BID ADDENDUM 02

The attention of bidders submitting proposals for the subject project noted above is called to the following Addendum to the Contract Forms and Specifications.

The items set forth herein, whether of omission, addition, substitution or clarification, are to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM MUST BE ENTERED IN THE SPACE PROVIDED ON THE BID PROPOSAL FORM.

This Addendum consists of the following information:

. NOT USED
. NOT USED
. NOT USED

Part 1 Division #0, Bidding and Contract Requirements

1. SECTION 006104 - PROJECT LABOR AGREEMENT

a) Remove from Article 1.01, "by Arace & Company Consulting"

2. SECTION 011000 - DESCRIPTION OF WORK

a) Add to the end of Paragraph 1.1A.2, "Phase Two includes all remaining trades and work required to fully complete the project as shown on the contract documents".

3. SECTION 011501 - UNIFORM SAFETY STANDARDS

a) Remove Section 011501

4. SECTION 014100 - PERMITS AND COMPLIANCE

a) Add - Article 1.1 D – "The Owner will provide the Building Permit and the Owner's Civil Engineer will facilitate the provision of the DOT permit for Harrison Avenue. The Contractor will provide any information required to obtain these permits. All other required permits are to be obtained and paid for by the Contractor".

5. SECTION 042000 - UNIT MASONRY

- a) 3.4 MORTAR BEDDING AND JOINTING Add A. 5, "All masonry units are to be laid in patterns and bonding as shown on drawings. Review with Architect prior to commencement work".
- b) 3.8 ANCHORING MASONRY VENEERS Add A.4, "Minimum spacing on stud wall backup to be 16" O.C. horizontally and 24" O.C. vertically".

6. SECTION 053100 - STEEL DECKING

a) Revised Article 1.1A.2, "Acoustical Roof Decking is to be provided over Gymnasium 113 and Fitness 123".

7. SECTION 054000 - COLD-FORMED METAL FRAMING

a) Add Article 1.3 PERFORMANCE REQUIREMENTS, B.6, "Delegated Design is to include coordination with all cladding materials to ensure that stud gauge meets the minimum weight required for fastening all fiber cement panels, cast stone or other cladding materials".

8. SECTION 015000 - TEMPORARY FACILITIES

a) Add Article 1.21,

TEMPORARY HEATING/COOLING/DEHUMIDIFICATION FACILITIES

A. The Contractor shall provide and pay for all temporary heating, coverings and enclosures necessary to properly protect all work and materials against damage by dampness and cold, to dry out the work and to facilitate the completion thereof. The Contractor shall maintain the critical installation temperatures, provided in the technical provisions of the specifications, herein, for all work in those areas where same is being performed.

Attention is directed to specific temperature requirements for painting, carpentry, flooring and such other temperature sensitive operations connected with the execution of the Work.

- B. Before and during the placing of wood finish and the application of other interior finishing, varnishing, painting, etc. and until final acceptance by the Owner of all work covered by the Contract, the Contractor shall, unless otherwise specified in the Contract Documents, maintain a temperature of between 65- and 85-degrees F. Coordinate with Division 9 of the Technical Specifications.
- C. The Contractor is to provide all temporary heat and or dehumidification as required to maintain the project schedule and to install materials and systems in accordance with the manufacturer's specifications for environmental conditions. This is to include the cost of equipment, fuel, fire watch, tenting or scaffolding or whatever measures are required.

Part 2 Technical Changes, Architectural, Structural and Civil

1. SECTION 096560 - RESILIENT ATHLETIC FLOORING

a) Replace Part 2.1.A.1 – "SP1: Tarkett, Omnisports Active +" with "Tarkett, Omnisports HPL 9mm".

Part 6 Drawing Changes, Mechanical, Electrical and Plumbing

- 1. Drawing SE-000-Cover Legend-General Notes
- 2. Revised Electrical Sheets: E-001, E-202, E-302, E-303, E-304, E-401, E-402, E-403, E-501, E-502, E-602.
- 3. Revised Fire Protection Sheet: FP-202
- 4. Revised Mechanical Sheets: M-201, M-203, M-204, M-301, M-303, M-304, M-501, M-601, M-602, M-603.

Part 7 Clarifications

- 1. Metal deck over Gymnasium 113 and Fitness 123 to be Epic Toris A Roof Deck Ceiling System. See General Structural Notes, Steel Deck Notes #4.
- Q: Specification-Table of Contents 000010-5: Division 26 Electrical- 260775 Diesel Emergency Engine Generator (Not in scope, by owner); 260785 ATS, same question. Is Generator supplied by Owner? Is Electrical Only installing Generator

 Contractor to furnish and install the Generator as noted in spec section 263213.14 "Diesel Engine Generators" and 236000 "Transfer Switches"
- 3. Q: Can you please help with some clarification on the scoreboard spec'd in section 116640. Under 2.2, the overall dimensions are larger then the scoreboard, so I was wondering what you wanted to go around the cabinet? Are you wanting it to have sponsor signs, or something else? Also, for the control software, it says you are wanting two licenses for a laptop. Typically non-video scoreboards are controlled from a controller provided by the manufacturer, not on a computer.
 - A: Utilize the dimensions listed for the Basis of Design product (approx. 4'x10') there are no signage panels. Provide controls as specified.
- 4. Q: Drawings A603 and A502 call out and show a walk draw style divider curtain with a curved track 116620 specifications call for a Motorized roll up divider curtain. Please confirm walk draw style divider curtain or motorized roll up curtain is desired.
 - A: Walk draw divider curtain is confirmed. There is no motorized curtain.
- 5. Q: Please confirm 116620 wall padding to have 2" Class A neoprene foam
 - A: Confirmed
- 6. Q: Doors 114C & 114D The door schedule on A911 has doors 114C and 114D as aluminum and is referencing door elevation F. Are these doors wood or aluminum?

 A: Doors are Aluminum see WS1 sim to 114 A and B.
- 7. Q: Fire rated glass is specified for doors 114C and 114D on first floor plan A202. The door schedule does not provide a fire label. Are these doors required to be fire rated including the frame?
 - A: Door and frame are rated at the request of the Fire Marshal.
- 8. Q: Door SA1A Door schedule A911 specifies door SA1A to be fire rated. Is the surrounding aluminum frame and glass in stair A required to be a complete fire rated system?

 A: No, see Construction Type Chart on CC001.
- 9. Q: Door elevation FRP does not exist on the door elevations. Which type of door is this? A: Door is aluminum see elevation WS1.

- 10. Q: Door 203B The door schedule on A911 has door 203B as aluminum and is referencing door elevation FLNG. Are these doors wood or aluminum?A: Door type is Aluminum WS1 not FLNG.
- 11. The door schedule on A911 has doors 114A and 114B as aluminum and is referencing door elevation WS1 and hollow metal frame type H3 on A912. Are these doors and frames aluminum or hollow metal?
 - A: Doors and frames are aluminum. The configuration resembles H3.
- 12. Is type 'A' door on A912 storefront or curtainwall?

A: Storefront

13. Are the interior lobby doors 100D, 100E, 100F, and surrounding frame on A912 required to be thermally broken?

A: No

14. Q: Are type '1' and type '2' on A913 storefront or curtainwall?

A; Storefront. Only 1Z, 1Y, and 1X are curtain wall.

- 15. Q: Which curtainwall type 1,2,3, or 4 on specification 084410-6/2.1 are we to provide? A: The pressure plate system type.
- 16.Q: If the answer to #5 above is more than one type, where are they located on A912 and A913.

A: NA

17.Q: Please confirm if locks are required at custom cabinetry.

A: Provide locks on doors.

18.Q: What solid surface is to be used at window sill per detail 2/A802?

A: Window sill to match the Fitness Desk counter top.

19.Q: Please provide a copy of the sign in sheet from the Mandatory Pre Bid Meeting which took place on 6.13.2024.

A: Sign in sheet is attached in Part 8.

20. Q: Please provide a guideline specification for the PV Array.

A: The PV Array is Not In Contract. Contractor to provide infrastructure only per Electrical Drawings.

21. Q: There are trees that need to be trimmed along the west property line. Are there any requirements for this work?

A: Tree pruning will be required by the Contractor. At a minimum, trees will be pruned to the property line. Some work may be required on the abutter's property TBD.

22. Q: Please confirm spray foam is not required under the parking area, but only around the beams, as shown on A504 Finish Schedule.

A: Confirmed that the steel beams receive the spray foam the decking does not. See

- 23. Q: Please provide specification for the Roof Green Grid/Tray System.A: Vegetated Roof System spec is attached. Basis of Design is GreenGrid G4 Module by Weston Solutions.
- 24. Q: The door schedule on sheet A-911 does not indicate a required fire rating for door #'s 114C 114D & it's frame, but the floor plan on A-202 has a note pointing towards these doors that says 'fire rated glass required @ this door'. Please clarify if these doors and frame are required to be fire rated aluminum system. If it is to be fire rated aluminum please indicate a duration to be included and provide a spec section.
 - A: Door and frame at 114 C and D are required to be rated. Duration is 60 min.
- 25. Q: The door schedule says that door #'s 114A, 114B, 114C, 114D are aluminum doors with aluminum frames and indicates the frame type as H3. Frame type H3 is a hollow metal frame according to sheet A912. Please clarify if the previously mentioned door numbers should be aluminum doors with aluminum frames or hollow metal doors with hollow metal frames. Please also clarify fire rating requirements for these doors per the note on A202.

 A: 114 A-D are aluminum doors and frames. 114 C and D are rated. Provide aluminum doors and frames in the H3 configuration.
- 26. Q: Please clarify requirements for the operable partitions on the second floor between column lines D.1 & B.8 and in line with column line 4. Elevations on A406 say 'operable partition, see spec'. The drawings have very limited information for these openings, and it is unclear if these partitions are glass or a different material. Are these operable partitions glass? Should they be included per spec section 083513? Please clarify.
 A: The operable partitions on column line 4 between the Multipurpose Room 203 and Viewing 200 are not glass. See spec section 102220 Folding Panel Partitions.
- 27. Q: Please clarify requirements for the operable partition that divides multi purpose rooms 202 & 203. Elevation on A406 say 'operable partition, see spec'. The drawings have very limited information for this opening, and it is unclear if this partition is glass or a different material. Is this operable partition glass? Should it be included per spec section 083513? Please clarify. A: The operable partitions on column line 4 between the Multipurpose Room 203 and Viewing 200 are not glass. See spec section 102220 Folding Panel Partitions.
- 28. Q: Please clarify requirements for the partition (which may be operable based on how it looks on the floor plan compared to other partitions that are operable) on the second floor between column lines B.8 & C.6 and in line with column line 5.7. The drawings have very limited information for this opening. It is shown in elevation 2/A403 with glazing indicators, so it's clear this is a glass partition, but it is unclear if it is intended to be fixed or operable. Please clarify. A: The partition is operable. It is intended to be a pivot type opening.
- 29. Please clarify frame type for frame 1R & 1P. These frames were assumed to be hollow metal like the other interior glazed frames they are located next to, but they are incorrectly included in the first floor *exterior* glazing section of the frame elevations on sheet A913. Frames 1R & 1P are interior glazing. Please clarify if the frames are hollow metal or aluminum. A: The frames for 1R and 1P are hollow metal.
- 30. Q: Please clarify where window type 1B shown on sheet A913 occurs on the project. It does not appear to be shown on the exterior building elevations.A: Window 1B is shown on EAST FAÇADE ELEVATION on Sheet A301. It is located in the

north east corner of Fitness Room 123.

- 31. Q: Spec section 085110 Aluminum Windows was provided as part of the bidding documents, however it is unclear which exterior openings should be included per this spec section. While the drawings do call most exterior openings 'windows' we believe all exterior openings on the project are either storefront or curtain wall. Please confirm that spec section 085110 can be disregarded and that all exterior openings should be included as storefront or curtain wall per spec section 084410 & 084110 or clarify which exterior openings should be included as aluminum windows per spec section 085110.
 - A: Confirmed utilize spec sections 084410 and 084110.
- 32. Q: Bid extension request. (multiple)
 - A: See Addendum 1
- 33. Q: It appears that Inpro materials (tags VWC-1 and VWC-2) are referenced, but the documentation includes only a room finish schedule and lacks a material legend. Consequently, we are unable to determine the allocation of materials, such as color variations, to their respective locations.
- 34. Q: Please clarify the following discrepancies in the bidding / construction documents: According to the Code Compliance drawings this structure is not a fire rated structure. Fire resistance rating for the building elements is shown as zero hours. The finish schedule on drawing A504 shows "closed cell spray foam insulation on all steel beams with painted deck". A601 calls for "closed cell spray foam insulation on all steel beams". A804 calls for "spray fireproof primary structure". Specifications section 078100 calls for regular density spray fireproofing for concealed steel and thin film intumescent paint for exposed steel. Our interpretation of this information is that even though the building structure is not fire rated, the Parking Garage will need to be fireproofed. That the "open cell spray foam insulation" is a typo and the intent was to specify spray fireproofing material. Please confirm or advice if our interpretation is correct. Also, clarify if the intent is to use regular density fireproofing at the Parking Garage level steel or if the intent is to use intumescent paint. Lastly, please clarify what the required fire resistance rating for the Parking Garage steel will be.

A: The interpretation is correct. It is the intent to use regular density fireproofing on the steel beams in the Garage. The resistance rating is 1- hour.

Part 8 New Issues

1. Pre Bid Meeting Attendance

1 page

2. Specification Section 077273 Vegetated Roof Systems

5 pages

End of Addendum

GENERAL NOTES

- 1. DRAWINGS AND DIVISION 28 DEFINITIONS: YOU ARE THE SECURITY ELECTRICAL CONTRACTOR ("SC"; "SEC"), LOW VOLTAGE CONTRACTOR ("LVC") AKA "BIDDER" "CONTRACTOR". THE BASE BUILDING ELECTRICAL CONTRACTOR IS KNOWN AS "EC". OTHER THAN OWNER PROVIDED ELECTRONIC CONTROLLERS AND EQUIPMENT, ALL OTHER SECURITY SYSTEM INSTALLATION WORK IS PART OF YOUR WORK. ALL ITEMS MENTIONED IN THE DIVISION 27 AND 28 SPECIFICATIONS ARE ALSO PART OF THIS PACKAGE AND INCLUDED IN YOUR SCOPE OF WORK AS WELL.
- 2. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS IN THE SE AND TC BINDER SETS.
- 3. WORK TO COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATORY AGENCIES, INCLUDING, BUT NOT LIMITED TO, NEC, OSHA, AND OTHERS.
- 4. THE SEC SHALL BE RESPONSIBLE FOR SCHEDULING WITH BUILDING MANAGEMENT THE USE OF ELEVATOR OR OTHER HOISTING FACILITIES FOR HANDLING THE DELIVERY OF MATERIALS.
- 5. FIRE STOPPING OF ALL PENETRATIONS SHALL BE PROVIDED BY THE INSTALLING SEC AS REQUIRED BY CODE.
- 6. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND FINAL SYSTEM CONDUITS AND CONDUCTOR LAYOUTS SHALL BE PROVIDED BY THE SEC IN ACCORDANCE WITH THE MANUFACTURER'S APPROVED EQUIPMENT, CONDUIT, AND WIRING SHOP DRAWINGS, AND FIELD CONDITIONS.
- 7. THE SEC MUST COORDINATE WITH THE EC ALL DEVICE INSTALLATION DETAILS AND ENSURE THAT DEVICE BACKBOXES ARE APPROPRIATE PER THE FINAL APPROVED SHOP DRAWING, ON A LOCATION-BY-LOCATION BASIS, AND MEET ARCHITECTURAL REQUIREMENTS SURFACE MOUNTING IS ONLY APPROVED IF THERE IS NO OTHER PATHWAY OPTION. NO SURFACE MOUNTING IS APPROVED ON ANY DRYWALL.
- 8. PROVIDE APPROPRIATE METALLIC RACEWAY FOR THE SECURITY SYSTEM AS NEEDED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND SO AS NOT TO EXCEED 40% CONDUIT FILL. WHEN USING SURFACE MOUNTED WIREMOLD, BACK BOX DEPTH SHOULD NOT EXCEED THE ABSOLUTE MINIMUM DEPTH REQUIRED FOR THE DEVICE. FOR EXAMPLE, CARD READERS BACK BOX CANNOT EXCEED ½" IN DEPTH.
- 9. UNLESS OTHERWISE NOTED, THE SEC SHALL PROVIDE ALL 120/220VAC AS REQUIRED FOR THE SECURITY SYSTEM. FINAL 120 VAC TERMINATIONS IN THE SECURITY EQUIPMENT SHALL BE PERFORMED BY THE SEC AS WELL.
- 10. THE SEC SHALL PROVIDE AND INSTALL ALL INTERCONNECTING CONDUITS AND RACEWAYS INSIDE THE SECURITY EQUIPMENT AND TERMINATE ALL WIRES AS SHOWN IN THIS DRAWING SET.
- 11. UNLESS OTHERWISE NOTED, THE SEC SHALL PROVIDE AND INSTALL ALL CABLE PASS-THROUGH HOLES IN MILLWORK.
- 12. THE SEC SHALL PROVIDE AND INSTALL ALL OVERHEAD CABLE SUPPORTED BY PANDUIT J-HOOKS, CABLE TRAYS, OR EQUIVALENT. CABLE SHALL NOT BE SUPPORTED BY CEILING GRID, DUCTWORK, SPRINKLER PIPES, ELECTRICAL CONDUIT OR GAS PIPES.
- 13. THE SEC TO PROVIDE GROUNDING OF ALL ELECTRONICS EQUIPMENT. AT MDF/IDF, ON THE PLYWOOD BACKBOARD, USE GROUND BAR. COORDINATE WITH GENERAL CONTRACTOR AND EC FOR NEAREST GROUNDING LOCATION.
- 14. THE SEC SHALL WIRE ALL DOORS FOR ELECTRIFIED DOOR HARDWARE THAT WILL BE PROVIDED BY OTHERS. THIS INCLUDES ELECTRIC LOCKS, DOOR FRAMES FOR ELECTRIC STRIKES, HOLES FOR DOOR CONTACTS AUTOMATIC DOOR OPERATORS ETC..
- 15. THESE DRAWINGS INDICATE THE GENERAL INTENT OF WORK AND ARE NOT INTENDED TO INDICATE OR DESCRIBE ALL THE WORK REQUIRED BY THE SEC FOR THE FULL PERFORMANCE AND COMPLETION OF THE CONTRACT.
- 16. ALL CONDUIT SHALL BE DEBURRED, CLEANED, CAPPED, TAGGED, AND PROVIDED WITH PULL WIRES AND BRUSHINGS. WHERE CONDUITS OR WIREWAYS PASS THROUGH FIRE RATED ASSEMBLIES. THE PENETRATIONS SHALL BE FIRE- STOPPED.
- 17. PRIOR TO SYSTEM TURN-ON, THE INSTALLING SECURITY CONTRACTOR SHALL REVIEW THE INSTALLATION OF ALL INSTALLED DEVICES WITH OWNER'S REP TO VERIFY CORRECT INSTALLATION & PROPER FUNCTIONING.
- 18. AT THE TIME OF ACCESS CONTROL SYSTEM TURN ON, THE SEC SHALL PROVIDE THE SAME PERSONNEL WHO PERFORMED & SUPERVISED THE WORK TO TROUBLESHOOT, TEST THE INSTALLATION AND REMEDY ALL RELATED PUNCH LIST ITEMS FOR FINAL COMMISSIONING.
- 19. THE SEC SHALL ADJUST CAMERA VIEWS TO OWNER'S SATISFACTION TILL FINAL ACCEPTANCE.
- 20. CLIENTS FIRE ALARM CONTRACTOR SHALL PROVIDE A SET OF NORMALLY CLOSED (N/C) CONTACTS TO RELEASE ON GENERAL ALARM AND BE CONNECTED BY SEC.
- 21. THE SEC IS RESPONSIBLE FOR PROVIDING A COMPLETE AND ACCURATE SET OF AS-BUILT DRAWINGS.
- 22. ALL WIRES TO BE MACHINE LABELED VIA SELF LAMINATING LSL-77 TAGS OR SIMILAR. PROVIDE FOR OWNER'S REP REVIEW PRIOR TO USE
- 23. SECURITY SCREWS TO BE USED ON ALL DEVICES TO MAINTAIN SYSTEM'S INTEGRITY.
- 24. POWER AND PATHWAYS BY BASE BUILDING ELECTRICAL CONTRACTOR.

POWER REQUIREMENTS

CONTRA EMERGI BOX SUI

POWER (EMERGENCY CIRCUIT)
CONTRACTOR TO PROVIDE A HA

CONTRACTOR TO PROVIDE A HARD WIRED CONNECTION TO A 120 VAC 20A EMERGENCY CIRCUIT DEDICATED TO SECURITY IN EACH RISER LOCATION WITHIN A 4"x4" BOX SURFACE MOUNTED 18" AFF WITH WIRE ENDS TERMINATED AND INSULATED WITH WIRE NUTS.

2

POWER (NON-EMERGENCY CIRCUIT)

CONTRACTOR TO PROVIDE A HARD WIRED CONNECTION TO A 120 VAC 20A

NON-EMERGENCY CIRCUIT DEDICATED TO SECURITY IN EACH RISER LOCATION WITHIN

A 4"x4" BOX SURFACE MOUNTED 18" AFF WITH WIRE ENDS TERMINATED AND INSULATED

WITH WIRE NUTS.

SECURITY DEVICES LEGEND

CR _X	CARD READER	LR = LONG F EL = ELEVATO		O = BIOMETRIC C = BARCODE
(DDC) _X	DOUBLE DOOR CONTACTS	R = RECESS S = SURFACE		PDT = DOUBLE POLE OUBLE THROW
DCX	DOOR CONTACT	R = RECESS S = SURFACE		PDT = DOUBLE POLE OUBLE THROW
KP	BURG PANEL KEY PAD			
DO	ELECTRIFIED DOOR OPERATOR (PB	O)		
OH	OVERHEAD DOOR CONTACT	DPDT = DOUE DOUBLE THRO		
ELX	ELECTRIC MORTISE LOCK	REX = REQUE	ST TO EXIT	BUILT IN
ML	ELECTROMAGNETIC LOCK			
ES	ELECTRIC STRIKE LOCK			
EOL	END OF LINE RESISTOR			
REX	REQUEST TO EXIT MOTION SENSOR			
(DMA)	INTELLIGENT DOOR MANAGEMENT	ALARM (IDMA	- "EXD" C	ABLE
(CB) _X	ELECTRIC LOCKING CRASH BAR	REX = BUILT II	n request	TO EXIT
(LR)	MOTION SENSOR (LONG RANGE) -	"RX" CABLE		SENSORS WILL BE WALL
(SR)	MOTION SENSOR (SHORT RANGE)	- "RX" CABLE		O UNLESS MOTION S 360° CEILING TYPE
BUZ	BUZZER			
TMP	TEMPERATURE SENSOR			
MON	VIDEO MONITOR			
(ICM) _X	INTERCOM	S=SUBSTATIOI M=MASTER		S=VIDEO SUBSTATION M=VIDEO MASTER
S	SIREN			
CAS	CUSTODIAL ARMING STATION			
	FIXED MINI DOME OUTDOOR VANI	DAL CAMERA		
	FIXED MINI DOME INDOOR CAMER	?A		
	PTZ DOME OUTDOOR CAMERA			
	PTZ DOME INDOOR CAMERA			
	FIXED BOX OUTDOOR CAMERA			
	FIXED BOX INDOOR CAMERA			
	QUAD CAMERA			

SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL ABBREVIATION	DESCRIPTION
	-	CONDUIT AND WIRING	DGP	DGP	DATA GATHERING PANEL	DEM.	DEMOLISH AND REMOVE
	-	CONDUIT & WIRING TO BE REMOVED UON	FCS	FCS	FIRE COMMAND STATION	DISC	DISCONNECT
— —UG— —	-	BURIED CONDUIT	FSS	FSS	FIRE SUPPRESSION SYSTEM PANEL	DIM	DIMMER
——OH——	-	OVERHEAD CONDUCTORS	R		FIRE ALARM RELAY	DWG	DRAWING
	-	HOMERUN TO PANEL, ARROWS INDICATE # 1P	-	EOL -	WALL MOUNTED PUBLIC ADDRESS SPEAKER	ELEV	ELECTRICAL METALLIC TUBING
	-	MULTI-POLE HOMERUN ELECTRICAL EQUIPMENT AS INDICATED	大	-	PUBLIC ADDRESS TELEPHONE	EMT EM	EMERGENCY
<u> </u>	-	ELECTRICAL EQUIPMENT TO BE REMOVED UON	(PP)	-	CEILING MOUNTED PUBLIC ADDRESS SPEAKER	EX.	EXISTING TO REMAIN
<u>'</u> '	-	ELECTRIC METER	S	-	CEILING MOUNTED SPHERICAL TYPE LOUD	F	FLOOR
J	-	JUNCTION BOX			SPEAKER	FBO	FURNISHED BY OTHERS
	-	FUSED DISCONNECT SWITCH	O B	-	FIRE ALARM BELL 5	FC	FAN COIL UNIT
	-	UNFUSED DISCONNECT SWITCH	© C	-	CAMERA	GEN	GENERATOR
⊠¹	-	COMBINATION MOTOR STARTER/FUSED DISC.	TC	-	TIME CLOCK	GFI	GROUND FAULT INTERRUPTER
\boxtimes	-	MOTOR STARTER	CR	-	CARD READER	HP	HORSEPOWER
	-	MOTOR	DA	-	DOOR ALARM	HVAC	HEATING VENTILATION AIR CONDITIONING
	-	BATTERY PACK EMERGENCY LIGHT FIXTURE	ES	-	ELECTRIC DOOR STRIKE	IG	ISOLATED GROUND
X	-	EXIT LIGHT, FACES-SHADED, CHEVRON-ARROW	MD	-	SECURITY MOTION DETECTOR	IMC	INTERMEDIATE METAL CONDUIT
S _x	-	SINGLE POLE SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)	KP	-	KEY PAD	KVA	KILO-VOLT-AMPERE
\mathbf{c}^3	_	TURE WAY ON TOU	PA	-	PANIC ALARM	KW	KILO-WATT
S_x^3	-	THREE WAY SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)	PTZ		SECURITY CAMERA PTZ - PAN, TILT, ZOOM	MAX MCB	MAXIMUM MAIN CIRCUIT BREAKER
\mathbf{S}^4	-	FOUR WAY SWITCH	s	_	SECURITY ALARM HORN	MCC MCC	MOTOR CONTROL CENTER
S _x		(x - INDICATES FIXTURE BEING CONTROLLED)		-	PUSHBUTTON	MIN	MINIMUM
S _x ^{DIM}	-	DIMMER SWITCH	CFA	-	CALL FOR AID PULL STATION	MLO	MAIN LUG ONLY
S _x		(x - INDICATES FIXTURE BEING CONTROLLED)	CFA	-	CALL FOR AID A/V DEVICE	MTS	MANUAL TRANSFER SWITCH
S _M	-	MOTOR RATED TOGGLE SWITCH	HD	-	ELECTRIC HAND DRYER	NIC	NOT IN CONTRACT
S _K	-	KEY OPERATED SINGLE POLE SWITCH	EPO	EPO	EMERGENCY POWER OFF SWITCH	NL	NIGHT LIGHT
S _v	-	SPEED CONTROLLER (FB0)	RASP	RASP	RESCUE ASSIST. SYSTEM MASTER STATION	NTS	NOT TO SCALE
	-	WALL MOUNTED OCCUPANCY SENSOR	<u>&</u>	-	REMOTE RESCUE STATION	ОН	OVERHEAD
(OC)	-	CEILING MOUNTED OCCUPANCY SENSOR	<u></u>	СВ	CIRCUIT BREAKER	Р	POLE
\ominus	-	DUPLEX RECEPTACLE		-	ENCLOSED CIRCUIT BREAKER	РВО	PROVIDED BY OTHERS
+	-	DOUBLE DUPLEX RECEPTACLE	/ 200AS	-	FUSED SWITCH	PNL	PANEL
<u> </u>	-	SPECIAL RECEPTACLE	G	GEN	GENERATOR	PT	PRESSURE TREATED
▼ x	-	TELEPHONE OUTLET		-	GENERATOR RECEPTACLE	PVC	POLY VINYL CHLORIDE
^	-	DATA OUTLET (x - INDICATES # OF JACKS, 1 JACK UON)	OR	GND -	GROUND AS PER LOCAL CODE	REL.	REMOVE AND RELOCATE
■7		COMPINATION TELEPHONE/DATA OLITLET		-	GROUND BOD	RGS	RIGID GALVANIZED STEEL
V	-	COMBINATION TELEPHONE/DATA OUTLET COMBINATION DATA & TV OUTLET	OR ⊙	-	GROUND ROD TRANSFER SWITCH	RTU SCH	ROOF TOP UNIT SCHEDULE
\bigcap	-	TV OUTLET	UW OR T	XFMR	TRANSFORMER	SPD	SURGE PROTECTION DEVICE
P	-	FURNITURE SYSTEM POWER FEED		СТ	CURRENT TRANSFORMER	SW	SWITCH(ES)
C	-	FURNITURE SYSTEM COMMUNICATION FEED	<u> </u>	-	UTILITY POLE	TELCO	TELEPHONE COMPANY
F	-	FIRE ALARM MANUAL PULL STATION	₹ 1 WM	WM	WATER MAIN	TYP	TYPICAL
FK\$	-	FIRE ALARM COMBINATION AUDIO/VISUAL DEVICE	В	-	BOILER BREAK GLASS STATION	UG	UNDERGROUND
		(15/75 CD - STROBE)		NC	NORMALLY CLOSED CONTACTS	UON	UNLESS OTHERWISE NOTED
F 110	-	FIRE ALARM COMBINATION AUDIO/VISUAL DEVICE (110 CD - STROBE)		NO	NORMALLY OPEN CONTACTS	UV	UNIT VENTILATOR
		(TIUCD-STROBE)	A	CV	CONTROL VALVE	VIF	VERIFY IN FIELD
F	-	FIRE ALARM STROBE 15/75 CD	M	MD	MOTORIZED DAMPER	V	VOLT(S)
E 110	-	FIRE ALARM STROBE 110 CD	— — —	SD OR CFSD		WG	WIRE GUARD
	-	CARBON MONOXIDE DEVICE (15/75 CD - STROBE)	UH	UH	UNIT HEATER	WH	WATER HEATER
			RA	-	RESCUE ASSISTANCE	WP	WEATHERPROOF
S EL; SH; SC	-	SMOKE DETECTOR. EL - ELEVATOR LOBBY; SH - SMOKE HATCH; SC - PLENUM RATED ABOVE CEILING	DDC		DOUBLE DOOR CONTACT		Y NOT BE APPLICABLE FOR THIS PROJECT.
	SB	FIRE ALARM DEVICE.	DC	Λ	DOOR CONTACT AMPERE(S)	2.) SEE LIGHTING FIXTURE SCHEDULE FO	
SB	36	SB - SOUNDER BASE FOR SMOKE OR CARBON MONOXIDE DETECTOR		AC	AIR CONDITIONER	TYPICAL BRANCH CIRC	CUIT WIRING LEGEND
RX	-	BEAM SMOKE DETECTOR RECEIVER		ACC	AIR CONDITIONER CONDENSER	2-#12 & 1-#12 GND (1-1P-20A C	
TX	-	BEAM SMOKE DETECTOR TRANSMITTER		AFF	ABOVE FINISHED FLOOR	3-#12 & 1-#12 GND (3P-20A OF > 2-#12 & 1-#12 GND (2P-20A OF	,
S AC-	-	DUCT MOUNTED SMOKE DETECTOR		AF	AMPERAGE OF FUSE		LIGHT FIXTURE TYPE
H)	-	HEAT DETECTOR		AGL	ABOVE GRADE LEVEL	CIRCUIT # RECEPTACLE	SWITCH CONTROL
⟨ C ⊘	-	CARBON MONOXIDE DETECTOR		AHU	AIR HANDLING UNIT	NOTES:	LIGHT FIXTURE CIRCUIT #
(NG)	-	NATURAL GAS DETECTOR		AL	ALUMINIUM		HAVE A DEDICATED NEUTRAL CONDUCTOR. SHARED NEUTRAL
PS	-	FIRE ALARM PRESSURE SWITCH		ARC	ARC FAULT INTERRUPTER	2.) CONDUCTORS SHALL BE INCREASED CODE. FOR CIRCUITS THAT ARE BETWE	FOR VOLTAGE DROP AND DERATING AS PER APPLICABLE ELECTRICAL EN 100' AND 150' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL
TS	-	FIRE ALARM TAMPER SWITCH		AS	AMPERAGE OF SWITCH	BE #10 AWG. FOR CIRCUITS THAT ARE B	ETWEEN 150' AND 225' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS TER THAN 225' IN LENGTH, VERIFY CONDUCTOR SIZES WITH ENGINEER.
(WP)	-	FIRE ALARM WATER FLOW SWITCH		ATS	AUTOMATIC TRANSFER SWITCH		
(LT)	-	FIRE WATER TANK LOW TEMP SENSOR		AWG	AMERICAN WIRE GAUGE	GENERAL NOTES	
(LW)	-	FIRE WATER TANK LOW WATER		AV	AUDIO VISUAL	1.) ALL WORK SHOWN IS NEW UNLESS O	THERWISE NOTED (UON) EXISTING TO REMAIN (EX.).
HW	-	FIRE WATER TANK HIGH WATER		BCW	BARE COPPER WIRE		RED SCHEMATIC ONLY AND DO NOT NECESSARILY SHOW THE EXACT
	-	DRY VALVE LOW AIR		BLDG	BUILDING	LOCATIONS AND DETAILS OF THE WORK 3) THE ELECTRICAL CONTRACTOR SHALL	
(LA)	_	DRY VALVE HIGH AIR		BMS	BUILDING MANAGEMENT SYSTEM		L BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING INCLUDING FILING WITH THE UTILITY COMPANY (AS REQUIRED), AND WITH N
(HA)			ı	С	CONDUIT	FOOUR VOLHOUTH HAVING JUKISDICHO	
(HA) (WS)	-	FIRE ALARM WARDEN STATION				4.) ALL WORK INVOLVING THE ELECTRIC	SERVICE SHALL BE COORDINATED AND APPROVED BY THE LITH ITV
(HA) (WS) (DH) /5	-	FIRE ALARM DOOR RELEASE		CD	CANDELA	4.) ALL WORK INVOLVING THE ELECTRIC COMPANY.	SERVICE SHALL BE COORDINATED AND APPROVED BY THE UTILITY
(HA) (WS) (DH) (5) (ANN)		FIRE ALARM DOOR RELEASE FIRE ALARM ANNUNCIATOR PANEL		CD CKT	CANDELA CIRCUIT	5.) ALL CONDUCTORS SHALL BE COPPER	UON "ON DRAWINGS".
(HA) (WS) (DH) 5 (ANN) (CM)	- - - CM	FIRE ALARM DOOR RELEASE FIRE ALARM ANNUNCIATOR PANEL FIRE ALARM CONTROL MODULE		CD CKT CLG	CANDELA CIRCUIT CEILING	6.) ELECTRONIC FILES OF THE MECHANIA AVAILABLE TO THE CONTRACTOR. THE	CON "ON DRAWINGS". CAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS ARE ENGINEER MAY GRANT THE CONTRACTOR A LIMITED LICENSE TO MAKE A
HA) WS OH S ANN CM MM	- - - CM MM	FIRE ALARM DOOR RELEASE FIRE ALARM ANNUNCIATOR PANEL FIRE ALARM CONTROL MODULE FIRE ALARM MONITORING MODULE		CD CKT CLG COL	CANDELA CIRCUIT CEILING COLUMN	COMPANY. 5.) ALL CONDUCTORS SHALL BE COPPER 6.) ELECTRONIC FILES OF THE MECHANIC AVAILABLE TO THE CONTRACTOR. THE DERIVATIVE WORK OF THE DATABASE FOR DRAWINGS. UPON REQUEST, THE ENGIN	CAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS ARE ENGINEER MAY GRANT THE CONTRACTOR A LIMITED LICENSE TO MAKE A DR THE PURPOSE OF SHOP DRAWINGS, SUBMITTALS AND AS-BUILT IEER SHALL PROVIDE A RELEASE FORM THAT MUST BE SIGNED AND
(HA) (WS) (DH) 5 ANN (CM)	- - - CM	FIRE ALARM DOOR RELEASE FIRE ALARM ANNUNCIATOR PANEL FIRE ALARM CONTROL MODULE		CD CKT CLG	CANDELA CIRCUIT CEILING	COMPANY. 5.) ALL CONDUCTORS SHALL BE COPPER 6.) ELECTRONIC FILES OF THE MECHANIC AVAILABLE TO THE CONTRACTOR. THE DERIVATIVE WORK OF THE DATABASE FOR DRAWINGS. UPON REQUEST, THE ENGIN	CAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS ARE ENGINEER MAY GRANT THE CONTRACTOR A LIMITED LICENSE TO MAKE A DR THE PURPOSE OF SHOP DRAWINGS, SUBMITTALS AND AS-BUILT

BPS

GENERAL NOTES (CONT'D)

7.) CIRCUIT NUMBERS ARE FOR INFORMATION PURPOSES ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN

8.) WHERE GFI RECEPTACLES ARE CIRCUITED WITH GENERAL CONVENIENCE RECEPTACLES, THE GFI RECEPTACLE SHALL BE THE LAST DEVICE ON THE CIRCUIT.

9.) INSTALL CONDUIT EXPANSION FITTINGS AT ALL LOCATIONS WHERE CONDUITS CROSS BUILDING OR STRUCTURE

EXPANSION JOINTS.

10.) CEILING MOUNTED RECEPTACLES SHALL BE MOUNTED FLUSH TO CEILING.

11.) UNLESS OTHERWISE NOTED. DISCONNECT SWITCHES. STARTERS. HOAS AND MOTOR RATED TOGGLE SWITCHES FOR MECHANICAL PUMPS, CABINET AND UNIT HEATERS, RETURN FANS, ROOF FANS, VAV BOXES, COMPRESSORS, FAN COIL UNITS, AIR HANDLERS AND CONDENSERS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE ALL WORK WITH THE MECHANICAL CONTRACTOR.

12.) DISCONNECT SWITCHES FOR MOTORIZED DAMPERS, CFSD/SD AND VAV BOXES SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. SWITCHES NOT SHOWN ON PLANS.

13.) INCLUDE IN BASE BID THE FOLLOWING 1P-20A CIRCUITS ON EACH LEVEL (150' LENGTH EACH) FOR HVAC SYSTEM CONTROL PANELS. EXACT LOCATION OF CONTROL PANELS SHALL BE COORDINATED WITH DIVISION 23 IN THE FIELD. CIRCUITS SHALL ORIGINATE FROM THE FOLLOWING PANELBOARDS:

PARKING - PSPA-45 FIRST FLOOR - PS1A-25, PN1A-27 SECOND FLOOR - PS2A-57

DEFINITION OF TERMS

1.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" IS USED, IT MUST BE UNDERSTOOD THAT "THE TOWN OF HARRISON, NY" IS INTENDED.

2.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ARCHITECT" IS USED, IT MUST BE UNDERSTOOD THAT "KG&D ARCHITECTS, P.C." IS INTENDED.

3.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT MUST BE UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.

4.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORDS "ELECTRICAL UTILITY" OR "POWER COMPANY" ARE USED, IT MUST BE UNDERSTOOD THAT "CON EDISON" IS INTENDED.

5.) WHEREVER IN THE CONTRACT DOCUMENTS THE WORDS "TELEPHONE UTILITY" OR "TELCO" ARE USED, IT MUST BE UNDERSTOOD THAT "OPTIMUM" IS INTENDED.

6.) "WORK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, TRANSPORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, INSPECTIONS, INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / OR REASONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE CONTRACT DOCUMENTS.

7.) "FURNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE JOB SITE.

10.) THE FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:

8.) "INSTALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, APPLYING, SETTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION MATERIALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED AND FURNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE COMPLETE IN ALL RESPECTS.

9.) "PROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL, EQUIPMENT, ETC. AS DEFINED ABOVE.

A.) "NO EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC.

AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY COMMENCE.

B.) "MAKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE WITH THE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING, FABRICATION AND/OR PURCHASE MAY COMMENCE.

C.) "AMEND AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION ARE SO EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE COMMENTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR FABRICATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY NOT COMMENCE.

D.) "REJECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY NOT COMMENCE.

TRENCHING NOTES

- CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES THAT ARE NOT PART OF N.Y. STATE "CODE 753" PRIOR TO DIGGING.
- 2. ALL EXCAVATING IN THE AREA OF THE EXISTING UNDERGROUND EQUIPMENT, PIPES AND CONDUITS SHALL BE PERFORMED BY HAND.
- ANY AREA/PLANTS OR LANDSCAPING OR PAVEMENTS DISTURBED DURING THE EXCAVATION SHALL BE RESTORED OR REPLACED TO MATCH EXISTING CONDITIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.
- 4. ANY EXISTING BURIED CONDUITS, DRAINAGE, SPRINKLER PIPING, ETC. THAT IS DISTURBED AND/OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- 5. THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL OR BLAST, CALL 1-800-962-7962.

LOW VOLTAGE SYSTEMS NOTES

1.) THIS CONTRACTOR IS RESPONSIBLE FOR ALL RACEWAYS AND WIRING ASSOCIATED WITH LOW VOLTAGE SYSTEMS. THE LOW VOLTAGE SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO, AUDIO/VISUAL, ACCESS CONTROL, CCTV, INTRUDER ALARM, DATA AND COMMUNICATION SYSTEMS. THIS CONTRACTOR SHALL REFER TO THE "AVV" AND "SE" SERIES DRAWINGS AND DETAILS FOR QUANTITIES, SIZES AND SPECIFICATION OF RACEWAYS AND WIRING. THIS CONTRACTOR SHALL PROVIDE DATA RACKS AND PATCH PANELS FOR TERMINATING SYSTEM WIRING. TEST AND LABEL EACH END OF

2.) HEAD-END SWITCHES, SENSORS AND SYSTEM COMPONENTS SHALL BE BY OTHERS.

3.) ALL LADDER RACKS, TROUGHS AND ASSOCIATED COMPONENTS WITHIN IT AND AV ROOMS ARE BY THIS CONTRACTOR, AS DETAILED IN THE "AVV" AND "SE" SERIES DRAWINGS.

4.) FOR EACH WALL MOUNTED LOW VOLTAGE SYSTEM OUTLET, PROVIDE A 1900 JUNCTION BOX WITH AN EXTENDER COLLAR AND 1 INCH CONDUIT WITH DRAGLINE 6 INCHES ABOVE ACCESSIBLE CEILING FOR INSTALLATION OF CABLE BY THIS CONTRACTOR. JUNCTION BOXES SHALL BE RECESSED WITHIN THE NEW BUILDING CONSTRUCTION, COORDINATE WITH GENERAL CONSTRUCTION CONTRACTOR.

5.) THIS CONTRACTOR SHALL WIRE CAT6 CABLE TO EACH COMMUNICATION POINT SHOWN, SEE PLAN FOR QUANTITIES. TERMINATIONS AT DATA POINT AND PATCH PANEL BY THIS CONTRACTOR. RJ45 JACKS AND COVER PLATES TO BE PROVIDED BY THIS CONTRACTOR. TEST AND LABEL EACH END OF CAT6 CABLE.

6.) FIBER OPTIC WIRING BETWEEN DATA ROOM 111 AND DATA ROOM 205A IS BY THIS CONTRACTOR. PROVIDE A PLENUM RATED MULTI-MODE 12 STRAND FIBER OPTIC CABLE TERMINATED WITH LC CONNECTORS.

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KGDARCHITECTS.COM

OLA Consulting Engineers

Hawthorne, NY 10532 914.747.2800 8 West 38th Street, Suite 501 New York, NY 10018 646.849.4110

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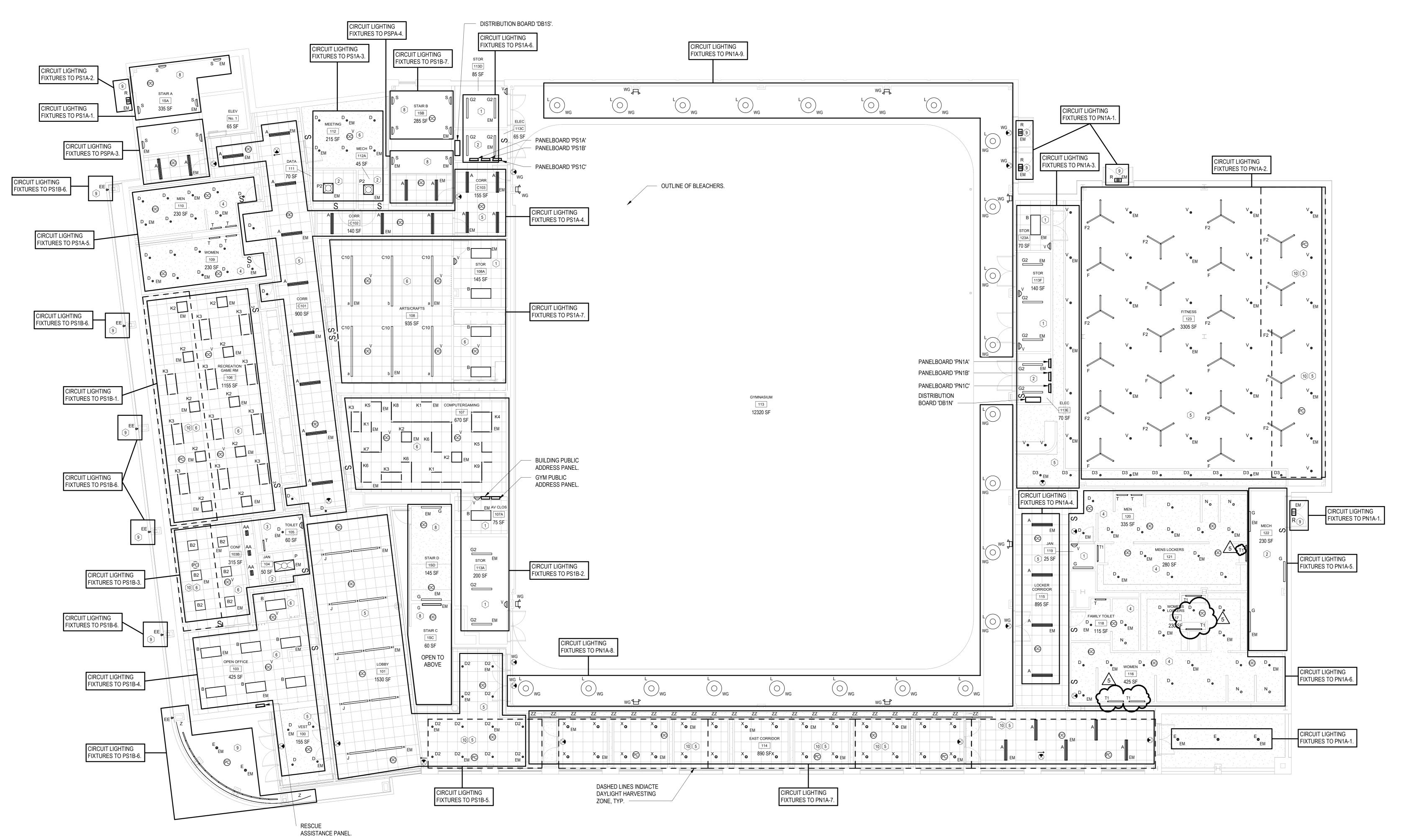
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ELECTRICAL SYMBOLS, NOTES

& ABBREVIATIONS NKGD0207.00 03/01/2024

Drawn / Checked AS NOTED JJ / ML/DS Sheet Number

E-001



LIGHTING CONTROL LEGEND:

- 1 LINE VOLTAGE WALL MOUNTED DUAL TECHNOLOGY VACANCY SENSOR.
- 2 LINE VOLTAGE MANUAL ON/OFF WALL SWITCH.
- (3) LINE VOLTAGE WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR.
- [4] LINE VOLTAGE WALL SWITCH WITH DUAL TECHNOLOGY CEILING MOUNTED OCCUPANY SENSOR.
- 5 TIMECLOCK WITH OCCUPANCY SENSOR AFTER HOURS AND MAIN SWITCH IN RECEPTION AREA.
- 6 LOW VOLTAGE WALL SWITCH WITH DUAL TECHNOLOGY CEILING MOUNTED VACANCY SENSOR.
- 7 PHOTOCELL AND TIMECLOCK WITH MANUAL OVERRIDE SWITCH.
- 8 TIMECLOCK CONTROL, LIGHTS SHALL BE AT FULL BRIGHTNESS DURING BUSINESS HOURS, AFTER HOURS LIGHTS SHALL AUTOMATICALLY DIM TO 50% AND RETURN TO FULL BRIGHTNESS WHEN OCCUPANCY IS DETECTED VIA OCCUPANCY SENSORS.
- 9 OUTDOOR PHOTOSENSOR CONTROL.
- 10 DAYLIGHT ZONE.

ELECTRICAL FIRST FLOOR REFLECTED CEILING PLAN SCALE: 1/8" = 1'-0"

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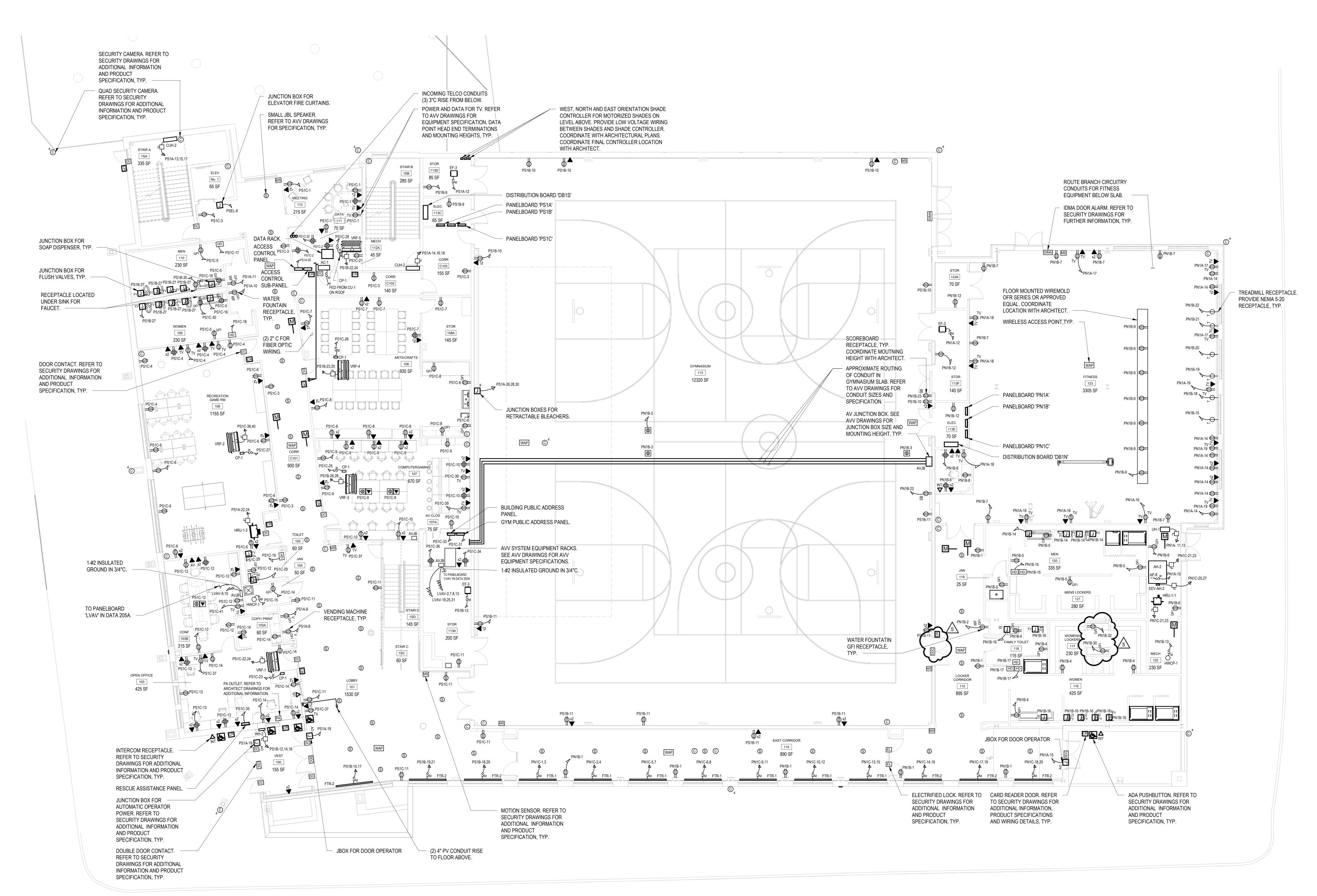
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Sheet Title ELECTRICAL FIRST FLOOR REFLECTED **CEILING PLAN**

Job No.	Date
NKGD0207.00	02/21/20
Scale	Drawn / Checked
AS NOTED	VB / ML





NOTES:
1.) CIRCUIT ALL MOTORIZED DAMPERS LOCATED ON THE SOUTH SIDE OF THE BUILDING TO 'PS1A-20'.
2.) CIRCUIT ALL MOTORIZED DAMPERS LOCATED ON THE NORTH SIDE OF THE BUILDING TO 'PN1C-22'.

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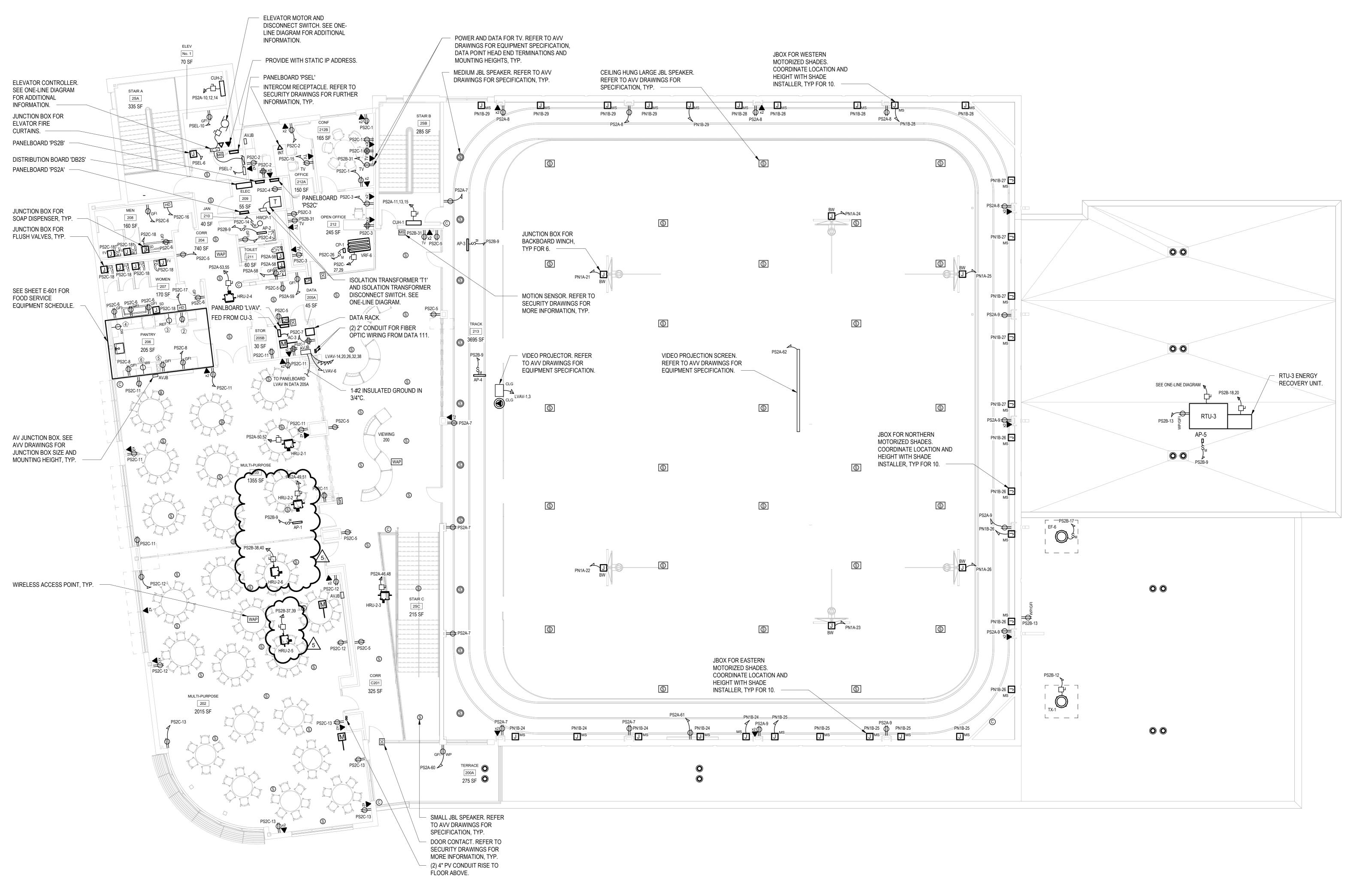
ELECTRICAL FIRST FLOOR PLAN

 Job No.
 Date

 NKGD0207.00
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NOTES:
1.) CIRCUIT ALL MOTORIZED DAMPERS TO 'PS2C-28'.

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ELECTRICAL SECOND FLOOR PLAN

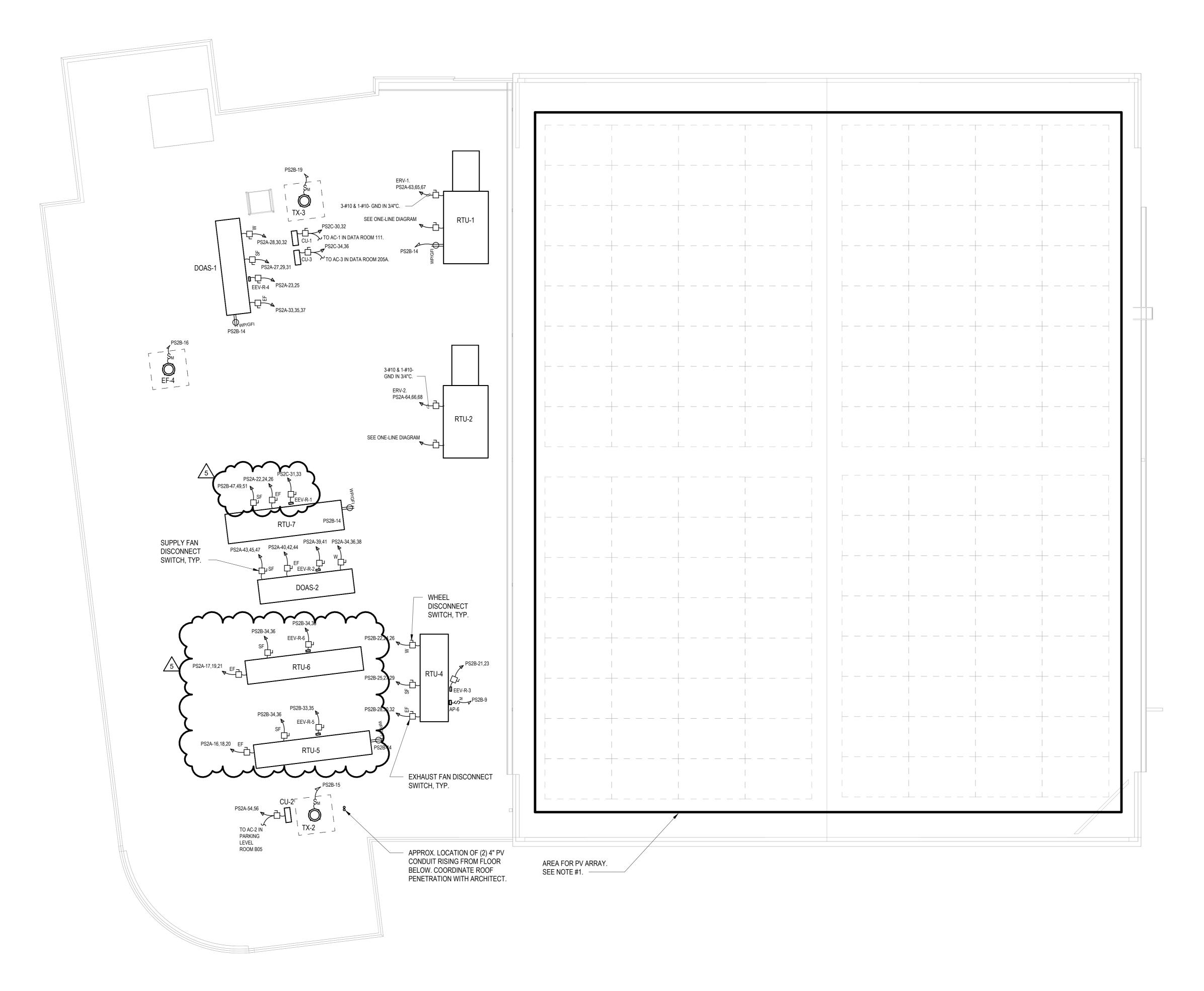
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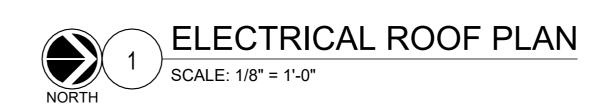
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NOTES:

1.) PV ARRAY SHALL BE APPROXIMATELY 170kW CAPACITY. ALL COMPONENTS AND WIRING ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR A DELEGATED DESIGN INCLUDING ALL NECESSARY COMPONENTS, WIRING (LINE AND LOW VOLTAGE) AND PROGRAMMING FOR A FULLY OPERATIONAL SYSTEM.

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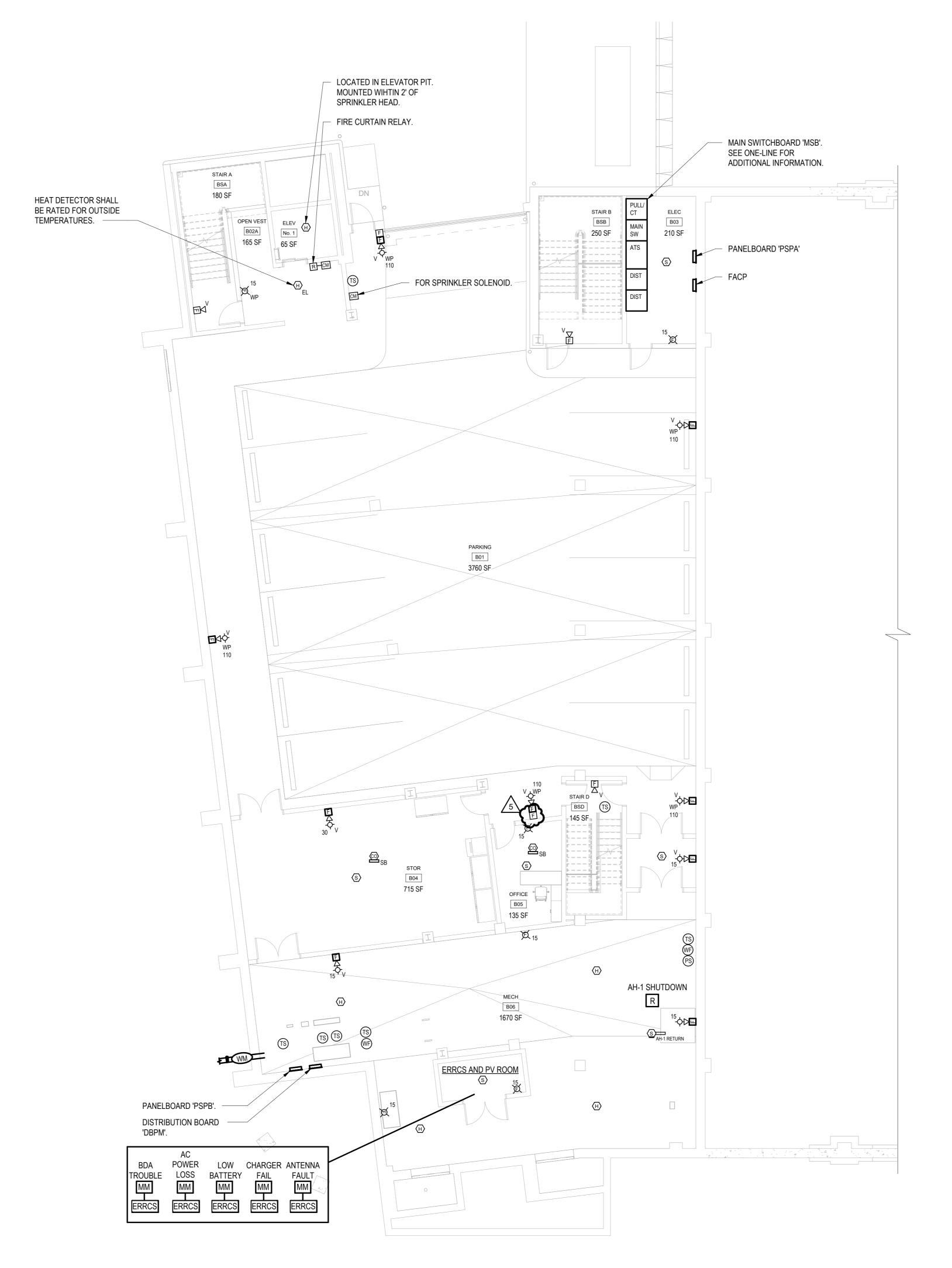
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Sheet Title

ELECTRICAL **ROOF PLAN**

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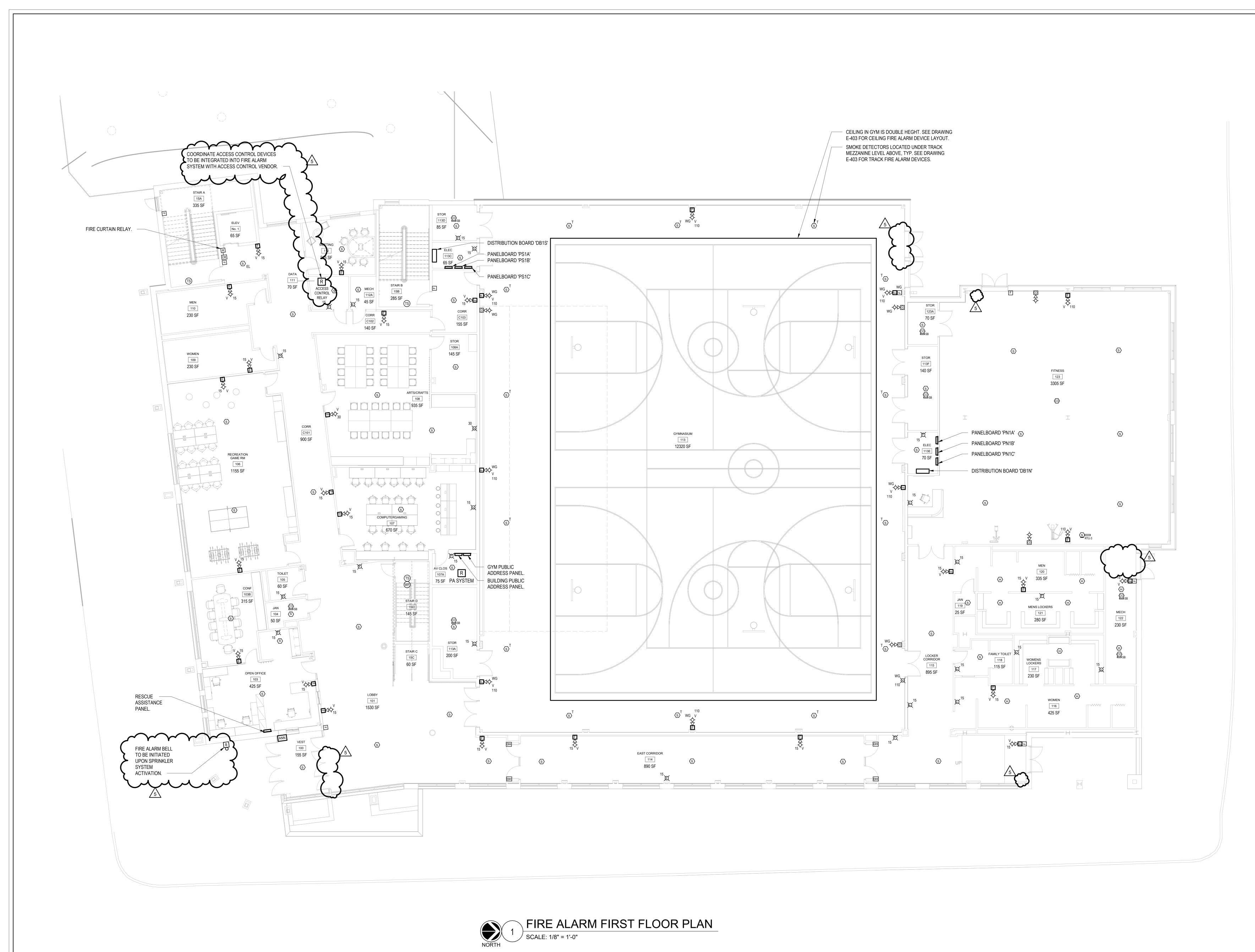
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 Date
 Issue

 Sheet Title
 Issue

FIRE ALARM PARKING FLOOR

PLAN 02/21/20 NKGD0207.00

Scale Drawn / Checked AS NOTED VB / ML



New Construction - Phase 2
Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528





CONSTRUCTION DOCUMENTS

Key Plan

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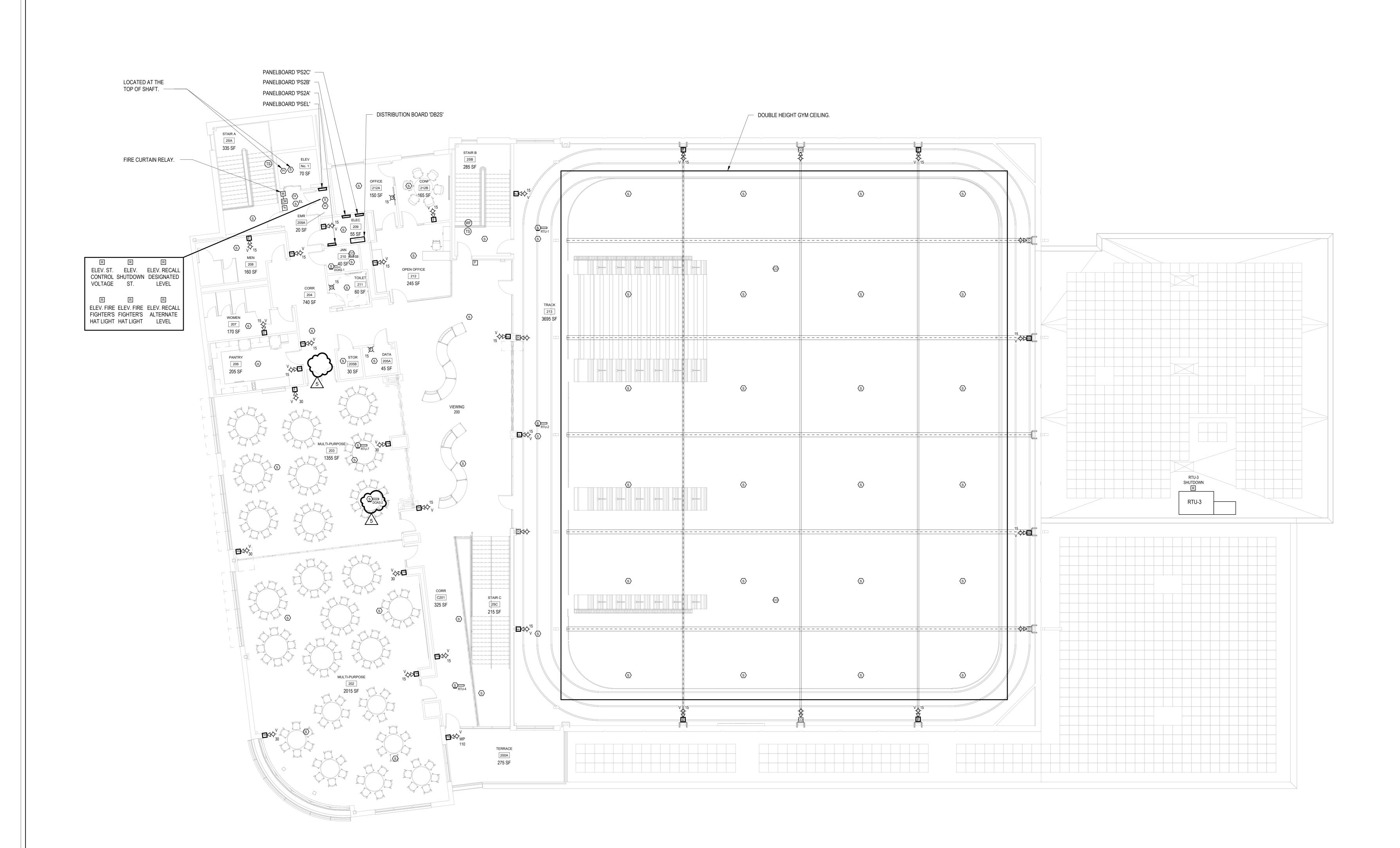
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Professional Seal

5 07/01/2024 BID ADDENDUM #2 4 06/05/2024 ISSUED FOR BID 3 01/16/2024 ISSUED FOR PERMIT 2 06/01/2020 DESIGN DEVELOPMENT 1 03/31/2020 50% DESIGN DEVELOPMENT

FIRE ALARM FIRST FLOOR PLAN

Job No.	Date
NKGD0207.00	02/21/20
Scale AS NOTED	Drawn / Checked VB / ML
Sheet Number	



FIRE ALARM SECOND FLOOR PLAN

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

HARRISON RECREATION & COMMUNITY CENTER

New Construction - Phase 2
Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528





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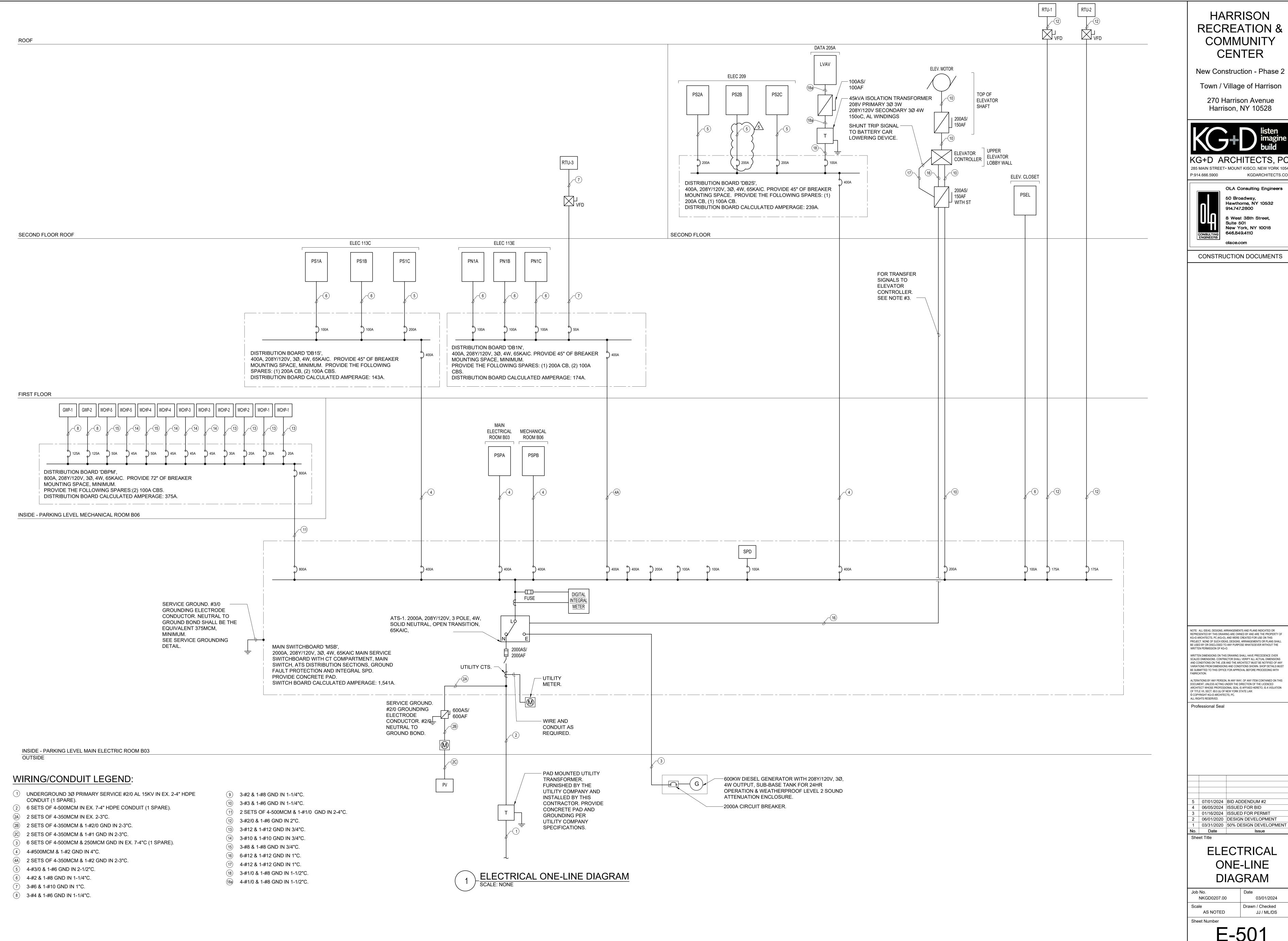
FIRE ALARM
SECOND FLOOR

Date
NKGD0207.00
Date
02/21/20
Drawn / Checked

E-403

VB / ML

AS NOTED



New Construction - Phase 2

Town / Village of Harrison

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OLA Consulting Engineers Hawthorne, NY 10532 914.747.2800 Suite 501 New York, NY 10018 646.849.4110 olace.com

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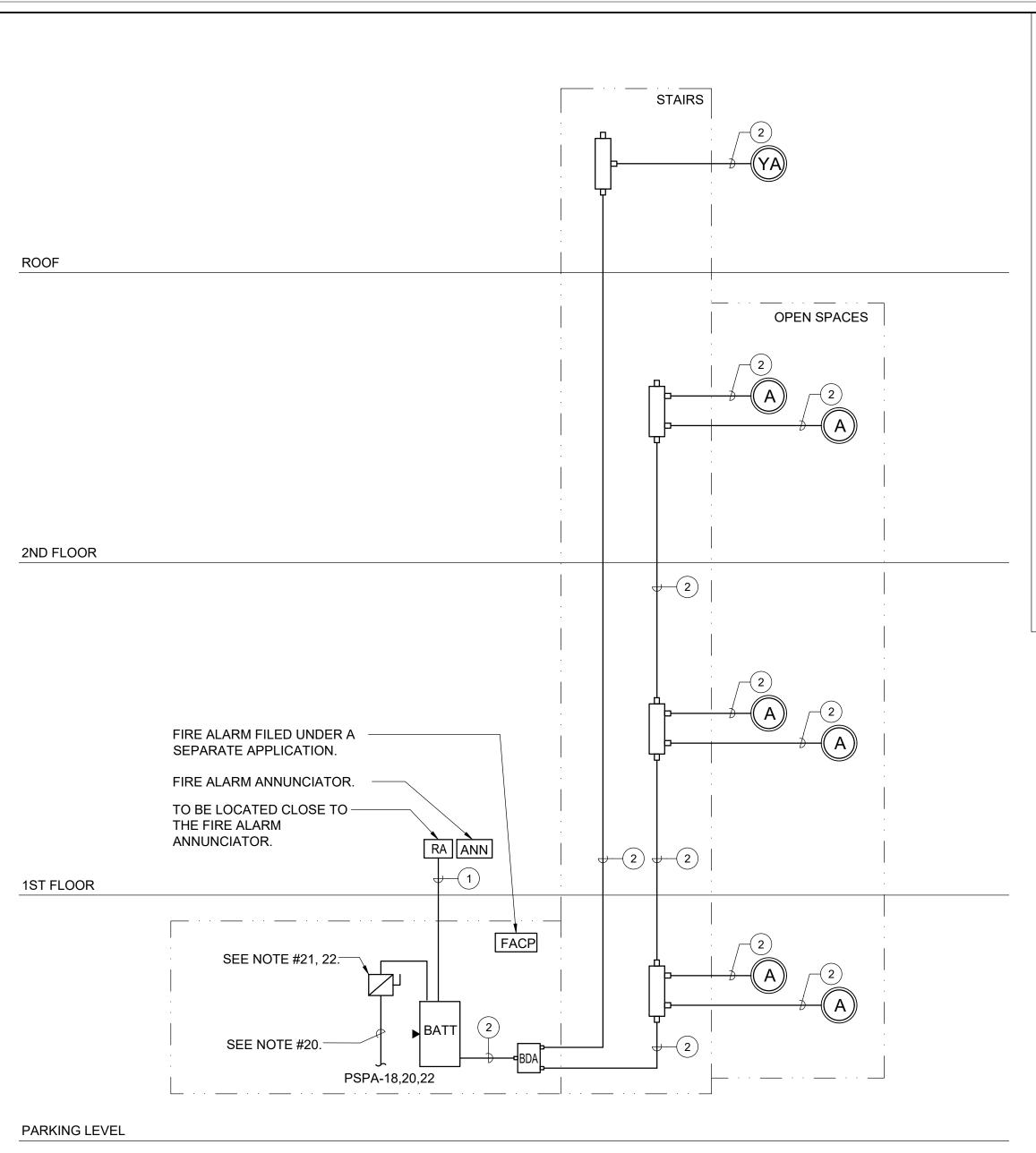
Professional Seal

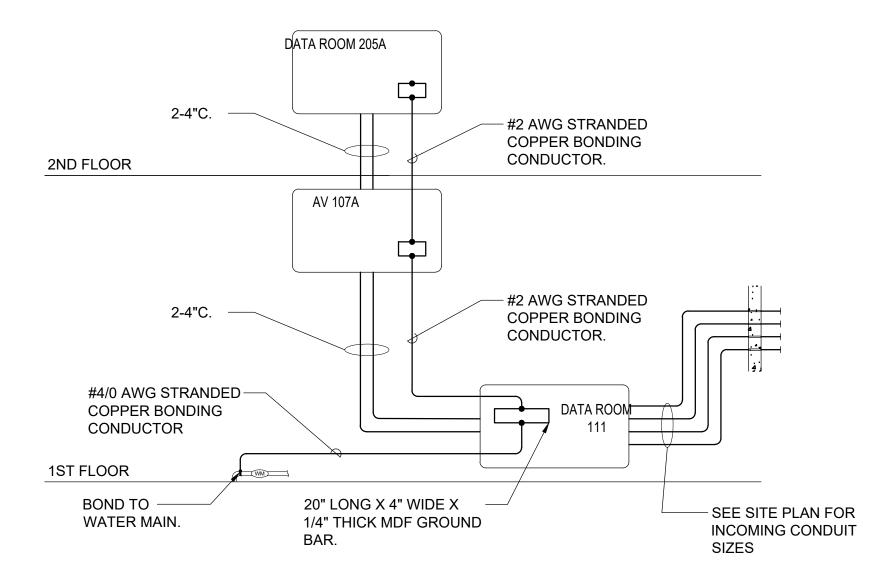
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> ELECTRICAL ONE-LINE

DIAGRAM

03/01/2024 NKGD0207.00 Drawn / Checked AS NOTED JJ / ML/DS Sheet Number







SYMBOLS A	AND ABBR	EVIATIONS			
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
	-	FUSED DISCONNECT SWITCH		С	CONDUIT
	-	UNFUSED DISCONNECT SWITCH		CKT	CIRCUIT
	-	TAPPER		CLG	CEILING
	-	EQUAL POWER DIVIDER		COL	COLUMN
A	-	RY012NQ, POLOMARCONI ANTENNA		DWG	DRAWING
A	-	TOWERLINQ SLC RISER		ELEV	ELEVATOR
FACP	FACP	FIRE ALARM CONTROL PANEL		FCS	FIRE COMMAND STATION
BATT	BATT	BATTERY BACK-UP WITH INTERNAL CHARGER		PS	POWER SUPPLY
BDA	BDA	BI-DIRECTIONAL AMPLIFIER BOOSTER		SW	SWITCH(ES)
(YA)	-	YAGI ANTENNA WITH MOUNTING HARDWARE		TYP	TYPICAL
RA	-	REMOTE ANNUNCIATOR		UON	UNLESS OTHERWISE NOTED
	А	AMPERE(S)	NOTES:	DDDE\/IATIONIC MAN	V NOT BE ADDITIONAL E EOD THIS DOO IECT
	BLDG	BUILDING	1.) ALL STWIDOLS AND A	DDREVIATIONS MAY	Y NOT BE APPLICABLE FOR THIS PROJECT.

WIRING/CONDUIT LEGEND:

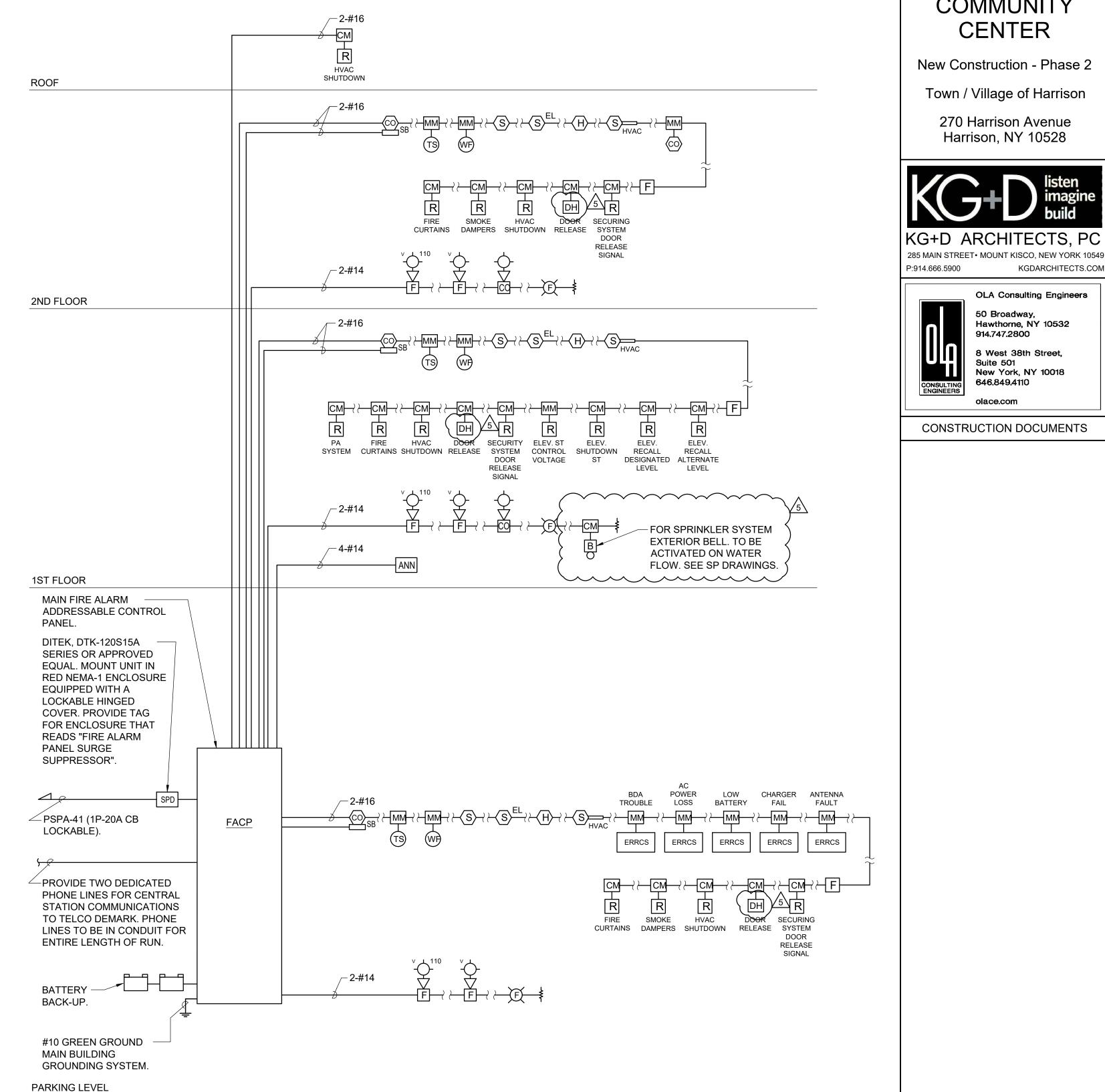
(1) CONTROL CABLING:CAT-5e.

OR APPROVED EQUAL.

2-HR RATED CO-AUX CABLE IN 3/4"C THAT MEETS NFPA 72, 1221 AND UL 2196 SIMILAR TO DRAGON SKIN 2HB12-50JPLR

- RISER CABLING: PRIMARY DISTRIBUTION CABLE FOR R/F POWER IS NOT EXCLUSIVELY INSTALLED VERTICALLY.
- BRANCH CABLING: LAST LEG DISTRIBUTION CABLE FOR R/F POWER. TYPICALLY INSTALLED ON A SINGLE FLOOR AND FEEDS ANTENNAS.
- ALL BRANCH CABLING MUST BE ENCASED IN THE CONCRETE DECK OR OTHERWISE PROVIDED WITH TWO HOURS SURVIVABILITY. CONTROL CABLING:CAT-5E. ALL CONTROL CABLING IS TO BE INSTALLED INSIDE A TWO-HOUR RATED SHAFT WAY.
- ALL RISER CABLING IS 1/2" AIR DIELECTRIC CABLE, RED, PRINTED "FIRE DEPARTMENT COMMUNICATIONS USE" TO BE INSTALLED AND SECURED PER MANUFACTURER RECOMMENDATIONS. INSTALLING CONTRACTOR TO DETERMINE FINAL DBM VALUES OF RF COMPONENTS.
- WHERE RISER AND/OR BRANCH CABLING IS EXPOSED TO GENERAL PUBLIC, MUST BE MECHANICALLY PROTECTED AGAINST ACCIDENTAL AND INTENTIONAL DAMAGE.
- ALL BRANCH CABLING IS 1/2" AIR DIELECTRIC CABLE WITH PLENUM RATING TO BE INSTALLED AND SECURED PER MANUFACTURER RECOMMENDATIONS.
- RADIO AMPLIFICATION UNIT (RAU) BY TOWERIQ MODEL TAC-R414 OR CURRENT MODEL. RAU MUST BE LOCATED IN TWO HOUR RATED ROOM.
- 10. ALL COAXIAL CONNECTORS ARE TO BE N-TYPE CONNECTORS. 11. WHERE ANY ELECTRICAL AND R/F CONNECTION IS MADE, PHYSICAL ACCESS MUST BE AVAILABLE
- 12. RAU REQUIRES A L5 30R ELECTRICAL CONNECTION TO LIFE SAFETY SOURCE. PROVIDE WITH A LOCKABLE FUSE DISCONNECT.
- 13. ALL INSTALLED CABLING AND COMPONENTS, WHERE PHYSICALLY ACCESSIBLE ARE TO BE LABELED "EMERGENCY RESPONDER COMMUNICATIONS USE," AT A MINIMUM INTERVAL OF 6'. 14. RAU MIST BE PROVIDED WITH INTERNET CONNECTIVITY VIA RJ-45 RECEPTACLE.
- 15. WHEN ENCASED IN THE DECK ALL CABLES MUST BE INSTALLED IN PROPERLY SIZED CONDUIT WITH CONSIDERATIONS FOR PULL BOXES, TURN CONNECTORS AND OTHER IN-LINE DEVISES.
- 16. PROVIDE FUSE QUANTITIES AND SIZES AS REQUIRED FOR SYSTEM.
- 17. PROVIDE WIRING AND CONDUIT AS REQUIRED. 18. NEW YORK STATE APPROVED CABINET WITH NYS/FDNY KEY AND LOCKABLE DOOR. (FCO).
- 19. 5-#10 IN 1"C.
- 20. 4-#4 & 1-#6 GND IN 1-1/4"C FROM 3P-60A CB IN PANELBOARD. QUANTITY OF PHASE CONDUCTORS SHOWN FOR INFORMATION ONLY. PROVIDE NUMBER OF PHASE CONDUCTORS AS REQUIRED.
- 21. 60AS/60AF. SIZE OF FUSES SHOWN FOR INFORMATION ONLY. SIZE FUSES AND PROVIDE NUMBER OF FUSES AS REQUIRED.
- 22. ERRCS DISCONNECT SWITCH.
- 23. SEE FLOOR PLANS FOR EQUIPMENT QUANTITIES AND LOCATIONS. RISER IS NOT A POINT-TO-POINT WIRING DIAGRAM. PRIOR TO STARTING ANT WORK, A WORKING POINT-TO-POINT WIRING DIAGRAM SHALL BE OBTAINED FROM A SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.

TELECOMMUNICATIONS GROUNDING AND CONDUIT RISER



FIRE ALARM RISER DIAGRAM

RISER NOTES:

1.) THIS IS NOT A POINT-TO-POINT WIRING DIAGRAM. PRIOR TO STARTING ANY WORK, A WORKING POINT-TO-POINT WIRING DIAGRAM SHALL BE OBTAINED FROM FIRE ALARM SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.

2.) ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BASE BID ALL 120V CIRCUITS THAT ARE REQUIRED TO SUPPORT THE OPERATION OF THE FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS WITH THE FIRE ALARM VENDOR.

3.) QUANTITY OF STROBE BOOSTER POWER SUPPLY PANELS AND ASSOCIATED 120V CIRCUITS SHALL BE COORDINATED WITH SELECTED FIRE ALARM SYSTEM MANUFACTURER AND/OR FIRE ALARM VENDOR.

4.) PROVIDE ALL NECESSARY HARDWARE AND PROGRAMMING TO PROVIDE THE CLIENT WITH 20% SPARE CAPACITY ON ALL INITIATING AND INDICATING CIRCUITS.

5.) PROVIDE AS PART OF THE BASE CONTRACT ALL LABOR AND MATERIALS TO INSTALL TWENTY (20) ADDITIONAL FIRE ALARM DEVICES DURING CONSTRUCTION. THE TWENTY (20) FIRE ALARM DEVICES CAN BE BUT NOT LIMITED TO SMOKE DETECTOR, HEAT DETECTOR, DOOR HOLDER, DUCT DETECTOR, FAN SHUTDOWN, TAMPER SWITCHES, FLOW SWITCHES, ETC. INCLUDE ALL LABOR AND MATERIALS INCLUDING WIRE, BOXES, CONDUIT, TERMINATIONS, HARDWARE, SOFTWARE, PROGRAMMING AND TESTING.

6.) HEAT DETECTORS IN ELEVATOR MACHINE ROOM AND/OR SHAFT SHALL HAVE A LOWER TEMPERATURE RATING THAN THE NEARBY SPRINKLER HEAD(S). HEAT DETECTORS SHALL BE INSTALLED 2'-0" MAXIMUM AWAY FROM EACH SPRINKLER HEAD IN THE ELEVATOR MACHINE ROOM AND EACH HEAD LOCATED GREATER THAN 2'-0" ABOVE THE FLOOR OF THE ELEVATOR SHAFT. UPON ACTIVATION OF A HEAT DETECTOR USED FOR ELEVATOR POWER SHUTDOWN, THERE SHALL BE A DELAY IN THE ACTIVATION OF THE POWER SHUNT TRIP. THIS DELAY SHALL BE THE TIME THAT IT TAKES THE ELEVATOR CAB TO TRAVEL FROM THE TOP OF THE HOISTWAY TO THE LOWEST RECALL LEVEL. COORDINATE WITH ELEVATOR CONTRACTOR.

7.) DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR AND INSTALLED IN DUCT WORK BY MECHANICAL CONTRACTOR.

8.) CARBON MONOXIDE AND NATURAL GAS DETECTORS SHALL BE SUPERVISED BY FIRE ALARM SYSTEM BUT SHALL NOT SEND AN ALARM SIGNAL TO THE SYSTEM. THESE DETECTORS SHALL CONTAIN INTERNAL HORNS TO PROVIDE LOCAL ALARM ONLY, UON.

9.) ALL VISUAL ALARM DEVICES SHALL BE ADA COMPLIANT.

10.) ELECTRICAL CONTRACTOR TO PROVIDE A RELAY FOR EACH SMOKE DAMPER/COMBINATION FIRE SMOKE DAMPER. RELAYS ARE NOT SHOWN ON PLANS FOR CLARITY.

11.) DOOR HOLDERS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.

12.) PROVIDE REMOTE LED INDICATORS FOR ALL CONCEALED FIRE ALARM DEVICES SUCH AS DUCT SMOKE DETECTORS, ABOVE CEILING SMOKE DETECTORS, ELEVATOR SHAFT DETECTORS, MONITORING AND CONTROL MODULES, ETC. LED INDICATORS FOR DEVICES MOUNTED ABOVE DROP CEILINGS SHALL BE MOUNTED BELOW ASSOCIATED DEVICES. LABEL INDICATORS TO INDICATE DEVICE SERVED.

13.) CONTRACTOR TO PROVIDE SMOKE DETECTOR(S) IN ALL LOCATIONS CONTAINING FIRE ALARM CONTROL PANELS, DATA GATHERING PANELS, BOOSTER POWER SUPPLIES, OR ANY OTHER FIRE ALARM SYSTEM PANEL. WHETHER SHOWN ON PLANS OR NOT.

HARRISON RECREATION & COMMUNITY **CENTER**

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E-502

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07/01/2024 |BID ADDENDUM #2

06/05/2024 ISSUED FOR BID

01/16/2024 ISSUED FOR PERMIT

06/01/2020 DESIGN DEVELOPMENT

FIRE ALARM &

FIRE RADIO

RISER DIAGRAM

03/31/2020 50% DESIGN DEVELOPMENT

OF TITLE VII, SECT. 69.5 (b) OF NEW YORK STATE LAW.

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Sheet Title

Sheet Number

Professional Seal

MAIN RATING: 200A	1C PAN			KAIC RATING: 22KAIC			MAIN RATING: 100A	MAIN C.B.:		KAIC RATING: 22KAIC			MAIN RATING: 100A		AIN C.B.:			NAIC RATING: 22KAIC
VOLTAGE: <u>208Y/120V</u>	PHASE		WIRE: <u>4</u>	MOUNTING: <u>SURFACE</u>			VOLTAGE: 208Y/120V	PHASE:					VOLTAGE: 208Y/120V		IASE: <u>3</u>		IRE: <u>4</u>	
RC. IO. LOAD DESCRIPTION	BKR. AMPS POL		NO. OF OLES	LOAD DESCRIPTION	CIRC. NO.	CIRC. NO.	LOAD DESCRIPTION	BKR. NO. OF POLES	NO. OF POLES	LOAD DESCRIPTION	CIRC. NO.	CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION
1 REC - MEETING 112 3 REC - CORRIDOR C101	20 1	1		REC - DATA 111 REC - RECREATION GAME RM	2 4	1 3	LTG - GAME ROOM 106 LTG-CONF 103B/103A/104/105	20 1 20 1	1	LTG-GAMING 107/STOR 107A/113A LTG - OFFICE 103/VEST 100	2 4	1	LTG - STAIR A LTG - MEETING 112/DATA 111	20	1	1 1		LTG - EXTERIOR LTG - CORR 101/102/103
 5 REC - MEN 110/WOMEN 109 7 REC - ART/CRAFTS 108 	20 1	1		REC - RECREATION GAME RM REC - ART/CRAFTS 108	6 8	5	LTG - LOBBY 101 LTG - STAIR B	20 1	1 20	LTG - EXTERIOR	6	5	LTG - RESTROOMS 110/109 LTG - ARTS 108/ STOR 108A	20	1	1	20	
9 REC - COMPUTER/GAMING 107	20 1	1	1 20	REC - COMPUTER/GAMING 107	10	9	REC - ELEC 113C/ STOR 113D	20 1	1 20	REC - GYMNASIUM 113	10	9	REC - VENDING MACHINE	20	1	1	20	REC - WATER FOUNTAIN
11 REC - LOBBY 101/ STOR 113A 13 REC - OPEN OFFICE 103	20 1	1	1 20	REC - CONFERENCE 103B REC - OPEN OFFICE 103/103A	12		REC - GYMNASIUM 113 EF-3 - STOR 113A	20 1	3 15	WH-2	12	13	REC - WATER FOUNTAIN	20		 '		EF-3 - STOR 113D
15 HWCP-1 - JAN 104 17 HAND DRYER - MEN 110	20 1	1		JBOX - MEN 110/ WOMEN 109 HAND DRYER - WOMEN 109	16	15 17	FTR-2 - LOBBY 101	15 2	2 15	FTR-2 - LOBBY 101	16 18	15 17	CUH-2 - STAIR A	15	3	3	15	CUH-2 - STAIR B
19 HAND DRYER - TOILET 105 21 REC - MECH 112A	20 1	1		JBOX - FIRE CURTAIN VRF-1 - OPEN OFFICE 103	20 22	19 21	FTR-2 - LOBBY 101	15 2	2 15	VRF-5 - MECH 112A	20	19 21	AUTOMATIC DOOR OPERATOR -	20	1 -	1 1	20 15	
23 CP-1 - OPEN OFFICE 103 25 CP-1 - COMPUTER GAMING	15 1 15 1	1	1 15	CP-1 - ARTS/CRAFTS 108	24 26	23 25	VRF-4 - ARTS/CRAFTS 108	15 2	2 15	VRF-3 - GAMES RM 107	24 26	23 25	- HVAC CONTROL PANEL	20	1	1		GAME ROOM 106
27 CP-1 - REC RM 106 29 J-BOX - TOILET 105	15 1 20 1	1		CP-1 - MECH 112A REC - WOMEN 109	28	27 29	JBOX - FLUSH VALVES	20 1	1 20	REC - MENS 110	28	27 29	-	-	-	3	20	BLEACHERS
31 GYM PA PANEL 33 BUILDING PA PANEL	20 1	1	1 20	REC - DATA 111 REC - STOR 107A	32	31	-			-	32	31	-	-	-	-	-	-
RESCUE ASSISTANCE PANEL	20 1	1	1 20	REC - STOR 107A	36	35	SPARE	20 1	1	SPARE	36	35	SPARE	20	1	1	20	
TV OUTLET - OFFICE103/LOBBY 10 TV OUTLET - COMPUTER GAMING 107	20 1	1		VRF-2 - REC RM 106	38 40	39	SPARE SPARE	20 1	1 20		38	39	SPARE SPARE	20	1	1 1	20	SPARE
41 TV OUTLET - CONF 103B 43 -	20 1	1		-		LK - P	SPARE ROVIDE LOCKING TABS ON C.B.; C			SPARE E C.B.;	42		SPARE PROVIDE LOCKING TABS ON C.B.; G		1 /PE C.B	1 .; GP - GF		PE C.B.;
45 - 47 SPARE	20	- 1	1 20	- SPARE	46	AF - A NOTE	RC FAULT TYPE C.B.; ST - SHUNT S:	TRIP C.B.				NOTI	ARC FAULT TYPE C.B.; ST - SHUNT ES:	RIP C.B.				
49 SPARE 51 SPARE	20 1	1		SPARE SPARE	50 52													
53 SPARE 55 SPARE	20 1	1	1 20	SPARE SPARE	54 56													
57 SPARE	20 1	1	1 20	SPARE	58 L													
59 SPARE 61 SPARE	20 1	1	1 20	SPARE SPARE	60 62		PN	11B PANE	L SCHE	DULE			PN	1A P/	ANE	L SCI	HEC	DULE
SPARE SPARE	20 1	1	1 20	SPARE SPARE	64 66		MAIN RATING: 100A	MAIN C.B.:		KAIC RATING: 22KAIC			MAIN RATING: 100A			: <u>MLO</u>		KAIC RATING: 22KAI
K - PROVIDE LOCKING TABS ON C.B.; GF .F - ARC FAULT TYPE C.B.; ST - SHUNT T		C.B.; GP	P - GFP TYPE	C.B.;			VOLTAGE: <u>208Y/120V</u>	PHASE:					VOLTAGE: <u>208Y/120V</u>	PH	IASE: 3	П	IRE: 4	4 MOUNTING: <u>SURFACE</u>
NOTES:						CIRC. NO.	LOAD DESCRIPTION	AMPS	NO. OF POLES	S EGAL BEGGIAII HOIV	CIRC. NO.	CIRC. NO.	LOAD DESCRIPTION		POLES	NO. OF POLES		S LOAD DESCRIPTIO
PS:	2B PAN	IEL S	SCHED	ULE		3	REC - EAST CORRIDOR 114 REC - GYMNASIUM 113	20 1	1 20	REC - WATER FOUNTAIN REC - WOMENS LOCKERS	2 4		LTG - EXTERIOR LTG - ELEC/ STOR/ STOR	20	1	1 1		LTG - FITNESS 123 LTG - LOCKER CORRIDOR 1
MAIN RATING: 200A	MAIN C	_		KAIC RATING: 22KAIC			REC - MENS LOCKERS REC - FITNESS 123	20 1	1	REC - MECH 122 REC - FITNESS 123	8	5 7	LTG - MECH 122 LTG - EAST CORRIDOR 114	20	1	1 1		LTG - MEN/WOMEN LOCKER LTG - GYMNASIUM 123
VOLTAGE: <u>208Y/120V</u>	PHASE		WIRE: <u>4</u>	MOUNTING: <u>SURFACE</u>			REC - FITNESS 123 REC - FITNESS 123	20 1 20 1	1	REC - TREADMILL REC - STOR 113F/123A/ ELEC	10 12	9	LTG - GYMNASIUM 123 UH-1 - MECH 122	20 20	2	1 1		AP-8 - MECH 122 EF-3 - STOR 113F
RC. LOAD DESCRIPTION	BKR. O	v= 11 .	NO. OF OLES BKR.	LOAD DESCRIPTION	CIRC. NO.		HWCP-1 - MECH 122 HAND DRYER - MEN 120	20 1	1 20 1 20	JBOX - MEN 120 JBOX - TOILET 118/WOMEN 116	14	13 15	AUTOMATIC DOOR OPERATOR	20	1	1 1	20	REC - FITNESS 123 TV OUTLET - FITNESS 123
1 LTG - VIEWING 200	20	1		LTG - CORRIDOR C201	2	17	HAND DRYER - TOILET 118/116	20 1	1 20	REC - TREADMILL	18	17	TV OUTLET - FITNESS 123	20	1	1	20	TV OUTLET - FITNESS 123
 3 LTG - TRACK 213 5 LTG - TRACK 213 	20 1	1		LTG - TRACK 213 LTG - TRACK 213	6	21	REC - TREADMILL REC - TREADMILL	20 1	1 20	REC - TREADMILL REC - TREADMILL	20	19 21	TV OUTLET - FITNESS 123 J-BOX - BACKBOARD WINCH	30	1	1 1	30	MOTORIZED DAMPERS J-BOX - BACKBOARD WINCI
7 LTG - EXTERIOR9 AP-1/AP-2/AP-3/AP-4/AP-5	20 1	1		LTG - TRACK 213 LTG - TRACK 213	8	23 25	REC - GYM SCOREBOARDS J-BOX - MOTORIZED CURTAINS	20 1 20 1	1 20	J-BOX - MOTORIZED CURTAINS J-BOX - MOTORIZED CURTAINS	24 26	23 25	J-BOX - BACKBOARD WINCH J-BOX - BACKBOARD WINCH	30	1	1 1	30	J-BOX - BACKBOARD WINC J-BOX - BACKBOARD WINC
11 LTG - TRACK 213 SCONCE 13 REC - ROOF WP GFI	20 1	1	1 20	TX-1 - GREEN ROOF REC - ROOF WP GFI	12	27 29	J-BOX - MOTORIZED CURTAINS J-BOX - MOTORIZED CURTAINS	20 1	117	J-BOX - MOTORIZED CURTAINS REC - WOMENS LOCKERS	30	27 29	HVAC CONTROL PANEL -	20	-	1 -	20	J-BOX - FLUSHVALVES -
15 TX-2 - ROOF 17 EF-6 - GREEN ROOF	15 1	1	1 15	EF-4 - ROOF RTU-3 ENERGY RECOVERY UNIT	16	31 33	-			REC - WOMENS LOCKERS /5	32 34	31	-	-	-	-	-	-
19 TX-3 - ROOF	15 1	1	2 13	TO-5 ENERGY RECOVERY ONLY	20		SPARE SPARE	20 1	1	SPARE SPARE	36 38	35 37	SPARE SPARE	20 20	1	1 1	20	
21 RTU-4 EEV KIT 23	15 2		3 15	RTU-4 WHEEL	22		SPARE SPARE	20 1	1 20 1 20	SPARE SPARE	40	39 41	SPARE SPARE	20	1	1 1	20	SPARE SPARE
25 27 RTU-4 SUPPLY FAN	15 3	3			1 20 1 1	LK - P	ROVIDE LOCKING TABS ON C.B.; C RC FAULT TYPE C.B.; ST - SHUNT	GF - GFI TYPE C.B				LK - F	PROVIDE LOCKING TABS ON C.B.; G ARC FAULT TYPE C.B.; ST - SHUNT	F - GFI TY	PE C.B.	; GP - GF		
29 31 TV QUTLET - GQNF, 2421, 212, A121, 212F	3 20			RTU-4 EXHAUST FAN	30	NOTE	S:					NOTI	ES:					
33 EEV-R-5 35	15 2	2	2 15	EEV-R-6	34 36													
37 HRU-2-5 39	15 2	2	2 15	HRU-2-6	38 3													
41 43 RTU-5 - SUPPLY FAN	15 3		2 15	RTU-6 - SUPPLY FAN	42													
45	15 3			RTU-0 - SUPPLY FAIN	44 46			S2C PANE										
47 49 RTU-7 - SUPPLY FAN	20 3	3		- -	50		MAIN RATING: <u>200A</u> VOLTAGE: 208Y/120V	MAIN C.B.:		KAIC RATING: 22KAIC MOUNTING: SURFACE								
51 53 -		-		-	52 54	CIDC		NO.	NO		CIPC							
55 - 57 -		- -		-		CIRC. NO.	LOAD DESCRIPTION	BKR. OF POLES	OF AMPS	LOAD DESCRIPTION	CIRC. NO.							
59 SPARE 61 SPARE	20 1	1		SPARE SPARE	60	1	REC - CONF 212B REC - OPEN OFFICE 212	20 1 20 1	11	REC - OFFICE 2121A REC - ELEC/JAN/TOILET	2							
SPARE SPARE	20 1	1		SPARE SPARE	64 66	5	REC- CORRIDOR/ VIEWING	20 1	1 20	REC - MEN 208/WOMEN 207	6							
SPARE	20 1	1	1 20	SPARE	68	9	REC - DATA 205A REC - PANTRY REFRIGERATOR	20 1 15 1	1 20	REC - PANTRY 206 REC - PANTRY ICE MAKER	10							
SPARE SPARE	20 1	1	1 20	SPARE SPARE	70 72		REC - MULTI-PURPOSE 203 REC - MULTI-PURPOSE 202	20 1	1	REC - MULTI-PURPOSE 202 HWCP-1 - JAN 210	12							
K - PROVIDE LOCKING TABS ON C.B.; GF .F - ARC FAULT TYPE C.B.; ST - SHUNT T		C.B.; GP	P - GFP TYPE	C.B.;	}}	15 17	REC - OFFICE 212A HAND DRYER - WOMEN 207	20 1 20 1	1 20 1 20		16 18							
NOTES:					\$	19 21	PANTRY DISHWASHER	35 2	1	REC - COFFEE MAKER REC - MICROWAVE	20							
		~~~					REC - HEATING CABINET REC - WARMING CABINET	20 1		CP-1 - OPEN OFFICE 212	24							
<u>/5\</u>					-	27	VRF-6 OPEN OFFICE 212	20 2	1 20	MOTORIZED DAMPERS	28							
							RTU-7 EEV KIT	15 2		CU-1 - ROOF	30							
						33 35	SPARE	20 1	2 15	CU-3 - ROOF	34 36							
					ļ		SPARE SPARE	20 1 20 1	1	SPARE SPARE	38 40							
					<u> </u>	41	SPARE ROVIDE LOCKING TABS ON C.B.; G	20 1	1 20	SPARE	42							
					1	AF - A	ROVIDE LOCKING TABS ON C.B.; C RC FAULT TYPE C.B.; ST - SHUNT		., or - or r r r									
						NOTE	C.				ı							

- PARKING B01 - STAIR A - STAIR D - MECH B06 C - PARKING B01	20 20 20	1	1	+		
- STAIR D - MECH B06		1		20	LTG - MAIN ELEC ROOM B03	2
- MECH B06	20	'	1	20	LTG - STAIR B	4
		1	1	20	LTG -STOR B04/ OFFICE B05	6
- PARKING B01	20	1	1	20	REC - MAIN ELEC ROOM B03	8
	20	1	1	20	REC - STOR B04/OFFICE B05	10
: - MECH B06	20	1	1	20	REC - ICE MAKER	12
- REFRIGERATOR	20	1	1	20	REC - REFRIGERATOR	14
- REFRIGERATOR	20	1	-	-	-	16
	-	-				18
X - FIRE CURTAIN	20	1	3	60	FIRE RADIO SYSTEM	20
3 - ELEC B03	15	1				22
1 - ELEC B03	20	2				24
			3	15	CUH-1 - STAIR B	26
						28
I-2 - STAIR A	15	3	2	20	SITE LIGHTING	30
						32
IERATOR BLOCK HEATER	20	2	2	20	SITE LIGHTING	34
						36
IERATOR GFI	20	1	2	40LK	EV CHARGERS	38
IERATOR BATTERY CHARGER	20	1				40
P	20LK	1	2	40LK	EV CHARGERS	42
LIGHTING	20	1				44
C CONTROL PANEL	20	1	2	40LK	EV CHARGERS	46
CHARGERS	40LK	2				48
			1	15	SITE LIGHTING TIME CLOCK	50
KING B01 LIGHTING	20	1				52
KING B01 LIGHTING	20	1	3	20	JBOX - GARAGE DOOR	54
	-	-				56
RE	20	1	1	20	SPARE	58
RE	20	1	1	20	SPARE	60
RE	20	1	1	20	SPARE	62
RE	20	1	1	20	SPARE	64
RE	20	1	1	20	SPARE	66
RE	20	1	1	20	SPARE	68
RE	20	1	1	20	SPARE	70
RE	20	1	1	20	SPARE	72
	B - ELEC B03  1	3 - ELEC B03	3 - ELEC B03	S - ELEC B03	S - ELEC B03	SELEC B03

PSPA PANEL SCHEDULE

12

20

22

24

26

40

42

10

12

14

	PS	52A P	ANEL	SCI	HED	ULE		
	MAIN RATING: 200A	MA	IN C.B.:	MLO		KAIC RATING: 22KAIC		
	VOLTAGE: <u>208Y/120V</u>	PH	ASE: <u>3</u>	WI	RE: <u>4</u>	MOUNTING: <u>SURFACE</u>		
CIRC.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.	
1	LTG - OFFICES/ELEC/JAN/TOIL	20	1	1	20	LTG - CORRIDOR 204	2	
3	LTG - PANTRY/ RESTROOMS	20	1	1	20	LTG - DATA 205A/STOR 205B	4	
5	LTG - MULTI-PURPOSE 203	20	1	1	20	LTG -MULTI-PURPOSE 201/202	6	
7	REC - TRACK 213	20	1	1	20	REC - TRACK 213	8	
9	REC - TRACK 213	20	1				10	
11				3	15	CUH-2 - STAIR A	12	
13	CUH-1 - STAIR B	15	3				14	
15							16	
17				3	15	RTU-5 (EXHAUST FAN	18	
19	RTU-6 (EXHAUST FAN)	15	3			3000	20	
21						$\bigcirc \bigcirc $	22	
23	DOAS-1 EEV KIT	15	2	3	20	RTU-7 (EXHAUST FAN)	24	
25							26	
<b>」</b> 27							28	
29	DOAS-1 SUPPLY FAN	15	3	3	15	DOAS-1 WHEEL	30	
31							32	NOTE: ALL IDEAS, DESIGNS, ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND ARE THE PROPERTY OF
33							34	KG+D ARCHITECTS, PC (KG+D), AND WERE CREATED FOR USE ON THIS PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL
35	DOAS-1 EXHAUST FAN	15	3	3	15	DOAS-2 WHEEL	36	BE USED BY OR DISCLOSED TO ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF KG+D.
37							38	WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL VERIFY ALL ACTUAL DIMENSIONS
39	DOAS-2 EEV KIT	15	2				40	AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN. SHOP DETAILS MUST
41				3	15	DOAS-2 EXHAUST FAN	42	BE SUBMITTED TO THIS OFFICE FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.
43							44	ALTERATIONS BY ANY PERSON, IN ANY WAY, OF ANY ITEM CONTAINED ON THIS DOCUMENT. UNLESS ACTING UNDER THE DIRECTION OF THE LICENCED
45 47	DOAS-2 SUPPLY FAN	15	3	2	15	HRU-2-3 - CORRIDOR C201	46	ARCHITECT WHOSE PROFESSIONAL SEAL IS AFFIXED HERETO, IS A VIOLATION OF TITLE VII, SECT. 69.5 (b) OF NEW YORK STATE LAW.  © COPYRIGHT KG+D ARCHITECTS, PC.
49	HRU-2-2 - PANTRY 206	15	2	2	15	HRU-2-1 - MULTI-PURPOSE	50	ALL RIGHTS RESERVED.
51			_			THREE TO MIGETTY OF MIGGE	52	Professional Seal
53	HRU-2-2 - ELEV LOBBY 204	15	2	2	15	CU-2 - ROOF	54	
55			_	_			56	
57	HVAC CONTROL PANEL	20	1	1	20	J-B0X - TOILET 211	58	
59	REC - WATER FOUNTAIN	20	1	1	20	REC - TERRACE WP GFI	60	
61	REC - TRACK SCOREBOARD	20	1	1	20	GYMNASIUM PROJECTOR SCREEN	62	
63							64	
65	ERV-1	25	3	3	25	ERV-2	66	
67	1						68	
69	SPARE	20	1	1	20	SPARE	70	
71	SPARE	20	1	1	20	SPARE	72	
73	SPARE	20	1	11	20	SPARE	74	5 07/01/2024 BID ADDENDUM #2
75	SPARE	20	1	1	20	SPARE	76	4 06/05/2024 ISSUED FOR BID 3 01/16/2024 ISSUED FOR PERMIT
77	SPARE	20	1	1	20	SPARE	78	2 06/01/2020 DESIGN DEVELOPMENT
79	SPARE	20	1	1	20	SPARE	80	1 03/31/2020 50% DESIGN DEVELOPMENT
81	SPARE	20	1	1	20	SPARE	82	No. Date Issue
83	SPARE	20	1	1	20	SPARE	84	CHOCK THE
	PROVIDE LOCKING TABS ON C.B.; C ARC FAULT TYPE C.B.; ST - SHUNT		'PE C.B.;	GP - GF	P TYPE	E C.B.;		ELECTRICAL
NOT	ES:							SCHEDI II ES
								SCHEDULES

# HARRISON **RECREATION &** COMMUNITY CENTER

New Construction - Phase 2

Town / Village of Harrison 270 Harrison Avenue



Harrison, NY 10528

KG+D ARCHITECTS, PC 285 MAIN STREET• MOUNT KISCO, NEW YORK 10549 KGDARCHITECTS.COM

OLA Consulting Engineers 50 Broadway, Hawthorne, NY 10532 914.747.2800 8 West 38th Street, Suite 501 New York, NY 10018 646.849.4110 olace.com

CONSTRUCTION DOCUMENTS

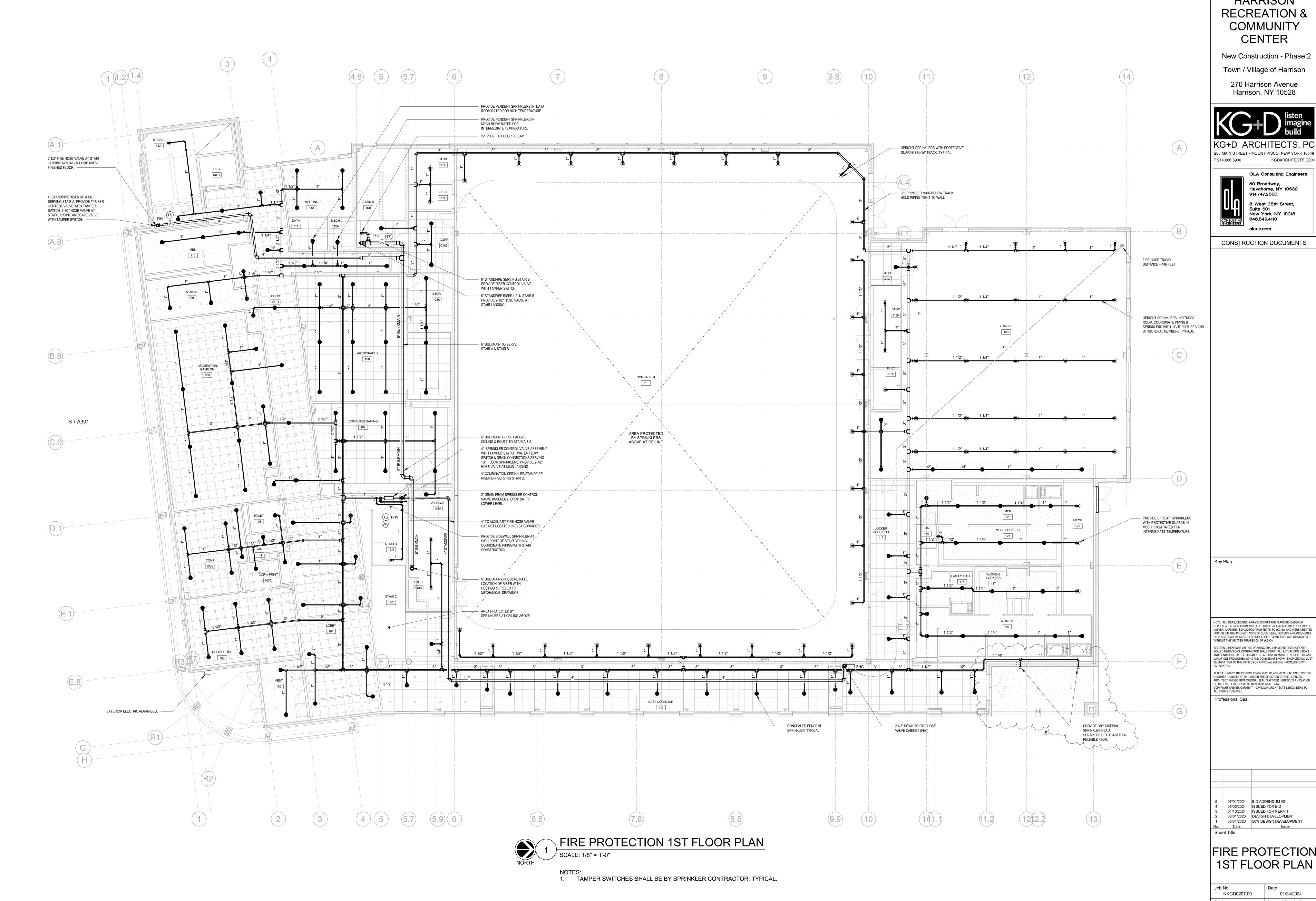
SCHEDULES

NKGD0207.00

Drawn / Checked AS NOTED JJ / ML/DS

E-602

03/01/2024



New Construction - Phase 2 Town / Village of Harrison

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07/01/2024 BID ADDENDUM #2
06/05/2024 ISSUED FOR BID
01/16/2024 ISSUED FOR PERMIT
06/01/2020 DESIGN DEVELOPMENT 
 1
 03/31/2020
 50% DESIGN DEVELOPMENT

 No.
 Date
 Issue

 Sheet Title

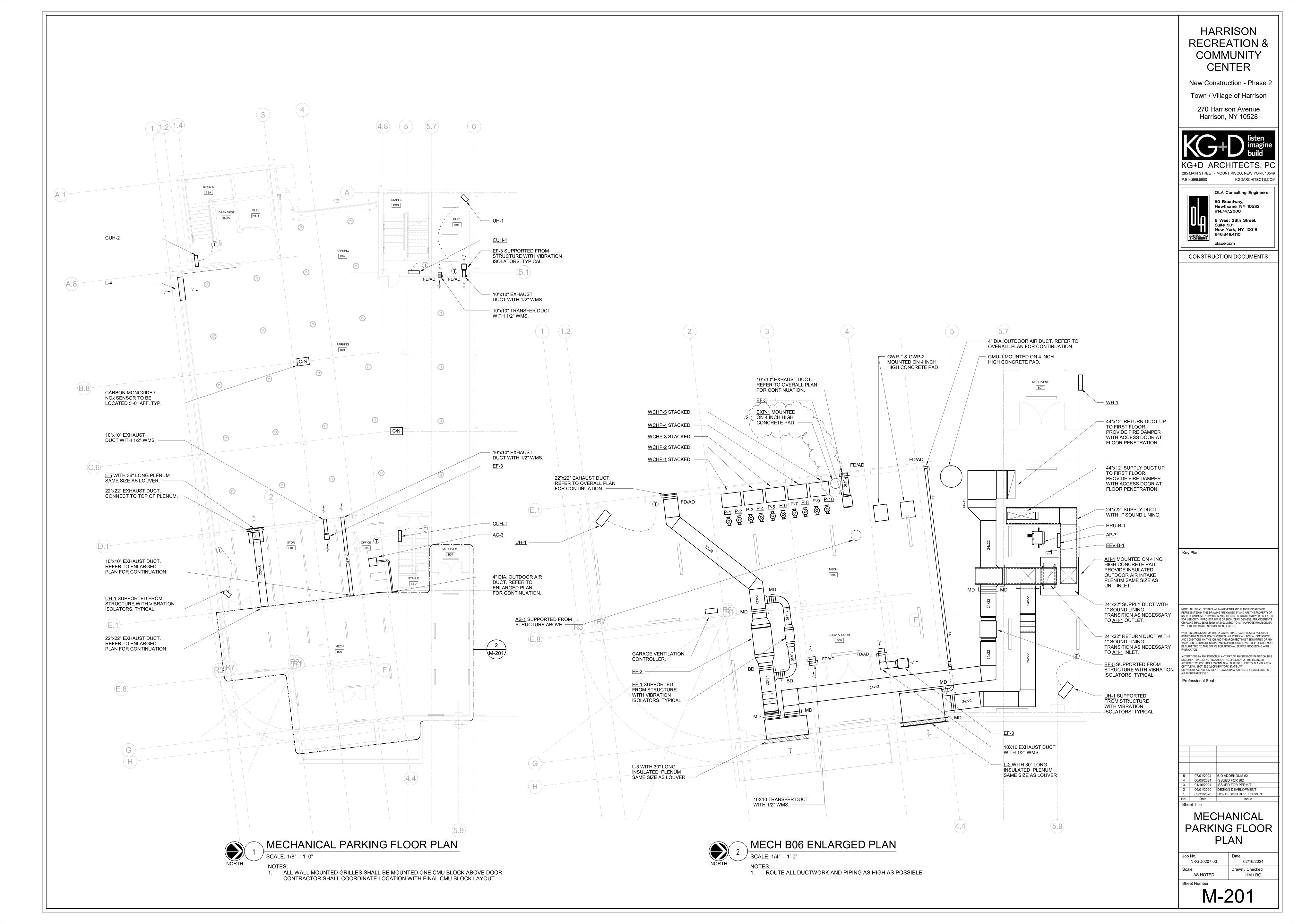
FIRE PROTECTION

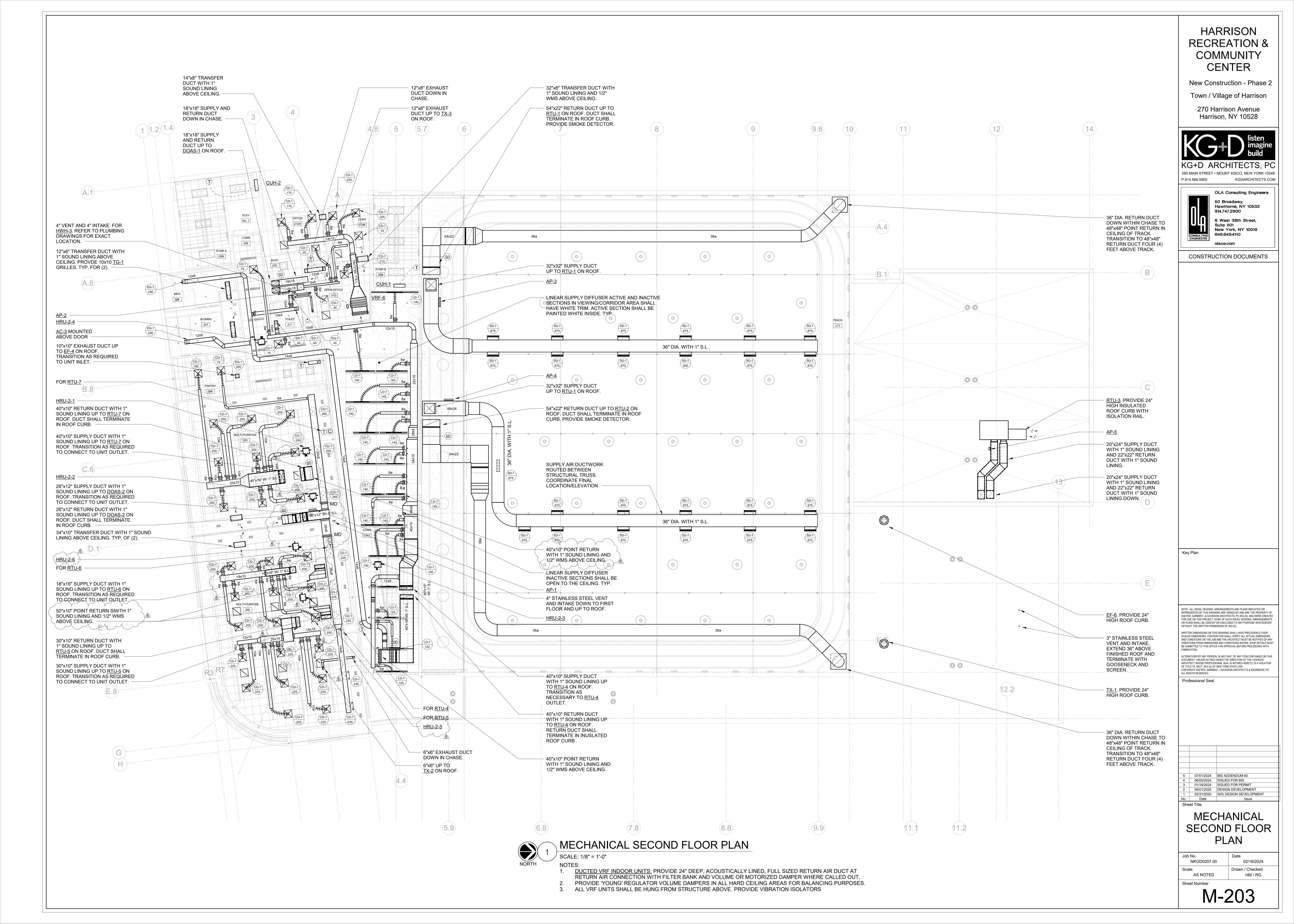
01/24/2024 Drawn / Checked

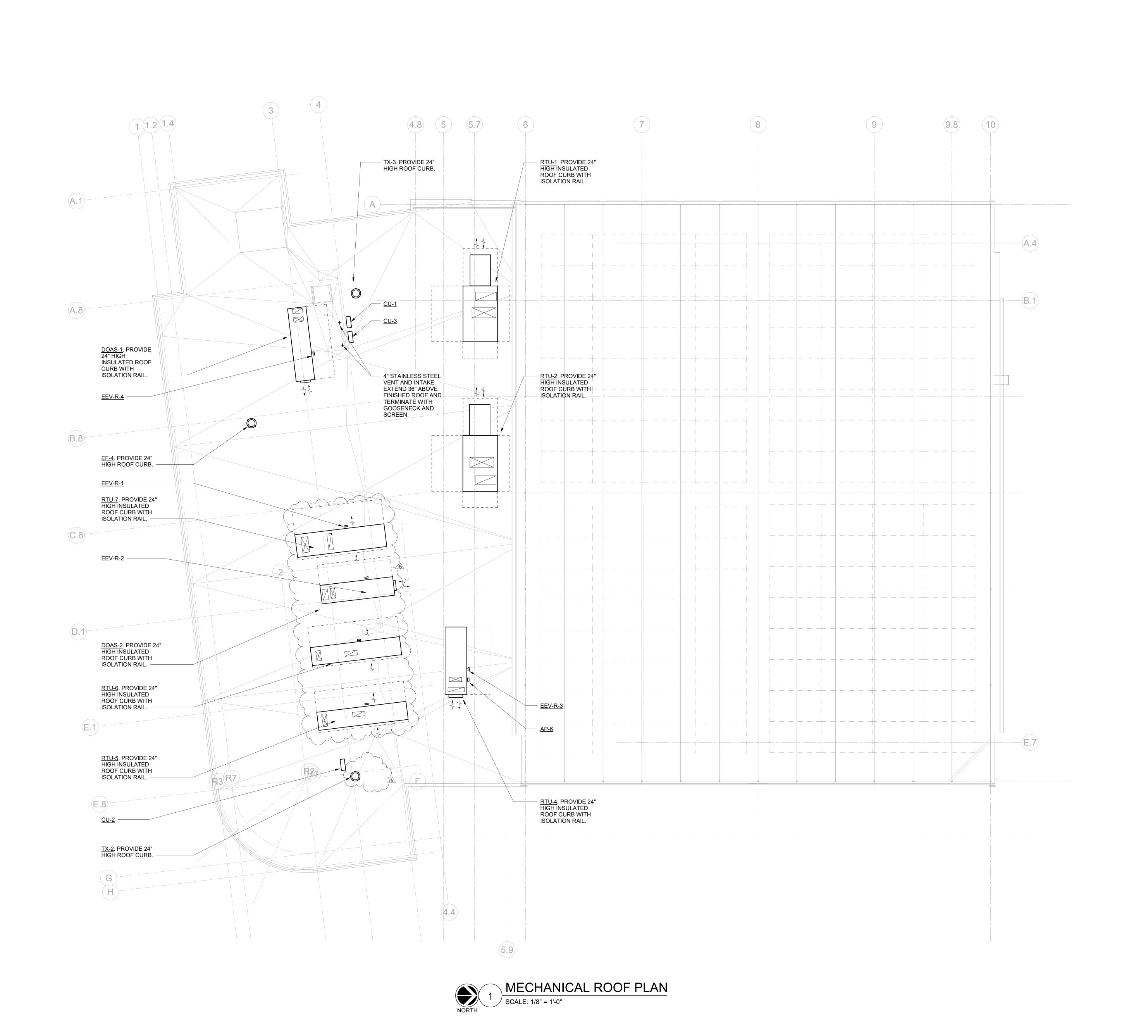
FP-202

AM / CD

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New Construction - Phase 2
Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528

Isten imagine build

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Key Plan

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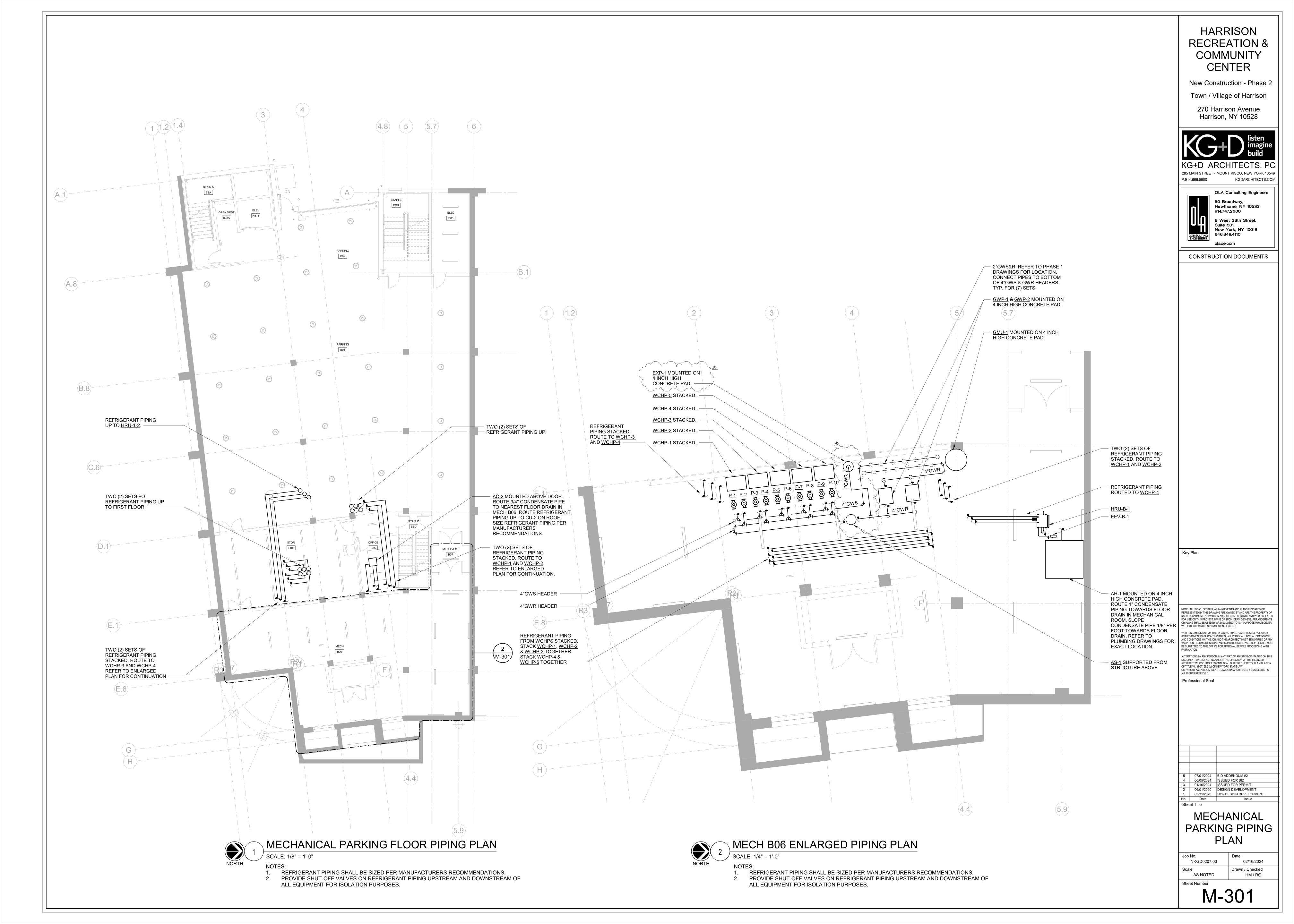
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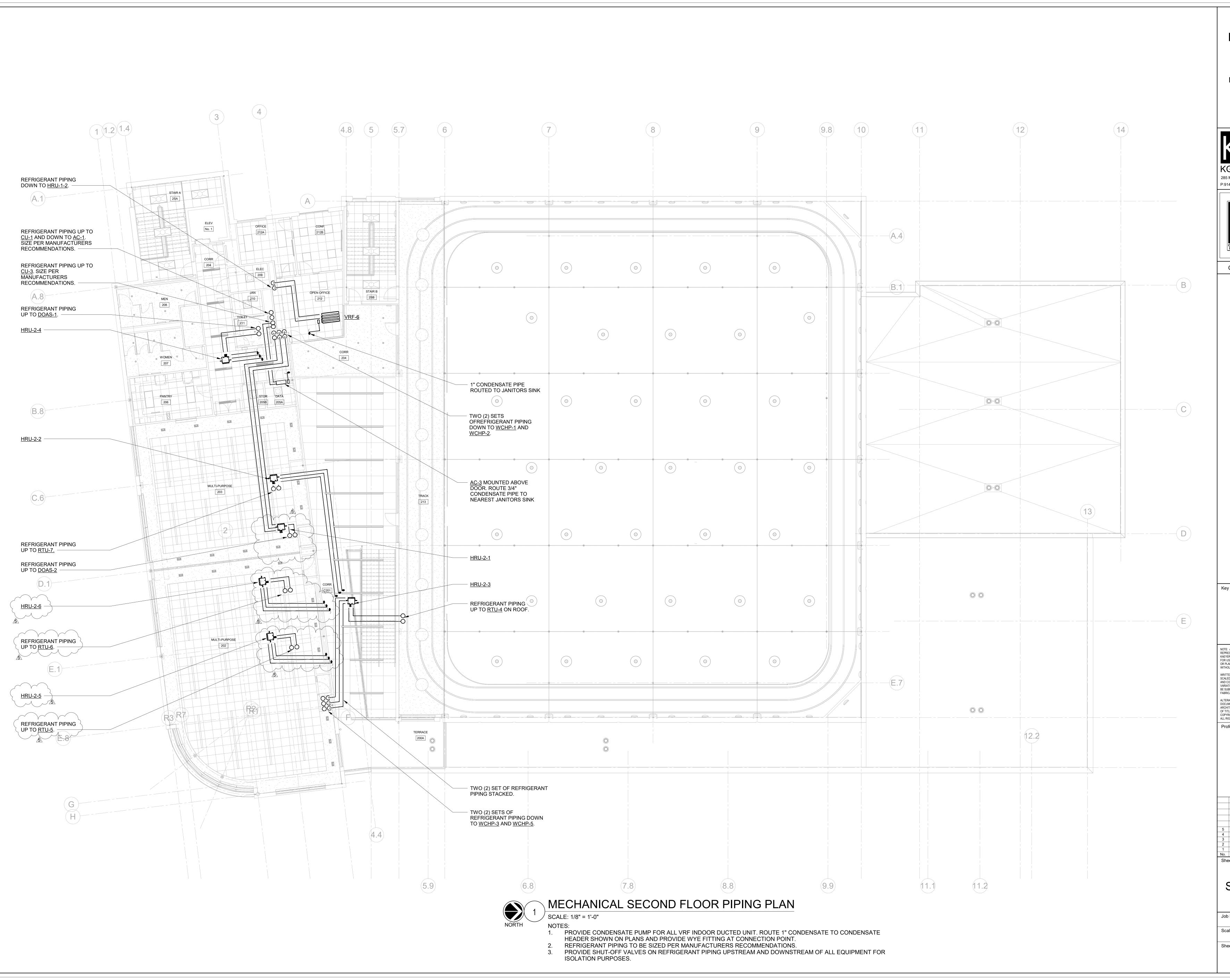
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4 06/05/2024 ISSUED FOR BID
3 01/16/2024 ISSUED FOR PERMIT
2 06/01/2020 DESIGN DEVELOPMENT
1 03/31/2020 50% DESIGN DEVELOPMENT
No. Date Issue
Sheet Title

MECHANICAL ROOF PLAN





New Construction - Phase 2 Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528



OLA Consulting Engineers 50 Broadway, Hawthorne, NY 10532 914.747.2800 Suite 501 New York, NY 10018 646.849.4110 olace.com

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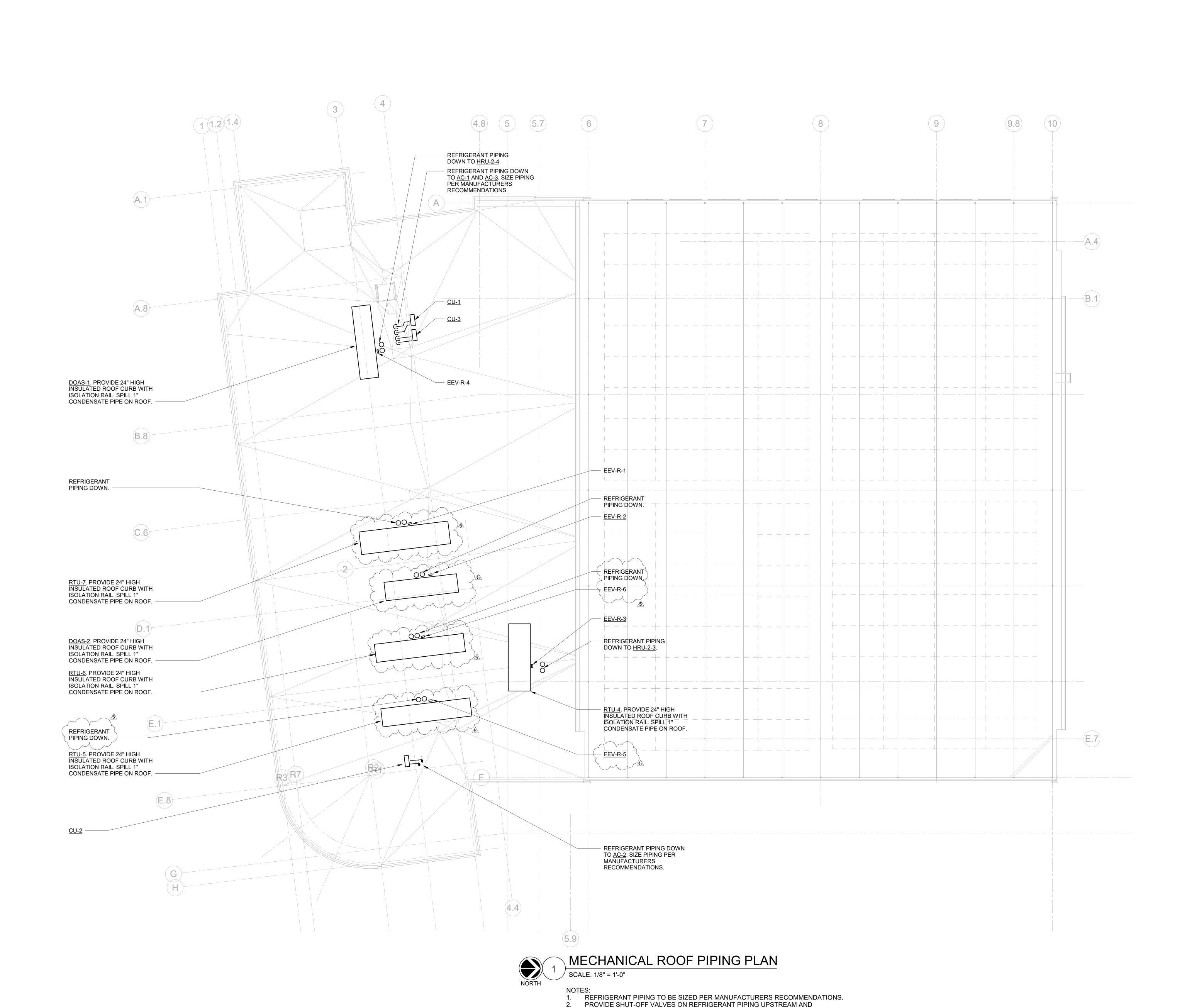
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**MECHANICAL** SECOND FLOOR

PIPING PLAN 02/16/2024 NKGD0207.00

Scale Drawn / Checked AS NOTED HM / RG Sheet Number



DOWNSTREAM OF ALL EQUIPMENT FOR ISOLATION PURPOSES.

# HARRISON RECREATION & COMMUNITY CENTER

New Construction - Phase 2
Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528



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50 Broadway,
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Key Plan

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No. Date Issue

MECHANICAL ROOF PIPING PLAN

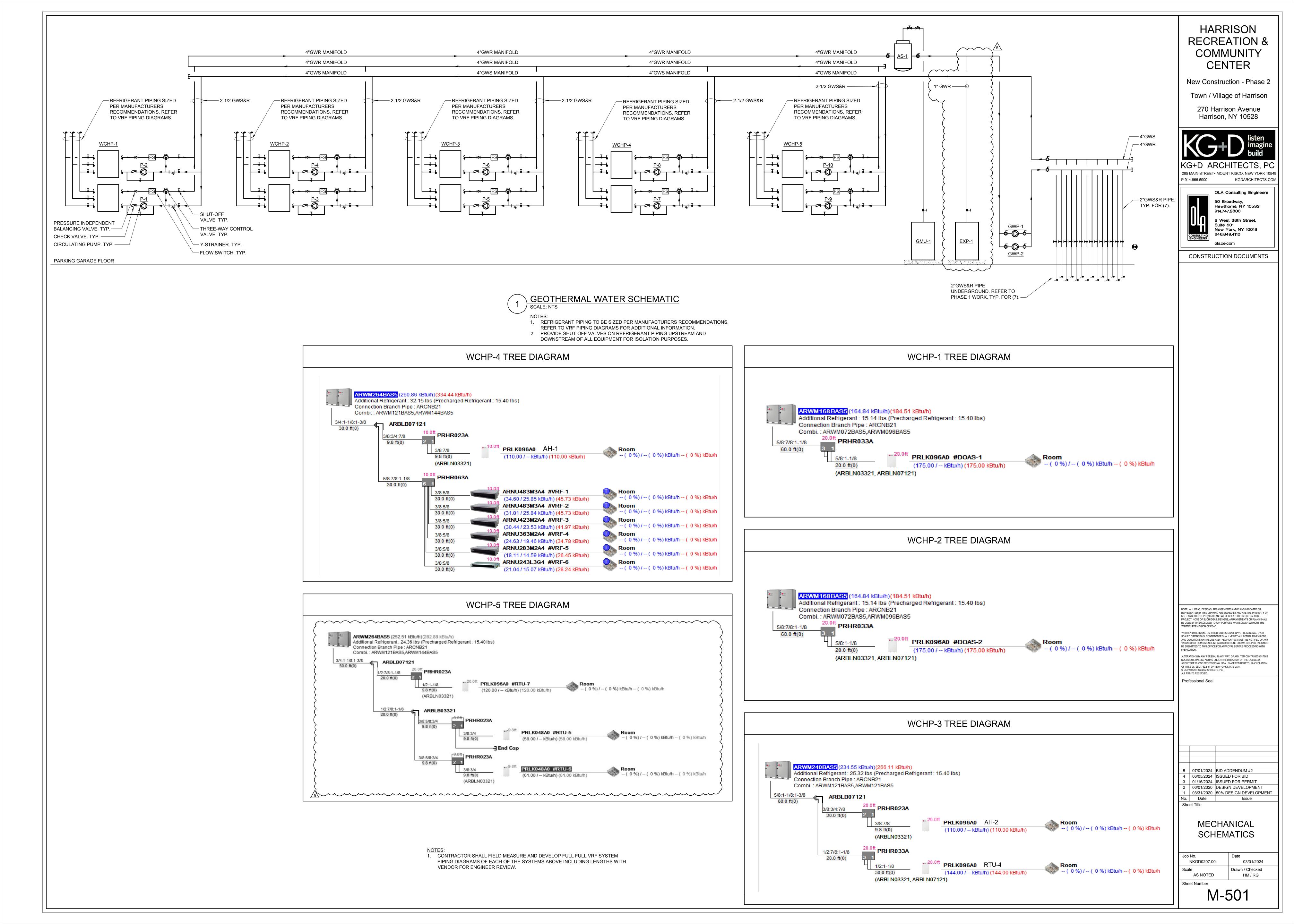
 Job No.
 Date

 NKGD0207.00
 02/16/2024

 Scale
 Drawn / Checked

 AS NOTED
 HM / RG

Sheet Number



RETURN REGISTER / TRANSFER GRILLE												
SCHEDULE												
DESIGNATION	RG-1 / TG	G-1 / EG-1	RG	G-2								
MODEL	3 F	S	56	FL								
MAX NK VEL (FT/MIN)	50	00	-	•								
MAX NC	2	5	-	•								
CONSTRUCTION	ALUM	INUM	ALUMINUM									
BORDER/FRAME	SURFACE	MOUNTED	SURFACE MOUNTED									
DEFLECTION	45° F	IXED	0° FIXED									
SPACING	3/4	4"	3/4"									
	CFM RANGE	NOMINAL NECK SIZE	CFM RANGE	NOMINAL NECK SIZE								
	0-150	8x8	0 - 10,500	48x48								
	151-250	10x10										
	251-350	12x12										
	351-725	18x18										
	726-950	22x22										
	951-1100	24x24										
	1101-1400	24x30										

RETURN REGISTERS ARE BASED ON TITUS.

- 2. THE ABOVE SCHEDULE INDICATES NOMINAL REGISTER NECK SIZES. THE CONTRACTOR SHALL COORDINATE THE REGISTER SIZE IN THE FIELD
- ACCORDING TO THE ACTUAL DUCT DIMENSIONS AND MAINTAIN AN EQUIVALENT CORE AREA.
- 3. ALL REGISTERS SHALL BE EQUIPPED WITH AN OPPOSED BLADE VOLUME DAMPER.
- 4. SUBMIT COLOR CHART FOR REVIEW AND APPROVAL BY ARCHITECT. 5. RETURN REGISTERS SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE
- CONSTRUCTION IN WHICH THEY WILL BE INSTALLED. CONTRACTOR TO COORDINATE.

DESIGNATION	S	R-1	S	R-2	S	R-3
MODEL	30	0RL	S30	00FS	[	DL
MAX NK VEL (FT/MIN)	550		5	550	5	50
MAX NC	25		2	25	2	25
CONSTRUCTION	ALUN	/INUM	ALUN	MINUM	ALUN	MINUM
BORDER/FRAME	SURFACE	MOUNTED	SURFACE	MOUNTED	SURFACE MOUNTED	
DEFLECTION	DOL	JBLE	DOUBI	LE 22.5°		-
SPACING	3.	/4"	3	/4"		-
	CFM RANGE	NOMINAL NECK SIZE	CFM RANGE	NOMINAL NECK SIZE	CFM RANGE	NOMINAL NECK SIZE
	0-200	8x8	0-170	14x6	800-1000	36x8
	201-300	10x10	,			
	301-500	12x12				
	501-850	16x16				
	851-1100	18x18				
	1101-1700	22x22				
	1701-2000	24x24				

I. SUPPLY REGISTERS BASED ON TITUS.

- 2. THE ABOVE SCHEDULE INDICATES NOMINAL REGISTER NECK SIZES. THE CONTRACTOR SHALL COORDINATE THE REGISTER SIZE IN THE FIELD ACCORDING TO THE ACTUAL DUCT DIMENSIONS AND MAINTAIN EQUIVALENT CORE AREA.
- 3. ALL REGISTERS SHALL BE EQUIPPED WITH AN OPPOSED BLADE VOLUME DAMPER. 4. SUBMIT COLOR CHART FOR REVIEW AND APPROVAL BY ARCHITECT.
- 5. SUPPLY REGISTERS SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. 6. SR-2 AND SR-3 SHALL BE PROVIDED WITH AIR SCOOP DEVICE.
- ACCORDING TO THE SCHEDULE.

DESIGNATION	C	D-1		
MODEL	0	OMNI		
MAX CORE VEL (FT/MIN)	5	550		
MAX NC		25		
CONSTRUCTION	ST	EEL		
FRAME	LA	Y-IN		
DEFLECTION	4 \	WAY		
FACE SIZE	24	x24		
	CFM RANGE	NOMINAL NECK SIZE		
	0-100	6"		
	101-200	8"		
	201-350	10"		
	351-450	12"		
	451-600	14"		
	601-700	15"		

OPPOSED BLADE VOLUME DAMPER. 3. COORDINATE COLOR SELECTION WITH ARCH PLANS.

4. SUPPLY DIFFUSERS SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED. CONTRACTOR TO COORDINATE. 5. ALL LAY-IN DIFFUSERS SHALL HAVE A MODULE SIZE OF 24x24. FACE SIZES SHOWN IN SCHEDULE ARE FOR SURFACE MOUNT DIFFUSERS. NECK SIZES VARY

6. DIFFUSER BLOW PATTERN IS AS SHOWN ON DRAWINGS.

\/\DI\\RI E DE	FRIGERANT FLOW			: LINIT SCHEDLII E	<u>-</u>
DESIGNATION	WCHP-1	WCHP-2	WCHP-3	WCHP-4	WCHP-5
DESCRIPTION	HEAT RECOVERY				
RATED COOLING CAPACITY					
BTUH/HR	168,000	168,000	239,000	264,000	264,000
EWT (°F)	85	85	85	85	85
LWT (°F)	94.2	94.2	94.8	95.1	94
GPM	45.7	45.7	60.8	65.9	65.9
RATED HEATING CAPACITY					
BTUH/HR	189,000	189,000	269,000	297,000	297,000
EWT (°F)	45	45	45	45	45
LWT (°F)	38.3	38.3	37.7	36.4	37.9
GPM	45.7	45.7	60.8	65.9	65.9
REFRIGERANT CHARGE					
TOTAL CHARGE (LBS)	30.6	30.6	40.8	47.6	42.9
FACTORY CHARGE (LBS)	15.4	15.4	15.4	15.4	15.4
ADDITIONAL REFRIGERANT (LBS)	15.2	15.2	25.4	32.2	27.5
ELECTRICAL DATA:					
VOLTS / Ø / Hz	208/3/60	208/3/60	208/3/60	208/3/60	208/3/60
MCA (MODULE 1 / MODULE 2)	13.8/19.4	13.8/19.4	27.7/27.7	27.7/32.7	27.7/32.7
MOCP (MODULE 1 / MODULE 2)	20/30	20/30	45/45	45/50	45/50
PHYSICAL:					
TONS	14	14	20	22	22
WEIGHT (LBS) (MODULE 1 / MODULE 2)	322/322	322/322	322/322	322/322	322/322
DIMENSIONS (WxHxD) (IN) (MODULE 1 / MODULE 2)	30.5 x 44.25 x 21.5 / 30.5 x 44.25 x 21.5	30.5 x 44.25 x 21.5 / 30.5 x 44.25 x 21.5	30.5 x 44.25 x 21.5 / 30.5 x 44.25 x 21.5	30.5 x 44.25 x 21.5 / 30.5 x 44.25 x 21.5	30.5 x 44.25 x 21.5 / 30.5 x 44.25 x 21.5
PERFORMANCE:					
COOLING (BTU/H/W)	15.6	15.6	15.6	16	15.4
HEATING (BTU/H/W)	15.3	15.3	15.5	16.3	14.2
BASIS OF DESIGN	ARWM168BAS5	ARWM168BAS5	ARWM240BAS5	ARWM264BAS5	ARWM264BAS5

1. UNITS BASED ON LG.

2. PROVIDE RUBBER VIBRATION ISOLATION FOR EACH UNIT.

B. WARRANTY SHALL BE 10 YEARS PARTS AND 10 YEARS ON THE COMPRESSORS.

4. CONTRACTOR SHALL HIRE THE MANUFACTURER'S INSTALLATION TECHNICIAN FOR INSTALLATION AND STARTUP. PROVIDE STARTUP REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL 5. PROVIDE ALL UNITS WITH RATED DISCONNECT SWITCH.

ELECTRONI	C EXPANSION VAL	_VE KIT
DESIGNATION	EEV-R-5, EEV-R-6	EEV-B-1, EEV-1-1, EEV-R-1, EEV-R-2, EEV-R-3, EEV-R-4
QUANTITY	2	6
MAX AH CAPACITY (MBH)	96	192
WEIGHT (LBS)	6.8	6.8
DIMENSIONS (WxHxD)	8.75 x 16 x 3.5	8.75 x 16 x 3.5
ELECTRICAL DATA:	>	
VOLTS / Ø / Hz	208/1/60	208/1/60
AMPS	0.1	0.1
BASIS OF DESIGN	PRLK048A0	PRLK096A0
NOTES:		<u>.</u>

. UNITS BASED ON LG.

2. CONTRACTOR TO MAINTAIN A MAXIMUM DISTANCE OF 10 FEET BETWEEN EEV AND COMM

3. REFRIGERANT TYPE IS R410A

VARIABLE REFR	IGERANT FLOW - ZO	ONE HEAT RECOVERY	UNIT SCHEDULE
ESIGNATION	HRU-2-1, HRU-2-2, HRU-2-4	HRU-B-1, HRU-1-4, HRU-2-3, HRU-2-5, HRU-2-6	HRU-1-2
UMBER OF PORTS	3		6
UANTITY	3	3	1
APACITY PER BRANCH (MBH)	60	60	60
/EIGHT (LBS)	37	33	60
IMENSIONS (WxHxD) (IN)	19.25 x 8.75 x 19	19.25 x 8.75 x 19	31.25 x 8.75 x 19
LECTRICAL DATA:		·	
OLTS / Ø / Hz	208/1/60	208/1/60	208/1/60
CA	0.17	0.17	0.27

**BASIS OF DESIGN** 

7.2

. UNITS BASED ON LG.

2. PROVIDE DISCONNECT SWITCH. 3. INDIVIDUAL CONTROL AND CHANGEOVER FOR ONE GROUP OF INDOOR UNITS.

15

PRHR033A

MAINTAIN REQUIRED CLEARANCES FOR UNIT.

ELECTRIC FIN T	ELECTRIC FIN TUBE RADIATORS				
DESIGNATION	FTR-1	FTR-2			
LOCATION	SEE PLANS	SEE PLANS			
AREA SERVED	SEE PLANS	SEE PLANS			
MODEL	CPH05A8125	CPH05A8188			
LENGTH	8 FEET	8 FEET			
NUMBER OF ELEMENTS	1	1			
VOLTS/Ø/Hz	208/1/60	208/1/60			

NOTES: 1. HEATERS BASED ON QMARK.

- 2. PROVIDE DPHOSA PEDESTAL. PEDESTAL SHALL BE 3-3/8" TALL. INSTALL
- PER MANUFACTURERS RECOMMENDATIONS. 3. PROVIDE DISCONNECT SWITCH FOR EACH HEATER
- 4. PROVIDE UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE
- CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION
- 5. PROVIDE FACTORY INSTALLED LINEAR THERMAL CUT-OUT. 6. CABINET FINISH SHALL BE APPROVED BY ARCHITECT.
- 7. PROVIDE THERMOSTAT AT AT LOCATION SHOWN ON DRAWINGS.

ELE	CTRIC HE	ATER
1111.4	14/11/4	14/11.0

DESIGNATION	UH-1	WH-1	WH-2	CUH-1	CUH-2
OCATION	SEE PLANS				
AREA SERVED	SEE PLANS				
MODEL	MUH03-81	AWH3150F	AWH4404F	CU935	CU935
CFM	350	-	-	250	250
<del>I</del> P	1/100	-	-	-	-
AN RPM	11000	-	-	-	-
/OLTS/Ø/Hz	208/1/60	120/1/60	208/3/60	208/3/60	208/3/60
(W	3	1.5	3	2	3
AMPS	14.5	12.5	14.4	6	9

15

PRHR023A

15

PRHR063A

NOTES:

- 1. HEATER BASED ON QMARK.
- 2. PROVIDE DISCONNECT SWITCH FOR EACH HEATER.
- 3. CABINET UNIT HEATERS SHALL HAVE UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION SYSTEM, KEY LOCK ACCESS DOORS, UNIT MOUNTED THERMOSTAT WITH FAN ON-OFF-AUTO SWITCH AND TEMP SETTING, AND (2) SETS OF SPARE FILTERS
- FOR EACH UNIT. 4. CABINET UNIT HEATER FINISH SHALL BE APPROVED BY ARCHITECT.
- 5. UNIT HEATERS SHALL BE PROVIDED WITH 24 VOLT CONTROL TRANSFORMER. FACTORY HANGING KIT TO MOUNT TO SLAB/CEILING/WALL AS INDICATED ON DRAWINGS, AND FACTORY INSTALLED AUTOMATIC RESET LINEAR THERMAL CUT-OUT. CONTRACTOR SHALL COORDINATE SUPPORT FOR UNIT HEATERS FOR EACH CONDITION. 6. PROVIDE THERMOSTAT AT LOCATION SHOWN ON DRAWINGS.

## 141 - 170 201 - 230 12" 1. CEILING LINEAR SUPPLY DIFFUSERS ARE BASED ON TITUS. 2. COORDINATE COLOR SELECTION WITH ARCHITECTURAL PLANS. $3.\ \mathsf{SUPPLY}\ \mathsf{DIFFUSERS}\ \mathsf{SHALL}\ \mathsf{HAVE}\ \mathsf{FRAMES}\ \mathsf{AND}\ \mathsf{BORDERS}\ \mathsf{SUITABLE}\ \mathsf{FOR}\ \mathsf{THE}\ \mathsf{CONSTRUCTION}\ \mathsf{IN}\ \mathsf{WHICH}\ \mathsf{THEY}\ \mathsf{WILL}\ \mathsf{BE}$ INSTALLED, CONTRACTOR TO COORDINATE. 4. DIFFUSER BLOW PATTERN IS AS SHOWN ON DRAWINGS. PROVIDE PATTERN CONTROLLER.

5. DIFFUSERS SHALL BE INSTALLED WITH FACTORY-BUILT SUPPLY PLENUMS WITH MANUFACTURERS INTERNAL SOUND LINING.

8. PROVIDE CONCEALED CABLE OPERATED BALANCING DAMPERS THROUGH SLOT OPENINGS FOR ALL LINEAR DIFFUSERS WITH

7. INACTIVE DIFFUSER SECTIONS SHALL BE OPEN TO CEILING PLENUM AND PROVIDED WITH FACTORY LIGHT SHIELD.

DUCTLESS SPLIT-SYSTEM AC UNIT SCHEDULE

AC-1 / CU-1

LG

12,000

12,000

9.640

148 / 264 / 353

17 / 10.5

3/8

1/4

5/8

208/1/60

10 / 15

**DATA 111** 

LSN120HFV3

12.2 x 33 x 7.5

19.2

WALL MOUNTED

ROOF

LSU120HFV3

19.5 x 28.3 x 10.7

55.3

R-410A

2. FIELD SUPPLIED LOCAL DISCONNECT SWITCH AT INDOOR UNIT SHALL BE FURNISHED BY THE MECHANICAL

3. FIELD SUPPLIED WEATHERPROOF LOCAL DISCONNECT SWITCH AT OUTDOOR UNIT SHALL BE FURNISHED BY THE

OUTDOOR UNIT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WIRING FROM THE OUTDOOR UNIT TO THE

7. PROVIDE ACCESSORIES AS REQUIRED BY MANUFACTURER. WHICH MAY INCLUDE: LIQUID LINE SOLENOID. RELAYS.

LD-2

FL-20

25

ALUMINUM

LAY-IN

48"

**NECK SIZE** 

8"

CFM RANGE

0 - 200

4. SINGLE POINT EXTERNAL POWER CONNECTION FOR EACH INDOOR/OUTDOOR SET OF UNITS SHALL BE AT THE

5. THE AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE CONTROL WIRING BETWEEN THE

PROVIDE ALL REQUIRED MOUNTING BRACKETS, SUPPORTS, HANGERS, PADS, ETC. FOR INSTALLATION.

LINEAR DIFFUSER SCHEDULE

AC-2 / CU-2

LG

12,000

12,000

9.640

148 / 264 / 353

17 / 10.5

3/8

1/4

5/8

208/1/60

10 / 15

DATA 205A

LSN120HFV3

12.2 x 33 x 7.5

19.2

WALL MOUNTED

ROOF

LSU120HFV3

19.5 x 28.3 x 10.7

55.3

R-410A

AC-3 / CU-3

LG

11.100

14,000

11.900

247 / 283 / 335

19.4

3/8

1/4

5/8

208/1/60

12.3 / 15

OFFICE B05

LCN128HV4

8.1 x 22.5 x 22.5

**CEILING CASSETTE** 

ROOF

LUU120HV

21.5 x 30.4 x 11.4

71

R-410A

LD-3

FL-20

25

ALUMINUM

LAY-IN

24"

**CFM RANGE** 

0 - 110

NOMINAL

**NECK SIZE** 

8"

INDOOR/OUTDOOR UNIT DESIGNATION

NOMINAL COOLING CAPACITY (TONS)

NOMINAL HEATING CAPACITY AT 47°F (MBH)

NOMINAL HEATING CAPACITY AT 19°F (MBH)

NOMINAL COOLING CAPACITY (MBH)

CONDENSATE DRAIN PIPE SIZE (IN)

INDOOR EVAPORATOR UNIT DATA

OUTDOOR CONDENSING UNIT DATA:

. PROVIDE THE FOLLOWING OPTIONS FOR EACH UNIT:

CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR.

MECHANICAL CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR.

LD-1

FL-15

25

ALUMINUM

LAY-IN

1.5

48"

COORDINATE DIFFUSER INSTALLATION WITH REFLECTED CEILING PLANS AND ALL OTHER TRADES.

**CFM RANGE** 

0 - 140

FIELD. INSULATED PLENUMS SHALL BE BASED ON TITUS FBPI.

INACCESSIBLE VOLUME DAMPERS.

NOMINAL

NECK SIZE

6"

HEIGHT x WIDTH x DEPTH (IN)

HEIGHT x WIDTH x DEPTH (IN)

0° LOW AMBIENT CONTROLS.

OUTDOOR UNIT AND INDOOR UNIT.

HARD WIRED REMOTE CONTROLLER

BREAKER SIZE (AMPS) AT OUTDOOR UNIT

MANUFACTURER

CFM (LO-MID-HI)

RS PIPE SIZE (IN)

RL PIPE SIZE (IN)

ELECTRICAL DATA:

VOLTS/Ø/Hz

LOCATION

WEIGHT (LBS)

LOCATION

WEIGHT (LBS)

REFRIGERANT TYPE

WIND BAFFLE

INDOOR UNIT.

FILTERS, ETC.

DESIGNATION

CONSTRUCTION

NUMBER OF SLOTS SLOT WIDTH (IN)

MODEL

MAX NC

FRAME

LENGTH

MODEL

MODEL

TYPE

SEER/EER

# VARIABLE REFRIGERANT FLOW - INDOOR UNITS SCHEDULE

DESIGNATION	VRF-1	VRF-2	VRF-3	VRF-4	VRF-5	VRF-6
TONNAGE	4	4	3.5	3	2.5	2
TYPE	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED	DUCTED
QUANTITY	1	1	1	1	1	1
SUPPLY FAN AIRFLOW	1,191	1,191	1,076	845	676	710
ESP (IN WC)	0.6	0.6	0.6	0.6	0.6	0.6
COOLING PERFORMANCE						
TOTAL (BTUH)	34.6	31.8	30.5	24.7	18.2	21
SENSIBLE (BTUH)	25.9	25.9	23.6	19.5	14.6	15
EAT (DB / WB)	74.8 / 62.7	72.7 / 61	73.6 / 61.7	73 / 61.2	72.3 / 60.6	74.8 / 62.7
LAT (DB)	55.6	53.5	54.3	52.6	53.2	56
HEATING PERFORMANCE						
TOTAL CAPACITY (BTUH)	45.8	45.8	42	34.8	26.5	28.3
EAT (DB)	68	68	68	68	68	68
LAT (DB)	102.4	102.4	103	104.9	103.1	103.7
ELECTRICAL DATA:						
VOLTS / Ø / Hz	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60	208/1/60
MCA	3.1	3.1	2.9	2.9	2.9	1.2
MOCP	15	15	15	15	15	15
WEIGHT (LBS)	96.1	96.1	86.2	86.2	86.2	60
DIMENSIONS (WxHxD) (IN)	49.5x14.5x27.5	49.5x14.5x27.5	49.5x10.5x27.5	49.5x10.5x27.5	49.5x10.5x27.5	49.5x7.5x27.5
MODEL	ARNU483M3A4	ARNU483M3A4	ARNU423M2A4	ARNU363M2A4	ARNU283M2A4	ARNU243L3G4

1. UNITS BASED ON LG. 2. PROVIDE DUCTED UNITS WITH CONDENSATE PUMP. REFER TO M-601 FOR CONDENSATE PUMP SPECIFICATION. 3. PROVIDE UNITS WITH DISCONNECT SWITCH.

# **EQUIPMENT NOTES**

APPROVAL.

- FIRE DAMPERS: SHALL BE RUSKIN MODEL DIBD-2, 1-1/2 HOUR UL555 RATED, SUITABLE FOR INSTALLATION IN WALL AND FLOOR PARTITIONS WITH FIRE RATINGS OF LESS THAN 3 HOURS. DAMPER SHALL BE A COMPLETE FACTORY PACKAGE INCLUDING U.L. APPROVED ANGLES, WALL SLEEVE, AND BREAKAWAY CONNECTIONS. DAMPER SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS OF 2,000 FPM AND 4.0" SP.
- 2. VOLUME CONTROL DAMPERS: FOR ALL ROUND & RECTANGULAR VOLUME CONTROL DAMPERS THAT ARE LOCATED ABOVE INACCESSIBLE CEILINGS, PROVIDE CABLE OPERATED DAMPERS. ROUND DAMPERS SHALL BE YOUNG BOWDEN MODEL 5020-CC. RECTANGULAR DAMPERS SHALL BE MODEL 830-CC2. CABLE CONTROLS SHALL BE MODEL 270-275 FOR CONCEALED LOCATIONS & MODEL 270-896C FOR LOCATIONS WHERE CABLES TERMINATE IN FINISHED SPACES. COORDINATE LOCATIONS IN THE FIELD.
- MOTORIZED DAMPERS: SHALL BE LOW LEAKAGE TYPE RUSKIN MODEL CD40, 4" DEEP EXTRUDED ALUMINUM AIRFOIL DAMPER. DAMPER SHALL HAVE OPPOSED BLADES, MOTOR AND LINKAGE. DAMPERS SHALL BE LOW-LEAKAGE RATED TYPE. DAMPERS SHALL BE
- 120V/1\phi/60Hz, 3 AMPS MAX. FURNISH DISCONNECT SWITCH. 3.1. OUTSIDE AIR INTAKE & EXHAUST DAMPERS SHALL BE CLASS I MOTORIZED DAMPERS WITH MAXIMUM LEAKAGE RATE OF 4 CFM/SQFT @ 1.0" W.G.; TESTED IN ACCORDANCE WITH AMCA 500D. DAMPERS SHALL BE CONFIGURED TO CLOSE AUTOMATICALLY WHEN THE SYSTEMS OF THE SPACE SERVED ARE NOT IN USE.
- CONDENSATE PUMP: SHALL BE LITTLE GIANT VCCA-20-P. PUMP SHALL BE HARD WIRED PLENUM RATED AND SHALL BE ABLE TO PUMP 45 GPH AT 10 FEET OF HEAD. CONDENSATE PUMP SHALL BE 115/1/60, 1.5 AMPS.
- FURNISH ALL REQUIRED PIPE AND ENCLOSURE SUPPORTS, BRACKETS, AND FASTENERS ETC. FURNISH VALVE ACCESS DOORS AND KNOCK OUT FOR ELECTRICAL RECEPTACLES. FURNISH END CAPS AND CORNER ANGLES, RUN ENCLOSURES CONTINUOUS WALL TO WALL. FINISH SHALL BE BAKED ON ENAMEL, SUBMIT COLOR CHART FOR REVIEW AND
- EXPANSION TANK EXP-1: TO BE AMTROL MODEL AX-40V, 21.7 GALLON TANK AND 11.3 GALLON ACCEPTANCE VOLUME, 30" HIGH, 16" DIAMETER AND HAVE A SHIPPING WEIGHT OF APPROXIMATELY 99 POUNDS.
- AIR SEPARATOR AS-1: SHALL BE BELL & GOSSETT MODEL R-4F, 300 GPM MAXIMUM CAPACITY, 4" FLANGED INLET AND OUTLET, REMOVABLE GALVANIZED STEEL SYSTEM STRAINER, INTERNAL STAINLESS STEEL AIR COLLECTOR TUBE WITH NPT CONNECTION AND BLOWDOWN CONNECTION. THE AIR SEPARATOR MUST BE DESIGNED, CONSTRUCTED, AND STAMPED FOR 125 PSIG @ 350°F IN ACCORDANCE WITH SECTION VIII, DIVISION I OF THE ASME BOILER AND PRESSURE VESSEL CODE, AND REGISTERED WITH THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS. THE AIR SEPARATOR SHALL BE PAINTED WITH ONE SHOP COAT OF LIGHT GRAY AIR DRY ENAMEL.
- 8. GLYCOL MIXING TANK: GMU-1, SHALL BE WESSELS COMPANY MODEL GMPD-13050 WITH INDUSTRIAL GRADE GRADUATED POLYETHYLENE 50 GALLON TANK, OBSERVABLE FLUID LEVEL SCALE, & REMOVABLE LID. EQUIPPED WITH ONE (1) AUTOMATIC PUMPING ASSEMBLIES, RATED AT 1.8 GPM @ 70 PSI, 1/3 HP; FITTED WITH H-O-A CONTROLS ADJUSTABLE PRV, PRESSURE GAUGE, HIGH LEVEL ALARM AND LOW-LEVEL ALARM WITH AUDIBLE AND VISUAL ALARMS. FURNISH DISCONNECT SWITCH FOR GMU PUMP FOR INSTALLATION BY THE ELECTRICAL CONTRACTOR. ELECTRICAL: 120/1/60. PROVIDE BMS PROTOCOL FOR CONNECTION/MONITORING TO BMS.
- 9. PROPYLENE GLYCOL: SHALL BE BASED ON DOW DOWFROST HD INHIBITED PROPYLENE GYLCOL-BASED HEAT TRANSFER FLUID. THE MECHANICAL CONTRACTOR SHALL PROVIDE PROPYLENE GLYCOL FOR DUAL TEMPERATURE WATER SYSTEM AS NOTED ON PLANS (20% CONCENTRATION).
- 10. PIPE INSULATION JACKETING: SHALL BE WHITE ZESTON 2000 PVC COVERS FOR PIPING AND FITTINGS. JACKET ALL PIPING AND FITTING THAT ARE EXPOSED IN ANY ROOM.
- 11. PIPE LABELS: SHALL BE SETON ULTRA-MARK WEATHER RESISTANT FOR OUTDOOR APPLICATION AND OPTI-CODE FOR INDOOR APPLICATION. LETTERS AND ARROWS SHALL BE 2 1/2" HIGH AND SHALL BE WHITE ON A GREEN BACKGROUND AND SHALL CONFORM TO ANSI AND OSHA STANDARDS. APPLY OVER INSULATION ONLY.
- 12. ALL HVAC EQUIPMENT SHALL HAVE 3" HIGH BLACK LAMACOID NAME PLATES WITH WHITE ENGRAVED LETTERS PERMANENTLY FASTENED TO EQUIPMENT. TYPICAL FOR All BOILERS. PUMPS, AIR HANDLERS, AC UNITS AND CONDENSERS.
- 13. REFRIGERANT PIPE INSULATION: SHALL BE AP ARMAFLEX PIPE INSULATION. 1" THICK UNSLIT, TO BE INSTALLED BEFORE FINAL CONNECTION. FIELD FABRICATE FITTING INSULATION WITH MITER-CUTS. ALL BUTT JOINTS AND SEAMS ARE TO BE SEALED WITH ARMSTRONG 520 ADHESIVE. ALL INSULATION INSTALLED OUTDOORS SHALL BE COATED WITH UV RESISTANT COATING/FINISH, AS PER THE MANUFACTURERS RECOMMENDATIONS.

# HARRISON **RECREATION & CENTER**

New Construction - Phase 2

Town / Village of Harrison 270 Harrison Avenue

Harrison, NY 10528

KG+D ARCHITECTS, PC 285 MAIN STREET. MOUNT KISCO, NEW YORK 10549 KGDARCHITECTS.COM

OLA Consulting Engineers 50 Broadway, Hawthorne, NY 10532 914.747.2800

8 West 38th Street, Suite 501 New York, NY 10018 646.849.4110

CONSTRUCTION DOCUMENTS

olace.com

NOTE: ALL IDEAS DESIGNS ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND ARE THE PROPERTY OF G+D ARCHITECTS, PC (KG+D), AND WERE CREATED FOR USE ON THIS PROJECT, NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PURPOSE WHATSOEVER WITHOUT THE RITTEN PERMISSION OF KG+D. WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVE

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SCALED DIMENSIONS, CONTRACTOR SHALL VERIFY ALL ACTUAL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED OF ANY

ALL RIGHTS RESERVED. **Professional Seal** 

> 07/01/2024 |BID ADDENDUM #2 06/05/2024 ISSUED FOR BID 01/16/2024 ISSUED FOR PERMIT 06/01/2020 DESIGN DEVELOPMENT 03/31/2020 50% DESIGN DEVELOPMENT

**MECHANICAL EQUIPMENT NOTES** & SCHEDULES

Sheet Title

NKGD0207.00 03/01/2024 Drawn / Checked AS NOTED HM / RG

Sheet Number M-601

ESIGNATION	DOAS-1	DOAS-2
OCATION	ROOF	ROOF
REA SERVED		SEE PLANS
	SEE PLANS VTS AMERICA INC.	VTS AMERICA INC.
IANUFACTURER		
IODEL	AVS020-R-FRMCHVE	AVS020-R-FRMCHVE
VEIGHT OF UNIT (LBS)	1,770	1,770
IMENSION (WxHxD) (IN)	47 x 54 x 189	47 x 54 x 189
OUTSIDE AIR (CFM)	2,000	2,010
UPPLY FAN:		)/5\
FM	2,000	2,010
SP/TSP (IN H ₂ O)	1.0	1.0
YPE	DIRECT DRIVE PLENUM	DIRECT DRIVE PLENUM
IOTOR HP	2	2
ONTROL	VFD	VFD
OLTS / Ø / Hz	208/3/60	( 208 / 3 / 60
ICA / MOCP (AMPS)	8.3 / 15	8.3 / 15
XHAUST FAN:	5	5
FM	2,000	2,010
SP/TSP (IN H ₂ O)	1.0	1.0
YPE	DIRECT DRIVE PLENUM	DIRECT DRIVE PLENUM
IOTOR HP	1.5	1.5
ONTROL	VFD VFD	₩ĘD
OLTS / Ø / Hz	208 / 3 / 60	(208/3/60)
ICA / MOCP (AMPS)	5.6 / 15 /5	5.6 / 15 5
OOLING PERFORMANCE:	$\sim\sim$	$\sim\sim$
.A.T (DB / WB)	80.2 / 65.8	80.2 / 65.8
.A.T (DB / WB)	52.8 / 51.9	52.8 / 52.8
ROSS TOTAL CAPACITY (MBH)	82.4	( 175.6
ROSS SENSIBLE CAPACITY (MBH)	60.2	94.3
EHEAT CAPACITY (MBH)	48.6	48.9
EHEAT (DB / WB)	75 / 60.7	75.0 / 60.7
EATING PERFORMANCE: HEAT PUMP	/5	\$ \\ \sqrt{5}
.A.T. / L.A.T. (DB)	54.2 / 70	54.1 / 70.0
EATING CAPACITY (MBH)	34.7	35
EAT ENTHALPY WHEEL PERFORMANCE (VALUES	IN °F DB/WB/	
VINTER RETURN (EXHAUST AIR STREAM)	68 / 68	68 / 68
VINTER EXHAUST (EXHAUST AIR STREAM)	13.9 / 13.9	13.9 / 13.9
VINTER SUPPLY (SUPPLY AIR STREAM)	54.2 / 54.2	54.1 / 54.1
VINTER OUTDOOR AIR (OUTDOOR AIR STREAM)	0.0 / -1.0	0.0 / -1.0
UMMER RETURN (EXHAUST AIR STREAM)	77 / 63	77 / 63
UMMER EXHAUST (EXHAUST AIR STREAM)	91.2 / 75.4	91.2 / 75.4
UMMER SUPPLY (SUPPLY AIR STREAM)	80.2 / 65.8	80.2 / 65.8
UMMER OUTDOOR AIR (OUTDOOR AIR STREAM)	95 / 78	95 / 78
OLTS / Ø / Hz	208 / 3 / 60	208 / 3 / 60
ICA / MOCP (AMPS)	0.8 / 15.0	0.8 / 15.0
INES & FILTERS:		1 2.37 13.0
ONDENSATE DRAIN LINE SIZE (IN)	1"	1"
ETURN AIR FILTER TYPE	2" MERV 8	2" MERV 8

• 100% OUTSIDE AIR UNIT

• EXTRA DRIVE BELT AND FILTER SET

• DIRTY FILTER SENSOR

• DISCONNECT SWITCH FREEZE-STAT

2. PROVIDE THE FOLLOWING MOTOR CONTROL OPTIONS: • TRIPLE POINT EXTERNAL POWER CONNECTION AT UNIT • ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY. ALL MOTORS FURNISHED WITH VARIABLE

FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE

• UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION SYSTEM 3. MOTOR STARTER & DISCONNECT SWITCH FOR EACH UNIT SHALL BE FURNISHED BY THE MECHANICAL

CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR. EACH UNIT SHALL BE FURNISHED WITH THE

UNIT- MOUNTED LOCAL DISCONNECT SWITCH. 4. UNIT SHALL BE MOUNTED ON VIBRATION ISOLATION ROOF CURB. HEIGHT OF CURB IS TO BE COORDINATED WITH FINAL FINISHED ROOF SURFACE, INCLUDING DEVIATIONS DUE TO CRICKETS, ROOF DRAINS, ETC. LOWER PORTION OF VIBRATION CURB SHALL EXTEND 12" MINIMUM ABOVE FINISHED ROOF SURFACE. PROVIDE BLOCKING OR SIMILAR AS NECESSARY. MASON INDUSTRIES TYPE RSC OR EQUIVALENT.

5. PROVIDE UNIT WITH AIR SIDE ECONOMIZER AND HOT GAS REHEAT. 6. INTERNAL VFDS SHALL BE RATED FOR TEMPERATURE RANGING FROM 0°F TO 100°F.

DESIGNATION	RTU-1	RTU-2	RTU-3
LOCATION	ROOF	ROOF	ROOF
AREA SERVED	GYM	GYM	FITNESS
MANUFACTURER	TEMPMASTER	TEMPMASTER	TEMPMASTER
MODEL	CV25T3DQ2S1ABN47E3	CV25T3DQ2S1ABN47E3	ZJ120S18R2B5BCE3A3
NOMINAL CAPACITY (TONS)	25	25	10
WEIGHT OF UNIT (LBS)	2,485	2,485	1285
SUPPLY DUCT CONNECTION	воттом	воттом	воттом
RETURN DUCT CONNECTION	BOTTOM	воттом	воттом
OUTSIDE AIR (CFM)	3,450	3,450	960
SUPPLY FAN:			
QUANTITY	1	1	1
TOTAL CFM	10,500	10,500	3,500
CFM FOR EACH FAN	10,500	10,500	3,500
ESP/TSP (IN H₂ O)	1.5 / -	1.5 / -	1/-
TYPE	BELT	BELT	BELT
HP FOR EACH FAN	10	10	3
CONTROL	VFD	VFD	VFD
COOLING PERFORMANCE:		<u> </u>	
E.A.T (DB / WB)	76.9 / 64	76.9 / 64	76.3 / 63.4
L.A.T (DB / WB)	58.3 / 55.5	58.3 / 55.5	53.6 / 52.5
TOTAL CAPACITY (MBH)	268.1	268.1	110.3
SENSIBLE CAPACITY (MBH)	210.9	210.9	85.9
NUMBER OF COMPRESSORS	2	2	2
	2	2	2
NUMBER OF CIRCUITS			
NUMBER OF STAGES	4	4	2
REHEAT CAPACITY (MBH)	166.5	166.5	57.3
REHEAT (DB / WB)	72 / 62.4	72 / 62.4	71.8
HEATING PERFORMANCE: NATURAL GAS		Г	
E.A.T. / L.A.T. (DB)	62.6 / 91.2	62.6 / 91.2	64.9 / 103.5
HEATING CAPACITY INPUT (MBH)	400	400	180
HEATING CAPACITY OUTPUT (MBH)	324	324	146
INLET PRESSURE (IN WC)	7 - 14	7 - 14	7 - 14
ERV:			
MODEL	CV25T3DQ2S1ABN47E3	CV25T3DQ2S1ABN47E3	ZJ120S18R2B5BCE3A3
WEIGHT OF UNIT (LBS)	1,230	1,230	318
OUTSIDE AIR CFM	3,450	3,450	960
SUMMER ENTHALPY WHEEL PERFORMAN	NCE (VALUES IN °F DB/WB)		
RETURN (EXHAUST AIR STREAM)	75 / 62	75 / 62	75 / 62
EXHAUST (EXHAUST AIR STREAM)	80.4 / 67.61	80.4 / 67.61	79.2 / 66.4
SUPPLY (SUPPLY AIR STREAM)	76.9 / 64	76.9 / 64	76.3 / 63.4
OUTDOOR (OUTDOOR AIR STREAM)	95 / 78	95 / 78	95 / 78
WINTER ENTHALPY WHEEL PERFORMAN	CE (VALUES IN °F DB/WB)	<u> </u>	
RETURN (EXHAUST AIR STREAM)	70	70	70
EXHAUST (EXHAUST AIR STREAM)	49	49	53.9
SUPPLY (SUPPLY AIR STREAM)	62.6	62.6	64.9
OUTDOOR (OUTDOOR AIR STREAM)	0 / 0	0/0	0 / 0
LINES & FILTERS:	1		<u> </u>
CONDENSATE DRAIN LINE SIZE (IN)	1	1	1
		-	
RETURN AIR FILTER TYPE	ANGLE FILTER 4" MERV 13	ANGLE FILTER 4" MERV 13	4" PLEATED MERV 13
QUANTITY AND SIZE	(9) 16x25	(9) 16x25	(4) 24x20
EFFICIENCY:			
EER	10	10	12
IEER	14.2	14.2	15
ELECTRICAL DATA - RTU	Т	<u> </u>	
VOLTS / Ø / Hz	208 / 3 / 60	208 / 3 / 60	208 / 3 / 60
MCA / MOCP (AMPS)	143.7 / 175	143.7 / 175	44.9 / 50
ELECTRICAL DATA - ERV			
VOLTS / Ø / Hz	208 / 3 / 60	208 / 3 / 60	208 / 3 / 60

1. PROVIDE <u>RTU-1</u>, <u>RTU-2</u>, <u>RTU-3</u> WITH DUCT MOUNTED SMOKE DETECTORS.

2. PROVIDE RTU-1, RTU-2, RTU-3 WITH INSULATED ROOF CURB WITH VIBRATION ISOLATION RAIL. ROOF CURB SHALL BE RETURN

23.5 / 25

8.3 / 10

3. PROVIDE UNITS WITH DISCONNECT SWITCH. ALL OUTDOOR UNITS SHALL BE PROVIDED WITH RATED DISCONNECT SWITCH.

23.5 / 25

4. PROVIDE <u>RTU-1</u>, <u>RTU-2</u>, <u>RTU-3</u> WITH AIRSIDE ECONOMIZER AND POWER EXHAUST. 5. PROVIDE RTU-1, RTU-2, RTU-3 WITH HOT GAS REHEAT.

MCA / MOCP (AMPS)

6. PROVIDE THE FOLLOWING OPTIONS FOR ALL UNITS:

• HIGH STATIC DRIVE MOTOR. COORDINATE LEFT/RIGHT HAND FAN DRIVE IN FIELD. • 100% MODULATING ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL AND ECONOMIZER HOOD.

• FURNISH EXTRA DRIVE BELT AND EXTRA FILTER SET FOR EACH UNIT.

• UNIT SHALL BE MOUNTED ON VIBRATION ISOLATION ROOF CURB. HEIGHT OF CURB IS TO BE COORDINATED WITH FINAL FINISHED ROOF SURFACE, INCLUDING DEVIATIONS DUE TO CRICKETS, ROOF DRAINS, ETC. LOWER PORTION OF VIBRATION CURB SHALL EXTEND 12" MINIMUM ABOVE FINISHED ROOF SURFACE. PROVIDE BLOCKING OR SIMILAR AS NECESSARY. MASON INDUSTRIES TYPE RSC OR EQUIVALENT.

• PROVIDE 4" FIELD INSTALLED FILTER SECTION WITH HINGED ACCESS DOOR AND PROVIDE MERV 10 FILTERS.

7. PROVIDE THE FOLLOWING MOTOR CONTROL OPTIONS FOR ALL UNITS: • UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION SYSTEM.

• ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS. • SINGLE POINT EXTERNAL POWER CONNECTION AT BOTH RTU ANDERV, UNIT-MOUNTED DISCONNECT SWITCH, AND FACTORY

INSTALLED MOTOR STARTERS. VAV UNITS SHALL HAVE FACTORY MOUNTED VFD'S WITH H-O-A. 8. CONTRACTOR SHALL HIRE THE MANUFACTURER'S INSTALLATION TECHNICIAN FOR INSTALLATION AND STARTUP. PROVIDE

STARTUP REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL. INTERNAL VFDS SHALL BE RATED FOR TEMPERATURE RANGING FROM 0°F TO 100°F.

# ROOFTOP UNIT SCHEDULE

DESIGNATION	RTU-4	RTU-5	RTU-6	RTU-7
LOCATION	ROOF	ROOF	ROOF	ROOF
AREA SERVED	2ND FLOOR COMMON AREA	MULTIPURPOSE 202	MULTIPURPOSE 202	MULTIPURPOSE 2
MANUFACTURER	VTS	VTS	VTS	VTS
MODEL	AVS030	AVS020	AVS020	AVS040
NOMINAL CAPACITY (TONS)	-	-	-	-
WEIGHT OF UNIT (LBS)	1,991	1,238	1,238	1,924
SUPPLY DUCT CONNECTION	ВОТТОМ	BOTTOM	BOTTOM	ВОТТОМ
RETURN DUCT CONNECTION	BOTTOM	ВОТТОМ	ВОТТОМ	ВОТТОМ
OUTSIDE AIR (CFM)	1,680	0	0	0
SUPPLY FAN:	,,,,,,	ı		
QUANTITY	1 (	1	1	1
TOTAL CFM	2,680	1,800	1,800	2,400
CFM FOR EACH FAN	2,680	1,800	1,800	2,400
ESP/TSP (IN H ₂ O)	1 / 2.8	1 / 2.23	1 / 2.23	1 / 2.05
<u> </u>	+ (			
TYPE	DIRECT DRIVE PLENUM	DIRECT DRIVE PLENUM	DIRECT DRIVE PLENUM	DIRECT DRIVE PLEN
HP FOR EACH FAN	2	1.5	1.5	3
CONTROL	VFD (	VFD	VFD	VFD
RETURN FAN:	}			
QUANTITY	1	1	1	1
TOTAL CFM	2,680	1,800	1,800	2,400
CFM FOR EACH FAN	2,680	1,800	1,800	2,400
ESP/TSP (IN H₂ O)	1 / 2.3	1 / 1.73	1 / 1.73	1 / 1.8
TYPE	DIRECT DRIVE PLENUM (	DIRECT DRIVE PLENUM	DIRECT DRIVE PLENUM	DIRECT DRIVE PLEN
HP FOR EACH FAN	2	1.5	1.5	3
CONTROL	VFD	VFD	VFD	VFD
COOLING PERFORMANCE:				
E.A.T (DB / WB)	78.5 / 64.7	72.4 / 60.9	73.7 / 61.9	73.5 / 61.3
L.A.T (DB / WB)	49 / 49	52.2 /	53.1 /	50.9 / 50
TOTAL CAPACITY (MBH)	120.3	57.2	61	75.1
. ,	+			
SENSIBLE CAPACITY (MBH)	86.9	41.1	41.7	59.5
REHEAT CAPACITY (MBH)	76.2	44.3	42.6	62.5
REHEAT (DB / WB)	75 / 59.6	75	75	75
HEATING PERFORMANCE:	}	<u> </u>	T	
E.A.T. / L.A.T. (DB)	61.6 / 80	68 / 80	68 / 80	68 / 80
HEATING CAPACITY OUTPUT (MBH)	54.5	23.9	23.9	31.8
SUMMER ENTHALPY WHEEL PERFORMAN	ICE (VALUES IN °F DB/WB)			
RETURN (EXHAUST AIR STREAM)	77 / 63.5			
			N/A	N/A
EXHAUST (EXHAUST AIR STREAM)	92 / 76.1	NI/A		IN/A
EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM)	92 / 76.1	N/A	IN/A	
· · · · · · · · · · · · · · · · · · ·		N/A	IN/A	
SUPPLY (SUPPLY AIR STREAM)	79.4 / 65.5 95 / 78	N/A	N/A	
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM)	79.4 / 65.5 95 / 78	N/A	N/A	
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG	79.4 / 65.5 95 / 78 CE (VALUES IN °F DB/WB)			
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)	79.4 / 65.5 95 / 78 CE (VALUES IN °F DB/WB) 68 / 67	N/A N/A	N/A	N/A
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM)	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7			N/A
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM)	79.4 / 65.5 95 / 78 CE (VALUES IN °F DB/WB) 68 / 67 10.6 / 10.6			N/A
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS:	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0			
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN)	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0	N/A	N/A	1
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8	N/A  1 2" MERV 8	N/A  1 2" MERV 8	1 2" MERV 8
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5	N/A	N/A	1
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5	N/A  1 2" MERV 8	N/A  1 2" MERV 8	1 2" MERV 8
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE VOLTS / Ø / Hz	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5	N/A  1 2" MERV 8	N/A  1 2" MERV 8	1 2" MERV 8
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE VOLTS / Ø / Hz	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE VOLTS / Ø / Hz MCA / MOCP (AMPS)	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35 N/A
SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)  EXHAUST (EXHAUST AIR STREAM)  SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  LINES & FILTERS:  CONDENSATE DRAIN LINE SIZE (IN)  RETURN AIR FILTER TYPE  QUANTITY AND SIZE  ELECTRICAL DATA - SINGLE POINT POWE  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - ENERGY WHEEL:	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35
SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM) EXHAUST (EXHAUST AIR STREAM) SUPPLY (SUPPLY AIR STREAM) OUTDOOR (OUTDOOR AIR STREAM) LINES & FILTERS: CONDENSATE DRAIN LINE SIZE (IN) RETURN AIR FILTER TYPE QUANTITY AND SIZE ELECTRICAL DATA - SINGLE POINT POWE VOLTS / Ø / Hz MCA / MOCP (AMPS) ELECTRICAL DATA - ENERGY WHEEL: VOLTS / Ø / Hz	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:  N/A	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35 N/A
SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)  EXHAUST (EXHAUST AIR STREAM)  SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  LINES & FILTERS:  CONDENSATE DRAIN LINE SIZE (IN)  RETURN AIR FILTER TYPE  QUANTITY AND SIZE  ELECTRICAL DATA - SINGLE POINT POWE  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - ENERGY WHEEL:  VOLTS / Ø / Hz  MCA / MOCP (AMPS)	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:  N/A	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5	1 2" MERV 8 (6) 14.25x17.35 N/A
SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)  EXHAUST (EXHAUST AIR STREAM)  SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  LINES & FILTERS:  CONDENSATE DRAIN LINE SIZE (IN)  RETURN AIR FILTER TYPE  QUANTITY AND SIZE  ELECTRICAL DATA - SINGLE POINT POWE  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - ENERGY WHEEL:  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - SUPPLY FAN:	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:  N/A  208 / 3 / 60  0.8 / 15	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A	1 2" MERV 8 (6) 14.25x17.35 N/A
SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)  EXHAUST (EXHAUST AIR STREAM)  SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  LINES & FILTERS:  CONDENSATE DRAIN LINE SIZE (IN)  RETURN AIR FILTER TYPE  QUANTITY AND SIZE  ELECTRICAL DATA - SINGLE POINT POWE  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - ENERGY WHEEL:  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - SUPPLY FAN:  VOLTS / Ø / Hz	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:  N/A  208 / 3 / 60  0.8 / 15	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A  N/A	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A  N/A	1 2" MERV 8 (6) 14.25x17.35 N/A N/A
SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  WINTER ENTHALPY WHEEL PERFORMANG RETURN (EXHAUST AIR STREAM)  EXHAUST (EXHAUST AIR STREAM)  SUPPLY (SUPPLY AIR STREAM)  OUTDOOR (OUTDOOR AIR STREAM)  LINES & FILTERS:  CONDENSATE DRAIN LINE SIZE (IN)  RETURN AIR FILTER TYPE  QUANTITY AND SIZE  ELECTRICAL DATA - SINGLE POINT POWE  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - ENERGY WHEEL:  VOLTS / Ø / Hz  MCA / MOCP (AMPS)  ELECTRICAL DATA - SUPPLY FAN:  VOLTS / Ø / Hz  MCA / MOCP (AMPS)	79.4 / 65.5  95 / 78  CE (VALUES IN °F DB/WB)  68 / 67  10.6 / 10.6  57.7 / 57.7  0 / 0  1  2" MERV 8  (3) 15.5x24.5  R CONNECTION:  N/A  208 / 3 / 60  0.8 / 15	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A  N/A	N/A  1 2" MERV 8 (1) 19.5x19.5, (1) 19.5x23.5  N/A  N/A	1 2" MERV 8 (6) 14.25x17.35 N/A N/A

1. PROVIDE RTU-4 AND RTU-7 WITH DUCT MOUNTED SMOKE DETECTORS. 2. PROVIDE RTU-4, RTU-5, RTU-6, AND RTU-7 WITH INSULATED ROOF CURB WITH VIBRATION ISOLATION RAIL. ROOF CURB SHALL BE RETURN PLENUM. 3. PROVIDE UNITS WITH DISCONNECT SWITCH. ALL OUTDOOR UNITS SHAKEBERROWIDED WITH RATED DISCONNECT SWITCH VICTOR OF THE SWITC

4. PROVIDE RTU-4, RTU-5, RTU-6, AND RTU-7 WITH AIRSIDE ECONOMIZER

5. PROVIDE RTU-4, RTU-5, RTU-6, AND RTU-7 WITH HOT GAS REHEAT.

6. PROVIDE THE FOLLOWING OPTIONS FOR ALL UNITS: • HIGH STATIC DRIVE MOTOR. COORDINATE LEFT/RIGHT HAND FAN DRIVE IN FIELD.

• 100% MODULATING ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL AND ECONOMIZER HOOD.

• FURNISH EXTRA DRIVE BELT AND EXTRA FILTER SET FOR EACH UNIT. • UNIT SHALL BE MOUNTED ON VIBRATION ISOLATION ROOF CURB. HEIGHT OF CURB IS TO BE COORDINATED WITH FINAL FINISHED ROOF SURFACE, INCLUDING DEVIATIONS DUE TO CRICKETS, ROOF DRAINS, ETC. LOWER PORTION OF VIBRATION CURB SHALL EXTEND 12" MINIMUM ABOVE FINISHED ROOF SURFACE. PROVIDE BLOCKING OR SIMILAR AS NECESSARY. MASON INDUSTRIES TYPE RSC OR EQUIVALENT.

7. PROVIDE THE FOLLOWING MOTOR CONTROL OPTIONS FOR ALL UNITS: • UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION SYSTEM.

• ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS.

• SINGLE POINT EXTERNAL POWER CONNECTION AT JUNIT, JUNIT, MOUNTED DISCONNECT SWITCH, AND FACTORY INSTALLED MOTOR STARTERS. VAV UNITS SHALL HAVE FACTORY MOUNTED VFD'S WITH H-O-A, RTU-4, 5, 6, 7 SHALL HAVE MULTIPLE POINT EXTERNAL POWER CONNECTIONS AT UNIT. 8. CONTRACTOR SHALL HIRE THE MANUFACTURER'S AUSTALLATION TECHNICIAN FOR USTALLATION AND STARTUP. PROVIDE STARTUP REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.

9. INTERNAL VFDS SHALL BE RATED FOR TEMPERATURE RANGING FROM 0°F TO 100°F.

# HARRISON **RECREATION &** COMMUNITY **CENTER**

New Construction - Phase 2

Town / Village of Harrison

270 Harrison Avenue Harrison, NY 10528

OLA Consulting Engineers Hawthorne, NY 10532 Suite 501 New York, NY 10018 646.849.4110

CONSTRUCTION DOCUMENTS

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| 07/01/2024 |BID ADDENDUM #2 06/05/2024 ISSUED FOR BID 3 01/16/2024 ISSUED FOR PERMIT 06/01/2020 DESIGN DEVELOPMENT 03/31/2020 50% DESIGN DEVELOPMENT

**MECHANICAL EQUIPMENT NOTES** & SCHEDULES

NKGD0207.00 03/01/2024

Sheet Number

AS NOTED

M-602

Drawn / Checked

HM / RG

				FAN SCI	HEDULE				
DESIGNATION	EF- 1	EF- 2	EF- 3	EF- 4	EF- 5	EF- 6	TX- 1	TX- 2	TX- 3
LOCATION	MECH B06	MECH B06	SEE PLANS	ROOF	MECH B06	ROOF	ROOF	ROOF	ROOF
AREA SERVED	PARKING B01	PARKING B01	SEE PLANS	PANTRY	FIRST FLOOR	LOCKER ROOM	LOCKER ROOM	TOILET 105 JAN 104	FIRST FLOOR BATHROOMS
MODEL	XD100EC	XD200EC	SQ-90-VG	G-097-VG	SQ-160-VG	G-095-VG	G-140-VG	G-097-VG	G-098-VG
CFM	500	3400	250	265	2700	650	1150	100	400
ВНР	0.127	0.662	0.02	0.11	0.51	0.13	0.3	0.03	0.14
HP	1/4	1	1/10	1/4	3/4	1/6	1/2	1/4	1/4
FAN RPM	1800	910	1111	1636	1121	1577	1160	1121	1551
SP (IN H ₂ O)	0.5	0.5	0.25	0.53	0.5	0.5	0.82	0.5	0.82
VOLTS/Ø/Hz	115/1/60	208/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60	115/1/60
INTERLOCK	-	-	-	-	-	-	-	-	-

1. FANS BASED ON GREENHECK. EF- 1 AND EF- 2 BASED ON ACME. 2. FURNISH MOTOR STARTERS AND DISCONNECT SWITCHES FOR EACH FAN.

3. FURNISH RUBBER IN SHEAR OR SPRING VIBRATION ISOLATORS. 4. SEE PLAN FOR INLET AND DISCHARGE ORIENTATION.

5. PROVIDE BACKDRAFT DAMPER FOR EF-4, EF-6, TX-1, TX-2, TX-3.

Р	UMP SCHEDULE	
DESIGNATION	GWP-1 / 2	P-1, 2, 3, 4, 5, 6, 7, 8, 9, 10
LOCATION	MECH B06	MECH B06
SYSTEM SERVED	GEOTHERMAL WELLS	WCHP'S
ARRANGEMENT	INLINE	INLINE
MANUFACTURER	TACO	TACO
TYPE	VERTICAL, SPLIT COUPLED	CIRCULATING
MODEL	SKS3006D	IL132
IMPELLER DIA. (IN.)	6.25	-
GPM	230	36
TOTAL DYNAMIC HEAD (FT H₂O)	80	20
RPM	3500	1725
NPSH (FT. H₂O)	12.2	-
MOTOR HP	15	1/2
VOLTAGE/Ø/Hz	208/3/60	120/1/60
STARTER TYPE	VFD	-
STARTER LOCATION	INTEGRAL	-
DISCONNECT SWITCH AT PUMP (Y/N)	Υ	Υ
INTERLOCK	-	-
NOTES:		

1. ALL PUMPS SHALL BE CAST IRON BODY, BRONZE FITTED, BRONZE IMPELLER. REFER TO SPECIFICATION FOR PUMP CONSTRUCTION.

2. FLUID SHALL BE 20% PROPYLENE GLYCOL SOLUTION.

3. ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY. 4. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED

AND APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS.

5. MOTOR STARTERS AND DISCONNECT SWITCHES SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

	LOUVE	ER SCHEE	DULE		
DESIGNATION	L-1	L-2	L-3	L-4	L-5
LOCATION	MECH 122	MECH B06	MECH B06	GARAGE	GARAGE
AREA SERVED	LOCKER ROOMS	SEE PLANS	SEE PLANS	GARAGE	GARAGE
MODEL	ESD-635	ESD-635	ESD-635	ESD-635	ESD-435
FREE AREA (SF)	3.7	20.4	20.4	8.7	8.1
MAXIMUM FACE VELOCITY (FPM)	500	500	700	500	700
DIMENSIONS (WxH)(IN)	76x18	66x72	66x72	72x32	44x48

NOTES: 1. LOUVERS BASED ON GREENHECK.

2. COORDINATE EXACT LOUVER SIZE WITH ARCHITECTURAL PLANS AND WITH WALL OPENING IN FIELD.

3. ALL LOUVERS SHALL BE STATIONARY, DRAINABLE BLADE. 4. CUSTOM COLORED LOUVERS SHALL BE SELECTED BY ARCHITECT. SUBMIT COLOR CHART FOR REVIEW.

5. FURNISH 1/2" GALVANIZED BIRD SCREEN FOR ALL LOUVERS.

6. BLANK OFF UNUSED SECTIONS OF LOUVERS WITH SHEET METAL PANELS. PAINT PANELS TO MATCH LOUVER AND INSULATE WITH 1" RIGID BOARD INSULATION.

		AIR PU	JRIFICATI	ON SCHEI	DULE			
DESIGNATION	AP-1	AP-2	AP-3	AP-4	AP-5	AP-6	AP-7	AP-8
MODEL	500EC	500EC	500FC	500FC	M1002	M1002	500EC	500EC
TUBE SIZE	Е	E	F	F	Е	Е	E	E
ASSOCIATED HVAC UNIT	DOAS-2	DOAS-1	RTU-1	RTU-2	RTU-3	RTU-4	AH-1	AH-1
ELECTRICAL DATA:	•				•			
VOLTS / Ø / Hz	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
ALADO	0.40	0.40	0.45	0.45	0.4	0.4	0.40	0.40

1. AIR PURIFICATION BASED ON ATMOS AIR. AIR PLUS IS AN APPROVED EQUAL AND CONTACT INFORMATION IS LARRY SUNSHINE AT LSUNSHINE@AIR-PLUS.COM 2. AIR PURIFICATION SYSTEM SHALL BE MOUNTED ON SUPPLY AIR DUCT OR ON HVACUNIT. BEFER TO DRAWINGS FOR EXACT LOCATION //5

3. AIR PURIFICATION SYSTEM SHALL BE INTERLOCKED WITH ASSOCIATED HVAC UNIT.

4. CONTRACTOR SHALL PROVIDE MOUNTING BRACKET AS NEEDED FOR INSTALLATION. COORDINATE WITH FINAL MOUNTING LOCATION. 5. CONTRACTOR SHALL PROVIDE A WEATHERPROOF ENCLOSURE WITH AN ACCESS PANEL OVER THE ATMOS AIR ION GENERATOR WHEN INSTALLED OUTDOORS.

# AIR HANDLER SCHEDULE

DESIGNATION	AH-1	AH-2
LOCATION	MECH B06	MECH 122
AREA SERVED	2ND FLOOR COMMON AREA	MULTIPURPOSE 201
MANUFACTURER	VTS	VTS
MODEL	AVS040V	AVS020V
NOMINAL CAPACITY (TONS)	-	-
WEIGHT OF UNIT (LBS)	717	523
SUPPLY DUCT CONNECTION	TOP	TOP
RETURN DUCT CONNECTION	FRONT	FRONT
OUTSIDE AIR (CFM)	550	1,150
SUPPLY FAN:		
QUANTITY	1	1
TOTAL CFM	3,810	1,800
CFM FOR EACH FAN	3,810	1,800
ESP/TSP (IN H ₂ O)	1/-	1 / -
TYPE	DIRECT DRIVE PLENUM	DIRECT DRIVE PLUG
HP FOR EACH FAN	3	1.5
CONTROL	VFD	VFD
COOLING PERFORMANCE:		
E.A.T (DB / WB)	77.4 / 64.5	89.1 / 73.8
L.A.T (DB / WB)	55.8 / 54	55.2 / 55.2
TOTAL CAPACITY (MBH)	118.9	112.7
SENSIBLE CAPACITY (MBH)	90.4	67.6
REHEAT CAPACITY (MBH)	76.2	38.5
REHEAT (DB / WB)	75 / 59.6	75
HEATING PERFORMANCE:	<u> </u>	
E.A.T. / L.A.T. (DB)	60 / 81	23 / 80
HEATING CAPACITY INPUT (MBH)	87.6	111.2
LINES & FILTERS:		
CONDENSATE DRAIN LINE SIZE (IN)	1	1
RETURN AIR FILTER TYPE	2" MERV 8	2" MERV 8
QUANTITY AND SIZE	(6) 14.25x17.35	(2) 19.5x19.5
ELECTRICAL DATA - SINGLE POINT POW	ER CONNECTION:	
VOLTS / Ø / Hz	208 / 3 / 60	208 / 3 / 60
MCA / MOCP (AMPS)	11.3 / 20	5.6 / 15
NOTES:	1	

. PROVIDE AH-1 WITH DUCT MOUNTED SMOKE DETECTORS. 2. PROVIDE UNITS WITH DISCONNECT SWITCH. ALL OUTDOOR UNITS SHALL BE PROVIDED WITH

RATED DISCONNECT SWITCH. 3. PROVIDE AH-1 AND AH-2 WITH AIRSIDE ECONOMIZER.

4. PROVIDE  $\overline{AH-1}$  AND  $\overline{AH-2}$  WITH HOT GAS REHEAT. 5. PROVIDE THE FOLLOWING OPTIONS FOR ALL UNITS:

• HIGH STATIC DRIVE MOTOR. COORDINATE LEFT/RIGHT HAND FAN DRIVE IN FIELD. • 100% MODULATING ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL AND ECONOMIZER

• UNIT SHALL BE MOUNTED ON 4 INCH HIGH CONCRETE EQUIPMENT PAD. REFER TO STRUCTURAL

DRAWINGS FOR ADDITIONAL INFORMATION. 6. PROVIDE THE FOLLOWING MOTOR CONTROL OPTIONS FOR ALL UNITS:

• UNITARY CONTROLLER BY AUTOMATIC TEMPERATURE CONTROLS MANUFACTURER, COMPATIBLE WITH THE BUILDING AUTOMATION SYSTEM. • ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS.

• SINGLE POINT EXTERNAL POWER CONNECTION AT UNIT, UNIT-MOUNTED DISCONNECT SWITCH, AND FACTORY INSTALLED MOTOR STARTERS. VAV UNITS SHALL HAVE FACTORY MOUNTED VFD'S WITH H-O-A. 7. CONTRACTOR SHALL HIRE THE MANUFACTURER'S INSTALLATION TECHNICIAN FOR INSTALLATION

AND STARTUP. PROVIDE STARTUP REPORTS TO THE ENGINEER FOR REVIEW AND APPROVAL.

	OUTDOOR AIR		
UNIT DESIGNATION	AREA SERVED	AREA (SF)	OUTDOOR AIR CFM
VRF-1 / DOAS-1	OPEN OFFICE 103	433	51
VRF-1 / DOAS-1	COPY/PRINT 103A	58	4
VRF-1 / DOAS-1	CONF 103B	320	132
VRF-2 / DOAS-1	RECREATION GAME ROOM 106	1,160	488
VRF-3 / DOAS-1	COMPUTER/GAMING 107	668	426
VRF-4 / DOAS-1	ARTS/CRAFTS 108	952	597
VRF-4 / DOAS-1	STOR 108A	146	11
VRF-5 / DOAS-1	MEETING 112	217	85
VRF-6 / DOAS-1	OPEN OFFICE 212	247	31
VRF-6 / DOAS-1	OFFICE 212A	152	24
VRF-6 / DOAS-1	CONF 212B	164	69
RTU-5 / DOAS-2	MULTIPURPOSE 201	930	463
RTU-6 / DOAS-2	MULTIPURPOSE 202	1,071	681
RTU-7 / DOAS-2	MULTIPURPOSE 203	1,353	788
RTU-7 / DOAS-2	PANTRY 206	207	74
AH-1	VEST 100	166	12
AH-1	LOBBY 101	1,539	228
AH-1	JAN 104	51	0
AH-1	TOILET 105	58	0
AH-1	CORR C101	898	67
AH-1	CORR C102	138	10
AH-1	CORR C103	143	11
AH-1	WOMEN 109	229	0
AH-1	MEN 110	227	0
AH-1	EAST CORRIDOR 114	915	70
RTU-4	VIEWING 200	979	1,451
RTU-4	CORR C201	344	26
RTU-4	CORR 204	733	55
RTU-4	STOR 205B	31	2
RTU-4	WOMEN 207	173	0
RTU-4	MEN 208	161	0
RTU-4	JAN 210	41	0
RTU-4	TOILET 211	59	0
RTU-3	FITNESS 123	3,268	1,100
RTU-3	STOR 123A	83	5
RTU-1 / RTU-2	GYM	13,725	6,900

# HARRISON **RECREATION &** COMMUNITY CENTER

New Construction - Phase 2

Town / Village of Harrison 270 Harrison Avenue



KG+D ARCHITECTS, PC 285 MAIN STREET• MOUNT KISCO, NEW YORK 10549

> OLA Consulting Engineers Hawthorne, NY 10532 914.747.2800 8 West 38th Street, Suite 501 New York, NY 10018 646.849.4110

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olace.com

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Professional Seal

	07/01/2024	BID ADDENDUM #2
	06/05/2024	ISSUED FOR BID
	01/16/2024	ISSUED FOR PERMIT
	06/01/2020	DESIGN DEVELOPMENT
	03/31/2020	50% DESIGN DEVELOPMENT
).	Date	Issue

# **MECHANICAL** EQUIPMENT, NOTES & SCHEDULES

Job No.	Date
NKGD0207.00	03/01/2024
Scale	Drawn / Checked
AS NOTED	HM / RG

# HARRISON RECREATION COMMUNITY CENTER PROJECT PHASE 2 Thursday • June 13, 2024 On-Site Pre-Bid Meeting

**PLEASE	ATTACH YOUR BUSI	**PLEASE ATTACH YOUR BUSINESS CARD AND COMPLETE THE FORM BELOW**	THE FORM BELOW**
	PLEASE PRIN	PLEASE PRINT CLEARLY WITH BLOCK LETTERS	S
OmeN		i	
INGILIE	Company Name	Phone Number	Email
Charlie Vallaio	Veteran Concrete Corp.	718-530-3090	CIV713@vahop.com
100	ABM Air Conditioning and		
Ed Horvath	Heating Co.	914-747-0910, Ext. 26 • Cel: 914-469-3028	ehorvath@abmhyac.com • eddiei54@aol.com
Giuseppe Iuliucci • David Casillo	E.W. Howell Construction Group		giuliucci@ewhowell com • deseillo@ewhowell com
Daniel Dubois	OCS Industries, Inc.	845-692-8450	ddilhois@orsindustrias com
Emily Jaramillo	ELQ Industries	914-654-1040	eiaramillo@elgindustries.com
		203-449-2967 • 914-232-7531 • 914-301-	
Chazz Winter • Peter Gifford	Andron Construction	9113 • Cell for P. Gifford: 914-712-5619	cawinter@androncc.com • ngifford@andoncc.com
Tony Cimahosky and Alfred			The state of the s
Torreggiani, Jr.	Key Construction Services	570-228-1488 • 845-797-1420	tcimahosky@contactkcs.com
A A 2 a 4 b 1 b 1 b 1 b 1 b 1 b 1 b 1 b 1 b 1 b			chiefestimator@worthconstruction.com •
iviark Pukhovich	Worth Construction	203-797-8788	pukhovichm@worthconstruction.com
Harold Kenny	C&L Contractiong Corp.	516-326-4468	hkennv@clcont.com
Keith Ackerson	Icon Construction Gr. Inc.	914-288-0018 • Cel: 914-420-6713	kackerson@iconcainc.com
Prisco J. DeMercurio	Piazza, Inc.	914-741-4435 • Cel: 914-424-5216	prisco@njazzahrothere com
Dragana Kjoseska	APS Contracting, Inc.	973-754-1980, Ex. 15	bidding@anscontracting us
Steve Governale (sub)	Eastport Excavators		easthortexcav@vahoo.com
			and both and a second a second and a second

### SECTION 077273 - VEGETATED ROOF SYSTEMS

### PART 1 - GENERAL

### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Modular system of preplanted plastic modules containing a drainage layer with growth media and plant species preplaced into the module.
  - 2. Slip sheet for separation from roof membrane surface.
- B. Roofing membrane is specified in Section 075323.

### 1.2 SUBMITTALS

- A. Product Data: Before materials are delivered to site, submit manufacturer's printed product data and specifications for all materials and components of green roof system. Include installation instructions and data substantiating that materials comply with requirements.
- B. Shop Drawings: Show roof configuration and module layout, location and type of all penetrations, termination details, and all other application details, each at an appropriate scale.
- **C.** Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- D. Maintenance Data: For green roof system to include in the maintenance manuals specified in Division 01 Section "Closeout Procedures."
- E. Warranty: Sample copy of green roof system manufacturer's warranty stating obligations, remedies, limitations, and exclusions of warranty as stated in "Warranty" Article.
- F. Inspection Report: Copy of green roof system manufacturer's inspection report of completed installation, specified in the "Quality Assurance" Article.

### 1.3 QUALITY ASSURANCE

A. Manufacturer: Obtain primary green roof system materials from a single manufacturer. Provide secondary materials as produced by or accepted by manufacturer of primary materials.

- B. Installer: Green roof system and all associated work shall be installed by a firm that has five (5) years experience in the installation of green roofing systems similar to the system specified.
- C. Single-Source Responsibility: The vegetated roof assembly shall be installed in conjunction with the membrane roof system installer as a single source installer or a partnership for single source responsibility of membrane roof system warranty and vegetated roof assembly warranty covering replacement of overburden in the event roofing repair service is required.
- D. Pre-Roofing Inspection and Certification: Prior to start of installation of the work of this Section, secure a visit to the job site by a representative of the manufacturer of the roofing membrane used who shall inspect the job conditions and shall certify in writing to the Architect that each of the surfaces to which the green roof system materials will be applied is in a condition suitable for this application.
- E. Preinstallation Conference: Before installing green roof system, conduct conference at Project site to comply with requirements of Division 01 Section "Project Management and Coordination."
- F. Post-Roofing Inspection: At the completion of the installation of the green roof system. a representative of the green roof system manufacturer shall inspect the work as required to provide the manufacturer's guarantee as specified below. The representative shall either approve the work or shall order changes in the work required for approval in which case he shall reinspect the work after the changes have been made.
  - 1. Notify Architect or Owner 48 hours in advance of the date and time of inspection.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, and directions for storing.
- B. Install planted modules on rooftop within 4 hours of delivery.

### 1.5 PROJECT CONDITIONS

- Weather: Proceed with green roof system work when existing and forecasted weather Α. conditions permit work to be performed in accordance with manufacturers' recommendations and warranty requirements.
- B. Installation Season: Install during the time period of April 1 to October 15, unless otherwise recommended by manufacturer and as allowed by Owner.
- C. Coordination with Roofing Membrane Warranty: Roofing membrane manufacturer shall provide "single source" warranty that includes the vegetated cover and the membrane roofing system, covering removal and replacement of vegetated roofing system in the event repair work is required on the roof membrane.

### 1.6 SPECIAL PROJECT WARRANTY

- A. The warranty specified in the Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- B. Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the Owner the following written guarantees:
  - 1. The installer will guarantee a uniform stand of plants by watering and maintaining green roof areas until final acceptance, and will replant areas that fail to provide a uniform stand of plants until all areas are accepted by Owner.

### 1.7 MAINTENANCE SERVICE

A. Initial Maintenance Service: Provide full maintenance by skilled employees of installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until an acceptable green roof system is established, but for not less than 90 days from date of Substantial Completion. The Owner will solely determine the acceptance of the installation.

### PART 2 - PRODUCT

### 2.1 GENERAL

A. Basis of Design Product: Provide "GreenGrid G4Module" Extensive Module manufactured by Weston Solutions or equal.

### 2.2 MATERIALS

- A. Modules: Formed from black or grey 100mil thick HDPE (100% recycled post industrial material) 24" x 24" in size, with 4-1/4" depth of modules. Modules shall have water retention reservoirs, bottom drainage holes and integrated handles.
- B. Underlayment Material: Heavy duty HDPE, Polypropylene, TPO, EPDM or recyclable PVC slip sheet/root barrier of 40-60 mil. thickness with effectively bonded seams. Material shall be compatible with roofing membrane system.
- **C.** Growth media shall be engineered light weight blend inorganic content, provided by module manufacturer, and appropriate for materials being planted. Saturated weight with mature vegetation shall be 26-30 lbs. per square foot.
- D. Ground Covers and Plants: Design mix of grasses, perennials and groundcovers that can thrive in non-irrigated extensive rooftop environment in project location; exact mix as approved by Architect. Plants shall be grown to maturity (approximately 95+% soil coverage) before delivery to site.

### PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Prior to work of this Section, carefully inspect all surfaces and verify that surfaces are satisfactory so that the work of this Section may properly commence. Verify that green roof system may be installed in strict accordance with the manufacturer's current recommendations, and all pertinent codes and regulations.
- B. Examine substrates, areas, and conditions under which system will be applied, with roofing Installer present, for compliance with requirements.
- **C.** Do not proceed with installation until unsatisfactory conditions have been corrected. In the event of discrepancy, immediately notify the Architect. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

### 3.2 SURFACE PREPARATION

- A. Clean substrate of dust, debris, and other substances detrimental to green roof system installation according to manufacturer's written instructions .
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

### 3.3 INSTALLATION

A. Place underlayment sheet over completed and tested membrane roof. Place modules on roof surface in arrangement according to approved landscape design and shop drawings. Water modules to insure growth.

### 3.4 MAINTENANCE

- A. Maintain and establish green roof system by watering, fertilizing, weeding, trimming, replanting, and other operations. Replant bare or eroded areas and those damaged by insects or disease. Provide materials and installation the same as those used in the original installation.
- B. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep green roof system uniformly moist to adepth of 4 inches (100 mm).
  - 1. Water with fine spray at a minimum rate of 1 inch (25 mm) per week unless rainfall precipitation is adequate.

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C. Acceptance: Upon completion of maintenance period, Owner will inspect green roof system to determine if a uniform stand of plants exists, and will accept if all requirements have been met. Upon acceptance, Owner will assume maintenance of green roof system.

END OF SECTION 077273