **Exterior Wall 2 - Patio Interior**
scale: 1/8" = 1'-0" Cultural Resource Center

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Ocean, North Carolina

Workshop Elevations & Resource Center Patio Interior

JOB NUMBER

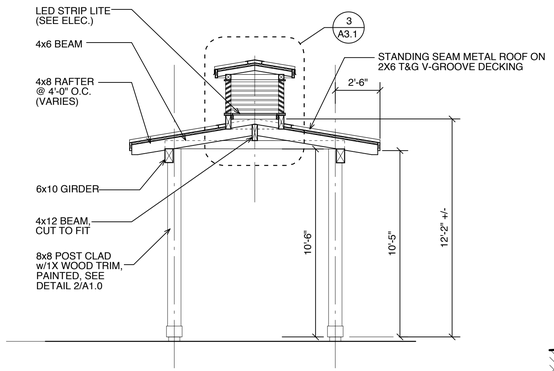
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Hemingway

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June 12, 2023

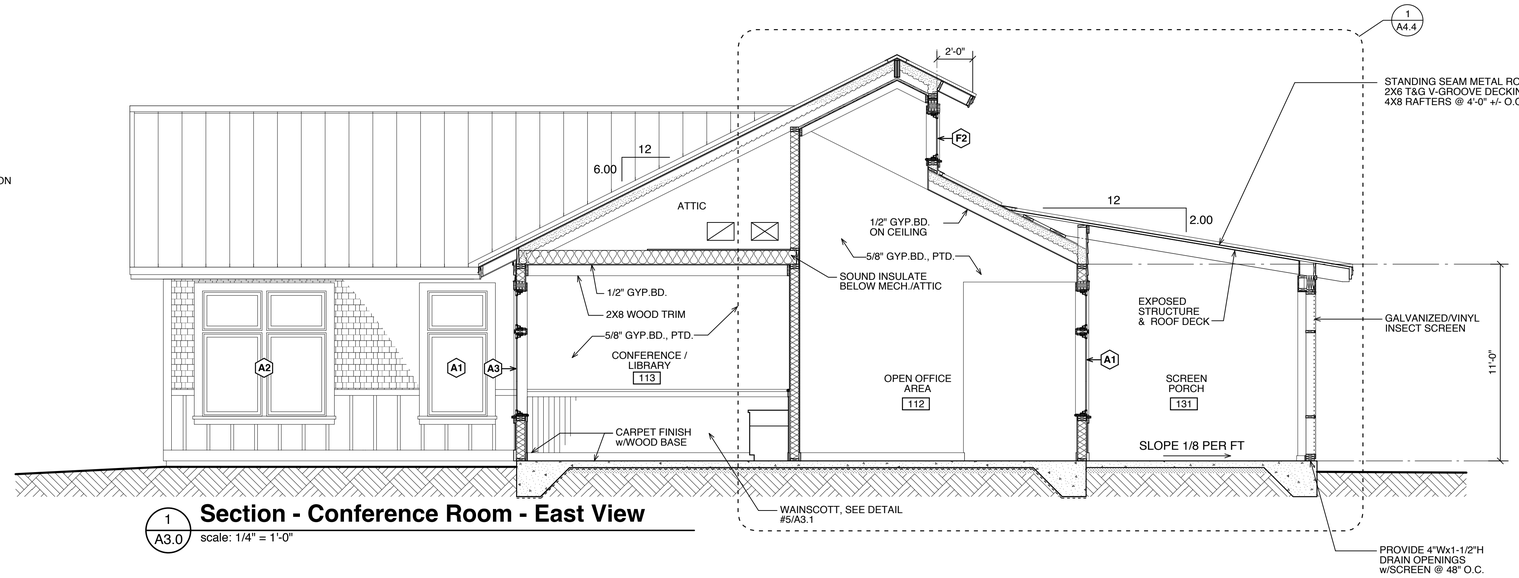
REVISIONS

SHEET NUMBER
A2.2



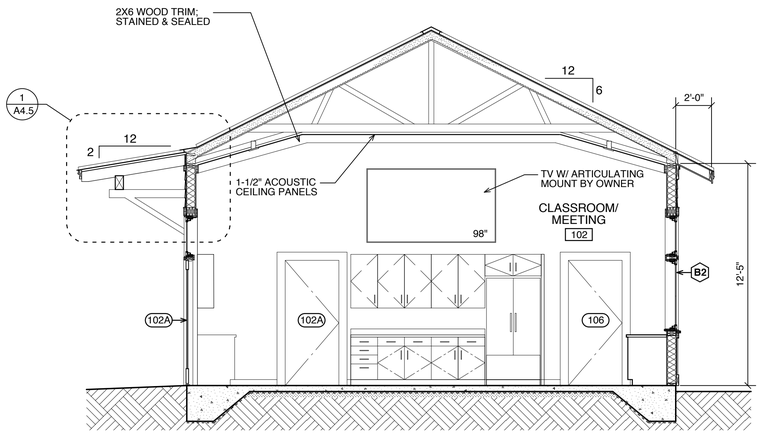
4 / A3.0 Section -Covered Walkway

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



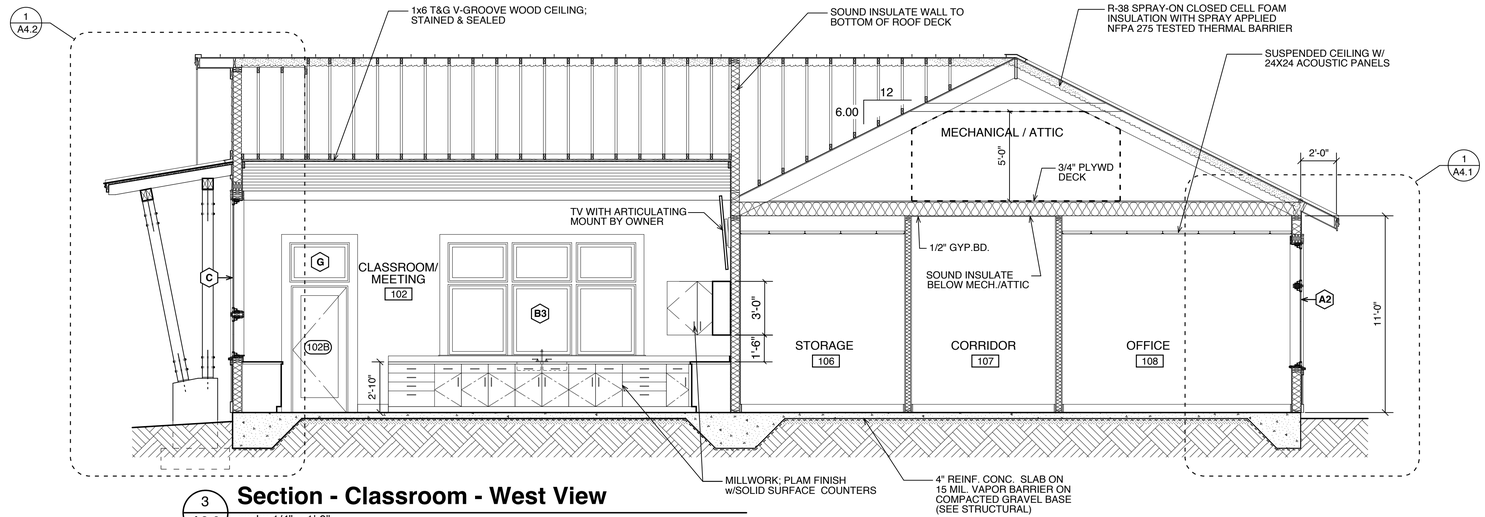
1 / A3.0 Section - Conference Room - East View

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



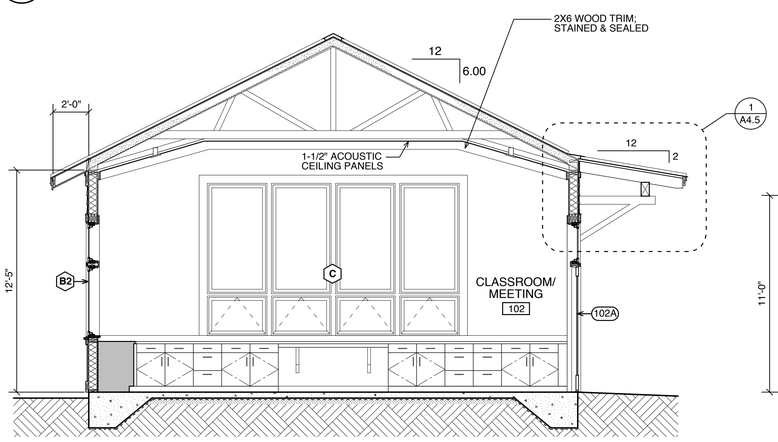
2 / A3.0 Section - Classroom - North View

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



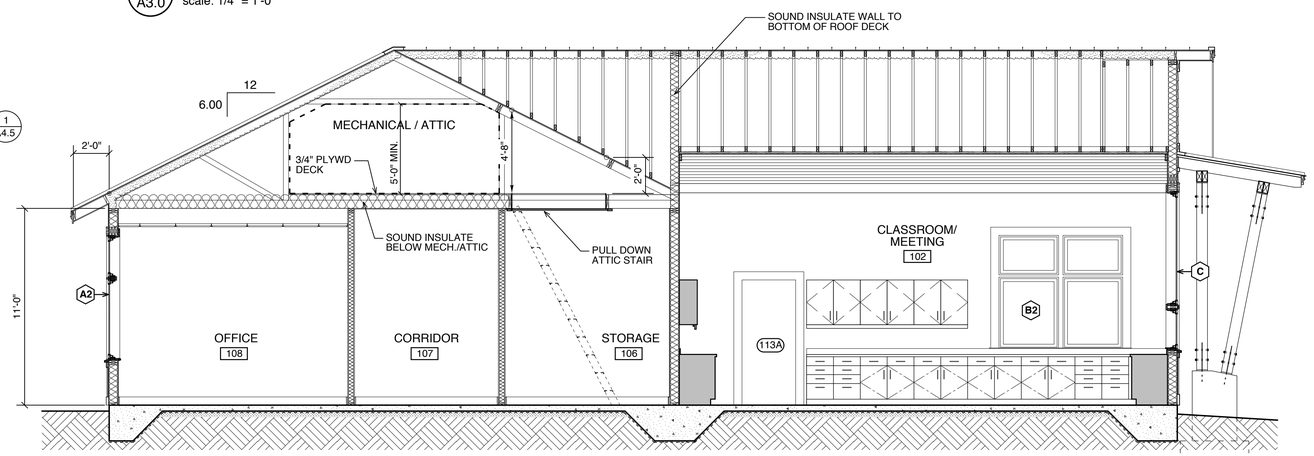
3 / A3.0 Section - Classroom - West View

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



5 / A3.0 Section - Classroom - South View

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



6 / A3.0 Section - Classroom - East View

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

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Ocean, North Carolina

Coastal Resource Center Enlarged Sections

JOB NUMBER

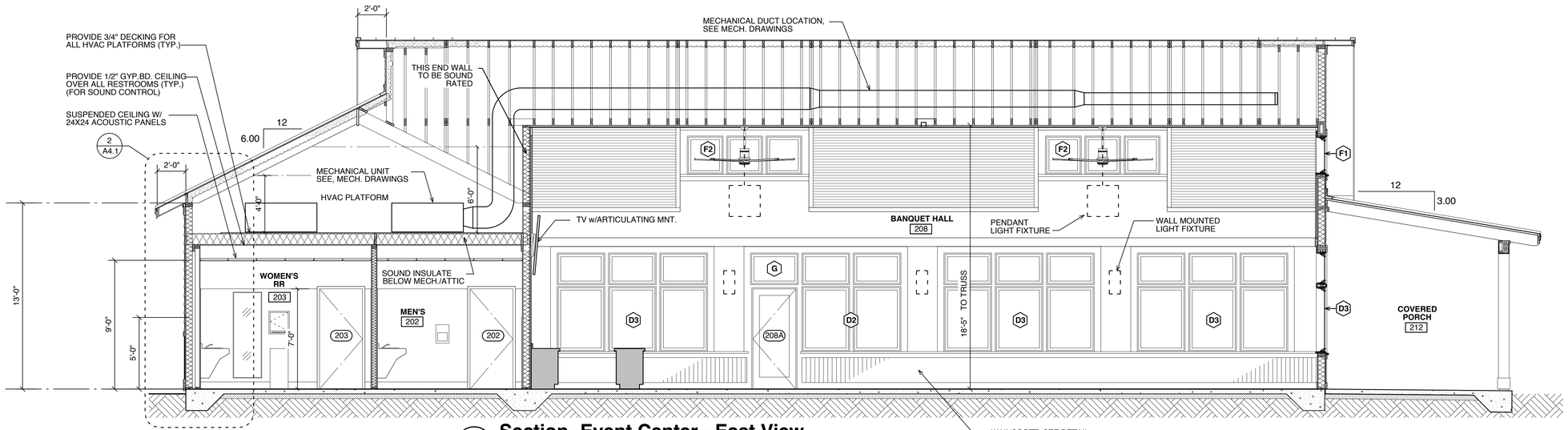
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Hemingway

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Hemingway

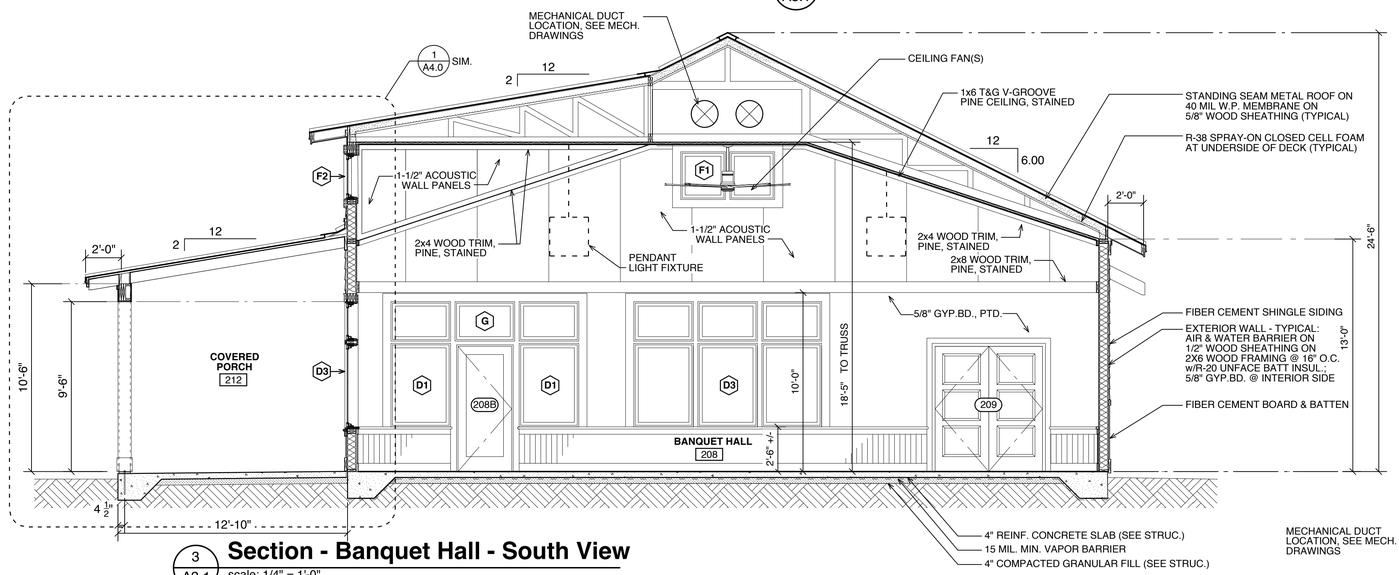
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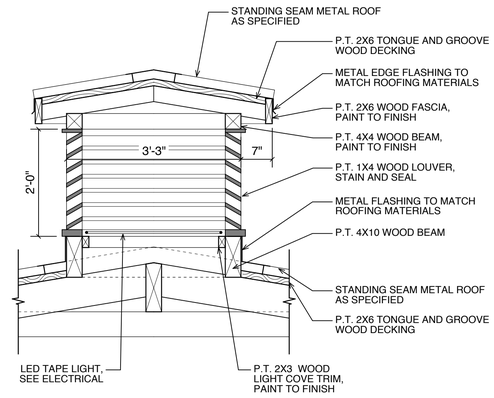
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A3.0



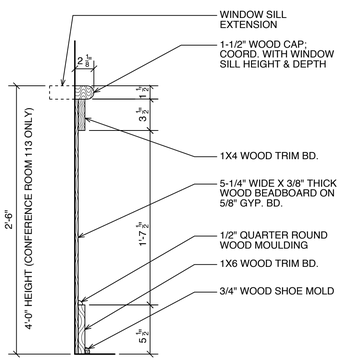
4 A3.1 **Section -Event Center - East View**
scale: 1/4" = 1'-0"



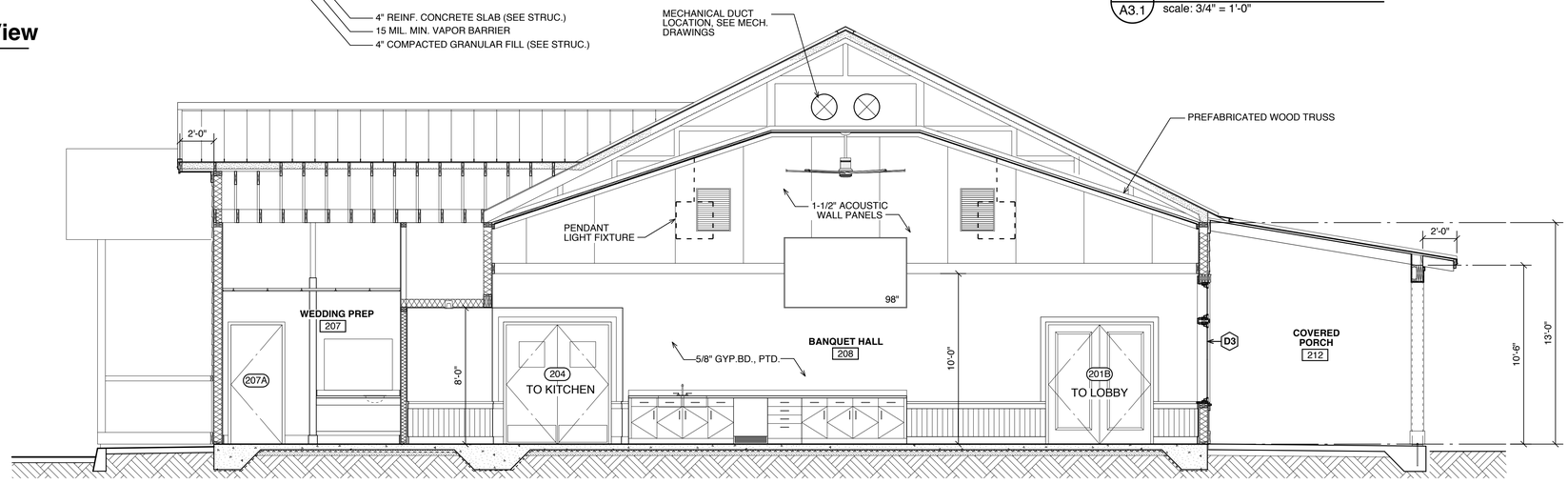
3 A3.1 **Section - Banquet Hall - South View**
scale: 1/4" = 1'-0"



3 A3.1 **Cupola Section**
scale: 3/4" = 1'-0"



5 A3.1 **Wall Wainscott**
scale: 1-1/2" = 1'-0"



1 A3.1 **Section - Banquet Hall - North View**
scale: 1/4" = 1'-0"

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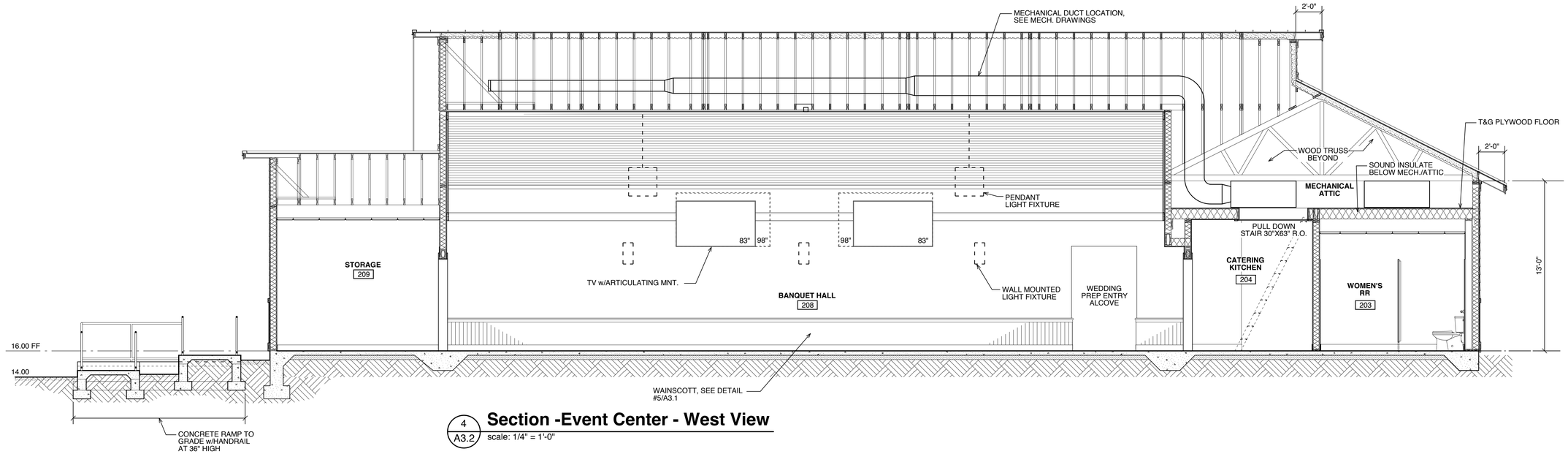
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Event Center Enlarged Sections

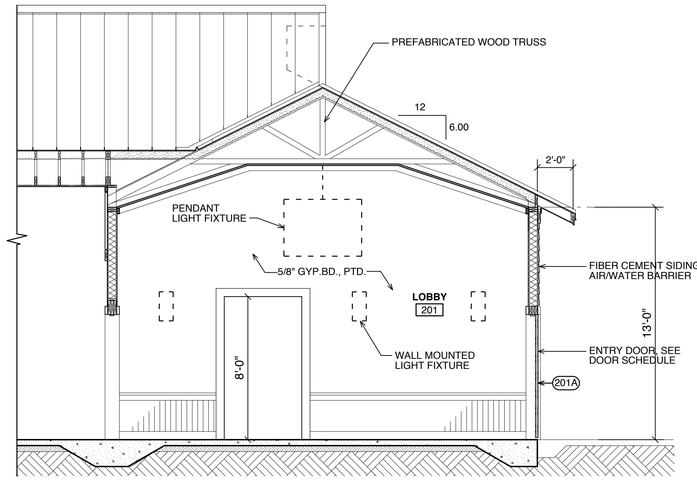
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Hemingway
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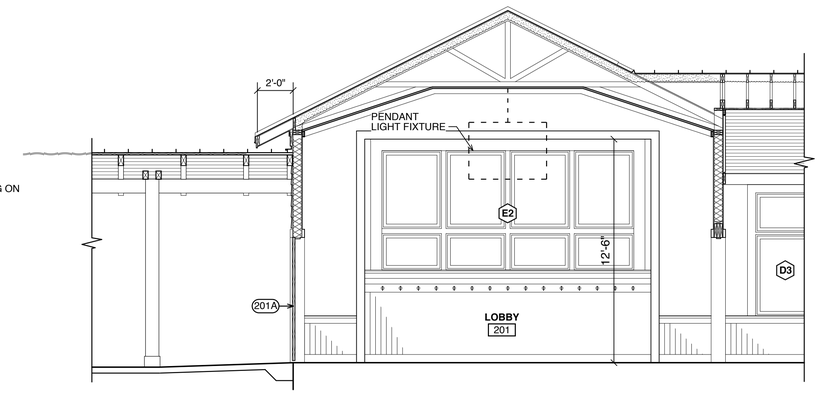
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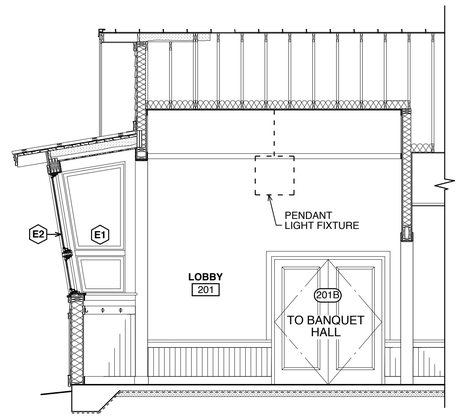
4 / A3.2 **Section -Event Center - West View**
scale: 1/4" = 1'-0"



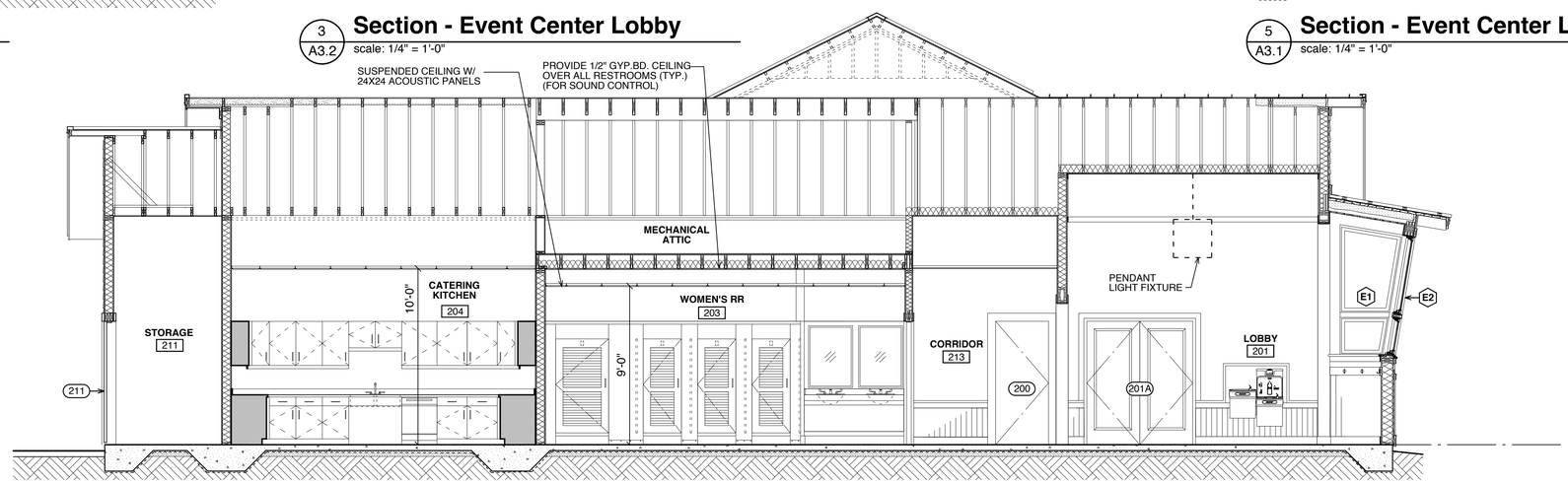
2 / A3.2 **Section - Event Center Lobby**
scale: 1/4" = 1'-0"



3 / A3.2 **Section - Event Center Lobby**
scale: 1/4" = 1'-0"



5 / A3.1 **Section - Event Center Lobby**
scale: 1/4" = 1'-0"



1 / A3.2 **Section - Banquet Hall - North View**
scale: 1/4" = 1'-0"

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Event Center Enlarged Sections

JOB NUMBER

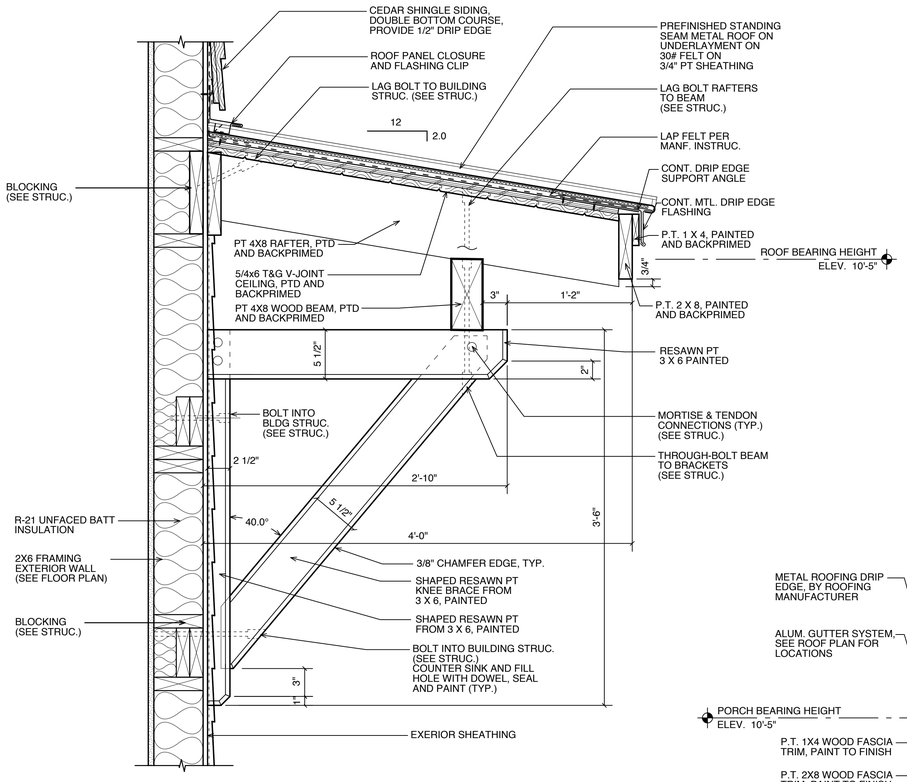
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CHECKED BY
Hemingway

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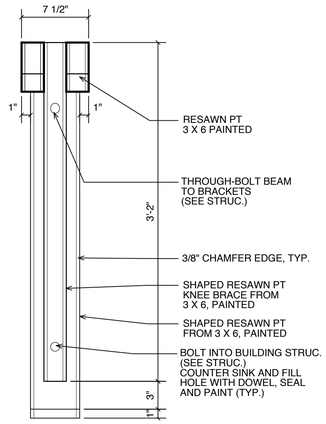
SHEET NUMBER
A3.2



2 A4.0 Bracket Detail, Typical

scale: 1 1/2" = 1'-0"

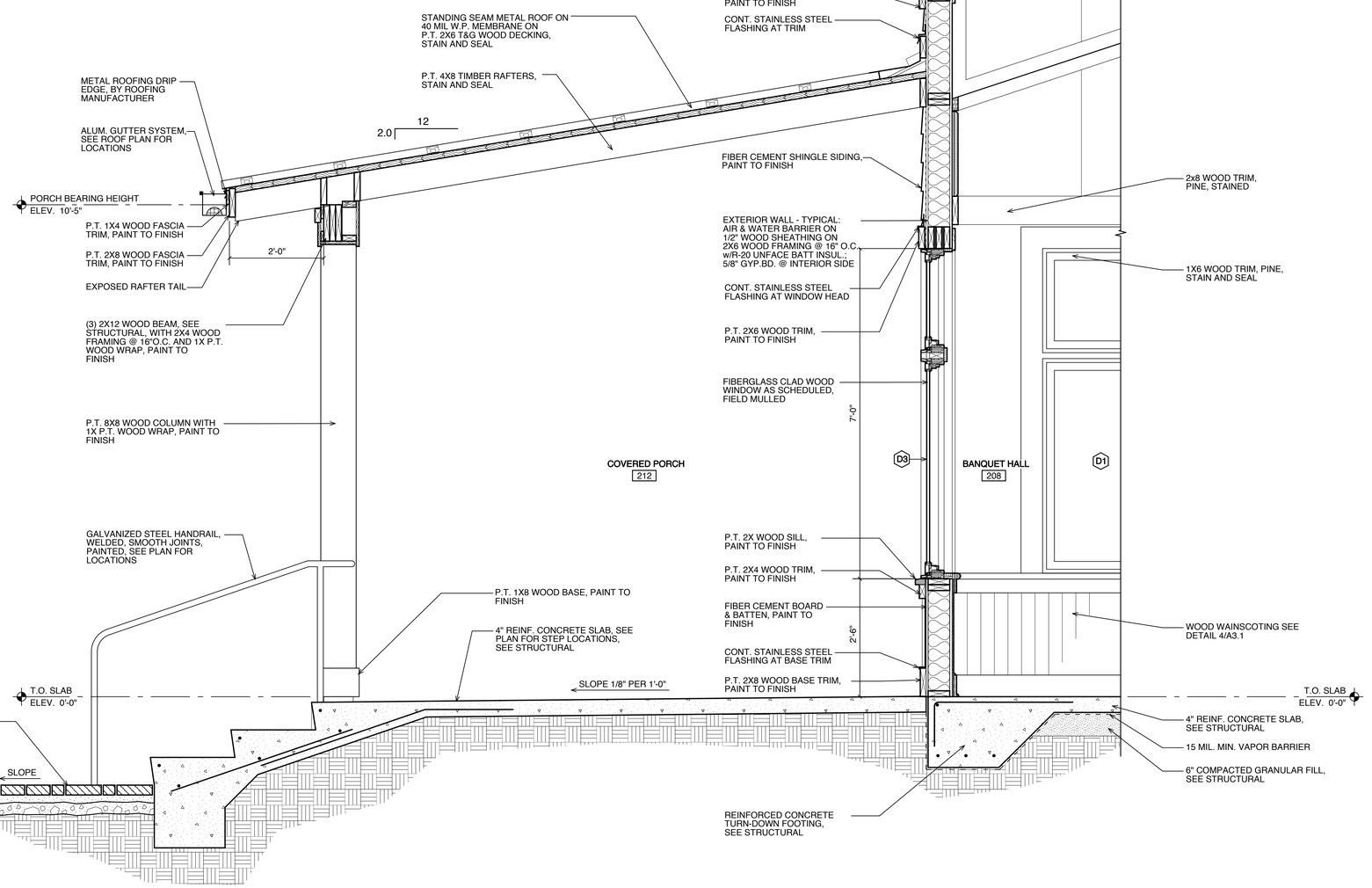
NOTE: ALL EXTERIOR PRESSURE TREATED WOOD IS TO BE KILN DRIED, SEE BRACKET DETAIL 3/A4.0.



3 A4.0 Bracket Detail, Typical

scale: 1 1/2" = 1'-0"

NOTE: ALL EXTERIOR PRESSURE TREATED WOOD IS TO BE KILN DRIED



1 A4.0 Wall Section @ Event Center

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

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Wall Sections

JOB NUMBER

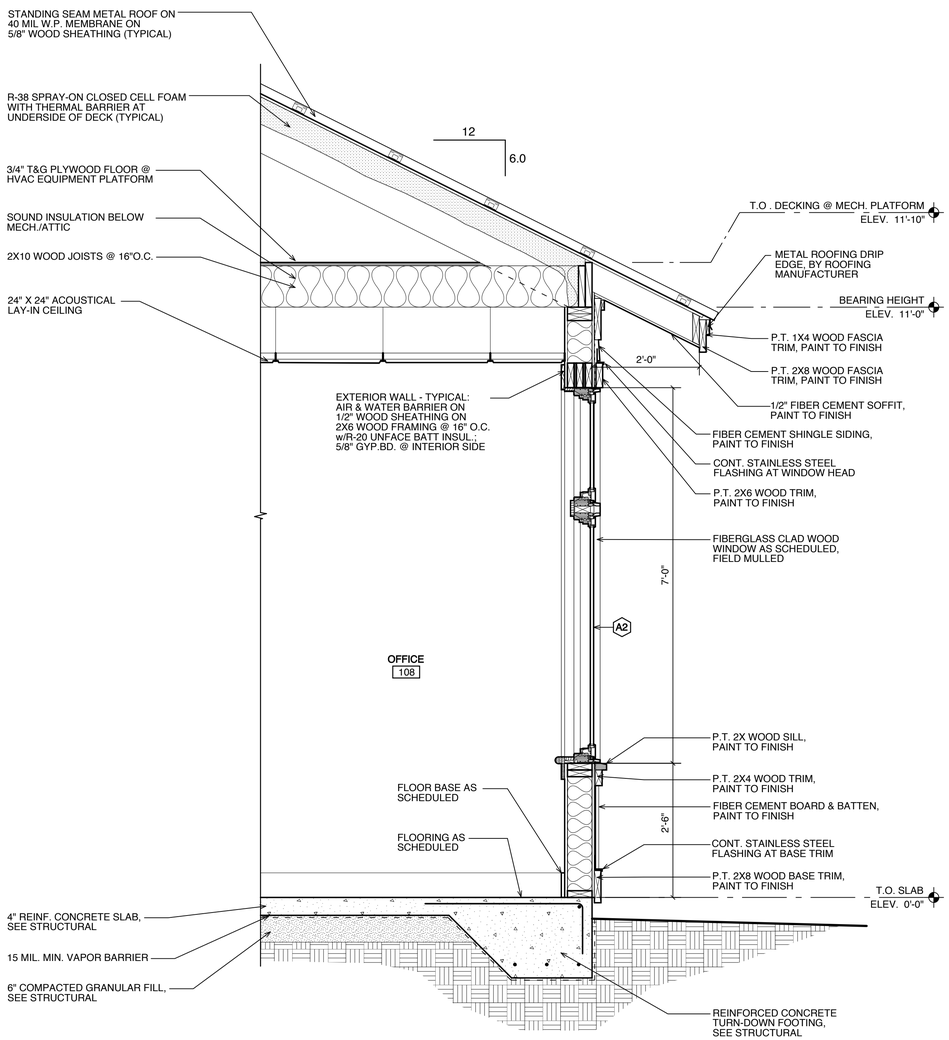
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MG

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Hemingway

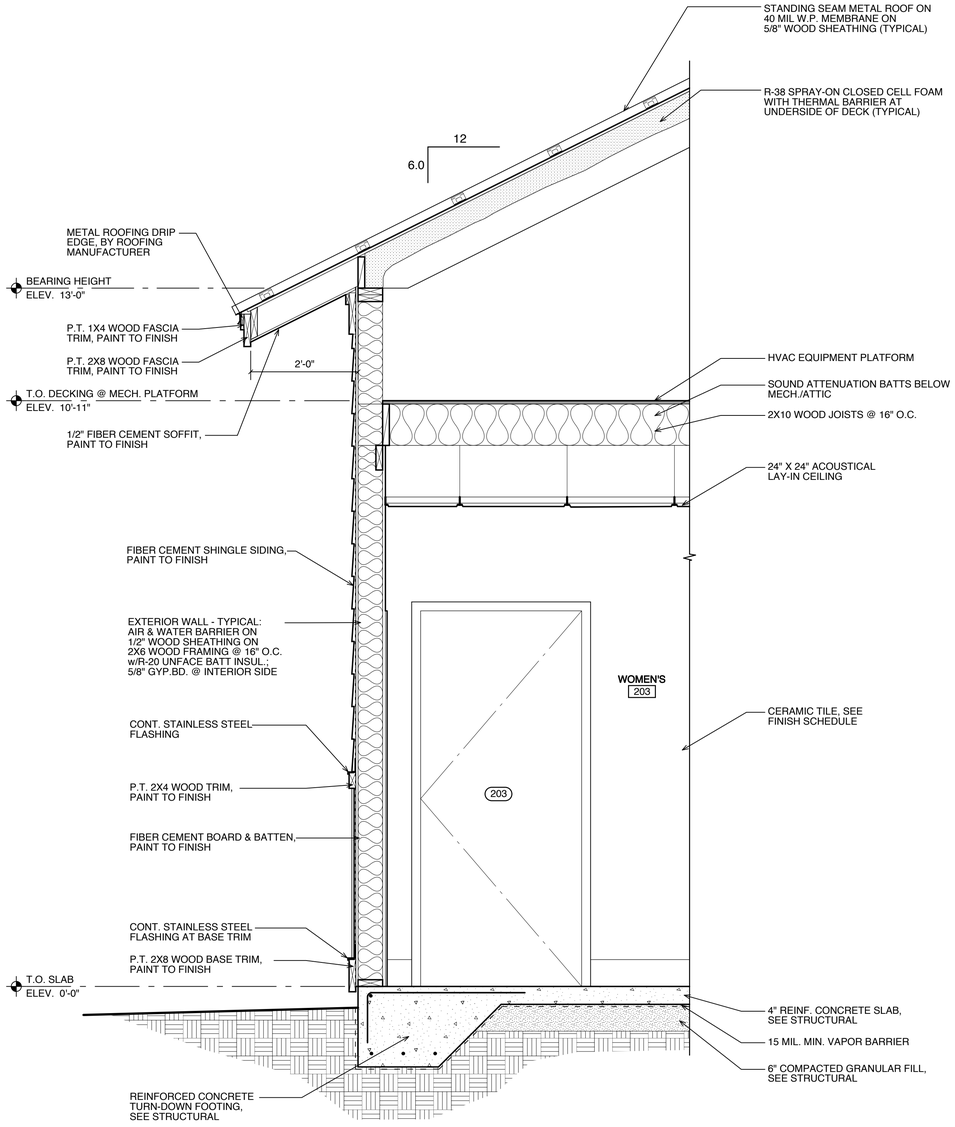
DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A4.0



1 A4.1 **Wall Section @ Coastal Resource Center**
scale: 3/4" = 1'-0"



2 A4.1 **Wall Section @ Event Center**
scale: 3/4" = 1'-0"

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Ocean, North Carolina

Wall Sections

JOB NUMBER

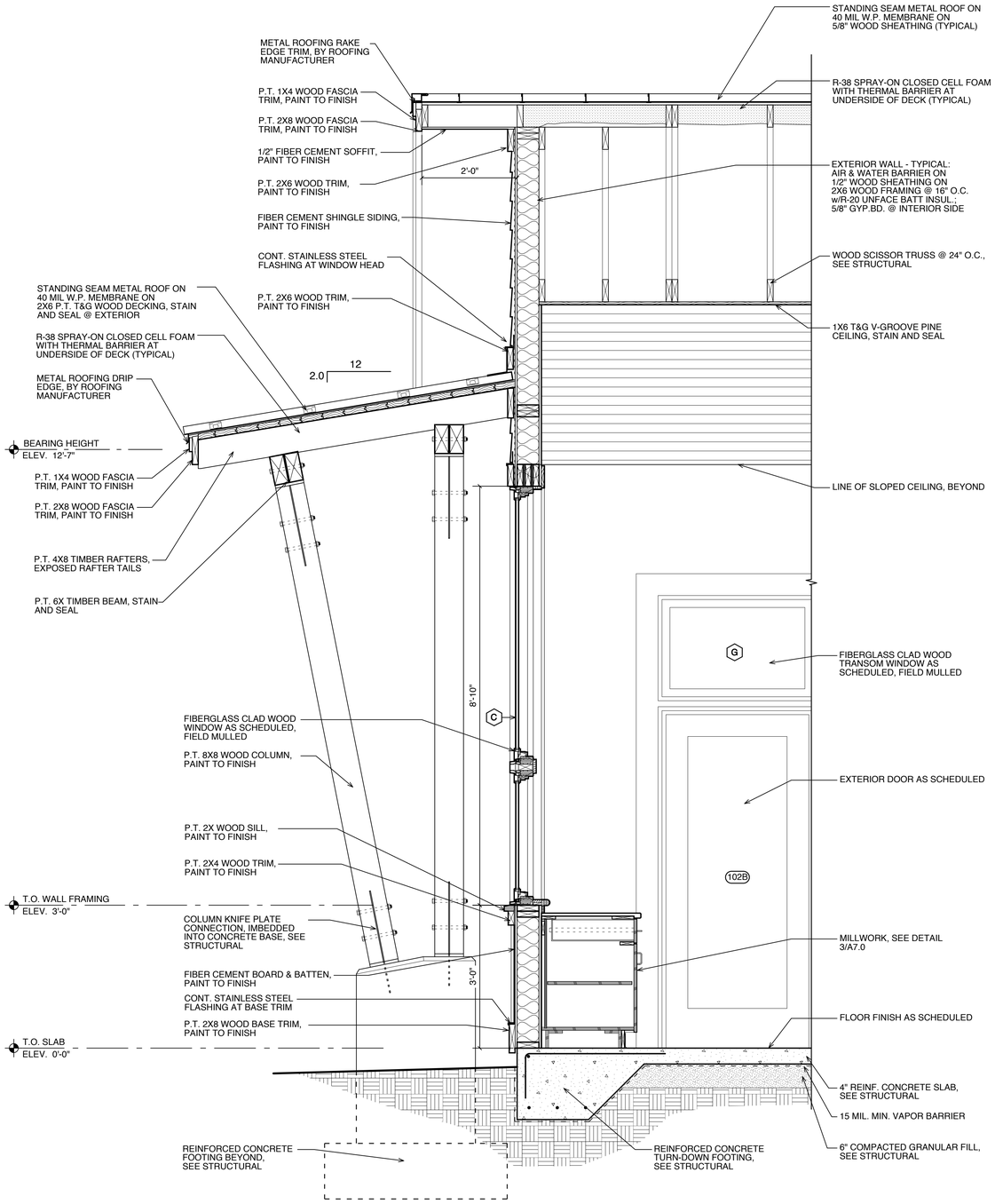
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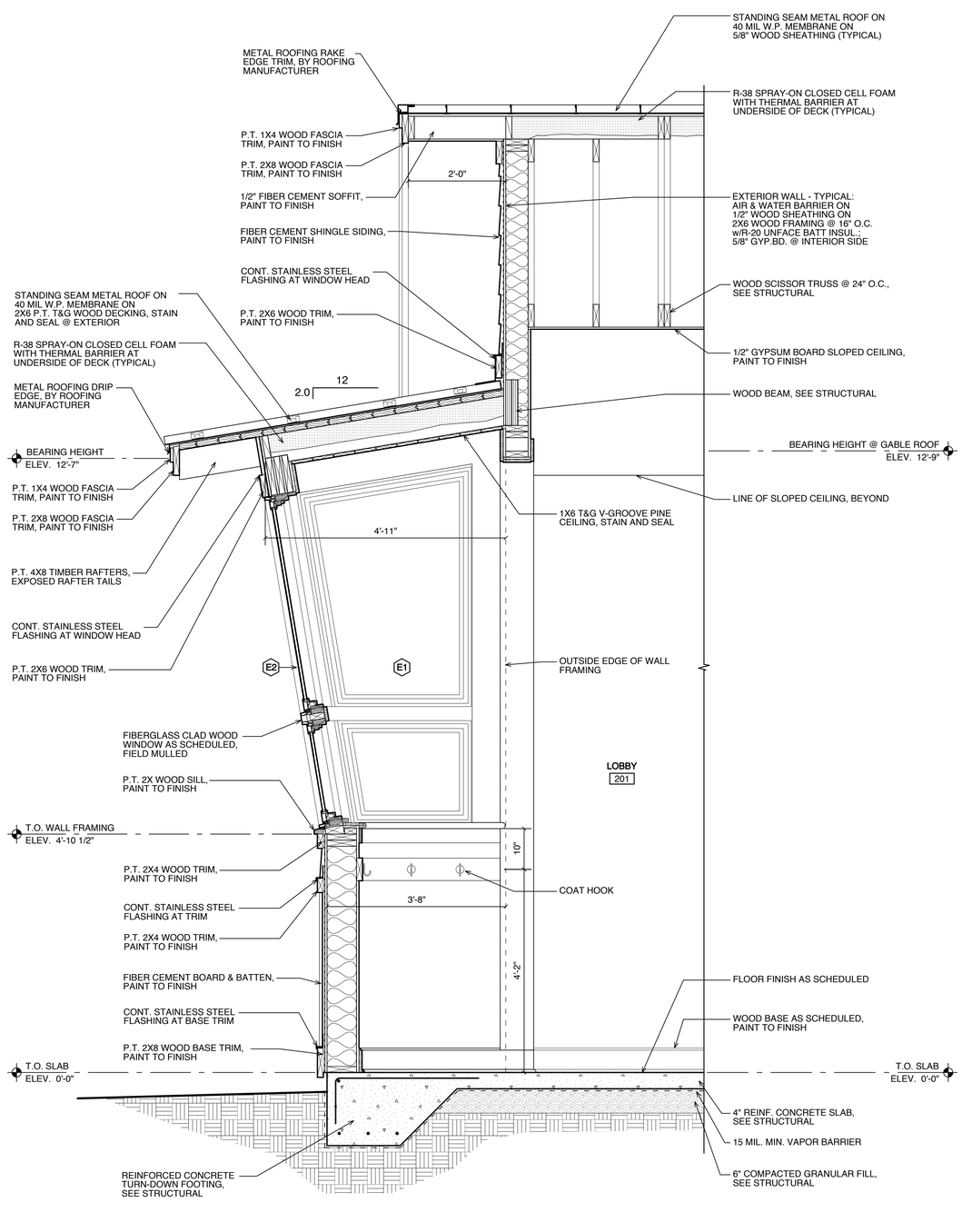
DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A4.1



1 A4.2 **Wall Section @ Coastal Resouce Center Classroom**
scale: 3/4" = 1'-0"



2 A4.2 **Wall Section @ Event Center Lobby**
scale: 3/4" = 1'-0"

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Wall Sections

JOB NUMBER

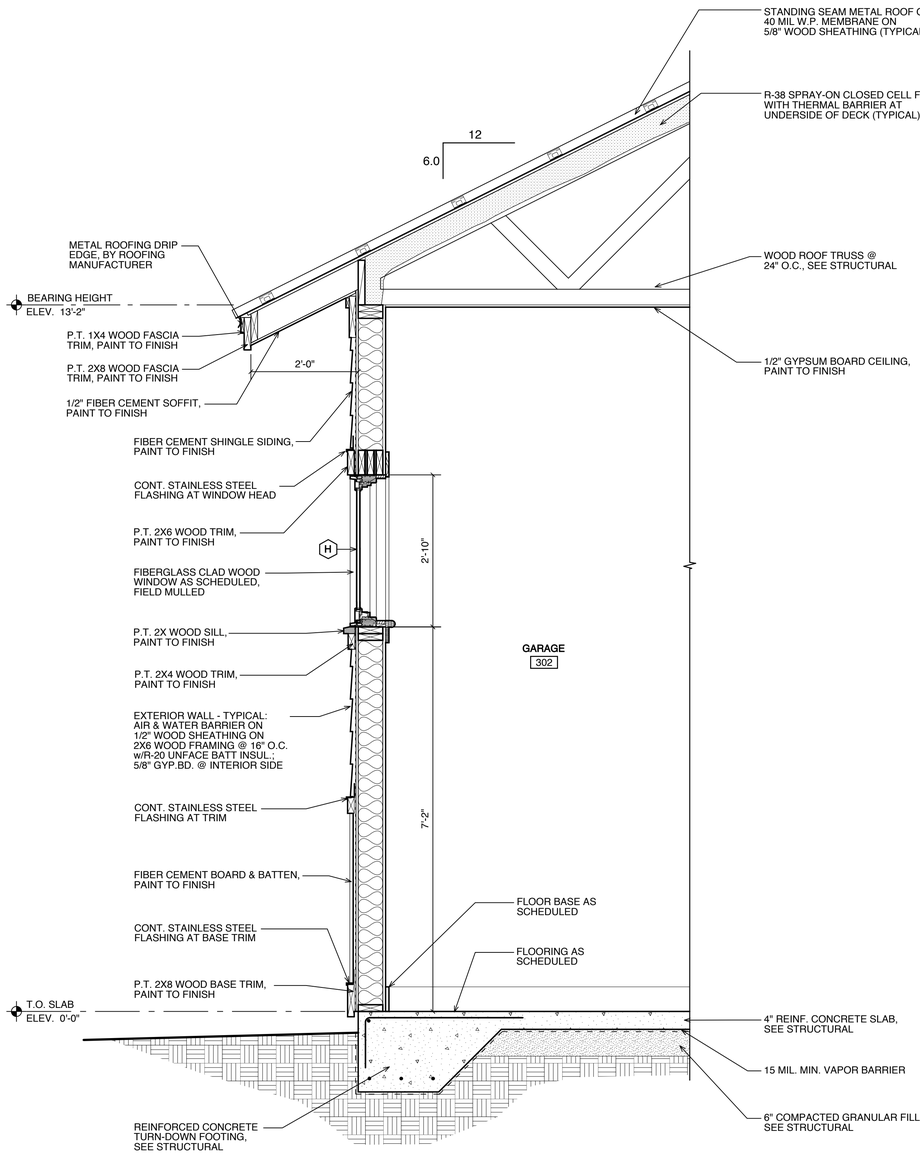
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CHECKED BY
Hemingway

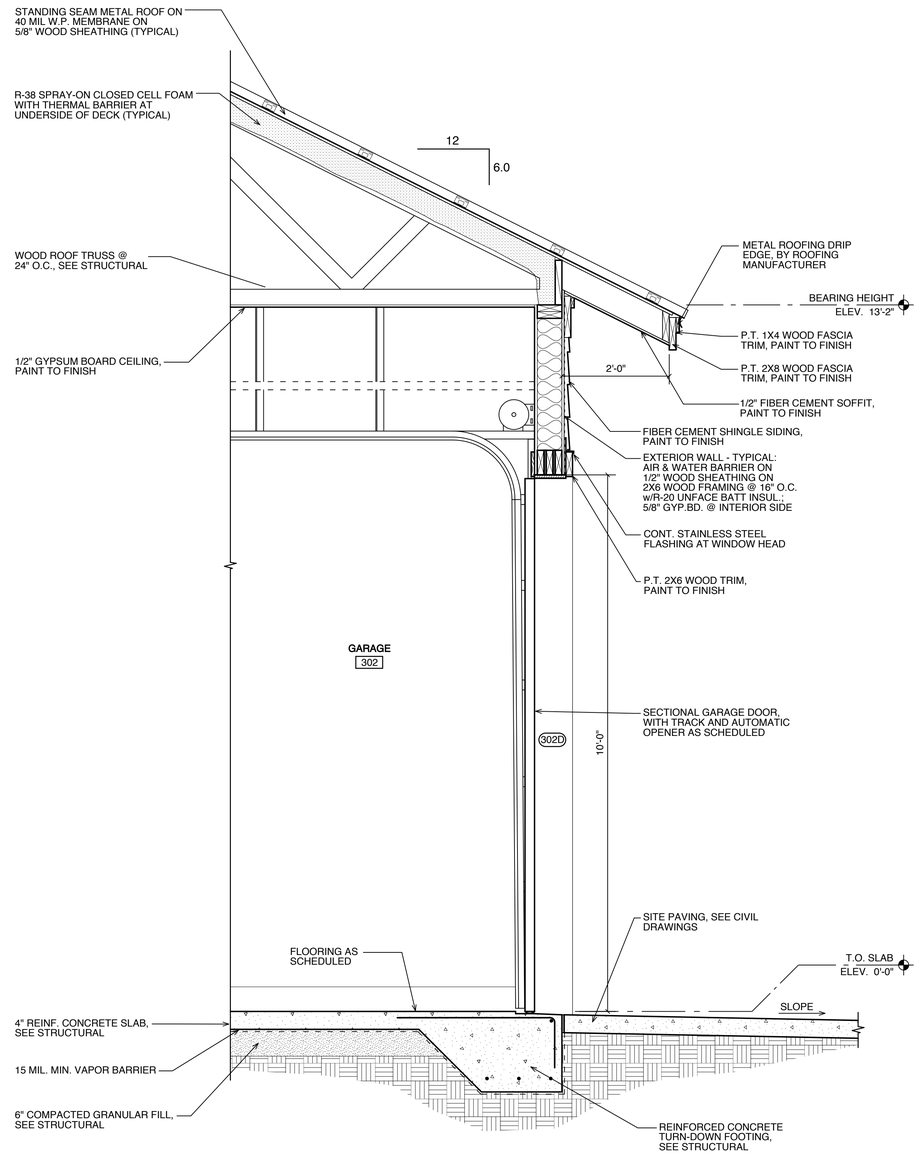
DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A4.2



1 A4.3 **Wall Section @ 3-Bay Garage / Workshop**
scale: 3/4" = 1'-0"



2 A4.3 **Wall Section @ 3-Bay Garage / Workshop**
scale: 3/4" = 1'-0"

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Wall Sections

JOB NUMBER

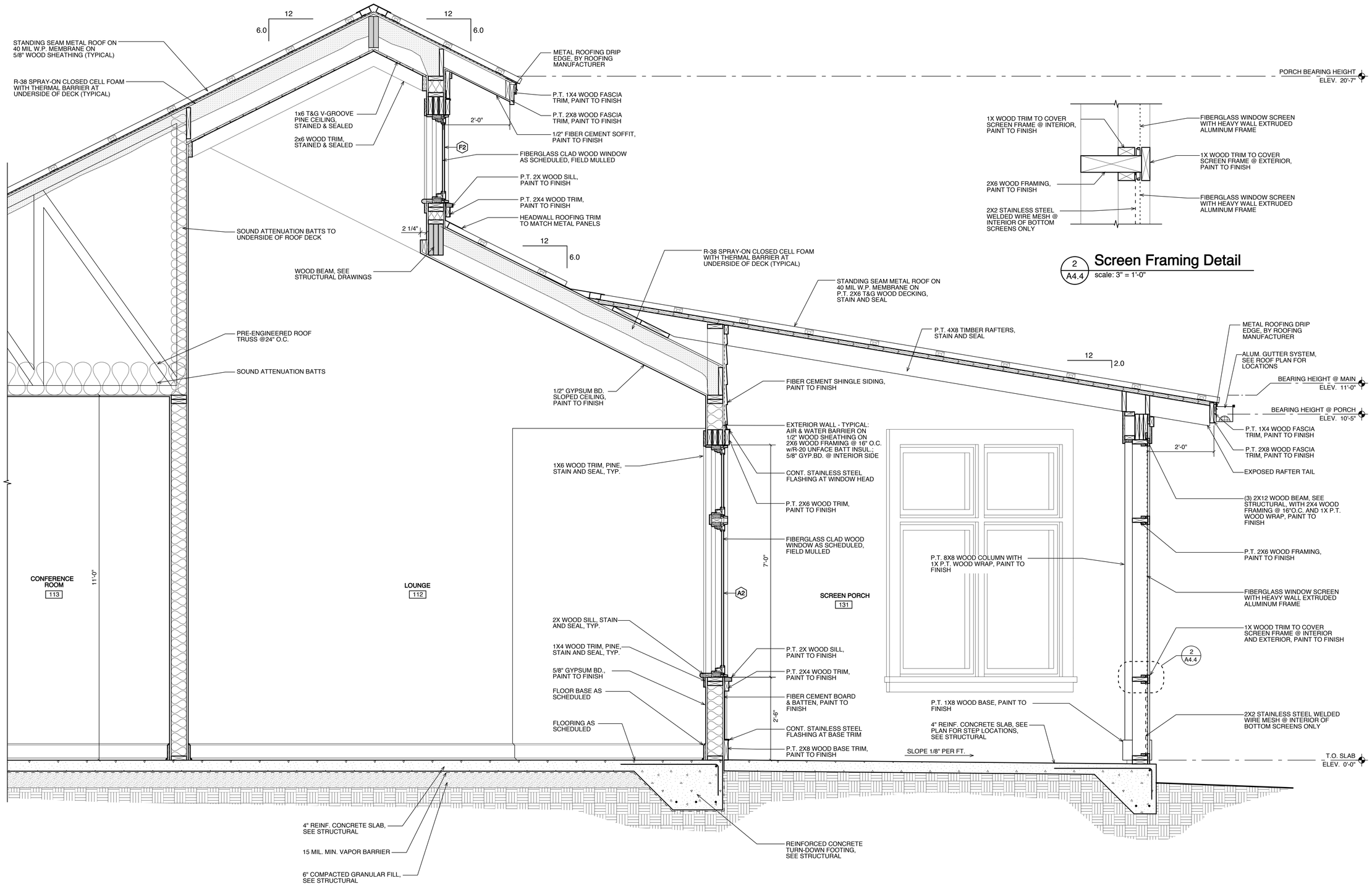
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SHEET NUMBER
A4.3



1 A4.4 **Wall Section @Coastal Resource Center**
scale: 3/4" = 1'-0"

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Wall Sections

JOB NUMBER

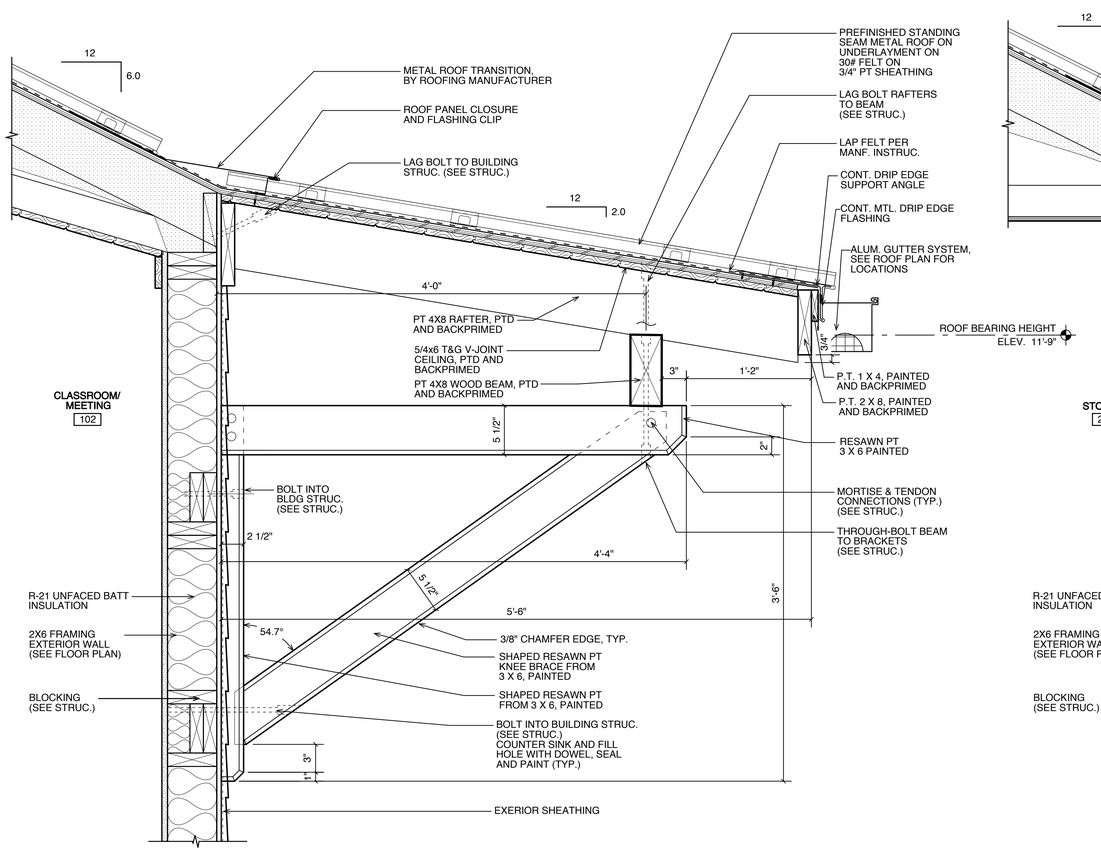
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REVISIONS

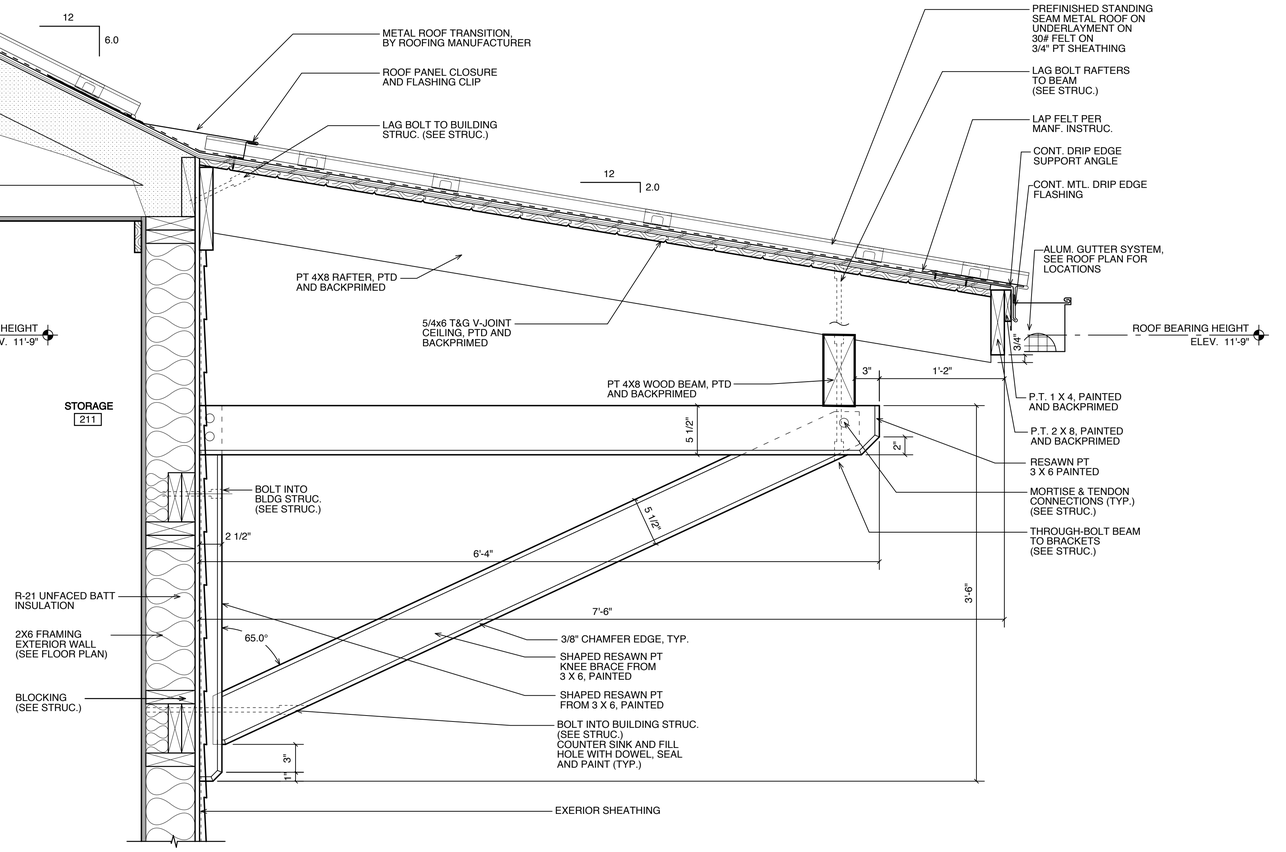
SHEET NUMBER
A4.4



1 A4.5 **Bracket Detail @ CRC Classroom**

scale: 1 1/2" = 1'-0"

NOTE: ALL EXTERIOR PRESSURE TREATED WOOD IS TO BE KILN DRIED, SEE BRACKET DETAIL 3/A4.0.



2 A4.5 **Bracket Detail @ Event Center Kitchen**

scale: 1 1/2" = 1'-0"

NOTE: ALL EXTERIOR PRESSURE TREATED WOOD IS TO BE KILN DRIED, SEE BRACKET DETAIL 3/A4.0.

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Wall Sections

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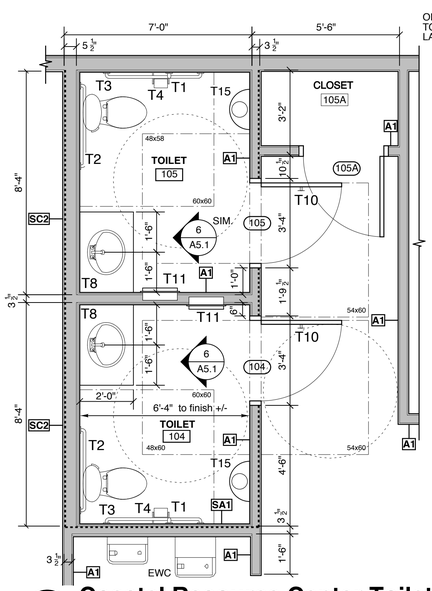
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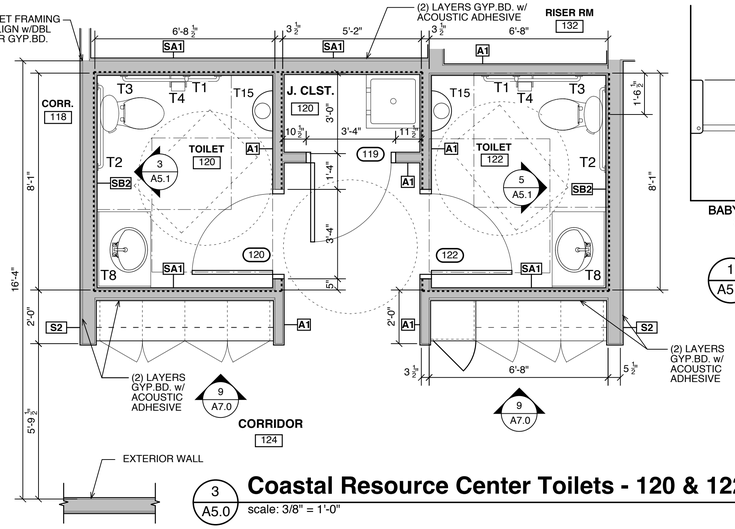
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DATE
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REVISIONS

SHEET NUMBER
A4.5



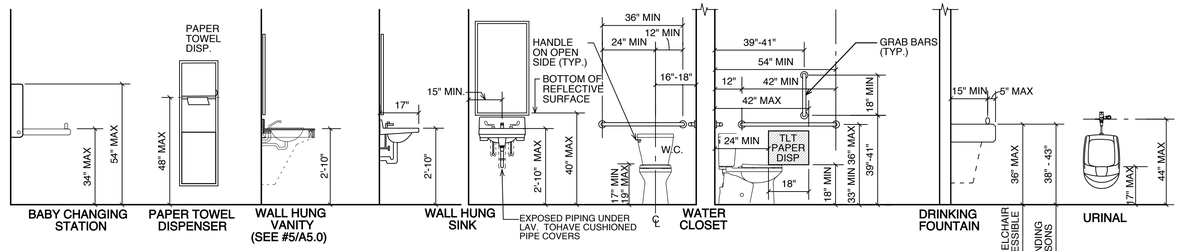


3 A5.0 Coastal Resource Center Toilets - 120 & 122

scale: 3/8" = 1'-0"

4 A5.0 Coastal Resource Center Toilets - 104 & 105

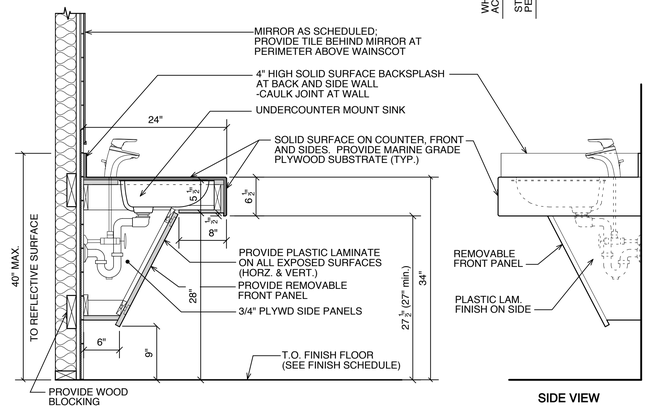
scale: 3/8" = 1'-0"



1 A5.0 ADA Mounting Requirements

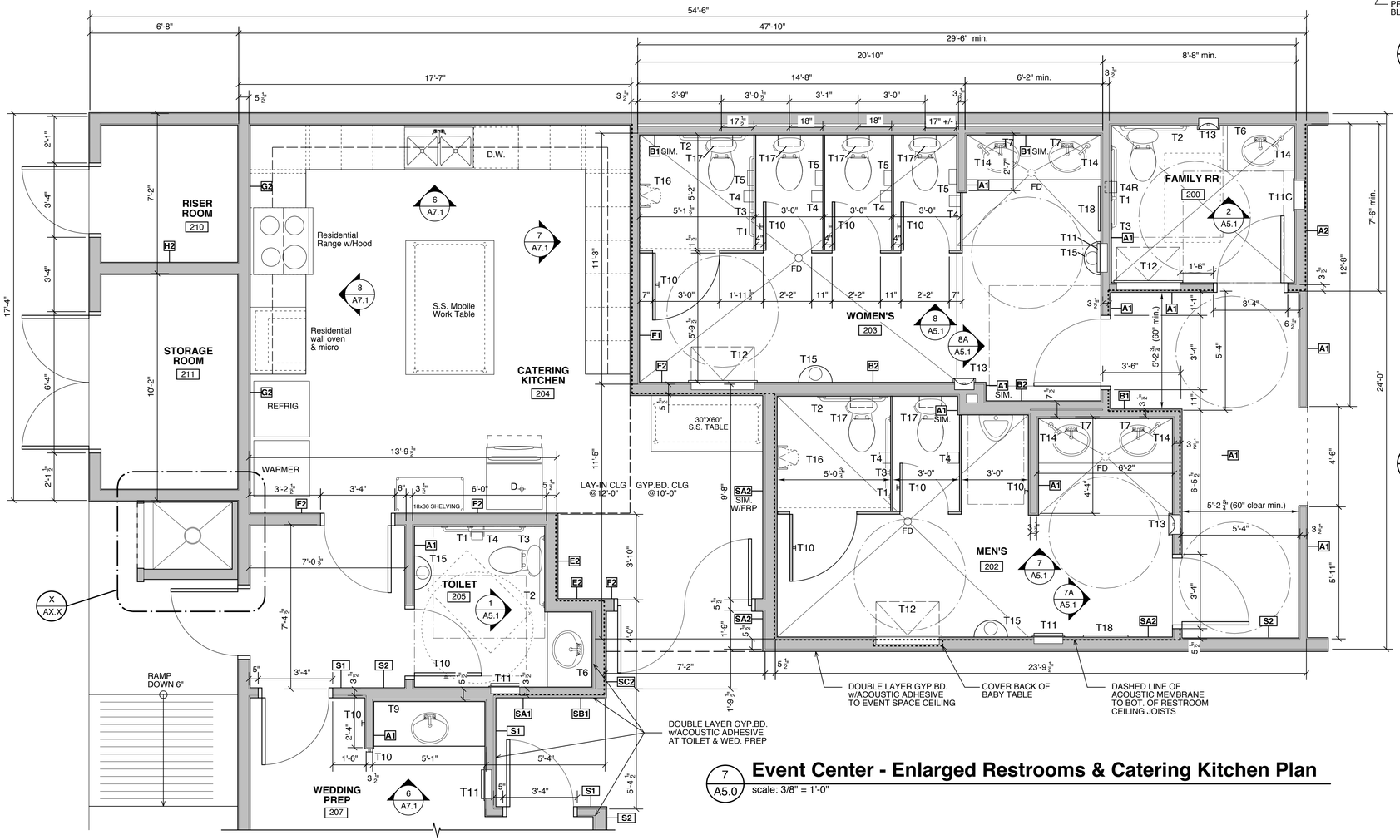
scale: 3/8" = 1'-0"

NOTE: Mounting heights are to operating mechanism where applicable.



2 A5.0 Typical Vanity Section

scale: 1" = 1'-0"



7 A5.0 Event Center - Enlarged Restrooms & Catering Kitchen Plan

scale: 3/8" = 1'-0"

5 A5.0 Workshop Toilet - 301

scale: 3/8" = 1'-0"

TOILET ACCESSORIES		MOUNTING HEIGHT (See #1 / A5.0, Typical)
T1	Vertical Handicapped Grab Bar-18"	40"
T2	Handicapped Grab Bar - 36"	36"
T3	Handicapped Grab Bar - 42"	36"
T4	Toilet Tissue Dispenser- Double Roll	18"
T4R	Toilet Tissue Dispenser- Double Roll, Semi-Recessed	18"
T5	Sanitary Napkin Disposal	
T6	Frame Mirror - See Interior Design Drawings	
T7	Frame Mirror - 2'-6" Wide x 3'-6" High	
T8	Frame Mirror - 3'-0" Wide x 3'-6" High	
T9	Wall Mirror - See Interior Design Drawings	
T10	Coat Hook	
T11	Paper Towel Dispenser, Semi-Recessed	48" / 60"
T11C	Paper Towel Dispenser w/Trash Container, Full Recessed	
T12	Baby Changing Table, Semi-Recessed	
T13	Automatic Hand-Dryer, Semi-Recessed	32" - 46" AFF
T14	Automatic Counter Mounted Soap Dispenser	Counter - Mounted
T15	Trash Container, Half-round S.S. , 12 Gal. capacity	
T16	Toddler Safety Seat, Wall Mounted	T.O. Seat @ 15" AFF
T17	12" L x 6" D S.S. shelf, Wall Mounted	54" STD, 48" @ ADA
T18	Frame Mirror - 2'-0" wide x 6'-0" high	bottom @ 6" AFF

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Enlarged Toilet Plans & Details

JOB NUMBER

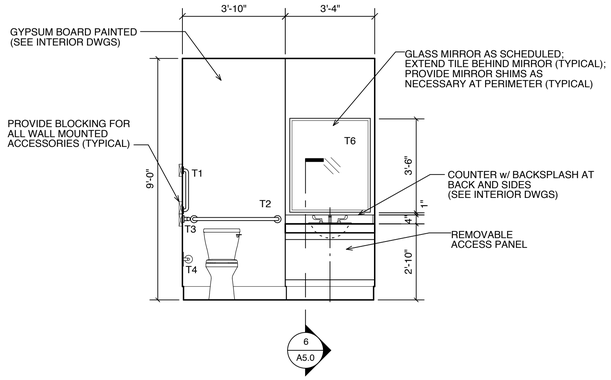
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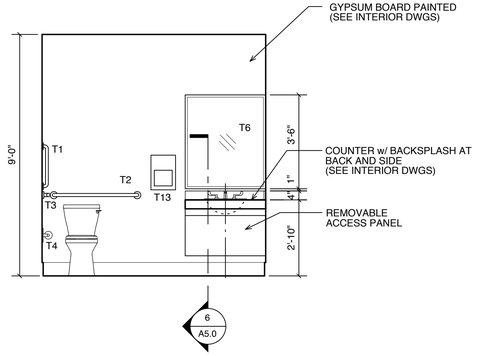
REVISIONS

SHEET NUMBER
A5.0



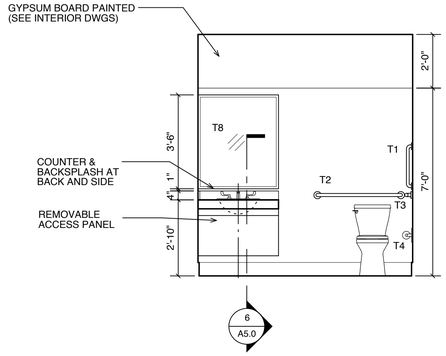
1 A5.1 Toilet Elevation - 205

scale: 3/8" = 1'-0"



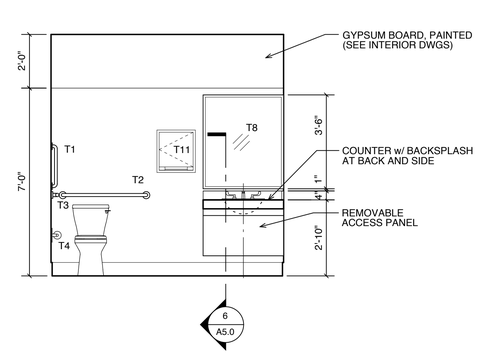
2 A5.1 Toilet Elevation - 200

scale: 3/8" = 1'-0"



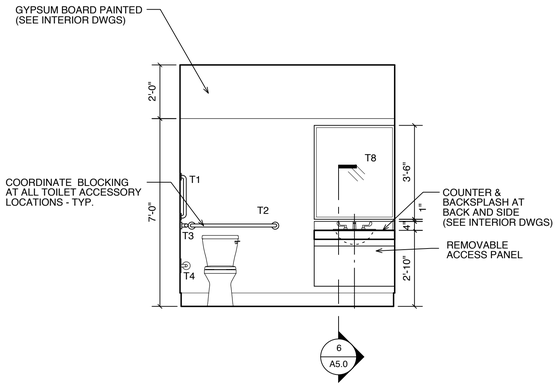
3 A5.1 Toilet Elevation - 120

scale: 3/8" = 1'-0"



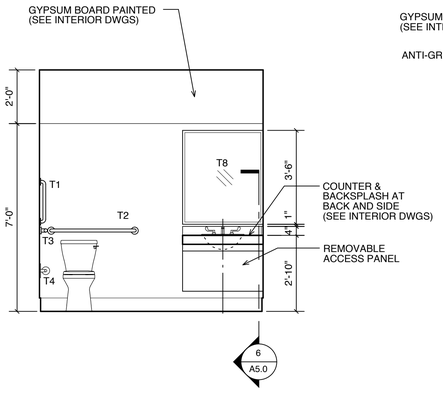
4 A5.1 Toilet Elevation - 301

scale: 3/8" = 1'-0"



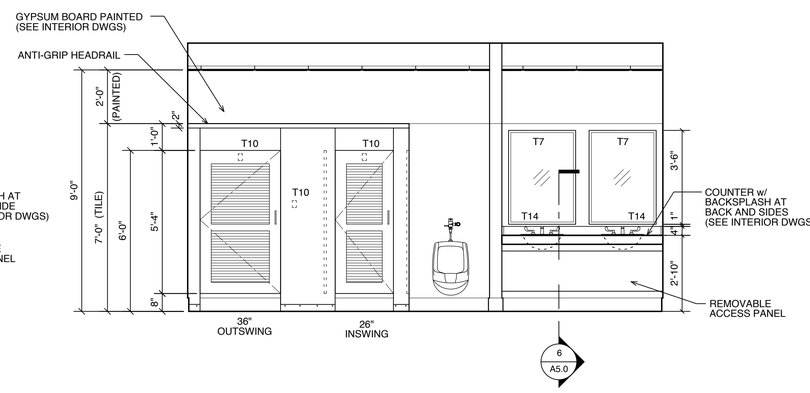
5 A5.1 Toilet Elevation - 122

scale: 3/8" = 1'-0"



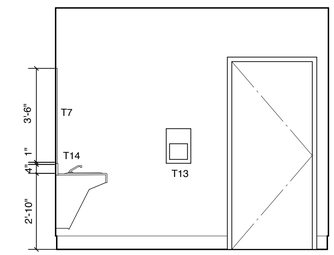
6 A5.1 Toilet Elevation - 104 & 105

scale: 3/8" = 1'-0"



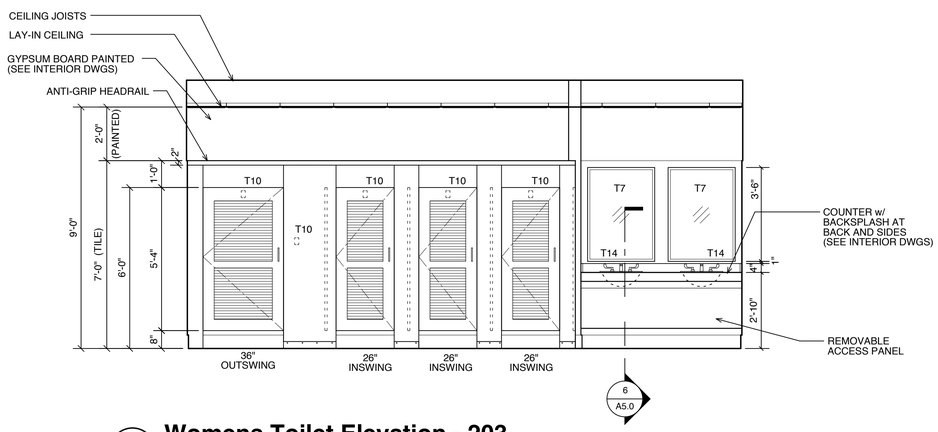
7 A5.1 Mens Toilet Elevation - 202

scale: 3/8" = 1'-0"



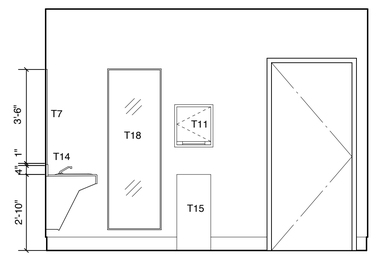
7A A5.1 Mens Toilet Elevation - 202

scale: 3/8" = 1'-0"



8 A5.1 Womens Toilet Elevation - 203

scale: 3/8" = 1'-0"



8A A5.1 Womens Toilet Elevation - 203

scale: 3/8" = 1'-0"

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Ocean, North Carolina

Enlarged Toilet Elevations & Details

JOB NUMBER

DRAWN BY
MG

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A5.1

Finish Schedule - Coastal Resource Center

ROOM #	ROOM NAME	FLOOR	BASE	NORTH WALL MAT/FINISH	EAST WALL MAT/FINISH	SOUTH WALL MAT/FINISH	WEST WALL MAT/FINISH	CEILING MAT/FINISH	REMARKS
100	GIFT SHOP	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	
101	WAITING AREA	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	
102	CLASSROOM/ MEETING	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	T&G WOOD/ STAIN	
103	LIBRARY	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	
104	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT/TILE	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
105	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT/TILE	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
105A	CLOSET	VCT	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
106	STORAGE	VCT	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
107	CORRIDOR	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	
108	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
109	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
110	COPY/MAIL	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
111	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
112	LOUNGE	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD./ PT	T&G WOOD/ STAIN CEILING AT CLERESTORY
113	CONFERENCE ROOM	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD./ PT	48" WAINSCOTING ON ALL WALLS
114	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
115	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
116	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
117	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
118	CORRIDOR	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD./ PT	
119	STORAGE	VCT	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
120	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT/TILE	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
121	FOYER	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	
122	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT/TILE	GYP. BD/ PT	GYP. BD/ PT	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
123	PHONE/MEETING	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
124	CORRIDOR	LVT	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD./ PT	
125	KITCHEN	LVT	WOOD	GYP. BD/ FRP	GYP. BD/ FRP	GYP. BD/ FRP	GYP. BD/ FRP	EGAP	
126	ELECTRICAL ROOM	VCT	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
127	PRODUCTION	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
128	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
129	OFFICE	CARPET TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
130	OFFICE	CARPET TILE	WOOD	GYP. BD/ FRP	GYP. BD/ FRP	GYP. BD/ FRP	GYP. BD/ FRP	EGAP	
131	SCREEN PORCH	CONCRETE	N/A	N/A	N/A	N/A	N/A	T&G WOOD/ STAIN	
132	RISER ROOM	CONCRETE	WOOD	EXT. PLYWD./ PT	EXT. PLYWD/ PT	EXT. PLYWD./ PT	EXT. PLYWD./ PT	EXT. PLYWD./PT	

Finish Schedule - Event Center

ROOM #	ROOM NAME	FLOOR	BASE	NORTH WALL MAT/FINISH	EAST WALL MAT/FINISH	SOUTH WALL MAT/FINISH	WEST WALL MAT/FINISH	CEILING MAT/FINISH	REMARKS
200	FAMILY RR	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT/TILE	GYP. BD/ PT	GYP. BD/ PT	EGAP	WALL TILE TO CEILING, EXTEND TILE UP AND AROUND MIRRORS
201	LOBBY	CERAMIC TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	30" WAINSCOTING ON ALL WALLS
202	MEN'S TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT/TILE	GYP. BD/ PT	GYP. BD/ PT	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
203	WOMEN'S TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT/TILE	GYP. BD/ PT	GYP. BD/ PT	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
204	CATERING KITCHEN	CERAMIC TILE	TILE	GYP. BD/FRP	GYP. BD/ FRP	GYP. BD/ FRP	GYP. BD/ FRP	EGAP	FRP FULLY ADHERED TO UNDERSIDE OF CEILING
205	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT/TILE	GYP. BD/ PT	EGAP	WALL TILE TO CEILING, EXTEND TILE UP AND AROUND MIRRORS
206	KITCHEN ENTRANCE	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
207	WEDDING PREP	CARPET TILE	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
208	BANQUET HALL	CARPET TILE	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	T&G WOOD/ STAIN	T&G WOOD/ STAIN @ DORMERS, 30" WAINSCOTING ON ALL WALLS
209	STORAGE	VCT	RUBBER	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	
210	RISER ROOM	CONCRETE	WOOD	EXT. PLYWD./ PT	EXT. PLYWD/ PT	EXT. PLYWD./ PT	EXT. PLYWD./ PT	EXT. PLYWD./PT	
211	STORAGE	CONCRETE	WOOD	EXT. PLYWD./ PT	EXT. PLYWD/ PT	EXT. PLYWD./ PT	EXT. PLYWD./ PT	EXT. PLYWD./PT	
212	COVERED PORCH	CONCRETE	N/A	N/A	N/A	N/A	N/A	T&G WOOD/ STAIN	
213	CORRIDOR	CERAMIC TILE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	30" WAINSCOTING ON ALL WALLS

Finish Schedule - 3-Bay Garage

ROOM #	ROOM NAME	FLOOR	BASE	NORTH WALL MAT/FINISH	EAST WALL MAT/FINISH	SOUTH WALL MAT/FINISH	WEST WALL MAT/FINISH	CEILING MAT/FINISH	REMARKS
300	OFFICE	CONCRETE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	EGAP	PROVIDE CONCRETE DENSIFIER
301	TOILET	CERAMIC TILE	TILE	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT/TILE	EGAP	WALL TILE TO 84" AFF, EXTEND TILE UP AND AROUND MIRRORS
302	GARAGE/ WORKSHOP	CONCRETE	WOOD	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP. BD/ PT	GYP.BD/ PT	PROVIDE CONCRETE DENSIFIER

NOTE: SEE INTERIOR DESIGN DRAWINGS FOR INTERIOR FINISHES.

1 / A6.0 **Finish Schedules**
Not to Scale

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The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

Finish Schedule and Details

JOB NUMBER

DRAWN BY
Hemingway

CHECKED BY
Hemingway

DATE
June 12, 2023

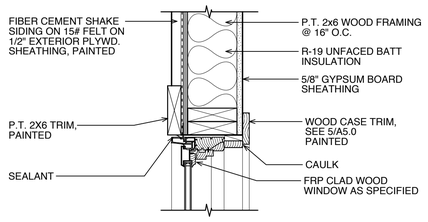
REVISIONS

SHEET NUMBER
A6.0

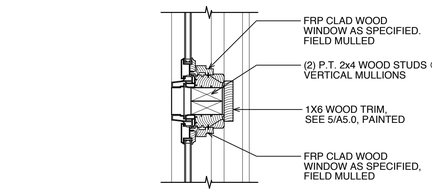
Window Specification:

"ELEVATE" SERIES BY MARVIN
TYPE: FIXED CASEMENT & OPERABLE AWNINGS
FINISH:
EXTERIOR - FACTORY BAKED ON ACRYLIC URETHANE; COLOR "EBONY"
INTERIOR - BARE-TREATED PINE (SEE INTERIOR DWGS FOR FIELD FINISH)
HARDWARE:
HANDLE AND LOCKING HARDWARE - COLOR "SATIN NICKEL"
WEATHERSTRIPPING - COLOR "BLACK"
JAMB EXTENSIONS:
OPTIONAL JAMB EXTENSION; WIDTH AS NEEDED, SHIPPED LOOSE
FINISH - UNFINISHED PINE
INSECT SCREEN:
FACTORY INSTALLED; 18 X 16 CHARCOAL FIBERGLASS
ALUMINUM FRAME; COLOR TO BE DETERMINED BY ARCHITECT
GLAZING:
CLEAR INSULATING GLASS
TYPE - Low E3, ARGON

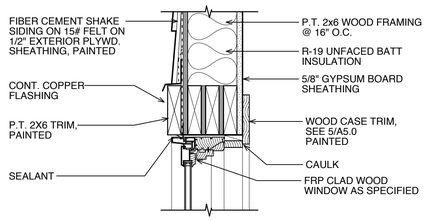
REQUIRED WIND PRESSURE RESISTANCE: SEE COMPONENTS & CLADDING TABLE ON SHEET S1.01



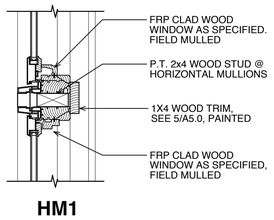
WJ1



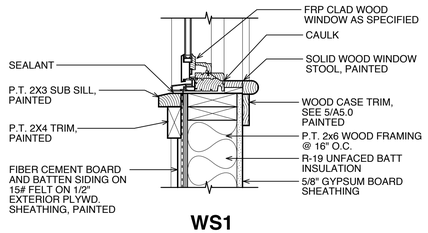
VM1



WH1



HM1

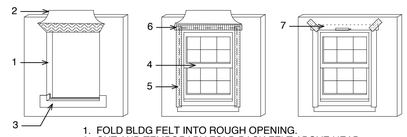


WS1

FRP CLAD WINDOW @ EXTERIOR

1 A6.1 Window Details

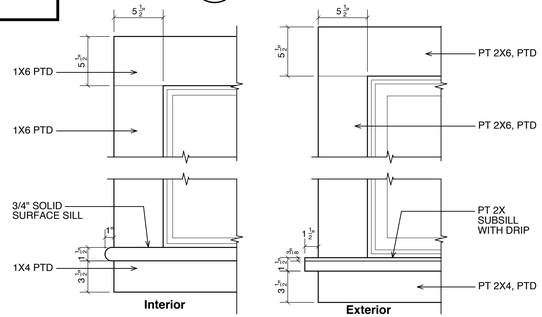
scale: 1-1/2" = 1'-0"



1. FOLD BLDG FELT INTO ROUGH OPENING.
2. CUT AND TEMPORARY FOLD BACK FELT ABOVE HEAD.
3. INSTALL SILL FLASHING PER MANUF. INSTRUCTIONS.
4. INSTALL WINDOW PER MANUF. INSTRUCTIONS.
5. INSTALL JAMB FLASHING, LAP OVER SILL FLASHING.
6. INSTALL HEAD FLASHING. LAP OVER JAMB FLASHING.
7. FOLD DOWN BLDG FELT OVER HEAD FLASHING, TAPE SEAMS.
8. COPPER FLASHING AS PER SPECIFICATIONS.

2 A6.1 Typical Flashing Diagram

Not to Scale



Window Schedule

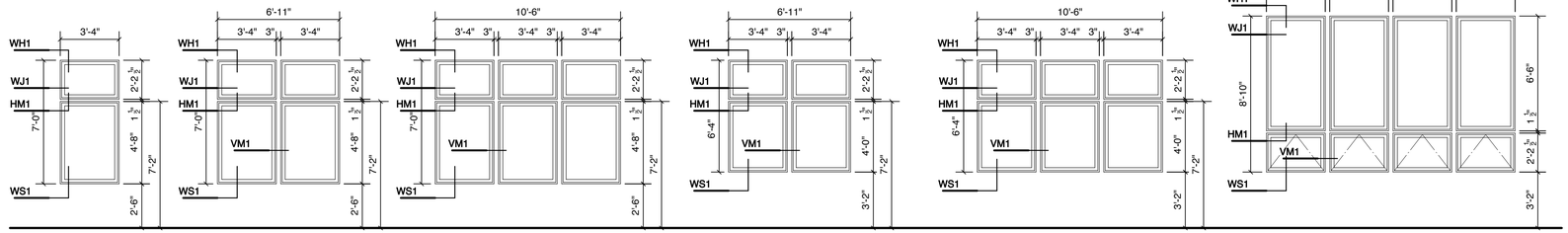
SYM.	SIZE: WxH	TYPE	HEAD/JAMB/SILL DETAILS	MATERIAL	GLAZING	EXT. FINISH	INT. FINISH	NOTES
Coastal Resource Center, Event Center, Garage								
A1	3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
A2	(2) 3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
A3	(3) 3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
B2	(2) 3'-4" X 6'-4"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
B3	(3) 3'-4" X 6'-4"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
C	(4) 3'-4" X 8'-10"	FXD OVER AWNING	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
D1	3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
D2	(2) 3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
D3	(3) 3'-4" X 7'-0"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
E1	SEE ELEVATION	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
E2	(4) 3'-4" X 6'-7"±	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	SEE ELEVATION, WINDOWS INSTALLED AT ANGLE
F1	(2) 2'-6" X 2'-8"	FXD	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
F2	(3) 2'-6" X 2'-8"	FXD	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
G	3'-4" X 2'-2 1/2"	FXD	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	TRANSOM ABOVE DOOR
H	(2) 2'-10" X 2'-10"	FXD	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
I	1'-10" X 3'-4"	FXD	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	OBSCURE GLASS
J	(2) 2'-10" X 3'-4"	AWNING	WS1/WJ1/WH1 - VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
K1	2'-4" X 6'-4"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
K2	(2) 2'-4" X 6'-4"	FXD OVER FXD	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	
L	2'-6" X 2'-6"	AWNING	WS1/WJ1/WH1 - HM1/VM1	CLAD/WOOD	I/E/P/T	FRP CLAD	WOOD, PTD	

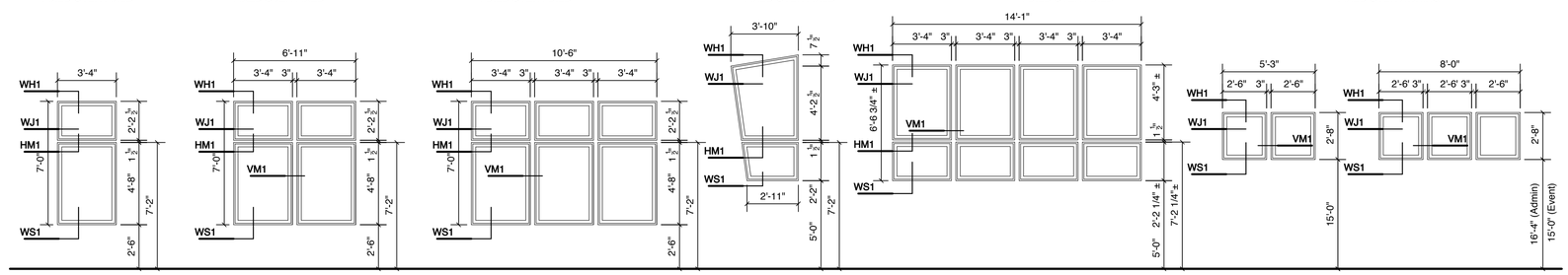
Window Notes:
1. ALL WINDOWS SHALL BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS PROVIDED WITH EACH WINDOW.
2. ROUGH OPENINGS SHALL HAVE FLASHING AT HEAD, JAMB, AND SILL. FLASHING SHALL BE INSTALLED PER FLASHING MANUFACTURER'S INSTRUCTIONS.
3. SILL FLASHING SHALL BE PREMOLDED, SELF ADHERING WITH 3/8" HIGH BACKDAM. HEAD AND JAMB FLASHING SHALL BE STRAIGHT AND SELF ADHERING.
4. SHIMS AND ANCHORING CLIPS ARE NOT SHOWN IN DETAILS FOR CLARITY BUT SHALL BE PROVIDED AS PER WINDOW MANUFACTURER'S INSTRUCTIONS.
5. ANCHORING CLIPS SHALL BE STAINLESS STEEL AND SHALL BE INSTALLED WITH STAINLESS STEEL FASTENERS, ADJUST ROUGH OPENING AS NECESSARY.
6. ALL GLAZING SHALL BE TEMPERED AND HURRICANE IMPACT RESISTANT.
7. ALL GLAZING WITHIN 24" OF A DOOR SHALL BE TEMPERED.
8. ALL WINDOWS OPENINGS TO BE FIELD MEASURED PRIOR TO ORDERING.

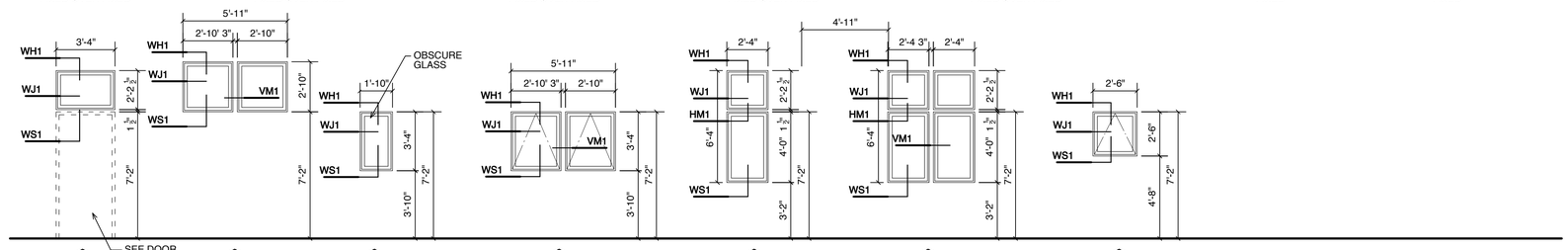
Legend
I = INSULATED
E = LOW-E
P = IMPACT RESISTANT
T=TEMPERED
F=FIRE RATED

2 A6.1 Window Elevation w/Sill

scale: 1-1/2" = 1'-0"







1 A6.1 Window Elevations

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

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The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

Window Schedule, Elevations and Details

JOB NUMBER

DRAWN BY
Hemingway

CHECKED BY
Hemingway

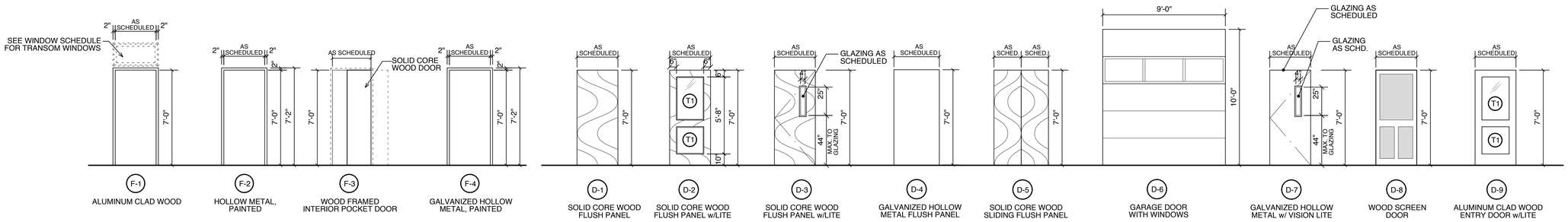
DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A6.1

Door Schedule

	No.	DOOR SIZE: WxHxT	DOOR TYPE	DOOR ELEV.	FRAME ELEV.	DOOR FINISH	FRAME TYPE / FINISH	HEAD/JAMB/SILL DETAILS	HARDWARE SET No.	RATING	GLAZING	NOTES
Coastal Resource Center	101	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	102A	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	11	N/A	N/A	
	102B	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	104	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	08	N/A	N/A	
	105	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	08	N/A	N/A	
	105A	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	106	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	10	N/A	N/A	
	108	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	109	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	111A	3'-0" X 7'-0" - POCKET	SCW	D-1	F-3	STAIN	HM	DS2/DJ2/DH2	18	N/A	N/A	INTERIOR POCKET DOOR
	111B	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	112	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	113A	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	09	N/A	N/A	
	113B	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	09	N/A	N/A	
	114	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	115	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	116	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	116A	(2)2'-6" X 7'-0" - SLIDING	SCW	D-5	F-2	STAIN	HM	DS2/DJ2/DH2	21	N/A	N/A	SLIDING CLOSET DOOR
	117	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	117A	(2)2'-6" X 7'-0" - SLIDING	SCW	D-5	F-2	STAIN	HM	DS2/DJ2/DH2	21	N/A	N/A	SLIDING CLOSET DOOR
	119	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	120	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	07	N/A	N/A	
	121	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	122	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	08	N/A	N/A	
	123	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	08	N/A	N/A	
	124	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	126	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	12	N/A	N/A	
	128	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	129	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	129A	(2)2'-6" X 7'-0" - SLIDING	SCW	D-5	F-2	STAIN	HM	DS2/DJ2/DH2	21	N/A	N/A	SLIDING CLOSET DOOR
	130	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	131A	3'-0" X 7'-0"	WD/SCREEN	D-8	--	STAIN	WOOD	DS4/DJ4/DH4	20	N/A	N/A	PRESSURE TREATED WOOD, SEE SPECIFICATIONS
	131B	3'-0" X 7'-0"	WD/SCREEN	D-8	--	STAIN	WOOD	DS4/DJ4/DH4	20	N/A	N/A	PRESSURE TREATED WOOD, SEE SPECIFICATIONS
	132	3'-0" X 7'-0"	HM - GALV.	D-4	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	03	N/A	N/A	
Event Center	200	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	08	N/A	N/A	
	201A	(2) 3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	05	N/A	I/E/P/T	WITH TRANSOM ABOVE
	201B	(2) 3'-0" X 7'-0"	SCW	D-2	F-2	STAIN	HM	DS2/DJ2/DH2	16	N/A	I/E/P/T	
	202	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	13	N/A	N/A	
	203	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	13	N/A	N/A	
	204	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	15	N/A	N/A	
	205	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	07	N/A	N/A	
	206A	3'-0" X 7'-0"	HM - GALV.	D-7	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	02	N/A	I/E/P/T	
	206B	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	17	N/A	N/A	
	207A	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	13	N/A	N/A	
	207B	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	13	N/A	N/A	
	208A	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	208B	3'-0" X 7'-0"	ALUM. CLAD	D-9	F-1	FACTORY	ALUM. CLAD	DS3/DJ3/DH3	01	N/A	I/E/P/T	WITH TRANSOM ABOVE
	209	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	14	N/A	N/A	
	210	3'-0" X 7'-0"	HM - GALV.	D-4	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	03	N/A	N/A	
	211	(2)3'-0" X 7'-0"	HM - GALV.	D-4	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	19	N/A	N/A	
Garage	300	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	06	N/A	N/A	
	301	3'-0" X 7'-0"	SCW	D-1	F-2	STAIN	HM	DS2/DJ2/DH2	07	N/A	N/A	
	302A	3'-0" X 7'-0"	HM - GALV.	D-7	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	04	N/A	I/E/P/T	
	302B	3'-0" X 7'-0"	HM - GALV.	D-7	F-4	FACTORY	HM - GALV.	DS1/DJ1/DH1	04	N/A	I/E/P/T	
	302C	9'-0" X 10'-0"	ALUM.	D-6	--	FACTORY	ALUM.	DS5/DJ5/DH5	BY MANUF.	N/A	I/E/P/T	GARAGE DOOR WITH OPENER
	302D	9'-0" X 10'-0"	ALUM.	D-6	--	FACTORY	ALUM.	DS5/DJ5/DH5	BY MANUF.	N/A	I/E/P/T	GARAGE DOOR WITH OPENER
	302E	9'-0" X 10'-0"	ALUM.	D-6	--	FACTORY	ALUM.	DS5/DJ5/DH5	BY MANUF.	N/A	I/E/P/T	GARAGE DOOR WITH OPENER



2 / A6.2 **Frame Elevations**
scale: 1/4" = 1'-0"

1 / A6.2 **Door Elevations**
scale: 1/4" = 1'-0"

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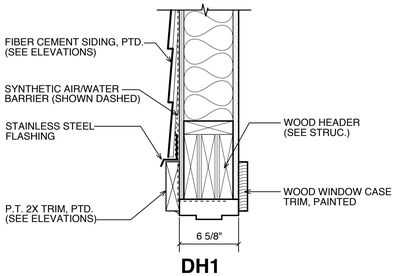
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Door Schedule and Elevations

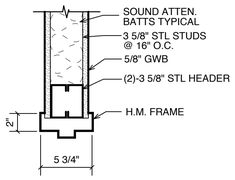
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DRAWN BY
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CHECKED BY
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DATE
June 12, 2023
REVISIONS

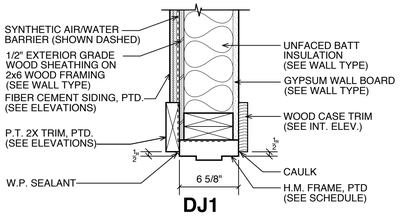
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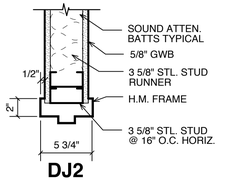
DH1



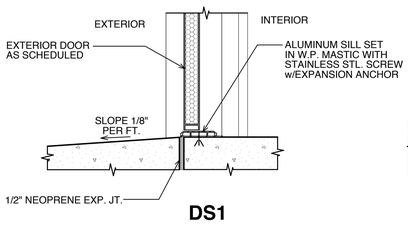
DH2



DJ1

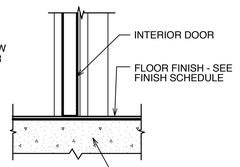


DJ2



DS1

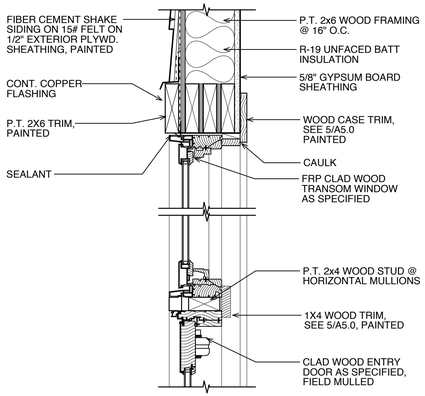
HOLLOW METAL DOOR @ EXTERIOR



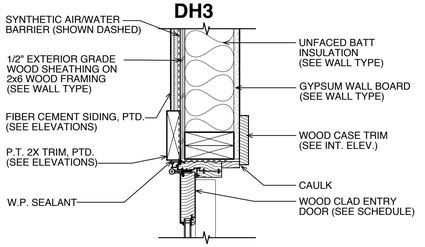
DS2

SCW DOOR @ INTERIOR

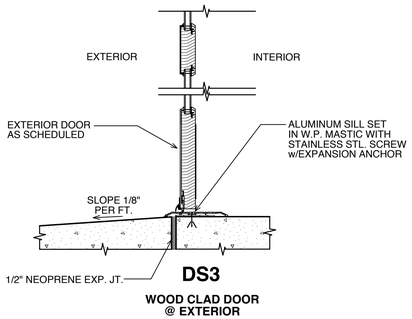
SEE PLAN FOR WALL TYPE CONSTRUCTION



DH3

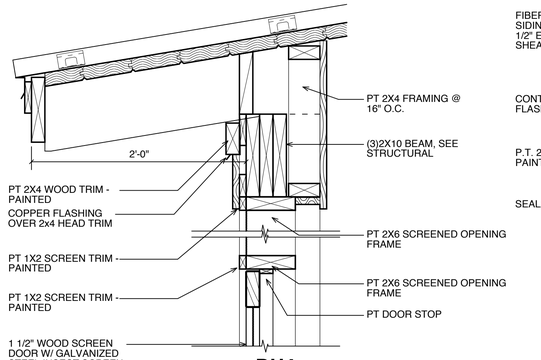


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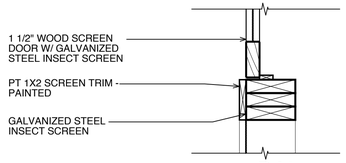


DS3

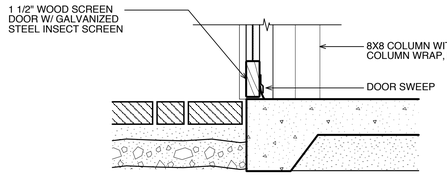
WOOD CLAD DOOR @ EXTERIOR



DH4

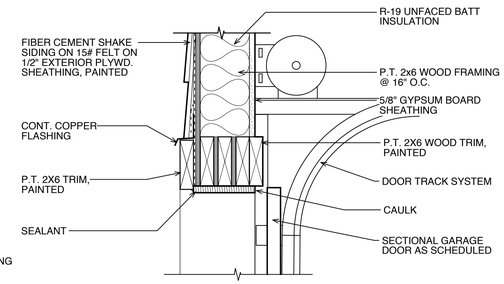


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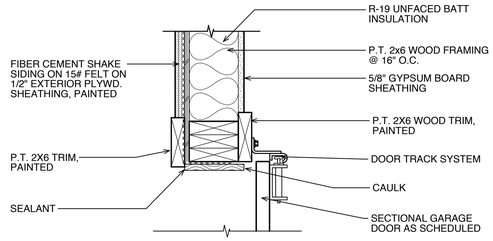


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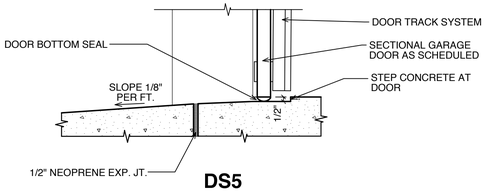
WOOD SCREEN DOOR @ EXTERIOR



DH5



DJ5



DS5

SECTIONAL GARAGE DOOR @ EXTERIOR

1 / A6.3 **Door Details**

scale: 1-1/2" = 1'-0"

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Ocean, North Carolina

Door Details

JOB NUMBER

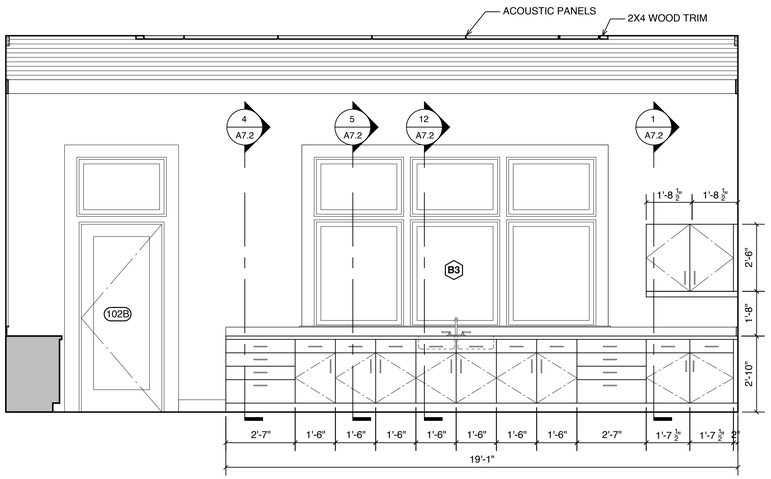
DRAWN BY
Hemingway

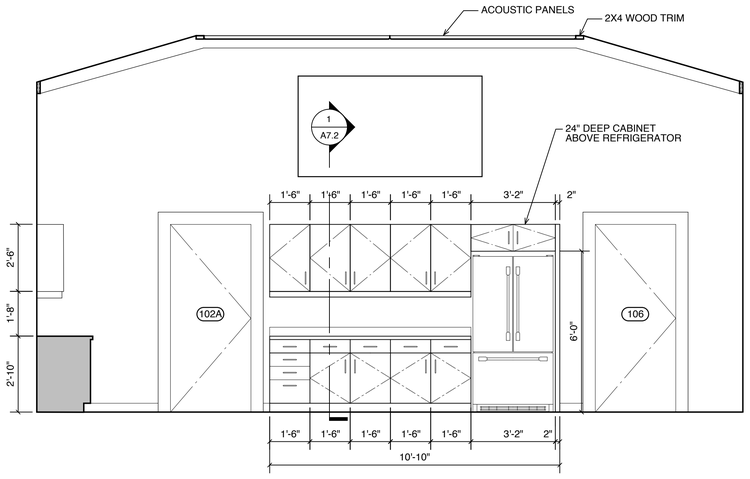
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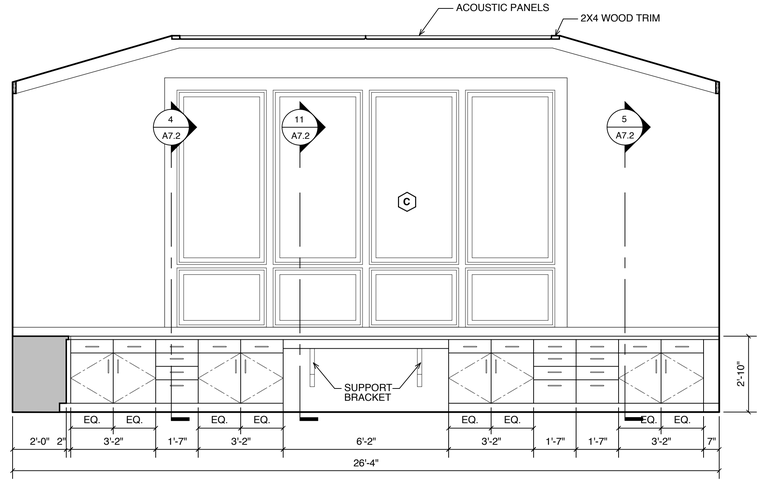
DATE
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REVISIONS

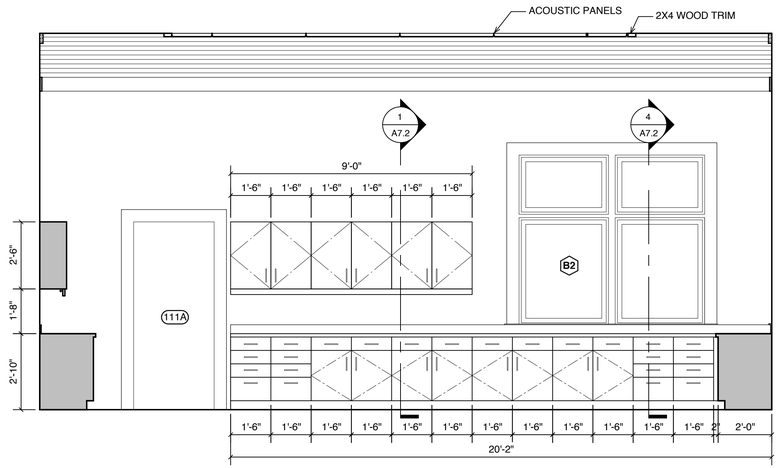
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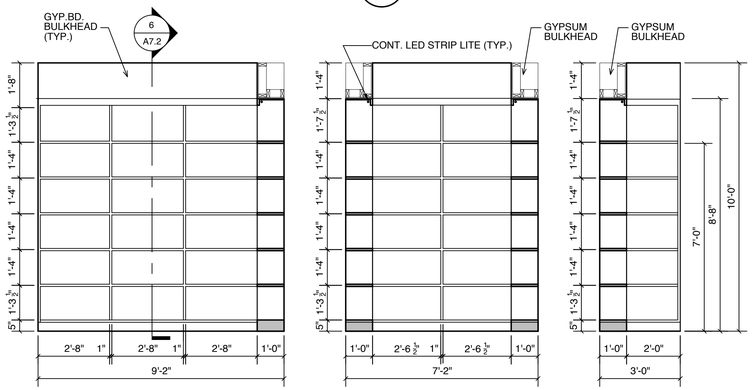


1 A7.0 CRC Classroom Millwork
scale: 3/8" = 1'-0"

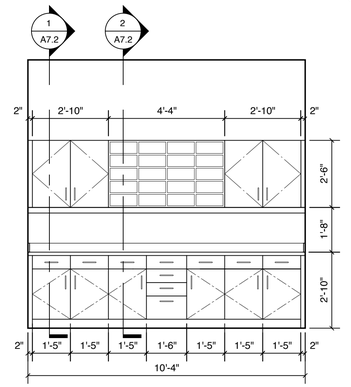


4 A7.0 CRC Classroom Millwork
scale: 3/8" = 1'-0"

2 A7.0 CRC Classroom Millwork
scale: 3/8" = 1'-0"

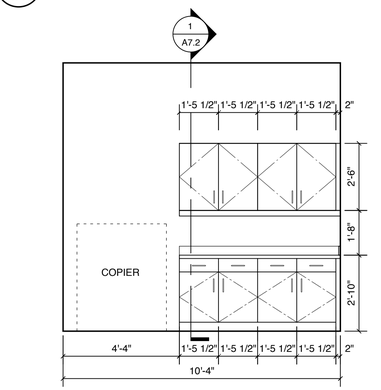


5 A7.0 CRC Library Millwork
scale: 3/8" = 1'-0"

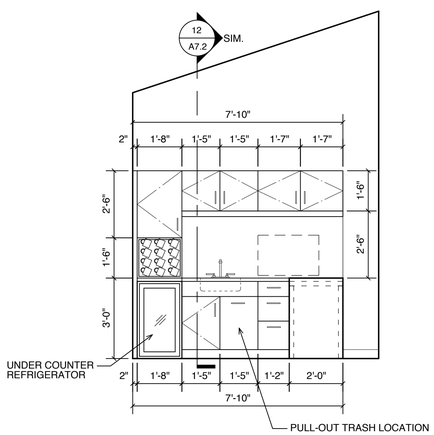


6 A7.0 CRC Copy/Mail Millwork
scale: 3/8" = 1'-0"

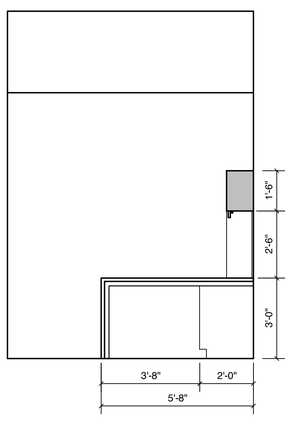
3 A7.0 CRC Classroom Millwork
scale: 3/8" = 1'-0"

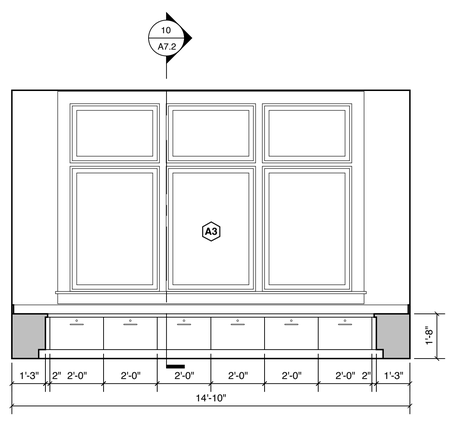


7 A7.0 CRC Copy/Mail Millwork
scale: 3/8" = 1'-0"



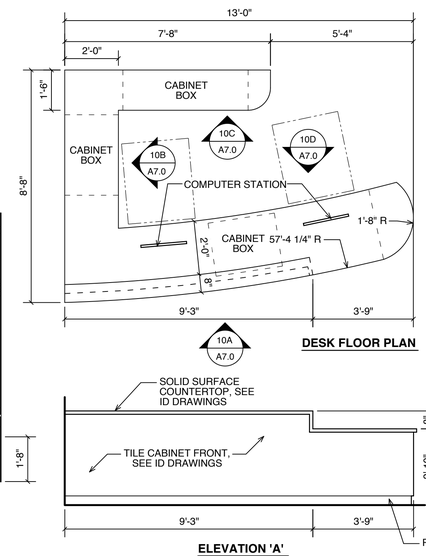
8 A7.0 CRC Coffee Cafe Millwork
scale: 3/8" = 1'-0"

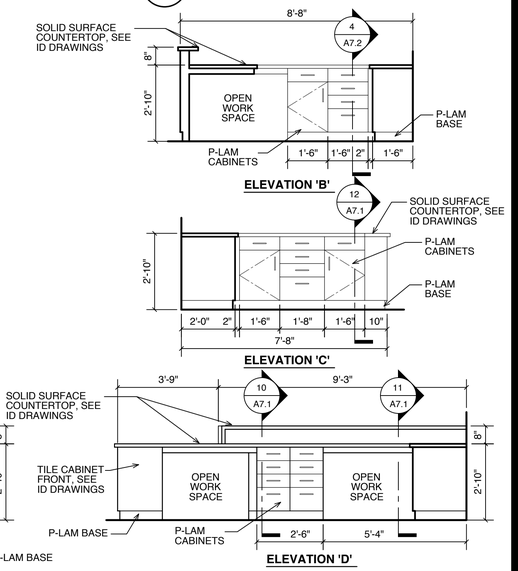






9 A7.0 CRC Gift Shop Storage Millwork
scale: 3/8" = 1'-0"





10 A7.0 CRC Front Desk
scale: 3/8" = 1'-0"

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Ocean, North Carolina

Millwork Details

JOB NUMBER

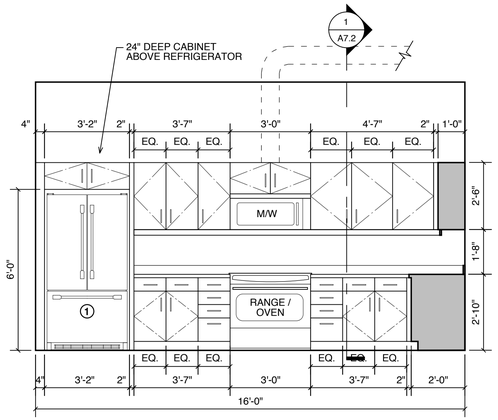
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CHECKED BY
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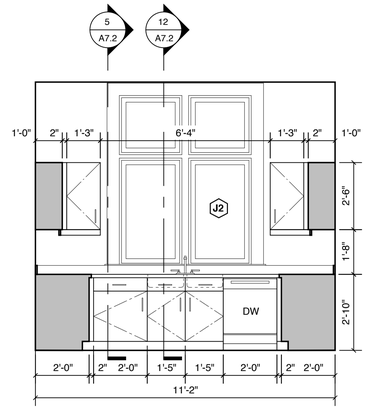
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SHEET NUMBER
A7.0



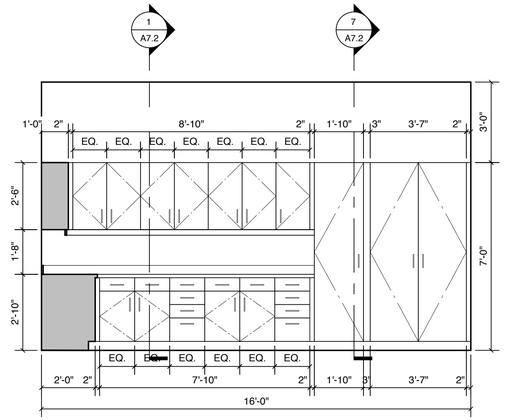
1 A7.1 CRC Kitchen Millwork

scale: 3/8" = 1'-0"



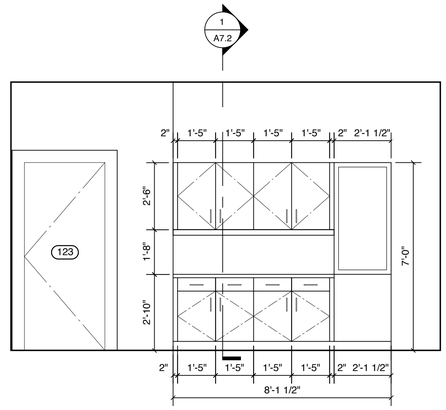
2 A7.1 CRC Kitchen Millwork

scale: 3/8" = 1'-0"



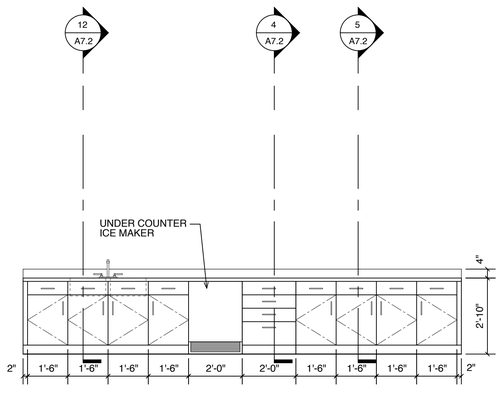
3 A7.1 CRC Kitchen Millwork

scale: 3/8" = 1'-0"



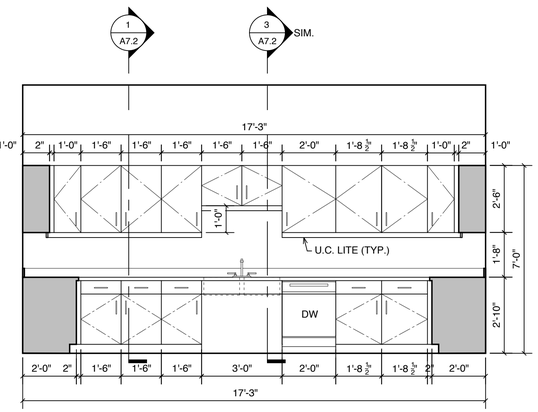
4 A7.1 CRC Foyer 121 Millwork

scale: 3/8" = 1'-0"



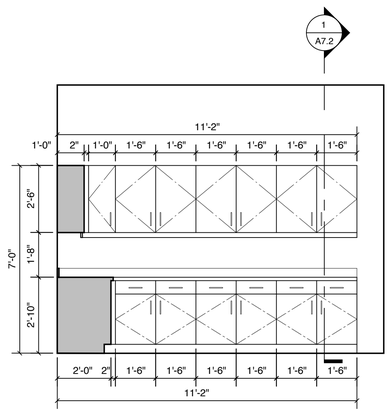
5 A7.1 Event Center Bar Millwork

scale: 3/8" = 1'-0"



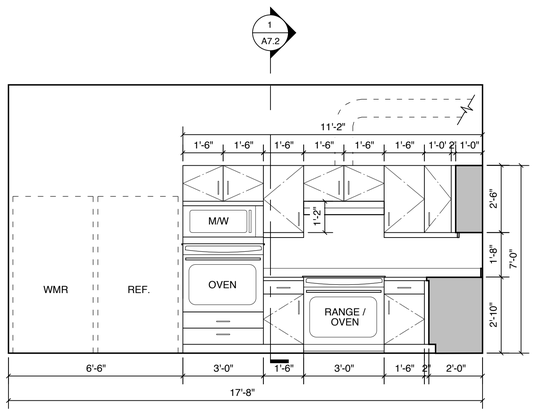
6 A7.1 Event Center Kitchen Millwork

scale: 3/8" = 1'-0"



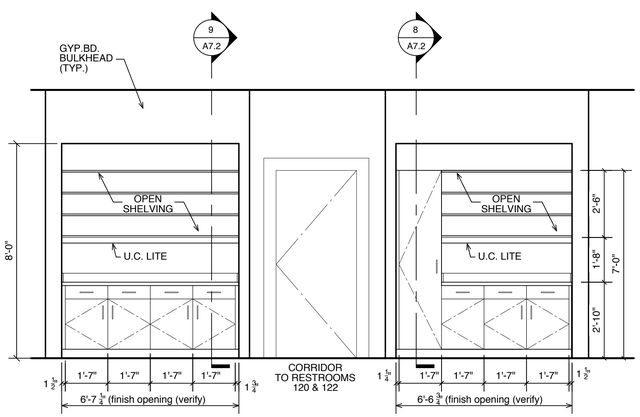
7 A7.1 Event Center Kitchen Millwork

scale: 3/8" = 1'-0"



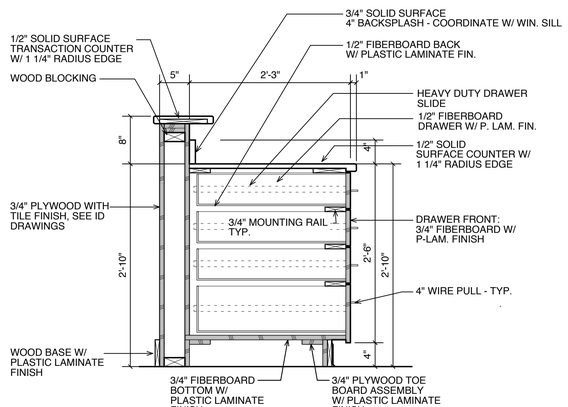
8 A7.1 Event Center Kitchen Millwork

scale: 3/8" = 1'-0"



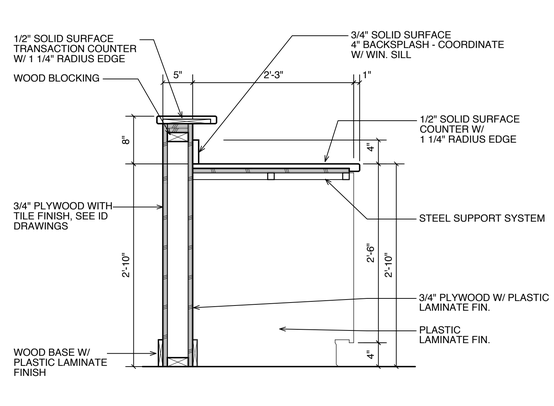
9 A7.0 CRC Toilet Room Millwork

scale: 3/8" = 1'-0"



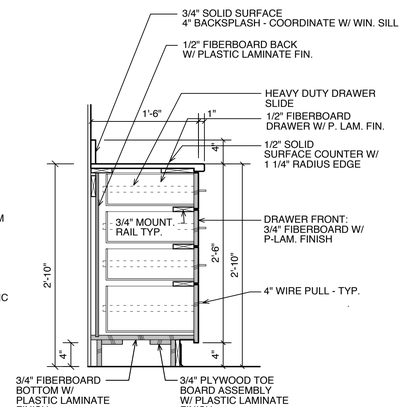
10 A7.1 Millwork Section

scale: 1" = 1'-0"



11 A7.1 Millwork Section

scale: 1" = 1'-0"



12 A7.1 Millwork Section

scale: 1" = 1'-0"

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Ocean, North Carolina

Millwork Details

JOB NUMBER

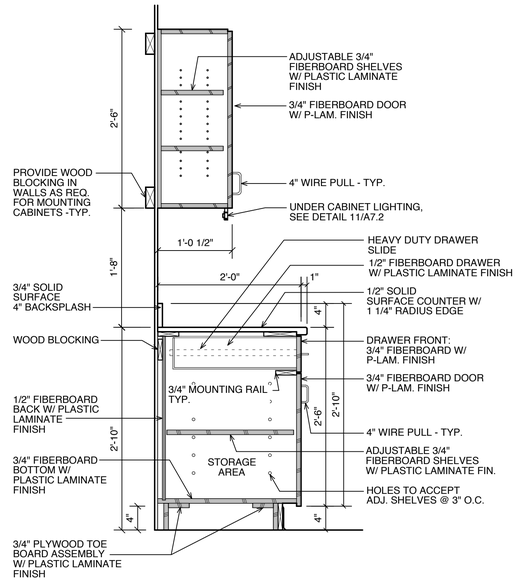
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Hemingway

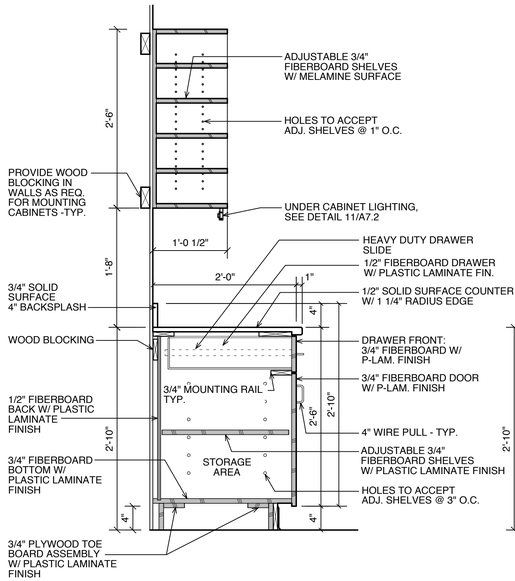
DATE
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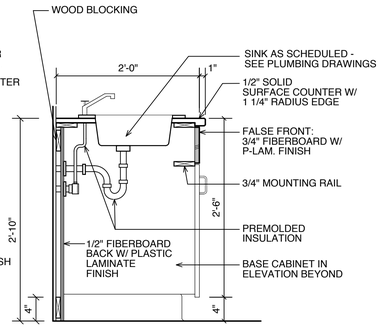
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A7.1



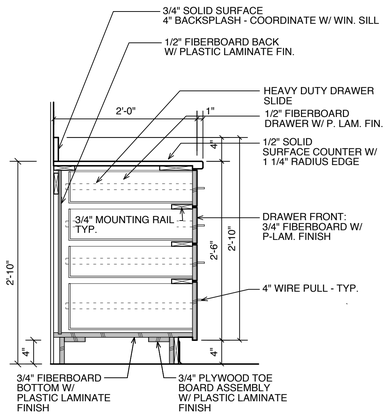
1 A7.2 **Millwork Section**
scale: 1" = 1'-0"



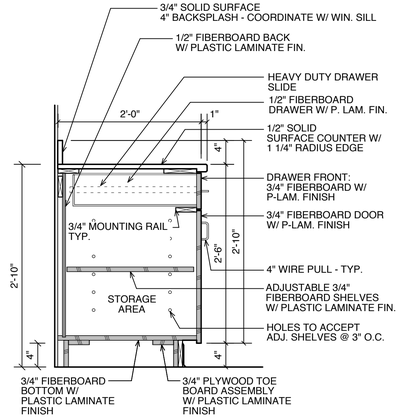
2 A7.2 **Millwork Section**
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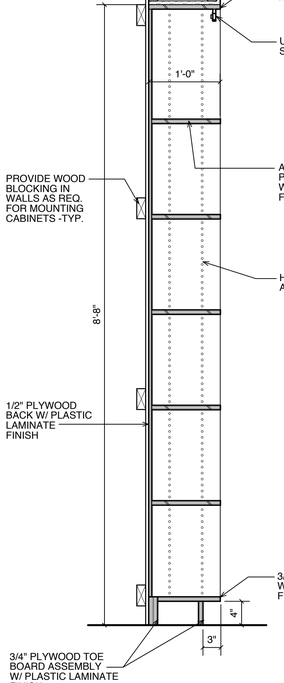
3 A7.2 **Millwork Section**
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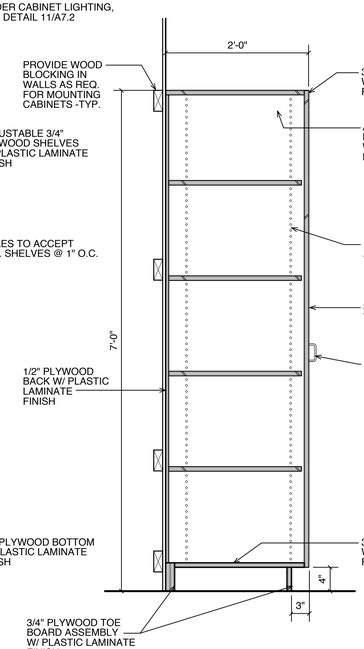
4 A7.2 **Millwork Section**
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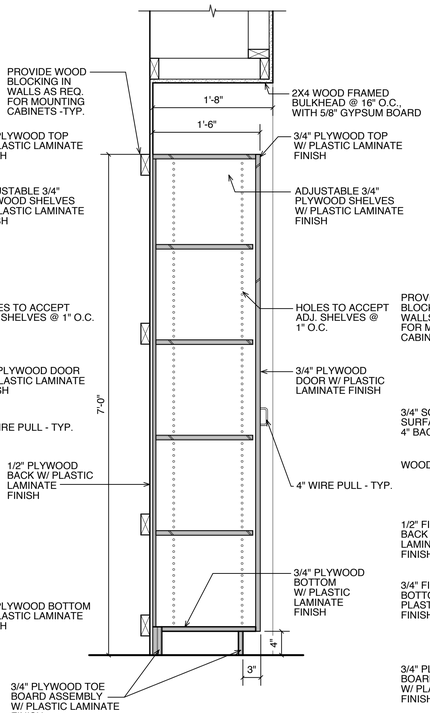
5 A7.2 **Millwork Section**
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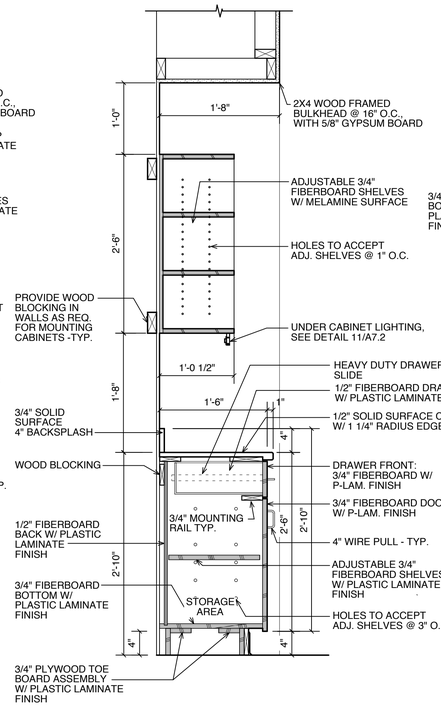
6 A7.2 **Millwork Section**
scale: 1" = 1'-0"



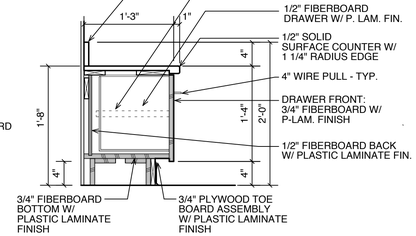
7 A7.2 **Millwork Section**
scale: 1" = 1'-0"



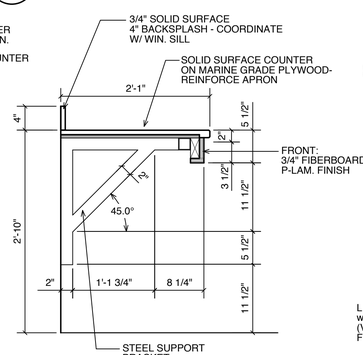
8 A7.2 **Millwork Section**
scale: 1" = 1'-0"



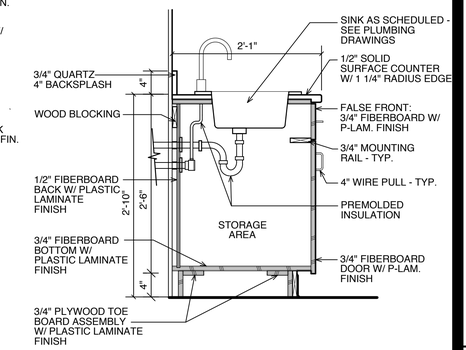
9 A7.2 **Millwork Section**
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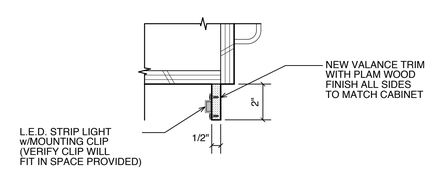
10 A7.2 **Millwork Section**
scale: 1" = 1'-0"



11 A7.2 **Millwork Section**
scale: 1" = 1'-0"



12 A7.2 **Millwork Section**
scale: 1" = 1'-0"



13 A7.2 **Under Cabinet Light**
scale: 3" = 1'-0"

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Ocean, North Carolina

Millwork Details

JOB NUMBER

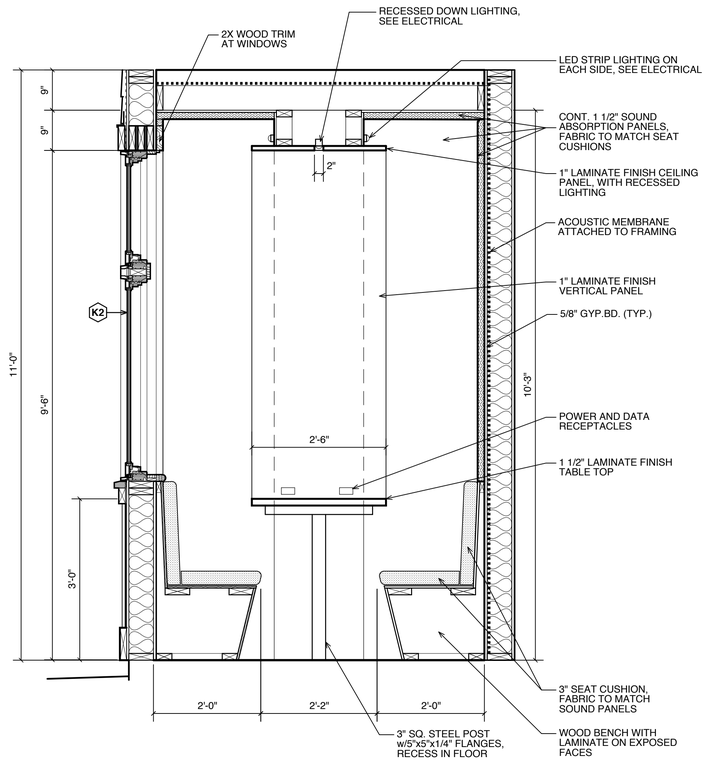
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MG

CHECKED BY
Hemingway

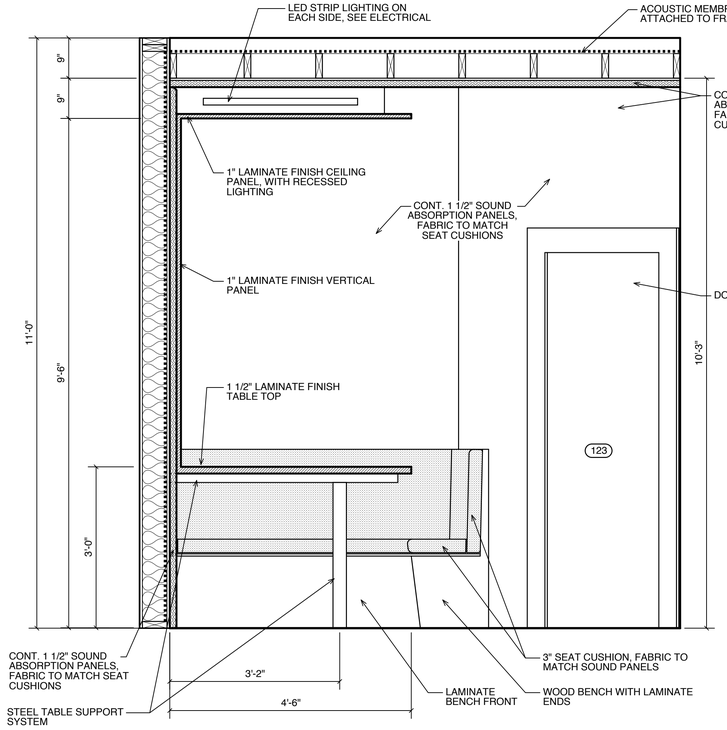
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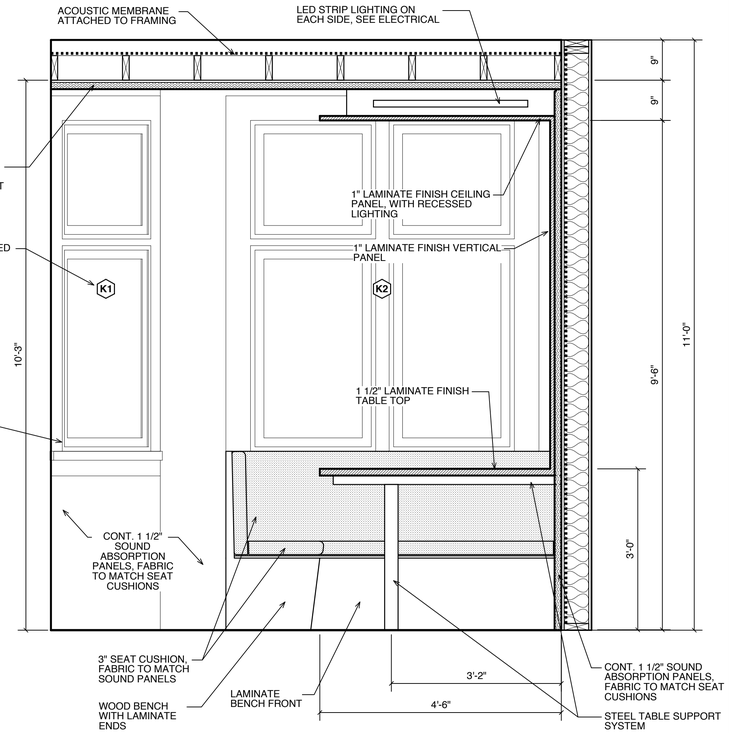
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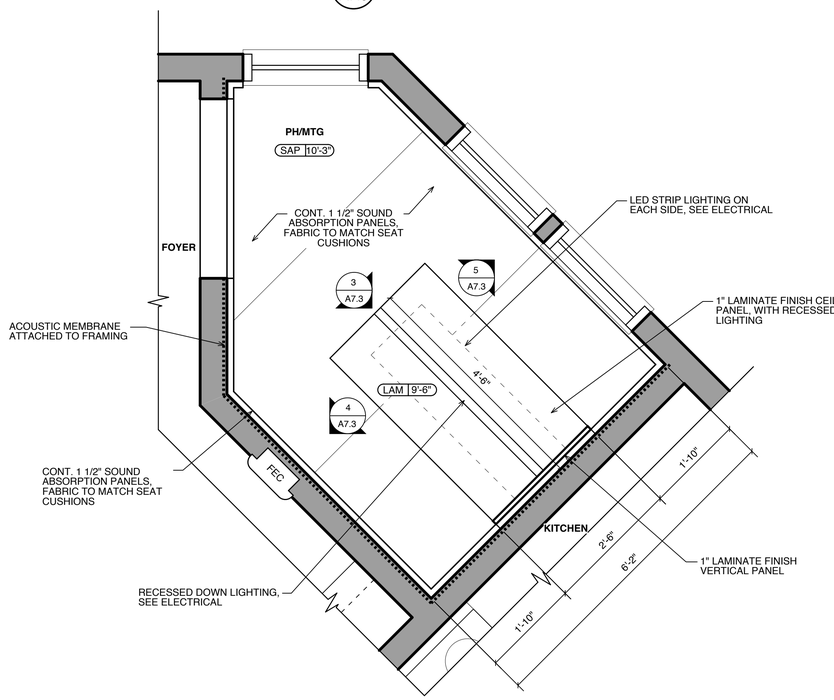
3 A7.3 **Elevation - Phone/Meeting 123**
scale: 3/4" = 1'-0"



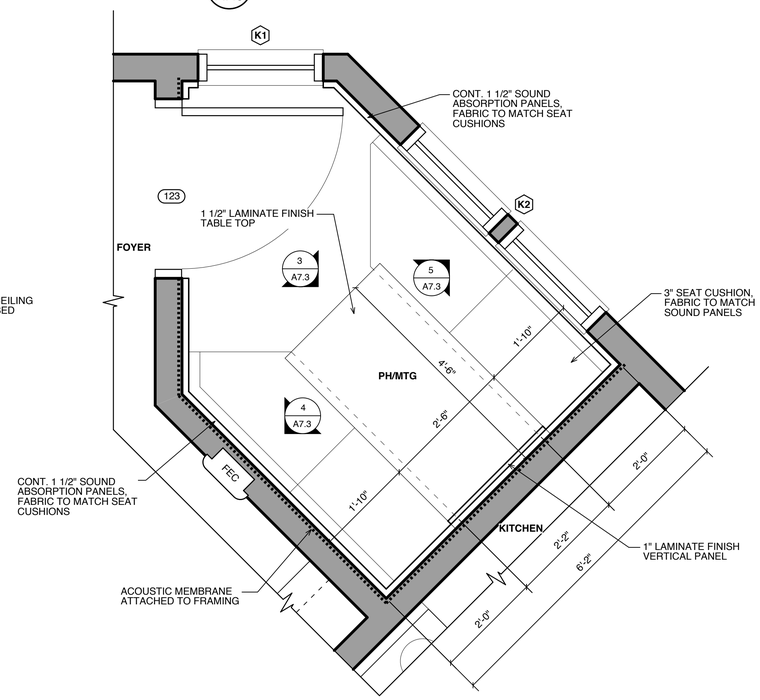
4 A7.3 **Elevation - Phone/Meeting 123**
scale: 3/4" = 1'-0"



5 A7.3 **Elevation - Phone/Meeting 123**
scale: 3/4" = 1'-0"



2 A7.3 **Reflected Ceiling Plan - Phone/Meeting 123**
scale: 3/4" = 1'-0"



1 A7.3 **Enlarged Plan - Phone/Meeting 123**
scale: 3/4" = 1'-0"

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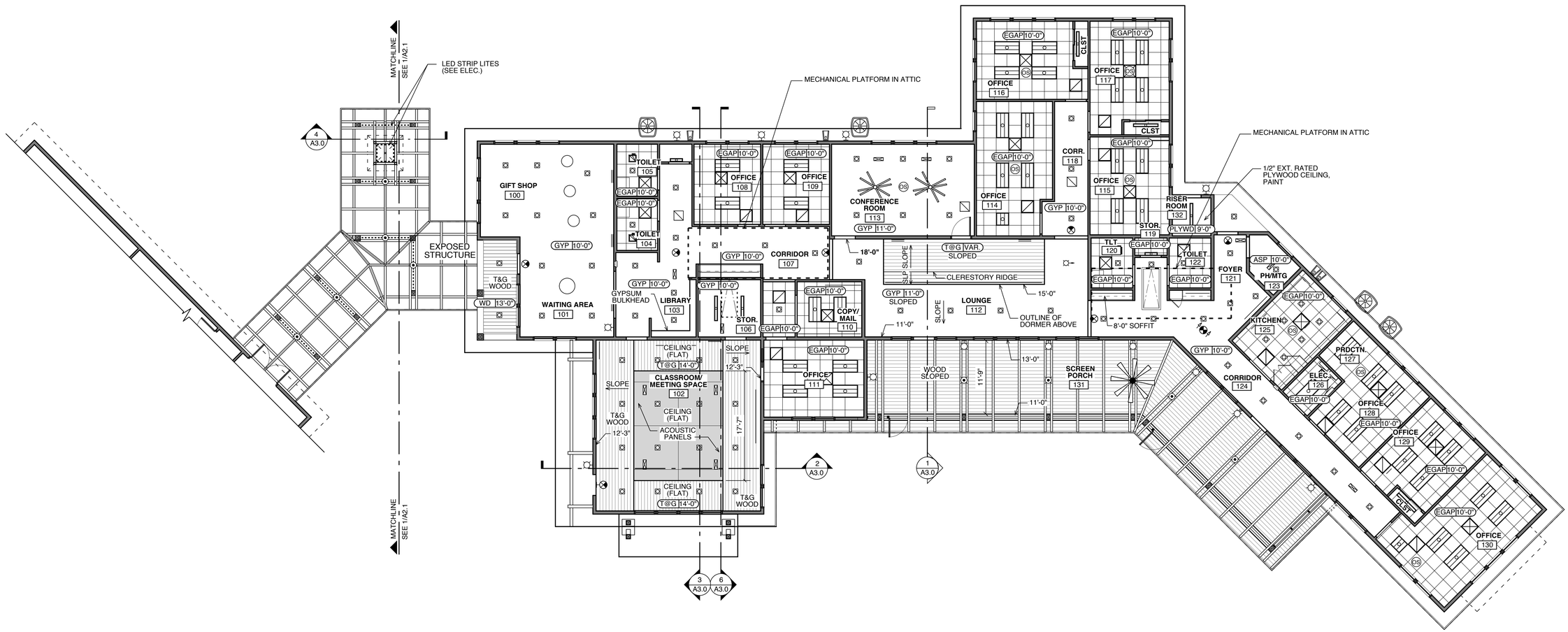
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Hemingway

DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A7.3



LEGEND

- ACOUSTICAL CEILING TILE AND GRID
- GYP 12'-0" — CEILING TYPE / CEILING HEIGHT
  - GYP = GYPSUM BD., 1/2", PAINTED.
  - EGAP = EXPOSED GRID ACOUSTIC PANEL
  - T&G = WOOD TONGUE AND GROOVE
  - PLYWD = EXT. PLYWOOD CEILING, PAINTED
- GYPSUM BOARD = GYP. BD. MOISTURE RESISTANT GYP. BD. = M. GYP. BD.
- 2X4 LAY-IN GRID LIGHT FIXTURE
- 2X2 LAY-IN GRID LIGHT FIXTURE
- RECESSED/ SURFACE MOUNTED LED DOWN LIGHT FIXTURE
- CEILING FAN
- CEILING MOUNTED LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MOUNTED LED STRIP LIGHT FIXTURE
- AIR SUPPLY
- RETURN AIR
- CEILING MECHANICAL UNIT REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED EXHAUST FAN
- EMERGENCY LIGHT
- SMOKE DETECTOR
- WALL MOUNTED FIRE ALARM PULL STATION
- RECESSED / SURFACE MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED EXIT SIGN
- DIRECTIONAL EXIT SIGN
- EMERGENCY LIGHTING WALL MOUNTED DIRECTIONAL EXIT SIGN
- OCCUPANCY SENSOR
- 1 1/2" ACOUSTICAL PANELS

REFLECTED CEILING PLAN GENERAL NOTES:

1. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS.
2. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
3. CENTER GRID AND DEVICES WHEREVER POSSIBLE.
4. LAY-IN TILE TO HAVE 6" MINIMUM TILE WIDTH AT WALL EDGE.
5. ALL WALLS TO BE EXTENDED TO UNDERSIDE OF DECK UNLESS OTHERWISE NOTED.

1 / A8.0 Reflected Ceiling Plan - Coastal Resource Center

scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

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Ocean, North Carolina

Coastal Resource Center Reflected Ceiling Plan

JOB NUMBER

DRAWN BY
Hemingway

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

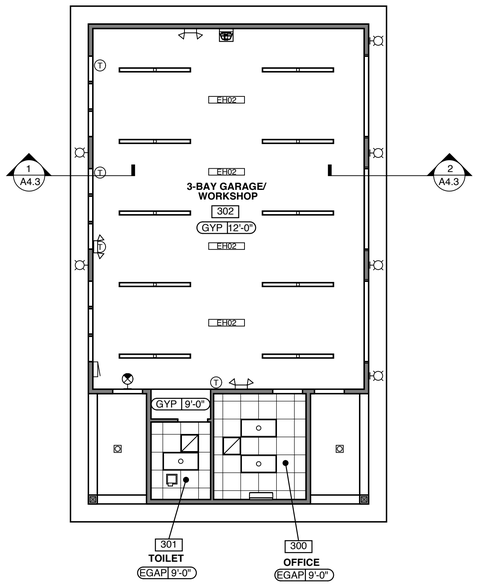
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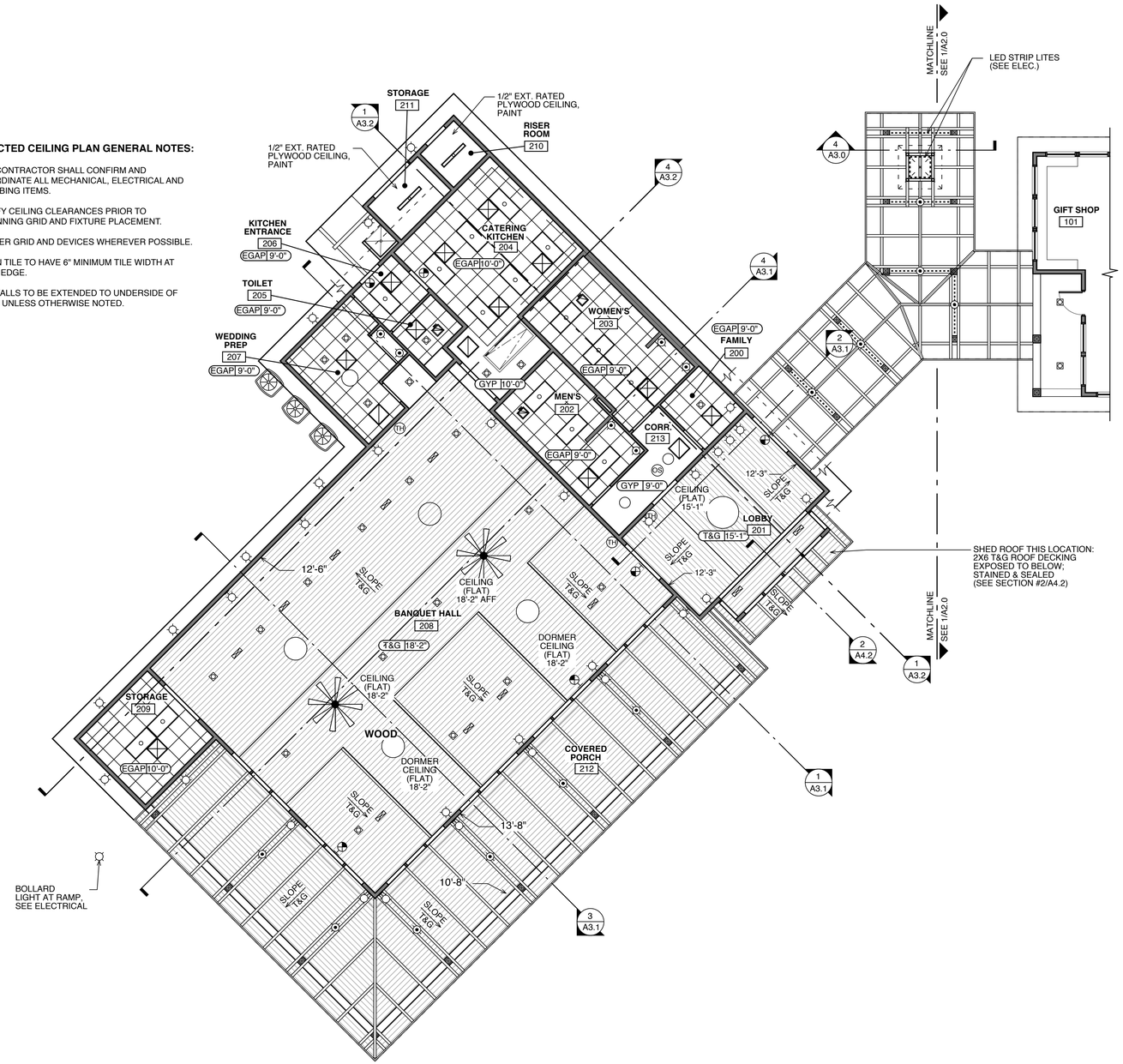
LEGEND

- ACOUSTICAL CEILING TILE AND GRID
- GYP | 12'-0" — CEILING TYPE / CEILING HEIGHT
  - GYP = GYPSUM BD., 1/2", PAINTED.
  - EGAP = EXPOSED GRID ACOUSTIC PANEL
  - T&G = WOOD TONGUE AND GROOVE
  - PLYWD = EXT. PLYWOOD CEILING, PAINTED
- GYPSUM BOARD = GYP. BD. MOISTURE RESISTANT GYP. BD. = M. GYP. BD.
- 2X4 LAY-IN GRID LIGHT FIXTURE
- 2X2 LAY-IN GRID LIGHT FIXTURE
- RECESSED/ SURFACE MOUNTED LED DOWN LIGHT FIXTURE
- CEILING FAN
- CEILING MOUNTED LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MOUNTED LED STRIP LIGHT FIXTURE
- AIR SUPPLY
- RETURN AIR
- CEILING MECHANICAL UNIT REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED EXHAUST FAN
- EMERGENCY LIGHT
- SD — SMOKE DETECTOR
- WALL MOUNTED FIRE ALARM PULL STATION
- RECESSED / SURFACE MOUNTED LIGHT FIXTURE
- # — WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED EXIT SIGN
- DIRECTIONAL EXIT SIGN
- EMERGENCY LIGHTING WALL MOUNTED DIRECTIONAL EXIT SIGN
- OS — OCCUPANCY SENSOR
- 1 1/2" ACOUSTICAL PANELS

REFLECTED CEILING PLAN GENERAL NOTES:

1. THE CONTRACTOR SHALL CONFIRM AND COORDINATE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS.
2. VERIFY CEILING CLEARANCES PRIOR TO BEGINNING GRID AND FIXTURE PLACEMENT.
3. CENTER GRID AND DEVICES WHEREVER POSSIBLE.
4. LAY-IN TILE TO HAVE 6" MINIMUM TILE WIDTH AT WALL EDGE.
5. ALL WALLS TO BE EXTENDED TO UNDERSIDE OF DECK UNLESS OTHERWISE NOTED.





2 / A8.1 Reflected Ceiling Plan - Workshop
scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

1 / A8.1 Reflected Ceiling Plan - Event Center
scale: 1/8" = 1'-0"

NOTES: - ALL WALLS TO BE EXTENDED TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

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Ocean, North Carolina

Event Center and Workshop Reflected Ceiling Plans

JOB NUMBER

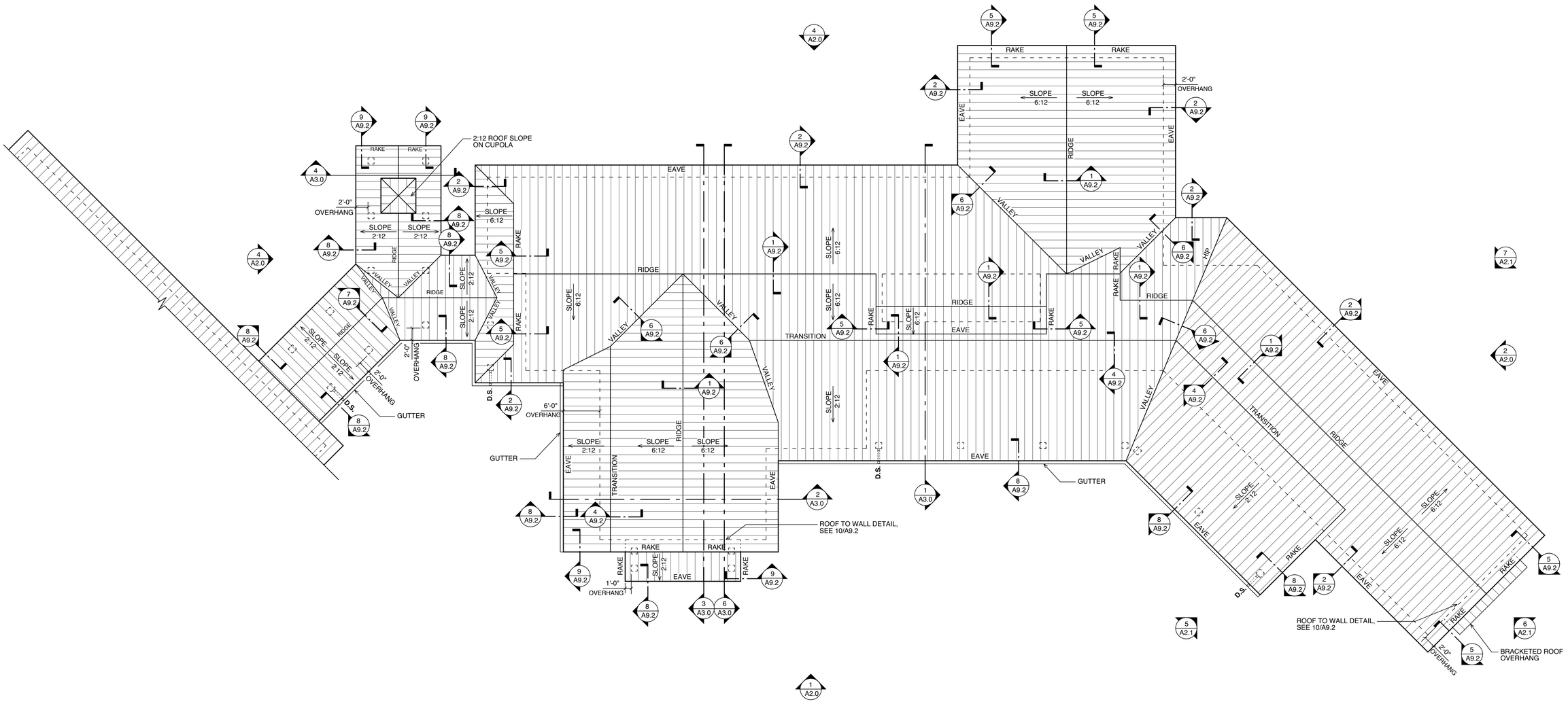
DRAWN BY
Hemingway

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

SHEET NUMBER
A8.1



LEGEND

V.P.	VENT PIPE
D.S.	GUTTER DOWN SPOUT LOCATION

ROOFING NOTES:

1. SEE PLUMBING DRAWINGS FOR LOCATIONS OF ROOF VENTS.
2. METAL ROOF PANELS AND MEMBRANE SECUREMENT SHALL MEET ASCE 7 REQUIREMENTS FOR 150 MPH WIND SPEED EXPOSURE B.
3. PROVIDE EXPANSION RELIEF AT GUTTERS AND METAL FABRICATIONS TO ALLOW FOR MOVEMENT
4. PROVIDE CONCEALED FASTENERS TO EXTENT POSSIBLE. ALL SURFACE FASTENERS SHALL BE CORROSION RESISTANT AND SET IN SEALANT.
5. ROOFING UNDERLAYMENT IS TO BE 40 MIL. ICE & WATER BARRIER PEEL AND STICK MEMBRANE

1 A9.0 — Coastal Resource Center Roof Plan
scale: 1/8" = 1'-0"

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Coastal Resource Center Roof Plan

JOB NUMBER

DRAWN BY: Hemingway
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DATE: June 12, 2023
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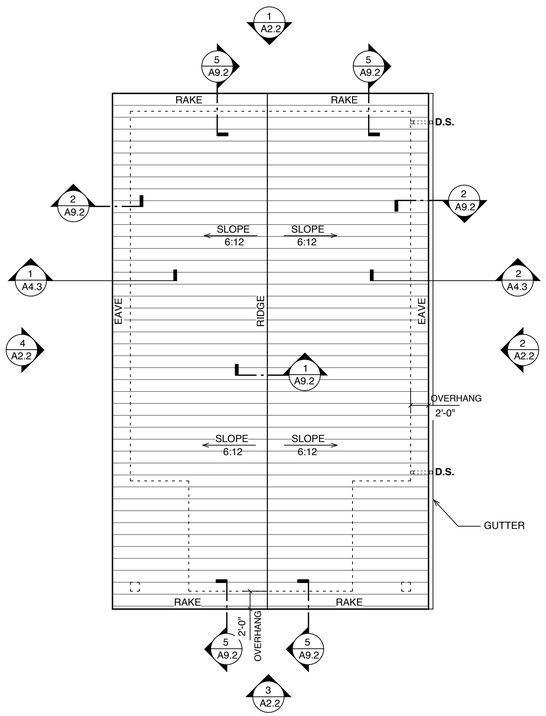
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LEGEND

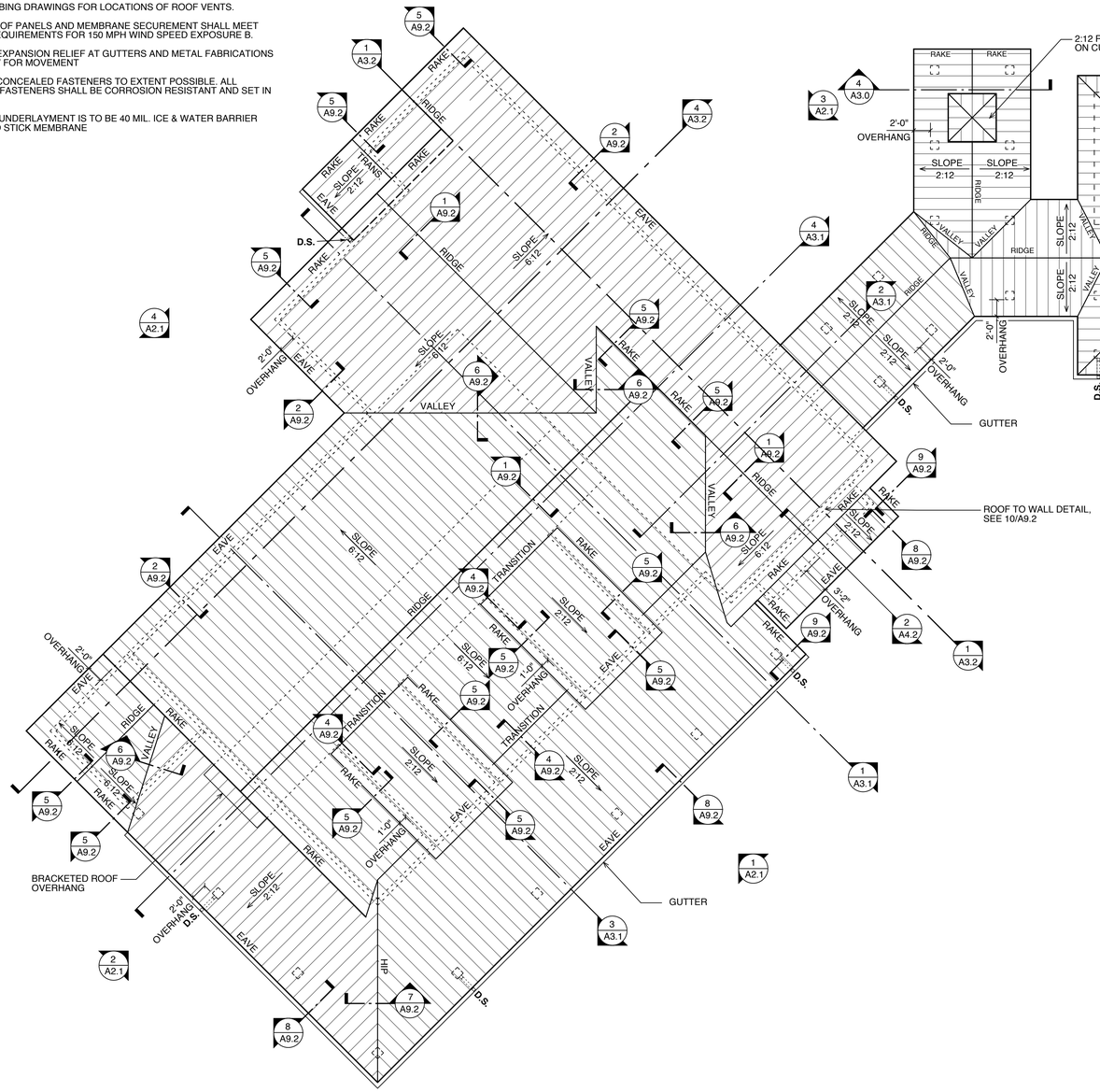
V.P.	VENT PIPE
D.S.	GUTTER DOWN SPOUT LOCATION

ROOFING NOTES:

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3. PROVIDE EXPANSION RELIEF AT GUTTERS AND METAL FABRICATIONS TO ALLOW FOR MOVEMENT
4. PROVIDE CONCEALED FASTENERS TO EXTENT POSSIBLE. ALL SURFACE FASTENERS SHALL BE CORROSION RESISTANT AND SET IN SEALANT.
5. ROOFING UNDERLAYMENT IS TO BE 40 MIL. ICE & WATER BARRIER PEEL AND STICK MEMBRANE



2 A9.1 3 Bay Garage / Workshop Roof Plan
scale: 1/8" = 1'-0"



1 A8.1 Event Center Roof Plan
scale: 1/8" = 1'-0"

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Event Center and Workshop Floor Plans

JOB NUMBER

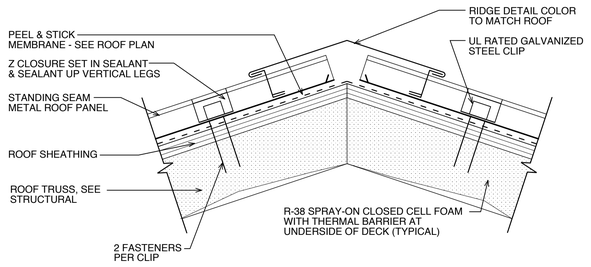
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Hemingway

DATE
June 12, 2023

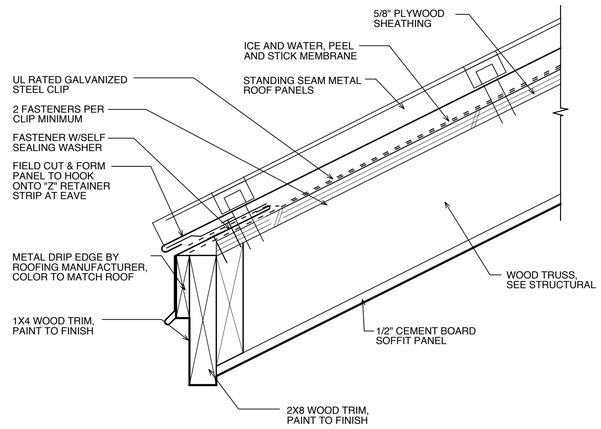
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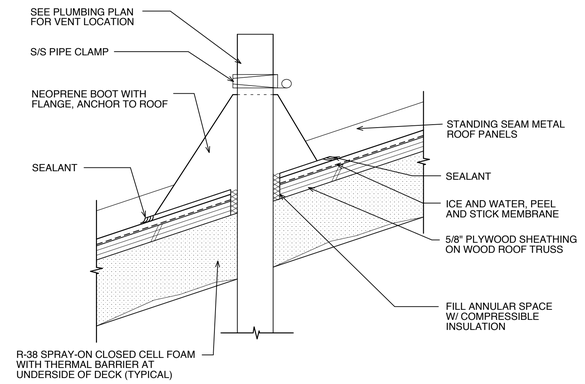
1 A9.2 Ridge Detail

scale: 3" = 1'-0"



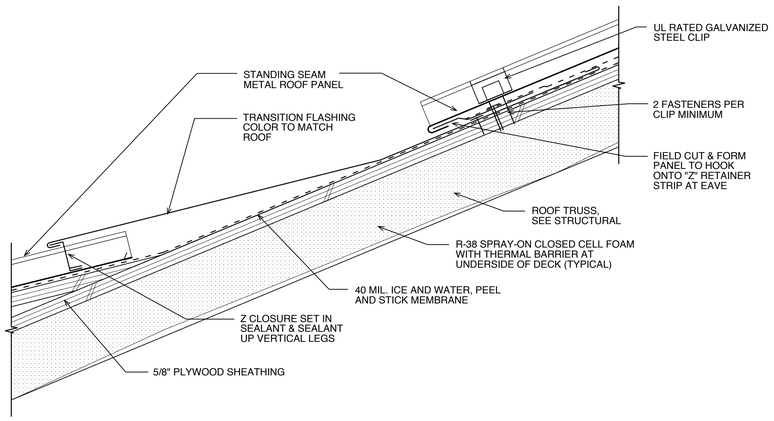
2 A9.2 Eave Detail

scale: 3" = 1'-0"



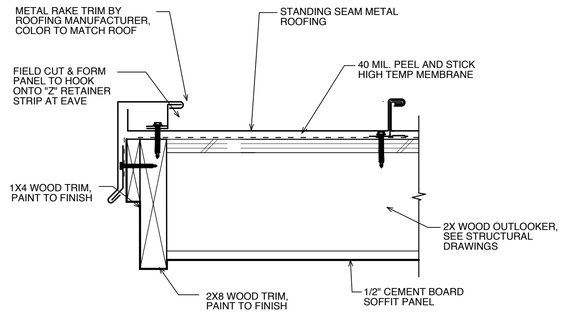
3 A9.2 Roof Penetration Detail

scale: 3" = 1'-0"



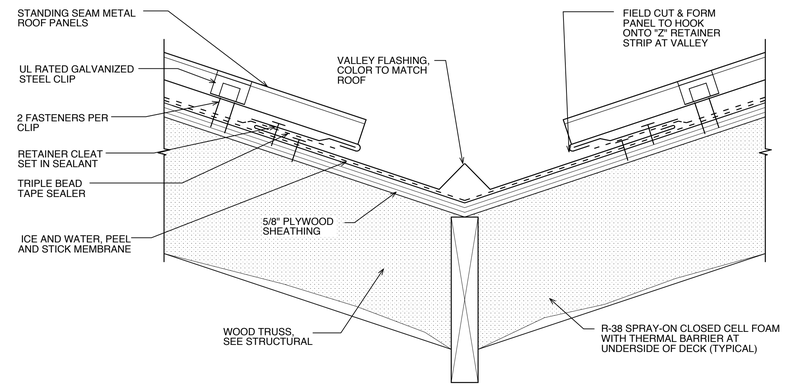
4 A9.2 Transition Detail

scale: 3" = 1'-0"



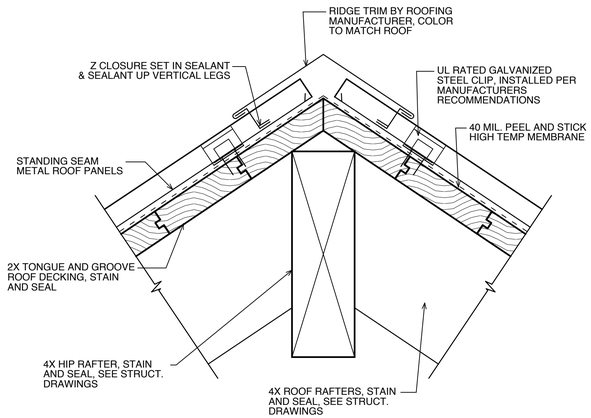
5 A9.2 Rake Detail

scale: 3" = 1'-0"



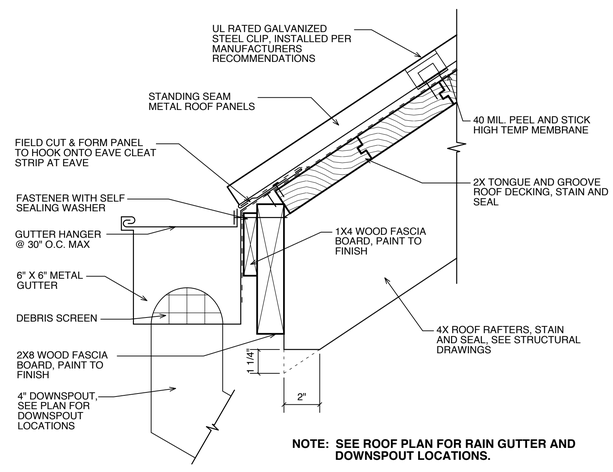
6 A9.2 Typical Valley Detail

scale: 3" = 1'-0"



7 A9.2 Hip Detail @ Porch Roofs

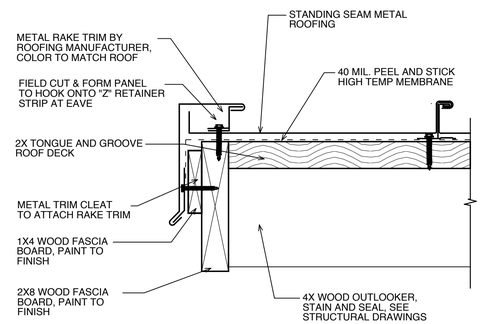
scale: 3" = 1'-0"



NOTE: SEE ROOF PLAN FOR RAIN GUTTER AND DOWNSPOUT LOCATIONS.

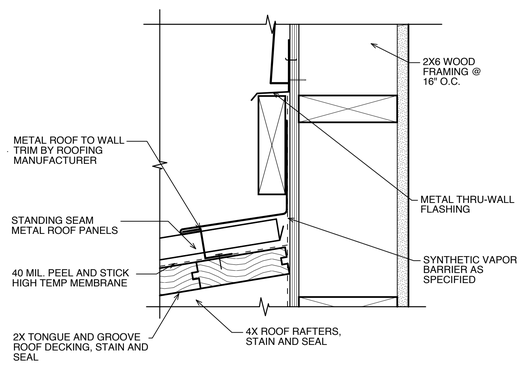
8 A9.2 Eave Detail @ Porches & Bracketed Roofs

scale: 3" = 1'-0"



9 A9.2 Rake Detail @ Porches & Bracketed Roofs

scale: 3" = 1'-0"



10 A9.2 Roof to Wall Detail @ Porches & Bracketed Roofs

scale: 3" = 1'-0"

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Roof Details

JOB NUMBER

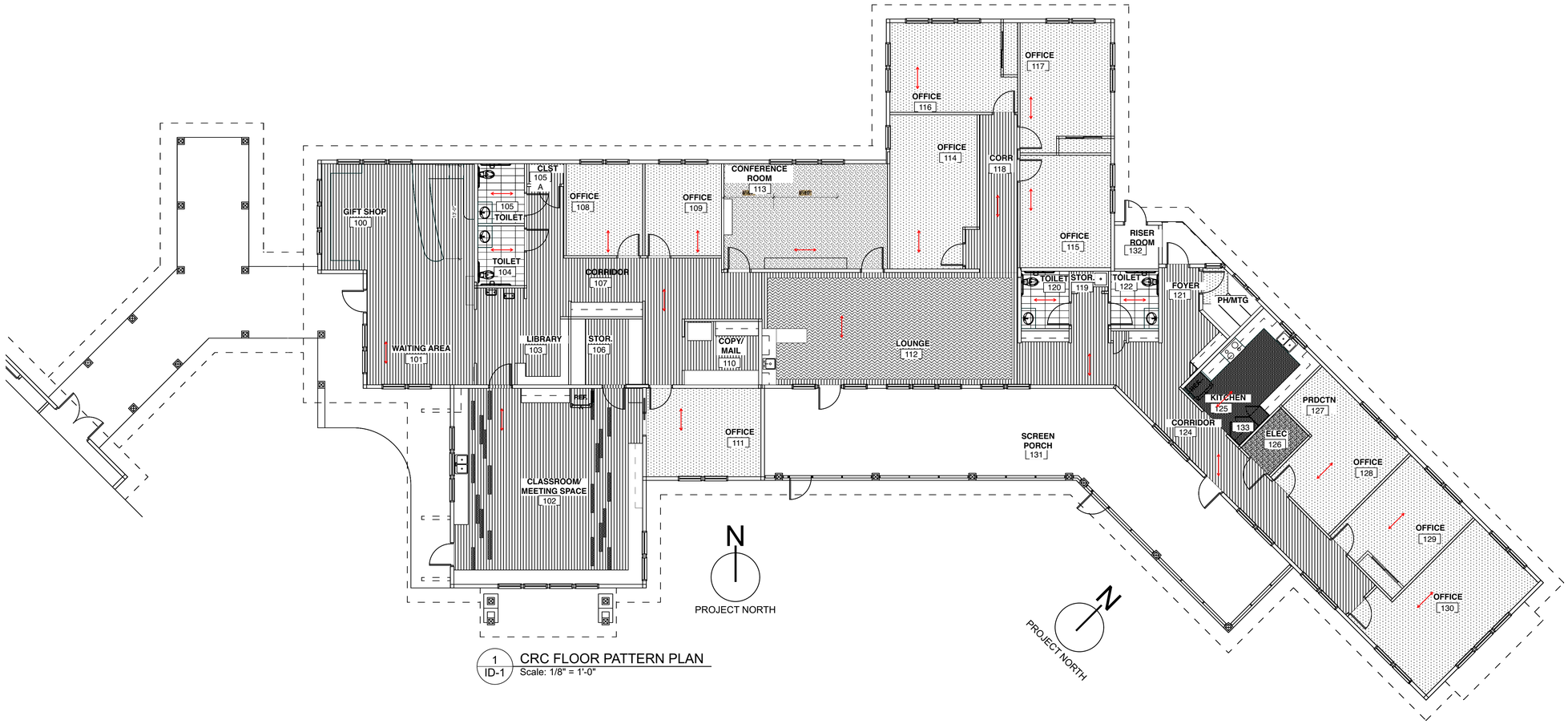
DRAWN BY
MG

CHECKED BY
Hemingway

DATE
June 12, 2023

REVISIONS

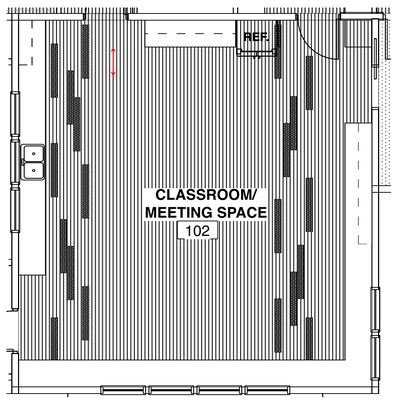
SHEET NUMBER
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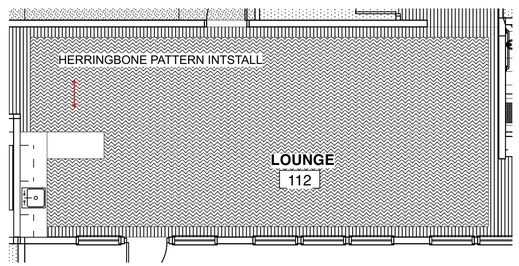
1 ID-1 CRC FLOOR PATTERN PLAN
Scale: 1/8" = 1'-0"

FLOORING KEY

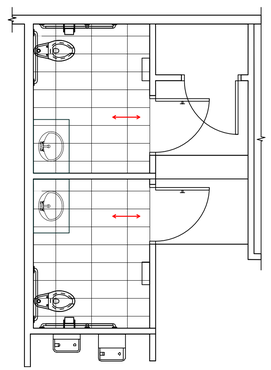
- TL-C1
- LVT-C1
- LVT-C2
- CPT-C1
- CPT-C2



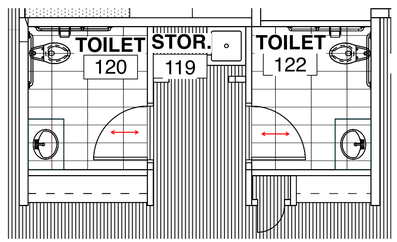
2 ID-1 CLASSROOM/MEETING SPACE 102 ENLARGED PLAN
Scale: 3/16" = 1'-0"



3 ID-1 LOUNGE 112 ENLARGED PLAN
Scale: 3/16" = 1'-0"



4 ID-1 ENLARGED TOILET 104 + 105 PLANS
Scale: 1/4" = 1'-0"



5 ID-1 ENLARGED TOILET 120 + 122 PLANS
Scale: 1/4" = 1'-0"

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. SEE PLAN FOR DIRECTION AND ID-11 FOR LAY PATTERN.
3. ALL CARPET APPLICATIONS TO BE ASHLAR PATTERN.
4. ALL TILE APPLICATIONS (WALL AND FLOOR) STRAIGHT SET.

N
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www.bigskydesignonline.com

project information:
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OCEAN, NC

revisions:

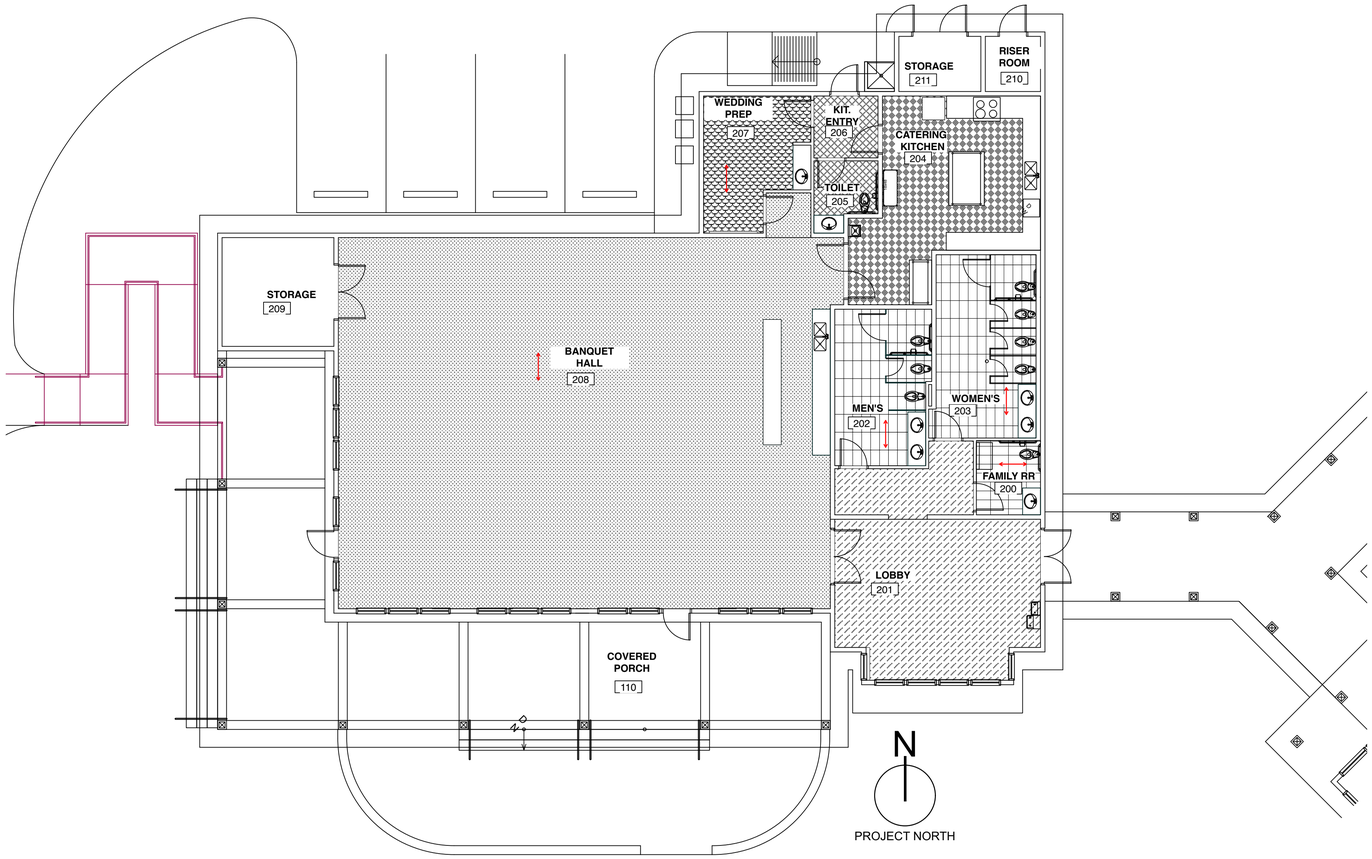
notes:

drawn by: MB / JK

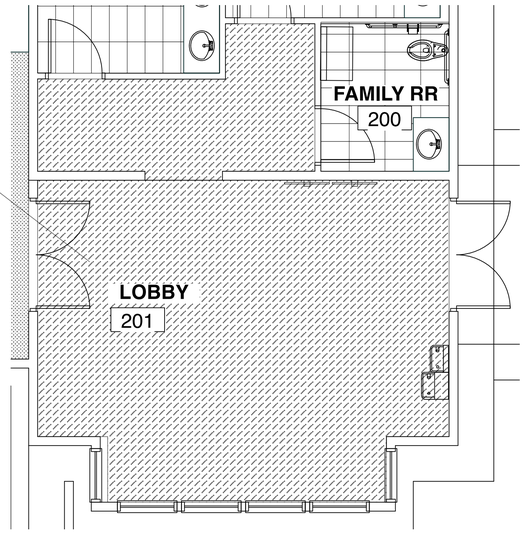
date: 6/16/23

drawing title:
CRC - FLOOR PATTERN PLAN

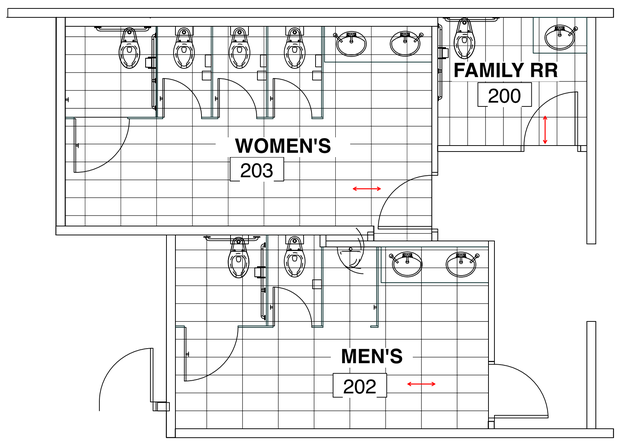
sheet no.:
ID-1



1 ID-2 EVENT SPACE FLOOR PATTERN PLAN
Scale: 1/8" = 1'-0"



2 ID-2 ENLARGED LOBBY 201 PLAN
Scale: 1/4" = 1'-0"



3 ID-2 ENLARGED TOILET PLANS
Scale: 1/4" = 1'-0"

FLOORING KEY

- TL-E1
- TL-E2
- TL-E3
- TL-E4
- CPT-E1
- CPT-E2

GENERAL NOTES:

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2. SEE PLAN FOR DIRECTION AND ID-11 FOR LAY PATTERN.
3. ALL TILE APPLICATIONS TO BE STRAIGHT SET.
4. ALL CARPET APPLICATIONS TO BE INSTALLED IN ASHLAR PATTERN WITH THE EXCPETION OF WEDDING PREP 207. THIS WILL BE MONOLITHIC.

N
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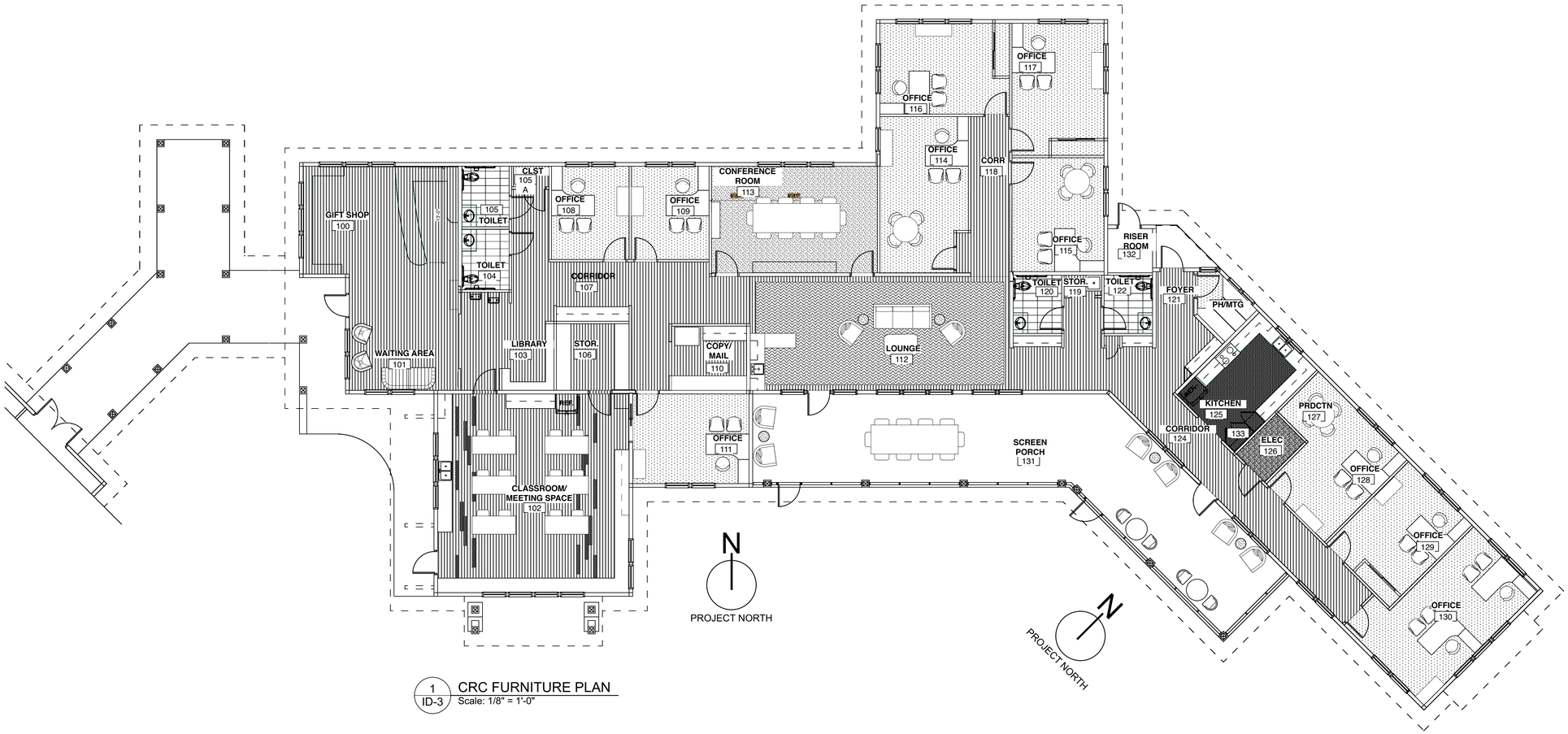
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
EVENT CENTER - FLOOR PATTERN PLAN

sheet no.:
ID-2



1 ID-3 CRC FURNITURE PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTES:

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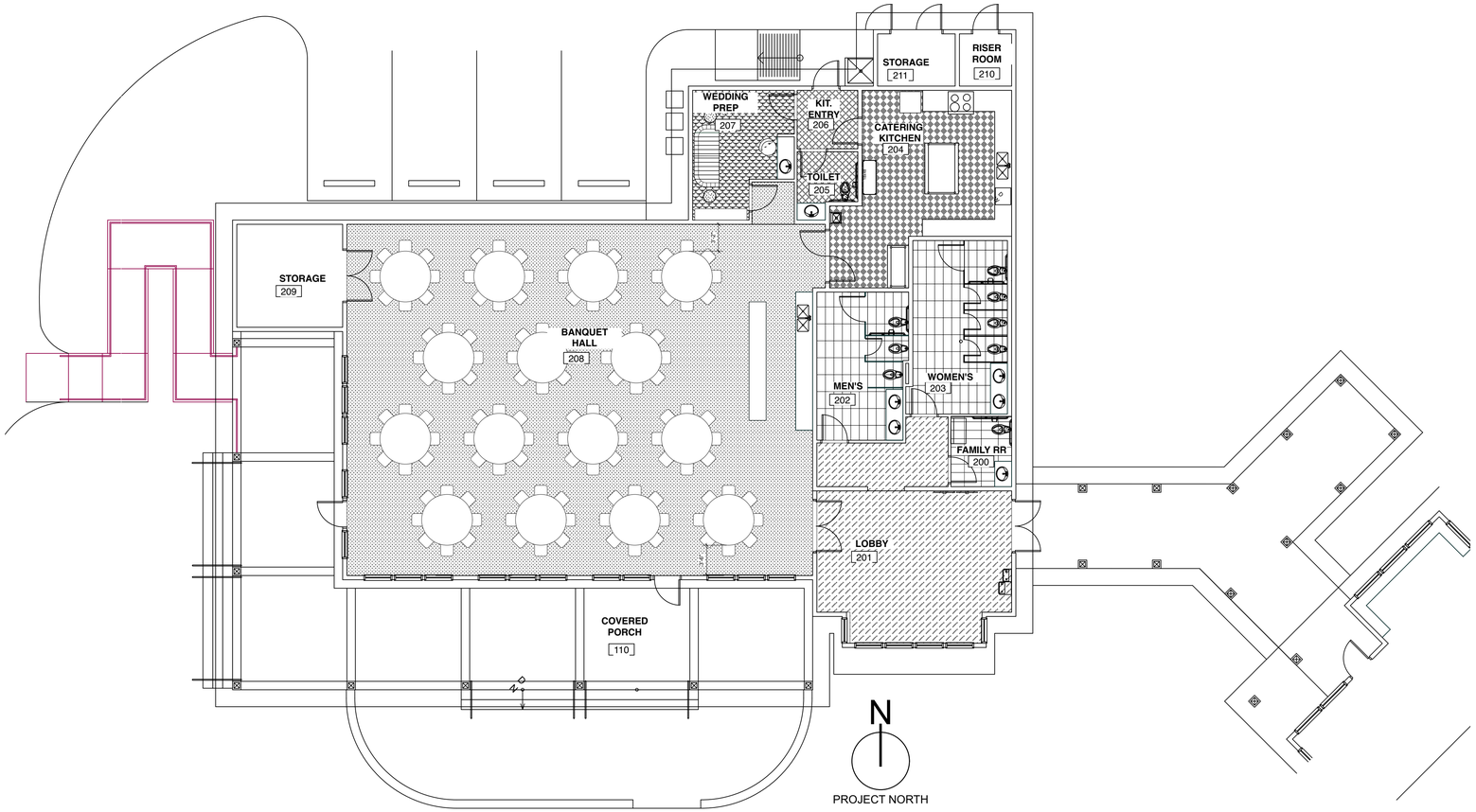
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
CRC - FURNITURE PLAN

sheet no.:
ID-3



1 ID-4 EVENT SPACE FURNITURE PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. CURRENTLY SHOWN WITH (15) 6' TABLES WITH ESTIMATED 120 CHAIRS

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revisions:

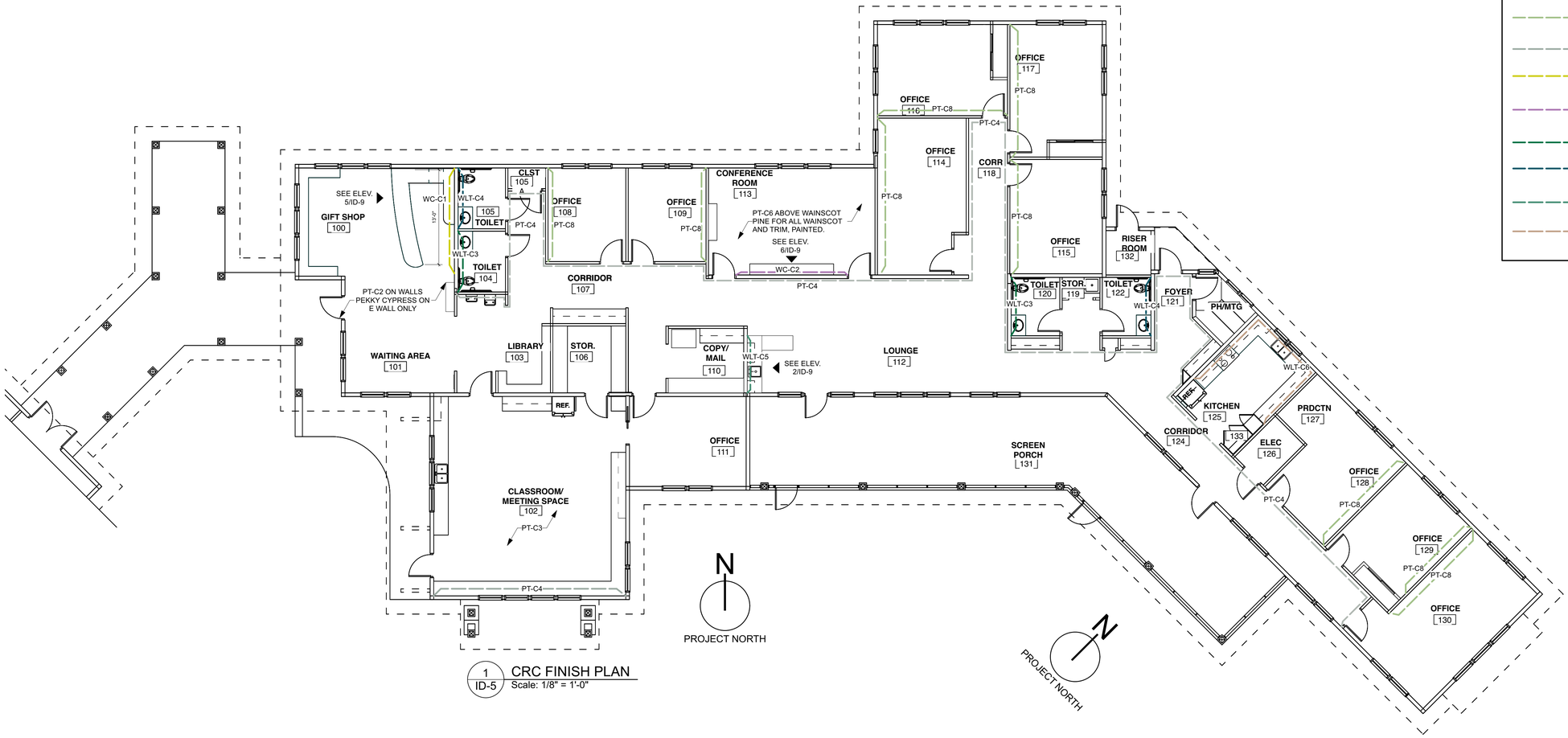
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
EVENT CENTER - FURNITURE PLAN

sheet no.:
ID-4



1 ID-5 CRC FINISH PLAN
Scale: 1/8" = 1'-0"

FINISH KEY
PT-C2
PT-C8
PT-C4
WC-C1
WC-C2
WLT-C3
WLT-C4
WLT-C5
WLT-C6

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. ALL INTERIOR WALLS TO BE PT-C2 UNLESS NOTED OTHERWISE ABOVE. SEE FINISH SCHEDULE FOR LOCATIONS.
3. DIFFERENT NEUTRAL PAINTS CALLED OUT FOR ROOMS 102 AND 113.
4. FINISH PLANS TO BE PRINTED IN COLOR FOR BEST UNDERSTANDING.

N
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project information:
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OCEAN, NC

revisions:

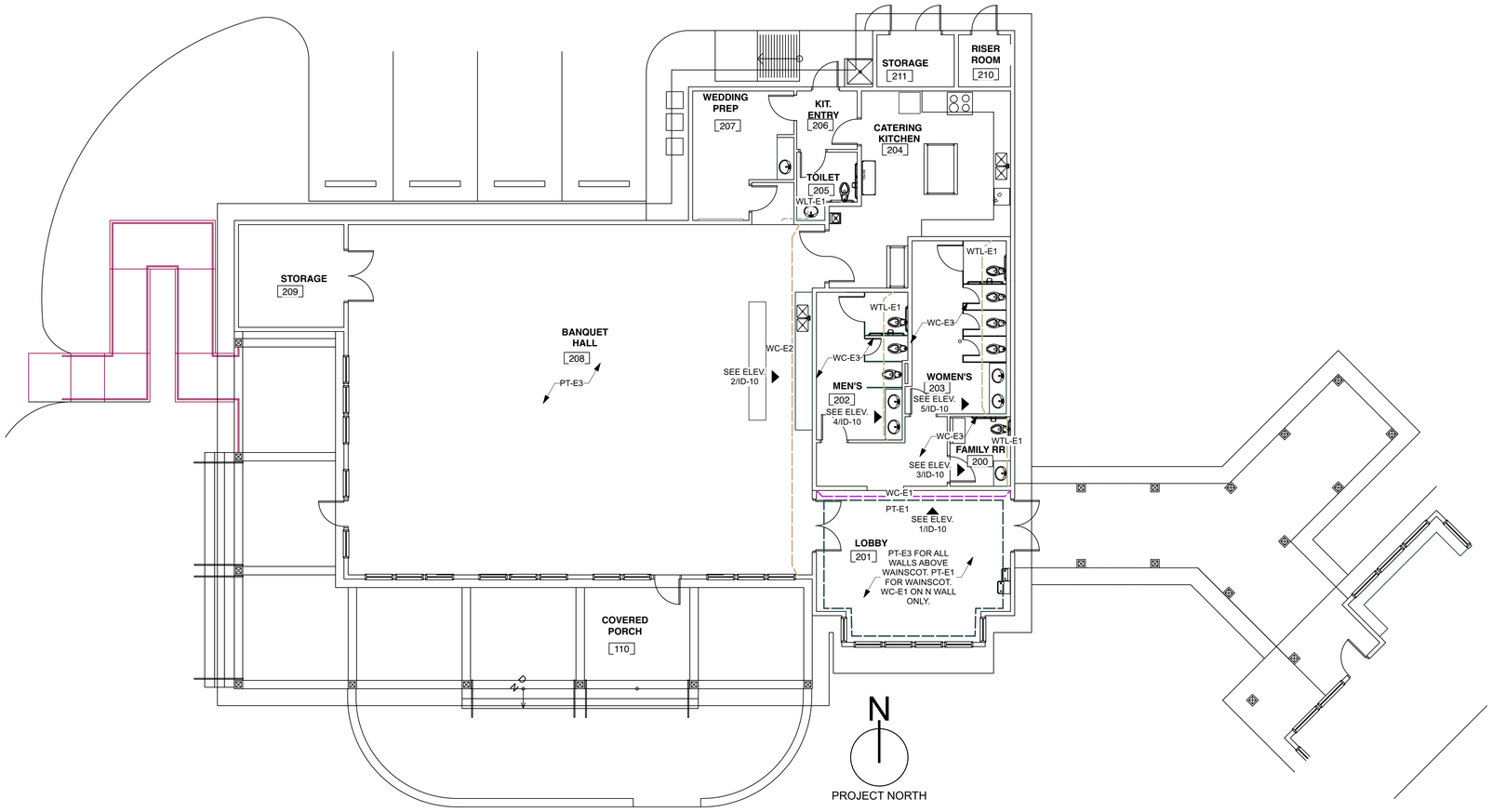
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
CRC - FINISH PLAN

sheet no.:
ID-5



1 ID-6 EVENT SPACE FINISH PLAN
Scale: 1/8" = 1'-0"

FINISH KEY	
	PT-E1
	PT-E2
	PT-E3
	WTL-E1
	WTL-E2
	WC-E1
	WC-E2
	WC-E3

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. ALL INTERIOR WALLS TO BE PT-E2 UNLESS NOTED OTHERWISE ABOVE.
3. TOILET ROOMS 200, 202 AND 203 HAVE WTL-E2 ON E WALL ONLY, ALL OTHERS TO BE WC-E3. REFER TO ID-10 FOR WALL TILE INSTALLATION HEIGHTS.
4. LOBBY 201 TO HAVE PAINTED PT-E1 WAINSCOT ON ALL WALLS. N WALL ONLY TO HAVE WC-E1 ABOVE WAINSCOT. REFER TO ID-10 FOR ELEVATION.
5. ALL CEILINGS TO BE PT-E5 UNLESS NOTED OTHERWISE.

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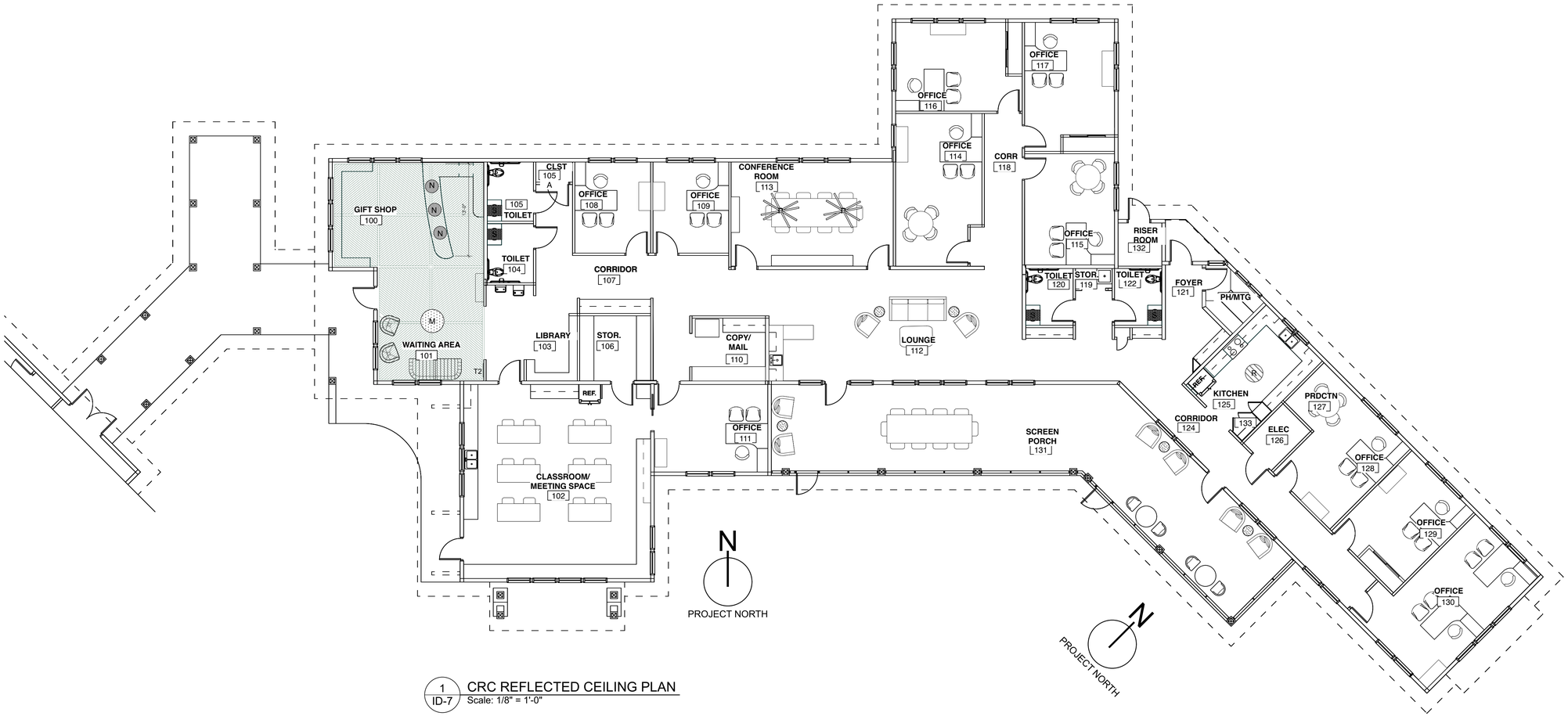
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
EVENT CENTER - FINISH PLAN

sheet no.:
ID-6



1 ID-7 CRC REFLECTED CEILING PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. INTENT OF BSD REFELCTED CEILING PLAN IS TO SHOW LIGHTING IN CONJUCTION WITH FURNITURE ONLY. SEE ENGINEERS DRAWINGS FOR INSTALLATION AND LUMEN REQUIREMENTS.

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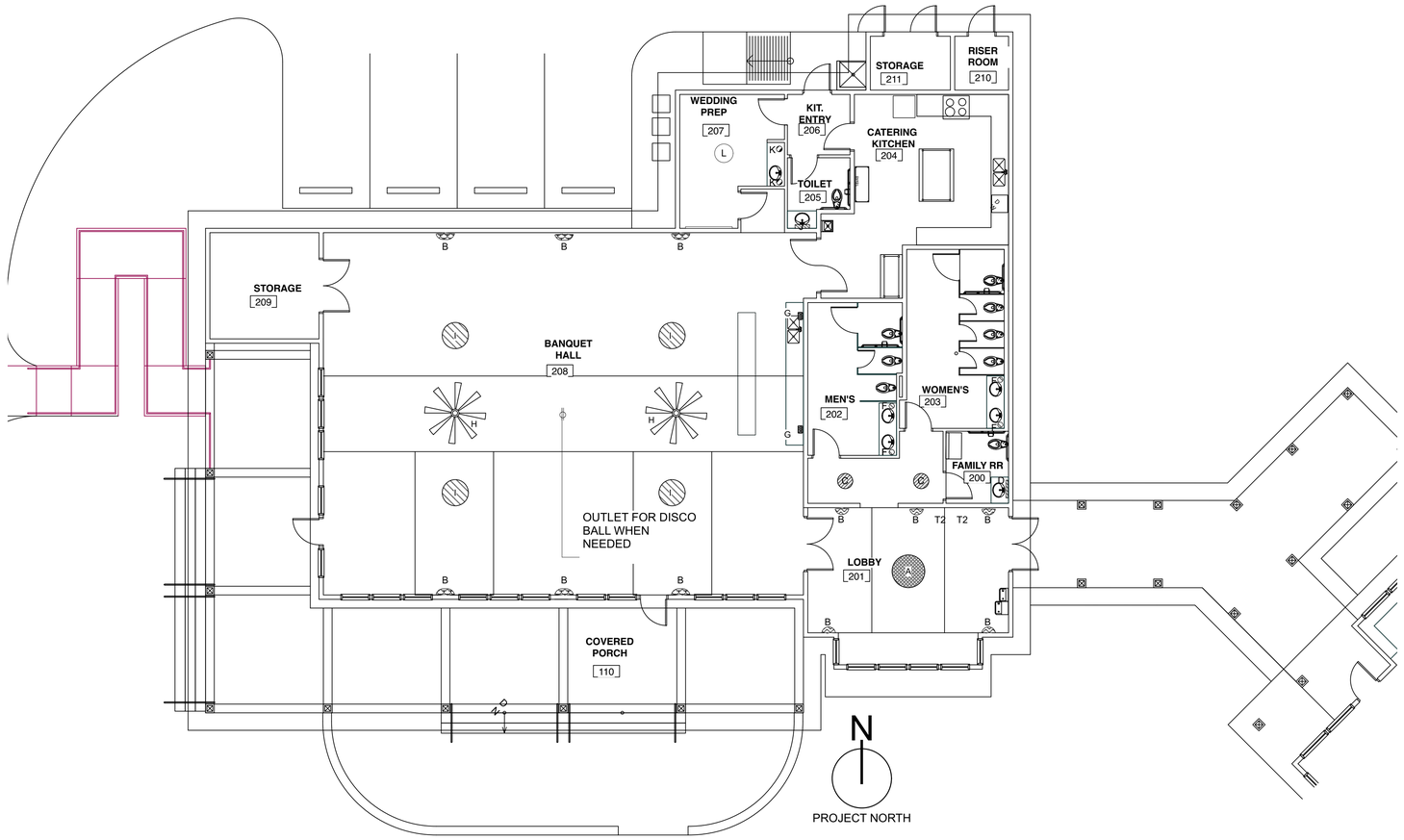
notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
CRC - REFLECTED CEILING PLAN

sheet no.:
ID-7



1 / ID-8 EVENT SPACE RCP
Scale: 1/8" = 1'-0"

GENERAL NOTES:

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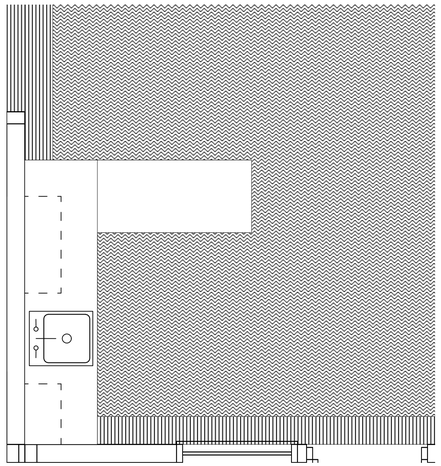
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drawn by: MB / JK

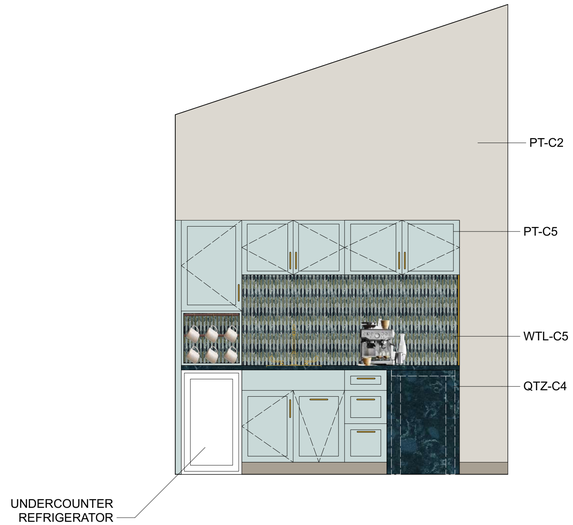
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drawing title:
EVENT CENTER - REFLECTED CEILING PLAN

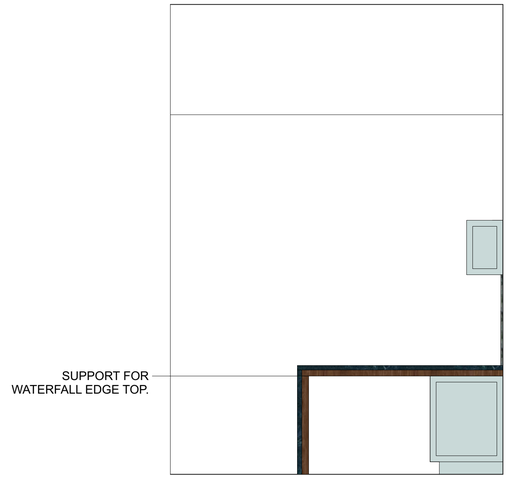
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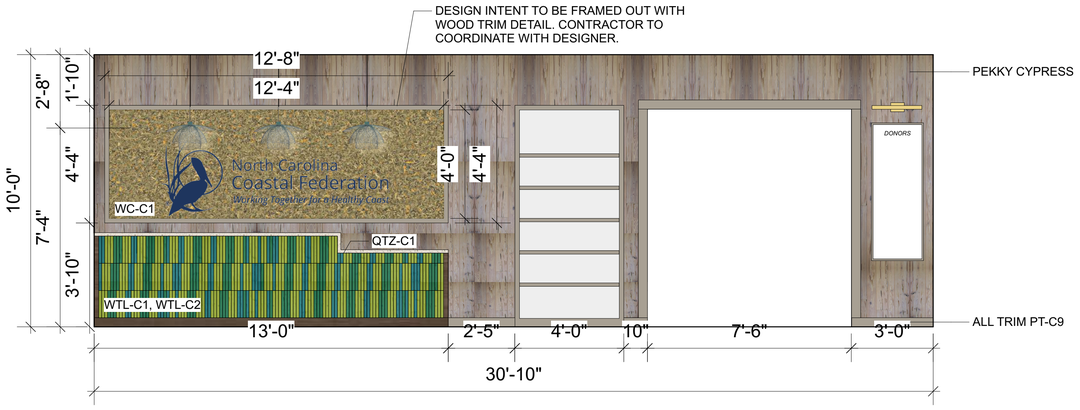
1 ID-9 ENLARGED PLAN
Scale: 1/2" = 1'-0"



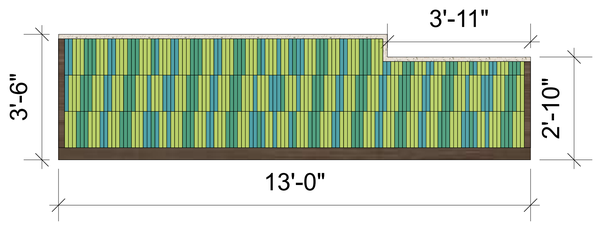
2 ID-9 CRC BEVERAGE BAR
Scale: 1/2" = 1'-0"



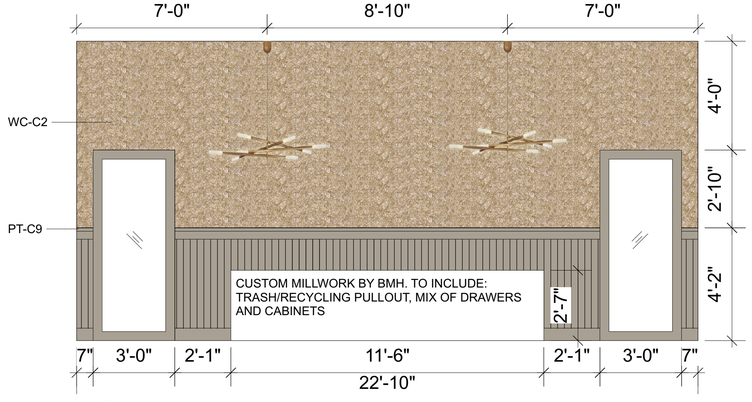
3 ID-9 CRC BEVERAGE BAR 2
Scale: 1/2" = 1'-0"



4 ID-9 CRC RECEPTION
Scale: 3/8" = 1'-0"



5 ID-9 RECEPTION DESK TILE LAYOUT
Scale: 1/2" = 1'-0"



6 ID-9 CONFERENCE ROOM 113
Scale: 3/8" = 1'-0"

GENERAL NOTES:

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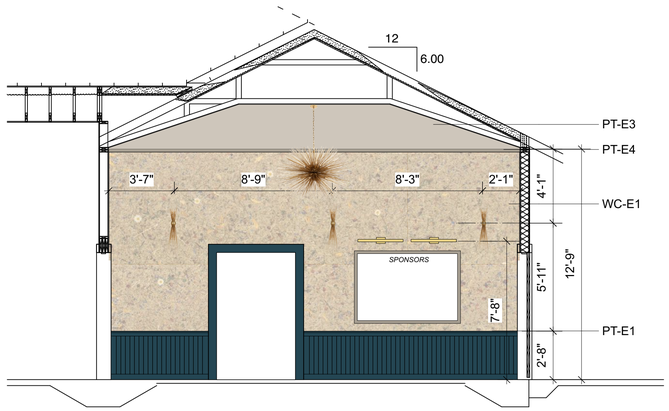
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drawn by: MB / JK

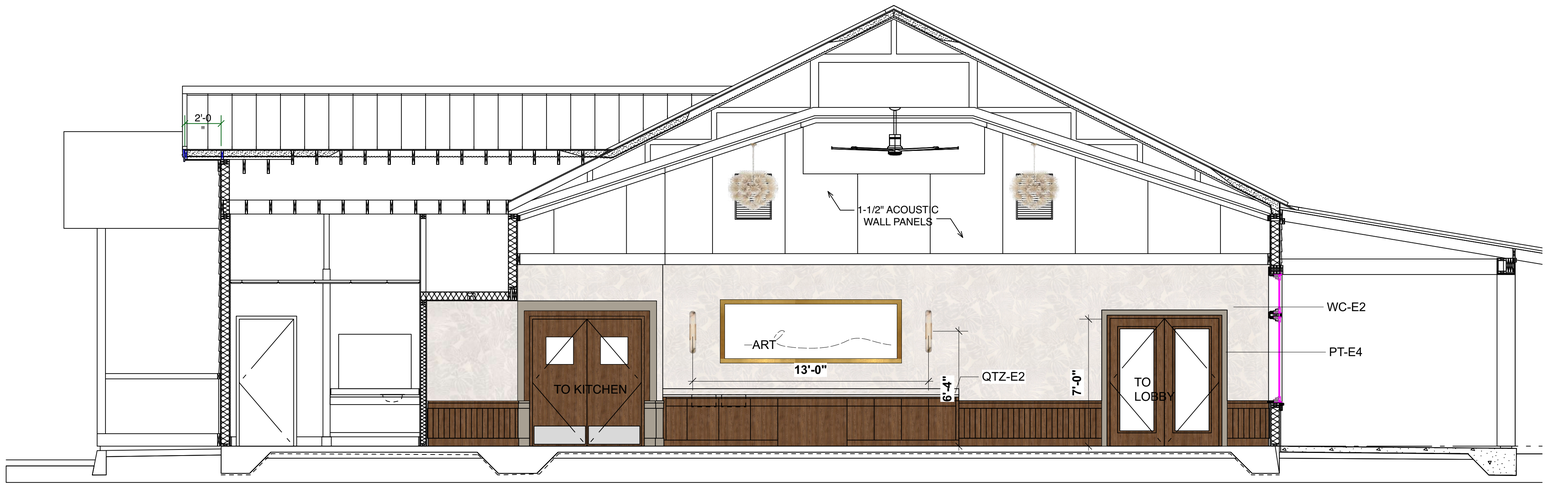
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drawing title:
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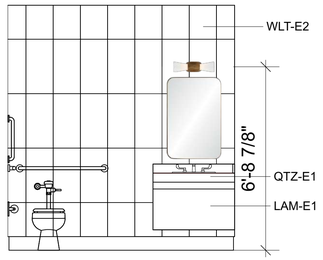
sheet no.:
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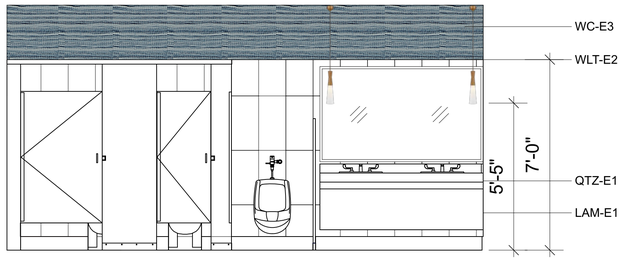
1 ID-10 EVENT CENTER LOBBY 201
Scale: 1/4" = 1'-0"



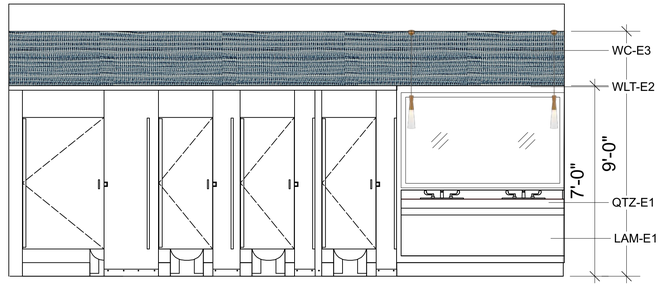
2 ID-10 EVENT CENTER BAR 208
Scale: 1/4" = 1'-0"



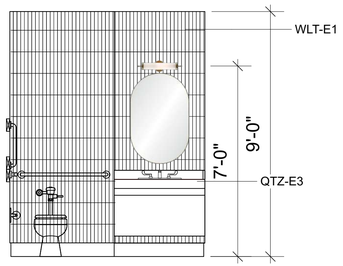
3 ID-10 FAMILY RESTROOM 200
Scale: 3/8" = 1'-0"



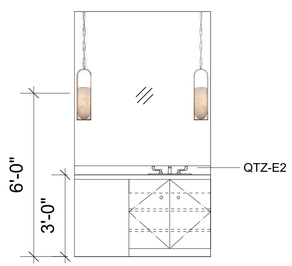
4 ID-10 MEN'S RESTROOM 202
Scale: 3/8" = 1'-0"



5 ID-10 WOMEN'S RESTROOM 203
Scale: 3/8" = 1'-0"



6 ID-10 TOILET 205
Scale: 3/8" = 1'-0"



7 ID-10 WEDDING PREP 207
Scale: 3/8" = 1'-0"

GENERAL NOTES:

1. IF ANY DISCREPANCIES OR CLARIFICATIONS NEEDED, PLEASE CONTACT THE DESIGNER @ 910-793-3992 IMMEDIATELY. DESIGNER IS NOT RESPONSIBLE FOR OTHERS INTERPRETATIONS OF DRAWINGS.
2. ALL DECORATIVE MIRRORS TO BE PROVIDED BY BSD.
3. FOR RESTROOMS 202 AND 203, CONTRACTOR TO PROVIDE WALL MIRROR WITH SIMPLE BEVELED 2" TRIM, PAINTED.

N
PROJECT NORTH

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project information:
COASTAL FEDERATION
OCEAN, NC

revisions:

notes:

drawn by: MB / JK

date: 6/16/23

drawing title:
ELEVATIONS

sheet no.:
ID-10

FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALLS (ALL WALLS THE SAME AS NORTH UNLESS NOTED) NORTH	EAST	SOUTH	WEST	CEILING	NOTES
100	GIFT SHOP	LVT-C1	WD-C1	PT-C2	WC-C1	PT-C2	PT-C2	PT-C1	EAST WALL TO BE PEKKY CYPRESS WITH WALLCOVERING FRAMED OUT. SEE ID-9
101	WAITING AREA	LVT-C1	WD-C1	PT-C2	WC-C1	PT-C2	PT-C2	PT-C1	EAST WALL TO BE PEKKY CYPRESS WITH WALLCOVERING FRAMED OUT. SEE ID-9
102	CLASSROOM/MEETING SPACE	LVT-C1, LVT-C2	WD-Cl	PT-C3	PT-C3	PT-C4	PT-C3	PT-C1	SEE ID-1 FOR FLOOR PATTERN PLAN
103	LIBRARY	LVT-C1	WD-C1	PT-C2				PT-C1	
104	TOILET	TL-C1	TB-1	PT-C2	PT-C2	PT-C2	WLT-C3	PT-C1	
105	TOILET	TL-C1	TB-1	PT-C2	PT-C2	PT-C2	WLT-C4	PT-C1	
105A	CLOSET	VCT-C1	RB-1	PT-C2				PT-C1	
106	STORAGE	VCT-C1	RB-1	PT-C2				PT-C1	
107	CORRIDOR	LVT-C1	WD-C1	PT-C7	PT-C2	PT-C2	PT-C2	PT-C1	
108	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C2	PT-C8	PT-C1	
109	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C8	PT-C2	PT-C2	PT-C1	
110	COPY/MAIL	LVT-C1	WD-C1	PT-C2				PT-C1	
111	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C8	PT-C2	PT-C2	PT-C1	
112	LOUNGE	LVT-C1	WD-C1	PT-C7	PT-C7	PT-C2	PT-C2, WLT-C5	PT-C1	
113	CONFERENCE ROOM	CPT-C2	WD-C1	PT-C2	PT-C2	WC-C2, PT-9	PT-C2	PT-C1	SEE ID-9 FOR ELEVATION
114	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C2	PT-C8	PT-C1	
115	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C2	PT-C8	PT-C1	
116	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C8	PT-C2	PT-C1	
117	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C2	PT-C8	PT-C1	
118	CORRIDOR	LVT-C1	WD-C1	PT-C7	PT-C7	PT-C2	PT-C7	PT-C1	
119	STORAGE	VCT-C1	RB-1	PT-C2				PT-C1	
120	TOILET	TL-C1	TB-1	PT-C2	PT-C2	PT-C2	WLT-C3	PT-C1	
121	FOYER	LVT-C1	WD-C1	PT-C7				PT-C1	
122	TOILET	TL-C1	TB-1	PT-C2	WLT-C4	PT-C2	PT-C2	PT-C1	
123	PHONE/MEETING	CPT-C1	WD-C1	PT-C2				PT-C1	
124	CORRIDOR	LVT-C1	WD-C1	PT-C7	PT-C7	PT-C2	PT-C2	PT-C1	
125	KITCHEN	LVT-C2	WD-C1	WLT-C6, PT-C2	WLT-C6, PT-C2	PT-C2	WLT-C6, PT-C2	PT-C1	
126	ELECTRICAL	VCT-C1	RB-1	PT-C2				PT-C1	
127	PRODUCTION	CPT-C1	WD-C1	PT-C2				PT-C1	
128	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C8	PT-C2	PT-C2	PT-C1	
129	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C8	PT-C2	PT-C2	PT-C1	
130	OFFICE	CPT-C1	WD-C1	PT-C2	PT-C2	PT-C2	PT-C8	PT-C1	
131	SCREEN PORCH	CONCRETE							PER ARCH SPEC
132	RISER ROOM								PER ARCH SPEC

ID	CRC BUILIDING - FINISH LEGEND	LOCATION & NOTES
TILE		
TL-C1	AMERICAN OLEAN: NEOSPECK, LIGHT GRAY NE03, MATTE, 12"x24"	TOILET ROOMS 104, 105, 120, 122. STRAIGHT SET (CONTINUE TO LOOK FOR ALTERNATIVES BUT OKAY TO PRICE AS IS FOR NOW)
WLT-C1	ARCHITESSA: LAPIS, RIO VELATO & VERDE OLIVA, 4"x12"	COMBINATION OF COLORS AT RECEPTION DESK OF GIFT SHOP 100, REFER TO ID-9 FOR EXACT LAYOUT AND QUANTITES
WLT-C2	ARCHITESSA: LAPIS, ABISSO VELATO & BRUNO DORATO, 1.3"x12"	COMBINATION OF COLORS AT RECEPTION DESK OF GIFT SHOP 100, REFER TO ID-9 FOR EXACT LAYOUT AND QUANTITES
WLT-C3	DALTILE: REMEDY, HERBAL RD21, 2"x10"	RESTROOM WET WALLS (104, 120). STRAIGHT SET
WLT-C4	DALTILE: REMEDY, HYDRO RD22, 2"x10"	RESTROOM WET WALLS (105, 122). STRAIGHT SET
WLT-C5	ARTISTIC TILE: TAPPETI GREEN BLEND MOSAIC, POLISHED STONE, 12-3/4"x13-7/16"	LOUNGE 112 BEVERAGE BAR SPLASH, REFER TO ID-9 FOR DETAILS. STRAIGHT SET
WLT-C6	WAYNE TILE COMPANY: ZELLIGE, WHEAT 5"x5"	KITCHEN 125 SPLASH, REFER TO ID- FOR LAYOUT. STRAIGHT SET
FLOORING		
LVT-C1	***SIGNATURE FLOORING: VIVID EXPRESSIONS L1008, VALERIO 008L, 9"x59.72"***	***GIFT SHOP 100, WAITING AREA 101, CLASSROOM/MEETING SPACE 102, LIBRARY 103, CORRIDOR 107, COPY/MAIL 110, CORRIDOR 118, FOYER 121, CORRIDOR 124. MONOLITHIC LAY PATTERN. LOUNGE 112 HERRINGBONE INSTALLTION, REFER TO ID-1 FOR EXACT LOCATION. (UPDATED 6.14.23)***
LVT-C2	PATCRAFT: MARK MAKING 1509V 5MM, CASCADE-V2 00370, 5.96"x48"	KITCHEN 125, CLASSROOM/MEETING SPACE 102. REFER TO ID-1 FOR DESIGN INTENT/INSTALLATION LAY PATTERN
CPT-C1	SHAW CONTRACT: IKAT TILE 5T346, RECOLLECT 85215, 18"x36"	ALL OFFICE CARPET (108, 109, 111, 114, 115, 116, 117, 127, 128, 129, 130). ASHLAR (CONTINUE TO LOOK FOR ALTERNATIVES BUT OKAY TO PRICE AS IS FOR NOW)
CPT-C2	SHAW CONTRACT: WRITTEN TILE 5T407, SCRIPT 05210, 9"x36"	CONFERENCE ROOM 113. ASHLAR
VCT-C1	ARMSTRONG: STANDARD EXCELON, IMPERIAL TEXTURE, MINT CREAM 51876, 12"x12"	105A, 106, 119, 126 WANT TO USE LEFTOVER LVT IF POSSIBLE TO AVOID TRANSITIONS
BASES		
TB-C1	AMERICAN OLEAN: NEOSPECK, LIGHT GRAY NE03, MATTE, 12"x24"	ALL TOILET ROOMS, TILE CUT IN HALF, USED AS BASE
RB-C1	NEED TO SPEC COLOR	105A, 106, 119, 126
WD-C1	SHERWIN WILLIAMS: INTELECTUAL GRAY SW7045	ALL WOOD BASES TO BE PAINTED ***CONFIRM COLOR WITH FINAL CARPET SELECTION
WALLCOVERING		
WC-C1	ORGANOID: RELAX, ROLLED GOODS, W: 4' 5-9/16"	GIFT SHOP 100, REFER TO ID-9 FOR LOCATION AND HEIGHTS
WC-C2	ORGANOID: LAVEDL MEDIUM, ROLLED GOODS, W: 4' 5-9/16"	CONFERENCE ROOM 113, REFER TO ID-9 FOR LOCATION
LAMINATE		
LAM-C1	WILSONART: PHANTOM ECRU 8212K-28, GLOSS LINE FINISH	CLASSROOM/MEETING SPACE 102
PAINT		
PT-C1	SHERWIN WILLIAMS: WESTHIGHLAND WHITE SW7566, FLAT	CEILING COLOR UNLESS NOTED OTHERWISE
PT-C2	SHERWIN WILLIAMS: DRIFT OF MIST SW9166, EGGSHELL	ALL WALLS UNLESS NOTED ON ID-3
PT-C3	SHERWIN WILLIAMS: WINDOW PANE 6210, EGSHELL	CLASSROOM/MEETING SPACE 102 OVERALL NEUTRAL
PT-C4	SHERWIN WILLIAMS: HALCYON GREEN SW6213, EGGSHELL	CLASSROOM/MEETING SPACE 102 ACCENT WALL
PT-C5	SHERWIN WILLIAMS: TRADEWIND SW6218, SEMI-GLOSS	LOUNGE 112 BEVERAGE BAR CABINET COLOR
PT-C6	SHERWIN WILLIAMS: USEFUL GRAY SW7050, EGGSHELL	CONFERENCE ROOM 113, ALL WALLS UNLESS NOTED OTHERWISE
PT-C7	SHERWIN WILLIAMS: SILVERMIST SW7621, EGGSHELL	ACCENT COLOR IN CORRIDOR, REFER TO ID-5 FOR LOCATIONS
PT-C8		ACCENT COLOR FOR OFFICES ***MAKE SELECTION ONCE CARPET IS CONFIRMED
PT-C9	SHERWIN WILLIAMS: INTELLECTUAL GRAY SW7045, SEMI-GLOSS	ALL TRIM COLOR
COUNTERTOPS		
QTZ-C1	CARA GREEN: GEOS, WHITE BIRCH, 3CM	GIFT SHOP 100 RECEPTION DESK
QTZ-C2	CARA GREEN : GEOS, MEADOWBROOK, 3CM	CLASSROOM/MEETING SPACE 102
QTZ-C3	CAMBRIA: SANDGATE, 3CM	ALL RESTROOM COUNTERTOPS (104, 105, 120, 122)
QTZ-C4	CORIAN: INDIGO SWIRL, 3CM	LOUNGE 112 BEVERAGE BAR COUNTERTOP AND WATERFALL EDGE
QTZ-C5	CAMBRIA: MONTGOMERY, 3CM	KITCHEN 125 COUNTERTOPS
GROUT		
GT-C1		
SCHLUTER		

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notes:

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date: 6/16/23

drawing title:

CRC - FINISH SCHEDULE

sheet no.:

ID-11

FINISH SCHEDULE									
				WALLS (ALL WALLS THE SAME AS NORTH UNLESS NOTED)					
ROOM #	ROOM NAME	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	CEILING	NOTES
200	FAMILY RESTROOM	TL-E3	TB-E1	WC-3	WLT-E2	WC-3	WC-3	PT-E4	
201	LOBBY	TL-E2	WD-E1	WC-E1, PT-E1	PT-E1, PT-E2	PT-E1, PT-E2	PT-E1, PT-E2	PT-E4	
202	MEN'S RESTROOM	TL-E3	TB-E1	PT-E2	WLT-E2, WC-E3	PT-E2	PT-E2	PT-E4	
203	WOMEN'S RESTROOM	TL-E3	TB-E1	PT-E2	WLT-E2, WC-E3	PT-E2	PT-E2	PT-E4	
204	CATERING KITCHEN	TL-E4	TILE?	PT-E2				PT-E4	
205	TOILET	TL-E1	TB-E2	PT-E2	PT-E2	WLT-E1, WC-E3	PT-E2	PT-E4	
206	KITCHEN ENTRY	TL-E1	TB-2	PT-E2				PT-E4	
207	WEDDING PREP	CPT-E3	WD-E1	PT-E2				PT-E4	
208	BANQUET HALL	CPT-E1, CPT-E2	WD-E1	PT-E2	PT-E2, WC-E2	PT-E2	PT-E2	PT-E4	
209	STORAGE	VCT-E1	RB-E1	PT-E2				PT-E4	
210	RISER ROOM	CONCRETE	WD-E1	PT-E2				PT-4	
211	STORAGE	CONCRETE	WD-E1	PT-E2				PT-E4	

ID	FINISH LEGEND - EVENT CENTER	LOCATION & NOTES
TILE		
TL-E1	AMERICAN OLEAN: NEOSPECK, LIGHT GRAY NE03, MATTE, 12"x24"	RESTROOM 205, STRAIGHT SET (CONTINUE TO LOOK FOR ALTERNATIVES BUT OKAY TO PRICE AS IS FOR NOW)
TL-E2	PORCELANOSA: NOA-R TANZANIA ALMOND, 24"x24"	LOBBY 201, STRAIGHT SET
TL-E3	ARCHITESSA: WINDBOUD, SEEDPEARL, 12"x24"	RESTROOMS 200, 202, 203. STRAIGHT SET
TL-E4	DALTILE: QUARRY TEXTURES, ASHEN GRAY 0T03, MATTE, 8"x8"	CATERING KITCHEN 204
WLT-E1	DALTILE: REMEDY, ELIXIR RD20, 2"x10"	RESTROOM 205, STRAIGHT SET. REFER TO ID-6 FOR LOCATION
WLT-E2	ARCHITESSA: WINDBOUND, SEEDPEARL, 12"x24"	FAMILY RESTROOM 200 TO CEILING, RESTROOMS 202, 203 UP TO 7'. ALL STRAIGHT SET. REFER TO ID-6 FOR LOCATIONS.
FLOORING		
CPT-E1	SHAW CONTRACT: IKAT TILE 5T346, TIMELESS 85402, 18"x36"	BANQUET HALL 208 MAIN FLOORING, REFER TO ID- FOR FLOOR PATTERN. ASHLAR
CPT-E2	PATCRAFT: STRUCTURE ARC 10599, POINT 00100, 18"x36"	WEDDING PREP 207. MONOLITHIC
VCT-1	ARMSTRONG: STANDARD EXCELON, IMPERIAL TEXTURE, DUSTY MILLER, 12"x12"	STORAGE 209 WANT TO USE CARPET TO AVOID TRANSITIONS
BASES		
TB-E1	ARCHITESSA: WINDBOUD, SEEDPEARL, 12"x24"	RESTROOMS 200, 202, 203 BASE CUT IN HALF
TB-E2	AMERICAN OLEAN: NEOSPECK, LIGHT GRAY NE03, MATTE, 12"x24"	RESTROOM 205 BASE CUT IN HALF
WD-E1	SHERWIN WILLIAMS: INTELLECTUAL GRAY SW7045	ALL TRIM COLOR ***CONFIRM COLOR UPON FINAL CARPET SELECTION
RB-E1	NEED TO SPEC COLOR	STORAGE 209
WALLCOVERING		
WC-E1	ORGANOID: ALMWIESN, ROLLED GOODS, W: 4' 5-9/16"	LOBBY 201, REFER TO ID- FOR LOCATION
WC-E2	MOMENTUM: KINGSTON WC, LUCEA 2VKT-01, 54" W	BANQUET HALL 208, REFER TO ID- FOR LOCATION
WC-E3	PHILLIP JEFFRIES: VINYL SOHO HEMP, TEAL TRANCE 9402, 54"W	RESTROOMS 200,202,203, REFER TO ID-6 FOR LOCATIONS
LAMINATE		
LAM-1	WILSONART: RIVER CHERRY 7937-38, FINE VELVET FINISH	RESTROOMS 200, 202, 203 VANITIES
PAINT		
PT-E1	SHERWIN WILLIAMS: RAINSTORM SW6230, SEMI-GLOSS	LOBBY 201 WAINSCOT, REFER TO ID- FOR LOCATIONS
PT-E2	SHERWIN WILLIAMS: MODERN GRAY SW7632, EGGSHELL	BANQUET HALL 208, ALL WALLS UNLESS NOTED OTHERWISE
PT-E3	SHERWIN WILLIAMS: WORLDLY GRAY SW7043, SEMI-GLOSS	LOBBY 201 NEUTRAL COLOR. ALL WALLS REFER TO ID-10 FOR ACCENT WALL ELEVATION.
PT-E4	SHERWIN WILLIAMS: INTELECTUAL GRAY SW7045, SEMI-GLOSS	ALL TRIM COLOR UNLESS NOTED OTEHRWISE
PT-E5	SHERWIN WILLIAMS: WESTHIGHLAND WHITE SW7566, FLAT	ALL CEILING COLOR UNLESS NOTED OTHERWISE
COUNTERTOPS		
QTZ-E1	ECO-TERR SLABS: DIAMANTE G, 3CM	RESTROOMS 200, 202, 203
QTZ-E2	CAMBRIA: IRONSBRIDGE, 3CM	BANQUET HALL 208 BAR COUNTERTOP AND SPLASH, WEDDING PREP 207
QTZ-E3	CAMBRIA: SANDGATE, 3CM	TOILET 205
GROUT		
GT-E1		
SCHLUTER		

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date: 6/16/23

drawing title:

EVENT CENTER - FINISH SCHEDULE

sheet no.:

ID-12

1.0 CODES AND STANDARDS:

1.1 "2018 North Carolina State Building Code" and "International Building Code", 2015.

1.2 "Minimum Design Loads for Buildings and other Structures" SEI/ASCE 7-16.

1.3 "Building Code Requirements for Structural Concrete (ACI 318-14)" American Concrete Institute 2014.

1.4 "Manual of Standard Practice", Concrete Reinforcing Steel Institute, latest editio

1.5 "National Design Specification for Wood Construction with 2015 NDS Supplement," ANSI/AWC NDS-2015.

2.0 DESIGN LOADS:
Project Located in: City of Newport, County of Carteret, State of North Carolina.

2.1 Gravity Loads: (Reduced where allowed)

GRAVITY LOADS		
Location	**Uniform (psf)**	**Concentrated (lbs) (Over 2.5'x2.5')**
Roof Loads:		
Dead Load	20	
Live Load	20	300
Floor Loads:		
Dead Load	50	
Floor Live Loads:		
Office	81	2000
Assembly	100	
Mechanical & Electrical Rooms	150	
Storage	125	

2.2 Drifting Snow Loads per Referenced Code.

Pg = 10 psf
I = 1.0
Ce = 0.9
Ct = 1.0

2.3 Risk Category = II

2.4 Wind Loads per Referenced Code.

Basic Design Wind Speed:
3-second Gust PER ASCE
V= 143mph
Exposure "C"

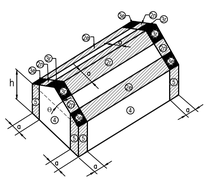
Main Wind Force Resisting System:
Building is enclosed & Internal Pressure coefficient (GCpi) = +0.18 & -0.18
Topographic Factor Kzt = 1.0
Wind Directionality Factor, Kd = 0.85

CALCULATED WIND BASE SHEAR (VULT FOR MWFRS)		
Unit Name	**Vx (k)**	**Vy (k)**
Resource Center	54.2	162
Event Center	54.2	85.7
Garage/Workshop	.5	.45

Components & Cladding

Components and Cladding Wind Pressure (psf)									
Walls	Area < 10ft²		< 20ft²		Area < 50ft²		Area < 100ft²		Area < 500ft²	
Zone 4	37.8	41.6	35.9	-39.7	33.1	-36.9	30.4	-35.0	26.5	-30.3
Zone 5	37.8	-53.0	35.9	-49.2	33.1	-43.5	30.4	-39.7	26.5	-30.3
Roof	Area < 10ft²		Area < 20ft²		Area < 50ft²		Area < 100ft²		Area < 500ft²	
Zone 1	18.9	-56.7	17.0	-56.7	16.0	-47.3	16.0	-39.7	16.0	-30.3
Zone 2e	18.9	-56.7	17.0	-56.7	16.0	-47.3	16.0	-39.7	16.0	-30.3
Zone 2n	18.9	-94.6	17.0	-81.3	16.0	-64.3	16.0	-51.1	16.0	-45.4
Zone 2r	18.9	-94.6	17.0	-81.3	16.0	-64.3	16.0	-51.1	16.0	-45.4
Zone 3e	18.9	-94.6	17.0	-81.3	16.0	-64.3	16.0	-51.1	16.0	-45.4
Zone 3r	18.9	-104.0	17.0	-87.0	16.0	-68.1	16.0	-68.1	16.0	-68.1

Notes:
1. Areas noted are effective wind areas as per ASCE 7, 26.2 definitions.
2. See figures below for Zone locations.
3. Plus and minus signs signify pressures acting toward and away from surfaces, respectively.
4. Design pressures shown in table are strength design wind pressures. Allowable stress design wind pressures may be calculated by factoring the pressures by 0.6.
5. Design pressures for effective wind areas between those noted in schedule may be interpolated.
6. Tributary area = greater of LxW or LxL/3.
7. Deflections may be calculated based on 42% of these loads.



Gable Roof (7°< Θ ≤45°)

a = 10ft "corner zone"

2.5 Seismic Loads per Referenced Code.

Risk Category = II
Site class = "D" (Presumptive)
Spectral Response Coefficients:
SDS = 0.105
SD1 = 0.079
Cs = 0.016g

Seismic Design Category = "B"
Seismic Importance Factor = 1.0
Basic Seismic – Force – Resisting System light-frame (wood) walls sheathed with wood structural panels rated for shear resistance

RX=RY=6.5, ΩX=ΩY=3.0, CDX=CDY=4.0
Design Base Shear
Resource Center Vx = Vy = 2.89k
Event Center Vx = Vy = 2.0k
Garage Vx = Vy = 0.54k
Building Height Limit = NL
Analysis Procedure – per Referenced Code.
Equivalent Lateral Force Procedure

2.6 Guardrail designed per Referenced Code, Chapter 16 IBC

Guardrail:
Uniform load = 50 plf, any direction
Concentrated load = 200 lbs, any direction
Intermediate Rail: (all those except handrail)

2.7 Flood Loads:
Project is not located in a flood zone.

3.0 FOUNDATIONS:

3.1 Site soil conditions are unknown. A geotechnical report is not currently available. Foundation design is based upon a presumptive bearing capacity of 1500 psf, as allowed by the 2018 North Carolina State Building Code, Section 1806. A qualified geotechnical engineer shall be present to verify bearing capacity and the results shall be sent to the engineer

3.2 Footings shall bear on strata capable of sustaining a minimum bearing pressure of 1500 psf.

3.3 Top of footing (T/FTG) elevations are shown on the drawings or are to be determined by the Contractor in the field in accordance with the guidelines set forth in the drawings.

3.4 Bottom of exterior footings, grade beams and walls shall bear at a minimum depth of 1'-0" below final grade for frost protection.

3.5 Testing and Inspection:
a. All areas to have slabs on grade shall be proof rolled in accordance with and under observation of the Geotechnical Engineer and approved prior to preparation for concrete placement.

b. All foundation bearing strata shall be inspected and approved by the Geotechnical Engineer prior to any concrete placement.

c. Geotechnical Engineer shall be the sole judge as to suitability of all foundation and/or slab bearing strata.

d. Footing bearing elevations shall be adjusted in the field as required to meet the design bearing pressures by additional excavation or compaction and/or backfilling or by other means acceptable to the Geotechnical Engineer.

3.6 Undercutting to remove existing fill beneath footings and slab shall be performed at the direction of the Geotechnical Engineer.

3.7 Engineered Fill: All fill material shall be selected in accordance with the Geotechnical Report Material shall be a clean, low plastic soil with a plasticity index less than 30 (less than 15 is preferred), liquid limit less than 50, and unit weight of 120 pcf (+ 5 pcf)

3.8 Compaction: All fill shall be placed in loose lifts not exceeding 8 inches in thickness and compacted to a minimum of 96 percent Standard Proctor (ASTM D-698) except that the top 12 inches shall be compacted to a minimum of 98 percent Standard Proctor. Moisture shall be controlled to within 3 percent above or below optimum content.

3.9 Remove all topsoil and organic materials. The stripping should extend at least 10' beyond the proposed construction limits.

4.0 CONCRETE:

4.1 Concrete Strength:
All concrete shall be in accordance with the American Concrete Institute (ACI) 301 and 318.

4.2 Concrete shall have a 28 day compressive strength and density as follows:
a. Footings, Grade Beams, and Interior Slab-on-grade.....3,000psi, Density = ±145pcf
b. Exterior Slab on Grade.....4,000psi, Density = ±145pcf

4.3 Concrete Mix Designs:
a. Submittals: Submit written reports of each proposed concrete mix not less than 15 days prior to the start of work.
b. Mix designs, including water, cement ratios and slumps, shall be prepared in accordance with ACI 301-05, Section 4, Cement shall conform to ASTM C 150 Type 1 or at contractor's option, ASTM C 595 Type IP where fly ash is permitted. Normal weight aggregate shall conform to ASTM C 33 and light weight aggregate shall conform to ASTM C 330. No admixtures containing calcium chloride shall be permitted in any concrete.
c. Aggregate size shall be #67 stone for supported slabs or other formed concrete elements; #57 stone for slabs on grade and footings or other concrete elements formed from and poured against earth; #89 stone for masonry grout.
d. Water reducing admixture shall be used in all concrete.
e. Air entraining admixture in accordance with ACI 301 shall be used in all concrete exposed freezing and thawing during construction or service conditions.
f. Concrete subjected to freezing/thawing shall have a maximum water/cement ratio of 0.45 and shall contain the amount of air entraining agent specified in ACI 301-05 Section 4.

4.4 Curing:
See specifications for curing method options and apply within two (2) hours after completion of finishing to all concrete flatwork and walls, U.N.O., other than footings and grade beams.

4.5 Use a non-corrosive, non-chloride accelerating admixture in concrete exposed to temperatures below 40 degrees. Uniformly heat the water and aggregates to a temperature of not less than 50 degrees. Place and cure concrete in accordance with ACI 306.

4.6 When hot weather conditions exist, place and cure concrete in accordance with ACI 301. Cool ingredients before mixing to maintain concrete temp. at time of placement below 90 degrees.

4.7 Reinforcing in all abutting concrete, including footings shall be continuous through or around all corners or intersections. Dowels or splices shall be equal in size and spacing to the reinforcing in the abutting members.

4.8 Refer to architectural drawings for door and window openings, drips, reglets, washes, masonry anchors, brick ledge elevations, slab depressions and miscellaneous embedded plates, bolts, anchors, angles, etc.

4.9 Refer to plumbing, mechanical and electrical drawings for underfloor, perimeter and other drains and for sleeves, outlet boxes, conduit, anchors, etc. The various trades are responsible for their items.

4.10 Base plates, anchor rods, support angles and other steel exposed to earth or granular fill shall be covered with a minimum of 3" of concrete.

4.11 Fill slabs, not shown on the structural drawings and all exterior slabs to be broom finished, shall be reinforced with a minimum of 6 x 6 x W2.0 x W2.0 WWM unless noted otherwise on other drawings.

4.12 Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
a. Specified overall values of flatness, F(F) 25; and of levelness, F(L) 20; with minimum local values equal to ⅔ of the overall flatness and levelness values.
b. The composite F(F) and F(L) numbers shall be measured and reported within 72 hours after completion of slab concrete finishing operations and before removal of any supporting shores.

4.13 Non-shrink grout shall be pre-mixed, non-corrosive, non-metallic, non-staining containing silica sands, Portland cement, shrinkage compensating and water reducing agents. Product shall only require the addition of water. Minimum compressive strength shall be 2500 psi after one day and 7000 psi after 28 days. Grout shall be free of gas producing or air releasing and oxidizing agents and contain no corrosive iron, aluminum or gypsum.

4.14 Provide concrete grout – not mortar – for reinforced masonry lintel and bond beams where indicated on drawing or as scheduled.

4.15 Tolerance for anchor rods and other embedded items shall be per the AISC Code of Standard Practice Section 7.5.

4.16 Unless otherwise shown in the architectural drawings, provide 3/4-inch chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

4.17 Concrete cover for cast-in-place concrete reinforcement:
Concrete cast against & permanently exposed to earth:.....3 Inches
Concrete exposed to earth or weather:
No. 6 through No. 18 Bars:.....2 Inches
No. 5 Bar and smaller:.....1½" Inches
Concrete not exposed to weather or in contact with ground:
Slabs, Walls, Joists:
No. 11 Bar and smaller:.....¾" Inches
Beams, Columns:
Primary Reinforcement, Ties, Stirrups:.....1½" Inches

5.0 REINFORCING STEEL:

5.1 Reinforcing shall be domestic new billet steel conforming to ASTM A615, Grade 60 or 60S including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.

5.2 Field bending of concrete reinforcing steel is not permitted.

5.3 Welded wire mat and fabric shall conform to ASTM A184 and A185 respectively and shall be provided in flat sheets. Welded wire mat/fabric shall be lapped 0'-6" at all splices.

5.4 Bar Splices:

	f'c = 3,000psi		f'c = 4,000psi		f'c = 5,000psi	
Bar Size	**Ld (in)**	**Class "B" Lap Splice (in)**	**Ld (in)**	**Class "B" Lap Splice (in)**	**Ld (in)**	**Class "B" Lap Splice (in)**
#3	17	22	15	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56

1. Values are based on normal weight concrete.
2. Ld = minimum embed of rebar
3. Class "B" lap splice refers to minimum distance bars must be lapped for a full tension splice.

6.0 GENERAL WOOD FRAMING NOTES:

6.1 All exterior and interior load bearing walls shall be as noted or approved equals:
2x6 SPF #2 & 2x4 SPF #2
See plans and load bearing wall schedule for locations, spacing, and load bearing studs species.
All interior non-load bearing wall, shall be SPF #2, or approved equal.
All sill and top plates shall be SYP #2 or better. Pressure treat all sill plates in contact with concrete or masonry.
All pressure treated 2x material shall be SYP #2 or better and shall be treated in accordance with AWPA Standard U1 to the requirements of Use Category 3B (UC3B) or Use Category 4A (UC4A).
All pressure treated Parallam shall be Truss Joist MacMillan, Walmanized Parallam PSL, or approved equal.
All pressure treated Glulam (GL) members shall be Rosboro Treated X-Beam 2400F_b-1.9E or approved equal.
All Glulams shall be Rosboro 24F-V4 or better.

6.2 All Laminated Veneer Lumber (LVL) shall be Louisiana Pacific, Gang-Lam 2950F_b-2.0E or approved equal.
All roof and floor I-Joists shall be Trus Joist TJI or Georgia-Pacific wood I beam or approved equal. The joist supplier shall also submit drawings for review prior to fabrication. The shop drawings shall show the following:
– Layout plan
– Bearing locations
– Hurricane clips and tie downs

6.3 Wall Sheathing
– Exterior wall sheathing shall be 7/16" exterior grade plywood.
– Interior Shear Wall sheathing shall be 7/16" OSB or plywood.
– Block all edges @ exterior walls and Shear Walls.
– First row of sheathing at slab on grade shall be pressure treated.
– See S5.0 sheets for shear wall nailing requiremnts block all edges.
– All other non-shear Wall sheathing shall be nailed to supports w/ 8d @ 3"o.c. edges and 12"o.c. field.

6.4 Roof Deck/Diaphragm
– Roof sheathing shall be 5/8-inch exterior grade plywood.
– Place long direction perpendicular to framing
– Stagger end joints
– Provide roof sheathing clips, Simpson PSCL/PSCA or approved equal at all unsupported edges.
– Nail to supporting members with 10d ring shank @ 6" o.c. edges and 12" o.c. field..

6.5 See plan for location of Wood Shear Walls and detail sheets for framing requirements.

6.6 [X] number in box notes the required number of bundled studs in that location. Bundled studs shall rest on framing member below or provide solid blocking from sub-floor to plate or girder below. Good framing practices shall be used in all cases.

6.7 All strap and tie connections shall have z-max (g185) triple zinc coating (or hot-dipped galvanized). All nails in contact with pressure treated lumber shall be hot-dipped galvanized and approved for use in pressure treated lumber.

6.8 Do not bend coil straps.

6.9 Unless noted otherwise, connect all building components per table 2304.10.1 – fastening schedule, per IBC 2016.

7.0 POST-INSTALLED ANCHORS:

7.1 Except where indicated on the drawings, post-installed anchors shall consist of the following anchor types as provided by HILTI, Inc. Contact HILTI at (800) 879-8000 for product related questions.

Anchorage to Concrete
a. Adhesive anchors for cracked and uncracked concrete use:
1. HILTI HIT-HY 200 Safe Set System with HILTI HIT-Z Rod per ICC ESR-3187 (pending).
2. HILTI HIT-HY 200 Safe Set System with HILTI Hollow Drill Bit System with HAS-E threaded rod per ICC ESR-3187.
3. HILTI HIT-RE 500-SD Epoxy Adhesive Anchoring system with HAS-E threaded rod per ICC ESR-2322 for slow cure applications.

b. Medium duty mechanical anchors for cracked and uncracked concrete use:
1. HILTI KWIK HUS EZ and KWIK HUS EZ-I Screw Anchors per ICC ESR-3027
2. HILTI KWIK BOLT-TZ Expansion Anchors per ICC ESR-1917
3. HILTI KWIK Bolt 3 Expansion Anchors (uncracked concrete only) per ICC ESR-2302

c. Heavy duty mechanical anchors for cracked and uncracked concrete use:
1. HILTI HDA Undercut Anchors per ICC ESR 1546
2. HILTI HSL-3 Expansion Anchors per ICC ESR 1545

Rebar Doweling into Concrete
a. Adhesive anchors for cracked and uncracked concrete use:
1. HILTI HIT-HY 200 Safe Set System with HILTI Hollow Drill Bit System with continuously deformed rebar per ICC ESR-3187.
2. HILTI HIT-RE 500-SD Epoxy Adhesive Anchoring System with continuously deformed rebar per ICC ESR-2322.

Anchorage to Solid Grouted Masonry
a. Adhesive Anchors use:
1. HILTI HIT-HY 70 Masonry Adhesive Anchoring System (ICC pending).
2. Steel anchor element shall be HILTI HAS-E continuously threaded rod or continuously deformed steel rebar.
b. Mechanical Anchors use:
1. HILTI KWIK BOLT-3 Expansion Anchors per ICC ESR 1385.

Anchorage to Hollow/Multi-wythe Masonry
a. Adhesive Anchors use:
1. HILTI HIT-HY 70 Masonry Adhesive Anchoring System per ICC ESR-3342.
2. Steel anchor element shall be HILTI HAS-E continuously threaded rod or continuously deformed steel rebar.
3. The appropriate size screen tube shall be used per adhesive manufacturer's recommendation.

7.2 Anchor capacity used in design shall be based on the technical data published by HILTI or such other method as approved by the Structural Engineer of record. Substitution requests for alternate products must be approved in writing by the Structural Engineer of record prior to use. Contractor shall provide calculations demonstrating that the substituted product is capable of achieving the performance values of the specified product. Substitutions will be evaluated by their having and ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature and installation temperature.

7.3 Install anchors per the manufacturer instructions, as included in the anchor packaging.

7.4 Overhead adhesive anchors must be installed using the HILTI PROFI System.

7.5 The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training for all of their anchoring products specified. The Structural Engineer of record must receive documented confirmation that all of the contractor's personnel who install anchors are trained prior to the commencement of installing anchors.

7.6 Anchor capacity is dependant upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings.

7.7 Existing reinforcing bars in the concrete structure may conflict with specific anchor locations. Unless noted on the drawings that the bars can be cut, the contractor shall review the existing structural drawings and shall undertake to locate the position of the reinforcing bars at the locations of the concrete anchors, by HILTI FERROSCAN, GPR, X-ray, chipping or other means.

8.0 SHEAR WALL AND UPLIFT HOLDOWN SYSTEM:

8.1 See plans for shear wall locations and designations. See Schedules and details on S5.01 for shear wall holdown requirements.

8.2 See roof plan and sections for uplift requirements.

9.0 CONSTRUCTION AND SAFETY:

9.1 Woods Engineering P.A.'s responsibility is limited to the details and information shown on these drawings. It is the responsibility of the Contractor to provide adequate safety measures required by local codes as well as OSHA Standards for the Construction Industry.
This should include, but not be limited to the following:
Shoring to protect new as well as existing structures.
Necessary Scaffolding.
Material Handling Equipment.
Trench Boxing.

10.0 SHOP DRAWING SUBMITTAL:

10.1 See Project Manual

10.2 Contractor shall submit Electronic copies (PDF format) of each shop drawing for review. Shop drawings shall be reviewed by the Contractor prior to submission to the Engineer. The Contractor shall allow 10 working days for shop drawing approval.

11.0 STRUCTURAL INSPECTIONS:

11.1 Special Inspections of the structural frame are not required for this project. However, material inspections per Chapter 17 of the 2012 NCSBC are required. See schedules on sheet S1.04 for requirements.

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WOODS ENGINEERING P.A. CORPORATE SEAL No. C-1806 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

Digitally signed by Adam L. Sisk, PE, SE
DN: Email=lm@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2023.06.20 17:56:21-04'00'

THE NC COASTAL FEDERATION'S CENTER FOR COASTAL PROTECTION AND RESTORATION

HIGHWAY 24
OCEAN, NC

REV.	DATE	DESCRIPTION

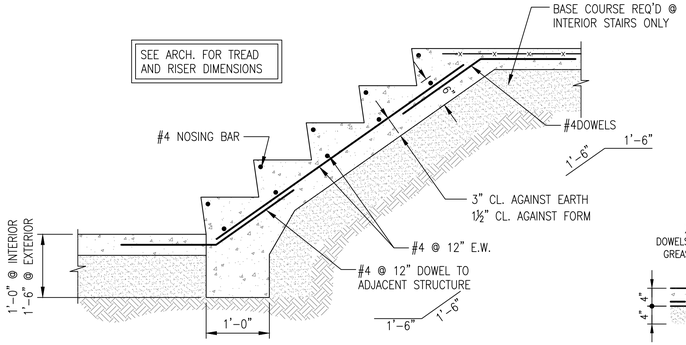
Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: GENERAL NOTES

Sheet No.: S1.01

ABBREVIATIONS

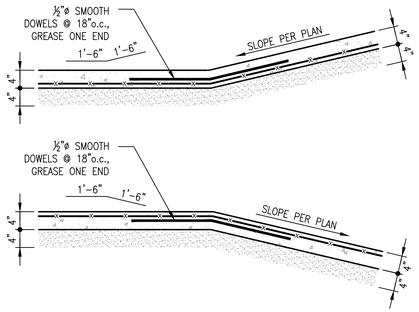
@	AT
&	AND
AB	ANCHOR BOLTS
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ARCH	ARCHITECTS – ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B, BOTT	BOTTOM
BCX	BOTTOM CHORD EXTENSION
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BM	BEAM
BOS	BOTTOM OF STEEL
BRG	BEARING
BTWN	BETWEEN
CFS	COLD FORMED STEEL
CJ	CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS
CONTR	CONTRACTOR
CSJ	COMPOSITE STEEL JOIST
CTRD	CENTERED
DBA	DEFORMED BAR ANCHOR
DD	DELEGATED DESIGN
DEFL	DEFLECTION
DEPR	DEPRESSION – DEPRESSED
DET	DETAIL
DIAG	DIAGONAL
ø	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DWG(S)	DRAWING(S)
DWL(S)	DOWEL(S)
EA	EACH
ELEV	ELEVATION
EMBED	EMBEDDED – EMBEDMENT
ENG	ENGINEER
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
EF	EACH FACE
EJ	EXPANSION JOINT
EOD	EDGE OF DECK
EOM	EDGE OF MASONRY
EOS	EDGE OF SLAB
EOW	EDGE OF WALL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
FS	FAR SIDE
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GT	GIRDER TRUSS
HD	HEADED
HI	HIGH
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HIP TRUSS
IFM	INSIDE FACE OF MASONRY
INT	INTERIOR
JBE	JOIST BEARING ELEVATION
JT	JOINT
K	KIP–S
KB	KICKER BRACE
KSI	KIPS PER SQUARE INCH
(L)	LONG SIDE REINFORCEMENT
LB	LONG BAR
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LO	LOW
LOC	LOCATION
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MC	MOMENT CONNECTION
MECH	MECHANICAL
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOW	MIDDLE OF WALL
MP	MASONRY PILASTER
d	NAILS – PENNY
No	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OC	ON CENTER
OFB	OUTSIDE FACE OF BRICK
OFM	OUTSIDE FACE OF MASONRY
OFS	OUTSIDE FACE OF STUD
OPNG	OPENING
OPP	OPPOSITE HAND
PEBS	PRE–ENGINEERED BUILDING SUPPLIER
PED	PEDESTAL
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PLF	POUNDS PER LINEAR FOOT
PT	PRESSURE TREATED
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
(S)	SHORT SIDE REINFORCEMENT
SB	SHORT BAR
SCHD	SCHEDULE
SF	STEP FOOTING
SIM	SIMILAR
SOG	SLAB ON GRADE
SPEC(S)	SPECIFICATION(S)
SPF	SPRUCE PINE FUR
SQ	SQUARE
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STR	STRUCTURAL
SW	SHEAR WALL
SYP	SOUTHERN YELLOW PINE
T	TOP
TOX	TOP CHORD EXTENSION
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VB	VEHICLE BARRIER
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WITH
WWF	WELDED WIRE FABRIC



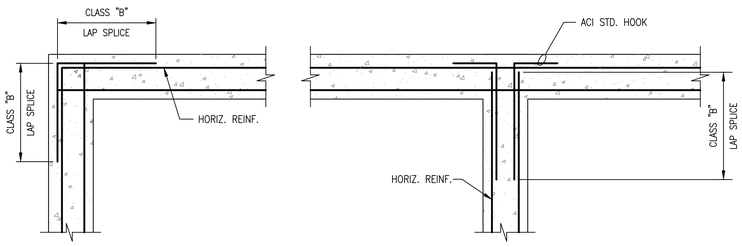
TYPICAL STAIR ON GRADE
SCALE: 3/4" = 1'–0"

2X JOIST HANGER SCHEDULE		
JOIST SIZE	FLOOR JOIST HANGERS	ROOF RAFTER HANGERS
2x6	LUS26	HU26
2x8	LUS26	HU28
2x10	LUS28	HU210
2x12	LUS210	HU210

– PROVIDE SIMPSON HANGERS AS SHOWN (OR EQUIVALENT) U.N.O. ON PLAN
– JOIST HANGERS NOT REQUIRED WHERE DETAILS SHOW JOISTS SITTING ON LEDGER

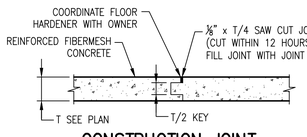


TYPICAL RAMP AT SLAB ON GRADE
SCALE: 3/4" = 1'–0"

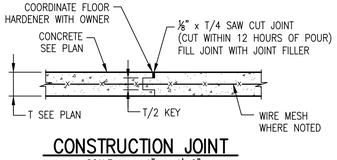


❶ FOOTING CORNERS

❷ FOOTING INTERSECTION

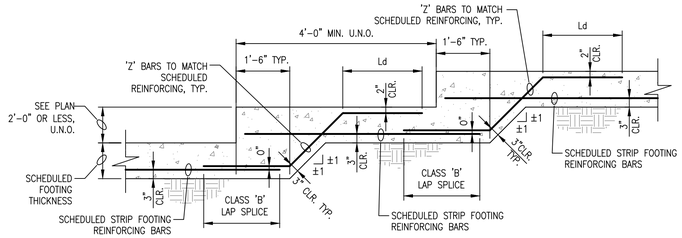


CONSTRUCTION JOINT
SCALE: 1" = 1'–0"
WITHOUT WIRE MESH

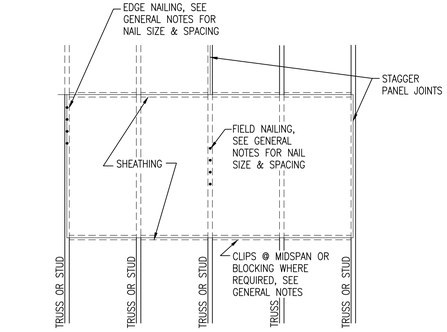


CONSTRUCTION JOINT
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WITH WIRE MESH

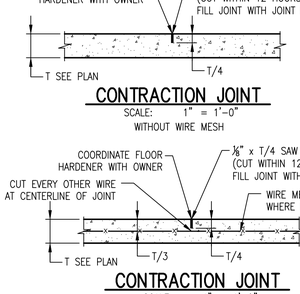
TYPICAL CORNER REINFORCING FOR CONCRETE FOOTINGS
SCALE: 3/4" = 1'–0"



STEP FOOTING DETAIL
SCALE: 1/2" = 1'–0"

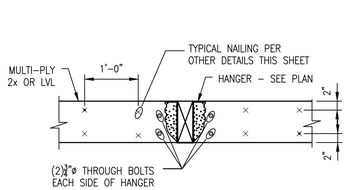


NAILING PATTERN FOR ROOF, FLOOR, OR WALL SHEATHING
SCALE: 1/2" = 1'–0"

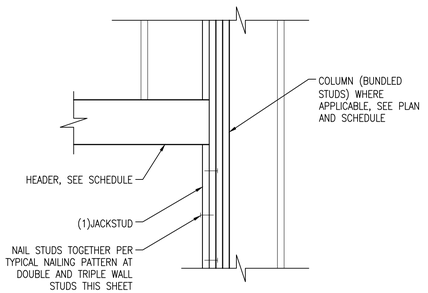


CONTRACTION JOINT
SCALE: 1" = 1'–0"
WITHOUT WIRE MESH

CONTRACTION JOINT
SCALE: 1" = 1'–0"
WITH WIRE MESH

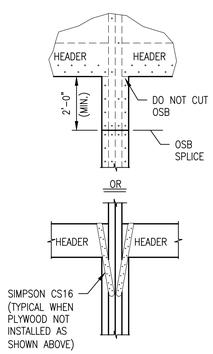


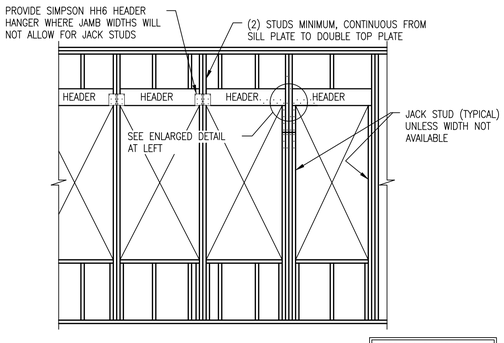
THREE & FOUR–PLY SIDE–LOADED MEMBERS



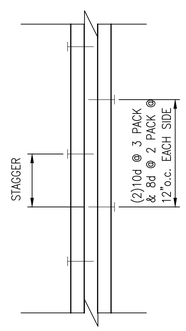
TYPICAL WINDOW AND DOOR
SCALE: 3/4" = 1'–0"

NOTES:
1. THIS DETAIL APPLIES TO ALL HEADERS, THIRD FLOOR AND ABOVE, UNO.

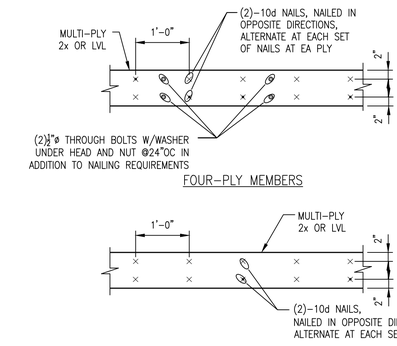




TYPICAL FRAMING AT EXTERIOR WINDOW OR DOOR OPENING
SCALE: 3/8" = 1'–0"



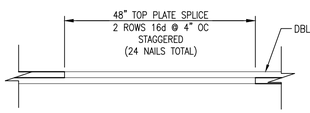
TYPICAL NAILING PATTERN AT DOUBLE AND TRIPLE WALL STUDS
SCALE: 1 1/2" = 1'–0"



FOUR–PLY MEMBERS

TWO–PLY AND THREE–PLY MEMBERS

TYPICAL NAILING PATTERN AT MULTI–PLY MEMBERS
SCALE: 3/4" = 1'–0"



TYPICAL TOP PLATE SPLICE
SCALE: 1" = 1'–0"

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WOODS ENGINEERING, P.A. CORPORATE SEAL No. C-1806 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

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DN: Email=ilm@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2023.06.20 17:56:26-04'00'

THE NC COASTAL FEDERATION'S CENTER FOR COASTAL PROTECTION AND RESTORATION

HIGHWAY 24
OCEAN, NC

REV.	DATE	DESCRIPTION

Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: TYPICAL DETAILS

Sheet No.: S1.02

SCHEDULE FOR MATERIAL INSPECTIONS

BUILDING COMPONENTS OR MATERIAL	MATERIAL SUBMITTAL	INSPECTION / MONITORING	INSPECTION FREQUENCY	INSPECTOR QUALIFICATIONS	TEST REQUIREMENTS	TEST FREQUENCY	INSPECTION AGENCY
SOILS	1. PRELIMINARY PRESUMPTIVE ALLOWABLE SOIL BEARING = 1500psf 2. FILL MATERIAL SPECIFICATIONS. 3. VAPOR BARRIER	1. INSPECT SOILS PER ATTACHED 2015 IBC, TABLE 1705.6 FOR REQUIRED VERIFICATION AND INSPECTION. 2. INSPECT VAPOR BARRIER INSTALLATION. SEE PROJECT & MANUFACTURER SPECS.	ALL INSPECTIONS ARE PERIODIC EXCEPT FILL PLACEMENT AND COMPACTION WHICH IS CONTINUOUS.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. PROVIDE VISUAL AND DCP TESTS PER ASTM STP-399 2. SUBGRADE DENSITY VERIFICATION	1. EACH ISOLATED FOOTING AND AT 20' INTERVALS FOR CONTINUOUS FOOTINGS. 2. AS REQUIRED TO VERIFY ENTIRE BUILDING PAD.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
CONCRETE	1. SUBMIT CONCRETE MIX DESIGN. 2. SUBMIT MATERIAL CERTIFICATION 3. SUBMIT REBAR SHOP DRAWINGS.	INSPECT CONCRETE CONSTRUCTION PER ATTACHED 2015 IBC, TABLE 1705.3	AS OUTLINED PER TASK IN TABLE 1705.3	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. TEST CONCRETE FOR COMPRESSIVE STRENGTH, SLUMP, AIR CONTENT, TEMPERATURE AND BATCH TO PLACEMENT TIME.	1. SAMPLES FOR STRENGTH TESTS FOR EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 YD³ OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000FT² OF SURFACE AREA FOR SLABS OR WALLS.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
WOOD	1. SUBMIT MATERIAL CERTIFICATES.. 2. SHEAR WALL HOLDOWN MATERIAL CERTIFICATES	1. INSPECT WOOD PLATES AND ROOF TRUSSES FOR GRADE AND SPACING PER APPROVED CONSTRUCTION DOCUMENTS. 2. INSPECT ROOF & BRACING LAYOUT, TYPE AND SPACING PER SHOP DRAWINGS. 3. VERIFY WOOD FRAMING INSTALLATION WITH APPROVED CONSTRUCTION DOCUMENTS. 4. INSPECT WOOD SHEAR WALL, FASTENING, BOLTING AND ANCHORING PER APPROVED CONSTRUCTION DOCUMENTS. 5. INSPECT ROOF DECK NAILING & VERIFY DECK TYPE.	1.–5. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. VISUAL ONLY.	1. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
ROOF CLADDING	NONE.	1. VISUAL AND AS REQUIRED TO CERTIFY ROOF ATTACHMENT PER MANUFACTURER GUIDELINES.	1. PERIODIC.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. PER MANUFACTURER AND 2015 IBC CODE FOR A WIND SPEED OF 143 MPH.	1. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION OF SOILS

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW FOOTINGS 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 CONTROLLED FILL MATERIALS.	–	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	–
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	–	X

NOTE: SEE IBC-2015, TABLE 1705.6, CHAPTER 17

REQUIRED VERIFICATION & INSPECTION OF CONCRETE CONSTRUCTION FREQUENCY CHART

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	–	X
2. REINFORCING BAR WELDING: a. VERIFY WEDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706 b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; and c. INSPECT ALL OTHER WELDS.	– – X	X X
3. INSPECTION OF ANCHORS CAST IN CONCRETE	–	X
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLUDED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	X
5. VERIFY USE OF REQUIRED DESIGN MIX.	–	X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	–
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	–
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X
9. INSPECTION OF PRESTRESSED CONCRETE: a. APPLICATION OF PRESTRESSING FORCES. b. GROUTING OF BONDED PRESTRESSING TENDONS	X X	– –
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	–	X
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
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	–	X

NOTE: SEE IBC 2015, TABLE 1705.3 FOR REFERENCE STANDARDS.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

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DN: Email=lm@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2023.06.20 17:56:31-04'00'

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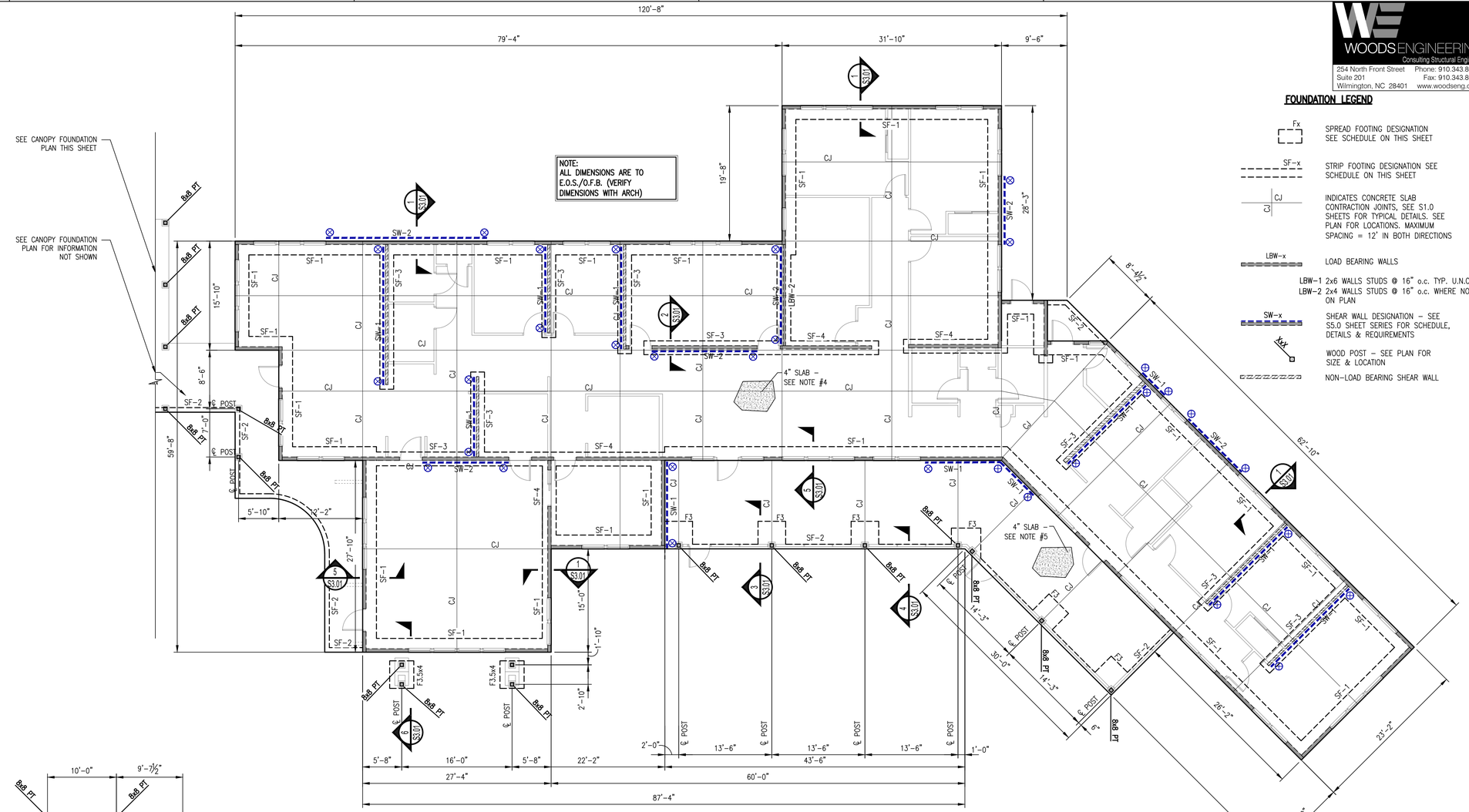
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REV.	DATE	DESCRIPTION

Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
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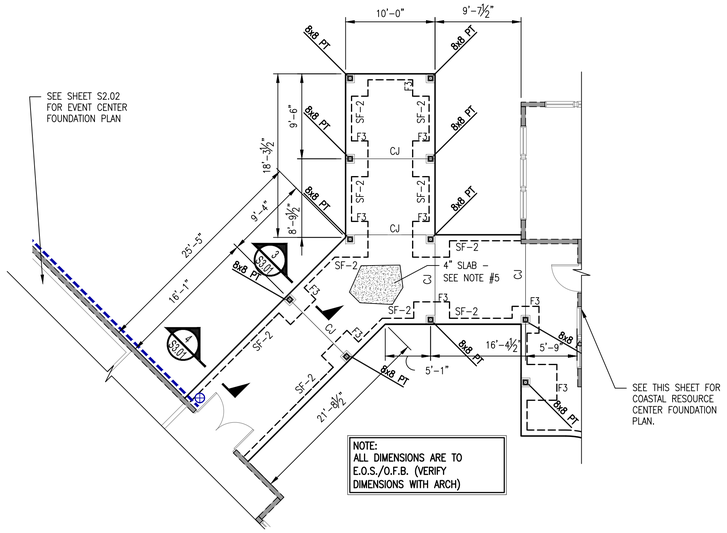
Sheet Title: MATERIAL INSPECTIONS

Sheet No.: S1.03



COASTAL RESOURCE CENTER FOUNDATION PLAN

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



CANOPY FOUNDATION PLAN

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

FOUNDATION LEGEND

- Fx — SPREAD FOOTING DESIGNATION SEE SCHEDULE ON THIS SHEET
- SF–x — STRIP FOOTING DESIGNATION SEE SCHEDULE ON THIS SHEET
- CJ — INDICATES CONCRETE SLAB CONTRACTION JOINTS, SEE S1.0 SHEETS FOR TYPICAL DETAILS. SEE PLAN FOR LOCATIONS. MAXIMUM SPACING = 12' IN BOTH DIRECTIONS
- LBW–x — LOAD BEARING WALLS
  - LBW–1 2x6 WALLS STUDS @ 16" o.c. TYP. U.N.O.
  - LBW–2 2x4 WALLS STUDS @ 16" o.c. WHERE NOTED ON PLAN
- SW–x — SHEAR WALL DESIGNATION – SEE S5.0 SHEET SERIES FOR SCHEDULE, DETAILS & REQUIREMENTS
- XxX — WOOD POST – SEE PLAN FOR SIZE & LOCATION
- NON–LOAD BEARING SHEAR WALL

FOUNDATION PLAN NOTES:

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. DATUM ELEVATION = TOP OF SLAB ELEVATION = ASSUMED 0'–0" OTHER ELEVATIONS ARE NOTED AS (+ OR –) FROM DATUM ELEVATION.
3. FOOTING SHALL BE MONOLITHIC WITH SLAB, U.N.O.
4. INTERIOR SLAB–ON–GRADE SHALL BE 4" THICK 3000 psi CONCRETE WITH 6x6xW2.0xW2.0 or 3.0lbs/yd.^{3} OF SYNTHETIC MACRO–FIBERS (TUF–STRAND SF BY EUCLID, FIBER MAC SERIES BY BASF, OR FORTA–FERRO BY FORTA CORP, OR APPROVED EQUAL) ON 15 mil VAPOR RETARDER, ON 6" GRANULAR DRAINAGE LAYER (CLEAN SANDS WITH LESS THAN 3% FINES) OR APPROVED EQUAL ON WELL COMPACTED SUB GRADE. VERIFY FILL MATERIALS AND COMPACTION WITH QUALIFIED GEOTECHNICAL ENGINEER.
5. EXTERIOR SLAB–ON–GRADE SHALL BE 4" THICK 4000 psi CONCRETE WITH 6x6xW2.0xW2.0 AND AIR ENTRAINMENT ON 15 mil VAPOR RETARDER, ON 6" GRANULAR DRAINAGE LAYER (CLEAN SANDS WITH LESS THAN 3% FINES) OR APPROVED EQUAL ON WELL COMPACTED SUB GRADE. VERIFY FILL MATERIALS AND COMPACTION WITH QUALIFIED GEOTECHNICAL ENGINEER.
6. RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DROP THE FOUNDATIONS TO AN ELEVATION BELOW THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE TRAVELS UNDER A CONTINUOUS STRIP FOOTING EITHER:
   a. DROP THE FOOTING ELEVATION BELOW THE PROPOSED LINE.
   b. ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'–0" PAST EACH SIDE OF THE CONCRETE FOOTING.
   c. IF THE LINE IS ≥ 2'–0" BELOW BOTTOM OF FOOTING, THEN STEEL PIPE IS NOT REQUIRED. BACKFILL THE TRENCH WITH #57 STONE. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
7. DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF STUD (O.F.S.) / CURTAINWALL (O.F.CW.) TO COLUMN CENTERLINE UNLESS NOTED OTHERWISE.
8. S.F. = STEP FOOTING, SEE TYPICAL DETAIL ON S1.0 SHEETS – G.C. TO COORDINATE STEPS IN FOUNDATION FOR PLUMBING, ELECTRICAL AND MECHANICAL.
9. SEE S5.0 SHEETS FOR (SHEARWALL) INFORMATION AND REQUIREMENTS.
10. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
11. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS

SPREAD FOOTING (FX) SCHEDULE

MARK	SIZE width x length x thickness	REINFORCEMENT: TOP BARS EACH WAY (U.N.O.)	REINFORCEMENT: BOTTOM BARS EACH WAY (U.N.O.)	REMARKS
F3	3'–0" x 3'–0" x 1'–0"		(3) #5	
F3.5X4	3'–6" x 4'–0" x 1'–0"		(3) #5 LONG / (4)#5 SHORT	

STRIP FOOTING (SF–X) SCHEDULE

MARK	SIZE width x thickness x length	REINFORCEMENT: TOP BARS	REINFORCEMENT: BOTTOM BARS	REMARKS
SF–1	2'–0" x 1'–4" x CONT.	(1) #4 CONT.	(2)#5 CONT.	TYP. EXTERIOR FOOTING
SF–2	0'–8" x 1'–4" x CONT.	(1) #4 CONT.	(1)#4 CONT.	TYP PORCH EDGE
SF–3	2'–0" x 1'–0" x CONT.	(2) #4 CONT.	(2)#5 CONT.	INTERIOR UNDER SHEAR WALL
SF–4	2'–0" x 1'–0" x CONT.		(2)#5 CONT.	TYP INTERIOR LBW
SF–5	1'–0" x 2'–6" x CONT.	(1) #4 CONT.	(2)#5 CONT.	TYP AT EXTENDED PORCH EDGE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

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Date: 2023.06.20 17:56:36-04'00'

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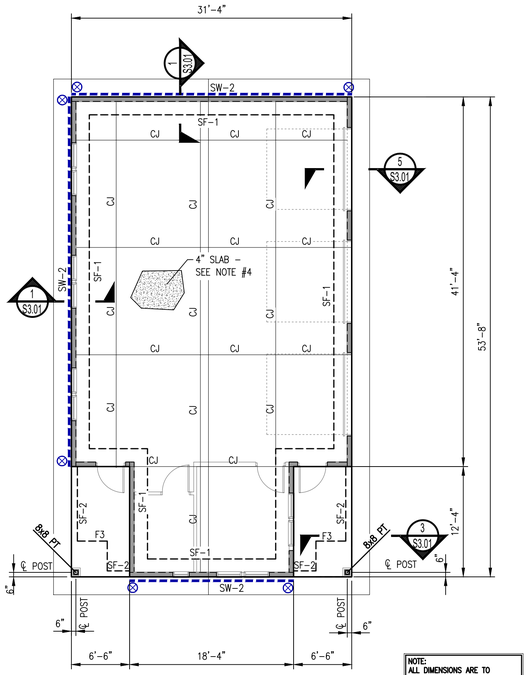
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Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: COASTAL RESOURCE CENTER FOUNDATION PLAN

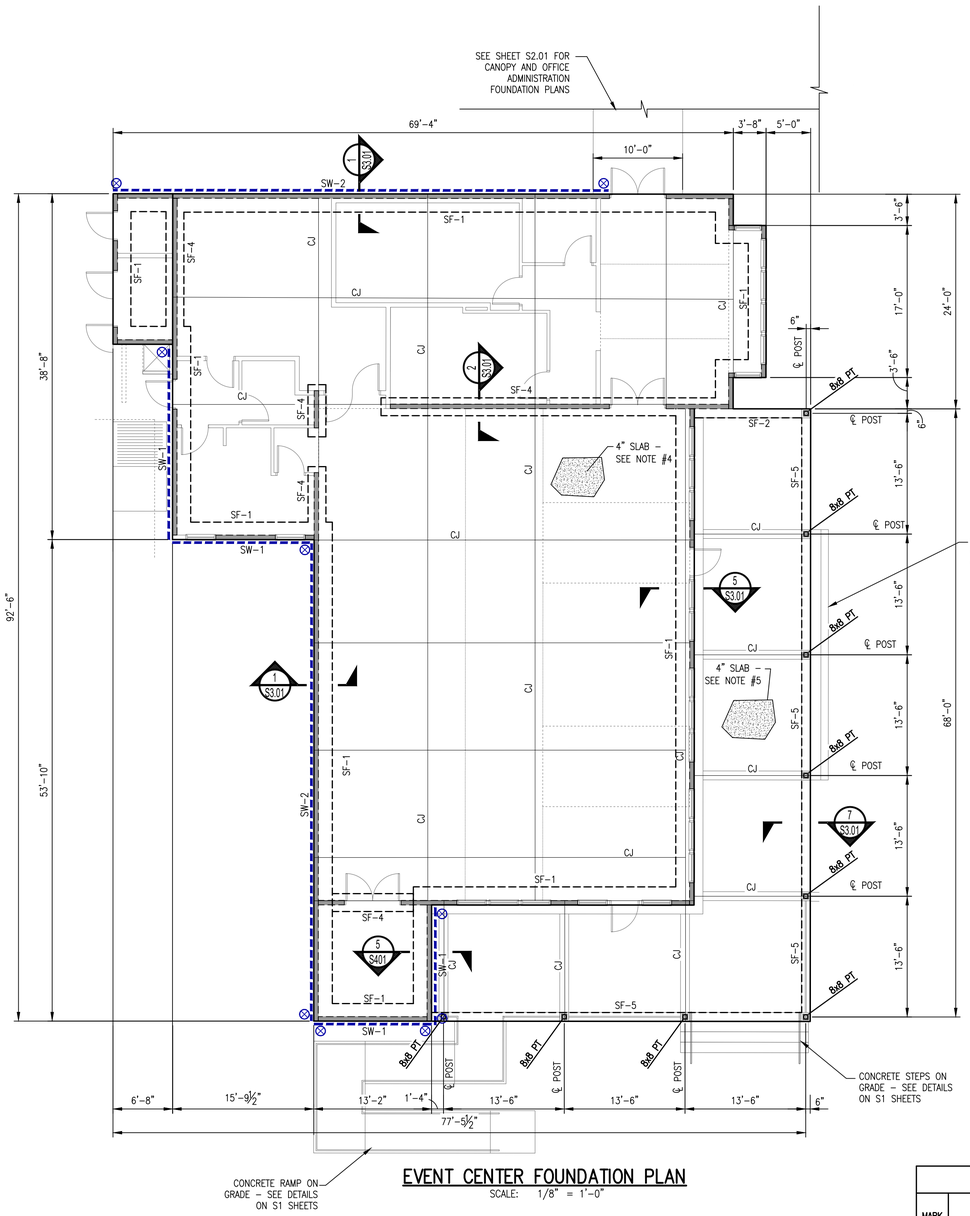
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GARAGE FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

NOTE:
ALL DIMENSIONS ARE TO E.O.S./O.F.B. (VERIFY DIMENSIONS WITH ARCH)



EVENT CENTER FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

FOUNDATION LEGEND

Fx	SPREAD FOOTING DESIGNATION SEE SCHEDULE ON THIS SHEET
SF–x	STRIP FOOTING DESIGNATION SEE SCHEDULE ON THIS SHEET
CJ	INDICATES CONCRETE SLAB CONTRACTION JOINTS, SEE S1.0 SHEETS FOR TYPICAL DETAILS. SEE PLAN FOR LOCATIONS. MAXIMUM SPACING = 12' IN BOTH DIRECTIONS
LBW–x	LOAD BEARING WALLS LBW–1 2x6 WALLS STUDS @ 16" o.c. TYP. U.N.O. LBW–2 2x4 WALLS STUDS @ 16" o.c. WHERE NOTED ON PLAN
SW–x	SHEAR WALL DESIGNATION – SEE S5.0 SHEET SERIES FOR SCHEDULE, DETAILS & REQUIREMENTS
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SPREAD FOOTING (FX) SCHEDULE

MARK	SIZE width x length x thickness	REINFORCEMENT		REMARKS
		TOP BARS EACH WAY (U.N.O.)	BOTTOM BARS EACH WAY (U.N.O.)	
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F3.5X4	3'–6" x 4'–0" x 1'–0"		(3) #5 LONG / (4)#5 SHORT	

STRIP FOOTING (SF–X) SCHEDULE

MARK	SIZE width x thickness x length	REINFORCEMENT		REMARKS
		TOP BARS	BOTTOM BARS	
SF–1	2'–0" x 1'–4" x CONT.	(1) #4 CONT.	(2)#5 CONT.	TYP. EXTERIOR FOOTING
SF–2	0'–8" x 1'–4" x CONT.	(1) #4 CONT.	(1)#4 CONT.	TYP PORCH EDGE
SF–3	2'–0" x 1'–0" x CONT.	(2) #4 CONT.	(2)#5 CONT.	INTERIOR UNDER SHEAR WALL
SF–4	2'–0" x 1'–0" x CONT.		(2)#5 CONT.	TYP INTERIOR LBW
SF–5	1'–0" x 2'–6" x CONT.	(1) #4 CONT.	(2)#5 CONT.	TYP AT EXTENDED PORCH EDGE

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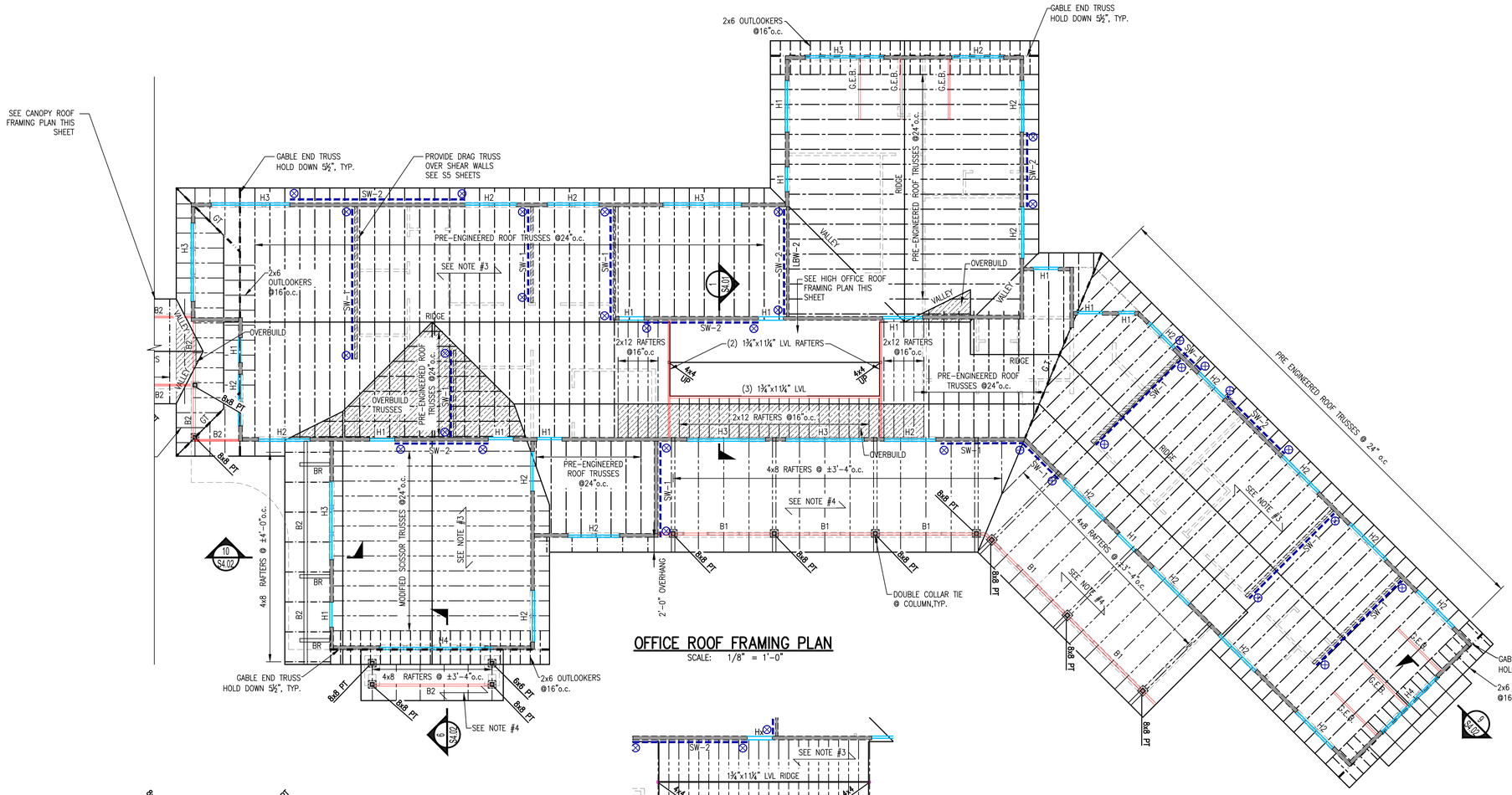
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OCEAN, NC

REV.	DATE	DESCRIPTION

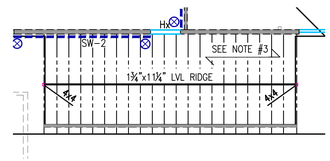
Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: EVENT CENTER FOUNDATION PLAN

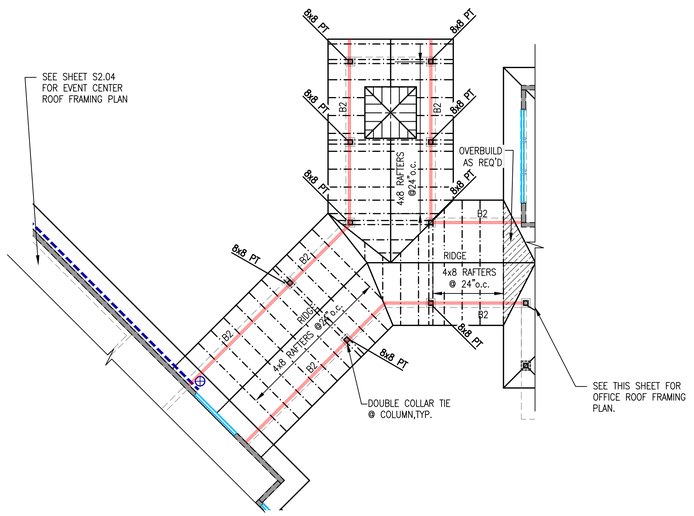
Sheet No.: S2.02



OFFICE ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



HIGH OFFICE ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



CANOPY ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

HEADER SCHEDULE		JAMB REQUIREMENTS
MARK	HEADER REQUIREMENTS	FL #1
H1	(3) 2x10'S	1K/1J
H2	(2) 1¾" X 9¼" LVLS	2K/1J
H3	(3) 1¾" X 9¼" LVLS	2K/2J
H4	(3) 1¾" x 11⅞" LVLs	3K/2J

NOTES:
1. 2x's TO HAVE ⅞" OSB OR PLYWOOD BETWEEN PLYS TO FLUSH OUT WITH WALL FRAMING.
(J) = JACK STUDS
(K) = KING STUDS

BEAM SCHEDULE		
MARK	HEADER REQUIREMENTS	BUNDLED STUDS (U.N.O.)
B1	(3)2x12's	3
B2	6x10	3
B3	(3)2x8's	3

NOTES:
1. ALL BEAMS SHALL BE PRESSURE TREATED IF EXPOSED TO ELEMENTS.

ROOF FRAMING PLAN NOTES:

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. HEADERS, BEAMS, SHEAR WALLS AND LOAD BEARING WALLS SHOWN ARE FOR FRAMING BELOW THIS LEVEL.
3. ROOF SHEATHING SHALL BE ⅜" O.S.B. SPAN AS NOTED ON PLAN.
4. STANDING SEAM METAL ROOF ON 2x6 T&G V-GROOVE DECKING ON 4x8 BEAMS @ ±3'-4" o.c.
5. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.

ROOF FRAMING LEGEND

- ROOF TRUSSES @24"o.c. U.N.O.
- 2x12 RAFTERS @16" o.c. U.N.O.
- 4x8 RAFTERS @ 3'-4" +/- o.c.
- GT — INDICATES GIRDER TRUSS SEE SCHEDULE ON S1.02 SHEET
- Hx — HEADER – SEE PLAN & SCHEDULE ON S1.02 SHEET
- Bx — WOOD BEAM – SEE PLAN FOR SIZE AND LOCATION
- LBW-x — LOAD BEARING WALLS
  - LBW-1 2x6 WALLS STUDS @ 16" o.c. TYP. U.N.O.
  - LBW-2 2x4 WALLS STUDS @ 16" o.c. WHERE NOTED ON PLAN
- SW-x — SHEAR WALL DESIGNATION SEE S5.0 SHEET SERIES FOR SCHEDULE, DETAILS & REQUIREMENTS
- INDICATES OVERBUILD
- NON-LOAD BEARING SHEAR WALL
- G.E.B. — INDICATES GABLE END BRACE, SEE DETAIL S4 SHEETS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

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DN: Email=ajm@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2023.06.20 17:56:45-04'00'

THE NC COASTAL FEDERATION'S CENTER FOR COASTAL PROTECTION AND RESTORATION

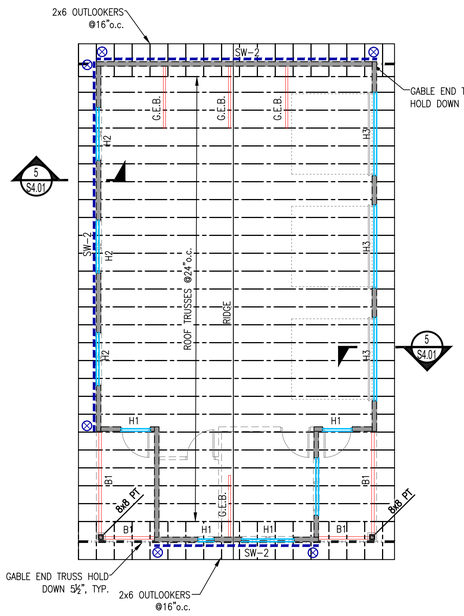
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OCEAN, NC

REV.	DATE	DESCRIPTION

Project Manager	Drawn By
M.W.	J.M.
Date	Reviewed By
JUNE 12, 2023	A.S.
Project ID	
22-3530	

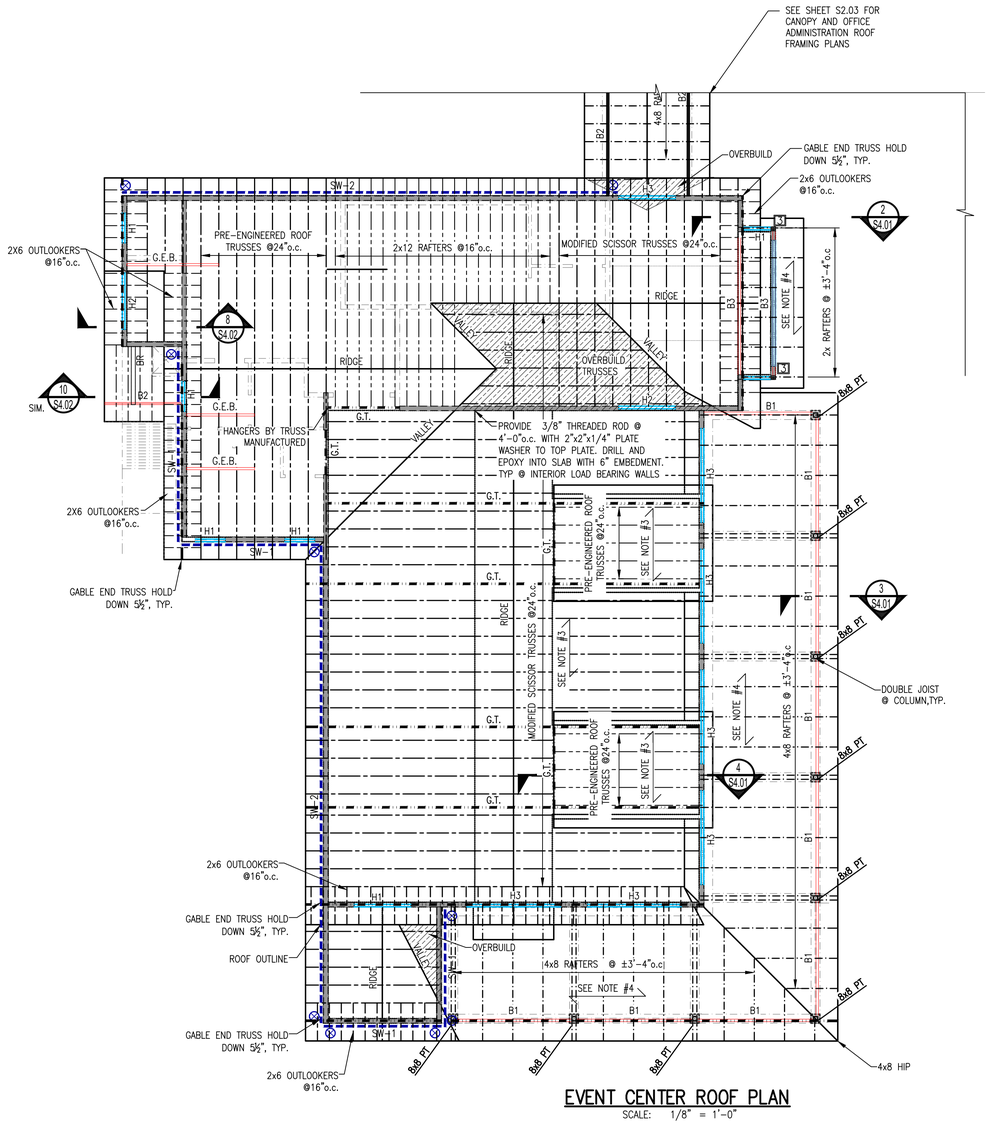
Sheet Title
ADMINISTRATION OFFICE ROOF FRAMING PLAN

Sheet No.
S2.03



GARAGE ROOF FRAMING PLAN

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



EVENT CENTER ROOF PLAN

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

ROOF FRAMING LEGEND

- ROOF TRUSSES @24"o.c. U.N.O.
- 2x12 RAFTERS @16" o.c. U.N.O.
- 4x8 RAFTERS @ 3'-4" +/- o.c.
- GT — INDICATES GIRDER TRUSS SEE SCHEDULE ON S1.02 SHEET
- Hx — HEADER – SEE PLAN & SCHEDULE ON S1.02 SHEET
- Bx — WOOD BEAM – SEE PLAN FOR SIZE AND LOCATION
- LBW-x — LOAD BEARING WALLS
  - LBW-1 2x6 WALLS STUDS @ 16" o.c. TYP. U.N.O.
  - LBW-2 2x4 WALLS STUDS @ 16" o.c. WHERE NOTED ON PLAN
- SW-x — SHEAR WALL DESIGNATION SEE S5.0 SHEET SERIES FOR SCHEDULE, DETAILS & REQUIREMENTS
- INDICATES OVERBUILD
- NON-LOAD BEARING SHEAR WALL
- G.E.B. — INDICATES GABLE END BRACE, SEE DETAIL S4 SHEETS

ROOF FRAMING PLAN NOTES:

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
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HEADER SCHEDULE		JAMB REQUIREMENTS
MARK	HEADER REQUIREMENTS	FL #1
H1	(3) 2x10"S	1K/1J
H2	(2) 1¾" X 9¼" LVLS	2K/1J
H3	(3) 1¾" X 9¼" LVLS	2K/2J
H4	(3) 1¾" x 11⅞" LVLs	3K/2J

NOTES:
1. 2x's TO HAVE 7/16" OSB OR PLYWOOD BETWEEN PLYS TO FLUSH OUT WITH WALL FRAMING.

(J) = JACK STUDS
(K) = KING STUDS

BEAM SCHEDULE		
MARK	HEADER REQUIREMENTS	BUNDLED STUDS (U.N.O.)
B1	(3)2x12's	3
B2	6x10	3
B3	(3)2x8's	3

NOTES:
1. ALL BEAMS SHALL BE PRESSURE TREATED IF EXPOSED TO ELEMENTS.

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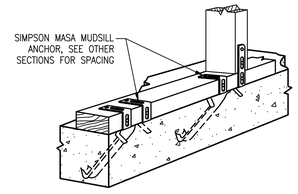
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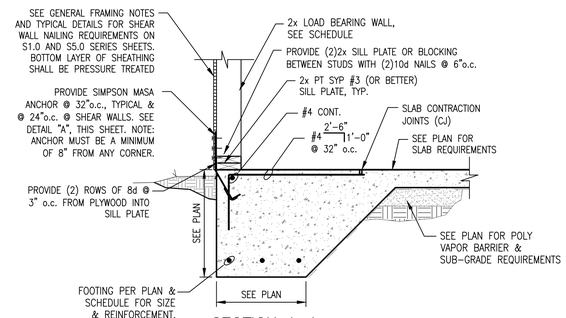
Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: EVENT CENTER & GARAGE ROOF FRAMING PLAN

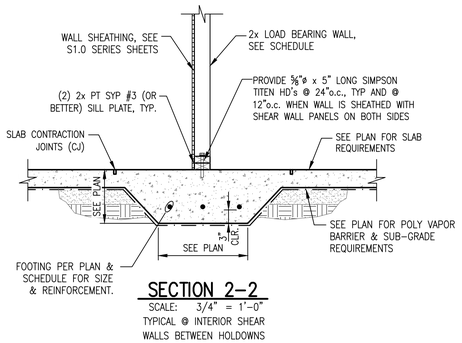
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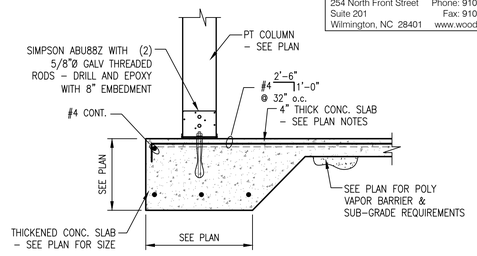
DETAIL 'A'
SCALE: 3/4" = 1'-0"



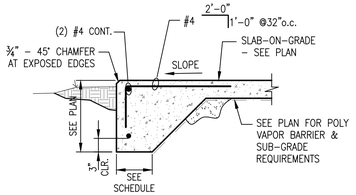
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AT EXTERIOR LOAD BEARING WALL



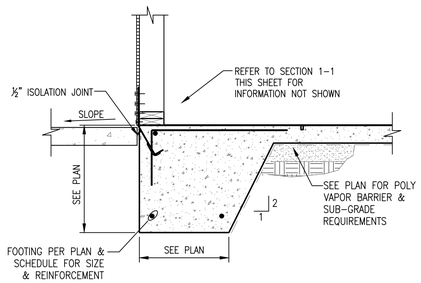
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TYPICAL @ INTERIOR SHEAR WALLS BETWEEN HOLDOWNS



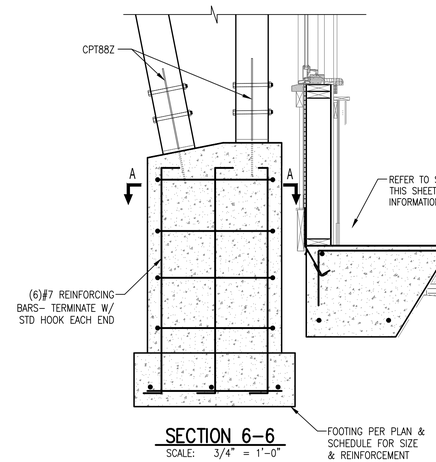
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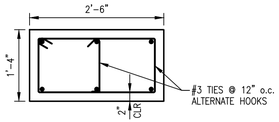
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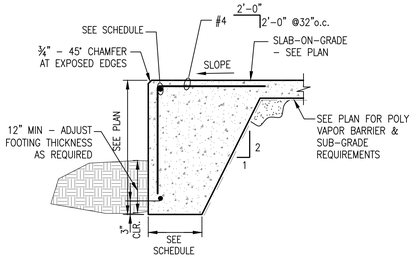
SECTION 5-5
SCALE: 3/4" = 1'-0"
TYPICAL AT INTERIOR TO PORCH



SECTION 6-6
SCALE: 3/4" = 1'-0"



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



SECTION 7-7
SCALE: 3/4" = 1'-0"

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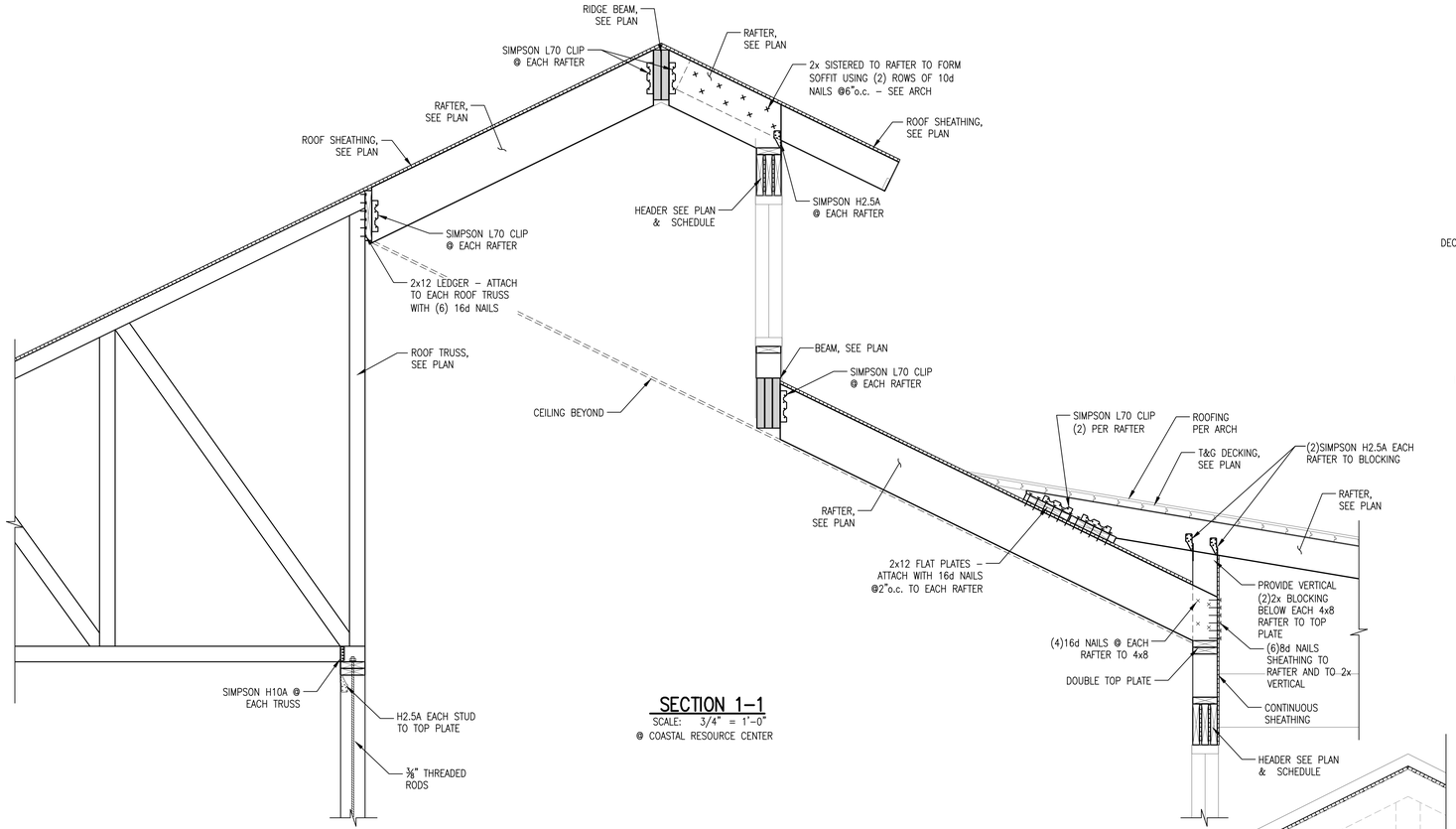
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OCEAN, NC

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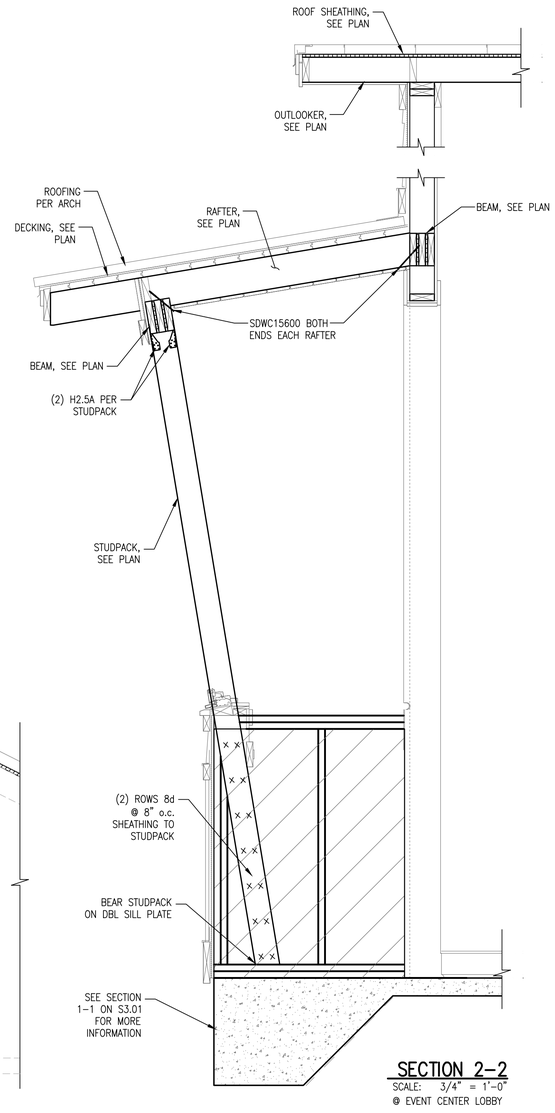
Project Manager	Drawn By
M.W.	J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: FOUNDATION SECTIONS & DETAILS

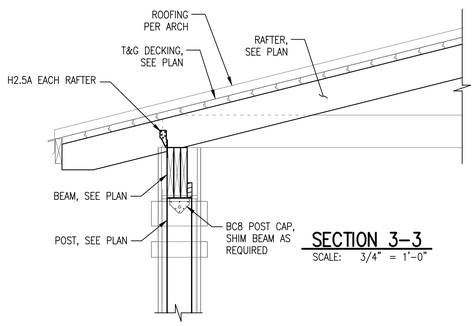
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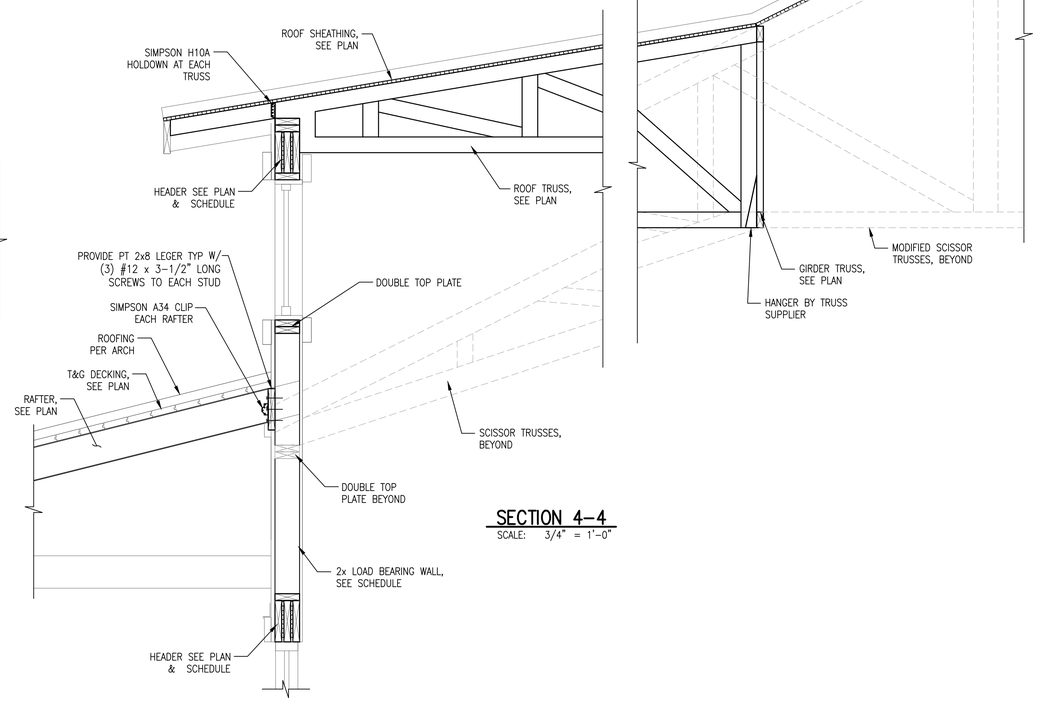
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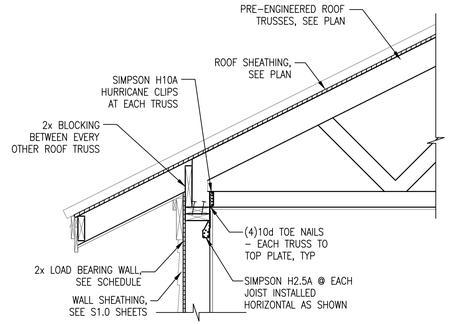
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@ EVENT CENTER LOBBY



SECTION 3–3
SCALE: 3/4" = 1'–0"



SECTION 4–4
SCALE: 3/4" = 1'–0"



SECTION 5–5
SCALE: 3/4" = 1'–0"
TYPICAL AT GARAGE/WORKSHOP

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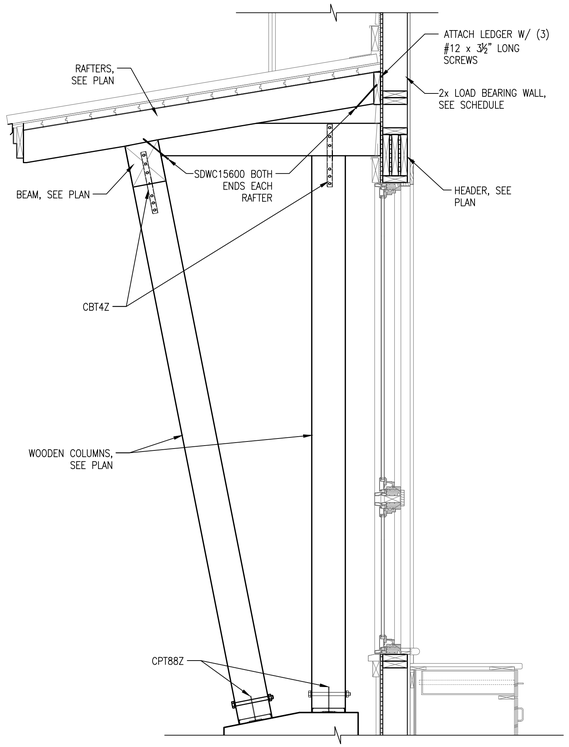
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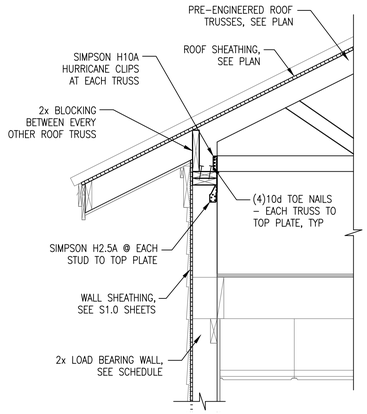
Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: ROOF SECTIONS & DETAILS

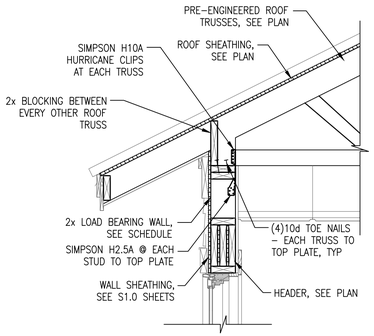
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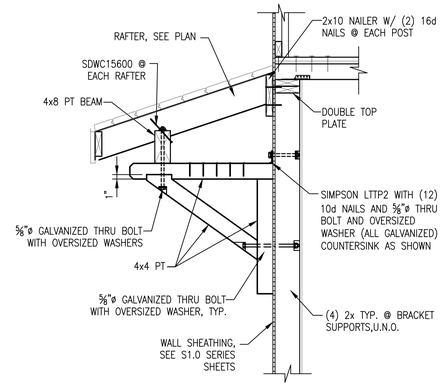
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@ COASTAL RESOURCE CENTER CLASSROOM



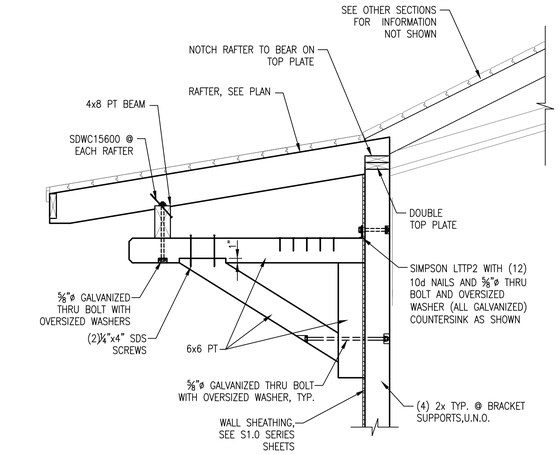
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@ EVENT CENTER



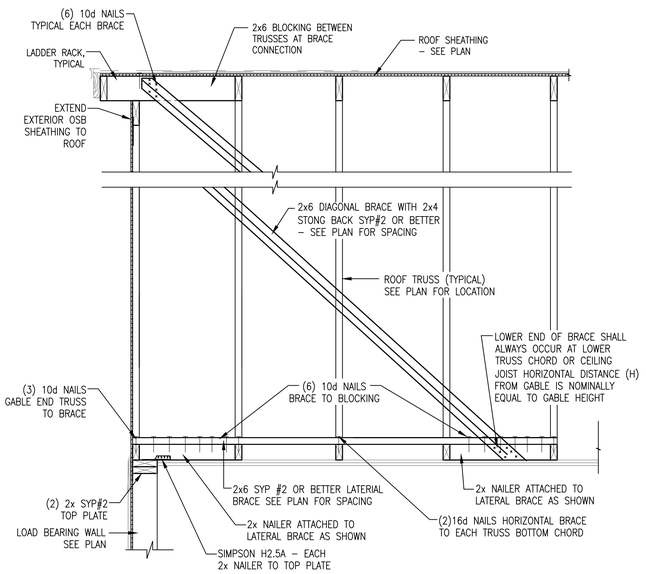
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SCALE: 3/4" = 1'–0"
@ COASTAL RESOURCE CENTER



SECTION 9–9
SCALE: 3/4" = 1'–0"



SECTION 10–10
SCALE: 3/4" = 1'–0"



SECTION 11–11
SCALE: 3/4" = 1'–0"
GABLE END BRACE DETAIL

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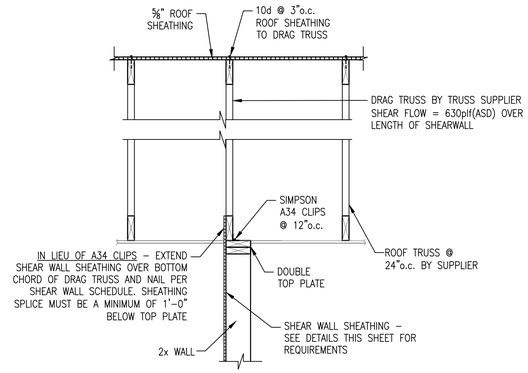
Project Manager: M.W.	Drawn By: J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: ROOF SECTIONS & DETAILS

Sheet No.: S4.02

SHEAR WALL SW-1 (1 STORY)				
FLOOR	SHEATHING REQUIREMENTS	TOTAL # OF COMPRESSION STUDS AT HOLDOWN	HOLDOWN AND ROD SIZE	FLOOR CONNECTION
SLAB to 2nd	SHEATHING ONE SIDE W/8d NAILS @ 3" o.c.	(2) 2x6	SIMPSON HDU8-SDS2.5	SEE SCHEDULE FOR REQUIRED ROD EMBEDMENT AND DETAILS THIS SHEET FOR SILL PLATE ATTACHMENT

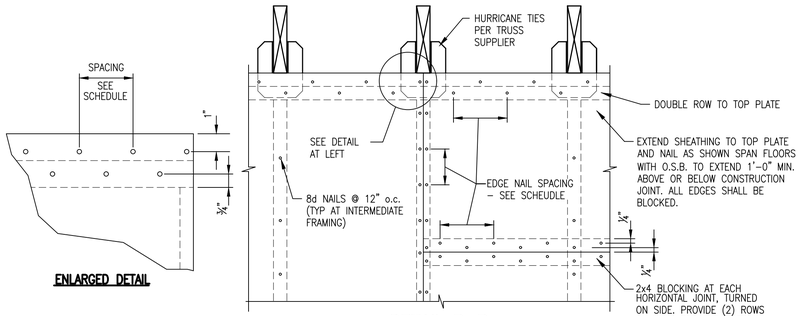
SHEAR WALL SW-2 (1 STORY)				
FLOOR	SHEATHING REQUIREMENTS	TOTAL # OF COMPRESSION STUDS AT HOLDOWN	HOLDOWN AND ROD SIZE	FLOOR CONNECTION
SLAB to 2nd	SHEATHING ONE SIDE W/8d NAILS @ 3" o.c.	(2) 2x6	SIMPSON HDU5-SDS2.5	SEE SCHEDULE FOR REQUIRED ROD EMBEDMENT AND DETAILS THIS SHEET FOR SILL PLATE ATTACHMENT



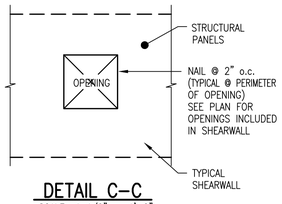
SECTION 1-1
SCALE: 3/4" = 1'-0"

SHEAR WALL NOTES:

1. FOR GENERAL FRAMING INFORMATION, SEE SHEET S1.01
2. SEE DETAILS ON THIS SHEET SERIES FOR TYPICAL SHEAR WALL DETAILS.
3. SHEAR WALL SHEATHING SHALL BE 7/16" OSB OR PLYWOOD WITH 8d NAILS @ 3"o.c. AT EDGES AND 12"o.c. IN FIELD. - SEE SCHEDULES THIS SHEET
4. ALL RODS SHALL BE ASTM A36. (Fu=70Ksi)
5. ALL STUDS SHALL MATCH LOAD BEARING WALL SPACING AND SPECIES.
6. ALL ROD HOLDOWNS TO BE LOCATED A MAXIMUM DISTANCE OF 12" FROM END OF WALL. (TYP. OF ALL SHEAR WALLS)
7. EPOXY SHALL BE HILTI HY-200. SEE TABLE THIS SHEET FOR REQUIRED EMBEDMENT.
8. ALL HOLDOWN RODS LOCATED ON EXTERIOR WALL SHALL BE CAST-IN-PLACE.



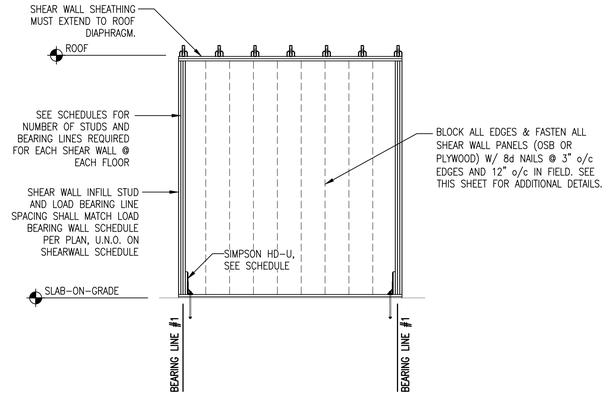
DETAIL B-B
SCALE: 1 1/2" = 1'-0"
TYPICAL SHEAR WALL NAILING PATTERN



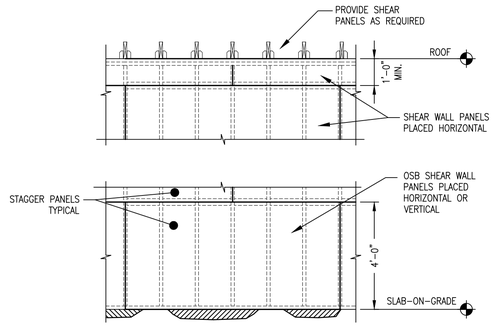
DETAIL C-C
SCALE: 1 1/2" = 1'-0"
TYPICAL OSB SHEAR WALL NAILING AT OPENINGS

SHEAR WALL ROD EPOXY EMBEDMENT	
ROD SIZE	EMBEDMENT
½"ø	7"
⅝"ø	9"
¾"ø	11"
⅞"ø	15"
1"ø	15"
1¼"ø	22"

- EPOXY SHALL BE HILTI HY-200
- ALL EXTERIOR HOLDOWN RODS SHALL BE CAST-IN-PLACE NUT ON BOTTOM AND 15" EMBEDMENT



TYPICAL SHEAR WALL STUD REQUIREMENTS
SCALE: 1/4" = 1'-0"



TYPICAL SHEAR WALL SPLICE PATTERN
SCALE: 3/8" = 1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

Digitally signed by Adam L. Sisk, PE, SE
DN: Email=m@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2023.06.20 17:57:10-04'00'

THE NC COASTAL FEDERATION'S CENTER FOR COASTAL PROTECTION AND RESTORATION

HIGHWAY 24
OCEAN, NC

REV.	DATE	DESCRIPTION

Project Manager	Drawn By
M.W.	J.M.
Date: JUNE 12, 2023	Reviewed By: A.S.
Project ID: 22-3530	

Sheet Title: SHEAR WALL DETAILS

Sheet No.: S5.01

PLUMBING SPECIFICATIONS

PART 1 GENERAL

1.1 SCOPE OF WORK: THESE OUTLINE SPECIFICATIONS AND ACCOMPANYING DRAWINGS DESCRIBE SCOPE OF WORK REQUIRED FOR PLUMBING SYSTEMS. LABOR AND MATERIAL SHALL BE PROVIDED AS REQUIRED FOR A COMPLETE, WORKMANLIKE INSTALLATION OF ALL SYSTEMS SHOWN ON DIAGRAMMATIC DRAWINGS AND/OR AS SPECIFIED HEREIN.

1.2 CONTRACTOR: THE WORD "CONTRACTOR", "PLUMBING CONTRACTOR", AND "P.C." AS USED HEREIN SHALL MEAN THE PLUMBING INSTALLER UNLESS OTHERWISE QUALIFIED.

1.3 DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING PLUMBING SYSTEMS.

1.4 CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INSOFAR AS THEY APPLY:

- NORTH CAROLINA STATE BUILDING CODE (CODE), LATEST EDITION AND REVISIONS.
- LOCAL JURISDICTION REQUIREMENTS.

1.5 PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.

1.6 SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.

1.7 PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GENERAL CONTRACTOR. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.

1.8 COORDINATION: COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. ARRANGE PLUMBING SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO PIPE FABRICATION AND ADJUST LAYOUT AS REQUIRED. INCLUDE ALL OFFSETS IN PIPING, FITTINGS, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.

1.9 EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.

1.10 LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.

1.11 STORAGE SPACE: CONSULT WITH THE GENERAL CONTRACTOR REGARDING JOB SITE STORAGE FOR PLUMBING MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.

1.12 CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.

1.13 ELECTRICAL WORK:

A. PERFORM ELECTRICAL WORK FOR PLUMBING EQUIPMENT IN COMPLIANCE WITH PROJECT ELECTRICAL REQUIREMENTS. ELECTRICAL WORK FOR PLUMBING EQUIPMENT NOT SPECIFICALLY INDICATED TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN THE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AS PART OF HIS WORK.

B. ELECTRICAL DRAWINGS ARE BASED ON ELECTRICAL CHARACTERISTICS INDICATED IN DRAWING PLUMBING EQUIPMENT SCHEDULES. ANY EQUIPMENT FURNISHED BY THE PLUMBING CONTRACTOR WHICH DOES NOT MATCH THE ELECTRICAL CHARACTERISTICS INDICATED IN THE DRAWING SCHEDULES SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. ANY ADDITIONAL COSTS FOR ELECTRICAL INSTALLATION REQUIRED FOR EQUIPMENT NOT MATCHING THE DRAWING SCHEDULES SHALL BE BORNE BY THE PLUMBING CONTRACTOR.

1.14 PLUMBING WORK IN CONNECTION WITH OTHER CONTRACTS

A. PROVIDE PLUMBING SERVICES AS REQUIRED FOR ITEMS FURNISHED BY OTHER CONTRACTORS OR VENDORS AS SHOWN ON THE PLUMBING DRAWINGS. INCLUDE ROUGH-INS AND FINAL CONNECTIONS TO EQUIPMENT. LOCATIONS OF CONNECTIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SOME ADJUSTMENT OF ACTUAL CONNECTION LOCATIONS SHOULD BE ANTICIPATED. COORDINATE EXACT CONNECTION REQUIREMENTS. MAKE FINAL CONNECTIONS ONLY AFTER APPROVAL OF THE OTHER CONTRACTOR OR VENDOR, IN THE CONTRACTOR'S OR VENDOR'S PRESENCE.

B. SITE UTILITIES- IN GENERAL, WORK UNDER THIS DIVISION COVERS WORK TO FIVE FEET OUTSIDE BUILDINGS. EXTEND AND CONNECT WORK UNDER THIS DIVISION TO SITE UTILITIES AS REQUIRED.

C. OWNER FURNISHED EQUIPMENT- OBTAIN EXACT PLUMBING REQUIREMENTS AND ROUGH-IN LOCATIONS FOR OWNER FURNISHED EQUIPMENT. PROVIDE COMPLETE PLUMBING INSTALLATION FOR PROPER OPERATION OF EQUIPMENT.

D. KITCHEN EQUIPMENT- OBTAINING EXACT PLUMBING REQUIREMENTS AND ROUGH-IN LOCATIONS FOR KITCHEN EQUIPMENT. PROVIDE COMPLETE PLUMBING INSTALLATION FOR PROPER OPERATION OF EQUIPMENT.

1.15 SUBSTITUTIONS: MAJOR FIXTURES, EQUIPMENT, DEVICES, AND SPECIALTIES SHALL BE AS SCHEDULED ON THE DRAWINGS. MANUFACTURERS SHOWN OR NOTED ARE INTENDED FOR REFERENCE AS TO THE QUALITY AND TYPE OF EQUIPMENT DESIRED. COMPARABLE FIXTURES BY OTHER MANUFACTURERS MAY BE ACCEPTED IF, IN THE OPINION OF THE ENGINEER, THE LEVEL OF QUALITY IS EQUIVALENT TO SCHEDULED FIXTURES.

1.16 SUBMITTALS:

A. EQUIPMENT SUBMITTALS: SUBMIT ONE (1) ELECTRONIC COPY OF DESCRIPTIVE DATA FOR PLUMBING EQUIPMENT AND MATERIALS FOR APPROVAL BY THE ENGINEER. CLEARLY IDENTIFY ALL ITEMS.

B. OPERATING AND MAINTENANCE MANUALS: SUBMIT TWO COPIES OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, INCLUDING NECESSARY CUT SHEETS, CHARTS, WRITTEN INSTRUCTIONS, WIRING DIAGRAMS, FINAL RECORD DRAWINGS, ETC. BIND IN SUITABLE HARD BACK RING BINDERS, PROPERLY INDEXED, AND DELIVER TO THE OWNER PRIOR TO BUILDING OCCUPANCY. IN ADDITION, AFFIX A FOLDER WITH TYPICAL "OWNER'S INSTRUCTIONS" AND "MAINTENANCE INFORMATION" INSIDE THE MECHANICAL EQUIPMENT AS APPLICABLE. THE FOLDER SHALL ALSO INCLUDE A COMPLETE STARTUP LOG FOR THE EQUIPMENT.

1.17 RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ENGINEER PRIOR TO FINAL INSPECTION.

1.18 WARRANTY: WARRANTY THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. REPAIR AND/OR REPLACE ANY PARTS OF THE WORK THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE WARRANTY PERIOD.

PART 2 MATERIALS

2.1 GENERAL: ALL PLUMBING MATERIALS SHALL CONFORM TO APPLICABLE CODE REQUIREMENTS. UNLESS SPECIFICALLY INDICATED OTHERWISE, PROVIDE ALL NEW MATERIALS.

2.2 VALVES:

A. BALL VALVES, 3" AND SMALLER: ASTM B 62, 200 PSI WOG, TWO-PIECE CONSTRUCTION, BRASS BODY, STANDARD PORT, CHROME-PLATED BRASS BALL, REPLACEABLE "TFE" SEATS AND SEALS, VINYL-COVERED HANDLE, SOLDER ENDS.

B. CHECK VALVES, 3" AND SMALLER: MSS-SP-80, 125 PSI CWP, BRONZE BODY, Y-PATTERN, SOLDER ENDS.

2.3 HANGERS, SUPPORTS AND ANCHORS:

A. HANGERS, SUPPORTS AND ANCHORS - B-LINE, GRINNELL, PHD OR EQUAL, MANUFACTURED PRODUCTS. USE CLEVIS OR CLAMP HANGERS WITH THREADED ROD SUPPORTS AND SUITABLE FASTENERS TO BUILDING STRUCTURE. CHAIN, STRAP, PERFORATED STRAP, WIRE HANGERS OR WOOD PLUGS ARE PROHIBITED.

2.4 PIPING

A. DOMESTIC WATER PIPING (INTERIOR - ABOVE GROUND): ASTM F441/F441M, CPVC, SCHEDULE 40; CPVC SCHEDULE 40 SOCKET FITTINGS; AND SOLVENT-CEMENTED JOINTS.

B. DOMESTIC WATER PIPING (INTERIOR - ABOVE GROUND): ASTM F876, CROSSED LINK POLYETHYLENE (PEX) PLASTIC TUBING AND COMPATIBLE BRASS/BRONZE FITTINGS.

C. DOMESTIC WATER PIPING (BELOW GROUND OR SLAB): ASTM F876, CROSSED LINK POLYETHYLENE (PEX) PLASTIC TUBING AND COMPATIBLE BRASS/BRONZE FITTINGS. NO JOINTS UNDERSLAB.

D. DRAIN, WASTE & VENT PIPING: ASTM D2665 PVC-DWV W/ PLAIN ENDS, SCHEDULE 40; SOCKET TYPE FITTINGS; PVC SOLVENT-CEMENTED JOINTS (COMBINATION SOLVENT CEMENTS ARE UNACCEPTABLE). NOT TO BE USED IN PLENUMS.

2.5 PIPE INSULATION:

A. PIPE INSULATION - MANSVILLE, KNAUF, OWENS-CORNING OR EQUAL, ASTM C547-77 CLASS 1 PREFORMED GLASS FIBER, 10 PCF MAX DENSITY WITH ALL PURPOSE PAPER AND FOIL JACKET.

B. WHERE DOMESTIC WATER PIPING IS EXPOSED TO VIEW, PROVIDE PVC JACKETING W/ PVC ELBOW JACKETS. PROVIDE VAPOR BARRIER ON ALL PIPE INSULATION.

C. INSULATION SCHEDULE:

DOMESTIC HOT AND COLD WATER	
PIPE SIZE	THICKNESS
<1 INCH	1.0 INCH
1-1/4 THROUGH 2 INCHES	1.5 INCH

2.6 ADA INSULATION: TRUBRO OR EQUAL PREFORMED INSULATION COVERS FOR WATER AND WASTE CONNECTIONS UNDER SINKS AND LAVATORIES.

2.7 SPECIALITIES:

A. UNIONS - PROVIDE UNIONS TO PERMIT DISASSEMBLY FOR EQUIPMENT SERVICE, REPAIRS, OR REPLACEMENT. PROVIDE DIELECTRIC UNIONS FOR CONNECTIONS BETWEEN DISSIMILAR METALS.

B. ESCUTCHEONS - PROVIDE CHROME PLATED BRASS ESCUTCHEONS ON ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, OR CEILINGS.

2.8 BACKFLOW PREVENTERS - PROVIDE VACUUM BREAKER BACKFLOW PREVENTERS ON ALL HOSE OUTLETS AND OTHER LOCATIONS AS REQUIRED BY LOCAL AUTHORITY. PROVIDE DOUBLE CHECK BACKFLOW PREVENTER AS REQUIRED PER LOCAL ORDINANCE ON BUILDING WATER SERVICE.

2.9 PLUMBING FIXTURES: PROVIDE FIXTURES AS SCHEDULED ON DRAWINGS OR EQUAL. INCLUDE ALL OPTIONS AND ACCESSORIES INDICATED OR AS REQUIRED FOR PROPER INSTALLATION.

PART 3 EXECUTION

3.1 PREPARATION: VERIFY EXISTING CONDITIONS. COMPARE DRAWINGS WITH EXISTING CONDITIONS AND ADJUST INSTALLATION TO SUIT. NOTIFY ENGINEER OF ANY CONDITIONS WHICH WOULD PREVENT INSTALLATION OF PLUMBING WORK IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

3.2 INSTALLATION: INSTALL ALL PLUMBING WORK IN ACCORDANCE WITH CODE, MANUFACTURER'S RECOMMENDATIONS AND GOOD INDUSTRY PRACTICE. ARRANGE WORK TO ALLOW EASY ACCESS TO EQUIPMENT FOR SERVICE AND MAINTENANCE.

3.3 INSTALL PLUMBING PIPING PER ACCEPTED INDUSTRY METHODS. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH WALLS.

3.4 PROVIDE ZONE SHUTOFF VALVES FOR WATER SUPPLIES ON BRANCH LINES AS PRESCRIBED BY CODE. LOCATE VALVES SO AS TO BE ACCESSIBLE.

3.5 INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, EXCEPT WHERE OTHERWISE INDICATED.

3.6 SLOPE WASTE PIPING AT 1/4"/FT FOR PIPE SIZES 2-1/2" AND LESS, AND 1/8"/FT FOR PIPE SIZES 3" AND LARGER. COORDINATE FINAL CONNECTIONS W/ GENERAL CONTRACTOR.

3.7 EXCAVATION - PERFORM ALL EXCAVATION, TRENCHING AND BACKFILLING NECESSARY TO INSTALL PLUMBING WORK. COMPLY WITH CODE. EXCAVATE TRENCHES OF UNIFORM WIDTHS TO PROVIDE A WORKING CLEARANCE ON EACH SIDE OF PIPE. EXCAVATE TRENCH WALLS VERTICALLY FROM TRENCH BOTTOM TO 12" HIGHER THAN TOP OF PIPE. SHAPE TRENCH BOTTOMS TO PROVIDE UNIFORM BEARING AND SUPPORT OF PIPES. SHAPE SUBGRADE TO PROVIDE CONTINUOUS SUPPORT FOR BELLS, JOINTS, AND BARRELS OF PIPES. REMOVE STONES AND SHARP OBJECTS TO AVOID POINT LOADING. SUPPORT PIPE ON UNDISTURBED SUBGRADE. BACKFILL WITH MATERIALS FREE OF PARTICLES LARGER THAN 1 INCH. BACKFILL AND COMPACT IN 12" LAYERS. BACKFILL AND COMPACT IN MANNER WHICH AVOIDS DAMAGE OR DISPLACEMENT.

3.8 SUPPORT AND FASTEN ALL ABOVE GROUND HORIZONTAL AND VERTICAL PIPING, EQUIPMENT ETC., SECURELY IN PLACE. SPACE, SECURE AND ADJUST HANGERS WITHOUT DEFLECTION OR SAG.

3.9 PROVIDE STEEL SUPPORTS, ANCHORS, FRAMES, BRACING, PLATES, BOLTS, NUTS, WASHERS, RODS, HANGERS, UPPER ATTACHMENTS, ETC., INCIDENTAL TO INSTALLATION OF WORK AS SPECIFIED OR REQUIRED. USE HANGERS COMPATIBLE TO COPPER PIPE WHERE BARE COPPER PIPE IS SUPPORTED.

3.10 SUPPORT EQUIPMENT FROM THE STRUCTURE IN AN APPROVED MANNER. NO PORTION OF THE STRUCTURE SHALL BE OVER STRESSED BY THE HANGING OPERATION OR BY THE FINAL SUPPORTS. PROVIDE AUXILIARY STRUCTURAL MEMBERS, SUCH AS 3"X3"X1/4" ANGLES, WHERE REQUIRED BETWEEN MEMBERS OF THE STRUCTURE AND SUPPORT EQUIPMENT OR DEVICE OFF ANGLES. ATTACHMENTS THAT ARE INADEQUATE, IN THE OPINION OF THE ENGINEER, SHALL BE REPLACED AS DIRECTED.

A. PIPE SUPPORT SPACING - AS FOLLOWS OR PER CODE IF MORE STRINGENT:

PVC - 4 FT INTERVALS FOR HORIZONTAL AND VERTICAL RUNS
CPVC - 4 FT INTERVALS FOR HORIZONTAL AND VERTICAL RUNS
PEX - 4 FT INTERVALS FOR HORIZONTAL AND VERTICAL RUNS

3.11 PROVIDE CLEVIS STYLE HANGERS FOR INDIVIDUAL PIPE RUNS. ARRANGE HANGERS FOR WASTE PIPING SUCH THAT REQUIRED PIPE SLOPE IS MAINTAINED ALONG ENTIRE RUN OF PIPE.

3.12 ROUGH-INS - VERIFY FINAL LOCATION FOR ROUGH-INS W/ FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED. DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT. DO NOT SCALE DRAWINGS. COORDINATE CLOSELY WITH G.C.

3.13 FLOOR MOUNT WATER CLOSETS - FIRMLY AFFIX FLOOR MOUNTED WATER CLOSETS TO FLOOR AND CAULK TO FLOOR USING WHITE SILICON CAULK.

3.14 WALL HUNG FIXTURES - FIRMLY SUPPORT FROM WALL (PROVIDE ADDITIONAL STRUCTURAL SUPPORT AS REQUIRED) AND CAULK TO WALL WITH WHITE SILICONE CAULK.

3.15 FIRE RATINGS - WHERE PIPING PENETRATES FIRE-RATED CONSTRUCTION, PROVIDE SUITABLE PROTECTION TO MAINTAIN RATING.

3.16 CUTTING & PATCHING - THIS CONTRACTOR IS RESPONSIBLE FOR ANY CUTTING AND PATCHING REQUIRED WHICH IS INCIDENTAL TO THE INSTALLATION OF HIS WORK. CUT, CHANNEL, CHASE, AND DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, AND OTHER SURFACES NECESSARY FOR PLUMBING INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF THE TRADES INVOLVED. REPAIR CUT SURFACES USING MATERIALS MATCHING SPECIFIED MATERIALS AND METHODS REQUIRED FOR SURFACE.

3.17 CLEAN-UP: CONTRACTOR SHALL REMOVE ALL DEBRIS DUE TO THIS WORK AND SHALL REPAIR, CLEAN AND REPLACE ALL DAMAGED OR SOILED SURFACES AS A RESULT OF THIS WORK AT NO ADDITIONAL EXPENSE TO THE OWNER. REMOVAL OF DEBRIS SHALL BE DAILY AS REQUIRED TO MAINTAIN SAFE WORKING CONDITIONS.

3.18 TESTING AND START-UP

A. ALL COSTS OF TESTS SHALL BE BORNE BY THIS CONTRACTOR. SHOULD TEST REVEAL ANY DEFECTIVE MATERIAL OR WORKMANSHIP, SUCH WORK SHALL BE REPLACED AND TESTS REPEATED. ALL CORRECTIONS IN PIPING SHALL BE MADE USING NEW MATERIALS.

B. TESTING - TEST ALL PLUMBING SYSTEMS PER REQUIREMENTS OF CODE AND LOCAL AUTHORITY. PROVIDE DOCUMENTATION OF ACCEPTANCE.

C. DISINFECTION - DISINFECT POTABLE WATER SYSTEMS IN ACCORDANCE WITH CODE AND LOCAL AUTHORITY. PROVIDE WRITTEN DOCUMENTATION OF DISINFECTION ACCEPTANCE.

D. START-UP: START-UP, CHECK OUT AND ADJUST ALL PLUMBING WORK FOR PROPER OPERATION. DEMONSTRATE TO ENGINEER AND LOCAL AUTHORITY THAT ALL SYSTEMS ARE IN COMPLETE SERVICEABLE CONDITION AND WILL FUNCTION AS INTENDED.

E. CLEANING: AFTER ALL FIXTURES, EQUIPMENT, ETC., HAVE BEEN INSTALLED, THE ENTIRE SYSTEM SHALL BE THOROUGHLY CLEANED. ALL PIPE FITTINGS, EQUIPMENT, ETC., SHALL BE CLEANED OF PIPE JOINT COMPOUND, GREASE, METAL SHAVINGS, ETC., WHICH HAVE ACCUMULATED THEREON. ALL DAMAGE OR DISCOLORATION OF FIXTURES OR BUILDING DUE TO FAILURE TO CLEAN UP THOROUGHLY OR FLUSH OUT PIPING PROPERLY SHALL BE CORRECTED WITHOUT ADDITIONAL COST TO THE OWNER.

PLUMBING LEGEND

CA	COMPRESSED AIR PIPING
C — C	CONDENSATE PIPING
140°F — 140°F	DOMESTIC 140°F WATER PIPING
140R	DOMESTIC 140°F RETURN WATER PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER CIRCULATION PIPING
	DOMESTIC HOT WATER PIPING
F — F	FILTERED WATER PIPING
SP	FIRE SPRINKLER PIPING
FM	FORCE MAIN PIPING
NG	NATURAL GAS PIPING
LP	LP GAS PIPING
GW	GREASE WASTE PIPING
MCA	MEDICAL COMPRESSED AIR PIPING
N2	NITROUS OXIDE PIPING
O2	O2 (0XYGEN) PIPING
OD	OVERFLOW ROOF DRAIN PIPING
RD	ROOF DRAIN PIPING
	SANITARY VENT PIPING
	SANITARY WASTE PIPING
T — T	TEPID WATER PIPING
VAC	VACUUM PIPING
	BACKFLOW PREVENTION DEVICE
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER (BALANCING VALVE)
P	CIRCULATION PUMP
	CONTROL VALVE
	EXTENT OF DEMOLITION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
	GAS-REGULATOR VALVE
	GATE VALVE
	GATE VALVE IN RISER
GCO	GRADE CLEANOUT
HB	HOSE BIBB
	PIPE CAP
	PIPE ELBOW
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	PIPE TEE
	PIPE TEE DOWN
	PIPE TEE UP
SP P FM	SUMP PUMP
1	DEMOLITION KEYED NOTE TAG
1	NEW WORK KEYED NOTE
	POINT OF CONNECTION - NEW TO EXISTING
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
M 140°F	THERMOSTATIC MIXING VALVE
WCO	WALL CLEANOUT
WH	WALL HYDRANT
	WASHING MACHINE BOX
SA	WATER HAMMER ARRESTOR

NOTE: ALL ITEMS LISTED IN THIS SCHEDULE MAY NOT BE USED IN PROJECT

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PLUMBING ABBREVIATIONS

(X)	EXISTING
AAV	AIR ADMITTANCE VALVE
A.F.F.	ABOVE FINISHED FLOOR
A.R.C.I.	ACID RESISTANT CAST IRON
ADA	AMERICANS WITH DISABILITIES ACT
BRZ.	BRONZE
BT	BATHTUB
C.I.	CAST IRON
CO	CLEANOUT
CONC.	CONCRETE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DIA.	DIAMETER
E.C.I.	ENAMELED CAST IRON
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
GA.	GAUGE
GAL.	GALLON
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GWH	GAS-FIRED WATER HEATER
HB	HOSE BIBB
INCL.	INCLUDED
KS	KITCHEN SINK
LAV	LAVATORY
LP	LIQUID PROPANE
MS	MOP SERVICE BASIN
NAT.	NATURAL GAS
NKL.	NICKEL
NON SIMULT.	NON SIMULTANEOUS
O.F.L.C.	OPEN FRONT LESS COVER
OB	OUTLET BOX
OC	ON CENTER
ORDL	OVERFLOW ROOF DRAIN LEADER
PC	PLUMBING CONTRACTOR
PRESS. BAL.	PRESSURE BALANCED
RCVY.	RECOVERY
RDL	ROOF DRAIN LEADER
SA	WATER HAMMER ARRESTOR
SH	SHOWER
SK	SINK
SLD.	SLIDE
SS	STAINLESS STEEL
TDH	TOTAL DYNAMIC HEAD
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VC	VITREOUS CHINA
VR	VANDAL RESISTANT
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

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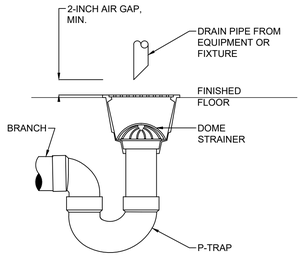
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05/25/2023

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Highway 24
Ocean, North Carolina

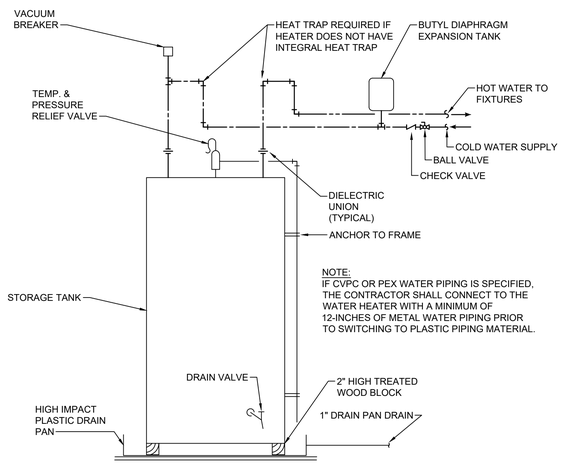
PLUMBING SPECIFICATIONS, LEGEND, ABBREVIATRIONS

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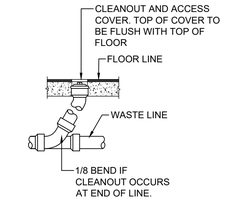
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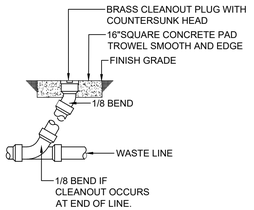
B1 FLOOR SINK DETAIL
NOT TO SCALE



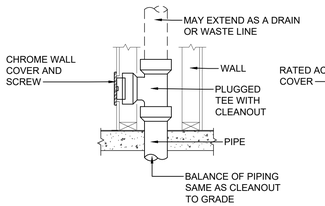
B2 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE



FLOOR CLEANOUT (FCO)

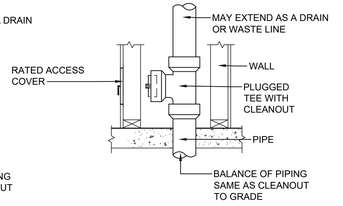


GRADE CLEANOUT (GCO)



NOTE: CLEANOUT TO BE FLUSH WITH FINISHED WALL.

WALL CLEANOUT (WCO)

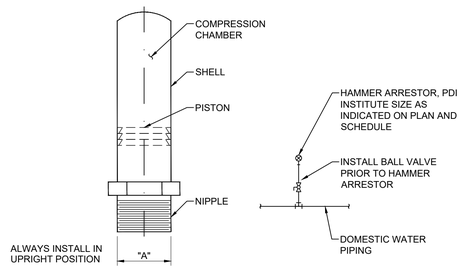


NOTE: CLEANOUT TO BE FLUSH WITH FINISHED WALL.

WALL CLEANOUT (WCO) RATED WALL

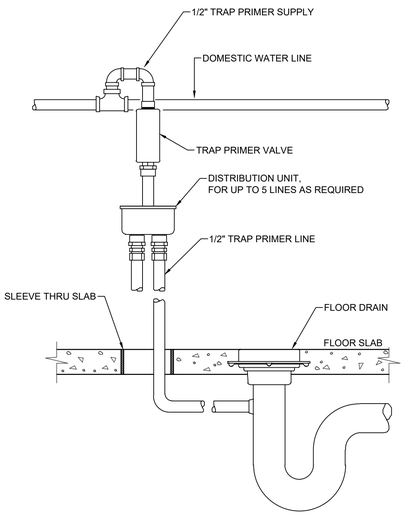
B4 TYPICAL CLEANOUT DETAILS
NOT TO SCALE

E1 GI-1000 DETAIL
NOT TO SCALE

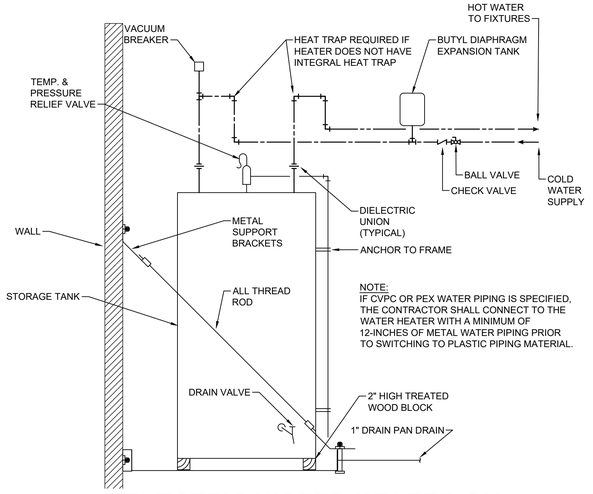


P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE
A	1-11	1/2"
B	12-32	3/4"
C	33-60	1"
D	61-113	1"
E	114-154	1"
F	155-330	1"

E3 HAMMER ARRESTOR DETAIL
NOT TO SCALE



E4 TRAP PRIMER DETAIL
NOT TO SCALE



E5 ELECTRIC WATER HEATER ON ENGINEERED PLATFORM DETAIL
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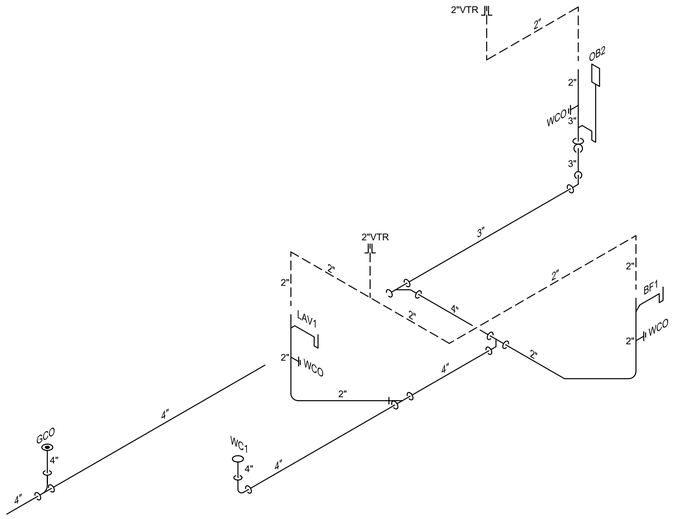
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PLUMBING DETAILS

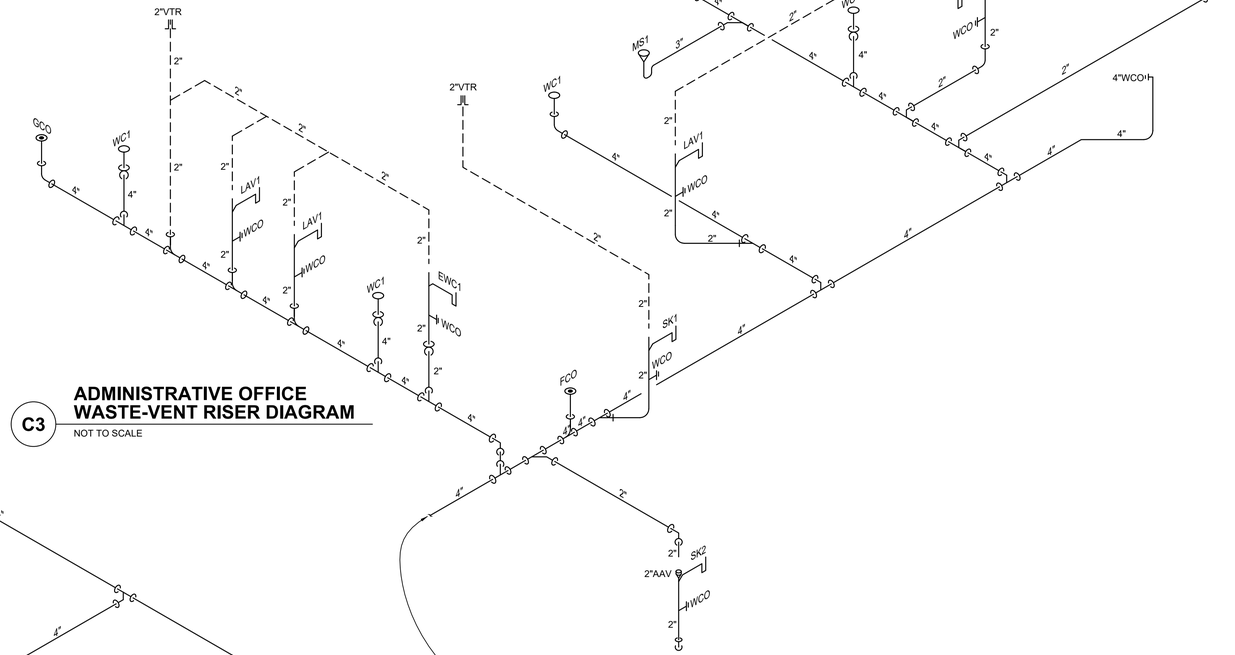
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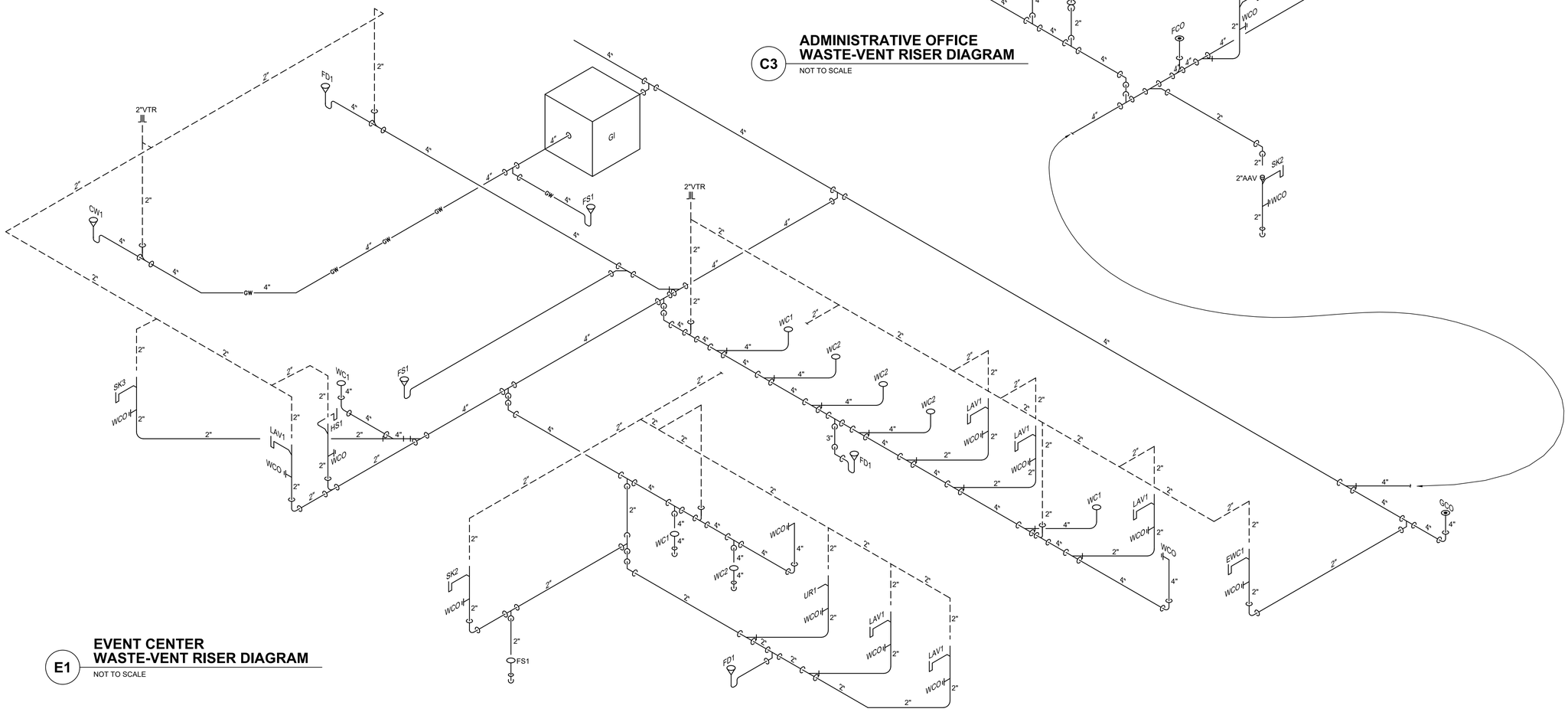
B1 GARAGE/WORKSHOP BUILDING WASTE-VENT RISER DIAGRAM

NOT TO SCALE



C3 ADMINISTRATIVE OFFICE WASTE-VENT RISER DIAGRAM

NOT TO SCALE



E1 EVENT CENTER WASTE-VENT RISER DIAGRAM

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WASTE-VENT RISER DIAGRAM

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PLUMBING FIXTURE SCHEDULE

DRAWING CODE	FIXTURE		DESCRIPTION	MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURERS	NOTES	PIPE SIZE			
								DCW	DHW	WASTE	VENT
WC1 (1)	TANK TYPE WATER CLOSET, FLOOR MTD, 1.6GPF, ADA	BOWL	16.5" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; CADET PRO	AMERICAN STANDARD	215AA.004	ZURN, KOHLER	6,9	1/2"	-	4"	2"
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE; HEIGHT 17-19" AFF	CHURCH	295SSCT	BEMIS, OLSONITE					
WC2	TANK TYPE WATER CLOSET, FLOOR MTD, 1.6GPF	BOWL	15" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; CADET PRO	AMERICAN STANDARD	215CA.004	ZURN, KOHLER	9	1/2"	-	4"	2"
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE	CHURCH	295SSCT	BEMIS, OLSONITE					
UR1	URINAL WALL HUNG, 0.125GPF, ADA	BOWL	VITREOUS CHINA, WASHOUT, ELONGATED RIM MTD. 17 A.F.F. MAX., 3/4"TOP SPUD	AMERICAN STANDARD	6590.001	ZURN, KOHLER	1	3/4"	-	2"	2"
		FLUSH VALVE	11.5 HIGH	SLOAN	186-0.125	ZURN, TEC					
LAV1	COUNTERTOP LAVATORY,0.5GPM, ADA	BOWL	20"x17" VITREOUS CHINA, 34"A.F.F., MAX.	AMERICAN STANDARD	0476.028	ZURN, CRANE	2,3,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, SINGLE LEVER HANDLE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGE, HIGH TEMP LIMIT STOP	MOEN	8413F05	ZURN, DELTA					
		DRAIN	CAST BRASS, CHROME PLATED, OPEN GRID STRAINER P.O. PLUG WITH BRASS TAILPIECE	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 105°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
SK1	1-COMPARTMENT COUNTERTOP SINK, ADA	BOWL	19"X19"X6"", 18 GA S.S., 34"A.F.F. MAX.	ELKAY	LRAD191960	JUST, ACORN	2,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	180° SWING SPOUT, SINGLE LEVER HANDLE, 3 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	8701	DELTA, ZURN					
		DRAIN	WROUGHT BRASS CHROME PLATED STRAINER, BRASS TAILPIECE	MCGUIRE	152N	ZURN, MOEN					
SK2	2-COMPARTMENT COUNTERTOP SINK, 10" DEEP (ADA SIDE APPROACH)	BOWL	37x22x10, 18 GA S.S., EQUAL DOUBLE BOWL DROP-IN SINK	ELKAY	DLR372210	JUST, ACORN	2,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	180° SWING SPOUT, SINGLE LEVER HANDLE, 3 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	8701	DELTA, ZURN					
		DRAIN	STAINLESS STEEL BASKET STRAINER, BRASS TAILPIECE	MCGUIRE	151A	ZURN, MOEN					
SK3	2-COMPARTMENT COUNTERTOP SINK, ADA	BOWL	37x22x6, 18 GA S.S., EQUAL DOUBLE BOWL DROP-IN SINK	ELKAY	LRAD372260	JUST, ACORN	2,3,4,5,9,	1/2"	1/2"	ID	2"
		FAUCET	180° SWING SPOUT, SINGLE LEVER HANDLE, 3 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	8701	DELTA, ZURN					
		DRAIN	STAINLESS STEEL BASKET STRAINER, BRASS TAILPIECE	MCGUIRE	151A	ZURN, MOEN					
SK4	2-COMPARTMENT COUNTERTOP SINK, ADA	BOWL	37x22x6, 18 GA S.S., EQUAL DOUBLE BOWL DROP-IN SINK	ELKAY	LRAD372260	JUST, ACORN	2,3,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	180° SWING SPOUT, SINGLE LEVER HANDLE, 3 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	8701	DELTA, ZURN					
		DRAIN	STAINLESS STEEL BASKET STRAINER, BRASS TAILPIECE	MCGUIRE	151A	ZURN, MOEN					
SK5	COUNTERTOP SINK,0.5GPM, ADA	BOWL	20"x17" VITREOUS CHINA, 34"A.F.F., MAX.	AMERICAN STANDARD	0476.028	ZURN, CRANE	2,3,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, SINGLE LEVER HANDLE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGE, HIGH TEMP LIMIT STOP	MOEN	8413F05	ZURN, DELTA					
		DRAIN	CAST BRASS, CHROME PLATED, OPEN GRID STRAINER P.O. PLUG WITH BRASS TAILPIECE	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 105°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
MS1	MOP SINK	BASIN	24"x24"x10" MOLDED STONE w/ STAINLESS STEEL DRAIN	FIAT	MSB-2424	FLORESTONE, ZURN		1/2"	1/2"	3"	2"
		FAUCET	BRASS CONSTRUCTION, ROUGH CHROME FINISH, INTEGRAL VACUUM BREAKER, INTEGRAL CHECK STOPS, 3/4"THREADED SPOUT, SERVICE STOPS, WALL MOUNT, VANDAL RESISTANT, LEVER HANDLES	MOEN	8124	DELTA, ZURN					
		ACCESSORIES	STAINLESS STEEL, THREE STATION MOP/BROOM HOLDER	MOEN	8198	-					
		ACCESSORIES	STAINLESS STEEL, HOSE BRACKET WITH 30" HEAVY DUTY RUBBER HOSE, GHT THREADED CONNECTION	MOEN	8199	DELTA, ZURN					
LS1 (1)	FLOOR MOUNT LAUNDRY SINK	SINK	40"X24"X14" MOLDED STONE w/ GRID DRAIN	FIAT	FLTD II	SWANSTONE, MUSTEE	9,10	1/2"	1/2"	2"	2"
		FAUCET	CHROME PLATED BRASS, 4" WRIST BLADE HANDLES, VANDAL RESISTANT, CERAMIC CARTRIDGE	MOEN	74998	DELTA, ZURN					
CW1	CAN WASH	BASIN	JOB-BUILT BY G.C.	-	-	-	10	1/2"	1/2"	3"	2"
		FAUCET	NON-FREEZE, HOT -COLD	WOODFORD	HC-67	SMITH, ZURN					
		DRAIN	MED. DUTY, 12" DIA. C.I. GRATE, SEDIMENT BUCKET	JR SMITH	2143	ZURN, WATTS					
BF1	WALL MOUNT BOTTLE FILLER	FIXT	SURFACE MOUNT, FILTERED, NON-REFRIGERATED STAINLESS, HANDS FREE, LAMINAR FLOW, VISUAL FILTER MONITOR	ELKAY	LZWSSM	HALSEY TAYLOR, OASIS	6,11	1/2"	-	2"	2"
EWC1	WALL HUNG WATER COOLER, ADA	FIXT	SPLIT LEVEL, S.S. TOP, LIGHT GREY BODY, BOTTLE FILLING STATION, 8 GPH @ 50/80/90, 120V/1PH WITH FILTER	ELKAY	LZSTL8WSLK	HALSEY TAYLOR, OASIS	1,11	1/2"	-	2"	2"
EWH1	ELECTRIC WATER HEATER, 20 GAL	FIXT	GLASS-LINED TANK, DUAL 4500W, 208V/1PH, NON-SIMULT.	A.O. SMITH	DEL-20	BRADFORD-WHITE, RHEEM	8	3/4"	3/4"	-	-
		EXP TANK	2 GAL DIAPHRAGM		PMC-2					-	-
EWH2	ELECTRIC WATER HEATER, 30 GAL	FIXT	GLASS-LINED TANK, DUAL 4500W, 208V/1PH, NON-SIMULT.	A.O. SMITH	DEL-30	BRADFORD-WHITE, EeMAXX	8	1/2"	1/2"	-	-
			2 GAL DIAPHRAGM		PMC-2					-	-
EWH3	ELECTRIC WATER HEATER, 50 GAL	FIXT	GLASS-LINED TANK, DUAL 4500W, 208V/1PH, NON-SIMULT.	A.O. SMITH	DEN-52	BRADFORD-WHITE, RHEEM	8	3/4"	3/4"	-	-
		EXP TANK	10 GAL DIAPHRAGM		PMC-10					-	-
FCO	FLOOR CLEANOUT	FIXT	4"SCH. 40 HUB, PVC BASE ADAPTER, ROUND NICKEL-BRONZE COVER, VANDAL RESISTANT SCREWS	SIOUX CHIEF	834-4PNRV	ZURN, SMITH		-	-	MATCH	-
GCO	GRADE CLEANOUT	FIXT	4"SCH. 40 HUB, PVC BASE ADAPTER, ROUND NICKEL-BRONZE COVER, VANDAL RESISTANT SCREWS	SIOUX CHIEF	851-44NV	ZURN, SMITH		-	-	MATCH	-
WCO	WALL CLEANOUT	FIXT	ROUND S/S ACCESS COVER & SCREW, RECESS BRONZE THRD. PLUG	SIOUX CHIEF	870	ZURN, SMITH		-	-	MATCH	-
FD1	FLOOR DRAIN	FIXT	FINISHLINE ADJUSTABLE, SCH. 40 HUB CONNECTION, ABS/PVC BASE ADAPTER, SQUARE NICKEL BRONZE STRAINER, TRAP PRIMER CONNECTION	SIOUX CHIEF	832	ZURN, SMITH	7	-	-	MATCH	-
FS1	FLOOR SINK	FIXT	PVC BODY, 12"X12" PLASTIC TOP w/ 3/4 GRATE, BEEHIVE STRAINER	PROFLO	PF42855	ZURN, SMITH		-	-	MATCH	-
FS2	FLOOR SINK	FIXT	PVC BODY, 12"x12" PLASTIC TOP w/ 1/2 GRATE, BEEHIVE STRAINER	PROFLO	PF42857	ZURN, SMITH		-	-	MATCH	-
GI	GREASE INTERCEPTOR	FIXT	OUTDOOR CONCRETE, 1000 GALLON OR AS APPROVED BY LOCAL JURISDICTION	-	-	-		-	-	MATCH	-
HB1	EXTERIOR HOSE BIBB	FIXT	FREEZELESS, POWDER COATED, 3/4"HOSE THREAD, ANTI-SIPHON	WOODFORD	19	ZURN, WATTS		3/4"	-	-	-
YH1 (1)	FREEZELESS YARD HYDRANT	FIXT	DUCTILE IRON HANDLE, ALL METAL CONSTRUCTION, 3/4" BRASS HOSE NOZZLE WITH VACUUM BREAKER	WOODFORD	R34	ZURN, WATTS		3/4"	-	-	-
OB1	ICE MAKER BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIOUX CHIEF	696	OATEY, IPS		1/2"	-	-	-
OB2	WASHER CONNECTION BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIOUX CHIEF	696	OATEY, IPS		1/2"	1/2"	2"	2"

NOTES

1. PROVIDE MATCHING WALL HANGER. COORDINATE WITH G.C. FOR WALL REINFORCING.
2. PROVIDE BRASS 1-1/2" TAILPIECE, CAST BRASS SLIP JOINT P-TRAP WITH CLEANOUT; PROVIDE ADA OFFSET ARRANGEMENT WHERE REQUIRED.
3. PROVIDE ADA INSULATION KIT
4. COORDINATE WITH MILLWORK.
5. COORDINATE ADA MILLWORK ENCLOSURE FOR WATER AND DRAIN PIPING UNDER SINK.
6. TRIP LEVER OR FLUSH HANDLE TO BE LOCATED ON WIDE SIDE OF STALL OR TOILET ROOM.
7. PROVIDE TRAP PRIMER
8. FIELD ROUTE 1" DRAIN PAN DRAIN PIPING TO CLOSEST INDIRECT DRAIN OR SPILL TO GRADE.
9. PROVIDE 1/2" IPS X 3/8" OD ANGLE BRASS STOP(S) WITH RIGID COPPER RISERS. ALL EXPOSED PIPING SHALL BE CHROME PLATED.
10. PROVIDE INLINE CHECK VALVES FOR WATER SUPPLY LINES.
11. PROVIDE 1/2"IPS x 3/8" O.D. BRASS STOP CONCEALED BEHIND CABINET.

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PLUMBING SCHEDULES

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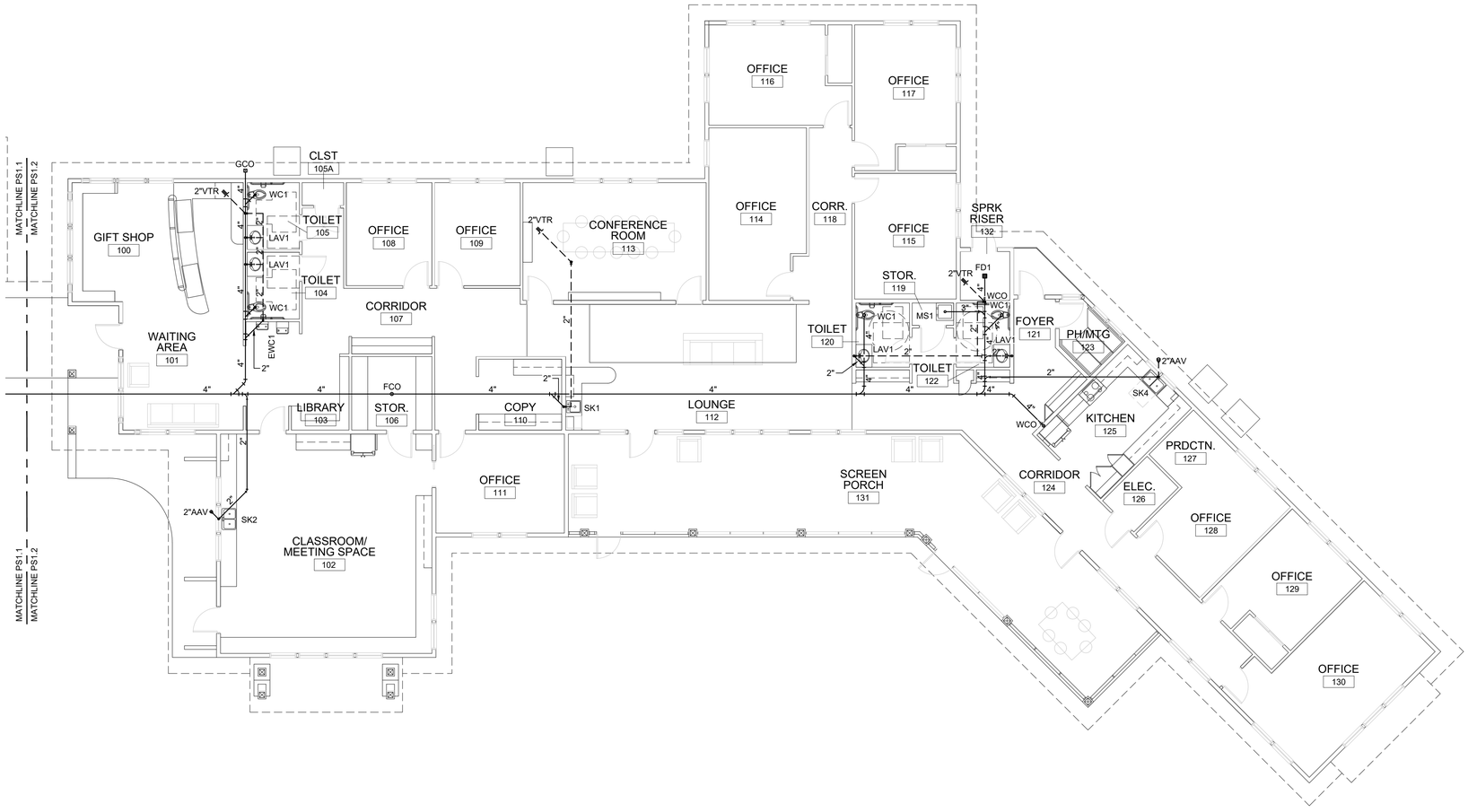
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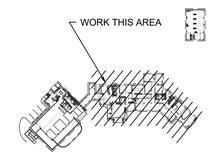


E1 ADMINISTRATIVE OFFICE WASTE-VENT PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH



E6 KEY PLAN

NOT TO SCALE

PLAN NORTH

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PLUMBING WASTE-VENT PLAN

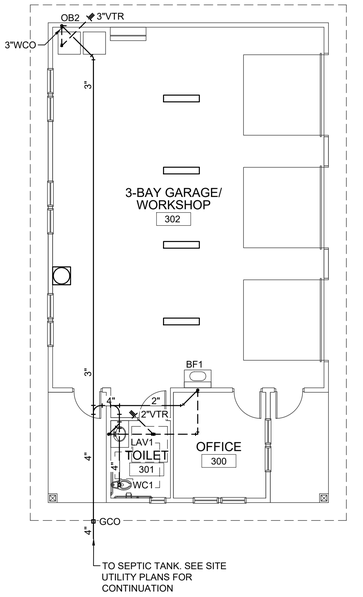
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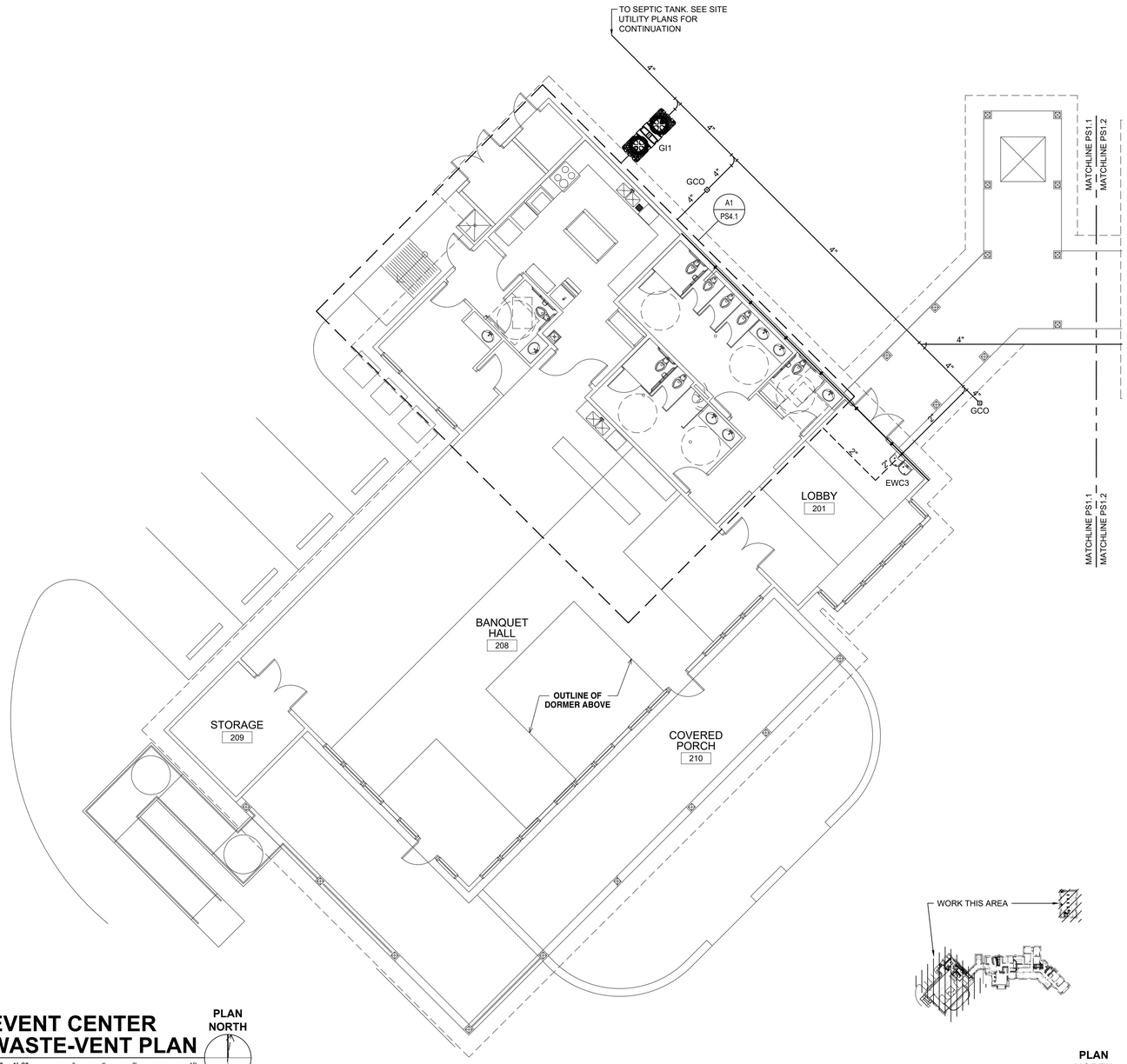
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NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R. BENSON
05/25/2023



D1 GARAGE/WORKSHOP WASTE-VENT PLAN
1/8" = 1'-0"
PLAN NORTH



E3 EVENT CENTER WASTE-VENT PLAN
1/8" = 1'-0"
PLAN NORTH

E6 KEY PLAN
NOT TO SCALE
PLAN NORTH

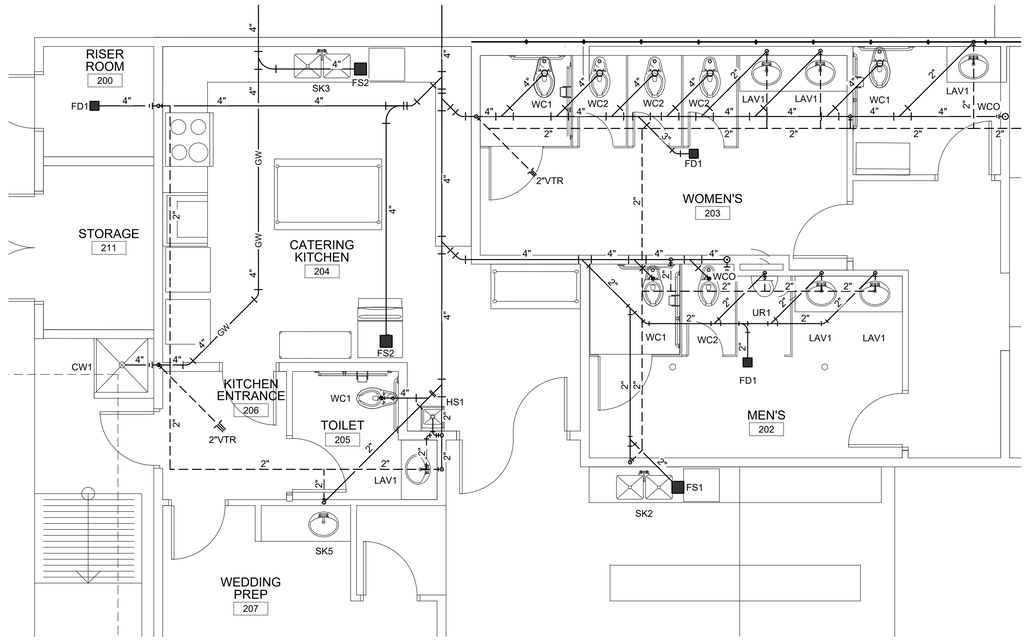
The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

PLUMBING WASTE-VENT PLAN

JOB NUMBER 22126
DRAWN BY JBS
CHECKED BY JRB
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
PS1.2

CBHF
Engineers, PLLC
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www.cbhfengineers.com
NC# P-0506
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C4 ENLARGED WASTE-VENT PLAN

1/4" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10592 JAMES R. BERGSTROM
05/25/2023

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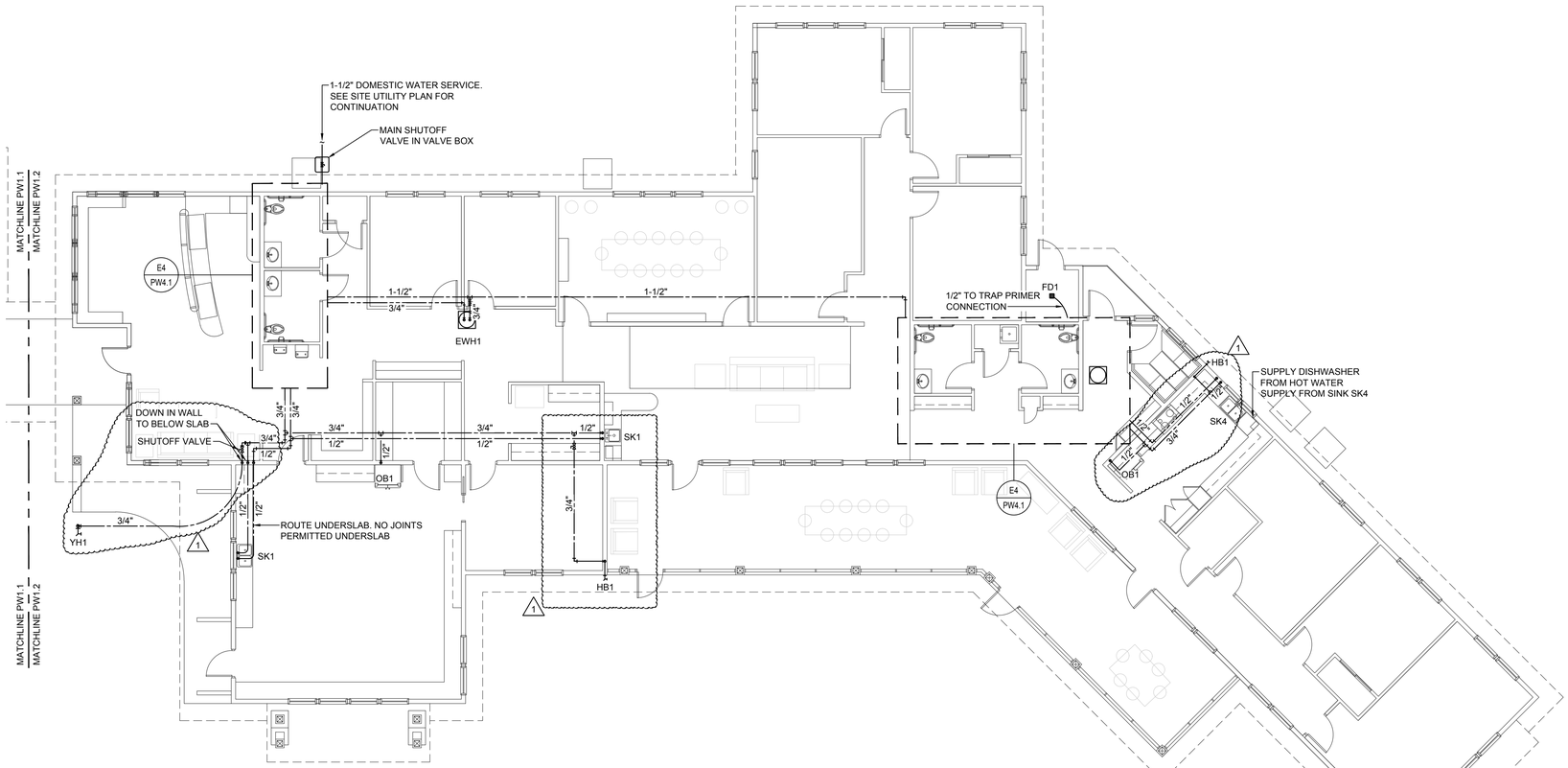
PLUMBING WASTE-VENT PLAN

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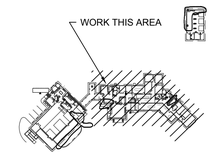


E1 ADMINISTRATIVE OFFICE DOMESTIC WATER PLAN

1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'



E6 KEY PLAN

NOT TO SCALE

PLAN NORTH

FOR DRAWING REVIEW PURPOSES ONLY

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 3387 JAMES R. BENSON

The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

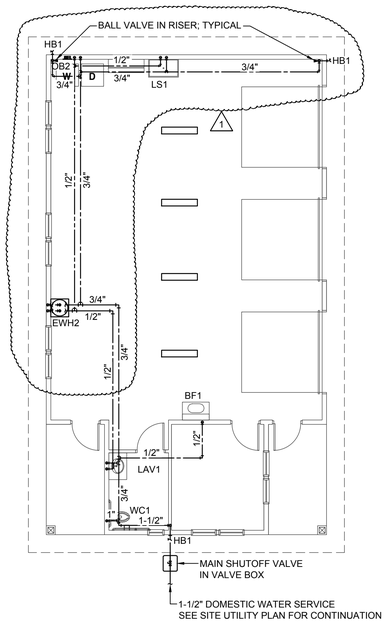
PLUMBING
DOMESTIC
WATER PLAN

JOB NUMBER 22126
DRAWN BY JBS
CHECKED BY JRB
DATE MAY 25, 2023
REVISIONS

1 ARCHITECT REVISIONS 06-12-2023

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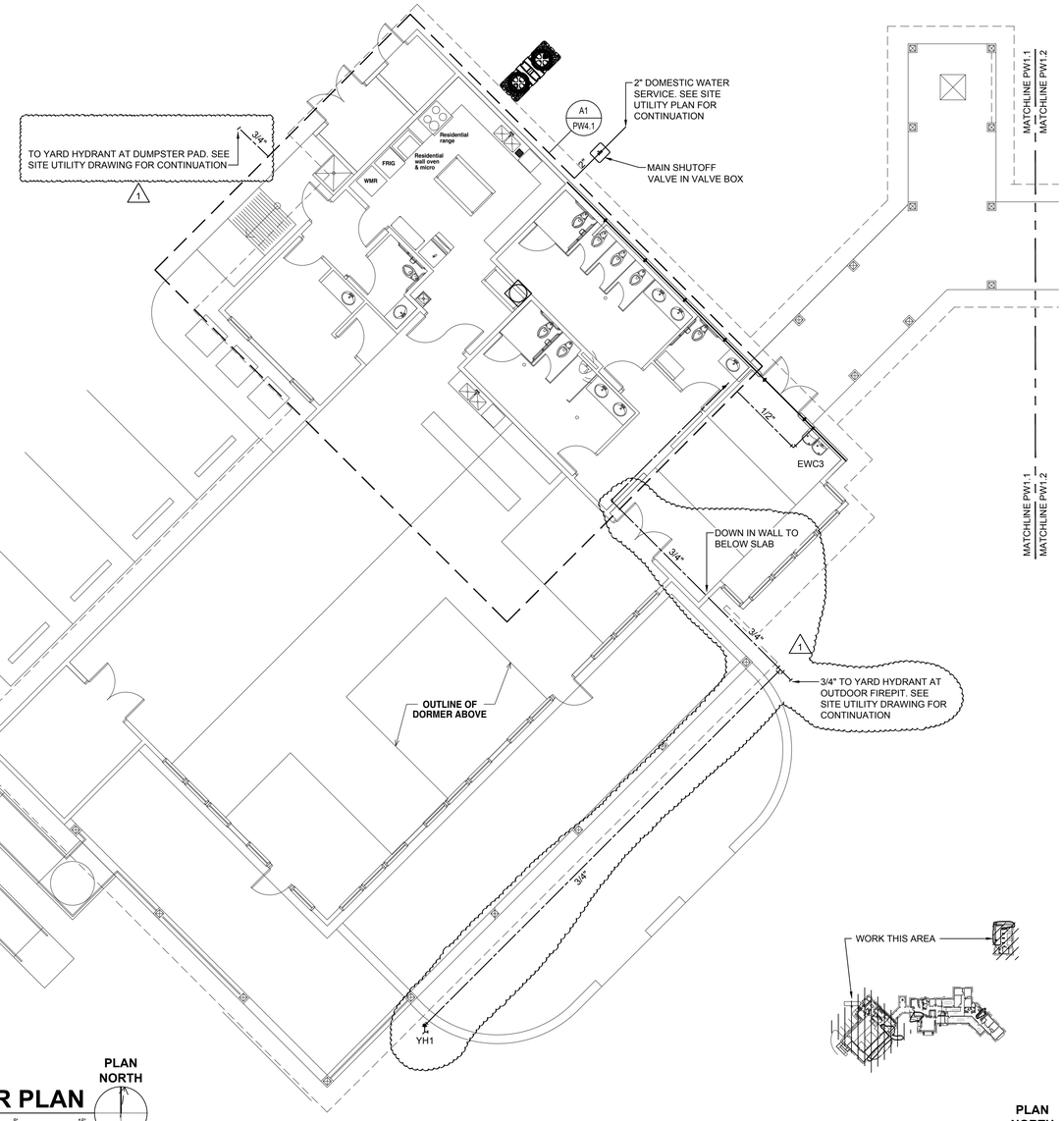
PW1.1



D1 GARAGE/WORKSHOP DOMESTIC WATER PLAN

1/8" = 1'-0"

PLAN NORTH



E3 EVENT CENTER DOMESTIC WATER PLAN

1/8" = 1'-0"

PLAN NORTH

E6 KEY PLAN

NOT TO SCALE

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049615 JAMES R. BENSON
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Ocean, North Carolina

PLUMBING DOMESTIC WATER PLAN

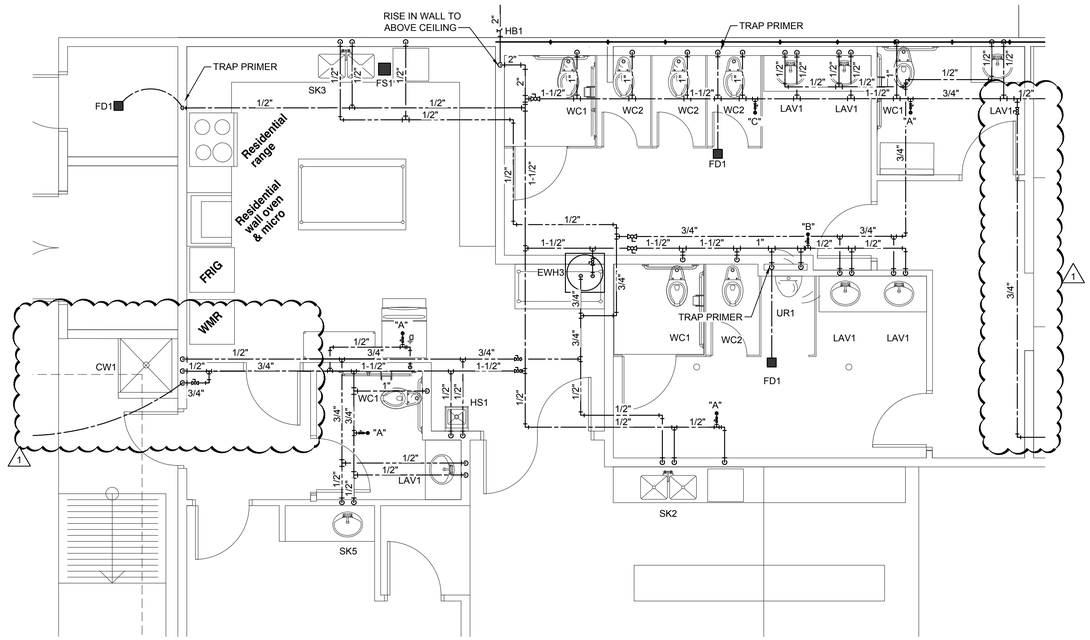
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REVISIONS

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SHEET NUMBER

PW1.2

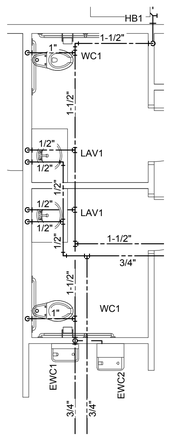
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C4 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

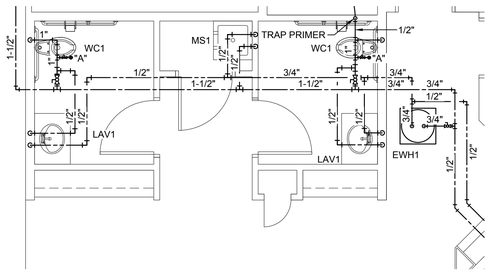
PLAN NORTH



E4 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

PLAN NORTH



E5 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036961 JAMES R. BENSON
FOR REVIEW PURPOSES ONLY

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Ocean, North Carolina

PLUMBING DOMESTIC WATER PLAN

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PW4.1

MECHANICAL SPECIFICATIONS:

PART 1 GENERAL

1.1 SCOPE OF WORK: THESE DRAWINGS AND SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT MECHANICAL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING MECHANICAL SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

1.2 CONTRACTOR: THE WORD "CONTRACTOR" AS USED HEREIN SHALL MEAN THE HVAC INSTALLER UNLESS OTHERWISE QUALIFIED.

1.3 DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING HVAC SYSTEMS.

1.4 CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INSOFAR AS THEY APPLY:

A. NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS

B. LOCAL JURISDICTION REQUIREMENTS: INCLUDE ALL WORK TO COMPLY WITH CODES WHETHER INDICATED ON DRAWINGS OR NOT. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND CODES PRIOR TO BEGINNING WORK.

1.5 PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.

1.6 MANUFACTURER'S RECOMMENDATIONS: INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

1.7 WORKMANSHIP: UTILIZE SKILLED MECHANICS TO OBTAIN A HIGH QUALITY PROFESSIONAL FINISH INSTALLATION WHEN COMPLETED. WORK OF UNACCEPTABLE QUALITY SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST. ENGINEER SHALL BE THE JUDGE OF WORKMANSHIP AND THEIR OPINION WILL BE FINAL. IN ADDITION, ANY EXISTING CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT NO ADDITIONAL COST.

1.8 SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.

1.9 PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GENERAL CONTRACTOR.

1.10 COORDINATION: COORDINATE MECHANICAL WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. LAYOUT MECHANICAL WORK SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST ARRANGEMENT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.

1.11 EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.

1.12 LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.

1.13 STORAGE SPACE: CONSULT WITH THE GENERAL CONTRACTOR REGARDING JOB SITE STORAGE FOR MECHANICAL MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.

1.14 CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.

1.15 ELECTRICAL WORK

A. PERFORM ELECTRICAL WORK FOR MECHANICAL EQUIPMENT IN COMPLIANCE WITH PROJECT ELECTRICAL REQUIREMENTS. ELECTRICAL WORK FOR MECHANICAL EQUIPMENT NOT SPECIFICALLY INDICATED TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN THE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AS PART OF HIS WORK.

B. ELECTRICAL DRAWINGS ARE BASED ON ELECTRICAL CHARACTERISTICS INDICATED IN DRAWING MECHANICAL EQUIPMENT SCHEDULES. ANY EQUIPMENT FURNISHED BY THE MECHANICAL CONTRACTOR WHICH DOES NOT MATCH THE ELECTRICAL CHARACTERISTICS INDICATED IN THE DRAWING SCHEDULES SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. ANY ADDITIONAL COSTS FOR ELECTRICAL INSTALLATION REQUIRED FOR EQUIPMENT NOT MATCHING THE DRAWING SCHEDULES SHALL BE BORNE BY THE MECHANICAL CONTRACTOR.

C. LOW VOLTAGE CONTROL WIRING FOR MECHANICAL SYSTEMS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR.

1.16 SUBMITTALS: SUBMIT ONE (1) ELECTRONIC COPY OF DESCRIPTIVE DATA FOR MECHANICAL EQUIPMENT AND MATERIALS INCLUDING GRILLES AND DAMPERS FOR APPROVAL BY THE ENGINEER. CLEARLY IDENTIFY ALL ITEMS.

1.17 OPERATING AND MAINTENANCE MANUALS: SUBMIT TWO COPIES OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, INCLUDING NECESSARY CUT SHEETS, CHARTS, WRITTEN INSTRUCTIONS, WIRING DIAGRAMS, FINAL AS-BUILT DRAWINGS WITH BALANCED AIRFLOWS INDICATED, ETC. BIND IN SUITABLE HARD BACK RING BINDERS, PROPERLY INDEXED, AND DELIVER TO THE OWNER PRIOR TO BUILDING OCCUPANCY. IN ADDITION, AFFIX A FOLDER WITH TYPICAL "OWNER'S INSTRUCTIONS" AND "MAINTENANCE INFORMATION" INSIDE THE MECHANICAL EQUIPMENT AS APPLICABLE. THE FOLDER SHALL ALSO INCLUDE A COMPLETE STARTUP LOG FOR THE EQUIPMENT.

1.18 RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ENGINEER PRIOR TO FINAL INSPECTION.

1.19 WARRANTY: WARRANTY THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS PER GENERAL CONTRACT REQUIREMENTS. REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE WARRANTY PERIOD. PROVIDE 5 YEAR WARRANTY FOR ALL AIR CONDITIONING COMPRESSORS. FURNISH WARRANTY CERTIFICATES FOR ALL MECHANICAL EQUIPMENT. WARRANTY TO COMMENCE UPON DATE OF ACCEPTANCE OF WORK BY OWNER.

PART 2 MATERIALS

2.1 EQUIPMENT

A. MODELS AS SCHEDULED ON THE DRAWINGS. MANUFACTURERS INDICATED ARE INTENDED TO ESTABLISH THE QUALITY AND TYPE OF EQUIPMENT DESIRED. COMPARABLE EQUIPMENT WILL BE CONSIDERED FOR APPROVAL BY THE ARCHITECT/ENGINEER

B. INCLUDE ALL ACCESSORIES INDICATED OR AS RECOMMENDED BY THE MANUFACTURER FOR PROPER OPERATION.

2.2 DUCTWORK

A. DUCT CONSTRUCTION (SINGLE WALL): GALVANIZED STEEL CONSTRUCTED, BRACED, SUPPORTED AND INSTALLED ACCORDING TO SMACNA HVAC DUCT CONSTRUCTION STANDARDS, 1" PRESSURE CLASS, SEAL CLASS A. SEAL USING APPROVED TYPE DUCT SEALING MASTIC OR TAPE DIPPED IN OR BRUSHED WITH ADHESIVE ("HARDCAST" DT-TAPE W/FTA-20 ADHESIVE OR "UNITED MCGILL" MTD TAPE W/MTD-20 ADHESIVE). "DUCT TAPE" IS UNACCEPTABLE FOR DUCT SEALING. "DUCT-MATE" OR EQUAL TRANSVERSE JOINT CONNECTION METHODS WILL BE ACCEPTABLE ONLY IF A LETTER FROM THE MANUFACTURER IS PRESENTED TO THE ENGINEER STATING THAT THE CONTRACTOR'S INSTALLATION METHODS ARE APPROVED BY THE MANUFACTURER AND THAT ALL MANUFACTURER'S RECOMMENDATIONS WILL BE FOLLOWED. THERE WILL BE NO EXCEPTIONS TO THIS STIPULATION.

B. DUCT SIZES INDICATED ARE INSIDE FREE AREA DIMENSIONS. DUCT DIMENSIONS SHALL BE ADJUSTED TO SUIT FIELD CONDITIONS USING EQUIVALENT SIZE PER ASHRAE STANDARD. RECTANGULAR OR ROUND DUCTWORK MAY BE USED AT CONTRACTOR OPTION PROVIDED EQUIVALENT SIZE PER ASHRAE STANDARD IS USED.

C. BRANCH DUCTS: PROVIDE MANUFACTURED TAKE-OFF FITTINGS WITH EXTRACTOR AND VOLUME DAMPER WITH LOCKING QUADRANT OPERATOR AND INSULATION GUARD, GENERAL ENVIRONMENT CORPORATION OR EQUAL, FOR ALL BRANCH RUNOUTS TO SUPPLY REGISTERS AND DIFFUSERS. UNLESS OTHERWISE NOTED, MATCH SUPPLY BRANCH DUCT SIZE TO DIFFUSER SIZE.

D. ELBOWS: ALL SQUARE BENDS OR ELBOW FITTINGS SHALL BE FITTED WITH APPROVED TYPE DOUBLE THICKNESS TURNING VANES.

E. FLEXIBLE DUCT: FACTORY INSULATED, R-8, MINIMUM, UL 181 CLASS 1. MAXIMUM FLEX DUCT RUNOUT LENGTH NOT TO EXCEED 8' UNLESS OTHERWISE NOTED. INSTALL AND SUPPORT FLEXIBLE DUCTS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

F. FLEXIBLE CONNECTIONS: PROVIDE FLEXIBLE CONNECTOR, VENTFABRICS OR EQUAL, AT ALL MECHANICAL EQUIPMENT CONNECTIONS TO DUCT SYSTEM.

G. FIRE DAMPERS: PROVIDE SUITABLY LISTED FIRE DAMPERS IN DUCTS PENETRATING FIRE RATED CONSTRUCTION WHERE REQUIRED BY CODE. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED CONSTRUCTION.

H. PROVIDE REMOVABLE ACCESS PANELS IN CEILINGS AND ACCESS DOORS (WITH AIR TIGHT GASKETS) IN DUCTWORK AS REQUIRED FOR ACCESS TO DAMPERS OR OTHER DUCT MOUNTED EQUIPMENT.

2.3 AIR DISTRIBUTION

A. DIFFUSERS AND REGISTERS: MODELS AS SCHEDULED ON THE DRAWINGS. MANUFACTURERS INDICATED ARE INTENDED TO ESTABLISH THE QUALITY AND TYPE OF EQUIPMENT DESIRED. COMPARABLE EQUIPMENT WILL BE CONSIDERED FOR APPROVAL BY THE ENGINEER. INCLUDE FINISH AND ACCESSORIES AS INDICATED.

B. LOUVERS: MODELS AS SCHEDULED ON THE DRAWINGS OR EQUAL.

2.4 PIPING

A. REFRIGERANT PIPING: TYPE ACR COPPER WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS. SIZE & INSTALL IN STRICT ACCORDANCE W/ REFRIGERATION EQUIPMENT MANUFACTURER RECOMMENDATIONS.

B. REFRIGERANT ACCESSORIES: PROVIDE FOR EACH REFRIGERANT CIRCUIT:
1. SIGHT GLASS WITH MOISTURE INDICATOR, FILTER DRYER, SOLENOID VALVE AND EXPANSION VALVE.
2. GAUGES, CHARGING VALVES, RELIEF VALVES, LOW LIMIT CONTROLS, AND SPECIALTIES REQUIRED FOR A COMPLETE AND SAFE INSTALLATION.
3. ALL ACCESSORIES AS RECOMMENDED BY THE REFRIGERATION EQUIPMENT MANUFACTURER.
4. VALVES AND SPECIALTIES SHALL BE AS MADE BY MUELLER, HENRY, ALCO, OR EQUAL.

C. CONDENSATE PIPING: SCH 40 PVC W/ SOLVENT WELD JOINTS. PROVIDE TRAP AT COOLING COIL DRAIN CONNECTION. PROVIDE CLEANOUTS AT CHANGE IN DIRECTION. EXTEND CONDENSATE PIPING TO APPROVED DISCHARGE LOCATION.

2.5 INSULATION

A. DUCT INSULATION: R-8 MINIMUM, 2" FIBERGLASS BLANKET INSULATION, ASTM C553, TYPE II, 0.75 PCF CLASS F-1, ASTM 84E FLAME SPREAD/SMOKE DEVELOPED RATING LESS THAN 25/50. PROVIDE WITH FACTORY APPLIED ALL-PURPOSE, LAMINATED GLASS-FIBER-REINFORCED, FLAME-RETARDANT KRAFT PAPER AND ALUMINUM FOIL JACKET. INSTALL ON ALL CONCEALED HVAC SUPPLY, RETURN, MAKE-UP AIR DUCTS AND PLENUMS.

B. REFRIGERANT PIPING INSULATION: ELASTOMERIC CLOSED CELL PIPE INSULATION, ARMAFLEX AP OR EQUAL, 1½" THICK. PROTECT ALL EXTERIOR, EXPOSED PIPE INSULATION WITH ARMAFLEX WB FINISH.

C. CONDENSATE DRAIN PIPING INSULATION: ELASTOMERIC CLOSED CELL PIPE INSULATION, ARMAFLEX AP OR EQUAL, 1/2" THICK. PROTECT ALL EXTERIOR, EXPOSED PIPE INSULATION WITH ARMAFLEX WB FINISH.

2.6 CONTROLS

A. HEAT PUMP TEMPERATURE CONTROLS: SEE DRAWING SCHEDULES AND DETAILS.

B. TOILET EXHAUST: SEE DRAWING SCHEDULES AND DETAILS.

2.7 SUPPORTS

A. HANGERS, SUPPORTS, AND ANCHORS: SUPPORT AND FASTEN ALL DUCTWORK, PIPING, EQUIPMENT, ETC., SECURELY IN PLACE USING APPROVED STEEL HANGERS AND FASTENERS. CHAIN, STRAP, PERFORATED STRAP, WIRE HANGERS, OR WOOD PLUGS ARE PROHIBITED.

B. INCLUDE STEEL SUPPORTS, ANCHORS, FRAMES, BRACING, PLATES, BOLTS, NUTS, WASHERS, ETC. INCIDENTAL TO INSTALLATION OF WORK.

C. PROVIDE AUXILIARY STRUCTURAL MEMBERS WHERE REQUIRED BETWEEN MEMBERS OF THE STRUCTURE.

2.8 REFRIGERANT: FURNISH A FULL CHARGE OF REFRIGERANT FOR EACH SYSTEM AND MAINTAIN THE CHARGE FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND REPLACE ANY THAT MAY BE LOST (UNLESS LOSS IS DETERMINED TO BE CAUSED BY THE OWNER).

PART 3 EXECUTION

3.1 PREPARATION: REVIEW CONSTRUCTION DOCUMENTS AND VERIFY ARRANGEMENT WITH FIELD CONDITIONS. COORDINATE PROPOSED MECHANICAL EQUIPMENT AND SYSTEMS WITH ASSOCIATED WORK OF OTHER TRADES.

3.2 INSTALLATION: INSTALL ALL MECHANICAL WORK IN ACCORDANCE WITH CODE. MANUFACTURER'S RECOMMENDATIONS AND GOOD INDUSTRY PRACTICE. ARRANGE WORK TO ALLOW EASY ACCESS TO EQUIPMENT FOR SERVICE AND MAINTENANCE.

3.3 DUCTWORK: LAYOUT DUCTWORK TO AVOID INTERFERENCES AND MAXIMIZE USABLE SPACE IN THE BUILDING.

3.4 FIRE DAMPERS: INSTALL STRICTLY IN ACCORDANCE TO MANUFACTURER INSTRUCTIONS TO MAINTAIN RATING. KEEP ONE (1) HARD COPY OF INDSTRUCTIONS ON SITE FOR INSPECTOR REVIEW..

3.5 PIPING: ROUTE PIPING NEATLY, PARALLEL TO BUILDING WALLS. WHERE REQUIRED, SLOPE PIPING FOR PROPER DRAINAGE.

3.6 DUCT INSULATION: INSTALL BLANKET INSULATION TIGHT AND SMOOTH. OVERLAP JOINTS 3 INCHES. SEAL JOINTS, BREAKS, AND PUNCTURES WITH VAPOR BARRIER COMPOUND.

3.7 PIPING INSULATION: INSTALL INSULATION NEATLY. APPLY ADHESIVE TO BOTH FACES OF JOINT TO OBTAIN FULLY ADHERED, VAPOR TIGHT INSTALLATION. FINISH ALL INSULATION EXPOSED TO WEATHER WITH MANUFACTURE APPROVED WEATHERPROOF COATING.

3.8 CONTROLS: INSTALL AND WIRE ALL CONTROLS COMPLETE TO OBTAIN INTENDED SEQUENCE OF OPERATION.

3.9 HANGERS AND SUPPORTS: HANG AND SUPPORT EQUIPMENT, DUCTS AND PIPING IN A SUBSTANTIAL MANNER FROM THE BUILDING STRUCTURE. SPACE HANGERS IN ACCORDANCE WITH CODE AND SO AS TO AVOID EXCESS DEFLECTION OR SAG. PROVIDE SEISMIC DESIGN HANGERS WHERE REQUIRED. NO PORTION OF THE STRUCTURE SHALL BE OVER STRESSED BY THE HANGING OPERATION OR BY THE FINAL SUPPORTS. ATTACHMENTS DEEMED INADEQUATE BY THE ENGINEER SHALL BE REWORKED AS DIRECTED. PROVIDE VIBRATION ISOLATION FOR MOVING MACHINERY.

3.10 REFRIGERANT PIPING TESTS: PLACE REFRIGERANT PIPING UNDER A TEST PRESSURE USING ANHYDROUS CARBON DIOXIDE OR NITROGEN BEFORE DEHYDRATING WITH A VACUUM PUMP TO A VACUUM OF 26 INCHES HG. SEE CONDENSING UNIT, COMPRESSOR OR COMPRESSOR UNIT NAME PLATE FOR TEST PRESSURES. MAINTAIN VACUUM FOR A MINIMUM OF 24 HOURS. REFRIGERATION COMPRESSOR SHALL NOT BE USED FOR THIS PURPOSE. AFTER SYSTEM IS VACUUM TESTED, CHARGE WITH SYSTEM REFRIGERANT AND LEAK TEST ENTIRE CIRCUIT WITH ELECTRONIC TESTER.

3.11 LABELS: LABEL ALL EQUIPMENT AND DEVICES WITH BAKELITE ENGRAVED PLATES SCREWED IN PLACE. "TAPEWRITER" AND ADHESIVE LABELS ARE UNACCEPTABLE.

3.12 START-UP: VERIFY INSTALLATION IS COMPLETE AND READY FOR START-UP. START-UP ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING FACTORY CERTIFIED MECHANICS. AFTER START-UP, VERIFY AND DOCUMENT THAT EQUIPMENT IS OPERATING PROPERLY WITHIN MANUFACTURER'S SPECIFIED TOLERANCES.

3.13 TESTING AND BALANCING: BALANCE AIR FLOWS TO OBTAIN AIR QUANTITIES SHOWN ON DRAWINGS. ADJUST DAMPERS FOR ALL AIR OUTLETS AND RECORD VELOMETER READINGS WHICH CORRESPOND TO DESIGN FLOW RATES AT EACH OUTLET. RECORD DESIGN AND FINAL READINGS ON APPROVED FORMS. SUBMIT TWO COPIES FOR REVIEW AND APPROVAL BY ENGINEER. UPON COMPLETION OF ALL BALANCING AND TESTING, SCHEDULE A TIME FOR ENGINEER TO PERFORM RANDOM CHECKING OF TYPICAL OUTLETS. CONTRACTOR SHALL PROVIDE TECHNICIANS AND MEASURING DEVICES FOR THIS TESTING.

3.14 COMMISSIONING: DEMONSTRATE AND DOCUMENT OPERATION OF ALL MECHANICAL SYSTEMS INSTALLED UNDER THIS CONTRACT IN THE PRESENCE OF THE ENGINEER. INCLUDE ALL TESTS, TRIAL OPERATIONS, ETC. AS REQUIRED TO PROVE THAT ALL SYSTEMS ARE IN COMPLETE SERVICEABLE CONDITION AND WILL FUNCTION AS INTENDED. ALL COSTS OF COMMISSIONING SHALL BE BORNE BY THIS CONTRACTOR.

3.15 TRAINING: TRAIN OWNER PERSONNEL IN THE PROPER OPERATION AND MAINTENANCE OF MECHANICAL SYSTEMS. PROVIDE WRITTEN DOCUMENTATION INCLUDING NAMES OF OWNER PERSONNEL ATTENDING TRAINING.

3.16 CLEAN-UP: CLEAN ALL EQUIPMENT AND DEVICES AND INSTALL NEW FILTERS IN EQUIPMENT IMMEDIATELY PRIOR TO OWNER ACCEPTANCE AND OCCUPANCY.

MECHANICAL ABBREVIATIONS

ABBREVIATION	TERM
ADJ	ADJUSTABLE
AMCA	AIR MOVEMENT AND CONTROL ASSOCIATION
AMP	AMPERE (AMP, AMPS)
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
CFM	CUBIC FEET PER MINUTE
CIP	CAST IN PLACE
CMU	CONCRETE MASONRY UNIT
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DEG OR °	DEGREE
EA	EXHAUST AIR
EG	EXHAUST GRILLE
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRONICALLY COMMUTATED MOTOR
EER	ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE
F	FAN
°F	FAHRENHEIT
FLA	FULL LOAD AMPS
FT	FEET
HC	HOT WATER COIL
HGT OR H	HEIGHT
HP	HORSEPOWER
HR	HOUR(S)
IN.	INCH
IN.-WG	INCHES WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
L	LOUVER
MAX	MAXIMUM
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MCWB	MEAN COINCIDENT WET BULB
MIN.	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OZ	OUNCE
OA	OUTSIDE AIR
%	PERCENT
RA	RETURN AIR
RG	RETURN GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SF	SQUARE-FEET
SG	SUPPLY GRILLE
SQ	SQUARE
TG	TRANSFER GRILLE
TYP	TYPICAL
UH	UNIT HEATER
V/PH/HZ	VOLT/PHASE/HERTZ
VTR	VENT THROUGH ROOF
W	WIDTH
WB	WET BULB

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

MECHANICAL LEGEND

T	TEMPERATURE SENSOR
TH	TEMPERATURE/HUMIDITY SENSOR
D	DUCT SMOKE DETECTOR
	INDICATES TO DEMOLISH
GM	GAS METER
	GAS SHUTOFF VALVE
	EXTENT OF DEMOLITION
	POINT OF CONNECTION
* / -	DIFFUSER/ REGISTER/ GRILLE NO. AS SHOWN ON PLAN AND SCHEDULE
	SG,RG,TG,EG
	AIRFLOW, CFM

NOTE: ALL ITEMS MAY NOT BE USED IN PROJECT.

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23°F
SUMMER DRY BULB	95°F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70°F
SUMMER DRY BULB	75°F
RELATIVE HUMIDITY	60% RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	ADMIN 99MBH, BANQUET 99MBH
BUILDING COOLING LOAD:	ADMIN 161MBH, BANQUET 177MBH
MECHANICAL SPACING CONDITIONING SYSTEM	SEE SCHEDULES
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

NOTE: BANQUET HALL DESIGN BASED ON 150 PERSON OCCUPANCY.

MECHANICAL DUCTWORK LEGEND

BD	BALANCING DAMPER
	CEILING RETURN OR TRANSFER REGISTER/GRILLES
	EXHAUST GRILLES
	CEILING SUPPLY DIFFUSERS
	CONICAL TEE
FD	HORIZONTAL FIRE DAMPER
FD	VERTICAL FIRE DAMPER
SD	VERTICAL SMOKE DAMPER
F/SD	VERTICAL FIRE/SMOKE DAMPER
	FLEXIBLE DUCT CONNECTION
DROP	DECLINED DROP WITH RESPECT TO AIRFLOW
RISE	INCLINED RISE WITH RESPECT TO AIRFLOW
Ø	INDICATES ROUND DUCTWORK
	MITERED ELBOW WITH TURNING VANES
M	MOTORIZED CONTROL DAMPER
	RADIUS ELBOW
	SUPPLY DUCT TURNING UP (ROUND OR RECTANGULAR)
	RETURN DUCT TURNING UP (ROUND OR RECTANGULAR)
	EXHAUST DUCT TURNING UP (ROUND OR RECTANGULAR)
	OUTSIDE AIR DUCT TURNING UP (ROUND OR RECTANGULAR)
	SUPPLY DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	RETURN DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	EXHAUST DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	OUTSIDE AIR DUCT TURNING DOWN (ROUND OR RECTANGULAR)
10X10	SQUARE OR RECTANGULAR DUCTWORK
	VOLUME DAMPER
	TAKEOFF WITH 45° THROAT
	RETURN, EXHAUST OR TRANSFER AIR FLOW
	SUPPLY AIR FLOW
	DUCT CROSSING
	RECTANGULAR DUCT TURNING DOWN WITH CHANGE OF DIRECTION
	ROUND DUCT TURNING DOWN WITH CHANGE OF DIRECTION
	TERMINATION OF DUCT WITH BRANCH CONNECTIONS
	RECTANGULAR TO ROUND DUCT TRANSITION
SA	SUPPLY AIR DUCTWORK
RA	RETURN AIR DUCTWORK
EA	EXHAUST AIR DUCTWORK
OA	OUTSIDE AIR DUCTWORK
MA	MAKEUP AIR DUCTWORK
SD	DUCT SMOKE DETECTOR
P	STATIC PRESSURE SENSOR
DPT	DIFFERENTIAL PRESSURE TRANSDUCER

NOTE: ALL ITEMS MAY NOT BE USED IN PROJECT.

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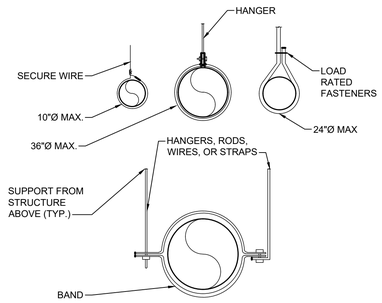
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MECHANICAL SPECIFICATIONS ABBREVIATIONS, LEGEND

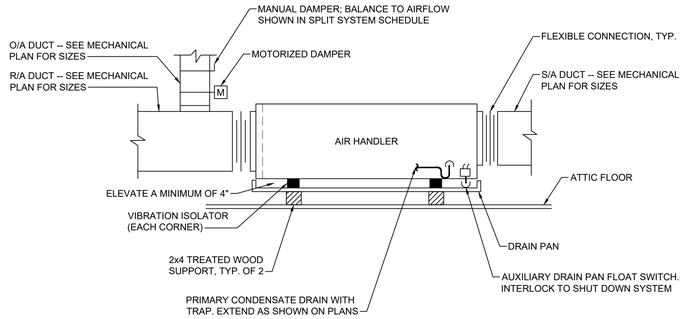
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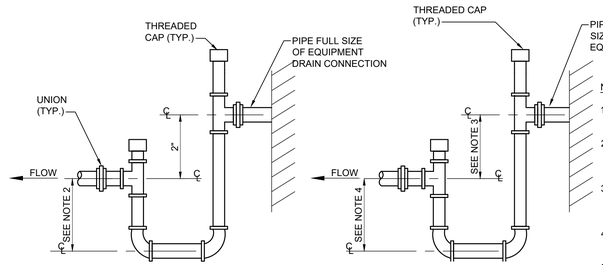
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B1 ROUND DUCT SUPPORT DETAIL
NOT TO SCALE

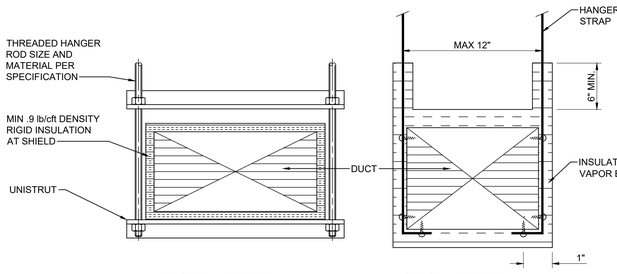


B2 TYPICAL AIR HANDLER DETAIL
NOT TO SCALE



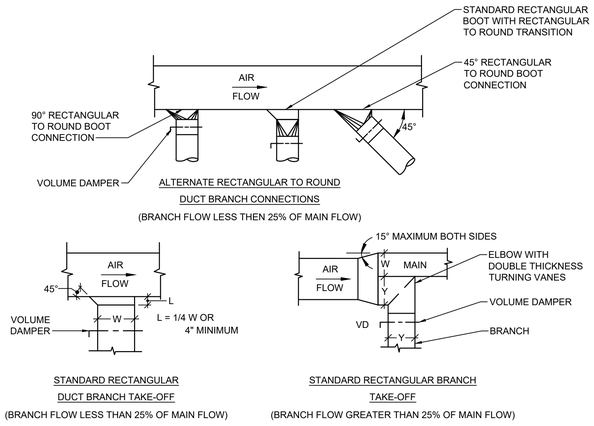
NOTES:
1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT MUST BE EQUAL TO UNIT MAXIMUM TOTAL STATIC PRESSURE PLUS 1/2".
3. HEIGHT MUST BE EQUAL TO UNIT MAXIMUM NEGATIVE STATIC PRESSURE PLUS 1".
4. HEIGHT MUST BE 1/2 OF HEIGHT INSTALLED IN NOTE 3.
5. PIPE TO NEAREST DRAIN.
6. TRAP MUST NOT BLOCK ACCESS TO EQUIPMENT
7. PROVIDE UNIONS AT INLET AND OUTLET OF TRAP.

B5 CONDENSATE DRAIN DETAIL
NOT TO SCALE



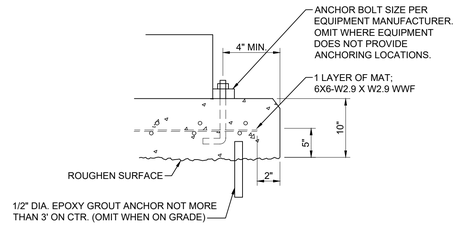
NOTES:
1. TRAPEZE HANGERS SHALL BE PROVIDED FOR ALL DUCT WORK. TRAPEZE HANGERS CANNOT BE USED FOR BRANCH DUCT WORK 12" IN WIDTH AND SHORTER REFER TO STRAP HANGER DETAIL.
2. SUPPORTS SHALL BE SPACED AND SIZED AS PER SPECIFICATIONS.
3. RIGID INSULATION SHALL EXTEND MINIMUM OF 3" BEYOND STRUT ON BOTH SIDES. MAINTAIN VAPOR BARRIER ACROSS STRUT.

D1 DUCT SUPPORT DETAIL
NOT TO SCALE

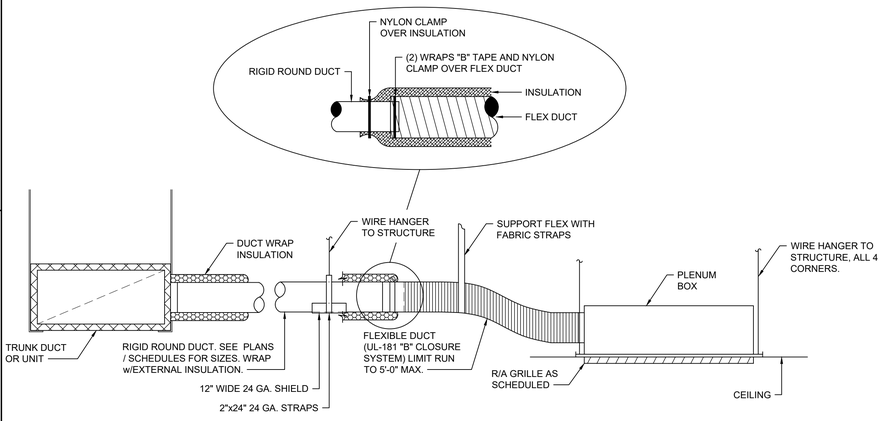


D3 ROUND/RECTANGULAR TAKE-OFF FITTING DETAILS
NOT TO SCALE

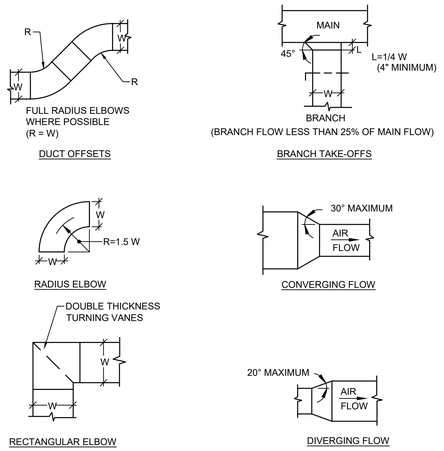
NOTE:
1. MESH SHALL BE FURNISHED IN SHEETS.
2. ALL PAD EDGES SHALL BE CHAMFERED.
3. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS
4. ONLY ANCHOR EQUIPMENT WITH MANUFACTURER SUPPLIED ANCHOR MOUNTS



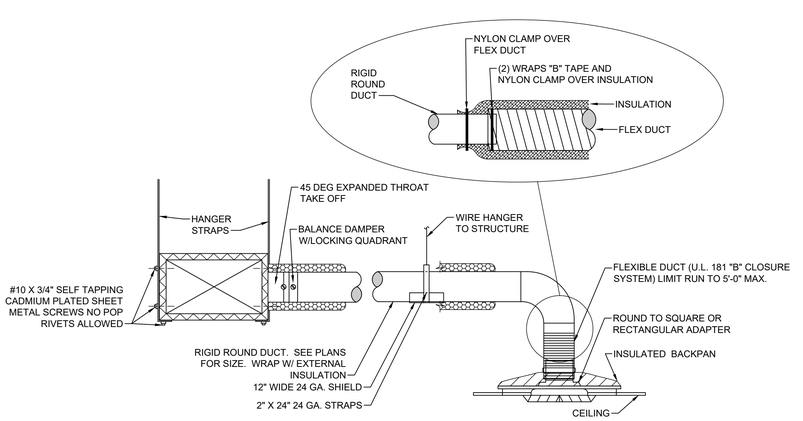
D5 EQUIPMENT PAD-EXTERIOR DETAIL
NOT TO SCALE



E1 TYPICAL R/A GRILLE CONNECTION DETAIL
NOT TO SCALE



E3 TYPICAL RECTANGULAR DUCT FITTINGS DETAILS
NOT TO SCALE



E5 TYPICAL DIFFUSER CONNECTION DETAIL
NOT TO SCALE

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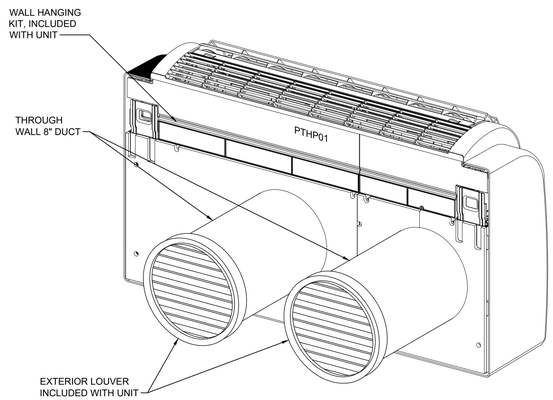
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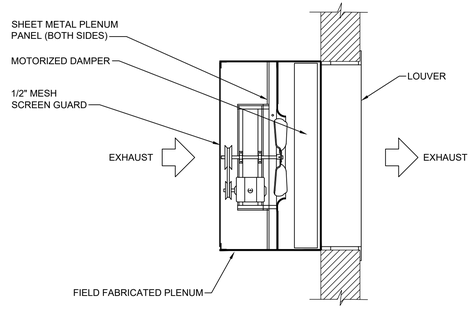
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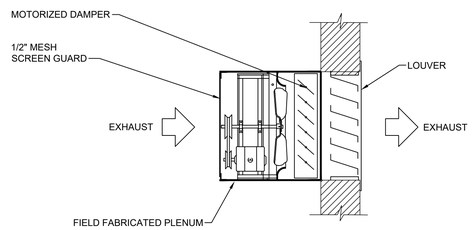
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E2 THROUGH THE WALL HEAT PUMP DETAIL
NOT TO SCALE



PLAN VIEW



SECTION VIEW

E5 PV04 EXHAUST FAN & LOUVER DETAIL
NOT TO SCALE

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SHEET NUMBER

M-5.2

PACKAGE TERMINAL HEAT PUMP SCHEDULE

DRAWING CODE	LOCATION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ARI COOLING 80/67/95		ARI HEATING 70/45		INDOOR FAN SECTION		ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
				TOTAL (MBH)	MIN CEER	TOTAL (MBH)	MIN COP	SA (CFM)	OA (CFM)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
PTHP01	MAINTENANCE OFFICE	OLIMPIA SPLENDID	MAESTRO 9 #01721	9.2	9.3	8.5	3.3	288	-	120/1//60	12.0	15.0	90	1	A,B,C

NOTES: 1. REFER TO SPECIFICATIONS SHEET M-0.2 FOR FURTHER INFORMATION.

ACCESSORIES: A. (2) MATCHING 8Ø WALL LOUVERS AND THROUGH WALL CONDENSER DUCTS.
B. MATCHING WALL MOUNT TEMPERATURE CONTROLLER.
C. CORD/PLUG SET

ELECTRIC HEATER SCHEDULE

DRAWING CODE	LOCATION	DESIGN BASIS MANUFACTURER	MODEL	DESCRIPTION			ELECTRIC COIL		SUPPLY AIR	FAN MOTOR	ELECTRICAL		WEIGHT (LBS)	MOUNTING HEIGHT (FT)	NOTES	ACCESSORIES
				TYPE	FAN	DISCHARGE	CAPACITY (W)	STEPS	AIRFLOW (CFM)	SPEED (RPM)	POWER (V/PH/HZ)	FLA				
EH01	RISER	MARKEL	E3055T2DWB	WALL HEATER	PROPELLER	HORIZONTAL	1500	1	100.0	1060.0	120/1/60	12.5	25	2	1	A,B
EH02	GARAGE	MARKEL	FSSS-3120-1	INFRARED HEATER	NONE	VERTICAL	3150	1	-	-	208/1/60	15.1	13	8-12	1	

NOTES: 1. REFER TO SPECIFICATIONS SHEET M-0.2 FOR FURTHER INFORMATION.

ACCESSORIES: A. FACTORY INSTALLED THERMOSTAT.
B. RECESSED WALL MOUNT.
C. CEILING HANGER.
D. MATCHING WALLMOUNT LINE VOLTAGE THERMOSTAT.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	BRANCH CONN. SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø		24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø		24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø		24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S4	PRICE	ASCD	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	8 x 4		8 x 4	ALUMINUM	WHITE	CEILING SURFACE	1,2	A, B
S5	PRICE	VPD-HC	METALAIRE, TITUS	DOUBLE DEFLECTION LOUVER FACE DIFFUSER	SUPPLY	12 x 6		12 x 6	ALUMINUM	WHITE	WALL SURFACE	1,2	A, B
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	20 X 20		24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
R2	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	16 X 16		16 X 16	ALUMINUM	WHITE	CEILING SURFACE	1,2	A, B
R3	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	20 X 20		20 X 20	ALUMINUM	WHITE	WALL SURFACE	1,2	A, B
T1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	TRANSFER	20 X 20		24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A

NOTES: 1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES: A. VOLUME DAMPER.
B. CONCEALED MOUNTING BRACKET.

POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	SERVICE	CAPACITIES					ELECTRICAL					SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
						AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE ARRANGEMENT	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/HZ	MCA	MOCP				
PV01	GREENHECK	SP-A290	COOK, PENNBARRY	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	70	0.38	DIRECT	728	1050	PSC	81	115/1/60	1.0	15	1.3	25	1	A,B,C
PV02	GREENHECK	SP-A290	COOK, PENNBARRY	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	210	0.38	DIRECT	991	1050	PSC	81	115/1/60	1.0	15	2.5	25	1	A,B,C
PV03	GREENHECK	SP-A510	COOK, PENNBARRY	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	280	0.38	DIRECT	930	1070	PSC	224	115/1/60	3.0	15	2	31	1	A,B,C
PV04	MULTIFAN	V4E35K4M71100	HARTZELL, MK BLASTICS	PROPELLER FANS	EXHAUST	1,500	0.25	DIRECT	1160	1670	PSC	170	115/1/60	2.5	15	-	24	1,2	A,D,E

NOTES: 1. REFER TO SPECIFICATIONS SHEET M-0.2 FOR FURTHER INFORMATION.
2. SEALED SEVERE DUTY, CORROSION RESISTANT, WASHDOWN.

ACCESSORIES: A. GRAVITY BACKDRAFT DAMPER.
B. UNITS MOUNTED SPEED CONTROL FOR BALANCING.
C. CONTROL VIA OCCUPANCY SENSOR BY E.C. SEE ELECTRICAL DRAWINGS.
D. ON/OFF SWITCH LOCATED PER ELECTRICAL PLANS
E. MATCHING WALL SLEEVE with OHSA GUARD, BACKDRAFT DAMPER AND MIAMI-DADE WIND/WATER RATED DISCHARGE LOUVER.

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN.)	SIZE (W x H) (IN.)	SERVICE	AIRFLOW (CFM)	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA (SF)	S.P. LOSS (IN.H20)	WATER PENETRATION (OZ./SF)		
L1	RUSKIN	EME520DDE	GREENHECK, POTTORFF	FIXED	EXTERIOR FLANGE	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	5	24X24	INTAKE	793	1.56	0.06	0	1,2	A, B
L2	RUSKIN	EME520DDE	GREENHECK, POTTORFF	FIXED	EXTERIOR FLANGE	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	5	24X24	INTAKE	1,330	1.56	0.06	0	1,2	A, B
L3	RUSKIN	EME520DDE	GREENHECK, POTTORFF	FIXED	EXTERIOR FLANGE	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	5	24X24	EXHAUST	1,500	1.56	0.06	0	1,2	A, B

NOTES: 1. REFER TO SPECIFICATIONS FOR FUTHER INFORMATION.
2. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.

ACCESSORIES: A. BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL)
B. DAMPER

SPLIT SYSTEM SCHEDULE

DRAWING CODE (IDU/ODU)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL (IDU/ODU)	ALTERNATE APPROVED MANUFACTURERS	SYSTEM TYPE	COOLING (AHRI STANDARD)				HEATING (AHRI STANDARD)		INDOOR UNIT			ELECTRICAL						REFRIGERANT PIPING		WEIGHT (LBS.)		NOTES	ACCESSORIES
					TOTAL (MBH)	SENSIBLE (MBH)	EFFICIENCY		TOTAL (MBH)	EFFICIENCY	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	INDOOR UNIT			OUTDOOR UNIT			MAXIMUM LENGTH (FT.)	MAXIMUM HEIGHT DIFFERENTIAL (FT.)	INDOOR UNIT	OUTDOOR UNIT		
														(V/PH/HZ)	(MCA)	(MOCP)	(V/PH/HZ)	(MCA)	(MOCP)						
AH01 / HP01	TRANE	TEM6A0C36H31+TDR/4TWA7036A3	LENNOX, CARRIER	HEAT PUMP	37.0	26.9	EER	13.0	32.8	COP 4.0	1080	210	0.6	208/3/60	33.0	35	208/3/60	15.0	25	70	30	170	290	1,2	A-F
AH02 / HP02	TRANE	TEM6A0C36H31+TDR/4TWA7036A3	LENNOX, CARRIER	HEAT PUMP	37.0	26.9	EER	13.0	32.8	COP 4.0	1080	245	0.6	208/3/60	33.0	35	208/3/60	15.0	25	70	30	170	290	1,2	A-F
AH03 / HP03	TRANE	TEM6A0C36H31+TDR/4TWA7036A3	LENNOX, CARRIER	HEAT PUMP	37.0	26.9	EER	13.0	32.8	COP 4.0	1080	250	0.6	208/3/60	33.0	35	208/3/60	15.0	25	70	30	170	290	1,2	A-F
AH04 / HP04	TRANE	TEM6A0C36H31+TDR/4TWA7036A3	LENNOX, CARRIER	HEAT PUMP	37.0	26.9	EER	13.0	32.8	COP 4.0	1080	95	0.6	208/3/60	33.0	35	208/3/60	15.0	25	70	30	170	290	1,2	A-F
AH05 / HP05	TRANE	TEM6A0C48H41+TDR/4TWA7048A3	LENNOX, CARRIER	HEAT PUMP	47.5	-	EER	13.0	46.5	COP 4.2	1440	350	0.6	208/3/60	45.0	45	208/3/60	18.0	30	70	30	174	292	1,2	A-F
AH06 / HP06	TRANE	TEM6A0C48H41+TDR/4TWA7048A3	LENNOX, CARRIER	HEAT PUMP	47.5	-	EER	13.0	46.5	COP 4.2	1440	490	0.6	208/3/60	45.0	45	208/3/60	22.0	35	70	30	174	293	1,2	A-F
AH07 / HP07	TRANE	TEM6A0C60H41+TDR/4TWA7060A3	LENNOX, CARRIER	HEAT PUMP	55.5	39.1	EER	12.2	55.7	COP 4.1	1770	490	0.6	208/3/60	45.0	45	208/3/60	22.0	35	70	30	174	293	1,2	A-F

NOTES: 1. REFER TO SPECIFICATIONS SHEET M-0.2 FOR FURTHER INFORMATION.
2. 2-STAGE COMPRESSOR

ACCESSORIES: A. SINGLE POINT IDU POWER CONNECTION
B. MATCHING AUTOCHANGEOVER HEAT-COOL PROGRAMMABLE THERMOSTAT with REHEAT HUMIDITY CONTROL, AUX HEAT LOCKOUT ON OA TEMP
C. 24V MOTORIZED OA DAMPER. INTERLOCK TO OPEN ON IDU FAN START.
D. 24V MOTORIZED OA DAMPER. INTERLOCK TO OPEN VIA WALL MOUNT SPRING WOUND VENTILATION TIMER, 0-2HR RANGE.
E. ODU COIL SEACOAST PROTECTION.
F. ODU CONCRETE SUPPORT PAD.

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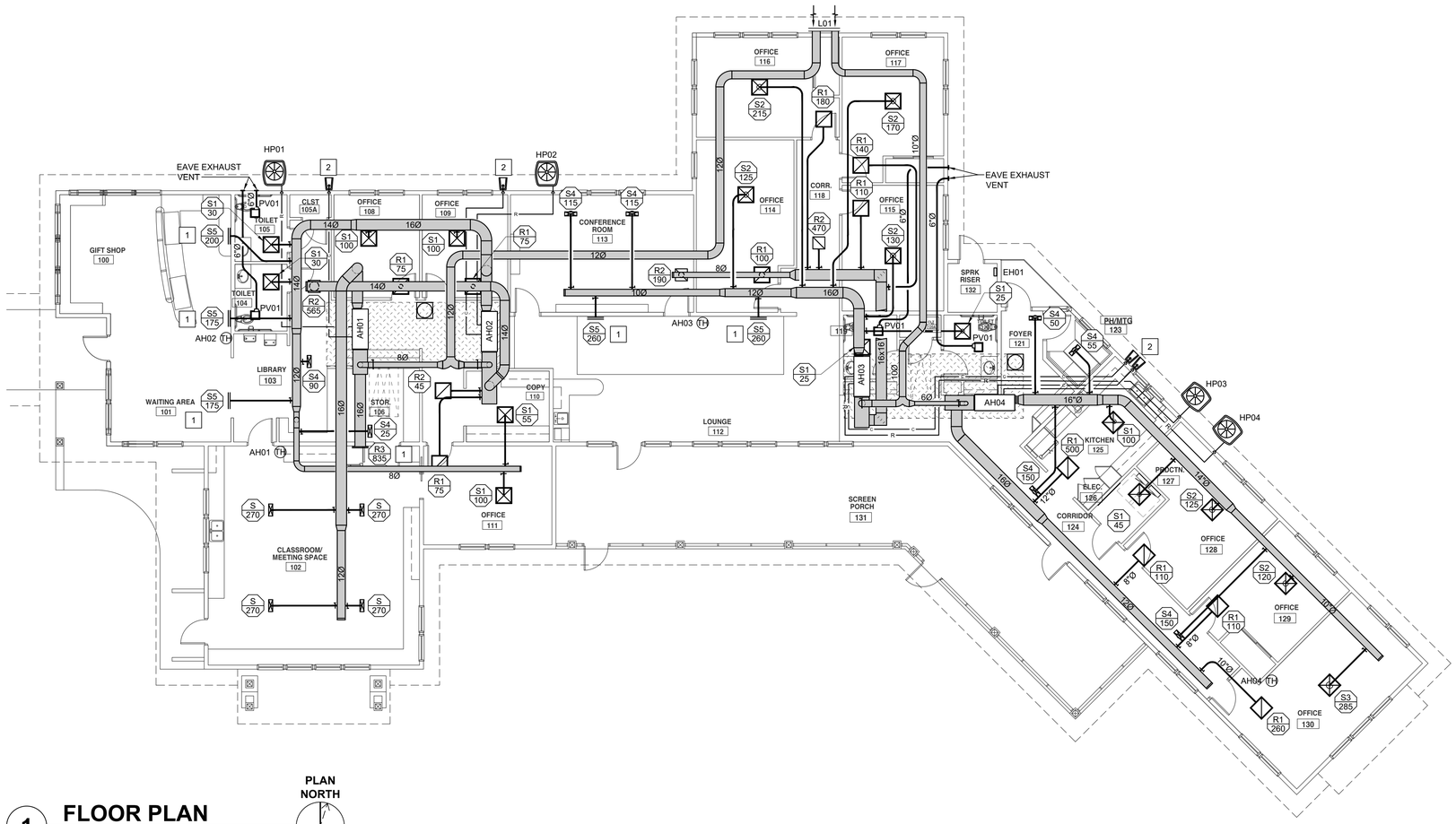
NORTH CAROLINA PROFESSIONAL SEAL 10592 ENGINEER JAMES R BENSON
05/25/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

JOB NUMBER 22126
DRAWN BY RWC
CHECKED BY JRB
DATE MAY 25, 2023
REVISIONS

MECHANICAL SCHEDULES

SHEET NUMBER
M-6.1



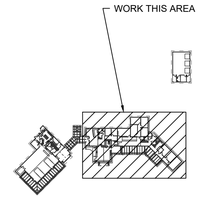
1 FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

MECHANICAL KEYED NOTES

1. MECHANICAL CONTRACTOR MUST CONSULT WITH ARCHITECT FOR DIFFUSER / GRILLE LOCATIONS AND ELEVATIONS.
2. SPILL HVAC CONDENSATE ON SPLASH BLOCK.



2 KEY PLAN

NOT TO SCALE

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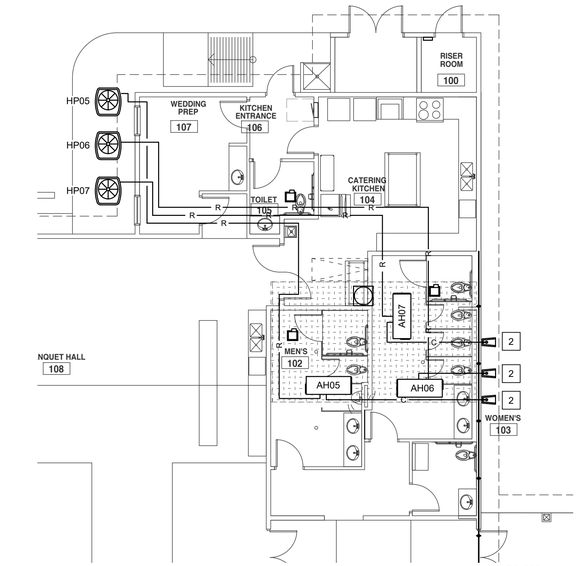
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05/25/2023

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Ocean, North Carolina

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REVISIONS
MECHANICAL HVAC ADMINISTRATIVE OFFICE PLAN

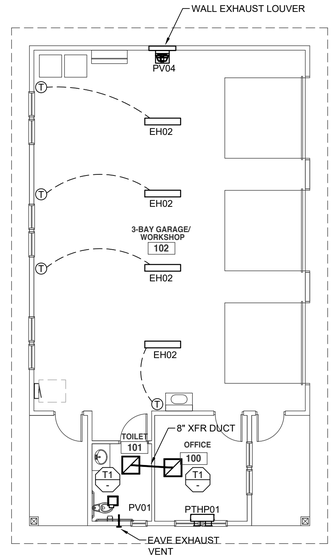
SHEET NUMBER
MH1.1



E2 REFRIGERATION LINE SET AND CONDENSATE FLOOR PLAN

1/8" = 1'-0"

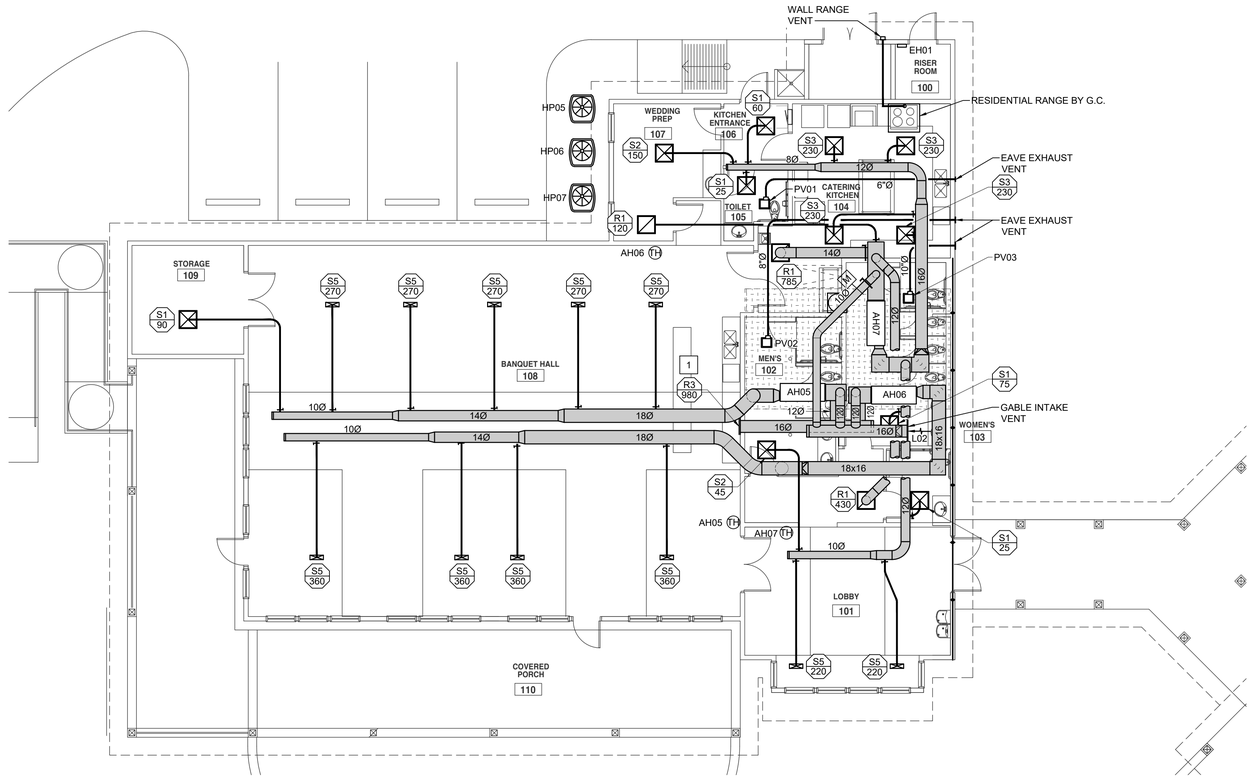
PLAN NORTH



C5 GARAGE FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH



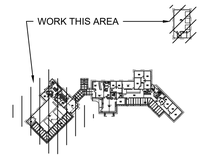
E2 HVAC FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

MECHANICAL KEYED NOTES

1. MECHANICAL CONTRACTOR MUST CONSULT WITH ARCHITECT FOR DIFFUSER / GRILLE LOCATIONS AND ELEVATIONS.
2. SPILL HVAC CONDENSATE ON SPLASH BLOCK.



E6 KEY PLAN

NOT TO SCALE

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 10592 JAMES R. BENSON
05/25/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

JOB NUMBER 22126
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REVISIONS

MECHANICAL HVAC EVENT HALL AND GARAGE PLAN

SHEET NUMBER

MH1.2

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	CEILING FAN, SEE LIGHTING FIXTURE SCHEDULE FOR TYPE
	2x4 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	2x2 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	4FT OR 8FT LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	4FT OR 8FT CHANNEL LIGHT FIXTURE, SUSPENDED OR SURFACE MOUNTED
	UNDER COUNTER LIGHT FIXTURE
	DIRECT/INDIRECT FIXTURE, SUSPENDED
	TRACK WITH LIGHT KIT
	RECESSED LIGHT FIXTURE
	SURFACE LIGHT FIXTURE
	RECESSED WALL WASH LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	EXIT SIGN, SINGLE FACE, CEILING, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, CEILING MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, SINGLE FACE, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, DOUBLE FACE, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED"
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, CEILING MOUNTED, "NOT SWITCHED"
	**FOR ALL LIGHTING FIXTURE TYPES ABOVE: LETTER ADJACENT TO FIXTURE INDICATES FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
	POWER & SWITCH LEG
	UNSWITCHED LEG
	CONDUIT, HOME RUN TO PANEL BOARD
PE	PHOTOCELL, REMOTE MOUNTED, 120V, 10 SECOND TIME DELAY, UL WET LOCATION, RATED FOR 1500 W @ 120 VAC AND 4000 W @ 277 VAC (FOR USE WITH LAMP SOURCE(S) SHOWN.
$	SWITCH, SINGLE POLE, 120/277VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED, SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$3	3-WAY SWITCH, 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$4	4-WAY SWITCH 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$WP	WEATHERPROOF SWITCH, SINGLE POLE 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
D$	DIMMER SWITCH, 0-10V OR LINE VOLTAGE RATING AS REQUIRED BY LIGHTING FIXTURE(S). LINE VOLTAGE RATED DIMMERS MUST BE 1500W FOR 120 VAC AND 4000W 277VAC MINIMUM.
AFC$	ADJUSTABLE FAN CONTROL, 120/277VAC, SINGLE POLE, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED, SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED

SYMBOL	DESCRIPTION
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 360° COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, LONG RANGE COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 180° COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, PIR TECHNOLOGY OCCUPANCY SENSOR, LOW VOLTAGE (24VDC) 19mA DRAW, WATTSTOPPER CX100-1, LONG RANGE SENSOR. INSTALL WHERE FREE OF OBSTRUCTIONS.
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, PIR TECHNOLOGY OCCUPANCY SENSOR, LOW VOLTAGE (24VDC) 19mA DRAW, WATTSTOPPER CX100-3, TWO SIDED AISLEWAY. INSTALL WHERE FREE OF OBSTRUCTIONS.
O$	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, SINGLE BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$2	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$D	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL WITH 0-10V DIMMING, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED. WATTSTOPPER DW-311 OR EQUAL.
O$F	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, ADDITIONAL POWER SUPPLY FOR FAN OPERATION, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
	RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, QUADPLEX, 120VAC, 20A MOUNTED 16"AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, QUADPLEX, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, QUADPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A MOUNTED 16"AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, QUADPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, 250VAC, 2 POLE, 3 WIRE, WALL MOUNTED
	UPS FED RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	UPS FED RECEPTACLE, QUADPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	**FOR ALL RECEPTACLE TYPES ABOVE: +XX"- INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (IF GIVEN) (SEE ELECTRICAL MOUNTING HEIGHT DETAIL) WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF IN USE COVER TR - TAMPER RESISTANT S - INDICATES THE TOP RECEPTACLE OF THE DEVICE IS CONTROLLED VIA WALL SWITCH H - DEVICE MOUNTED HORIZONTALLY U - USB IN-WALL CHARGER
30A/3/3R, W/ 30AF	SAFETY SWITCH, FUSED, HEAVY DUTY, SIZE AS INDICATED ON DRAWINGS ##A = SWITCH SIZE / # = NUMBER OF POLES / # = NEMA RATING, /##AF = FUSE SIZE
CB	ENCLOSED CIRCUIT BREAKER, SIZE AS INDICATED ON DRAWINGS ##A = BREAKER SIZE / # = NUMBER OF POLES / # = NEMA RATING
	VARIABLE FREQUENCY DRIVE (VFD)
"Equip" #AMP HMCP (##HP) NEMA # M$##	COMBINATION STARTER WITH CIRCUIT BREAKER DISCONNECT, FULL VOLTAGE, SIZE AS INDICATED ON DRAWINGS MANUAL MOTOR STARTER, ELECTRICAL CONTRACTOR SHALL COORDINATE POLES AND SIZE WITH EQUIPMENT ## = AMPERAGE RATING WHEN INDICATED ON DRAWING

SYMBOL	DESCRIPTION
208/120V	PANELBOARD, SURFACE OR RECESSED MOUNTED AS SHOWN. SIZE, RATINGS, AND MOUNTING AS INDICATED ON PANEL SCHEDULE. CONTRACTOR IS RESPONSIBLE FOR REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL. SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS.
	METER
	GROUND BUS, "E" INDICATES ELECTRICAL GROUND BAR, "TG" INDICATES TELECOMMUNICATIONS GROUND BAR
1	DEMOLITION KEY NOTE SYMBOL
1	KEY NOTE SYMBOL
1	REVISION DELTA
WP WAP WALL CLNG	WIRELESS ACCESS POINT, 1 DATA IN A DUAL GANG BOX WITH A SINGLE GANG PLASTER RING, OWNER SHALL PROVIDE SURGE PROTECTOR AND WAP DEVICE, THE ELECTRICAL CONTRACTOR SHALL INSTALL. WP - LISTED WEATHER-RESISTANT TYPE DEVICE
	COMBINATION DATA/TELEPHONE OUTLET, MOUNTED 18" AFF UNLESS OTHERWISE NOTED. PROVIDE 1 1/4" CONDUIT TO ABOVE ACCESSIBLE GRID CEILING WITH PULL STRING. FOR OUTLETS LOCATED BELOW HARD (GYPBOARD) CEILINGS, ROUTE 1 1/4" CONDUIT TO TELECOM BACKBOARD. TELECOM/DATA CABLES PROVIDED AND INSTALLED BY OWNER.
FB2	4 GANG FLOOR BOX WITH DUPLEX RECEPTACLE AND EMPTY GANG FOR DATA CAPABILITIES. PROVIDE METALLIC IN-USE COVER (HUBBELL CFB4G30CR OR EQUIVALENT). DATA CABLES PROVIDED AND INSTALLED BY OWNER
	JUNCTION BOX - WALL MOUNTED "##" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (if given)
	JUNCTION BOX - CEILING/ABOVE CEILING MOUNTED
J	JUNCTION BOX - FLOOR MOUNTED
	WALL MOUNTED DOUBLE GANG BOX FOR TELEVISION MOUNTED AT 72" AFF UNLESS NOTED OTHERWISE. BOX SHALL HAVE DUPLEX RECEPTACLE AND DATA CONNECTIONS FOR TELEVISION. DATA CABLES PROVIDED AND INSTALLED BY OWNER. BOX SHALL BE PASS & SEYMOUR TV2MW OR APPROVED EQUIVALENT.
WP	WALL MOUNTED CAMERA. PROVIDE OUTLET BOX AND 1" RACEWAY WITH PULL STRING TO ELEC. 128 IN MAIN BUILDING AND OFFICE 100 IN GARAGE/WORKSHOP BUILDING. CAMERA AND ASSOCIATED CABLES PROVIDED AND INSTALLED BY OWNER. FIELD VERIFY OUTLET BOX EXACT LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN

TYPICAL ABBREVIATIONS:

A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BOF	BOTTOM OF FIXTURE
BRKR	BREAKER
C, CND	CONDUIT
CAB	CABINET
CAT	CATALOG
CL	CHLORINE
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CR	CONTROL RELAY, CORROSION RESISTANT
CS	CONTROL SWITCH
CV	CONTROL VALVE
CT	CURRENT TRANSFORMER
CU	COPPER
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQ, EQIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EPRF	EXPLOSION PROOF
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FLR	FLOOR
FWE	FURNISHED WITH EQUIPMENT
GEN	GENERATOR
G, GND	GROUND
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
Hz	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
K	THOUSAND
Kcmil	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERE
KW	KILOWATTS
KWH	KILOWATT-HOURS
LP	LIGHTING PANEL, LIGHT POLE
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX, PUSH-BUTTON
PF	POWER FACTOR
PH,ϕ	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER PANEL, POWER POLE
PT	POTENTIAL TRANSFORMER
PWR	POWER
RECPT,RCP	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RTU	REMOTE TELEMETRY UNIT
SCR	DC MOTOR DRIVE
SH	SHEET
SM	SURFACE MOUNTED
SPEC	SPECIFICATION
SS	SELECTOR SWITCH
SST	STAINLESS STEEL
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCH GEAR
TEL	TELEPHONE
TPS	TWISTED PAIR SHIELDED
TVSS, SPD	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UG, UGND	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATT
WH	WATT-HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
(X)	EXISTING

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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER RYAN M. DEFOOTE
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL ABBREVIATIONS AND LEGEND

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
E0.1

ELECTRICAL SPECIFICATIONS

260500 GENERAL ELECTRICAL

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS INSOFAR AS THEY APPLY.
   1. THE NATIONAL ELECTRICAL CODE, 2020 EDITION
   2. THE NATIONAL ELECTRICAL SAFETY CODE
   3. UNDERWRITER'S LABORATORIES, INC., STANDARDS AND APPROVED LISTINGS
   4. ELECTRICAL TESTING LABORATORIES STANDARDS
   5. NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS
   6. ALL LOCAL CODES AND ORDINANCES
   7. NFPA 72
   8. ADA
B. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH HAZARD PROTECTION REQUIREMENTS.
C. THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
D. SEE ELECTRICAL GENERAL NOTES FOR ADDITIONAL REQUIREMENTS, CONDITIONS AND RESTRICTIONS.
E. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL CIRCUITS SHALL BE PROVIDED AND INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
F. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
G. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND SHALL PAY FOR SAME, IF ANY. WORK SHALL NOT BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED BY THE ARCHITECT, ENGINEER AND AUTHORITIES HAVING JURISDICTION OVER THIS WORK. SHOULD ANY OF THE WORK BE ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST, THE CONTRACTOR SHALL UNCOVER THE WORK AT THE CONTRACTOR'S EXPENSE. AFTER IT HAS BEEN INSPECTED, TESTED AND APPROVED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION.
H. BIDDERS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE CONSTRUCTION DOCUMENTS NOTWITHSTANDING.
I. ALL WORK SHALL BE DONE BY SKILLED MECHANICS AND SHALL PRESENT A NEAT, TRIM AND WORKMANLIKE FINISH WHEN COMPLETED.
J. DO NOT SCALE ELECTRICAL DRAWINGS. FIELD VERIFY ALL DIMENSIONS AS LOCATIONS SHOWN ARE APPROXIMATE.
K. UNLESS DIMENSIONED, WIRING DEVICE, TELECOM AND OTHER OUTLET LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT DEVICE AND OUTLET LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE ARCHITECT/ENGINEER AND/OR THE OWNER PRIOR TO ROUGH-IN.
L. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT MEASUREMENTS IN THE PLACEMENT OF EQUIPMENT, FIXTURES, ETC.
M. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE ELECTRICAL CONNECTIONS AS THE DRAWINGS DO NOT PROVIDE EXACT DETAILS AS TO ELEVATIONS AND LOCATIONS OF VARIOUS FITTINGS, CONDUIT, ETC., AND DO NOT SHOW ALL OFFSETS AND OTHER INSTALLATION DETAILS, ALL WHICH MAY BE REQUIRED. ADJUST LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES.
N. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AND CABLES AS REQUIRED BY THE CONDITIONS OF INSTALLATION.
O. COORDINATION
   1. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, FOOD SERVICE, DATA AND TELEPHONE, AUDIO/VISUAL EQUIPMENT AND OF OWNER-PROVIDED EQUIPMENT WITH THE RESPECTIVE CONTRACTORS AND VENDORS AND THE OWNER BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES, OUTLETS AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN. MINOR CHANGES IN ELECTRICAL EQUIPMENT LOCATIONS AND LAYOUT THAT ARE REQUIRED BY SITE CONDITIONS OR ORDERED BY THE DESIGN TEAM PRIOR TO PERFORMANCE OF WORK SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGES TO THE OWNER.
   2. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR OR ENTITY PROVIDING THE EQUIPMENT.
   3. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, CONDUCTORS, RACEWAYS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.
   4. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.
   5. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SAFETY SWITCHES, SHALL MOUNT STARTERS FURNISHED BY THE MECHANICAL AND PLUMBING CONTRACTORS AND PROVIDE WIRING AND CONNECTIONS TO LINE SIDE OF STARTERS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LOAD SIDE WIRING AND CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTACTORS ARE NOT REQUIRED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.
   6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EQUIPMENT TERMINATIONS, PLUGS AND CORDSETS WITH VENDOR EQUIPMENT AND VERIFY ALL DEVICE AND OUTLET LOCATIONS FOR SPECIALTY EQUIPMENT WITH CASEWORK PRIOR TO ROUGH-IN.
   7. HVAC CONTROLS POWER AND POWER FOR UNSCHEDULED HVAC EQUIPMENT: THE ELECTRICAL CONTRACTOR SHALL PROVIDE BRANCH CIRCUIT POWER SOURCES (DESIGNATED 20A CIRCUIT BREAKERS IN SELECTED BRANCH CIRCUIT PANELBOARDS) AS INDICATED IN THE PANEL SCHEDULES ON THE DRAWINGS. THE HVAC CONTRACTOR SHALL EXTEND POWER FROM THESE CIRCUIT BREAKERS AS REQUIRED FOR CONTROL POWER, DAMPER POWER, AND POWER FOR UNSCHEDULED HVAC EQUIPMENT. IF ADDITIONAL CIRCUITS ARE REQUIRED, THE CONTRACTOR MAY USE CIRCUIT BREAKERS DESIGNATED AS "SPARE".
P. MATERIALS: ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME AND TRADE NAME. MATERIALS SHALL BE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE REQUIRED TYPE OF EQUIPMENT AND THE MANUFACTURER'S LATEST APPROVED DESIGN. OTHER MATERIALS AND EQUIPMENT TO BE AS SHOWN ON THE DRAWINGS. WHERE NO SPECIFIC MATERIAL TYPE IS MENTIONED, A HIGH QUALITY PRODUCT OF A REPUTABLE MANUFACTURER, AS JUDGED BY THE ARCHITECT/ENGINEER, MAY BE USED PROVIDED IT CONFORMS TO THE REQUIREMENTS OF THESE SPECIFICATIONS.
Q. ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BE LISTED BY A QUALIFIED THIRD PARTY TESTING AGENCY ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ACCEPTABLE QUALIFIED THIRD PARTY TESTING LABORATORIES/AGENCIES SHALL BE AMONGST THOSE ACCREDITED BY THE NORTH CAROLINA BUILDING CODE COUNCIL (NCBCC) TO LABEL ELECTRICAL AND MECHANICAL EQUIPMENT. EQUIPMENT AND MATERIALS SHALL BEAR THE APPROPRIATE TESTING AGENCY'S LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A THIRD PARTY TESTING AGENCY CERTIFICATION SHALL BE FIELD OR FACTORY THIRD PARTY TESTING AGENCY CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE. FIELD CERTIFICATIONS SHALL BE AT THE CONTRACTOR'S EXPENSE.
R. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G., WHEN INSTALLED IN THE EXTERIOR, IT SHALL BE WEATHERPROOF, ETC.) ALL EXTERIOR WIRING DEVICES, OUTLETS, BOXES, ETC. SHALL BE WEATHERPROOF. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT.
S. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.
T. ELECTRICAL DISTRIBUTION EQUIPMENT AND OVERCURRENT PROTECTIVE DEVICES RATINGS SHALL BE SUBJECT TO THE RESULTS OF THE SHORT CIRCUIT AND SELECTIVE COORDINATION STUDY, WHERE SPECIFIED.
U. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL BE STORED IN DRY PERMANENT SHELTERS. PROVIDE HEATING FOR EQUIPMENT SUBJECT TO MOISTURE DAMAGE OR DAMAGE FROM CONDENSATION. IF MATERIALS OR EQUIPMENT HAVE BEEN JUDGED BY THE ARCHITECT/ENGINEER TO BE DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH EQUIPMENT SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
V. WIRING METHODS:
   1. WET AND DAMP LOCATIONS OUTDOORS (EXPOSED): USE RIGID STEEL, IMC OR SCHEDULE 40 PVC. RIGID STEEL WHERE SUBJECT TO PHYSICAL DAMAGE.
   2. WET AND DAMP LOCATIONS OUTDOORS (CONCEALED): USE RIGID STEEL, IMC OR SCHEDULE 40 PVC.
   3. DRY LOCATIONS (EXPOSED): USE EMT, RIGID STEEL OR IMC. RIGID STEEL WHERE SUBJECT TO PHYSICAL DAMAGE.
   4. DRY LOCATIONS (CONCEALED): USE EMT, IMC, RIGID STEEL OR MC CABLE.
   5. INTERIOR WET AND DAMP LOCATIONS: USE RIGID STEEL.
W. UTILITY COMPANY COORDINATION
   1. COORDINATION WITH THE ELECTRICAL UTILITY COMPANY IS THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE WITH THE UTILITY COMPANY FOR PLACEMENT OF THE UTILITY'S FACILITIES AND THE CONTRACTOR'S SERVICE ENTRANCE RACEWAYS AND FOR CONNECTIONS TO THE CONTRACTOR'S SERVICE ENTRANCE CONDUCTORS.
   2. ALL ELECTRICAL DISTRIBUTION EQUIPMENT (PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, ETC.) SHALL, AS A MINIMUM, BE PROVIDED WITH SHORT CIRCUIT WITHSTAND AND INTERRUPTING RATINGS AS SHOWN IN THE DRAWINGS. COORDINATE ACTUAL FAULT CURRENT AVAILABLE WITH THE SERVING UTILITY COMPANY AND ADJUST RATINGS AS APPROPRIATE. PROVIDE DEVICES WITH CURRENT LIMITING CHARACTERISTICS AS REQUIRED TO SAFELY FUNCTION AND PROTECT THE DISTRIBUTION SYSTEM.
X. ALL ELECTRICAL DISTRIBUTION EQUIPMENT (PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, ETC.) SHALL, AS A MINIMUM, BE PROVIDED WITH SHORT CIRCUIT WITHSTAND AND INTERRUPTING RATINGS AS SHOWN IN THE DRAWINGS OR AS DETERMINED BY THE SELECTIVE COORDINATION STUDY, WHICHEVER IS GREATER. COORDINATE ACTUAL FAULT CURRENT AVAILABLE WITH THE SERVING UTILITY COMPANY AND ADJUST RATINGS AS REQUIRED.
Y. TESTING
   1. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING DURING CONSTRUCTION AND/OR AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
   2. MAKE THE FOLLOWING MINIMUM TESTS AND CHECKS PRIOR TO ENERGIZING ELECTRICAL EQUIPMENT:
      a. MECHANICAL INSPECTION, TESTING AND SETTINGS OF ALL CIRCUIT BREAKERS, DISCONNECTING MEANS/SAFETY SWITCHES, MOTOR STARTERS, CONTROL EQUIPMENT, ETC., FOR PROPER OPERATION. ALL OVERCURRENT PROTECTIVE DEVICES SHALL BE SET AS RECOMMENDED BY THE SELECTIVE COORDINATION STUDY, IF APPLICABLE.
      b. CHECK ALL WIRE AND CABLE TERMINATIONS. VERIFY TO THE ARCHITECT/ENGINEER THAT CONNECTIONS MEET THE EQUIPMENT TORQUE REQUIREMENTS.
      c. CHECK ROTATION OF MOTORS, OBTAIN PERMISSION FROM OTHER CONTRACTORS TO START MOTORS, AND PROCEED TO CHECK FOR PROPER ROTATION. TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE ANY EQUIPMENT.
      d. PROVIDE ALL INSTRUMENTS AND EQUIPMENT FOR THE TESTS SPECIFIED HEREIN.
   3. ALL CURRENT CARRYING PHASE CONDUCTORS AND NEUTRALS SHALL BE TESTED AS INSTALLED, AND BEFORE CONNECTIONS ARE MADE, FOR INSULATION RESISTANCE AND ACCIDENTAL GROUNDS. THIS SHALL BE DONE WITH A 500 VOLT CABLE INSULATION TESTER.
      a. MINIMUM READINGS SHALL BE ONE MILLION (1,000,000) OR MORE OHMS FOR #6 WIRE AND SMALLER, 250,000 OHMS OR MORE FOR #4 WIRE OR LARGER BETWEEN CONDUCTORS AND BETWEEN CONDUCTOR AND THE GROUNDED METAL RACEWAY.
      b. AFTER ALL FIXTURES, DEVICES AND EQUIPMENT ARE INSTALLED AND ALL CONNECTIONS COMPLETED TO EACH PANEL, THE CONTRACTOR SHALL DISCONNECT THE NEUTRAL FEEDER CONDUCTOR FROM THE NEUTRAL BAR AND TAKE A CABLE INSULATION TESTER READING BETWEEN THE NEUTRAL BAR AND GROUNDED ENCLOSURE. IF THIS READING IS LESS THAN 250,000 OHMS, THE CONTRACTOR SHALL DISCONNECT THE BRANCH CIRCUIT NEUTRAL WIRES FROM THIS NEUTRAL BAR. HE SHALL THEN TEST EACH ONE SEPARATELY TO THE PANEL AND UNTIL THE LOW READING ONES ARE FOUND. THE CONTRACTOR SHALL CORRECT TROUBLES, RECONNECT AND RETEST UNTIL AT LEAST 250,000 OHMS FROM THE NEUTRAL BAR TO THE GROUNDED PANEL CAN BE ACHIEVED WITH ONLY THE NEUTRAL FEEDER DISCONNECTED.
      c. THE CONTRACTOR SHALL CERTIFY IN WRITING THE ABOVE HAS BEEN DONE AND TABULATE THE MEGGER READINGS FOR EACH PANEL.
      d. AT INSPECTION, THE CONTRACTOR SHALL FURNISH A CABLE INSULATION TESTER AND SHOW ARCHITECT/ENGINEER'S REPRESENTATIVE THAT THE PANELS COMPLY WITH THE ABOVE REQUIREMENTS. THE CONTRACTOR SHALL ALSO FURNISH A CLAMP TYPE AMMETER AND A VOLTMETER AND TAKE CURRENT AND VOLTAGE READINGS AS DIRECTED BY THE REPRESENTATIVES.
      e. AT INSPECTION, THE CONTRACTOR SHALL FURNISH LADDERS, REQUIRED TOOLS, AND MECHANICS TO OPEN FIXTURES, BOXES, PANELS, OR ANY OTHER EQUIPMENT TO ENABLE THE ARCHITECT/ENGINEER'S REPRESENTATIVES TO SEE INTO ANY PARTS OF THE INSTALLATION THAT MAY BE REQUESTED.
   4. PROVIDE DOCUMENTATION SHOWING VALUES OF THE EARTH GROUND ELECTRODE IMPEDANCE FOR THE SYSTEM GROUND. SEE SPECIFICATIONS SECTION 260526.
   5. ALL TESTS SHALL BE COMPLETELY DOCUMENTED WITH THE TIME OF DAY, DATE, TEMPERATURE, AND ALL OTHER PERTINENT TEST INFORMATION. ALL REQUIRED DOCUMENTATION OF READINGS INDICATED SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER PRIOR TO, AND AS ONE OF THE PREREQUISITES FOR, FINAL ACCEPTANCE OF THE PROJECT.
Z. SEISMIC REQUIREMENTS
   1. ALL EQUIPMENT FURNISHED UNDER THE ELECTRICAL CONTRACT SHALL BE INSTALLED IN A MANNER TO BE FULLY COMPLIANT WITH THE SEISMIC RESTRAINT REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE (NCSBC). THE CONTRACTOR SHALL PROVIDE ANY AND ALL SEISMIC RESTRAINT DETAILS AND CALCULATIONS THAT MAY BE REQUIRED BY THE NCSBC AND/OR THE AUTHORITY HAVING JURISDICTION.
   2. REQUIREMENTS FOR RESTRAINTS ARE DETAILED IN THE NCSBC. ALL TABLES AND REFERENCES SHALL CONFORM TO BUILDING'S LOCATION. RESTRAINTS SHALL BE PER SEISMIC PERFORMANCE CATEGORY STATED ON ARCHITECTURAL DRAWINGS.
   3. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA TO DESIGN SEISMIC RESTRAINT ELEMENTS REQUIRED FOR THIS PROJECT. THE ENGINEER'S CALCULATIONS, BEARING HIS PROFESSIONAL SEAL, SHALL ACCOMPANY SHOP DRAWINGS AND SHALL DEMONSTRATE CODE COMPLIANCE INCLUDING CERTIFICATION THAT THE SEISMIC SYSTEM COMPONENTS COMPLY WITH THE TESTING REQUIREMENTS OF NCSBC SECTION 1708.5. CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE PURCHASING OF MATERIALS, EQUIPMENT, SYSTEMS AND ASSEMBLIES. INTERNAL SEISMIC RESTRAINT ELEMENTS OF MANUFACTURED EQUIPMENT SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER RETAINED BY THE MANUFACTURER. SUCH CERTIFICATE APPLIES ONLY TO INTERNAL ELEMENTS OF THE EQUIPMENT. ALL EQUIPMENT ANCHORAGE REQUIREMENTS SHALL BE COORDINATED WITH THE BUILDING STRUCTURE AND SHALL BE COMPATIBLE THERETO. ALL SUCH ANCHORAGES SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE PROJECT'S STRUCTURAL ENGINEER.
   4. THE PROFESSIONAL ENGINEER RETAINED FOR SEISMIC RESTRAINT CALCULATIONS SHALL VISIT THE JOB SITE UPON COMPLETION OF THE SEISMIC RESTRAINT INSTALLATION TO COMPLY WITH THE SPECIAL INSPECTIONS REQUIREMENT OF THE CODE. THIS ENGINEER SHALL PROVIDE WRITTEN VERIFICATION OF COMPLIANCE OF THE INSTALLATION WITH THE APPROVED SEISMIC SUBMITTAL. THIS VERIFICATION SHALL BE SUBMITTED AS A SPECIAL INSPECTIONS REPORT AND SHALL BEAR THE ENGINEER'S PROFESSIONAL SEAL. JOB SITE INSPECTIONS BY OTHER THAN THIS ENGINEER ARE NOT ACCEPTABLE.
   5. REVIEW OF THE SEISMIC DESIGN COMPUTATIONS AND SHOP DRAWINGS BY THE ARCHITECT/ENGINEER OR HIS AGENT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLY WITH THE SEISMIC OR ANY OTHER REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE.
   6. PROJECT CONDITIONS
      a. ASSIGNED SEISMIC DESIGN CATEGORY AS DEFINED IN THE IBC: *.
      b. S, MAPPED MAXIMUM CONSIDERED EARTHQUAKE SPECTRAL RESPONSE AT SHORT PERIODS: *
      c. S1, MAPPED MAXIMUM CONSIDERED EARTHQUAKE SPECTRAL RESPONSE AT 1-SECOND PERIOD: *
      d. ASSIGNED SEISMIC USE GROUP OR BUILDING CATEGORY AS DEFINED IN THE IBC: I.
   (* ELECTRICAL CONTRACTOR SHALL CONSULT THE STRUCTURAL DRAWINGS FOR THIS INFORMATION.)
AA. SUBMITTALS: SUBMITTALS SHALL INCLUDE PRODUCT DATA FOR EACH PANELBOARD, SAFETY SWITCH, ENCLOSED CIRCUIT BREAKER, LIGHTING FIXTURE, LAMPS, OVERCURRENT PROTECTIVE DEVICE, FIRE ALARM SYSTEM, WIREWAY, RACEWAY FITTINGS, WIRING DEVICES AND ACCESSORIES. INCLUDE DIMENSIONS AND MANUFACTURERS TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS AND FINISHES. IN LIEU OF SUBMITTALS, THE CONTRACTOR MAY PROVIDE A CERTIFICATION OF PRODUCT COMPLIANCE FOR COMMODITY MATERIALS SUCH AS CONDUIT, CONDUCTORS, BOXES, FITTINGS, HANGARS, HARDWARE, ETC. ATTESTING NAMED PRODUCTS COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. COMPLIANCE FORM SHALL BE ACCEPTABLE TO THE ARCHITECT/ENGINEER. ALL SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED AT THE SAME TIME. PARTIAL SHOP DRAWING AND SUBMITTALS WILL BE REJECTED AND NOT PROCESSED. MATERIALS AND EQUIPMENT WITH LONG LEAD TIMES OR OTHER MATERIALS AND EQUIPMENT REQUIRING SPECIAL HANDLING, IF IDENTIFIED AND REQUESTED BY THE CONTRACTOR, WILL BE PROCESSED SEPARATELY.
BB. THE CONTRACTOR SHALL PROVIDE A COORDINATED SHORT CIRCUIT AND ARC FLASH STUDY FOR ARCHITECT/ENGINEER APPROVAL. ALL ELECTRICAL EQUIPMENT SHALL BE RATED TO COORDINATE WITH THE SHORT CIRCUIT STUDY. PROVIDE ARC FLASH LABELS FOR ALL RELEVANT EQUIPMENT WITH DANGER OR WARNING HEADER, MINIMUM AIC RATING, ARC FLASH BOUNDARY, LIMITED APPROACH, RESTRICTED APPROACH, SHOCK RISK, INCIDENT ENERGY LEVELS AND LEVEL OF PPE REQUIRED ON EACH LABEL. CONTRACTOR SHALL PRODUCE AND PLACE LABELS DURING PROJECT SUBSTANTIAL COMPLETION, PRIOR TO OWNER OCCUPANCY.
CC. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.

260519 CONDUCTORS

A. CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG. SIZES #10 AWG AND #12 AWG SHALL BE SOLID, #8 AWG AND LARGER, STRANDED.
B. MC CABLE WITH GREEN INSULATED EQUIPMENT GROUND CONDUCTOR MAY BE USED FOR INTERIOR CONCEALED 30A MAXIMUM BRANCH CIRCUITS FOR RECEPTACLE AND LIGHTING CIRCUITS. MC CABLE SHALL BE OF STEEL OR ALUMINUM INTERLOCKED ARMOR CONSTRUCTION WITH COPPER CONDUCTORS AND AN INTERNAL GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR. CONDUCTOR CHARACTERISTICS, COLOR CODING, ETC. SHALL BE AS HEREIN SPECIFIED FOR BUILDING WIRE. CONNECTORS SHALL BE ZINC PLATED MALLEABLE IRON OR STEEL BODY WITH LOCKNUT, DUAL CABLE GRIPPING SADDLE DESIGN WITH SET SCREW AND INSULATED THROAT. PRESSURE CAST (POT METAL) CONNECTORS ARE NOT PERMITTED.
C. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
D. CONDUCTORS SHALL BE COLOR CODED THROUGHOUT, SIZES #10 AWG AND #12 AWG SHALL BE FACTORY CODED, SIZES #8 AWG AND LARGER MAY BE COLOR TAPED ON THE JOB. COLOR CODING SHALL BE: PHASE A - BLACK, PHASE B - RED, PHASE C - BLUE, NEUTRAL - WHITE, GROUND - GREEN FOR 120/208 VOLT SYSTEMS.
E. CONDUCTORS SHALL MEET THE LATEST REQUIREMENTS OF NEMA AND IPCEA AND SHALL BE THIRD PARTY TESTING AGENCY APPROVED.
F. FEEDER CONDUCTORS SHALL BE CONTINUOUS WITHOUT SLICE FROM SOURCE TO LOAD, UNLESS SPLICING IS SPECIFICALLY APPROVED BY THE ARCHITCT/ENGINEER. KEEP BRANCH CIRCUIT CONDUCTOR SPLICES TO A MINIMUM. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICE BETWEEN JUNCTION, OUTLET, DEVICE BOXES, ETC., UNLESS NOTED OTHERWISE. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD. NO SPLICING WILL BE PERMITTED IN PANELBOARD CABINETS, SAFETY SWITCHES, ETC. WHERE REQUIRED AND PERMITTED, INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL.
G. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 [12] INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
H. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.
I. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 AWG OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY. REFER TO THE "MINIMUM CONDUCTORS SIZE CHART" ON THE DRAWINGS AND INCREASE CONDUCTORS SIZES AS REQUIRED TO MAINTAIN A MAXIMUM OF 3% VOLTAGE DROP.
J. POWER RISER DIAGRAM SERVICE AND FEEDER CONDUCTOR SIZES ARE BASED ON 75°C COPPER CONDUCTORS IN PVC RACEWAYS ROUTED IN/UNDER THE FLOOR SLAB DIRECTLY FROM SOURCE TO LOAD TO ACHIEVE NO MORE THAN THREE (3) PERCENT VOLTAGE DROP AT THE DEMAND LOAD SHOWN IN THE SWITCHBOARD AND PANELBOARD SCHEDULES. IF THE CONTRACTOR ELECTS TO INSTALL CIRCUITS IN A DIFFERENT MANNER, CALCULATE VOLTAGE DROP USING ACTUAL CONDUCTOR LENGTHS AND SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER DOCUMENTING THREE (3) PERCENT OR LESS VOLTAGE DROP UNDER THE LOAD CONDITIONS INDICATED. IF REQUIRED BY CALCULATIONS, THE CONTRACTOR SHALL, AT HIS EXPENSE, ADJUST CONDUCTOR SIZES TO ACHIEVE NO MORE THAN 3% VOLTAGE DROP.
K. COMMON NEUTRAL BRANCH CIRCUITS ARE NOT PERMITTED. PROVIDE SEPARATE, INDIVIDUAL NEUTRAL CONDUCTORS FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS.
L. MC CABLE SHALL BE SUPPORTED IN STRAIGHT LINES USING APPROVED SUPPORTING MEANS AND IN COMPLIANCE WITH THE NEC. DEDICATED SUPPORT WIRES MAY BE USED ABOVE FINISHED CEILINGS AND SHALL BE PAINTED RED PRIOR TO INSTALLATION.

ELECTRICAL SPECIFICATIONS

D. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
E. PROVIDE ANCHORS, FASTENERS, AND SUPPORTS IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION".
F. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, AND CONDUIT.
G. DO NOT USE POWDER_ACTUATED ANCHORS.
H. OBTAIN PERMISSION FROM ARCHITECT/ENGINEER BEFORE DRILLING OR CUTTING STRUCTURAL MEMBERS.
I. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL. RIGIDLY WELD MEMBERS OR USE HEXAGON HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.
J. INSTALL SURFACE_MOUNTED CABINETS AND PANELBOARDS WITH MINIMUM OF FOUR ANCHORS.
K. IN WET AND DAMP LOCATIONS USE STEEL CHANNEL SUPPORTS TO STAND CABINETS AND PANELBOARDS ONE INCH (25 MM) OFF WALL.
L. CONDUITS INSTALLED ON THE INTERIOR OF EXTERIOR BUILDING WALLS SHALL BE SPACED AWAY FROM THE WALL SURFACE A MINIMUM OF 1/4 INCH (65MM) USING "CLAMP-BACKS" OR STRUTS.
M. USE SHEET METAL CHANNEL TO BRIDGE STUDS ABOVE AND BELOW CABINETS AND PANELBOARDS RECESSED IN HOLLOW PARTITIONS.

260533 RACEWAYS AND FITTINGS

A. RACEWAYS SHALL BE RIGID GALVANIZED STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING AND/OR SCHEDULE 40 PVC CONDUIT WITH APPROPRIATE FITTINGS. EMT FITTINGS SHALL BE HEX NUT STEEL COMPRESSION TYPE WITH INSULATED THROATS
B. SIZE: RACEWAYS SHALL BE SIZED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC UNLESS SHOWN OTHERWISE, WITH MINIMUM SIZE OF ½ INCH; EXCEPT HOMERUNS MINIMUM SIZE SHALL BE 3/4". FLEXIBLE METAL AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN SIZE ½ INCH AND LARGER ARE ACCEPTABLE FOR MOTOR, APPLIANCE AND FIXTURE CONNECTIONS PROVIDED GREEN EQUIPMENT GROUND CONDUCTOR IS INSTALLED (SEE SECTION 260526) AND NEC IS FOLLOWED.
C. EMT SHALL NOT BE INSTALLED:
   a. WHERE TUBING, COUPLINGS, ELBOWS AND FITTINGS WOULD BE IN DIRECT CONTACT WITH THE EARTH.
   b. UNDERGROUND (IN/BELOW SLAB-ON-GRADE OR IN EARTH).
   c. WHERE SUBJECT TO SEVERE CORROSIVE INFLUENCE.
   d. WHERE SUBJECT TO SEVERE PHYSICAL DAMAGE.
D. EXTERIOR EXPOSED RACEWAYS AND INTERIOR EXPOSED RACEWAYS INSTALLED AT OR BELOW 8 FEET AFF/AFG SHALL BE RIGID GALVANIZED STEEL WITH CAST MALLEABLE BOXES AND FITTINGS. EMT MAY BE USED ABOVE 12 FEET AFF IN INTERIOR LOCATIONS. PVC MAY BE USED FOR UNDERGROUND WORK ONLY.
E. FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT: UL APPROVED AND LABELED WITH HEX NUT MALLEABLE FITTINGS. ALL FLEXIBLE METAL CONDUIT INSTALLED AT OR BELOW 12 FEET AFF/AFG SHALL BE LIQUIDTIGHT.
F. RACEWAYS, BOXES, FITTINGS, ETC., SHALL BE SOLIDLY FASTENED TO MASONRY WITH LEAD ANCHORS AND MACHINE SCREWS OR TOGGLE BOLTS. RACEWAYS SHALL BE FASTENED TO STRUCTURAL STEEL WITH BEAM CLAMPS, CONDUIT HANGERS, TRAPEZE HANGERS, OR OTHER APPROVED DEVICES.
G. ALL RACEWAYS AND CABLES SHALL BE CONCEALED EXCEPT THOSE SHOWN ON DRAWINGS TO BE EXPOSED. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
H. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
I. RACEWAYS PENETRATING CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKETIGHT.
J. RACEWAYS PENETRATING RATED CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES.
K. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.
L. EXCAVATION AND TRENCHING REQUIRED FOR THE INSTALLATION OF ELECTRICAL POWER AND TELECOMMUNICATIONS RACEWAYS SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ALL REGULATORY REQUIREMENTS.
M. PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA/FIBER, CABLE TELEVISION, GAS AND WATER UTILITY PROVIDERS AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. DAMAGE TO ANY UNDERGROUND UTILITIES OR STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
N. DIRECT BURIED RACEWAYS SHALL BE 24" DEEP TO THE TOP OF THE RACEWAY. TRENCH IN COMPLIANCE WITH LOCAL CODES AND REGULATIONS. BACKFILL TO 95% COMPACTION AND RESOD GRASSED AREAS TO MATCH EXISTING.
O. MARKER TAPE: ALL UNDERGROUND CONDUCTORS SHALL BE IDENTIFIED BY UNDERGROUND LINE MARKING TAPE LOCATED DIRECTLY ABOVE THE CONDUCTORS AT 6 TO 8 INCHES BELOW FINISHED GRADE. TAPE SHALL BE PERMANENT BRIGHT-COLORED, CONTINUOUS FOIL BACKING SUITABLE FOR USE WITH METAL DETECTION DEVICES, FOR DIRECT BURIAL NOT LESS THAN 8 INCHES AND 4 MILS THICK. PRINTED LEGEND SHALL BE INDICATIVE OF TYPE OF UNDERGROUND LINE BELOW.
P. WHERE UNDERGROUND RACEWAYS ARE REQUIRED TO TURN UP, THE ELBOW REQUIRED AND THE STUB-UP OUT OF THE EARTH SHALL BE OF PLASTIC-COATED RIGID STEEL. ALTERNATELY, FIELD APPLIED CORROSION PROTECTION WRAPS MAY BE USED FOR UNDERGROUND LOCATIONS, IN EQUIVALENT THICKNESS TO FACTORY APPLIED MATERIALS, WITH THE SPECIFIC APPROVAL OF THE ARCHITECT/ENGINNER. EXPOSED RACEWAYS SHALL BE FACTORY PLASTIC COATED

260534 BOXES

A. JUNCTION, SWITCH, RECEPTACLE AND OUTLET BOXES FOR INTERIOR USE IN DRY LOCATIONS SHALL BE ZINC COATED OR CADMIUM PLATED SHEET STEEL, 4" SQUARE AND 2-1/8" DEEP, UNLESS OTHERWISE INDICATED ON THE CONTRACT, EXCEPT SINGLE WIRING DEVICE BOXES MAY BE SINGLE GANG. SMALLER AND SHALLOWER OUTLET BOXES WILL BE PERMITTED ONLY BY SPECIAL PERMISSION OF THE ARCHITECT/ENGINEER WHERE SUCH BOXES ARE NECESSARY DUE TO STRUCTURAL CONDITIONS ENCOUNTERED. WHERE LARGER JUNCTION BOXES ARE REQUIRED, THEY SHALL BE FABRICATED FROM NO. 10, 12, 14 OR 16 GAUGE SHEET STEEL AS REQUIRED BY THE UNDERWRITER'S LABORATORIES, INC., AND GALVANIZED AFTER FABRICATION.
B. INTERIOR EXPOSED JUNCTION, SWITCH, RECEPTACLE AND OUTLET BOXES INSTALLED AT OR BELOW 8 FEET AFF/AFG SHALL BE CAST MALLEABLE TYPE WITH HUBS AND CAST, GASKETED PLATES.
C. EXTERIOR EXPOSED JUNCTION, SWITCH, RECEPTACLE AND OUTLET BOXES SHALL BE CAST MALLEABLE TYPE WITH HUBS AND CAST, GASKETED PLATES.
D. ALL JUNCTION BOXES SHALL HAVE SCREW FASTENED COVERS. OUTLET BOXES SHALL BE PROVIDED WITH EXTENSION PLASTER RINGS WHERE REQUIRED BY STRUCTURAL AND FINISH CONDITIONS.
E. RACEWAYS TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
F. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.
G. BOXES INSTALLED IN CONCEALED LOCATIONS SHALL BE SET FLUSH WITH THE FINISHED SURFACES AND SHALL BE PROVIDED WITH EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE RIGIDLY INSTALLED. BOX SUPPORTS UTILIZING SHEET METAL "WINGS" ARE NOT PERMITTED.
H. USE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS. USE STAMPED STEEL BRIDGES, CADDY RBS SERIES, RACO 9001 OR COOPER B-LINE BB8-16 BOX MOUNTING BRACKETS TO SUPPORT FLUSH MOUNTING OUTLET BOXES BETWEEN STUDS.
I. SET WALL MOUNTED BOXES AT ELEVATIONS TO ACCOMMODATE MOUNTING HEIGHTS INDICATED AND SPECIFIED IN SECTION FOR OUTLET DEVICE. BOXES ARE SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. ADJUST BOX LOCATION UP TO 10 FEET (3 M) IF REQUIRED TO ACCOMMODATE INTENDED PURPOSE. INSTALL PULL BOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS AND IN UNFINISHED AREAS ONLY, OR PROVIDE ACCESS PANELS AS REQUIRED. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS MOUNTED ABOVE COUNTERS, BENCHES, AND BACKSPLASHES.
J. INSTALL BOXES TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS AND OTHER ELEMENTS, USING APPROVED MATERIALS AND METHODS.

260553 IDENTIFICATION

A. WIRE MARKERS: PROVIDE SPLIT SLEEVE TYPE WIRE MARKERS OR APPROVED EQUIVALENT ON EACH CONDUCTOR AT PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND EACH LOAD CONNECTION. LEGEND: (1) POWER AND LIGHTING CIRCUITS: BRANCH CIRCUIT OR FEEDER NUMBER AS INDICATED ON DRAWINGS. (2) CONTROL CIRCUITS: CONTROL WIRE NUMBER AS INDICATED ON SCHEMATIC AND INTERCONNECTION DIAGRAMS ON DRAWINGS.
B. IDENTIFICATION NAMEPLATES: FURNISH AND INSTALL ENGRAVED LAMINATED PHENOLIC NAMEPLATES FOR ALL SAFETY SWITCHES, ENCLOSED CIRCUIT BREAKERS, PANELBOARDS AND ELECTRICAL EQUIPMENT SUPPLIED FOR IDENTIFICATION OF EQUIPMENT CONTROLLED, SERVED, PHASE, VOLTAGE, ETC. NAMEPLATES SHALL BE SECURELY ATTACHED TO EQUIPMENT WITH METAL SCREWS OR RIVETS AND SHALL IDENTIFY BY NAME THE EQUIPMENT CONTROLLED, ATTACHED, ETC. SEE DRAWINGS FOR DETAILS. INSTALL NAMEPLATE PARALLEL TO EQUIPMENT LINES. EMBOSSED, SELF-ADHESIVE PLASTIC TAPE IS NOT ACCEPTABLE.
C. RECEPTACLE CIRCUIT IDENTIFICATION: PROVIDE ADHESIVE BACKED, LAMINATED PLASTIC RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL BE LABEL MACHINE PRINTED, BLACK LETTERING ON A CLEAR BACKGROUND, TO INDICATE PANEL AND CIRCUIT NUMBER FEEDING THE DEVICE AND SHALL BE CASIO, BROTHER, T&B OR APPROVED EQUAL. ON EACH RECEPTACLE DEVICE PLATE APPLY CIRCUIT LABEL CENTERED ON THE UPPER PORTION ABOVE THE RECEPTACLE, PARALLEL TO THE UPPER SURFACE. TYPED LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER FEEDING THE DEVICE (I.E., RPA-24).
D. NEATLY AND LEGIBLY MARK RACEWAYS AT JUNCTION BOXES AND JUNCTION BOX COVERS ABOVE ACCESSIBLE CEILINGS WITH THE PANELBOARD AND CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED IN THE RACEWAY(S) AND JUNCTION BOX USING A PERMANENT BLACK BOLD MARKING PEN.
E. PAINT VISIBLE SURFACES OF JUNCTION AND OUTLET BOXES AND COVERS OF FIRE ALARM RACEWAY SYSTEMS RED WHERE INSTALLED EXPOSED AND ABOVE LAY IN AND OTHER ACCESSIBLE CEILINGS. PAINT ALL BOXES AND COVERS BEFORE INSTALLATION. DO NOT PAINT BOX INTERIORS. PAINT CONDUIT AND RACEWAYS ABOVE ACCESSIBLE CEILINGS AT TEN FOOT MINIMUM INTERVALS WITH A 6 INCH WIDE RED BAND.
F. NEATLY AND LEGIBLY MARK RACEWAYS AT JUNCTION BOXES IN UNFINISHED AREAS, ELECTRICAL/MECHANICAL EQUIPMENT ROOMS AND ABOVE ACCESSIBLE CEILINGS WITH THE PANELBOARD AND CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED IN THE RACEWAY USING A PERMANENT BLACK BOLD MARKING PEN.

262416 PANELBOARDS

A. NEMA PB1, CIRCUIT BREAKER TYPE, BRANCH CIRCUIT PANELBOARD WITH COPPER PHASE BUS, 100% COPPER GROUND AND NEUTRALS BUSES AND RATINGS AS INDICATED. MINIMUM INTEGRATED SHORT CIRCUIT RATING: 10,000 AMPERES RMS SYMMETRICAL FOR 208 VOLT PANELBOARDS, UNLESS NOTED OTHERWISE INDICATED. CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE. ENCLOSURE: NEMA PB 1, TYPE 1 OR TYPE 3R. CABINET BOX: 6 INCHES (153 MM) DEEP, 20 INCHES (508 MM) WIDE FOR 240 VOLT AND LESS PANELBOARDS, 24 INCHES (600 MM) WIDE FOR 480 VOLT PANELBOARDS. CABINET FRONT: FLUSH AND SURFACE CABINET FRONT DOOR-IN-DOOR TYPE (HINGED TRIMS ARE NOT ACCEPTABLE) WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE, METAL DIRECTORY FRAME, AND FLUSH LOCK ALL KEYED ALIKE. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL.
B. PANELBOARDS SHALL BE MANUFACTURED BY EATON, GENERAL ELECTRIC/ABB, SIEMENS OR SQUARE D SCHNEIDER.
C. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS. REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS. PROVIDE SPARE CONDUITS OUT OF EACH RECESSED PANELBOARD TO AN ACCESSIBLE LOCATION ABOVE CEILING AND BELOW FLOOR. MINIMUM SPARE CONDUITS: 5 EMPTY 1 INCH (DN27). IDENTIFY EACH AS SPARE. GROUND AND BOND PANELBOARD ENCLOSURE ACCORDING TO SECTION 260553.

262726 WIRING DEVICES

A. PROVIDE HEAVY DUTY INDUSTRIAL SPECIFICATION GRADE RECEPTACLES AND SWITCHES. COLOR SELECTED BY THE ARCHITECT. ALL DEVICES SHALL BE RATED 20 AMPERES. HUBBELL HBL 5362 AND HBL 1221/2/3/4, PASS AND SEYMOUR 5362A AND PS20AC1/2/3/4, OR LEVITON 5362 AND 1221/2/3/4.
B. PROVIDE 302 STAINLESS STEEL DEVICE PLATES.
C. PROVIDE SPECIFICATION GRADE GRAY COMBINATION USB CHARGER RECEPTACLES AS INDICATED. ALL DEVICES SHALL BE RATED 20 AMPERES. HUBBELL USB20AC5W OR EQUAL BY PASS AND SEYMOUR OR LEVITON. PROVIDE 302 STAINLESS STEEL DEVICE PLATES.

262727 OCCUPANCY SENSORS

A. OCCUPANCY SENSORS SHALL UTILIZE DUAL TECHNOLOGY SENSING. ACCEPTABLE TECHNOLOGY IS PASSIVE INFRARED (PIR), ULTRASONIC AND MICROPHONIC. DUAL TECHNOLOGY IS REQUIRED UTILIZING PIR AND ONE OF THE OTHER TECHNOLOGIES. SENSORS SHALL AUTOMATICALLY ADJUST TIME DELAYS AND SENSITIVITY BASED ON THE ACTIVITY LEVEL IN THE SPACE. ALL SWITCHES SHALL BE APPROVED BY A THIRD PARTY AGENCY, APPROVED FOR THE VOLTAGE AND CURRENT INDICATED. SENSORS SHALL BE COMPATIBLE WITH ALL LOAD TYPES AND REQUIRE NO MINIMUM LOAD.
B. WALL SWITCH LINE VOLTAGE SENSORS FOR SMALL AREAS: LINE VOLTAGE, SINGLE GANG, WALL MOUNTED OCCUPANCY SENSOR SWITCH WITH ONE OR TWO OVERRIDE SWITCHES AS SHOWN. SENSOR SHALL RECESS INTO SINGLE GANG SWITCH BOX AND FIT A STANDARD GFI RECEPTACLE PLATE OPENING. SWITCHES SHALL BE COMPATIBLE WITH STANDARD THREE AND FOUR-WAY TOGGLE SWITCHES. PROVIDE HARD LENS SWITCHES IN STORAGE ROOMS AND OTHER LOCATION SUBJECT TO ABUSE. ADJUSTABLE TIME DELAY OF 20 MINUTES, 180 DEGREE FIELD OF VIEW, MINIMUM COVERAGE AREA OF 900 SF. VOLTAGE: 120-277 VOLTS AC, MINIMUM LOAD RATING 800 WATTS AT 120 VAC, 1200 WATTS AT 277 VAC. LUTRON, SENSOR SWITCH OR WATTSTOPPER.
C. WALL SWITCH LOW VOLTAGE SENSORS FOR SMALL AREAS: LOW VOLTAGE, SINGLE GANG, WALL MOUNTED OCCUPANCY SENSOR 0-10V DIMMER SWITCH WITH ONE OR TWO OVERRIDE SWITCHES AS SHOWN. SENSOR SHALL RECESS INTO SINGLE GANG SWITCH BOX AND FIT A STANDARD GFI RECEPTACLE PLATE OPENING. SWITCHES SHALL BE COMPATIBLE WITH STANDARD THREE AND FOUR-WAY TOGGLE SWITCHES. PROVIDE HARD LENS SWITCHES IN STORAGE ROOMS AND OTHER LOCATION SUBJECT TO ABUSE. ADJUSTABLE TIME DELAY OF 20 MINUTES, 180 DEGREE FIELD OF VIEW, MINIMUM COVERAGE AREA OF 900 SF. VOLTAGE: 120-277 VOLTS AC, MINIMUM LOAD RATING 800 WATTS AT 120 VAC, 1200 WATTS AT 277 VAC. LUTRON, SENSOR SWITCH OR WATTSTOPPER.
D. CEILING MOUNTED LOW VOLTAGE SENSORS FOR LARGE AREAS: LOW VOLTAGE, RECESS CEILING MOUNTED OCCUPANCY SENSOR SWITCH SHALL OPERATE IN CONJUNCTION WITH A LINE VOLTAGE POWER PACK TO CONTROL THE CONNECTED LIGHTING LOADS. SENSORS SHALL OPERATE ON A CLASS 2, THREE-CONDUCTOR CABLE SYSTEM. MULTIPLE SENSORS SHALL BE CONNECTABLE TO A SINGLE POWER PACK. SENSOR SHALL RECESS INTO A TWO GANG OUTLET BOX. ADJUSTABLE TIME DELAY OF 1 - 15 MINUTES. POWER PACKS SHALL BE RATED 20A AT 120-277 VOLTS AND SHALL BE COMPATIBLE WITH ALL LOAD TYPES. THEY SHALL HAVE THE CAPACITY TO POWER ADDITIONAL REMOTE HEADS OR ADDITIONAL RELAYS. LUTRON, SENSOR SWITCH OR WATTSTOPPER.

262816 SAFETY SWITCHES

A. NEMA KS 1, TYPE HD WITH EXTERNALLY OPERABLE HANDLE INTERLOCKED (DEFEATABLE) TO PREVENT OPENING FRONT COVER WITH SWITCH IN ON POSITION, ENCLOSED LOAD INTERRUPTER KNIFE SWITCH. MECHANISMS SHALL BE NON-TEASIBLE, POSITIVE, QUICK MAKE-QUICK BREAK TYPE. HANDLE LOCKABLE IN ON OR OFF POSITION. SWITCHES SHALL HAVE HANDLES WHOSE POSITIONS ARE EASILY RECOGNIZABLE IN THE ON OR OFF POSITION. FUSE CLIPS SHALL BE DESIGNED TO ACCOMMODATE NEMA FU1, CLASS R FUSES.
B. PROVIDE ACCESSORIES REQUIRED BY THEIR INSTALLATION. PROVIDE AUXILIARY SWITCH CONTACTS AS REQUIRED BY OTHER SYSTEMS. COORDINATE WITH OTHER DIVISIONS AS REQUIRED.
C. APPLY ADHESIVE TAG ON INSIDE DOOR OF EACH FUSED SWITCH INDICATING NEMA FUSE CLASS AND SIZE INSTALLED.
D. SAFETY SWITCHES SHALL BE MANUFACTURED BY EATON, GENERAL ELECTRIC/ABB, SIEMENS OR SQUARE D SCHNEIDER.

262817 CIRCUIT BREAKERS

A. ENCLOSED CIRCUIT BREAKERS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS WITH APPROPRIATE WITHSTAND RATINGS AND CURRENT LIMITING CHARACTERISTICS AS REQUIRED TO SAFELY FUNCTION AND PROTECT THE DISTRIBUTION SYSTEM. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
B. CIRCUIT BREAKERS SHALL BE MANUFACTURED BY EATON, GENERAL ELECTRIC/ABB, SIEMENS OR SQUARE D SCHNEIDER.

265100 LIGHTING FIXTURES

A. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS.
B. ALL FIXTURES SHALL BE INSTALLED COMPLETE WITH LAMPS AND/OR LIGHT ENGINES. LAMPS SHALL BE INDICATED ON THE DRAWINGS. INCANDESCENT LAMPS SHALL BE RATED 120 VOLTS, UNLESS OTHERWISE INDICATED.
C. LED SOURCES SHALL BE HIGH INTENSITY WHITE, SINGLE COLOR OR AS NOTED. PROVIDE WHITE LEDS IN THE COLOR TEMPERATURE(S) SPECIFIED. THE COLOR TEMPERATURE IN ALL FIXTURES OF THE SAME TYPE SHALL BE CONSISTENT AND REMAIN SO OVER THE LIFE OF THE FIXTURE. COLOR CONSISTENCY BETWEEN FIXTURES SHALL CONFORM TO ANSI NEMA ANSLG STANDARD C78.377-2008. THE CONTRACTOR SHALL REPLACE FIXTURES EXHIBITING INCONSISTENT COLOR. MINIMUM LUMEN MAINTENANCE SHALL BE 70% OF RATED INITIAL LUMEN OUTPUT AT 50,000 HOURS OF OPERATION. MEASUREMENT OF LUMEN MAINTENANCE SHALL BE IN ACCORDANCE WITH IES LM-80-08. THE LUMINAIRE MANUFACTURER SHALL PROVIDE A MINIMUM OF FIVE YEAR WARRANTY FROM THE DATE OF FINAL ACCEPTANCE AGAINST PREMATURE FAILURE, DISCOLORATION AND DEFECTS. THE COLOR OR COLOR TEMPERATURE OF REPLACEMENT LEDS SHALL MATCH THOSE OF THE SAME LEDS TYPES THAT REMAIN IN OPERATION. THE MINIMUM COLOR RENDERING INDEX OF WHITE LEDS SHALL BE 80. ELECTRICAL AND PHOTOMETRIC PERFORMANCE OF LED ASSEMBLIES AND LUMINAIRES SHALL CONFORM TO IES LM 79-08.
D. LENSES SHALL BE CLEAR VIRGIN ACRYLIC MATERIAL WITH UNIFORM 3/16" SQUARE BASED FEMALE CONE PRISMS ALIGNED 45° TO THE LENGTH AND WIDTH OF THE LENS PANEL. MINIMUM PRISM DEPTH SHALL BE 0.080" WITH A NOMINAL PANEL THICKNESS OF 0.125".
E. LED DRIVERS: PROVIDE HIGH FREQUENCY ELECTRONIC TYPE WITH SECONDARY VOLTAGES MATCHING THOSE REQUIRED BY THE LED SOURCE THEY OPERATE. DRIVERS SHALL OPERATE WITHIN A 0F - 140F AMBIENT TEMPERATURE RANGE AND SHALL COMPLY WITH FCC CLASS A STANDARDS FOR EMI. MINIMUM DRIVER SPECIFICATIONS:
   1. POWER FACTOR ≥ 90%.
   2. EFFICIENCY ≥ 90%.
   3. CURRENT CREST FACTOR - 1.5 MINIMUM.
   4. TOTAL HARMONIC DISTORTION < 20%.
   5. RATED LIFE - 50,000 HOURS.
   MANUFACTURERS SHALL HAVE BEEN MANUFACTURING LED DRIVERS FOR AT LEAST TEN YEARS WITH A DOCUMENTABLE LOW FAILURE RATE. THE CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP, INCLUDING REPLACEMENT FOR FIVE YEARS FROM THE DATE OF FINAL ACCEPTANCE.
F. RELAMP LUMINAIRES THAT HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION. REPLACE LED MODULES IN WHICH MORE THAN 5% OF THE LEDS HAVE FAILED LAMPS AT FINAL ACCEPTANCE OF THE WORK.
G. THE CONTRACTOR SHALL VERIFY THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS OR ADDITIONAL MATERIALS REQUIRED COMPLYING WITH ALL APPLICABLE CODES TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.

265200 EMERGENCY AND EXIT LIGHTING FIXTURES

A. EMERGENCY AND EXIT LIGHTING FIXTURES SHALL BE SELF_CONTAINED UNITS AUTOMATICALLY ACTIVATED WHEN THE LINE VOLTAGE DROPS BELOW 80% AND SHALL COMPLY WITH UL 924, NFPA 101 - LIFE SAFETY CODE, NFPA 70 - NEC AND THE NCSBC. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS. CATALOG NUMBERS ARE PROVIDED AS A GUIDE TO THE DESIGN AND QUALITY OF FIXTURE DESIRED. EQUIVALENT DESIGNS AND EQUAL QUALITY FIXTURES OF OTHER MANUFACTURERS LISTED WILL BE ACCEPTABLE UPON APPROVAL OF THE ARCHITECT/ENGINEER. THE CONTRACTOR SHALL VERIFY FROM THE CONTRACT DRAWINGS THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES OR ADDITIONAL MATERIALS REQUIRED TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.
B. ALL FIXTURES SHALL BE COMPLETELY SELF-CONTAINED, PROVIDED WITH MAINTENANCE FREE BATTERY, AUTOMATIC CHARGER AND OTHER FEATURES. THEY SHALL BE INSTALLED COMPLETE WITH LAMPS, BATTERIES, ETC. WHICH SHALL BE NEW AND UNUSED AT TIME OF FINAL INSPECTION OF THE PROJECT FOR ACCEPTANCE.
C. LED EMERGENCY LIGHTING (EGRESS) UNITS
   1. PRODUCT DESCRIPTION: UL924 LED EMERGENCY BATTERY POWER SUPPLY SUITABLE FOR INSTALLATION IN AN LED FIXTURE. UNIT SHALL BE AUTOMATICALLY ACTIVATED WHEN LINE VOLTAGE DROPS BELOW 80 PERCENT.
   2. UNIT SHALL BE CAPABLE OF PROVIDING FULL LIGHT OUTPUT FOR 90 MINUTES.
   3. A REMOTE SOLID-STATE CHARGING INDICATOR LIGHT TO MONITOR THE CHARGER AND BATTERY, A DOUBLE-POLE TEST SWITCH, SHALL BE PROVIDED AND INSTALLED TO BE OPERABLE AND VISIBLE FROM THE OUTSIDE OF AN ASSEMBLED LUMINAIRE. INSTALL IN CEILING ADJACENT TO FIXTURE.
D. ALL FIXTURES SHALL HAVE SELF-DIAGNOSTICS. ELECTRONICS SHALL AUTOMATICALLY, OR MANUALLY UPON DEMAND, CONDUCT SELF TEST ON BATTERY CONDITION (INCLUDING ACTUAL DISCHARGE), CHARGER, LAMPS AND INTERNAL WIRING INTEGRITY PER NEC AND NFPA AT PRESCRIBED INTERVALS. A PILOT LIGHT SHALL INDICATE THE UNIT IS CONNECTED TO AC POWER. PROVIDE TEST SWITCH AND VISUAL INDICATOR(S) OF UNIT OPERATIONAL CONDITION INCLUDING CHARGER STATUS, READY AND SERVICE CODE. TEST SWITCH SHALL SIMULATE OPERATION OF THE UNIT UPON LOSS OF AC POWER BY ENERGIZING LAMPS FROM THE BATTERY, AND ALSO EXERCISE THE TRANSFER RELAY.
E. WARRANTY: EACH UNIT SHALL BE WARRANTED FOR THREE YEARS. THE BATTERY SHALL HAVE AN ADDITIONAL TWO MORE YEARS PRO-RATED WARRANTY. WARRANTY SHALL DATE FROM THE DATE OF FINAL PROJECT ACCEPTANCE AND BE INCLUDED IN THE CONTRACT DOCUMENT.

270510 TELECOM AND LOW VOLTAGE SYSTEMS PATHWAYS

A. COMBINATION TELEPHONE AND DATA OUTLETS SHALL BE PROVIDED AS SHOWN AND SHALL CONSIST OF A 4" SQUARE X 2 1/8" DEEP BOX WITH 1" CONDUIT TO THE ACCESSIBLE CEILING CAVITY. CABLING WILL BE INSTALLED BY THE OWNER. LEAVE PULL STRINGS OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.
B. CONTRACTOR SHALL SCHEDULE A MEETING WITH OWNER'S INFORMATION TECHNOLOGY AND SPECIAL SYSTEMS REPRESENTATIVES TO COORDINATE LOW VOLTAGE AND LINE VOLTAGE ROUGH-IN PRIOR TO BEGINNING CONSTRUCTION.

271500 DATA AND VOICE CABLING

A. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE OWNER. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.

B. PROVIDE EMPTY TELEPHONE, CABLE TELEVISION, FIBER AND DATA SERVICE ENTRANCE CONDUIT IN SIZES AND LOCATIONS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY THE OWNER AND THE SERVICE UTILITIES. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.

283111 FIRE ALARM SYSTEM

A. NCSBC SECTION 907 COMPLIANT FIRE DETECTION AND ALARM SYSTEM. THE SYSTEM SHALL BE CLASS "A", TWO WIRE ADDRESSABLE TYPE WITH SMOKE DETECTORS, HEAT DETECTORS, DUCT DETECTORS, DOUBLE ACTION TYPE MANUAL STATIONS, SYNCHRONIZED ADA AURAL/VISUAL AND STROBE ONLY INDICATING APPLIANCES, A SOLID STATE FIRE ALARM CONTROL PANEL WITH REMOTE LCD ALPHANUMERIC ANNUNCIATOR AND RECHARGING BATTERY SUPPLY. THE SYSTEM SHALL PROVIDE LOCAL ANNUNCIATION VIA ALARM INDICATING APPLIANCES AND REMOTE ANNUNCIATION VIA TELEPHONE LINES. PROVIDE A DEDICATED 120 VAC BRANCH CIRCUIT WITH BREAKER LOCKING MEANS FOR THE FACP. BATTERY SUPPLY CAPACITY SHALL PROVIDE FOR [24] 60 HOURS IN STANDBY FOLLOWED BY 5 MINUTES WITH ALL DEVICES IN ALARM. ALL AURAL DEVICES SHALL PRODUCE SOUND PRESSURES AS REQUIRED BY THE

ELECTRICAL GENERAL NOTES

1. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED. UNDERGROUND AND/OR UNDER SLAB RACEWAYS MAY BE SHOWN DOTTED OR DASHED.
2. THE DRAWINGS INDICATE THE NUMBER OF BRANCH CIRCUIT HOMERUN PHASE CONDUCTORS VIA ARROWHEADS. PROVIDE NEUTRAL AND EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
3. ALL MOTORS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.
4. RACEWAY LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS.
5. SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
6. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.
7. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.
8. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN SERVICE AREAS AND WHERE SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFCI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.
9. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE AFTER INSTALLATION. IF CONDITIONS OF THE INSTALLATION TO NOT ALLOW FOR READY ACCESS, PROVIDE A STANDARD RECEPTACLE AND PROVIDE A GFCI CIRCUIT BREAKER TO FEED THE CIRCUIT.
10. IN AREAS IN WHICH DUAL LEVEL SWITCHING IS INDICATED (TYPICALLY BY 2 OR MORE ADJACENT, GANGED SWITCHES), PROVIDE THE APPROPRIATE NUMBER OF CONDUCTORS TO FACILITATE THIS FUNCTION (AS TYPICALLY SHOWN).
11. CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING CLARITY.
12. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING.
13. ADJACENT SWITCHES SHALL BE GANGED.
14. ADJACENT RECEPTACLES AND DATA/TELEPHONE OUTLETS SHALL BE INSTALLED 6 INCHES CENTER TO CENTER AND SHALL BE AT THE SAME ELEVATION.
15. SEPARATE NEUTRALS ARE REQUIRED FOR ALL LINE VOLTAGE DIMMED LIGHTING CIRCUITS.
16. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, MULTI-LEVEL, ETC), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.
17. THE LOCATIONS OF ELECTRICAL EQUIPMENT SERVING MECHANICAL, PLUMBING AND FOOD SERVICE EQUIPMENT MAY NOT BE SHOWN PRECISELY ON THE ELECTRICAL DRAWINGS DUE TO THE VARIABILITY OF SPACE AND EQUIPMENT ROOM ARRANGEMENTS AND THE EQUIPMENT PROVIDED. LOCATIONS OF ELECTRICAL EQUIPMENT, PANELBOARDS, WIRING TROUGHS, LOCAL DISCONNECTING MEANS, ETC. SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS PRIOR TO ROUGH-IN. LOCATE AND/OR ADJUST EQUIPMENT LOCATIONS SHOWN IN CONSULTATION WITH OTHER TRADES TO MAINTAIN VISABILITY OF THE EQUIPMENT FROM DISCONNECTING MEANS AND PROVIDE ACCESS AND WORKING SPACE IN COMPLIANCE WITH CODES.
18. THE LAYOUT AND PLACEMENT OF ELECTRICAL DISTRIBUTION EQUIPMENT IN ELECTRICAL AND MECHANICAL EQUIPMENT ROOMS IS BASED ON PUBLISHED EQUIPMENT SIZES AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. DEVIATIONS FROM CONFIGURATIONS SHOWN IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE NATIONAL ELECTRIC CODE REQUIRED CLEARANCES FOR ALL ELECTRICAL EQUIPMENT, PANELBOARDS, TRANSFORMERS, SAFETY SWITCHES, SWITCHBOARDS, ETC. COORDINATE RESOLUTION OF CONFLICTS WITH OTHER TRADES. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
19. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
20. FOODSERVICE EQUIPMENT NOTES:
    - A. THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTIONS TO ALL FOOD SERVICE AND RELATED KITCHEN EQUIPMENT.
    - B. THE CIRCLE OR ELONGATED BUBBLE SYMBOL WITH NUMBER IDENTIFIES FOOD SERVICE EQUIPMENT AS IT IS SHOWN ON THE FOOD SERVICE EQUIPMENT DRAWINGS. SEE FOOD SERVICE EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION.
    - C. SEE FOOD SERVICE EQUIPMENT DRAWINGS FOR EXACT EQUIPMENT LOCATIONS, DIMENSIONS, CONNECTION TYPE, POWER AND CIRCUIT REQUIREMENTS, CIRCUIT BREAKER SIZE, WIRING DEVICE TYPE, RATING AND CONFIGURATION AND ROUGH-IN LOCATIONS AND PROVIDE SUITABLE ELECTRICAL EQUIPMENT, DEVICES, CONNECTIONS, CIRCUITS AS REQUIRED BY THE FOOD SERVICE EQUIPMENT DRAWINGS.
    - D. THE ELECTRICAL CONTRACTOR SHALL VERIFY ROUGH-IN REQUIREMENTS, LOCATIONS, MOUNTING HEIGHTS, ORIENTATION, VOLTAGE, PHASE, AMPS, HP, KW, ETC. FOR ALL FOOD SERVICE EQUIPMENT PRIOR TO ROUGH-IN.
    - E. PROVIDE LOCAL DISCONNECTING MEANS FOR EQUIPMENT AS REQUIRED BY CODES AND THE AHJ.
    - F. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCHES, INTERLOCKS, RACEWAY, WIRING AND INSTALLATION AS SPECIFICALLY OUTLINED ON THE FOOD SERVICE EQUIPMENT DRAWINGS.
    - G. FINAL CONNECTION TO HARD WIRED FOOD SERVICE EQUIPMENT SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE CONDUIT.
    - H. COORDINATE ALL CONNECTIONS TO EQUIPMENT WITH THE FOOD SERVICE EQUIPMENT CONTRACTOR.
    - I. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.
    - J. ALL CONVENIENCE OUTLETS IN THE KITCHEN SHALL BE INSTALLED HORIZONTALLY AND RATED 20 AMPS UNLESS NOTED OTHERWISE OR REQUIRED BY EQUIPMENT. ALL 125 VOLT RECEPTACLES MOUNTED IN THE KITCHEN SHALL BE GFCI TYPE. RECEPTACLES SHALL BE OF STANDARD NEMA CONFIGURATIONS. PROVIDE GFI CIRCUIT BREAKERS FOR EQUIPMENT IN COMPLIANCE WITH NEC ART. 210.8(B).
    - K. ALL RACEWAYS SHALL BE CONCEALED IN WALLS WHERE POSSIBLE, OTHERWISE, STUB UP THROUGH FLOOR AT EQUIPMENT APPROX. 6" ABOVE FLOOR TO CLEAR EQUIPMENT BASES.

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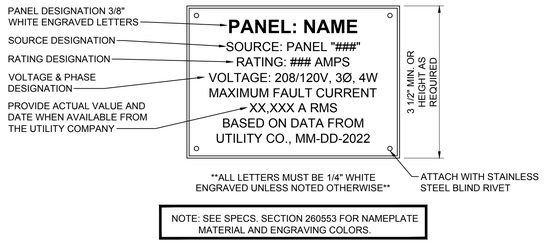
NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER WILLIAM MCPHERSON
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

ELECTRICAL GENERAL NOTES

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
E0.2.2



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

A1 TYPICAL PANELBOARD NAMEPLATE DETAIL

NOT TO SCALE

WARNING

Arc Flash and Shock Risk

Appropriate PPE Required

38 in 4.10 cal/cm^2	Arc Flash Boundary Incident Energy at 18 in
PPE	Cotton Underwear + FR Shirt & Pants
480 VAC 00 42 in 12 in	Shock Risk when cover is removed Glove Class Limited Approach Restricted Approach

Location: PNL-MDP

SKM Systems Analysis, Inc.
1 Pearl St.
Redondo Beach, CA 90277
(310) 698-4700

Job#:	232874	Prepared on:	03/01/23	By:	Engineer

Warning: Changes in equipment settings or system configuration will invalidate the calculated values and PPE requirements

NOTE: THE VALUES ABOVE ARE AN EXAMPLE OF THE NECESSARY CONTENTS OF THE LABEL CREATED AND APPLIED TO THE EQUIPMENT

1C TYPICAL ARC FLASH LABEL

NOT TO SCALE

MINIMUM CONDUCTORS SIZE CHART

PROVIDE THE FOLLOWING MINIMUM SIZES FOR BRANCH CIRCUIT CONDUCTORS:

SINGLE PHASE CIRCUITS

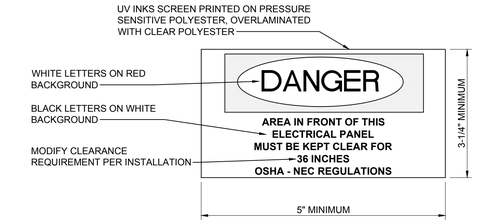
CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)			
		120	208	240	277
#12	15	81	141	163	188
#10	15	135	234	270	312
#8	15	204	355	409	473
#12	20	61	106	122	141
#10	20	101	175	202	233
#8	20	153	266	307	354
#10	30	67	117	135	155
#8	30	102	177	204	236

THREE PHASE CIRCUITS

CONDUCTOR SIZE (AWG)	BRANCH CIRCUIT BREAKER TRIP (AMPERES)	CIRCUIT VOLTAGE MAXIMUM ALLOWABLE CIRCUIT LENGTH (FEET)			
			208	240	480
#12	15		163	188	377
#10	15		270	312	624
#12	20		122	141	283
#10	20		202	234	468
#10	30		135	156	312
#8	30		205	236	473
#8	40		153	177	354
#6	40		239	276	553
#8	50		123	142	283
#6	50		191	221	442
#6	60		159	184	368
#4	60		245	283	567

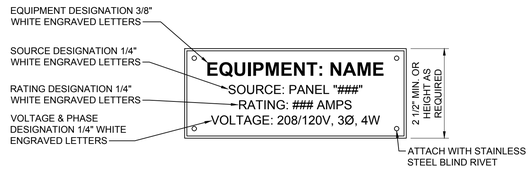
NOTES:

1. CONDUCTOR LENGTHS ARE BASED ON SINGLE & THREE PHASE, 90% POWER FACTOR LOADS USING 75°C COPPER CONDUCTORS IN EMT RACEWAYS TO ACHIEVE NO MORE THAN 3 PERCENT VOLTAGE DROP.
2. CALCULATIONS ASSUME LOADS OF 80% OF CIRCUIT BREAKER TRIP (12A, 16A & 24A, 32A, 40A & 48A, RESPECTIVELY) ARE CONCENTRATED AT THE END OF THE CIRCUITS.
3. IF LOAD CHARACTERISTICS DIFFER FROM ABOVE, CALCULATE USING KNOWN CHARACTERISTICS AND SUBMIT CALCULATIONS TO THE ARCHITECT/ENGINEER DOCUMENTING 3% OR LESS VOLTAGE DROP UNDER THE ACTUAL LOAD CONDITIONS.
4. WHEN A DEDICATED SINGLE LOAD LESS THAN NOTED ABOVE IS KNOWN, THE CONTRACTOR MAY UTILIZE SMALLER CONDUCTORS UPON SUBMISSION OF VOLTAGE DROP CALCULATIONS DOCUMENTING 3% OR LESS VOLTAGE DROP. THE MINIMUM LOAD SHALL BE ASSUMED TO BE 60% OF THE CB TRIP RATING REGARDLESS OF ACTUAL DEDICATED LOAD.
5. USE THE LARGER OF THE CONDUCTORS INDICATED ON THE DRAWINGS OR THIS TABLE.



A3 NEC WORKING SPACE LABEL DETAIL

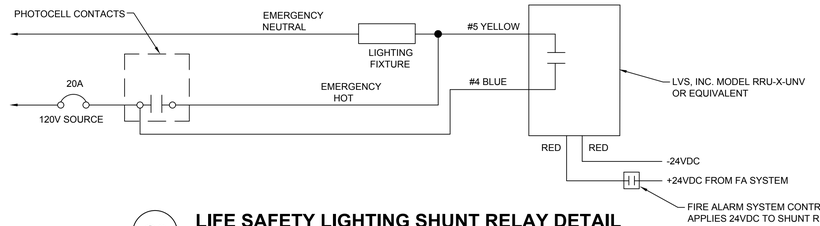
NOT TO SCALE



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

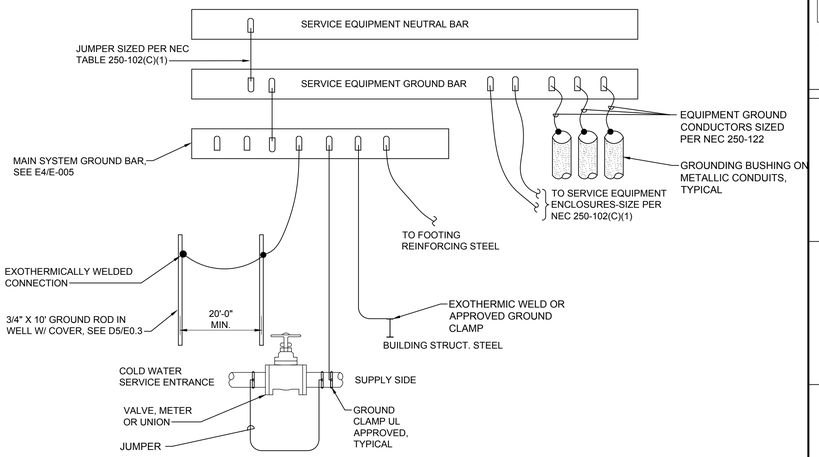
B3 TYPICAL EQUIPMENT NAMEPLATE DETAIL

NOT TO SCALE



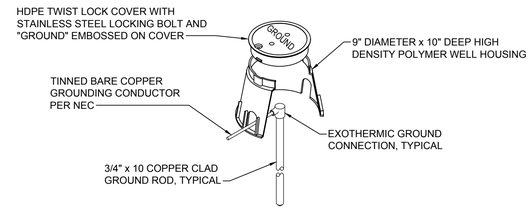
C3 LIFE SAFETY LIGHTING SHUNT RELAY DETAIL

NOT TO SCALE



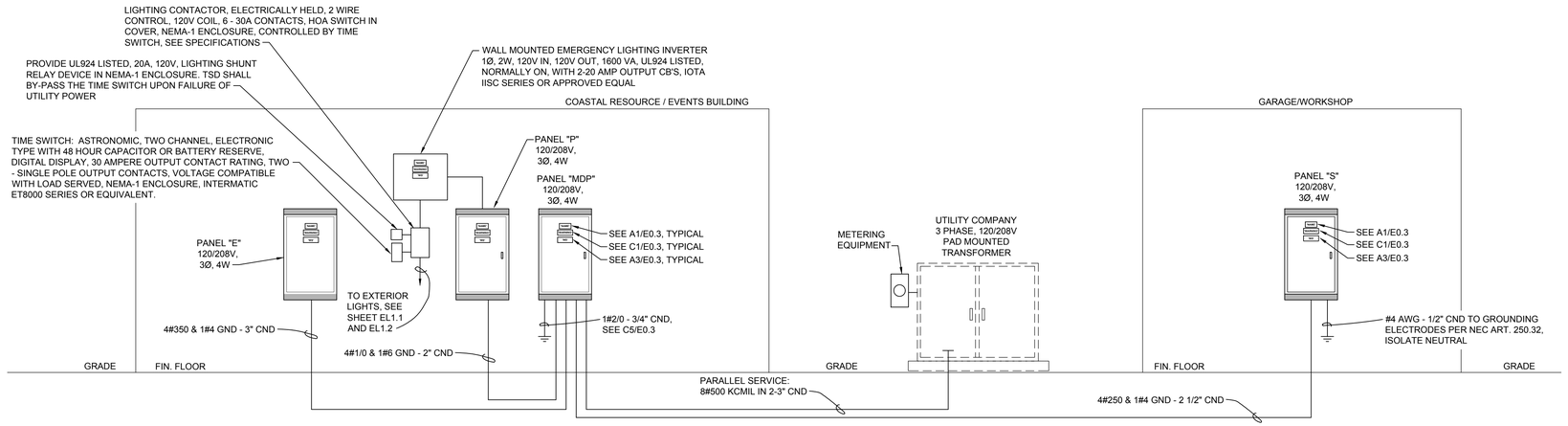
C5 SERVICE GROUNDING DETAIL

NOT TO SCALE



D5 GROUNDING INSPECTION WELL DETAIL

NOT TO SCALE



E3 POWER RISER DIAGRAM

NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER JAMES R. CHRISTIAN MCPHERSON

05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL POWER RISER DIAGRAM AND DETAILS

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER

E0.3

Panel MDP

TYPE:	208	120	VOLTS, 3	PHASE, 4	WIRE	PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE				IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM				CHECKED	XX	ULSE LABEL
	NEMA -	1	ENCLOSURE					ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
SPARE		20/1	1				2	20/1		SPARE
SPARE		20/1	3				4	20/1		SPARE
SPARE		20/1	5				6	20/1		SPARE
SPARE		20/1	7				8	20/1		SPARE
SPARE		20/1	9				10	20/1		SPARE
SPARE		20/1	11				12	20/1		SPARE
			13				14			
SPARE		30/3	15				16	30/3		SPARE
			17				18			
SPARE		30/2	19				20			
			21				22	50/3		SPARE
EWH1	2,250	30/2	23			2,250	24			
	2,250		25	3,691			26		1,441	
EWH1	2,250	30/2	27		3,691		28	25/3	1,441	HP01
	2,250		29			3,691	30		1,441	
	3,170		31	4,612			32		1,441	
AHU01	3,170	35/3	33		4,612		34	25/3	1,441	HP02
	3,170		35			4,612	36		1,441	
	3,170		37	4,612			38		1,441	
AHU02	3,170	35/3	39		4,612		40	25/3	1,441	HP03
	3,170		41			4,612	42		1,441	
	3,170		43	4,612			44		1,441	
AHU03	3,170	35/3	45		4,612		46	25/3	1,441	HP04
	3,170		47			4,612	48		1,441	
	3,170		49	26,403			50		23,233	
AHU04	3,170	35/3	51		22,442		52	250/3	19,272	PANEL S
	3,170		53			21,091	54		17,921	
	11,369		55	44,719			56		33,350	
PANEL P	16,949	150/3	57		48,094		58	300/3	31,145	PANEL E
	17,258		59			53,920	60		36,662	
				88,647	88,062	94,787	TOTAL PHASE VA		800	A. BUS (COPPER, UNO)
				739	734	790	TOTAL PHASE AMPS		800	A. MAIN CIRCUIT BREAKER
				33%	32%	35%	PHASE BALANCE		30	KAIC MINIMUM RATING

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. MCB SHALL BE 100% RATED.

ADDITIONAL NOTES (AS APPLICABLE):
3. THE SHORT CIRCUIT AVAILABILITY AT THE SECONDARY TERMINALS OF THE ESTIMATED UTILITY COMPANY 225 KVA PAD MOUNTED TRANSFORMER IS 20,820A (3% MINIMUM Z & X/R OF 2.6). DATA FROM DUKE ENERGY'S APRIL 2022 EDITION OF THE "REQUIREMENTS FOR ELECTRIC SERVICE AND METER INSTALLATION, NC AND SC." CONTRACTOR SHALL CONFIRM ACTUAL SHORT CIRCUIT AVAILABILITY WITH THE SERVING UTILITY AND ADJUST EQUIPMENT RATING ACCORDINGLY.

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	46,680			
RECEPTACLES FIRST 10 KVA		10,000	1.00	10,000
RECEPTACLES > 10 KVA		36,680	0.50	18,340
LIGHTING		10,075	1.25	12,594
MISCELLANEOUS EQUIPMENT		46,960	1.00	46,960
OTHER EQUIPMENT (CONTINUOUS)		16,640	1.25	20,800
LARGEST MOTOR		12,970	1.25	16,212
HVAC EQUIPMENT (FLA = MCA X 0.8)		113,471	1.00	113,471
KITCHEN EQUIPMENT	7	24,700	0.65	16,055
TOTAL CONNECTED (VA)		271,496		
TOTAL DEMAND (VA)				254,432
TOTAL DEMAND (AMPERES)				706.2

Panel P

TYPE:	208	120	VOLTS, 3	PHASE, 4	WIRE	PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE				IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM				CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE					ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
RECEPTACLES 129,130	1,260	20/1	1	1,620			2	20/1	360	RECEPTACLES 102
RECEPTACLES 111,128	1,260	20/1	3		1,620		4	20/1	360	RECEPTACLES 102
RECEPTACLE 126	2,880	30/1	5			4,080	6	20/1	1,200	REFRIGERATOR 102 (NOTE 3)
TELECOMMUNICATIONS BACKBOARD 126	720	20/1	7	1,080			8	20/1	360	FLOORBOXES 102
REFRIGERATOR 125 (NOTE 3)	1,200	20/1	9		1,560		10	20/1	360	RECEPTACLES 102
RECEPTACLE 125	180	20/1	11			540	12	20/1	360	RECEPTACLES 102
RECEPTACLE 125	180	20/1	13	900			14	20/1	720	RECEPTACLES 100,102,103
MICROWAVE 125	1,500	20/1	15		2,000		16	20/1	500	EWC (NOTE 3)
RECEPTACLE 125	180	20/1	17			680	18	20/1	500	EWC (NOTE 3)
RECEPTACLE 125	180	20/1	19	540			20	20/1	360	RECEPTACLES 104,105
RECEPTACLE 125	180	20/1	21		1,080		22	20/1	900	RECEPTACLES 100
RECEPTACLE 125	180	20/1	23			540	24	20/1	360	EXTERIOR RECEPTACLES
RECEPTACLE 123	360	20/1	25	1,080			26	20/1	720	EXTERIOR RECEPTACLES
RECEPTACLES 124	900	20/1	27		1,842		28	20/1	942	LIGHTING 125-130
RECEPTACLES 120,122	360	20/1	29			1,440	30	20/1	1,080	LIGHTING 114-117, 119,120,122,123
RECEPTACLES 115,117	1,260	20/1	31	3,009			32	20/1	1,749	LIGHTING 102,104,105,105A,108-111, 113
RECEPTACLES 114,116	1,260	20/1	33		2,295		34	20/1	1,035	EXTER. LIGHTING THRU PHOTOCELL & INVERTER
RECEPTACLES 112,118	1,080	20/1	35			2,050	36	20/1	970	EXTERIOR LIGHTING THRU PHOTOCELL
RECEPTACLES 113	900	20/1	37	1,100			38	20/1	200	FIRE ALARM CONTROL UNIT (NOTE 4)
RECEPTACLE, FLOORBOX 113	360	20/1	39		442		40	20/1	82	LIGHTING, FAN PORCH 131
RECEPTACLES 108,109	1,440	20/1	41			2,518	42	20/1	1,078	LIGHTING 100,101,102,112,116,124,
RECEPTACLE 127	360	20/1	43	360			44	20/1		SPARE
RECEPTACLE 127	360	20/1	45		360		46	20/1		SPARE
RECEPTALES MECH PLATFORM	360	20/1	47			360	48	20/1		SPARE
RECEPTACLE 132	180	20/1	49	180			50	20/1		SPARE
EH01 132	1,200	20/1	51		1,200		52	20/1		SPARE
UC REFRIG 122 (NOTE 3)	500	20/1	53			500	54	20/1		SPARE
DISHWASHER (NOTE 3)	1,500	20/1	55	1,500			56	20/1		SPARE
RANGE/OVEN (NOTE 3)	4,550	40/2	57		4,550		58	20/1		SPARE
	4,550		59			4,550	60	20/1		SPARE
				11,369	16,949	17,258	TOTAL PHASE VA		225	A. BUS (COPPER, UNO)
				95	141	144	TOTAL PHASE AMPS		150	A. MAIN LUGS AND/OR FEEDER RATING
				25%	37%	38%	PHASE BALANCE		22	KAIC MINIMUM RATING

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. KITCHEN EQUIPMENT DEMAND FACTOR PER NEC TABLE 220.56

ADDITIONAL NOTES (AS APPLICABLE):
3. GFCI CIRCUIT BREAKER
4. PROVIDE CIRCUIT BREAKER LOCKING DEVICE FOR FACU CIRCUIT BREAKER.

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	20,520			
RECEPTACLES FIRST 10 KVA		10,000	1.00	10,000
RECEPTACLES > 10 KVA		10,520	0.50	5,260
LIGHTING		6,936	1.25	8,670
MISCELLANEOUS EQUIPMENT		6,320	1.00	6,320
OTHER EQUIPMENT (CONTINUOUS)			1.25	
LARGEST MOTOR			1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1,200	1.00	1,200
KITCHEN EQUIPMENT	2	10,600	1.00	10,600
TOTAL CONNECTED (VA)		45,576		
TOTAL DEMAND (VA)				42,050
TOTAL DEMAND (AMPERES)				116.7
PANEL DEMAND LOADING VS RATING		77.8%		

Panel E

TYPE:	208	120	VOLTS, 3	PHASE, 4	WIRE	PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	FLUSH				IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM				CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE					ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
RECEPTACLES 201	720	20/1	1	2,220			2	20/1	1,500	WARMER 204
EWC 201 (NOTE 5)	500	20/1	3		1,500		4	20/1	1,000	REFRIGERATOR 204 (NOTE 3)
RECEPTACLES 200,202,203,205	720	20/1	5			2,220	6	20/1	1,500	DISHWSHER 204 (NOTE 3)
RECEPTACLE 207	1,800	20/1	7	2,800			8	20/1	1,000	ICE MAKER 204
RECEPTACLES 204,206	360	20/1	9		540		10	20/1	180	RECEPTACLE 204
RECEPTACLE 208	1,800	20/1	11			1,980	12	20/1	180	RECEPTACLE 204
RECEPTACLES 208	1,800	20/1	13	1,980			14	20/1	180	RECEPTACLE 204
RECEPTACLE 208	1,800	20/1	15		1,980		16	20/1	180	RECEPTACLE 204
RECEPTACLES 208	1,800	20/1	17			1,980	18	20/1	180	RECEPTACLE 204
RECEPTACLES 208	1,260	20/1	19	1,440			20	20/1	180	RECEPTACLE 204
RECEPTACLE 208	180	20/1	21		360		22	20/1	180	RECEPTACLE 204
RECEPTACLE 208	180	20/1	23			1,155	24	20/1	975	LIGHTING 200-207, 210,211
RECEPTACLE 208	180	20/1	25	1,273			26	20/1	1,093	LIGHTING 208,209
MICROWAVE 208	1,500	20/1	27		1,608		28	20/1	108	LIGHTING PORCH 210
RECEPTACLES 207	540	20/1	29			540	30	20/1		SPARE
EXTERIOR RECEPTACLES	1,260	20/1	31	1,260			32	20/1		SPARE
RECEPTACLE MECH PLATFORM	180	20/1	33		180		34	20/1		SPARE
RECEPTACLE 210	180	20/1	35			180	36	20/1		SPARE
EH01 210	1,200	20/1	37	1,200			38	20/1		SPARE
TELEVISIONS 205	1,500	20/1	39		1,500		40	20/1		SPARE
RECEPTACLE 209	2,880	30/1	41			2,880	42	20/1		SPARE
SPARE		20/1	43				44	20/1		SPARE
SPARE		20/1	45				46	20/1		SPARE
SPARE		20/1	47				48	20/1		SPARE
SPARE		20/1	49				50	20/1		SPARE
SPARE		20/1	51				52	20/1		SPARE
SPARE		20/1	53				54	20/1		SPARE
SPARE		30/2	55				56			
			57				58	30/3		SPARE
EWH3	2,250	30/2	59			2,250	60			
	2,250		61	2,250			62			
KITCHEN RANGE (NOTE 3)	4,550	40/2	63		4,550		64	50/3		SPARE
	4,550		65			4,550	66			
	1,729		67	6,053			68		4,323	
HP05	1,729	30/3	69		6,053		70	45/3	4,323	AH05
	1,729		71			6,053	72		4,323	
	2,114		73	6,437			74		4,323	
HP06	2,114	35/3	75		6,437		76	45/3	4,323	AH06
	2,114		77			6,437	78		4,323	
	2,114		79	6,437			80		4,323	
HP07	2,114	35/3	81		6,437		82	45/3	4,323	AH07
	2,114		83			6,437	84		4,323	
				33,350	31,145	36,662	TOTAL PHASE VA		400	A. BUS (COPPER, UNO)
				278	260	306	TOTAL PHASE AMPS		300	A. MAIN LUGS AND/OR FEEDER RATING
				33%	31%	36%	PHASE BALANCE		22	KAIC MINIMUM RATING

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. KITCHEN EQUIPMENT DEMAND FACTOR PER NEC TABLE 220.56

ADDITIONAL NOTES (AS APPLICABLE):
3. GFCI CIRCUIT BREAKER

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	20,400			
RECEPTACLES FIRST 10 KVA		10,000	1.00	10,000
RECEPTACLES > 10 KVA		10,400	0.50	5,200
LIGHTING		2,176	1.25	2,720
MISCELLANEOUS EQUIPMENT		6,500	1.00	6,500
OTHER EQUIPMENT (CONTINUOUS)			1.25	
LARGEST MOTOR		12,970	1.25	16,212
HVAC EQUIPMENT (FLA = MCA X 0.8)		45,010	1.00	45,010
KITCHEN EQUIPMENT	5	14,100	0.70	9,870
TOTAL CONNECTED (VA)		101,156		
TOTAL DEMAND (VA)				95,512
TOTAL DEMAND (AMPERES)				265.1

Panel S

TYPE:	208	120	VOLTS, 3	PHASE, 4	WIRE	PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE				IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM				CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE					ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
EXTERIOR RECEPTACLES	720	20/1	1	1,260			2	20/1	540	REEPTACLES 100
RECEPTACLE 102	180	20/1	3		360		4	20/1	180	RECEPTACLE 101
RECEPTACLE 102	180	20/1	5			900	6	20/1	720	PV04
RECEPTACLE 102	180	20/1	7	1,332			8	20/1	1,152	PHTP01
RECEPTACLE 102	180	20/1	9		1,180		10	20/1	1,000	WASHER
RECEPTACLE 102	180	20/1	11			1,002	12	20/1	822	LIGHTING 100,101, 102
RECEPTACLE 102	180	20/1	13	268			14	20/1	88	EXTERIOR LIGHTS
RECEPTACLE 102	180	20/1	15		233		16	20/1	53	EXTERIOR LIGHTS THRU PC
RECEPTACLE 102	180	20/1	17			180	18	20/1		SPARE
RECEPTACLE 100	2,880	30/1	19	7,040			20	50/2	4,160	EV CHARGING STATION (NOTES 1 & 3)
SPARE		20/1	21		4,160		22		4,160	
SPARE		20/1	23			4,160	24	50/2	4,160	EV CHARGING STATION (NOTES 1 & 3)
SPARE		20/1	25	4,160			26		4,160	
FUTURE EV CHARGING STATION (NOTES 1 & 3)	4,160	50/2	27		5,416		28	15/2	1,256	EH02
	4,160		29			5,416	30		1,256	
FUTURE EV CHARGING STATION (NOTES 1 & 3)	4,160	50/2	31	5,416			32	15/2	1,256	EH02
	4,160		33		5,416		34		1,256	
DRYER	2,500	30/2	35			3,756	36	15/2	1,256	EH02
	2,500		37	3,756			38		1,256	
EWH2	1,250	20/2	39		2,506		40	15/2	1,256	EH02
	1,250		41			2,506	42		1,256	
				23,233	19,272	17,921	TOTAL PHASE VA		250	A. BUS (COPPER, UNO)
				194	161	149	TOTAL PHASE AMPS		250	A. MAIN CIRCUIT BREAKER
				38%	32%	30%	PHASE BALANCE		10	KAIC MINIMUM RATING

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. ISOLATE NEUTRAL FROM EG BAR PER NEC ART. 250.

ADDITIONAL NOTES (AS APPLICABLE):
3. GFCI CIRCUIT BREAKER.

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	5,760			
RECEPTACLES FIRST 10 KVA		5,760	1.00	5,760
RECEPTACLES > 10 KVA			0.50	
LIGHTING		963	1.25	1,204
MISCELLANEOUS EQUIPMENT		25,140	1.00	25,140
OTHER EQUIPMENT (CONTINUOUS)		16,640	1.25	20,800
LARGEST MOTOR			1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		11,923	1.00	11,923
KITCHEN EQUIPMENT			1.00	
TOTAL CONNECTED (VA)		60,426		
TOTAL DEMAND (VA)				64,826
TOTAL DEMAND (AMPERES)				179.9
PANEL DEMAND LOADING VS RATING		72.0%		

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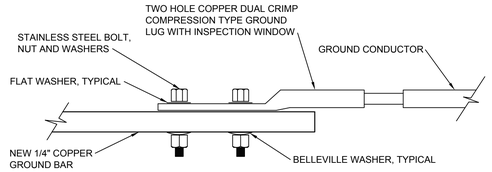
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 6433 REGISTERED PROFESSIONAL ENGINEER
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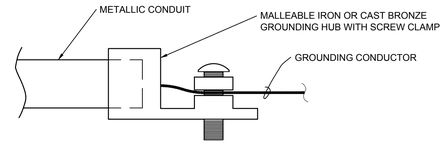
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E0.4

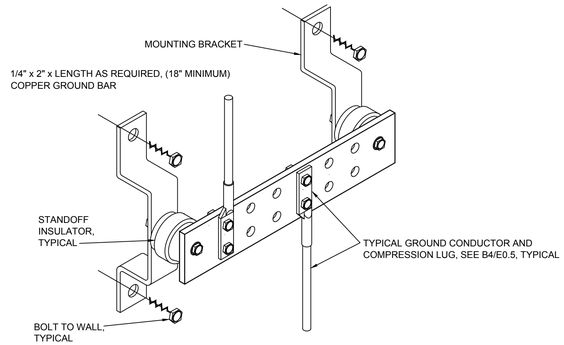


A4 **TYPICAL GROUND BAR CONNECTION DETAIL**
NOT TO SCALE



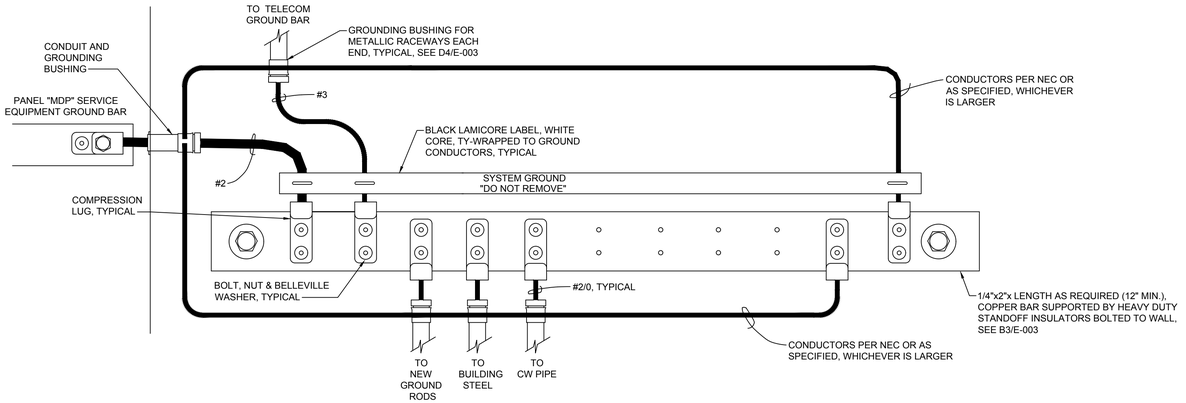
NOTE: INSTALL AT EACH END OF RACEWAY

B4 **CONDUIT HUB AND GROUNDING CONDUCTOR DETAIL**
NOT TO SCALE



SEE SPECS SECTION 260526 FOR ADDITIONAL DETAILS

D4 **TYPICAL GROUND BAR MOUNTING DETAIL**
NOT TO SCALE



E4 **MAIN SYSTEM GROUND BAR DETAIL**
NOT TO SCALE

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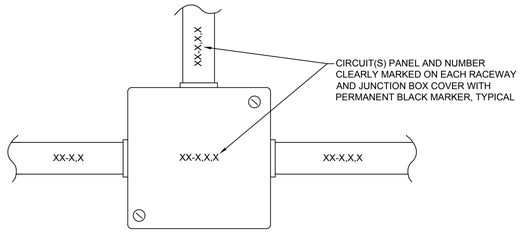
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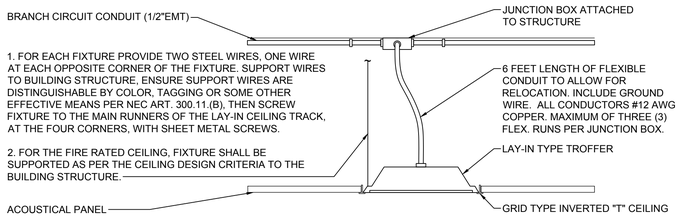
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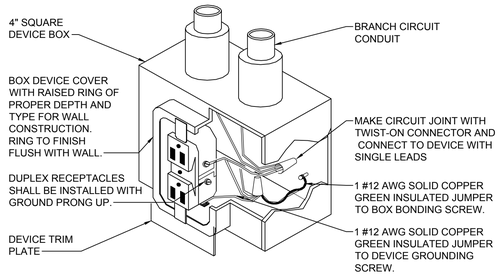
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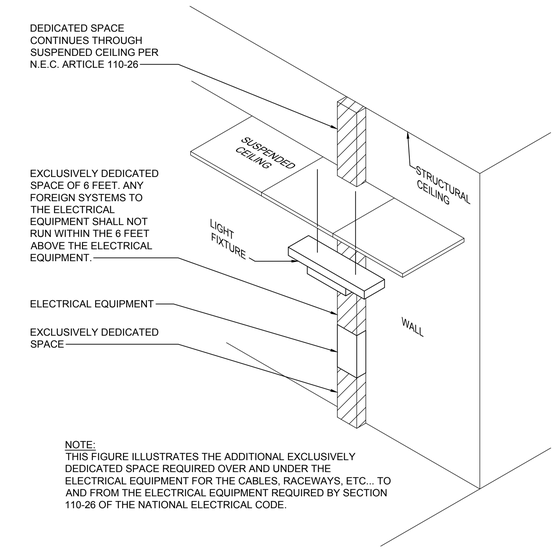
A1 CIRCUIT IDENTIFICATION DETAIL
NOT TO SCALE



A3 LIGHTING FIXTURE MOUNTING DETAIL
NOT TO SCALE

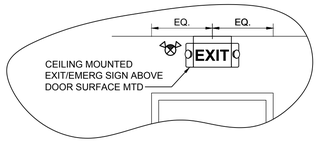


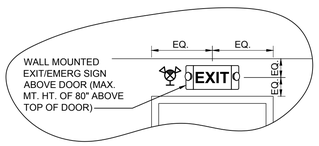
C1 RECEPTACLE GROUNDING DETAIL
NOT TO SCALE

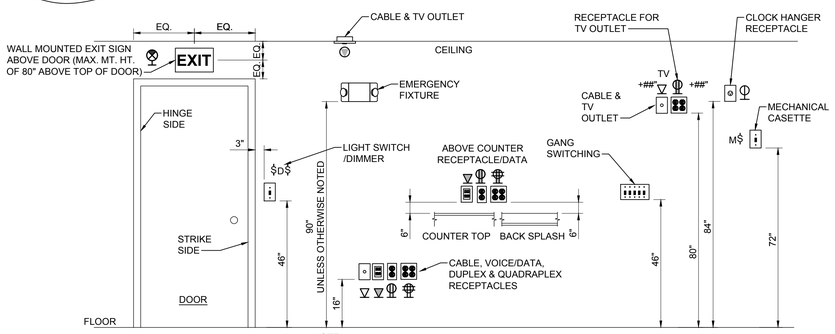


NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ETC... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

C5 DEDICATED SPACE FOR ELECTRICAL
NOT TO SCALE







NOTE:
DETAIL SHOWN FOR REFERENCE ONLY, NOT ALL DEVICES ARE INDICATED ON PLANS.

A1 ELECTRICAL DEVICES - MOUNTING HEIGHT DETAIL
NOT TO SCALE

TABLE 110.26(A)(1) - WORKING SPACES

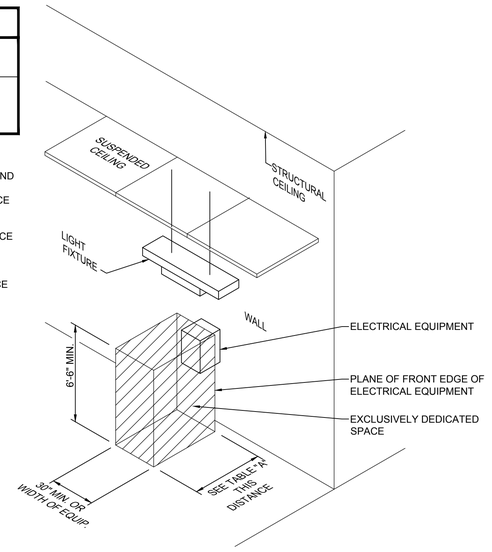
NOMINAL VOLTAGE TO GROUND	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION 1	CONDITION 2	CONDITION 3
0 - 150	900mm (3 ft)	900mm (3 ft)	900mm (3 ft)
151 - 600	900mm (3 ft)	1.0m (3 ft 6 in.)	1.2 m (4 ft.)
601 - 1000	900mm (3 ft)	1.2 m (4 ft.)	1.5 m (5 ft.)

NOTE: WHERE THE "CONDITIONS" ARE AS FOLLOWS:

CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.

CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF WORKING SPACE. CONCRETE BRICK, OR TILE WALLS SHALL BE CONSIDERED GROUNDED.

CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE



E5 WORKING CLEARANCE FOR ELECTRICAL
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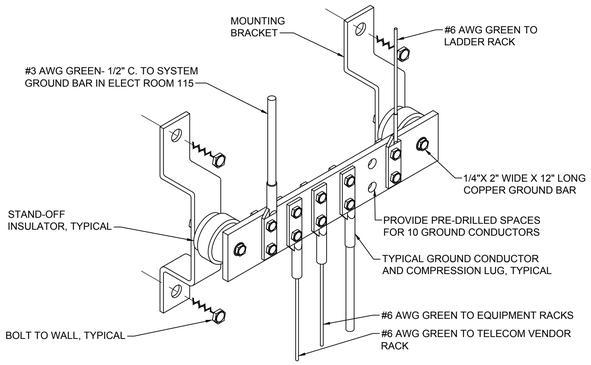
NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER RICHARD D. MCADAMS
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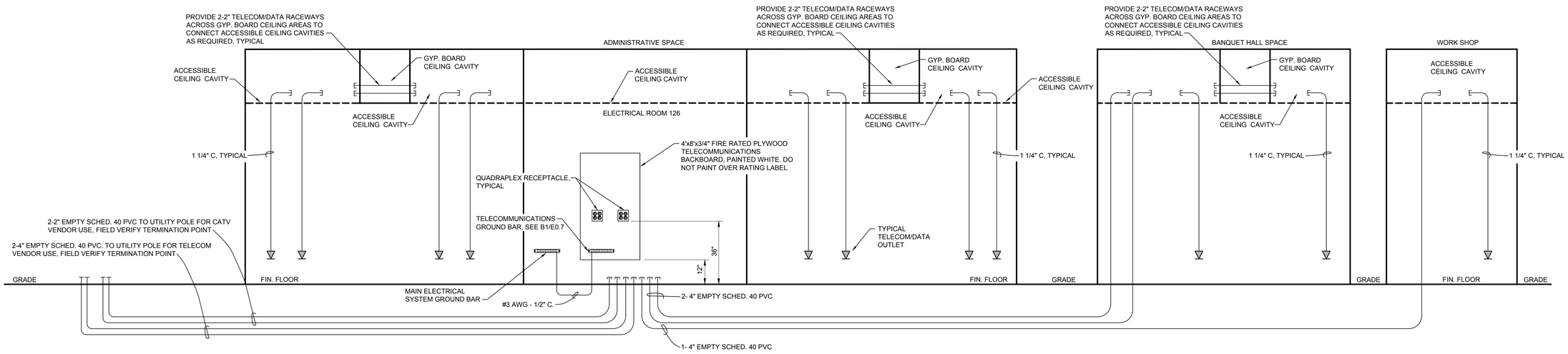
SHEET NUMBER
E0.6



SEE SPEC SECTION 260526 FOR ADDITIONAL INFORMATION

B1 **TELECOMMUNICATIONS GROUND BAR DETAIL**

NOT TO SCALE



E3 **TELECOMMUNICATION RISER DIAGRAM**

NOT TO SCALE

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ELECTRICAL TELECOMM. RISER DIAGRAM AND DETAILS

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REVISIONS

SHEET NUMBER

E0.7

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER/SERIES	NOM. SIZE	SOURCE / TEMP(oK) / DELIVERED LUMENS	VOLTS	WATTS	LENS	COLOR/ MATERIAL	MOUNTING HEIGHT	DRIVER/ DIMMING	REMARKS/ OPTIONS MFGR.
L1	LAY-IN VOLUMETRIC LED	LITHONIA "STAKPAK" SERIES	2'x4'	LEDs / 3500K / 6000 LUMENS	MVOLT	49	ACRYLIC DIFFUSER	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V 10% DIMMING	
L2	LAY-IN VOLUMETRIC LED	LITHONIA "STAKPAK" SERIES	2'x2'	LEDs / 3500K / 3000 LUMENS	MVOLT	27	ACRYLIC DIFFUSER	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V 10% DIMMING	
L3	LAY-IN VOLUMETRIC LED	LITHONIA "STAKPAK" SERIES	2'x4'	LEDs / 3500K / 4000 LUMENS	MVOLT	40	ACRYLIC DIFFUSER	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V 10% DIMMING	
L4	LAY-IN LED TROFFER	LITHONIA "2GTL" SERIES	2'x4'	LEDs / 3500K / 6000 LUMENS	MVOLT	49	ACRYLIC	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V DIMMING	6
L5	LAY-IN LED TROFFER	LITHONIA "2GTL" SERIES	2'x4'	LEDs / 3500K / 4000 LUMENS	MVOLT	30	ACRYLIC	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V DIMMING	6
L6	LAY-IN LED TROFFER	LITHONIA "2GTL" SERIES	2'x4'	LEDs / 3500K / 4800 LUMENS	MVOLT	36	ACRYLIC	WHITE/ STEEL	RECESSED	LED DRIVER 0-10V DIMMING	
L7	GROUND MOUNTED FLOODLIGHT	LITHONIA "QTE LED" SERIES	6" x 5"	10 4000K / 2500 LUMENS	120	25	TEMPERED GLASS	BLACK ALUMINUM	GROUND	LED DRIVER	
L8	SURFACE MOUNTED LED STRIP LIGHT	LITHONIA "RLNK" SERIES	2'	LEDs / 3500K / 940 LUMENS	120	9	DIFFUSE POLYCARBONTE	WHITE/ STEEL	WALL OVER DOOR	LED DRIVER	
L9	SURFACE MOUNTED LED STRIP FIXTURE	LITHONIA "CSS" SERIES	4'	LEDs / 4000K / 4298 LUMENS	MVOLT	35	DIFFUSE ACRYLIC	WHITE/ STEEL	SURFACE STRUCTURE	LED DRIVER	
L10	SURFACE MOUNTED LED STRIP FIXTURE	LITHONIA "CSS" SWW3" SERIES	4'	LEDs / 3500K / 3851 LUMENS	MVOLT	46	DIFFUSE ACRYLIC	WHITE/ STEEL	SURFACE CEILING	LED DRIVER	
L11	SURFACE MOUNTED ENCLOSED AND GASKTED LED	LITHNOINA "FEM" SERIES	4'	LEDs / 3500K / 6000 LUMENS	MVOLT	38	LPACL DIFFUSER	FIBERGLASS	SURFACE CEILING	LED DRIVER	NEMA-4X GASKET MD DISTRIBUTION, 80 CRI
L12	UNDERCABINET LED TAPE LIGHT	ACOLYTE "CHAS1-RB-SWS220" SERIES	LENGTH AS INDICATED	LEDs / 2700K / 399 LUMENS/FT	120/24V	3W/LF		SILVEER/ ALUMINUM	SURFACE UNDER CABINET	LED DRIVER	AS1-F-SV CHANNEL, IP20 RATING, 90 CRI
L12A	LED TAPE LIGHT	ACOLYTE "CHAC5-RB-SCS220" SERIES	LENGTH AS INDICATED	LEDs / 2700K / 565 LUMENS/FT	120/24V	5W/LF		SILVER/ ALUMINUM	SURFACE IN COVE	LED DRIVER 0-10V DIMMING	AC5-F-SV CHANNEL, IP20 RATING, 90 CRI
L13	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 1000 LUMENS	MVOLT	11		WHITE	RECESSED CEILING	LED DRIVER	LO4, AR, LD, TRW, GZ10
L14	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 1500 LUMENS	MVOLT	18		WHITE	RECESSED CEILING	LED DRIVER 0-10V 10%DIMMING	LO4, AR, LD, TRW, GZ10
L15	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 1500 LUMENS	MVOLT	18		WHITE	RECESSED CEILING	LED DRIVER 0-10V 10% DIMMING	LO4, AR, LD, TRW, GZ10 7
L16	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 2000 LUMENS	MVOLT	22		WHITE	RECESSED CEILING	LED DRIVER 0-10V 10% DIMMING	LO4, AR, LD, TRW, GZ10 7
L16AS	RECESSED LED WALLWASH DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 2000 LUMENS	MVOLT	22		WHITE	RECESSED CEILING	LED DRIVER 0-10V 10% DIMMING	LW4, AR, LD, TRW, GZ10 SCA4 30D, 7
L16S	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 2000 LUMENS	MVOLT	22		WHITE	RECESSED CEILING	LED DRIVER 0-10V 10% DIMMING	LO4, AR, LD, TRW, GZ10 SCA4 30D, 7
L17	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 3500K / 3000 LUMENS	MVOLT	32		WHITE	RECESSED CEILING	LED DRIVER 0-10V 1% DIMMING	LO4, AR, LD, TRW, GZ1, 7
L17S	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 3500K / 3000 LUMENS	MVOLT	32		WHITE	RECESSED CEILING	LED DRIVER 0-10V 1% DIMMING	LO4, AR, LD, TRW, GZ1, SCA4 30D
L18	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 4000 LUMENS	MVOLT	43		WHITE	RECESSED CEILING	LED DRIVER 0-10V 1% DIMMING	LO4, AR, LD, TRW, GZ1, 7
L18S	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 4000 LUMENS	MVOLT	43		WHITE	RECESSED CEILING	LED DRIVER 0-10V 1% DIMMING	LO4, AR, LD, TRW, GZ1, SCA4 30D, 7
L19	SURFACE MOUNTED LED STRIP FIXTURE	LITHONIA "CSS" SERIES	8'	LEDs / 4000K / 8596 LUMENS	MVOLT	72		WHITE/ STEEL	SURFACE CEILING	LED DRIVER 0-10V DIMMING	
L20	LED DOWNLIGHT CYLINDER	LITHONIA "ICO4WC" SERIES	4"x9"	LEDs / 2700K / 1500 LUMENS	MVOLT	17.5		DBL MATTE BLACK	WALL FIELD VERIFY	LED DRIVER 0-10V 10% DIMMING	AR,LD,45D, JBX, DN
L21	LED UP/ DOWNLIGHT CYLINDER	LITHONIA "ICO4UDWC" SERIES	4"x19"	LEDs / 2700K / 2000 LUMENS DOWN 1500 LUMENS UP	MVOLT	37		DBL MATTE BLACK	WALL FIELD VERIFY	LED DRIVER 0-10V 10% DIMMING	AR,LD,45D DN, ASYM UP, JBX, GZ10
L24	RECESSED LED DOWNLIGHT	LITHONIA "LDN4" SERIES	4"	LEDs / 2700K / 1500 LUMENS	MVOLT	18		WHITE/ ALUMINUM	RECESSED CEILING	LED DRIVER 0-10V 10% DIMMING	LO4, AR, LD, TRW, GZ10, 7
L25	PENDANT MOUTNED LED	TROY LIGHTING "RNSM16 -LED1835" SERIES	10" x 16"	LEDs / 2700K / 1265 LUMENS	MVOLT	18		BLACK/ ALUMINUM	PENDANT CEILING	LED DRIVER 0-10V 10% DIMMING	3/4" IP MOUNTING, CG LENS
L26	SURFACE MOUNTED LED LIGHT TAPE	ACOLYTE "CHAS1-RB-SWS220" SERIES	LENGTH AS INDICATED	LEDs / 2700K / 399 LUMENS/FT	120	3W/LF		WHITE/ ALUMINUM	SURFACE ON STRUCTURE	LED DRIVER	AS1-F-SV CHANNEL, IP65 RATING, 90 CRI
X1	RECESS MOUNTED LED EXIT FIXTURE, SINGLE FACE	LITHONIA "EDRG" SERIES		GREEN LED	MVOLT	2.6		WHITE	RECESSED CEILING		GMR, EL, SD
X2	RECESS MOUNTED LED EXIT FIXTURE, DOUBLE FACE	LITHONIA "EDGR "SERIES		GREEN LED	MVOLT	2.6		WHITE	RECESSED CEILING		GMR, EL, SD
X3	WALL MOUNTED LED EXIT FIXTURE, SINGLE FACE	LITHONIA "EDG" SERIES		GREEN LED	MVOLT	2.6		WHITE	WALL		GMR, EL, SD
E1	WALL MOUNTED LED EMERGENCY FIXTURE	LITHONIA "ELM6L" SERIES		LED 1100 LUMEN	MVOLT	10.6		WHITE	WALL 7'-6"		

REMARKS:

1. BI-LEVEL SWITCHING
2. DAMP LOCATION
3. WET LOCATION
4. WIREGUARD
5. LED REQUIRED SURGE PROTECTION
6. SUFFIX "E" INDICATES E10WLCP EMERGENCY BATTERY BACKUP
7. SUFFIX "E" INDICATES ELSD EMERGENCY BATTERY BACKUP

GENERAL NOTES:

A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
D. THE ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM THE ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.
E. FIXTURES INSTALLED IN CEILINGS INDICATED ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE SHALL BE MANUFACTURER RATED "IC"..
F. LED MODULES SHALL BE REPLACEABLE.
G. ACRYLIC PRISMATIC LENSES SHALL BE 0.125" NOMINAL MINIMUM THICKNESS.
H. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
J. SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
K. SUBSTITUTIONS MAY BE APPROVED BY THE ARCHITECT AND ENGINEER IF THEY ARE JUDGED TO BE EQUAL TO THE SPECIFIED FIXTURES. "EQUAL" MAY INCLUDE, AT THE SOLE DISCRETION OF THE ARCHITECT AND ENGINEER, LENS MATERIAL AND CHARACTERISTICS, COLORS, REFLECTORS, HOUSING MATERIAL AND CONFIGURATION, FINISHES, PHOTOMETRICS, EFFICIENCY, OPTIONS, FUNCTIONALITY, ETC.

2018 APPENDIX B BUILDING CODE SUMMARY
MAIN BUILDING ELECTRICAL SUMMARY
ELECTRICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: ☑ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ☐ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)

LAMP TYPE REQUIRED IN FIXTURE: SEE FIXTURE SCHEDULE
NUMBER OF LAMPS IN FIXTURE: SEE FIXTURE SCHEDULE
BALLAST TYPE USED IN THE FIXTURE: SEE FIXTURE SCHEDULE
NUMBER OF BALLASTS IN FIXTURE: SEE FIXTURE SCHEDULE
TOTAL WATTAGE PER FIXTURE: SEE FIXTURE SCHEDULE

TOTAL INTERIOR WATTAGE: (WHOLE BUILDING OR SPACE BY SPACE)

ALLOWED =	11,196	WATTS
ADDITIONAL 10% =	10,076	WATTS
SPECIFIED =	8,205	WATTS

EXTERIOR ALLOWANCE: (TRADEABLE SURFACES)

ALLOWED =	1,777	WATTS
SPECIFIED =	1,715	WATTS

(NON-TRADEABLE SURFACES:)

ALLOWED =	N/A	WATTS
SPECIFIED =	N/A	WATTS

ADDITIONAL PRESCRIPTIVE COMPLIANCE

☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
☑ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTSIDE AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

2018 APPENDIX B BUILDING CODE SUMMARY
WORKSHOP ELECTRICAL SUMMARY
ELECTRICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: ☑ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ☐ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)

LAMP TYPE REQUIRED IN FIXTURE: SEE FIXTURE SCHEDULE
NUMBER OF LAMPS IN FIXTURE: SEE FIXTURE SCHEDULE
BALLAST TYPE USED IN THE FIXTURE: SEE FIXTURE SCHEDULE
NUMBER OF BALLASTS IN FIXTURE: SEE FIXTURE SCHEDULE
TOTAL WATTAGE PER FIXTURE: SEE FIXTURE SCHEDULE

TOTAL INTERIOR WATTAGE: (WHOLE BUILDING OR SPACE BY SPACE)

ALLOWED =	1,705	WATTS
ADDITIONAL 10% =	1,535	WATTS
SPECIFIED =	822	WATTS

EXTERIOR ALLOWANCE: (TRADEABLE SURFACES)

ALLOWED =	500	WATTS
SPECIFIED =	141	WATTS

(NON-TRADEABLE SURFACES:)

ALLOWED =	N/A	WATTS
SPECIFIED =	N/A	WATTS

ADDITIONAL PRESCRIPTIVE COMPLIANCE

☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
☑ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTSIDE AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER BRIAN MCPHERSON
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL LIGHTING FIXTURE SCHEDULE AND ENERGY SUMMARY

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
E0.8

INTERIOR DESIGNER LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER/SERIES	NOM. SIZE	SOURCE / TEMP(oK) / DELIVERED LUMENS	VOLTS	WATTS	LENS	COLOR/ MATERIAL	MOUNTING HEIGHT	DRIVER/ DIMMING	REMARKS
A	PENDANT MOUNTED CHANDALIER	VISUAL COMFORT STRADA LARGE OVAL CHANDALIER		20 - 40W 20 - 6W LED	120	800 120 LED			PENDANT CEILING		A,B,C
B	WALL SCONCE	VISUAL COMFORT STRADA SMALL SCONCE		2 - 60W 2 - 9W LED	120	120 18 LED			WALL		A,B,C
C	SURFACE SEMI-FLUSH	VISUAL COMFORT HELIOUS LARGE SEMI-FLUSH MOUNT		2 - 60W 2 - 9W LED	120	120 18 LED			CEILING		A,B,C
D	WALL SCONCE	VISUAL COMFORT UTOPIA LARGE DOUBLE BATH SCONCE		2 - 60W 2 - 9W LED	120	120 18 LED			WALL		A,B,C
F	SMALL PENDANT	VISUAL COMFORT UTOPIA SMALL PENDANT		1-40W 1 - 6W LED	120	40 6 LED			PENDANT CEILING		A,B,C
G	WALL SCONCE	VISUAL COMFORT MELANGE ELONGATED SCONCE		22W LED	120	22			WALL		A,B,C
H	PENDANT CEILING FAN	MINKAAIRE XTREME H20		10W	120	10			PENDANT CEILING		A,B
I	PENDANT MOUNTED CHANDALIER	CURRY & COMPANY KINGALI GRANDE RATAN CHANDALIER		10 - 60W 10 - 9W LED	120	600 90 LED			PENDANT CEILING		A,B,C
J	WALL SCONCE	CURRY & COMPANY LATIMER WALL SCONCE		1 - 60W 1 - 9W LED	120	60 9 LED			WALL		A,B,C
K	SMALL PENDANT	VISUAL COMFORT MELANGE SMALL ELONGATED SCONCE		9W LED	120	9			PENDANT CEILING		A,B,C
L	PENDANT MOUNTED CHANDALIER	VISUAL COMFORT HAMPTON MEDIUM CHANDALIER		6 - 60W 2 - 9W LED	120	360 18			PENDANT CEILING		A,B,C
M	PENDANT MOUNTED CHANDALIER	CURRY & COMPANY MAURA NATURAL CHANDALIER		6 - 40W 6 - 6W LED	120	240 36 LED			PENDANT CEILING		A,B,C
N	PENDANT	TANGO LIGHTING PAPILLION PENDANT		1 - 60W 1 - 9W LED	120	60 9W			PENDANT CEILING		A,B,C
P	PENDANT MOUNTED LED	VISUAL COMFORT ROUSSEAU GRANDA 8 LIGHT CHANDALIER		35W LED	120	35			PENDANT CEILING		A,B,C
S	WALL SCONCE	CURRY & COMPANY DITCHLEY WALL SCONCE		10W LED	120	10			WALL		A,B,C
T1	WALL MOUNTED LED ART LIGHT	HUDSON VALLEY "JEROME 9422-AGB" SEREIS		8W LED	120	8			WALL		A,B
T2	WALL MOUNTED LED ART LIGHT	HUDSON VALLEY "JEROME 9430-AGB" SEREIS		12W LED	120	12			WALL		A,B
U	PENDANT MOUNTED CEILING FAN				120				PENDANT		D

REMARKS:

1. BI-LEVEL SWITCHING
2. DAMP LOCATION
3. WET LOCATION
4. WIREGUARD
5. LED REQUIRED SURGE PROTECTION
6. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT
7. FINAL COLOR SELECTION BY ARCHITECT
8. USER DEFINED
9. USER DEFINED

GENERAL NOTES:

A. LIGHTING FIXTURE PROVIDED BY INTERIOR DESIGNER, INSTALLED BY ELECTRICAL CONTRACTOR.
B. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH INTERIOR DESIGNER PRIOR TO ROUGH-IN.
C. LAMPS PROVIDED BY INTERIOR DESIGNER, INSTALLED BY ELECTRICAL CONTRACTOR.
D. CEILING FAN PROVIDED BY INTERIOR DESIGNER, INSTALLED BY ELECTRICAL CONTRACTOR.

SITE LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER/SERIES	NOM. SIZE	SOURCE / TEMP(oK) / DELIVERED LUMENS	VOLTS	WATTS	LENS	COLOR/ MATERIAL	MOUNTING HEIGHT	DRIVER/ DIMMING	REMARKS/MFGR. OPTIONS
SL1	LED BOLLARD	LITHONIA "DSXB LED" SERIES	8" x 42"	LEDs / 3000K / 2802 LUMENS	MVOLT	39		DARK BRONZE	GROUND	LED DRIVER	16C LED'S, 700mA, SYM, H36, SF. FUSE AT NO MORE THAN 1 AMP
SL2	LED BOLLARD	LITHONIA "DSXB LED" SERIES	8" x 24"	LEDs / 3000K / 1194 LUMENS	MVOLT	16		DARK BRONZE	GROUND	LED DRIVER	12C LED'S, 350mA, ASY, H24, SF. FUSE AT NO MORE THAN 1 AMP
SL3	WALL MOUnTED LED STEPLIGHT	WAC LIGHTING "WL-LED100" SERIES	3" x 5"	LEDs / 3000K / 65 LUMENS	120	3.5		BLACK	RECESSED IN WALL	LED DRIVER	IP66 RATING

REMARKS:

1. BI-LEVEL SWITCHING
2. DAMP LOCATION
3. WET LOCATION
4. WIREGUARD
5. LED REQUIRED SURGE PROTECTION

GENERAL NOTES:

A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
D. ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
E. THE ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM THE ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.
I. LED MODULES SHALL BE REPLACEABLE.
M. SUBSTITUTIONS MAY BE APPROVED BY THE ARCHITECT AND ENGINEER IF THEY ARE JUDGED TO BE EQUAL TO THE SPECIFIED FIXTURES. "EQUAL" MAY INCLUDE, AT THE SOLE DISCRETION OF THE ARCHITECT AND ENGINEER, LENS MATERIAL AND CHARACTERISTICS, COLORS, REFLECTORS, HOUSING MATERIAL AND CONFIGURATION, FINISHES, PHOTOMETRICS, EFFICIENCY, OPTIONS, FUNCTIONALITY, ETC.

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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER ROBERT DAVID MCMAHON

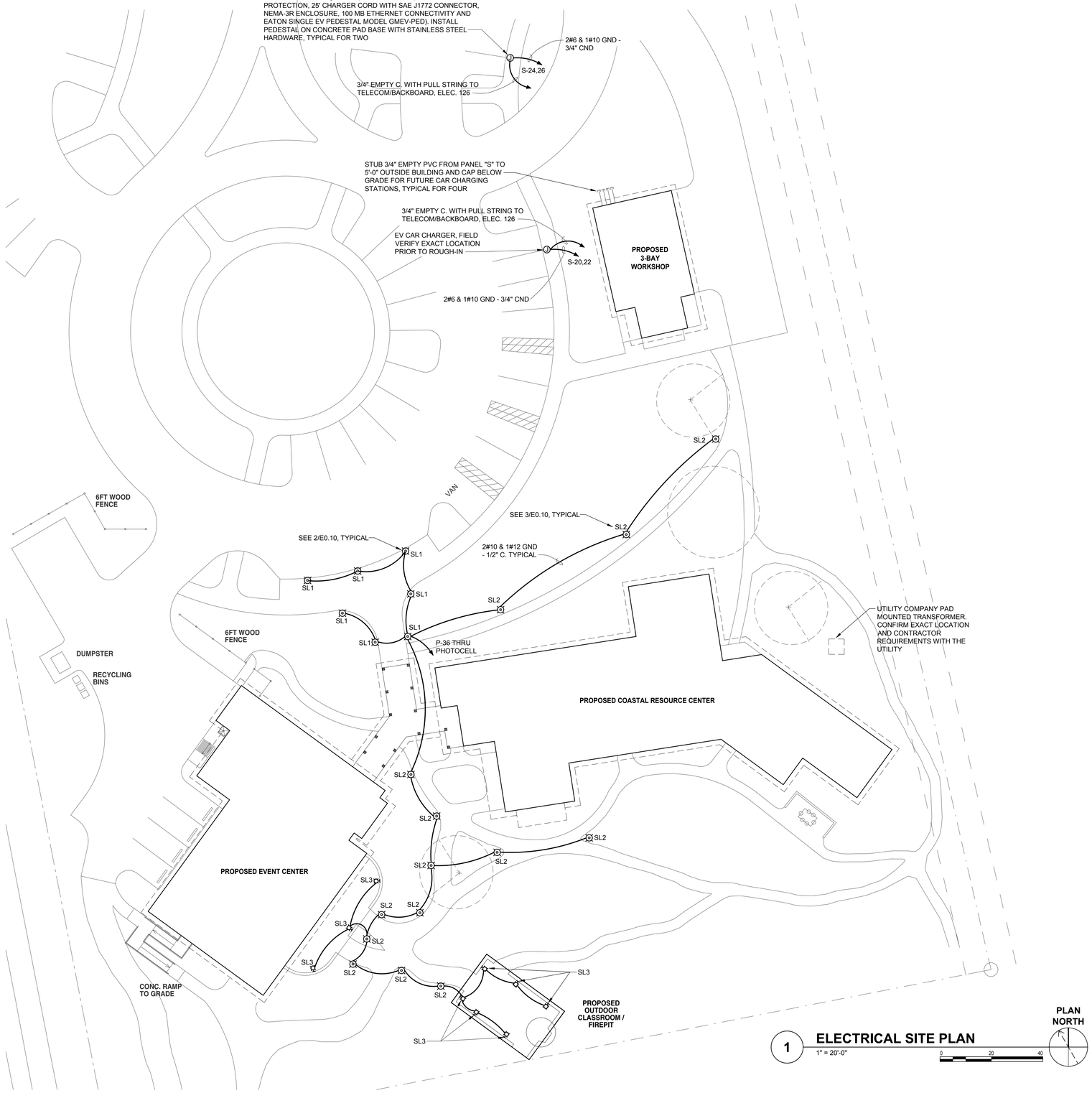
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL LIGHTING FIXTURE SCHEDULE

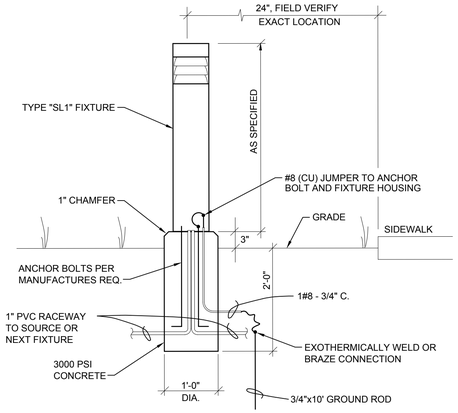
JOB NUMBER 22126
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DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
E0.9

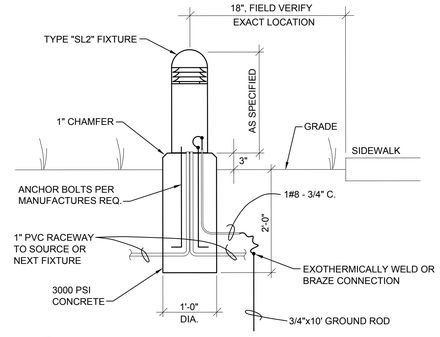


1 ELECTRICAL SITE PLAN
1" = 20'-0"

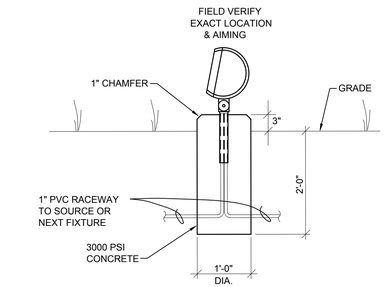
PLAN NORTH



2 TYPE SL1 BOLLARD DETAIL
NOT TO SCALE



3 TYPE SL2 BOLLARD DETAIL
NOT TO SCALE



4 TYPE L7 FLOODLIGHT DETAIL
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER RYAN M. DEPOYSTER
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL SITE PLAN AND DETAILS

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05/16/2023

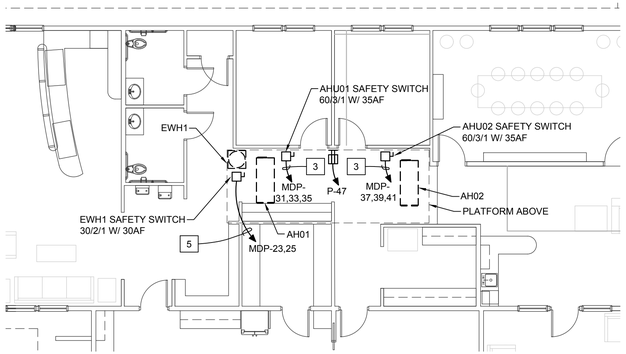
The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

ELECTRICAL POWER PLAN

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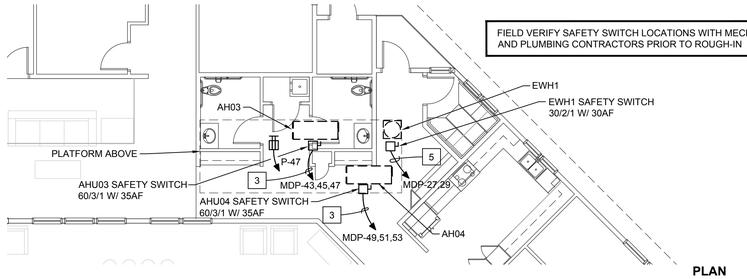
SHEET NUMBER
EP1.1

FIELD VERIFY SAFETY SWITCH LOCATIONS WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ROUGH-IN



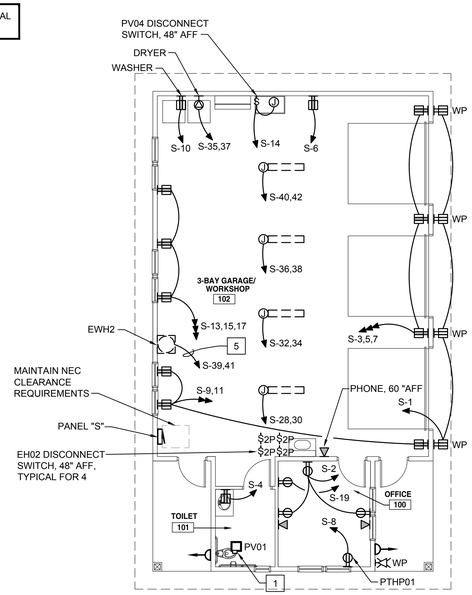
2 MECHANICAL PLATFORM POWER PLAN
1/8" = 1'-0"

PLAN NORTH



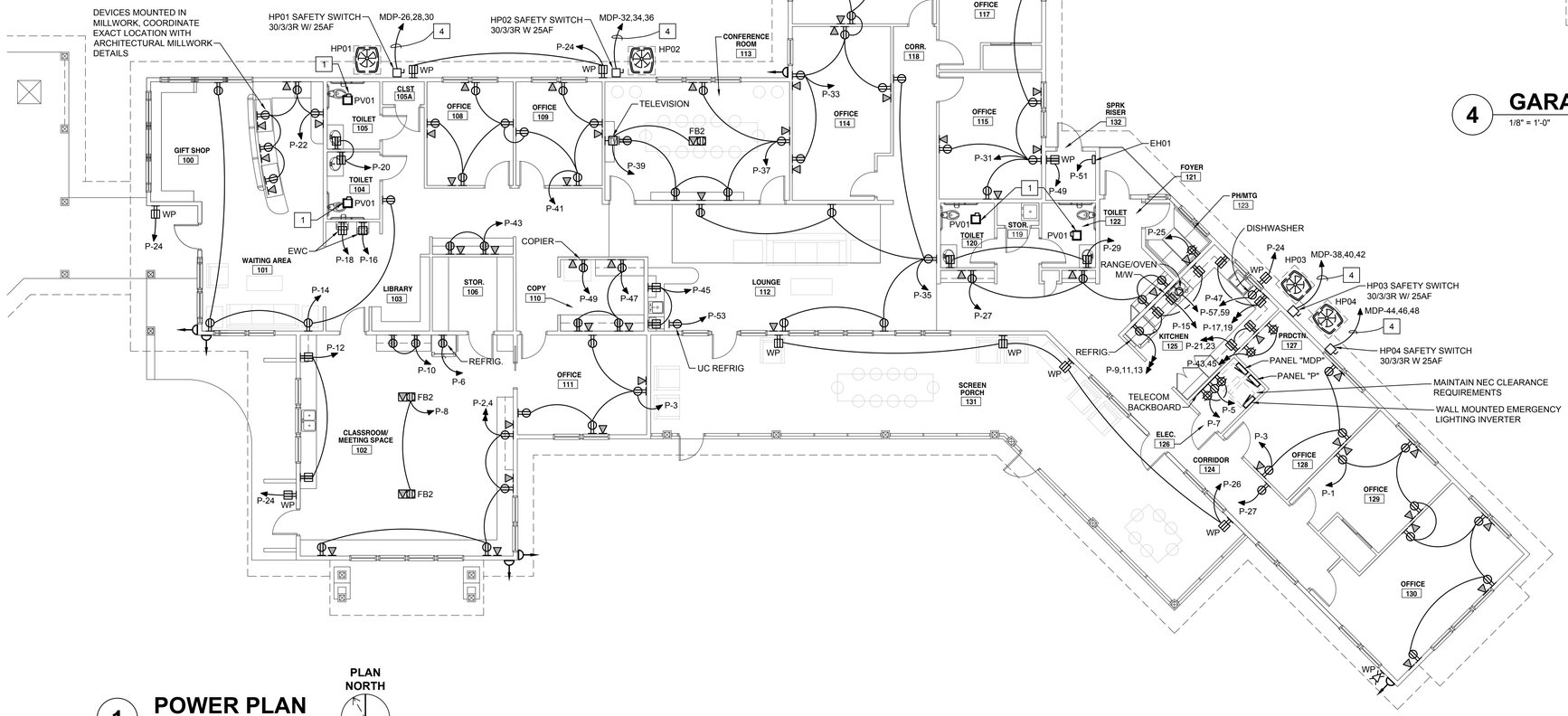
3 MECHANICAL PLATFORM POWER PLAN
1/8" = 1'-0"

PLAN NORTH



4 GARAGE/WORKSHOP POWER PLAN
1/8" = 1'-0"

PLAN NORTH

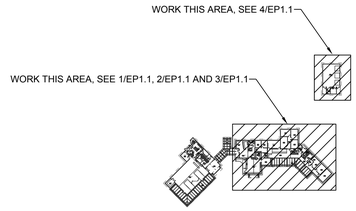


1 POWER PLAN
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES

1	PV01, CONNECT TO OPERATE WITH THE LIGHTING FIXTURES SERVING THIS SPACE.
2	PV02, CONNECT TO OPERATE WITH THE LIGHTING FIXTURES SERVING THIS SPACE.
3	3#8 & 1#10 GND - 3/4" CND.
4	3#10 & 1#10 GND - 1/2" CND.
5	2#10 & 1#10 GND - 1/2" CND.

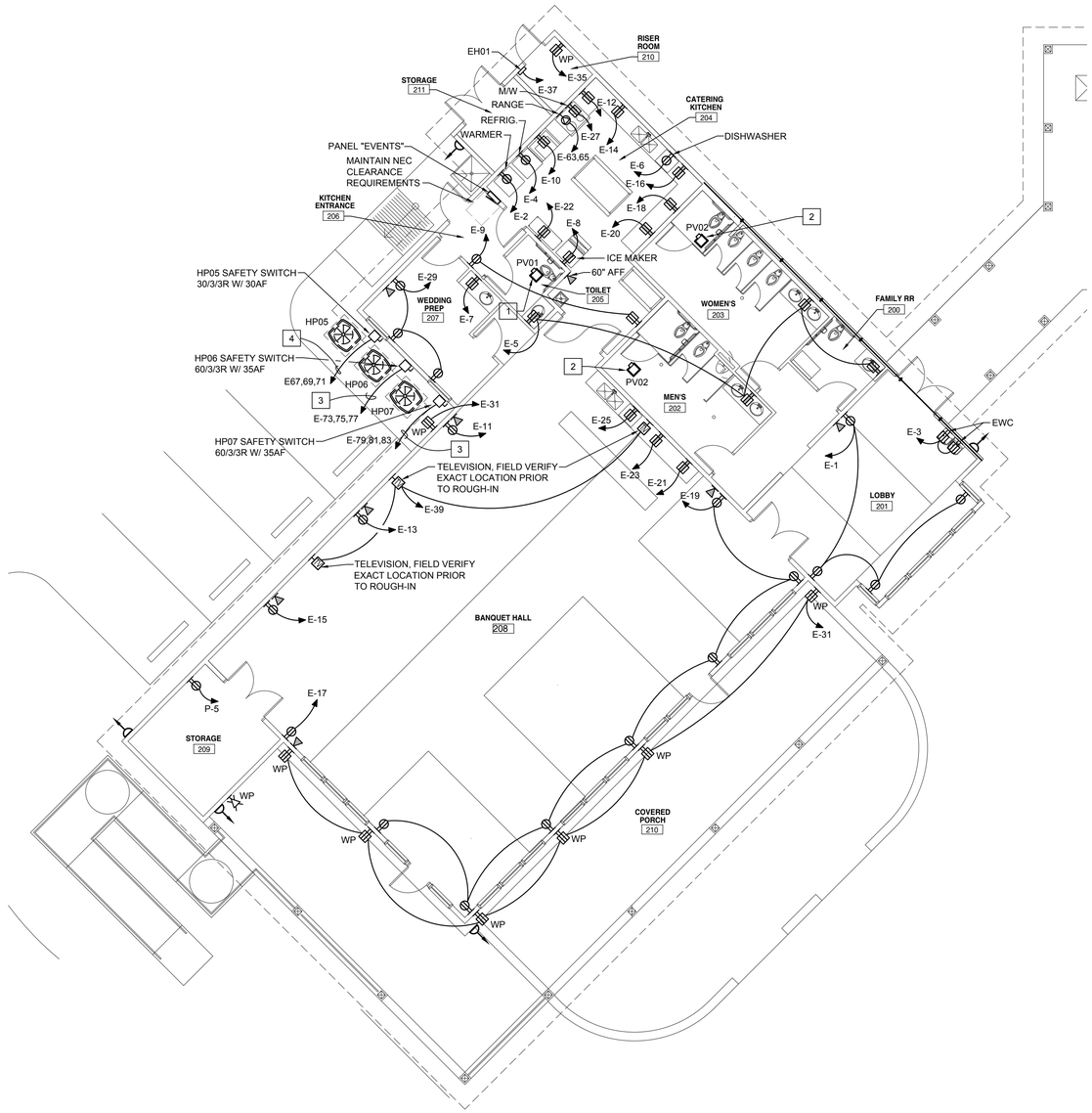


5 KEY PLAN
NOT TO SCALE

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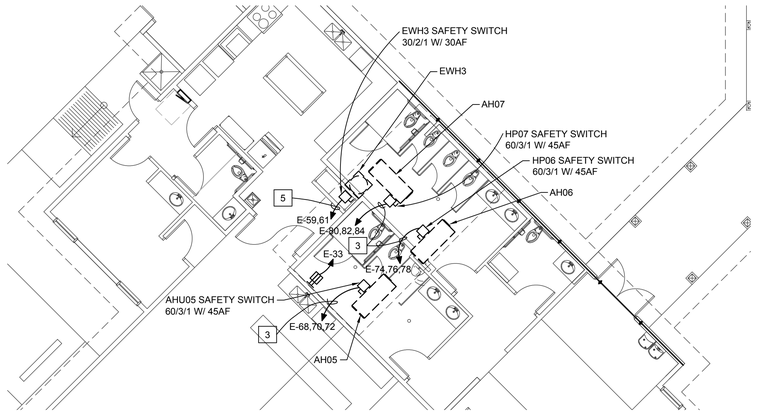
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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER AMERICAN MEMBRANE
05/16/2023



1 POWER PLAN
1/8" = 1'-0"

PLAN NORTH

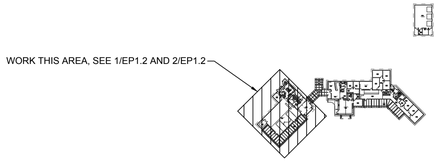


2 MECHANICAL PLATFORM POWER PLAN
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES

1	PV01, CONNECT TO OPERATE WITH THE LIGHTING FIXTURES SERVING THIS SPACE.
2	PV02, CONNECT TO OPERATE WITH THE LIGHTING FIXTURES SERVING THIS SPACE.
3	3#8 & 1#10 GND - 3/4" CND.
4	3#10 & 1#10 GND - 1/2" CND.
5	2#10 & 1#10 GND - 1/2" CND.



3 KEY PLAN
NOT TO SCALE

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

ELECTRICAL POWER PLAN

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

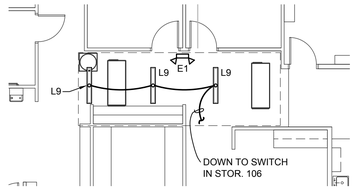
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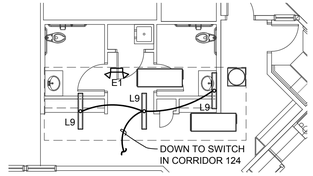
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NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER BRIAN MCPHERSON
05/16/2023

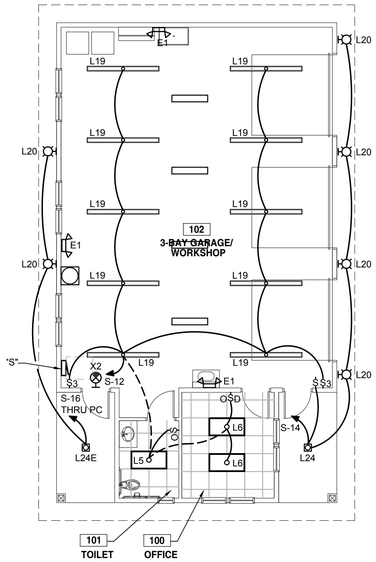
The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina



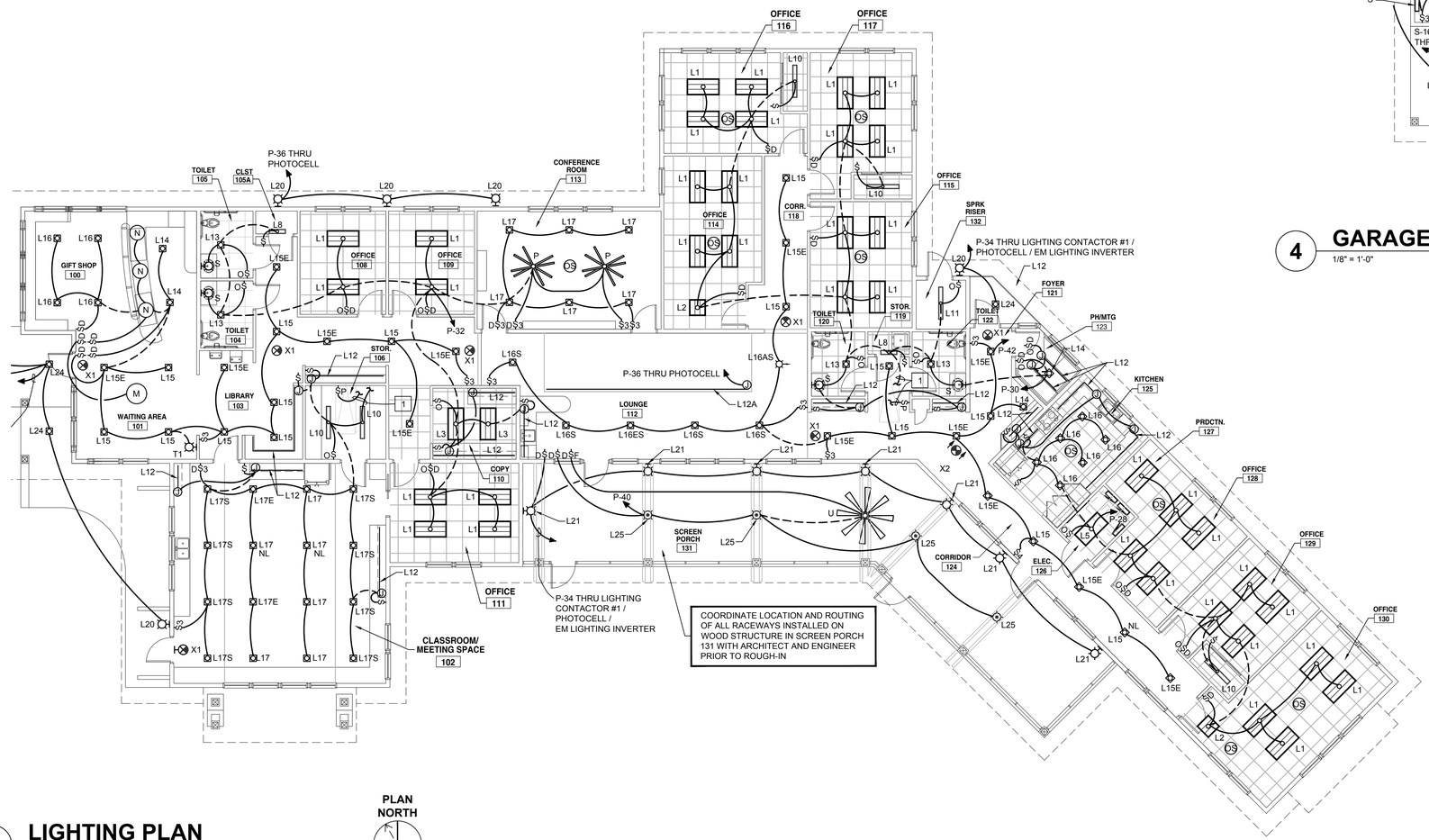
2 MECHANICAL PLATFORM LIGHTING PLAN
1/8" = 1'-0"



3 MECHANICAL PLATFORM LIGHTING PLAN
1/8" = 1'-0"



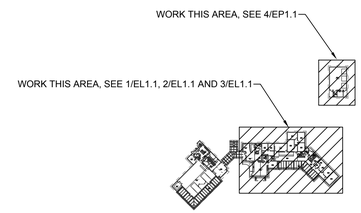
4 GARAGE/WORKSHOP LIGHTING PLAN
1/8" = 1'-0"



1 LIGHTING PLAN
1/8" = 1'-0"

KEYED NOTES

1	UP TO LIGHTS ON MECHANICAL PLATFORM.



5 KEY PLAN
NOT TO SCALE

ELECTRICAL
LIGHTING PLAN

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

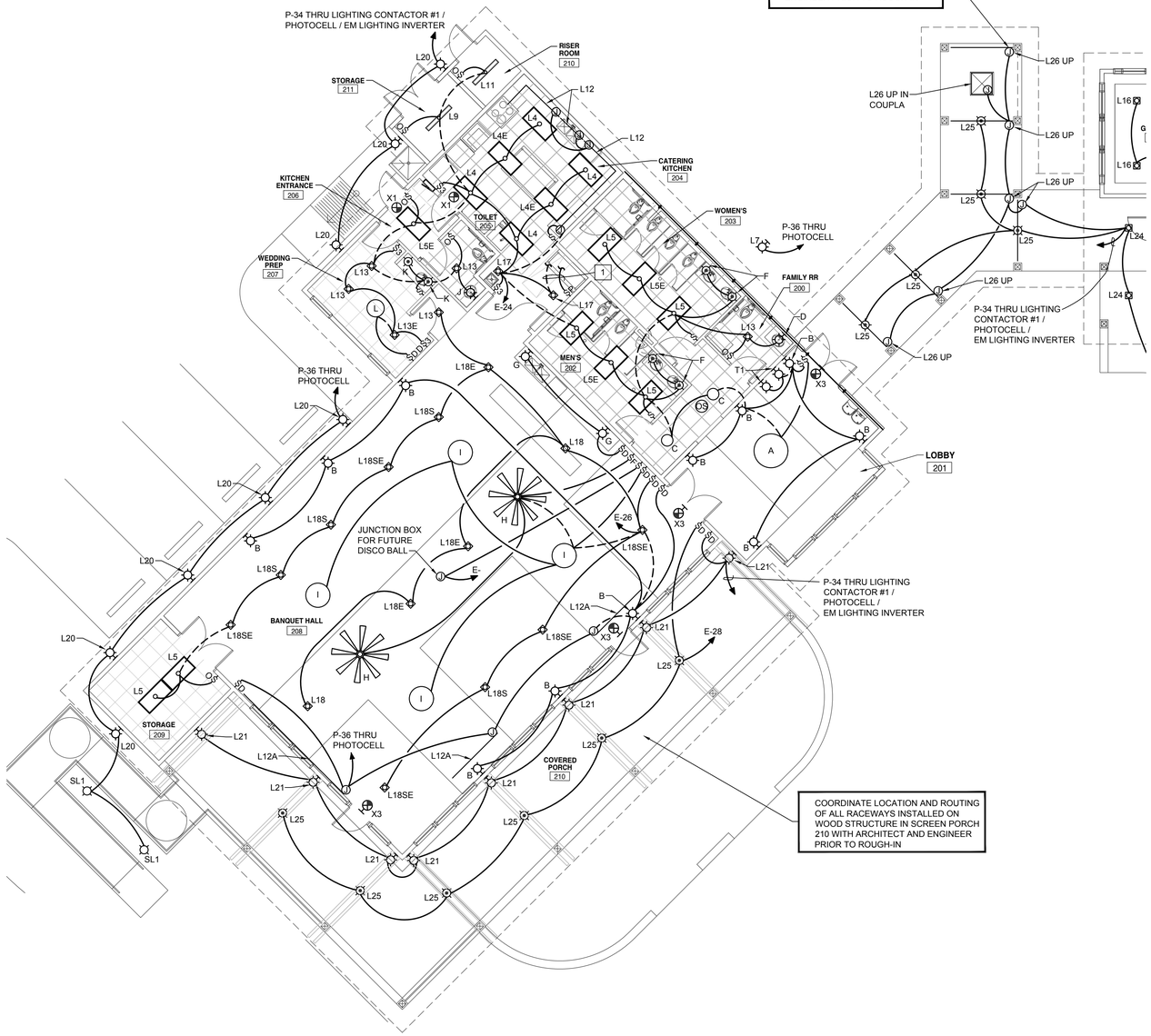
SHEET NUMBER
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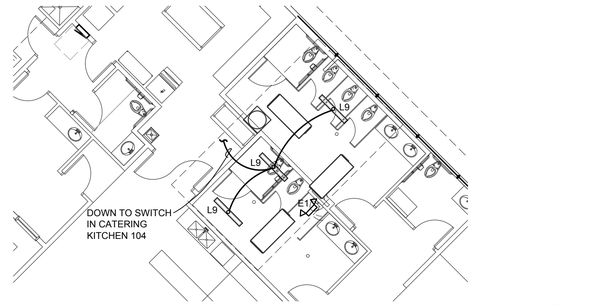
NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER RICHARD D. MERCHANT
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina



1 LIGHTING PLAN
1/8" = 1'-0"

PLAN NORTH

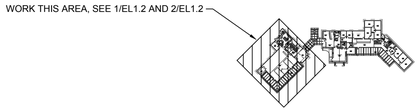


2 MECHANICAL PLATFORM LIGHTING PLAN
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES

1	UP TO LIGHTS ON MECHANICAL PLATFORM.



2 KEY PLAN
NOT TO SCALE

ELECTRICAL LIGHTING PLAN

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SHEET NUMBER
EL1.2

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
F	FIRE ALARM MANUAL STATION, 48" AFF
F	FIRE ALARM ABORT KILL SWITCH, 48" AFF
K	FIRE DEPT. KNOX BOX, 60" AFF
15cd F	FIRE ALARM HORN/STROBE DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
F	FIRE HORN (ONLY) DEVICE, 80" AFF
15cd F	FIRE ALARM HORN/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
15cd F	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
15cd F	FIRE ALARM VISUAL (ONLY) CEILING MOUNTED "15cd" INDICATES CANDELA RATING
S 15cd F	FIRE ALARM SPEAKER/STROBE DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
S F	FIRE ALARM SPEAKER DEVICE, 80" AFF
S 15cd F	FIRE ALARM SPEAKER/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
S F	FIRE ALARM SPEAKER DEVICE, CEILING MOUNTED
F	FIRE ALARM BELL, 80" AFF
F	FIRE ALARM BELL/STROBE, 80" AFF
F	FIRE ALARM CHIME, 80" AFF
15cd F	FIRE ALARM CHIME/STROBE, 80" AFF, "15cd" INDICATES CANDELA RATING
	HEAT DETECTOR, CEILING MOUNTED
	SMOKE DETECTOR, CEILING MOUNTED
C	SMOKE/CO DETECTOR, CEILING MOUNTED
	DUCT MOUNTED SMOKE DETECTOR
	DUCT MOUNTED HEAT DETECTOR
	DOOR HOLD OPEN DEVICE BY G.C.
BT BR	FIRE ALARM LINEAR BEAM SMOKE DETECTOR, INSTALLED APPROX. 12" BELOW CEILING, OR PER LISTING. PROVIDE REMOTE TEST/STATUS SWITCH AT 60" AFF BELOW DEVICE
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
	LEVEL SWITCH
	PRESSURE SWITCH
T	TEMPERATURE SWITCH
R	REMOTE INDICATING DEVICE (RAIL), CEILING MOUNTED
R	REMOTE INDICATING DEVICE (RAIL), WALL MOUNTED
M	MONITOR MODULE
M	MONITOR MODULE, WALL MOUNTED
I	ISOLATION MODULE
C	CONTROL MODULE
C	CONTROL MODULE, WALL MOUNTED
FACP	FIRE ALARM CONTROL PANEL (FACP)
FA REMOTE ANN	FIRE ALARM REMOTE ANNUNCIATOR PANEL
G	GAS VALVE CONTROL MODULE
	END OF LINE RESISTER (EOR)

(SYMBOLS SHOWN FOR REFERENCE ONLY AND MAY NOT IMPLY CONTRACTUAL REQUIREMENTS)

GENERAL FIRE ALARM NOTES

1. ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 70, THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)
3. THE CONTRACTOR SHALL REVIEW THE FIRE ALARM DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR FIRE ALARM EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
4. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
5. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE FIRE ALARM CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
6. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
7. ALL FIRE ALARM EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. FIRE ALARM EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. DO NOT SCALE FIRE ALARM DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
9. FIRE ALARM DEVICE LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/ DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
10. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS IF NOT SHOWN ON THE FIRE ALARM DRAWINGS OR DIMENSIONED ON THE FIRE ALARM DRAWINGS, VERIFY EXACT LOCATION WITH THE ENGINEER PRIOR TO ROUGH-IN.
11. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
12. ALL EXTERIOR WIRING DEVICES, BOXES, ETC. SHALL BE WEATHERPROOF. FIRE ALARM DEVICES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT.
13. MAINTAIN CEILING FIRE RATINGS WITH ALL NECESSARY ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS COMPLYING WITH ALL APPLICABLE CODES.
14. RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKETIGHT.
15. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
16. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
17. PROVIDE AND PLACE ALL SLEEVES FOR CONDUITS PENETRATING WALLS, FLOORS, PARTITIONS, ETC. LOCATE ALL NECESSARY SLOTS FOR ELECTRICAL WORK AND FORM BEFORE CONCRETE IS POURED.
18. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.
19. SURFACE MOUNTED PANELS, JUNCTION AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
20. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE DEVICE BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED DEVICES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.
21. COORDINATE LOCATIONS OF FIRE ALARM DEVICES BEFORE ROUGH-IN. ADVISE THE ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
22. EXACT SPACING OF SMOKE AND HEAT DETECTORS BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES. PROVIDE FLEX CONDUIT CONNECTION TO SMOKE AND HEAT DETECTORS OF ADEQUATE LENGTH TO ALLOW HORIZONTAL ADJUSTMENT OF FOUR FEET FROM POSITION INDICATED ON DRAWINGS.
23. INSTALLATION INFORMATION PACKED WITH DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
24. INSTALL WORK AT SUCH TIME AS TO REQUIRE THE MINIMUM AMOUNT TO CUTTING AND PATCHING.
25. CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.

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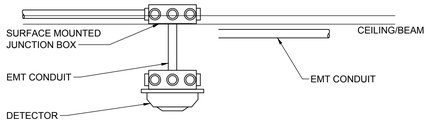
NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER AMERICAN MEMBERSHIP
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

FIRE ALARM LEGEND AND NOTES

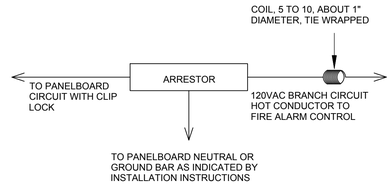
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A1 TYPICAL SUSPENDED DEVICE DETAIL

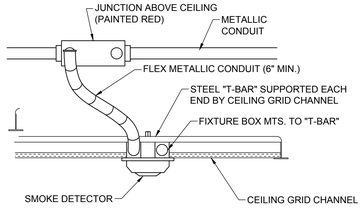
NOT TO SCALE



NOTES:
SECURELY MOUNT TRANSIENT ARRESTOR IN ACCESSIBLE JUNCTION BOX OR PROPER METAL ENCLOSURE ADJACENT TO THE PANELBOARD. PROVIDE ENGRAVED LABEL INDICATING ITS LOCATION

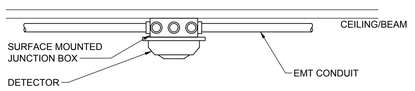
A3 TRANSIENT ARRESTOR DETAIL

NOT TO SCALE



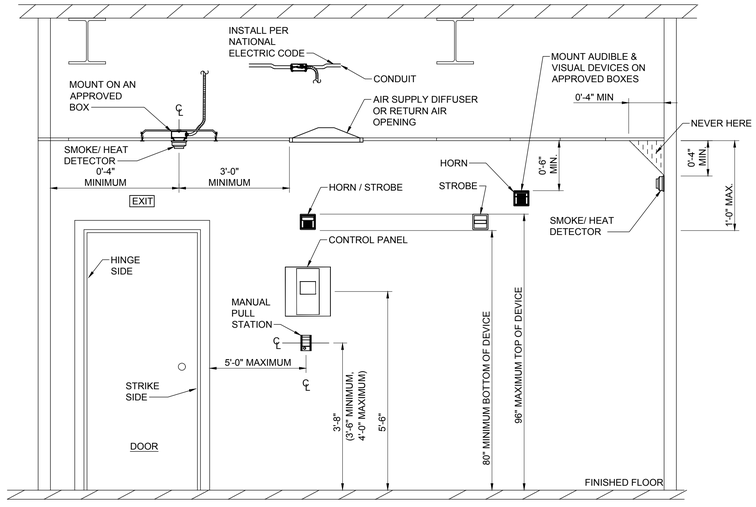
B1 TYPICAL CEILING MOUNTED DEVICE DETAIL

NOT TO SCALE



C1 TYPICAL SURFACE DEVICE DETAIL

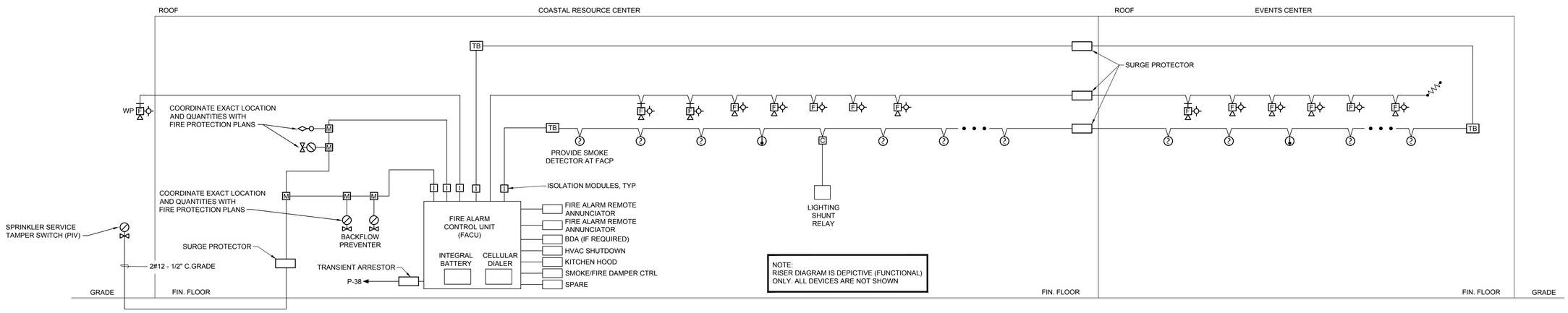
NOT TO SCALE



NOTE: DETAIL SHOWN FOR REFERENCE ONLY, NOT ALL DEVICES ARE INDICATED ON PLANS.

C5 DEVICE MOUNTING DETAIL

NOT TO SCALE



E3 FIRE ALARM RISER DIAGRAM

NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 6433 WILLIAM P. MURRAY AMERICAN METEOROLOGICAL SOCIETY
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration
Highway 24
Ocean, North Carolina

FIRE ALARM RISER DIAGRAM AND DETAILS

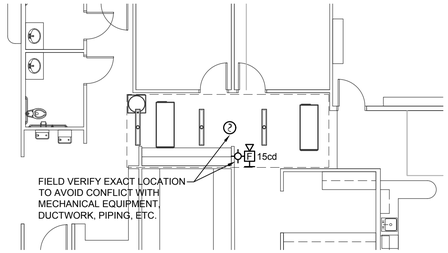
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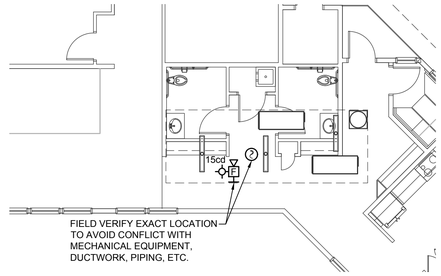
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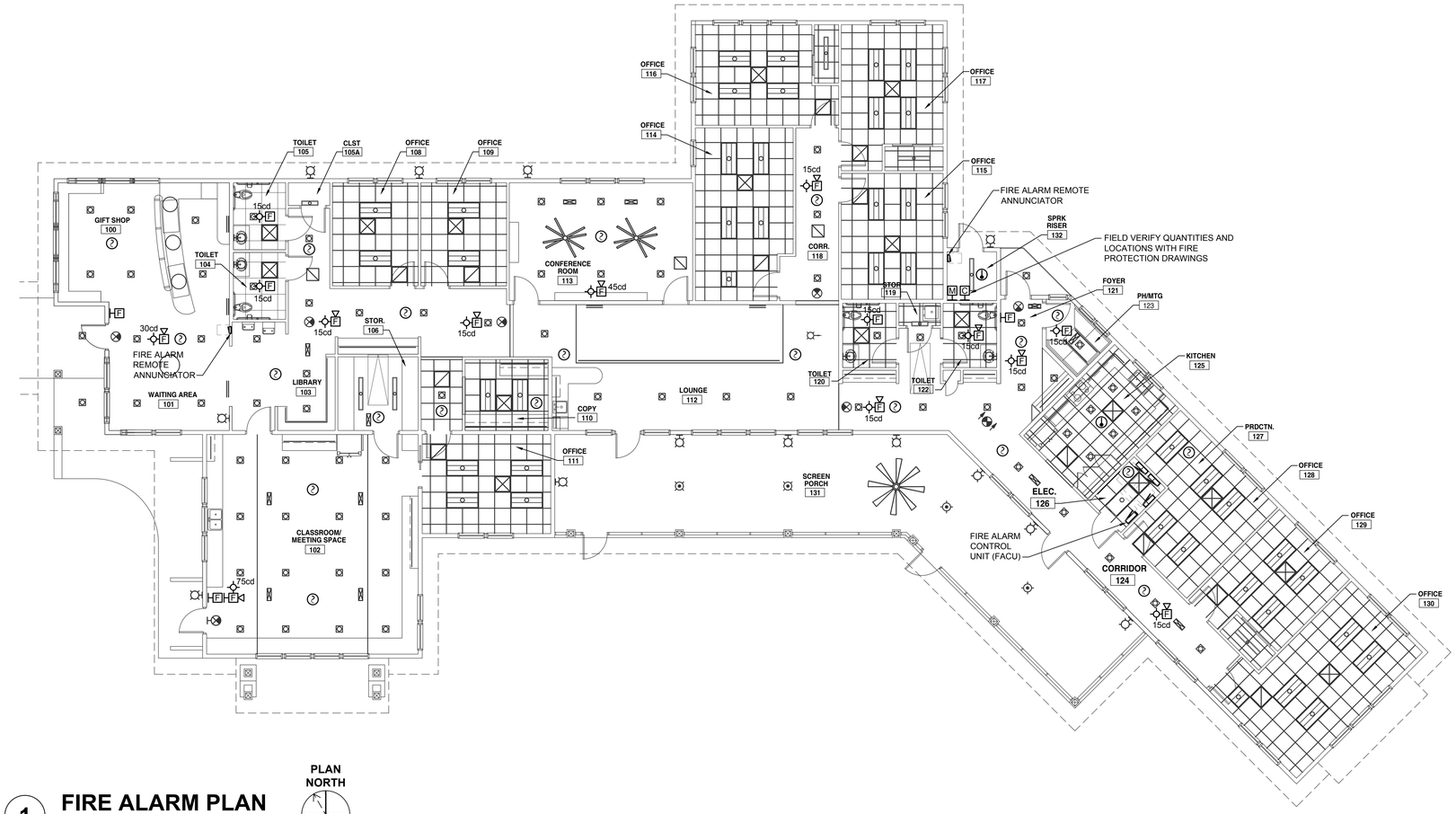
2 MECHANICAL PLATFORM FIRE ALARM PLAN
1/8" = 1'-0"

PLAN NORTH



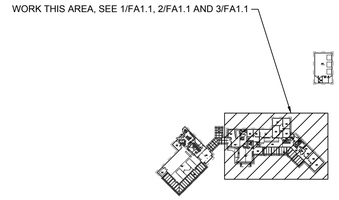
3 MECHANICAL PLATFORM FIRE ALARM PLAN
1/8" = 1'-0"

PLAN NORTH



1 FIRE ALARM PLAN
1/8" = 1'-0"

PLAN NORTH



2 KEY PLAN
NOT TO SCALE

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

FIRE ALARM PLAN

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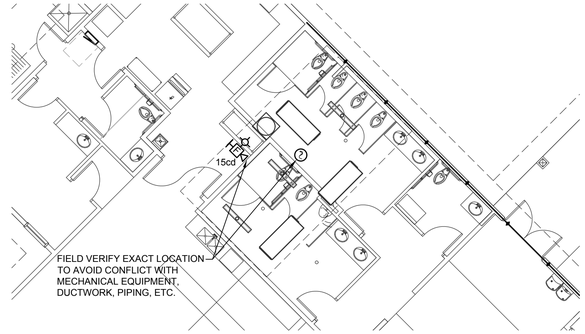
SHEET NUMBER
FA1.1



1 FIRE ALARM PLAN

1/8" = 1'-0"

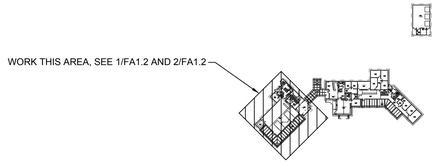
PLAN NORTH



2 MECHANICAL PLATFORM FIRE ALARM PLAN

1/8" = 1'-0"

PLAN NORTH



2 KEY PLAN

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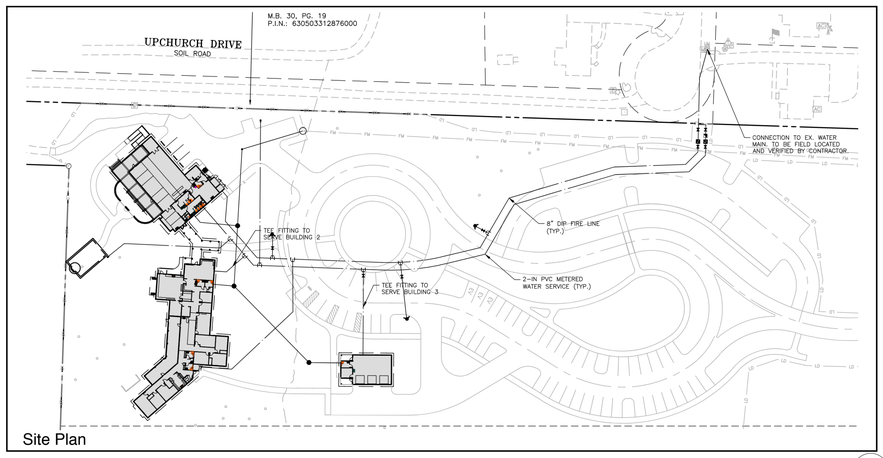
NORTH CAROLINA PROFESSIONAL SEAL 6433 ENGINEER RYAN MCPHERSON
05/16/2023

The NC Coastal Federation's Center for Coastal Protection and Restoration Highway 24 Ocean, North Carolina

FIRE ALARM PLAN

JOB NUMBER 22126
DRAWN BY WPJ
CHECKED BY RDM
DATE MAY 25, 2023
REVISIONS

SHEET NUMBER
FA1.2

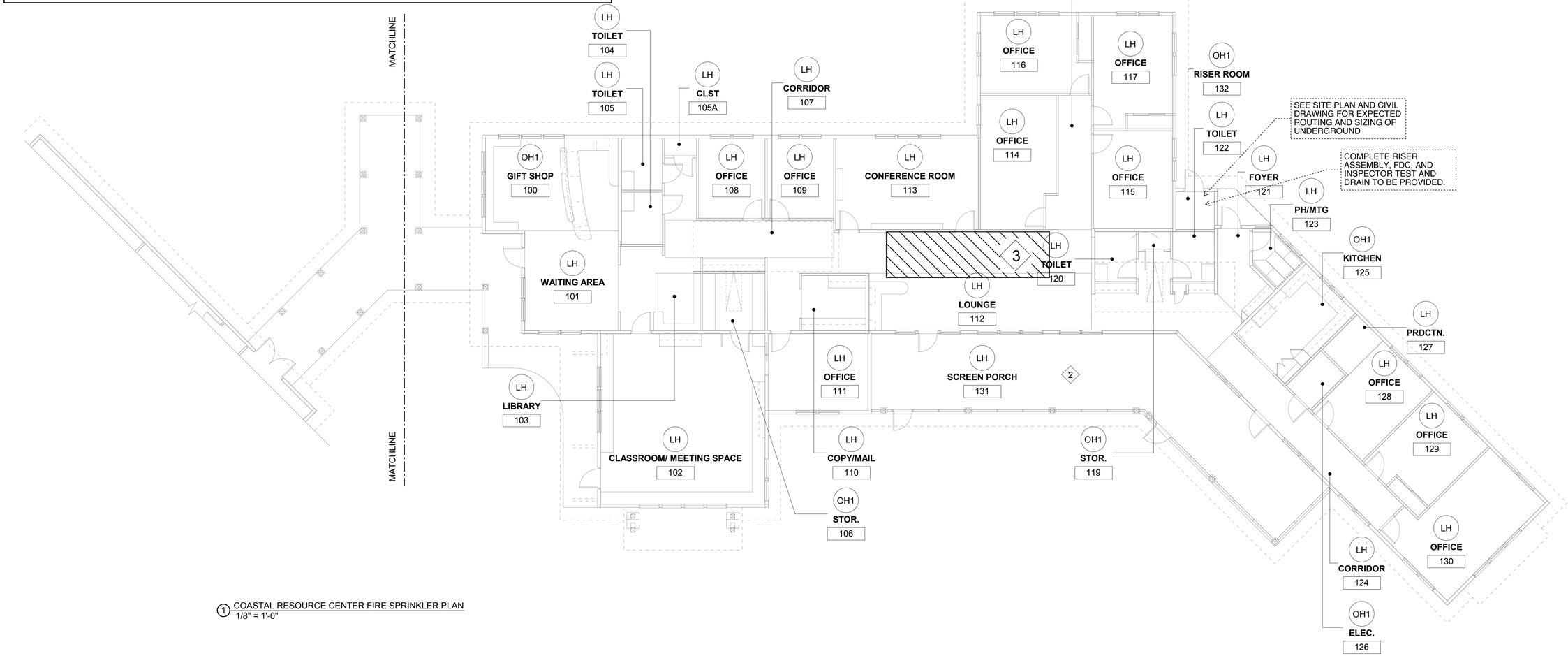


Site Plan

FOR INITIAL PRICING ONLY - ENGINEERED DRAWINGS WITH ADDITIONAL INFORMATION AND DETAILS FOR PERMIT AND FINAL CONTRACTOR COORDINATION WILL BE PROVIDED. BUILDINGS TO BE FULLY SPRINKLER PROTECTED, MAIN AND HYDRAULIC AREA SHOWN FOR CALCULATIONS AND REPRESENTATION ONLY. ATTIC TO BE INSULATED AND WITHIN THERMAL ENVELOPE, PROVIDE WET-PIPE SPRINKLER PROTECTION IN NOTED LOCATIONS

KEYNOTE LEGEND

1. MAIN SHOWN FOR REPRESENTATION PURPOSES AND INITIAL HYDRAULIC DEMAND PURPOSES ONLY.
2. THE COVERED AREA SHALL BE PROVIDED WITH SPRINKLER PROTECTION. PROVIDE DRY HORIZONTAL SIDEWALL SPRINKLERS TO PROTECT BENEATH CANOPY. CONNECT TO WET PIPE SPRINKLER SYSTEM. SIDEWALL SPRINKLERS SHALL BE LOCATED AT THE HIGH POINT OF THE SLOPED ROOF AND POSITIONED TO DISCHARGE DOWNWARD ALONG THE SLOPE.
3. ALL SPACES EXCEPTED HATCHED AREA HAVE ATTIC SPACE THAT WILL BE PROTECTED WITH UPRIGHT SPRINKLERS. ATTIC SPACES ARE WITHIN THERMAL BARRIER.



1 COASTAL RESOURCE CENTER FIRE SPRINKLER PLAN
1/8" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
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The NC Coastal Federation's
Center for Coastal Protection and Restoration
Ocean, North Carolina

SHEET TITLE :
COASTAL RESOURCE CENTER FIRE SPRINKLER PLAN

JOB NUMBER : -

DRAWN BY : SA

CHECKED BY : YS

DATE : 06/14/2023

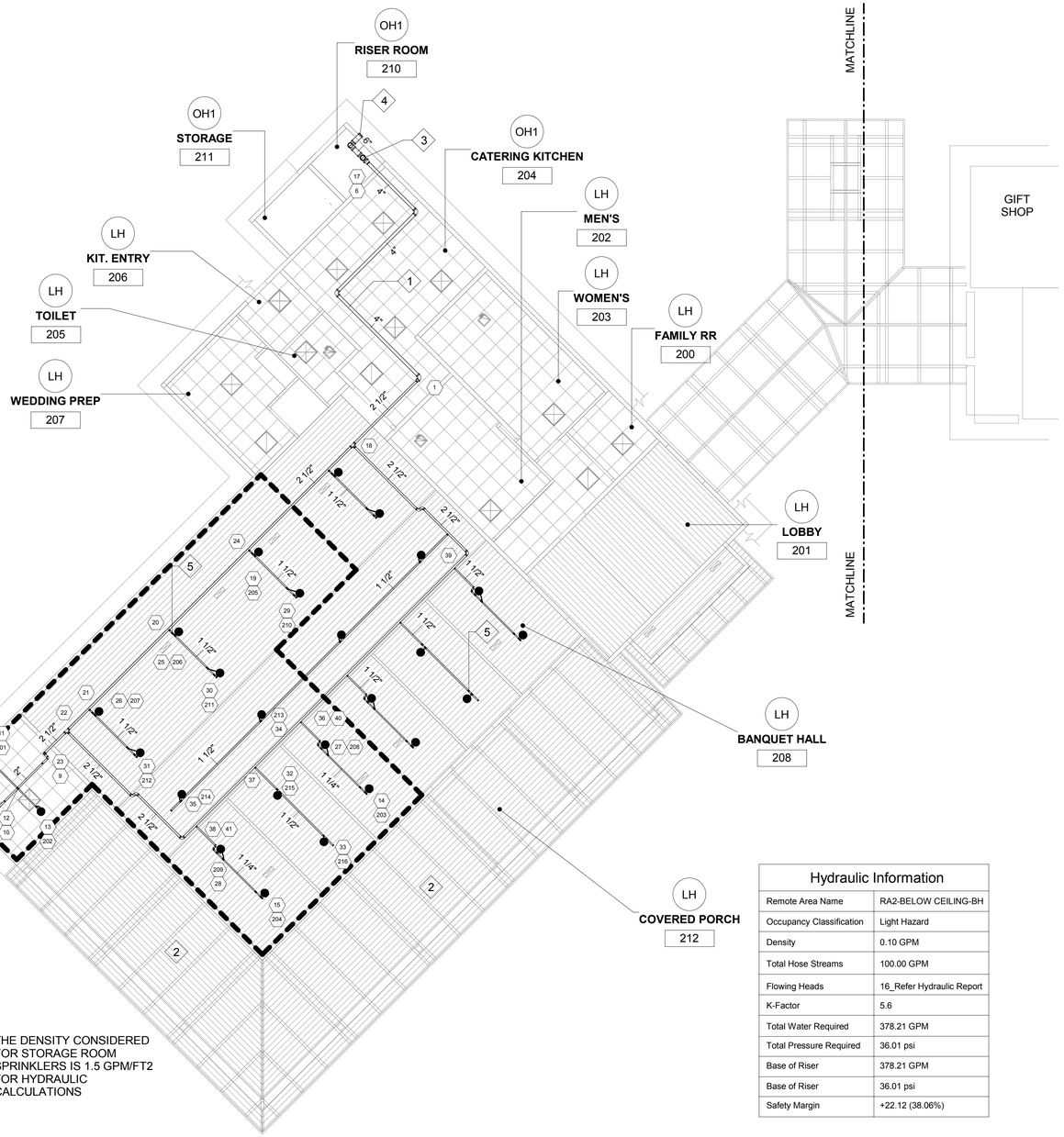
REV	DATE	DRAWN	DESCRIPTION
P01	06/20/2023	SA	INTERNAL REVIEW

SHEET NUMBER
FP101

FOR INITIAL PRICING ONLY - ENGINEERED DRAWINGS WITH ADDITIONAL INFORMATION AND DETAILS FOR PERMIT AND FINAL CONTRACTOR COORDINATION WILL BE PROVIDED. BUILDINGS TO BE FULLY SPRINKLER PROTECTED, MAIN AND HYDRAULIC AREA SHOWN FOR CALCULATIONS AND REPRESENTATION ONLY. ATTIC TO BE INSULATED AND WITHIN THERMAL ENVELOPE, PROVIDE WET-PIPE SPRINKLER PROTECTION IN NOTED LOCATIONS

KEYNOTE LEGEND

1. MAIN SHOWN FOR REPRESENTATION PURPOSES AND INITIAL HYDRAULIC DEMAND PURPOSES ONLY.
2. THE COVERED AREA SHALL BE PROVIDED WITH SPRINKLER PROTECTION. PROVIDE DRY HORIZONTAL SIDEWALL SPRINKLERS TO PROTECT BENEATH CANOPY. CONNECT TO WET PIPE SPRINKLER SYSTEM. SIDEWALL SPRINKLERS SHALL BE LOCATED AT THE HIGH POINT OF THE SLOPED ROOF AND POSITIONED TO DISCHARGE DOWNWARD ALONG THE SLOPE.
3. 6" INCOMING FIRE SERVICE FROM UNDERGROUND.
4. FIRE DEPARTMENT CONNECTION.
5. TEE CONNECTION TO UPRIGHT SPRINKLER. FOR CONTINUATION REFER TO EVENT CENTER ATTIC FIRE SPRINKLER PLAN, DRAWING NO. FP104 (TYPICAL).



Hydraulic Information	
Remote Area Name	RA2-BELOW CEILING-BH
Occupancy Classification	Light Hazard
Density	0.10 GPM
Total Hose Streams	100.00 GPM
Flowing Heads	16_Refer Hydraulic Report
K-Factor	5.6
Total Water Required	378.21 GPM
Total Pressure Required	36.01 psi
Base of Riser	378.21 GPM
Base of Riser	36.01 psi
Safety Margin	+22.12 (38.06%)

1 EVENT CENTER FIRE SPRINKLER REFLECTED CEILING PLAN
1/8" = 1'-0"

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Ocean, North Carolina

SHEET TITLE :
EVENT CENTER FIRE SPRINKLER REFLECTED CEILING PLAN

JOB NUMBER : -

DRAWN BY : SA

CHECKED BY : YS

DATE : 06/20/2023

REV	DATE	DRAWN	DESCRIPTION
P01	06/20/2023	SA	INTERNAL REVIEW

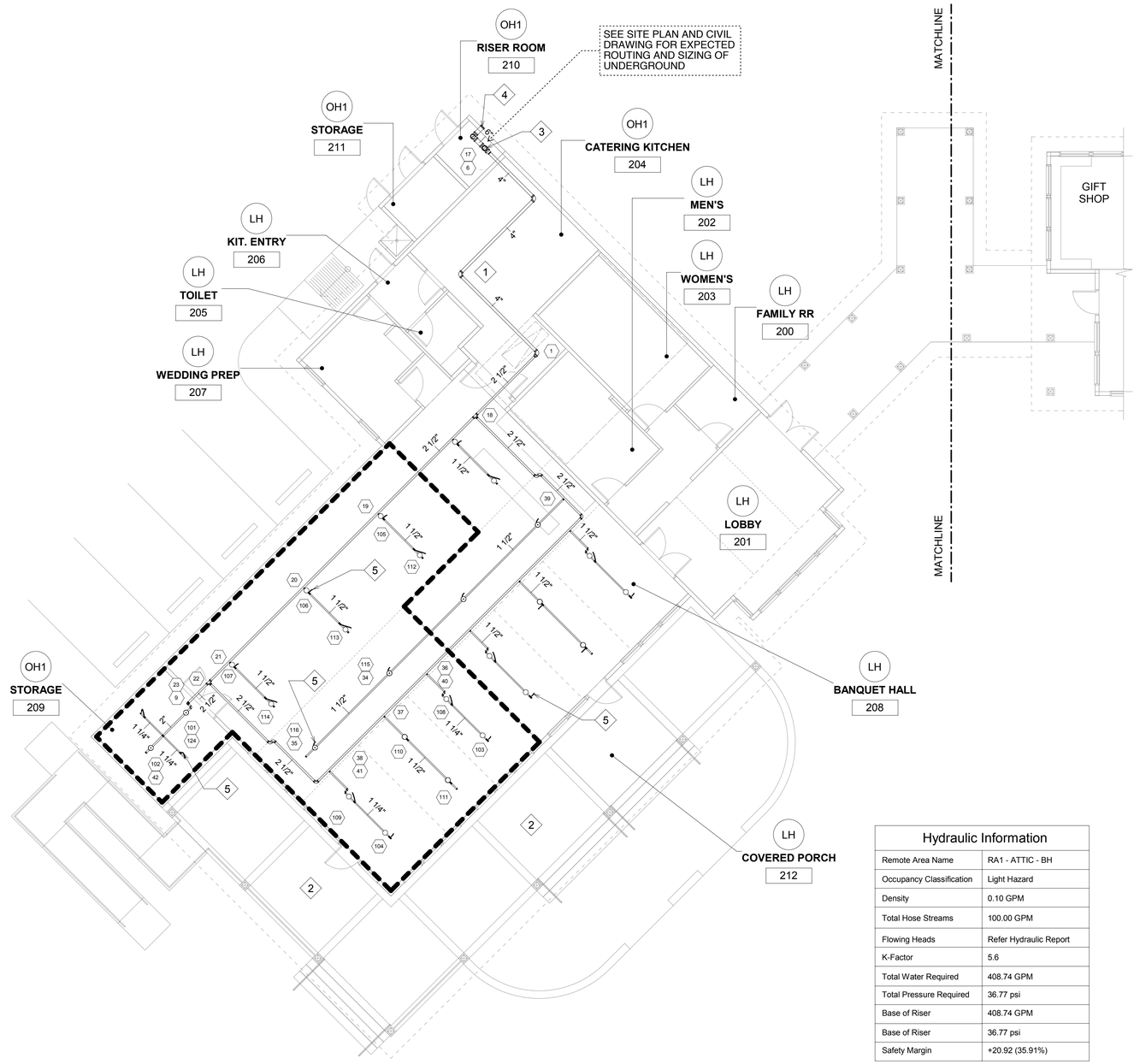
SHEET NUMBER
FP103

FOR INITIAL PRICING ONLY - ENGINEERED DRAWINGS WITH ADDITIONAL INFORMATION AND DETAILS FOR PERMIT AND FINAL CONTRACTOR COORDINATION WILL BE PROVIDED. BUILDINGS TO BE FULLY SPRINKLER PROTECTED, MAIN AND HYDRAULIC AREA SHOWN FOR CALCULATIONS AND REPRESENTATION ONLY. ATTIC TO BE INSULATED AND WITHIN THERMAL ENVELOPE, PROVIDE WET-PIPE SPRINKLER PROTECTION IN NOTED LOCATIONS

KEYNOTE LEGEND

1. MAIN SHOWN FOR REPRESENTATION PURPOSES AND INITIAL HYDRAULIC DEMAND PURPOSES ONLY.
2. THE COVERED AREA SHALL BE PROVIDED WITH SPRINKLER PROTECTION. PROVIDE DRY HORIZONTAL SIDEWALL SPRINKLERS TO PROTECT BENEATH CANOPY. CONNECT TO WET PIPE SPRINKLER SYSTEM. SIDEWALL SPRINKLERS SHALL BE LOCATED AT THE HIGH POINT OF THE SLOPED ROOF AND POSITIONED TO DISCHARGE DOWNWARD ALONG THE SLOPE.
3. 6" INCOMING FIRE SERVICE FROM UNDERGROUND.
4. FIRE DEPARTMENT CONNECTION.
5. FLEX PIPE CONNECTION TO CONCEALED PENDENT SPRINKLER.

FOR CONTINUATION REFER TO EVENT CENTER FIRE SPRINKLER REFLECTED CEILING PLAN, DRAWING NO. FP103 (TYPICAL).



Hydraulic Information	
Remote Area Name	RA1 - ATTIC - BH
Occupancy Classification	Light Hazard
Density	0.10 GPM
Total Hose Streams	100.00 GPM
Flowing Heads	Refer Hydraulic Report
K-Factor	5.6
Total Water Required	408.74 GPM
Total Pressure Required	36.77 psi
Base of Riser	408.74 GPM
Base of Riser	36.77 psi
Safety Margin	+20.92 (35.91%)

1 EVENT CENTER ATTIC FIRE SPRINKLER PLAN
1/8" = 1'-0"

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The NC Coastal Federation's
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Ocean, North Carolina

SHEET TITLE :
EVENT CENTER ATTIC FIRE SPRINKLER PLAN

JOB NUMBER : -

DRAWN BY : SA

CHECKED BY : YS

DATE : 06/20/2023

REV	DATE	DRAWN	DESCRIPTION
PD1	06/20/2023	SA	INTERNAL REVIEW

SHEET NUMBER
FP104