PURCHASING DEPARTMENT
DIVISION OF BUDGET & FINANCE

100 West Washington Street, Room 3200 | Hagerstown, MD 21740-4748 | P: 240.313.2330 | F: 240.313.2331
www.washco-md.net

PUR-1378
ADDENDUM NO. 3
INVITATION TO BID

THE MARYLAND THEATRE EXPANSION
IN HAGERSTOWN, MARYLAND

DATE: Thursday, March 29, 2018 **BIDS DUE: Monday, April 9, 2018**
(Revised Date via Addendum No. 3) **2:00 P.M.**

To Bidders:

This Addendum is hereby made a part of the Contract Documents on which all bids will be based and is issued to correct and clarify the original documents.

Please acknowledge receipt of this Addendum at the appropriate space on the Proposal Form. This Addendum consists of fourteen (14) pages and thirteen (13) attachments.

NOTE: All Bidders must enter the Washington County Administration Complex through either the front door at the 100 West Washington Street entrance or through the rear entrance (w/blue canopy roof) which is handicap accessible and must use the elevator to access the Purchasing Department to submit their proposal and/or to attend the Pre-Proposal Conference. Alternate routes are controlled by a door access system. Washington County Government has announced new security protocols being implemented at the Washington County Administration Complex at 100 West Washington Street, Hagerstown. The new measures took effect Tuesday, February 14, 2017. The general public will be subject to wand search and will be required to remove any unauthorized items from the building prior to entry. Prohibited items include but are not limited to: Weapons of any type; Firearms, ammunition and explosive devices; Cutting instruments of any type - including knives, scissors, box cutters, work tools, knitting needles, or anything with a cutting edge, etc.; Pepper spray, mace or any other chemical defense sprays; and Illegal substances.

Additional information promised from Addendum 2:

ITEM NO. 1: *Inquiry:* There are some sound attenuators on the fourth floor duct. We're not sure some them are going to fit. They are not marked on the drawings as to where they are to go. Can you please confirm locations for them?

Response: Sound attenuation shall be provided for all supply and return connections to Rooftop units. Where scheduled sound attenuators do not fit, alternative sound attenuation methods shall be provided. See ITEM NO. 59 (in this Addendum) and Sheet M-2.5, ITEM NO. 61 (in this Addendum) and Sheet M-9.2.

ITEM NO. 2: *Inquiry:* Please provide locations for the 4th floor duct sound attenuators.

Response: Clarification for exact sound attenuator location, see ITEM NO. 59 (in this Addendum) and Sheet M-2.5, ITEM NO. 61 (in this Addendum) and Sheet M-9.2.

ITEM NO. 3: *Inquiry:* We recommend establishing an allowance for underpinning and adding the following unit prices to the bid form:
a. Underpinning in earth per cubic yard.
b. Underpinning in rock per cubic yard.

Response: We have included drawings to explain our understanding of the extent to underpinning based on the test pits. See ITEM Nos. 52, 53 and 54 (in this Addendum) – Sheets S-3.0, S-3.2 and S-4.0. We are not providing an allowance, we expect contractors to use the drawings to determine the cost. We have also requested a Unit Price for Underpinning – see ITEM NO. 46 in this Addendum. We are not requesting a unit price for underpinning in rock.

New inquiries independent of previous addendum:

ITEM NO. 4: *Inquiry:* I was at the pre-bid meeting the other day and am putting together a proposal for the signage on this project. I came across the dedication plaque and see one is being provided by the city. We would be happy to provide a proposal for the plaque you are fabricating if needed. Please provide the specs for this.

Response: This is not a bid question; the dedication plaque is in an allowance that will be specified later.

ITEM NO. 5: *Inquiry:* Do you have a Contractor's Qualification Statement?

Response: We assume you mean in Word – or a format you can fill in. See attached.

ITEM NO. 6: *Inquiry:* Are there any bond requirements (percentage of contract amount or payment and performance)

Response: A bid bond in the amount of 5% of the total amount of the total bid price is required to be submitted with the bid submittal. When the successfully awarded bidder executes the contract, the labor & material payment bonds must be submitted for 100% of the total bid price.

ITEM NO. 7: *Inquiry:* We operate in MEP trades, if the project includes those outside that realm, would we still be welcome to bid?

Response: MEP contractors are welcome to bid; however, the contract shall be awarded to a general contractor to complete the work themselves with contracted subcontractors. The attendance sheet from the March 8th pre-bid conference/site tour as well as the attendee lists from alternately scheduled site tour visits on March 12th and March 15th was included in Addendum No. 1. Additionally, the project plan holder's list can be accessed by using the following link: https://www.washco-md.net/wp-content/uploads/2018/03/purch-pur-1378-planholders.pdf

ITEM NO. 8: *Inquiry:* Is there any verbiage which discusses wage scale (if applicable) and/or scheduling restrictions

Response: The project is not a prevailing wage project. Scheduling restrictions are in the phasing plan and the specifications.

ITEM NO. 9: *Inquiry:* Are there any limits on liability insurance?

Response: Refer to the bid document, Page 08000-12, Supplemental to the 2007 – General Conditions of the Contract, 11.5, Insurance Requirements for Independent Contractors.

ITEM NO. 10: *Inquiry:* Address Trouvaille dance floor substitution request.

Response: Connor System Trouvaille T1 has been added to the list of acceptable manufacturers. See Item No. 47 within this addendum.

ITEM NO. 11: *Inquiry:* We believe detail A5/A-6.12 Stair 2 Enlarged Plan @ 00 Basement Floor – Exit Stair should be labeled Stair 1.

Response: Detail A5/A-6.12 is correct - Stair 2 comes down to basement – pass through exit corridor C012 and up another flight of stairs to exit the building. This last flight of stairs up the sidewalk is next to Stair 2 but separated by a 2-hour enclosure – see notes in hatch on A 6.11 detail A5.

ITEM NO. 12: *Inquiry:* Stair 1 Sections A14 & A18/A-6.11 both show the stair stopping around Stage Level 0'-0", shouldn't the stairs go all the way down to the Basement Level - 9'-0"? Please clarify.

Response: Section on Sheet A-6.11 only show Stair 1. You can find Stair 2 that goes down to the basement in Sheet A-6.12.

ITEM NO. 13: *Inquiry:* Alternate 5 deletes all column covers in the 4th floor Event Space. Will he exposed columns require fireproofing?

Response: All exposed columns shall require fireproofing. This question was also answered in Addendum No. 2, ITEM NO. 11.

ITEM NO. 14: *Inquiry:* Please provide location for the swing gates specified in Section 32 31 19 Ornamental Metal Fences and Gates.

Response: See Addendum No. 2, ITEM NO. 66. Spec section 32 31 19 is deleted.

ITEM NO. 15: *Inquiry:* Please clearly define the limits of the Event Space wood and acoustical paneling shown partially on the elevations on A7.0 on the floor plan A1.15. We can't tell where to stop the wood/acoustical paneling aside from knowing that it does not occur on the "B" elevation.

Response: Event Space wood and acoustical paneling is limited to the Event Space It does not include the Coat Niche, Restroom Vestibule, Stair 2 or Elevator 2 – It ends at Column line B.

ITEM NO. 16: *Inquiry:* On pg. A-2.3 there is a "Custom Decorative Mesh Chandelier w/ Pendant Lights". Is the custom decorative mesh to be provided by the GC or the Owner? If provided by the GC, please provide a manufacturer & model # of the chandelier that is to be used.

Response: The Custom Decorative Mesh Chandelier to be provided by the GC. The chandelier is a mix of globe pendant lights, see Electrical light Type N. Mesh material is from Whiting & Davis – Small Spider Mesh in Gold. Mounted on Hanging Plate. See ITEM NO. 56 (in this Addendum) and new sheet A-2.10 for all details.

ITEM NO. 17: *Inquiry:* On the Finish Plans (pgs. A-9.1 – A-9.5) the legend on each page does not match what is shown on the floor plan, i.e. the stairs are being called out to have carpet, while the legend & Finish Schedule (pg. A-9.0A) calls for the stairs to receive rubber. Please clarify which we are to follow, the legend or the floor plan.

Response: We do not see a discrepancy in the finish plans and schedule.

ITEM NO. 18: *Inquiry:* A2.2 calls for shelf lighting at back bar millwork. This lighting is not shown on the electrical lighting plan for this area E-2.2 so we don't know the fixture manufacturer/model numbers, the panel the fixtures are wired to or how they are switched.

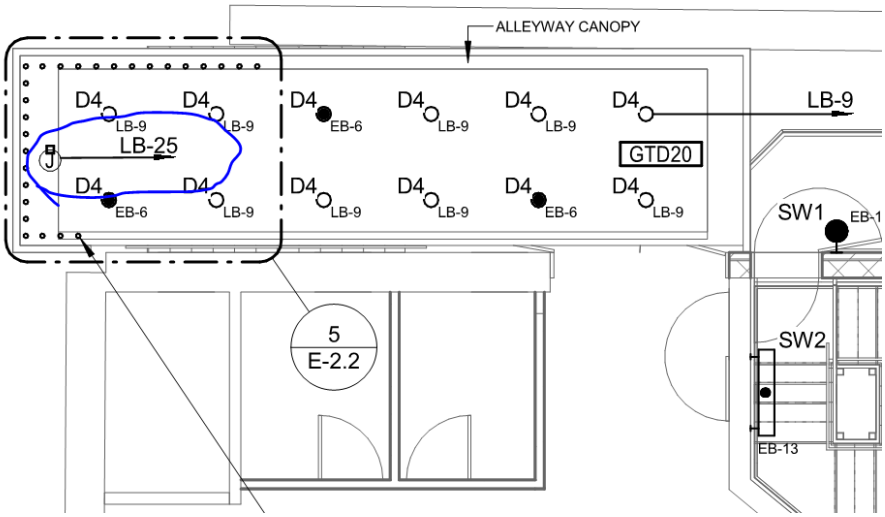
Response: Remove note. There is no light shelf behind bar.

ITEM NO. 19: *Inquiry:* A2.3 calls for shelf lighting at back bar millwork. This lighting is not shown on the electrical lighting plan for this area E-2.3 so we don't know the fixture manufacturer/model numbers, the panel the fixtures are wired to or how they are switched.

Response: Remove note. There is no light shelf behind bar.

ITEM NO. 20: *Inquiry:* To what panel are the orchestra level alleyway canopy Type SC lighting run?

Response: LB-25



Branch Panel: LB

LOCATION: UTILITY ROOM M009
SUPPLY FROM: MSB
MOUNTING: Surface

Notes:
ALL LIGHTING CIRCUITS SHALL HAVE DEDICATED NEUTRALS.

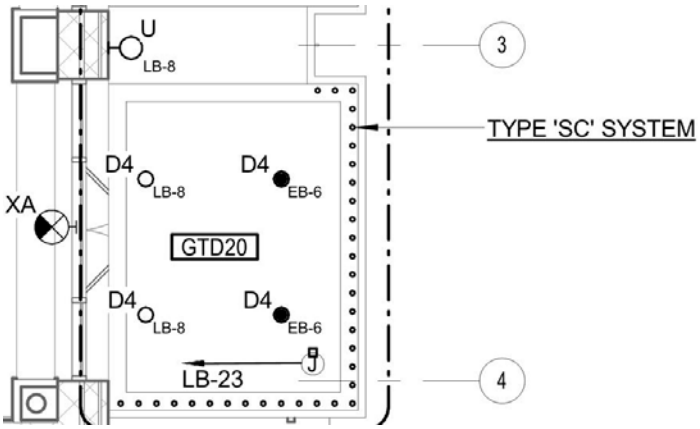
CKT	CIRCUIT	Cond.		Gnd	C	P	CB
LB-1	LTG. - GALLERY	2	#12	#12	3/4"	1	20 A
LB-3	LTG. - ORCHESTRA LEVEL	2	#12	#12	3/4"	1	20 A
LB-5	LTG. - LOBBY 102	2	#12	#12	3/4"	1	20 A
LB-7	LTG. - LOBBY RAISED CLG PENDANT	2	#12	#12	3/4"	1	20 A
LB-9	LTG. - ALLEY CANOPY	2	#12	#12	3/4"	1	20 A
LB-11	* LTG. - FACADE UP LIGHTING	2	#12	#12	3/4"	1	20 A
LB-13	LTG. - LOBBY RAISED CLG PENDANT	2	#12	#12	3/4"	1	20 A
LB-15	LTG. - 2ND LVL LOBBY 201	2	#12	#12	3/4"	1	20 A
LB-17	LTG. - 2ND LVL LOBBY 201	2	#12	#12	3/4"	1	20 A
LB-19	LIGHTING - EVENT SPACE COVE	2	#10	#10	3/4"	1	20 A
LB-21	LTG. - DIMMING RACK	2	#12	#12	3/4"	1	20 A
LB-23	LTG. - CANOPY MARQUE	2	#12	#12	3/4"	1	20 A
LB-25	LTG. - ALLEY CANOPY MARQUE	2	#12	#12	3/4"	1	20 A
LB-27							
LB-29							
					Total Connected Load:		23.5 kVA
					Total Connected Current:		65 A

Legend:

***(NOTE:** The wording of all "Inquiries" submitted are displayed exactly as received.)*

ITEM NO. 21: *Inquiry:* To what panel are the orchestra level from entry canopy Type SC lights run?

Response: LB-23



Branch Panel: LB

LOCATION: UTILITY ROOM M009
SUPPLY FROM: MSB
MOUNTING: Surface

Notes:
ALL LIGHTING CIRCUITS SHALL HAVE DEDICATED NEUTRALS.

CKT	CIRCUIT	Cond.		Gnd	C	P	CB	
LB-1	LTG. - GALLERY	2	#12	#12	3/4"	1	20 A	
LB-3	LTG. - ORCHESTRA LEVEL	2	#12	#12	3/4"	1	20 A	
LB-5	LTG. - LOBBY 102	2	#12	#12	3/4"	1	20 A	
LB-7	LTG. - LOBBY RAISED CLG PENDANT	2	#12	#12	3/4"	1	20 A	
LB-9	LTG. - ALLEY CANOPY	2	#12	#12	3/4"	1	20 A	
LB-11	* LTG. - FACADE UP LIGHTING	2	#12	#12	3/4"	1	20 A	
LB-13	LTG. - LOBBY RAISED CLG PENDANT	2	#12	#12	3/4"	1	20 A	
LB-15	LTG. - 2ND LVL LOBBY 201	2	#12	#12	3/4"	1	20 A	
LB-17	LTG. - 2ND LVL LOBBY 201	2	#12	#12	3/4"	1	20 A	
LB-19	LIGHTING - EVENT SPACE COVE	2	#10	#10	3/4"	1	20 A	
LB-21	LTG. - DIMMING RACK	2	#12	#12	3/4"	1	20 A	
LB-23	LTG. - CANOPY MARQUE	2	#12	#12	3/4"	1	20 A	
LB-25	LTG. - ALLEY CANOPY MARQUE	2	#12	#12	3/4"	1	20 A	

ITEM NO. 22: *Inquiry:* How is the lighting controlled (switching, dimming, occupancy sensors, etc.)?

Response: Switching and various occupancy sensors are shown on all of the lighting drawings. Refer to all Lighting drawings. In addition, you should be looking at Drawing E-6.2 and Drawing E-7.3 specifically entitled "Lighting Controls Schedule".

ITEM NO. 23: *Inquiry:* Why are several ends of the bulkheads in Lobby 102 on A-2.2 drawn in phantom?

Response: Not sure we understand your question. Lobby 102 shows bulkheads at 10'-5"and drop panel ceiling at 11'-0". If you are referring to the Mechanical grilles the lighter ones are blanks to match the operable ones – see M-2.2.

ITEM NO. 24: *Inquiry:* G15/A7.0, A-12.2 - Please confirm the interior cast stone and HDMU-4 should be deleted from the Event Space in Alternate #5.

Response: Confirmed.

ITEM NO. 25: *Inquiry:* A-8.1 – Grouted hollow metal frames are called for in both masonry and drywall partitions. We recommend not grouting hollow metal frames in either masonry or drywall partitions as it causes a myriad of problems/complications. Please see the following publication from the Steel Door Institute. https://www.steeldoor.org/newsletters/13-July.php and attached HMMA publication and email from Contract Hardware and Supply Co.

Response: Detail H1 and J1 should not show grout in the HM frames. Per 08 11 13 – 3.2E - Grouting of HM frames are only required at masonry openings.

ITEM NO. 26: *Inquiry:* J17/A-6.1 - Please provide overhead support steels details for ceiling mounted toilet partitions.

Response: GC to provide stud blocking as required to support ceiling mounted toilet partitions.

ITEM NO. 27: *Inquiry:* Please clarify the finishes listed in the Railing Type B&C Parts on Sheet A-6.13A. Specification 05 73 00 does not address this.
a) Items A, B, C, D, F, G & H specify a bronze finish: Is this a bronze powder coat?
b) Item E calls out an iron finish: Is that a mill finish?

Response: See Addendum NO. 2 for responses.

ITEM NO. 28: *Inquiry:* Sheet M-9.1 Roof Top Unit Schedule - Are the heat recovery units heat pump or ac. The schedule shows a heating capacity in the DX coil section but there's nothing in the equipment operation sequence that calls out DX heating. Please clarify.

Response: The basis of design Rooftop Units have the capability of DX heating, where shown, however for competitive bidding purposes, the approved manufacturer is only required to meet what is outlined in the specifications (DX cooling, gas-fired heat etc). If the submitted Rooftop unit has heat pump capabilities, the sequence of operation for heating mode will be adjusted with the unit's internal controls at that time to include DX heating for supplemental heat.

ITEM NO. 29: *Inquiry:* Is the Electrical Contractor (EC) responsible for providing and installing the TMGB, TGB and TBB as required for this project? Spec Reference: 271000

Response: Yes.

ITEM NO. 30: *Inquiry:* Is the EC responsible for providing and installing core holes, vertical and horizontal sleeves and the Telecommunications Contractor (TC) responsible for firestopping the sleeves utilized for Telecom cabling? Spec Reference: 271000

Response: Yes typically, but the GC is responsible for determining the scope of their subcontractors.

ITEM NO. 31: *Inquiry:* Who is responsible for installing the following items? Spec Reference: 271000
a. Plywood backboards
b. Cable Basket Tray per T-5.01 Detail 8 outside the MDF & IDFs
c. Owner telephone equipment, data equipment, active equipment and WAPs

d. UPS – 3KVA Units
e. Installing Patch Cords and Cross-connects

Response: The typical Responsibilities are as follow but the GC is responsible for the scope of their subcontractors:
a. General Contractor. b. Telecom Contractor c. The telephone equipment, data equipment, and active equipment are not part of the Telecom Contractors scope of work. This equipment is owner furnished and should be coordinated with the owner. d. Telecom Contractor e. Telecom Contractor

ITEM NO. 32: *Inquiry:* If Telecommunications Contractor is responsible for mounting the WAPs, is the owner providing the mounting equipment/enclosure? Spec Reference: 271000

Response: The Telecom Contractor is responsible for coordination and installation of the Owner Furnished WAP's and mounting infrastructure hardware.

ITEM NO. 33: *Inquiry:* Can faceplates be high impact resistant plastic? Spec Reference: 271000

Response: The specification calls for Metallic faceplates in 27100 Section 2.9 A. 1. This can be discussed with the Owner during the submittal process.

ITEM NO. 34: *Inquiry:* Are there any requirements for 12" ladder type cable tray in the MDF? Spec Reference: 271000

Response: Yes.

ITEM NO. 35: *Inquiry:* Who is responsible for providing and installing access panels mentioned on T-0.01, General Note 22? Spec Reference: 271000

Response: The General Contractor, but coordination will be required between the GC, EC, and the Telecom contractor.

ITEM NO. 36: *Inquiry:* Can Belden 25 Pair Category 3 CMR copper cable and Belden 12 Strand OM3 MM Riser fiber cable be an acceptable owner approved backbone cables? Spec Reference: 271000

Response: Yes, this is acceptable.

ITEM NO. 37: *Inquiry:* Faceplate Detail Drawing indicates all wall faceplates for 2 and 4 jacks are to be 6 port but Specification 271000, Section 2.9.A.1 calls for 1 to 4 port faceplates. Should faceplates be 4 or 6 port faceplates?

Response: Per Specification use (1) to (4) port faceplates, unless there is a need for (6) network connections.

ITEM NO. 38: *Inquiry:* Specification 271000, Section 2.10.A.5 indicates patch cords are required for the IDF end. Are patch cords required for the faceplate end?

Response: Yes.

ITEM NO. 39: *Inquiry:* The Crestron CEN WAP 1500 is discontinued with no replacement available from Crestron. Please advise on suitable replacement. Spec Reference: 274100 Page 21

Response: Include the cost of the Crestron CEN WAP 1500 in your proposal. A replacement model will be provided after the award.

ITEM NO. 40: *Inquiry:* Please confirm what size displays are required at each Flat Panel Display location. Drawing Reference: AV Series, Spec Reference: 274100

Response: FP1- Gallery Sharp PN E 603; FP2- Sharp PN R46; FP3-Sharp PN E603 (Concessions/Rehearsal Studio); FP4- Sharp PN E703 (Conf. Room 210), FP5-Sharp PN E603(Volunteer RM 305); FP6- Sharp PN E603; TV-OFE Flat Panels; Events Space-Sharp PN E603 (portable flat panels for WP6).

ITEM NO. 41: *Inquiry:* The Optional 70" Flat Panel Displays mentioned in the specification are not shown on the AV drawings. Please clarify. Drawing Reference: AV Series, Spec Reference: 274100 Page 18

Response: The portable flat panel displays (sharp PN E703 on a Chief PFCUB) are portable and will connect to the wall plates in the Event Space. Also See Addendum NO. 2, ITEM NOs. 38 and 39.

ITEM NO. 42: *Inquiry:* The specified projector mount is actually a cart to hold a flat panel display. Please clarify. Spec Reference: 274100 Page 18

Response: The Chief PFCUB is the cart for the Sharp PN E703 flat panel displays for the Event Space. Do not include the cost of this cart in your bid.

ITEM NO. 43: *Inquiry:* Please confirm that the GC or EC will be providing all required conduit and J-hooks as stated in "AV Conduit and Back Box Requirements" Drawing Reference: AV-0.01

Response: The GC or EC shall provide all required conduit and J-hooks as stated in the “AV Conduit and Back Box Requirements”, “AV-0.01”, and detailed in the referenced drawing sets.

ITEM NO. 44: *Inquiry:* Please confirm that it is not your intention to delete each paragraph of the AIA 201 General Conditions. It appears that there was a malfunction when printing the document.

Response: You are correct, It is not the intention to delete each paragraph of the AIA 201 General Conditions document. Please note that the "Supplementary General Conditions" contains changes and additions to the "General Conditions of the Contract for Construction.

ITEM NO. 45: *Inquiry:* The project documents call for Sheet Waterproofing to be applied to the exterior side of the concrete foundation walls along the North Side/East Side and the front corner of the South Side of the building at the new stair tower. We do not believe this will be possible along the North and South ends of the building due to the following conditions. At the cast in place foundation wall on the Southeast corner of the building the new foundation wall is within inches of the existing neighboring building foundation making it impossible to install sheet waterproofing once the wall is poured. On the North end of the building we have concerns with having enough room between the BISFA building foundation and the new concrete foundation wall to install temporary shoring, inner/outer wall forms not to mention the existence of underground utilities. Please review the products currently spec'd for these locations and advise.

Response: Where feasible we prefer the sheet waterproofing on the exterior side of the foundation walls. We understand that in some locations this is not possible due to existing adjacent properties or property lines. For example, at the south exterior wall along column line 5 we call out exterior wall type 0.2 which include polymer modified cement waterproofing on the interior of the foundation wall (due to the blind side condition). We understand that this condition might occur along the east face of stair 1 where it is close to the property line and part of the north side of the stair 1 footing. Due to the site setback, we expect the sheet waterproofing can be applied along the foundation wall along column line D called out as EX 0.1 on sheet A1.11. The north wall of the new building foundation will require some level of excavation for the utilities and depending on how this is phased could offer an opportunity to apply sheet waterproofing along some of this basement wall. If the lower part of this north wall between column line A and D does not require excavation for utilities the exterior wall type 0.2 and 0.5 on sheet A4.0 can be used which includes the polymer modified cement waterproofing on the inside face.

ITEM NO. 46: SPECIFICATION SECTION 01 22 00 (SPECIFICATION NOT ATTACHED) and PROPOSAL FORM

ADD 01 22 00 – 1.5 Add line Item P – Unit Price # 17 – Underpinning

1. Description: Provide Unit price for Underpinning in earth per cubic yard.
2. Unit of Measurement: Cubic Yard
3. Price per Unit of Measurement: $ _____

Add No. 17 (as described above) to page 005000-5 in the standard form of the proposal.

ITEM NO. 47: SPECIFICATION SECTION 09 64 00 (SPECIFICATION NOT ATTACHED)
The following additional products need to meet the performance criteria of spec section 09 64 00

ADD Approved Substitution: Add line item 2.1A.1 Aacer Flex Floating System w/gray vinyl top surface.

ADD Approved Substitution: Add line item 2.1A.2 Connor Trouvaille T1 Floor System w gray vinyl top surface.

ITEM NO. 48: SPECIFICATION SECTION 23 34 33 (SPECIFICATION NOT ATTACHED)

ADD Para 2.1A Mars Air to list of acceptable alternate air curtain manufacturers

ITEM NO. 49: SHEET SI – SHEET INDEX and PROPOSAL FORM

ADD ALTERNATE 7:
Base Bid: Walkway section 1/S-3.0.
Alternate: If required due to BISFA construction schedule. Provide a lowered footing & increase slab rebar @ BISFA side. See detail 3/S-1.1

PROPOSAL FORM:
In Page 005000-2 Add under 2.G: ALTERNATE 7: based on description above.

ITEM NO. 50: SHEET S-1.1 – FOUNDATION PLAN ***(SHEET ATTACHED)***

ADD Show extent of underpinning to plan1/S-1.1
ADD New Section of BOH corridor 2/S-1.1 – hatch show areas of underpinning. New Section for Alternate 7, 3/S-1.1

ITEM NO. 51: SHEET S-1.7 – STAIR FRAMING PLANS ***(SHEET ATTACHED)***

REVISE Detail G/S-1.7 for Stair 6 Framing Support

ITEM NO. 52: SHEET S-3.0 – STRUCTURAL SECTIONS ***(SHEET ATTACHED)***

REVISE Revised section 1/S-3.0

ITEM NO. 53: SHEET S-3.2 – STRUCTURAL SECTIONS ***(SHEET ATTACHED)***

REVISE Revised Detail 1 – Increased Bar # from 5 to 6 and noted 4" Ledge @ elevator slab.
REVISE Revised Detail 4 – to show underpinning concrete requirement

ITEM NO. 54: SHEET S-4.0 – TYPICAL STRUCTURAL DETAILS (1) ***(SHEET ATTACHED)***

ADD Note for base bid underpinning

ITEM NO. 55: SHEET A-2.9 – CEILING DETAILS

ADD Moved Detail C13/A-2.9 to New Sheet A-2.10.

ITEM NO. 56: SHEET A-2.10 – CUSTOM DECORATIVE CHANDELIER DETAILS
(SHEET ATTACHED)

ADD New sheet of Plans and detail of the custom Decorative Chandelier.

ITEM NO. 57: SHEET M-2.2 – ORCHESTRA FLOOR PLAN - MECHANICAL

ADD "NOT TO SCALE" note under ex theater elevation detail.

ITEM NO. 58: SHEET M-2.4 – THIRD FLOOR PLAN - MECHANICAL
(SHEET ATTACHED)

ADD Drawing note #9. Locate drawing note in rehearsal studio 313.

REVISE Drawing note #3.

REVISE Drawing note #4.

ITEM NO. 59: SHEET M-2.5 – FOURTH FLOOR PLAN – MECHANICAL
(SHEET ATTACHED)

REVISE S/A and R/A Ductwork from RTU-4 in ceiling space and down in shaft shall be revised from 20x16 to 20x18. Revised associated drawing notes #3, 4, 14 & 15. Refer to revised sheet M-2.5 for additional information.

ADD For clarity, notes and locations for all sound attenuators scheduled as indicated by SA-X, where 'x' is the sound attenuator number. Refer to revised sheet M-2.5 for additional information.

REVISE RTU-6 unit supply connection and associated drawing note #7 to read "44x16 TRANSITION TO FULL SIZE OF RTU-6. REFER TO DRAWING M-2.6 FOR CONTINUATION." Refer to revised sheet M-2.5 for additional information.

ADD Drawing note #19. Add drawing note to revised RTU-6 supply duct near unit connection as shown on revised sheet M-2.5 for continuation.

ADD Add drawing note #20. Add drawing note to RTU-3 return duct near unit connection as shown on revised sheet M-2.5 for continuation.

ITEM NO. 60: SHEET M-9.1 – ROOF TOP UNIT AND VRV EQUIPMENT SCHEDULE
(SHEET ATTACHED)

REVISE RTU-3 and RTU-6 HP, BHP, ESP, RPM and electrical characteristics. Refer to revised sheet M-9.1 for additional information.

ITEM NO. 61: SHEET M-9.2 – MISCELLANEOUS SCHEDULE AND LEGEND
(SHEET ATTACHED)

REVISE Sound Attenuator schedule with more columns to provide clarity of size, type, weight, model #, etc. Revised SA-2 and SA-7. Refer to revised sheet M-9.2 for additional information.

ITEM NO. 62: SHEET P-9.1 – PLUMBING SCHEDULES, NOTES, & LEGEND
(SHEET ATTACHED)

REVISE Gas Booster pump service to say "HIGHER PRESSURE GAS TO BUILDING" and type to read "HERMETICALLY SEALED MULTISTAGE BOOSTER" Refer to revised sheet P-9.1 for additional information.

ITEM NO. 63: SHEET E-7.1 – PANELBOARD SCHEDULES

REVISE Circuit breaker size for M3-3 to a 175A in lieu of a 200A

ITEM NO. 64: SHEET E-5.1 – SCHEMATIC POWER RISER DIAGRAM

ADD Add to the end of Note #3 "Provide separate 24"W x 24"D x 91.5"H incoming section to feed stacked main circuit breakers."

ITEM NO. 65: All references in the bid document made to the bid submission deadline have been extended to no later than **2:00 P.M. (EDST), Monday, April 9, 2018.**

Total Attachments: 13

Drawings (PDF 30x42) - 11 sheets

- S-1.1
- S-1.7
- S-3.0
- S-3.2
- S-4.0
- A-2.10
- M-2.4
- M-2.5
- M-9.1
- M-9.2
- P-9.1

AIA Document A305 – 1986: *Contractor's Qualification Statement* (in Word format) – 5 pages
Revised Form of Proposal – 8 pages

BY AUTHORITY OF:

Rick F. Curry, CPPO
Director of Purchasing

REVISED STANDARD FORM OF PROPOSAL

The Maryland Theatre
21 South Potomac Street
Hagerstown, MD 21740

Date: Monday, April 9, 2018
Time: No later than 2:00 PM
(EDST)/Local Time

Project Name: Maryland Theatre Expansion
Washington County Bid No.: PUR-1378
Grimm and Parker Project No.: 21633

Firm Submitting Proposal: _____
Telephone No. (_____)_____ Fax: (_____)_____
Contact: Name Printed and Title: _____
E-Mail Address: _____
Address: _____

Gentlemen/Ladies:

We hereby submit our proposal for the Maryland Theatre Expansion

Having carefully examined the Specifications and Plans for the subject construction -

Specifications Dated: _____

Drawings Dated: _____

Addenda No. _____ Date _____ ; No. ____ Date _____ ; No. ____ Date _____
No. _____ Date _____ ; No ____ Date _____ ; No ____ Date _____

and having received clarification on all items of conflict or upon which any doubt arose, the undersigned proposes to furnish all labor, materials and equipment called for by the said documents for the entire work, in strict accordance with the Contract Documents, for the stipulated sum of:

1. BASE BID:

_____ Dollars ($_____)
(Written) (Figures)

2. ALTERNATES:

A. ADD/DEDUCT Alternate No. 1: NOT USED

B. ADD/DEDUCT Alternate No. 2: ADD RENOVATION OF PROJECTOR ROOM – Provide in accordance with Section 01 23 00 - Alternates.

_____ Dollars ($_____)
(Written) (Figures)

C. ADD/DEDUCT Alternate No. 3: ADD/DEDUCT KAWNEER FINISH IN LIEU OF GOLD FINISH ON CURTAINWALL, STOREFRONT, EXTERIOR DOORS, FRONT CANOPY – Provide in accordance with Section 01 23 00 - Alternates.

_____ Dollars ($_____)
(Written) (Figures)

D. ADD/DEDUCT Alternate No. 4: DEDUCT BRIDGE TO BISFA – Provide in accordance with Section 01 23 00 - Alternates.

_____ Dollars ($_____)
(Written) (Figures)

E. ADD/DEDUCT Alternate No. 5: DEDUCT FIT-OUT OF EVENT SPACE – Provide in accordance with Section 01 23 00 - Alternates.

_____ Dollars ($_____)
(Written) (Figures)

F. ADD/DEDUCT Alternate No. 6: DEDUCT LIGHT TYPES "FS" and "Z"– Provide in accordance with Section 01 23 00 - Alternates.

_____ Dollars ($_____)
(Written) (Figures)

G. ADD/DEDUCT Alternate No. 7: PROVIDE A LOWERED FOOTING & INCREASE SLAB REBAR @ BISFA SIDE - Provide in accordance with detail 3/S-1.1.

_____ Dollars ($_____)
(Written) (Figures)

3. ALLOWANCES: In accordance with Section 01 21 00 – Allowances, include the following allowances in the Base Bid.

A.	Allowance No. 1 – Masonry Repointing	$10,000.00
B.	Allowance No. 2 – Vibration Testing	$10,000.00
C.	Allowance No. 3 – Rock Excavation	$250,000.00
D.	Allowance No. 4 – Dedication Plaque	$2,500.00
	Total Allowance in Base Bid	$272,500.00

4. UNIT PRICE SCHEDULE: In accordance with Section 01 22 00 – Unit Prices.

	Description / Written Unit Price	**Unit**	**Unit Price (in figures)**
A.	No. 1 – Earth Excavation-Machine Onsite @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____
B.	No. 2 – Earth Excavation-Hand Onsite @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____
C.	No. 3 – Trench Excavation Onsite @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____
D.	No. 4 – Rock Removal @ Seventy -Five Dollars (written) _____Cents **per** (written)	CY	$ 75.00
E.	No. 5 – Unsuitable Material Excavation @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____
F.	No. 6 – Suitable Material Import @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____

	Description / Written Unit Price	Unit	Unit Price (in figures)
G.	No. 8 – Undercut and Refill @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____
H.	No. 9 – Receptacle @ _____ Dollars (written) _____Cents **per** (written)	Per Location	$ _____
I.	No. 10 – Fire Alarm Strobe @ _____ Dollars (written) _____Cents **per** (written)	Per Location	$ _____
J.	No. 11 – Fire Alarm Horn or Speaker/Strobe Unit @ _____ Dollars (written) _____Cents **per** (written)	Per Location	$ _____
K.	No. 12 – Data Outlet @ _____ Dollars (written) _____Cents **per** (written)	Per Location	$ _____
L.	No. 13 – Exit Sign @ _____ Dollars (written) _____Cents **per** (written)	Each	$ _____

	Description / Written Unit Price	Unit	Unit Price (in figures)
M.	No. 14 – Light Switch @ _____ Dollars (written) _____Cents **per** (written)	Each	$ _____
N.	No. 15 – Telephone Drop @ _____ Dollars (written) _____Cents **per** (written)	Each	$ _____
O.	No. 16 – Fire Alarm Pull Station @ _____ Dollars (written) _____Cents **per** (written)	Each	$ _____
P.	No. 17 – Underpinning @ _____ Dollars (written) _____Cents **per** (written)	CY	$ _____

5. SUBCONTRACTORS:

   A. **All Bidders shall submit their list of subcontractors concurrently with the Bid submission.** No change or deviation from this list shall be allowed except as determined by the Owner or the Owner's Representative **(SEE ATTACHMENT "A")**:

   B. Subcontractors Bond:

      1. The Owner retains the right to request a subcontractor to submit a performance and payment bond in the amount of his Contract to the General Contractor.

      2. The Owner shall reimburse the subcontractor in the amount of the direct cost of the bond without subcontractor or General Contractor markup for overhead, profit or any other associated cost.

6. CONTRACTOR'S STATE OF MARYLAND REGISTRATION NUMBER.

Construction Firm License No.	Date Issued	Place of Issuance

Federal Employer Identification No.
(or Social Security No. if no F.E.I.N.)

It is understood that the bid price will be firm for a time period of **ninety (90)** calendar days from the bid opening date. If the undersigned be notified of acceptance of this proposal within this time period, the firm shall be given a "Notice to Proceed". The undersigned shall complete the total work after the "Notice to Proceed", Phase-1 shall be fully completed no later than September 30, 2018, and Phase-2 shall be fully completed no later than August 30, 2019. If this work is not completed within the time period specified, the Contractor will be liable for Liquidated Damages of **$1,000.00** per calendar day. This shall apply to the completion of Phase 1 and Phase 2 construction. The Maryland Theatre has performances under contract that are scheduled to occur based on this schedule.

7. AFFIRMATION REGARDING COLLUSION:

I AFFIRM THAT:

Neither I nor, to the best of my knowledge, information, and belief, the below stated business has:

a. Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

b. In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the Bidder or Offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

8. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM:

Neither I nor, to the best of my knowledge, information, and belief, the below business (as is defined in Section 16-101 (b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, or any of its employees directly involved in obtaining or performing contracts with public bodies (as is defined in Section 16-101(f) of the State Finance and Procurement Article of the Annotated Code of Maryland), has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, Section 6-220 of the Annotated Code of Maryland, or has pleaded nolo

contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other State or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

Bid Security Bonds shall be submitted with each proposal in the amount of five (5%) percent of the total of the Base Bid and requested alternates.

Bid Bonds, except those of three (3) Best Value bidders will be returned after the contractor selection. Other bid bonds will be returned after the related contract has been executed. If no bid has been accepted within **ninety (90)** calendar days after the bid opening, then any bond may be returned upon demand of the bidder.

Failure to properly and completely fill in all blanks may be cause for rejection of this proposal. All alternates and unit prices called for in the Contract Documents must be submitted herewith.

INDIVIDUAL PRINCIPAL

In Presence of Witness: FIRM NAME_____

_____ SIGNED _____

ADDRESS_____

TELEPHONE_____

CO-PARTNERSHIP PRINCIPAL

In Presence of Witness:

_____ _____
(Name of Corporation)

ADDRESS_____

TELEPHONE_____

_____ as to BY_____

_____ as to BY_____

CORPORATE PRINCIPAL

_____
(Name of Corporation)

ADDRESS_____

_____ TELEPHONE_____
(Corporate Secretary)

BY_____

_____(AFFIX CORPORATE SEAL)

The bidder represents, and it is a condition precedent to acceptance of this bid, that the bidder has not been a part to any agreement to bid a fixed or uniform price.

WITNESS:

_____ _____
(SEAL)

SUBSCRIBED AND SWORN TO Before me, a Notary Public of the State of _____

County or City of _____ this _____ day of _____, 2018

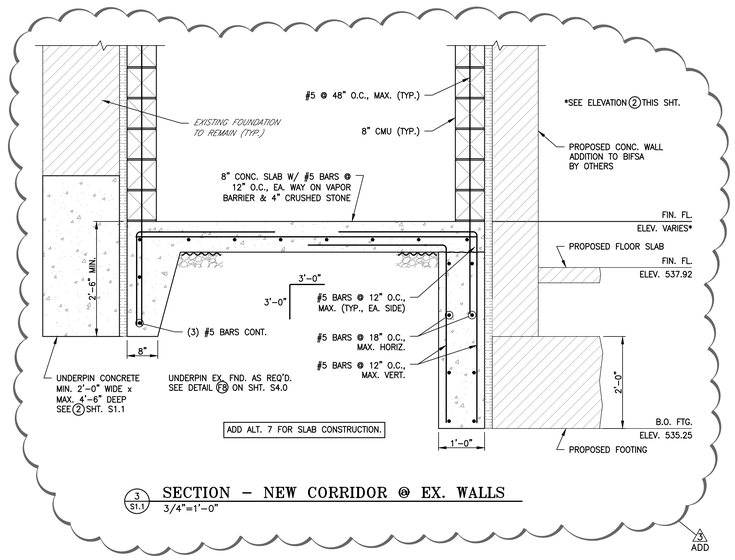
_____
Notary Public

For Information Purposes Only: Has your company/firm been certified by the State of Maryland as a Minority Business Enterprise (Please check below.)

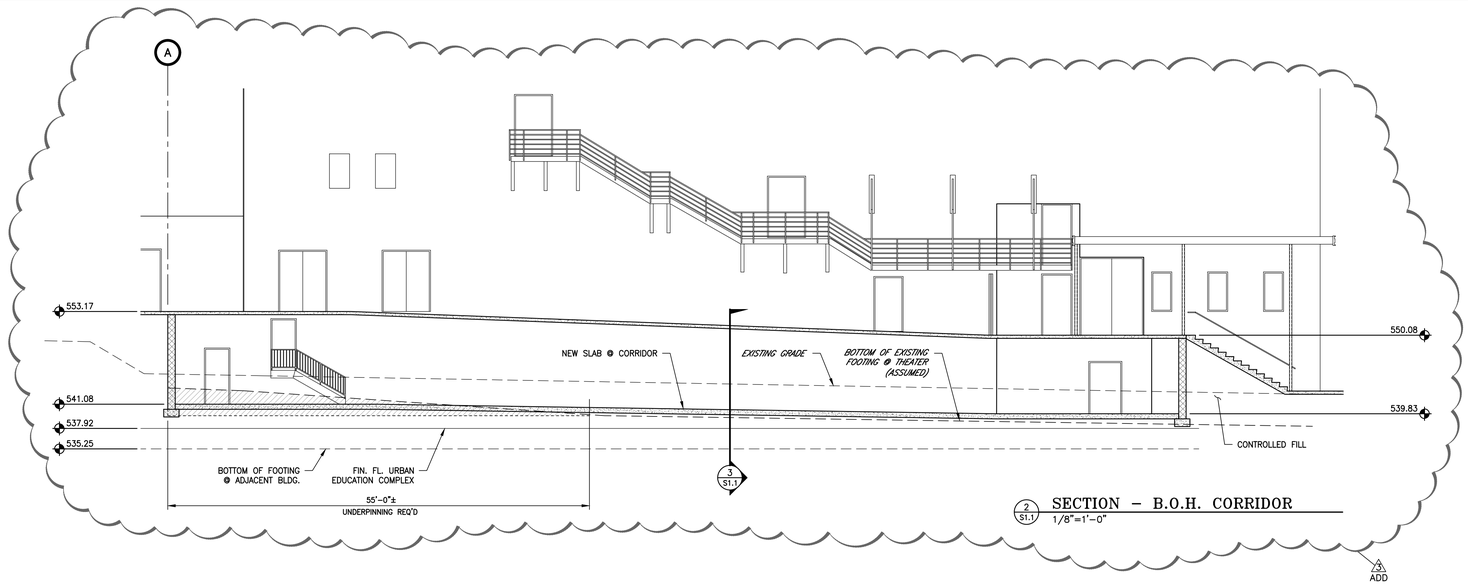
_____ Yes _____ No

Forms to be Completed and submitted with the Bid:

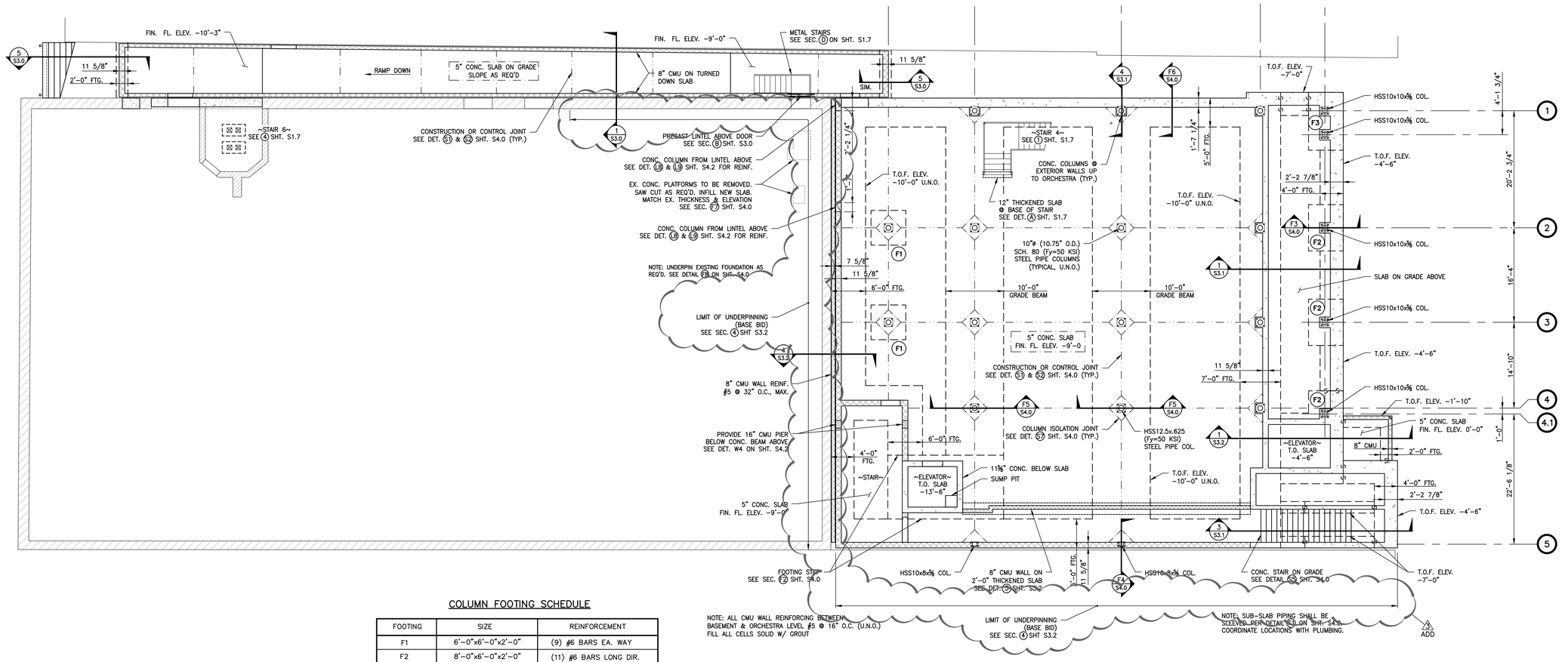
1. ***Bid Bond***
2. ***Contractor Qualification Statement (00 45 00)***
3. ***Reference Projects***
4. ***Occupied Renovation Project***
5. ***Urban Infill Project***
6. ***Project Approach***
7. ***Project Schedule***
8. ***Project Team***
9. ***Work Load Capacity Chart***
10. ***Standard Form of Proposal (00 50 00)***
    - ***10a. Form of Proposal Attachment A (Subcontractors List)***
    - ***10b. Form of Proposal Attachment B (Government-Side Debarment and Suspension)***



(3/S1.1) SECTION – NEW CORRIDOR @ EX. WALLS
3/4"=1'-0"



(2/S1.1) SECTION – B.O.H. CORRIDOR
1/8"=1'-0"



(1/S1.1) FOUNDATION PLAN
1/8"=1'-0"

COLUMN FOOTING SCHEDULE

FOOTING	SIZE	REINFORCEMENT
F1	6'–0"x6'–0"x2'–0"	(9) #6 BARS EA. WAY
F2	8'–0"x6'–0"x2'–0"	(11) #6 BARS LONG DIR. (9) #6 BARS SHORT DIR.
F3	10'–0"x6'–0"x2'–0"	(13) #6 BARS LONG DIR. (9) #6 BARS SHORT DIR.

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931-B Sweeney Drive
Hagerstown, Maryland 21740
P: 301-790-0111
F: 301-790-0222
www.strengthenginnering.com

MS&A PROJECT #16–133

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE: 11953
EXPIRES: 6 MAY 2018

GRIMM AND PARKER
11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com

GP #21633

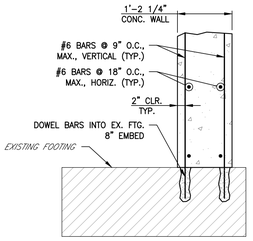
FOUNDATION PLAN

THE MARYLAND THEATRE ADDITION
HAGERSTOWN, MD

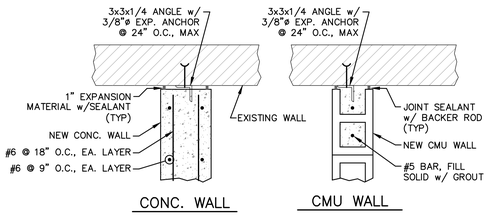
DATE	DESCRIPTION
3-23-18	ADD 3

S-1.1

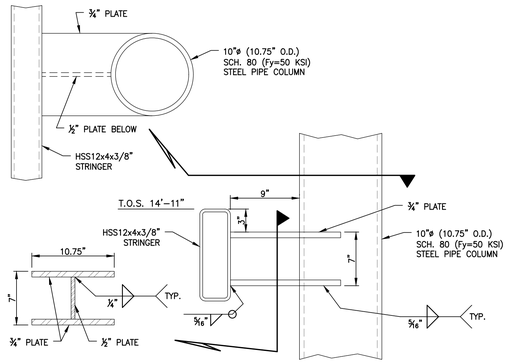
BID SET
02/15/18



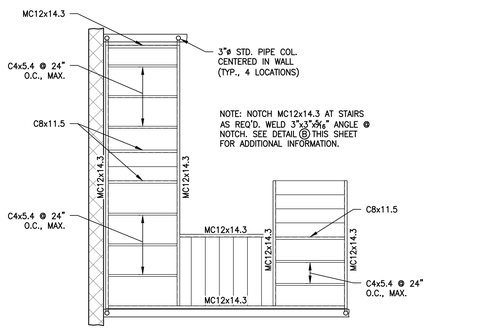
E S1.7 SECTION – BASEMENT WALL @ STAIR 6
3/4"=1'-0"



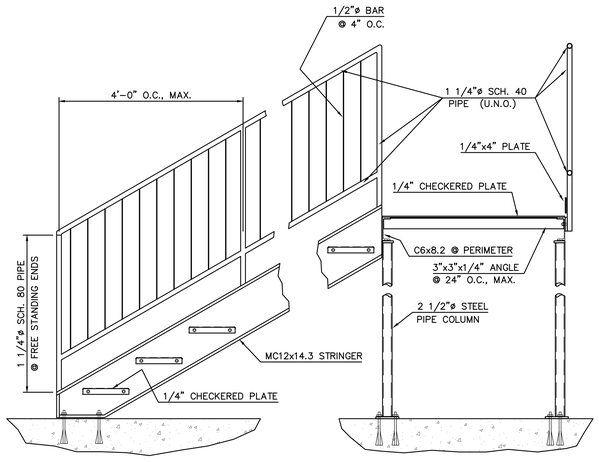
F S2.1 DETAIL – NEW WALL TO EXISTING TIE
N.T.S.



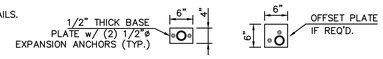
J S1.7 DETAIL – STRINGER CONNECTION @ COLUMN
1 1/2"=1'-0"



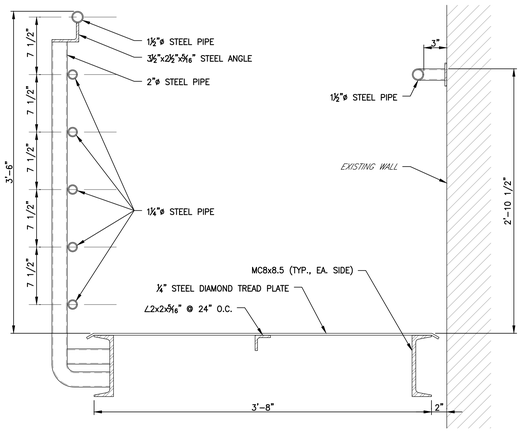
3 S1.7 PLAN – STAIR 5 FRAMING
1/4"=1'-0"



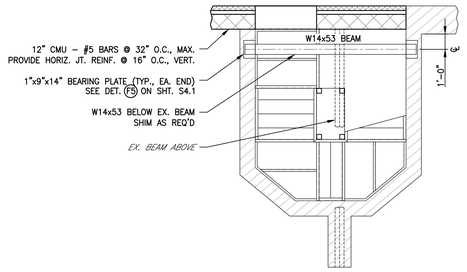
SEE ARCH DWGS. FOR ADDITIONAL DETAILS.

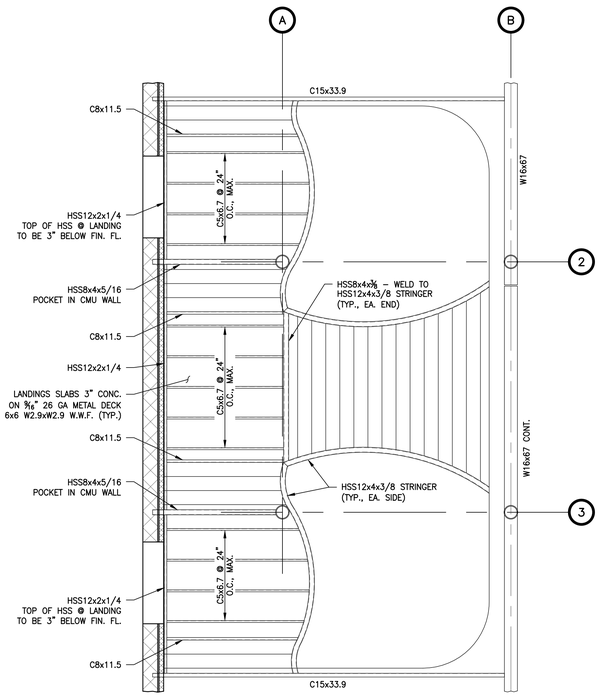


D S1.7 SECTION – STAIR 8
N.T.S.

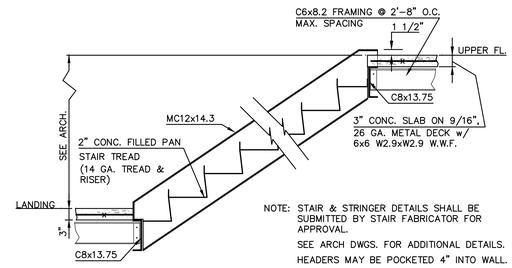


H S1.7 DETAIL – RAILING @ STAIR 6
1 1/2"=1'-0"



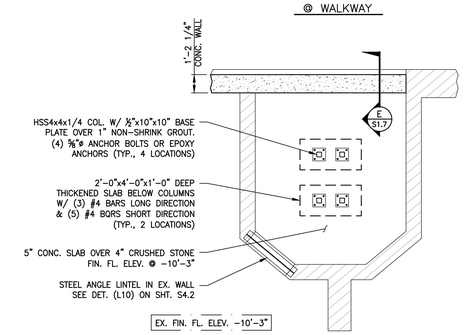


2 S1.7 PLAN – STAIR 3 FRAMING
1/4"=1'-0"

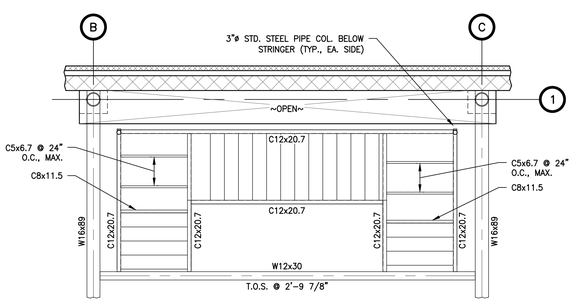


NOTE: STAIR & STRINGER DETAILS SHALL BE SUBMITTED BY STAIR FABRICATOR FOR APPROVAL.
SEE ARCH DWGS. FOR ADDITIONAL DETAILS.
HEADERS MAY BE POCKETED 4" INTO WALL.

C S1.7 DETAIL – TYP. STAIR FRAMING
N.T.S

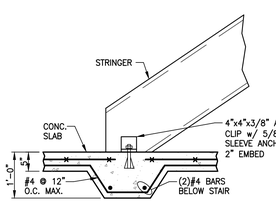


4 S1.7 PLAN – STAIR 6 FRAMING
1/4"=1'-0"

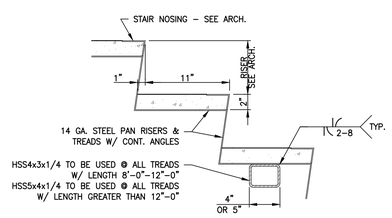


NOTE: NOTCH C12x20.7 AT STAIRS AS REQ'D. WELD 3"x3"x5/16" ANGLE @ NOTCH. SEE DETAIL B THIS SHEET FOR ADDITIONAL INFORMATION.

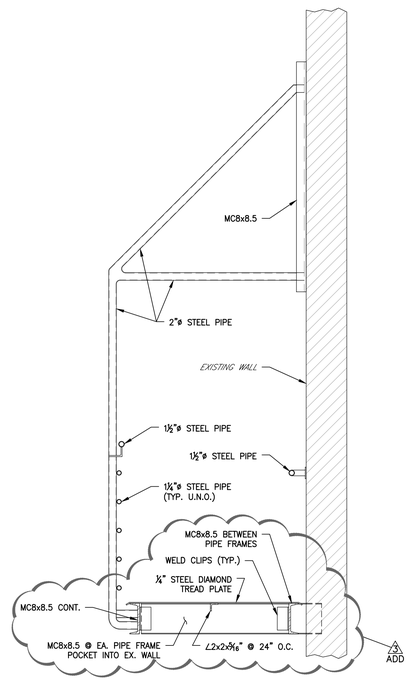
1 S1.7 PLAN – STAIR 4 FRAMING
1/4"=1'-0"



A S1.7 STAIR CONNECTION AT SLAB
N.T.S



B S1.7 DETAIL – TYP. STAIR TREAD
1 1/2"=1'-0"



G S1.7 SECTION – OVERHEAD SUPPORT @ STAIR 6
3/4"=1'-0"

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MS&A PROJECT #16-133

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE: 11953
EXPIRES: 6 MAY 2018

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GP #21633

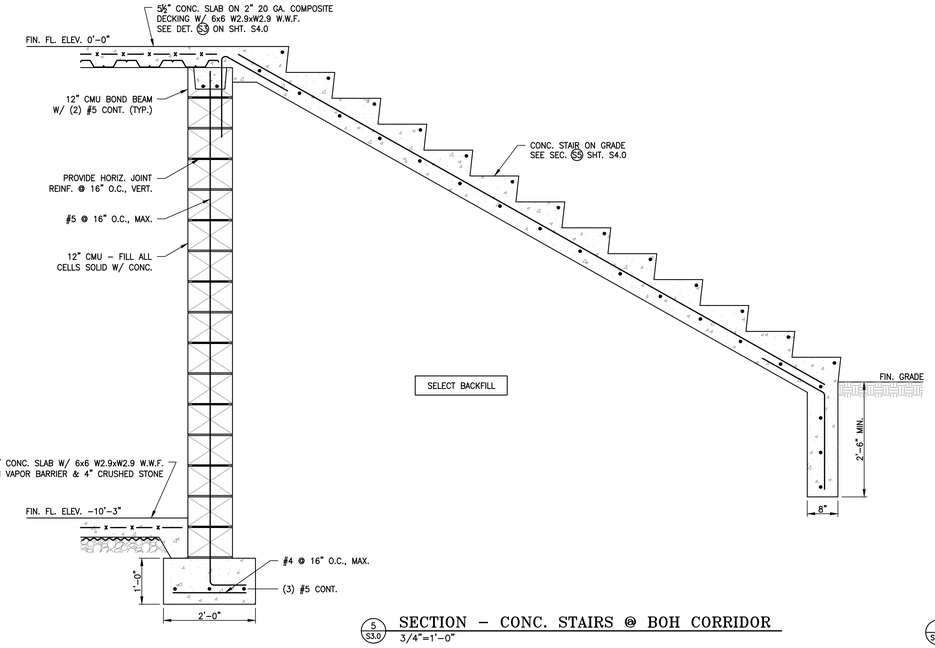
STAIR FRAMING PLANS

THE MARYLAND THEATRE ADDITION
HAGERSTOWN, MD

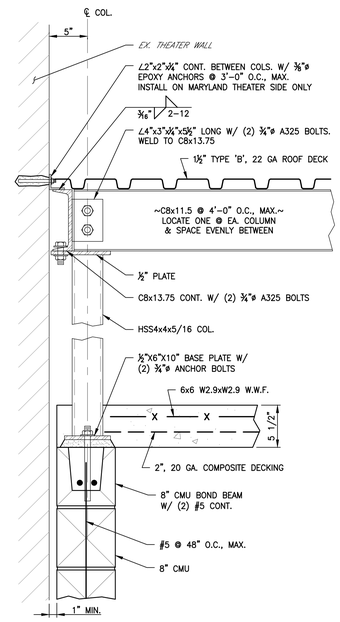
DATE	DESCRIPTION
3-23-18	ADD 3

S-1.7

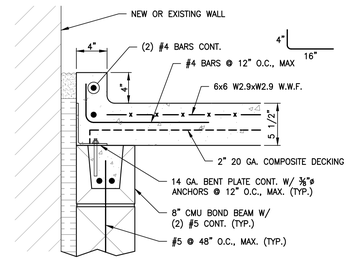
BID SET
02/15/18



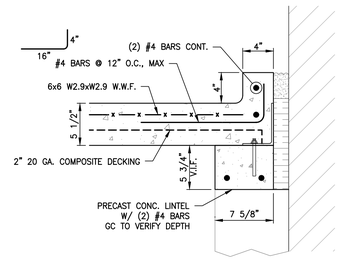
5 S3.0 SECTION - CONC. STAIRS @ BOH CORRIDOR
3/4"=1'-0"



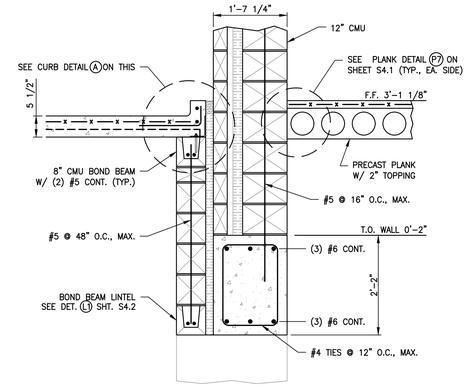
2 S3.0 SECTION - CANOPY @ BOH CORRIDOR
1 1/2"=1'-0"



A S3.0 DETAIL - CURB @ BOH CORRIDOR
1 1/2"=1'-0"



B S3.0 DETAIL - BOH CORRIDOR @ LINTEL
1 1/2"=1'-0"



C S3.0 SECTION - LINTEL @ DOOR BASEMENT/CORRIDOR
3/4"=1'-0"

4 S3.0 SECTION - BIFSA CONNECTION
3/4"=1'-0"

3 S3.0 SECTION - BIFSA CONNECTION
3/4"=1'-0"

1 S3.0 SECTION - NEW CORRIDOR @ EX. WALLS
3/4"=1'-0"

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MS&A PROJECT #16-133

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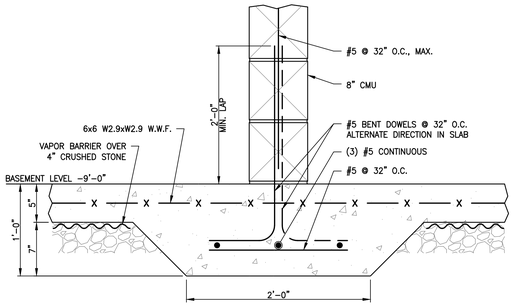
GRIMM AND PARKER

GP #21633

STRUCTURAL SECTIONS
THE MARYLAND THEATRE ADDITION
HAGERSTOWN, MD

DATE	DESCRIPTION
3-23-18	ADD 3

S-3.0
BID SET
02/15/18



3/S3.2 DETAIL – THICKENED SLAB
1 1/2"=1'-0"

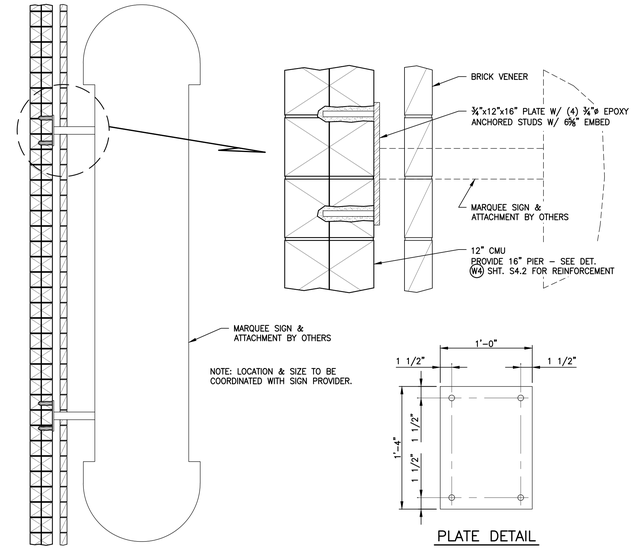
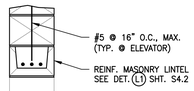
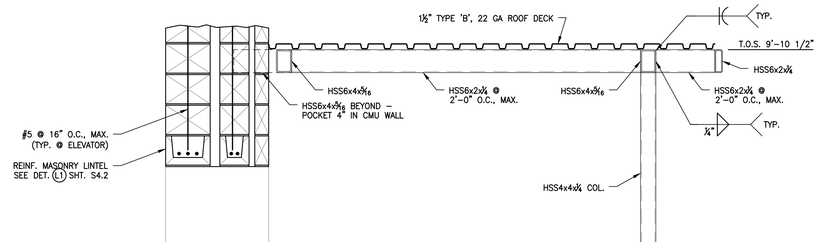
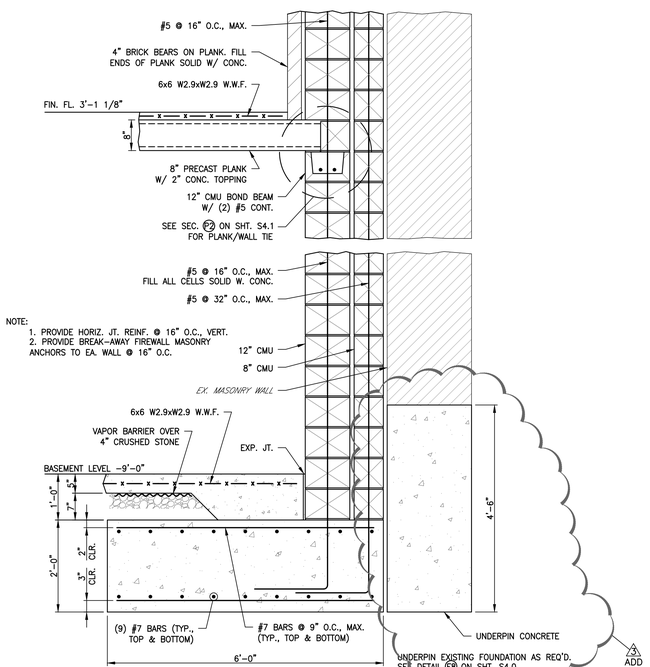


PLATE DETAIL

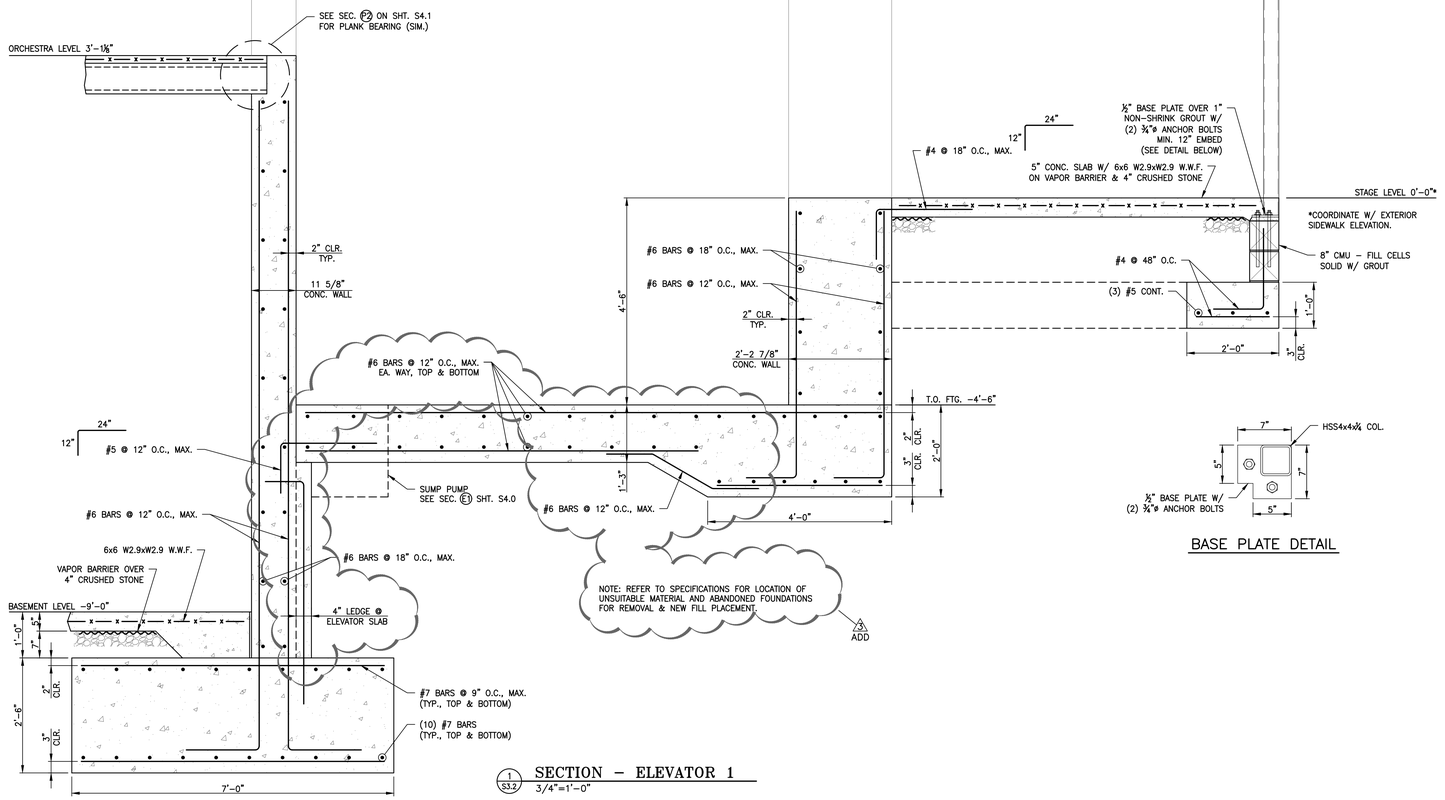
2/S3.2 SECTION – MARQUEE ATTACHMENT
3/8"=1'-0"







4/S3.2 SECTION – FOOTING/WALL @ EX. THEATER WALL
3/4"=1'-0"



1/S3.2 SECTION – ELEVATOR 1
3/4"=1'-0"

BASE PLATE DETAIL

MS&A
Matonak Snyder & Associates
STRUCTURAL ENGINEERS
931-B Sweeney Drive
Hagerstown, Maryland 21740
P: 301-790-0111
F: 301-790-0222
www.strengthenjmcering.com

MS&A PROJECT #16-133

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE: 11953
EXPIRES: 6 MAY 2018

11720 Baltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com

GRIMM AND PARKER

GP #21633

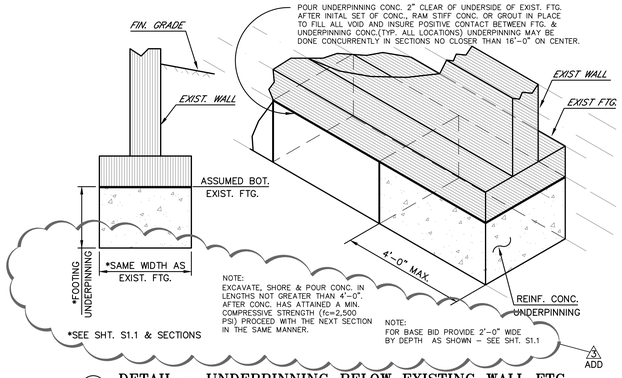
STRUCTURAL SECTIONS

THE MARYLAND THEATRE ADDITION
HAGERSTOWN, MD

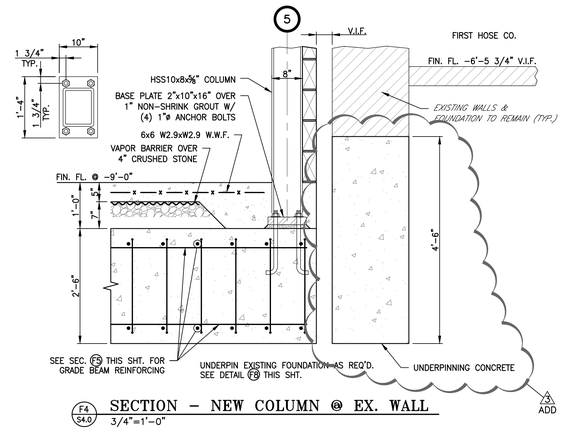
DATE	DESCRIPTION
3-23-18	ADD 3

S-3.2

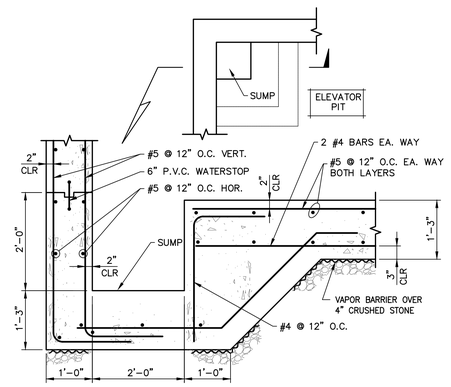
BID SET
02/15/18



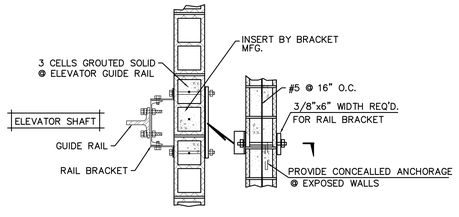
F8 S4.0 DETAIL - UNDERPINNING BELOW EXISTING WALL FTG.
N.T.S.



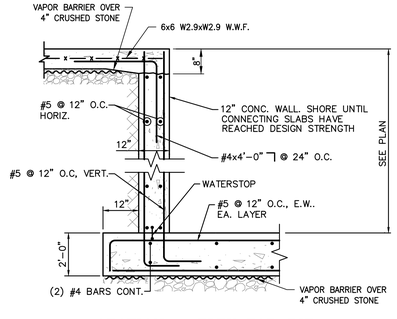
F4 S4.0 SECTION - NEW COLUMN @ EX. WALL
3/4"=1'-0"



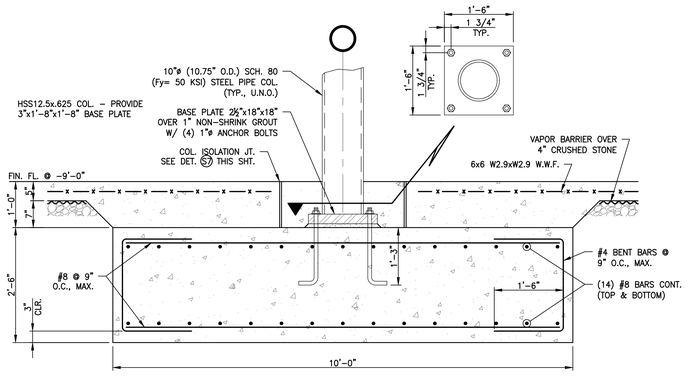
E1 S4.0 SECTION - ELEVATOR SUMP
N.T.S.



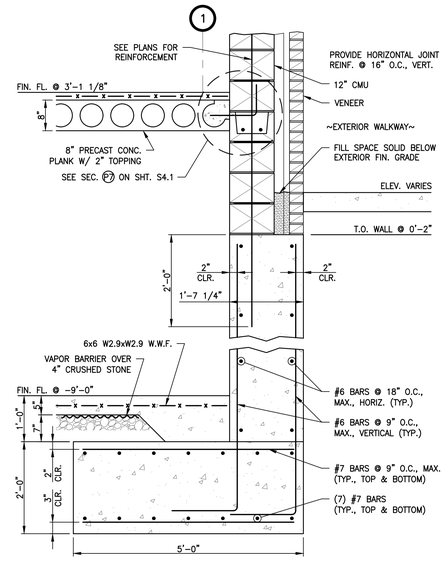
E2 S4.0 DETAIL - ELEVATOR GUIDE RAIL SUPPORT
3/4"=1'-0"



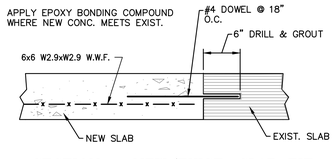
E3 S4.0 SECTION - ELEVATOR PIT
N.T.S.



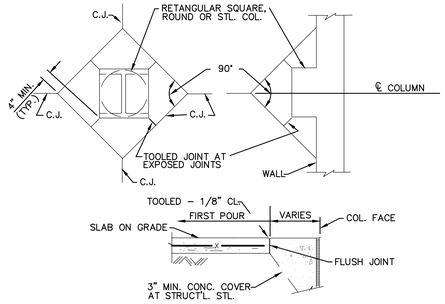
F5 S4.0 SECTION - GRADE BEAM @ COLUMN
3/4"=1'-0"



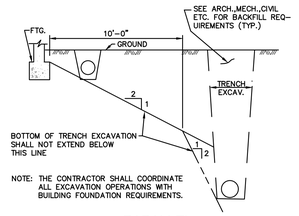
F6 S4.0 SECTION - WALL @ COLUMN LINE 1
3/4"=1'-0"



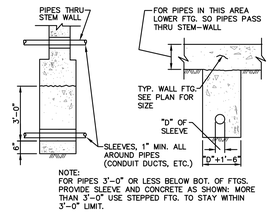
F7 S4.0 SECTION - NEW/EXIST. SLAB TIE
N.T.S.



S7 S5.1 DETAIL - COLUMN ISOLATION JOINT
N.T.S.

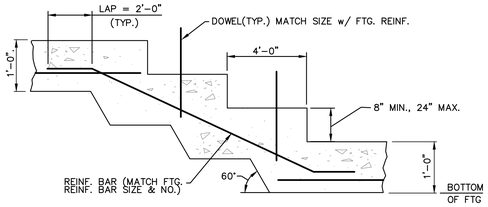


PARALLEL

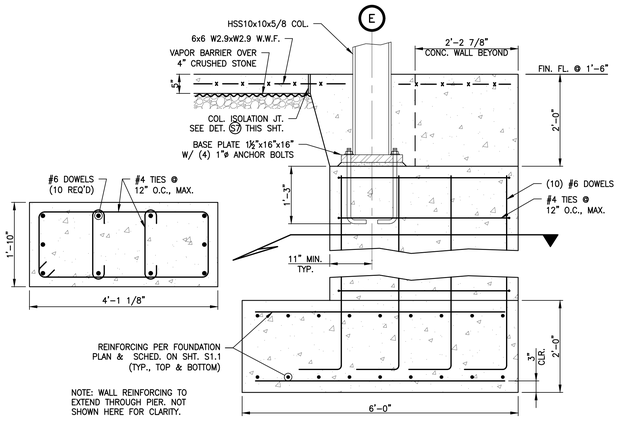


PERPENDICULAR

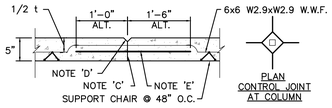
F1 S4.0 DETAIL - EXCAVATION PERPENDICULAR/ PARALLEL TO FOOTING
N.T.S.



F2 S4.0 DETAIL - STEPPED FOOTING
N.T.S.



F3 S4.0 SECTION - EXTERIOR COLUMN FOOTING
3/4"=1'-0"



A. JOINTS WHERE POSSIBLE TO BE UNDER PARTITIONS & / OR ON CENTER LINE OF COLUMN GRID. PROVIDE DIAMOND SHAPED CONTROL JOINT AT ALL COLUMNS.

B. SLAB MAY BE POURED IN STRIPS WITH CONSTRUCTION JOINTS AT EDGES AND SAW-CUT CONTROL JOINTS SPACED AS DETAILED. SAW CUTS SHOULD DIVIDE SLAB INTO 400 TO 500 SQUARE FOOT MARKS.

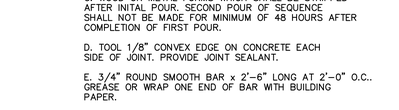
C. WOOD OR METAL FORMS WHICH SHALL BE STRIPPED AFTER INITAL POUR. SECOND POUR OF SEQUENCE SHALL NOT BE MADE FOR MINIMUM OF 48 HOURS AFTER COMPLETION OF FIRST POUR.

D. TOOL 1/8" CONVEX EDGE ON CONCRETE EACH SIDE OF JOINT. PROVIDE JOINT SEALANT.

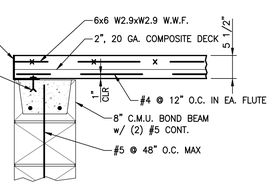
E. 3/4" ROUND SMOOTH BAR x 2'-6" LONG AT 2'-0" O.C.. GREASE OR WRAP ONE END OF BAR WITH BUILDING PAPER.

F. INSTALL MESH ABOVE SMOOTH BARS ADJACENT TO JOINT.

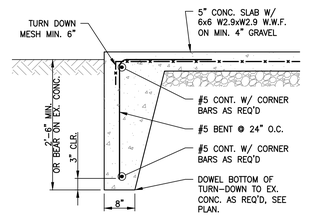
S1 S4.0 DETAIL - SLAB ON GRADE FLUSH CONSTRUCTION JOINT
N.T.S.



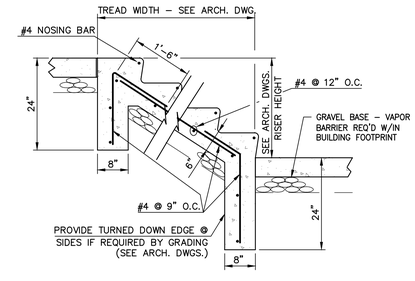
S2 S4.0 DETAIL - SLAB ON GRADE & CONTROL JOINT
N.T.S.



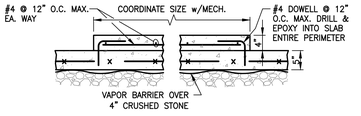
S3 S4.0 SECTION - B.O.H. CORRIDOR SLAB
N.T.S.



S4 S4.0 DETAIL - EXTERIOR SLAB
3/4"=1'-0" W.W.F.



S5 S4.0 SECTION - TYP STAIR ON GRADE
3/4"=1'-0"



S6 S4.0 SECTION - MECH. EQUIPMENT PAD
3/4"=1'-0"

MS&A
Matonak Snyder & Associates
STRUCTURAL ENGINEERS
931-B Sweeney Drive
Hagerstown, Maryland 21740
P: 301-790-0111
F: 301-790-0222
www.strengthenginecering.com
MS&A PROJECT #16-133

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE: 11953
EXPIRES: 6 MAY 2018

G+P GRIMM AND PARKER
11720 Baltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com

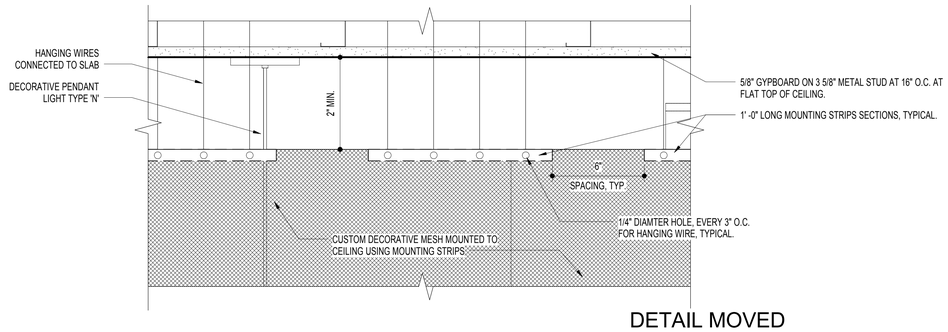
GP #21633

TYPICAL STRUCTURAL DETAILS (1)

THE MARYLAND THEATRE ADDITION
HAGERSTOWN, MD

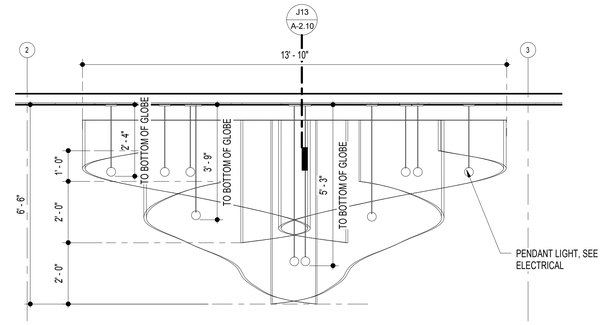
DATE	DESCRIPTION
3-23-18	ADD 3

S-4.0
BID SET
02/15/18

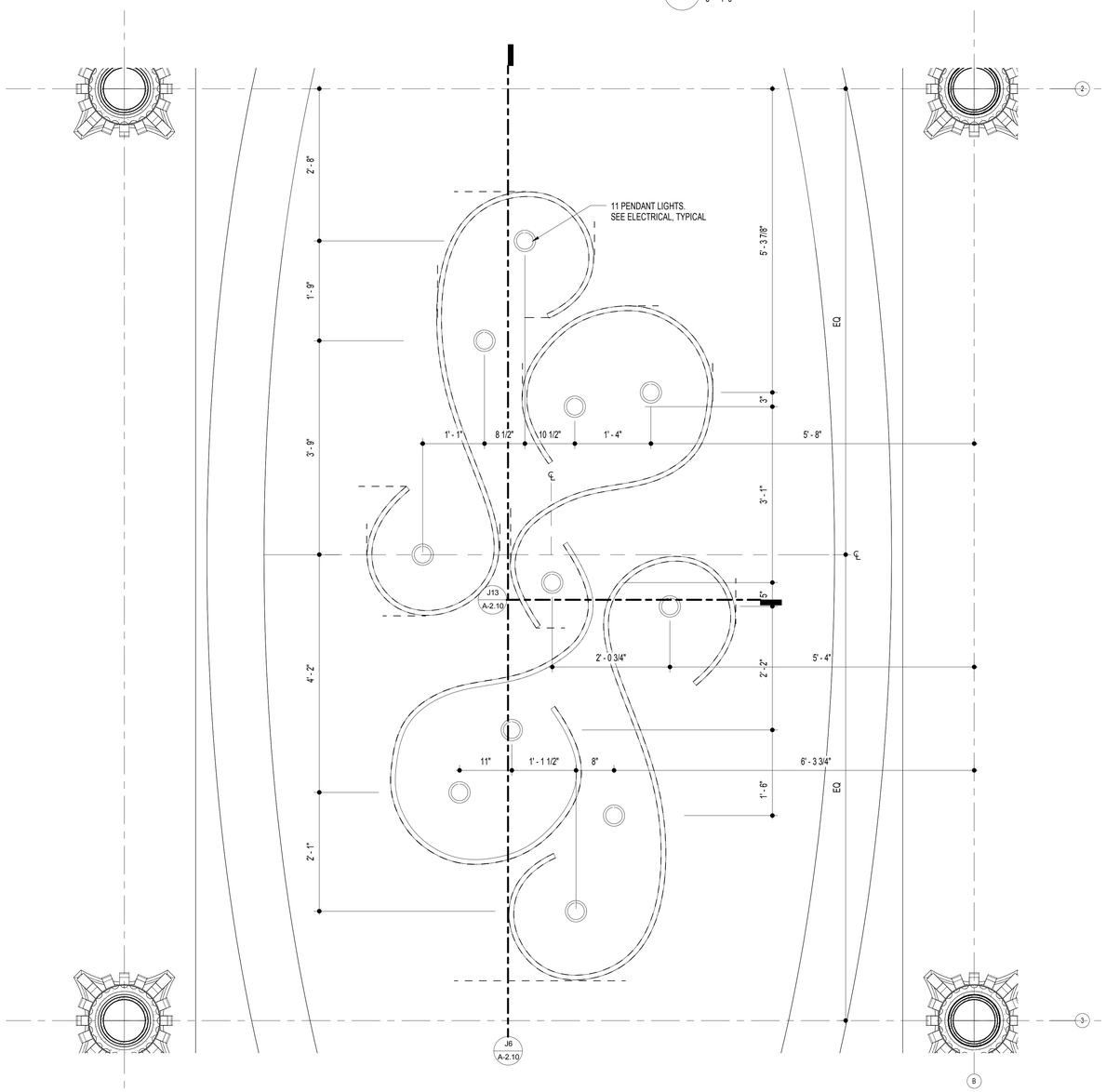


J13 DECORATIVE MESH CHANDELIER MOUNTING DETAIL
3" = 1'-0"

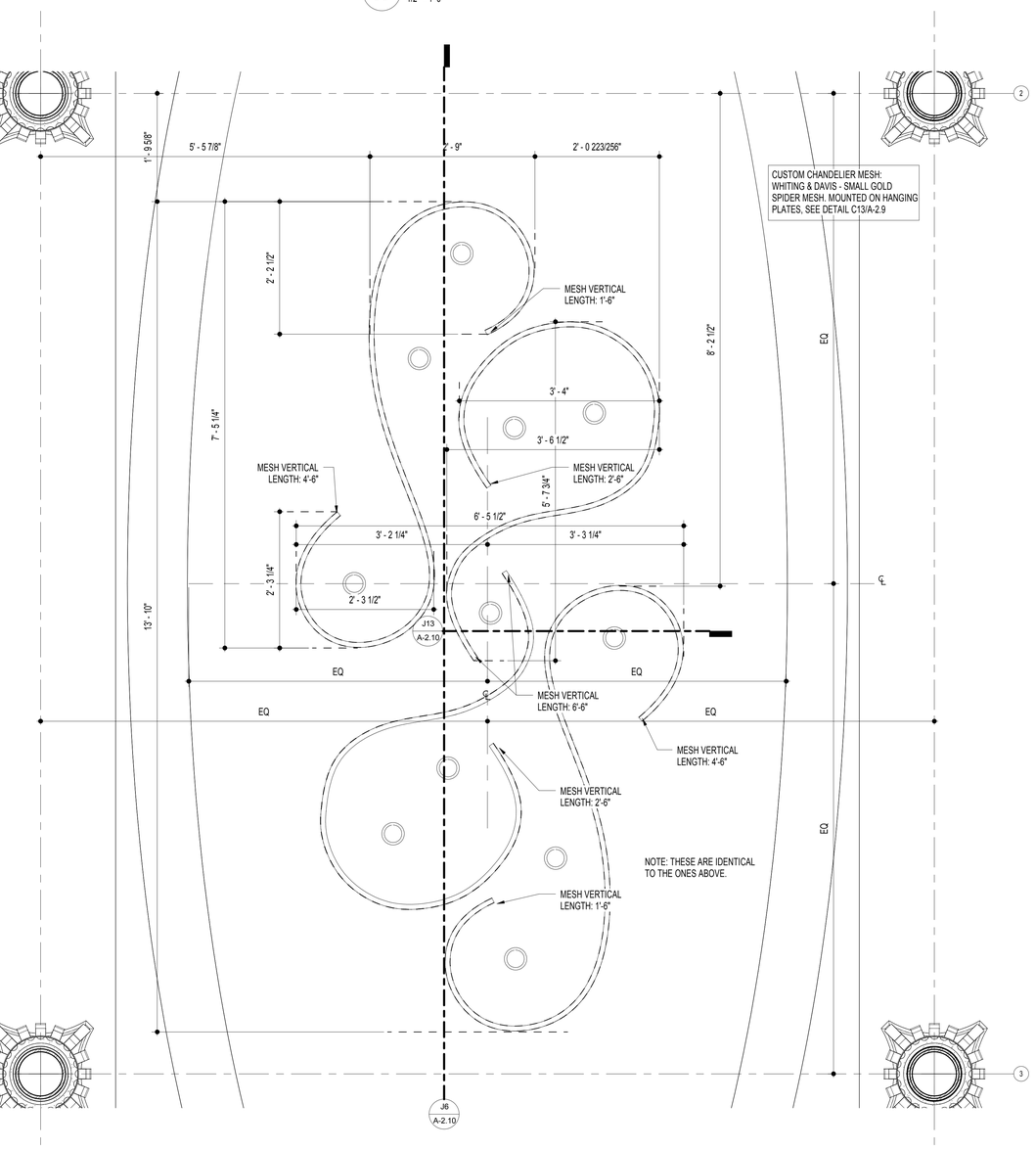
DETAIL MOVED FROM SHEET A-2.9



J6 SECTION AT CHANDELIER
1/2" = 1'-0"



A17 ENLARGED PLAN OF CUSTOM CHANDELIER - DIMENSION OF PENDANTS
1" = 1'-0"



A7 ENLARGED PLAN OF CUSTOM CHANDELIER
1" = 1'-0"

THE MARYLAND THEATRE 100 YEARS
A Beacon for Every Age

11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com

G+P GRIMM AND PARKER

GP #21633

CUSTOM DECORATIVE CHANDELIER DETAILS

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

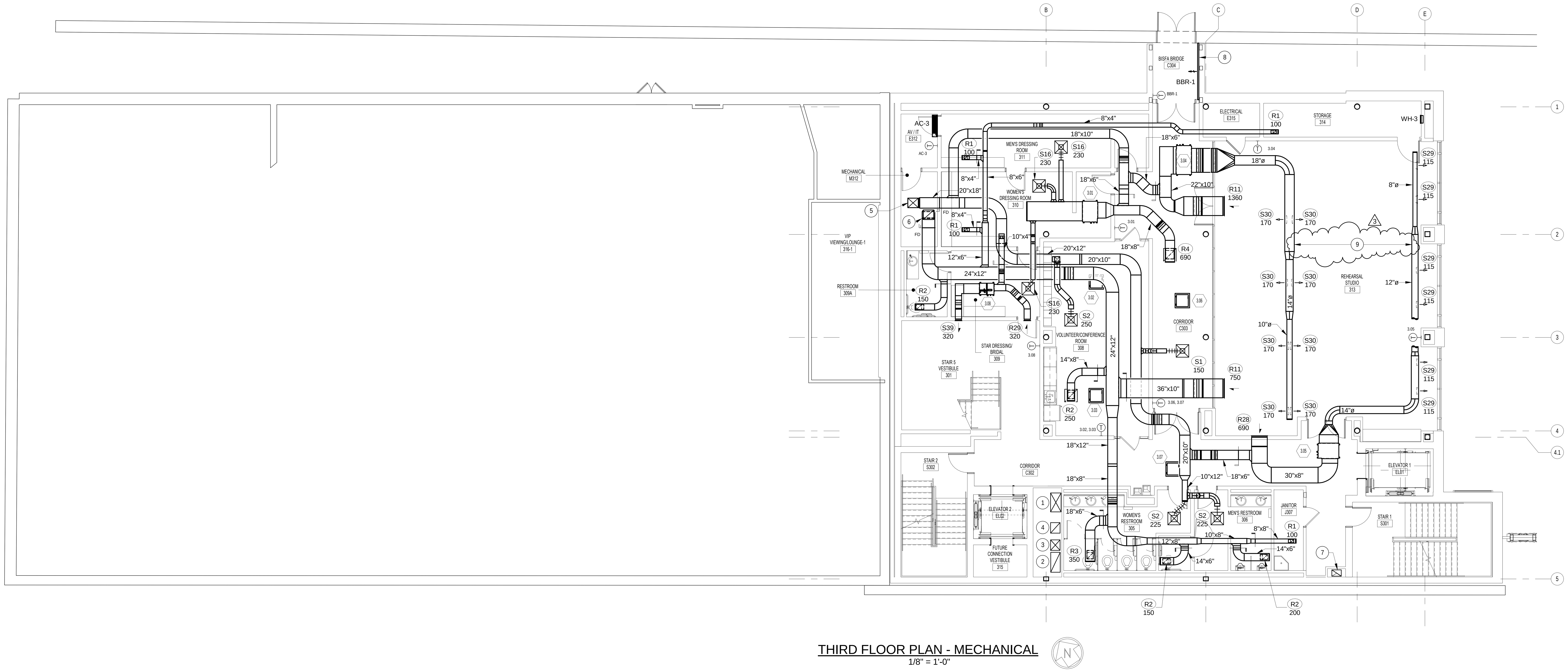
ADD. 3

A-2.10

03/27/18
BID SET

DRAWING NOTES:

1. 36x20 S/A DUCT UP & DN. REFER TO DRAWINGS M-2.3 & M-2.5 FOR CONTINUATION.
2. 38x18 R/A DUCT UP & DN. REFER TO DRAWINGS M-2.3 & M-2.5 FOR CONTINUATION.
3. 20x18 S/A DUCT UP & DN. REFER TO DRAWINGS M-2.3 & M-2.5 FOR CONTINUATION.
4. 20x18 R/A DUCT UP & DN. REFER TO DRAWINGS M-2.3 & M-2.5 FOR CONTINUATION.
5. 20x18 S/A DUCT UP. REFER TO DRAWING M-2.4 FOR CONTINUATION.
6. 24x12 R/A DUCT UP. TRANSITION TO 20x18 IN VERTICAL. REFER TO DRAWING M-2.5 FOR CONTINUATION.
7. 18x12 E/A DUCT UP & DN. REFER TO DRAWING M-2.3 M-2.5 FOR CONTINUATION.
8. BASEBOARD TO BE PROVIDED UNDER BASE BID. UNDER ALTERNATE No. 4, DO NOT PROVIDE BASEBOARD.
9. ALL ROUND, EXPOSED DUCTWORK IN THIS AREA TO BE PAINTABLE, GALVANIZED STEEL, DOUBLE WALL CONSTRUCTION WITH PERFORATED INTERIOR LINER AND SELF-SEALING DUCT CONNECTORS. BASED ON LINDAB OR APPROVED EQUAL.



THIRD FLOOR PLAN - MECHANICAL
1/8" = 1'-0"

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

ALBAN ENGINEERING, INC

11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000

www.grimmandparker.com

GRIMM AND PARKER

GP #21633

THIRD FLOOR PLAN - MECHANICAL

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

M-2.4

2/15/18
BID SET

DUCTED SPLIT SYSTEM SCHEDULE – ALTERNATE No. 2

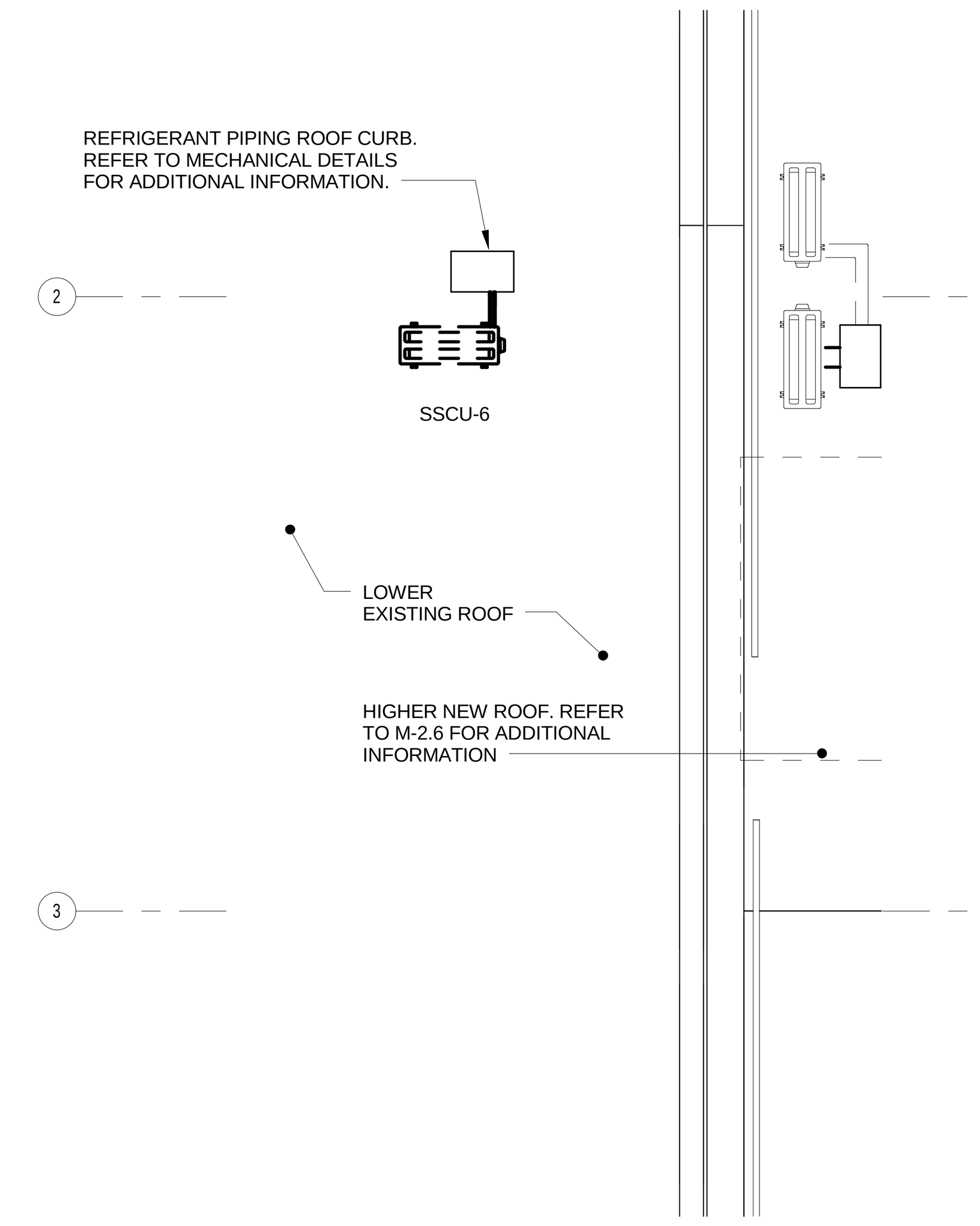
EVAP Nº	COND Nº	SERVICE	LOCATION: EVAPORATOR	LOCATION: CONDENSER	MAX CFM	O/A CFM	REFRIGERANT TYPE	COOLING CAPACITY (BTUs)	HEATING CAPACITY (BTUs)	OUTDOOR EAT DB (°F)	ELECTRICAL INDOOR UNIT V/ø/Hz	INDOOR UNIT MCA	INDOOR UNIT MOCP	ELECTRICAL OUTDOOR UNIT V/ø/Hz	OUTDOOR UNIT MCA	OUTDOOR UNIT MOCP	INDOOR UNIT SIZE (L X W X H)	OUTDOOR UNIT MAX OPERATING WT (LBS)	BASED ON DAIKIN SKY AIR: EVAPORATOR	BASED ON DAIKIN SKY AIR: CONDENSER
AC-6	SSCU-6	VIP VIEWING/LOUNGE 316	316	ROOF	560	120	410A	24,000	24,000	95	208/1/60	1.8	15	208/1/60	16.5	20	39"X25"X14"	150	FBQ24PVJU	RZQ24PVJU

NOTES:

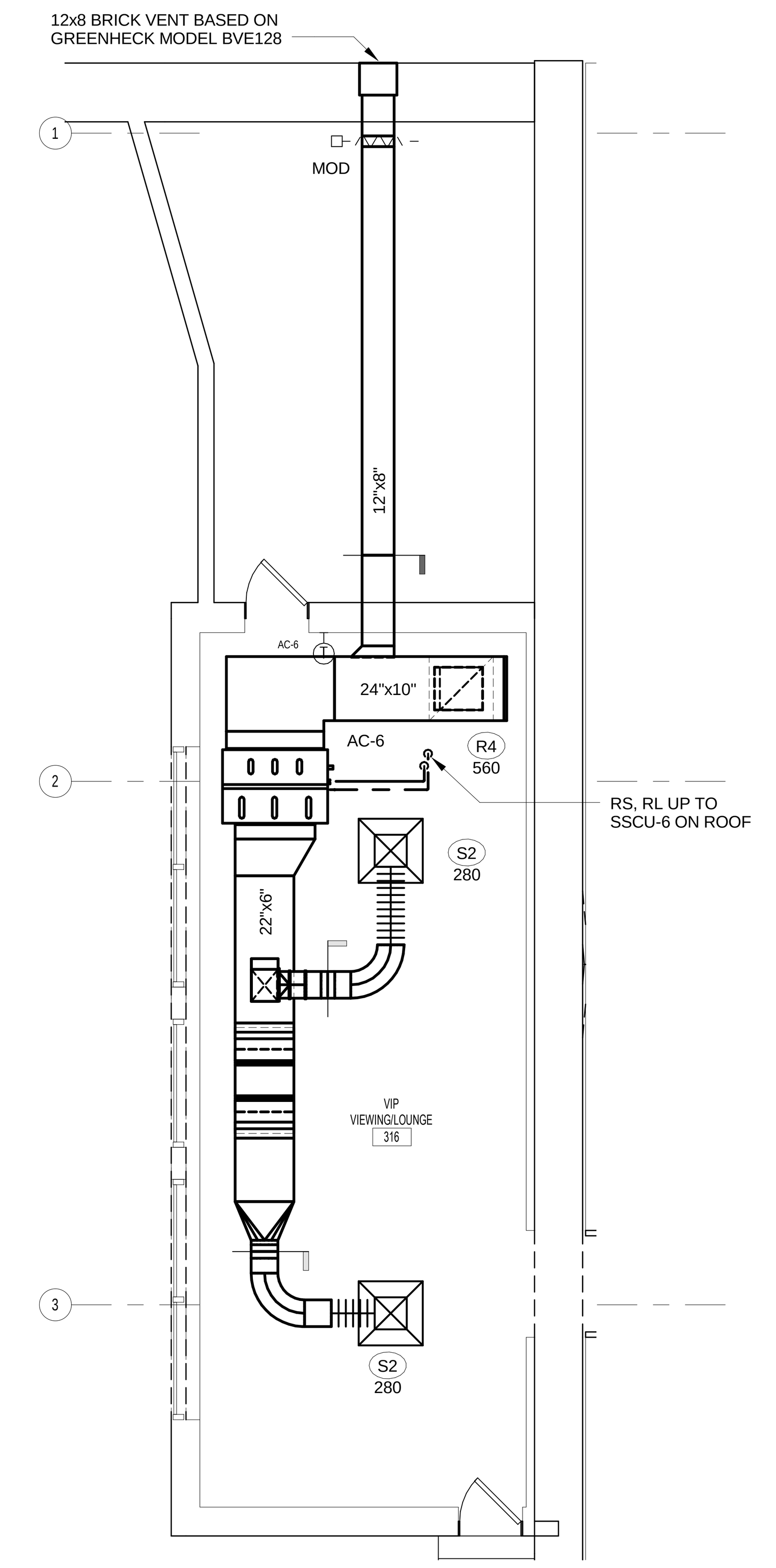
1. BASED ON MITSUBISHI ELECTRIC MR. SLIM WITH ADVANCED MICROPROCESSOR CONTROLLER, OR EQUAL OF DAIKIN INVERTER DRIVEN COMPRESSOR R410A REFRIGERANT AND DEHUMIDIFICATION MODE, 165' REFRIGERANT LINE LENGTH, 100' LIFT
2. LOW AMBIENT CONTROL (COOLING TO 0°F OUTDOOR AIR TEMPERATURE) AND WIND BAFFLE.

ELECTRIC UNIT HEATER SCHEDULE – ALTERNATE No. 5

UNIT UH-X	AREA SERVED	SUPPLY FAN CFM	ELECTRIC COIL CHARACTERISTICS V/ø/Hz	TOTAL CAP. (MBH)	TOTAL CAP. (KW)	AMPS	EMERGENCY POWER	TYPE	BASED ON (MARKEL)
2	EVENT SPACE SHELL 400	400	208/3/60	17.1	5	13.9	NO	HORIZONTAL DISCHARGE	5100 SERIES
3	EVENT SPACE SHELL 400	400	208/3/60	17.1	5	13.9	NO	HORIZONTAL DISCHARGE	5100 SERIES
4	EVENT SPACE SHELL 400	400	208/3/60	17.1	5	13.9	NO	HORIZONTAL DISCHARGE	5100 SERIES
5	EVENT SPACE SHELL 400	400	208/3/60	17.1	5	13.9	NO	HORIZONTAL DISCHARGE	5100 SERIES



ROOF PART PLAN - ALTERNATE No. 2
1/4" = 1'-0"



2
M-2.5
VIP LOUNGE - PART PLAN - ALTERNATE No. 2
1/4" = 1'-0"

GENERAL NOTES:

1. PATCH ALL HOLES, PENETRATIONS, ETC. (IN WALLS, FLOORS, ROOF, ETC.) TO MATCH EXISTING MATERIALS, FINISHES, ETC. AND PAINT TO MATCH EXISTING FINISHES. ALL ROOFING WORK SHALL BE PERFORMED BY A CERTIFIED ROOF CONTRACTOR TO MAINTAIN THE EXISTING WARRANTY IN THE AREAS OF WORK.

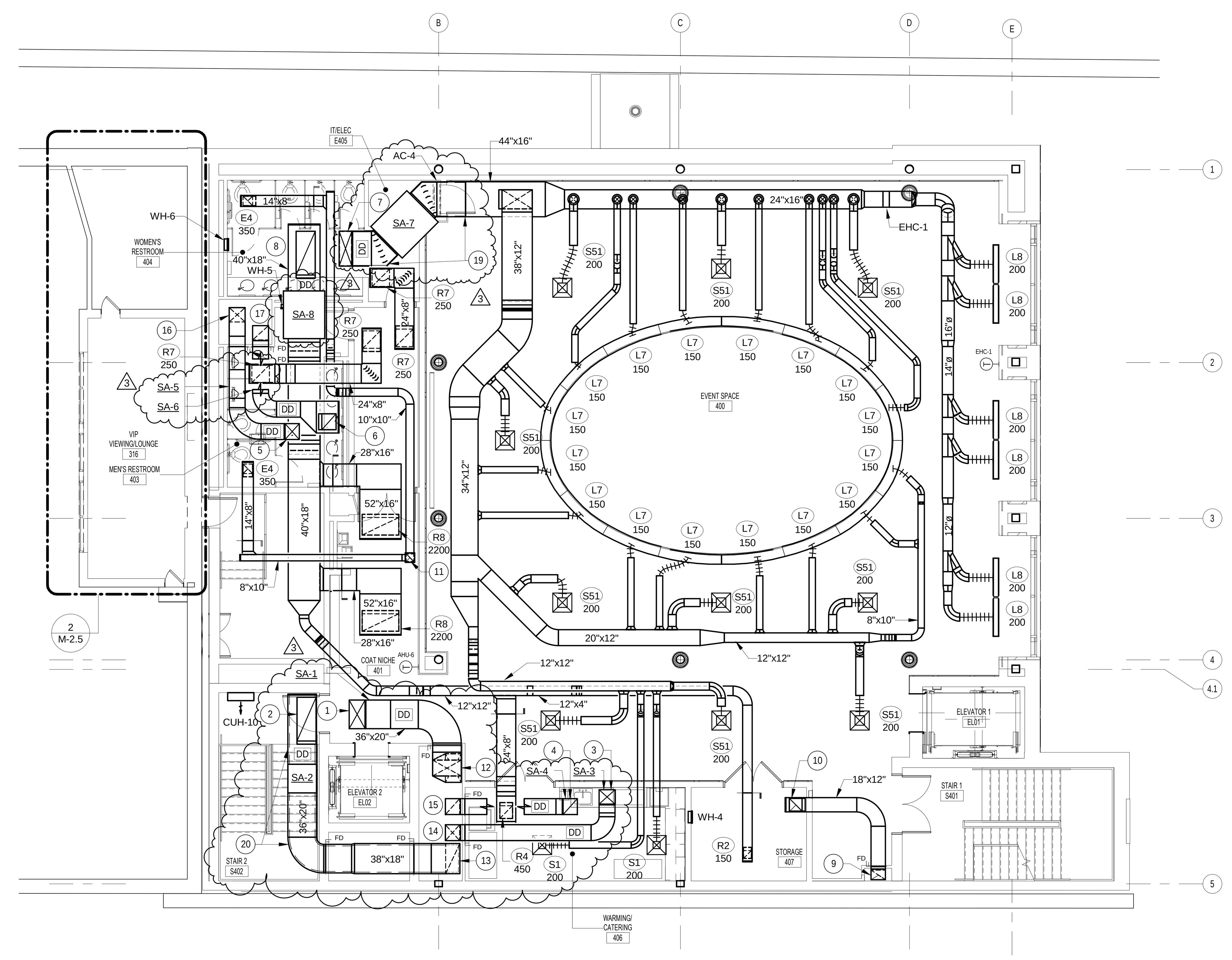
DRAWING NOTES:

1. 36x20 S/A TRANSITION TO 44x44 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-3. REFER TO DRAWING M-2.6 FOR CONTINUATION.
2. 36x20 R/A TRANSITION TO 56x24 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-3. REFER TO DRAWING M-2.6 FOR CONTINUATION.
3. 20x18 S/A TRANSITION TO 34x30 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-4. REFER TO DRAWING M-2.6 FOR CONTINUATION.
4. 20x18 R/A TRANSITION TO 48x14 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-4. REFER TO DRAWING M-2.6 FOR CONTINUATION.
5. 20x18 S/A TRANSITION TO 34x30 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-5. REFER TO DRAWING M-2.6 FOR CONTINUATION.
6. 20x18 R/A TRANSITION TO 48x14 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-5. REFER TO DRAWING M-2.6 FOR CONTINUATION.
7. 44x16 S/A TRANSITION TO FULL SIZE OF RTU-6. REFER TO DRAWING M-2.6 FOR CONTINUATION.
8. 40x18 R/A TRANSITION TO 56x24 DUCT IN VERTICAL. TRANSITION TO FULL SIZE OF RTU-6. REFER TO DRAWING M-2.6 FOR CONTINUATION.
9. 18x12 E/A DUCT DN
10. 16x16 E/A DUCT UP TO F-1 ON ROOF. REFER TO DRAWING M-2.6 FOR CONTINUATION.
11. 12x12 E/A DUCT UP TO F-2 ON ROOF. REFER TO DRAWING M-2.6 FOR CONTINUATION.
12. 20x36 S/A DUCT DN. TRANSITION TO 36x20 IN VERTICAL. REFER TO DRAWING M-2.4 FOR CONTINUATION.
13. 38x18 R/A DUCT DN. REFER TO DRAWING M-2.4 FOR CONTINUATION.
14. 20x18 S/A DUCT DN. REFER TO DRAWING M-2.4 FOR CONTINUATION.
15. 20x18 R/A DUCT DN. REFER TO DRAWING M-2.4 FOR CONTINUATION.
16. 20x18 S/A DUCT DN. REFER TO DRAWING M-2.4 FOR CONTINUATION.
17. 20x18 R/A DUCT DN. REFER TO DRAWING M-2.4 FOR CONTINUATION.
18. ALTERNATE No. 5

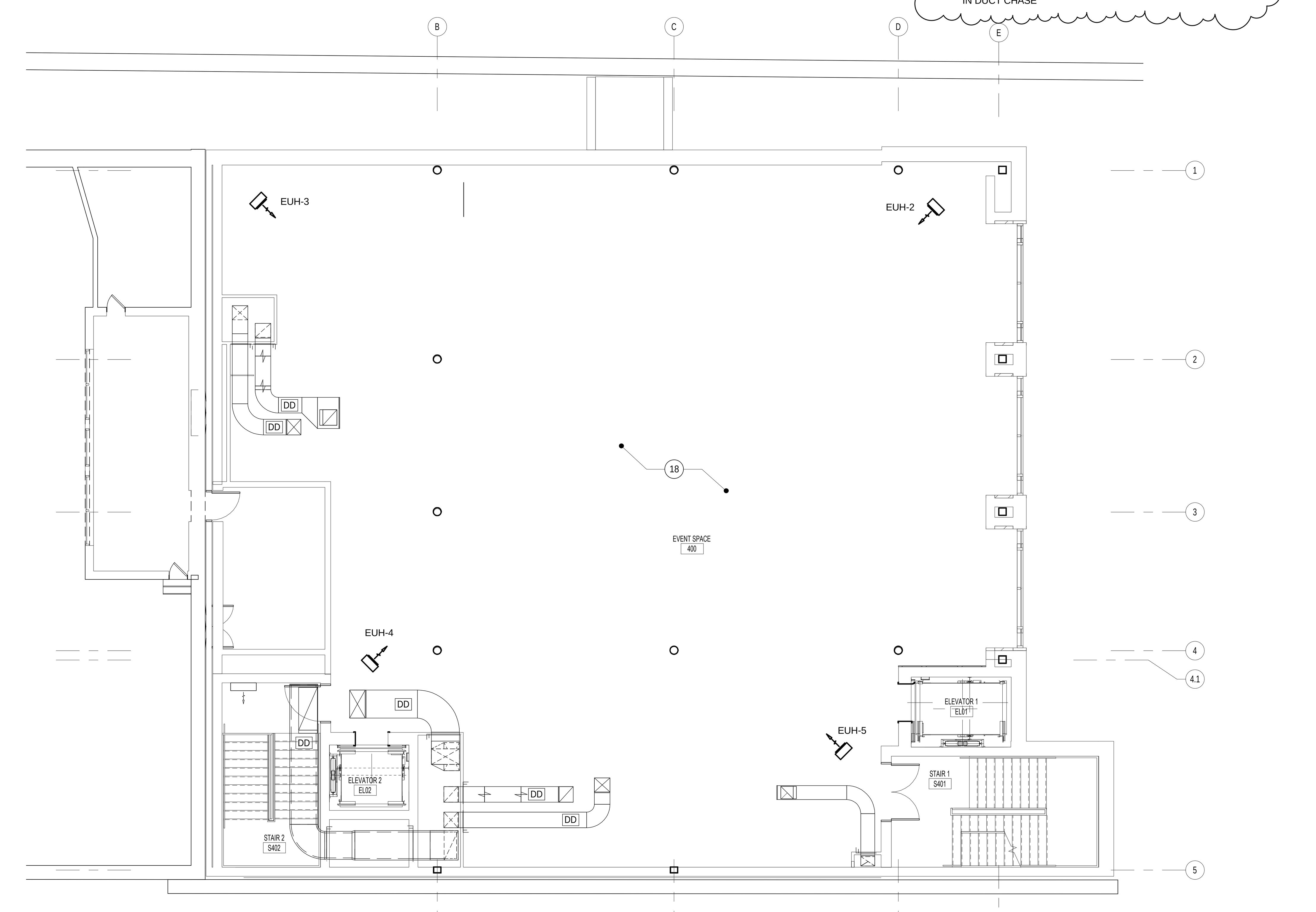
    4TH FLOOR EVENT SPACE SHALL BECOME A "DARK SHELL". RTU-6 ROOF CURB AND ASSOCIATED ROOF PENETRATIONS SHALL BE PROVIDED. RTU-6 SHALL BE DELETED.

    ELECTRIC UNIT HEATERS AND ASSOCIATED THERMOSTATS SHALL BE PROVIDED TO MAINTAIN A SPACE TEMPERATURE SETPOINT OF 65°F

    WORK ASSOCIATED WITH SYSTEMS SERVING LOWER LEVELS TO BE INSTALLED AS SHOWN UNDER BASE BID. REFER TO BASE BID DRAWING ON THIS SHEET FOR ADDITIONAL INFORMATION.
19. PROVIDE 1" INTERNAL SOUND LINING FROM UNIT CONNECTION TO SA-7, AND FROM SA-7 TO POINT SHOWN.
20. PROVIDE 2" INTERNAL SOUND LINING FROM UNIT CONNECTION TO SA-2, AND FROM SA-2 TO 38x18 ELBOW DN IN DUCT CHASE



FOURTH FLOOR PLAN - MECHANICAL
As indicated



FOURTH FLOOR PLAN - MECHANICAL - ALTERNATE No. 5
1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
8 0 8 16

ALBAN ENGINEERING, INC

11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com

G+P GRIMM AND PARKER

GP #21633

FOURTH FLOOR PLAN - MECHANICAL

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

M-2.5
2/15/18
BID SET

ROOF TOP UNIT SCHEDULE

RTU Nº	SERVICE	LOCATION	SUPPLY FAN – FAN BHP	SUPPLY FAN – FAN HP	SUPPLY FAN – FAN QTY	SUPPLY FAN – FAN TYPE	SUPPLY FAN – MAX ESP	SUPPLY FAN – RPM MAX	SUPPLY FAN – STD. AIR CFM MIN	SUPPLY FAN – STD. AIR CFM MAX	EXHAUST FAN – FAN BHP	EXHAUST FAN – FAN HP	EXHAUST FAN – FAN QTY	EXHAUST FAN – FAN TYPE	EXHAUST FAN – MAX ESP	EXHAUST FAN – RPM MAX	EXHAUST FAN – STD. AIR CFM MIN	EXHAUST FAN – STD. AIR CFM MAX	DX COIL – EAT DB (°F)	DX COIL – EAT WB (°F)	DX COIL – LAT DB (°F)	DX COIL – LAT WB (°F)	DX COIL – MAX FACE VEL (FPM)	DX COIL – MAX A.P.D (IN H20)	DX COIL – SENS. COOL CAP. (MBH)	DX COIL – TOTAL COOL CAP. (MBH)	DX COIL – TOTAL HEAT CAP. (MBH)	HGRH COIL SYSTEM CONDITIONS – EAT DB (°F)	HGRH – LAT DB (°F)	HGRH – MAX FACE VEL (FPM)	HGRH – MAX A.P.D (IN H20)	HGRH – TOTAL CAP. (MBH)	NG FURNACE SYSTEM CONDITIONS – EAT DB (°F)	NG – LAT DB (°F)	NG – MAX FACE VEL	NG – MAX A.P.D (IN	NG – TOTAL CAP. (MBH)	OUTSIDE AIR – MIN CFM	OUTSIDE AIR – MAX CFM	OUTSIDE AIR – %	ELECTRICAL – V/ø/Hz	ELECTRICAL – MCA	ELECTRICAL – MOCP	WEIGHT (lbs)	SYSTEM TYPE	BASED ON DAIKIN
3	BASEMENT/LOBBY/MEZZANINE	ROOF	6.27	7.5	1	AFPF	1.5	1541	5800	5800	2.46	4.0	2	AFPF	1.5	2242	5500	5500	84.5	71.0	53.2	53.2	271	0.280	198.0	331.0	–	53	70	268	0.050	105.0	60	117	271	0.180	450	5800	5800	100	208/3/60	151.2	175	5,200	DOAS	REBEL DPS028A
4	TICKET OFFICE & MSO OFFICE	ROOF	2.31	4.0	1	AFPF	2.0	1368	2700	2700	1.50	2.3	1	AFPF	1.0	2330	2500	2500	79.4	66.7	56.1	56.0	193	0.130	69.0	90.4	78.1	56	70	193	0.040	40.9	47	102	193	0.020	200	2700	2700	100	208/3/60	42.7	50	2,750	DOAS	REBEL DPS007A
5	THIRD FLOOR	ROOF	1.76	4.0	1	AFPF	2.0	2053	2400	2400	1.50	2.3	1	AFPF	1.0	2151	2250	2250	80.1	67.2	50.4	50.4	156	0.130	77.9	120.8	98.5	51	70	156	0.020	47.0	53	114	156	0.130	200	2400	2400	100	208/3/60	51.1	60	2,750	DOAS	REBEL DPS010A
6	BALL ROOM	ROOF	5.05	7.5	1	AFPF	1.5	1413	3400	6000	3.37	4.0	1	AFPF	1.0	1484	3400	5700	78.8	65.8	53.4	53.3	280	0.290	166.8	225.7	205.2	55	70	318	0.050	97.0	58	109	318	0.190	450	3400	6000	57	208/3/60	121.7	175	4,750	CV	REBEL DPS020A

NOTES:
1. VAV = VARIABLE AIR VOLUME / CV = CONSTANT VOLUME / DOAS = DEDICATED OUTSIDE AIR SYS
2. ESP = EXTERNAL STATIC PRESSURE BASED ON PRESSURE REQUIRED AT AHU DUCT CONNECTION.
3. FC = FORWARD CURVED, BIAF = BACKWARD INCLINED AIR FOIL (DOUBLE WIDTH, DOUBLE INLET).
4. AFPF = AIRFOIL PLENUM FAN (SINGLE WIDTH, SINGLE INLET).
5. ALL FANS SHALL BE DIRECT DRIVE TYPE WITH VARIABLE SPEED DRIVE
6. PREFILTERS SHALL BE 2" THICK MERV 8 FARR 30/30 OR AS APPROVED EQUAL.
7. FINAL FILTERS SHALL BE 4" THICK MERV 11 FARR OPTI-PAC OR AS APPROVED EQUAL.
8. FOR TOTAL STATIC PRESSURE CALCULATIONS USE MEDIAN (CLEAN/DIRTY) FITLER AIR PRESSURE DROPS.
9. NG = NATURAL GAS, HGRH = HOT GAS REHEAT
10. ALL NATURAL GAS BURNERS SHALL HAVE A MINIMUM OF 10:1 TURNDOWN
11. ALL UNITS SHALL BE PROVIDED WITH A TOTAL ENERGY RECOVERY WHEEL. REFER TO THE CONTROL DIAGRAMS FOR TYPICAL PERFORMANCE INFORMATION.
12. DX COIL HEATING PERFORMANCE BASED ON 47F AMBIENT CONDITIONS

HEAT RECOVERY DEVICE SCHEDULE

SERVICES RTU №	MAX A.P.D (IN W.C)	MAX FACE VEL (FPM)	ELECTRICAL CHARACTERISTIC – MOTOR HP	ELECTRICAL CHARACTERISTIC – V/ø/Hz	SUMMER SUPPLY – DEVICE CFM (ENTERING)	SUMMER SUPPLY – EAT DB (°F)	SUMMER SUPPLY – EAT WB (°F)	SUMMER SUPPLY – LAT DB (°F)	SUMMER SUPPLY – LAT WB (°F)	SUMMER EXHAUST – DEVICE CFM (ENTERING)	SUMMER EXHAUST – EAT DB (°F)	SUMMER EXHAUST – EAT WB (°F)	SUMMER EXHAUST – LAT DB (°F)	SUMMER EXHAUST – LAT WB (°F)	WINTER SUPPLY – DEVICE CFM (ENTERING)	WINTER SUPPLY – EAT DB (°F)	WINTER SUPPLY – EAT WB (°F)	WINTER SUPPLY – LAT DB (°F)	WINTER SUPPLY – LAT WB (°F)	WINTER EXHAUST – DEVICE CFM (ENTERING)	WINTER EXHAUST – EAT DB (°F)	WINTER EXHAUST – EAT WB (°F)	WINTER EXHAUST – LAT DB (°F)	WINTER EXHAUST – LAT WB (°F)	TOTAL EFFECTIVENESS (%)
3	1.12	490	1/6	208/3/60	5,800	95	78	83.3	69.6	5,800	75	62	84.5	70.6	5,800	10	9	43.1	34.2	5,800	70	50	39.3	31.7	51
4	0.61	300	1/6	208/3/60	2,700	95	78	80.6	67.6	2,700	75	62	80.6	67.6	2,700	10	9	51.8	39.6	2,700	70	50	51.8	39.6	68
5	0.54	267	1/6	208/3/60	2,400	95	78	80.1	67.2	2,400	75	62	80.1	67.2	2,400	10	9	53.3	40.6	2,400	70	50	53.3	40.6	70
6	0.76	327	1/6	208/3/60	3,400	95	78	78.8	65.8	3,400	75	62	81.7	68.5	3,400	10	9	57.6	43.2	3,400	70	50	48.1	37.4	63

(Summer and winter columns: ENTHALPY HEAT RECOVERY DEVICE (ROTARY TYPE) – SUMMER CONDITIONS / WINTER CONDITIONS)

NOTES:
1. DEVICE ENTERING CFM INDICATED IS UPSTREAM OF HEAT RECOVERY DEVICE AND EXCLUDES PURGE VOLUME.
2. PROVIDE VARIALBE SPEED DRIVES AND FROST CONTROL FOR ALL ENTHALPY ROTARY TYPE HEAT RECOVERY DEVICES.

ELECTRIC CABINET UNIT HEATER SCHEDULE

UNIT CUH-X	AREA SERVED	SUPPLY FAN CFM	ELECTRIC COIL CHARACTERISTICS V/ø/Hz	TOTAL CAP. (MBH)	TOTAL CAP. (KW)	AMPS	EMERGENCY POWER	TYPE	BASED ON (MARKEL)
1	STAIR 6 S006	250	208/3/60	17.1	5	17.6	NO	WALL MTD	SERIES 6346D
2	BOH CORRIDOR	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
3	BOH CORRIDOR	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
4	STAIR 2 S002	250	208/3/60	17.1	5	17.6	NO	WALL MTD	SERIES 6346D
5	EXIT CORRIDOR	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
6	STAIR 101 S101	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
7	STAIR 101 S101	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
8	STAIR 2 S202	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
9	STAIR 1 S201	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
10	STAIR 2 S402	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D
11	STAIR 1 S401	230	208/3/60	10.2	3	9.2	NO	WALL MTD	SERIES 6346D

NOTES:
1. PROVIDE CUSTOM COLOR AS SELECTED BY THE ARCHITECT
2. ALL UNITS SHALL BE PROVIDED WITH A DPST DISCONNECT SWITCH.
3. PROVIDE TRIM FRAME
4. PROVIDE REPLACEABLE FILTER
5. REMOTE TEMPERATURE SENSOR (ATC) CONTROL AND EMS INTERLOCK

VARIABLE REFRIGERANT FLOW (VRF) CONDENSING UNIT SCHEDULE

UNIT	AREA SERVED	UNIT LOCATION	COOLING MODE CAPACITY (BTU)	COOLING MODE IEER	HEATING MODE CAPACITY (BTU)	HEATING MODE COP	MODULE	ELECTRICAL MCA	ELECTRICAL MOP	ELECTRICAL V/ø/Hz	WEIGHT (LBS)	BASED ON DAIKIN
COND-1	BASEMENT/LOBBY/MEZZANINE	ROOF	270,093	21.1	226,575	2.41	No. 1	55.0	70	208/3/60	1600	REYQ288TTJU
							No. 2	55.0	70	208/3/60		
COND-2	MAIN OFFICES/LOBBY ENTRANCE	ROOF	159,977	22.0	115,921	2.22	–	61.9	70	208/3/60	800	REYQ168TTJU
COND-3	THIRD FLOOR	ROOF	116,074	25.4	92,362	2.46	–	43.0	50	208/3/60	750	REYQ120TTJU

NOTES:
1. COOLING BASED ON 95°F OUTSIDE AIR TEMPERATURE
2. HEATING BASED ON 17°F OUTSIDE AIR TEMPERATURE

ELECTRIC UNIT HEATER SCHEDULE

UNIT UH-X	AREA SERVED	SUPPLY FAN CFM	ELECTRIC COIL CHARACTERISTICS V/ø/Hz	TOTAL CAP. (MBH)	TOTAL CAP. (KW)	AMPS	EMERGENCY POWER	TYPE	BASED ON (MARKEL)
1	WATER/GAS ROOM M009	400	208/3/60	17.1	5	13.9	NO	HORIZONTAL DISCHARGE	5100 SERIES

SPLIT SYSTEM SCHEDULE

EVAP Nº	COND Nº	SERVICE	LOCATION EVAPORATOR	LOCATION CONDENSER	MAX CFM	REFRIGERANT TYPE	COOLING CAPACITY (BTUs)	MAX CAPACITY FULL LOAD (TONS)	INDOOR CONDITIONS EAT DB (°F)	INDOOR CONDITIONS EAT WB (°F)	OUTDOOR EAT DB (°F)	ELECTRICAL V/ø/Hz	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL EMERGENCY POWER	INDOOR UNIT SIZE (L X W X H)	OUTDOOR UNIT MAX OPERATING WT (LBS)	BASED ON DAIKIN EVAPORATOR	BASED ON DAIKIN CONDENSER
AC-1	SSCU-1	AV/IT E013	E013	ROOF	700	410A	18,000	1.5	80	67	95	208/1/60	18.3	20	NO	39"X10"X14"	100	FTK18NMVJU	RK18NMVJU
AC-2	SSCU-2	EL MACHINE RM E005	E005	ROOF	700	410A	18,000	1.5	80	67	95	208/1/60	18.3	20	NO	39"X10"X14"	100	FTK18NMVJU	RK18NMVJU
AC-3	SSCU-3	AV/IT E312	E405	ROOF	434	410A	12,000	1.0	80	67	95	208/1/60	12.2	15	NO	39"X10"X14"	60	FTK12NMVJU	RK12NMVJU
AC-4	SSCU-4	IT/ELEC E405	E312	ROOF	700	410A	18,000	1.5	80	67	95	208/1/60	18.3	20	NO	39"X10"X14"	100	FTK18NMVJU	RK18NMVJU
AC-5	SSCU-5	EX AV/IT ROOM	–	ROOF	700	410A	24,000	1.5	80	67	95	208/1/60	18.3	20	NO	39"X10"X14"	110	FTK24NMVJU	RK24NMVJU

NOTES:
1. BASED ON MITSUBISHI ELECTRIC MR. SLIM WITH ADVANCED MICROPROCESSOR CONTROLLER, OR EQUAL OF DAIKIN INVERTER DRIVEN COMPRESSOR R410A REFRIGERANT AND DEHUMIDIFICATION MODE, 165' REFRIGERANT LINE LENGTH, 100' LIFT
2. LOW AMBIENT CONTROL (COOLING TO 0°F OUTDOOR AIR TEMPERATURE) AND WIND BAFFLE.

VARIABLE REFRIGERANT FLOW (VRF) FAN COIL UNIT SCHEDULE

UNIT (x.xx)	AREA SERVED	TYPE	MOUNTING HEIGHT (AFF)	MAX AIRFLOW (CFM)	MAX ESP	NOM. COOLING CAP. (MBH)	NOM. HEATING CAPACITY (MBH)	SOUND PRESSURE LEVEL (DB(A))	ELECTRICAL MCA	ELECTRICAL MAX FUSE	ELECTRICAL V/ø/Hz	WEIGHT (LBS)	O/A (CFM)	BASED ON DAIKIN	REMARKS
1.01	GALLERY 001	DUCTED FCU	IN CEILING	1100	0.40	30.0	34.0	43	2.8	15	208/1/60	102	425	FXMQ30PBVJU	
1.02	MAINTENANCE/STORAGE 007	DUCTED FCU	IN CEILING	450	0.20	12.0	13.5	39	1.4	15	208/1/60	62	100	FXMQ12PBVJU	
1.03	BOH CORRIDOR C011	CEILING SUSPENDED	9'-6"	410	0.00	12.0	13.5	38	0.8	15	208/1/60	55		FXHQ12MVJU	
1.04	BOH CORRIDOR C011	CEILING SUSPENDED	9'-6"	410	0.00	12.0	13.5	38	0.8	15	208/1/60	55		FXHQ12MVJU	
1.05	LOBBY 102 (INTERIOR)	DUCTED FCU	IN CEILING	2475	0.95	96.0	108.0	49	10.7	15	208/1/60	302	1800	FXMQ96MVJU	
1.06	LOBBY 102 (INTERIOR)	DUCTED FCU	IN CEILING	1120	0.40	36.0	40.0	43	2.9	15	208/1/60	102	500	FXMQ36PBVJU	
1.07	MEZZANINE LOBBY 201	DUCTED FCU	IN CEILING	1375	0.40	48.0	54.0	44	3.4	15	208/1/60	102	725	FXMQ48PBVJU	
1.08	MEZZANINE LOBBY 201	DUCTED FCU	IN CEILING	690	0.40	24.0	27.0	42	1.8	15	208/1/60	80	450	FXMQ24PBVJU	
1.09	MEZZANINE LOBBY 201	DUCTED FCU	IN CEILING	690	0.40	24.0	27.0	42	1.8	15	208/1/60	80	450	FXMQ24PBVJU	
1.10	ELEVATOR VESTIBULE 100	DUCTED FCU	IN CEILING	490	0.00	18.0	20.0	40	0.6	15	208/1/60	80		FXLQ18MVJU9	
2.01	LOBBY ENTRANCE 101	DUCTED FCU	IN CEILING	1360	0.40	48.0	54.0	44	3.4	15	208/1/60	102	800	FXMQ48PBVJU	
2.02	LOBBY (EXTERIOR) 102	DUCTED FCU	IN CEILING	1120	0.40	36.0	40.0	43	2.9	15	208/1/60	102	475	FXMQ36PBVJU	
2.03	LOBBY (EXTERIOR) 102	DUCTED FCU	IN CEILING	1120	0.40	36.0	40.0	43	2.9	15	208/1/60	102		FXMQ36PBVJU	
2.04	TICKET COUNTER/OPEN OFFICE	DUCTED FCU	IN CEILING	690	0.40	24.0	27.0	42	1.8	15	208/1/60	80	250	FXMQ24PBVJU	
2.05	MSO OPEN OFFICE 208	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
2.06	MSO OPEN OFFICE 208	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
2.07	MSO DIRECTOR OFFICE 209	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
2.08	CONFERENCE ROOM 210	CEILING CASSETTE	IN CEILING	390	0.00	15.0	17.5	41	0.8	15	208/1/60	48		FXZQ15MVJU9	
3.01	DRESSING ROOMS	DUCTED FCU	IN CEILING	690	0.40	24.0	27.0	42	1.8	15	208/1/60	80	400	FXMQ24PBVJU	
3.02	VOLUNTEER LOUNGE 308	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
3.03	VOLUNTEER LOUNGE 308	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
3.04	REHEARSAL STUDIO 313	DUCTED FCU	IN CEILING	1360	0.40	48.0	54.0	44	3.4	15	208/1/60	102	600	FXMQ48PBVJU	
3.05	REHEARSAL STUDIO 313	DUCTED FCU	IN CEILING	690	0.40	24.0	27.0	42	1.8	15	208/1/60	80	450	FXMQ24PBVJU	
3.06	CORRIDOR C303	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
3.07	CORRIDOR C302	CEILING CASSETTE	IN CEILING	320	0.00	7.5	8.7	31	0.8	15	208/1/60	48		FXZQ07MVJU9	
3.08	STAIR 5 VESTIBULE 301	DUCTED FCU	IN CEILING	320	0.20	9.5	10.5	31	0.6	15	208/1/60	55	125	FXMQ09MVJU9	

NOTES:
1. COOLING CAPACITY IS BASED ON EAT AT 80°F DB/67°FWB INDOOR COIL
2. HEATING CAPACITY IS BASED ON EAT AT 70°F EAT
3. PROVIDE 2" MERV 8 FILTER FOR DUCTED FAN COIL UNITS

ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 450
HUNT VALLEY, MD 21030
P.N. 17002
www.albanengineering.com 410.842.6411

11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000
www.grimmandparker.com
G+P GRIMM AND PARKER

GP #21633

ROOF TOP UNIT AND VRV EQUIPMENT SCHEDULES

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

M-9.1

2/15/18
BID SET

DUCT MOUNTED ELECTRIC HEATING COIL SCHEDULE

No. EHC-x	INTERLOCK	SERVICE	TERMINAL HEAT COIL CHARACTERISTICS: CFM	EAT (°F)	LAT (°F)	TOTAL CAP (MBH)	TOTAL CAP (kW)	Amps	V/ø/Hz	MAX APD (in. H2O)	MAX FACE VELOCITY (fpm)	COIL SIZE WxH	BASED ON GREENHECK
EHC-1	TSTAT	FOURTH FLOOR PERIMETER	1200	55	90	51.2	15.0	41.6	208/3/60	0.20	800	20 x 12	IDHC
EHC-2	TSTAT	MEN'S RESTROOM 004 & WOMEN'S RESTROOM 003	1250	60	85	33.8	10.0	27.8	208/3/60	0.20	800	20 x 12	IDHC

ELECTRIC WALL HEATER SCHEDULE

UNIT WH-X	AREA SERVED	SUPPLY FAN: CFM	SUPPLY FAN: RPM	ELECTRIC COIL CHARACTERISTICS: V/ø/Hz	TOTAL CAP. (MBH)	TOTAL CAP. (KW)	AMPS	EMERGENCY POWER	TYPE	BASED ON (MARKEL)
1	FAMILY RESTROOM 002	245	1400	208/3/60	6.8	2.0	5.6	NO	SEMI-RECESSED	3450 SERIES
2	STORAGE 001D	245	1400	208/3/60	10.2	3.0	8.3	NO	SEMI-RECESSED	3450 SERIES
3	STORAGE 314	245	1400	208/3/60	10.2	3.0	8.3	NO	SEMI-RECESSED	3450 SERIES
4	STORAGE 407	245	1400	208/3/60	10.2	3.0	8.3	NO	SEMI-RECESSED	3450 SERIES
5	MEN'S RESTROOM 403	245	1400	208/3/60	10.2	3.0	8.3	NO	SEMI-RECESSED	3450 SERIES
6	WOMEN'S RESTROOM 404	245	1400	208/3/60	10.2	3.0	8.3	NO	SEMI-RECESSED	3450 SERIES

NOTES:
1. COLOR SHALL BE SELECTED BY ARCHITECT
2. ALL UNITS SHALL BE PROVIDED WITH A CIRCUIT BREAKER AND CONTACTORS
3. REMOTE TEMPERATURE SENSOR (ATC) CONTROL AND EMS INTERLOCK.

LINEAR SLOT DIFFUSER SCHEDULE

№	DUTY	CFM: PER L.F.	CFM: TOTAL	№ OF SLOTS	SLOT WIDTH (IN)	TOTAL LENGTH (FT)	COLAR OR INLET SIZE (ø)	MAX N.C.	PLENUM SIZE (SOUND LINED)	BASED ON (TITUS)
L1	SUPPLY	34	136	3	3/4	4	6	18	8"x14"	ML-38
L2	SUPPLY	35	140	3	3/4	4	6	18	10"x18"	ML-38
L3	SUPPLY	40	190	3	3/4	4	6	18	10"x14"	ML-38
L4	SUPPLY	42	165	3	3/4	4	6	18	10"x14"	ML-38
L5	SUPPLY	32	125	3	3/4	4	6	18	10"x18"	ML-38
L6	SUPPLY	29	115	3	3/4	4	6	18	10"x18"	ML-38
L7	SUPPLY	25	150	1	1	6	8	18	8"X18"	FL-10
L8	SUPPLY	50	200	1	1	4	8	18	12"x14"	FL-10
L9	RETURN	138	2470	2	2 1/2	18	48x14	20	12"x30"	FL-25

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION.
2. FLOWBAR TYPE LINEAR SLOT DIFFUSER SHALL BE PROVIDED WITH JETTHROW PATTERN

ARCHITECTURAL DIFFUSER SCHEDULE

No. (Sx)	DUTY	MAX CFM	NECK SIZE	No. OF SLOTS	SLOT WIDTH (IN.)	MAX NC	REMARKS
S51	SUPPLY	200	10"ø	1	1"	20	TITUS MODUFLOW MF10

NOTES: ALL DIFFUSERS SHALL BE 24x24 MODULE, WITH CEILING TILE FACE, 4-WAY BLOW WITH INSULATED PLENUM

FAN SCHEDULE

UNIT F-X	AREA SERVED	INTERLOCK	LOCATION	MAX CFM	ESP (IN H2O)	FRPM	DRIVE TYPE	MOTOR: HP	MOTOR: TYPE	ELECTRICAL: V/ø/Hz	ELECTRICAL: EMERGENCY POWER	TYPE	BASED ON (GREENHECK)
1	MECHANICAL/ELECTRICAL E008, EXHAUST	TSTAT, F-3	ROOF	1100	1.00	1199	DIRECT	1/2	ODP	208/1/60	NO	POWER ROOF VENTILATOR	GB-161HP-5
2	MEN'S 403, WOMEN'S 404	RTU-4	ROOF	700	0.50	1232	DIRECT	1/4	ECM	208/1/60	NO	UPBLAST CENTRIFUGAL	CUE-101-VG
3	MECHANICAL/ELECTRICAL E008, INTAKE	TSTAT, F-1	E008	1100	0.75	1417	DIRECT	1/2	ECM	208/1/60	NO	INLINE CENTRIFUGAL	SQ-120-VG
4	EX ELECTRICAL ROOM	TSTAT	EX ELEC	1350	0.25	820	BELT	1/4	ODP	208/1/60	NO	SIDEWALL PROPELLER	SBE-1H20-4

NOTES:
1. TSTAT=THERMOSTAT; SW=SWITCH; SP=STATIC PRESSURE, TD=WITH 15 MINUTE TIME DELAY
2. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH FOR ALL EXHAUST FANS, COORDINATING REQUIREMENTS AND INTERLOCKS WITH ELECTRICAL

3

SOUND ATTENUATOR SCHEDULE

SA №	SERVICE	LOCATION	TYPE	DUCT DIMENSIONS (IN) W X H	LENGTH (IN)	ELBOW LEG LENGTH (IN): INLET	ELBOW LEG LENGTH (IN): OUTLET	FLOW (CFM)	RATED @ ACTUAL VELOCITY (FPM)	AIRFLOW DIRECTION	A.P.D (IN H2O)	WEIGHT (LBS)	DIL 1 (63)	2 (125)	3 (250)	4 (500)	5 (1K)	6 (2K)	7 (4K)	8 (8K)	BASED ON PRICE MODEL
1	RTU-3-SUPPLY	4TH FLOOR	ELBOW	36x20	-	40	52	5,800	1,160	FORWARD	0.12	202	9	12	19	29	33	32	27	23	ERM72/4A
2	RTU-3-RETURN	4TH FLOOR	RECTANGULAR	36x20	36	-	-	5,800	1,160	REVERSE	0.07	102	5	7	13	21	21	16	13	10	RH36/4C
3	RTU-4-SUPPLY	4TH FLOOR	ELBOW	20x18	-	25	29	2,700	1,080	FORWARD	0.11	43	8	10	11	16	14	15	14	13	ERM36/WA
4	RTU-4-RETURN	4th FLOOR	ELBOW	20x18	-	27	27	2,700	1,080	REVERSE	0.10	43	9	13	14	18	19	17	15	14	ERM36/WB
5	RTU-5-SUPPLY	4th FLOOR	RECTANGULAR	20x18	36	-	-	2,400	960	FORWARD	0.06	44	5	6	8	12	11	9	7	6	RH36/XA
6	RTU-5-RETURN	4th FLOOR	RECTANGULAR	20x18	36	-	-	2,400	960	REVERSE	0.12	43	8	10	12	16	13	11	10	9	RL36/XB
7	RTU-6-SUPPLY	4th FLOOR	RECTANGULAR	44(56)x16	64	-	-	6,000	1,227	FORWARD	0.17	209	9	13	20	31	27	20	15	12	RLX64/8C
8	RTU-6-RETURN	4th FLOOR	RECTANGULAR	40(52)x18	60	-	-	6,000	1,200	REVERSE	0.27	233	8	13	23	41	50	42	27	21	RLX60/1C

(DIL = DYNAMIC INSERTION LOSS (DB))

NOTES:
1. ALL SOUND ATTENUATORS SHALL HAVE 2" SLIP CONNECTIONS
2. ACOUSTIC MEDIA SHALL BE GLASS FIBER
3. SA-1, SA-2 & SA-7 SHALL HAVE 18 GA CASING AND 22 GA PERFORATED LINER
4. REMAINING SOUND ATTENUATORS SHALL HAVE 22 GA CASING AND 22 GA PERFORATED LINER

BASEBOARD RADIATION SCHEDULE

UNIT BBR-X	AREA SERVED	BTUH/LF	ELECTRIC COIL CHARACTERISTICS: V/ø/Hz	TOTAL CAP. (BTU)	TOTAL CAP. (WATTS)	ACTIVE ELEM (FT)	MOUNTING HT. AFF (in)	ENCLOSURE WIDTH. (in)	ENCLOSURE HT. (in)	BASED ON (MARKEL)
1	BISFA BRIDGE C304	125	208/1/60	3414	1000	8	4.00	3.50	6.00	MARKEL DBT SERIES

NOTES:
1. ACTIVE ELEMENT SHALL BE LOCATED DIRECTLY UNDER WINDOW. PROVIDE END CAPS WHERE ENCLOSURE DOES NOT TERMINATE AT WALL.
2. MOUNTING HEIGHT IS DISTANCE FROM FLOOR TO THE BOTTOM OF THE ENCLOSURE.
3. PROVIDE ALL END CAPS, ACCESS DOORS, CORNERS, WALL SLEEVES, CONTROL ENCLOSURES ETC..
4. PROVIDE CUSTOM COLOR AS SELECTED BY THE ARCHITECT.
5. REMOTE TEMPERATURE SENSOR (ATC) CONTROL AND EMS INTERLOCK.
6. UNDER ALTERNATE No. 4, BBR-1 SHALL NOT BE PROVIDED

AIR DEVICE SCHEDULE

No. (Sx)	CFM MAX	NECK SIZE	COLLAR ø SIZE	MAX NC	TYPE (SEE SPEC.)
SUPPLY AIR DEVICE					
S1	200	9x9	8"ø	18	TITUS TDV
S2	325	12x12	10"ø	18	TITUS TDV
S3	485	15x15	12"ø	18	TITUS TDV
S4	700	18x18	14"ø	18	TITUS TDV
S5	100	6x6	6"ø	18	TITUS TDCA
S6	170	9x9	8"ø	18	TITUS TDCA
S7	325	12x12	10"ø	18	TITUS TDCA
S8	485	15x15	12"ø	18	TITUS TDCA
S9	700	18x18	14"ø	18	TITUS TDCA
S10	100	6x6	-	18	TITUS TDCA
S11	170	9x9	-	18	TITUS TDCA
S12	325	12x12	-	18	TITUS TDCA
S13	485	15x15	-	18	TITUS TDCA
S14	700	18x18	-	18	TITUS TDCA
S15	125	6x6	6"ø	18	TITUS TDC
S16	230	9x9	8"ø	18	TITUS TDC
S17	400	12x12	10"ø	18	TITUS TDC
S18	600	15x15	12"ø	18	TITUS TDC
S19	800	18x18	14"ø	18	TITUS TDC
S20	1000	21x21	16"ø	18	TITUS TDC
S21	125	6x6	-	18	TITUS TDC
S22	230	9x9	-	18	TITUS TDC
S23	400	12x12	-	18	TITUS TDC
S24	600	15x15	-	18	TITUS TDC
S25	800	18x18	-	18	TITUS TDC
S26	1000	21x21	-	18	TITUS TDC
S27	200	12x12/8"ø	-	18	TITUS TDC
S28	50	12x12/6"ø	-	18	TITUS TDC
S29	150	12x4	-	18	TITUS S300FS
S30	175	14x4	-	18	TITUS S300FS
S31	500	14"ø	-	25	TITUS XC-310
S32	800	18"ø	-	25	TITUS XC-310
S33	1000	20"ø	-	25	TITUS XC-310
S34	2000	30"ø	-	25	TITUS XC-310
S35	2800	36"ø	-	25	TITUS XC-310
S36	150	8x6	-	18	TITUS 300RS
S37	200	12x6	-	18	TITUS 300RS
S38	315	18x6	-	18	TITUS 300RS
S39	350	12x10	-	18	TITUS 300RS
S40	450	24x6	-	18	TITUS 300RS
S41	550	18x10	-	18	TITUS 300RS
S42	650	18x12	-	18	TITUS 300RS
S43	725	24x10	-	18	TITUS 300RS
S44	850	24x12	-	18	TITUS 300RS
S45	950	24x14	-	18	TITUS 300RS
S46	950	36x10	-	18	TITUS 300RS
S47	1100	24x18	-	18	TITUS 300RS
S48	1300	42x12	-	18	TITUS 300RS
S49	1700	36x18	-	18	TITUS 300RS
S50	2700	32x32	-	18	TITUS 300RS
RETURN AIR DEVICE					
R1	100	6x6	-	18	TITUS 350RL
R2	300	10x10	-	18	TITUS 350RL
R3	450	12x12	-	18	TITUS 350RL
R4	800	16x16	-	18	TITUS 350RL
R5	1000	18x18	-	18	TITUS 350RL
R6	1300	20x20	-	18	TITUS 350RL
R7	1660	22x22	-	18	TITUS 350RL
R8	3300	46x22	-	18	TITUS 350RL
R9	650	18x12	-	18	TITUS 350RL
R10	1275	30x12	-	22	TITUS 350RL
R11	1375	36x12	-	18	TITUS 350RL
R12	2470	42x18	-	18	TITUS 350RL
R13	2830	48x18	-	18	TITUS 50F
R14	1900	22x22	-	18	TITUS 50F
R15	4000	46x22	-	18	TITUS 50F
R16	1600	20x20	-	18	TITUS 50FF
R17	3400	42x20	-	18	TITUS 50FF
R18	700	24x12	-	18	TITUS 33RS
R19	1200	24x24	-	18	TITUS 33RS
R20	1700	36x24	-	18	TITUS 33RS
R21	2600	36x36	-	18	TITUS 33RS
R22	3100	42x36	-	18	TITUS 33RS
R23	3500	48x36	-	18	TITUS 33RS
R24	3600	42x42	-	18	TITUS 33RS
R25	4650	48x48	-	18	TITUS 33RS
R26	910	24x12	-	18	TITUS 350RL
R27	685	22x10	-	18	TITUS 350RL
R28	750	30x8	-	18	TITUS 350RL
R28	750	30x8	-	18	TITUS 350RL
R29	350	12x10	-	18	TITUS 350RL
EXHAUST AIR DEVICE					
E1	100	6x6	-	18	TITUS 350RL
E2	150	8x6	-	18	TITUS 350RL
E3	300	12x8	-	18	TITUS 350RL
E4	325	10x10	-	18	TITUS 350RL
E5	450	12x12	-	18	TITUS 350RL
E6	750	18x12	-	18	TITUS 350RL
E7	800	16x16	-	18	TITUS 350RL
E8	900	24x12	-	18	TITUS 350RL
E9	1200	24x16	-	18	TITUS 350RL
E10	1300	20x20	-	18	TITUS 350RL
E11	1550	22x22	-	18	TITUS 350RL
E12	1750	30x18	-	18	TITUS 350RL
E13	2450	42x18	-	18	TITUS 350RL
E14	2700	32x32	-	18	TITUS 350RL
E15	3300	46x22	-	18	TITUS 350RL

NOTES:
1. ALL SUPPLY AIR DIFFUSERS SHALL BE 4-WAY BLOW UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL SUPPLY AIR REGISTERS SHALL BE DOUBLE DEFLECTION WITH FRONT BLADES PARALLEL TO THE SHORT DIMENSION (VERTICAL).
3. PROVIDE 24x24 OR 48x24 MODULE FOR ALL LAY-IN SUPPLY, RETURN AND EXHAUST AIR DEVICES. TRIM MODULE AS NECESSARY TO FIT INTO GRID IF LESS THAN 24x24 OR 48x24 IS AVAILABLE.
4. EGGCRATE REGISTERS SHALL HAVE ½"x½"x1" DEEP ALUMINUM CORES.
5. EXHAUST REGISTERS CONNECTED TO STAINLESS STEEL DUCTWORK SHALL BE CONSTRUCTED OF STAINLESS STEEL.
6. FOR SUPPLY AIR DEVICES CONNECTED TO THE BOTTOM OF BRANCH DUCTS (ie SERVING MORE THAN ONE AIR DEVICE) PROVIDE DAMPER WITH GRID, TITUS AG-65 OR EQUAL.
7. NOT ALL AIR DEVICES SCHEDULED MAY BE USED.
8. COLLAR SIZE REFERS TO RUNNOUT CONNECTION TO SOUND LINED PLENUM BOX FABRICATED BY THE SHEET METAL CONTRACTOR CONNECTING TO THE DIFFUSER NECK. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
9. PROVIDE AIR EXTRACTOR FOR ALL SIDEWALL SUPPLY REGISTERS.
10. PROVIDE ALUMINUM CONSTRUCTION FOR ALL AIR DEVICES LOCATED IN LOCKER ROOMS, KITCHEN, ROOMS WITH SHOWERS AND ALL SCIENCE LABS.
11. ALL TDCA TYPE DIFFUSERS SHALL BE PROVIDED WITH ADJUSTABLE VANES, ACCESSIBLE FROM THE DIFFUSER FACE, WITH THE DISCHARGE PATTERN SET TO THE VERTICAL POSITION.

MECHANICAL LEGEND

SYMBOL	ABBREV	DEFINITION
	SA	SUPPLY AIR DUCT UP, DOWN
	RA	RETURN AIR DUCT UP, DOWN
	EA	EXHAUST AIR DUCT UP, DOWN
	OA	OUTSIDE AIR DUCT UP, DOWN
		RECT. TO ROUND TRANSITION
		FLEXIBLE CONNECTION (DUCTWORK)
		FLEXIBLE DUCT
	VD	MANUAL VOLUME DAMPER
	FD	FIRE DAMPER
	MOD	MOTOR OPERATED DAMPER
	SD	SMOKE DAMPER
	CD	COMBINATION FIRE/SMOKE DAMPER
	SL	ACOUSTICAL DUCT LINING
		DUCT TRANSITION
		CHANGE IN ELEVATION RISE (R); DROP (D)
	AMS	AIR MONITORING STATION
		SOUND ATTENUATOR
	DD	DUCT SMOKE DETECTOR
		ELBOW W/TURNING VANES
		RADIUS ELBOW
		RETURN AIR REGISTER W/BOOT
	T'STAT	THERMOSTAT
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		BALANCING VALVE
		MULTI-PURPOSE VALVE
		CHECK VALVE
		BUTTERFLY VALVE
		3-WAY MODULATING VALVE (ATC)
		2-WAY MODULATING VALVE (ATC)
	PRV	PRESSURE REDUCING VALVE
		NEEDLE VALVE
		PRESSURE RELIEF OR SAFETY VALVE
	HED	HOSE END DRAIN VALVE
		STRAINER W/HOSE END DRAIN VALVE & CAP
		COMBINATION BALANCING/SHUT-OFF VALVE
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		FLOW METER FITTING
		UNION
		FLANGE
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		FLEXIBLE CONNECTION (PIPING)
		THERMOMETER
		PRESSURE GAUGE W/NEEDLE VALVE
		TEMPERATURE SENSOR
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
	F&T	FLOAT AND THERMOSTATIC TRAP
		PIPE-TURN DOWN
		PIPE-TURN UP
		PIPE-TURN DOWN (DOUBLE LINE PIPE)
		PIPE-TURN UP (DOUBLE LINE PIPE)
		PIPE TEE UP
		PIPE TEE DOWN
		END CAP
		DIRECTION OF FLOW
		CONNECT TO EXISTING
		DEMOLITION ENDS HERE
		DRAWING NOTE DESIGNATION
		AIR DEVICE DESIGNATION
		EQUIPMENT BOX DESIGNATION

SYMBOL	ABBREV	DEFINITION
	AD	ACCESS DOOR
	AFF	ABOVE FINISHED FLOOR
	AFPF	AIRFOIL PLENUM FAN
	AHU	AIR HANDLING UNIT
	AMS	AIR MONITORING STATION
	AP	ACCESS PANEL
	APD	AIR PRESSURE DROP
	ATC	AUTOMATIC TEMPERATURE CONTROL
	BBR	BASEBOARD RADIATION
	BHP	BOILER HORSEPOWER
	BHP	BRAKE HORSEPOWER
	BTU	BRITISH THERMAL UNIT
	C	CLOSED
	CAP	CAPACITY
	CAV	CONSTANT AIR VOLUME
	CFM	CUBIC FEET PER MINUTE
	CONV	CONVECTOR
	CW	DOMESTIC COLD WATER
	CUH	CABINET UNIT HEATER
	DB	DRY BULB
	DB	DECIBEL
ø	DIA	DIAMETER
	DIFF	DIFFUSER
	DWG	DRAWING
	EAT	ENTERING AIR TEMPERATURE
	EF	EXHAUST FAN
	EFF	EFFICIENCY
	ELECT. CHAR.	ELECTRICAL CHARACTERISTICS
	EMS	ENERGY MANAGEMENT SYSTEM
	ERV	ENERGY RECOVERY VENTILATOR
	ESP	EXTERNAL STATIC PRESSURE
	EX	EXISTING
	EXH	EXHAUST
	ETR	EXISTING TO REMAIN
	E/W	EACH WAY
	EWT	ENTERING WATER TEMPERATURE
	F	FAN
	°F	DEGREES FAHRENHEIT
	FCU	FAN COIL UNIT
	FPM	FEET PER MINUTE
	FT H_2O	FEET WATER GAUGE
	FTR	FINNED TUBE RADIATION
	FZ	FREEZESTAT
G	G	NATURAL GAS
	GPM	GALLONS PER MINUTE
	HT	HEIGHT
	HW(x°)	DOMESTIC HOT WATER (TEMP.)
	HWR(x°)	DOMESTIC HOT WATER RECIRC. (TEMP.)
	HWG	HOT WATER GENERATOR
	HZ	HERTZ
	IN H_2O	INCHES WATER GAUGE
	KW	KILOWATT
	LAT	LEAVING AIR TEMPERATURE
	LBS	POUNDS
	LF	LINEAR FOOT
	LWT	LEAVING WATER TEMPERATURE
	MAX	MAXIMUM
	MBH	BTU PER HOUR (THOUSAND)
	MIN	MINIMUM
	NC	NOISE CRITERIA
	N.C.	NORMALLY CLOSED
	No.	NUMBER
	N.O.	NORMALLY OPEN
	OAF	OUTSIDE AIR FAN
	O/C	ON CENTER
	OED	OPEN END DUCT
	P	PUMP
	PA	PRIMARY AIR
	PD	PRESSURE DROP
	PSI	POUNDS PER SQUARE INCH
	RAF	RETURN AIR FAN
	REG	REGISTER
	REQ'D	REQUIRED
	RPM	REVOLUTIONS PER MINUTE
	RX	REMOVE EXISTING
	SAF	SUPPLY AIR FAN
SAN	SAN	SANITARY
	SB	STAND-BY
	SENS	SENSIBLE
SP	SP	SPRINKLER PIPING
	SP	STATIC PRESSURE
	SQ	SQUARE
	STD	STANDARD
	SWT	SUPPLY WATER TEMPERATURE
	TEMP	TEMPERATURE
	TONS	TONS OF REFRIGERATION
	V	VENT
	V	VOLTS
	VEL	VELOCITY
	VSD	VARIABLE SPEED DRIVE
	W/	WITH
	WB	WET BULB
	WG	WATER GAUGE
	WPD	WATER PRESSURE DROP
	ΔT	TEMPERATURE DIFFERENCE
	%	PERCENT
	ϕ	ELECTRICAL PHASE

MECHANICAL EQUIPMENT NOTES

1. AIR CURTAIN No.1-3

GENERAL:
72" WIDE SLOT
2443 CFM AVG. AIR FLOW RATE, 3800 FPM AVG. AIR VELOCITY
2 MOTORS @ 3/4 HP, 208V/3Ø/60HZ
MCA: 62.7A MOCP: 80A
ELECTRIC HEATING COIL @ 20KW
SINGLE POINT POWER CONNECTION
UL LISTED
POWERED AIRE MODEL CHA-2-72E
364 LBS MAX WEIGHT
MOUNTED TO WALL WITH ADJUSTABLE MOUNTING SYSTEM,
WASHABLE ALUMINUM FILTERS
PROVIDE PRE-PROGRAMMED CRUISE CONTROL SWITCH WITH LCD DISPLAY LOCATED IN DIRECTOR'S OFFICE.
COORDINATE ALL WIRING, PROGRAMMING, COMMISIONING, CALIBRATION ETC WITH MANUFACTURER FOR A FULLY TURNKEY SYSTEM.
PROVIDE DOOR ACTIVATION SWITCH TO MATCH DOOR TYPE.
CUSTOM COLOR AND FINISH AS SELECTED BY ARCHITECT
(LOCATE ABOVE DOOR OF MAIN ENTRANCE)

ALBAN ENGINEERING, INC
303 INTERNATIONAL CIRCLE, SUITE 450
HUNT VALLEY, MD 21030
P.N. 17002 410.842.6411
www.albanengineering.com

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Suite 600
Calverton, MD 20705
Tel: 301.595.1000
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GP #21633

MISCELLANEOUS SCHEDULES AND LEGEND

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

M-9.2

2/15/18
BID SET

PLUMBING FIXTURE SCHEDULE

DESIG.	FIXTURE	ROUGH-IN CONNECTION				FIXTURE UNIT VALUES			GPM FLOW RATE	WATER TEMPERING DEVICE (WTD)	REMARKS
		C.W.	H.W.	SAN.	VENT	C.W.	H.W.	SAN.			
P1	WATER CLOSET (W/H)	1"	---	4"	2"	10	---	4	1.28 GPF	---	ADULT STANDARD; WALL MOUNTED, BACK OUTLET
P1A	WATER CLOSET (W/H)	1"	---	4"	2"	10	---	4	1.28 GPF	---	ADULT ADA ACCESSIBLE; WALL MOUNTED, BACK OUTLET
P2	URINAL (W/H)	3/4"	---	2"	1½"	5	---	4	0.13 GPF	---	STANDARD
P2A	URINAL (W/H)	3/4"	---	2"	1½"	5	---	4	0.13 GPF	---	ADA ACCESSIBLE
P3	LAVATORY	1/2"	1/2"	1½"	1½"	1.5	1.5	1	1.2	WTD-1	ADULT; ADA ACCESSIBLE - COUNTER MOUNTED VESSEL SINK
P3A	LAVATORY	1/2"	1/2"	1½"	1½"	1.5	1.5	1	1.2	WTD-1	ADULT; ADA ACCESSIBLE - UNDER COUNTER MOUNTED
P4	MOP SINK	3/4"	3/4"	3"	1½"	2.25	2.25	2	2.5	WTD-1	
P4A	MOP SINK	3/4"	3/4"	3"	1½"	2.25	2.25	2	2.5	WTD-1	
P5	ELECTRIC WATER COOLER	1/2"	---	1½"	1½"	.25	---	.5	---	---	ADA ACCESSIBLE, SIDE-BY-SIDE W/ BOTTLE FILLER
P6	COUNTER SINK	1/2"	1/2"	1½"	1½"	1.5	1.5	2	0.5	WTD-1	ADA ACCESSIBLE
P6A	COUNTER SINK (ORCHESTRA BAR)	1/2"	1/2"	1½"	1½"	1.5	1.5	2	0.5	WTD-1	ADA ACCESSIBLE
P6B	HAND SINK (CATERING)	1/2"	1/2"	1½"	1½"	1.5	1.5	2	0.5	WTD-1	ADA ACCESSIBLE
P6C	COUNTER (MEZZANINE)	1/2"	1/2"	1½"	1½"	1.5	1.5	2	0.5	WTD-1	ADA ACCESSIBLE
P7	ICE MAKER BOX	1/2"	---	---	---	1	---	---	---	---	FIRE RATED SUPPLY BOX

NOTES:

1) W/H = WALL HUNG

2) LOCATE ROUGH IN FOR HANDICAPPED TOILETS SO THAT FLUSH VALVE HANDLE IS IN THE WIDE SIDE OF THE STALL

3) SLAB ON GRADE FIXTURE DRAINS SHALL BE 2" MINIMUM.

PUMP SCHEDULE

NO.	SERVICE	LOCATION	GPM	FT. OF HEAD	HP	RPM	ELECT. CHAR. V/ø/Hz	TYPE	REMARKS (BASED ON)
RP-1	140° HOT WATER RECIRCULATION	UTILITY ROOM M009	5.5	30	1/3	3450	120/1/60	IN-LINE CIRCULATOR	TACO MODEL 2400-45S-3P

NOTES:
PUMP SHALL BE MADE OF ALL STAINLESS STEEL MATERIAL WHERE POSSIBLE, AND SHALL COMPLY WITH NSF 61 FOR DOMESTIC WATER SYSTEMS.

GAS BOOSTER PUMP SCHEDULE

NO.	SERVICE ③	LOCATION	CFH	ΔP (IN WC)	HP	RPM	ELECT. CHAR. V/ø/Hz	③ TYPE	REMARKS (BASED ON)
GB-1	HIGHER PRESSURE GAS TO BUILDING	UTILITY ROOM M009	4500	20.8	1	3500	208/3/60	HERMETICALLY SEALED MULTI-STAGE BOOSTER	SPENCER TURBINE MODEL GL-075-3/4-R

NOTES:
1. PUMP SHALL HAVE TOP INLET AND TOP OUTLET

PLUMBING EQUIPMENT NOTES

1. HOT WATER GENERATOR #1 (HWG-1)

HOT WATER GENERATOR SHALL BE ULTRA HIGH EFFICIENCY, GAS FIRED TYPE.
ASME TANK RATED FOR 150 PSI WORKING PRESSURE
WITH A.G.A. RATED T & P VALVE.
TANK CAPACITY: 100 GALLONS
BURNER CAPACITY: 199,900 BTUH
RECOVERY RATE: 233 GPH @ 100°F RISE
120v/1 PH/60Hz, UNIT SHALL BE UL LISTED
AND SHALL MEET OR EXCEED ASHRAE/IES-90.1-2007
BASIS OF DESIGN PVI CONQUEST 20 L 100A-GCL

2. WATER TEMPERING DEVICES

WATER TEMPERING DEVICE #1 (WTD-1)

PROVIDE FOR ALL FIXTURES FOR WHICH HOT WATER IS PROVIDED
TEMPER WATER FROM 140°F TO 110°F
ASSE 1070 RATED, NSF-61 CERTIFIED
ADJUSTABLE TEMPERATURE CONTROL WITH LOCKING FEATURE
SHALL HAVE INTEGRAL WALL BRACKET FOR MOUNTING.
CHICAGO FAUCET MODEL 131-ABNF OR AS APPROVED EQUAL

3. ELEVATOR SUMP PUMP #1 & #2

SUMP PUMP SHALL BE STANCOR OIL MINDER CONTROL SYSTEM MODEL SE-50. ASME A17.1, UL508 AND UL778 APPROVED. COMPLETE WITH NEMA 4X FIBERGLASS ENCLOSURE, STAINLESS STEEL SENSOR PROBE, PLUG IN POWER HOOK-UP.

A. ½ HP, 120V/10/60HZ, 3600 RPM WITH 2" DISCHARGE

B. 2" CHECK VALVE

C. JUNCTION BOX WITH MULTI-PIN CONNECTOR AND CORD IN LENGTHS AS REQUIRED

D. OIL-MINDER POWER CABLE, PROBE CABLE AND FLOAT CABLE

E. HIGH LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT ON PUMP DISCHARGE

F. CONTROL SYSTEM SHALL HAVE BUILT-IN AUDIBLE AND VISUAL ALARM WHEN THE PUMP DOESN'T OPERATE DUE TO OIL IN THE PIT, HIGH AMPERAGE OR HIGH LIQUID CONDITION. PROVIDE SILENCING BUTTON IN THE CONTROL PANEL. PROVIDE ADDITIONAL CONTACTS FOR MONITORING THROUGH THE ATC SYSTEM.

PLUMBING COUNTS- MTA- NEW BUILDING ONLY

Use Group	Description	No. of Occupants	Water Closet		Lavatories		Drink Fountains	Other
			Male	Female	Male	Female		
A-2			75	75	200	200	500	1 Sink
A-2	Event Space	430						
Total A-2			2.866667	2.86667	1.075	1.075	0.43	1
A-1 / A-3			125	65	200	200	500	1 Sink
A-1	Assembly Concentrated - Theatre- Orchestra Floor	686						
A-1	Assembly Concentrated - Theatre- Second Floor	610						
A-3	Assembly UnConcentrated - Rehearsal Studio	111						
A-3	Assembly UnConcentrated - Orchestra Lobby	364						
A-3	Assembly UnConcentrated - Second Floor	138						
A-3	Assembly UnConcentrated - (Basement) Gallery	43						
A-3	Assembly UnConcentrated - VIP (ALT 2)	21						
Total A-3		1,973	7.892	15.1769	4.9325	4.9325	3.946	1
B			1 per 25 first 50 after 1 per 50	1 per 25 first 50 after 1 per 50	1 per 40 first 80 after 1 per 80	1 per 40 first 80 after 1 per 80	100	1 Sink
B	Business Areas - Orchestra Floor	13						
B	Business Areas - Second Floor	41						
B	Business Areas - Third Floor	86						
Total B		140	4	4	1.875	1.875	1.4	1
S-1	Basement Floor	5	100	100	100	100	1000	1 Sink
Total S		5	0.025	0.025	0.025	0.025	1	1
		Urinals	10					
		WC	5					
TOTAL REQUIRED		**GRAND TOTALS**	**15**	**23**	**8**	**8**	**7**	**4**
ACTUAL	BASEMENT		**Water Closet**		**Lavatories**		**Drink Fountains**	**Other**
			Male	Female	Male	Female		
	Urinals		3 4	9	6	6		
	Total		7	9	6	6	2	1
	ORCHESTRA		**Water Closet**		**Lavatories**		**Drink Fountains**	**Other**
	Total							1
	MEZZANINE		**Water Closet**		**Lavatories**		**Drink Fountains**	**Other**
			Male	Female	Male	Female		
	Urinals		1 2	4	2	3		
	Total		3	4	2	3	2	1
	THIRD FLOOR		**Water Closet**		**Lavatories**		**Drink Fountains**	**Other**
			Male	Female	Male	Female		
	Urinals		1 2	4	2	3		
	Total		3	4	2	3	2	1
	FOURTH FLOOR		**Water Closet**		**Lavatories**		**Drink Fountains**	**Other**
			Male	Female	Male	Female		
	Urinals		2 2	4	5	5		
	Total		4	4	5	5	2	
	TOTALS		17	21	15	17	8	4
UNISEX RESTROOMS	FAMILY TOILET (BSMT)		1		1			
	STAFF TOILET (ORCH)			1		1		
	STAR DRESSING (3RD)			1		1		
TOTAL PROVIDED (NEW ONLY)		**GRAND TOTAL**	**18**	**23**	**16**	**19**	**8**	**4**
TOTAL PROVIDED (EXISTING + NEW)		**GRAND TOTAL**	**24**	**34**	**20**	**25**	**9**	**4**

GENERAL NOTES: (PLUMBING)

A. COORDINATE NEW WORK BETWEEN ALL DISCIPLINES.

B. REFER TO SECTIONS ON ARCHITECTURAL AND MECHANICAL DRAWINGS FOR PIPE ROUTING THROUGH THE FACILITY.

C. CONDENSATE FROM HVAC EQUIPMENT COILS SHALL BE PIPED TO THE STORM DRAIN SYSTEM PIPING.

D. COORDINATE PLUMBING PIPING ENCLOSURES WITH ARCHITECTURAL DRAWINGS PRIOR TO SETTING PIPING BELOW SLABS.

E. COORDINATE FLOOR DRAIN AND OPEN HUB DRAIN LOCATIONS WITH MECHANICAL EQUIPMENT PLACEMENT PRIOR TO SETTING FLOOR DRAINS. DRAINS SHALL BE LOCATED AS CLOSE TO EQUIPMENT DRAIN POINTS AS POSSIBLE.

F. FIELD VERIFY PIPING MATERIALS AND SIZES PRIOR TO CONNECTION THERETO.

G. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER SYSTEM BRANCH LINES SERVING TWO OR MORE FIXTURES.

H. INSTALL PIPING TO ALLOW ACCESS TO VALVES.

J. WHERE HOT AND COLD WATER PIPING DROPS INTO PIPE CHASE, THE SIZE SHOWN FOR THE PIPE DROPS SHALL BE USED TO THE LAST FIXTURE.

K. ITEMS SUCH AS ACCESS DOORS, RISE AND DROPS IN PIPING, ETC., ARE INDICATED ON THE DRAWINGS FOR CLARITY OR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THESE ITEMS AS REQUIRED ELSEWHERE IN THE CONTRACT DOCUMENTS.

L. ALL PLUMBING FIXTURES SHALL HAVE A MINIMUM AIR GAP FROM THE LOWEST END OF A POTABLE WATER OUTLET TO THE FLOOD RIM OR LINE OF THE FIXTURE INTO WHICH IT DISCHARGES. THE AIR GAP SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF A POTABLE WATER OUTLET UNLESS THE OUTLET IS A DISTANCE LESS THAN 3 TIMES THE EFFECTIVE OPENING AWAY FROM A WALL OR SIMILAR VERTICAL SURFACE IN WHICH CASE THE MINIMUM REQUIRED AIR GAP SHALL BE 3 TIMES THE EFFECTIVE OPENING OF THE OUTLET.

M. FIXTURES SUBJECT TO INTERMITTENT OR CONTINUOUS PRESSURE BACK-SIPHONAGE SHALL BE PROVIDED WITH A BACKFLOW PREVENTION DEVICE.

N. FIXTURES WHICH DISCHARGE INDIRECTLY INTO A FLOOR DRAIN OR FLOOR SINK SHALL DISCHARGE WITH AN AIR GAP EQUAL TO TWICE THE DIAMETER OF THE FIXTURE DISCHARGE PIPE.

O. COORDINATE SETTING OF KITCHEN FLOOR SINKS AND FLOOR DRAINS WITH LOCAL PLUMBING INSPECTOR.

P. ALL PIPING NOT INDICATED IN CHASES SHALL BE LOCATED ABOVE CEILING AS HIGH AS POSSIBLE. COORDINATE ROUTING OF PIPING WITH OTHER DISCIPLINES.

Q. REFER TO ALL ARCHITECTURAL DRAWINGS FOR RATED WALL ASSEMBLY LOCATIONS.

R. ALL COMPONENTS OF THE DOMESTIC WATER SYSTEMS SHALL BE NSF-61 CERTIFIED

S. PROVIDE WATER HAMMER ARRESTORS WHERE QUICK CLOSING VALVES ARE INSTALLED. INSTALLATION AND QUANTITY SHALL BE PER MANUFACTURERS RECOMMENDATIONS. WATER HAMMER ARRESTORS SHALL BE ACCESSIBLE FOR MAINTENANCE.

T. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR PROTECTING ALL DRAINS DURING THE CONSTRUCTION AND RETURNING THEM FREE FLOWING AND IN WORKING CONDITION. CONTRACTOR SHALL GUARANTEE ALL DRAINS FOR AT LEAST 90 DAYS AFTER OCCUPATION OF THE BUILDING.

U. REFER TO STRUCTURAL DRAWINGS FOR INFORMATION AND RECOMMENDATIONS FOR PENETRATION OF HOLLOW CORE PRECAST PLANKS BETWEEN FLOOR LEVELS.

LEGEND

SYMBOLS

SYMBOL	DEFINITION
	COLD WATER
	TEMPERED WATER (110°)
	TEMPERED WATER RETURN (110°)
	140° DOMESTIC HOT WATER
	140° DOMESTIC HOT WATER RETURN
T	TEMPERED WATER
F	FIRE LINE
SP	SPRINKLER LINE
	SANITARY
	VENT
	STORM WATER
PD	PUMPED DISCHARGE
COND	CONDENSATE DRAIN
	FOUNDATION DRAIN
AW	ACID RESISTANT WASTE
AV	ACID RESISTANT VENT
C	COMPRESSED AIR
	BALL VALVE
	PIPING BELOW GRADE OR SLAB
	BUTTERFLY VALVE
	UNION
	GATE VALVE
	GLOBE VALVE
	BALANCING VALVE
	PLUG VALVE
PRV	REDUCED PRESS. BACKFLOW PREVENTER
	PRESSURE REDUCING VALVE
	CHECK VALVE
DDCV	DOUBLE DETECTOR CHECK VALVE
	BACKWATER VALVE
	FLOOR CLEANOUT
	WALL CLEANOUT
	PIPE UP
	PIPE UP & DOWN
	PIPE DOWN
	SIGHT GLASS
	FLOAT VALVE
	FLOOR DRAIN
	FLOOR DRAIN WITH TRAP PRIMER
	FLOOR SINK
(F)	ROOF DRAIN (W/ SQ.FT INDICATED)
	TRAP (ELEVATION)
	VENT THROUGH ROOF (ELEVATION)
	VENT THROUGH ROOF (PLAN)
	MIXING VALVE
	METER (FLUID OR GAS)
"	INCHES
'	FEET
	HOSE BIBB (PLAN)
	NON-FREEZE WALL HYDRANT
	HOSE BIBB (ELEV.)
	HOSE END DRAIN
TS	OUTSIDE STEM & YOKE VALVE
OSYS	NON-RISING STEM & YOKE
FS	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
	FIRE DEPT HOSE CONNECTION
FS	FLOOR CONTROL VALVE ASSEMBLY
	'Y' STRAINER
	WATER HAMMER ARRESTOR
	ACCESS PANEL
	POINT OF CONN. TO SITE UTILITIES
	SQUARE FOOTAGE
	DUPLEX GAS OUTLET
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	FLEXIBLE CONNECTION
	CAPPED PIPE
	BLIND FLANGE
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	BLOW DOWN VALVE (W/HOSE END)
	PRESSURE/TEMP. RELIEF VALVE
ΔP	PRESSURE DIFFERENCE
ΔT	TEMPERATURE DIFFERENCE
	CENTER LINE
	THERMOMETER
	PRESSURE GAUGE W/ NEEDLE VALVE
Ø	DIAMETER (OR ELECTRICAL PHASE)
	BACK WATER VALVE W/ ACCESS COVER
	SOLENOID VALVE
-%	SLOPE OF PIPE (WITH % OF SLOPE SHOWN)
	DIRECTION OF FLOW
	FUNNEL CONNECTION @ FLOOR DRAIN
S-A-1	SANITARY/WATER RISER DESIGNATION

NOTE: NOT ALL SYMBOLS MAY BE USED.

ABBREVIATIONS

ABBREV.	DEFINITION
140°	140° DOMESTIC HOT WATER
140°R	140° DOMESTIC HOT WATER RETURN
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ANC	ANCHOR
AP	ACCESS PANEL
APPROX	APPROXIMATE
AQ	AQUASTAT
AV	ACID VENT
AW	ACID WASTE
BDV	BLOW DOWN VALVE
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOP	BOTTOM OF PIPE
BOTT	BOTTOM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACK WATER VALVE W/ ACCESS COVER
CAP	CAPACITY
CD, COND	CONDENSATE DRAIN
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT
CONC	CONCRETE
CU FT	CUBIC FEET
CW	COLD WATER
CX	CONNECT TO EXISTING
DDC	DOUBLE DETECTOR CHECK VALVE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DISH	DISCHARGE
DN	PIPE DOWN
DS	DOWN SPOUT W/BOOT
DST	DEEP SEAL TRAP
DWG	DRAWING
ELEC	ELECTRIC
ELEV	ELEVATION
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
F	FIRE LINE
FC	FUNNEL CONNECTION @ FD
FCO	FLOOR CLEANOUT
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FD	FLOOR DRAIN
FDV	FIRE DEPT. HOSE CONNECTION
FS	FLOW SWITCH
FT	FEET
FT.HD	FEET OF HEAD
G	GAS
GA	GAUGE
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HED	HOSE END DRAIN
HOR	HORIZONTAL
HP	HORSEPOWER
HT	HEAT TRAP
HW	HOT WATER (140°F)
HWR	HOT WATER RETURN (140°F)
HYD	HYDRAULIC
IN	INCHES
I.E.	INVERT ELEVATION
IW	INDIRECT WASTE
LOC	LIMIT OF CONTRACT
MAV	MANUAL AIR VENT
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NRS	NON-RISING STEM & YOKE
OFD	OVER FLOW DRAIN
OHD	OPEN HUB DRAIN
O,S,&Y	OUTSIDE STEM & YOKE VALVE
P	PRESSURE
PCOND	PUMPED CONDENSATE
PD	PUMPED DISCHARGE
PH	PIPE HANGER
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSAN	PUMPED SANITARY
PSC	PUMPED STEAM CONDENSATE
RD	ROOF DRAIN
RL	RAIN LEADER
RX	REMOVE, EXISTING
SAN, S	SANITARY
SC	STEAM CONDENSATE
SCH	SCHEDULE
SP	SPRINKLER LINE
STD	STANDARD
SW	STORM WATER
T	TEMPERATURE
TD	TRENCH DRAIN
TS	TAMPER SWITCH
TW	TEMPERED WATER
TWR	TEMPERED WATER RETURN
UP	PIPE UP
UP&DN	PIPE UP & DN
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WSFU	WATER SUPPLY FIXTURE UNITS
TD	TRENCH DRAIN

NOTE:
NOT ALL ABBREVIATIONS MAY BE USED.

ALBAN ENGINEERING, INC
CIVIL • MECHANICAL • STRUCTURAL
HUNT VALLEY, MD 21030
410.628.4411
www.albanengineering.com

11720 Beltsville Drive
Suite 600
Calverton, MD 20705
Tel: 301.595.1000

GRIMM AND PARKER
www.grimmandparker.com

GP #21633

PLUMBING SCHEDULES, NOTES, & LEGEND

THE MARYLAND THEATRE EXPANSION & RENOVATION
21 SOUTH POTOMAC ST. HAGERSTOWN, MD 21740

DATE	DESCRIPTION
3/28/18	ADD 3

P-9.1

2/15/18
BID SET