CSARCH

Addendum No. 4

Date: 05-20-2024
Project Name: NECSD – New CTE Building
CSArch Project No. 108-2303
SED Control No. 44-16-00-01-0-053-001

This Addendum No. 4 forms part of the Contract Documents and modifies the original bidding documents dated April 15, 2024. Addendum No. 4 consists of 3 pages, 7 specification sections, and 39 drawings.

REGISTRATION EXPIRATION DATE: 12/31/2026
Architect's Seal

GENERAL INFORMATION

1. RFI Log: RFI questions and answers are included as an attachment to this addendum.

REVISIONS TO THE PROJECT MANUAL

1. **DELETE** specification section 002113. **ADD** revised specification 002113 Instruction to Bidders in its entirety, attached.
2. **DELETE** specification section 011200.01. **ADD** revised specification 011200.01 Appendix A – Responsibility Matrix in its entirety, attached.
3. **DELETE** specification section 012900. **ADD** revised specification 012900 Payment Procedures in its entirety, attached.
4. **DELETE** specification section 051200. **ADD** revised specification 051200 Structural Steel Framing in its entirety, attached.
5. **DELETE** specification section 078100. **ADD** revised specification 078100 Applied Fire Protection in its entirety, attached.
6. **DELETE** specification section 250923. **ADD** revised specification 250923 Building Automation System, attached.
7. **DELETE** specification section 275313. **ADD** revised specification 275313 Clock Systems in its entirety, attached.

REVISIONS TO THE CONTRACT DRAWINGS

1. **DELETE** drawing C130. **ADD** revised drawing C130, attached.
2. **DELETE** drawing C180. **ADD** revised drawing C180, attached.
3. **DELETE** drawing C230. **ADD** revised drawing C230, attached.
4. **DELETE** drawing S001. **ADD** revised drawing S001, attached.
5. **DELETE** drawing S003. **ADD** revised drawing S003, attached.
6. **DELETE** drawing S004. **ADD** revised drawing S004, attached.

7. **DELETE** drawing A123. **ADD** revised drawing A123, attached.
8. **DELETE** drawing A253. **ADD** revised drawing A253, attached.
9. **DELETE** drawing A303. **ADD** revised drawing A303, attached.
10. **DELETE** drawing A309. **ADD** revised drawing A309, attached.
11. **DELETE** drawing A413. **ADD** revised drawing A413, attached.
12. **DELETE** drawing A604. **ADD** revised drawing A604, attached.
13. **DELETE** drawing A616. **ADD** revised drawing A616, attached.
14. **DELETE** drawing A624. **ADD** revised drawing A624, attached.
15. **DELETE** drawing A701. **ADD** revised drawing A701, attached.
16. **DELETE** drawing A702. **ADD** revised drawing A702, attached.
17. **DELETE** drawing A901. **ADD** revised drawing A901, attached.
18. **DELETE** drawing A902. **ADD** revised drawing A902, attached.
19. **DELETE** drawing A903. **ADD** revised drawing A903, attached.
20. **DELETE** drawing A904. **ADD** revised drawing A904, attached.
21. **DELETE** drawing FS200. **ADD** revised drawing FS200, attached.
22. **DELETE** drawing DJ101. **ADD** revised drawing DJ101, attached.
23. **DELETE** drawing M111. **ADD** revised drawing M111, attached.
24. **DELETE** drawing M113. **ADD** revised drawing M113, attached.
25. **DELETE** drawing M121. **ADD** revised drawing M121, attached.
26. **DELETE** drawing M122. **ADD** revised drawing M122, attached.
27. **DELETE** drawing M123. **ADD** revised drawing M123, attached.
28. **DELETE** drawing M133. **ADD** revised drawing M133, attached.
29. **DELETE** drawing M321. **ADD** revised drawing M321, attached.
30. **DELETE** drawing M901. **ADD** revised drawing M901, attached.

31. **DELETE** drawing M902. **ADD** revised drawing M902, attached.
32. **DELETE** drawing ES100. **ADD** revised drawing ES100, attached.
33. **DELETE** drawing E212. **ADD** revised drawing E212, attached.
34. **DELETE** drawing E213. **ADD** revised drawing E213, attached.
35. **DELETE** drawing E343. **ADD** revised drawing E343, attached.
36. **DELETE** drawing E701. **ADD** revised drawing E701, attached.
37. **DELETE** drawing E901. **ADD** revised drawing E901, attached.
38. **DELETE** drawing E908. **ADD** revised drawing E908, attached.
39. **DELETE** drawing T001. **ADD** revised drawing T001, attached.

END OF ADDENDUM NO. 4

Newburgh ECSD - New CTE Building
Date: 5/20/2024

ITEM NO.	DISCIPLINE	SUBJECT	RFI	DATE	FROM	RESPONSE	ADDENDUM ITEM	DRAWING NUMBER(S)	SPEC SECTION/ ARTICLE	ADDENDUM NUMBER
1	A	Elevator	1. Drawing A502 and the Division 14 specification do not align, the specifications call for a 3500lb elevator with a 36" wide door opening and the drawings seem to show a 5000lb elevator with a 54" door opening. Which one is correct? Please note, if a 5000lb car is desired here we recommend increasing the clear hoistway width to 8'-0" and the pit depth will need to increase to 5'-0" for either car. 2. The specifications call for a Lobby monitoring panel, this is not typically seen on a single 3 stop elevator and would add a lot of additional cost nor is it required by code. Please advise if this is actually required? 3. The specifications call for a plastic laminate on plywood ceiling. We can provide a brushed stainless-steel ceiling which is a standard option. Please advise if this is acceptable? 4. Please confirm what the voltage supply to the elevator will be. The electrical drawings are not clear on this. Is it 208V or 480V?	4/24/2024	Darlind Associates, Inc.	1. Elevator should be Otis Gen3 Edge 4000 lbs service elevator or equal. Door width opening shall be 48" wide. Pit depth will be 5'-0". Clear hoistway to remain 7'-10" x 10'-9" as shown on drawing A502. 2. Lobby Monitoring Panel is not required. 3. Brushed Stainless Steel ceiling is acceptable. 4. Voltage supply is 480V. Provided as part of addendum #2	Yes	S502, A112, A122, A132, A502	142100	Add #2
2	E	PA System	The attached specification lists Care Hawk as the basis of design for your projects. The specification also indicates that an alternate manufacturer be submitted 15 days prior to the bid date. With this in mind, I would like to request the approval of our Telecor eSeries Platform as an acceptable alternate to the specified Care Hawk design. Please let me know if you require any additional information and also be advised that I am available to present a complete system demonstration at your office or the district office if requested. Thank you and I look forward to your response.	4/29/2024	Telecor	As per Spec Section 012519- Equivalents, article 1.2, E and G; Requests for Architect approval of proposed equivalents prior to the bid date will only be reviewed if the request is submitted directly by the contractor submitting a bid.	No			
3	M	Duct Silencers	Silencer Schedule : Please provide duct silencer schedule?	4/30/2024	ACS Systems Associates, Inc.	Provided as part of addendum #2	Yes	M902		Add #2
4	M	Controls & BMS	Controls /BMS : Please provide existing BMS details if any?	4/30/2024	ACS Systems Associates, Inc.	**Revised Response (5/20/2024): The building automation system will be Schneider Electric EcoStruxure by Day Automation Systems. It is the intent of the district to purchase the building automation system from the Day Automation Systems' OGS state contract number PT68783.**	Yes		250923	Add #4
5	G	Project Schedule	Duration : Kindly provide duration of project- Start/End date?	4/30/2024	ACS Systems Associates, Inc.	Provided as part of addendum #2	Yes		003113.01	Add #2

6	A	Wood Athletic Flooring	Attached please find Action Floor Systems Anchor Flex DIN-PUR floor system submitted for consideration as an equal to Robbins Bio Channel Star as covered under Section 096566 - Wood Athletic Flooring Anchor Flex DIN-PUR system uses 6 mil polyethylene vapor barrier, factory fabricated 3/4" plywood sub-floor system with 5/8" continuous foam resilient layer and 25/32" x 2 1/4" 1st grade ER (expansion ridge) MFMA - maple strip flooring. Specification, cut sheet, system data sheet, MFMA PUR and DIN certification and substitution request form attached. Thank you for your consideration in this substitution request.	4/30/2024	Action Floor Systems	As per Spec Section 012519- Equivalents, article 1.2, E and G; Requests for Architect approval of proposed equivalents prior to the bid date will only be reviewed if the request is submitted directly by the contractor submitting a bid.	No			
7	G	Instructions to Bidders	Instructions to bidders indicate Labor Rates to be submitted with bid. However the actual Bid Form does not list Labor Rates as a required attachment. Please clarify if the complete prevailing and union labor rates schedules are required to be submitted in duplicate with the bid.	4/30/2024	Worth Construction Co., Inc.	Labor Rates will not be required at bid submission. Spec. Section 002113 Instruction to Bidders Sub paragraph 4.3 Item D.3 has been updated to reflect. This requirement has been removed from Spec. Section 002113 Instruction to Bidders Sub paragraph 4.3 Item D.3. Refer to addendum #2 attachment for more information. If contractor is deemed to be the lowest apparent bidder, labor rate sheets will be required per sub paragraph 6.2 item A.2 within (3) calendar days following the bid opening time.	Yes		002113	Add #2
8	G	Instructions to Bidders	Instructions to bidders indicate the bids shall be submitted in duplicate. The Advertisement for Bids indicates a single copy submitted by bid time with one copy emailed no later than the next day. Please clarify.	4/30/2024	Worth Construction Co., Inc.	What is outlined in the Advertisement for Bids is correct. Revision to the Instruction to Bidders has been provided as part of addendum #2.	Yes		002113	Add #2
9	C	Sheet Error	Drawing C180 pdf file does not print correctly. Please provide another file.	4/30/2024	Worth Construction Co., Inc.	Provided as part of addendum #2	Yes	C180		Add #2
10	A	Equipment List	The equipment list is understood but incomplete. It is fine for equipment positioning and electrical requirements, but there is specific information missing that is required for an accurate quote. There are accessories for the brake lathe and the wheel balancers that aren't included on the plans but are typically required to be included in the price quote. For example, the wheel alignment system, described on the plan as "head unit", HE421, is incomplete. There are several configurations available for a wheel alignment system. HE421 just describes the measuring sensor type, but does not include the console which houses the PC, monitor, printer, etc. There are options for the wheel alignment lift, RX12 that might be beneficial in a student learning environment but are not indicated. Please review the contractor required equipment lists and clarify which accessories should be included in the bid.	4/30/2024	Worth Construction Co., Inc.	Provided as part of addendum #3.	Yes	A604, A613, A615		Add #3
11	A	Door Hardware	Door Schedule Dr. A904 door #305A, 305B should be “acoustical with STC rating: 6.1 hardware 48”. However, specs for hardware 08 71 00 stated Set:48 by MFG. Since there is variety of hardware, please be more specific what Set:48 should be.	4/30/2024	Worth Construction Co., Inc.	Provided as part of addendum #2.	Yes		083473, 084700	Add #2

12	A	Casework	Please advise if millwork in office 100C, D, F, H storage 100K, office 129A (Dr. A606, A620) should be included, since no elevations / details shown.	4/30/2024	Worth Construction Co., Inc.	As per "GENERAL NOTE #6: ALL FURNITURE SHOWN AS HALFTONE IS NOT IN CONTRACT." What is shown in office 100C, D, F, H, 100K storage, and office 129A is furniture and should **NOT** be included in your bid.	No			
13	A	Casework	Please identify classrooms which receive Manufactured Wood Casework 12 32 00. Drawings are not clear which casework is div. 06 and which is div. 12. Please clarify.	4/30/2024	Worth Construction Co., Inc.	Section 064100 is for specialty fabricated cabinet units as detailed on A651 & A652. Section 123200 is for standard casework tagged with the casework tag as indicated within the "CASEWORK NOTES" on drawings A601 thru A635.	No			
14	AF	Finish Drawings	First floor finish plans dr. AF112 & AF113 shown heavy stipes at the multiple locations. Please explain and provide requirements for that.	4/30/2024	Worth Construction Co., Inc.	Provided as part of addendum #2	Yes	AF112, AF113		Add #2
15	P	Oil Separator / Grease Interceptor	As per drawing P-301 please provide sizes for oil separator and grease interceptor.	4/30/2024	Worth Construction Co., Inc.	Provided as part of addendum #2	Yes	P301		Add #2
16	P	Lavatories	As per schedule on drawing P-001, LV-a, b &c schedule is 1, 3 & 4 stations. Written spec show 1, 2 & 3 stations. Please advise.	4/30/2024	Worth Construction Co., Inc.	Provided as Part of addendum #2	Yes	P001	224000	Add #2
17	G	3d Model	Is there a 3D model of this building available?	5/1/2024	Rizzo Companies	There is a 3d model, but it is **NOT** part of the bidding documents. The model can be shared with the contractor once the contract is awarded.	No			
18	G	Instructions to Bidders	Section 00 21 13 "Instructions to Bidders" page 9 - 4.3/D reads "Bids shall be submitted in duplicate". Section 00 11 16 "Advertisements for Bids" page 1 reads "One copy of sealed bids…." and "One copy of bid in PDF format…". Please clarify if the sealed bid shall include two (2) hard copies of the bid submission, in addition to a PDF copy of the bid emailed the next day.	5/1/2024	EW Howell Construction Group	What is outlined in the Advertisement for Bids is correct. Revision to the Instruction to Bidders has been provided as part of addendum #2.	Yes		002113	Add #2
19	G	Instructions to Bidders	Section 00 21 13 "Instructions to Bidders" pages 9-10 - 4.3/D lists a series of documents for bid submissions to be considered a complete bid. This list differs from the list provided on the Addendum #1 Bid Form GC-01, page 3. Please clarify which list shall be followed for submitting a complete bid.	5/1/2024	EW Howell Construction Group	Labor Rates will not be required at bid submission. Spec. Section 002113 Instruction to Bidders Sub paragraph 4.3 Item D.3 has been updated to reflect. This requirement has been removed from Spec. Section 002113 Instruction to Bidders Sub paragraph 4.3 Item D.3. Refer to addendum #2 attachment for more information. If contractor is deemed to be the lowest apparent bidder, labor rate sheets will be required per sub paragraph 6.2 item A.2 within (3) calendar days following the bid opening time.	Yes		002113	Add #2
20	G	MWBE	V1 Specifications provided with the bid documents does not identify MWBE Requirements and/or MWBE Participation Goals for the project. Please advise if any MWBE Participation Goals have been set for this project.	5/1/2024	EW Howell Construction Group	**Revised Response (5/20/2024): There are no MWBE goals for this project. Local, minority and female (LMF) participation is a part of the PLA agreement. Please refer to that agreement and any questions related to the agreement, the pre-apprenticeship or apprenticeship programs and LMF participation to the Hudson Valley Building Trades Council.**	No			

21	G	CSArch Plan Room	CS Arch Plan Room website used for Bid documents & Addenda identifies a planholder list, where one name/contact is listed under the company as a main contact. This contact receives email notification of any new posted addenda. Please advise if it's possible to have another contact added to this list, so that they may receive email notification of any new posted addenda.	5/1/2024	EW Howell Construction Group	Please reach out to Vincent@revplans.com for support.	No			
22	G	Insurance Requirements	V1 Specifications do not call out a set of specific insurance requirements for the project. Please provide a document for insurance requirements if any are set for this project.	5/1/2024	EW Howell Construction Group	Refer to AIA A232 General Conditions, Article 11 for the specific insurance requirements for this project.	No			
23	A	Wood Athletic Flooring	Attached please find the substitution request and product data for your consideration of approval for the above project. Aacer Channel VLP HC flooring by Aacer Sports Flooring is being submitted as an equal to Bio-Channel Star flooring by Robbins Sports Surfaces. The Aacer Channel VLP HC has the same component configuration as the products specified. Approval of Aacers Floor System will not affect the design, schedule, or other trades and local installation and service are available. Please visit www.aacerflooring.com and learn more about our maple floor systems. We appreciate your time and consideration, please feel free to contact me if you have questions or require additional information.	5/1/2024	Aacer Sports Flooring	As per Spec Section 012519- Equivalents, article 1.2, E and G; Requests for Architect approval of proposed equivalents prior to the bid date will only be reviewed if the request is submitted directly by the contractor submitting a bid.	No			
24	M	HVAC Controls	SPECIFICATION 012100-1.8-"B.1A" STATES HVAC CONTROLS WILL BE PROVIDED BY OWNER UNDER A SEPARATE CONTRACT AND THE MC-02 CONTRACT IS TO PROVIDE STAND ALONE CONTROLS FOR MECHANICAL SYSTEM. PLEASE ADVISE IF THE OWNER HAS ASSIGNED A HVAC BAS CONTRACTOR AND IF THIS INFORMATION IS AVAILABLE, WE WOULD LIKE TO CONTACT THEM FOR COORDINATION AND RECEIVING A PROPOSAL FOR STAND-ALONE CONTROLS.	5/1/2024	Joseph Lombardo Plumbing, Heating & Cooling, Inc.	**Revised Response (5/20/2024): The building automation system will be Schneider Electric EcoStruxure by Day Automation Systems. It is the intent of the district to purchase the building automation system from the Day Automation Systems' OGS state contract number PT68783.**	Yes		250923	Add #4
25	A/M	Welding Booth / Extraction Arms	The booth description (A040, A040A) in the Equipment Schedule on sheet CTE A615 indicates the power is 120V/1-ph which would imply one or both of those options should be included. However, I don't think they are listed anywhere. Also, I cannot find reference to the extraction arms. Below indicates the airflow (per arm) but no details. Do you know on which sheet if any they are identified?	5/3/2024	The Lincoln Electric Company	Refer to spec section 125713 – Welding Equipment in Volume 2 of the project manual. Revised as part of addendum #3.	Yes		125713	Add #3
26	A	Ceramic Tile	Finish Plan Dr. AF113 shows CWT wall tile at Locker Rooms. However elevations Dr. A611 shows no CWT. Please clarify.	5/6/2024	Worth Construction Co., Inc.	Revised as part of addendum #3	Yes	A611		Add #3
27	A	Security Grill Door	Door Schedule Dr. A902 shown Security Grill OH4 for Cafeteria. Please provide Basis of design and model #.	5/6/2024	Worth Construction Co., Inc.	Provided as part of addendum #3	Yes		083326	Add #3
28	M	Duct Liners	The liner spec p220, see below, indicates elastomeric liner in every duct type. Can you send an RFI to confirm this?	5/6/2024	Armistead Mechanical, Inc.	Lined Ducts are indicated on the drawings. Refer to Symbols on MG000.	No			
29	M	Fume Extraction Arms	Do you know what the lengths and diameters of the fume extraction arms is? I'm assuming 8' length and 8" diameter but my estimating department wanted to be sure.	5/6/2024	ADE Group	Revised as part of addendum #3.	Yes		125713	Add #3
30	M	Wood Dust Collector	For the wood dust collector, its only one unit, right (DC-A-1)?	5/6/2024	ADE Group	Yes, There is only one wood dust collector unit.	No			

31	G	Contracts	Contracts: As per Addendum 1 We have noticed that all trade bid forms are deleted and revised GC bid form is added. However, through Revplans its still showing 5 prime contracts . Kindly confirm whether it's a single Prime contract or Multiple Prime contracts?	5/8/2024	ACS Systems Associates, Inc.	As per addendum #1, it is a Single Prime Contract. Rev plans has updated their website.	No			
32	AF	Fluid Applied Flooring	Section 096700: Are alternate products accepted for this? Stonhard is proprietary	5/8/2024	Rizzo Companies	Product equivalents will be accepted.	No			
33	A	Coiling Doors	On the door schedule for 1st floor, there are (4) OH2 doors which are insulated coiling doors. 3 of the 4 doors have remark #2 and #8 which are "Overhead door" and "Standard Lift track" which doesn't apply to coiling doors. The 4th OH2 door on the schedule has remarks #2 and #9 which are "Overhead door" and "coiling door, motor operated" which does apply to coiling doors. I want to confirm that there are (4) OH2 doors on this project. It seems that there is only (1) coiling door and the other 3 should be sectional doors, and have been mis-labeled. Please advise	5/9/2024	Rizzo Companies	Revised as part of addendum #3.	Yes	A902		Add #3
34	A	Security Grill Door	Will an upcoming addendum contain a specification for the Coiling Security Grille?	5/9/2024	Rizzo Companies	Provided as part of addendum #3.	Yes		083326	Add #3
35	AF	Division 9	LVT-1 Adhesive; V-88 Adhesive by Mannington, V-95 Adhesive or XpressStep Spray Adhesive by Mannington for this bid scope ?	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Bid as per section 096500-5, part 2.5.B.	No			
36	AF	Division 9	LVT-1, No diagonal layout installation is required for this bid scope, please confirm.	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	No diagonal layout required.	No			
37	AF	Division 9	See Detail 2 on Drawing CTE A504.00; are Rubber Stair Risers required for this bid scope, please advise.	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Provided as part of addendum #3.	Yes	A504, AF002	096500	Add #3

38	AF	Division 9	RST-1 Rubber Stair Treads; Please confirm optional Safety Inserts at nose of tread(s) are not required for this bid scope ?	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Provided as part of addendum #3.	Yes		096500	Add #3
39	AF	Division 9	RT-1 Rubber Tile for intermediate landings; Marbleized is not available in 24" x 24" and not available in 3.5mm thickness, please advise.	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF002	096500	Add #3
40	AF	Division 9	Stair Stringers Section 096500-4 para 2.3B are required for this bid scope, if yes please provide a detail ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes		096500	Add #3
41	AF	Division 9	Sheet Vinyl Base HMB-1 Base is 4" High ?	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF002		Add #3
42	AF	Division 9	Please provide a detail of HMB-1 Base; Cap Strip, Fillet Strip, Floor heat weld location ?	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	As per manufacturers standard details.	No			

43	AF	Division 9	Vent Cove Base 4" in section 096466-3 para 2.5A and RB-2 is 6" on Drawing AF002, please advise 4" is required for this bid scope.	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction	Revised as part of addendum #3.	Yes	AF002		Add #3
44	AF	Division 9	Polished Concrete Section 033543 installed complete procedure before all fixed millwork or casework ?	5/9/2024	Rizzo Companies EW Howell Construction Group	Polished concrete install to be complete prior to millwork and casework installation	No			
45	AF	Division 9	RST-1 at Landings - Detail 3 on A504 Tread Nosing to Polished Concrete; trip hazard or will concrete be recessed to accept tread nose ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	A504		Add #3
46	AF	Division 9	LVT-1 installed wall to wall and before all fixed millwork or casework ?	5/9/204	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Millwork to be installed prior to LVT flooring	No			
47	AF	Division 9	HMB Sheet Vinyl installed wall to wall and before all fixed millwork or casework ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Millwork to be installed prior to HMB flooring	No			
48	AF	Division 9	No HMB-1 on walls behind fixed casework or millwork at perimeter of rooms is required for this bid scope ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	No HMB-1 is required behind casework or millwork	No			
49	AF	Division 9	No RB-1 on walls behind fixed casework or millwork at perimeter of rooms is required for this bid scope ?	5/9/2024	Rizzo Companies EW Howell Construction Group	No RB-1 is required behind casework or millwork	No			

50	AF	Division 9	Drawing A901 Detail 7, HMB sheet vinyl to Polished Concrete; A Saddle Threshold or a Vinyl Transition Strip ?	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF111		Add #3
51	AF	Division 9	Steps to electrical room from Roof, please confirm no Rubber Stair Treads are required for this bid scope ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	No, refer to drawing 11/A354.	No			
52	AF	Division 9	SDT-1; Grounding location and Ohm meter testing are to be provided by electrical contractor for this bid scope, please confirm.	5/9/2024	Rizzo Companies Worth Construction Co., Inc.	As per addendum #1, single prime contract.	No			
53	AF	Division 9	SDT-1; No (No Wax Logo tiles) are required for this bid scope, please confirm ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Bid as per specification 096500.	No			
54	AF	Division 9	Corridors 1st - 3rd floor wall base; Elevation Drawings A631-635, Details show SWB, Which walls get RB-1 and which get MT-1 ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF002		Add #3
55	AF	Division 9	Limits of MT-1 Metal Base at Vending 118A on 1st floor and same for Cafeteria 116 ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF002		Add #3
56	AF	Division 9	Limits of MT-1 Metal Base in Cafeteria 116 ?	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes	AF002		Add #3

57	AF	Division 9	Section 033000-15 para 3.7D.3 Other Surfaces - Gym Wood system and Polished Concrete are Other Surfaces, please advise.	5/9/2024	Rizzo Companies EW Howell Construction Group	Yes.	No			
58	AF	Division 9	Section 096500-6 para 3.2H Feature Strips and LOGOS are not required for this bid scope, please confirm.	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	Yes		096500	Add #3
59	AF	Division 9	HMB Sheet Vinyl to HMB Sheet Vinyl at door threshold, Doors 202A, 202C, 202D; Heat weld seam only, please advise.	5/9/2024	Rizzo Companies Worth Construction Co., Inc. EW Howell Construction Group Pike Construction Services, Inc.	Revised as part of addendum #3.	No	AF121		Add #3
60	AF	Division 9	Polished Concrete Section 033543-3 para 1.6B, Mock-up 50 sf. Is 50 SF required for each; PCON-1, PCON-2 and PCON-3, please advise.	5/9/2024	Rizzo Companies EW Howell Construction Group Pike Construction Services, Inc.	As indicated per specification 033543.	No			
61	AF	Division 9	Many Abbreviations on Drawings AF001 do not apply to this scope, please confirm. WOM, BBT, CPT, RAF, STF, VCT, please advise.	5/9/2024	Rizzo Companies EW Howell Construction Group	Abbreviations listed may not apply to scope of work. Refer to the abbreviations indicated in the finish schedule and finish tag.	No			
62	AF	Division 9	Drawing AF133 Detail 1 description; THURD might be THIRD ?	5/9/2024	Rizzo Companies EW Howell Construction Group	Spelling error; should read THIRD.	No			
63	M	BMS	I was looking at the Newburgh School bid in section 250923 but there are no control vendors listed. Part 2 – Products has conduit and fitting in this section. I was wondering who the acceptable BMS manufacturers would be or did the school standardize on a control vendor.	5/9/2024	Stark Tech	**Revised Response (5/20/2024): The building automation system will be Schneider Electric EcoStruxure by Day Automation Systems. It is the intent of the district to purchase the building automation system from the Day Automation Systems' OGS state contract number PT68783.**	Yes		250923	Add #4
64	A	Cast Stone	Please clarify cast stone profiles locations. For instance: Dr.A201 /4 elevation shown second floor cast stone profile CS3 & CS4 Building Section dr. A307/3 shows CS1. Elevation dr. A201/2 shows CS3 building section shows CS2. And there are more discrepancies.	5/10/2024	Worth Construction Co., Inc.	Revised as part of addendum #3.	Yes	A201, A202, A203, A204, A205		Add #3

65	E	Site Lighting	In addendum #2, revised drawing C180 was issued which shows 25 type A site light fixtures. Drawing ES100 shows 29 site light fixtures (16 type 9 and 13 type 11) Should the electrical site drawing be updated to only show 25 fixtures? Also ES100 calls for 3 flood lights for the flagpole. Can you provide a part # for these?	5/13/2024	J&J Sass Electric Inc.	Revised as part of addendum #4.	Yes	C180, C230, ES100		Add #4
66	G	AISC Certification	Do you intend on waiving the AISC certification for this project or keeping it? Please let me know when you get the chance.	5/13/2024	Rizzo Companies	AISC certification is required. Bid as per specification section 051200, 1.5, D	No			
67	M	Weld Shop Collectors	"For the weld shop collector, please ask them which number they want below (1 or 2 ?): 1.One collector composed of 1 module with 3800sqft of filter media 2.One collector composed of 2 modules each with 3800sqft of filter media x 2 = 7600sqft total And for the weld shop collector's blower. Please ask them which number they want below (1, 2, or 3 ?): 1.One 13000cfm blower and motor 2.Two 6500cfm blowers and motors 3.Two 7400cfm blowers and motors"	5/13/2024	ADE Group	Refer to welding filtration unit schedule on sheet M902 and welding fume exhaust specification 233505.	No			
68	G	Apprentice Program	Item #3 on the Pre-Bid Conference Agenda states, "Per the PLA Contractors must participate in an Apprentice Program. Please become familiar with these requirements." Do all subcontractors have to participate in the Apprentice Program, or are there any exceptions based on number of employees on site for a particular company or value of their trade on this project?	5/13/2024	EW Howell Construction Group	Please refer to the PLA agreement and any questions related to the agreement, the pre-apprenticeship or apprenticeship programs and LMF participation to the Hudson Valley Building Trades Council.	No			
69	T	Vape Detection	Please provide specifications for the vape detection system.	5/13/2024	EW Howell Construction Group Worth Construction Co., Inc. Rizzo Companies	Refer to revised T001 as part of addendum #4 for vape detection basis of design. Vape Detection system furnished be the owner. Refer to revised specification section 011200.01 as part of addendum #4.	Yes	T001	011200.01	Add #4
70	E / T	Wiring	Specifications call for all wiring (concealed or exposed) to be single conductors in raceway. Please confirm that MC cable will be suitable for use within walls and above hung ceilings.	5/13/2024	EW Howell Construction Group Worth Construction Co., Inc. Rizzo Companies	MC cable can be used in situations described as per specification 260533, 3.1., A	No			
71	AF	Resinous Flooring	Stonhard products are proprietary resinous floor scope products. Please confirm if Dex-O-Tex equal system can be priced in lieu of Stonhard products.	5/13/2024	EW Howell Construction Group	Product equivalents will be accepted.	No			
72	G	BIM	Please advise if BIM Coordination is part of this project & scope of work.	5/13/2024	EW Howell Construction Group	Coordination drawings are required as per specification section 013100. CAD and REVIT files will be provided at no cost to the awarded contractor with the execution of the Digital Data Licensing Agreement release form C106-2013.	No			

73	M	Heat Exchangers	Drawing CTE-M902: HX schedule PFHX-A-1: Fouling factor isn't typically used for Plate & Frame heat exchangers as it isn't recommended by most manufacturers. When it is present, the value is usually much lower than what is currently scheduled. Please confirm whether or not a FF is necessary and what the correct value should be.	5/13/2024	Frank P. Langley, Co. Inc.	Revised as part of addendum #4.	Yes	M902		Add #4
74	M	Heat Exchangers	Heat exchanger for HVAC – Section 235700. Specification notes gaskets to be EPDM material. Is Nitrile also acceptable?	5/13/2024	Frank P. Langley, Co. Inc.	Bid as per specification section 235700 requirements.	No			
75	G	Bid Award / Notice to Proceed	Please provide the anticipated award date and anticipated notice to proceed date.	5/13/2024	Dobco, Inc.	Refer to addendum #2 for updated milestone schedule, specification section 003113.01. The anticipated award date is 6/18/2024 and the anticipated notice to proceed date is 6/19/2024.	No			
76	G	Bid	Please confirm that only one (1) Bid Proposal is required to be submitted.	5/13/2024	Dobco, Inc.	As per specification section 001116 Advertisement For Bids. (1) Hard Copy, (1) PDF copy submitted via email the following day. The bid form must be fully complete to qualify the bid. It is important to emphasize that the schedule of values breakdown and the unit price break down in addition to the other information being requested in the bid form is completed and submitted accurately.	No			
77	G	Permit Fees	Please confirm that the contractor is not responsible for any permit fees including the building permit's fees.	5/13/2024	Dobco, Inc.	As per specification section 007216 General Conditions AIA-A232, 3.7 Permits, Fees, Notices and Compliance with Laws.	No			
78	G	Retainage	Please confirm that the retainage is 2%.	5/13/2024	Dobco, Inc.	5% retainage. Provided as part of addendum #4.	Yes		012900	Add #4
79	G	Electronic Files	Please confirm that the Architect and Design Professionals will provide the contractor with all the CAD files and backgrounds at no cost to the contractor.	5/13/2024	Dobco, Inc.	CAD and REVIT files will be provided at no cost to the awarded contractor with the execution of the Digital Data Licensing Agreement release form C106-2013.	No			
80	G	LEED	Please confirm that the LEED administration will not be performed by the contractor.	5/13/2024	Dobco, Inc.	This project has no LEED requirements.	No			
81	G	Testing	Please confirm that all field testing and inspections will be performed and paid by the owner.	5/13/2024	Dobco, Inc.	Contractor shall be responsible to coordinate his work with the testing agent (which is provided and paid by the owner)	No			
82	G	AHJ	Please advise who is the authority having jurisdiction that will perform code compliance review and inspections.	5/13/2024	Dobco, Inc.	AHJ is New York State Education Departments Office of Facilities Planning	No			
83	G	AHJ	Please confirm that the authority having jurisdiction on the project have already reviewed plans and issuing permits is expected to happen within 15 days of receiving a Notice to Proceed.	5/13/2024	Dobco, Inc.	Plans have been approved by the AHJ and the building permit has already been issued. Bid as per specification section 007216 General Conditions AIA-A232, 3.7 Permits, Fees, Notices and Compliance with Laws.	No			
84	G	Owner Tax-Exempt	Please confirm that the owner is tax exempt, and a tax-exempt certificate will be provided to the contractor upon award so no sales taxes should be counted during the bid.	5/13/2024	Dobco, Inc.	As per specification section 007216 General Conditions AIA-A232, 3.6 Taxes.	No			
85	G	Percentage of Work	Please confirm that the contractor doesn't have to perform certain percentages of the scope of work by its own forces and if this is not the case, please advise what percentages are required by the contractor to perform.	5/13/2024	Dobco, Inc.	The Contractor is responsible to review the project specifications and documents to verify there is no requirement for a percentage of self-performing work.	No			

86	G	Temporary Facilities	Please clarify if the water and electrical power usage costs are to be carried by the Contractor. Since quantifying these costs is difficult, can this clause be waived and establish an allowance to carry the costs?	5/13/2024	Dobco, Inc.	**Response Pending, Open RFI**				
87	G	Traffic control	Please confirm that the Contractor is not responsible for any traffic control and traffic control fees associated with deliveries. Please establish a Police Escort or Traffic Management Allowance of $100,000.00 to be used for the duration of the project for deliveries and erection of the structure.	5/13/2024	Dobco, Inc.	Traffic control and police escort fees are the contractors responsibilities and the contractor would be required to plan for these costs if they feel this is necessary to facilitate their work for the project.	No			
88	G	Self-Perform	Due to the complexity of the scope of work and the need for an aggressive schedule required to complete the project within the stipulated timeframes, please confirm that the contractor will have to certify ability to self-perform certain percentages of the contract in order to complete the milestones set forth for this project.	5/13/2024	Dobco, Inc.	The Contractor is responsible to review the project specifications and documents to verify there is no requirement for a percentage of self-performing work.	No			
89	G	Site Contaminates	Please confirm that NO site contaminants are existing on any of the site soils or ground water.	5/13/2024	Dobco, Inc.	There is no known site contaminants at this time. Bid as per specification section 007216 General Conditions AIA-A232, 3.7.3 Concealed or Unknown Conditions.	No			
90	G	Soils	Please confirm that all soils meet or under the NY residential requirements.	5/13/2024	Dobco, Inc.	Not a residential project.	No			
91	G	List of Subcontractors	Please advise what paperwork the bidder needs to submit for the listed subcontractors.	5/13/2024	Dobco, Inc.	Specification section 004336 - Proposed Subcontractors Form	No			
92	G	Bid Bond	Please confirm that the bid bond is 10% of the total lump sum bid but NTE $20,000.	5/13/2024	Dobco, Inc.	As per specification section 002113 - Instructions to Bidders 4.2, A., 1. "Bid Security shall be provided in the amount of five (5) percent of the dollar amount of the Base Bid." There is **NO** Not to Exceed amount.	No			
93	G	Colored Renderings	Please re-consider the request to provide electronic colored renderings, it will only help the bidders and subcontractors. we strongly recommend it for the exterior facades and interior elevations.	5/13/2024	Dobco, Inc.	Renderings are not part of the contract documents.	No			
94	G	AISC Certification	Please confirm that the listed Structural Steel Contractor must have an AISC fabrication certification.	5/13/2024	Dobco, Inc.	Yes, bid as per specification section 051200, 1.5, D	No			
95	G	Contractor Experience	Please confirm that the bidder must have prior experience constructing similar facilities in active areas similar to the site herein.	5/13/2024	Dobco, Inc.	Contractor shall have technical ability and experience in institutional and commercial construction including experience in K-12 public school construction in New York State. Additionally should have ground-up construction experience, have at a minimum constructed and completed similar projects of this square footage and cost, and have been successful. If determined to be the lowest bidders the Contractor is required to complete the AIA Document A305 Contractor Qualifications Statement which will be submitted and used at the bid leveling meeting to determine if the contractor is the lowest qualified bidder.	No			
96	G	Bid Form	Please confirm that the contractor needs to list only the plumbing, HVAC, electrical, subcontractors on the bid form.	5/13/2024	Dobco, Inc.	Subcontractors should be listed on the Proposed Subcontractors Form Specification section 004336. All subcontractors should be listed.	No			

97	G	AIA Document A305-2020	Please confirm that the AIA Document A305-2020 which includes Exhibits A – E is not required to be submitted with the bid proposal. Please confirm that the AIA Document A305-2020 and the Exhibits A-E will only be required by the low bidder.	5/13/2024	Dobco, Inc.	As per specification section 002113 - Instructions to Bidders 6.2, A.	No			
98	G	Bid Date	We respectfully request that the bid date be extended until the 6/24/2024 if possible, in order to be able to provide the Owner with a competitive bid package. Due to the bid date being close to the Memorial Day weekend many of our subcontractor and vendors will be on vacation and we are getting feedback that they do not have enough time to complete their quotes. Dobco would like to submit a competitive bid to the owner and we would appreciate the owner assistance on extending the bid date.	5/13/2024	Dobco, Inc.	At this time the bid date is to remain 6/6/2024.	No			
99	A	078100 - Applied Fire Protection	There is a discrepancy between the Life and Safety sheets LS101-LS102 and the specification section 078100. The Life and Safety plans show fireproofing plans that it calls out for the SOFP to be rated for 1-hour, whereas the specification section called for roof construction and supporting beams and joist to be 2-hours. Which of the two different rating should we abide by?	5/13/2024	Dobco, Inc.	Revised as part of addendum #4	Yes		078100	Add #4
100	S	Column Schedule	Column F-20 is scheduled to receive intumescent paint. The column schedules do not call out what the F-20 column is. Please determine the size of the HSS member at location F-20.	5/13/2024	Dobco, Inc.	Provided as part of addendum #4	Yes	S004		Add #4
101	S	Column Schedule	The column schedule legend shown on sheet S004 called out FP "Denotes fireproofing treatment required on column (do not shop prime)." This is correct when applying fireproofing but some of these columns will receive intumescent paint. Steel to receive intumescent paint is required to be shop primed with a compatible primer.	5/13/2024	Dobco, Inc.	Revised as part of addendum #4	Yes	S004		Add #4
102	A	Intumescent Paint	Clarify what primer will be applied for the steel to receive intumescent paint.	5/13/2024	Dobco, Inc.	Bid as per specification section 078123, 2.3, B.	No			
103	A	Wall Construction	Detail 3 on sheet A309 wall construction notes do not match the section drawn. Wall construction called out 2" of spray foam insulation of 5/8" exterior sheathing, and the detail shows rigid insulation being applied to CMU block. Which of the two different wall constructions should be abide?	5/13/2024	Dobco, Inc.	Revised as part of addendum #4	Yes	A309		Add 4
104	A	Wall Construction	Detail 3 on sheet A253 shows two details (3/A351 and 9/A354) representing the base and top of an exterior wall. These two details show two different wall constructions. 3/A351 has spray foam on exterior sheathing and 9/A354 has rigid insulation on cmu block. Please clarify the wall construction type in this area.	5/13/2024	Dobco, Inc.	Revised as part of addendum #4	Yes	A253		Add 4
105	A	Wall Construction	Detail 1 of sheet A303 wall construction calls for 8" CMU with fluid applied membrane barrier and 2-1/2" rigid insulation; the wall itself does not match the description it is given. Please clarify if this wall is supposed to be CMU or 6" CFMF with 2" of spray foam insulation as drawn.	5/13/2024	Dobco, Inc.	Revised as part of addendum #4	Yes	A303		Add 4

106	A	Gypsum Board	Spec 092116-2.3-B-3a states MR Gypsum Board throughout, however sheet A701, Note#8 goes into detail stating Type 'X' gypsum board unless listed below. Is the intent to have Type 'X-MR' gypsum board thru-out?	5/13/2024	Pike Construction Services, Inc.	Type 'X-MR' gypsum board thru-out. Revised as part of addendum #4.	Yes	A701, A702		
107	A	Batt Insulation	Is batt insulation in new metal framing acceptable? There is no mention of it in specifications.	5/13/2024	Pike Construction Services, Inc.	Bid as specified. Spray foam insulation shall be used in exterior metal framed walls as per specification section 072119. Acoustic insulation to be used at interior metal framed partitions as per specification section 092216, 2.1, F., 8.	No			
108	A	A604	Per detail 11/A604 there is a half wall at the section cut thru indicating detail 6/A604. Can a detail thru the 'B003' mirror area please be provided. (How are the mirrors attached/hung? Is there a wall behind them?)	5/13/2024	Pike Construction Services, Inc.	Revised as part of addendum #4.	Yes	A604		Add #4
109	A	Washer / Dryers	Reference specification 113013 Residential Appliances which mentions Contractor to carry Clothes Washer and Dryer. Drawing FS200 items 215 (Washer Machine) and 215.1 (Dryer Machine) are marked as "NIC – By others". Please confirm we are not to carry the cost of these with our bid.	5/13/2024	Pike Construction Services, Inc.	Revised as part of addendum #4.	Yes	A624, FS200		Add #4
110	A	Door Schedule	100A, 129A – "G" Door Type / no glazing type noted. Please advise	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902		Add #4
111	A	Door Schedule	100J – "N" Door Type / no glazing type noted. Please advise	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902		Add #4
112	A	Door Schedule	130, 130B, C102, C201 – "F" Type Door – G3 Glazing Noted. Are these doors to be flush or do they need lites (windows) in them. Please advise	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902, A903		Add #4
113	A	Door Schedule	105, 106, 122, 129B, 130, 130A, 130B, C102, S101, S102, S103, S104, 203, 206, 222, S201, S202, S203, S204, 300, 303, S303, S304 – Type 3 Frame (double frame – 2" head) / Head Detail 5 (4" Masonry head). Please advise which is correct.	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902, A903, A904		Add #4
114	A	Door Schedule	112 – Type 4 Frame (double frame – 4" head) / Head Detail 4 (2" head). Please advise which is correct.	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902		Add #4
115	A	Door Schedule	116E, 204A – Type 2 Frame (single with 4" head) / Head Detail 4 (2" head). Please advise which is correct.	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A902, A903		Add #4
116	A	Door Schedule	206A, 210A, 215A, 216A – Type 1 Frame (single with 2" head) / Head Detail 5 (4" Masonry head). Please advise which is correct	5/14/2024	Rizzo Companies	Revised as part of addendum #4.	Yes	A903		Add #4
117	A	Wall Construction	Area 3 dr. A113 referring to wall section A309/3. Detail 3 / A309 showing CMU wall on 2nd floor, however wall construction description calls for different. Please clarify.	5/14/2024	Worth Construction Co., Inc.	Revised as part of addendum #4.	Yes	A309		Add #4
118	A	Casework	Casework detail 1 & 2 on Dr. A651, please explain what rooms this details should be use for.	5/14/2024	Worth Construction Co., Inc.	Details 1 & 2 on drawing A651 are typical details for plastic laminate casework. Refer to interior elevations for locations.	No			
119	A	Casework	Dr.123 no details shown for Rm. #224. Is the case work same kind as for Rm. #232? Please confirm.	5/14/2024	Worth Construction Co., Inc.	Revised as part of addendum #4.	Yes	A123		Add #4
120	G	Contract Award	Date Contract to be Awarded	5/14/2024	Joseph Lombardo Plumbing, Heating & Cooling, Inc.	Refer to addendum #2 for updated milestone schedule, specification section 003113.01. The anticipated award date is 6/18/2024 and the anticipated notice to proceed date is 6/19/2024.	No			

121	G	Schedule	Date of Work Commencing (I was only able to discern groundbreaking date of 7/9/24) - If you have any intel specific to Divisions 22 and 23, muchly appreciated in advance.	5/14/2024	Joseph Lombardo Plumbing, Heating & Cooling, Inc.	There are no schedule specific dates relative to Divisions 22 and 23 at this time.	No			
122	G	Schedule	Date of Work Completion	5/14/2024	Joseph Lombardo Plumbing, Heating & Cooling, Inc.	Refer to addendum #2 for updated milestone schedule, specification section 003113.01. The work completion date is 7/24/2026	No			
123	A	Equivalents	In accordance with the bid documents “Proposed Products Forms” and “Substitution Request Form” which would require the Contractor to submit the request for approval of equal products, please find the request to provide us with 4 or 5 equal Manufacturers/Products for each spec section of the bid package. Upon review of the specifications it came to our attention that majority of the spec sections have only 1 (one) manufacturer listed. Please review the example of the spec sections below that have only 1 manufacturer listed and approve the manufacturers below as equals. 081416 - FLUSH WOOD DOORS 083323 - OVERHEAD COILING DOORS 083343 - SMOKE CURTAINS 084313 - ALUMINUM-FRAMED STOREFRONTS 095100 - ACOUSTICAL CEILINGS 102123 - CUBICLE CURTAINS AND TRACK 102800 TOILET, BATH, AND LAUNDRY ACCESSORIES 104400 - FIRE PROTECTION SPECIALTIES 105113 - METAL LOCKERS 122400 - WINDOW SHADES	5/15/2024	Dobco, Inc.	The products specified are basis of design. It is not the intent of the Owner or Architect to deny products deemed to be equivalents. Products will not be reviewed or approved for equivalency prior to the bid date. Revised as part of addendum #4. Refer to section 002113, 3.3.	Yes		002113	Add #4
124	M	Refrigerant Lines	On the mechanical drawings there are now refrigerant lines sizes. Please provide sizes of the refrigerant lines or more detail.	5/16/2024	Pike Construction Services, Inc.	**Response Pending, Open RFI**				
125	M	Condensing Units	On M901 there seems to be missing information on air cooled condensing units CU-F-6, and CU-J-1 and what indoor units they serve. The VRF systems table is incomplete. Can you provide that information and complete the served indoor units table?	5/16/2024	Pike Construction Services, Inc.	Revised as part of addendum #4.	Yes	M901		Add #4
126	A/M	Paint Booth	Please clarify if the paint booth is owner provided. Can you provide more information on the paint booth as far as model #, accessories, and scope responsibilities? Can you provide contact info for the paint booth representative?	5/16/2024	Pike Construction Services, Inc.	As per the equipment schedule on drawing A616, the paint booth is contractor provided. Revised equipment plan provided as part of addendum #4. Refer to specification section 233500 for paint booth requirements.	Yes	A616		Add #4
127	E	Clock System	Confirm who is responsible to furnish the clock system (275313)	5/17/2024	Rizzo Companies	Refer to revised specification section 011200.01 as part of addendum #4.	Yes		011200.01	Add #4
128	E	Entry System	Confirm who is responsible to furnish the Audio Visual Entry System (281301)	5/17/2024	Rizzo Companies	Refer to revised specification section 011200.01 as part of addendum #4.	Yes		011200.01	Add #4
129	E	Gym Sound System	Is the gymnasium sound system being furnished by the owner’s vendor?	5/17/2024	Rizzo Companies	Gymnasium sound system shall be provided by the GC.	No			
130	C	Chain Link Fence	Sheet C-130 (Addendum #3) appears to have an overlay error on the Eastern-Side Parking lot. 4' High Chain Link Fence is called out in the same location as the parking lot directional arrows. Please advise.	5/17/2024	EW Howell Construction Group	Revised as part of addendum #4.	Yes	C130		Add #4

131	A	Door Schedule	There are hollow metal door frames shown with side lite glass on the floor plans. See rooms 116, 116C, 117A, 118, 119A, 120A, 221 & 302. These frame types are not shown on A901. The door schedule shows these frames as HM - Type 5 but that's for a pair of doors. Please review and advise on these HM frames with side lite glass. Also, please provide required glazing types for these frames.	5/17/2024	EW Howell Construction Group	Revised as part of addendum #4.	Yes	A901, A902, A903, A904		Add #4
132	C	MUTCD Signage	Please advise who is responsible for furnishing & installing the signs indicated on the MUTCD Sign Schedule, C-130.	5/17/2024	EW Howell Construction Group	MUTCD signage shall be provided by the Contractor.	No			

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

PART 1 – DEFINITIONS

A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Invitation to Bid, Instruction to Bidders, the Bid Form, Supplementary Bid Forms and other sample bidding and contract forms.

B. The proposed Contract Documents include the Contract Forms between the Owner and Contractor, Contractor's executed Bid Form and executed Supplementary Bid Forms, Conditions of the Contract (General, supplemental, and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

C. Definitions set forth in the General Conditions of the Contract of Construction, or in other Contract Documents are applicable to the Bidding Documents.

D. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

E. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

1. Wherever the word "Bid" occurs in the documents, it refers to the Bidder's Proposal.

F. The Base Bid is an amount stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents.

G. An Alternate is an amount stated on the Bid Form to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

H. A Unit Price is an amount stated on the Bid Form as a price per unit of measurement for materials, equipment for services or a portion of the Work as described in the Bidding Documents.

I. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

1. A Sub-bidder is a person or entity who submits a Bid to a Bidder for materials, equipment, or labor for a portion of the Work.

PART 2 – BIDDER'S REPRESENTATIONS

A. The Bidder by making a Bid represents that:

1. The Bidder has read and understands the Bidding Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being Bid concurrently or presently under construction.
2. The Bid is made in compliance with the Bidding Documents.
3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
   a. Bidders may visit the existing site by making prior arrangements with Thomas Ritzenthaler, CSArch at 845-561-3179.
4. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.
5. No official, officer or agent of the Owner is authorized to make any representations as to the materials or workmanship involved or the conditions to be encountered and the Bidder agrees that no such statement or the evidence of any documents or plans, not a part of the Bidding Documents, shall constitute any grounds for claim as to conditions encountered. No verbal agreement or conversation with any officer, agent, or employee of the Owner either before or after the execution of this Contract shall affect or modify any of the terms or obligations herein contained.

B. Each Bidder is required to form an individual opinion of the quantities and character of construction work by personal examination of the site and all existing facilities where the project work is to be done, and of the plans and specifications relating to it by such means as is preferred. Each Bidder shall inspect accessible concealed areas of existing construction, provided no significant permanent damage is inflicted upon the property. Lack of knowledge about conditions in accessible concealed areas shall not be the basis for additional cost claims at a later time.

C. The Bidder’s attention has been directed to the fact that all applicable state laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they are deemed to be included in the Contract Documents the same as though herein written out in full. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the Work as drawn and specified in the Contract Documents. By submitting a Bid, the

Bidder acknowledges that if awarded the Contract it shall be required to observe all laws and ordinances including, but not limited to, relating to the obstructing of streets, maintaining signals, keeping open passageways, and protecting them where exposed to danger, and all general ordinances affecting it, its employees, or its work hereunder in its relations to the Owner or any person. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall also obey all laws and ordinances controlling or limiting the Contractor while engaged in the prosecution of the Work under the Contract.

D. The Bidder's attention is directed to the fact that Each Contractor shall pay not less than the minimum hourly wage rates on those contracts as established in accordance with Section 220 of the Labor Law as shown in the schedule included in the Bidding Documents. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides (among other things) that it shall be the duty of the fiscal officer to make a determination of the schedule of wages to be paid to all laborers, workers and mechanics employed on public work projects, including supplements for welfare, pension, vacation, and other benefits. These supplements include hospital, surgical or medical insurance, or benefits; life insurance or death benefits; accidental death or dismemberment insurance; and pension or retirement benefits. If the amount of supplements provided by the employer is less than the total supplements shown on the wage schedule, the difference shall be paid in cash to the employee. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, also provides that the supplements to be provided to laborers, workers, and mechanics upon public work, "...shall be in accordance with the prevailing practices in the locality...." The amount for supplements listed on the enclosed schedule does not necessarily include all types of prevailing supplements in the locality, and a future determination of the Industrial Commissioner may require the Contractor to provide additional supplements. The original payrolls or transcripts shall be preserved for three (3) years from the completion of the Work on the awarded project by the Contractor. The Owner shall receive such payroll record upon completion of the Project.

PART 3 – BIDDING DOCUMENTS

3.1 COPIES

A. It is the intention of this Project to be both environmentally and fiscally conscious of paper use and consumption. Therefore, documents will be distributed as digital sets in PDF format. Bidding Documents, Drawings, and Specifications, may be viewed online free of charge beginning on **April 15, 2024**, at www.csarchplanroom.com or www.usinglesspaper.com under Public Projects or

electronically downloaded for a non-refundable charge of one-hundred dollars ($100.00.)

1. Please note, in order to access online documents and information, a log in is required. New users can create a free online account upon visiting site by clicking "Register for an Account."

B. Complete sets of Bidding Documents, Drawings, and Specifications, in PDF format (not CAD format) on compact disc (CD) may be obtained from Rev, 28 Church Street, Unit #7, Warwick, NY 10990 Tel: (877) 272-0216, upon depositing the sum of one hundred dollars ($100.00) for each combined set of documents. Checks or money orders shall be made payable to Newburgh Enlarged City School District.

1. Deposit is refundable in accordance with the terms in the Instructions to Bidders to all submitting bids. Any Bidder requiring CD(s) to be shipped shall make arrangements with the printer and pay for all packaging and shipping costs.
2. Any Bidder requiring paper copies of the Bidding Documents, Drawings, and Specifications, shall make arrangements with the printer, and pay for all printing, packaging, and shipping costs. Such costs are non-refundable.

C. All Bid Addenda will be transmitted to registered plan holders via email in PDF format and will be available at www.csarchplanroom.com. Plan holders who have paid for CDs or hard copies of the Bidding Documents will need to make the determination if hard copies of the Addenda are required for their use, and coordinate directly with the printer for hard copies of Addenda to be issued.

1. There will be no charge for registered plan holders to obtain hard copies of the Bid Addenda.

D. Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

E. The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

A. The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being Bid concurrently or presently under

construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered. All reports to the Architect shall be in writing.

B. No interpretation of the meaning of the Contract Documents, the existing conditions, or of the scope of Work will be made verbally. Provide every request for such interpretation in writing, addressed to CSArch, Attention Joseph Metzger, 40 Beaver Street, Albany, New York 12207 or by e-mail: jmetzger@csarchpc.com, with copy to rpeckham@csarchpc.com, tritzenthaler@csarchpc.com. To provide consideration RFI must be received at least seven (7) working days prior to the date of the Bid Opening.

C. Interpretations, corrections, and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections, and changes of the Bidding Documents made in any other manner will not be binding, and Bidders are not required to rely upon them.

D. The Bidding Documents for this Project have been prepared using certain existing construction documents furnished by the Owner, which pertain to the construction of the existing conditions, and limited observations obtained by the Architect at the Project site.

1. More extensive investigations of existing conditions, including disassembly, or testing of existing building components, was not undertaken by the Architect.
2. Portrayal of such existing conditions obscured or concealed from the Owner or Architect's view prior to the start of this Project's construction activities, is based on reasonable implications and assumptions. The Owner and Architect do not imply or guarantee to the Bidders, in any way, that such portrayals are accurate or true existing conditions.

E. In the absence of an interpretation by the Architect, should the Drawings disagree in themselves or with the Specifications, the better quality, the more costly or the greater quantity of work or materials shall be estimated upon, and unless otherwise determined, shall be furnished.

3.3 EQUIVALENTS

A. **Each Bidder shall base his Bid upon the materials and equipment described in the Bidding Documents to the fullest extent possible. The materials, products and equipment described in the Bidding Documents establish as standard of required function, dimension, appearance, and quality to be met by any proposed comparable product/equivalent. It is not the intention of the**

Owner or Architect to eliminate from consideration products that are equivalent in quality, appearance, and function to those specified. (**Bid Addendum #4)**

B. In the specifications, two or more kinds, types, brands, or manufacturers or materials may be named. They shall be regarded as the required standard of quality, and overall, are judged to be equivalent by the Architect. The Bidder may select one of these named items as the basis for its Bid **or, if the Bidder desires to use any other kind, type, brand, or manufacturer or material other than those named in the specifications, it shall indicate in writing, when requested, and prior to the award of the Contract, what kind, type, brand, or manufacturer is proposed in lieu of the named specified item(s).** ~~If a Bidder proposes to use comparable products/equivalents other than those listed in the Project Manual, submit in accordance with subparagraph C below.~~

C. ~~No substitution will be considered prior to receipt of Bids unless written request for approval on a Substitution Request (During the Bidding Phase) Form (Section 004325) has been received by the Architect at least ten (10) days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed equivalent would require, shall be included. The burden of proof of the merit of the proposed equivalent is upon the proposer. The Architect's decision of approval or disapproval of a proposed equivalent shall be final.~~

D. ~~If the Architect approves a proposed equivalent prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.~~

E. ~~No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.~~

3.4 ADDENDA

A. Addenda will be transmitted to all that are known to have received a complete set of Bidding Documents. All such addenda shall become part of the Contract Documents and all Bidders shall be bound by such Addenda whether or not received by the Bidders.

1. Provide Bidding Document distributor with full company name, address, telephone and facsimile numbers and contact person's name.

B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

C. Addenda will not be issued later than five (5) working days prior to the time specified for receipt of Bids, except any Addendum withdrawing the request for Bids or one which includes postponement of the time for receipt of Bids.

D. Each Bidder shall ascertain upon submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt on the Bid Form.

3.5 TAX LIABILITY

A. Bidders are exempt from payment of manufacturer's excise taxes for materials purchased for the exclusive use of the Owner, provided that the manufacturer has complied with rules and regulation of the Commissioner of Internal Revenue Service.

B. New York State Sales Tax does not apply to this Project. Contractors are exempt from payment on purchase of materials for the execution of this Contract and such taxes shall not be included in Bids. Exemption Certificates will be provided upon request.

C. All other taxes shall be included in the Bid.

3.6 PRE-BID CONFERENCE

A. There will be a Pre-Bid Conference as detailed in the Invitation to Bidders. A lack of representation at the Pre-bid Conference will not be justification for additional costs due to unforeseen conditions during the construction phases of the Contracts.

PART 4 – BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

A. Bids shall be submitted on forms identical to the Bid Forms contained in this Project Manual, or submitted using unaltered and legible copies thereof.

B. All blanks on the Bid Form shall be legible executed in a non-erasable medium. No Bid will be considered which does not include bids for all items listed in the proposal sheets.

C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

D. Interlineations, alterations, and erasures must be initialed by the signer of the Bid.

E. Bid all requested alternates. If no change in the Base Bid is required, enter "No Change."

F. Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each Bid copy shall be signed by the person or persons legally authorized to bind the Bidder to a Contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

G. Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

H. The Owner may consider as informal any Bid on which there is an alteration of or departure from or additions to or qualification of the Bid Form or from the any of the other Contract Documents. The Owner may reject a Bid, which in the Owner's sole view, is not adequately filled out, or does not contain the requested information.

4.2 BID SECURITY

A. Each Bid must be accompanied by a certified bank check of the Bidder, or a Bid Bond prepared by a surety company licensed in New York State.

1. Bid Security shall be provided in the amount of five (5) percent of the dollar amount of the Base Bid.
2. Bid Security shall be payable to Newburgh Enlarged City School District,.
3. If certified check is utilized, the Bidder shall provide written confirmation from a licensed New York State Surety company that Performance and Payment Bonds will be available to said Bidder for this Project.
4. The apparent low Bidders, upon failure or refusal to furnish the required Performance and Payment Bonds and execute a Contract within ten (10) calendar days after receipt of notice of the acceptance of Bid, shall forfeit the Bid Security as liquidated damages for such failure or refusal, and not as a penalty.
5. The successful Bidders shall have the Bid Security returned upon execution of an Owner/Contractor Agreement.

6. Unsuccessful Bidders shall have their Bid Security returned following the execution of the Owner/Contractor Agreements or the forty-five (45) day period following the Bid Opening, whichever occurs first.
7. The Bid Security shall not be forfeited to the Owner in the event the Owner fails to comply with subparagraph 6.2.

B. Surety Bond shall be written on AIA Document A310, Bid Bond, and the attorney-in-fact that executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney and with a copy of the riders.

C. The Owner will have the right to retain the Bid Security of Bidders to whom an award is being considered until either:

1. The Contract has been executed and bonds, when required, have been furnished, or;
2. The specified time has elapsed so that Bids may be withdrawn or;
3. All Bids have been rejected.

4.3 SUBMISSION OF BIDS

A. All copies of the Bid, the Bid Security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name, and address and, if applicable, the designated Contract for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

1. If Bidder submits for different Contracts, each shall be submitted individually and so labeled for that Contract.

B. Bids shall be deposited at the designated location prior to the time and date indicated in the Invitation to Bidders for the receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

1. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
2. Oral, telephonic, telegraphic, facsimile, or other electronically transmitted Bids will not be considered.

C. Bids not exhibiting original signatures or seals will not be accepted as a responsive Bid.

D. Bids shall be submitted **with one copy of sealed bids in an envelope and one copy of bid in PDF format to be emailed no later than the next day before close of business for record keeping purposes** ~~in duplicate~~. Executed forms required for each submitted Bid are as follows to be considered a complete bid:

1. Bid Form- all costs are to be filled out
2. Unit prices
3. ~~Labor Rates~~
4. Substitution list
5. Resolution.
6. Non-Collusive Bid Certification.
7. Iran Divestment Act Certification.
8. Bid Security.

4.4 MODIFICATION OR WITHDRAWAL OF BID

A. A Bid may not be modified, withdrawn, or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid. No Bidder may withdraw a Bid within the forty-five (45) day period following the time of the Bid Opening or be subject to forfeiture of the bid security.

B. Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

C. Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

D. Negligence on the part of the Bidder in preparing its Bid confers no right for the withdrawal of the Bid after it has been opened. If a Bidder claims to have made a mistake or error in its Bid, it shall deliver to the Architect within three (3) days after the Bid Opening, a written notice describing in detail the nature of the claimed mistake or error with documentary evidence or proof (including, but not limited to, bid worksheets, summary sheets and other bid related data requested of it). Failure to deliver notice and evidence or proof specified above within the specified time shall constitute a waiver of the Bidder's right to claim an error or mistake. Upon receipt of specified notice and evidence or proof within the specified time period, the Architect and Owner shall determine if an excusable

error or mistake has been made; and, if so, the Owner may permit the Bid to be withdrawn. The Owner's determination of whether a Bidder made an excusable error or mistake shall be conclusive on the Bidder, its Surety, and all the claim rights under the Bidder.

PART 5 – CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

A. The properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders. The Owner reserves the right to postpone the date and time of the opening of Bids at any time prior to the date and time listed in the Advertisement or Invitation to Bid.

5.2 REJECTION OF BIDS

A. The Owner shall maintain the right to reject any or all Bids. A Bid not accompanied by the required Bid Security or by other data required by the Bidding Documents, or which is in any way incomplete, or irregular is subject to rejection.

B. If identical bids are received and these bids are or become the low Bids, the Owner reserves the right to award the Contract on the basis of the relative quality of the product or products as shown by similar work done elsewhere, and it is mutually agreed that the Owner's judgment shall be final.

C. In order to qualify as a Contractor satisfactory to the Owner, each Bidder shall document to the satisfaction of the Owner that it has the skill and experience as well as the necessary facilities, ample financial resources, and adequate laborers and equipment to do the Work in a satisfactory manner and within the time specified. Bidders may be judged qualified only for the type of work in which they demonstrate competence. Bidders must prove to the satisfaction of the Owner that they are reputable, reliable, and responsible. The Owner may make any investigation it deems necessary to assure itself of the ability of the Bidder to perform the Work, and the Bidder shall furnish the Owner with all such additional information and data for this purpose as may be requested. In addition to the general reservation of rights to reject any and all bids, the Owner specifically reserves the right to reject any Bid of any Bidder if the evidence submitted by, or investigation of such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract Documents and to complete the Work contemplated therein.

D. The Owner reserves unto itself the sole right to determine the lowest qualified and responsible Bidder. The Owner may make any investigation necessary to

determine the ability of the Bidder to fulfill the Contract and the Bidder shall furnish the Owner with all such information for this purpose as the Owner may request. Without limiting the general rights which the Owner has to reject Bids, as herein before set forth, in determining the lowest responsible Bidder, the following considerations in addition to those above mentioned will be taken into account. In determining the responsibility of a Bidder for a public works contract, the Owner shall consider whether the Bidder:

1. Maintains a permanent place of business;
2. Has adequate plant and equipment to do the Work properly and expeditiously;
3. Has the suitable financial ability to meet obligations required by the Work;
4. Has appropriate technical ability and experience in institutional and commercial construction including experience in K-12 public school construction in New York State;
5. Has performed Work of the same general type and the same scale called for under this Contract;
6. Has previously failed to perform contracts properly or complete them on time;
7. Is in a position to perform this Contract;
8. Has habitually and without just cause neglected the payment of bills or otherwise disregarded its obligations to subcontractors, suppliers, or employees;
9. Is eligible for full bonding capacity of its Contract;
10. Has been in business as the corporation, partnership, sole proprietorship or other business entity, in whose name the bid is submitted, continuously, for no less than the previous five (5) years performing or coordinating the Work which they are bidding on;
11. Is not currently involved in bankruptcy proceedings;
12. Is licensed to perform the Work it is bidding on in the jurisdiction the work will take place;
13. Is able to perform the work with manpower available to it;
14. Will employ a field superintendent with at least five (5) years' experience as a working field superintendent and capable of communicating in fluent English;
15. Has committed a willful violation of the New York State Prevailing Wage Laws within the last five years;
16. Has committed violations of safety and/or training standards as evidenced by a pattern of OSHA violations or the existence of willful OSHA violations;
17. Has committed any significant violation of the Worker's Compensation Law, including, but not limited to, the failure of the bidder to provide proof of worker's compensation or disability benefits coverage;

18. Has committed any criminal conduct involving violations of the Environmental Conservation Law or other federal or state environmental statutes of regulations;
19. Has committed any criminal conduct concerning formation of, or any business association with, an allegedly false or fraudulent Women's or Minority Business Enterprise (W/MBE), or any denial, decertification, revocation or forfeiture of W/MBE status by New York State;
20. Has been debarred by any agency of the U.S. Government; and
21. Has engaged in other conduct of so serious or compelling a nature that it raises questions about the responsibility of the bidder, including, but not limited to submission to the Owner of a false or misleading Statement of Bidder's Qualifications, or in some other form, in connection with a bid for or award of a contract.

5.3 AWARD OF BID

A. It is the intent of the Owner to enter into separate Prime Contracts with the lowest responsive and responsible bidder, as those criteria are defined and interpreted under the laws of the State of New York regarding competitive bidding for public improvement projects, for each Prime Contract, provided the Bids are submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interest.

B. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

C. The acceptance of a Bid will be a notice in writing signed by a duly authorized representative of the Owner by mail sent within forty-five (45) after the Bids have been opened and no other act of the Owner shall constitute the acceptance of a Bid. The acceptance of a Bid shall bind the successful Bidder to execute the Contract as provided hereinafter. The rights and obligations provided for in the Contract shall become effective and binding upon the parties only with its formal execution by the successful Bidder and the Owner.

PART 6 – POST-BID INFORMATION

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

A. Bidders to whom an award of a Contract is under consideration shall submit to the Owner, within three (3) calendar days, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

B. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform its obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as the Owner may request. The right is reserved by the Owner to reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified and capable to carry out properly the terms of the Contract. The issuing of Bid Documents and acceptance of a Bidder's payment by the Owner shall not be construed as pre-qualification of that Bidder. If a Bidder is later discovered to have misrepresented or provided false or incorrect information with regard to any material party of the information submitted to the Owner, including but not limited to information regarding experience, debarment, claims, lawsuits, arbitrations, mediations, finances, license, contract termination, the Owner reserves the right to reject the Bid of such Bidder and, if a Contract has been awarded, it will become automatically voidable at the sole discretion and election of the Owner.

6.2 SUBMITTALS

A. Within three (3) calendar days following the Bid Opening time, the apparent lowest Bidder, shall furnish to the Owner through the Architect the following information:

1. Contractor’s Qualification Statement – AIA Document 305, 2020 edition.
2. Labor rate sheet
3. Material and Equipment List.
4. Schedule of Values.
5. Proposed Project Manager.

B. The Bidder will be required to establish to the satisfaction of the Owner and Construction Manager the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

C. Upon request only, the apparent second and third low Bidders shall be prepared to submit the information of paragraphs 6.1 and 6.2.A.

D. Prior to the execution of the Contract, the Construction Manager will notify the Bidder in writing if either the Owner, Architect/Engineer, or Construction Manager, after due investigation, has reasonable objection to a person or entity

proposed by the Bidder. If the Owner, Architect or Construction Manager has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity. In the event of withdrawal or disqualification, Bid Security will not be forfeited.

E. Persons and entities proposed by the Bidder and to whom the Owner and Construction Manager have made no reasonable objection must be used on the Work for whom they were proposed and shall not be changed except with the written consent of the Owner and Construction Manager.

F. Any Bidder, upon failure to submit the information required in subparagraphs 6.1.A, 6.2.A, and 6.2.B in the allowed time, may have the Bid rejected. In that event, the Bidder shall forfeit the Bid Security to the Owner as liquidated damages for such failure or refusal, and not as penalty.

6.3 BOND REQUIREMENTS

A. The Owner requires the apparent successful Bidder to furnish and deliver bonds, covering the faithful performance of the Contract Work and payment of all obligations arising thereunder duly executed by the Bidder and a surety company licensed to do business in New York State rating.

B. The premiums shall be included in the Bid and paid by the Contractor. The Bidder shall proportionally distribute the costs of such bonds between the Base Bid and any Alternates.

6.4 TIME OF DELIVERY AND FORM OF BONDS

A. The Bidder shall deliver the required bonds to the Owner through the Construction Manager on or before the time of execution of the Owner/Contractor Agreement. Bonds shall be payable to Newburgh Enlarged City School District.

B. Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond, Version 2010. Both bonds shall be written in the amount of the Contract Sum.

C. The bonds shall be dated the same as the Owner/Contractor Agreement.

D. The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

E. The surety for the performance and payments bonds shall be a duly authorized surety company, licensed to do business in the State of New York, and listed in the latest issue of U.S. Treasury Circular 570. The sufficiency of the surety and the bonds is subject to the approval of the Owner, and sureties and bonds that are deemed insufficient by the Owner may be rejected.

PART 7 – AGREEMENT FORM BETWEEN OWNER AND CONTRACTOR

A. Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition – AIA Document A132-2019 Edition, as modified.

END OF DOCUMENT 002113

Responsibility Matrix												
	Furnished by Owner's Vendor	Furnished by Owner	Furnished by GC	Furnished by Controls Contractor	Installed by Owner's Separate Contractor	Installed by GC	Installed by Owner's Contriols Contractors	Control Wiring by Controls Contractor	Control Wiring by GC	Power Wiring by GC	Power Wiring by Controls Contractor	Notes
Note: For any items not specifcally listed, the Prime contractor responsible for the spec section shall provide the item.												
102800 - Toilet and Bath Accessories												
Paper Towel Dispensers	X					X						
Toilet Paper Dispensers	X					X						
Soap Dispensers	X					X						
Sanitary Napkin Dispensers	X					X						
104413 - Fire Protection Cabinets												
Fire Extinguishers	X					X						
Fire Extinguisher Cabinets			X			X						
230900 Building Automation System												
Hydronic Control Valves for New Equipment				X		X		X			X	
Pipe Mounted Temperature Sensors				X		X		X				
Dampers				X		X		X				
Damper Actuators				X			X	X			X	
Duct Mounted Airflow Stations				X			X	X				
Fan Inlet Airflow Station				X		X		X				
Duct Mounted Pressure Sensor				X			X	X				
Duct Mounted Smoke Detector	X					X			X			
Variable Frequency Drives			X			X		X		X		
Pipe Mounted Pressure Sensors				X		X		X				
Building Management Control Panel				X				X			X	
Control Relays				X			X	X				
Current Sensing Device				X			X	X				
Hydronic Flow Meter				X				X			X	
Fire Alarm Equipment Shut Down Relay	X					X			X	X		

Responsibility Matrix												
	Furnished by Owner's Vendor	Furnished by Owner	Furnished by GC	Furnished by Controls Contractor	Installed by Owner's Separate Contractor	Installed by GC	Installed by Owner's Contriols Contractors	Control Wiring by Controls Contractor	Control Wiring by GC	Power Wiring by GC	Power Wiring by Controls Contractor	Notes
Smoke Dampers			X			X			X	X		
Combination Fire/Smoke Dampers			X			X			X	X		
Fire Dampers			X			X						
Space Occupancy Sensors								X				
Space CO2 Sensors				X				X				
Mechnical Equipment Scheduled on Sheet M901												
Equipment	X					X						Refer to 011200 Summary for specific responsibilities of the mechanical contractor to receive and store equipment
Curbs for Other Than VRF Condensing Units	X					X						
Rails for VRF Condesning Units			X			X						
Support Stands for VRF Condesning Units	X					X						
Mechanical Equipment Scheduled on Sheet M902 or Otherswise Required and NOT on M901												
Equipment			X			X						Refer to 011200 Summary for specific responsibilities of the mechanical contractor to receive and store equipment
Curbs and supports flashed into the roof.			X			X						
271600 - Communications Connecting Cords, Devices and Adapters												
Wireless Access Points		X				X						
Network Switches and UPS		X				X						

Responsibility Matrix												
	Furnished by Owner's Vendor	Furnished by Owner	Furnished by GC	Furnished by Controls Contractor	Installed by Owner's Separate Contractor	Installed by GC	Installed by Owner's Contriols Contractors	Control Wiring by Controls Contractor	Control Wiring by GC	Power Wiring by GC	Power Wiring by Controls Contractor	Notes
275113 - Public Address System												
Public Address Equipment	X					X						
Public Address Cabling and Pathways						X						
Public Address Programming and Training	X											
275313 - Clock Systems												
Clock Equipment	X					X						
Clock Cabling and Pathways						X						
Clock Programming and Training	X											
281300 - Door Access Control System												
Card Access Equipment	X					X						
Card Access Cabling and Pathways						X						
Card Access Programming and Training	X											
281301 - Audio Visual Entry System												
Audio Visual Entrance Equipment			X			X						
Audio Visual Entrance Cabling and Pathways						X						
Audio Visual Entrance Programming and Training			X									
281600 - Intrusion Detection System												
Intrusion Detection Equipment	X					X						
Intrusion Detection Cabling and Pathways						X						
Intrusion Detection Programming	X											

Responsibility Matrix												
	Furnished by Owner's Vendor	Furnished by Owner	Furnished by GC	Furnished by Controls Contractor	Installed by Owner's Separate Contractor	Installed by GC	Installed by Owner's Contriols Contractors	Control Wiring by Controls Contractor	Control Wiring by GC	Power Wiring by GC	Power Wiring by Controls Contractor	Notes
282300 - Closed Circuit Television System												
CCTV Cameras	X				X							
Pathways and Cabling for Cameras						X						
Programming and Training for Cameras	X											
283100 - Fire Detection and Alarm												
Devices	X					X						
Programming	X											
Cabling and Pathways						X						
Vape Detection as indicated on 'T' Series Drawings												
Vape Detection Devices	X					X						
Vape Detection Pathways and Cabling for Cameras						X						
Vape Detection Programming	X											

SECTION 012900 - – PAYMENT PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the requirements set forth in the AIA Document A232 - 2019 General Conditions of the Contract for Construction and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Use the approved Schedule of Values form for each Application for Payment.

1.5 APPLICATIONS FOR PAYMENT

A. Submit Applications for Payment only after Schedule of Values have been approved.

B. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
   1. List of subcontractors.
   2. Schedule of Values.
   3. Contractor's Construction Schedule (preliminary if not final.)
   4. Products list.
   5. Schedule of unit prices.
   6. Submittals Schedule (preliminary if not final.)
   7. List of Contractor's staff assignments.
   8. List of Contractor's principal consultants.
   9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

10. Initial progress report.
11. Report of preconstruction conference.
12. Certificates of insurance and insurance policies.
13. Performance and payment bonds.
14. Data needed to acquire Owner's insurance.
15. Initial settlement survey and damage report if required.

C. Each Application for Payment shall be consistent with previous applications and payments as certified by the Construction Manager and Architect as to the actual value of the Work, which will be completed by the end of the month and paid for by Owner.
   1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

D. Payment Application Times: The date for each progress payment is the 30th day of each month.
   1. This date is a basis of cycle time, and shall be confirmed at the Pre-Construction Conference, based on the owner’s requirements for processing Applications for Payment. The owner reserves the right to adjust this cycle if necessary, with payments executed net 30 days.”

E. Draft copies (pencil copies) shall be submitted to the Construction Manager, by the same day of the month, for the duration of the project. This day shall be established at the Pre-Construction Conference, based on the owner’s requirements for processing Applications for Payment. This day may be modified from time to time to accommodate the Owners schedule.
   1. Reflect an accurate accounting of the Work completed and material stored at the time of the pencil copy submission. Projections of work anticipated to be completed or stored is not allowed.
   2. Final copies, including review adjustments, shall be submitted to Architect by the 27th day of the month.
      a. Provided that a fully executed and complete Application for Payment is submitted on the 27th day of each month, the Owner will receive requisitions by the 10th day of the next month.

F. Payment Application Forms: Use approved Schedule of Values as form for Application for Payment.
   1. Provide itemized data on the Continuation Sheet. Format, schedules, line items, and values shall be those of the approved Schedule of Values.

G. Application Preparation: Complete every entry on the form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
   1. Entries shall match data of the approved Schedule of Values.
   2. Provide updated Prime Contractor Construction Schedule with each application.

3. **The owner shall retain five percent (5%) of the amount due on each application for both the work completed and material stored, unless stated otherwise in the Owner Contractor Agreement. The OWNER reserves the right to retain a greater precentage in the event the contractor fails to make safisfactory progress or in the event there is specific cause for greater withholding. (Bid Addendum #4)**

H. Transmittal: Submit five (5) signed and notarized original copies of each Application for Payment to the Construction Manager by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
   1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application in acceptable manner discussed with Construction Manager and Architect.

I. Certified Payrolls: With each Application for Payment, submit certified payrolls from the Prime Contractor's own forces and subcontractors for the construction period covered by the previous application.

J. All substantiating data and attachments required by the Contract Documents shall accompany each Application for Payment upon submission in the form required by the Construction Manager and Architect.

K. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
   1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
   2. When an application shows completion of an item, submit final or full waivers.
   3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
   4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
   5. An Affidavit of Payments to Subcontractors and Suppliers on a form approved by Architect.
      a. Forms are for previous month's application and are to be submitted with every application through and including the latest pay period prior to the date of submittal of the application.
   6. When the Construction Manager and/or Architect require additional substantiating data, Prime Contractor shall promptly submit suitable information with a cover letter.

L. Monthly Application for Payment: Administrative actions and submittals for each monthly application for payment include the following:
   1. Change Orders: Submit only fully executed, including signatures by all parties, documenting approval.

M. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
   1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
   2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

N. Final Payment Application: Submit final Application for Payment with executed releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
   1. Evidence of completion of Project closeout requirements.
   2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
   3. Updated final statement, accounting for final changes to the Contract Sum.
   4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
   5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
   6. AIA Document G707, "Consent of Surety to Final Payment."
   7. Evidence that claims have been settled.

O. Full and Final Payment will not be made until the following have been supplied, approved and accepted by the Construction Manager, the Owner and the Architect.
   1. The required number of copies of all written guarantees, warranties, bonds, operating and maintenance manuals, and test results.
   2. Documentation that all verbal and written instructions and training sessions required by the Contract has been completed.
   3. The required number of copies of all Project Record Documents (“as-built” drawings) has been received.
   4. All materials and equipment required as stock is delivered.
   5. Any other requirement of the Contract Documents which remains outstanding.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

3.1 END OF SECTION 012900

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SECTION 051200 - STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Structural steel framing members.

B. Structural steel support members and struts.

C. Base plates, shear stud connectors and expansion joint plates.

D. Grouting under base plates.

E. Structural Cast components

F. Thermal break pads and coatings

1.2 RELATED REQUIREMENTS

A. Section 053100 - Steel Decking: Support framing for small openings in deck.

B. Section 055000 - Metal Fabrications: Steel fabrications affecting structural steel work.

1.3 REFERENCE STANDARDS

A. AISC (MAN) - Steel Construction Manual; 2023.

B. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2022.

C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.

D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.

E. ASTM A108 - Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished; 2018.

F. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.

G. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2021a.

H. ASTM A563M - Standard Specification for Carbon and Alloy Steel Nuts (Metric); 2021a.

I. ASTM A572/A572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel; 2021, with Editorial Revision.

J. ASTM A992/A992M - Standard Specification for Structural Steel Shapes; 2022.

K. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.

L. ASTM E164 - Standard Practice for Contact Ultrasonic Testing of Weldments; 2019.

M. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2023.

N. ASTM F436/F436M - Standard Specification for Hardened Steel Washers Inch and Metric Dimensions; 2019.

O. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2020.

P. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.

Q. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021.

R. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).

S. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel AC172; 2019.

T. RCSC (HSBOLT) - Specification for Structural Joints Using High-Strength Bolts; Research Council on Structural Connections; 2020.

U. SSPC-SP 3 - Power Tool Cleaning; 2018.

1.4 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings:

1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.

2. Connections not detailed.

3. Indicate cambers and loads.

4. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.

C. Shop Drawings for custom designed castings: Provide project specific, scaled, stamped engineered shop drawings and calculations including:

1. Design, detail and engineer castings including establishing interior and exterior dimensions and the preparation of casting specifications including material selection, non-destructive examination requirements, and all casting production parameters.

D. Manufacturer's Mill Certificate: Certify that products meet or exceed specified requirements.

E. Mill Test Reports: Indicate structural strength, destructive test analysis and non-destructive test analysis.

F. Fabricator Test Reports: Comply with ASTM A1011/A1011M.

G. Materials Test Reports: Submit independent test results or engineered performance analysis of structural thermal-break pad performance in bearing or slip-critical connections where shear and moment loads are applied.

H. Product Test Reports:

1. Bolts, nuts, and washers including mechanical properties and chemical analysis.

2. Direct-tension indicators.

3. Tension-control, high-strength, bolt-nut-washer assemblies.
4. Shear stud connectors.
5. Shop primers.
6. Nonshrink grout.
7. Post-Installed Anchors
8. Thermal break material

I. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

J. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint whether prequalified or qualified by testing, including the following:

1. Power source (constant current or constant voltage).
2. Electrode manufacturer and trade name, for demand critical welds.

K. Designer's Qualification Statement.

L. Fabricator's Qualification Statement.

1.5 QUALITY ASSURANCE

A. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."

B. Fabricator: Company specializing in performing the work of this section with minimum 20 years of documented experience.

C. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and no more than 12 months before start of scheduled welding work.

1. Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8/D1.8M. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.

D. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.

E. Design connections not detailed on drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

PART 2 PRODUCTS

2.1 MATERIALS

A. Steel Angles and Plates: ASTM A36/A36M.

B. Steel W Shapes and Tees: ASTM A992/A992M.

C. Rolled Steel Structural Shapes: ASTM A992/A992M.

D. Steel Plates and Bars: ASTM A572/A572M, Grade 50 (345) high-strength, columbium-vanadium steel.

E. Cold-Formed Structural Tubing: ASTM A500/A500M, Grade C.

F. Pipe: ASTM A53/A53M, Grade B, Finish black.

G. Shear Stud Connectors: Made from ASTM A108 Grade 1015 bars.

H. High-Strength Structural Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, with matching compatible ASTM A563 or ASTM A563M nuts and ASTM F436/F436M washers.

I. Tension Control Bolts: Twist-off type; ASTM F3125/F3125M.

J. Unheaded Anchor Rods: ASTM F1554, Grade 36, plain, with matching ASTM A563 or ASTM A563M nuts and ASTM F436/F436M Type 1 washers.

K. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

L. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.

2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

M. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

N. Touch-Up Primer for Galvanized Surfaces: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

O. TNEMEC Aerolon 971 Thermal Break Paint: Apply to steel at all locations where steel framing breaks the plane of the thermal envelope.

2.2 FABRICATION

A. Shop fabricate to greatest extent possible.

B. Continuously seal joined members by continuous welds. Grind exposed welds smooth.

C. Fabricate connections for bolt, nut, and washer connectors.

2.3 FINISH

A. Prepare structural component surfaces in accordance with SSPC-SP 3, unless noted otherwise as AESS thus requiring more stringent surface preparation.

B. Shop prime structural steel members. Do not prime surfaces that will be ~~fireproofed,~~ field welded, in contact with concrete, or coated with TNEMEC Aerolon thermal break paint. ***For surfaces that will be fireproofed, coordinate shop primer requirements with fireproofing product manufacturer. (Addendum 4)***

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

3.2 ERECTION

A. Erect structural steel in compliance with AISC 303.

B. Allow for erection loads and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing.

C. Field weld components and shear studs indicated on shop drawings.

D. Use carbon steel bolts only for temporary bracing during construction, unless otherwise specifically permitted on drawings. Install high-strength bolts in accordance with RCSC (HSBOLT) "Specification for Structural Joints Using High-Strength Bolts".

E. Do not field cut or alter structural members without approval of Architect.

F. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

G. Grout solidly between column plates and bearing surfaces, complying with manufacturer's instructions for nonshrink grout. Trowel grouted surfaces smooth, splaying neatly to 45 degrees.

3.3 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

3.4 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.

B. Welded Connections: Visually inspect all field-welded connections per Statement of Special Inspections, and physically test all complete joint penetration groove welds (CJP), using the following:

1. Ultrasonic testing performed in accordance with ASTM E164.

END OF SECTION 051200

SECTION 078100 - APPLIED FIRE PROTECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Applied fire protection of interior structural steel not exposed to damage or moisture.

B. Preparation of applied fire protection for application of exposed overcoat finish specified elsewhere.

1.2 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023c.

B. ASTM E736/E736M - Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2019 (Reapproved 2023).

C. ASTM E759/E759M - Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved 2023).

D. ASTM E760/E760M - Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved 2023).

E. ASTM E859/E859M - Standard Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members; 2023.

F. ASTM E937/E937M - Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 1993 (Reapproved 2023).

G. UL (FRD) - Fire Resistance Directory; Current Edition.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with placement of ceiling hanger tabs, mechanical component hangers, and electrical components.

B. Preinstallation Meeting: Convene one week before starting work of this section.

1.4 SUBMITTALS

A. Product Data: Provide data indicating product characteristics.

B. Manufacturer's Certificate: Certify that applied fireproofing products meet or exceed requirements of Contract Documents.

C. Test Reports: Reports from reputable independent testing agencies for proposed products, indicating compliance with specified criteria, conducted under conditions similar to those on project, as follows:
   1. Bond strength.
   2. Bond impact.
   3. Compressive strength.
   4. Fire tests using substrate materials similar those on project.

D. Manufacturer's Installation Instructions: Indicate special procedures.

E. Field Quality Control Submittals: Submit field test report.

F. Installer's Qualification Statement.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience

1.6 FIELD CONDITIONS

A. Do not apply fireproofing when temperature of substrate material and surrounding air is below 40 degrees F or when temperature is predicted to be below said temperature for 24 hours after application.

B. Provide ventilation in areas to receive fireproofing during application and 24 hours afterward, to dry applied material.

C. Provide temporary enclosure to prevent spray from contaminating air.

1.7 WARRANTY

A. Correct defective Work within a two year period after Date of Substantial Completion.
   1. Include coverage for fireproofing to remain free from cracking, checking, dusting, flaking, spalling, separation, and blistering.
   2. Reinstall or repair failures that occur within warranty period.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Applied Fire Protection:
   1. GCP Applied Technologies: www.gcpat.com/#sle.

2.2 APPLIED FIRE PROTECTION ASSEMBLIES

A. Provide assemblies as indicated on drawings.

B. Provide fire resistance ratings for following building elements as required by local building code:
   1. **Floor construction, including supporting beams and joists, 1 hour. (Bid Addnedum #4)**
   2. Roof construction, including supporting **columns**, beams and joists, ~~2 hours~~ **1 hour. (Bid Addendum #4)**

2.3 MATERIALS

A. Applied Fire Protection Material for Interior Applications, Concealed: Manufacturer's standard factory mixed material, which when combined with water is capable of providing indicated fire resistance, and complying with following requirements:
   1. Composition: Gypsum-based; not mineral-fiber-based.
   2. Bond Strength: 150 pounds per square foot, minimum, when tested in accordance with ASTM E736/E736M when set and dry.
   3. Compressive Strength: 8.33 pounds per square inch, minimum.
   4. Effect of Impact on Bonding: No cracking, spalling or delamination, when tested in accordance with ASTM E760/E760M.
   5. Corrosivity: No evidence of corrosion, when tested in accordance with ASTM E937/E937M.
   6. Air Erosion Resistance: Weight loss of 0.025 g/sq ft, maximum, when tested in accordance with ASTM E859/E859M after 24 hours.
   7. Surface Burning Characteristics: Maximum flame spread index of 0 (zero) and maximum smoke developed index of 0 (zero), when tested in accordance with ASTM E84.
   8. Effect of Deflection: No cracking, spalling, or delamination, when tested in accordance with ASTM E759/E759M.
   9. Manufacturers:
      a. GCP Applied Technologies; Monokote MK-6: www.gcpat.com/#sle.

2.4 ACCESSORIES

A. Primer Adhesive: Of type recommended by applied fire protection manufacturer.

B. Overcoat: As recommended by manufacturer of applied fire protection material.

C. Metal Lath: Expanded metal lath; minimum weight of 1.7 psf, galvanized finish.

D. Water: Clean, potable.

E. And all components needed to provide a completed application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are ready to receive fireproofing.

B. Verify that clips, hangers, supports, sleeves, and other items required to penetrate fireproofing are in place.

C. Verify that ducts, piping, equipment, or other items that would interfere with application of fireproofing have not been installed.

D. Verify that voids and cracks in substrate have been filled.

E. Verify that projections have been removed where fireproofing will be exposed to view as a finish material.

3.2 PREPARATION

A. Perform tests as recommended by fireproofing manufacturer in applications where adhesion of fireproofing to substrate is in question.

B. Remove incompatible materials that could effect bond by scraping, brushing, scrubbing, or sandblasting.

C. Prepare substrates to receive fireproofing in strict accordance with instructions of fireproofing manufacturer.

D. Apply fireproofing manufacturer's recommended bonding agent on primed steel.

E. Protect surfaces not scheduled for fireproofing and equipment from damage by overspray, fall-out, and dusting.

F. Close off and seal duct work in areas where fireproofing is being applied.

3.3 APPLICATION

A. Install metal lath over structural members as indicated or as required by UL Assembly Design Numbers.

B. Apply primer adhesive in accordance with manufacturer's instructions.

C. Apply fireproofing in uniform thickness and density as necessary to achieve required ratings.

3.4 FIELD QUALITY CONTROL

A. Inspect installed fireproofing after application and curing for integrity, prior to its concealment.
   1. Submit field test reports promptly to Contractor and Architect.

B. Ensure that actual thicknesses, densities, and bond strengths meet requirements for specified ratings and requirements of authorities having jurisdiction (AHJ).

C. Repair or replace applied fireproofing at locations where test results indicate fireproofing does not meet specified requirements.

D. Re-inspect installed fireproofing for integrity of fire protection, after installation of subsequent Work.

3.5 CLEANING

A. Remove excess material, overspray, droppings, and debris.

B. Remove fireproofing from materials and surfaces not required to be fireproofed.

C. At exposed fireproofing, clean surfaces that have become soiled or stained, using manufacturer's recommended procedures.

END OF SECTION

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SECTION 250923 - BUILDING AUTOMATION SYSTEM (BMS) FOR HVAC *REVISED BY ADDEDNUM #4*

PART 1 - GENERAL

1.1 CONTROL SYSTEM DESCRIPTION

A. Controls System shall be Web-based and accessible either directly connected and/or through the owners IP LAN network.

B. The BAS shall meet BACnet communication standards to ensure the system maintains "interoperability" to avoid proprietary arrangements that will make it difficult for the Owner to consider other BAS manufacturers in future projects.

C. BAS controllers shall be listed by BACnet Testing Laboratories (BTL) with appropriate classification.

D. Direct Digital Control (DDC) technology shall be used to facilitate the functions necessary for control of mechanical systems and equipment on this project.

E. Approved control system manufacturer:

1. The building automation system will be Schneider Electric EcoStruxure by Day Automation Systems. It is the intent of the district to purchase the building automation system from the Day Automation Systems' OGS state contract number PT68783. *Added per Addendum #4.*

1.2 CODES AND STANDARDS

A. Codes and Standards: Meet requirements of all applicable standards and codes, except when more detailed or stringent requirements are indicated by the Contract Documents, including requirements of this Section.

1. Underwriters Laboratories: Products shall be UL-916-PAZX listed.
2. National Electrical Code - NFPA 70.
3. Federal Communications Commission - Part J.
4. ASHRAE/ANSI 135-2012 (BACnet) - (System Level Devices) - Building Controllers shall conform to the listed version of the BACnet specification to improve interoperability with various building system manufacturers' control systems and devices.
5. ASHRAE/ANSI 135-2012 (BACnet) - (Unit Level Devices) - Unit Controllers shall conform to the listed version of the BACnet specification to improve interoperability with various building system manufacturers' control systems and devices.

1.3 SYSTEM PERFORMANCE

A. Performance Standards. The BAS system shall conform to the following:

1. Graphic Display. The system shall display a graphic with a minimum of 20 dynamic points. All current data shall be displayed within 10 seconds of the operator's request.
2. Graphic Refresh. The system shall update all dynamic points with current data within 10 seconds.
3. Object Command. The maximum time between the command of a binary object by the operator and the reaction by the device shall be 5 seconds. Analog objects shall start to adjust within 5 seconds.
4. Object Scan. All changes of state and change of analog values shall be transmitted over the high-speed network such that any data used or displayed at a controller or workstation will be current within the prior 10 seconds.
5. Alarm Response Time. The maximum time from when an object goes into alarm to when it is annunciated at the workstation shall not exceed 10 seconds.
6. Program Execution Frequency. Custom and standard applications shall be capable of running as often as once every 5 seconds. The Contractor shall be responsible for selecting execution times consistent with the mechanical process under control.
7. Programmable Controllers shall be able to execute DDC PID control loops at a selectable frequency from at least once every 5 seconds. The controller shall scan and update the process value and output generated by this calculation at this same frequency.
8. Reporting Accuracy. Table 1 lists minimum acceptable reporting accuracies for all values reported by the specified system.
    a. Table 1: Reporting Accuracy

Measured Variable	Reported Accuracy
Space Temperature	±0.5°C [±1°F]
Ducted Air	±1.0°C [±2°F]
Outside Air	±1.0°C [±2°F]
Water Temperature	±0.5°C [±1°F]
Delta –T	±0.15°C[±0.25°F]
Relative Humidity	±5% RH
Water Flow	±5% of full scale
Air Flow (terminal)	±10% of reading *Note 1
Air Flow (measuring stations)	±5% of reading
Air Pressure (ducts)	±25 Pa [±0.1 "W.G.]
Air Pressure (space)	±3 Pa [±0.01 "W.G.]
Water Pressure	±2% of full scale *Note 2
Electrical Power	5% of reading *Note 3
Carbon Monoxide (CO)	± 50 PPM
Carbon Dioxide (CO2)	± 50 PPM

Note 1: (10%-100% of scale) (cannot read accurately below 10%)
Note 2: for both absolute and differential pressure
Note 3: * not including utility supplied meters

1.4 SUBMITTAL REQUIREMENTS

A. A complete bill of materials of equipment to be used indicating quantities, manufacturers and model numbers.

B. A schedule of all control valves including the valve size, pressure drop, model number (including pattern and connections), flow, CV, body pressure rating, and location.

C. A schedule of all control dampers including damper size, pressure drop, manufacturer, and model number.

D. All manufacturers' technical cut sheets for major system components.

E. Proposed Building Automation System architectural diagram depicting various controller types, workstations, device locations, addresses, and communication cable requirements

F. Detailed termination drawings showing all required field and factory terminations, as well as terminal tie-ins to DDC controls by mechanical equipment manufacturers. Terminal numbers shall be clearly labeled.

G. Points list showing all system objects and the proposed English language object names.

H. Sequence of operation for each controlled mechanical system and terminal end devices.

I. BACnet Protocol Implementation Conformance Statement (PICS) for each BACnet system level device (i.e. Building Controller & Operator Workstations) type. This defines the points list for proper coordination of interoperability with other building systems if applicable for this project.

J. BAS Workstation and HMI interface screen graphics for all systems, showing system schematics, control and instrumentation points, monitoring data, setpoints with adjustments, and alarms. A

K. Additional information or data which is deemed necessary to determine compliance with the specifications or which is deemed valuable in documenting and understanding the system to be installed.

L. As-built drawings showing any and all modifications to the shop drawings that took place during the construction process.

1.5 WARRANTY REQUIREMENTS

A. Warrant all work as follows:

1. BAS system labor and materials shall be warranted free from defects for a period of twelve (12) months after final completion acceptance by the Owner. BAS failures during the warranty period shall be adjusted, repaired, or replaced at no charge to the Owner. The BAS manufacturer shall respond to the Owner's request for warranty service within 24 hours of the initiated call and will occur during normal business hours (8AM-5PM).

2. At the end of the final start-up/testing, if equipment and systems are operating satisfactorily to the Owner and Engineer, the Owner shall sign certificates certifying that the BAS is operational and has been tested and accepted in accordance with the terms of this specification. The date of Owner's acceptance shall be the start of the warranty period.

1.6 SYSTEM MAINTENANCE

A. Perform Building Automation System preventative maintenance and support for a period of 1 year (beginning the date of substantial completion).

1. Make a minimum of 2 complete Building Automation System inspections, in addition to normal warranty requirements. Inspections to include:

a. System Review – Review the BAS to correct programming errors, failed points, points in alarm, and points that have been overridden manually.

b. Seasonal Control Loop Tuning – Control loops are reviewed to reflect changing seasonal conditions and / or facility heating and cooling loads.

c. Sequence of operation verification – Systems all verified to be operating as designed and in automatic operation. Scheduling and setpoints are reviewed and modified.

d. Database back-up

e. Operator coaching

2. Technician shall review critical alarm log and advise of additional services that may be required.

3. Technician shall submit a written report after each inspection.

1.7 OWNERSHIP OF BAS MATERIAL

A. Project specific software and documantation shall become the owner's property upon project completion. This includes the following:

1. Operator Graphic files

2. As-built hardware design drawings

3. Operating & Maintenance Manuals

4. BAS System software database

5. Controller application programming databases

6. Application Specific Controller configuration files

7. Required Licensed software

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use new products that the manufacturer is currently manufacturing and that have been installed in a minimum of 25 installations. Do not use this installation as a product test site unless explicitly approved in writing by the owner or the owner's representative. Spare parts shall be available for at least five years after completion of this contract.

2.2 METAL CONDUITS AND FITTINGS

A. Description: Metal raceway of circular cross section with manufacturer-fabricated fittings.

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

1. Allied Tube & Conduit; Atkore International.
2. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.

3. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
4. Western Tube; Zekelman Industries.
5. Wheatland Tube; Zekelman Industries.

C. General Requirements for Metal Conduits and Fittings:
1. Listed and labeled as defined in NFPA 70, by a nationally recognized testing laboratory, and marked for intended location and application.
2. Comply with TIA-569-D.

D. GRC: Comply with ANSI C80.1 and UL 6.

E. IMC: Comply with ANSI C80.6 and UL 1242.

F. EMT: Comply with ANSI C80.3 and UL 797.

G. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 1203 and NFPA 70.
2. Fittings for EMT:
a. Material: Steel.
b. Type: Set screw.

H. Joint Compound for IMC or GRC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.3 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Description: Sheet metal trough of rectangular cross section fabricated to required size and shape, without holes or knockouts, and with hinged or removable covers.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Cooper B-line; brand of Eaton, Electrical Sector.
2. Hoffman; brand of nVent Electrical plc.
3. MonoSystems, Inc.
4. Square D; Schneider Electric USA.

C. General Requirements for Metal Wireways and Auxiliary Gutters:
1. Comply with UL 870 and NEMA 250, Type 1 unless otherwise indicated, and sized according to NFPA 70.
2. Metal wireways installed outdoors shall be listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and application.
3. Comply with TIA-569-D.

D. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

E. Wireway Covers: Screw-cover type unless otherwise indicated.

F. Finish: Manufacturer's standard enamel finish.

2.4 SURFACE METAL PATHWAYS

A. Description: Galvanized steel with snap-on covers, complying with UL 5.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. MonoSystems, Inc.
   2. Panduit Corp.
   3. Wiremold; Legrand North America, LLC.

C. Finish: Manufacturer's standard enamel finish in color selected by Architect.

D. Listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and application.

2.5 HOOKS

A. Description: Prefabricated sheet metal cable supports for telecommunications cable.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. MonoSystems, Inc.
   2. Panduit Corp.
   3. Wiremold; Legrand North America, LLC.

C. Listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and application.

D. Comply with TIA-569-D.

E. Galvanized steel.

F. J shape.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. Description: Enclosures for communications.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. ABB, Electrification Business.
   2. Adalet.
   3. Appleton; Emerson Electric Co., Automation Solutions.
   4. Crouse-Hinds; brand of Eaton, Electrical Sector.
   5. Erickson Electrical Equipment Company.
   6. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.

C. General Requirements for Boxes, Enclosures, and Cabinets:
   1. Comply with TIA-569-D.
   2. Boxes, enclosures, and cabinets installed in wet locations shall be listed and labeled as defined in NFPA 70, by an NRTL, and marked for use in wet locations.
   3. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
   4. Device Box Dimensions: 4 inches square by 2-1/8 inches deep

D. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

E. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1, with continuous-hinge cover with flush latch unless otherwise indicated.
   1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
      a. Finished inside with radio-frequency-resistant paint.
   2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.

F. Cabinets:
   1. NEMA 250, Type 1 galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
   2. Hinged door in front cover with flush latch and concealed hinge.
   3. Key latch to match panelboards.
   4. Metal barriers to separate wiring of different systems and voltage.

2.7 COMMUNICATION

A. A. Network communication protocol(s) used throughout entire DDC system shall be open to Owner and available to other companies for use in making future modifications to DDC system.

B. This project shall be comprised of a high speed Ethernet network utilizing BACnet/IP communications between System Controllers and Workstations. Each System Controller shall function as a BACnet Router to each unit controller providing a unique BACnet Device ID for all controllers within the system.

C. Communications between System Controllers and sub-networks of Custom Application Controllers and/or Application Specific Controllers shall meet the ASHRAE 135 Standard either via BACnet MS/TP or BACnet over Zigbee.

1. Wireless Equipment Level Controller Communication and Auxiliary Control Devices shall conform to:
    a. Each System Controller shall perform communications to a network of Custom Application and Application Specific Controllers on a certified, open standard wireless solution to enable integration with other suppliers using the same open standard.
    b. Each communication interface shall be ZigBee certified as a BACnet tunneling device as allowed by the BACnet Standard and defined by the Zigbee Alliance.
    c. Each System Controller shall function as a BACnet Router to each unit controller providing a unique BACnet Device ID for all controllers within the system.
    d. The controls wireless network shall be capable of similar performance to a wired, equally quantified network by responding to controls requests within 10% timing comparison to facilitate a similar user experience for facility managers and occupants.
    e. The controls wireless network shall be secured using Advanced Encryption Standard AES-128 (FIPS Pub 197) and HMAC (FIPS Pub 198). A Trust Center will create a randomly generated 128-bit network security key for each ZigBee network.
    f. IEEE 802.15.4 radios to minimize risk of interference and maximize battery life, reliability, and range.
    g. Indoor design range shall be a minimum of 200 feet (60 m); open range shall be 2,500 ft. (762 m) with less than 2% packet error rate to minimize the need for repeaters and optimize network reliability.
    h. To maintain robust communication, self-healing, redundant mesh networking and two-way communications shall be used to optimize the wireless network reliability.
    i. Wireless communication shall be capable of many-to-one sensors per controller to support averaging, monitoring, and multiple zone applications.
    j. Space/wall sensors shall be available with batteries with a typical life of 15 or more years to minimize maintenance costs or with power harvesting capabilities to minimize the need for batteries.
    k. Space/wall sensors shall be available with temperature, relative humidity, occupancy, and CO_2 to support common HVAC controls applications.

l. Occupancy sensors shall have adequate range, sensing patterns, and number of sensors required for 100% coverage.

m. CO_2 sensors shall have a design life of 15 or more years, and include barometric pressure sensing and be self-calibrating to minimize maintenance expenses over the life of the sensor.

n. Certifications shall include FCC CFR47 - RADIO FREQUENCY DEVICES - Section 15.247 & Subpart E

D. ASHRAE 135 Protocol:

1. ASHRAE 135 communication protocol shall be sole and native protocol used throughout entire DDC system.
2. DDC system shall not require use of gateways except to integrate HVAC equipment and other building systems and equipment, not required to use ASHRAE 135 communication protocol.
3. If used, gateways shall connect to DDC system using ASHRAE 135 communication protocol and Project object properties and read/write services indicated by interoperability schedule.
4. Operator workstations, controllers and other network devices shall be tested and listed by BACnet Testing Laboratories.

2.8 OPERATOR INTERFACE

A. Operator Web Interface shall conform to following:

1. System Security
   a. Each operator shall be required to login to the system with a user name and password in order to view, edit, add, or delete data.
   b. User Profiles shall restrict the user to only the objects, applications, and system functions as assigned by the system administrator.
   c. Each operator shall be allowed to change their user password.
   d. The System Administrator shall be able to manage the security for all other users.
   e. The system shall include pre-defined “roles” that allow a system administrator to quickly assign permissions to a user.
   f. User logon/logoff attempts shall be recorded.
   g. The system shall track and record all user log-in activity and all changes done at the enterprise level including who made the change, when, what was changed, pervious value and new value.
2. Customizable Navigation Tree
   a. The operator web interface shall include a fully customizable navigation tree that shall allow an operator to do the following:
      1) Move and edit any of the nodes of the tree.
      2) Move entire groups to any area of the tree

3) Change the name of any node in the tree
4) Create custom nodes for any page in the web interface including: graphics, data log views, schedules, and dashboards
5) Support navigation from multi-building to single building view
6) Ability to create folders and assign and change hierarchy of nodes of the tree

3. Standard Equipment Pages
   a. The operator web interface shall include standard pages for all major equipment.
   b. These pages shall allow an operator to obtain information relevant to the operation of the equipment, including:
      1) Animated Equipment Graphics for each major piece of equipment and floor plan in the System.
      2) Alarms relevant to the equipment or application without requiring a user to navigate to an alarm page and perform a filter.
      3) Data Logs for the equipment without requiring a user to navigate to a Data Log page and perform a filter.
4. System Graphics Package
   a. The operator web interface shall be graphically based and shall include at least one 3-D color graphic per piece of equipment, graphics for each hydronic system, and graphics that summarize conditions on each floor of each building included in this contract.
   b. Graphics Package shall include at a minimum:
      1) 3-D Color Site Map (for multiple building campus projects) or 3-D Building Rendering (for single building projects)
      2) 3-D Color Custom Floor Plans
         a) Floor Plan Graphics to show accurate ductwork of system
         b) Toggle Switch to turn ductwork on/off per each floor plan
         c) Indicate thermal comfort on floor plan graphics using colors to represent zone temperature relative to zone set point
      3) 3-D Color Hydronic System Graphics with Animations
         a) Example Animation: Pump Flashing when On
      4) 3-D Color Major Equipment Graphics with Animations
         a) Example Animation: Fan Spinning when On
5. Manual Control and Override
   a. Point Control – There shall be a method for a user to view, override, and edit if applicable, the status of any object and property in the system. The point status shall be available by menu, on graphics or through custom programs.
   b. Temporary Overrides - The user shall be able to perform a temporary override wherever an override is allowed, automatically removing the override after a specified period of time.

6. Engineering Units
    a. Allow for selection of the desired engineering units (i.e. Inch pound or SI) in the system.
7. Scheduling
    a. A user shall be able to perform the following tasks utilizing the operator web interface:
    b. Create a new schedule, defining the default values, events and membership.
    c. Create exceptions to a schedule for any given day.
    d. Apply an exception that spans a single day or multiple days.
    e. View a schedule by day, week and month.
    f. Exception schedules and holidays shall be shown clearly on the calendar.
    g. Modify the schedule events, members and exceptions.
    h. Create schedules and exceptions for multiple buildings
    i. Apply emergency schedule to multiple buildings
    j. Drag and drop scheduling editing
    k. Global schedule and exceptions across multiple buildings
8. Data Logs
    a. Data Logs Definition.
        1) The operator web interface shall allow a user with the appropriate security permissions to define a Data Log for any data in the system.
    b. Data Log Viewer.
        1) The operator web interface shall allow Data Log data to be viewed and printed.
        2) The operator web interface shall allow a user to view Data Log data in a text-based format (time –stamp/value).
        3) The operator shall be able to view the data collected by a Data Log in a graphical chart in the operator web interface.
        4) Data Log viewing capabilities shall include the ability to show a minimum of five points on a chart.
        5) Each data point data line shall be displayed as a unique color.
        6) Data points can be hidden on the display view by clicking on the point
        7) The operator shall be able to specify the duration of historical data to view by scrolling, zooming, or selecting from a pull down list.
        8) The system shall have a graphical trace display of the associated time stamp and value for any selected point along the x-axis.
    c. Export Data Logs.
        1) The Enterprise operator web interface shall allow a user to export Data Log data in CSV, xlsx or text format for use by other industry standard word processing and spreadsheet packages.

9. Alarm/Event Notification
    a. An operator shall be notified of new alarms/events as they occur while navigating through any part of the system via an alarm icon.
    b. The operator will have the option of selecting an audible alarm notification for all alarm classes they subscribe to.
    c. The system operator will have the option of setting specific times and days that that they will receive alarm notifications.
    d. Alarm/Event Log. The operator shall be able to view all logged system alarms/events from any operator web interface.
        1) The operator shall be able to sort and filter alarms from events. Alarms shall be sorted in categories based on severity.
        2) The alarm/event log shall include a comment field for each alarm/event that allows a user to add specific comments associated with any alarm.
10. User Change Log
    a. The operator shall be able to view all logged user changes in the system from any operator web interface.
        1) An operator shall be able to group user changes by: date, affected, date & affected, user, date & user, transaction type, date & transaction type, or sort only.
        2) The operator will have the option of additional filtering capability of: date, transaction, type, user, affected, and details that can be used individually or in conjunction with other filters.
11. Reports
    a. The operator web interface shall have a reporting package that allows the operator to select reports to run.
    b. The operator web interface shall have the ability to schedule reports to run at specified intervals of time.
    c. The Enterprise operator web interface shall have the ability to email schedule reports at specified intervals of time.
    d. The following standard reports shall be available without requiring a user to manually design the report:
        1) All Points in Alarm Report: On demand report showing all current alarms.
        2) All Points in Override Report: On demand report showing all overrides in effect.
        3) Schedules Report: List of all weekly events for all schedules in selected buildings
        4) Space Comfort Analysis Report: List of spaces that meet selected criteria for potential comfort issues (temp variance, high, low, unoccupied)
12. Operator Web Interface must meet the following Agency Compliance:
    a. BACnet Testing Laboratory (BTL) Listed

2.9 MOBILE APP INTERFACE

A. Mobile App Operator Interface shall support the following Operating systems

1. Apple iOS 6
2. Apple iOS 7
3. Apple iOS 17
4. Android V2.3
5. Android V4.3
6. Android V14

B. The operator interface shall support system access on a mobile device via a mobile app to:

1. Alarm log
2. System Status
3. Equipment status
4. Space Status
5. Standard Equipment graphics

C. The operator interface shall support actions on a mobile device via a mobile app to:

1. Override set points
2. Override occupancy
3. Acknowledge Alarms
4. Comment on Alarms

2.10 PROGRAMMING TOOLS

A. Custom Application Programming Tools to create, modify, and debug custom application programming, under license for a period of at least (1) year. The operator shall be able to create, edit, and download custom programs at the same time that all other system applications are operating. The system shall be fully operable while custom routines are edited, compiled, and downloaded. Upon expiration of software license the building owner may choose to renew the license at their discretion.

B. Custom Graphic Editor. The tools neceesary to create, modify, and debug custom graphics. The operator shall be able to create, edit, and download custom graphics at the same time that all other system applications are operating. The system shall be fully operable while custom graphics are edited, compiled, and downloaded.

2.11 BUILDING CONTROLLERS

A. There shall be one or more independent, standalone microprocessor based System Controllers to manage the global strategies described in Application and Control Software section.

B. The System Controller shall have sufficient memory to support its operating system, database, and programming requirements.

C. The operating system of the Controller shall manage the input and output communications signals to allow distributed controllers to share real and virtual point information and allow central monitoring and alarms.

D. All System Controllers shall have a real-time clock.

E. Data shall be shared between networked System Controllers.

F. The System Controller shall continually check the status of its processor and memory circuits. If an abnormal operation is detected, the controller shall:

1. Assume a predetermined failure mode.
2. Generate an alarm notification.
3. Create a retrievable file of the state of all applicable memory locations at the time of the failure.
4. Automatically reset the System Controller to return to a normal operating mode.

G. Environment. Controller hardware shall be suitable for the anticipated ambient conditions. Controller used in conditioned ambient shall be mounted in an enclosure, and shall be rated for operation at -40° C to 50° C [-40° F to 122° F].

H. Clock Synchronization.

1. All System Controllers shall be able to synchronize with a NTP server for automatic time synchronization.
2. All System Controllers shall be able to accept a BACnet time synchronization command for automatic time synchronization.
3. All System Controllers shall automatically adjust for daylight savings time if applicable.

I. Serviceability

1. Diagnostic LEDs for power, communications, and processor

J. Memory. The System Controller shall maintain all BIOS and programming information indefinitely without power to the System controller.

K. BACnet Test Labs (BTL) Listing. Each System Controller shall be listed as a Building Controller (B-BC) by the BACnet Test Labs with a minimum BACnet Protocol Revision of 14.

2.12 ADVANCED APPLICATION CONTROLLERS

A. Advance Application Controllers shall be used to control all equipment or applications of medium and high complexity, including but not limited to Air Handlers, Boiler Plants and Chiller Plants.

B. To meet the sequence of operation for each application, the Controller shall use programs by the controller manufacturer that are either factory loaded or downloaded with service tool to the Controller.

C. Stand-Alone Operation: In case of communications failure stand-alone operation shall use default values or last values for remote sensors read over the network such as outdoor air temperature.

D. Environment. Controller hardware shall be suitable for the anticipated ambient conditions.

E. Input/Output: The Controller shall have on board or through expansion module all I/O capable of performing all functionality needed for the application. Controls by the equipment manufacturer must supply the required I/O for the equipment.

F. Input/Output Expandability – For the application flexibility, the Controller shall be capable of expanding to a total of at least 100 hardware I/O terminations.

G. Serviceability – The Controller shall have the following in order to improve serviceability of the Controller.

1. Diagnostic LEDs for power/normal operation/status, BACnet communications, sensor bus communications, and binary outputs. All wiring connections shall be clearly labeled and made to be field removable.

2. To aid in service replacement, the Controller shall allow for setting its BACnet address via controller mounted rotary switches that correspond to the numerical value of the address. (DIP switch methodologies are not allowed). Setting of the address shall be accomplished without the need of a service tool or power applied to the controller.

3. Controller data shall be maintained through a power failure.

H. Transformer for the Controller must be rated at minimum of 115% of ASC power consumption, and shall be fused or current limiting type. 24 VAC, +/- 15% nominal, 50-60 Hz, 24 VA plus binary output loads for a maximum of 12 VA for each binary output.

I. Controller must meet the following Agency Compliance:

1. UL916 PAZX, Open Energy Management Equipment

2. UL94-5V, Flammability
3. FCC Part 15, Subpart B, Class B Limit
4. BACnet Testing Laboratory (BTL) Listed

2.13 APPLICATION-SPECIFIC CONTROLLERS

A. Application Specific Controllers (ASC) shall be microprocessor-based DDC controller, The controller shall use programs by the controller manufacturer that are either factory loaded or downloaded with service tool to the Controller.

B. Zone Controllers are controllers that operate equipment that control the space temperature of single zone. Examples are controllers for VAV, Fan coil, Blower Coils, Unit Ventilators, Heat Pumps, and Water Source Heat Pumps.

C. Stand-Alone Operation: In case of communications failure stand-alone operation shall use default values or last values for remote sensors read over the network such as outdoor air temperature.

D. Environment: Controller hardware shall be suitable for the anticipated ambient conditions.

E. Input/Output: The Controller shall have on board or through expansion module all I/O capable of performing all functionality needed for the application. Controls by the equipment manufacture must supply the required I/O for the equipment.

F. Input/Output Expandability – For the application flexibility, the Controller shall be capable of expanding to a total of at least 100 hardware I/O terminations.

G. Serviceability – The Controller shall have the following in order to improve serviceability of the Controller.

1. Diagnostic LEDs for power/normal operation/status, BACnet communications, sensor bus communications, and binary outputs. All wiring connections shall be clearly labeled and made to be field removable.
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3. Controller data shall be maintained through a power failure.

H. Transformer for the Controller must be rated at minimum of 115% of ASC power consumption, and shall be fused or current limiting type. 24 VAC, +/- 15% nominal, 50-60 Hz, 24 VA plus binary output loads for a maximum of 12 VA for each binary output.

I. Controller must meet the following Agency Compliance:

1. UL916 PAZX, Open Energy Management Equipment
2. UL94-5V, Flammability
3. FCC Part 15, Subpart B, Class B Limit
4. BACnet Testing Laboratory (BTL) Listed

2.14 FIELD HARDWARE/INSTRUMENTATION

A. Temperature Sensing Devices

1. Type & Accuracy. Temperature sensors shall be of the type and accuracy indicated for the application. Sensors shall have an accuracy rating within 1% of the intended use temperature range.
2. Outside Air Temperature Sensors. Outside air temperature sensors' accuracy shall be within +1degF in the range of -52degF to 152degF.
3. Room Temperature Sensors. Room temperature sensors shall have an accuracy of +0.36degF in the range of 32degF to 96degF.
4. Chilled Water and Condenser Water Sensors. Chilled water and condenser water sensors shall have an accuracy of +0.25degF in their range of application.
5. Hot Water Temperature Sensors. Hot water temperature sensors shall have an accuracy of +0.75degF over the range of their application.

B. Pressure Instruments

1. Differential Pressure and Pressure Sensors: Sensors shall have a 4-20 MA output proportional signal with provisions for field checking. Sensors shall withstand up to 150% of rated pressure, without damaging the device. Accuracy shall be within +2% of full scale. Sensors shall be manufactured by Leeds & Northrup, Setra, Robertshaw, Dwyer Instruments, Rosemont, or be approved equal.
2. Pressure Switches: Pressure switches shall have a repetitive accuracy of +2% of range and withstand up to 150% of rated pressure. Sensors shall be diaphragm or bourdon tube design. Switch operation shall be adjustable over the operating pressure range. The switch shall have an application rated Form C, snap-acting, self-wiping contact of platinum alloy, silver alloy, or gold plating.

C. Flow Switches:

1. Flow switches shall have a repetitive accuracy of +1% of their operating range. Switch actuation shall be adjustable over the operating flow range. Switches shall have snap-acting Form C contacts rated for the specific electrical application.

D. Humidity Sensors:

1. Sensors shall have an accuracy of +2.5% over a range of 20% to 95% RH.

E. Current Sensing Relays

1. Relays shall monitor status of motor loads. Switch shall have self-wiping, snap-acting Form C contacts rated for the application. The setpoint of the contact operation shall be field adjustable.

F. Output Relays

1. Control relay contacts shall be rated for 150% of the loading application, with self-wiping, snap-acting Form C contacts, enclosed in dustproof enclosure. Relays shall have silver cadmium contacts with a minimum life span rating of one million operations. Relays shall be equipped with coil transient suppression devices.

G. Solid State Relays

1. Input/output isolation shall be greater than 10 billion ohms with a breakdown voltage of 15 V root mean square, or greater, at 60 Hz. The contact operating life shall be 10 million operations or greater. The ambient temperature range of SSRs shall be 20F-140F. Input impedance shall be greater than 500 ohms. Relays shall be rated for the application. Operating and release time shall be 10 milliseconds or less. Transient suppression as an integral part of the relays.

H. Valve and Damper Actuators

1. Electronic Direct-Coupled: Electronic direct-coupled actuation.

2. Actuator Mounting: The actuator shall be direct-coupled over the shaft, enabling it to be mounted directly to the damper shaft without the need for connecting linkage. The fastening clamp assemble shall be of a 'V' bolt design with associated 'V' shaped toothed cradle attaching to the shaft for maximum strength and eliminating slippage. Spring return actuators shall have a 'V' clamp assembly of sufficient size to be directly mounted to an integral jackshaft of up to 1.05 inches when the damper is constructed in this manner. Single bolt or screw type fasteners are not acceptable

3. Electronic Overload Sensing: The actuator shall have electronic overload or digital rotation sensing circuitry to prevent damage to the actuator throughout the entire rotation of the actuator. Mechanical end switches or magnetic clutch to deactivate the actuator at the end of rotation are not acceptable.

4. Power Failure/Safety Applications: For power failure/safety applications, an internal mechanical spring return mechanism shall be built into the actuator housing. Non-mechanical forms of fail-safe operation are not acceptable.

5. Spring Return Actuators: All spring return actuators shall be capable of both clockwise or counterclockwise spring return operation by simply changing the mounting orientation.

6. Proportional Actuators: Proportional actuators shall accept a 0 to 10VDC or 0 to 20mA control input and provide a 2 to 10VDC or 4 to 20mA operating range. An actuator capable of accepting a pulse width modulating control signal and providing full

proportional operation of the damper is acceptable. All actuators shall provide a 2 to 10VDC position feedback signal.

7. 24 Volts (AC/DC) actuators: All 24VAC/DC actuators shall operate on Class 2 wiring and shall not require more than 10VA for AC or more than 8 watts for DC applications. Actuators operating on 120VAC power shall not require more than 10VA. Actuators operating on 230VAC shall not require more than 11VA.
8. Non-Spring Return Actuators: All non-spring return actuators shall have an external manual gear release to allow manual positioning of the damper when the actuator is not powered. Spring return actuators with more than 60 in-lb torque shall have a manual crank for this purpose.
9. Modulating Actuators: All modulating actuators shall have an external, built-in switch to allow reversing direction of rotation.
10. Conduit Fitting & Pre-Wiring: Actuators shall be have a conduit fitting and a minimum 3ft electrical cable, and shall be pre-wired to eliminate the necessity of opening the actuator housing to make electrical connections.
11. U.L. Listing: Actuators shall be Underwriters Laboratories Standard 873 listed and Canadian Standards Association Class 4813 02 certified as meeting correct safety requirements and recognized industry standards.
12. Warranty: Actuators shall be designed for a minimum of 60,000 full stroke cycles at the actuator's rated torque and shall have a 2-year manufacturer's warranty, starting from the date of installation. Manufacturer shall be ISO9001 certified.
13. Controls valve actuator application fail-safe positions shall be as follows
    a. AHU coils: normally open
    b. Boilers: normally open
    c. Chiller evaporator: normally open
    d. Cooling tower isolation: normally open
    e. Chiller condenser: normally open
    f. Terminal equipment heating: normally open
    g. Terminal equipment cooling: normally closed
    h. Two-pipe changeover valves: fail to heating

I. Control Valves: Factory fabricated U.S. forged and assembled electric control valves of type, body material, and pressure class indicated. Where type or body material is not indicated, make selection as determined by manufacturer for installation requirements and pressure class, based on maximum pressure and temperature in piping system. The valve size shall be in accordance with scheduled or specified maximum pressure drop across control valve. Except as otherwise indicated, valves shall mate and match material of connecting piping. Equip control valves with control valve motor actuators, with proper shutoff rating for each individual application.

1. Water Service Valves: Equal percentage characteristics with rangeability of 50 to 1, Class 150 at 250°F and maximum full flow pressure drop 5 psig. Globe type with replaceable plugs and seats of stainless steel or brass. Select operators to close valves against pump shutoff head.
2. Double Seated Valves: Balanced plug type, with caged type trim providing seating and guiding surfaces on "top and bottom" guided plugs.
3. Valve Trim and Stems: Polished stainless steel.
4. Packing: Spring-loaded teflon, self-adjusting.
5. Terminal Unit Control Valves: Unless indicated otherwise, modulating, electrically actuated (by 24VAC max) control ball valves shall control terminal units including, but not necessarily limited to, convectors, finned tube radiation, and fan coil units that are of integral motor type.

J. Pressure-Independent Control Valves:

1. Valves shall have stainless-steel stems and stuffing boxes with extended necks to clear the piping insulation. Valve bodies shall meet ASME B16.34 or ASME B16.15 pressure and temperature class ratings based on the design operating temperature and 150 percent of the system design operating pressure. Valve leakage shall meet FCI 70-2 Class IV leakage rating (0.01 percent of valve Kv). Valves shall be two-way pressure independent globe-style bodies.
    a. Bodies for valves 2 inches and smaller shall be brass or bronze, with union ends
    b. Bodies for valves 2 to 3 inches shall be of brass, bronze or iron.
    c. Bodies for valves 2.5 inches and larger shall have flanged-end connections.
    d. Valve and actuator combination shall be normally open or normally closed as shown.
2. Two-Way Pressure Independent Globe Valve: The valve shall be two-way globe style with integrated differential pressure control regulator. Where indicated modulating proportional valve application shall utilize controller or actuator to match required control signal to complement controlled coil heat transfer characteristic for linear control. The valve shall have:
    a. Integrated pressure regulator; regulator to control pressure across control valve orifice.
    b. Regulator incorporating EPDM diaphragm, stainless steel spring and pressure control disc. Pressure control seat shall be brass construction with vulcanized EPDM.
    c. Counterbalance of supply pipe pressure to return pipe pressure across diaphragm to prevent diaphragm damage when control valve is closed
    d. User adjustable maximum flow within valve control range; Adjustment method shall indicate percentage of valve flow range and utilize spring locked method of adjustment.

e. The ability to regulate internal control valve differential pressure to have 100% control valve authority.

f. shall have linear flow characteristic.

g. Back seated globe design to allow service of packing under pressure without leakage.

h. Entering to leaving (P1-P3) pressure control across low flow ½'' valve in size from 2.3PSI - 60PSI.

i. Entering to leaving (P1-P3) pressure control across valves ½'' - ¾'' in size from 5PSI - 60PSI.

j. Entering to leaving (P1-P3) pressure control across valves 1'' - 1¼'' in size from 5PSI - 60PSI.

k. Entering to leaving (P1-P3) pressure control across valves 1½'' - 10'' in size from 4PSI - 60PSI.

l. Union connections for ½'' - 2'' valve size: ANSI flanged connections for 2.5'' - 10'' valve sizes

m. Stainless steel internal trim with brass globe and seat.

n. A Threaded actuator connection

o. Flow requirements sized for nominal body selection no more than one size smaller to corresponding nominal pipe connection.
   1) ½'' bodies shall be utilized for ½'' and may be utilized for ¾'' pipe connection and flow less than 5 GPM.
   2) ¾'' bodies may be utilized for ¾'' pipe and may be applied to 1'' pipe connection with flow less than 7.5 GPM.
   3) 1'' bodies may be utilized for 1'' pipe and may be applied to 1¼'' pipe connection with flow less than 12 GPM.
   4) 1¼'' bodies may be utilized for 1¼'' and may be applied to 1½'' pipe connection with flow less than 17.5 GPM.
   5) 1½'' bodies may be utilized for 1½'' pipe and may be applied to 2'' pipe connection with flows less than 33 GPM.
   6) Flows less than 55 GPM may use 2'' bodies.
   7) Flows less than 85 GPM may use 2½'' bodies.
   8) Flows less than 120 GPM may use 3'' bodies.
   9) Flows less than 165 GPM may use 4'' bodies.
   10) Flows less than 395 GPM may use 5'' bodies.
   11) Flows less than 640 GPM may use 6'' bodies.
   12) Flows less than 830 GPM may use 8'' bodies.
   13) Flows less than 1230 GPM may use 10'' bodies.

K. Dampers: Automatic control low leakage, opposed blade dampers, with damper frames not less than formed 13-gauged galvanized steel and mounting holes for enclosed duct mounting. Damper blades not less than formed 16-gauged galvanized steel, with

maximum blade width of 8-inch. Equip dampers with motors of proper rating of each application.

1. Secure blades to ½ inch diameter zinc-plated axles using zinc-plated hardware. Seal off against spring stainless steel blade bearings. Blade bearings to be Nylon with thrust bearings at each end of every blade. Construct blade linkage hardware of zinc-plated steel and brass. Submit leakage and flow characteristics plus size schedule for controlled dampers.
2. Operating Temperature Range: From –20° to 200°F (-29° to 93°C).
3. For low leakage application or opposed blade design (as selected by manufacturers sizing techniques) with inflatable steel blade edging or replaceable rubber seals, rated for leakage less than 4 cfm per square foot of damper area, AR differential pressure of 4-inch w.g. when damper is being held by torque 50 inch-pounds.
4. Outdoor air and exhaust air dampers shall be low leakage and thermally insulated.

L. Electromagnetic Flow Meters
   1. complete with all installation hardware necessary to enable insertion and removal of the meter without system shutdown. The flow meter shall be hand-insertable up to 400 psi. For installations in non-metallic pipe, install grounding rings or probes. Materials of construction for wetted metal components shall be 316 SS. The flow meter shall average velocity readings from two sets of diametrically opposed electrodes. Each flow meter shall be individually wet calibrated against a primary volumetric standard that is accurate to within 0.1% and traceable to NIST*. A certificate of calibration shall be provided with each flow meter. Accuracy shall be within ± 1% of rate from 2-20 ft/s. Overall turndown shall exceed 100:1. Output signals shall be completely isolated and shall consist of the following: (1) analog output; 4-20mA, 0-10V, or 0-5V jumper selectable, (1) scalable dry contact output for totalization, and (1) high resolution frequency output for use with peripheral devices such as an ONICON display module or Btu meter. Each flow meter shall be covered by the manufacturer's two-year warranty.
   2. Optional Flow Display: D-100 Series Display Module for network interface and local/remote indication of flow rate and total.

M. Ultrasonic Flow Meters: Provide a clamp-on transit time ultrasonic flowmeter complete with matched transducers, self- aligning installation hardware and triaxial transducer cables and calibration certificate

   1. Flowmeter shall consist of a processor / transmitter, matched pair of transducers and mounting hardware including pipe clamps and mounting bracket for the line size and material specified

      a. Sensing Technology: Ultrasonic transit time velocity-measurement utilizing non-wetted transducers matched for the specific applications in terms of pipe size and pipe material

b. Enclosure: Wall mount, NEMA4X polycarbonate with clear shatterproof enclosure

c. Maximum Temperature Rating: 250 deg F

d. Meter shall have CE approval

e. Each flowmeter shall be covered by the manufacturer's two-year warranty

2. Operation and Configuration

a. Flow Range: Flow-measuring element and transmitter shall cover operating range of equipment or system served.

b. Accuracy: Flowmeter shall have calibrated outputs directly from the transmitter, throughout the operating range with plus or minus 1.0% of flow rate from 1 to 20 ft/sec velocity

c. Calibration: ach flow meter shall be individually calibrated against a N.I.S.T. traceable standard and receive a certificate of calibration. Each flow meter shall be factory programmed based on the application data specified at time of order.

d. Transmitter and Display: Operator interface consisting of five pushbuttons. Display shall visually indicate instantaneous flow rate and total fluid volume. Output signals shall be RS485 serial network protocol, BACnet MS/TP or MODBUS RTU, native to the transmitter, two (2) programmable pulse outputs configured for totalizing pulse, flow direction or flow alarm indication and one (1) analog output signal.

e. Flow meter shall be capable of operating from 24V ac/dc or 120V ac mains power.

PART 3 - EXECUTION

3.1 COORDINATION

A. Power is to be sourced from existing electrical distribution system as necessary for the controls system. Must comply with the National Electrical Code.

B. Test and Balance

1. The contractor shall furnish a single set of all tools necessary to interface to the control system for test and balance purposes.

2. The tools used during the test and balance process shall be returned to the contractor at the completion of the testing and balancing.

3.2 INSTALLATION

A. Connect and configure equipment and software to achieve sequences of operations specified

B. Verify location of exposed control sensors with arhitect prior to installation. Install devices 48 inches above the floor, or lower if necessary.

C. Install damper moters on outside of duct in warm areas, not tin locations exposed to outdoor temperatures.

3.3 ELECTRICAL WIRING AND CONNECTION INSTALLATION

A. Where Class 2 wires are in concealed and accessible locations; including ceiling return air plenums, approved cables outside of electrical raceway can be used if the following conditions are met:

1. Circuits meet NEC Class 2 (current-limited) requirements. (Low-voltage power circuits shall be sub-fused when required to meet Class 2 current-limit.)

2. All cables shall be UL listed for application (i.e., cables used in ceiling plenums shall be UL listed specifically for that purpose).

B. Do not install Class 2 wiring in conduits containing Class 1 wiring. Boxes and panels containing high voltage may not be used for low voltage wiring except for the purpose of interfacing the two via control relays and transformers.

C. Where Class 2 wiring is run exposed, wiring shall be run parallel along a surface or perpendicular to it, and bundled, using approved wire ties at no greater than 3 m (10 ft.) intervals. Such bundled cable shall be fastened to the structure, using industry approved fasteners, at 1.5 m (5 ft.) intervals or more often to achieve a neat and workmanlike result.

D. Maximum allowable voltage for control wiring shall be 120Vac. If only higher voltages are available for use, use step-down transformers to achieve the desired control voltages.

E. All control wiring shall be installed as continuous lengths, where possible. Any required splices shall be made only within an approved junction box or other approved protective device.

F. Install wire and cable with sufficient slack and flexible connections to allow for vibration of piping and equipment

G. Install plenum wiring in sleeves where it passes through walls and floors. Maintain fire rating at all penetrations in accordance with Contract Documents and National and/or Local Codes.

H. Control and status relays are to be located in pre-fabricated enclosures that meet the application. These relays may also be located within packaged equipment control panel

enclosures as coordinated. These relays shall not be located within Class 1 starter enclosures.

I. Follow manufacturer's installation recommendations for all communication and network bus cabling. Network or communication cabling shall be run separately from all control power wiring.

J. BAS manufacturer shall terminate all control and/or interlock wiring and shall maintain updated (as-built) wiring diagrams with terminations identified at the job site.

K. Flexible metal conduits and liquid-tight flexible metal conduits shall not exceed 3' in length and shall be supported at each end. Flexible metal conduit less than 1/2" electrical trade size shall not be used. In areas exposed to moisture, including chiller and boiler rooms, liquid-tight, flexible metal conduits shall be used.

3.4 WIRING METHODS

A. Routing:

1. Install cables in raceways and cable trays, except within consoles, cabinets, desks, and counters and except in accessible ceiling spaces, attics, and gypsum board partitions where unenclosed wiring method may be used. Conceal raceway and cables, except in unfinished spaces.

    a. Install plenum cable in environmental air spaces, including plenum ceilings.

2. Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

B. Wiring within Enclosures: Bundle, lace, and train cables within enclosures. Connect to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools. Install conductors parallel with or at right angles to sides and back of enclosure.

3.5 INSTALLATION OF TWISTED-PAIR HORIZONTAL CABLES

A. Comply with NECA 1 and NECA/BICSI 568.

B. General Requirements for Cabling:

1. Comply with TIA-568-C.0, TIA-568-C.1, and TIA-568-C.2.
2. Comply with BICSI's "Information Transport Systems Installation Methods Manual (ITSIMM), Ch. 5, "Copper Structured Cabling Systems," "Cable Termination Practices" Section.
3. Install 110-style IDC termination hardware unless otherwise indicated.

4. Do not untwist twisted pair cables more than 1/2 inch (12 mm) from the point of termination to maintain cable geometry.
5. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
6. Consolidation points may be used only for making a direct connection to equipment outlets:

    a. Do not use consolidation point as a cross-connect point, as a patch connection, or for direct connection to workstation equipment.
    b. Locate consolidation points for twisted-pair cables at least 49 feet (15 m) from communications equipment room.

7. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
8. Install lacing bars to restrain cables, prevent straining connections, and prevent bending cables to smaller radii than minimums recommended by manufacturer.
9. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI Information Transport Systems Installation Methods Manual, Ch. 5, "Copper Structured Cabling Systems," "Cable Termination Practices" Section. Use lacing bars and distribution spools.
10. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
11. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used for heating.
12. In the communications equipment room, install a 10-foot- (3-m-) long service loop on each end of cable.
13. Pulling Cable: Comply with BICSI Information Transport Systems Installation Methods Manual, Ch. 5, "Copper Structured Cabling Systems," "Pulling and Installing Cable" Section. Monitor cable pull tensions.

C. Open-Cable Installation:

1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Suspend twisted pair cabling, not in a wireway or pathway, a minimum of 8 inches (200 mm) above ceilings by cable supports not more than 60 inches (1524 mm) apart.
3. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.

D. Group connecting hardware for cables into separate logical fields.

E. Separation from EMI Sources:

1. Comply with recommendations from BICSI's "Telecommunications Distribution Methods Manual" and TIA-569-D for separating unshielded copper communication cable from potential EMI sources, including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:

    a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches (127 mm).
    b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches (300 mm).
    c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches (600 mm).

3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:

    a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches (64 mm).
    b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches (150 mm).
    c. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches (300 mm).

4. Separation between communications cables in grounded metallic raceways, power lines, and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:

    a. Electrical Equipment Rating Less Than 2 kVA: No requirement.
    b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches (76 mm).
    c. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches (150 mm).

5. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches (1200 mm).
6. Separation between Communications Cables and LED Lighting Fixtures: A minimum of 5 inches (127 mm).

3.6 FIRESTOPPING

A. Comply with requirements in Section 078413 "Penetration Firestopping."

B. Comply with TIA-569-D, Annex A, "Firestopping."

C. Comply with "Firestopping Systems" Article in BISCI's "Telecommunications Distribution Methods Manual."

3.7 GROUNDING

A. Install grounding according to the "Grounding, Bonding, and Electrical Protection" chapter in BICSI's "Telecommunications Distribution Methods Manual."

B. Comply with TIA-607-B and NECA/BICSI-607.

C. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall, allowing at least a 2-inch (50-mm) clearance behind the grounding bus bar. Connect grounding bus bar to suitable electrical building ground, using a minimum No. 4 AWG grounding electrode conductor.

D. Bond metallic equipment to the grounding bus bar, using not smaller than a No. 6 AWG equipment grounding conductor.

3.8 IDENTIFICATION

A. Cable Schedule: Install in a prominent location in each equipment room and wiring closet. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.

B. Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications closets, terminal hardware and positions, horizontal cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors.

C. Cable and Wire Identification:

1. Label each cable within 4 inches (100 mm) of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
2. Each wire connected to building-mounted devices is not required to be numbered at the device if wire color is consistent with associated wire connected and numbered within panel or cabinet.

3. Exposed Cables and Cables in Cable Trays and Wire Troughs: Label each cable at intervals not exceeding 15 feet (4.5 m).
4. Label each terminal strip, and screw terminal in each cabinet, rack, or panel.

    a. Individually number wiring conductors connected to terminal strips, and identify each cable or wiring group, extended from a panel or cabinet to a building-mounted device, with the name and number of a particular device.
    b. Label each unit and field within distribution racks and frames.

5. Identification within Connector Fields in Equipment Rooms and Wiring Closets: Label each connector and each discrete unit of cable-terminating and -connecting hardware. Where similar jacks and plugs are used for both voice and data communication cabling, use a different color for jacks and plugs of each service.

D. Labels shall be preprinted or computer-printed type, with a printing area and font color that contrast with cable jacket color but still comply with TIA-606-B requirements for the following:

1. Cables use flexible vinyl or polyester that flexes as cables are bent.

3.9 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust field-assembled components and equipment installation, including connections, and to assist in field testing. Report results in writing.

B. Perform the following field tests and inspections and prepare test reports:

1. Operational Test: After electrical circuitry has been energized, start units to confirm proper unit operation. Remove and replace malfunctioning units and retest.
2. Test and adjust controls and safeties.
3. Test each point through its full operating range to verify that safety and operating control setpoints are as required.
4. Test each control loop to verify stable mode of operation and compliance with sequence of operation. Adjust PID actions.
5. Test each system for compliance with sequence of operation.
6. Test software and hardware interlocks.

C. DDC Verification:

1. Verify that instruments are installed before calibration, testing, and loop or leak checks.
2. Check instruments for proper location and accessibility.

3. Check instrument installation for direction of flow, elevation, orientation, insertion depth, and other applicable considerations.
4. Check flow instruments. Inspect tag number and line and bore size and verify that inlet side is identified and that meters are installed correctly.
5. Check control valves. Verify that they are in correct direction.
6. Check DDC system as follows:
    a. a. Verify that wires at control panels are tagged with their service designation and approved tagging system.
    b. b. Verify that DDC controllers are protected from power supply surges.

D. Replace damaged or malfunctioning controls and equipment and repeat testing procedures.

3.10 CONTROL SYSTEM DEMONSTRATION AND ACCEPTANCE

A. Demonstration: A complete demonstration of the capabilities of the BAS system shall be performed by the BAS manufacturer's field personnel. The BAS manufacturer shall dedicate a minimum of (16) hours on-site with the Owner representatives, and Engineer to demonstrate a complete functional test of all the BAS system requirements. This BAS demonstration shall constitute an acceptance inspection, and will represent the process of approving the BAS as designed and specified. Functional testing shall include, but is not limited to, the following system level components where installed:

B. Acceptance: The BAS will not be accepted as meeting the requirements of Completion until all tests described in this specification have been performed to the satisfaction of both the Engineer and Owner. Any tests that cannot be performed due to circumstances beyond the control of the Contractor may be exempt from the Completion requirements if stated as such in writing by the Owner's representative.

3.11 TRAINING

A. Two training sessions of four (4) hours minimum per session, with sessions on separate days for the facility maintenance staff. The training shall review accessing the web based building automation system (BAS) by password, show how to navigate through each of the system's graphic screens to identify each of the parameters which are just monitored and what parameters can be adjusted (setpoints and schedules), review each of the alarms which can be sent to the BAS and how the maintenance staff should address each, and proper logging out of the system. All training is to be video recorded.

1. Review with the maintenance staff current setpoints and instruct them how to adjust the setpoints. Instruct the staff in how to adjust equipment schedules and assist them in setting up each applicable schedule.

2. Instruct the staff in system troubleshooting. Instruct them in setup of trending / data logging and how to review the resulting data.
3. Instruct the staff how to do seasonal system startups and shutdowns.
4. Perform a walk-through of the building and review the location of room sensors and unit controllers.

END OF SECTION 250923

SECTION 275313 CLOCK SYSTEMS

PART 1 GENERAL

1.1 WORK INCLUDED

A. Provide labor, materials, equipment and services to perform operations required for the complete installation and related Work as required in Contract Documents.

B. Include FCC registrations and any other fees and licenses for not less than 10 years.

1.2 SECTION INCLUDES

A. Clock system requirements.

B. Wireless clock systems and associated components:

1. Master clock unit.

2. Wireless secondary indicating clocks.

C. Accessories.

1.3 SCOPE OF WORK

A. Provide all labor, tools, transportation, taxes, and related items, essential for installation of the work and necessary to make work, complete, and operational. All equipment and devices shall be provided by the owner through a state contract. Provide new equipment and material unless otherwise called for. References to codes, specifications and standards called for in the specification sections and on the drawings mean, the latest edition, amendment and revision of such referenced standard in effect on the date of these contract documents. All materials and equipment shall be installed in accordance with the manufacturer's recommendations. All new equipment shall be fully compatible with the new system being installed. The new system shall be purchased through state contract from Dutchess Tel-Audio.

1. Provide new headend, clocks, hardware and programming, as well as all associated auxiliary equipment to facilitate installation of the new clock system.

2. Install all equipment, accessories, and materials (purchased by the district through state contract) per these specifications and drawings to provide a complete and operating school clock system.

1.4 REFERENCE STANDARDS

A. 47 CFR 15 - Radio Frequency Devices current edition.

B. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

C. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate the placement of clocks with potential conflicts and/or view obstructions installed under other sections or by others.

2. Coordinate the work with other installers to provide power for clocks and equipment at required locations.

3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.6 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for each system component. Include ratings, configurations, standard wiring diagrams, dimensions, finishes, service condition requirements, and installed features.

B. Maintenance contracts, if applicable.

C. Operation and Maintenance Data: Include detailed information on system operation, equipment programming and setup, replacement parts, and recommended maintenance procedures and intervals.

1. Include contact information for entity that will be providing contract maintenance and trouble call-back service.

a. Dutchess Tel-Audio, Inc. 10 Steele Rd. New Windsor, NY (845) 462-1700.

D. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

E. Project Record Documents: Record actual locations of system components and installed wiring arrangements and routing.

F. Software: One copy of software, if applicable.

1.7 QUALITY ASSURANCE

A. Comply with the following:

1. NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

D. Installer Qualifications: Company with minimum three years documented experience with similar clock systems and providing contract maintenance service as a regular part of their business; manufacturer's authorized installer.

1. Contract maintenance office located within 25 miles of project site.

E. Products: Listed, classified, and labeled as suitable for the purpose intended.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

B. Store products in manufacturer's unopened packaging, keep dry and protect from damage until ready for installation.

1.9 FIELD CONDITIONS

A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.10 WARRANTY

A. Provide minimum one year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

PART 2 PRODUCTS

2.1 CLOCK SYSTEM REQUIREMENTS

A. Provide new wireless clock system consisting of all required equipment, battery powered clocks, transmitter(s), hardware, accessories, software, system programming, etc. as necessary for a complete operating wireless system that provides the functional intent indicated.

B. Interface with Other Systems:

1. Provide products compatible with other systems requiring interface with clock system, if required.

C. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of 47 CFR 15, for Class B, consumer application.

2.2 WIRELESS CLOCK SYSTEMS

A. Manufacturers:

1. Wireless Clock System:

a. Primex 72MHz OneVue™ Sync Wireless Clock System
https://www.primexinc.com/en/

1) Broadcast at 72 MHz/FCC-licensed frequency

2) Compatible with existing Newburgh ECSD district wide 72mhz FCC license

b. Acceptable product, approved as equal.

2. Products other than basis of design are subject to compliance with specified requirements and prior approval of Engineer.

3. Source Limitations: Furnish system components and accessories produced by a single manufacturer and obtained from a single supplier.

B. Master Clock Unit:

1. Description: Microprocessor-based controller and associated accessories for maintaining time reference and correcting connected wireless secondary indicating clocks.

a. Product(s)

1) Primex, Sync OneVue Transmitter 1 Watt with NTP capability (with GPS).

2) Primex, Sync Transmitter Accessory Pack - Transmitter Rack and UPS.

2. Acceptable Time Reference Source(s): Based on Network Time Protocol (NTP) server time data obtained via local area network (LAN).

a. Optional GPS antenna time source.

3. Wireless Time Correction Signal Transmitter/Antenna: Compatible with wireless secondary clocks.

4. Master Clock and Repeater Placement:

a. Installation location to be reviewed by manufacture.

1) Prior to installation, Primex to confirm the proper location of the transmitter and repeater to ensure facility wide time correction signal coverage.

5. Features:

a. Battery backup for timekeeping and settings; rated for 10 years.

b. Supports security access control for system programming functions.

c. Supports remote interface via web browser or software.

d. Supports automatic daylight savings time adjustment.

C. Analog Wireless Secondary Indicating Clocks:

1. Power Source: Two (2) D cell batteries, to be included.

2. Time Reference Source: Synchronized with master clock unit wireless time correction signal.

3. Clock Movements: Microprocessor-controlled.

4. Clock Face:

a. Shape: Round.

b. Size: 12inch and 16inch nominal.

c. Color: White face with black numerals and markings, unless otherwise indicated or approved by Architect.

d. Hands: For indicating hour, minute, and second.

5. Clock Crystal/Lens: Shatter-resistant plastic.

6. Case Material/Color/Finish: Black.

7. Mounting:

a. Single-Face Clocks: Surface mount.

b. Double-Face Clocks: Dual Clock 12.5” Mounting Kit

8. Product(s)

a. Primex Sync 72Mhz Analog Clock, 12.5” Black

b. Primex Sync 72Mhz Analog Clock, 16” Black

c. Primex Sync 12.5” Dual Mounting Kit

D. Provide components as indicated or as required for extension of wireless time correction signal between master clock unit and wireless secondary indicating clocks.

1. Product(s):

a. Wireless Repeater: Primex, Sync OneVue Transceiver 1 Watt Repeater.

2.3 ACCESSORIES

A. Provide components and wiring as indicated or as required for connection to auxiliary devices and other systems indicated.

1. Product(s):

    a. 100’ GPS Extension Cable for Sync OneVue Transmitter.

B. Auxiliary Devices:

1. Product(s):

    a. Tone/Audio Generator to existing pa system, if required.

C. Protective Covers/Guards for Clocks: Where indicated.

1. Product(s):

    a. Primex Sync 18”x18” Analog Wire Guard (for 12.5” and 16” clocks)

D. Racks/Cabinets: Provide as indicated or as required for equipment mounting.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that characteristics of system components are consistent with the indicated requirements.

C. Verify that mounting surfaces are ready to receive system components.

D. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. All installations shall be accomplished in a professional manner by qualified personnel regularly engaged in and experienced in this type of work.

D. Provide on 20 ampere, 120 volt power circuit to the master clock and program controller; provide 20A – 1P circuit breaker at panelboard and identify on panel directory.

E. All surface mounted devices shall be mounted on a special box furnished by clock equipment manufacturer. Total assembly shall be secure, smooth contour and have no protrusions.

3.3 FIELD QUALITY CONTROL

A. Prepare and start system in accordance with manufacturer's instructions.

B. Program system parameters according to requirements of Owner.

C. Test for proper interface with other systems.

D. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.

E. Submit detailed reports indicating inspection and testing results and corrective actions taken.

3.4 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.5 CLOSEOUT ACTIVITIES

A. Demonstration: Demonstrate proper operation of system to Owner, and correct deficiencies or make adjustments as directed.

B. Training: Train Owner's personnel on operation, adjustment, and maintenance of system.

1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.

2. Provide minimum of two hours of training.

3. Location: At project site.

3.6 PROTECTION

A. Protect installed system components from subsequent construction operations.

3.7 MAINTENANCE

A. Vendor to provide an initial quantity of spare clocks, see SPARES 3.08

B. Provide trouble call-back service upon notification by Owner:

1. Vendor to provide first year warranty support during normal working hours at no extra cost to Owner.

2. Owner will pay for call-back service outside of normal working hours on an hourly basis, based on then current prevailing product and service rates.

3. Post warranty support will be provided to the Owner at then current prevailing product and service rates.

3.8 SPARES

A. Analog clock spares, provide 5% of each model (12.5” and 16”).

END OF SECTION 275313

SITE PLAN NOTES:

1. LAYOUT **THE DIMENSIONS SHOWN ARE TO THE FACE OF THE CURB AND INCLUDES THE OVERALL SIDEWALK WIDTH, WHERE APPLICABLE.**
2. ASPHALT **ASPHALT SHALL BE CALCULATED BY WEIGHT (TONNAGE) USING THE SPECIFIED COMPACTED THICKNESS. PAVEMENTS WILL BE BASED ON THE TONNAGE PLACED AS ACCOUNTED FOR BY EACH DELIVERY TRUCK. FULL TIME ON-SITE OBSERVATION WILL BE PRESENT DURING ALL RELATED PAVING OPERATIONS.**
3. VEHICULAR TRAFFIC **SHALL NOT BE PERMITTED ON THE SURFACE OF SUBBASE COURSE MATERIAL ONCE IT HAS BEEN FINE GRADED, COMPACTED, AND IS READY FOR PAVING. SUBBASE MATERIAL PREPARED FOR PAVING SHALL BE PAVED WITHIN THREE DAYS OF PREPARATION.**
4. SUBBASE MATERIAL **AND THE VARIOUS ASPHALT CONCRETE MATERIALS CALLED FOR IN THESE DRAWINGS SHALL CONFORM WITH THE REFERENCED SECTION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, "LATEST EDITION". CONSTRUCTION SHALL BE AS FURTHER SET FORTH IN THOSE SPECIFICATIONS AND AS OTHERWISE PROVIDED FOR IN THESE DRAWINGS.**
5. PLACE ASPHALT **CONCRETE MIXTURE ON PREPARED SURFACE, SPREAD AND STRIKE-OFF USING A SELF-PROPELLED PAVING MACHINE, WITH VIBRATING SCREED. PLACEMENT IN INACCESSIBLE AND SMALL AREAS MAY BE BY HAND.**
6. JOINTS **PROVIDE JOINTS BETWEEN OLD AND NEW PAVEMENT OR BETWEEN SUCCESSIVE DAYS WORK.**
7. TACK COAT **SHALL BE APPLIED TO BINDER COURSE. TACK COAT SHALL CONFORM WITH THE FOLLOWING:**

   A. **TACK COAT SHALL MEET THE MATERIAL REQUIREMENTS OF 702-90 ASPHALT EMULSION FOR TACK COAT OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, "LATEST EDITION" AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 407. TACK COAT SHALL BE IN ACCORDANCE WITH THOSE SPECIFICATIONS AND AS OTHERWISE PROVIDED FOR IN THESE DRAWINGS.**
   B. **REMOVE LOOSE AND FOREIGN MATERIAL FROM ASPHALT SURFACE BEFORE PAVING NEXT COURSE. USE POWER BROOMS, BLOWERS OR HAND BROOM.**
   C. **APPLY TACK COAT TO THE ASPHALT PAVEMENT SURFACES AND SURFACES OF CURBS, GUTTERS, MANHOLES, AND OTHER STRUCTURES PROJECTING INTO OR ABUTTING PAVEMENT. DRY TO A "TACKY" CONSISTENCY BEFORE PAVING.**
   D. **TACK COAT ENTIRE VERTICAL SURFACE OF ABUTTING EXISTING PAVEMENT.**

6. CLEAN SURFACE **AFTER COMPLETION OF PAVING AND SURFACING OPERATIONS, CLEAN SURFACES OF EXCESS OR SPILLED ASPHALT, GRAVEL OR STONE MATERIALS TO THE SATISFACTION OF THE ENGINEER.**

MUTCD SIGN SCHEDULE

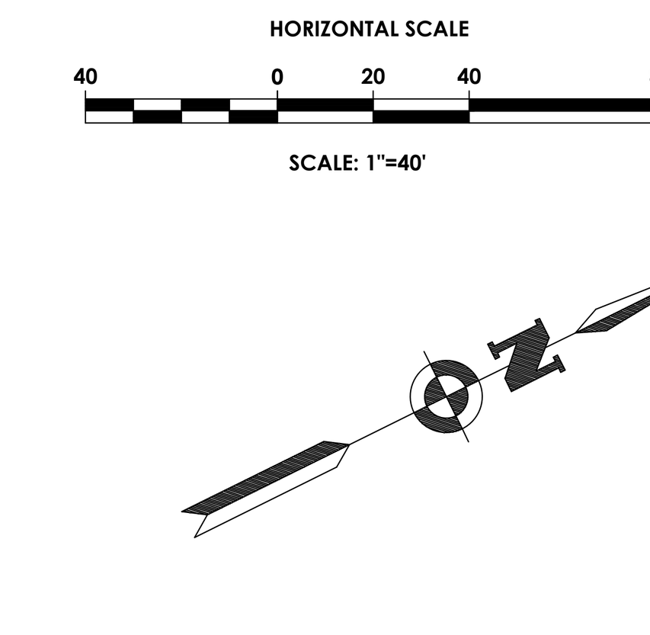
SIGN NO.	SIGN FACE	MUTCD NUMBER	MIN SIZE	COLORS		MOUNTING
				BCKGRND	LEGEND	
1	STOP	R1-1	24"X24"	RED	WHITE	10 / C230
2	DO NOT ENTER	R5-1	30"X30"	RED	WHITE	10 / C230
3	PULL FORWARD FOR STUDENT DROP OFF	NA	12"X18"	WHITE	BLACK	10 / C230
4	THRU LANE ONLY NO PARKING STOPPING STANDING / PULL FORWARD STUDENT DROP OFF DRIVERS MUST REMAIN WITH VEHICLE	NA	(2)12"X12" (2)12"X18"	YELLOW/ RED/ WHITE	BLACK/ WHITE/RED	10 / C230
5	DO NOT ENTER BUSES ONLY	NA	18"X24"	WHITE (TOP) BLACK BOTTOM)	RED (TOP, OUTLINE) WHITE (BOTTOM)	10 / C230
6	NO PARKING	R8-3A	18"X24"	WHITE	RED	10 / C230
7	ONLY	R3-5	30"X36"	WHITE	BLACK	10 / C230
8	ONE WAY	R6-2	24"X30"	WHITE	BLACK	10 / C230
9	RESERVED PARKING	R7-8	12"X18"	WHITE	GREEN	10 / C230
10	VAN ACCESSIBLE	R7-8P	18"X9"	WHITE	GREEN	10 / C230
11	FIRE LANE	R7230	12"X18"	WHITE	RED/ BLACK	10 / C230
12		W11-2	24"X24"	YELLOW	BLACK	10 / C230
13		W16-7PR	24"X12"	YELLOW	BLACK	10 / C230
14		W16-7PL	24"X12"	YELLOW	BLACK	10 / C230

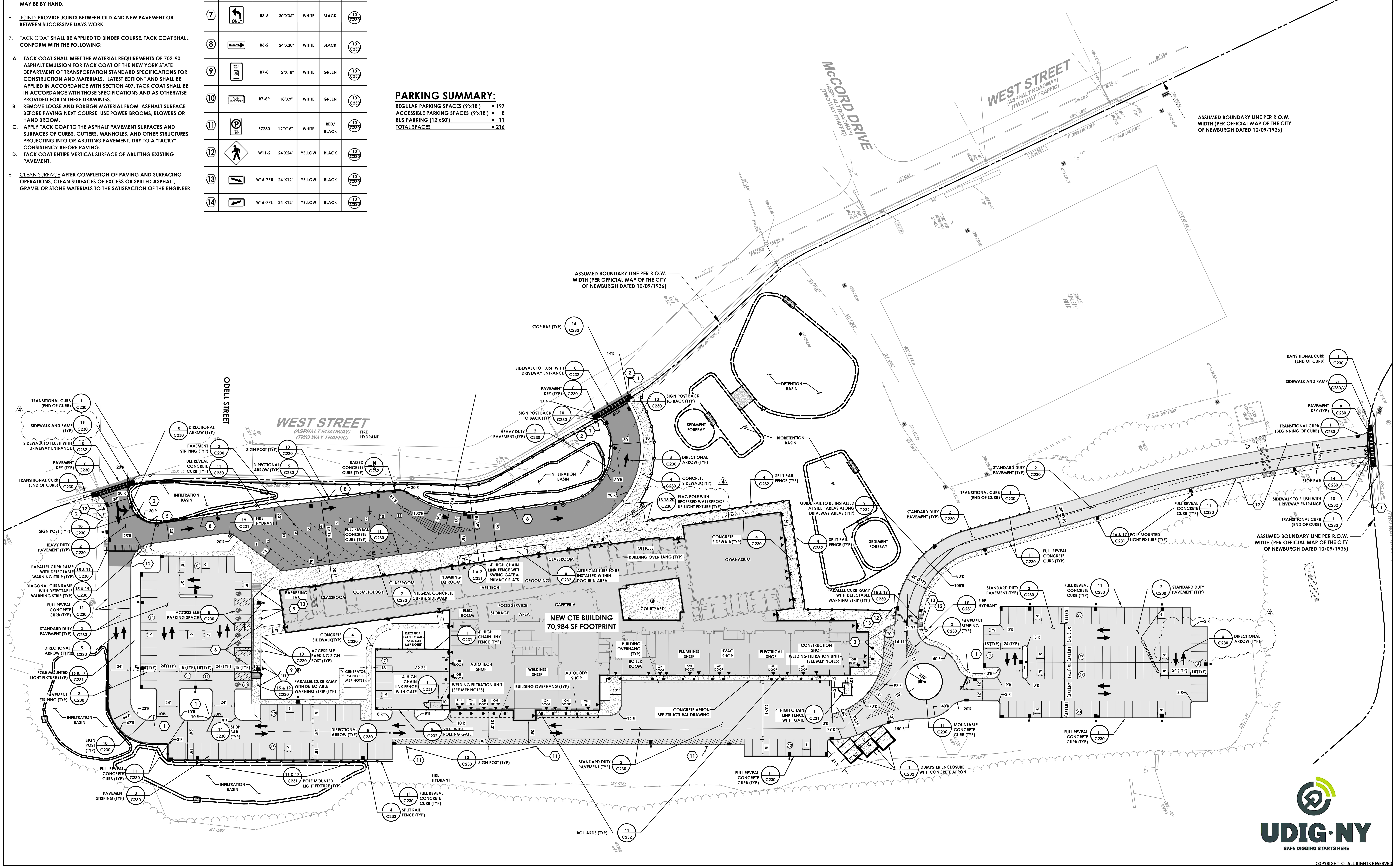
LEGEND:

- PROPERTY BOUNDARY
- PROPOSED BUILDING
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED PARKING COUNT
- PROPOSED CONCRETE
- PROPOSED ACCESS RAMP
- PROPOSED PAVEMENT STRIPING
- PROPOSED CURB
- PROPOSED SIGN
- PROPOSED LIGHTS
- PROPOSED BUS PARKING
- PROPOSED SPLIT RAIL FENCE

PARKING SUMMARY:

REGULAR PARKING SPACES (9'x18')	= 197
ACCESSIBLE PARKING SPACES (9'x18')	= 8
BUS PARKING (12'x50')	= 11
TOTAL SPACES	= 216





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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING
CTE NEWBURGH

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4
3	5/13/2024	BID ADDENDUM #3
2	5/3/2024	BID ADDENDUM #2

Drawn By:	MP
Checked By:	SK
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

Sheet Title

SITE PLAN

Sheet No.

CTE
C130

CONSTRUCTION DOCUMENTS

LEGEND:

- PROPERTY BOUNDARY
- EXISTING BUILDING
- PROPOSED ACCESS RAMP
- PROPOSED CURB
- PROPOSED SIGN
- EXISTING SIGN
- PROPOSED LIGHT POLE
- 3.0 FOOT CONTOUR
- 1.0 FOOT CONTOUR
- 0.25 FOOT CONTOUR

LUMINAIRE SCHEDULE (SEE LIGHTING NOTES #3)										
LABEL	SYMBOL	QUANITITY	LIGHT FIXTURE CATALOG NUMBER	DESCRIPTION	POLE CATALOG NUMBER	MOUNT HEIGHT (SEE LIGHTING NOTES #5)	LUMENS	INPUT WATTAGE	B.U.G. RATING	CORRELATED COLOR TEMPERATURE
A		32	A17-5T70N	RAB LIGHTING POLE MOUNTED AREA LIGHT	PS4-11-15D2	17 FT	±9385	70.8	B3-U0-G3	4000K
B		SEE ELECTRICAL PLANS FOR WALL PACK LIGHTING								
C	•	SEE ELECTRICAL PLANS FOR CANOPY LIGHTING								

LIGHTING NOTES:

1) LIGHTING PLAN DESIGN IS BASED ON SPECIFICATIONS FROM RAB LIGHTING.

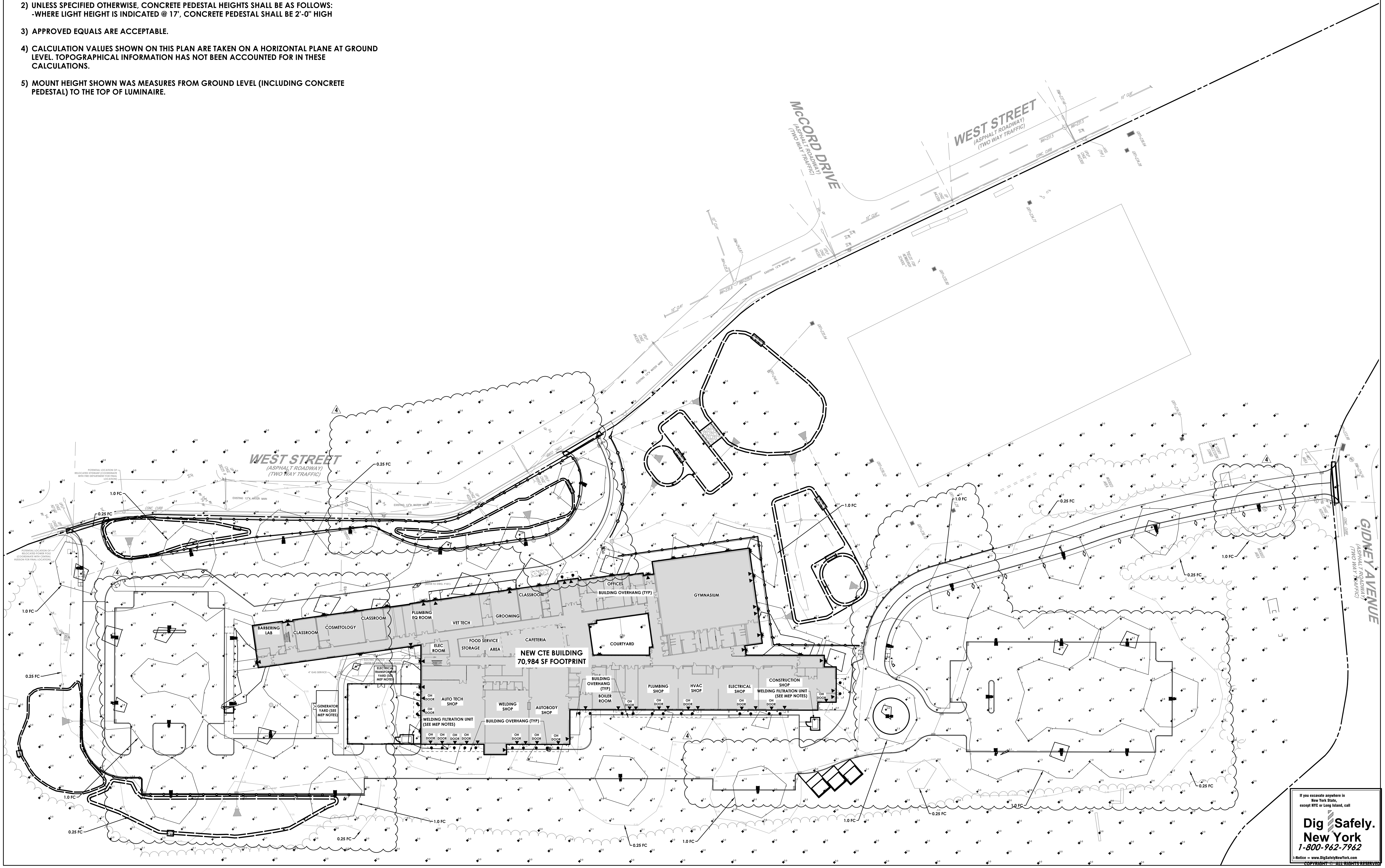
2) UNLESS SPECIFIED OTHERWISE, CONCRETE PEDESTAL HEIGHTS SHALL BE AS FOLLOWS: -WHERE LIGHT HEIGHT IS INDICATED @ 17', CONCRETE PEDESTAL SHALL BE 2'-0" HIGH

3) APPROVED EQUALS ARE ACCEPTABLE.

4) CALCULATION VALUES SHOWN ON THIS PLAN ARE TAKEN ON A HORIZONTAL PLANE AT GROUND LEVEL. TOPOGRAPHICAL INFORMATION HAS NOT BEEN ACCOUNTED FOR IN THESE CALCULATIONS.

5) MOUNT HEIGHT SHOWN WAS MEASURES FROM GROUND LEVEL (INCLUDING CONCRETE PEDESTAL) TO THE TOP OF LUMINAIRE.

HORIZONTAL SCALE
SCALE: 1"=40'



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Consultant

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING
CTE NEWBURGH

STATE OF NEW YORK — CHRISTOPHER J. LAPORTA — 102592 — LICENSED PROFESSIONAL ENGINEER

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4
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Issued for Bid:	4/15/2024

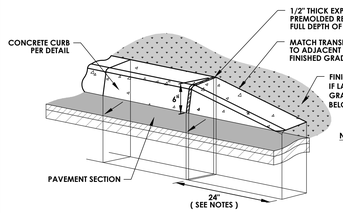
Sheet Title

LIGHTING & PHOTOMETRIC PLAN

Sheet No.

CTE C180

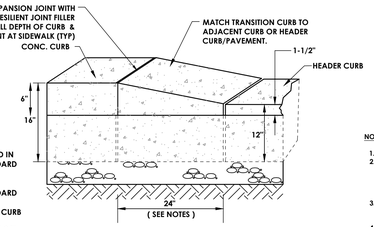
CONSTRUCTION DOCUMENTS

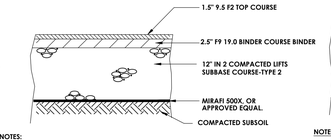


NOTES:

1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. JOINTS SHALL BE IN INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609-3.04.
3. PROVIDE 5/8" MAX. LIP FOR HEADER CURB AT SIDEWALK RAMPS.
4. TRANSITION CURB LENGTHS SHALL BE 24" OR AS INDICATED IN THE DRAWINGS.

1 TRANSITION CURB TO GRADE
N.T.S.

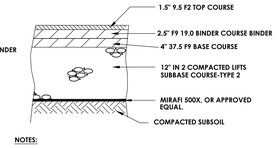




NOTES:

1. ALL DEPTHS ARE COMPACTED THICKNESSES.
2. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE INCORFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, "LATEST VERSION" AND ALL ADDENDA THERE TO.
3. WHEN SPECIFIED OR REQUIRED BY THE REFERENCED SPECIFICATIONS, TACK COAT SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATION.
4. BINDER COURSE SHALL BE SWEPT CLEAR TO REMOVE ANY LOOSE MATERIAL PRIOR TO PLACING TOP COAT. IF TOP COURSE IS NOT PLACED WITHIN TWENTY FOUR HOURS OF BINDER PLACEMENT, A TACK COAT SHALL BE APPLIED TO CLEAN SURFACE PRIOR TO PLACEMENT OF TOP COURSE.

STANDARD DUTY PAVEMENT



NOTES:

1. ALL DEPTHS ARE COMPACTED THICKNESSES.
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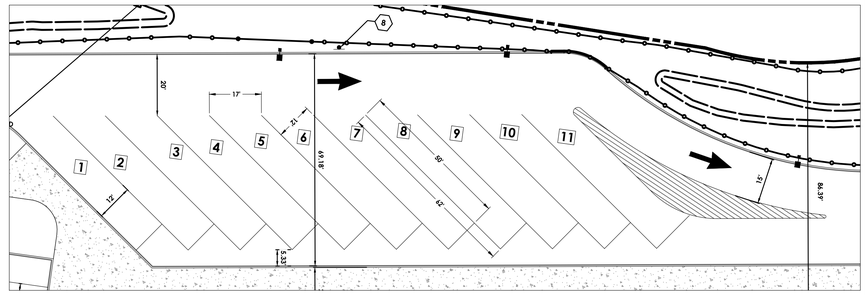
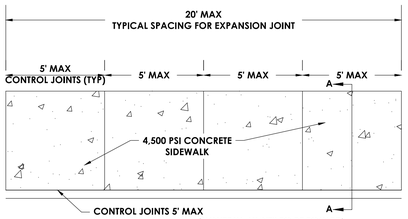
HEAVY DUTY PAVEMENT

2 PAVEMENT SECTION
N.T.S.

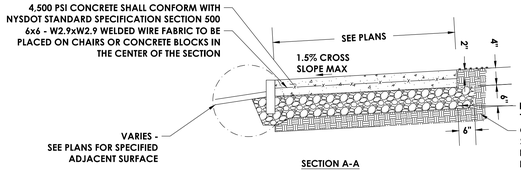


3 BUS LOOP PARKING PAVEMENT MARKING LAYOUT
SCALE: 1"=20'

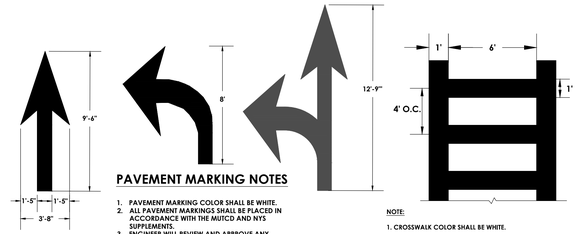


NOTES:

1. SIDEWALK WIDTH SHALL BE MEASURED FROM THE BACK OF THE CURB UNLESS OTHERWISE SPECIFIED.
2. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE. THE FILL MATERIAL PLACED SHALL BE IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 203, LATEST EDITION
3. NYSDOT SUBBASE TYPE 2 SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION SECTION 304, LATEST EDITION.
4. CONCRETE SHALL NOT BE PLACE UNLESS THE AMBIENT AIR SURFACE TEMPERATURE IS ABOVE 40 DEGREES UNLESS DISCUSSED WITH OWNER AND ENGINEER.
5. SIDEWALKS SHALL HAVE A CROSS SLOPE OF 1.5% PER FOOT UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. ALL EXPOSED CONCRETE SURFACES SHALL BE BROOM FNISHED AND THE EDGES SHALL BE FINISHED WITH A 1.5" RADIUS EDGING TOOL. THE FINISHED CONCRETE SURFACE SHALL BE TREATED WITH CONCRETE SEALER, HARDENER AND DUSTPROOFER. RATE AND METHOD OF APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



SECTION A-A



PAVEMENT MARKING NOTES

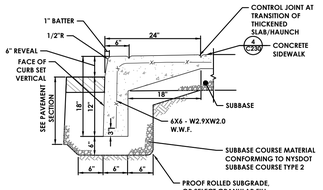
1. PAVEMENT MARKING COLOR SHALL BE WHITE.
2. ALL PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MUTCD AND NYS SUPPLEMENTS.
3. ENGINEER WILL REVIEW AND APPROVE ANY CHANGES TO THE PAVEMENT MARKING PLANS PRIOR TO FINAL INSTALLATION. CHANGES SHALL BE SUBMITTED PRIOR TO INSTALLATION.

5 DIRECTIONAL ARROW PAVEMENT MARKING DETAIL
N.T.S.

NOTE:

1. CROSSWALK COLOR SHALL BE WHITE.

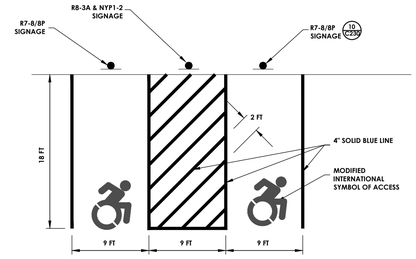
6 CROSSWALK DETAIL
N.T.S.



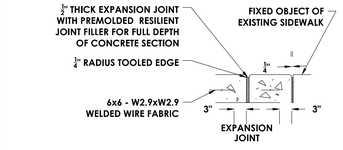
NOTES:

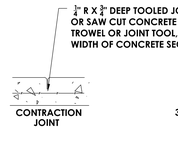
1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. SEE CONCRETE SIDEWALK DETAIL FOR ADDITIONAL DETAILS AND NOTES.

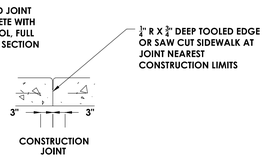
7 INTEGRAL CONCRETE CURB & SIDEWALK
N.T.S.



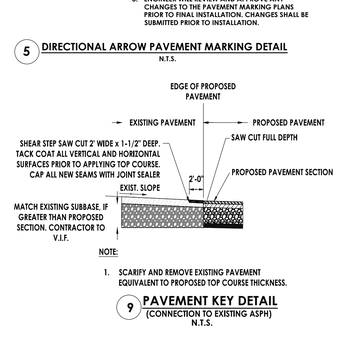
8 ACCESSIBLE PARKING SPACE PAVEMENT MARKING DETAIL
N.T.S.







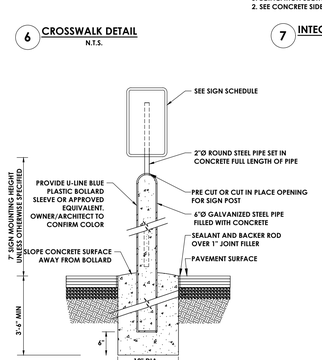
4 TYPICAL SIDEWALK DETAIL
N.T.S.



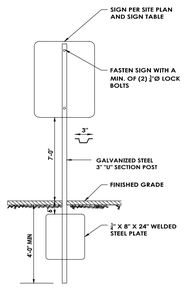
NOTE:

1. SCARIFY AND REMOVE EXISTING PAVEMENT EQUIVALENT TO PROPOSED TOP COURSE THICKNESS.

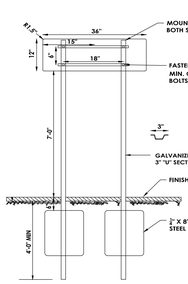
9 PAVEMENT KEY DETAIL
(CONNECTION TO EXISTING ASPH)
N.T.S.



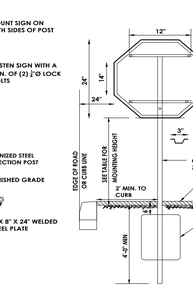
BOLLARD MOUNTED SIGN
N.T.S.



SINGLE POST SIGN MOUNTING DETAIL
(SIGN IN LANDSCAPE AREA OR SIDEWALK)
N.T.S.

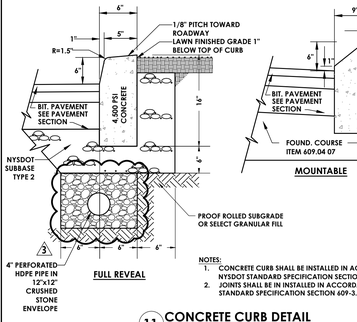


TWO POST ONE WAY SIGN MOUNTING DETAIL
(SIGN IN LANDSCAPE AREA OR SIDEWALK)
N.T.S.

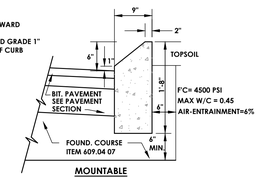


SINGLE POST STOP SIGN MOUNTING DETAIL
(SIGN IN LANDSCAPE AREA OR SIDEWALK)
N.T.S.

10 SIGN MOUNTING DETAIL
N.T.S.



FULL REVEAL

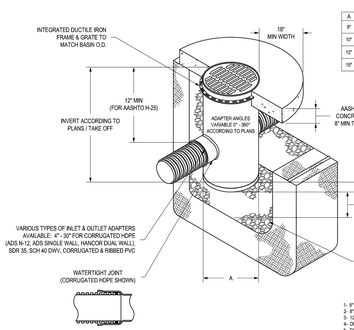


MOUNTABLE

NOTES:

1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. JOINTS SHALL BE IN INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609-3.04.

11 CONCRETE CURB DETAIL
N.T.S.

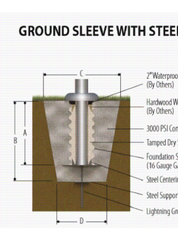


A	PART #	GRATE OPTIONS		
8"	2909AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10"	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12"	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18"	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20

1- 8"- 30" GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2- 8", 10", 18", 24" & 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3- 12" & 15" FRAMES SHALL BE CAST IRON PER ASTM A-48-83 CLASS 35B
4- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
5- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
6- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
7- TO ORDER CALL: **800-821-6710**

12 NYLOPLAST YARD DRAIN DETAIL
N.T.S.

GROUND SLEEVE WITH STEEL LIGHTNING SPIKE INSTALLATION



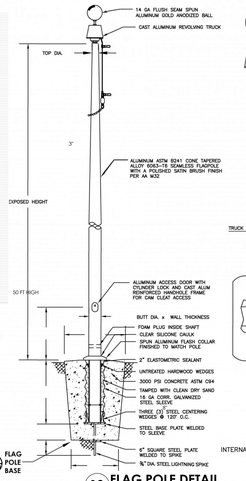
Ground Set

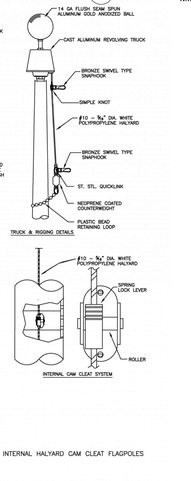
Exposed Mounting Height	A	B	C	D
20'-0"	2'-0"	2'-6"	30"	24"
25'-0"	2'-6"	3'-0"	36"	24"
30'-0"	3'-0"	3'-6"	36"	24"
35'-0"	3'-6"	4'-0"	36"	30"
40'-0"	4'-0"	4'-6"	45"	36"
45'-0"	4'-6"	5'-0"	45"	36"
50'-0"	5'-0"	5'-6"	50"	42"
60'-0"	6'-0"	6'-6"	60"	48"
70'-0"	7'-0"	7'-6"	60"	48"
80'-0"	8'-0"	8'-6"	72"	48"

NAMM's Metal Flagpole Manual offers basic suggestions on foundation measurements in firm, dry soil only using dry tamped sand and 3000 PSI concrete. Soil conditions vary by site. Exact foundation requirements should be verified by a Structural Engineer with knowledge of soil conditions in your locality.

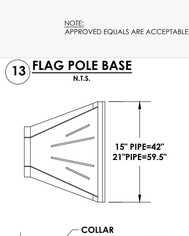
NOTE:
APPROVED EQUALS ARE ACCEPTABLE

13 FLAG POLE BASE
N.T.S.

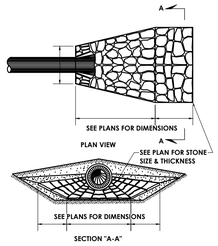




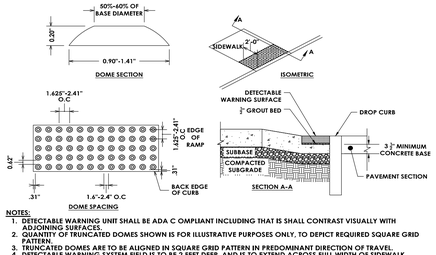
18 FLAG POLE DETAIL
N.T.S.



17 FLARED END SECTION DETAIL
N.T.S.



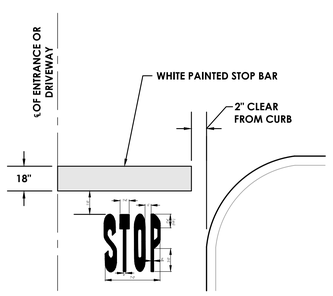
16 STONE RIP-RAP DETAIL
N.T.S.



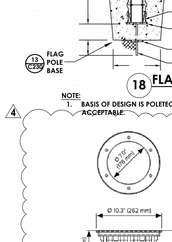
NOTES:

1. DETECTABLE WARNING UNIT SHALL BE ADA C OMPLIANT INCLUDING THAT IS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
2. QUANTITY OF TRUNCATED DOMES SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. TO DEPICT REQUIRED SQUARE GRID PATTERN.
3. TRUNCATED DOMES ARE TO BE ALIGNED IN SQUARE GRID PATTERN IN PREDOMINANT DIRECTION OF TRAVEL.
4. DETECTABLE WARNING SYSTEM FIELD IS TO BE 2 FEET DEEP, AND IS TO EXTEND ACROSS FULL WIDTH OF SIDEWALK ACCESS RAMP, BUT NOT UP SIDE FLARES.
5. DETECTABLE WARNING SYSTEM FIELD IS TO BE LOCATED SUCH THAT OUTER EDGE OF WARNING FIELD NEAREST TO STREET IS 2 TO 4 INCHES OFF BACK EDGE OF CURB.
6. COORDINATE COLOR WITH OWNER.

15 DETECTABLE WARNING SURFACE
N.T.S.



14 STOP BAR DETAIL
N.T.S.



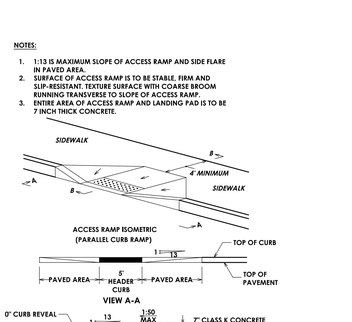
NOTES:

1. BASIS OF DESIGN IS ERDEN E6 (MODEL LS3060) MANUFACTURED BY LUMASCAPE OR APPROVED EQUIVALENT. LIGHT SHALL HAVE A MINIMUM SURFACE AREA OF 7" AND BODY DEPTH OF 7.1".
2. LIGHT SHALL BE 3,500 K (80 CRI) WITH A LUMEN OUTPUT OF 2,245 LM AND EFFICACY OF 91 LM/W. OWNER/ARCHITECT TO CONFIRM COLOR PRIOR TO ORDER.
3. LIGHT SHALL BE INSTALLED UTILIZING PRE-INSTALLATION BLOCK PER MANUFACTURER (MODEL LS6052-K).
4. FLUSH COVER SHALL BE MODEL SS316-POLISHED WITH A MINIMUM DIAMETER OF 10.3".
5. THREE RECESSED UP LIGHT FIXTURES SHALL BE PLACED AT A DISTANCE OF ONE THIRD OF THE FLAG POLE'S HEIGHT AWAY FROM THE CENTER OF THE POLE. LIGHTS SHALL BE SPACED 120 DEGREES APART.

20 IN-GROUND LIGHT
N.T.S.

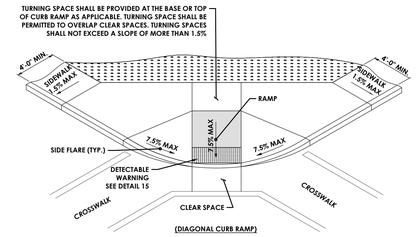
NOTES:

1. 1:13 IS MAXIMUM SLOPE OF ACCESS RAMP AND SIDE FLARE IN PAVED AREA.
2. SURFACE OF ACCESS RAMP IS TO BE STABLE, FIRM AND SLIP-RESISTANT. TEXTURE SURFACE WITH COARSE BROOM RUNNING TRANSVERSE TO SLOPE OF ACCESS RAMP.
3. ENTIRE AREA OF ACCESS RAMP AND LANDING PAD IS TO BE 7 INCH THICK CONCRETE.



SECTION B-B
(PARALLEL CURB RAMP)

TURNING SPACE SHALL BE PROVIDED AT THE BASE OR TOP OF CURB RAMP AS APPLICABLE. TURNING SPACE SHALL BE PERMITTED TO OVERLAP CLEAR SPACES. TURNING SPACES SHALL NOT EXCEED A SLOPE OF MORE THAN 1.5%



(DIAGONAL CURB RAMP)

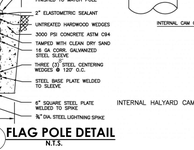
19 CURB RAMP DETAIL
N.T.S.

40 Beaver St. Albany, New York 12207-1511
518 463 8068 www.csarchpc.com
PASSERO engineering architecture
CSARCH

Consultant

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING
CTE NEWBURGH



4	5/29/2024	BID ADDENDUM #4
3	5/13/2024	BID ADDENDUM #3
2	5/3/2024	BID ADDENDUM #2
NO.	DATE	DESCRIPTION

Drawn By:	MP
Checked By:	SK
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

Sheet Title

SITE DETAILS

Sheet No.

CTE C230

CONSTRUCTION DOCUMENTS

GENERAL NOTES:

1. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, HVAC, AND PLUMBING DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR(S) SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC. IN THE FIELD AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION OR SHOP DRAWINGS.
3. THE DRAWINGS ARE INTENDED TO REQUIRE AND TO INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT PROPER FOR THE WORK.
4. ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND REQUIREMENTS.
5. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND SAFETY PROCEDURES. THE ARCHITECT/ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK.
6. OBSERVE ALL OSHA AND OTHER APPLICABLE SAFETY REQUIREMENTS INCLUDING THE USE OF SAFETY GLASSES, HARD HATS, AND PROTECTION OF AREA WHEN WORKING OVERHEAD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CONSTRUCTION SAFETY AT ALL TIMES.
7. COORDINATE WORK OF ALL DISCIPLINES (STRUCT., ARCH., MECH., ELECT., ETC.) WITH EXISTING CONDITIONS, SPECIAL REQUIREMENTS, CONSTRUCTION SCHEDULE AND OTHER CONTRACTORS PERFORMING WORK AT THE SITE.
8. ALL TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DESIGN AND PROVIDE ANY TEMPORARY SHORING, BRACING, ETC., AS NEEDED FOR THE WORK SO AS NOT TO ENDANGER THE STRUCTURAL INTEGRITY OF ANY EXISTING FEATURE.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AS A RESULT OF THIS WORK. DAMAGED ITEMS SHALL BE REPLACED IN KIND AND AT NO ADDITIONAL COST TO THE OWNER.
10. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LAYOUT PRIOR TO CONSTRUCTION. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IMMEDIATELY. SEE THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. CHANGES AFFECTING THE LAYOUT SHOWN MUST BE SPECIFIC AND CLEARLY CONVEYED TO THE OWNER'S REPRESENTATIVE IN WRITTEN FORM AS A CHANGE FOR INCLUSION INTO THESE PLANS.
11. SHOP DRAWINGS: REPRODUCTION OF DESIGN DRAWINGS SHALL NOT BE PERMITTED FOR SHOP DRAWING SUBMISSIONS. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL REVIEW AND PROVIDE REVIEW STAMP ON SHOP DRAWING SUBMISSIONS PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER INDICATING UNDERSTANDING AND ACCEPTANCE OF SUBMITTAL AND CONFIRMING CONFORMANCE TO PROJECT PLANS/SPECIFICATIONS.
12. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY.
13. EQUIPMENT FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO HVAC, PLUMBING, PROCESS OR ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL OBTAIN APPROVAL OF THE PERTINENT TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN THESE REQUIREMENTS SHALL BE BORNE BY THE APPROPRIATE CONTRACTOR.

FOUNDATION NOTES

1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT BY QUALITY GEO ENGINEERING, P.C., PROJECT NO. SE20-042, AND DATED JANUARY 6, 2021. THE CONTRACTOR SHALL THOROUGHLY REVIEW AND UNDERSTAND ALL PERTINENT CONSTRUCTION ASPECTS OF THIS REPORT BEFORE BEGINNING ANY WORK AND SHALL ENSURE ALL APPLICABLE WORK IS DONE IN ACCORDANCE WITH THIS REPORT.
2. DESIGN OF FOOTINGS AND FOUNDATION WALLS IS BASED ON THE FOLLOWING CRITERIA:
   A. MAXIMUM ALLOWABLE BEARING PRESSURE = 3,000 PSF
3. FOOTING ELEVATION SHOWN REPRESENT THE MINIMUM DEPTH TO WHICH FOOTINGS SHALL BE PLACED, BUT SHALL BEAR AT A DEPTH BELOW FINISHED GRADE NO LESS THAN 4' - 0". FOOTINGS SHALL BE LOWERED AS REQUIRED TO OBTAIN SUITABLE BEARING. WHERE FOOTINGS ARE REQUIRED TO BE LOWERED MORE THAN 1 FOOT, NOTIFY THE ENGINEER OF RECORD.
4. ALL UNSUITABLE FOUNDATION MATERIAL SHALL BE REMOVED WITH FOOTINGS RESTING ON UNDISTURBED SOIL OR STRUCTURAL FILL WITH A MINIMUM BEARING CAPACITY OF 3,000 PSF, UNLESS OTHERWISE INDICATED. ALL EXISTING FILL TYPE MATERIALS TO BE REMOVED WITHIN THE PROPOSED BUILDING FOOTPRINT AND AN ADDITIONAL HORIZONTAL DISTANCE OF 5'-0" BEYOND THE BUILDING FOOTPRINT. EXCAVATION TO BE BACKFILLED WITH COMPACTED STRUCTURAL FILL.
5. IT HAS BEEN DETERMINED THAT BEDROCK MAY BE INCOUNTED DURING FOUNDATION EXCAVATION, PARTICULARLY NEAR THE ELEVATOR PIT. IF DISCOVERED THE ROCK IS TO BE REMOVED TO A MINIMUM OF 6" BELOW FOUNDATION BEARING ELEVATION. THIS OVEREXCAVATION SHALL BE BACKFILLED WITH DRAINAGE STONE TO THE BEARING ELEVATION INDICATED ON THE CONTRACT DRAWINGS, PER THE GEOTECHNICAL REPORT RECOMENDATIONS.
6. A GEOTECHNICAL ENGINEER SHALL OBSERVE THE OPEN EXCAVATION TO DETERMINE THAT THE SOIL TYPE AND CONDITIONS ARE CONSISTENT WITH DESIGN CRITERIA OF THE SOIL REPORT. IF THE SOIL PROPERTIES ARE FOUND TO BE DIFFERENT FROM THIS CRITERIA THE OWNER'S REPRESENTATIVE SHALL BE PROMPTLY NOTIFIED SO THAT THE FOUNDATION DESIGN MAY BE REVIEWED.
7. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES. FOOTINGS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES. WHERE FOOTINGS ARE REQUIRED TO BE LOWERED MORE THAN 1 FOOT, NOTIFY THE ENGINEER OF RECORD.
8. TO MINIMIZE WEATHERING, THE LAST 6 INCHES OF EXCAVATION FOR ALL FOOTINGS SHALL BE MADE IMMEDIATELY PRIOR TO PLACEMENT OF FOOTINGS.
9. WHERE ROCK OUTCROPPINGS ARE ENCOUNTERED IN ANY FOOTING EXCAVATION, UNDERCUT TO A DEPTH OF NOT LESS THAN 6 INCHES BELOW ELEVATION OF BOTTOM OF FOOTING AND BACKFILL WITH THOROUGHLY COMPACTED #10 FINES.
10. UNLESS OTHERWISE SHOWN, THE CENTERLINES OF ALL PIERS AND COLUMN FOOTINGS SHALL BE LOCATED ON COLUMN CENTERLINES.

CONCRETE NOTES

1. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
   A. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
   B. ACI 305, ACI 306, ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
   C. ACI DETAILING MANUAL (ACI SP-66-04).
   D. ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK".
   E. CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE".
   F. ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE".
2. MATERIALS:
   A. REINFORCING BARS - ASTM A615, GRADE 60, DEFORMED
   B. WELDED WIRE FABRIC (WWF) - ASTM A185, FLAT SHEETS.
   C. PORTLAND CEMENT-ASTM C150, TYPE II.
   D. AGGREGATES-ASTM C33.
   E. AIR ENTRAINING ADMIXTURE-ASTM C260, CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER REQUIRED ADMIXTURES.
   F. PROHIBITED ADMIXTURES-CALCIUM CHLORIDE THYOCYANATES OR ADMIXTURES CONTAINING MORE THAN 0.1% CHLORIDE IONS ARE NOT PERMITTED.
3. CONTINUOUS REINFORCING IN WALLS AND SLABS MAY BE SPLICED, AS REQUIRED, PROVIDING BARS ARE OF THE LONGEST PRACTICABLE LENGTH AND SPLICES ARE SHOWN ON REINFORCING SHOP DRAWINGS. WHEREVER POSSIBLE, SPLICES SHALL BE STAGGERED. FIELD CUTTING OF REINFORCEMENT WILL NOT BE PERMITTED.
4. UNLESS OTHERWISE SHOWN, BARS AT WALL AND CONTINUOUS FOOTING CORNERS AND INTERSECTIONS SHALL BE DETAILED AS SHOWN ON FIGURE 15 OF ACI SP-66-04. CORNER BARS SHALL BE DETAILED AS SHOWN FOR OUTSIDE LOADED ONLY CORNERS. INTERSECTIONS SHALL BE DETAILED WITHOUT DIAGONAL BARS. ALL END HOOKS SHALL BE STANDARD 90 DEGREE END HOOKS AND CORNER BARS SHALL BE 48 BAR DIAMETERS X 48 BAR DIAMETERS MINIMUM UNLESS NOTED OTHERWISE.
5. PROVIDE DOWELS TO MATCH REINFORCEMENT SIZE AND SPACING INDICATED FOR ALL STRUCTURAL ELEMENTS, UNLESS OTHERWISE INDICATED. DOWELS MUST BE PLACED AND SECURED PRIOR TO CONCRETE PLACEMENT (WET STICKING REINFORCING NOT PERMITTED").
6. MAJOR CONSTRUCTION JOINTS ARE SHOWN ON THE DRAWINGS. INTERMEDIATE JOINTS IN WALLS, SLABS, AND FLOOR FRAMING ARE NOT SHOWN. CONSTRUCTION JOINTS MAY BE ADDED, OMITTED OR RELOCATED IF PROPERLY DETAILED ON SHOP DRAWINGS AND APPROVED BY THE OWNER'S REPRESENTATIVE.
7. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF OPENINGS AND SLEEVES IN CONCRETE WALLS AND SUPPORTED FLOORS. SPREAD REINFORCEMENT AT OPENINGS AND SLEEVES UNLESS OTHERWISE SHOWN. DO NOT CUT REINFORCEMENT. SEE TYPICAL REINFORCEMENT DETAILS FOR OPENINGS IN SLABS AND WALLS FOR ADDITIONAL REQUIREMENTS.
8. PLACING OF REINFORCEMENT: PROVIDE CHAIRS, BOLSTERS, ADDITIONAL REINFORCEMENT, AND ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITION SHOWN ON DRAWINGS. SUPPORT OF REINFORCEMENT ON FORM TIES, WOOD, BRICK, BRICKBAT OR OTHER UNACCEPTABLE MATERIAL, WILL NOT BE PERMITTED.
9. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS FOR SIZE AND LOCATION OF ALL EMBEDDED ITEMS, SLEEVES, SLAB DEPRESSIONS, OPENINGS, ETC. REQUIRED BY OTHER TRADES. RECONCILE THEIR EXACT SIZES AND LOCATIONS BEFORE PROCEEDING WITH THE WORK. ALL ITEMS SHALL BE FURNISHED AND INSTALLED PRIOR TO PLACEMENT OF CONCRETE. SECURE THE APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO PLACING OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS
10. IN SLABS-ON-GRADE, PROVIDE (2) #4 X 4' - 0" LONG DIAGONAL BARS IN THE MIDDLE OF THE SLAB AT EACH CORNER OF OPENINGS OVER 1' 0" SQUARE AND AT RE-ENTRANT CORNERS. SEE RE-ENTRANT CORNER TYPICAL DETAIL.
11. PROVIDE CONTROL JOINTS IN CAST-IN-PLACE CONCRETE SLABS-ON-GRADE AT 12 FEET O.C. MAX. LOCATE CONTROL JOINTS TO FORM APPROXIMATE SQUARE PANELS WITH THE LENGTH OF ONE SIDE NOT EXCEEDING THE ADJACENT SIDE BY A FACTOR OF 1.5. CONTROL JOINTS MAY BE CONTRACTION JOINTS, CONSTRUCTION JOINTS, OR EXPANSION JOINTS.
12. CONCRETE WALLS SHALL BE TEMPORARILY BRACED AGAINST EARTH PRESSURE AND OTHER FORCES UNTIL FLOOR SLABS ARE IN PLACE AND HAVE ATTAINED REQUIRED STRENGTHS.
13. WHERE CONSTRUCTION JOINTS ARE REQUIRED BUT ARE NOT INDICATED ON THE DRAWINGS, THEY SHALL BE LOCATED AT THE MID-SPAN OF BEAMS, SLABS AND WALLS AND SHALL BE SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE. UNLESS NOTED OTHERWISE OR SHOWN ON THE DRAWINGS, AT CONCRETE SLABS ON STEEL DECK, SUPPORTED BY STEEL BEAMS AND GIRDERS, CONSTRUCTION JOINTS SHALL BE PLACED AT MID-SPAN OF DECK AND MID-WAY BETWEEN GIRDERS
14. CHAMFER EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES 3/4-INCH, UNO.
15. SLABS AND BEAMS OR JOISTS SHALL BE CAST MONOLITHICALLY UNLESS OTHERWISE INDICATED.
16. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHEN IT IS SAFE TO REMOVE FORMS AND/OR SHORING. FORMS AND SHORING MUST NOT BE REMOVED UNTIL THE CONCRETE IS STRONG ENOUGH TO CARRY ITS OWN WEIGHT AND ANY ANTICIPATED SUPERIMPOSED LOADS. WHEN FORMS ARE STRIPPED THERE MUST BE NO EXCESSIVE DEFLECTION, DISTORTION, DISCOLORATION, AND NO EVIDENCE OF DAMAGE TO THE CONCRETE.

MASONRY NOTES:

1. MASONRY WORK SHALL CONFORM TO THE LATEST EDITIONS OF ACI 530 AND 530.1.
2. MATERIALS:
   A. CONCRETE MASONRY UNITS: HOLLOW OR SOLID UNITS ASTM C90. ALL UNITS SHALL BE TYPE I, NORMAL WEIGHT AUTOCLAVED CURED. MOISTURE CONTENT SHALL NOT EXCEED 30% OF MAXIMUM ABSORPTION, AND SHRINKAGE SHALL BE LESS THAN 0.35% AS PER ASTM C426.
   B. MORTAR: ASTM C270, TYPE S. NO MASONRY CEMENT WILL BE ALLOWED.
   C. f'_m = 2,000 psi
   D. REINFORCEMENT BARS: ASTM A615 GRADE 60.
   E. JOINT REINFORCEMENT: TRUSS TYPE WITH 0.148 INCH DIAMETER
   F. FINE GROUT: ASTM C476.
3. USE UNIT TEST METHOD, ACCORDING TO ASTM C -140, TO VERIFY MATERIALS PROPERTIES.
4. REINFORCING BARS IN MASONRY SHALL BE FULLY GROUTED FOR THEIR ENTIRE LENGTH AND SHALL BE LAP SPLICED 48 BAR DIAMETERS,UNO. VERTICAL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60.
5. UNLESS OTHERWISE NOTED OR SHOWN, PROVIDE CMU LINTELS OVER OPENINGS IN CMU WALLS IN ACCORDANCE WITH TYPICAL CMU LINTEL SCHEDULE.
6. UNLESS OTHERWISE SHOWN, PROVIDE SOLID MASONRY BLOCK COURSES, CONSISTING OF SOLID BLOCKS OR GROUT FILLED BLOCKS FOR BEARING UNDER STRUCTURAL MEMBERS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
   A. ONE COURSE UNDER OPEN WEB STEEL JOISTS
   B. THREE COURSES UNDER LONGSPAN STEEL JOISTS (2' 0" EACH SIDE OF JOIST)
   C. THREE COURSES UNDER STEEL BEAMS AND COLUMNS (2' 0" EACH SIDE OF MEMBER)
7. ALL EXPOSED MORTAR JOINTS SHALL BE TOOLED.
8. CMU WALLS SHALL RECEIVE TEMPORARY BRACING. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED BY THE ROOF (IF ONE STORY IN HEIGHT) OR AT EACH FLOOR/ROOF LEVEL (IF OVER ONE STORY IN HEIGHT).
9. PROTECT MASONRY WORK FROM DAMAGE DUE TO OTHER WORK AND THE WEATHER AS RECOMMENDED BY NCMA. ALL UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. SOLID UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS, 3/8" THICK. LAY IN FULL RUNNING BOND UNLESS INDICATED OTHERWISE.
10. PLACE HORIZONTAL REINFORCING ON FULL MORTAR BED AT 16" OC MIN OR AS INDICATED ON DRAWINGS. VERTICAL REINFORCING IN MASONRY WHERE SHOWN SHALL BE PLACED IN GROUT FILLED CORES AND PROPERLY LOCATED AS INDICATED. SPLICES SHALL BE MINIMUM 36 X BAR DIAMETER.
11. USE LOW-LIFT GROUTING TECHNIQUES TO FILL CORES, UNLESS HIGH-LIFT GROUTING (VERTICAL PLACEMENT >4'0") IS APPROVED BY THE OWNER'S REPRESENTATIVE IN WRITING.
12. PROVIDE DOWELS TO MATCH REINFORCEMENT SIZE AND SPACING INDICATED FOR ALL STRUCTURAL ELEMENTS, UNLESS OTHERWISE INDICTED. DOWELS MUST BE PLACED AND SECURED PRIOR TO CONCRETE PLACEMENT ("WET-STICKING" REINFORCING NOT PERMITED).

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL WORK INCLUDES ALL STRUCTURAL STEEL TO BE FURNISHED AND ERECTED, BEAMS, COLUMNS, CHANNELS, ANGLES, JOISTS, LINTELS, BEARING PLATES, ETC., AS INDICATED ON THE DRAWINGS.
2. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
   A. AISC STEEL CONSTRUCTION MANUAL, ASD, 14TH EDITION
   B. AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE STEEL", 2015.
   C. CURRENT OSHA ERECTION AND FABRICATION REQUIREMENTS.
3. MATERIALS:
   A. WIDE FLANGE BEAMS, GIRDERS AND COLUMNS: ASTM A992
   B. ANGLES, BARS AND PLATES: ASTM A36.
   C. HOLLOW STRUCTRUAL SECTIONS "HSS": ASTM A500, GRADE C
   D. PIPE: SCHEDULE 40 CONFORMING TO ASTM A53, GRADE B. U.N.O.
   E. HIGH STRENGTH BOLTS: ASTM A 325.
   F. WELDS: E70XX ELECTRODES.
4. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED.
5. ALL STRUCTURAL STEEL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE HIGH-STRENGTH BOLTED UNLESS SHOWN OTHERWISE.
6. ALL BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION UNLESS NOTED OTHERWISE. SLIP CRITICAL BOLTS SHALL BE USED AT ALL MOMENT CONNECTIONS.
7. BOLTS SHALL BE 3/4 INCH DIAMETER, TYPE A325N, UNLESS OTHERWISE INDICATED. FOR DELEGATED DESIGN CONNECTIONS, BOLT SIZE, GRADE AND TYPE SHALL BE AS SPECIFIED BY THE DELEGATED CONNECTIONS DESIGN ENGINEER (ASTM A325N, 3/4 INCH DIAMETER, MINIMUM).
8. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE. SWAGED ANCHOR BOLTS AND ANCHOR BOLTS WITH HOOKED END ANCHORAGE ARE NOT ALLOWED.
9. IN ACCORDANCE WITH AISC 303-10, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (STEEL CONNECTION DESIGN - OPTION 3), SHEAR CONNECTIONS FOR SIMPLY SUPPORTED BEAMS SHALL BE DESIGNED FOR THE LRFD REACTIONS INDICATED ON THE FRAMING PLANS IN ACCORDANCE WITH AISC REQUIREMENTS. WHERE NONE ARE INDICATED, BEAMS SHALL BE DESIGNED FOR AN END REACTION EQUAL TO NO LESS THAN 15 KIPS. DETERMINATION OF BOLT SIZE, TYPE, GRADE AND CONNECTING MATERIAL THICKNESS AND SIZE IS THE RESPONSIBILITY OF THE DELEGATED ENGINEER. CONNECTION DESIGN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK (WHO IS CONTRACTED AND WORKING FOR THE FABRICATOR) AND SUBMITTED FOR REVIEW WITH THE STRUCTURAL STEEL SHOP DRAWINGS.
10. BOLTED MOMENT CONNECTIONS SHALL BE SLIP-CRITICAL CONNECTIONS. OTHER CONNECTIONS SHALL BE BEARING CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANES.
11. WELDS INDICATED "CJP" SHALL BE COMPLETE JOINT PENETRATION GROOVE WELDS. FABRICATOR SHALL PRODUCE COMPLETE JOINT PENETRATION GROOVE WELDS WHICH CONFORM TO ALL AWS D1.1 QUALIFIED WELD REQUIREMENTS AND WHICH ARE APPLICABLE TO THE SPECIFIC CONDITIONS SHOWN.
12. WELDS INDICATED "PJP" SHALL BE PARTIAL JOINT PENETRATION GROOVE WELDS. FABRICATOR SHALL PRODUCE PARTIAL JOINT PENETRATION GROOVE WELDS WHICH CONFORM TO ALL AWS D1.1 QUALIFIED WELD REQUIREMENTS AND WHICH ARE APPLICABLE TO THE SPECIFIC CONDITIONS SHOWN.
13. WHERE THE WORK OF OTHER TRADES REQUIRES CUTS, HOLES, ETC., IN STRUCTURAL STEEL MEMBERS, CUTS, HOLES, ETC., SHALL BE MADE IN THE SHOP AND SHALL BE SHOWN ON THE SHOP DRAWINGS. MAKING HOLES OR CUTS IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED WITHOUT SPECIFIC APPROVAL OF THE OWNER'S REPRESENTATIVE.
14. STRUCTURAL STEEL AND PORTIONS OF THE UNDERSIDE OF STEEL DECK SHALL BE PROTECTED WITH SPRAYED FIRE PROTECTION AS INDICATED. SEE ARCHITECTURAL DRAWINGS FOR FIREPROOFING DETAILS. FOR STRUCTURAL STEEL THAT WILL RECEIVE FIRE PROOFING MATERAL, COORDINATE SHOP PRIMER REQUIREMENTS WITH FIRE PROOFING PRODUCT MANUFACTURER. 4
15. COMPOSITE SLABS SHALL BE PLACED TO A MINIMUM OF THE THICKNESS INDICATED AND SHALL BE SCREEDED LEVEL.
16. SHEAR CONNECTORS FOR COMPOSITE BEAMS SHALL BE 3/4 INCH DIAMETER x 4 INCH LONG STUDS OF THE QUANTITY INDICATED ON THE FLOOR PLAN. DISTRIBUTE STUDS UNIFORMLY ALONG BEAMS AND GIRDERS WHERE QUANTITY IS SHOWN AS A SINGLE NUMBER. WHERE QUANTITY IS SHOWN AS MULTIPLE CALLOUTS ALONG A GIRDER DISTRIBUTE STUDS UNIFORMLY ALONG EACH SEGMENT. WHERE THE FLUTE OF THE DECK IS PERPENDICULAR TO THE BEAM, PROVIDE NO MORE THAN ONE STUD IN A FLUTE PER ROW (ALONG THE LENGTH OF THE BEAM). WHERE ONE ROW OF STUDS WILL NOT ACCOMMODATE THE REQUIRED QUANTITY OF STUDS, DISTRIBUTE HALF OF THE REMAINDER TO EACH END OF THE BEAM USING TWO ROWS OF STUDS WITH A MINIMUM CENTER-TO-CENTER SPACING BETWEEN ROWS OF 3 INCHES. WHERE THE FLUTE OF THE DECK IS PARALLEL TO THE GIRDERS PROVIDE A MINIMUM LONGITUDINAL SPACING OF 4 1/2 INCHES BETWEEN THE STUDS
17. WHERE PARTITIONS OF ANY MATERIAL ABUT STEEL COLUMN ENCASEMENTS, INCREASE THE DISTANCE FROM STEEL COLUMN TO FACE OF ENCASEMENT AS REQUIRED TO PROVIDE AN UNBROKEN SURFACE FOR THE WALL FINISH
18. THE LATERAL LOAD RESISTING SYSTEM INCLUDES STRUCTURAL STEEL, NON-STRUCTURAL STEEL ELEMENTS, AND THE DIAPHRAGM AS INDICATED BELOW. ALL ELEMENTS OF THE LATERAL LOAD RESISTING SYSTEM AND DIAPHRAGM ARE REQUIRED TO BE COMPLETE AS INDICATED AND DETAILED IN THE STRUCTURAL CONTRACT DOCUMENTS TO PROVIDE THE LATERAL STRENGTH AND STABILITY OF THE STEEL STRUCTURE. THE STRUCTURE SHALL BE CONSIDERED UNSTABLE UNTIL THESE SYSTEMS AND ELEMENTS ARE COMPLETE.
19. THE LATERAL LOAD RESISTING SYSTEM FOR THE STEEL STRUCTURE INCLUDES THE FOLLOWING ELEMENTS AS INDICATED AND DETAILED IN THE STRUCTURAL CONTRACT DOCUMENTS:
   A. BRACED FRAMES
   B. CONNECTIONS, BASEPLATES, ANCHOR BOLTS, AND GROUT
   C. MASONRY SHEAR WALLS
20. THE LATERAL LOAD RESISTING DIAPHRAGM FOR THE STEEL STRUCTURE INCLUDES THE FOLLOWING ELEMENTS AS INDICATED AND DETAILED IN THE STRUCTURAL CONTRACT DOCUMENTS:
   A. STEEL FLOOR DECK WITH CONCRETE AT 28-DAY STRENGTH
   B. STEEL ROOF DECK
21. STABILITY BRACING: THE STABILITY OF STRUCTURAL STEEL ELEMENTS INCLUDING INDIVIDUAL HOT-ROLLED STEEL SHAPES AND FABRICATED TRUSSES IS PROVIDED BY THE FOLLOWING ELEMENTS AS INDICATED AND DETAILED IN THE STRUCTURAL CONTRACT DOCUMENTS. THESE ELEMENTS SHALL BE COMPLETE AS SHOWN IN THE STRUCTURAL CONTRACT DOCUMENTS BEFORE ANY TEMPORARY MEANS AND METHODS REQUIRED FOR ERECTION ARE REMOVED.
   A. STEEL FLOOR DECK WITH CONCRETE AT 28-DAY STRENGTH
   B. STEEL ROOF DECK
   C. STRUCTURAL STEEL BRACING AND KICKERS

STEEL JOIST AND JOIST GIRDER NOTES:

1. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
   A. SJI 100 - 2020 - STANDARD SPECIFICATION FOR K-SERIES, LH-SERIES AND DLH-SERIES OPEN WEB STEEL JOISTS AND FOR JOIST GIRDERS
   B. SJI-COSP-2020 - CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS
   C. TECHNICAL DIGEST NO. 8 - WELDING OF OPEN WEB STEEL JOISTS AND JOIST GIRDERS
   D. TECHNICAL DIGEST NO. 9 - HANDLING AND ERECTION OF STEEL JOISTS AND JOIST GIRDERS
   E. TECHNICAL DIGEST NO. 11 - DESIGN OF LATERAL LOAD RESISTING FRAMES USING STEEL JOISTS AND JOIST GIRDERS
   F. AISC DESIGN GUIDE 40 - RAIN LOADS AND PONDING
2. MATERIALS:
   A. CARBON STRUCTURAL STEEL - ASTM A36
   B. COLD-FORMED WELDED AND SEAMLESS CARBON STEEL STRUCTURAL TUBING IN ROUNDS AND SHAPES - ASTM A500
   C. WELDS: E70XX ELECTRODES
3. STEEL JOISTS SHALL RECEIVE STANDARD SHOP PAINT. DO NOT PRIME PAINT STEEL TO RECEIVE SPRAY-APPLIED FIREPROOFING, OR SPRAY-APPLIED ACOUSTIC TREATMENTS. REFER TO ARCH DRAWINGS FOR LOCATIONS OF ACOUSTIC TREATMENTS
4. STEEL JOIST DEFLECTION DUE TO DESIGN LIVE LOAD SHALL NOT EXCEED THE FOLLOWING:
   A. ROOFS: 1/360 OF SPAN
5. STEEL JOIST SPACING SHALL NOT EXCEED SPACING INDICATED ON DRAWINGS AND PLACEMENT OF JOISTS SHALL BE CAREFULLY COORDINATED WITH PARTITIONS AND WORK OF OTHER TRADES TO AVOID INTERFERENCES.
6. STEEL JOISTS, AS DESIGNED, DO NOT ACCOUNT FOR ROOF SLOPE. JOIST MFR TO VERIFY SIZE INDICATED IS ADEQUATE BASED ON ROOF SLOPE, ROOF LIVE LOAD AS INDICATED.
7. STEEL JOISTS SHALL BE DESIGNED FOR THE WIND UPLIFT PRESURES SHOWN ON S005 AND S006.
8. CONCENTRATED LOADS IN EXCESS OF 100 POUNDS APPLIED TO JOISTS SHALL BE APPLIED AT PANEL POINTS, UNLESS AN ADDED WEB MEMBER IS PROVIDED FROM POINT OF APPLICATION OF LOAD ON CHORD TO THE NEAREST PANEL POINT ON OPPOSITE CHORD.
9. PROVIDE JOIST BRIDGING IN ACCORDANCE WITH SJI SPECIFICATIONS. OMIT JOIST BRIDGING WHERE REQUIRED TO ALLOW INSTALLATION OF WORK OF OTHER TRADES. PROVIDE DIAGONAL BRIDGING IN EACH ADJACENT BAY IN LINE WITH OMITTED BRIDGING. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS.

STEEL DECK NOTES:

1. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
   A. AISI / STEEL DECK INSTITUTE "C-2011 STANDARD FOR COMPOSITE STEEL DECK-SLABS"
   B. AMERICAN WELDING SOCIETY (AWS) D1.3 "STRUCTURAL WELDING CODE- SHEET STEEL", 2015.
2. ROOF AND FLOOR DECK CONNECTIONS: IN ACCORDANCE WITH TYPICAL DECK ATTACHMENT DETAIL.
3. ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER THREE SPANS MINIMUM, AND SHALL BEAR AT LEAST 2 INCHES MINIMUM ON STEEL SUPPORTS OR MORE AS REQUIRED BY DECK MANUFACTURER. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED, OR FURNISH HIGHER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS. CONTRACTOR SHALL SUBMIT ALTERNATE FOR APPROVAL. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION LOADS ON STEEL DECK DO NOT EXCEED SDI PUBLISHED CONSTRUCTION LOAD CRITERIA.
4. DESIGN ROOF DECK IN ACCORDANCE WITH THE FOLLOWING:
   A. YEILD STRENGTH, Fy = 50 KSI
   B. DEPTH: AS INDICATED
   C. MINIMUM SECTION MODULUS, Sp: 0.224 INCHES^3
   D. MINIMUM MOMENT OF INERTIA, In: 0.217 INCHES^4
5. DESIGN FLOOR DECK IN ACCORDANCE WITH THE FOLLOWING:
   A. YEILD STRENGTH, Fy = 50 KSI
   B. DEPTH: AS INDICATED
   C. MINIMUM SECTION MODULUS, Sp: 0.326 INCHES^3
   D. MINIMUM MOMENT OF INERTIA, In: 0.407 INCHES^4
6. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES, INSERTS, ETC., WITH SHOP DRAWINGS OF THE EQUIPMENT TO BE INSTALLED. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF PIPE SLEEVES. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF OPENINGS IN ROOF.

COLD-FORMED METAL FRAMING NOTES:

1. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE "LIGHT GAGE COLD FORMED STEEL DESIGN MANUAL", LATEST EDITION AND THE AISI SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, LATEST EDITION.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL DESIGN AND PERFORMANCE OF ALL COLD-FORMED METAL FRAMING. ALL SIZES, GAGES AND DESIGN REQUIREMENTS SHOWN ON THESE DRAWINGS ARE TO BE CONSIDERED MINIMUM REQUIREMENTS AND NOT FINAL REQUIREMENTS.
3. PROVIDE CLIPS, CONNECTIONS, STRAPPING AND/OR BRIDGING FOR TEMPORARY LATERAL BRACING AND ALL ITEMS NECESSARY FOR COMPLETE INSTALLATION.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE – SHEET STEEL", LATEST EDITION AND PERFORMED BY CERTIFIED, LICENSED WELDER.
5. DETAILING AND FABRICATION OF ALL COLD-FORMED STRUCTURAL MEMBERS SHALL CONFORM TO THE AISI SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, LATEST EDITION.
6. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED. WALL STUD BRIDGING SHALL BE INSTALLED IN A MANNER AS TO PREVENT ROTATION AND ALSO IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION. BRIDGING ROWS SHALL BE EQUALLY SPACED AT 4'-0" ON CENTER MAXIMUM, UNLESS APPROVED OTHERWISE.
7. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL COLD FORMED METAL FRAMING LOCATIONS AND REQUIREMENTS. COORDINATE LOCATIONS AND DESIGN FOR ALL WALL HUNG EQUIPMENT.
8. PROVIDE AND COORDINATE VERTICAL SLIP CONNECTIONS TO STRUCTURAL STEEL MEMBERS WHERE REQUIRED. ACCOUNT FOR A MINIMUM DEFLECTION OF 1 INCH UNLESS NOTED OTHERWISE.

POST-INSTALLED ANCHOR NOTES:

1. POST INSTALLED ANCHORS HAVE BEEN DESIGNED WITH HILTI ANCHORS (NOTED BELOW) AS THE BASIS OF DESIGN, UNLESS NOTED OTHERWISE ON CONTRACTOR DRAWINGS. INSTALL ANCHORS PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
   A. EXPANSION ANCHORS: KWIK BOLT 3 OR TZ2
   B. SLEEVE ANCHORS: HIT-SC SLEEVE ANCHOR
   C. ADHESIVE ANCHORS: HIT HY-200
   D. SCREEN TUBE ANCHORS: HIT HY-270
2. CONTRACTOR MAY PROVIDE EQUIVALENT ANCHORS WITH SIZE AND FINISH AS NOTED AND EQUIVALENT SHEAR AND TENSION CAPACITIES AFTER MODIFICATION DUE TO EMBEDMENT, SPACING AND EDGE DISTANCES AT THE DISCRETION OF THE OWNER'S REPRESENTATIVE
3. ALL ADHESIVE ANCHORS FOR REINFORCING SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS.
4. DESIGN ADHESIVE BOND STRENGTH FOR ADHESIVE ANCHORS IN CONCRETE HAS BEEN BASED ON ACI 355.4, TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE DRILL BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS.
5. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318 D.9.2.4.

DELEGATED DESIGN NOTES:

PROVIDE DOCUMENTS, DOCUMENTATION, AND INFORMATION INDICATED PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE THE WORK IS PERFORMED.

1. TEMPORARY SHORING
2. SOIL BEARING AND SURFACE CONDITIONS FOR STRUCTURAL WORK ON EARTH OR FILL.
3. STRUCTURAL STEEL CONNECTIONS.
4. STAIRS, GUARDRAILS, AND RAILINGS
5. CONCRETE FORMWORK
6. COLD-FORMED STEEL (OR METAL) FRAMING (CFSF OR CFMF).
7. CAST STONE ACHORAGE TO STRUCTURAL BACKUP.
8. PERFORMANCE-BASED DESIGN.
9. ANCHORS AND FASTENERS IN-LIEU OF SPECIFIED FASTENERS.

SPECIAL INSPECTION NOTES:

1. SPECIAL INSPECTIONS WILL BE PERFORMED IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTIONS.
2. OWNER, OR ARCHITECT/STRUCTURAL ENGINEER OF RECORD ACTING AS THE OWNER'S AGENT, SHALL DIRECTLY EMPLOY AND PAY FOR SERVICES OF THE SPECIAL INSPECTORS TO PERFORM REQUIRED SPECIAL INSPECTIONS.

1 ISOMETRIC VIEW LOOKING SOUTHEAST

NOTES:
1. *FOR REFERENCE PURPOSES ONLY, NOT FOR CONSTRUCTION*
2. *ISOMETRIC VIEW MAY NOT BE AN ACCURATE REPRESENTATION OF FRAMING CONDITIONS. SEE PLANS AND SECTIONS FOR ALL CONDITIONS.*

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Consultant
PASSERO engineering architecture
STRUCTURAL

Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

PATRICK JAMES WILLIAMS
100938

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4

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Sheet Title
GENERAL NOTES

Sheet No.
CTE S001

CONSTRUCTION DOCUMENTS

COLUMN SCHEDULE - AREA 1

Levels: TOS 3RD FLR/ROOF 31' - 6 1/2"; TOS 2ND FLR 15' - 6 1/2"; TO SOG 0"

Column Locations	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	D-1	D-2	D-3	D-4
Column	HSS7X7X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS8X8X3/8	HSS8X8X3/8	HSS8X8X3/8	HSS7X7X3/8	HSS6X6X3/8	HSS7X7X3/8	HSS7X7X3/8	HSS7X7X3/8	HSS8X8X3/8
BASE PLATE MARK	BP3	BP2	BP2	BP4	BP4	BP4	BP3	BP2	BP3	BP3	BP3	BP4
BASE PLATE THICKNESS	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"	1"	1"	1"	1"	1"	1 1/2"
ANCHOR BOLT MARK	AB2	AB2	AB2	AB3	AB3	AB3	AB2	AB2	AB2	AB2	AB2	AB4

Column Locations	D-5	D-6	D-7	D-8	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8
Column	HSS8X8X3/8	HSS8X8X1/2	HSS7X7X3/8	HSS7X7X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS6X6X3/8
BASE PLATE MARK	BP4	BP4	BP3	BP3	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP2
BASE PLATE THICKNESS	1 1/2"	1 1/2"	1"	1"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"
ANCHOR BOLT MARK	AB4	AB4	AB2	AB2	AB1	AB1	AB1	AB2	AB2	AB2	AB2	AB2

STEEL COLUMN SCHEDULE NOTES:
1. COLUMNS INDICATED TO BE FIREPROOFED "FP" ONLY REQUIRE FIREPROOFIING FROM BOTTOM OF SECOND FLOOR DECKING DOWN TO BASE PLATE.
2. TOP OF COLUMN ELEVATION SHALL FOLLOW SLOPED ROOF ELEVATIONS AS INDICATED ON ROOF FRAMING PLANS, UNLESS NOTED OTHERWISE.
3. COLUMN SPLICES SHOWN ARE AT CONTRACTOR'S OPTION.

COLUMN SCHEDULE LEGEND

Symbol	Description
⊥	DENOTES COLUMN BASEPLATE
splice symbol	DENOTES OPTIONAL COLUMN SPLICE
break symbol	DENOTES COLUMN BREAKS AT BEAM
FP (4)	DENOTES FIREPROOFING TREATMENT REQUIRED ON COLUMN. REFER TO ARCH FOR TYPE AND HOURLY RATING (COORDINATE SHOP PRIMER REQUIREMENTS WITH FIRE PROOFING MANUFACTURER).

COLUMN SCHEDULE - AREA 2

Levels: TOS HIGH ROOF 48' - 0"; TOS 3RD FLR/ROOF 31' - 6 1/2"; TOS LOW ROOF 24' - 11"; TOS 2ND FLR 15' - 6 1/2"; TO SOG 0"

INDICATES COLUMN SPLICE LOCATION, TYP

4' - 0" TYP

Column Locations	A-9	A-11	A-12	A-13	A-14	A(2' - 1")-14(1' - 3")	A-15	A(2' - 1")-15(-1' - 3")	D-9	D-11	D-12	D-13	D-14
Column	HSS7X7X3/8	HSS8X8X3/8	HSS8X8X3/8	HSS7X7X3/8	HSS7X7X3/8	HSS5X5X3/8	HSS7X7X3/8	HSS5X5X3/8	HSS8X8X3/8	HSS8X8X1/2	HSS8X8X1/2	HSS8X8X3/8	HSS8X8X3/8
BASE PLATE MARK	BP3	BP4	BP4	BP3	BP3	BP1	BP3	BP1	BP4	BP4	BP4	BP4	BP4
BASE PLATE THICKNESS	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/8"	3/4"	1 1/8"	3/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/4"
ANCHOR BOLT MARK	AB3	AB3	AB3	AB3	AB3	AB1	AB3	AB1	AB3	AB4	AB4	AB4	AB3

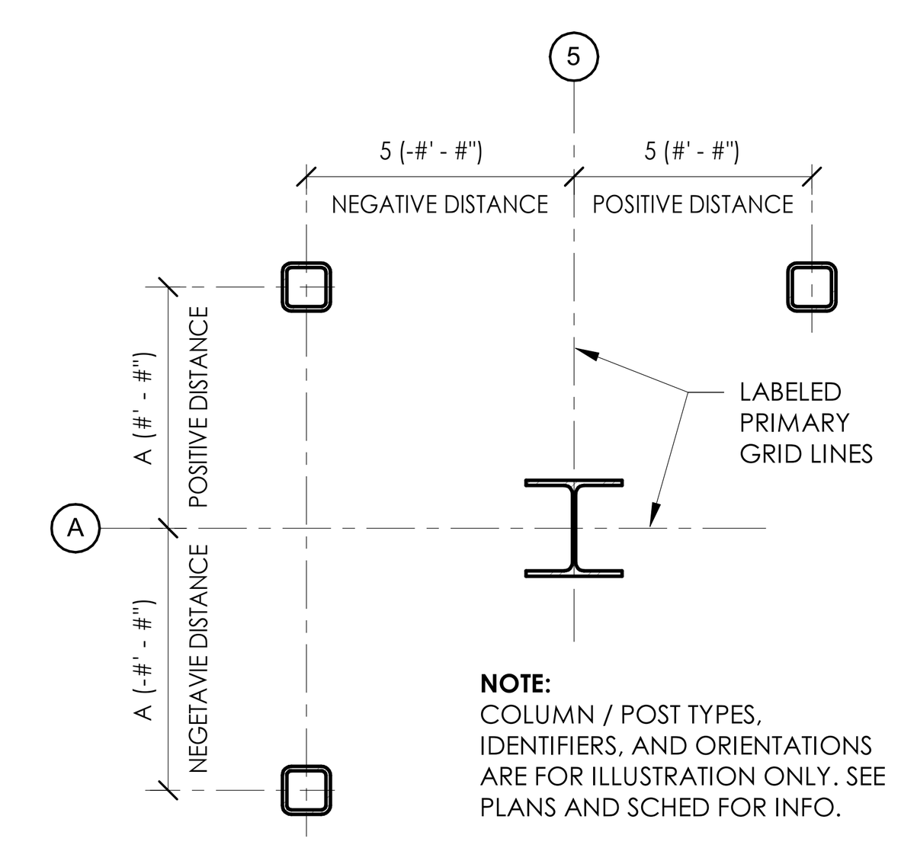
Column Locations	D-15	E-9	E-11	E-12	E-13	E-14	E-16	K-9	K-29	L-16	M-11	M-12
Column	HSS8X8X3/8	HSS7X7X3/8	HSS8X8X1/2	HSS8X8X1/2	HSS8X8X1/2	HSS8X8X1/2	HSS7X7X3/8	HSS7X7X3/8	HSS5X5X3/8	HSS7X7X3/8	HSS8X8X1/2	HSS8X8X1/2
BASE PLATE MARK	BP4	BP3	BP4	BP4	BP4	BP4	BP3	BP3	BP1	BP3	BP4	BP4
BASE PLATE THICKNESS	1 1/4"	1 1/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/4"	1 1/8"	3/4"	1 1/4"	1 1/2"	1 1/2"
ANCHOR BOLT MARK	AB3	AB3	AB4	AB4	AB4	AB4	AB3	AB3	AB1	AB3	AB4	AB4

Column Locations	M-13	M-39	P-33	P-37	P-39	R-29	R-31	S-40	U-29	U-31	U-33	U-37
Column	HSS8X8X3/8	HSS8X8X3/8	HSS9X9X1/2	HSS9X9X5/8	HSS8X8X1/2	HSS6X6X3/8	HSS8X8X1/2	HSS8X8X1/2	HSS6X6X3/8	HSS8X8X1/2	HSS9X9X5/8	HSS9X9X5/8
BASE PLATE MARK	BP4	BP4	BP5	BP6	BP4	BP2	BP4	BP4	BP2	BP4	BP6	BP6
BASE PLATE THICKNESS	1 1/2"	1 1/4"	1 3/4"	1 3/4"	1 1/4"	3/4"	1 1/2"	1 1/2"	7/8"	1 1/2"	2"	2"
ANCHOR BOLT MARK	AB4	AB3	AB4	AB4	AB3	AB1	AB4	AB4	AB2	AB4	AB4	AB4

COLUMN SCHEDULE - AREA 2

Levels: TOS HIGH ROOF 48' - 0"; TOS 3RD FLR/ROOF 31' - 6 1/2"; TOS LOW ROOF 24' - 11"; TOS 2ND FLR 15' - 6 1/2"; TO SOG 0"

Column Locations	U-39	W-40	X-29	X-33	X-37	X-39	Y-29	Y-30	Y-32	Y-33	Y-36	Y-37	Y-38	Y-39
Column	HSS8X8X1/2	HSS8X8X3/8	HSS5X5X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS5X5X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS5X5X3/8	HSS6X6X3/8	HSS6X6X3/8	HSS6X6X3/8
BASE PLATE MARK	BP4	BP4	BP1	BP2	BP2	BP1	BP2	BP2	BP2	BP2	BP1	BP2	BP2	BP2
BASE PLATE THICKNESS	1 1/2"	1 1/4"	3/4"	1"	1"	3/4"	3/4"	1"	1"	7/8"	3/4"	7/8"	3/4"	3/4"
ANCHOR BOLT MARK	AB4	AB3	AB1	AB2	AB2	AB1	AB1	AB2	AB2	AB2	AB1	AB2	AB1	AB1



NOTE: COLUMN / POST TYPES, IDENTIFIERS, AND ORIENTATIONS ARE FOR ILLUSTRATION ONLY. SEE PLANS AND SCHED FOR INFO.

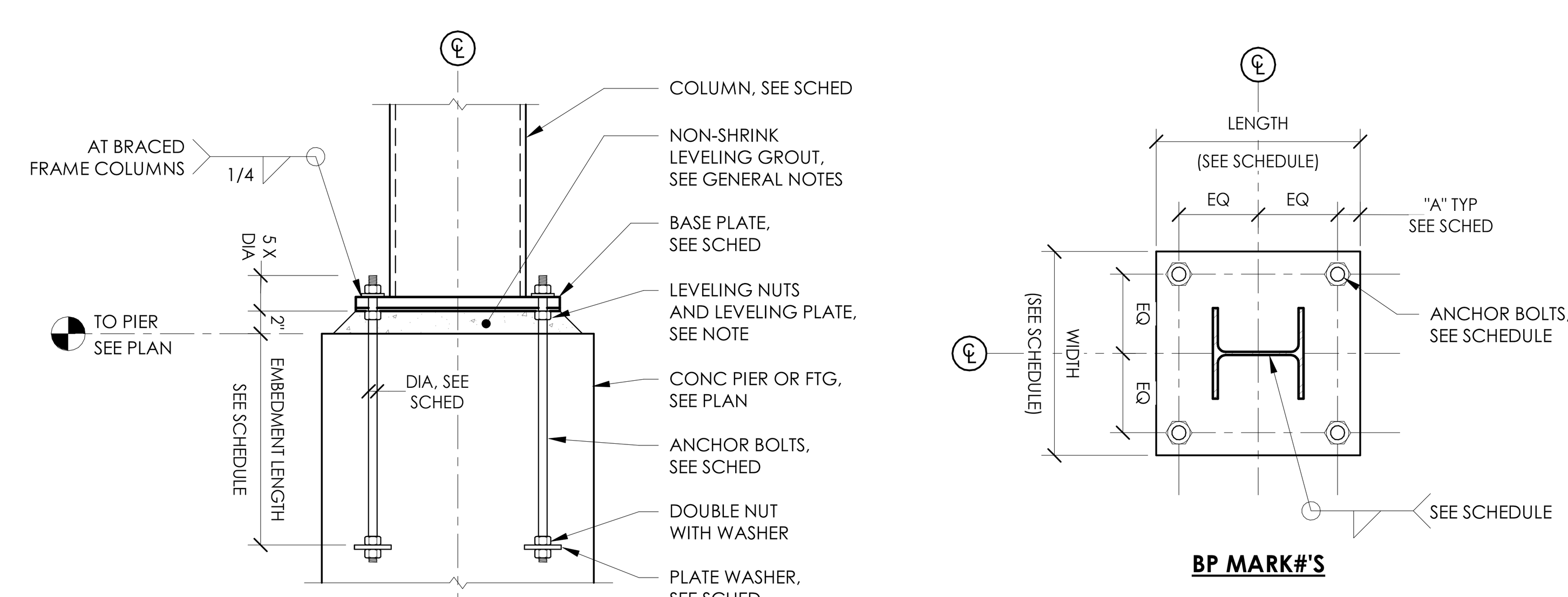
1 TYPICAL GRID OFFSET DETAIL
N.T.S.

BASE PLATE SCHEDULE

MARK	BASE PLATE DIMENSIONS			COL WELD SIZE	REMARKS
	LENGTH	WIDTH	EDGE DISTANCE "A"		
BP1	1' - 0"	1' - 0"	2"	3/16"	
BP2	1' - 2"	1' - 2"	2 1/4"	3/16"	
BP3	1' - 3"	1' - 3"	2 1/4"	3/16"	
BP4	1' - 5"	1' - 5"	2 1/2"	3/16"	
BP5	1' - 8"	1' - 8"	3"	1/4"	
BP6	1' - 9"	1' - 9"	3 1/4"	1/4"	
BP7	1' - 10"	1' - 10"	3 1/4"	1/4"	

ANCHOR BOLT SCHEDULE

MARK	ANCHOR BOLT PROPERTIES		PLATE WAHSER PROPERTIES	
	DIA	EMBEDMENT	MIN DIMENSIONS	MIN THICKNESS
AB1	3/4"	9"	2"	1/4"
AB2	1"	1' - 0"	3"	3/8"
AB3	1 1/4"	1' - 0"	3 1/2"	1/2"
AB4	1 1/2"	1' - 0"	4"	1/2"



NOTES:
1. LEVELING DEVICES ARE CONTRACTOR MEANS AND METHODS. CONTRACTOR TO PROVIDE MEANS AND METHODS FOR LEVELING/PLUMBING/RACKING THE STEEL FRAME. DO NOT GROUT UNDER BASE PLATES UNTIL STEEL FRAME IS LEVEL/PLUMB/RACKED.
2. WHERE ANCHOR ROD PROJECTIONS EXTEND BEYOND TOP OF SLAB, CONTRACTOR TO CUT PROJECTION TO 3/4" BELOW TOP OF SLAB ELEVATION AFTER ERECTION AND PRIOR TO POURING SLAB.

2 BASE PLATE DIAGRAM AND SCHEDULE
N.T.S.

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PASSERO engineering architecture
STRUCTURAL

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT NEW CTE BUILDING

STATE OF NEW YORK · PATRICK JAMES WILLIAMS · 100938 · LICENSED PROFESSIONAL ENGINEER

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4
2	5/3/2024	BID ADDENDUM #2

Drawn By:	JRC
Checked By:	LCA
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

Sheet Title
COLUMN SCHEDULE

Sheet No.
CTE S003

CONSTRUCTION DOCUMENTS

COLUMN SCHEDULE - AREA 3

TOS HIGH ROOF																																						
48' - 0"																																						
TOS 3RD FLR/ROOF																						INDICATES COLUMN SPLICE LOCATION, TYP	4'-0" TYP	HSS6X6X3/8	HSS7X7X3/8	HSS8X8X3/8	HSS8X8X3/8	HSS8X8X3/8	HSS8X8X1/2	HSS8X8X3/8	HSS8X8X3/8	HSS8X8X1/2	HSS8X8X1/2	HSS8X8X1/2	HSS9X9X5/8	HSS9X9X1/2	
31' - 6 1/2"																																						
TOS 2ND FLR																																						
15' - 6 1/2"	HSS7X7X3/8	HSS7X7X3/8	HSS5X5X3/8 FP	HSS5X5X3/8 FP	HSS8X8X3/8	HSS7X7X5/16	HSS5X5X3/8 FP	HSS5X5X3/8 FP	HSS5X5X3/8	HSS6X6X3/8	HSS5X5X3/8 FP	HSS5X5X3/8 FP	HSS5X5X3/8 FP	HSS5X5X3/8 FP	HSS6X6X3/8 FP	HSS6X6X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8 FP	HSS5X5X3/8 FP												
TO SOG																																						
0"																																						
BASE PLATE MARK	BP3	BP3	BP1	BP1	BP4	BP3	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP2	BP3	BP4	BP4	BP4	BP4	BP4	BP4	BP3	BP4	BP4	BP6	BP5
BASE PLATE THICKNESS	1 1/4"	1 1/8"	3/4"	3/4"	1 1/4"	1 1/8"	3/4"	3/4"	7/8"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1 1/8"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"	2"	1 3/4"
ANCHOR BOLT MARK	AB3	AB3	AB1	AB1	AB3	AB3	AB1	AB1	AB2	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB1	AB3	AB3	AB4	AB4	AB4	AB4	AB4	AB3	AB4	AB4	AB4	AB4
Column Locations	A-17	A-18	B-19	C-21	D-17	D-18	D-19	D-21	E-17	E-18	E-19	E-21	F-20	F-21	G-22	H-23	H-24	H-25	H-26	H-28	J-27	J-50	L-22	L-47	N-40	N-41	N-43	N-45	N-48	N-49	N-50	N-51	N-52	T-41	T-42	T-44	T-46

COLUMN SCHEDULE - AREA 3

TOS HIGH ROOF																		
48' - 0"																		
TOS 3RD FLR/ROOF	HSS9X9X5/8	HSS10X10X5/8	HSS10X10X5/8	HSS10X10X5/8						HSS9X9X1/2	HSS9X9X5/8	HSS9X9X5/8	HSS9X9X1/2	HSS9X9X1/2	HSS9X9X1/2	HSS9X9X5/8	HSS9X9X1/2	
31' - 6 1/2"																		
TOS 2ND FLR					HSS9X9X5/8	HSS7X7X3/8				HSS9X9X1/2	HSS9X9X5/8	HSS9X9X5/8	HSS9X9X1/2	HSS9X9X1/2	HSS9X9X1/2	HSS9X9X5/8	HSS9X9X1/2	
15' - 6 1/2"	HSS9X9X5/8	HSS10X10X5/8	HSS10X10X5/8	HSS10X10X5/8		HSS7X7X3/8	HSS5X5X3/8	HSS5X5X3/8	HSS5X5X3/8									HSS6X6X3/8
TO SOG																		
0"																		
BASE PLATE MARK	BP6	BP7	BP7	BP7	BP6	BP3	BP1	BP1	BP1	BP5	BP6	BP6	BP5	BP5	BP5	BP6	BP5	BP2
BASE PLATE THICKNESS	2"	2"	2"	2"	2"	1 1/4"	3/4"	3/4"	3/4"	1 3/4"	2"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	2"	1 3/4"	3/4"
ANCHOR BOLT MARK	AB4	AB4	AB4	AB4	AB4	AB3	AB1	AB1	AB1	AB4	AB4	AB4	AB4	AB4	AB4	AB4	AB4	AB1
Column Locations	T-48	T-49	T-50	T-51	T-52	T-53	T-54	V-53	V-54	W-41	W-43	W-45	W-48	W-49	W-50	W-51	W-52	W-53

STEEL COLUMN SCHEDULE NOTE:
1. COLUMNS INDICATED TO BE FIREPROOFED "FP" ONLY REQUIRE FIREPROOFIING FROM BOTTOM OF SECOND FLOOR DECKING DOWN TO BASE PLATE.
2. TOP OF COLUMN ELEVATION SHALL FOLLOW SLOPED ROOF ELEVATIONS AS INDICATED ON ROOF FRAMING PLANS, UNLESS NOTED OTHERWISE.
3. COLUMN SPLICES SHOWN ARE AT CONTRACTOR'S OPTION.

COLUMN SCHEDULE LEGEND

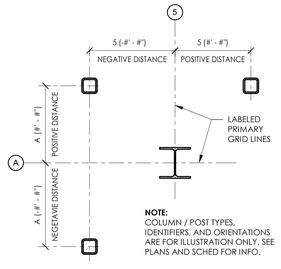
- DENOTES COLUMN BASEPLATE
- DENOTES OPTIONAL COLUMN SPLICE
- DENOTES COLUMN BREAKS AT BEAM
- FP — DENOTES FIREPROOFING TREATMENT REQUIRED ON COLUMN. REFER TO ARCH FOR TYPE AND HOURLY RATING (COORDINATE SHOP PRIMER REQUIREMENTS WITH FIRE PROOFING MANUFACTURER).

BASE PLATE SCHEDULE

MARK	BASE PLATE DIMENSIONS			COL WELD SIZE	REMARKS
	LENGTH	WIDTH	EDGE DISTANCE "A"		
BP1	1' - 0"	1' - 0"	2"	3/16"	
BP2	1' - 2"	1' - 2"	2 1/4"	3/16"	
BP3	1' - 3"	1' - 3"	2 1/4"	3/16"	
BP4	1' - 5"	1' - 5"	2 1/2"	3/16"	
BP5	1' - 8"	1' - 8"	3"	1/4"	
BP6	1' - 9"	1' - 9"	3 1/4"	1/4"	
BP7	1' - 10"	1' - 10"	3 1/4"	1/4"	

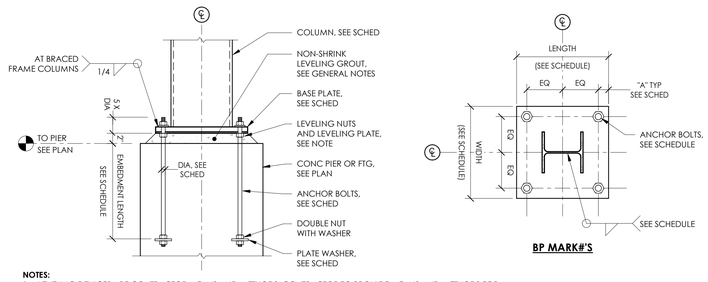
ANCHOR BOLT SCHEDULE

MARK	ANCHOR BOLT PROPERTIES		PLATE WAHSER PROPERTIES	
	DIA	EMBEDMENT	MIN DIMENSIONS	MIN THICKNESS
AB1	3/4"	9"	2"	1/4"
AB2	1"	1' - 0"	3"	3/8"
AB3	1 1/4"	1' - 0"	3 1/2"	1/2"
AB4	1 1/2"	1' - 0"	4"	1/2"



NOTE:
COLUMN / POST TYPES, IDENTIFIERS, AND ORIENTATIONS ARE FOR ILLUSTRATION ONLY. SEE PLANS AND SCHED FOR INFO.

1 TYPICAL GRID OFFSET DETAIL
N.T.S.



BP MARK#'S

NOTES:
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2. WHERE ANCHOR ROD PROJECTIONS EXTEND BEYOND TOP OF SLAB, CONTRACTOR TO CUT PROJECTION TO 3/4" BELOW TOP OF SLAB ELEVATION AFTER ERECTION AND PRIOR TO POURING SLAB.

2 BASE PLATE DIAGRAM AND SCHEDULE
N.T.S.

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Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

STATE OF NEW YORK
PATRICK JAMES WILLIAMS
100935
LICENSED PROFESSIONAL ENGINEER

#	DATE	DESCRIPTION
4	5/28/2024	BID ADDENDUM #4

Drawn By:	JRC
Checked By:	LCA
Proj. #:	44-16-00-01-0-053-001
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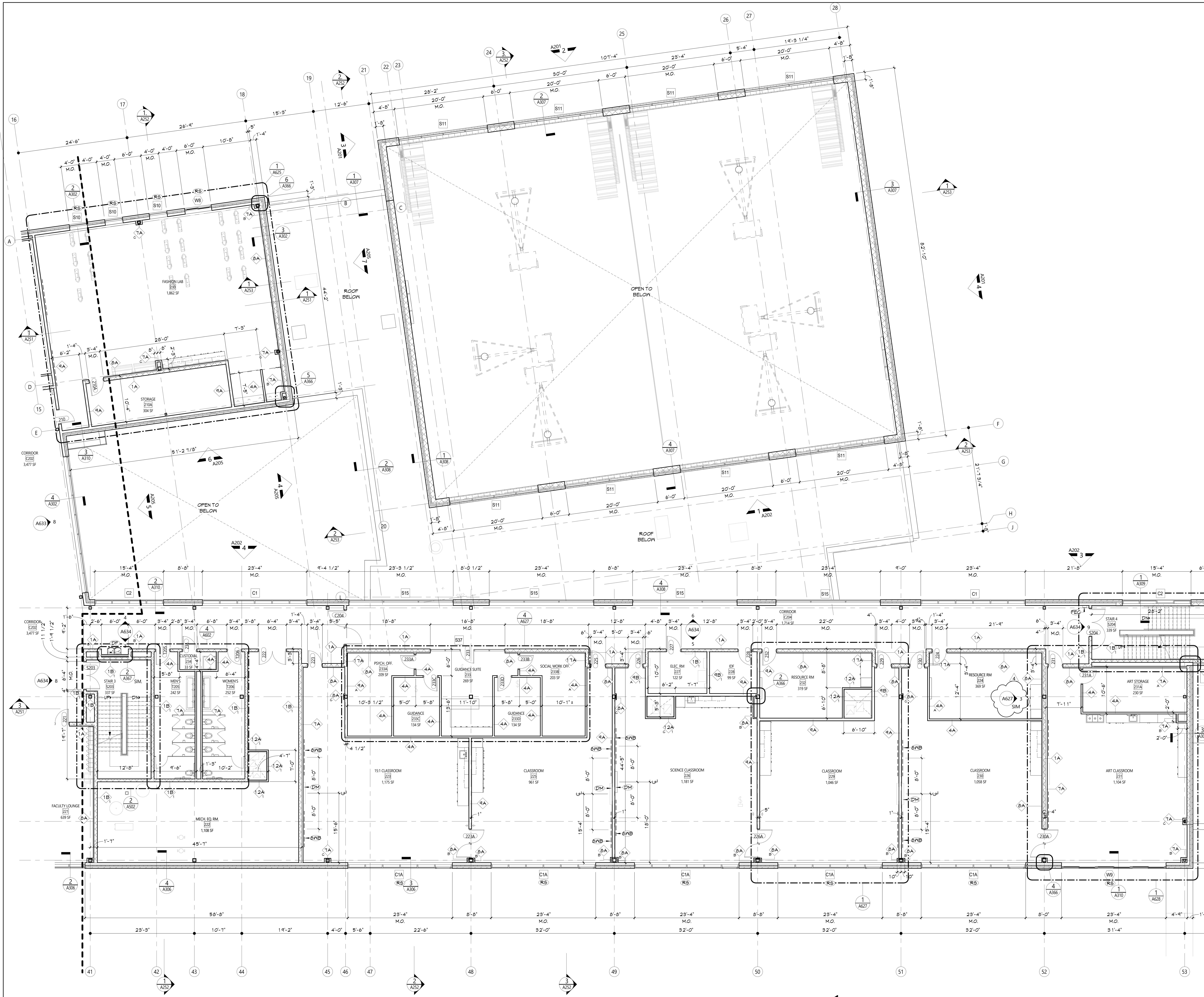
Sheet Title
COLUMN SCHEDULE

Sheet No.
CTE S004

CONSTRUCTION DOCUMENTS



1
A123
PARTIAL SECOND FLOOR PLAN - AREA 3
1/8" = 1'-0"

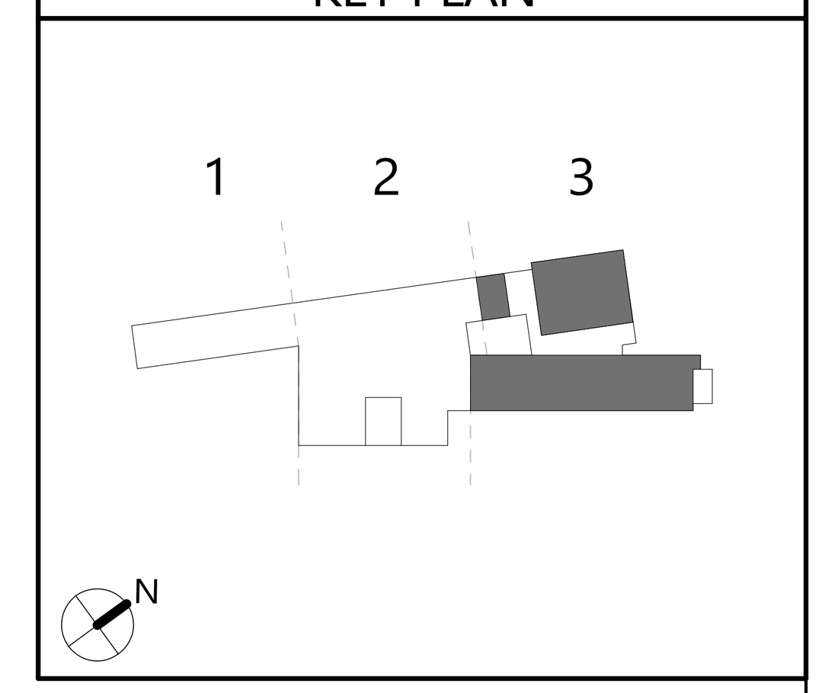
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A600 SERIES DRAWINGS FOR ADDITIONAL DIMENSIONS AND DETAILED INFORMATION OF CABINETRY.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. REFER TO SHEET A701 FOR PARTITION TYPES AND ADDITIONAL NOTES.

KEYNOTES

#	DESCRIPTION
8WB	8' WHITEBOARD
DF	DRINKING FOUNTAIN WITH BOTTLE FILLER, REFER TO PLUMBING DRAWINGS
DM	DISPLAY MONITOR (OWNER FURNISHED, CONTRACTOR INSTALLED)
FEC	FIRE EXTINGUISHER CABINET
RS	ROLLER SHADE

KEY PLAN



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Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT NEW CTE BUILDING

REGISTERED ARCHITECT RICHARD L. PECKHAM 019884 STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4

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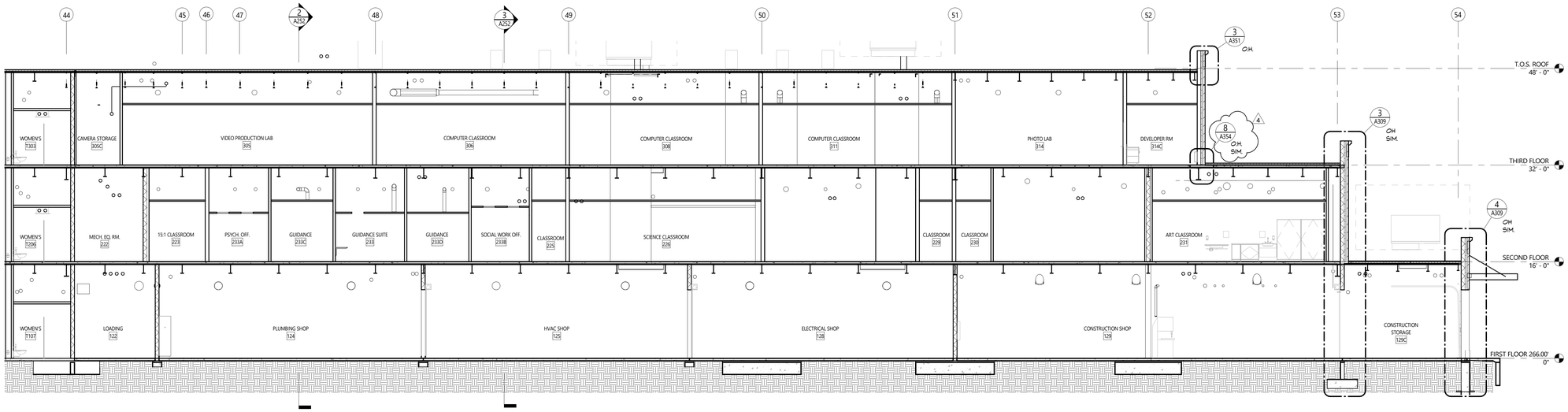
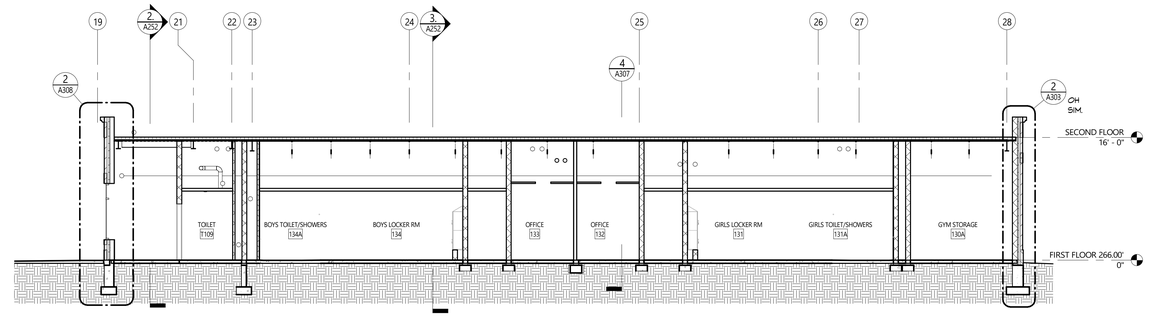
Sheet Title
PARTIAL SECOND FLOOR PLAN - AREA 3

Sheet No.
CTE A123

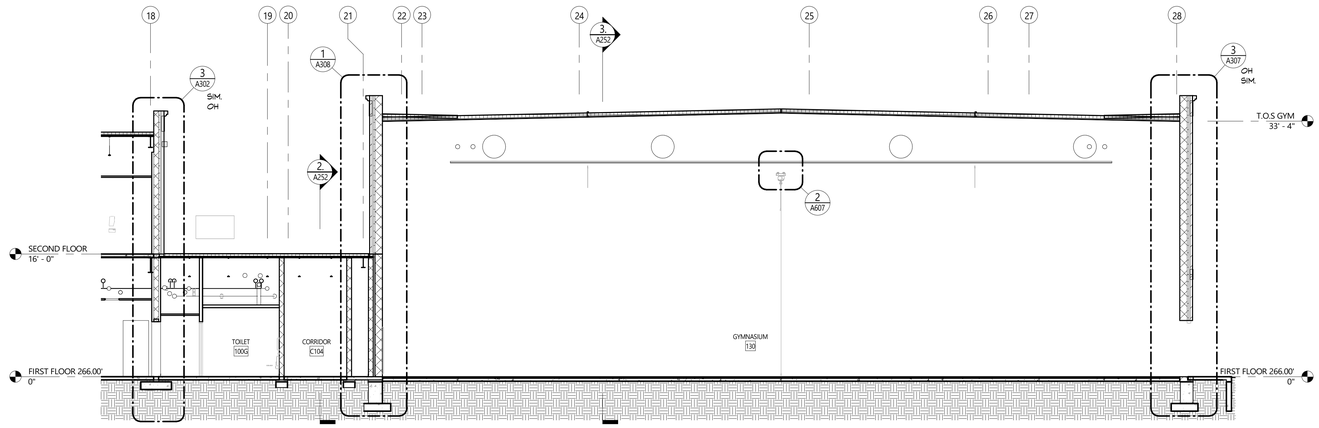
CONSTRUCTION DOCUMENTS



3 PARTIAL BUILDING SECTION
A253 1/8" = 1'-0"

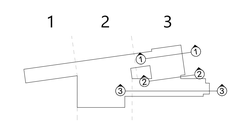


2 BUILDING SECTION
A253 1/8" = 1'-0"



1 PARTIAL BUILDING SECTION
A253 1/8" = 1'-0"

KEY PLAN



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Project Title

REGISTERED ARCHITECT RAYMOND L. PECKHAM 019844 STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

#	DATE	DESCRIPTION
4	5/28/2024	BID Addendum #4

Drawn By:	
Checked By:	
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
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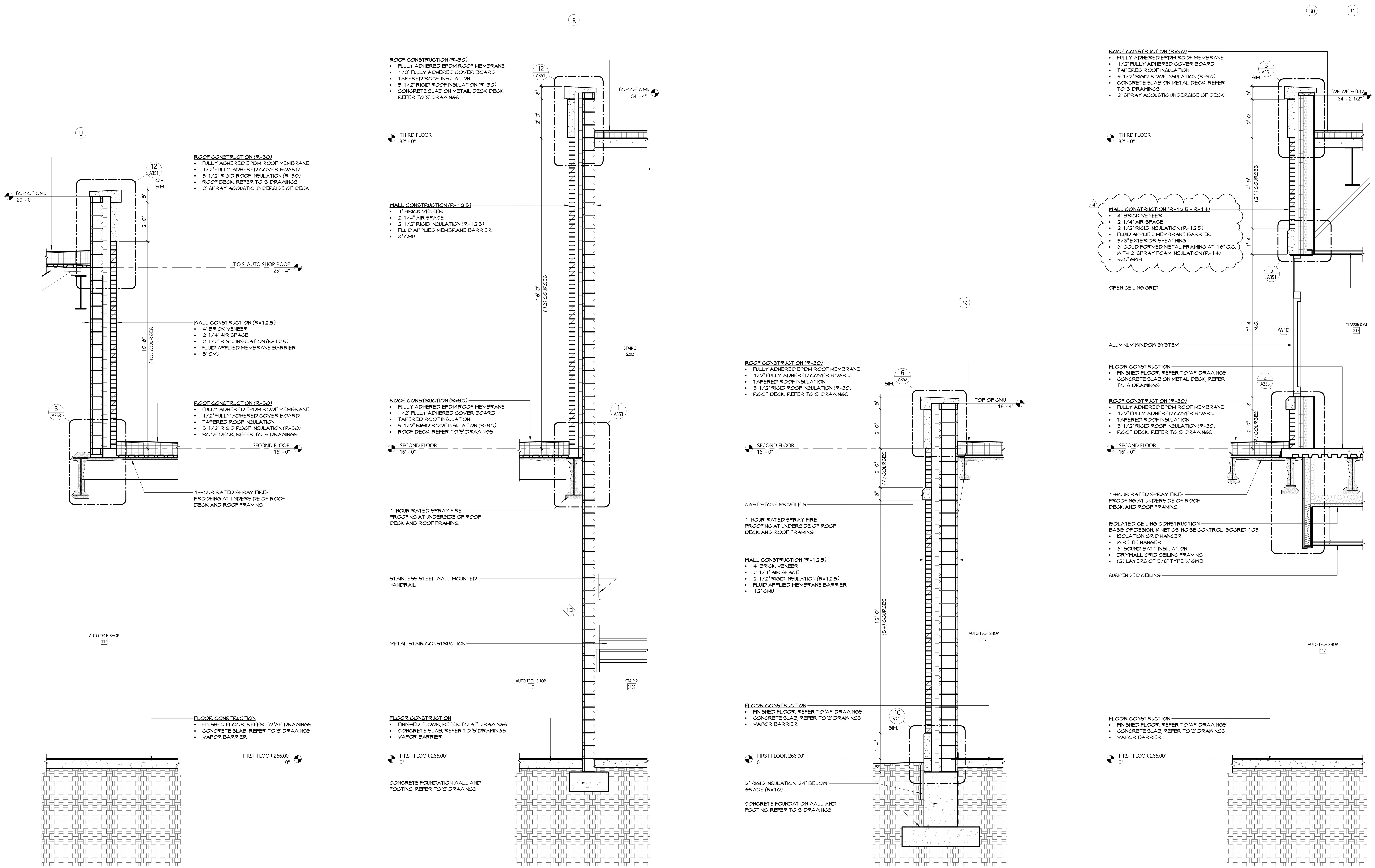
Sheet Title
BUILDING SECTIONS

Sheet No.
CTE A253

CONSTRUCTION DOCUMENTS



4 WALL SECTION
A303 1/2" = 1'-0"

3 WALL SECTION
A303 1/2" = 1'-0"

2 WALL SECTION
A303 1/2" = 1'-0"

1 WALL SECTION
A303 1/2" = 1'-0"

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NEW CTE BUILDING

Project Title

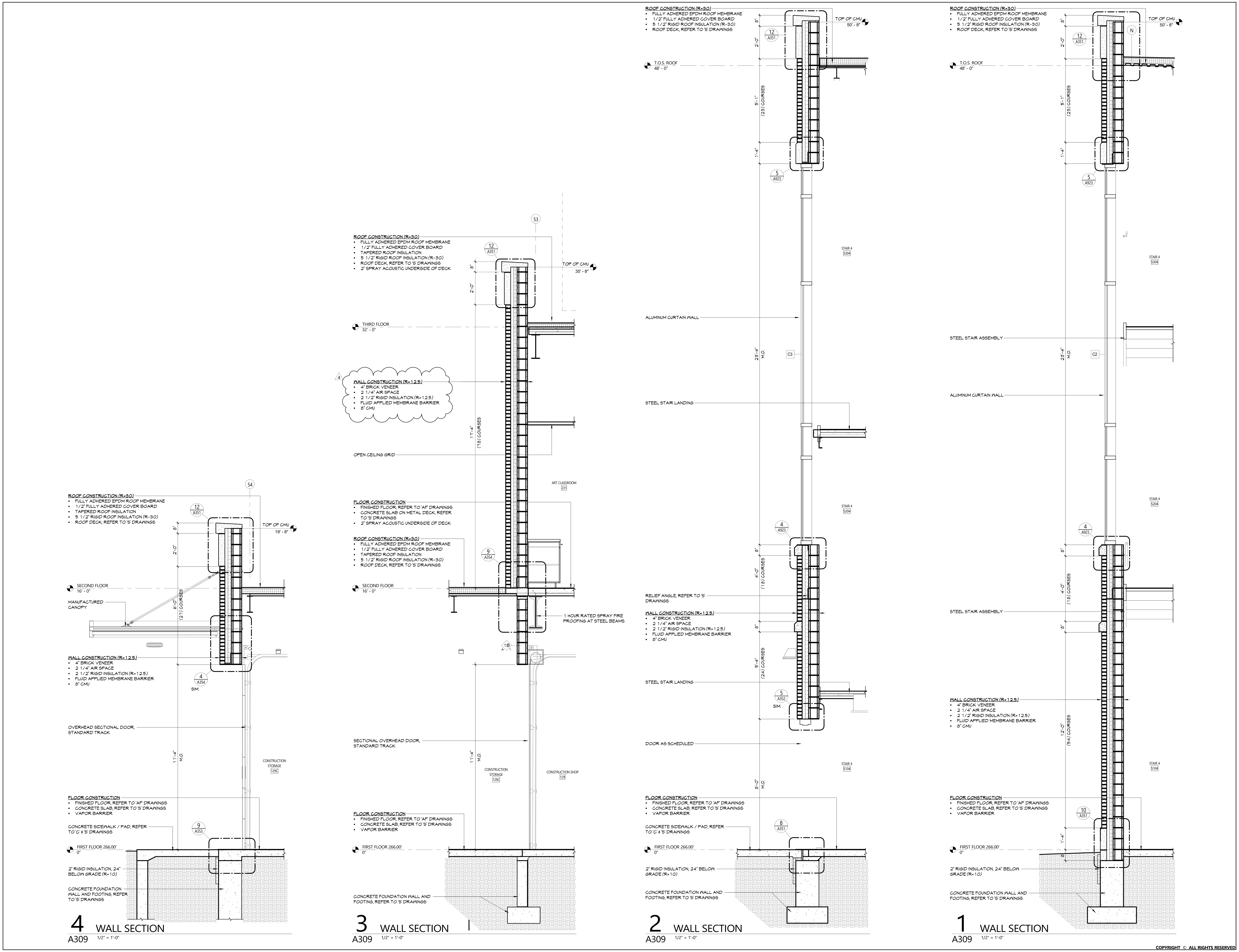
#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4

Drawn By:
Checked By:
Proj. #: 44-16-00-01-0-053-001
CSArch Proj. #: 108-2303
Issued for Bid: 4/15/2024

Sheet Title
WALL SECTIONS - AREA 2

Sheet No.
CTE A303

CONSTRUCTION DOCUMENTS



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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT · RICHARD L. PECKHAM · STATE OF NEW YORK

REGISTRATION EXPIRATION DATE: 12/31/2026

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Drawn By:	
Checked By:	
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
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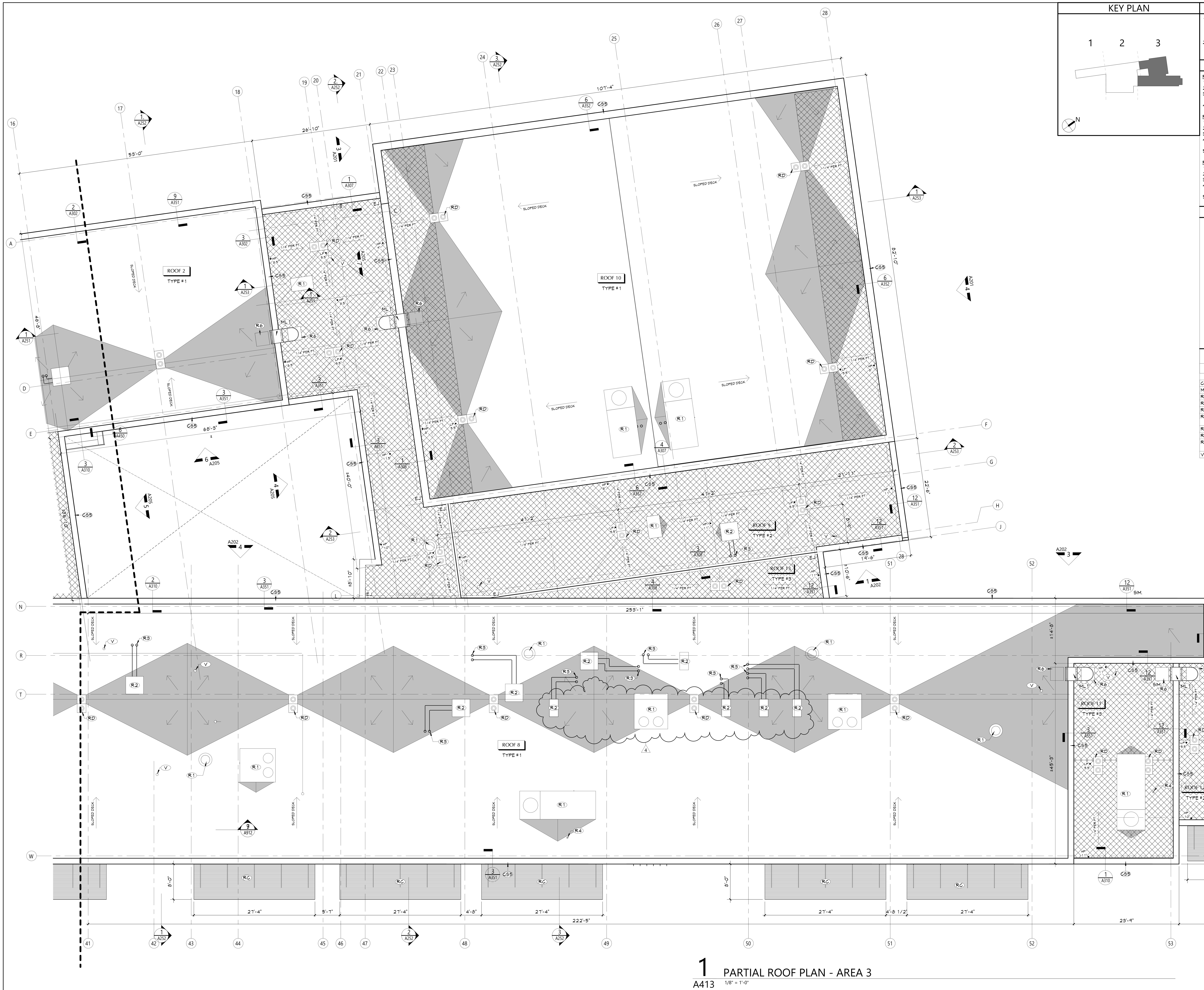
Sheet Title

WALL SECTIONS - AREA 3

Sheet No.

CTE A309

CONSTRUCTION DOCUMENTS



1 PARTIAL ROOF PLAN - AREA 3

A413 1/8" = 1'-0"

KEY PLAN

ROOF GENERAL NOTES

1. CURB SIZES SHOWN REFLECT PENETRATING DUCT SIZE. CURB SIZE MAY VARY, REFER TO MECHANICAL DRAWINGS, COORDINATE ACTUAL SIZE OF CURBS IN APPROVED SUBMITTALS.
2. ROOF INSULATION FASTENERS TO ENGAGE HIGH POINT OF STEEL DECK FLUTES.

ROOF DESCRIPTIONS

ROOF TYPE #1
1. FULLY ADHERED EPDM ROOF MEMBRANE
2. 1/2 COVER BOARD
3. (2) LAYERS OF RIGID ROOF INSULATION (TOTAL THICKNESS 5 1/2", MIN R-30
4. METAL DECK, REFER TO 'S' DRAWINGS

ROOF TYPE #2
1. FULLY ADHERED EPDM ROOF MEMBRANE
2. 1/2 COVER BOARD
3. TAPERED INSULATION, SLOPE 1/4" PER FOOT, U.N.O.
4. (2) LAYERS OF RIGID ROOF INSULATION (TOTAL THICKNESS 5 1/2", MIN R-30
5. METAL DECK, REFER TO 'S' DRAWINGS

ROOF TYPE #3
1. FULLY ADHERED EPDM ROOF MEMBRANE
2. 1/2 COVER BOARD
3. TAPERED INSULATION, SLOPE 1/4" PER FOOT, U.N.O.
4. (2) LAYERS OF RIGID ROOF INSULATION (TOTAL THICKNESS 5 1/2", MIN R-30
5. CONCRETE ON METAL DECK, REFER TO 'S' DRAWINGS

ROOF LEGEND

RD	DUAL ROOF DRAIN, REFER TO PLUMBING DRAWINGS
SC	ROOF SCUPPER
V	VENT PIPE, REFER TO PLUMBING DRAWINGS
	ROOF PENETRATIONS, REFER TO MECHANICAL DRAWINGS
AH	ROOF ACCESS HATCH
	INDICATES DIRECTION OF SLOPE AT 1/4" PER FOOT MINIMUM, UNO
L	ROOF LADDER
EJ	EXPANSION JOINT
	TAPERED INSULATION, SLOPE 1/4" PER FOOT, U.N.O.
	ROOF CRICKET, SLOPE 1/2" PER FOOT, U.N.O.

KEYNOTES

#	DESCRIPTION
CS5	CAST STONE PROFILE #5
ML1	METAL ROOF LADDER WITH CAGE
R1	MECHANICAL UNIT ON CURB, REFER TO DETAILS
R2	MECHANICAL UNIT ON RAILS, REFER TO DETAILS
R3	PIPE PORTAL THROUGH ROOF. REFER TO DETAILS
R4	PROVIDE FALL PROTECTION TIE-OFF DEVICE, REFER TO DETAILS.
R6	PROVIDE WALKWAY PADS, TYP.
RC	MANUFACTURED CANOPY
RD	DUAL ROOF DRAIN, REFER TO PLUMBING DRAWINGS
V	VENT, REFER TO PLUMBING DRAWINGS

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Project Title

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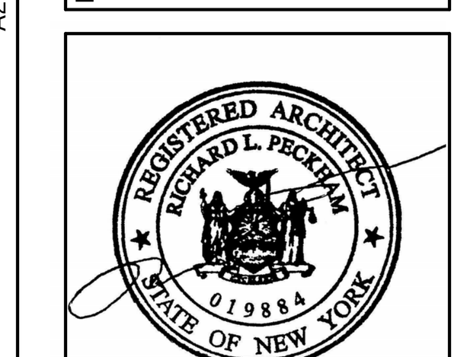


REGISTRATION EXPIRATION DATE: 12/31/2026

#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4

Drawn By:	Author
Checked By:	Checker
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

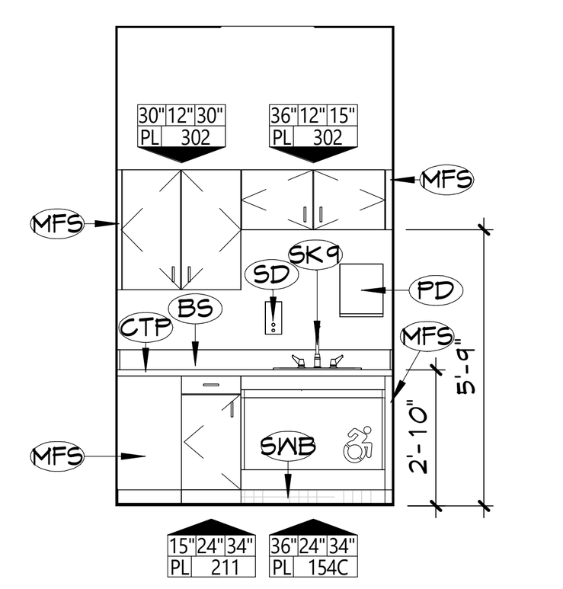
Sheet Title

PARTIAL ROOF PLAN - AREA 3

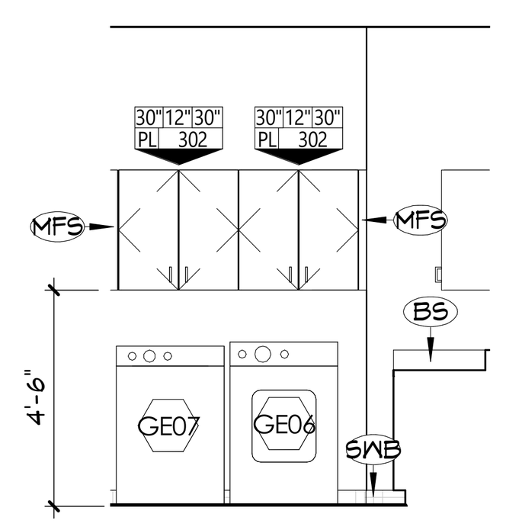
Sheet No.

CTE A413

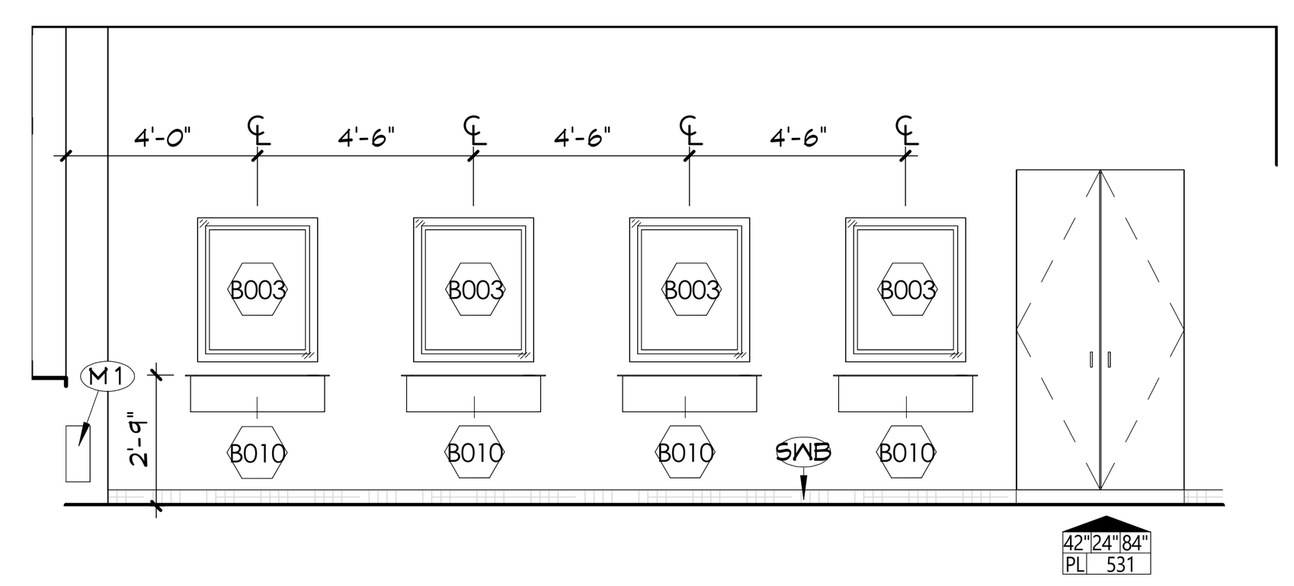
CONSTRUCTION DOCUMENTS



15 INTERIOR ELEVATION DISPENSING - EAST
A604 1/4" = 1'-0"



14 INTERIOR ELEVATION DISPENSING - NORTH
A604 1/4" = 1'-0"



12 INTERIOR ELEVATION BARBERING - NORTH
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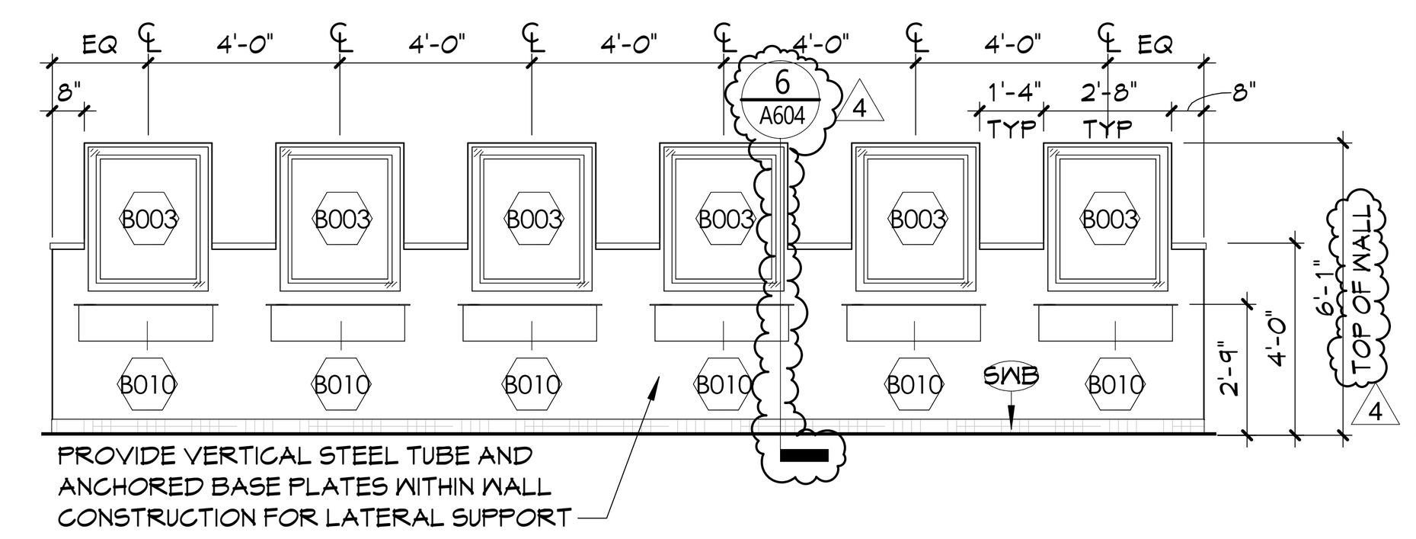
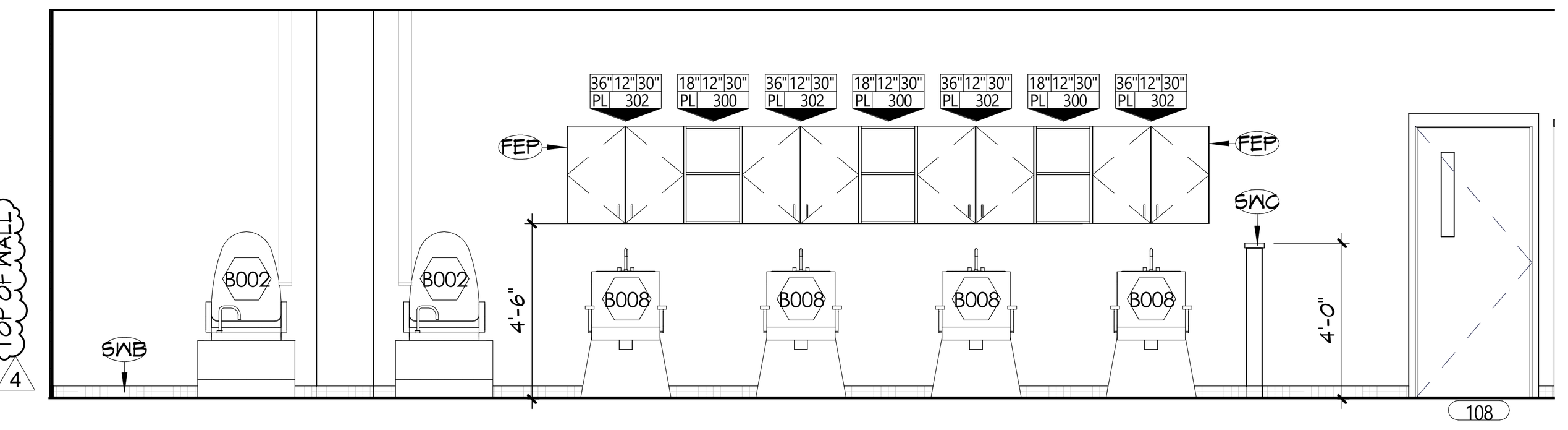


8 INTERIOR ELEVATION COSMETOLOGY - WEST
A604 1/4" = 1'-0"



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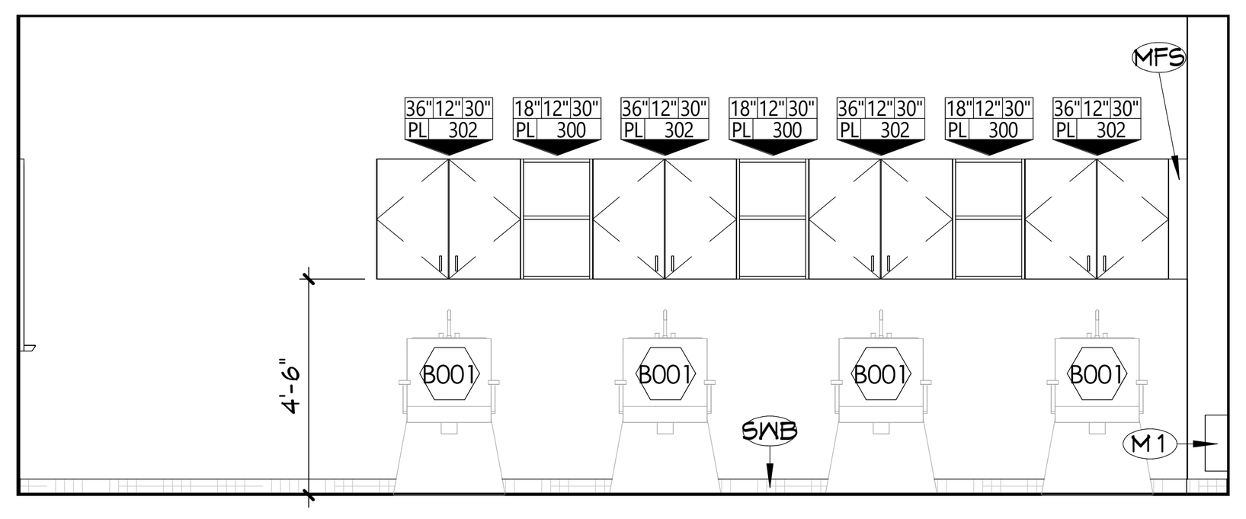

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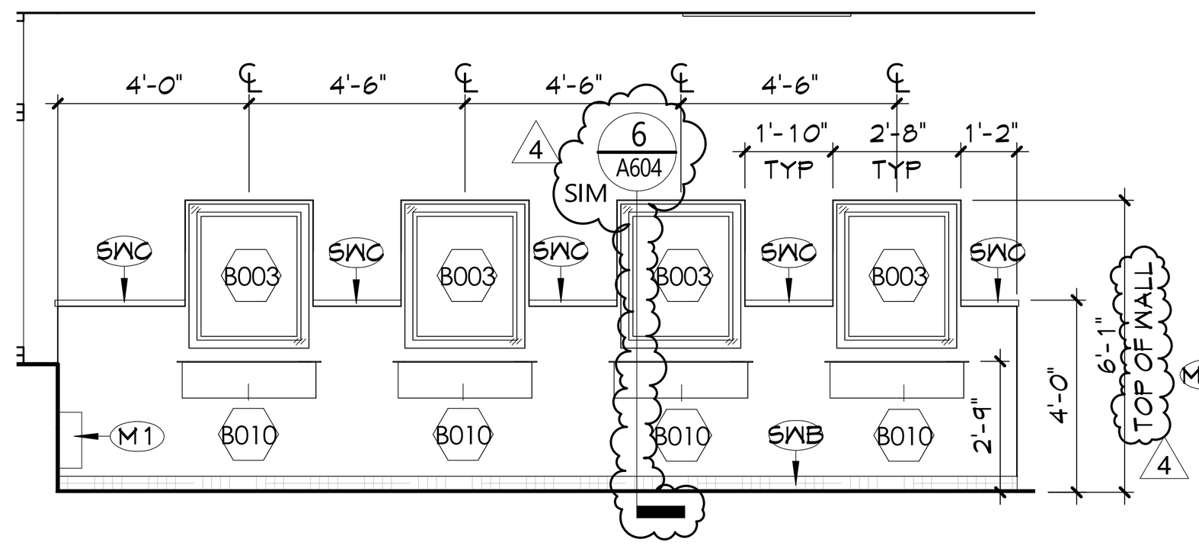

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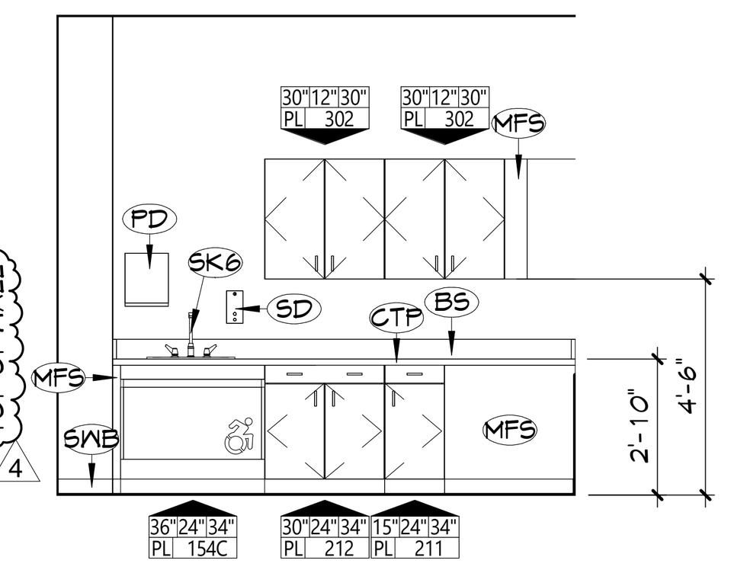

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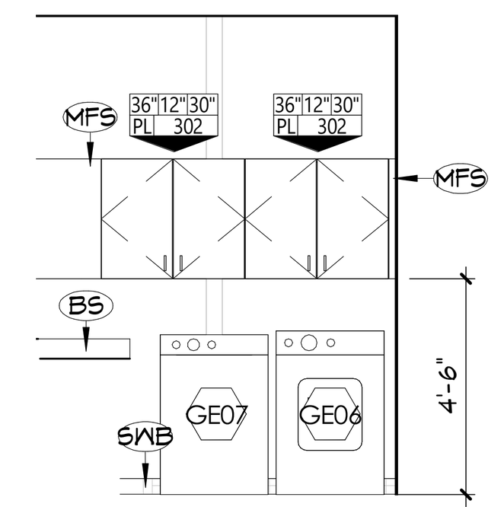

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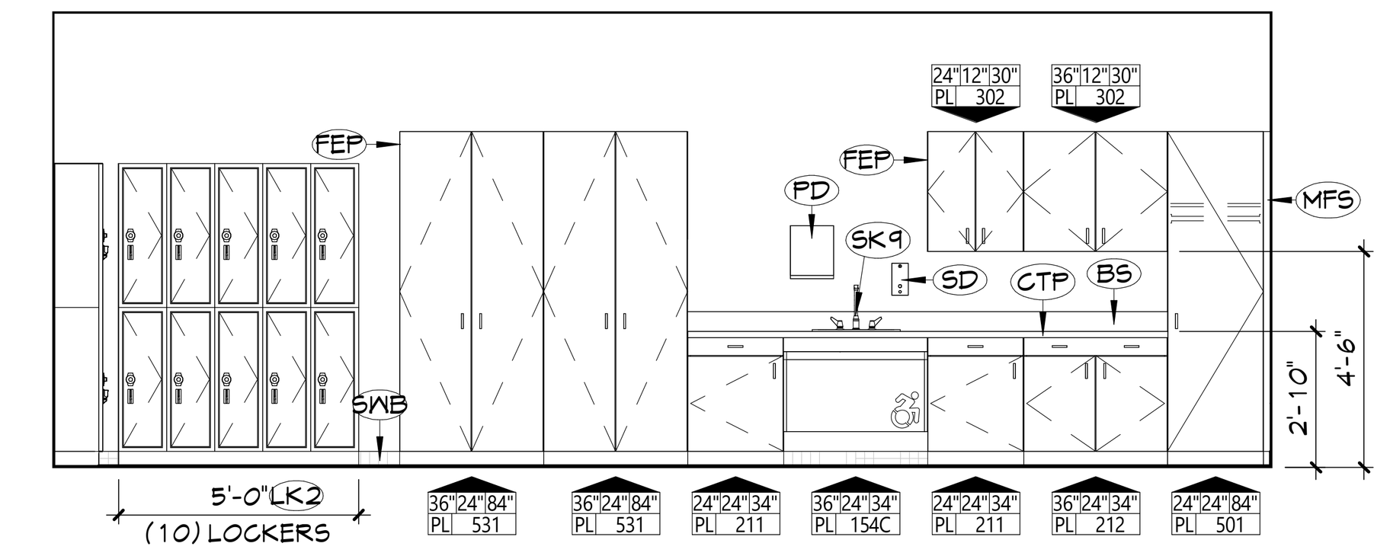
A604 1/4" = 1'-0"



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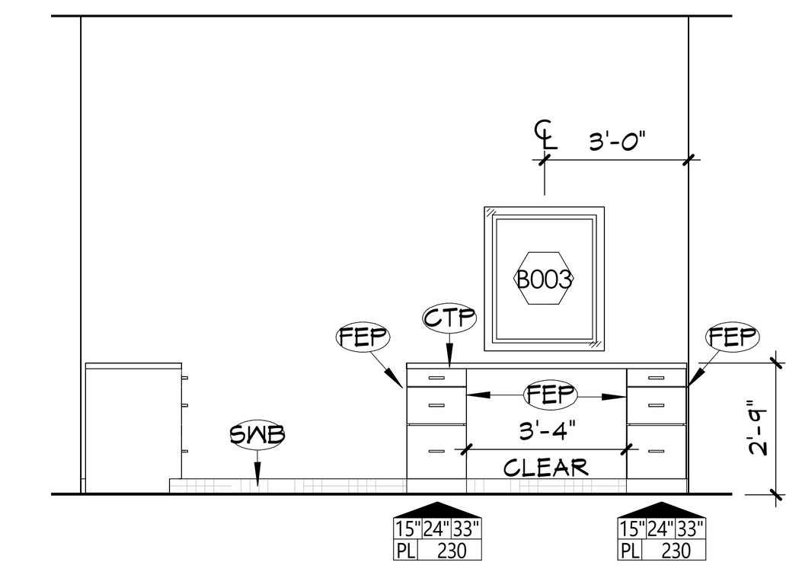
A604 1/4" = 1'-0"



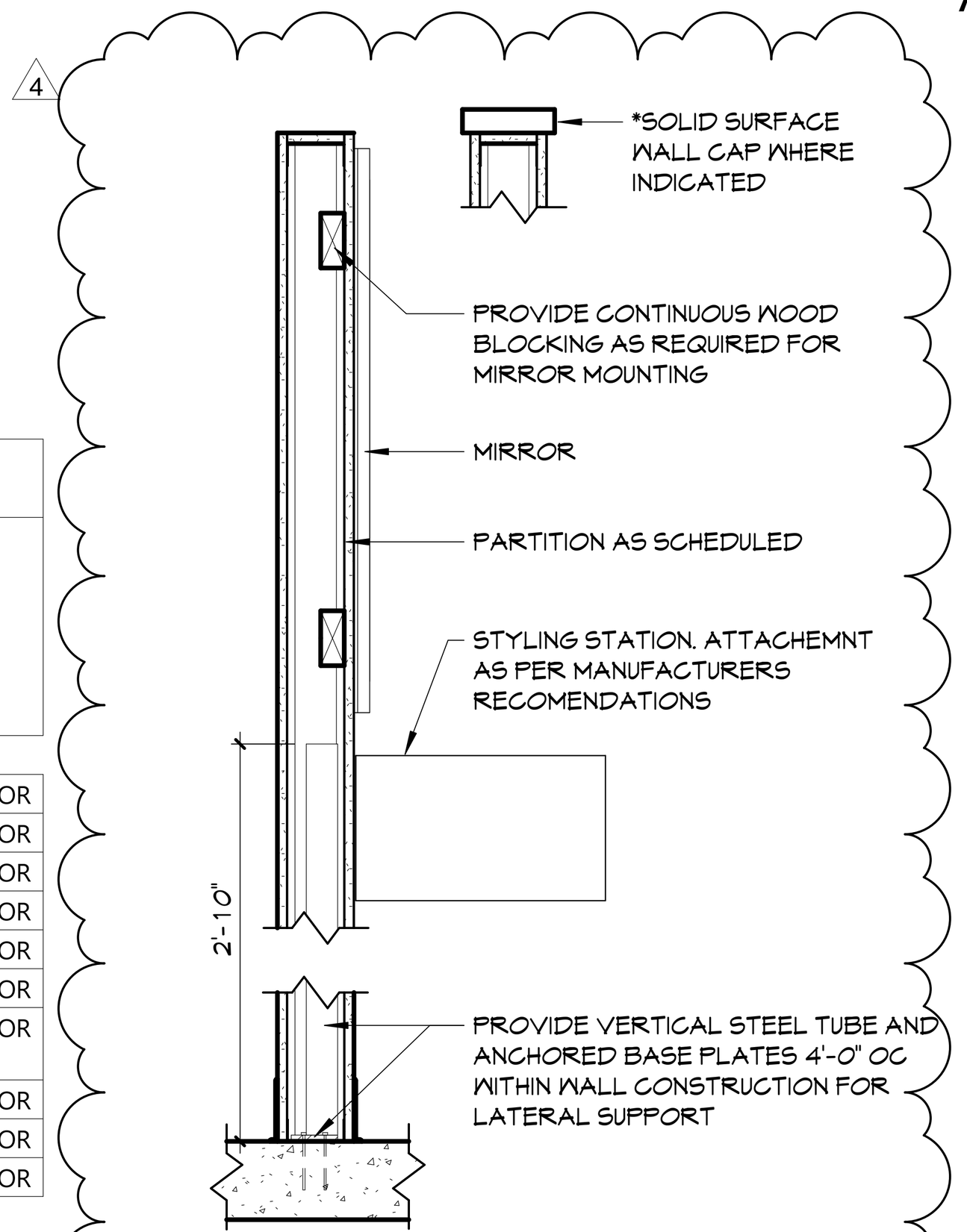
4 INTERIOR ELEVATION COSMETOLOGY - SOUTH
A604 1/4" = 1'-0"

EQUIPMENT SCHEDULE - BARBERING

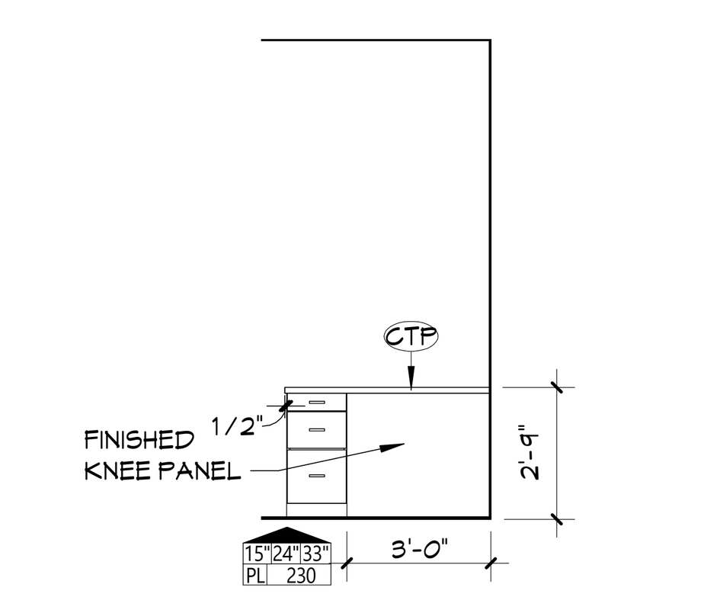
EQUIPMENT #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	POWER	HORSEPOWER	WATER	DUST COLLECTION	COMPRESSED AIR	FURNISHED	INSTALLED
B001	4	HAIR WASH STATION	AGS BEAUTY	DT-001	FLOOR	-	-	YES	-	-	CONTRACTOR	CONTRACTOR
B003	12	MIRROR	PIBBS	PIB-9440	WALL	110V	-	-	-	-	CONTRACTOR	CONTRACTOR
B009	12	SALON CHAIR	BUY-RITE SALON & SPA EQUIPMENT	CHRIS STYLING CHAIR - SY-1801	FREE STANDING	-	-	-	-	-	CONTRACTOR	CONTRACTOR
B010	12	STYLING STATION	WINADO	HGI-G10000063 (3)	WALL	-	-	-	-	-	CONTRACTOR	CONTRACTOR
GE06	1	DRYER	MAYTAG COMMERCIAL	MDE20MNBZW	FREE STANDING	240V	1/3 HP	-	-	-	CONTRACTOR	CONTRACTOR
GE07	1	WASHING MACHINE	MAYTAG COMMERCIAL	MAT20MNAWW	FREE STANDING	120V	1/2 HP	YES	-	-	CONTRACTOR	CONTRACTOR

EQUIPMENT SCHEDULE - COSMETOLOGY

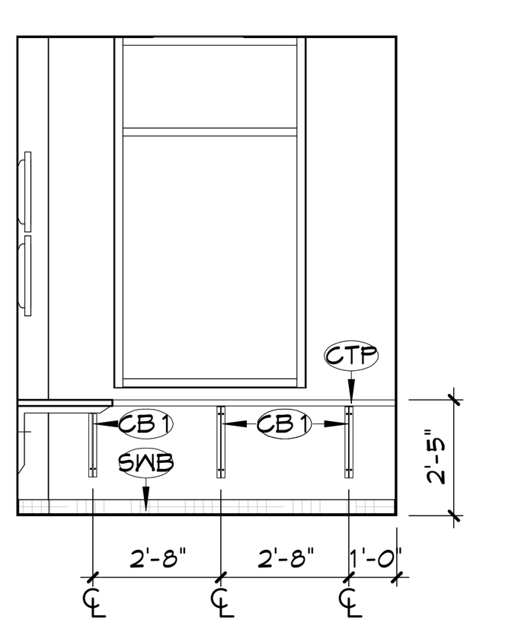
EQUIPMENT #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	POWER	HORSEPOWER	WATER	DUST COLLECTION	COMPRESSED AIR	FURNISHED	INSTALLED
B002	2	PEDICURE STATION	J & A	JA-CLEOG5	FLOOR	110V	-	YES	-	-	CONTRACTOR	CONTRACTOR
B003	25	MIRROR	PIBBS	PIB-9440	WALL	110V	-	-	-	-	CONTRACTOR	CONTRACTOR
B005	1	WAXING TABLE	OAKWORKS	OW-CLINICIANPRIM-ELHY-ST	FREE STANDING	120V	-	-	-	-	CONTRACTOR	CONTRACTOR
B006	1	FACIAL TABLE	OAKWORKS	OW-CLINICIANPRIM-ELHY-ST	FREE STANDING	120V	-	-	-	-	CONTRACTOR	CONTRACTOR
B007	4	MANICURE STATION	J & A	JA-KM-N104	FREE STANDING	-	-	-	-	-	CONTRACTOR	CONTRACTOR
B008	4	HAIR WASH STATION	BARBERPUB	6154-9070	FLOOR	-	-	YES	-	-	CONTRACTOR	CONTRACTOR
B009	25	SALON CHAIR	BUY-RITE SALON & SPA EQUIPMENT	CHRIS STYLING CHAIR - SY-1801	FREE STANDING	-	-	-	-	-	CONTRACTOR	CONTRACTOR
B010	24	STYLING STATION	WINADO	HGI-G10000063 (3)	WALL	-	-	-	-	-	CONTRACTOR	CONTRACTOR
GE06	1	DRYER	MAYTAG COMMERCIAL	MDE20MNBZW	FREE STANDING	240V	1/3 HP	-	-	-	CONTRACTOR	CONTRACTOR
GE07	1	WASHING MACHINE	MAYTAG COMMERCIAL	MAT20MNAWW	FREE STANDING	120V	1/2 HP	YES	-	-	CONTRACTOR	CONTRACTOR



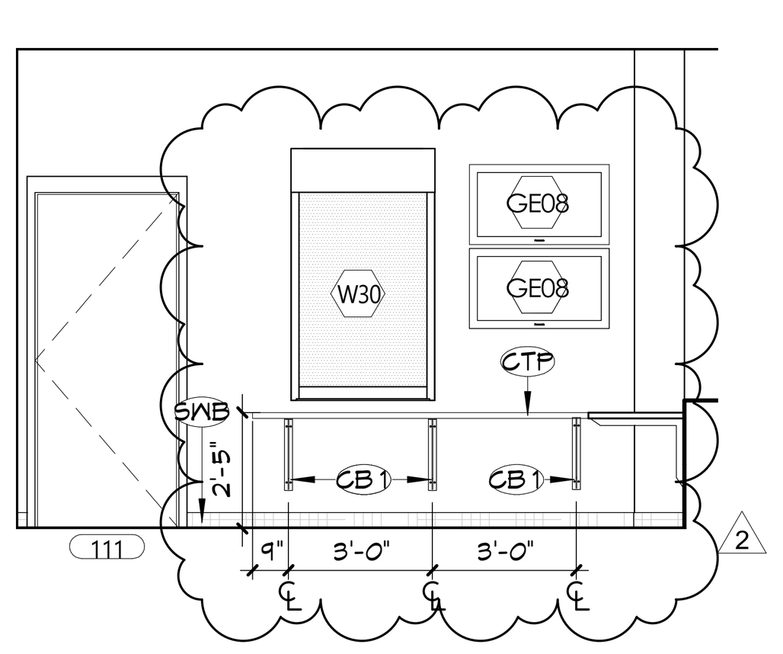
6 SECTION DETAIL AT PARTIAL HEIGHT WALL
A604 1" = 1'-0"



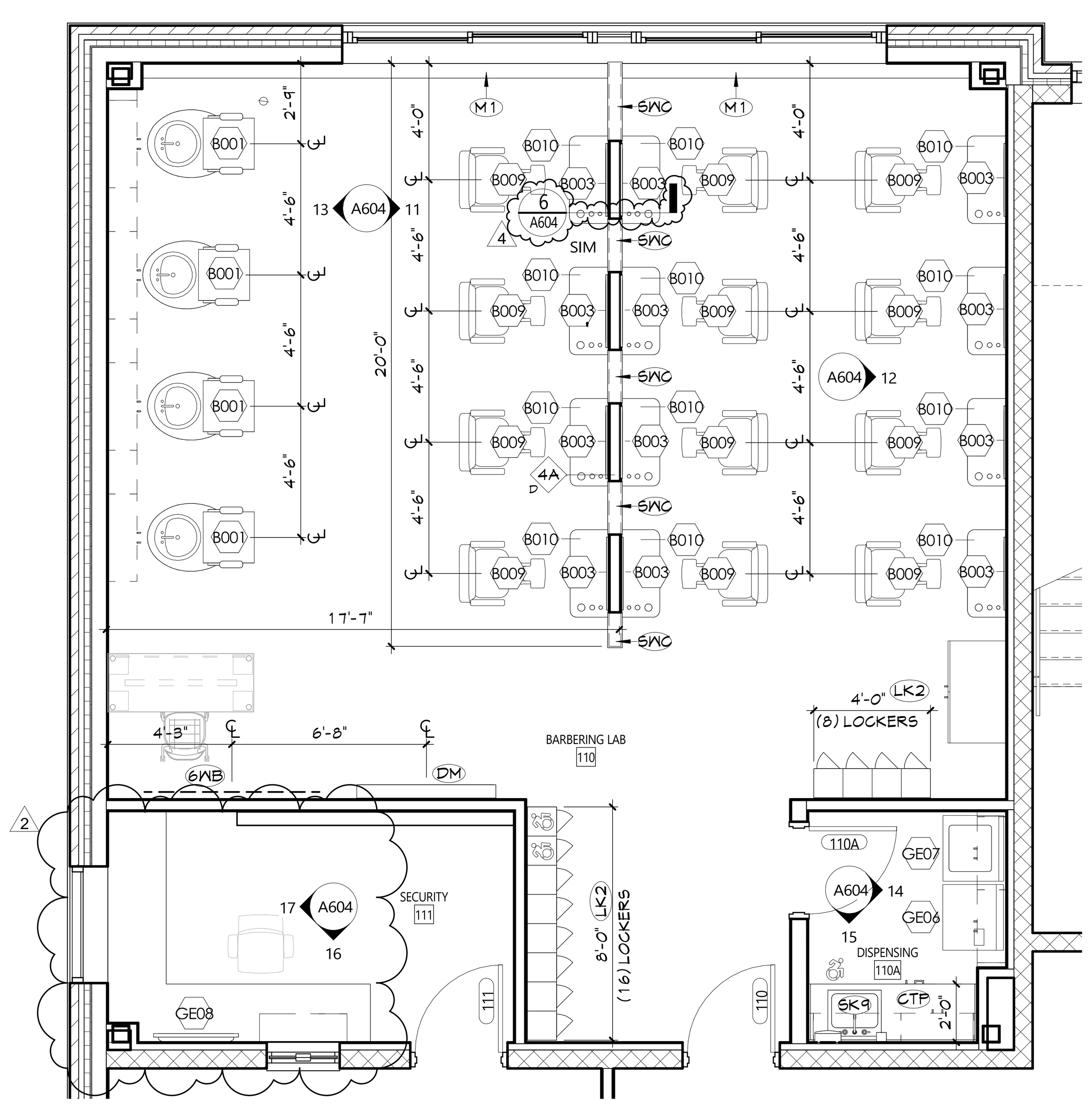
3 INTERIOR ELEVATION COSMETOLOGY - EAST
A604 1/4" = 1'-0"



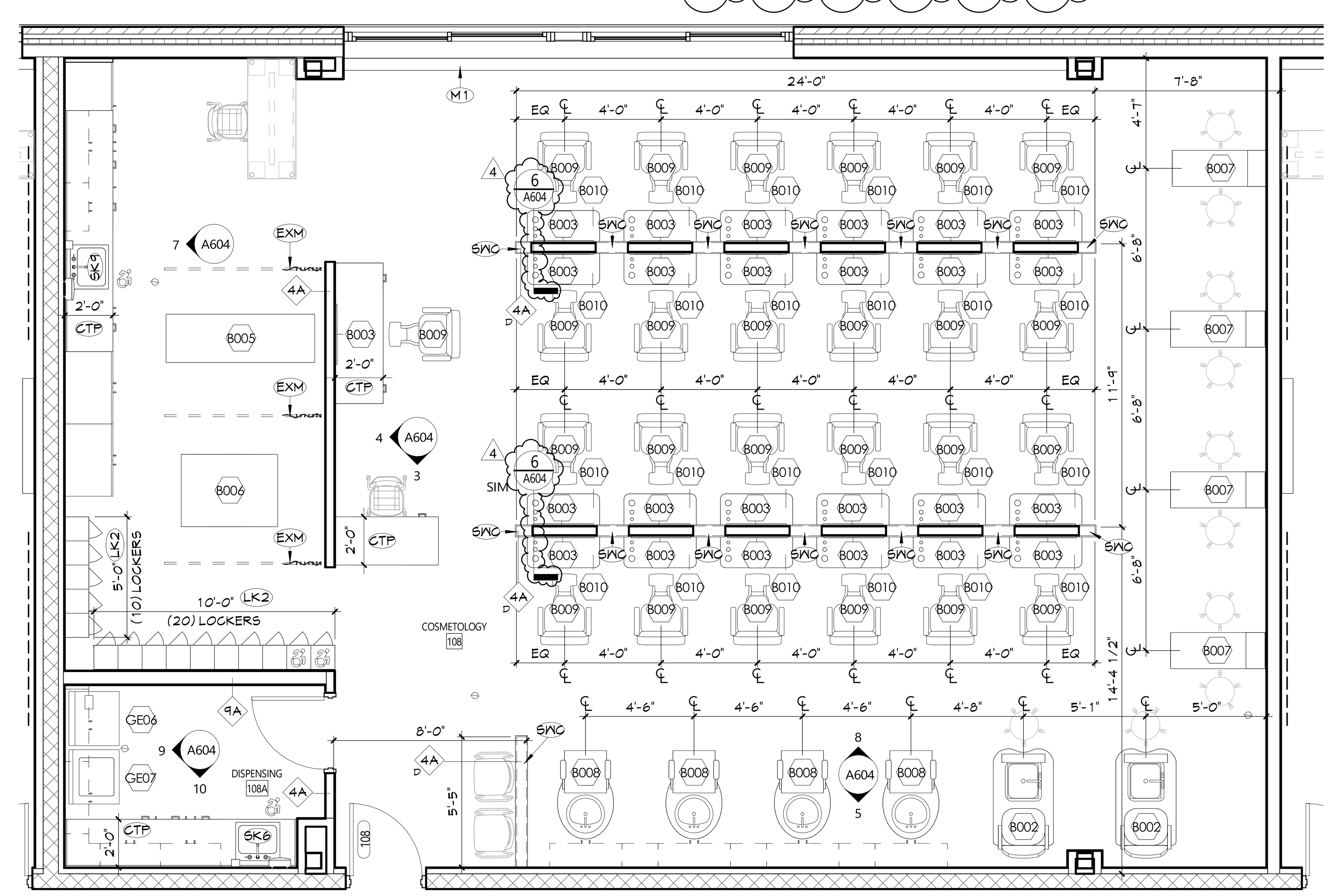
17 INTERIOR ELEVATION SECURITY - SOUTH
A604 1/4" = 1'-0"



16 INTERIOR ELEVATION SECURITY - EAST
A604 1/4" = 1'-0"



2 ENLARGED FLOOR PLAN - BARBERING
A604 1/4" = 1'-0"



1 ENLARGED FLOOR PLAN - COSMETOLOGY
A604 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
3. PROVIDE BLOCKING IN ALL ADJACENT WALLS AS REQUIRED TO INSTALL ALL CASEWORK.
4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
5. PROVIDE WALL BASE AS SCHEDULED ON ALL EXPOSED TOE KICK SPACES AND EXPOSED END PANELS.
6. ALL FURNITURE SHOWN AS HALFTONE IS NOT IN CONTRACT

CASEWORK NOTES

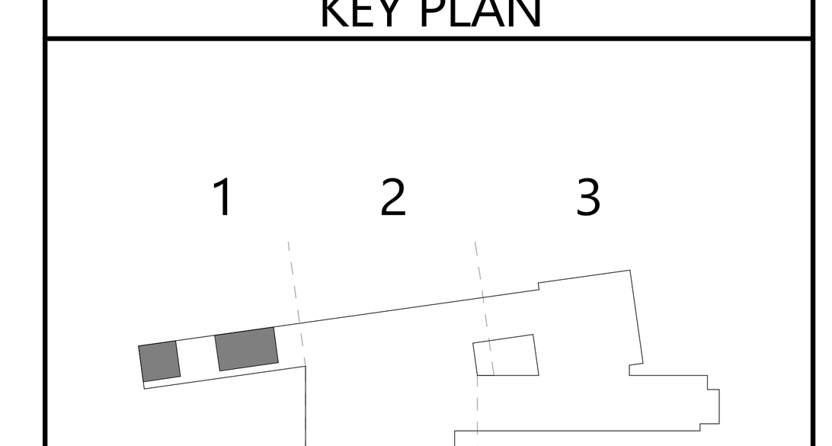
W" H" D"
XX XXXX

- WIDTH OF CASEWORK
- HEIGHT OF CASEWORK
- DEPTH OF CASEWORK
- AWI DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)
- TYPE OF CASEWORK
  - PL = PLASTIC LAMINATE
  - M = METAL
  - W = WOOD

KEYNOTES

#	DESCRIPTION
6WB	6' WHITEBOARD
BS	PLAM BACKSPLASH, 4" HIGH, UNO
CB1	COUNTER SUPPORT BRACKET
CTP	PLAM COUNTERTOP
DM	DISPLAY MONITOR (OWNER FURNISHED, CONTRACTOR INSTALLED)
EXM	EXAM CURTAIN
FEP	FINISHED END PANEL
LK2	TWO-TIER METAL LOCKER
M1	MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
MFS	MATCHING FILLER STRIP
PD	PAPER TOWEL DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED)
SD	SOAP DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED)
SK6	NURSING LAB SINK, REFER TO PLUMBING DRAWINGS
SK9	LAY-IN SINK WITH EYEWASH, REFER TO PLUMBING DRAWINGS
SWB	SCHEDULED WALL BASE
SWC	SOLID SURFACE WALL CAP

KEY PLAN



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Consultant

Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT RICHARD L. PECKHAM 019884 STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4
3	5/13/2024	BID Addendum #3
2	5/3/2024	BID Addendum #2

Drawn By:	ACG
Checked By:	
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

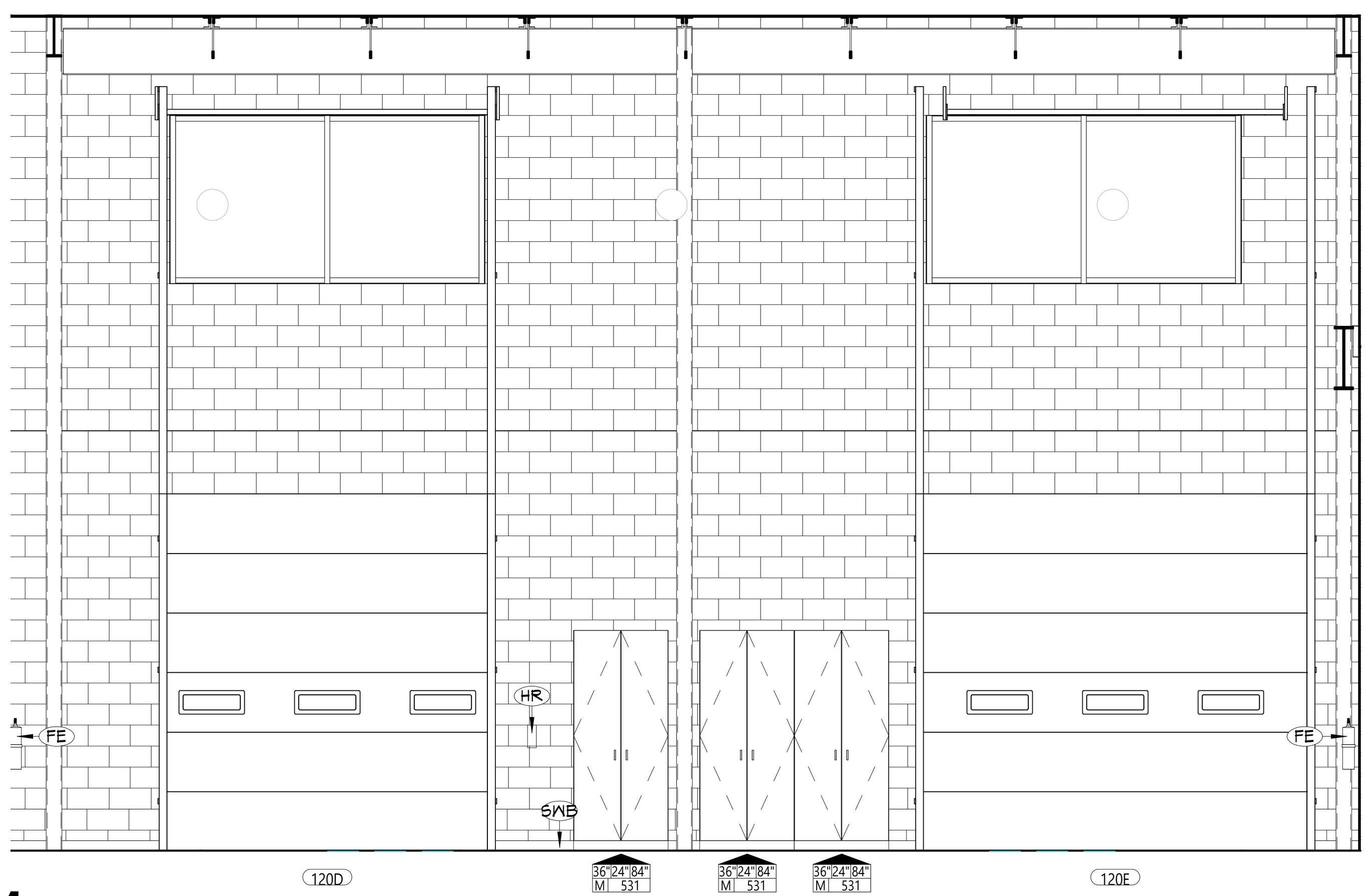
Sheet Title
ENLARGED PLAN - BARBERING AND COSMETOLOGY

Sheet No.
CTE A604

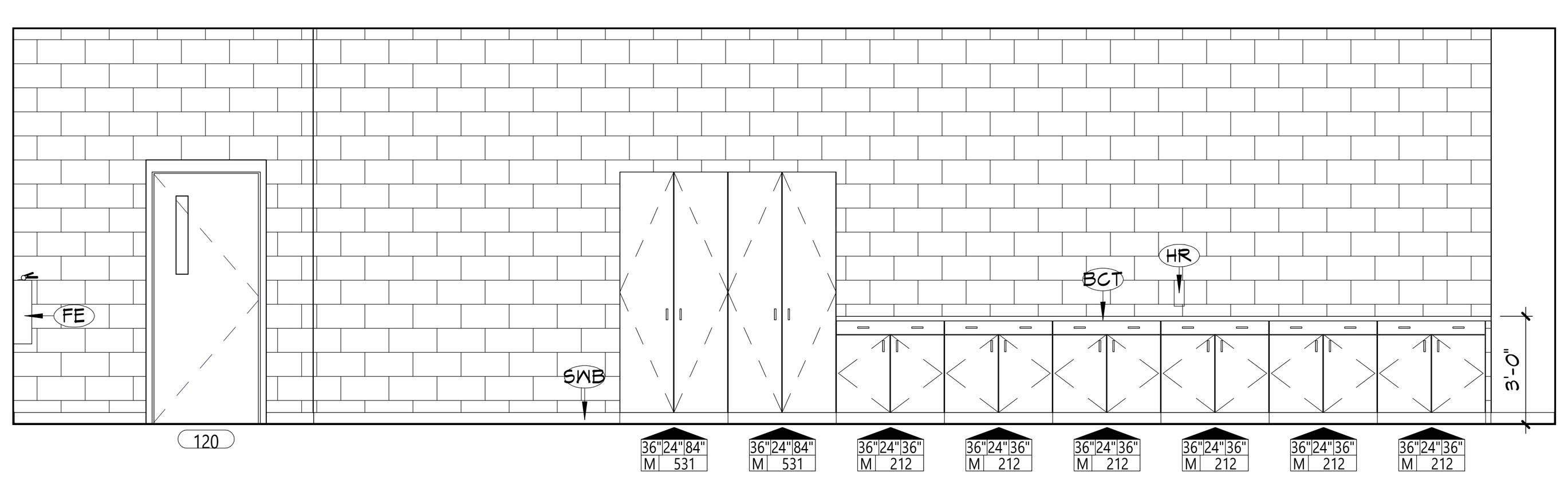
CONSTRUCTION DOCUMENTS

EQUIPMENT SCHEDULE - AUTO BODY SHOP

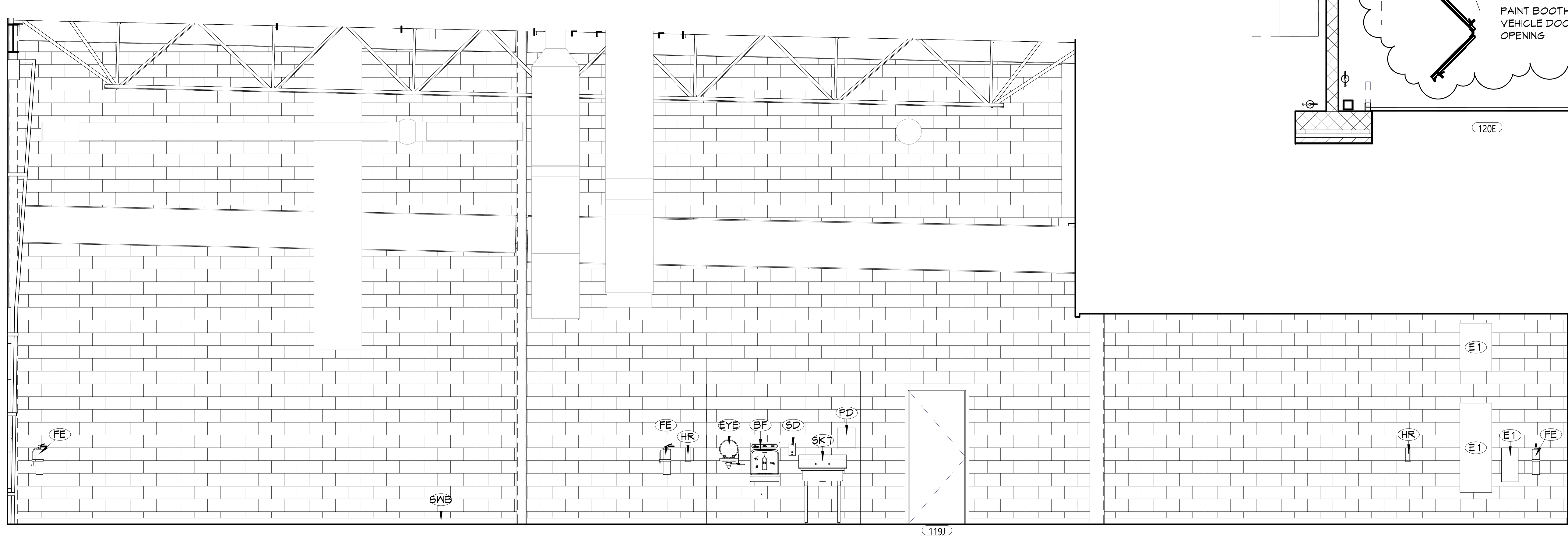
EQUIPMENT #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	POWER	HORSEPOWER	WATER	DUST COLLECTION	COMPRESSED AIR	FURNISHED	INSTALLED
A005	1	SAFETY CABINET	CONDOR	45AE88	FREE STANDING	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A014	1	TIRE CHANGER	HUNTER ENGINEERING COMPANY	TC33	FLOOR	230V, 1PH, 6.0A	-	-	-	115-175 PSI	CONTRACTOR	CONTRACTOR
A015	1	WHEEL BALANCER	HUNTER ENGINEERING COMPANY	SWE33	FLOOR	230V, 1PH, 10A	-	-	-	100-175 PSI	CONTRACTOR	CONTRACTOR
A020	2	BENCH GRINDER WITH STAND	JET	577102K & 48RJ30	FREE STANDING	120V, 1PH, 12.0A	1HP	-	-	-	CONTRACTOR	CONTRACTOR
A021	1	POST LIFT	CHALLENGER LIFTS	CL12A	FLOOR	230V, 1PH, 30.0A	-	-	-	-	CONTRACTOR	CONTRACTOR
A027	1	BUMPER RACK	PROLIFIC	1101489	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A028	1	CHASSIS LINER	CHASSIS LINER SUPPLY	05-832120	FREE STANDING	-				?	CONTRACTOR	CONTRACTOR
A030	1	MIG WELDER	LINCOLN	K6080-1	FREE STANDING	230V, 1PH, 22.5A	-	-	-	-	OWNER	OWNER
A031	1	DOOR-BUMPER HANDLER	PROLIFIC	1203077	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A032	1	PANEL CADDY	PROLIFIC	1101255	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A033	1	ENGINE HOIST	GRAINGER	3ZC71	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A034	1	DRILL PRESS	DAKE	SB-16 / PART # 977200-1	FLOOR	120V, 1PH, 14.0A	1/2 HP	-	-	-	CONTRACTOR	CONTRACTOR
A035	1	MOBILE MASKER	CHAMP	PART # 6266 / SKU # 1815792	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A036	8	UTILITY CART	SUNEX TOOLS	8035	MOBILE	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A037	1	PAINT MIXING ROOM	ACCUDRAFT	TITAN MIXING ROOM	FLOOR	-	-	-	-	-	CONTRACTOR	CONTRACTOR
A038	1	PAINT BOOTH	ACCUDRAFT	TITAN	FLOOR	208V, 3PH, 84.1A	-	-	-	-	CONTRACTOR	CONTRACTOR



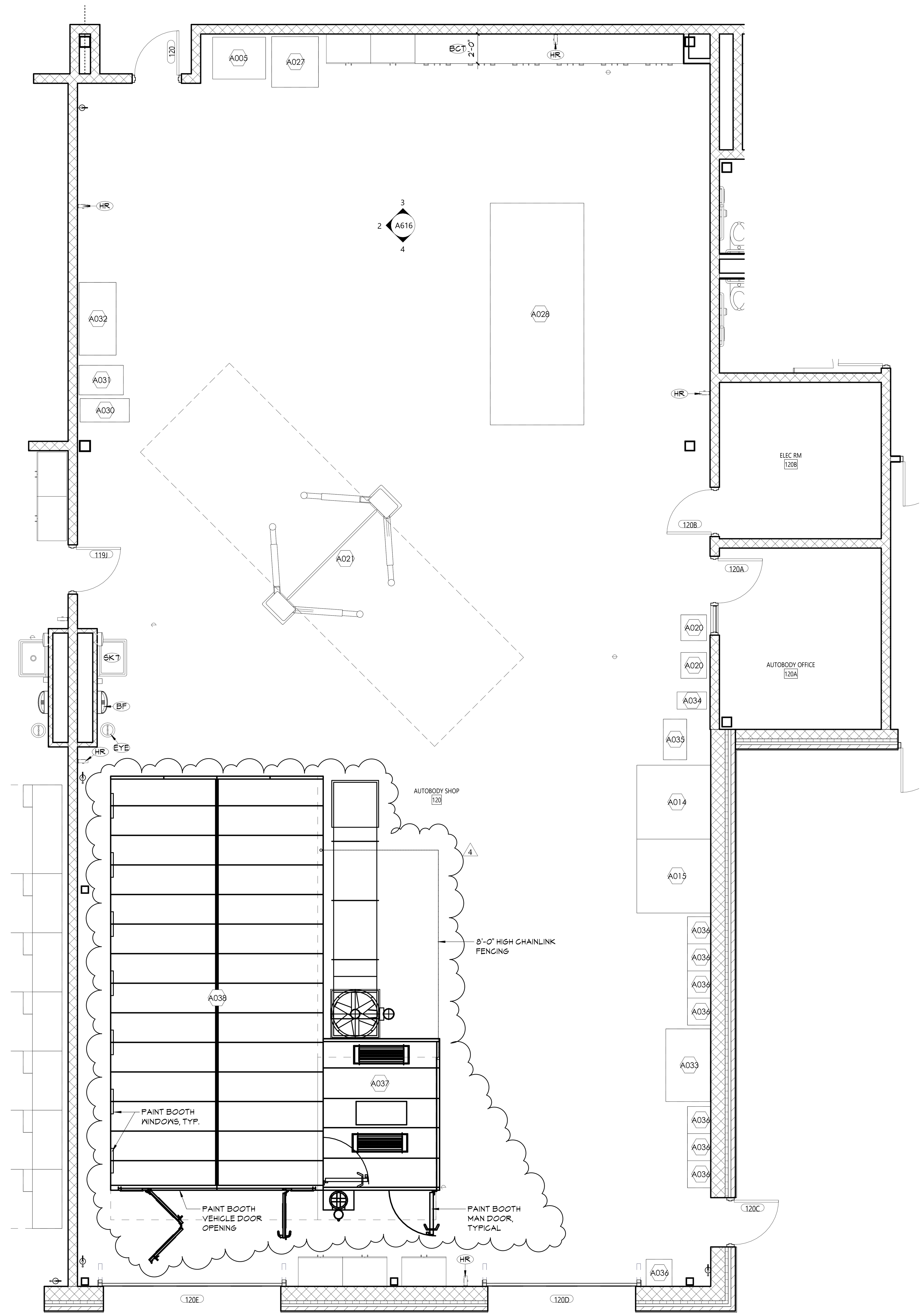
4 INTERIOR ELEVATION - AUTO BODY - EAST
A616 1/4" = 1'-0"



3 INTERIOR ELEVATION
AUTO BODY - WEST
A616 1/4" = 1'-0"



2 INTERIOR ELEVATION
AUTO BODY - SOUTH
A616 1/4" = 1'-0"



1 ENLARGED FLOOR PLAN - AUTO BODY SHOP
A616 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
3. PROVIDE BLOCKING IN ALL ADJACENT WALLS AS REQUIRED TO INSTALL ALL CASEWORK.
4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
5. PROVIDE WALL BASE AS SCHEDULED ON ALL EXPOSED TOE KICK SPACES AND EXPOSED END PANELS.
6. ALL FURNITURE SHOWN AS HALFTONE IS NOT IN CONTRACT

CASEWORK NOTES

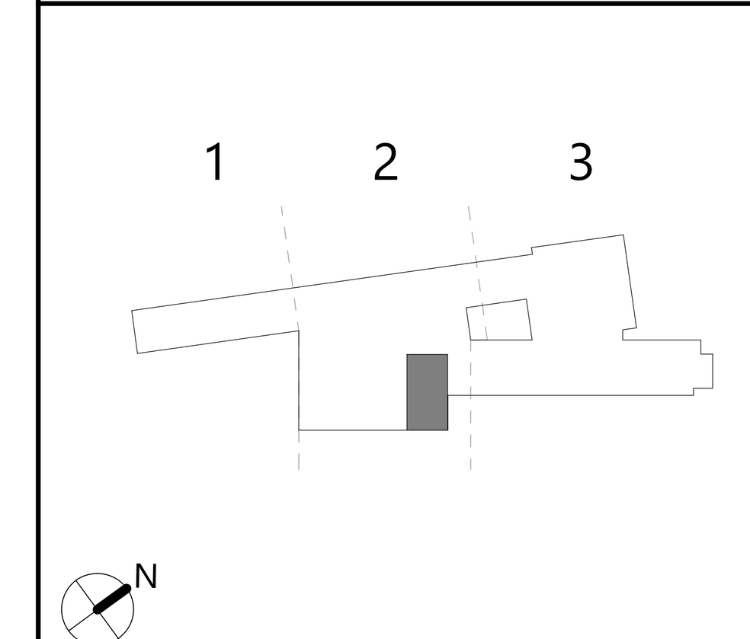
W" H" D"
XX XXXX

- WIDTH OF CASEWORK
- HEIGHT OF CASEWORK
- DEPTH OF CASEWORK
- AWI DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)
- TYPE OF CASEWORK
  - PL = PLASTIC LAMINATE
  - M = METAL
  - W = WOOD

KEYNOTES

#	DESCRIPTION
BCT	BUTCHERBLOCK COUNTER TOP
BF	BOTTLE FILLER, REFER TO PLUMBING DRAWINGS
E1	ELECTRICAL EQUIPMENT, REFER TO ELECTRICAL DRAWINGS
EYE	EYEWASH STATION, REFER TO PLUMBING DRAWINGS
FE	FIRE EXTINGUISHER, WALL MOUNT
HR	HOSE REEL
PD	PAPER TOWEL DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED)
SD	SOAP DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED)
SK7	SINGLE BAY UTILITY SINK, REFER TO PLUMBING DRAWINGS
SWB	SCHEDULED WALL BASE

KEY PLAN



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845 · 561 · 3179 www.csarchpc.com

Consultant

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT RICHARD L. PECKHAM 019884 STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

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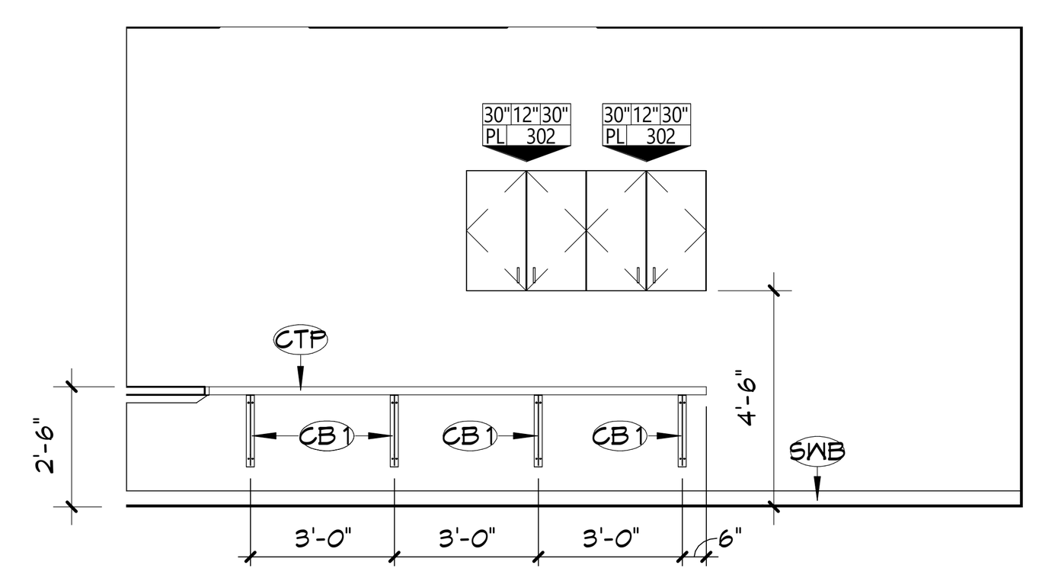
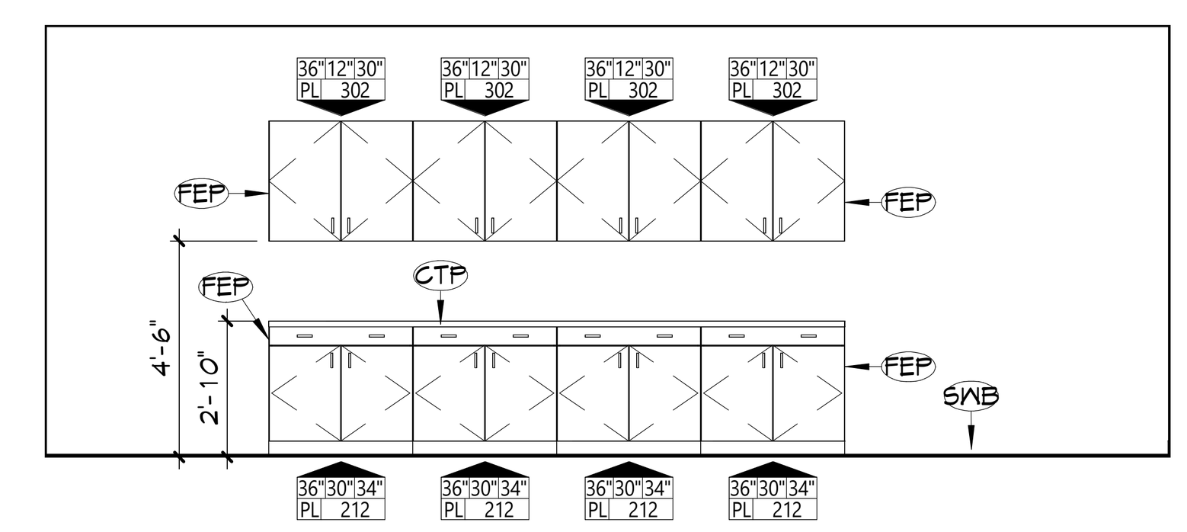
Sheet Title
ENLARGED PLAN - AUTO BODY SHOP

Sheet No.
CTE A616

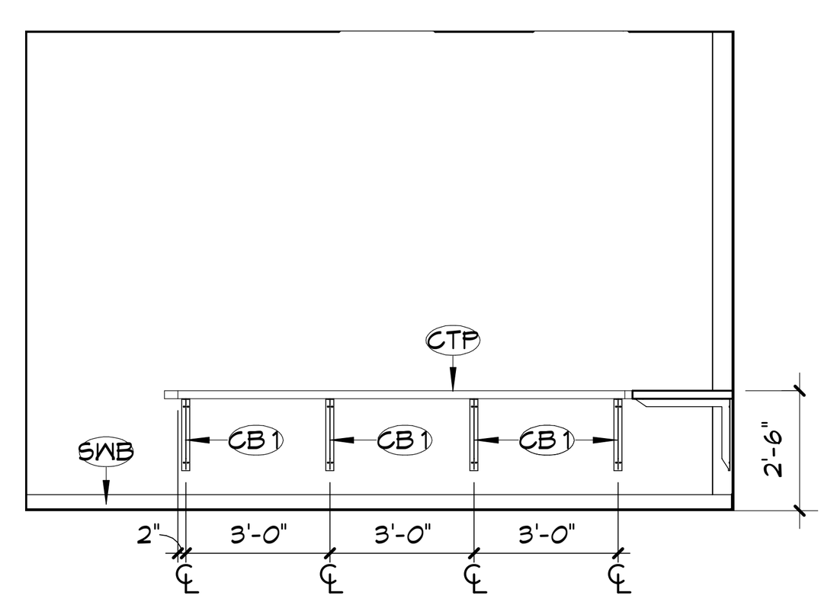
CONSTRUCTION DOCUMENTS



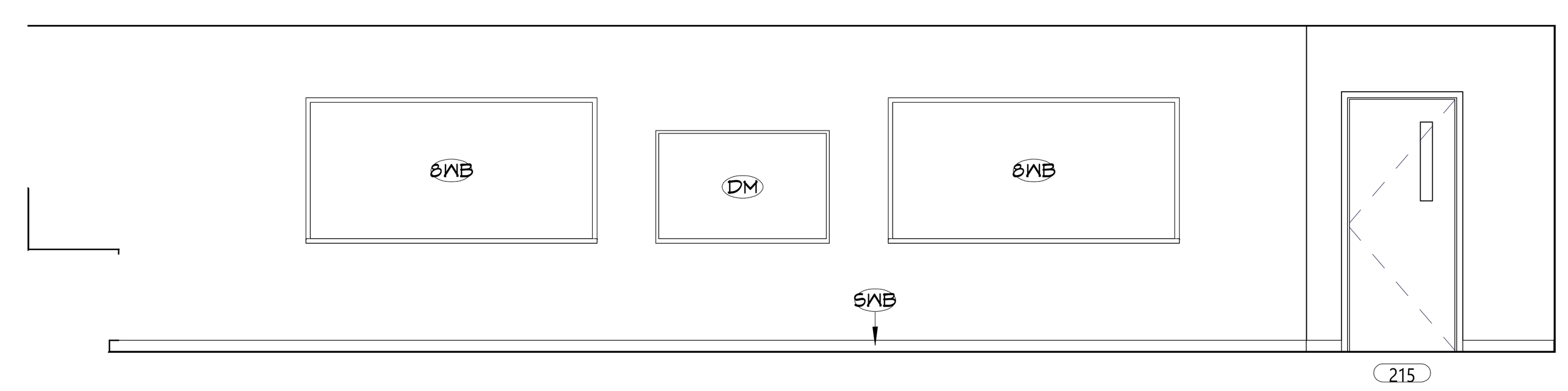
6 INTERIOR ELEVATION
CULINARY OFFICE SOUTH
A624 1/4" = 1'-0"



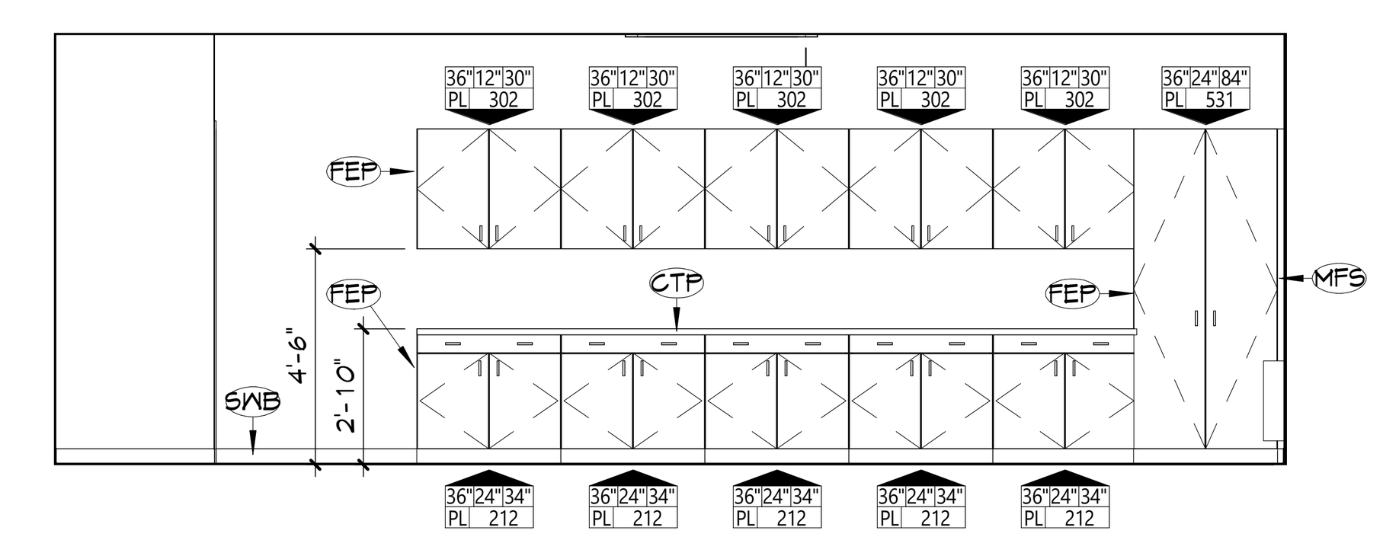
3 INTERIOR ELEVATION
CULINARY CLASSROOM SOUTH
A624 1/4" = 1'-0"



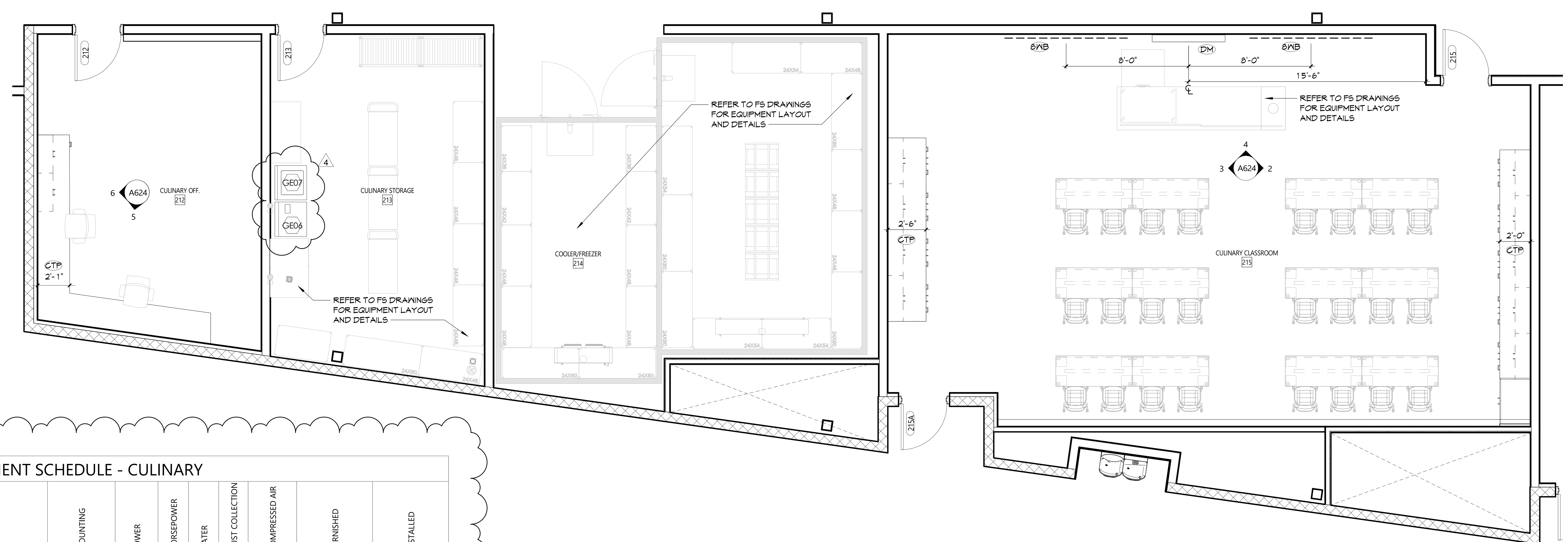
5 INTERIOR ELEVATION
CULINARY OFFICE EAST
A624 1/4" = 1'-0"



4 INTERIOR ELEVATION
CULINARY CLASSROOM WEST
A624 1/4" = 1'-0"



2 INTERIOR ELEVATION
CULINARY CLASSROOM NORTH
A624 1/4" = 1'-0"



EQUIPMENT SCHEDULE - CULINARY												
EQUIPMENT #	QUANTITY	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	POWER	HORSEPOWER	WATER	DUST COLLECTION	COMPRESSED AIR	FURNISHED	INSTALLED
GE06	1	DRYER	MAYTAG COMMERCIAL	MDE20MNBZW	FREE STANDING	240V	1/3 HP	-	-	-	CONTRACTOR	CONTRACTOR
GE07	1	WASHING MACHINE	MAYTAG COMMERCIAL	MAT20MNAWW	FREE STANDING	120V	1/2 HP	YES	-	-	CONTRACTOR	CONTRACTOR

1 ENLARGED FLOOR PLAN - CULINARY CLASSROOM
A624 1/4" = 1'-0"

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GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
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4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
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6. ALL FURNITURE SHOWN AS HALFTONE IS NOT IN CONTRACT

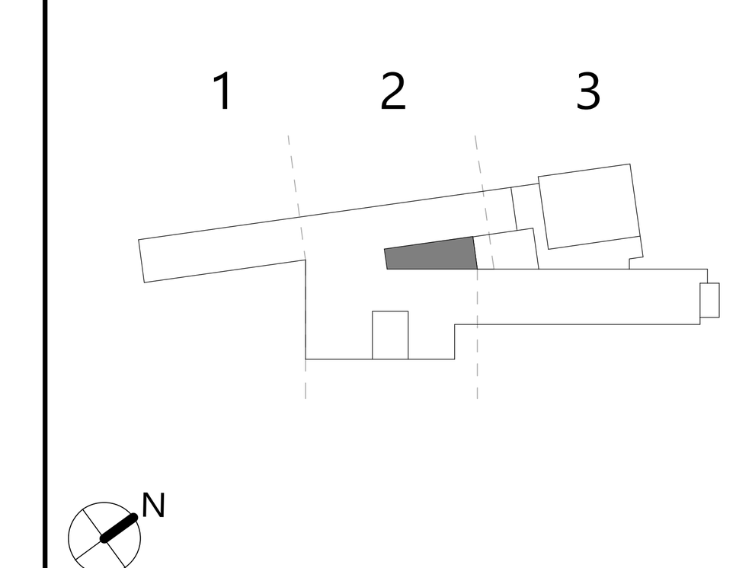
CASEWORK NOTES

- WIDTH OF CASEWORK
- HEIGHT OF CASEWORK
- DEPTH OF CASEWORK
- AWI DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)
- TYPE OF CASEWORK
  - PL = PLASTIC LAMINATE
  - M = METAL
  - W = WOOD

KEYNOTES

#	DESCRIPTION
8WB	8' WHITEBOARD
CB1	COUNTER SUPPORT BRACKET
CTP	PLAM COUNTERTOP
DM	DISPLAY MONITOR (OWNER FURNISHED, CONTRACTOR INSTALLED)
FEP	FINISHED END PANEL
MFS	MATCHING FILLER STRIP
SWB	SCHEDULED WALL BASE

KEY PLAN



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Consultant

Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT RICHARD L. PECKHAM 019884 STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4

Drawn By:	
Checked By:	
Proj. #:	44-16-00-01-0-053-001
CSArch Proj. #:	108-2303
Issued for Bid:	4/15/2024

Sheet Title
ENLARGED PLAN - CULINARY CLASSROOM

Sheet No.
CTE A624

CONSTRUCTION DOCUMENTS

PARTITION NOTES

PARTITION TYPE
FIRE RATING
PARTITION MODIFIER

NOM. CMU SIZE	STC RATING	FIRE RATING / TEST DESIGN	SIDE ONE FINISH / SIDE TWO FINISH

GENERAL PARTITION NOTES

1	THIS PARTITION TYPE SCHEDULE IS GENERIC IN NATURE. NOT ALL OF THE PARTITION TYPES ILLUSTRATED ON THIS SHEET HAVE BEEN UTILIZED IN THIS PROJECT. SEE FLOOR PLANS FOR LOCATIONS
2	ALL INTERIOR PARTITIONS INDICATED ON THE FLOOR PLANS SHALL BE INCLUDED IN THE CONTRACTOR'S BID. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY PARTITION SHOWN ON THE FLOOR PLANS WITHOUT A PARTITION TAG. THE ARCHITECT WILL DETERMINE THE PARTITION TYPE TO

PARTITION MODIFIER LEGEND

A	ALIGN FACES OF ADJACENT CONSTRUCTION
B	USE SAME PARTITION TYPE ON ONE ADJACENT RETURN WALL
C	USE SAME PARTITION TYPE ON TWO ADJACENT RETURN WALL
D	TOP OF PARTITION AFF VARIES. SEE DETAILS FOR ADDITIONAL INFORMATION
E	PROVIDE LEVEL 5 FINISH

FIRE RATED SYSTEMS

1.	PROVIDE FIRE RATED JOINT SYSTEMS AT ALL INTERSECTIONS OF FIRE RATED PARTITION ASSEMBLIES AND FIRE RATED FLOOR/ROOF ASSEMBLIES. THE FIRE RATED JOINT SYSTEM SHALL HAVE A MINIMUM FIRE RESISTANCE RATING GREATER THAN OR EQUAL TO THE PARTITION IN WHICH IT IS BEING USED. THIS JOINT SYSTEM MUST BE AN APPROVED ASSEMBLY TESTED BY A NATIONALLY RECOGNIZED TESTING AGENCY.
2.	PROVIDE THROUGH-PENETRATION FIRE STOP SYSTEM AT ALL PENETRATIONS THROUGH FIRE RATED PARTITION, FLOOR AND ROOF ASSEMBLIES. THE THROUGH-PENETRATION FIRE STOP SYSTEM SHALL HAVE A MINIMUM FIRE RESISTANCE RATING GREATER THAN OR EQUAL TO THE ASSEMBLY THAT IT IS BEING USED IN. THIS FIRE STOP SYSTEM MUST BE AN APPROVED ASSEMBLY TESTED BY A NATIONALLY RECOGNIZED TESTING AGENCY.
3.	ANY PRODUCT THAT EMITS ODOR MUST MEET THE REQUIREMENTS OF THE NEW YORK STATE EDUCATION DEPARTMENT.
4.	CONCEALED VERTICAL SPACES IN PARTITIONS SHALL BE FILLED WITH NON COMBUSTIBLE MATERIAL, OR FIRE-STOPPED AT EACH FLOOR LEVEL AND AT THE CEILING OF THE UPPERMOST STORY, SO THAT SUCH SPACES WILL NOT BE CONTINUOUS FOR MORE THAN ONE STORY, OR COMMUNICATE WITH CONCEALED HORIZONTAL SPACES IN THE FLOOR OR ROOF CONSTRUCTION.
5.	ALL PARTITION TYPE DIAGRAMS ARE GRAPHICAL IN NATURE. IN THE CASE WHERE A DIAGRAM DOES NOT SHOW ALL MATERIALS REQUIRED BY A FIRE-RATED PARTITION, THE PARTITION TYPE DESCRIPTION GOVERNS.

CMU WALL SYSTEMS

1.	ALL PLAN DIMENSIONS ARE TO FACE OF CMU, UNLESS NOTED OTHERWISE.
2.	PROVIDE HORIZONTAL JOINT REINFORCEMENT EVERY OTHER CMU COURSE.
3.	PROVIDE (2) VERTICAL #4 BARS IN FULLY GROUTED CORES AT THE FOLLOWING LOCATIONS: A. PARTITION INTERSECTIONS (REINFORCE FULL HEIGHT) B. DOOR OPENINGS (REINFORCE FULL HEIGHT OF DOOR) C. WINDOW OPENINGS (REINFORCE FLOOR TO WINDOW HEAD) D. WALL ENDS (REINFORCE FULL HEIGHT)
4.	SEE STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REINFORCING AND ANCHORING REQUIREMENTS.

METAL STUD PARTITION AND CEILING SYSTEMS

1.	ALL DIMENSIONS ARE TO THE FACE OF METAL STUDS UNLESS NOTED OTHERWISE.
2.	PROVIDE METAL BRACING AT THIRD POINTS AT THE INTERIOR OF METAL STUD CHASE PARTITIONS. BRACING SHALL NOT EXCEED 48" O.C..
3.	PROVIDE METAL D BEAD, BACKER ROD AND SEALANT AT THE INTERSECTION OF GYP BD PARTITIONS AND MASONRY PARTITIONS.
4.	PROVIDE ACOUSTICAL SEALANT IN THE FOLLOWING LOCATIONS: A. PERIMETER OF PARTITIONS B. RUNNERS C. ELECTRICAL OUTLETS D. PARTITION PENETRATIONS AND OPENINGS
5.	PROVIDE BLOCKING WITHIN PARTITIONS TO SUPPORT PARTITION MOUNTED EQUIPMENT, FIXTURES AND ACCESSORIES. COORDINATE WITH CABINETRY DETAILS AND MEP DRAWINGS.
6.	ALL INTERIOR METAL STUDS AND METAL FURRING AT PARTITIONS ARE 20 GAUGE UNLESS OTHERWISE NOTED. ALL INTERIOR METAL STUDS AND FURRING FOR CEILING SOFFITS ARE 25 GAUGE UNLESS NOTED OTHERWISE.
7.	ANCHOR INSULATION TO STUD SYSTEM WITH WIRE SUPPORT SYSTEM IF INSULATION IS NOT SUPPORTED ON BOTH SIDES BY GYPSUM BOARD. WHERE DOUBLE STUD PARTITIONS ARE USED TO FORM CHASE PARTITIONS ONLY PROVIDE SOUND ATTENUATION BLANKETS ON ONE SIDE OF CHASE
8.	GYPSUM BOARD SCHEDULE - 5/8" TYPE "X-MR" GYPSUM BOARD UNLESS NOTED OTHERWISE. - CORRIDOR AND STUDENT OCCUPIED SPACES FROM FLOOR TO 8'-0" ABOVE FINISHED FLOOR: 5/8" TYPE "X-MR" ABUSE RESISTANT GYPSUM BOARD

4

MAXIMUM SPACING - GYPSUM BOARD CONTROL JOINTS

CONSTRUCTION AND LOCATION	MAX SINGLE DIMENSION	MAX SINGLE AREA
	FEET	FEET
PARTITION - INTERIOR	30	-
CEILING - INTERIOR		
W/ PERIMETER RELIEF	50	2500
W/O PERIMETER RELIEF	30	900

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Sheet Title

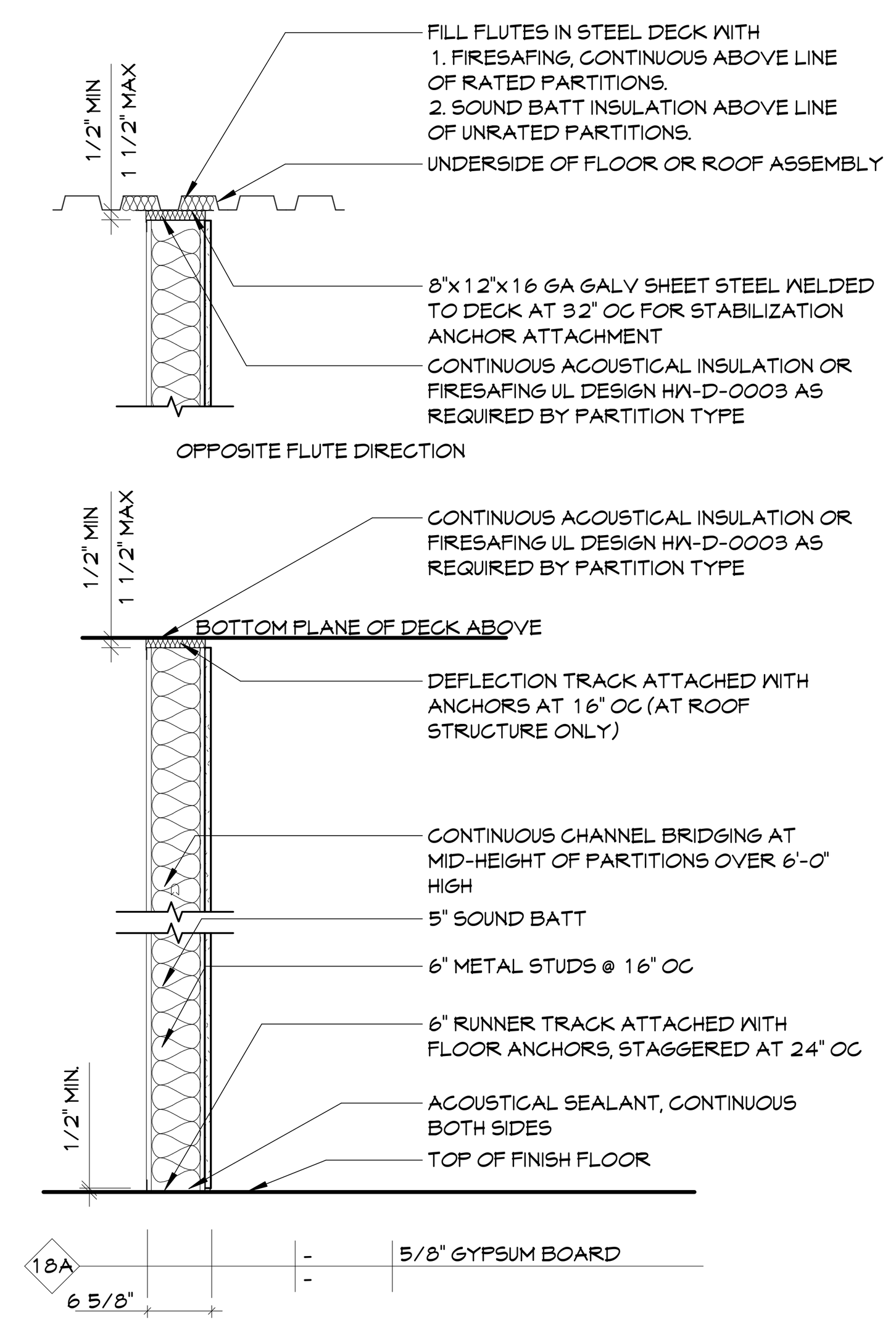
PARTITION TYPES

Sheet No.

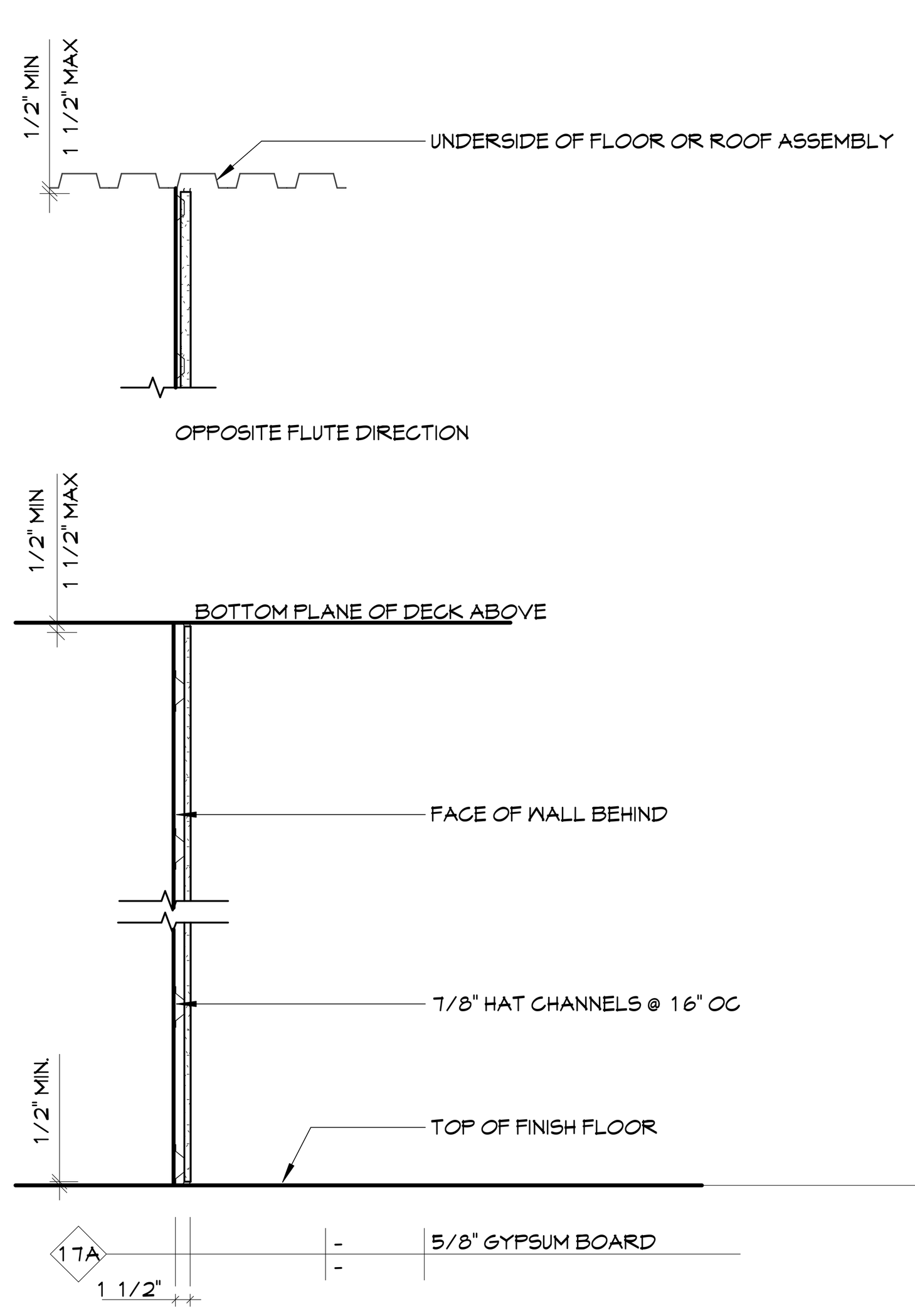
CTE A701

CONSTRUCTION DOCUMENTS

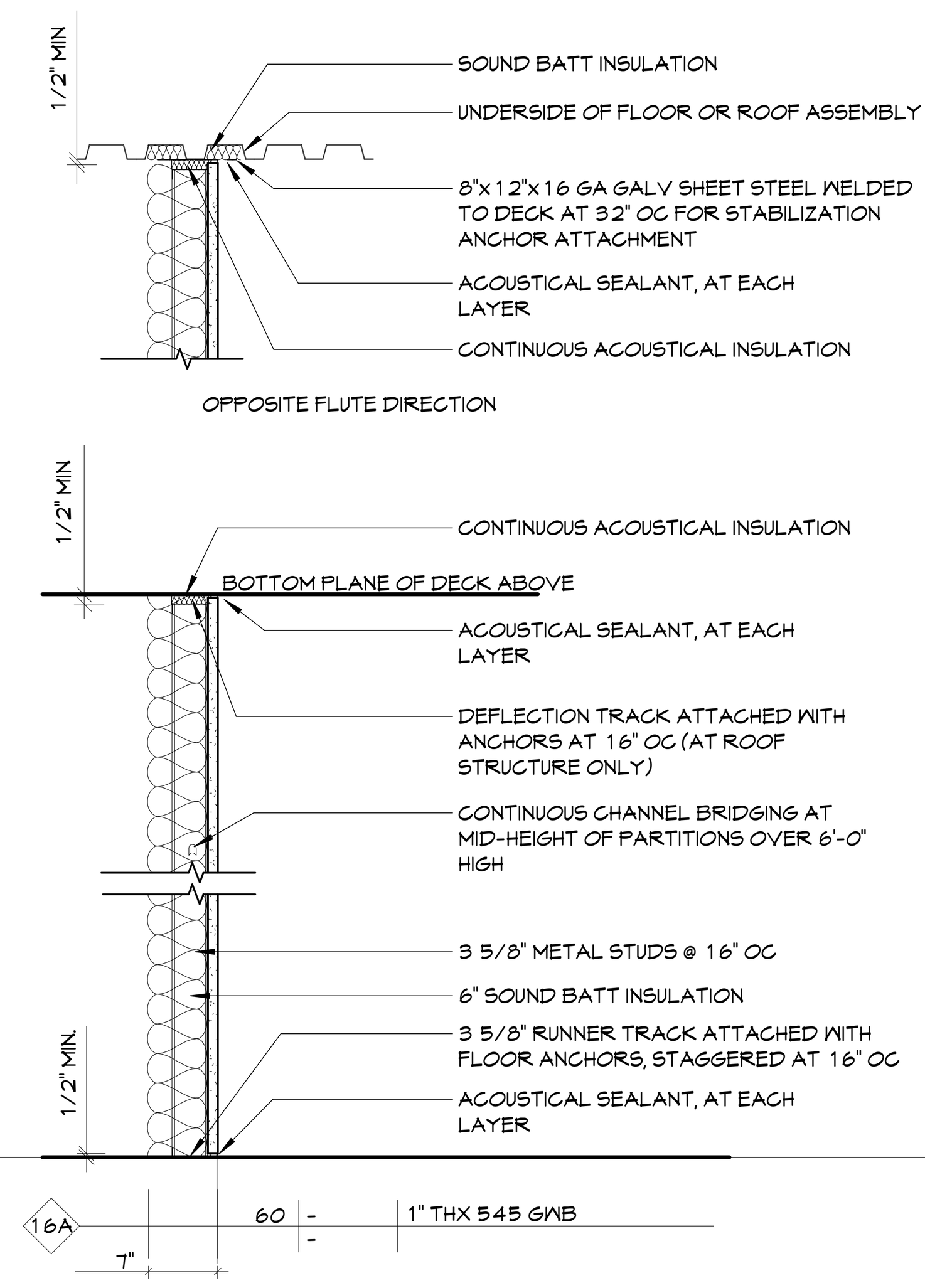
Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - ARCH.rvt



18 PARTITION TYPE '18'
A702 3/4" = 1'-0"

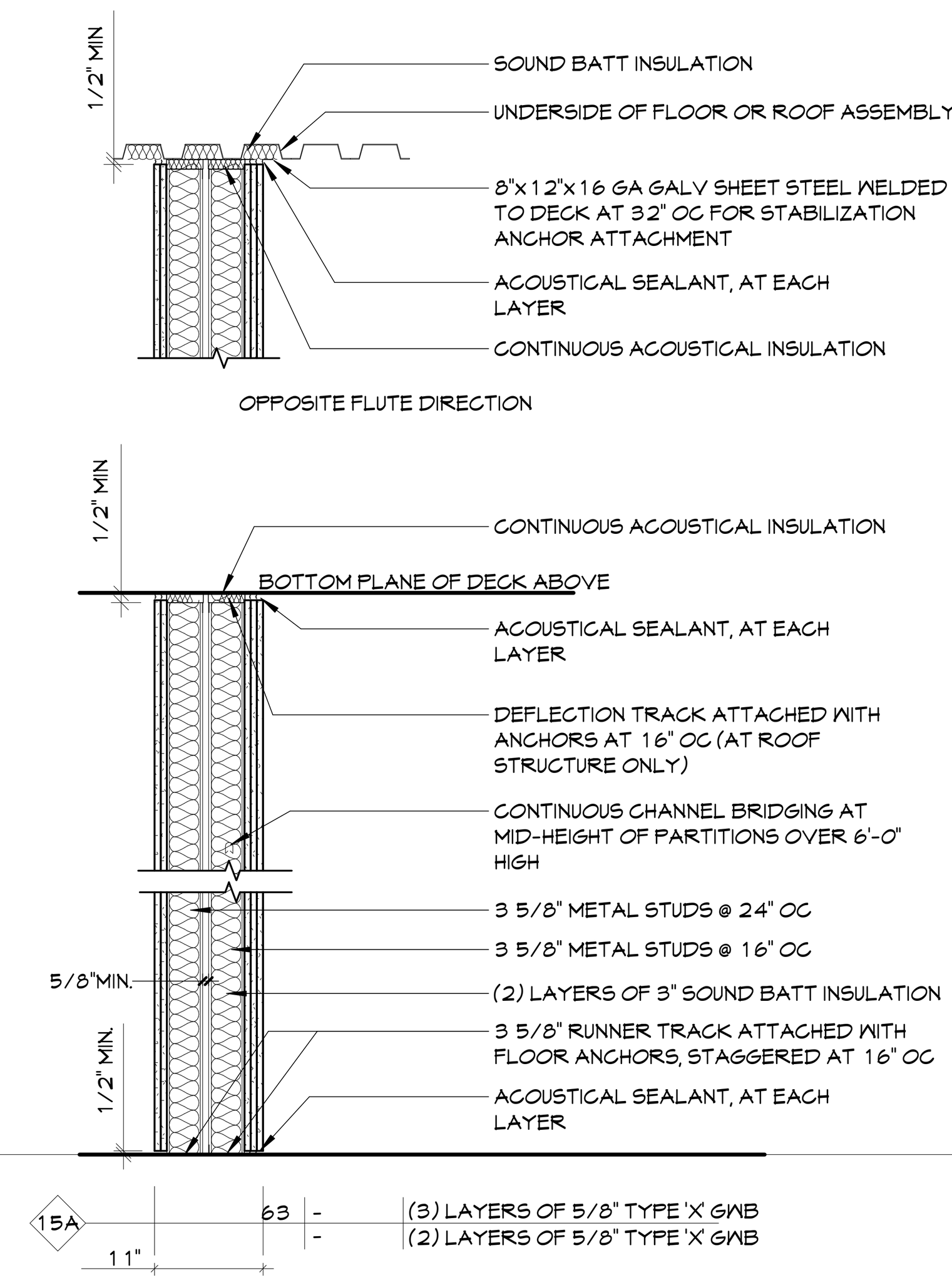


17 PARTITION TYPE '17'
A702 3/4" = 1'-0"



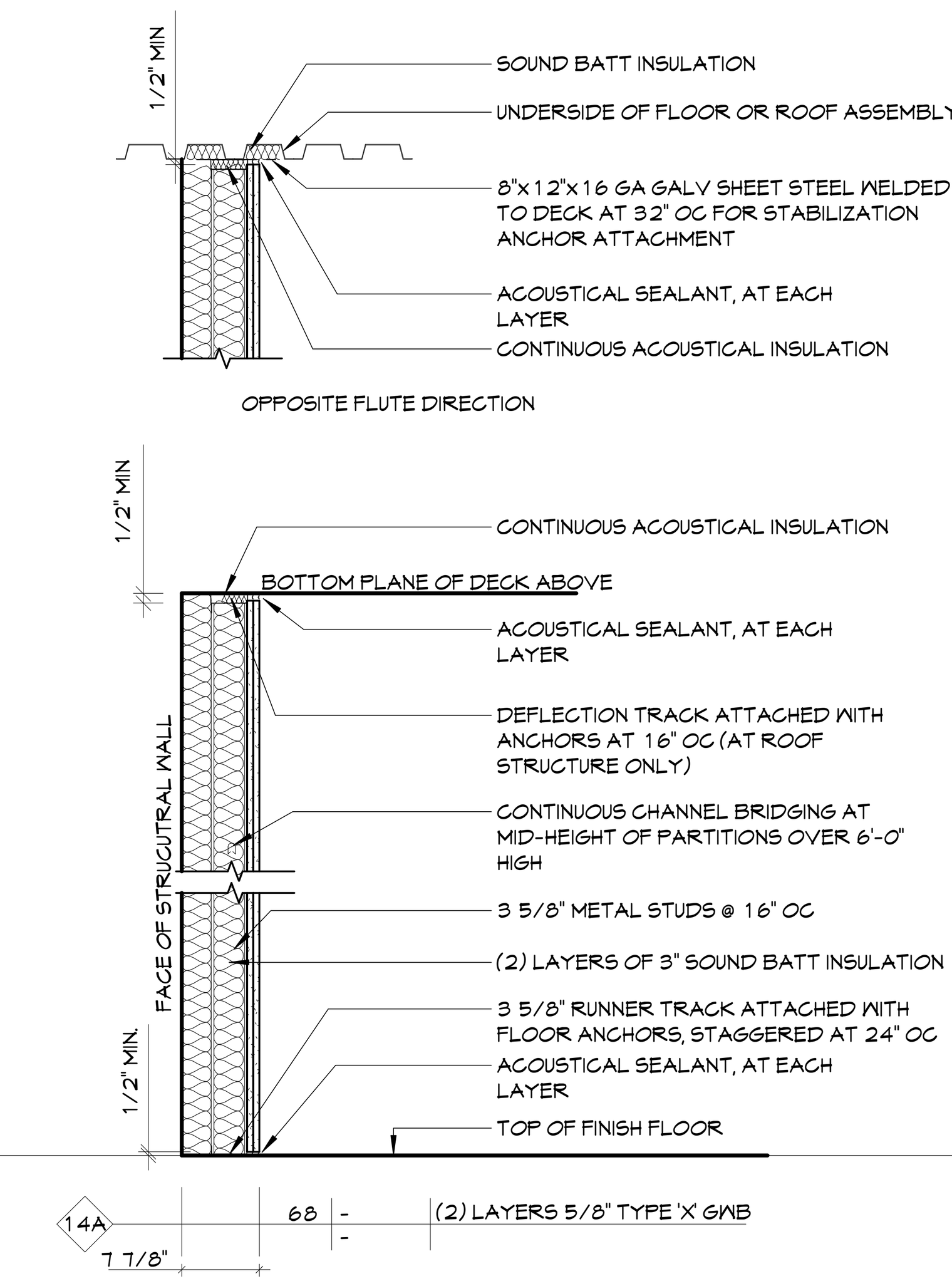
NOTES
1. CUALK ALL JOINTS GWB JOINTS BEFORE APPLYING JOINT COMPOUND.
2. TYPICAL AT ALL ELECTRICAL BOXES:
   A. NO DATA PLATES - ALL METAL BOXES.
   B. NO BACK TO BACK BOXES.
   C. ALL BOXES OFFSET AT LEAST 36" ROOM TO ROOM.
   D. PROVIDE FOAM THERMAL GASKET UNDER PLATE.
   E. PROVIDE FIRESTOP PUTTY PAD, CAULK SOLID BOX PERIMETER.

16 PARTITION TYPE '16'
A702 3/4" = 1'-0"



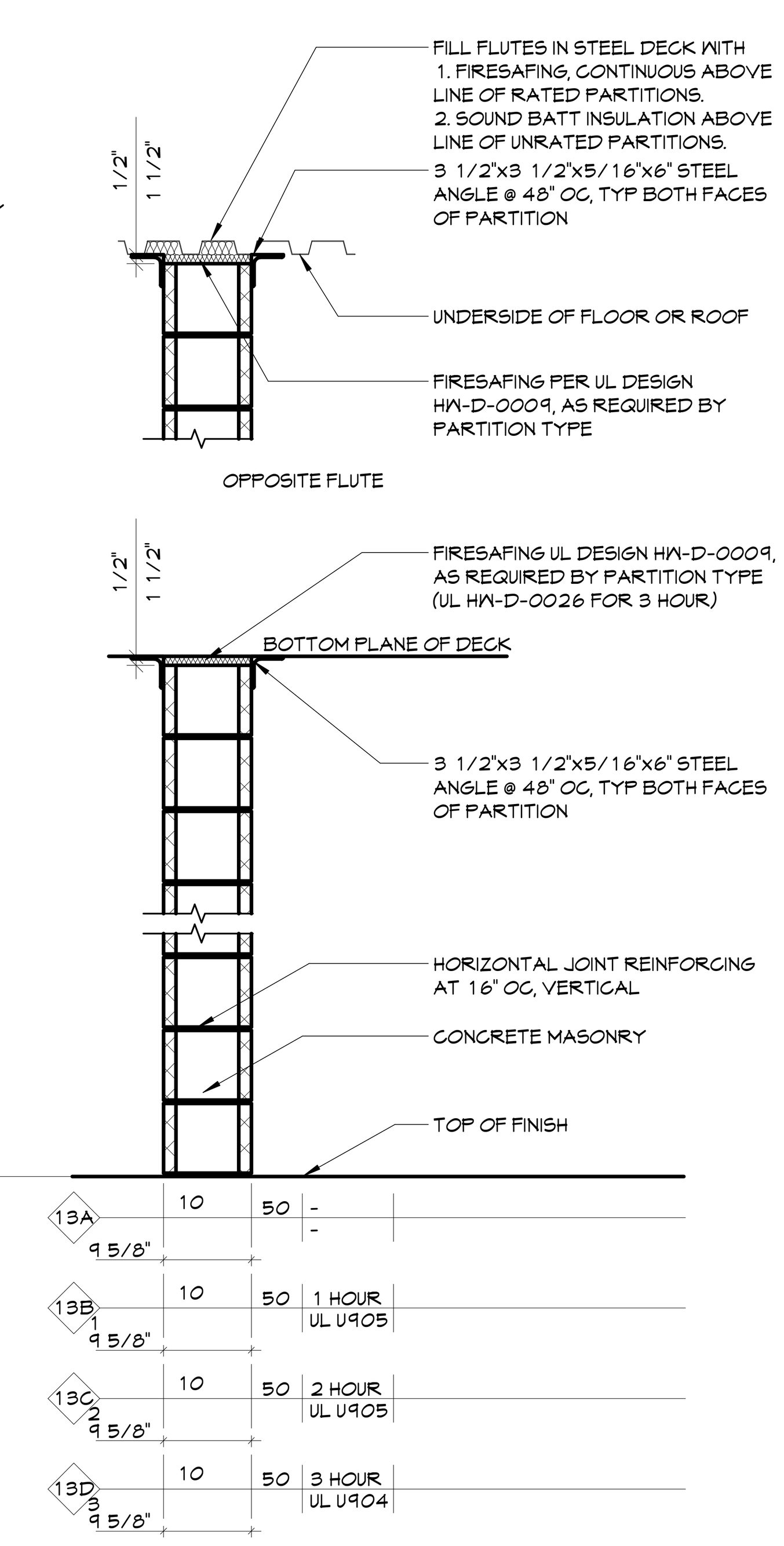
NOTES
1. ALTERNATE TYPE 'X' GWB LAYER ORRIENTATIONS - CAULK ALL JOINTS. COMPOUND FILL JOINTS IN EACH LAYER.
2. CAULK ENTIRE STUD VERTICALLY BEFORE FIRST LAYER OF GWB
3. TYPICAL AT ALL ELECTRICAL BOXES:
   A. NO DATA PLATES - ALL METAL BOXES.
   B. NO BACK TO BACK BOXES.
   C. ALL BOXES OFFSET AT LEAST 36" ROOM TO ROOM.
   D. PROVIDE FOAM THERMAL GASKET UNDER PLATE.
   E. PROVIDE FIRESTOP PUTTY PAD, CAULK SOLID BOX PERIMETER.

15 PARTITION TYPE '15'
A702 3/4" = 1'-0"



NOTES
1. ALTERNATE TYPE 'X' GWB LAYER ORRIENTATIONS - CAULK ALL JOINTS. COMPOUND FILL JOINTS IN EACH LAYER.
2. TYPICAL AT ALL ELECTRICAL BOXES:
   A. NO DATA PLATES - ALL METAL BOXES.
   B. NO BACK TO BACK BOXES.
   C. ALL BOXES OFFSET AT LEAST 36" ROOM TO ROOM.
   D. PROVIDE FOAM THERMAL GASKET UNDER PLATE.
   E. PROVIDE FIRESTOP PUTTY PAD, CAULK SOLID BOX PERIMETER.

14 PARTITION TYPE '14'
A702 3/4" = 1'-0"



13 PARTITION TYPE '13'
A702 3/4" = 1'-0"

PARTITION NOTES

PARTITION TYPE
FIRE RATING
PARTITION MODIFIER

NOM. CMU SIZE	STC RATING	FIRE RATING	SIDE ONE FINISH
		TEST DESIGN	SIDE TWO FINISH

GENERAL PARTITION NOTES

1	THIS PARTITION TYPE SCHEDULE IS GENERIC IN NATURE. NOT ALL OF THE PARTITION TYPES ILLUSTRATED ON THIS SHEET HAVE BEEN UTILIZED IN THIS PROJECT. SEE FLOOR PLANS FOR LOCATIONS
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PARTITION MODIFIER LEGEND

A	ALIGN FACES OF ADJACENT CONSTRUCTION
B	USE SAME PARTITION TYPE ON ONE ADJACENT RETURN WALL
C	USE SAME PARTITION TYPE ON TWO ADJACENT RETURN WALL
D	TOP OF PARTITION AFF VARIES. SEE DETAILS FOR ADDITIONAL INFORMATION
E	PROVIDE LEVEL 5 FINISH

FIRE RATED SYSTEMS

1. PROVIDE FIRE RATED JOINT SYSTEMS AT ALL INTERSECTIONS OF FIRE RATED PARTITION ASSEMBLIES AND FIRE RATED FLOOR/ROOF ASSEMBLIES. THE FIRE RATED JOINT SYSTEM SHALL HAVE A MINIMUM FIRE RESISTANCE RATING GREATER THAN OR EQUAL TO THE PARTITION IN WHICH IT IS BEING USED. THIS JOINT SYSTEM MUST BE AN APPROVED ASSEMBLY TESTED BY A NATIONALLY RECOGNIZED TESTING AGENCY.
2. PROVIDE THROUGH-PENETRATION FIRE STOP SYSTEM AT ALL PENETRATIONS THROUGH FIRE RATED PARTITION, FLOOR AND ROOF ASSEMBLIES. THE THROUGH-PENETRATION FIRE STOP SYSTEM SHALL HAVE A MINIMUM FIRE RESISTANCE RATING GREATER THAN OR EQUAL TO THE ASSEMBLY THAT IT IS BEING USED IN. THIS FIRE STOP SYSTEM MUST BE AN APPROVED ASSEMBLY TESTED BY A NATIONALLY RECOGNIZED TESTING AGENCY.
3. ANY PRODUCT THAT EMITS ODOR MUST MEET THE REQUIREMENTS OF THE NEW YORK STATE EDUCATION DEPARTMENT.
4. CONCEALED VERTICAL SPACES IN PARTITIONS SHALL BE FILLED WITH NON COMBUSTIBLE MATERIAL, OR FIRE-STOPPED AT EACH FLOOR LEVEL AND AT THE CEILING OF THE UPPERMOST STORY, SO THAT SUCH SPACES WILL NOT BE CONTINUOUS FOR MORE THAN ONE STORY, OR COMMUNICATE WITH CONCEALED HORIZONTAL SPACES IN THE FLOOR OR ROOF CONSTRUCTION.
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CMU WALL SYSTEMS

1. ALL PLAN DIMENSIONS ARE TO FACE OF CMU, UNLESS NOTED OTHERWISE.
2. PROVIDE HORIZONTAL JOINT REINFORCEMENT EVERY OTHER CMU COURSE.
3. PROVIDE (2) VERTICAL #4 BARS IN FULLY GROUTED CORES AT THE FOLLOWING LOCATIONS:
   A. PARTITION INTERSECTIONS (REINFORCE FULL HEIGHT)
   B. DOOR OPENINGS (REINFORCE FULL HEIGHT OF DOOR)
   C. WINDOW OPENINGS (REINFORCE FLOOR TO WINDOW HEAD)
   D. WALL ENDS (REINFORCE FULL HEIGHT)
4. SEE STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REINFORCING AND ANCHORING REQUIREMENTS.

METAL STUD PARTITION AND CEILING SYSTEMS

1. ALL DIMENSIONS ARE TO THE FACE OF METAL STUDS UNLESS NOTED OTHERWISE.
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3. PROVIDE METAL D BEAD, BACKER ROD AND SEALANT AT THE INTERSECTION OF GYP BD PARTITIONS AND MASONRY PARTITIONS.
4. PROVIDE ACOUSTICAL SEALANT IN THE FOLLOWING LOCATIONS:
   A. PERIMETER OF PARTITIONS
   B. RUNNERS
   C. ELECTRICAL OUTLETS
   D. PARTITION PENETRATIONS AND OPENINGS
5. PROVIDE BLOCKING WITHIN PARTITIONS TO SUPPORT PARTITION MOUNTED EQUIPMENT, FIXTURES AND ACCESSORIES. COORDINATE WITH CABINETRY DETAILS AND MEP DRAWINGS.
6. ALL INTERIOR METAL STUDS AND METAL FURRING AT PARTITIONS ARE 20 GAUGE UNLESS OTHERWISE NOTED. ALL INTERIOR METAL STUDS AND FURRING FOR CEILING SOFFITS ARE 25 GAUGE UNLESS NOTED OTHERWISE.
7. ANCHOR INSULATION TO STUD SYSTEM WITH WIRE SUPPORT SYSTEM IF INSULATION IS NOT SUPPORTED ON BOTH SIDES BY GYPSUM BOARD. WHERE DOUBLE STUD PARTITIONS ARE USED TO FORM CHASE PARTITIONS ONLY PROVIDE SOUND ATTENUATION BLANKETS ON ONE SIDE OF CHASE
4 8. GYPSUM BOARD SCHEDULE
   - 5/8" TYPE "X-MR" GYPSUM BOARD UNLESS NOTED OTHERWISE.
   - CORRIDOR AND STUDENT OCCUPIED SPACES FROM FLOOR TO 8'-0" ABOVE FINISHED FLOOR: 5/8" TYPE "X-MR" ABUSE RESISTANT GYPSUM BOARD

MAXIMUM SPACING - GYPSUM BOARD CONTROL JOINTS

CONSTRUCTION AND LOCATION	MAX SINGLE DIMENSION	MAX SINGLE AREA
	FEET	FEET
PARTITION - INTERIOR	30	-
CEILING - INTERIOR		
W/ PERIMETER RELIEF	50	2500
W/O PERIMETER RELIEF	30	900

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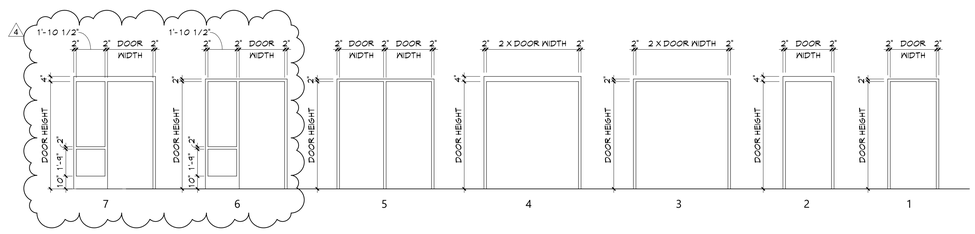
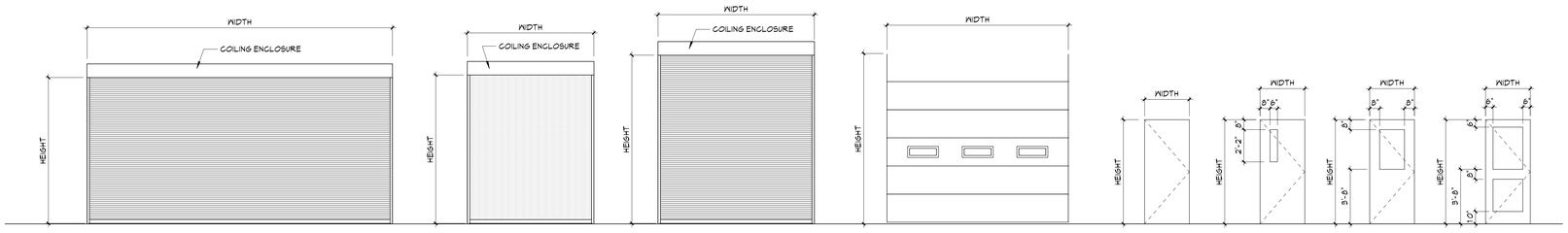
Sheet Title
PARTITION TYPES

Sheet No.
CTE A702

CONSTRUCTION DOCUMENTS



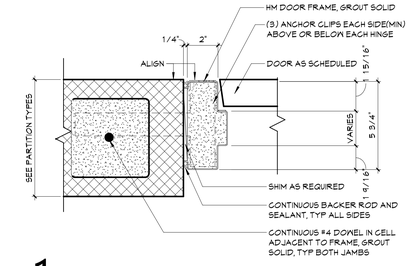
FRAME TYPES
1/4" = 1'-0"



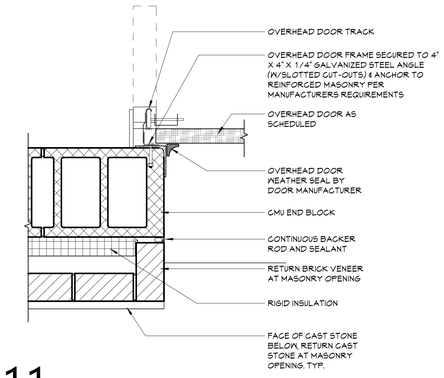
DOOR TYPES
1/4" = 1'-0"

GLAZING TYPES	
G1	TINTED INSULATED GLASS
G2	CLEAR INSULATED GLASS
G3	FIRE PROTECTED SAFETY GLASS
G4	FULLY TEMPERED GLASS, 1/4" CLEAR
G5	LAMINATED GLASS
G6	SPANDREL GLASS
G7	SHOOTER/ATTACK RESISTANT INSULATED GLASS

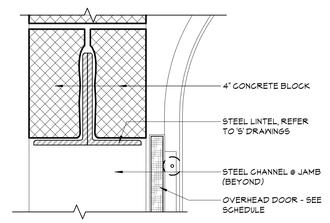
DOOR/FRAME MATERIALS	
ALUM	ALUMINUM
ANOD	ANODIZED
EXST	EXISTING TO REMAIN
FF	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PLASTIC
HM	HOLLOW METAL
PT	PAINTED
ST	STEEL
WD	WOOD



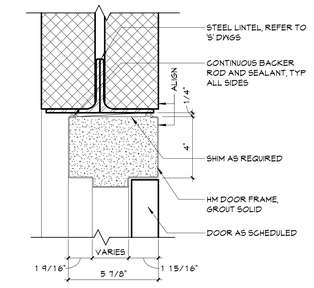
1 JAMB DETAIL
A901 3" = 1'-0"



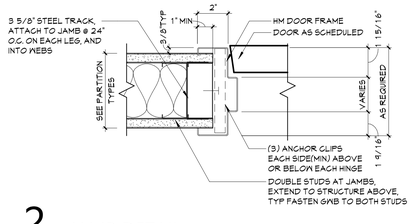
11 JAMB DETAIL
A901 1 1/2" = 1'-0"



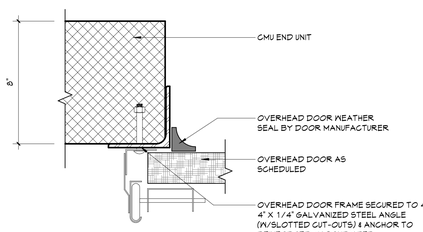
8 HEAD DETAIL
A901 3" = 1'-0"



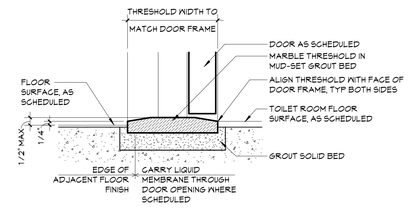
5 HEAD DETAIL
A901 3" = 1'-0"



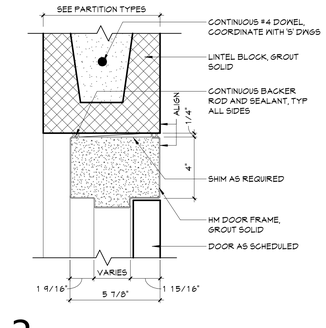
2 JAMB DETAIL
A901 3" = 1'-0"



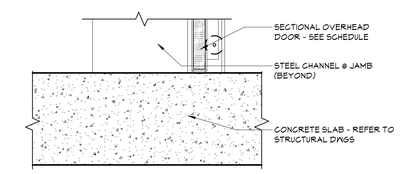
9 JAMB DETAIL
A901 3" = 1'-0"



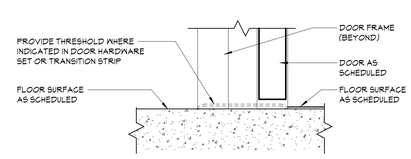
6 THRESHOLD DETAIL
A901 3" = 1'-0"



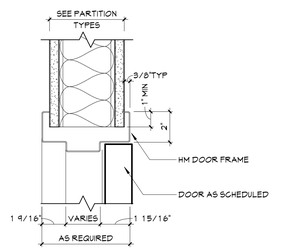
3 HEAD DETAIL
A901 3" = 1'-0"



10 THRESHOLD DETAIL
A901 3" = 1'-0"



7 THRESHOLD DETAIL
A901 3" = 1'-0"



4 HEAD DETAIL
A901 3" = 1'-0"

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NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

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Sheet Title
DOOR DETAILS

Sheet No.
CTE A901

CONSTRUCTION DOCUMENTS

DOOR SCHEDULE - FIRST FLOOR

DOOR NUMBER	DOOR											FRAME						LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
	QUANTITY	FROM		TO		WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD DETAIL	JAMB DETAIL	SILL DETAIL							
100		V101	WEST VEST	100	FRONT OFFICE	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S31	AL	FF	1/A921	1/A921	7/A901	-	G5	26.0	-	-		100
100A	1	100	FRONT OFFICE	100A	SECURITY	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	G5 △4	11.0	-	-		100A
100A.1		100A	SECURITY	V101	WEST VEST	2' - 6"	4' - 0"	2"	OH3	-	-	-	-	-	11/A912	-	10/A912	20	-	42.0	-	-	3	100A.1
100B	1	100	FRONT OFFICE	100B	MEETING ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	11.0	-	-		100B
100C	1	100	FRONT OFFICE	100C	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	11.0	-	-		100C
100D	1	100	FRONT OFFICE	100D	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	11.0	-	-		100D
100E	1	100	FRONT OFFICE	100E	VAULT	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	-	-	27.0	-	-		100E
100F	1	100M	PASSAGE	100F	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	6/A901	-	-	11.0	-	-		100F
100G	1	100M	PASSAGE	100G	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	6/A901	-	-	14.0	-	-		100G
100H	1	100M	PASSAGE	100H	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	11.0	-	-		100H
100J	1	100	FRONT OFFICE	100J	WORK BASED LEARNING	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	G5 △4	11.0	-	-		100J
100K	1	100	FRONT OFFICE	100K	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		100K
100L		C101	CORRIDOR	100	FRONT OFFICE	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S38	AL	FF	1/A921	1/A921	7/A901	-	G5	7.0	-	-		100L
100M	1	C101	CORRIDOR	100M	PASSAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	4.0	-	-		100M
101	1	C101	CORRIDOR	101	HEALTH OFFICE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		101
101A	1	101	HEALTH OFFICE	101A	ISOLATION ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	28.0	-	-		101A
101B	1	101	HEALTH OFFICE	101B	SECURE STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	19.0	-	-		101B
101C	1	101	HEALTH OFFICE	101C	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	6/A901	-	-	14.0	-	-		101C
101D	1	101	HEALTH OFFICE	101D	EXAM ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	28.0	-	-		101D
102	1	C101	CORRIDOR	102	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		102
103	1	C101	CORRIDOR	103	GROOMING	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		103
103A	1	103	GROOMING	103A	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	8.0	-	-		103A
103B	1	103A	STORAGE	103B	CUST.	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	20.0	-	-		103B
103C	1	103A	STORAGE	103C	LOCKED STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	20.0	-	-		103C
103D		103	GROOMING	103D	DOG RUN	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S2	AL	FF	1/A922	1/A922	8/A351	-	G7	30.0	-	AC	10	103D
104	1	C101	CORRIDOR	104	VET TECH	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-		△2	104
104A	1	104	VET TECH	103A	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	9.0	-	-		104A
104B		104	VET TECH	103D	DOG RUN	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S2	AL	FF	1/A922	1/A922	8/A351	-	G7	30.0	-	AC	10	104B
105	PR	C101	CORRIDOR	105	PLUMBING EQ RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	-	-	21.0	-	-		105
105A	PR	105	PLUMBING EQ RM		EXTERIOR	3' - 6"	8' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	13/A352	6/A352	8/A351	-	-	32.0	-	AC	10	105A
106	PR	C102	CORRIDOR	106	CUSTODIAL SUPPLY RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	-	-	21.0	-	-		106
107	1	C102	CORRIDOR	107	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		107
108	1	C102	CORRIDOR	108	COSMETOLOGY	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	5.0	-	-		108
108A	1	108	COSMETOLOGY	108A	DISPENSING	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		108A
109	1	C102	CORRIDOR	109	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	5.0	-	-		109
110	1	C102	CORRIDOR	110	BARBERING LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		110
110A	1	110	BARBERING LAB	110A	DISPENSING	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		110A
111	1	V102	SOUTH VEST	111	SECURITY	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	5.0	-	-		111
111.1		111	SECURITY	V102	SOUTH VEST	2' - 6"	4' - 0"	2"	OH3	-	-	-	-	-	11/A912		10/A912	20	-	42.0	-	-	3	111.1
112	PR	C101	CORRIDOR	112	ELEC RM	3' - 0"	7' - 0"	1 3/4"	F	WD	PT	3 △4	HM	PT	4/A901	2/A901	7/A901	60	-	40.0	-	-		112
115	1	C101	CORRIDOR	115	FOOD SERV. AREA	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	5.0	-	-		115
115A	1	C101	CORRIDOR	115A	FOOD SERV. STORAGE	3' - 4"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	18.0	-	-		115A
115B	1	C101	CORRIDOR	115	FOOD SERV. AREA	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	5.0	-	-		115B
115C		116	CAFETERIA	115	FOOD SERV. AREA	20' - 0"	9' - 6"	2"	OH4	-	-	-	-	-	2/A355	6/A255		-	-	42.0	-	-	4 / 6	115C
116	1	C101	CORRIDOR	116	CAFETERIA	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	6 △4	HM	PT	4/A901	2/A901	7/A901	-	G3	1.0	-	-		116
116A		C101	CORRIDOR	116	CAFETERIA	8' - 0"	9' - 8"	2"	OH3	-	-	-	-	-	4/A355	9/A355	5/A355	20	-	42.0	-	-	3	116A
116B		C101	CORRIDOR	116	CAFETERIA	8' - 0"	9' - 8"	2"	OH3	-	-	-	-	-	4/A355	9/A355	5/A355	20	-	42.0	-	-	3	116B
116C	1	C101	CORRIDOR	116	CAFETERIA	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	6 △4	HM	PT	4/A901	2/A901	7/A901	-	G3	1.0	-	-		116C
116D		C101	CORRIDOR	116	CAFETERIA	8' - 0"	9' - 8"	2"	OH3	-	-	-	-	-	4/A355	8/A355	5/A355	20	-	42.0	-	-	3	116D
116E	1	C101	CORRIDOR	116	CAFETERIA	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	1 △4	HM	PT	4/A901	2/A901	7/A901	-	G3	1.0	-	-		116E
116F	1	C101	CORRIDOR	116	CAFETERIA	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	G3	1.0	-	-		116F
116G		C101	CORRIDOR	116	CAFETERIA	8' - 0"	9' - 8"	2"	OH3	-	-	-	-	-	4/A355	8/A355	5/A355	20	-	42.0	-	-	3	116G
116H		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116H
116I		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116I
116J		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116J
116K		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116K
116L		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116L
116M		C101	CORRIDOR	116	CAFETERIA	10' - 0"	5' - 2"	2"	OH3	-	-	-	-	-	4/A355	7/A355	3/A355	20	-	42.0	-	-	3	116M
117	1	C101	CORRIDOR	117	AUTO TECH SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		117
117A	1	117	AUTO TECH SHOP	117A	AUTO TECH OFFICE	3' - 0"	7' - 0"	1 3/4"	G	HM	PT	7 △4	HM	PT	5/A901	1/A901	7/A901	45	G3	13.0	-	-	1	117A
117B	1	117	AUTO TECH SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	31.0	-	AC	10 △2	117B
117C	1	117	AUTO TECH SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	31.0	-	AC	10	117C
117D		117	AUTO TECH SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117D
117E		117	AUTO TECH SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117E
117F		117	AUTO TECH SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117F
117G		117	AUTO TECH SHOP		EXTERIOR	8' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117G
117H		117	AUTO TECH SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117H
117I		117	AUTO TECH SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	117I
118	1	C101	CORRIDOR	118	STORAGE	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	7	HM	PT	5/A901	1/A901	7/A901	-	G3	15.0	-	-	1 △4	118
119	1	119E	PASSAGE	119	WELDING SHOP	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	45	-	4.0	-	-		119
119A	1	119	WELDING SHOP	119A	WELDING OFFICE	3' - 0"	7' - 0"	1 3/4"	G	HM	PT	7 △4	HM	PT	5/A901	1/A901	7/A901	45	G3	13.0	-	-	1	119A
119B	1	119E	PASSAGE	119B	DRESSING ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	14.0	-	-		119B
119C	1	119E	PASSAGE	119C	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	6/A901	-	-	14.0	-	-		119C
119D	1	119E	PASSAGE	119D	DRESSING ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	14.0	-	-		119D
119E	1	C101	CORRIDOR	119E	PASSAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	4.0	-	-		119E
119EA	1	119E	PASSAGE	117	AUTO TECH SHOP	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	45	-	6.0	-	-		119EA
119F	PR	119F	GAS & METAL STOCK STORAGE		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	AC	10 △2	119F
119G	1	119	WELDING SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	AC	10	119G
119H		119	WELDING SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	119H
119I	1	119	WELDING SHOP	117	AUTO TECH SHOP	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	45	-	41.0	-	-		119I
119J	1	119	WELDING SHOP	120	AUTOBODY SHOP	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	45	-	41.0	-	-		119J
120	1	C101	CORRIDOR	120	AUTOBODY SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		120
120A	1	120	AUTOBODY SHOP	120A	AUTOBODY OFFICE	3' - 0"	7' - 0"	1 3/4"	G	HM	PT	7 △4	HM	PT	5/A901	1/A901	7/A901	45	G3	13.0	-	-	1	120A
120B	1	120	AUTOBODY SHOP	120B	ELEC RM	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	2	HM	PT	5/A901	1/A901	7/A901	60	-	43.0	-	-		120B
120C	1	120	AUTOBODY SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	-		120C
120D		120	AUTOBODY SHOP		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	120D
120E		120	AUTOBODY SHOP		EXTERIOR	12' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	10/A353	11/A901	9/A353	-	G7	42.0	-	-	2 / 7	120E
121	1	C101	CORRIDOR	121	CUSTODIAL	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	-	16.0	-	-		121
122	PR	C101	CORRIDOR	122	LOADING	3' - 10"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	45	-	21.0	-	-		122
122A	1	122	LOADING		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	AC	10	122A
122B		122	LOADING		EXTERIOR	8' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	-	42.0	-	-	8 △2	122B
123	PR	122	LOADING	123	BOILER RM	3' - 0"	7' - 0"	1 3/4"	F	HM	PT	4	HM	PT	5/A901	1/A901	7/A901	60	-	21.0	-	-		123
123A	PR	123	BOILER RM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	8/A351	-	-	34.0	-	AC	10	123A
124	1	C101	CORRIDOR	124	PLUMBING SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		124
124A	1	C103	CORRIDOR	124	PLUMBING SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-	△3	124A
124B		124	PLUMBING SHOP	125	HVAC SHOP	10' - 0"	11' - 0"	2"	OH2	-	-	-	-	-	8/A901	9/A901	10/A901	45	-	42.0	-	-	2 / 9	124B
124C	1	124	PLUMBING SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	G7	33.0	-	AC	10 △2	124C
124D		124	PLUMBING SHOP		EXTERIOR	12' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	124D
125	1	C103	CORRIDOR	125	HVAC SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		125
125A	1	C103	CORRIDOR	125	HVAC SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-	△3	125A
125B		125	HVAC SHOP	128	ELECTRICAL SHOP	10' - 0"	11' - 0"	2"	OH2	-	-	-	-	-	8/A901	9/A901	10/A901	45	-	42.0	-	-	2 / 9	125B
125C	1	125	HVAC SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	G7	31.0	-	AC	10 △2	125C
125D		125	HVAC SHOP		EXTERIOR	12' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	125D
126	1	C103	CORRIDOR	126	ELEC. RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	-	43.0	-	-		126
127	1	C103	CORRIDOR	127	IDF	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	17.0	-	-		127
128	1	C103	CORRIDOR	128	ELECTRICAL SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		128
128A	1	C103	CORRIDOR	128	ELECTRICAL SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-	△2	128A
128B	1	128	ELECTRICAL SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	G7	33.0	-	AC	10	128B
128C		128	ELECTRICAL SHOP		EXTERIOR	12' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	128C
129	1	C103	CORRIDOR	129	CONSTRUCTION SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-		129
129A	1	129	CONSTRUCTION SHOP	129A	OFFICE	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5 △4	12.0	-	-		129A
129B	PR	129	CONSTRUCTION SHOP	129B	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	-	-	22.0	-	-		129B
129C	1	129	CONSTRUCTION SHOP	129C	CONSTRUCTION STORAGE	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	60	G3	29.0	-	-	△3	129C
129CA		129	CONSTRUCTION SHOP	129C	CONSTRUCTION STORAGE	10' - 0"	11' - 0"	2"	OH2	-	-	-	-	-	8/A901	9/A901	10/A901	60	-	42.0	-	-	2 / 9	129CA
129CB		129C	CONSTRUCTION STORAGE		EXTERIOR	10' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	129CB
129CC	1	129C	CONSTRUCTION STORAGE		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	AC	10	129CC
129D	1	C103	CORRIDOR	129	CONSTRUCTION SHOP	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	45	G3	4.0	-	-	△2	129D
129DA	1	129D	MAINTENANCE STORAGE		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	AC	10	129DA
129DB		129D	MAINTENANCE STORAGE		EXTERIOR	10' - 0"	11' - 0"	2"	OH2	-	-	-	-	-	4/A353	11/A901	9/A353	-	-	42.0	-	-	2 / 9	129DB
129F	1	129	CONSTRUCTION SHOP		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	G7	33.0	-	AC	10	129F
129G		129	CONSTRUCTION SHOP		EXTERIOR	12' - 0"	11' - 4"	3"	OH1	-	-	-	-	-	4/A354	11/A901	9/A353	-	G7	42.0	-	-	2 / 8	129G
130	PR	C104	CORRIDOR	130	GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	6/A352	90	- △4	10.0	-	-		130
130A	PR	130	GYMNASIUM	130A	GYM STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	-	-	23.0	-	-		130A

DOOR SCHEDULE - FIRST FLOOR

DOOR NUMBER	DOOR											FRAME						LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
	QUANTITY	FROM		TO		WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD DETAIL	JAMB DETAIL	SILL DETAIL							
130AA	PR	130A	GYM STORAGE		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	8/A351	-	-	33.0	-	-		130AA
130B	PR	C104	CORRIDOR	130	GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	6/A352	90	- △4	10.0	-	-		130B
130C	PR	130	GYMNASIUM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	6/A352	-	-	35.0	-	AC	10 △2	130C
130D	PR	130	GYMNASIUM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	6/A352	-	-	35.0	-	AC	10	130D
130E	PR	130	GYMNASIUM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	6/A352	-	-	35.0	-	AC	10	130E
130F	PR	130	GYMNASIUM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	4	AL	FF	5/A901	1/A901	6/A352	-	-	35.0	-	AC	10	130F
131	1	C103	CORRIDOR	131	GIRLS LOCKER RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	90	-	5.0	-	-		131
131A	1	130	GYMNASIUM	131	GIRLS LOCKER RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	5.0	-	-		131A
132	1	130	GYMNASIUM	132	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	11.0	-	-		132
133	1	130	GYMNASIUM	133	OFFICE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	11.0	-	-		133
134	1	C103	CORRIDOR	134	BOYS LOCKER RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	90	-	5.0	-	-		134
134A	1	130	GYMNASIUM	134	BOYS LOCKER RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	5.0	-	-		134A
136	1	C104	CORRIDOR	136	HOT WATER CLOSET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	17.0	-	-		136
C102	PR	C101	CORRIDOR	C102	CORRIDOR	3' - 8"	7' - 0"	1 3/4"	F	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	90	- △4	51.0	MHO	-		C102
C102A		C102	CORRIDOR		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S14	AL	FF	1/A922	1/A922	8/A351	-	G7	37.0	-	AC	10	C102A
C103		C101	CORRIDOR	C103	CORRIDOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S32	AL	FF	1/A921	1/A921	7/A901	-	G5	49.0	MHO	-	△2	C103
C104		C104	CORRIDOR	C101	CORRIDOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S32	AL	FF	1/A921	1/A921	7/A901	-	G5	49.0	MHO	-		C104
CY101	1	C101	CORRIDOR	CY101	COURTYARD	3' - 0"	7' - 0"	1 3/4"	DG	FRP	FF	2	AL	FF	5/A901	1/A901	8/A351	-	G3	50.0	-	AC	10	CY101
CY101A	PR	C104	CORRIDOR	CY101	COURTYARD	3' - 0"	7' - 0"	1 3/4"	DG	FRP	FF	4	AL	FF	5/A901	1/A901	8/A351	-	G3	63.0	-	AC	10	CY101A
S101	PR	C102	CORRIDOR	S101	STAIR 1	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S101
S101A		S101	STAIR 1		EXTERIOR	3' - 0"	7' - 9 3/4"	1 3/4"	DG	AL	FF	S1	AL	FF	1/A922	1/A922	8/A351	-	G7	38.0	-	AC	10	S101A
S102	PR	C101	CORRIDOR	S102	STAIR 2	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S102
S102A	PR	S102	STAIR 2		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	DG	AL	AL	4	AL	FF	5/A901	1/A901	8/A351	-	G7	39.0	-	AC	10	S102A
S103	PR	S103	STAIR 3	C101	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-	△2	S103
S104	PR	C103	CORRIDOR	S104	STAIR 4	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 △4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S104
S104A	PR	S104	STAIR 4		EXTERIOR	3' - 0"	7' - 8"	1 3/4"	DG	AL	AL	4	AL	FF	5/A901	1/A901	8/A351	-	G7	58.0	-	AC	11	S104A
T101	1	C102	CORRIDOR	T101	WOMEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	25.0	-	-		T101
T102	1	C102	CORRIDOR	T102	MEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	25.0	-	-		T102
T103	1	C101	CORRIDOR	T103	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	6/A901	20	-	52.0	-	-		T103
T104	1	C101	CORRIDOR	T104	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	60	-	52.0	-	-		T104
T105	1	C101	CORRIDOR	T105	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	60	-	52.0	-	-		T105
T106	1	C101	CORRIDOR	T106	MEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	45	-	25.0	-	-		T106
T107	1	C101	CORRIDOR	T107	WOMEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	45	-	25.0	-	-		T107
T108	1	C104	CORRIDOR	T108	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	52.0	-	-		T108
T109	1	C104	CORRIDOR	T109	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	52.0	-	-		T109
V101		C101	CORRIDOR	V101	WEST VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S30	AL	FF	1/A921	1/A921	7/A901	-	G5	53.0	-	AC	11	V101
V101A		C101	CORRIDOR	V101	WEST VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S30	AL	FF	1/A921	1/A921	7/A901	-	G5	54.0	-	-	△2	V101A
V101B		V101	WEST VEST		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S3	AL	FF	1/A922	1/A922	8/A351	-	G7	55.0	-	AC	10	V101B
V101C		V101	WEST VEST		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S3	AL	FF	1/A922	1/A922	8/A351	-	G7	58.0	-	AC	11	V101C
V102	PR	C102	CORRIDOR	V102	SOUTH VEST	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	3	HM	PT	4/A901	2/A901	7/A901	-	G5	59.0	-	-		V102
V102A	PR	V102	SOUTH VEST		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	DG	AL	AL	4	AL	FF	5/A901	1/A901	8/A351	-	G7	62.0	-	AC	11	V102A
V103		C101	CORRIDOR	V103	EAST VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S36	AL	FF	1/A921	1/A921	7/A901	-	G5	54.0	-	-		V103
V103A		C101	CORRIDOR	V103	EAST VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S36	AL	FF	1/A921	1/A921	7/A901	-	G5	53.0	-	-		V103A
V103B		V103	EAST VEST		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S5	AL	FF	1/A922	1/A922	8/A351	-	G7	58.0	-	AC	11	V103B
V103C		V103	EAST VEST		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S5	AL	FF	1/A922	1/A922	8/A351	-	G7	57.0	-	AC	10	V103C
V104		C103	CORRIDOR	V104	NORTH VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S34	AL	FF	1/A921	1/A921	7/A901	-	G5	53.0	- △2	-		V104
V104A	PR	V104	NORTH VEST		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	DG	AL	AL	4	AL	FF	5/A901	1/A901	8/A351	-	G7	62.0	-	AC	11	V104A
V105		C104	CORRIDOR	V105	NW VEST	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S33	AL	FF	1/A921	1/A921	7/A901	-	G5	56.0	-	-		V105
V105A		V105	NW VEST		EXTERIOR	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S4	AL	FF	1/A922	1/A922	8/A351	-	G7	58.0	-	AC	11	V105A

REMARKS:

1. DOOR WITH SIDELITE.
2. OVERHEAD DOOR.
3. SMOKE CURTAIN.
4. SECURITY GRILLE.
5. ACOUSTICAL DOOR WITH STC RATING: 61.
6. MOTOR OPERATED.
7. FULL VERTICAL TRACK.
8. STANDARD LIFT TRACK.
9. ~~COILING DOOR, MOTOR OPERATED.~~
10. DOOR CONTACT SENSOR, COORDINATE WITH 'T' DRAWINGS
11. DOOR CARD READER ACCESS, COORDINATE WITH T' DRAWINSG

△2

GLAZING TYPES

G1	TINTED INSLUATED GLASS
G2	CLEAR INSULATED GLASS
G3	FIRE PROTECTED SAFETY GLASS
G4	FULLY TEMPERED GLASS, 1/4" CLEAR
G5	LAMINATED GLASS
G6	SPANDREL GLASS
G7	SHOOTER/ATTACK RESISTANT INSULATED GLASS

DOOR/FRAME MATERIALS

ALUM	ALUMINUM
ANOD	ANODIZED
EXST	EXISTING TO REMAIN
FF	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PLASTIC
HM	HOLLOW METAL
PT	PAINTED
ST	STEEL
WD	WOOD

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Consultant

Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

RICHARD L. PECKHAM
019884
REGISTRATION EXPIRATION DATE: 12/31/2026

△#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4
3	5/13/2024	BID Addendum #3
2	5/3/2024	BID Addendum #2

Drawn By:	
Checked By:	
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Sheet Title
DOOR SCHEDULE - FIRST FLOOR

Sheet No.
CTE A902

CONSTRUCTION DOCUMENTS

Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - ARCH.rvt

DOOR SCHEDULE - SECOND FLOOR

DOOR NUMBER	DOOR QUANTITY	DOOR FROM		DOOR TO		DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
200	1	C201	CORRIDOR	200	BIOLOGY LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		200
200A	1	200	BIOLOGY LAB	200A	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		200A
201	1	C201	CORRIDOR	201	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	5.0	-	-		201
202	1	C201	CORRIDOR	202	NURSING LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		202
202A	1	202	NURSING LAB	202A	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		202A
202B	1	202	NURSING LAB	202B	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	14.0	-	-		202B
202C	1	202	NURSING LAB	202C	SOILED STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		202C
202D	1	202	NURSING LAB	202D	CLEAN STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		202D
202E	1	C201	CORRIDOR	202	NURSING LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		202E
203	PR	C201	CORRIDOR	203	CUSTODIAL SUPPLY RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	-	-	21.0	-	-		203
204	1	C202	CORRIDOR	204	TECH WORK RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	17.0	-	-		204
204A	1	204	TECH WORK RM	204A	MDF	3' - 6"	7' - 0"	1 3/4"	F	WD	FF	1 4	HM	PT	4/A901	2/A901	7/A901	60	-	44.0	-	AC		204A
205	1	C202	CORRIDOR	205	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	5.0	-	-		205
206	PR	C202	CORRIDOR	206	CULINARY LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	45	G3	10.0	-	-		206
206A	1	C202	CORRIDOR	206	CULINARY LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2 4	HM	PT	5/A901	1/A901	7/A901	45	G3	2.0	-	-		206A
207	1	C202	CORRIDOR	207	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		207
208	1	C202	CORRIDOR	208	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		208
209	1	C202	CORRIDOR	209	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		209
210	1	C202	CORRIDOR	210	FASHION LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	45	G3	5.0	-	-		210
210A	1	210	FASHION LAB	210A	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2 4	HM	PT	5/A901	1/A901	7/A901	-	-	24.0	-	-		210A
211	PR	C202	CORRIDOR	211	ELEC RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	3	HM	PT	4/A901	2/A901	7/A901	60	-	40.0	-	-		211
212	1	C202	CORRIDOR	212	CULINARY OFF.	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	6.0	-	-		212
213	1	C202	CORRIDOR	213	CULINARY STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	17.0	-	-		213
215	1	C202	CORRIDOR	215	CULINARY CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	G3	4.0	-	-		215
215A	1	C203	CORRIDOR	215	CULINARY CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2 4	HM	PT	5/A901	1/A901	7/A901	-	G3	4.0	-	-		215A
216	1	C202	CORRIDOR	216	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	G3	4.0	-	-		216
216A	1	C203	CORRIDOR	216	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2 4	HM	PT	5/A901	1/A901	7/A901	-	G3	4.0	-	-		216A
217	1	C203	CORRIDOR	217	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	5.0	-	-		217
218	1	C203	CORRIDOR	218	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		218
219	1	C203	CORRIDOR	219	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		219
220	1	C202	CORRIDOR	220	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		220
220A	1	C203	CORRIDOR	220	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G5	6.0	-	-		220A
221	1	C202	CORRIDOR	221	FACULTY LOUNGE	3' - 0"	7' - 0"	1 3/4"	G	WD	FF	7 4	HM	PT	5/A901	1/A901	7/A901	-	G3	3.0	-	-	1	221
221A	1	221	FACULTY LOUNGE	221A	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	14.0	-	-		221A
221B	1	221	FACULTY LOUNGE	221B	MOTHERS RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	14.0	-	-		221B
222	PR	C202	CORRIDOR	222	MECH. EQ. RM.	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	45	-	21.0	-	-		222
223	1	C202	CORRIDOR	223	15:1 CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		223
223A	2	223	15:1 CLASSROOM	225	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	5	HM	PT	4/A901	2/A901	7/A901	-	-	45.0	-	-		223A
224	1	C204	CORRIDOR	224	RESOURCE RM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	5.0	-	-		224
225	1	C204	CORRIDOR	225	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		225
226	1	C204	CORRIDOR	226	SCIENCE CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		226
226A	2	226	SCIENCE CLASSROOM	229	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	5	HM	PT	4/A901	2/A901	7/A901	-	-	45.0	-	-		226A
227	1	C204	CORRIDOR	227	ELEC. RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	60	-	43.0	-	-		227
228	1	C204	CORRIDOR	228	IDF	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	17.0	-	-		228
229	1	C204	CORRIDOR	229	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		229
230	1	C204	CORRIDOR	230	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		230
230A	2	230	CLASSROOM	231	ART CLASSROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	5	HM	PT	4/A901	2/A901	7/A901	-	-	45.0	-	-		230A
231	1	C204	CORRIDOR	231	ART CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	1.0	-	-		231
231A	1	231	ART CLASSROOM	231A	ART STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	25.0	-	-		231A
232	1	C204	CORRIDOR	232	RESOURCE RM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	G3	5.0	-	-		232
233		C204	CORRIDOR	233	GUIDANCE SUITE	3' - 0"	8' - 0"	1 3/4"	DG	AL	FF	S37	AL	FF	1/A921	1/A921	7/A901	-	G5	7.0	-	-		233
233A	1	233	GUIDANCE SUITE	233A	PSYCH. OFF.	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	13.0	-	-		233A
233B	1	233	GUIDANCE SUITE	233B	SOCIAL WORK OFF.	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	13.0	-	-		233B
233C	1	233	GUIDANCE SUITE	233C	GUIDANCE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	13.0	-	-		233C
233D	1	233	GUIDANCE SUITE	233D	GUIDANCE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	13.0	-	-		233D
234	1	C202	CORRIDOR	234	CUSTODIAL	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	7/A901	-	-	16.0	-	-		234
C201	2	C201	CORRIDOR	C202	CORRIDOR	3' - 8"	7' - 0"	1 3/4"	F	WD	FF	5	HM	PT	5/A901	1/A901	7/A901	90	- 4	46.0	MHO	-		C201
C203	2	C203	CORRIDOR	C202	CORRIDOR	3' - 8"	7' - 0"	1 3/4"	G	WD	FF	5	HM	PT	4/A901	2/A901	7/A901	-	G5	46.0	MHO	-		C203
C203A	2	C203	CORRIDOR	C202	CORRIDOR	3' - 8"	7' - 0"	1 3/4"	G	WD	FF	5	HM	PT	4/A901	2/A901	7/A901	-	G5	46.0	MHO	-		C203A
C204	2	C202	CORRIDOR	C204	CORRIDOR	3' - 8"	7' - 0"	1 3/4"	G	WD	FF	5	HM	PT	5/A901	1/A901	7/A901	-	G5	46.0	MHO	-		C204
S201	PR	C201	CORRIDOR	S201	STAIR 1	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S201
S202	PR	C203	CORRIDOR	S202	STAIR 2	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S202
S203	PR	C202	CORRIDOR	S203	STAIR 3	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S203
S204	PR	C204	CORRIDOR	S204	STAIR 4	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	5/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S204
T201	1	C201	CORRIDOR	T201	MEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	25.0	-	-		T201
T202	1	C201	CORRIDOR	T202	WOMEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	25.0	-	-		T202
T203	1	C202	CORRIDOR	T203	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	52.0	-	-		T203
T204	1	C202	CORRIDOR	T204	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	-	-	52.0	-	-		T204
T205	1	C202	CORRIDOR	T205	MEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	60	-	25.0	-	-		T205
T206	1	C202	CORRIDOR	T206	WOMEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	5/A901	1/A901	6/A901	60	-	25.0	-	-		T206

REMARKS:

1. DOOR WITH SIDELITE.
2. OVERHEAD DOOR.
3. SMOKE CURTAIN.
4. SECURITY GRILLE.
5. ACOUSTICAL DOOR WITH STC RATING: 61.
6. MOTOR OPERATED.
7. FULL VERTICAL TRACK.
8. STANDARD LIFT TRACK.
9. COILING DOOR, MOTOR OPERATED.
10. DOOR CONTACT SENSOR, COORDINATE WITH T DRAWINGS
11. DOOR CARD READER ACCESS, COORDINATE WITH T DRAWINGS

GLAZING TYPES

G1	TINTED INSLUATED GLASS
G2	CLEAR INSULATED GLASS
G3	FIRE PROTECTED SAFETY GLASS
G4	FULLY TEMPERED GLASS, 1/4" CLEAR
G5	LAMINATED GLASS
G6	SPANDREL GLASS
G7	SHOOTER/ATTACK RESISTANT INSULATED GLASS

DOOR/FRAME MATERIALS

ALUM	ALUMINUM
ANOD	ANODIZED
EXST	EXISTING TO REMAIN
FF	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PLASTIC
HM	HOLLOW METAL
PT	PAINTED
ST	STEEL
WD	WOOD

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Consultant

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT
RICHARD L. PECKHAM
021984
STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2024

#	DATE	DESCRIPTION
4	5/28/2024	BID Addendum #4

Drawn By:
Checked By:
Proj. #: 44-16-00-01-0-053-001
CSArch Proj. #: 108-2303
Issued for Bid: 4/15/2024

Sheet Title

DOOR SCHEDULE - SECOND FLOOR

Sheet No.

CTE A903

CONSTRUCTION DOCUMENTS

DOOR SCHEDULE - THIRD FLOOR

DOOR NUMBER	DOOR QUANTITY	DOOR FROM		DOOR TO		DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
300	PR	C301	CORRIDOR	300	ELEC RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 4	HM	PT	S/A901	1/A901	7/A901	60	-	21.0	-			300
300A	PR	300	ELEC RM		EXTERIOR	3' - 0"	7' - 0"	1 3/4"	F	FRP	PT	4	AL	FF	S/A901	1/A901	11/A354	-	-	36.0	-	AC	10 2	300A
301	1	C301	CORRIDOR	301	ELEV. CONTROL RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	45	-	17.0	-	-		301
302	1	C301	CORRIDOR	302	FACULTY LOUNGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	7 4	HM	PT	S/A901	1/A901	7/A901	45	G3	3.0	-	-	1	302
302A	1	302	FACULTY LOUNGE	302A	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	6/A901	-	-	14.0	-	-		302A
303	PR	C301	CORRIDOR	303	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	4 4	HM	PT	S/A901	1/A901	7/A901	60	-	22.0	-	-		303
304	1	C301	CORRIDOR	304	CUSTODIAN	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	16.0	-	-		304
305	1	C301	CORRIDOR	305	VIDEO PRODUCTION LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		305
305A	1	305	VIDEO PRODUCTION LAB	305A	CONTROL RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	48.0	-	-	5	305A
305B	1	305A	CONTROL RM	305B	GREEN RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	48.0	-	-	5	305B
305C	1	305	VIDEO PRODUCTION LAB	305C	CAMERA STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		305C
305D	1	C301	CORRIDOR	305	VIDEO PRODUCTION LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		305D
306	1	C301	CORRIDOR	306	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		306
306A	1	C301	CORRIDOR	306	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		306A
307	1	C301	CORRIDOR	307	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	17.0	-	-		307
308	1	C301	CORRIDOR	308	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		308
308A	1	C301	CORRIDOR	308	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		308A
309	1	C301	CORRIDOR	309	ELEC. RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	45	-	43.0	-	-		309
310	1	C301	CORRIDOR	310	IDF	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	17.0	-	-		310
311	1	C301	CORRIDOR	311	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		311
311A	1	C301	CORRIDOR	311	COMPUTER CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		311A
312	1	C301	CORRIDOR	312	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	17.0	-	-		312
313	1	313	STORAGE	C301	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	17.0	-	-		313
314	1	C301	CORRIDOR	314	PHOTO LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		314
314A	1	314	PHOTO LAB	314A	LIGHT LOCK	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	24.0	-	-		314A
314B	1	314A	LIGHT LOCK	314B	DARK RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	47.0	-	-		314B
314C	1	314B	DARK RM	314C	DEVELOPER RM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	1	HM	PT	4/A901	2/A901	7/A901	-	-	47.0	-	-		314C
314D	1	C301	CORRIDOR	314	PHOTO LAB	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	G3	4.0	-	-		314D
315	1	C301	CORRIDOR	315	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	7/A901	-	-	17.0	-	-		315
S303	PR	C301	CORRIDOR	S303	STAIR 3	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	S/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S303
S304	PR	C301	CORRIDOR	S304	STAIR 4	3' - 0"	7' - 0"	1 3/4"	DG	WD	FF	4 4	HM	PT	S/A901	1/A901	7/A901	60	G3	51.0	MHO	-		S304
T301	1	C301	CORRIDOR	T301	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	6/A901	-	-	52.0	-	-		T301
T302	1	C301	CORRIDOR	T302	MEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	6/A901	-	-	25.0	-	-		T302
T303	1	C301	CORRIDOR	T303	WOMEN'S	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	2	HM	PT	S/A901	1/A901	6/A901	-	-	25.0	-	-		T303

REMARKS:

1. DOOR WITH SIDELITE.
2. OVERHEAD DOOR.
3. SMOKE CURTAIN.
4. SECURITY GRILLE.
5. ACOUSTICAL DOOR WITH STC RATING: 61.
6. MOTOR OPERATED.
7. FULL VERTICAL TRACK.
8. STANDARD LIFT TRACK.
9. ROLLING DOOR MOTOR OPERATED.
10. DOOR CONTACT SENSOR. COORDINATE WITH 'T' DRAWINGS. 2
11. DOOR CARD READER ACCESS. COORDINATE WITH 'T' DRAWINGS.

GLAZING TYPES

G1	TINTED INSLUATED GLASS
G2	CLEAR INSULATED GLASS
G3	FIRE PROTECTED SAFETY GLASS
G4	FULLY TEMPERED GLASS, 1/4" CLEAR
G5	LAMINATED GLASS
G6	SPANDREL GLASS
G7	SHOOTER/ATTACK RESISTANT INSULATED GLASS

DOOR/FRAME MATERIALS

ALUM	ALUMINUM
ANOD	ANODIZED
EXST	EXISTING TO REMAIN
FF	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PLASTIC
HM	HOLLOW METAL
PT	PAINTED
ST	STEEL
WD	WOOD

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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT
EDWARD L. PROCHILO
019855
STATE OF NEW YORK

REGISTRATION EXPIRATION DATE: 12/31/2024

#	DATE	DESCRIPTION
4	5/20/2024	BID Addendum #4
3	5/3/2024	BID Addendum #2

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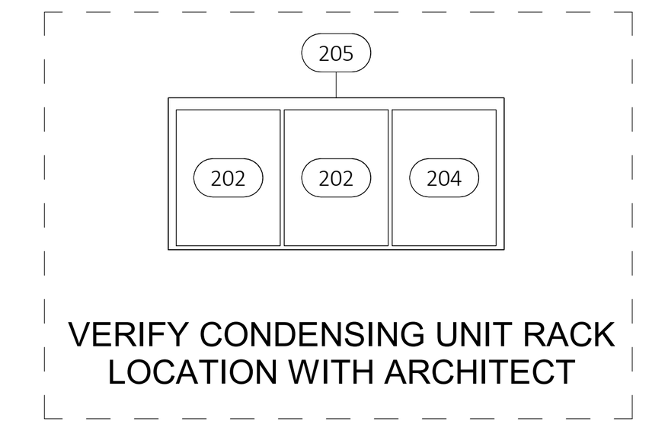
Sheet Title

DOOR SCHEDULE - THIRD FLOOR

Sheet No.

CTE A904

CONSTRUCTION DOCUMENTS



1 FOODSERVICE EQUIPMENT PLAN - STORAGE
3/8" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE - STORAGE			
ITEM NO.	QTY.	CATEGORY	REMARKS
200	1	WALK-IN COOLER / FREEZER	NEW
200.1	2	AIR CURTAIN	NEW
201	1	WALK-IN COOLER EVAPORATOR COIL	NEW
202	2	WALK-IN COOLER CONDENSER	NEW
203	1	WALK-IN FREEZER EVAPORATOR COIL	NEW
203.1	1	FREEZER DRAIN LINE HEATER	NEW
204	1	WALK-IN FREEZER CONDENSER	NEW
205	1	REFRIGERATION RACK SYSTEM	NEW
206	11	WALK-IN COOLER SHELVING	NEW
207	5	SHEET PAN RACK	NEW
208	10	WALK-IN FREEZER SHELVING	NEW
209	1	SPARE NUMBER	SPARE
210	1	SPARE NUMBER	SPARE
211	2	PLATFORM TRUCK	NEW
212	3	UTILITY CART	NEW
213	7	DRY STORAGE SHELVING	NEW
214	1	MOP SINK CABINET	NEW
215	1	WASHER MACHINE	REFER TO ARCHITECTURAL DRAWINGS
215.1	1	DRYER MACHINE	REFER TO ARCHITECTURAL DRAWINGS
216	1	LINEN TABLE	NEW

4

C:\Users\Dan\ChefTech\FSDS - Jon Woods - Active Projects\Newburgh CTE - #21-518\Drawings\Current Drawing Sheets\20-138_Newburgh ESCD CTE Center_FSDS_R22.rvt

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FOOD SERVICE DESIGN STUDIOS FSDS
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Project Title
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

REGISTERED ARCHITECT · STATE OF NEW YORK
REGISTRATION EXPIRATION DATE: 12/31/2026

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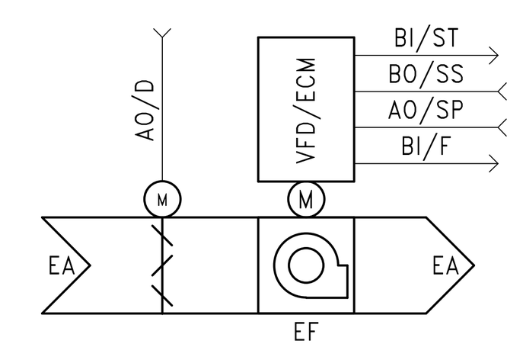
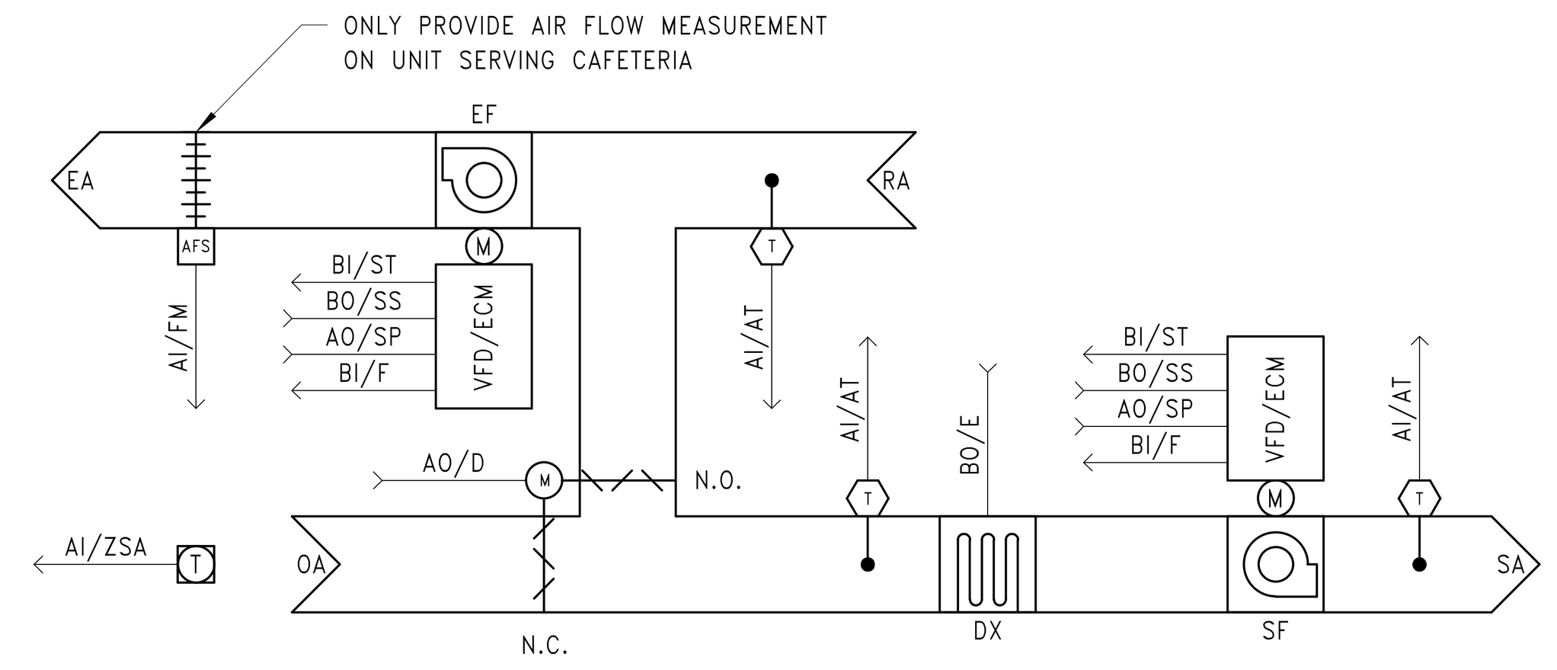
Sheet Title
FOODSERVICE EQUIPMENT PLAN - STORAGE

Sheet No.
FS200
CONSTRUCTION DOCUMENTS

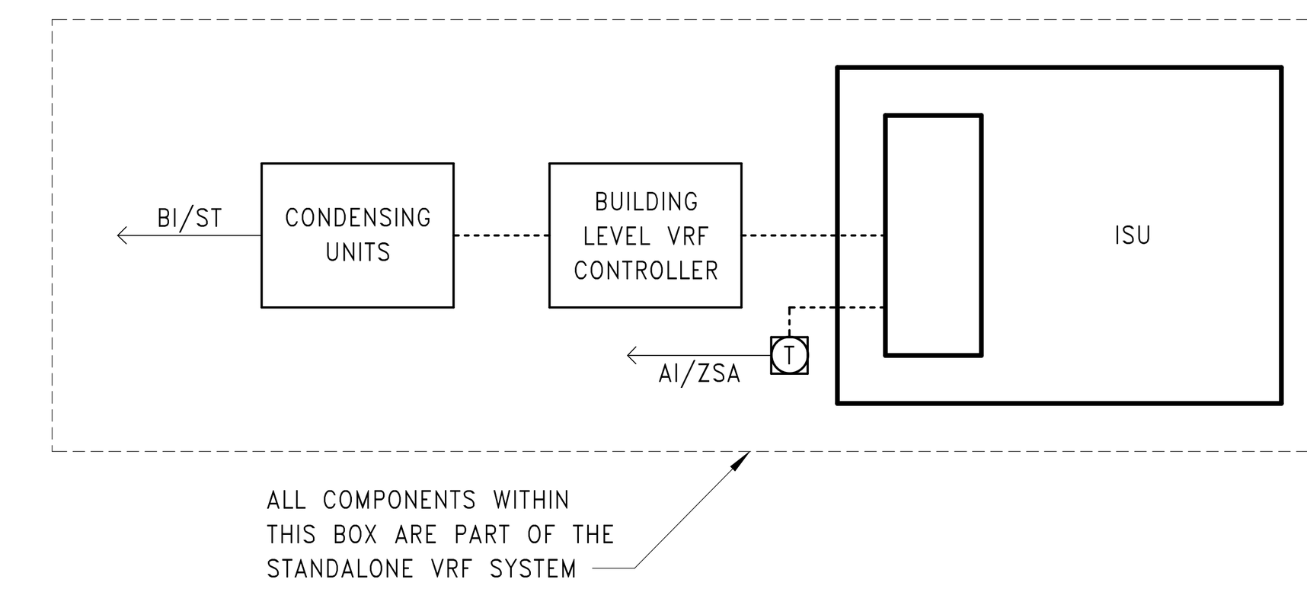


18 FAN
DJ101 NTS

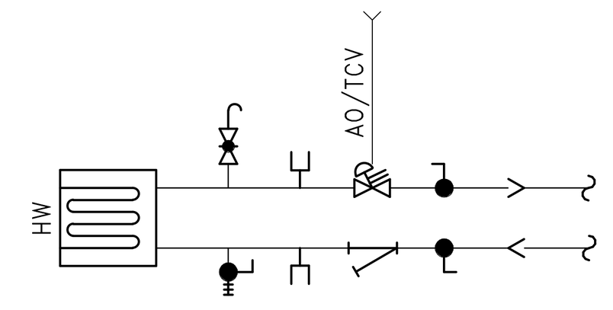


17 ROOF TOP UNIT
DJ101 NTS

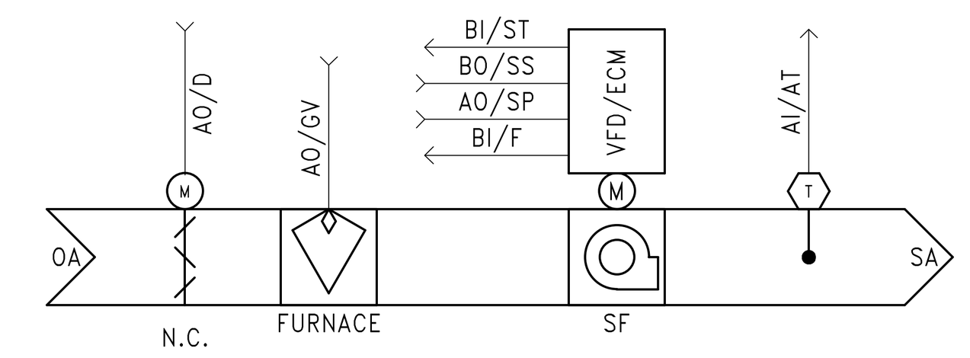
VRF SYSTEM NOTES:
1. PROVIDE ALL PARTS, LABOR, COMPONENTS, CONTROLS, ELECTRICAL CONNECTIONS, ASSOCIATED PIPING, DUCTWORK AND WIRING AS REQUIRED BY THE MANUFACTURER, TO ENSURE A FULLY OPERATIONAL, STANDALONE SYSTEM.
2. INTEGRATE THE FOLLOWING POINTS SHOWN IN THE SCHEMATIC TO THE BMS THROUGH BACNET INTERFACE INCLUDING BUT NOT LIMITED TO:
   - CONDENSING UNIT STATUS
   - ROOM TEMPERATURE SETPOINT ADJUST, AS READ BY VRF MANUFACTURER FURNISHED THERMOSTAT, CAPABLE OF CONTROLING OTHER MECHANICAL EQUIPMENT AS REQUIRED.
   - INDOOR SPLIT UNIT (OR LEV KIT) STATUS (NOT SHOWN)
3. FOR UNITS IN CORRIDOR, PROVIDE DUCT MOUNTED OA DAMPER.



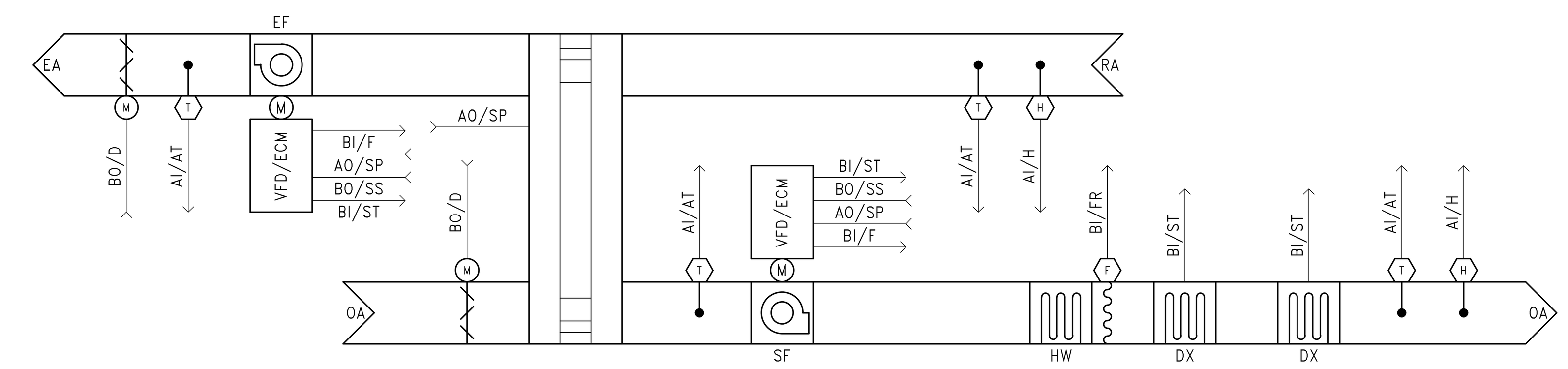
16 VRF
DJ101 NTS



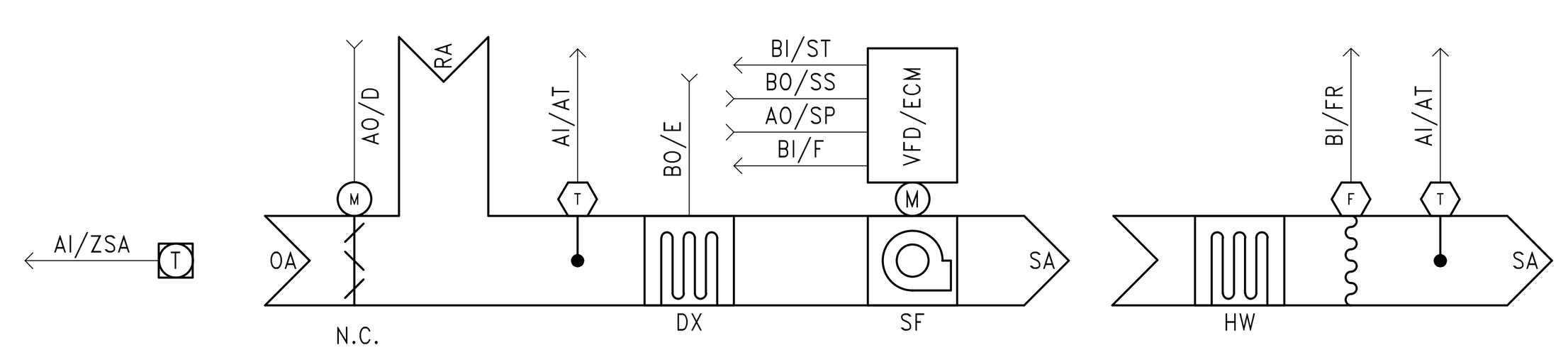
15 HOT WATER COIL
DJ101 NTS



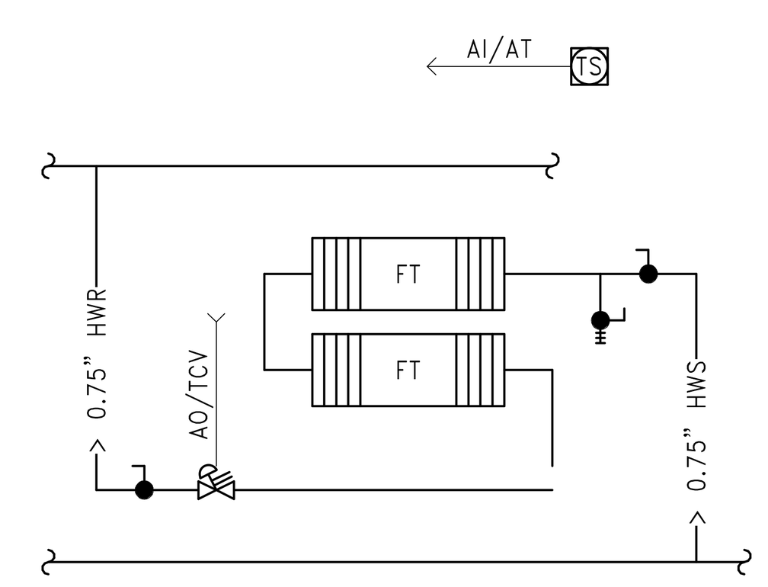
14 MAKE UP AIR UNIT
DJ101 NTS



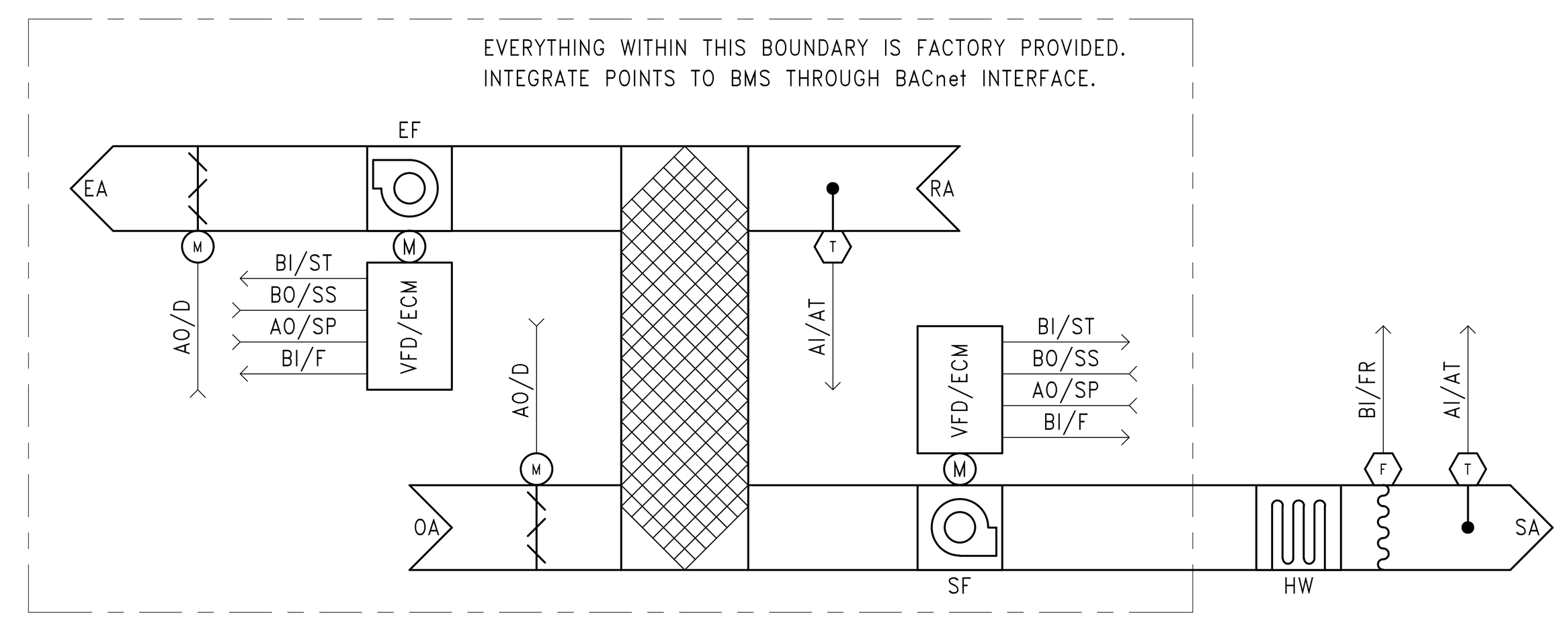
13 ENERGY RECOVERY UNIT
DJ101 NTS



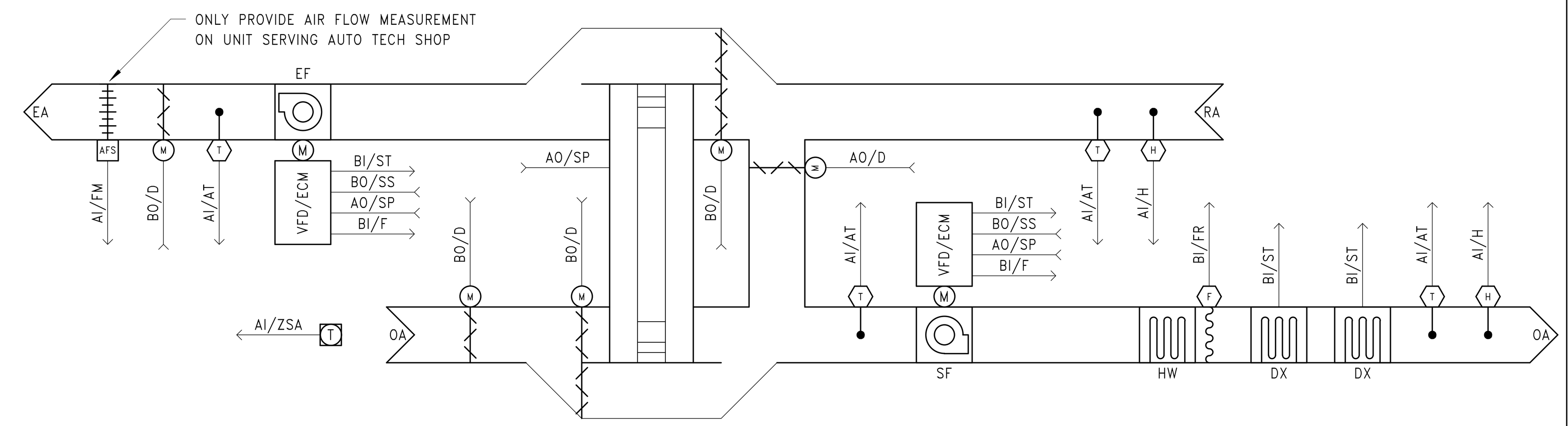
12 VRF UNIT WITH DUCTED HEATING COIL
DJ101 NTS



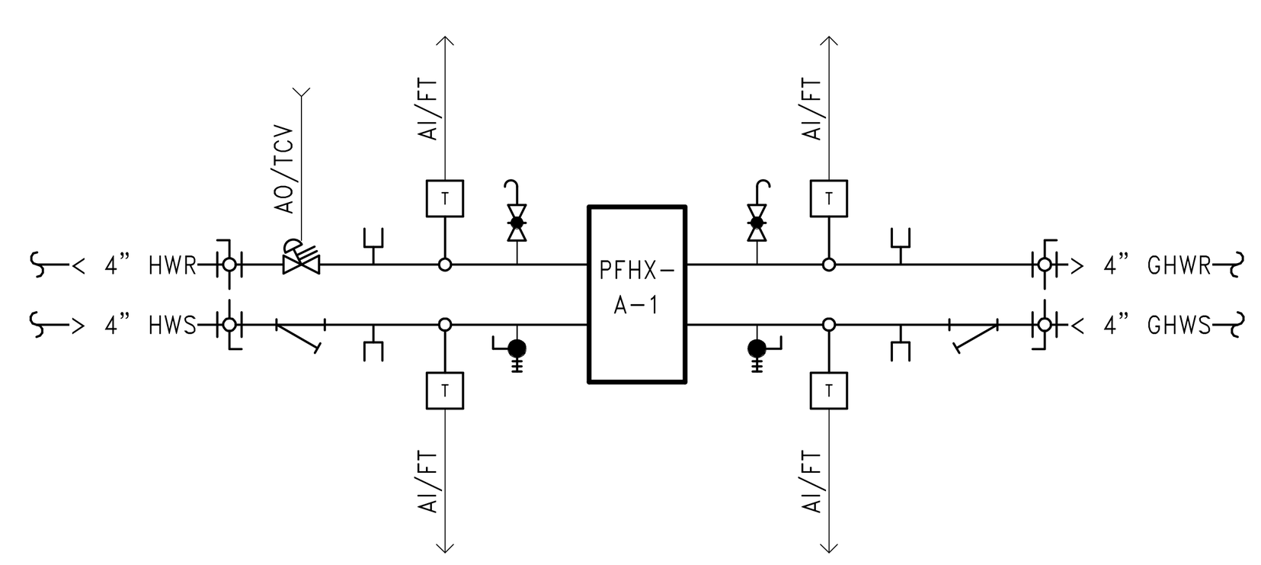
11 FINNED TUBE
DJ101 NTS



10 ENERGY RECOVERY VENTILATOR
DJ101 NTS

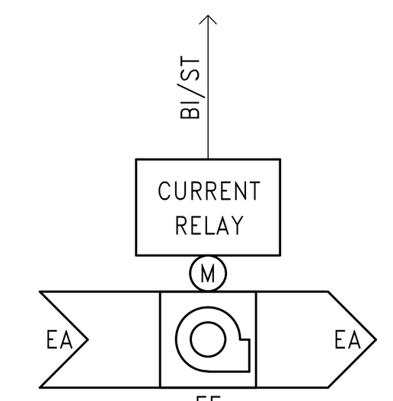


9 ENERGY RECOVERY UNIT WITH RECIRCULATION
DJ101 NTS

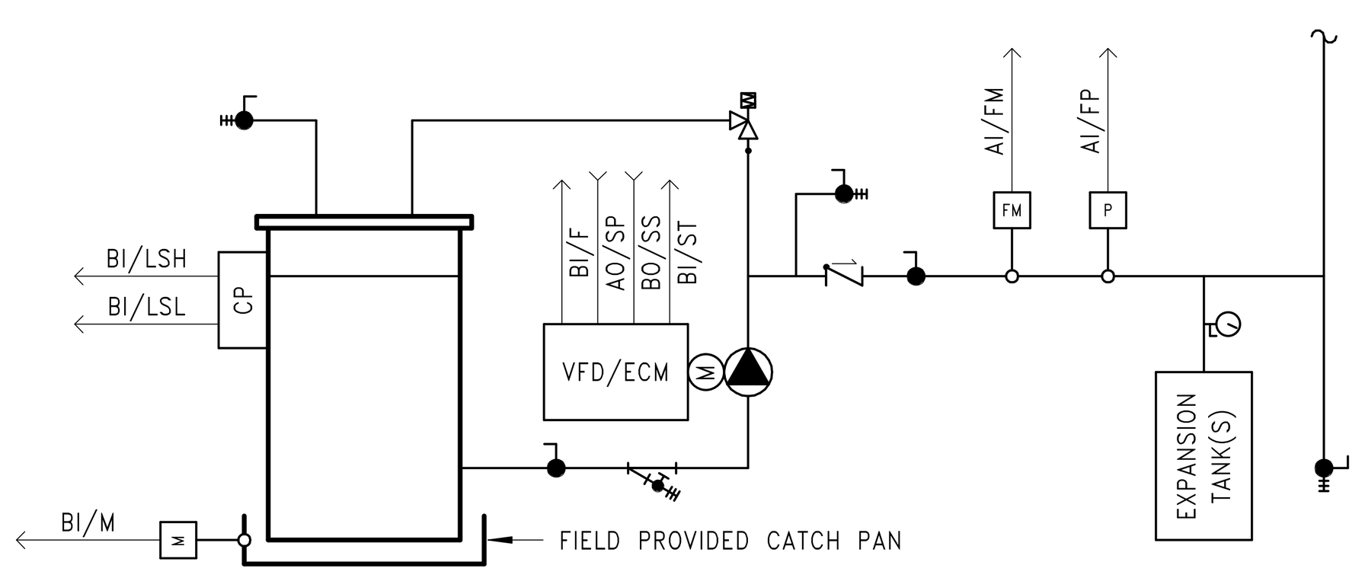


8 HEAT EXCHANGER
DJ101 NTS

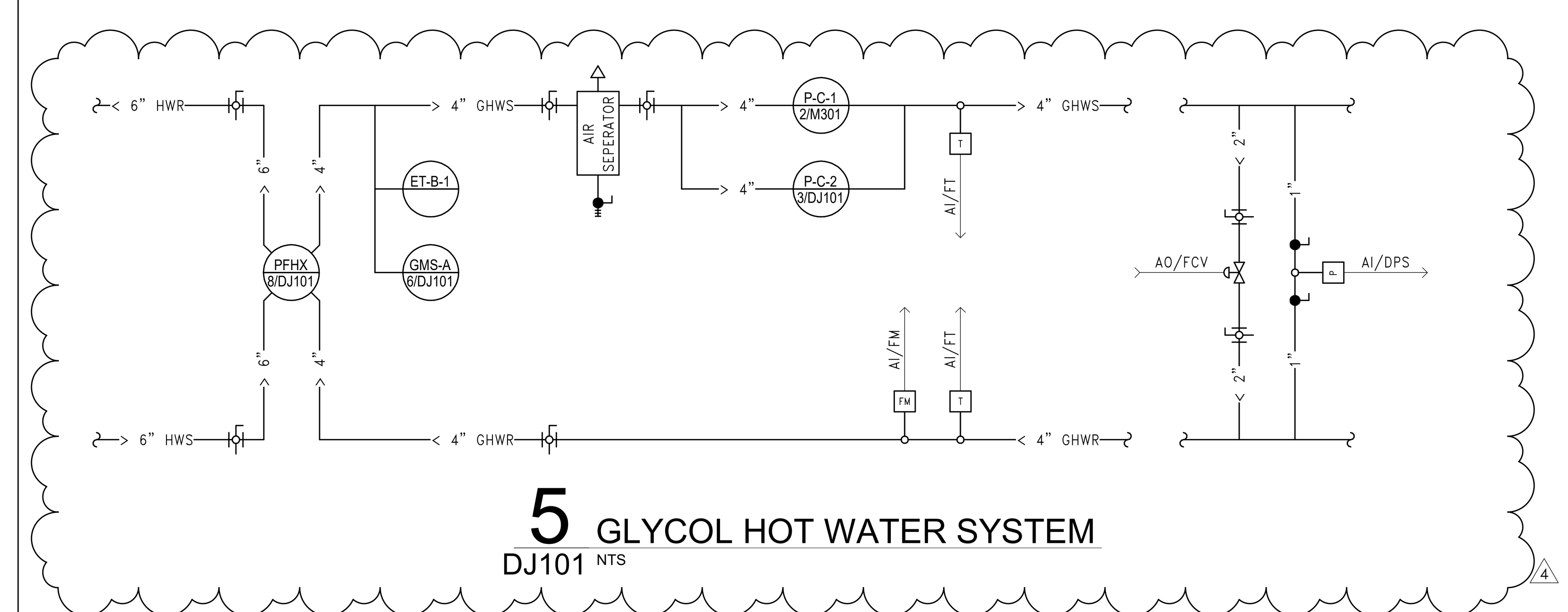
PROVIDE ON THE FOLLOWING SYSTEMS:
1. AUTO TECH SHOP: VEHICLE EXHAUST SYSTEM FAN
2. AUTOBODY SHOP: PAINT BOOTH FAN
3. CONSTRUCTION SHOP: DUST COLLECTOR FAN
4. WELDING SHOP: FUME CAPTURE FAN
5. CULINARY LAB: HOOD FANS



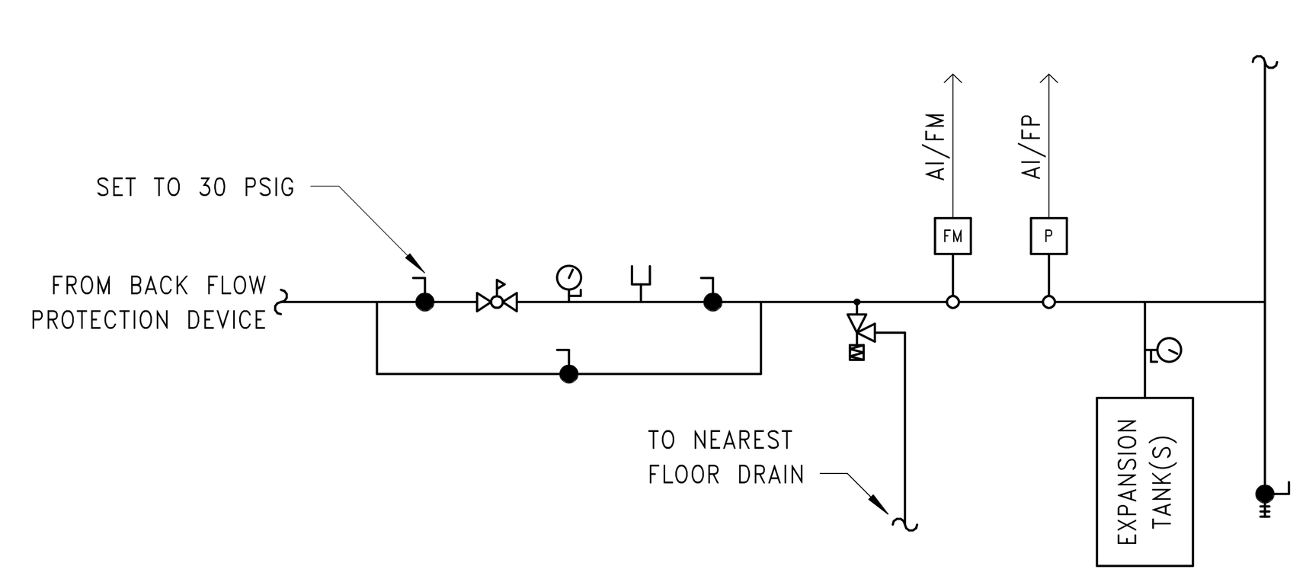
7 FAN CURRENT RELAY
DJ101 NTS



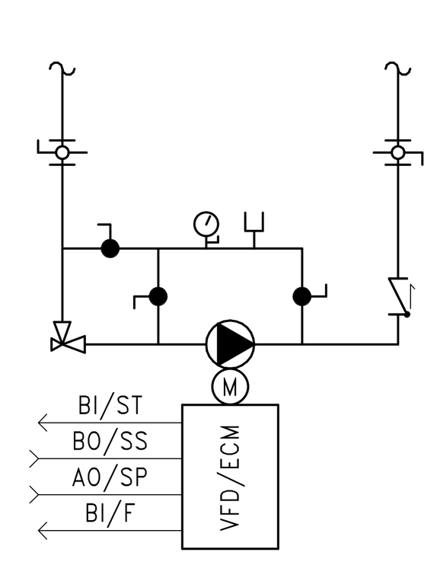
6 GLYCOL MANAGEMENT SYSTEM
DJ101 NTS



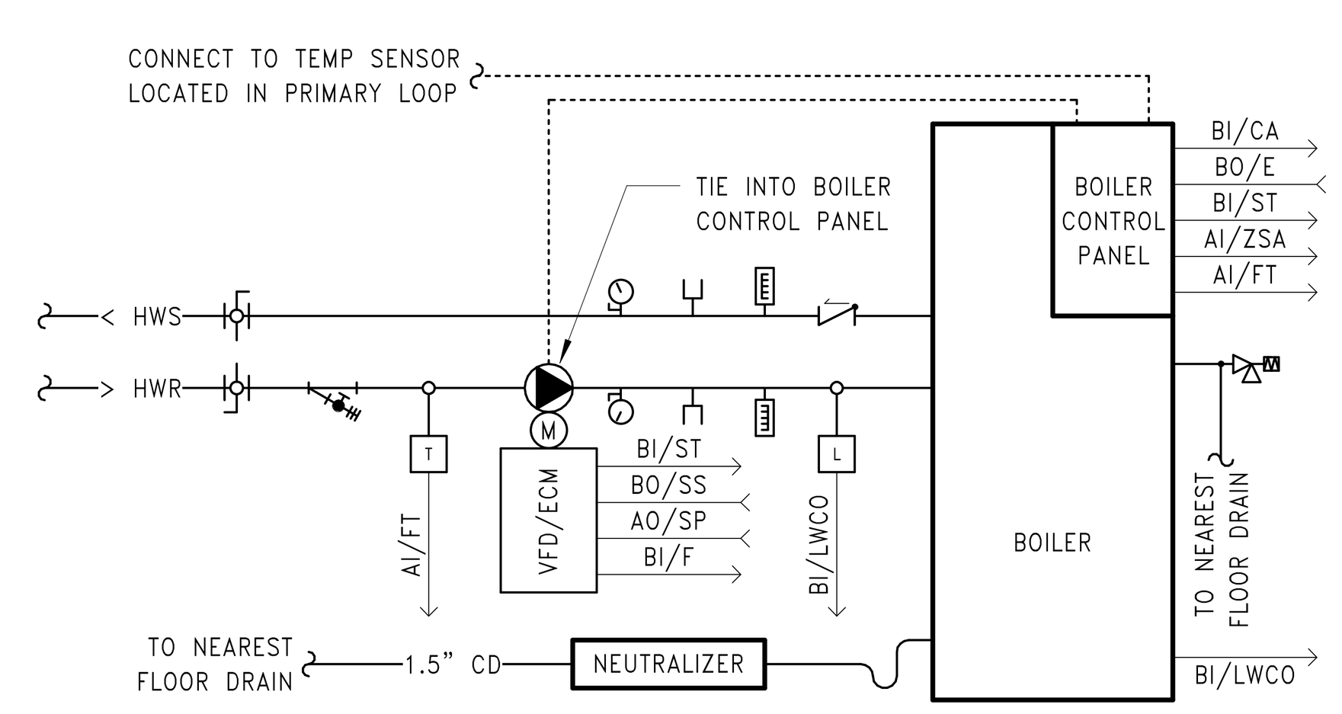
5 GLYCOL HOT WATER SYSTEM
DJ101 NTS



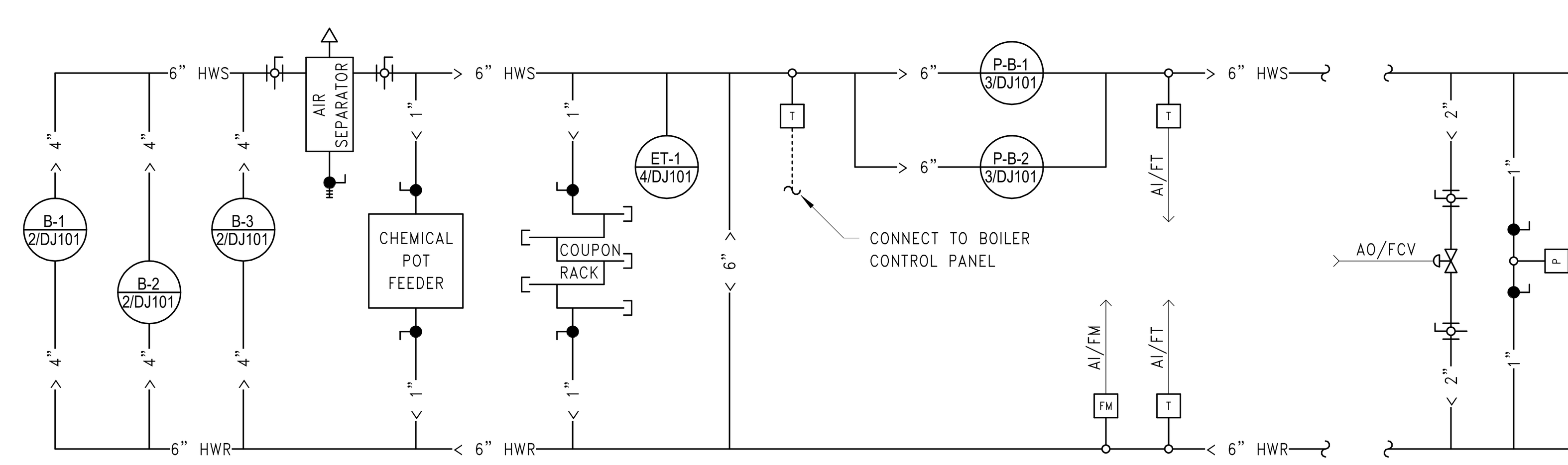
4 EXPANSION TANK
DJ101 NTS



3 PUMP
DJ101 NTS



2 BOILER
DJ101 NTS



1 HEATING PLANT
DJ101 NTS

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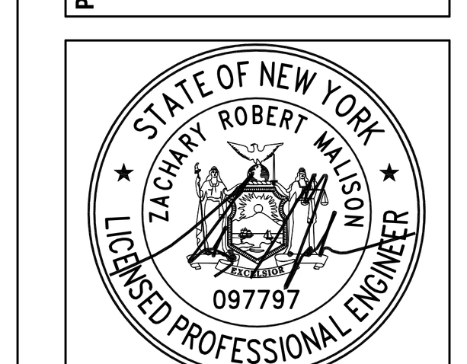
NEW CTE BUILDING

Project Title



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Sheet Title

MECHANICAL PID

Sheet No.

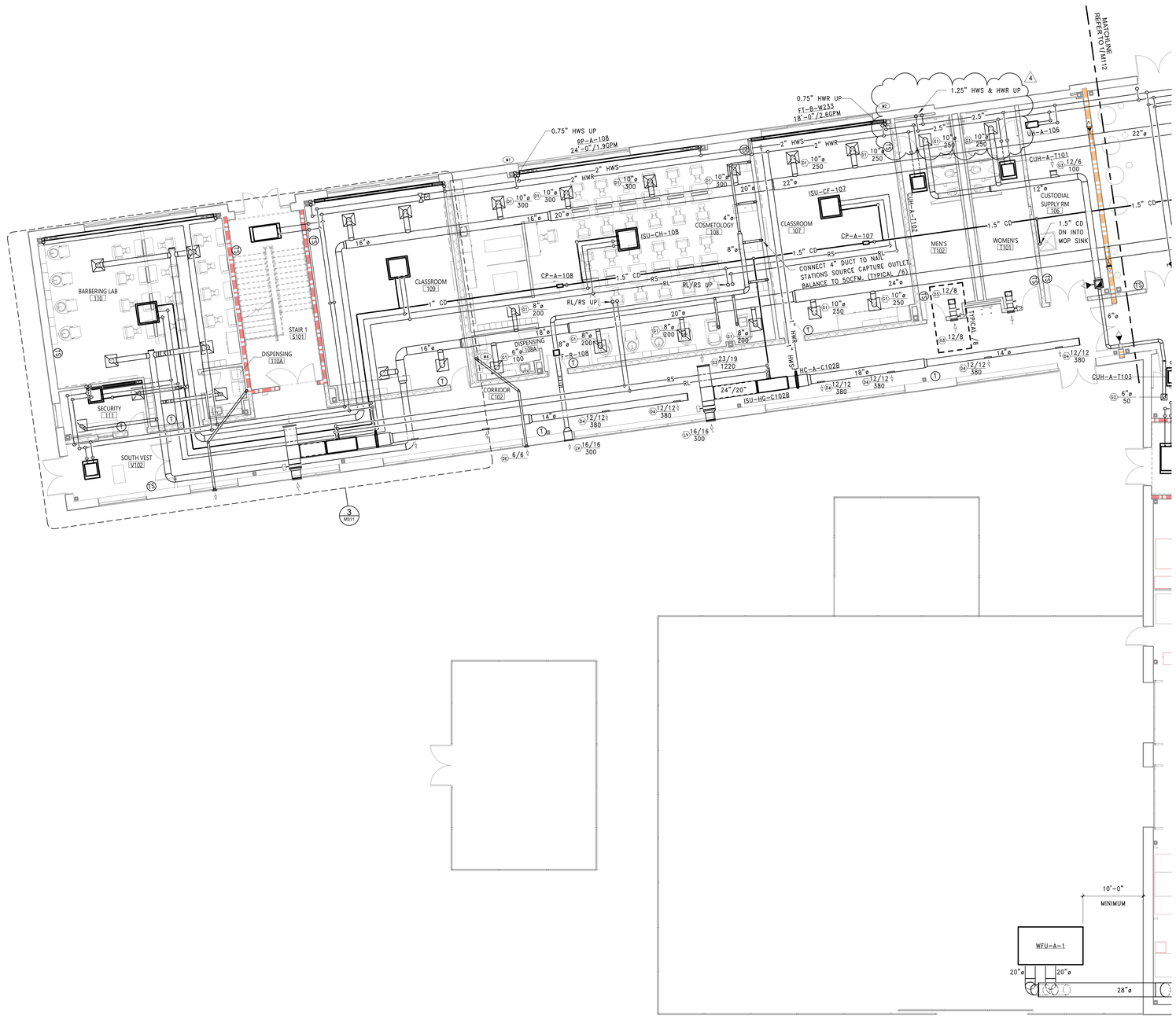
CTE DJ101

CONSTRUCTION DOCUMENTS

Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - MEP.rvt

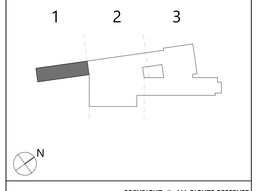
KEY NOTES

M1	1" TAP OFF MAIN AND 0.75" HWR UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.
M2	1" TAP OFF MAIN AND 0.75" HWS UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.
M4	PROVIDE 4" SMOOTH DUCT DRYER EXHAUST SYSTEM WITH CODE REQUIRED CLEANOUT ON RISER. ELBOWS TO BE 4" DIAMETER 8" LONG RADIUS STYLE.



1 M111 FIRST FLOOR PLAN - AREA '1'
1/8" = 1'-0"

KEY PLAN



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NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

Project Title

ZACHARY ROBERT WILSON
STATE OF NEW YORK
097797
LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2025

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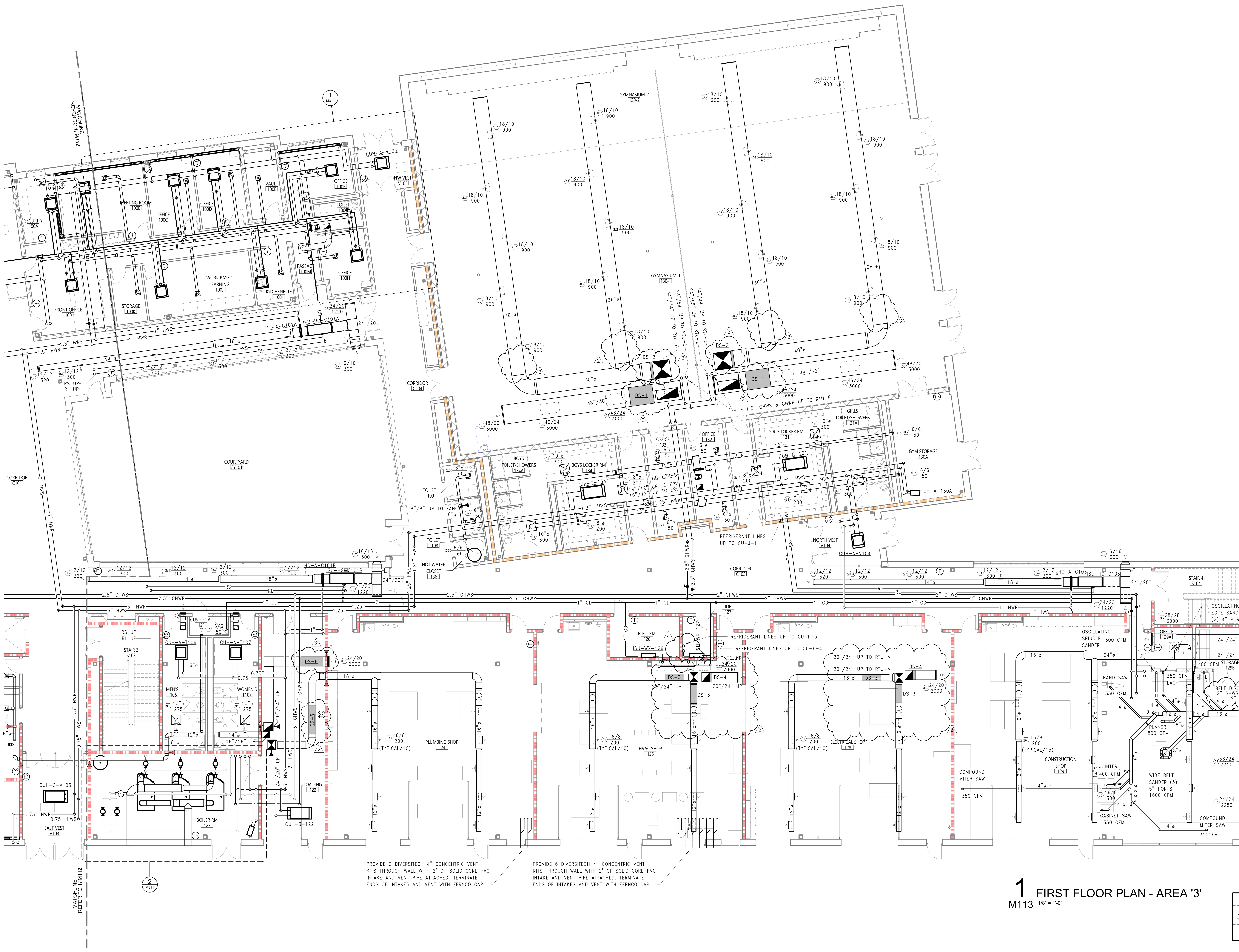
Sheet Title
FIRST FLOOR PLAN - AREA '1'

Sheet No.
CTE M111

CONSTRUCTION DOCUMENTS

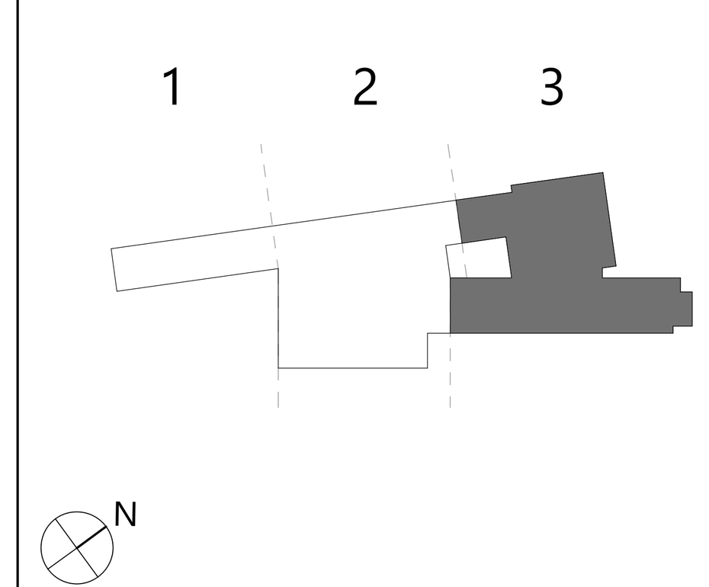
Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - MEP.rvt



1 M113 FIRST FLOOR PLAN - AREA '3'
1/8" = 1'-0"

KEY NOTES

KEY PLAN



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NEW CTE BUILDING

STATE OF NEW YORK ZACHARY ROBERT MALISON 097797 LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2025

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Sheet Title

FIRST FLOOR PLAN - AREA '3'

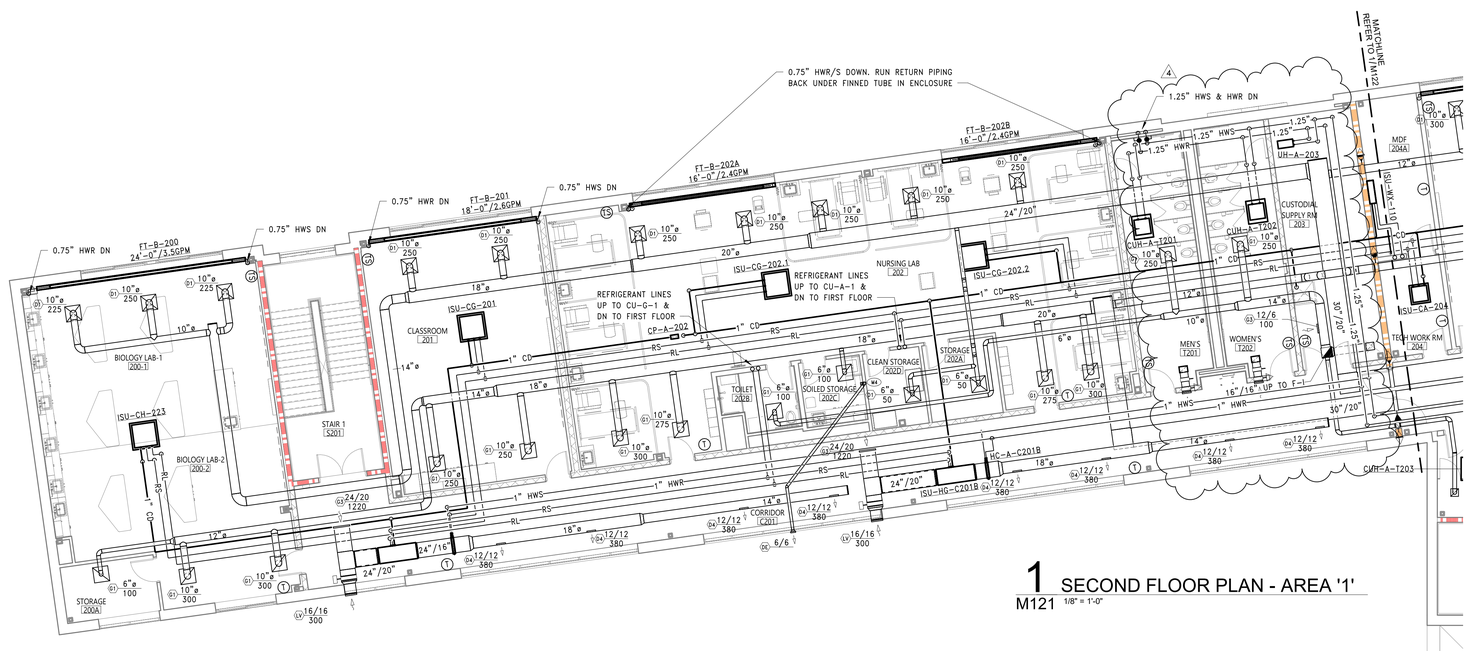
Sheet No.

CTE M113

CONSTRUCTION DOCUMENTS

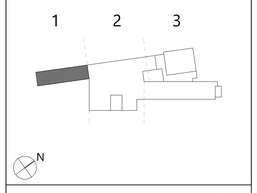
KEY NOTES

M4	PROVIDE 4" SMOOTH DUCT DRYER EXHAUST SYSTEM WITH CODE REQUIRED CLEANOUT ON RISER. ELBOWS TO BE 4" DIAMETER 8" LONG RADIUS STYLE.



1 SECOND FLOOR PLAN - AREA '1'
M121 1/8" = 1'-0"

KEY PLAN



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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

ZACHARY ROBERT SMITH — LICENSED PROFESSIONAL ENGINEER — STATE OF NEW YORK — 097757
Expires : 06/30/2025

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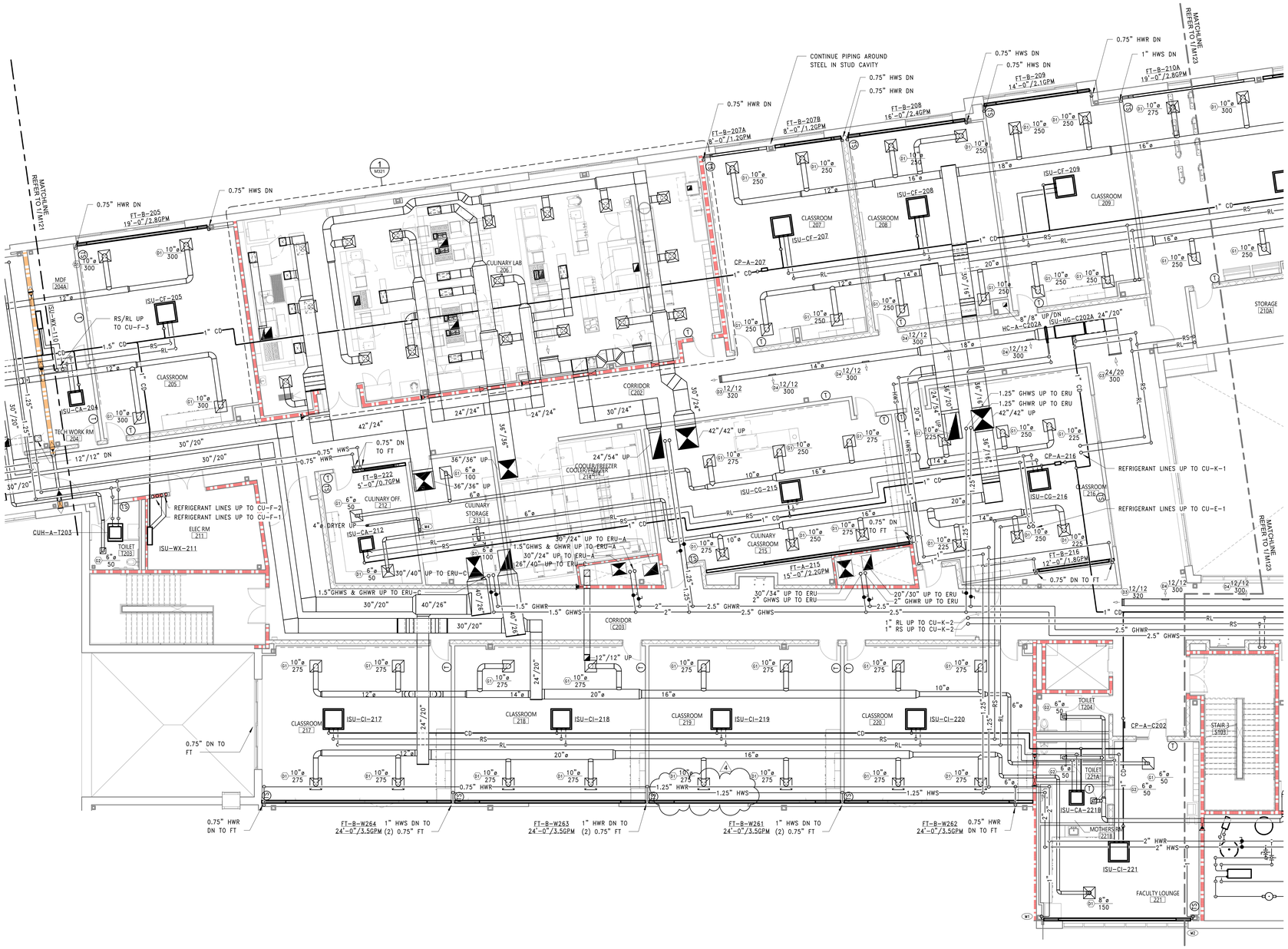
Sheet Title
SECOND FLOOR PLAN - AREA '1'

Sheet No.
CTE M121

CONSTRUCTION DOCUMENTS

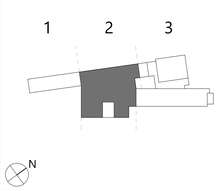
KEY NOTES

M1	1" TAP OFF MAIN AND 0.75" HWR UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.
M2	1" TAP OFF MAIN AND 0.75" HWS UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.
M4	PROVIDE 4" SMOOTH DUCT DRYER EXHAUST SYSTEM WITH CODE REQUIRED CLEANOUT ON RISER. ELBOWS TO BE 4" DIAMETER 8" LONG RADIUS STYLE.



1 SECOND FLOOR PLAN - AREA '2'
M122 1/8" = 1'-0"

KEY PLAN



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NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

Project Title

STATE OF NEW YORK ZACHARY ROBERT WILLSON LICENSED PROFESSIONAL ENGINEER 097797
Expires : 06/30/2025

#	DATE	DESCRIPTION
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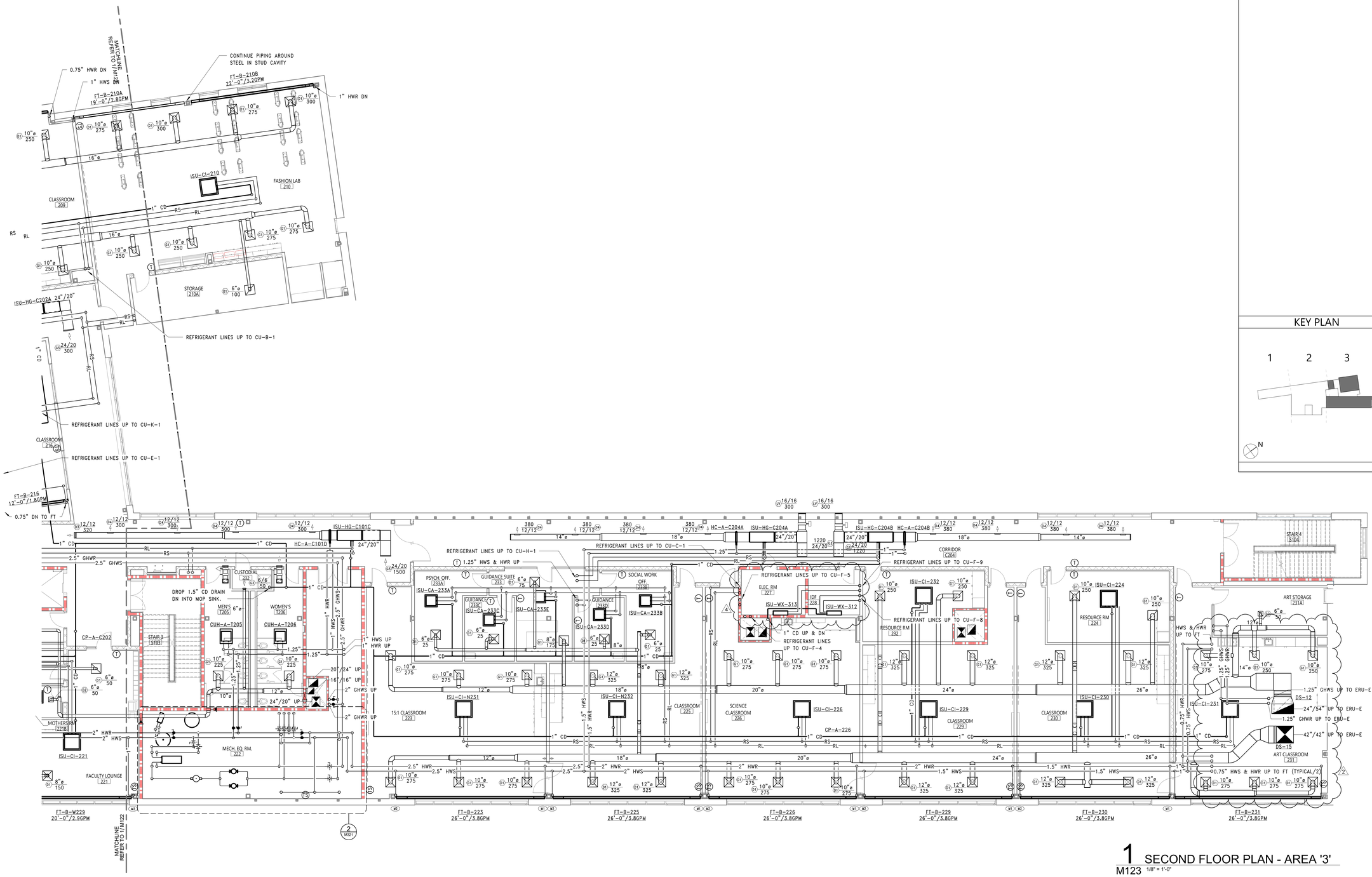
Issued for Bid:	4/15/2024

Sheet Title: SECOND FLOOR PLAN - AREA '2'

Sheet No.: CTE M122

CONSTRUCTION DOCUMENTS



1 SECOND FLOOR PLAN - AREA '3'
M123 1/8" = 1'-0"

KEY NOTES

M1	1" TAP OFF MAIN AND 0.75" HWR UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.
M2	1" TAP OFF MAIN AND 0.75" HWS UP AND DOWN TO FINNED TUBE. ROUTE PIPING UP IN STUD CAVITY TO AVOID STRUCTURAL BEAM.

KEY PLAN

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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

STATE OF NEW YORK
ZACHARY ROBERT WILSON
097797
LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2025

#	DATE	DESCRIPTION
4	5/28/2024	BID ADDENDUM #4
3	5/02/2024	BID ADDENDUM #3

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Checked By:	
Proj. #:	44-16-00-01-0-053-001
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Issued for Bid:	4/15/2024

Sheet Title

SECOND FLOOR PLAN - AREA '3'

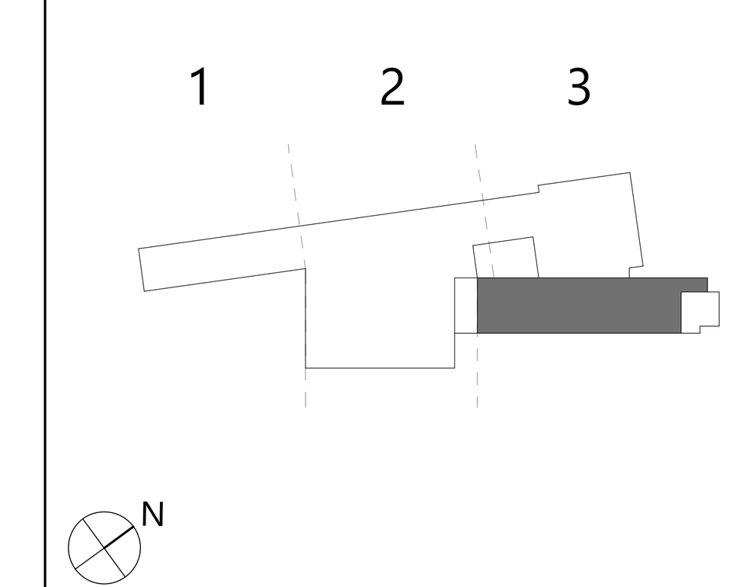
Sheet No.

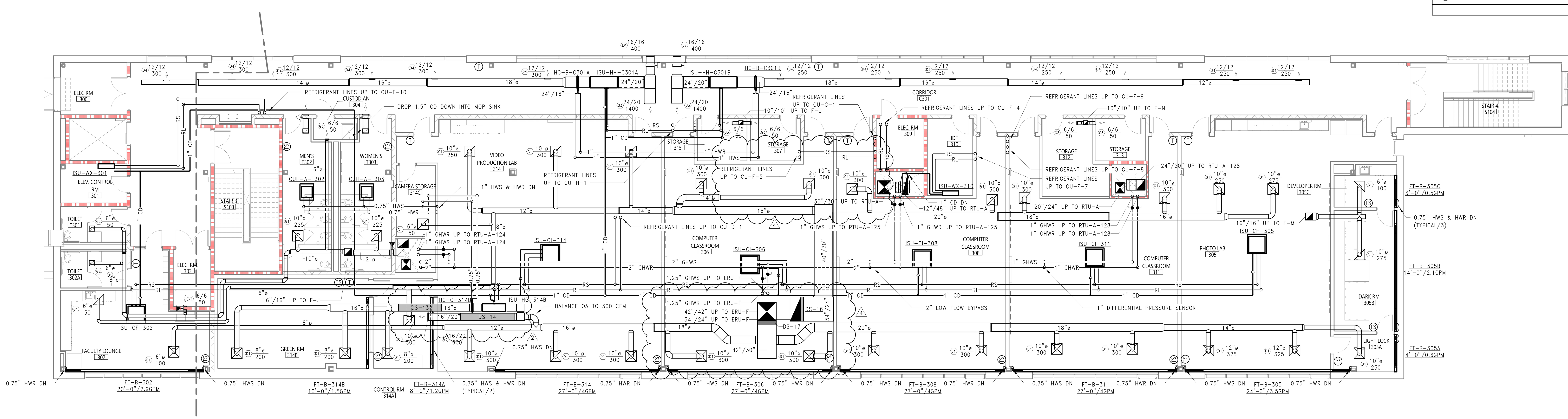
CTE M123

CONSTRUCTION DOCUMENTS

KEY NOTES

KEY PLAN





1 THIRD FLOOR PLAN - AREA '3'
M133 1/8" = 1'-0"

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Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

STATE OF NEW YORK · ZACHARY ROBERT MALISON · 097797 · LICENSED PROFESSIONAL ENGINEER
Expires : 06/30/2025

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4
2	5/02/2024	BID ADDENDUM #2

Drawn By:
Checked By:
Proj. #: 44-16-00-01-0-053-001
CSArch Proj. #: 108-2303
Issued for Bid: 4/15/2024

Sheet Title
THIRD FLOOR PLAN - AREA '3'

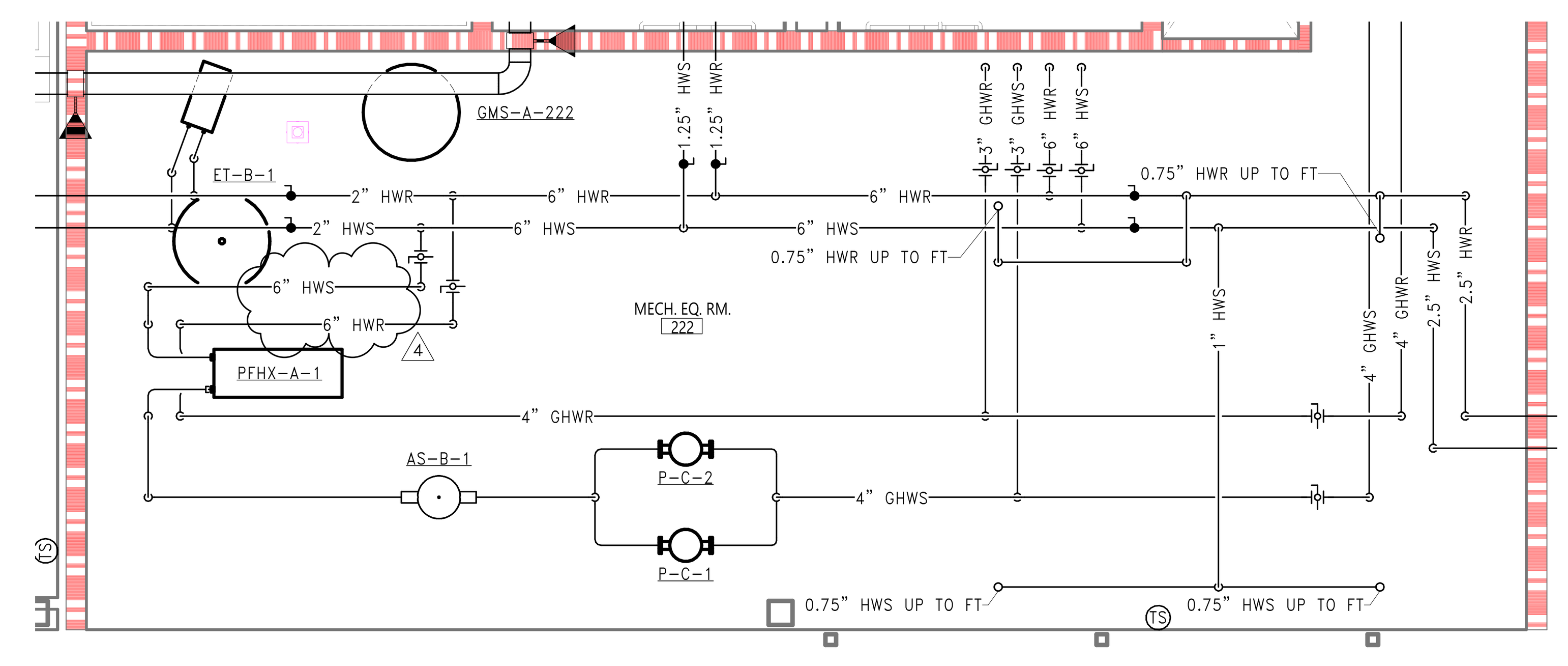
Sheet No.
CTE M133

CONSTRUCTION DOCUMENTS

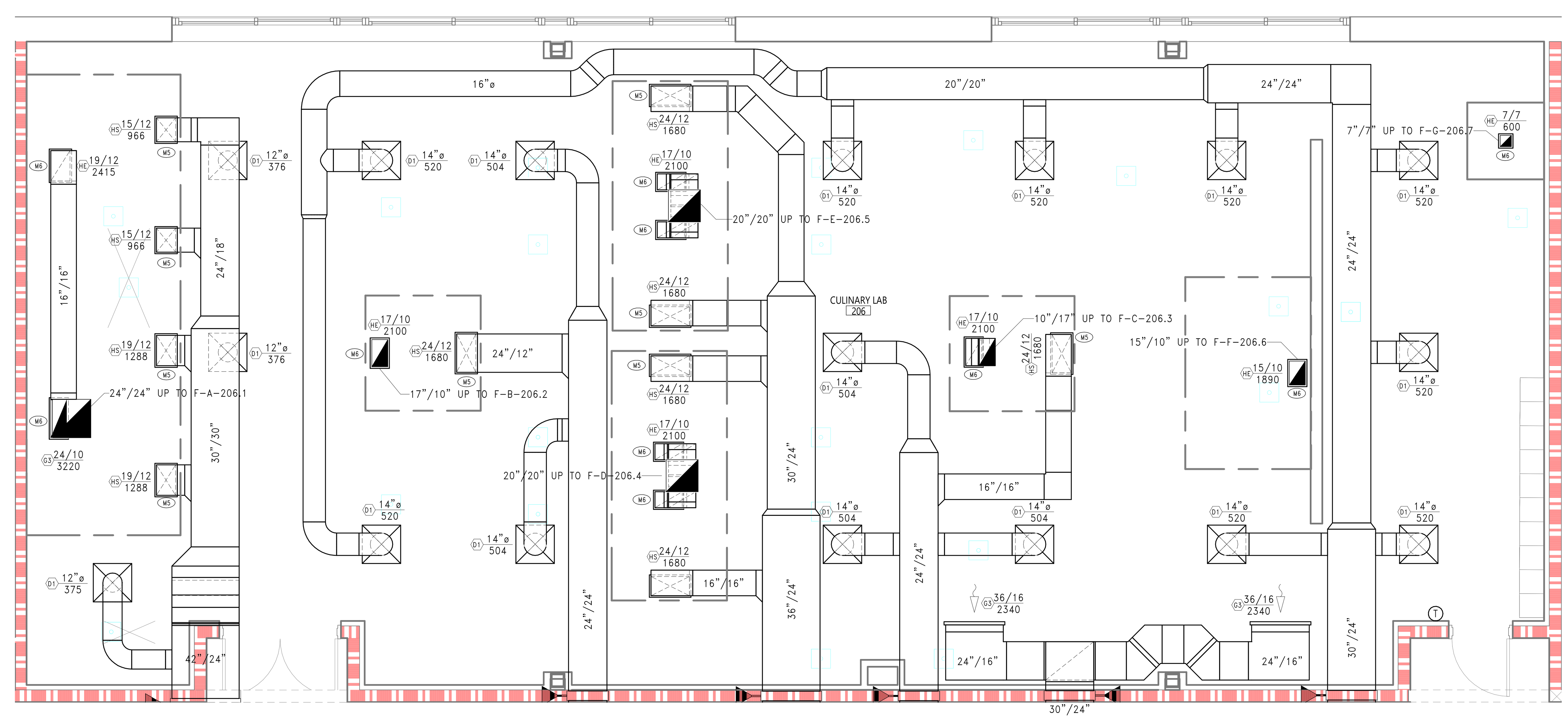
Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - MEP.rvt

KEY NOTES

M5	MAKEUP AIR SUPPLY CONNECTION TO KITCHEN HOOD.
M6	EXHAUST AIR CONNECTION TO KITCHEN HOOD.



2 ENLARGED MECHANICAL ROOM
M321 1/4" = 1'-0"



1 ENLARGED CULINARY LAB PLAN
M321 1/4" = 1'-0"

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Sheet Title

ENLARGED SECOND FLOOR PLANS

Sheet No.

CTE M321

CONSTRUCTION DOCUMENTS

VRF SYSTEMS

CONDENSING UNIT	TAG	CS DX Total Cooling MBH (Number)	CS DX Total Cooling Btu/hr
CU-A-1	ISU-CA-204	5.8	0.5 ton
CU-A-1	ISU-CB-111	7.5	0.6 ton
CU-A-1	ISU-CF-107	24	2.0 ton
CU-A-1	ISU-CF-109	24	2.0 ton
CU-A-1	ISU-CF-110A	24	2.0 ton
CU-A-1	ISU-CF-205	24	2.0 ton
CU-A-1	ISU-CG-201	30	2.5 ton
CU-A-1	ISU-CG-202.1	30	2.5 ton
CU-A-1	ISU-CG-202.2	30	2.5 ton
CU-A-1	ISU-CH-108	36	3.0 ton
CU-A-1	ISU-CH-223	36	3.0 ton
CU-A-1			22.6 ton
CU-B-1	ISU-CA-100A	5.8	0.5 ton
CU-B-1	ISU-CA-100C	5.8	0.5 ton
CU-B-1	ISU-CA-100D	5.8	0.5 ton
CU-B-1	ISU-CA-100F	5.8	0.5 ton
CU-B-1	ISU-CA-100H	5.8	0.5 ton
CU-B-1	ISU-CA-100I	5.8	0.5 ton
CU-B-1	ISU-CA-100J	5.8	0.5 ton
CU-B-1	ISU-CB-100B	7.5	0.6 ton
CU-B-1	ISU-CC-100	12	1.0 ton
CU-B-1	ISU-CC-101	12	1.0 ton
CU-B-1	ISU-CF-102	24	2.0 ton
CU-B-1	ISU-CF-103	24	2.0 ton
CU-B-1	ISU-CF-207	24	2.0 ton
CU-B-1	ISU-CF-208	24	2.0 ton
CU-B-1	ISU-CF-209	24	2.0 ton
CU-B-1	ISU-CI-104	48	4.0 ton
CU-B-1	ISU-CI-210	48	4.0 ton
CU-B-1			24.0 ton
CU-C-1	ISU-CA-233A	5.8	0.5 ton
CU-C-1	ISU-CA-233B	5.8	0.5 ton
CU-C-1	ISU-CA-233C	5.8	0.5 ton
CU-C-1	ISU-CA-233D	5.8	0.5 ton
CU-C-1	ISU-CA-233E	5.8	0.5 ton
CU-C-1	ISU-CI-224	48	4.0 ton
CU-C-1	ISU-CI-226	48	4.0 ton
CU-C-1	ISU-CI-229	48	4.0 ton
CU-C-1	ISU-CI-230	48	4.0 ton
CU-C-1	ISU-CI-231	48	4.0 ton
CU-C-1	ISU-CI-232	48	4.0 ton
CU-C-1	ISU-CI-N231	48	4.0 ton
CU-C-1	ISU-CI-N232	48	4.0 ton
CU-C-1			34.4 ton
CU-D-1	ISU-CF-302	24	2.0 ton
CU-D-1	ISU-CH-305	36	3.0 ton
CU-D-1	ISU-CI-306	48	4.0 ton
CU-D-1	ISU-CI-308	48	4.0 ton
CU-D-1	ISU-CI-311	48	4.0 ton
CU-D-1	ISU-CI-314	48	4.0 ton
CU-D-1	ISU-HC-314B	12	1.5 ton
CU-D-1			22.5 ton
CU-E-1	ISU-CA-212	5.8	0.5 ton
CU-E-1	ISU-CA-221B	5.8	0.5 ton
CU-E-1	ISU-CG-215	30	2.5 ton
CU-E-1	ISU-CG-216	30	2.5 ton
CU-E-1	ISU-CI-217	48	4.0 ton
CU-E-1	ISU-CI-218	48	4.0 ton
CU-E-1	ISU-CI-219	48	4.0 ton
CU-E-1	ISU-CI-220	48	4.0 ton
CU-E-1	ISU-CI-221	48	4.0 ton
CU-E-1			26.0 ton
CU-F-1	ISU-WX-112	30	2.5 ton
CU-F-1			2.5 ton
CU-F-2	ISU-WX-211	30	2.5 ton
CU-F-2			2.5 ton
CU-F-3	ISU-WX-110	30	2.5 ton
CU-F-3			2.5 ton
CU-F-4	ISU-WX-126	30	2.5 ton
CU-F-4			2.5 ton
CU-F-5	ISU-WX-127	30	2.5 ton
CU-F-5			2.5 ton
CU-F-7	ISU-WX-310	30	2.5 ton
CU-F-7			2.5 ton
CU-F-8	ISU-WX-312	20	2.5 ton
CU-F-8			2.5 ton
CU-F-9	ISU-WX-313	30	2.5 ton
CU-F-9			2.5 ton
CU-F-10	ISU-WX-301		2.5 ton
CU-F-10			2.5 ton
CU-G-1	ISU-HG-C102A	48	4.0 ton
CU-G-1	ISU-HG-C102B	48	4.0 ton
CU-G-1	ISU-HG-C201A	48	4.0 ton
CU-G-1	ISU-HG-C201B	48	4.0 ton
CU-G-1			16.0 ton
CU-H-1	ISU-HG-C204A	48	4.0 ton
CU-H-1	ISU-HG-C204B	48	4.0 ton
CU-H-1	ISU-HH-C301A	54	4.5 ton
CU-H-1	ISU-HH-C301B	54	4.5 ton
CU-H-1			17.0 ton
CU-J-1	ISU-HG-C103	48	4.0 ton
CU-J-1			4.0 ton
CU-K-1	ISU-HG-C101A	48	4.0 ton
CU-K-1	ISU-HG-C202A	48	4.0 ton
CU-K-1			8.0 ton
CU-K-2	ISU-HG-C101B	48	4.0 ton
CU-K-2	ISU-HG-C101C	48	4.0 ton
CU-K-2			8.0 ton

4

AIR COOLED CONDENSING UNIT SCHEDULE

TAG	NOMINAL TONS	REFIGERANT	EER	ELECTRICAL DATA						WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
				VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH				
CU-A-1	22	R410A	10	480	3	–	42.1	45	FACTORY PROVIDED	1,800	DAIKIN APPLIED	REYQ264AAYDA	1
CU-B-1	24	R410A	10.3	480	3	–	46.8	50	FACTORY PROVIDED	2,000	DAIKIN APPLIED	REYQ288AAYDA	1
CU-C-1	26	R410A	10.2	480	3	–	50.4	60	FACTORY PROVIDED	2,000	DAIKIN APPLIED	REYQ312AAYDA	1
CU-D-1	22	R410A	10	480	3	–	42.1	45	FACTORY PROVIDED	1,800	DAIKIN APPLIED	REYQ264AAYDA	1
CU-E-1	24	R410A	10.3	480	3	–	46.8	50	FACTORY PROVIDED	2,000	DAIKIN APPLIED	REYQ288AAYDA	1
CU-F-1	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-2	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-3	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-4	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-5	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-7	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-8	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-9	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-F-10	2.5	R410A	9.85	480	3	–	16.6	20	FACTORY PROVIDED	250	DAIKIN APPLIED	FTX30WVJU9RK30WMVJU9	2
CU-G-1	22	R410A	11.6	480	3	–	32.5	35	FACTORY PROVIDED	1,200	DAIKIN APPLIED	RXYQ192AAYDA	1
CU-H-1	22	R410A	11.6	480	3	–	32.5	35	FACTORY PROVIDED	1,200	DAIKIN APPLIED	RXYQ192AAYDA	1
CU-J-1	4	R410A	9.5	208	1	–	6.5	15	FACTORY PROVIDED	250	DAIKIN APPLIED	RZQ48TAVJUA	2
CU-K-1	8	R410A	10.3	480	3	–	20.6	25	FACTORY PROVIDED	750	DAIKIN APPLIED	RXYQ96AAYDA	1
CU-K-2	8	R410A	10.3	480	3	–	20.6	25	FACTORY PROVIDED	750	DAIKIN APPLIED	RXYQ96AAYDA	1

NOTES:
1. SINGLE POINT POWER CONNECTION WITH INTEGRAL DISCONNECT AND GFCI CONTINENCE OUTLET.
2. POWERS INDOOR UNIT.

4

INDOOR SPLIT UNIT SCHEDULE

TAG	DX COOLING TOT. MBH	REFIGERANT	CFM	OA CFM	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
					VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
ISU-CA	5800.0 Btu/h	R410A	300	0	208	1	–	0.3	15	FIELD	DAIKIN APPLIED	FXZQ05TAVJU	
ISU-CB	7500.0 Btu/h	R410A	307	0	208	1	–	0.3	15	FIELD	DAIKIN APPLIED	FXZQ07TAVJU	
ISU-CC	12000.0 Btu/h	R410A	353	0	208	1	–	0.4	15	FIELD	DAIKIN APPLIED	FXZQ12TAVJU	
ISU-CF	24000.0 Btu/h	R410A	777	0	208	1	–	0.7	15	FIELD	DAIKIN APPLIED	FXFQ24TVJU	
ISU-CG	30000.0 Btu/h	R410A	1112	0	208	1	–	1.3	15	FIELD	DAIKIN APPLIED	FXFQ30TVJU	
ISU-CH	36000.0 Btu/h	R410A	1165	0	208	1	–	1.5	15	FIELD	DAIKIN APPLIED	FXFQ36TVJU	
ISU-CI	48000.0 Btu/h	R410A	1218	0	208	1	–	1.8	15	FIELD	DAIKIN APPLIED	FXFQ48TVJU	
ISU-HC	18000.0 Btu/h	R410A	600	300	208	1	–	4.9	15	FACTORY PROVIDED	DAIKIN APPLIED	FXTQ18TAVJUA	
ISU-HG	48000.0 Btu/h	R410A	1520	300	208	1	–	6.5	15	FACTORY PROVIDED	DAIKIN APPLIED	FXTQ48TAVJUD	
ISU-HH	54000.0 Btu/h	R410A	1800	400	208	1	–	8.6	15	FACTORY PROVIDED	DAIKIN APPLIED	FXTQ54TAVJUD	
ISU-WX	30000.0 Btu/h	R410A	635	0	208	1	–		15	FIELD	DAIKIN APPLIED	FXAQ24PVJU	1

NOTES:
1. POWERED FROM OUTDOOR UNIT.

DUCTED HOT WATER COIL SCHEDULE

TAG	CFM	APD (in. WC)	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	WIDTH (IN)	HEIGHT (IN)	MANUFACTURER	MODEL	NOTES
HC-A-C201A	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C102A	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C201B	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C204B	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C204A	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C102B	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C101A	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C101B	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C202A	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C101D	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-A-C103	1520	0.14	56	95	150	120	4.3	64	.1	24	16	DAIKIN APPLIED	5WL0803A	
HC-B-C301A	1800	0.15	55	95	150	120	5.2	77.8	.2	24	16	DAIKIN APPLIED	5WL0803A	
HC-B-C301B	1800	0.15	55	95	150	120	5.2	77.8	.2	24	16	DAIKIN APPLIED	5WL0803A	
HC-C-314B	600	0.04	70	95	150	120	1.1	16.2	.1	16	16	DAIKIN APPLIED	5WH0702A	
HC-ERV-A	525	0.1	70	95	150	120	1.1	14.4	.1	12	10	DAIKIN APPLIED	5WH0602A	
HC-ERV-B	1100	0.12	70	95	150	120	2.1	30.2	.2	16	12	DAIKIN APPLIED	5WL0702A	

UNIT HEATER SCHEDULE

TAG	UNIT TYPE	FLUID	FAN DATA				HEATING COIL DATA							ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
			CFM	ESP (In. Wg)	HP	MOTOR CONTROLLER	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	FPD (FT)	MBH	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
UH	EXPOSED	30% GLYCOL	370	0	1/25	ECM	65	115	150	124	1.5	2.4	20.1	115	1	.53	–	20	FACTORY PROVIDED	AIREDALE	WSH 22SB01FA	
UH-A	EXPOSED	WATER	370	0	1/25	ECM	65	109	150	115	1	1.1	17.6	115	1	.53	–	20	FACTORY PROVIDED	AIREDALE	WSH 22SB01FA	

CABINET UNIT HEATER SCHEDULE

TAG	UNIT TYPE	FAN DATA				HEATING COIL DATA							ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
		CFM	ESP (In. Wg)	HP	MOTOR CONTROLLER	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	FPD (FT)	MBH	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
CUH-A	CEILING RECESSED	327	0	.25	ECM	65	100	150	135	1.8	.2	12.5	120	15	3.7	–	20	FACTORY PROVIDED	AIREDALE	WCC0035BALLL110E00	
CUH-B	CEILING EXPOSED	827	0	.25	ECM	65	104	150	113	2	.2	35.1	120	4	7.4	–	20	FACTORY PROVIDED	AIREDALE	WCC0085BALLL210E00	
CUH-C	CEILING RECESSED	827	0	.25	ECM	65	104	150	113	2	.2	35.1	120	5	7.4	–	20	FACTORY PROVIDED	AIREDALE	WCC0085BALLL210E00	

ROOFTOP UNIT SCHEDULE

TAG	SERVICE	SUPPLY FAN DATA								POWER EXHAUST FAN HP	HEATING COIL DATA									COOLING DATA					ELECTRICAL DATA						WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
		CFM	OA CFM	EVENT MODE OA CFM	ESP (In. Wg)	RPM	BHP	HP	MOTOR CONTROLLER		FLUID	APD (in.WC)	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	REFIGERANT	NOMINAL TONS	AMBIENT TEMPERATURE	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH				
RTU-A-124	PLUMBING SHOP 124	2000	1000		1.5	1838	1.21	1.7	ECM	2.4	30% GLYCOL	0.13	30	95	145	113	9.3	142	2.5	R32	7.5	95	83.5	68.8	53.4	53.2	480	3	20.8	24	35	FACTORY PROVIDED	3,500	DAIKIN APPLIED	DPS007A	
RTU-A-125	HVAC SHOP 125	2000	1000		1.5	1838	1.21	1.7	ECM	2.4	30% GLYCOL	0.13	30	95	145	113	9.3	142	2.5	R32	7.5	95	83.5	68.8	53.4	53.2	480	3	20.8	24	35	FACTORY PROVIDED	3,500	DAIKIN APPLIED	DPS007A	
RTU-A-128	ELECTRICAL SHOP 128	2000	1000		1.5	1838	1.21	1.7	ECM	2.4	30% GLYCOL	0.13	30	95	145	113	9.3	142	2.5	R32	7.5	95	83.5	68.8	53.4	53.2	480	3	20.8	24	35	FACTORY PROVIDED	3,500	DAIKIN APPLIED	DPS007A	
RTU-B-129	CONSTRUCTION SHOP 129	3000	1450		1.5	1809	2.24	4.3	ECM	4.3	30% GLYCOL	0.18	37	95	145	126	21	188	12.8	R32	12	95	83.1	68.6	52.8	52.7	480	3	36.6	42.9	60	FACTORY PROVIDED	3,500	DAIKIN APPLIED	DPS012A	
RTU-C-119	WELDING SHOP 119	3300	1400		1.5	1885	2.54	4.3	ECM	4.3	30% GLYCOL	0.21	41	95	145	1260	22	194	14.1	R32	12	95	81.8	67.8	53.1	53.1	480	3	36.6	42.9	60	FACTORY PROVIDED	3,500	DAIKIN APPLIED	DPS012A	
RTU-D-120	AUTOBODY SHOP 120	4500	2700		1.5	1804	3.53	5	FACTORY VFD	7	30% GLYCOL	0.32	24	101	145	100	17.5	380	1.2	R32	20	95	85.8	70.1	53.0	52.3	480	3	58.4	64.7	90	FACTORY PROVIDED	5,000	DAIKIN APPLIED	DPS020A	
RTU-E-130.1	GYMNASIUM 130	9000	1550	2750	1.5	1711	8.99	10	FACTORY VFD	4.6	30% GLYCOL	1.01	50	97	145	105	24.3	465	2.2	R32	28	95	79.0	66.2	55.5	53.6	480	3	75.8	82	100	FACTORY PROVIDED	5,500	DAIKIN APPLIED	DPS028A	
RTU-E-130.2	GYMNASIUM 130	9000	1550	2750	1.5	1711	8.99	10	FACTORY VFD	4.6	30% GLYCOL	1.01	50	97	145	105	24.3	465	2.2	R32	28	95	79.0	66.2	55.5	53.6	480	3	75.8	82	100	FACTORY PROVIDED	5,500	DAIKIN APPLIED	DPS028A	
RTU-F-206	CULINARY LAB 206	4680	2490		1.5	1842	3.73	5	FACTORY VFD	7	30% GLYCOL	0.34	43	99	145	98	12.8	287	0.6	R32	16	95	84.2	69.2	52.6	52.0	480	3	58.4	64.7	90	FACTORY PROVIDED	5,000	DAIKIN APPLIED	DPS020A	

PACKAGED ENERGY RECOVERY UNIT SCHEDULE

TAG	SERVICE	SUPPLY FAN DATA						EXHAUST FAN DATA					HEATING COIL DATA								DX COIL DATA							ENERGY RECOVERY SECTION DATA								ELECTRICAL DATA							WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
																												WINTER			SUMMER																
		CFM	OA CFM	ESP (In. Wg)	RPM	BHP	HP	CFM	ESP (In. Wg)	RPM	BHP	HP	FLUID	APD (in.WC)	EAT (F)	LAT (F)	EFT (F)	LFT (F)	GPM	MBH	FPD (FT)	REFRIGERANT	APD (in. WC)	EAT DB (F)	EAT WB (F)	LAT DB (F)	LAT WB (F)	SENS. MBH	TOT. MBH	OA TEMP DB (F)	RA TEMP DB (F)	LAT DB (F)	OA TEMP DB (F)	OA TEMP WB (F)	RA TEMP DB (F)	RA TEMP WB (F)	LAT DB (F)	LAT WB (F)	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH	MOTOR CONTROLLER				
ERU-A-1.1	FIRST FLOOR AREA 1	6125	6125	1.5	1566	6.69	10	5625	1.0	2240	3.6	7	30% GLYCOL	0.54	44	102.1	145	105	20.1	390	1.5	R32	0.29	82.4	69.7	54.6	54.5	175	284	2	70	43.8	92	75	75	62.5	82.4	69.7	480	3	70	76.3	100	FACTORY PROVIDED	FACTORY VFD, ECM	4,500	DAIKIN APPLIED	DPS025A	
ERU-B-1.2	CAFETERIA	3300	3300	1.5	2071	3.36	4.3	2900	1.0	1569	1.43	2.4	30% GLYCOL	0.15	45	94.9	145	122	16.6	180	8	R32	0.34	82	69.4	54.8	54.8	92	147	2	70	45.0	92	75	75	62.5	82.0	69.8	480	3	36.1	42.3	60	FACTORY PROVIDED	FACTORY VFD, ECM	2750	DAIKIN APPLIED	DPS012A	
ERU-C-2.1	SECOND FLOOR AREA 1	5500	5500	1.5	1493	5.65	7.5	5300	1.0	2066	2.9	4.3	30% GLYCOL	0.45	45	102.5	145	103	17.1	344	1.1	R32	0.26	81.9	69.4	54.5	54.1	164	259	2	70	45.3	92	75	75	62.5	81.9	69.4	480	3	61.2	67.4	90	FACTORY PROVIDED	FACTORY VFD, ECM	4,500	DAIKIN APPLIED	DPS020A	
ERU-D-2.2	SECOND FLOOR AREA 2	4300	4300	1.5	1909	4.34	7.5	4300	1.0	1743	1.85	4.3	30% GLYCOL	0.3	48	100.2	145	103	12.4	260	.6	R32	0.22	81.0	68.6	55	53.8	122	187	2	70	47.9	92	75	75	62.5	81.0	68.6	480	3	47.2	53.4	70	FACTORY PROVIDED	FACTORY VFD, ECM	4,000	DAIKIN APPLIED	DPS016A	
ERU-E-2.3	SECOND FLOOR AREA 3	5100	5100	1.5	2093	5.57	7.5	5100	1.0	1956	2.10	4.3	30% GLYCOL	.4	47	97.5	145	98	12.4	280	.6	R32	0.24	81.6	69.2	53.4	53	149	247	2	70	46.2	92	75	75	62.5	81.6	69.2	480	3	61.2	67.4	90	FACTORY PROVIDED	FACTORY VFD, ECM	4,500	DAIKIN APPLIED	DPS018A	
ERU-F-3.3	THIRD FLOOR AREA 3	4000	4000	1.5	2247	4.3	7	3575	1.0	1753	1.95	2.4	30% GLYCOL	0.24	43	89.5	145	119	16.6	203	8	R32	0.18	82.9	70	55.4	54.6	114	188	2	70	42.1	92	75	75	62.5	82.9	70	480	3	49.6	58.6	90	FACTORY PROVIDED	FACTORY VFD, ECM	4,000	DAIKIN APPLIED	DPS016A	
ERU-G-117	AUTO TECH SHOP 117	7500	4500	1.5	1740	9.48	15	4500	1.0	1577	4.12	4.6	30% GLYCOL	0.75	52	99.8	145	104	20.1	392	1.5	R32	0.27	80.2	67.3	54.7	54.5	199	287	2	70	51.9	92	75	75	62.5	80.2	67.3	480	3	74	80.2	100	FACTORY PROVIDED	FACTORY VFD, ECM	4,500	DAIKIN APPLIED	DPS025A	

4

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NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

Project Title

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Sheet Title

OWNER FURNISHED EQUIPMENT SCHEDULES

Sheet No.

CTE M901

CONSTRUCTION DOCUMENTS

Autodesk Docs://NECSD - New CTE Bldg/108-2303 NECSD CTE - MEP.rvt

PUMP SCHEDULE

TAG	SERVICE	TYPE	GPM	PRESSURE (FT)	RPM	BHP	HP	MOTOR CONTROLLER	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
									VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
P-A-1	BOILER	INLINE	250	25	1760	–	3	INTEGRAL VFD	480	3	4.8	–	15	FACTORY PROVIDED	TACO	SKV4007D	
P-A-2	BOILER	INLINE	250	25	1760	–	3	INTEGRAL VFD	480	3	4.8	–	15	FACTORY PROVIDED	TACO	SKV4007D	
P-A-3	BOILER	INLINE	250	25	1760	–	3	INTEGRAL VFD	480	3	4.8	–	15	FACTORY PROVIDED	TACO	SKV4007D	
P-B-1	HEATING WATER	INLINE	550	105	1760	19.65	25	INTEGRAL VFD	480	3	27.0	–	60	FACTORY PROVIDED	TACO	SKS4013D	
P-B-2	HEATING WATER	INLINE	550	105	1760	19.65	25	INTEGRAL VFD	480	3	27.0	–	60	FACTORY PROVIDED	TACO	SKS4013D	
P-C-1	GLYCOL	INLINE	270	90	1760	8.61	10	INTEGRAL VFD	480	3	11.0	–	20	FACTORY PROVIDED	TACO	SKS3011D	
P-C-2	GLYCOL	INLINE	270	90	1760	8.61	10	INTEGRAL VFD	480	3	11.0	–	20	FACTORY PROVIDED	TACO	SKS3011D	

4

FIN TUBE SCHEDULE

BUILDING	TAG	ELEMENT						ENCLOSURE			MANUFACTURER	MODEL	NOTES
		PIPE DIAMETER (IN)	# OF ROWS	ELEMENT WIDTH (IN)	ELEMENT HEIGHT (IN)	EAT (F)	AVG. FLUID TEMP. (F)	BTU/FT	WIDTH (IN)	HEIGHT (IN)	DESCRIPTION			
CTE	FT-A	0.75	2	4.25	4.25	70	140	1470	6	20	TOP OUTLET, STAMPED LOUVERS	STERLING	JVB-RD20	
CTE	FT-B	0.75	2	4.25	4.25	70	150	1470	6	20	TOP OUTLET, STAMPED LOUVERS	STERLING	JVB-RD24	

GLYCOL MANAGEMENT SYSTEM SCHEDULE

TAG	VOLUME (GAL)	RELIEF VALVE (PSIG)	MOTOR HP	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
				VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
GMS-A-222	55	30	1/3	120	1	–	9.0	20	FACTORY PROVIDED	SKIDMORE	S-55-100-2-PEFS	

DUST COLLECTOR SCHEDULE

TAG	FILTER AREA (SQ FT)	CFM	ESP (In. Wg)	HP	VOLTAGE	PHASE	DISCONNECT SWITCH	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
DC-A-1	720	5600	14	20	480	3	FIELD PROVIDED	6,000	STERNVENT	DKPL72020H	1

WELDING FILTRATION UNIT SCHEDULE

TAG	FILTER AREA (SQ FT)	CFM	ESP (In. Wg)	HP	VOLTAGE	PHASE	DISCONNECT SWITCH	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
WFU-A-1	(12) X 323	13000	15	(2) X 20	480	3	FIELD PROVIDED	4850	LINCOLN ELECTRIC	PRISM 12	1

NOTES:
1. PROVIDE EXHAUST DUCT SILENCER ON UNIT.

AIR AND DIRT SEPARATOR SCHEDULE

TAG	SERVICE	FLOW	FPD (FT)	MANUFACTURER	MODEL	NOTES
AS-A-1	HEATING WATER	500	3.6	TACO	4906ADR-125	
AS-B-1	GLYCOL	220	3.7	TACO	4904ADR-125	

HYDRONIC RADIATOR PANEL SCHEDULE

TAG	PIPE DIAMETER (IN)	EAT (F)	AVG. FLUID TEMP. (F)	BTU/FT	WIDTH (IN)	HEIGHT (IN)	DESCRIPTION	MANUFACTURER	MODEL	NOTES
RP-A	0.75	70	135	1193	6	14	RADIANT PANEL	RUNTAL	R2F6	

DUCT SILENCER SCHEDULE

TAG	CFM	SIZE (ENTERING-LEAVING)	LENGTH	FACE VELOCITY (FPM)	APD (in. WC)	DYNAMIC INSERTION LOSS (dB)							MANUFACTURER	MODEL
						63	125	250	500	1000	2000	4000		
DS-1	9000	48"/30"-48"/30"	60"	900	0.12	10	12	18	18	12	9	6	VAW SYSTEMS	RSA
DS-2	9000	44"/44"-44"/44"	70" ELBOW	669	0.13	17	21	30	36	35	36	27	VAW SYSTEMS	REA
DS-3	1000	16"ø-16"ø	48"	716	0.08	3	8	17	25	38	50	53	VAW SYSTEMS	CSA
DS-4	2000	20"/24"-20"/24"	46" ELBOW	600	0.17	14	19	30	40	44	39	32	VAW SYSTEMS	REA
DS-5	2000	18"ø-18"ø	72"	1132	0.01	3	11	18	27	28	23	20	VAW SYSTEMS	CSA
DS-6	2000	24"/20"-24"/20"	60"	600	0.11	8	16	28	35	40	26	15	VAW SYSTEMS	RSA
DS-7	2880	28"ø-28"ø	56"	674	0.01	6	13	20	27	33	31	24	VAW SYSTEMS	CSA
DS-8	1530	20"ø-20"ø	40	683	0.05	6	13	20	30	40	44	38	VAW SYSTEMS	CSA
DS-9	4500	24"/48"-24"/48"	42" ELBOW	562	0.1	11	13	18	25	28	24	21	VAW SYSTEMS	REA
DS-10	3300	28"/28"-28"/28"	48"	606	0.1	6	10	20	34	42	37	23	VAW SYSTEMS	RSA
DS-11	3300	30"/30"-30"/30"	48"	528	0.09	10	13	23	30	29	22	15	VAW SYSTEMS	RSA
DS-12	5100	42"/42"-41"/42"	51" ELBOW	416	0.13	14	20	26	31	30	31	24	VAW SYSTEMS	RSA
DS-13	600	16"ø-16"ø	96"	430	0.06	20	35	43	49	56	59	57	VAW SYSTEMS	CSA
DS-14	600	16"/20"-16"/20"	120"	270	0.04	19	25	45	53	54	44	34	VAW SYSTEMS	RSA
DS-15	5100	42"/42"-24"/42"	63" ELBOW	416	0.11	18	22	33	38	39	30	26	VAW SYSTEMS	REA
DS-16	3575	24"/54"-24"/54"	60" ELBOW	397	0.08	12	14	20	30	33	28	24	VAW SYSTEMS	REA
DS-17	4000	42"/42"-30"/42"	84" ELBOW	381	0.1	17	22	33	39	40	41	32	VAW SYSTEMS	REA

4

DIFFUSER & GRILLE SCHEDULE

TAG	SYSTEM TYPE	SHAPE	NOMINAL SIZE	MATERIAL	FINISH	MOUNTING	ACCESSORIES	MANUFACTURER	MODEL	NOTES
D1	SUPPLY DIFFUSER	SQUARE	24"x24"	STEEL	WHITE POWDER COAT	CEILING		TITUS	OMNI	
D2	SUPPLY DIFFUSER	SQUARE	12"X12"	STEEL	WHITE POWDER COAT	CEILING		TITUS	OMNI	
D3	SUPPLY GRILLE	RECTANGULAR	NECK SIZE + 2"	ALUMINUM	WHITE POWDER COAT	WALL AND RECTANGULAR DUCT		TITUS	300FL	
D4	SUPPLY GRILLE	RECTANGULAR	NECK SIZE + 2"	ALUMINUM	WHITE POWDER COAT	ROUND DUCT		TITUS	S300FL	
DE	DRYER EXHAUST	RECTANGULAR	6"x6"	STEEL	WHITE POWDER COAT	WALL	DAMPER	FAMCO	DWVG	
G1	RETURN GRILLE	SQUARE	24"x24"	STEEL	WHITE POWDER COAT	CEILING		TITUS	OMNI	
G2	RETURN GRILLE	SQUARE	12"X12"	STEEL	WHITE POWDER COAT	CEILING		TITUS	OMNI	
G3	RETURN GRILLE	RECTANGULAR	NECK SIZE + 2"	ALUMINUM	WHITE POWDER COAT	WALL AND RECTANGULAR DUCT		TITUS	3FL	
HE	HOOD EXHUAST CONNECTION	–	–	–	–	–	–	–	–	
HS	HOOD SUPPLY CONNECTION	–	–	–	–	–	–	–	–	

CONDENSATE PUMP SCHEDULE

TAG	SERVICE	GPH	PRESSURE (FT)	TANK VOLUME (GAL)	HP	MOTOR CONTROLLER	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
							VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
CP-A-108	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-202	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-207	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-100	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-216	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-C202	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-226	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	
CP-A-107	CONDENSATE	48	10	0.5	1/30	FLOAT	120	1	1.5	–	20	FIELD	LITTLE GIANT	VCMA-20UL	

FAN SCHEDULE

TAG	SERVICE	TYPE	FAN DATA						ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
			CFM	ESP (In. Wg)	RPM	BHP	HP	MOTOR CONTROLLER	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
F-A-206.1	KITCHEN HOOD	UP BLAST	5635	1.0	873	1.72	2	INTEGRAL ECM	480	3	7.2	9	15	FACTORY PROVIDED	GREENHECK	CUE-240-VG	
F-B-206.2	KITCHEN HOOD	UP BLAST	2100	1.0	1100	0.58	1	INTEGRAL ECM	480	3	3.2	4	15	FACTORY PROVIDED	GREENHECK	CUE-180HP-VG	
F-C-206.3	KITCHEN HOOD	UP BLAST	2100	1.0	1100	0.58	1	INTEGRAL ECM	480	3	3.2	4	15	FACTORY PROVIDED	GREENHECK	CUE-180HP-VG	
F-D-206.4	KITCHEN HOOD	UP BLAST	2400	1.0	1667	0.89	1	INTEGRAL ECM	480	3	1.8	2.2	15	FACTORY PROVIDED	GREENHECK	CUE-140-VG	
F-E-206.5	KITCHEN HOOD	UP BLAST	2400	1.0	1667	0.89	1	INTEGRAL ECM	480	3	1.8	2.2	15	FACTORY PROVIDED	GREENHECK	CUE-140-VG	
F-F-206.6	KITCHEN HOOD	UP BLAST	1890	1.0	1059	0.51	1	INTEGRAL ECM	480	3	3.2	4	15	FACTORY PROVIDED	GREENHECK	CUE-180HP-VG	
F-G-206.7	DISHWASHER HOOD	UP BLAST	600	0.5	1066	0.11	1	INTEGRAL ECM	480	3	3.2	4	15	FACTORY PROVIDED	GREENHECK	CUE-160XP-VG	
F-H-117	VEHICLE EXHAUST	UP BLAST	1800	4.5	3100	1.8	3	FACTORY VFD	480	3	4.8	–	15	FIELD PROVIDED	MONOXIVENT	BI-120	
F-I	AREA 1 BATHROOMS	DOWN BLAST	1400	0.75	1360	0.29	1/2	INTEGRAL ECM	115	1	6.6	8.2	15	FACTORY PROVIDED	GREENHECK	G-130-VG	
F-J	AREA 3 BATHROOMS	DOWN BLAST	2050	0.75	1704	0.56	3/4	INTEGRAL ECM	115	1	10	12.5	20	FACTORY PROVIDED	GREENHECK	G-130-VG	
F-K-115A	FOOD SERV. STORAGE 115A	DOWN BLAST	400	0.75	1646	0.12	1/6	INTEGRAL ECM	115	1	2.8	3.5	15	FACTORY PROVIDED	GREENHECK	G-095-VG	
F-L	HEALTH OFFICE	DOWN BLAST	200	0.75	1566	0.09	1/4	INTEGRAL ECM	115	1	3.8	4.8	15	FACTORY PROVIDED	GREENHECK	G-097-VG	
F-M	DARK ROOM	DOWN BLAST	375	0.75	1638	0.12	1/6	INTEGRAL ECM	115	1	2.8	3.5	15	FACTORY PROVIDED	GREENHECK	G-095-VG	
F-N	3RD FLOOR STORAGE ROOMS	DOWN BLAST	100	0.5	1122	0.03	1/4	INTEGRAL ECM	115	1	3.8	4.8	15	FACTORY PROVIDED	GREENHECK	G-097-VG	
F-O	3RD FLOOR STORAGE ROOMS	DOWN BLAST	100	0.5	1122	0.03	1/4	INTEGRAL ECM	115	1	3.8	4.8	15	FACTORY PROVIDED	GREENHECK	G-097-VG	
F-P	AREA 3 TOILET ROOMS	DOWN BLAST	150	0.5	1238	0.05	1/4	INTEGRAL ECM	115	1	3.8	4.8	15	FACTORY PROVIDED	GREENHECK	G-097-VG	
F-Q	SHOP DRESSING ROOMS	DOWN BLAST	150	0.5	1238	0.05	1/4	INTEGRAL ECM	115	1	3.8	4.8	15	FACTORY PROVIDED	GREENHECK	G-097-VG	
F-R-108	MANICURE STATIONS	INLINE	300	0.5	1358	0.1	1/10	INTEGRAL ECM	120	1	1.5	1.9	15	FACTORY PROVIDED	GREENHECK	CSP-A390-VG	

PLATE & FRAME HEAT EXCHANGER SCHEDULE

TAG	SERVICE	MBH	HEAT SOURCE						HEAT SYNC						NOMINAL DIMENSIONS (IN)	# PLATES	WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
			FLUID	EFT (F)	LFT (F)	FPD (FT)	GPM	FOULING FACTOR	FLUID	EFT (F)	LFT (F)	FPD (FT)	GPM	FOULING FACTOR						
PFHX-A-1	GLYCOL	4725	WATER	150	120	14.6	315	0.015	30% GLYCOL	110	145	14.6	270	0.015	26"/45".73"	93	2411	ALFA LAVAL	AQ6T-BFG	

4

HEATING HOT WATER EXPANSION TANK SCHEDULE

TAG	SERVICE	TYPE	ACCEPTANCE (GAL)	VOLUME (GAL)	DIAMETER / HEIGHT	SYSTEM FILL (PSIG)	RELIEF VALVE (PSIG)	MANUFACTURER	MODEL	NOTES
ET-A-1	HEATING WATER	FULL ACCEPTANCE BLADDER	106	106	24"/73"	30	75	AMTROL	ST-449C	
ET-B-1	GLYCOL	FULL ACCEPTANCE BLADDER	80	80	24"/59"	30	75	AMTROL	ST-448C	

BOILER SCHEDULE

TAG	INPUT MBH	OUTPUT MBH	FUEL	GPM	TURN DOWN RATIO	EFT (F)	LFT (F)	RELIEF VALVE (PSIG)	AFUE (%)	VENT DIAMETER (IN)	INTAKE DIAMETER (IN)	FPD (FT)	ELECTRICAL DATA						MANUFACTURER	MODEL	NOTES
													VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH			
B-A-1	3999	3843	NAT	250	20:1	120	150	75	96.1	12	12		480	3	6	7.5	20	FIELD PROVIDED	LOCHINVAR	FCB4000	
B-A-3	3999	3843	NAT	250	20:1	120	150	75	96.1	12	12		480	3	6	7.5	20	FIELD PROVIDED	LOCHINVAR	FCB4000	
B-A-2	3999	3843	NAT	250	20:1	120	150	75	96.1	12	12		480	3	6	7.5	20	FIELD PROVIDED	LOCHINVAR	FCB4000	

MAKEUP AIR UNIT SCHEDULE

TAG	SERVICE	SUPPLY FAN DATA							FURNACE DATA					ELECTRICAL DATA							WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
		TYPE	CFM	OA CFM	ESP (In. Wg)	RPM	BHP	HP	FUEL	EAT (F)	LAT (F)	INPUT MBH	OUTPUT MBH	VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH	MOTOR CONTROLLER				
MAU-A-119.2	WELDING	INDIRECT FIRED	6500	6500	0.75	1395	2.6	3	NAT	-10	82	800	634	480	3	–	7.2	15	FACTORY PROVIDED	–	2,000	GREENHECK	IGX-P120-H32-MF	
MAU-A-119.1	WELDING	INDIRECT FIRED	6500	6500	0.75	1395	2.6	3	NAT	-10	82	800	634	480	3	–	7.2	15	FACTORY PROVIDED	–	2,000	GREENHECK	IGX-P120-H32-MF	
MAU-C-129	DUST COLLECTION	INDIRECT FIRED	5600	5600	0.75	1255	1.93	3	NAT	-10	84	700	567	480	3	–	7.2	15	FACTORY PROVIDED	–	2,000	GREENHECK	IGX-P120-H32-MF	
MAU-D-206.1	CULINARY	DIRECT FIRED	5635	5635	0.75	1252	2.34	3	NAT	-10	83	615	566	480	3	–	6.2	15	FACTORY PROVIDED	–	1,000	GREENHECK	DGX-P122-H22-D1	
MAU-E-206.2	CULINARY	DIRECT FIRED	12600	12600	0.75	1744	8.26	10	NAT	-10	83	1376	1266	480	3	–	17.7	30	FACTORY PROVIDED	–	1500	GREENHECK	DGX-P125-H32-D3	

PACKAGED ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	SERVICE	SUPPLY FAN					EXHAUST FAN DATA					MOTOR CONTROLLER	ENERGY RECOVERY SECTION DATA						ELECTRICAL DATA						WEIGHT (LBS)	MANUFACTURER	MODEL	NOTES
		CFM	ESP (In. Wg)	RPM	BHP	HP	CFM	ESP (In. Wg)	RPM	BHP	HP		WINTER			SUMMER			VOLTAGE	PHASE	FLA	MCA	MOCP	DISCONNECT SWITCH				
													OA TEMP DB (F)	RA TEMP DB (F)	LAT DB (F)	OA TEMP DB (F)	OA TEMP WB (F)	RA TEMP DB (F)	RA TEMP WB (F)	LAT DB (F)	LAT WB (F)							
ERV-A	OFFICES	525	0.5	–	–	1/2	525	0.5	–	–	1/2	INTEGRAL ECM	2	70	50	92	75	75	62.5	80	70	208	1	1.73	3.9	15	FACTORY PROVIDED	750	RENEWAIRE	HE10RTV	
ERV-B	LOCKER ROOMS	1100	0.5	–	–	1	1100	0.5	–	–	1	INTEGRAL ECM	2	70	50	92	75	75	62.5	80	70	208	1	3.4	7.7	15	FACTORY PROVIDED	750	RENEWAIRE	HE1.5XRTV	

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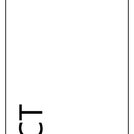
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

Project Title



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Sheet Title
SCHEDULES

Sheet No.
CTE M902

CONSTRUCTION DOCUMENTS

SHEET NOTES

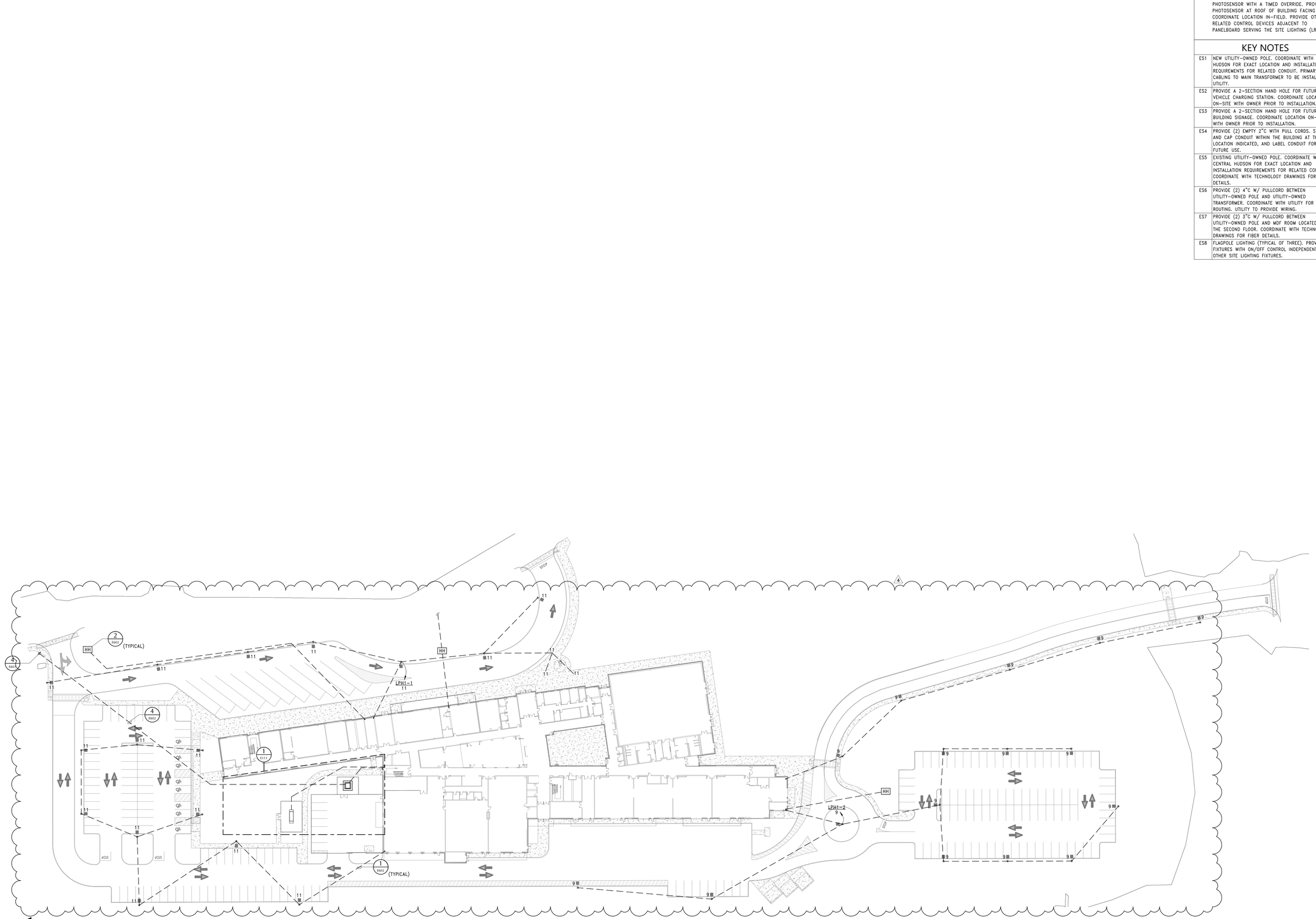
A. UNLESS OTHERWISE NOTED, ALL UNDERGROUND LIGHTING CIRCUITS SHALL BE FED WITH 1"C – 2#10,1#10G.

B. SEE SITE CIVIL PLANS FOR EXTERIOR LIGHTING FIXTURE SCHEDULE AND DETAILS.

C. ALL SITE LIGHTING IS TO BE CONTROLLED VIA A PHOTOSENSOR WITH A TIMED OVERRIDE. PROVIDE PHOTOSENSOR AT ROOF OF BUILDING FACING NORTH, COORDINATE LOCATION IN-FIELD. PROVIDE OTHER RELATED CONTROL DEVICES ADJACENT TO PANELBOARD SERVING THE SITE LIGHTING (LRC-1).

KEY NOTES

ES1	NEW UTILITY-OWNED POLE. COORDINATE WITH CENTRAL HUDSON FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS FOR RELATED CONDUIT. PRIMARY CABLING TO MAIN TRANSFORMER TO BE INSTALLED BY UTILITY.
ES2	PROVIDE A 2-SECTION HAND HOLE FOR FUTURE VEHICLE CHARGING STATION. COORDINATE LOCATION ON-SITE WITH OWNER PRIOR TO INSTALLATION.
ES3	PROVIDE A 2-SECTION HAND HOLE FOR FUTURE BUILDING SIGNAGE. COORDINATE LOCATION ON-SITE WITH OWNER PRIOR TO INSTALLATION.
ES4	PROVIDE (2) EMPTY 2"C WITH PULL CORDS. STUB UP AND CAP CONDUIT WITHIN THE BUILDING AT THE LOCATION INDICATED, AND LABEL CONDUIT FOR ITS FUTURE USE.
ES5	EXISTING UTILITY-OWNED POLE. COORDINATE WITH CENTRAL HUDSON FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS FOR RELATED CONDUIT. COORDINATE WITH TECHNOLOGY DRAWINGS FOR FIBER DETAILS.
ES6	PROVIDE (2) 4"C W/ PULLCORD BETWEEN UTILITY-OWNED POLE AND UTILITY-OWNED TRANSFORMER. COORDINATE WITH UTILITY FOR ROUTING. UTILITY TO PROVIDE WIRING.
ES7	PROVIDE (2) 3"C W/ PULLCORD BETWEEN UTILITY-OWNED POLE AND MDF ROOM LOCATED ON THE SECOND FLOOR. COORDINATE WITH TECHNOLOGY DRAWINGS FOR FIBER DETAILS.
ES8	FLAGPOLE LIGHTING (TYPICAL OF THREE). PROVIDE FIXTURES WITH ON/OFF CONTROL INDEPENDENT OF OTHER SITE LIGHTING FIXTURES.



1 ELECTRICAL SITE PLAN
ES100 1" = 40'-0"

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Sheet No.: CTE ES100

CONSTRUCTION DOCUMENTS

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1 FIRST FLOOR LIGHTING PLAN - AREA '2'
E212 1/8" = 1'-0"

SHEET NOTES

A. SUSPENDED FIXTURES ARE MOUNTED AT 10'-0" AFF UNLESS OTHERWISE NOTED

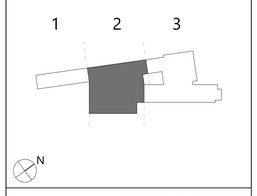
B. STAIRWELL FIXTURES ARE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.

C. REFER TO E900 SERIES DRAWINGS FOR LIGHTING FIXTURE, LIGHTING CONTROL SEQUENCE OF OPERATION, AND PANELBOARD SCHEDULES.

KEY NOTES

2	EL1	PROVIDE FIXTURE WITH BRANCH CIRCUITY FROM BOTH A NORMAL AND LIFE SAFETY POWER SOURCE. EMERGENCY CIRCUIT INDICATED AS INDICATED. SOURCE NORMAL POWER FROM LOCAL LIGHTING CIRCUIT.

KEY PLAN



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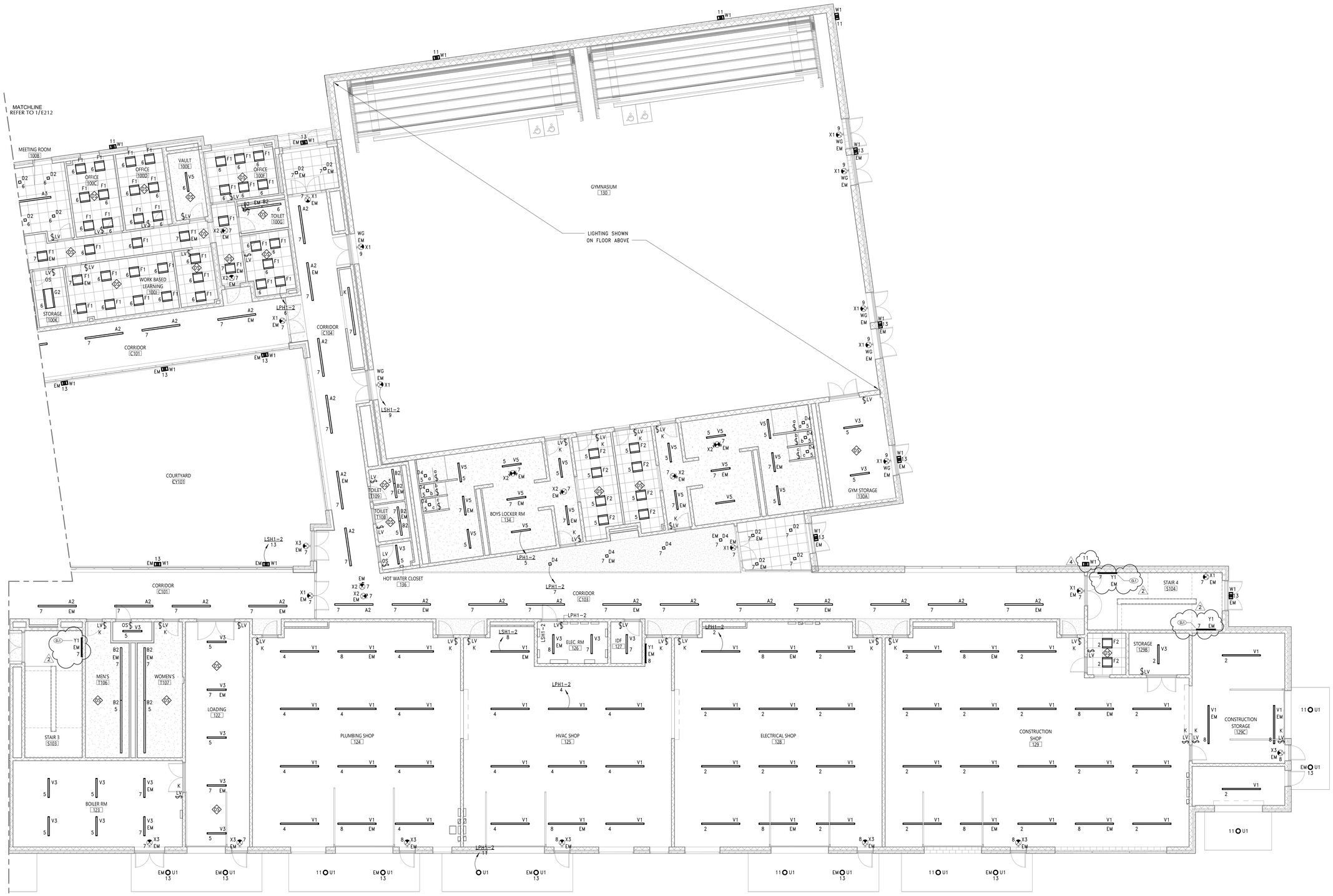
Sheet Title
FIRST FLOOR LIGHTING PLAN -AREA '2'

Sheet No.
CTE E212

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR LIGHTING PLAN - AREA '3'

E213 1/8" = 1'-0"

SHEET NOTES

A. SUSPENDED FIXTURES ARE MOUNTED AT 10'-0" AFF UNLESS OTHERWISE NOTED

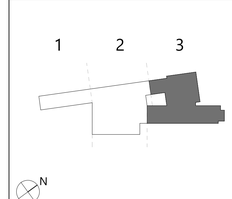
B. STAIRWELL FIXTURES ARE MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED.

C. REFER TO E900 SERIES DRAWINGS FOR LIGHTING FIXTURE, LIGHTING CONTROL SEQUENCE OF OPERATION, AND PANELBOARD SCHEDULES.

KEY NOTES

EL1	PROVIDE FIXTURE WITH BRANCH CIRCUITY FROM BOTH A NORMAL AND LIFE SAFETY POWER SOURCE. EMERGENCY CIRCUIT INDICATED AS INDICATED. SOURCE NORMAL POWER FROM LOCAL LIGHTING CIRCUIT.

KEY PLAN



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Sheet Title

FIRST FLOOR LIGHTING PLAN - AREA '3'

Sheet No.

CTE E213

CONSTRUCTION DOCUMENTS

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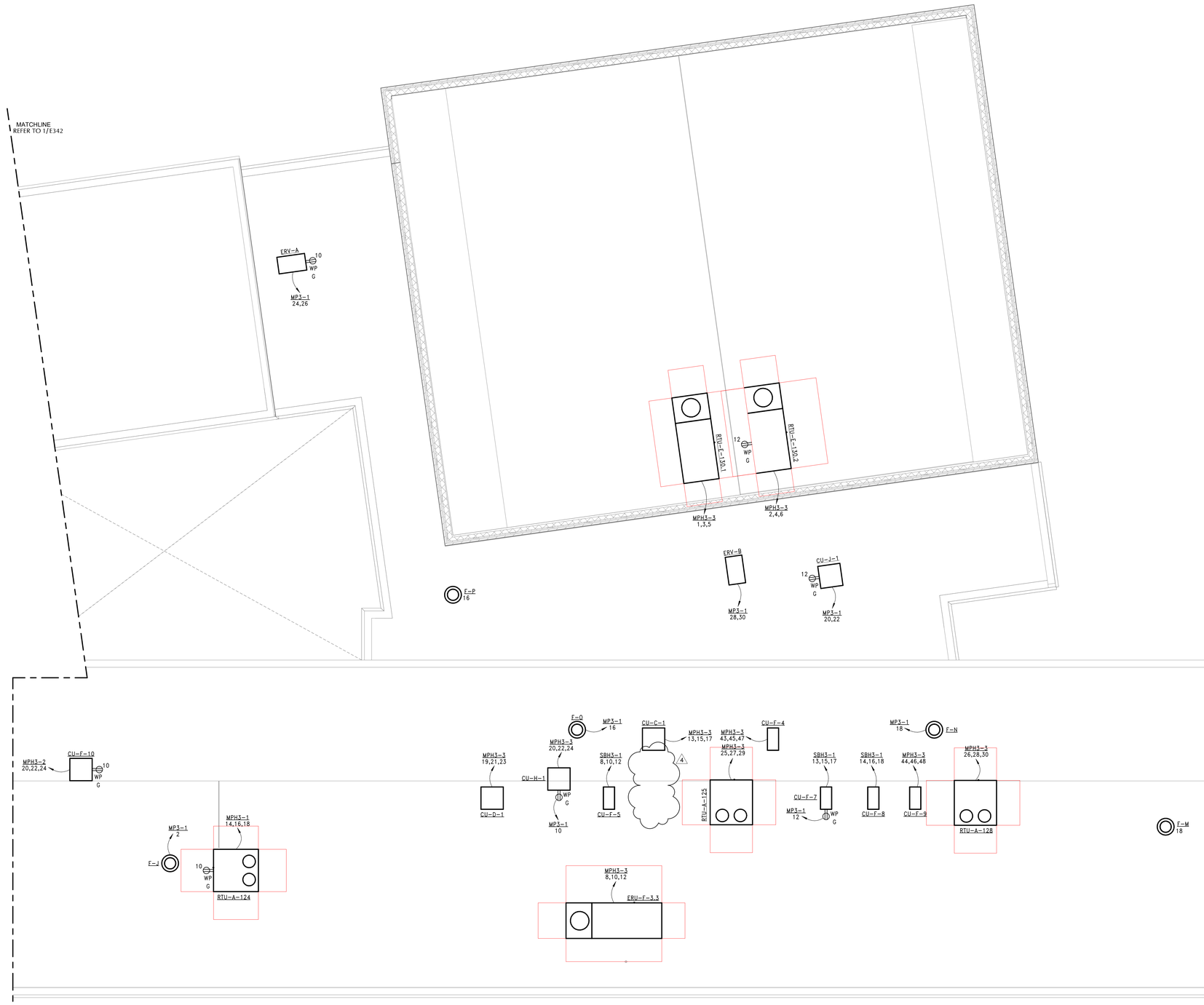


1 ROOF UTILITY PLAN - AREA '3'

E343 1/8" = 1'-0"

SHEET NOTES

A. FIELD COORDINATE ROUTING OF ALL FEEDERS AND BRANCH CIRCUITS.

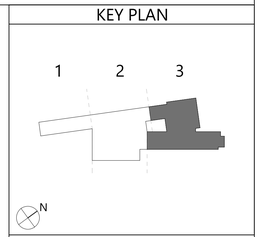
B. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROPERLY FIRE-STOPPED.

C. COORDINATE ALL RECEPTACLE LOCATIONS WITH ARCHITECTURAL CASEWORK AND FURNITURE PLANS.

D. REFER TO E701 FOR POWER RISERS AND WIRING SCHEDULES.

E. REFER TO E900 SERIES DRAWINGS FOR EQUIPMENT AND PANELBOARD SCHEDULES.

KEY PLAN



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Sheet Title

ROOF UTILITY PLAN - AREA '3'

Sheet No.

CTE
E343

CONSTRUCTION DOCUMENTS

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WIRING SCHEDULE
COPPER CONDUCTORS (0-600V)

CIRCUIT LABEL	# OF PARALLEL CONDUIT RUNS	CONDUIT SIZE (INCHES) BASED ON CIRCUIT TYPE [1]			CONDUCTOR SIZE	
		2C	3C	4C	PHASE/ NEUTRAL [2]	EGC [3]
15	1	3/4	3/4	3/4	12	12
20	1	3/4	3/4	3/4	12	12
25	1	3/4	3/4	3/4	10	10
30	1	3/4	3/4	3/4	10	10
35	1	3/4	3/4	3/4	8	10
40	1	3/4	3/4	3/4	8	10
45	1	3/4	3/4	3/4	8	10
50	1	3/4	3/4	3/4	8	10
60	1	3/4	3/4	1	6	10
70	1	1	1	1-1/4	4	8
80	1	1	1	1-1/4	4	8
90	1	1	1-1/4	1-1/4	3	8
100	1	1	1-1/4	1-1/4	3	8
110	1	1-1/4	1-1/4	1-1/4	2	6
125	1	1-1/4	1-1/2	1-1/2	1	6
150	1	1-1/4	1-1/2	1-1/2	1/0	6
175	1	1-1/2	2	2	2/0	6
200	1	1-1/2	2	2	3/0	6
225	1	2	2	2-1/2	4/0	4
250	1	2	2-1/2	2-1/2	250	4
300	1	2-1/2	3	3	350	4
350	1	2-1/2	3	3-1/2	500	3
400	2	2	2	2	3/0	3
450	2	2	2	2-1/2	4/0	2
500	2	2	2-1/2	2-1/2	250	2
600	2	2-1/2	3	3	350	1
700	2	3	3	3-1/2	500	1/0
800	3	2-1/2	2-1/2	3	300	1/0
1000	3	2-1/2	3	3	400	2/0
1200	4	2-1/2	3	3	350	3/0
1600	5	3	3	3	400	4/0
2000	6	3	3	3	400	250
2500	7	3	3	3-1/2	500	350
3000	8	3	3	3-1/2	500	400
4000	11	3	3	3-1/2	500	500

WIRING SCHEDULE NOTES:

1. SUITABLE FOR NEC RACEWAY TYPES: RMC, EMT, FMC, LFMC, AND PVC SCHEDULE 40. VALUES SHOWN ARE BASED ON NEC CHAPTER 9 TABLES 4 (ABOVE RACEWAY TYPES) AND 5 (THHN/THWN/THWN-2 INSULATION), 40% MAXIMUM CONDUIT FILL, AND JAMMING RATIO > 3.2 (RIGID CONDUIT TYPES ONLY). ADJUST SIZE FOR OTHER RACEWAY TYPES REQUIRED FOR A GIVEN APPLICATION IN ACCORDANCE WITH THE PROJECT DRAWINGS AND SPECIFICATIONS.
2. BASED ON NEC TABLE 310.16 (75°C CONDUCTOR TEMPERATURE RATING), WITH AMPACITY OF PHASE/NEUTRAL CONDUCTORS EQUAL TO OR GREATER THAN OCPD RATING.
3. FROM NEC TABLE 250.122.

CONDUIT SELECTION TABLE

USE THE CIRCUIT DESIGNATION TO DETERMINE THE APPROPRIATE COLUMN FOR SELECTING CONDUIT SIZES:

CIRCUIT DESIGNATION	CIRCUIT PHASING/POLES	CONDUCTORS PER CONDUIT			COLUMN
		PHASE	NEUTRAL	EGC	
1NG	SINGLE PHASE/1-POLE	1	1	1	2C
2G	SINGLE PHASE/2-POLE	2	0	1	
2NG	SINGLE PHASE/2-POLE	2	1	1	3C
3G	THREE PHASE/3-POLE	3	0	1	
3NG	THREE PHASE/3-POLE	3	1	1	4C
3N	THREE PHASE/3-POLE (SE)	3	1	0	

CONDUIT SELECTION TABLE NOTES:

1. CIRCUIT LABELS/DESIGNATIONS ON PLANS AND DIAGRAMS INDICATE THE CIRCUIT AMPACITY AND PHASE/NEUTRAL/GROUND CONFIGURATION. FOR EXAMPLE, A DESIGNATION OF 800/3NG INDICATES AN 800A/3P CIRCUIT BREAKER SUPPLYING (3) [3"C, 4#300MCM + #1/0G].

DRY-TYPE TRANSFORMER SCHEDULE (THREE PHASE)

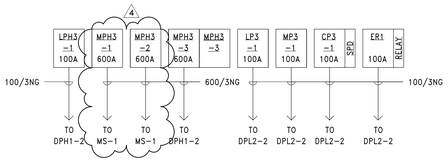
TRANSFORMER SIZE (KVA)	OCPD RATING (A)		GROUNDING ELECTRODE CONDUCTOR
	480V PRIMARY	208Y/120V SECONDARY	
15	25	60	8
30	50	110	8
45	70	175	4
75	125	300	2
112.5	175	400	2
150	250	600	2/0
225	350	800	2/0
300	500	1200	3/0
500	800	2000	3/0
TAG	FEEDER KEY – REFER TO WIRING SCHEDULE		
T	PRIMARY	SECONDARY	
	3G	3NG	

TRANSFORMER SCHEDULE NOTES:

1. BOTH PRIMARY AND SECONDARY OCPD RATINGS BASED ON 125% OF TRANSFORMER RATED CURRENTS, COMPLYING WITH NEC TABLE 450.3(B). SELECT PRIMARY AND SECONDARY FEEDER WIRE SIZES FROM WIRING SCHEDULE TO MATCH RESPECTIVE OCPD SIZES.
2. FROM NEC TABLE 250.66, BASED ON WIRING SCHEDULE.
3. FOR EXAMPLE, FOR A DESIGNATION OF T150 PROVIDE: 150KVA TRANSFORMER, PRIMARY 250A/3P CIRCUIT BREAKER WITH 250/3G FEEDER, SECONDARY 600/3NG FEEDER WITH DOWNSTREAM 600A/3P CIRCUIT BREAKER, AND #2/0 GEC.
4. TRANSFORMER LABELS ON PLANS AND DIAGRAMS INDICATE THE TRANSFORMER SIZE AND CIRCUITING REQUIREMENTS. FOR EXAMPLE, A DESIGNATION OF T150 INDICATES: 150 KVA TRANSFORMER, PRIMARY 250A/3P CIRCUIT BREAKER WITH 250/3G FEEDER, SECONDARY 600/3NG FEEDER WITH DOWNSTREAM 600A/3P CIRCUIT BREAKER, AND #2/0 GEC.

DRY-TYPE TRANSFORMER SCHEDULE (SINGLE PHASE)

TRANSFORMER SIZE (KVA)	OCPD RATING (A)		GROUNDING ELECTRODE CONDUCTOR
	480V PRIMARY	120/240V SECONDARY	
15	40	80	8
25	70	150	6
37.5	100	200	4
50	150	300	2
75	200	400	2
100	300	600	2/0
167	450	1000	3/0
250	700	1600	3/0
TAG	FEEDER KEY – REFER TO WIRING SCHEDULE		
T	PRIMARY	SECONDARY	
	2G	2NG	



1 ELECTRICAL RISER DIAGRAM
E701 NTS

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Sheet Title
ELECTRICAL RISER DIAGRAM

Sheet No.
CTE E701

CONSTRUCTION DOCUMENTS

EQUIPMENT CONNECTION SCHEDULE - SINGLE POINT CONNECTION

TAG	VOLTAGE	PHASE	FLA	MCA	MOCP	POWER SOURCE	CIRCUIT BREAKER	WIRE SIZE	DISCONNECT SWITCH	DISCONNECT SIZE	FA SHUTDOWN
–119H	0	3		27.7	35			40/3G		–	YES W/ DUCT DETECTOR
–B–120	480	3	–	27.7	35			40/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
AC–1	208	1	17.5	–	35	MP1–1	37,39,41	35/3G	FACTORY PROVIDED	–	–
AC–DRYER	120	1	0.7	–	20	MP1–1	18	20/1NG	FACTORY PROVIDED	–	–
B–A–1	480	3	6	7.5	20	MPH1–1	7,9,11	20/3NG	FIELD PROVIDED	BREAKER	–
B–A–2	480	3	6	7.5	20	MPH1–1	8,10,12	20/3NG	FIELD PROVIDED	BREAKER	–
B–A–3	480	3	6	7.5	20	MPH1–1	13,15,17	20/3NG	FIELD PROVIDED	BREAKER	–
CP–A–100	120	1	1.5	–	20	MP1–2	16	20/1NG	FIELD	MMS	–
CP–A–107	120	1	1.5	–	20	MP1–1	22	20/1NG	FIELD	MMS	–
CP–A–108	120	1	1.5	–	20	MP1–1	22	20/1NG	FIELD	MMS	–
CP–A–202	120	1	1.5	–	20	MP2–1	12	20/1NG	FIELD	MMS	–
CP–A–207	120	1	1.5	–	20	MP2–1	12	20/1NG	FIELD	MMS	–
CP–A–216	120	1	1.5	–	20	MP2–1	12	20/1NG	FIELD	MMS	–
CP–A–226	120	1	1.5	–	20	MP2–2	6	20/1NG	FIELD	MMS	–
CP–A–C202	120	1	1.5	–	20	MP2–2	6	20/1NG	FIELD	MMS	–
CU–A–1	480	3	–	42.1	45	MPH2–1	1,3,5	45/3G	FACTORY PROVIDED	–	–
CU–B–1	480	3	–	46.8	50	MPH3–1	13,15,17	50/3G	FACTORY PROVIDED	–	–
CU–C–1	480	3	–	50.4	60	MPH3–3	13,15,17	60/3G	FACTORY PROVIDED	–	–
CU–D–1	480	3	–	42.1	45	MPH3–3	19,21,23	45/3G	FACTORY PROVIDED	–	–
CU–E–1	480	3	–	46.8	50	MPH3–2	13,15,17	50/3G	FACTORY PROVIDED	–	–
CU–F–1	480	3	–	16.6	20	MPH3–1	20,22,24	20/3G	FACTORY PROVIDED	–	–
CU–F–2	480	3	–	16.6	20	MPH3–2	25,27,29	20/3G	FACTORY PROVIDED	–	–
CU–F–3	480	3	–	16.6	20	SBH3–1	7,9,11	20/3G	FACTORY PROVIDED	–	–
CU–F–4	480	3	–	16.6	20	MPH3–3	43,45,47	20/3G	FACTORY PROVIDED	–	–
CU–F–5	480	3	–	16.6	20	SBH3–1	8,10,12	20/3G	FACTORY PROVIDED	–	–
CU–F–7	480	3	–	16.6	20	SBH3–1	13,15,17	20/3G	FACTORY PROVIDED	–	–
CU–F–8	480	3	–	16.6	20	SBH3–1	14,16,18	20/3G	FACTORY PROVIDED	–	–
CU–F–9	480	3	–	16.6	20	MPH3–3	44,46,48	20/3G	FACTORY PROVIDED	–	–
CU–F–10	480	3	–	16.6	20	MPH3–2	20,22,24	20/3G	FACTORY PROVIDED	–	–
CU–G–1	480	3	–	32.5	35	MPH2–1	2,4,6	35/3G	FACTORY PROVIDED	–	–
CU–H–1	480	3	–	32.5	35	MPH3–3	20,22,24	35/3G	FACTORY PROVIDED	–	–
CU–J–1	208	1	–	6.5	15	MP3–1	20,22	15/2NG	FACTORY PROVIDED	–	–
CU–K–1	480	3	–	20.6	25	MPH3–1	19,21,23	25/3G	FACTORY PROVIDED	–	–
CU–K–2	480	3	–	20.6	25	MPH3–2	19,21,23	25/3G	FACTORY PROVIDED	–	–
CUH–A–T101	120	1	3.7	–	20	MP1–1	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T102	120	1	3.7	–	20	MP1–1	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T103	120	1	3.7	–	20	MP1–1	6	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T106	120	1	3.7	–	20	MP1–2	10	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T107	120	1	3.7	–	20	MP1–2	10	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T201	120	1	3.7	–	20	MP2–1	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T202	120	1	3.7	–	20	MP2–1	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T203	120	1	3.7	–	20	MP2–1	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T205	120	1	3.7	–	20	MP2–2	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T206	120	1	3.7	–	20	MP2–2	2	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T302	120	1	3.7	–	20	MP3–1	4	20/1NG	FACTORY PROVIDED	–	–
CUH–A–T303	120	1	3.7	–	20	MP3–1	4	20/1NG	FACTORY PROVIDED	–	–
CUH–A–V102	120	1	3.7	–	20	MP1–1	4	20/1NG	FACTORY PROVIDED	–	–
CUH–A–V104	120	1	3.7	–	20	MP1–2	8	20/1NG	FACTORY PROVIDED	–	–
CUH–A–V105	120	1	3.7	–	20	MP1–2	4	20/1NG	FACTORY PROVIDED	–	–
CUH–B–122	120	1	7.4	–	20	MP1–2	2	20/1NG	FACTORY PROVIDED	–	–
CUH–B–S101	120	1	7.4	–	20	MP1–1	4	20/1NG	FACTORY PROVIDED	–	–
CUH–B–S102	120	1	7.4	–	20	MP1–1	6	20/1NG	FACTORY PROVIDED	–	–
CUH–B–S104	120	1	7.4	–	20	MP1–2	8	20/1NG	FACTORY PROVIDED	–	–
CUH–C–103	120	1	7.4	–	20	MP1–1	8	20/1NG	FACTORY PROVIDED	–	–
CUH–C–131	120	1	7.4	–	20	MP1–2	6	20/1NG	FACTORY PROVIDED	–	–
CUH–C–134	120	1	7.4	–	20	MP1–2	6	20/1NG	FACTORY PROVIDED	–	–
CUH–C–V101	120	1	7.4	–	20	MP1–2	4	20/1NG	FACTORY PROVIDED	–	–
CUH–C–V103	120	1	7.4	–	20	MP1–2	2	20/1NG	FACTORY PROVIDED	–	–
ERU–A–1.1	480	3	70	76.3	100	MPH3–2	1,3,5	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–B–1.2	480	3	36.1	42.3	60	MPH3–2	8,10,12	60/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–C–2.1	480	3	61.2	67.4	90	MPH3–2	2,4,6	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–D–2.2	480	3	47.2	53.4	70	MPH3–2	7,9,11	80/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–E–2.3	480	3	61.2	67.4	90	MPH3–3	7,9,11	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–F–3.3	480	3	49.6	58.6	90	MPH3–3	8,10,12	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERU–G–117	480	3	74	80.2	100	MPH3–1	1,3,5	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
ERV–A	208	1	1.73	3.9	15	MP3–1	24,26	15/2NG	FACTORY PROVIDED	–	–
ERV–B	208	1	3.4	7.7	15	MP3–1	28,30	15/2NG	FACTORY PROVIDED	–	–
F–A–206.1	480	3	7.2	9	15	MPH3–2	31,33,35	15/3G	FACTORY PROVIDED	–	–
F–B–206.2	480	3	3.2	4	15	MPH3–1	31,33,35	15/3G	FACTORY PROVIDED	–	–
F–C–206.3	480	3	3.2	4	15	MPH3–1	31,33,35	15/3G	FACTORY PROVIDED	–	–
F–D–206.4	480	3	1.8	2.2	15	MPH3–1	31,33,35	15/3G	FACTORY PROVIDED	–	–
F–E–206.5	480	3	1.8	2.2	15	MPH3–2	32,34,36	15/3G	FACTORY PROVIDED	–	–
F–F–206.6	480	3	3.2	4	15	MPH3–2	32,34,36	15/3G	FACTORY PROVIDED	–	–
F–G–206.7	480	3	3.2	4	15	MPH3–2	32,34,36	15/3G	FACTORY PROVIDED	–	–
F–H–117	480	3	4.8	–	15	MPH3–2	37,39,41	15/3G	FIELD PROVIDED	30A	–
F–I	115	1	6.6	8.2	15	MP2–1	4	15/1NG	FACTORY PROVIDED	–	–
F–J	115	1	10	12.5	20	MP3–1	2	20/1NG	FACTORY PROVIDED	–	–
F–K–115A	115	1	2.8	3.5	15	MP2–1	6	15/1NG	FACTORY PROVIDED	–	–
F–L	115	1	3.8	4.8	15	MP3–1	14	15/1NG	FACTORY PROVIDED	–	–
F–M	115	1	2.8	3.5	15	MP3–1	18	15/1NG	FACTORY PROVIDED	–	–
F–N	115	1	3.8	4.8	15	MP3–1	18	15/1NG	FACTORY PROVIDED	–	–
F–O	115	1	3.8	4.8	15	MP3–1	16	15/1NG	FACTORY PROVIDED	–	–
F–P	115	1	3.8	4.8	15	MP3–1	16	15/1NG	FACTORY PROVIDED	–	–
F–Q	115	1	3.8	4.8	15	MP2–1	6	15/1NG	FACTORY PROVIDED	–	–
F–R–108	120	1	1.5	1.9	15	MP1–1	20	15/1NG	FACTORY PROVIDED	–	–
GMS–A–222	120	1	–	9.0	20	MP2–2	4	20/1NG	FACTORY PROVIDED	–	–
GWH–1	120	1	5.0	–	20	MP1–2	12	20/1NG	FIELD	30A	–
GWH–2	120	1	5.0	–	20	MP1–1	10	20/1NG	FIELD	30A	–
GWH–3A	120	1	5.0	–	20	MP1–1	12	20/1NG	FIELD	30A	–
GWH–3B	120	1	5.0	–	20	MP1–1	14	20/1NG	FIELD	30A	–
GWH–4	120	1	5.0	–	20	MP1–1	16	20/1NG	FIELD	30A	–
ISU–CA–100A	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100C	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100D	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100F	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100H	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100I	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–100J	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CA–204	208	1	–	0.3	15	MP2–1	5,7	20/2NG	FIELD	MMS	–

EQUIPMENT CONNECTION SCHEDULE - SINGLE POINT CONNECTION

TAG	VOLTAGE	PHASE	FLA	MCA	MOCP	POWER SOURCE	CIRCUIT BREAKER	WIRE SIZE	DISCONNECT SWITCH	DISCONNECT SIZE	FA SHUTDOWN
ISU–CA–212	208	1	–	0.3	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CA–221B	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CA–233A	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CA–233B	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CA–233C	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CA–233D	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CA–233E	208	1	–	0.3	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CB–100B	208	1	–	0.3	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CB–111	208	1	–	0.3	15	MP1–1	1,3	20/2NG	FIELD	MMS	–
ISU–CC–100	208	1	–	0.4	15	MP1–2	1,3	20/2NG	FIELD	MMS	–
ISU–CC–101	208	1	–	0.4	15	MP1–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–102	208	1	–	0.7	15	MP1–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–103	208	1	–	0.7	15	MP1–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–107	208	1	–	0.7	15	MP1–1	1,3	20/2NG	FIELD	MMS	–
ISU–CF–109	208	1	–	0.7	15	MP1–1	1,3	20/2NG	FIELD	MMS	–
ISU–CF–110A	208	1	–	0.7	15	MP1–1	1,3	20/2NG	FIELD	MMS	–
ISU–CF–205	208	1	–	0.7	15	MP2–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–207	208	1	–	0.7	15	MP2–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–208	208	1	–	0.7	15	MP2–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–209	208	1	–	0.7	15	MP2–1	5,7	20/2NG	FIELD	MMS	–
ISU–CF–302	208	1	–	0.7	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CG–201	208	1	–	1.3	15	MP2–1	1,3	20/2NG	FIELD	MMS	–
ISU–CG–202.1	208	1	–	1.3	15	MP2–1	1,3	20/2NG	FIELD	MMS	–
ISU–CG–202.2	208	1	–	1.3	15	MP2–1	1,3	20/2NG	FIELD	MMS	–
ISU–CG–215	208	1	–	1.3	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CG–216	208	1	–	1.3	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CH–108	208	1	–	1.5	15	MP1–1	1,3	20/2NG	FIELD	MMS	–
ISU–CH–223	208	1	–	1.5	15	MP2–1	1,3	20/2NG	FIELD	MMS	–
ISU–CH–305	208	1	–	1.5	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–104	208	1	–	1.8	15	MP1–1	5,7	20/2NG	FIELD	MMS	–
ISU–CI–210	208	1	–	1.8	15	MP2–1	5,7	20/2NG	FIELD	MMS	–
ISU–CI–217	208	1	–	1.8	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–218	208	1	–	1.8	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–219	208	1	–	1.8	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–220	208	1	–	1.8	15	MP2–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–221	208	1	–	1.8	15	MP2–2	5,7	20/2NG	FIELD	MMS	–
ISU–CI–224	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–226	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–229	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–230	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–231	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–232	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–306	208	1	–	1.8	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–308	208	1	–	1.8	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–311	208	1	–	1.8	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–314	208	1	–	1.8	15	MP3–1	9,11	20/2NG	FIELD	MMS	–
ISU–CI–N231	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–CI–N232	208	1	–	1.8	15	MP2–2	1,3	20/2NG	FIELD	MMS	–
ISU–HC–314B	208	1	–	4.9	15	MP3–1	19,21	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C101A	208	1	–	6.5	15	MP1–2	13,15	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C101B	208	1	–	6.5	15	MP1–2	17,19	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C101C	208	1	–	6.5	15	MP2–2	13,15	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C102A	208	1	–	6.5	15	MP1–1	13,15	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C102B	208	1	–	6.5	15	MP1–1	17,19	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C103	208	1	–	6.5	15	MP1–2	21,23	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C201A	208	1	–	6.5	15	MP2–1	13,15	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C201B	208	1	–	6.5	15	MP2–1	17,19	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C202A	208	1	–	6.5	15	MP2–1	21,23	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C204A	208	1	–	6.5	15	MP2–2	17,19	15/2NG	FACTORY PROVIDED	–	–
ISU–HG–C204B	208	1	–	6.5	15	MP2–2	21,23	15/2NG	FACTORY PROVIDED	–	–
ISU–HH–C301A	208	1	–	8.6	15	MP3–1	23,25	15/2NG	FACTORY PROVIDED	–	–
ISU–HH–C301B	208	1	–	8.6	15	MP3–1	27,29	15/2NG	FACTORY PROVIDED	–	–
MAU–A–119.1	480	3	–	7.2	15	MPH3–1	25,27,29	20/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
MAU–A–119.2	480	3	–	7.2	15	MPH3–2	26,28,30	20/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
MAU–C–129	480	3	–	7.2	15	MPH3–3	49,51,53	20/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
MAU–D–206.1	480	3	–	6.2	15	MPH3–1	26,28,30	20/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
MAU–E–206.2	480	3	–	17.7	30	MPH3–2	14,16,18	30/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
P–A–1	480	3	4.8	–	15	MPH1–1	25,27,29	15/3G	FACTORY PROVIDED	–	–
P–A–2	480	3	4.8	–	15	MPH1–1	26,28,30	15/3G	FACTORY PROVIDED	–	–
P–A–3	480	3	4.8	–	15	MPH1–1	31,33,35	15/3G	FACTORY PROVIDED	–	–
P–B–1	480	3	27.0	–	60	MPH1–1	1,3,5	60/3G	FACTORY PROVIDED	–	–
P–B–2	480	3	27.0	–	60	MPH1–1	2,4,6	60/3G	FACTORY PROVIDED	–	–
P–C–1	480	3	11.0	–	20	MPH1–1	14,16,18	20/3G	FACTORY PROVIDED	–	–
P–C–2	480	3	11.0	–	20	MPH1–1	19,21,23	20/3G	FACTORY PROVIDED	–	–
PP–1	120	1	1.4	–	20	MP1–2	12	20/1NG	FACTORY PROVIDED	–	–
PP–2	120	1	1.4	–	20	MP1–1	10	20/1NG	FACTORY PROVIDED	–	–
PP–3A	120	1	1.4	–	20	MP1–1	12	20/1NG	FACTORY PROVIDED	–	–
PP–3B	120	1	1.4	–	20	MP1–1	14	20/1NG	FACTORY PROVIDED	–	–
RTU–A–124	480	3	20.8	24	35	MPH3–1	14,16,18	40/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–A–125	480	3	20.8	24	35	MPH3–3	25,27,29	40/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–A–128	480	3	20.8	24	35	MPH3–3	26,28,30	40/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–B–129	480	3	36.6	42.9	60	MPH3–3	14,16,18	60/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–C–119	480	3	36.6	42.9	60	MPH3–1	8,10,12	60/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–D–120	480	3	58.4	64.7	90	MPH3–1	2,4,6	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–E–130.1	480	3	75.8	82	100	MPH3–3	1,3,5	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–E–130.2	480	3	75.8	82	100	MPH3–3	2,4,6	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
RTU–F–206	480	3	58.4	64.7	90	MPH3–1	7,9,11	100/3G	FACTORY PROVIDED	–	YES W/ DUCT DETECTOR
UH–119F	115	1	.53	–	20	LP1–WS	31	20/1NG	FACTORY PROVIDED	–	–
UH–129C	115	1	.53	–	20	MP1–2	8	20/1NG	FACTORY PROVIDED	–	–
UH–129D	115	1	.53	–	20	MP1–2	8	20/1NG	FACTORY PROVIDED	–	–
UH–A–105	115	1	.53	–	20	MP1–1	8	20/1NG	FACTORY PROVIDED	–	–
UH–A–106	115	1	.53	–	20	MP1–1	2	20/1NG	FACTORY PROVIDED	–	–
UH–A–123	115	1	.53	–	20	MP1–2	10	20/1NG	FACTORY PROVIDED	–	–
UH–A–130A	115	1	.53	–	20	MP1–2	8	20/1NG	FACTORY PROVIDED	–	–
UH–A–203	115	1	.53	–	20	MP2–1	2	20/1NG	FACTORY PROVIDED	–	–
UH–A–V108	115	1	.53	–	20	MP2–2	2	20/1NG	FACTORY PROVIDED	–	–
WFU–A–1	480	3	52.0	–	125	DPH1–1	19,21,23	125/3G	FIELD PROVIDED	–	YES W/ DUCT DETECTOR

4

KITCHEN & CULINARY SCHEDULE

TAG	DESCRIPTION	VOLTAGE	PHASE	AMPS	NEMA	DIRECT	POWER SOURCE	CIRCUIT BREAKER	CONDUIT & WIRING
K100	MILK COOLER	120	1	7.6	5–15R	–	KP1–1	2	20/1NG
K100	MILK COOLER	120	1	7.6	5–15R	–	KP1–1	4	20/1NG
K101	HOT FOOD STATION	208	1	9.9	L14–20R	–	KP1–1	31,33	20/2NG
K101	HOT FOOD STATION	208	1	9.9	L14–20R	–	KP1–1	32,34	20/2NG
K103	UTILITY COUNTER	120	1	20.0	5–20R	–	KP1–1	7	20/1NG
K103	UTILITY COUNTER	120	1	20.0	5–20R	–	KP1–1	6	20/1NG
K104	COLD FOOD STATION	120	1	7.8	5–15R	–	KP1–1	9	20/1NG
K104	COLD FOOD STATION	120	1	7.8	5–15R	–	KP1–1	8	20/1NG
K106	UTILITY COUNTER	120	1	20.0	5–20R	–	KP1–1	10	20/1NG
K106	UTILITY COUNTER	120	1	20.0	5–20R	–	KP1–1	11	20/1NG
K109	CASHIER STATION	120	1	20.0	5–20R	–	KP1–1	13	20/1NG
K109	CASHIER STATION	120	1	20.0	5–20R	–	KP1–1	12	20/1NG
K112	ROLL–THRU REFRIGERATOR	120	1	10.3	5–15R	–	KP1–1	14	20/1NG
K113	ROLL–THRU HEATED CABINET	208	1	7.2	–	X	KP1–1	35,37	20/2NG
K115	ROLL–IN HEATED CABINET	208	1	7.2	–	X	KP1–1	36,38	20/2NG
K116	ROLL–IN HEATED CABINET	208	1	13.9	–	X	KP1–1	39,41	20/2NG
K117	ROLL–IN REFRIGERATOR	120	1	9.4	5–15R	–	KP1–1	15	20/1NG
K117	ROLL–IN REFRIGERATOR	120	1	9.4	5–15R	–	KP1–1	16	20/1NG
K120	VENTLESS COMBI OVEN	208	3	124.0	–	X	DPL1–1	8,10,12	175/3G
K120	VENTLESS COMBI OVEN	208	3	124.0	–	X	DPL1–1	13,15,17	175/3G
K120	VENTLESS COMBI OVEN	208	3	124.0	–	X	DPL1–1	14,16,18	175/3G
K120	VENTLESS COMBI OVEN	208	3	124.0	–	X	DPL1–1	19,21,23	175/3G
K120.1	CONDENSATE HOOD	120	1	1.6	5–15R	–	KP1–1	17	20/1NG
K120.1	CONDENSATE HOOD	120	1	1.6	5–15R	–	KP1–1	17	20/1NG
K121	HAND SINK	120	1	1.0	5–15R	–	KP1–1	19	20/1NG
K123	WORK TABLE	120	1	30.0	–	X	KP1–1	5	30/1NG
K123	WORK TABLE	120	1	30.0	–	X	KP1–1	3	30/1NG
K123	WORK TABLE	120	1	30.0	–	X	KP1–1	1	30/1NG
K124	REACH–IN FREEZER	120	1	9.4	5–15R	–	KP1–1	18	20/1NG
K200	WALK–IN COOLER/FREEZER	120	1	15.0	–	X	SB2–1	10	20/1NG
K200	WALK–IN COOLER/FREEZER	120	1	15.0	–	X	SB2–1	8	20/1NG
K200.1	AIR CURTAIN	120	1	15.0	–	X	SB2–1	14	20/1NG
K200.1	AIR CURTAIN	120	1	15.0	–	X	SB2–1	12	20/1NG
K201	WALK–IN COOLER EVAPORATOR COIL	208	1	4.4	–	X	SB2–1	11,13	20/2NG
K203	WALK–IN FREEZER EVAPORATOR COIL	208	1	13.7	–	X	SB2–1	15,17	20/2NG
K203.1	FREEZER DRAIN LINE HEATER	120	1	11.9	–	X	SB2–1	16	20/2NG
K205	REFRIGERATOR RACK SYSTEM	208	3	41.7	–	X	SB2–1	1,3,5	60/3G
K215	WASHING MACHINE	120	1	15.0	5–20R	–	KP2–2	1	20/1NG
K215.1	DRYER MACHINE	208	1	22.0	6–30R	–	KP2–2	38,40	30/2NG
K301	TEACHER'S REFREGERATED STATION	120	1	3.4	5–15R	–	KP2–2	2	20/1NG
K402	DISHWASHER	208	3	26.9	–	X	KP2–1	19,21,23	35/3G
K402.1	INTERNAL BOOSTER HEATER	208	3	25.6	–	X	KP2–1	14,16,18	35/3G
K408	HAND SINK	120	1	1.0	5–15R	–	KP2–2	3	20/1NG
K411	PROOFING CABINET	120	1	13.8	5–20R	–	KP2–2	4	20/1NG
K412	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	5	20/1NG
K413	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	KP2–2	6	20/1NG
K414	CONVECTION OVEN	208	3	38.0	–	X	KP2–1	2,4,6	50/3G
K414	CONVECTION OVEN	208	3	38.0	–	X	KP2–1	7,9,11	50/3G
K415	COMBI OVEN	208	3	30.0	–	X	KP2–1	8,10,12	40/3G
K415	COMBI OVEN	208	3	30.0	–	X	KP2–1	13,15,17	40/3G
K417	HAND SINK	120	1	1.0	5–15R	–	KP2–2	3	20/1NG
K417	HAND SINK	120	1	1.0	5–15R	–	KP2–2	3	20/1NG
K417	HAND SINK	120	1	1.0	5–15R	–	KP2–2	3	20/1NG
K418	MIXER	208	3	7.0	L15–20R	–	KP2–1	20,22,24	20/3G
K424	SLICER	120	1	2.0	5–15R	–	KP2–2	7	20/1NG
K427.1	UTILITY WALL SYSTEM	120	1	60.0	–	X	KP2–2	35	60/1NG
K428.1	UTILITY WALL SYSTEM	120	1	60.0	–	X	KP2–2	37	60/1NG
K429	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	9	20/1NG
K429	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	8	20/1NG
K429.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	11	20/1NG
K429.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	10	20/1NG
K432.1	UTILITY WALL SYSTEM	120	1	60.0	–	X	KP2–2	39	60/1NG
K432.1	UTILITY WALL SYSTEM	120	1	60.0	–	X	KP2–2	41	60/1NG
K433	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	10	20/1NG
K433	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	11	20/1NG
K433	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	12	20/1NG
K433	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	13	20/1NG
K433.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	15	20/1NG
K433.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	14	20/1NG
K433.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	13	20/1NG
K433.1	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	12	20/1NG
K436	EXHAUST HOOD	120	1	15.0	–	X	KP2–2	14	20/1NG
K437	UTILITY WALL SYSTEM	208	3	200.0	–	X	KP2–1	1,3,5	200/3G
K438	FIRE SUPPRESSION SYSTEM	120	1	20.0	–	X	LS1–1	16	20/1NG
K451	ICE MACHINE	120	1	11.9	5–15R	–	KP2–2	19	20/1NG
K453	ROLL–IN REFRIGERATOR	120	1	9.4	5–15R	–	KP2–2	15	20/1NG
K453	ROLL–IN REFRIGERATOR	120	1	9.4	5–15R	–	KP2–2	17	20/1NG
K456	MIXER	120	1	6.0	5–15R	–	KP2–2	16	20/1NG
K456	MIXER	120	1	6.0	5–15R	–	KP2–2	18	20/1NG

KITCHEN SCHEDULE NOTES:

1. FOR EACH DIRECT CONNECTION UNIT, PROVIDE LOCAL DISCONNECT WITHIN SITE OF UNIT. COORDINATE LOCATION IN–FIELD WITH ARCHITECT.
2. COORDINATE ALL BACKBOX MOUNTING HEIGHTS WITH FOOD SERVICE DRAWINGS PRIOR TO INSTALLATION.

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Consultant

Project Title

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

JAMES R. BARRETT
073467
EXPIRES 5/31/2026

#	DATE	DESCRIPTION
4	5/20/2024	BID ADDENDUM #4

Drawn By: NAR
Checked By: JRB
Proj. #: 44-16-00-01-0-053-001
CSArch Proj. #: 108-2303
Issued for Bid: 4/15/2024

Sheet Title

SCHEDULES

Sheet No.

CTE
E901

CONSTRUCTION DOCUMENTS

Branch Panel: MPH3-3

Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 14,000

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
43	CU-F-4	20	3	3680.3 VA	3680.3 VA					3	20	CU-F-9	44
45	--	--	--			3680.3 VA	3680.3 VA			--	--	--	46
47	--	--	--					3680.3 VA	3680.3 VA	--	--	--	48
49	MAU-C-129	15	3	1596.3 VA	0 VA					3	20	SPARE	50
51	--	--	--			1596.3 VA	0 VA			--	--	--	52
53	--	--	--					1596.3 VA	0 VA	--	--	--	54
55	SPARE	20	3	0 VA	0 VA					3	20	SPARE	56
57	--	--	--			0 VA	0 VA			--	--	--	58
59	--	--	--					0 VA	0 VA	--	--	--	60
61	SPACE	--	1	--	--					1	--	SPACE	62
63	SPACE	--	1			--	--			1	--	SPACE	64
65	SPACE	--	1					--	--	1	--	SPACE	66
67	SPACE	--	1	--	--					1	--	SPACE	68
69	SPACE	--	1			--	--			1	--	SPACE	70
71	SPACE	--	1					--	--	1	--	SPACE	72
73	SPACE	--	1	--	--					1	--	SPACE	74
75	SPACE	--	1			--	--			1	--	SPACE	76
77	SPACE	--	1					--	--	1	--	SPACE	78
79	SPACE	--	1	--	--					1	--	SPACE	80
81	SPACE	--	1			--	--			1	--	SPACE	82
83	SPACE	--	1					--	--	1	--	SPACE	84
		Total Load:		8957 VA		8957 VA		8957 VA					
		Total Amps:		32.3		32.3		32.3					

Notes:

Branch Panel: MPH3-3

Location: ELEC. RM 309
Supply From: DPH1-2
Mounting: SURFACE
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 14,000
Mains Type: 600 A MCB
Mains Rating: 600

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RTU-E-130.1	100	3	21006.3...	21006.3...					3	100	RTU-E-130.2	2
3	--	--	--			21006.3...	21006.3...			--	--	--	4
5	--	--	--					21006.3...	21006.3...	--	--	--	6
7	ERU-E-2.3	90	3	14743.2...	13745.6...					3	90	ERU-F-3.3	8
9	--	--	--			14743.2...	13745.6...			--	--	--	10
11	--	--	--					14743.2...	13745.6...	--	--	--	12
13	CU-C-1	60	3	11173.7...	10142.9...					3	60	RTU-B-129	14
15	--	--	--			11173.7...	10142.9...			--	--	--	16
17	--	--	--					11173.7...	10142.9...	--	--	--	18
19	CU-D-1	45	3	9333.7 VA	9333.7 VA					3	35	CU-H-1	20
21	--	--	--			9333.7 VA	9333.7 VA			--	--	--	22
23	--	--	--					9333.7 VA	9333.7 VA	--	--	--	24
25	RTU-A-125	35	3	5764.3 VA	5764.3 VA					3	35	RTU-A-128	26
27	--	--	--			5764.3 VA	5764.3 VA			--	--	--	28
29	--	--	--					5764.3 VA	5764.3 VA	--	--	--	30
31	SPACE	--	1	--	--					1	--	SPACE	32
33	SPACE	--	1			--	--			1	--	SPACE	34
35	SPACE	--	1					--	--	1	--	SPACE	36
37	SPACE	--	1	--	--					1	--	SPACE	38
39	SPACE	--	1			--	--			1	--	SPACE	40
41	SPACE	--	1					--	--	1	--	SPACE	42
		Total Load:		13027 VA		13027 VA		13027 VA					
		Total Amps:		472.8		472.8		472.8					

Notes:

Branch Panel: MP3-1

Location: ELEC. RM 309
Supply From: DPL2-2
Mounting: SURFACE
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
Mains Type: 100 A MCB
Mains Rating: 100

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	SPARE	20	2	0 VA	1200 VA					1	20	F-J	2
3	--	--	--			0 VA	888 VA			1	20	CUH-As	4
5	SPARE	20	2					0 VA	540 VA	1	20	RECEPT. - MAINTENANCE	6
7	--	--	--	0 VA	720 VA					1	20	RECEPT. - MAINTENANCE	8
9	ISUs - AREA THREE	15	2			807.3 VA	720 VA			1	20	RECEPT. - MAINTENANCE	10
11	--	--	--					807.3 VA	900 VA	1	20	RECEPT. - MAINTENANCE	12
13	SPARE	15	1	0 VA	456 VA					1	15	F-L	14
15	SPARE	15	1			0 VA	912 VA			1	15	F-O & F-P	16
17	SPARE	15	1					0 VA	792 VA	1	15	F-M & F-N	18
19	ISU-HC-314B	15	2	706.1 VA	936.7 VA					2	15	CU-J-1	20
21	--	--	--			706.1 VA	936.7 VA			--	--	--	22
23	ISU-HH-C301A	15	2					715.5 VA	176.8 VA	2	15	ERV-A	24
25	--	--	--	715.5 VA	176.8 VA					--	--	--	26
27	ISU-HH-C301B	15	2			715.5 VA	353.6 VA			2	15	ERV-B	28
29	--	--	--					715.5 VA	353.6 VA	--	--	--	30
		Total Load:		4911 VA		6039 VA		5001 VA					
		Total Amps:		40.9		50.4		41.8					

Notes:

Branch Panel: CP3-1

Location: ELEC. RM 309
Supply From: DPL2-2
Mounting: SURFACE
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
Mains Type: 100 A MCB
Mains Rating: 100

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPT. - VIDEO PROD. LAB 314	20	1	1080 VA	1080 VA					1	20	RECEPT. - VIDEO PROD. LAB 314	2
3	RECEPT. - VIDEO PROD. LAB 314	20	1			1080 VA	1080 VA			1	20	RECEPT. - VIDEO PROD. LAB 314	4
5	RECEPT. - VIDEO PROD. LAB 314	20	1					1080 VA	1080 VA	1	20	RECEPT. - COMPUTER CLASS. 306	6
7	RECEPT. - COMPUTER CLASS. 306	20	1	1080 VA	1080 VA					1	20	RECEPT. - COMPUTER CLASS. 306	8
9	RECEPT. - COMPUTER CLASS. 306	20	1			720 VA	1080 VA			1	20	RECEPT. - COMPUTER CLASS. 308	10
11	RECEPT. - COMPUTER CLASS. 308	20	1					1080 VA	720 VA	1	20	RECEPT. - COMPUTER CLASS. 308	12
13	RECEPT. - COMPUTER CLASS. 308	20	1	1080 VA	1080 VA					1	20	RECEPT. - COMPUTER CLASS. 311	14
15	RECEPT. - COMPUTER CLASS. 311	20	1			1080 VA	720 VA			1	20	RECEPT. - COMPUTER CLASS. 311	16
17	RECEPT. - COMPUTER CLASS. 311	20	1					1080 VA	720 VA	1	20	RECEPT. - PHOTO LAB 305	18
19	RECEPT. - PHOTO LAB 305	20	1	720 VA	720 VA					1	20	RECEPT. - PHOTO LAB 305	20
21	RECEPT. - PHOTO LAB 305	20	1			720 VA	720 VA			1	20	RECEPT. - PHOTO LAB 305	22
23	RECEPT. - PHOTO LAB 305	20	1					720 VA	0 VA	1	20	SPARE	24
25	SPARE	20	1	0 VA	0 VA					1	20	SPARE	26
27	SPARE	20	1			0 VA	0 VA			1	20	SPARE	28
29	SPARE	20	1					0 VA	0 VA	1	20	SPARE	30
		Total Load:		7920 VA		7200 VA		6480 VA					
		Total Amps:		66.9		60.9		54					

Notes:

Branch Panel: LP3-1

Location: ELEC. RM 309
Supply From: DPL2-2
Mounting: SURFACE
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
Mains Type: 225 A MCB
Mains Rating: 225

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	HAND DRYER (SINK) - TOILET T301	20	1	1500 VA	1500 VA					1	20	HAND DRYER (SINK) - TOILET 302A	2
3	RECEPT. & FLUSH. - TOILET	20	1			460 VA	720 VA			1	20	RECEPT. - FACULTY LOUNGE 302	4
5	RECEPT. - REFRIGERATOR	20	1					500 VA	520 VA	1	20	RECEPT. - WATER COOLER	6
7	HAND DRYER (SINK) - MEN'S T302	20	1	1500 VA	1500 VA					1	20	HAND DRYER (SINK) - MEN'S T302	8
9	HAND DRYER (SINK) - MEN'S T302	20	1			1500 VA	1500 VA			1	20	HAND DRYER (SINK) - WOMEN'S T303	10
11	HAND DRYER (SINK) - WOMEN'S T303	20	1					1500 VA	1500 VA	1	20	HAND DRYER (SINK) - WOMEN'S T303	12
13	RECEPT. & FLUSH. - TOILET & CUST.	20	1	940 VA	1080 VA					1	20	RECEPT. - VIDEO PROD. LAB 314	14
15	RECEPT. - COMPUTER CLASS. 306	20	1			1080 VA	720 VA			1	20	RECEPT. - COMPUTER CLASS. 308	16
17	RECEPT. - COMPUTER CLASS. 311	20	1					900 VA	900 VA	1	20	RECEPT. - PHOTO LAB 305	18
19	RECEPT. - REFRIGERATOR	20	1	500 VA	500 VA					1	20	RECEPT. - REFRIGERATOR	20
21	RECEPT. - CORR. STAIR. ELEC. STOR	20	1			1620 VA	1080 VA			1	20	RECEPT. - CORR. STAIR. ELEC. STOR	22
23	RECEPT. - DARK ROOM	20	1					1080 VA	1500 VA	2	20	RECEPT. - COPIER	24
25	SPARE	20	1	0 VA	1500 VA					--	--	--	26
27	SPARE	20	1			0 VA	0 VA			1	20	SPARE	28
29	SPARE	20	1					0 VA	0 VA	1	20	SPARE	30
31	SPARE	20	1	0 VA	0 VA					1	20	SPARE	32
33	SPACE	--	1			--	--			1	--	SPACE	34
35	SPACE	--	1					--	--	1	--	SPACE	36
37	SPACE	--	1	--	--					1	--	SPACE	38
39	SPACE	--	1			--	--			1	--	SPACE	40
41	SPACE	--	1					--	--	1	--	SPACE	42
		Total Load:		10520 VA		8680 VA		8400 VA					
		Total Amps:		88		72.7		70					

Notes:

Branch Panel: LPH3-1

Location: ELEC. RM 309
Supply From: DPH1-2
Mounting: SURFACE
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 14,000
Mains Type: 100 A MCB
Mains Rating: 100

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	LIGHTING - CLASS. 311 & DARK ROOM	20	1	1284 VA	1738.8 VA					1	20	LIGHTING - CORR., STOR., TOILETS	2
3	LIGHTING - VIDEO PROD. & FACULTY	20	1			1465.6 VA	0 VA			1	20	SPARE	4
5	LIGHTING - COMPUTER CLASS. 305 &...	20	1					2216 VA	0 VA	1	20	SPARE	6
7	SPARE	20	1	0 VA	0 VA					1	20	SPARE	8
9	SPARE	20	1			0 VA	0 VA			1	20	SPARE	10
11	SPARE	20	1					0 VA	0 VA	1	20	SPARE	12
13	SPACE	--	1	--	--					1	--	SPACE	14
15	SPACE	--	1			--	--			1	--	SPACE	16
17	SPACE	--	1					--	--	1	--	SPACE	18
19	SPACE	--	1	--	--					1	--	SPACE	20
21	SPACE	--	1			--	--			1	--	SPACE	22
23	SPACE	--	1					--	--	1	--	SPACE	24
25	SPACE	--	1	--	--					1	--	SPACE	26
27	SPACE	--	1			--	--			1	--	SPACE	28
29	SPACE	--	1					--	--	1	--	SPACE	30
		Total Load:		3023 VA		1466 VA		2216 VA					
		Total Amps:		11.3		5.3		8.4					

Notes:

Branch Panel: MPH3-2

Location: ELEC RM 300
Supply From: MS-1
Mounting: SURFACE
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 14,000
Mains Type: 600 A MCB
Mains Rating: 600

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	ERU-A-1.1	100	3	19399 VA	16960.2...					3	90	ERU-C-2.1	2
3	--	--	--			19399 VA	16960.2...			--	--	--	4
5	--	--	--					19399 VA	16960.2...	--	--	--	6
7	ERU-D-2.2	70	3	13080.4...	10004.3...					3	60	ERU-B-1.2	8
9	--	--	--			13080.4...	10004.3...			--	--	--	10
11	--	--	--					13080.4...	10004.3...	--	--	--	12
13	CU-E-1	50	3	10375.7...	3924.1 VA					3	30	MAU-E-206.2	14
15	--	--	--			10375.7...	3924.1 VA			--	--	--	16
17	--	--	--					10375.7...	3924.1 VA	--	--	--	18
19	CU-K-2	25	3	4567.1 VA	3680.3 VA					3	20	CU-F-10	20
21	--	--	--			4567.1 VA	3680.3 VA			--	--	--	22
23	--	--	--					4567.1 VA	3680.3 VA	--	--	--	24
25	CU-F-2	20	3	3680.3 VA	1596.3 VA					3	20	MAU-A-119.2	26
27	--	--	--			3680.3 VA	1596.3 VA			--	--	--	28
29	--	--	--					3680.3 VA	1596.3 VA	--	--	--	30
31	F-A-206.1	15	3	1995.3 VA	2272.5 VA					3	15	F-E, F-F, F-G	32
33	--	--	--			1995.3 VA	2272.5 VA			--	--	--	34
35	--	--	--					1995.3 VA	2272.5 VA	--	--	--	36
37	F-H-117	15	3	1330.2 VA	0 VA					3	15	SPARE	38
39	--	--	--			1330.2 VA	0 VA			--	--	--	40
41	--	--	--					1330.2 VA	0 VA	--	--	--	42
		Total Load:		92866 VA		92866 VA		92866 VA					
		Total Amps:		335.3		335.3		335.3					

Notes:

Branch Panel: MPH3-1

Location: ELEC RM 300
Supply From: MS-1
Mounting: SURFACE
Volts: 480/277 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 14,000
Mains Type: 600 A MCB
Mains Rating: 600

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	ERU-G-117	100	3	19787 VA	16184.3...					3	90	RTU-D-120	2
3	--	--	--			19787 VA	16184.3...			--	--	--	4
5	--	--	--					19787 VA	16184.3...	--	--	--	6
7	RTU-F-206	90	3	16184.3...	10142.9...					3	60	RTU-C-119	8
9	--	--	--			16184.3...	10142.9...			--	--	--	10
11	--	--	--					16184.3...	10142.9...	--	--	--	12
13	CU-B-1	50	3	10375.7...	5764.3 VA					3	35	RTU-A-124	14
15	--	--	--			10375.7...	5764.3 VA			--	--	--	16
17	--	--	--					10375.7...	5764.3 VA	--	--	--	18
19	CU-K-1	25	3	4567.1 VA	3680.3 VA					3	20	CU-F-1	20
21	--	--	--			4567.1 VA	3680.3 VA			--	--	--	22
23	--	--	--					4567.1 VA	3680.3 VA	--	--	--	24
25	MAU-A-119.1	15	3	1596.3 VA	1374.6 VA					3	15	MAU-D-206.1	26
27	--	--	--			1596.3 VA	1374.6 VA			--	--	--	28
29	--	--	--					1596.3 VA	1374.6 VA	--	--	--	30
31	F-B, F-C, & F-D	15	3	2272.5 VA	0 VA					3	15	SPARE	32
33	--	--	--			2272.5 VA	0 VA			--	--	--	34
35	--	--	--					2272.5 VA	0 VA	--	--	--	36
37	SPARE	15	3	0 VA	0 VA					3	15	SPARE	38
39	--	--	--			0 VA	0 VA			--	--	--	40
41	--	--	--					0 VA	0 VA	--	--	--	42
		Total Load:		91929 VA		91929 VA		91929 VA					
		Total Amps:		331.9		331.9		331.9					

Notes:

	MPH3-3 (S2)	MPH3-3 (S1)
MP3-1	CP3-1	LP3-1
LPH3-1	MPH3-2	MPH3-1

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Consultant

NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

Project Title

STATE OF NEW YORK
JAMES R. BARRETT
LICENSED PROFESSIONAL ENGINEER
EXPIRES 5/31/2026

#	DATE	DESCRIPTION
4	5/28/2024	BID ADDENDUM #4

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Sheet Title

PANELBOARD SCHEDULES - 3RD FLOOR

Sheet No.

CTE E908

CONSTRUCTION DOCUMENTS

GENERAL DEFINITIONS:

A. INDICATE: THE TERM "INDICATE" REFERS TO GRAPHIC REPRESENTATIONS, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

B. DESCRIBED: TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

C. APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

D. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

E. INSTALL: THE TERM "INSTALL IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

F. PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL COMPLETE AND READY FOR THE INTENDED USE."

G. INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

H. ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS." THESE SYSTEMS INCLUDE BUT NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC.

GENERAL NOTES (APPLY TO ALL DRAWINGS):

A. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED N.E.C./NFPA 70 CODE.

B. THE CONTRACTOR SHALL PERFORM HIS WORK BY COORDINATING WITH THE FACILITY REPRESENTATIVE REGARDING SUCH THINGS AS NOISE, WORK AREA LIMITATIONS, ALLOWABLE WORKING HOURS, UTILITY INTERRUPTIONS, ETC.

C. THE CONTRACTOR SHALL INSTALL TEMPORARY FACILITIES/PRECAUTIONS TO GUARD AGAINST WORK THAT IS AN INFECTION CONTROL HAZARD OR NUISANCE (SUCH AS NOISE, DUST, OPERATIONS INTERRUPTION, ETC.). THE CONTRACTOR SHALL COMPLY WITH FACILITY REPRESENTATIVES FOR THE COORDINATION, LOCATION, AND QUALITY OF THESE TEMPORARY PROVISIONS.

D. ALL WORK AREAS SHALL BE KEPT CLEAN AND ORDERLY AT ALL TIMES. OPEN-ENDED ITEMS SUCH AS CONDUITS SHALL ALWAYS BE COVERED AND PROTECTED TO PROHIBIT ACCUMULATION OF CONSTRUCTION DUST/DEBRIS.

E. ALL COMMUNICATION AND DATA CABLE ARE TO BE INSTALLED IN CONDUIT WHERE INSTALLED EXPOSED AT AREAS W/O CEILINGS OR ABOVE IN CONCEALED CEILINGS. CABLES CAN BE INSTALLED EXPOSED ABOVE ACCESSIBLE CEILINGS. ALL EXPOSED CABLES ARE TO BE ANCHORED TO WALL OR ROOF STRUCTURE IN BRIDLE RINGS AT MINIMUM 3'-0" O.C. OR IN CABLE TRAY.

F. PROVIDE CONDUIT BODY FOR ALL DATA AND SIGNAL CABLES TO BE INSTALLED EXPOSED AT AREAS W/O CEILINGS OR ABOVE INACCESSIBLE CEILINGS. CABLES CAN BE INSTALLED EXPOSED ABOVE ACCESSIBLE CEILINGS AND THEREFORE DO NOT REQUIRE CONDUIT.

G. CONDUIT RUNS ARE SCHEMATIC ONLY. ALL CONDUIT RUNS SHOULD TAKE THE SHORTEST MOST DIRECT ROUTE POSSIBLE. CONDUIT RUNS MAY HAVE A MAXIMUM OF (3) 90` BENDS. IF ADDITIONAL BENDS ARE REQUIRED, PROVIDE PULLBOX.

H. CABLE TRAY SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. CABLE TRAY SHALL BE PAINTED BEFORE ANY CABLES ARE INSTALLED AS PAINT COULD DAMAGE UTP CABLE JACKETING.

I. WHERE CABLE TRAY IS SHOWN PENETRATING A FIRE WALL, TERMINATE CABLE TRAY ON EITHER SIDE OF THE WALL AND PROVIDE FOUR (4)" EMT CONDUIT SLEEVES IN FIRE WALL. SEAL CONDUIT PENETRATIONS AS DIRECTED BY THE SPECIFICATIONS.

J. ALL CABLE TRAY SHALL BE MOUNTED 9'-0" AFF WHERE ALLOWED BY FIELD CONDITIONS. IF FIELD CONDITIONS DO NOT ALLOW FOR 9'-0" MOUNTING HEIGHT, CONTRACTOR SHALL PROVIDE ALTERNATE ROUTING TO BE APPROVED BY EOR.

K. ALL CABLE NOT INSTALLED IN CABLE TRAY SHALL BE SUPPORTED VIA J-HOOKS OR ROUTED THROUGH CONDUIT.

L. CONTRACTOR SHALL PROVIDE BACKBOX AND CONDUIT ROUTED TO NEAREST CABLE TRAY FOR ALL WALL MOUNTED DEVICES. CONDUIT SHALL BE SIZED TO ACCOMMODATE QUANTITY OF DEVICES BEING FED TO EACH DEVICE. CONDUIT SHALL BE 3/4" MINIMUM.

M. COORDINATE WORK WITH ALL OTHER TRADES.

2

N. ALL VAPE DETECTORS TO BE PURCHASED BY THE DISTRICT THROUGH STATE CONTRACT. VAPE DETECTION SYSTEM SHALL BE A VERKADA SYSTEM. PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, TAXES, AND RELATED ITEMS, ESSENTIAL FOR THE INSTALLATION OF THE WORK AND NECESSARY TO MAKE WORK, COMPLETE AND OPERATIONAL. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE INSTALLATION OF NEW HEADEND, VAPE DETECTORS, WIRING, HARDWARE, AND PROGRAMMING, AS WELL AS ALL ASSOCIATED AUXILIARY EQUIPMENT TO FACILITATE INSTALLATION OF THE NEW VAPE DETECTION SYSTEM.

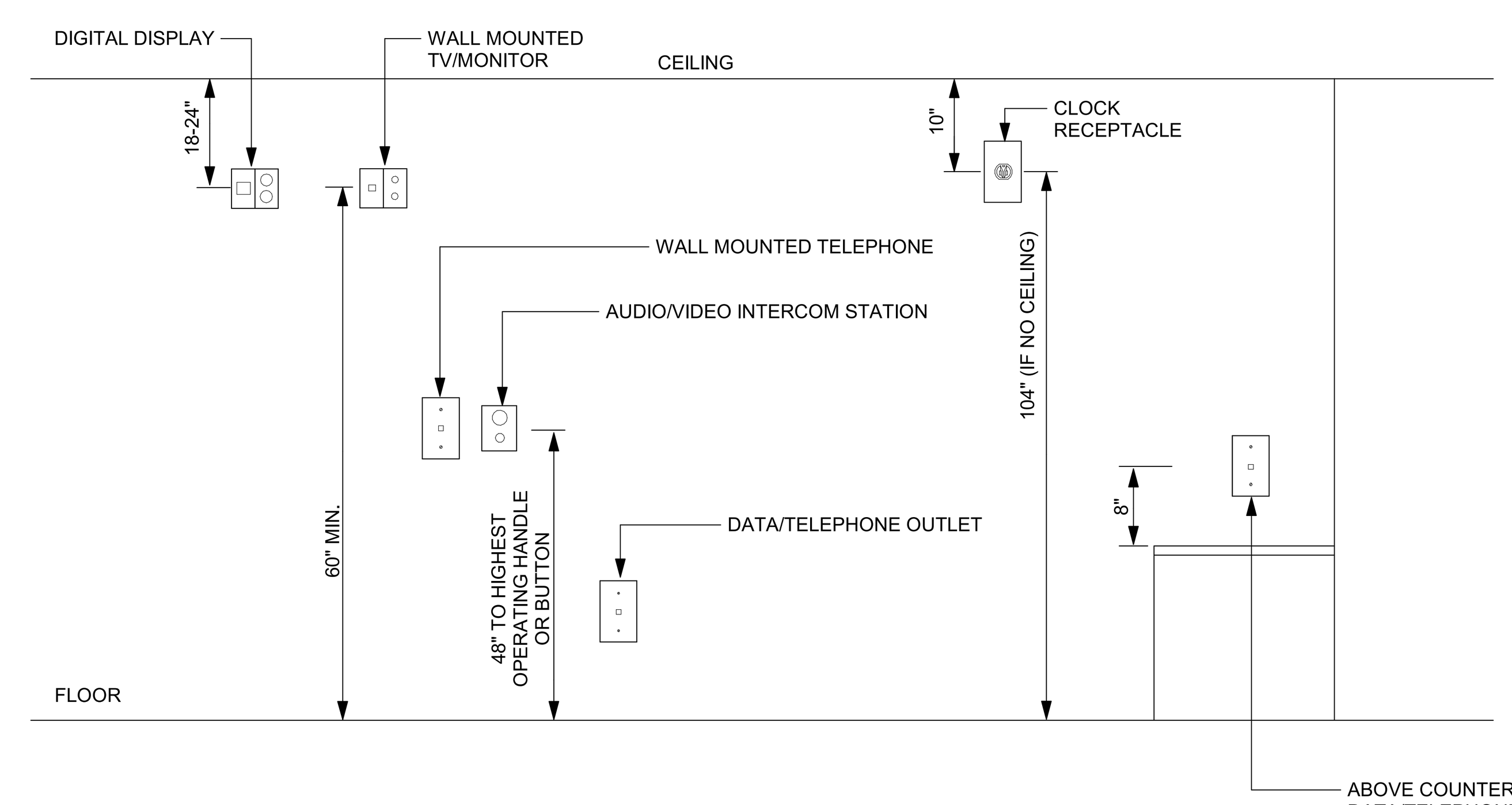
O. CONTRACTOR TO INSTALL ALL DEVICES INCLUDING, BUT NOT LIMITED TO CAMERAS, WALL PHONES, WAPS, VAPE DETECTORS, SPEAKERS, CLOCKS, DATA RECEPTACLES, AND NETWORK ELECTRONICS (PROVIDED BY OTHERS).
   a. WHEN INSTALLING NETWORK ELECTRONICS:
      - ALL PATCH CORDS ARE TO BE UNIQUELY LABELED AT EACH END AT APPROXIMATELY 2 INCHES FROM THE TERMINATION POINT.
      - CONTRACTOR IS REQUIRED TO INCLUDE WITH HIS PROPOSAL SUFFICIENT TIME AND MATERIALS TO INSTALL CUSTOMER PROVIDED NETWORK SWITCHES.
      - CONTRACTOR SHALL RECEIVE DEVICES FROM THE CLIENT AND INSTALL. MOUNTING POSITIONS SHALL BE REVIEWED WITH CUSTOMER IT PERSONNEL PRIOR TO INSTALL.
      - CONTRACTOR SHALL ASSUME SIX (6) NETWORK SWITCHES PER TELECOMMUNICATIONS CLOSET.
      - CONTRACTOR IS REQUIRED TO INCLUDE WITH HIS PROPOSAL SUFFICIENT TIME AND MATERIALS TO INSTALL CUSTOMER PROVIDED NETWORK EQUIPMENT.
   b. WHEN INSTALLING WAPs:
      - CONTRACTOR IS REQUIRED TO INCLUDE WITH HIS PROPOSAL TIME AND MATERIALS TO INSTALLED CUSTOMER PROVIDED WAPS FOR DATA.
      - THIS INCLUDES BOTH INTERIOR AND EXTERIOR WAPS.
      - CUSTOMER SHALL PROGRAM AND TEST ALL ACCESS POINTS.
      - CONTRACTOR SHALL RECEIVE AND INSTALL DEVICES IN POSITIONS SHOWN ON DRAWINGS. ALL MOUNTING HARDWARE SHALL BE PROVIDED BY CONTRACTOR.
      - CONTRACTOR SHALL COORDINATE ALL POSITIONS AND MOUNTING HEIGHTS WITH ARCHITECT AND CUSTOMER IT PERSONNEL.

LEGEND

SYMBOL	DESCRIPTION
▼	DATA OUTLET
	PROVIDE (30) FEET OF CAT6A CABLE ABOVE ACCESSIBLE CEILING FOR FUTURE USE
WAP	WIRELESS ACCESS POINT. PROVIDE ADDITIONAL 15' OF CABLE SPOOLED ABOVE CEILING FOR ADJUSTMENT OF WAP LOCATION.
DR	DATA RACK
	CABLE TRAY; 12"W x 6"D SOLID BOTTOM
IC	INTERCOM
FB	FLOOR BOX
AC A	ACCESS CONTROL, REFER TO DETAILS SUBSCRIPT INDICATES TYPE
VAPE	VAPE DETECTOR
S S	CEILING AND WALL MOUNTED SPEAKER(S)
	WALL MOUNTED CLOCK
S	COMBINATION WALL SPEAKER/CLOCK UNIT
PA	PUBLIC ADDRESS SYSTEM HEAD END DEVICE
	SECURITY CAMERA, SUBSCRIPT INDICATES TYPE: B - BI-DIRECTIONAL F - FISHEYE O - ONE-EIGHTY DEGREE S - SINGLE POINT T - THREE-WAY V - TWO-SEVENTY DEGREE WP - WEATHER PROOF

ABBREVIATIONS

ABBREV.	DESCRIPTION
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AV	AUDIOVISUAL
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CT	CABLE TRAY
CU	COPPER
DN	DOWN
EA	EACH
EMT	ELECTRICAL METALLIC TUBING
FBO	FURNISHED BY OTHERS
GC	GENERAL CONTRACTOR
G/GND	GROUND
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	MOUNTED OVER COUNTER
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
TV	TELEVISION
TYP	TYPICAL
UC	MOUNTED UNDER COUNTER HEIGHT
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
W	WIRE OR WATT
WP	WEATHER PROOF



DETAIL NOTES:

A. MOUNTING LOCATIONS OF DATA DEVICES.
B. DEVICE HEIGHTS ARE TO BE AS INDICATED UNLESS OTHERWISE NOTED.

1 DEVICE MOUNTING LOCATION DETAIL
T001 NTS

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NEWBURGH ENLARGED CITY SCHOOL DISTRICT
NEW CTE BUILDING

STATE OF NEW YORK · MICHAEL K. SULLIVAN · 077887-1 · LICENSED PROFESSIONAL ENGINEER
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2	5/20/2024	BID Addendum #4
1	5/3/2024	BID Addendum #2

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LEGEND, NOTES & ABBREVIATIONS

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CTE T001

CONSTRUCTION DOCUMENTS

Autodesk Docs://NECSD - New CTE Bldg/233139_NECSD_CTE_ELEC_CENTRAL_R22.rvt