### **ADDENDUM NO. 1**

DATE: February 25, 2020

ARCHITECT: Smolen, Emr, Ilkovitch Architects, Inc.

9211 Corporate Blvd., Suite 340 Rockville, Maryland 20850 Phone: (301) 770-0177 Fax: (301) 330-3224

OWNER: Howard County Public School System

PROJECT: Hammond High School Renovation and Addition

Columbia, Maryland

Architect Project No. 17014

TO: All Prospective Bidders

The following changes are made a part of the Drawings and Specifications for the subject project, dated February 25, 2020. Receipt of this Addendum is to be acknowledged, in the space provided in the Bid Form. Failure to do so may subject the Bid to be considered as non-responsive.

### A. REQUESTS FOR INFORMATION

1. Please clarify the date of the of the Pre-Bid meeting.

**RESPONSE:** The Bid Announcement provided by J. Vinton Schafer & Sons, Inc. provided incorrect information regarding the Pre-Bid. Please be advised the Pre-Bid Date shall be as per Contract Documents on Tuesday, March 3, 2020 at 3:30 PM at the Hammond High School.

### **B. CHANGES TO SPECIFICATIONS**

■ None

### C. CHANGES TO DRAWINGS

### 1. <u>CIVIL DRAWINGS</u>

### 2. ARCHITECTURAL DRAWINGS

■ None

### 3. THEATER / AV DRAWINGS

□ Add attached drawings listed on the sheet index, but not included within PDF made available for download.

### 4. KITCHEN DRAWINGS

 Add attached drawings listed on the sheet index, but not included within PDF made available for download.

## HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

	5.	STRUCTURAL DRAWINGS
		<ul> <li>Add attached drawings listed on the sheet index, but not included within PDF made available for download.</li> </ul>
	3.	MECHANICAL DRAWINGS
		□ None
	4.	PLUMBING DRAWINGS
		□ None
	5.	FIRE PROTECTION DRAWINGS
		□ None
	6.	ELECTRICAL DRAWINGS
		□ None
D.	ΑT	TACHMENTS
	1.	ADDENDUM DRAWINGS
		<ul> <li>Theater / AV Drawings</li> <li>Kitchen Drawings</li> <li>Structural Drawings</li> </ul>
	2.	ADDENDUM SPECIFICATIONS
		□ None
	3.	<u>OTHER</u>
		□ None

**END OF ADDENDUM NO. 1** 

## AUDIO/VISUAL SYMBOLS

- PLAN NOTE NUMBER.
- HARD-WIRED ELECTRICAL POWER CONNECTION. SEE NOTE FOR DETAILS.
- 20A 120V DUPLEX POWER RECEPTACLE 18" AFF U.N.O.
- 20A 120V QUADPLEX POWER RECEPTACLE 18" AFF U.N.O.
- NETWORK DATA OUTLET 18" AFF U.N.O. "#" INDICATES QUANTITY OF DEVICE PORTS.
- PROVIDE LIFE SAFETY SYSTEM RELAY / DRY CONTACT CLOSURE WHERE SHOWN FOR INTERFACING WITH THE AV SYSTEM.
- PROVIDE SCHOOL PUBLIC ADDRESS SYSTEM LOUDSPEAKER LEVEL SIGNAL WHERE SHOWN FOR INTERFACING WITH THE AV SYSTEM.
- FLOOR BOX. SEE NOTE FOR DETAILS.
- AUDIO-VISUAL EQUIPMENT RACK, DRAWN TO SCALE
- WALL BOX. "#" INDICATES GANG SIZE OF WALL BOX. WHERE NO GANG SIZE IS INDICATED SEE NOTE FOR BACK BOX DETAILS.
- AUDIO & VIDEO LEVEL SIGNALS WALL BOX.
- CAMERA VIDEO AND CONTROL SIGNALS WALL BOX.
- LOW VOLTAGE CONTROL PANEL SIGNALS WALL BOX.
- DANTE AUDIO NETWORK SIGNALS WALL BOX.
- INTERCOM WALL BOX.
- JUNCTION / PULL BOX, SIZE AND SERVICE AS NOTED.
- MICROPHONE LEVEL SIGNALS WALL BOX.
- RADIO FREQUENCY ANTENNA LEVEL SIGNALS WALL BOX.
- LOW VOLTAGE SCREEN CONTROL SIGNALS WALL BOX.
- LOUDSPEAKER LEVEL SIGNALS WALL BOX.
- LOW VOLTAGE VOLUME CONTROL WALL BOX.
- VIDEO PROJECTOR SIGNALS WALL BOX.
- WIRELESS ACCESS POINT WALL BOX / WALL MOUNTED WIRELESS ACCESS POINT.
- CEILING BOX. "#" INDICATES GANG SIZE OF CEILING BOX. WHERE NO GANG SIZE IS INDICATED SEE NOTE FOR BACK BOX DETAILS.
- CAMERA VIDEO AND CONTROL SIGNALS CEILING BOX.
- MICROPHONE LEVEL SIGNALS CEILING BOX.
- LOUDSPEAKER LEVEL SIGNALS CEILING BOX.
- WIRELESS ACCESS POINT CEILING BOX / CEILING MOUNTED WIRELESS ACCESS POINT.
- CEILING LOUDSPEAKER (DRAWN TO SCALE), DESIGNATION AS NOTED.
- INSTALLED MICROPHONE. ARROW INDICATES DIRECTION OF PICKUP M-1 PATTERN. TEXT INDICATES MICROPHONE DESIGNATION.
- FLOOR MOUNTED BOUNDARY MICROPHONE (PORTABLE). ARROW INDICATES DIRECTION OF PICKUP PATTERN.
- HORIZONTAL CABLE MANAGEMENT SYSTEM. SEE NOTE FOR DETAILS

## SPECIAL REQUIREMENTS - EXISTING CONDITIONS

- PROVIDE A SITE INSPECTION TO DOCUMENT EXISTING EQUIPMENT AND CONDITIONS. MAKE NOTE OF EXISTING CONDITIONS OR ANY OTHER CONFLICTS THAT COULD AFFECT THE INSTALLATION OF NEW AUDIO-VISUAL SYSTEMS AS INDICATED ON THESE DRAWINGS IN A WRITTEN REQUEST FOR INFORMATION (RFI).
- PROVIDE LABOR TO UNINSTALL EXISTING AUDIO-VISUAL EQUIPMENT NOT INTENDED TO BE REUSED AS PART OF THE NEW AUDIO-VISUAL SYSTEM AND HAND OVER ALL DECOMMISSIONED EQUIPMENT TO THE OWNER IN GOOD WORKING ORDER.
- REVIEW THESE DRAWINGS FOR ALL REFERENCES TO EXISTING AND OWNER FURNISHED EQUIPMENT AND COORDINATE WITH OWNER THE DECOMMISSIONING OF EXISTING EQUIPMENT.
- 4. TEST AND VERIFY ALL EXISTING EQUIPMENT INTENDED TO BE REUSED IN THE NEW AUDIO-VISUAL SYSTEMS OPERATES AS INTENDED. REPORT TO THE OWNER ANY EQUIPMENT THAT REQUIRES REPAIR OR REPLACEMENT PRIOR TO INSTALLATION.
- COORDINATE WITH THE OWNER THE INSTALLATION OF EQUIPMENT (NEW, EXISTING, AND OWNER FURNISHED), PROVIDING ALL NECESSARY ACCESSORIES AND INTERFACING COMPONENTS FOR A COMPLETE, WORKING SYSTEM MEETING THE OWNER'S REQUIREMENTS.

## **GENERAL NOTES**

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- PRIOR TO BIDDING, REVIEW THE PROJECT DRAWINGS AND SPECIFICATIONS TO BECOME FAMILIAR WITH THE PROJECT SCOPE AND AUDIO-VISUAL SYSTEM REQUIREMENTS.
- 2. ADVISE THE ARCHITECT AND AUDIO-VISUAL CONSULTANT OF ANY DISCREPANCIES THAT WILL AFFECT THE INSTALLATION OF THE AUDIO-VISUAL SYSTEMS. OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR
- OFFICIALS IF REQUIRED BY LOCAL CODE. 4. COORDINATE THE INSTALLATION OF THE AUDIO-VISUAL SYSTEMS WITH THE BASE BUILDING ELECTRICAL WORK, INCLUDING CONDUIT, BACK BOXES, PULL BOXES, JUNCTION BOXES, CABLES, AND ELECTRICAL POWER AS SHOWN ON THE ELECTRICAL DRAWINGS AND AUDIO-VISUAL SYSTEM

INSPECTION OF THE AUDIO-VISUAL SYSTEMS BY LOCAL

- INFRASTRUCTURE DRAWINGS. 5. COORDINATE WITH ARCHITECT ALL INFRASTRUCTURE REQUIREMENTS SHOWN ON THESE DRAWINGS INCLUDING BUT NOT LIMITED TO FLOOR BOX LOCATIONS. BACK BOX LOCATIONS AND ELEVATIONS, AND CONDUIT ROUTING. OBTAIN ARCHITECT'S APPROVAL BEFORE COMMENCING
- WITH WORK VERIFY THE BASE BUILDING ELECTRICAL INFRASTRUCTURE IS COMPLETE AND CORRECT FOR THE AUDIO-VISUAL SYSTEM
- SUPPLY AND INSTALL MISCELLANEOUS CONDUIT, BACK BOXES, PULL BOXES, JUNCTION BOXES, AND CABLES TO RESULT IN A COMPLETE SYSTEM TO THE EXTENT THESE ITEMS ARE NOT SUPPLIED OR INSTALLED BY THE ELECTRICAL CONTRACTOR.
- 8. LOUDSPEAKERS SHOWN ON THESE DRAWINGS SHALL BE PROVIDED AND INSTALLED BY THE AUDIO-VISUAL CONTRACTOR.

CABLES AND FUNCTIONS.

SUPPLY AND TERMINATE AUDIO-VISUAL SYSTEM CABLES. 10. SUPPLY AND INSTALL ALL AUDIO-VISUAL SYSTEM ELECTRONICS, COMPONENT ITEMS, CONTROL SOFTWARE PROGRAMMING, AND PROVIDE TESTING TO ENSURE COMPLETE AND WORKING SYSTEMS.

## **ELECTRICAL CONTRACTOR INSTALLATION RESPONSIBILITIES**

1. EXISTING CONDITIONS: PROVIDE LABOR TO REMOVE ALL EXISTING LOW VOLTAGE CABLING AND ASSOCIATED **CONDUITS SERVING EXISTING AUDITORIUM AUDIO-VISUAL EQUIPMENT NOT BEING RETAINED FOR USE IN THE NEW AUDIO-VISUAL SYSTEM.** 

L2. ALL ELECTRICAL POWER REQUIREMENTS INDICATED ON

- AUDIO-VISUAL DRAWINGS ARE SHOWN FOR COORDINATION PURPOSES ONLY AND SHALL BE PROVIDED UNDER DIVISION 26. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL POWER INFRASTRUCTURE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR. 13. THE INSTALLATION OF ALL CONDUITS, BACK BOXES, PULL
- BOXES, JUNCTION BOXES, AND ELECTRICAL POWER SHOWN ON THESE AUDIO-VISUAL DRAWINGS SHALL BE PROVIDED UNDER DIVISION 26.
- 14. POWER REQUIREMENTS INDICATED ON THESE AUDIO-VISUAL DRAWINGS SHALL BE SERVED BY A BREAKER PANEL DEDICATED TO AUDIO-VISUAL SYSTEMS AND ELECTRICALLY ISOLATED FROM OTHER POWER CIRCUITS SERVING LIGHTING CONTROL SYSTEMS, MOTORS, OR OTHER NOISE-GENERATING

## AUDIO-VISUAL SYSTEM INFRASTRUCTURE REQUIREMENTS

15. ALL CONDUITS SHALL BE EMT OF MINIMUM 1" DIAMETER

UNLESS NOTED OTHERWISE.

- 16. CONDUITS SHALL BE PROVIDED SIZED AS INDICATED OR SIZED AS REQUIRED FOR 40 PERCENT FILL, WHICHEVER IS LARGER. 17. CONDUIT RUNS IN EXCESS OF 100 FT SHALL HAVE
- INTERMEDIATE JUNCTION BOXES EVERY 100 FT OR AT 3 BEND INTERVALS, WHICHEVER IS SHORTER. 18. CONDUIT FIELD BENDS AND OFFSETS SHALL BE AVOIDED WHENEVER POSSIBLE. FIELD BENDS SHALL BE MADE TO
- AVOID CHANGING THE INTERNAL DIAMETER AND NOT DAMAGE THE CONDUIT'S INTERIOR AND EXTERIOR PROTECTIVE COATINGS. FIELD BENDS SHALL BE FREE OF KINKS, INDENTATIONS, AND FLATTENING. INDIVIDUAL BENDS SHALL NOT EXCEED 90 DEGREES. NO MORE THAN 270 DEGREES OF TOTAL BENDS SHALL BE ALLOWED IN ANY ONE CONDUIT RUN.
- 19. ALL CONDUITS SHALL BE PROVIDED WITH ONE (1) SPARE NYLON PULL LINE.
- 20. ALL WALL AND CEILING BOXES SHALL BE A MINIMUM OF 3-1/2 INCHES DEEP UNLESS NOTED OTHERWISE.
- 21. ALL JUNCTION AND PULL BOXES SHALL BE A MINIMUM OF 4 INCHES DEEP UNLESS NOTED OTHERWISE 22. PULL BOXES AND JUNCTION BOXES SHALL BE INSTALLED IN
- 23. MAINTAIN PROXIMITY GROUPING OF ALL SIMILAR LEVEL CABLES AND CONDUITS. PROVIDE THE FOLLOWING SEPARATION DISTANCES BETWEEN DIFFERENT CABLES **ROUTED IN CONDUITS:**

ACCESSIBLE LOCATIONS.

- 23.2. MIC / LINE LEVEL TO VIDEO OR CONTROL LEVEL:
- 23.3. MIC / LINE LEVEL TO ELECTRICAL POWER: 24 INCHES;
- 23.4. VIDEO OR CONTROL LEVEL TO ELECTRICAL POWER: 8 INCHES.
- 24. COORDINATE ANTENNA BACK BOX LOCATIONS TO MAINTAIN MANUFACTURER RECOMMENDED DISTANCES OR A MINIMUM OF 18 INCHES--WHICHEVER IS GREATER--FROM ELECTRICAL FIXTURES AND METAL OBJECTS INCLUDING BUT NOT LIMITED TO METAL TRUSSES, LIGHTING EQUIPMENT, RIGGING, ETC.
- 25. ALL CONDUIT AND BACK BOXES ARE TO BE RECESSED WHERE POSSIBLE. ALL CONDUIT TO BE CONCEALED WHERE POSSIBLE IF CONDUIT AND BACK BOXES CANNOT BE RECESSED INTO EXISTING GYPSUM BOARD OR NEW WALLS. NOTIFY ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH WORK. INSTALL CONDUIT AND BACK BOXES TO SURFACE OF EXISTING MASONRY WALLS.
- 26. ALL EXPOSED AUDIO-VISUAL CONDUIT, BACK BOXES, PULL BOXES, AND JUNCTION BOXES THAT ARE VISIBLE SHALL BE PAINTED TO MATCH THE SURFACES TO WHICH THE DEVICES ARE MOUNTED.
- 27. COORDINATE DEVICE POWER AND SIGNAL BOX LOCATIONS TO BE PLACED DIRECTLY BEHIND THE AUDIO-VISUAL DEVICES THEY SERVE. INSTALL MULTIPLE BOXES SERVING THE SAME DEVICE AND SHOWN ADJACENT TO EACH OTHER ON THE DRAWINGS PHYSICALLY ADJACENT TO EACH OTHER IN THE FIELD REGARDLESS OF DRAWING SCALE AND SYMBOL SIZE
- 28. SEE ARCHITECTURAL DETAIL "UNIVERSAL INTERIOR **ELEVATIONS AT DEVICES" AND ARCHITECTURAL INTERIOR** ELEVATION DRAWINGS FOR MORE INFORMATION ON LOCATING DEVICE BOXES.
- 29. COORDINATE THE LOCATION OF MICROPHONE, LOUDSPEAKER, VOLUME CONTROL, AND AUDIO-VISUAL DEVICE PLATES WITH CASEWORK, LIGHT FIXTURES, SPRINKLER HEADS, AND HVAC DUCTWORK AND DIFFUSERS.

### STRUCTURED CABLING CONTRACTOR (27 1000) INSTALLATION RESPONSIBILITIES

- 30. NETWORK DATA REQUIREMENTS INDICATED ON THE AUDIO-VISUAL INFRASTRUCTURE DRAWINGS SHALL BE
- PROVIDED BY THE STRUCTURED CABLING CONTRACTOR 31. PROVIDE AND INSTALL STRUCTURED CABLES TO ALL LOCATIONS INDICATED.
- 32. TERMINATE DATA CABLES WITH APPROPRIATE JACKS OR CONNECTORS AND SUPPLY AND INSTALL ALL FITTINGS TO INCLUDE DECORA INSERTS AND WALL PLATES, EXCEPT WHERE NETWORK DATA DROPS ARE TO BE PROVIDED INSIDE AUDIO-VISUAL DEVICE BOXES OR EQUIPMENT RACK LOCATIONS, WHEREUPON:
- 32.1. AUDIO-VISUAL DEVICE BOXES: THE AUDIO-VISUAL CONTRACTOR SHALL PROVIDE AND INSTALL THE WALL PLATE. CABLE TERMINATIONS AND DECORA INSERT SHALL BE PROVIDED BY STRUCTURED CABLING CONTRACTOR. COORDINATE WITH AUDIO-VISUAL CONTRACTOR.
- 32.2. AUDIO-VISUAL EQUIPMENT RACKS: COORDINATE REQUIREMENTS WITH AUDIO-VISUAL CONTRACTOR TO PROVIDE NETWORK DATA JACKS INSIDE EQUIPMENT RACK ENCLOSURES. TERMINATE, MOUNT, AND LOCATE CONNECTIONS AS DIRECTED BY THE AUDIO-VISUAL CONTRACTOR.

## LIFE SAFETY SYSTEM CONTRACTOR INSTALLATION RESPONSIBILITIES

- 33. PROVIDE ADDITIONAL LIFE SAFETY SYSTEM RELAY MODULES AS REQUIRED TO PROVIDE DRY CONTACT CLOSURES TO THE LOCATIONS INDICATED ON THE AUDIO-VISUAL INFRASTRUCTURE DRAWINGS.
- 34. PULL THE LIFE SAFETY SYSTEM 2 CONDUCTOR DRY CONTACT SIGNAL WIRE TO AUDIO-VISUAL EQUIPMENT RACKS WHERE INDICATED FOR CONNECTION TO AUDIO-VISUAL SYSTEM CONTROL PROCESSORS. COORDINATE REQUIREMENTS WITH THE AUDIO-VISUAL CONTRACTOR. AUDIO-VISUAL SYSTEM CONTROL PROCESSORS SHALL BE PROVIDED BY THE AUDIO-VISUAL CONTRACTOR. THE CONNECTION SHALL BE MADE BY THE AUDIO-VISUAL CONTRACTOR.

## AUDIO-VISUAL CONTRACTOR INSTALLATION REQUIREMENTS

- LOUDSPEAKER BACK BOX.
- RACKS TO ENABLE EQUIPMENT RACKS TO BE MOVED OR
- 37. PROVIDE SEQUENTIAL NUMBERING OF ALL AUDIO-VISUAL CABLES AT EACH CABLE ORIGINATION AND TERMINATION
- 38. PROVIDE SEQUENTIAL NUMBERING OF ALL DEVICE PLATES AND CONNECTORS. LABELING SHALL DESIGNATE FUNCTION, TYPE, AND UNIQUE INTERCONNECTION NUMBER AND SHALL BE RECORDED AS PART OF THE AUDIO-VISUAL SYSTEM
- 39. NUMBERING INDICATED ON AUDIO-VISUAL INFRASTRUCTURE, SIGNAL FLOW, AND PLATE DETAIL DRAWINGS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY, AND DO NOT FREE THE CONTRACTOR OF THE
- 40. AUDIO-VISUAL CONTRACTOR SHALL DETERMINE NAMING OF AUDIO-VISUAL WALL, CEILING, AND FLOOR PLATES AND
- CONTRACTOR INSTALLATION REQUIREMENTS, AND FOR MORE INFORMATION ON SCOPE DIVISION BETWEEN

- 35. PROVIDE 3'-0" LOOP OF LOUDSPEAKER CABLE IN EACH
- 36. PROVIDE SUFFICIENT SLACK FOR AUDIO-VISUAL AND POWER CABLES ENTERING FLOOR AND WALL MOUNTED EQUIPMENT OPENED FULLY AND CLEAR ADJACENT WALLS OR FURNITURE
- POINT. RECORD NUMBERING AS PART OF THE AUDIO-VISUAL SYSTEM DOCUMENTATION.
- DOCUMENTATION.
- RESPONSIBILITIES LISTED IN NOTES 37 AND 38, ABOVE.
- SUBMIT TO OWNER FOR REVIEW BEFORE ORDERING.
- 41. SEE SPECIFICATION 274116 FOR FULL AUDIO-VISUAL AUDIO-VISUAL CONTRACTOR AND CONTRACTORS OF OTHER

## **PLAN NOTES**

- ONE (1) CONDUIT FROM 4-GANG WALL BOX 48" AFF ROUTED 17. EXISTING VIDEO PROJECTION SCREEN: CONFIRM SCREEN TO JUNCTION BOX "J-E" FOR INTERCOM SIGNALS. SEE SHEET AV2.11 FOR LOCATION OF JUNCTION BOX "J-E"
- 2. ONE (1) CONDUIT FROM 4-GANG WALL BOX 48" AFF ROUTED TO "IC21" IN TICKETS/CONCESSION H129 FOR INTERCOM SIGNALS. SEE SHEET AV2.01 FOR LOCATION OF "IC21".
- 3. ONE (1) CONDUIT FROM 4-GANG WALL BOX 48" AFF ROUTED
- TO "IC22" IN WORKSHOP H128 FOR INTERCOM SIGNALS. ONE (1) CONDUIT FROM 4-GANG WALL BOX 48" AFF ROUTED TO "IC23" FOR INTERCOM SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER INTERCOM BOXES AS INDICATED ON THE DRAWINGS FOR INTERCOM SIGNALS. ALL INTERCOM WALL BOXES SHOWN INTERCONNECTED WITH 17.2. THIS BOX ARE MOUNTED 4-GANG WALL BOXES AT 48" AFF UNLESS INDICATED OTHERWISE ON THE DRAWINGS. SEE
- SHEET AV2.03 FOR LOCATION OF "IC23". ROUTE ONE (1) CONDUIT FROM THIS 4-GANG WALL BOX (48" AFF) TO FLOOR BOX "F-01" TO PROVIDE A COMPLETE CONDUIT LOOP FOR INTERCONNECTED INTERCOM BOXES "IC21" THROUGH "IC28".
- ONE (1) CONDUIT FROM SINGLE GANG WALL BOX 48" AFF ROUTED TO "ER-1" FOR LOW VOLTAGE CONTROL SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER VOLUME CONTROL BOXES AS INDICATED ON THE DRAWINGS FOR LOW VOLTAGE CONTROL SIGNALS. ALL VOLUME CONTROL WALL BOXES SHOWN INTERCONNECTED WITH THIS BOX ARE SINGLE GANG WALL BOXES AT 48" AFF UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- TWO (2) 1-1/4" DIAMETER CONDUITS FROM FLOOR / WALL MOUNTED EQUIPMENT RACK "ER-1" ROUTED TO "J-C" FOR DIGITAL AUDIO NETWORK AND LOW VOLTAGE CONTROL SIGNALS. EQUIPMENT RACK SHALL BE EQUAL TO MIDDLE ATLANTIC MODEL 'SR28-46-32'. COORDINATE LOCATION OF NEW AUDIO-VISUAL RACK WITH ARCHITECT.
- SPLIT-WIRED 20A 120V QUADPLEX POWER RECEPTACLE LOCATED INSIDE "ER-1" FOR EQUIPMENT RACK POWER. PROVIDE TWO (2) SEPARATE AND INDEPENDENT 120 VAC 20A CIRCUITS TO THIS POWER RECEPTACLE. CONDUIT(S) FOR POWER SERVICE SHALL ENTER EQUIPMENT RACK VIA
- EQUIPMENT RACK BACKPAN CONDUIT KNOCKOUT(S). PROVIDE TWO (2) CAT-6 DATA JACKS CONNECTED TO THE OWNER'S LAN INSIDE EQUIPMENT RACK "ER-1", CONDUIT(S) FOR WHICH SHALL ENTER EQUIPMENT RACK VIA EQUIPMENT RACK BACKPAN CONDUIT KNOCKOUT(S).
- 10. ONE (1) 3" DIAMETER CONDUIT FROM 18" X 18" X 6 INCH DEEP JUNCTION BOX "J-A" LOCATED ABOVE EQUIPMENT RACK "ER-1" AT 10'-6" AFF ROUTED TO "ER-1" FOR MICROPHONE LEVEL SIGNALS. COORDINATE JUNCTION BOX LOCATION WITH ARCHITECT.
- 11. ONE (1) 4" DIAMETER CONDUIT FROM 18" X 18" X 6 INCH DEEP JUNCTION BOX "J-B" LOCATED ABOVE EQUIPMENT RACK "ER-1" AT 10'-6" AFF ROUTED TO "ER-1" FOR LOUDSPEAKER LEVEL SIGNALS. COORDINATE JUNCTION BOX LOCATION WITH ARCHITECT.
- 12. ONE (1) CONDUIT FROM 2-GANG WALL BOX 18" AFF ROUTED TO "ER-1" FOR DIGITAL AUDIO NETWORK SIGNALS.
- 13. ONE (1) 1-1/4" DIAMETER CONDUIT FROM 2-GANG WALL BOX 18" AFF ROUTED TO "J-B" FOR LOUDSPEAKER LEVEL SIGNALS. 14. ONE (1) 1-1/4" DIAMETER CONDUIT FROM 4-GANG WALL BOX
- 18" AFF ROUTED TO "J-A" FOR MICROPHONE AND LINE LEVEL 15. ONE (1) 1-1/4" DIAMETER CONDUIT FROM 6-GANG WALL BOX

18" AFF ROUTED TO "J-A" FOR MICROPHONE LEVEL SIGNALS.

16. PROVIDE ONE (1) 6-GANG WALL BOX 18" AFF WITH LOW VOLTAGE PARTITION TO DIVIDE WALL BOX FOR 2 GANGS HIGH VOLTAGE (POWER) SERVICE AND 4 GANGS LOW VOLTAGE SERVICE. PROVIDE TWO (2) DECORATOR STYLE 20A 120V DUPLEX POWER RECEPTACLES IN HIGH VOLTAGE SIDE FOR AUDIO-VISUAL SOURCE DEVICE POWER. PROVIDE TWO (2) CAT-6 DATA JACKS CONNECTED TO OWNER'S LAN IN LOW VOLTAGE SIDE. ROUTE ONE (1) CONDUIT TO JUNCTION BOX "J-F" FOR VIDEO AND CONTROL SIGNALS. SEE SHEET AV2.11 FOR LOCATION OF JUNCTION BOX "J-F".

- CONTROL TYPE (110V OR LOW VOLTAGE CONTROL) AND LOCATION OF EXISTING WALL SWITCH. IF EXISTING SCREEN CONTROL IS LOW VOLTAGE, THE EXISTING LVC WALL SWITCH IS TO BE RETAINED AND ONE (1) 3/4" CONDUIT PROVIDED FROM THE EXISTING PROJECTION SCREEN LOW VOLTAGE CONTROL (LVC) MODULE TO "J-C" FOR LOW VOLTAGE CONTROL SIGNALS. IF THE EXISTING SCREEN CONTROL IS 110V, THE CONTRACTOR IS TO CONVERT EXISTING LINE VOLTAGE PROJECTION SCREEN CONTROL TO LOW VOLTAGE CONTROL AS FOLLOWS:
- REMOVE THE EXISTING 110V PROJECTION SCREEN SWITCH AND ASSOCIATED WIRING: PROVIDE EXTERNAL LOW VOLTAGE SCREEN CONTROL MODULE COMPATIBLE WITH THE EXISTING PROJECTION SCREEN AND NEW AUDIO-VISUAL CONTROL SYSTEM
- PROCESSOR: 17.3. PROVIDE 120V 20A ELECTRICAL POWER TO THE NEW EXTERNAL LVC MODULE AND THE EXISTING PROJECTION SCREEN CASE AS REQUIRED. 17.4. REPURPOSE THE EXISTING SCREEN CONTROL SWITCH BACK
- BOX AND CONDUIT PATHWAYS BETWEEN THE EXISTING SWITCH BOX AND THE EXISTING PROJECTION SCREEN CASE WHERE POSSIBLE, OTHERWISE REMOVE THE EXISTING SWITCH BOX AND ASSOCIATED EXISTING CONDUITS, PROVIDE A NEW SINGLE-GANG SWITCH BOX AT THE LOCATION INDICATED ON THE DRAWINGS, AND PROVIDE 3/4" CONDUITS TO CONNECT THE NEW SWITCH BOX TO THE NEW EXTERNAL LVC MODULE.
- 17.5. ROUTE ONE (1) 3/4" CONDUIT FROM THE NEW EXTERNAL LVC MODULE TO "J-C" FOR LOW VOLTAGE CONTROL 17.6. INSTALL NEW EXTERNAL LVC MODULE AND LVC WALL
- SWITCH. PROVIDE KEY-LOCKING COVER FOR LVC WALL 18. ONE (1) CONDUIT FROM SINGLE GANG WALL BOX 18" AFF ROUTED TO FLOOR BOX "F-01" FOR INTERCOM SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER INTERCOM BOXES AS INDICATED ON THE DRAWINGS FOR INTERCOM SIGNALS. ALL INTERCOM WALL BOXES SHOWN INTERCONNECTED ARE AT 18" AFF UNLESS

INDICATED OTHERWISE ON THE DRAWINGS.

- 19. ROUTE ONE (1) CONDUIT FROM THIS SINGLE GANG WALL BOX (18" AFF) TO JUNCTION BOX "J-E" TO PROVIDE A COMPLETE CONDUIT LOOP FOR THE INTERCOM BOXES SHOWN CONNECTED TOGETHER. SEE NOTE 18.
- 20. ONE (1) CONDUIT FROM SINGLE GANG WALL BOX "RF-1" AT 17'-0" ABOVE FINISHED FIRST FLOOR LEVEL (TO CENTER OF WALL BOX) ROUTED TO "J-C" FOR WIRELESS MICROPHONE ANTENNA SIGNALS. ROUTE ONE (1) CONDUIT FROM SAME WALL BOX TO SINGLE GANG WALL BOX "RF-2" AT 17'-0" ABOVE FINISHED FIRST FLOOR LEVEL (TO CENTER OF WALL BOX) FOR WIRELESS MICROPHONE SIGNALS.
- 21. ONE (1) 3/4" CONDUIT FROM SINGLE GANG WALL BOX "RF-3" ABOVE FINISHED AUDITORIUM CEILING ROUTED TO "J-C" FOR COORDINATE LOCATION FOR EASY ACCESS AND OPTIMUM
- 22. ONE (1) FLOOR MOUNTED EQUIPMENT RACK "ER-2" SHALL BE PROVIDED ON CASTERS FOR AUDITORIUM AUDIO-VISUAL EQUIPMENT STORAGE.

RECEPTION.

23. PROVIDE ONE FLUSH WALL MOUNTED 12" X 12" X 6" DEEP JUNCTION BOX "J-C" AT FLOOR JUNCTURE TO SERVE EQUIPMENT RACK ER-2. ROUTE ONE (1) 3/4" CONDUIT TO LIFE SAFETY SYSTEM LOW VOLTAGE CONTROL INTERFACE FOR AUDITORIUM AUDIO-VISUAL SYSTEM MUTING OR SHUTDOWN DURING AN EMERGENCY. ROUTE ONE (1) 3/4" CONDUIT TO AUDITORIUM LIGHTING CONTROL PROCESSOR (SEE "ER-L1" ON THEATER DRAWINGS) FOR LOW VOLTAGE (RS-232) LIGHTING CONTROL SIGNALS. COORDINATE LIGHTING CONTROL PROCESSOR LOCATION WITH

THEATRICAL LIGHTING SYSTEM CONTRACTOR.

24. ONE (1) SPLIT-WIRED 20A 120V QUADPLEX POWER RECEPTACLE FOR EQUIPMENT RACK POWER. PROVIDE TWO (2) SEPARATE AND INDEPENDENT 120 VAC 20A CIRCUITS TO THIS POWER RECEPTACLE.

- 25. THE AUDIO-VISUAL CONTRACTOR IS TO PROVIDE AND INSTALL HORIZONTAL CABLE SUPPORTS ALONG THE UNDERSIDE OF DESK AT WALL FOR ROUTING CABLES BETWEEN EQUIPMENT MOUNTED ON WORK SURFACE. CABLE SUPPORTS TO BE EQUAL TO MIDDLE ATLANTIC "D-RING" SPACED 3.75 INCHES ON CENTER ALONG LENGTH OF COUNTER AS SHOWN.
- 26. ONE (1) 1-1/4" DIAMETER CONDUIT FROM 5-GANG WALL BOX 18" AFF ROUTED TO JUNCTION BOX "J-E" FOR INTERCOM SIGNALS. ONE (1) 1" DIAMETER CONDUIT FROM SAME WALL BOX TO "F-01" FOR LINE LEVEL AUDIO SIGNALS.
- PROVIDE ONE (1) 2-GANG WALL BOX 16'-0" ABOVE FIRST FLOOR LEVEL WITH LOW VOLTAGE PARTITION TO DIVIDE BACK BOX FOR HIGH VOLTAGE (POWER) AND LOW VOLTAGE SERVICE. PROVIDE ONE (1) DECORATOR STYLE 20A 120V DUPLEX POWER RECEPTACLE WITH ITS OWN DEDICATED 20A 120V CIRCUIT FOR VIDEO PROJECTOR POWER IN HIGH VOLTAGE SIDE. PROVIDE TWO (2) CAT-6 DATA JACKS CONNECTED TO OWNER'S LAN IN LOW VOLTAGE SIDE. ROUTE ONE (1) CONDUIT FROM LOW VOLTAGE SIDE TO JUNCTION BOX "J-F" FOR PROJECTOR VIDEO AND CONTROL SIGNALS. COORDINATE LOCATION OF BOX TO BE CENTERED BELOW
- VIDEO PROJECTOR MOUNTING BRACKET. 28. ONE (1) CONDUIT FROM SINGLE GANG BOX 18" AFF (MOUNTED TO WALL OR CATWALK RAILING) ROUTED TO
- JUNCTION BOX "J-E" FOR INTERCOM SIGNALS. 29. ONE (1) CONDUIT FROM SINGLE GANG BOX MOUNTED TO CATWALK RAILING SHALL BE ROUTED TO "IC30" AT FOLLOW SPOT PLATFORM FOR INTERCOM SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER INTERCOM BOXES AS INDICATED ON THE DRAWINGS FOR INTERCOM SIGNALS. ALL INTERCOM WALL BOXES SHOWN INTERCONNECTED ON THE CATWALK LEVEL ARE SINGLE GANG BOXES MOUNTED TO CATWALK RAILING UNLESS INDICATED
- OTHERWISE ON THE DRAWINGS. 30. ROUTE ONE (1) CONDUIT FROM THIS SINGLE GANG BOX TO "IC34" AT FOLLOW SPOT PLATFORM FOR INTERCOM SIGNALS.
- 31. ONE (1) CONDUIT FROM SINGLE GANG BOX 18" AFF (MOUNTED TO WALL OR CATWALK RAILING) ROUTED TO FLOOR BOX "F-01" TO PROVIDE A COMPLETE CONDUIT LOOP FOR FOLLOW SPOT AND CATWALK LEVEL INTERCOM BOXES CONNECTED TOGETHER.

32. ONE (1) CONDUIT FROM SINGLE GANG BOX MOUNTED TO

- STRUCTURE ABOVE STAGE SHALL BE ROUTED TO "J-A" FOR MICROPHONE LEVEL SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER SINGLE GANG MICROPHONE LEVEL CEILING BOXES AS INDICATED ON THE DRAWINGS. ALL MICROPHONE LEVEL CEILING BOXES SHOWN INTERCONNECTED SHALL BE MOUNTED TO STRUCTURE ABOVE STAGE AT THE SAME ELEVATION. COORDINATE BOX LOCATIONS WITH OWNER AND AUDIO-VISUAL AND THEATRICAL FOUIPMENT INSTALLERS SO THAT MICROPHONES CAN HANG BELOW AND CLEAR EXISTING THEATRICAL HARDWARE AND DRAPERIES. AUDIO-VISUAL CONTRACTOR TO COORDINATE HANGING MICROPHONE LOCATIONS AND CABLE LENGTHS WITH OWNER AND PROVIDE A MINI-FXLR TO STANDARD-SIZE MXLR MICROPHONE CABLE SUSPENDED AT VALANCE CURTAIN ELEVATION FOR EASY
- 33. ONE (1) CONDUIT FROM SINGLE GANG CEILING BOX ROUTED TO "J-B" FOR LOUDSPEAKER LEVEL SIGNALS. COORDINATE BOX LOCATIONS TO BE ADJACENT TO LOUDSPEAKER RIGGING POINTS. CONTRACTOR TO PROVIDE BLOCKING AND ADDITIONAL STRUCTURE ABOVE FINISHED CEILING TO SUPPORT LOUDSPEAKER AND MOUNTING HARDWARE WHERE SHOWN ON THE DRAWINGS.

ACCESS BY SCHOOL STAFF.

- 34. ONE (1) CONDUIT FROM SINGLE GANG BACK BOX INSTALLED TO EXPOSED STRUCTURE WHERE SHOWN ROUTED TO "J-B" FOR LOUDSPEAKER LEVEL SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO INTERCONNECT OTHER SINGLE GANG BACK BOXES AS SHOWN ON THE DRAWINGS. ALL BACK BOXES SHOWN INTERCONNECTED ARE TO BE MOUNTED TO EXPOSED STRUCTURE FOR SURFACE MOUNTED LOUDSPEAKERS.
- "J-E" LOCATED ABOVE CONTROL BOOTH FINISHED CEILING

35. PROVIDE ONE (1) 12" X 12" X 4 INCH DEEP JUNCTION BOX

- FOR INTERCOM SIGNALS.
- 36. ONE (1) 2" DIAMETER CONDUIT FROM 12" X 12" X 6 INCH DEEP JUNCTION BOX "J-F" LOCATED ABOVE CONTROL BOOTH FINISHED CEILING ROUTED TO "J-C" FOR VIDEO AND CONTROL SIGNALS.
- 37. ONE (1) CONDUIT FROM FLUSH CEILING LOUDSPEAKER BACK CAN ROUTED TO "J-B" FOR LOUDSPEAKER LEVEL SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS CEILING LOUDSPEAKER TO INTERCONNECT OTHER CEILING LOUDSPEAKERS WHERE SHOWN ON THE DRAWINGS FOR LOUDSPEAKER LEVEL 38. ONE (1) 6" DEEP FLOOR BOX EQUAL TO FSR MODEL FL-600P-6
- (TEL: 800.332.3771) WITH 20A 120V QUADPLEX POWER RECEPTACLE (BY DIVISION 26) AND (2) CAT6 DATA JACKS CONNECTED TO THE OWNER'S LAN (BY TECHNOLOGY). ROUTE ONE (1) CONDUIT TO JUNCTION BOX "J-E" FOR INTERCOM SIGNALS. FLOOR BOX FINISH COVER TO BE SPECIFIED BY ARCHITECT. INSTALLING CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES FOR PROPER INSTALLATION OF THE FLOOR BOX, TO INCLUDE 4" DEEP POUR PAN EQUAL TO FSR MODEL FL-GRD4.
- 39. ONE (1) 6" DEEP FLOOR BOX EQUAL TO FSR MODEL FL-600P-6 (TEL: 800.332.3771) WITH 20A 120V QUADPLEX POWER RECEPTACLE (BY DIVISION 26) AND (2) CAT6 DATA JACKS CONNECTED TO OWNER'S LAN (BY TECHNOLOGY). ROUTE ONE (1) 1-1/4" CONDUIT TO JUNCTION BOX "J-F" FOR VIDEO AND CONTROL SIGNALS. ROUTE ONE (1) 1-1/4" CONDUIT TO JUNCTION BOX "J-C" FOR DIGITAL AUDIO NETWORK SIGNALS. FLOOR BOX FINISH COVER TO BE SPECIFIED BY ARCHITECT. INSTALLING CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES FOR PROPER INSTALLATION OF THE FLOOR BOX, TO INCLUDE 4" DEEP POUR PAN EQUAL TO FSR MODEL
- FL-GRD4. 40. ONE (1) 3/4" CONDUIT FROM 2-GANG WALL BOX 48" AFF ROUTED TO JUNCTION BOX "J-F" FOR LOW VOLTAGE CONTROL SIGNALS. INSTALLING CONTRACTOR TO PROVIDE CLEAR, LOCKING SECURITY COVER AND MOUNT TO WALL
- OVER TOUCH SCREEN CONTROL PANEL. 41. ONE (1) CONDUIT FROM SINGLE GANG WALL BOX AT 3'-0" AFF (TO CENTER OF BOX) ROUTED TO "J-B" FOR LOUDSPEAKER LEVEL SIGNALS. ROUTE ONE (1) CONDUIT FROM THIS BOX TO OTHER LOUDSPEAKER WALL BOXES (AT SAME ELEVATION) AS INDICATED ON THE DRAWINGS. NOTE LOUDSPEAKERS ARE TO BE PORTABLE FOR INSTALLATION ON
- STAGE FLOOR AT FRONT LIP OF STAGE WHERE SHOWN. 42. ONE (1) CONDUIT FROM SINGLE-GANG WALL BOX 18"AFF ROUTED TO "J-A" FOR AUDIO LINE LEVEL SIGNALS. COORDINATE LOCATION OF THIS BOX TO BE BEHIND CLASSROOM SOUND SYSTEM EQUIPMENT. AUDIO-VISUAL CONTRACTOR IS TO CONNECT THE AUDITORIUM PROGRAM AUDIO FEED INTO THE CLASSROOM SOUND SYSTEM FOR PROGRAM MONITORING THROUGH THE CLASSROOM
- LOUDSPEAKER SYSTEM. 43. PROVIDE ONE (1) 6-GANG WALL BOX 18" AFF WITH LOW VOLTAGE PARTITION TO DIVIDE WALL BOX FOR 2 GANGS HIGH VOLTAGE (POWER) SERVICE AND 4 GANGS LOW VOLTAGE SERVICE. PROVIDE TWO (2) DECORATOR STYLE 20A 120V DUPLEX POWER RECEPTACLES IN HIGH VOLTAGE SIDE FOR AUDIO-VISUAL SOURCE DEVICE POWER. PROVIDE TWO (2) CAT-6 DATA JACKS CONNECTED TO OWNER'S LAN IN LOW VOLTAGE SIDE. ROUTE ONE (1) CONDUIT TO JUNCTION BOX "J-F" FOR VIDEO AND CONTROL SIGNALS. ROUTE ONE (1) CONDUIT TO JUNCTION BOX "J-C" FOR DIGITAL AUDIO
- NETWORK SIGNALS. 44. ONE (1) CEILING MOUNTED WIRELESS ACCESS POINT. ROUTE TWO (2) CAT-6A CABLES TO "J-C" FOR LOW VOLTAGE ETHERNET SIGNALS AND LOW VOLTAGE POWER (PoE+).

## **ARCHITECT**

9211 CORPORATE BLVD. SUITE 340

ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL FISHER, COLLINS, CARTER

**10272 BALTIMORE NATIONAL PIKE** 

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KITCHEN

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**CONSTRUCTION MANAGER** 

J. VINTON SCHAFER & SONS

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02/25/2020

PRINTS ISSUED

DESCRIPTION:

BID SET

**HAMMOND HIGH** SCHOOL **RENOVATION AND** 

HOWARD COUNTY **PUBLIC SCHOOL** 

**SYMBOLS & NOTES** 

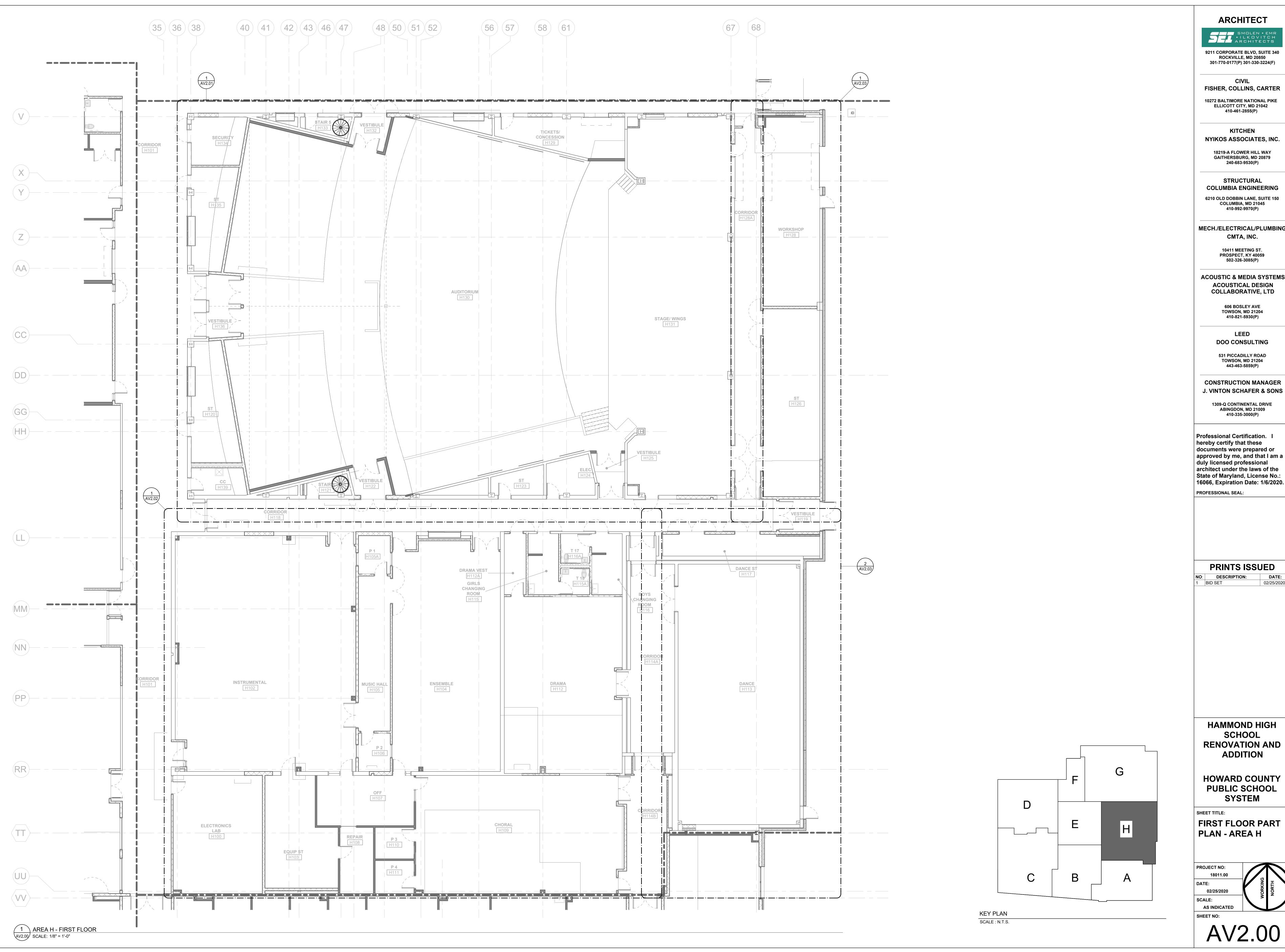
**ADDITION** 

02/25/2020 AS INDICATED

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SHEET TITLE:

**AUDIO-VISUAL** 



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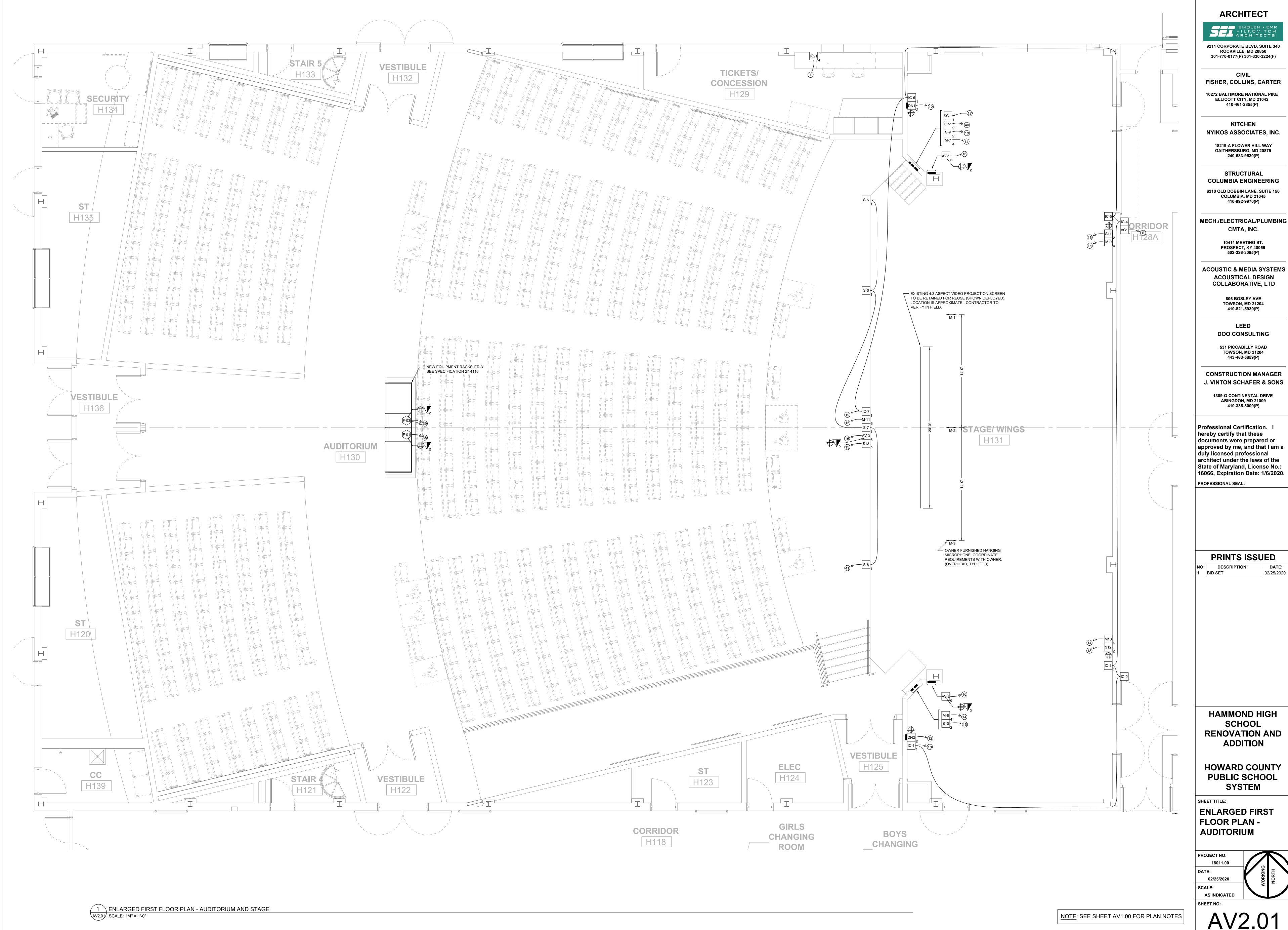
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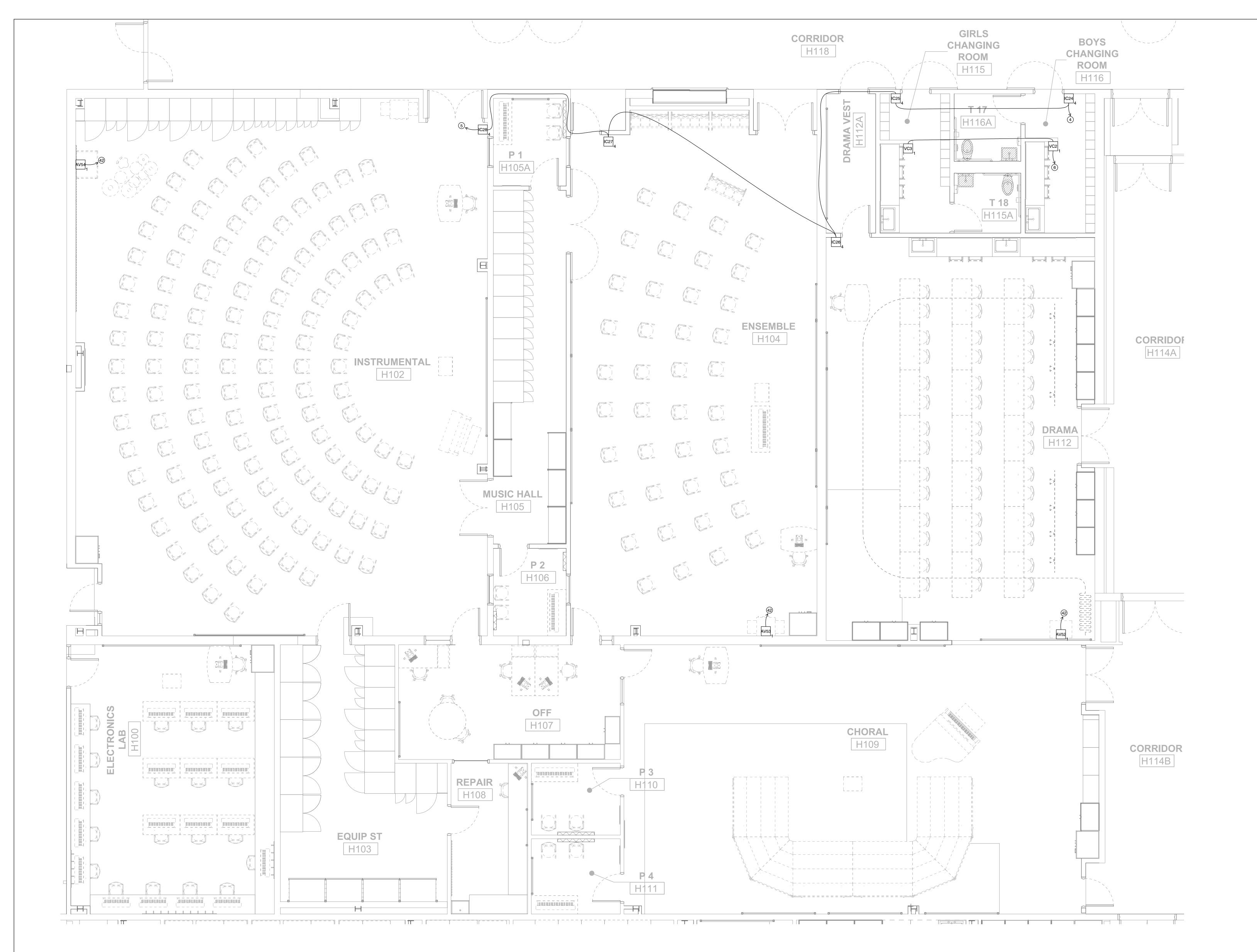
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**HAMMOND HIGH** SCHOOL

**HOWARD COUNTY PUBLIC SCHOOL** 

FIRST FLOOR PART





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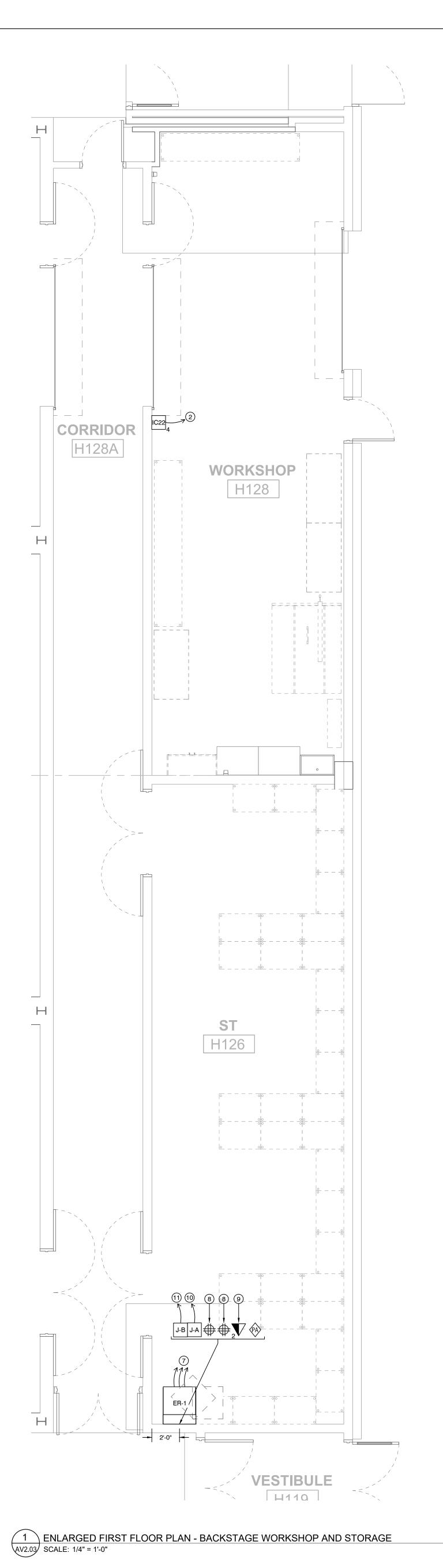
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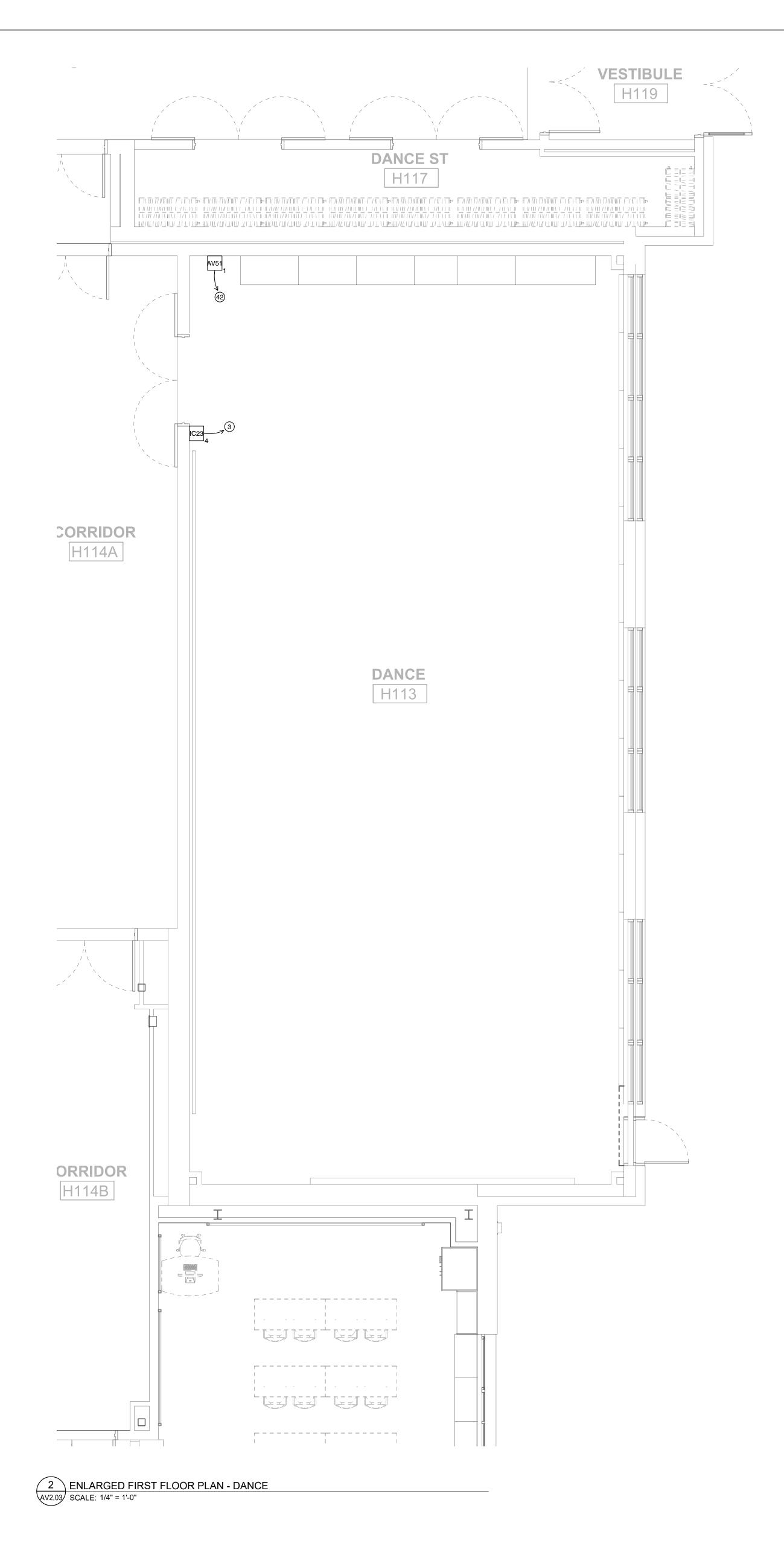
**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE: **ENLARGED FIRST** FLOOR PLAN - MUSIC **AND DRAMA** 

AS INDICATED





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SCHOOL **RENOVATION AND ADDITION** 

**HAMMOND HIGH** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

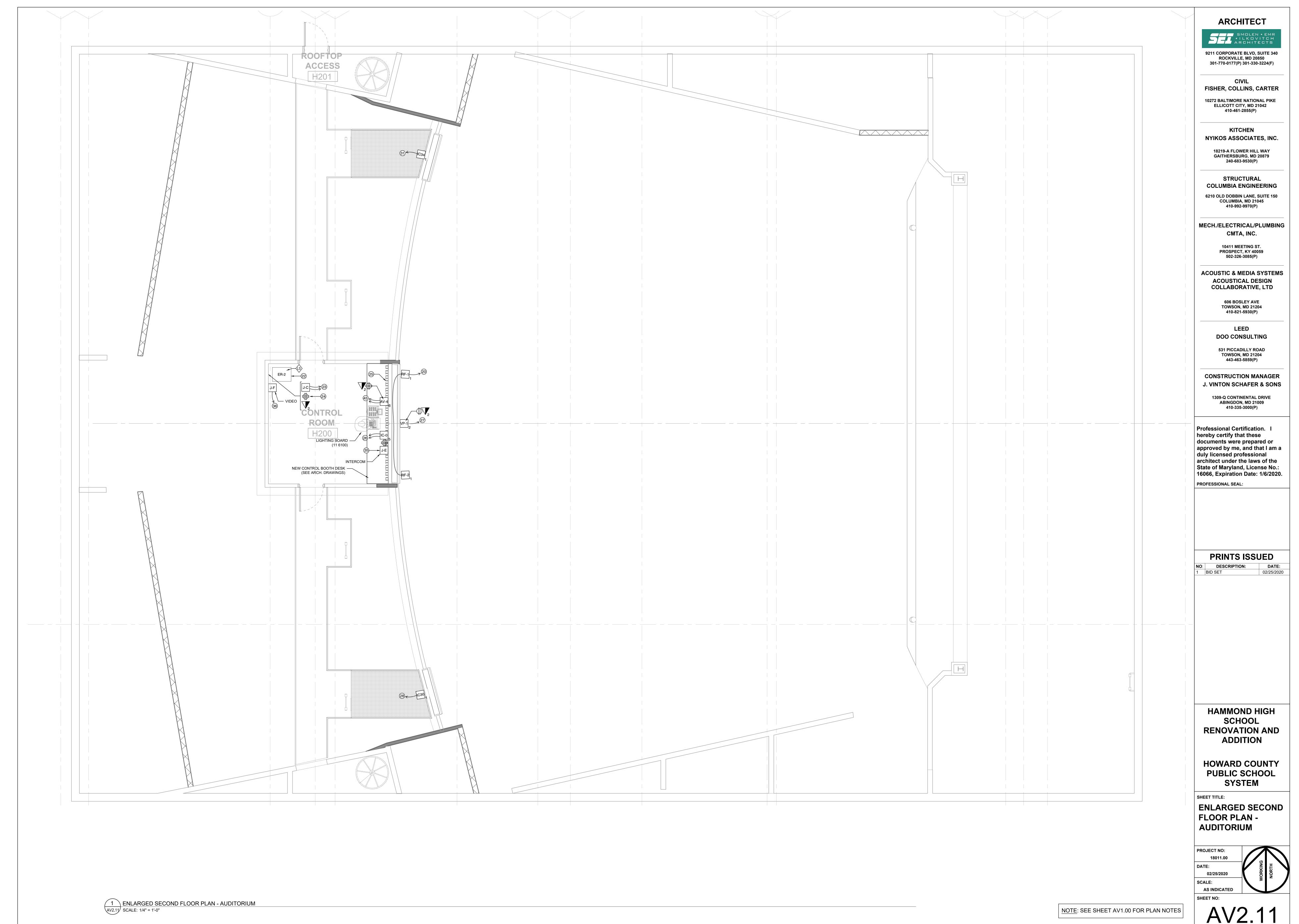
SHEET TITLE: **ENLARGED FIRST FLOOR PLANS -**BACKSTAGE &

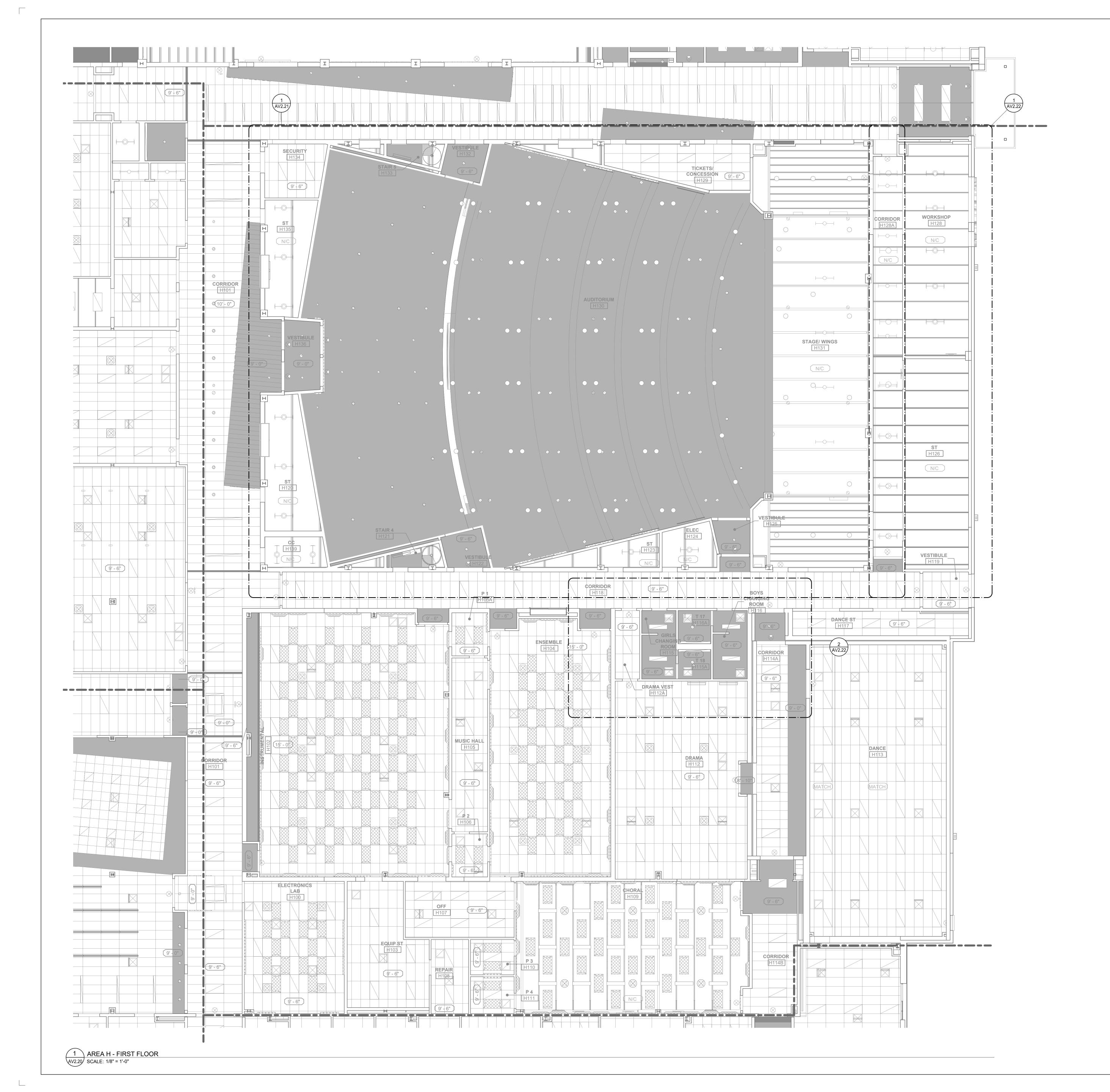
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**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

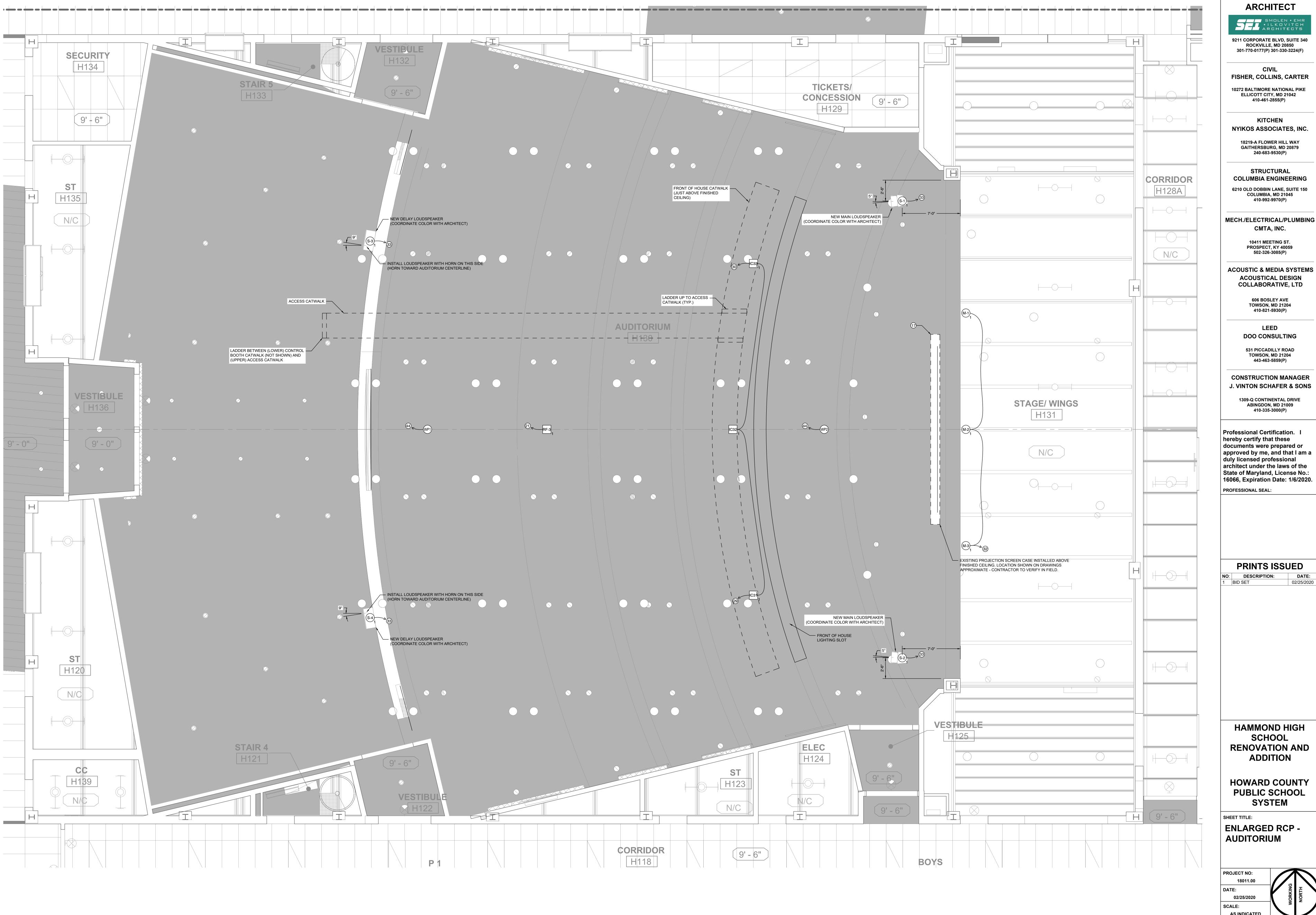
**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE:

PARTIAL RCP - FIRST FLOOR - AREA H

02/25/2020 **AS INDICATED** 

**KEY PLAN** SCALE : N.T.S.



1 ENLARGED FIRST FLOOR PLAN - AUDITORIUM AND STAGE SCALE: 1/4" = 1'-0"

**ARCHITECT** 

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**HAMMOND HIGH** SCHOOL **RENOVATION AND** 

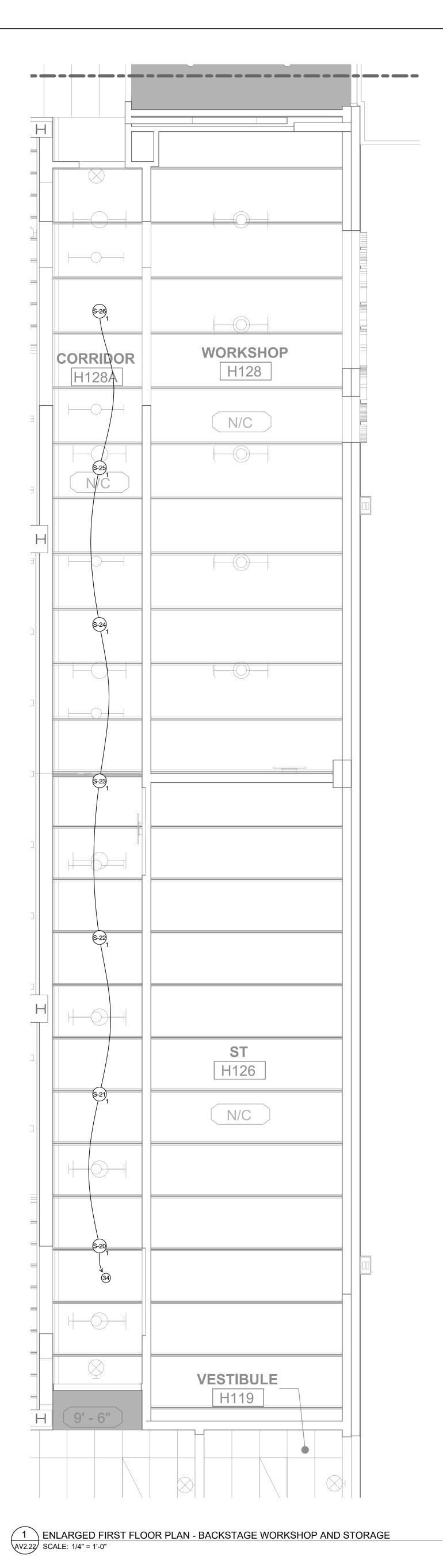
**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

**ENLARGED RCP -**

AS INDICATED

SHEET NO:

NOTE: SEE SHEET AV1.00 FOR PLAN NOTES



2 ENLARGED FIRST FLOOR PLAN - DANCE SCALE: 1/4" = 1'-0"

9' - 6"

9' - 6"

DRAMA VEST

H112A

BOYS

CHANGING

ROOM

9'96"

CORRIDOR

H114A

9' - 6"

CORRIDOR

H118

15' - 0"

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**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

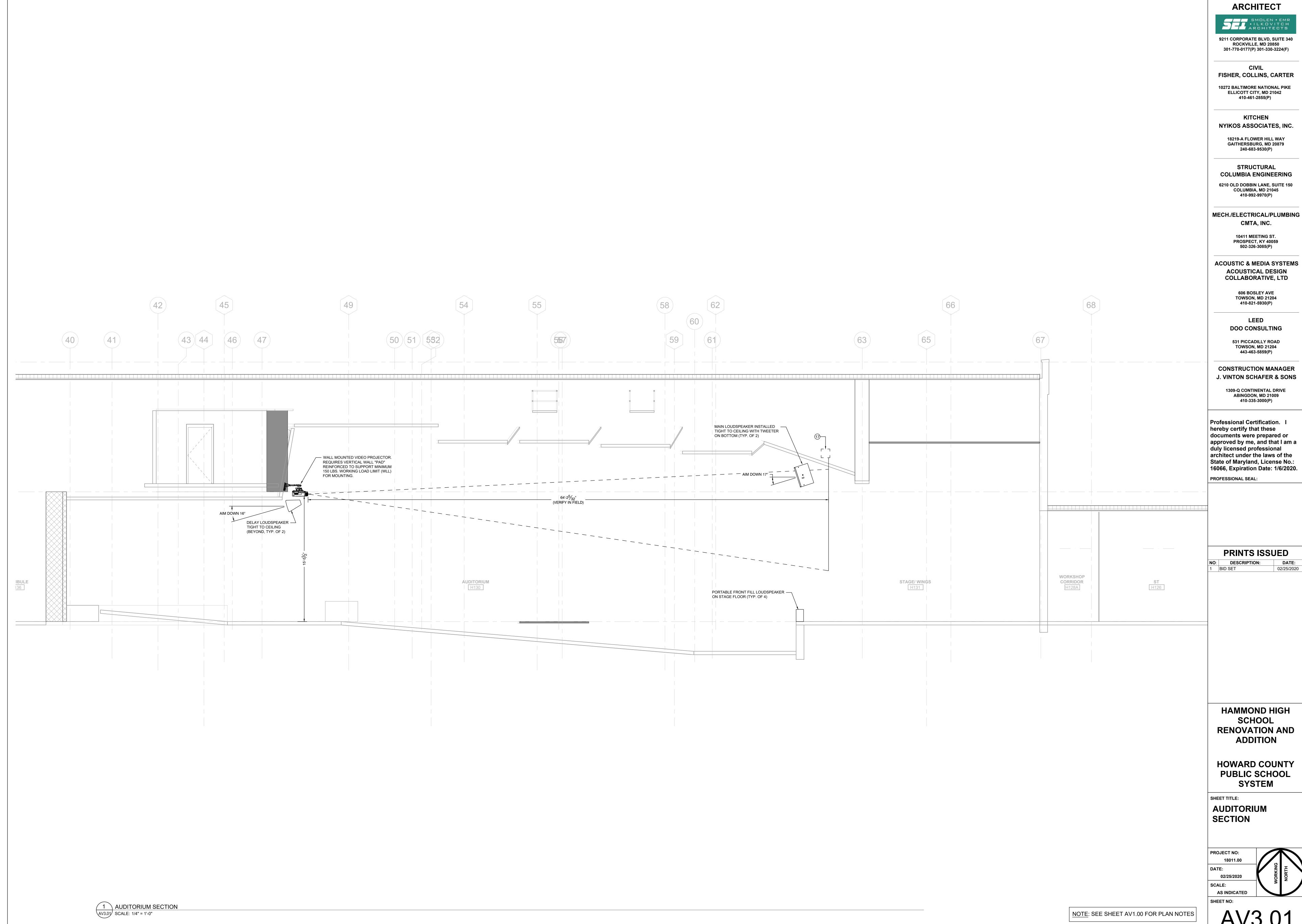
**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

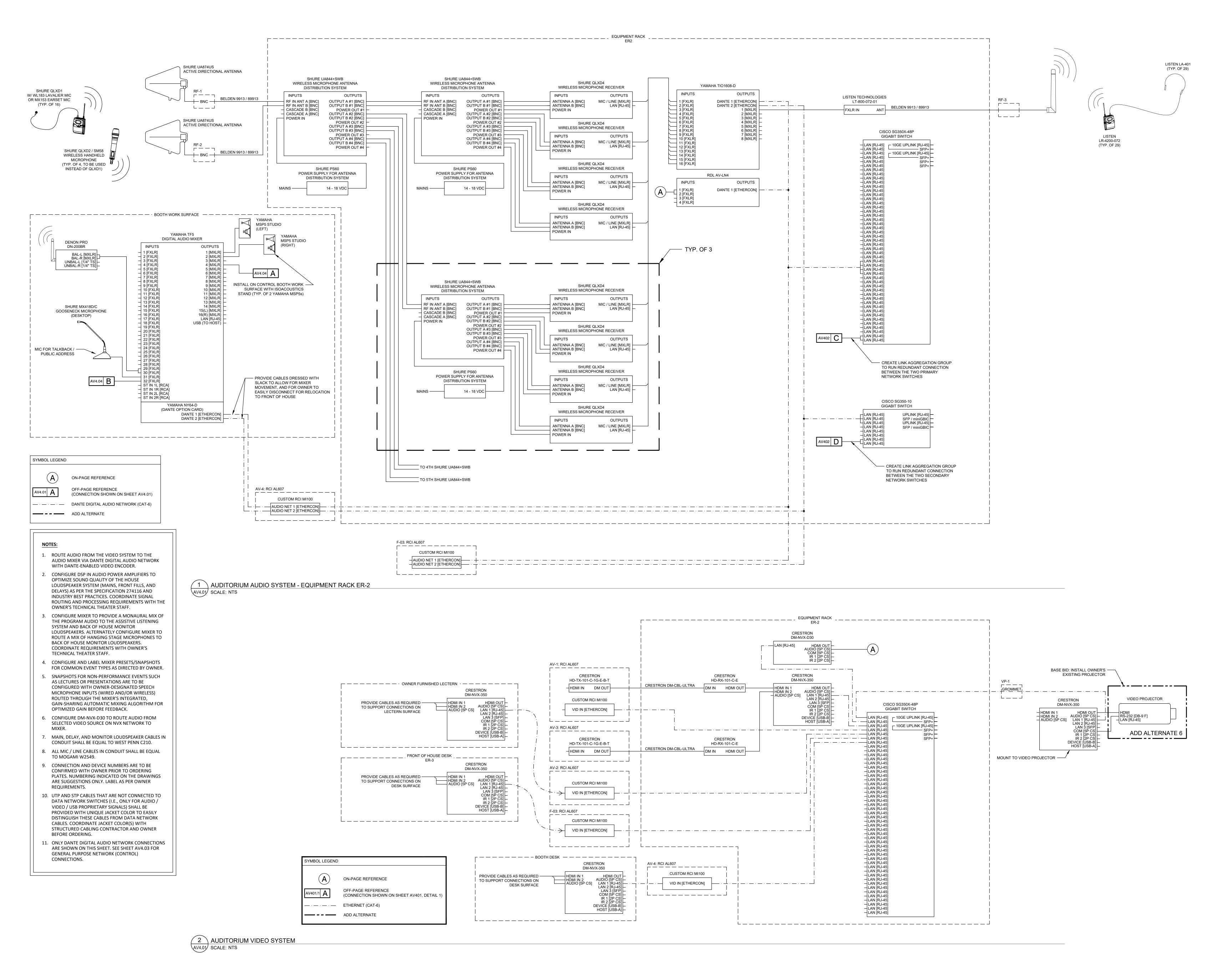
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**ENLARGED RCP -**BACKSTAGE & DRESSING ROOMS

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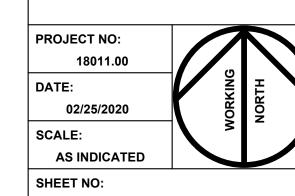
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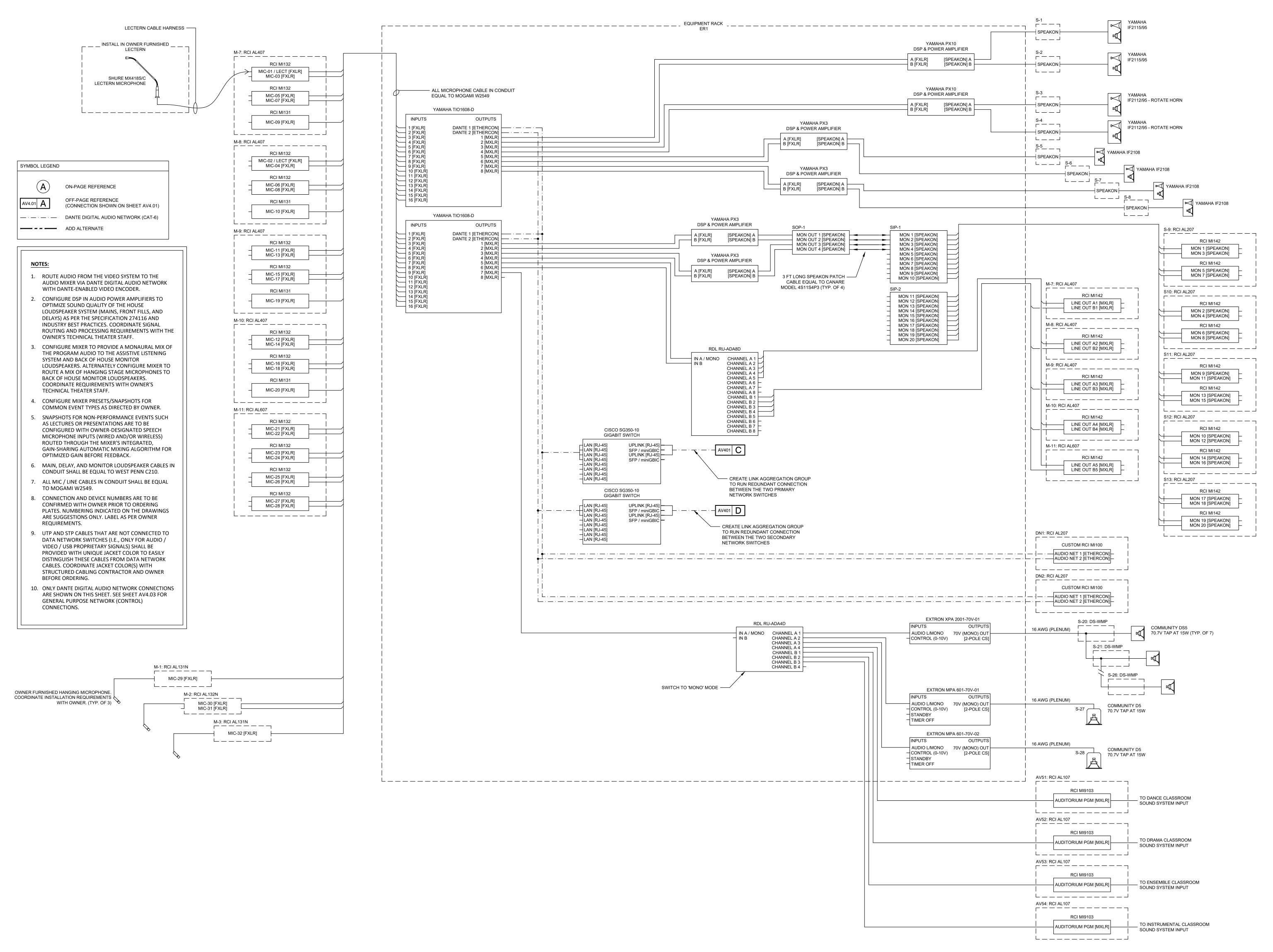
HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:
BLOCK DIAGRAMS



474.01



1 AUDITORIUM AUDIO SYSTEM - EQUIPMENT RACK ER-1 SCALE: NTS

ARCHITECT

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CIVIL
FISHER, COLLINS, CARTER

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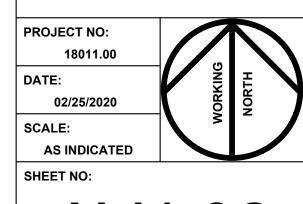
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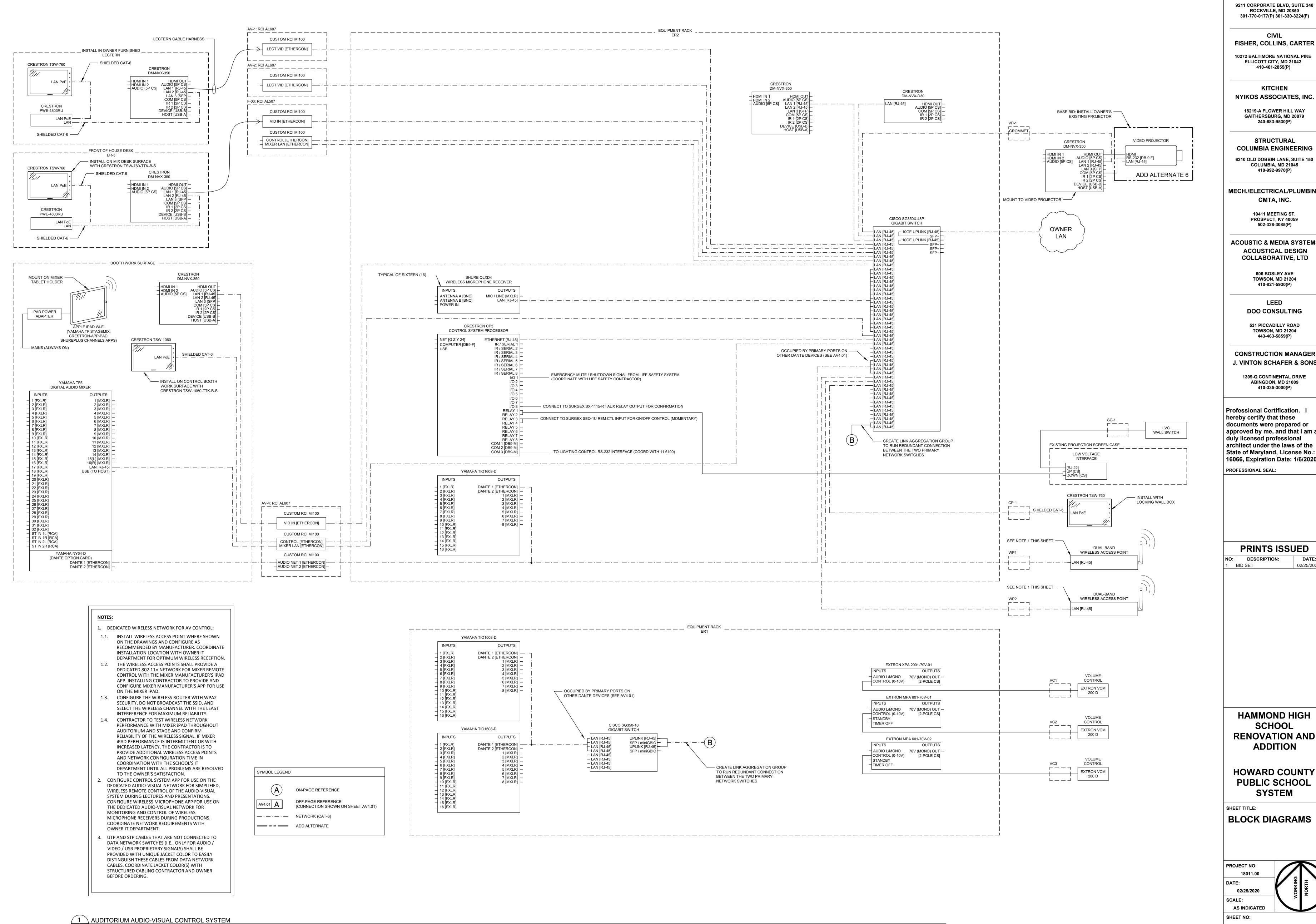
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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:
BLOCK DIAGRAMS





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**KITCHEN** NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879 240-683-9530(P)

STRUCTURAL **COLUMBIA ENGINEERING** 6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

MECH./ELECTRICAL/PLUMBING

410-992-9970(P)

10411 MEETING ST. PROSPECT, KY 40059 502-326-3085(P)

CMTA, INC.

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410-821-5930(P)

LEED

DOO CONSULTING 531 PICCADILLY ROAD

**TOWSON, MD 21204** 

443-463-5859(P) **CONSTRUCTION MANAGER** 

1309-Q CONTINENTAL DRIVE

410-335-3000(P)

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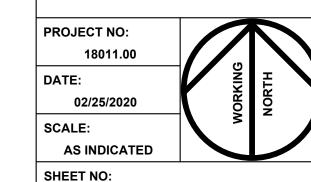
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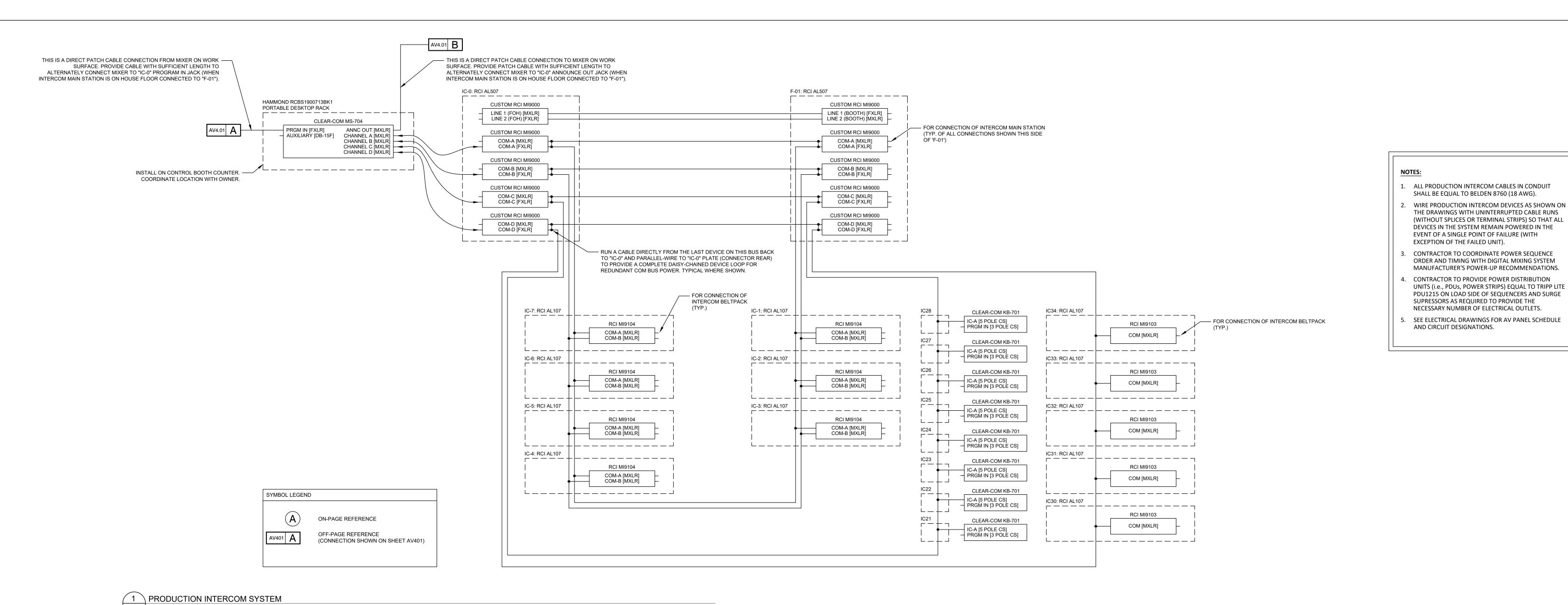
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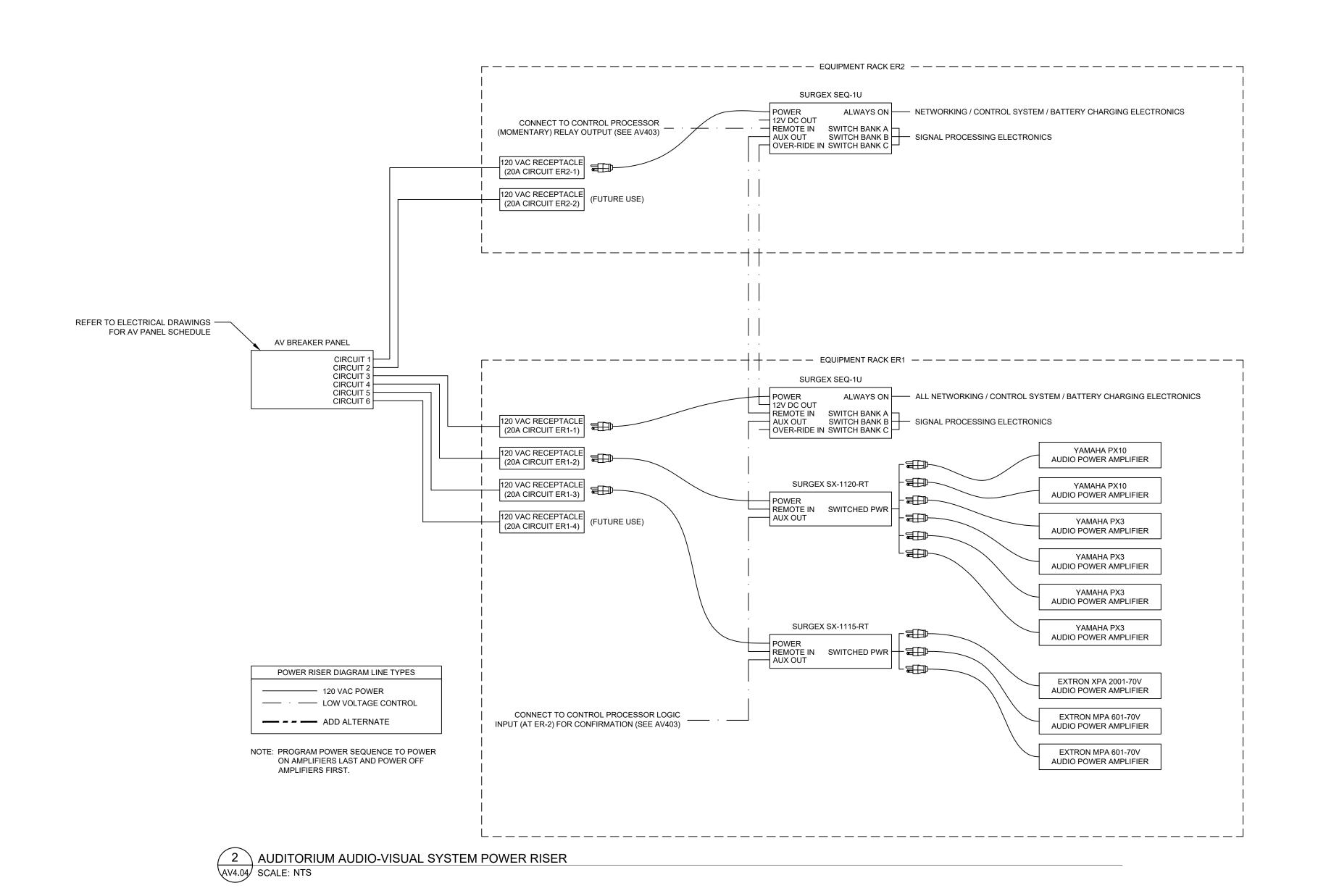
**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE: **BLOCK DIAGRAMS** 







9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042 410-461-2855(P)

SHALL BE EQUAL TO BELDEN 8760 (18 AWG).

EVENT OF A SINGLE POINT OF FAILURE (WITH

EXCEPTION OF THE FAILED UNIT).

AND CIRCUIT DESIGNATIONS.

THE DRAWINGS WITH UNINTERRUPTED CABLE RUNS

DEVICES IN THE SYSTEM REMAIN POWERED IN THE

ORDER AND TIMING WITH DIGITAL MIXING SYSTEM

MANUFACTURER'S POWER-UP RECOMMENDATIONS.

UNITS (i.e., PDUs, POWER STRIPS) EQUAL TO TRIPP LITE

PDU1215 ON LOAD SIDE OF SEQUENCERS AND SURGE

SUPRESSORS AS REQUIRED TO PROVIDE THE

NECESSARY NUMBER OF ELECTRICAL OUTLETS.

(WITHOUT SPLICES OR TERMINAL STRIPS) SO THAT ALL

**KITCHEN** NYIKOS ASSOCIATES, INC.

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STRUCTURAL

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COLUMBIA ENGINEERING

MECH./ELECTRICAL/PLUMBING

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531 PICCADILLY ROAD

**TOWSON, MD 21204** 443-463-5859(P)

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

> 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

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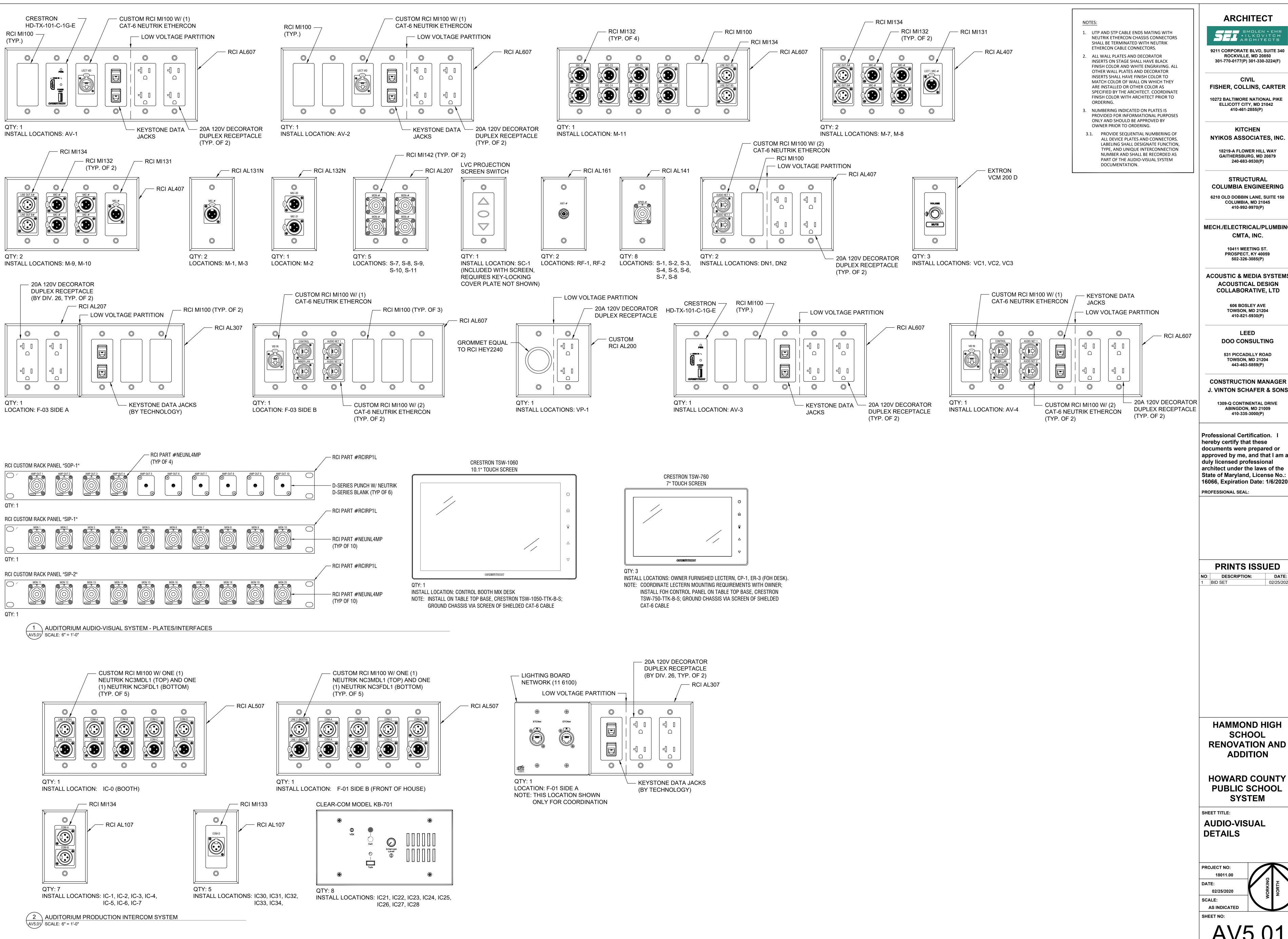
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**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY** SYSTEM

SHEET TITLE: **BLOCK DIAGRAMS** 

02/25/2020 AS INDICATED



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> 410-461-2855(P) **KITCHEN**

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**CONSTRUCTION MANAGER** 

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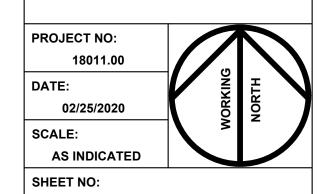
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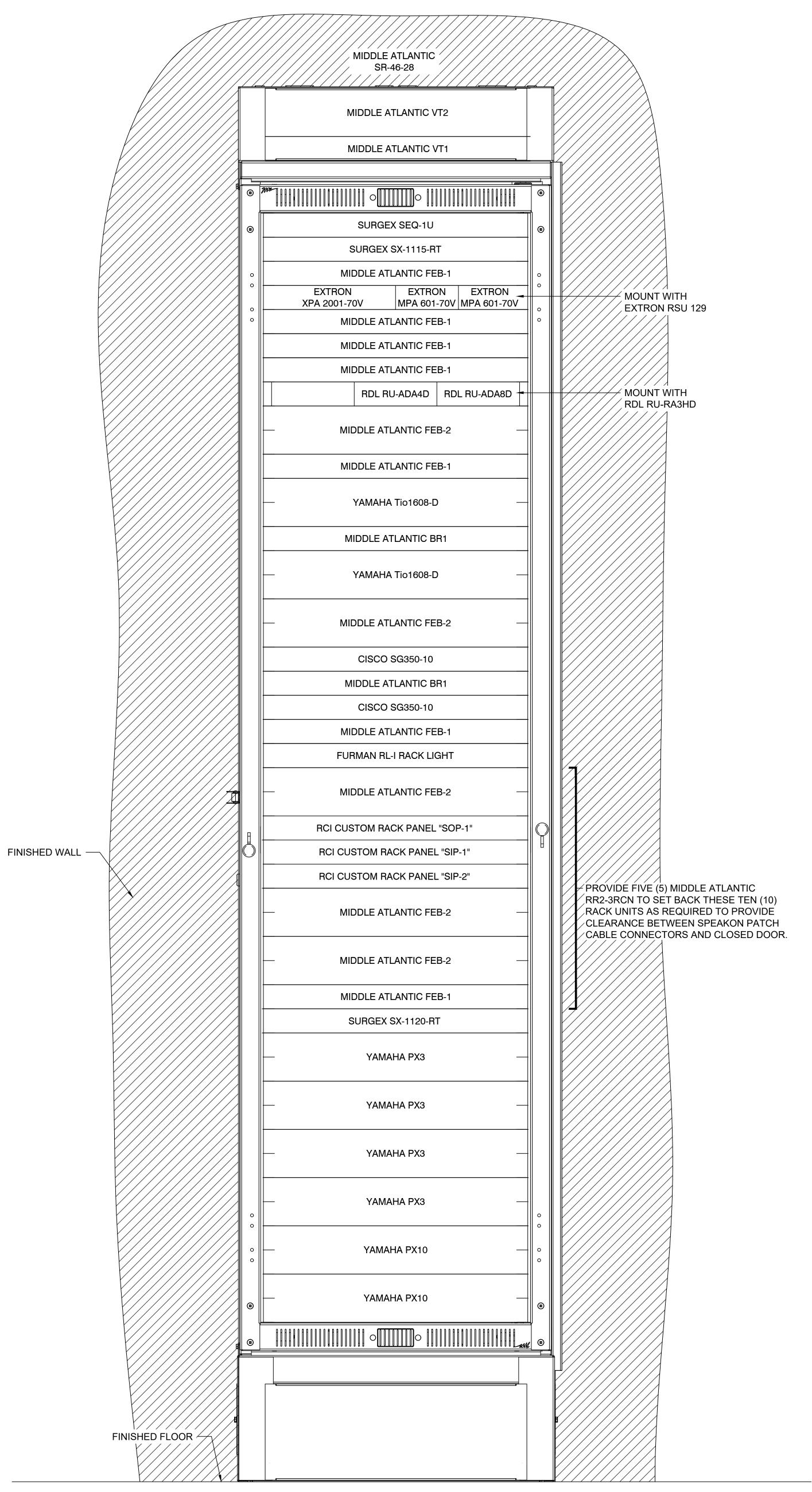
02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE: **AUDIO-VISUAL DETAILS** 





(SHOWN WITHOUT REQUIRED LOCKING VENTED FRONT DOOR)

AV5.02 AUDITORIUM EQUIPMENT RACK 'ER-1' (STAGE)
SCALE: 3" = 1'-0"

HAMMOND RCBS1900713BK1

FURMAN RL-I RACK LIGHT

SURGEX SX-1115

— CLEAR-COM MS-704

3 AUDITORIUM PRODUCTION INTERCOM RACK (FOH OR BOOTH)

AV5.02 SCALE: 3" = 1'-0"

EQUIPMENT RACK EQUAL TO MIDDLE — ATLANTIC MRK-4426LRD FITTED WITH COMMERCIAL GRADE CASTER BASE

AND SIDE PANELS.

MIDDLE ATLANTIC VT2 FURMAN RL-I RACK LIGHT SHURE UA844+SWB SHURE UA844+SWB SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE UA844+SWB SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE UA844+SWB SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE UA844+SWB SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 SHURE QLXD4 MIDDLE ATLANTIC FEB-1 LISTEN RACK MOUNT KIT LISTEN LT-800-072 MIDDLE ATLANTIC FEB-2 MIDDLE ATLANTIC FEB-1 **CRESTRON CP3** MIDDLE ATLANTIC FEB-1 CISCO SG350X-48P MIDDLE ATLANTIC BR1 CISCO SG350-10 MIDDLE ATLANTIC FEB-1 MIDDLE ATLANTIC BR1 YAMAHA Tio1608-D MIDDLE ATLANTIC FEB-1 MIDDLE ATLANTIC D4 SURGEX SEQ-1U

AV EQUIPMENT RACK "ER-2"

2 AUDITORIUM EQUIPMENT RACK 'ER-2' (CONTROL BOOTH)

SCALE: 3" = 1'-0"

**ARCHITECT** 

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CONSTRUCTION MANAGER
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 DESCRIPTION:
 DATE:

 BID SET
 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

AUDIO-VISUAL DETAILS

PROJECT NO:

18011.00

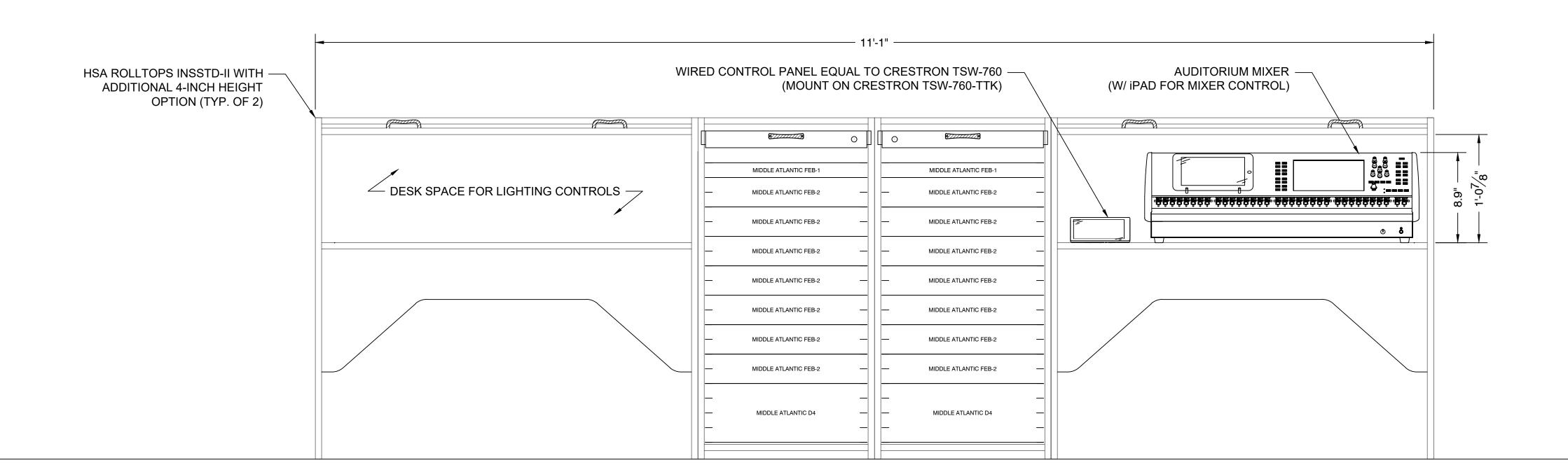
DATE:

02/25/2020

SCALE:

AS INDICATED

AV5.02



1 FRONT OF HOUSE EQUIPMENT RACKS 'ER-3'
AV5.03 SCALE: 1-1/2" = 1'-0"

**ARCHITECT** 

SMOLEN • EMR
• ILKOVITCH
ARCHITECTS

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PROFESSIONAL SEAL:

PRINTS ISSUED

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 DESCRIPTION:
 DATE:

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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:
AUDIO-VISUAL
DETAILS

PROJECT NO: 18011.00 DATE: 02/25/2020 SCALE:

DATE:

02/25/2020

SCALE:

AS INDICATED

SHEET NO:

AV5.03

## THEATER SYSTEMS SYMBOLS PLAN NOTE NUMBER. ELECTRIC MOTOR. SEE NOTE FOR DETAILS. HARD-WIRED ELECTRICAL POWER CONNECTION. SEE NOTE FOR 20A 120V DUPLEX POWER RECEPTACLE 18" AFF U.N.O. 20A 120V QUADPLEX POWER RECEPTACLE 18" AFF U.N.O. NETWORK DATA OUTLET 18" AFF U.N.O. "#" INDICATES QUANTITY OF DEVICE PORTS. FLOOR BOX, SIZE / MODEL AS NOTED. EQUIPMENT RACK, DRAWN TO SCALE LIGHTING SYSTEM DIMMER PANEL, DRAWN TO SCALE. LIGHTING SYSTEM RELAY PANEL, DRAWN TO SCALE. "#" INDICATES GANG SIZE OF WALL BOX. WHERE NO GANG SIZE IS INDICATED SEE NOTE FOR BACK BOX DETAILS. LIGHTING CONTROL SYSTEM BUTTON STATION. RIGGING CONTROL SYSTEM EMERGENCY STOP WALL BOX. LIGHTING CONTROL SYSTEM FADER STATION. LIGHTING CONTROL SYSTEM TOUCH SCREEN STATION. HOIST POWER AND CONTROL DISTRIBUTION BOX. JUNCTION / PULL BOX, SIZE AND SERVICE AS NOTED. MOTOR STARTER EQUAL TO ETC MODEL FSMS. LIGHTING SYSTEM POWER/CONTROL DISTRIBUTION WALL BOX. LIGHTING CONTROL PLUG-IN STATION WALL BOX. MOTORIZED RIGGING CONTROL STATION. LIGHTING CONTROL SYSTEM LOCKOUT STATION EMERGENCY LIGHTING TRANSFER SWITCH, DRAWN TO SCALE. WALL-MOUNTED DMX EMERGENCY BYPASS CONTROLLER

## SPECIAL REQUIREMENTS - EXISTING CONDITIONS

- EXISTING EQUIPMENT LOCATIONS AND RIGGING DIMENSIONS ON THESE DRAWINGS ARE A BEST-EFFORT ATTEMPT TO DOCUMENT EXISTING CONDITIONS, BUT MAY NOT BE CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR FIELD-VERIFYING EXISTING CONDITIONS.
- PROVIDE A SITE INSPECTION TO DOCUMENT EXISTING EQUIPMENT AND CONDITIONS. MAKE NOTE OF EXISTING CONDITIONS OR ANY OTHER CONFLICTS THAT COULD AFFECT THE INSTALLATION OF NEW THEATER LIGHTING/RIGGING SYSTEMS AS INDICATED ON THESE DRAWINGS IN A WRITTEN REQUEST FOR INFORMATION (RFI).
- 3. PROVIDE LABOR TO UNINSTALL EXISTING THEATER LIGHTING/RIGGING EQUIPMENT NOT INTENDED TO REMAIN AS PART OF THE NEW THEATER LIGHTING/RIGGING SYSTEMS AND DISPOSE OF DECOMMISSIONED EQUIPMENT AS DIRECTED BY THE
- OWNER. 4. REVIEW THESE DRAWINGS FOR ALL REFERENCES TO EXISTING AND OWNER FURNISHED EQUIPMENT AND COORDINATE WITH OWNER THE DECOMMISSIONING
- OF EXISTING EQUIPMENT. 5. EXISTING RIGGING SYSTEMS ARE TO BE RETAINED PENDING INSPECTION BY AN
- ETCP CERTIFIED RIGGING INSPECTOR, UNLESS NOTED OTHERWISE. CONFIRM WITH A LICENSED STRUCTURAL ENGINEER THE BUILDING STRUCTURE CAN SUPPORT NEW RIGGING LOADS AS SPECIFIED PRIOR TO COMMENCING WITH

WORK.

- 7. PROVIDE LABOR TO UNINSTALL AND REINSTALL EXISTING RIGGING SYSTEMS AS
- REQUIRED TO ACCESS STRUCTURE AND INSTALL NEW RIGGING COMPONENTS. 8. TEST AND VERIFY ALL EXISTING EQUIPMENT INTENDED TO BE REUSED IN THE NEW THEATER SYSTEMS OPERATES AS INTENDED. REPORT TO THE OWNER ANY
- **EQUIPMENT THAT REQUIRES REPAIR OR REPLACEMENT PRIOR TO INSTALLATION.** 9. COORDINATE WITH THE OWNER THE INSTALLATION OF EQUIPMENT (NEW, EXISTING, AND OWNER FURNISHED). PROVIDING ALL NECESSARY ACCESSORIES AND INTERFACING COMPONENTS FOR A COMPLETE, WORKING SYSTEM MEETING THE OWNER'S REQUIREMENTS.

## **GENERAL NOTES**

## **GENERAL NOTES**

- 1. PRIOR TO BIDDING, REVIEW THE PROJECT DRAWINGS AND SPECIFICATIONS TO BECOME FAMILIAR WITH THE PROJECT SCOPE AND THEATRICAL SYSTEMS REQUIREMENTS.
- ADVISE THE ARCHITECT AND THEATER CONSULTANT OF ANY DISCREPANCIES THAT WILL AFFECT THE INSTALLATION OF THE THEATRICAL SYSTEMS.
- OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR INSPECTION OF THE THEATRICAL SYSTEMS BY LOCAL OFFICIALS IF REQUIRED BY LOCAL CODE.
- 4. COORDINATE THE INSTALLATION OF THE THEATRICAL SYSTEMS WITH THE BASE BUILDING ELECTRICAL WORK, INCLUDING CONDUIT, BACK BOXES, PULL BOXES, JUNCTION BOXES, CABLES, AND ELECTRICAL POWER AS SHOWN ON THE ELECTRICAL DRAWINGS AND THEATER SYSTEMS INFRASTRUCTURE DRAWINGS.
- COORDINATE WITH ARCHITECT ALL INFRASTRUCTURE REQUIREMENTS SHOWN ON THESE DRAWINGS INCLUDING BUT NOT LIMITED TO FLOOR BOX LOCATIONS, BACK BOX LOCATIONS AND ELEVATIONS, AND CONDUIT ROUTING. OBTAIN ARCHITECT'S APPROVAL BEFORE COMMENCING WITH WORK.
- 6. VERIFY THE BASE BUILDING ELECTRICAL INFRASTRUCTURE IS COMPLETE AND CORRECT FOR THE THEATRICAL SYSTEMS CABLES AND FUNCTIONS.
- 7. SUPPLY AND INSTALL MISCELLANEOUS CONDUIT, BACK BOXES, PULL BOXES, JUNCTION BOXES, AND CABLES TO RESULT IN A COMPLETE SYSTEM TO THE EXTENT THESE ITEMS ARE NOT SUPPLIED OR INSTALLED BY THE ELECTRICAL CONTRACTOR.
- 8. TERMINATE THEATER SYSTEMS CABLES.
- 9. SUPPLY AND INSTALL ALL THEATER SYSTEMS EQUIPMENT, ELECTRONICS, COMPONENT ITEMS, CONTROL SOFTWARE PROGRAMMING, AND PROVIDE TESTING TO ENSURE COMPLETE AND WORKING SYSTEMS.

## **NEW RIGGING REQUIREMENTS:**

- 10. RIGGING DETAILS SHOWN ON THE THEATER DRAWINGS ARE CONCEPTUAL. RIGGING HARDWARE, ATTACHMENT METHODS, AND SUPPORTING STRUCTURE (BUILDING STEEL AND SUPPLEMENTAL STRUCTURE) MUST BE APPROVED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE RIGGING SYSTEMS ARE TO BE INSTALLED PRIOR TO COMMENCING WITH WORK.
- 11. RIGGING LOADS INDICATED ON THE DRAWINGS ARE ESTIMATED. THE CONTRACTOR IS TO CONFIRM RIGGING LOADS WITH A LICENSED STRUCTURAL ENGINEER.
- 12. CONTRACTOR TO COORDINATE RIGGING REQUIREMENTS AND SUPPORTING STRUCTURE TO BE PROVIDED BETWEEN BUILDING STEEL CONTRACTOR AND RIGGING INSTALLER.
- 13. IT IS THE RESPONSIBILITY OF BIDDING CONTRACTORS TO CAREFULLY REVIEW THE RIGGING SYSTEMS DESIGN SHOWN ON THESE DRAWINGS AND NOTE ANY POTENTIAL PROBLEMS OR CONFLICTS WITH BUILDING SYSTEMS IN A REQUEST FOR INFORMATION (RFI) PRIOR TO SUBMITTING BIDS.
- 14. RIGGING INSTALLER TO PROVIDE SUPPLEMENTAL STRUCTURE AND ALL HARDWARE REQUIRED TO SUPPORT INSTALLATION OF RIGGING SYSTEMS AS SHOWN ON THESE DRAWINGS.
- 15. ALL RIGGING TO BE INSTALLED BY AN ETCP-CERTIFIED
- 16. ALL RIGGING SHALL BE INSTALLED TO ESTA AND ANSI ACCEPTED STANDARDS.
- 17. ALL PIPES, BATTENS, AND PIPE GRIDS:
- 17.1. ALL PIPES ARE TO BE 1-1/2" DIAMETER NOMINAL (1.9" O.D.) SCHEDULE 40 STEEL UNLESS NOTED OTHERWISE.
- 17.2. ANSI E1.4-3.9.1(C): ALL PIPES SHALL BE CAPABLE OF SUPPORTING AT MINIMUM 30.25 LBS./FT OF UNIFORMLY DISTRIBUTED LOAD. 17.3. ALL PIPES SHALL BE CAPABLE OF SUSTAINING A POINT
- LOAD OF 100 LBS. AT MID-SPAN BETWEEN ANY TWO HANG POINTS/ATTACHMENTS TO STRUCTURE WITH A MAXIMUM SPAN DEFLECTION OF 1/180 OF THE SPAN.

## ELECTRICAL CONTRACTOR INSTALLATION RESPONSIBILITIES

- 18. ALL ELECTRICAL POWER REQUIREMENTS INDICATED ON THEATER SYSTEMS DRAWINGS ARE SHOWN FOR COORDINATION PURPOSES ONLY AND SHALL BE PROVIDED UNDER DIVISION 26. SEE ELECTRICAL DRAWINGS FOR INFORMATION ON ELECTRICAL POWER INFRASTRUCTURE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
- 19. THE INSTALLATION OF ALL CONDUITS, BACK BOXES, PULL BOXES, JUNCTION BOXES, AND ELECTRICAL POWER SHOWN ON THESE THEATER SYSTEMS DRAWINGS SHALL BE PROVIDED UNDER DIVISION 26.
- 20. ELECTRICAL POWER FOR THE THEATRICAL LIGHTING AND LIGHTING CONTROL SYSTEM SHALL BE SERVED BY A DEDICATED BREAKER PANEL ELECTRICALLY ISOLATED FROM POWER CIRCUITS SERVING THE RIGGING CONTROL SYSTEM, RIGGING MOTORS, HVAC EQUIPMENT, AND OTHER NOISE-GENERATING BUILDING SYSTEMS EQUIPMENT

## THEATER SYSTEMS INFRASTRUCTURE REQUIREMENTS

### 21. ALL CONDUITS SHALL BE EMT OF MINIMUM 1" DIAMETER UNLESS NOTED OTHERWISE.

- 22. CONDUITS SHALL BE PROVIDED SIZED AS INDICATED OR SIZED AS REQUIRED FOR 40 PERCENT FILL, WHICHEVER IS LARGER.
- 23. CONDUIT RUNS IN EXCESS OF 100 FT SHALL HAVE INTERMEDIATE JUNCTION BOXES EVERY 100 FT OR AT 3 BEND INTERVALS, WHICHEVER IS SHORTER.
- 24. CONDUIT FIELD BENDS AND OFFSETS SHALL BE AVOIDED WHENEVER POSSIBLE. FIELD BENDS SHALL BE MADE TO AVOID CHANGING THE INTERNAL DIAMETER AND NOT DAMAGE THE CONDUIT'S INTERIOR AND EXTERIOR PROTECTIVE COATINGS. FIELD BENDS SHALL BE FREE OF KINKS, INDENTATIONS, AND FLATTENING. INDIVIDUAL BENDS SHALL NOT EXCEED 90 DEGREES. NO MORE THAN 270 DEGREES OF TOTAL BENDS SHALL BE ALLOWED IN ANY ONE CONDUIT RUN.
- 25. ALL CONDUITS SHALL BE PROVIDED WITH ONE (1) SPARE NYLON PULL LINE.
- 26. ALL WALL AND CEILING BOXES SHALL BE A MINIMUM OF 3-1/2 INCHES DEEP UNLESS NOTED OTHERWISE.
- 27. ALL JUNCTION AND PULL BOXES SHALL BE A MINIMUM OF 4 INCHES DEEP UNLESS NOTED OTHERWISE
- 28. PULL BOXES AND JUNCTION BOXES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
- 29. MAINTAIN PROXIMITY GROUPING OF ALL SIMILAR LEVEL CABLES AND CONDUITS. PROVIDE INDUSTRY-STANDARD SPACING BETWEEN CABLES AND CONDUITS OF DIFFERENT ELECTRICAL SIGNAL LEVELS.
- 30. ALL CONDUIT AND BACK BOXES ARE TO BE RECESSED WHERE POSSIBLE. ALL CONDUIT TO BE CONCEALED WHERE POSSIBLE. IF CONDUIT AND BACK BOXES CANNOT BE RECESSED IN EXISTING GYPSUM BOARD WALLS OR NEW WALLS, NOTIFY ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH WORK. INSTALL CONDUIT AND BACK BOXES TO SURFACE OF EXISTING MASONRY WALLS.
- 31. ALL EXPOSED CONDUITS, BACK BOXES, PULL BOXES, AND JUNCTION BOXES THAT ARE VISIBLE SHALL BE PAINTED TO MATCH THE SURFACES TO WHICH THEY ARE MOUNTED.
- 32. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON LOCATING DEVICE BOXES.

## STRUCTURED CABLING CONTRACTOR (27 1000) INSTALLATION

- 33. NETWORK DATA REQUIREMENTS INDICATED ON THE THEATER SYSTEMS INFRASTRUCTURE DRAWINGS SHALL BE PROVIDED BY THE STRUCTURED CABLING CONTRACTOR.
  - 34. PROVIDE AND INSTALL STRUCTURED CABLES TO ALL LOCATIONS INDICATED.
  - 35. TERMINATE DATA CABLES WITH APPROPRIATE JACKS OR CONNECTORS AND SUPPLY AND INSTALL ALL FITTINGS TO INCLUDE DECORATOR INSERTS AND WALL PLATES, EXCEPT WHERE NETWORK DATA DROPS ARE TO BE PROVIDED INSIDE THEATRICAL DEVICE BOXES OR EQUIPMENT RACK LOCATIONS,
  - 35.1. THEATRICAL EQUIPMENT RACKS: COORDINATE REQUIREMENTS WITH THEATRICAL EQUIPMENT CONTRACTOR TO PROVIDE NETWORK DATA JACKS INSIDE EQUIPMENT RACK ENCLOSURES WHERE INDICATED. TERMINATE, MOUNT, AND LOCATE CONNECTIONS AS DIRECTED BY THE THEATRICAL CONTRACTOR.

## THEATRICAL CONTRACTOR INSTALLATION REQUIREMENTS

- 36. COORDINATE ADDITIONAL STRUCTURE, BRACING, AND BLOCKING REQUIREMENTS FOR MOUNTING OF THEATRICAL EQUIPMENT WITH THE ARCHITECT AND GENERAL CONTRACTOR.
- 37. PROVIDE SUFFICIENT TRACK LENGTH AS REQUIRED TO STORE STACKED CURTAINS OF SPECIFIED LENGTH OFF-STAGE.
- 38. PROVIDE SUFFICIENT SLACK FOR LOW VOLTAGE CONTROL CABLES AND POWER CABLES ENTERING FLOOR AND WALL MOUNTED EQUIPMENT RACKS TO ENABLE EQUIPMENT RACKS TO BE MOVED OUT OR OPENED UP FULLY, AND TO CLEAR ADJACENT WALLS OR FURNITURE FOR SERVICING.
- 39. PROVIDE SEQUENTIAL NUMBERING OF ALL THEATER SYSTEMS CABLES AT EACH CABLE ORIGINATION AND TERMINATION POINT. RECORD NUMBERING AS PART OF THE THEATER SYSTEMS DOCUMENTATION.
- 40. PROVIDE SEQUENTIAL NUMBERING OF ALL DEVICE PLATES AND CONNECTORS. LABELING SHALL DESIGNATE FUNCTION, TYPE, AND UNIQUE INTERCONNECTION NUMBER AND SHALL BE RECORDED AS PART OF THE THEATER SYSTEMS DOCUMENTATION.
- 41. SEE SPECIFICATION 116100 FOR FULL THEATRICAL CONTRACTOR INSTALLATION REQUIREMENTS.

## PLAN NOTES

- 1. EXISTING DEAD-HUNG VALANCE CURTAIN TO REMAIN. 2. EXISTING VARIABLE PROSCENIUM LEGS TO REMAIN.
- 3. EXISTING UTILITY (MICROPHONE) BATTEN ON HAND WINCH TO REMAIN. HAND WINCH IS LOCATED ON UPSTAGE WALL.
- 4. EXISTING DEAD-HUNG MAIN TRAVELER CURTAIN TO REMAIN. EXISTING MOTORIZED 1ST ELECTRIC TO REMAIN. EXISTING SYSTEM IS VORTEK CLASSIC HOIST WITH E-SERIES RIGGING CONTROL SYSTEM. HOIST IS LOCATED AT STAGE RIGHT SIDE WITH PANTOGRAPH CABLE MANAGEMENT ON STAGE LEFT
- 6. EXISTING DEAD-HUNG BORDER CURTAIN TO REMAIN.
- 7. EXISTING DEAD-HUNG LEGS (ON SEPARATE PIPE SEGMENTS) TO REMAIN. 8. EXISTING MOTORIZED 2ND ELECTRIC TO REMAIN. EXISTING SYSTEM IS VORTEK CLASSIC HOIST WITH E-SERIES RIGGING

CONTROL SYSTEM. HOIST IS LOCATED AT STAGE RIGHT SIDE

WITH PANTOGRAPH CABLE MANAGEMENT ON STAGE LEFT

- 9. EXISTING DEAD-HUNG MID-STAGE TRAVELER CURTAIN TO
- 10. EXISTING DEAD-HUNG BORDER CURTAIN TO REMAIN.
- 11. EXISTING DEAD-HUNG LEGS (ON SEPARATE PIPE SEGMENTS) TO REMAIN.
- 12. EXISTING MOTORIZED 3RD ELECTRIC TO REMAIN. EXISTING SYSTEM IS VORTEK CLASSIC HOIST WITH E-SERIES RIGGING CONTROL SYSTEM. HOIST IS LOCATED AT STAGE RIGHT SIDE WITH PANTOGRAPH CABLE MANAGEMENT ON STAGE LEFT
- 13. PROVIDE TWO (2) NEW WALK-ALONG CURTAIN TRACKS EQUAL TO ADC SILENT STEEL MODEL 284-R WITH ALL NECESSARY ACCESSORIES FOR SUPPORT OF OWNER FURNISHED SOFT SCENERY PANELS. BOTH TRACKS ARE TO RUN THE FULL WIDTH OF THE STAGE AT SAME ELEVATION AS LAP CLAMPS. PROVIDE PULL CORD TO LEADING AND
- EXISTING DRAPERY TRACKS SPACED FROM EACH OTHER WITH TRAILING CARRIERS. INTENT IS FOR END USER TO ATTACH UP TO TWO (2) SCENERY DROPS WITH ONE TRACKING OFF-STAGE LEFT AND ONE TRACKING OFF-STAGE RIGHT.
- WITH EXISTING RIGGING AND WITH END USER. ADJUST SPACING OF ADJACENT LINE SETS TO ACCOMMODATE THE NEW DROP TRACKS. DROP TRACKS ARE TO BE INSTALLED UPSTAGE OF 3RD ELECTRIC IF POSSIBLE.
- 14. EXISTING DEAD-HUNG UPSTAGE TRAVELER CURTAIN TO
- 15. EXISTING CYCLORAMA/UTILITY BATTEN:
- 15.1. EXISTING CYCLORAMA BATTEN ON HAND WINCH. HAND WINCH IS LOCATED ON UPSTAGE WALL.
- 15.2. CONTRACTOR TO REMOVE EXISTING RIGGING LINE SET AT THIS LOCATION AND PROVIDE ONE (1) NEW MOTORIZED HOIST EQUAL TO ETC/VORTEK MODEL VE-0820 AND CONFIGURATION AS EXISTING HOISTS, BUT WITHOUT THE PANTOGRAPH CABLE MANAGEMENT SYSTEM FOR
- THEATRICAL LIGHTING CIRCUITS. 15.3. CONTRACTOR TO PROVIDE NEW, FLOWN UTILITY BATTEN FOR SUPPORT OF THE NEW CYCLORAMA CURTAIN.
- 15.4. HOIST WEIGHT IS 650 LBS. 15.5. HOIST GROSS LIFTING CAPACITY IS 800 LBS.
- 16. PROVIDE 480VAC 3 PHASE (3 WIRE + GROUND) POWER RATED 28. EXISTING LIGHTING CONTROL PANEL: AT 20A MAX FOR HOIST POWER. PROVIDE MOTOR RATED BREAKER. NEW ELECTRICAL POWER CIRCUIT TO BE PROVIDED 28.1. CONTRACTOR TO REMOVE EXISTING JOHNSON SYSTEMS BY EXTENDING EXISTING HIGH VOLTAGE HOIST WIREWAY IF EXISTING WIREWAY CAPACITY IS ADEQUATE. OTHERWISE PROVIDE ONE (1) NEW HIGH VOLTAGE DISTRIBUTION BOX WITH DEDICATED ELECTRICAL POWER CIRCUIT HOMERUN BACK TO 480VAC 3 PHASE DISTRIBUTION PANEL FOR THE NEW HOIST. NEW HIGH VOLTAGE WIREWAY PANEL OR

- TWIST-LOCKING ELECTRICAL POWER RECEPTACLE IS TO BE FURNISHED BY HOIST MANUFACTURER FOR INSTALLATION BY DIVISION 26. POWER RECEPTACLE MUST BE INSTALLED WITHIN 6 FEET OF HOIST POWER PANEL.
- EXTEND EXISTING LOW VOLTAGE HOIST CONTROL WIREWAY AND PROVIDE ONE (1) NEW LOW VOLTAGE HOIST CONTROL DISTRIBUTION PANEL AND ASSOCIATED CABLING. OTHERWISE, PROVIDE ONE (1) NEW HOIST LOW VOLTAGE CONTROL DISTRIBUTION BOX ADJACENT TO (WITHIN 6 FEET OF) HOIST MOTOR AND ROUTE ONE (1) 3/4" CONDUIT FROM THE NEW BOX TO THE EXISTING LOW VOLTAGE HOIST WIREWAY FOR LOW VOLTAGE RIGGING CONTROL SIGNALS. EXISTING RIGGING CONTROL SYSTEM IS THE VORTEK E-SERIES RIGGING CONTROL SYSTEM.
- 18. ONE (1) 3/4" DIAMETER CONDUIT FROM SINGLE GANG BOX AT STRUCTURE ABOVE EXISTING ELECTRIC AND ADJACENT TO PANTOGRAPH ROUTED TO NEW EQUIPMENT RACK "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS. PROVIDE TWO (2) NEW SHIELDED CAT-6 CABLES FROM NEW EQUIPMENT RACK TO EXISTING LIGHTING BATTEN. PROVIDE PIPE MOUNTED BOX ON EXISTING BATTEN WITH TWO (2) ETHERCON JACKS FOR FUTURE DMX GATEWAY(S).
- 19. EXISTING FIXTURE PIPE AT FRONT OF HOUSE CATWALK.
- 20. ONE (1) 3/4" DIAMETER CONDUIT FROM SINGLE GANG BOX MOUNTED TO EXISTING FIXTURE PIPE ROUTED TO NEW EQUIPMENT RACK "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS. PROVIDE TWO (2) NEW SHIELDED CAT-6 CABLES FROM NEW EQUIPMENT RACK TO EXISTING LIGHTING BATTEN. PROVIDE TWO (2) ETHERCON JACKS FOR FUTURE DMX GATEWAY(S) IN PIPE MOUNTED BOX.
- 21. PROVIDE ONE (1) DEDICATED 20A 120V ELECTRICAL POWER CIRCUIT TO THIS DUPLEX RECEPTACLE FOR EXISTING FOLLOW SPOT FIXTURE POWER.
- 22. ONE (1) 3/4" CONDUIT FROM SINGLE GANG WALL BOX 18" AFF ROUTED TO NEW EQUIPMENT RACK "ER-L1" FOR FUTURE LOW VOLTAGE LIGHTING CONTROL SIGNALS.
- 23. ONE (1) 3/4" CONDUIT FROM SINGLE GANG WALL BOX 18" AFF ROUTED TO NEW EQUIPMENT RACK "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.
- 13.1. COORDINATE LOCATION OF THE DROP TRAVELER TRACKS 24. PROVIDE ONE (1) BACK BOX EQUAL TO ETC P-LCD-FBB (FLUSH, PREFERRED) OR ETC P-LCD-SBB (SURFACE) MOUNTED 42" AFF FOR LIGHTING CONTROL TOUCH SCREEN STATION. ROUTE ONE (1) 3/4" CONDUIT FROM WALL BOX TO "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.
  - 25. ONE (1) 3/4" CONDUIT FROM 2-GANG WALL BOX 18" AFF ROUTED TO NEW EQUIPMENT RACK "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.
  - 26. ONE (1) 6" DEEP FLOOR BOX EQUAL TO FSR MODEL FL-600P-6 (TEL: 800.332.3771) WITH 20A 120V QUADPLEX POWER RECEPTACLE AND (2) CAT6 DATA JACKS PROVIDED BY DIVISION 26. ROUTE ONE (1) 3/4" CONDUIT TO "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.
  - INTEGRATE NEW HOIST INTO EXISTING E-SERIES CONTROL 27. ONE (1) 3/4" CONDUIT FROM SINGLE GANG WALL BOX 48" SYSTEM. THE NEW HOIST IS TO BE INSTALLED WITH 6-LINE AFF ROUTED TO "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS. ROUTE ONE (1) 3/4" CONDUIT FROM THIS BOX TO INTERCONNECT OTHER BOXES AS INDICATED ON THE DRAWINGS FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS. ALL WALL BOXES SHOWN INTERCONNECTED ARE AT 48" AFF UNLESS INDICATED OTHERWISE ON THE DRAWINGS. NOTE CONDUITS ARE TO PROVIDE A COMPLETE CONDUIT LOOP BETWEEN LIGHTING CONTROL BUTTON STATIONS AND EQUIPMENT RACK "ER-L1".

    - LIGHTING CONTROL PANEL, WIRING, AND WALL BOX. 28.2. PROVIDE ONE (1) NEW LOCKING WALL BOX EQUAL TO ETC P-LCD-SLBB IN PLACE OF EXISTING WALL BOX AT 48 INCHES
- DISTRIBUTION BOX FITTED WITH OVER-CURRENT PROTECTED 28.3. ROUTE ONE (1) 3/4" CONDUIT FROM NEW WALL BOX TO "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.

AFF FOR NEW LIGHTING CONTROL TOUCH SCREEN

- 29. EXISTING LIGHTING CONTROL SYSTEM NETWORK INTERFACE BOX (SIMPLE NETWORK BOX BY ETC) TO REMAIN.
- 30. EXISTING LIGHTING CONTROL SYSTEM DIN ENCLOSURE EQUAL TO PATHWAY CONNECTIVITY MODEL 1106 TO

30.1. CONTRACTOR TO REPLACE EXISTING DMX OPTO-SPLITTERS

- WITH SAME QUANTITY OF RDM-CAPABLE DMX REPEATERS EQUAL TO PATHWAY CONNECTIVITY MODEL 1009. 30.2. INTENT IS TO PROVIDE RDM-CAPABLE DMX DISTRIBUTION WITH THE SAME DISTRIBUTION TOPOLOGY AS THE
- EXISTING LIGHTING SYSTEM. 30.3. NOTE DMX INPUTS WILL BE FROM NEW DMX GATEWAY IN EQUIPMENT RACK "ER-L1". ALL OTHER DMX WIRING AT OUTPUTS OF THE DMX REPEATERS WILL BE RE-USED.
- 31. EXISTING DIMMER PANELS EQUAL TO STRAND CD80 WITH JOHNSON SYSTEMS CD-2000 CONTROL SYSTEM TO REMAIN. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL WORK RELATED TO HOUSE LIGHTING AND EXISTING DIMMER PANELS.
- PROVIDE ONE (1) NEW WALL-MOUNTED, 24RU EQUIPMENT RACK "ER-L1" EQUAL TO MIDDLE ATLANTIC DWR-24-22PD INSTALLED 1'-4" AFF (TO BOTTOM OF EQUIPMENT RACK) FOR NEW THEATRICAL LIGHTING NETWORK / CONTROL INTERFACE EQUIPMENT. ROUTE ONE (1) 1" CONDUIT TO EXISTING NETWORK INTERFACE BOX. ROUTE ONE (1) 1" CONDUIT TO EXISTING DIN ENCLOSURE. ROUTE ONE (1) 1" CONDUIT TO EXISTING MASTER DIMMER RACK "DP-1". COORDINATE CONDUIT REQUIREMENTS WITH THEATRICAL LIGHTING CONTRACTOR.
- 33. ONE (1) 20A 120V QUADPLEX POWER RECEPTACLE LOCATED INSIDE EQUIPMENT RACK "ER-L1" FOR LIGHTING CONTROL SYSTEM EQUIPMENT RACK POWER. CONDUIT(S) FOR POWER SERVICE SHALL ENTER EQUIPMENT RACK VIA EQUIPMENT RACK BACKPAN CONDUIT KNOCKOUT(S).
- 34. PROVIDE TWO (2) CAT-6 DATA JACKS CONNECTED TO THE OWNER'S LAN INSIDE EQUIPMENT RACK "ER-L1", CONDUIT(S) FOR WHICH SHALL ENTER EQUIPMENT RACK VIA EQUIPMENT RACK BACKPAN CONDUIT KNOCKOUT(S).
- 35. EXISTING WALL MOUNTED RIGGING CONTROLLER EQUAL TO DAKTRONICS/VORTEK E-SERIES TO REMAIN.
- 36. PROVIDE ONE (1) WALL-MOUNTED DMX EMERGENCY BYPASS CONTROLLER EQUAL TO ETC MODEL DEBC-6 FOR TRIGGERING DMX 'PANIC' SCENE AND PUTTING ALL EMERGENCY FIXTURES TO FULL BRIGHTNESS DURING AN EMERGENCY OR LOSS OF NORMAL POWER, ROUTE ONE (1) 3/4" DIAMETER CONDUIT TO "ER-L1" FOR LOW VOLTAGE LIGHTING CONTROL SIGNALS.
- 37. HARDWIRE 20A 120V SINGLE PHASE NORMAL/EMERGENCY ELECTRICAL POWER INTO DMX EMERGENCY BYPASS CONTROLLER AS PER MANUFACTURER INSTALLATION INSTRUCTIONS. THE DMX EMERGENCY BYPASS CONTROLLER REQUIRES EMERGENCY POWER DURING A LOSS OF NORMAL POWER. SEE ELECTRICAL DRAWINGS FOR LOCATION OF NORMAL/EMERGENCY POWER DISTRIBUTION PANE

## **ARCHITECT**



9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL FISHER, COLLINS, CARTER **10272 BALTIMORE NATIONAL PIKE** 

ELLICOTT CITY, MD 21042

410-461-2855(P)

KITCHEN

18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879

240-683-9530(P)

NYIKOS ASSOCIATES, INC.

STRUCTURAL **COLUMBIA ENGINEERING** 

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MECH./ELECTRICAL/PLUMBING CMTA, INC.

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531 PICCADILLY ROAD

**TOWSON, MD 21204** 

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J. VINTON SCHAFER & SONS

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PRINTS ISSUED

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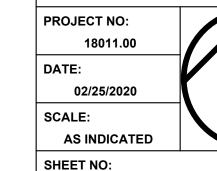
**HAMMOND HIGH** SCHOOL **RENOVATION AND** 

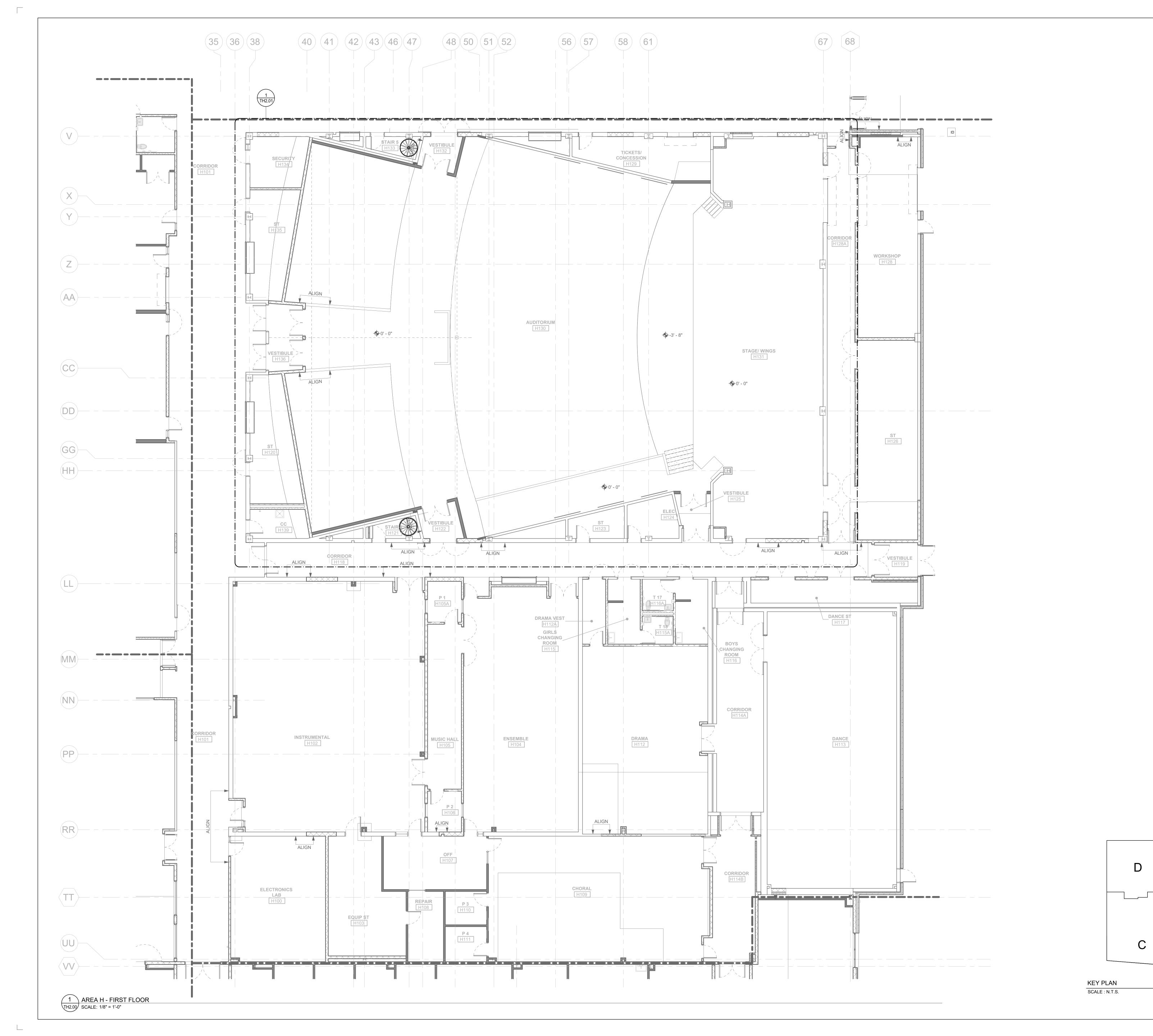
**ADDITION** 

HOWARD COUNTY **PUBLIC SCHOOL** 

SHEET TITLE:

THEATER SYSTEMS **SYMBOLS & NOTES** 





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MECH./ELECTRICAL/PLUMBING CMTA, INC.

10411 MEETING ST.

PROSPECT, KY 40059 502-326-3085(P)

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443-463-5859(P)

531 PICCADILLY ROAD **TOWSON, MD 21204** 

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

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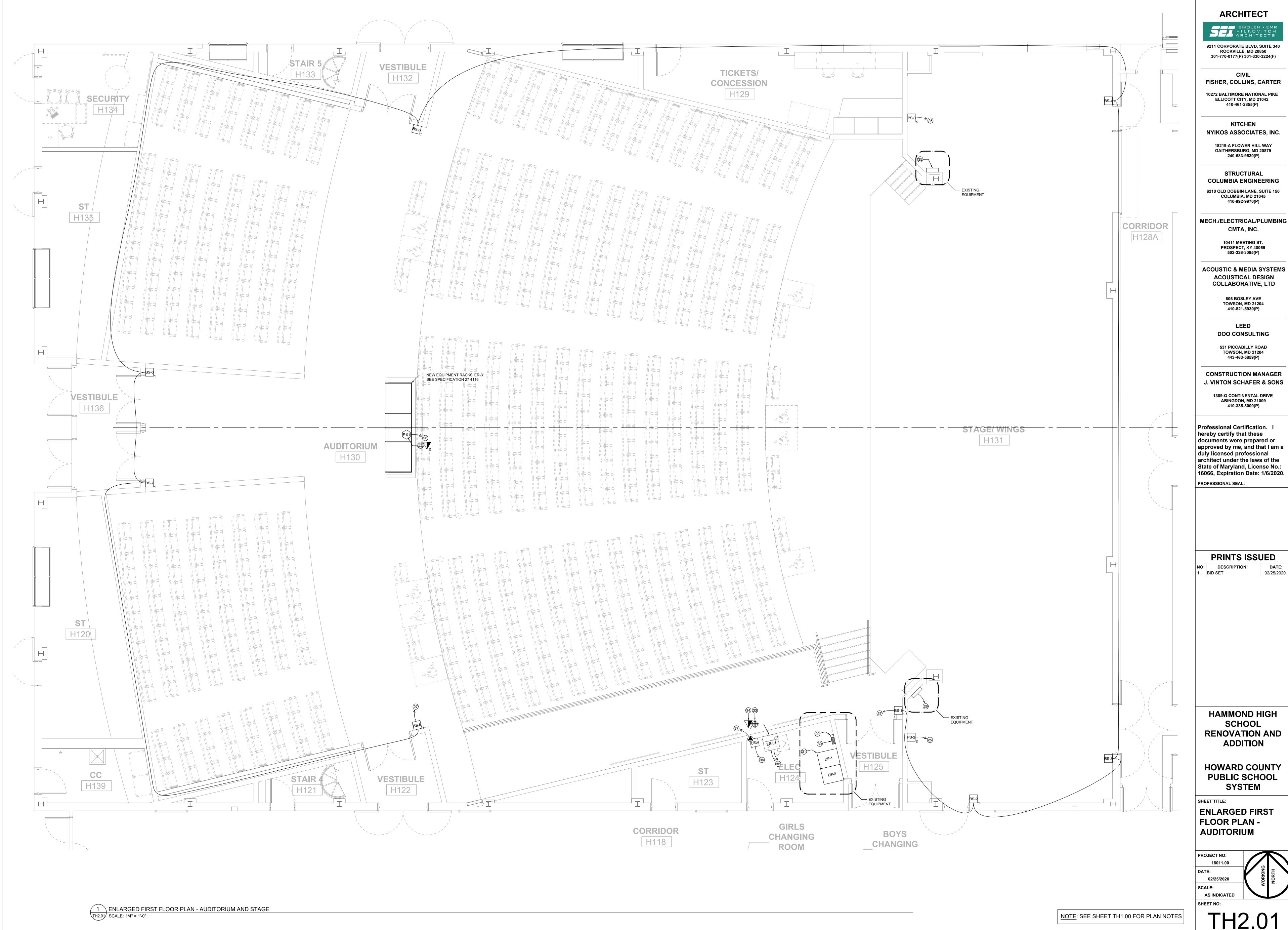
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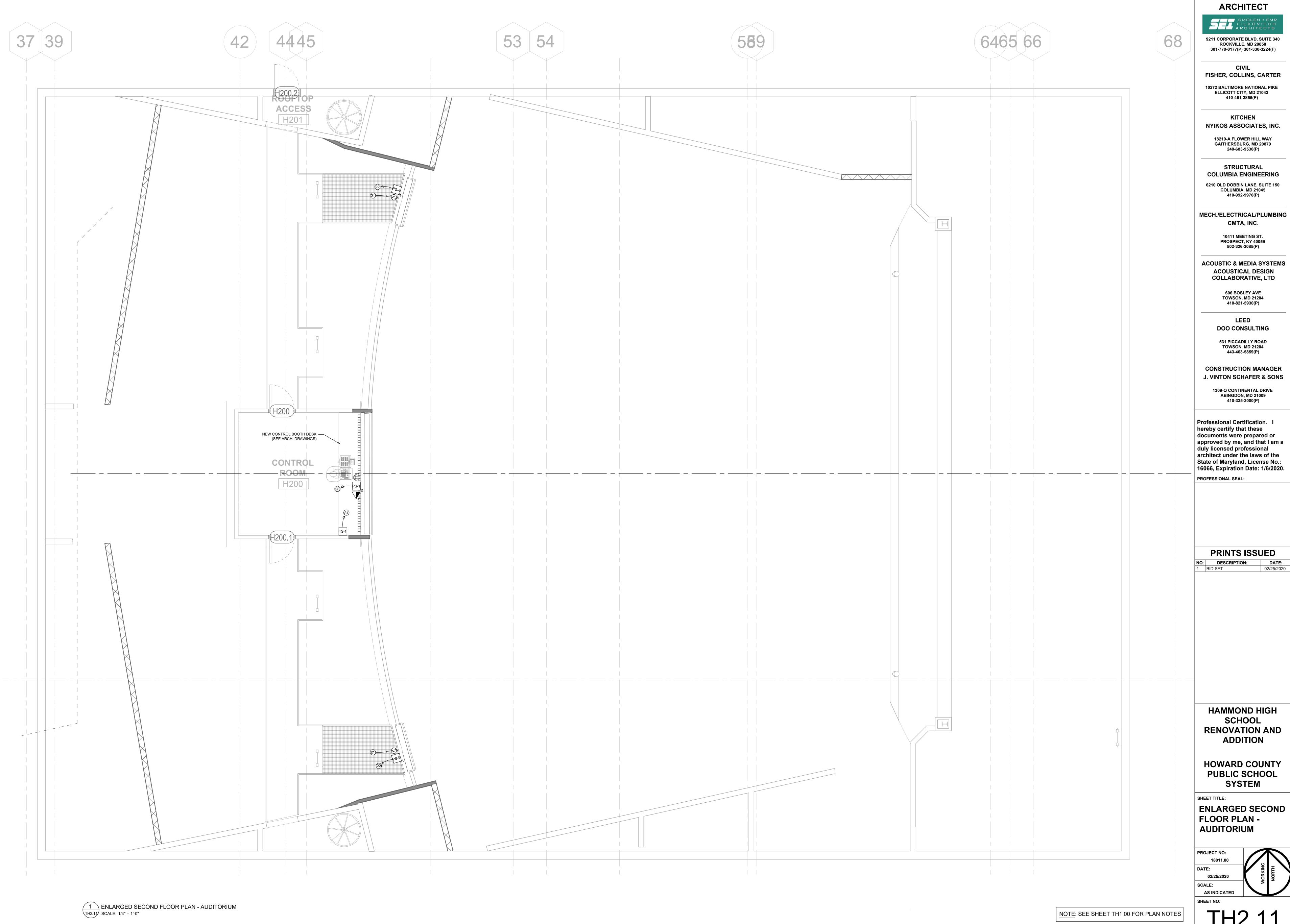
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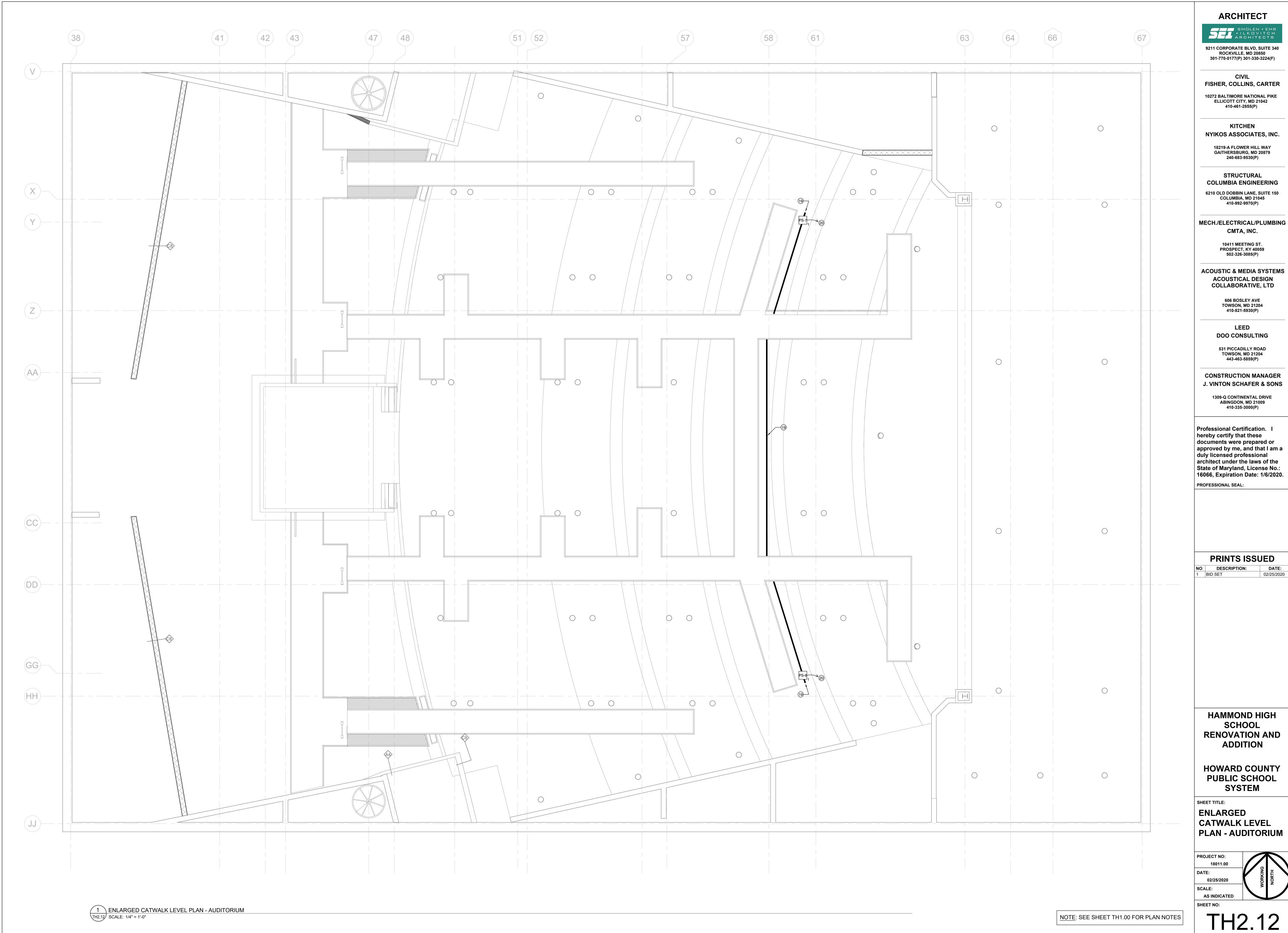
**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

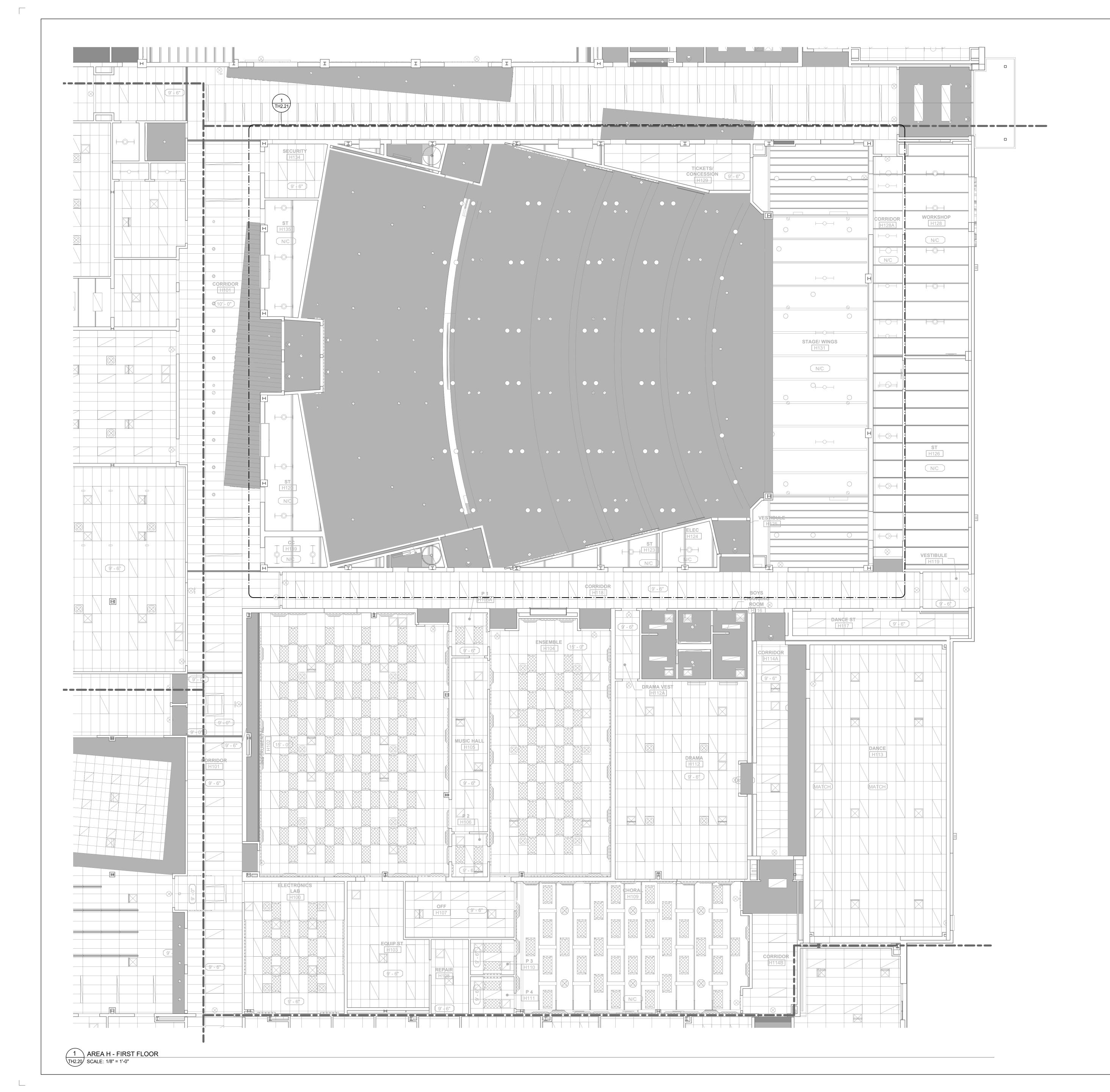
SHEET TITLE: FIRST FLOOR PART PLAN - AREA H

02/25/2020 **AS INDICATED** 









SEL · ILKOVITCH
ARCHITECTS

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD 21042
410-461-2855(P)

KITCHEN NYIKOS ASSOCIATES, INC.

> 18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879 240-683-9530(P)

STRUCTURAL

410-992-9970(P)

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE, SUITE 150
COLUMBIA, MD 21045

MECH./ELECTRICAL/PLUMBING

10411 MEETING ST. PROSPECT, KY 40059

CMTA, INC.

502-326-3085(P)

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531 PICCADILLY ROAD TOWSON, MD 21204

443-463-5859(P)

CONSTRUCTION MANAGER
J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

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 DESCRIPTION:
 DATE:

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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:

PARTIAL RCP - FIRST FLOOR - AREA H

PROJECT NO:

18011.00

DATE:

02/25/2020

SCALE:

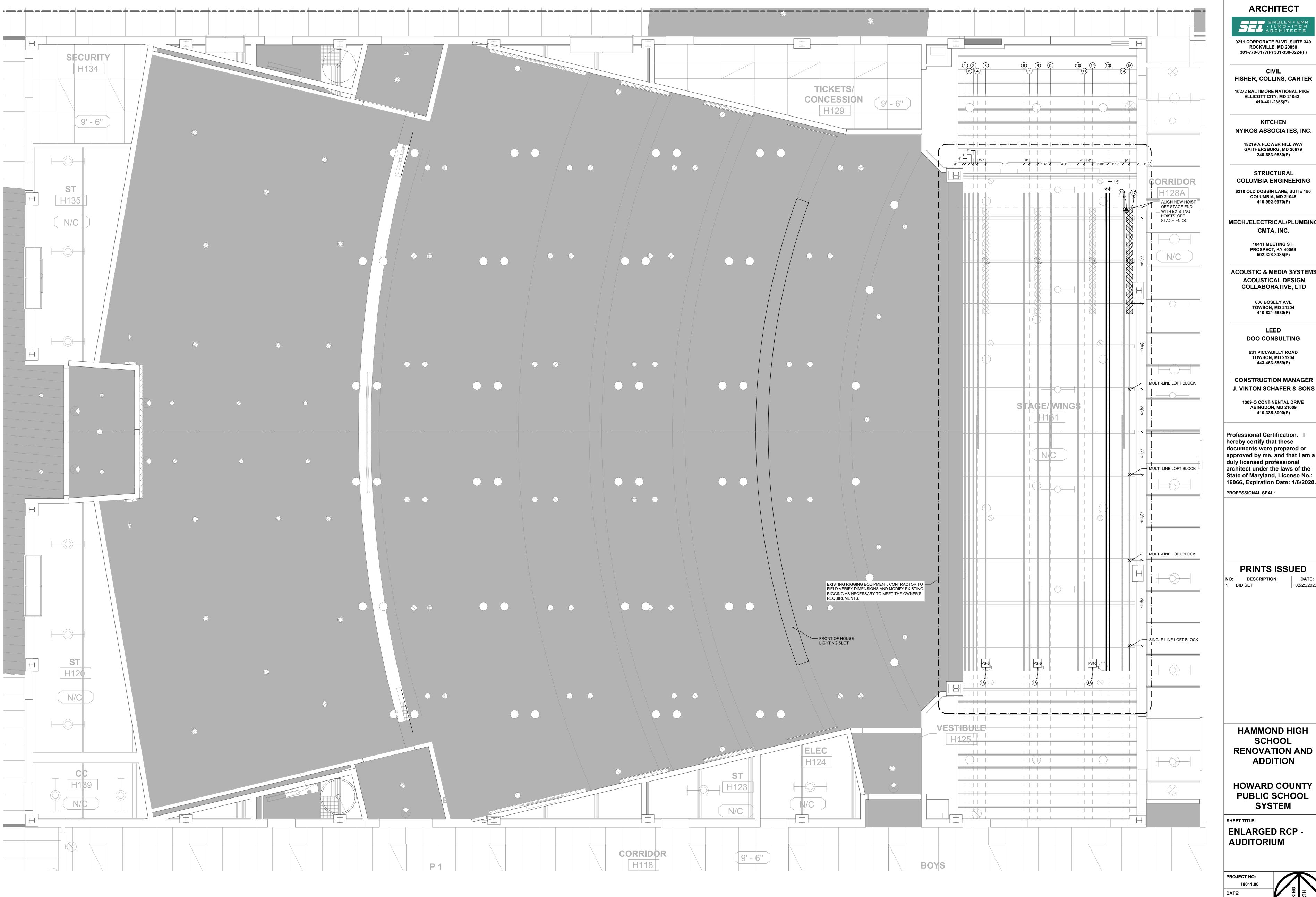
KEY PLAN
SCALE: N.T.S.

GCALE:

AS INDICATED

SHEET NO:

1H2.20



1 ENLARGED FIRST FLOOR PLAN - AUDITORIUM AND STAGE
TH2.21 SCALE: 1/4" = 1'-0"

**ARCHITECT** 

SMOLEN • EMR
• ILKOVITCH
ARCHITECTS

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

FISHER, COLLINS, CARTER 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042 410-461-2855(P)

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STRUCTURAL **COLUMBIA ENGINEERING** 

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PROSPECT, KY 40059 502-326-3085(P)

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**PRINTS ISSUED** 

**DATE**: 02/25/2020 DESCRIPTION:

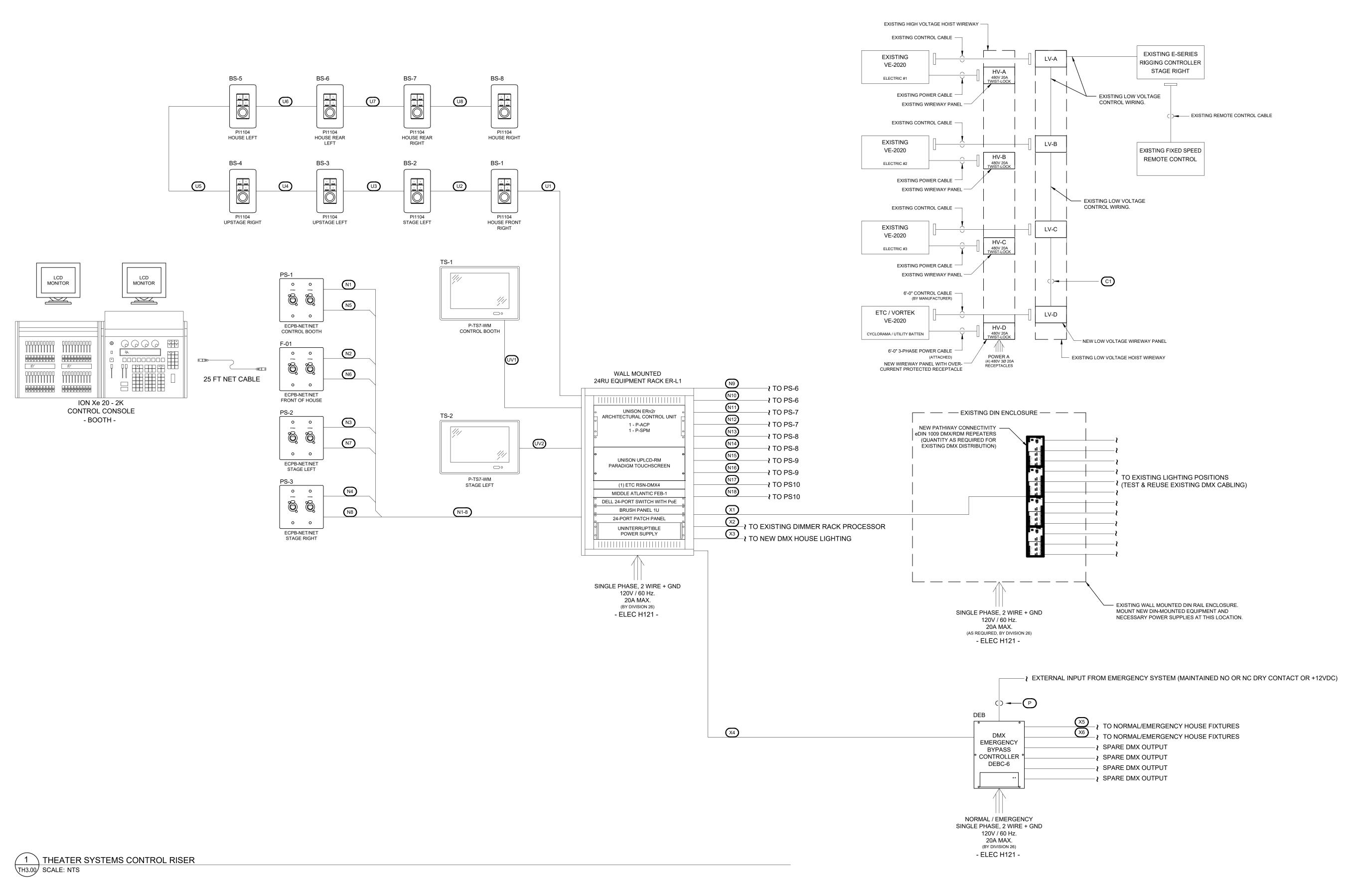
**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE: **ENLARGED RCP -**

02/25/2020 AS INDICATED SHEET NO:

NOTE: SEE SHEET TH1.00 FOR PLAN NOTES



ELECTRICAL DIAGRAM

WHT/BRN BRN

FRONT VIEW

2 CONTROL PLUG-IN STATION - TYPE 1 (TYP. OF 4)
TH3.00 SCALE: 6" = 1'-0"

NOTES:

1.) FACE PANEL IS .08" ALUMINUM FINISHED IN A BLACK FINE-TEXTURED POWDER COAT.

2.) ALL NOMENCLATURE IS LASER ENGRAVED IN

3.) WITH THE EXCEPTION OF FLOOR BOX LOCATION

F-01, BACK BOX SHALL BE DOUBLE GANG 2.50"

BACK BOX IS NOT ACCEPTABLE.

SEE AUDIO-VISUAL DRAWINGS.

.) COORDINATE NETWORK FACEPLATE

SIDE VIEW

.08 - 2.50 -

DEEP RACO #691 (OR EQUIVALENT). GANGABLE

INSTALLATION IN FLOOR BOX F-01 (FSR MODEL

FL-600P-6) WITH AUDIO-VISUAL CONTRACTOR.

INSTALLATION LOCATION

REAR VIEW
(BACK BOX AND WIRE CONNECTORS REMOVED)

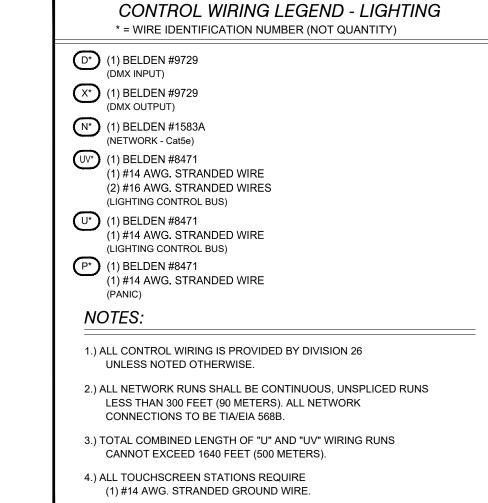
LOCATION

CONTROL BOOTH

STAGE LEFT

STAGE RIGHT

FRONT OF HOUSE



HOIST POWER LEGEND								
SYMBOL	BOX TYPE	POWER						
POWER A	WIREWAY	3 PHASE, 3 WIRE + GROUND MOTOR RATED BREAKERS 480VAC 20A. MAX. 60 Hz.						

CONTROL WIRING LEGEND - RIGGING										
SYMBOL	WIRE TYPE(S)	SIGNAL								
C*	(5) #12 THHN (BLK, RED, BLU, VIO, GRN) (1) BELDEN #7919A	HOIST CONTROL								
X*	(1) BELDEN #9729	DMX OUT								
ES*	(1) BELDEN #1583A	E-STOP (24AWG Cat5e)								
N*	(1) BELDEN #1583A	NETWORK (Cat5e)								
* = WIRE IDENTIFICATION NUMBER (NOT QUANTITY)										

- 1. ALL CONTROL WIRING IS EXISTING UNLESS KEYED WITH A WIRE TYPE SYMBOL AS PER CONTROL WIRING LEGENDS, IN WHICH CASE THE CABLE IS NEW WITH WIRE TYPE AS
- 2. CONTRACTOR TO FIELD TEST AND VERIFY EXISTING DMX CABLES BEING RETAINED PERFORM
- AS EXPECTED PRIOR TO RE-USING. REPLACE ALL DMX WIRING FOUND TO BE DEFICIENT WITH NEW DMX CABLES AS PER CONTROL WIRING LEGENDS THIS SHEET.
- 3. ALL NEW CONTROL WIRING IS TO BE PROVIDED BY DIVISION 26 UNLESS NOTED OTHERWISE.
- 4. TOTAL COMBINED LENGTH OF C (HOIST CONTROL) WIRING RUNS CANNOT EXCEED 340 FEET. 5. ALL C RUNS SHALL BE CONTINUOUS, UNSPLICED RUNS.
- 6. PHASE SEQUENCING FOR 3-PHASE POWER MUST BE OBSERVED AND BE CONSISTENT.
- 7. HOIST CONTROL AND EMERGENCY STOP WIRING MUST BE IN GROUNDED METAL CONDUIT. 8. ALL NETWORK RUNS SHALL BE CONTINUOUS, UNSPLICED RUNS LESS THAN 300 FEET (90
- duly licensed professional METERS). ALL NETWORK CONNECTIONS TO BE TIA/EIA 568B. architect under the laws of the State of Maryland, License No.:

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850

CIVIL

FISHER, COLLINS, CARTER

**10272 BALTIMORE NATIONAL PIKE** 

ELLICOTT CITY, MD 21042

410-461-2855(P)

**KITCHEN** 

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240-683-9530(P)

STRUCTURAL

**COLUMBIA ENGINEERING** 

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

410-992-9970(P)

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PROSPECT, KY 40059

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531 PICCADILLY ROAD

**TOWSON, MD 21204** 

443-463-5859(P)

**CONSTRUCTION MANAGER** 

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009

410-335-3000(P)

**Professional Certification.** I

documents were prepared or

approved by me, and that I am a

16066, Expiration Date: 1/6/2020.

hereby certify that these

PROFESSIONAL SEAL:

**TOWSON, MD 21204** 

301-770-0177(P) 301-330-3224(F)

**PRINTS ISSUED** DESCRIPTION: BID SET 02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

SHEET TITLE: THEATER SYSTEMS **CONTROL RISER** 

02/25/2020

AS INDICATED

TH3.00



NOTES:

POWDER COAT.

BY DIVISION 26.

CUSTOM RCI AL100

— CAT-6A PUNCHDOWN ETHERCON

1.) FACE PANEL IS 1/8" (11 GAUGE) ALUMINUM WITH

DEGREES) FINISHED IN A BLACK TEXTURED

**INSTALLATION LOCATION** 

PS-9 2ND ELECTRIC FIXTURE PIPE

PS10 3RD ELECTRIC FIXTURE PIPE

BOX#

PS-7

LOCATION

FOH CATWALK STAGE LEFT

FOH CATWALK STAGE RIGHT

1ST ELECTRIC FIXTURE PIPE

DOUBLE BEVELED EDGES (0.0635 AT 45

2.) ALL NOMENCLATURE IS LASER ENGRAVED IN

3.) BACK BOX SHALL BE SINGLE GANG 2.50" DEEP

RACO #690 (OR EQUIVALENT), AND IS SUPPLIED

REAR VIEW
(BACK BOX AND WIRE CONNECTORS REMOVED)

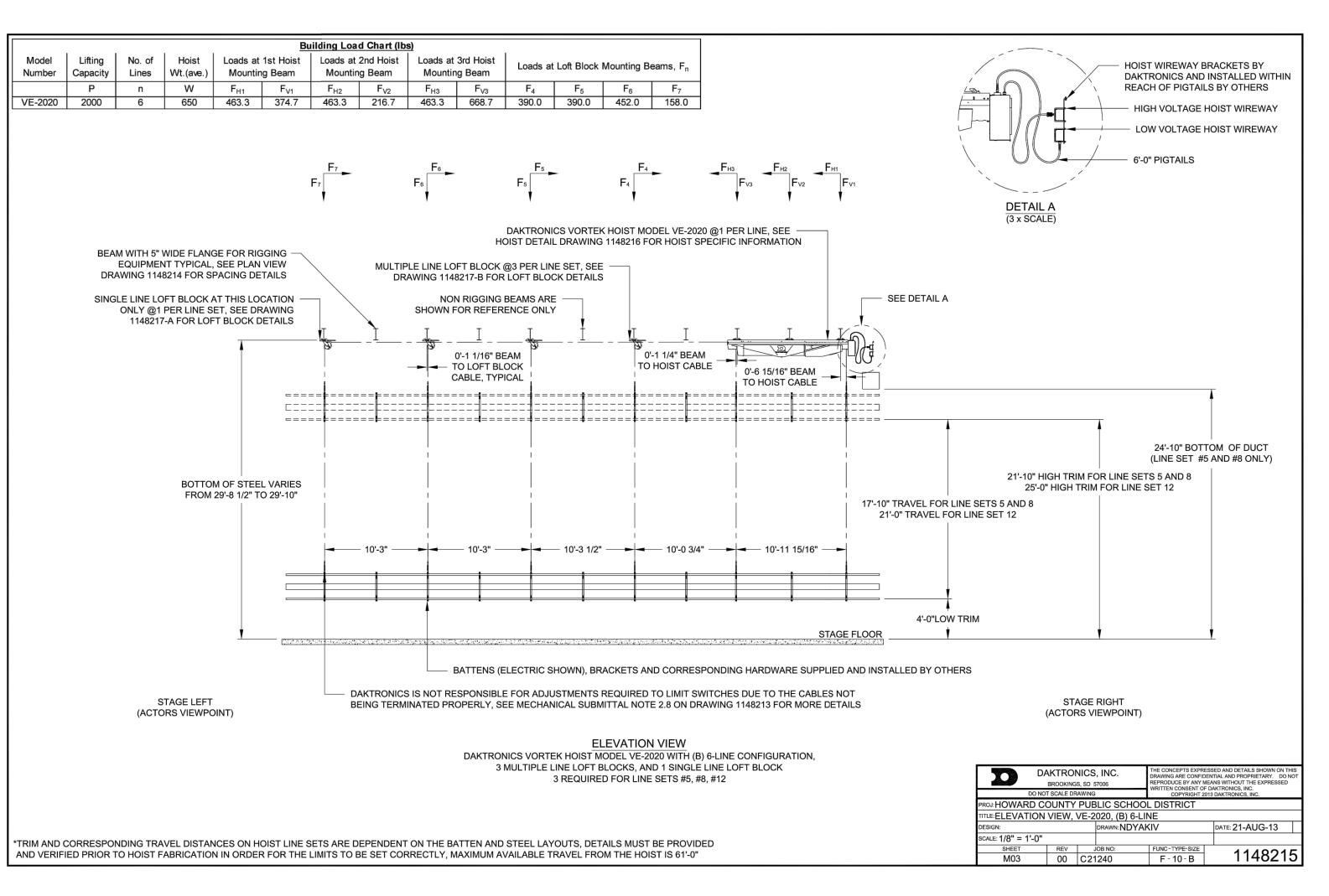
**ELECTRICAL DIAGRAM** 

(1) BELDEN #1583A CABLE (BY DIVISION 26)

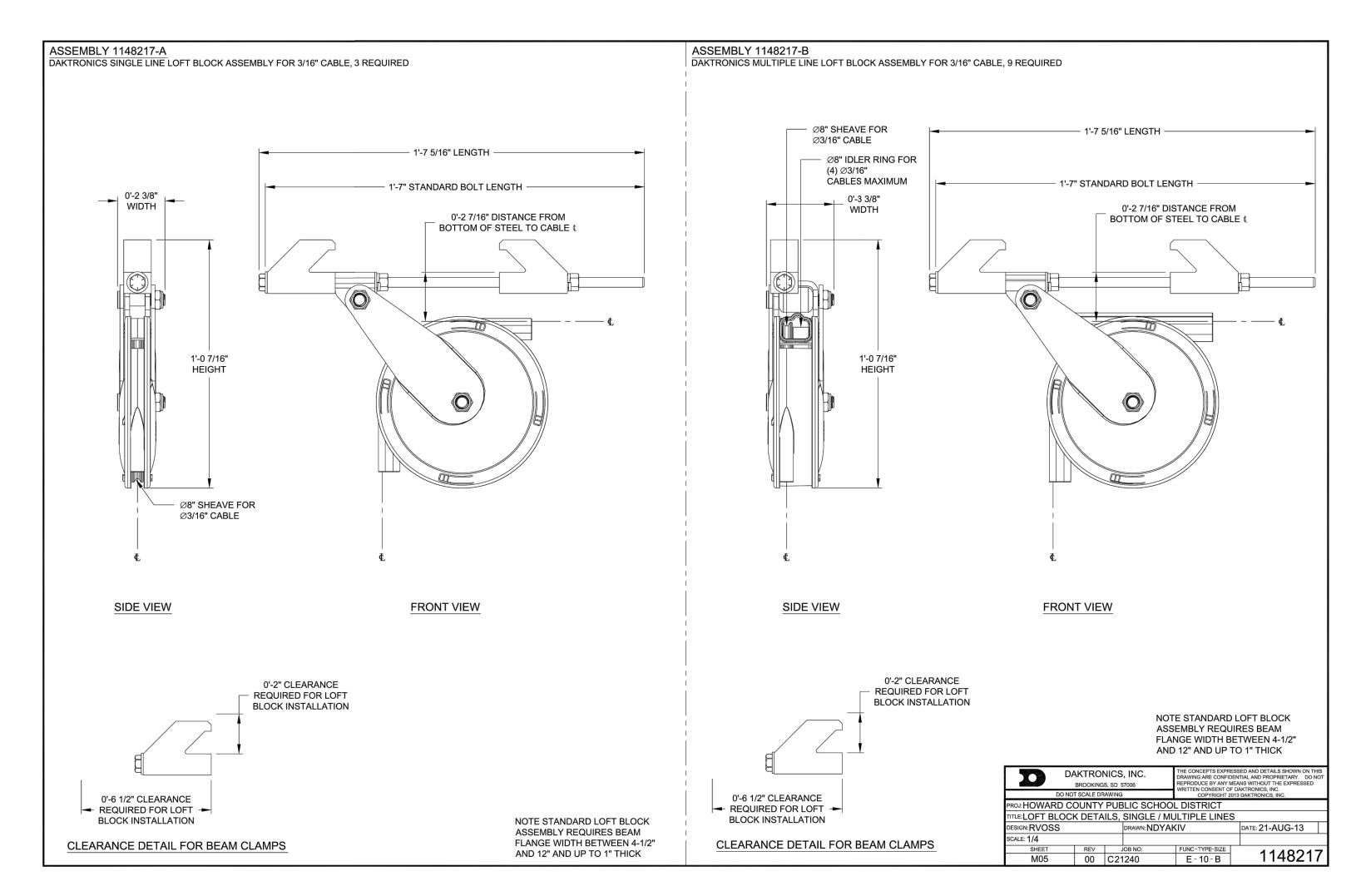
WHT/GRN BLU

FRONT VIEW

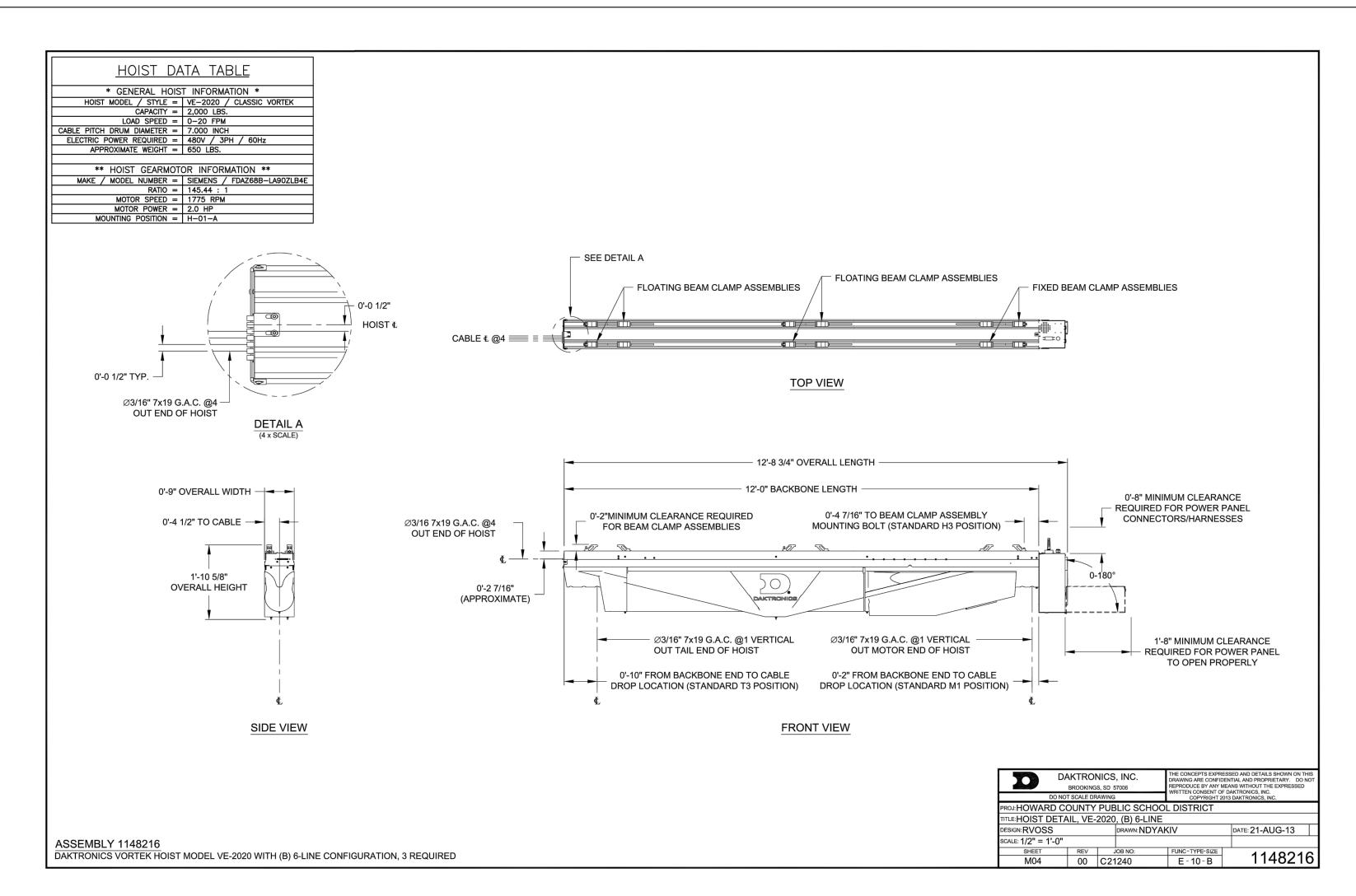
 $\bigcirc$ 



1 INSTALLATION OF EXISTING HOISTS (DAKTRONICS SHOP DRAWINGS) - SHEET 1148215
TH3.01 SCALE: AS NOTED



3 INSTALLATION OF EXISTING HOISTS (DAKTRONICS SHOP DRAWINGS) - SHEET 1148217
TH3.01 SCALE: AS NOTED



2 INSTALLATION OF EXISTING HOISTS (DAKTRONICS SHOP DRAWINGS) - SHEET 1148216
TH3.01 SCALE: AS NOTED

## NOTE

- RIGGING SHOP DRAWINGS ON THIS SHEET WERE RECEIVED FROM THE MANUFACTURER OF THE EXISTING AND BASIS OF DESIGN HOISTS (DAKTRONICS/VORTEK, SINCE ACQUIRED BY ELECTRONIC THEATRE CONTROLS, INC.).
- 2. DRAWINGS ON THIS SHEET ARE SHOP DRAWINGS FROM A PREVIOUS UPGRADE TO THE HAMMOND HIGH SCHOOL RIGGING SYSTEMS TO INSTALL MOTORIZED HOISTS FOR ELECTRICS.
- NOTE THE SHOP DRAWINGS SHOWN ON THIS SHEET ARE FOR VORTEK HOISTS MODEL VE-2020, WHICH HAS A LIFTING CAPACITY OF 2,000 LBS. THE NEW HOIST BEING SPECIFIED FOR THE CYCLORAMA CURTAIN IN THIS PROJECT IS VORTEK MODEL VE-0820, WHICH HAS A LIFTING CAPACITY OF ONLY 800 LBS.
- 4. INSTALLATION FOR THE NEW HOIST IS SIMILAR TO THE INSTALLATION SHOWN ON SHOP DRAWINGS THIS SHEET. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND CONFIRM LOADS ON BUILDING STRUCTURE FOR HOIST MODEL VE-0820.

**ARCHITECT** 

SMOLEN • EMR
• ILKOVITCH
ARCHITECTS

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL
FISHER, COLLINS, CARTER
10272 BALTIMORE NATIONAL PIKE

ELLICOTT CITY, MD 21042 410-461-2855(P)

NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY
GAITHERSBURG, MD 20879

**KITCHEN** 

240-683-9530(P)

STRUCTURAL

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE, SUITE 150
COLUMBIA, MD 21045
410-992-9970(P)

MECH./ELECTRICAL/PLUMBING CMTA, INC.

10411 MEETING ST. PROSPECT, KY 40059 502-326-3085(P)

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ACOUSTICAL DESIGN
COLLABORATIVE, LTD

606 BOSLEY AVE TOWSON, MD 21204

410-821-5930(P)

LEED

531 PICCADILLY ROAD TOWSON, MD 21204

443-463-5859(P)

CONSTRUCTION MANAGER
J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 16066, Expiration Date: 1/6/2020.

PROFESSIONAL SEAL:

PRINTS ISSUED

BID SET DATE: 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

SHEET TITLE:

RIGGING DETAILS HOIST

PROJECT NO:

18011.00

DATE:

02/25/2020

SCALE:

AS INDICATED

SHEET NO:

TH3.01



**EQUIPMENT SCHEDULE** ITEM QTY. DESCRIPTION REMARKS UTILITY CART, MOBILE **DUNNAGE RACK** CAN RACK SHELVING WALK-IN COOLER/FREEZER W/ VERTICAL AIR CURTAIN COOLER REFRIGERATION SYSTEM LOCATED OUTDOORS ON ROOF FREEZER REFRIGERATION SYSTEM LOCATED OUTDOORS ON ROOF DUNNAGE RACK, MOBILE SHELVING, MOBILE PAN RACK, MOBILE 11 PASS-THRU HEATED CABINET, MOBILE PASS-THRU REFRIGERATOR, MOBILE 13 ICE MACHINE/BIN W/ WATER FILTER SYSTEM PREP SINK W/ OVERSHELF 15 OSCILLATING WALL FAN WORKTABLE 16a WORKTABLE 16b WORKTABLE WITH SINK HAND SINK 19 SOAP & TOWEL DISPENSER (N.I.K.E.C.) - SPECIFIED BY ARCHITECT **EXHAUST CANOPY** TYPE II WITH MAKE-UP AIR; SEE SHEET K502 21 CONVECTION STEAMER DOUBLE-COMPARTMENT TILTING KETTLE, 40-GALLON FLOOR TROUGH 23 COMBI OVEN DOUBLE-STACKED WORKCOUNTER MILK COOLER, MOBILE SINGLE-ACCESS MILK COOLER, MOBILE DUAL - ACCESS 28 SERVING COUNTER, MOBILE 28a HOT FOOD COUNTER, MOBILE W/ FILL FAUCET 28b FROST TOP COUNTER, MOBILE 28c CORNER SOLID TOP COUNTER SALAD BAR COUNTER, MOBILE CASHIER'S STAND, MOBILE SOLID TOP COUNTER, MOBILE SOLID TOP COUNTER, MOBILE CASH REGISTER (N.I.C.) - FURNISHED BY OWNER HEATED DISPLAY MERCHANDISER HEATED SANDWICH MERCHANDISER REAR-ACCESS AIR SCREEN MERCHANDISER ELECTRONIC MENU BOARD (N.I.C.) - FURNISHED BY OWNER POT WASHING SINK W/ OVERSHELF POT & PAN SHELVING, MOBILE 35 SOILED DISHTABLE W/ SCRAP BASKET W/ CONTROL PANEL RETRACTABLE HOSE REEL DISHMACHINE HI-TEMP; VENTLESS CLEAN DISHTABLE ADA COMPLIANT: W/ SOAP & TOWEL DISPENSER HAND SINK WASHER/DRYER, STACKED 42 MOP SINK & RACK (N.I.K.E.C.) - SPECIFIED BY PLUMBING DIVISION 43 SHELVING, MOBILE WORKTABLE TRASH CONTAINER, MOBILE

## GENERAL HEALTH DEPARTMENT NOTATIONS

- 1. ALL PIPING, CONDUIT, BX CABLE AND SIMILAR CONSTRUCTION WILL BE EITHER LOCATED INSIDE A WALL OR INSTALLED WITH A MINIMUM 3/4" SPACE FROM THE WALL OR SEALED TO THE WALL.
- 2. ALL DOORS TO THE OUTSIDE WILL BE SELF-CLOSING AND RODENT-PROOF.
- 3. A MINIMUM OF FIFTY (50) FOOT-CANDLES OF SHIELDED LIGHT WILL BE PROVIDED AT ALL
- WORK SURFACES, STORAGE AREAS, FOOD PREPARATION AREAS, UTENSIL WASHING AREAS, TOILET ROOMS, LOCKER ROOMS AND IN THE GARBAGE AND RUBBISH STORAGE AREAS.
- 4. ALL RESTROOM DOORS WILL BE SELF-CLOSING.
- 5. ALL RESTROOMS WILL BE EQUIPPED WITH MECHANICAL EXHAUST VENTILATION SIZED AT A MINIMUM RATE OF TWO (2) CUBIC FEET PER MINUTE PER SQUARE FOOT OF FLOOR AREA AND EXHAUSTING
- 6. ALL FLOOR MOUNTED EQUIPMENT WILL BE PLACED ON NATIONAL SANITATION FOUNDATION (NSF) APPROVED SIX (6) INCH LEGS, OR THE EQUIVALENT, AND PROPERLY SPACED FROM ADJACENT EQUIPMENT OR WALLS; OR PLACED ON NSF APPROVED CASTERS, OR THE EQUIVALENT; OR PROPERLY SEALED TO ALL ADJACENT SURFACES.
- WILL BE MOUNTED ON NSF APPROVED FOUR (4) INCH HIGH LEGS.
- 8. ALL EXPOSED RAW WOOD WILL BE SEALED.
- 9. ALL ANNULAR OPENINGS IN CONSTRUCTION WILL BE SEALED TO WITHIN 1/32TH OF AN INCH.
- 10. ALL AISLES WILL BE A MINIMUM OF THIRTY-SIX (36) INCHES WIDE PER NATIONAL FIRE PROTECTION ASSOCIATION 101.
- 11. THE OUTSIDE STORAGE OF REFUSE WILL BE IN RODENT-PROOF CONTAINERS LOCATED ON A PAVED SURFACE.
- 12. ALL SINK INSTALLATIONS WILL BE EQUIPPED WITH HOT AND COLD RUNNING WATER THROUGH
- A MIXING VALVE OR COMBINATION FAUCET. 13. ALL PAINTING WILL BE WITH LEAD-FREE, NON-METALLIC ENAMEL PAINT OR A HIGH QUALITY VARNISH.
- 14. WASTE WATER FROM ALL APPLICABLE FOODSERVICE EQUIPMENT WILL BE INDIVIDUALLY PLUMBED TO AN OPEN SITE DRAIN WITH A MINIMUM ONE INCH AIR GAP.

### (N.I.C.) - NOT IN CONTRACT (N.I.K.E.C.) - NOT IN KITCHEN E QUIPMENT CONTRACT

**KEY PLAN** 

SCALE : N.T.S.

## THE USE OF SEALANTS IN FOOD SERVICE EQUIPMENT

- 1. ALL SEALANTS MUST BE LISTED AS APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) UNDER 51. 2. SEALANTS SHALL BE USED ONLY ON STRUCTURALLY SOUND JOINTS AND SEAMS.
- 3. SEALANTS MAY BE USED TO FILL SPACES AND OPENINGS SUCH AS, BUT NOT LIMITED TO, BLIND RIVET HEADS AND
- SLOT AND PHILLIPS HEAD SCREWS.
- 4. OPENINGS AROUND SERVICE AND UTILITY LINES SHOULD BE CLOSED INSOFAR AS PRACTICAL BY: A. COLLARS AND GROMMETS.

EXCESSIVE AND MUST BE CLOSED USING PROPER FIELD JOINTS.

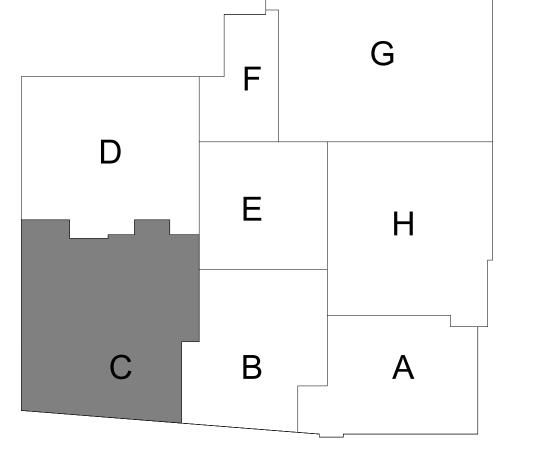
- B. FLEXIBLE FORM GASKETS. SEALANTS MAY BE USED TO SEAL SERVICE AND UTILITY LINES TO WALL AND ADJACENT PIECES OF EQUIPMENT WHERE
- THE SPACING IS. CLOSED TO LESS THAN 1/8 OF INCH.

5. SEALANTS MAY NOT BE UTILIZED IN FOOD AND SPLASH CONTACT SURFACES, TO FILL OPEN SPACES, OR VOIDS WHICH RESULT DUE TO IMPROPER DESIGN OR FABRICATION. ANY OPENING IN EXCESS OF 1/8 INCH SHALL BE CONSIDERED

**ADDITION** 

02/25/2020 1/4" = 1'-0"

THIS PERSPECTIVE IS TO AID IN THE GENERAL VISUALIZATION OF THE PROJECT. SOME ELEMENTS MAY BE MISSING FOR CLARITY FOR CONSTRUCTION DETAILS, REFERENCE THE PLANS, SECTION, ENLARGE DETAILS AS WELL AS ARCHITECTURAL DRAWINGS, FABRICATION & FOODSERVICE SPECIFICATIONS.



**VIEW OF COOKING LINE** 

**VIEW OF SERVING LINE** 

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL FISHER, COLLINS, CARTER

**10272 BALTIMORE NATIONAL PIKE** ELLICOTT CITY, MD 21042 410-461-2855(P)

**KITCHEN NYIKOS ASSOCIATES, INC.** 

> 18219-A FLOWER HILL WAY **GAITHERSBURG, MD 20879** 240-683-9530(P)

STRUCTURAL **COLUMBIA ENGINEERING** 6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045 410-992-9970(P)

MECH./ELECTRICAL/PLUMBING CMTA, INC.

> 10411 MEETING ST. PROSPECT, KY 40059 502-326-3085(P)

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> **606 BOSLEY AVE TOWSON, MD 21204**

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410-821-5930(P)

531 PICCADILLY ROAD **TOWSON, MD 21204** 443-463-5859(P)

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

> 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

Professional Certification. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 16066, Expiration Date: 1/6/2022.

**PROFESSIONAL SEAL:** 

**PRINTS ISSUED** 

02/25/2020

**DESCRIPTION:** 

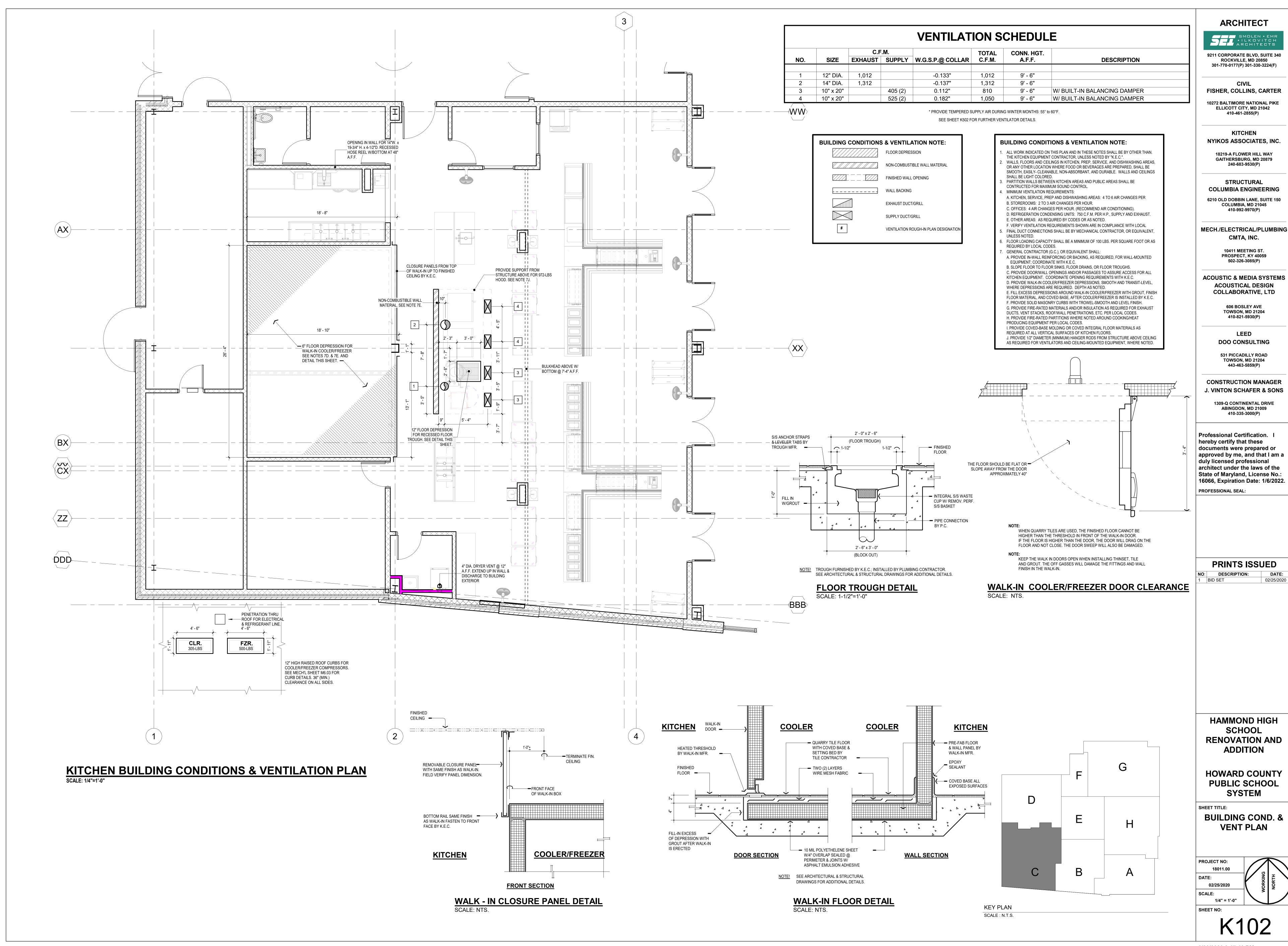
HAMMOND HIGH SCHOOL **RENOVATION AND** 

**HOWARD COUNTY PUBLIC SCHOOL** 

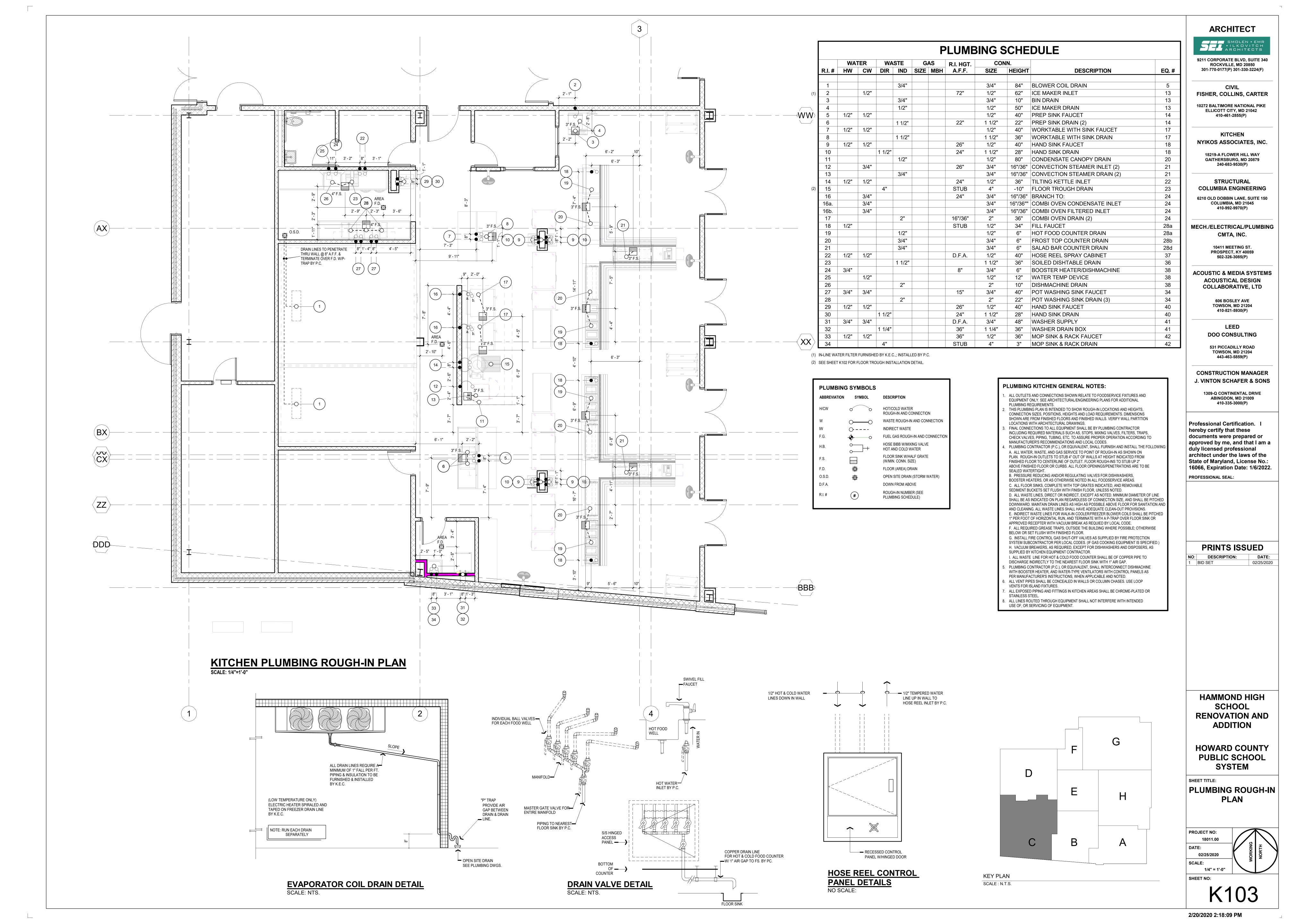
KITCHEN EQUIPMENT **PLAN** 

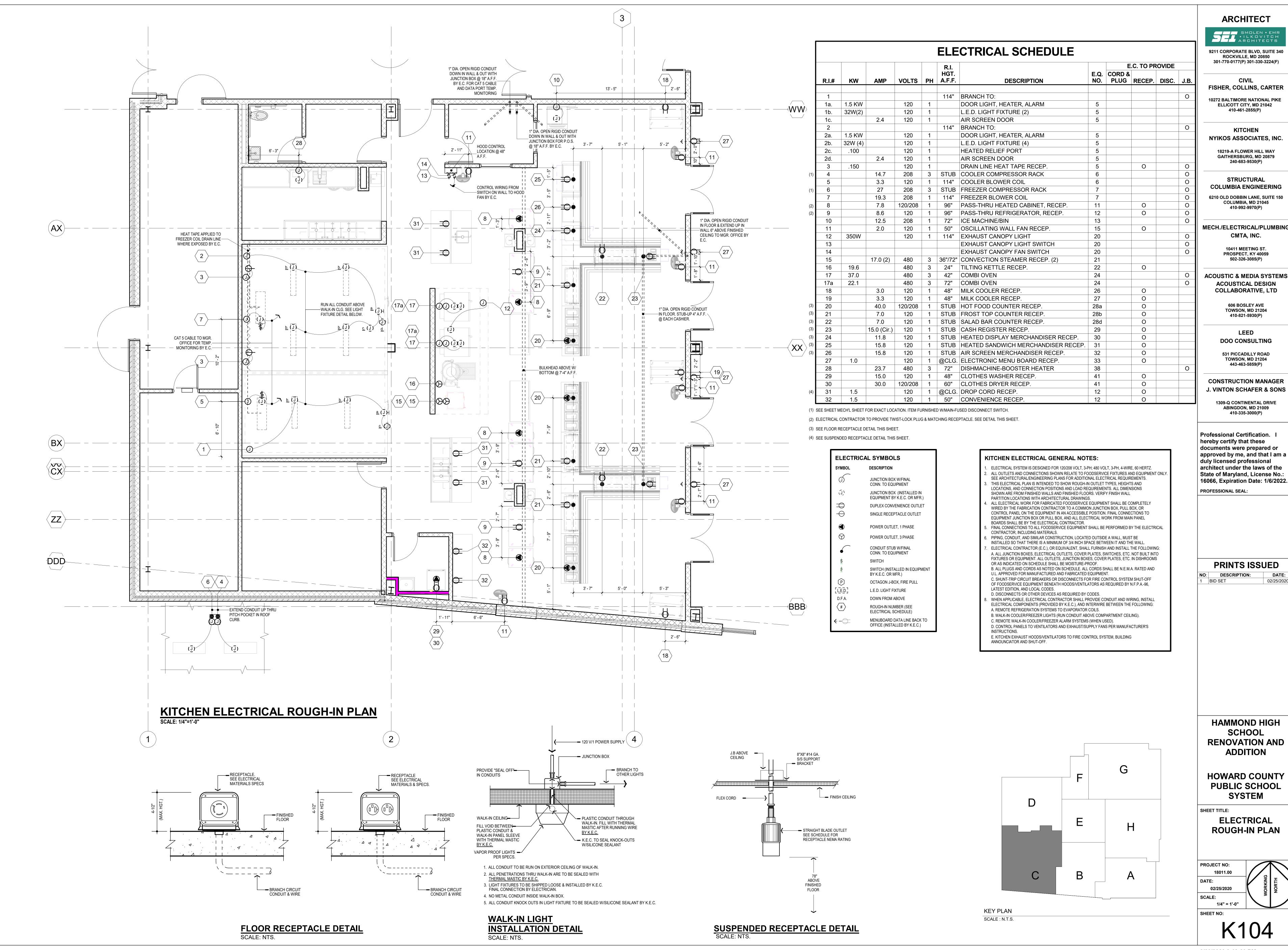
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ELLICOTT CITY, MD 21042 410-461-2855(P)

18219-A FLOWER HILL WAY

STRUCTURAL **COLUMBIA ENGINEERING** 6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

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10411 MEETING ST.

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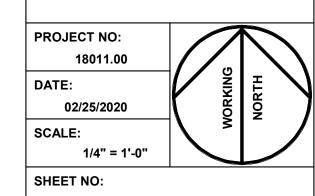
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02/25/2020

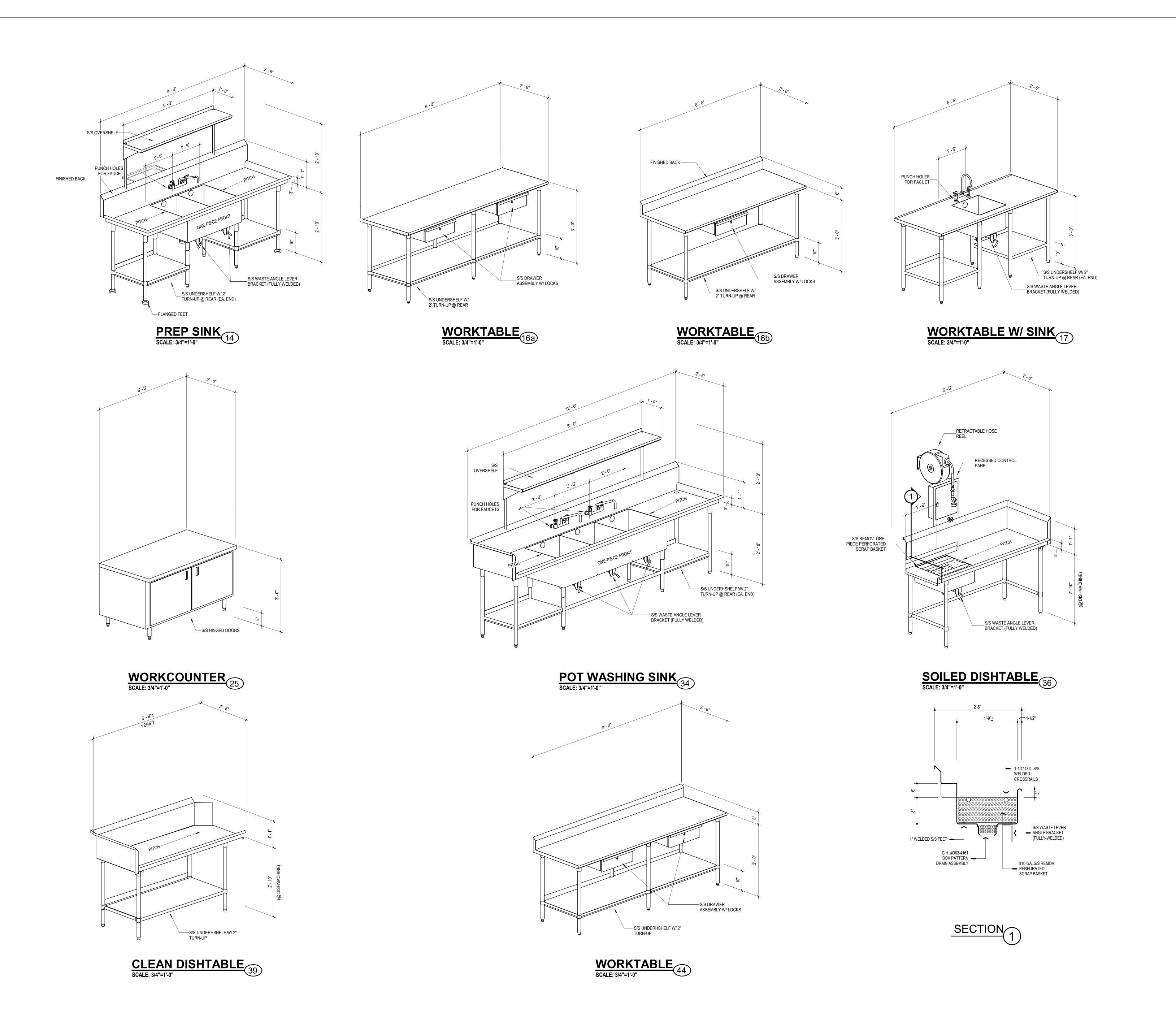
**HAMMOND HIGH** SCHOOL **RENOVATION AND** 

**HOWARD COUNTY PUBLIC SCHOOL** 

**ELECTRICAL ROUGH-IN PLAN** 



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NO: DESCRIPTION:

1 BID SET **DATE:** 02/25/2020

> **HAMMOND HIGH** SCHOOL **RENOVATION AND**

> **HOWARD COUNTY PUBLIC SCHOOL**

**ADDITION** 

SHEET TITLE: **FABRICATION** 

**DETAILS** 

K501

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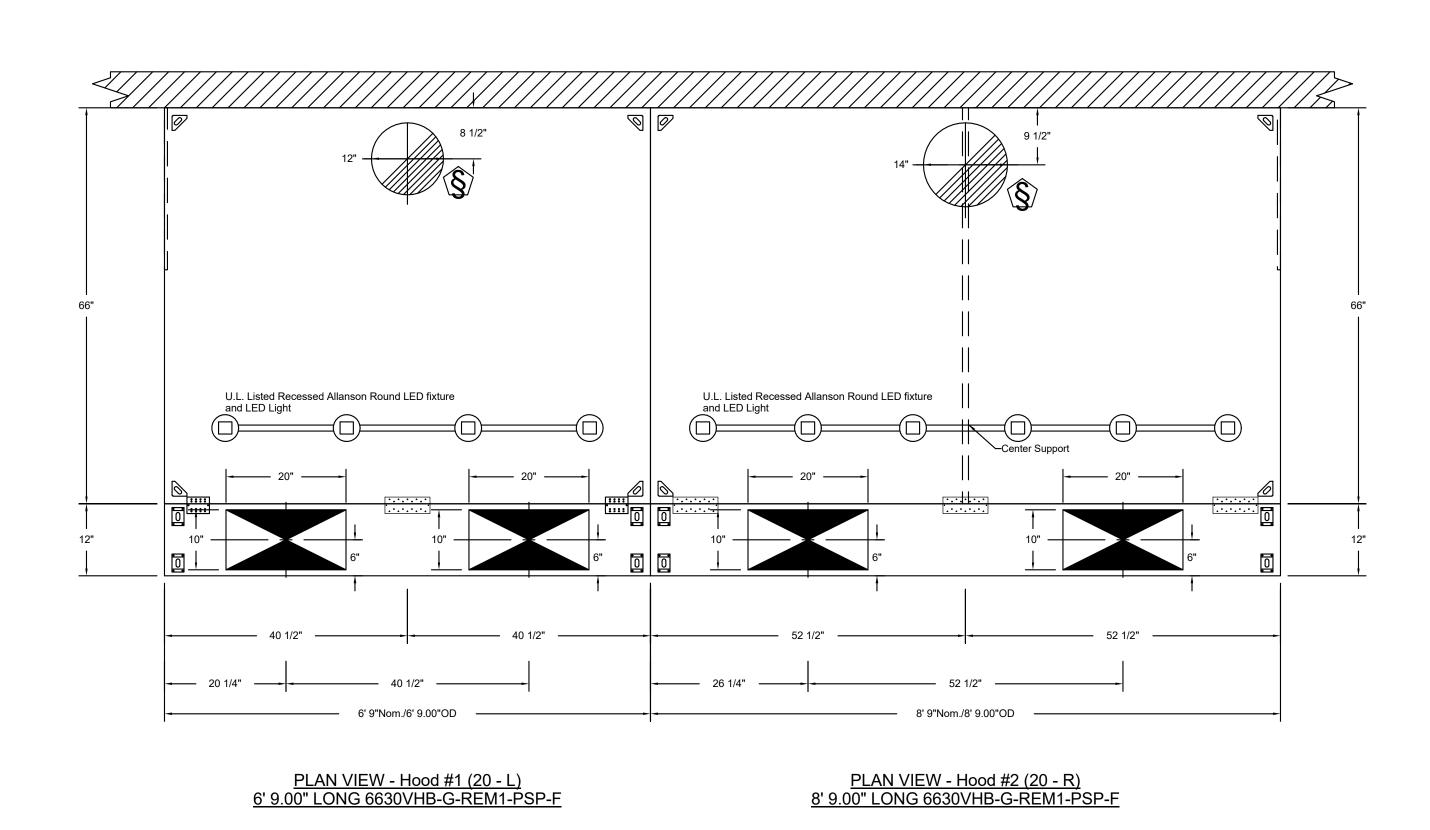
НО	OD	INFOF	RMATION - Job#4	148978													
					MAX.			EX	HAUST P	ENUM				TOTAL		HOOD C	ONFIG.
	)OD	TAG	MODEL	LENGTH	COOKING	TOTAL			F	ISER(S)				SUPPLY	HOOD	END TO	
N	O.	170	MODEL	LLINOTTI	TEMP.	EXH. CFM	WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.	S.P.	CFM	CONSTRUCTION	END	ROW
		00 1	6630	CI O!!	700	4040			4"	40"	4040	4000	0.400"	040	304 SS		AL ON
	1	20 - L	VHB-G-REM1-PSP-F	6' 9"	Deg.	1012			4"	12"	1012	1289	-0.133"	810	100%	LEFT	ALON
	,	20 B	6630	8' 9"	700	1312			4"	14"	1312	1227	-0.137"	1050	304 SS	RIGHT	ALON
	2	20 - R	VHB-G-REM1-PSP-F	0 9	Deg.	1312			4"	14	1312	1227	-0.137	1050	100%	RIGHT	ALON

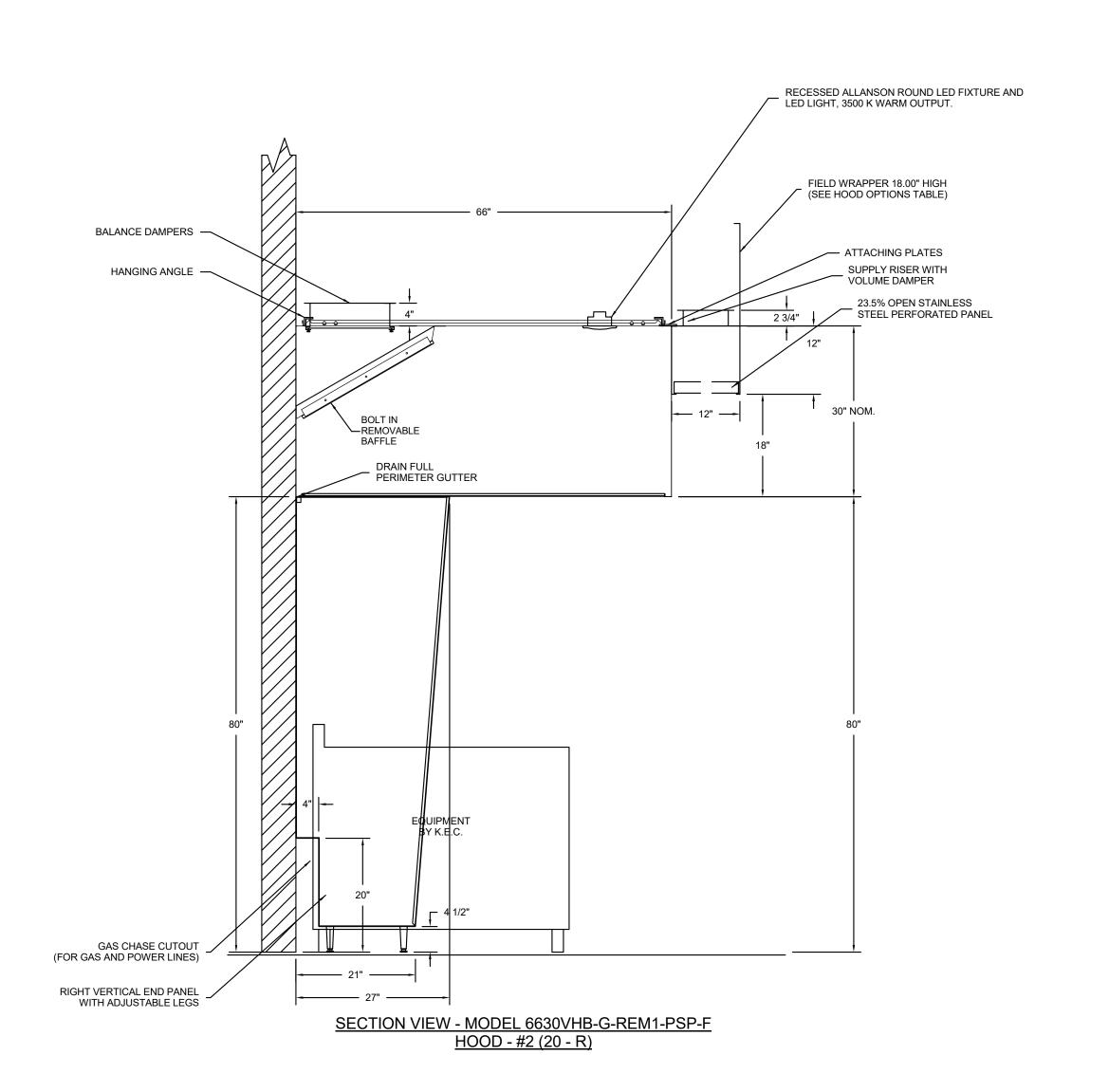
HOOD INFORMATION

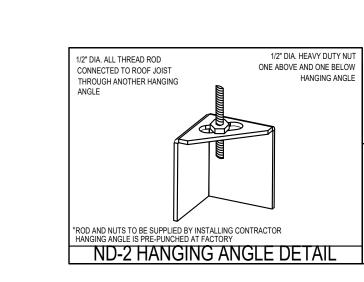
 <u>1000</u>	HVI OF	MATION														
			FILTE	R(S)				LIGHT(S)				UTILITY CABINET(S)			FIDE	HOOD
HOOD NO.	TAG					EFFICIENCY			WIRE LOCATION		F	TIRE SYSTEM	ELECTRICAL	SWITCHES	FIRE	HOOD HANGING
NO.	IAG	TYPE	QTY	'. HEIGHT	LENGTH	@ 7 MICRONS	QTY.	TYPE	GUARD LOCATION	SIZE	TYPE	SIZE	MODEL#	QUANTITY	PIPING	
1	20 - L						4	Recessed	NO						NO	442 LBS
2	20 - R						6	Recessed	NO						NO	530 LBS

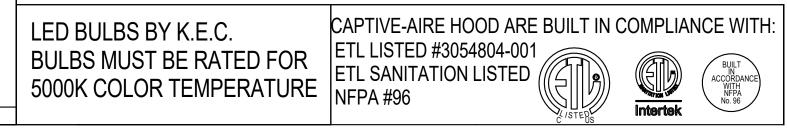
HOOD NO. TAG FIELD WRAPPER 18.00" High Front, Left BACKSPLASH 80.00" High X 186.00" Long 304 SS Vertical 1 20 - L BALANCE DAMPERS LEFT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 304 FIELD WRAPPER 18.00" High Front, Right 2 20 - R BALANCE DAMPERS
RIGHT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 304

		S	S									
	PERFORATED SUPPLY PLENUM(S)											
RISER(S)												
H	OOD N	Ф. TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	WIDTH	LENG.	DIA.	CFM	S.P.
		20.1	Frant	81"	12"	12"	MUA	10"	20"		405	0.112"
		20 - L	Front				MUA	10"	20"		405	0.112"
	2	20 - R	Front	105"	12"	40"	MUA	10"	20"		525	0.182"
		20 - K	Front	105"		12"	MUA	10"	20"		525	0.182"









**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

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PROFESSIONAL SEAL:

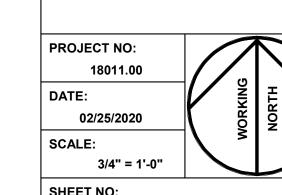
**PRINTS ISSUED DATE:** 02/25/2020 NO: DESCRIPTION:
1 BID SET

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

SHEET TITLE:

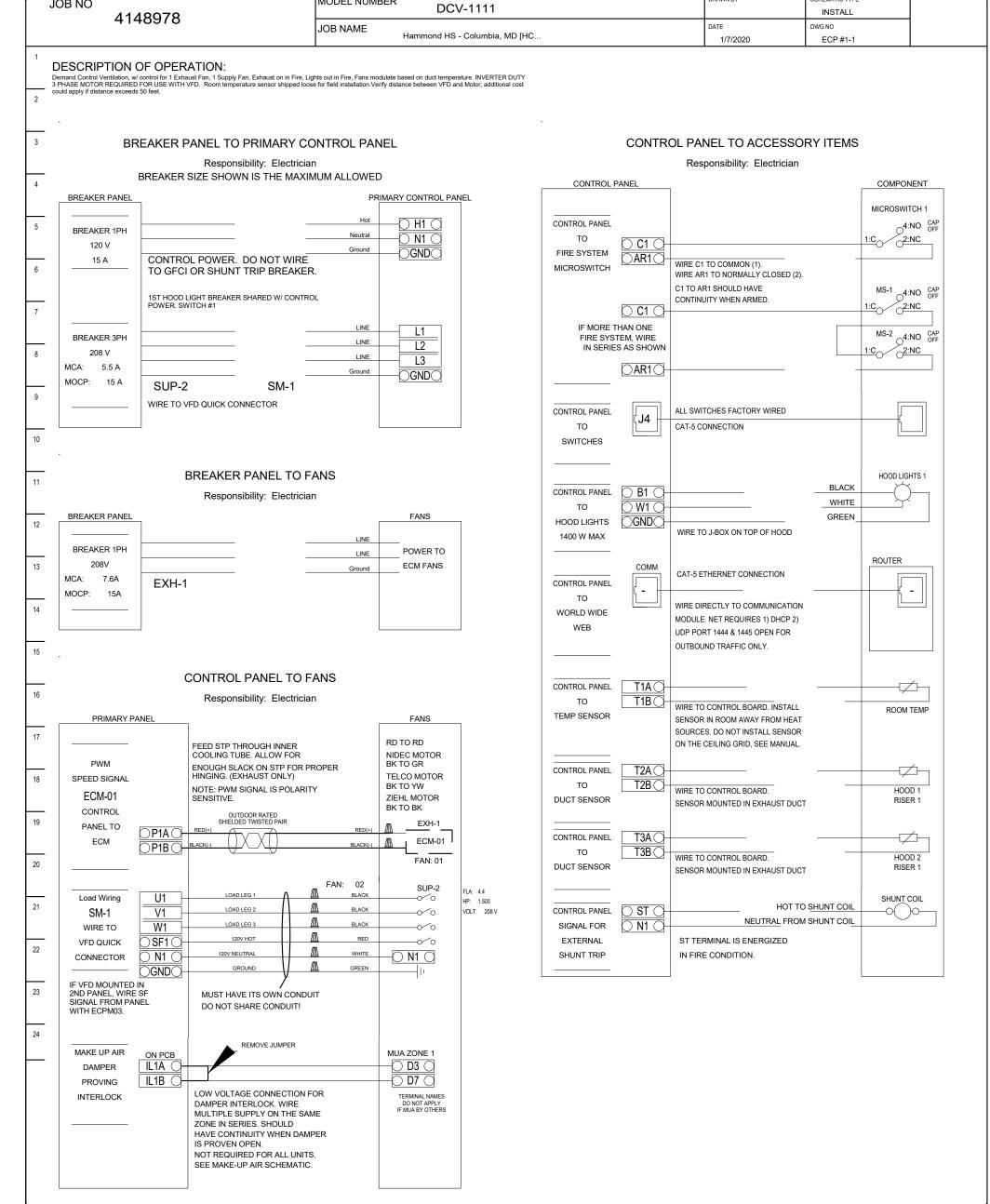
**VENTILATOR DETAILS** 

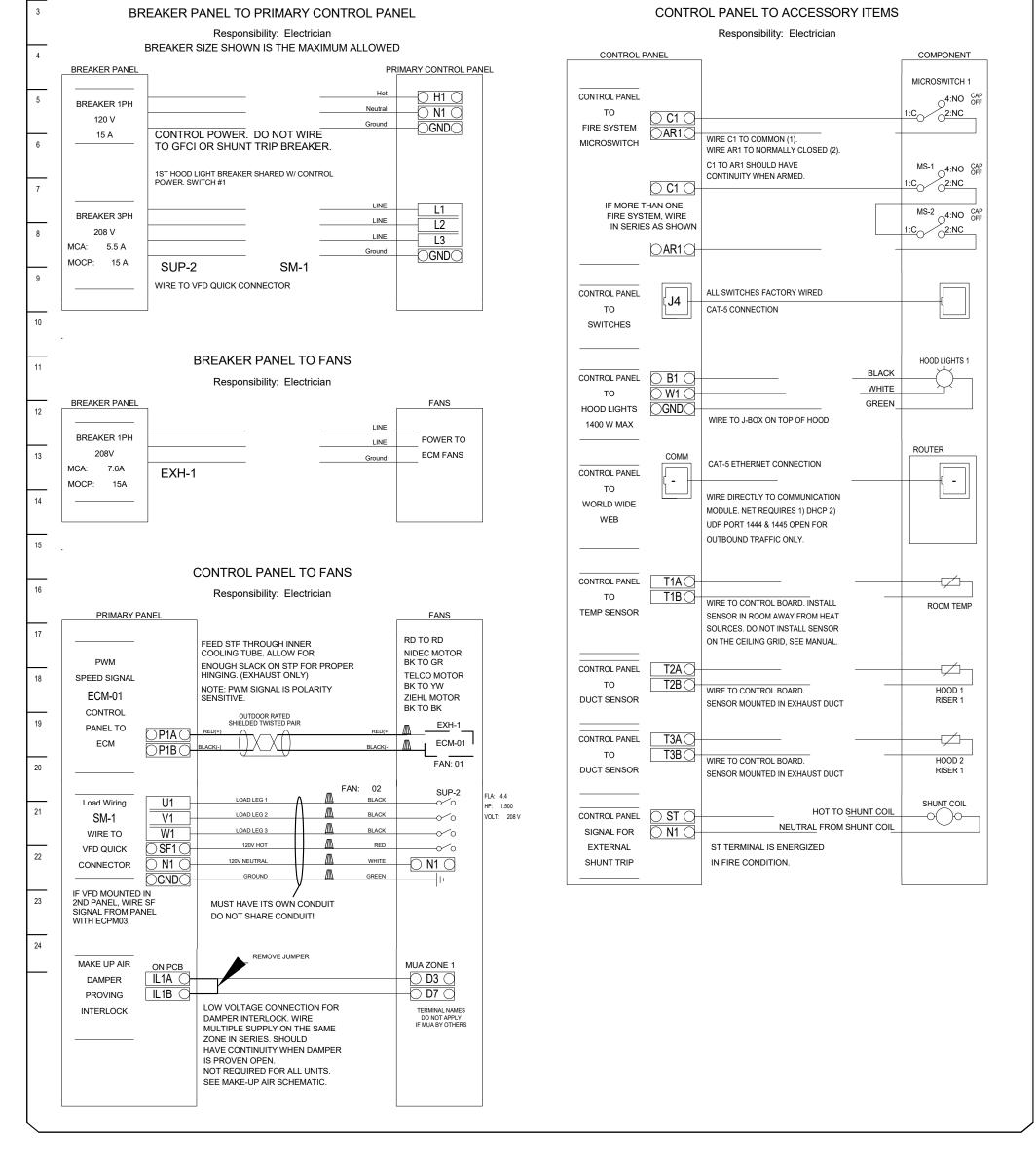


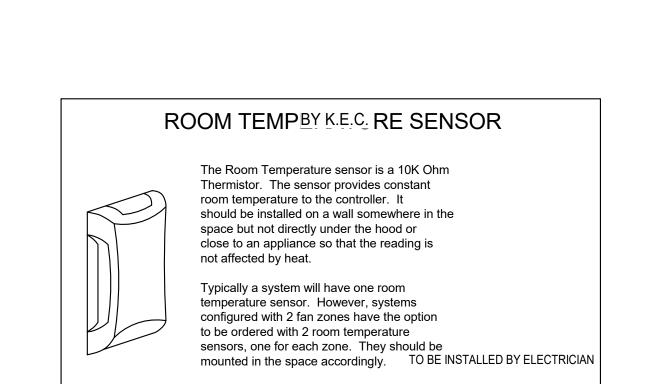
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ELECTRICAL PACKAGE - Job#4148978 **SWITCHES** FANS CONTROLLED TAG PACKAGE# LOCATION OPTION TYPE φ H.P. VOLT FLA LOCATION QUANTITY Exhaust 1 1.000 208 6.1 Supply 3 1.500 208 4.4 DCV-1111 | Wall Mount In SS Box | 05 - SS Wall Mount Box Smart Controls DCV

### MODEL NUMBER JOB NO DCV-1111 INSTALL 4148978 Hammond HS - Columbia, MD [HC. DESCRIPTION OF OPERATION: Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation. Verify distance between VFD and Motor, additional cost CONTROL PANEL TO ACCESSORY ITEMS BREAKER PANEL TO PRIMARY CONTROL PANEL Responsibility: Electrician Responsibility: Electrician BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED CONTROL PANEL COMPONENT BREAKER PANEL MICROSWITCH 1 CONTROL PANEL 4:NO CAP BREAKER 1PH Neutral TO (C1 ( 120 V FIRE SYSTEM CONTROL POWER. DO NOT WIRE 15 A WIRE C1 TO COMMON (1). MICROSWITCH TO GFCI OR SHUNT TRIP BREAKER. WIRE AR1 TO NORMALLY CLOSED (2). C1 TO AR1 SHOULD HAVE MS-1 4:NO CAP ST HOOD LIGHT BREAKER SHARED W/ CONTROL CONTINUITY WHEN ARMED. 1:C 2:NC IF MORE THAN ONE MS-2 4:NO CAP BREAKER 3PH FIRE SYSTEM. WIRE IN SERIES AS SHOWN 1:C 2:NC 208 V MOCP: 15 A SUP-2 WIRE TO VFD QUICK CONNECTOR CONTROL PANEL ALL SWITCHES FACTORY WIRED SWITCHES BREAKER PANEL TO FANS HOOD LIGHTS 1 CONTROL PANEL Responsibility: Electrician WHITE TO HOOD LIGHTS GND WIRE TO J-BOX ON TOP OF HOOD 1400 W MAX BREAKER 1PH POWER TO 208V ECM FANS CAT-5 ETHERNET CONNECTION MCA: 7.6A EXH-1 CONTROL PANEL MOCP: 15A WIRE DIRECTLY TO COMMUNICATION WORLD WIDE MODULE. NET REQUIRES 1) DHCP 2) WEB UDP PORT 1444 & 1445 OPEN FOR OUTBOUND TRAFFIC ONLY. CONTROL PANEL TO FANS CONTROL PANEL Responsibility: Electrician T1B WIRE TO CONTROL BOARD. INSTALL TO TEMP SENSOR SENSOR IN ROOM AWAY FROM HEAT SOURCES. DO NOT INSTALL SENSOR RD TO RD ON THE CEILING GRID, SEE MANUAL. FEED STP THROUGH INNER NIDEC MOTOR BK TO GR PWM ENOUGH SLACK ON STP FOR PROPER CONTROL PANEL T2A —Ø TELCO MOTOR T2B WIRE TO CONTROL BOARD. NOTE: PWM SIGNAL IS POLARITY ZIEHL MOTOR DUCT SENSOR SENSOR MOUNTED IN EXHAUST DUCT CONTROL PANEL TO CONTROL PANEL T3A ECM T3B WIRE TO CONTROL BOARD. HOOD 2 RISER 1 DUCT SENSOR SENSOR MOUNTED IN EXHAUST DUCT Load Wiring HOT TO SHUNT COIL CONTROL PANEL ST NEUTRAL FROM SHUNT COIL SIGNAL FOR 120V HOT EXTERNAL ST TERMINAL IS ENERGIZED VFD QUICK 120V NEUTRAL WHITE N1 SHUNT TRIP IN FIRE CONDITION. CONNECTOR GROUND GREEN \_\_\_\_ IF VFD MOUNTED IN 2ND PANEL, WIRE SF SIGNAL FROM PANEL MUST HAVE ITS OWN CONDUIT DO NOT SHARE CONDUIT! WITH ECPM03. MAKE UP AIR DAMPER PROVING LOW VOLTAGE CONNECTION FOR INTERLOCK DAMPER INTERLOCK, WIRE MULTIPLE SUPPLY ON THE SAME ZONE IN SERIES. SHOULD HAVE CONTINUITY WHEN DAMPER IS PROVEN OPEN. NOT REQUIRED FOR ALL UNITS.







SEQUENCE OF OPERATION - HOOD CONTROLS

ALL POWER, LIGHTING, MICROSWITCH AND TEMPERATURE PROBE CONNECTIONS AND INTERLOCKS TO BE COMPLETED BY ELECTRICAL CONTRACTOR PER SCHEMATICS PROVIDED WITH EQUIPMENT.

SECURE TO WALL WITH 4 SCREWS

SENSOR

ROOM TEMPERATURE

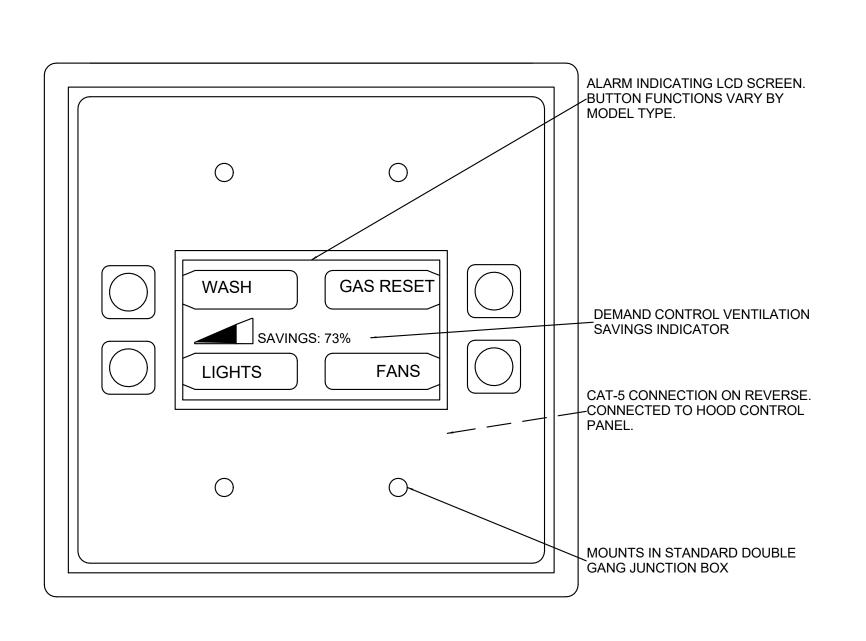
TWO METHODS TO ACTIVATE EXHAUST SYSTEM:

ELECTRICAL PACKAGE: FP SERIES

1. ENGAGE FAN SWITCH IN THE "ON" POSITION TO ENERGIZE CONTACTOR(S) AND START THE EXHAUST FAN(S). SUPPLY FAN(S), IF PRESENT, WILL BE ACTIVATED BY FACTORY PRE-WIRED INTERLOCK. 2. TURN ON COOKING APPLIANCES. EXHAUST FAN(S) [AND SUPPLY FAN(S), IF PRESENT] WILL AUTOMATICALLY ENERGIZE WHEN DUCT TEMPERATURE EXCEEDS SET-POINT (FACTORY PRE-SET = 85°F). AUTOMATIC ACTIVATION COMPLIES WITH IMC 507.2.1.1 "OPERATION." FAN(S) WILL DISENGAGE WHEN DUCT TEMPERATURE FALLS BELOW SET-POINT.

FIRE CONDITION

IN THE EVENT OF A FIRE, A SIGNAL IS SENT ACROSS THE NORMALLY OPEN DRY CONTACT OF THE FIRE SUPPRESSION SYSTEM MICROSWITCH (INTERLOCKED WITH HOOD CONTROL PANEL BY ELECTRICIAN). EXHAUST FAN(S) TO REMAIN RUNNING, SUPPLY FAN(S) TO DE-ENERGIZE, LIGHTING CIRCUIT(S) TO DE-ENERGIZE. MICROSWITCH MUST BE RESET PRIOR TO RESUMPTION OF NORMAL OPERATION.



<u>Demand Control Ventilation Hood Control Panel Specifications:</u>

turndown requirements outlined in IECC 403.2.8 (2015).

shall meet the requirements of IMC 507.1.1.

calculate the speed reference signal.

is detected on a covered hood.

TEMPERATURE SENSOR

INTERFACE

WALL MOUNTED CONTROL CENTER

or painted steel.

stainless steel.

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system

exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel

- The control enclosure shall be NEMA 1 rated and listed for installation inside of the

Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of

- A digital controller shall be provided to activate the hood exhaust fans dynamically based

- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the

fans after the cooking appliances have been turned off and/or the heat in the exhaust

- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan

controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on

The VFD speed range of operation shall be from 0% to 100% for the system, with the actual

proportional to all exhaust fans that are located in the same fan group as the supply fan.

sufficient heat remains underneath the hood system after cooking operations have

- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when

completed. Operation during either of these periods will disable the supply fans and provide

the appliance shunt trip, and disable an electric gas valve automatically when fire condition

demand. The duct temperature sensor input(s) to the digital controller shall be used to

- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital

minimum speed set as required to meet minimum ventilation requirements.

- An internal algorithm to the digital controller shall modulate supply fan VFD speed

an exhaust fan speed that is equal to the minimum ventilation requirement.

- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate

- A digital controller shall allow for external BMS fan control via Dry Contact (external

b. Integrated gas valve reset for electronic gas valves (no reset relay required)

g. An energy savings indicator that utilizes measured kWh from the VFDs

d. Duct temperature sensor failure detection with audible & visual alarm notification

e. Mis-wired duct temperature sensor detection with audible & visual alarm notification

HOOD LIGHTS

control shall not override fan operation logic as required by code).

- An LCD interface shall be provided with the following features:

c. VFD Fault display with audible & visual alarm notification

a. On/Off push button fan & light switch activation

f. A single low voltage Cat-5 RJ45 wiring connection

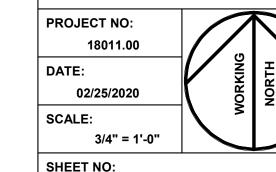
on a fixed differential between the ambient and duct temperatures sensors. This function

**HAMMOND HIGH** 

**HOWARD COUNTY** 

SHEET TITLE:

**VENTILATOR WIRING DIAGRAM** 



9211 CORPORATE BLVD, SUITE 340 **ROCKVILLE, MD 20850** 301-770-0177(P) 301-330-3224(F)

**ARCHITECT** 

CIVIL FISHER, COLLINS, CARTER 10272 BALTIMORE NATIONAL PIKE

**KITCHEN** 

NYIKOS ASSOCIATES, INC.

ELLICOTT CITY, MD 21042

410-461-2855(P)

18219-A FLOWER HILL WAY **GAITHERSBURG, MD 20879** 240-683-9530(P)

STRUCTURAL **COLUMBIA ENGINEERING** 6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045 410-992-9970(P)

MECH./ELECTRICAL/PLUMBING CMTA, INC.

> 10411 MEETING ST. PROSPECT, KY 40059 502-326-3085(P)

**ACOUSTIC & MEDIA SYSTEMS ACOUSTICAL DESIGN** COLLABORATIVE, LTD

> **606 BOSLEY AVE TOWSON, MD 21204** 410-821-5930(P)

LEED DOO CONSULTING 531 PICCADILLY ROAD **TOWSON, MD 21204** 443-463-5859(P)

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

> 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000(P)

**Professional Certification.** hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 16066, Expiration Date: 1/6/2022.

**PROFESSIONAL SEAL:** 

**PRINTS ISSUED** DESCRIPTION:

02/25/2020

SCHOOL **RENOVATION AND ADDITION** 

**PUBLIC SCHOOL** 

2/20/2020 2:18:40 PM

ALL FILL UNDER SLABS-ON-GRADE SHALL BE COARSE GRANULAR MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM WATER CONTENT. SLABS-ON-GRADE SHALL BE POURED IN ACCORDANCE WITH ACI 302.1R, "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (LATEST LOCAL APPROVED EDITION). SAW CUT CONTROL JOINTS SUCH THAT TOTAL AREA BOUNDED BY SAW CUTS AND FORMED EDGES DOES NOT EXCEED 400 SQ./FT. AND LONG SIDE TO SHORT SIDE DOES NOT EXCEED A 1.5:1 RATIO. PROVIDE #4 x3'-0" LONG BAR AT MID-DEPTH OF SLAB AT ALL RE-ENTRANT CORNERS AND COLUMN ISOLATION JOINT CORNERS THAT DO NOT HAVE A CONTROL/CONSTRUCTION JOINT TERMINATING.

## DO NOT BACKFILL AGAINST WALLS UNTIL SUPPORTING SLABS ARE IN PLACE AND HAVE ATTAINED DESIGN STRENGTH.

WHERE COMPACTED FILL IS SPECIFIED. OTHER COARSE GRANULAR MATERIAL MAY BE USED WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER.

### **CONCRETE:**

WALLS

TOPPINGS

CONCRETE, UNLESS OTHERWISE NOTED ON THE PLANS OR SCHEDULES. SHALL BE CONCRETE WITH THE FOLLOWING 28 DAY COMPRESSIVE STRENGTHS (f'c):

<u>f'c = 4000 PSI, LIGHT WEIGHT = 110 PCF:</u> AUDITORIUM RAISED SLAB

fc = 3000 PSI, NORMAL WEIGHT = 145 PCF: FOOTINGS GRADE BEAMS SLAB ON GRADE

<u>f'c = 4000 PSI, NORMAL WEIGHT = 145 PCF</u> SLABS ON METAL DECK

CONCRETE NOT OTHERWISE SPECIFIED SHALL BE f'c=3000 PSI NORMAL WEIGHT CONCRETE. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE f'c=5000 PSI MINIMUM AND SHALL BE AIR ENTRAINED FOR EXPOSURE CLASS F2 PER ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION).

NOTE: AT CONTRACTOR'S OPTION. HIGH EARLY STRENGTH DESIGN MIX OR CONCRETE WITH HIGHER DESIGN STRENGTHS MAY BE USED TO DECREASE TIME TO REACH REQUIRED COMPRESSIVE STRENGTH. SUMBIT DESIGN MIXES AS REQUIRED IN SPECIFICATIONS.

ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 (LATEST LOCAL APPROVED EDITION), GRADE 60. ALL REINFORCING STEEL SHALL BE DETAILED. FABRICATED AND PLACED IN ACCORDANCE WITH ACI SP-66, "ACI DETAILING MANUAL" (LATEST LOCAL APPROVED EDITION).

## ALL SPLICES IN REINFORCING SHALL BE CLASS "B" SPLICES IN

ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION) EXCEPT AS OTHERWISE NOTED.

## WELDED WIRE FABRIC (W.W.F.) SHALL HAVE ENDS LAPPED ONE FULL MESH.

WALL FOOTING REINFORCING SHALL EXTEND 2'-0" INTO ADJACENT COLUMN FOOTING, UNLESS OTHERWISE NOTED

## UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, PROVIDE

CONCRETE PROTECTION FOR REINFORCING AS FOLLOWS:

### CAST AGAINST EARTH = 3" EXPOSED TO EARTH OR WEATHER

NO. 6 AND LARGER BARS = 2" NO. 5 AND SMALLER BARS = 1 1/2"

OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS ARE PRINCIPAL OPENINGS. SEE MEP AND ARCHITECTURAL DRAWINGS FOR HOLES IN SLABS NOT SHOWN.

THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.

## NO OPENINGS SHALL BE MADE THROUGH CONCRETE FLOORS ON METAL DECK UNLESS THESE ARE SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR ON THE APPROVED STRUCTURAL SHOP DRAWINGS.

**CONDUITS IN STRUCTURAL MEMBERS:** a. CONDUITS SHALL ONLY BE PLACED IN THE MIDDLE THIRD OF THE DEPTH OF THE SLAB.

## **b.** NO CONDUIT WITH AN OUTSIDE DIAMETER GREATER THAN ONE THIRD

- OF THE SLAB THICKNESS SHALL BE PLACED IN THE SLAB. c. NO CONDUITS SHALL BE PLACED IN THE SLAB UNLESS SPECIFICALLY INDICATED ON THE ELECTRICAL DRAWINGS.
- d. CONDUITS WHICH CROSS OVER ONE ANOTHER IN A CONCRETE SLAB OR WALL SHALL NOT OCCUPY A TOTAL SPACE AT THE POINT OF CROSSOVER GREATER THAN ONE THIRD THE DEPTH OF THE SLAB.
- e. NO CONDUITS SHALL BE PLACED IN A PIER. f. FOR CONCRETE ON METAL DECK. THE DEPTH OF THE SLAB SHALL BE CONSIDERED THE TOTAL SLAB THICKNESS

CONSTRUCTION JOINTS IN SLABS SHALL BE LOCATED MIDWAY BETWEEN SUPPORTS. WHEN AN INTERSECTING MEMBER OCCURS AT MIDSPAN, THE JOINT SHALL BE OFFSET TWICE THE WIDTH OF THE INTERSECTING MEMBER. BEFORE FRESH CONCRETE IS POURED AGAINST CONCRETE IN PLACE, THE CONTACT SURFACES SHALL BE THOROUGHLY CLEANED, ALL LAITANCE SHALL BE REMOVED AND THE CONTACT SURFACES SHALL BE THOROUGHLY SLUSHED WITH GROUT CONSISTING OF ONE PART SAND TO ONE PART CEMENT WITH A MINIMUM AMOUNT OF WATER.

CONSTRUCTION JOINTS SHALL HAVE THE SURFACE OF THE FIRST POUR ROUGHENED TO 1/4" AMPLITUDE, UNLESS OTHERWISE NOTED.

## NOTE: 13 THE CONTRACTOR MUST SUBMIT A CONCRETE DESIGN MIX IN

ACCORDANCE WITH ACI 318 (LATEST LOCAL APPROVED EDITION). SUCH DESIGN MIX SHALL BE ACCOMPANIED BY THE APPROPRIATE GRAPHS AND BACKGROUND DATA. CONCRETE DESIGN MIX SHALL INDICATE 7 AND 28 DAY STRENGTHS, CEMENT CONTENT, WATER-CEMENT RATIO, FINE AND REINFORCING BAR POSITIONERS SHALL BE USED TO HOLD BARS IN COARSE AGGREGATES AND ADMIXTURES FOR EACH DESIGN STRENGTH. PROPER LOCATION. POSITIONERS SHALL BE PLACED AT A MAXIMUM THE ADDITION OF WATER AT THE PLANT OR IN THE FIELD GREATER THAN THE SPECIFIED WATER CONTENT IS STRICTLY PROHIBITED.

## **CONCRETE (CONTINUED):**

ACI-306

ACI SP-66

ALL CONCRETE WORK SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF THE FOLLOWING ACI AND ASTM DOCUMENTS:

### ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI-318 CODE ACI-214 COMPRESSIVE TEST

 ACI-347 **FORMWORK**  ACI-305 **HOT WEATHER**  ACI-211 PROPORTIONS OF CONCRETE ACI-304 PLACING CONCRETE ASTM C-94 READY-MIX CONCRETE

DETAILING

COLD WEATHER

ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF ASTM STANDARDS: ASTM C-31 FIELD CYLINDER SPECIMENS

 ASTM C-143 SLUMP TEST ASTM C-231 AIR CONTENT (WHEN REQUIRED) ASTM C-39 LAB TESTING CYLINDERS

 ASTM C-172 SAMPLING FRESH CONCRETE ASTM C-42 HARDENED CORES (WHEN REQUIRED) TEST RESULTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION.

## ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347. "GUIDE TO FORMWORK FOR CONCRETE" (LATEST LOCAL APPROVED EDITION).

## CONCRETE FORMWORK SHALL NOT BE DISTURBED UNTIL THE

CONCRETE HAS HARDENED SUFFICIENTLY TO SUPPORT ITS OWN WEIGHT PLUS SUPERIMPOSED CONSTRUCTION LOADS. AS A MINIMUM. FORMS MUST REMAIN IN PLACE FOR THE LENGTH OF TIME RECOMMENDED BY ACI 347, "GUIDE TO FORMWORK FOR CONCRETE" (LATEST LOCAL APPROVED EDITION). FORM REMOVAL REQUIRES SIMULTANEOUS RESHORING. RESHORING SHALL REMAIN IN PLACE UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED DESIGN STRENGTH. IN LIEU OF THE RECOMMENDATIONS ESTABLISHED IN ACI 347, THE CONTRACTOR MAY TEST FIELD CURED CYLINDERS TO CONFIRM EARLY CONCRETE DESIGN STRENGTH. THE CONTRACTOR SHALL HAVE A FORMWORK PLAN AT THE SITE SHOWING THE SIZE AND STRENGTH OF FORMWORK, SEQUENCE OF CONSTRUCTION, AND A TEMPERATURE DEPENDENT FORMWORK REMOVAL AND RESHORING PROCEDURE. THE PLANS SHALL BE PREPARED AND SIGNED AND

SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL

JURISDICTION.

CONCRETE SLABS ON METAL DECK AND STEEL FRAMING ARE DESIGNED AS UNSHORED. SLABS SHALL BE POURED LEVEL TO THE ELEVATIONS NOTED ON THE PLAN. FOR BIDDING PURPOSES, THE CONCRETE CONTRACTOR SHALL ASSUME AN AVERAGE OF 1/2" ADDITIONAL CONCRETE OVER THE FOOTPRINT OF THE FLOOR TO ACCOUNT FOR DEFLECTION OF THE FRAMING UNDER THE WET LOAD OF THE CONCRETE.

## MASONRY:

CONCRETE MASONRY SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION C90. CONCRETE MASONRY SHALL BE SAMPLED AND TESTED BY THE MASONRY SUPPLIER ACCORDING TO ASTM C140. ALL CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (LATEST LOCAL APPROVED EDITION) AND TMS 602, "SPECIFICATION FOR MASONRY STRUCTURES" (LATEST LOCAL APPROVED EDITION).

### UNLESS OTHERWISE NOTED, CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI ON THE NET AREA. ALL BRICK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3350 PSI ON THE NET AREA.

## NOTE: 3

ALL MORTAR SHALL CONFORM TO ASTM C270. MORTAR TO BE USED SHALL BE SAMPLED AND TESTED BY THE BRICK AND MASONRY SUPPLIERS ACCORDING TO ASTM C780 AND RESULTS SUBMITTED TO THE ENGINEER FOR APPROVAL. MORTAR SHALL BE PORTLAND CEMENT/LIME MORTAR TYPE "S" AS A MINIMUM.

## UNLESS NOTED OTHERWISE, PROVIDE 8" MINIMUM OF BRICK OR 100% SOLID MASONRY CONTINUOUS BELOW ALL JOISTS OR SLAB BEARING LINES. PROVIDE 16" MINIMUM BRICK OR 100% SOLID MASONRY BELOW ALL LINTELS AND/OR MINOR WALL BEARING BEAMS.

LOOSE LINTELS FOR OPENINGS IN MASONRY BEARING WALLS SHALL BE AS FOLLOWS FOR EACH 4" WIDTH: 0'-0" TO 3'-0"... ...3 1/2 "x3 1/2"x5/16"ANGLE • 3'-1" TO 5'-0"... ...4"x3 1/2"x5/16" ANGLE 5'-1" TO 6'-0"... ...5"x3 1/2"x3/8" ANGLE

• 6'-1" TO 8'-0"... ...6"x3 1/2"x3/8" ANGLE ALL ANGLES SHALL HAVE THEIR SHORT LEG OUTSTANDING AND 6" MINIMUM BEARING.

LINTELS OVER OPENINGS 10'-0" WIDE OR LESS IN INTERIOR NON-BEARING MASONRY PARTITIONS NOT OTHERWISE SPECIFIED SHALL BE PRECAST LIGHTWEIGHT CONCRETE LINTELS REINFORCED WITH 1-#5 BAR TOP AND BOTTOM FOR EACH 4" WIDTH. SCORE THE LINTELS VERTICALLY AT 16" o.c. TO MATCH ADJACENT CMU COURSING.

ALL SOLID CMU SHALL BE 100% SOLID BLOCK OR HOLLOW BLOCK WITH CELLS FILLED 100% SOLID WITH fc=3000 PSI COARSE AGGREGATE GROUT CONFORMING TO ASTM C476. GROUT SHALL BE PLACED IN POUR HEIGHTS NOT TO EXCEED 4'-0" AS CMU CONSTRUCTION PROGRESSES. THE WEBS OF THE MASONRY UNITS SHALL BE FULLY MORTARED AROUND ALL GROUTED CELLS.

ALL REINFORCED CELLS IN HOLLOW BLOCK SHALL BE GROUTED 100% SOLID PER NOTE ABOVE.

ALL SPLICES IN REINFORCING STEEL FOR MASONRY BEARING WALLS AND MASONRY SHEAR WALLS SHALL BE MECHANICAL BUTT SPLCES USING ZAP SCREWLOCK "SL" SERIES BY BAR SPLICE PRODUCTS, INC. OR EQUIVALENT. DOWELS SHALL BE LAPPED 64 BAR DIAMETERS WITH VERTICAL REINFORCING BARS.

## ALL SPLICES IN REINFORCING STEEL FOR ALL OTHER MASONRY WALLS SHALL AS FOLLOWS UNLESS NOTED OTHERWISE:

• #4 BAR ---- 2'-8" • #5 BAR ---- 3'-4" • #6 BAR ---- 4'-0"

EXTERIOR WALLS ......#5 AT 48" o.c.

ALL CMU WALLS 8" OR WIDER SHALL HAVE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE • INTERIOR WALLS ......#5 AT 48" o.c.

## NOTE: 11

IN ADDITION TO REINFORCING STEEL NOTED ON PLANS, SCHEDULES AND SECTIONS, PROVIDE VERTICAL BARS OF SAME SIZE WITHIN 8" OF EACH SIDE OF WALL CONTROL JOINTS, WITHIN 8" OF THE ENDS OF WALLS, WITHIN 16" OF EACH SIDE OF OPENINGS AND AT ALL CORNERS.

## NOTE: 12

VERTICAL SPACING OF 48"o.c. NOTE: 13

## ALL 6" CMU NON-BEARING WALLS SHALL BE DOWELED TO THE SUPPORTING SLAB WITH #4 AT 48" o.c. UNLESS NOTED OTHERWISE.

## MASONRY (CONTINUED):

AT STEEL COLUMNS:

ALL MASONRY ANCHORS SHALL BE INSTALLED IN MASONRY THAT HAS BEEN GROUTED SOLID A MINIMUM OF 8" ABOVE AND BELOW THE ANCHOR AND A MINIMUM OF 8" EACH SIDE OF THE ANCHOR.

UNLESS OTHERWISE NOTED, PROVIDE ANCHORAGE OF MASONRY WALLS TO THE STRUCTURE IN THE FOLLOWING MANNER: SEE TYPICAL DETAIL G/S3.00 AT STEEL BEAMS:

ADJUSTABLE MASONRY ANCHORS AT

• AT CONCRETE ELEMENTS: DOVETAIL ANCHORS AT 16"o.c.

## MASONRY CONSTRUCTION SHALL BE INSPECTED PER TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (LATEST LOCAL APPROVED EDITION) FOR LEVEL B QUALITY ASSURANCE.

TYPICAL INFILLING, REMOVAL AND REPAIR OF EXISTING MASONRY

### WHERE NEW MASONRY IS TO BE ADDED, THE MASONRY SHALL BE TOOTHED AND MORTARED (SEE GUIDELINES FOR "REPAIR"). THE NEW MASONRY SHALL BEAR ON NEW CONCRETE FOUNDATIONS OR ON THE EXISTING MASONRY. IN THE LATTER CASE, THE EXISTING MASONRY SHALL BE REMOVED TO GOOD, SOLID MATERIAL. THE DRAWINGS INDICATE THE APPROXIMATE EXTENT OF THE REQUIRED MASONRY INFILL. THIS IS A GUIDE ONLY AND THE EXACT EXTENT SHALL BE DETERMINED BY THE CONTRACTOR BASED ON FIELD CONDITIONS. WHEN THE RESULTING MASONRY WOULD BE PART NEW AND PART EXISTING AND WOULD FORM A PIER OR OTHERWISE SMALL ELEMENT. REMOVE ALL THE EXISTING MASONRY AND MAKE A NEW PIER OR WALL.

### REMOVING: IN THOSE AREAS WHERE NEW OPENINGS MUST BE MADE THROUGH EXISTING MASONRY WALLS, THE EXISTING MASONRY SHALL BE CAREFULLY REMOVED AFTER THE WALL THAT REMAINS ABOVE THE PROPOSED OPENING HAS BEEN TEMPORARILY SUPPORTED OR AFTER THE LINTELS HAVE BEEN PUT IN PLACE. ANY REQUIRED CUTTING BEYOND THE MASONRY OPENING SHALL BE PATCHED WITH MASONRY AND MORTAR (SEE GUIDELINES FOR "REPAIR"). WHEN THE MASONRY THAT REMAINS AFTER REMOVAL WOULD RESULT IN A PIER OR OTHERWISE SMALL ELEMENT. THE EXISTING MASONRY SHALL BE REMOVED AND A NEW PIER OR WALL SHALL BE CONSTRUCTED. THE CONTRACTOR SHALL PROVIDE DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION SHOWING THE SUPPORT OF THE WALLS PRIOR TO AND DURING THE INSTALLATION OF LINTELS REQUIRED TO SUPPORT THE MASONRY ABOVE THE NEW OPENING.

IN THOSE AREAS WHERE THE EXISTING MASONRY HAS DETERIORATED SAGGED OR CRACKED, THE MASONRY SHALL BE REMOVED AND REPLACED. EXISTING BRICKS MAY BE RE-USED PROVIDED THAT THEY ARE IN GOOD CONDITION. THE NEW MORTAR USED TO REPLACE THE EXISTING MORTAR SHALL MATCH SOUND EXISTING MORTAR IN STIFFNESS AND CONSISTENCY. IF NEW BRICKS ARE REQUIRED, THEY ALSO SHALL MATCH EXISTING BRICKS IN GOOD CONDITION. THE NEW MASONRY SHALL BE TOOTHED INTO THE EXISTING WALL. THE ARCHITECT SHALL APPROVE ALL NEW MASONRY WORK.

## STEEL:

ALL STEEL JOISTS SHALL CONFORM TO THE SJI STANDARD SPECIFICATIONS IN ALL RESPECTS AND SHALL HAVE BRIDGING IN ACCORDANCE WITH THE SJI SPECIFICATIONS. JOISTS SHALL BE WELDED TO STEEL SUPPORTS PER SJI SPECIFICATIONS. JOISTS SUPPORTED BY A COLUMN SHALL BE WELDED TO THE COLUMN WITH 1/8"x2" LONG FILLET WELD EACH SIDE UNLESS NOTED OTHERWISE. JOISTS SUPPORTED ON STEEL BEAMS, GIRDERS, OR BEARING PLATES SHALL HAVE THE JOIST SEAT DESIGNED TO TRANSFER THE LOAD TO THE SUPPORT CENTERLINE UNLESS NOTED OTHERWISE ON THE PLAN.

STRUCTURAL STEEL FOR WIDE FLANGE SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992. STRUCTURAL STEEL FOR HSS MEMBERS SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE C. STRUCTURAL STEEL FOR PIPES SHALL CONFORM TO ASTM SPECIFICATION A53 TYPE E, GRADE B. ALL OTHER STEEL SHALL CONFORM TO ASTM SPECIFICATION A36. MILL TEST REPORTS SHALL BE SUBMITTED TO THE ARCHITECT. ALL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC MANUAL, AISC SPECIFICATION AND AISC CODE OF STANDARD PRACTICE. UNLESS NOTED OTHERWISE, ALL CONNECTIONS FOR NON-COMPOSITE BEAMS SHALL DEVELOP THE ALLOWABLE UNIFORM LOAD OF THE BEAM. CONNECTIONS FOR COMPOSITE BEAMS SHALL DEVELOP THE REACTION NOTED ON THE PLANS. ALL CONNECTIONS SHALL DEVELOP AT LEAST 6k. IN GENERAL, FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER A325 BOLTS UNLESS OTHERWISE NOTED AND SHOP

CONNECTIONS SHALL BE WELDED.

BOLTS, EXCEPT AS NOTED, NEED ONLY BE INSTALLED TO THE "SNUG TIGHT" CONDITION AS DEFINED IN THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS." BOLTS IN BEAM TO COLUMN CONNECTIONS THAT HAVE SLOTTED HOLES, BOLTS NOTED AS SLIP CRITICAL, AND BOLTS SUBJECT TO DIRECT TENSION SHALL BE FULLY PRE-TENSIONED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS" (LATEST LOCAL APPROVED EDITION).

## NOTE: 4 WELDS SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES.

ALL CONNECTIONS, UNLESS OTHERWISE NOTED, SHALL BE DOUBLE ANGLE, SINGLE ANGLE, SINGLE PLATE, OR THRU PLATE CONNECTIONS PER THE TYPICAL DETAILS OF THE CONTRACT DOCUMENTS, CONNECTIONS SHALL BE SELECTED BY THE STEEL DETAILER BASED ON THE CONNECTION TABLES PROVIDED IN THE TYPICAL DETAILS. LOADS SHOWN IN THE DRAWINGS ARE ASD LOADS UNLESS OTHERWISE NOTED.

ALL GROOVE WELDS SHALL BE FULL PENETRATION GROOVE WELDS IN ACCORDANCE WITH ANSI/AWS D1.1, "STRUCTURAL WELDING CODE" (LATEST LOCAL APPROVED EDITION). THESE WELDS SHALL BE MADE ONLY BY OPERATORS QUALIFIED BY PRESCRIBED TESTS IN THE "STRUCTURAL WELDING CODE." ACCEPTANCE SHALL BE SUBJECT TO THE INSPECTION AND REVIEW OF AN INDEPENDENT INSPECTION AGENCY. ALL FULL PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED.

HOLES AND OPENINGS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

FIELD MODIFICATION OF THE STRUCTURAL STEEL IS NOT ALLOWED WITHOUT PRIOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.

## WELDING SEQUENCE AND TECHNIQUE SHALL BE SUCH THAT DISTORTION OF STEEL MEMBERS IS MINIMIZED AND UNDUE DISTORTION IS AVOIDED.

ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH A RUST INHIBITIVE PRIMER. ALL EXPOSED STEEL AND LINTELS IN EXTERIOR WALLS SHALL BE HOT-DIPPED GALVANIZED. REFER TO ARCHITECTURAL DRAWINGS FOR GALVANIZED STEEL THAT SHALL RECEIVE A PAINTED FINISH COAT.

NO REDUCTION IN THE SHEAR CAPACITY OF THE STUDS. IF REQUIRED, THE

TOTAL NUMBER OF STUDS, [No.], SHALL BE INCREASED IN ACCORDANCE

WITH AISC SPECIFICATIONS TO ALLOW FOR ANY REDUCTION IN SHEAR

CAPACITY DUE TO THE METAL DECK CONFIGURATION.

### NOTE: 11 THE SYMBOL [No.] ADJACENT TO A BEAM OR PORTION OF A BEAM DENOTES THE NUMBER OF 3/4" DIAMETER HEADED STUDS TO BE WELDED TO THE TOP OF THE BEAM OR PORTION OF THE BEAM. STUDS SHALL EXTEND 1 1/2" ABOVE THE DECK AFTER INSTALLATION. THE NUMBER OF STUDS HAS BEEN DETERMINED BY ASSUMING THE SHAPE OF THE METAL DECK CAUSES

## STEEL (CONTINUED):

TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL THE INSTALLATION OF THE FOLLOWING ITEMS HAS BEEN COMPLETED AND INSPECTED:

- METAL ROOF DECK ELEVATED CONCRETE FLOORS
- LATERAL BRACING COMPONENTS INCLUDING ANCHOR BOLTS
- SHEAR WALLS
- MOMENT CONNECTIONS

## METAL DECK:

FABRICATION AND ERECTION OF ALL METAL DECK SHALL CONFORM TO THE LATEST EDITION OF STEEL DECK INSTITUTE SPECIFICATIONS.

FLOOR DECK SHALL BE MADE OF STEEL CONFORMING TO ASTM A653 SS GRADE 50. ROOF DECK SHALL BE MADE OF STEEL CONFORMING TO ASTM A653 SS GRADE 33. GALVANIZED DECK SHALL HAVE COATING DESIGNATION

METAL DECK SHALL HAVE THE FOLLOWING MINIMUM SECTION ROOF DECK ------ I = 0.289 in<sup>4</sup>/ft, S = 0.318 in<sup>3</sup>/ft

## ACOUSTIC ROOF DECK ----- EPIC METALS EDP324A, 3" DECK ONLY COMPOSITE FLOOR DECK ------ I = 0.402 in<sup>4</sup>/ft, S = 0.326 in<sup>3</sup>/ft

## ACOUSTIC COMPOSITE FLOOR DECK ------ I = 0.402 in<sup>4</sup>/ft, S = 0.326 in<sup>3</sup>/ft NON-COMPOSITE FLOOR DECK ----- I = 0.402 in<sup>4</sup>/ft, S = 0.326 in<sup>3</sup>/ft

ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER 3 SPANS MINIMUM AND SHALL BEAR AT LEAST 2" ON STEEL SUPPORTS. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL FURNISH HEAVIER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS. THE CONTRACTOR SHALL SUBMIT THE ALTERNATE LAYOUT FOR APPROVAL.

## DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS AT 12"o.c., AND AS NOTED ON PLANS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SIDE LAPS

SHALL BE WELDED OR SCREWED AT MID SPAN AND AS NOTED ON PLANS. PROVIDE RIDGE AND VALLEY PLATES, REINFORCING CHANNELS, STANDARD CLOSURES, CANT STRIPS, SUMP PANS, FINISH STRIPS, POUR

STOPS, AND OTHER ACCESSORIES AS SHOWN ON THE DRAWINGS OR AS

DO NOT HANG ANY EQUIPMENT, LIGHTS, DUCTS, PIPES, CEILING GRID, ETC., FROM METAL ROOF DECK.

## **COLD-FORMED METAL FRAMING:**

REQUIRED.

GALVANIZED STUDS. JOISTS. AND TRACKS. 12. 14. AND 16 GAGE SHALL BE FORMED FROM STEEL THAT CONFORMS TO ASTM A653, GRADE 50. GALVANIZED 18 AND 20 GAGE STUDS, JOISTS, TRACKS, AND ALL GALVANIZED BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM

ALL COLD-FORMED METAL FRAMING SHALL BE FORMED FROM STEEL HAVING A G-90 GALVANIZED COATING.

FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO ERECTING. PREFABRICATED PANELS SHALL BE SQUARE WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING. HANDLING AND LIFTING OF PREFABRICATED FRAME PANELS SHALL BE DONE IN A MANNER AS NOT TO CAUSE DISTORTION IN ANY MEMBER.

PROVIDE UNIFORM AND LEVEL BEARING SUPPORT FOR THE BOTTOM

## AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE BUTT WELDED OR SPLICED TOGETHER. STUDS SHALL BE PLUMBED, ALIGNED, AND SECURELY ATTACHED TO THE

AGAINST THE WEB OF BOTH UPPER AND LOWER TRACKS, UNLESS

FLANGES OR WEBS OF THE TRACKS. THE ENDS OF THE STUDS MUST BEAR

SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.

OTHERWISE NOTED.

WALL STUD BRIDGING SHALL BE INSTALLED IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION. BRIDGING ROWS SHALL BE EQUALLY SPACED NOT TO EXCEED 4'-0"o.c.

## TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION OF THE

STRUCTURAL SYSTEM IS COMPLETE. SIZES AND GAGES OF COLD-FORMED METAL FRAMING SHOWN ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. FRAMING SHALL BE DESIGNED FOR THE WIND LOADS REQUIRED BY THE LOCAL BUILDING CODE AND SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION. FOR BIDDING PURPOSES, PROVIDE MULTIPLE STUDS AT EACH SIDE OF OPENINGS EQUAL TO ONE-

## <u>SUPPORT FOR DUCTWORK, PIPING AND MECHANICAL UNITS:</u>

HALF OPENING WIDTH DIVIDED BY THE STUD SPACING.

NO MECHANICAL UNITS SHALL BE PLACED ON OR HUNG FROM JOISTS WITHOUT THE APPROVAL OF THE ENGINEER. NO UNITS SHALL BE SUPPORTED FROM THE BOTTOM CHORD OF THE JOIST.

DUCTWORK AND PIPING SHALL ONLY BE HUNG FROM THE STEEL FRAMING. AT JOISTS, HANGERS SHALL BE SUPPORTED FROM THE TOP CHORD PANEL POINT AND THE LOAD ON INDIVIDUAL HANGERS SHALL NOT EXCEED 300 POUNDS.

## PIPE RISERS SHALL BE SUPPORTED FROM THE FLOOR SLAB BELOW WITH A CLAMP OR STANCHION.

JOISTS HAVE BEEN DESIGNED FOR A UNIFORM HANGING SPRINKLER LOAD OF 3 PSF. THE SPRINKLER CONTRACTOR SHALL SPACE THE SPRINKLERS SO THAT THE UNIFORM HANGING SPRINKLER LOAD IS NOT EXCEEDED. SPRINKLER LINES 4" AND LARGER THAT RUN PARALLEL WITH THE JOISTS SHALL BE PLACED EVENLY BETWEEN TWO JOISTS. SPRINKLER PIPES SHALL BE HUNG FROM THE TOP CHORD PANEL POINT OF THE JOISTS AND THE LOAD ON EACH INDIVIDUAL HANGER SHALL NOT EXCEED 300 POUNDS.

THE MAXIMUM TOTAL HUNG LOAD ON ANY SINGLE JOIST FROM MULTIPLE HANGERS SHALL NOT EXCEED 900 POUNDS.

## **POST-INSTALLED ANCHORS AND REINFORCING:**

ANCHOR PER ICC ESR-1917

ANCHORS SPECIFIED.

3 EXPANSION ANCHOR PER ICC ESR-1385

AND HAS ATTAINED 70% OF ITS DESIGN STRENGTH.

OR GROUT HAS ATTAINED 70% OF ITS DESIGN STRENGTH.

ANCHORS SHALL BE THE FOLLOWING TYPES MANUFACTURED BY HILTI.

- a. ADHESIVE ANCHORS IN CONCRETE: HILTI HIT-HY200 ANCHORING SYSTEM PER ICC ESR-3187 WITH HILTI HIT-Z THREADED ROD. b. ADHESIVE ANCHORS IN SOLID GROUTED MASONRY: HILTI HIT-HY70
- 2. DEMOLITION PROCEDURES WITH SEQUENCING REQUIREMENTS. 3. TEMPORARY SUPPORT OF EXISTING WALLS MASONRY ADHESIVE SYSTEM PER ICC ESR-2682 WITH HILTI HAS-E CONTINUOUSLY THREADED ROD SUBMITTALS SHALL BE PREPARED UNDER THE SUPERVISION OF A . ADHESIVE ANCHORS IN HOLLOW AND MULTI-WYTHE MASONRY: HILTI

e. MECHANICAL ANCHORS IN SOLID GROUTED MASONRY: HILTI KWIK BOLT

ALTERNATE MANUFACTURERS OR ANCHORS MUST BE SUBMITTED TO THE

DEMONSTRATING THAT THE PROPOSED SUBSTITUTIONS, BASED ON THEIR

SPECIFIC ICC-ES EVALUATION REPORTS, ARE CAPABLE OF ACHIEVING THE

ADHESIVE ANCHORS AND REINFORCING SHALL NOT BE INSTALLED UNTIL

MECHANICAL ANCHORS SHALL NOT BE INSTALLED UNTIL THE CONCRETE

ALL POST INSTALLED ANCHORS AND REINFORCING SHALL BE INSTALLED IN

DRY HOLES THAT HAVE BEEN DRILLED, CLEANED AND PREPARED IN STRICT

ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION

INSTRUCTIONS AND THE RESPECTIVE ICC ES EVALUATION REPORTS.

THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S

REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL

INSTALLATION OF ANY ANCHORS, THE CONTRACTOR SHALL SUBMIT TO

PERSONNEL WHO WILL INSTALL THE ANCHORS HAVE BEEN PROPERLY

IN ADDITION TO TRAINING BY THE MANUFACTURER'S REPRESENTATIVE,

IN CONCRETE SHALL BE CERTIFIED BY AN ACI/CRSI ADHESIVE ANCHOR

THE CONTRACTOR'S PERSONNEL WHO WILL INSTALL ADHESIVE ANCHORS

ALL ANCHORS AND REINFORCING SHALL BE INSTALLED IN ACCORDANCE

WITH THE SPACING AND EDGE DISTANCES SHOWN IN THE DRAWINGS. THE

CONTRACTOR SHALL INFORM THE ARCHITECT PRIOR TO INSTALLING THE

DRAWINGS CANNOT BE ACHIEVED. IF THIS IS THE CASE, RE-DESIGN MIGHT

DO NOT CUT ANY REINFORCING UNLESS IT IS SPECIFICALLY INDICATED IN

ANCHORS IF THE SPACING AND EDGE DISTANCES SHOWN IN THE

BE REQUIRED AND THE ANCHORS SHOULD NOT BE INSTALLED UNTIL

APPROVAL HAS BEEN PROVIDED BY COLUMBIA ENGINEERING, INC.

THE DRAWINGS OR IS APPROVED BY COLUMBIA ENGINEERING, INC.

POST INSTALLED ANCHORS AND REINFORCING SHALL ONLY BE USED

WHERE SPECIFIED IN THE CONTRACT DRAWINGS. THE CONTRACTOR

SHALL OBTAIN APPROVAL FROM COLUMBIA ENGINEERING INC. PRIOR TO

INSTALLING POST INSTALLED ANCHORS WHERE CAST IN PLACE ANCHORS

POST INSTALLED ANCHORS AND REINFORCING SHALL BE PERIODICALLY

INSPECTED PER IBC 2018 SECTION 1705 EXCEPT ADHESIVE ANCHORS AND

REINFORCING INSTALLED IN A VERTICAL OR OVERHEAD SURFACE SHALL

REVIEW A SITE SPECIFIC RIGGING AND HOISTING PLAN FOR ALL MAJOR

THE DESCRIPTION OF THE RIGGING, HOISTING AND TRANSPORTATION

EQUIPMENT AND THE SITE PREPARATIONS THAT WILL BE NEEDED TO

COMPLETE THE INSTALLATION. EXISTING AREAS OF SCHOOL WILL BE

THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ARCHITECT FOR

REVIEW A SITE SPECIFIC PLAN FOR ALL SCAFFOLDING THAT WILL BE

THE PROPOSED RIGGING, HOISTING OR SCAFFOLDING PLAN SHALL BE

REVIEWED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL

AND SEALED CERTIFICATION STATING THAT THE PROPOSED PLAN WILL

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE LOADS

THE CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL FINISHES.

COLUMBIA ENGINEERING INC. HAS PREPARED THESE PLANS BASED ON A

"HAMMOND AREA HIGH SCHOOL, COLUMBIA, MD", PREPARED BY STANLEY

LIMITED AMOUNT OF FIELD EXPLORATION AND ON THE STRUCTURAL

"HAMMOND HIGH SCHOOL, COLUMBIA, MD", PREPARED BY NICHOLS

"CENTENNIAL & HAMMOND HIGH SCHOOLS - DANCE STUDIO ADDITIONS,

THE EXISTING MEMBER SIZES ARE NOTED (E) AND ARE SHOWN IN THE

PLANS. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING MEMBERS

SHOWN IN THE PLANS MATCH EXISTING AS BUILT CONDITIONS PRIOR TO

PREPARING SHOP DRAWINGS. IF THE AS BUILT CONDITIONS DO NOT

CONFORM TO THE INFORMATION SHOWN IN THE PLANS, OR IF ANY

STRUCTURAL MEMBER IS FOUND TO BE IN POOR CONDITION, THE

CONTRACTOR SHALL INFORM COLUMBIA ENGINEERING INC. OF THE

ACTUAL SIZES AND/OR CONDITION. RE-DESIGN AND ADDITIONAL FRAMING

HOWARD COUNTY PUBLIC SCHOOL SYSTEM". PREPARED BY SCHAMU

MACHOWSKI GRECO ARCHITECTS, DATED DECEMBER 2010

INFORMATION SHOWN IN THE FOLLOWING DRAWINGS:

SUPERIMPOSED BY THE RIGGING, HOISTING OR SCAFFOLDING SYSTEMS

JURISDICTION. THE PROFESSIONAL ENGINEER SHALL PROVIDE A SIGNED

RIGGING, HOISTING AND SCAFFOLDING REQUIREMENTS:

THE ANCHORING PRODUCTS SPECIFIED IN THE DRAWINGS. PRIOR TO

THE ARCHITECT DOCUMENTED CONFIRMATION FROM THE

TRAINED FOR THE SPECIFIED ANCHORS.

INSTALLER CERTIFICATION PROGRAM.

ARE MISSING, MISPLACED OR DAMAGED.

BE CONTINUOUSLY INSPECTED.

OCCUPIED DURING CONSTRUCTION.

INSTALLED ON FRAMED FLOORS AND ROOFS

NOT DAMAGE OR OVERSTRESS THE STRUCTURE.

WILL NOT EXCEED THE FOLLOWING LOADS:

FRAMED FLOORS = 40 PSF

**EXISTING CONSTRUCTION:** 

H. ARTHUR, DATED AUGUST 1974.

MAY BE REQUIRED IN THAT CASE.

ARCHITECTS, DATED SEPTEMBER 1995.

ROOFS = 30 PSF

MANUFACTURER'S REPRESENTATIVE THAT THE CONTRACTOR'S

THE CONCRETE OR GROUT HAS BEEN ALLOWED TO CURE FOR 21 DAYS

PERFORMANCE VALUES EQUAL TO OR GREATER THAN THOSE OF THE

CONTRACTOR SHALL PROVIDE SIGNED AND SEALED CALCULATIONS

ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO USE. THE

- PROFESSIONAL ENGINEER EXPERIENCED IN THIS TYPE OF WORK. SHOP HIT-HY70 MASONRY ADHESIVE SYSTEM PER ICC ESR-2682 WITH HILTI DRAWINGS SHALL BE ACCOMPANIED BY SUPPORTING CALCULATIONS AND HAS-E CONTINUOUSLY THREADED ROD AND APPROPRIATE SIZE SCREEN TUBE. REGISTERED INT HE LOCAL JURISDICTION. . MECHANICAL ANCHORS IN CONCRETE: HILTI KWIK BOLT TZ EXPANSION
  - SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER NOTE: 3

THE CONTRACTOR SHALL SUBMIT DOCUMENTATION FOR THE FOLLOWING

1. TEMPORARY SHORING / BRACING OF EXISTING STRUCTURAL ELEMENTS.

**EXISTING CONSTRUCTION (CONTINUED):** 

DEMOLITION/CONSTRUCTION ACTIVITIES

ALL NEW PENETRATIONS THROUGH THE EXISTING FRAMED FLOORS. ROOFS AND WALLS SHALL BE ACCURATELY LOCATED BY THE CONTRACTOR. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS SHOWING ALL PROPOSED OPENINGS AND SHALL SUBMIT THESE FOR REVIEW AND APPROVAL PRIOR TO CUTTING ANY OPENINGS.

### NOTE: 4 NEW PENETRATIONS SHOWN IN THE STRUCTURAL DRAWINGS ARE PRINCIPAL OPENINGS. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, MEP AND TELECOMMUNICATION DRAWINGS FOR ALL PENETRATIONS.

NOTE: 5 ALL NEW PIPE AND DUCT PENETRATIONS SHALL BE LOCATED BY THE CONTRACTOR TO AVOID CONCRETE SLAB REINFORCEMENT AND SUPPORTING MEMBERS UNDER THE SLAB OR ROOF. IF CUTTING OF ANY REINFORCEMENT OR EXISTING SUPPORTING MEMBER CANNOT BE AVOIDED, THEN PRIOR TO CUTTING, THE CONTRACTOR SHALL PREPARE A DETAILED DRAWING SHOWING THE PROPOSED PENETRATION AND ALL THE AFFECTED REINFORCEMENT AND SUPPORTING MEMBERS AND SHALL SUBMIT THE DRAWING TO COLUMBIA ENGINEERING INC. FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT CUT ANY REINFORCEMENT OR MEMBER WITHOUT THE PRIOR APPROVAL OF COLUMBIA ENGINEERING, INC.

## **MISCELLANEOUS**

CONSTRUCTION.

NOTE: 4

ITEMS AND CONDITIONS NOTED OR IDENTIFIED IN SECTIONS AND DETAILS APPLY TO AREAS SIMILAR IN CONDITION TO THOSE DENOTED BY THE SECTION CUT OR DETAIL MARK

### NOTE: 2 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH FABRICATION OR

SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS MUST BE SUBMITTED BY THE CONTRACTOR. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS. THE FIRM COLUMBIA ENGINEERING, INC., WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND/OR THE DESIGN OF THE PROJECT.

## SHOP DRAWINGS.

REPRODUCTION OF CONTRACT DOCUMENTS WILL NOT BE ACCEPTED AS

- SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED FOR ARCHITECT/ENGINEER REVIEW: a. CONCRETE/GROUT MIX DESIGNS
- d. STEEL JOISTS e. METAL DECK SEE SPECIFICATIONS FOR ADDITIONAL REQUIRED SUBMITTALS.

b. CONCRETE/MASONRY REINFORCING STEEL

- THE FOLLOWING ITEMS SHALL BE DESIGNED FOR LOADS INDICATED IN THE PLANS, SPECIFICATIONS, AND IN THE LOCAL BUILDING CODE:
- a. TEMPORARY SHORING AND BRACING OF EXISTING b. CURTAINWALL SYSTEMS
- c. COLD-FORMED FRAMING d. METAL STAIRS e. EXTERIOR EQUIPMENT PLATFORM ACCESS STAIRS AND LANDINGS
- f. HANDRAILS AND GUARDRAILS

AS NOTED."

NOTE: 8

c. STRUCTURAL STEEL

- g. LADDERS h. CANOPIES
- BLEACHERS AND PRESS BOX/PLATFORM THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ARCHITECT FOR . SPECIAL JOISTS k. STRUCTURAL SKYLIGHT EQUIPMENT THAT WILL BE TRANSPORTED THROUGH OR HOISTED FROM SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION AND THE BUILDING. THE PLAN SHALL INCLUDE THE SEQUENCE OF ERECTION,
  - SUBMITTED FOR REVIEW. NOTE: 7 ALL SHOP DRAWINGS USED FOR WORK SHALL BEAR THE STAMP OF THE ARCHITECT/ENGINEER, AND SHALL BE MARKED "REVIEWED" OR "REVIEWED

### THE BUILDING FRAME IS NOT SELF-SUPPORTING UNTIL THE ENTIRE STRUCTURAL SYSTEM HAS BEEN INSTALLED. TEMPORARY BRACING MUST BE PROVIDED BY THE CONTRACTOR TO SUPPORT THE FRAME UNTIL THE STRUCTURAL SYSTEM HAS BEEN COMPLETED. NOTE: 9

ACHIEVED EARLIER BASED ON FIELD CURED CYLINDERS. NOTE: 10 THE CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS. CONTRACTOR SHALL HAVE ALL TEMPORARY

CONTRACTOR'S WORK, SIGNED AND SEALED BY A PROFESSIONAL

FORMWORK, SHEETING, SHORING, UNDERPINNING, ETC., AS PART OF THE

THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS

DESIGN LIVE LOADS FOR 28 DAYS, UNLESS THE DESIGN STRENGTH IS

LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON

## ENGINEER REGISTERED IN THE LOCAL JURISDICTION. ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 (EXCEPTIONS NOTED SHALL NOT BE PERMITTED) AND ALL LOCAL ORDINANCES. INSPECTIONS REQUIRED SHALL BE PER THE STATEMENT OF SPECIAL INSPECTIONS NOTED SHEET S0.02. THE OWNER SHALL HIRE AN EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALI THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS A PART OF HIS DESIGN SERVICE. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE

TO THE CONTRACT DOCUMENTS, AND SUCH VISITS ARE NOT TO BE

CONSTRUED AS MEETING INSPECTION REQUIREMENTS.

THE GENERAL CONTRACTOR AND ITS SUBCONTRACTORS SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE IN THE CONSTRUCTION OF WORK SIMILAR IN NATURE TO THIS PROJECT.

## NOTE: 13 LEGAL USE OF DOCUMENTS THE PLANS, SPECIFICATIONS AND OTHER INFORMATION CONTAINED IN

THESE DRAWINGS (COLLECTIVELY THE "DRAWINGS") WERE PREPARED BY COLUMBIA ENGINEERING, INC. AND ARE INSTRUMENTS OF PROFESSIONAL SERVICES RENDERED AND DELIVERED PURSUANT TO THE TERMS AND CONDITIONS OF A WRITTEN AGREEMENT (THE "AGREEMENT") ONLY TO THE RECIPIENT NAMED THEREIN. ANY USE OF THE DRAWINGS BY ANY PARTY WHICH IS INCONSISTENT WITH THE TERMS AND CONDITIONS OF THE AGREEMENT IS EXPRESSLY PROHIBITED. COLUMBIA ENGINEERING, INC. EXPRESSLY RESERVES ITS COPYRIGHT AND ALL INTELLECTUAL PROPERTY AND OTHER RIGHTS IN THE DRAWINGS. NO PORTION OF THE DRAWINGS ARE TO BE REPRODUCED. CHANGED OR OTHERWISE USED IN ANY FORM OR MANNER WHATSOEVER WHICH IS INCONSISTENT WITH EITHER THE AGREEMENT OR THE PURPOSES FOR WHICH THEY WERE ORIGINALLY PREPARED, NOR ARE THEY TO BE DEEMED ASSIGNED TO ANY PERSON OR ENTITY WITHOUT OBTAINING THE EXPRESS PRIOR WRITTEN PERMISSION AND CONSENT OF COLUMBIA ENGINEERING, INC. THE RECIPIENT OF THE DRAWINGS AGREES TO INDEMNIFY AND HOLD HARMLESS COLUMBIA ENGINEERING, INC., ITS EMPLOYEES, OFFICERS, DIRECTORS AND AGENTS. FROM AND AGAINST ANY AND ALL DAMAGES WHICH ARISE OUT OF OR IN CONNECTION WITH ANY VIOLATION OF THE FOREGOING.

## **DESIGN CODES:**

INTERNATIONAL BUILDING CODE: IBC 2018 WITH LOCAL AMMENDMENTS

INTERNATIONAL EXISTING BUILDING CODE: IEBC 2018

BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE: ACI 318-14

BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES:

TMS 402-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS:

AISC 14TH EDITION 360-16

**DESIGN LOADS:** 

## IBC RISK CATEGORY III FLOOR LIVE LOADS:

SLAB ON GRADE - 100 PSF CLASSROOMS - 40 PSF CORRIDORS ABOVE FIRST FLOOR - 80 PSF TOILET ROOMS - 60 PSF STORAGE ROOMS - 125 PSF STAIRS - 100 PSF KITCHEN/CAFETERIA - 100 PSF

ELECTRICAL/MECHANICAL ROOMS - 150 PSF (OR ACTUAL EQUIPMENT

## ROOF LOADS:

WEIGHT)

MEDIA CENTER - 150 PSF

LIVE LOAD = 30 PSF PHOTOVOLTAIC PANEL ALLOWANCE = 20 PSF (AT AREA A, B, AND C NEW HIGH ROOF ONLY) GROUND SNOW LOAD, pg = 25 PSF FLAT ROOF SNOW LOAD, pf = 20 PSF SNOW EXPOSURE FACTOR, Ce = 1.0

## NEW STRUCTURAL SKYLIGHT SYSTEM LIVE LOAD = 40 PSF

SEISMIC IMPORTANCE FACTOR, le = 1.25

SNOW LOAD IMPORTANCE FACTOR, Is = 1.1

## SNOW LOAD = 30 PSF MINIMUM SEISMIC DESIGN DATA: SOIL SITE CLASS C SEISMIC DESIGN CATEGORY A

THERMAL FACTOR, Ct = 1.0

MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS Ss = 0.136S1 = 0.043

DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:

Sds = 0.117Sd1 = 0.043BASIC SEISMIC FORCE RESISTING SYSTEM: ORDINARY PLAIN MASONRY SHEAR WALLS AND

INTERMEDIATE REINFORCED MASONRY SHEAR WALLS RESPONSE MODIFICATION COEFFICIENT, R = 1.5 AND 3.5 SEISMIC RESPONSE COEFFICIENT, Cs = 0.0975

## ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE WIND LOADS: **DESIGN WIND SPEED:**

200 FT^2

500 FT^2

DESIGN BASE SHEAR = 216K

Vult = 120 MPH (3 SECOND GUST) Vasd = 93 MPH (3 SECOND GUST) WIND EXPOSURE B

INTERNAL PRESSURE COEFFICIENT, GCpi = +/-0.18

GREATER THAN 10 FT<sup>2</sup> BASED ON ASCE 7 COMPONENTS & CLADDING: ULTIMATE WIND PRESSURE WIND AREA | ZONE 1 | ZONE 2 | ZONE 3 | ZONE 4 | ZONE 5 -27.1 PSF | -45.4 PSF | -68.4 PSF | -26.8 PSF | -33.0 PSF 16.0 PSF | 16.0 PSF | 16.0 PSF | 24.8 PSF | 24.8 PSF -25.5 PSF | -34.3 PSF | -68.4 PSF | -24.3 PSF | -28.0 PSF 16.0 PSF | 16.0 PSF | 16.0 PSF | 22.3 PSF | 22.3 PSF

-24.8 PSF | -29.4 PSF | -68.4 PSF | -22.1 PSF | -23.5 PSF

16.0 PSF | 16.0 PSF | 20.0 PSF | 20.0 PSF

-24.8 PSF | -29.4 PSF | -68.4 PSF | -20.6 PSF | -20.6 PSF

16.0 PSF | 16.0 PSF | 16.0 PSF | 18.6 PSF | 18.6 PSF

PRESSURES CAN BE REDUCED FOR COMPONENTS WITH TRIBUTARY AREAS

## **ARCHITECT**

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

## CIVIL

FISHER, COLLINS, CARTER 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042 410-461-2855

## **KITCHEN** NYIKOS ASSOCIATES, INC.

**GAITHERSBURG, MD 20879** 240-683-9530

## COLUMBIA ENGINEERING, INC.

COLUMBIA, MD 21045 410-992-9970

## CMTA, INC.

502-326-3085 **ACOUSTICAL DESIGN** 

> **TOWSON, MD 21204** 410-821-5930 (P) LEED

DOO CONSULTING

531 PICCADILLY ROAD

**TOWSON, MD 21204** 

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE

## 443-463-5859 CONSTRUCTION MANAGER



Professional Certification. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.:

> 14479, Expiration Date: 6/22/2021 PROFESSIONAL SEAL:

## PRINTS ISSUED **DESCRIPTION:** 02/25/2020

**HAMMOND HIGH** 

SCHOOL

RENOVATION AND

**ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

GENERAL NOTES

PROJECT NO:

SHEET TITLE:

02/25/2020 SCALE: **AS NOTED** SHEET NO:

## 2/21/2020 10:17:16 AM CEI #18134

# 18219-A FLOWER HILL WAY

## STRUCTURAL

6210 OLD DOBBIN LANE, SUITE 150

## MECH./ELECTRICAL/PLUMBING

**10411 MEETING STREET** PROSPECT, KY 40059

## **ACOUSTIC & MEDIA SYSTEMS COLLABORATIVE, LTD** 606 BOSLEY AVE

## **INSPECTION TABLES**

#### STATEMENT OF SPECIAL INSPECTIONS:

INSPECTION OR TESTING SHALL BE PROVIDED FOR ALL MATERIAL, COMPONENTS AND WORK LISTED IN THE TABLES BELOW.

#### NOTE 2: DEFINITIONS:

a. CONTINUOUS INSPECTION: INDICATES SPECIAL INSPECTOR SHALL BE PRESENT DURING

CONTRACTOR PERFORMANCE OF THE TASK.

VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.

- b. PERIODIC INSPECTION: INDICATES SPECIAL INSPECTOR SHALL PROVIDE INSPECTION OR TESTING OF ALL WORK INDICATED, BUT THAT SPECIAL INSPECTOR IS NOT REQUIRED TO BE PRESENT DURING CONTRACTOR PERFORMANCE OF THE TASK. PERIODIC INSPECTION DOES NOT MEAN RANDOM
- c. RANDOM INSPECTION: INDICATES SPECIAL INSPECTOR SHALL PROVIDE INSPECTION OR TESTING, AS NEEDED, TO INSURE PROPER PERFORMANCE OF THE TASK BY THE CONTRACTOR.

, and the second	
SOILS	
INSPECTION TASK	TYPE OF INSPECTIO
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC
<ol> <li>VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.</li> </ol>	PERIODIC
<ol> <li>PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.</li> </ol>	PERIODIC
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND	PERIODIC

CONCRETE		
INSPECTION TASK	TYPE OF INSPECTION	
INSPECTION OF REINFORCING STEEL FOR SIZE, QUANTITY AND PLACEMENT.	PERIODIC	
2. INSPECTION OF ANCHORS CAST IN CONCRETE.	PERIODIC	
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS (FOLLOW MANUFACTURERS WRITTEN INSTALLATION REQUIREMENTS).		
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS	A. CONTINUOUS	
B. ALL OTHER CONDITIONS	B. PERIODIC	
4. VERIFY USE OF REQUIRED DESIGN MIX.	PERIODIC	
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. FOR LIGHTWEIGHT CONCRETE, PERFORM UNIT WEIGHT TESTS.	CONTINUOUS	
6. INSPECTION OF CONCRETE PLACEMENT.	CONTINUOUS	
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	
8. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED AND FOR CONFORMANCE WITH FORMWORK DESIGN.	PERIODIC	
10. MEASURE F (F) AND F (L) TOLERANCE FOR FLOORS.	PERIODIC	

MASONRY		
INSPECTION TASK	TYPE OF INSPECTION	
1. VERIFICATION OF fm PRIOR TO CONSTRUCTION	PERIODIC	
2. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	PERIODIC	
3. AS MASONRY CONSTRUCTION BEGINS, VERIFY THE FOLLOWING ARE IN COMPLIANCE:		
a. PROPORTIONS OF SITE-PREPARED MORTAR	PERIODIC	
b. CONSTRUCTION OF MORTAR JOINTS	PERIODIC	
c. LOCATION OF REINFORCEMENT AND CONNECTORS	PERIODIC	
4. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
a. GROUT SPACE	PERIODIC	
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	PERIODIC	
c. PLACEMENT OF REINFORCEMENT AND CONNECTORS	PERIODIC	
d. PROPORTIONS OF SITE-PREPARED GROUT	PERIODIC	
e. CONSTRUCTION OF MORTAR JOINTS	PERIODIC	
5. VERIFY DURING CONSTRUCTION:		
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	PERIODIC	
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	PERIODIC	
c. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	PERIODIC	
d. PLACEMENT OF GROUT	CONTINUOUS	
6. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	PERIODIC	
7. INSTALLATION OF POST INSTALLED ANCHORS.	CONTINUOUS	

STEEL JOISTS	
INSPECTION TASK	TYPE OF INSPECTION
1. SETTING OF BEARING PLATES	PERIODIC
2. ALIGNMENT OF JOISTS	PERIODIC
3. INSTALLATION OF BRIDGING	PERIODIC
4. SIZE, LENGTH AND LOCATION OF WELDS	PERIODIC
5. ULTRASONICALLY TEST FULL PENETRATION WELDS	PERIODIC
6. HIGH-STRENGTH BOLTS INSTALLED	PERIODIC

STEEL DECK		
INSPECTION TASK	TYPE OF INSPECTION	
MATERIAL VERIFICATION:     a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS     SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.     b. MANUFACTURER'S CERTIFIED TEST REPORTS	PERIODIC	
2. VERIFY WELDING CONSUMABLES AND FASTENERS TO BE USED.	PERIODIC	
3. VERIFY DECK ALIGNMENT AND SUPPORT.	PERIODIC	
4. VERIFY FLOOR AND ROOF DECK ATTACHMENT:  a. WELDS TO SUPPORTING MEMBERS  b. SIDE LAP SCREWS AND WELDS	PERIODIC	
5. VERIFY TOUCH-UP GALVANIZATION APPLIED TO WELDS.	PERIODIC	

COLD-FORMED STEEL	
INSPECTION TASK	TYPE OF INSPECTION
1. VERIFY SIZE AND GAGE OF FRAMING.	PERIODIC
2. VERIFY PLUMBNESS, ALIGNMENT AND PROPER BEARING OF ELEMENTS	PERIODIC
3. VERIFY COLD-FORMED FRAMING IS PROPERLY FASTENED TOGETHER	PERIODIC
4. VERIFY CONNECTIONS TO STRUCTURAL FRAME	PERIODIC
5. VERIFY TOUCH-UP GALVANIZATION IS APPLIED TO WELDS	PERIODIC

INSPECTION TASK	TYPE OF I	TYPE OF INSPECTION	
	QC	SI	
1. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	PERIODIC	PERIODIC	
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	PERIODIC	PERIODIC	
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	RANDOM	RANDOM	
4. WELDER IDENTIFICATION SYSTEM	RANDOM	RANDOM	
<ul> <li>5. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)</li> <li>• JOINT PREPARATION</li> <li>• DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL)</li> <li>• CLEANLINESS (CONDITION OF STEEL SURFACES)</li> <li>• TACKING (TACK WELD QUALITY AND LOCATION)</li> <li>• BACKING TYPE AND FIT (IF APPLICABLE)</li> </ul>	RANDOM	PERIODIC	
6. CONFIGURATION AND FINISH OF ACCESS HOLES	RANDOM	PERIODIC	
<ul> <li>7. FIT-UP OF FILLET WELDS</li> <li>DIMENSIONS (ALIGNMENT, GAPS AT ROOT)</li> <li>CLEANLINESS (CONDITION OF STEEL SURFACES)</li> <li>TACKING (TACK WELD QUALITY AND LOCATION)</li> </ul>	RANDOM	RANDOM	
8. CHECK WELDING EQUIPMENT	RANDOM	NONE	

STEEL - DURING WELDING				
INSDECTION TASK	INSPECTION TASK TYPE OF IN		TYPE OF INSPECTION	NSPECTION
INSPECTION TASK	QC	SI		
1. USE OF QUALIFIED WELDERS	RANDOM	RANDOM		
<ul> <li>2. CONTROL AND HANDLING OF WELDING CONSUMABLES</li> <li>PACKAGING</li> <li>EXPOSURE CONTROL</li> </ul>	RANDOM	RANDOM		
3. NO WELDING OVER CRACKED TACK WELDS	RANDOM	RANDOM		
4. ENVIRONMENTAL CONDITIONS  • WIND SPEED WITHIN LIMITS  • PRECIPITATION AND TEMPERATURE	RANDOM	RANDOM		
<ul> <li>5. WPS FOLLOWED FOR GROOVE WELDS AND MULTI-PASS FILLET WELDS</li> <li>SETTINGS ON WELDING EQUIPMENT</li> <li>TRAVEL SPEED</li> <li>SELECTED WELDING MATERIALS</li> <li>SHIELDING GAS TYPE/FLOW RATE</li> <li>PREHEAT APPLIED</li> <li>INTERPASS TEMPERATURE MAINTAINED (MINIMUM / MAXIMUM)</li> <li>PROPER POSITION (F, V, H, OH)</li> </ul>	RANDOM	CONTINUOUS		
6. WPS FOLLOWED FOR SINGLE - PASS FILLET WELDS  • SETTINGS ON WELDING EQUIPMENT  • TRAVEL SPEED  • SELECTED WELDING MATERIALS  • SHIELDING GAS TYPE/FLOW RATE  • PREHEAT APPLIED  • INTERPASS TEMPERATURE MAINTAINED (MINIMUM / MAXIMUM)  • PROPER POSITION (F, V, H, OH)	RANDOM	RANDOM		
7. WELDING TECHNIQUES FOR GROOVE WELDS AND MULTI-PASS FILLET WELDS  • INTERPASS AND FINAL CLEANING  • EACH PASS WITHIN PROFILE LIMITATIONS  • EACH PASS MEETS QUALITY REQUIREMENTS	RANDOM	CONTINUOUS		
8. WELDING TECHNIQUES FOR SINGLE-PASS FILLET WELDS  • INTERPASS AND FINAL CLEANING  • EACH PASS WITHIN PROFILE LIMITATIONS  • EACH PASS MEETS QUALITY REQUIREMENTS	RANDOM	RANDOM		

INSPECTION TASK	TYPE OF INSPECTION	
INSPECTION TASK	QC	SI
1. WELDS CLEANED	PERIODIC	PERIODIC
2. SIZE, LENGTH AND LOCATION OF WELDS	PERIODIC	PERIODIC
<ul> <li>WELDS MEET VISUAL ACCEPTANCE CRITERIA</li> <li>CRACK PROHIBITION</li> <li>WELD / BASE-METAL FUSION</li> <li>CRATER CROSS SECTION</li> <li>WELD PROFILES</li> <li>WELD SIZE</li> <li>UNDERCUT</li> <li>POROSITY</li> </ul>	PERIODIC	PERIODIC
4. ULTRASONICALLY TEST FULL PENETRATION GROOVE WELDS	PERIODIC	PERIODIC
5. ARC STRIKES	PERIODIC	PERIODIC
6. K - AREA (1*)	PERIODIC	PERIODIC
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	PERIODIC	PERIODIC
8. REPAIR ACTIVITIES	PERIODIC	PERIODIC
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	PERIODIC	PERIODIC
NOTES:  QC - DENOTES QUALITY CONTROL PERSONNEL SI - DENOTES SPECIAL INSPECTOR (1*) - DENOTES WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OF PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACK OF THE WELD.		

SI - DENOTES SPECIAL INSPECTOR

INSPECTION TASK	TYPE OF IN	TYPE OF INSPECTION	
INSPECTION TASK	QC	SI	
1. COMPLIANCE OF THE FABRICATED STEEL WITH THE SHOP DRAWINGS	PERIODIC	NONE	
2. SETTING OF ANCHOR BOLTS, BEARING PLATES AND EMBEDDED ITEMS PRIOR TO PLACEMENT OF CONCRETE	RANDOM	PERIODIC	
3. STRUCTURAL MEMBERS FOR PLUMBNESS, ELEVATION AND ALIGNMENT	RANDOM	PERIODIC	
4. COMPLIANCE OF THE ERECTED STEEL FRAME WITH ERECTION DRAWINGS FOR ITEMS SUCH AS BRACES, MEMBER LOCATIONS AND CONNECTION DETAILS	PERIODIC	NONE	
5. COMPLIANCE OF THE ERECTED STEEL FRAME WITH CONTRACT DOCUMENTS FOR ITEMS SUCH AS BRACES, MEMBER LOCATIONS AND CONNECTION DETAILS	NONE	PERIODIC	

STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT		
INCDECTION TACK	TYPE OF IN	SPECTION
INSPECTION TASK	QC	SI
1. PLACEMENT AND INSTALLATION OF STEEL DECK	PERIODIC	PERIODIC
2. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	PERIODIC	PERIODIC
3. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	PERIODIC	PERIODIC
NOTES: QC - DENOTES QUALITY CONTROL PERSONNEL SI - DENOTES SPECIAL INSPECTOR		

INSPECTION TASK	TYPE OF IN	TYPE OF INSPECTIO	
	QC	SI	
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	RANDOM	PERIODIC	
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	RANDOM	RANDOM	
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	RANDOM	RANDOM	
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	RANDOM	RANDOM	
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	RANDOM	RANDOM	
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	CONTINUOUS	RANDOM	
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	RANDOM	RANDOM	

INSPECTION TASK	TYPE OF IN	ISPECTION
INSPECTION TASK	QC	SI
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL     HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	PERIODIC	PERIODIC
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	RANDOM	RANDOM
<ul> <li>3. PRETENSIONED AND SLIP-CRITICAL JOINTS INSTALLED USING ONE OF THE FOLLOWING METHODS:</li> <li>DIRECT-TENSION-INDICATOR WASHER METHOD</li> <li>TWIST-OFF TYPE TENSION CONTROL BOLT METHOD</li> </ul>	PERIODIC	PERIODIC
4. FASTENERS COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	RANDOM	RANDOM
5. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	RANDOM	RANDOM

STEEL - AFTER BOLTING					
INSPECTION TASK	TYPE OF INSPECTION				
INSPECTION TASK	QC	SI			
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	PERIODIC	PERIODIC			
NOTES: QC - DENOTES QUALITY CONTROL PERSONNEL SI - DENOTES SPECIAL INSPECTOR					

MARK	SIZE	BASE PLATE	ANCHOR BOLTS	REMARKS
C1	W10x33	18"x18"x1 1/4"	(4) 3/4" DIAMETER ASTM F1554	18"x15"x1 1/4" THICK BASE PLATE AT COLUMNS 66-TT AND 68-TT
C2	W10x39	18"x18"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554	
C3	W10x45	18"x18"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554	
C4	W10x49	18"x18"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554	
C5	W10x54	18"x18"x1 1/2"	(4) 3/4" DIAMETER ASTM F1554	
C6	W10x60	18"x18"x1 3/4"	(4) 3/4" DIAMETER ASTM F1554	
C7	W10x68	18"x18"x1 3/4"	(4) 3/4" DIAMETER ASTM F1554	
C8	W10x77	18"x18"x1 3/4"	(4) 3/4" DIAMETER ASTM F1554	
C9	W10x88	18"x18"x1 3/4"	(4) 3/4" DIAMETER ASTM F1554	
C10	HSS6x6x3/8	16"x16"x1"	(4) 3/4" DIAMETER HILTI HIT-Z THREADED ROD. SEE B/S4.01	
C10A	HSS6x6x3/8	26"x16"x1 1/2"	(8) 3/4" DIAMETER HILTI HIT-Z THREADED ROD. SEE A/S4.01	
C11	HSS5x5x3/8	14"x14"x1"	(4) 3/4" DIAMETER ASTM F1554	
C12	5" DIA STD PIPE	12"x12"x1"	(4) 3/4" DIAMETER ASTM F1554	

MARK	SIZE	REMARKS
BP1	6"x6"x5/8"	(2) 1/2" DIA. x 4" LONG HEADED STUDS WELDED TO UNDERSIDE OF PLATE
BP2	6"x8"x5/8"	(2) 1/2" DIA. x 4" LONG HEADED STUDS WELDED TO UNDERSIDE OF PLATE
BP3	9 1/2"x6"x5/8"	(2) 1/2" DIA. x 4" LONG HEADED STUDS WELDED TO UNDERSIDE OF PLATE
BP4	6"x10"x3/4"	(2) 3/4" DIA. ANCHOR BOLTS (12" EMBEDMENT) WELDED TO UNDERSIDE OF PLATE

MARK	SIZE	VERTICAL REINFORCEMENT	REMARKS
P18	18"x18"	4-#6	
P20	20"x20"	8-#5	
P22	22"x22"	8-#5	
P24	24"x24"	8-#6	
P26	26"x26"	8-#6	
P28	28"x28"	8-#7	
P40	40"x40"	12-#8	
P4624	46"x24"	10-#8	

40"x40"	12-#8	
46"x24"	10-#8	
RNS:		
JDINAL BARS	8 LONGITUDINAL BARS	12 LONGITUDINAL BARS
	46"x24" RNS:	46"x24" 10-#8  RNS:

MARK	SIZE	THICKNESS	REINFORCEMENT
F40-2	4'-0"x4'-0"	1'-0"	6 #4 EACH WAY BOTTOM WITH HOOKED ENDS
F40-2A	4'-0"x4'-0"	SEE DETAIL D/S4.02	6 #4 EACH WAY BOTTOM WITH HOOKED ENDS
F46-2A	4'-6"x4'-6"	SEE DETAIL D/S4.02	6 #4 EACH WAY BOTTOM WITH HOOKED ENDS
F50-2	5'-0"x5'-0"	1'-0"	7 #4 EACH WAY BOTTOM
F60-2	6'-0"x6'-0"	1'-0"	7 #5 EACH WAY BOTTOM
F60-2A	6'-0"x6'-0"	1'-0"	8 #5 EACH WAY TOP AND BOTTOM
F70-2	7'-0"x7'-0"	1'-0"	8 #6 EACH WAY BOTTOM
F80-2	8'-0"x8'-0"	1'-2"	8 #7 EACH WAY BOTTOM
F90-2	9'-0"x9'-0"	1'-4"	9 #7 EACH WAY BOTTOM
F100-2	10'-0"x10'-0"	1'-4"	10 #8 EACH WAY BOTTOM
F110-2	11'-0"x11'-0"	1'-6"	12 #8 EACH WAY BOTTOM
F120-2	12'-0"x12'-0"	1'-8"	14 #8 EACH WAY BOTTOM
F130-2	13'-0"x13'-0"	1'-10"	15 #8 EACH WAY BOTTOM
F140-2	14'-0"x14'-0"	2'-0"	14 #9 EACH WAY BOTTOM
F150-2	15'-0"x15'-0"	2'-2"	15 #9 EACH WAY BOTTOM
F4060-2	4'-0"x6'-0"	1'-0"	7#5 SHORT TOP AND BOTTOM, 5 #5 LONG TOP AND BOTTOM
F40116-2	4'-0"x11'-6"	1'-0"	12 #8 SHORT BOTTOM, 4 #8 LONG TOP AND BOTTOM
F130110-2	13'-0"x11'-0"	1'-10"	15 #8 SHORT BOTTOM, 12 #8 LONG BOTTOM
F180130-2	18'-0"x13'-0"	2'-6"	22 #9 SHORT TOP AND BOTTOM, 15 #8 LONG TOP AND BOTTOM

SPREAD FOOTING SCHEDULE (3000 PSF SOILS)					
MARK	SIZE	THICKNESS	REINFORCEMENT		
F40-3	4'-0"x4'-0"	1'-0"	6 #4 EACH WAY BOTTOM WITH HOOKED ENDS		
F50-3	5'-0"x5'-0"	1'-0"	7 #4 EACH WAY BOTTOM		
F60-3	6'-0"x6'-0"	1'-0"	7 #6 EACH WAY BOTTOM		
F60-3A	6'-0"x6'-0"	SEE DETAIL A/S4.02	8 #6 EACH WAY TOP AND BOTTOM		
F70-3	7'-0"x7'-0"	1'-2"	7 #7 EACH WAY BOTTOM		
F80-3	8'-0"x8'-0"	1'-4"	8 #8 EACH WAY BOTTOM		
F90-3	9'-0"x9'-0"	1'-6"	9 #8 EACH WAY BOTTOM		
F100-3	10'-0"x10'-0"	1'-8"	12 #8 EACH WAY BOTTOM		
F110-3	11'-0"x11'-0"	2'-0"	12 #8 EACH WAY BOTTOM		
F11080-3	11'-0"x8'-0"	2'-0"	12 #8 SHORT TOP AND BOTTOM, 8 #8 LONG TOP AND BOTTO		

MARK	SIZE	THICKNESS	REINFORCEMENT
TWF	,	SEE DETAIL J/S3.02	
WF20	2'-0" CONTINUOUS	1'-0"	2-#5 CONTINUOUS BOTTOM
WF28	2'-8" CONTINUOUS	1'-0"	3-#5 CONTINUOUS BOTTOM
WF34	3'-4" CONTINUOUS	1'-0"	3-#5 CONTINUOUS BOTTOM
WF40	4'-0" CONTINUOUS	1'-0"	4-#5 CONTINUOUS BOTTOM
WF48	4'-8" CONTINUOUS	1'-0"	5-#5 CONTINUOUS BOTTOM, #5 @ 12" o.c. TRANSVERSE
WF54	5'-4" CONTINUOUS	1'-0"	6-#5 CONTINUOUS BOTTOM, #5 @ 12" o.c. TRANSVERSE

**STAR NOTES LEGEND:** 

1. (1\*) DENOTES 2"x2"x1/4" ANGLE X-BRACE AT MID POINT OR THIRD POINTS OF SPAN AS SHOWN ON PLAN 2. (2\*) DENOTES 5"x3 1/2"x3/8" ANGLE (LLV) BOLTED TO WALL WITH 3/4" DIAMETER HILTI KWIK BOLT 3

ANCHORS AT 16" o.c. (4 3/4" EMBEDMENT) FOR DECK SUPPORT UNLESS NOTED OTHERWISE. 3. (3\*) DENOTES HSS 3 1/2"x3 1/2"x3/16"x6" LONG FOR DECK SUPPORT. SEE DETAIL G/S3.04

(REFER TO M/S3.02). LOCATIONS OF WALLS ARE SHOWN ON ARCHITECTURAL PLANS.

4. (4\*) DENOTES SLAB INFILL. SEE DETAIL J/S3.04

MASONRY PIER SCHEDULE				
MARK	WIDTH	VERTICAL REINFORCEMENT	REMARKS	
MP16	16"	1-#5		
MP24	24"	1-#5		
MP32	32"	2-#5		
MP32A	32"	2-#5 EACH FACE		
MP40	40"	2-#5		

1. MASONRY PIERS SHALL BE GROUTED SOLID FOR FULL HEIGHT.

5. THICKNESS OF PEIRS TO MATCH CMU WALL THICKNESS

2. REINFORCEMENT EXTENDS FULL HEIGHT OF THE PIER. 3. VERTICAL REINFORCEMENT SHALL BE PLACED TO AVOID LINTELS AND BEARING PLATES. 4. NO MASONRY CONTROL JOINTS ARE PERMITTED IN THE MASONRY PIERS.

MARK	SIZE	BEARING PLATE	REMARKS
L1	W8x21 WITH BOTTOM PLATE	6"x6"x1/2"	
L1A	W8x21 WITH HUNG PLATE	6"x6"x1/2"	
L2	W8x24 WITH BOTTOM PLATE	7 1/2"x8"x3/4"	
L3	W8x28 WITH BOTTOM PLATE	7 1/2"x8"x3/4"	
L3A	W8x28 WITH HUNG PLATE	8"x8"x3/4"	
L4	W16x40 WITH BOTTOM PLATE	7 1/2"x8"x3/4"	
L4A	W16x40 WITH HUNG PLATE	7 1/2"x8"x3/4"	
L5A	W16x45 WITH HUNG PLATE	8"x8"x3/4"	
L6	W16x50 WITH BOTTOM PLATE	7 1/2"x8"x3/4"	
L6A	W16x50 WITH HUNG PLATE	8"x8"x3/4"	
L7A	W8x58 WITH HUNG PLATE	8"x8"x3/4"	
L8	W10x22 WITH BOTTOM PLATE	7 1/2"x8"x3/4"	
L9	W8x15 WITH BOTTOM PLATE	5"x5"x1/2"	
L10	W16x26 WITH BOTTOM PLATE	6"x6"x1/2"	
L10A	W16x26 WITH HUNG PLATE	6"x8"x1/2"	

1. REFER TO MASONRY NOTES ON SHEET S0.01 FOR LINTELS NOT REFERENCED ON PLANS.

6"x6"x1/2"

- 2. INSTALL LOOSE ANGLE LINTELS OVER ALL MECHANICAL DUCT OPENINGS THROUGH MASONRY WALLS. REFER TO MASONRY NOTES ON SHEET S0.01 FOR SIZE.
- 3. BEARING PLATE SIZE APPLIES TO EACH END UNLESS NOTED OTHERWISE. 4. REFER TO SHEET S3.01 FOR LINTEL CONFIGURATIONS AND BEAM BEARING DETAILS. 5. FIRST COURSE OF CMU ABOVE STEEL BEAM SHALL BE SOLID.

L11 W16x31 WITH BOTTOM PLATE

- 6. LINTELS WITH HUNG PLATE SHALL HAVE BOTTOM OF BEAM LOCATED 8" ABOVE OPENING
- UNLESS NOTED OTHERWISE. 7. LINTELS WITH CLEAR SPANS GREATER THAN 6'-4" SHALL HAVE 1/2" DIAMETER x 4" LONG
- HEADED STUDS WELDED TO THE TOP FLANGE AT 24"o.c. 8. LINTELS SHALL BE POSITIONED AT THE CENTERLINE OF THE CMU WALL UNLESS NOTED OTHERWISE.

1. ALTERNATE THE 180 DEGREE HOOKED END OF ALL SINGLE-LEG TIES. 2. ALL TIES SHALL BE PLACED WITH 1 1/2" CONCRETE COVER UNLESS NOTED OTHERWISE. Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 14479, Expiration Date: 6/22/2021

PROFESSIONAL SEAL:	

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340 **ROCKVILLE, MD 20850** 301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE

ELLICOTT CITY, MD 21042

410-461-2855

**KITCHEN** 

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CONSTRUCTION MANAGER

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000

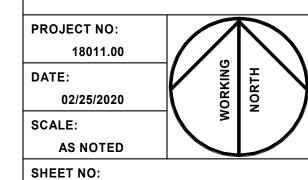
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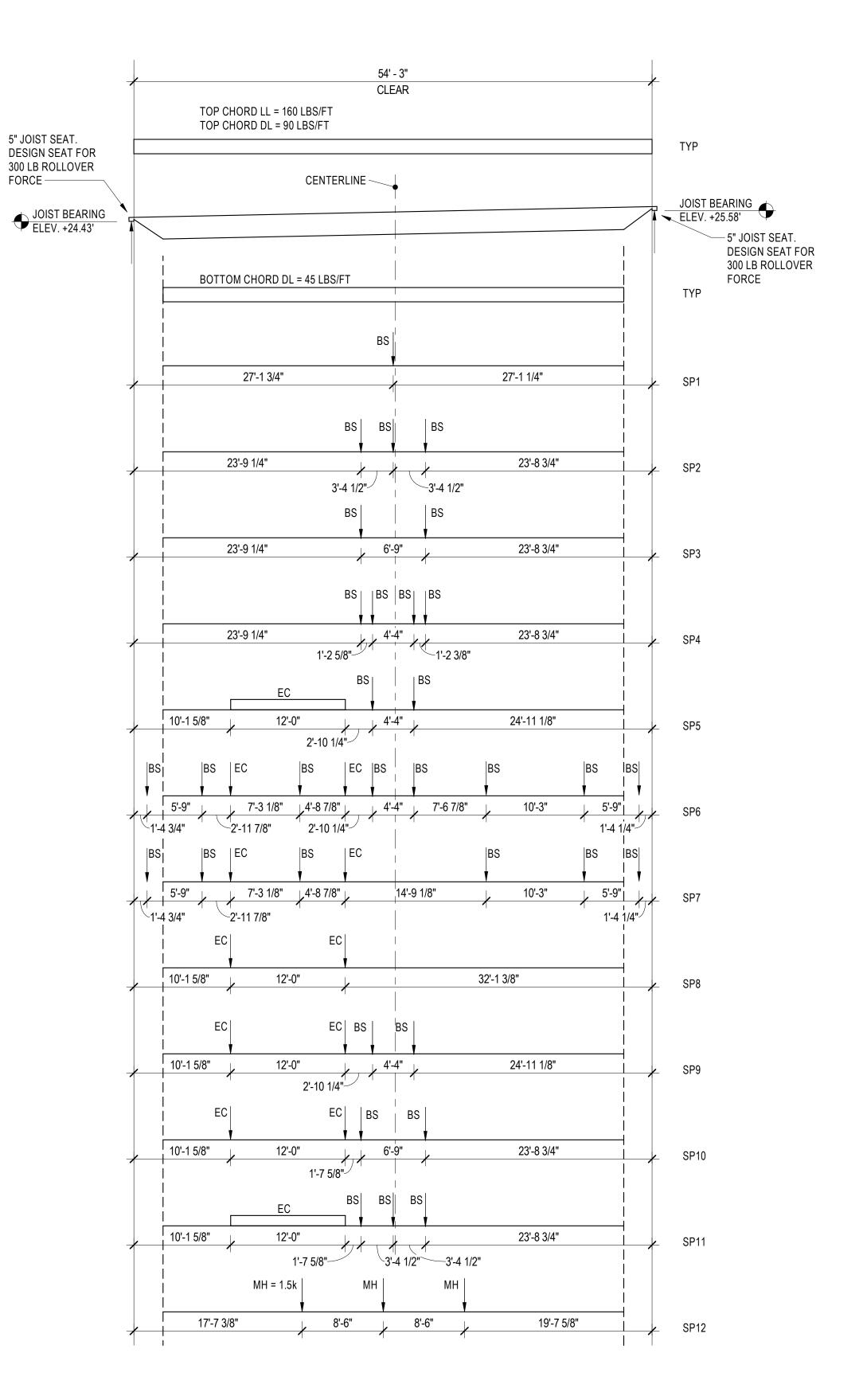
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SHEET TITLE:

**INSPECTION TABLES AND SCHEDULES** 

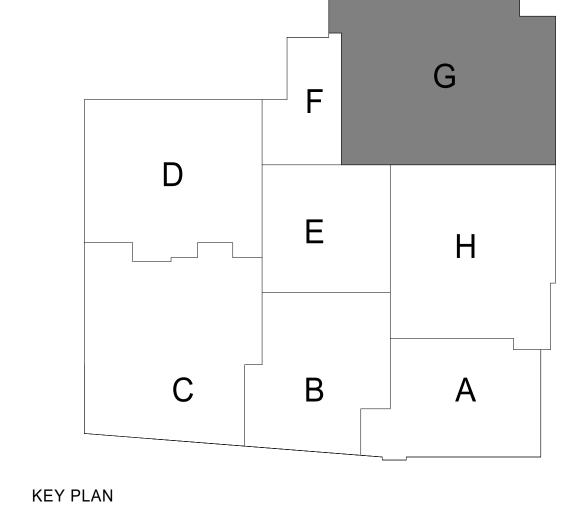


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### 28LHSPX (AUX GYM) LOADING SCHEDULE

- NOTES:
  1. LOADS MARKED "TYP" APPLY TO ALL JOISTS. LOADS DENOTED "SPX" SHALL BE ADDED TO TYPICAL LOADS FOR THOSE JOISTS. 2. "BS", "EC", "MH" DENOTE LOADS CORRESPONDING TO BASKETBALL BACKSTOPS, EQUIPMENT CAGE, AND MAT HOIST. COORDINATE LOADS WITH MANUFACTURERS.
- 3. MAXIMUM LIVE LOAD DEFLECTION = L/360.
- 4. DEAD LOADS SHOWN DO NOT INCLUDE WEIGHT OF JOIST AND ITS ACCESSORIES. 5. REINFORCE BOTTOM CHORD AS NEEDED TO SUPPORT BOTTOM CHORD LOAD.
- 6. COORDINATE LOCATIONS OF ALL WEBS WITH MECHANICAL DUCTS.
- 7. JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 10 PSF.
- 8. SPECIAL JOISTS ARE A DELEGATED DESIGN. PREPARATION OF CALCULATIONS AND SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR REVIEW.



SCALE : N.T.S.

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL

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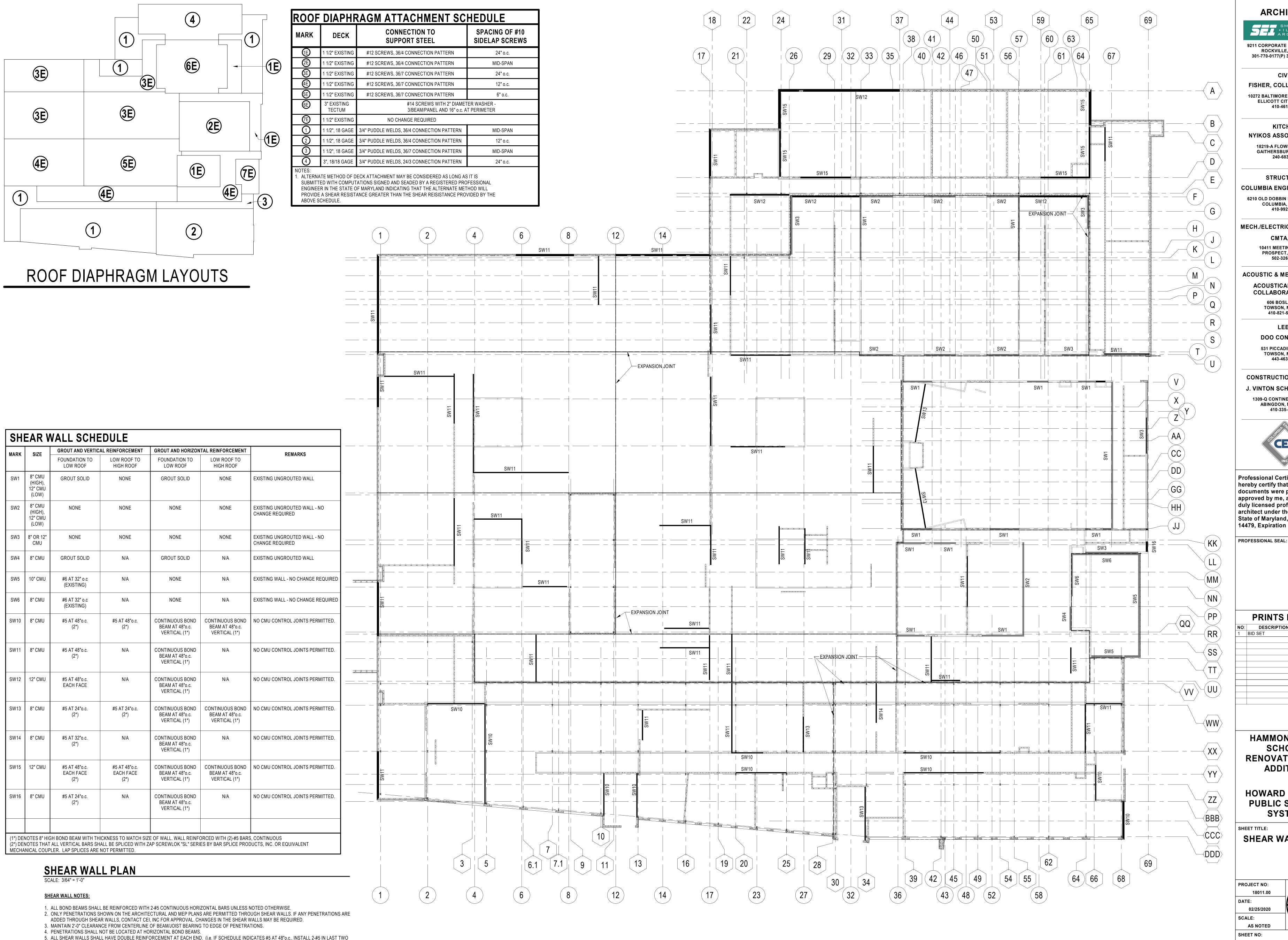
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**HOWARD COUNTY PUBLIC SCHOOL** 

**SPECIAL JOIST** LOADING DIAGRAMS

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CELLS AT EACH END).

6. ADDITIONAL REINFORCEMENT MAY BE REQUIRED. SEE WALL SECTIONS.

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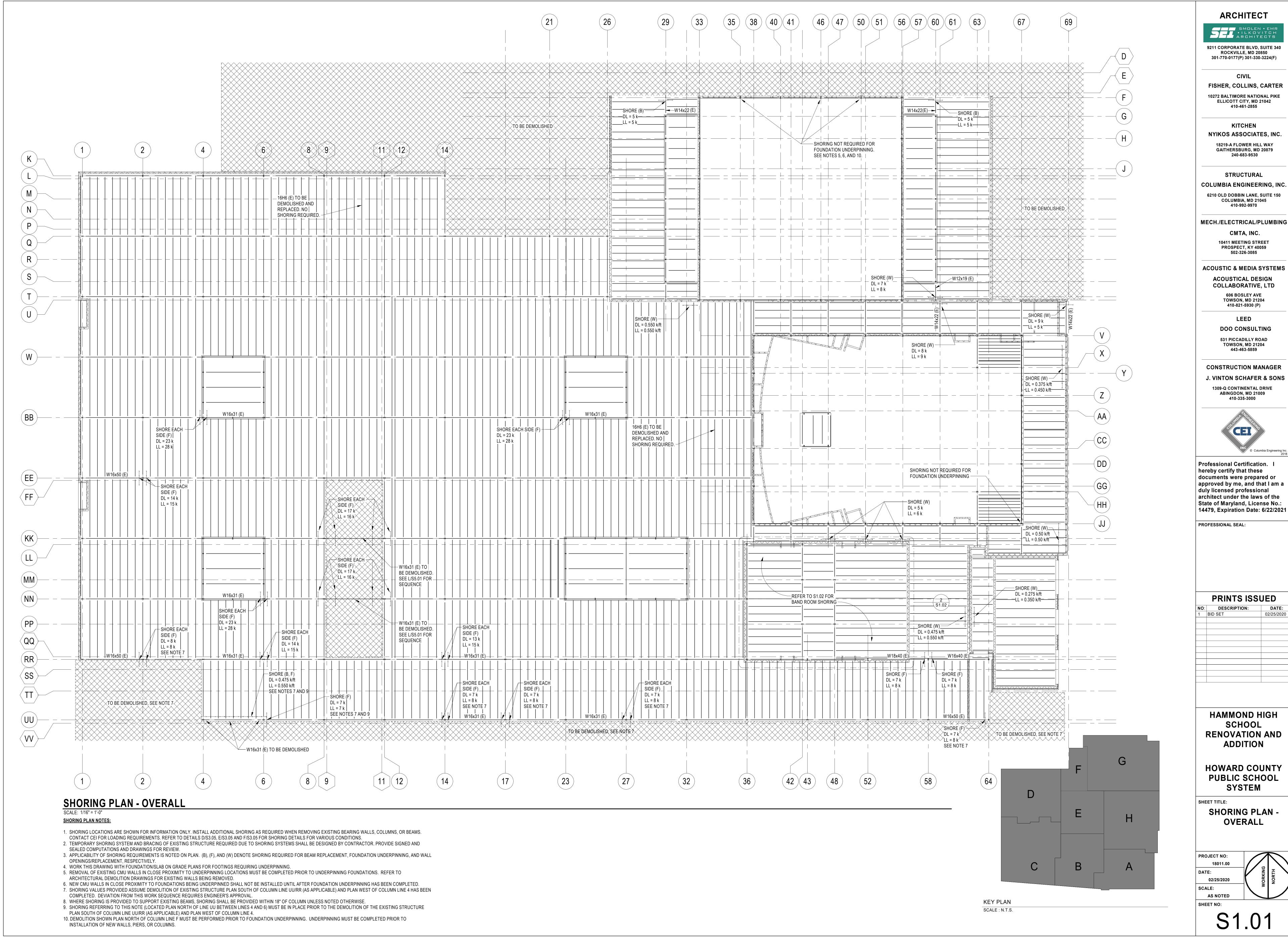
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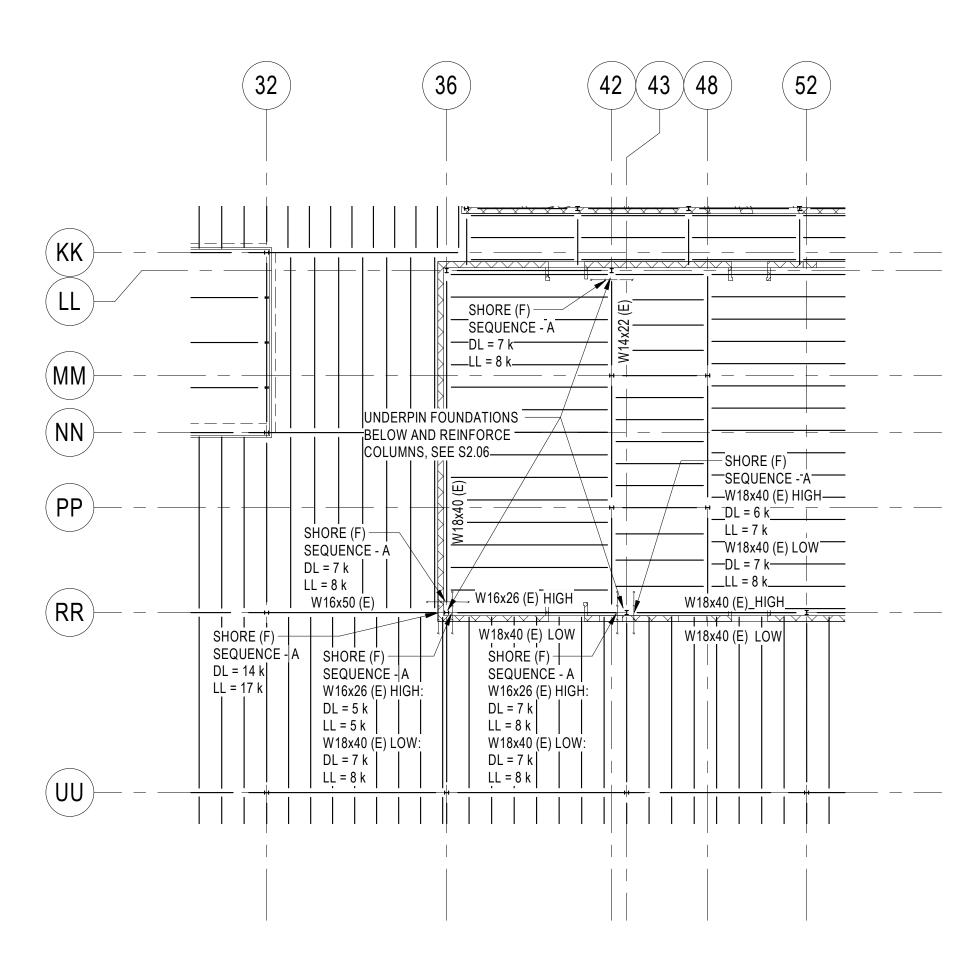
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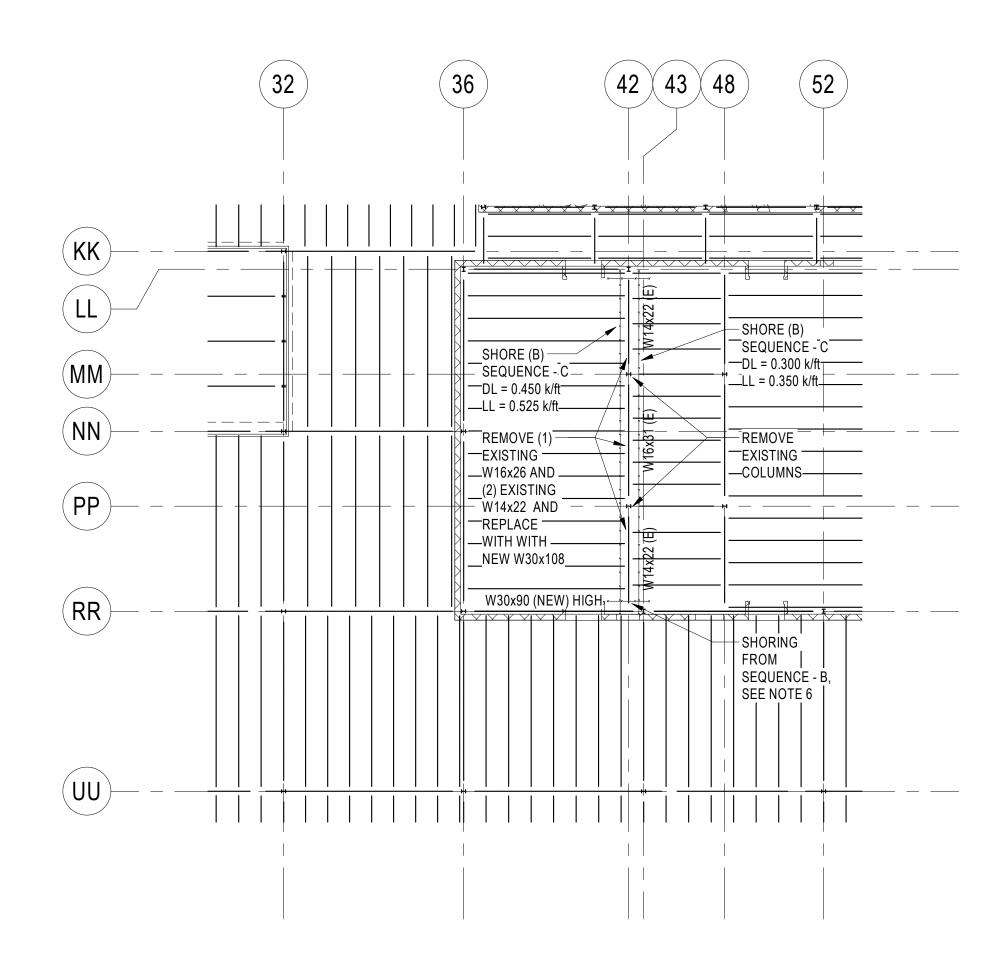
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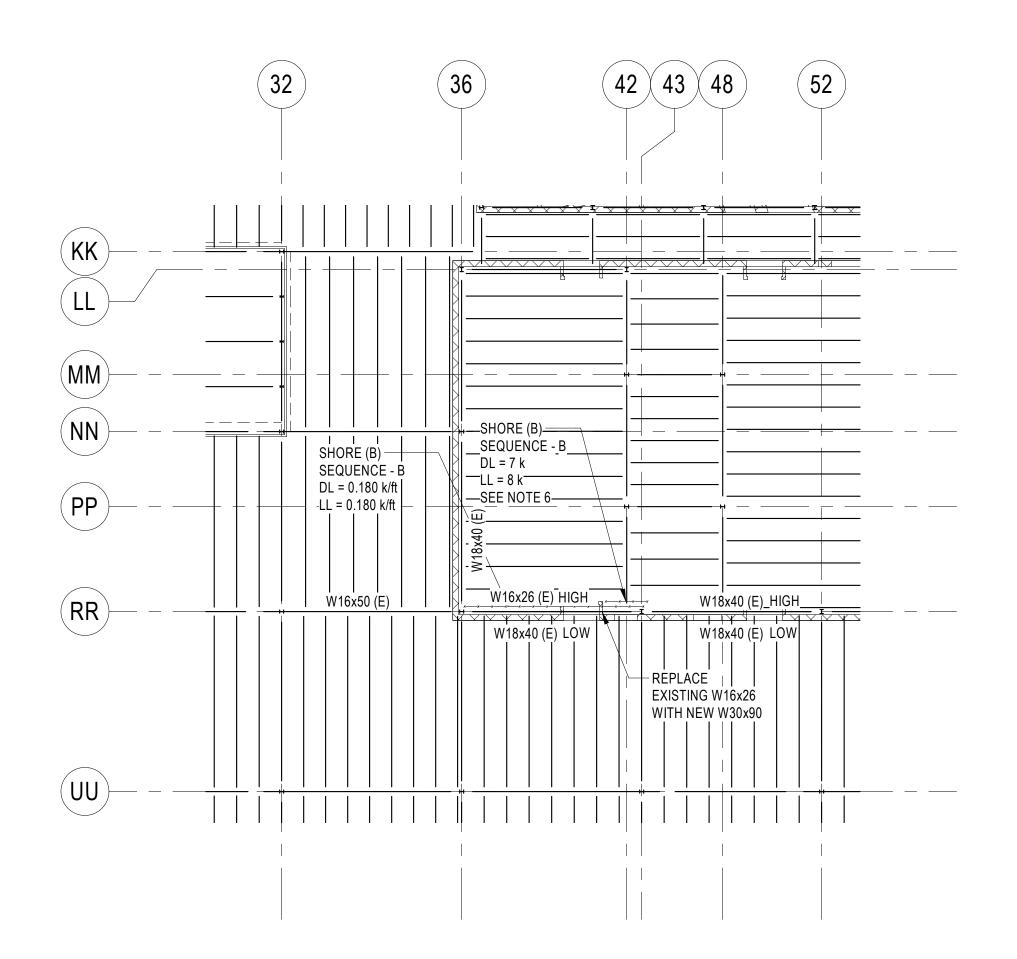
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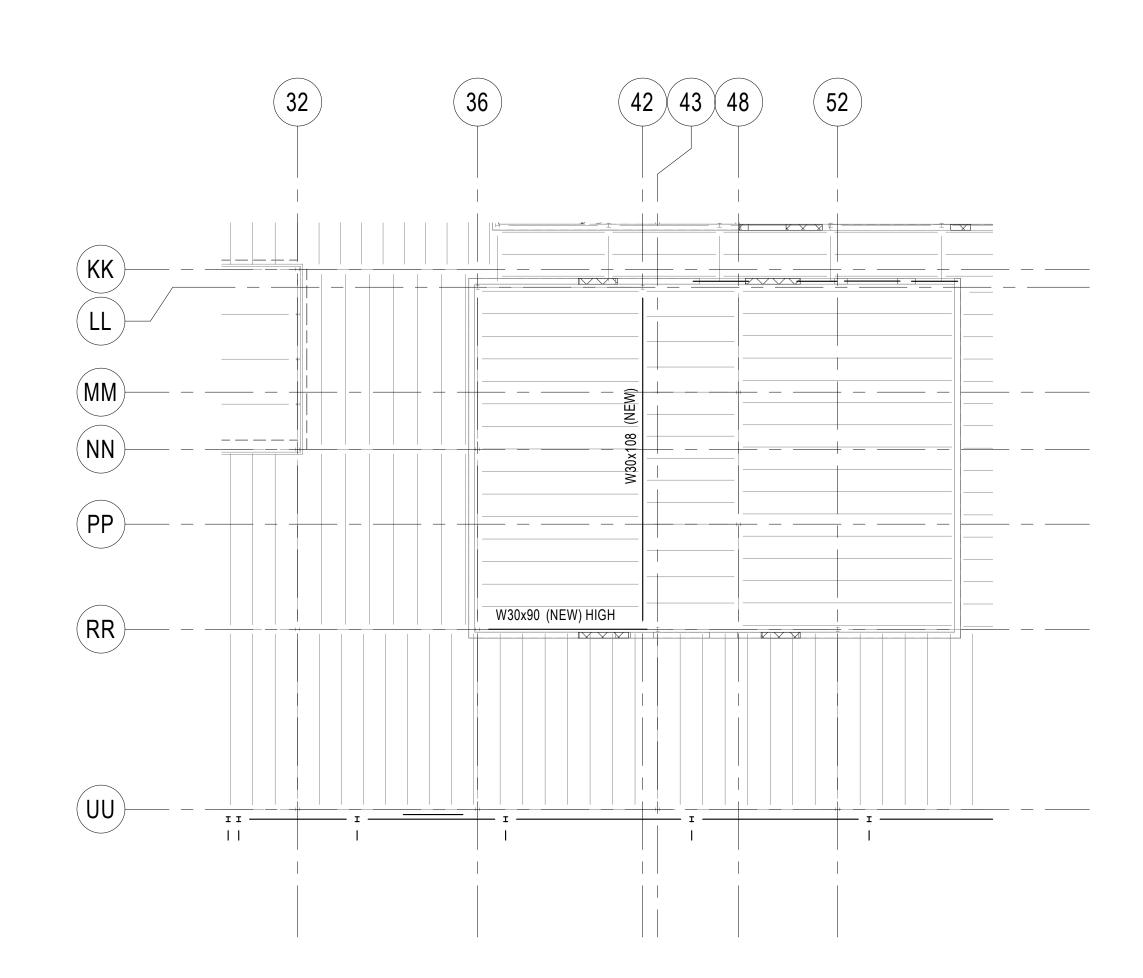
## SHORING PLAN - BAND ROOM SEQUENCE A (EXISTING SHOWN)



SHORING PLAN - BAND ROOM SEQUENCE C (EXISTING SHOWN EXCEPT AS NOTED)



## SHORING PLAN - BAND ROOM SEQUENCE B (EXISTING SHOWN)



SHORING PLAN - BAND ROOM FINAL CONDITION

#### **BAND ROOM SHORING PLAN NOTES:**

- 1. APPLICABILITY OF SHORING REQUIREMENTS IS NOTED ON PLAN. (B) DENOTES SHORING REQUIRED FOR BEAM REPLACEMENT. (F) DENOTES SHORING REQUIRED FOR FOUNDATION UNDERPINNING.
- 2. WORK THIS DRAWING WITH FOUNDATION/SLAB ON GRADE AND LOW ROOF FRAMING PLANS.
- COMPLETED PRIOR TO UNDERPINNING FOUNDATIONS. REFER TO ARCHITECTURAL DEMOLITION
- DRAWINGS FOR EXISTING WALLS TO BE REMOVED. 4. NEW CMU WALLS IN CLOSE PROXIMITY TO FOUNDATIONS BEING UNDERPINNED MAY NOT BE INSTALLED
- UNTIL AFTER FOUNDATION UNDERPINNING HAS BEEN COMPLETED.
- 5. THE ASSUMED WORK SEQUENCE IS REFLECTED ON THE PLANS AND NOTED BELOW. DEVIATION FROM
- A. UNDERPIN FOUNDATIONS AND REINFORCE COLUMNS AT LOCATIONS SHOWN (3 LOCATIONS).
- B. REMOVE EXISTING W16x26 (HIGH) AND REPLACE WITH NEW W30X90. C. REMOVE EXISTING W16X31 AND W14x22 BEAMS (3 TOTAL) AND REPLACE WITH (1) NEW W30x108.
- 6. SHORING FROM SEQUENCE B REFERRING TO THIS NOTE MUST REMAIN IN PLACE UNTIL SHORING

- 3. REMOVAL OF EXISTING CMU WALLS IN CLOSE PROXIMITY TO UNDERPINNING LOCATIONS MUST BE

- THE SEQUENCE SHOWN REQUIRES ENGINEER'S APPROVAL.
- SHOWN IN SEQUENCE C IS INSTALLED. ONCE SHORING SHOWN IN SEQUENCE C IS IN PLACE, EXISTING W14x22 AND ASSOCIATED SHORING MAY BE REMOVED.

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301-770-0177(P) 301-330-3224(F)

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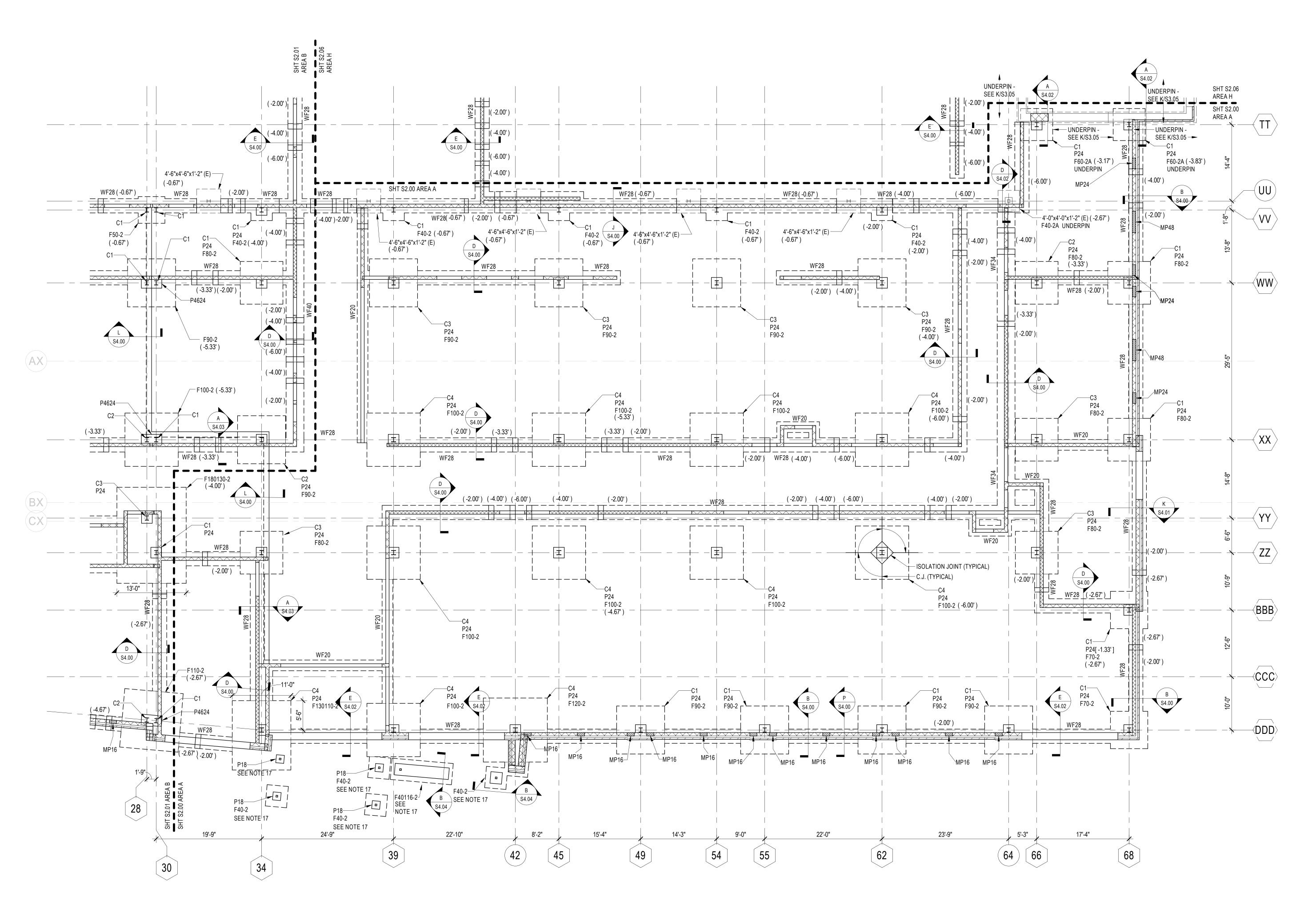
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KEY PLAN SCALE : N.T.S. **SHORING PLAN -BAND ROOM** 

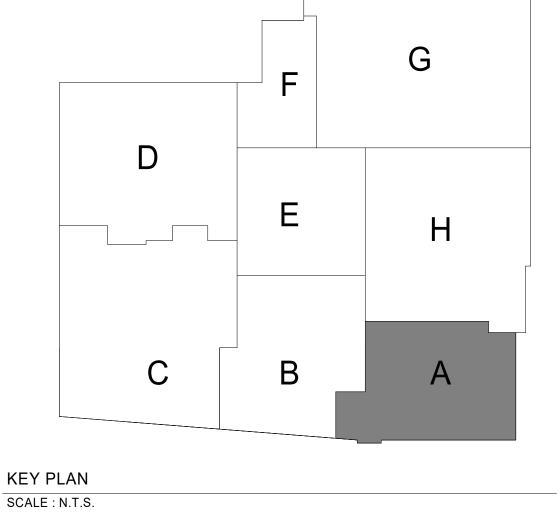
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#### FOUNDATION AND SLAB ON GRADE PLAN - AREA A SCALE: 1/8" = 1'-0"

### **FOUNDATION AND SLAB ON GRADE NOTES:**

- FOOTING WITHIN EXISTING BUILDING ELEVATIONS SHALL BE 8" BELOW DATUM ELEVATION UNLESS NOTED OTHERWISE THUS (....) ON PLAN. ELEVATIONS ARE FOR BID PURPOSES ONLY AND MAY HAVE TO BE FIELD ADJUSTED. LOWER ALL FOOTINGS AS REQUIRED BELOW ALL NEW AND EXISTING UTILITY LINES AND INSTALL SLEEVES THROUGH MASONRY WALLS. REFER TO PLUMBING DRAWINGS FOR DEPTHS OF PLUMBING INVERTS. NO NEW UTILITIES ARE TO BE PLACED BELOW EXISTING SPREAD FOOTINGS. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE MINIMUM 2'-6" BELOW GRADE.
- 8. C.J. DENOTES CONTROL/CONSTRUCTION JOINT. SEE TYPICAL CONSTRUCTION JOINT IN SLAB ON GRADE DETAIL AND GENERAL NOTES. 9. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF EXPANSION JOINTS AT CMU WALLS.
- 10. PROVIDE 1-#4x3'-0" LONG AT MID-DEPTH OF SLAB ON GRADE AT ALL RE-ENTRANT CORNERS AND AT ALL CORNERS OF COLUMN ISOLATION JOINTS THAT DO NOT HAVE A CONTROL OR CONSTRUCTION JOINT TERMINATING.
- 11. COORDINATE DEPTH OF ELEVATOR PIT WITH ELEVATOR MANUFACTURER. FOOTING ELEVATION SHOWN ON PLAN IS FOR BID PURPOSES ONLY AND MAY HAVE TO BE FIELD ADJUSTED.
- 12. PROVIDE THICKENED SLAB UNDER ALL INTERIOR NON-LOAD BEARING 8" AND 6" CMU PARTITION WALLS PER M/S3.02 UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS. COORDINATE LOCATIONS OF WALLS WITH ARCHITECTURAL PLANS.
- 13. SEE ARCHITECTURAL AND KITCHEN DRAWINGS FOR LOCATIONS OF ANY DEPRESSED SLAB AREAS. SEE DETAIL J/S3.02.
- 14. EXISTING FRAMING SHOWN IS BASED ON EXISTING STRUCTURAL DRAWINGS AND MAY DIFFER FROM WHAT IS FOUND DURING CONSTRUCTION. IF EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT THAN WHAT IS SHOWN HERE, CONTRACTOR IS TO REPORT TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO COMMENCING WORK. 15. REFER TO DETAILS N/S4.00 AND M/S4.00 FOR SITE WALLS AND H/S4.02 FOR SITE SIGN. WALL REINFORCING SHALL CONFORM TO GENERAL NOTES UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR LOCATIONS OF SITE WALLS.
- 16. INFILL/PATCH EXISTING CONCRETE SLABS WHERE FLOORING WAS REMOVED (UP TO 2.5" DEEP) WITH SIKA LEVEL-225 OR EQUIVALENT. INFILL CONCRETE AREAS UP TO 4" DEEP WITH SIKACRETE-211 OR EQUIVALENT AND PLACE 6"x6" W2.1xW2.1 W.W.F AT MID DEPTH. FOLLOW ALL MANUFACTURER'S SPECIFICATIONS. COORDINATE LOCATIONS WITH ARCHITECTURAL DRAWINGS. 17. EXTERIOR CANOPIES TO BE PROVIDED BY MANUFACTURER. COORDINATE LOCATION WITH ARCHITECTURAL AND MANUFACTURER'S DRAWINGS. FOOTING AND PIER SIZES SHOWN ARE MINIMUM SIZES AND MAY NEED TO BE INCREASED AFTER CANOPY DESIGN IS COMPLETE.
- 18. REFER TO SHEET S1.01 AND S1.02 FOR SHORING PLANS. 19. FOUNDATION UNDERPINNING TO BE ADDED PRIOR TO NEW WALLS AND / OR COLUMN INSTALLATION. REFER TO FOUNDATION SECTIONS AND SHORING PLANS FOR PROCEDURES.



**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

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SCHOOL

**RENOVATION AND** 

**ADDITION** 

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**PROPOSED** 

**FOUNDATION AND** 

**SLAB ON GRADE** 

PLAN - AREA A

SHEET TITLE:

PROJECT NO:

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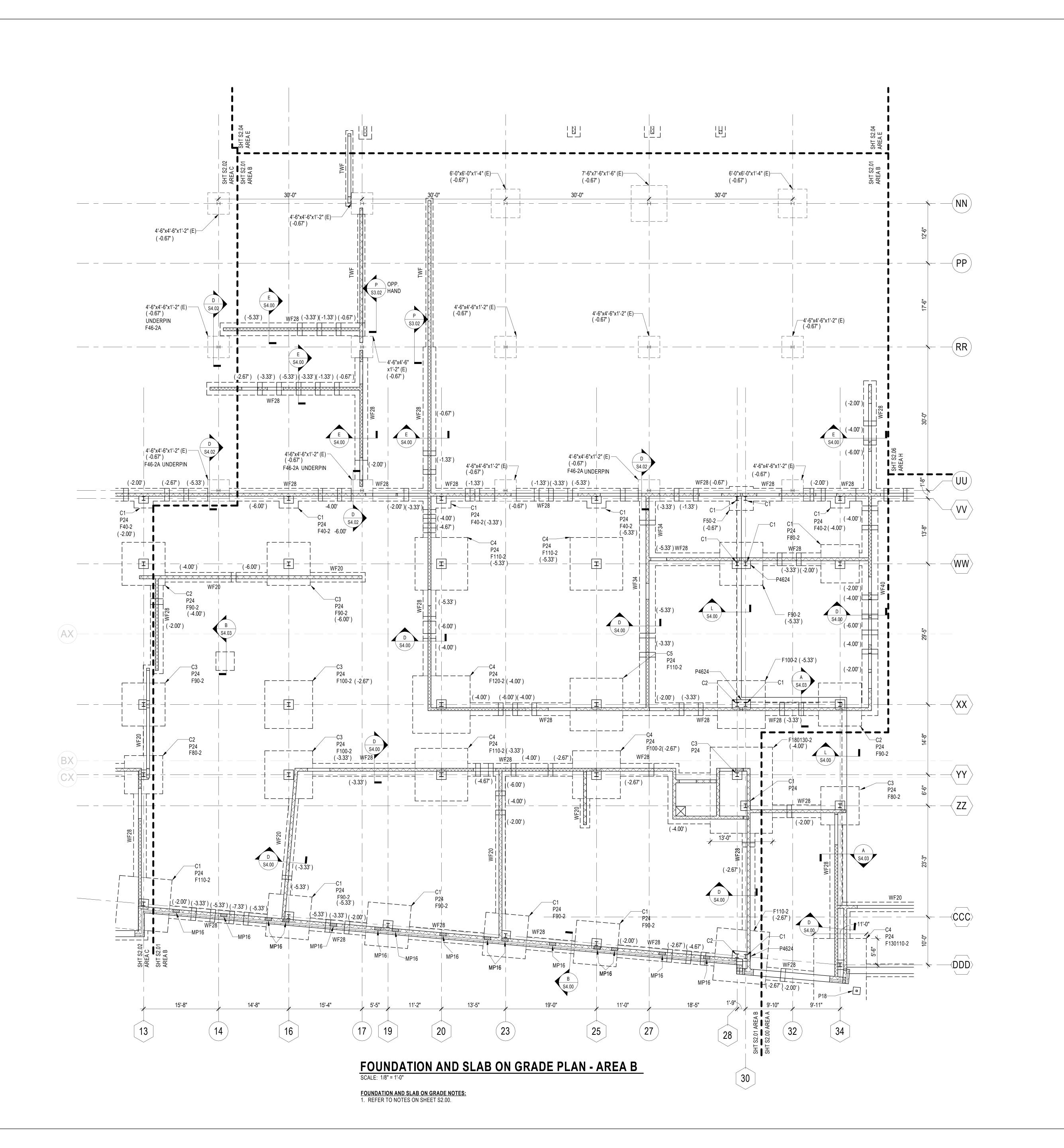
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**KEY PLAN** 

SCALE : N.T.S.

PROPOSED FOUNDATION AND SLAB ON GRADE

PLAN - AREA B

PROJECT NO:

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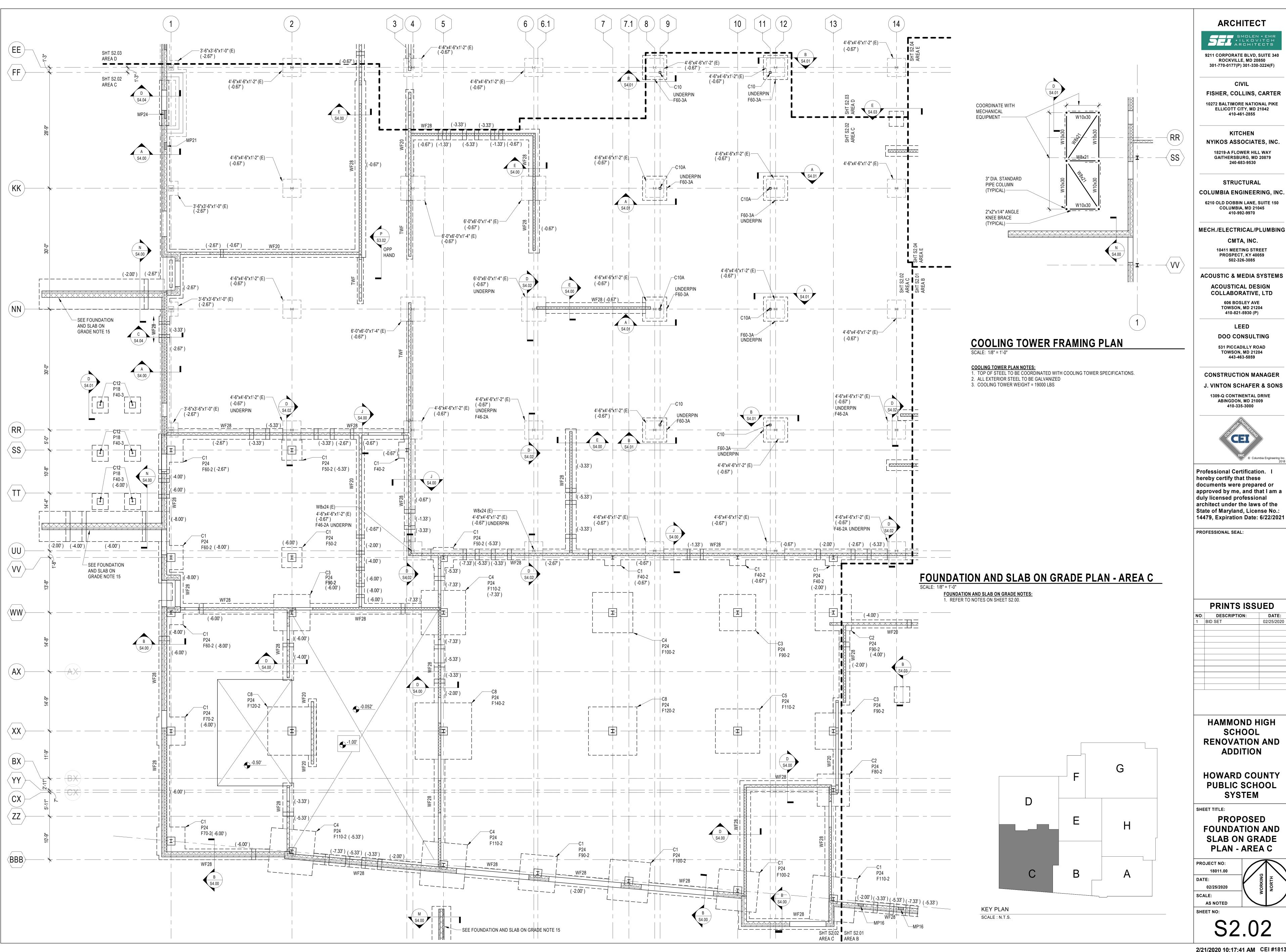
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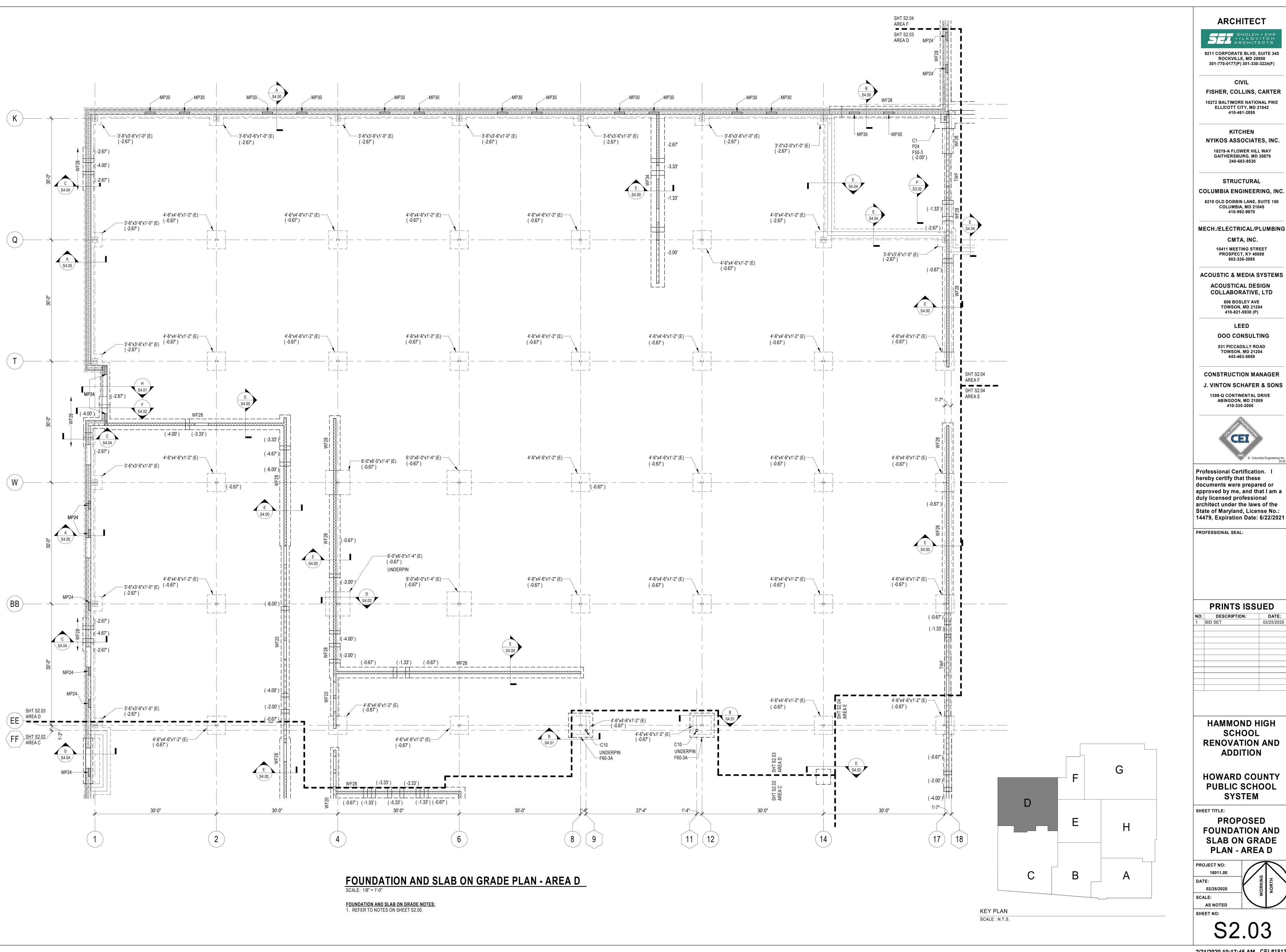
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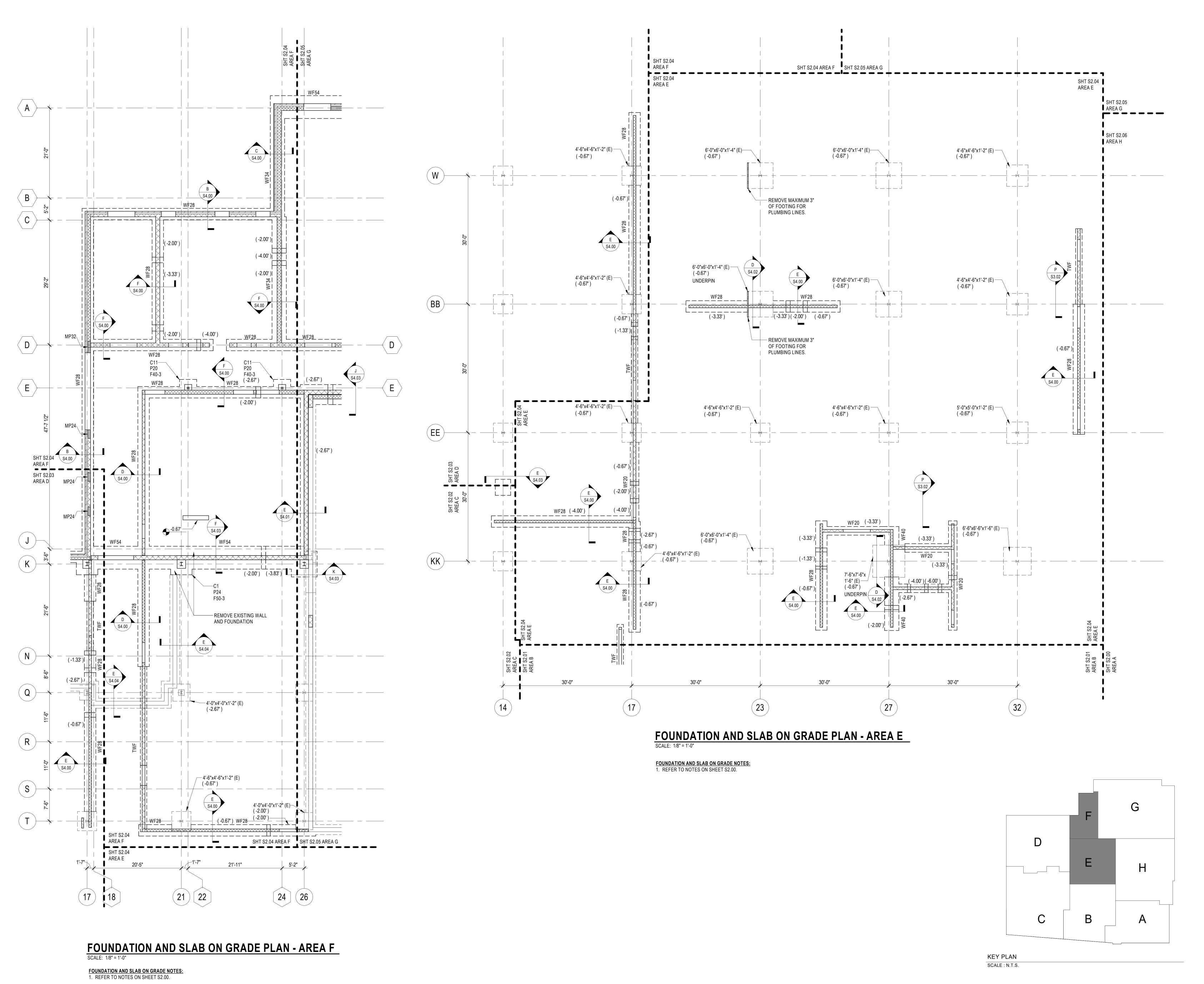
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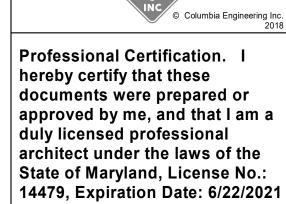
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SLAB ON GRADE
PLAN - AREAS E & F

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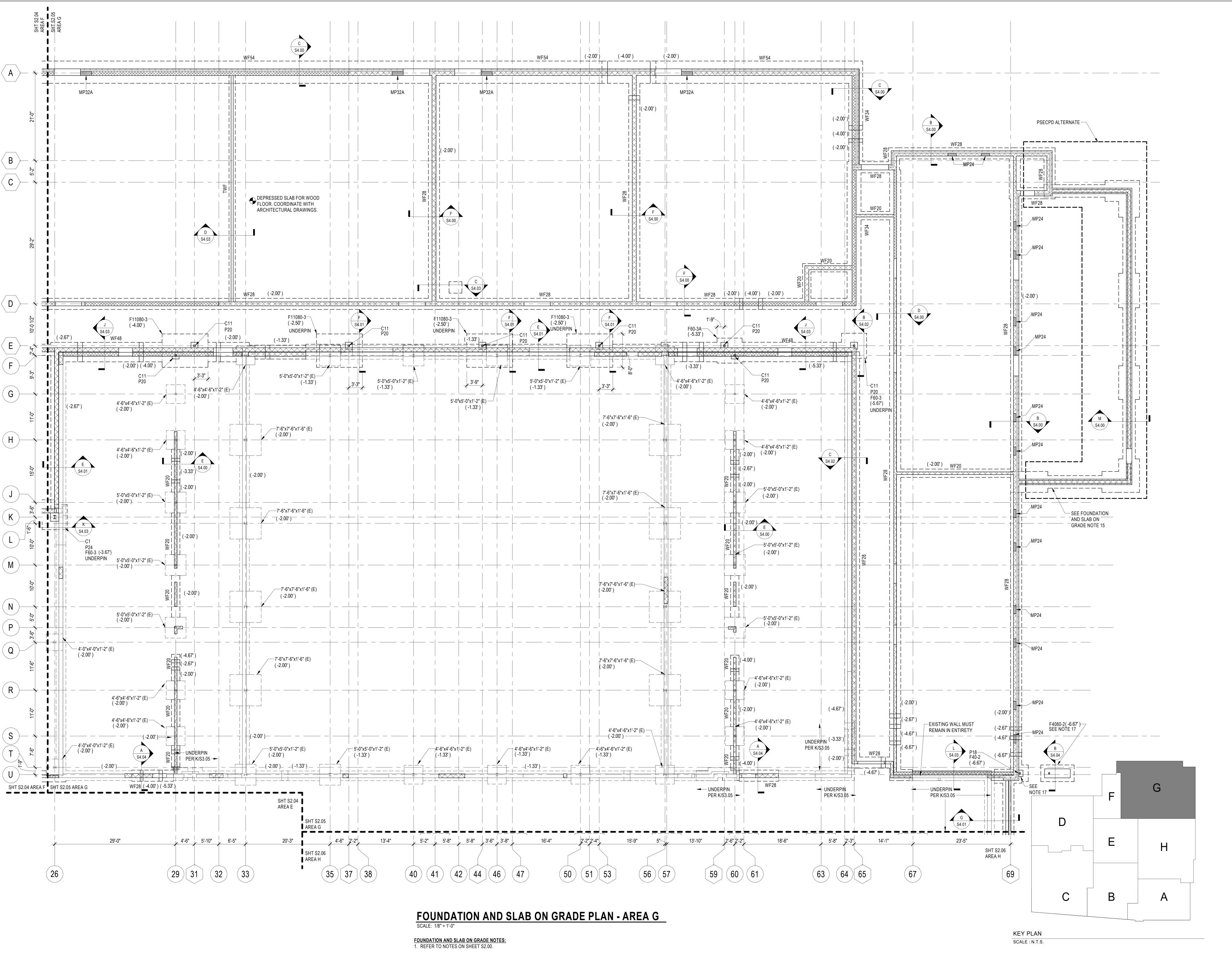
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PROPOSED FOUNDATION AND SLAB ON GRADE

PLAN - AREA G

PROJECT NO:

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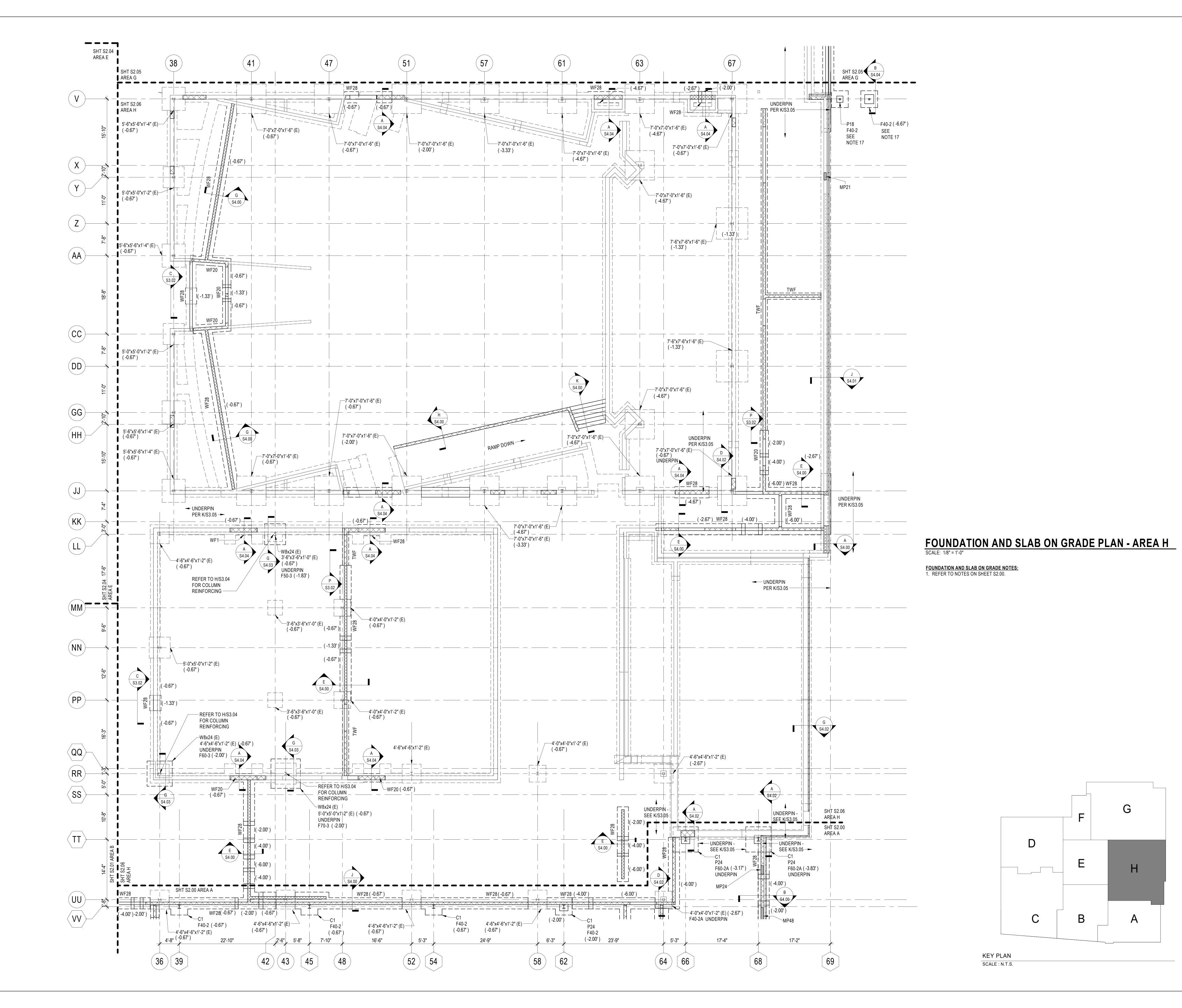
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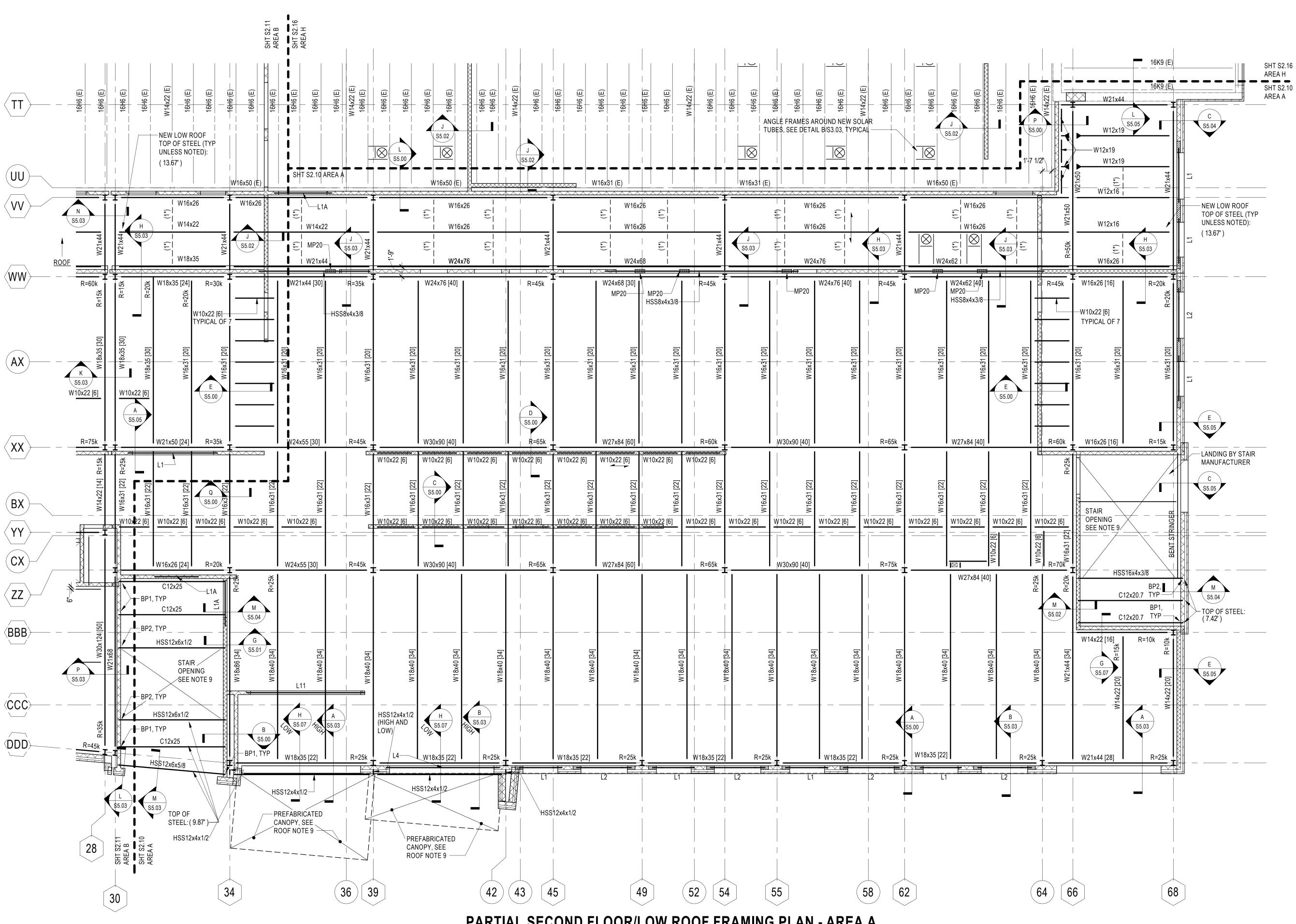
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### PARTIAL SECOND FLOOR/LOW ROOF FRAMING PLAN - AREA A

### **SECOND FLOOR FRAMING NOTES:**

- 1. (E) DENOTES EXISTING.
- 3. FLOOR SLAB AND STAIR LANDING SLAB SHALL BE 3" NORMAL WEIGHT CONCRETE REINFORCED WITH A 6"x6", W2.1xW2.1 W.W.F. OVER A 2", 20 GAGE COMPOSITE METAL DECK (3 SPAN MINIMUM). DIRECTION OF DECK IS SHOWN THUS ATTACH DECK TO SUPPORTING STRUCTURE WITH 3/4" DIAMETER PUDDLE WELDS IN A 36/4 PATTERN WITH SIDELAPS WELDED PER SPECIFICATIONS.
- 4. DECK OVER CAFETERIA TO BE 2", 20 GAGE ACOUTISTICAL COMPOSITE METAL DECK.
- 5. TOP OF FLOOR SLAB ELEVATION SHALL BE +16'-0" ABOVE DATUM UNLESS NOTED OTHERWISE. TOP OF STEEL ELEVATION SHALL BE 5" BELOW TOP OF SLAB ELEVATION UNLESS SHOWN OTHERWISE THUS (.....) ON PLAN, MEASURED FROM DATUM ELEVATION. 6. [NO.] DENOTES THE NUMBER OF 3/4" DIAMETER x 4" LONG HEADED STUDS WELDED TO THE STEEL BEAM. STUDS SHALL BE SPACED UNIFORMLY ALONG BEAM LENGTH UNLESS NOTED OTHERWISE.
- 7. PROVIDE (2) #5 BARS AT MID-DEPTH OF SLAB AROUND OPENINGS 1'-0"x1'-0" OR SMALLER
- 8. PROVIDE CHANNEL FRAME AROUND FLOOR OPENINGS WITH ONE SIDE LARGER THAN 1'-0" PER TYPICAL FLOOR OPENING DETAIL 9. STAIRS (AND LANDINGS WHERE APPLICABLE) SHALL BE DESIGNED BY CONTRACTOR FOR A UNIFORM LIVE LOAD OF 100 PSF PLUS CONCENTRATED LOAD PER IBC 2018. SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR REVIEW.
- 10. ▶ DENOTES MOMENT CONNECTION. SEE TYPICAL DETAILS. 11. LINTELS NOT CALLED OUT ON PLANS TO BE PROVIDED PER MASONRY GENERAL NOTES ON \$0.01.
- 12. PROVIDE 2"x2"x1/4" ANGLE FOR DECK SUPPORT AT ALL COLUMN FACES THAT DO NOT HAVE A BEAM OR WHERE TOP OF BEAM ELEVATION IS DIFFERENT THAN UNDERSIDE OF DECK ELEVATION. 13. WHERE APPLICABLE, COORDINATE W10x22 BEAM LOCATIONS WITH MASONRY WALLS ABOVE. SEE ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS.

### **ROOF FRAMING PLAN NOTES:**

- 1. (E) DENOTES EXISTING.
- NEW WORK SHOWN BOLD. 3. EXISTING ROOF STRUCTURE IS AS NOTED BELOW:
- A. GYMNASIUM 3" TECTUM DECK PANELS ON DLH SERIES STEEL JOISTS FRAMED ON STRUCTURAL STEEL.
- B. AUDITORIUM 22 GAGE, 1 1/2" DEEP RIB METAL DECK SUPPORTED BY DLH SERIES STEEL JOISTS FRAMED ON STRUCTURAL STEEL. C. DANCE STUDIO ADDITION - 20 GAGE, 1 1/2" TYPE B METAL ROOF DECK SUPPORTED BY K-SERIES STEEL JOISTS.
- D. BALANCE OF MAIN STRUCTURE 22 GAGE, 1 1/2" DEEP RIB METAL DECK SUPPORTED BY H-SERIES STEEL JOISTS FRAMED ON STRUCTURAL STEEL. 4. UNLESS NOTED OTHERWISE, NEW ROOF DECK SHALL BE A 1 1/2", 18 GAGE, TYPE B GALVANIZED METAL DECK (3 SPAN MINIMUM) BY VULCRAFT OR APPROVED EQUAL. ROOF DECK OVER THE AUXILIARY GYM, WRESTLING ROOM, WEIGHT TRAINING ROOM, AND ADJACENT MECHANICAL PENTHOUSE SHALL BE A 3", EPIC METALS EDP324A 18/18 GAGE GALVANIZED ACOUSTIC METAL DECK (3 SPAN MINIMUM). DIRECTION OF DECK IS SHOWN THUS - ATTACH DECK TO SUPPORTING ROOF MEMBERS PER SCHEDULE ON
- 5. EXISTING FRAMING SHOWN IS BASED ON EXISTING STRUCTURAL DRAWINGS AND MAY DIFFER FROM WHAT IS FOUND DURING CONSTRUCTION. IF EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT THAN WHAT IS SHOWN HERE, CONTRACTOR IS TO REPORT TO
- THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO COMMENCING WORK. 6. PROVIDE ANGLE FRAME AROUND ROOF OPENINGS WITH ONE SIDE LARGER THAN 1'-0" PER TYPICAL ROOF OPENING DETAIL. DO NOT CUT EXISTING JOISTS OR BEAMS TO CREATE NEW OPENINGS.
- 7. TEMPORARY SHORING MUST BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF MARYLAND FOR UNIFORM LOADS NOTED ON THE PLANS. THE SHORING MUST BE IN PLACE PRIOR TO REMOVING EXISTING STRUCTURE AND MUST REMAIN IN PLACE UNTIL THE NEW STRUCTURAL ELEMENTS ARE FULLY INSTALLED. 8. TOP OF STEEL (UNDERSIDE OF METAL DECK) ELEVATION NOTED ON PLAN IS MEASURED FROM TOP OF SLAB ON GRADE. BEAMS SUPPORTING K SERIES JOISTS SHALL BE 3 1/2" BELOW TOP OF STEEL UNLESS NOTED OTHERWISE. BEAMS SUPPORTING LH SERIES
- JOISTS SHALL BE 5" BELOW TOP OF STEEL UNLESS NOTED OTHERWISE. COORDINATE SPECIAL JOISTS WITH LOAD DIAGRAMS ON S0.03. 9. CANOPIES SHALL BE DESIGNED BY CONTRACTOR FOR APPLICABLE LOADING PER IBC 2018. SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR REVIEW. 10. PROVIDE 5"x3 1/2"x3/18" ANGLE (LLV) UNDER ALL ROOF TOP UNITS. PROVIDE BLOCKING AS REQUIRED BETWEEN UNIT AND SUPPORTING STEEL. SUPPORT AT JOISTS OR BEAMS WITH 4"x4"x1/2"x8" LONG ANGLE SEAT. ROOF FRAMING IS STRUCTURALLY ADEQUATE FOR
- ROOFTOP UNITS SHOWN ON PLANS ONLY. CONTACT CELIF LOCATION OR WEIGHT OF EQUIPMENT VARIES FROM THE LOCATIONS AND WEIGHTS SHOWN. 11. PROVIDE 2"x2"x1/4" ANGLE FOR DECK SUPPORT AT ALL COLUMN FACES THAT DO NOT HAVE A BEAM OR WHERE TOP OF BEAM ELEVATION IS DIFFERENT THAN UNDERSIDE OF DECK ELEVATION.

12. JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 10 PSF.

# **ARCHITECT**

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CIVIL

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**KITCHEN** NYIKOS ASSOCIATES, INC. 18219-A FLOWER HILL WAY

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**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

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443-463-5859

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**PRINTS ISSUED** DESCRIPTION:

> **HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION**

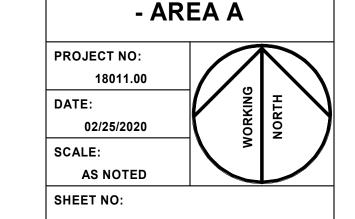
**HOWARD COUNTY PUBLIC SCHOOL** 

G

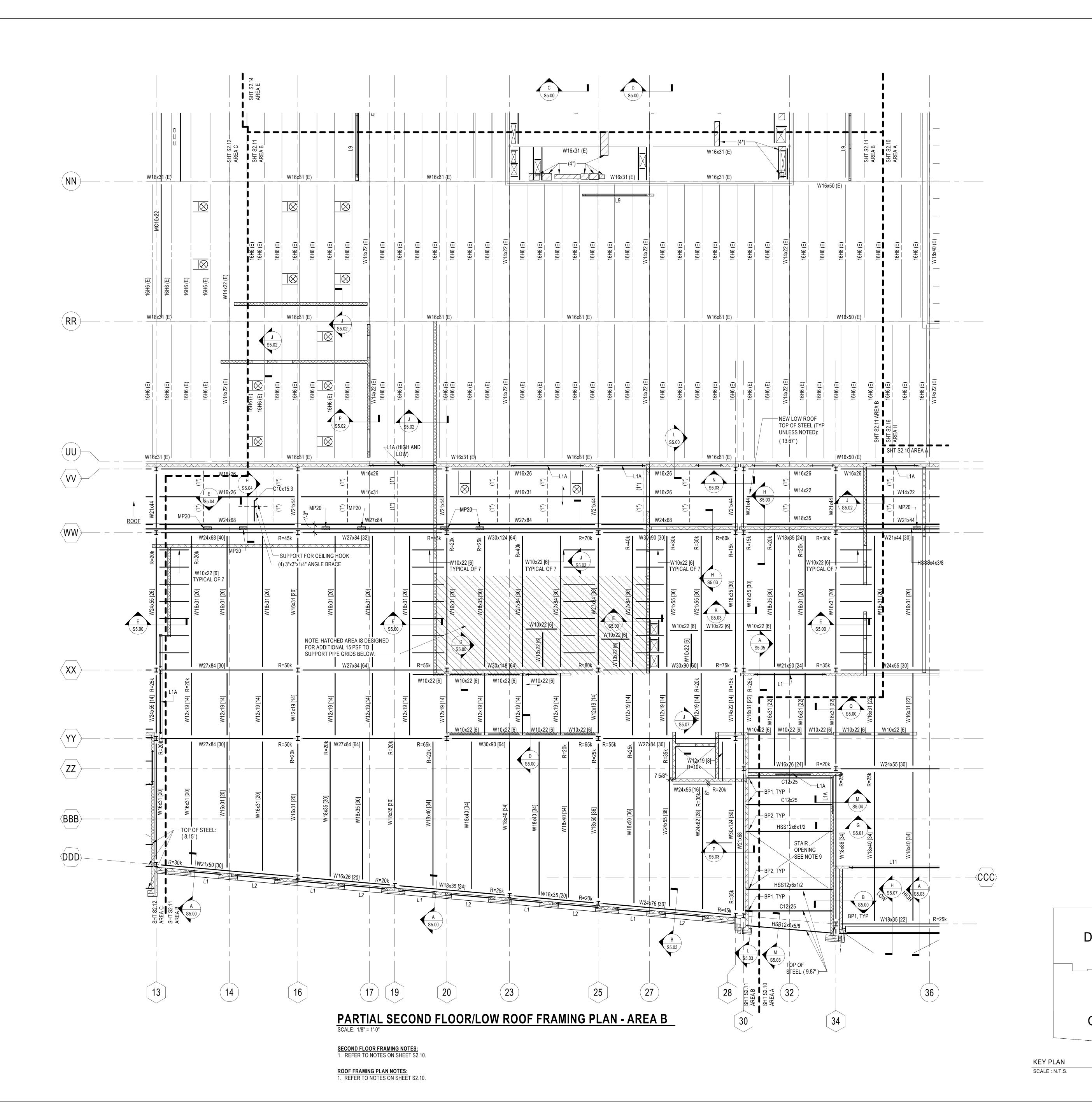
**KEY PLAN** 

SCALE : N.T.S.

PROPOSED PARTIAL SECOND FLOOR/LOW ROOF FRAMING PLAN



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NO: DESCRIPTION: DATE:

1 BID SET 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:

G

PROPOSED PARTIAL SECOND FLOOR/LOW ROOF FRAMING PLAN

PROJECT NO:

18011.00

DATE:

02/25/2020

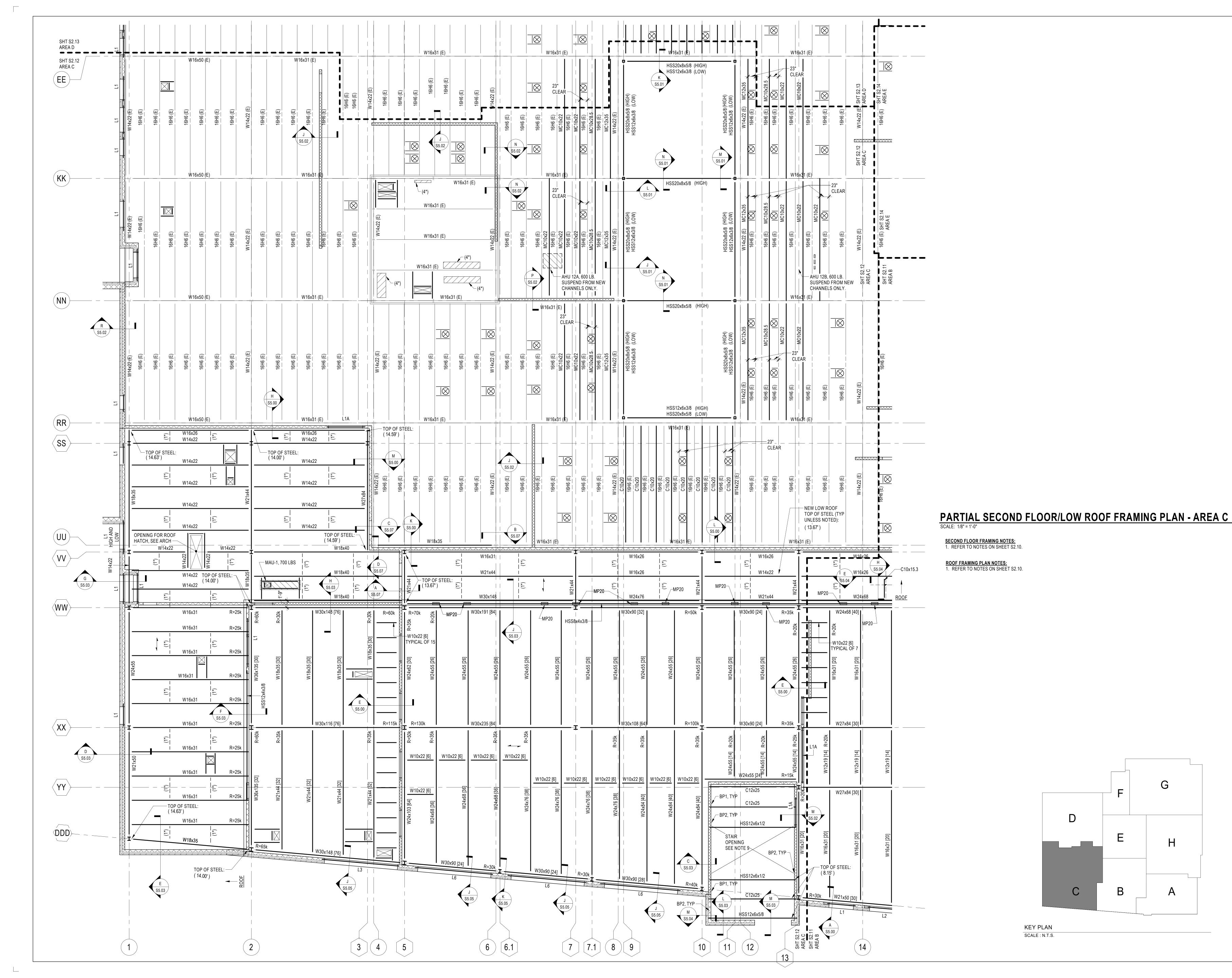
SCALE:

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SHEET NO:

S2.11

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**CONSTRUCTION MANAGER** 

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**PRINTS ISSUED** 

**HAMMOND HIGH** 

SCHOOL

**RENOVATION AND** 

**ADDITION** 

**HOWARD COUNTY** 

**PUBLIC SCHOOL** 

PROPOSED PARTIAL

SECOND FLOOR/LOW

**ROOF FRAMING PLAN** 

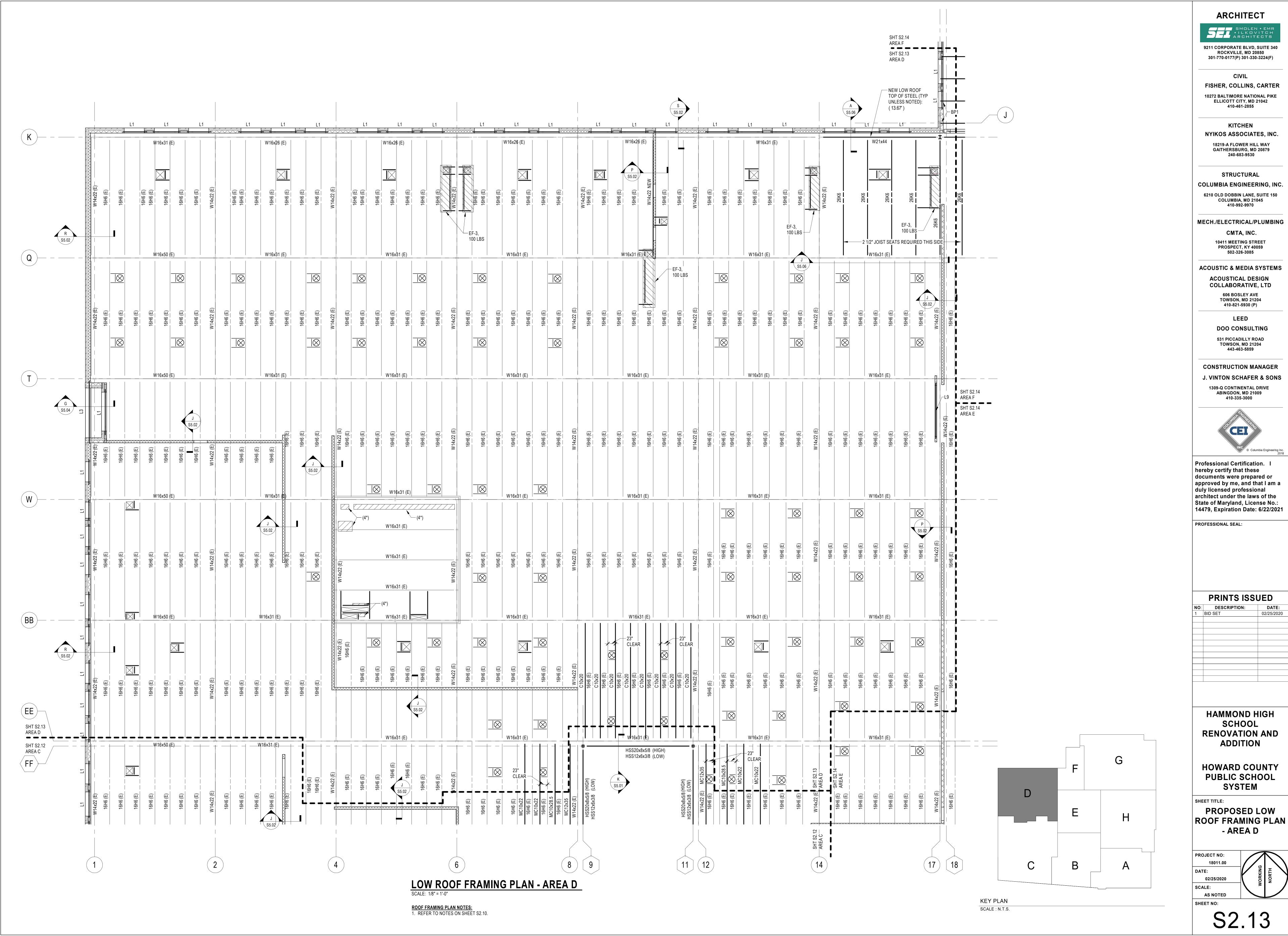
- AREA C

02/25/2020

AS NOTED

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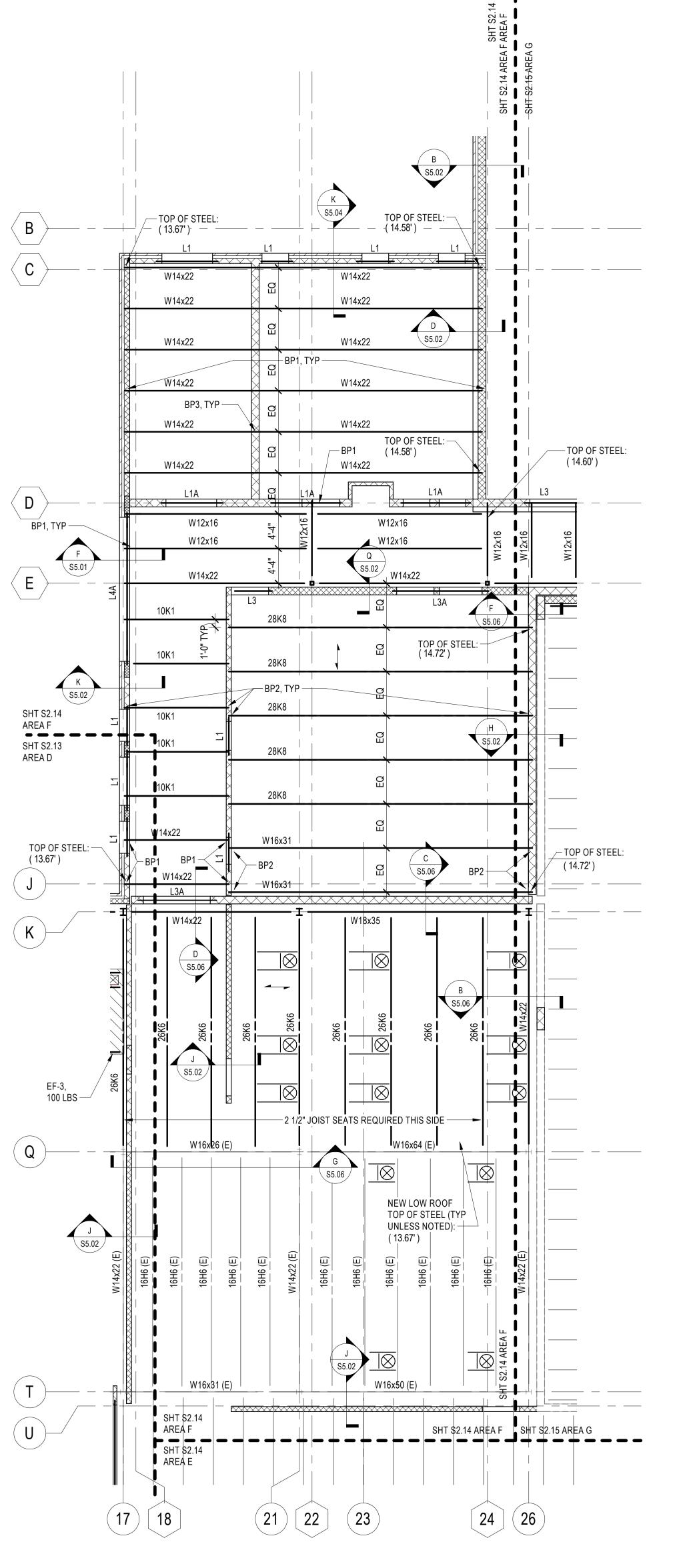
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PROPOSED LOW

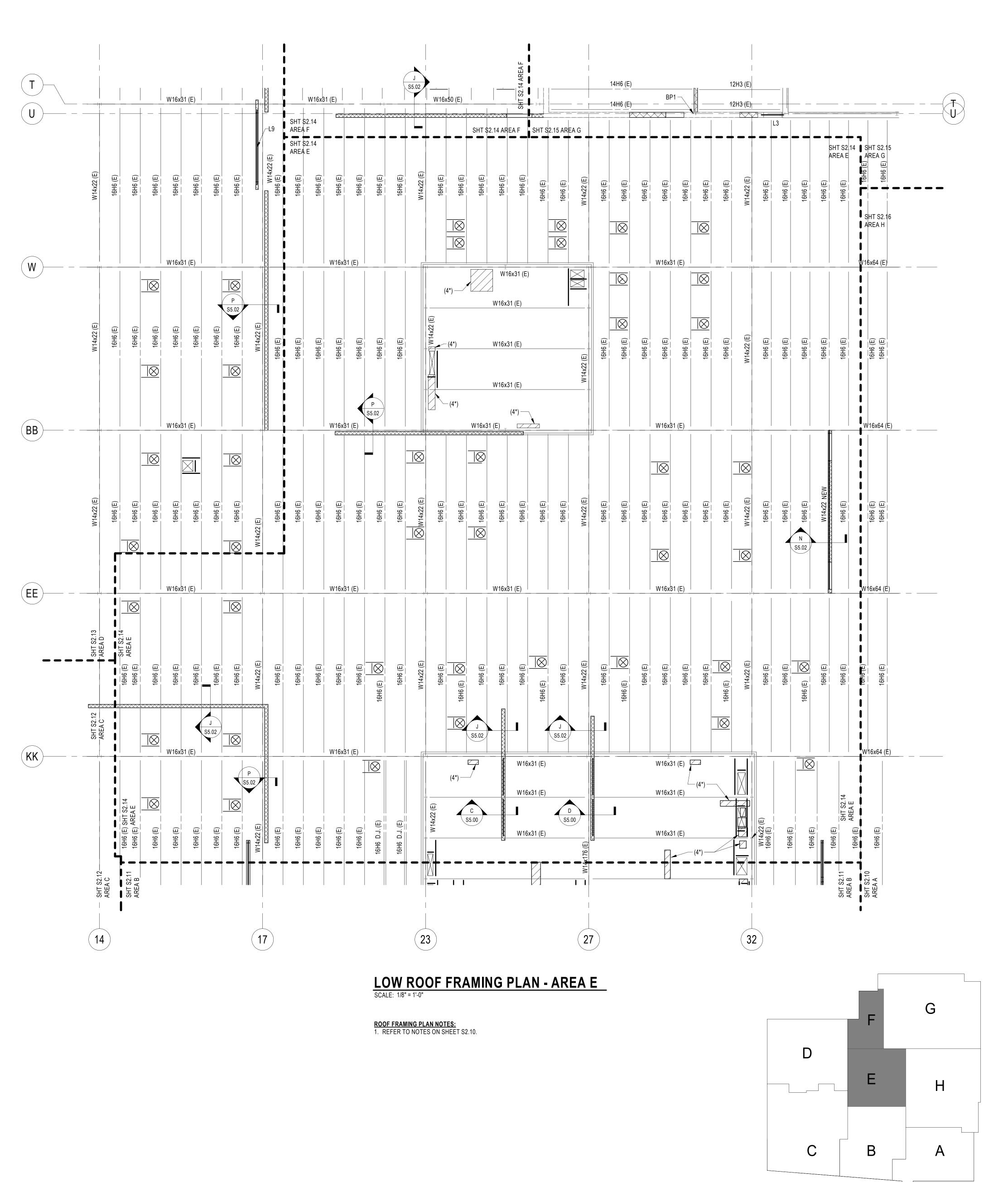
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LOW ROOF FRAMING PLAN - AREA F

ROOF FRAMING PLAN NOTES:

1. REFER TO NOTES ON SHEET S2.10.



**ARCHITECT** 

9211 CORPORATE BLVD. SUITE

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O: DESCRIPTION: DATE:
BID SET 02/25/2020

HAMMOND HIGH

SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:

**KEY PLAN** 

SCALE : N.T.S.

PROPOSED LOW ROOF FRAMING PLAN - AREAS E & F

PROJECT NO:

18011.00

DATE:

02/25/2020

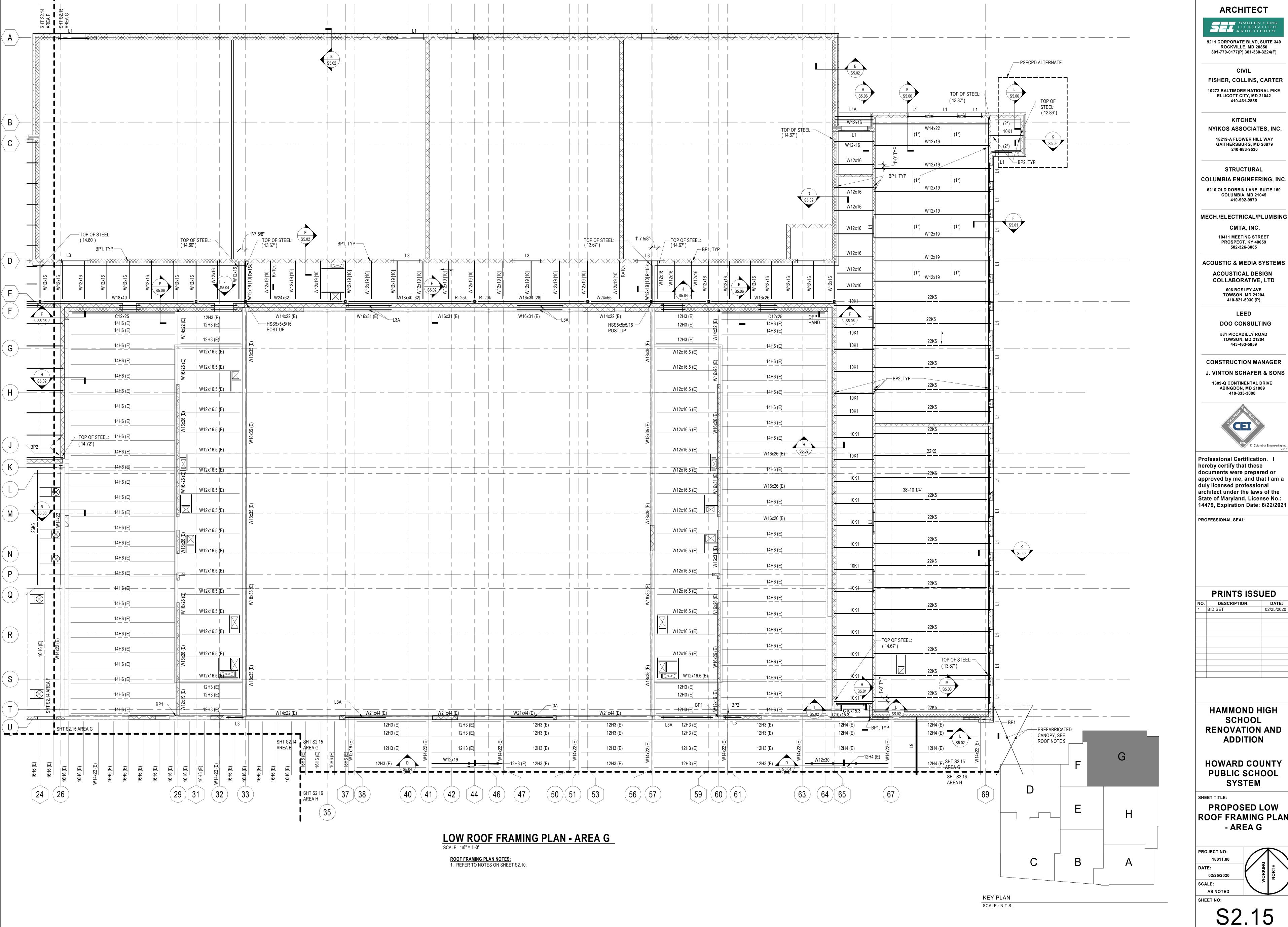
SCALE:

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SHEET NO:

S2.14

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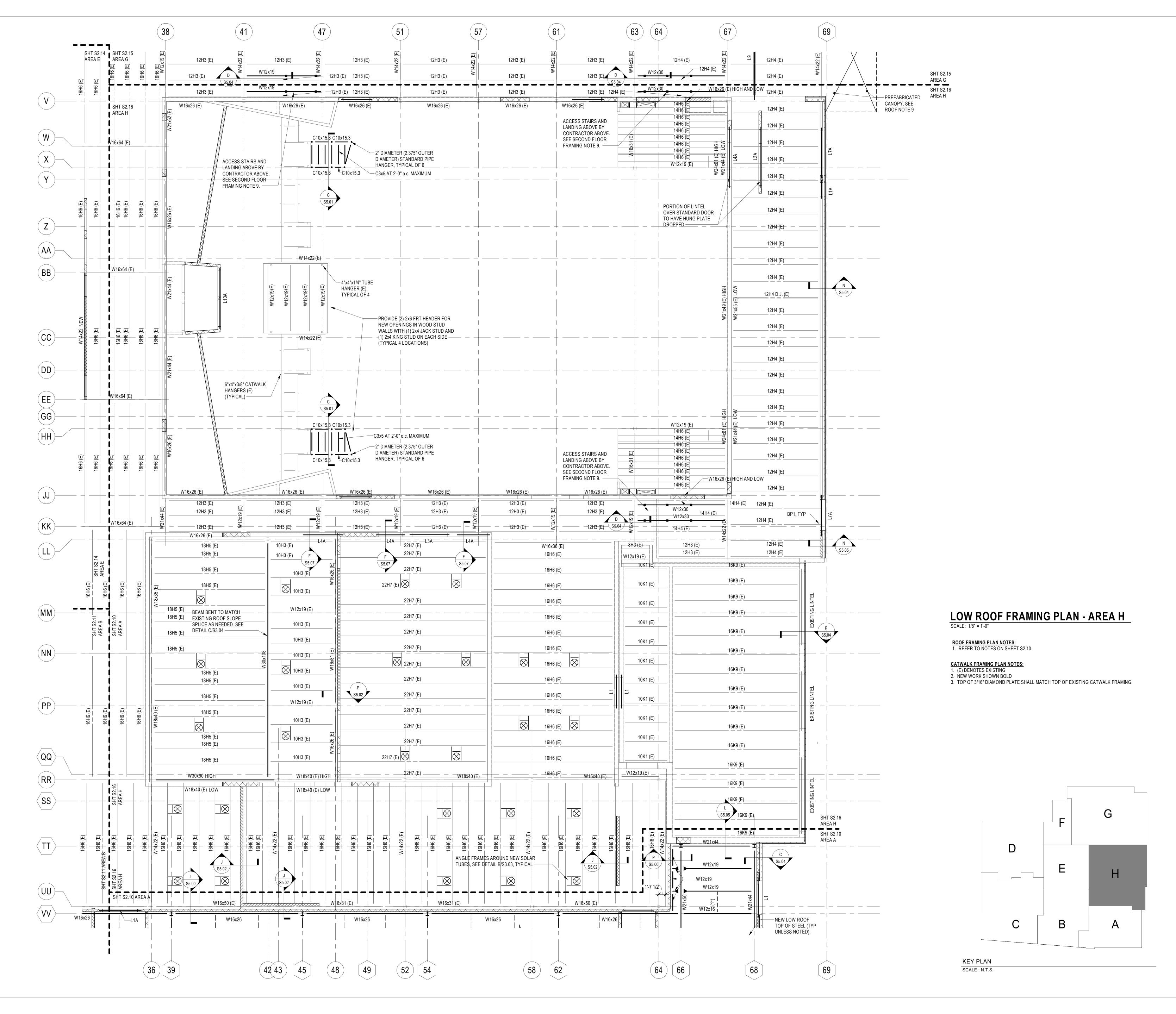


J. VINTON SCHAFER & SONS



approved by me, and that I am a

PROPOSED LOW **ROOF FRAMING PLAN** 



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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

SHEET TITLE:

PROPOSED LOW ROOF FRAMING PLAN - AREA H

PROJECT NO:

18011.00

DATE:

02/25/2020

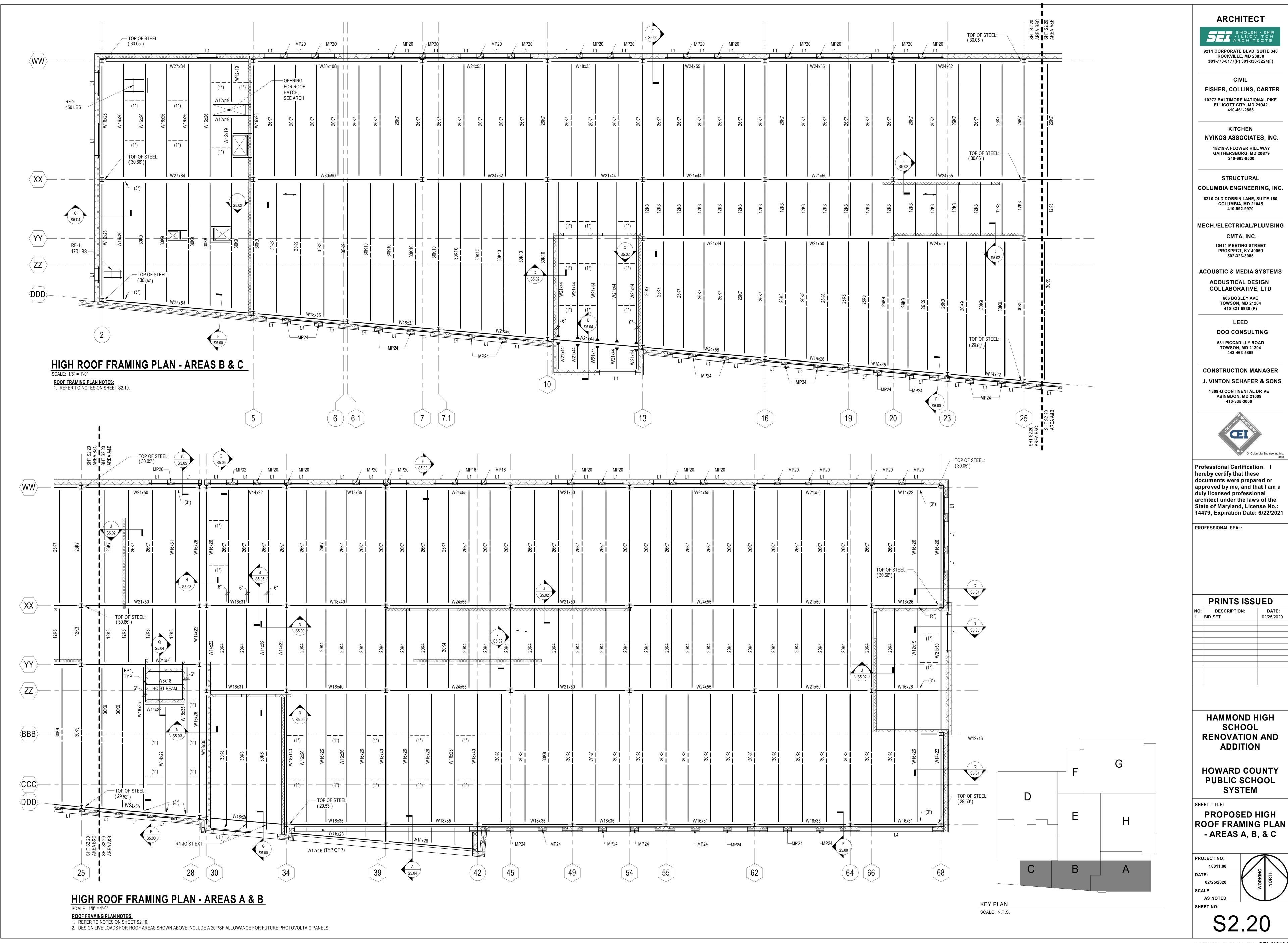
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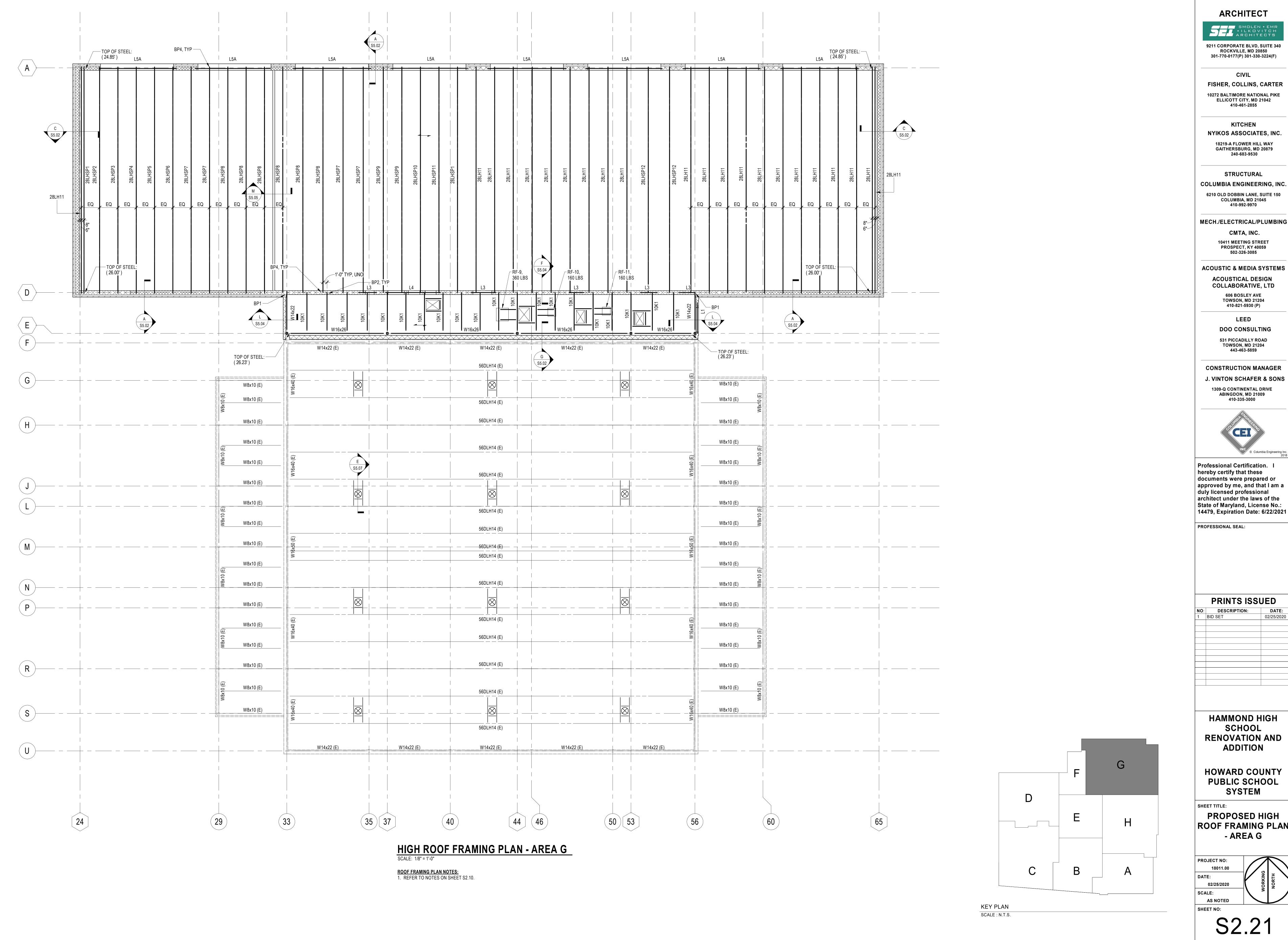
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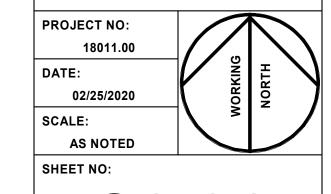


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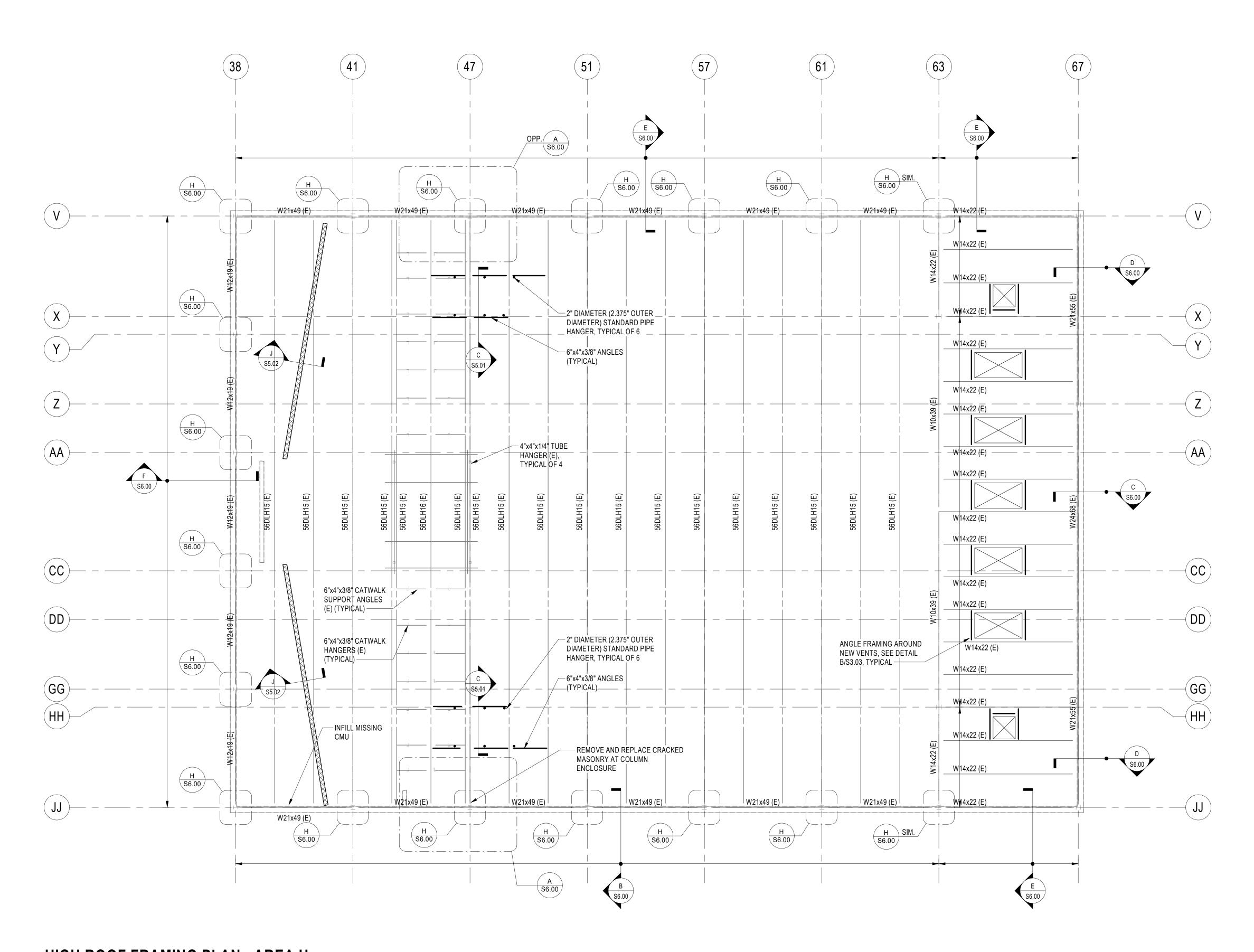
**HAMMOND HIGH RENOVATION AND** 

**PUBLIC SCHOOL** 

**PROPOSED HIGH** ROOF FRAMING PLAN



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## HIGH ROOF FRAMING PLAN - AREA H

SCALE: 1/8" = 1

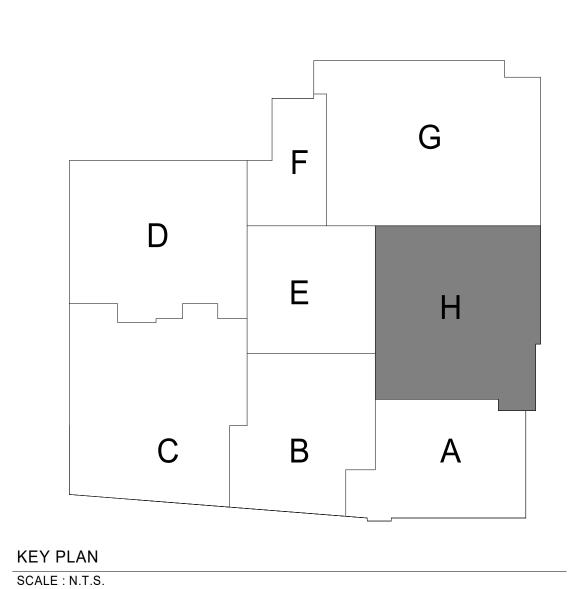
### <u>AUDITORIUM ROOF FRAMING PLAN NOTES:</u> 1. (E) DENOTES EXISTING.

(E) DENOTES EXISTING.
 NEW WORK SHOWN BOLD.

- 3. EXISTING ROOF STRUCTURE IS 22 GAGE, 1 1/2" DEEP RIB METAL DECK SUPPORTED BY DLH SERIES STEEL JOISTS FRAMED ON STRUCTURAL STEEL.
  4. EXISTING FRAMING SHOWN IS BASED ON EXISTING STRUCTURAL DRAWINGS AND MAY DIFFER FROM WHAT IS FOUND DURING CONSTRUCTION. IF
- 4. EXISTING FRAMING SHOWN IS BASED ON EXISTING STRUCTURAL DRAWINGS AND MAY DIFFER FROM WHAT IS FOUND DURING CONSTRUCTION. IF

  EXISTING CONDITIONS ARE FOUND TO BE DIFFERENT THAN WHAT IS SHOWN HERE, CONTRACTOR IS TO REPORT TO THE ARCHITECT AND STRUCTURAL
- ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO COMMENCING WORK.
  5. PROVIDE ANGLE FRAME AROUND ROOF OPENINGS WITH ONE SIDE LARGER THAN 1'-0" PER TYPICAL ROOF OPENING DETAIL. DO NOT CUT EXISTING
- JOISTS OR BEAMS TO CREATE NEW OPENINGS.

  6. PROVIDE VENEER TO MATCH EXISTING AT EXTERIOR.



ARCHITECT

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• IL KOVITCH
ARCHITECTS

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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL

SHEET TIT

PROPOSED HIGH ROOF FRAMING PLAN - AREA H

PROJECT NO:

18011.00

DATE:

02/25/2020

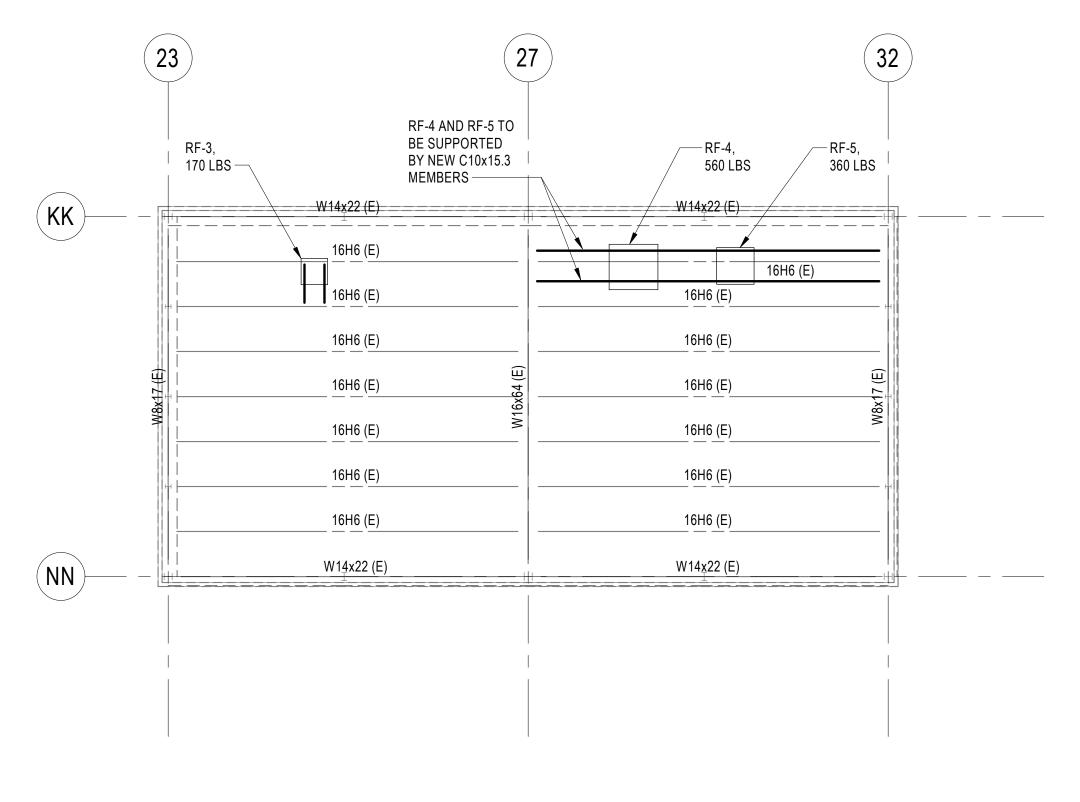
SCALE:

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**HIGH ROOF FRAMING PLAN - PENTHOUSE #6** NOT TO SCALE

**ROOF FRAMING PLAN NOTES:** 1. REFER TO NOTES ON SHEET S2.10. **ARCHITECT** 

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CONSTRUCTION MANAGER J. VINTON SCHAFER & SONS

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**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

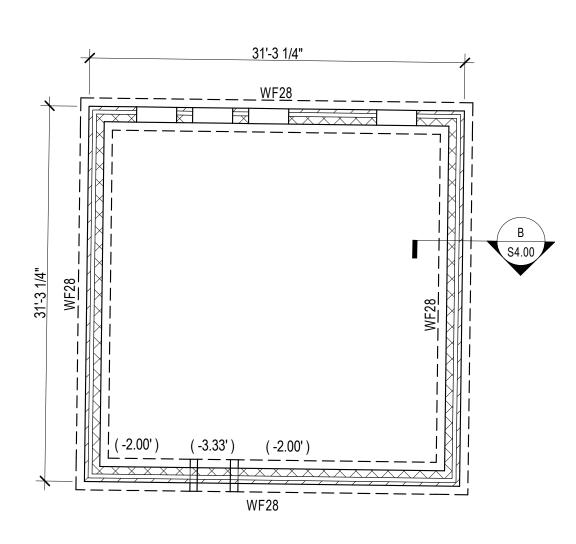
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KEY PLAN
SCALE: N.T.S.

**PROPOSED HIGH** ROOF FRAMING PLAN - PENTHOUSE #6

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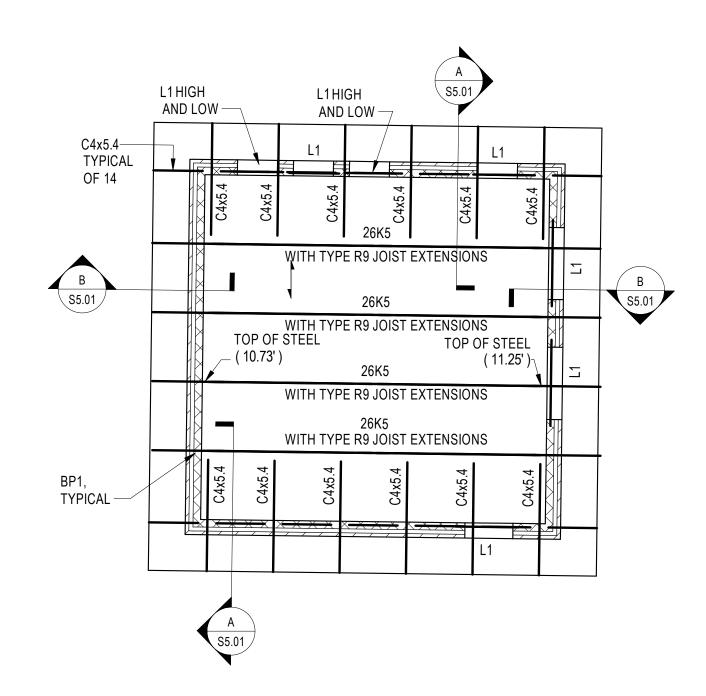
### FOUNDATION AND SLAB ON GRADE PLAN - FIELD HOUSE

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

FOUNDATION AND SLAB ON GRADE NOTES:

1. NEW SLAB ON GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH A 6"x6" W2.1xW2.1 W.W.F. ON A 15 MILS VAPOR BARRIER OVER A 4" LAYER OF WASHED GRAVEL.

- 2. TOP OF SLAB ON GRADE ELEVATION SHALL BE AT ELEVATION +336.00' WHICH CORRESPONDS TO DATUM 0'-0". 3. TOP OF FOOTING ELEVATIONS SHALL BE 2'-0" BELOW DATUM ELEVATION UNLESS NOTED OTHERWISE THUS (....) ON PLAN. ELEVATIONS ARE FOR BID PURPOSES ONLY AND MAY HAVE TO BE FIELD ADJUSTED. LOWER ALL FOOTINGS AS REQUIRED BELOW ALL UTILITY LINES AND INSTALL SLEEVES THROUGH MASONRY WALLS. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL
- BE MINIMUM 2'-6" BELOW GRADE. 4. C.J. DENOTES CONTROL/CONSTRUCTION JOINT. SEE TYPICAL CONSTRUCTION JOINT IN SLAB ON GRADE DETAIL AND
- GENERAL NOTES. 5. PROVIDE THICKENED SLAB UNDER ALL INTERIOR NON-LOAD BEARING 8" AND 6" CMU PARTITION WALLS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS.
- 6. SEE ARCHITECTURAL AND KITCHEN DRAWINGS FOR LOCATIONS OF ANY DEPRESSED SLAB AREAS. SEE DETAIL G/S3.02.
  7. SEE SITE PLAN FOR LOCATION OF FIELD HOUSE.



### **ROOF FRAMING PLAN - FIELD HOUSE**

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

- 1. NEW ROOF DECK SHALL BE A 1 1/2", 18 GAGE, TYPE B GALVANIZED METAL DECK (3 SPAN MINIMUM) BY VULCRAFT OR APPROVED EQUAL. DIRECTION OF DECK IS SHOWN THUS - . ATTACH DECK TO SUPPORTING ROOF MEMBERS WITH 5/8" DIAMETER PUDDLE WELDS IN A 36/4 PATTERN AND No. 10 SIDELAP SCREWS AT 36" o.c. UNLESS NOTED OTHERWISE.
- 2. TOP OF STEEL (UNDERSIDE OF METAL DECK) ELEVATION NOTED ON PLAN IS MEASURED FROM TOP OF SLAB ON GRADE. BEARING FOR K SERIES JOISTS
- SHALL BE 3 1/2" BELOW TOP OF STEEL. 3. MECHANICAL PIPING SHALL BE SUPPORTED FROM STRUCTURAL STEEL FRAMING ONLY.
- 4. PROVIDE ANGLE FRAME AROUND ROOF OPENINGS WITH ONE SIDE LARGER THAN 1'-0" PER TYPICAL ROOF OPENING DETAIL. DO NOT CUT EXISTING
- JOISTS OR BEAMS TO CREATE NEW OPENINGS. COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

5. JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 24 PSF.

#### **ARCHITECT**

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301-770-0177(P) 301-330-3224(F)

CIVIL FISHER, COLLINS, CARTER

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443-463-5859

J. VINTON SCHAFER & SONS 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 14479, Expiration Date: 6/22/2021

PROFESSIONAL SEAL:

**PRINTS ISSUED** DESCRIPTION: 02/25/2020

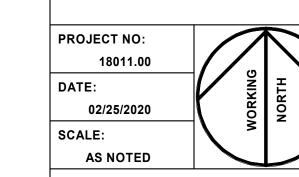
**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

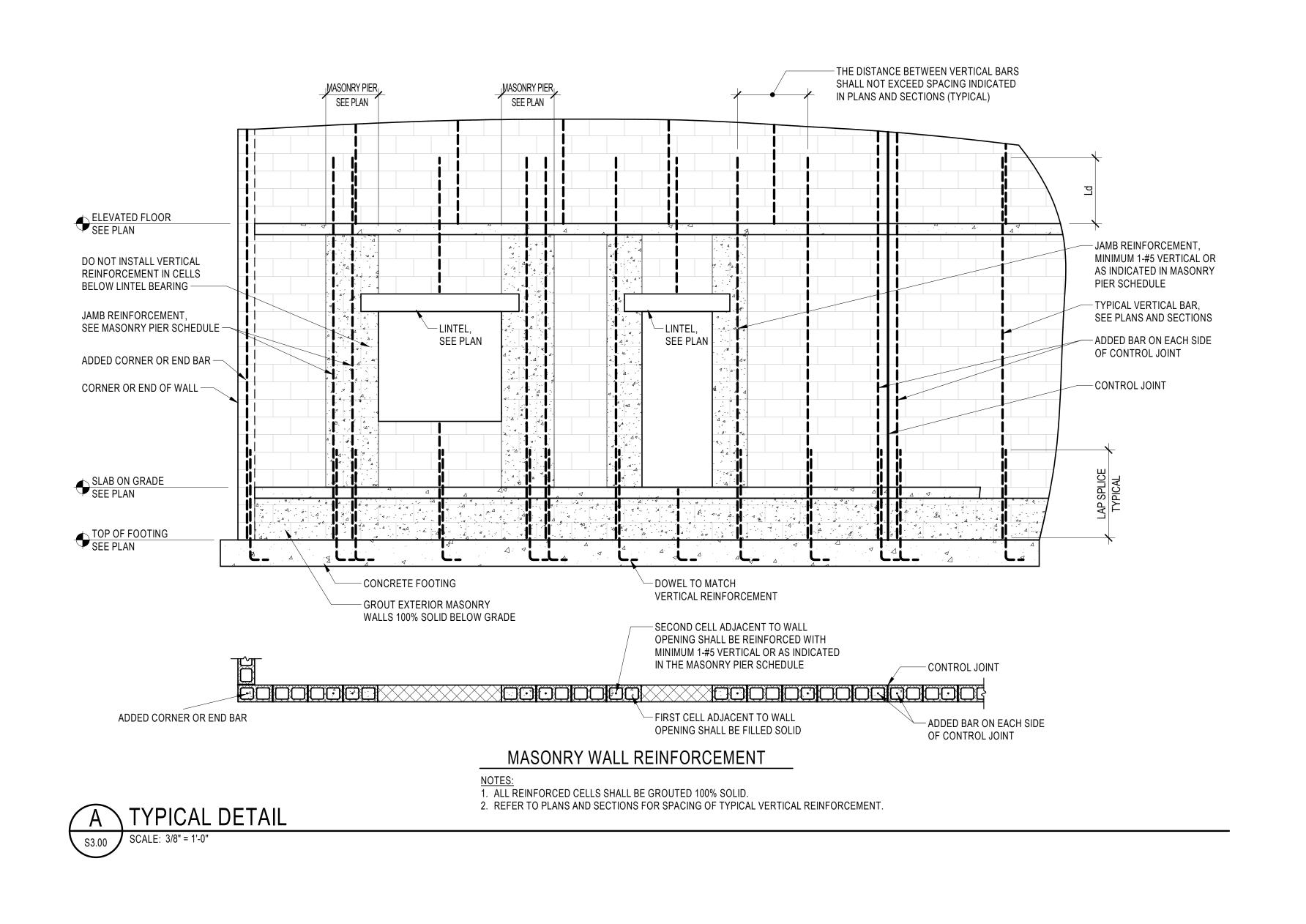
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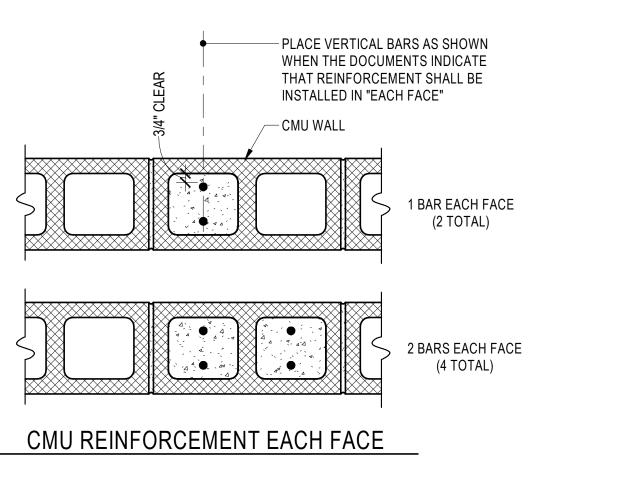
KEY PLAN
SCALE: N.T.S.

PROPOSED FIELD **HOUSE PLANS** 



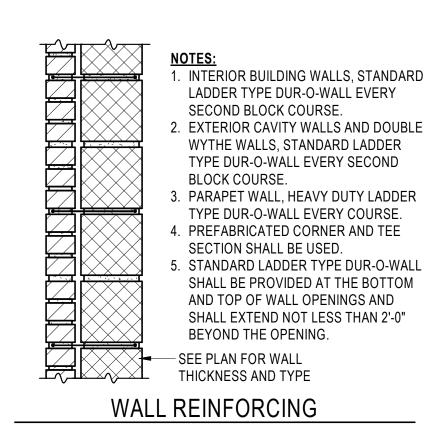
2/21/2020 10:18:58 AM CEI #18134





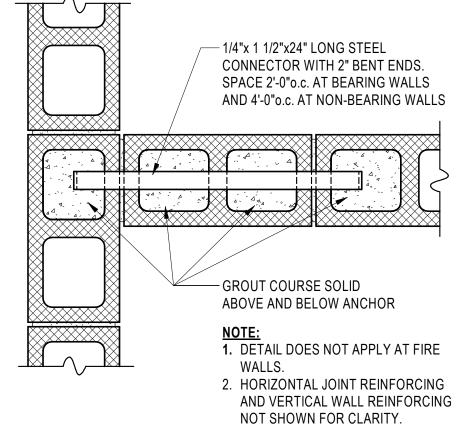
TYPICAL DETAIL

S3.00 SCALE: 1 1/2" = 1'-0"



TYPICAL DETAIL

SCALE: 1" = 1'-0"

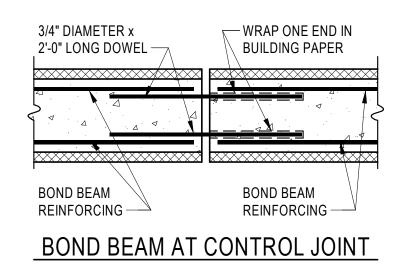


NOT SHOWN FOR CLARITY.

ABUTTING MASONRY WALL

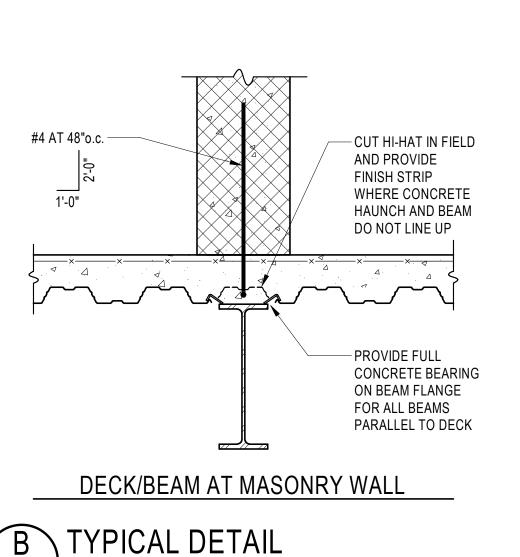
(REQUIRED AT ALL CMU WALLS THAT DO NOT HAVE INTERLOCKING UNITS)





TYPICAL DETAIL

S3.00 SCALE: 1" = 1'-0"



TYPICAL 1/8"

BRIDGING

3"x3"x5/16"x1"-0" LONG ANGLE WITH (2) 5/8"
DIAMETER HILTI KWIK BOLT 3 AT 24"o.c.
(4" EMBEDMENT), PROVIDE 8" MINIMUM
GROUT COVER CONTINUOUS FOR FULL
LENGTH OF WALL ABOVE AND BELOW THE
LINE OF ANCHORS

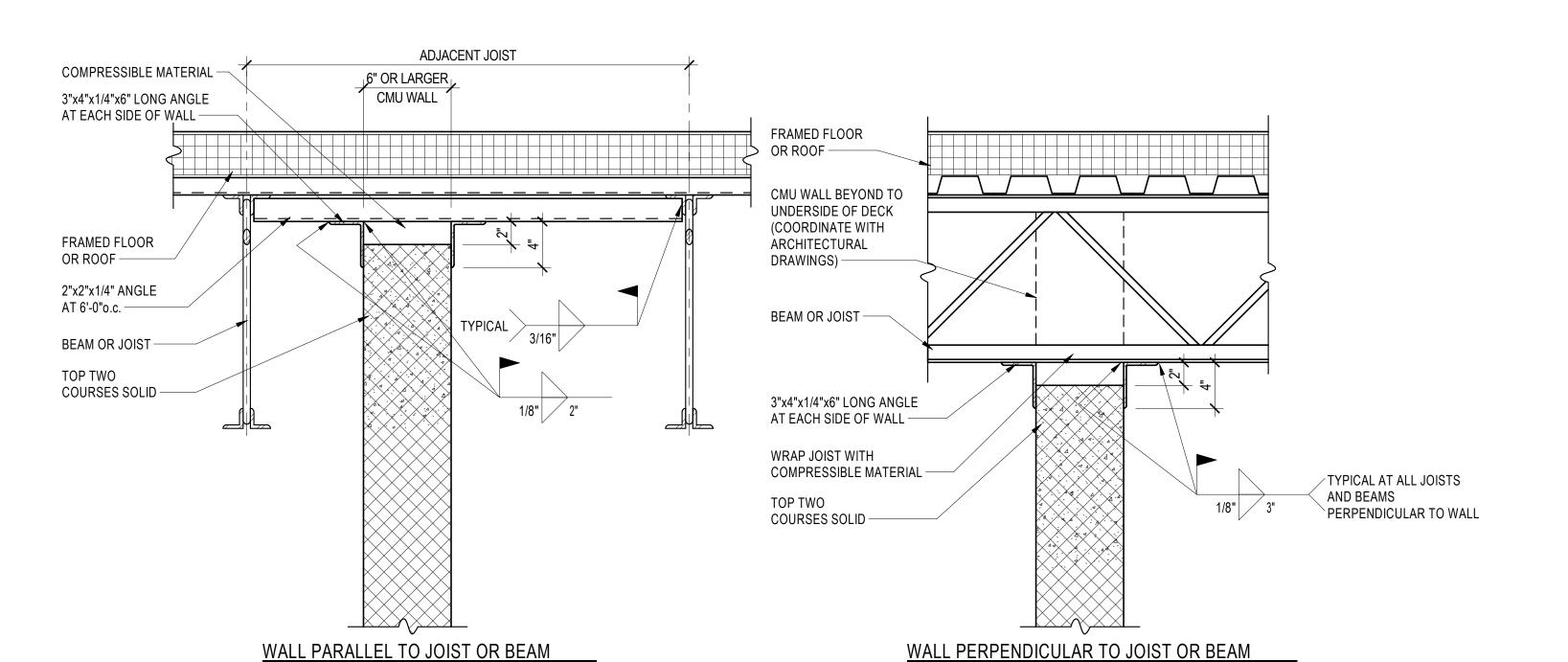
3"x3"x5/16"x1"-0" LONG ANGLE WITH (2) 5/8"
DIAMETER HILTI KWIK BOLT 3 (8" SPACING,
4" EMBEDMENT), PROVIDE 8" MINIMUM
GROUT COVER AROUND BOLTS

- 5"x3"x3/8" CONTINUOUS ANGLE (LLV) WITH

DECK SUPPRT AND BRIDGING CONNECTION AT MASONRY WALL

(REQUIRED AT ALL MASONRY WALLS WHERE SPAN OF METAL DECK TERMINATES)

C TYPICAL DETAIL
SCALE: 1 1/2" = 1'-0"

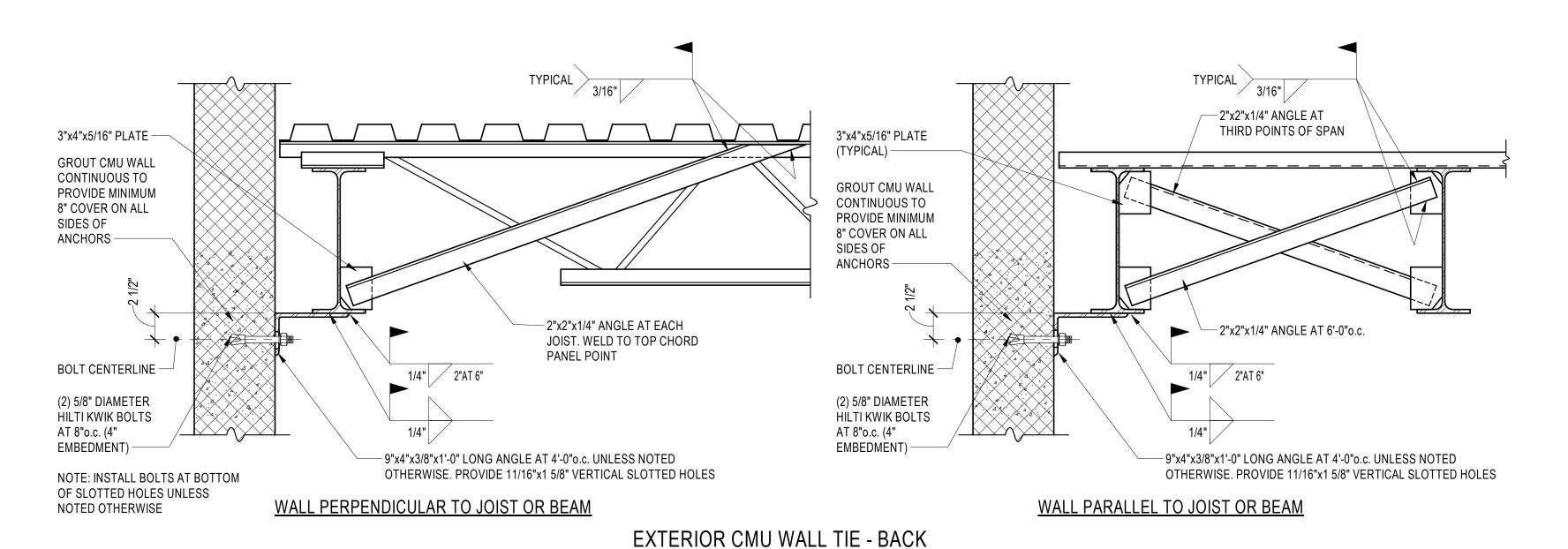


MASONRY PARTITION SUPPORT

G TYPICAL DETAIL

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

SCALE: 1" = 1'-0"



TYPICAL DETAIL

S3.00 SCALE: 1 1/2" = 1'-0"

ARCHITECT

9211 CORPORATE BLVD, SUITE 340
ROCKVILLE, MD 20850

301-770-0177(P) 301-330-3224(F)

CIVIL
FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD 21042

410-461-2855

KITCHEN

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GAITHERSBURG, MD 20879 240-683-9530 STRUCTURAL

18219-A FLOWER HILL WAY

COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150
COLUMBIA, MD 21045
410-992-9970

MECH./ELECTRICAL/PLUMBING

CMTA, INC.

10411 MEETING STREET

PROSPECT, KY 40059 502-326-3085 DUSTIC & MEDIA SYSTEI

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606 BOSLEY AVE
TOWSON, MD 21204
410-821-5930 (P)

LEED

DOO CONSULTING

531 PICCADILLY ROAD
TOWSON, MD 21204
443-463-5859

CONSTRUCTION MANAGER

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE
ABINGDON, MD 21009
410-335-3000



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PROFESSIONAL SEAL:

PRINTS ISSUED

NO: DESCRIPTION: DATE:

1 BID SET 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:

TYPICAL MASONRY DETAILS

PROJECT NO:

18011.00

DATE:

02/25/2020

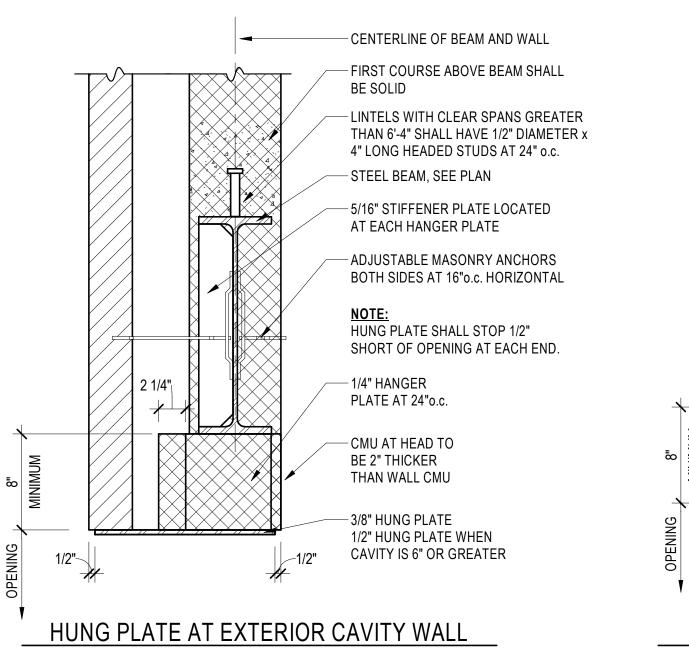
SCALE:

AS NOTED

SHEET NO:

S3.00

2/21/2020 10:19:00 AM CEI #18134

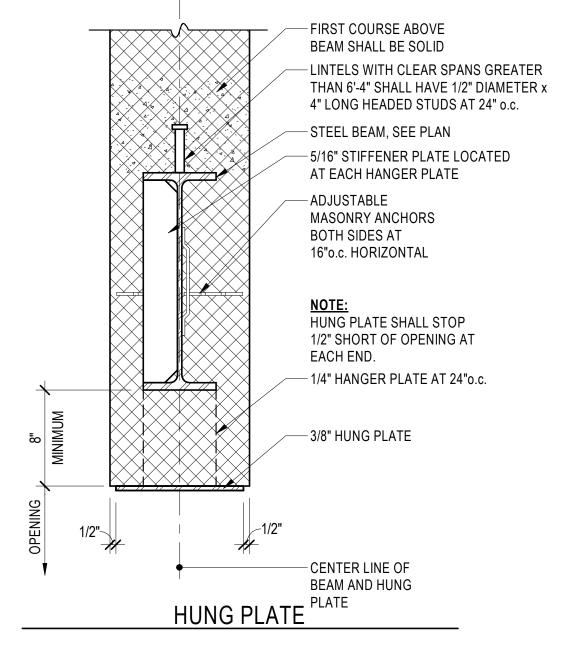


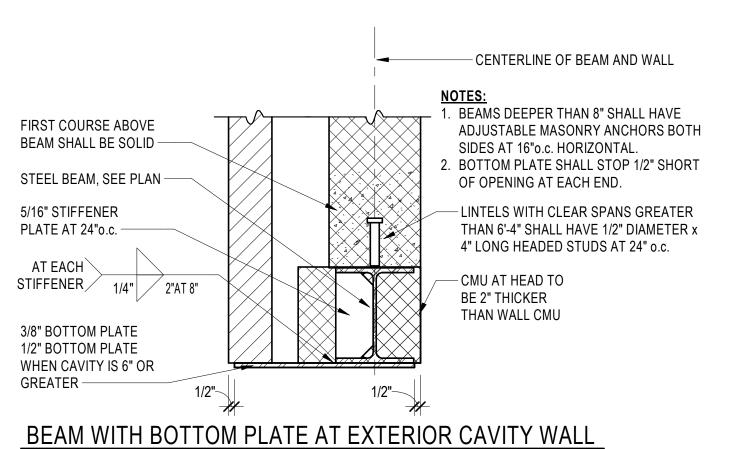
A TYPICAL DETAIL

E TYPICAL DETAIL

S3.01 SCALE: 1" = 1'-0"

S3.01 SCALE: 1 1/2" = 1'-0"

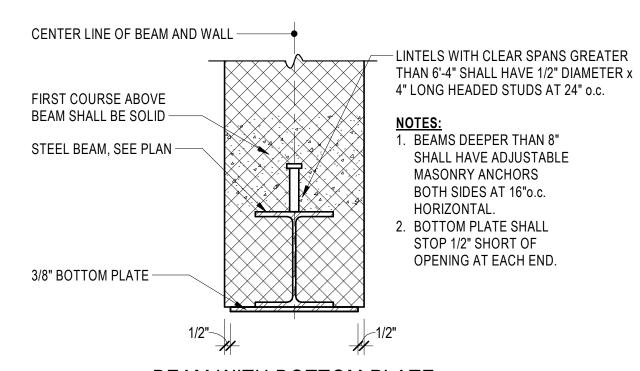




TYPICAL DETAIL

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

S3.01







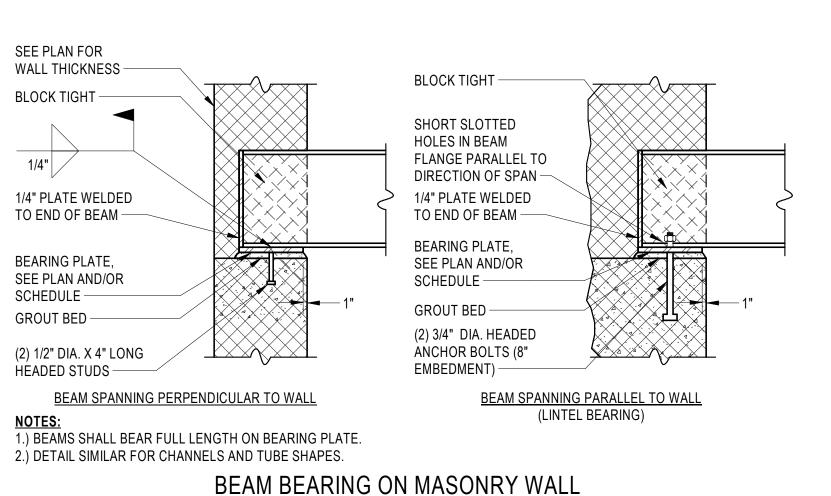
- FIRST COURSE ABOVE

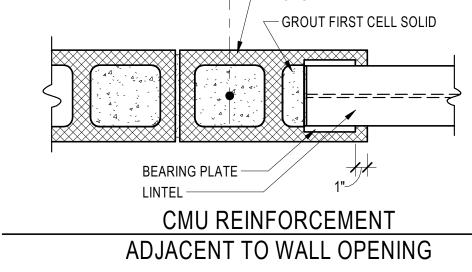
BEAM SHALL BE SOLID

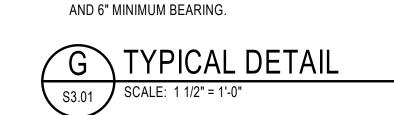
- GROUT WALL SOLID

AROUND LINTELS

OF WALL WIDTH.







SHALL BE AS FOLLOWS FOR EACH 4" WIDTH:

EXTERIOR WALLS

0'-0" TO 3'-0"...

3'-1" TO 5'-0"...

5'-1" TO 6'-0"...

6'-1" TO 8'-0"......

INTERIOR BEARING WALLS

LOOSE ANGLE LINTELS

1. LOOSE ANGLES LINTELS SHALL BE INSTALLED OVER OPENINGS

2. LOOSE LINTELS FOR OPENINGS IN MASONRY BEARING WALLS

3. ALL ANGLES SHALL HAVE THEIR SHORT LEG OUTSTANDING

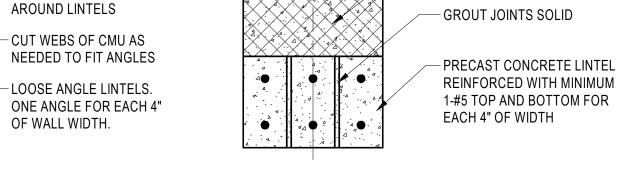
....3 1/2 "x3 1/2"x5/16" ANGLE

....4"x3 1/2"x5/16" ANGLE

....5"x3 1/2"x3/8" ANGLE

.....6"x3 1/2"x3/8" ANGLE

IIN THE FOLLOWING LOCATIONS UNLESS NOTED OTHERWISE:



— FIRST COURSE ABOVE

LINTEL SHALL BE SOLID

### PRECAST LINTELS

NOTES:

1. PRECAST LINTELS SHALL BE INSTALLED OVER OPENINGS IN ALL INTERIOR NON-BEARING PARTITIONS UNLESS NOTED OTHERWISE. 2. PRECAST LINTELS SHALL NOT BE INSTALLED ABOVE OPENINGS WIDER THAN 10'-0" WITHOUT THE CONSENT OF THE EOR.

**ARCHITECT** 

ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

9211 CORPORATE BLVD, SUITE 340

CIVIL

FISHER, COLLINS, CARTER **10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042** 410-461-2855

**KITCHEN** NYIKOS ASSOCIATES, INC.

> 18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879 240-683-9530

STRUCTURAL

COLUMBIA ENGINEERING, INC. 6210 OLD DOBBIN LANE, SUITE 150

COLUMBIA, MD 21045 410-992-9970

MECH./ELECTRICAL/PLUMBING CMTA, INC.

> **10411 MEETING STREET** PROSPECT, KY 40059

502-326-3085

ACOUSTIC & MEDIA SYSTEMS

**ACOUSTICAL DESIGN** COLLABORATIVE, LTD

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**606 BOSLEY AVE TOWSON, MD 21204** 

DOO CONSULTING

531 PICCADILLY ROAD **TOWSON, MD 21204** 443-463-5859

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000



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PROFESSIONAL SEAL:

**PRINTS ISSUED** DESCRIPTION: 02/25/2020

**HAMMOND HIGH** SCHOOL

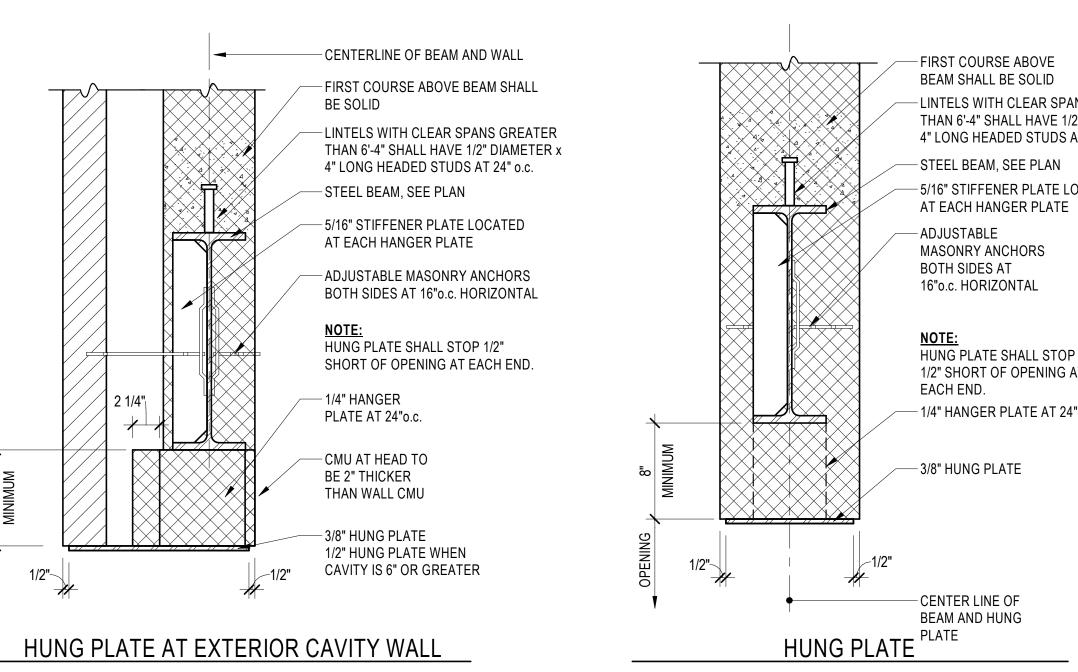
**RENOVATION AND** 

**ADDITION** 

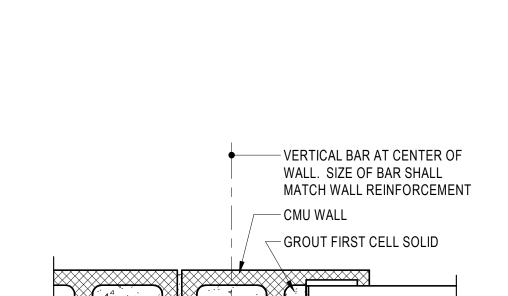
**HOWARD COUNTY PUBLIC SCHOOL** 

TYPICAL MASONRY **DETAILS** 

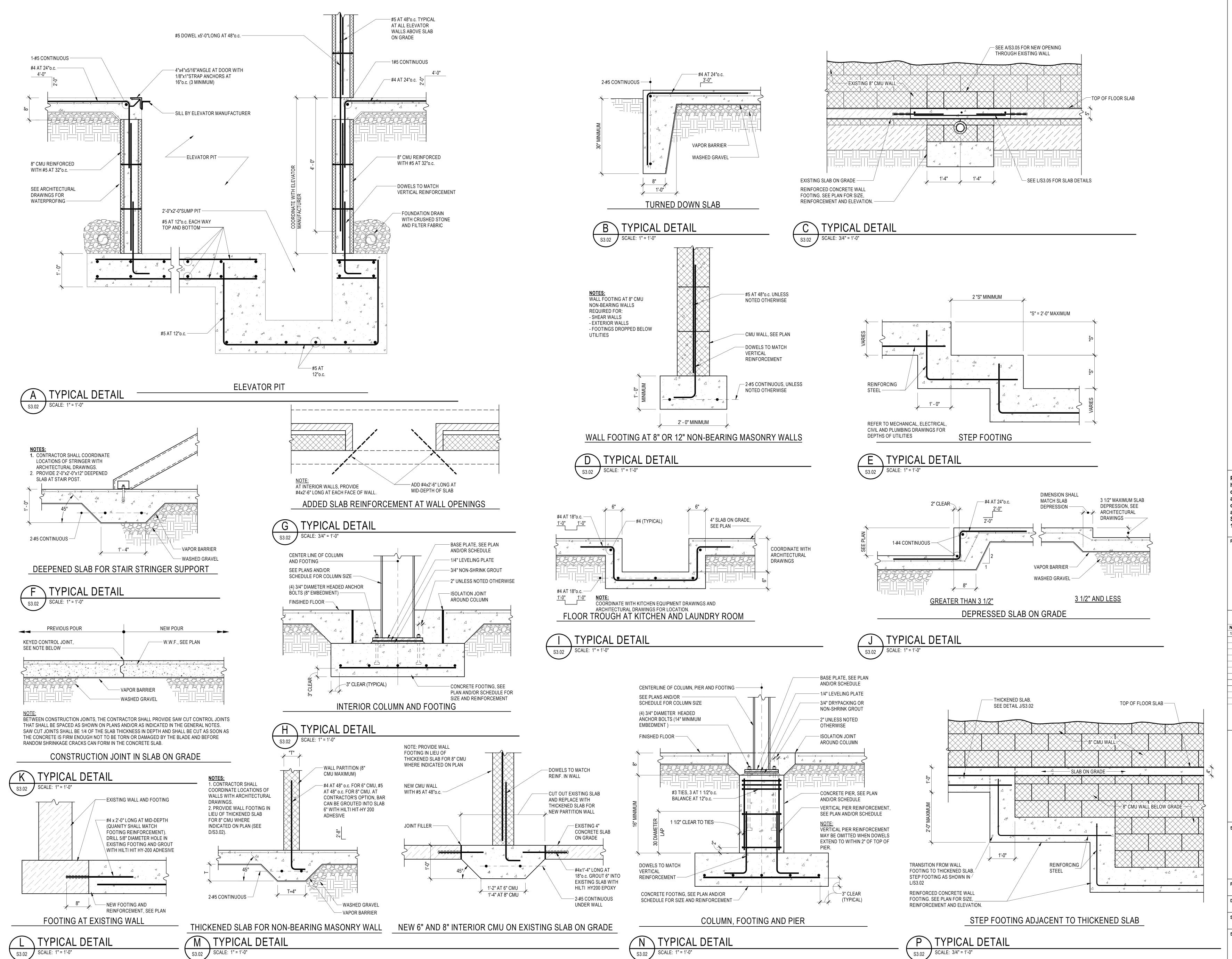
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• ILKOVITCH ARCHITECTS

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE
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410-461-2855

KITCHEN NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879 240-683-9530

STRUCTURAL
COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045 410-992-9970

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NO: DESCRIPTION: DATE:

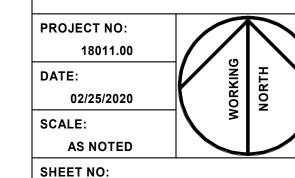
1 BID SET 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY PUBLIC SCHOOL

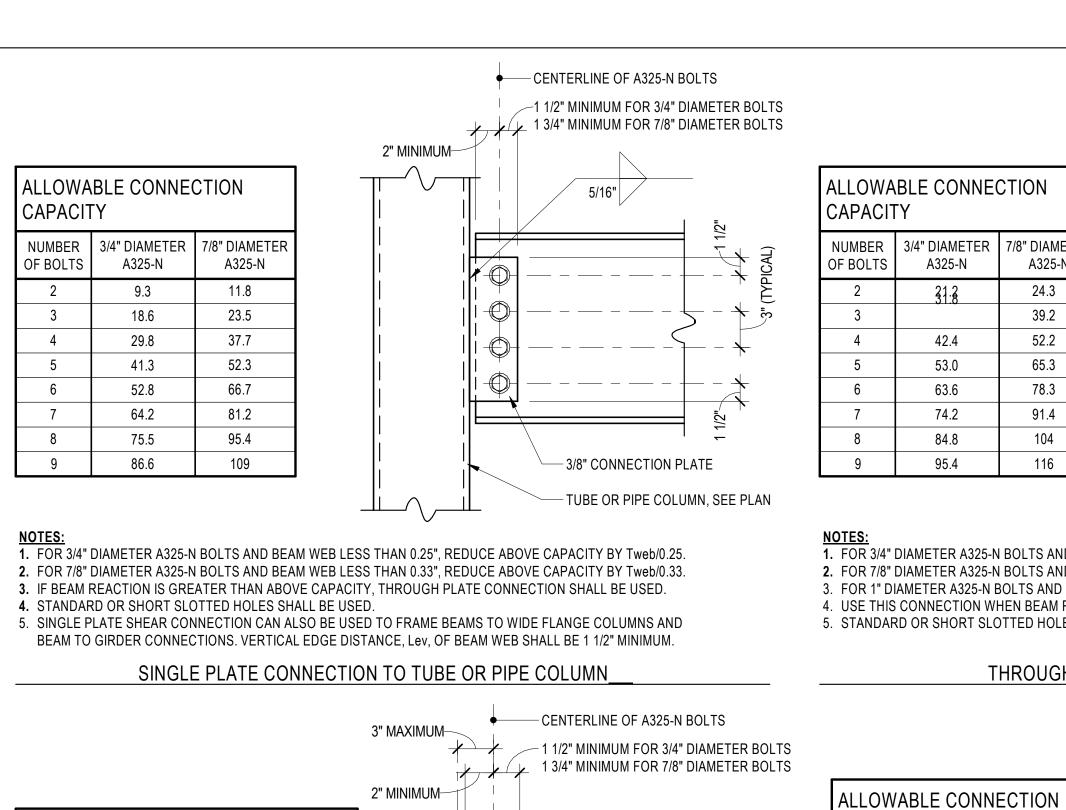
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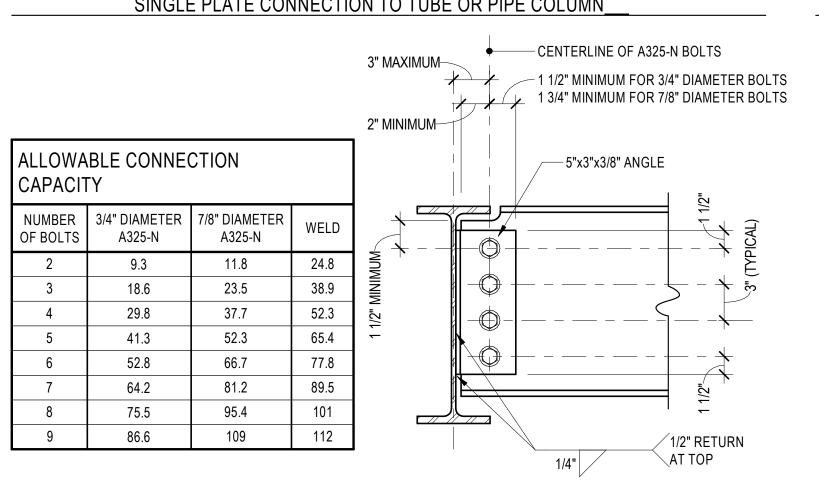
TYPICAL FOUNDATION DETAILS



S3.02

2/21/2020 10:19:03 AM CEI #18134





1. FOR 3/4" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.25", REDUCE ABOVE CAPACITY BY Tweb/0.25. 2. FOR 7/8" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.33". REDUCE ABOVE CAPACITY BY Tweb/0.33. 3. IF BEAMS FRAME TO SUPPORTING MEMBER FROM BOTH SIDES AND THE CONNECTION ANGLES ARE LOCATED BACK TO BACK, REDUCE THE WELD CAPACITY BY Tweb/0.38 FOR SUPPORTING MEMBER WEBS LESS THAN

4. STANDARD OR SHORT SLOTTED HOLES SHALL BE USED 5. 4"x3"x3/8" ANGLE CAN BE USED FOR 3/4" DIAMETER BOLTS PROVIDED MINIMUM REQUIRED DIMENSIONS ARE MAINTAINED. SINGLE ANGLE CONNECTION\_\_\_

#### - 1 1/2" MINIMUM FOR 3/4" DIAMETER BOLTS 1 3/4" MINIMUM FOR 7/8" AND 1" 2" MINIMUM-DIAMETER BOLTS ALLOWABLE CONNECTION 5/16" CAPACITY NUMBER | 3/4" DIAMETER | 7/8" DIAMETER | 1" DIAMETER F BOLTS A325-N A325-N A325-N \_ \_ \_ \_ \_ \_ \_ \_ 24.3 32.2 39.2 48.9 42.4 52.2 65.3 53.0 65.3 81.6 63.6 97.9 78.3 74.2 91.4 114 84.8 131 104 95.4 116 147 - 3/8" PLATE FOR 3/4" DIAMETER BOLTS 3/8" PLATE FOR 7/8" DIAMETER BOLTS 1/2" PLATE FOR 1" DIAMETER BOLTS

CENTERLINE OF A325-N BOLTS

TUBE OR PIPE COLUMN, SEE PLAN 1. FOR 3/4" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.25", REDUCE ABOVE CAPACITY BY Tweb/0.25. 2. FOR 7/8" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.33", REDUCE ABOVE CAPACITY BY Tweb/0.33. 3. FOR 1" DIAMETER A325-N BOLTS AND BEAM WEB LESS THAN 0.44". REDUCE ABOVE CAPACITY BY Tweb/0.44. 4. USE THIS CONNECTION WHEN BEAM REACTION IS GREATER THAN SINGLE PLATE CONNECTION CAPACITY. 5. STANDARD OR SHORT SLOTTED HOLES SHALL BE USED.

3" MAXIMUM-

2" MINIMMUM-

CAPACITY

OF BOLTS

NUMBER | 3/4" DIAMETER | 3/4" DIAMETER

SUPPORTING | SUPPORTED

A325-N AT

MEMBER

16.2

32.2

51.7

71.8

91.6

111

131

150

CAPACITY BY Tweb/0.36 FOR SUPPORTING MEMBER WEBS LESS THAN 0.36".

1. FOR SUPPORTED MEMBER WITH WEB LESS THAN 0.43", REDUCE ABOVE CAPACITY BY Tweb/0.43".

2. IF BEAMS FRAME TO SUPPORTING MEMBER FROM BOTH SIDES, REDUCE THE SUPPORTING MEMBER BOLT

**BOLTED / BOLTED DOUBLE ANGLE CONNECTION** 

3. STANDARD OR SHORT SLOTTED HOLES SHALL BE USED AT ANGLE LEG CONNECTED TO SUPPORTED

4. STANDARD HOLES SHALL BE USED AT ANGLE LEG CONNECTED TO SUPPORTING MEMBER

**CONNECTION DETAILS** 

A325-N AT

MEMBER

39.6

60.8

82.0

103

124

145

165

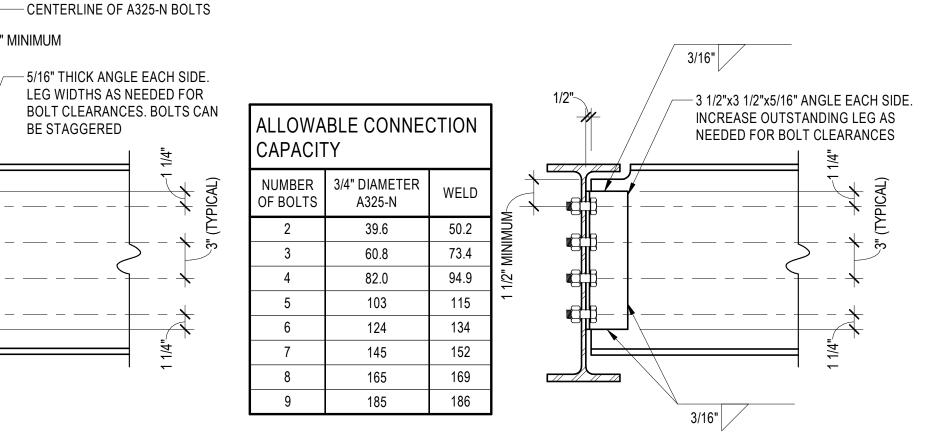
185

#### THROUGH PLATE CONNECTION TO TUBE OR PIPE COLUMN

\_1 1/2" MINIMUM

BE STAGGERED

\_ \_\_ \_ \_



TYPICAL CONNECTION NOTES:

THE SUPPORTED MEMBER.

SUPPORTING MEMBER.

MINIMUM LENGTH OF CONNECTION SHALL BE ONE-HALF THE T-DIMENSION OF

ALL CONNECTIONS SHALL BE DESIGNED FOR THE ECCENTRICITY BETWEEN

MEMBER. THE ECCENTRICITY SHALL BE FULLY RESISTED BY THE BOLTS OR

STANDARD OR SHORT SLOTTED HOLES, EDGE DISTANCES AND WELD SIZE

SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE PRIOR TO THE

ALLOWABLE CONNECTION CAPACITY TABLES, ALONG WITH SUPPORTING

PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION.

THE CONNECTIONS SHOWN IN THIS DETAIL OR PREVIOUSLY REVIEWED

DEVELOPMENT OF THE STEEL SHOP DRAWINGS.

ALTERNATE CONNECTION DETAILS WILL BE REJECTED.

THE CENTROID OF THE BOLT GROUP OR WELD AND THE SUPPORTING

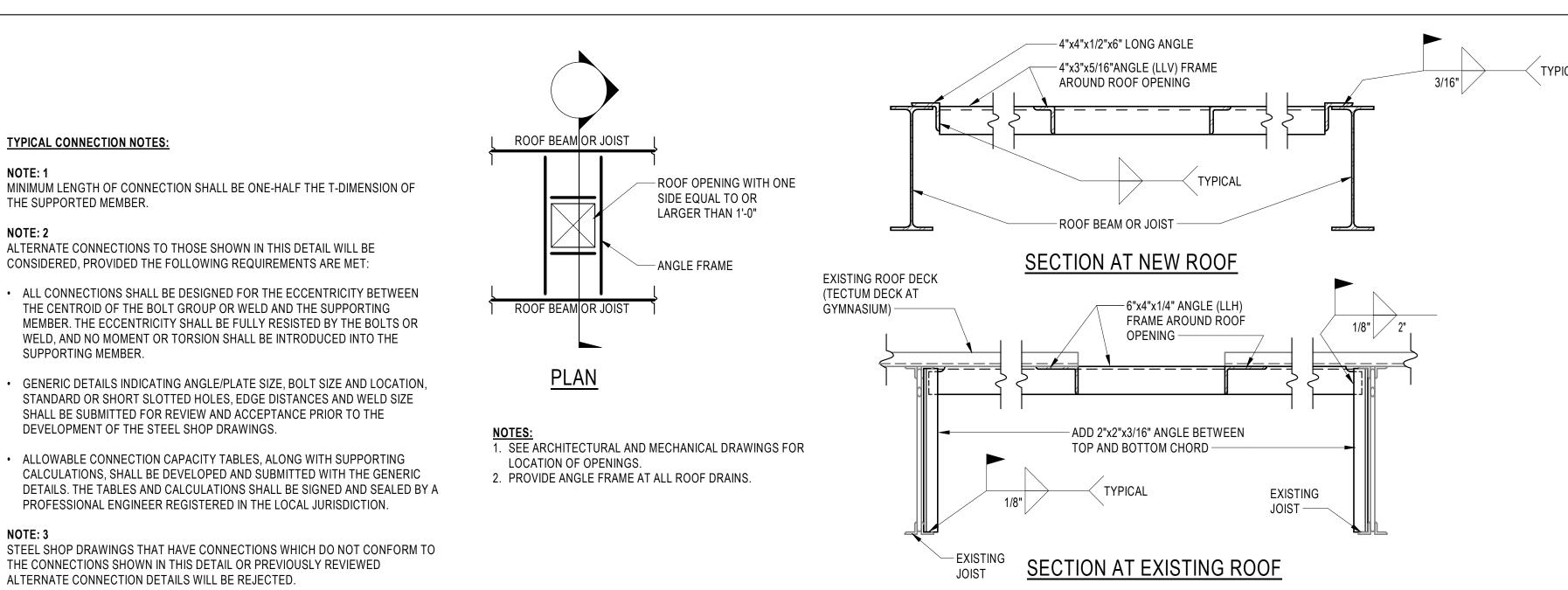
WELD, AND NO MOMENT OR TORSION SHALL BE INTRODUCED INTO THE

ALTERNATE CONNECTIONS TO THOSE SHOWN IN THIS DETAIL WILL BE

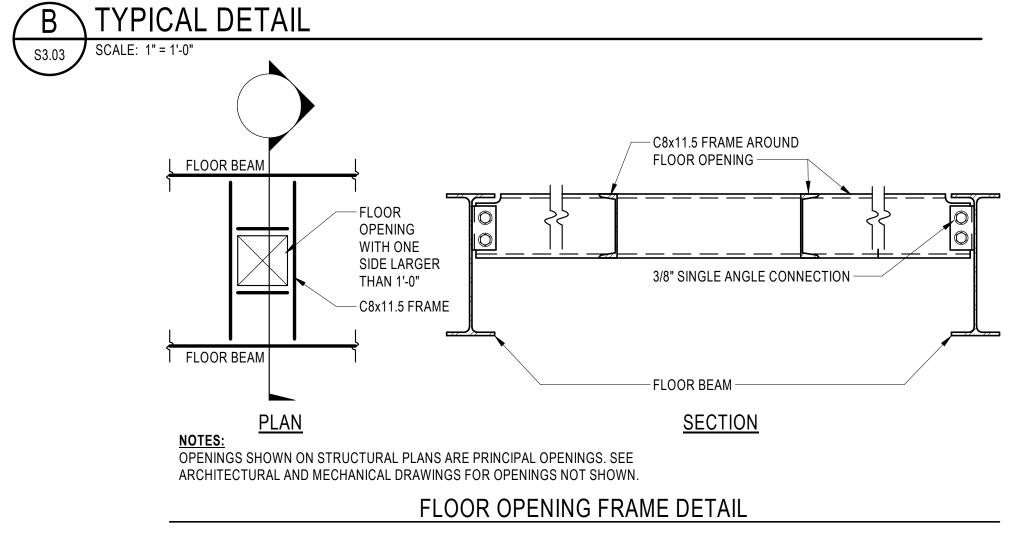
CONSIDERED, PROVIDED THE FOLLOWING REQUIREMENTS ARE MET:

1. REDUCE 3/16" WELD CAPACITY BY Tweb/0.29 FOR BEAM WEB LESS THAN 0.29". 2. IF BEAMS FRAME TO SUPPORTING MEMBER FROM BOTH SIDES, REDUCE THE BOLT CAPACITY BY Tweb/0.36 FOR SUPPORTING MEMBER WEB LESS THAN 0.36". 3. STANDARD HOLES SHALL BE USED.

BOLTED / WELDED DOUBLE ANGLE CONNECTION\_





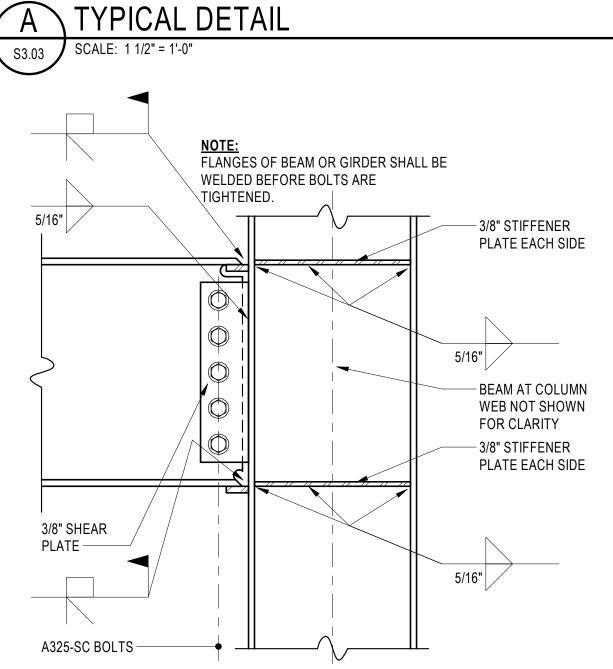


TYPICAL DETAIL SCALE: 1" = 1'-0" S3.03

—#4 x 4'-0" LONG AT

12"o.c. UNLESS

NOTED OTHERWISE



GIRDER TO COLUMN MOMENT CONNECTION

CANTILEVER BEAM

TYPICAL DETAIL

SCALE: 1" = 1'-0"

CANTILEVER, SEE PLAN

- CENTER LINE OF COLUMN

- STEEL COLUMN, SEE

SCHEDULE FOR SIZE

PLAN AND/OR

TYPICAL DETAIL

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

5/16" STIFFENER PLATE

NOTED OTHERWISE

CANTILEVER BEAM,

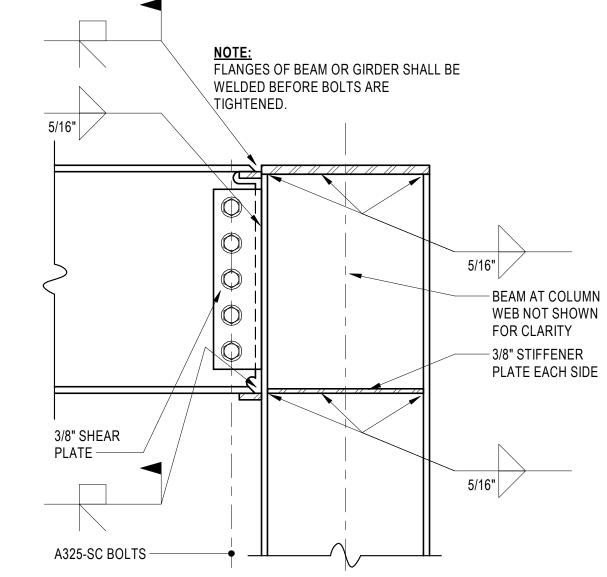
SEE PLAN FOR SIZE -

3/4" CAP PLATE -

(4) 3/4" DIAMETER

HIGH TENSILE BOLTS —

EACH SIDE OF WEB UNLESS



GIRDER TO COLUMN MOMENT CONNECTION

CENTER LINE OF

3/8" PLATE

ON ONE SIDE

OF WEB ----

STEEL BEAM,

SEE PLAN ----

3/4" DIAMETER

A325 BOLTS -

CANTILEVER BEAM

TYPICAL DETAIL

S3.03 SCALE: 1 1/2" = 1'-0"

5/16" STIFFENER PLATE

NOTED OTHERWISE

CANTILEVER BEAM,

SEE PLAN FOR SIZE -

3/4" CAP PLATE -

(4) 3/4" DIAMETER

HIGH TENSILE BOLTS -

STEEL COLUMN, SEE

SCHEDULE FOR SIZE -

PLAN AND/OR

S3.03

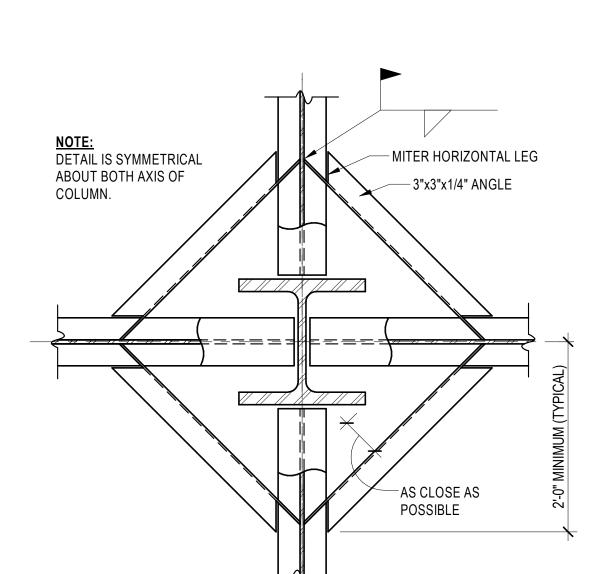
CENTER LINE OF COLUMN

SCALE: 1" = 1'-0"

TYPICAL DETAIL

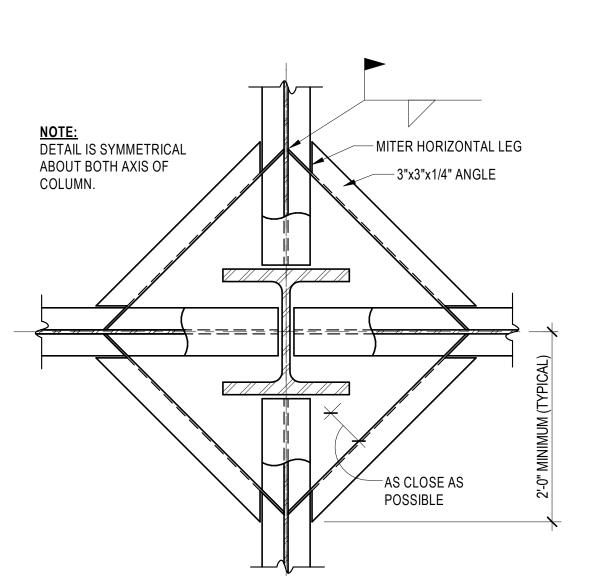
EACH SIDE OF WEB UNLESS

BEAM TO COLUMN WEB MOMENT CONNECTION



1. SLEEVE SHALL BE LOCATED NO CLOSER THAN 4'-0" FROM END OF BEAM. 2. SEE MEP DRAWINGS FOR REQUIRED SLEEVE LOCATIONS. PIPE THROUGH BEAM

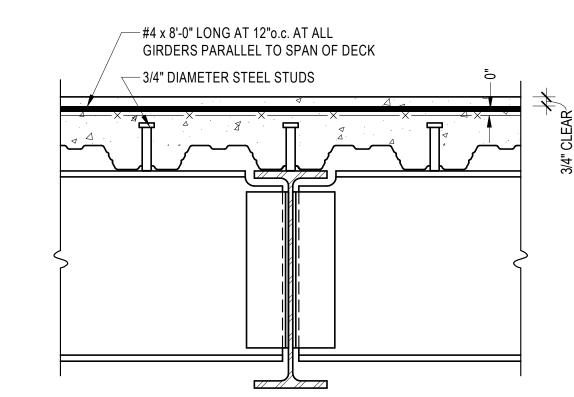
TYPICAL DETAIL SCALE: 1 1/2" = 1'-0" S3.03



SLAB OPENING AND SLAB PERIMETER

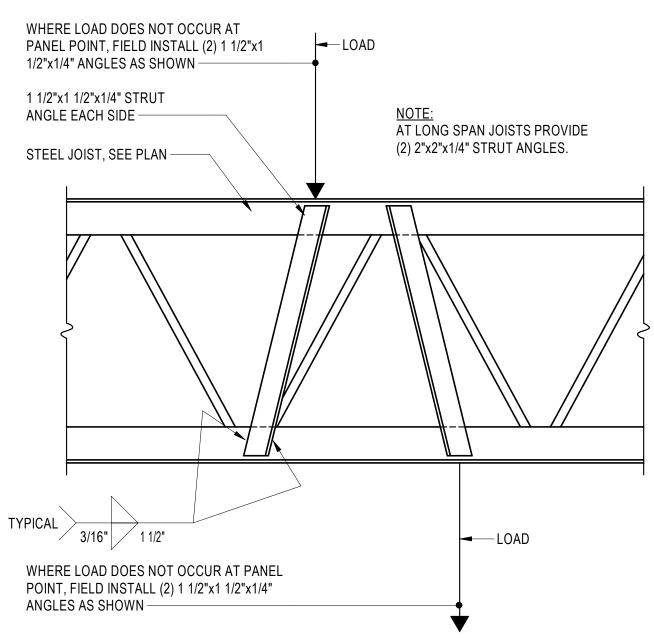
G TYPICAL DETAIL

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



COMPOSITE FLOOR BEAM AND GIRDER

**TYPICAL DETAIL** SCALE: 1 1/2" = 1'-0" S3.03



JOIST LOAD STRUT DETAIL

\TYPICAL DETAIL SCALE: 3/4" = 1'-0" S3.03

PROJECT NO: 18011.00 02/25/2020 SCALE:

SHEET TITLE:

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850

301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

**10272 BALTIMORE NATIONAL PIKE** 

ELLICOTT CITY, MD 21042

410-461-2855

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COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150

COLUMBIA, MD 21045 410-992-9970

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**CONSTRUCTION MANAGER** 

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1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009

410-335-3000

CEI

Professional Certification. hereby certify that these

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architect under the laws of the

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14479, Expiration Date: 6/22/2021

**PRINTS ISSUED** 

**HAMMOND HIGH** 

SCHOOL

**RENOVATION AND** 

**ADDITION** 

**HOWARD COUNTY** 

**PUBLIC SCHOOL** 

TYPICAL STEEL

FRAMING DETAILS

02/25/2020

DESCRIPTION:

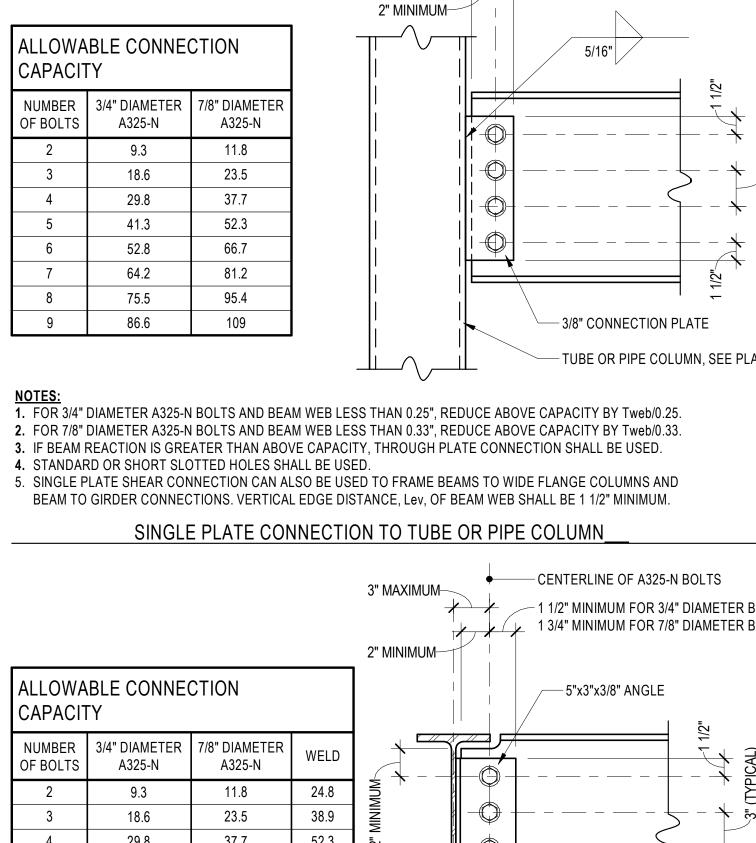
duly licensed professional

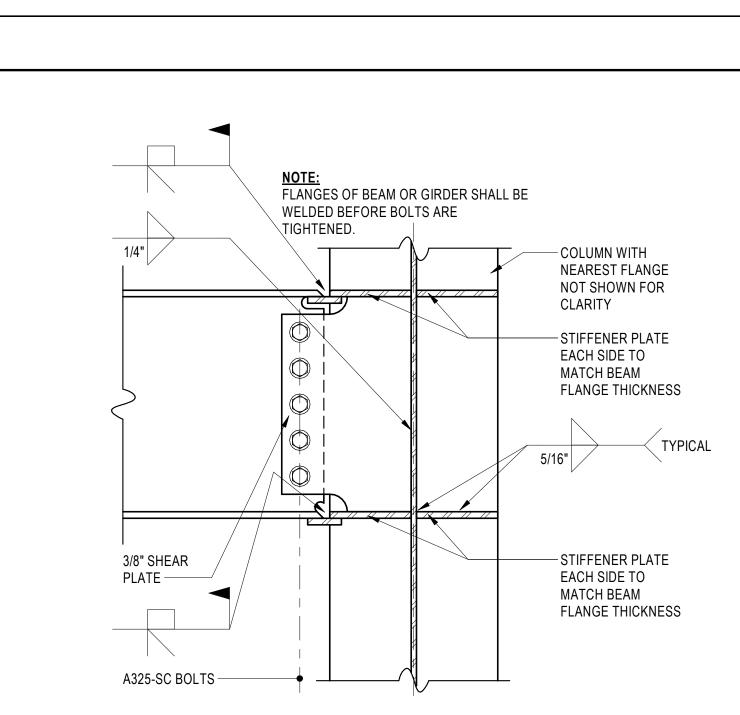
**PROFESSIONAL SEAL:** 

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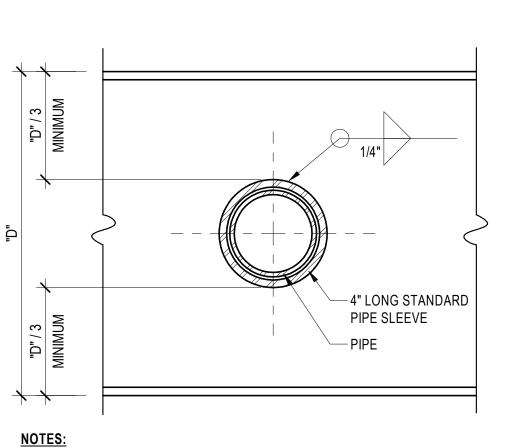
240-683-9530

AS NOTED SHEET NO:





TYPICAL DETAIL



TYPICAL DETAIL SCALE: 1" = 1'-0"

1-#5 CONTINUOUS -

0" TO 5", 16 GAGE

5" TO 7", 14 GAGE

CONTRACTOR -

7" TO 10", 12 GAGE

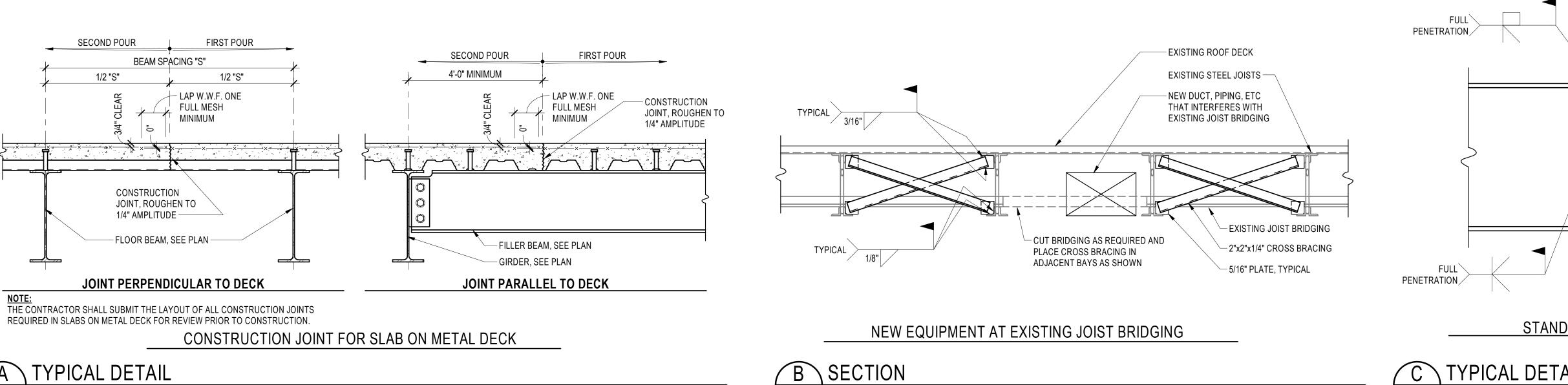
10" TO 16", 1/4" BENT PLATE

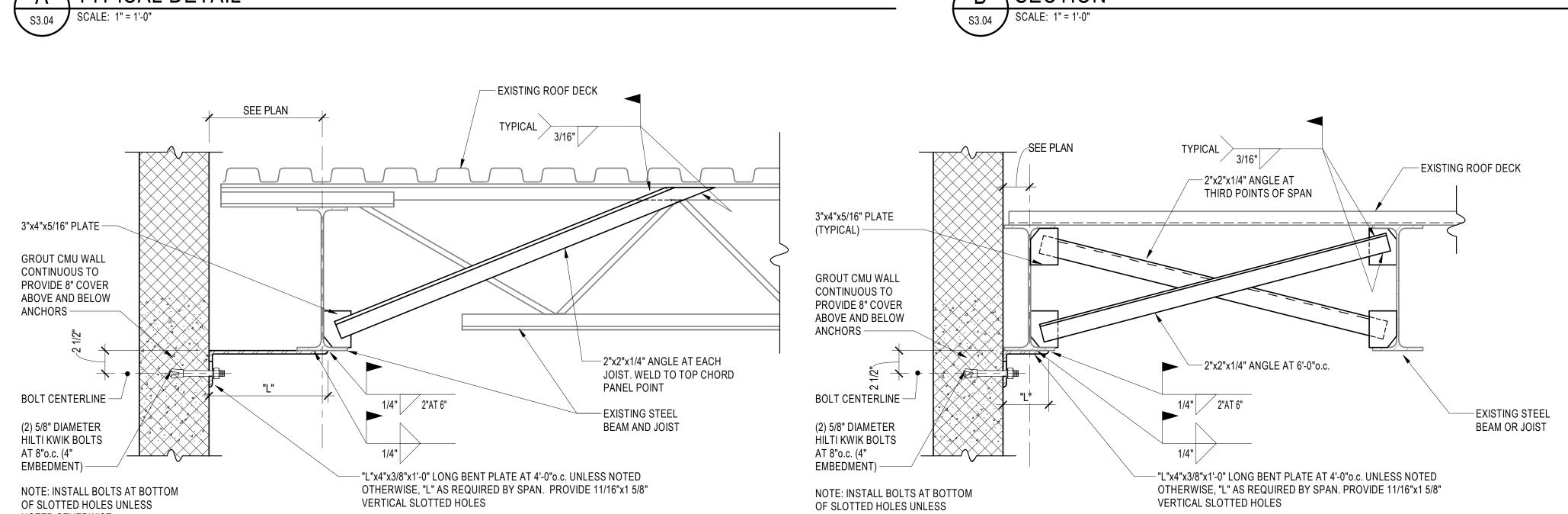
METAL CLOSURE PER DECK

DECK SUPPORT AT COLUMN

S3.03

2/21/2020 10:19:07 AM CEI #18134





EXTERIOR CMU WALL TIE - BACK AT EXISTING ROOF STRUCTURE

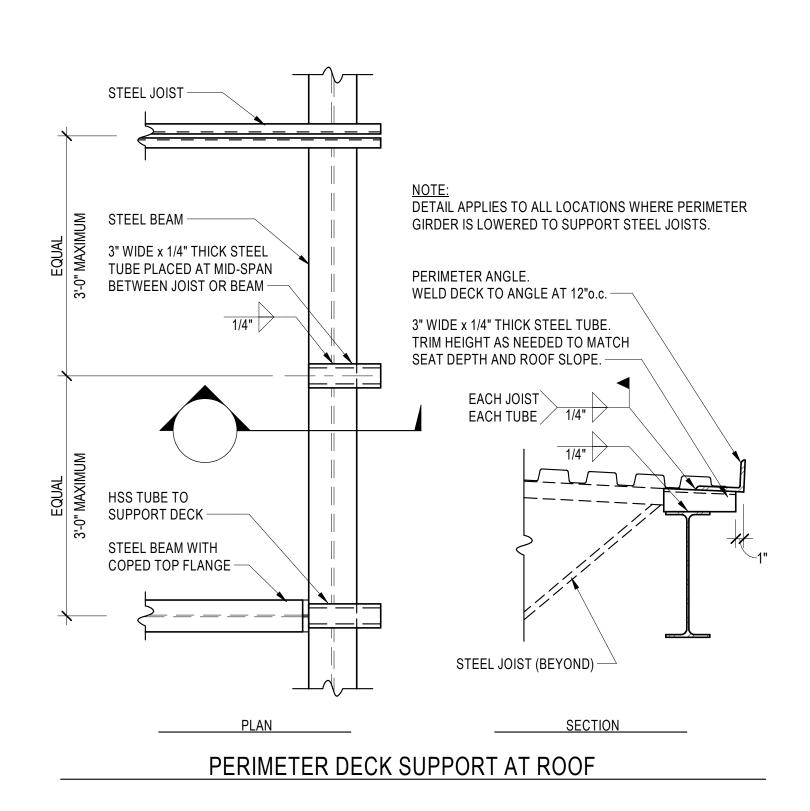
NOTED OTHERWISE



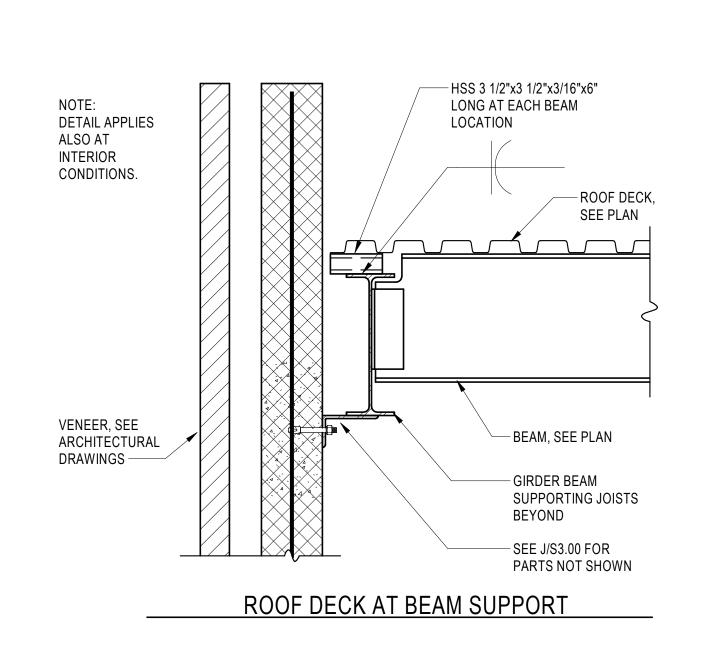
F TYPICAL DETAIL

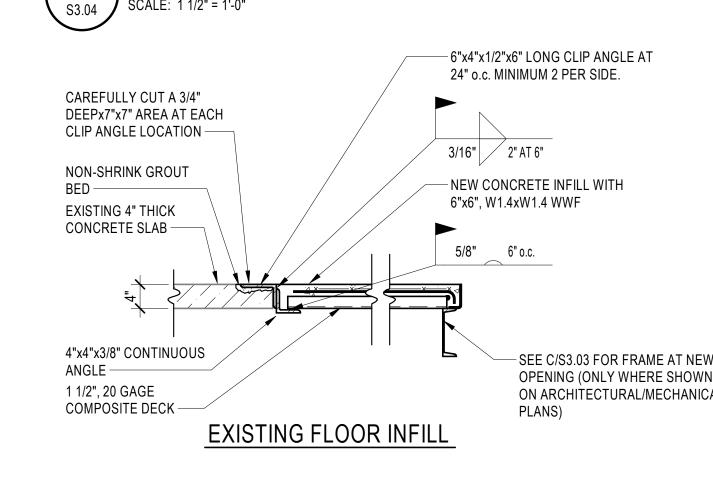
OF SLOTTED HOLES UNLESS

NOTED OTHERWISE



WALL PERPENDICULAR TO JOIST OR BEAM

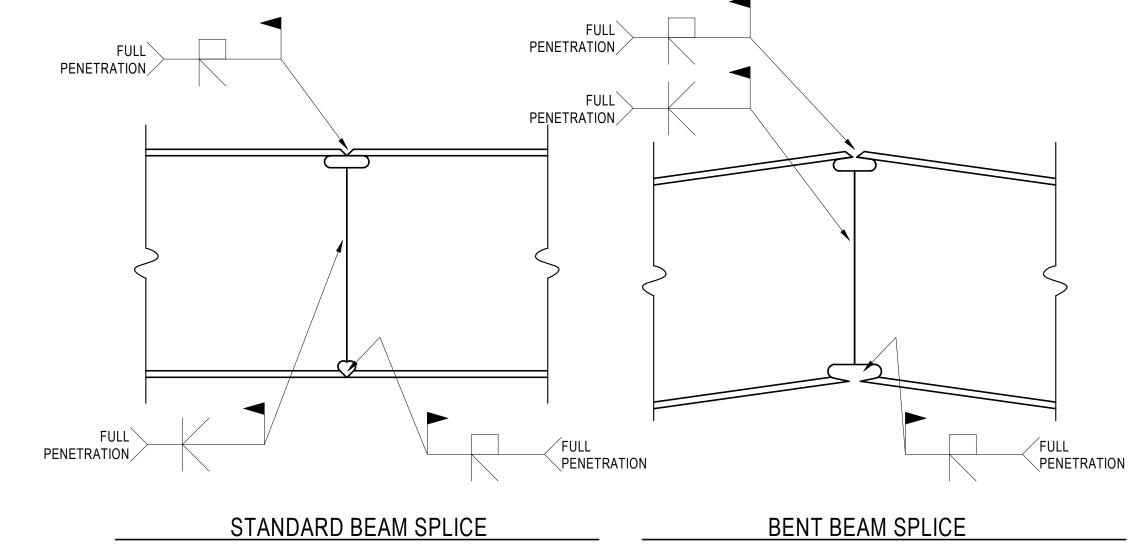








WALL PARALLEL TO JOIST OR BEAM



C TYPICAL DETAIL S3.04 SCALE: 1 1/2" = 1'-0"

> CMTA, INC. **10411 MEETING STREET** PROSPECT, KY 40059 502-326-3085

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

**10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042** 410-461-2855

**KITCHEN** 

NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY

GAITHERSBURG, MD 20879

STRUCTURAL

COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

410-992-9970

MECH./ELECTRICAL/PLUMBING

240-683-9530

**ACOUSTIC & MEDIA SYSTEMS ACOUSTICAL DESIGN** COLLABORATIVE, LTD

**606 BOSLEY AVE TOWSON, MD 21204** 410-821-5930 (P)

531 PICCADILLY ROAD **TOWSON, MD 21204** 443-463-5859

LEED

DOO CONSULTING

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 14479, Expiration Date: 6/22/2021

PROFESSIONAL SEAL:

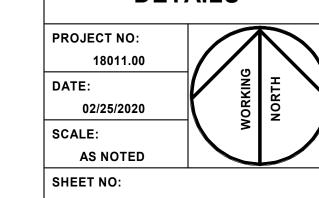
NO:	DESCRIPTION:	DATE:
1	BID SET	02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

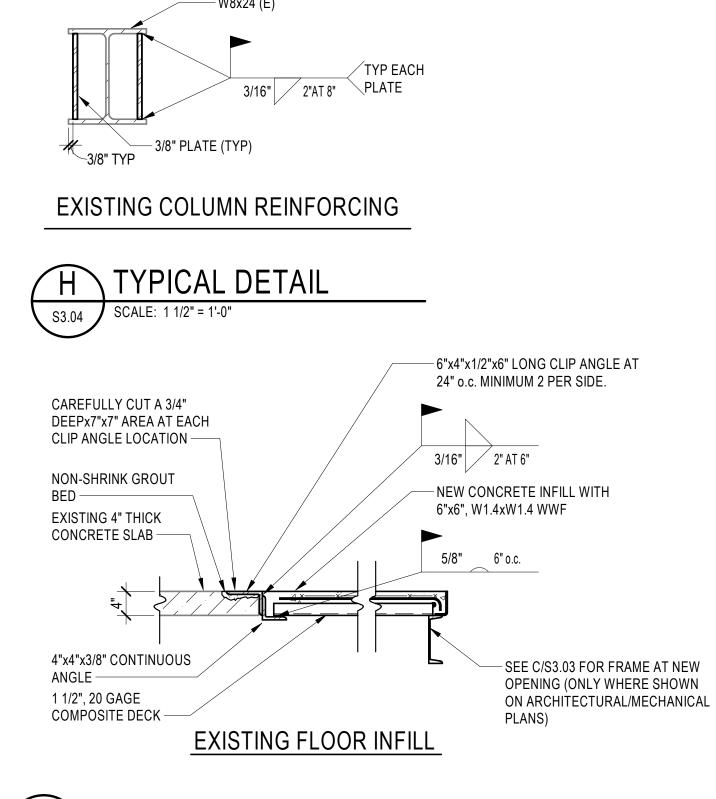
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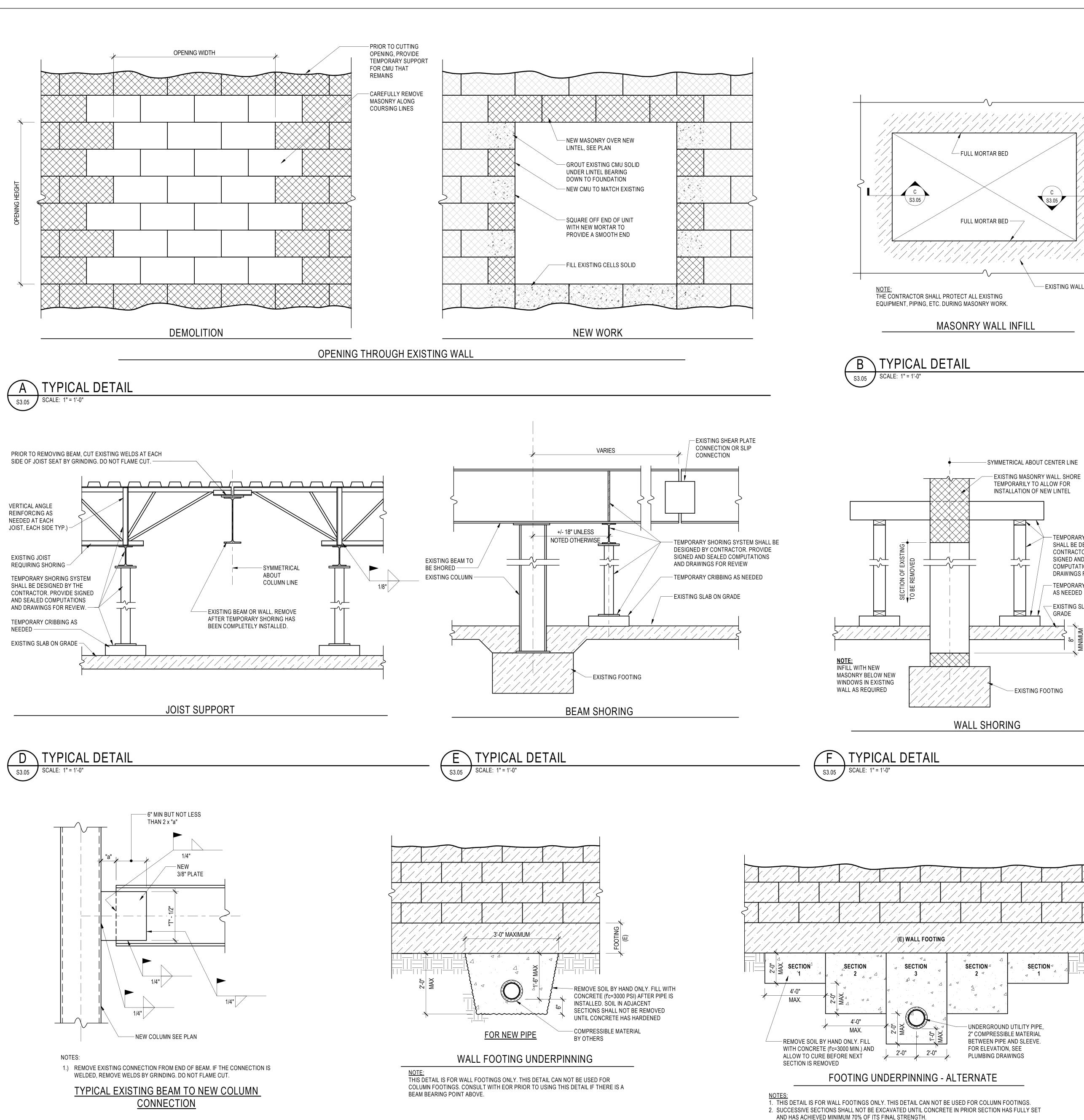
TYPICAL STEEL FRAMING AND **RENOVATION DETAILS** 



S3.04

2/21/2020 10:19:09 AM CEI #18134



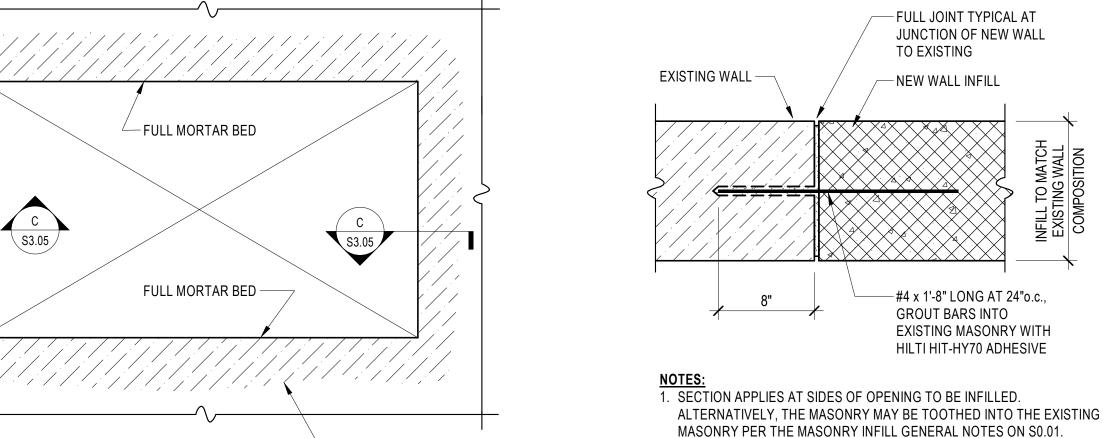


TYPICAL DETAIL

SCALE: 3/4" = 1'-0"

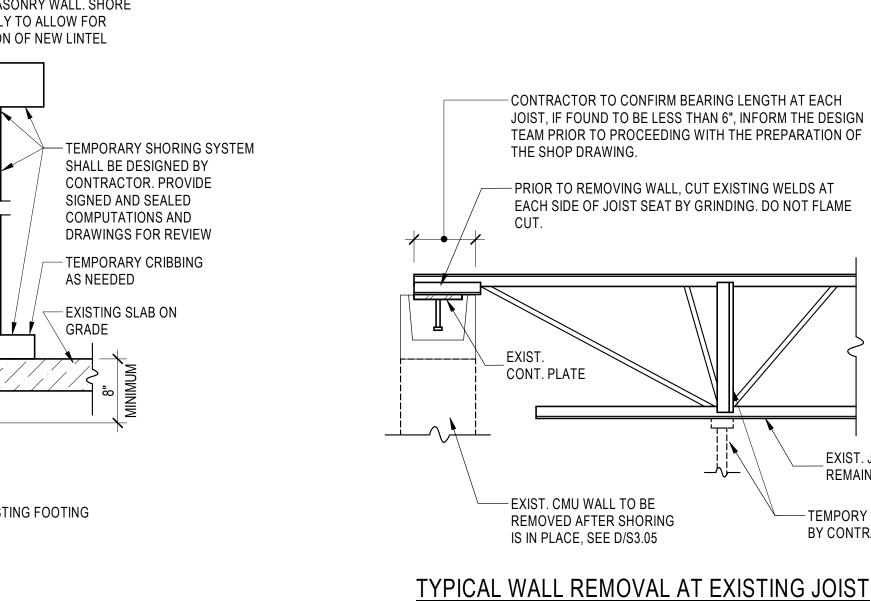
\ TYPICAL DETAIL

S3.05 | SCALE: 1 1/2" = 1'-0"



3. IF REQUIRED, PROVIDE VERTICAL REINFORCEMENT PER A/S3.00 IF NEW LINTEL BEARS ON INFILL.

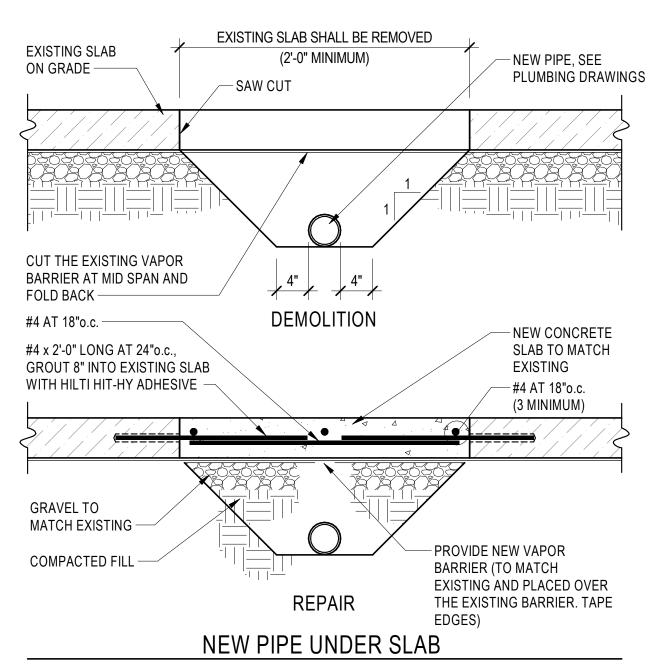
\TYPICAL DETAIL SCALE: 1 1/2" = 1'-0"





2. PROVIDE FULL MORTAR JOINT BETWEEN EXISTING AND NEW WALL

INFILL. TYPICAL AT SIDES, TOP AND BOTTOM.



1. COMPACTED FILL MAY BE SUBSTITUTED WITH OTHER COARSE GRANULAR MATERIAL WITH THE

APROVAL OF THE GEOTECHNICAL ENGINEER. \TYPICAL DETAIL S3.05 SCALE: 1" = 1'-0"

NOTES:

TYPICAL DETAIL

SCALE: 3/4" = 1'-0"

S3.05

**TYPICAL RENOVATION DETAILS** PROJECT NO: 18011.00 02/25/2020 SCALE: **AS NOTED** SHEET NO: S3.05

**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340

ROCKVILLE, MD 20850

301-770-0177(P) 301-330-3224(F)

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**10272 BALTIMORE NATIONAL PIKE** 

**ELLICOTT CITY, MD 21042** 

410-461-2855

**KITCHEN** 

NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879

240-683-9530

STRUCTURAL

COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

410-992-9970

MECH./ELECTRICAL/PLUMBING

CMTA, INC.

**10411 MEETING STREET** PROSPECT, KY 40059

502-326-3085

**ACOUSTIC & MEDIA SYSTEMS** 

**ACOUSTICAL DESIGN** 

COLLABORATIVE, LTD

**606 BOSLEY AVE** 

**TOWSON, MD 21204** 410-821-5930 (P)

LEED

DOO CONSULTING

531 PICCADILLY ROAD **TOWSON, MD 21204** 

443-463-5859

**CONSTRUCTION MANAGER** 

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009

410-335-3000

Professional Certification. I

documents were prepared or

architect under the laws of the

State of Maryland, License No.:

14479, Expiration Date: 6/22/2021

**PRINTS ISSUED** 

**HAMMOND HIGH** 

SCHOOL

**RENOVATION AND** 

**ADDITION** 

**HOWARD COUNTY** 

**PUBLIC SCHOOL** 

SHEET TITLE:

02/25/2020

DESCRIPTION:

approved by me, and that I am a

hereby certify that these

duly licensed professional

PROFESSIONAL SEAL:

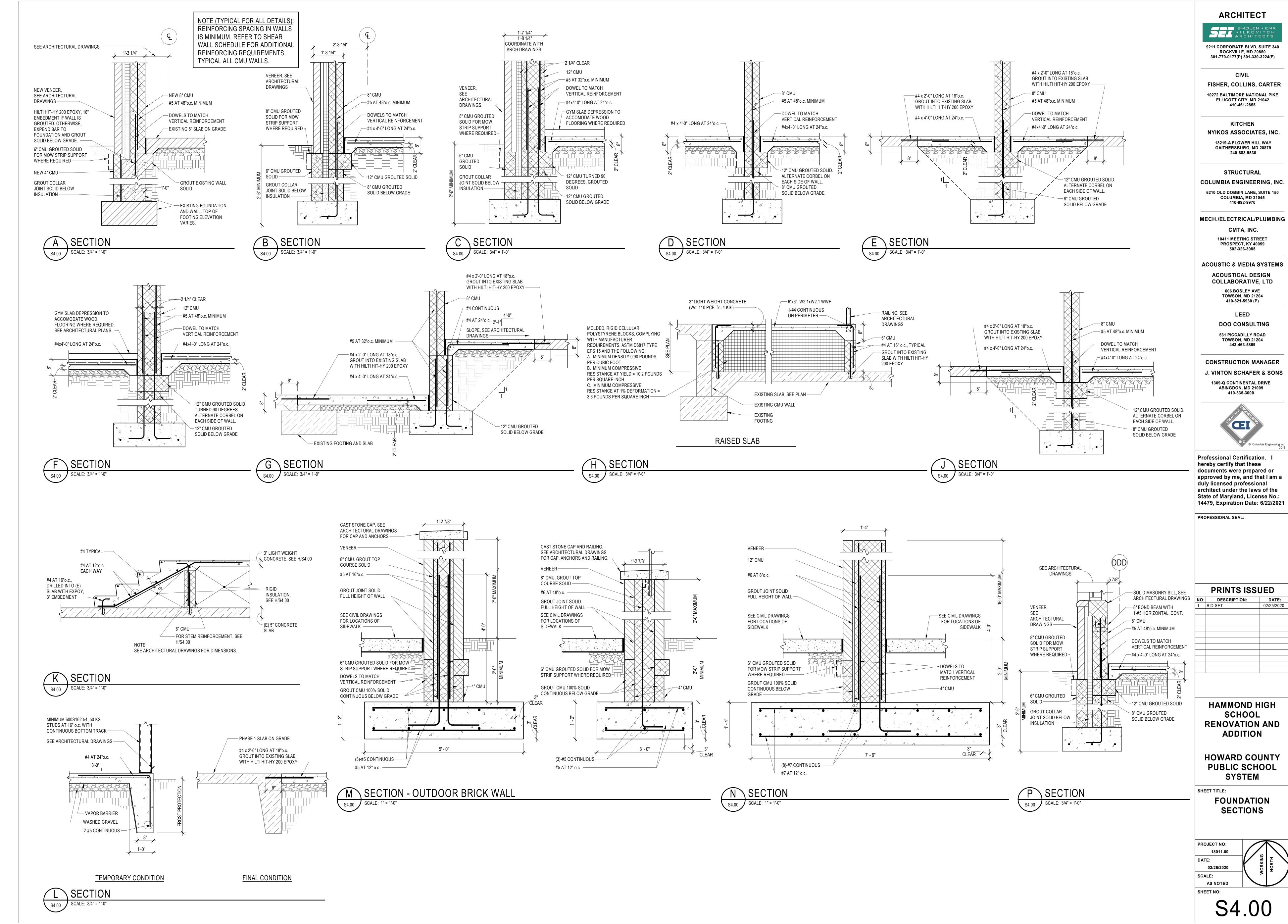
EXIST. JOIST TO

TEMPORY SHORING

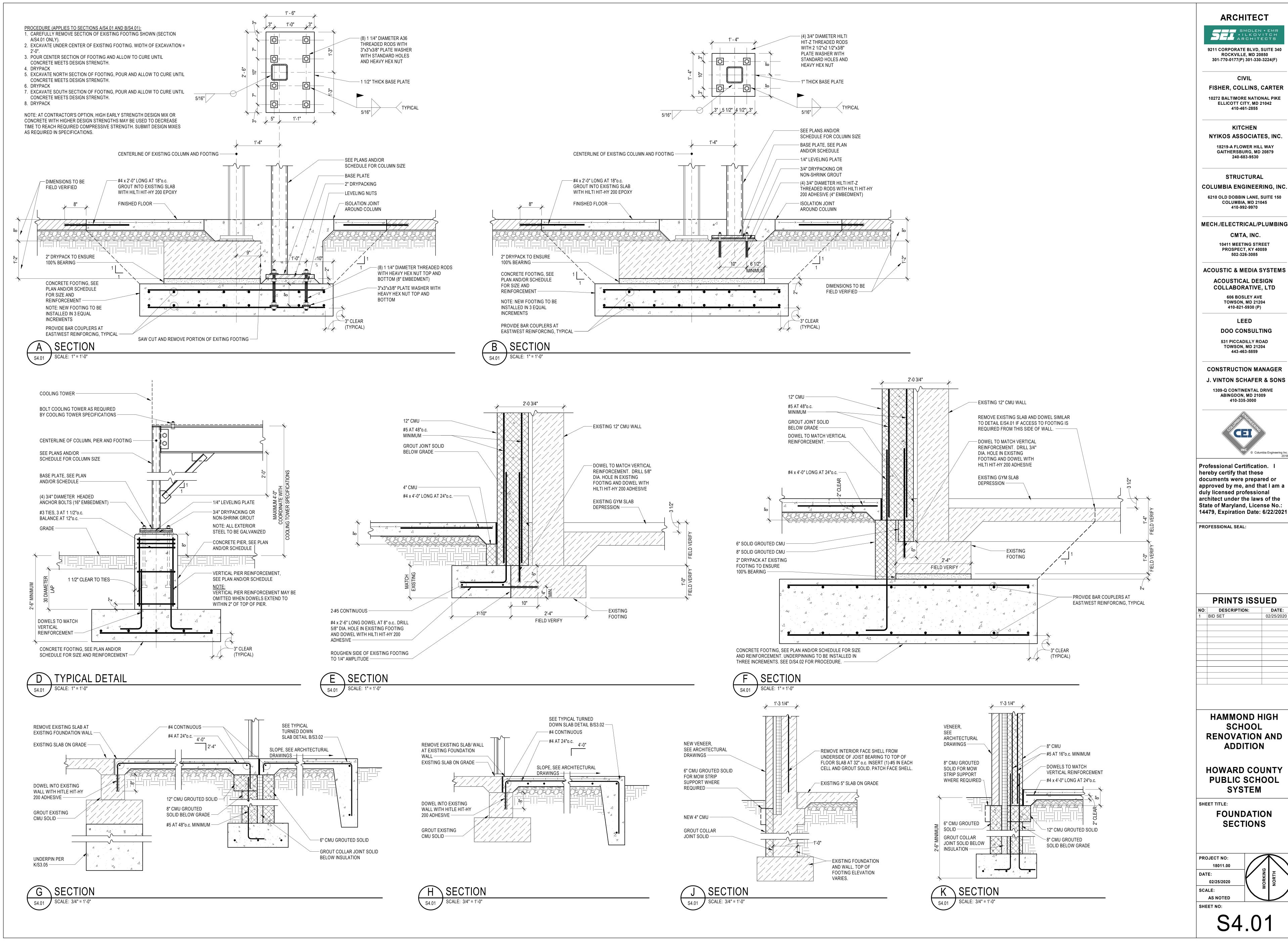
BY CONTRACTOR

REMAIN SEE PLAN

2/21/2020 10:19:10 AM CEI #18134



2/21/2020 10:19:12 AM CEI #18134



2/21/2020 10:19:14 AM CEI #18134

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CIVIL

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NYIKOS ASSOCIATES, INC. 18219-A FLOWER HILL WAY

STRUCTURAL COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

MECH./ELECTRICAL/PLUMBING

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**10411 MEETING STREET** PROSPECT, KY 40059

502-326-3085

**ACOUSTIC & MEDIA SYSTEMS** 

**ACOUSTICAL DESIGN** COLLABORATIVE, LTD **606 BOSLEY AVE** 

410-821-5930 (P)

DOO CONSULTING

531 PICCADILLY ROAD **TOWSON, MD 21204** 443-463-5859

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS



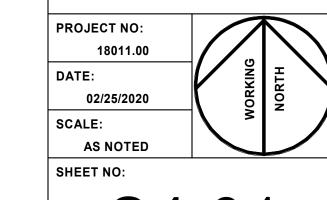
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.:

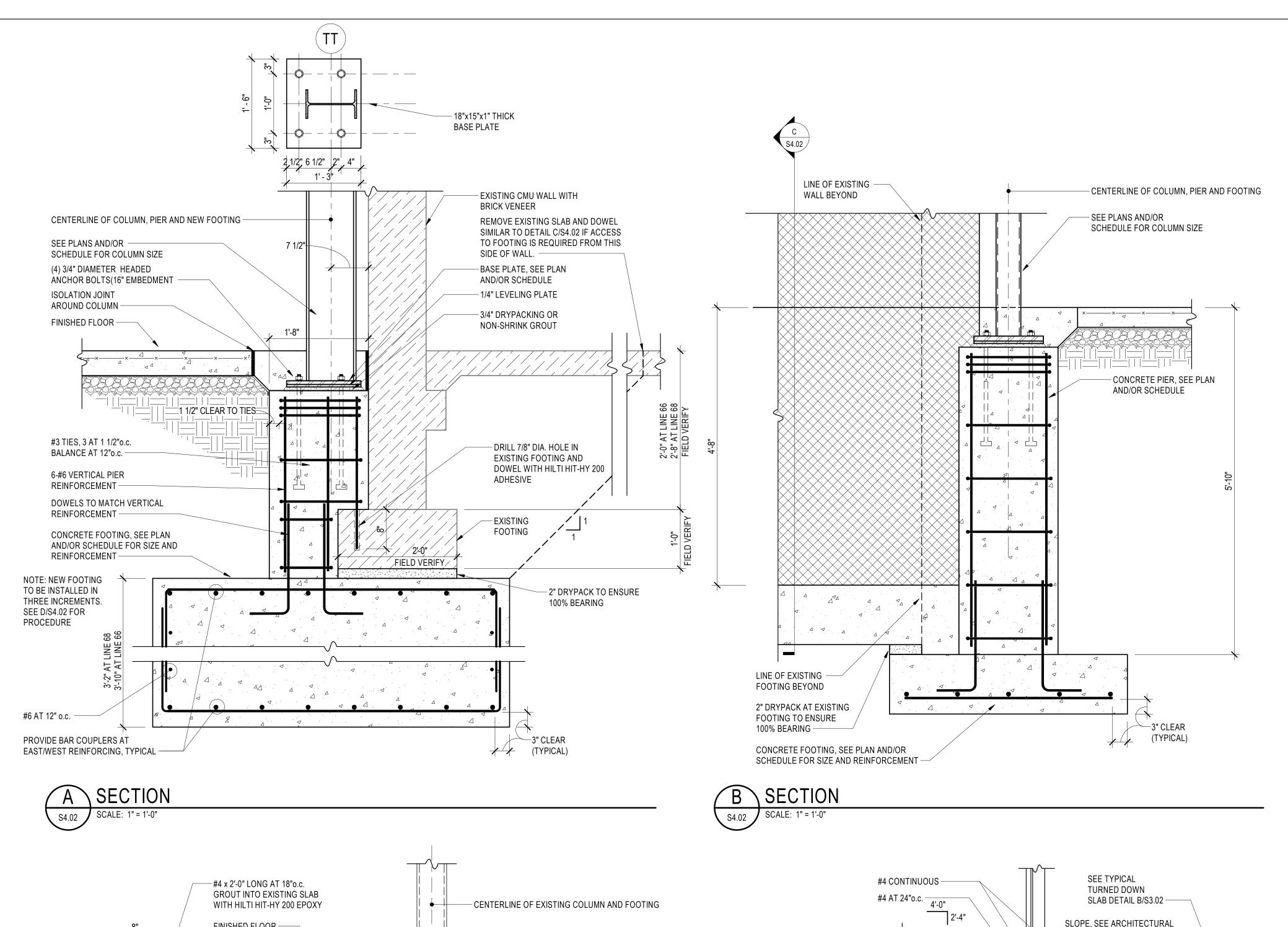
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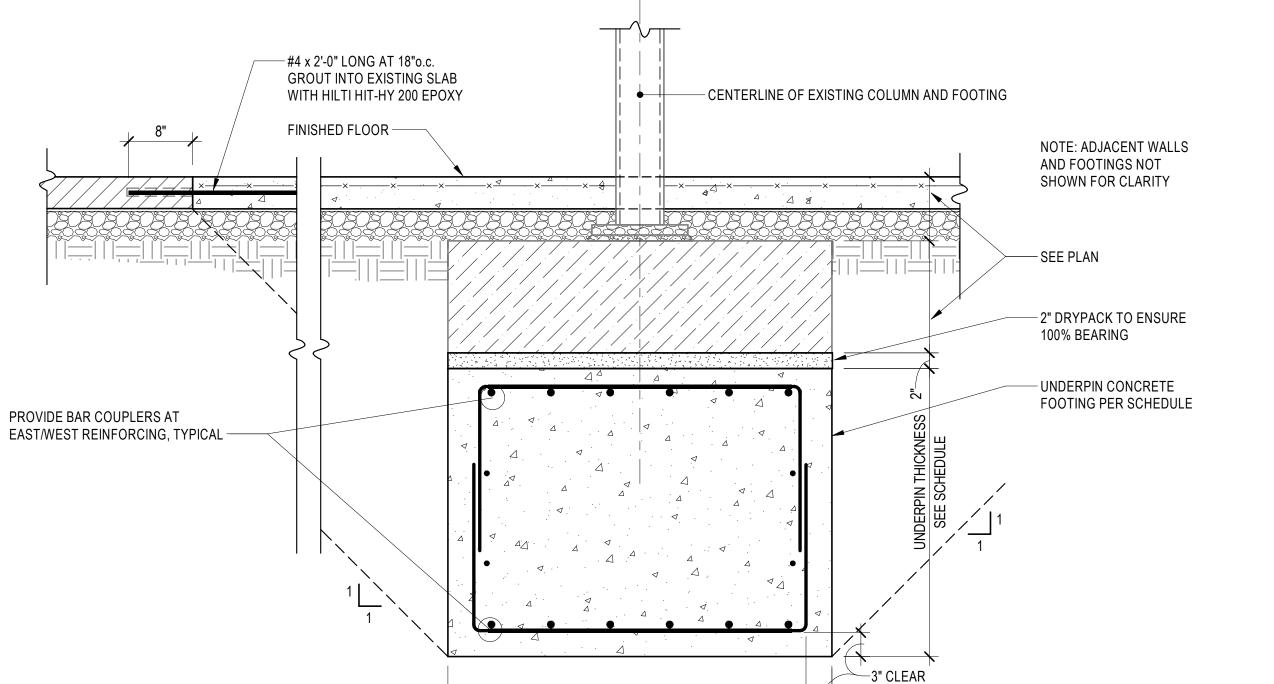
**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** 

**FOUNDATION SECTIONS** 







FOOTING WIDTH

SEE SCHEDULE

(TYPICAL)

1. EXCAVATE UNDER CENTER OF EXISTING FOOTING.

2. POUR CENTER SECTION OF FOOTING AND ALLOW TO CURE UNTIL CONCRETE MEETS DESIGN STRENGTH.

4. EXCAVATE EAST SECTION OF FOOTING, POUR AND

ALLOW TO CURE UNTIL CONCRETE MEETS DESIGN

6. EXCAVATE WEST SECTION OF FOOTING, POUR AND

ALLOW TO CURE UNTIL CONCRETE MEETS DESIGN

NOTE: AT CONTRACTOR'S OPTION, HIGH EARLY STRENGTH

STRENGTHS MAY BE USED TO DECREASE TIME TO REACH

REQUIRED COMPRESSIVE STRENGTH. SUBMIT DESIGN

DESIGN MIX OR CONCRETE WITH HIGHER DESIGN

MIXES AS REQUIRED IN SPECIFICATIONS.

WIDTH OF EXCAVATION = 2'-0".

DRYPACK.

STRENGTH.

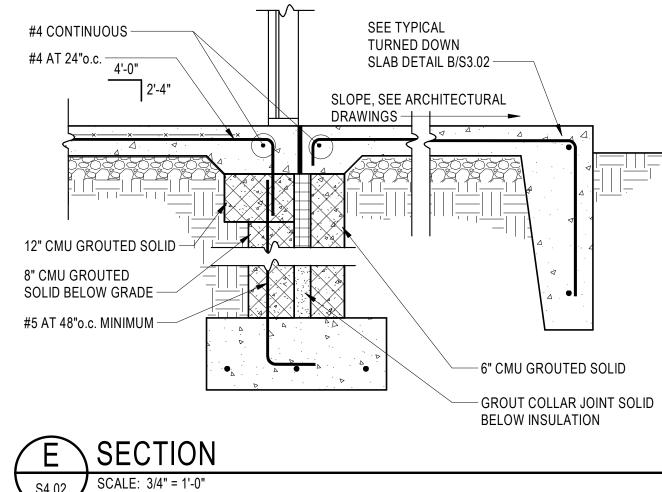
STRENGTH.

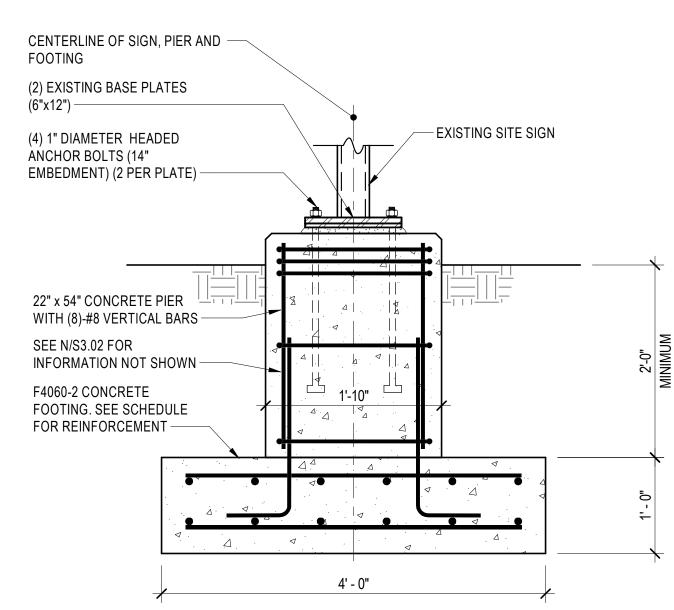
DRYPACK.

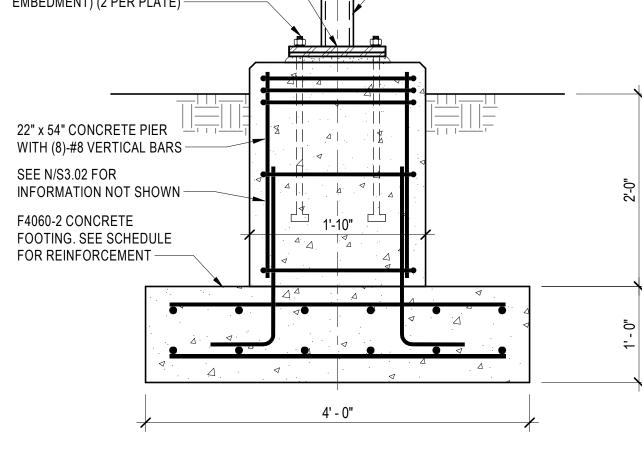
COLUMN OCATION	FOOTING SIZE	UNDERPIN THICKNESS	UNDERPIN REINFORCEMENT	REMARKS
2-RR	4'-6"x4'-6"	4'-4"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
4-BB	6'-0"x6'-0"	1'-10"	(7)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
4-UU	4'-6"x4'-6"	2'-4"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
6-UU	4'-6"x4'-6"	1'-8"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
6-NN	6'-0"x6'-0"	3'-2"	(7)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
6-RR	4'-6"x4'-6"	3'-4"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
14-RR	4'-6"x4'-6"	4'-4"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
14-UU	4'-6"x4'-6"	5'-0"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
17-UU	4'-6"x4'-6"	1'-0"	(6)-#6 EACH WAY BOTTOM	
23-BB	6'-0"x6'-0"	2'-2"	(7)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
27-KK	7'-6"x7'-6"	2'-0"	(7)-#7 EACH WAY TOP AND BOTTOM AND #7 AT 12" o.c. AT EDGES	
27-UU	4'-6"x4'-6"	2'-4"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	
67-JJ	7'-0"x7'-0"	3'-2"	(7)-#7 EACH WAY TOP AND BOTTOM AND #7 AT 12" o.c. AT EDGES	
64-UU	4'-0"x4'-0"	3'-0"	(6)-#6 EACH WAY TOP AND BOTTOM AND #6 AT 12" o.c. AT EDGES	

SECTION

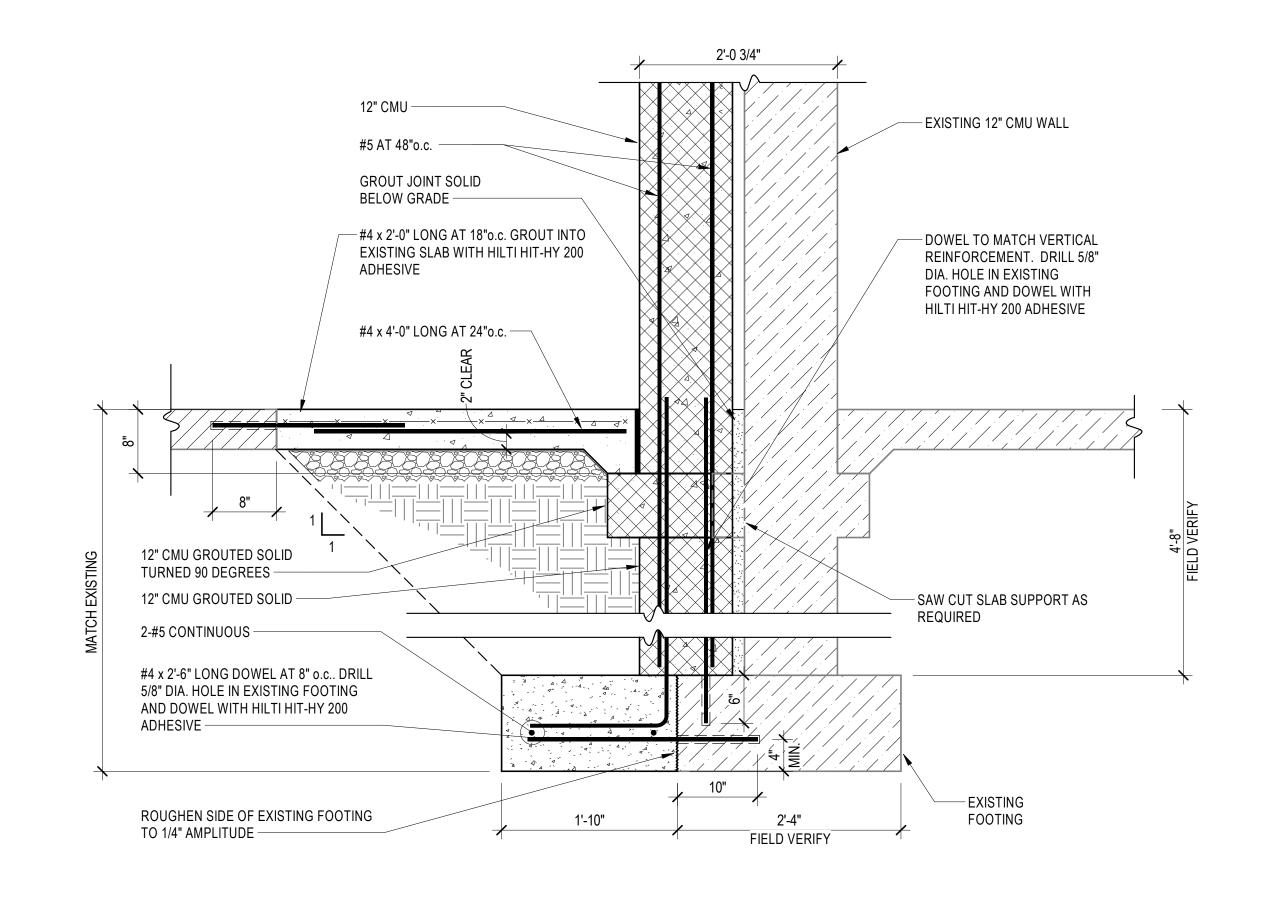
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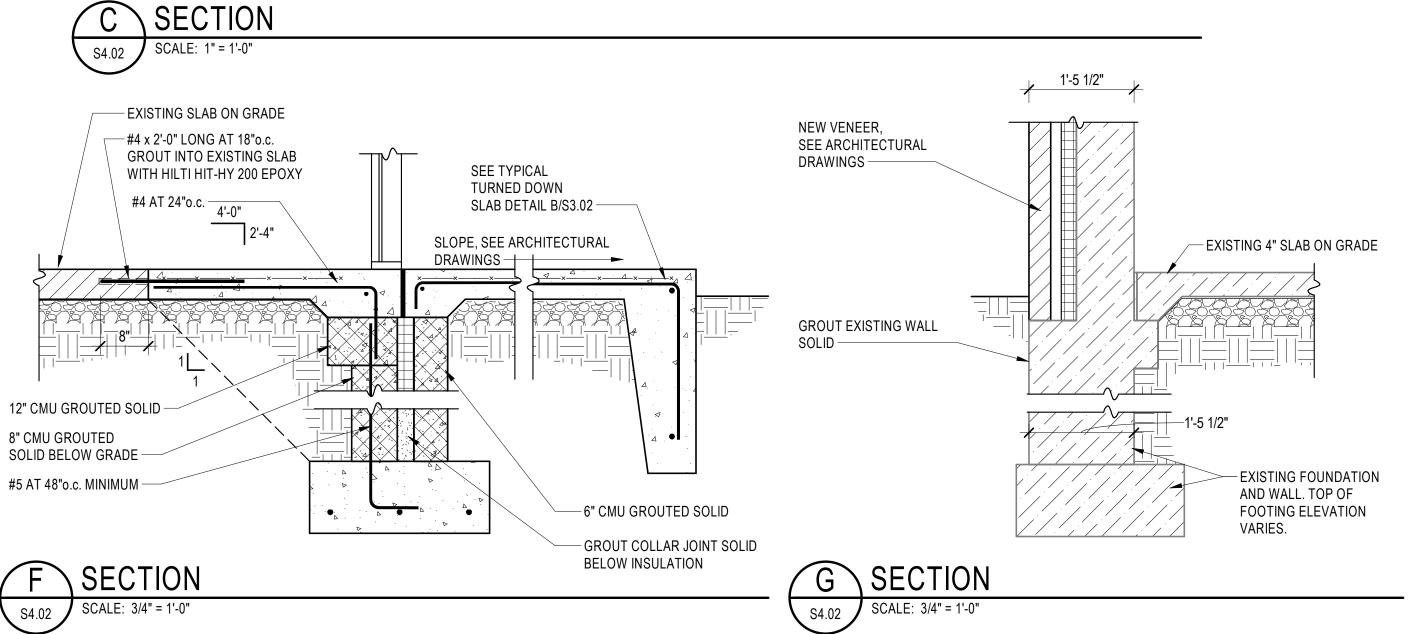






SECTION - SITE SIGN





**ARCHITECT** 

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL FISHER, COLLINS, CARTER **10272 BALTIMORE NATIONAL PIKE** 

**ELLICOTT CITY, MD 21042** 410-461-2855

NYIKOS ASSOCIATES, INC. 18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879

240-683-9530

**KITCHEN** 

STRUCTURAL COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045 410-992-9970

MECH./ELECTRICAL/PLUMBING CMTA, INC.

> **10411 MEETING STREET** PROSPECT, KY 40059

502-326-3085

ACOUSTIC & MEDIA SYSTEMS

**ACOUSTICAL DESIGN** COLLABORATIVE, LTD **606 BOSLEY AVE TOWSON, MD 21204** 

410-821-5930 (P)

LEED DOO CONSULTING 531 PICCADILLY ROAD

**CONSTRUCTION MANAGER** 

**TOWSON, MD 21204** 

443-463-5859

J. VINTON SCHAFER & SONS 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009 410-335-3000



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.: 14479, Expiration Date: 6/22/2021

PROFESSIONAL SEAL:

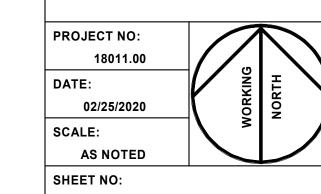
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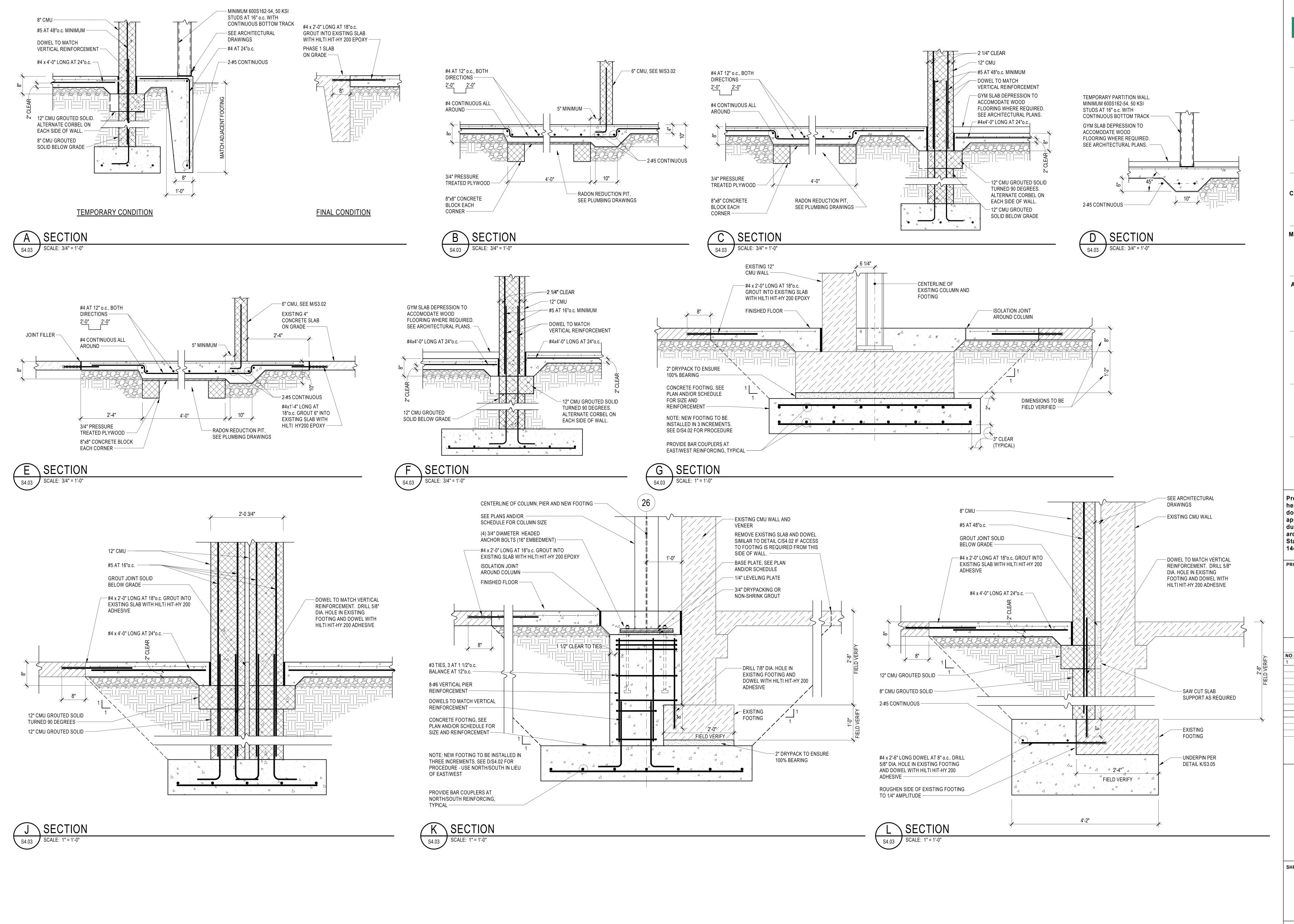
> **HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION**

**HOWARD COUNTY PUBLIC SCHOOL** 

SHEET TITLE:

**FOUNDATION SECTIONS** 





9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER **10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21042** 410-461-2855

**KITCHEN** NYIKOS ASSOCIATES, INC. 18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879

240-683-9530

STRUCTURAL **COLUMBIA ENGINEERING, INC.** 

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045 410-992-9970

MECH./ELECTRICAL/PLUMBING CMTA, INC.

**10411 MEETING STREET** PROSPECT, KY 40059 502-326-3085

**ACOUSTIC & MEDIA SYSTEMS ACOUSTICAL DESIGN** COLLABORATIVE, LTD

**606 BOSLEY AVE TOWSON, MD 21204** 410-821-5930 (P)

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**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS 1309-Q CONTINENTAL DRIVE ABINGDON, MD 21009

410-335-3000

**TOWSON, MD 21204** 

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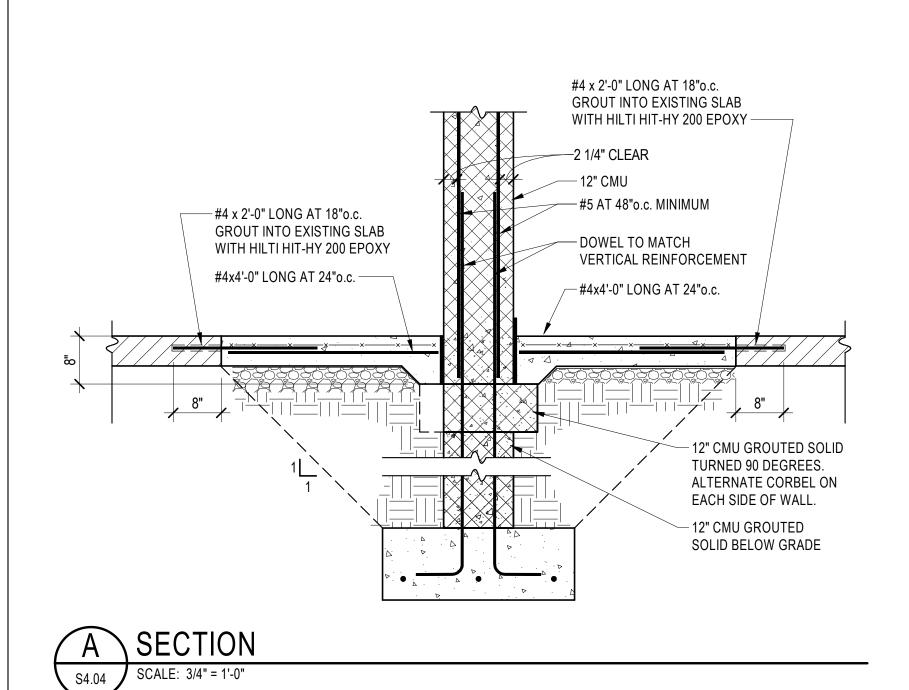
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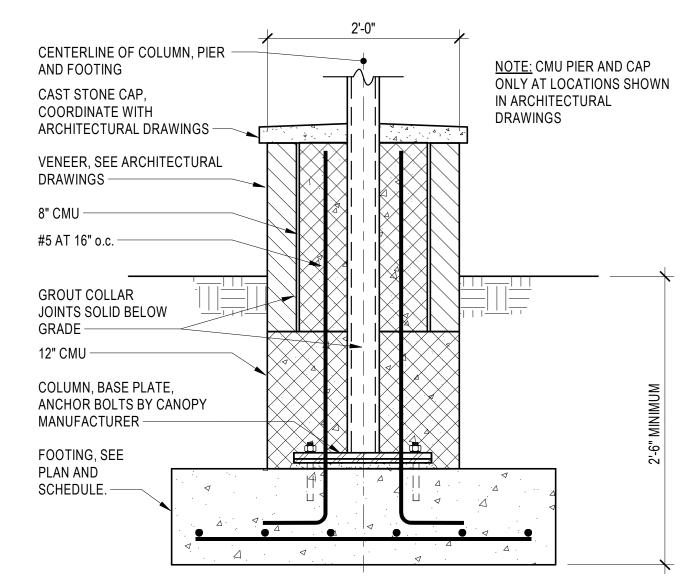
**PRINTS ISSUED** DESCRIPTION: 02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM

**FOUNDATION SECTIONS** 

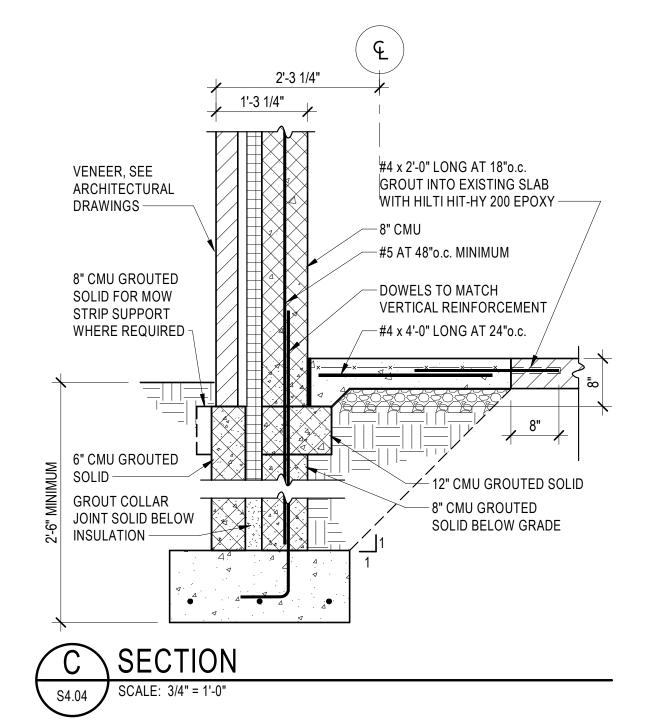


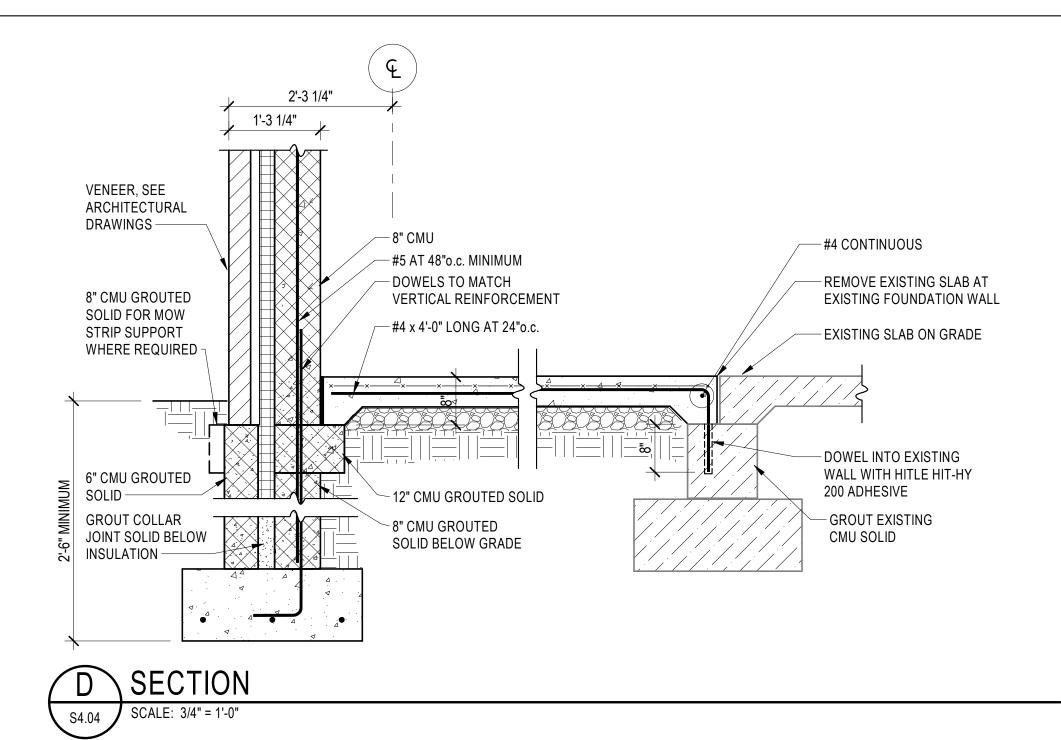


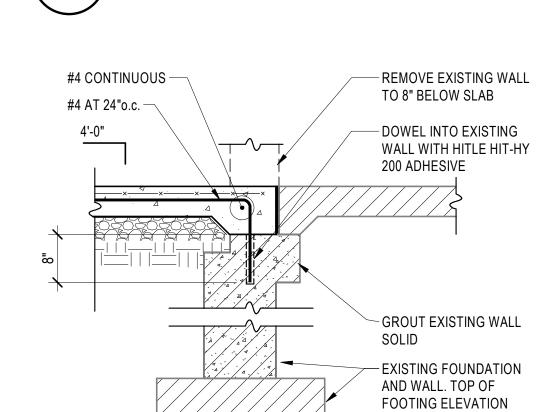
B SECTION

SCALE: 1" = 1'-0"

S4.04







VARIES.

SECTION SCALE: 3/4" = 1'-0"

ARCHITECT

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850

301-770-0177(P) 301-330-3224(F)

CIVIL

FISHER, COLLINS, CARTER

10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD 21042
410-461-2855

NYIKOS ASSOCIATES, INC.

18219-A FLOWER HILL WAY
GAITHERSBURG, MD 20879
240-683-9530

**KITCHEN** 

STRUCTURAL
COLUMBIA ENGINEERING, INC.
6210 OLD DOBBIN LANE, SUITE 150

COLUMBIA, MD 21045
410-992-9970

MECH./ELECTRICAL/PLUMBING

CMTA, INC.

10411 MEETING STREET
PROSPECT, KY 40059

ACOUSTIC & MEDIA SYSTEMS

ACOUSTICAL DESIGN
COLLABORATIVE, LTD

502-326-3085

606 BOSLEY AVE TOWSON, MD 21204 410-821-5930 (P)

LEED

DOO CONSULTING

531 PICCADILLY ROAD
TOWSON, MD 21204

CONSTRUCTION MANAGER

J. VINTON SCHAFER & SONS

1309-Q CONTINENTAL DRIVE
ABINGDON, MD 21009
410-335-3000

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PROFESSIONAL SEAL:

PRINTS ISSUED

NO: DESCRIPTION: DATE:

1 BID SET 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE

FOUNDATION SECTIONS

PROJECT NO:

18011.00

DATE:

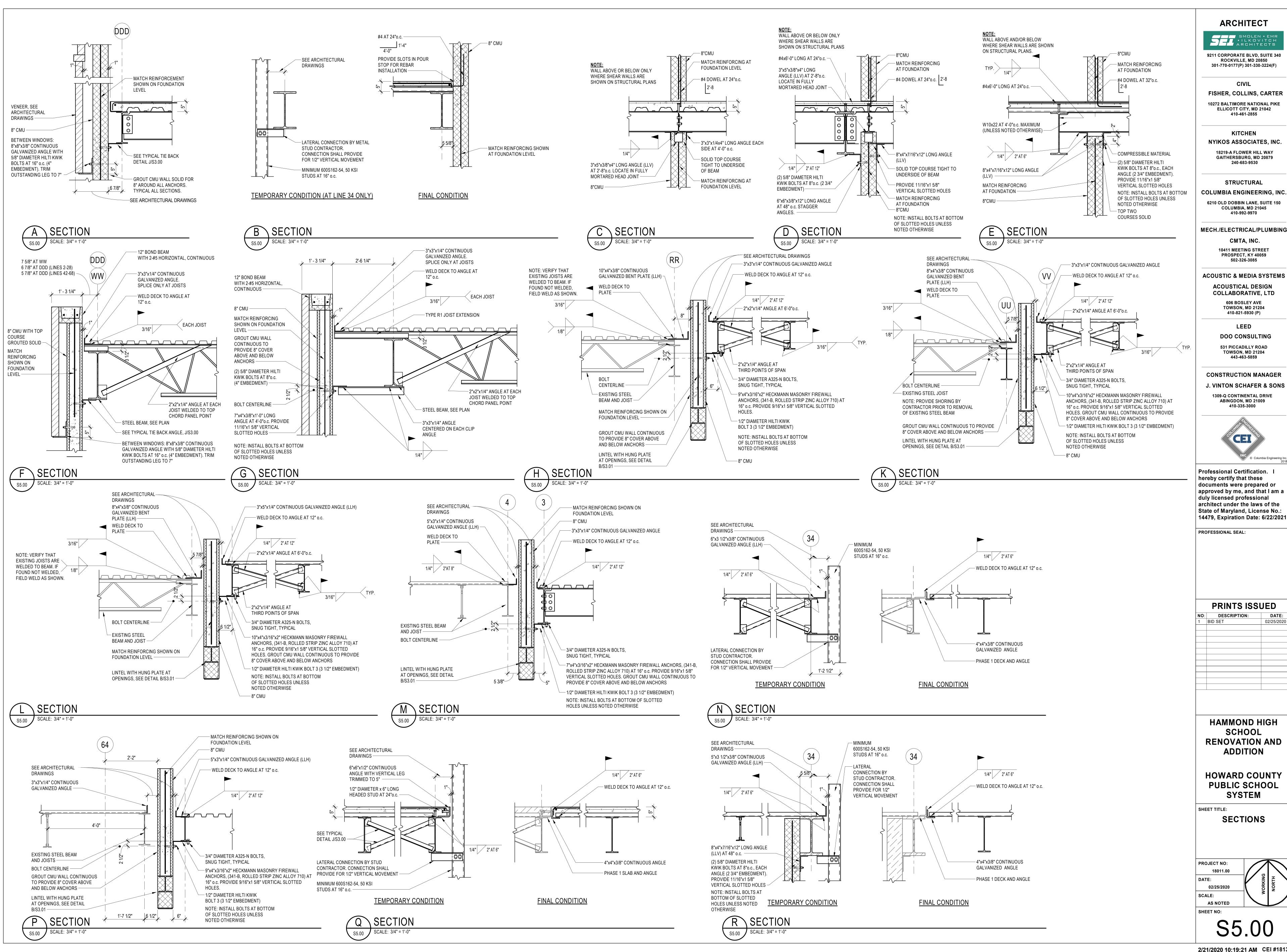
02/25/2020

SCALE:

AS NOTED

SHEET NO:

2/21/2020 10:19:18 AM CEI #18134



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CIVIL FISHER, COLLINS, CARTER

ELLICOTT CITY, MD 21042 410-461-2855

**GAITHERSBURG, MD 20879** 240-683-9530

COLUMBIA ENGINEERING, INC. 6210 OLD DOBBIN LANE, SUITE 150

COLUMBIA, MD 21045 410-992-9970

CMTA, INC.

**10411 MEETING STREET** PROSPECT, KY 40059

502-326-3085

**ACOUSTIC & MEDIA SYSTEMS** 

**ACOUSTICAL DESIGN COLLABORATIVE, LTD 606 BOSLEY AVE** 

410-821-5930 (P)

**DOO CONSULTING 531 PICCADILLY ROAD** 

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS



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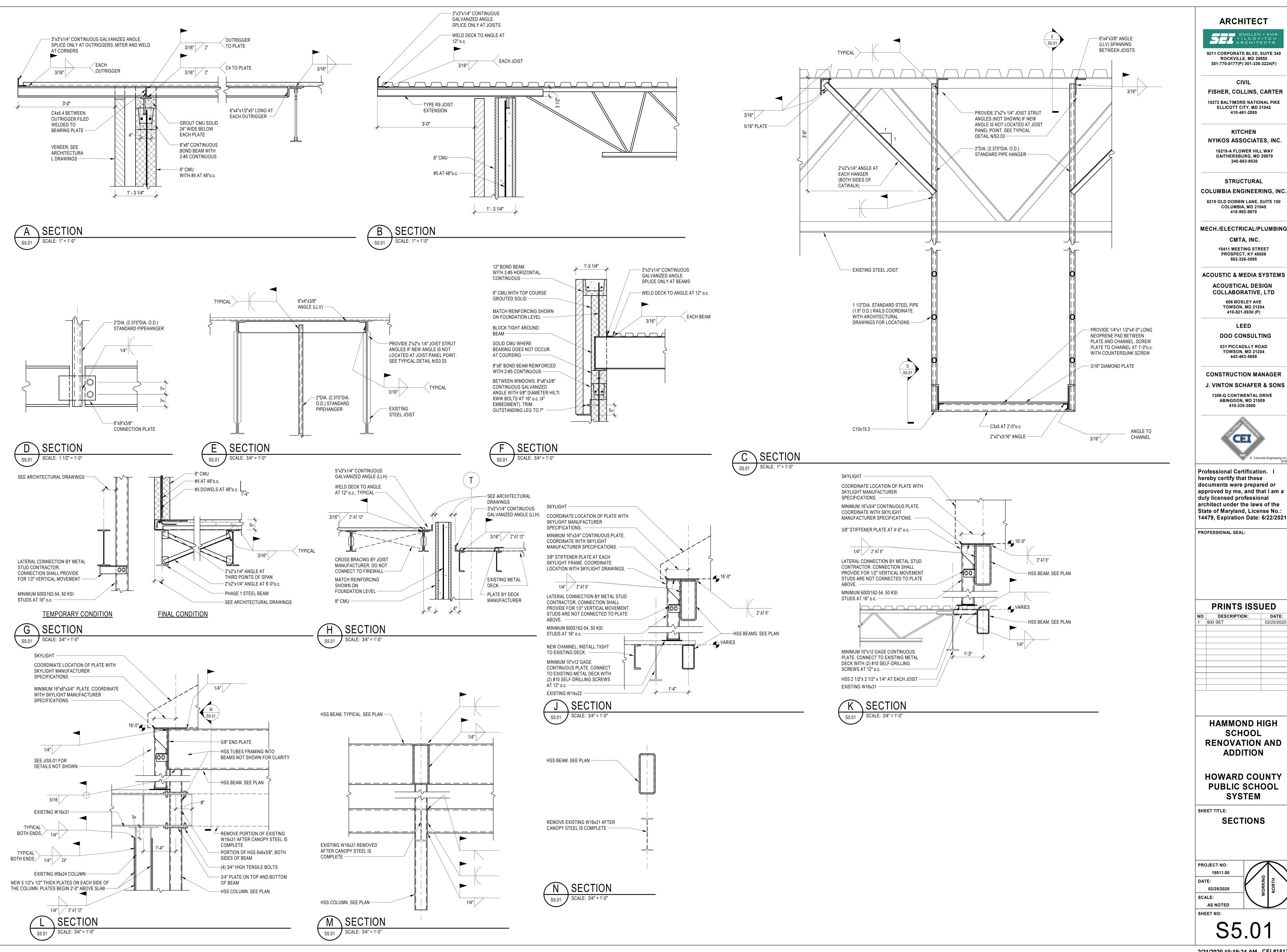
**PRINTS ISSUED** DESCRIPTION: 02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND** 

**HOWARD COUNTY PUBLIC SCHOOL** 

S5.00

2/21/2020 10:19:21 AM CEI #18134



2/21/2020 10:19:24 AM CEI #18134

9211 CORPORATE BLVD, SUITE 340

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**10272 BALTIMORE NATIONAL PIKE** ELLICOTT CITY, MD 21042 410-461-2855

NYIKOS ASSOCIATES, INC. 18219-A FLOWER HILL WAY GAITHERSBURG, MD 20879

STRUCTURAL COLUMBIA ENGINEERING, INC.

6210 OLD DOBBIN LANE, SUITE 150 COLUMBIA, MD 21045

MECH./ELECTRICAL/PLUMBING

**10411 MEETING STREET** 

PROSPECT, KY 40059 502-326-3085

ACOUSTIC & MEDIA SYSTEMS **ACOUSTICAL DESIGN** 

> **606 BOSLEY AVE TOWSON, MD 21204**

> > LEED

531 PICCADILLY ROAD **TOWSON, MD 21204** 

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS

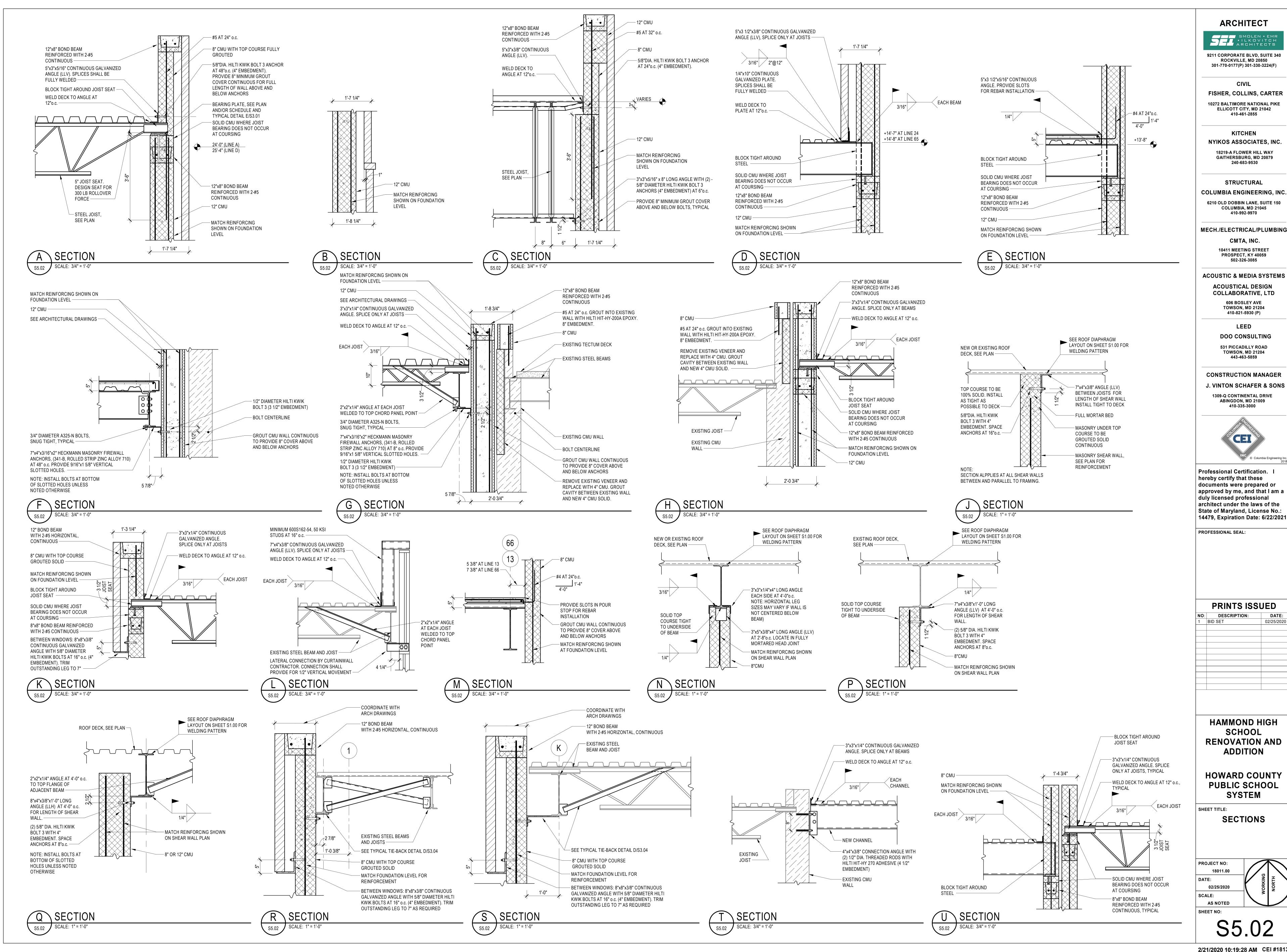


Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.:

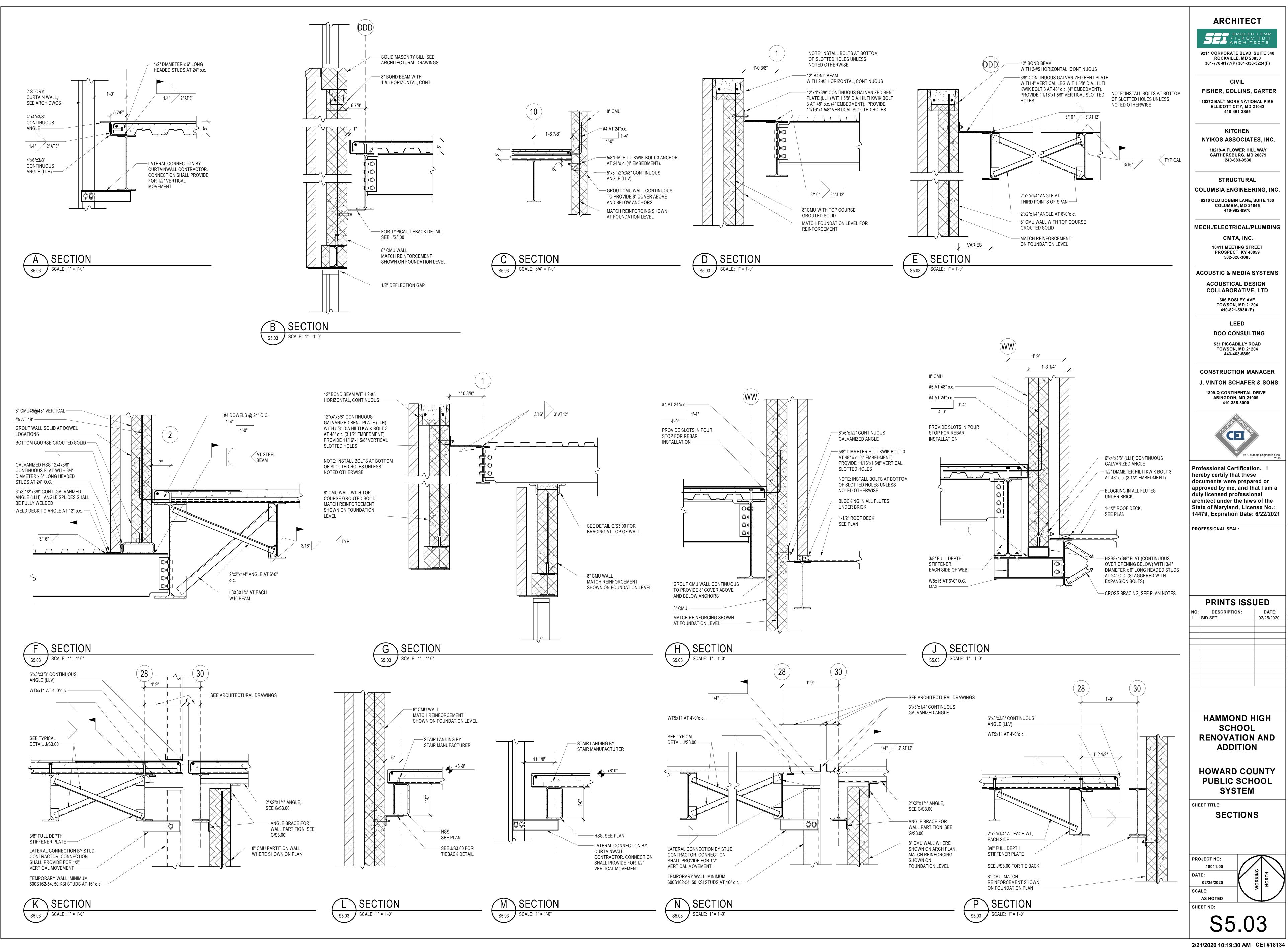
02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

**HOWARD COUNTY PUBLIC SCHOOL** SYSTEM



2/21/2020 10:19:28 AM CEI #18134



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MECH./ELECTRICAL/PLUMBING CMTA, INC.

> **10411 MEETING STREET** PROSPECT, KY 40059

> 502-326-3085

ACOUSTIC & MEDIA SYSTEMS

COLLABORATIVE, LTD **606 BOSLEY AVE TOWSON, MD 21204** 410-821-5930 (P)

LEED

DOO CONSULTING 531 PICCADILLY ROAD **TOWSON, MD 21204** 

**CONSTRUCTION MANAGER** J. VINTON SCHAFER & SONS



**Professional Certification.** I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional architect under the laws of the State of Maryland, License No.:

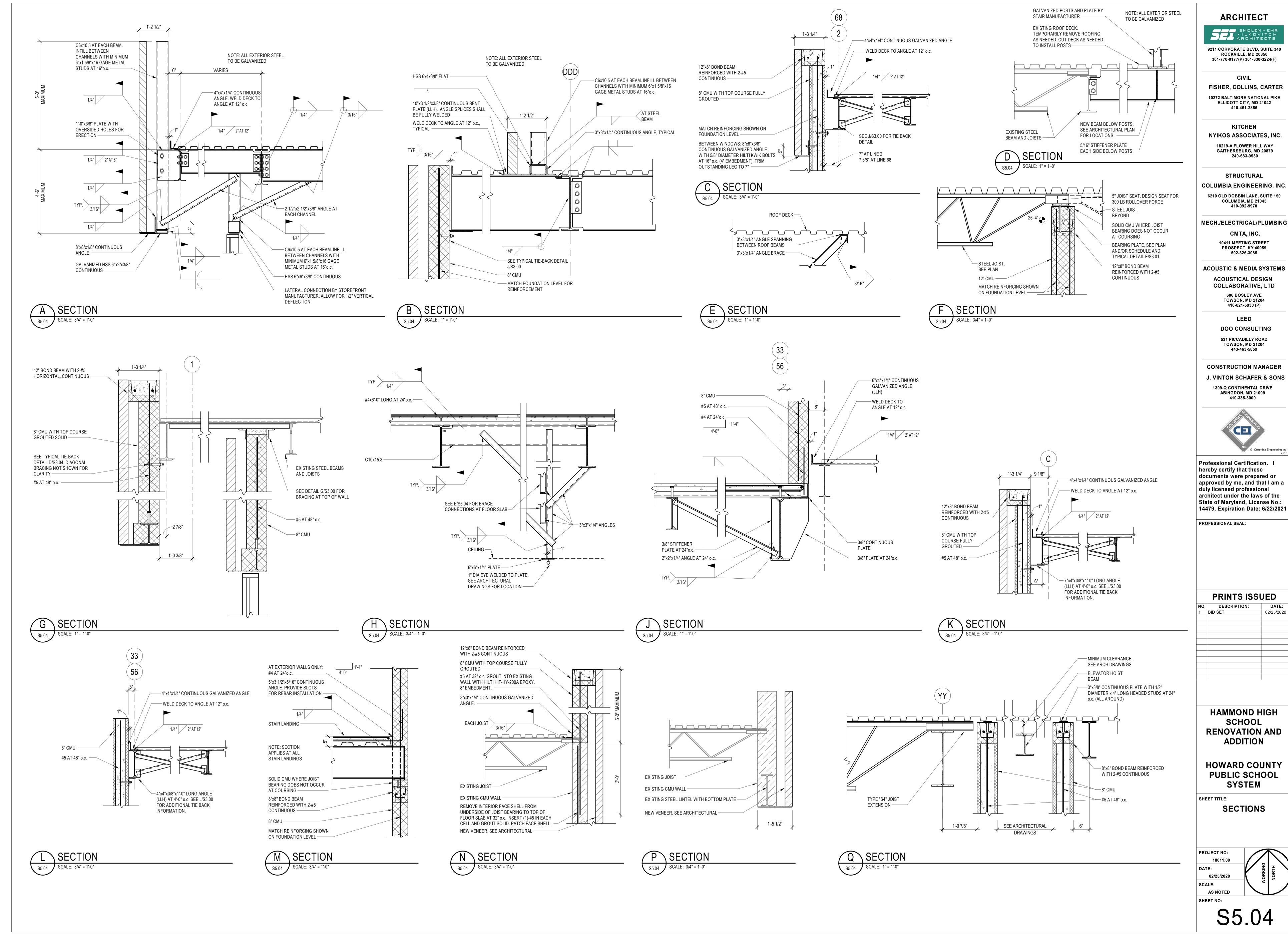
**PRINTS ISSUED** DESCRIPTION: 02/25/2020

**HAMMOND HIGH** SCHOOL **RENOVATION AND ADDITION** 

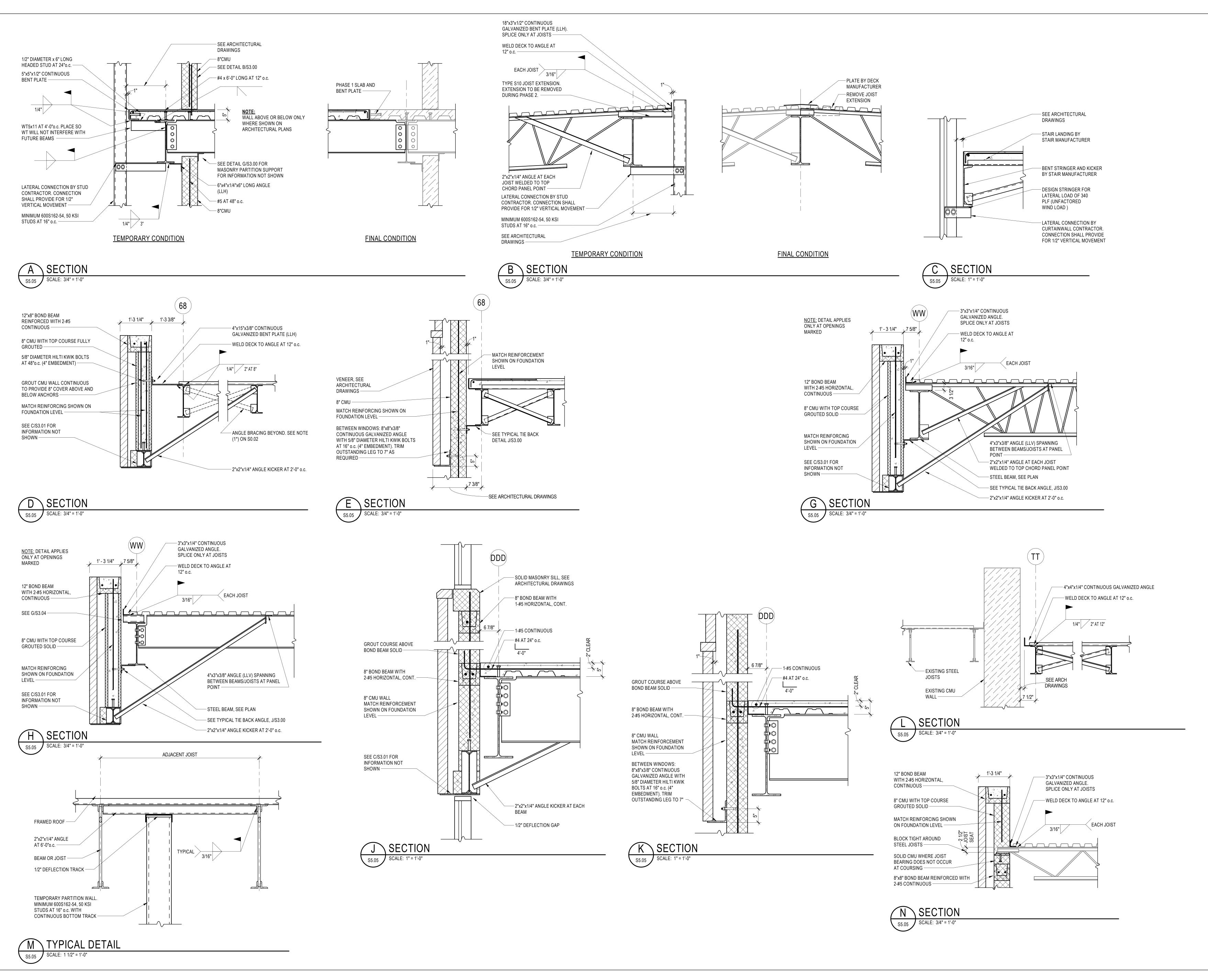
**HOWARD COUNTY PUBLIC SCHOOL** 

**SECTIONS** 

S5.03



2/21/2020 10:19:33 AM CEI #18134



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531 PICCADILLY ROAD TOWSON, MD 21204 443-463-5859

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PROFESSIONAL SEAL:

PRINTS ISSUED

DESCRIPTION: DATE:

BID SET 02/25/2020

HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

SHEET TITLE:

SECTIONS

PROJECT NO:

18011.00

DATE:

02/25/2020

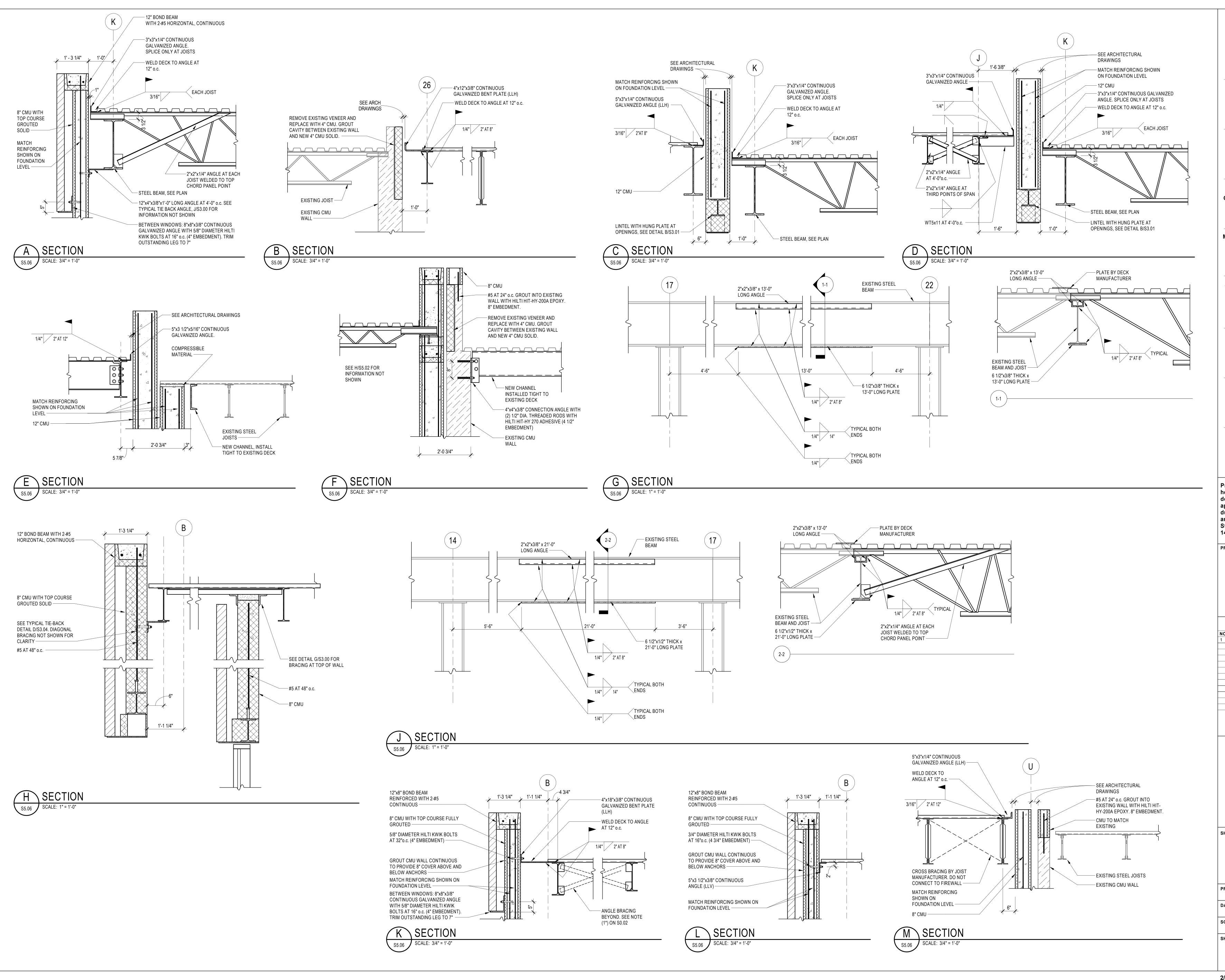
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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

SHEET TITLE:

SECTIONS

PROJECT NO:

18011.00

DATE:

02/25/2020

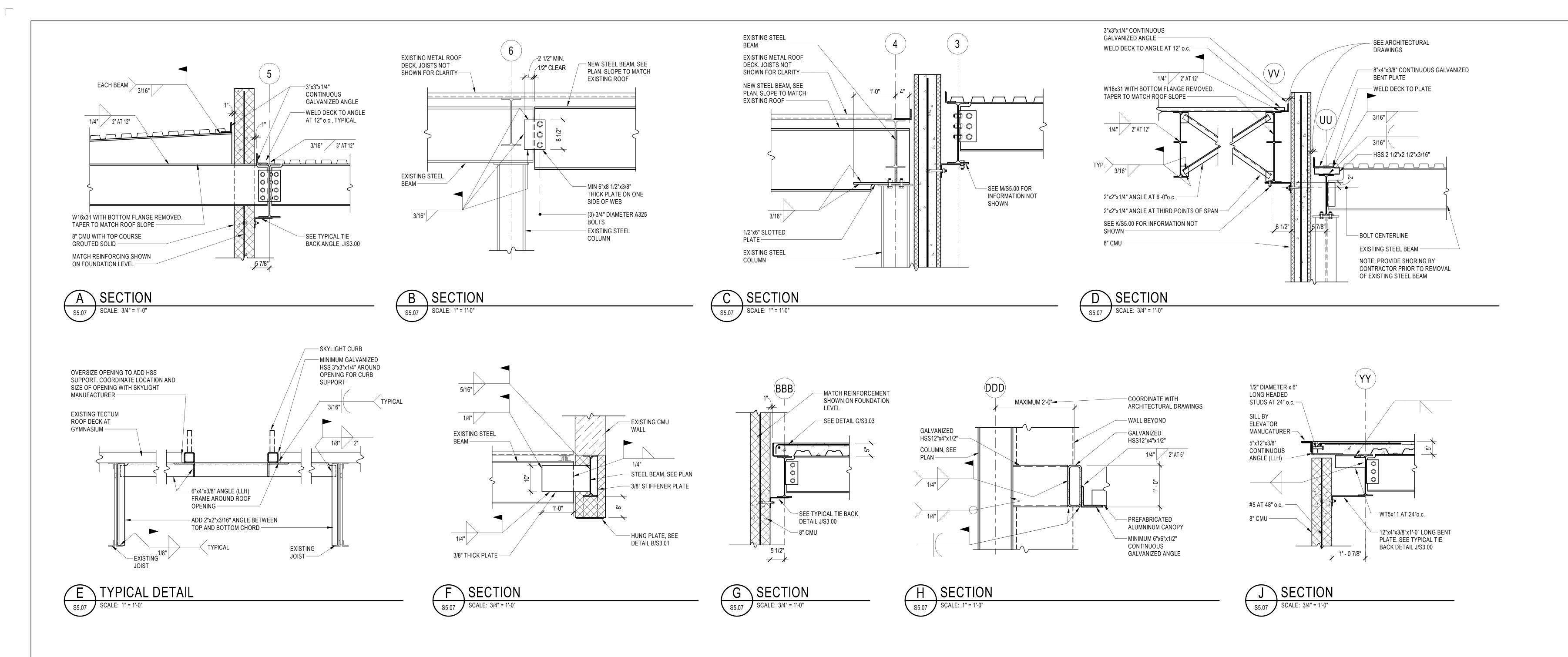
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S5.06



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CONSTRUCTION MANAGER

TOWSON, MD 21204 443-463-5859

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HAMMOND HIGH

SCHOOL

**RENOVATION AND** 

ADDITION

HOWARD COUNTY
PUBLIC SCHOOL

SHEET TITLE:

SECTIONS

SYSTEM

PROJECT NO:

18011.00

DATE:

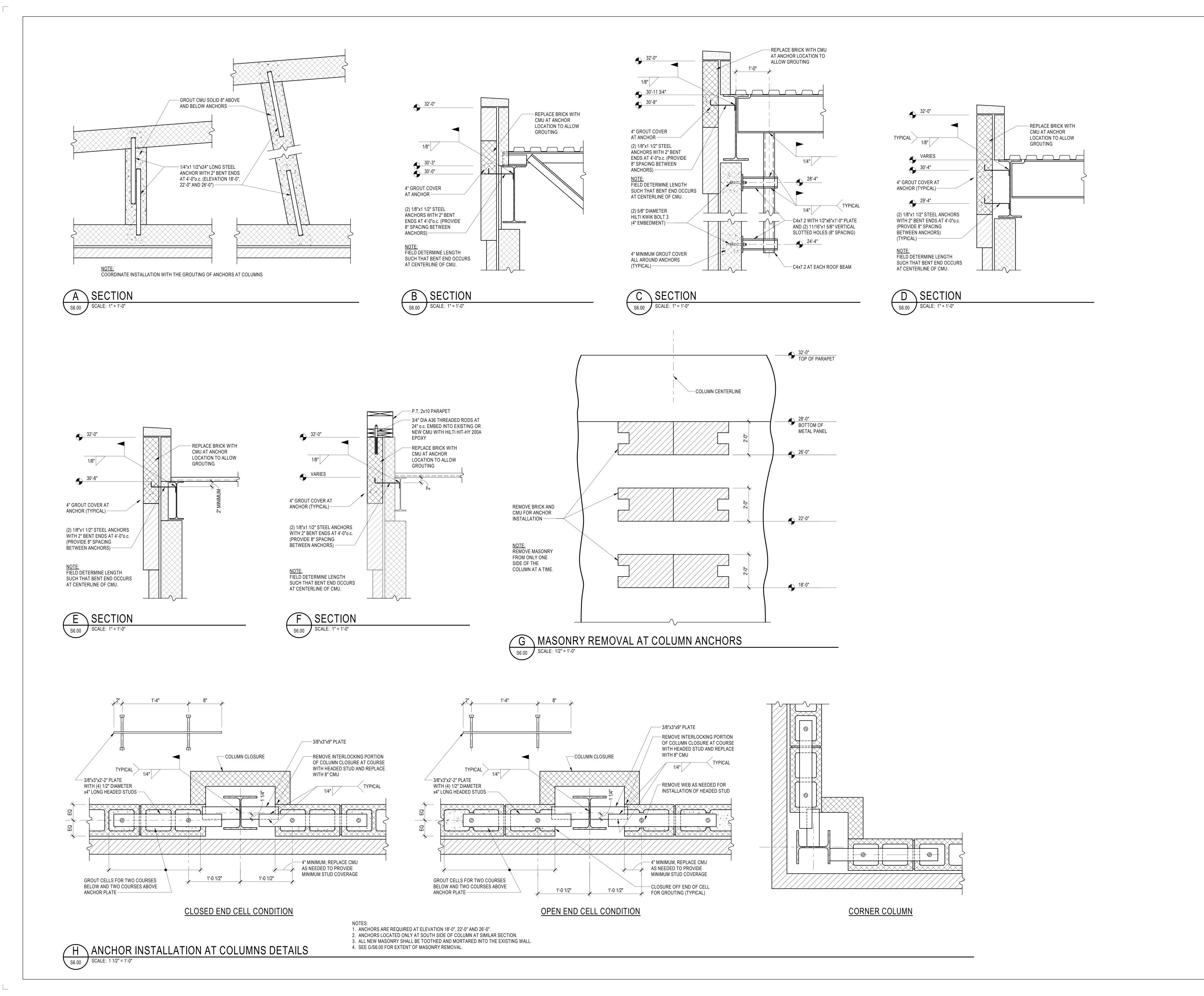
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SCALE:

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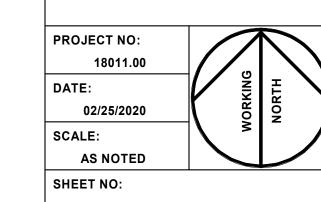
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HAMMOND HIGH SCHOOL RENOVATION AND ADDITION

HOWARD COUNTY
PUBLIC SCHOOL
SYSTEM

SHEET TITLE:

AUDITORIUM WALL REPAIRS



S6.00