Ebert Norman Brady Architects

1361 13th Avenue South, Suite 230 • Jacksonville Beach, Florida 32250

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ADDENDUM NUMBER TWO

September 9, 2015

Re: **Florida Army National Guard**
Project Number 214026 Barracks Renovation Area 4600
Project Number 214027 Barracks Renovation Area 4700
Project Number 214028 Barracks Renovation Area 4800
CBJTC, Starke, Florida

This addendum forms a part of the contract documents and modifies the original bidding documents as noted below. Acknowledge receipt of this addendum in the space provided on the bid form(s). Failure to do so may subject bidder to disqualification.

General:

- **Bid Date and Time:** The bid date and time has not changed.
- **Plan Holders:** Attached is a list of the plan holders for this project.
- **Permitting:** The contractor shall verify which permits are required for the scope of work indicated, but it is expected that at a minimum a plumbing and electrical permit will be required.
- **Bid Form – Additive Alternate:** All windows shown on this project shall be listed as an additive alternate.
- **Bid Form – Unit Prices:** Provide a unit cost for replacement of the doors, frames and hardware. Unit cost shall be based on new insulated hollow metal doors and frames as indicated in the attached specification and door hardware to include Lever Type Cylindrical Locksets, using Best 7 pin E keyways with an office lock function, stainless steel ball bearing hinges, door closer, weather-stripping, and ADA compliant threshold. This unit price option may be exercised at the Owner's discretion and would likely result from the on-site determination that the existing doors and frames are in substandard condition and in need of replacement.
- **Bid Form – Unit Prices:** Provide a unit cost for replacement of watercloset plumbing trim. This unit price option may be exercised at the Owner's discretion and would likely result from the on-site determination that the existing watercloset plumbing trim is in substandard condition and is in need of replacement.
- **Bid Form – Unit Prices:** Provide a unit cost for replacement of urinal plumbing trim. This unit price option may be exercised at the Owner's discretion and would likely result from the on-site determination that the existing urinal plumbing trim is in substandard condition and is in need of replacement.

Drawings:

- **Drawing A2.1 – Renovation Floor Plan:** Delete the indication of the door tags currently shown on the existing doors. The existing doors are to remain. The Owner may identify specific doors in each building that will need to be replaced. Refer to General category above for bid actions required for the existing doors and frames. All existing door hardware shall be replaced with Lever Type Cylindrical

Locksets, using Best 7 pin E keyways with an office lock function. Where new doors are provided, provide a full hardware sets as indicated above in the Unit Price description for new doors, frames and hardware.

- **Drawing A4.1 – Wall Sections, Room Finish Schedule and Window Types:** Add the attached drawing to the contract documents. Note this drawing is listed as area 4600 but is applicable to 4700 and 4800 as well.
- **Drawing A6.1 – Enlarged Bathroom Plan:** The existing waterclosets and urinals and associated trim shall be carefully removed, salvaged and reinstalled. The new drop-in lavatories shall be equivalent to: Drop-in countertop lavatory, 4" on center holes, American Standard Piazza, 23-1/2" x 18" x 6-1/2" deep. Trim with Delta single handle faucet, 0.4 GPM, chrome plated lavatory faucet and grid drain, anti-scald valve.
- **Drawing A6.1 – Enlarged Bathroom Plan**: Add the interior elevation key detail symbol on the right side of this plan pointing to the west face of the easternmost wall on this plan. This elevation references 5/A6.1.
- **Drawing A6.1 – Enlarged Bathroom Plan:** The basis-of-design dressing bench shall be Global Industries Model WY764335 Plastic Locker Bench with PVC Plastic Pedestals Bolt Down 9-1/4" x 60" x 16-1/2"
- **Drawing A6.1 – Interior Elevations 4 and 5/A6.1**: Correct the TBA designation to read TBA-3, where it is currently incorrectly identified as TBA-5.
- **Drawing E2.1 – Lighting Plan:** Replace the Type C fixture in the Shower with the attached linear wet location fixture, Williams Model 96-4-L40/835-HIAFR-WET/1-DRV-UNV.
- **Drawing E2.1 – Partial Power Plan:** Remove the center quad outlet from above the vanity and leave the outer two as shown.
- **Drawing E2.1 – Partial Power Plan:** Note 6: Demolish all receptacles, conduit, and wire back to Panel 'L' for general purpose receptacles in the Barracks Room 101. Provide new quad receptacle at each locations shown. Provide 2#12 AWG wires with #12 AWG ground in ½" conduit for each new circuit that is replacing an existing circuit. Circuits shall be wired in the same fashion as for the existing installation. Resize conductors for voltage drop accordingly. Reuse existing breaker in panel if condition is acceptable.

Specifications:

- **Specification Section 024119 – Selective Demolition:** Add this attached specification to the contract documents.
- **Specification Section 066400 – Plastic Paneling:** Add this attached specification to the contract documents.
- **Specification Section 072100 – Thermal Insulation:** Add this attached specification to the contract documents.
- **Specification Section 079200 – Joint Sealants:** Add this attached specification to the contract documents.
- **Specification Section 081113 – Hollow Metal Doors and Frames:** Add this attached specification to the contract documents.
- **Specification Section 085313 – Vinyl Windows:** Add this attached specification to the contract documents.
- **Specification Section 092216 – Non-Structural Metal Framing:** Add this attached specification to the contract documents.
- **Specification Section 092900 – Gypsum Board:** Add this attached specification to the contract documents.
- **Specification Section 093000 – Tiling:** Add this attached specification to the contract documents.

- **Specification Section 096513 – Resilient Base and Accessories:** Add this attached specification to the contract documents.
- **Specification Section 099123 – Painting:** Add this attached specification to the contract documents.
- **Specification Section 102113 – Toilet Compartments:** Add this attached specification to the contract documents.
- **Specification Section 123661 – Simulated Stone Countertops:** Add this attached specification to the contract documents.

Questions and Responses:

Question: *Plan sheet A2.1 indicates a wall section on 1/A4.1, but no sheet with A4.1 is in the plans showing any measured anything for wall sections. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: This drawing has been added in this addendum.

Question: *No finish schedule or specs. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: This drawing and specifications have been added in this addendum.

Question: *No door, window schedule or specs. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: The door and window specifications have been added in this addendum.

Question: *No door hardware schedule or specs. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: The door hardware is clarified above.

Question: *Alternates show Decorative Barrier Wall, Vehicular Bollards, Gutters & Downspouts, & Lightning Protection, but lack any specs or directive on drawings and no specs. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: This was incorrectly included and is to be omitted.

Question: *Specs on toilet partitions, wall and floor tile, plumbing fixtures, foamed insulation in trusses are requested. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: The specifications for the toilet compartments, wall and floor tile, and foamed insulation have been added. The plumbing fixtures are clarified above.

Question: *Clarification on the Proposal Form (Exhibit 4) that on each group of barracks pricing is specifically for total number of buildings or each group since the proposal form has not indicated such. Please note also the totals should reflect either a each building or total values for all in the group. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*
Response: The base bid will be the price of one building. The additive alternates will be a price per building after the base bid.

Question: *On applications of foamed insulation in closed attics existing insulation should be removed as not to create a moisture problem in the attic not allowing the conditioned air to freely mix. Not removing existing insulation will cause most insulating contractors not to guarantee their product*

since mold will be likely to occur. From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.

Response: The existing batt insulation is to be removed and this has been clarified in the attached wall section drawing.

Question: *Noting on the sub list is a classification for Vaults and Fire Sprinkler. Is there more work not showing on the projects that needs to be included? From: Rick Nooney, President, Nooney Construction, Inc., (904)260-5124.*

Response: These two subcontractors were incorrectly included and are to be removed.

Question: *Do we have Finish Schedule, Door & Windows Schedule, and Spray form Specs? From: Jerry Cai, Estimator, E. Vaughan Rivers, Inc., (904)264-0123*

Response: The finish schedule has been added to the drawing A4.1 that is included in this addendum. The doors are clarified above. The spray foam specifications have been added to this addendum.

Question: *Wall section A2.1 shows wall cut on A4.1 – there is no sheet A4.1 – Will this sheet be provided? From: Amelia Creamer, Little & Williams, Inc., (386)755-3139*

Response: This drawing has been added in this addendum.

Question: *Are there any technical specs? From: Amelia Creamer, Little & Williams, Inc., (386)755-3139*

Response: The technical specifications are included with this addendum.

Question: *There is currently no grounding wire installed in the existing electrical conduits for the 18 double duplex outlets. Is the plan to install new EMT conduit and boxes for electrical receptacles to allow for the grounding wire? Installation of a additional ground wire in the existing conduit will not fit. Please advise. From: Steve Pickett, Pickett Construction*

Response: Refer to the revised electrical note 6 indicated above.

Question: *Reference A6.1, Latrine 102 elevation 5. Does not show FRP like others will this area remain CMU? From: Steve Pickett, Pickett Construction*

Response: Yes. The drawing correctly indicates the intent of the scope of work.

Question: *Please provide a specification for Maple Bench and pedestal in dressing area. From: Steve Pickett, Pickett Construction*

Response: See clarification above.

Question: *Wall section A2.1 shows wall cut on A4.1 – there is no sheet A4.1 – Will this sheet be provided? From: Steve Pickett, Pickett Construction*

Response: Refer to the attached drawing A4.1.

Question: *Are there any technical specs? From: Steve Pickett, Pickett Construction*

Response: Refer to the attached technical specifications.

Question: *Is a building permit required for this project? From: Steve Pickett, Pickett Construction*

Response: Refer to the response above.

END OF WRITTEN ADDENDUM

Ebert Norman Brady Architects
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ENB ARCHITECTS

PLAN HOLDERS

212046 BARRACKS RENOVATION AREA 4600
212047 BARRACKS RENOVATION AREA 4700
212048 BARRACKS RENOVATION AREA 4800
CBJTC, Starke, Florida
ENB Project No. 14059

Bid Date: September 21, 2015

Company	Contact	Telephone #	Fax #
Bichachi Construction	Moises Bichachi	(305)891-7990	(305)891-7993
Browning's Construction Inc.	George Browning	(904)237-4222	(904)964-7530
Construction Market Data Group LLC	Angel Catacutan	(323)602-5079 Ext. 75307	(800)303-8629
Dodge Data & Analytics	Lex Ann Thomas	(850)656-3770	(850)656-2523
E. Vaughan Rivers, Inc.	Jerry Cai	(904)264-0123	(904)264-1790
iSqFt Plan Room	Jeff Huff	(800)364-2059 Ext. 8118	(866)570-8187
Little and Williams Inc.	Mark Little	(386)755-3139	(386)961-9539
Marbeck Construction	George Ray	(407)468-8378	(352)242-1081
Nooney Construction, Inc.	Rick Nooney	(904)260-5124	(904)260-5049
Pickett Construction	Steve Pickett	(904)282-5505	(904)282-8585
STG Contracting Group, Inc.	Gene Staton	(904)287-9898	(904)217-3750
Thomas May Construction Company	Joshua Goff	(904)272-4808	(904)272-4957
Xeye Incorporated	David Hutchinson	(904)714-2100	(904)714-7051
West Construction, Inc.	Racquel Barrett	(561)588-2027	(561)582-9419

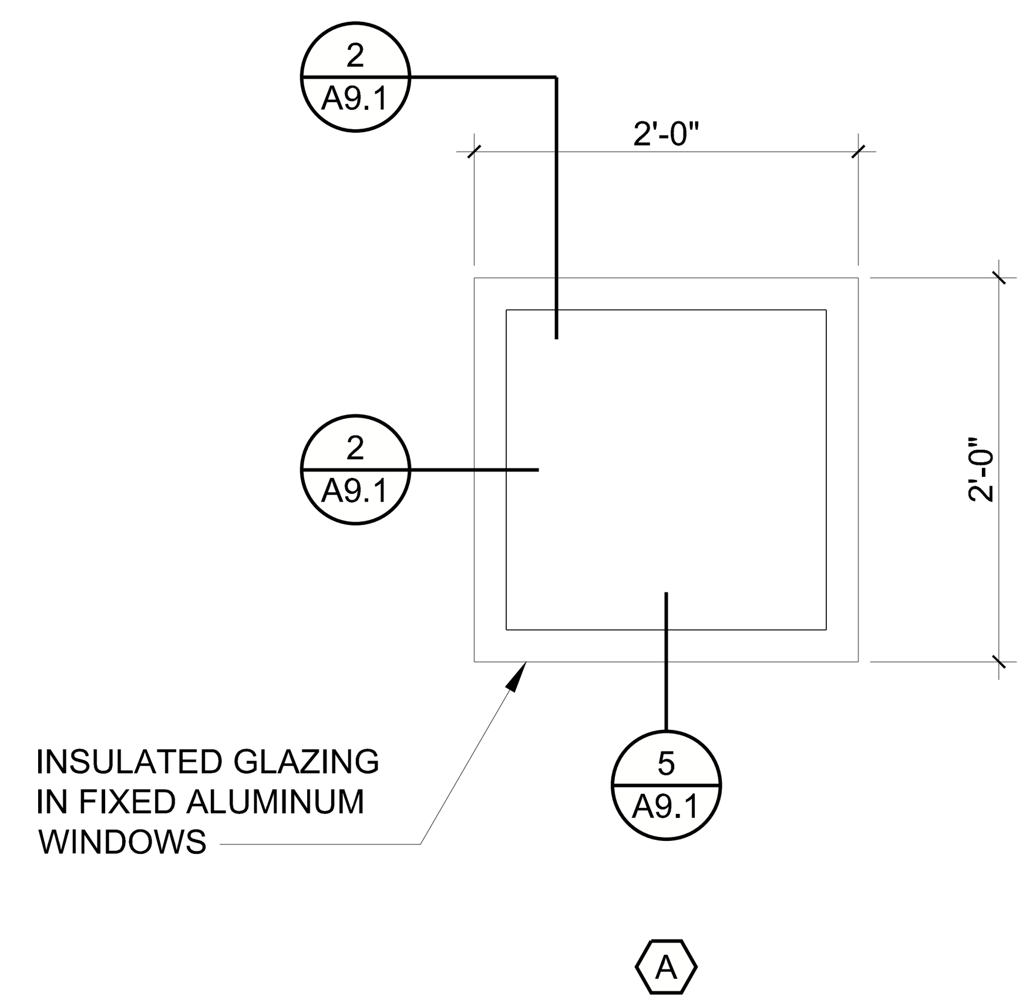
ROOM FINISH SCHEDULE

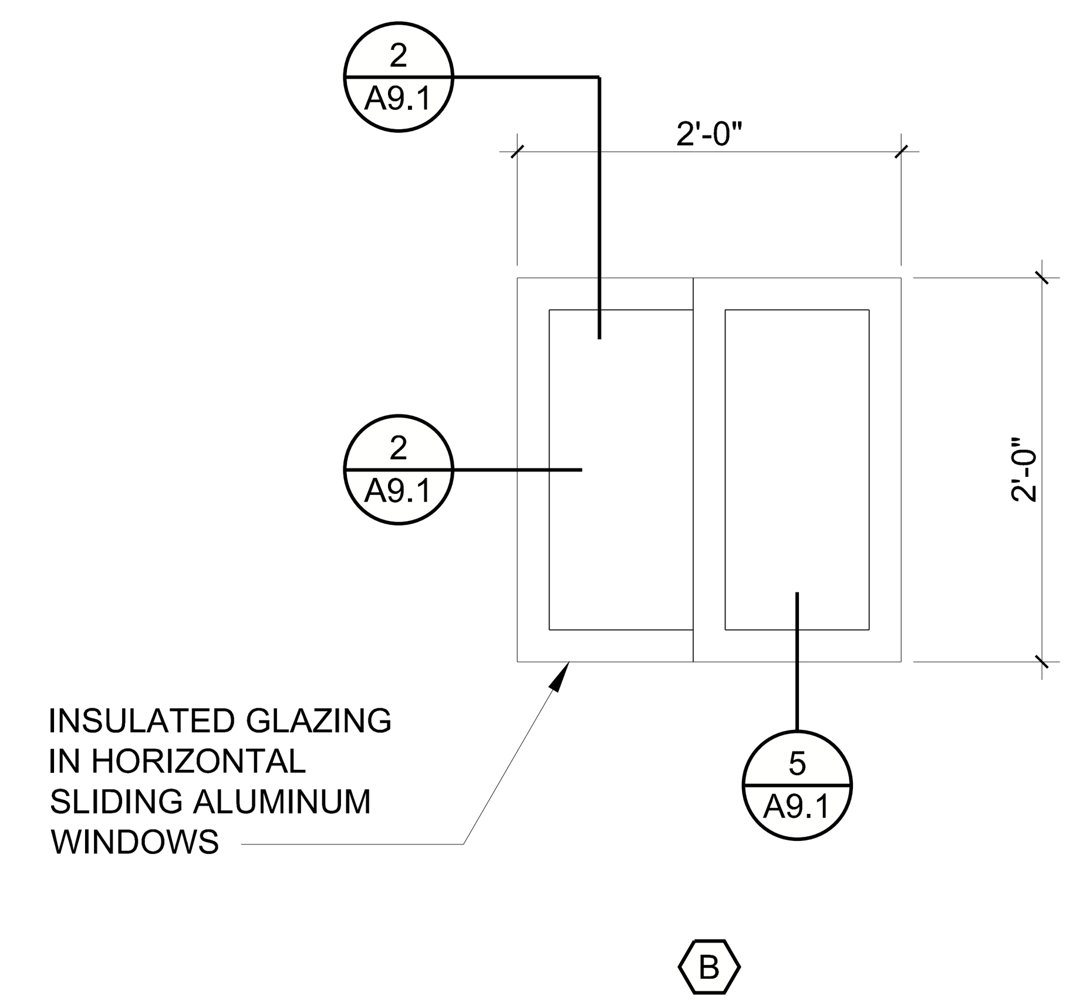
				WALLS								CEILINGS		
				NORTH		EAST		SOUTH		WEST				
ROOM NUMBER	ROOM NAME	FLOOR	BASE	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	REMARKS
101	BARRACKS ROOM	EXIST.	RWB	GWB	PAINT	GWB	PAINT	GWB	PAINT	EXIST.	PAINT	EXIST./GWB	PAINT	
102	LATRINE	EXIST.	RWB	GWB	PT/FRP	GWB	PT/FRP	EXIST. CMU	PAINT	*	*	EXIST./GWB	PAINT	*REFER TO THE INT. ELEV. FOR THIS MATERIAL AND FINISH.
103	DRYING	TILE	TILE	TILE BACK.	TILE	TILE BACK.	TILE	TILE BACK.	TILE	TILE BACK.	TILE	EXIST./GWB	PAINT	
104	SHOWER	TILE	TILE	TILE BACK.	TILE	TILE BACK.	TILE	TILE BACK.	TILE	TILE BACK.	TILE	EXIST./GWB	PAINT	
105	STORAGE	EXIST.	RWB	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST.	PAINT	EXIST./GWB	PAINT	

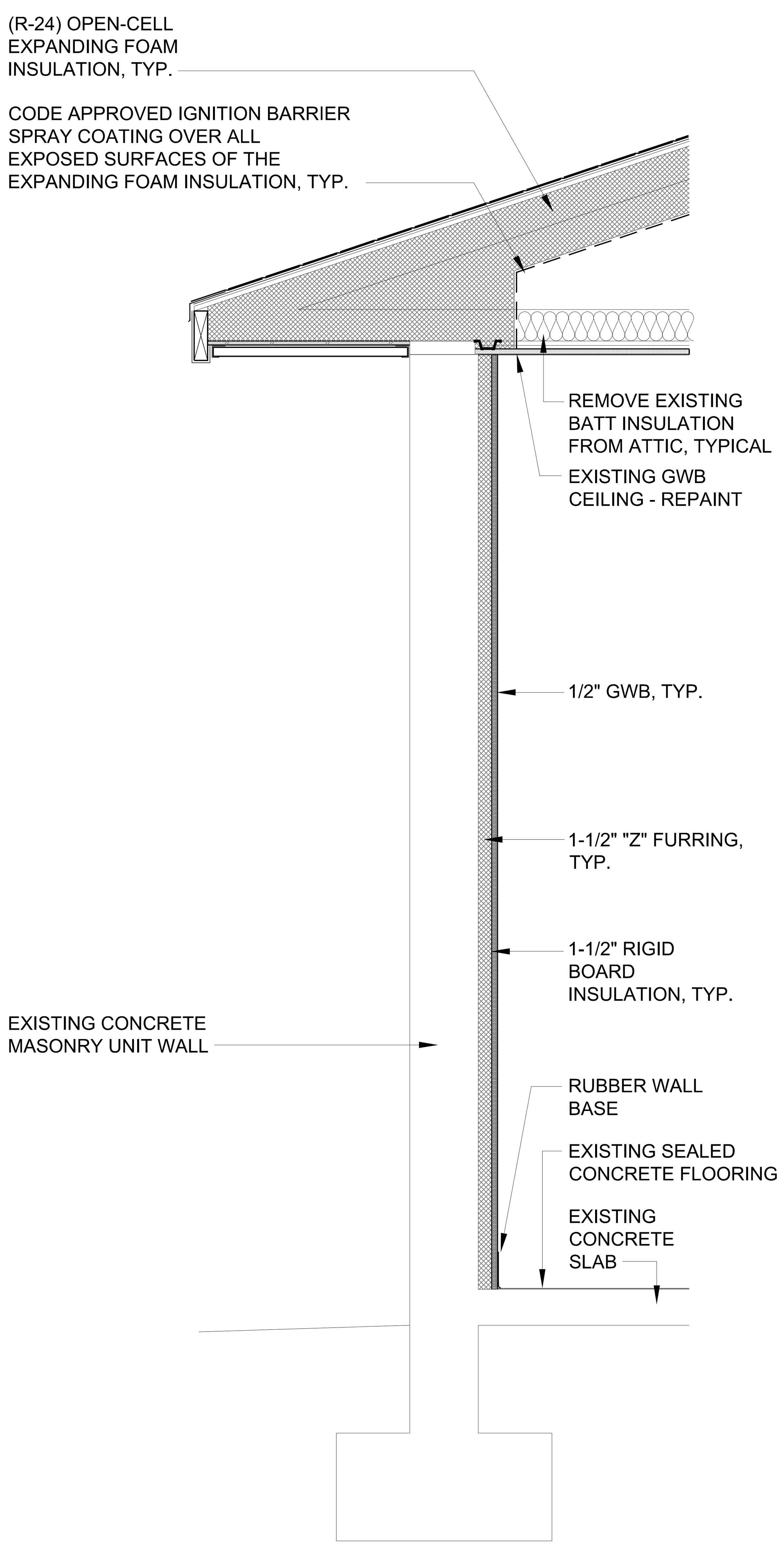
ABBREVIATIONS

GWB = GYPSUM WALLBOARD
RWB = RUBBER WALL BASE
TILE BACK. = TILE BACKER BOARD

WINDOW TYPES







1 A4.1 **WALL SECTION**
SCALE: 1" = 1'-0"

SYM | DESCRIPTION | DATE | APPR

SEAL

ENB ARCHITECTS
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A/E INFO

JTN
DRAWN BY: JTN
CHECKED BY:

FLORIDA ARMY NATIONAL GUARD
DEPARTMENT OF MILITARY AFFAIRS
CONSTRUCTION AND FACILITY MANAGEMENT OFFICE
CAMP BLANDING JOINT TRAINING CENTER
STARKE, FL
BARRACKS RENOVATION - AREA 4600

WALL SECTIONS

SIZE: ANSI D
DATE: 20 AUGUST 2015
PROJECT NO: 214026
DRAWING NO.:

A4.1

FULLY ENCLOSED & GASKETED INDUSTRIAL

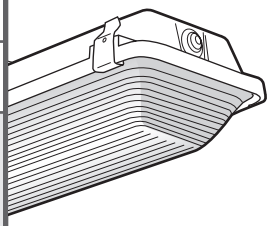
96

LED

SUBMITTAL:

JOB:

TYPE: **VOLTAGE:**

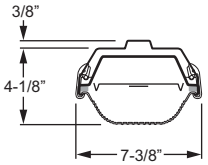


EXAMPLE: **96 - 4 - L62/830 - HIAFR - OPTIONS - DRV - UNV**

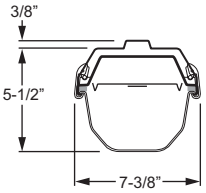
SERIES | NOMINAL LENGTH | LED PACKAGE | SHIELDING | OPTIONS | DRIVER | VOLTAGE

FEATURES

- Fully gasketed fixture resists dust, bugs, and moisture.
- Polycarbonate toggle latches (standard) ensure a tight seal and provide easy access to electrical components.
- Optional stainless steel, tamper-resistant stainless steel, or tamper-resistant polycarbonate latches available.
- Closed-cell polyurethane gasket poured and formed in place to ensure tight seal—does not absorb water or support fungal growth.
- NSF/ANSI Standard 2—Splash Zone certified.
- IP65, IP66, and IP67 certified.
- Can operate up to 40°C/104°F with high-ambient (HA/40C) option.
- LED technology provides high efficacy and energy efficiency.
- Multiple dimming protocols available.
- Rated for 50,000 hours at 85% lumen maintenance (L85).
- Minimum 82 CRI; 3000K, 3500K, 4000K, 5000K CCT.
- This fixture is proudly made in the USA.



Shown with PCFR or HIAFR diffuser



Shown with DCL or DFR diffuser

ORDERING INFORMATION

SERIES

96	Fully Enclosed & Gasketed Industrial – LED

NOMINAL LENGTH

2	2′
4	4′
8	8′ (acrylic diffusers only)

LED PACKAGE

NOTE: Nominal lumens are based on HIAFR shielding. See back for fixture performance data.

EXAMPLE: L80/830		
LUMEN PACKAGE	**NOMINAL LUMENS**	**MINIMUM CRI & CCT**
2′ UNIT		**830** = 82 CRI, 3000K **835** = 82 CRI, 3500K **840** = 82 CRI, 4000K **850** = 82 CRI, 5000K
L21/	2,100	
L29/	2,900	
4′ UNIT		
L40/	4,000	
L62/	6,200	
8′ UNIT		
L50/	5,000	
L80/	8,000	
L130/	13,000	

Additional lumen packages available, see options.

SHIELDING

HIAFR	Frosted, ribbed, impact-resistant acrylic
PCFR	Frosted, ribbed, UV stabilized polycarbonate (not available in 8′ units)
DFR	Drop, frosted, impact-resistant acrylic
DCL	Drop, clear, impact-resistant acrylic with frosted ends

OPTIONS/ACCESSORIES

Cord and receptacle options available, see back for details.

EM/BSL310	Emergency LED driver, nominal 1,300 lumens module output in EM mode (4′ or 8′ only; 4′ available with lumen packages at or below 4,000 lumens; 8′ available with lumen packages at or below 8,000 lumens)
HA/40C[1]	High-ambient, 40°C maximum operating temperature[1]
(L___)	Additional lower lumen packages in 100 nominal lumen increments available. Option must be specified with next *higher* lumen package. **Example:** 4,100 nominal lumens = 96-4-L62/840-HIAFR-**(L41)**.
WET/1	(1) 1/2″ watertight hub (factory-installed in end of housing)
WET/2	(2) 1/2″ watertight hubs (factory-installed in ends of housing; not available with occupancy sensor option)
SSCMB	Stainless steel chain mounting brackets (2 per fixture)
TP[2]	Tamper-resistant polycarbonate latches[2]
SS LATCH	Stainless steel latches
TP/SS LATCH[2]	Tamper-resistant stainless steel latches[2]

OCCUPANCY SENSORS

Specify from the following options:

- **OCCWS HB350W-L2W-120/277**[3]
- **OCCWS HB350W-L3W-120/277**[3]
- **OCCWS HB350W-L4W-120/277**[3]

DRIVER

Additional driver options available, see back for details.

DRV	Driver prewired for non-dimming applications
DIM	Driver prewired for 0-10V low-voltage dimming applications

VOLTAGE

Must specify 120V or 277V when using occupancy sensor.

120	120V
277	277V
UNV	120-277V

SPECIFICATIONS

Enclosure – Outer housing consists of 5VA (f1) fiberglass, rated for flame and weather resistance.
Internal Housing – .040″ aluminum.
Latching – Injection-molded polycarbonate latches.
Reflector – 92% minimum average reflective white polyester powder coat bonded to phosphate-free, multi-stage pretreated metal.
Shielding – Frosted, ribbed, impact-resistant acrylic.
LED Module – High quality mid-power LED board. L85 at 50,000 hours. 25°C maximum ambient operating temperature.
Driver – Constant current, class 2 driver.
Mounting – Surface or suspended. Stainless steel ceiling mount brackets included.
Labels & Certifications – cETLus conforms to UL STD 1598 and UL STD 8750. Certified to CAN/CSA STD C22.2 No. 250.0. Suitable for dry or damp locations. cETLus listed as suitable for wet locations when specified with watertight hub, STOW or SOOW cord, or mini-male receptacle option. NSF/ANSI Standard 2—Splash Zone certified, IP65, IP66, and IP67 certified, and rated for NEMA 4X.
Warranty – 5-year limited fixture warranty, see hewilliams.com/warranty.

[1] Not available with EM/BSL310 option.
[2] This option requires a **tamper-resistant tool** (must be ordered separately). Please specify quantity required per project.
[3] IP65 certified when specified with occupancy sensor.

IMPORTANT:
Electrostatic sensitive unit. Observe precautions when handling.

DIMMING DRIVER OPTIONS

Restrictions apply when used with Emergency driver or HA/40C option, consult factory.

CATALOG #	DESCRIPTION
DIM LINE	Line voltage dimming driver (must specify 120V or 277V)
SD40	40% step-dimming driver (must specify 120V or 277V)
DALI	DALI dimming driver
L3D ECO	Lutron Hi-lume® A-Series LED dimming driver for EcoSystem® controls
L3D 3WIRE	Lutron Hi-lume® A-Series LED dimming driver for 3-wire controls
LTE LINE	Lutron Hi-lume® A-Series LED dimming driver for forward phase line voltage controls (120V only)

CORD OPTIONS

EXAMPLE: 5WMRC6		
NUMBER OF CONDUCTORS	**POWER CONNECTION – NON-DIMMING**	**CORD LENGTH**
3 = 3-wire **4** = 4-wire	**WMR** = Mini-male receptacle only	N/A
	WC = STOW cord	**6** = 6′ **20** = 20′
	WMRC = Mini-male receptacle with STOW cord	
	POWER CONNECTION – DIMMING	
5 = 5-wire **6** = 6-wire	**WMR** = Mini-male receptacle only	N/A
	WC = SOOW cord	**6** = 6′ **20** = 20′
	WMRC = Mini-male receptacle with SOOW cord	

FIXTURE PERFORMANCE DATA

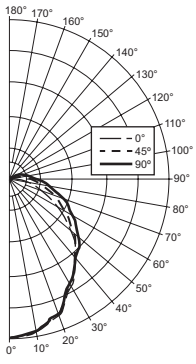
SIZE	LED PACKAGE	AVERAGE SYSTEM WATTAGE	NOMINAL LUMENS	
			FROSTED LENS	CLEAR LENS
2′	**L21/**	27	2,100	2,400
	L29/	38	2,900	3,400
4′	**L40/**	40	4,000	4,700
	L62/	73	6,200	7,300
8′	**L50/**	41	5,000	5,900
	L80/	76	8,000	9,500
	L130/	135	13,000	15,800

PHOTOMETRY

Catalog #: **96-4-L62/830-HIAFR-DRV**

TEST REPORT INFORMATION

- Test Report #: 18131.0
- Date: 05/08/14
- Lamp Type: LED light engine
- **Rated Lumens: 6123**
- **Watts: 78**
- **Lumens Per Watt: 77**
- **CRI: 83.8**
- **CCT: 3082K**



CANDLEPOWER DISTRIBUTION

Vertical Angle	Horizontal Angle 0°	45°	90°	Zonal Lumens
0	2189.	2189.	2189.	
5	2169.	2147.	2154.	205.5
15	2032.	2017.	2003.	571.1
25	1770.	1753.	1720.	808.4
35	1503.	1480.	1494.	934.8
45	1213.	1236.	1311.	967.2
55	842.	935.	1063.	846.7
65	532.	702.	847.	691.0
75	248.	452.	583.	462.5
85	62.	289.	414.	292.1
90	24.	201.	303.	
95	7.	163.	268.	165.5
105	0.	97.	180.	98.0
115	0.	49.	115.	52.3
125	0.	15.	64.	22.1
135	0.	0.	25.	5.8
145	0.	0.	0.	0.0
155	0.	0.	0.	0.0
165	0.	0.	0.	0.0
175	0.	0.	0.	0.0
180	0.	0.	0.	

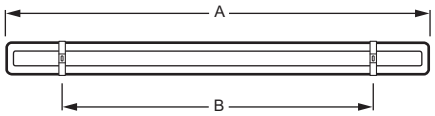
LUMEN SUMMARY

Zone	Lumens	% Fixture
0 - 30	1585.	25.9
0 - 40	2520.	41.2
0 - 60	4334.	70.8
0 - 90	5779.	94.4
90 - 120	316.	5.2
90 - 130	338.	5.5
90 - 150	344.	5.6
90 - 180	344.	5.6
Total Luminaire:		
0 - 180	6123.	100.0

IES Spacing Criteria:
End = 1.1, Diagonal = 1.1, Across = 1.1

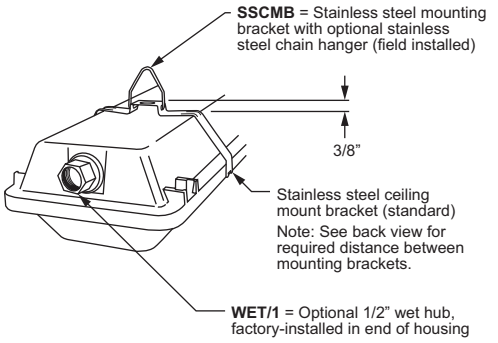
FIXTURE DETAILS

BACK VIEW



Nominal Length	Overall Length (A)	Mounting Distance (B)
2′	27-5/8″	15″- 17″ OC
4′	51-7/8″	36″- 41″ OC
8′	100-1/4″	70″- 80″ OC

MOUNTING



Project name and location:

BARRACKS RENOVATION
AREAS 4600 AND 4700 AND 4800

Camp Blanding Joint Training Center
Starke, Florida

Projects No. 214026 and 214027 and 214028

To be constructed for and the contract administered by:

State of Florida
Department of Military Affairs
Construction and Facility Management Office
2305 State Road 207
St. Augustine, Florida 32086

20 AUGUST 2015
CONSTRUCTION SPECIFICATIONS

Architectural / Engineering Team

Architect
Ebert Norman Brady Architects
Mechanical / Electrical / Plumbing Engineer
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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.4 FIELD CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Before selective demolition, Owner will remove the following items:

a. Non-fixed interior furniture, fixtures and equipment.

B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
   1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

   1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs, and preconstruction videotapes.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

   1. Arrange to shut off indicated utilities with utility companies.

2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, plumbing, and HVAC systems, equipment, and components indicated to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
    c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-

cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

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SECTION 066400 - PLASTIC PANELING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes glass-fiber reinforced plastic (FRP) wall and ceiling paneling and trim accessories.

1.2 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 450 or less.

PART 2 - PRODUCTS

2.1 PLASTIC SHEET PANELING

A. General: Gelcoat-finished, glass-fiber reinforced plastic panels complying with ASTM D 5319.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Kemlite Company Inc.
b. Marlite.
c. Nudo Products, Inc.

2. Nominal Thickness: Not less than 0.075 inch (1.9 mm).
3. Surface Finish: Smooth for walls.
4. Color: As selected by Architect from manufacturer's full range.

2.2 ACCESSORIES

A. Trim Accessories: Manufacturer's standard one-piece vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners, outside corners, and caps as needed to conceal edges.

1. Color: Match panels.

B. Adhesive: As recommended by plastic paneling manufacturer.

C. Sealant: Single-component, mildew-resistant, neutral-curing silicone or Single-component, mildew-resistant, acid-curing silicone sealant recommended by plastic paneling manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that could impair bond of adhesive, including oil, grease, dirt, and dust.

B. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.

C. Lay out paneling before installing. Locate panel joints where indicated and to provide equal panels at ends of walls not less than half the width of full panels and so that trimmed panels at corners are not less than 12 inches (300 mm) wide.

3.2 INSTALLATION

A. Install plastic paneling according to manufacturer's written instructions.

B. Install panels in a full spread of adhesive.

C. Install trim accessories with adhesive.

D. Fill grooves in trim accessories with sealant before installing panels and bed inside corner trim in a bead of sealant.

E. Maintain uniform space between panels and wall fixtures. Fill space with sealant.

F. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

END OF SECTION 066400

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Foam-plastic board insulation.
2. Spray polyurethane foam insulation.
3. Foamed-in-place masonry wall insulation.

PART 2 - PRODUCTS

2.1 FOAM-PLASTIC BOARD INSULATION

A. Extruded-Polystyrene Board Insulation: ASTM C 578, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. DiversiFoam Products.
b. Dow Chemical Company (The).
c. Owens Corning.
d. Pactiv Building Products.

2. Type X, 15 psi (104 kPa).

2.2 SPRAY POLYURETHANE FOAM INSULATION

A. Open-Cell Polyurethane Foam Insulation: Spray-applied polyurethane foam using water as a blowing agent, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. BaySystems NorthAmerica, LLC.
b. Demilec (USA) LLC.
c. Icynene Inc.
d. SWD Urethane Company.

2. Minimum density of 0.4 lb/cu. ft. (6.4 kg/cu. m), thermal resistivity of 3.4 deg F x h x sq. ft./Btu x in. at 75 deg F (24 K x m/W at 24 deg C).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

E. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer.

F. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

END OF SECTION 072100

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Joint sealants for the applications indicated in the Joint-Sealant Specification at the end of Part 3.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

B. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.2 SILICONE JOINT SEALANTS

A. Silicone Joint Sealant: ASTM C 920.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Tremco Tremsil 200 General Construction Grade Silicone Building Sealant or comparable product by one of the following:

a. BASF Building Systems.
b. Dow Corning Corporation.
c. GE Advanced Materials - Silicones.
d. May National Associates, Inc.
e. Pecora Corporation.
f. Polymeric Systems, Inc.
g. Schnee-Morehead, Inc.
h. Sika Corporation; Construction Products Division.
i. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: nonsag (NS).
4. Class: 25.
5. Uses Related to Exposure: Nontraffic (NT).

B. Silicone Joint Sealant: ASTM C 920.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Dow Corning 790 Silicone Building Sealant or comparable product by one of the following:

a. BASF Building Systems.
b. Dow Corning Corporation.
c. GE Advanced Materials - Silicones.
d. May National Associates, Inc.
e. Pecora Corporation.
f. Polymeric Systems, Inc.
g. Schnee-Morehead, Inc.
h. Sika Corporation; Construction Products Division.
i. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: nonsag (NS).
4. Class: 100/50.
5. Uses Related to Exposure: Traffic (T) and Nontraffic (NT).

2.3 URETHANE JOINT SEALANTS

A. Urethane Joint Sealant: ASTM C 920.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Tremco Vulkem 116 One-Part, High Performance Polyurethane Sealant or comparable product by one of the following:

a. BASF Building Systems.
b. Bostik, Inc.
c. Lymtal, International, Inc.
d. May National Associates, Inc.
e. Pacific Polymers International, Inc.
f. Pecora Corporation.
g. Polymeric Systems, Inc.
h. Schnee-Morehead, Inc.
i. Sika Corporation; Construction Products Division.
j. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: nonsag (NS).
4. Class: 25.
5. Uses Related to Exposure: Traffic (T) and Nontraffic (NT).

2.4 LATEX JOINT SEALANTS

A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Pecora Corporation AC-20 FTR (Fire & Temperature Rated) Acrylic Latex Caulking Compound or comparable product by one of the following:

a. BASF Building Systems.
b. Bostik, Inc.
c. May National Associates, Inc.
d. Pecora Corporation.
e. Schnee-Morehead, Inc.
f. Tremco Incorporated.

2.5 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at the back of the joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

2.7 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Non-porous substrates include metal, glass, porcelain enamel, and glazed surfaces of ceramic tile.
3. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil grease, waterproofing, water repellents, water, surface dirt, and frost.
4. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include concrete, masonry and unglazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION

A. General: Comply with joint-sealant manufacturer's written instructions for products and applications indicated, unless more stringent requirements apply

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
4. Use masking tape to protect surfaces adjacent to recessed tooled joints.

G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.4 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.5 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed and cured sealant joints as follows:

    a. Perform 5 tests for the first 500 feet of joint length for each kind of sealant and joint substrate.

2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

    a. Construction joints in cast-in-place concrete.
    b. Joints between plant-precast architectural concrete units.
    c. Control and expansion joints in unit masonry.
    d. Joints in architectural precast concrete units.
    e. Joints between different materials listed above.
    f. Other joints as indicated.

2. Joint Sealant: Dow 790 Silicone Joint Sealant.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:
    a. Perimeter joints between materials listed above and frames of doors, windows and louvers.
    b. Other joints as indicated.

2. Joint Sealant: Tremco Vulkem 116 One-Part, High Performance Polyurethane Sealant
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

    a. Control and expansion joints on exposed interior surfaces of exterior walls.
    b. Perimeter joints of exterior openings where indicated.
    c. Tile control and expansion joints.
    d. Perimeter joints between interior wall surfaces and frames of interior doors, windows.
    e. Other joints as indicated.

2. Joint Sealant: Pecora Corporation AC-20 FTR (Fire & Temperature Rated) Acrylic Latex Caulking Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

D. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant Location:

a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
b. Tile control and expansion joints where indicated.
c. Other joints as indicated.

2. Joint Sealant: Silicone.
3. Joint Sealant: Tremco Tremsil 200 General Construction Grade Silicone Building Sealant.
4. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
5. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 079200

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SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes hollow-metal work.

1.2 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Amweld International, LLC.
2. Ceco Door Products; an Assa Abloy Group company.
3. Curries Company; an Assa Abloy Group company.
4. Republic Doors and Frames.
5. Steelcraft; an Ingersoll-Rand company.

2.2 EXTERIOR HOLLOW-METAL DOORS AND FRAMES

A. Heavy-Duty Doors and Frames: SDI A250.8, Level 2.

1. Physical Performance: Level B according to SDI A250.4.
2. Doors:

    a. Type: As indicated in the Door and Frame Schedule.
    b. Thickness: 1-3/4 inches (44.5 mm).
    c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch (1.0 mm).
    d. Edge Construction: Model 1, Full Flush.
    e. Core: Manufacturer's standard insulation material.
    f. Thermal-Rated Doors: Provide doors fabricated with thermal resistance value (R-value) of not less than R-5 minimum when test according to ASTM C 1363.

3. Frames:

a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm).
b. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.3 FRAME ANCHORS

A. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch (1.0 mm), and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch (51-mm) height adjustment. Terminate bottom of frames at finish floor surface.

2.4 MATERIALS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

C. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

D. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

E. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

F. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

H. Glazing: Section 088000 "Glazing."

2.5 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Hollow-Metal Doors:

1. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.

C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
2. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
3. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
4. Jamb Anchors: Provide number and spacing of anchors as follows:
a. Postinstalled Expansion Type: Locate anchors not more than 6 inches (152 mm) from top and bottom of frame. Space anchors not more than 26 inches (660 mm) o.c.

2.6 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: SDI A250.10.

2.7 ACCESSORIES

A. Grout Guards: Formed from same material as frames, not less than 0.016 inch (0.4 mm) thick.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
a. Remove temporary braces necessary for installation only after frames have been properly set and secured.
b. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
2. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.

3. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.

a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

4. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

B. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Steel Doors:

a. Between Door and Frame Jambs and Head: 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).
b. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm) to 1/4 inch (6.3 mm) plus or minus 1/32 inch (0.8 mm).
c. At Bottom of Door: 3/4 inch (19.1 mm) plus or minus 1/32 inch (0.8 mm).
d. Between Door Face and Stop: 1/16 inch (1.6 mm) to 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).

3.2 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

C. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

SECTION 085313 - VINYL WINDOWS

GENERAL

1.1 SECTION INCLUDES

A. Fixed and sliding windows

1.2 REFERENCES

A. American Architectural Manufacturer Association (AAMA)

1. ANSI/AAMA/NWWDA 101/I.S.2 /NAFS; Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors

1.3 QUALITY ASSURANCE

A. Qualifications

1. Installer shall have successfully completed training through the window manufacturer's qualified training program. The installer must be an authorized installer by the window manufacturer.

B. Pre-installation Meeting

1. Conduct meeting on site with Window Manufacturer's Representative, Window Installer and General Contractor.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver windows materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.

B. Store windows as recommended by manufacturer.

PRODUCTS

1.5 MANUFACTURER

A. Basis-of-design Manufacturer: JELD-WEN® Windows and Doors; 3250 Lakeport Blvd. P.O. Box 1329; Klamath Falls, OR 97601-0268, USA; Phone 541.885.7412, fax 541.884.3331; Toll free 800.535. 3936; website www.jeld-wen.com or equivalent.

B. Basis of Design: Windows are based on the JELD-WEN®'s Vinyl Windows or equivalent.

C. Glazing

1. Window Glazing

a. Strength: Tempered
b. Insulated Glass standard:

1) Two panes of glass utilizing a continuous roll formed stainless steel and dual seal sealant.
2) Overall Nominal Thickness: 3/4 inch

3) Type: standard: Type 1- Clear and Specialty Glass – Obscure for bathroom window glazing

4) Coating Options: Low E on surface 2

1.6 WINDOW ACCESSORIES

A. Insect Screens

1. Material: standard: Charcoal fiberglass screen cloth (18 by 16 mesh) set in painted roll formed aluminum frame.

a. Frame Finish: Color match window frame extrusion.

B. Sealants: Refer to Section 07 92 00 Joint Sealants

1.7 FABRICATION

A. General: Fixed and Operable Windows

1. Frame: Fusion welded corners

2. Sash: Fusion welded corners

3. Glass: Mounted using silicone glazing compound or glazing tape.

1.8 FINISH

A. Color: Standard White

EXECUTION

1.9 GENERAL

A. Install windows in accordance with manufacturer's installation guidelines and recommendations.

1.10 EXAMINATION

A. Inspect window prior to installation.

B. Inspect rough opening for compliance with window manufacturer recommendations. Verify rough opening conditions are within recommended tolerances.

1.11 PREPARATION

A. Prepare windows for installation in accordance with manufacturer's recommendations.

1.12 INSTALLATION

A. Insert window into rough opening:

1. Shim side jambs straight.
2. Inspect window for square, level and plumb.
3. Fasten window through jamb, shim and into rough opening jamb.
4. Test and adjust for smooth operation of window.
5. Ensure weep holes are clear of debris for proper drainage.

1.13 CLEANING

A. Remove protective film from glass.

B. Clean the exterior surface and glass with mild soap and water.

1.14 PROTECTION

A. Protect installed windows from damage.

END OF SECTION

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Non-load-bearing steel framing systems for interior gypsum board assemblies.

PART 2 - PRODUCTS

2.1 FRAMING SYSTEMS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.

B. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (31.8 mm), wall attachment flange of 7/8 inch (22 mm), minimum uncoated-metal thickness of 0.018 inch (0.45 mm), and depth required to fit insulation thickness indicated.

C. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

1. Minimum Base-Metal Thickness: 0.033 inch (0.84 mm).

2.2 AUXILIARY MATERIALS

A. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.

1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.2 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

C. Install studs so flanges within framing system point in same direction.

D. Z-Furring Members:

1. Erect insulation vertically and hold in place with Z-furring members spaced 24 inches (610 mm) o.c.
2. Except at exterior corners, securely attach narrow flanges of furring members to wall with screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.
3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches (305 mm) from corner and cut insulation to fit.

E. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Glass matt, water resistant backing board.

PART 2 - PRODUCTS

2.1 INTERIOR GYPSUM BOARD

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. CertainTeed Corp.
2. Georgia-Pacific Gypsum LLC.
3. Lafarge North America Inc.
4. National Gypsum Company.
5. USG Corporation.

B. Gypsum Board: ASTM C 1396/C 1396M.

1. Thickness: 1/2 inch.
2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.

2.2 TILE BACKING PANELS

A. Glass-Mat, Water-Resistant Backing Board: ASTM C 1178/C 1178M, with manufacturer's standard edges.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed Corp.; GlasRoc Tile Backer.
b. Georgia-Pacific Gypsum LLC; DensShield Tile Backer.

2. Core: 1/2 inch.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.3 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.

B. Aluminum Trim: ASTM B 221 (ASTM B 221M), Alloy 6063-T5.

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.

C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

2.5 AUXILIARY MATERIALS

A. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

B. Thermal Insulation: As specified in Section 072100 "Thermal Insulation."

PART 3 - EXECUTION

3.1 APPLYING AND FINISHING PANELS

A. Comply with ASTM C 840.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed.

D. Install trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

E. Prefill open joints, rounded or beveled edges, and damaged surface areas.

F. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

G. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 2: Panels that are substrate for tile, FRP Board and panels that are concealed by suspended acoustical ceiling tile.
2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

H. Protect adjacent surfaces from drywall compound and texture finishes and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

I. Remove and replace panels that are wet, moisture damaged, and mold damaged.

END OF SECTION 092900

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SECTION 093000 – TILING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Floor tile.
2. Wall tile.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

1. Basis-of-Design Product: The design for each tile type is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 TILE PRODUCTS

A. ANSI Ceramic Tile Standard: Provide Standard grade tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.

B. Porcelain Floor Tile:

1. Basis-of-Design Product: Iris U.S. – size 3" x 3".
2. Color: Deluxe Collection – "Olive Brown" (Honed)
3. Grout color: Mapei – "11 Sahara Beige".
4. Install per TCA Method F122-01.

C. Glazed Porcelain Ceramic Wall Tile:

1. Basis-of-Design Product: Iris U.S. – size 12" x 12".
2. Color: Deluxe Collection - "Crema" (Polished)
3. Grout color: Mapei – "49 Light Almond".
4. Locations: Wall tile in shower and drying areas. Refer to drawings.
5. Base Trim: Iris U.S. Cove Base IRH612C008, size 6" x 12".
6. Install per TCA Method W244-01.

2.3 ACCESSORY MATERIALS

B. Waterproofing and Crack-Suppression Membranes for Thin-Set Tile Installations: Manufacturer's standard product that complies with ANSI A118.10.

2.4 SETTING AND GROUTING MATERIALS

A. Basis of Design Product:

1. Grouting Materials Equivalent to: StarQuartz Industries, Inc. "Quartz-Lock Grout." - Custom Building Products CEG-Lite Grout Exceed ANSI 118.3
2. *Floor* Setting Materials: Latex-Portland Cement Mortar ANSI-A118.4 Custom Building Products Versabond over Liquid Applied Waterproofing ANSI-A118.10. Custom Building Products Red Gard AntiFracture and Waterproofing.
3. Wall Setting Materials: Latex-Portland Cement Mortar ANSI-A118.4.Custom Building Products ProLite Mortar

2.5 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials. Custom Building Products LevelQuik ES

PART 3 - EXECUTION

3.1 PREPARATION

A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.

B. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions.

C. Remove protrusions, bumps, and ridges by sanding or grinding.

D. Blending: For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.

E. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.2 INSTALLATION, GENERAL

A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.

B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules.

C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Grind cut edges of tile abutting trim, finish, or built-in items. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

E. Jointing Pattern: Lay tile in patterns indicated in drawings, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.

F. Lay out tile wainscots as indicated in drawings.

G. Expansion Joints: Locate expansion joints and other sealant-filled joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Locate joints in tile surfaces directly above joints in concrete substrates.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

H. Grout tile to comply with requirements of ANSI A108.10, unless otherwise indicated.

I. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.

1. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

J. Install tile on floors with the following joint widths:

1. Porcelain Tile: 1/8 inch.

K. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile, unless otherwise indicated.

1. Set thresholds in latex-portland cement mortar for locations where mortar bed would otherwise be exposed above adjacent nontile floor finish.

L. Install tile on walls with the following joint widths:

1. 1/8 inch installed with the 6 inch tile dimension installed vertically and all joints aligned.

3.3 FLOOR TILE INSTALLATION SCHEDULE

A. Interior floor installation on waterproofing membrane over concrete; thin-set mortar; TCA F122.

1. Thin-Set Mortar: Water-cleanable, 100% solids epoxy mortar and nonsagging grout.
2. Grout: Equivalent to: StarQuartz Industries, Inc. "Quartz-Lock Grout."Custom Building Products CEG Lite Epoxy Grout

3.4 WALL TILE INSTALLATION SCHEDULE

A. Interior wall installation; thin-set mortar; over tile backer units; TCA W244.

1. Thin-Set Mortar: Water-cleanable, 100% solids epoxy mortar and nonsagging grout.
2. Grout: Equivalent to: StarQuartz Industries, Inc. "Quartz-Lock Grout." Custom Building Products CEG Lite Epoxy Grout

END OF SECTION 093000

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Resilient base.
2. Resilient molding accessories.

PART 2 - PRODUCTS

2.1 THERMOPLASTIC-RUBBER BASE (RWB)

A. Basis-of-Design: Johnsonite Rubber Wall Base

B. Product Standard: ASTM F 1861, Type TP (rubber, thermoplastic).

1. Group: I (solid, homogeneous).
2. Style and Location:

a. Style A, Straight: Provide in areas with carpet.
b. Style B, Cove: Provide in areas with resilient flooring.

1) Profile: As indicated.

C. Thickness: 0.125 inch (3.2 mm).

D. Height: 4 inches (102 mm).

E. Lengths: Cut lengths 48 inches (1219 mm) long or coils in manufacturer's standard length.

F. Outside Corners: Job formed or preformed.

G. Inside Corners: Job formed or preformed.

2.2 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are the same temperature as the space where they are to be installed.

D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.2 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Preformed Corners: Install preformed corners before installing straight pieces.

3.3 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513

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SECTION 099123 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following substrates:

1. Steel.
2. Gypsum board.

1.2 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the paint category indicated.

2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

2.3 PRIMERS/SEALERS

A. Primer Sealer, Latex, Interior:

1. Basis-of-Design – Benjamin Moore Fresh Start Multi-purpose Latex Primer N023.
2. Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Latex Primer N534.

2.4 METAL PRIMERS

A. Primer, Rust-Inhibitive, Water Based:

1. Basis-of-Design – Benjamin Moore Super Spec HP Acrylic Metal Primer P04.

2.5 WATER-BASED PAINTS

A. Latex, Interior, Flat:

1. Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Flat Finish 536.

B. Latex, Interior, Eggshell:

1. Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Eggshell Finish N538.

C. Latex, Interior, Semi-Gloss:

1. Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Semi-gloss Finish N539.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Gypsum Board: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 PAINTING SCHEDULE

A. Steel Substrates:

1. Prime Coat: Basis-of-Design – Benjamin Moore Super Spec HP Acrylic Metal Primer P04.
2. Intermediate Coat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Semi-gloss Finish N539.
3. Topcoat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Semi-gloss Finish N539.

B. Gypsum Board and Plywood Substrates:

1. Prime Coat: Basis-of-Design – Benjamin Moore Fresh Start Multi-purpose Latex Primer N023.
2. Intermediate Coat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Flat Finish 536.
3. Topcoat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Eggshell Finish N538. All gypsum wallboard walls except where noted otherwise.
4. Topcoat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Flat Finish 536. All gypsum wallboard ceilings except where noted otherwise.
5. Topcoat: Basis-of-Design – Benjamin Moore Ultra Spec 500 Interior Semi-gloss Finish N539-Restrooms all ceilings.

END OF SECTION 099123

SECTION 102113 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-polymer toilet compartments configured as toilet compartments, compartment doors and urinal screens.

1.2 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 75 or less.
2. Smoke-Developed Index: 450 or less.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Zamac: ASTM B 86, commercial zinc-alloy die castings.

2.2 SOLID-POLYMER UNITS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Accurate Partitions Corporation.
2. Ampco, Inc.
3. Bradley Corporation; Mills Partitions.
4. Comtec Industries/Capitol Partitions.
5. General Partitions Mfg. Corp.
6. Hadrian Manufacturing Inc.
7. Knickerbocker Partition Corporation.
8. Partition Systems Incorporated of South Carolina.
9. Rockville Partitions Incorporated.
10. Santana Products, Inc.
11. Sanymetal; a Crane Plumbing company.

B. Door and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch (25 mm) thick, seamless, with eased edges, no-sightline system, and with homogenous color and pattern throughout thickness of material.

1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
2. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless-steel strip fastened to exposed bottom edges of solid-polymer components to prevent burning.
3. Polymer Panel Finish: One color and pattern in each room.

a. Color and Pattern: As selected by Architect from manufacturer's full range.

C. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; polymer or stainless steel.

1. Polymer Color and Pattern: Matching pilaster.

D. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets, chrome-plated zamac or clear-anodized aluminum or stainless steel or chrome-plated brass.
2. Full-Height (Continuous) Type: Manufacturer's standard design; polymer or extruded aluminum or stainless steel.

a. Polymer Color and Pattern: Matching panel.

2.3 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.

1. Material: Chrome-plated zamac or Clear-anodized aluminum or Stainless steel or Chrome-plated brass.
2. Hinges: Manufacturer's standard paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees or continuous, cam type that swings to a closed or partially open position or continuous, spring-loaded type or integral hinge for solid-polymer doors.
3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors and entrance-screen doors.
6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

2.4 FABRICATION

A. Floor-and-Ceiling-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.

B. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

B. Clearances: Maximum 1/2 inch (13 mm) between pilasters and panels; 1 inch (25 mm) between panels and walls.

C. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than two brackets attached near top and bottom of panel. Locate wall brackets so holes for wall anchors occur in masonry or tile joints. Align brackets at pilasters with brackets at walls.

3.2 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors and doors in entrance screens to return doors to fully closed position.

END OF SECTION 102113

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SECTION 123661 - SIMULATED STONE COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-surface-material countertops.

PART 2 - PRODUCTS

2.1 SOLID-SURFACE-MATERIAL COUNTERTOPS

A. Configuration: Provide countertops with the following front style:

1. Front: 1-1/2-inch (38-mm) laminated bullnose.

B. Countertops: 1/4-inch- (6.4-mm-) thick, solid surface material laminated to 3/4-inch- (19-mm-) thick particleboard with exposed edges built up with 3/4-inch- (19-mm-) thick, solid surface material exposed edges faced with 1/4-inch- (6.4-mm-) thick, solid surface material.

2.2 COUNTERTOP MATERIALS

A. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Manufacturers: Subject to compliance with requirements, the following Basis-of-Design selections: Corian or equivalent.

2. Type: Provide Standard Type or Veneer Type made from material complying with requirements for Standard Type, as indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Fasten countertops by screwing through countertop support blocks of countertop into surrounding walls. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

END OF SECTION 123661