

ISSUED:

MAY 17, 2023

ADDENDUM #2

IFB 23B-006: CHESAPEAKE WELCOME CENTER RENOVATION SOLICITATION NUMBER AND TITLE: AND EXPANSION PROJECT SOLICITATION DUE DATE AND TIME: May 31, 2023 1:00 PM Local Time HARFORD COMMUNITY COLLEGE | Procurement Dept. **DELIVERY LOCATION OF SUBMITTAL:** 401 Thomas Run Road, Bel Air, MD 21015 **Conowingo Building, Suite 105** 2:00 PM Local Time May 31, 2023 **BID OPENING Chesapeake Center – Dining Room North** PRE-SOLICITATION MEETING **Chesapeake Center- Dining Room North** LOCATION: QUESTIONS DUE DATE AND TIME: **CHANGED**: May 9, 2023 5:00 PM Local Time Questions must be received by the date and time noted **PROCUREMENT DIRECTOR:** above via email to: Christine Carpenter at ccarpenter@harford.edu **BID DEPOSIT:** Bid Deposit – 10% of bid price MBE GOAL: 10% of bid price BONDING REQUIREMENTS: 100% Payment & Performance Bond **INSURANCE REQUIREMENTS: Construction with Builders Risk** PREVAILING WAGE: **Prevailing Wage Required**

Harford Community College encourages small and minority businesses to respond to and participate in solicitation opportunities.







Chesapeake Welcome Center Renovation & Addition Project Addendum #2 May 17, 2023

- Item 2.1. The deadline for Pre-Bid RFI's will not be extended, but bidders are welcome to continue to submit any RFIs for review. RFIs submitted after the deadline will not have responses included in Addenda.
- Item 2.2. Include the Pre-Bid RFI Spreadsheet with questions and answers. Please note that the responses are part of the Bid Documents. Any questions that haven't been answered will be addressed in Addendum #3. Please note that the insurance question (Pre-Bid RFI #24) has a revised response included with this Addendum.
 - i. Pre-Bid RFI Spreadsheet (19 pages)
- Item 2.3. Revise the Builders Risk Insurance Coverage to remove the requirement for Professional Liability Insurance.
- Item 2.4. Replace Specification Section 00 41 00 Bid Form with the attached revised Specification Section 00 41 00 Bid Form.
- Item 2.5. Add Specification Section 25 08 00 Commissioning of Integrated Automated Systems to the bidding documents.
- Item 2.6. Revise Specification Section 01 23 00 Alternates attached.
- Item 2.7. Add to the end of note C-5 on C131, "Sculpture's base is to be a precast plinth 18" x 18" x 32" tall above grade. Connection details are to be provided in shop drawing submittal.
 Provide inserts or cast in holes within base. Footing to be 24" x 24" x 24" 3000 PSI concrete below grade."
- Item 2.8. Revise note D-8 on C111 to read, "Underground water tank to be demoed by Contractor." Remove "Oil Tank" note and leader from C111.
- Item 2.9. Revise Demolition Note 32 on all sheets AD1.01, AD1.02, and AD1.03 to read, "Contractor shall be required to remove and properly dispose of all Solar Panels and related equipment. Deduct Alternate will be for this demo to be by the Owner."
- Item 2.10. Revise note U-11 on C151 to read, "Proposed Electrical route to be confirmed by BGE (see E004 for additional information."
- Item 2.11. Delete General Notes 1-3 on C151.
- Item 2.12. The existing building drawings are being provided for reference only. The Owner is not responsible for the accuracy of the existing drawings. The existing conditions as inspected by the bidder shall prevail.

Existing Drawings - OneDrive (sharepoint.com)







- Item 2.13. Add designations on K-101B for items R1 R7 to be in the Base Contract column.
- Item 2.14. Delete "See deduct Alternate #6" from the note found on A1.03.
- Item 2.15. Revise note references to 11D and 11G on SD-011 to 12D and 12G respectively.
- Item 2.16. Delete detail 2 on A109.
- Item 2.17. Revise note in Scene Shop 161 on A1.05 to read "Portable dust collection and associated piping will be provided by the Owner."
- Item 2.18. Remove the reference to "Haz. Mat. Contents unknown. Presume Hazardous." As noted in detail 1 and detail 2 on AD1.04.
- Item 2.19. All AEDs are removed from the Contract and will be furnished and installed by the Owner.
- Item 2.20. Replace all refences to 20x PTZ to 12x PTZ on TA7.02.
- Item 2.21. Delete note 29 on M207.
- Item 2.22. Revise Specification Section 09 68 13 with the attached.
- Item 2.23. Add Specification Section 08 34 30 Steel Acoustic Windows as attached.
- Item 2.24. Revise Demolition Note #23 on Ad1.01 to read, "GC to cautiously remove, wrap and relocate to a storage space the donor wall 'tree' & plaques with panel backing prior to demolition. Owner to provide moving wrap or blankets to be used by the GC. Owner to provide storage location somewhere on campus for GC to relocate. One week prior to punchout walk, GC to reinstall the donor wall tree & plaques as directed."
- Item 2.25. Revise Fixture type B on E504 Light Fixture Schedule to be 2x4.
- Item 2.26. Revise Fixture type BE on E504 Light Fixture Schedule to be 2x4.
- Item 2.27. Delete switch designation "C" in Room 141 on Drawing E201.
- Item 2.28. Delete note #2 designation shown at the bottom of the stairs at Column Line C on E206.
- Item 2.29. Revise Drawing note #2 on E203 to reference drawing E404 in lieu of E405.
- Item 2.30. Please see below for a list of the Drawings included in this Addendum:
 - 1. A1.06 First Floor Plan Area C
 - 2. A1.09 Second Floor Plan Area B
 - 3. A4.10 Large Scale Toilet Rooms
 - 4. A4.11 Large Scale Toilet Rooms
 - 5. A4.36 Interior Elevations Kitchen & Support
 - 6. A4.43 Casework Plans 7 Elevations Reception
 - 7. A4.44 Casework Plans & Elevations Work Rooms
 - 8. A4.45 Casework Plans & Elevations Theatre Support
 - 9. A6.30 Interior Glazing Detail







This amendment is issued to clarify, add to, delete from, correct and/or change the Bid Documents to the extent indicated and is hereby made a part of the said Bid Documents on which the Contract will be based.





Addendum #2 DATE 5/17/2023

Harford County Community College Chesapeake Welcome Center Renovation & Addition

RFI / BIDL	/ BIDDING PHASE							
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE			
1	4/15/2023	Specifications issued has two Fixed Audience Seating spec sections (11 61 13 & 12 61 00). One needs to be deleted.	5/2/2023	1	Delete Specification 12 61 00 from the Table of contents and from the Project Manual in its entirety.			
2	4/15/2023	Bid Form 6E - Alternate #5 - Item #1 states add a second year for the warranty and the language in 5A and 5B states to reduce the warranty duration from 2 to 1 years.	5/2/2023	1	Bid Form to be revised in Addendum #1. Please see revised Spec Section 00 41 00 in Addendum #1.			
3	4/15/2023	Please provide mock up panel location and details / section cut.	5/2/2023	1	Mock up panel requirements can be found in Spec Section 01 43 39. Site location to be provided by the Architect at a later date. Additional details are included in this Addendum - Sketch SK-01 and SK-02.			
4	4/15/2023	Is there a State Sign required? If so, please provide sign details.	5/2/2023	1	Construction notification signage will be furnished by the College, to be installed by the Contractor. Contractor should assume for material bidding purposes a minimum of three - 12' treated 4x4 posts in concrete temp footers, 50 LF of treated 2x4, and 1 sheet 3/4" treated plywood.			
5	4/17/2023	What is the anticipated start date for the above referenced project?	5/2/2023	1	Please see spec section 00 02 00 Para 1.9.			
6	4/17/2023	Can you tell us how many General Contractors were approved to bid this project? Any chance you could send us the list?	5/2/2023	1	The List of Prequalified GCs has been posted on the HCC BidBoard and eMaryland Marketplace Advantage.			
7	4/24/2023	Please confirm the bid date and the last date for RFIs	5/2/2023	1	The last day of bid questions is being extended to close of buisness on 5/9/2023.			
8	4/25/2023	Project Added General Conditions, Page GC-5, Item GC-9.A: Please clarify who is responsible for paying the cost of the General Building Permit for this project.	5/2/2023	1	The Owner will obtain, including pay for, the General Building Permit. The Contractor is responsible for all Trade Permits.			
9	4/25/2023	The bidding documents provided include Appendix C – Structural Calculations. What is the intent of including these in the contractor's contract documents? If the engineer of record has made a mistake in these calculations, does that mistake become the contractor's responsibility? Please clarify.	5/2/2023	1	Delete Appendix C in its entirety. It was included with DGS documentation and was inadvertently included in the Contractor's Bid Solicitation.			
10	4/25/2023	Specification Section 01 10 00 – Summary of Work, Page 7: At the top of this page there is the following statement: "A salvage list is to be provided by request for coordination and storage/moving and the contractor is to carry an allowance for disconnecting, properly handling and delivering salvaged items". Here are our questions and requests for clarification related to this statement:	5/2/23	1	A. SALVAGE LIST 1. Salvage, wrap and box or palletize all existing acoustical wall panels (AWP) in the existing conference room. Relocate to a Storage location on campus as directed by the College. These will be installed by contractor in			
<u> </u>		A. Please provide the salvage list referred in this paragraph.			completed building. See Demolition note 1 on AD1.01			

RFI / BIDC	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
		B. Who is responsible for creating the allowance referenced in this statement? There is not a specification for allowances and there is no spot on the bid form to identify an allowance. How will the amount of this allowance be documented?			B. The contractor is to include the pricing for this within the contract. NoAllowance is required.C. This item will be further clarified in Addendum #2.
		C. What Kitchen equipment if any is to be salvaged			
11	4/25/2023	Specification Section 01 31 00 Project Management and Coordination, Page 5, Paragraph 1.6.D.3: Please confirm that the contractor is to include BIM modeling for this project.	5/2/2023	1	The Contract shall provide BIM modeling for this project.
12	4/25/2023	Specification Section 01 50 00 Temporary Facilities and Controls, Paragraph 3.3.C&D: These paragraphs say to connect to the Owner's existing electric power service. Please clarify who is responsible for the consumption charges related to electric power use for construction purposes, Owner or Contractor.	5/2/2023	1	Consumption charges will be by the Owner. Please see Pre-Bid Meeting Minutes Item 2a for more information.
13	4/25/2023	Drawing TR-302 is listed on the drawing list but is not included in the drawing set provided. Please provide drawing TR-302.	5/2/2023	1	Delete TR302 from sheet lists, this sheet is not incldued.
14	4/25/2023	Drawing S-127 is listed on the drawing list but is not included in the drawing set provided. Please provide drawing S-127.	5/2/2023	1	Delete S-127 from sheet lists, this sheet is not incldued.
15	4/25/2023	In the set of drawings provided, after drawing E505 comes drawings E01 and E02. These two drawings are not on the drawing list. Please clarify if they are intended to be part of the bidding documents.	5/2/2023	1	E001 Electrical Legend and E002 Electrical General Notes are included in the Bid Documents.
16	4/25/2023	Drawings E506, E507, E601 and E602 are listed on the drawing list but are not included in the drawing set provided. Please provide these drawings.	5/2/2023	1	Drawings E601 and E602 were included in the Bid Documents and have been included in Addendum #1. Delete E506 and E507 from the sheet lists.
17	4/25/2023	Specification Section 01 31 00, Paragraph 1.8.8, Page 7 says that Procore is the preferred Web Based Project Management System. Will HCC bear all Procore subscription costs/fees for the project or does the General Contractor need to carry this cost in the Bid? If HCC is not carrying this cost, would Submittal Exchange be an acceptable Web Based Project Management System?	5/2/2023	1	The Contractor shall provide a web based project management system with cost included in the the contract. Procore is a suggestion and preferred but other web based systems will be review and acceptance not witheld unreasonably.
18	4/25/2023	Specification Section 01 10 00, Paragraph 1.8.8, Page 7 has FF&E items under the heading of "Owner Furnished/Owner Installed Products". Drawing K-101B has numerous kitchen equipment items listed as FF&E. Please confirm that all items in the FF&E column on K-101B are furnished and installed by the Owner.	5/2/2023	1	Confirmed. Further clarification to this item will be provided in Addendum #2.
19	4/25/2023	Specification Section 05 12 00 Structural Steel Framing, Paragraph 1.8.A&B: These paragraphs say that the steel fabricator and the steel erector must be AISC certified. Can the AISC certification be waived for either the fabricator or the erector?	5/2/2023	1	Yes, the AISC certifications plant and erector may be waived with the Code required speical inspections that are required for this project, noted in 05 12 00 Paragraph 1.8 A&B.
20	4/25/2023	Specification Section 06 40 23 Interior Architectural Woodwork, Paragraph 1.5.A&B: These paragraphs say that the millwork fabricator and installer must be AWI certified. Can the AWI certification be waived for either the fabricator or the installer?	5/2/2023	1	Yes, the AWI certification can be waived for both the fabricator or the installer.

RFI / BIDD	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
21	4/25/2023	Terms & Conditions, Page T&C-4, Paragraph G31: This paragraph says that background checks "may" be required. There is a cost associated with contractors and subcontractors obtaining background checks. Please clarify if all employees working on-site will be required to provide background checks.	5/2/2023	1	It is not the Owner's intent to require background checks for all workers / employees onsite. However, should questionable activities occur onsite, the Owner reserves the right to have those individuals provide a background check at the Owner's request. Failure to provide the requested background check will result in those individuals' removal from the project. For bidding purposes, this is a bidders risk - judgement.
22	4/25/2023	Specification Section 01 50 00 Temporary Facilities & Controls, Paragraph 1.3.D, Page 1. This paragraph describes temporary heat and says to assume temporary heat will be needed for the duration of the job. What is this temporary heat referring to? Is this for the building, construction trailers or both?	5/2/2023	1	This temp heat is referencing construction temp heat.
23	4/28/2023	There are TWO specs for Audience Seating listed in the table of contents as 116113 (but is 126113 when you open) and 126100. Our vendor said they prefer we use 126100. Please clarify which is correct and eliminate the other	5/2/2023	1	Please see Pre-Bid RFI #1 response.
24	4/28/2023	This project outlines the requirements for the GC to provide a Builders Risk Policy. In order to do this, we need the following information.	5/17/2023	2	Addendum #2 - please note the revised reponse for this RFI.
		a. Is there a mortgage, if so, please provide the Payee Name, Contact, Phone, Address			a. No Mortgage on this property
		b. Will you want coverage on any existing structure? If so, what is the value of the existing structure? What would be the value after construction is completed?			b. Yes. Existing Value \$10,641,000.00. After construction value \$50,000,000.00
		c. What is the intended Occupancy use for?			c. School - telecom room, classrooms, offices, theater, conference rooms
		d. Total SF of covered area?			d. Existing building has 32,266 SF. After project completion 78,000 SF
		e. What is the age of the existing structure?			e. Built in 1968. Last renovation 2002
		f. What year was the Heating and Electrical most recently updated?			f. 2002
		g. Will the school have any fire or burglary detection systems in place and operational during construction?			g. Yes
		h. What Limit of insurance coverage? What deductible amount is requested?			h. Building limit as listed above \$50M. Deductible amount: \$25,000 maximum
25	4/28/2023	There was NO Appendix B included in the Appendices File. Please provide or confirm none exists.	5/2/23	1	Appendix B has been added via Addendum #1.
26	4/28/2023	There's a discrepancy in the Warranty Period. Scope of Work 3.0, D.6 calls for a 2-year warranty while G.12 (page T&C-1) calls for a 1-year warranty "unless otherwise stated" and GC.31(page GC-15) call for a 1-year warranty "unless otherwise provided in the specifications". Please clarify the warranty period.	5/2/2023	1	The minimum warranty required shall be two years. All references throughout the bidding documents to a minimum one year warranty shall be revised to be a minimum two year warranty.
27	4/28/2023	Who is responsible for permits? Construction Terms and Conditions item C4 states Contractor to obtain and pay for unless otherwise specified. General Conditions GC.9 A. states Contractor to obtain or assist the College in obtaining. Please clarify who is obtaining and who is paying. If by GC, can you consider and allowance for this since the exact costs are unknown?	5/2/2023	1	Please see Pre-Bid RFI #8 response.

RFI / BIDD	I / BIDDING PHASE							
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE			
28	4/28/2023	Spec Section 26 2913 is missing. Spec Section 26 2816 is included twice. The second occurrence of 26 2816 appears to be for Motor Controllers but is titled and numbered incorrectly. Confirm Motor Controller specification is the second occurrence of 26 2816 or provide correct specification.	5/2/2023	1	Specification Section 26 29 13 - Motor Controller has been added via Addendum #1.			
29	4/28/2023	Please consider extending the last day for questions beyond May 5 th . The nature of bidding, most subcontractors don't get involved until a week before the bid. Most questions will come to us past the 5 th no matter how much we try to get the questions early. Not have responses to these pending questions could cause us to lose participation and/or add costs for uncertainty.	5/2/2023	1	Please see Pre-Bid RFI #7 response.			
30	4/28/2023	Please define the specific lots where contractors are allowed to park.	5/2/2023	1	Please see Pre-Bid Meeting Minutes item #2j.			
31	4/28/2023	The civil plans indicate a LOD which is typically the contractor's area to use for storage, etc. If there are any restrictions to this, please define clearly.	5/2/2023	1	There are no restrictions inside the LOD. There are additional areas outside the LOD on campus property that can be discussed as potential staging areas after Owner review and approval. Additional information to			
32	4/28/2023	Per the prebid meeting, the owner will pay for all contractor utilities including electric and water. Please confirm this.	5/2/2023	1	Please see Pre-Bid RFI #12 response.			
33	4/28/2023	Please confirm that all Asbestos will be removed by owner prior to contractor mobilization.	5/2/2023	1	Confirmed. Please see Pre-Bid Meeting Minutes item #2c for additional information.			
34	4/28/2023	Please confirm the project requires a two-year warranty.	5/2/2023	1	Please see Pre-Bid RFI #26 response.			
35	4/28/2023	Please add the following contractor to 27 41 00 Audio Visual Systems, Part I, Section 1.5 Quality Assurance.	5/2/2023	1	Clarifies that the specification 27 41 00 will require that the contractors must come from the preferred prequalifed bidder list provided in the specifications OR must demonstrate three years of experience and furnish three reference projects of similar size and scope. The contractors must be able to provide references with Extron and Epson systems.			
36	5/4/2023	Under 2.2 Construction with Business Risk Insurance Coverage Requirements, the Insurance Coverage table on pages 3-4 lists Professional/ Errors & Omissions Liability \$1,000,000 for each occurrence and \$2,000,000 aggregate. Professional Liability (or Errors & Omissions) Insurance is typically required for professional design services or required of the design-build firm on a design-build delivery project. Because the General Contractor is not responsible for the design of the project, please confirm it is not necessary for the General Contractor to carry Professional Liability Insurance.	5/17/2023	2	Professional E&O requirement is waived.			
37	5/4/2023	Spec section 25 08 00 is listed in the Table of Contents, but is not included in the specs. If this spec section is required, please provide this spec section	5/17/2023	2	Specification section 25 08 00 Commisioning of Integrated Automated Systems has been attached in this addendum.			
38	5/4/2023	I did not see a specification for the Fire Extinguishers and Cabinets. Please provide a specification for the Fire Extinguishers and Cabinets.	5/17/2023	2	Please see Spec Section 10 44 16 found in the Bid Documents.			

RFI / BIDD	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
39	5/4/2023	Part 3.E of spec section 004100 – Bid Form states that bids can be held for 120 calendar days. Can the hold period be reduced to 60 calendar days?	5/17/2023	2	No.
40	5/4/2023	Ref: Temporary Kitchen. Please provide the minimum requirements that are needed for a temporary kitchen at the off-site location on campus. How many trailers are needed? What is the minimum kitchen equipment that is needed? Mechanical and Electrical requirements? What was the name of the trailer company that the owner received pricing from before? Please provide name and contact info. Any ADA requirements?		3	Minimum requirements will be further detailed in Addendum #3.
41	5/4/2023	Alternate No. 2 is to delete the Café. If the Café is deleted, what is the intention for that room/space? What would the finishes, MEP requirements be if this space is not used as a Café? I did not see any details or plans showing this space would look like other than the Café.	5/17/2023	2	HCC intends to use the Cafe space as a lounge space and construct a future café if the deduct alternate is accepted. All of the MEP is capped for future connection to the layout as shown. Flooring and ceiling continues as drawn. Bulk heads are to stay as drawn. With the deduct, no secuirty grille, counters, kitchen equipment, casework, doors are to be provided. Just open the space up to the surrounding lounge and ciruclation areas.
42	5/4/2023	Alternate No. 1 is to deduct the concrete pavers at the entrance plaza and at the café plaza. There is a detail for the concrete pavers on 2/C201, but I did not see a detail for these areas if we are to only have scored concrete. Are we to use the same detail and increase the concrete thickness by 3"? Please provide a detail for these areas if concrete pavers are deleted.		3	Please use concrete walk detail 1/C201, in lieu of 2/C201 if Deduct #1 is accepted. Included in Deduct #1 shall be removing the pavers from the concrete stair risers from the stair detail. There will be a reissued Sheet C201 in Addendum #3 that will better detail the Alternate.
43	5/4/2023	Please provide a specification for the precast concrete stair treads shown on the stairs on detail 5/C202.	5/17/2023	2	The general concrete spec covers the concrete used in the stair treads. Detail will be revised in Addendum #3 to show a base bid concrete stair and an alternate no. 1 paver stair.
44	5/4/2023	There is a 3 rd bollard at the loading dock that is not called out on C131. The tag for 1/C202 only points to 2. There are 3 per drawing A4.26.	5/17/2023	2	Correct, there are 3 bollards as shown on Civil and noted in the Arch drawings. As the most stringent applies, 3 bollards are required to be included in the bid.
45	5/4/2023	Note C-5 on C131 says "Contractor shall provide shop drawings for structural foundation & pedestal connection, signed by a MD certified engineer." How are we to price this pedestal without any information or details? Can an allowance cost be provided for this note?	5/17/2023	2	The sculpture's base is to be a precast plinth 18" x 18" x 32" tall above grade. This plinth is to match the specifications of all other precast stone in color and finish typical in the project. Connections details are to be provided in shop drawings for both the sculpture and the footing. Provide inserts or cast in holes within the precast plinth. This plinth is to sit on a 3000PSI conrete footing, that is 24"x24"x24" below grade. An allowance for this is not acceptable.
46	5/4/2023	Please provide a detail for where the heavy duty concrete ties into the asphalt paving at the loading dock area as shown on C131.	5/17/2023	2	Asphalt is a flexible pavement and therefore does not need pinning or tieing into heavy duty concrete. The heavy duty concrete should be formed first, and then the asphalt installed after.
47	5/4/2023	Please provide a spec for the Aluminum retention wall that is shown at the planter boxes on 2/C202.		3	Will provide a spec for Aluminum retention wall in Addendum #3.

RFI / BIDD	FI / BIDDING PHASE						
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE		
48	5/4/2023	Please confirm whether any of the existing parking lot gets re-stripped or not. Note C-4 on C131 points to parking spaces in the existing parking lot that doesn't appear to be in the scope of work. Please clarify.		3	The parking spaces that are shown to be re-striped are the only ones. These spaces will be converted from handicap parking stalls to standard parking stalls. Addendum #3 will show a revised LOD reducing the amount of the parking lot as part of the project.		
49	5/4/2023	Demolition note D8 on C111 refers to removing an existing fuel tank by an MDE approved contractor. What is the size of this tank? Is it an above ground or below ground tanks? Does the tank currently have fuel I it and if so, how much fuel and what type?	5/17/2023	2	There is not an existing oil tank as noted. There is an underground 5,000 GAL water tank for fire suppression. The Contractor should assume it is filled with water. Revise note D-8 on C111 to read, "Underground Water tank to be demoed by the Contractor."		
50	5/4/2023	Specification Section 12 24 13, Part 2, Paragraph 1.3.C: This paragraph starts with "Room Darkening Shades (Manual Shades) RS-2". Paragraph 1.3.C.1 says "Fabric: Classic Blackout (Motorized Shades): 0700 Series Opaque". Are RS-2 shades to be manual or motorized or some combination of both manual and motorized? Please clarify.		3	This RFI will be responded to in Addendum #3.		
51	5/4/2023	Demolition Note 32 on AD1.01 is different from demolition note 32 on AD1.02 and AD.103. It is difficult to understand what this note is saying on AD1.02 & AD1.03. Please clarify demolition note 32 for all drawings.	5/17/2023	2	Demolition Note 32 should match on all sheets (AD1.01 - AD1.03). Please revise Note 32 on sheets AD1.01 - AD1.03 to read, "Contractor shall be required to remove and properly dispose of all Solar Panels and related equipment." See attached revised Bid Form that adds Deduct Alt to remove demo from scope to be done by Owner.		
52	5/4/2023	Per the Demo RCP Legend on AD1.04, please confirm that "ALL" hazardous material including floor tile and mastic is Not in Contract. If we are to include any hazardous material removal, please clarify what portions are by the contractor.	5/17/2023	2	Confirmed, not in contract as stated.		
53	5/4/2023	Detail 2 on A3.10 calls for 2" rigid insulation beneath concrete slab but does not show the limits. Does the 2" rigid insulation continue under the entire slab or is it 2'-0" from the interior face of the wall as shown in detail 3 on A3.10?	5/17/2023	2	A clarification for 2/A3.10: the typical detail for 2" rigid insulation (RI) beneath the concrete slab requires only 2'-0" of RI from interior face of exterior wall as shown on detail A3.10.		
54	5/4/2023	Drawing C151, Note U-11 says that the contractor shall include an allowance for the BGE electrical service continuation to power source as determined by BGE. Please provide the allowance that each contractor is supposed to include for this work. I do not see this referenced on the electrical drawings.	5/17/2023	2	Contractor will be required to complete service into the building and there will not be an allowance provided for this work. This is shown on sheet E004 accordingly. Please revise note U-11 on sheet C151 to read, "Proposed Electrical route to be confirmed by BGE (See E004 for additional information)."		
55	5/4/2023	Drawing C151, General notes 1 through 3 in the lower right corner of this drawing tell the contractor to include three (3) allowances. Please provide the allowance each contractor should include for these items.	5/17/2023	2	General Notes 1 thru 3 on drawing C151 can be struck from the bid set.		
56	5/4/2023	Drawing C151, Note 23 says to relocate an "unknown" utility prior to installing the storm drain system. We are not able to price an "unknown" utility? Should an allowance be included for all contractors to include since this item is unknown?		3	This RFI will be responded to in Addendum #3.		
57	5/4/2023	Demolition note D-33 on C111 says to remove paving as necessary for the installation of the proposed BGE service. Please provide the BGE service drawings so that we can determine the extent of this work.	5/17/2023	2	Please see Pre-Bid RFI #54 response.		

RFI / BIDD	FI / BIDDING PHASE							
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE			
58	5/4/2023	Construction note C-7 on C131 says to reinstall an existing "memorial sign". This sign is not referenced on the site demolition drawings. Please provide information regarding this sign.	5/17/2023	2	Correct, the existing memorial signs will be removed by the Owner prior to Contractor mobilization, stored by the Owner, and turned over to the Contractor for (re)installation. Please note that there are two signs, they are on metal poles and do not require a footer.			
59	5/4/2023	On drawing ESC101, the parking lot to the west of the building includes the note "Stage/Storage". Is this the location for the contractor/owner trailers, material storage, construction parking, etc.? If so, can you identify the extent of this lot that will be provided for the contractors use?		3	A redline Erosion & Sediment Control plan will be provide in Addendum #3. The parking lot space within the LOD will be dramatically decreased and additional staging area provided in grassy areas.			
60	5/4/2023	Please confirm fixture Type B is to be a 2x4 fixture, it is shown on E203 as 2x4. It is shown on the fixture schedule as 2x2	5/17/2023	2	Fixture B is 2x4. Light fixture description in light fixture schedule is a typo.			
61	5/4/2023	Please confirm fixture Type BE is to be a 2x4 fixture, it is shown on E203 as 2x4. It is shown on the fixture schedule as 2x2	5/17/2023	2	Fixture BE is 2x4. Light fixture description in light fixture schedule is a typo.			
62	5/4/2023	Please confirm actual location of switch S (D) that is floating at column line M.5 & 9e on page E203.	5/17/2023	2	The switch S(D) is for room 175.			
63	5/4/2023	Switching is unclear as to designation "C" in Room 141, drawing page E201. Please clarify which lights should be on switch "C".	5/17/2023	2	Remove switch designation "C".			
64	5/4/2023	What is note #2 on E206? Show on bottom of stairs near column line C.	5/17/2023	2	Remove Note #2.			
65	5/4/2023	Please clarify the intent with S(D) switch shown on E201 and E203 pertaining to lighting for gallery room 149.	5/17/2023	2	On E201, please confirm which S(D) on the floor plan as the gallery is only on E203. For E203, the intend is to divide the track lighting in to 4-zones and (1) zone for the downlights. The lights are being controlled by dimmer switch S(D) with subscripts. The other S(D) is for general lighting located on sheet E404 as indicated by note 2.			
66	5/4/2023	Note #2 on drawing E203 references drawing page E405. Please provide drawing page E405.	5/17/2023	2	Note #2 should reference E404.			
67	5/4/2023	Clarify the amount of lighting track required in Gallery RM 149. Should track be provided at locations of the grid that only show fixture heads or across the entire grid for fixture heads to be added in the future?	5/17/2023	2	Provide track to match layout indicated on drawings.			
68	5/4/2023	Please provide further detail on installation of Type S tape light "Along Main Stair Way to Second Floor" per note #3 on E201.	5/17/2023	2	Type S LED tape light shall be installed under the railing. Please See A.430 for elevation view.			
69	5/4/2023	Provide branch circuit and clarification of control for type S tape lighting at the receptionist desk and Room 010 stairwell.	5/17/2023	2	Type S tape light is provided with remote drivers for 120-277V. Type S fixtures for the reception desk and stairs can be connected to circuit #4 of panel LP1. Provide (2) local dimming switches in reception desk.			
70	5/4/2023	Three way dimming switches in Room 137 drawing page E201 has subscript "a" and "b". Please confirm the track lighting in this room is to be controlled by these switches.	5/17/2023	2	Yes the switch is for the track lighting.			
71	5/4/2023	Please confirm that all fixtures on the emergency circuits throughout should be provided with battery backup	5/17/2023	2	There is a generator on site. All emergency fixtures are to be provided on emergency circuit.			
72	5/4/2023	Please confirm JE1E and JE1 fixtures shown at the stage on E201/E202 are to be mounted to the underside of the catwalk.	5/17/2023	2	JE1 and JE1E are mounted to index light bracket.			
73	5/4/2023	Please confirm JE2 fixtures shown on E207 are to be mounted to underside of catwalk.	5/17/2023	2	JE2 are wall mounted 8ft a.f.f per light fixture schedules.			

RFI / BIDD	FI / BIDDING PHASE							
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE			
74	5/4/2023	Please confirm that the Owner is providing and installing theatrical stage lighting.	5/17/2023	2	The theatrical stage lighting in NIC and will part of the separate FF&E bid package.			
75	5/4/2023	Addendum # 1 includes a revised section 01 10 00 - Summary of Work. In the addendum # 1 section 01 10 00, paragraph 1.5.B has been changed to say the contract "will be constructed utilizing a design-bid-build delivery method". The original volume 1 of the specifications includes section 00 50 00 which references the AIA A101 document. Also in the original documents is section 00 70 01 which references the AIA A201 General Conditions of the Contract. In addition, The State of Maryland, DGS, General Conditions for Construction Contracts is included in the original volume 1 specifications. These documents do not appear to be correct for a "design-bid-build" contracting method. Please provide the correct sample documents that will be used at the time of contract for our review		3	Design-bid-build is a General Contractor delievery method. The Contract and General Conditions will be corrected in Addendum #3.			
76	5/4/2023	Are there existing drawings for the Chesapeake Building that can be provided to us?	5/17/2023	2	Yes, a link to download all of the existing drawings will be included in Addendum #2. These drawings are being provided for reference only.			
77	5/4/2023	Electrical Questions:						
		-Confirm fixture Type B is to be a 2x4 fixture, shown on E203 as 2x4.	5/17/2023	2	Please see Pre-Bid RFI #60 response.			
		-Confirm fixture Type BE is to be 2x4 fixture, shown on E203 as 2x4.	5/17/2023	2	Please see Pre-Bid RFI #61 response.			
		-Confirm actual location of switch S(D) that is floating at column line M.5 & 9e on page E203.	5/17/2023	2	Please see Pre-Bid RFI #62 response.			
		-Switching is unclear as to designation "C" in rm 141 drawing page E201, please clarify which lights should be on switch "C".	5/17/2023	2	Please see Pre-Bid RFI #63 response.			
		-What is note #2 on E206? Show on bottom of stairs near column line C.	5/17/2023	2	Please see Pre-Bid RFI #64 response.			
		-Clarify the intent with S(D) switch shown on E201 and E203 pertaining to lighting for gallery room 149.	5/17/2023	2	Please see Pre-Bid RFI #65 response.			
		-Note #2 on drawing E203 references drawing page E405. Please provide drawing page E405.	5/17/2023	2	Please see Pre-Bid RFI #66 response.			
		-Clarify the amount of lighting track required in Gallery RM 149. Should track be provided at locations of the grid that only show fixture heads or across the entire grid for fixture heads to be added in the future?	5/17/2023	2	Please see Pre-Bid RFI #67 response.			
		-Which trade is responsible for providing and installing Unistrut grid in Gallery Rm 149?	5/17/2023	2	Trade scoping is to be done by the Contractor.			
		-Provide further detail on install of Type S tape light "Along Main Stair Way to Second Floor" per note #3 on E201.	5/17/2023	2	Please see Pre-Bid RFI #68 response.			
		-Provide branch circuit and clarification of control for type S tape lighting at the receptionist desk and rm 010 stairwell.	5/17/2023	2	Please see Pre-Bid RFI #69 response.			
		-Three way dimming switches in RM 137 dwg page E201 has subscript "a" and "b", confirm the track lighting in this room is to be controlled by these switches.	5/17/2023	2	Please see Pre-Bid RFI #70 response.			
78	5/4/2023	Drawing K-101B – please clarify items R1-R7 who furnish and installs these items? Base Contract or FF&E?	5/17/2023	2	Kitchen Equipment Contractor (K.E.C.) will furnish and install the R1-R7 equipment.			

RFI / BIDD	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
79	5/4/2023	There was an option mentioned to provide an offsite temporary kitchen to allow the GC to complete the project in one phase in lieu of keeping the current kitchen in operation until the new kitchen is ready for occupancy. To consider this option we require some specific information to properly include all requirements in our bid. Please provide us with information pertaining to the following items:		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.1		Detailed list of appliance specifications. Provide quantities and any specific needs. Please designate all gas and electrical requirements so we can properly price the infrastructure to support the equipment.		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.2		How many meals per day does this kitchen need to produce?		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.3		Do you require dry storage or cooler/freezer needs? If so, provide size and specs.		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.4		Are there any additional space requirements needed for the employees other than the cooking space (prep area, rest area, bathrooms, etc)?		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.5		Do you require a dishwashing facility? Is there running water and septic at the suggested temporary site?		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
79.6		Any other requirements?		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.
80	5/4/2023	Please extend the last day for questions until 5/19 with the final adda being issued by the 23 rd to allow at least 5 working days prior to the bid date. It is in the best interest of the school to ensure all questions have time to be discovered, asked and answered prior to final pricing being provided	5/17/2023	2	The final day for questions has been extended to 5/9. There will be no further extensions.
81	5/4/2023	Regarding item 5 on the bid form requesting breakout pricing for submittals and procurement costs for the steel, mechanical and electrical items. We will not know who we are using until the last minute and trying to decipher this information in time to include on a bid form that has to be hand delivered might be very difficult. Is there any reason you can't request this information form the apparent low bidder(s) after the bid is submitted? The statement is also a bit confusing. Are you asking for a breakout of ALL PROJECT MATERIALS as mentioned or just the PROCESSING OF ALL SUBMITTALS and PROCUREMENT OF JUST STEEL, MECH, ELEC which is also stated.	5/17/2023	2	The required Breakout pricing is being requested in order to provide the Contractor an initial Notice to Proceed document. This initial-partial Notice to Proceed provides the Contractor security that any work performed regarding submittals and material procurement (as required) will be paid for by the Owner. Given the time lag from Contract approval (July) to Notice to Proceed for construction activities onsite (10/23) and the current market conditions
81.1	5/4/2023	DREAKOUT PRICING FOR SUDMITTALS, STEEL, MECHANICAL & ELECTRICAL MATERIAL A. Breakout pricing is part of the base bid submission and not in addition to the Base Bid amount. The requested breakout pricing is included in the Base Bid amount. B. Bidder shall provide breakout pricing for the processing of all project Submittals, the procurement of all Structural Steel, the procurement of all Mechanical material and the procurement of all Electrical material. Awarded Bidder will receive a Partial Notice-To- Proceed for Submittals, Steel, Mechanical and Electrical Material after all required Contract Approvals are obtained by the Owner. BREAKOUT PRICING FOR ALL PROJECT SUBMITTALS, ALL STRUCTUAL STEEL MATERIAL, ALL MECHANICAL MATERIAL AND ALL ELECTRICAL MATERIAL: (§), (figure) (use words)	5/17/2023	2	of procurement for joist & deck, structural steel, switchgear and mechanical units, it is in the best interest of the project to utilize those months to conduct the submittal process for the entire project as well as order those extemely long lead items.

RFI / BIDD	ING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
82	5/5/2023	Per Section 126100 Fixed Audience Seating there is no mention of aisle lights, however on Sheet TS-100 aisle lights are shown. Please clarify if they are needed for this project	5/17/2023	2	Spec Section 12 61 00 was deleted in Addendum #1. Please reference Spec Section 12 61 13, a revised TOC has been provided to correct section numbering to 12 61 13. A revised specification 12 61 13 is provided with this addendum, only corrects the file name.
83	5/5/2023	Can you please advise what the columns mean for foodservice equipment. See attached. Are we to include both Base Bid equipment and FF&E equipment? The foodservice written specs do not differentiate what is base bid and what is FF&E.		3	This will be further clarified in Addendum #3.
84	5/5/2023	Only see one rolling door and one "elephant Door," what is an elephant door and who makes it? Please clarify.	5/17/2023	2	The tall rolling door in the north side of the theater stage is the "elephant door", this is a theater term.
85	5/5/2023	Confirm fixture Type B is to be a 2x4 fixture, shown on E203 as 2x4.	5/17/2023	2	Please see Pre-Bid RFI #60 response.
86	5/5/2023	Confirm fixture Type BE is to be 2x4 fixture, shown on E203 as 2x4.	5/17/2023	2	Please see Pre-Bid RFI #61 response.
87	5/5/2023	Confirm actual location of switch S(D) that is floating at column line M.5 & 9e on page E203.	5/17/2023	2	Please see Pre-Bid RFI #62 response.
88	5/5/2023	Switching is unclear as to designation "C" in rm 141 drawing page E201, please clarify which lights should be on switch "C".	5/17/2023	2	Please see Pre-Bid RFI #63 response.
89	5/5/2023	What is note #2 on E206? Show on bottom of stairs near column line C.	5/17/2023	2	Please see Pre-Bid RFI #64 response.
90	5/5/2023	Clarify the intent with S(D) switch shown on E201 and E203 pertaining to lighting for gallery room 149.	5/17/2023	2	Please see Pre-Bid RFI #65 response.
91	5/5/2023	Note #2 on drawing E203 references drawing page E405. Please provide drawing page E405.	5/17/2023	2	Please see Pre-Bid RFI #66 response.
92	5/5/2023	Clarify the amount of lighting track required in Gallery RM 149. Should track be provided at locations of the grid that only show fixture heads or across the entire grid for fixture heads to be added in the future?	5/17/2023	2	Please see Pre-Bid RFI #67 response.
93	5/5/2023	Which trade is responsible for providing and installing Unistrut grid in Gallery Rm 149?	5/22/2023	2	Trade scoping is to be done by the Contractor.
94	5/5/2023	Provide further detail on install of Type S tape light "Along Main Stair Way to Second Floor" per note #3 on E201.	5/17/2023	2	Please see Pre-Bid RFI #68 response.
95	5/5/2023	Provide branch circuit and clarification of control for type S tape lighting at the receptionist desk and room 010 stairwell	5/17/2023	2	Please see Pre-Bid RFI #69 response.
96	5/5/2023	Three way dimming switches in RM 137 dwg page E201 has subscript "a" and "b", confirm the track lighting in this room is to be controlled by these switches.	5/17/2023	2	Please see Pre-Bid RFI #70 response.
97	5/5/2023	Confirm that all fixtures on the emergency circuits throughout should be provided with battery backup.	5/17/2023	2	Please see Pre-Bid RFI #71 response.
98	5/5/2023	Confirm JE1E and JE1 fixtures shown at the stage on E201/E202 are to be mounted to the underside of the catwalk.	5/17/2023	2	Please see Pre-Bid RFI #72 response.
99	5/5/2023	Confirm JE2 fixtures shown on E207 are to be mounted to underside of catwalk.	5/17/2023	2	Please see Pre-Bid RFI #73 response.
100	5/5/2023	Confirm owner is providing and installing theatrical stage lighting.	5/17/2023	2	Please see Pre-Bid RFI #74 response.
101	5/5/2023	Please issue a sign schedule for pricing	5/17/2023	2	Signage Schedule can be found on Detail 3 on A-6.40.

RFI / BIDD	ING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
102	5/5/2023	On drawing C151, General Note #1 says, "Contractor shall provide allowance for minimum 5' deep trenching for storm drain." Please provide an exact depth so we can accurately price this item. Minimum of 5' deep could mean 5' or 10'	5/17/2023	2	Please see Pre-Bid RFI #55 response.
103	5/5/2023	On drawing C151, General Note #2 says, "Contractor shall provide allowance for relocating existing utilities to remain. Existing utilities to be relocated are not shown. More detail will be provided in subsequent design submissions." Please provide all GCs with an allowance cost for this line item, so everyone is pricing this equally	5/17/2023	2	Please see Pre-Bid RFI #55 response.
104	5/5/2023	On drawing AD1.01 Demolition note #3 says, "Area not to be occupied by public during construction. Use per GC "Job Trailer" during Phase 1." Does this mean that the General Contractor can use this space In the existing building as an office space during Phase 1 and then provide an onsite trailer for Phase 2? If yes, are we to still provide a separate Owner's trailer for Phase 1 as well or would they use this space as well	5/17/2023	2	Note 3 is a proposed phasing item. The GC will be required to provide their phasing plan at the kickoff meeting. If the GC wishes to use part of the building as their "Job Trailer", that is means and methods. If the GC's proposed phasing plan, presented at the kickoff meeting, included their "Job Trailer" as a space inside the building, the Owner would not object. However, the Owner will still require a separate "Owner's Trailer" in accordance with the Specifications.
105	5/5/2023	Temporary Walls are to be provided per demolition notes #6 & #7 on AD1.01. Please provide to what extent are we to provide temp walls in the existing space and also please provide a detail for the temporary walls.	5/17/2023	2	These notes on this drawing are part of a proposed phasing plan. The GC will be required to provide their phasing plan at the kickoff meeting. If the GC's phasing plan has the kitchen to remain operational inside the building, the GC should intend on including temp walls in their proposed phasing plan. The GC's phasing plan should include a temp wall detail proposal. The temp wall needs to include sound attenutated batt insulated and the occupied side of the temp wall will be required to be standard drywall and 1 coat paint finish. No base required.
106	5/5/2023	On drawing A1.03 there is a note that says, "Orchestra Pit Depression see deduct Alternate #6." Is this an alternate? If yes, please provide a revised bid form and alternates spec section.	5/17/2023	2	Delete note that says, "Orchestra Pit Depression see deduct Alternate #6." from A1.03. No, this is not intended to be a alternate any longer.
107	5/5/2023	On drawing SD-011 in the existing stage area there are references to General Notes 11D and 11G. These notes do not pertain to this scope. Please confirm that the notes should be 12D and 12G.	5/17/2023	2	Yes, notes referenced should be 12D and 12G.
108	5/5/2023	On drawing A1.09 detail 2 it shows Alternate Deduct 7 – Room 282 becomes loft. Is this a deduct alternate? It is not on the bid form or in the alternates specification. Please clarify if this is an alternate.	5/17/2023	2	No this is no longer an alternate. 2/A109 has been deleted from the drawing set, see revised A1.09 - Second Floor PLan - Area 'B' - Addendum #2 attached in this addendum
109	5/5/2023	On drawing A4.30 detail 1 and A4.31 detail 1 shows digital signage. Please confirm that these are to be furnished in the AV package and the GC is responsible for installing.	5/17/2023	2	AV contractor providing distribution and displays. Digital signage player by owner
110	5/5/2023	There are several FF&E items shown on the architectural plans. I didn't see a FF&E or equipment schedule in the plans. Please provide a FF&E schedule of these items for our reference and so we know if we are responsible for installing any of these items.	5/17/2023	2	All FF&E is to be bid as a separate contract. If scheduled or specified then it is to be in contract.
111	5/5/2023	On drawing A1.05 there is a note in Scene Shop 161 that says to provide baseboard dust collector piping. I didn't any details or further information for this piping. Please provide more information and details for the baseboard dust collector piping.	5/17/2023	2	Revise note to state that portable dust collectotion and associated pipping will be provide by the Owner.

RFI / BIDDING PHASE						
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE	
112	5/5/2023	In the Project Meeting Minutes issued in Addendum No. 1, item 3.b.viii. states that the anticipated substantial completion date is April 23, 2025. What is the anticipated Final Completion Date? I did not see one in the IFB or the specifications.	5/17/2023	2	Final Completion will occur when all the project requirements have been met and the punchlist has been completed and signed off.	
113	5/5/2023	On detail 2 on drawing A3.04 it says that "Elephant Door or O.H. Door are acceptable equals." What kind of door is required at this opening? If it is an elephant door, please provide a specification.	5/17/2023	2	Please see Pre-Bid RFI #84 response.	
114	5/6/2023	Please confirm that the owner is removing the existing PV (Solar Panels) on the roof per demo note #32 on AD1.02 and AD1.03. On drawing AD1.01 demo note #32 says that the GC is to remove existing PV (solar panels).	5/17/2023	2	Please see Pre-Bid RFI #51 response.	
115	5/6/2023	Please confirm that the owner will be removing the acoustical tile ceiling and acoustical cloud that are both presumed to be hazardous per notes on 1 & 2/AD1.04.			Referenced notes should be notes #2 and notes #3. Those referenced notes state the standard process for encountering hazardous materials. We no longer believe those ceiling tiles are hazardous. Please revise those notes on Detail #1 and Detail #2 to remove the reference "Haz. Mat. contents unknown. Presume Hazardous.".	
116	5/6/2023	Are there any other AEDs besides the ones shown on A1.04? I didn't any find others on the plans.	5/17/2023	2	All AEDs are to be removed from the contract. Delete from Signage Schedule on A6.40, Delete all instances on AED on A1.04	
117	5/6/2023	There is a note regarding a Genie Lift on drawing A1.07. Is anything else required from the GC besides an outlet for the Genie Lift?	5/17/2023	2	Correct. Genie Lift is NIC as noted. Electrical outlets required are shown on the Elec drawings.	
118	5/7/2023	Drawing TA0.02 identifies (1) 24-strand sm from Library DC to telecom 189 and (1) 24-strand sm from Library DC to Telecom 185. Is this an error or are the requirements to have (2) 24-strand sm fiber cables to route to the Library DC?	5/17/2023	2	The one (1) 24 stand optical fiber cable passes through Telecom 185 and terminates in Telcom 189.	
119	5/7/2023	Please confirm all conduits, sleeves, & corridor cable tray to be used for telecommunications cable pathway will be provided and installed by the electrical contractor?	5/17/2023	2	Trade scoping is to be done by the Contractor.	
120	5/7/2023	Please confirm all plywood in the telecom rooms will not be provided, painted, and installed by the telecom contractor	5/17/2023	2	Trade scoping is to be done by the Contractor.	
121	5/7/2023	Please confirm all grounding busbars and their main grounding conductors in the telecom rooms will be provided and installed by the electrical contractor?	5/17/2023	2	Trade scoping is to be done by the Contractor.	
122	5/7/2023	Are there any requirements to remove existing telecom cables to be done by the telecom contractor?	5/17/2023	2	Trade scoping is to be done by the Contractor.	
123	5/7/2023	Are there any BIM modeling requirements by the telecom contractor	5/17/2023	2	Trade scoping is to be done by the Contractor.	
124	5/7/2023	Can a drawing for the library be provided to show the path of the backbone cable to the Data Center?	5/17/2023	2	Please see drawing TA0.03. If this does not answer your question please let us know and we will answer in Addendum #3.	
125	5/7/2023	Are all AV Category cables in the floor boxes to be shielded or only the displays, digital signage, and menu boards?	5/17/2023	2	Shieled Cable to be provided for digital video or audio distribution.	
126	5/7/2023	Reference 27 10 00-14. The division 27 specifications call for OSP innerduct. The drawings do not indicate where this innerduct is to be placed or how many? Please provide the location where the innerduct is to be installed and how many are to be installed if any.	5/17/2023	2	Provide innerduct as per 271000 article 3.7.	

RFI / BIDD	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
127	5/7/2023	Reference TA1.06. The notes in Gallery 149 instruct to route (2) cables each to wall mounted equipment rack in office 181. Are these (2) cables in addition to the quads shown or are they to be added to the quads shown?	5/17/2023	2	Cables are 2 of the 4 cables in the quad outlet.
128	OMITTED				
129	5/7/2023	What are the dimensions of the wall mounted equipment rack in Office 181 to be. Is this an open rack or enclosed cabinet?	5/17/2023	2	See 271000 Article 2.30.
130	5/7/2023	Reference 27 10 00-18 & -19 (2.24). A.3 calls for the free-standing relay rack to be 3" deep but A.5 calls for the free-standing relay rack to be 15" deep. Which is correct? If the requirement is 15" deep, please provide a part number for a 15" deep rack from CPI.	5/17/2023	2	A5 was crossed out in the bid set. Racks to be 3" deep per A3.
132	5/7/2023	Please confirm the 3/4" plywood backboards in the telecommunication rooms will be provided, installed, and painted by a trade other than the telecom cabling contractor?	5/17/2023	2	Trade scoping is to be done by the Contractor.
133	5/9/2023	Reference Telecom Site Plan TA0.03 – Please confirm Verizon is installing any new Telecom Vaults. (All new and existing copper and optical fiber cable to enter building through this vault. This includes current direct buried cabling.)	5/17/2023	2	New Telecom vault 48"X48"X 48" on drawing TA 0.03 is by contractor.
134	5/9/2023	Reference Telecom Site Plan TA0.03 – Is Verizon responsible for providing, installing, and splicing new four (4) 100PR Copper Telephone cables between Telecom 185 and the New Telecom Vault? (This would also seem to be Verizon related). These cables to be spliced in the new Telecom Vault to existing incoming copper cables.	5/17/2023	2	The contractor is responsible for providing, installing, and splicing new four (4) 100PR Copper Telephone cables between Telecom 185 and the New Telecom Vault.
135	5/9/2023	For the SWM 102, ESC 103, and ESC 113 sheets, is there any additional information or details on that area of the project? Will demolition and replacement of the concrete and curb and gutter be necessary?	5/17/2023	2	No demolition of existing features will need to occur. Installation of the underdrain can occur without demolition of concrete curb & gutter.
136	5/9/2023	Who is responsible for the Grease Trap?	5/17/2023	2	Trade scoping is to be done by the Contractor.
137	5/9/2023	Please see sheet C131, please elaborate on Detail C-15 about the #57 stone filling in the top of wall. Is that stone meant to fill in the space between the 2 walls that are proposed (Sheet C141)	5/17/2023	2	Correct, this area between the two walls is to be filled with No.57 stone flush with the top of the wall to limits shown.
138	5/9/2023	Who is responsible for demoing the oil tank?	5/17/2023	2	Please see Pre-Bid RFI #49 response.
139	5/9/2023	Refence TA7.02 drawing. Please confirm the correct PTZ camera. The drawings show a 20x but the specifications list a 12x.	5/17/2023	2	For TA7.02 provide the 12x PTZ camera per spec.
140	5/9/2023	Spec 26 05 19, section 2.2 B. states the following: "Per Value Engineering approved item, MC cable is allowed in concealed areas for circuits 30A or less." However, in the execution section, 3.2, it states the following: Can MC cable be used over 6ft lengths in areas NOT exposed, such as walls and above drop ceilings?	5/17/2023	2	MC cable for branch circuits 30A or less will be allowed in walls and above accessible ceilings
		B. MC cable shall not be used for feeders or branch circuit homeruns.	5/17/2023	2	MC cable cannot be used for feeders. MC cable for branch circuits 30A or less in concealed areas will be allowed
		E. MC cable may only be used for lighting whips; maximum 6-foot length, in accessible locations.	5/17/2023	2	3.2.E is no longer applicable due to VE. MC cable for branch circuits 30A or less will be allowed in walls and above accessible ceilings

RFI / BIDD	DING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
		Can MC cable be used over 6ft lengths in areas NOT exposed, such as walls and above drop ceilings?	5/17/2023	2	MC cable for branch circuits 30A or less will be allowed in walls and above accessible ceilings
141	5/9/2023	The project outlines a construction duration of 548 calendar days. Our sources state there is a 70-80 week lead time on switchgear and generators. How should we address this concern within our bid as well as other items with extensive lead times that are beyond contractor control?	5/17/2023	2	The awarded GC is to provide a list of long lead items as well as an initial construction schedule to the Kickoff meeting. The GC will also be required to discuss / propose a phasing plan. It is the Owner's assumption that long lead items will play a role in the GC's phasing plan and these issues will be discussed and addressed collectively by the Project Team at the kickoff meeting.
142	5/9/2023	Drawing TA0.02 identifies (1) 24-strand sm from Library DC to telecom 189 and (1) 24-strand sm from Library DC to Telecom 185. Is this an error or are the requirements to have (2) 24-strand sm fiber cables to route to the Library DC?	5/17/2023	2	The one (1) 24 stand optical fiber cable passes through Telecom 185 and terminates in Telcom 189.
143	5/9/2023	Can a drawing for the Library be provided to show the path of the backbone cable to the Data Center?	5/17/2023	2	Please see Pre-Bid RFI #124 response.
144	5/9/2023	Are all AV Category cables in the floor boxes to be shielded or only the displays, digital signage, and menu boards?	5/17/2023	2	Shieled Cable to be provided for digital video or audio distribution.
145	5/9/2023	Reference 27 10 00-14. The division 27 specifications call for OSP innerduct. The drawings do not indicate where this innerduct is to be placed or how many? Please provide the location the innerduct is to be installed and how many are to be installed if any	5/17/2023	2	Please see Pre-Bid RFI #126 response.
146	5/9/2023	Reference TA1.06. The notes in the Gallery 149 instruct to route (2) cables each to wall mounted equipment rack in office 181. Are these (2) cable in addition to the quads shown or are they to be added to the quads shown?	5/17/2023	2	Please see Pre-Bid RFI #127 response.
147	5/9/2023	What are the dimensions of the wall mounted equipment rack in Office 181 to be. Is this an open rack or enclosed cabinet?	5/17/2023	2	Please see Pre-Bid RFI #129 response.
148	5/9/2023	Reference 27 10 00-18 & -19 (2.24). A.3 calls for the free standing relay rack to be 3" deep but A.5 call for the free standing relay rack to be 15" deep. Which is correct? If the requirement is 15" deep, please provide a part number for a 15" deep rack from CPI.	5/17/2023	2	Please see Pre-Bid RFI #130 response.
149	5/9/2023	Please clarify which items listed on Drawing K-101B are to be included in the Base Contract and which are FF&E items. Numerous items are listed on K-101B as FF&E but are listed in Specification Section 11 4000 as furnished by the contractor. In addition to this, Items 39 and 40 are noted as "Furnished by Vendor" but are shown in the Base Contract column on K-101B, Specification Section 11 400 shows these as vendor furnished items. Also, Items R1 through R7 are not shown on K-101B as either Base Contract or FF&E but are listed in Specification Section 11 4000 as furnished by the contractor.		3	Please see Pre-Bid RFI #83 response.
150	5/9/2023	Per the TA plan drawings - Confirm all new cat 6 data cables on the 1st floor will be terminated in the Telecom Room 189.	5/17/2023	2	See note on TA1.04 amd TA1.22 for cables that terminate in telecom 241.

RFI / BIDD	BIDDING PHASE							
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE			
151	5/9/2023	Per drawing TA0.02 - Confirm that there is NO Ethernet cable or backbone cabling to be provided in between Telecom 189 and 185 and the Equipment rack in Office 181 on the 1st floor.	5/17/2023	2	There is a two (2) port data outlet located behind the rack. See TA1.06			
152	5/9/2023	Per the TA Plan drawings and spec section 27 10 00 1.5 C: In this section the maximum allowable horizontal cable length is only 263 ft. Please provide direction for cables that exceed the allowable horizontal cable length The maximum allowable horizontal cable length is 295 feet. This maximum allowable length does not include an allowable for the length of 16 feet to the workstation equipment. The maximum allowable length does not include an allowance for the length of 16 feet in the horizontal cross- connect.	5/17/2023	2	Per 271000 Article 1.5 C the maximum allowable horizontal cable length is 295 feet.			
153	5/9/2023	THIS IS ADDITIONAL INFORMATION PERTAINING TO THE TEMPORARY KITCHEN option. In lieu of specifying the needs for the temp kitchen, if you could review the specs on pre-assembled temporary kitchen options to see if they will suit your needs. If we select a kitchen that is already assembled, it will save HCC costs. If we need to customize, it will cost substantially more. REFER TO ATTACHED OPTIONS for kitchens, dishwashing and cold storage.		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		<u>https://emailharford-</u> <u>my.sharepoint.com/:f:/g/personal/ccarpenter_harford_edu/EtspltmpfYF</u> <u>ElJ49xkZi9H8BDmi4hbsVbC1MGdOzA8yCCQ?e=OMY1c1</u>		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION A - Mobile Kitchen Unit - 53' Mobile Kitchens (2750 - 5000 meals per day)		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION B - Mobile Kitchen Unit - 57' Mobile Kitchen (5000 – 8000 meals per day)		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION C - Mobile Kitchen Unit - 44' Mobile Kitchen (1250-2750 meals per day)		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION D - Mobile Kitchens - 20' Dishwashing Trailer		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION E - Mobile Kitchens - 32' Dishwashing Trailer		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
		OPTION F - Mobile Kitchens - 40' Cold Storage		3	Please see Pre-Bid RFI #40 response. This will be addressed in Addendum #3.			
154	5/9/2023	Please clarify the solar panel scope for work under this contract.	5/17/2023	2	Please see Pre-Bid RFI #51 response.			
155	5/9/2023	Door types for Openings 103A-107B are indicated as FG which are double doors, but plan and elevation views show single doors; please advise	5/17/2023	2	Clarifies that all doors are per schedule and plans. The typical door elevations on A6.40 does not refer to if a door is single or double, it shows the double condition for refernce and location of lites in the doors.			
156	5/9/2023	Note 29 on M207 indicates chiller access platform and stair by architect. Please clarify intent and provide additional information if work is under this contract.	5/17/2023	2	See Strcutural Drawings S-113 & S-336 and Architectural Drawings A1.33 in the bid set for equipment platform drawings.			
157	5/9/2023	The drawings reference a paint booth, however details or specifications are not found. Please confirm paint booth is NIC.		3	This will be addressed in Addendum #3.			

RFI / BIDD	ING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
158	5/9/2023	Please provide kitchen needs/requirements including max number of people to be fed on a given day, etc. Please also include cold storage requirements	5/17/2023	2	Please see Pre-Bid RFI #79 response.
159	5/9/2023	Regarding 074213-2.3B Tapered Plate Wall Panels, none of the alternative manufactures listed in the spec offer comparable products to the basis of design. As such, we would like to request that consideration be made for CEI CLadLok Series (https://www.ceimaterials.com/surfaces/cladlok-panels.html) and Imetco Element Series (https://imetco.com/products/wall-cladding- systems/element/).		3	This will be addressed in Addendum #3.
160	5/9/2023	Please confirm certified wood and regional materials requirements for rough carpentry, flush wood doors, acoustical wall panels and wall and door protection are not required as so stated in the specifications	5/17/2023	2	Confirmed as specified.
161	5/9/2023	Please confirm the construction schedule of 548 calendar days begins after the second NTP.	5/17/2023	2	Confirmed. This will be noted on the issued Notice to Proceed Documents.
162	5/9/2023	Please confirm Item 5 on the bid form is for the price of submittals and the procurement process, and does not include the price of any materials, equipment, etc.	5/17/2023	2	Please see Pre-Bid RFI #81 response.
163	5/9/2023	Reference Sheet TA7.02. Please confirm the correct PTZ camera. The drawings show a 20x but the specifications list a 12x.	5/17/2023	2	Please see Pre-Bid RFI #139 response.
164	5/9/2023	Addendum #1, RFI response #1 stated to delete Section 12 61 00 from the spec and use Section 11 61 13 but the actual number on the file of Section 11 61 13 is 12 61 13. Section 11 61 13 or 12 61 13 are not listed on the table of contents either. Can it be confirmed this section's file name should be 12 61 13 and not 11 61 13?	5/17/2023	2	Please see Pre-Bid RFI #82 response.
165	5/9/2023	Section 12 61 13 specifies donor plates in paragraph 2.14. Will donor plates be required for Section 12 61 13?	5/17/2023	2	Yes, they are to be provided per specifications.
166	5/9/2023	Section 12 61 13 does not specify a seat foam thickness in paragraph 2.8 but Section 12 61 00 specifies Ultra Plush, 3 to 4 inch thick, seat foam in paragraph 2.3.8.5 Can it be confirmed the seat foam thickness similar to Section 12 61 00 should be provided in Section 12 61 13?	5/17/2023	2	Yes these thickness may be applied to specification 12 61 13.
167	5/9/2023	Section 12 61 13 does not specify a back foam thickness in paragraph 2.9 but Section 12 61 00 specifies 2 inch thick back foam in paragraph 2.3.C.4. Can it be confirmed the back foam thickness similar to Section 12 61 00 should be provided in Section 12 61 13?	5/17/2023	2	Yes these thickness may be applied to specification 12 61 13.
168	5/9/2023	Section 12 61 13 does not specify end panel details in paragraph 2.12.A. but Section 12 61 00 specifies half wrap, full length end panels in paragraph 2.3.A.12. Can it be confirmed the end panels similar to Section 12 61 00 should be provided in Section 12 61 13?	5/17/2023	2	Yes these thickness may be applied to specification 12 61 13.
169	5/9/2023	Can it be confirmed that end panels are not required on the seating row ends that are located against a wall?	5/17/2023	2	Confirmed end panels are not required against the wall.

RFI / BIDD	/ BIDDING PHASE						
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE		
170	5/9/2023	Section 09 68 13 – Tile Carpeting does not specify carpet type CPT-1. Please provide a selection for CPT-1.	5/17/2023	2	CPT-1 Provided in revised specification Section 09 68 13 - TILE CARPETING attached in this Addendun.		
171	5/9/2023	Please provide specifications for the Eliason Traffic Doors (Door #'s 168C1 & 168C2).	5/17/2023	2	Provide double panel wood core with stainless steel metal facing, with heavy duty gravity hinges, equal to resturant door PE-630SS by Paylon Traffic Swinging Doors.		
172	5/9/2023	Please provide specifications for automatic door operators. Section 087113 is referenced in section 08 71 00 but is not in the project manual.		3	This will be addressed in Addendum #3.		
173	5/9/2023	The hardware schedule in section 08 71 00 shows doors 105A & 105B to get hardware set # 08. The door schedule on the drawings show 105A & 105B to get hardware set 04.8. Which is correct?		3	This will be addressed in Addendum #3.		
174	5/9/2023	Drawing TA0.02 identifies (1) 24-strand sm from Library DC to telecom 189 and (1) 24-strand sm from Library DC to Telecom 185. Is this an error or are the requirements to have (2) 24-strand sm fiber cables to route to the Library DC?	5/17/2023	2	Please see Pre-Bid RFI #139 response.		
175	5/9/2023	Please provide a drawing for the Library that shows the path of the backbone cable to the Data Center?	5/17/2023	2	Please see Pre-Bid RFI #124 response.		
176	5/9/2023	Are all AV Category cables in the floor boxes to be shielded or only the displays, digital signage, and menu boards?	5/17/2023	2	Please see Pre-Bid RFI #125 response.		
177	5/9/2023	Reference 27 10 00-14. The division 27 specifications call for OSP inner duct. The drawings do not indicate where this inner duct is to be placed or how many? Please provide the location the inner duct is to be installed and how many are to be installed if any	5/17/2023	2	Please see Pre-Bid RFI #126 response.		
178	5/9/2023	Reference TA1.06. The notes in the Gallery 149 instruct us to route (2) cables each to wall mounted equipment rack in office 181. Are these (2) cables in addition to the quads shown or are they to be added to the quads shown?	5/17/2023	2	Please see Pre-Bid RFI #127 response.		
179	5/9/2023	What are the dimensions of the wall mounted equipment rack in Office 181? Is this an open rack or enclosed cabinet?	5/17/2023	2	Please see Pre-Bid RFI #129 response.		
180	5/9/2023	Reference 27 10 00-18 & -19 (2.24). A.3 calls for the free standing relay rack to be 3" deep but A.5 call for the free standing relay rack to be 15" deep. Which is correct? If the requirement is 15" deep, please provide a part number for a 15" deep rack from CPI.	5/17/2023	2	Please see Pre-Bid RFI #130 response.		
181	5/9/2023	Addendum # 1, Section 00 41 00, Bid Form: Alternate # 3 on the revised Bid Form says to provide the cost to add Bi-Polar Ionization for all AHU's. According to the specifications this is part of the base bid. Should alternate # 3 be a deduct alternate?	5/17/2023	2	Bid form revised in Addendum #2.		
182	5/9/2023	Please confirm the correct PTZ camera; drawings show a 20x but the specs list a 12x.	5/17/2023	2	Please see Pre-Bid RFI #139 response.		
183	5/9/2023	Drawing S-522 Detail 7 calls out info on Drawing S-127 concerning alternates. Drawing S-127 is not in set. Please provide.	5/17/2023	2	Reference to S-127 is to be deleted, this sheet is not incldued.		

RFI / BIDD	ING PHASE				
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
184	5/9/2023	Please advise if spec section 102239 Folding Panel Partitions is to be tested by testing agency or by the manufacturer. 1.3 states "The operable wall must be manufactured by a certified ISO-9001-2015 company or an equivalent quality control system." Then in 1.6 it states, "Laboratory Test Reports: For composite wood products, indicating compliance with requirements for low-emitting materials."		3	This will be addressed in Addendum #3.
185	5/9/2023	Please advise if spec section 072700 Air Barriers is to be tested by the Owner or by testing agency. 1.7.A and 1.7.B		3	This will be addressed in Addendum #3.
186	5/9/2023	Please provide clarification if fixtures type B and BE are to be a 2x4 fixture shown on E203 as 2x4.	5/17/2023	2	Please see Pre-Bid RFI #60 and #61 response.
187	5/9/2023	Please advise on the location of switch S(D) this is floating at column Line M.5 & 9e on Page E203	5/17/2023	2	Please see Pre-Bid RFI #62 response.
188	5/9/2023	Switching is unclear for designation "C" in room 141 drawing E201, please clarify which lights should be on switch "C".	5/17/2023	2	Please see Pre-Bid RFI #63 response.
189	5/9/2023	What is not #2 on E206 in reference to? Located at the bottom of the stairs near column line C.	5/17/2023	2	Please see Pre-Bid RFI #64 response.
190	5/9/2023	Note #2 on drawing E203 references drawings E405, please provide this page.	5/17/2023	2	Please see Pre-Bid RFI #65 response.
191	5/9/2023	Please advise on the intent with S(D) switch shown on E201 and E203 pertaining to the lighting gallery room 149.	5/17/2023	2	Please see Pre-Bid RFI #66 response.
192	5/9/2023	Please advise on the amount of lighting track required in gallery room 149. Should track be provided at locations of the grid that only show fixture heads or across the entire grid for fixture heads to be added in the future	5/17/2023	2	Please see Pre-Bid RFI #67 response.
193	5/9/2023	Please provide further detail on install of type S tape light "Along Main Stair Way to Second Floor" per note #3 on E201.	5/17/2023	2	Please see Pre-Bid RFI #68 response.
194	5/9/2023	Please provide branch circuit and clarification of control for type S tape lighting at the receptionist desk and rm 010 stairwell.	5/17/2023	2	Please see Pre-Bid RFI #69 response.
195	5/9/2023	Please advise on the three-way dimming switches in RM 137 dwg page E201 has subscript "a" and "b", will the track lighting in this room is to be controlled by these switches?	5/17/2023	2	Please see Pre-Bid RFI #70 response.
196	5/9/2023	Please confirm that all fixtures on the emergency circuits throughout should be provided with battery backup.	5/17/2023	2	Please see Pre-Bid RFI #71 response.
197	5/9/2023	Please confirm JE1E and JE1 fixtures shown @ the stage on E201/E202 are to be mounted to the underside of the catwalk.	5/17/2023	2	Please see Pre-Bid RFI #72 response.
198	5/9/2023	Please confirm JE2 fixtures shown on E207 are to be mounted to underside of catwalk.	5/17/2023	2	Please see Pre-Bid RFI #73 response.
199	5/9/2023	Please advise if the Owner is providing and installing theatrical stage lighting.	5/17/2023	2	Please see Pre-Bid RFI #74 response.
200	5/9/2023	Spec 26 05 19, section 2.2 B. states the following: "Per Value Engineering approved item, MC cable is allowed in concealed areas for circuits 30A or less." However, in the execution section, 3.2, it states the following:	5/17/2023	2	Please see Pre-Bid RFI #140 response.
	5/9/2023	B. MC cable shall not be used for feeders or branch circuit homeruns.	5/17/2023	2	Please see Pre-Bid RFI #140 response.

RFI / BIDDING PHASE					
RFI No.	Date Asked	RFI DESCRIPTION	Date Reply	Addnm#	RFI RESPONSE
	5/9/2023	E. MC cable may only be used for lighting whips; maximum 6-foot length, in accessible locations.	5/17/2023	2	Please see Pre-Bid RFI #140 response.
	5/9/2023	Can MC cable be used over 6ft lengths in areas NOT exposed, such as walls and above drop ceilings?	5/17/2023	2	Please see Pre-Bid RFI #140 response.
201	5/9/2023	CPT-1 is currently not listed in the specification. It was added in Addendum #7 of the previous bid when the project was a CMAR delivery. Please advise.	5/17/2023	2	Please see Pre-Bid RFI #170 response.
202	5/9/2023	9/2023 Please reference interior storefront I7; this isn't actually storefront, but a sliding window. There is a note below this window that it is to achieve an STC rating of 55. This is extremely high, and we would not be able to provide a glass makeup thick enough to achieve this rating in a traditional sliding window. A Basis-of-Design manufacturer/product would be very beloful please advise		2	Please see revised 7/A6.30 and added specification 08 34 30 Steel Acoustic Windows attached with Addendum #2. Revise frame to be steel and reduced STC to 51. Provide SPECIALTY STEEL FRAME WINDOW ASSEMBLY, BASIS OF DESIGN: MODEL NCV-525SL-1351 BY KRIEGER SONIC OR EQUAL.
203	5/9/2023	For structural sheet S-621, please clarify stiffener plate need requirements for details indicated.		3	This will be addressed in Addendum #3.
204	5/9/2023	Would the College actually prefer to have the GC provide the removal, packing, and storage of the donor tree and have the GC reinstall into the building once the GC has reached substantial completion?	5/17/2023	2	On AD1.01 revise Demo Note #23 to read, "GC to cautiously remove, wrap and relocate to a storage space the donor wall 'tree' & plaques with panel backing prior to demolition. Owner to provide moving wrap or blankets to be used by the GC. Owner to provide storage location somewhere on campus for GC to relocate. One week prior to punchout walk, GC to reinstall the donor wall tree & plaques as directed."
205	5/9/2023	Can Riello be added to the list of available manufacturers for condensing boilers (section 235216 paragraph 2.1.A)?	5/17/2023	2	Yes Riello will be considered an acceptable manufacturer subject to compliance with all specificaiton requirements.
206	5/9/2023	Will the Soap and Paper Towel dispensors noted on the Kitchen equipment schedule be located on drawings and Toilet Accessories Schdules found on Architectural Drawings?	5/17/2023	2	The following drawings sheets have been revised and reissued to located and quantify additional soap and paper towel dispensors that are to be provided by owner and installed by GC as reference in the Kitchen Equipment Schedule: A1.06 First Floor Plan – Area C A4.10 Large Scale Toilet Rooms A4.11 Large Scale Toilet Rooms A4.36 Interior Elevations – Kitchen & Support A4.43 Casework Plans & Elevations – Reception A4.44 Casework Plans & Elevations – Work Rms A4.45 Casework Plans & Elevations – Theater Support

SECTION 00 41 00 - BID FORM

IFB 23B-006 Chesapeake Welcome Center Renovation and Expansion Project

All bids must be fully and properly executed, securely sealed, and marked with the number and title of the bid. Envelopes shall be addressed to the Procurement Department at Harford Community College 401 Thomas Run Road; Bel Air, MD 21015 – Conowingo Building.

Bids must be received in the Procurement Department:

1:00 PM, May 31, 2023. Late bids will not be accepted.

Bids will be publicly opened on May 31, 2023 at 2:00 PM at the Chesapeake Center- Dining Room.

To be considered responsive, bidder must have attended the mandatory Prebid Conference and each bid package submitted must, at a minimum, include the following documents:

- 1. Bid form, completed and signed;
- 2. Solicitation Affidavits, completed and signed;
- 3. Bid Deposit, 10% of Bid Price.
- 4. MBE Forms
- 1. The undersigned Bidder proposes and agrees, if this bid is accepted, to enter into an Agreement with Owner utilizing the agreement found within the project specifications, to complete all work as specified or indicated in the contract documents for the contract price and within the contract time indicated in this bid and in accordance with the contract documents.
- Bidder accepts all of the terms and conditions of the Invitation For Bid. The submitted Bid will remain valid for one hundred and twenty (120) calendar days after the day of the bid opening. The successful Bidder will sign the agreement and submit any other documents required by the contract documents within ten (10) business days after the issue date of Owner's Notice of Award.
- 3. In submitting this bid, bidder represents, as more fully set forth in the Bidding Documents that:
 - A. Bidder has examined copies of all the contract documents and acknowledges the following addenda:

Addendum Number	_Dated
Addendum Number	_Dated
Addendum Number	_Dated

- B. Bidder has examined the site and locality where the work is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules, and regulations) and the conditions affecting cost, progress or performance of the work; and has made such independent investigations as Bidder deems necessary;
- C. This bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation; and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid; Bidder has not solicited or

induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.

- D. Bidder agrees that the work will proceed and be substantially completed in the following number of calendar days from the receipt of a "<u>Notice-to-Proceed for Construction</u>" from the Owner.
 - 1. Number of Days to Substantial Completion: Five Hundred and Forty-Eight (548) Calendar days.
- E. Liquidated Damages: It is understood that the bid price will be firm for a time period of (120) calendar days from the bid opening date and that if the undersigned be notified of acceptance of this proposal within this time period, the firm shall complete the work within (548) calendar days from the issue date for "Notice-to-Proceed for Construction". This Work if not substantially completed, as determined by the College, within the time periods specified, Contractor will be liable for Liquidated Damages of \$2,500.00 per calendar day.

4. BASE BID

A. The undersigned Bidder, having carefully examined the Drawings, Specifications, and all subsequent Addenda, as prepared by Murphy & Dittenhafer, Inc. and the Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, including permits required, hereby agrees to furnish all material, labor, equipment, services, and including permit costs in the Bid, necessary to complete the work according to the requirements of the Documents, and will complete the work for the following price(s), which includes sales tax on material permanently incorporated into the work, as indicated in the conditions of the contract. Escalation shall not be allowed.

- 5. BREAKOUT PRICING FOR SUBMITTALS, STEEL, MECHANICAL & ELECTRICAL MATERIAL
 - A. Breakout pricing is part of the base bid submission and not in addition to the Base Bid amount. The requested breakout pricing is included in the Base Bid amount.
 - B. Bidder shall provide breakout pricing for the processing of all project Submittals, the procurement of all Structural Steel, the procurement of all Mechanical material and the procurement of all Electrical material. Awarded Bidder will receive a Partial Notice-To-Proceed for Submittals, Steel, Mechanical and Electrical Material after all required Contract Approvals are obtained by the Owner.

BREAKOUT PRICING FOR ALL PROJECT SUBMITTALS, ALL STRUCTUAL STEEL MATERIAL, ALL MECHANICAL MATERIAL AND ALL ELECTRICAL MATERIAL:

6. ALTERNATES

- A. ALTERNATE NUMBER 1:
 - 1. Bidder shall submit the amount to deduct from the total contract sum in connection with deletion of the pavers from the plaza and provide scored concrete as indicated on drawing C133.

- B. ALTERNATE NUMBER 2:
 - 1. Bidder shall submit the amount to deduct from the total contract sum in connection with the deletion of the Café and its related scope from the project as indicated on the Bid Drawings and Alternates specification.

- C. ALTERNATE NUMBER 3:
 - Bidder shall submit the amount to deduct from the total contract sum in connection with the deletion of Bi-Polar Ionization for all AHUs per 23 73 13 – Air Handling Units and drawings M507 & M701.

DEDUCT THE SUM OF (\$____

_____), _____ (figure) (use words)

- D. ALTERNATE NUMBER 4 (MULTIPLE ALTERNATES MAY BE SELECTED):
 - 1. Bidder shall submit the amount to deduct from the total contract sum in connection with removing the Performance Bond requirement for select Trade Subcontractors:

ALTERNATE 4A – Remove the performance bond requirement for the Building Concrete Subcontractor:

DEDUCT THE SUM OF (\$),	
	(figure)	(use	words)
ALTERNATE 4B – Remov Subcontractor:	e the performance	e bond requirement	for the Masonry

DEDUCT THE SUM OF (\$_____), _______, (use words)

ALTERNATE 4C – Remove the performance bond requirement for the Structural Steel Subcontractor:

ALTERNATE 4D – Remove the performance bond requirement for the Metal Panel Subcontractor:

DEDUCT THE SUM OF (\$),	
	(figure)	(use words)

ALTERNATE 4E – Remove the performance bond requirement for the Window / Storefront Subcontractor:

E. ALTERNATE NUMBER 5 (ONLY ONE OF THE ALTERNATES MAY BE SELECTED):

1. Bidder shall submit the amount to deduct from the total contract sum in connection with decreasing the minimum warranty requirement from two-years to one-year.

ALTERNATE 5A – Decrease the minimum requirement for every warranty duration from two-years to one-year. All project warranties with a specified duration for more than two-years shall remain as specified.

ALTERNATE 5B – Decrease the minimum warranty requirement for the project from twoyears to one-year except all the Mechanical, Electrical, and Plumbing (MEP) minimum warranty durations shall remain two-years. All project warranties with a specified duration for more than two-years shall remain as specified.

F. ALTERNATE NUMER 6:

1. Bidder shall submit the amount to deduct from the total contract sum in connection with the removal of the requirement for the Contractor to demolish and properly dispose of all existing solar panels and associated equipment from the Contractor's scope of work.

7. UNIT PRICES

- A. Unit prices are for both extra Work and credits. This list of prices will be submitted with the Bid and shall become a part of the Contract upon its award. Unit prices listed below are applicable and to all work in this project involving extra materials/services performed by the Contractor or his subcontractors and/or credits to the Owner for materials/services deleted from the project. Unit price includes all overhead and profit for the Subcontractor. Contractor mark-ups is to be applied per Article 7 of General Conditions. Prices as stated shall remain in effect through the end of the Contract warranty period. The undersigned acknowledges the unit price values as part of this bid proposal and agrees to add or delete items for the unit prices identified when directed to do so by the Owner.
 - 1. UNIT PRICE NUMBER 1: Removal of unsuitable soils and replacement with approved soil fill material from on-site.

\$_____ PER CUBIC YARD (figure only)

2. UNIT PRICE NUMBER 2: Removal of unsuitable soils and replacement with approved soil fill material from off-site.

\$_____ PER CUBIC YARD
(figure only)

3. UNIT PRICE NUMBER 3: Removal of unsuitable soils and replacement with approved stone fill material from off-site.

\$_____ PER CUBIC YARD (figure only)

4. UNIT PRICE NUMBER 4: Rock excavation, removal and replacement with approved soil fill material from on-site.

\$_____ PER CUBIC YARD
 (figure only)

8. PHASING

A. Please provide below a brief summary of what your proposed Phasing Plan for Owner approval will consist of (ie. Per the current phasing drawings, offsite kitchen in Area A, etc.):

9. EXECUTION

A. The undersigned, duly authorized to bind the named firm, agrees, upon receipt of written notice of acceptance of this bid within one hundred and twenty (120) calendar days after its opening, to execute the contract in accordance with the bid as accepted, and to render and payment and performance bonds and a certificate of insurance within ten (10) business days after notification of award.

1.	Bidder is a Partnership: Bv:	(Seal)
	(Firm Name)	(0001)
	(General Partner)	
	Business Address:	
		· · · · · · · · · · · · · · · · · · ·
	Phone Number:	

2. Bidder is a Corporation:

By: _____

(State of Incorporation)

By:

(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest: _____

(Secretary)

Business Address:

Phone Number:

SOLICITATION AFFIDAVITS

FIRM NAME:			
FIRM ADDRESS:			

A) NON-COLLUSION:

I AFFIRM THAT: Neither I, nor, to the best of my knowledge, information and belief, the above firm nor any of its other representatives I here represent have:

- 1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the proposal being submitted herewith; and
- 2) Not in any manner, directly or indirectly, entered into any agreement, participated in any agreement, participated in any collusion to fix the price proposal of the offeror herein or any competitor, or otherwise taken any action in restraint of free competition in connection with the Contract for which this proposal is submitted.
- B) SUSPENSION AND DEBARMENT:

I AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, or any of its employees directly involved in obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any Federal or public entity, except as follows: (List each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension)

FIRM NAME:

- The above business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Title 16, of the State Finance and Procurement Article of the Annotated Code of Maryland; and
- The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows: (Indicate the reasons why the affirmation cannot be given without qualification)
- C) I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

By:	Signature of Authorized Representativ	ve and Affiant	Printed Name of Authorized Representative and Affiant
Date:	Federal Employer Identification Number (FEIN):		
END C	F SECTION 00 41 00		

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 3 - EXECUTION

3.1 SCHEDULE OF DEDUCT ALTERNATES

- A. DEDUCT Alternate #1: Deduct from Civil delete pavers from plaza and plaza steps on the north and west entrances and provide scored concrete and use typical concrete stair detail as indicated on drawing C133 and S-511.
- B. DEDUCT Alternate #2: Deduct from Architectural, Kitchen, MEP, & TA Delete Cafe and its related scope from project. Cap all MEP for future connection. Flooring and ceiling continues and bulkheads remain as shown. Removal of security grille, counters, kitchen equipment, casework, and doors.
- C. DEDUCT Alternate #3: Remove MEP Bi-Polar Ionization for all AHUs per MEP specification 23 73 12 – Air Handling Units and drawings M507 & M701
- D. DEDUCT Alternate #4: Remove bonding requirement for select subcontractors:
 - 1. Alternate #4a Remove bonding requirement for Building Concrete Subcontractor.
 - 2. Alternate #4b Remove bonding requirement for Masonry Subcontractor.
 - 3. Alternate #4c Remove bonding requirement for Structural Steel Subcontractor.
 - 4. Alternate #4d Remove bonding requirement for Metal Panel Subcontractor.
 - 5. Alternate #4e Remove bonding requirement for Window / Storefront Subcontractor.
- E. DEDUCT Alternate #5: Remove second year warranty requirement:
 - 1. Alternate #5a Remove the second-year minimum warranty requirement for every item.
 - 2. Alternate #5b Remove the second-year minimum warranty requirement for every item but MEP items. MEP minimum warranty duration to remain 2 years.
- F. DEDUCT Alternate #6: Remove requirement to Demolish and properly dispose of all existing solar panels and associated equipment from the Contractor's scope of Work. This work will be performed by the Owner prior to Contractor mobilization onsite.

END OF SECTION 01 23 00

SECTION 04 72 00 - CAST STONE MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast stone windowsills.
 - 2. Cast stone site wall caps.

B. Related Sections:

- 1. Division 04 Section "Unit Masonry" for mortar mixes and flashing.
- 2. Division 07 Section "Joint Sealants."

1.2 DEFINITIONS

- A. Dry Cast Concrete Products are manufactured from zero-slump concrete.
 - 1. The Vibrant Dry Tamp (VDT) casting method: manufactured from earth-moist, zero-slump concrete using vibratory ramming against a rigid mold until it is densely compacted.
 - 2. The Machine Casting Method, manufactured from earth-moist, zero-slump concrete compacted by machinery using vibration and pressure against a rigid mold until it is densely compacted.
- B. Wet Cast Concrete Products are manufactured from measurable-slump concrete.
 - 1. Wet casting method: Manufactured from measurable slump concrete and vibrated into a mold until it becomes densely consolidated.
- C. Cast Stone is a refined architectural concrete building unit manufactured to simulate natural cut stone, used in unit masonry applications.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. For cast stone units, include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. LEED Submittals:
 - 1. Regional Materials: Manufacture cast stone units and mortar and grout within 100 miles (160 km) of Project site from aggregates that have been extracted, harvested, or recovered, as well as manufactured, within 100 miles (160 km) of Project site.

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- Shop Drawings: Show fabrication and installation details for cast stone units. Include profiles, C. cross sections, dimensions, details of reinforcement and anchorages if any, and indication of finished faces.
 - 1. Include building elevations showing layout of units and locations of joints and anchors.
- D. Samples for Verification:
 - 1. For each color and texture of cast stone required, 6 inches square in size.
 - For colored mortar. 2.
 - 3. Samples must be submitted in conjunction with samples for Division 4 Section "Unit masonry".

1.4 INFORMATIONAL SUBMITTALS

- Qualification Data: Include list of completed projects with project names and addresses, names Α. and addresses of architects and owners, and other information specified.
 - 1. Include current plant certification from the Architectural Precast Association.
- Β. Material Test Reports: For each mix required to produce cast stone, based on testing according to ASTM C1364.

1.5 QUALITY ASSURANCE

- Manufacturer Qualifications: Α.
 - 1. Sole source requirement: Company specializing in production of architectural precast concrete and architectural cast stone with minimum of ten (10) years documented experience.
 - 2. Has sufficient production capacity to produce required units without delaying the Work.
 - 3. Manufacturer is a certified producing member of the Architectural Precast Association.
- Installer Qualifications: Β.
 - 1. Installer shall have sufficient resources to install the cast stone and architectural precast shown in the architectural drawings in accordance with the project schedule.
 - 2. Installer shall have not less than three (3) years continuous operational experience in successful installation of cast stone and architectural precast in types and quantities similar to the project.

1.6 MOCKUPS

Include full scale cast stone window sill in integrated exterior mockup that will be used to Α. demonstrate aesthetic effects, perform preconstruction testing, and to set quality standards for Chesapeake Welcome Center Renovation and Expansion Project Addendum #2 - 5/17/23

materials and installation. See Division 01 Section "Mockups" for additional construction requirements.

1. Build mockup complete with anchors, connections, flashings, and joint fillers.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery of cast stone with unit masonry work to avoid delaying the Work and to minimize the need for on-site storage.
- B. All cast stone units shall be labeled on a non-exposed face with the identification mark shown in the manufacturer's shop drawings.
- C. Pack, handle, and ship cast stone units in suitable packs or pallets.
 - 1. An itemized list of products shall be provided for each shipment of cast stone units.
 - 2. All pallets shall be labeled with a complete list of the pallet contents.
 - 3. Lift with wide-belt slings; do not use wire rope or ropes that might cause staining. Move cast stone units if required, using dollies with wood supports.
 - 4. Store cast stone units on wood skids or pallets with nonstaining, waterproof covers, securely tied. Arrange to distribute weight evenly and to prevent damage to units. Ventilate under covers to prevent condensation.

1.8 PROJECT CONDITIONS

- A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements in TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until cast stone has dried, but no fewer than seven days after completing cleaning.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements in TMS 602.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace architectural precast concrete units that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: (10) years from date of Substantial Completion.

2.1 MANUFACTURERS

- Basis of design: Design is based upon cast stone units produced by Nelson Precast Products. Provide specified products or comparable products by one of the following fabricators, but not limited to:
 - 1. Sun Precast Co., Inc.
 - 2. Cast Stone Designs, Inc.
- B. Source Limitations: Obtain architectural precast and cast stone from a single manufacturer.

2.2 CAST STONE PLINTH/PEDESTAL

- A. The sculpture's base referenced in C131 note C5 is to be a precast pedestal/plinth 18" x 18" x 32" tall above grade. This plinth is to match the specifications of all other precast stone in color and finish typical in the project. Connections details are to be provided in shop drawings for both the sculpture and the footing. Provide inserts or cast in holes within the precast plinth. This plinth is to sit a 3000PSI concrete footing, that is 24"x24"x24" below grade. An allowance for this is not acceptable. The manufacture is to coordinate with general contractor for a template made from the sculpture base for detailing the location of the inserts or cast in holes.
- B. All other precast elements to be located in drawings and comply with this specification.

2.3 MATERIALS, GENERAL

- Regional Materials: Manufacture cast stone units within 100 miles (160 km) of Project site from aggregates that have been extracted, harvested, or recovered, as well as manufactured, within 100 miles (160 km) of Project site.
- B. Regional Materials: Manufacture aggregate for mortar and grout within 100 miles (160 km) of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 100 miles (160 km) of Project site.

2.4 CAST STONE MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or Type III, white and/or grey, ASTM C 150
- B. Coarse Aggregates: Granite, quartz, or limestone, ASTM C 33 (except for gradation). Coarse aggregates shall be optional for units made using the Vibrant Dry Tamp (VDT) casting method.
- C. Fine Aggregates: Manufactured or natural sands, ASTM C33/C33M (except for gradation).
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- D. Colors: Inorganic iron oxide pigments, ASTM C979/C979M (except that carbon black pigments shall not be used).
- E. Admixtures:
 - 1. ASTM C260/C260M for air-entraining admixtures (not for use in Dry Cast Concrete Products)
 - 2. ASTM C494/C495M Types A G for water reducing, retarding, accelerating, and high range admixtures.
 - 3. Other admixtures for which no ASTM standard exists, including integral water repellants and other chemicals, shall be previously established as suitable for use in concrete by proven field performance or through laboratory testing.
- F. Water: Clean and potable municipal water.
- G. Reinforcing:
 - 1. ASTM A615/A615M for reinforcing bars using grade 40 or 60 steel. Use galvanized or epoxy-coated reinforcement when covered with less than 1-1/2 inches of cast stone material.
 - 2. ASTMA185 for welded wire fabric (not for use in Dry Cast Concrete Products)
- H. All anchors, dowels, and other anchoring devices and shims shall be Type 304 stainless steel.

2.5 CAST STONE UNITS

- A. Cast Stone Units: Comply with ASTM C1364.
- B. Colors and Textures:
 - 1. As selected by Architect from manufacturer's full range.
- C. Physical properties:
 - 1. Compressive strength shall meet or exceed 6,500 psi at 28 days when tested according to ASTM C 1194.
 - 2. Absorption shall not exceed 6% when tested according to the cold water method described in ASTM C 1195.
 - 3. Air content shall be between 4-8% for units produced by the Wet Cast method in accordance with Test Method C173/C173M or Test Method C231/C231M. Air entrainment is not required for units produced by the Vibrant Dry Tamp (VDT) casting method.
 - 4. Freeze-thaw: ASTM C666/C666M in accordance with ASTM C1364. The CPWL shall be less than 5.0% after 300 cycles of freezing and thawing.
 - 5. Linear Drying Shrinkage: ASTM C426: Test and report in accordance with ASTM C1364.
- D. Manufacturer shall test units for conformance to compressive strength requirements at least once for every 500 cubic feet of material produced.

E. Job site testing may be performed in accordance with ASTM C1194 and C1195.

2.6 MANUFACTURING TOLERANCES

- A. Color and Finish:
 - 1. Cast Stone shall be appraised for color and finish quality under direct daylight illumination to avoid crosslighting conditions.
 - 2. All surfaces exposed to view shall have a fine-grained texture similar to natural stone. Air voids shall not be obvious when viewed under direct daylight illumination at a 5 ft distance.
 - 3. All units provided shall display a color and texture equal to the approved sample when viewed under direct daylight illumination at a 10 ft distance.
 - 4. The range of total acceptable color (lightness, color saturation, and hue) variation shall not exceed a ΔE of 6.0 (CIELAB 1976) when measured per ASTM D 2244, provided that hue does not exceed a ΔE of 2.0.
- B. Units:
 - 1. All pieces shall be made exactly in accordance with approved shop drawings.
 - 2. Variation in Cross Section: Do not vary from indicated dimensions by more than 1/8 inch.
 - 3. Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or 1/8 inch, whichever is greater, but in no case by more than 1/4 inch.
 - 4. Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8 inch, whichever is greater.
 - 5. Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than 1/8 inch on formed surfaces of units and 3/8 inch on unformed surfaces.
- C. Fabricate units with sharp arris and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.
 - 1. Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
 - 2. Provide drips on projecting elements unless otherwise indicated.

2.7 REINFORCING

- A. Reinforcing to be provided where necessary to facilitate safe handling and setting or to withstand structural stresses.
- B. Cast Stone panels, soffits, and similar stones greater than 24 inches in one direction shall be reinforced in that direction.
- C. Cast Stone units less than 24 inches in both their length and width shall be non-reinforced unless otherwise specified.

2.8 CURING

- A. Cure units in enclosed, moist curing room at 95 percent relative humidity and temperature of 90 deg F for 16 hours.
- B. Keep units damp and continue curing to comply with one of the following:
 - 1. No fewer than five days at mean daily temperature of 70 deg F or above.
 - 2. No fewer than seven days at mean daily temperature of 50 deg F or above.
- C. Form-cured units shall be protected from moisture evaporation with curing blankets or curing compounds after casting.
- D. Acid etch units after curing to remove cement film from surfaces to be exposed to view.

2.9 ACCESSORIES

- A. Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A240/A240M, ASTM A276/A276M, or ASTM A666.
- B. Dowels: 1/2-inch-diameter round bars, fabricated from Type 304 stainless steel complying with ASTM A240/A240M, ASTM A276/A276M, or ASTM A666.
- C. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cast stone manufacturer and expressly approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.

2.10 MORTAR MIXES

- A. Comply with requirements in Division 04 Section "Unit Masonry" for mortar mixes.
 - 1. For setting mortar, use Type S.
 - 2. For pointing mortar, use Type N.
 - 3. Pigmented Mortar: Use colored cement product.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Inspect all cast stone units prior to accepting delivery and check all cast stone units for fit and finish prior to installation. Do not set unacceptable units.

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

3.2 SETTING TOLERANCES

- A. Variation from Plumb: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- B. Variation from Level: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- C. Variation in Joint Width: Do not deviate from specified joint thickness more than 1/16" over and 1/8" under the specified size.
- D. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/16 inch.

3.3 JOINTING

- A. Stone/stone joints and stone/brick joints shall be 3/8" unless specified otherwise.
- B. Joint material: Mortar, Type N, ASTM C 270.
- C. Use a full bed of mortar at all bed joints.
- D. Flush vertical joints full with mortar.
- E. Leave all joints with exposed tops or under relieving angles open for sealant.
- F. Leave head joints in copings and projecting components open for sealant.

3.4 SETTING CAST STONE IN MORTAR

- A. Set units exactly in locations shown in Shop Drawings. Set units accurately in locations indicated, with edges and faces aligned according to established relationships and indicated tolerances.
 - 1. Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
 - 2. Coordinate installation of cast stone with installation of flashing specified in other Sections.
- B. Drench units with clean water prior to setting.
- C. Fill dowel holes and anchor slots completely with mortar or non-shrink grout.
- D. Set units in full bed of mortar unless otherwise noted.
- E. Rake mortar joints 3/4" for pointing.

CAST STONE MASONRY

- F. Remove excess mortar from unit faces immediately after setting.
- G. Tuck point unit joints to a slight concave profile.
- H. Provide sealant joints at head joints of copings and other horizontal surfaces; at expansion, control, and pressure-relieving joints; and at locations indicated.
 - 1. Keep joints free of mortar and other rigid materials.
 - 2. Build in compressible foam-plastic joint fillers where indicated.
 - 3. Form joint of width indicated, but not less recommended by Manufacturer.
 - 4. Prime cast stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.
 - 5. Prepare and apply sealant of type and at locations indicated to comply with applicable requirements in Division 07 Section "Joint Sealants."

3.5 ADJUSTING AND CLEANING

- A. Protect Cast Stone from staining and chipping before, during, and after installation.
- B. Remove and replace stained and otherwise damaged units and units not matching approved Samples.
 - 1. Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.
 - 2. Minor chips in cast stone may be repaired with patching material furnished by manufacturer, following manufacturer's instructions for use, if approved by Architect.
- C. In-Progress Cleaning: Clean cast stone as work progresses.
 - 1. Remove mortar fins and smears before tooling joints.
 - 2. Remove excess sealant immediately, including spills, smears, and spatter.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 3. Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
 - 4. Clean cast stone with proprietary acidic cleaner applied according to manufacturer's written instructions.
 - a. Do not use any cleaner not designed for use on concrete without express approval of manufacturer.
 - b. Do not clean Cast Stone by power washing or sandblasting without express approval of manufacturer.

3.6 INSPECTION AND ACCEPTANCE

- A. Inspect finished work according to Cast Stone Institute Technical Bulletin #36.
- B. Inspect under direct daylight conditions.
- C. Inspect Cast Stone only when dry.

END OF SECTION 04 72 00

08 34 30 - STEEL ACOUSTICAL WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

Noise Control view windows

1.2 RELATED SECTIONS

- A. Section 08800 Glazing.
- B. Section 09900 Paints and Coatings.

1.3 REFERENCES

- B. ASTM A 366 Standard Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
- B. ASTM A 569 Standard Specification for Steel, Carbon, (0.15 Maximum Percent), Hot-Rolled Sheet and Strip, Commercial Quality.
- C. ASTM A 653/A 653M Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process.
- D. ASTM B 117 Standard Method of Salt Spray (Fog) Testing.
- E. ASTM D 1735 Standard Practice for Testing Water Resistance of Coating Using Water Fog Apparatus.
- F. ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne-Sound Transmission Loss of Building Partitions.
- G. ASTM E 336 Standard Test Method for Measurement of Airborne Sound Insulation in Buildings.
- H. ASTM E 413 Classification for Determination of Sound Transmission Class.

1.4 SYSTEM DESCRIPTION

- A. Design requirements: Acoustical window assemblies to include frames, glass and the gasketing system required to achieve specified performance requirements.
- B. Performance requirements: Sound Transmission Coefficient rating of STC 51 for installed assembly, when tested as operable door assembly in accordance with ASTM E 90 and ASTM E 413.

1.5 SUBMITTALS

Harford Community College Chesapeake Welcome Center Renovation and Expansion Project Addendum #2 - 5/17/23 Project No. CC-07-MC19-465 100% CD Bid Documents

- A. Submit under provisions of Section 01300.
- B. Product data: Indicate window materials and construction.
- C. Shop drawings: Indicate window opening criteria, elevations, sizes, type; identify and detail cutouts.
- D. Quality assurance submittals:
 - 1. Test Reports:

Certified laboratory reports, performed in accordance with ASTM E90 and ASTM E 413, from independent testing laboratory qualified under the National Voluntary Laboratory Accreditation Program (NVLAP) supporting compliance of assemblies to specified requirements.

- 2. Certificates:
 - a) Contractor's certification that:
 - (1) Products of this section, as provided, meet or exceed specified requirements.
 - (1) Manufacturer of products of this section meets specified qualifications.
- 3. Manufacturer's instructions: Printed installation instructions for each component.
- E. Closeout submittals:
 - 1. Warranty documents, executed by manufacturer in Owner's name.
 - 2. Operation and maintenance data for assembly components.
 - 3. Certified statement of manufacturer's authorized representative, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.
 - 4. Certified test reports of independent testing agency, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.
- 1.6 QUALITY ASSURANCE
 - A. Qualifications:
 - 1. Manufacturer: Minimum five (5) years-documented experience producing systems specified in this section.
 - 2. Installer: Minimum five (5) years documented experience producing systems specified in this section, and approved by manufacturer.
- 1.7 DELIVERY, STORAGE, AND HANDLING
 - A. Store frames in accordance with requirements of HMMA 840.
 - B. Remove wraps or covers from frames upon delivery at the building site; clean and touch-up scratches or disfigurement caused by shipping or handling promptly with rust inhibitive primer.
 - C. Store windows on planks or dunnage in a dry location; store in a vertical position spaced by blocking.
 - D. Store units covered to protect them from damage, but permitting air circulation.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Krieger Steel Products, 4880 Gregg Road, Pico Rivera CA 90660; Telephone 562-695-0645, FAX 562-692-0146.

SPECIALTY STEEL FRAME WINDOW ASSEMBLY, BASIS OF DESIGN: MODEL NCV-525SL-1351 Interior Glazing Reference 7/A6.30 RO 3'-0" x 7'-0" sliding window.

- B. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.
- C. Or Approved Equal

2.2 MATERIALS

- A. Steel sheet: One of the following:
 - 1. Cold-rolled steel sheet conforming to ASTM A 366, commercial quality.
 - 2. Hot-rolled steel sheet conforming to ASTM A 569, pickled and oiled, commercial quality.
- B. Galvanized steel sheet: ASTM A 653/A 653M, commercial quality, minimum G60 zinc coating.
- C. Acoustical material: Manufacturer's standard for required STC rating.
- D. Primer: Meeting ASTM B 117 salt spray for 150 hours, and ASTM D 1735 water fog test for organic coatings for 200 hours.
- E. Glazing: to match glazing as specified in Section 08 80 00.

2.3 COMPONENTS

- A. Frames: Fabricate in accordance with Architect-approved shop drawings, and as follows:
 - 1. Frames for interior use: Fabricate from steel sheet, minimum 14 gage thickness.
 - 2. Frames for exterior use: Fabricate from galvanized steel sheet, minimum 14 gage thickness.
 - 3. Form frame members straight, and of uniform profile through lengths, as welded units with integral trim, of sizes and profiles indicated.
 - a) Weld contact edges of joints closed tight.
 - b) Miter perimeter trim faces and weld continuously.
 - 4. Stops:
 - a) Where integral stops are indicated, form minimum 5/8 inch in depth.
 - b) Butt stop joints.
 - 5. When shipping limitations so dictate, fabricate frames for large openings in sections designed for assembly in the field; install alignment plates or angles, of same material and gage as frame, at each joint.
 - 6. Jamb anchors:

- a) Fabricate of same material as frame material; weld anchors inside each jamb for wall anchorage.
 - Provide anchor types for indicated adjacent wall construction:
 - (1) Frames for installation in masonry walls: Adjustable jamb anchors, 16 gage, T-shape type.
 - (2) Frames for installation in stud partitions: Horizontal 16 gage steel "zee" sections to attach metal studs, welded inside each jamb.
- 7. Plaster guards: Fabricate from minimum 22 gage steel; weld in place at hardware mortises on frames to be set in plaster, masonry, or concrete openings.

B. Glass and Glazing

b)

- 1. Clear Laminated Acoustical glass shall be furnished in the thickness required to meet the STC ratings. The manufacturer will supply the materials.
- 2. For fire rated assemblies, clear fire glass shall be furnished in the thickness required to meet the fire ratings. The manufacturer will supply the materials.
- 3. The area between the two pieces of glass shall be finished with a minimum of 1" thick acoustical desiccant, applied to the frame by a perforated metal case. This will be furnished to fit.

2.4 FINISHES

- A. Shop priming for window frames:
 - 1. After fabrication, fill and sand tool marks and surface blemishes on both faces and both vertical edges smooth and free from irregularities.
 - 2. Treat for paint adhesion, then apply primer to all accessible surfaces; allow curing prior to shipment.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of conditions:
 - 1. Prior to installation, check and correct frames for size, squareness, alignment, twist and plumb.
 - 2. Verify openings are in accordance with approved shop drawings.
- B. Installer's examination:
 - 1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
 - 2. Transmit two copies of installer's report to Architect within 24 hours of receipt.
 - 3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.
 - 4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 INSTALLATION

- A. Install units in accordance with approved shop drawings and manufacturer's printed installation instructions; in addition, install steel components in accordance with HMMA 840.
- B. Oversize assemblies:
 - 1. Weld field joints in accordance with AWS D1.1 and approved shop drawings.
 - 2. Finish exposed field welds smooth; touch-up with rust inhibitive primer.
- C. Fill voids between concealed side of frame and adjacent wall construction with dense fiberglass or lightweight gypsum plaster in accordance with approved shop drawings or manufacturer's printed installation instructions.
- D. Finish surfaces having abrasion damage smooth; touch-up with rust inhibitive primer.
- E. Install glass & gasketing systems in accordance with manufacturer's printed instructions.
- F. Field painting is specified in Section 09900.

3.3 FIELD QUALITY CONTROL

- A. Engage and pay for the services of independent testing agency to:
 - 1. Test door and frame assemblies selected by Owner or Architect in accordance with ASTM E 336.
 - 2. Issue certified report-documenting compliance of installed door and frame assemblies to specified acoustical performance requirements.
- B. Notify Architect a minimum of four (4) calendar days prior to scheduled testing dates.

END OF SECTION

SECTION 09 68 13 - TILE CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes modular construction carpet tile.
- B. Related Sections include the following:
 - 1. Division 9 Section "Resilient Floor Tile" for resilient wall base and accessories installed with carpet tile.
 - 2. Division 9 Section "Carpet" for related areas.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance. Include installation recommendations for each type of substrate.
- B. LEED Submittals
 - 1. Product Data: For adhesives, indicating VOC content.
 - a. Verify adhesives have a VOC content of 50 g/L or less.
 - b. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
 - 2. Laboratory Test Reports: For flooring products, indicating compliance with requirements for low-emitting materials.
 - a. Verify flooring products comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic

Chemical Emissions from Indoor Sources Using Environmental Chambers."

- 3. Comply with Section 01 81 13
 - a. MR Credit 2: BPDO Environmental Product Declarations (EPD): For each product.
 - C. Shop Drawings: Show the following:
- 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
- 2. Existing flooring materials to be removed.

- 3. Existing flooring materials to remain.
- 4. Carpet tile type, color, and dye lot.
- 5. Type of subfloor.
- 6. Type of installation.
- 7. Pattern of installation.
- 8. Pattern type, location, and direction.
- 9. Pile direction.
- 10. Type, color, and location of insets and borders.
- 11. Type, color, and location of edge, transition, and other accessory strips.
- 12. Transition details to other flooring materials.
- D. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet Tile: Full-size Sample.
 - 2. Exposed Edge, Transition, and other Accessory Stripping: 12-inch- (300-mm-) long Samples.
- E. Product Schedule: For carpet tile. Use same designations indicated on Drawings.
- F. Qualification Data: For Installer.
- G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency.
- H. Maintenance Data: For carpet tiles to include in maintenance manuals. Include the following:
- 1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
- 2. Precautions for cleaning materials and methods that could be detrimental to carpet tile. I.

Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.
- B. Fire-Test-Response Characteristics: Provide products with the critical radiant flux classification indicated in Part 2, as determined by testing identical products per ASTM E 648 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

- C. Mockups: Before installing carpet tile, build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to carpet tile installation including, but not limited to, the following:
 - 1. Review delivery, storage, and handling procedures.
 - 2. Review ambient conditions and ventilation procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRI 104, Section 5, "Storage and Handling."

1.6 PROJECT CONDITIONS

- A. Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- B. Environmental Limitations: Do not install carpet tiles until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.7 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of tuft bind strength, dimensional stability, excess static discharge, and delamination.
 - 3. Warranty Period: 15 year wear warranty.

1.8 EXTRA MATERIALS

A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd.

PART 2 - PRODUCTS

2.1 CARPET TILE AS SCHEDULED

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following listed Basis of Design selections:

REVISED in ADDENDUM #2 - 5/17/23

CPT-1	
Manufacturer:	Interface
Collection:	Granite Mountain
Style:	Rockland Road
Sample #	271088-002
Size:	25 cm x 1m
Installation:	Monolithic
Location:	Office Suites

CPT-2A

Manufacturer: Interface Collection: Suite Serenity	
Style:	Bouquet
Sample #:	271088-018
Size:	50 cm x 1 m GlasBac®
Installation:	Ashlar
Location:	Conference Center – 198 Large Conference

CPT-2B

Manufacturer: Interface Collection: Chelsea Estate Style: Edge Sample #: 271088-007

Size: 50 cm x 50 cm GlasBac[®] Installation: Quarter Turn

Location: Conference Center – 192, 193,195, 197 Small Conference, 190 Business Center

CPT-2C

Manufacturer: Interface Collection: Rising Signs Style: Up At Dawn Sample #: 271088-005 Size: 25 cm x 1 m GlasBac[®] Installation: Ashlar Location: Conference Center - Corridor

CPT-3

Manufacturer: Interface Collection: Granite Mountain Style: Mile Rock Sample #: 271088-003 Size: 50cm x 50 cm GlasBac[®] Installation: Quarter Turn Location: Theater & Ramp

CPT-4

Manufacturer: Interface Collection: Step Repeat Style: SR799 - 1388502500 Color: 104937 Onyx Size: 50cm x 50cm GlasBac[®] Installation: Quarter Turn Location: Vestibules

CPT-5

Manufacturer: Interface Collection: Granite Mountain Style: Rock Springs Sample # 271088-023 Size: 25cm x 1m GlasBac[®] Installation: Herringbone Location: Canopy Lounge

B. Verify flooring products comply with the requirements of the California Department of Public

Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

C. For flooring products, indicate compliance with requirements for low-emitting materials.

2.2 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
 - 1. Acceptable Manufacturers and Products:
 - a. Sure Crete Design Products 5246 Citrus Country Drive Dade City, FL 33523 Tel: 352-567-7973
 - b. UMACO 60 Rear Newhall Street, Lowell, MA 01852 Tel: 978=-453-8881. www.umaco.com
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.
 - 1. VOC Limits: Provide adhesives that comply with the following limits for VOC content when tested according to ASTM D 5116:
 - a. Total VOCs: 10.00 mg/sq. m x h.
 - b. Formaldehyde: 0.05 mg/sq. m x h.
 - c. 2-Ethyl-1-Hexanol: 3.00 mg/sq. m x h.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Examine carpet tile for type, color, pattern, and potential defects.
- B. For wood subfloors, verify the following:

- 1. Underlayment over subfloor complies with requirements specified in Division 6 Section "Rough Carpentry."
- 2. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.
- C. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
 - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet tile manufacturer.
 - 2. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving carpet tile.
 - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits. D. For

painted subfloors, verify the following:

1. Perform bond test recommended in writing by adhesive manufacturer. E.

For raised access flooring systems, verify the following:

1. Access floor complies with requirements specified in Division 10 Section "Access Flooring." 2. Access floor substrate is compatible with carpet tile and adhesive if any.

3. Underlayment surface is flat, smooth, evenly planed, tightly jointed, and free of irregularities, gaps greater than 1/8 inch, protrusions more than 1/32 inch (0.8 mm), and substances that may interfere with adhesive bond or show through surface. F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch (3 mm) wide or wider and protrusions more than 1/32 inch (0.8 mm), unless more stringent requirements are required by manufacturer's written instructions.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer.
- D. Clean metal substrates of grease, oil, soil and rust, and prime if directed by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.3 INSTALLATION

- A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer install every tile with full-spread, releasable, pressure-sensitive adhesive.
- C. Maintain dye lot integrity. Do not mix dye lots in same area.
- D. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
- E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.
- G. Install pattern based on building design and installation efficiencies. Architect to approve layout before installation.
- H. Stagger joints of carpet tiles so carpet tile grid is offset from access flooring panel grid. Do not fill seams of access flooring panels with carpet adhesive; keep seams free of adhesive.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
 - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
 - 2. Remove yarns that protrude from carpet tile surface.
 - 3. Vacuum carpet tile using commercial machine with face-beater element.

B. Protect installed carpet tile to comply with CRI 104, Section 16, "Protection of Indoor Installations."

C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 09 68 13

SECTION 12 61 13 - FIXED AUDIENCE SEATING

PART 1 - GENERAL

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

1.2 SUMMARY

- A. The work of this section includes but is not limited to the manufacture and installation of fixed audience seating and related items, as indicated on the drawings, specified here, and as required to complete the installation.
- B. Provide a sample of any proposed alternative to the Basis of Design chair with the bid.

1.3 RELATED WORK

- A. Related work which is not part of the Fixed Audience Seating Contract includes, but is not limited to, the following:
 - 1. Auditorium floors.
 - 2. Handrails and guardrails.
 - 3. Electrical distribution to the end standards, wiring connections to the standards, and connection of all voltage reduction devices is by the Electrical Contractor.
 - 4. Scheduling and coordination for the work in this section is by the General Contractor.

1.4 ACCEPTABLE MANUFACTURERS

A. Ducharme Seating

<u>www.ducharmeseating.com</u> Attn: Isabelle Duplantie <u>iduplantie@siegesducharme.com</u>

B. Hussey Seating

<u>www.husseyseating.com</u> Attn: Jason Dinan jason@tjdistributors.com

C. Irwin Seating Company

<u>www.irwinseating.com</u> Attn: Kathleen Haldeman <u>irwin.kfh@gmail.com</u>

list continues,...

D. Series Seating Ltd. <u>www.seriesseating.com</u> Attn: Thomas Boyd <u>tboyd@seriesseating.com</u>

1.5 QUALITY ASSURANCE

- A. The installation shall comply with the applicable requirements of the laws, codes, ordinances and regulation of the Federal, State and Municipal authorities having jurisdiction.
- B. Seating manufacturer shall verify that minimum clearances shall meet ADAAG (ADA Accessibility Guidelines for Buildings and Facilities) regulations and local code.

1.6 SUBMITTALS

- A. Submittal procedures shall be as dictated by the Architect.
- B. Submit complete manufacturer's product data for all work in this Section, including all product descriptions and specifications, catalog cuts, laboratory test results, installation instructions, maintenance and cleaning instructions, and any other data required for product approval and use.
- C. Within six weeks of the award of contract, and prior to the preparation of product coordination shop drawings or seating layout drawings, the Seating Contractor shall submit a written review of related work as it appears on the Contract Documents. The review shall identify errors, omissions, or obstructions related to the installation and operation of the equipment in this Section. The sole intent of this written review is to identify potential problems as soon as possible.
- D. Submit product coordination shop drawings for approval. Product coordination shop drawings shall include the following:
 - 1. Complete plans for all levels, including dimensions to aisle light junction boxes.
 - 2. Details showing methods of seat installation and anchorage, relationship to adjacent work, and complete setting diagrams.
 - 3. Detail sections and elevations for each different seat condition, showing back pitch, viewer eye location, and clear distance from adjacent seat or guardrail with the seat both up and down, and (where applicable) the relationship to the adjacent riser, wall or railing.
 - 4. ADA standard details.
 - 5. Details of aisle lighting connections.
 - 6. Removable seat details.
- E. Prepare a survey of the auditorium and seating locations from site measurements, showing the existing site conditions including floor elevations, floor slopes, relevant railing and wall locations, door locations, aisle widths, and any row curvature.
- F. Confirm that floor surfaces and substrate are adequate for seat attachment.
- G. Following approval of the product coordination shop drawings, and once accurate as-built field measurements of the seating areas have been obtained, revised as necessary and resubmit the seating layout for final approval. Seating layout shall include:
 - 1. Complete seating plans for all levels showing fixed seats, removable seats, seat sizes, locations of base structures, aisle widths, end standards, ADA standard locations, aisle lights. Seating layouts shall include row and seat designation letters and numbers.
 - 2. Field measurements and survey information. Final seating layout will not be approved unless all dimensions are field verified.

- H. If product coordination shop drawings or seating layout review is required more than four times because of seating manufacturer's failure to incorporate earlier comments, all subsequent reviews will be billed on a time and materials basis to the seating manufacturer.
- I. Provide two copies of an instruction and maintenance manual at time of installation. The manual shall include:
 - 1. Recommended procedures for cleaning, touch-up and maintenance of all finished surfaces and upholstery, including all precautions against materials and methods which could damage upholstery fabric and/or its fire retardance characteristics.
 - 2. Catalog cuts, if applicable.
 - 3. "As-built" drawings showing all seating as installed in both electronic PDF format and as half-size paper prints.
- J. Provide a full attic stock inventory list.
- 1.7 SAMPLES
 - A. Following award of contract, provide a production sample. The production sample shall be complete in every respect, including upholstery and finishes. The Architect reserves the right to request replacement samples or portions of the samples until the appropriate party's approval has been obtained. The samples may not be incorporated in the final installation. The production sample shall remain the property of the Owner/Operator.
 - B. Submit the following detail samples to the appropriate party for approval:
 - 1. 8 inch square minimum piece of wood in the species, cut, and finish specified for both solid and laminated applications.
 - 2. 3 inch square minimum piece of metal in the finish specified.
 - 3. 12 inch square minimum piece of each fabric type and pattern specified.
 - 4. Seat number, row letter, and donor plate.

1.8 WARRANTY

A. Warrant the seats and related items in this Section to be free of defects in materials and workmanship for a period of five years after acceptance of the completed installation by the Owner. Defective work shall be repaired and replaced within 30 days of all items found defective during this Warranty period at no cost to the Owner. Ordinary wear and defects due to improper usage or vandalism are excepted.

PART 2 – PRODUCTS

2.1 BASIS OF DESIGN

- A. The Basis of Design is the Irwin Seating "Grand Rapids" chair, with a wood seat pan, and upholstered with "Shire" fabric
- 2.2 SEATING LAYOUT
 - A. Provide seats of varying widths in each row spaced laterally so that the end standards will be in alignment from the first to the last row, whether aisles are of constant or converging widths. Seat widths shall be 20 inches 23 inches, with the goal of no less than a 21 inch average seat width. Seating shall be staggered to optimize sightlines. Seat width distribution and seat quantities

indicated on the Audience Seating Drawings shall be reviewed and confirmed by the Manufacturer.

B. Final seating layout shall be determined based on actual field conditions and measurements.

2.3 METAL COMPONENTS

- A. Metal components shall be of sufficient gauge and design to withstand normal use and abuse.
- B. Metal components shall have smooth surfaces, including cut edges. Grind all welded connections smooth. Cut plates shall have dressed edges.
- C. All exposed metal parts, including bolts and hardware, shall be steel with a hybrid thermosetting powder coat finish. The powder coat finish shall be applied by electrostatic means to a thickness of 2 2.5 mils. and shall provide a durable coating having a 2H Pencil hardness.
- D. Paint colors shall be matte black and of the Manufacture's standard line. Paint application shall be of sufficient film depth to afford wear resistance of institutional quality.

2.4 WOOD

- A. Plywood, whether exposed or concealed, shall be hardwood. Plywood shall be hot press laminated (16 plies per inch thickness minimum) using a high frequency process. Interior plies shall be Class 3 or better. Exposed, exterior plies shall be Manufacturer standard veneer, maple or equivalent, Class 1, continuous, and selected for consistency of color. Plies shall be of equal thickness, without voids or defects affecting appearance or performance.
- B. Milled wood shall be Manufacturer standard, maple or equivalent, and shall be clear, wellseasoned stock, containing no defects affecting appearance or performance, and shall be selected for consistency of color.

2.5 WOOD FINISHES

- A. All exposed wood parts shall be stained a custom color to match the Architect's sample. All exposed wood parts shall be provided with a high-quality furniture finish. Film depth must be sufficient to afford wear resistance of institutional quality.
- B. All wood component finishes shall match.

2.6 PADDING

- A. Seat and back padding material shall be of new (prime manufacture) closed cell, medium density polyurethane foam.
- B. Padding material shall comply with the flammability requirements outlined in the California Technical Information Bulletin #117, Resilient Cellular Materials, Section A & D, dated February 1975, when tested in accordance with Federal Test Method Standard 191, Method 5903.2.

2.7 FABRICS

- A. Chair back and seat cushion upholstery fabric shall be per the Basis of Design, or approved substitute.
- B. A 12 inch square fabric sample shall be submitted with relevant manufacturer and dye lot information.

- C. Seat fabric material shall meet Class 1 flammability requirements of the U.S. Department of Commerce Commercial Standard 191-53 Bulletin #117 and to all applicable local codes.
- D. Seat fabric shall meet or exceed the following wearability criteria: 100,000 double rubs on the Wyzenbeek Test.
- E. Fabric shall be inherently strain repellant or receive protective treatment, and be cleanable with a mild solvent

2.8 SEAT PANS

- A. The seats shall be self-rising to the full fold, 90 degree position when unoccupied at all times without adjustment.
- B. The self-rising mechanism shall be counterweight type. Down stops shall be cushioned with neoprene. Hardware shall be permanently lubricated: stops shall be cushioned. Spring hinges are not acceptable.
- C. Seat cushions shall be fully upholstered, with a visible plywood panel underside in the Base Bid seat. Fabric covering shall be without welts and securely attached without the use of exposed affixing hardware.
- D. Foam seat cushions shall be polyurethane foam cemented to the inside bottom panel and covered in fabric as outlined above.

2.9 SEAT BACKS

- A. The chair backs shall be padded and fully upholstered, with visible, protective plywood rear panels.
- B. Seat backs shall have a wood reveal around the edge of the back. Dimension of wood reveal to be determined by the Architect. Seat back height is to be determined. Seat back shall have a curved top profile, radius to be determined by the Architect.
- C. Back inside wood upholstery panel shall be of plywood not less than 5-ply construction and not less than 5/16" thick.
- D. Back outside wood shall be plywood of not less than 7-ply construction and not less than 5/8" thick.
- E. Where inside upholstered panels and exposed back panels connect, they shall be formed on the same radius and mounted to each other using concealed fasteners.
- F. Foam back cushions shall be polyurethane foam cemented to the inside panel and covered with back fabric as outlined above.

2.10 ARM RESTS

- A. Armrests shall be solid wood, finished to match the back and seat bottom. Armrests will be mounted onto metal standards.
- B. End-standard armrests shall incorporate concealed aisle lights as described below and located as indicated in the Audience Seating Drawings and Electrical Drawings.

2.11 STANDARDS

- A. Standards shall be floor mounted and comply with the following requirements:
 - 1. Steel foot shall be welded to the bottom of the standard with a full weld bead entirely around the column.
 - 2. Any protruding anchorage rod shall be capped with acorn nuts or an approved equivalent.
 - 3. The standard shall be fabricated to be compatible with floor incline and to maintain seat and back height regardless of slopes.
 - 4. Standards shall be matte black.
- 2.12 END STANDARDS
 - A. End standards shall have wood veneer plywood panels. Refer to product reference for panel extent and shape. Veneered wood shall match Architect's sample in color and finish.
 - B. Provide hinged end-standards (transfer arms) where shown in the Audience Seating Drawings. The hinged end-standards shall have no visible difference from the typical end-standards other than modifications as necessary to accommodate hinges, floor slopes, and removable seating requirements.
 - C. Hinged end-standards shall be mounted so that the hinge and hardware are hidden.
 - D. Hinged end-standards shall swing 180 degrees.
 - E. End-standards shall have row identification plates. Plate finish to match the Architect's sample. Refer to Seat Signage Section below.
- 2.13 SEAT SIGNAGE
 - A. All signage plates shall be recessed and flush with chair wood. Plates shall be attached with concealed / tamper-proof fixation hardware.
 - B. Each chair shall have a metal plate for a seat number. Seat number plates shall be of a size to fit into a recessed depression on the front edge of the seat bottom plywood panel. Seat number plate finish to be determined by Architect.
 - C. Each row end standard shall have a metal row letter plate mounted to the side of the wood end panel. Row letter plate size, finish and font to be determined by Architect.
 - D. Each hinged end-standard (ADA location) shall have a plate that identifies it with an ADA international insignia. ADA plates shall be finished to match other seat signate and meet all applicable code requirements of size, finish and contrast.
- 2.14 DONOR PLATES
 - A. Donor plates, if any, would be fabricated and installed by the Owner.
- 2.15 AISLE LIGHTS
 - A. Provide aisle lights (AL) as indicated on the Audience Seating Drawings.
 - B. Aisle lights shall be low voltage LED non-hazardous fixtures, utilizing a miniature element in sufficient quantity to provide adequate illumination (minimum 2/10 footcandle) for floor and steps adjacent to the end-standards. The light assembly shall be recessed under the end-standard

armrest, concealed from sight, and protected from damage. The standard shall be completely pre-wired with an 18-inch lead extending beyond the standard.

- C. For each fixture, provided an 18-inch flex-steel conduit connector through which the lead passes. Low-voltage cabling may use approved non-steel flexible sleeving. Flexible conduit finish shall be matte black.
- D. Provide dimmable transformers, suitably housed in steel safety enclosures and equipped with primary and secondary fuses, terminal blocks, and safety disconnects. The transformers shall be in a remote location, as shown on the Electrical drawings.
- E. All electrical components shall be UL approved.
- F. Wiring connections from the electrical distribution system to the end standards, as well as installation and connection of the voltage reduction device shall be by the Electrical Contractor.

2.16 REMOVABLE SEATS

- A. Provide removable seats where shown on the Audience Seating Drawings. Removable seats shall be identical to fixed seats in design and finish.
- B. A maximum of three seats shall be ganged.
- C. Each removable seat or gang of seats shall have self-contained arms. Refer to Audience Seating Drawings for locations of double arms.
- D. Provide a sled base for each removable seat, or group of seats.
- E. Each removable seat or gang of seats shall have a quick-release device for attachment to the floor. This shall consist of a thumbscrew and insert with a threaded connection.
- F. Provide two castered dollies capable of moving a 3-gang section of removable seats.
- 2.17 IMPACT CRITERIA
 - A. Seats shall be capable of withstanding the repeated impact of a 40-pound sandbag dropped onto the seat pan from a height of 12 inches. The front edge of the seat pan shall not drop more than $\frac{3}{4}$ inch.
 - B. The seats shall be certified to withstand a 600-pound static load, laterally distributed three inches from the leading edge of the seat. The seat shall also be certified to pass seat cycle oscillation testing, ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism, and sandbag testing.
 - C. Seats shall be capable of withstanding without failure the repeated impact of two 40-pound sandbags suspended 10 inches below the top of the chair back and on both sides of the chair back.

2.18 MAINTENANCE MATERIALS

A. Provide fully constructed and upholstered seat backs and pans for 2 percent of all seating proportional to each chair size. Proportions to be based on final installed quantities.

- B. Provide complete spare chair components and hardware for 2 percent of the installed seating proportional to each type of seat component supplied (e.g. transfer arms, end standards, center standards, etc.).
- C. Provide cut and sewn seat and back covers for 2 percent of the seating installed. Covers shall be produced at the same time, using identical fabric and shall be presented to the Owner upon completion of the seating installation. Cover sizes and colors shall be prorated according to the seating sizes in the final layout.
- D. Provide an additional 50 yards of fabric of the same dye lot as the balance of the project.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before beginning the installation, check all construction and substrate materials to receive the seating to assure that they are sound, rigid, properly sized and located, level (or properly sloped), plumb and square, and that there is nothing to prevent proper and timely execution of the installation. Do not proceed until unsatisfactory conditions have been corrected. All overhead work, including painting, staining, and finishing shall be finished prior to the start of chair installation. All wall surfaces directly adjacent to chairs shall be finished prior to the start of chair installation. Start of work shall indicate acceptance of the substrate and surrounding conditions. Concrete floors shall have a clear 3 inches of 3000 psi concrete above top of metal deck fluting. Wood floors shall have 1 ½ inches of clear wood depth.

3.2 PROTECTION OF MATERIALS

- A. Protect the materials in this Section from soiling and damage during all phases of the work, from the time of manufacture to the acceptance of the completed installation.
- B. Cover the seats to protect them from dust, paint, and debris as required during and after installation.

3.3 INSTALLATION

- A. Commencement of installation means acceptance of site conditions. If site conditions warrant a change in the seating layout the Architect and Theatre Consultant shall be notified before installation. Changes in the layout shall be documented and approved by the Architect and the Theatre Consultant prior to installation.
- B. Installation shall be by the manufacturer or an authorized dealer or agent of the manufacturer. All installation work shall be carried out under the supervision of a capable superintendent experienced in the installation of seating of similar type and quality.
- C. Coordinate the installation schedule as required with related trades.
- D. The installation shall conform to the approved shop drawings and layout drawings and to the printed installation instructions of the manufacturer.
- E. Floor anchorages shall be of sufficient strength and capacity to assure safe, rigid, and permanent attachment.
- F. All related work for installation, such as drilling and cutting through finish floor materials in place at the time of installation shall be done as work of this Section.

- G. Remove all cartons, wrappings and debris associated with the installation from the building and legally dispose of same. The General Contractor is responsible for supply of all dumpsters.
- H. Upon completion of the installation, adjust all operating parts and assemblies for proper quiet operation. Clean and polish all exposed surfaces.
- I. Adjust seats as required to ensure that seats in each row are aligned when in upright position.
- J. Upon completion of the installation, touch-up all marred finishes with coating to match the factory-applied finish. Replace any unit whose finish cannot be restored to a high-quality appearance as indicated by the Architect and the Theatre Consultant.
- K. Replace upholstery which has been damaged in installation. Replacement of upholstery shall not deplete the attic stock.
- 3.4 PUNCH LISTING AND TRAINING
 - A. Installed seating will be reviewed and inspected for quality by the Architect, Theatre Consultant, Acoustics Consultant, and Owner.
 - B. Any necessary adjustments or modifications shall be made as required to comply with approved shop drawings.
 - C. The Owner's designated staff or representative shall be instructed in the care and maintenance of all items.
 - D. Review and instruction to be scheduled in conformance with project construction schedules and the availability of the Architect, Theatre Consultant, and Owner, pending on-time approvals of all prior requirements.

END OF SECTION 12 61 13

SECTION 25 08 00 COMMISSIONING OF INTEGRATED AUTOMATION SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Contract Drawings and provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections apply to this Section.
- B. Section 01 91 13 Commissioning General Requirements
- C. Section 22 08 00 Commissioning of Plumbing Systems
- D. Section 23 08 00 Commissioning of HVAC Systems
- E. Section 26 08 00 Commissioning of Electrical Systems
- F. Commissioning Plan

1.2 DESCRIPTION OF WORK

- A. The purpose of this section is to specify the Division 25 responsibilities and participation in the commissioning process. All contractors responsible for Division 25 installation or other activities shall have commissioning responsibilities described herein.
- B. Work under this contract shall conform to requirements of Division 1, General Requirements, Conditions of the Contract, and Supplementary Conditions. This specification covers Commissioning of Integrated Automation Systems, which are a part of this project.
- C. Commissioning shall be a team effort to ensure that all controls equipment and systems have been completely and properly installed and function together correctly to meet the design intent. Additionally, system performance parameters shall be monitored and documented for fine tuning of control sequences and operational procedures. Commissioning shall coordinate and document equipment installation, equipment start-up, control system calibration, testing and balancing, and verification and performance testing.
- D. The Commissioning Team is defined in Specification 01 91 13 Section 1.3 Definitions. The trades represented on the Commissioning Team shall include but not be limited to; sheet metal, pipe and fitting, controls, test and balance, plumbing, chemical treatment and fire protection. The lead person for each trade who will actually perform or supervise the work is to be designated as the representative to the Commissioning Team. Responsibility for various steps of the commissioning process shall be divided among the members of the Commissioning Team, as described in this section.

E. Controls Contractor(s) are responsible for integrated automation systems installation, start-up, testing, preparation of O&M manuals, and operator training as defined in various Division 25 specification sections. Controls Contractor(s) are responsible for coordination, observation, and verification of commissioning as defined in this section and Section 01 91 13. Neither Section 01 91 13 - Commissioning General Requirements nor Section 25 08 00 – Commissioning of Integrated Automation Systems shall relieve the Controls Contractor(s) from their obligations to complete all portions of work in a satisfactory and fully operational manner. Furthermore, Section 25 08 00 – Commissioning of Integrated Contractor(s) or Telecommunications Contractor(s) from any obligations set forth within Division 1, Division 26, Division 27, including Section 01 91 13 – Commissioning General Requirements.

1.3 DEFINITIONS

- A. Controls Contractor(s): The term Controls Contractor(s) utilized herein refers to any and all subcontracting companies or venders whom are responsible for the construction or other provisions regarding any of the systems which are being commissioned, as outlined in Specification 01 91 13 Section 1.5 Systems to be Included in Commissioning, and are defined within Division 25 of the specifications. Subcontracting parties outside of the scope of the Systems to be Included in Commissioning or outside of the scope of Division 25 are not included.
- B. Equipment Manufacturer(s): The term Equipment Manufacturer(s) utilized herein refers to any and all subcontracting companies whom are responsible for the provision of equipment or components which are being commissioned, as outlined in Specification 01 91 13 Section 1.5 Systems to be Included in Commissioning, and are defined within Division 25 of the specifications. Equipment Manufacturer(s) shall refer to the direct representative of the maker and/or distributor of the equipment or component being provided. This may include either the actual equipment manufacturer or the supplier thereof, under the provisions that the supplier has a thorough knowledge of the equipment or component and is recognized by the actual equipment manufacturer as being a proper representative.

1.4 SCOPE OF WORK

A. The Controls Contractor(s) shall be required to Commission all equipment, components and accessories of each of the commissioned systems as outlined within Specification 01 91 13 Section 1.5 – Systems to be Included in Commissioning. In order to accomplish a complete commissioning process, the Controls Contractor(s) shall be required to fulfill all requirements set forth within Specification 25 08 00 Section 1.5 – Roles and Responsibilities. Additionally, the Controls Contractor(s) shall be required to fulfill all requirements set forth within Specification 21 3.

B. Through the Commissioning Process, the Controls Contractor(s) shall accomplish thorough documentation, organized scheduling and coordination, detailed installation verification, and detailed system functional verification. For this, the Controls Contractor(s) must cooperate and coordinate with the Commissioning Agent.

1.5 ROLES AND RESPONSIBILITIES

- A. In addition to the Commissioning Agent, Owner and System Design Professional(s), the Commissioning Team is comprised of a minimum of one individual to represent each contracting company or venders whom are responsible for the construction or other provisions regarding any of the systems which are being commissioned, as outlined in Specification 01 91 13 Section 1.5 Systems to be Included in Commissioning, and are defined within Division 25 of the specifications. See Specification 01 91 13 Section 1.3 Definitions for the definition of the Commissioning Team.
- B. Contracting companies providing members shall include but not be limited to; HVAC, sheet metal, pipe and fitting, controls, test and balance, plumbing, chemical treatment and fire protection contractors whose responsibilities are defined herein.
- C. In addition to all roles and responsibilities defined herein, all Controls Contractor(s) shall be required to fulfill all requirements described within Specification 01 91 13 Section 1.4 Roles and Responsibilities.
- D. Controls Contractor(s)
 - 1. General Requirements:
 - a. Include all cost to complete commissioning requirements for Integrated Automation Systems in the contract price. Contractor costs shall be reflected within the Schedule of Values as specified within Specification 01 91 13 Section 2.2 – Schedule of Values.
 - b. Ensure cooperation and participation of specialty Contractors and Sub-Contractors.
 - c. Ensure participation of major Equipment Manufacturers in appropriate start-up, testing and training activities.
 - d. Attend Commissioning Meetings for construction phase coordination as scheduled by the Commissioning Agent. Additionally, attend the Commissioning Kick-Off Meeting as scheduled by the Commissioning Agent.
 - 2. Commissioning Schedule
 - a. Prepare a Preliminary Schedule for Integrated Automation Systems and equipment, including component installation, start-up and checkout, and system

start-up. Integrate commissioning activities into this Preliminary Schedule including Pre-Functional and Functional Performance Tests. Coordination of the commissioning activities and their integration into the schedule shall be conducted within the Commissioning Meetings.

- b. Update the Preliminary Schedule and submit a Final Schedule which shall reflect all items within the Preliminary Schedule and shall also include but not be limited to: inspections, O&M manual submission, training sessions, equipment start-up, and task completion. All Contractor(s) shall integrate schedule activities into one complete Final Schedule which shall be reflected within the Construction Manager's/General Contractor's overall project schedule. The Final Schedule shall be continuously updated throughout the Construction Phase.
- 3. Submittal Requirements:
 - a. Comply with all Submittal requirements as outlined within Specification 01 91 13 Section 2.3 Submittals.
 - b. Comply with all requirements as outlined within Specification 01 91 13 Section 2.5
 Start-Up and Test Reports.
 - c. Provide the following documentation to the Commissioning Agent for the purpose of construction updates:
 - 1) General construction progress and status reports
 - 2) Updated Architect, Owner, System Design Professional, and Contractor deficiency logs
 - 3) Minutes from all construction and coordination meetings not otherwise conducted by the Commissioning Agent
 - 4) Pre Start-Up and Start-Up procedures
 - 5) Value Engineering Proposals and a list of all accepted VE items
 - 6) Pressure Test Reports, Flushing Reports and Start-Up Reports
 - 7) Construction document changes resulting from controls Requests for Information
- 4. Pre-Functional Checklist Requirements:
 - a. Detailed installation verification shall be performed on all installed equipment and systems to ensure that the installations conform to the contract documents, local and applicable codes, and standard practice. This shall be accomplished through the completion of Pre-Functional Checklists. The creation, distribution, completion and maintenance of Pre-Functional Checklists are detailed in Specification 01 91 13 Section 2.4 – Pre-Functional Checklists.

- b. Complete Pre-Functional Checklists on all controls equipment and system components installed or provided by the Controls Contractors(s).
- c. Notify the Commissioning Agent a minimum of two weeks (14 days) in advance, so that witnessing Equipment and System Start-Up can begin.
- d. Provide written notification to the Commissioning Agent for each system listed in Specification 01 91 13 Section 1.5 Systems to be Included in Commissioning, that the system installation is complete in its entirety and that the system is fully operational, online, and ready for Functional Performance Testing.
- 5. Equipment and Systems Start-Up
 - Perform all initial check-out and start-up procedures as outlined within the specifications and as per the Equipment Manufacturer's recommendations.
 Provide full documentation of all start-up and check-out procedures and results.
 Documentations is to be submitted to the Commissioning Agent in conjunction with the associated Pre-Functional Checklist.
- 6. Functional Performance Test Requirements:
 - a. Detailed testing shall be performed on all installed equipment and systems to ensure that operation and performance conform to contract documents, local and applicable codes, and standard practice. This shall be accomplished through the completion of Functional Performance Tests. The creation, distribution and completion of Functional Performance Tests are detailed in Specification 01 91 13 Section 2.6 – Functional Performance Tests.
 - b. Provide all appropriate equipment and materials as necessary to execute and complete all Functional Performance Tests. Comply with all requirements as outlined within Specification 01 91 13 Section 2.8 Test Equipment.
 - c. Provide appropriate technicians for participation during system verification and functional performance testing. Technicians shall demonstrate system performance to Commissioning Agent including all modes of system operation (e.g. normal, abnormal, emergency, etc.)
 - d. Verify all functional performance tests prior to requesting test witness by the Commissioning Agent, demonstrate all Functional Performance test tasks in the presence of the Commissioning Agent and assist the Commissioning Agent in all verification and functional performance tests.
 - e. Participate in verification of the TAB report, which will consist of repeating any selected measurement contained in the TAB report where required by the Commissioning Agent for verification or diagnostic purposes. Typically, TAB Verification shall occur in conjunction with Functional Performance Testing.

- f. Cancellation or delays of any system tests or Functional Performance Testing upon the day of that particular scheduled test, due to lack of preparation or status of installation shall be considered a failed test due to the additional time required by the Commissioning Agent to witness electrical testing. These additional tests shall be treated in accordance with Specification 01 91 13 Section 3.6-A.
- 7. Training Requirements:
 - a. Comprehensive training of O&M personnel shall be performed by the Controls Contractor(s) and Equipment Manufacturer(s) prior to turnover of the systems to the Owner. Training shall include but not be limited to classroom instruction and hands-on instruction of the installed equipment and systems. Training shall be coordinated by the Commissioning Agent via review and approval of the Contractor(s) Training Plan, Forms and Schedule. Alternately, the Commissioning Agent may provide a Training Plan including all forms for completion by the Controls Contractor(s).
 - b. The Training Schedule is to be coordinated and completed by the Controls Contractor(s). The Training Schedule is to be updated and maintained as construction progresses. The Training Schedule and all updates shall be coordinated with and approved of by the Owner. A copy of the Training Schedule and all updates shall be provided to the Commissioning Agent.
 - c. Contractor(s) responsible for the installation or provision of any piece of equipment or system shall attend, at minimum, the initial training session for that equipment or system.
 - d. All Training Documentation shall be assembled and organized in a binder or set of binders. Coordinate with all other Contractor(s) to provide one complete bound Training Record. This requirement shall not be negated, unless other specific complete Project Training Record requirements, encompassing ALL project training documentation, is outlined elsewhere within the specifications.
- 8. Close-out Requirements:
 - a. Remedy all deficiencies identified during commissioning. Provide all materials, equipment, labor, etc. to accomplish these remedies.
 - b. Provide a complete set of Record Documents (As-Built Drawings and Specifications) to the Architect and/or Design Professional as required by the project specifications. Provide an additional copy for review and approval by the Commissioning Agent.
 - c. Provide a complete set of O&M Manuals and Project Training Record to the Architect and/or Design Professional as required by the project specifications. Provide an additional copy of the O&M Manuals for review and approval by the

Commissioning Agent. Provide an additional copy of all Project Training Record for review to the Commissioning Agent.

- d. Provide a complete copy of Equipment and System Warranties to the Architect and/or Design Professional as required by the project specifications. Provide an additional copy for review and approval by the Commissioning Agent.
- e. Provide to the Commissioning Agent, a complete record of Attic Stock as delivered to the Owner and as approved by the Owner.
- E. Additional Requirements of Controls Contractor(s):
 - 1. Review design for controllability with respect to selected equipment:
 - 2. Verify proper hardware specification exists for functional performance required by specification and sequence of operation.
 - 3. Verify proper safeties and interlocks are included in design.
 - 4. Verify proper sizing of control valves and actuators based on design pressure drops. Verify control valve authority to control coil properly.
 - 5. Verify proper sizing of control dampers. Verify damper authority to control air stream. Verify proper damper positioning for mixing to prevent stratification. Verify actuator vs. damper sections for smooth operation.
 - 6. Verify proper selection of sensor ranges.
 - 7. In addition to all other submittal requirements outlined with in Specifications 01 91 13 and 25 08 00, provide the following submittals to the Commissioning Agent:
 - a. Hardware and software submittals
 - b. Control panel construction shop drawings
 - c. Narrative description of each control sequence for each piece of equipment controlled.
 - d. Diagrams showing all control points, sensor locations, point names, actuators, controllers and, where necessary, points of access, superimposed on diagrams of the physical equipment.
 - e. Logic diagrams showing the logic flow of the system.
 - f. A list of all control points, including analog inputs, analog outputs, digital inputs, and digital outputs. Include the values of all parameters for each system point. Provide a separate list for each stand-alone control unit.
 - g. A complete control language program listing, including all software routines employed in operating the control system. Also provide a program write-up,

organized in the same manner as the control software. This narrative shall describe the logic flow of the software and the functions of each routine and sub-routine. It should also explain individual math or logic operations that are not clear from reading the software listing.

- h. Hardware Operation and Maintenance Manuals
- i. Application software and project applications code manuals.
- 8. Provide controls graphics submittals to the Commissioning Agent and to the Owner and Owner's Maintenance Personnel for approval. Do not proceed with controls graphics programming without integration of the Owner's Maintenance Personnel comments. Verify proper installation and performance of controls / BAS hardware and software provided by others.
- 9. Issue a Statement of Calibration for each system which states that all system points and interfaces have been properly calibrated and adjusted.
- 10.

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- 11. Provide thorough training to operating personnel on hardware operations and programming, and the application program for the system.
- 12. Demonstrate system performance to Commissioning Agent including all modes of system operation (e.g. normal, abnormal, and emergency).
- 13. Provide control system technician for use during system verification and functional performance testing.
- 14. Provide system modifications as required.
- 15. Provide support and coordination with TAB contractor on all interfaces between their scopes of work. Provide all devices, such as portable operator's terminals, for TAB use in completing TAB procedures.
- 16. The Controls Contractor(s) shall provide trending as required to confirm, disconfirm or correct any deficiencies identified during Commissioning. Specific trend logs will be required to facilitate the commissioning process and documentation of Functional Performance Testing. The Commissioning Agent will provide the list of systems and points for trending.
- F. Equipment Manufacturer(s):
 - 1. Comply with all requirements as outlined within Specification 25 08 00 Section 1.5 Sub-Section D – Controls Contractor(s).
 - 2. Assist in scheduling of training sessions. Provide training of Owner's Maintenance Personnel with adequacy required for full comprehension of equipment and maintenance procedures. Coordinate training with the Commissioning Agent. Training
forms for Agenda and Training Record shall be provided by the Commissioning Agent. These forms are to be utilized for all Training Sessions. Manufacturer's standard training forms shall not be accepted as Training Records if Commissioning Forms are provided. Manufacturer standard training forms may be submitted as supplemental information, but the Commissioning Forms must be completed in their entirety.

- 3. Review installation for Equipment Manufacturer's specific requirements. Verify safeties, limits, relays and all other equipment specific settings are correct. Verify these settings optimize equipment performance and efficiencies.
- 4. Perform, approve and document all start-up services as outlined within the specifications for each piece of equipment, component and accessory. Perform all standard manufacturer services as outlined on manufacturer supplied forms. Additionally, perform all other requirements specifically called for within the project specifications, not otherwise performed in a manufacturer standard startup service. Provide additional documentation for these services on forms with manufacturer's letterhead.
- 5. Demonstrate performance of equipment as required within Functional Performance Tests.

1.6 DOCUMENTATION

- A. The Commissioning Agent shall oversee and maintain the development of Commissioning Documentation. The Commissioning Documentation shall be kept in three ring binders, and organized by system and sub-system when practical. All pages shall be numbered, and a table of contents page(s) shall be provided. The Commissioning Documentation shall include the following which is to be maintained by the Contractor(s):
 - 1. Start-Up and Check-Out Documentation: Organized and arranged with its associated Pre-Functional Checklist.
 - 2. System and Component test: Organized and arranged with its associated Pre-Functional Checklist.
 - 3. Pre-Functional Checklist: Organized and arranged as per provided by the Commissioning Agent. Typically these forms are organized by System and Sub-System and according to the order of standard specifications as outlined by American Institute of Architects (AIA.)
 - 4. Functional Performance Tests: All tests performed by the installing contractors for internal checkout and for witness by the Commissioning Agent shall be kept by the Contractor(s), organized and arranged by System and Sub-System, and turned over to the Commissioning Agent for inclusion into the Final Commissioning Report.

5. Project Training Record: The Training Record shall be provided with a Table of Contents followed by the updated Training Schedule and finally followed by each Training Session Agenda and Record. The Training Session Agenda and Record shall be organized by System and Sub-System.

PART 2 - PRODUCTS

2.1 TEST EQUIPMENT

A. The appropriate Contractor(s) shall furnish all special tools and equipment required during the commissioning process. A list of all tools and equipment to be used during commissioning shall be submitted to the Commissioning Agent for approval. The owner shall furnish necessary utilities for the commissioning process. Additional test equipment requirements are found in Specification 01 91 13 Section 2.8 – Test Equipment.

2.2 TEST EQUIPMENT - PROPRIETARY

A. Proprietary test equipment and software required by any equipment manufacturer for programming and/or start-up, whether specified or not, shall be provided by the manufacturer of the equipment. Manufacturer shall provide the test equipment, demonstrate its use, and assist in the commissioning process as needed. Proprietary test equipment (and software) shall become the property of the owner upon completion of the commissioning process.

PART 3 - EXECUTION

3.1 GENERAL

- A. A pre-construction meeting of all Commissioning Team members shall be held at a time and place designated by the owner. The purpose shall be to familiarize all parties with the commissioning process, and to ensure that the responsibilities of each party are clearly understood.
- B. A Final Commissioning Plan shall be developed by the Commissioning Agent. The Controls Contractor(s) shall assist the Commissioning Agent in preparing the Commissioning Plan by providing all necessary information pertaining to the actual equipment and installation in a timely manner. If contractor initiated system changes have been made that alter the commissioning process, the Commissioning Agent shall notify the Owner.
- C. The Commissioning Process shall follow the schedule and procedures set forth within the Final Commissioning Plan.

- D. The Controls Contractor(s) shall complete all phases of work so the systems can be started, tested, balanced, and acceptance procedures undertaken. This includes the complete installation of all equipment, materials, pipe, duct, wire, insulation, controls, etc., per the contract documents and related directives, clarifications, and change orders.
- E. The Controls Contractor(s) shall coordinate all Commissioning Activities into the project as required herein and as outlined within the Commissioning Plan. The Controls Contractor(s) shall complete all required Commissioning and Construction Activities correctly and on schedule.

3.2 PARTICIPATION IN ACCEPTANCE PROCEDURES

- A. The Controls Contractor(s) shall provide skilled technicians to start-up and debug all systems within Division 25. These same technicians shall be made available to assist the Commissioning Agent in completing the commissioning program. Work schedules, time required for testing, etc., shall be requested by the Commissioning Agent and coordinated by the Controls Contractor(s). Controls Contractor(s) shall ensure that the qualified technician(s) are available and present during the agreed upon schedules and of sufficient duration to complete the necessary tests, adjustments, and/or problem resolutions.
- B. System performance problems and discrepancies may require additional technician time, Commissioning Agent time, reconstruction of systems, and/or replacement of system components. The additional technician time shall be made available for subsequent commissioning periods, at no cost to the owner, until the required system performance is obtained.
- C. The Commissioning Agent reserves the right to question the appropriateness and qualifications of the technicians relative to each item of equipment, system, and/or subsystem. Qualifications of technicians shall include expert knowledge relative to the specific equipment involved and willingness to work with the Commissioning Agent. The Controls Contractor(s) shall provide adequate documentation and tools to start-up and test the equipment, system, and/or sub-system.

3.3 DEFICIENCY RESOLUTION

A. In some systems, miss-adjustments, misapplied equipment, and/or deficient performance under varying loads will result in additional work being required to commission the systems. This work shall be completed under the direction of the Owner, with input from the contractor and equipment supplier. Whereas all members shall have input and the opportunity to discuss, debate, and work out problems, the Owner and/or Architect shall have final jurisdiction over any additional work done to achieve performance. B. Corrective work shall be completed in a timely fashion to permit the completion of the commissioning process. Any and all schedule items affected by this work shall be reflected on the Commissioning and Overall Project Schedules.

3.4 ADDITIONAL COMMISSIONING

- A. The Controls Contractor, and associated sub-contractors, shall include time for additional commissioning required as a result of failure of a pre-functional or a functional test. Incomplete or incorrect Pre-Functional Checklists reviewed by the Commissioning Agent shall require an additional inspection to verify the re-completed PFC is complete and accurate. Functional Performance Tests witnessed by the Commissioning Agent which fail, shall require retesting, again witnessed by the Commissioning Agent. These documents must be re-checked or re-witnessed in order for the system to be approved and accepted by the Commissioning Agent.
- B. The Commissioning Agent will invoice the Owner for additional time required to witness any retesting due to failed PFCs or FPTs, plus expenses, and the Owner at his discretion will deduct this cost from the Construction Manager's/General Contractor's Application for Payment. The Construction Manager or General Contractor may then back charge the party responsible for the test's failure. It is the Contractor's responsibility to properly de-bug systems and verify successful system performance prior to inviting the Commissioning Agent to witness the test.

3.5 SEASONAL COMMISSIONING

- A. Seasonal commissioning pertains to testing under full load conditions during peak heating and peak cooling seasons, as well as part load conditions in the spring and fall. Initial commissioning shall be done as soon as contract work is completed, regardless of season. Subsequent commissioning may be undertaken at any time thereafter to ascertain adequate performance during the different seasons.
- B. Heating equipment shall be tested during winter design extremes. Cooling equipment shall be tested during summer design extremes with a fully occupied building. Each contractor and supplier shall be responsible to participate in the initial and the alternate peak season tests of the systems as required to demonstrate performance.

3.6 PRE-FUNCTIONAL CHECKLISTS AND FUNCTIONAL PERFORMANCE TESTS

A. The Commissioning Agent shall be responsible for preparing the Pre-Functional Checklist. The Controls Contractor(s) shall be responsible for completing their applicable sections. Detailed descriptions of Pre-Functional Checklists are outlined in Section 01 91 13-2.4.

- B. The Commissioning Agent shall be responsible for preparing the Functional Performance Tests. The Commissioning Agent and Contractor (s) shall schedule the tests and assemble the commissioning team members who shall be responsible for the tests. Participating contractors, manufacturers, suppliers, etc. shall include all costs to do the work involved in these tests in their proposals. Detailed descriptions of Functional Performance Tests are outlined in Section 01 91 13-2.6.
- C. Following is a list of tasks and supporting information that shall be required:
 - 1. HVAC Contractor(s) provide the services of a technician(s) who is (are) familiar with the construction and operation of this system. Provide access to the contract plans, shop drawings, and equipment cut sheets of all installed equipment.
 - 2. Controls Contractor provide the services of a controls engineer who is familiar with the details of the project. Provide details of the control system, schematics, and a narrative description of control sequences of operation.
- D. Documentation and Reporting Requirements
 - 1. Any contractors with responsibilities related to the equipment to be installed (i.e. Plumbing, HVAC, Electrical, TAB, Controls, Construction Manager or General Contractor) shall be responsible for completing their related portion of the Pre-Functional Checklist and Functional Performance Test forms, and shall sign off on its completion.
- E. If deficiencies are identified during verification, the Construction Manager or General Contractor must be notified, and action taken to remedy the deficiency. The final tabulated checklist data sheets shall be reviewed by the Design Professional and the Commissioning Agent, to determine if verification is complete, and the operating system is functioning in accordance with the contract documents.

END OF SECTION 25 08 00







TOILET ACCESSORIES SCHEDULE									
UANTITY (TOTAL A4.10 + A4.11)	MARK	DESCRIPTION	MOUNTING	MOUNTING HEIGHT	INSTALLED BY	FURNISHED BY	_		
	BCS	DIAPER CHANGING STATION	SURFACE	34" MAX TOP OF WORK SURFACE	CONTRACTOR	OWNER			5' - 4 1/2"
	FEC-1	Non-Rated Wall, 1515 Steel, Flat Trim						STOR.	
	GB-42	42" GRAB BAR	SURFACE	34" TO BOTTOM	CONTRACTOR	CONTRACTOR	[153A	
}	M-1	MIRROR-UNFRAMED	SURFACE	38" MAX	CONTRACTOR	CONTRACTOR			
	PTD	WASTE RECEPTACLE/PAPER TOWEL	SEMI - RECESSED	48"	CONTRACTOR	OWNER			- 4 3/4"
2	PTD-2	PAPER TOWEL DISPENSER	SURFACE		CONTRACTOR	OWNER		-2	6
	SC	SHOWER CURTAIN			CONTRACTOR	OWNER	$ \leq$	<u> </u>	
β	SD-1 √	Bobrick Automatic Wall Mounted Foam Soap Dispenser $_{\lambda}$ B-2013 $_{\lambda}$ $_{\lambda}$ $_{\lambda}$ $_{\lambda}$		43" MAX					Ż
	SND-1	Bobrick B-254 Surface Mounted Sanitary Napkin Disposal	SURFACE	27" TO TOP	CONTRACTOR	OWNER			1/4"
)	TSC-1	Bobrick B-221 Classic Series Surface Mounted Seat Cover Dispenser	SURFACE	48" MAX	CONTRACTOR	OWNER			5' - 4
)	TTD-1	Bobrick B-2892 Classic Series Surface Mounted Twin Jumbo-Roll Toilet Tissue Dispenser	SURFACE	21" TO BOTTOM	CONTRACTOR	OWNER			
	GB-18	18" grab bar	SURFACE	39" TO BOTTOM	CONTRACTOR	CONTRACTOR			· _ _
	GB-36	36" grab bar	SURFACE	35" TO BOTTOM	CONTRACTOR	CONTRACTOR			
	VALLS NEA	R PLUMBING FIXTURES. USE WETROOM					,		RES



HARFORD COMMUNITY CHESAPEAKE WELCOME CENTER, **RENOVATION & EXPANSION** -CC-07-MC19-465 401 THOMAS RUN ROAD, BEL AIR, MARYLAND, 21015 USING AGENCY APPROVAL Date Date Date

A4.11

JAT



15 Interior Elevation - Circ. RM 018 - South 1/4" = 1'-0"

(16) Interior Elevation - Circ. 018 Lockers 1/4" = 1'-0"

17 Interior Elevation - Art Stor. RM 179 - South 1/4" = 1'-0"

A4.36







