

# ADDENDUM NO. 3

# ORANGE BEACH TRAIL MAINTENANCE SHOP AND WILDLIFE CENTER CITY OF ORANGE BEACH

ADDENDUM NO. THREE (3) - DATED March 8, 2022

This Addendum is directed to all bidders to whom the City of Orange Beach and Printing Pros has issued drawings and specifications. The following conditions, drawings, specification changes, etc., take precedence over any conflicting conditions in the Drawings and Specifications or other Contract and Bid Documents. Portions of the Contract Documents not changed by Addendum remain in effect.

# **SPECIFICATIONS**

ITEM 3.01 09 9000 PAINTING (ATTACHED)

Clarification added to show where painting of building is intended in Section 3.7 A.1.

ITEM 3.02 13 3419 METAL BUILDING SYSTEMS (FOR REFERENCE)

Colors for all metal building components shall be based on MBCI Signature 200 Standard Color Chart.

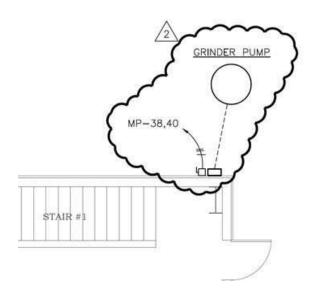
**DRAWINGS** 

ITEM 3.03 DRAWING A4.5 – PHASE 1 ALTERNATE 2 (ATTACHED)

Drawing has been revised to reflect wall changes and conditions.

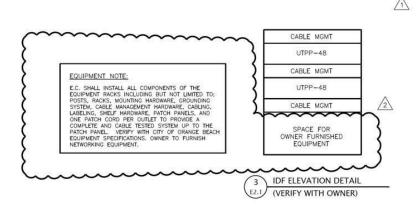
ITEM 3.04 DRAWING E2.1, PHASE 1 ALTERNATE 1, REV 2 (ATTACHED)

Add Grinder Pump location with 240V, 40A control panel and 240V, 60A, non-fused, NEMA 3R disconnect switch with connection from disconnect switch to control panel. Furnish 2" conduit sleeve from control panel to grinder pump tank. Include conduit seal at panel to prevent sewer gas entry into control panel. Grinder pump installation contractor to furnish and install pump and control cabling into the control panel. EC to perform all terminations. Reference Site Civil Utility plan for exact location.



# ITEM 3.05 DRAWING E2.1, PHASE 1 ALTERNATE 1, REV 2 (ATTACHED)

Revise Communication Scope of Work to furnish all communication work with exception to network switch, UPS, thermal management systems of which shall be furnished and installation by Owner's IT / Communication Vendor.



# ITEM 3.06 DRAWING E3.0, PHASE 1 ALTERNATE 1, REV 2 (ATTACHED)

Revise Panel MP, circuit MP-38,40 from 30A/2P TO 40/2P and Add load from 240V Grinder Pump.

2	17597	0	8		2	40	HP-2		30,32	
2			14676	0	2	40	HP-2		30,32	
2	15221	4560			2	60	HP-3		34,36	
2			12004	4560	2	60	HP-3		34,36	]
2	0	3000			2	(40)	GRINDER PUMP		38,40	1 1
2			0	3000	2	40	GRINDER PUMP		38,40	1
	CONNEC	TED LOAD F	PHASE TOTA	ALS (VA)		0				1
	524	80	47	788						
	CONNECT	ED DEM	AND DEN	AND LOAD			DEMAND LOAD	90.4 KVA		
	LOAD (KV	A) FAC		(KVA)			SPARE CAPACITY	53.6 KVA		
	13.0	1.0	00	13.0			SPARE CAPACITY	223.3 AMPS		

NOTE: Receipt of all addenda must be acknowledged on the Bid Form in order for the proposal to be considered a conforming bid.



Stedmann B. McCollough McCollough Architecture, Inc.

**END OF ADDENDUM #3** 

### SECTION 09 9000 - PAINTING

### PART 1 - GENERAL

### 1.1RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.2SUMMARY

- A. This Section includes surface preparation and field painting of the following:
  - Exposed exterior items and surfaces.
  - 2. Exposed interior items and surfaces.
  - 3. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the Architect will select from paint manufacturer's standard colors and finishes available.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
  - 1. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

# 1.3 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
  - 1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
  - 2. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
  - 3. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
  - 4. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
  - 5. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

### 1.4SUBMITTALS

A. Product Data: For each paint system specified. Include block fillers and primers.

- 1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
- 2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
- B. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for each type of finish-coat material indicated.

## 1.5QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.
- C. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample of each type of coating and substrate required on the Project. Comply with procedures specified in PDCA P5.
  - 1. The Architect will select one room surface to represent surfaces and conditions for each type of coating and substrate to be painted.
    - a. Wall Surfaces: Provide samples on at least 100 sq. ft. of wall surface.
    - b. Small Areas and Items: The Architect will designate an item or area as required.
  - 2. After permanent lighting and other environmental services have been activated, apply coatings in this room or to each surface according to the Schedule or as specified. Provide required sheen, color, and texture on each surface.
  - 3. Final approval of colors will be from job-applied samples.

# 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
  - 1. Product name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

# 1.7PROJECT CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F.
- C. Do not apply paint in rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
  - Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

# **PART 2 - PRODUCTS**

### 2.1MANUFACTURERS

- A. Unless otherwise specified, paint materials and systems specified herein are those of Porter Paint Co. (Porter). Subject to compliance with requirements, <u>equivalent</u> materials and systems by one of the following manufacturers are also acceptable:
  - Devoe and Reynolds Co. (Devoe).
  - 2. Benjamin Moore and Co. (Moore).
  - 3. Pratt and Lambert (P & L).
  - 4. Glidden.
  - 5. Sherwin Williams
  - 6. ICI Paints

# 2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
- C. Colors: Provide color selections made by the Architect.

### 2.3 LEAD CONTENT

A. The paint shall comply with the latest requirements of the Federal Government for maximum allowable lead content. Such compliance shall be stated on the MSDS and container clearly identifying the product.

### 2.4VOC COMPLIANCE

A. The paint shall comply with the latest requirements of Federal, Florida State, City or Local Government requirements for the maximum allowable VOC content at the time of purchase. Such compliance shall be stated on the MSDS and container clearly identifying the product.

### PART 3 - EXECUTION

### 3.1EXAMINATION

- A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.
  - 1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
  - 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

### 3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.
  - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
  - 1. Provide barrier coats over incompatible primers or remove and reprime.
  - 2. Cementitious Materials: Prepare concrete and concrete masonry surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
    - a. Use abrasive blast-cleaning methods if recommended by paint manufacturer.
    - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's written instructions.

- 3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
  - a. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
- 4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.
  - a. Touch up bare areas and shop-applied prime coats that have been damaged. Wirebrush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.
- 5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
  - 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  - 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  - 3. Use only thinners approved by paint manufacturer and only within recommended limits.

# 3.3APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
  - 1. Paint colors, surface treatments, and finishes are indicated in the schedule.
  - 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  - 3. Provide finish coats that are compatible with primers used.
  - 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, grilles, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
  - 5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - 6. Paint interior surfaces of ducts with a flat, non specular black paint where visible through registers or grilles.
  - 7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
  - 8. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
  - 9. Sand lightly between each succeeding enamel or varnish coat.

- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
  - 1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
  - 2. Omit primer on metal surfaces that have been shop primed and touchup painted.
  - 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  - 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions. All metal surfaces shall be sprayed except that piping, conduit, and ductwork may be brushed or rolled.
  - 1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
  - 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
  - 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.
- E. Electrical items to be painted include, but are not limited to, the following:
  - 1. Exposed conduit and fittings.
  - 2. Exterior switchgear.
- F. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- G. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- H. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

- I. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
  - Provide satin finish for final coats.
- J. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.
- K. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

### 3.4FIELD QUALITY CONTROL

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
  - 1. The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
  - 2. The testing agency will perform appropriate tests for the following characteristics as required by the Owner:
    - a. Quantitative material analysis.
    - b. Abrasion resistance.
    - c. Apparent reflectivity.
    - d. Flexibility.
    - e. Washability.
    - f. Absorption.
    - g. Accelerated weathering.
    - h. Dry opacity.
    - i. Accelerated yellowness.
    - j. Recoating.
    - k. Skinning.
    - I. Color retention.
    - M. Alkali and mildew resistance.
  - 3. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with specified requirements. The Contractor shall remove noncomplying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the 2 coatings are incompatible.

# 3.5CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
  - After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

### 3.6PROTECTION

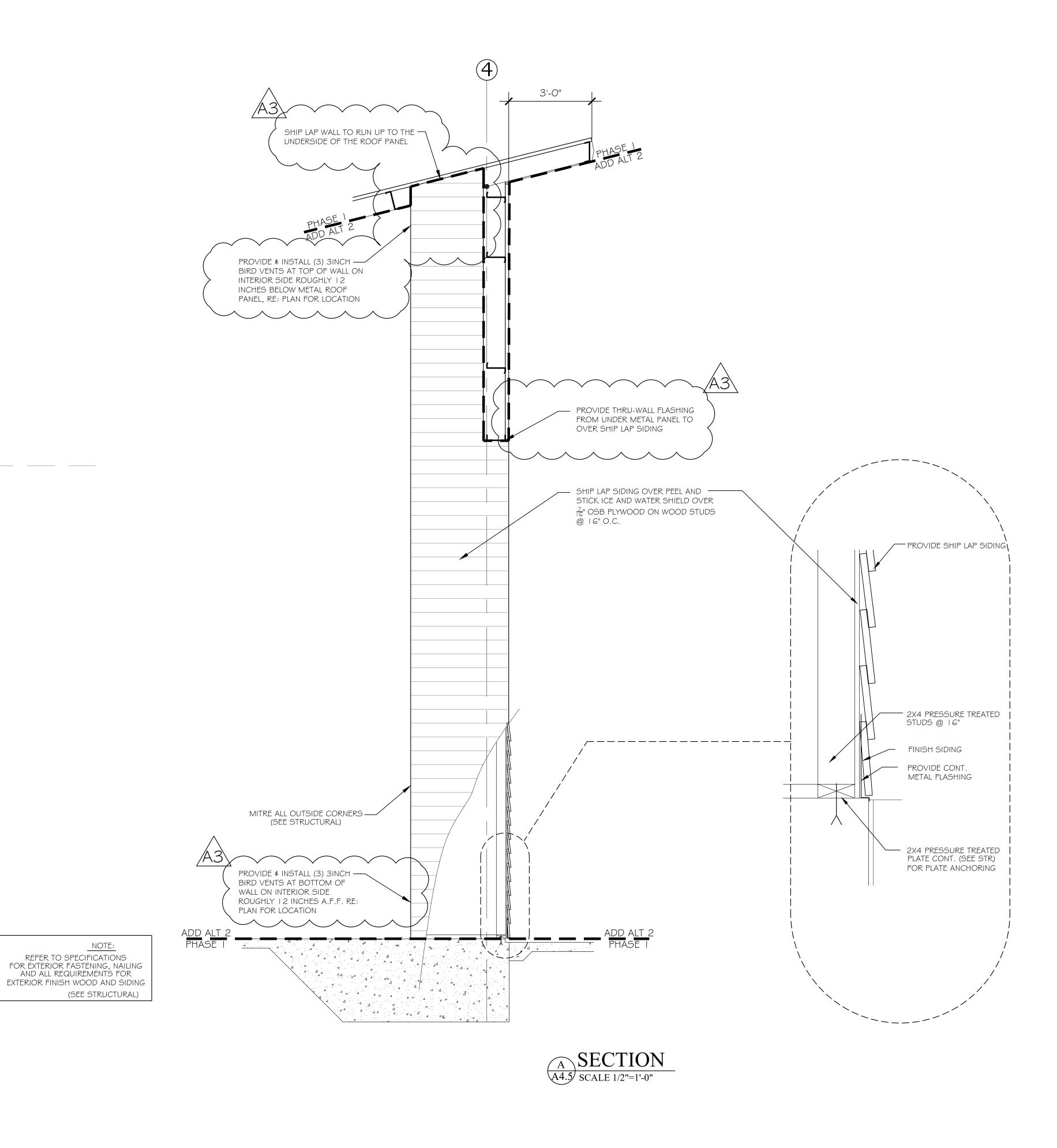
- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
  - 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

# 3.7PAINT SCHEDULE

- A. General: Provide the following paint systems for the various substrates, as indicated.
  - 1. <u>Pre-Engineered Metal Building Structure and Components (in all visible areas not heated and cooled included but not limited to the Breezeway; Machine/Shop and Mezzanine areas).</u>
    - a. Prime Coat:
      - 1) Sherwin Williams: Kem Kromik Universal Metal Primer, B50Z Series.
    - b. First and Second Finish Coats: Semi-Gloss Waterbased Alkyd Urethane Enamel. Equal to Sherwin Williams "Industrial Urethane Alkyd Enamel"; B54-150 Series.
  - 2. Exterior Galvanized Metal: Acrylic Gloss Exterior Paint.
    - a. Prime Coat: Rust Inhibitive Primer.
      - 1) Sherwin Williams: Pro Industrial ProCryl Universal Metal Primer, B66W310.
    - c. First and Second Finish coats: High-Sheen Gloss Acrylic Enamel.
      - 1) Sherwin Williams: Pro Industrial Acrylic Gloss, B66-610 Series.
  - 3. Exterior Concrete Block: Flat Acrylic Paint
    - a. Prime Coat: Block filler
      - 1) Sherwin Williams: Pro Industrial Heavy Duty Block Filler, b42W150.
    - a. First and Second Finish Coats: Flat Acrylic Exterior Paint.
      - 1) Sherwin Williams: Duration Exterior Acrylic Flat, K32-250 Series.
  - 4. Interior Gypsum Drywall Ceilings and Walls; Satin-Gloss Vinyl Acrylic Paint.
    - a. Prime Coat: Vinyl Acrylic Drywall Sealer.
      - 1) Sherwin Williams: ProMar 200 Zero VOC Primer, B26W2600.
    - b. First and Second Finish Coats: Egshel Vinyl Acrylic Paint.
      - 1) Sherwin Williams: ProMar 200 Zero VOC Latex EgShel, B20-1250 Series.
  - 5. Exterior Aluminum; Egshel Acrylic Enamel Finish.
    - a. Prime Coat:
      - 1) Sherwin Williams: Pro Industrial ProCryl Universal Metal Primer, B66W310.
    - b. First and Second Finish Coats: Egshel Acrylic Exterior Paint.
      - 1) Sherwin Williams: Pro Industrial Acrylic Egshel, B66-660 Series.

- 6. Epoxy Paint (where specified in Finish Schedule);
  - a. Prime Coat: Loxon, Block Surfacer LX1W200(at concrete and concrete block) equal to Sherwin Williams.
  - b. Finish Coat: Precatalyzed Waterbaed Epoxy, Egshel, K45 Series, equal to Sherwin Williams.

END OF SECTION 09 9000



5'-6"

IF ALTERNATE 2 IS CHOSEN
THEN THE MTL PANEL, THE 8"
MTL STUDS AND 2" MTL STUDS
ARE TO BE OMITTED AROUND

THIS D4 COLUMN.—

PROVIDE \$ INSTALL (3) 3INCH BIRD VENTS AT TOP OF WALL ON

3INCH BIRD VENTS AT 12" A.F.F.

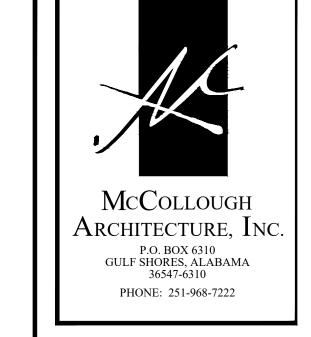
INTERIOR SIDE ROUGHLY 12

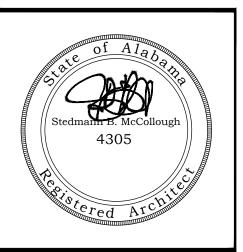
INCHES BELOW METAL ROOF PANEL AND (3) ADDITIONAL

SHIP LAP SIDING OVER PEEL AND — STICK ICE AND WATER SHIELD OVER 5/8" OSB PLYWOOD ON WOOD STUDS @ 16" O.C.

5'-6"

B ENLARGED PLAN
SCALE 1/2"=1'-0"





# PHASE I DRAWINGS FOR ORANGE BEACH RAIL SHOP / WILDLIFE CENTEI

JOB NO.: 21-05
DRAWN: CLT
CHECKED: SBM
DATE: 2021.06.01
REVISION:
APPLICATION 2 2022.03.04

A3 ADDENDUM 3 2022.03.08

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

SHEET NO.:

ALT 2

SECTIONS AND DETAILS

PHASE I ADD ALTERNATE 2

MAKE ALL TERMINATIONS IN STRICT ACCORDANCE WITH TIA GUIDELINES AS

"HORIZONTAL TELECOMMUNICATIONS LINK". STRIP CABLE JACKET BACK A

MAXIMUM OF 1 INCH FROM THE POINT OF TERMINATION. MAINTAIN FACTORY SYMMETRICAL CABLE TWISTS TO WITHIN 0.5 INCHES OF THE POINT OF

TERMINATION. PROVIDE CABLE SLACK AT EACH END ALLOW MINIMUM OF FIVE

AND THE TERMINATION DEVICE FOR ALL FIELD CONNECTIONS IN THE

(5) FUTURE RE-TERMINATIONS WITHOUT RE-ROUTING CABLE.

WELL AS THE MANUFACTURER'S PRINTED INSTRUCTION FOR BOTH THE CABLE

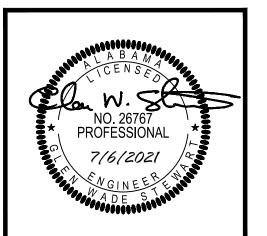
CATEGORY 6 TERMINATION NOTE:

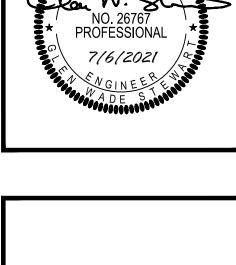


BAY MINETTE, ALABAMA 36507 (251)-937-6313 (251)-937-1782 Fax wstewart@stewartengineering.net

> McCollough Architecture, Inc. P.O. BOX 6310 GULF SHORES, ALABAMA 36547-6310

PHONE: 251-968-7222





ALTERNATE

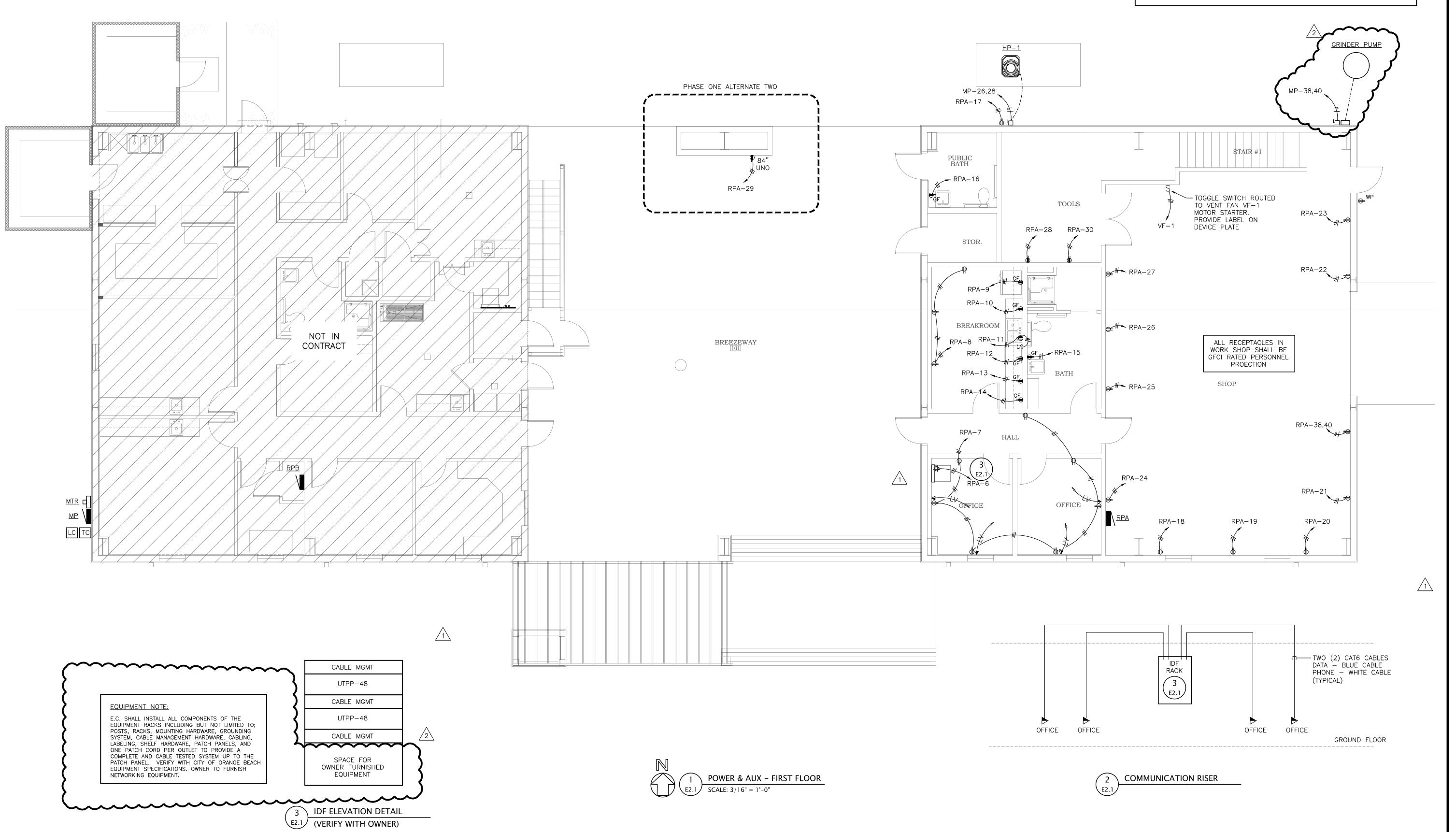
JOB NO.: GWS DRAWN: CHECKED: **GWS** 2021.04.22 1 2022.01.04 REVISION:

2 2022.03.07

AS SHOWN SHEET NO.:

POWER & AUX

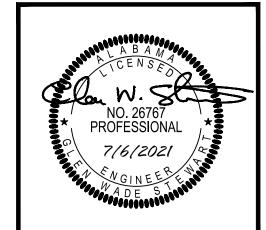
PHASE 1 ALTERNATE 1 FIRST FLOOR ALTERNATES

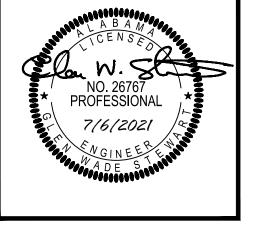


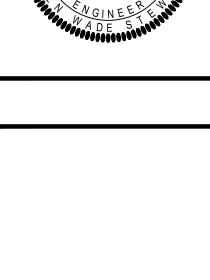












DRAWING BE LTERN OR

> GWS 2021.04.22

JOB NO.: DRAWN: CHECKED:

REVISION:  $\sqrt{1}$  2022.03.07

AS SHOWN SCALE:

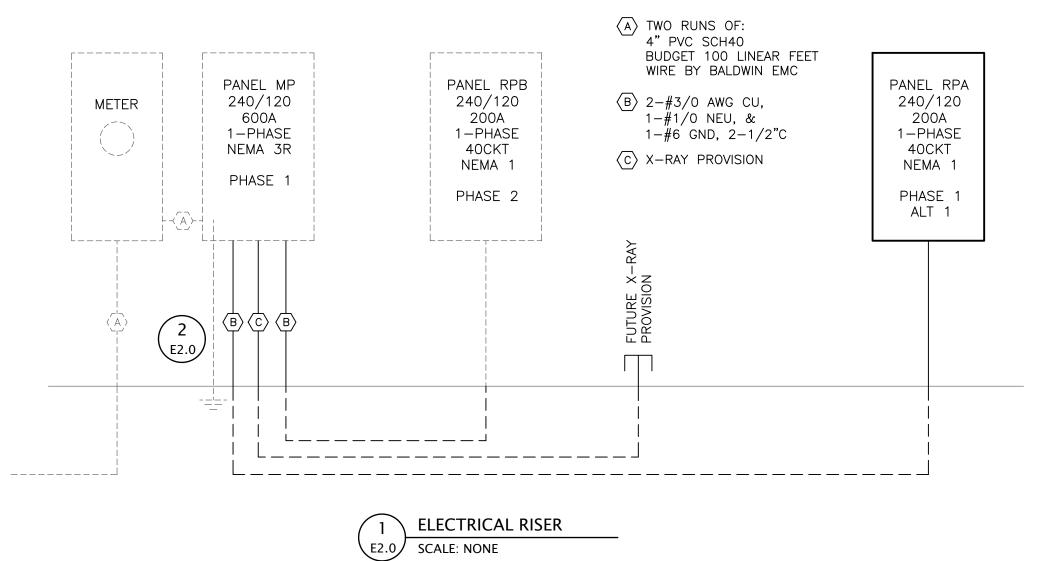
SHEET NO.:

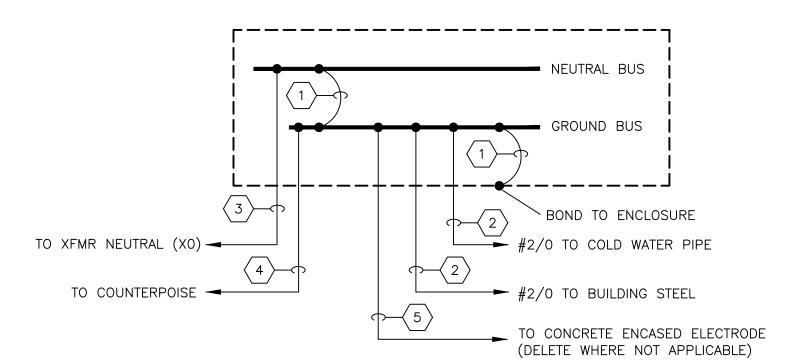
ELECTRICAL RISER AND DETAILS

PHASE 1	ALTERNATE

WIRE (AWG)	ו במווט מוומיז ב	
	EQUIP. GND	CONDUIT
12	#12	3/4"
<del>_</del>	· · · · · · · · · · · · · · · · · · ·	3/4"
	"	3/4"
	"	1"
		1"
6		1"
4		1-1/4"
4	·	1-1/4"
		1-1/4"
3	#8	1-1/4"
1	#6	1-1/2"
#1/0	#6	2"
#2/0	#6	2"
#3/0	#6	2"
#4/0	#4	2-1/2"
250KCMIL	#4	3"
600KCMIL	#2	4"
	12 10 8 6 6 4 4 3 3 1 #1/0 #2/0 #3/0 #4/0 250KCMIL	12 #12 10 #10 8 #10 6 #10 6 #10 4 #8 4 #8 3 #8 3 #8 1 #6 #1/0 #6 #2/0 #6 #3/0 #6 #4/0 #4 250KCMIL #4

400	600KCMIL	#2	4"
NOTES:			
1. NEUTRAL CONDU	ICTOR (IF REQUIRED)	SHALL BE THE SAM	E SIZE AS PHASE
CONDUCTORS.			
	THER CYCLICAL EQUI	PMENT SHALL UTILIZE	E HACR TYPE
CIRCUIT BREAKERS.		05 001101107000 40	NEGEOGRAPY TO
	PROVIDE QUANTITY	OF CONDUCTORS AS	NECESSARY TO
POWER LOADS.	BASES ON FOUR CO	NIDUICTORS MANUALIM	CONTRACTOR
	C GUIDELINES FOR D		
SIZES FOR ALL CO		LIVATING AMI ACTILS	AND CONDON
	HALL BE COPPER. IN	DICATED SIZES ARE	FOR USE WITH
COPPER CONDUCTO			
6. FOR BREAKERS	SIZES NOT INDICATED	D SUCH AS 25A, CO	MPLY WITH NEC
SECTION 240.4 (PF	ROTECTION OF CONDU	JCTORS.)	
7. CONTRACTOR SH	HALL COORDINATE THI	E REQUÍRED NUMBER	OF CONDUCTORS
WITH EQUIPMENT M	IFR PRIOR TO ROUGH	ł IN.	





- #2/0 MAIN BONDING JUMPER
- 2 #2/0 GROUNDING ELECTRODE BONDING JUMPER CONNECTION
- SAME SIZE AS PHASE CONDUCTOR
- SUPPLEMENTAL GROUNDING ELECTRODE BONDING JUMPER SIZED AT #6 AWG (SIZE PER NEC 250.66 IF WATER PIPE AND BLDG. STEEL NOT AVAILABLE)
- 5 SIZE PER NEC 250.66 BUT NO LARGER THAN #4 THHN
  - 2 MAIN SERVICE GROUNDING E2.0 SCALE: NONE

					LIC	SHTING FIX	TURE SCHEDULE													
					LAMB DATA						MOL	JNT T	YPE							
		ELECTRICAL DATA			LAMP DATA	BASIS OF DESIGN			LC	CATIC	N				AF	RRANC	GEMEN	NT		
ID	DESCRIPTION	LOAD VA	VOLTAGE	TAGE QTY LUMENS MANUFACTURER		MANUFACTURER	MODEL OR SERIES	CEILING	FLOOR	GROUND	POLE	ROOF	SUSPENDED	WALL	FLUSH	PEDESTAL	PENDANT	RECESSED	SURFACE	TRACK
Α	DOWN LIGHT	20	120	-	1500	LITHONIA	LDN6 40/15 LO6AR LS													
В	DOWN LIGHT	20	120	-	2000	LITHONIA	LDN6 40/20 LO6AR LS													
BE	DOWN LIGHT	20	120	-	2000	LITHONIA	LDN6 40/20 LO6AR LS ELSD													
С	STRIP	15	120	-	1500	LITHONIA	ZL1N L24 1500LM FST MVOLT 4000K 80 WH													
D	2X4 TROFFER	49	120		5400	LITHONIA	EPANL 2X4 5400 80CRI 40K													
DE	2X4 TROFFER	49	120		5400	LITHONIA	EPANL 2X4 5400 80CRI 40K E10WCP													
F	2X2 TROFFER	31	120		3400	LITHONIA	EPANL 2X2 3400 80CRI 40K													
FE	2X2 TROFFER	31	120		3400	LITHONIA	EPANL 2X2 3400 80CRI 40K E10WCP													
V	VANITY	20	120	-	_		ALLOWANCE \$150													
VT	VAPORTIGHT	116	120	-	15000	LITHONIA	VAP 15000LM PCL WD 40K 80CRI													
W	WALL PACK	30	120	_	4000	LITHONIA	ARC2 LED P4 40K MVOLT DDBXD													
RE	REMOTE EGRESS	6	120	-	_	EMERGI-LITE	EF44-2-LED-WP													
YE	EMERGENCY LIGHT	1	120	-	_	EMERGI-LITE	EL-2LED (LITE-2-LG-FINISH-N)													
ZE	EXIT/EMER. COMBO	1	120	-		EMERGI-LITE	ELXN400-G-2LED-R													

	TOTAL: LOAD (AMPS):		-	100.3 417.8			90.4 376.7	_				
			F	PANEL	-	RP	'A					
/OLTAGE (	′L-N):	120				ENCLOSURE	TYPF:	NEMA 1				
OLTAGE (		240				MOUNTING:		SURFACE	·			
PHASES, W		1 φ, 3 \	W			AIC RATING	);	10000				
	BUS CAPACITY (A):	200 A				NOTES:						
	DEVICE (A):	200 A				†						
CKT NO	DESCRIPTION	TRIP AMPS	POLE		PHASE L	OADS (VA)	В	POLE	TRIP AMPS	DESCRIPTI	ION	CKT NO
1	LGTS, 101-109	20	1	471	1130			1	20	LGTS, 110		2
3	LGTS, BREEZEWAY	20	1			0	0	1	20	LGTS, EXTERIOR		4
5	SPARE	20	1	0	500			1	20	REC, TBB		6
7	REC, 102-4	20	1			1260	800	1	20	REC, 105/107/109		8
9	REC, 105 REF	20	1	1500	1500			1	20	REC, 105 CNTR		10
11	REC, 105 GARBAGE DISP.	20	1			500	1500	1	20	REC, 105 CNTR		12
13	REC, 105 CNTR	20	1	1500	1500			1	20	REC, 105 CNTR		14
15	REC, 106	20	1			1500	200	1	20	REC, 108		16
17	REC, EXT. & MEZZ	20	1	400	180			1	20	REC, WORK SHOP		18
19	REC, WORK SHOP	20	1			180	180	1	20	REC, WORK SHOP		20
21	REC, WORK SHOP	20	1	180	180			1	20	REC, WORK SHOP		22
23	REC, WORK SHOP	20	1			180	200	1	20	REC, WORK SHOP		24
25	REC, WORK SHOP	20	1	200	200			1	20	REC, WORK SHOP		26
27	REC, WORK SHOP	20	1			200	180	1	20	REC, TOOL RM		28
29	REC, BREEZEWAY TV	20	1	180	180		, 00	1	20	REC, TOOL RM		30
31	SPARE	20	1			0	0	1	20	SPARE		32
33,35	SPARE	30	2	0	746			2	20	VF-1		34,36
33,35	SPARE	30	2			0	746	2	20	VF-1		34,36
37,39	EWH-1	30	2	2250	4800			2	50	WELDER		38,40
37,39	EWH-1	30	2			2250	4800	2	50	WELDER		38,40
				CONNE	CTED LOAD	PHASE TOTA						
					597		676					
				CONNEC LOAD (F	(VA) FA(	CTOR	MAND LOAD (KVA)			DEMAND LOAD SPARE CAPACITY	30.8 KVA 17.2 KVA	
	Equipment			10.		.00	10.1			SPARE CAPACITY	71.8 AMPS	
	Heating			4.5		.00	4.5			SPARE CAPACITY	36 %	
	Lighting			1.6		.25	2.0					
	Motors			0.0		.00	0.0					
	Motors (Largest)			1.5		.25	1.9					
	Receptacles (0 - 10 KVA)			10.0		.00	10.0					
	Receptacles (Over 10 KVA)			4.6	0	.50	2.3					
	TOTAL:			32.3			30.8	_				
	LOAD (AMPS):			134.5			128.2					

PANEL

600 A

600 A

TRIP POLE

VOLTAGE (L-L):

PHASES, WIRES:

CKT NO

MINIMUM BUS CAPACITY (A)

DESCRIPTION

MAIN O.C. DEVICE (A):

1,3 AHU-2

5,7 AHU-3

9,11 SPACE

9,11 SPACE

13,15 SPACE 13,15 SPACE

17,19 SPACE 17,19 SPACE

21,23 SPACE

21,23 SPACE 25,27 AHU-1

25,27 AHU-1 29,31 PANEL RPA

29,31 PANEL RPA 33,35 PANEL RPB 33,35 PANEL RPB

Cooling and Heating

Lighting — Exterior

Receptacles (0 - 10 KVA)

Receptacles (Over 10 KVA)

Motors (Largest)

Equipment

Heating

Motors

37,39 SPARE

37,39 SPARE

MP

12004 | 4560

47788

DEMAND LOAD

(KVA)

13.0

10.1

29.2

4.5

2.1

1.5

7.5

10.0

12.7

52480

**FACTOR** 

1.00

1.00

1.00

1.25

1.25

1.00

1.25

1.00

0.50

LOAD (KVA)

13.0

10.1

29.2

3.6

1.6

1.5

6.0

10.0

25.3

ENCLOSURE TYPE: NEMA 3R

SURFACE

POLE AMPS

0 3000 2 40 GRINDER PUMP

40 GRINDER PUMP

DEMAND LOAD

SPARE CAPACITY

SPARE CAPACITY

SPARE CAPACITY

CKT NO

14,16

14,16

18,20

26,28

26,28

34,36

90.4 KVA

53.6 KVA

223.3 AMPS

37 **%** 

38,40

DESCRIPTION

10000

# PANELBOARD SCHEDULE AND DETAIL NOTES:

- PANELBOARD & PANELBOARD INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 70, ART. 384. ALL PANELBOARDS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THIS LISTING AND FULLY SUPPORTED BY MEANS DESIGNED FOR THAT LISTED INSTALLATION. ALL CLEARANCES REQUIRED BY CODE SHALL BE MAINTAINED AS MINIMUM.
- 2. EACH PANELBOARD SHALL BE FURNISHED COMPLETE WITH THE PROPERLY SIZED CAN, INTERNAL HARDWARD, DEVICES, COMPONENTS, SUPPORTING STRUCTURES, ETC., FOR A COMPLETE INSTALLATION TO PROVIDE THE DESIGNED PERFORMANCE UNDER THE AMBIENT CONDITIONS ENCOUNTERED. ALL DEVICES, COMPONENTS, FITTINGS, SUPPORTS, ETC., SHALL BE COORDINATED TO PROVIDE A COMPLETE UL LISTED INSTALLATION. ALL DEVICES INSTALLED SHALL HAVE AN INTERRUPTING RATING GREATER THAN OR EQUAL TO THE SPECIFIED SCCR.
- 3. EACH PANELBOARD SHALL BE FURNISHED WITH A GROUND BAR BONDED TO THE PANEL ENCLOSURE. THIS GROUND BUS SHALL BE UTILIZED TO BOND ALL GROUNDING PROVISIONS IN ORDER TO ESTABLISH EQUAL POTENTIAL TO ALL GROUNDED COMPONENTS OF THE POWER SYSTEM.
- 4. PANELBOARD CANS SHALL BE RIGID AND CONTAIN KNOCKOUT PROVISIONS TO FACILITATE THE TERMINATION OF THE NUMBER AND SIZE OF CONDUIT SYSTEMS REQUIRED.
- 5. THE TERMINATION POINT OF THE FEEDER SERVING EACH ASSEMBLY SHALL BE AT THE NEAREST POINT OF FEEDER ENTRY TO MINIMIZE CONDUCTOR FILL IN THE CAN. COORDINATE TOP AND BOTTOM FEED PANELBOARD PROVISIONS WITH EACH FEEDER INSTALLATION.
- PROVIDE THE PROPERLY SIZED CONDUCTOR TERMINATION POINTS OR LUGS (MULTIPLE LUGS WHEN PARALLEL FEEDERS ARE USED) FOR THE NUMBER AND SIZE CIRCUITS INDICATED.
- 7. CONDUCTORS, SPLICES AND TERMINATIONS SHALL BE ACCESSIBLE. ONLY CONDUCTORS RATED AND SIZED FOR THE TEMPERATURE OF THE TERMINATION SHALL BE USED.
- 8. PANELBOARDS SHALL NOT BE INSTALLED IN CONTACT WITH COMBUSTIBLE MATERIALS. ADEQUATE SPACE FOR AIR CIRCULATION AND CODE COMPLIANCE SHALL BE PROVIDED AS A MINIMUM. FURNISH SPACERS, WASHERS, SUPPORTING DEVICES, ETC., AS REQUIRED TO MAINTAIN PROPER CLEARANCES.
- 9. ALL FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH FOUR (4) 1" EMPLY SPARE CONDUITS TO ABOE THE NEAREST ACCESSIBLE CEILING.