ADDENDUM NO. 3

October 28, 2022

Carey Ridge Elementary Addition & Renovation
16231 Carey Road
Westfield, IN 46074

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated September 30, 2022, by CSO Architects. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Page ADD 3-1 through ADD 3-3 and attached Addendum No. 3 from CSO Architects, consisting of two (1) page, Specification Sections: 05 52 13 Steel Pipe and Tube Railings, 08 11 13 Hollow Metal Door Frames, 08 31 13 Access Doors and Frames, 10 21 13 Toilet Compartments, 10 28 00 Toilet, Bath, and Laundry Accessories, and 11 52 13 Projection Screens.

Below is the link for the Virtual Bid Opening, which Bids are due November 3, 2022, at 2:00PM at Westfield Washington Schools, Community Board Room, 19500 Tomlinson Road, Suite B, Westfield, IN 46074.

Microsoft Teams meeting
Join on your computer, mobile app or room device
Click here to join the meeting
Meeting ID: 255 660 938 951
Passcode: f7u8x8
Download Teams | Join on the web
Or call in (audio only)
+1 317-762-3960,,632490404# United States, Indianapolis
Phone Conference ID: 632 490 404#

GENERAL NOTE

Work related Restrooms C103, D118, F109, F110, G106, and G107 has been deleted from the project scope.

A. SPECIFICATION SECTION 00 31 00 BID FORM

1. Reissued Specification Section is attached herein.

B. SPECIFICATION SECTION 00 43 50 SUBCONTRACTORS AND PRODUCTS LISTS

1. Reissued Specification Section is attached herein.

C. SPECIFICATION SECTION 01 12 00 MULTIPLE CONTRACT SUMMARY

1. Paragraph 3.03 Bid Categories

A. Bid Category No. 1 – General Trades

Add the following specification section:
05 52 13 – Steel Pipe and Tube Railings
08 11 13 – Hollow Metal Door Frames
08 31 13 – Access Doors and Frames
10 21 13 – Toilet Compartments
10 28 00 – Toilet, Bath, and Laundry Accessories
11 52 13 – Projection Screens.

Add the following clarification:
19. Include all work associated with patching of slab-on-grade for new reception desk under slab raceway. Saw cutting, removal and disposal of slab-on-grade by Bid Category 09.
20. Provide pre-manufactured Aluminum ships ladder.

E. Bid Category No. 5 – Metal Framing, Drywall & Ceilings

Add the following clarification:
5. Include replacement/rework of acoustical ceilings in existing areas as required per Architectural Demolition sheets.
6. Include an additional $20,000 allowance within the base bid for drywall replacement to complete restroom wall tile replacement.

H. Bid Category No. 8 – Fire Protection, Plumbing & HVAC

Add the following specification section:
21 05 17 – Sleeves and Sleeve Seals for Fire-Protection Piping
21 05 23 – General-Duty Valves for Fire Protection Piping
21 05 29 – Hangers and Supports for Fire Suppression Piping and Equipment
21 13 13 – Wet-Pipe Sprinkler Systems

Add the following clarification:
7. Include removal, storage and reinstallation of any existing devices/equipment/fixtures related to this Bid Categories scope that's required to complete replacement of adjacent renovation work.

I. Bid Category No. 9 – Electrical & Technology

Delete the following specification section:
27 21 29 – Data Communications Switches and Hubs **(Provided by Owner)**

Add the following clarification:

6. Include removal, storage and reinstallation of any existing devices/equipment related to this Bid Categories scope that's required to complete replacement of adjacent renovation scope.
7. Include Saw cutting, removal, and disposal of slab-on-grade for new reception desk under slab raceway. Include all work required to reroute and rework existing power/low voltage cabling/devices into new reception desk. Patching of slab-on-grade by Bid Category 01.

D. SPECIFICATION SECTION 01 23 00 ALTERNATES

1. Reissued Specification Section is attached herein.

E. SPECIFICATION SECTION 01 32 00 SCHEDULES AND REPORTS

1. Project Guideline Schedule is attached herein.

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96

Format (Revised 2013)
(Amended for WWS)

Carey Ridge Elementary Addition & Renovation

Westfield Washington Schools
(Hamilton County, Indiana)

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year):_____

BIDDER (Firm) _____

Address _____ P.O. Box _____

City/State/Zip _____

Telephone Number: _____ Email Address: _____

Person to contact regarding this Bid_____

Pursuant to notices given, the undersigned offers to furnish labor and/or materials necessary to complete the public works project of:

_____
Insert Category No. (s) and Name(s)

Of public works project, ***Carey Ridge Elementary Addition & Renovation***, in accordance with Plans and Specifications prepared by ***CSO Architects, 8831 Keystone Crossing, Indianapolis, IN 46240***, as follows:

BASE BID

For the sum of _____
(Sum in words)

_____DOLLARS ($_____)
(Sum in figures)

The undersigned acknowledges receipt of the following Addenda:
Receipt of Addenda No. (s) _____

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference YES _____ NO_____

Has visited the jobsite YES _____ NO_____

The Bidder has reviewed the Guideline Schedule in Section 01 32 00 and the intent Of the schedule can be met. YES _____ NO_____

Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6. YES _____ NO_____

The Skillman Corporation's diversity initiative is to create a program to encourage, assist and measure the active participation of Minority- Owned, Women-Owned, Veteran – Owned and Disabled Individual-Owned Businesses. The Program is to ensure that MWVDBEs are provided full and equal opportunity to participate in all Skillman Corporation's Projects.

Bidder has included:
DBE: YES _____% NO _____
MBE: YES _____% NO _____
WBE: YES _____% NO _____
VBE: YES _____% NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit bases, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(if applicable)

I, the undersigned bidder, or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

****MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE****

Alternate Bid No. 1 – Existing Playground Replacement

Change the Base Bid the sum of_____
(sum in words)

_____ DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 2 – Resurface Hard Surface Play Area

Change the Base Bid the sum of_____
(sum in words)

_____ DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 3 – Parking Lot Repairs - North

Change the Base Bid the sum of_____
(sum in words)

_____ DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 4 – Parking Lot Repairs - West

Change the Base Bid the sum of_____
(sum in words)

_____ DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 5 – Parking Lot Repairs - South

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. 6 – Multi-Use Path

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. **7a** – Existing Restroom Renovations

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT

(sum in figures)

Alternate Bid No. **7b** – Existing Restroom Renovations

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

PART II

(For projects of $150,000 or more – IC 36-1-12-4)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?_____If so, where and why?

_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and addresses of each subcontractor, equipment to be used by the subcontractor, and whether you will required a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed Project? Any equipment used by subcontractors may also be required to be listed by the governmental unit.

5. Have you into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which corroborate the process listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Dated at _____this _____ day of _____, 20

_____
(Name of Organization)

By
_____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) SS:
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named
_____

Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____,
_____
(Title)

_____
Notary Public

My Commission Expires: _____

County of Residence: _____

END OF SECTION 00 31 00

SECTION 00 43 50 - SUBCONTRACTORS AND PRODUCTS LIST

PART 1 - GENERAL

1.01 DESCRIPTION

A. The two (2) low responsive Bidders in each Bid Category shall furnish electronically, the following Subcontractors and Products List to the Construction Manager within **two (2) working days (48 hrs.)** of bid opening, unless submitted with Bid. . The blanks appropriate to the Bid Category(ies) on which they bid shall be completed.

1. The Owner and Architect shall have the right to select any material or equipment named in the Specifications for any particular item where the Bidder either fails to list same or lists more than one name for the item in question.
2. It is intended that this list will show the manufacturer and supplier of major items of work that will be subcontracted and to whom.

1.02 INSTRUCTIONS FOR SUBCONTRACTORS AND PRODUCTS LISTS

A. Each Bidder shall submit a copy of his list of subcontractors and manufacturers of products and equipment proposed for work indicated as required above.

B. The list shall be submitted on forms provided and shall be completely executed. "As Specified" or "With Equipment" type of terminology will not be accepted.

C. Under "Subcontractor", insert the name of the firm which the Bidder proposes to have perform the respective work. If work will be done by the Prime Bidder and no subcontract will be awarded, state "By Own Forces".

D. Submission does not constitute acceptance for use of listed manufacturers' products. Materials and subcontractors are subject to the provisions of the General Conditions and "Standard of Product Acceptability" and must be formally reviewed and adjudged acceptable by the Architect/Engineer.

E. Engineer, Architect and Owner reserve the right to reject submissions of materials, work, or subcontractors that do not, in their opinion, meet the requirements of Drawings, Specifications or job conditions.

F. Materials and subcontractors used for work on the Project shall be in accordance with accepted material list.

1. The list is intended to assure use of materials and vendors acceptably equivalent to those specified and is not a substitution sheet or complete listing of required materials or services.

2. Substitutions for listed items will not be allowed, except when termed acceptable, in writing by the Architect/Engineer, provided that substitution will result in a cost savings to the Owner, determined by the Owner to be a better product, or is made necessary due to unavailability of listed item. Unavailability shall be confirmed in writing by manufacturer named on accepted list.

1.03 CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO._____

(Insert Category No. and Name)

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	Description	XBE	Subcontractor	Manufacturer
02 41 00	Utility Demolition			
02 41 19	Selective Structure Demolition			
03 30 00	Cast-in-Place Concrete			
03 35 00	Concrete Surface Treatment			
03 54 16	Hydraulic Cement Underlayment			
04 20 00	Unit Masonry			
05 12 00	Structural Steel Framing			
05 31 00	Steel Decking			
05 40 00	Cold-formed Metal Framing			

Section	Description	XBE	Subcontractor	Manufacturer
05 44 00	Prefabricated Cold-Formed Metal Trusses			
05 50 00	Metal Fabrications			
05 52 13	Steel Pipe and Tube Railings			
06 10 53	Wood Blocking			
06 16 00	Wood Sheathing			
06 16 43	Glass Mat Gypsum Wall Sheathing			
06 40 00	Interior Architectural Woodwork			
07 21 00	Thermal Insulation			
07 21 19	Spray Foam Insulation Closed Cell			
07 22 19	Ventilated Nailbase			
07 24 13	Polymer-Based Exterior Insulation Finishing System (EIFS)			
07 24 15	Polymer-Based Direct Applied Finish System (DAFS)			
07 27 26	Fluid-Applied Membrane Air Barriers			
07 31 13	Asphalt Shingles			
07 42 43	Metal Composite Wall Panels			
07 62 00	Sheet Metal Flashing and Trim			
07 71 00	Roof Specialties			
07 71 29	Manufactured Roof Expansion Joints			
07 84 13	Penetration Firestopping			
07 92 00	Joint Sealants			

Section	Description	XBE	Subcontractor	Manufacturer
07 95 00	Expansion Control			
08 11 13	Hollow Metal Door Frames			
08 14 19	Flush Wood Doors			
08 31 13	Access Doors and Frames			
08 41 13	Aluminum-framed Entrances and Storefronts			
08 51 13	Aluminum Windows			
08 71 00	Door Hardware			
08 80 00	Glazing			
08 91 19	Fixed Louvers			
09 21 16	Gypsum Board Shaftwall Assemblies			
09 22 16	Non-Structural Metal Framing			
09 29 00	Gypsum Board			
09 30 00	Tiling			
09 51 13	Acoustical Panel Ceilings			
09 65 13	Resilient Base and Accessories			
09 65 16	Resilient Flooring – Sheet Vinyl			
09 65 23	Luxury Vinyl Flooring (LVT)			
09 67 23	Resinous Flooring			
09 68 13	Tile Carpeting			
09 91 23	Interior Painting			
09 96 00	High-Performance Coatings			

Section	Description	XBE	Subcontractor	Manufacturer
10 11 00	Visual Display Units			
10 21 13	Toilet Compartments			
10 26 00	Wall and Door Protection			
10 28 00	Toilet, Bath, and Laundry Accessories			
10 44 13	Fire Extinguishers and Cabinets			
11 52 13	Projection Screens			
11 66 25	Timeout Room Padding			
12 24 13	Roller Window Shades			
12 32 16	Manufactured Plastic-Laminate-Faced Casework			
12 36 61	Simulated Stone Countertops			
31 10 00	Site Clearing			
31 20 10	Earthwork - Building			
31 22 00	Earthwork			
31 23 16	Excavation			
31 23 16.13	Trenching			
31 23 19	Dewatering			
31 23 23	Fill			
31 24 00	Temporary Erosion and Sedimentation Control			
31 32 19	Geotextiles			
31 37 00	Riprap			
32 11 33	Granular Base			
32 12 16	Asphalt Paving			
32 13 13	Concrete Paving			

Section	Description	XBE	Subcontractor	Manufacturer
32 17 23	Paving Marking			
32 18 16	Playground Protective Surfacing			
32 31 09	Decorative Fencing and Gates			
32 33 00	Playground and Site Equipment			
32 92 00	Turfs and Grasses			
32 93 00	Plants			
33 05 13	Storm Manholes and Structures			
33 05 14	Sanitary Manholes and Structures			
33 14 16	Site Water Utility Distribution Piping			
33 31 13	Site Sanitary Sewerage Gravity Piping			
33 41 00	Subdrainage			
33 42 11	Stormwater Gravity Piping			
33 46 05	Playground Subdrainage			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

1.04 MECHANICAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO._____
(Insert Category No. and Name)

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If dual listing of manufacturers or subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

MECHANICAL WORK

Section	Description	XBE	Subcontractor	Manufacturer
21 05 17	Sleeves and Sleeve Seals for Fire-Protection Piping			
21 05 23	General-Duty Valves for Fire Protection Piping			
21 05 29	Hangers and Supports for Fire Suppression Piping and Equipment			
21 13 13	Wet-Pipe Sprinkler Systems			
22 05 17	Sleeves and Sleeve Seals for Plumbing Piping			
22 05 18	Escutcheons for Plumbing Piping			
22 05 23.12	Ball Valves for Plumbing Piping			
22 05 23.13	Butterfly valves for Plumbing Piping			
22.05.23.14	Check Valves for Plumbing Piping			
22 05 29	Hangers and Supports for Plumbing Piping and Equipment			
22 05 53	Identification for Plumbing Piping and Equipment			
22 07 19	Plumbing Piping Insulation			
22 11 16	Domestic Water Piping			

Section	Description	XBE	Subcontractor	Manufacturer
22 11 19	Domestic Water Piping Specialties			
22 13 16	Sanitary Waste and Vent Piping			
22 13 19.13	Sanitary Drains			
22 42 13.13	Commercial Water Closets			
22 42 13.16	Commercial Urinals			
22 42 16.13	Commercial Lavatories			
22 42 16.16	Commercial Sinks			
23 05 13	Common Motor Requirements for HVAC Equipment			
23 05 17	Sleeves and Sleeve Seals for HVAC Piping			
23 05 18	Escutcheons for Piping			
23 05 19	Meters and Gages for HVAC Piping			
23 05 23.12	Ball Valves for HVAC Piping			
23 05 23.13	Butterfly Valves for HVAC Piping			
23 05 23.14	Check Valves for HVAC Piping			
23 05 29	Hangers and Supports for Piping and Equipment			
23 05 53	Identification for Piping and Equipment			
23 05 93	Testing, Adjusting, and Balancing For HVAC			
23 07 13	Duct Insulation			
23 07 19	HVAC Piping Insulation			
23 09 23	Direct Digital Control Systems for HVAC			
23 11 23	Facility Natural-Gas Piping			
23 21 13	Hydronic Piping			
23 21 16	Hydronic Piping Specialties			

Section	Description	XBE	Subcontractor	Manufacturer
23 21 23	Hydronic Pumps			
23 31 13	Metal Ducts			
23 33 00	Air Duct Accessories			
23 34 16	Centrifugal HVAC Fans			
23 36 00	Air Terminal Units			
23 37 13.13	Air Diffusers			
23 37 13.23	Registers and Grilles			
23 51 23	Gas Vents			
23 52 16	Condensing Boilers			
23 73 13.13	Indoor, Basic Air-Handling Units			
23 81 26	Split-System Air-Conditioners			
23 82 16.11	Hydronic Air Coils			
23 82 39.13	Cabinet Unit Heaters			

Plumbing Fixtures: Manufacturer:

a) _____ _____

b) _____ _____

c) _____ _____

d) _____ _____

e) _____ _____

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

1.05 ELECTRICAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO._____
(Insert Category No. and Name)

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If dual listing of manufacturers or subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

ELECTRICAL WORK

Section	Description	XBE	Subcontractor	Manufacturer
26 05 19	Low-Voltage Electrical Power Conductors and Cables			
26 05 23	Control-Voltage Electrical Power Cables			
26 05 26	Grounding and Bonding for Electrical Systems			
26 05 29	Hangers and Supports for Electrical Systems			
26 05 33	Raceways and Boxes for Electrical Systems			
26 05 53	Identification for Electrical Systems			
26 09 23	Lighting Control Devices			
26 22 00	Low-Voltage Transformers			
26 24 16	Panelboards			
26 27 26	Wiring Devices			
26 28 16	Enclosed Switches and Circuit Breakers			
26 29 23	Variable-Frequency Motor Controllers			

Section	Description	XBE	Subcontractor	Manufacturer
26 51 19	LED Interior Lighting			
26 52 13	Emergency and Exit Lighting			
26 56 13	Lighting Poles and Standards			
26 56 19	LED Exterior Lighting			
27 05 26	Grounding and Bonding for Communications Systems			
27 05 28	Pathways for Communications Systems			
27 05 29	Hangers and Supports for Communications Systems			
27 05 36	Cable Trays for Communications Systems			
27 05 53	Identification for Communications Systems			
27 13 23	Communications Optical Fiber Backbone Cabling			
27 15 13	Communications Horizontal Cabling			
27 21 33	Data Communications Wireless Access Points			
27 24 23	Data Communications Audio-Video Devices			
27 51 16	Public Address Systems			
28 05 13	Conductors & Cables for Electronic Safety & Security			
28 05 26	Grounding & Bonding for Electronic Safety & Security			
28 05 28	Pathways for Electronic Safety and Security			
28 15 00	Access Control Hardware Devices (Rough-In Only)			
28 20 00	Video Surveillance			

Section	Description	XBE	Subcontractor	Manufacturer
28 31 11	Digital, Addressable Fire-Alarm System			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

END OF SECTION 00 43 50

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 PURPOSE

A. The Bids for the Alternates described herein are required in order for the Owner to obtain information necessary for the proper consideration of the Project in its entirety.

1.03 ALTERNATES

A. Definitions: Alternates are defined as alternate products, materials, equipment, installations or systems for the Work, which may, at Owner's option and under terms established by Instructions to Bidders, be selected and recorded in the Owner-Contractor Agreement to either supplement or displace corresponding basic requirements of Contract Documents. Alternates may or may not substantially change scope and general character of the Work; and must not be confused with "allowances", "unit prices", "change orders", "substitutions", and other similar provisions.

1.04 SCHEDULE OF ALTERNATES

A. ALTERNATE NO. 1: EXISTING PLAYGROUND REPLACEMENT

1. Base Bid: No work to existing Playground.
2. Alternate: Provide new playground equipment, play surface, and drainage as indicated in documents.

B. ALTERNATE NO. 2: RESURFACE HARD SURFACE PLAY AREA

1. Base Bid: No work to existing hard surface play area.
2. Alternate; Replace asphalt surface of existing hard surface play area as indicated in the documents.

C. ALTERNATE NO. 3: PARKING LOT REPAIRS - NORTH

1. Base Bid: No Pavement work to existing north parking lot, drainage improvements are part of base bid.
2. Alternate: Provide repairs/replacement of north parking lot as indicated in documents.

D. ALTERNATE NO. 4: Parking Lot Repairs - West

1. Base Bid: No work to existing west parking lot.
2. Alternate: Provide repairs/replacement of west parking lot as indicated in documents.

E. ALTERNATE NO. 5: Parking Lot Repairs - South

1. Base Bid: No work to existing south bus parking lot.
2. Alternate: Provide repairs/replacement of south bus parking lot as indicated in documents.

F. ALTERNATE NO. 6: Multi-Use Path

1. Base Bid: None
2. Alternate: Provide new multi-use path on south and east of site as indicated in documents.

G. ALTERNATE NO. 7: Existing Restroom Renovations

1. Base Bid: No work to restrooms throughout existing restrooms.
2. **Alternate 7a:** Provide new finishes, fixtures, toilet partitions, etc. in existing restrooms as indicated in documents. Restrooms B110, B111, D122, D123, E119, E120.
3. **Alternate 7b:** Provide new finishes, fixtures, toilet partitions, etc. in existing restrooms as indicated in documents. Restrooms A102A, A103A, A104A, A105A, B101A, B102A, B105A, B106A, B107A, C101, D101, D102, D113, D114, D121, E111A, E114, E115, and F122.

PART 2 - PRODUCTS,

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 23 00

Guideline Schedule

Carey Ridge Elementary Addition & Renovation

ACTIVITY	2022						2023												2024			
	November					D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
	1	6	13	20	27																	
Preconstruction Phase																						
Bid Opening	3																					
Pre-Award Conferences	4, 7, 8																					
School Board Review/Approval			15																			
Construction Phase																						
Issue Notices to Proceed			16																			
Contracting, Mobilization, Temp Facilities																						
Classroom Addition																						
Phase 1 Restrooms																						
Phase 2 Restrooms & Reception Desk																						
Phase 3 Restrooms																						
Occupancy																						

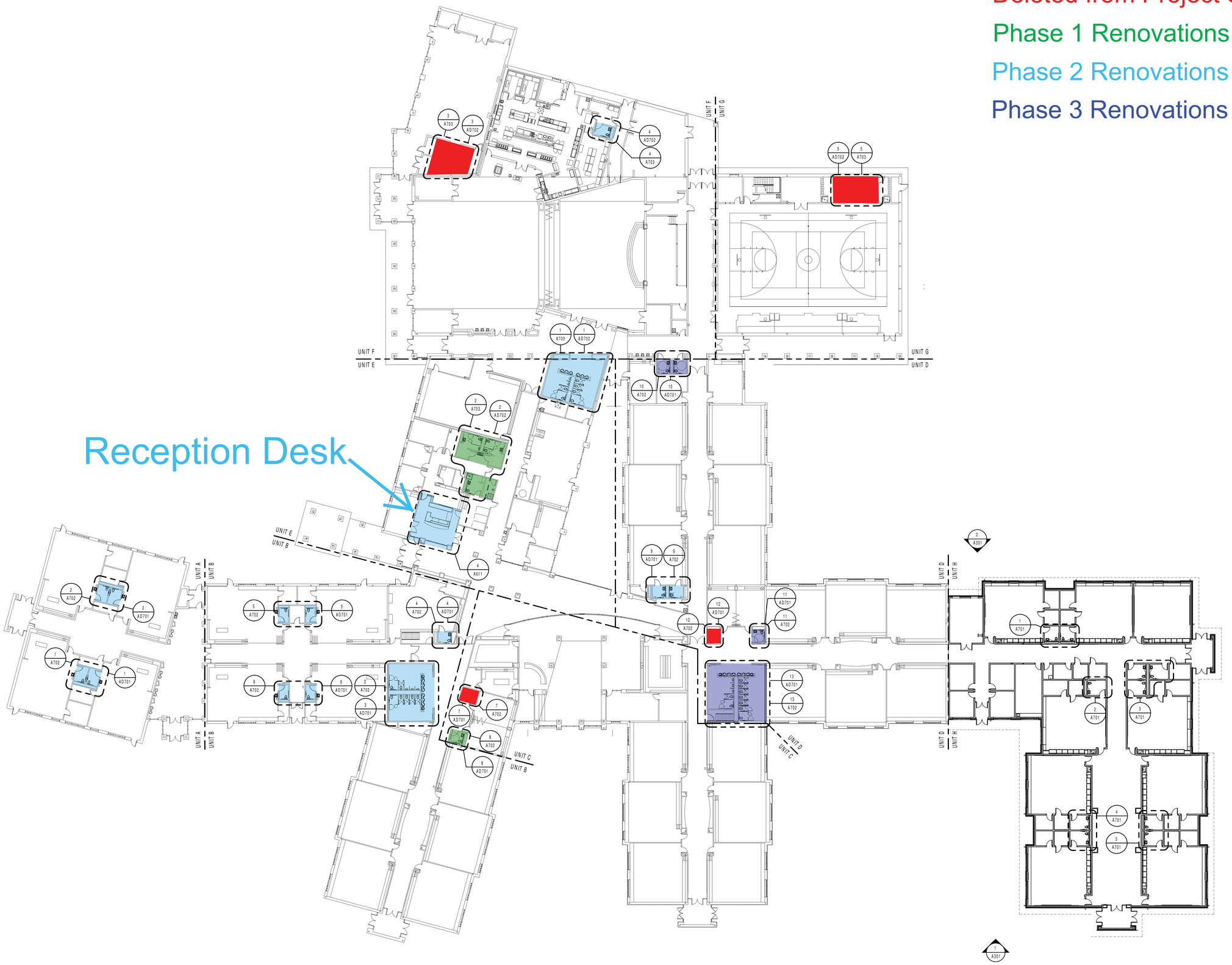
Deleted from Project Scope

Phase 1 Renovations (Spring)

Phase 2 Renovations (Summer)

Phase 3 Renovations (Fall)

Reception Desk



1 A101 OVERALL FLOOR PLAN
SCALE: 1" = 20'-0"

CSO
8831 Keystone Crossing, Indianapolis, IN 46240
317.848.7800 | CSOinc.net

PROJECT:
Westfield Washington Schools
ADDITION & RENOVATION TO
CAREY RIDGE ELEMENTARY
16231 CAREY ROAD, WESTFIELD, INDIANA 46074

SCOPE DRAWINGS:
These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, the major architectural elements and the type of structural, mechanical and electrical systems.
The drawings do not necessarily indicate or describe all work required for the complete performance and completion of the requirements of the Contract.
On the basis of the general scope indicated or described, the trade contractors shall furnish all items required for the proper execution and completion of the work.

REVISIONS:

ISSUE DATE	DRAWN BY	CHECKED BY
09/30/22	XXX	BH

DRAWING TITLE:
OVERALL
FLOOR PLAN

CERTIFIED BY:
JAMES ROBERT FINK
REGISTERED
No. AR00900003
STATE OF INDIANA
ARCHITECT

DRAWING NUMBER
A101

PROJECT NUMBER
2022020

ADDENDUM

CSO
ARCHITECTURE · INTERIOR DESIGN

ADDENDUM NO: 3

PROJECT: Carey Ridge Elementary School Addition & Renovations

PROJECT NO: 2022020 DATE: 10/28/2022 BY: Brent Hite

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

Attached Specification Sections:
055213, 081113, 083113, 102113, 102800, 115213

PART 1 - GENERAL INFORMATION

1.1 NOT USED

PART 2 - BIDDING REQUIREMENTS

2.1 NOT USED

PART 3 - SPECIFICATIONS

3.1 ADD SECTION 05 52 13 – STEEL PIPE AND TUBE RAILINGS

3.2 ADD SECTION 08 11 13 – HOLLOW METAL DOOR FRAMES

3.3 ADD SECTION 08 31 13 – ACCESS DOORS AND FRAMES

3.4 ADD SECTION 10 21 13 – TOILET COMPARTMENTS

3.5 ADD SECTION 10 28 00 – TOILET, BATH AND LAUNDRY ACCESSORIES

3.6 ADD SECTION 11 52 13 – PROJECT SCREENS

PART 4 - DRAWINGS

4.1 SHEET A901 – EQUIPMENT PLAN & SCHEDULE

A. Detail 2/A901

1. Revise two drawing notes to read 1/4" FABRIC WRAPPED CORK"

PART 5 - QUESTIONS AND ANSWERS

5.1 NOT USED

END ADDENDUM

SECTION 05 52 13 – STEEL PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Steel pipe and tube railings.

1.03 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design metal stairs, including comprehensive engineering analysis by a qualified professional engineer, licensed in the state the project is located, using performance requirements and design criteria indicated.

B. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:

1. Steel: 72 percent of minimum yield strength.

C. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
b. Infill load and other loads need not be assumed to act concurrently.

D. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.04 ACTION SUBMITTALS

A. Product Data: For the following:

1. Manufacturer's product lines of mechanically connected railings.
2. Railing brackets.
3. Grout, anchoring cement, and paint products.

B. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified professional engineer and testing agency.

B. Welding certificates.

C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

1.06 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of railing from single source from single manufacturer.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified and licensed to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indictated. Engineering services are defined as those performed for installations of metal stairs, handrails and railing systems that are similar to those indicated for this Project in material, design, and extent.

C. Fabricator Qualifications: A firm experienced in producing metal stairs similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Design and Fabrication Standards:

1. Fabricate railings in accordance with the recommendations of ANSI/NAAMM AMP-521. Finish joints in railings accordance with the following National and Ornamental & Miscellaneous Metal Association (NOMMA) standards :

a. Service Stairs, Guard Rails in Non-Public Spaces: Type 3

E. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.07 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.08 COORDINATION AND SCHEDULING

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

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

a. Pisor Industries, Inc.
b. Wagner, R & B, Inc.; a division of the Wagner Companies.
c. Local fabricators meeting the requirements of this specification and approved by the Architect.

2.02 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.03 STEEL

A. Tubing: ASTM A 500 (cold formed) or ASTM A 513.

B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.

C. Plates, Shapes, and Bars: ASTM A 36/A 36M.

D. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

2.04 FASTENERS

A. General - Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads

B. Non-galvanized Steel Railings: Plated steel fasteners complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5 for zinc coating.

C. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.

2.05 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Non-shrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

D. Anchoring Cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with water at project site to create pourable anchoring, patching, and grouting compound.

E. Zinc-Rich Primer: Complying with MPI#18, Zinc-Rich, Organic, and compatible with topcoat.

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

a. Carboline 621; Carboline Company.
b. Aquapon Zinc-Rich Primer 97-670; PPG Industries, Inc.
c. Tneme-Zinc 90-97; Tnemec Company, Inc.

F. Intermediate Coats and Topcoats: Provide products that comply with Division 09 Section “Interior Painting”.

2.06 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with welded connections unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.

I. Non-welded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

J. Form changes in direction as follows:

1. By bending, fabricators choice of flush or small radial bends.

K. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

L. Close exposed ends of railing members with prefabricated end fittings.

M. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.

N. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

O. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.07 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

2.08 STEEL AND IRON FINISHES

A. For non-galvanized steel railings, provide non-galvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors to be embedded in concrete or masonry.

B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed products:

1. Zinc-Rich Primed: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

C. Apply shop primer to uncoated surfaces of metal stair components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

D. Refer to Division 09 for high performance coatings for field finishing.

PART 3 - EXECUTION

3.01 EXAMINATION

3.02 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

D. Adjust railings before anchoring to ensure matching alignment at abutting joints.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.03 RAILING CONNECTIONS

A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

3.04 ANCHORING POSTS

A. Anchor posts using floor type steel square or circular flanges as required by conditions, flanges to be welded to posts bottoms and connected to supporting structure as follows:

1. For steel pipe railings, weld flanges to post and expansion bolt to concrete supporting surfaces.

3.05 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.

3.06 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION

SECTION 08 11 13 - HOLLOW METAL DOOR FRAMES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes hollow-metal work as follows:

1. Interior Steel Door Frames.

B. Related Requirements:

1. Division 08 Section "Door Hardware" for door hardware for hollow-metal doors.
2. Divison 08 Section “Flush Wood Doors” for door slab information.
3. Division 09 Section "Interior Painting" for field painting factory-primed doors and frames.
4. Division 08 Section "Glazing" and Section “Security Glazing” for glazing mounted in hollow metal frames.

1.03 DEFINITIONS

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

1.04 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, field splices, and connections.

7. Details of accessories.
8. Details of conduit and preparations for power, signal, and control systems.

C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Schedule: Provide a schedule of hollow-metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final Door Hardware Schedule.

1.06 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Inspect doors and frames on delivery for damage, and notify shipper and supplier if damage is found. Minor damages may be repaired provided refinished items match new work and are acceptable to Architect. Remove and replace damaged items that cannot be repaired as directed.

D. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

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

1. Ceco Door Products; an Assa Abloy Group company.
2. Curries Company; an Assa Abloy Group company.
3. Steelcraft; an Allegion Brand.
4. MPI Group, LLC (The).
5. Stiles Custom Metal.
6. De La Fontaine.

B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.02 REGULATORY REQUIREMENTS

A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

2.03 MATERIALS

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

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

C. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z 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.

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

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.

G. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

H. Glazing: Comply with requirements in Division 08 Section "Glazing" and Section “Security Glazing”.

I. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.04 INTERIOR HOLLOW METAL DOOR AND WINDOW FRAMES

A. Construct interior frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Frames: SDI A250.8, Level 2.

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

2. Frames:

a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch (1.3 mm) 16 gage.
b. Construction: Full profile welded.

3. Exposed Finish: Primed.

2.05 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
3. Post-installed Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch- diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.

B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.06 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 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. Masonry Type: Locate anchors not more than 16 inches from top and bottom of frame. Space anchors not more than 32 inches o.c., to match coursing, and as follows:

1) Two anchors per jamb up to 60 inches high.
2) Three anchors per jamb from 60 to 90 inches high.

3) Four anchors per jamb from 90 to 120 inches high.
4) Four anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.

b. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

1) Three anchors per jamb up to 60 inches high.
2) Four anchors per jamb from 60 to 90 inches high.
3) Five anchors per jamb from 90 to 96 inches high.
4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.

c. Compression Type: Not less than two anchors in each frame.
d. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.

5. Head Anchors: Two anchors per head for frames more than 42 inches wide and mounted in metal-stud partitions.
6. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

C. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.

D. Clearances for Non-Fire-Rated Doors: Not more than 1/8 inch at jambs and heads, except not more than 1/4 inch between pairs of doors. Not more than 3/4 inch at bottom.

E. Clearances for Fire-Rated Doors: As required by NFPA 80.

F. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."

G. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive non-templated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

H. Stops and Moldings: Provide stops and moldings around glazed lites and louvers where indicated. Form corners of stops and moldings with mitered hairline joints.

1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow-metal work.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
4. Provide loose stops and moldings on inside of hollow-metal work.
5. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.

2.07 STEEL FINISHES

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

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
2. Comply with Division 09 Sections for painting requirements and compatibility.

B. Frames installed in concrete or masonry walls: Coat interior of frame with asphaltic paint, except fire-rated frames.

2.08 ACCESSORIES

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

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

3.02 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Drill and tap doors and frames to receive non-templated, mortised, and surface-mounted door hardware.

3.03 INSTALLATION

A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

B. 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. At fire-rated openings, install frames according to NFPA 80.
    b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    c. Install frames with removable stops located on secure side of opening.
    d. Install door silencers in frames before grouting.
    e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
    f. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
    g. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.

2. 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.

3. Metal or Wood-Stud Partitions: Install per the following:

    a. Solidly pack mineral-fiber insulation inside frames.
    b. Place welded frames during partition construction.

4. Concrete and Masonry Walls: Install per the following:

    a. Place welded frames during concrete and masonry walls construction.
    b. Coordinate installation of welded frames to allow for solidly filling space between frames and masonry with grout.

5. For openings 90 inches or more in height, install an additional anchor at hinge and strike jambs.
6. 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, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.

c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

C. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow-metal manufacturer's written instructions.

1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

3.04 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. Remove grout and other bonding material from hollow-metal work immediately after installation.

C. 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.

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

END OF SECTION

SECTION 08 31 13 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Access doors and frames for walls and ceilings.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, fire ratings, materials, individual components and profiles, and finishes.

B. Shop Drawings:

1. Include plans, elevations, sections, details, and attachments to other work.
2. Detail fabrication and installation of access doors and frames for each type of substrate.

C. Samples: For each door face material, at least 3 by 5 inches in size, in specified finish.

D. Product Schedule: Provide complete access door and frame schedule, including types, locations, sizes, latching or locking provisions, and other data pertinent to installation.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics according to the following test method and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. NFPA 252 or UL 10B for fire-rated access door assemblies installed vertically.
2. NFPA 288 for fire-rated access door assemblies installed horizontally.

2.02 ACCESS DOORS AND FRAMES FOR WALLS AND CEILINGS

A. Basis-of-Design: As indicated on the Drawings.

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

a. Acudor Products, Inc.

b. Babcock-Davis.
c. J. L. Industries, Inc.; Div. of Activar Construction Products Group.
d. Karp Associates, Inc.
e. Larsen's Manufacturing Company.
f. MIFAB, Inc.
g. Milcor Inc.
h. Nystrom, Inc.
i. Williams Bros. Corporation of America (The).

B. Source Limitations: Obtain each type of access door and frame from single source from single manufacturer.

C. Flush Access Doors with Concealed Flanges:

1. Assembly Description: Fabricate door to fit flush to frame. Provide frame with gypsum board beads for concealed flange installation.
2. Locations: Finished Drywall Ceilings and Walls.
3. Door Size: As indicated on Drawings.
4. Metallic-Coated Steel Sheet for Door: Nominal 0.064 inch (1.63 mm), 16 gage.

a. Finish: Factory finish.

5. Frame Material: Same material and thickness as door.
6. Hinges: Manufacturer's standard.
7. Hardware: Cam latch operated by screwdriver.

D. Flush Access Doors with Exposed Flanges:

1. Description: Face of door flush with frame, with exposed flange and concealed hinge.
2. Locations: Exposed Masonry Walls, Tiled Walls
3. Door Size: As indicated on Drawings.
4. Metallic-Coated Steel Sheet for Door: Nominal 0.064 inch (1.63 mm), 16 gage.

a. Finish: Factory finish.

5. Frame Material: Same material, thickness, and finish as door.
6. Hardware: Cam latch operated by screwdriver.

2.03 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 304. Remove tool and die marks and stretch lines, or blend into finish.

C. Frame Anchors: Same type as door face.

D. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329.

2.04 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access doors to types of supports indicated.

1. For concealed flanges with drywall bead, provide edge trim for gypsum board securely attached to perimeter of frames.
2. Provide mounting holes in frames for attachment of units to metal or wood framing.
3. Provide mounting holes in frame for attachment of masonry anchors.

D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.

2.05 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Steel and Metallic-Coated-Steel Finishes:

1. Factory Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, with a minimum dry-film thickness of 1 mil (0.025 mm) for topcoat.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

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

3.02 INSTALLATION

A. Comply with manufacturer's written instructions for installing access doors and frames.

B. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

3.03 ADJUSTING

A. Adjust doors and hardware, after installation, for proper operation.

B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION

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SECTION 10 21 13 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Solid-polymer toilet compartments configured as toilet enclosures and urinal screens.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of cutouts for compartment-mounted toilet accessories.
2. Show locations of reinforcements for compartment-mounted grab bars.
3. Show locations of centerlines of toilet fixtures.
4. Show ceiling grid and overhead support or bracing locations.

C. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

1. Each type of material, color, and finish required for units, prepared on 6-inch-square Samples of same thickness and material indicated for Work.
2. Each type of hardware and accessory.

1.04 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment, from manufacturer.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.06 QUALITY ASSURANCE

A. Comply with requirements in GSA's CID-A-A-60003, "Partitions, Toilets, Complete."

B. Fire-Test-Response Characteristics: Units fabricated from PP, and most formulations of HDPE, will support combustion and do not comply with Class A or B flame-spread and smoke-developed index requirements.

C. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" and ICC/ANSI A117.1 for toilet compartments designated as accessible.

1.07 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS:

A. Fire Resistance: Partition materials shall comply with the following requirements, when tested in accordance with the ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials:

1. Class A flame spread/smoke developed rating, tested to ASTM E84.

B. Material Fire Ratings:

1. National Fire Protection Association (NFPA) 286: Pass.
2. International Code Council (ICC): Class B.

2.02 MATERIALS

A. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.

B. Stainless-Steel Castings: ASTM A 743/A 743M.

2.03 SOLID-POLYMER UNITS

A. General: Solid-polymer units are fabricated from high-density polyethylene (HDPE) or polypropylene (PP) panels.

1. Fire-resistance Rating: Class A.

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

1. Scranton Products.
2. Hiny Hiders.
3. Santana.
4. Comtec Industries.
5. Capitol Partitions.

C. Toilet-Enclosure Style: Floor anchored, overhead braced. 72 inches in height.

D. Urinal-Screen Style: Wall hung, floor anchored, 24” projection from wall. Panel configured in style as selected by Architect.

E. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.

1. Continuous Hinges: Configure doors and pilasters to receive continuous, spring loaded hinges.
2. Heat-Sink Strip: Manufacturer's standard continuous, stainless-steel strip fastened to exposed bottom edges of solid-polymer components to prevent burning.
3. Finish: Grip Ex.
4. Door Height: 72 inches door height.
5. Color and Pattern: Colors and patterns in each room as selected by Architect from manufacturer's full range.

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

G. Brackets (Fittings):

1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

a. Provide dividing panel hardware (continuous two- ear stainless steel bracket) and ending panel hardware (continuous, one-ear stainless steel bracket).

2.04 ACCESSORIES

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

1. Material: Stainless steel.
2. Hinges: Manufacturer's standard continuous, stainless steel piano hinge, spring loaded.
3. Latch and Keeper: Stainless steel surface mounted slide latch and keeper unit designed for emergency access and with combination rubber-faced door strike and keeper. Keepers work with Inswing Application and are ADA compliant. 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 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. Provide clamps for attachment to pilaster and stainless steel brackets to secure to wall.

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.

D. Wall Stops for Outswinging Doors: Provide No. 50A; Glynn-Johnson, convex style, to protect wall form door stop.

2.05 FABRICATION

A. Floor-Anchored, Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

B. Door Size and Swings: Unless otherwise indicated, provide minimum 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and minimum 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

3.01 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.

1. Maximum Clearances:

a. Pilasters and Panels: 1/2 inch (13 mm).
b. Panels and Walls: 1 inch (25 mm).

B. Floor-Anchored Units and Overhead-Braced Units: Set pilasters with anchors penetrating not less than 2 inches (51 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Secure pilasters to floor and level, plumb, and tighten. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Floor supported in style selected. Set units level and plumb, rigid, and secured to resist lateral impact.

3.02 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 to return doors to partially closed position.

END OF SECTION

SECTION 10 28 00 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Washroom accessories.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Manufacturer’s product data including image, construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated.
2. Identify products using designations indicated.

1.04 INFORMATIONAL SUBMITTALS

A. Warranty: Sample of special warranty.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.06 QUALITY ASSURANCE

A. Accessibility Standard: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 .

B. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.07 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.08 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) minimum nominal thickness unless otherwise indicated.

B. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch (0.9-mm) minimum nominal thickness.

C. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 (Z180) hot-dip zinc coating.

D. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

E. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

F. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

G. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

H. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.02 MANUFACTURERS

A. Basis-of-Design Products: The design for toilet and bath accessories is based on products indicated on Drawings in Toilet and Bath Accessories Schedule. Subject to compliance with requirements, another manufacturer's product of a similar and equivalent nature will be acceptable when, in the Architect's sole judgment rendered during the Bidding period, differences do not materially detract from the design concept or intended performance.

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

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation.
5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
6. Tubular Specialties Manufacturing, Inc.

2.03 WASHROOM ACCESSORIES

A. General: Refer to Toilet and Bath Accessories Schedule on Drawings for washroom accessories.

B. Grab Bar:

1. Mounting: Flanges with concealed fasteners.
2. Material: Stainless steel, 0.05 inch (1.3 mm) thick.

a. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.

3. Outside Diameter: 1-1/2 inches (38 mm).
4. Configuration and Length: As indicated on Drawings.

C. Mirror Unit:

1. Frame: Stainless-steel channel.

a. Corners: Welded and ground smooth.

2. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.

a. One-piece, galvanized-steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
b. Wall bracket of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.

3. Size: As indicated on Drawings.

2.04 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

1. One, maximum 1-1/2-inch-diameter, unobtrusive stamped manufacturer logo, as approved by Architect, is permitted on exposed face of accessories. On interior surface not exposed to view or back surface of each accessory, provide printed, waterproof label or stamped nameplate indicating manufacturer's name and product model number.

B. Surface-Mounted Toilet Accessories: Unless otherwise indicated, fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with continuous stainless-steel hinge. Provide concealed anchorage where possible.

C. Recessed Toilet Accessories: Unless otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors and access panels with full-length, stainless-steel hinge. Provide anchorage that is fully concealed when unit is closed.

D. Framed Glass-Mirror Units: Fabricate frames for glass-mirror units to accommodate glass edge protection material. Provide mirror backing and support system that permits rigid, tamper-resistant glass installation and prevents moisture accumulation.

1. Provide galvanized steel backing sheet, not less than 0.034 inch (0.85 mm) and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.

E. Mirror-Unit Hangers: Provide manufacturer’s standard mirror-unit mounting system that permits rigid, tamper- and theft-resistant installation.

F. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Secure mirrors to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated.

C. Grab Bars: Install to withstand a downward load of at least 250 lbf (1112 N), when tested according to ASTM F 446.

3.02 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION

SECTION 11 52 13 - PROJECTION SCREENS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Manually operated, front-projection screens.

1.03 DEFINITIONS

A. Gain: Ratio of light reflected from screen material to that reflected perpendicularly from a magnesium carbonate surface as determined per SMPTE RP 94.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Show layouts and types of front-projection screens. Include the following:

1. Drop lengths.
2. Location of seams in viewing surfaces.
3. Location of screen centerline relative to ends of screen case.
4. Anchorage details, including connection to supporting structure for suspended units.
5. Details of juncture of exposed surfaces with adjacent finishes.
6. Accessories.

C. Samples for Initial Selection: For finishes of surface-mounted screen cases.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance Data: For front-projection screens to include in maintenance manuals.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Environmental Limitations: Do not deliver or install front-projection screens until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.07 COORDINATION

A. Coordinate layout and installation of front-projection screens with ceiling projector and marker/tack display surfaces.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations for Projection Screens: Obtain front-projection screens from single manufacturer. Obtain accessories, including necessary mounting hardware, from screen manufacturer.

2.02 MANUALLY OPERATED, FRONT-PROJECTION SCREENS

A. General: Manufacturer's standard spring-roller-operated units, consisting of case, screen, mounting accessories, and other components necessary for a complete installation.

1. Screen Mounting: Top edge securely anchored to a 3-inch diameter, rigid steel roller; bottom edge formed into a pocket holding a tubular metal slat, with ends of slat protected by plastic caps, and with a saddle and pull attached to slat by screws.

B. Bracket-Mounted or Ceiling-Suspended, Metal-Encased, Manually Operated Screens without Tab Tensioning: Units designed and fabricated for suspending from wall brackets or ceiling, fabricated from formed-steel sheet not less than 0.027 inch (0.7 mm) thick or from aluminum extrusions; with vinyl covering or baked-enamel finish and matching end caps. Provide mounting brackets unless otherwise indicated.

1. Products: Subject to compliance with requirements, provide **Luma Projection Screen with Auto Return by Draper Inc**. or a comparable screen by one of the following:

a. Bretford, Inc.
b. Da-Lite Screen Company.

2. Fixed Projected Mounting Brackets with a 6 inch (152 mm) clearance from wall.

3. Auto Return spring roller with built-in inertia reduction mechanism to ensure viewing surface retracts slowly, smoothly and quietly into case. Provide intermediate stop positions.

2.03 FRONT-PROJECTION SCREEN MATERIAL

A. Matte-White Viewing Surface: Peak gain of not less than 0.9, and gain of not less than 0.8 at an angle of 50 degrees from the axis of the screen surface.

1. Products: Subject to compliance with requirements, provide **Matte White XT1000E screen material by Draper Inc**. or a comparable screen by one of the following:

a. Bretford Inc.: Matte White.
b. Da-Lite Screen Company: Matte White.

B. Material: Vinyl-coated, glass-fiber fabric or vinyl sheet.

C. Mildew-Resistance Rating: Zero or 1 when tested according to ASTM G 21.

D. Flame Resistance: Passes NFPA 701.

E. Flame-Spread Index: Not greater than 75 when tested according to ASTM E 84.

F. Seamless Construction: Provide screens, in sizes indicated, without seams.

G. Edge Treatment: Black masking borders.

H. Size of Viewing Surface: See Part 3.2 Front Projection Screen Schedule.

I. Provide extra drop length of dimensions and at locations indicated.

1. Color: Same as viewing surface.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install front-projection screens at locations indicated to comply with screen manufacturer's written instructions.

B. Install front-projection screens with screen cases in position and in relation to adjoining construction indicated. Securely anchor to supporting substrate in a manner that produces a smoothly operating screen with vertical edges plumb and viewing surface flat when screen is lowered.

1. Test manually operated units to verify that screen-operating components are in optimum functioning condition.

3.02 FRONT-PROJECTION SCREEN SCHEDULE

A. Manually Operated, Front-Projection Screen Type PS-1: Bracket mounted, metal encased.

1. Screen Surface: Matte white.
2. Size of Viewing Surface: 92” Diagonal, 45” Tall x 80” Wide
3. Extra Drop Length: As needed at top of screen for bottom of screen to be 36 inches (900 mm) above floor.

END OF SECTION