LIGHTBRIDGE ACADEMY

26 & 36 LEGION DRIVE
VALHALLA, NY 10595

JAM ARCH

ARCHITECT OF RECORD:
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ABBREVIATIONS

A.C.T.	ACOUSTICAL CLG. TILE	EA.	EACH	LT.	LIGHT	REQD.	REQUIRED
ADJ.	ADJACENT	ELEC.	ELECTRICAL				
A.F.F.	ABOVE FINISH FLOOR	ELEV.	ELEVATOR	MAR.	MARBLE	SIM.	SIMILAR
ALUM.	ALUMINUM	EL.	ELEVATION	MAX.	MAXIMUM	SPEC.	SPECIFICATIONS
ANG.	ANGLE	EQUIP.	EQUIPMENT	MECH.	MECHANICAL	S.F.	SQUARE FEET
		EXIST.	EXISTING	MFR.	MANUFACTURER	ST. STL.	STAINLESS STEEL
BLK.	BLOCKING	EQ.	EQUAL	MIN.	MINIMUM	STL.	STEEL
BD.	BOARD	F.D.	FLOOR DRAIN	MISC.	MISCELLANEOUS	STRUCT.	STRUCTURAL
BLDG.	BUILDING			M.O.	MASONRY OPENING	SUSP.	SUSPENDED
B.O.	BOTTOM OF	FIN.	FINISH	MTL.	METAL		
		F.P.	FIREPROOF			T & S	TAPE & SPACKLE
CLG.	CEILING	F.P.S.C.	FIREPROOF SELF-CLOSING	NOM.	NOMINAL	TEL.	TELEPHONE
CL.	CENTER LINE	FL.	FLOOR	N.	NORTH	THK.	THICK
CONC.	CONCRETE	FR.	FIRE RATED	N.C.	NON-CORROSIVE	T.O.	TOP OF
CONST.	CONSTRUCTION	FLUOR.	FLUORESCENT	N.I.C.	NOT IN CONTRACT	TYP.	TYPICAL
C.M.U.	CONC. MASONRY UNIT	FT.	FEET	N.T.S.	NOT TO SCALE		
				NO.	NUMBER	U.C.	UNDERCUT
DIAG.	DIAGONAL	GALV.	GALVANIZED			UNF.	UNFINISHED
DEMO.	DEMOLITION	GA.	GAUGE	O.C.	ON CENTER	U.O.N.	UNLESS OTHERWISE NOTED
DET.	DETAIL	G.C.	GENERAL CONTRACTOR	OPNG.	OPENING		
D.F.	DRINKING FOUNTAIN	G.W.B.	GYPSUM WALL BOARD	OPP.	OPPOSITE	V.C.T.	VINYL COMPOSITION TILE
DIA.	DIAMETER	GYP.	GYPSUM			VEST.	VESTIBULE
DIM.	DIMENSION			PTD.	PAINTED	V.I.F.	VERIFY IN FIELD
DN.	DOWN	HT.	HEIGHT	PART.	PARTITION		
D.O.	DITTO	H.M.	HOLLOW METAL	PL.	PLATE	WD.	WOOD
DWG.	DRAWING			PLAM.	PLASTIC LAMINATE	W/	WITH
		INSUL.	INSULATION	PLYWD.	PLYWOOD	W/O	WITHOUT

APPLICABLE CODES:

THIS PROJECT IS DESIGNED UNDER THE FOLLOWING CODES:
1. 2020 Building Code of New York State
2. 2020 Existing Building Code of New York State
3. 2020 FireCode of New York State
4. 2020 Plumbing Code of New York State
5. 2020 Mechanical Code of New York State
6. 2020 Energy Conservation Construction Code of New York State
7. ASHRAE Standard 90.1-2016

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BUILDING CODE NOTES:

TYPE OF WORK: INTERIOR ALTERATION, EXISTING TENANT SPACE, GRADE LEVEL.

DESCRIPTION: TENANT FIT OUT IN EXISTING BUILDING , FOR A TOTAL AREA OF 12,200 SF. THE PROPOSED USE IS A CHILDCARE FACILITY (I-4 USE). THE BUILDING IS FULLY SPRINKLERED, A NEW PLAYGROUND IS BEING CONSTRUCTED AT THE FRONT OF THE BUILDING. THIS IS BEING DESIGNED AS A NONSEPERATED OCCUPANCY, WHERE THE I-4 IS THE MOST RESTRICITVE. THEREFORE, THE SPACE IS DESIGNED TO THE REQUIREMENTS OF THE I-4 USE GROUP.

BUILDING CHARACTERISTICS - TWO-STORY SPRINKLERED (SM)

	ALLOWABLE	PROPOSED/EXIST.	COMMENTS
TYPE OF CONSTRUCTION:	TYPE IIIB		COMPLIES (EXISTING)
NO. OF STORIES:	3	2	COMPLIES (EXISTING)
ALLOWABLE AREA:	39,000 SF	12,200 SF	COMPLIES
BUILDING HEIGHT:	75'-0"	+/- 28'-2 1/2"	COMPLIES (EXISTING)

FIRE RESISTANCE RATINGS (TABLE 601)

BUILDING ELEMENT	REQUIRED	PROPOSED/EXIST.	COMMENT
STRUCTURAL FRAME	0 HOUR	0 HOUR	COMPLIES
BEARING WALLS	2 HOUR	2 HOUR	COMPLIES
NON-BEARING WALLS	0 HOUR	0 HOUR	COMPLIES
FLOOR CONSTRUCTION	0 HOUR	0 HOUR	COMPLIES
ROOF CONSTRUCTION	0 HOUR	0 HOUR	COMPLIES

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INTERIOR FINISHES (TABLE 803.13)

GROUP	EXIT ENCLOSURES & EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
I-4	B	B	B

1. 803.1.2 INTERIOR WALL AND CEILING FINISH MATERIALS. FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
2. 803.1.2. CLASS B. FLAME SPREAD INDEX 26-75; SMOKE-DEVELOPED INDEX 0-450.

FIRE PROTECTION SYSTEMS
AUTOMATIC SPRINKLER SYSTEMS (SECTION 903)
1. 903.2.6 GROUP I. AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT THE BUILDING.

PORTABLE FIRE EXTINGUISHERS (SECTION 906)
1. 906.1. REQUIRED AND SHALL BE INSTALLED.

FIRE ALARM AND DETECTION SYSTEMS (SECTION 907)
1. 907.2.6 GROUP I. A MANUAL FIRE ALARM SYSTEM THAT ACTIVATES THE OCCUPANT NOTIFICATION SYSTEM SHALL BE INSTALLED.
2. 907.2.6 GROUP I. AN AUTOMATIC SMOKE DETECTION SYSTEM THAT ACTIVATES THE OCCUPANT NOTIFICATION SYSTEM SHALL BE INSTALLED.
3. 907.4.2 MANUAL FIRE ALARM BOXES. WHERE A MANUAL FIRE ALARM SYSTEM IS REQUIRED, IT SHALL BE ACTIVATED BY FIRE ALARM BOXES INSTALLED AS FOLLOWS:
A. SHALL BE LOCATED NOT MORE THAN 5 FEET FROM THE ENTRANCE TO EACH EXIT. ADDITIONAL MANUAL FIRE ALARM BOXES SHALL BE LOCATED SO THAT TRAVEL DISTANCE TO THE NEAREST BOX DOES NOT EXCEED 200 FEET.
B. THE HEIGHT SHALL BE A MINIMUM OF 42 INCHES AND A MAXIMUM OF 48 INCHES MEASURED VERTICALLY FROM THE FLOOR LEVEL TO THE ACTIVATING HANDLE OR LEVER OF THE BOX.
4. 907.5.2.3 VISIBLE ALARMS. VISIBLE ALARM NOTIFICATION APPLIANCES SHALL BE PROVIDED. THEY SHALL BE PROVIDED IN PUBLIC AND COMMON AREAS.

FIRE DEPARTMENT CONNECTIONS (SECTION 912)
1. 912.1. FIRE DEPARTMENT CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA.

CORRIDORS (SECTION 1020)
TABLE 1020.1. 0 HOUR REQUIRED WHEN SPRINKLERED.
REFERENCE SHEET G005 FOR LICENSING REQUIREMENTS AND ALLOWABLE OCCUPANT LOADS

PLUMBING FIXTURE COUNT & CODE NOTES:

TOTAL OCCUPANCY = 171

	N.O. of Persons of Each Sex	Water Closets		Lavatories		Drinking Water Facilities	Other
		Male	Female	Male	Female		
		1 per 15	1 per 15	1 per 15	1 per 15	1 per 100	1 Service Sink
	171 occupants	6	6	6	6		
Required	86 per sex	12 Total		12 Total		2	1
Provided	N/A	15 Total		26 Total		2	1

PROJECT CONTACT LIST

OWNER:
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

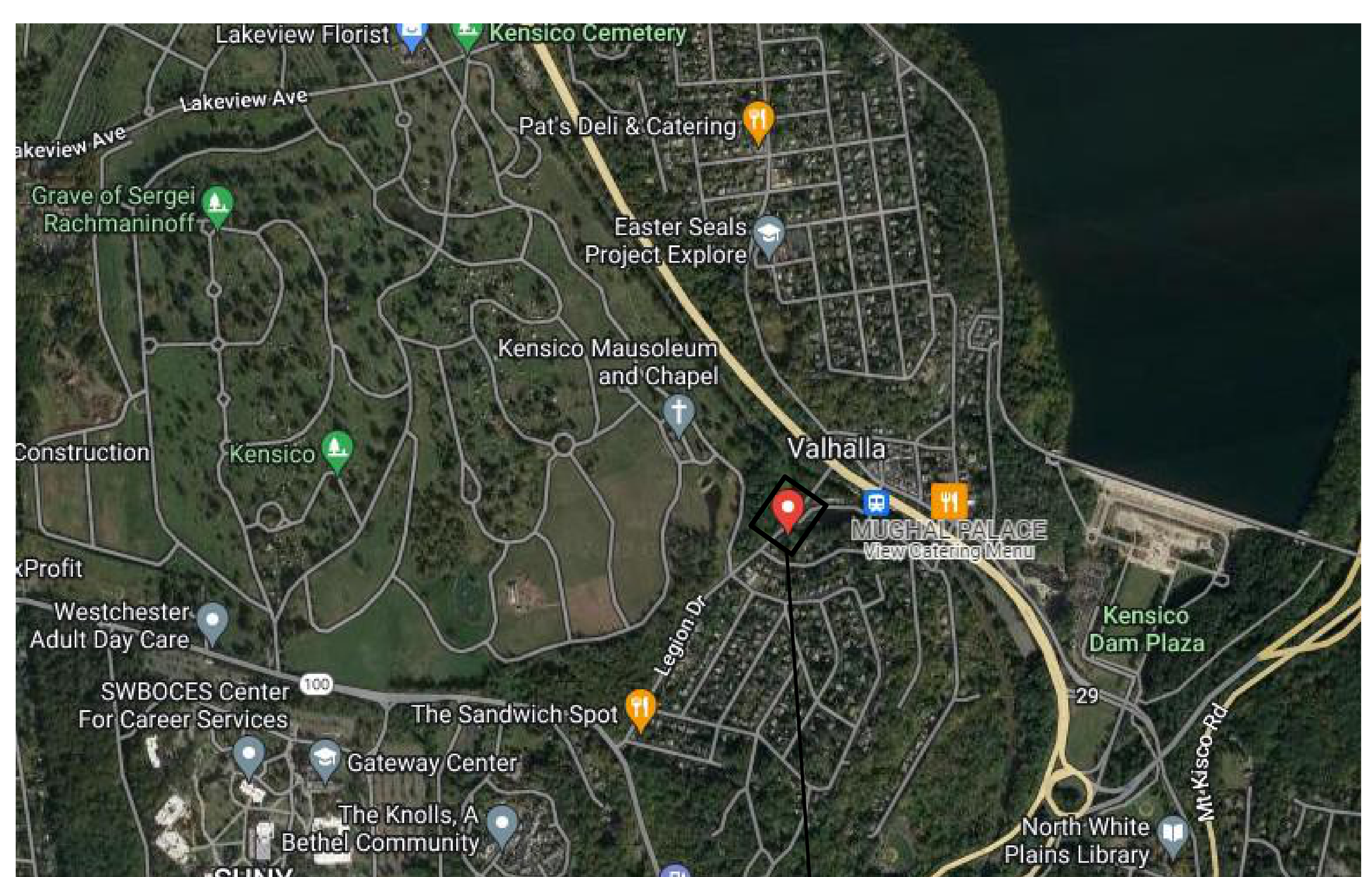
ARCHITECT:
J.A. Mihalik Architect
373 US Route 46 West
Building D, Suite 240
Fairfield, New Jersey 07004
ph: (973) 291-3730 fax: (973) 291-3740

RESPONSIBILITY SCHEDULE

Item	Responsibility: Supply	Responsibility: Install	Vendor	Lead Time
• Bathroom Partitions	GC	GC	Atlantic Partition Co.	4-6 weeks recommended
• Playground - Footings for Canopies	GC	GC		
• Playground Equipment • Playground Canopies	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Xceed Recreation Group	8-12 weeks
• Classroom Area Rugs • Office Furniture • Vestibule Furniture • Infant Gate • Infant Suite Mirror/Artwork line	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Becker's School Supplies	3-5 days to get delivered. Pre-stocked in advance.
• Cubbies	Lightbridge	GC	Becker's School Supplies (Alternate: Calhoun Millworks)	3-5 days to get delivered.
• Refrigerators/ Washer/ Dryer	Franchisee/GC	GC	Shop the best available product/price	6-8 weeks.
• Playground Fence	GC	GC	GC Vendor per LFC Specs	3-5 days leadtime for material.
• Office Artwork • Bathroom Artwork	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Effective Sign Works	
• Flags/Mural/Quotes • Interior Signage	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Effective Sign Works	
• Exterior Signage	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Effective Sign Works	
• Playground surfacing & padding	GC	GC	Forever Lawn	30 day prior to est install minimum.
• Window Cornices	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Fred Pepe	30 day prior to est install preferred.
• Low voltage wiring - • Security System • Fire/ Access Control • Panic Buttons	GC	GC	SMS Alarms for NE; All other regions: Telworx Communication or Vector Security	30 day prior to est install preferred. Required deposit.
• Phones/Internet • PA Speakers/Amp.	GC	Lightbridge/ Franchisse	ESP Delivers	2 weeks notice. 1 full day install
• BenQ IWB • Office Security T.V's	Lightbridge/ Franchisse	GC	Power Consulting Group	60 days prior to est TCO/CO for Whiteboards, 30 days for CCTV
• IT Closet Equipment/Wireless	Lightbridge/ Franchisse	GC	Power Consulting Group	30 days prior to est TCO/CO
• TVIP-Face8WP Reader/Face Recognition System	Lightbridge/ Franchisse	GC	Kintronics Inc.	90 days prior to est TCO/CO
• CCTV Cameras & System	Lightbridge/ Franchisse	Lightbridge/ Franchisse	Watch me Grow	30 day prior to est install. Requires deposit and signed order.
• Bulletin Boards • Chair rail	GC	GC	GC	
• Cabinetry	GC	GC	Calhoun Millworks (Alternate: M. Brodie Inc.)	8-12 weeks
Flooring: • Mohawk - LVT • Johnsonite - Base	GC	GC	Flooring Contractor	7-10 day quick ship program, once credit is cleared.
Flooring: • Mohawk - Carpet	GC	GC	Flooring Contractor	4-6 weeks
Flooring: • Daltile - Tile	GC	GC	Flooring Contractor	2-3 weeks
• Corner Guards	GC	GC	IPC Door and Wall Protection System	4-6 weeks
• Paper Towel Dispenser • Toilet Tissue • Soap Dispensers • Dilution System • Small office brewer • Staff lounge brewer • Water flitration cooler Staff Lounge.	GC	GC	WB Mason or GC Sourcing	1 Month lead time min.
• HVAC - MicroconUnits	GC	GC	Order directly from RGF. Rom Laureano	5 weeks from order
• Vinyl Wallcovering	GC	GC	Koroseal	4-6 weeks. *Adhesive not provided. (REC. Sherwin Williams heavy duty clay base adhesive)

Revised 05/05/2022

AERIAL LOCATION MAP N.T.S.



PROJECT LOCATION

N

LIST OF DRAWINGS

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Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
COVER SHEET

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: Author
CHECKED BY: Checker

SHEET NO.
G000

GENERAL CONDITIONS AND NOTES:

1. THE CONSTRUCTION DOCUMENTS CONSIST OF THE WORKING DRAWINGS HEREIN, THE PROJECT MANUAL AND ALL ADDENDA, IN THE EVENT OF A CONFLICT OF DISCREPANCY BETWEEN THE DOCUMENTS, THE CONTRACTOR SHALL BRING SUCH CONFLICT OR DISCREPANCY TO THE ATTENTION OF THE ARCHITECT FOR CLARITY PRIOR TO SUBMITTING A BID.

2. THE ARCHITECT HAS BEEN RETAINED TO PERFORM AT NORMAL SERVICE STANDARDS FOR THE PREPARATION OF THESE PLANS AND SPECIFICATIONS. THE ARCHITECT HAS NOT BEEN RETAINED TO PERFORM OTHER SERVICES SUCH AS: CIVIL, SOILS, SPECIAL INSPECTIONS OR SERVICES SUCH AS LEGAL, ENVIRONMENTAL, REAL ESTATE, CONSTRUCTION CONTRACTING OR CONTRACTOR SUPERVISOR.

3. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR SOILS OR SUBSURFACE ENGINEERING OR CONDITIONS.

4. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR OBTAINING MUNICIPAL APPROVALS, SUCH AS BUILDING DEPARTMENT, ENVIRONMENTAL OR ZONING. THE ARCHITECT SHALL ASSIST THE OWNER AND CONTRACTOR IN THAT EFFORT AS THE NEED ARISES.

5. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ACTIONS OF THE OWNER OR CONTRACTOR. NOR HAS THE ARCHITECT BEEN RETAINED OR ARE THEY RESPONSIBLE FOR SUPERVISION OF THE CONTRACTOR, DESIGN OF SAFETY PROVISIONS AT THE SITE, CONSTRUCTION SCHEDULES OR MEANS AND METHODS OF THE CONSTRUCTION.

6. THE CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR THE SAFE MAINTENANCE OF THE BUILDING AND IT'S FACILITIES.

7. ALL MATERIALS, FORMS, ASSEMBLIES AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MEET ALL MUNICIPAL REQUIREMENTS.

8. INTENT OF THIS SPECIFICATION AND GENERAL CONDITIONS:
MENTIONED HEREIN OR INDICATIONS ON DRAWINGS OR ARTICLES, OPERATIONS, METHODS OR MATERIALS, REQUIRES THAT THE CONTRACTOR PROVIDE EACH ITEM MENTIONED, INDICATED OR IMPLIED TO ACHIEVE THE INTENDED "PROJECT", BUILDING AND SITE WORK, ACCORDING TO THE METHODS OF BEST CONSTRUCTION PRACTICE (OR OF QUALITY OR METHOD SPECIFICALLY NOTED.) IN NO EVENT IS ANY ARTICLE, OPERATION, METHOD OR MATERIAL TO FALL BELOW BEST QUALITY AND FIRST CLASS TRADE. SAFETY STANDARDS AND ZONING AND CODE REQUIREMENTS. IN EVENT OF CONFLICTING STANDARDS, CODES OR SPECIFICATION REQUIREMENTS, THE METHOD, EQUIPMENT AND OPERATION OR MATERIAL OF BEST AND SAFEST QUALITY IS TO GOVERN THE WORK. ALL EQUIPMENT AND MATERIAL IS TO BE NEW AND IS TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE SPECIFIED. ALL WORK, ARTICLES, OPERATIONS, METHODS AND MATERIALS ARE TO BE APPROVED BY GOVERNING BUILDING OFFICIALS.

9. GENERAL RESPONSIBILITY:
THE CONTRACTOR SHALL LAY OUT ALL WORK AND BE RESPONSIBLE FOR IT'S CORRECTNESS AND SAFETY AND SHALL PROVIDE ALL NECESSARY LINES, LEVELS AND DIMENSIONS AS NOTED. ALL MEASUREMENTS SHALL BE VERIFIED AT THE SITE AND BUILDING BY THE CONTRACTOR AND TRADES BEFORE ORDERING MATERIALS OR DOING ANY WORK. ANY DISCREPANCIES IN SITE, SOIL CONDITIONS, EXISTING BUILDING CONDITIONS, PLANS AND DETAILS MUST BE REPORTED TO THE ARCHITECT AT ONCE. NO CHANGES OR SUBSTITUTIONS MAY BE MADE UNLESS APPROVED BY OWNER AND ARCHITECT.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE MAINTENANCE OF THE SITE, BUILDING AND ITS FACILITIES AND PROVIDE INSURANCE COVERAGE REQUIRED BY LAW AND GOOD STANDARD PRACTICE.

11. ALL MATERIALS, FORM ASSEMBLIES AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MEET THE FOLLOWING REQUIREMENTS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR:
11.1 THEY SHALL HAVE BEEN ACCEPTED BY GOVERNING LOCAL AND STATE AGENCIES CODES AT THE EFFECTED DATE OF THE CONTRACT
11.2. SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED CODE TEST METHODS.

12. AT LEAST 48 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE BUILDING DEPARTMENT BEFORE COMMENCEMENT OF WORK AND A BUILDING PERMIT OBTAINED BEFORE STARTING ANY WORK.

13. ALTERED GRADES EXCEEDING 30 DEGREE SLOPE SHALL HAVE A RETAINING WALL FILED AND APPROVED BY THE DEPARTMENT OF BUILDING BEFORE START OF SUCH WORK.

14. <u>ARCHITECT'S STATUS:</u>
THE ARCHITECT IS RESPONSIBLE ONLY TO THE EXTENT OF PROVIDING THE CONSTRUCTION DOCUMENTS, PLANS AND SPECIFICATIONS FOR THIS PROJECT SCOPE. THE ARCHITECT SHALL INTERPRET CONSTRUCTION DOCUMENTS TO THE BEST OF HIS KNOWLEDGE AND BASED ON HIS PROFESSIONAL OPINION, WILL DEFINE THEIR MEANING. THE ARCHITECT IS NOT RESPONSIBLE FOR MEANS AND METHODS OF THE CONTRACTOR AND IS NOT RESPONSIBLE FOR SAFETY ON THE JOB OR DELAYS IN CONSTRUCTION. THE ARCHITECT SHALL NOT BE RESPONSIBLE NOR BE HELD LIABLE FOR SITE OR CONSTRUCTION SAFETY CONDITIONS, CONSTRUCTION MEANS OR METHODS. THE ARCHITECT IS NOT RESPONSIBLE FOR ADMINISTRATION OF THE CONSTRUCTION. THE ARCHITECT IS NOT RESPONSIBLE FOR ACTIONS OF THE DEVELOPER, CONTRACTOR, SUB CONTRACTORS OR OWNER-USER.

15. <u>SCOPE OF WORK:</u>
THE CONTRACTOR SHALL CONSTRUCT THE PROJECT AS DESCRIBED IN THE CONTRACT DOCUMENTS (THE WORKING DRAWINGS AND SPECIFICATIONS). THE WORD "ARCHITECT" SHALL DESCRIBE JUSTIN A. MIHALIK, A.I.A. THE PROJECT IS DESIGNED TO CONFORM WITH ALL GOVERNING BUILDING CODES AND ZONING REQUIREMENTS AND THOSE ENGAGED IN THE WORK ARE DIRECTED TO MEET THOSE ENDS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

16. <u>CONTRACTOR'S INSURANCE:</u>
THE CONTRACTOR SHALL FILE WITH THE OWNER, CERTIFICATES OF THE FOLLOWING COVERAGE INCLUDED BUT NOT LIMITED TO:

A. WORKMEN'S COMPENSATION INSURANCE AS REQUIRED BY ALL GOVERNING LAW.
B. PUBLIC LIABILITY INSURANCE COVERING ANY ONE PERSON AND COVERING SEVERAL PERSONS PER THE A.I.A. DOCUMENTS AS A MINIMUM. MORE COVERAGE MAY BE DESIRED OR NEEDED.
C. PROPERTY DAMAGE INSURANCE: THE CONTRACTOR SHALL OBTAIN AND FILE WITH THE OWNER A CERTIFICATE FOR PROPERTY DAMAGE INSURANCE COVERING EACH ACCIDENT AND COVERING THE AGGREGATE OF OPERATIONS MINIMUM PER THE ABOVE MENTIONED A.I.A. DOCUMENT REQUIRES "AS A MINIMUM". MORE COVERAGE MAY BE DESIRED OR NEEDED.

THE CONTRACTOR SHALL OBTAIN INSURANCE AND PROVIDE CERTIFICATES OF INSURANCE TO THE OWNER. THE CERTIFICATES SHALL CONTAIN A 30 DAY NOTICE OF CANCELLATION CLAUSE ADDRESSED TO OWNER.

17. <u>REQUIRED DOCUMENTATION:</u>
THE OWNER SHALL PROVIDE ALL NECESSARY SURVEYS, SOIL REPORTS AND PERTINENT DATA NEEDED OR REQUESTED BY THE ARCHITECT IN ORDER TO PREPARE PLANS AND SPECIFICATIONS.

18. <u>OWNER'S INSURANCE:</u>
THE OWNER SHALL EFFECT AND MAINTAIN ALL INSURANCE COVERAGES AS REQUIRED.
ALL INSURANCE DESCRIBED HEREIN IS A RECOMMENDED MINIMUM. MORE COVERAGE MAY BE NEEDED.

19. <u>VISITING THE SITE:</u>
THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE CONDITIONS THAT EXIST. THE CONTRACTOR SHALL INFORM THE OWNER AND ARCHITECT OF ANY CONDITIONS WHICH ARE NOT COVERED BY THE WORKING DRAWINGS OR SPECIFICATIONS OR DISCREPANCIES IN EXISTING CONDITIONS.

20. <u>LAYOUT OF WORK:</u>
A SURVEY IS TO BE MADE AVAILABLE FROM THE OWNER TO THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL LAY OUT THE WORK AND ESTABLISH ELEVATIONS, ACCURATELY MARKED ON SUBSTANTIAL BATTER BOARDS.

21. <u>MEASUREMENTS AND DIMENSIONS:</u>
MEASUREMENTS AND DIMENSIONS, INDICATED ON THE DRAWINGS ARE NOMINAL. THEY SHALL BE ADHERED TO WHEREVER PRACTICAL. MAJOR DEVIATIONS IN DIMENSIONS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE PROCEEDING WITH WORK. PRIOR TO CONTRACTOR'S PURCHASE OF ANY BUILT-IN EQUIPMENT OR CABINETS, THE CONTRACTOR IS TO TAKE FIELD DIMENSIONS AND SHALL BE RESPONSIBLE FOR THEIR CORRECTNESS.

22. <u>TAXES:</u>
THE CONTRACTOR IS LIABLE FOR ALL STATE AND FEDERAL EMPLOYER'S AND EMPLOYEE'S TAXES, SALES TAXES AND WITHHOLDING TAXES.

23. <u>GUARANTEE:</u>
THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE BUILDING AND A CERTIFICATE OF OCCUPANCY IS OBTAINED.

24. <u>CONTRACT DRAWINGS:</u>
THE CONTRACT DRAWINGS, WHICH ACCOMPANY AND FORM A PART OF THESE DOCUMENTS ARE ATTACHED HEREINAFTER. THE CONTRACT DRAWINGS DO NOT SHOW ALL THE DETAILS OF THE WORK AND ARE INTENDED ONLY TO ILLUSTRATE THE CHARACTER AND EXTENT OF THE WORK TO BE PERFORMED. ACCORDINGLY, THEY MAY BE SUPPLEMENTED DURING THE PERFORMANCE OF THE WORK BY THE ARCHITECT OR BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT TO THE EXTENT NECESSARY TO FURTHER ILLUSTRATE THE WORK AND SHALL, AT ALL TIMES, REMAIN THE POSSESSION OF THE ARCHITECT.

25. <u>ADDITIONAL DRAWINGS:</u>
THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS WHICH MAY BE NECESSARY OR REQUIRED. THE SIZE OF THE DRAWINGS, THE NUMBER OF COPIES AND THE DETAILS TO BE SHOWN THEREON SHALL BE AS APPROVED BY THE OWNER IN ADVANCE OF THEIR PREPARATION. BEFORE ISSUING ANY SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT PRINTS THEREOF, INCLUDING THE REQUIRED NUMBER OF REVISED PRINTS, UNTIL THE DRAWINGS ARE APPROVED BY THE OWNER. AFTER APPROVAL THEREOF, NO CHANGE SHALL BE MADE THEREON UNLESS APPROVED, IN WRITING, BY THE OWNER. TRACINGS OF SHOP DRAWINGS SHALL BE DELIVERED TO THE OWNER PRIOR TO FINAL PAYMENT.

26. <u>LAWS AND ORDINANCES:</u>
IN ORDER TO EFFECTUATE THE WORK PROPERLY, THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE, MUNICIPAL AND DEPARTMENTAL LAWS, CODES ORDINANCES, RULES, REGULATIONS AND ORDERS WHICH WOULD AFFECT THE WORK AND ITS PERFORMANCE AND THOSE ENGAGED THEREIN. THE WORK IS TO CONFORM WITH ALL GOVERNING BUILDING CODES, AND ZONING REQUIREMENTS AND THOSE ENGAGED THEREIN ARE DIRECTED TO MEET THOSE ENDS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECTS IMMEDIATELY.

27. <u>APPROVALS:</u>
ANY APPROVAL BY THE ARCHITECT OR ANYTHING DONE OR PROPOSED TO BE DONE BY THE CONTRACTOR SHALL BE CONSTRUED MERELY TO MEAN THAT AT THAT TIME THE ARCHITECT KNOWS OF NO GOOD REASON FOR OBJECTING TO THERETO: AND NO SUCH APPROVAL SHALL RELIEVE THE CONTRACTOR FROM HIS FULL RESPONSIBILITY FOR THE COMPLETE AND ACCURATE PERFORMANCE OF THE WORK IN ACCORDANCE HEREWITH OR FROM ANY DUTY, OBLIGATION OR LIABILITY IMPOSED UPON HIM BY THE CONTRACT OR FROM RESPONSIBILITY FOR INJURIES TO PERSONS OR DAMAGE TO PROPERTY.

28. <u>CONTRACTOR'S REPRESENTATIVE:</u>
DURING THE PERFORMANCE OF ANY WORK AT THE SITE, THE CONTRACTOR SHALL HAVE A REPRESENTATIVE PRESENT WHO SHALL BE AUTHORIZED BY THE CONTRACTOR TO SUPERVISE THE WORK AND BE RESPONSIBLE FOR SAFELY CONDUCTING OPERATIONS AND ACTIVITIES. THE SUPERVISOR SHOULD BE DEDICATED TO THE PROJECT FOR ITS DURATION AND NOT BE REPLACED WITHOUT 30 DAYS NOTICE TO THE OWNER.

29. <u>INSPECTIONS:</u>
ALL CONTROLLED INSPECTIONS SHALL BE PERFORMED BY THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PROVIDE THE REQUIRED NOTICE FOR SAME AND BE PRESENT FOR ALL SUCH INSPECTIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE PERSON DESIGNATED, WITH AMPLE NOTICE, TO MAKE SUCH INSPECTIONS.

REPORTS OF ALL INSPECTIONS OF MATERIALS AND REQUIRED TESTS SHALL BE FILED WITH THE OWNER WITH A SIGNED STATEMENT BY THE PERSON DESIGNATED FOR SUCH INSPECTION BEFORE FINAL PAYMENT.

INSPECTIONS INCLUDE BUT SHALL NOT BE LIMITED TO:

A. SUB SOIL TEST
B. INSPECTION OF SUB-GRADE PRIOR TO INSTALLATION OF ANY FOOTINGS.
C. PLACEMENT OF CONCRETE MATERIALS FOR STRUCTURAL ELEMENTS
D. FOUNDATIONS
E. STRUCTURAL STEEL
F. LIGHT GAUGE METAL FRAMING
G. FIRE STOPPING FOR PENETRATIONS
H. ELECTRICAL, PLUMBING AND MECHANICAL.

30. <u>FINAL INSPECTION:</u>
WHEN, IN THE OPINION OF THE CONTRACTOR, THE WORK IS COMPLETED AND READY FOR FINAL INSPECTION, HE SHALL NOTIFY THE OWNER AND BUILDING DEPARTMENT OFFICIAL AND THE OWNER EITHER IN PERSON OR BY A DESIGNATED REPRESENTATIVE, WILL INSPECT THE WORK. BEFORE A CERTIFICATE OF FINAL COMPLETION WILL BE ISSUED BY THE OWNER AND BUILDING DEPARTMENT OFFICIALS, ANY DEFECTS OR OMISSIONS NOTED ON THIS INSPECTION MUST BE MADE GOOD BY THE CONTRACTOR.

31. <u>SURVEYS:</u>
FINAL SURVEY - AN ACCURATE AND COMPLETE PROPERTY SURVEY, MADE AND SEALED BY A PROFESSIONAL LICENSED LAND SURVEYOR, MAY BE REQUIRED. AFTER COMPLETION OF ALL WORK, THIS SURVEY MAY BE REQUIRED TO SHOW LOCATION OF NEW WORK, ELEVATION OF FLOOR LEVELS, ELEVATIONS OF FINISHED GRADES AND ELEVATIONS AT PROPERTY LINE INTERSECTIONS, LOCATION AND BOUNDARIES OF THE LOT, AND ALL BUILDINGS. IF MUNICIPAL OR OTHER AGENCIES REQUIRE SUCH A SURVEY, IT SHALL BE ORDERED BY THE CONTRACTOR AND PAID FOR BY THE OWNER.

THE CONTRACTOR SHALL PROTECT AREAS ADJACENT TO THE WORK AND SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE AND BUILDING IN A NEAT, CLEAN AND SAFE CONDITION AND SHALL, AT COMPLETION OF THE JOB, TURN OVER THE SITE AND BUILDING TO THE OWNERS IN A CONDITION SUITABLE TO MOVE IN, ALL SURFACES SHALL BE CLEAN AND READY FOR FURNISHING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE MAINTENANCE OF THE BUILDING AND ITS FACILITIES AND IS RESPONSIBLE FOR CONSTRUCTING THE WORK ACCORDING TO PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, CONDITIONS, NOTES, WORK, ETC. AT THE JOB SITE <u>BEFORE</u> ANY WORK IS STARTED, BE RESPONSIBLE FOR SAME AND REPORT ANY AND ALL DISCREPANCIES TO THE ARCHITECT <u>BEFORE</u> WORK IS STARTED WITH AMPLE TIME FOR CHANGES TO BE MADE.

ALL PLANS ARE REQUIRED TO HAVE THE APPROVAL OF THE MUNICIPAL AUTHORITIES AND OTHER AGENCIES. THE PLANS ARE SUBJECT TO REVIEW AND COMMENT <u>PRIOR TO COMMENCEMENT</u> OF CONSTRUCTION. THE ARCHITECT WILL SUPPLY THREE (3) COPIES OF SIGNED AND SEALED SETS OF PLANS FOR THE CONTRACTOR TO PRESENT TO MUNICIPAL AUTHORITIES. NO WORK IS TO BE DONE UNTIL A BUILDING PERMIT IS OBTAINED.

32. <u>CHANGES TO THE BUILDING DESIGN:</u>

NO CHANGES ARE TO BE MADE TO THE BUILDING WHICH DEVIATE FROM THESE GENERAL CONDITIONS, TECHNICAL NOTES OR CONSTRUCTION DOCUMENTS, <u>WITHOUT</u> THE PRIOR APPROVAL OF THE ARCHITECT. IF THE CONTRACTOR OR OWNER PROCEED WITH ANY CHANGES WITHOUT PRIOR APPROVAL BY THE ARCHITECT THEY WILL DO SO AT THEIR OWN RISK AND SUCH CHANGES MAY REQUIRE REMOVAL.

33. <u>WORK INCLUDED:</u>

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ALL WORK DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS.

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JUSTIN A. MIHALIK, AIA NY LIC. #: 27468

Lightbridge Academy
Innovators in Educational Child Care

<u>PROJECT</u>:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

<u>LEGAL DESCRIPTION</u>:
BLOCK: 1 , LOT: 91

<u>OWNER</u>
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
GENERAL CONDITIONS SHEET

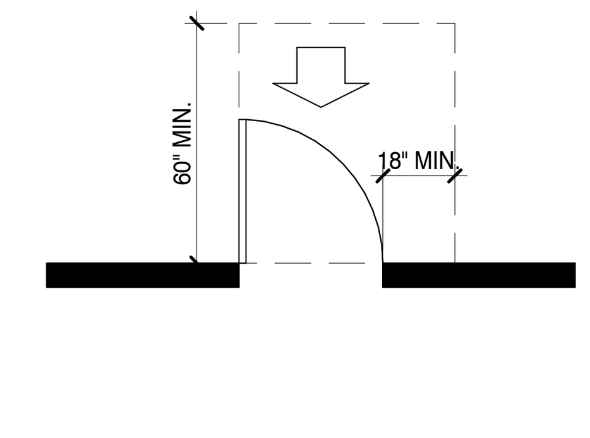
Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER:	2019-01.15
DATE:	07/23/2019
DRAWN BY:	OS/KM
CHECKED BY:	JAM/KM

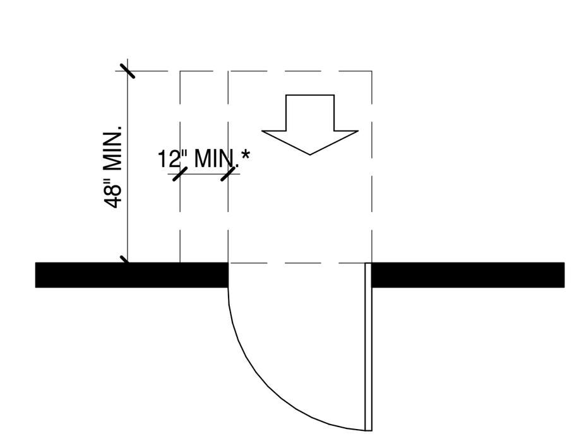
SHEET NO.
G001

MANEUVERING CLEARANCES

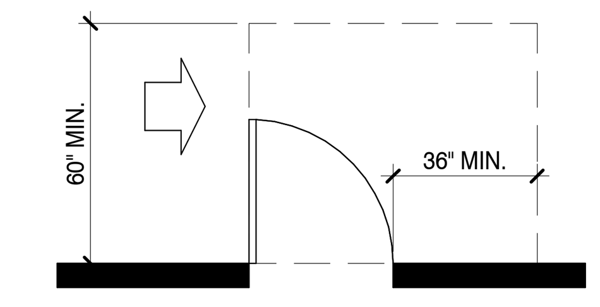
SCALE: 1/4" = 1'-0"



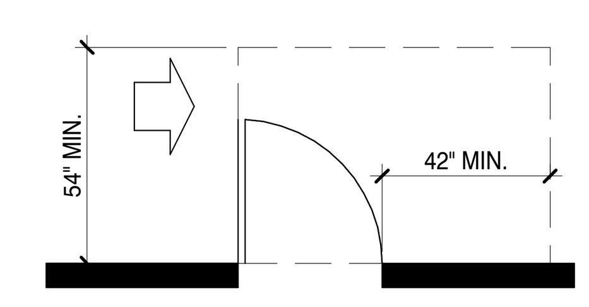
(a) FRONT APPROACH, PULL SIDE



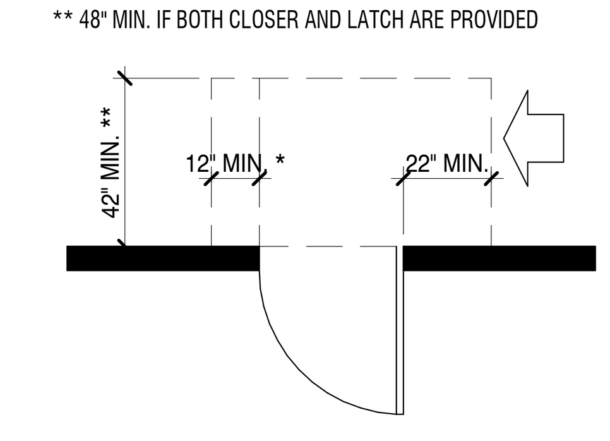
(b) FRONT APPROACH, PUSH SIDE



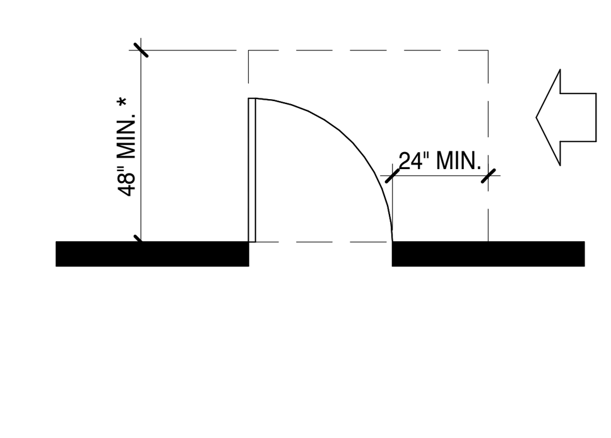
(c) HINGE APPROACH, PULL SIDE



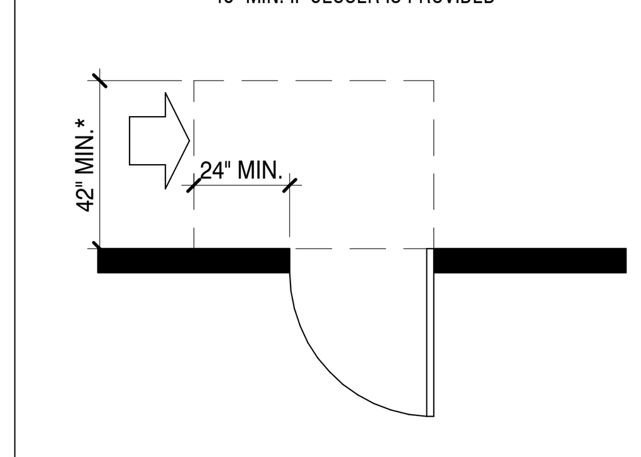
(d) HINGE APPROACH, PULL SIDE



(e) HINGE APPROACH, PUSH SIDE



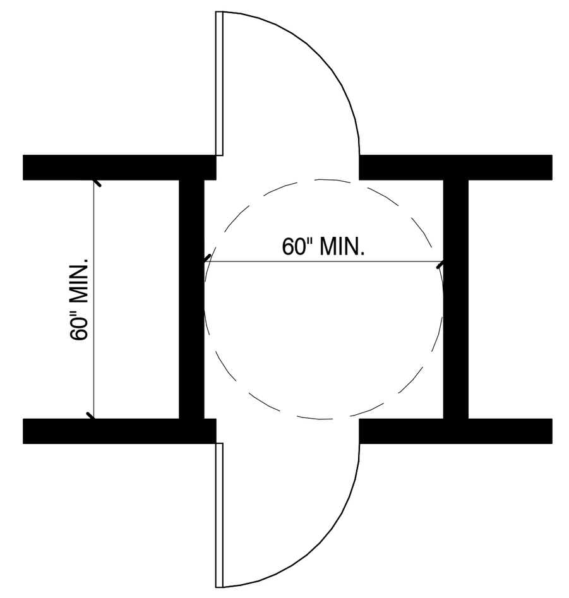
(f) LATCH APPROACH, PULL SIDE



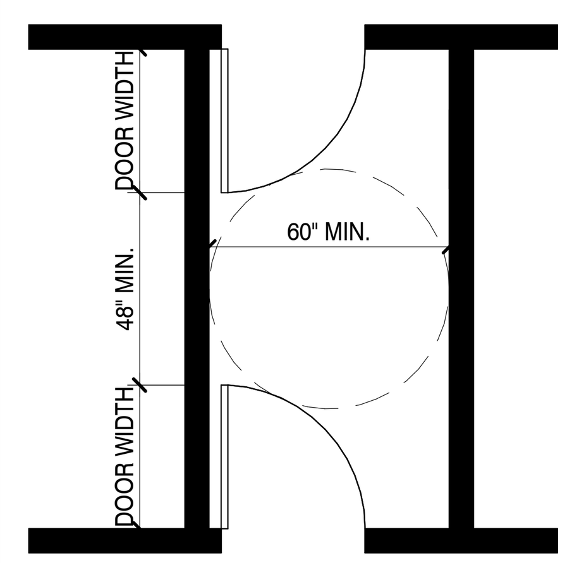
(g) LATCH APPROACH, PUSH SIDE

FIGURE 404.2.3.2

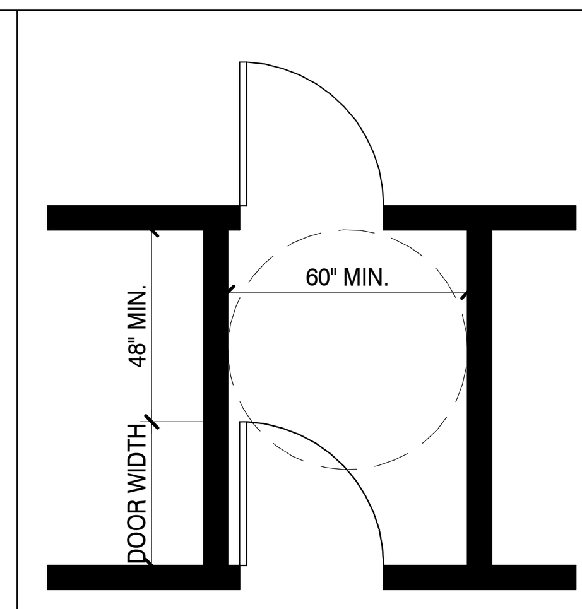
MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS



PLAN (a)



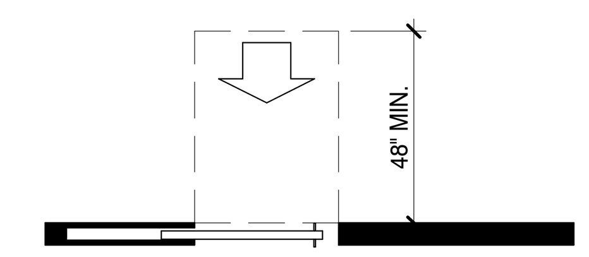
PLAN (b)



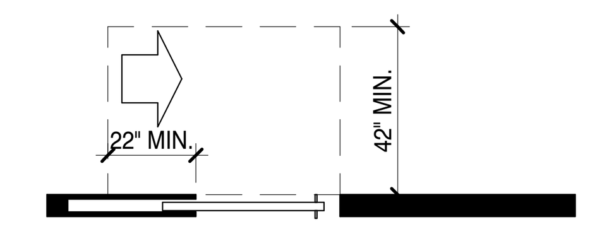
PLAN (c)

FIGURE 404.2.5.

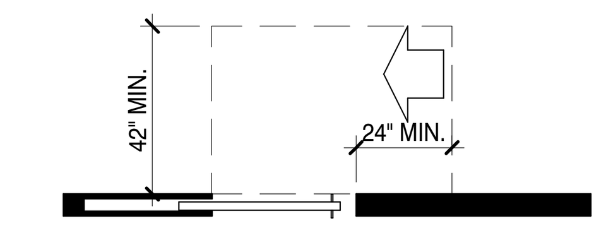
TWO DOORS IN A SERIES



(a) FRONT APPROACH



(b) POCKET OR HINGE APPROACH



(c) STOP OR LATCH APPROACH

MANEUVERING CLEARANCE AT SLIDING AND FOLDING DOORS

TOILET ROOM, FIXTURES AND ACCESSORIES

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

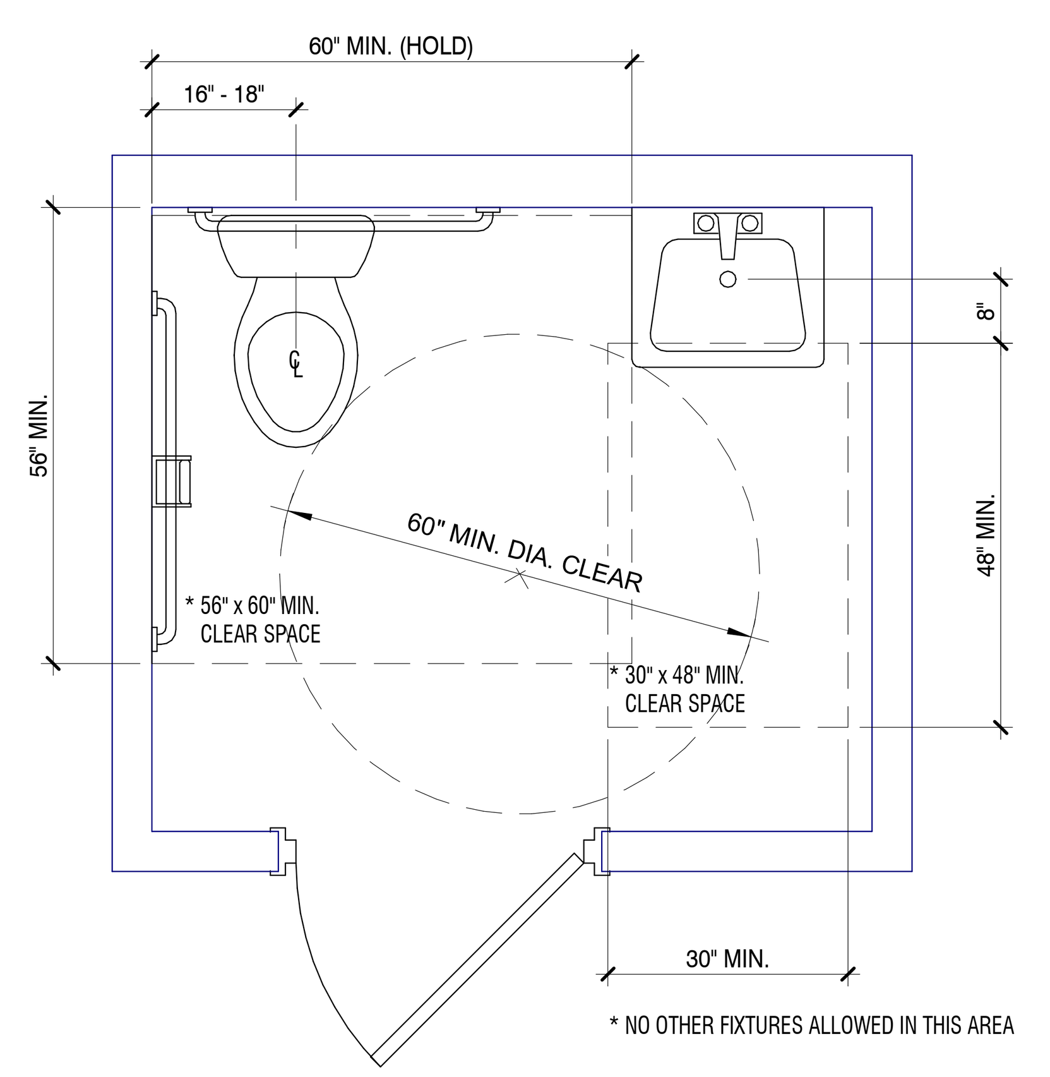


FIGURE 604.3
CLEARANCE FOR WATER CLOSET

FIGURE 305.3 & 306.3
CLEARANCE FOR LAVATORY

FIGURE 604.2 (a)
WATER CLOSET LOCATION

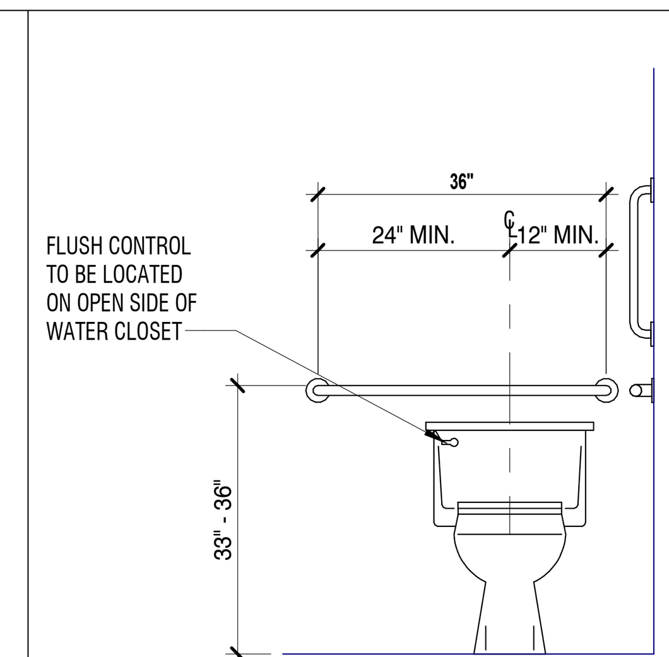


FIGURE 604.5.2 SECTION 609.4.1

REAR WALL GRAB BAR FOR WC

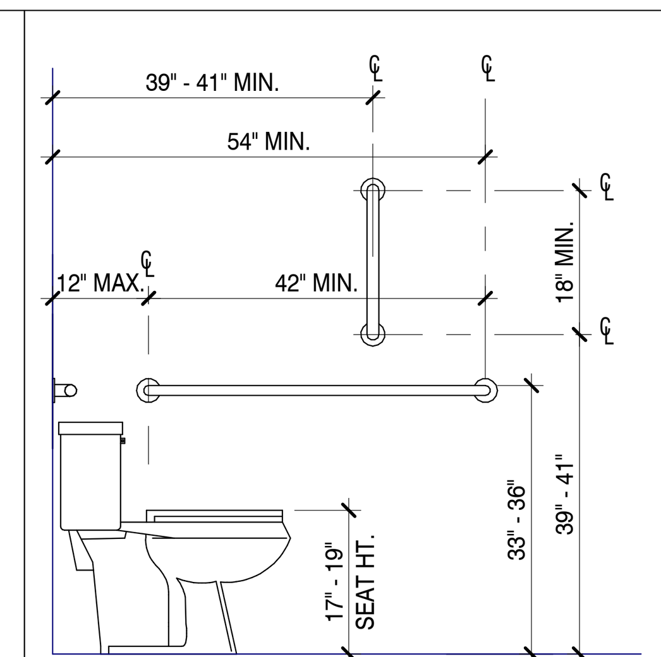


FIGURE 604.5.1 SECTION 609.4.4

SIDE WALL GRAB BAR FOR WC
WATER CLOSET SEAT HEIGHT

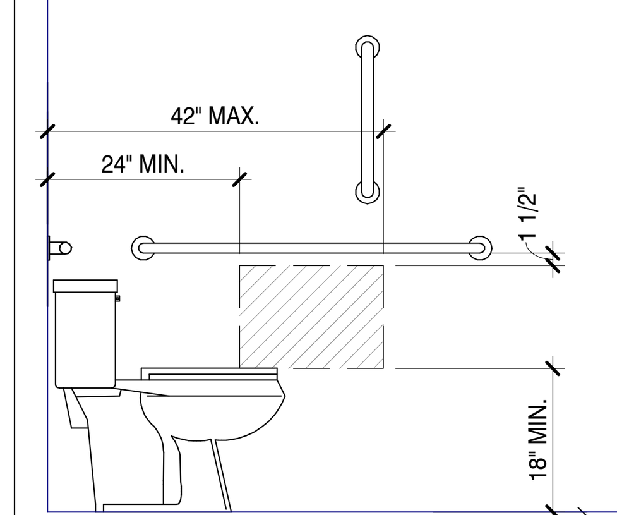


FIGURE 604.7(a)

DISPENSER OUTLET LOCATION

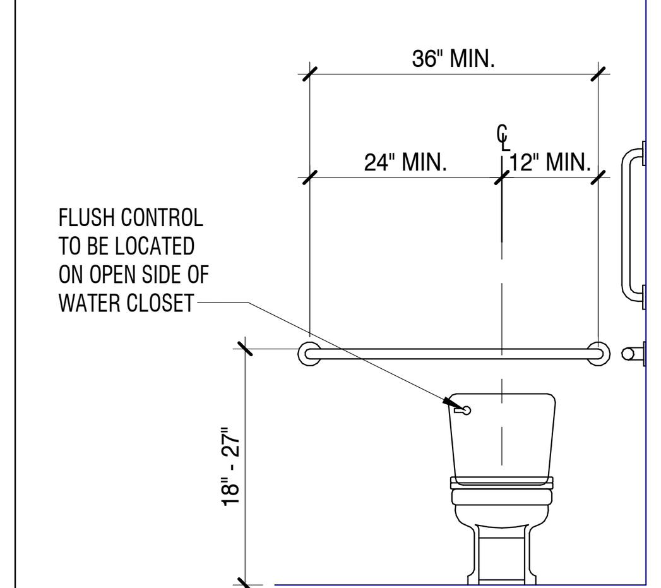


FIGURE 609.4.2 SECTION 609.4.1

CHILDREN'S POSITION FOR GRAB BAR

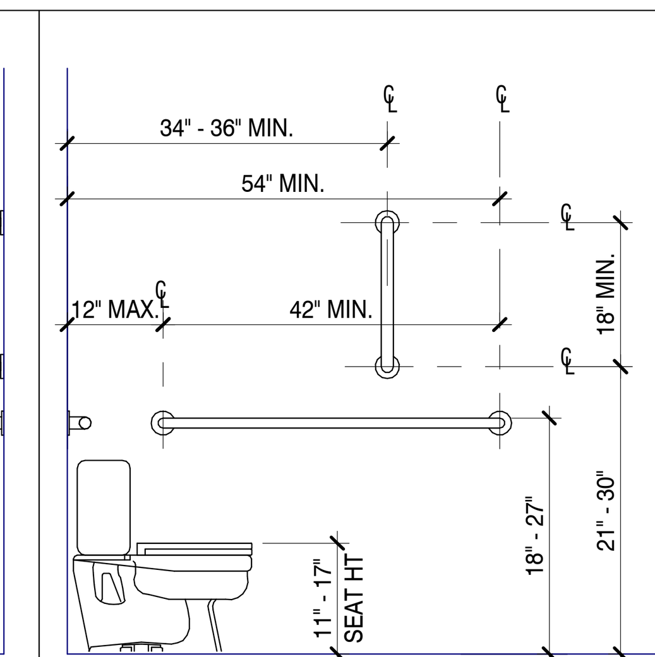


FIGURE 609.4.2 SECTION 604.11.4

CHILDREN'S POSITION FOR GRAB BAR

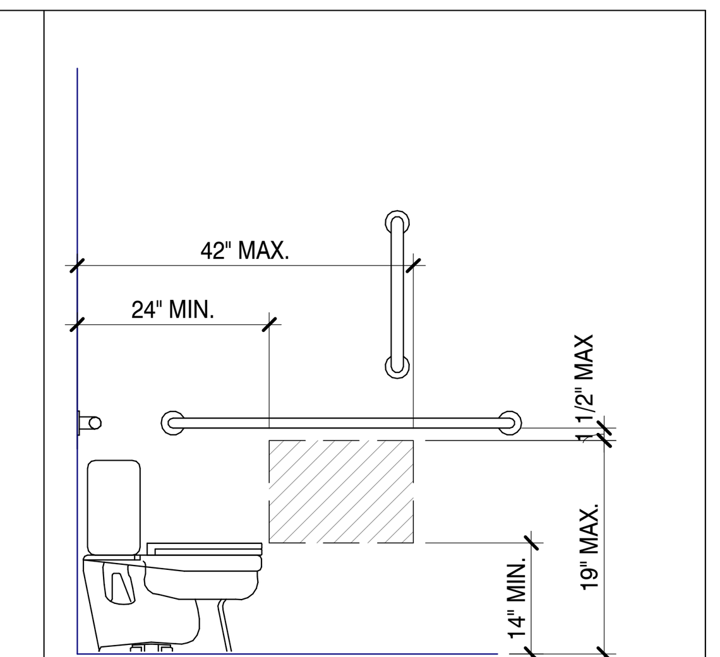
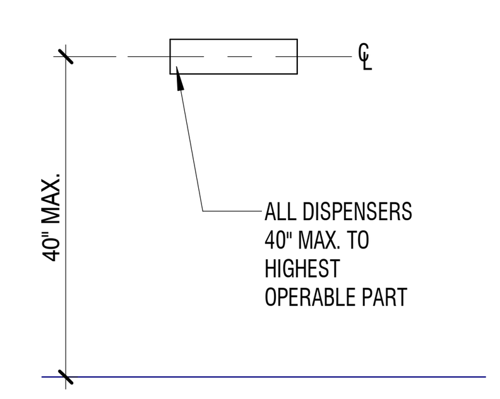


FIGURE 604.11.7

CHILDREN'S DISPENSER OUTLET LOCATION



DISPENSER HEIGHT

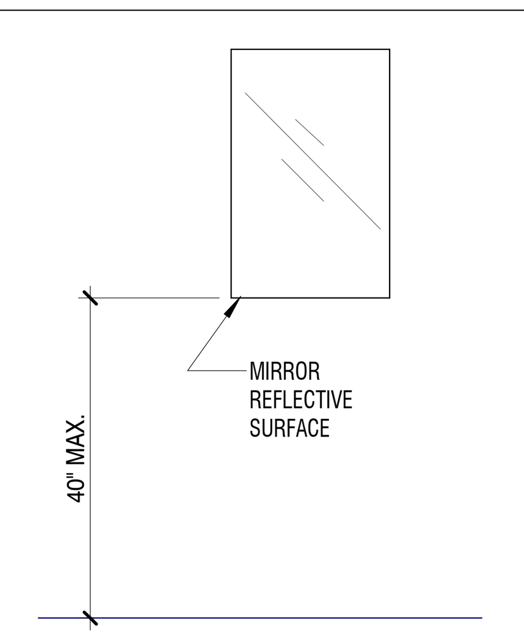


FIGURE 603.3

MIRROR LOCATION

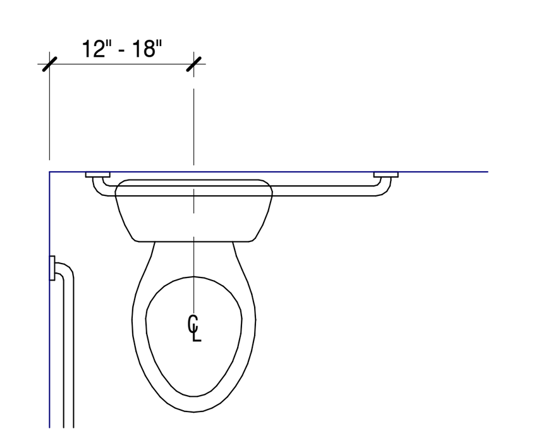


FIGURE 604.11.2

CHILDREN'S WATER CLOSET LOCATION

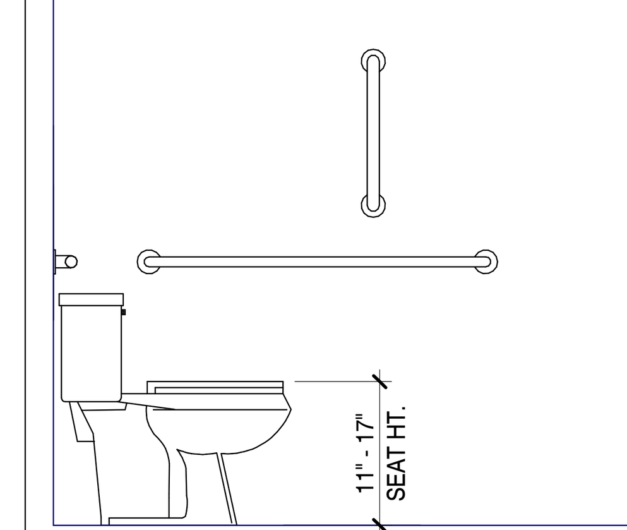


FIGURE 604.11.4

CHILDREN'S WATER CLOSET HEIGHT

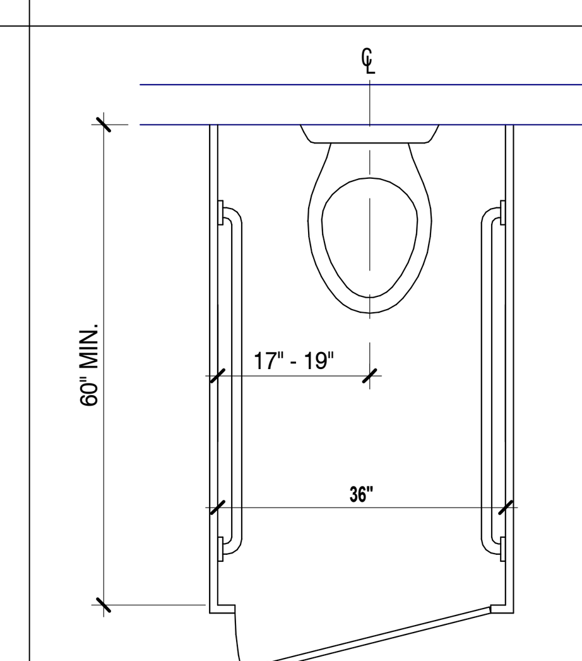


FIGURE 604.10

AMBULATORY ACCESSIBLE COMPARTMENT

1. DIMENSIONS SHOWN DESCRIBE MINIMUM REQUIREMENTS ONLY. REFER TO CONSTRUCTION DOCUMENTS FOR SIZE AND LOCATIONS FOR SPECIFIC FIXTURES AND ACCESSORIES

2. REPORTED MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO HIGHEST OPERABLE CONTROL.

NOTES

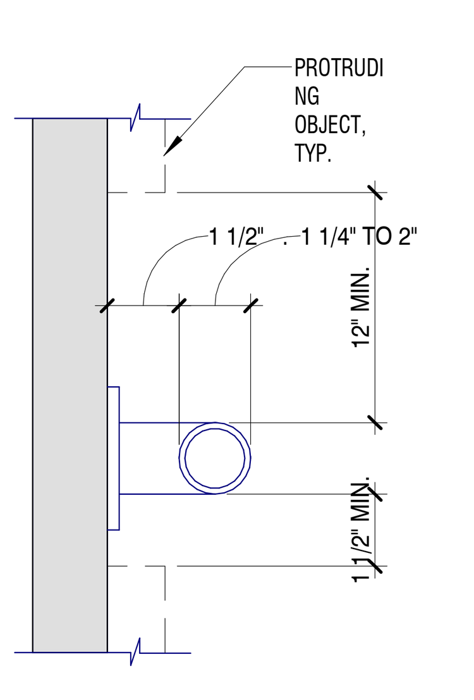


FIGURE 609.2(a) & 609.3

SIZE AND SPACING OF GRAB BARS

PLAN (a)

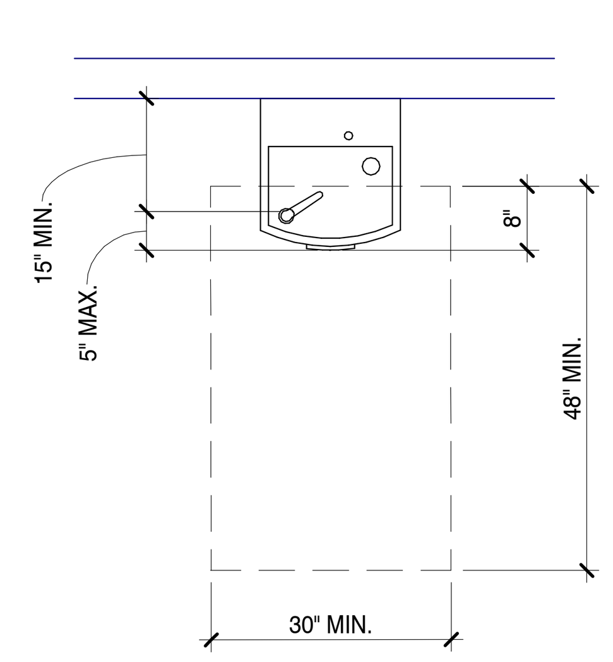


FIGURE 602.5(a)

DRINKING FOUNTAIN SPOUT LOCATION

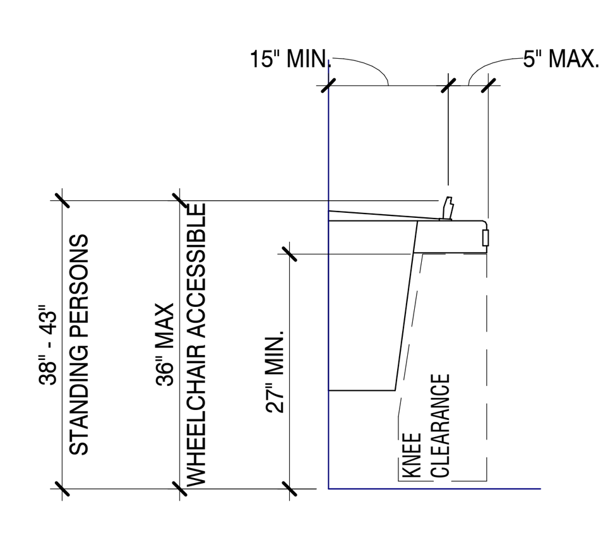


FIGURE 602.5(b)

DRINKING FOUNTAIN SPOUT LOCATION

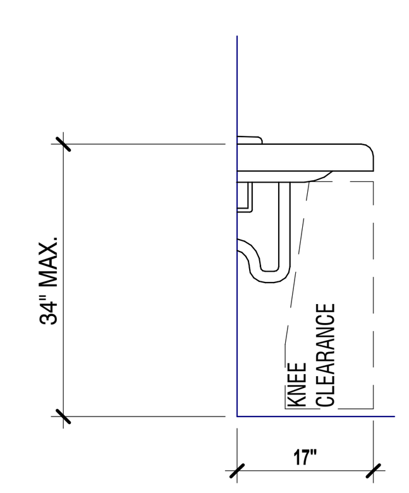


FIGURE 606.3(b)

HEIGHT OF LAVATORIES AND SINKS

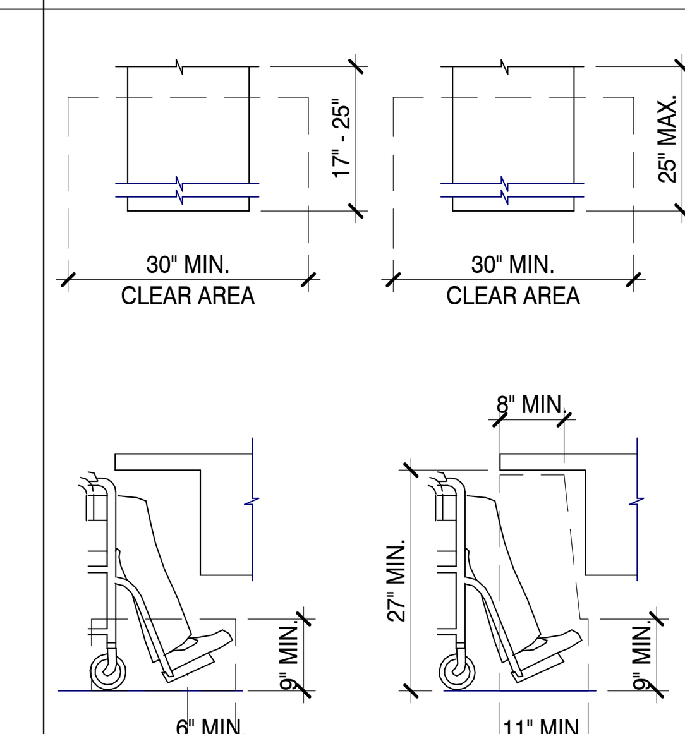
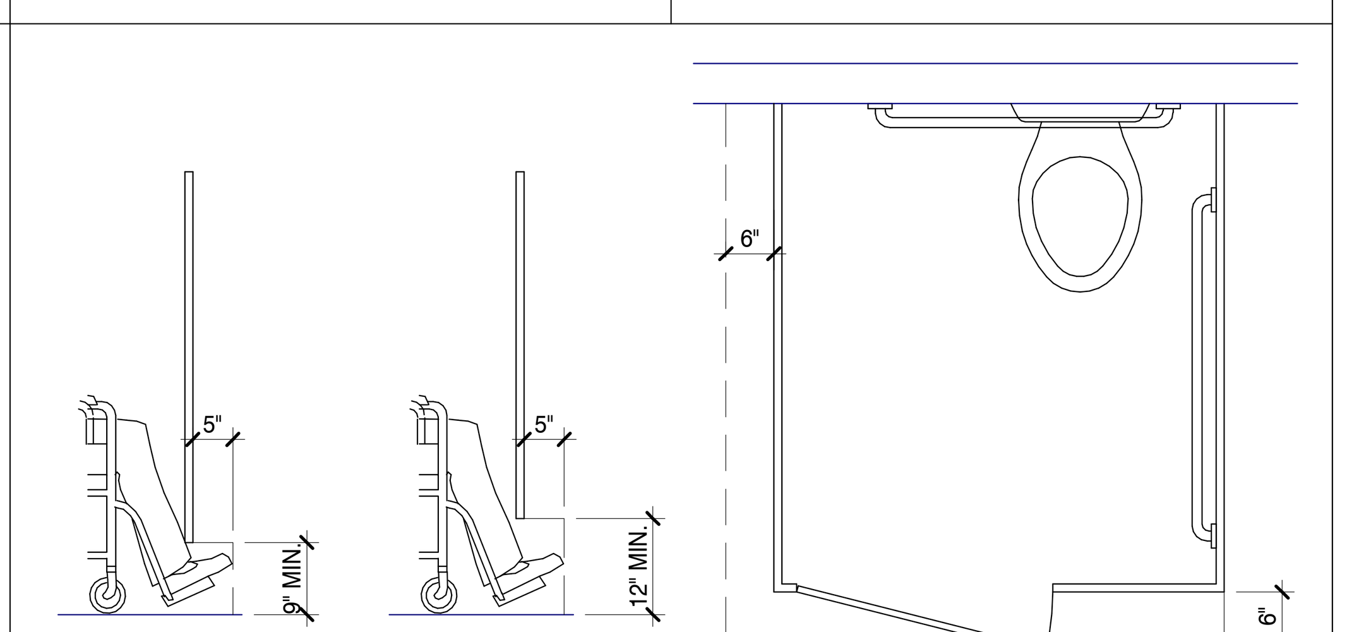


FIGURE 306.2 — TOE CLEARANCE

FIGURE 306.3 — KNEE CLEARANCE



(a) ELEV - ADULT

(b) ELEV - CHILDREN

(c) PLAN

FIGURE 604.9.5

WHEELCHAIR ACCESSIBLE
COMPARTMENT TOE CLEARANCE

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JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy — Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
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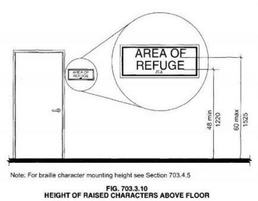
SHEET TITLE:
ACCESSIBILITY SHEET

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

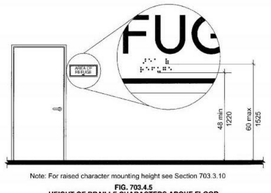
JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
G002



Note: For braille character mounting height see Section 703.4.5

FIG. 703.3.10
HEIGHT OF RAISED CHARACTERS ABOVE FLOOR



Note: For raised character mounting height see Section 703.3.10

FIG. 703.4.5
HEIGHT OF BRAILLE CHARACTERS ABOVE FLOOR

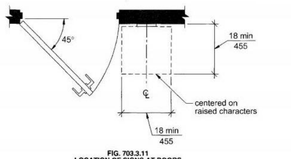
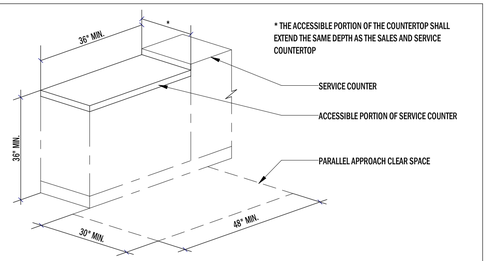


FIG. 703.3.11
LOCATION OF SIGNS AT DOORS

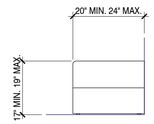
BRAILLE SIGNAGE DETAIL

N.T.S.

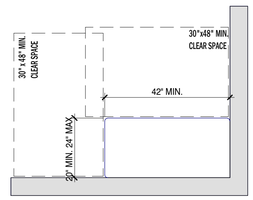


SECTION 904
ACCESSIBLE PORTION OF SERVICE COUNTER

SERVICE COUNTER | SCALE: 1/2" = 1'-0"



SECTION 903 (b)
BENCH HEIGHT



SECTION 903 (a)
BENCH SIZES & OPTIONS FOR CLEAR FLOOR SPACES

BENCHES

BENCHES

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

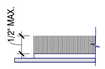


FIGURE 302.2

CARPET ON FLOOR SURFACES

FIGURE 303.2

CARPET ON FLOOR SURFACES

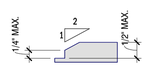


FIGURE 303.3 (a)

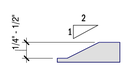
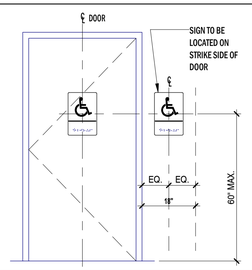


FIGURE 303.3 (b)

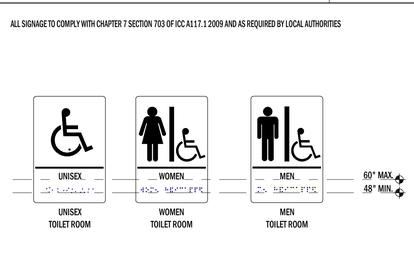
BEVELED CHANGES IN LEVEL

LEVEL CHANGES

SCALE: 6" = 1'-0"



TOILET ROOM SIGNAGE ELEVATION



UNISEX TOILET ROOM | WOMEN TOILET ROOM | MEN TOILET ROOM

TOILET ROOM SIGNAGE

SIGNS

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

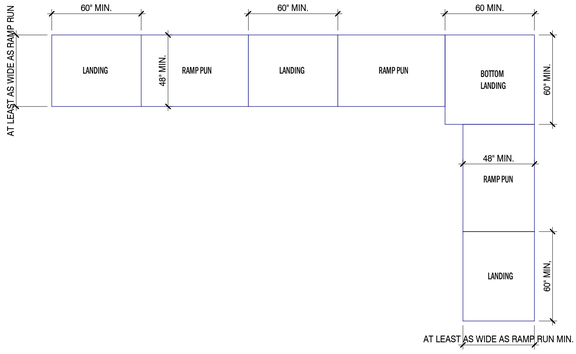


FIGURE 405.7 AND SECTION 405

RAMP LANDINGS

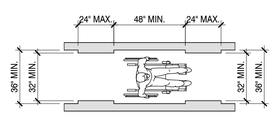


FIGURE 403.5

CLEAR WIDTH OF AN ACCESSIBLE ROUTE

ACCESSIBLE ROUTES

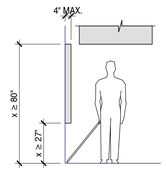


FIGURE 307.2

LIMITS OF PROTRUDING OBJECTS

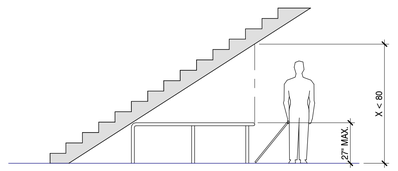


FIGURE 307.4

REDUCED VERTICAL CLEARANCE

PROTRUDING OBJECTS

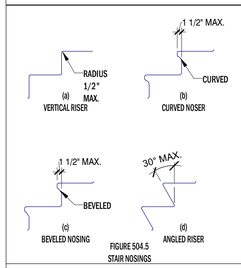


FIGURE 504.5
STAIR NOSINGS

STAIR NOSINGS

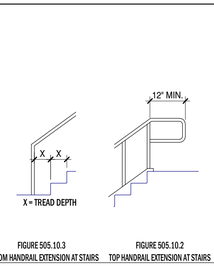


FIGURE 505.10.3
BOTTOM HANDRAIL EXTENSION AT STAIRS

FIGURE 505.10.2
TOP HANDRAIL EXTENSION AT STAIRS

STAIR HANDRAIL EXTENSIONS

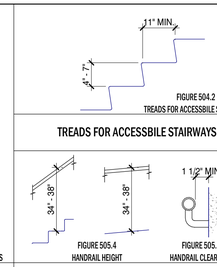


FIGURE 504.2
TREADS FOR ACCESSBILE STAIRWAYS

TREADS FOR ACCESSBILE STAIRWAYS

FIGURE 505.4
HANDRAIL HEIGHT

FIGURE 505.5
HANDRAIL CLEARANCE

HANDRAIL HEIGHT

STAIRS

JAM ARCH

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www.jam-arch.com

REGISTERED ARCHITECT JUSTIN ALLEN MIHALIK STATE OF NEW JERSEY 27468

JUSTIN A. MIHALIK, AIA LIC. #: 27468

Lightbridge Academy℠
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
ACCESSIBILITY SHEET

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER:	2019-01.15
DATE:	07/23/2019
DRAWN BY:	OS/KM
CHECKED BY:	JAM/KM

SHEET NO.
G003

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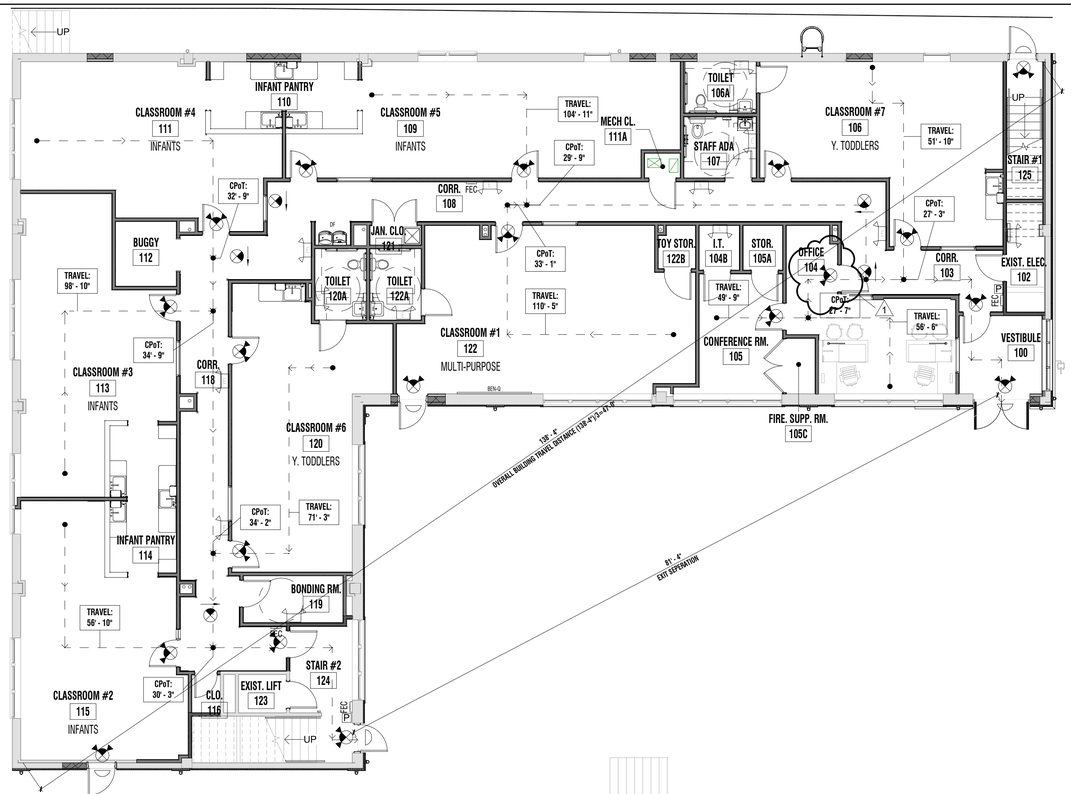
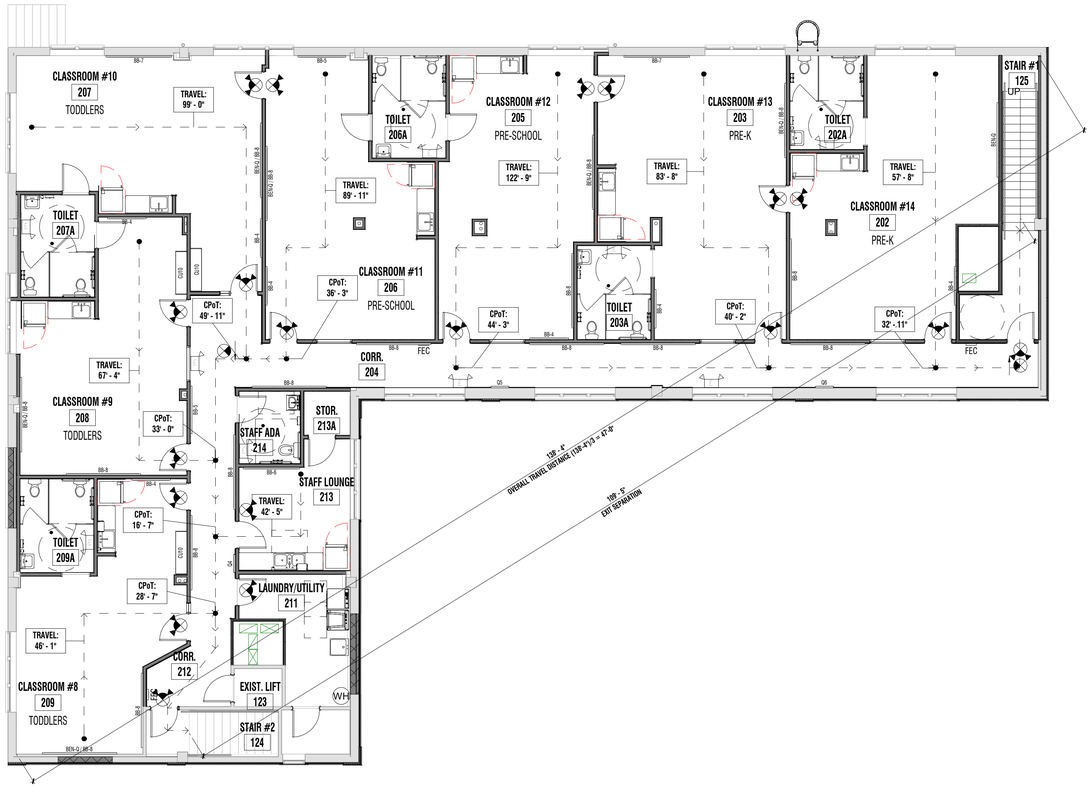


1 FIRST FLOOR LIFE SAFETY PLAN

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



2 SECOND FLOOR LIFE SAFETY PLAN

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

GENERAL NOTES

1 REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2 REFER TO DWG. G001 FOR GENERAL CONDITIONS.
3 REFER TO DWG. A101 & A102 FOR GROUND FLOOR AND UPPER FLOOR CONSTRUCTION PLANS.

MEANS OF EGRESS CODE NOTES:

Means of Egress
Occupant Load (Section 1004)
1. Refer to Licensing Chart on drawing G005. 139 Children + 31 Staff = 170 Occupancy.

Means of Egress Sizing (1005.3.2)
Other Egress = 0.2"
Number of Egress Doors = 4 x 36" = 144"
Number of Egress Doorways = 3
Number of Interior Stairways = 2
Max. Capacity = 144" / 0.2" = 720 persons
Actual Capacity = 170 persons, Design Complies

Electromagnetically locked egress doors (Section 1010.1.9.9)
1. Permitted

Exit And Exit Access Doorway Configuration (Section 1006.2.1)
1. Two exits or exit access doorways from any space is required where occupant load exceeds 10.
2. Section 1007.1.1. Where two exits are required, exits shall be placed a distance apart equal to not less than one-third of the length of the maximum overall diagonal dimension of the area to be served measured in a straight line between them. (Exception #2)
Calculation:
a. First Floor Building diagonal distance = 138'-4" / 3 = 47'-0" minimum distance between exit doors, 81'-4" provided. Design complies.
a. Second Floor Building diagonal distance = 138'-4" / 3 = 47'-0" minimum distance between exit doors, 109'-5" provided. Design complies.

Exit Access Travel Distance (Section 1017)
1. Table 1017.2- Use Group I-4: 200 feet maximum travel distance.

Corridors (Section 1020)
1. Table 1020.1. 0 hour required when sprinklered.

LIFE SAFETY PLAN LEGEND

- TRAVEL: 1' - 0" — TRAVEL DISTANCE TAG / MEASURED DISTANCE
- CPoT: 1' - 0" — COMMON PATH OF TRAVEL TAG / MEASURED DISTANCE
- DEAD END: 1' - 0" — DEAD END TAG / MEASURED DISTANCE
- PATH OF TRAVEL
- EMERGENCY LIGHT W/ EXIT SIGN COMBO, W/ BATTERY BACKUP
- EXISTING EXIT SIGN WITH DIRECTIONALS
- NEW EXIT SIGN WITH DIRECTIONALS
- FEC — FIRE EXTINGUISHER CABINET
- P — PULL SWITCH

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SHEET TITLE:
LIFE SAFETY AND EGRESS FLOOR PLANS, LEGEND & NOTES

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1	1/19/2023	BLDG. DEPT. COMMENTS
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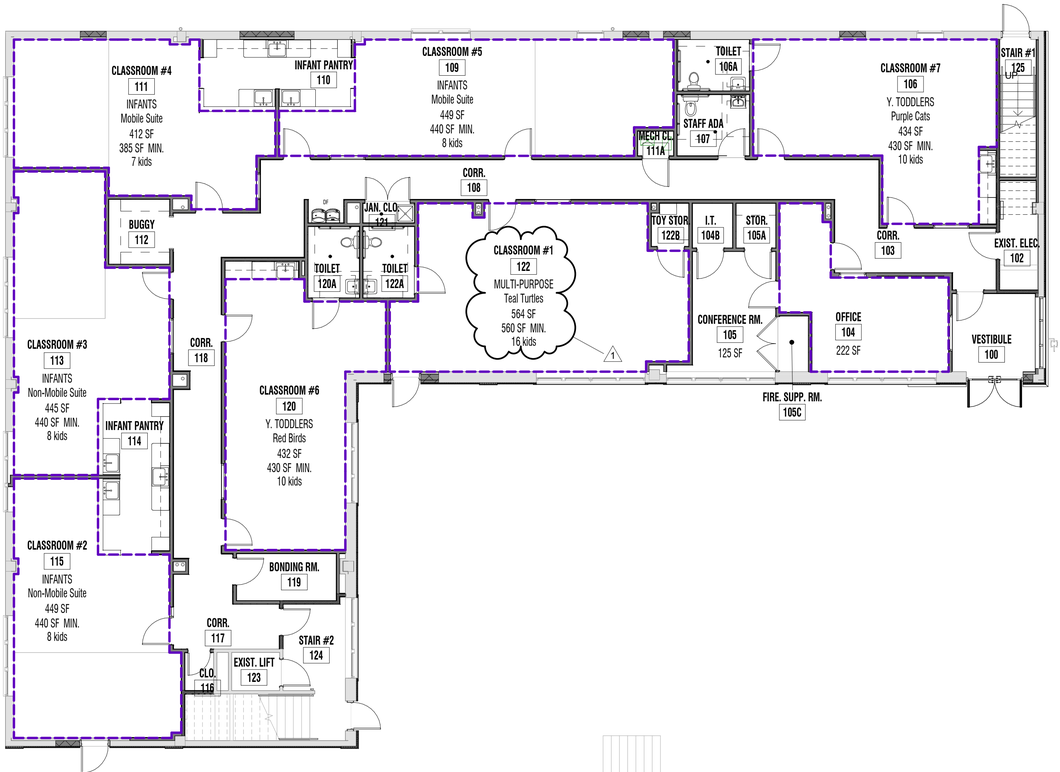
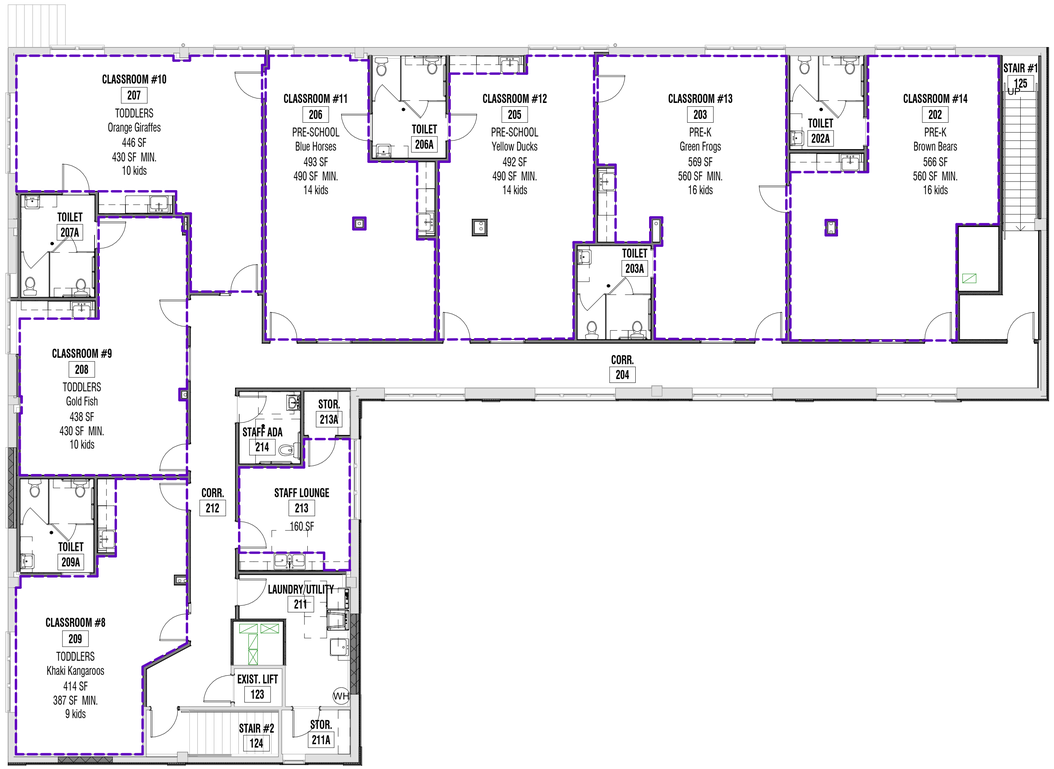


1 FIRST FLOOR LICENSING PLAN

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



2 SECOND FLOOR LICENSING PLAN

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

GENERAL NOTES

1 REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2 REFER TO DWG. G001 FOR GENERAL CONDITIONS.
3 REFER TO DWG. A101 & A102 FOR GROUND FLOOR AND UPPER FLOOR CONSTRUCTION PLANS.

TOTAL DAY CARE GROSS FLOOR AREA) = 14,520 SF

OCCUPANT LOAD CHART

	ROOM	ACTUAL AREA	REQUIRED AREA	AGE	TYPE	TEACHER: CHILD RATIO	MAX # OF CHILDREN	# OF STAFF
	OFFICE	222	-	-	-	-	-	3
	STAFF LOUNGE	160	-	-	-	-	-	-
	CLASSROOM #1	564	560	ALL	MULTI-PURPOSE	-	-	-
	CLASSROOM #2	449	440	6 WKS. TO 12 MONTHS	INFANTS	1:4	8	2
	CLASSROOM #3	445	440	6 WKS. TO 12 MONTHS	INFANTS	1:4	8	2
	CLASSROOM #4	412	385	12 TO 18 MONTHS	INFANTS	1:4	7	2
	CLASSROOM #5	449	440	12 TO 18 MONTHS	INFANTS	1:4	8	2
	CLASSROOM #6	432	430	18 TO 24 MONTHS	Y. TODDLERS	1:5	10	2
	CLASSROOM #7	434	430	18 TO 24 MONTHS	Y. TODDLERS	1:5	10	2
	CLASSROOM #8	414	387	2 YEARS	TODDLERS	1:5	9	2
	CLASSROOM # 9	438	430	2 YEARS	TODDLERS	1:5	10	2
	CLASSROOM #10	446	430	2 YEARS	TODDLERS	1:5	10	2
	CLASSROOM #11	493	490	3 YEARS	PRE-SCHOOL	1:7	14	2
	CLASSROOM #12	492	490	3 YEARS	PRE-SCHOOL	1:7	14	2
	CLASSROOM #13	569	560	4 YEARS	PRE-K	1:8	16	2
	CLASSROOM #14	566	560	4 YEARS	PRE-K	1:8	16	2
TOTALS							139	31

GROSS S.F. (MEASURED FROM OUTSIDE OF FOUNDATION WALL TO OUTSIDE OF FOUNDATION WALL)
BASED ON 35 S.F. / CHILD PER NEW YORK STATE COMAR REGULATIONS

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179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
LICENSING FLOOR PLANS, LEGEND & NOTES

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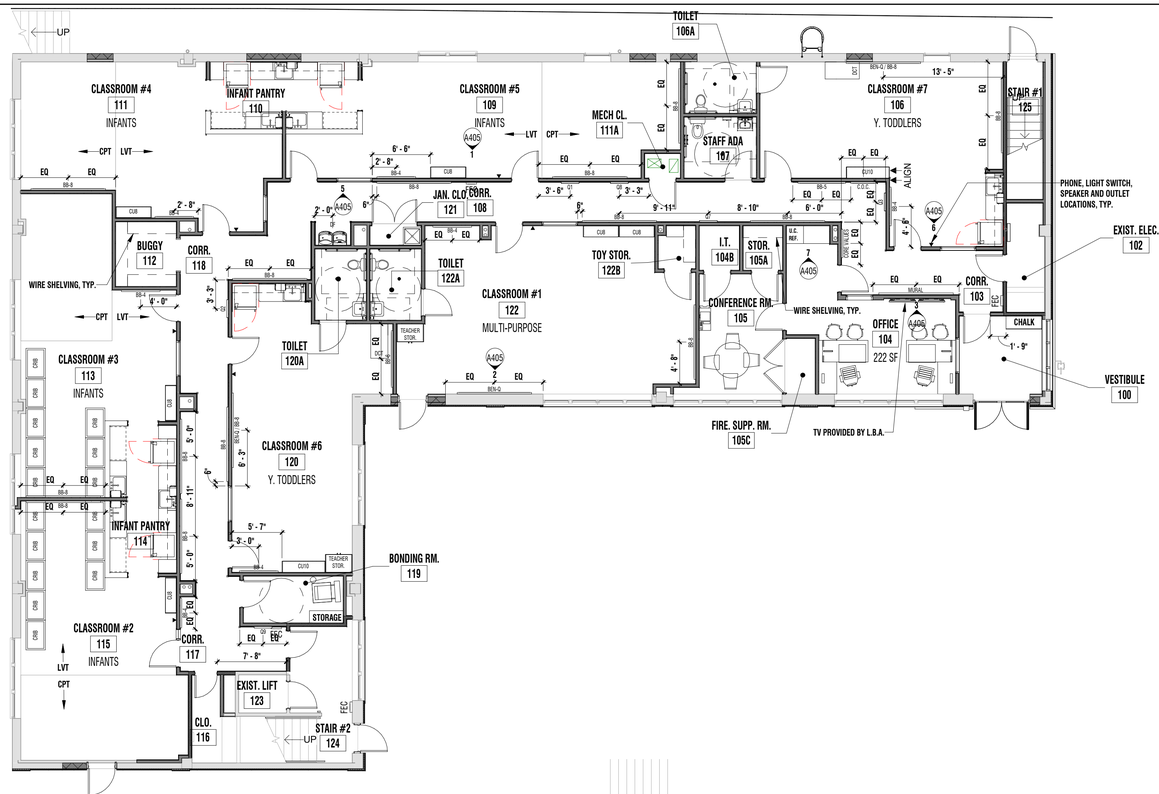
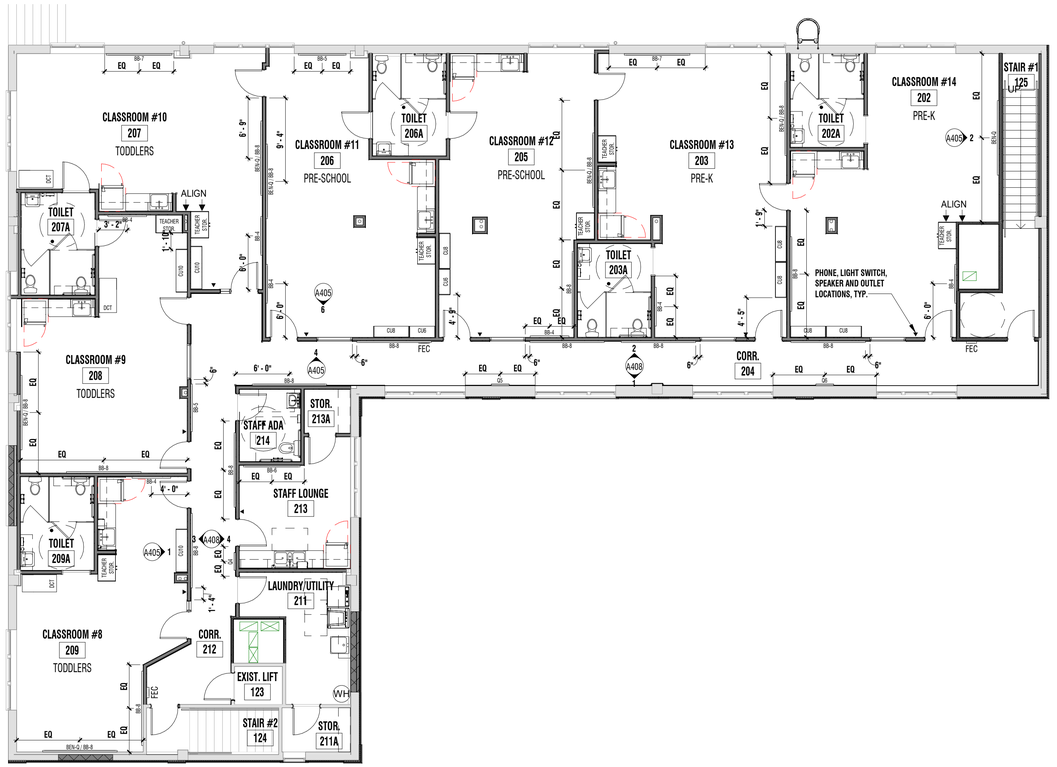


1 FIRST FLOOR FURNITURE PLAN

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



2 SECOND FLOOR FURNITURE PLAN

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

GENERAL NOTES - FURNITURE

1. REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2. REFER TO DWG. G001 & G002 FOR GENERAL CONDITIONS.
3. REFER TO DWG. A101 & A102 FOR CONSTRUCTION PLANS.
4. REFER TO DWG. A405 FOR CUBBIES AND EQUIPMENT
5. REFER TO DWG. A407 & A408 FOR CORRIDOR ELEVATIONS.
6. CONTRACTOR TO INSTALL ARTWORK. CONTRACTOR TO COORDINATE FINAL LOCATIONS WITH LIGHTBRIDGE ACADEMY. ARTWORK PROVIDED BY LIGHTBRIDGE ACADEMY.

FURNITURE LEGEND

BB-4	BULLETIN BOARD - 3'-3" X 4'
BB-'X'	BULLETIN BOARD ('X' = LENGTH OF BULLETIN BOARD IN FEET)
BEN-Q	INTERACTIVE WHITE BOARD
BEN-Q/B.B.	BULLETIN BOARD 3'-3" X 8' INSTALLED; WIRING FOR FUTURE INTERACTIVE BEN-Q BOARD INSTALLED
# = AMOUNT OF CUBBIES	
CUB	FLOOR-MOUNTED CUBBY UNIT
TEACHER STOR.	TEACHER STORAGE CABINET
CRIB	INFANT CRIB
DCT	DIAPER CHANGING TABLE
	REFRIGERATOR - PROVIDED BY L.B.A.
CORE VALUES	CORE VALUES
C.O.C.	CIRCLE OF CARE GRAPHIC
MURAL	MURAL
Q	QUOTE - SEE PROJECT MANUAL
CHALK	CHALK BOARD - 4' X 4'
	PAPER TOWEL HOLDER
	SOAP DISPENSER

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FURNITURE FLOOR PLANS & NOTES

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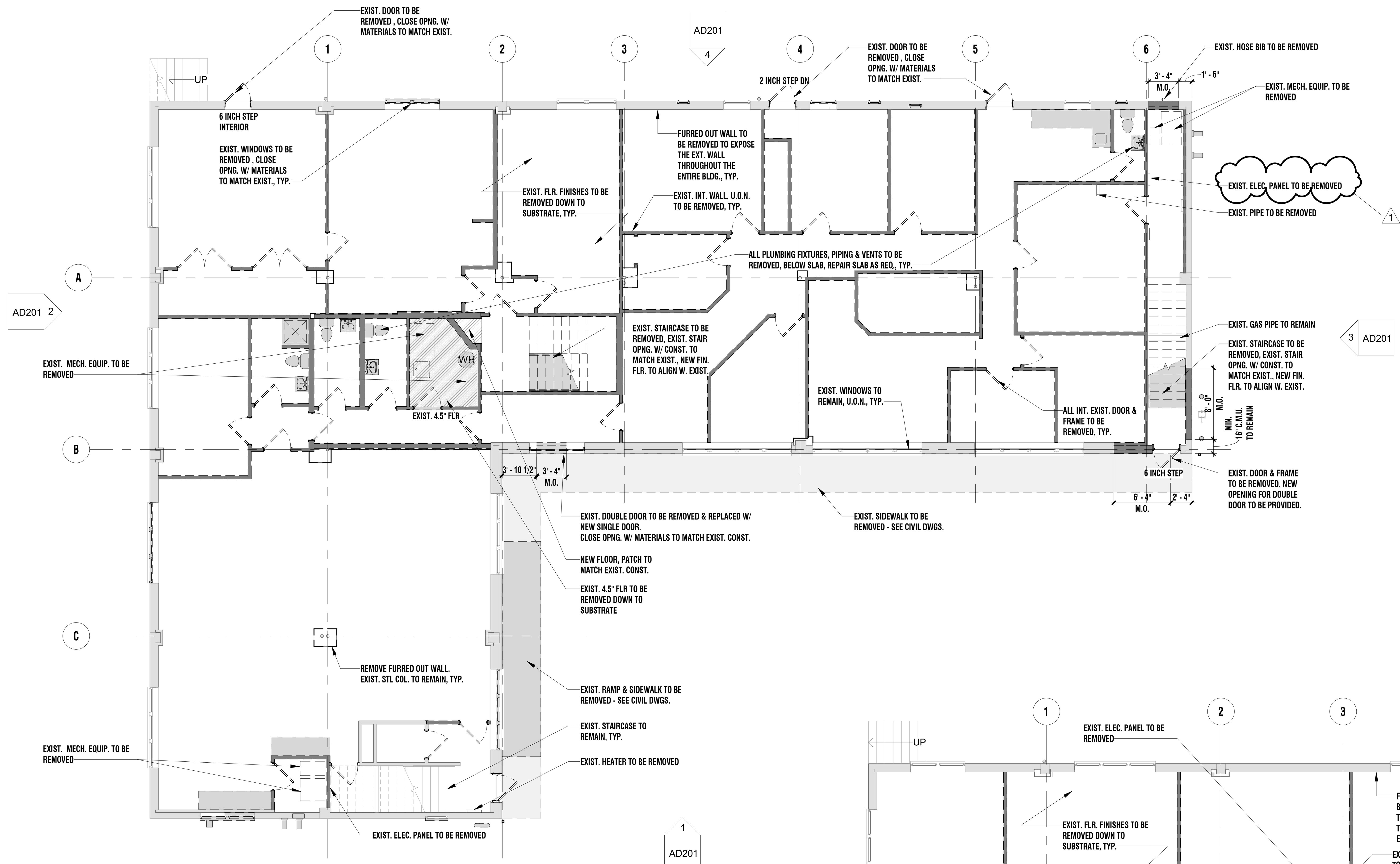
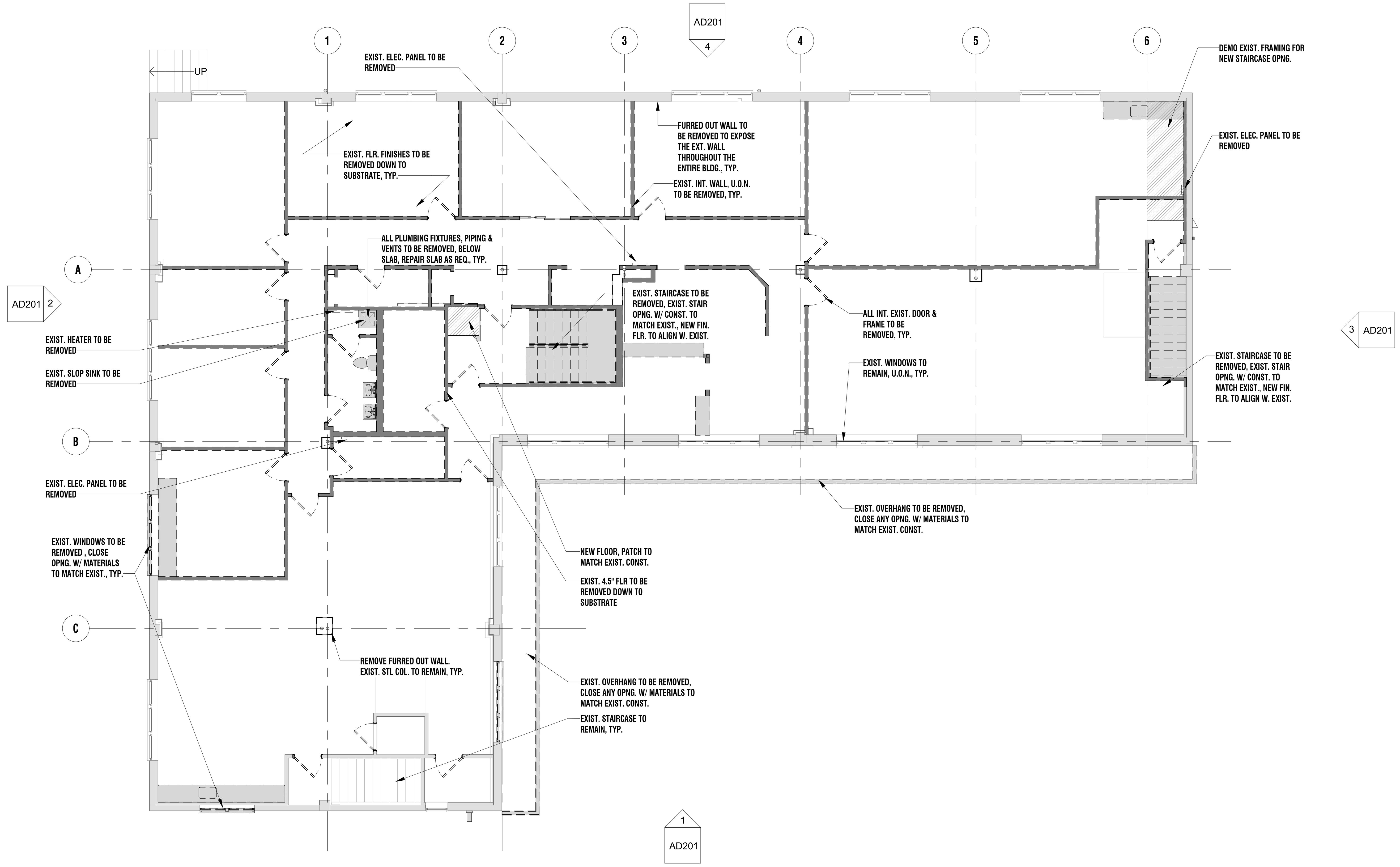


1 FIRST FLOOR REMOVALS

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



2 SECOND FLOOR REMOVALS

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

REMOVALS PLAN LEGEND

- EXIST. WALL OR PARTITION TO BE REMOVED
- EXIST. WALL OR PARTITION TO REMAIN
- EXISTING DOOR TO REMAIN REFER TO DOOR SCHEDULE FOR SCOPE OF WORK
- EXISTING DOOR TO BE REMOVED

GENERAL NOTES - REMOVALS

1. CONTRACTOR SHALL ASCERTAIN IF ANY HAZARDOUS MATERIAL OR WASTE, SUCH AS ASBESTOS, CONTAMINATED SOIL, ETC. EXISTS IN THE EXISTING BUILDING OR ON THE CONSTRUCTION SITE. ANY SUCH FINDING SHALL BE REPORTED IMMEDIATELY TO THE BUILDING OFFICIAL OF THE MUNICIPALITY, WHO SHALL ADVISE AND DIRECT THE CONTRACTOR ON LAWFUL PROCEDURES REGARDING THE HANDLING AND DISPOSAL OF ALL HAZARDOUS MATERIALS IN THE JURISDICTION.
2. REMOVAL WORK MAY COMMENCE ONLY AFTER ALL REQUIRED MUNICIPAL APPROVALS AND PERMITS HAVE BEEN OBTAINED, AND ALL ACTIVE UTILITIES HAVE BEEN TURNED OFF OR DISCONNECTED FROM THE MAINS.
3. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS BEFORE, DURING AND AFTER REMOVAL WORK, TO INSURE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING. PROPER TEMPORARY SUPPORTS AND BRACING SHALL BE INSTALLED PRIOR TO COMMENCING ANY REMOVAL WORK. PARTICULAR ATTENTION SHALL BE GIVEN TO THE REMOVALS OF THE ROOF EQUIPMENT AND STRUCTURAL ELEMENTS, SUCH AS COLUMNS, GIRDERS, BEARING WALLS, ETC.
4. CONTRACTOR SHALL REMOVE ONLY ITEMS THAT ARE INDICATED OR REASONABLY IMPLIED ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL QUESTIONABLE ITEMS FOUND IN THE FIELD PRIOR TO REMOVAL.
5. ALL REMOVAL WORK SHALL BE PERFORMED CAREFULLY AND SAFELY SO THAT THE REMAINING PORTIONS OF THE EXISTING BUILDING ARE SAFE AND ARE NOT DAMAGED OR WEAKENED IN ANY WAY.
6. ALL DEBRIS RESULTING FROM THE REMOVAL WORK SHALL BE PROPERLY SEPARATED, STORED, AND REMOVED FROM THE SITE AS APPROVED BY OWNER.
7. DUCTWORK TO BE REMOVED EXCEPT THE MAIN TRUNK
8. ELECTRICAL FIXTURES AND WIRING TO BE REMOVED.
9. LIGHTING TO BE TEMPORARY SUPPORTED AS REQUIRED TO MAINTAIN LIGHTING IN SPACE.
10. PLUMBING FIXTURES, PIPING AND VENTS TO BE REMOVED. ALL LINES TO BE CUT & CAPPED BY THE PLUMBER.
11. CEILING GRIDS AND TILES, DRYWALL CEILINGS, AND ALL NON-STRUCTURAL FRAMING TO BE REMOVED.
12. INTERIOR FURNISHINGS TO BE REMOVED.

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SHEET TITLE:
REMOVALS PLANS, LEGEND & NOTES

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1	1/19/2023	BLDG. DEPT. COMMENTS
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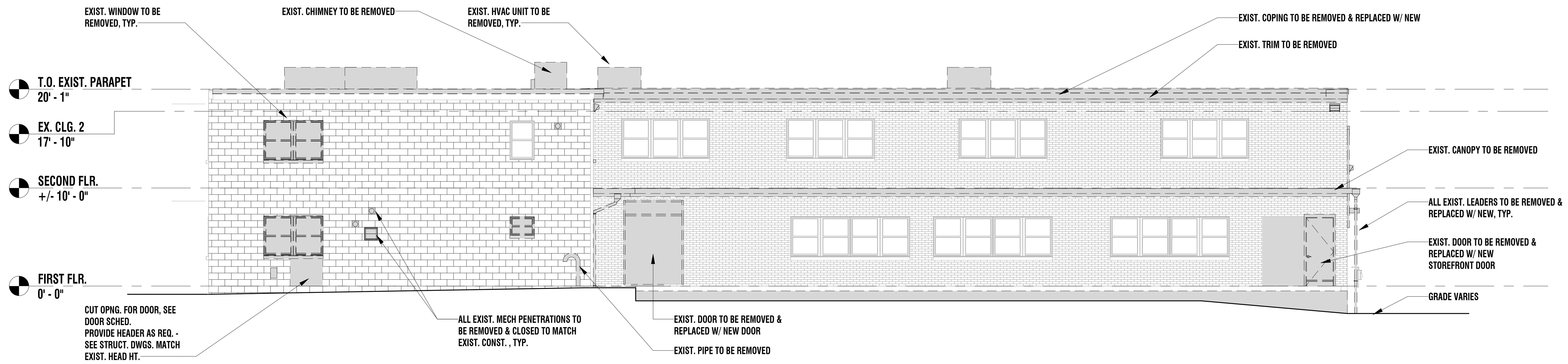
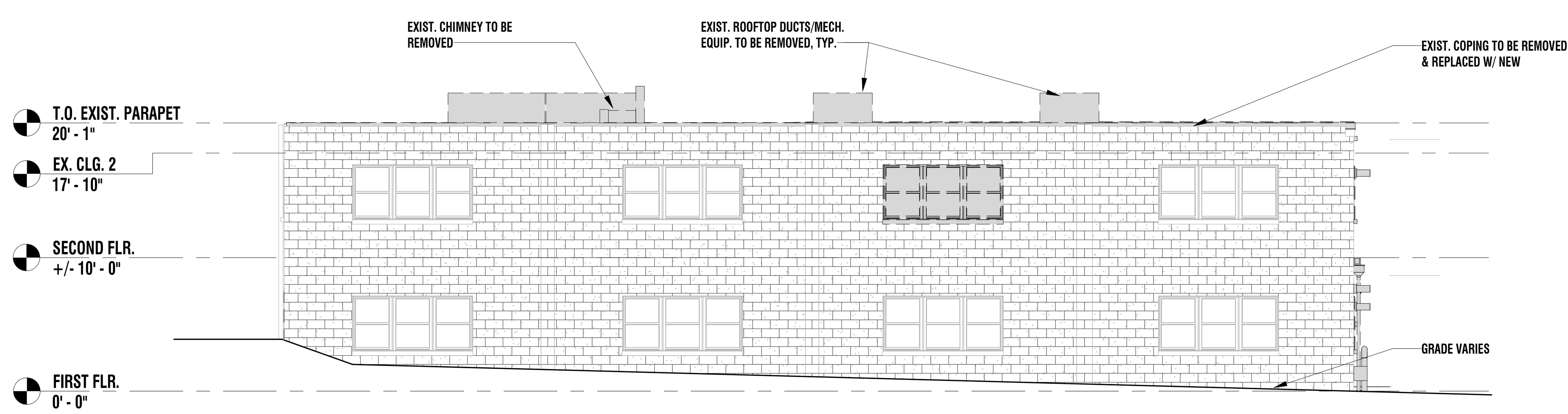


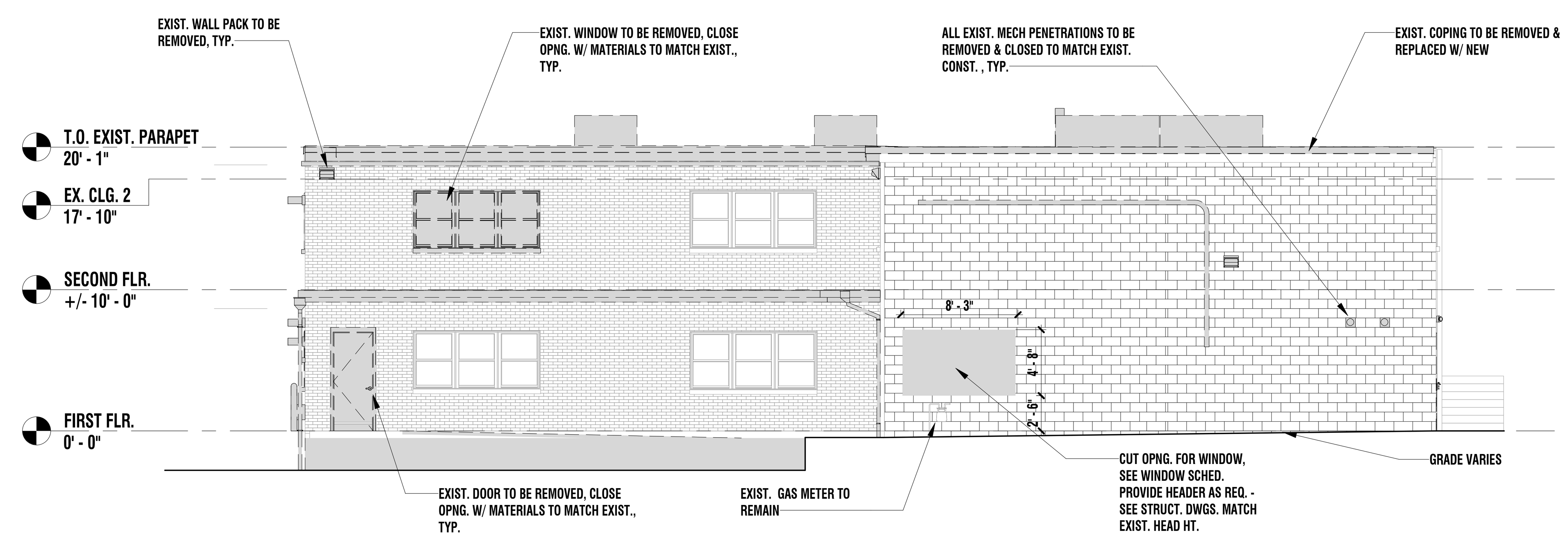
1 **NORTH ELEVATION REMOVALS**

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



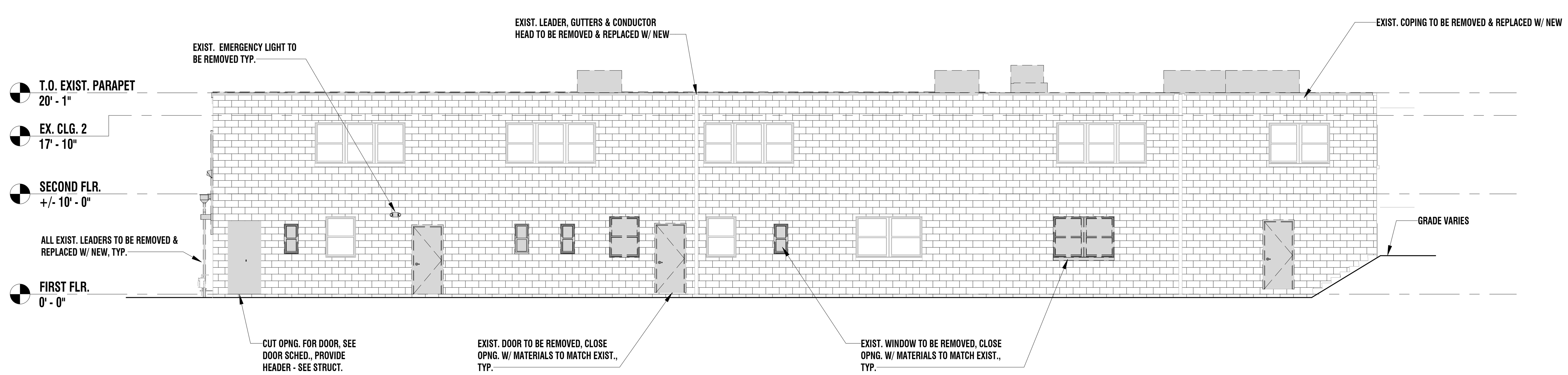
2 **EAST ELEVATION REMOVALS**

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



3 **WEST ELEVATION REMOVALS**

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



4 **SOUTH ELEVATION REMOVALS**

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

GENERAL NOTES

1 REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2 REFER TO DWG. G001 FOR GENERAL CONDITIONS.
3 REFER TO DWG. A101 & A102 FOR GROUND FLOOR AND UPPER FLOOR CONSTRUCTION PLANS.

GENERAL NOTES - REMOVALS

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BUILDING ELEVATION REMOVALS & NOTES

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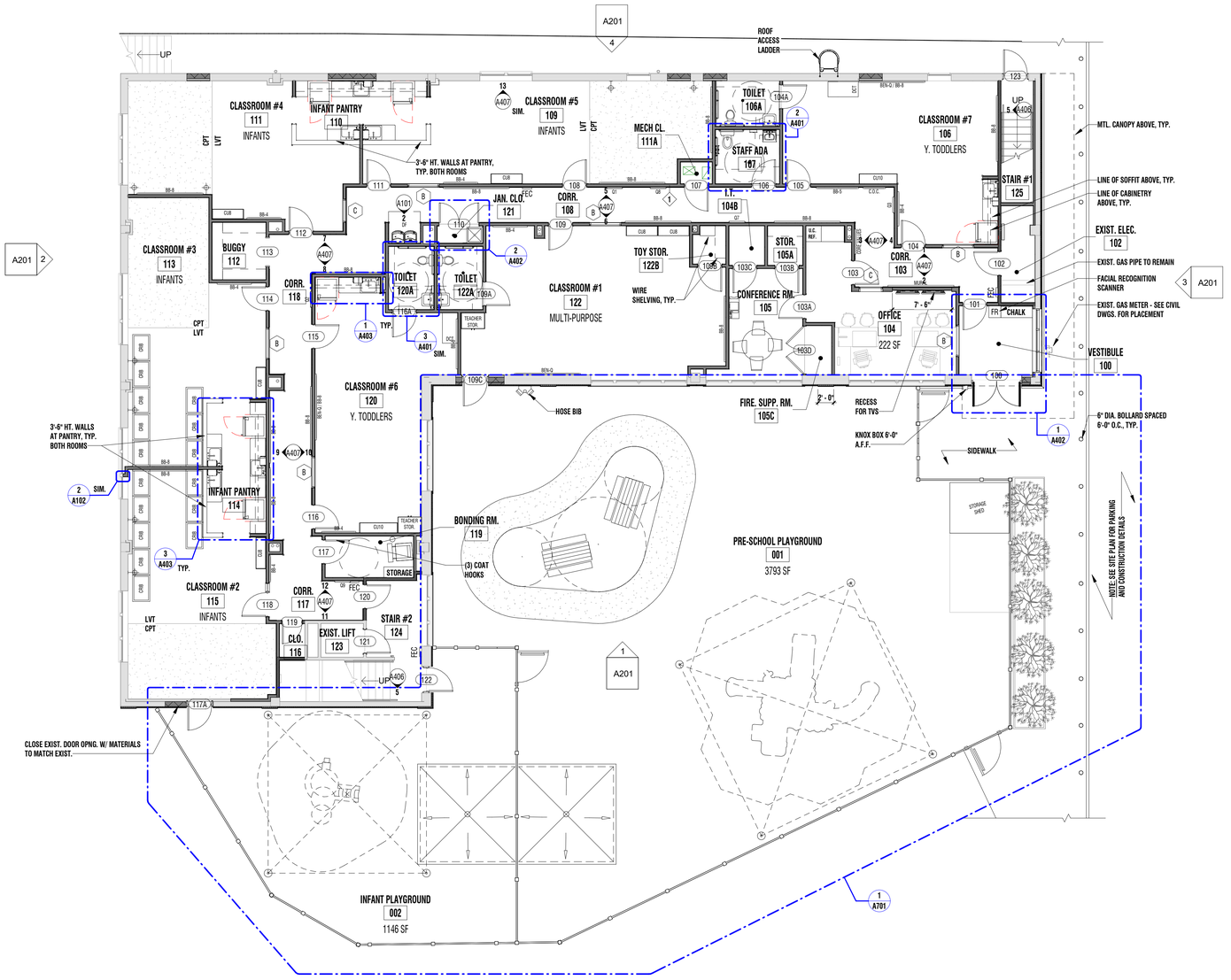
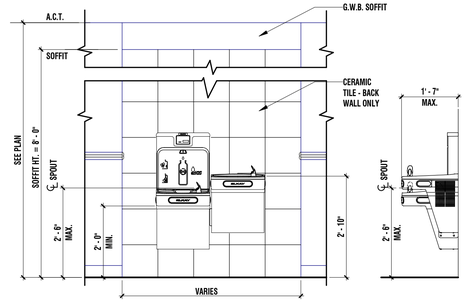


1 FIRST FLOOR PLAN

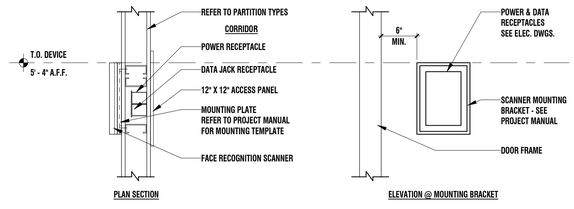
SCALE: 1/8" = 1'-0"

TOTAL GROSS FLOOR AREA:
DAY CARE = 6,100 SF



2 WATER FOUNTAIN DETAIL

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



3 BIOMETERIC SCANNER

SCALE: 1" = 1'-0"

GENERAL NOTES

1. REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2. REFER TO DWG. G001 & G002 FOR GENERAL CONDITIONS.
3. REFER TO DWG. G002 & G003 FOR ACCESSIBILTY REQUIREMENTS.
4. REFER TO DWG. A103 FOR PARTITION PLANS AND DWG. A102 FOR PARTITION TYPES.
5. REFER TO DWG. A104 FOR REFLECTED CEILING PLAN.
6. REFER TO DWG. A105 FOR FINISH PLANS.
7. REFER TO DWG. A404 FOR TYPICAL CABINETRY AND ELEVATIONS.
8. REFER TO DWG. A601 FOR DOOR & FRAME TYPES AND SCHEDULE.
9. SEE STRUCTURAL DRAWINGS FOR INFORMATION.
10. SEE ENGINEERING DRAWINGS FOR MECHANICAL, ELECTRICAL, PLUMBING FIRE PROTECTION.

GENERAL NOTES - CONSTRUCTION

1. REFER TO GENERAL NOTES AND REFERENCE SPECIFICATIONS REGARDING NEW CONSTRUCTION AND FINISHES.
2. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO DETERMINE IF LEVELING OR PATCHING OF THE EXISTING FLOOR SLAB IS REQUIRED – EITHER BECAUSE THE SURFACE OF THE SLAB IS NOT WITHIN REQUIRED TOLERANCES FOR INSTALLATION OF NEW WORK (INCLUDING, BUT NOT LIMITED TO, OPERABLE PARTITIONS AND FRAMELESS GLASS ASSEMBLIES), OR BECAUSE RESURFACING IS REQUIRED FOR INSTALLATION OF SPECIFIED FINISH – USE A SELF-LEVELING CEMENTITIOUS TOPPING EQUAL TO ARDEX INC. K-15, INSTALLED AS PER THE MANUFACTURER INSTALLATION INSTRUCTIONS.
3. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS UNLESS OTHERWISE INDICATED.SEE DWG.A103.
4. REFER TO FINISH PLAN AND FINISH NOTES FOR WALL BASE TYPE AND CEILING TYPES. SEE DWG.A104 & 105.
5. REFER TO PARTITION TYPE DETAILS FOR ADDITIONAL INFORMATION REGARDING WALL HEIGHTS AND TERMINATION. SEE DWG. A102.
6. PROVIDE AIR-TIGHT ACOUSTICAL AND/OR FIRE-RATED SEALANT AROUND PERIMETER OF ALL WALL TYPES WITH ACOUSTICAL INSULATION.
7. ALL JOINTS AND PENETRATIONS OF FIRE RATED ASSEMBLIES TO BE SEALED WITH APPROVED U.L. LISTED "F" AND "T" SYSTEMS. SUBMIT PRODUCT DATA AND INSTALLATION INFORMATION PRIOR TO INSTALLATION FOR ARCHITECT'S APPROVAL. LABEL/IDENTIFY FIRE RATED PARTITIONS FOR FUTURE REFERENCE ON EACH SIDE OF WALL ABOVE CEILING, CONCEALED FROM VIEW. NOTE THE UL ASSEMBLY DESIGNATION WITH 6" RED STENCILED LETTERS
8. DIMENSIONS ARE TAKEN FROM THE FACE OF MASONRY WALLS, COLUMN CENTERLINES, FINISH FACE OF WALLS (EXISTING AND NEW) UNLESS OTHERWISE INDICATED. REFER TO PARTITION TYPE DETAILS.
9. REFER TO FURNITURE & EQUIPMENT PLANS FOR MISCELLANEOUS SPECIALTIES & EQUIPMENT ITEMS THAT MAY NOT BE INDICATED ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WEIGHT OF EQUIPMENT AND BLOCKING REQUIREMENTS FOR ALL EQUIPMENT IN THE FINAL PROJECT, WHETHER OR NOT THAT EQUIPMENT IS PROVIDED BY THE CONTRACTOR OR NOT. SEE DWG. G006.
10. VERIFY ALL CRITICAL DIMENSIONS WITHIN AND/OR RELATED TO THE EXISTING BUILDING.
11. +/- DIMENSION IS EQUAL TO VERIFY IN FIELD.
12. PLANS ARE NOT TO BE SCALED FOR FINISH OR WALL INFORMATION. CONTRACTOR TO CONTACT ARCHITECT FOR ANY QUESTIONS OR CLARIFICATIONS ON PLAN DIMENSIONS.
13. WALLS BEHIND AND DIRECTLY ADJACENT TO ALL TOILET ROOM FIXTURES (LAVATORIES, TOILETS AND URINALS) SHALL HAVE A SMOOTH, HARD, NON-ABSORBANT SURFACE. PARTITIONS IN THESE AREAS SHALL BE CONSTRUCTED WITH CEMENT BOARD OR MOISTURE RESISTANT GYPSUM BOARD IN LIEU OF GYPSUM WALL BOARD AND/OR FINISHED WITH AN EPOXY PAINT. TOILET ROOM ACCESSORIES (GRAB BARS, TOILET PAPER DISPENSERS, ETC.) IN THESE AREAS SHALL BE INSTALLED AND SEALED TO PREVENT MOISTURE PENETRATION.
14. PROVIDE TILE BACKER BOARD AT LOCATIONS TO RECEIVE WALL TILE. REFER TO THE FINISH PLAN FOR LOCATIONS.
15. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL REQUIRED MECHANICAL PADS AND WALL OPENINGS.
16. CONTRACTOR TO INSTALL EXPANSION JOINTS IN GYPSUM BOARD WALLS PER GYPSUM CONSTRUCTION HANDBOOK. COORDINATE LOCATION OF EXPANSION JOINTS WITH ARCHITECT AND OWNER.
17. CONTRACTOR TO VERIFY FIRE RATING AT ANY STAIRWELL OR ELEVATOR ENCLOSURES WITHIN OR ADJACENT TO SCOPE OF WORK. IF STAIR OR ELEVATOR ENCLOSURE DOES NOT MEET REQUIRED FIRE RATINGS, CONTRACTOR IS TO INFORM ARCHITECT AND OWNER AND PROVIDE COST TO ENCLOSE STAIRWELL OR ELEVATOR ENCLOSURE WITH PROPER FIRE RATING.
18. CONTRACTOR SHALL VERIFY THE EXTENT OF GYPSUM BOARD FINISH ON EXTERIOR WALLS AND INTERIOR WALLS SCHEDULED TO REMAIN. WHERE GYPSUM BOARD DOES NOT EXTEND HIGH ENOUGH TO COORDINATE WITH THE SCHEDULED CEILING HEIGHTS, THE CONTRACTOR SHALL EXTEND GYPSUM BOARD FINISH ABOVE THE HIGHT OF SCHEDULED CEILING BY A MINIMUM OF 6". REFER TO SCHEDULED WALL TYPE CONDITIONS.
19. CONTRACTOR TO VERIFY THAT ALL DOORS AT FIRE RATED WALLS ARE OF APPROPRIATE FIRE RATING. IF A DOOR DOES NOT MEET FIRE RATED REQUIREMENT, CONTRACTOR IS TO INFORM ARCHITECT AND OWNER, AND PROVIDE COST TO REPLACE DOOR, FRAME, AND HARDWARE WITH BUILDING STANDARD DOOR, FRAME, AND HARDWARE THAT IS APPROPRIATELY FIRE RATED.
20. FINAL LOCATION OF ALL BULLETIN BOARDS AND CUBBIES TO BE DETERMINED BY LIGHTBRIDGE ACADEMY.
21. CONTRACTOR SHALL COORDINATE SITE INSPECTIONS WITH LIGHTBRIDGE ACADEMY.
22. PROVIDE IN-WALL BLOCKING FOR ALL WALL MOUNTED FURNITURE, EQUIPMENT AND PLUMBING ACCESSORIES.
23. ALL WOOD TRIM TO HAVE 1/4" DIA. ROUNDED CORNERS.
24. PROVIDE CORNER GUARD AT ALL OUTSIDE CORNERS WITHIN CORRIDORS AND CLASSROOMS.
25. ALL COUNTER TOP SURFACES TO BE 34" ABOVE FINISHED FLOOR. BASE CABINET TOE KICK TO BE 4-1/2" HIGH.
26. SHELVING:
    A.TOY STORAGE/ STORAGE - PROVIDE THREE ROWS OF 16" DEEP WIRE SHELVES WHERE INDICATED ON PLAN AT HEIGHTS 36", 54", & 72" ABOVE FINISHED FLOOR.
    B.BUGGY ROOM - PROVIDE TWO 16" DEEP WIRE SHELVES WHERE INDICATED ON PLAN AT HEIGHT OF 48" AND 66" ABOVE FINISHED FLOOR.
    C.LAUNDRY ROOM - PROVIDE ONE 16" DEEP WIRE SHELF WHERE INDICATED ON PLAN AT HEIGHT OF 60" ABOVE FINISHED FLOOR
    D.CLASSROOM TOILET ROOMS- PROVIDE ONE 16" DEEP WIRE SHELF WHERE INDICATED ON PLAN AT HEIGHT OF 60" ABOVE FINISHED FLOOR.
27. PROVIDE 48" WIDE CABINET ABOVE, A.D.A. TOILET & IN CLASSROOM TOILET ROOMS - SEE DRAWING A400.
28. CONTRACTOR TO COORDINATE WITH ARCHITECT/OWNER THE WALL PARTITION LAYOUT ON SITE PRIOR TO START OF CONSTRUCTION.
29. PROVIDE WINDOW RESISTORS TO ALL OPERABLE WINDOWS. REFER TO PROJECT MANUAL FOR SPECIFICATIONS.
30. PER SECTION 716.2.1.1 OF THE BCNYS FIRE DOOR ASSEMBLIES WITH SIDE-HINGED AND PIVOTED SWINGING SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C
31. PER SECTION 2506.2, 2508.1 AND TABLES 2506.2 & 2508.2 OF BCNYS; THE GYPSUM BOARD PRODUCTS AND/OR GYPSUM PANEL PRODUCTS TO COMPLY WITH THESE SECTIONS.

CONSTRUCTION PLAN LEGEND

- 1A — PARTITION TYPE, SEE SHEET A102
- NEW PARTITION - THICKNESS VARIES BY TYPE
- FIRE RATED PARTITION
- WALL BLOCKING
- EXISTING PARTITION
- EXISTING DOOR - IF DOOR NUMBER IS SHOWN, REFER TO SCHEDULE FOR ADDED/MODIFIED HARDWARE
- NEW DOOR
- 101 — DOOR NUMBER
- FEC — FIRE EXTINGUISHER CABINET - INSTALL AT 36" A.F.F. TO TOP OF CABINET PER SECTION 906.2 OF BCNYS, THE PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THIS SECTION AND NFPA 10
- A — WINDOW TYPE, SEE SHEET A602
- GC — FACIAL RECOGNITION (FR)
- MOP SINK
- SLOP SINK

JAM ARCH

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REGISTERED ARCHITECT JUSTIN ALLEN MIHALIK STATE OF NEW YORK
JUSTIN A. MIHALIK, AIA LIC. # 027468 27468

Lightbridge Academy℠
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
FIRST FLOOR CONSTRUCTION PLAN, LEGEND & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER:	2019-01.15
DATE:	07/23/2019
DRAWN BY:	OS/KM
CHECKED BY:	JAM/KM

SHEET NO.
A101

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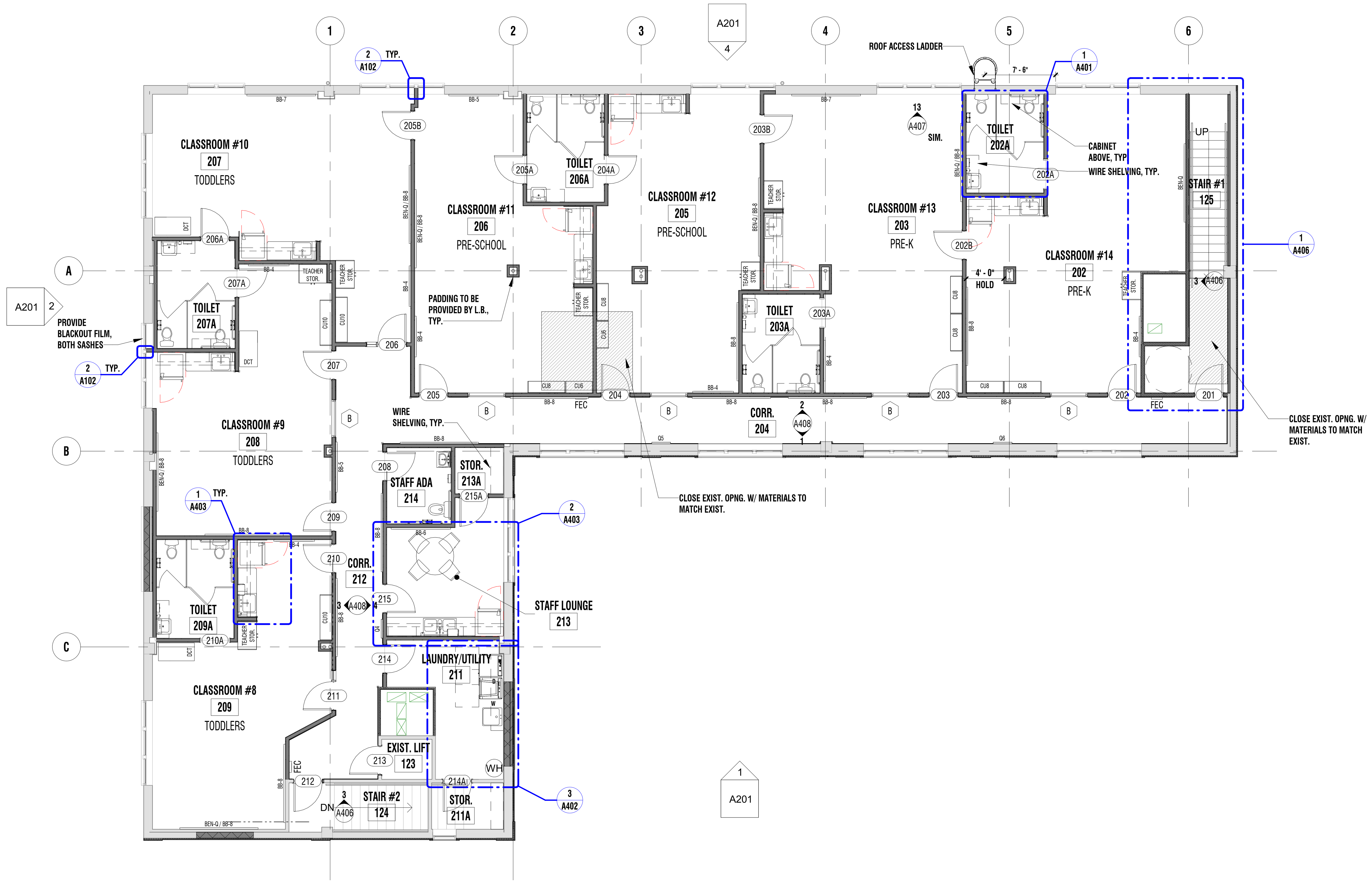
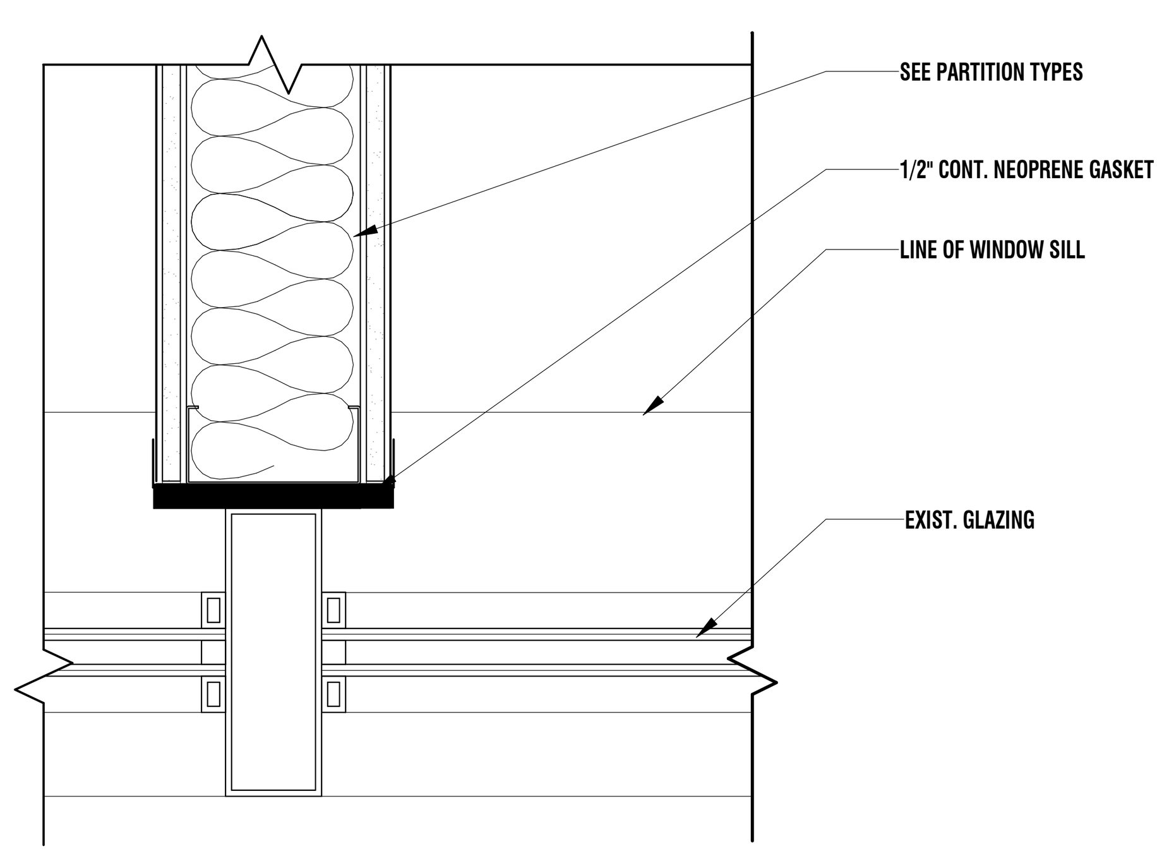


1 SECOND FLOOR PLAN

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

TOTAL GROSS FLOOR AREA:
DAY CARE = 6,100 SF



2 TYP. WALL TO WINDOW DETAIL

SCALE: 3" = 1'-0"

GENERAL NOTES

1. REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2. REFER TO DWG. G001 & G002 FOR GENERAL CONDITIONS.
3. REFER TO DWG. G002 & G003 FOR ACCESSIBILTY REQUIREMENTS.
4. REFER TO DWG. A103 FOR PARTITION PLANS AND DWG. A102 FOR PARTITION TYPES.
5. REFER TO DWG. A104 FOR REFLECTED CEILING PLAN.
6. REFER TO DWG. A105 FOR FINISH PLANS.
7. REFER TO DWG. A404 FOR TYPICAL CABINETRY AND ELEVATIONS.
8. REFER TO DWG. A601 FOR DOOR & FRAME TYPES AND SCHEDULE.
9. SEE STRUCTURAL DRAWINGS FOR INFORMATION.
10. SEE ENGINEERING DRAWINGS FOR MECHANICAL, ELECTRICAL, PLUMBING FIRE PROTECTION.

GENERAL NOTES - CONSTRUCTION

1. REFER TO GENERAL NOTES AND REFERENCE SPECIFICATIONS REGARDING NEW CONSTRUCTION AND FINISHES.
2. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO DETERMINE IF LEVELING OR PATCHING OF THE EXISTING FLOOR SLAB IS REQUIRED – EITHER BECAUSE THE SURFACE OF THE SLAB IS NOT WITHIN REQUIRED TOLERANCES FOR INSTALLATION OF NEW WORK (INCLUDING, BUT NOT LIMITED TO, OPERABLE PARTITIONS AND FRAMELESS GLASS ASSEMBLIES), OR BECAUSE RESURFACING IS REQUIRED FOR INSTALLATION OF SPECIFIED FINISH – USE A SELF-LEVELING CEMENTITIOUS TOPPING EQUAL TO ARDEX INC. K-15, INSTALLED AS PER THE MANUFACTURER INSTALLATION INSTRUCTIONS.
3. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS UNLESS OTHERWISE INDICATED.SEE DWG.A103.
4. REFER TO FINISH PLAN AND FINISH NOTES FOR WALL BASE TYPE AND CEILING TYPES. SEE DWG.A104 & 105.
5. REFER TO PARTITION TYPE DETAILS FOR ADDITIONAL INFORMATION REGARDING WALL HEIGHTS AND TERMINATION. SEE DWG. A102.
6. PROVIDE AIR-TIGHT ACOUSTICAL AND/OR FIRE-RATED SEALANT AROUND PERIMETER OF ALL WALL TYPES WITH ACOUSTICAL INSULATION.
7. ALL JOINTS AND PENETRATIONS OF FIRE RATED ASSEMBLIES TO BE SEALED WITH APPROVED U.L. LISTED "F" AND "T" SYSTEMS. SUBMIT PRODUCT DATA AND INSTALLATION INFORMATION PRIOR TO INSTALLATION FOR ARCHITECT'S APPROVAL. LABEL/IDENTIFY FIRE RATED PARTITIONS FOR FUTURE REFERENCE ON EACH SIDE OF WALL ABOVE CEILING, CONCEALED FROM VIEW. NOTE THE UL ASSEMBLY DESIGNATION WITH 6" RED STENCILED LETTERS
8. DIMENSIONS ARE TAKEN FROM THE FACE OF MASONRY WALLS, COLUMN CENTERLINES, FINISH FACE OF WALLS (EXISTING AND NEW) UNLESS OTHERWISE INDICATED. REFER TO PARTITION TYPE DETAILS.
9. REFER TO FURNITURE & EQUIPMENT PLANS FOR MISCELLANEOUS SPECIALTIES & EQUIPMENT ITEMS THAT MAY NOT BE INDICATED ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WEIGHT OF EQUIPMENT AND BLOCKING REQUIREMENTS FOR ALL EQUIPMENT IN THE FINAL PROJECT, WHETHER OR NOT THAT EQUIPMENT IS PROVIDED BY THE CONTRACTOR OR NOT. SEE DWG. G006.
10. VERIFY ALL CRITICAL DIMENSIONS WITHIN AND/OR RELATED TO THE EXISTING BUILDING.
11. +/- DIMENSION IS EQUAL TO VERIFY IN FIELD.
12. PLANS ARE NOT TO BE SCALED FOR FINISH OR WALL INFORMATION. CONTRACTOR TO CONTACT ARCHITECT FOR ANY QUESTIONS OR CLARIFICATIONS ON PLAN DIMENSIONS.
13. WALLS BEHIND AND DIRECTLY ADJACENT TO ALL TOILET ROOM FIXTURES (LAVATORIES, TOILETS AND URINALS) SHALL HAVE A SMOOTH, HARD, NON-ABSORBANT SURFACE. PARTITIONS IN THESE AREAS SHALL BE CONSTRUCTED WITH CEMENT BOARD OR MOISTURE RESISTANT GYPSUM BOARD IN LIEU OF GYPSUM WALL BOARD AND/OR FINISHED WITH AN EPOXY PAINT. TOILET ROOM ACCESSORIES (GRAB BARS, TOILET PAPER DISPENSERS, ETC.) IN THESE AREAS SHALL BE INSTALLED AND SEALED TO PREVENT MOISTURE PENETRATION.
14. PROVIDE TILE BACKER BOARD AT LOCATIONS TO RECEIVE WALL TILE. REFER TO THE FINISH PLAN FOR LOCATIONS.
15. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL REQUIRED MECHANICAL PADS AND WALL OPENINGS.
16. CONTRACTOR TO INSTALL EXPANSION JOINTS IN GYPSUM BOARD WALLS PER GYPSUM CONSTRUCTION HANDBOOK. COORDINATE LOCATION OF EXPANSION JOINTS WITH ARCHITECT AND OWNER.
17. CONTRACTOR TO VERIFY FIRE RATING AT ANY STAIRWELL OR ELEVATOR ENCLOSURES WITHIN OR ADJACENT TO SCOPE OF WORK. IF STAIR OR ELEVATOR ENCLOSURE DOES NOT MEET REQUIRED FIRE RATINGS, CONTRACTOR IS TO INFORM ARCHITECT AND OWNER AND PROVIDE COST TO ENCLOSE STAIRWELL OR ELEVATOR ENCLOSURE WITH PROPER FIRE RATING.
18. CONTRACTOR SHALL VERIFY THE EXTENT OF GYPSUM BOARD FINISH ON EXTERIOR WALLS AND INTERIOR WALLS SCHEDULED TO REMAIN. WHERE GYPSUM BOARD DOES NOT EXTEND HIGH ENOUGH TO COORDINATE WITH THE SCHEDULED CEILING HEIGHTS, THE CONTRACTOR SHALL EXTEND GYPSUM BOARD FINISH ABOVE THE HIGHT OF SCHEDULED CEILING BY A MINIMUM OF 6". REFER TO SCHEDULED WALL TYPE CONDITIONS.
19. CONTRACTOR TO VERIFY THAT ALL DOORS AT FIRE RATED WALLS ARE OF APPROPORIATE FIRE RATING. IF A DOOR DOES NOT MEET FIRE RATED REQUIREMENT, CONTRACTOR IS TO INFORM ARCHITECT AND OWNER, AND PROVIDE COST TO REPLACE DOOR, FRAME, AND HARDWARE WITH BUILDING STANDARD DOOR, FRAME, AND HARDWARE THAT IS APPROPRIATELY FIRE RATED.
20. FINAL LOCATION OF ALL BULLETIN BOARDS AND CUBBIES TO BE DETERMINED BY LIGHTBRIDGE ACADEMY.
21. CONTRACTOR SHALL COORDINATE SITE INSPECTIONS WITH LIGHTBRIDGE ACADEMY.
22. PROVIDE IN-WALL BLOCKING FOR ALL WALL MOUNTED FURNITURE, EQUIPMENT AND PLUMBING ACCESSORIES.
23. ALL WOOD TRIM TO HAVE 1/4" DIA. ROUNDED CORNERS.
24. PROVIDE CORNER GUARD AT ALL OUTSIDE CORNERS WITHIN CORRIDORS AND CLASSROOMS.
25. ALL COUNTER TOP SURFACES TO BE 34" ABOVE FINISHED FLOOR. BASE CABINET TOE KICK TO BE 4-1/2" HIGH.
26. SHELVING:
    A.TOY STORAGE/ STORAGE - PROVIDE THREE ROWS OF 16" DEEP WIRE SHELVES WHERE INDICATED ON PLAN AT HEIGHTS 36", 54", & 72" ABOVE FINISHED FLOOR.
    B.BUGGY ROOM - PROVIDE TWO 16" DEEP WIRE SHELVES WHERE INDICATED ON PLAN AT HEIGHT OF 48" AND 66" ABOVE FINISHED FLOOR.
    C.LAUNDRY ROOM - PROVIDE ONE 16" DEEP WIRE SHELF WHERE INDICATED ON PLAN AT HEIGHT OF 60" ABOVE FINISHED FLOOR
    D.CLASSROOM TOILET ROOMS- PROVIDE ONE 16" DEEP WIRE SHELF WHERE INDICATED ON PLAN AT HEIGHT OF 60" ABOVE FINISHED FLOOR.
27. PROVIDE 48" WIDE CABINET ABOVE, A.D.A. TOILET & IN CLASSROOM TOILET ROOMS - SEE DRAWING A400.
28. CONTRACTOR TO COORDINATE WITH ARCHITECT/OWNER THE WALL PARTITION LAYOUT ON SITE PRIOR TO START OF CONSTRUCTION.
29. PROVIDE WINDOW RESTRICTORS TO ALL OPERABLE WINDOWS. REFER TO PROJECT MANUAL FOR SPECIFICATIONS.
30. PER SECTION 716.2.1.1. OF THE BCNYS FIRE DOOR ASSEMBLIES WITH SIDE-HINGED AND PIVOTED SWINGING SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C
31. PER SECTION 2506.2, 2508.1 AND TABLES 2506.2 & 2508.2 OF BCNYS; THE GYPSUM BOARD PRODUCTS AND/OR GYPSUM PANEL PRODUCTS TO COMPLY WITH THESE SECTIONS.

CONSTRUCTION PLAN LEGEND

- 1A — PARTITION TYPE, SEE SHEET A102
- NEW PARTITION - THICKNESS VARIES BY TYPE
- FIRE RATED PARTITION
- WALL BLOCKING
- EXISTING PARTITION
- EXISTING DOOR - IF DOOR NUMBER IS SHOWN, REFER TO SCHEDULE FOR ADDED/MODIFIED HARDWARE
- NEW DOOR
- 101 — DOOR NUMBER
- FEC — FIRE EXTINGUSHER CABINET - INSTALL AT 36" A.F.F. TO TOP OF CABINET PER SECTION 906.2 OF BCNYS, THE PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THIS SECTION AND NFPA 10
- A — WINDOW TYPE, SEE SHEET A602
- FR — FACIAL RECOGNITION (FR)
- MOP SINK
- SLOP SINK

JAM ARCH

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JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

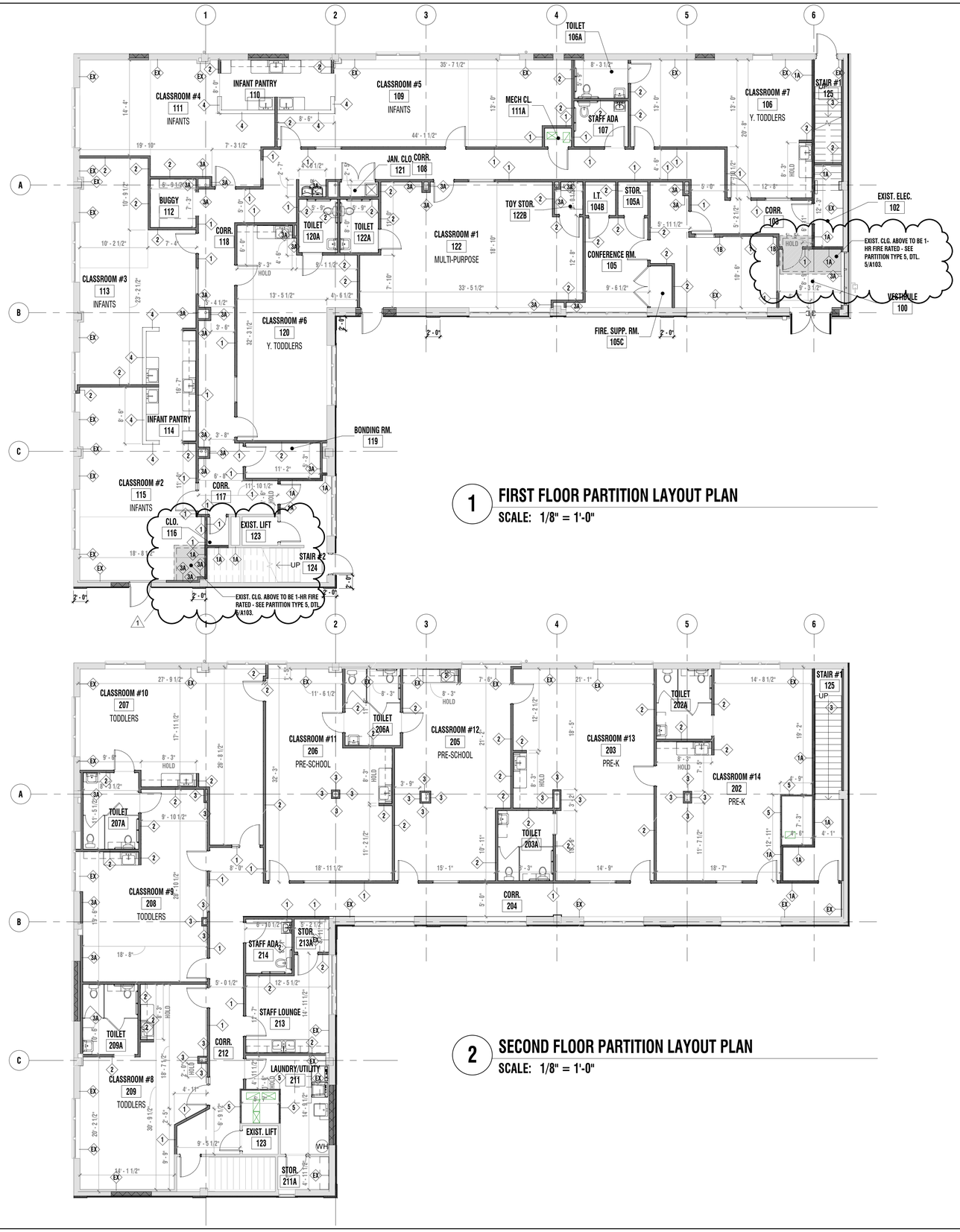
OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
SECOND FLOOR CONSTRUCTION PLAN, PARTITION TYPES, LEGEND & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
A102



1 FIRST FLOOR PARTITION LAYOUT PLAN

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

2 SECOND FLOOR PARTITION LAYOUT PLAN

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

GENERAL NOTES

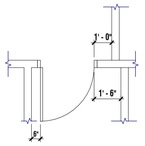
1. REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2. REFER TO DWG. G001 & G002 FOR GENERAL CONDITIONS.
3. REFER TO DWG. G002 & G003 FOR ACCESSIBILITY REQUIREMENTS.
4. REFER TO DWG. A103 FOR PARTITION PLANS AND DWG. A102 FOR PARTITION TYPES.
5. REFER TO DWG. A104 FOR REFLECTED CEILING PLAN.
6. REFER TO DWG. A105 FOR FINISH PLANS.
7. REFER TO DWG. A404 FOR TYPICAL CABINETRY AND ELEVATIONS.
8. REFER TO DWG. A601 FOR DOOR & FRAME TYPES AND SCHEDULE.
9. SEE STRUCTURAL DRAWINGS FOR INFORMATION.
10. SEE ENGINEERING DRAWINGS FOR MECHANICAL, ELECTRICAL, PLUMBING FIRE PROTECTION.

CONSTRUCTION NOTES:

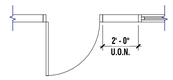
1. PER SECTION 716.2.1.1. OF THE BCNYS FIRE DOOR ASSEMBLIES WITH SIDE-HINGED AND PIVOTED SWINGING SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C.

CONSTRUCTION PLAN LEGEND

- 1A — PARTITION TYPE, SEE SHEET A102
- NEW PARTITION - THICKNESS VARIES BY TYPE
- FIRE RATED PARTITION
- WALL BLOCKING
- EXISTING PARTITION
- EXISTING DOOR - IF DOOR NUMBER IS SHOWN, REFER TO SCHEDULE FOR ADDED/MODIFIED HARDWARE
- NEW DOOR
- 101 — DOOR NUMBER
- FEC — FIRE EXTINGUSHER CABINET - INSTALL AT 36" A.F.F. TO TOP OF CABINET PER SECTION 906.2 OF BCNYS, THE PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THIS SECTION AND NFPA 10
- A — WINDOW TYPE, SEE SHEET A602
- FR — FACIAL RECOGNITION (FR)
- MOP SINK
- SLOP SINK



NOTES:
1. INSTALL DOOR/ DOOR FRAME SUCH THAT MINIMUM HINGE SIDE OF DOOR IS 6" FROM WALL, UNLESS OTHERWISE NOTED.
2. REFER TO ACCESSIBILITY SHEET FOR ADDITIONAL CLEARANCE REQUIREMENTS.

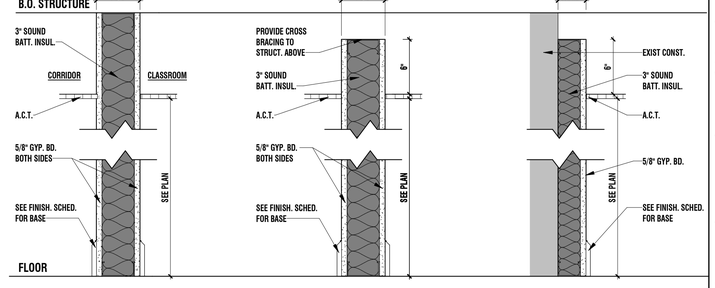


3 TYP. PLAN @ DOOR LOCATION

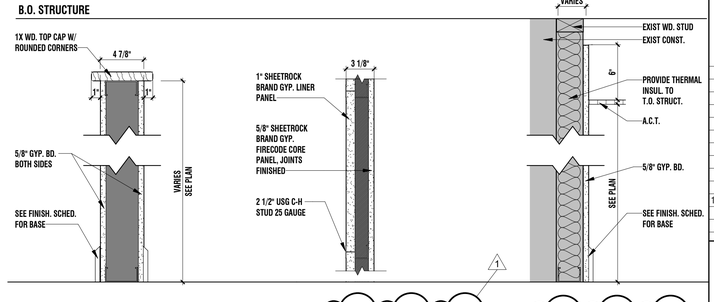
SCALE: 1/4" = 1'-0"

4 TYP. PLAN @ VIEWING PANEL

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



1. 3-5/8" 20 GAUGE MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD. BOTH SIDES
2. 3-5/8" 20 GAUGE MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD. BOTH SIDES
3. 2 1/2" MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD.
- 1A — 1-HOUR RATED: 3-5/8" MTL. STUD, AT 16" O.C. W/ 5/8" TYPE 'X' GYP. BD. BOTH SIDES. SHALL CONFORM WITH UL ASSEMBLY U407.
- 1B — 5 1/2" MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD.
- 3A — 3 1/2" MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD.
- 3B — 7/8" HAT CHANNEL, AT 16" O.C. W/ 5/8" GYP. BD.



4. 3-5/8" 20 GAUGE MTL. STUD, AT 16" O.C. W/ 5/8" GYP. BD. BOTH SIDES
5. 1-HOUR RATED: 2-1/2" 25 GAUGE USG C-H STUD, AT 24" O.C. W/ 5/8" GYP. BD. FIRECODE CORE PANELS & 1" GYP. BD. LINER PANELS. SHALL CONFORM WITH UL ASSEMBLY U415.
- EX — EXIST. STUD ADD THERMAL INSUL. AND 5/8" GYP. BD. PER SECTION 720.2 AND 720.3 OF THE BCNYS, INSULATION SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450, IN ACCORDANCE WITH ASTM E84 OR UL 723.

5 PARTITION TYPES

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

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REGISTERED ARCHITECT JUSTIN ALLEN MIHALIK STATE OF NEW YORK 027468
JUSTIN A. MIHALIK, AIA LIC. # 27468

Lightbridge Academy℠
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
PARTITION LAYOUT PLANS, DETAILS & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
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CHECKED BY: JAM/KM

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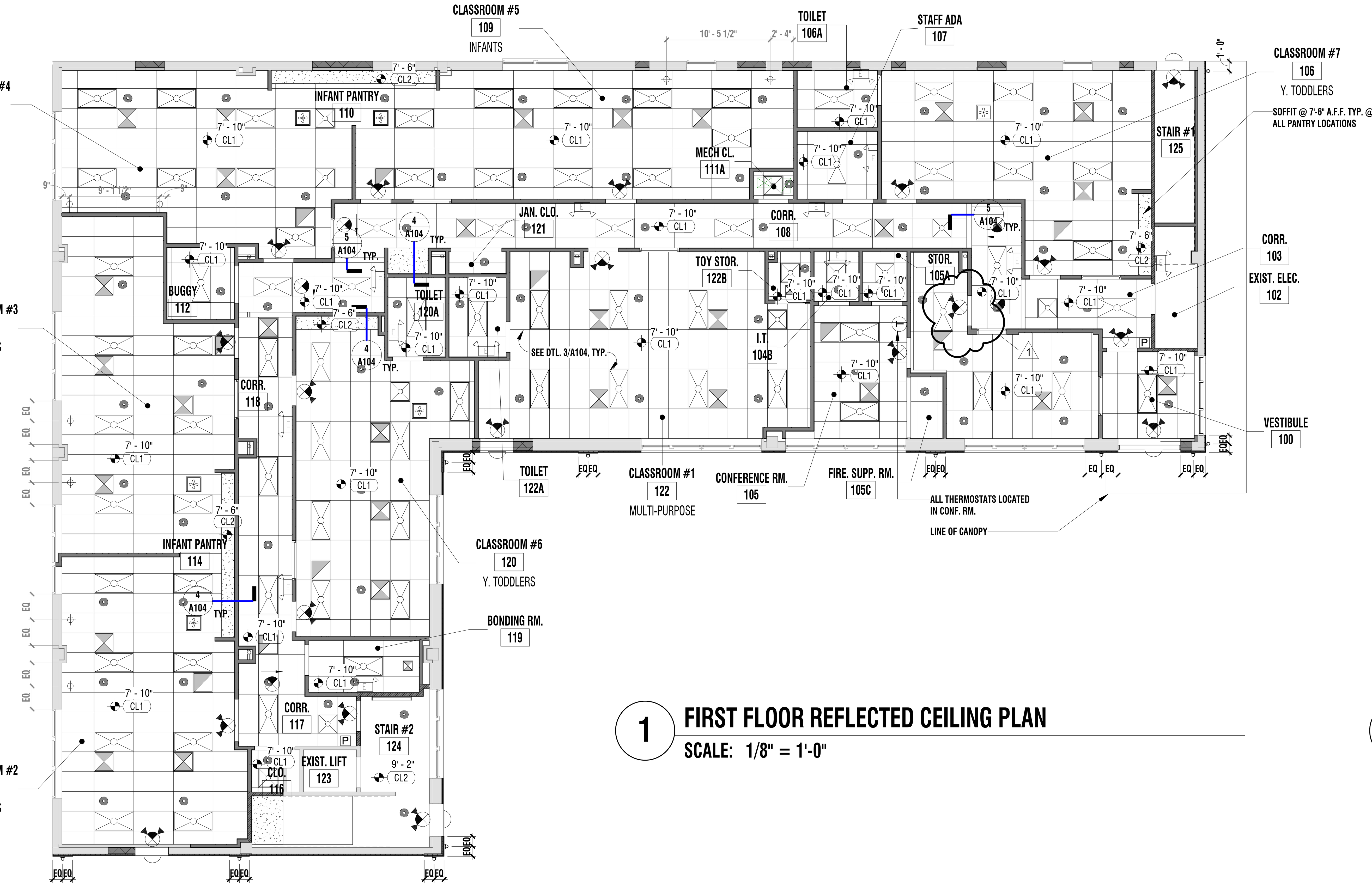
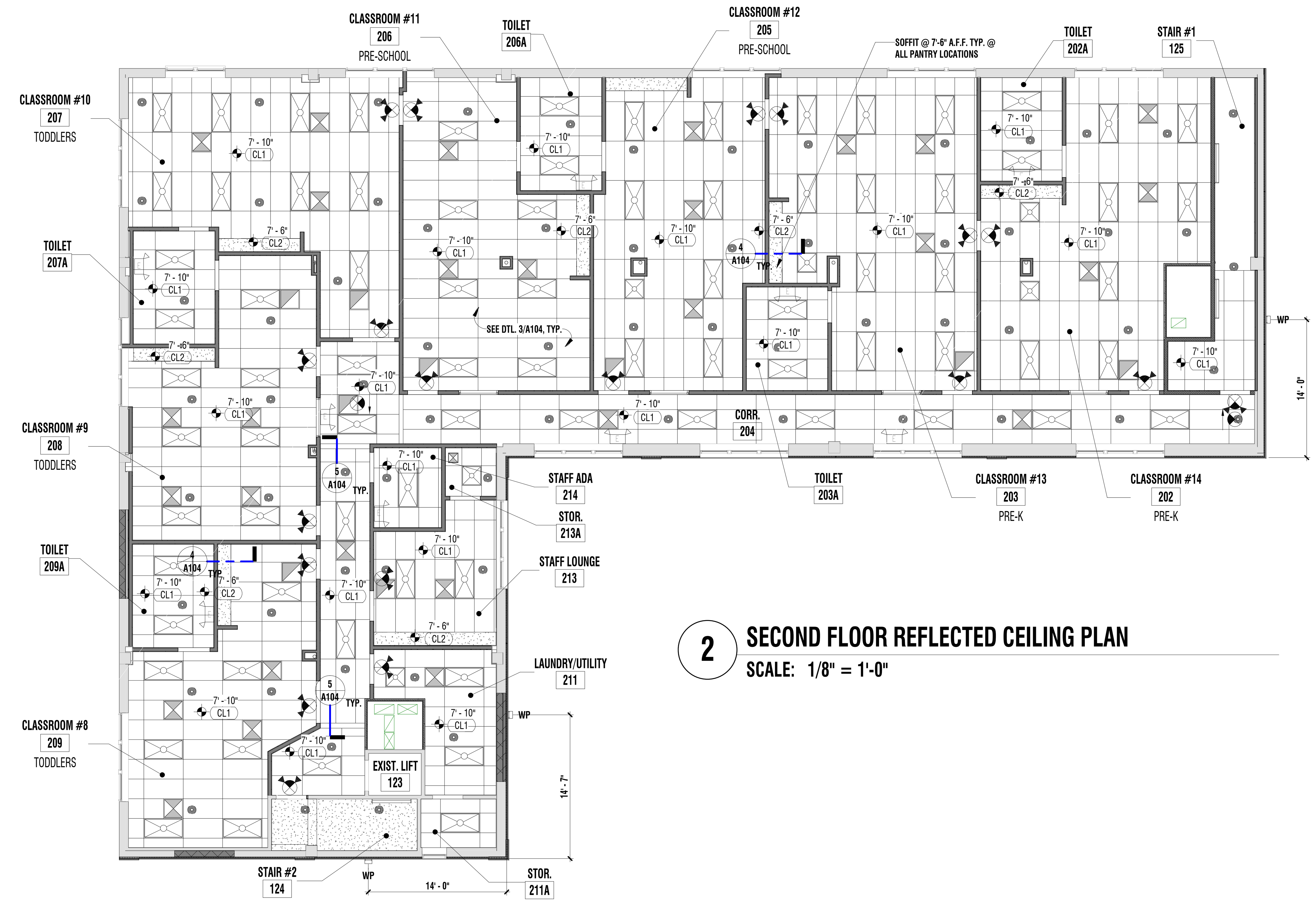


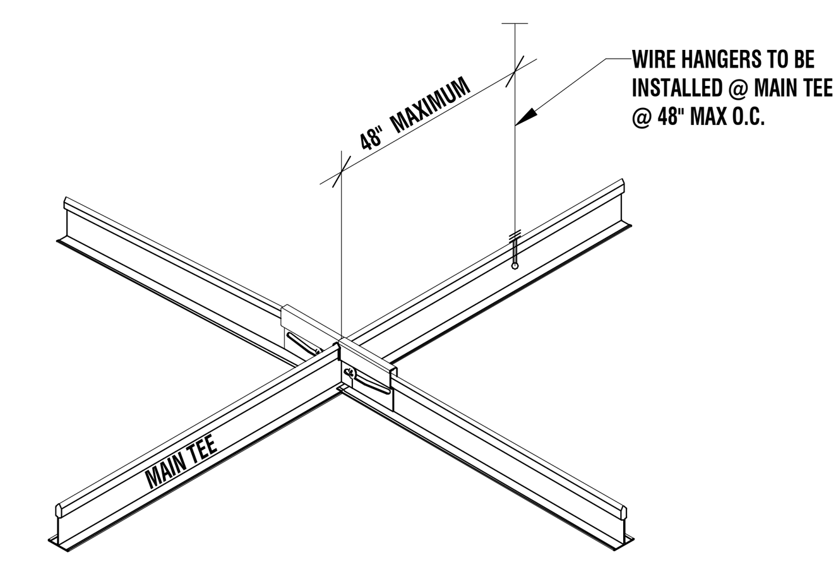
1 FIRST FLOOR REFLECTED CEILING PLAN

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



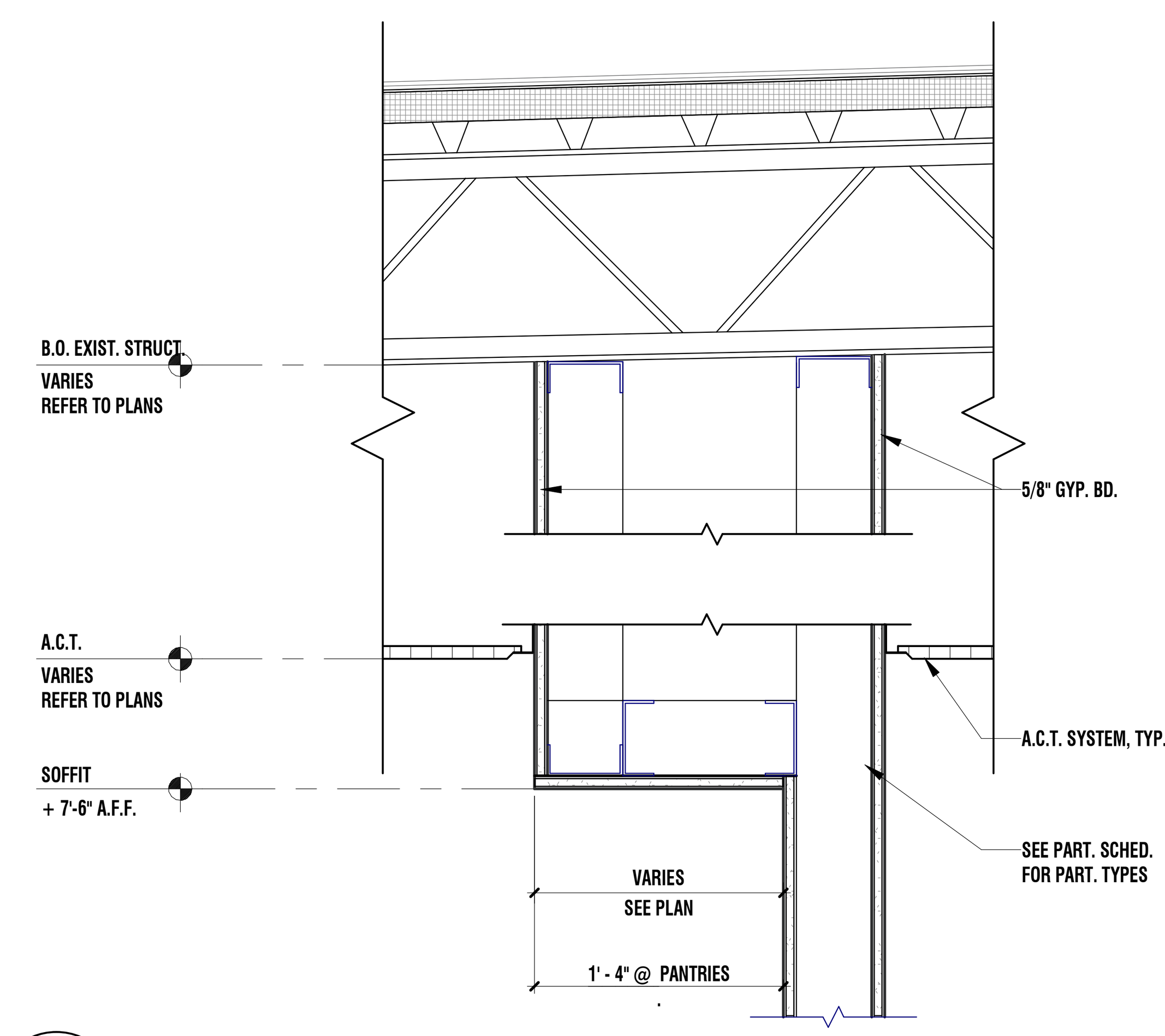
2 SECOND FLOOR REFLECTED CEILING PLAN

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



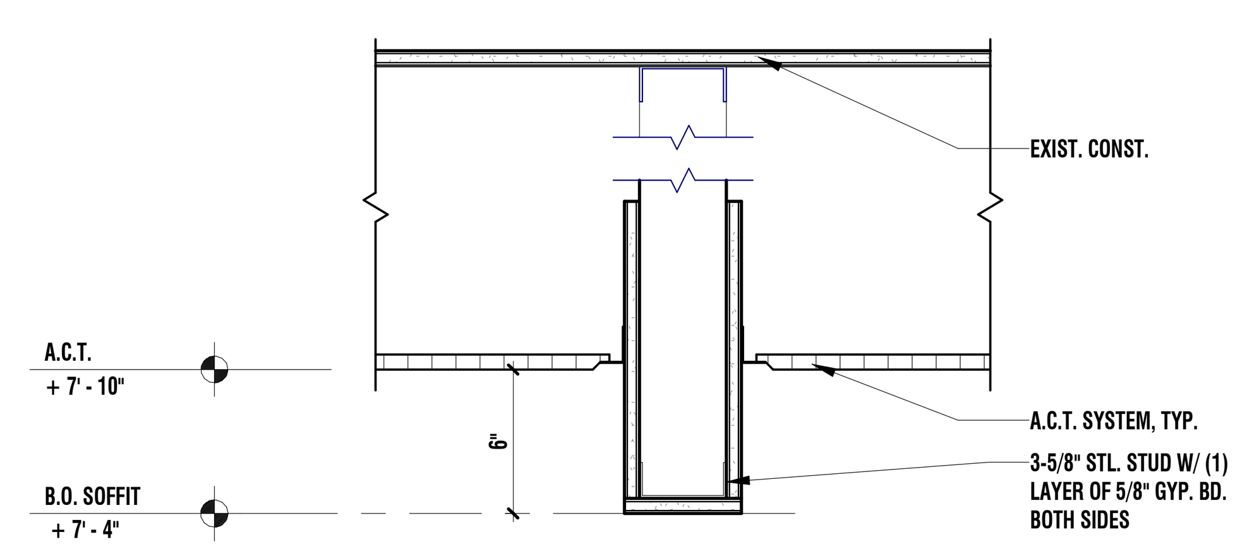
3 ACOUSTICAL CEILING DETAIL

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



4 SOFFIT DETAIL

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



5 HEADER DETAIL

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

GENERAL NOTES

1 SEE DWG. A101 & A102 FOR CONSTRUCTION PLANS.
2 SEE DWG. E201 & E202 FOR LIGHTING POWER PLANS.

GENERAL NOTES - REFLECTED CEILING

1 REFER TO ENGINEERING DRAWINGS FOR MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION.
2 ALL GYPSUM BOARD CEILING AND SOFFITS ARE TO BE PAINTED, SEE FINISH PLAN FOR COLOR.
3 CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK ABOVE CEILING AND NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLING CEILING GRID.
4 RETAINING CLIPS ARE TO BE USED ON CEILING IN VESTIBULE.

LEGEND - REFLECTED CEILING

- FIXTURE TYPE - REFER TO SCHEDULE & ELECTRICAL DRAWINGS
- BUILDING STANDARD 2X4 LIGHT FIXTURE
- BUILDING STANDARD LIGHT FIXTURE. SEE TYPICAL 2X4 NOTES ABOVE.
- BUILDING STANDARD ILLUMINATED EXIT LIGHT. SOLID AREA DENOTES DIRECTION OF FACE PLATE.
- INDICATES EMERGENCY LIGHT HEADS
- INDICATES DIRECTIONAL ARROWS
- EXTERIOR EMERGENCY FIXTURE
- SURFACE MOUNTED EXTERIOR SCONCE
- SURFACE MOUNTED INTERIOR SCONCE
- WP — WALL PACK - SEE CIVIL DWGS FOR MOUNTING HEIGHT
- XX'-XXX" — CEILING ELEVATION MARKER
- EXISTING CEILING GRID TO REMAIN.
- INDICATES NEW CEILING GRID TO BE INSTALLED.
- INDICATES NEW GYPSUM BOARD BULKHEAD TO BE INSTALLED.
- DIFFUSER - SUPPLY
- DIFFUSER - RETURN
- EXHAUST FAN
- SPRINKLER
- E — EMERGENCY LIGHT FIXTURE WITH EMERGENCY EXIT LIGHTING PACK AND BATTERY BACK UP.
- THERMOSTAT
- ? — FINISH TAG - REFER TO FINISH LEGEND

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Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
REFLECTED CEILING PLANS, DETAILS, LEGEND & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
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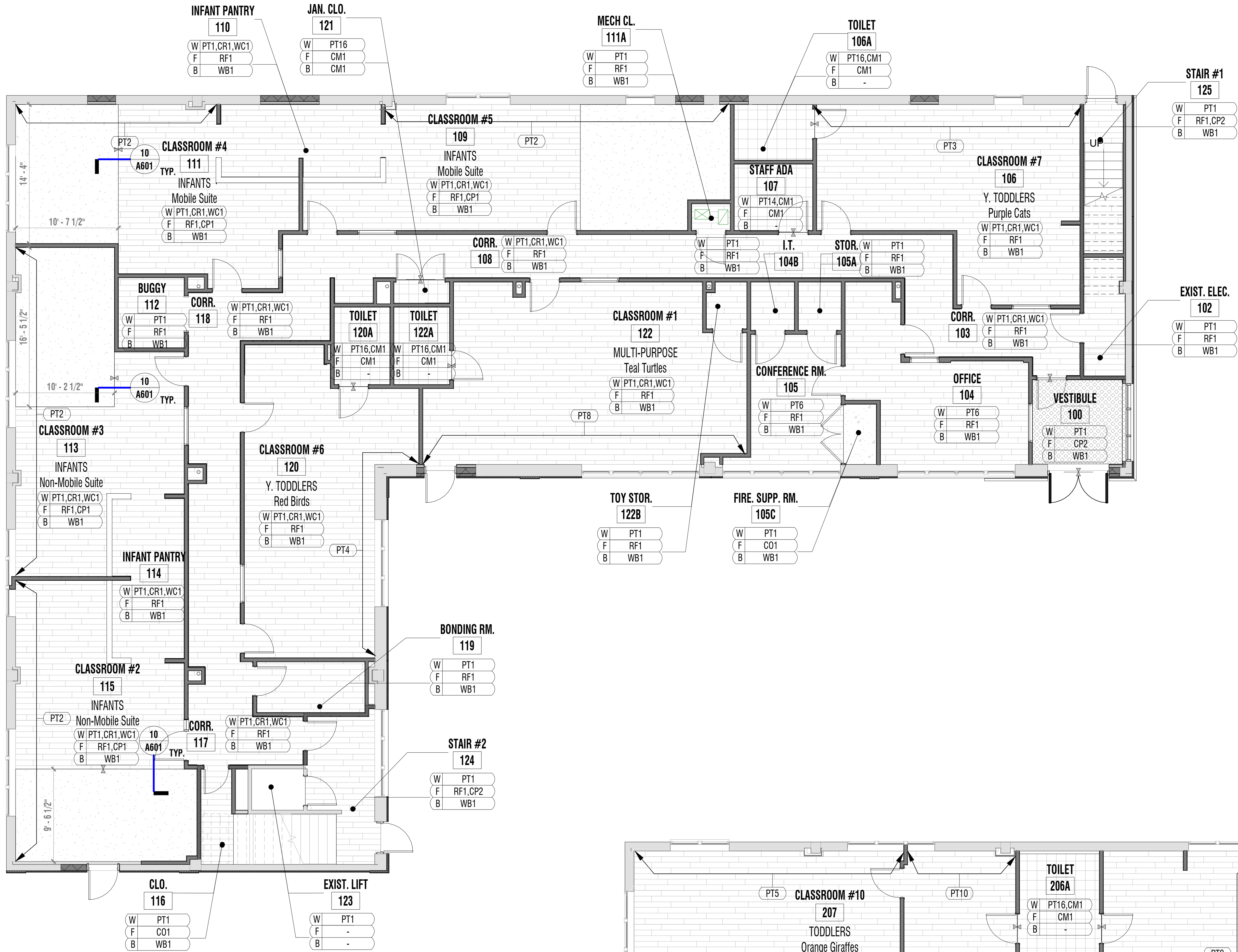
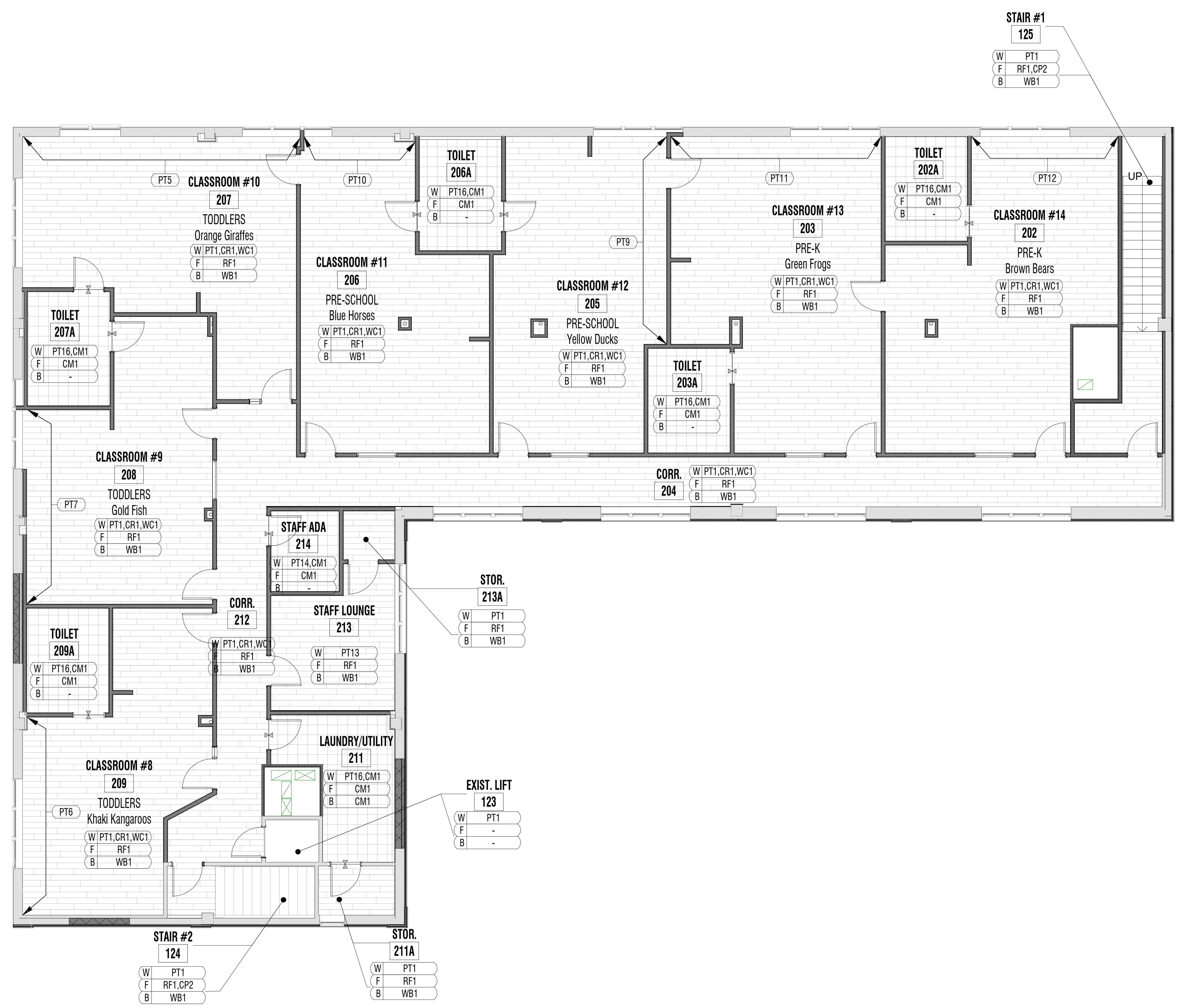
SHEET NO.
A104



1 **GROUND FLOOR FINISH PLAN**

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



2 **UPPER FLOOR FINISH PLAN**

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

GENERAL NOTES

1. REFER TO DWG. A101 FOR CONSTRUCTION PLANS.
2. REFER TO DWG. A103 FOR REFLECTED CEILING
3. REFER TO DWG. A600 FOR DOOR & FRAME SCHEDULE.
4. PROVIDE TRANSITION STRIPS AT DOORWAYS, ALIGN WITH THE FACE OF THE ROOM SIDE DOOR FRAME.
5 CONTRACTOR SHALL INSTALL CARPETING AT THE END OF CONSTRUCTION TO AVOID CONSTRUCTION DUST.
6 PROVIDE CORNER GUARD @ ALL OUTSIDE CORNERS WITHINCORRIDORS AND CLASSROOMS

GENERAL NOTES - FINISHES

1 ALL FINISHES ARE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDED METHODS AND INSTRUCTIONS, USING SUGGESTED PRODUCTS AND MATERIALS TO PROVIDE A SUCCESSFUL INSTALLATION FOR PROPOSED CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING THE PREPARATION OF ALL SUBSTRATES TO PROVIDE APPROPRIATE SUPPORT/ADHESION TO ACHIEVE PROPER FINISH INSTALLATION.
2 THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF LOCATION CHANGES IN DYE LOTS. BATCH OR SIMILAR COLOR SHIFTS.
3 WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF A DOOR UNLESS OTHERWISE INDICATED. IF A CHANGE OF MATERIAL OR ELEVATION WOULD CAUSE EXPOSED UNFINISHED SURFACES, OR UNEVEN FINISH HEIGHT, A TRANSITION STRIP OF SUITABLE MATERIAL SHALL BE INSTALLED.
4 CONTRACTOR SHALL FURNISH A MINIMUM OF THREE (3) 12"X12" SQUARE SAMPLE OF EACH SCHEDULED FINISH FOR REVIEW BY THE ARCHITECT. THE ARCHITECT SHALL RETAIN TWO (2) SAMPLES OF FINISHES FOR RECORD, AND RETURN A MINIMUM OF ONE (1) SAMPLE TO CONTRACTOR. FINISH MATERIALS ORDERED OR INSTALLED WIHTOUT A REVIEWED SUBMITTAL ARE DONE SO AT THE CONTRACTOR'S RISK.
5 INTERIOR FINISHES IN ROOMS AND ENCLOSED SPACES SHALL HAVE A FLAME SPREAD CLASSIFICATION OF III (76-200 TUNNEL TEST) AND A SMOKE DENSITY OF NO GREATER THAN 450 (CLASS C). FINISHES IN CORRIDORS OR EXIT ACCESS ENCLOSURES SHALL COMPLY WITH CODE REQUIRED LIMITS BASED UPON BUILDING TYPE, USER GROUP AND PRESENCE OF SPRINKLER HEADS.
6 MATERIALS EXPOSED WITHIN PLENUM SPACES DESIGNED TO ALLOW AIR MOVEMENT AND FUNCTION AS PART OF THE AIR DISTRIBUTION SYSTEM ARE REQURIED TO BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX LESS THAN 25 AND A SMOKE DEVELOPED INDEX LESS THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL COMBUSTABLE MATERIALS LOCATED WITHIN THESE PLENUM SPACES SHALL BE ENCLOSED IN NON-COMBUSTABLE MATERIAL (5/8" GYPSUM WALL BOARD) UNLESS OTHERWISE INDICATED. REFER TO MECHANICAL DRAWINGS FOR AIR DISTRIBUTION SYSTEM DESIGN AND DETAILS.
7 REFER TO FINISH SCHEDULE AND SPECIFICATIONS FOR SPECIFIED MANUFACTURER, MODEL, AND FINISH.
8 PROVIDE FINISH MATERIALS WITH FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS PER CODE REQUIRED LIMITS, BASED ON ASTM E-84 TEST METHOD.
9 PROVIDE 5% ATTIC STOCK OF PAINT AND FLOORING MATERIALS TO TENANT AT COMPLETION OF PROJECT.
10 ALL STANDING OR RUNNING TRIM PIECES TO BE PLAIN SAWN HARDWOOD GRADE I LUMBER TO MEET AWI REQUIREMENTS FOR PREMIUM GRADE.
11 COUNTERTOPS ARE TO BE CONTINUOUS, USING THE MINIMAL NUMBER OR SEAMS POSSIBLE. SEAMS SHOULD BE AS SMALL AND CLEAN AS POSSIBLE.
12 THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING MOISTURE CONTENT OF ALL SLABS PRIOR TO FLOORING INSTALLATION. IF TESTING RESULTS ARE OUTSIDE THE TOLERANCE OF SPECIFIED FLOORING MATERIALS, CONTRACTOR SHALL PROVIDE APPROPRIATE, APPROVED MITIGATION MEASURES.
13 CONTRACTOR SHALL COORDINATE LOCATION OF ACCENT WALL WITH LIGHTBRIDGE ACADEMY.
14 PROVIDE TRANSITION STRIPS AT DOORWAYS, ALIGN WITH THE FACE OF THE ROOM SIDE DOOR FRAME.
15 CONTRACTOR SHALL INSTALL CARPETING AT THE END OF CONSTRUCTION TO AVOID CONSTRUCTION DUST.
16 ALL WOOD TRIM TO HAVE 1/4" DIA. ROUNDED CORNERS.
17 PROVIDE CORNER GUARD @ ALL OUTSIDE CORNERS WITHIN CORRIDORS AND CLASSROOMS.

GENERAL NOTES - RESILIENT FLOORING

1. CONTRACTOR RESPONSIBLE FOR ALL PREPARATION AND CONSTRUCTION REQUIRED.
2. DESIGN INTENT IS FOR FLOORING TRANSITIONS TO MATCH COLOR OF ADJACENT FLOOR SURFACE. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL.
3. PROVIDE RESLIENT COVE BASE AT ALL RESILIENT FLOORING LOCATIONS. CONTRACTOR SHALL USE INSIDE AND OUTSIDE CORNERS AND END STOPS FOR ALL AREAS SPECIFIED. USE ROLL GOODS ONLY. NO SEAM SHALL OCCUR WITHIN 6" OF AN OUTSIDE CORNER.
4. NO SEAMS OF RESLIENT FLOORING SHALL OCCUR WITHIN 6'-0" OF ANY WATER SUPPLY OR SINK.
5 FOR SHEET MATERIAL, CONTRACTOR TO SUBMIT FLOOR SEAMING DIAGRAM TO ARCHITECT FOR REVIEW AND APPROVAL.
6 SHEET VINYL WELDING RODS TO BE USED ON SEAMS WHERE TWO COLORS JOIN. ALL OTHER SEAMS TO BE CHEMICALLY BONDED. WELDING ROD COLOR FOR SHEET VINYL IS TO MATCH UNLESS OTHERWISE NOTED.

GENERAL NOTES - PAINTING

1 IN CEILING AREAS SCHEDULED TO BE EXPOSED TO EXISTING STRUCTURE, ALL ITEMS INSTALLED ABOVE THE HEIGHT OF THE LIGHT FIXTURES, INCLUDING, BUT NOT LIMITED TO,DUCTWORK, SPRINKLER SYSTEM, CONDUIT, AND STRUCTURAL SLAB, SHALL BE PAINTED WITH DRYFALL PAINT COLORED ACCORDING TO THE FINISHES SCHEDULE.
2 PAINTING BEGINS FROM ALL EDGES AND CORNERS, UNLESS NOTED OTHERWISE.
3 ALL METALS TO BE SHOP PRIMED AND PAINTED WITH PAINT FORMULATED TO BE APPLIED TO METAL SURFACES.
4 ALL NEW AND EXISTING TO REMAIN GYPSUM BOARD WALLS AND CEILINGS TO BE PAINTED PT1, UNLESS OTHERWISE NOTED.

FINISH KEY

W Wall Finish — INDICATES WALL FINISH MATERIAL
F Floor Finish — INDICATES FLOOR FINISH MATERIAL
B Base Finish — INDICATES BASE FINISH MATERIAL

TS — TRANSITION STRIP

CHANGE IN FLOOR MATERIAL: PROVIDE VINYL TRANSITION STRIP

RF1 CP1 CO1
CM1 CP2

SCHEDULE - FINISH PLAN ABBREVIATIONS

Category	Key Name	Comments on Finish
CEILING	CL	ACOUSTICAL, SPECIALTY, AND WOOD
CERAMIC	CM	ANYTHING REQUIRING A SETTING BED AND GROUT, INCLUDING STACKED STONE
CONCRETE	CO	STAINED, STAMPED, SEALED, PATTERNED, AND POLISHED
CARPET	CP	INCLUDES CARPET BASE
CHAIR RAIL	CR	WOOD, RUBBER, PLASTIC OR OTHER RUNNING TRIM APPLIED TO WALLS
EXISTING TO REMAIN	EX	
FABRIC	FB	UPHOLSTERY AND WINDOW COVERING INCLUDING LEATHER AND VINYL
GLASS	GL	CLEAR, BACK PAINTED, FILMED, PATTERNED, FRITTED, TEXTURED AND MIRRORED
MISCELLANEOUS	MA	COVERS ITEMS NOT DESCRIBED BY OTHER CATEGORIES
METAL	MT	INCLUDES ALL UNPAINTED METALS
NOT IN CONTRACT	NIC	
PLASTIC LAMINATE	PL	ANY LAMINATE APPLIED TO A SUBSTRATE, INCLUDING METAL, PLASTIC , AND WOOD
PAINT	PT	INCLUDES PAINT TREATMENTS LIKE ZOLOTONE
RESILIENT FINISH	RF	VCT,SHEET VINYL, RUBBER, VINYL WOOD PLANK AND CORK
STUCCO	SC	PORTLAND BASED NON-EIFS TYPE APPLICATIONS
SOLID SURFACE	SS	CORIAN, 3FORM, SILESTONE, AVONITE, COMPAC
STONE	ST	INCLUDES STONE BASE, WALL CLADDING AND COUNTERTOPS
TERRAZZO	TZ	POURED IN PLACE APPLICATIONS
VERIFY IN FIELD	VIF	
WALL BASE	WB	ALL WALL BASES INCLUDING RUBBER, VINYL, AND WOOD - EXCLUDING STONE AND CARPET BASES
WALL COVERING	WC	VINYL, FABRIC, AND SPECIALTY
WOOD	WD	REAL WOOD IN ALL APPLICATIONS EXCLUDING BASE
FINISH LEGEND KEY	XD	INDICATES FINISH TO BE DETERMINED
FINISH PREFIXES		
EXTERIOR	E.	INDICATES EXTERIOR APPLIED FINISHES
FURNITURE	F.	INDICATES FURNITURE APPLIED FINISHES

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SHEET TITLE:
FINISH PLANS, SCHEDULES, LEGEND & NOTES

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
A105

SCHEDULE - FINISH LEGEND

Mark	Description	Manufacturer	Finish Specification	Install Pattern	Comments
CG1	CORNER GUARD	SEE SPEC	SEE SPEC	APPLIED WITH ADHESIVE	
CL1	ACOUSTIC CEILING TILE 24 x 48	ARMSTRONG	CORTEGA SECOND LOOK ANGLED TEGULAR	15/16" PRELUDE XL GRID	SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF ASTM C635 AND ASTM C636
CL2	GYPSUM BOARD	SHERWIN WILLIAMS	CEILING BRIGHT WHITE SW7007	FLAT	GYP. BOARD CEILINGS, FURR DOWNS, AND BULKHEADS
CM1	CERAMIC TILE - 12"X12"	DALTILE/LATICRETE	ACACIA BEIGE SW01 / 'PLASMA' GROUT, COLOR: AFFINITY BEIGE (AF02)	STRAIGHT GRID; 1/8" GROUT JOINTS	SCHLUTER TRANSITIONS - REFERENCE DETAILS; ALIGN JOINTS BETWEEN FLOOR AND WALL TILES
CO1	EPOX	SEE SPEC	SEE SPEC	-	EXPOSED SLAB TO BE EPOXY PAINTED
CP1	CARPET	LEES / MOHAWK	COLLECTION: COURT TERRACE; STYLE: SLC39 CRESTMONT AVENUE; COLOR: 879 PATINA	DOUBLE GLUE BROADLOOM & CARPET PAD	FLAMMABILITY: PASSES SURFACE FLAMMABILITY 16 CFR PART 1630
CP2	CARPET TILE	MOHAWK	STEP IN STYLE II; COLOR 859 WALNUT	24"X24" MULTIDIRECTIONAL TILE	FLAMMABILITY: ASTM E648 - CLASS 1 (GLUE DOWN)
FRP	FIBER REINFORCED PLASTIC	SEE SPEC	SEE SPEC	-	
GL1	CLEAR TEMPERED LAMINATED GLAZING		1/4" LAMINATED TEMPERED GLASS WITH SAFETY LAMINATION; GASKET COLOR TO MATCH FRAME/CHANNEL		TYPICAL FOR ALL GLAZING. REFER TO ELEVATIONS
PT1	TYPICAL PAINT	SHERWIN WILLIAMS	KILIM BEIGE SW6106	PROMAR200 EGGSHELL	
PT2	ACCENT PAINT	SHERWIN WILLIAMS	RAIN SW6219	PROMAR200 EGGSHELL	
PT3	ACCENT PAINT	SHERWIN WILLIAMS	THISTLE SW6283	PROMAR200 EGGSHELL	
PT4	ACCENT PAINT	SHERWIN WILLIAMS	BOLD BRICK SW6327	PROMAR200 EGGSHELL	
PT5	ACCENT PAINT	SHERWIN WILLIAMS	BAKED CLAY SW6340	PROMAR200 EGGSHELL	
PT6	ACCENT PAINT	SHERWIN WILLIAMS	CAMELBACK SW6122	PROMAR200 EGGSHELL	
PT7	ACCENT PAINT	SHERWIN WILLIAMS	GOLD FLEECE SW6388	PROMAR200 EGGSHELL	
PT8	ACCENT PAINT	SHERWIN WILLIAMS	COMPOSED SW6472	PROMAR200 EGGSHELL	NOT USED
PT9	ACCENT PAINT	SHERWIN WILLIAMS	HUMBLE GOLD SW6380	PROMAR200 EGGSHELL	
PT10	ACCENT PAINT	SHERWIN WILLIAMS	AQUA SPHERE SW7613	PROMAR200 EGGSHELL	
PT11	ACCENT PAINT	SHERWIN WILLIAMS	GREEN SPROUT SW7728	PROMAR200 EGGSHELL	
PT12	ACCENT PAINT	SHERWIN WILLIAMS	HOPSACK SW6109	PROMAR200 EGGSHELL	
PT13	ACCENT PAINT	SHERWIN WILLIAMS	SILVERMIST SW7621	PROMAR200 EGGSHELL	NOT USED
PT14	STAFF TOILETS	SHERWIN WILLIAMS	SILVERMIST SW7621	EMERALD SEMIGLOSS	
PT15	DOOR FRAME AND TRIM PAINT	SHERWIN WILLIAMS	ALABASTER SW7008	EMERALD SEMIGLOSS	DOOR FRAMES, VISION PANEL TRIM, CHAIR RAIL, WINDOW SILLS & TRIM, BULLETIN BOARD TRIM
PT16	TOILET ROOM	SHERWIN WILLIAMS	KILIM BEIGE SW6106	EMERALD SEMIGLOSS	
RF1	LVT - LUXURY VINYL TILE	MOHAWK	COLLECTION: VIVID STEP WOOD; STYLE: W723 VINTAGE OAK	6X48 PLANK, RANDOM LAY	CRITICAL RADIANT FLUX: ASTM E648 - CLASS 1
WB1	RUBBER BASE	JOHNSONITE	4" BASE; TIGHTLOCK RESILIENT, COLOR 49 BEIGE	ROLL GOODS, PREFORMED CORNERS	SEE SPEC
WC1	VINYL WALL COVERING	KOROSEAL	STYLE: CHIMAYO; COLOR: C521-26 SAGE BRUSH	ROLL WIDTH: 52/64"	FIRE RATING: ASTM-E84 TUNNEL TEST CLASS A; NFPA 286 CORNER BURN TEST. ALL MATERIAL TO BE UL LABELED.

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1

1

FIRST FLOOR ROOM FINISH SCHEDULE

NO.	ROOM	FLOOR	BASE	WALL	CEILING	ACCENT PAINT	REMARKS
100	VESTIBULE	CP2	WB1	PT1	CL1		INSTALL CLG. TILE CLIPS
102	EXIST. ELEC.	RF1	WB1	PT1	CL1		
103	CORR.	RF1	WB1	PT1,CR1,WC1	CL1		
104	OFFICE	RF1	WB1	PT6	CL1		
104B	I.T.	RF1	WB1	PT1	CL1		
105	CONFERENCE RM.	RF1	WB1	PT6	CL1		GYP. BD. @ SOFFIT
105A	STOR.	RF1	WB1	PT1	CL1		
105C	FIRE. SUPP. RM.	CO1	WB1	PT1	CL1		
106	Y. TODDLERS	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT3	GYP. BD. @ PANTRY AREA
106A	TOILET	CM1	-	PT16,CM1	CL1		
107	STAFF ADA	CM1	-	PT14,CM1	CL1		
108	CORR.	RF1	WB1	PT1,CR1,WC1	CL1, CL2		CM1 IN AREA OF DRINKING FOUNTAINS
109	INFANTS	RF1,CP1	WB1	PT1,CR1,WC1	CL1	PT2	
110	INFANT PANTRY	RF1	WB1	PT1,CR1,WC1	CL1, CL2		GYP. BD. @ PANTRY AREA
111	INFANTS	RF1,CP1	WB1	PT1,CR1,WC1	CL1	PT2	
111A	MECH CL.	RF1	WB1	PT1	CL1		
112	BUGGY	RF1	WB1	PT1	CL1		
113	INFANTS	RF1,CP1	WB1	PT1,CR1,WC1	CL1	PT2	
114	INFANT PANTRY	RF1	WB1	PT1,CR1,WC1	CL1, CL2		GYP. BD. @ PANTRY AREA
115	INFANTS	RF1,CP1	WB1	PT1,CR1,WC1	CL1	PT2	
116	CLO.	CO1	WB1	PT1	CL1		
117	CORR.	RF1	WB1	PT1,CR1,WC1	CL1, CL2		
118	CORR.	RF1	WB1	PT1,CR1,WC1	CL1		
119	BONDING RM.	RF1	WB1	PT1	CL1		
120	Y. TODDLERS	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT4	GYP. BD. @ PANTRY AREA
120A	TOILET	CM1	-	PT16,CM1	CL1		
121	JAN. CLO.	CM1	CM1	PT16	CL1	-	PROVIDE F.R.P. WAINSCOT 72" HIGH ON WET WALL
122	MULTI-PURPOSE	RF1	WB1	PT1,CR1,WC1	CL1	PT8	
122A	TOILET	CM1	-	PT16,CM1	CL1		
122B	TOY STOR.	RF1	WB1	PT1	CL1		
123	EXIST. LIFT	-	-	PT1	-		
124	STAIR #2	RF1,CP2	WB1	PT1	CL1		TREADS TO RECEIVE VINYL COVER
125	STAIR #1	RF1,CP2	WB1	PT1	CL1		TREADS TO RECEIVE VINYL COVER

SECOND FLOOR ROOM FINISH SCHEDULE

NO.	ROOM	FLOOR	BASE	WALL	CEILING	ACCENT PAINT	REMARKS
202	PRE-K	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT12	GYP. BD. @ PANTRY AREA
202A	TOILET	CM1	-	PT16,CM1	CL1		
203	PRE-K	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT11	GYP. BD. @ PANTRY AREA
203A	TOILET	CM1	-	PT16,CM1	CL1		
204	CORR.	RF1	WB1	PT1,CR1,WC1	CL1		
205	PRE-SCHOOL	RF1	WB1	PT1,CR1,WC1	CL1	PT9	GYP. BD. @ PANTRY AREA
206	PRE-SCHOOL	RF1	WB1	PT1,CR1,WC1	CL1	PT10	GYP. BD. @ PANTRY AREA
206A	TOILET	CM1	-	PT16,CM1	CL1		
207	TODDLERS	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT5	GYP. BD. @ PANTRY AREA
207A	TOILET	CM1	-	PT16,CM1	CL1		
208	TODDLERS	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT7	GYP. BD. @ PANTRY AREA
209	TODDLERS	RF1	WB1	PT1,CR1,WC1	CL1, CL2	PT6	GYP. BD. @ PANTRY AREA
209A	TOILET	CM1	-	PT16,CM1	CL1		
211	LAUNDRY/UTILITY	CM1	CM1	PT16,CM1	CL1		
211A	STOR.	RF1	WB1	PT1	CL1		
212	CORR.	RF1	WB1	PT1,CR1,WC1	CL1		
213	STAFF LOUNGE	RF1	WB1	PT13	CL1, CL2		GYP. BD. @ PANTRY AREA
213A	STOR.	RF1	WB1	PT1	CL1		
214	STAFF ADA	CM1	-	PT14,CM1	CL1		

WINDOW TREATMENT & RUG LEGEND

Room name	Paint Accent Color	Window Treatments	Rugs
Office	None	Duralee Jewel-141	TBD
Staff Lounge	None	Duralee Aqua Cocoa-680	None
Bonding Room	None	None	Polka Dot ABC Carpet 1731B -02 (3'-10"x5'-4")
Mobile Infant Suite	SW6219 Rain	Happy Spa-Michael Textiles	TBD
Mobile Infant Suite	SW6219 Rain	Happy Spa-Michael Textiles	TBD
Purple Cats	SW6283 Thistle	Duralee Jewel-141	Humpty Dumpty #1476
Red Birds	SW6327 Bold Brick	Duralee Sundance-346	TBD
Orange Giraffes	SW6340 Baked Clay	Duralee Sundance-346	Animal Phonics #1623
Khaki Kangaroos	SW6122 Camelback	Orange Fabric (Lightbridge)	Jungle Friends #1579
Goldfish	SW6388 Gold Fleece	Duralee Sundance-346	Fishin' Fun #1498
Teal Turtles-Multipurpose	SW6472 Composed	Duralee Seaglass-619	Alphabet Blocks- Natures Colors #CFK11726 (6x9) or CFK11728 (8x12)
Yellow Ducks	SW6380 Humble Gold	Duralee Blue Yellow-542	Toddler Alphabet Blocks #CFK3802 (8x12)
Blue Horses	SW7613 Aqua Sphere	Duralee Blue Yellow-542	Pinwheel #1625
Green Frogs	SW7728 Green Sprout	Duralee Seaglass-619	The Pond #CFK3036
Brown Bears	SW6109 Hopsack	Duralee Aqua Cocoa-680	Give the Planet a Hug #4417 (7'-8"x10'-10")
Grey Elephants	SW7621 Silvermist	Duralee Aqua Cocoa-680	TBD

SCHEDULE - FINISH PLAN ABBREVIATIONS

Category	Key Name	Comments on Finish
CEILING	CL	ACOUSTICAL, SPECIALTY, AND WOOD
CERAMIC	CM	ANYTHING REQUIRING A SETTING BED AND GROUT, INCLUDING STACKED STONE
CONCRETE	CO	STAINED, STAMPED, SEALED, PATTERNED, AND POLISHED
CARPET	CP	INCLUDES CARPET BASE
CHAIR RAIL	CR	WOOD, RUBBER, PLASTIC OR OTHER RUNNING TRIM APPLIED TO WALLS
EXISTING TO REMAIN	EX	
FABRIC	FB	UPHOLSTERY AND WINDOW COVERING INCLUDING LEATHER AND VINYL
GLASS	GL	CLEAR, BACK PAINTED, FILMED, PATTERNED, FRITTED, TEXTURED AND MIRRORED
MISCELLANEOUS	MA	COVERS ITEMS NOT DESCRIBED BY OTHER CATEGORIES
METAL	MT	INCLUDES ALL UNPAINTED METALS
NOT IN CONTRACT	NIC	
PLASTIC LAMINATE	PL	ANY LAMINATE APPLIED TO A SUBSTRATE, INCLUDING METAL, PLASTIC , AND WOOD
PAINT	PT	INCLUDES PAINT TREATMENTS LIKE ZOLOTONE
RESILIENT FINISH	RF	VCT,SHEET VINYL, RUBBER, VINYL WOOD PLANK AND CORK
STUCCO	SC	PORTLAND BASED NON-EIFS TYPE APPLICATIONS
SOLID SURFACE	SS	CORIAN, 3FORM, SILESTONE, AVONITE, COMPAC
STONE	ST	INCLUDES STONE BASE, WALL CLADDING AND COUNTERTOPS
TERRAZZO	TZ	POURED IN PLACE APPLICATIONS
VERIFY IN FIELD	VIF	
WALL BASE	WB	ALL WALL BASES INCLUDING RUBBER, VINYL, AND WOOD - EXCLUDING STONE AND CARPET BASES
WALL COVERING	WC	VINYL, FABRIC, AND SPECIALTY
WOOD	WD	REAL WOOD IN ALL APPLICATIONS EXCLUDING BASE
FINISH LEGEND KEY	XD	INDICATES FINISH TO BE DETERMINED
FINISH PREFIXES		
EXTERIOR	E.	INDICATES EXTERIOR APPLIED FINISHES
FURNITURE	F.	INDICATES FURNITURE APPLIED FINISHES

JAM ARCH

ARCHITECT OF RECORD:

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JUSTIN A. MIHALIK LIC #: 27468

Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
FINISH SCHEDULE

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15

DATE: 07/23/2019

DRAWN BY: OS/KM

CHECKED BY: JAM/KM

SHEET NO.
A106

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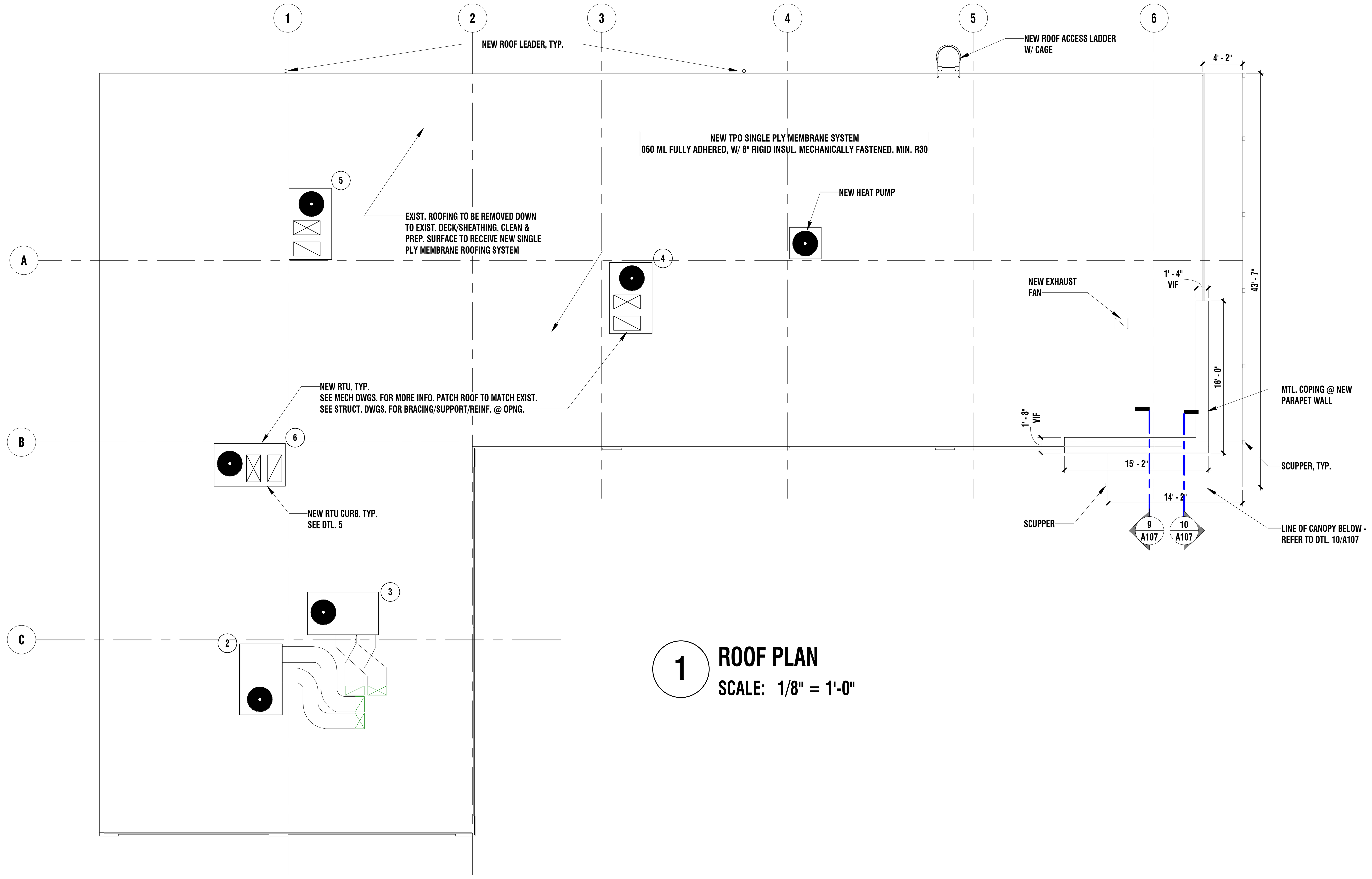
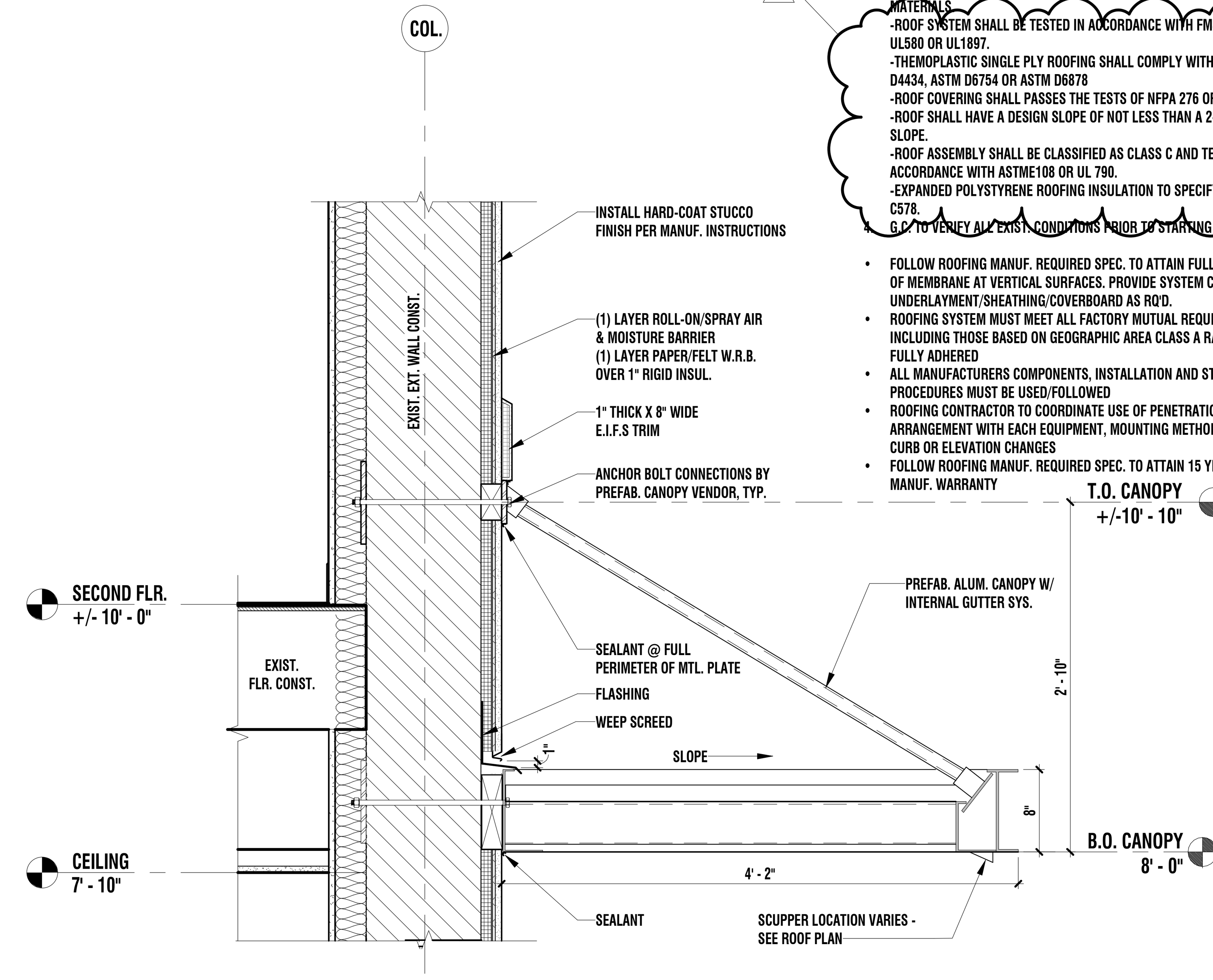
GENERAL NOTES:

1. SEE DWG. A101 & A102 FOR CONSTUCTION FLOOR PLAN.
2. MECHANICAL, PLUMBING, AND ELECTRICAL SERVICE DESIGN TO BE PROVIDED BY THE CONTRACTOR.
3. REFER TO SPECIFICATIONS FOR ROOFING, FLASHING, & RELATED MATERIALS.
   - -ROOF SYSTEM SHALL BE TESTED IN ACCORDANCE WITH FM4474, UL580 OR UL1897.
   - -THEMOPLASTIC SINGLE PLY ROOFING SHALL COMPLY WITH ASTM D4434, ASTM D6754 OR ASTM D6878
   - -ROOF COVERING SHALL PASSES THE TESTS OF NFPA 276 OR UL 1256.
   - -ROOF SHALL HAVE A DESIGN SLOPE OF NOT LESS THAN A 2-PERCENT SLOPE.
   - -ROOF ASSEMBLY SHALL BE CLASSIFIED AS CLASS C AND TESTED IN ACCORDANCE WITH ASTME108 OR UL 790.
   - -EXPANDED POLYSTYRENE ROOFING INSULATION TO SPECIFY ASTM C578.
4. G.C. TO VERIFY ALL EXIST. CONDITIONS PRIOR TO STARTING WORK

- FOLLOW ROOFING MANUF. REQUIRED SPEC. TO ATTAIN FULL ADHESION OF MEMBRANE AT VERTICAL SURFACES. PROVIDE SYSTEM COMPATIBLE UNDERLAYMENT/SHEATHING/COVERBOARD AS RQ'D.
- ROOFING SYSTEM MUST MEET ALL FACTORY MUTUAL REQUIREMENTS INCLUDING THOSE BASED ON GEOGRAPHIC AREA CLASS A RATING FULLY ADHERED
- ALL MANUFACTURERS COMPONENTS, INSTALLATION AND STORAGE PROCEDURES MUST BE USED/FOLLOWED
- ROOFING CONTRACTOR TO COORDINATE USE OF PENETRATION ARRANGEMENT WITH EACH EQUIPMENT, MOUNTING METHODS, PIPING, CURB OR ELEVATION CHANGES
- FOLLOW ROOFING MANUF. REQUIRED SPEC. TO ATTAIN 15 YEAR NDL MANUF. WARRANTY



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



10 SECTION @ CANOPY
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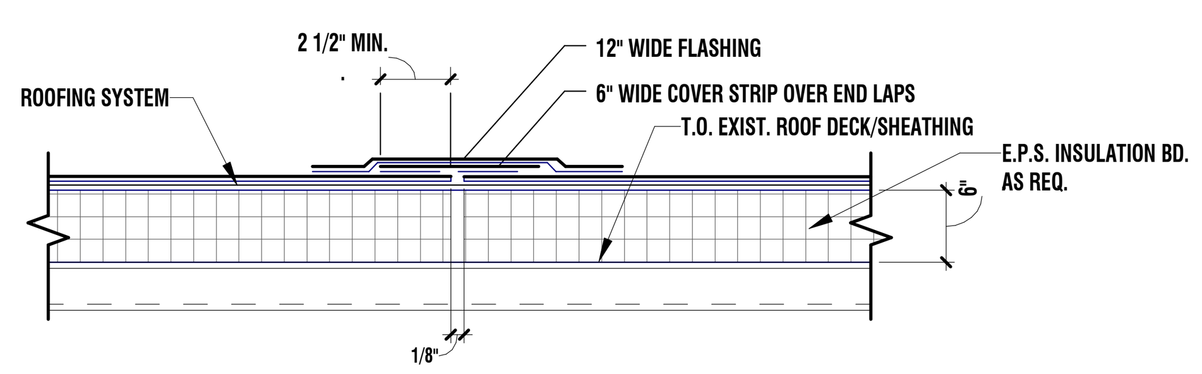
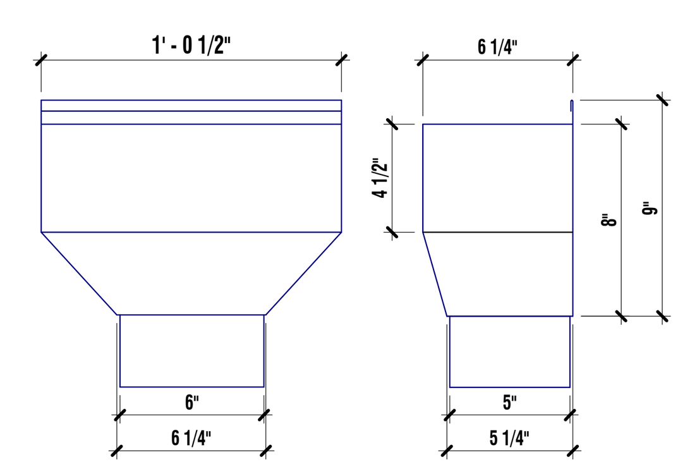
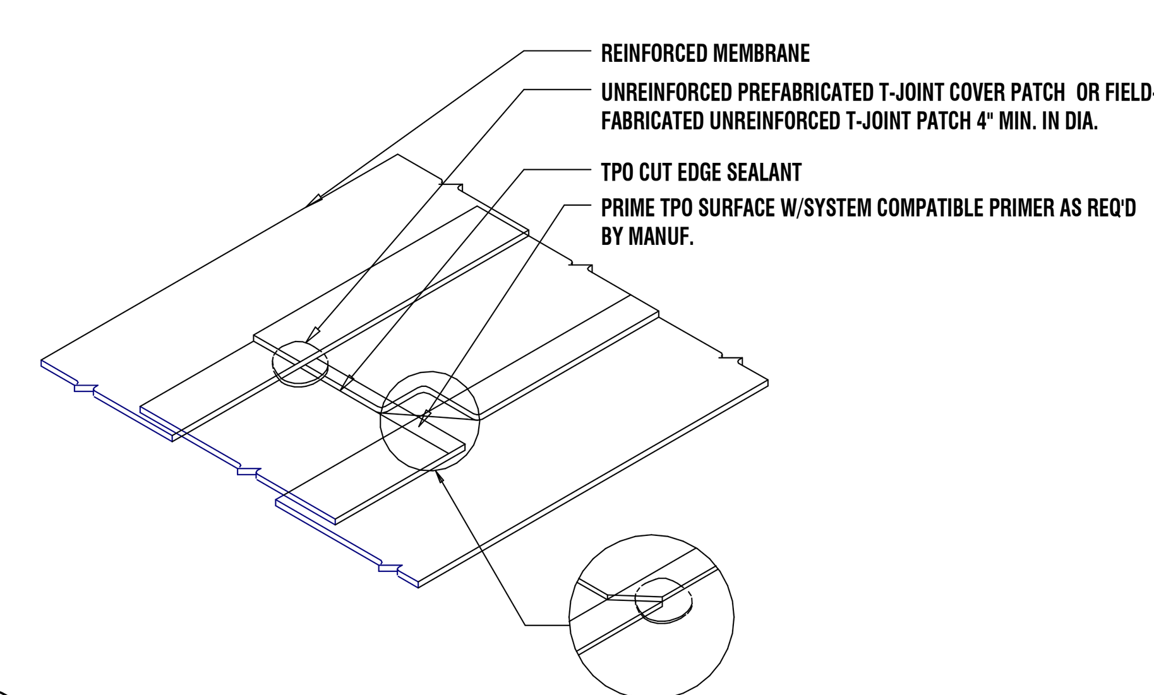


2 MEMBRANE DETAIL
SCALE: 6" = 1'-0"



3 CONDUCTOR HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



4 MEMBRANE DETAIL
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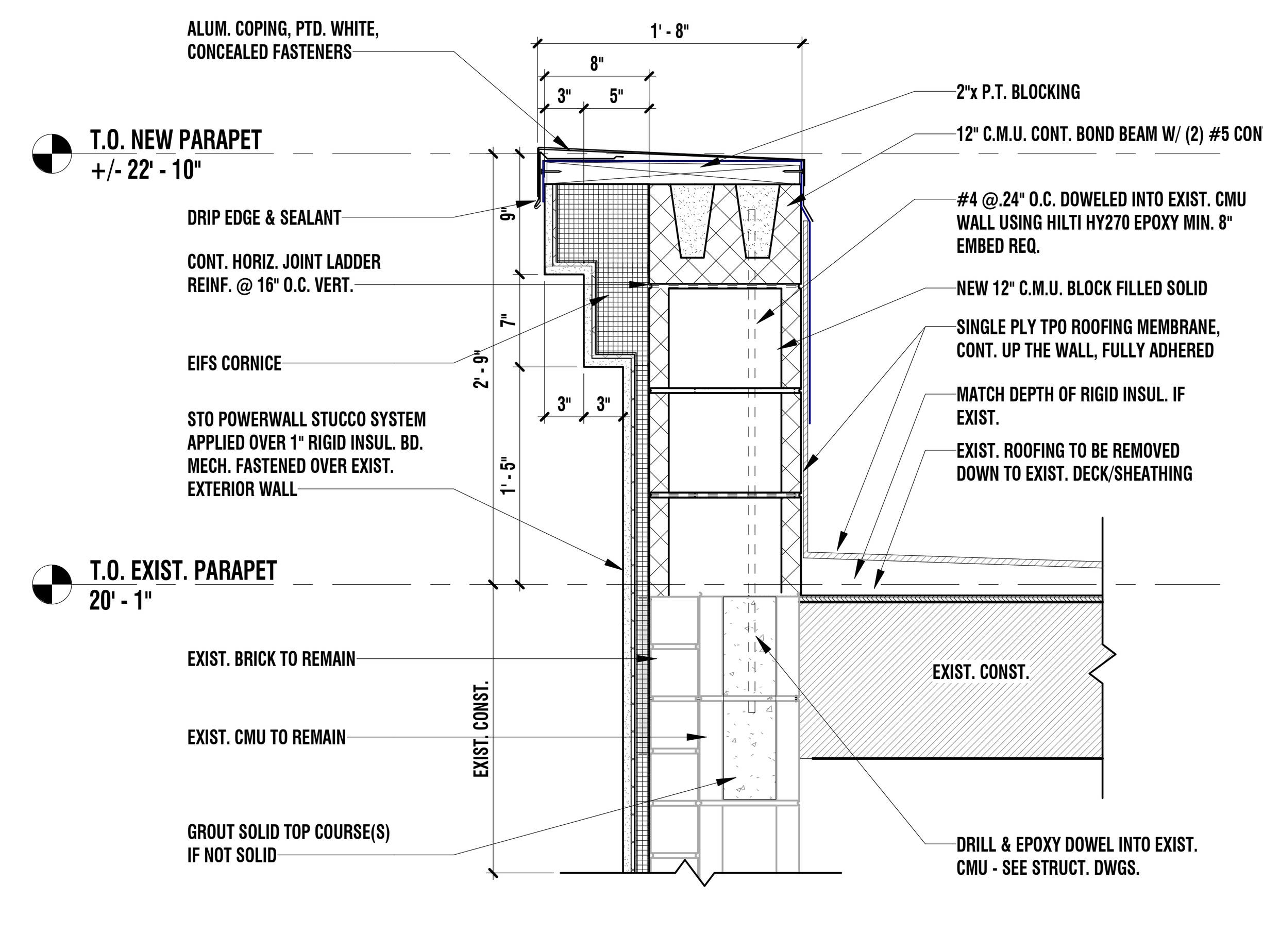

9 PARAPET DETAIL
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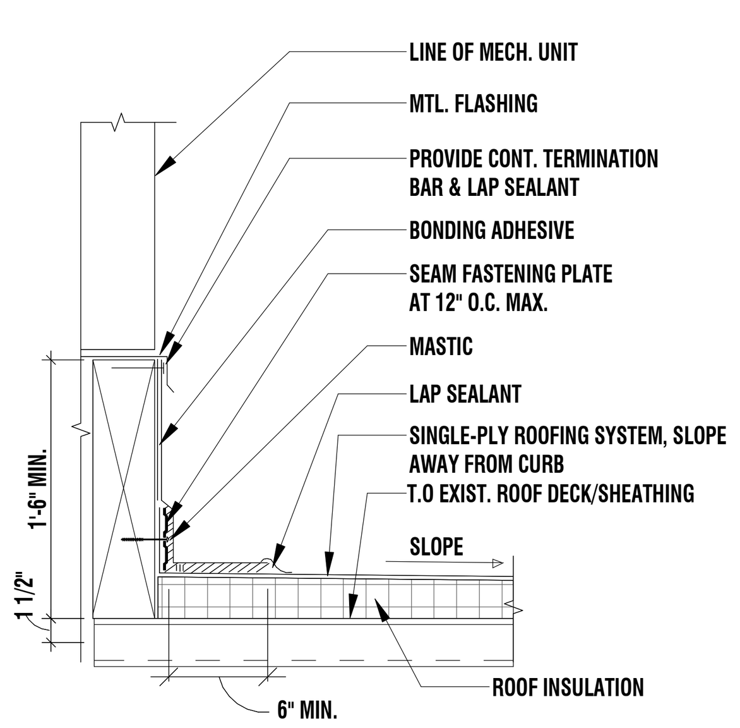
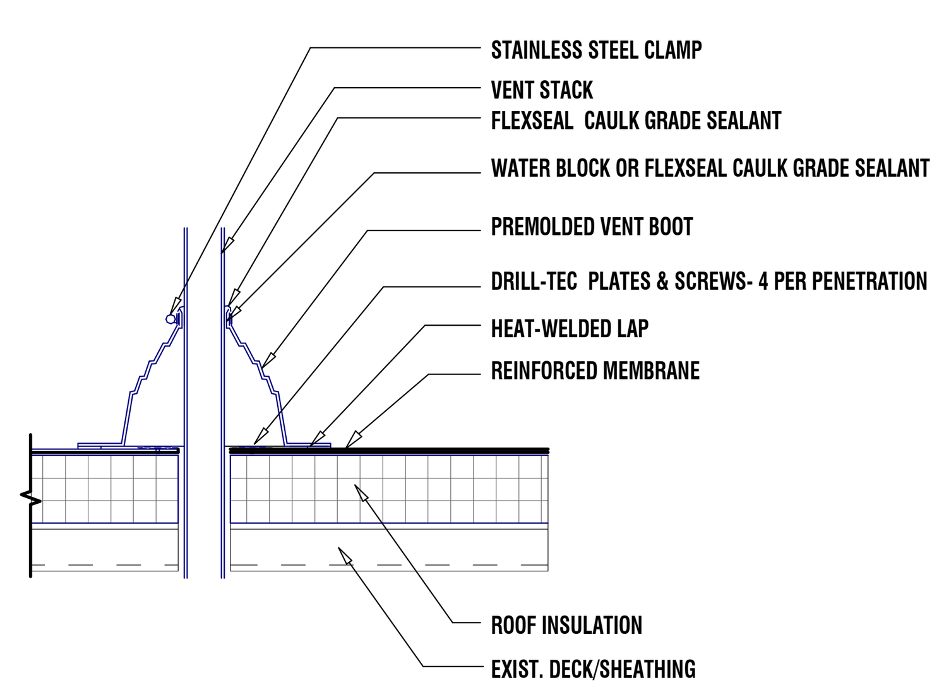
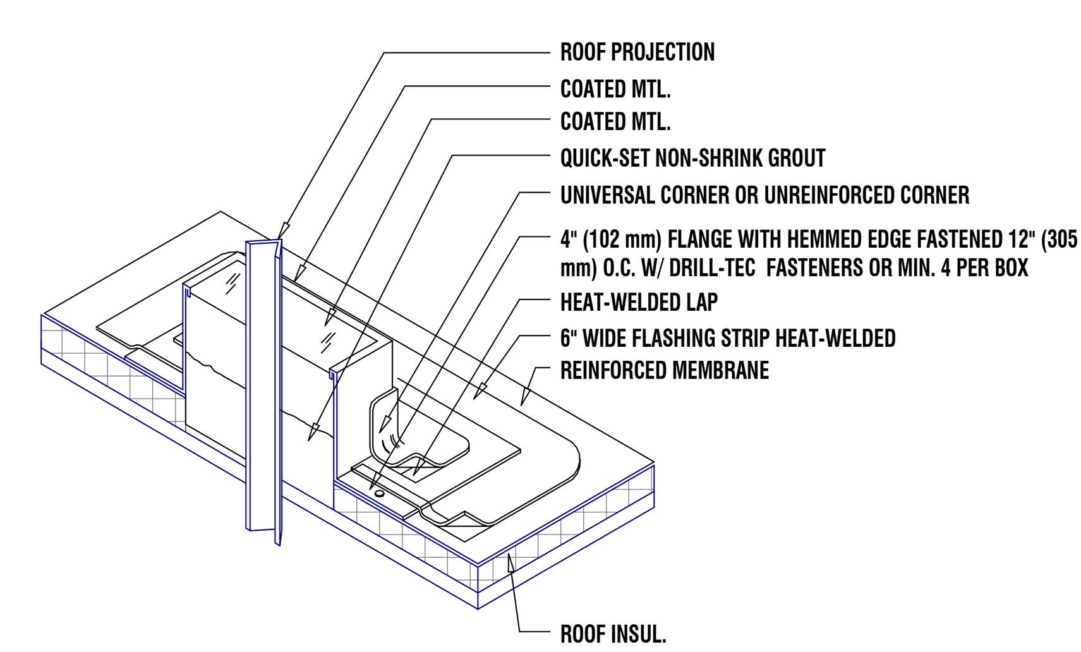


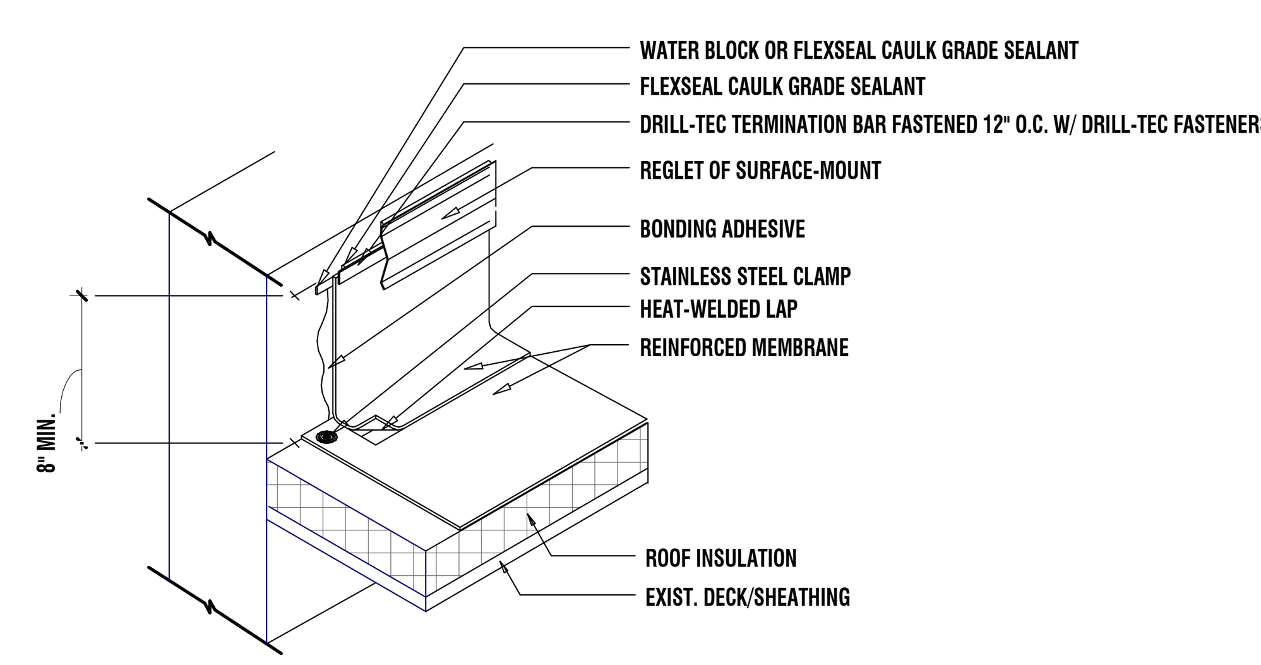
5 CURB DETAIL
SCALE: 6" = 1'-0"



6 VENT BOOT FLASHING
SCALE: 6" = 1'-0"



7 SEALANT POCKET DETAIL
SCALE: 6" = 1'-0"



8 PARAPET WALL FLASHING DETAIL
SCALE: 6" = 1'-0"

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SHEET TITLE:
ROOF PLAN, DETAILS & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
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DATE:	07/23/2019
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CHECKED BY:	JAM/KM

SHEET NO.
A107

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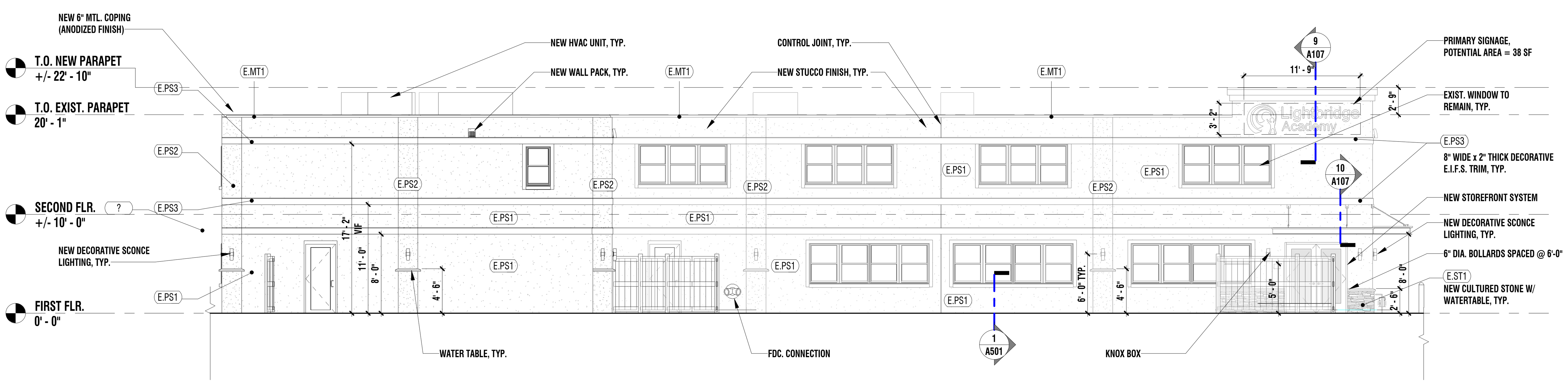
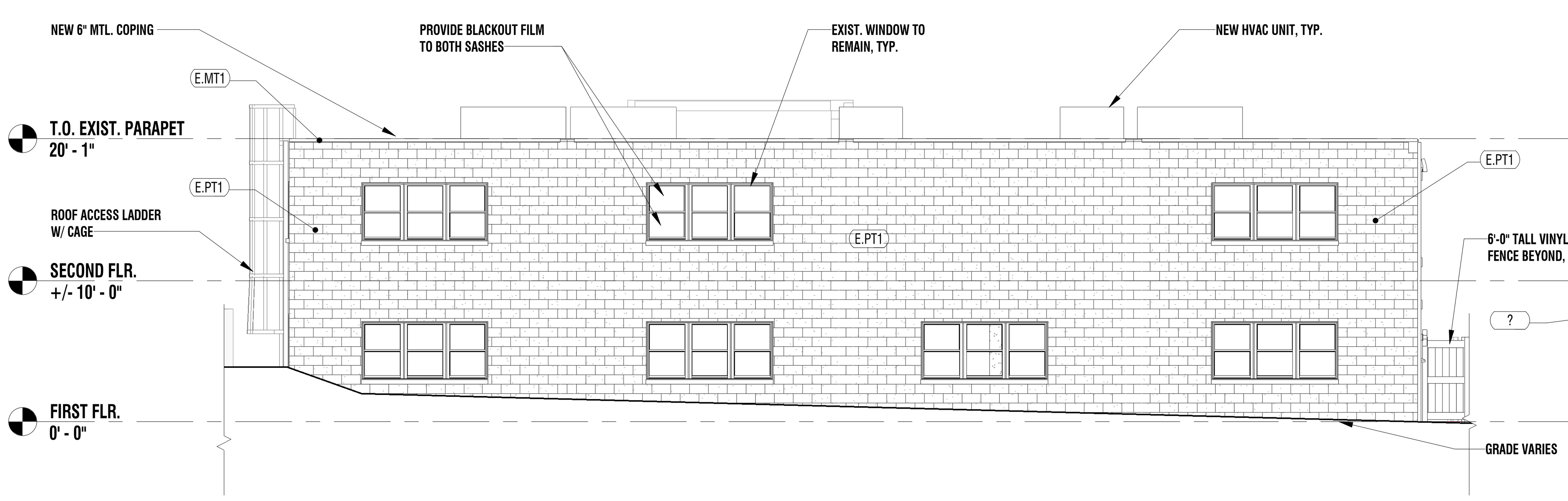


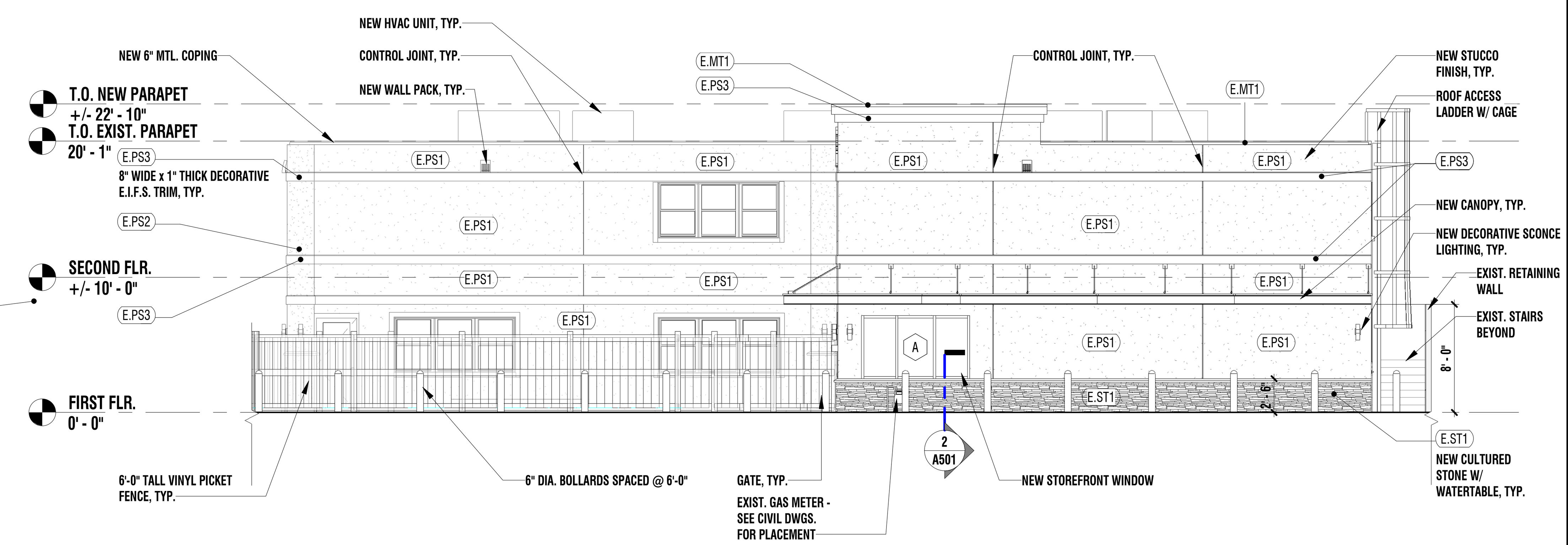
1 NORTH ELEVATION

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



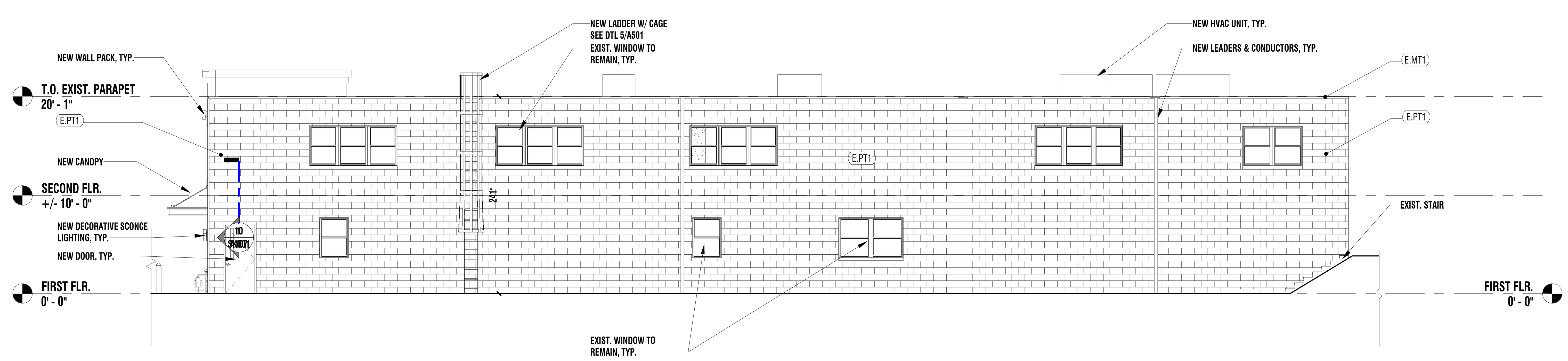
2 EAST ELEVATION

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



3 WEST ELEVATION

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



4 SOUTH ELEVATION

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

EXTERIOR FINISHES

MARK	DESCRIPTION	COLOR
E.MT1	METAL COPING	9433 WHITE
E.PS1	PAINTED STUCCO - BODY	10611 MOONLIT SAND
E.PS2	PAINTED STUCCO - ACCENT	32132 SPECTRAL
E.PS3	PAINTED STUCCO - TRIM	9433 WHITE
E.PT1	PAINT	10611 MOONLIT SAND

MAXIMUM AIR LEAKAGE RATE FOR FENESTRATION ASSEMBLIES:

Fenstration Assembly	Maximum Rate (CFM/FT ^ 2)	Test Procedure
Storefront glazing	0.06	NFRC 400 or ASTM E283 at 1.57 psf (75 Pa)
Commercial glazed swinging entrance doors	1.00	

1

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SHEET TITLE:
BUILDING ELEVATIONS, SCHEDULES & NOTES

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A201

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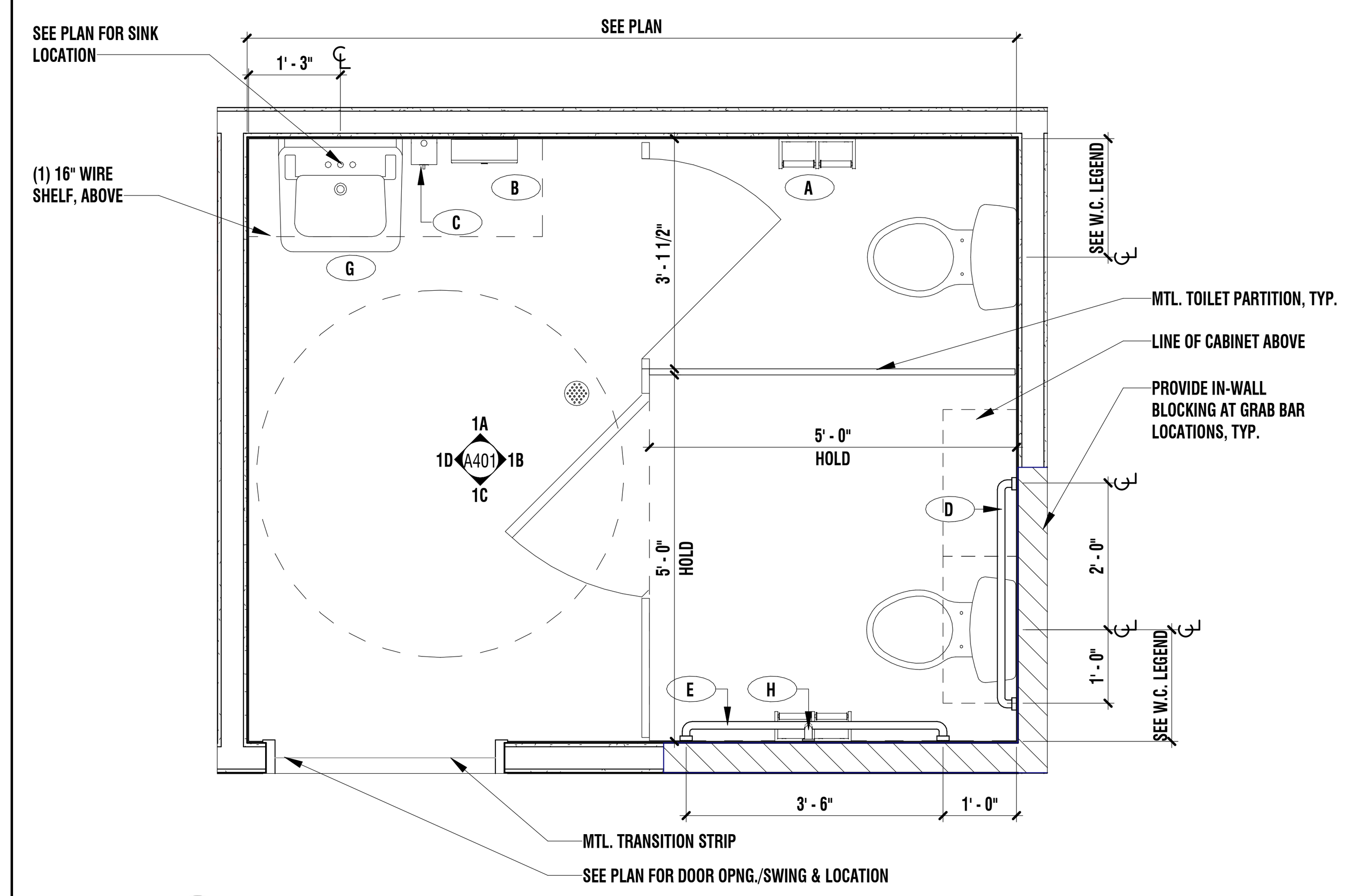
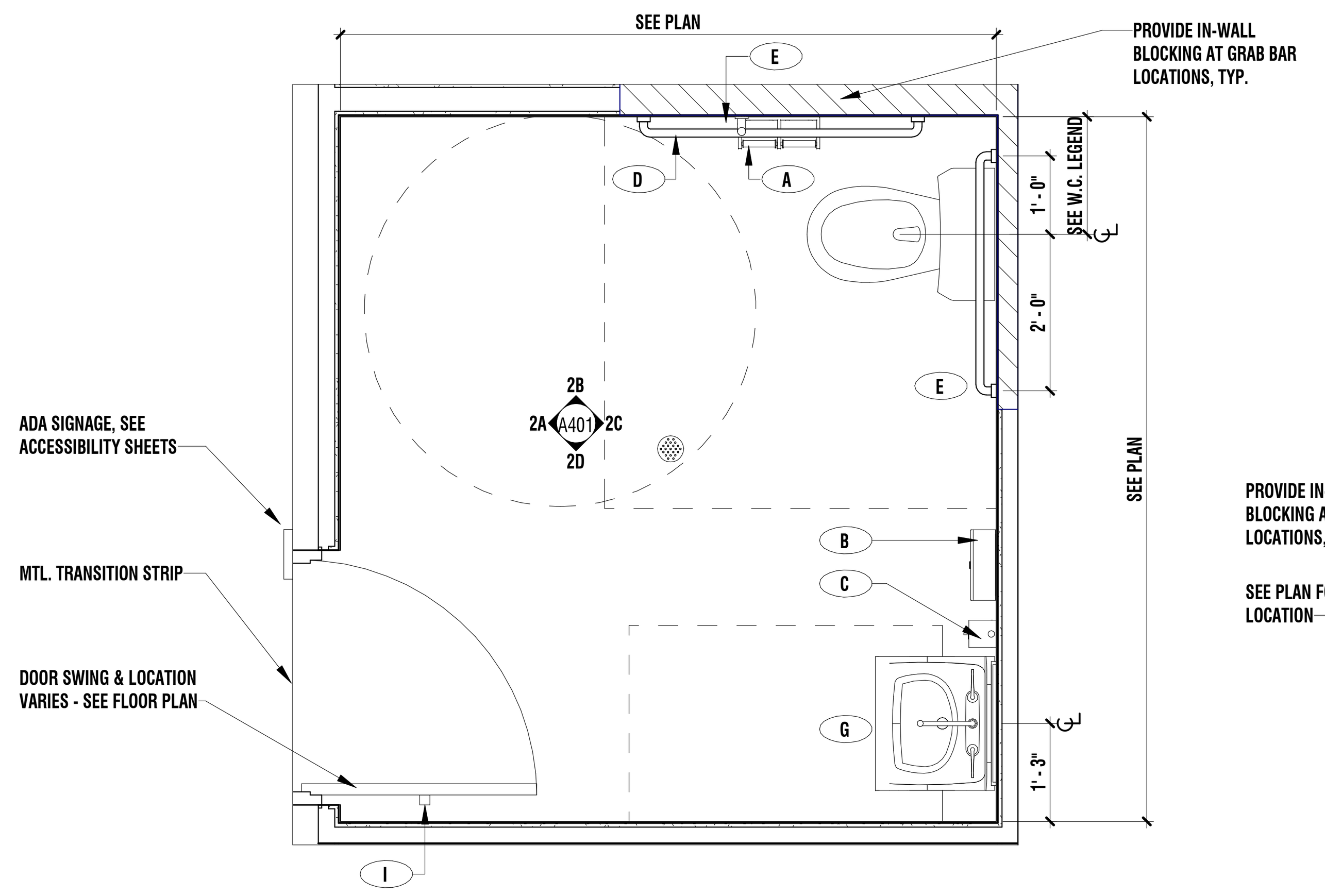
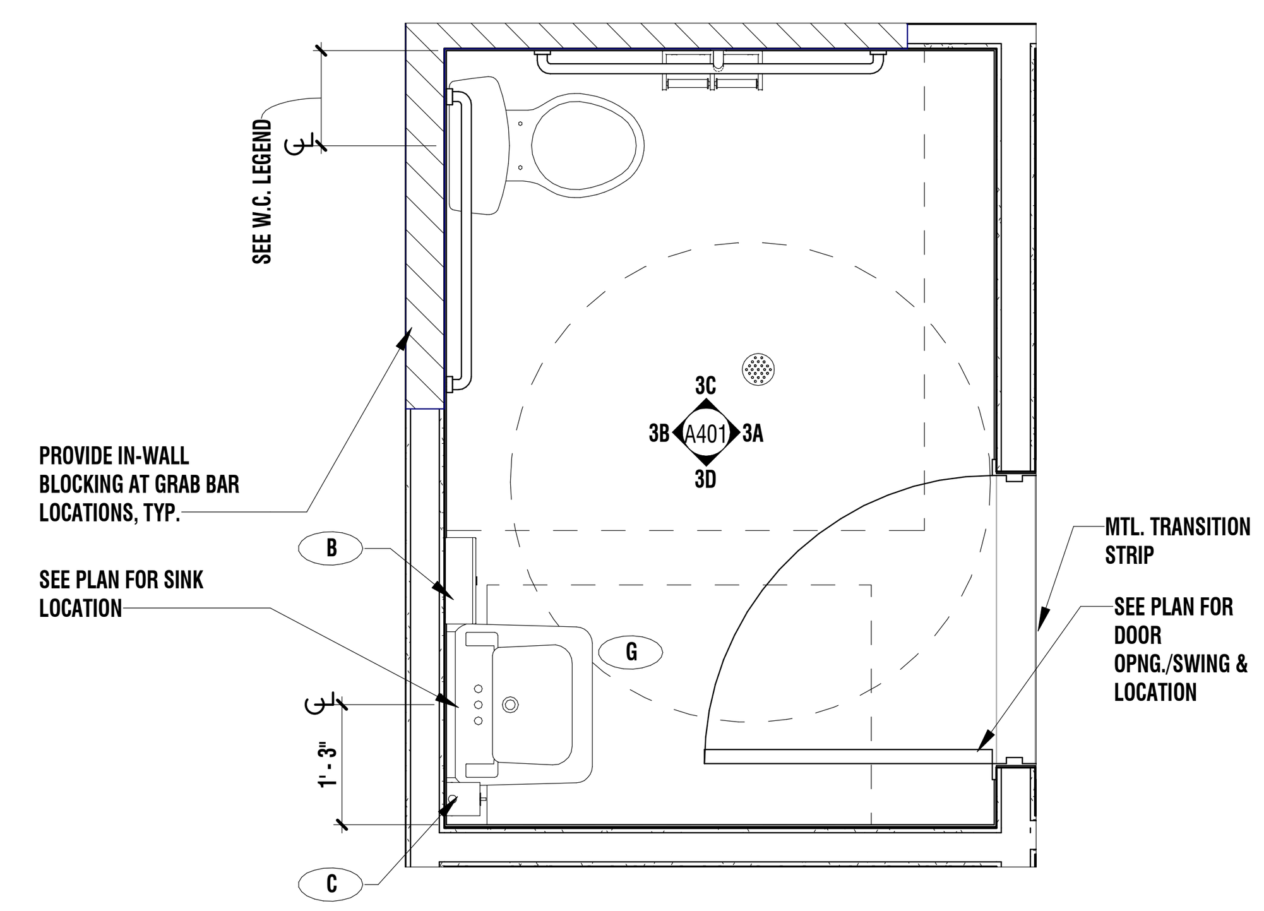


1 TYP. CLASSROOM TOILET PLAN
SCALE: 1/2" = 1'-0"



2 TYP. STAFF TOILET PLAN
SCALE: 1/2" = 1'-0"



3 TYP. YOUNG TODDLER TOILET PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES -TOILET ROOM

1. REFER TO DWG. A104 FOR REFLECTED CEILING PLAN.
2. REFER TO DWG. A105 & A106 FOR FINISH PLAN & SCHEDULE.
3. ALL DIMENSIONS SHOWN ARE FROM FINISH SURFACE TO FINISH SURFACE.
4. ALL MIRRORS ARE TO BE CENTERED WITH LAVATORY.
5. CHILDREN TOILET DESIGN SHALL COMPLY WITH ANSI A117.1, LATEST EDITION.
6. TOILET FLUSH HANDLE TO BE LOCATED ON THE OPEN ROOM SIDE OF THE TOILET.
7. PROVIDE WOOD BLOCKING FOR ALL WALL MOUNTED FURNITURE, EQUIPMENT AND PLUMBING ACCESSORIES.
8. SEE DWG. G103 FOR ADA/BRAILLE SIGNAGE.
9. SEE SPECIFICATION FOR METAL TILE TRIM AND TRANSITION STRIP.
10. SEE PLUMBING DRAWINGS FOR PLUMBING FIXTURES.

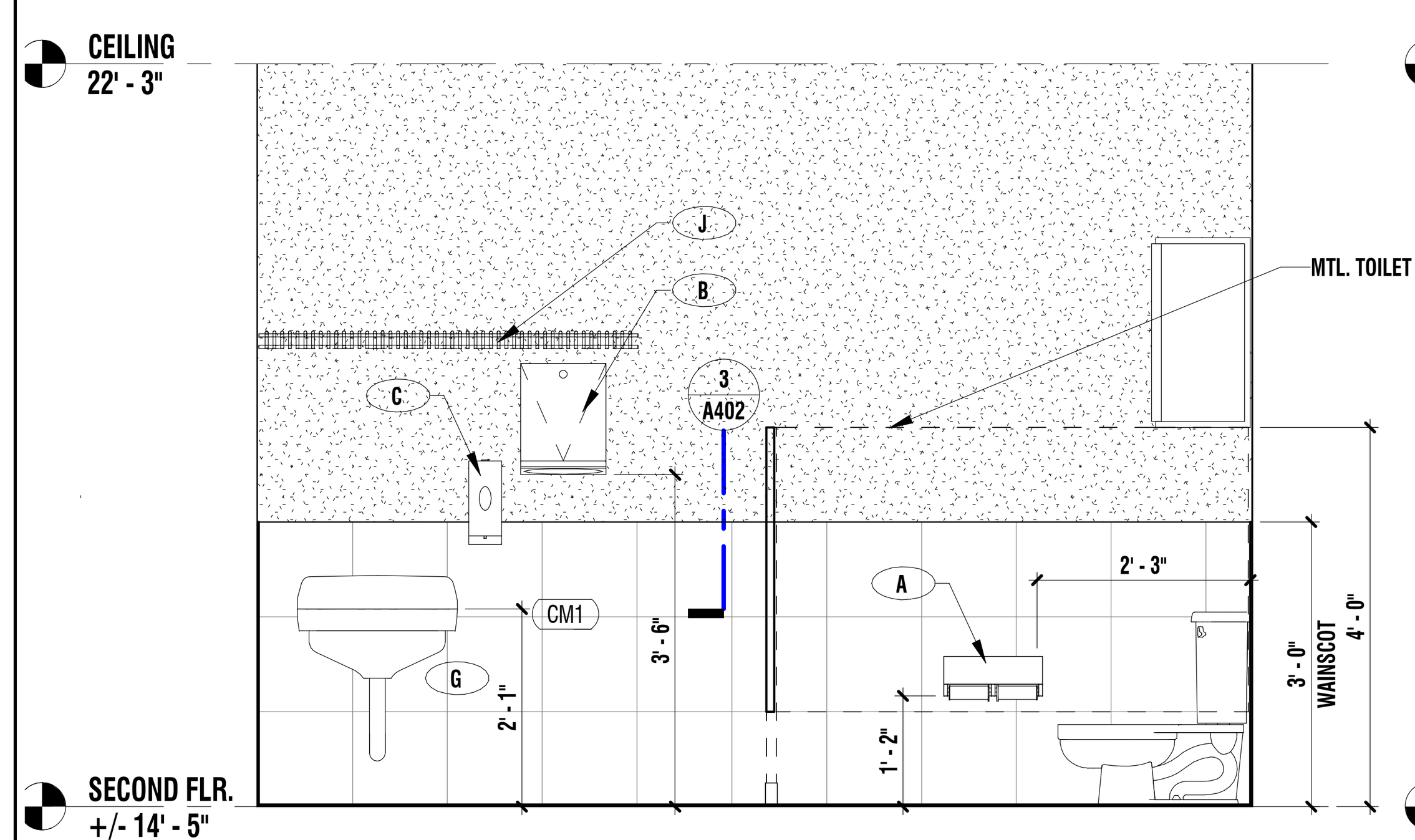
W.C. LEGEND

FIXTURE	℄ DISTANCE FIXTURE TO SIDE WALL
WC-1	12"
WC-2	16"
WC-3	18"

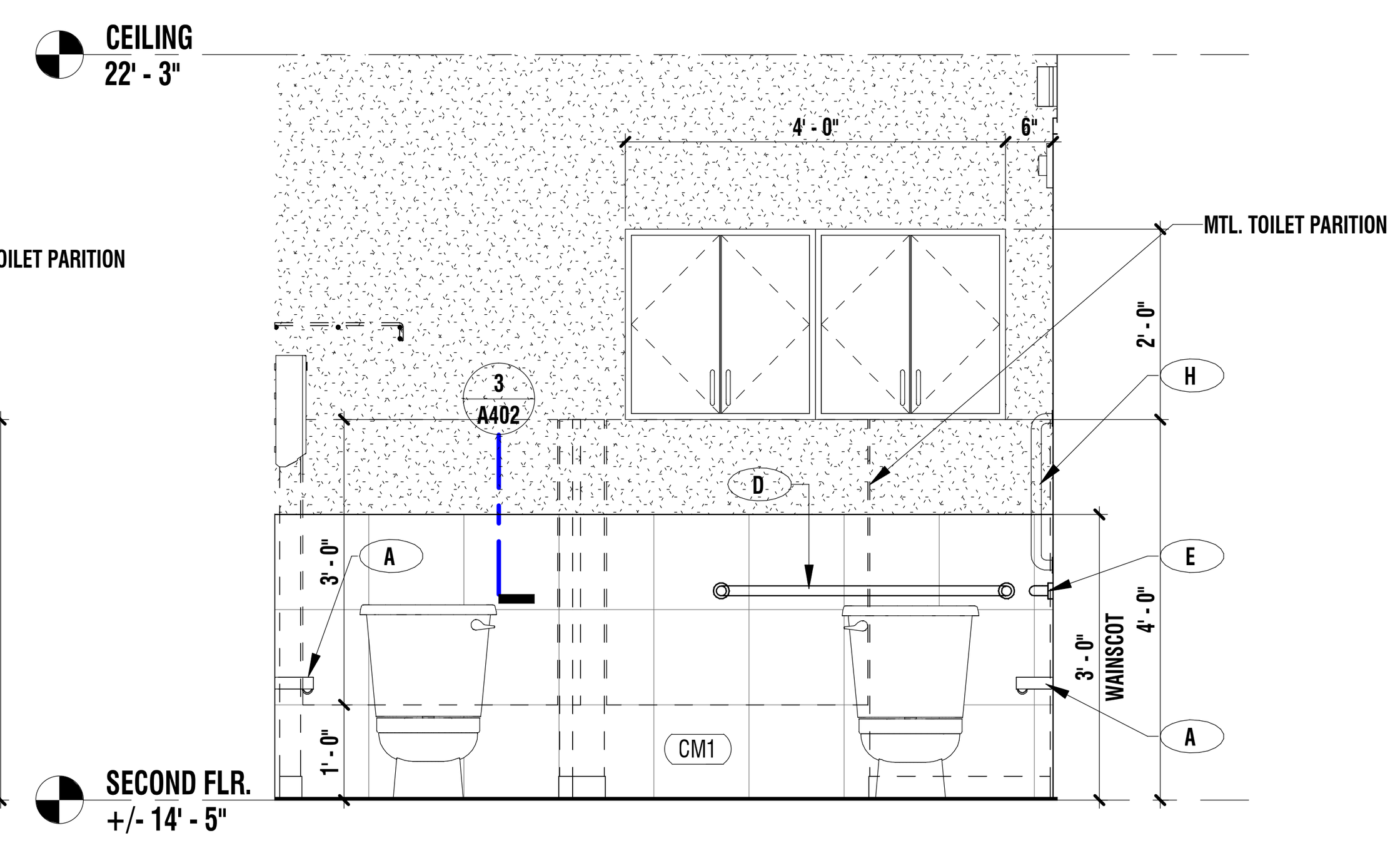
*REFER TO PLUMBING DWGS. FOR WATER CLOSET SPECIFICATIONS & ASSIGNMENTS

ACCESSORY SCHEDULE

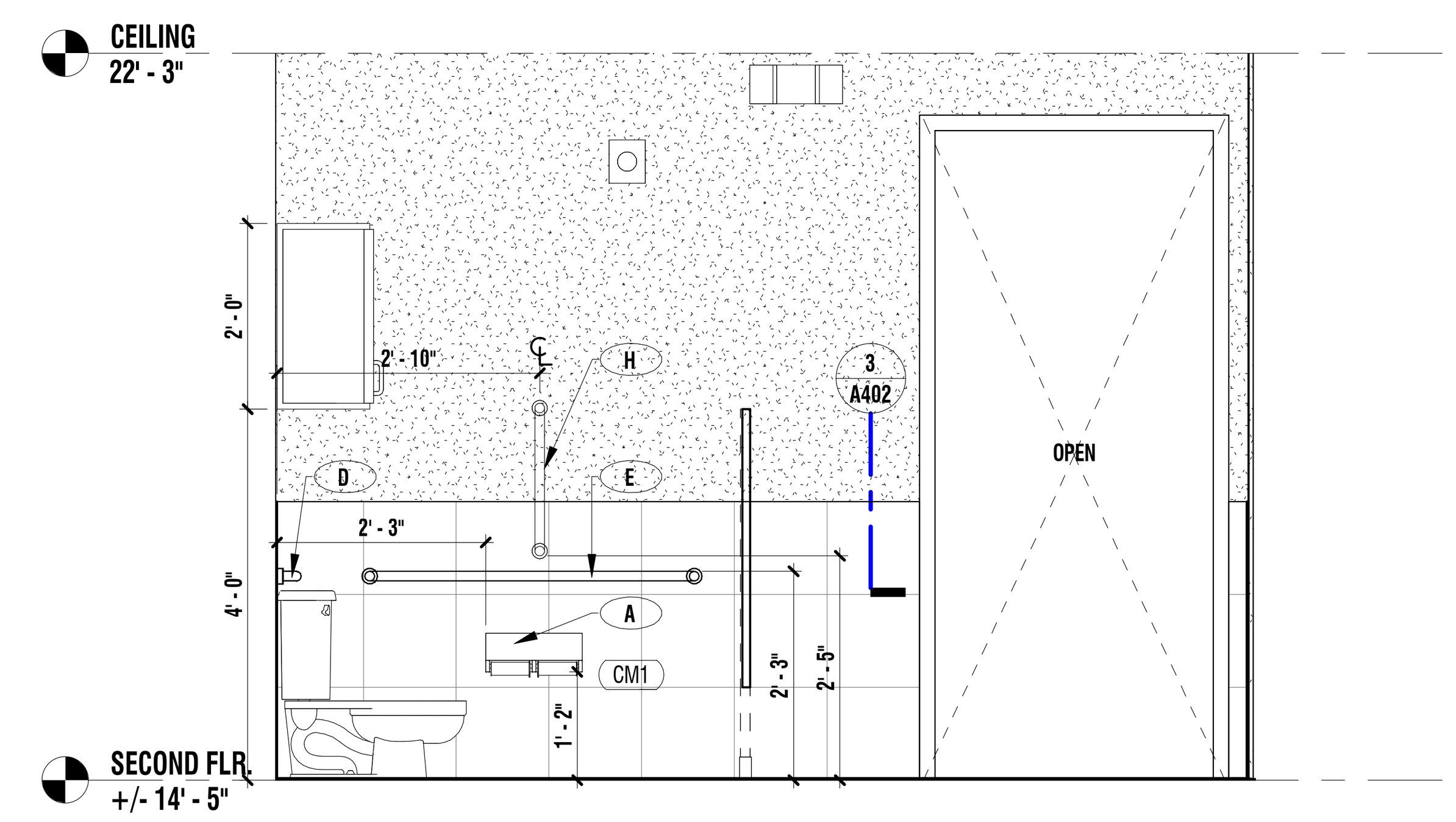
A	SINGLE-ROLL TOILET TISSUE DISPENSER - SUPPLIED BY L.B.A.
B	SURFACE-MOUNTED PAPER TOWEL DISPENSER - SUPPLIED BY L.B.A.
C	SOAP DISPENSER - SUPPLIED BY L.B.A.
D	GRAB BAR - BOBRICK #B-5806.99x36 PEENED GRIPPING
E	GRAB BAR - BOBRICK #B-5806.99x42 PEENED GRIPPING
F	MIRRORS - BOBRICK #B-1658 -16"x30" TEMPERED GLASS MIRROR.
G	USE PRE-FORMED INSULATION ON H.W. PIPING & DRAIN
H	GRAB BAR - BOBRICK #B-5806.99x18 PEENED GRIPPING
I	COAT HOOK - #B-682



1A TYP. CLASSROOM TOILET ELEV.
SCALE: 1/2" = 1'-0"



1B TYP. CLASSROOM TOILET ELEV.
SCALE: 1/2" = 1'-0"



1C TYP. CLASSROOM TOILET ELEV.
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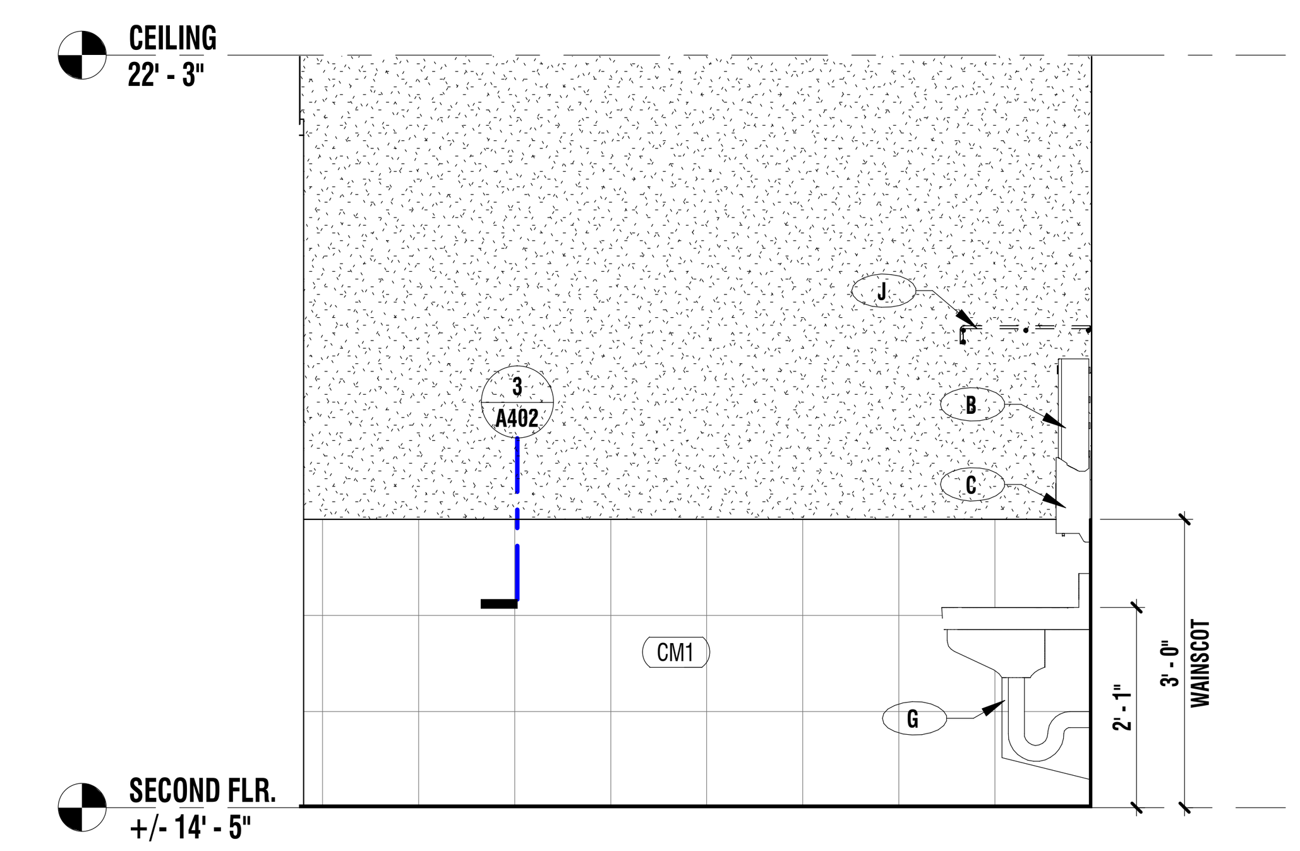

1D TYP. CLASSROOM TOILET ELEV.
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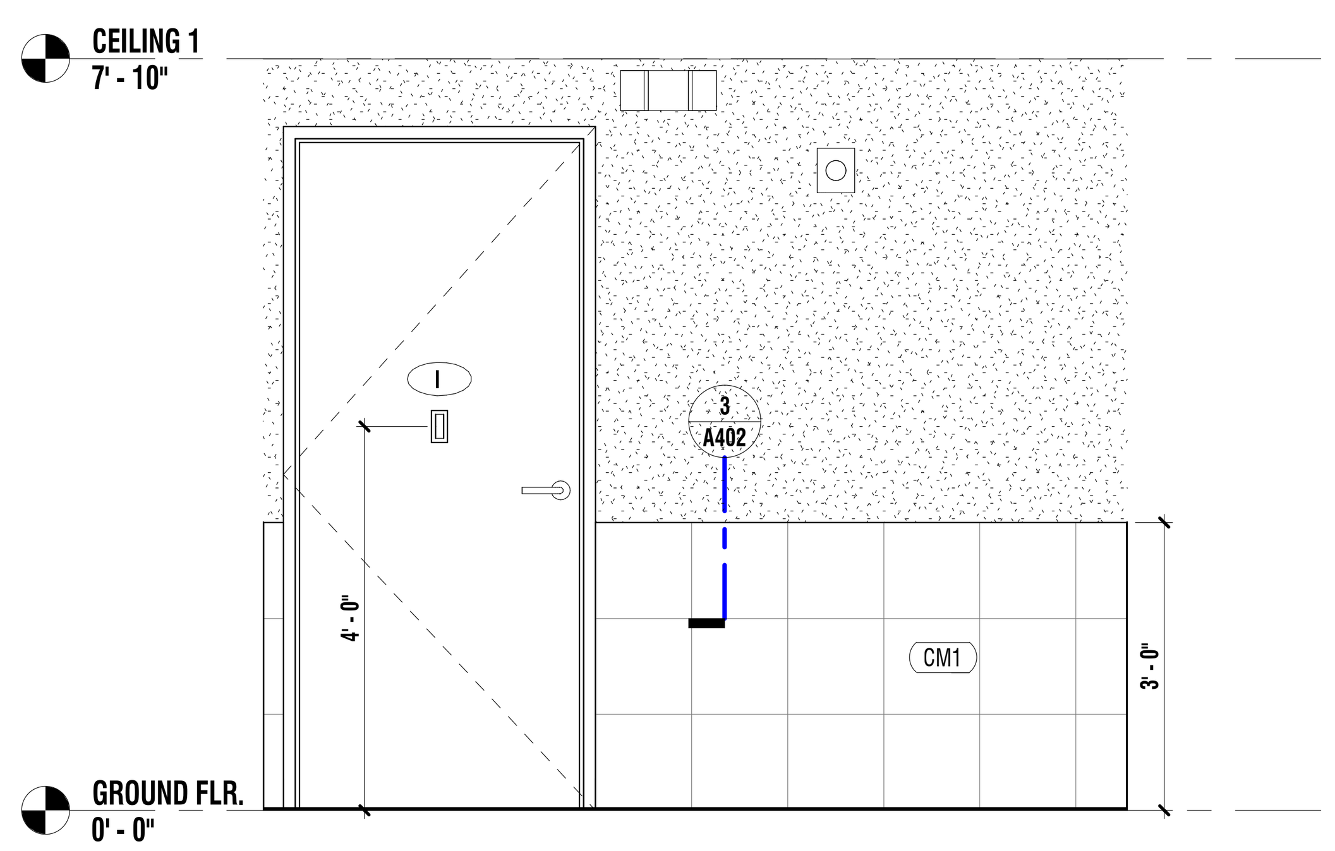

2A TYP. STAFF TOILET ELEV.
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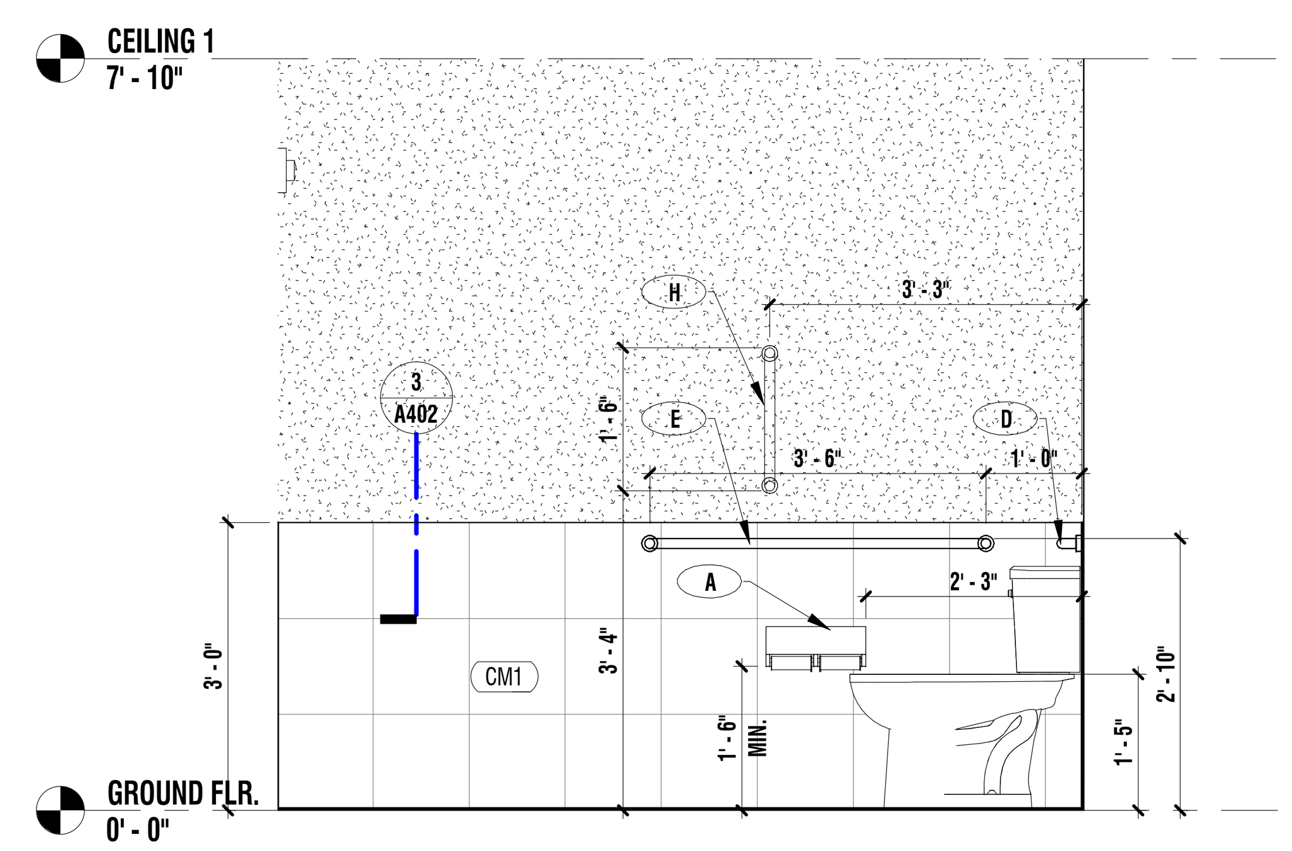
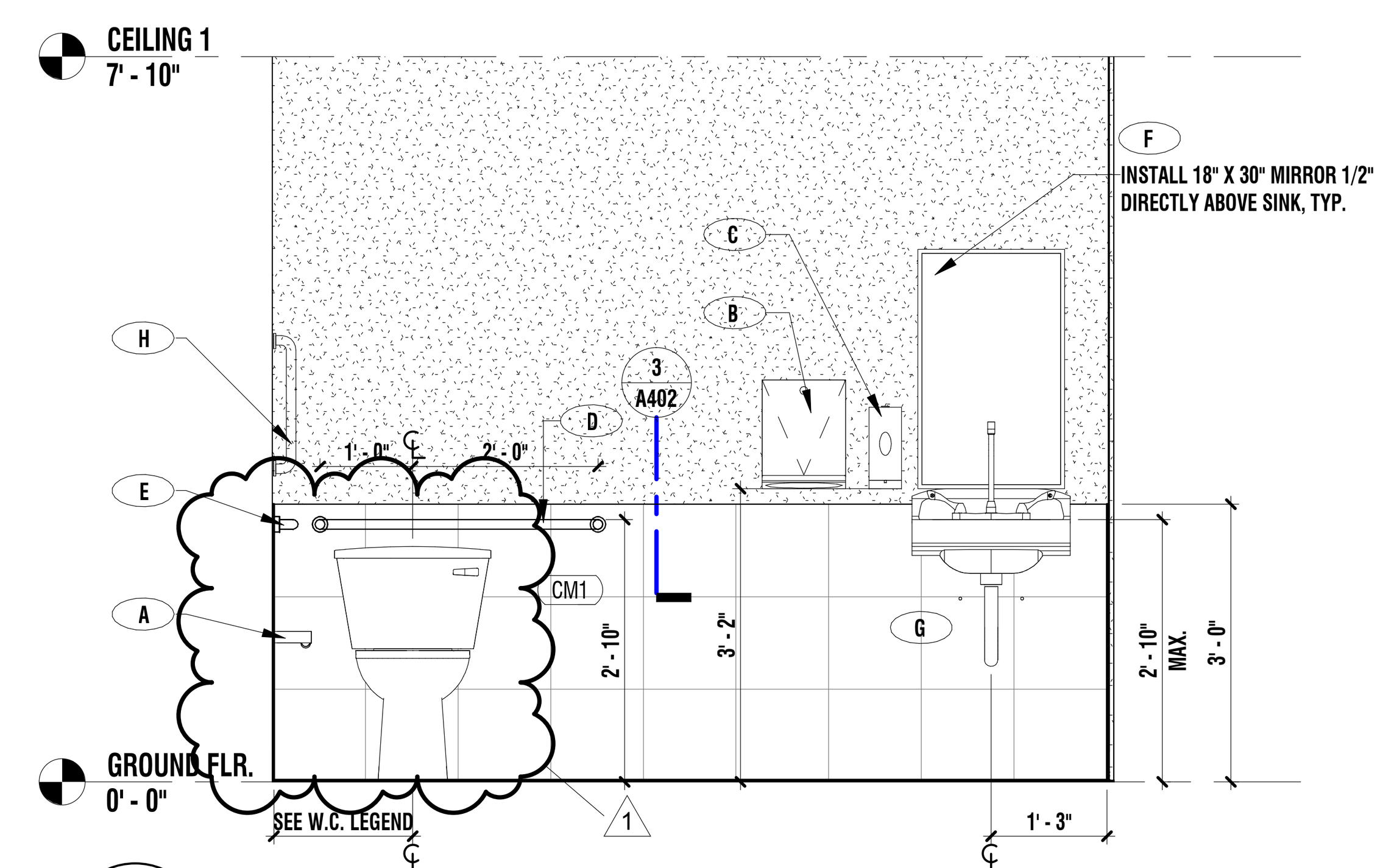


2B TYP. STAFF TOILET ELEV.
SCALE: 1/2" = 1'-0"



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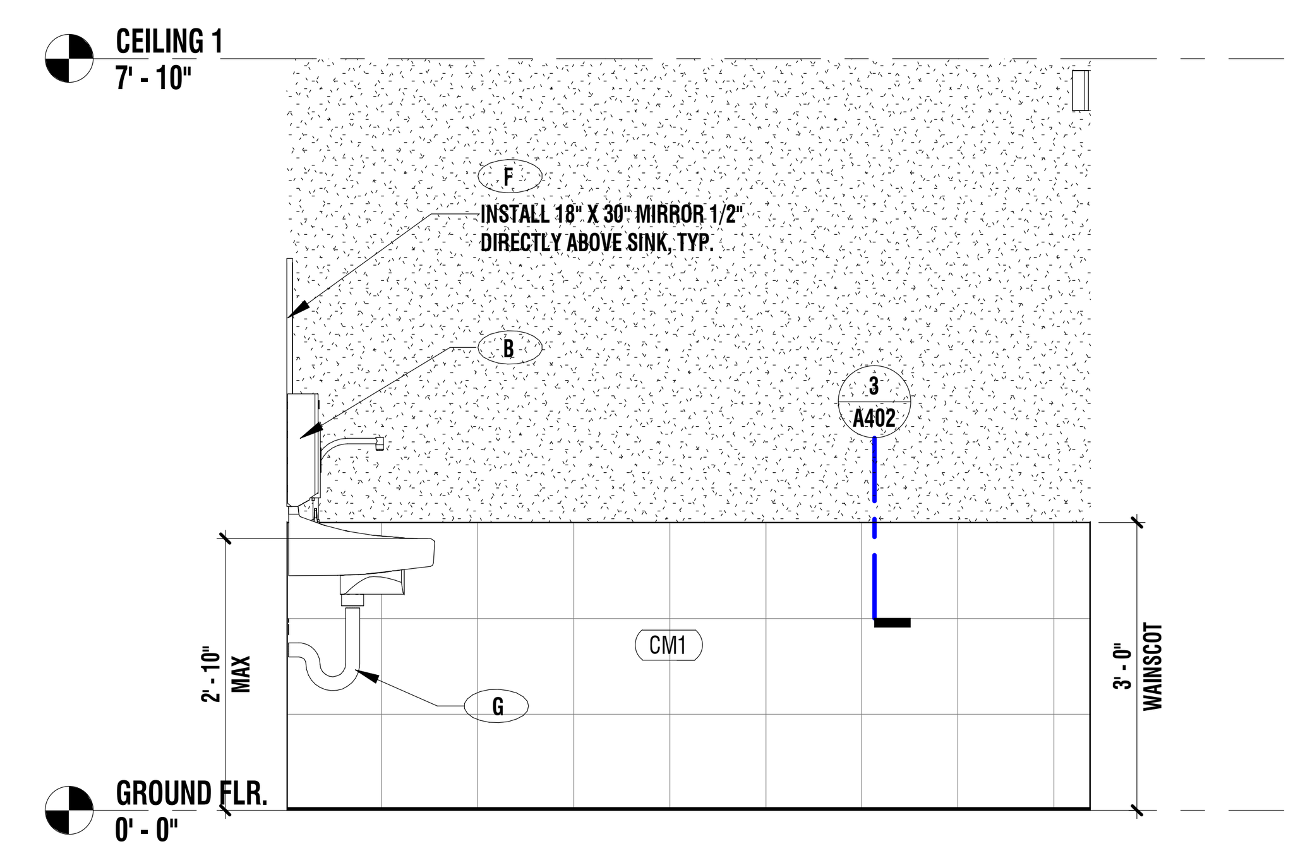

2D TYP. STAFF TOILET ELEV.
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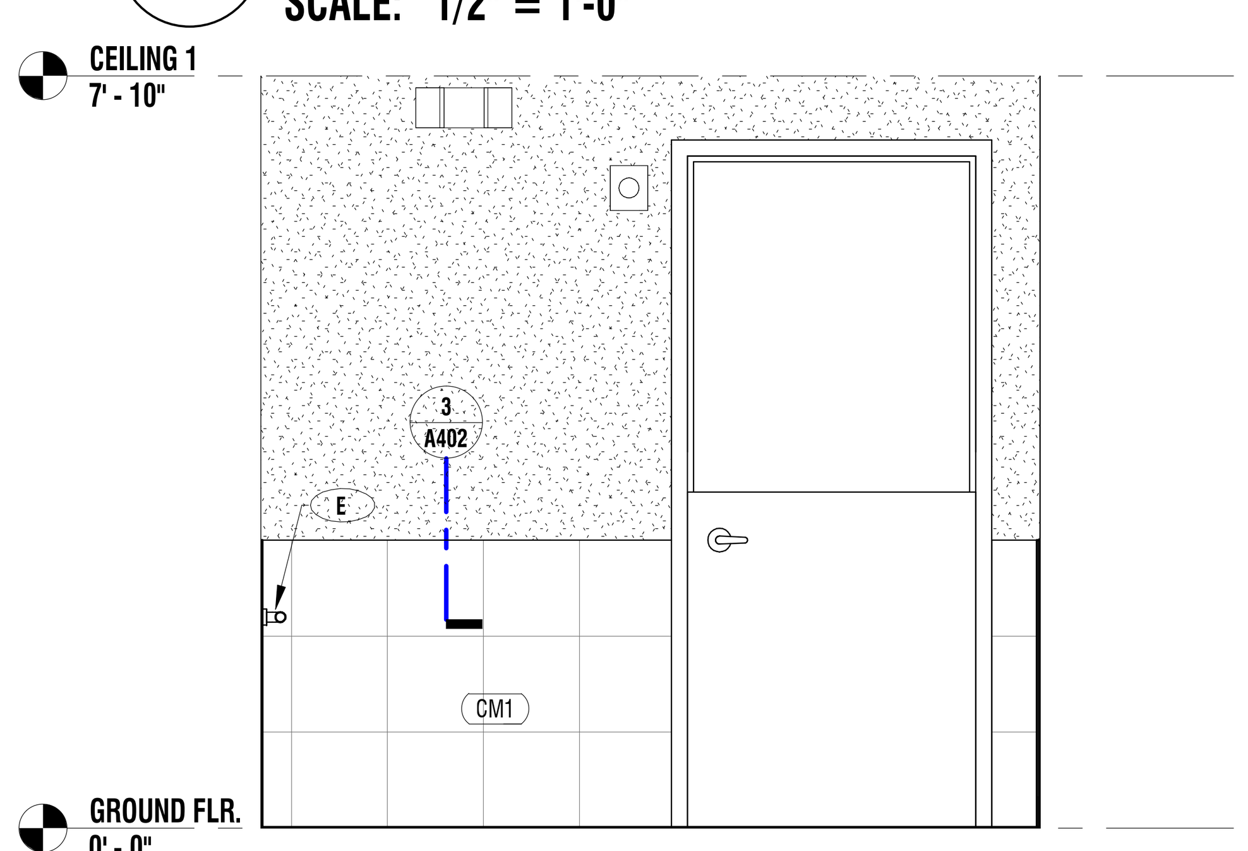
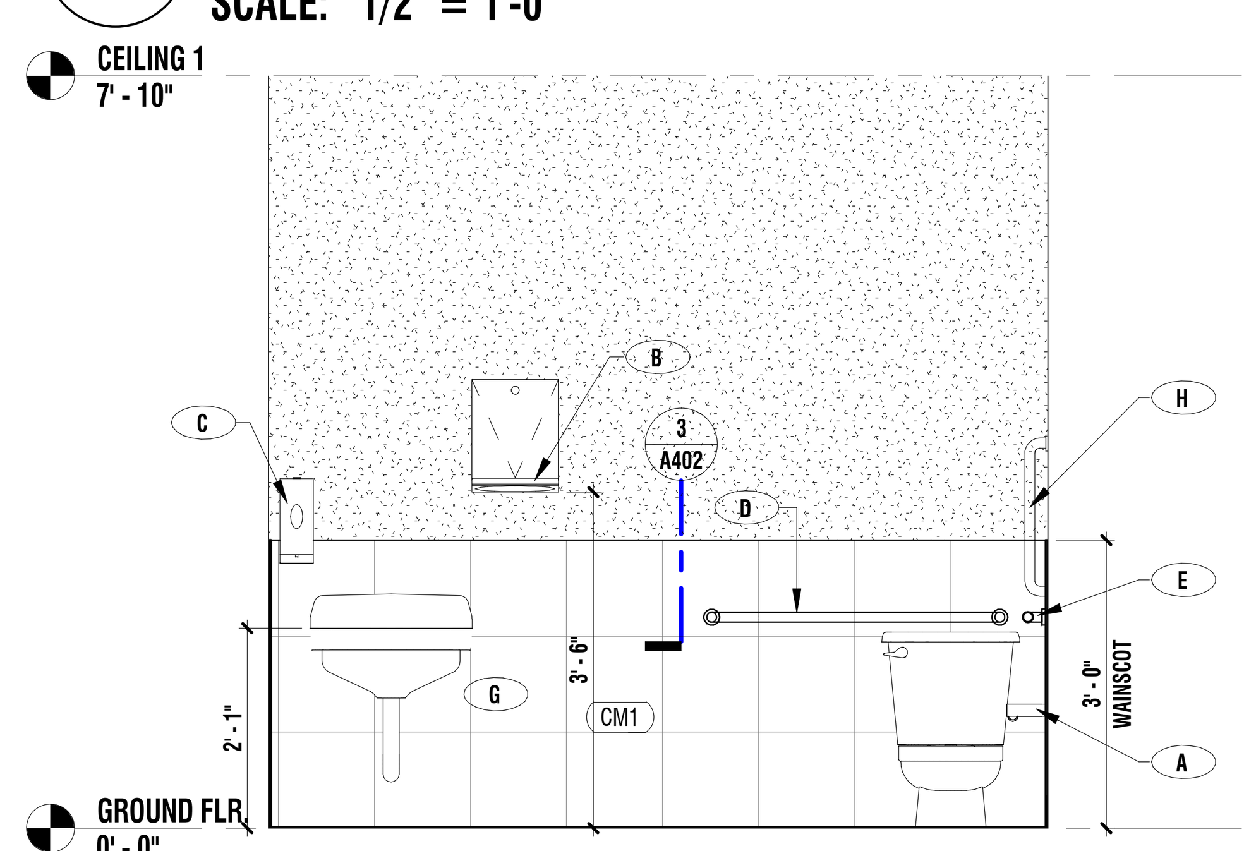


3A TYP. CLASSROOM TOILET ELEV.
SCALE: 1/2" = 1'-0"



3B TYP. CLASSROOM TOILET ELEV.
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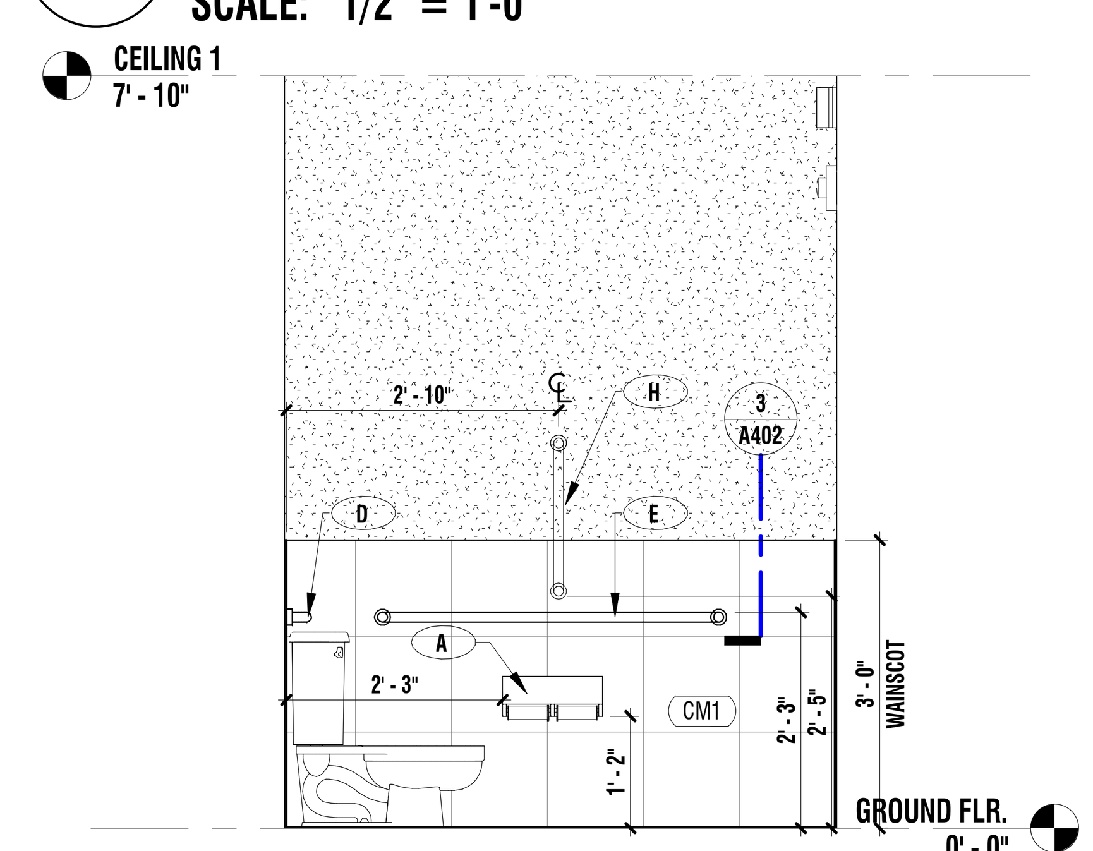

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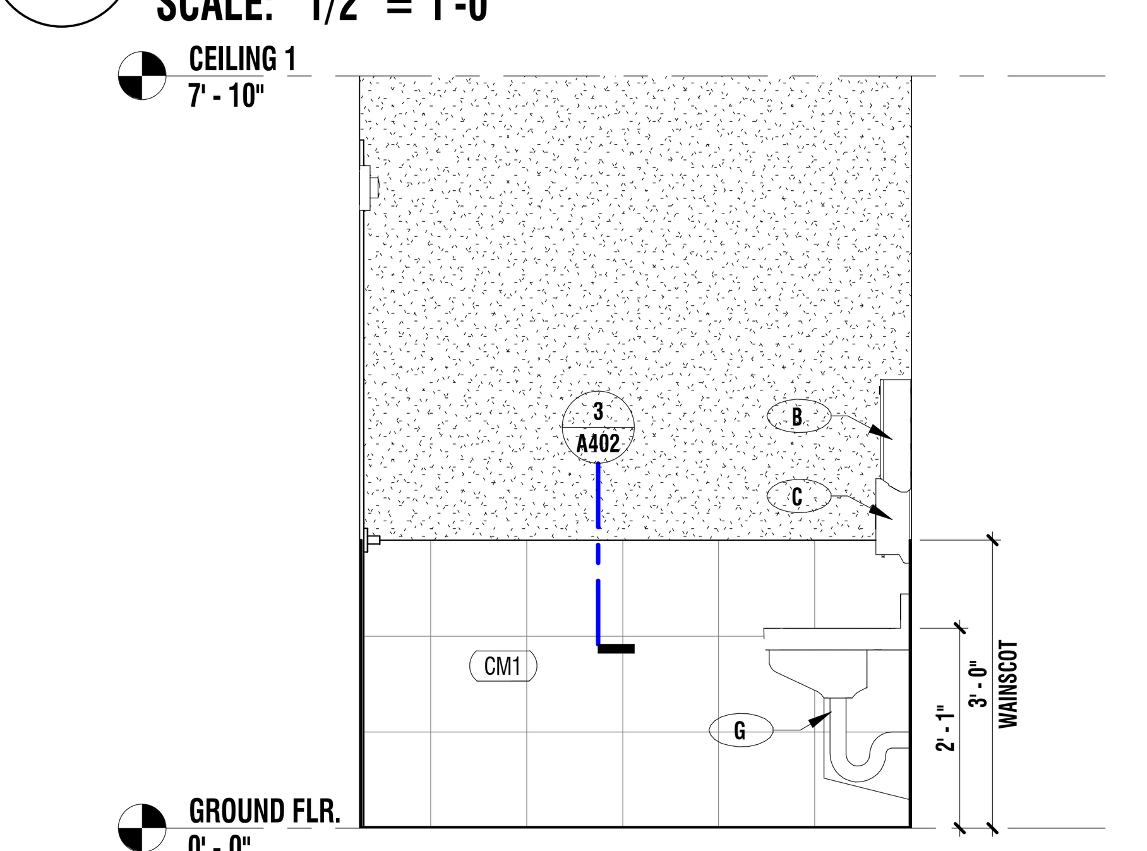

3D TYP. CLASSROOM TOILET ELEV.
SCALE: 1/2" = 1'-0"

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SHEET TITLE:
ENLARGED TOILET PLANS & ELEVATIONS SCHEDULE & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
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JOB NUMBER: 2019-01.15
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DRAWN BY: OS/KM
CHECKED BY: JAM/KM

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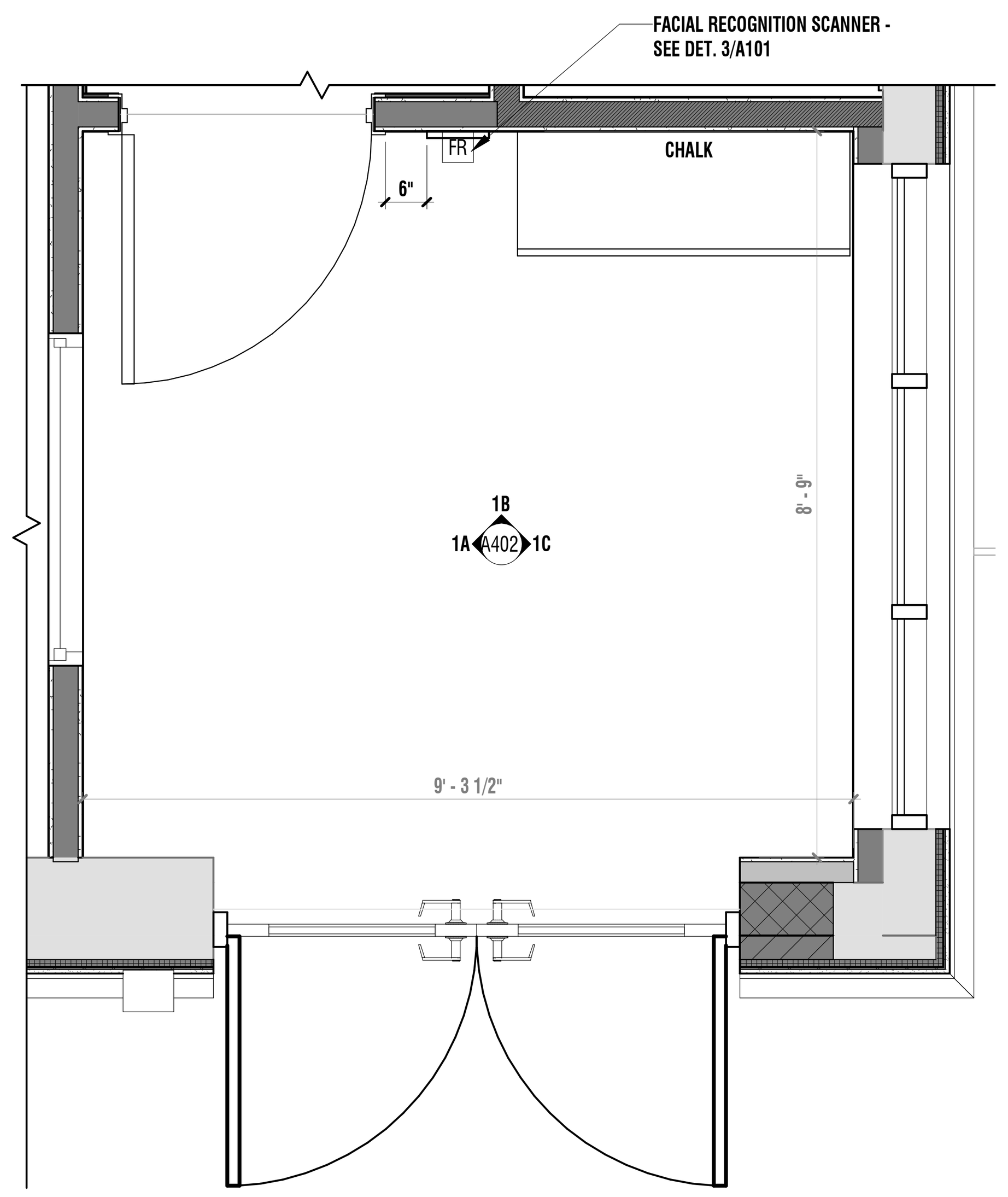
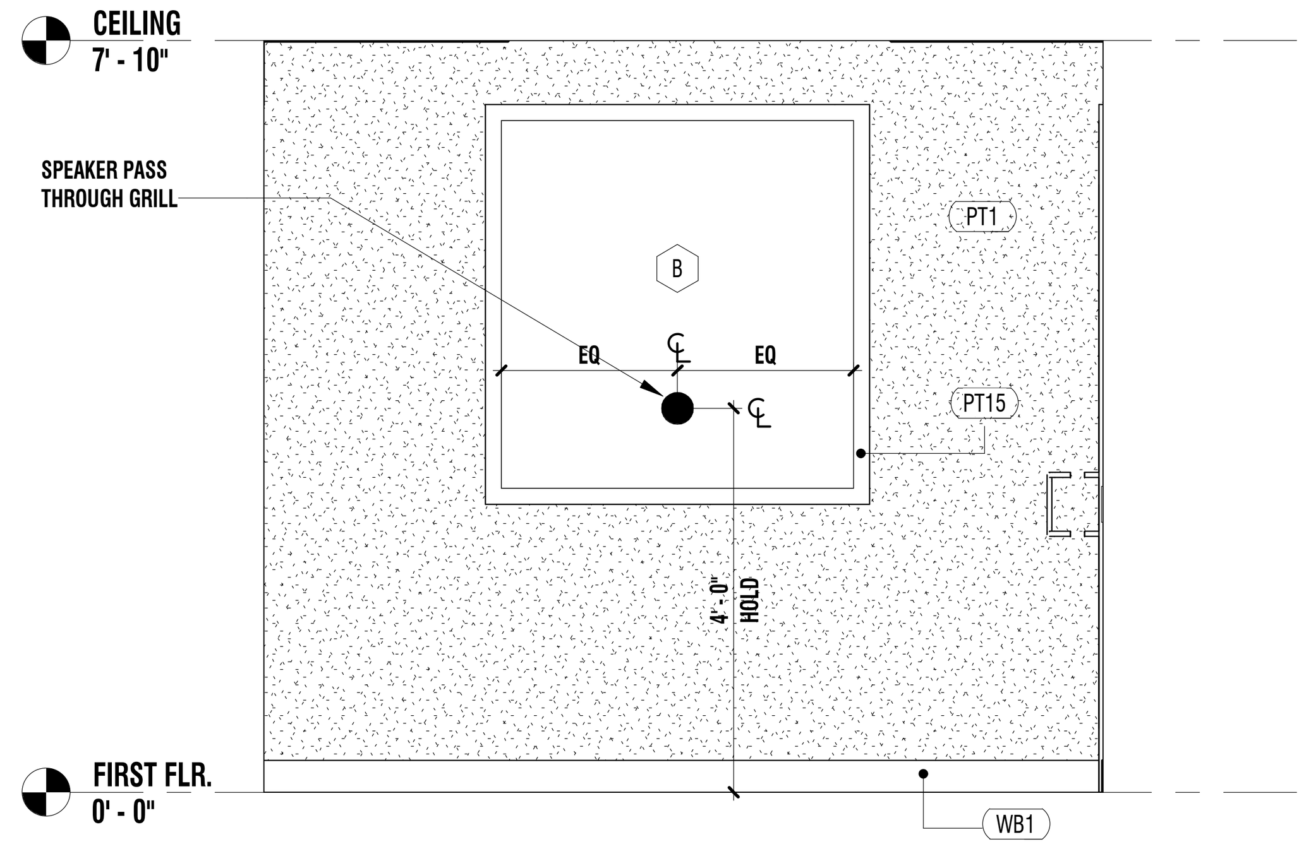
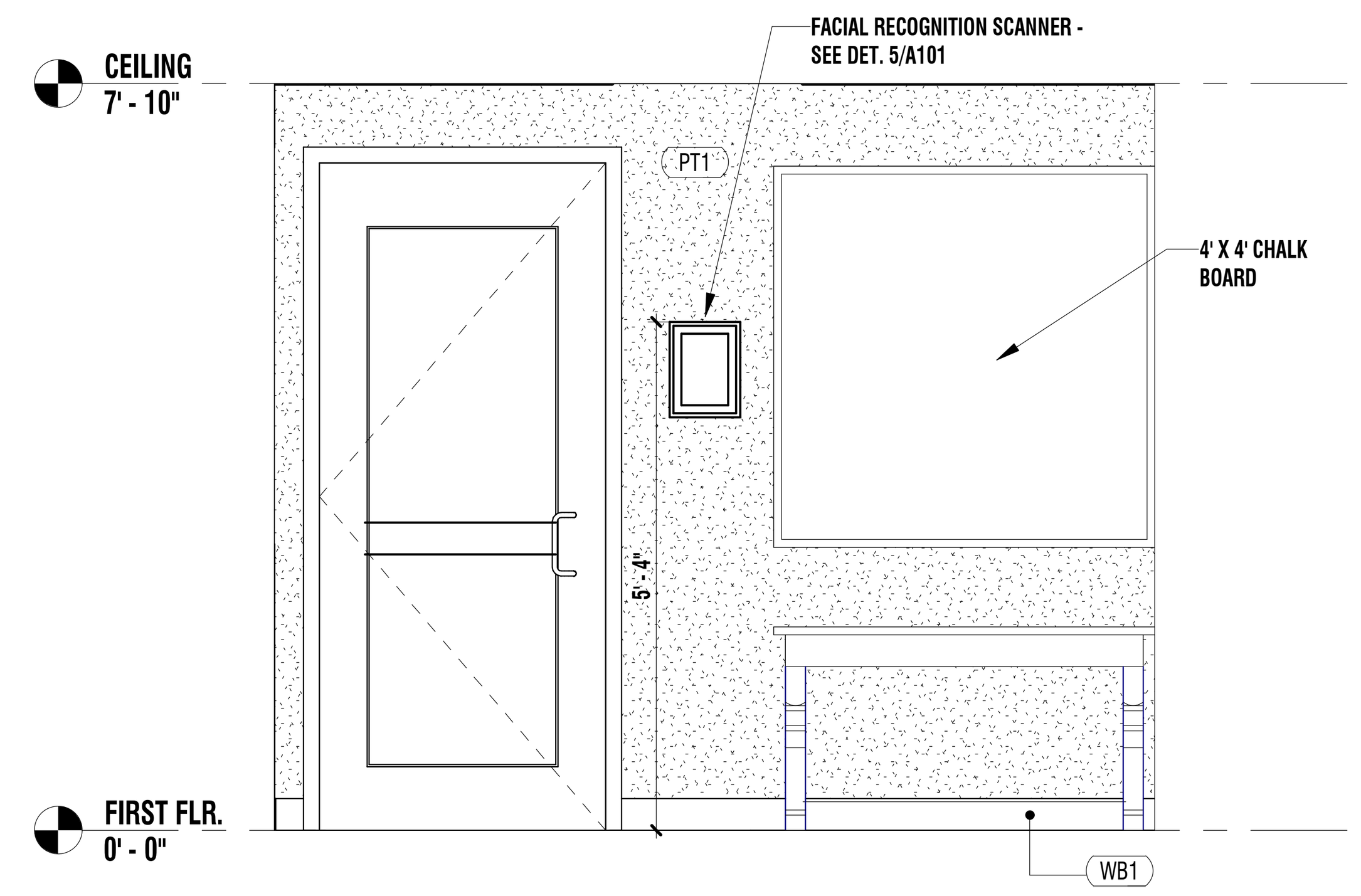
A401



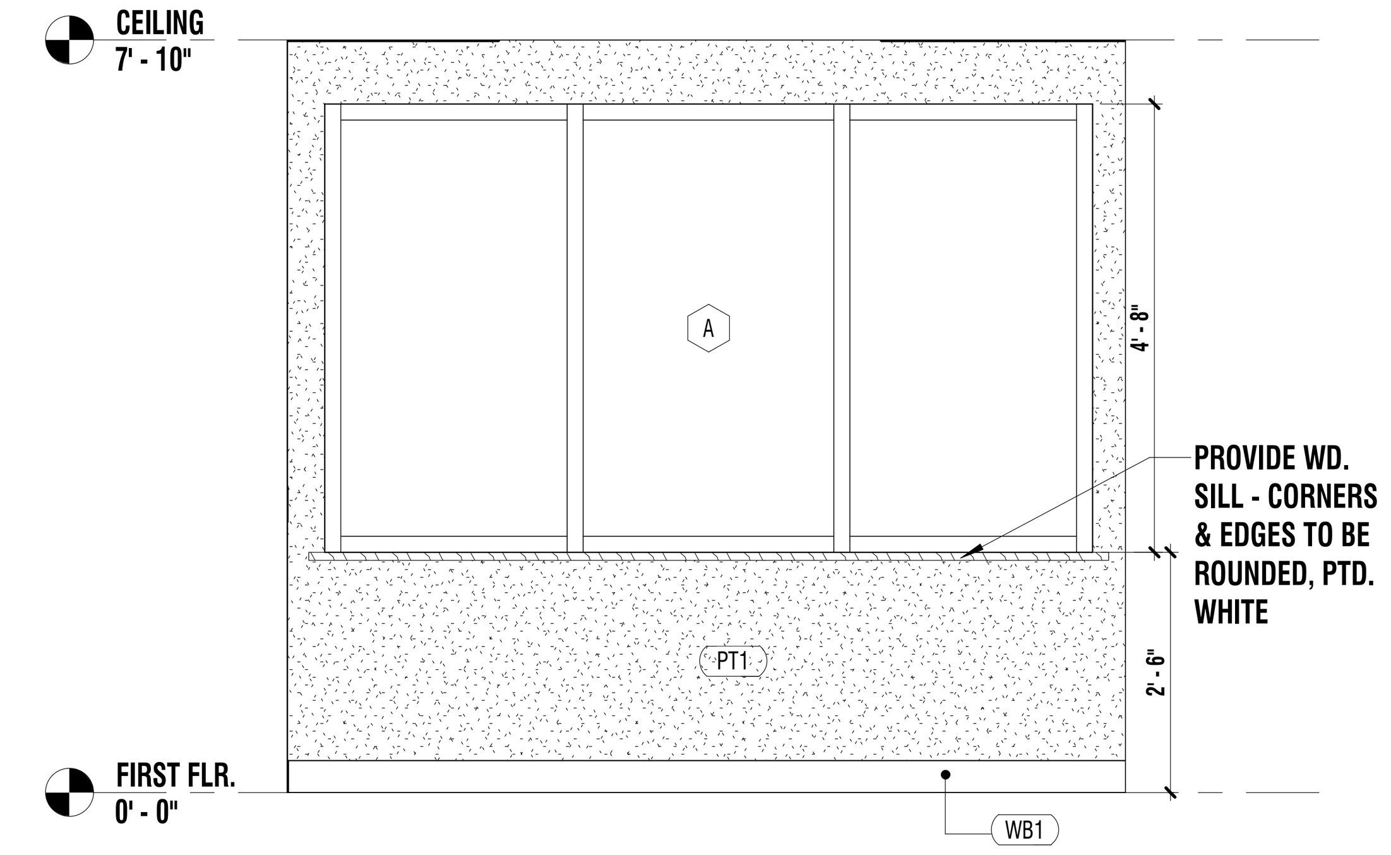
1 ENLARGED VESTIBULE PLAN
SCALE: 1/2" = 1'-0"



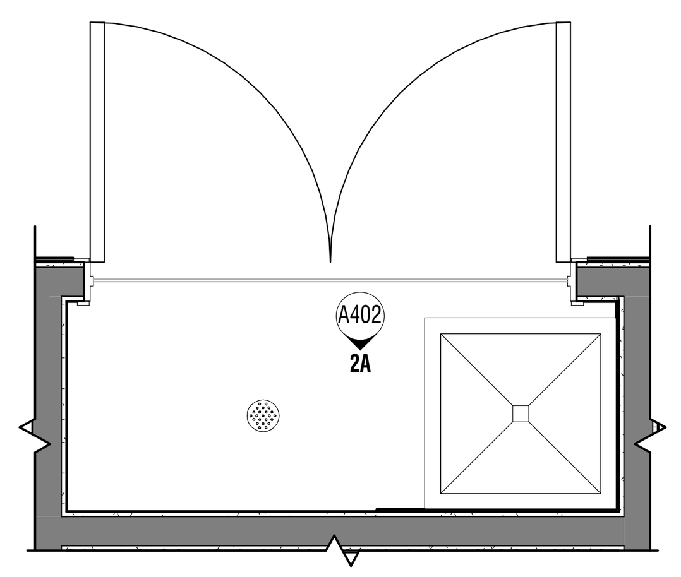
1A VESTIBULE ELEVATION
SCALE: 1/2" = 1'-0"



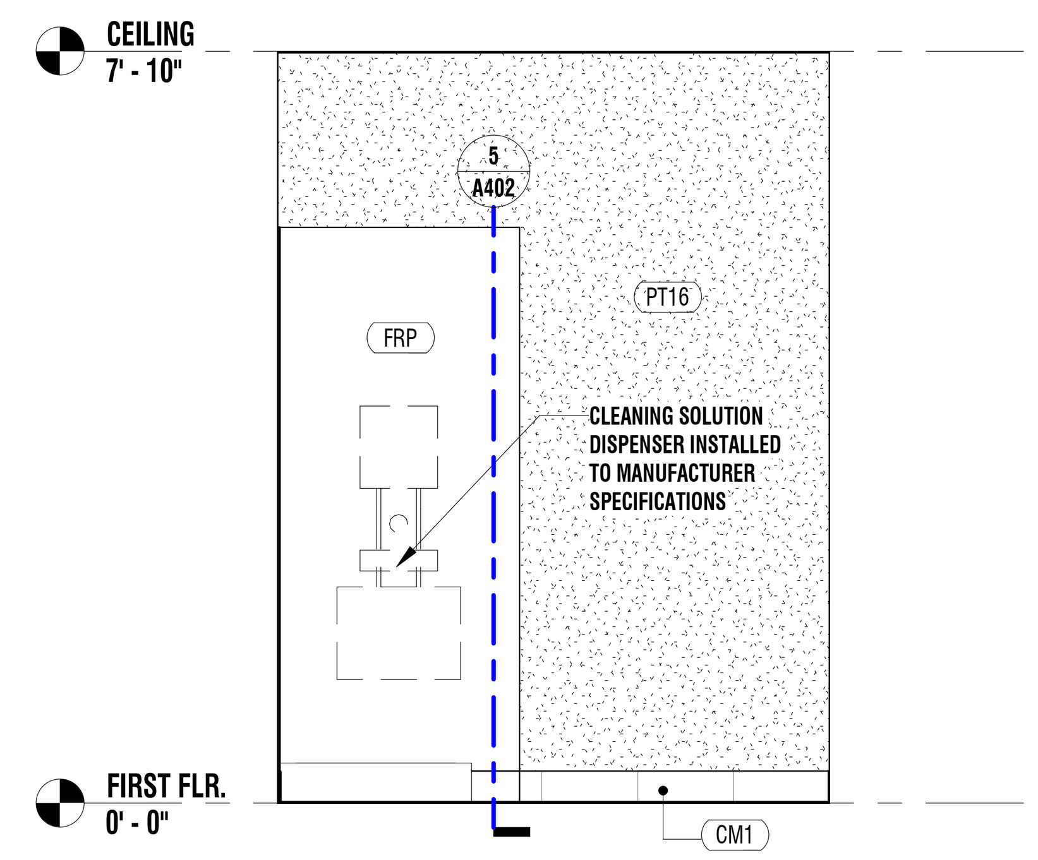
1B VESTIBULE ELEVATION
SCALE: 1/2" = 1'-0"



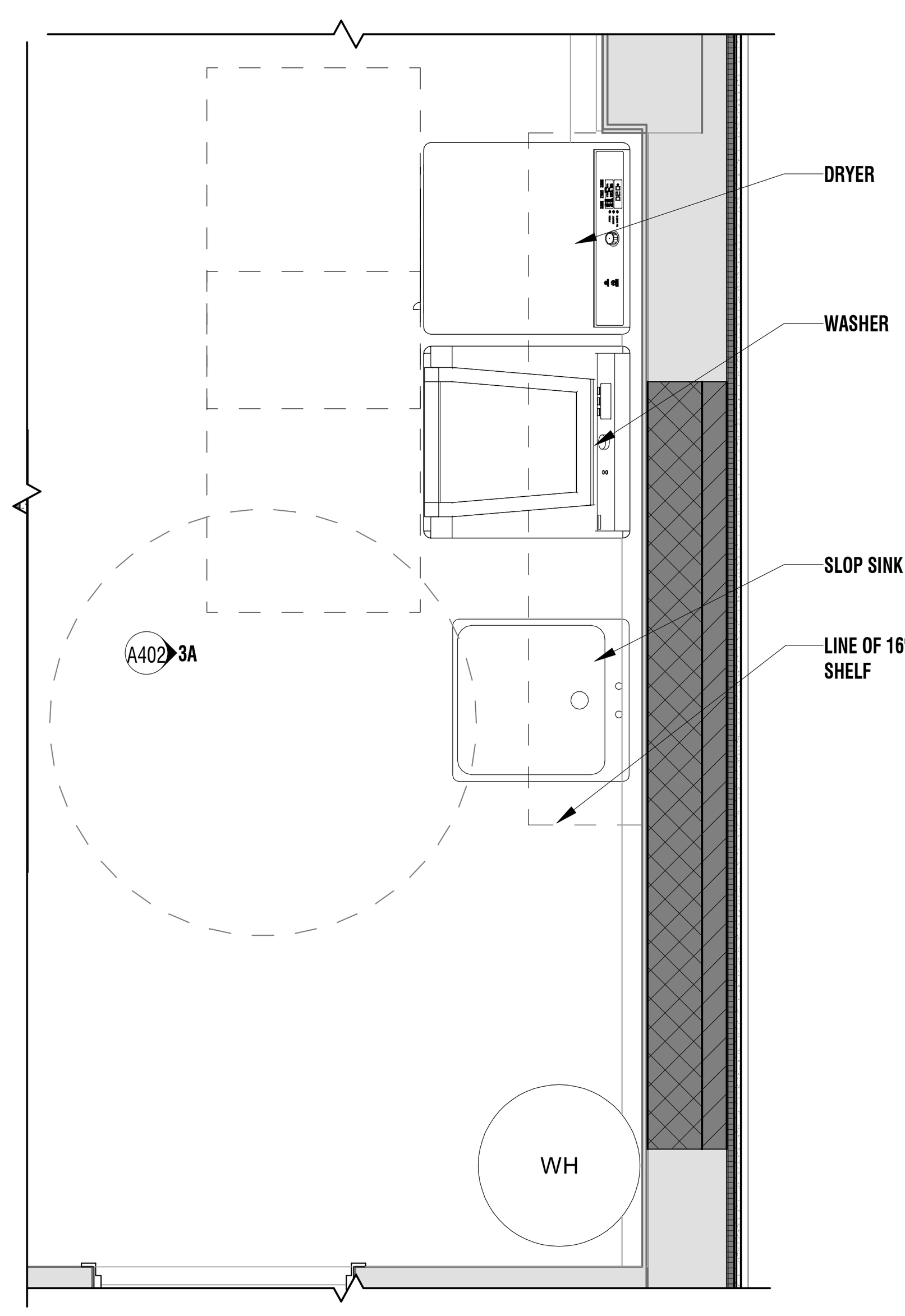
1C VESTIBULE ELEVATION
SCALE: 1/2" = 1'-0"



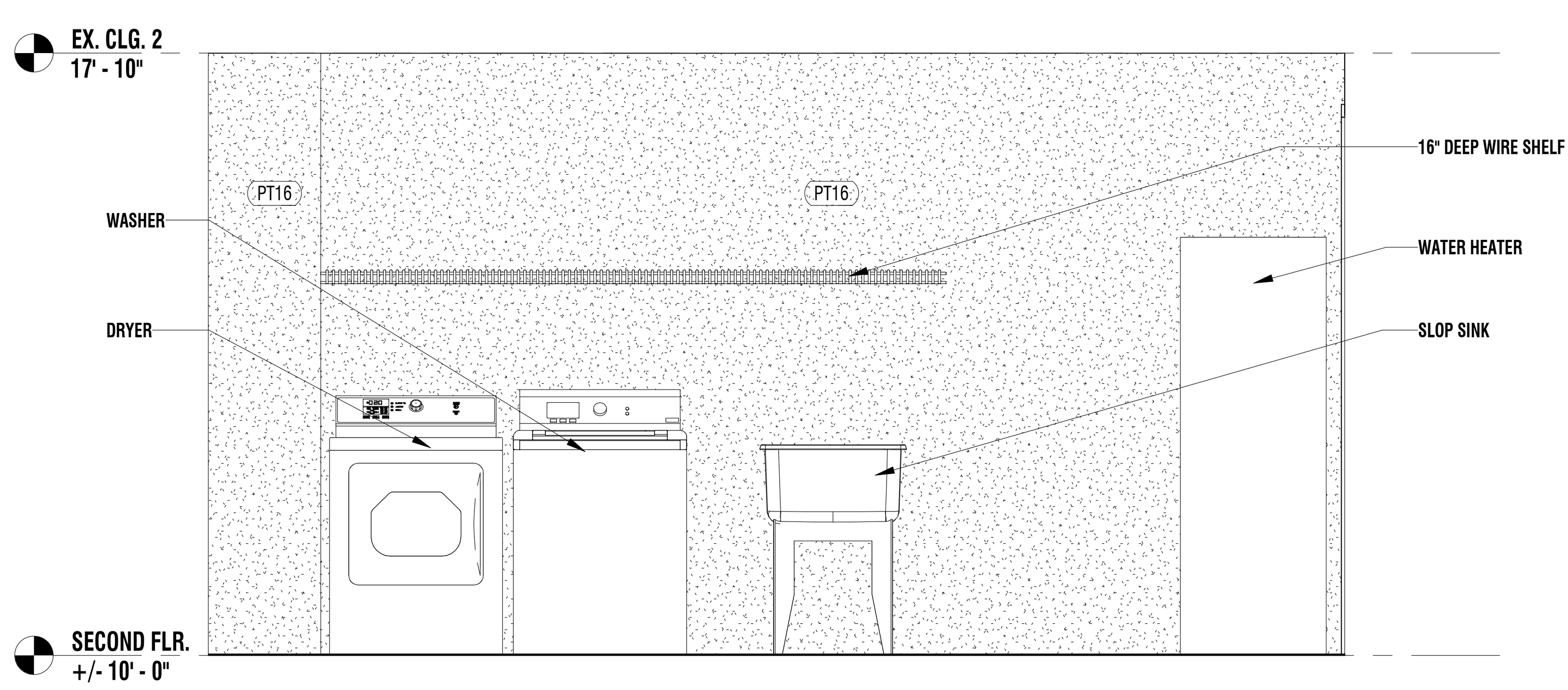
2 UTILITY ROOM PLAN
SCALE: 1/2" = 1'-0"



2A UTILITY ROOM ELEVATION
SCALE: 1/2" = 1'-0"



3 LAUNDRY ROOM PLAN
SCALE: 1/2" = 1'-0"



3A LAUNDRY ELEVATION
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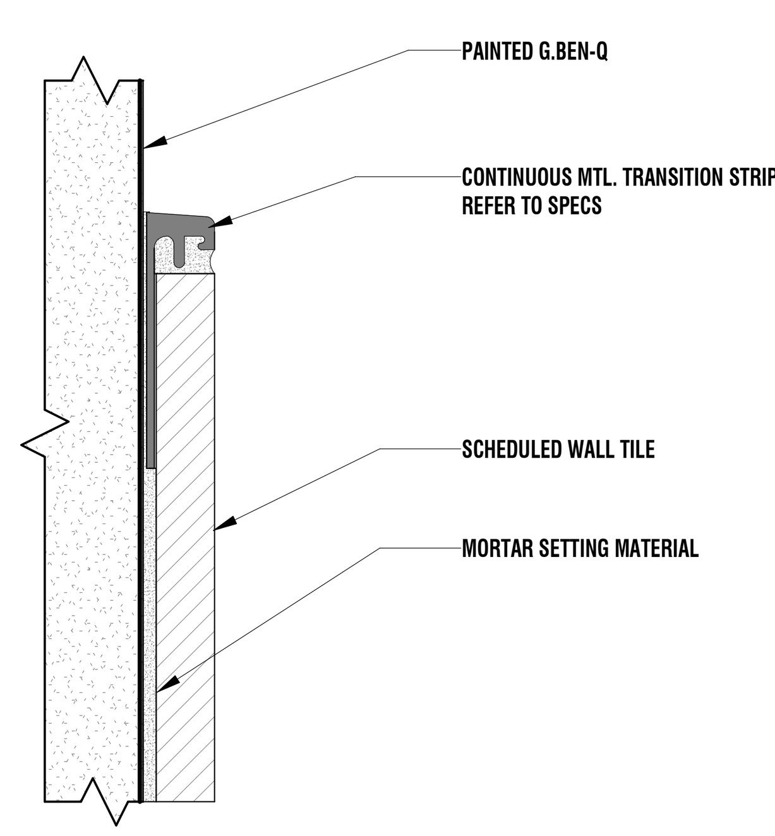

4 TYP. MTL. TRIM DETAIL
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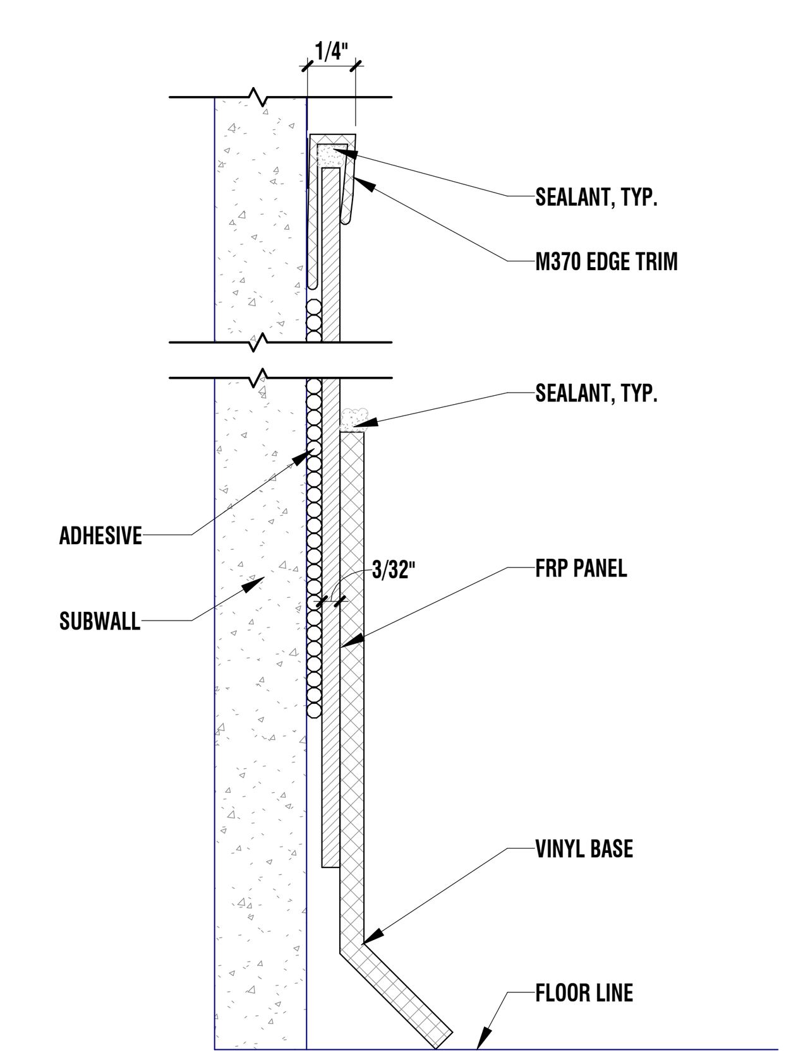

5 TYP. FRP DETAIL
SCALE: 12" = 1'-0"

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JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
ENLARGED INTERIOR PLANS, ELEVATIONS AND DETAILS

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
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CHECKED BY: JAM/KM

SHEET NO.
A402

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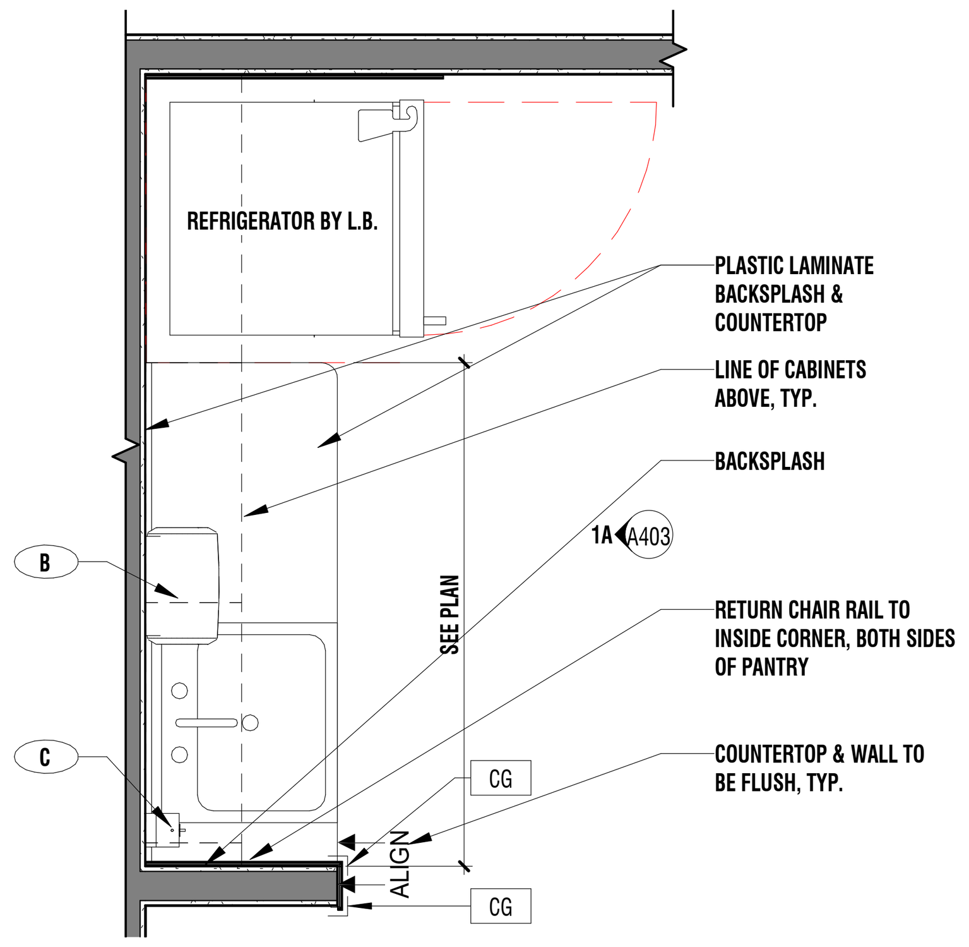
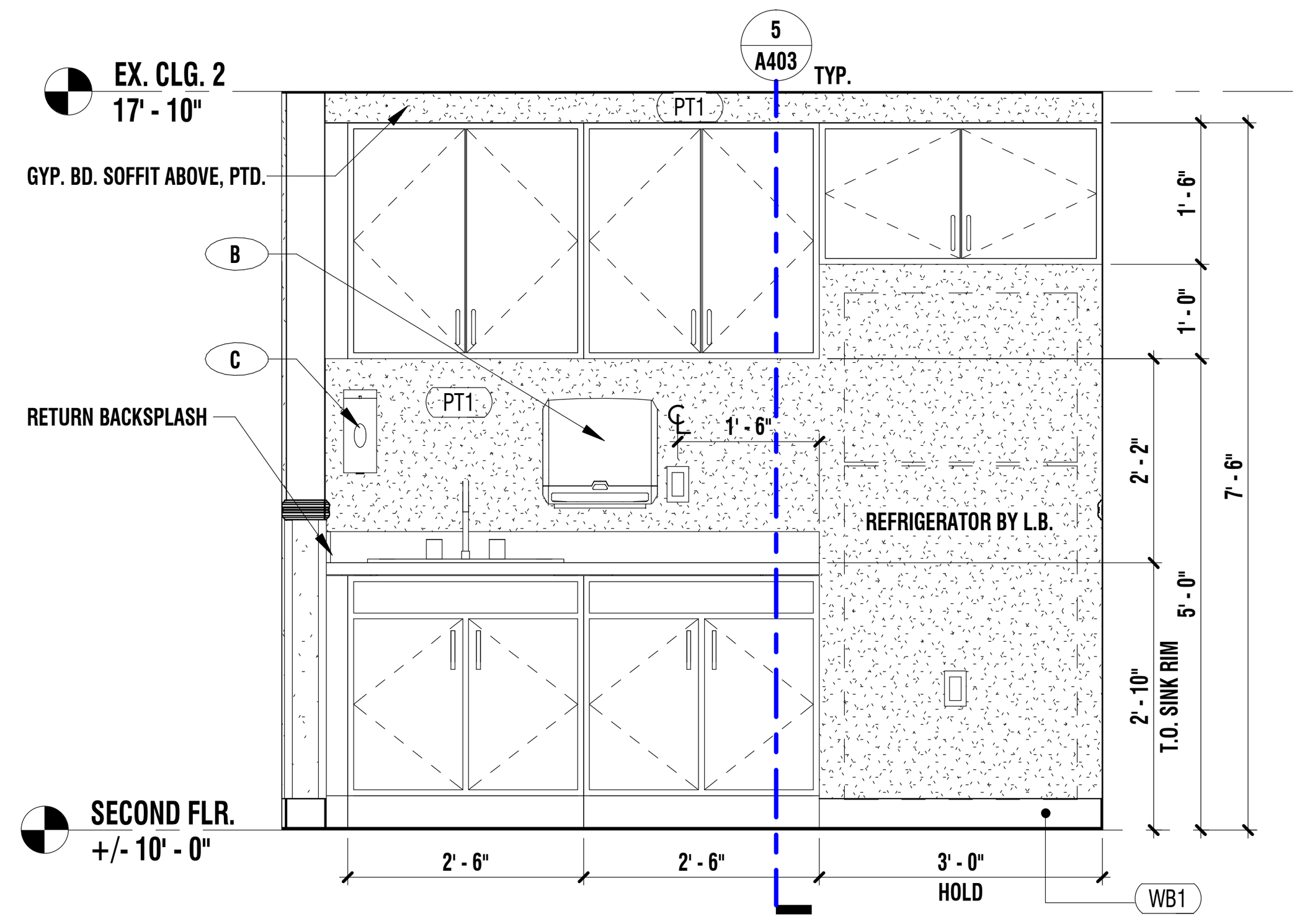
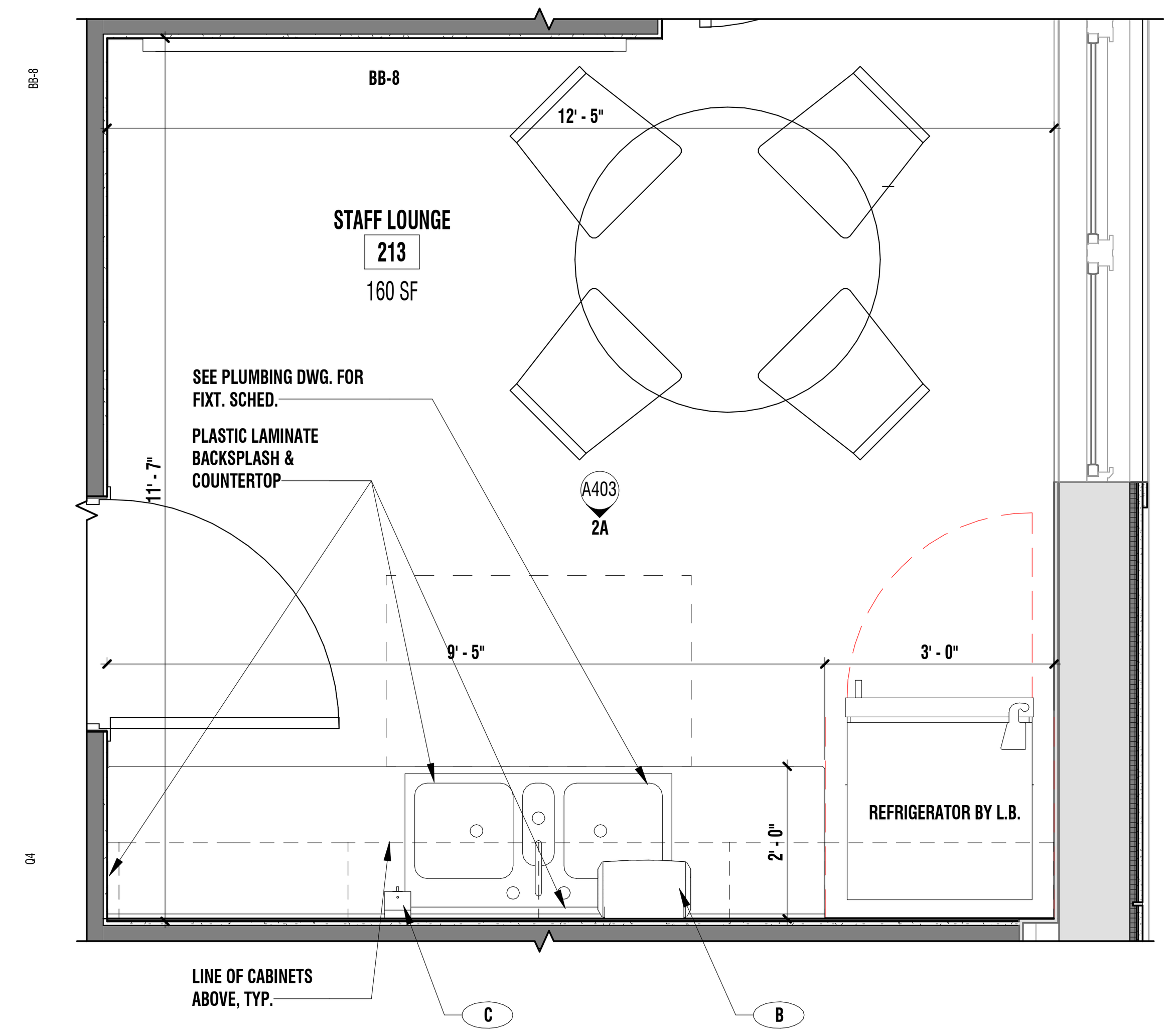
10/18/2022 8:38:29 AM



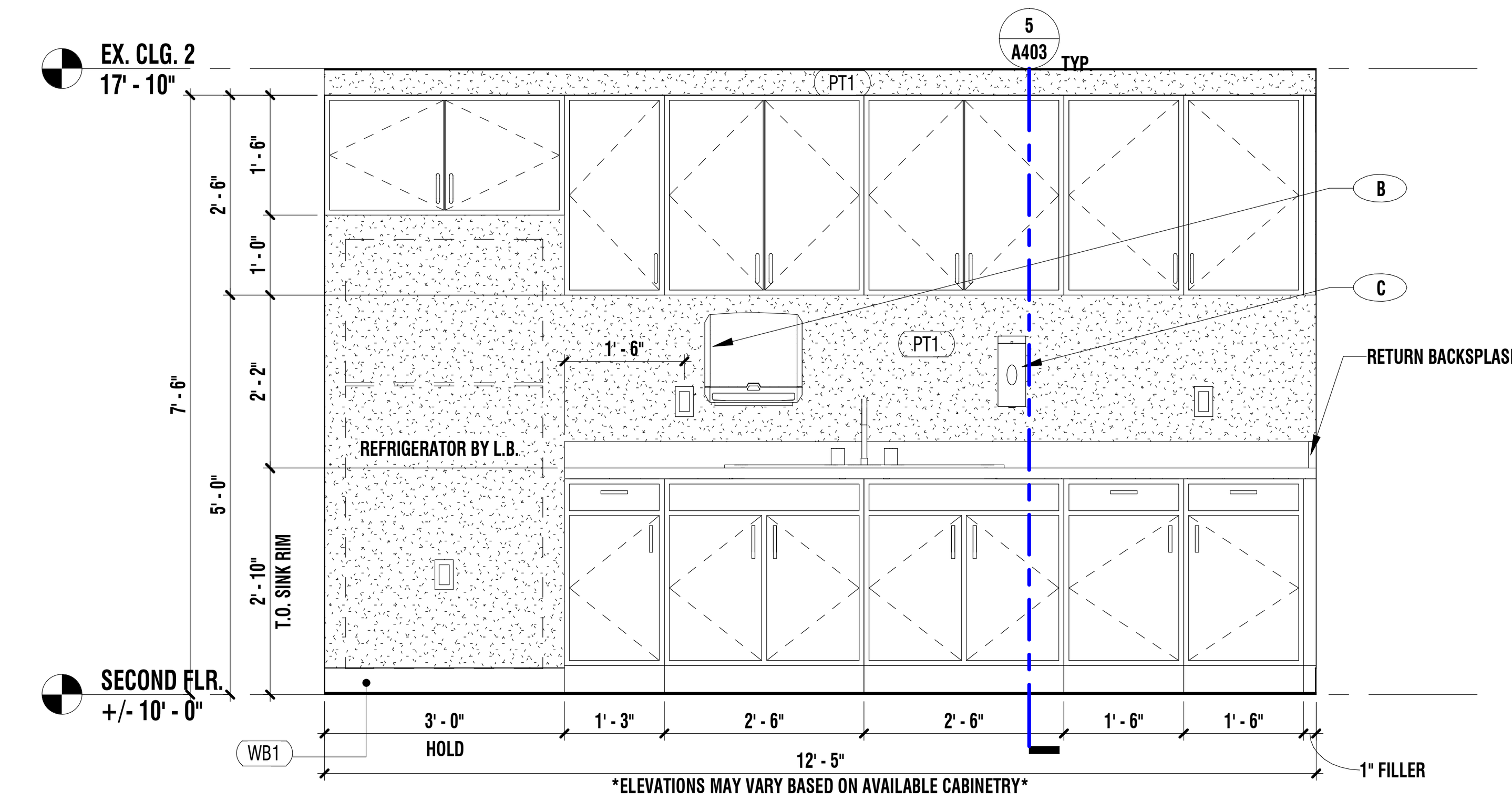
1 TYP. CLASSROOM PANTRY PLAN
SCALE: 1/2" = 1'-0"



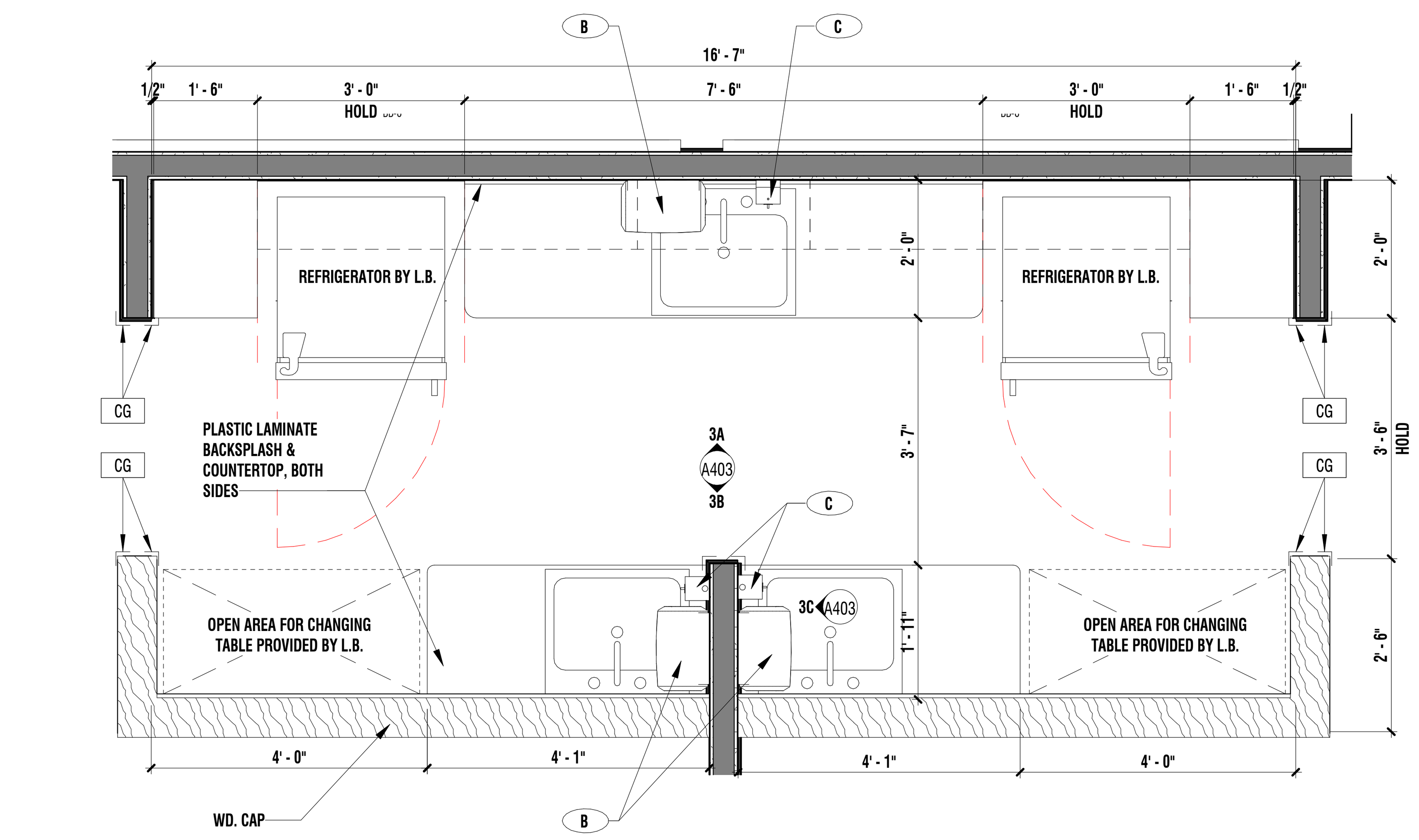
1A TYP. CLASSROOM PANTRY ELEVATION
SCALE: 1/2" = 1'-0"



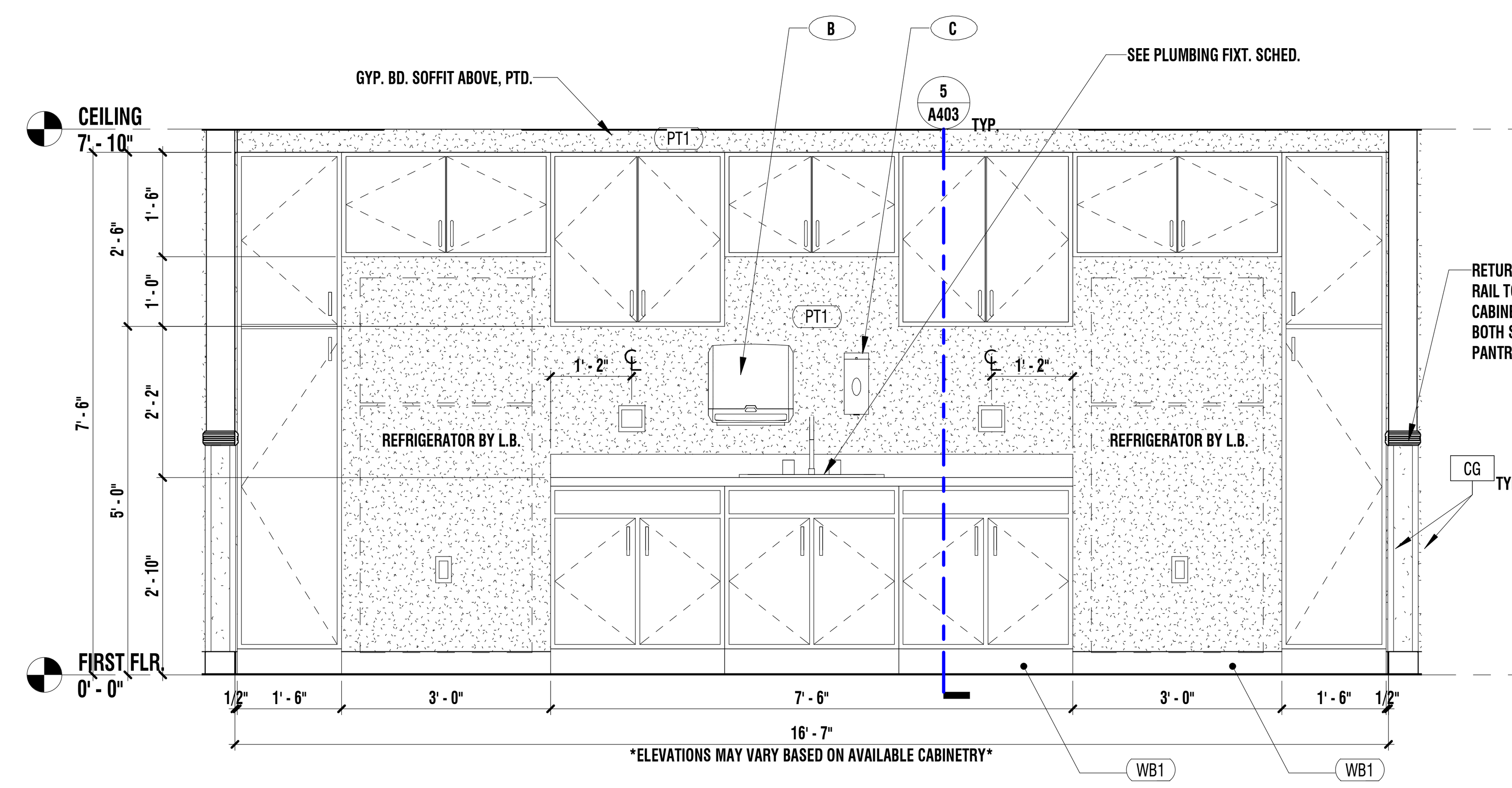
2 STAFF LOUNGE PLAN
SCALE: 1/2" = 1'-0"



2A STAFF LOUNGE ELEVATION
SCALE: 1/2" = 1'-0"

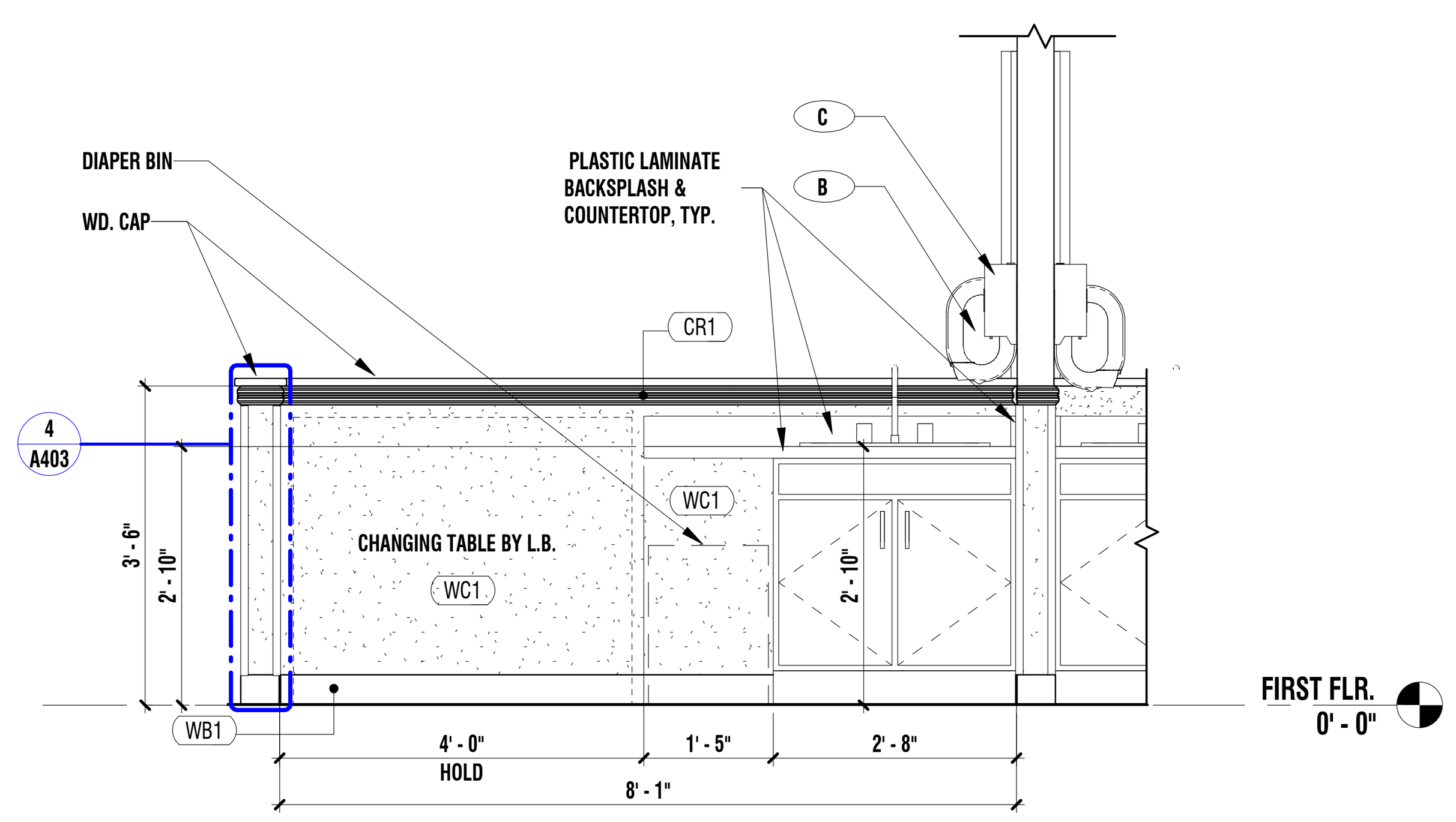


3 TYP. INFANT SUITE PLAN
SCALE: 1/2" = 1'-0"



3A TYP. INFANT PANTRY ELEVATION
SCALE: 1/2" = 1'-0"

ACCESSORY SCHEDULE	
B	SURFACE-MOUNTED PAPER TOWEL DISPENSER - SUPPLIED BY L.B.A.
C	SOAP DISPENSER - SUPPLIED BY L.B.A.
CG	1 1/2" X 1 1/2" VINYL CORNER GUARDS



3B TYP. INFANT PANTRY ELEVATION
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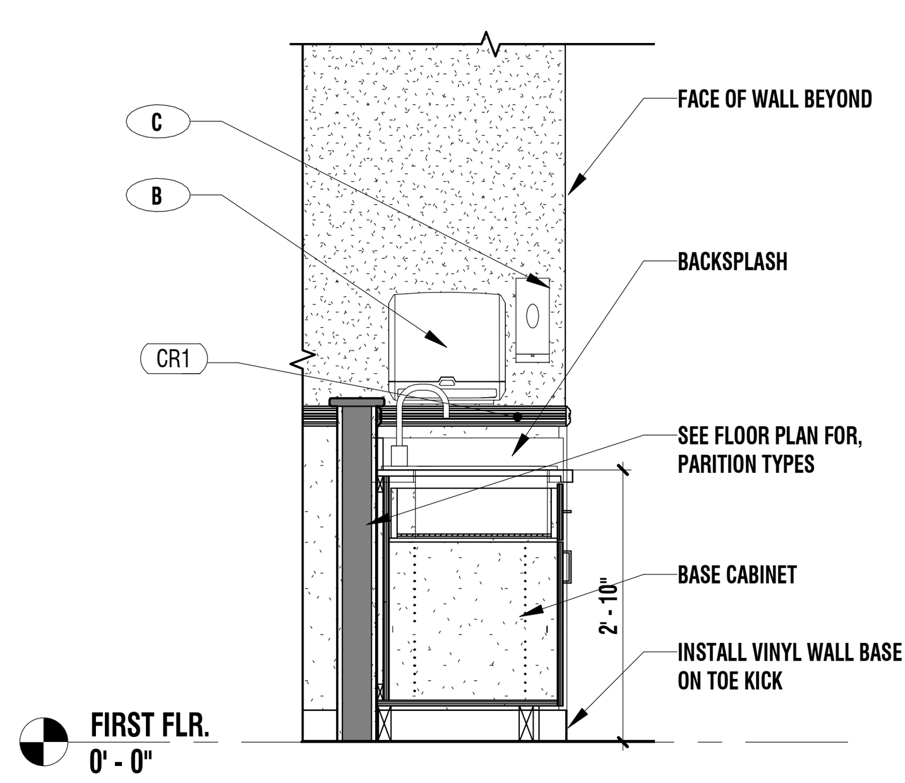

3C TYP. INFANT PANTRY ELEVATION
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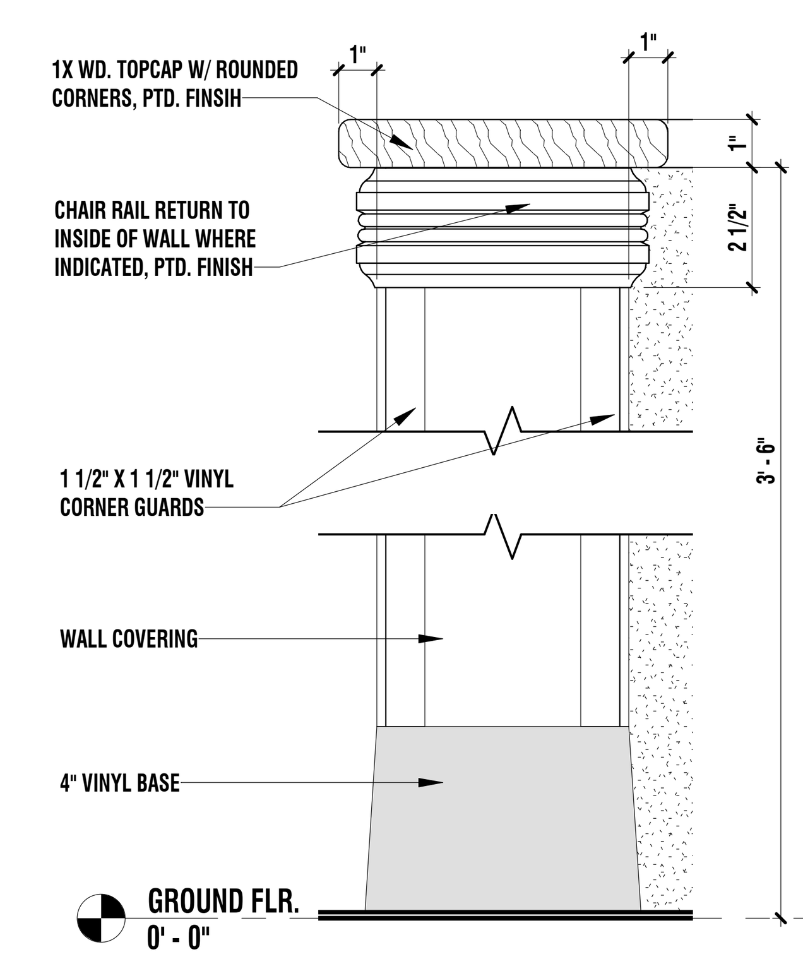
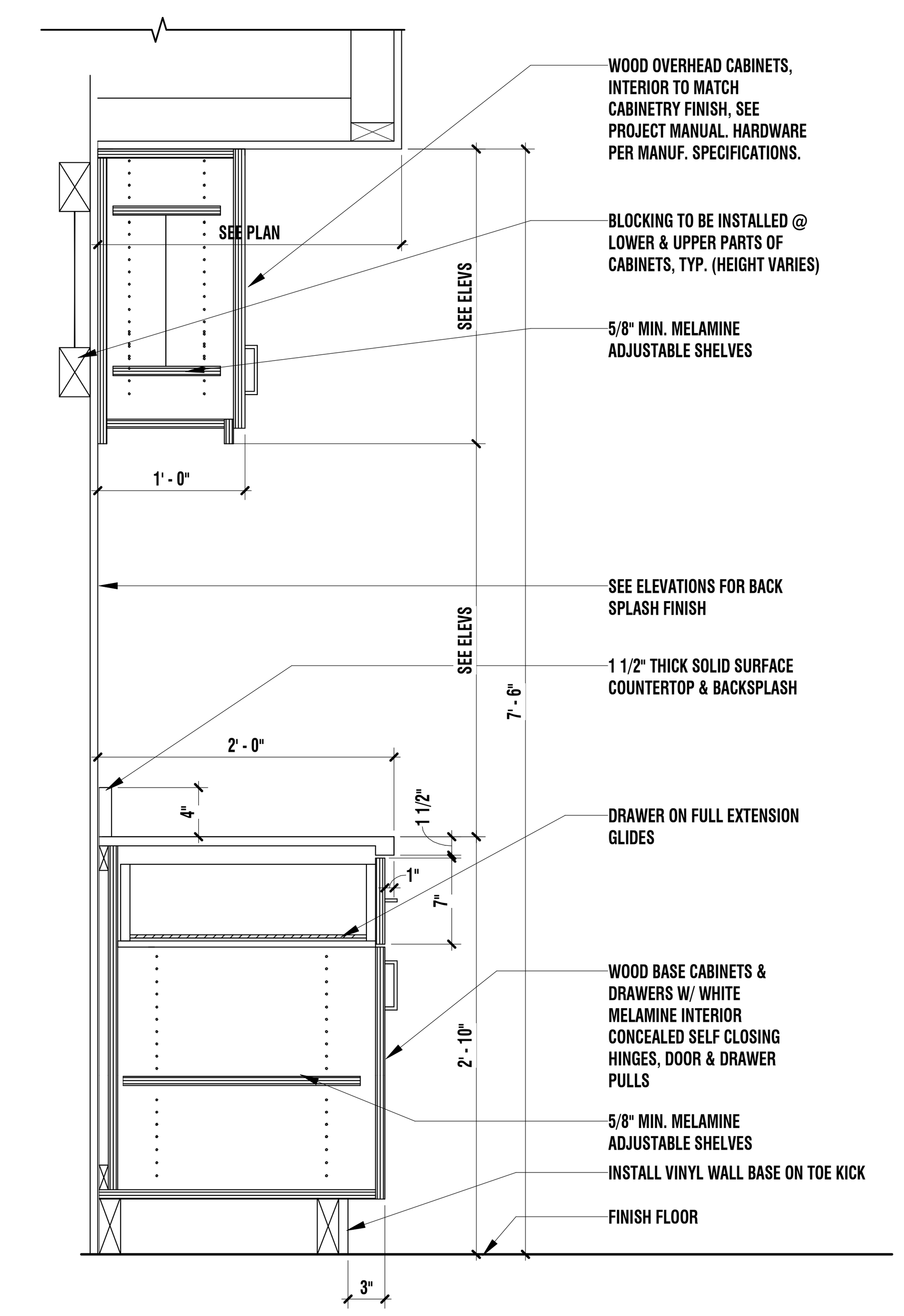


4 TYP. HALF WALL ELEVATION
SCALE: 3" = 1'-0"



5 TYP. SECTION @ CABINETRY
SCALE: 1" = 1'-0"

JAM ARCH

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179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
ENLARGED INTERIOR PLANS & ELEVATIONS

Rev. #	Revision Date	Revision Description
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SHEET NO.
A403

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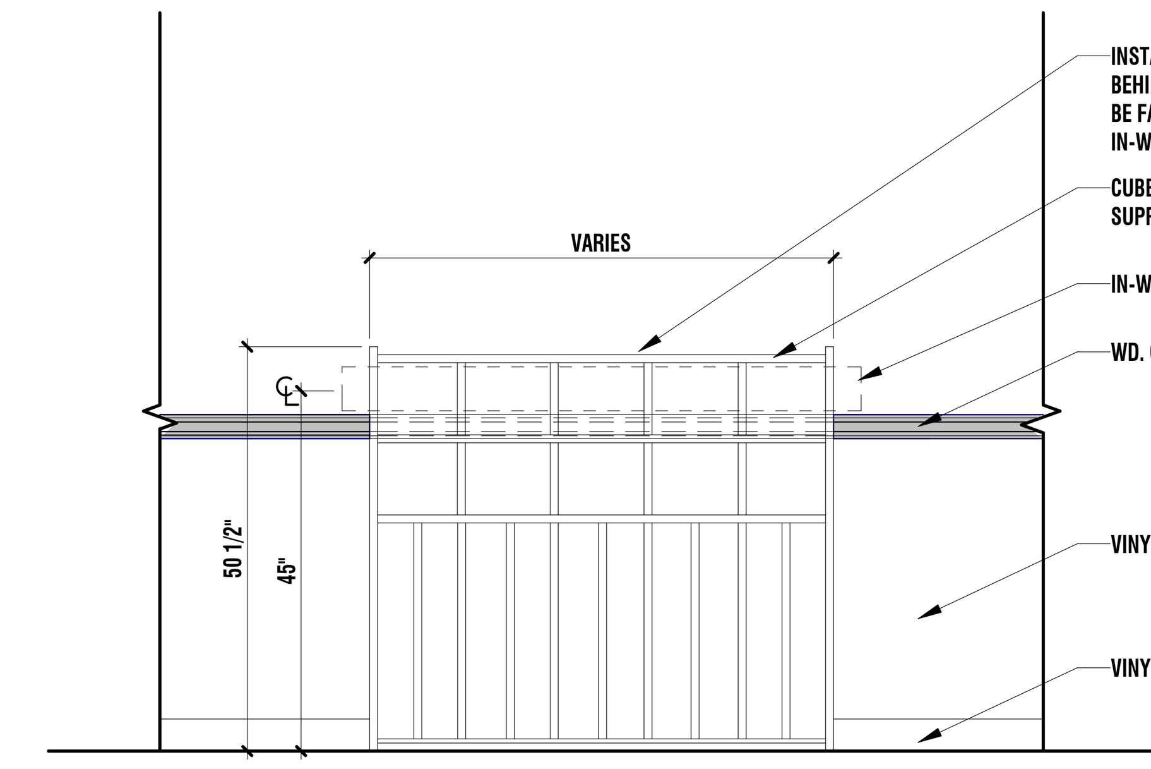
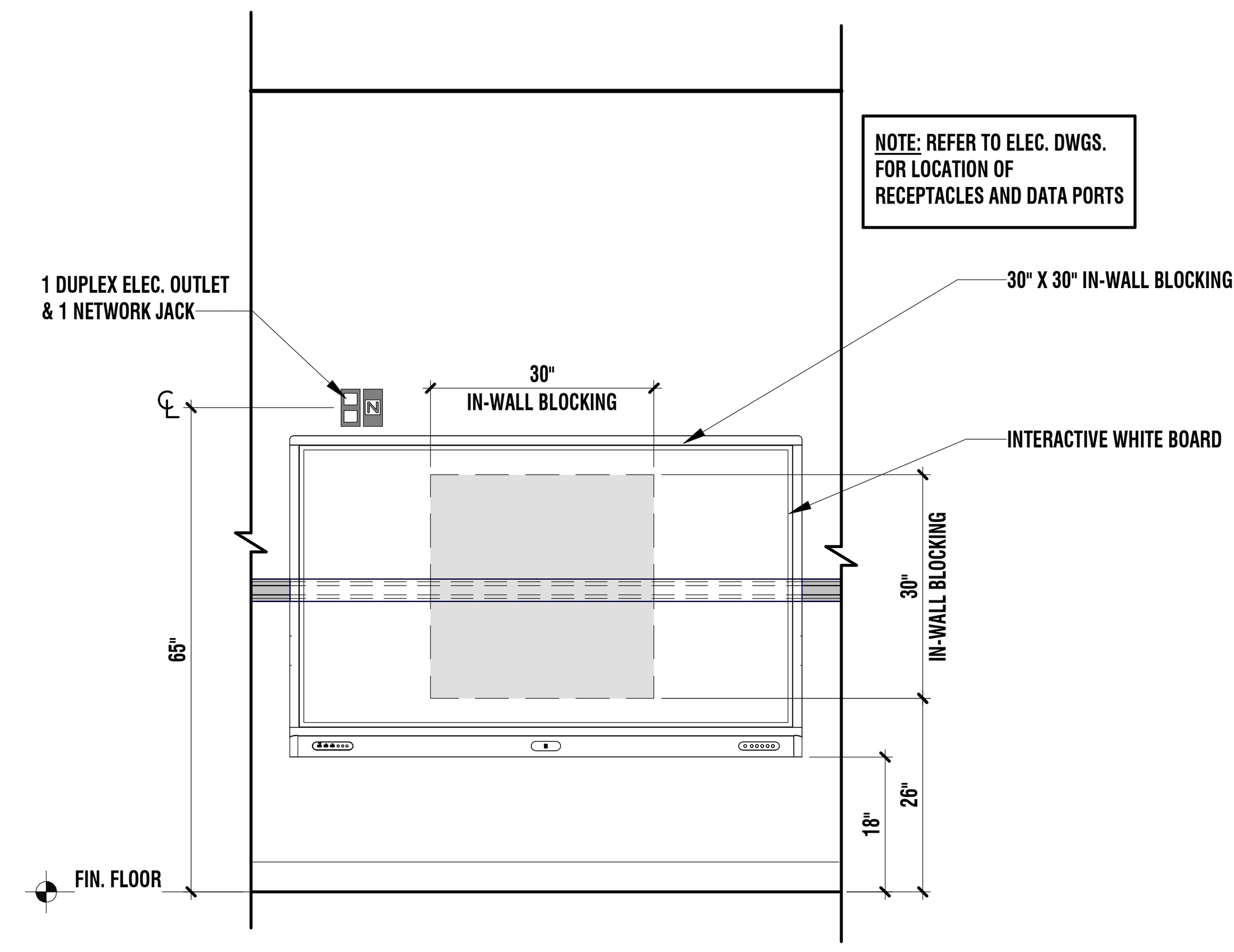
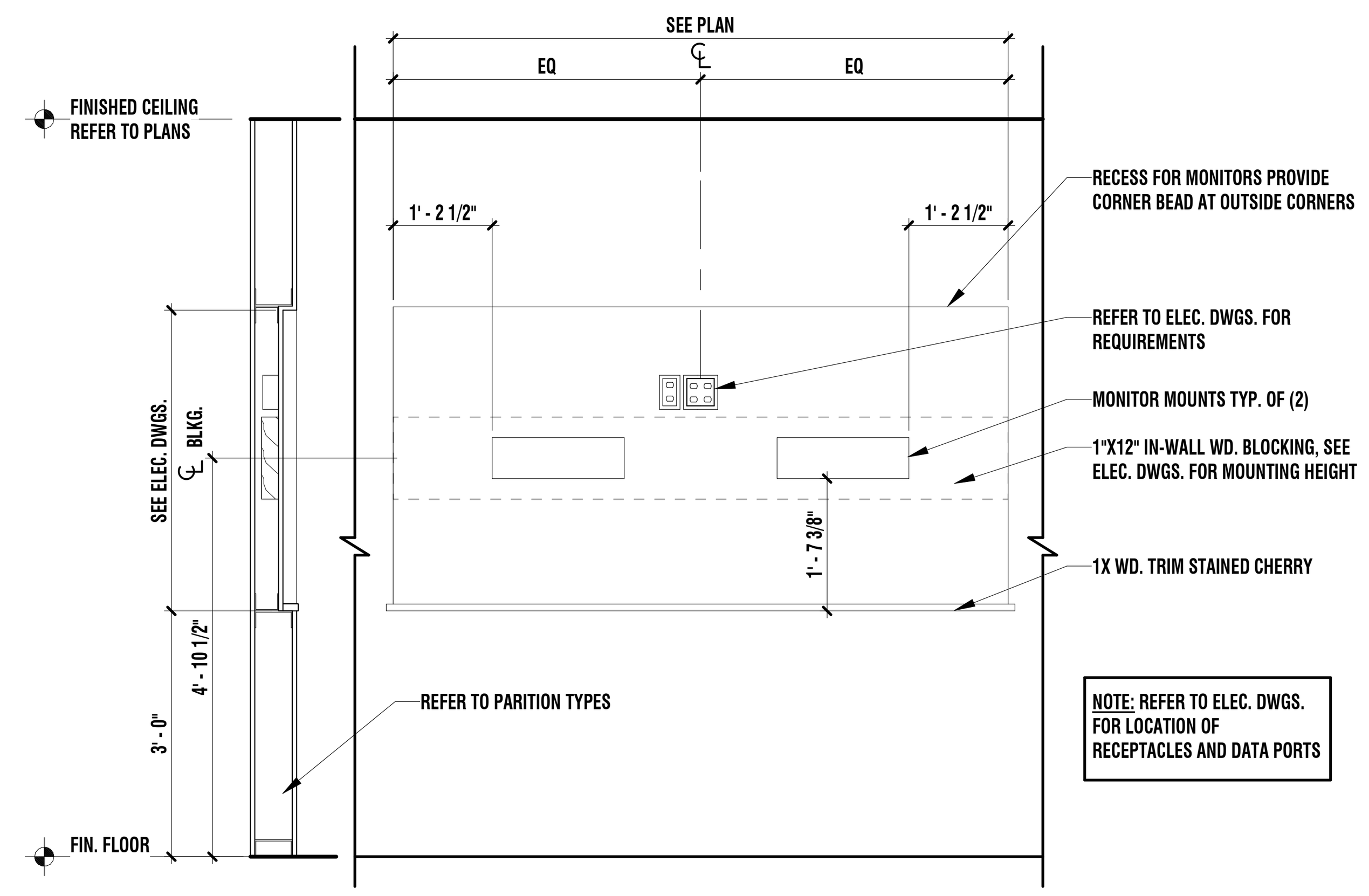


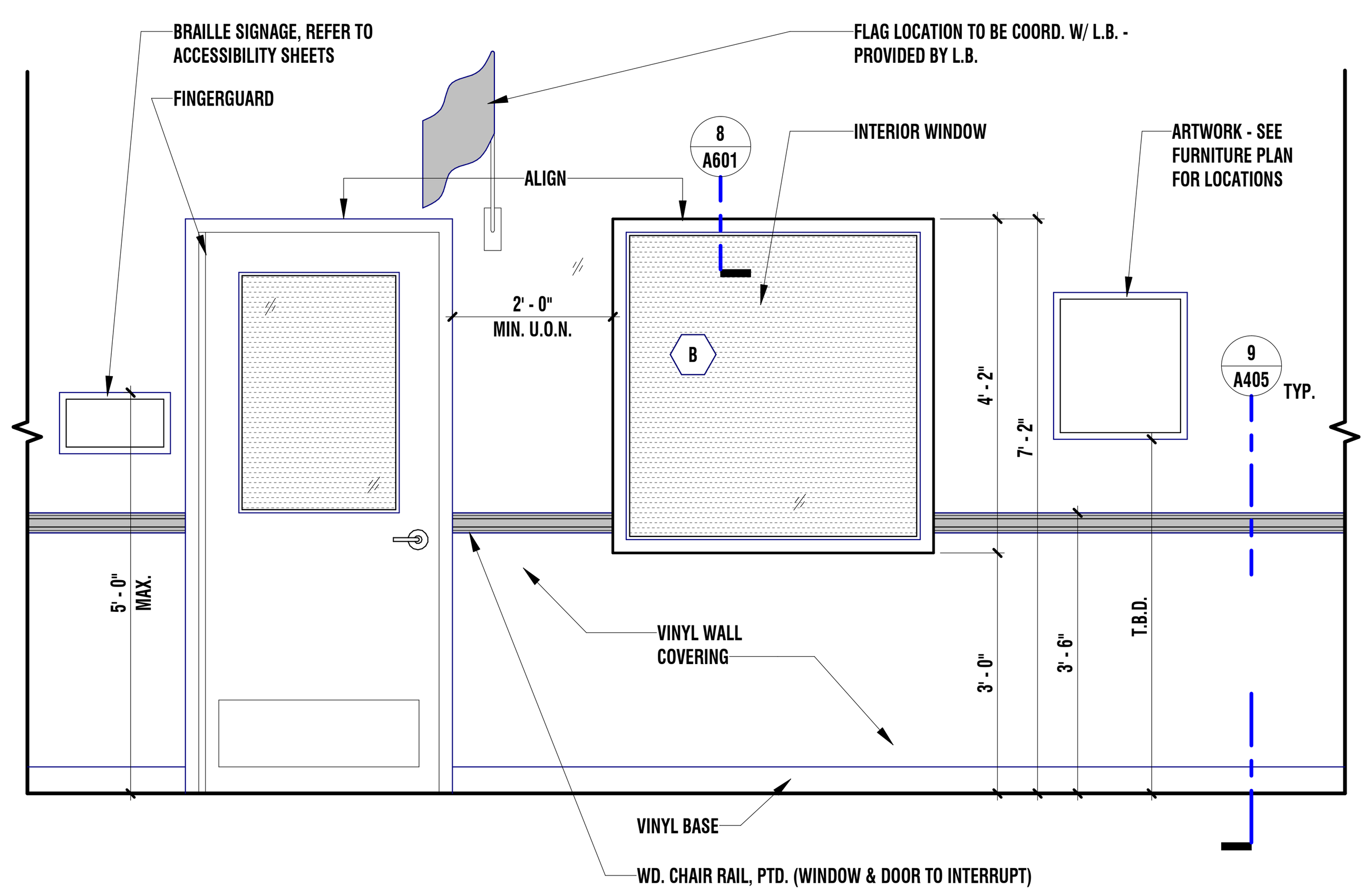
1 **FLOOR-MOUNTED CUBBY ELEVATION**
SCALE: 1/2" = 1'-0"



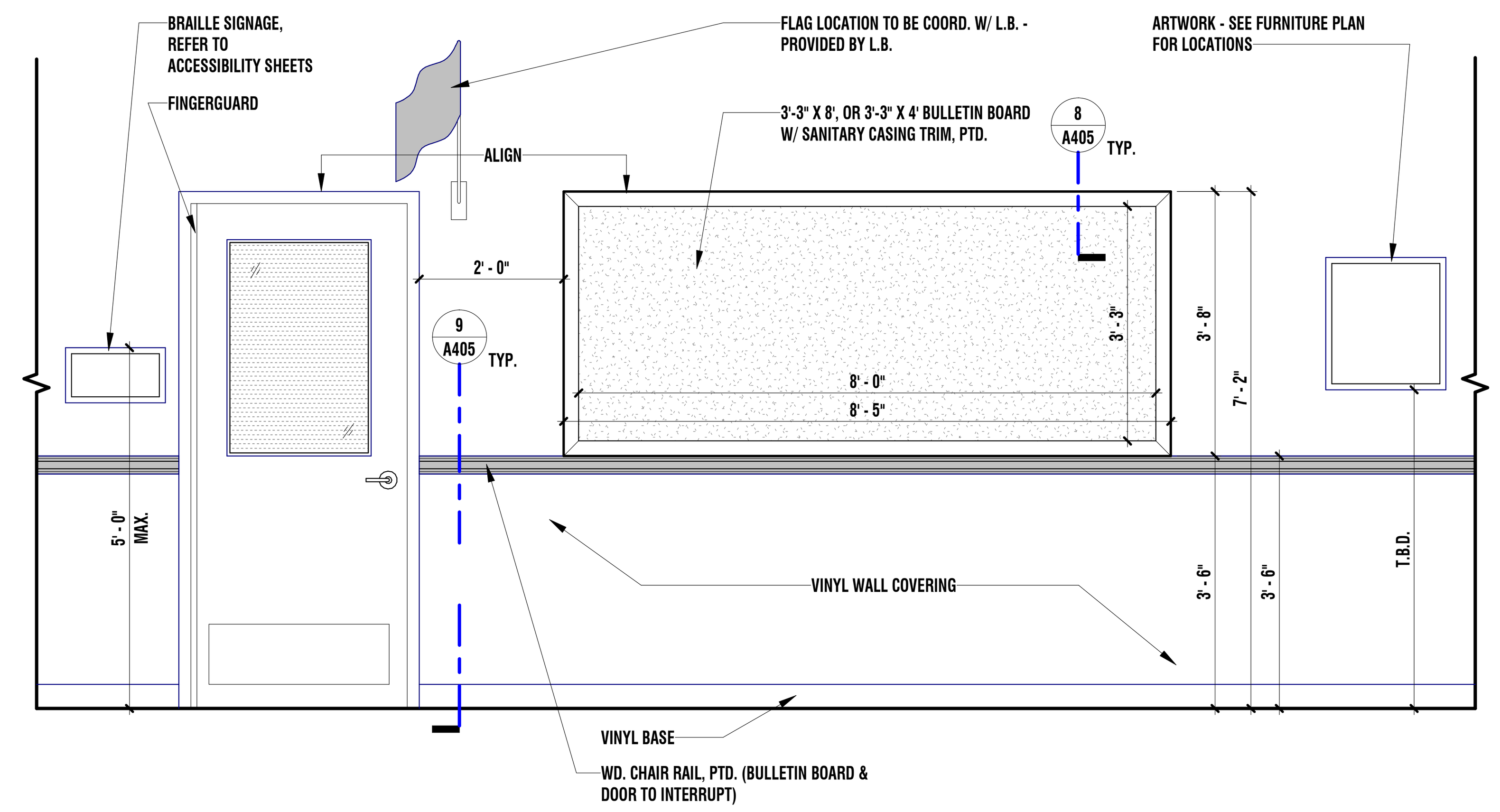
2 **BENQ BLOCKING ELEVATION**
SCALE: 1/2" = 1'-0"



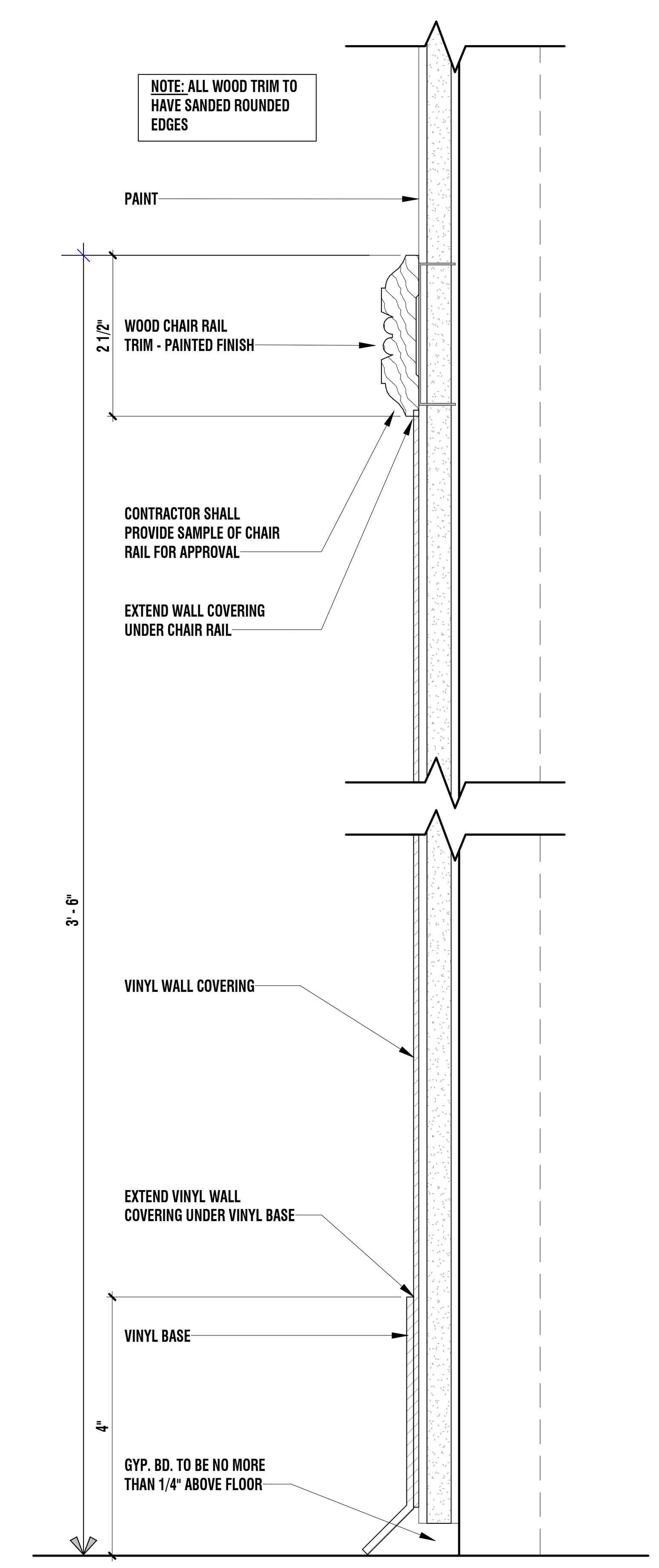
3 **TV BLOCKING ELEVATION**
SCALE: 1/2" = 1'-0"

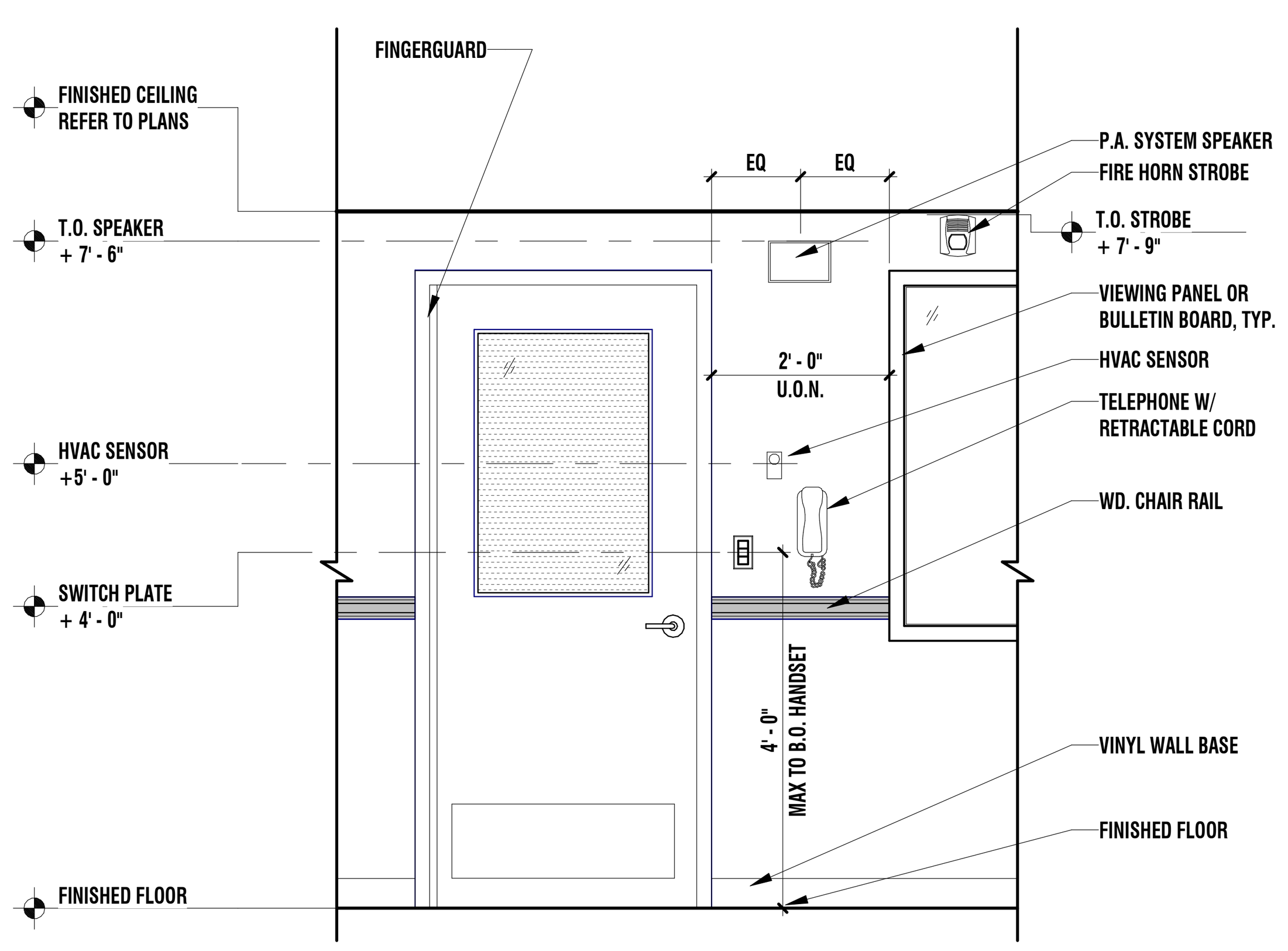


4 **CORRIDOR ELEVATION @ VIEWING PANEL**
SCALE: 1/2" = 1'-0"

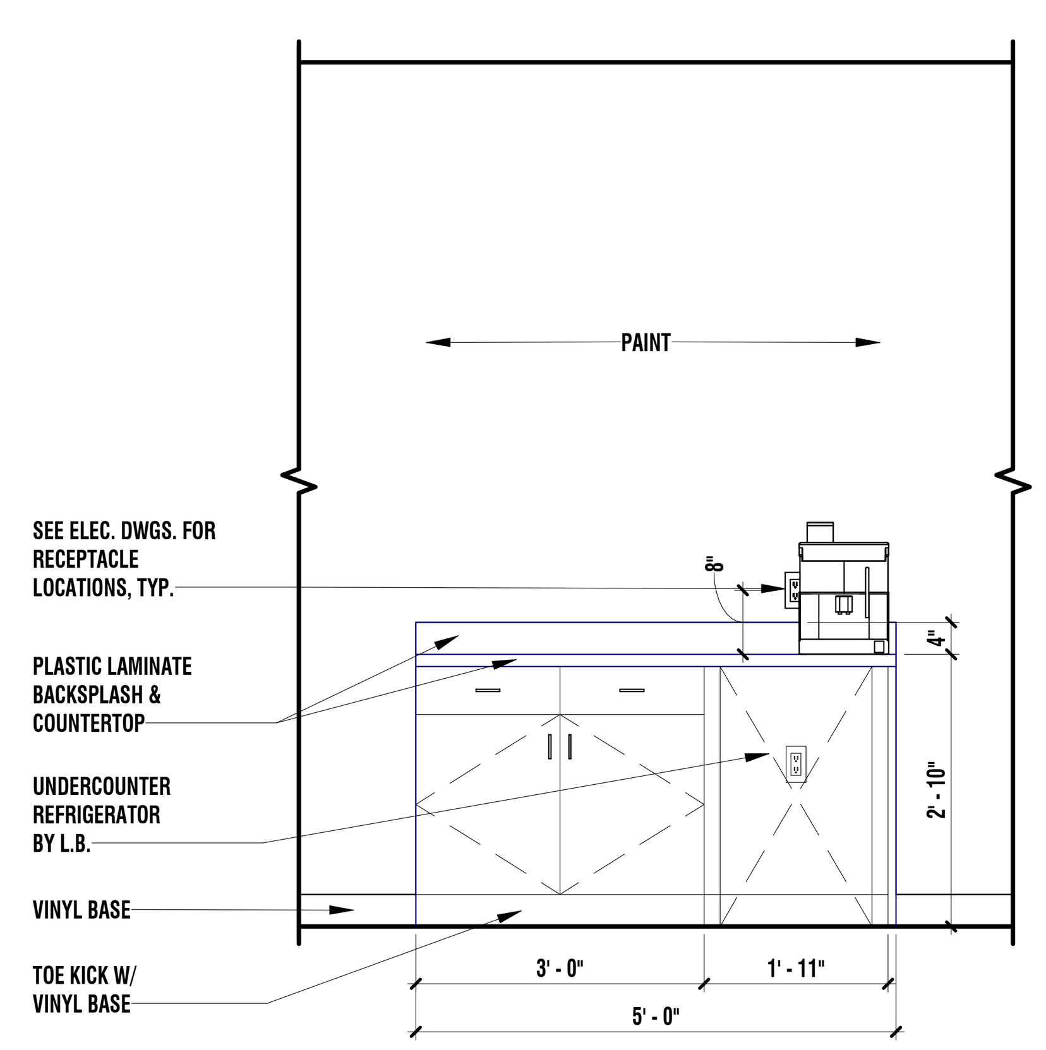


5 **CORRIDOR ELEVATION @ BULLETIN BOARD**
SCALE: 1/2" = 1'-0"

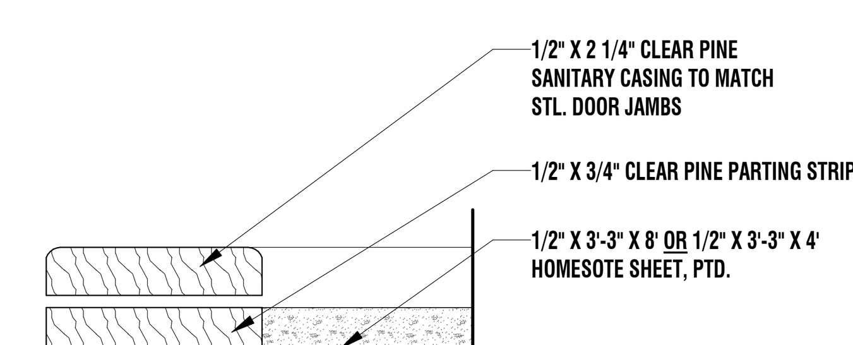




6 **CLASSROOM ELEVATION**
SCALE: 1/2" = 1'-0"



7 **HOSPITALITY CENTER**
SCALE: 1/2" = 1'-0"



8 **BULLETIN BD. EDGE DETAIL**
SCALE: 6" = 1'-0"

9 **TYP. WAINSCOT DETAIL**
SCALE: 6" = 1'-0"

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SHEET TITLE:
CASEWORK ELEVATIONS & DETAILS

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A405

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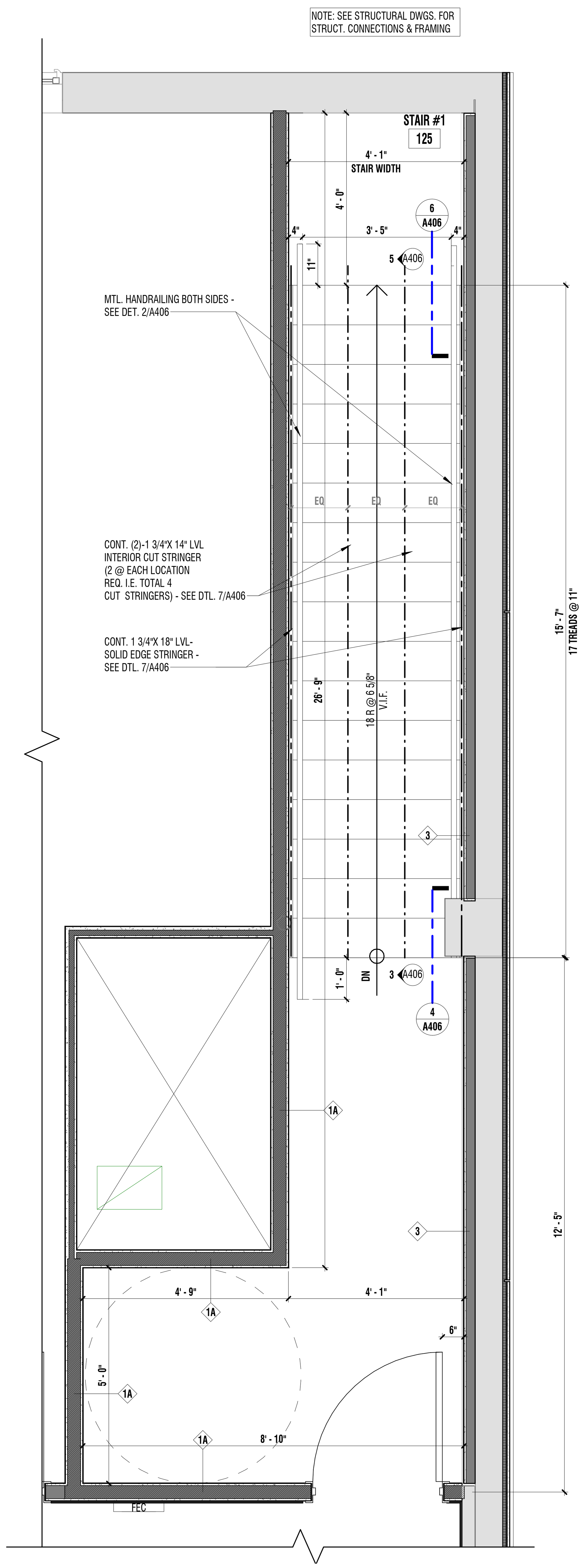
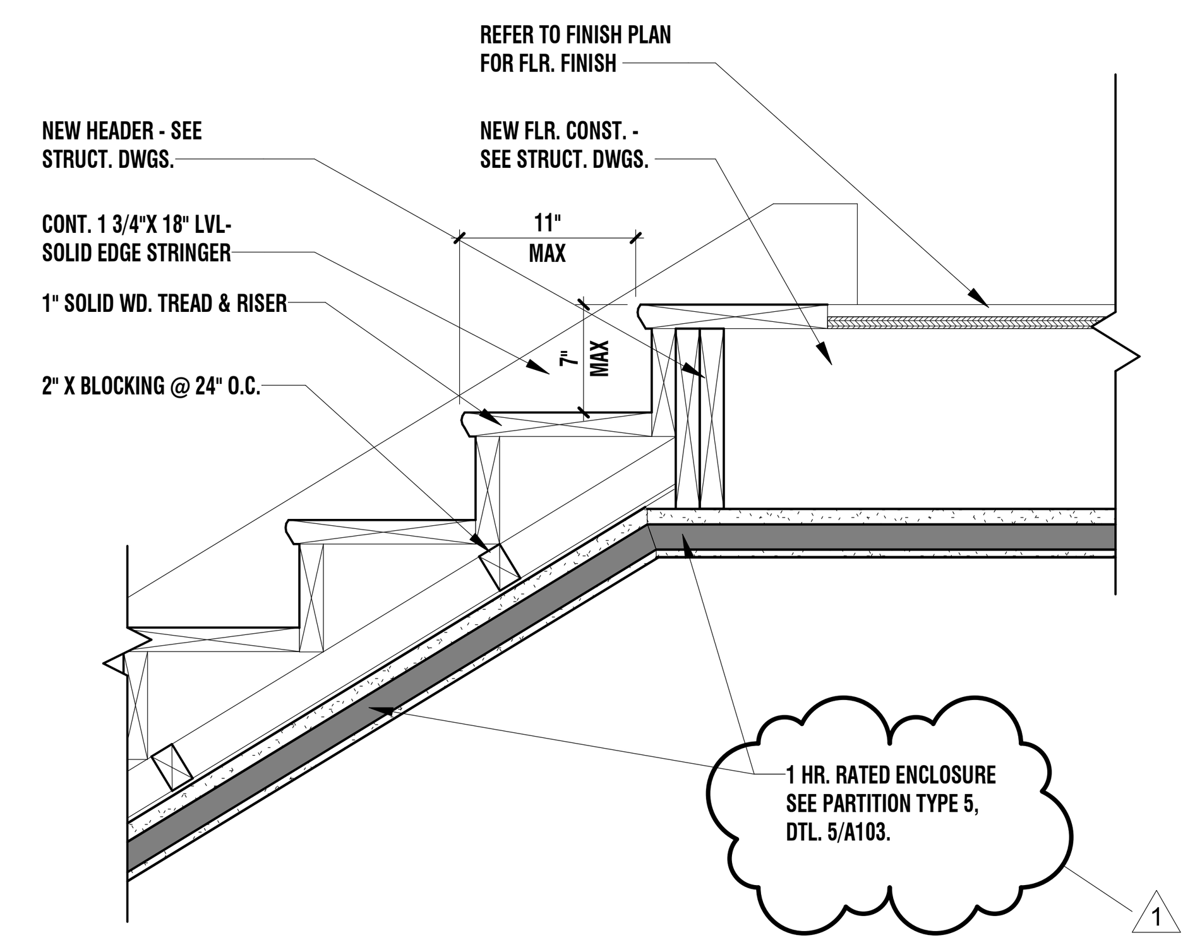
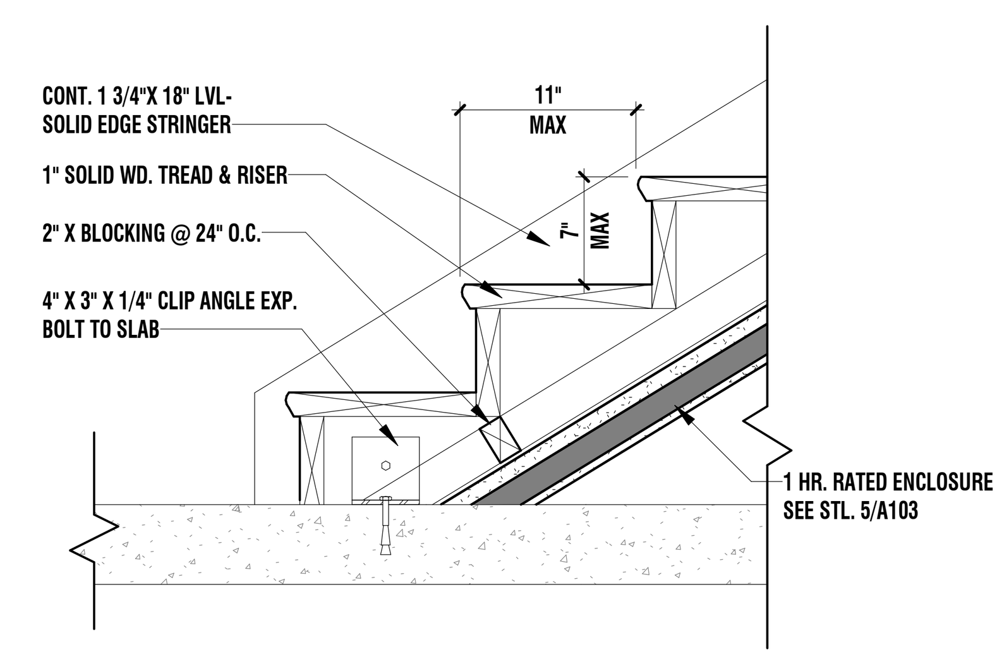
10/18/2022 8:38:36 AM



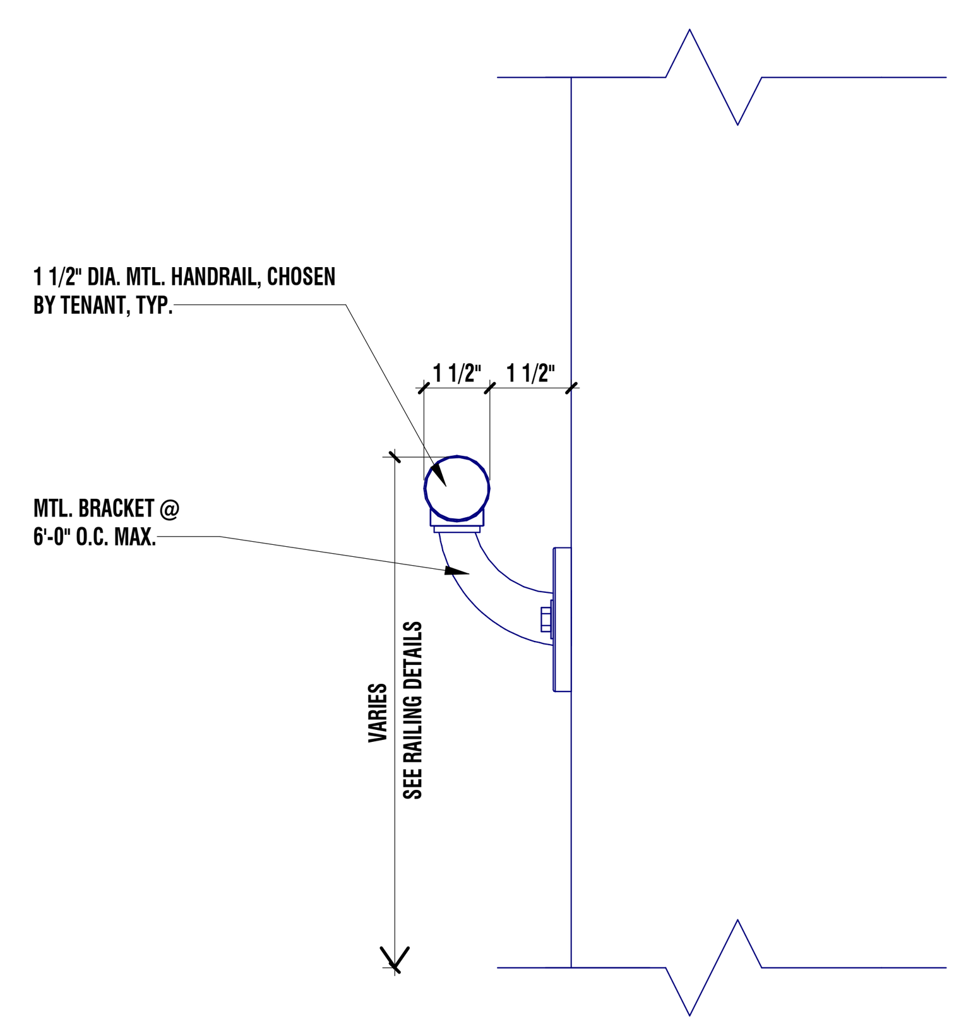
1 STAIR PLAN
SCALE: 1/2" = 1'-0"



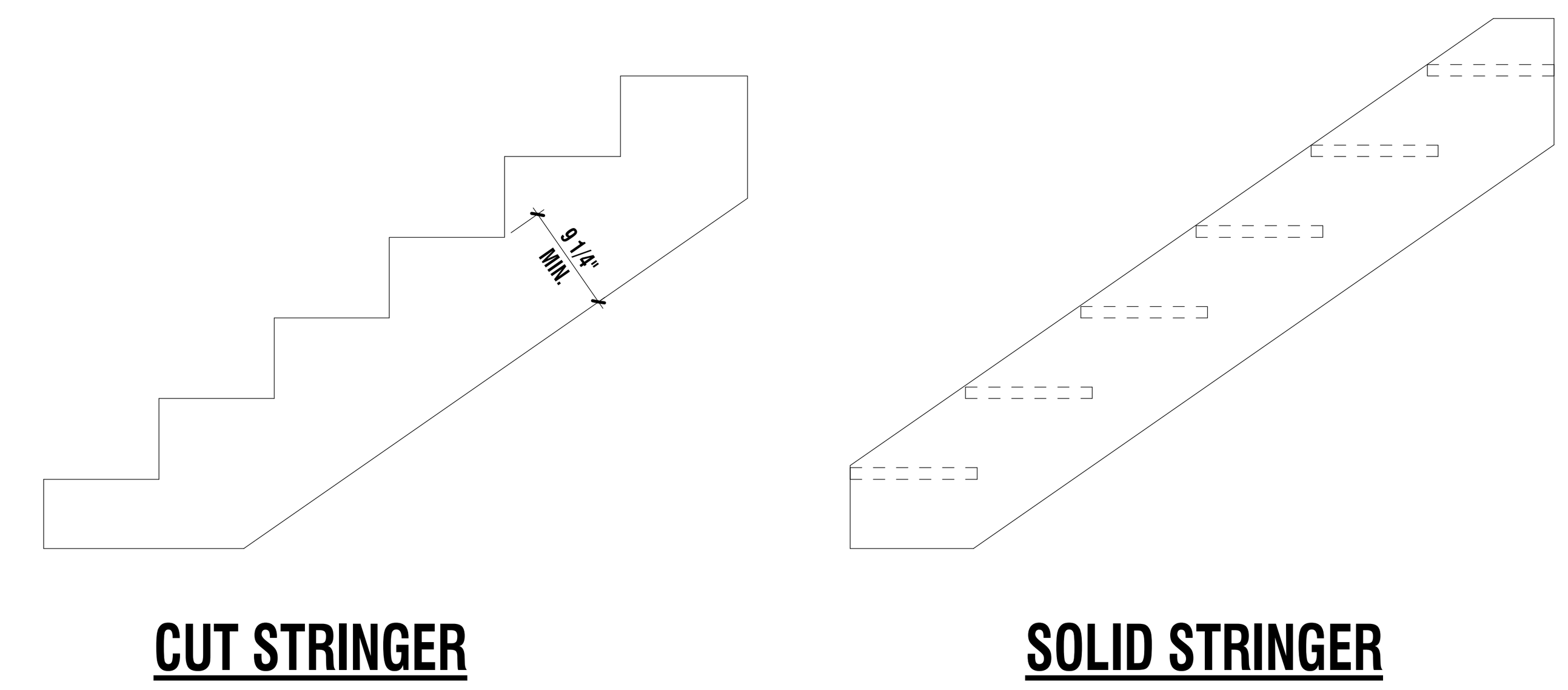
4 T.O. STAIR DETAIL
SCALE: 1" = 1'-0"



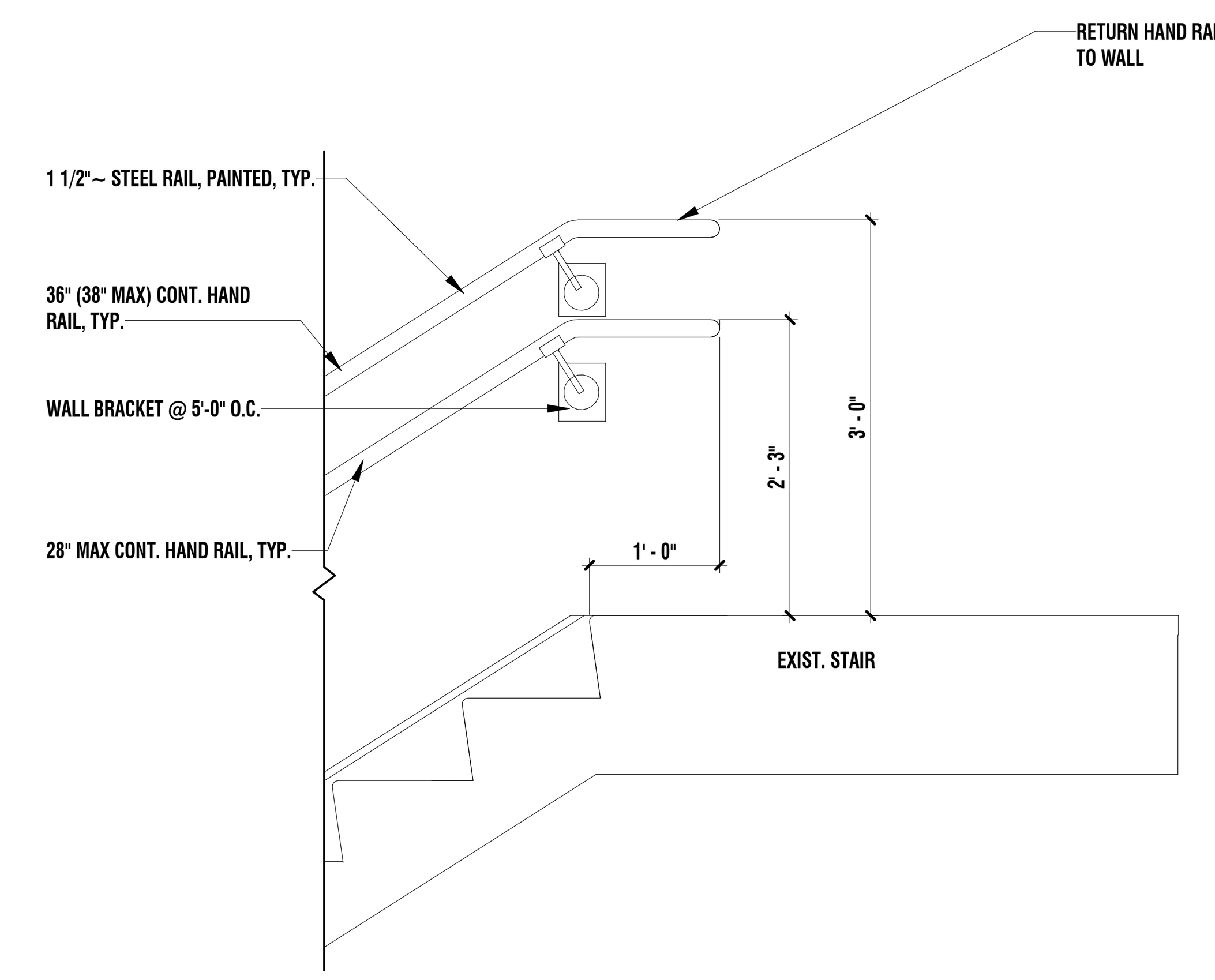
6 B.O. STAIR DETAIL
SCALE: 1" = 1'-0"



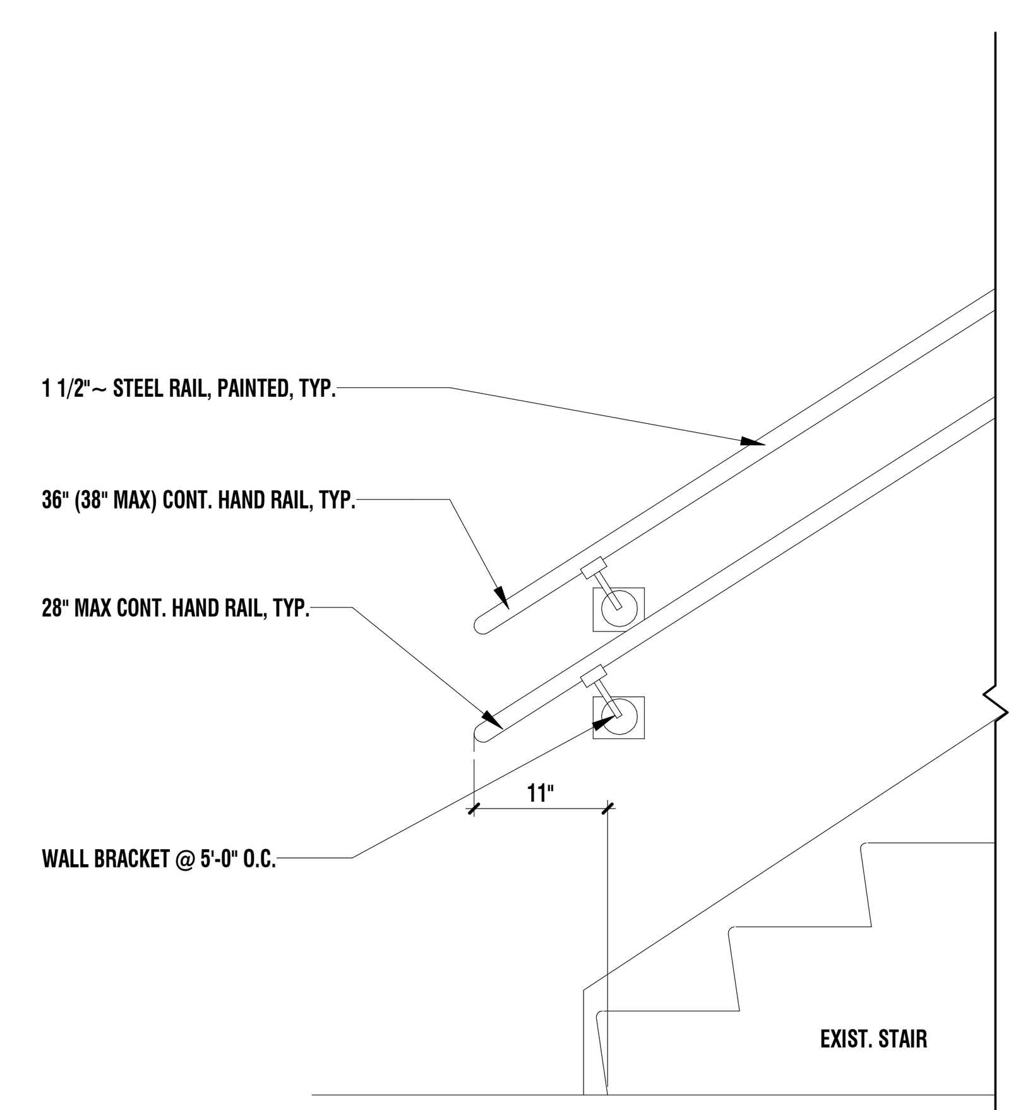
2 HANDRAIL DETAIL
SCALE: 3" = 1'-0"



7 TYP. STRINGER DTL.
SCALE: 3/4" = 1'-0"



3 HANDRAIL @ T.O. STAIR DETAIL
SCALE: 3/4" = 1'-0"



5 HANDRAIL @ B.O. STAIR DETAIL
SCALE: 3/4" = 1'-0"

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179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
ENLARGED STAIR PLAN, STAIR DETAILS, & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
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JOB NUMBER: 2019-01.15
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A406

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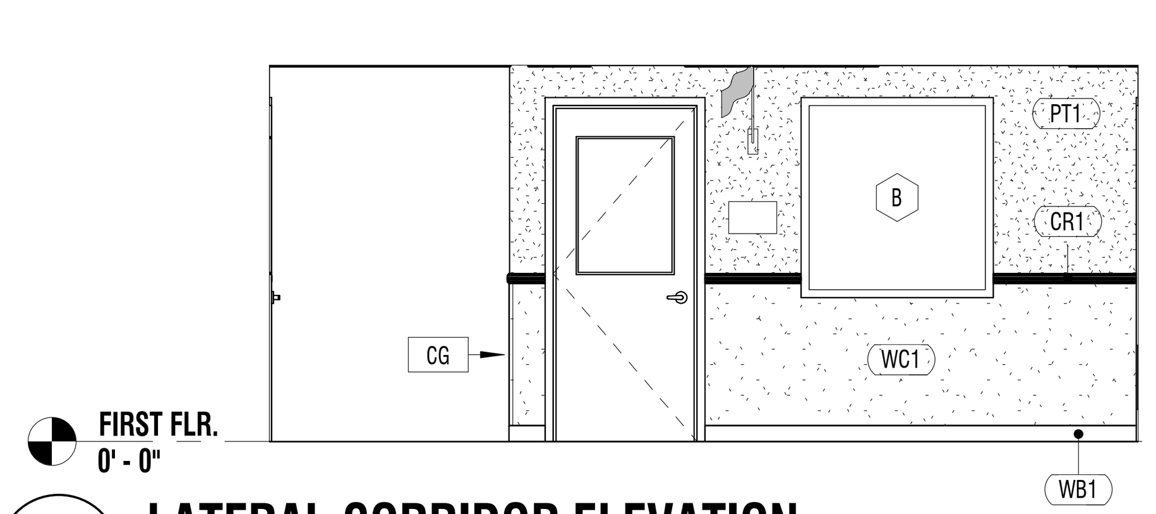
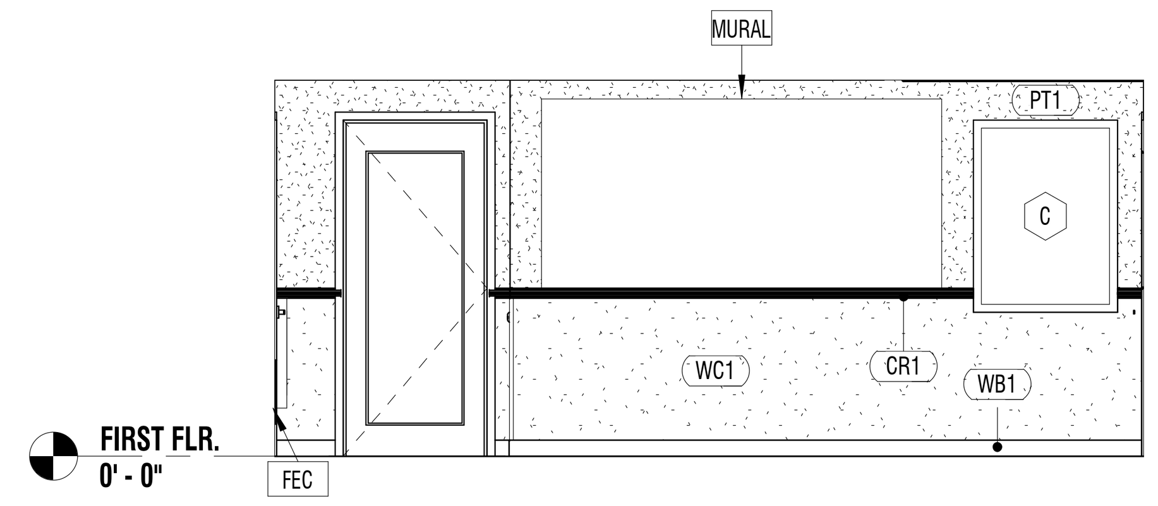


1 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



2 LATERAL CORRIDOR ELEVATION
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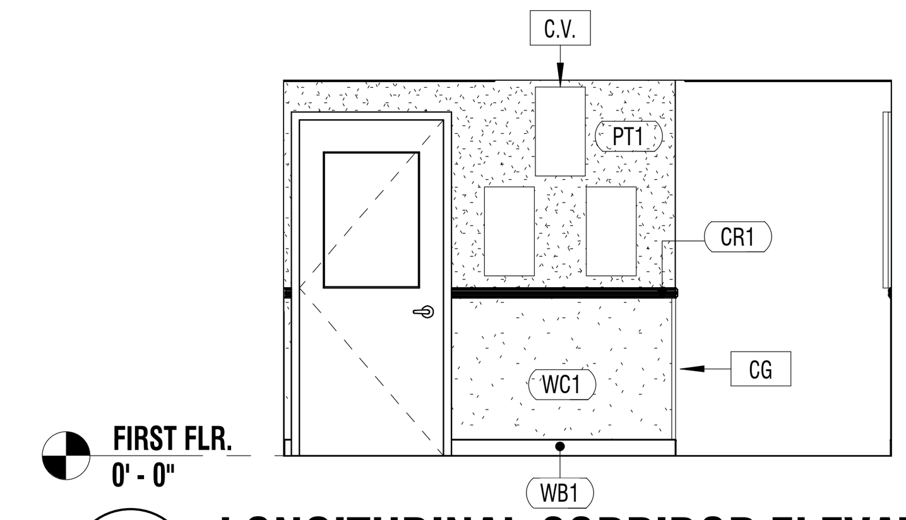
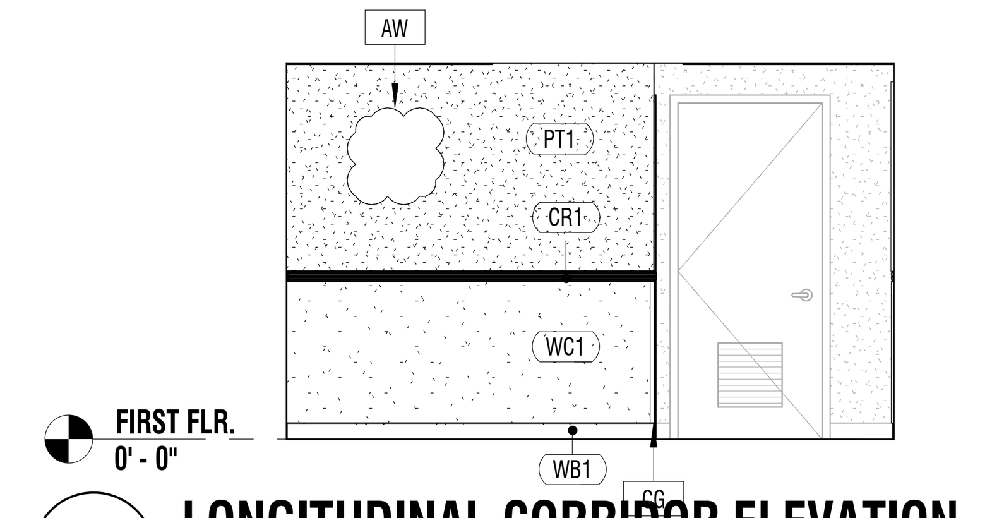


3 LONGITUDINAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



4 LONGITUDINAL CORRIDOR ELEVATION
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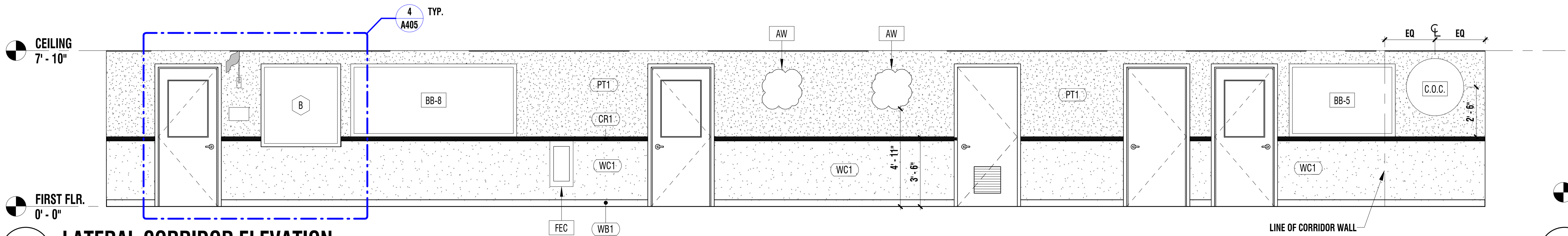

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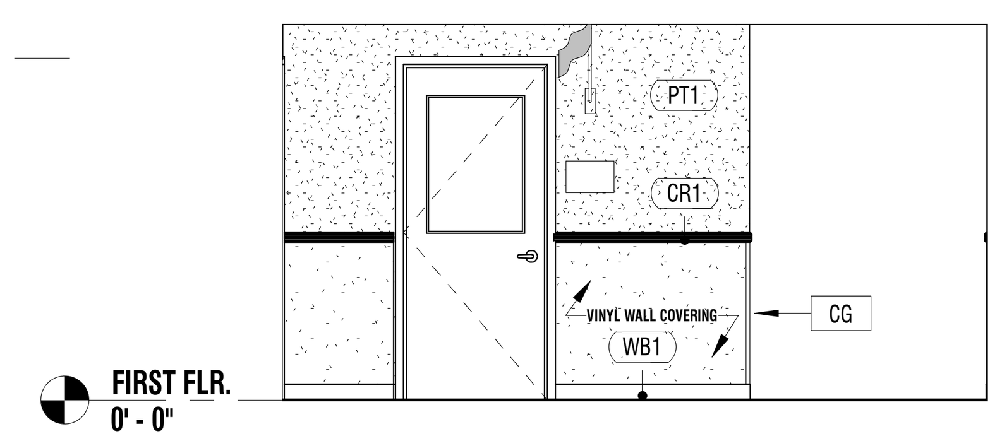
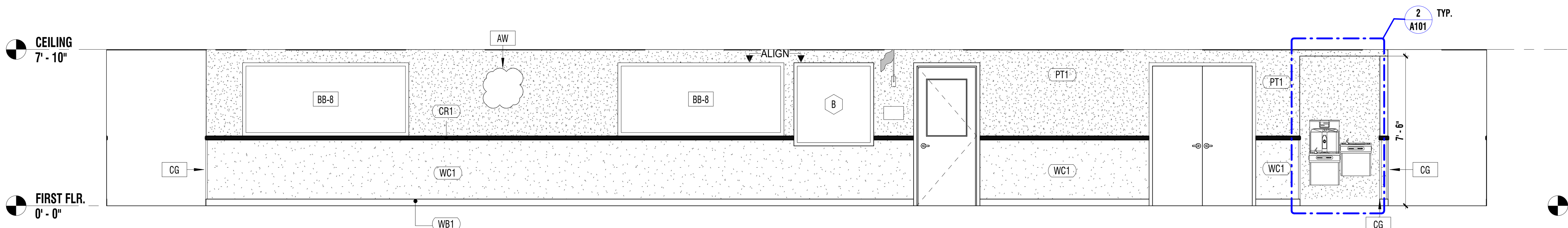
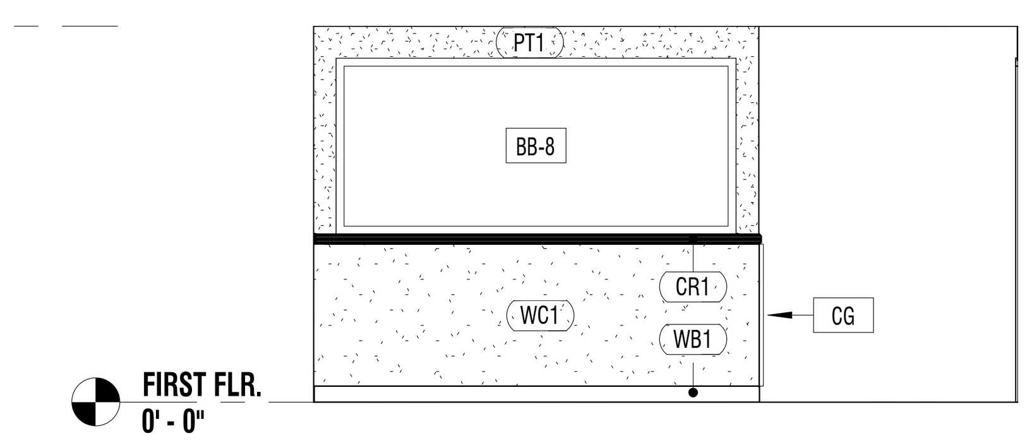


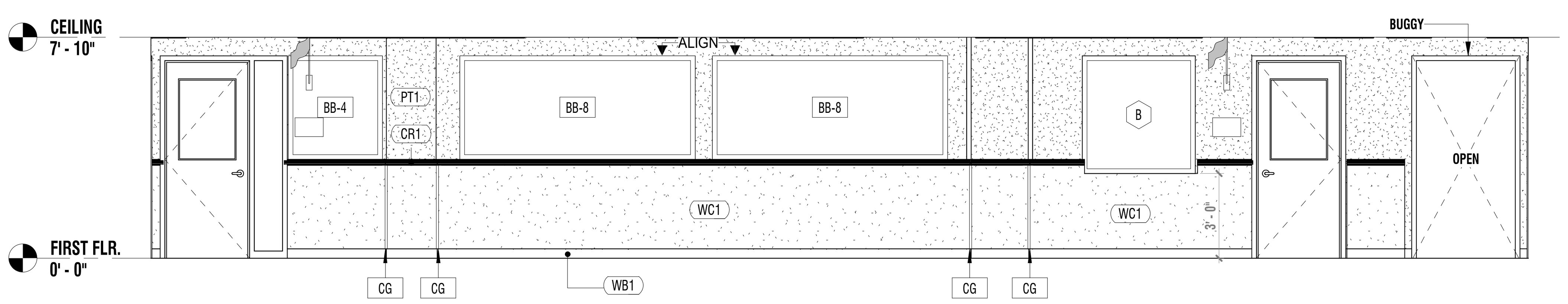
7 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



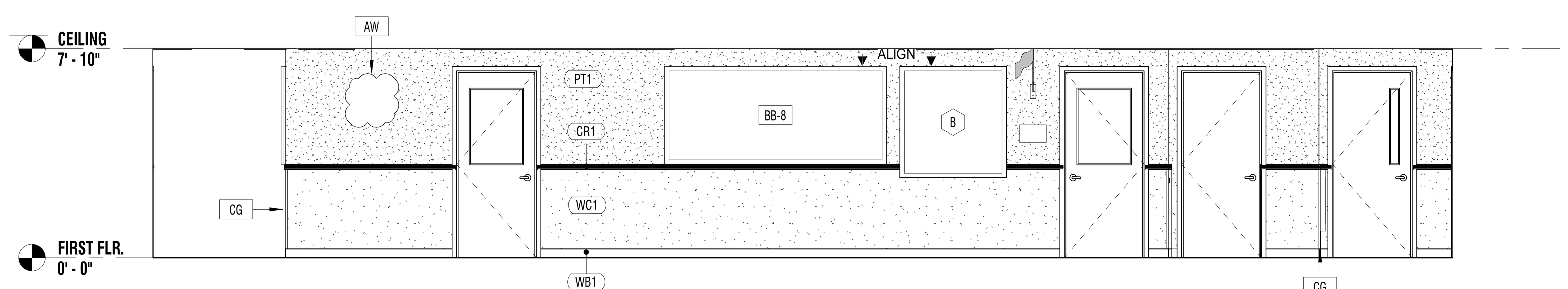
6 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



8 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



9 LONGITUDINAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



10 LONGITUDINAL CORRIDOR ELEVATION
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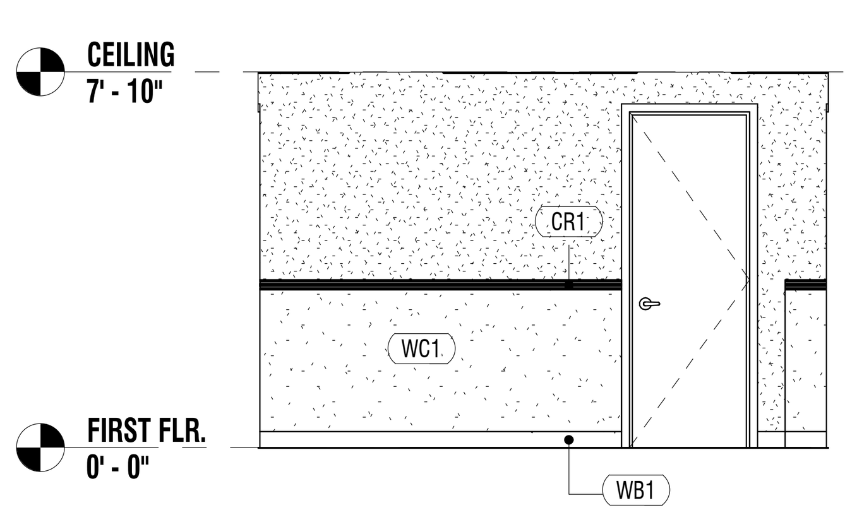
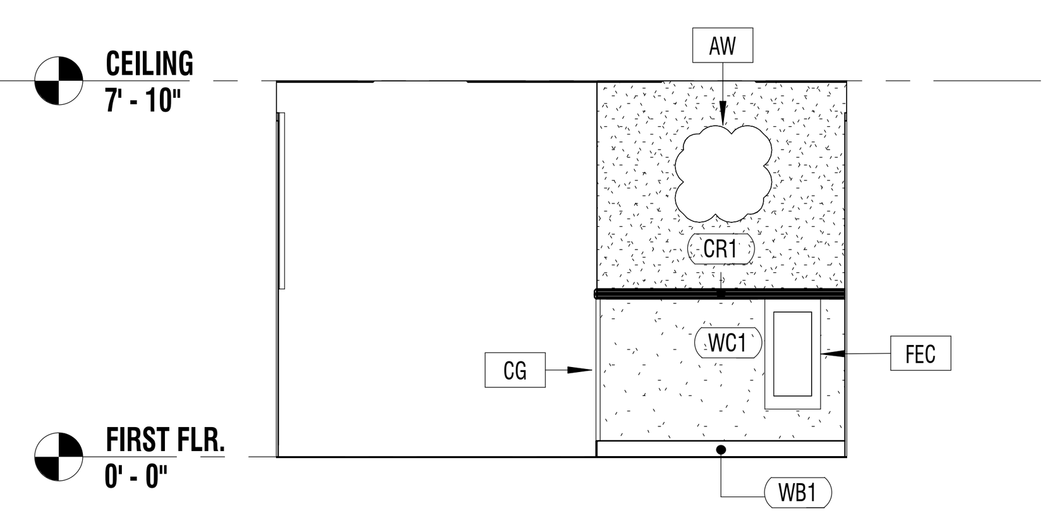
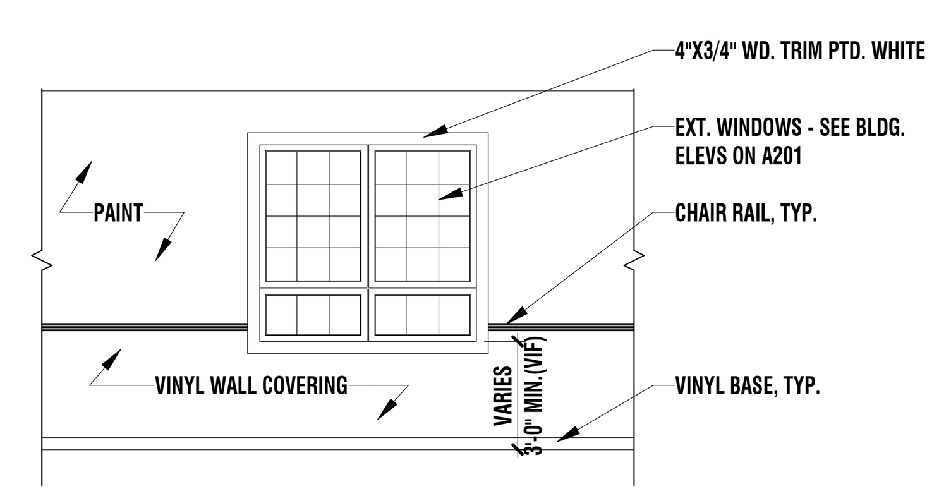


11 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



12 LATERAL CORRIDOR ELEVATION
SCALE: 1/4" = 1'-0"



13 TYP. EXT. WINDOW CORRDIOR ELEVATION
SCALE: 3/16" = 1'-0"

GENERAL NOTES :

1. REFER TO DWG. G006 FOR ART WORK LOCATIONS.

ELEVATION LEGEND

INDICATES FINISH MATERIAL - REFER TO FINISH SCHEDULE
INDICATES WINDOW TAG - REFER TO WINDOW SCHEDULE
EQUIPMENT TAG - REFER TO FURNITURE PLAN

JAM ARCH

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SHEET TITLE:
FIRST FLOOR CORRIDOR ELEVATIONS & DETAILS

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
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A407

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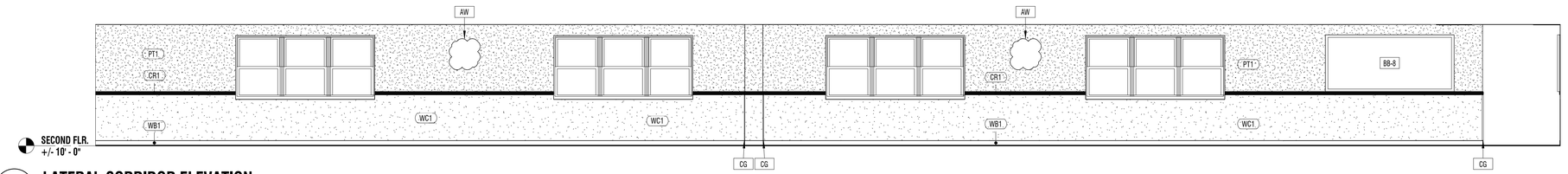
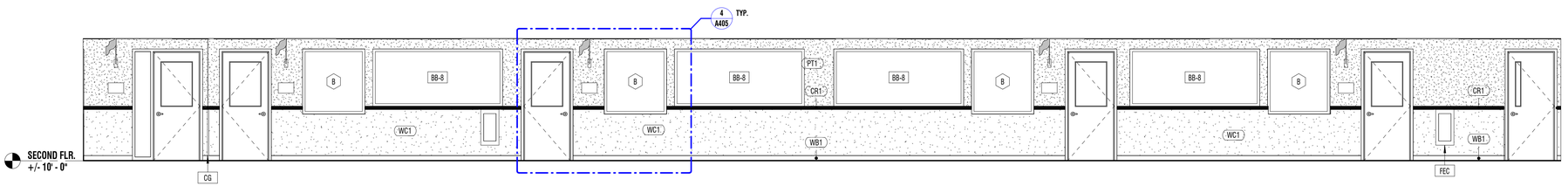


SECOND FLR.
+/- 10' - 0"

1 LATERAL CORRIDOR ELEVATION

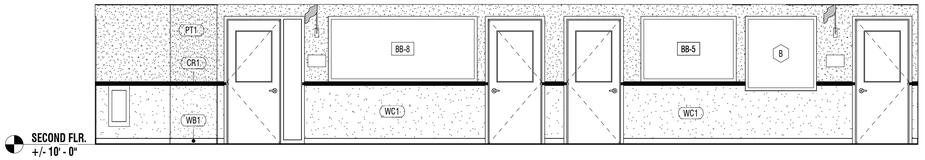
SCALE: 1/4" = 1'-0"



SECOND FLR.
+/- 10' - 0"

2 LATERAL CORRIDOR ELEVATION

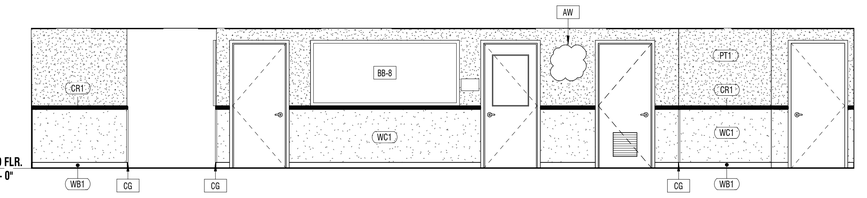
SCALE: 1/4" = 1'-0"



SECOND FLR.
+/- 10' - 0"

3 LONGITUDINAL CORRIDOR ELEVATION

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



SECOND FLR.
+/- 10' - 0"

4 LONGITUDINAL CORRIDOR ELEVATION

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

GENERAL NOTES :

1. REFER TO DWG. G006 FOR ART WORK LOCATIONS.

ELEVATION LEGEND

- (?) INDICATES FINISH MATERIAL - REFER TO FINISH SCHEDULE
- (A) INDICATES WINDOW TAG - REFER TO WINDOW SCHEDULE
- 1i EQUIPMENT TAG - REFER TO FURNITURE PLAN

JAM ARCH

ARCHITECT OF RECORD:
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REGISTERED ARCHITECT
JUSTIN ALLEN MIHALIK
027468
STATE OF NEW YORK

JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy℠
Innovators in Educational Child Care

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SHEET TITLE:
SECOND FLOOR CORRIDOR ELEVATIONS & DETAILS

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CHECKED BY:	JAM/KM

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A408

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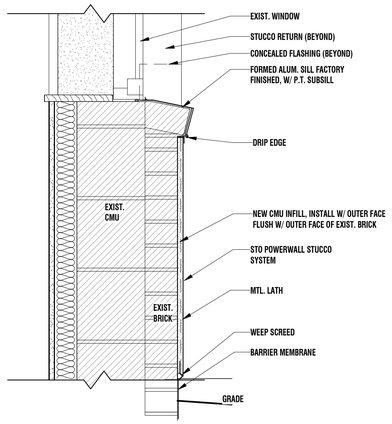
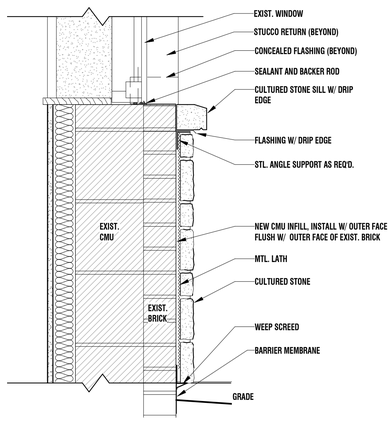


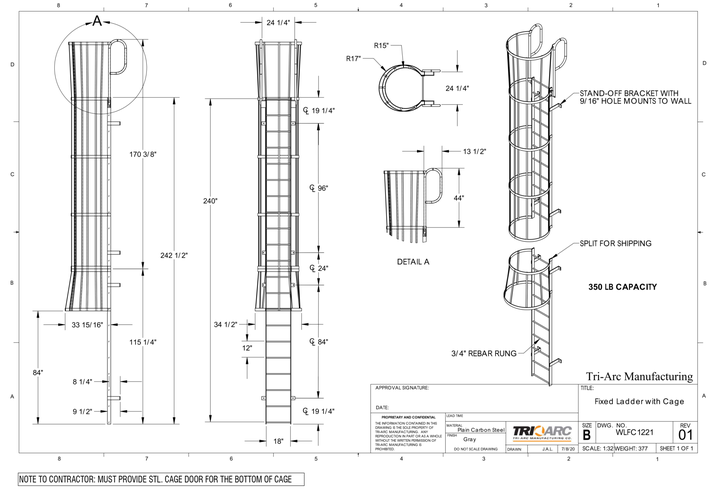
1 SECTION @WINDOW SILL (STUCCO)

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



2 SECTION @WINDOW SILL (CULTURED STONE)

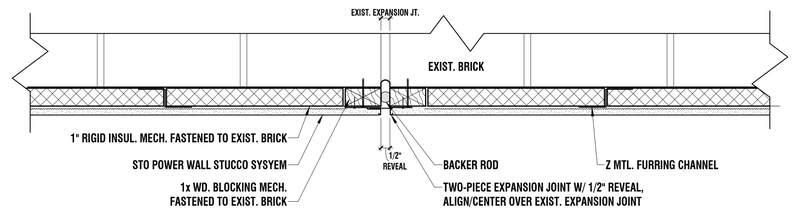
SCALE: 1 1/2" = 1'-0"



NOTE TO CONTRACTOR: MUST PROVIDE STL. CAGE DOOR FOR THE BOTTOM OF CAGE

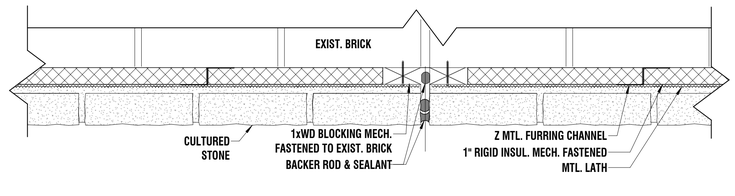
5 ROOF ACCESS LADDER

NOT TO SCALE



3 EXPANSION JOINT @ STUCCO

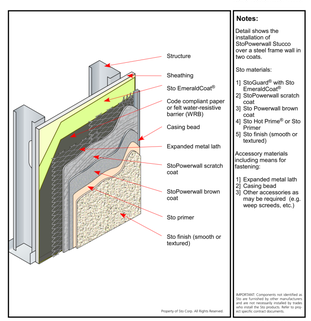
SCALE: 3" = 1'-0"



4 EXPANSION JOINT@ CULTURED STONE

SCALE: 3" = 1'-0"

StoPowerwall® Components — Detail No.: 4.01 — Date:December 2015



Notes:

Detail shows the installation of StoPowerwall Stucco over a steel frame wall in two coats.

Sto materials:

1) StoGuard® with Sto EmeraldCoat®
2) StoPowerwall scratch coat
3) Sto Powerwall brown coat
4) Sto Hot Prime® or Sto Primer
5) Sto finish (smooth or textured)

Accessory materials including means for fastening:

1) Expanded metal lath
2) Casing bead
3) Other accessories as may be required (e.g. weep screeds, etc.)

IMPORTANT: Components not identified as Sto are furnished by other manufacturers and are not necessarily installed by trades employed by Sto. Refer to your job specific contract documents.

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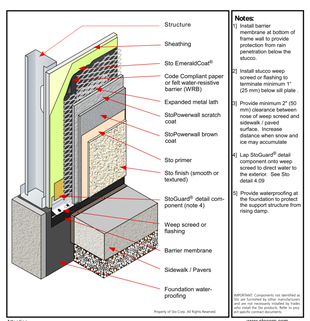
Sto Powerwall® Termination at Grade: Sidewalk / Pavers — Detail No.: 4.10 — Date:December 2015



Notes:

1) Install barrier membrane at bottom of frame wall to provide protection from rain penetration below the stucco.
2) Install stucco weep screed or flashing to terminate minimum 1" (25 mm) below sill plate.
3) Provide minimum 2" (50 mm) clearance between nose of weep screed and sidewalk / paved surface. Increase distance when snow and ice may accumulate
4) Lap StoGuard® detail component onto weep screed to direct water to the exterior. See Sto detail 4.09
5) Provide waterproofing at the foundation to protect the support structure from rising damp.

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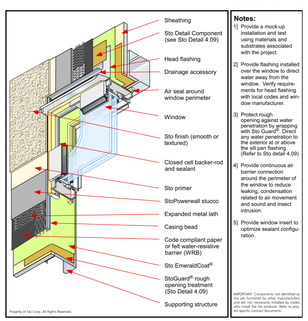
StoPowerwall® Commercial Window Head — Detail No.: 4.20 — Date:December 2015



Notes:

1) Provide a mock-up installation and test using materials and substrates associated with the project.
2) Provide flashing installed over the window to direct water away from the window. Refer to requirements for head flashing with local codes and window manufacturer.
3) Protect rough opening against water penetration by lapping with Sto StoGuard®. Direct any water penetration to the exterior at or above the sill pan flashing. (Refer to Sto detail 4.09)
4) Provide continuous air barrier connection around the perimeter of the window to reduce leaking, condensation related to air movement and sound and insect intrusion.
5) Provide window insert to optimize sealant configuration.

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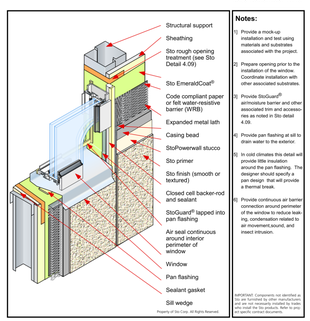
StoPowerwall® Commercial Window Sill — Detail No.: 4.22 — Date:December 2015



Notes:

1) Provide a mock-up installation and test using materials and substrates associated with the project.
2) Prepare opening prior to the installation of the window. Coordinate installation with other associated substrates.
3) Provide StoGuard® at rough opening as water barrier and other associated trim and accessories as noted in Sto detail 4.09.
4) Provide pan flashing at sill to drain water to the exterior.
5) In cold climates this detail will provide little insulation around the pan flashing. The designer should specify a pan design that will provide a thermal break.
6) Provide continuous air barrier connection around perimeter of the window to reduce leaking, condensation related to air movement,sound, and insect intrusion.

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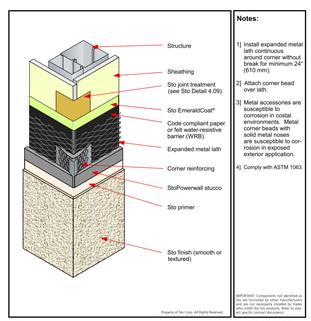
StoPowerwall® Outside Corner — Detail No.: 4.55 — Date:December 2015



Notes:

1) Install expanded metal lath continuous around corner without break for minimum 24" (610 mm).
2) Attach corner bead over lath.
3) Metal accessories are susceptible to corrosion in costal environments. Metal corner beads with solid metal noses are susceptible to corrosion in exposed exterior application.
4) Comply with ASTM 1063.

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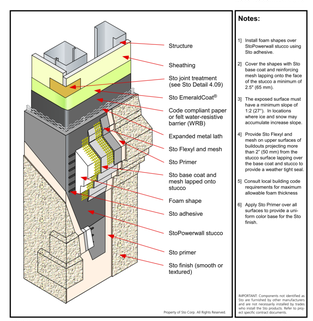
StoPowerwall® Buildouts — Detail No.: 4.70 — Date:December 2015



Notes:

1) Install foam shapes over StoPowerwall stucco using Sto adhesive.
2) Cover the shapes with Sto base coat and reinforcing mesh lapping onto the face of the stucco a minimum of 2.5" (65 mm).
3) The exposed surface must have a minimum slope of 1/2 (2°). In locations where ice and snow may accumulate increase slope.
4) Provide Sto Flexyl and mesh on exposed faces of buildouts projecting more than 2" (50 mm) from the stucco surface lapping over the base coat and stucco to provide a weather tight seal
5) Consult local building code requirements for maximum allowable foam thickness
6) Apply Sto Primer over all surfaces to provide a uniform color base for the Sto finish.

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JAM ARCH

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Building D, Suite 240
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ph: (973) 291-3730 fax: (973) 291-3740
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REGISTERED ARCHITECT JUSTIN ALLEN MIHALIK STATE OF NEW JERSEY 21749

JUSTIN A. MIHALIK, AIA LIC. #: 27468

Lightbridge Academy℠
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
EXTERIOR DETAILS

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
A501

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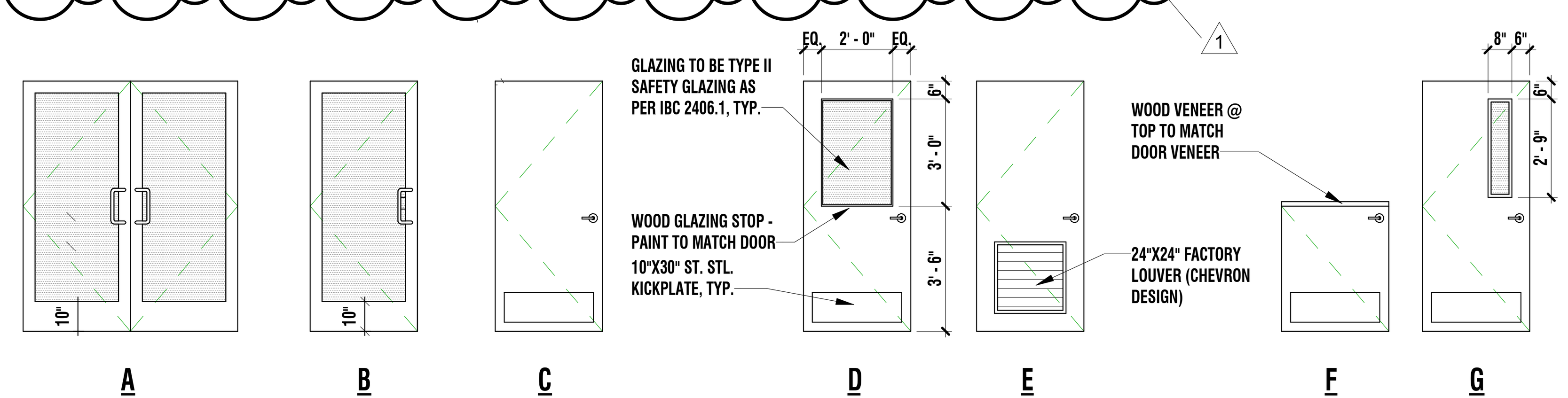
DOOR AND FRAME SCHEDULE

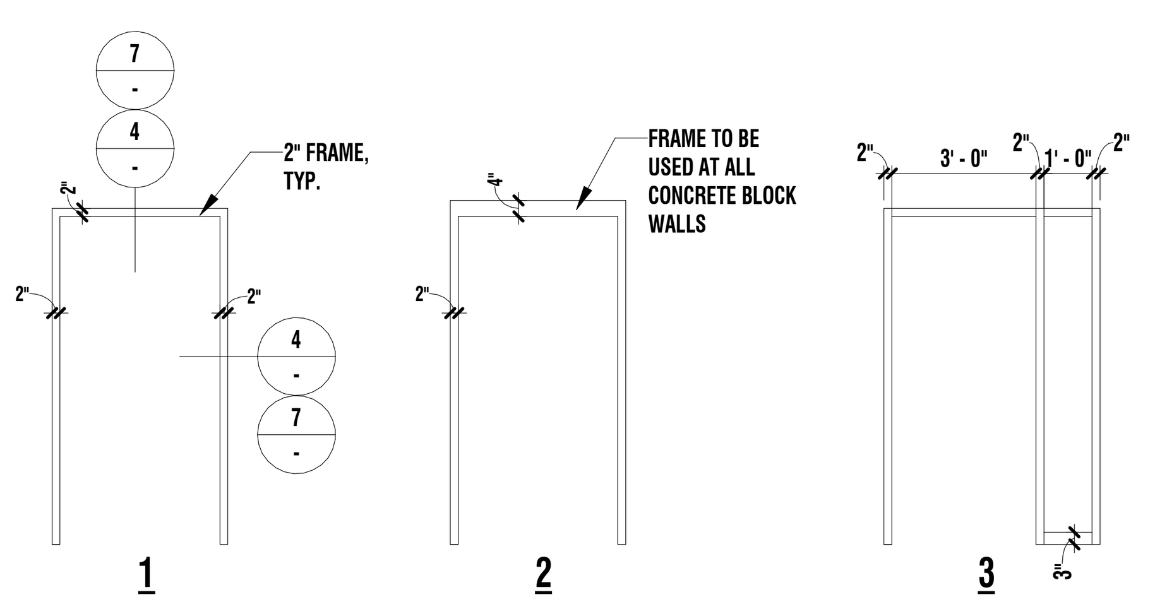
	Door Number	From	To	FR / DR TYPE	DOOR Width	DOOR Height	DOOR Thickness	DOOR Material	Frame Jamb	Frame Head	Frame Material	- Saddle	- Hardware	Comments
FIRST FLOOR	100	EXTERIOR	VESTIBULE	2/A	(2) 3' -0"	7' - 0"	1 3/4"	ALUM./GL.	5/A601	5/A601	ALUM.	9/A601	HW-2	PROVIDE PANIC HARDWARE, CLOSER
	101	CORR.	VESTIBULE	1/B	3' - 0"	7' - 0"	1 3/4"	ALUM./GL.	6/A601	6/A601	ALUM.	9/A601	HW-2.1	PROVIDE PANIC HARDWARE, ELECTRIC STRIKE, CLOSER
	102	CORR.	EXIST. ELEC.	1/E	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1B
	103	OFFICE	CORR.	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-6	FINGERSAFE MK1A & MK1B, CLOSER
	103A	CONFERENCE RM.	OFFICE	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4	FINGERSAFE MK1A & MK1B, CLOSER
	103B	CONFERENCE RM.	STOR.	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.		HW-5.3	UNDERCUT 1", FINGERSAFE MK1A
	103C	I.T.	CONFERENCE RM.	1/E	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5.3	UNDERCUT 1", FINGERSAFE MK1A
	103D	CONFERENCE RM.	FIRE. SUPP. RM.	1/C	(2) 3' -0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5.2	UNDERCUT 1"
	104	Y. TODDLERS	CORR.	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	104A	TOILET	Y. TODDLERS	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	105	CORR.	Y. TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	106	CORR.	STAFF ADA	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.		HW-3	UNDERCUT 1", FINGERSAFE MKIA, CLOSER, ENSURE BACK OF LOCK BUTTON DOESN'T HIT WALL STOP
	107	CORR.	MECH CL.	1/E	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1B
	108	CORR.	INFANTS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	109	CORR.	MULTI-PURPOSE	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	109A	TOILET	MULTI-PURPOSE	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	UNDERCUT 1", FINGERSAFE MKIA, CLOSER, ENSURE BACK OF LOCK BUTTON DOESN'T HIT WALL STOP
	109B	TOY STOR.	MULTI-PURPOSE	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1A
	109C	MULTI-PURPOSE	PRE-SCHOOL PLAYGROUND	2/B	3' - 0"	7' - 0"	1 3/4"	ALUM./GL.	6/A601	6/A601	ALUM.	9/A601	HW-1.1	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER, ELECTRIC STRIKE, EXIT ALARM & KEYPAD
	110	JAN. CLO.	CORR.	1/E	(2) 2' -6"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1A & MK1B, CLOSER
	111	CORR.	INFANTS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	112	CORR.	INFANTS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	113	BUGGY	CORR.	1/-	3' - 6"	7' - 0"	1 3/4"	-	7/A601	7/A601	-	-	-	OPEN FRAME
	114	CORR.	INFANTS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	HM.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	115	CORR.	Y. TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	116	CORR.	Y. TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	116A	TOILET	Y. TODDLERS	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	117	CORR.	BONDING RM.	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-3	UNDERCUT 1", FINGERSAFE MK1A, ENSURE BACK OF LOCK BUTTON DOESN'T HIT WALL STOP
	117A	INFANTS	INFANT PLAYGROUND	2/B	3' - 0"	7' - 0"	1 3/4"	ALUM./GL.	6/A601	6/A601	ALUM.	9/A601	HW-1.1	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER, ELECTRIC STRIKE, EXIT ALARM & KEYPAD
	118	CORR.	INFANTS	3/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.		HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	119	CLO.	CORR.	1/C	2' - 6"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1A
	120	CORR.	STAIR #2	1/G	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.3	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER-60 MIN. FIRE RATED DOOR
	121	EXIST. LIFT	STAIR #2	LIFT	3' - 0"	7' - 0"	1 3/4"	TBD	TBD	TBD	TBD	TBD	TBD	-
	122	STAIR #2	INFANT PLAYGROUND	2/B	3' - 0"	7' - 0"	1 3/4"	ALUM./GL.	6/A601	6/A601	ALUM.	9/A601	HW-2.1	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER, ELECTRIC STRIKE, EXIT ALARM & KEYPAD
	123	STAIR #1	EXTERIOR	2/G	3' - 0"	7' - 0"	1 3/4"	HM./GL.	4/A601	4/A601	H.M.	9/A601	HW-4.3	INSULATED, PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, EXIT ALARM
SECOND FLOOR	201	CORR.	STAIR #1	1/G	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.		HW-4.3	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER-60 MIN. FIRE RATED DOOR
	202	CORR.	PRE-K	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	202A	TOILET	PRE-K	1/-	3' - 0"	7' - 0"	1 3/4"	-	7/A601	7/A601	H.M.	11/A601	-	OPEN FRAME
	202B	PRE-K	PRE-K	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	203	CORR.	PRE-K	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	203A	TOILET	PRE-K	1/-	3' - 0"	7' - 0"	1 3/4"	-	7/A601	7/A601	H.M.	11/A601	-	OPEN FRAME
	203B	PRE-SCHOOL	PRE-K	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	204	CORR.	PRE-SCHOOL	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	204A	PRE-SCHOOL	TOILET	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	205	CORR.	PRE-SCHOOL	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	205A	PRE-SCHOOL	TOILET	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	205B	TODDLERS	PRE-SCHOOL	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	206	TODDLERS	CORR.	3/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.		HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	206A	TODDLERS	TOILET	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	207	CORR.	TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	207A	TODDLERS	TOILET	1/F	3' - 0"	3' - 6"	1 3/4"	WD.	4/A601	4/A601	H.M.	11/A601	HW-4.1	FINGERSAFE MK1A & MK1B
	208	CORR.	STAFF ADA	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-3	UNDERCUT 1", FINGERSAFE MKIA, CLOSER, ENSURE BACK OF LOCK BUTTON DOESN'T HIT WALL STOP
	209	CORR.	TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	210	CORR.	TODDLERS	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	210A	TODDLERS	TOILET	1/-	3' - 0"	7' - 0"	1 3/4"	-	7/A601	7/A601	H.M.	11/A601	-	OPEN FRAME
	211	CORR.	TODDLERS	3/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	212	CORR.	STAIR #2	1/G	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.		HW-4.3	PROVIDE PANIC HARDWARE, FINGERSAFE MK1A & MK1B, CLOSER-60 MIN. FIRE RATED DOOR
	213	CORR.	EXIST. LIFT	LIFT	3' - 0"	7' - 0"	1 3/4"	TBD	TBD	TBD	TBD	TBD	TBD	-
	214	CORR.	LAUNDRY/UTILITY	1/E	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	FINGERSAFE MK1A, CLOSER
	214A	LAUNDRY/UTILITY	STOR.	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.		HW-5	UNDERCUT 1", FINGERSAFE MK1A
	215	CORR.	STAFF LOUNGE	1/D	3' - 0"	7' - 0"	1 3/4"	WD./GL.	4/A601	4/A601	H.M.	-	HW-4.5	FINGERSAFE MK1A & MK1B, CLOSER, LOCKDOWN MAGNETIC STRIP
	215A	STOR.	STAFF LOUNGE	1/C	3' - 0"	7' - 0"	1 3/4"	WD.	4/A601	4/A601	H.M.	-	HW-5	UNDERCUT 1", FINGERSAFE MK1B

DOOR, FRAME & HARDWARE NOTES:

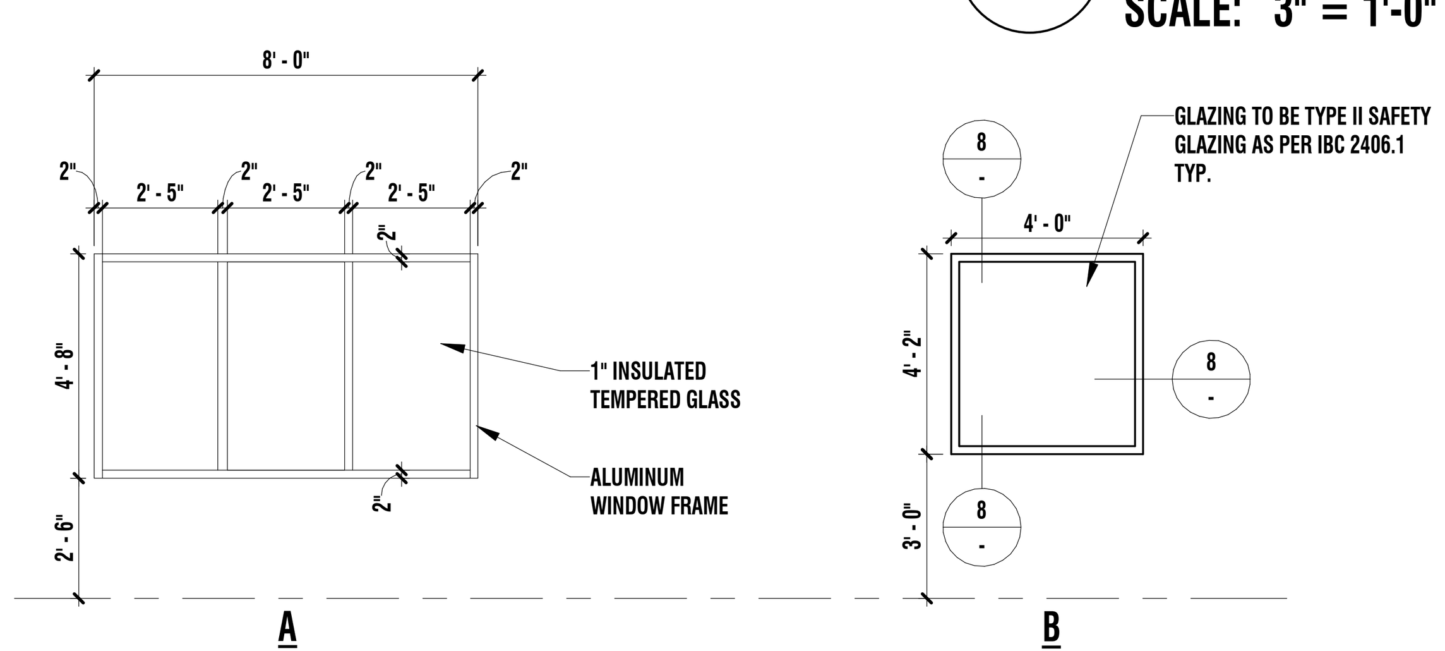
1. ALL HARDWARE TO BE AS PER ICC/ANSI A117.1-404.2.6.
2. CONTRACTOR TO COORDINATE DOOR FRAME THROAT WIDTHS WITH WALL THICKNESS.
3. ALL EXTERIOR DOORS TO BE PROVIDED WITH FULL WEATHERSEALS.
4. ALL EXTERIOR DOORS AND GLAZING TO BE INSULATED TYPE. DOORS WITH NOT LESS THAN 50% OPAQUE AREA MUST PROVIDE A MAXIMUM U-FACTOR OF 0.61.
5. PANIC HARDWARE SHALL BE MOUNTED AT HEIGHTS IN ACCORDANCE WITH THE BUILDING CODE.
6. ALL KICKPLATES TO BE ST. STL. ALL EXTERIOR DOORS (NOT STOREFRONT TYPE) TO RECEIVE KICKPLATES ON INTERIOR SIDE ONLY.
7. FOR SIGNAGE LOCATIONS, SEE DET. 8/A402.
8. SEE SPECIFICATIONS FOR FINGER GUARDS AND NIGHT LOCKS.
9. ALL EXTERIOR DOORS FROM CLASSROOM AND CORRIDORS, EXCEPT FOR MAIN ENTRY, TO RECEIVE CONTACT ALARM DEVICE, MODEL # 45174 - MANUFACTURED BY G.E.
10. PER SECTION 716.2.1.1. OF THE BCNYS FIRE DOOR ASSEMBLIES WITH SIDE-HINGED AND PIVOTED SWINGING SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C.



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



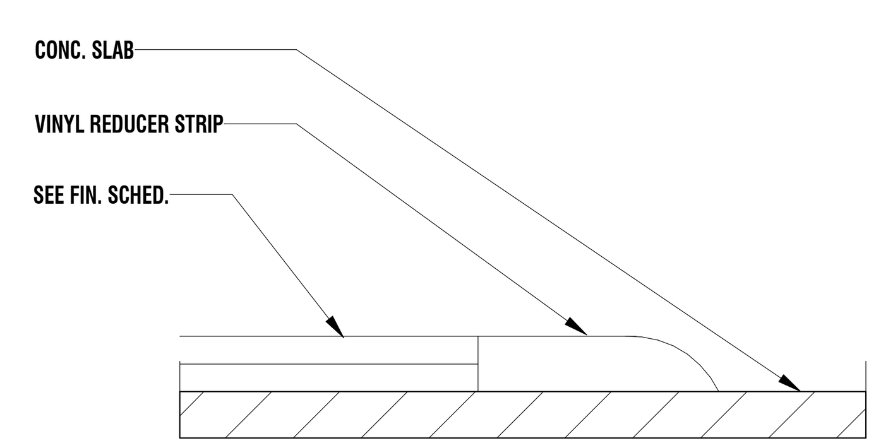
2 FRAME TYPES
SCALE: 1/4" = 1'-0"



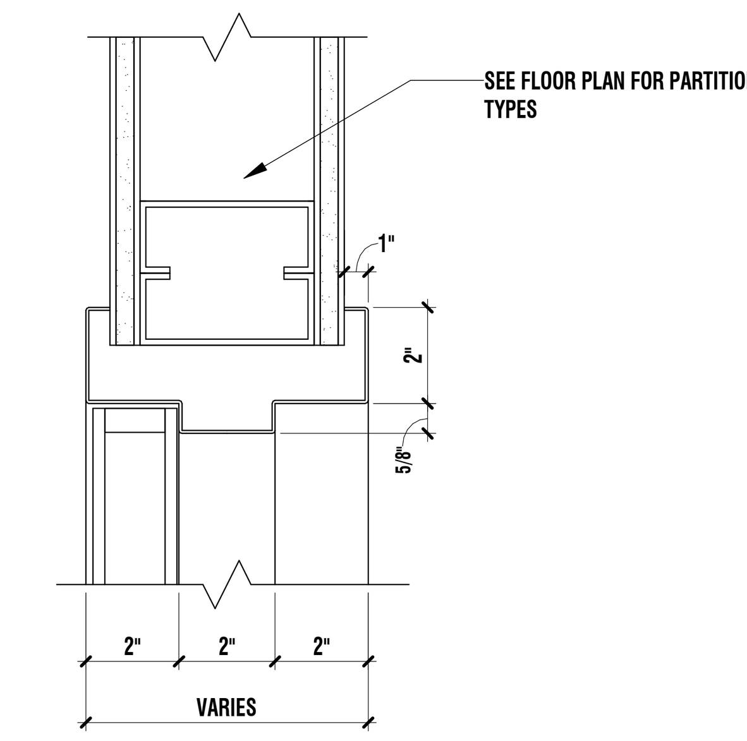
A - NEW EXTERIOR STOREFRONT WINDOW

B - NEW INTERIOR WINDOW
* ADD SPEAKER PASS THROUGH GRILL AT ENTRY VESTIBULE VIEWING PANEL - SEE DET. 1A/A402

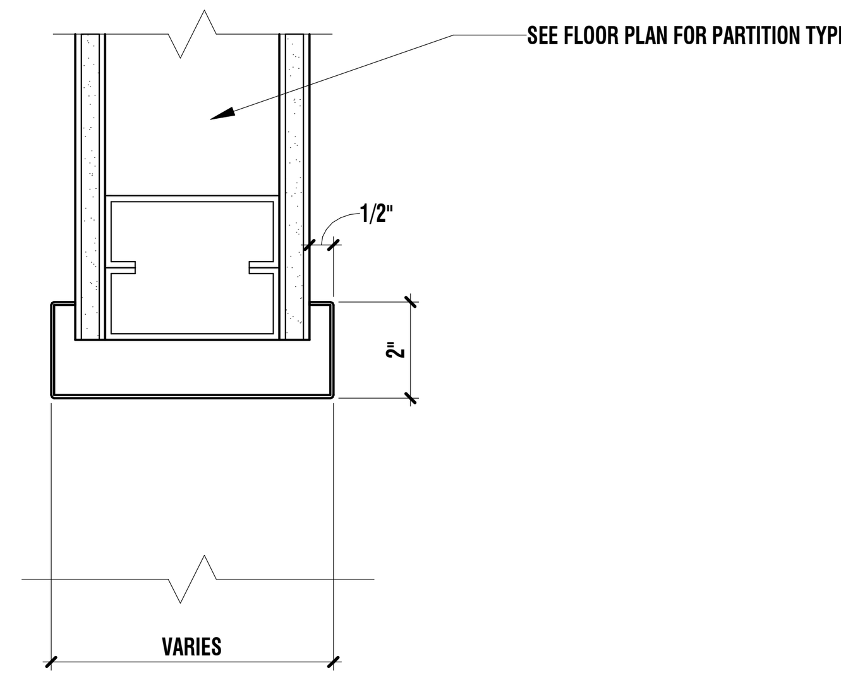
3 WINDOW TYPES
SCALE: 1/4" = 1'-0"



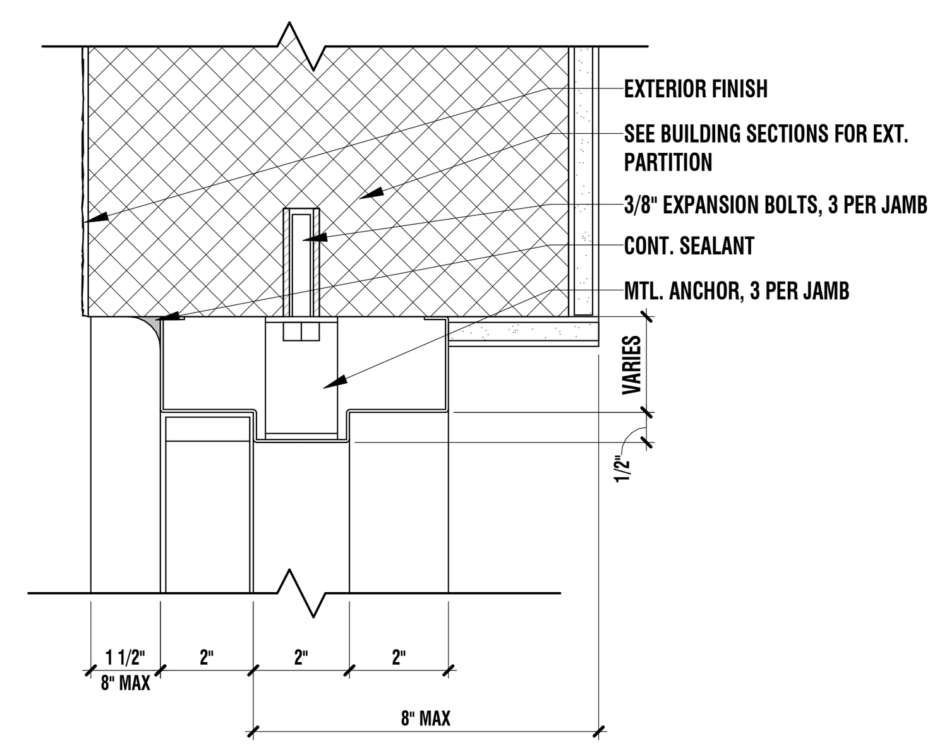
12 REDUCER DETAIL
SCALE: 3" = 1'-0"



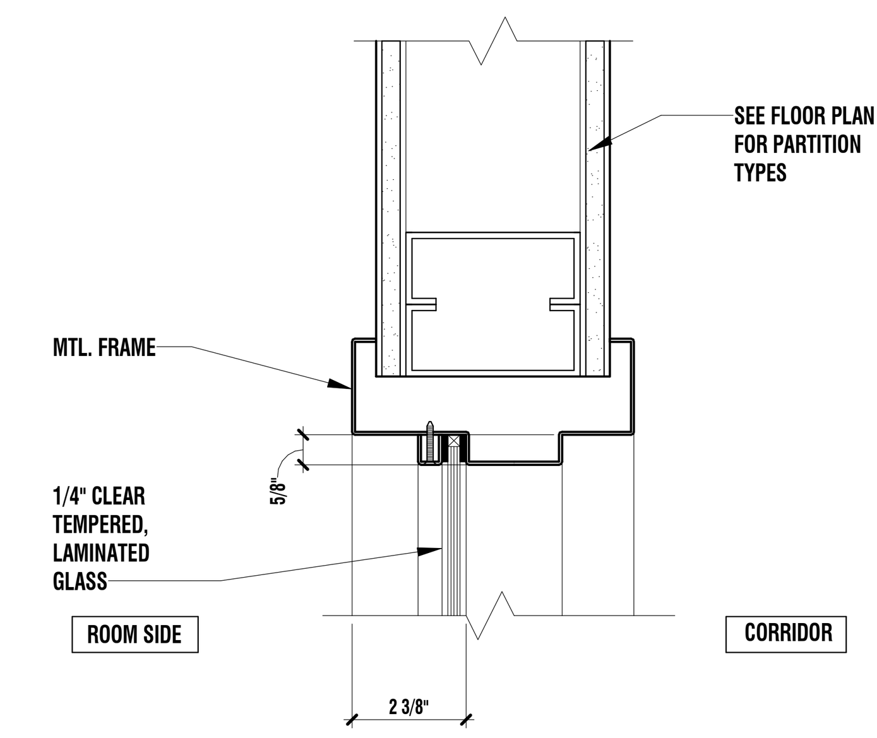
4 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



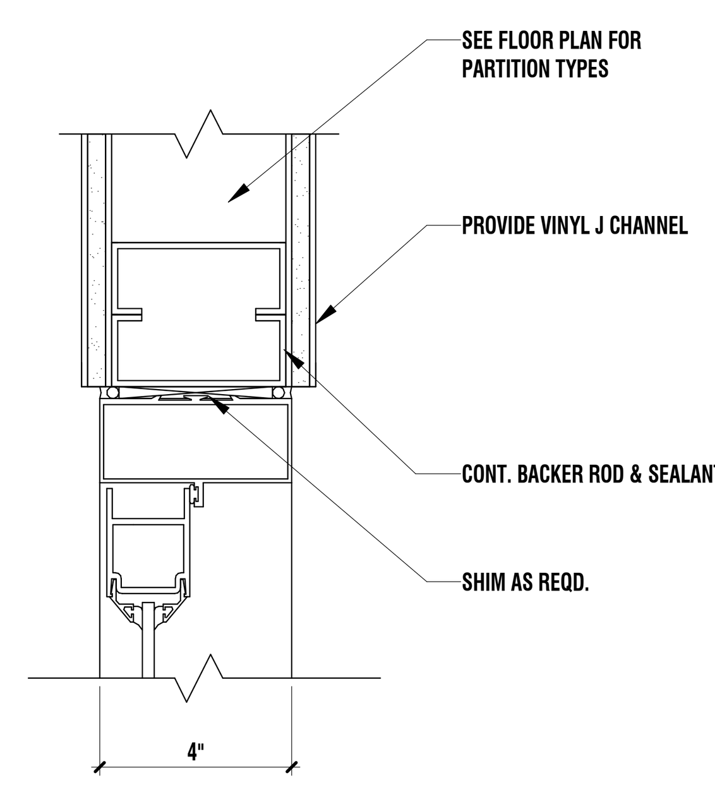
7 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



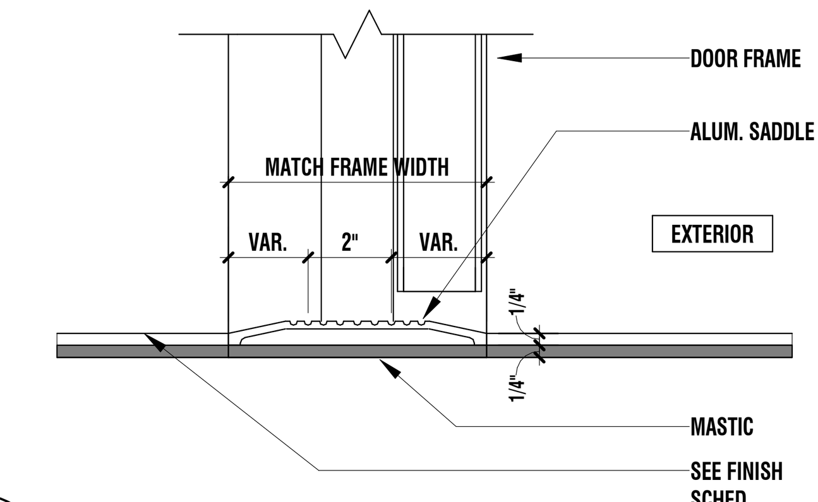
5 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



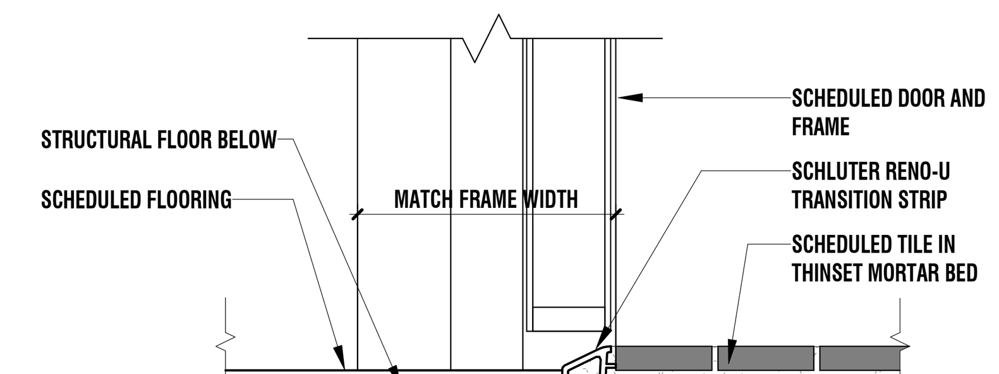
8 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



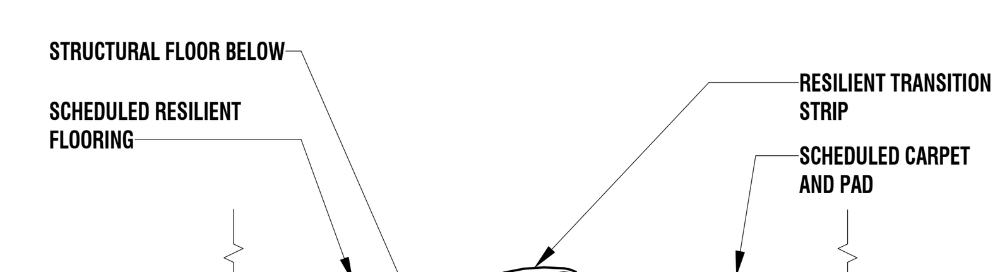
6 HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



9 SADDLE DETAIL
SCALE: 3" = 1'-0"



11 TRANSITION DETAIL
SCALE: 3" = 1'-0"



10 TRANSITION DETAIL
SCALE: 3" = 1'-0"

GENERAL NOTES

1. REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2. REFER TO DWG. G001 FOR GENERAL CONDITIONS.
3. REFER TO DWG. A101 & A102 FOR GROUND FLOOR AND UPPER FLOOR CONSTRUCTION PLANS.
4. SEE SPECIFICATIONS FOR DOOR HARDWARE.

JAM ARCH

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JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
DOOR & FRAME SCHEDULES, DETAILS & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
A601

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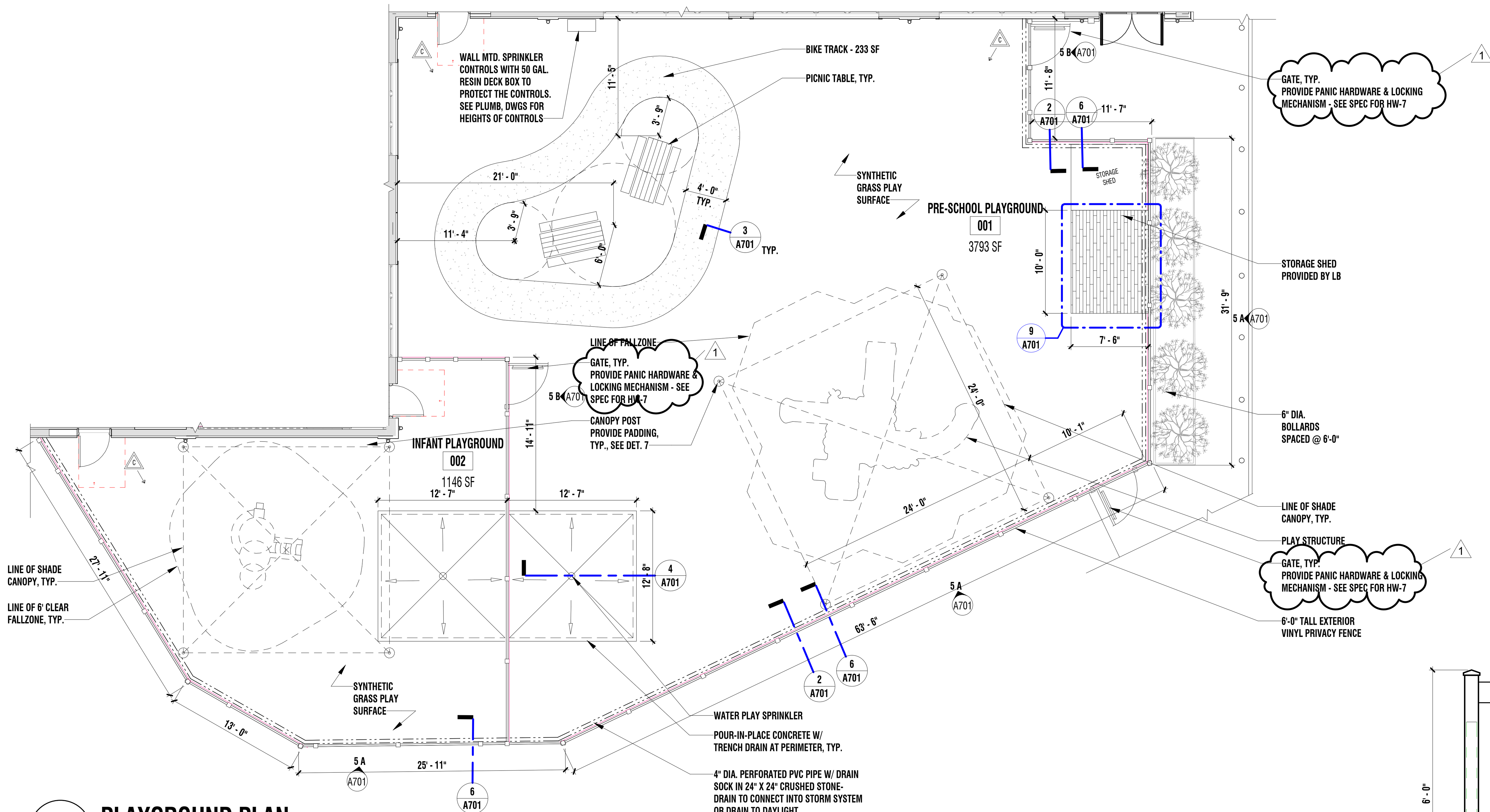
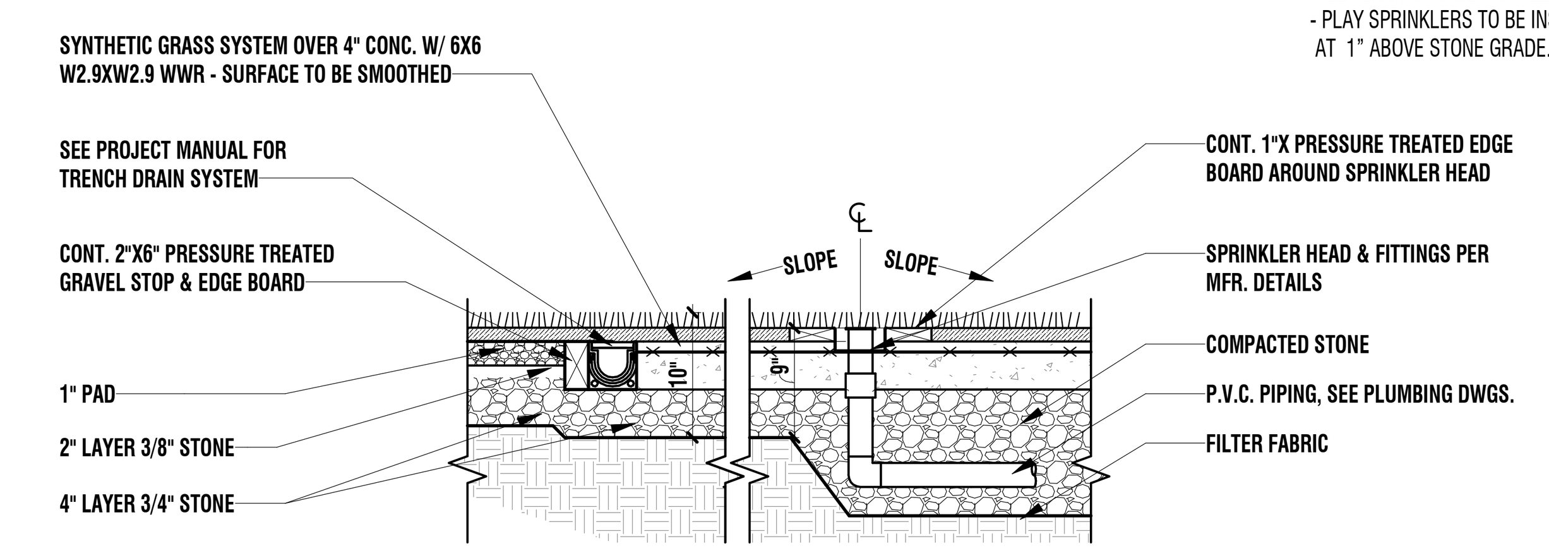


1 PLAYGROUND PLAN
SCALE: 1/8" = 1'-0"

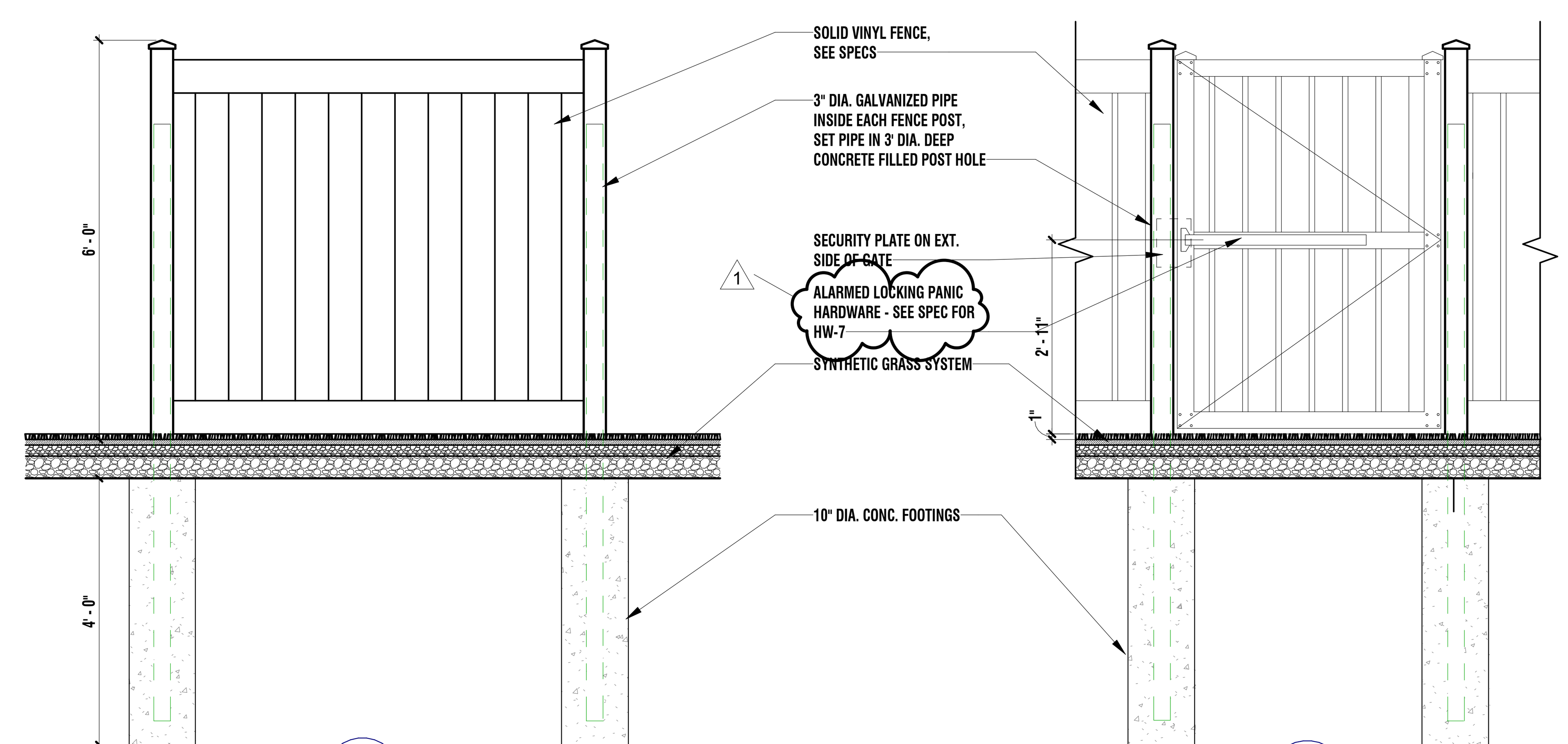
GENERAL NOTES - PLAYGROUND

1. REFER TO DWG. G001 & G002 FOR GENERAL CONDITIONS.
2. REFER TO DWG. A104 & A105 FOR FINISH PLAN & SCHEDULE.
3. REFER TO CIVIL ENGINEERING DRAWINGS FOR ACTUAL LAYOUT OF PLAYGROUND.
4. CIVIL ENGINEER TO ENSURE PROPER DRAINAGE IS INSTALLED FOR PLAYGROUND AREA.
5. CONTRACTOR SHALL PREPARE BASE MATERIAL IN ACCORDANCE WITH ENGINEER'S SPECIFICATIONS.
6. SYNTHETIC GRASS SHALL BE PLAYGROUND GRASS ULTRA AS MANUFACTURED BY "FOREVERLAWN", OR APPROVED EQUAL.
7. COORDINATE SYNTHETIC GRASS INSTALLATION REQUIREMENTS WITH VENDOR PRIOR TO START OF WORK.
8. PADDING SHALL BE INSTALLED AND IN ACCORDANCE WITH CHILDCARE REGULATIONS.
9. CONTRACTOR TO PROVIDE AND COORDINATE CONCRETE FOOTINGS REQUIRED AT PLAY STRUCTURES.
10. COMPOSITE DECKING SHALL BE MOISTURE SHIELD WITH COOLDECK TECHNOLOGY, INFUSE, LINE:VISION, COLOR:MOCHACCINO

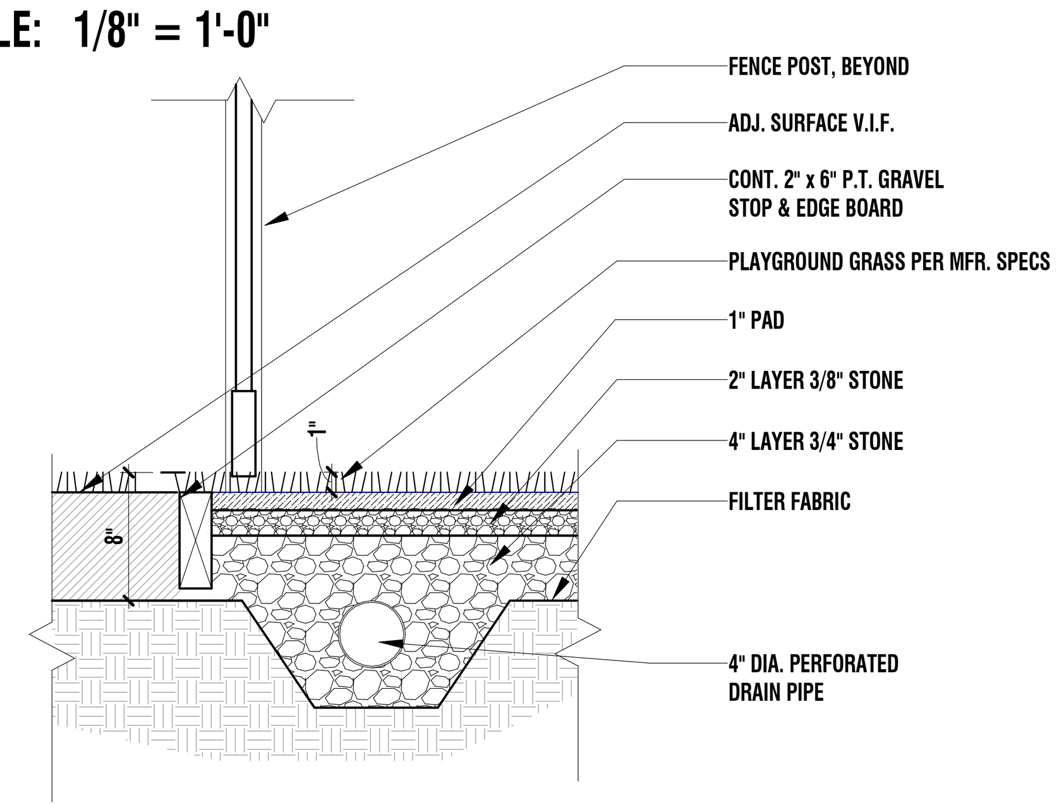
THE FOLLOWING ITEMS ARE TO BE IN PLACE PRIOR TO CAN COMMENCEMENT OF VENDOR INSTALLATION :
- 3/8" CRUSHED STONE TO BE INSTALLED 1.5" BELOW FINISHED GRADE.
- TOP OF STONE TO TOP OF CONCRETE OR DOOR JAMB SHOULD BE 1.5"
- ASPHALT TO BE INSTALLED
- SHADE POLES INSTALLED.
-ALL FENCING TO BE INSTALLED,
- PLAY SPRINKLERS TO BE INSTALLED
AT 1" ABOVE STONE GRADE.



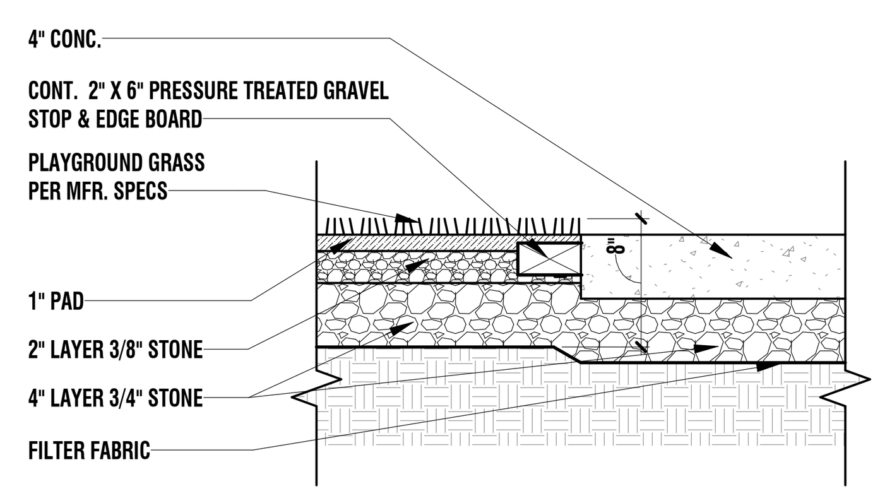
4 TRENCH DRAIN & WATER PLAY DETAIL
SCALE: 3/4" = 1'-0"



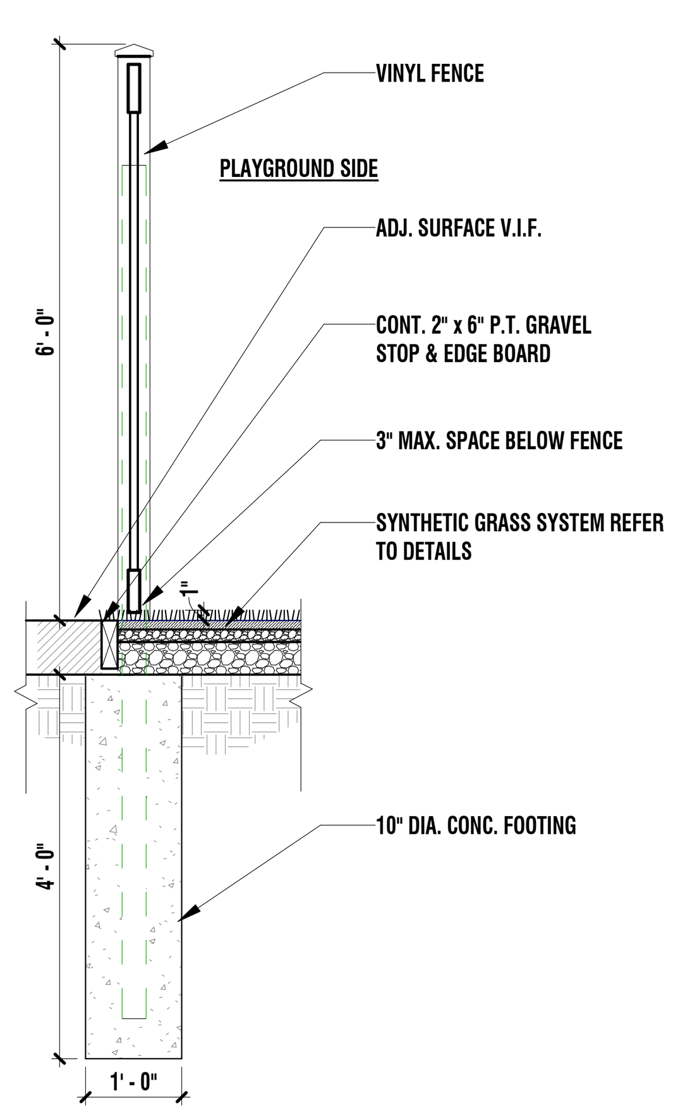
5 DETAIL @ PLAYGROUND FENCE EDGE
SCALE: 1/2" = 1'-0"



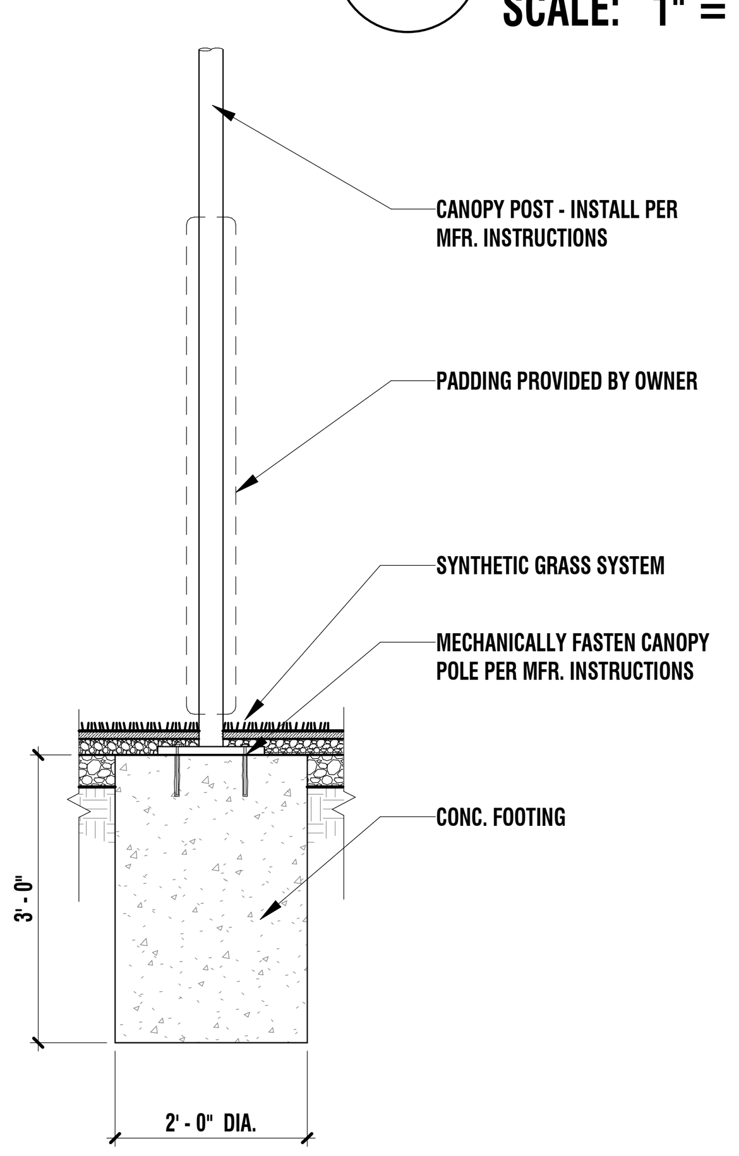
2 PLAYGROUND DETAIL
SCALE: 1" = 1'-0"



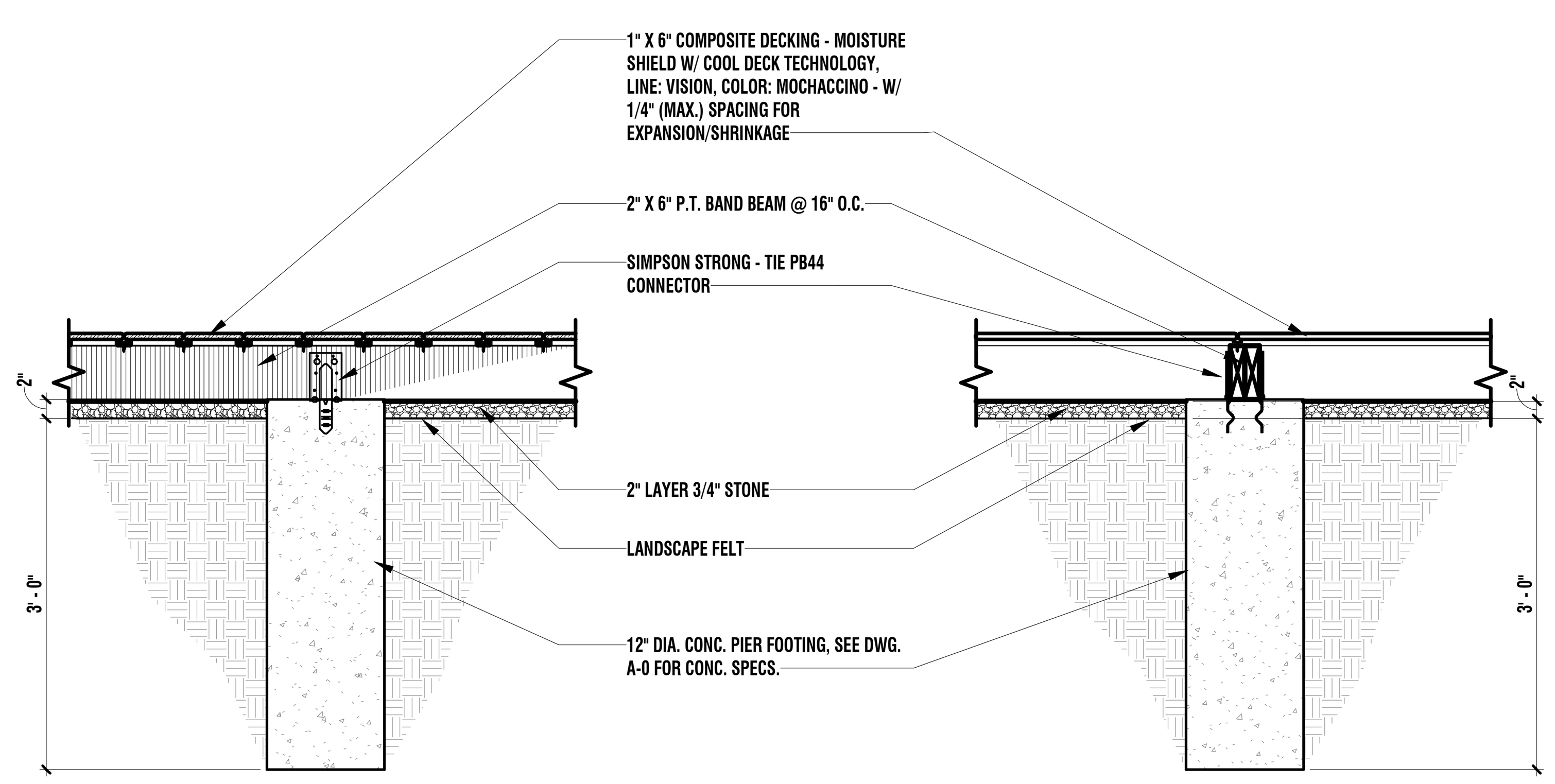
3 BIKE TRACK DETAIL
SCALE: 1" = 1'-0"



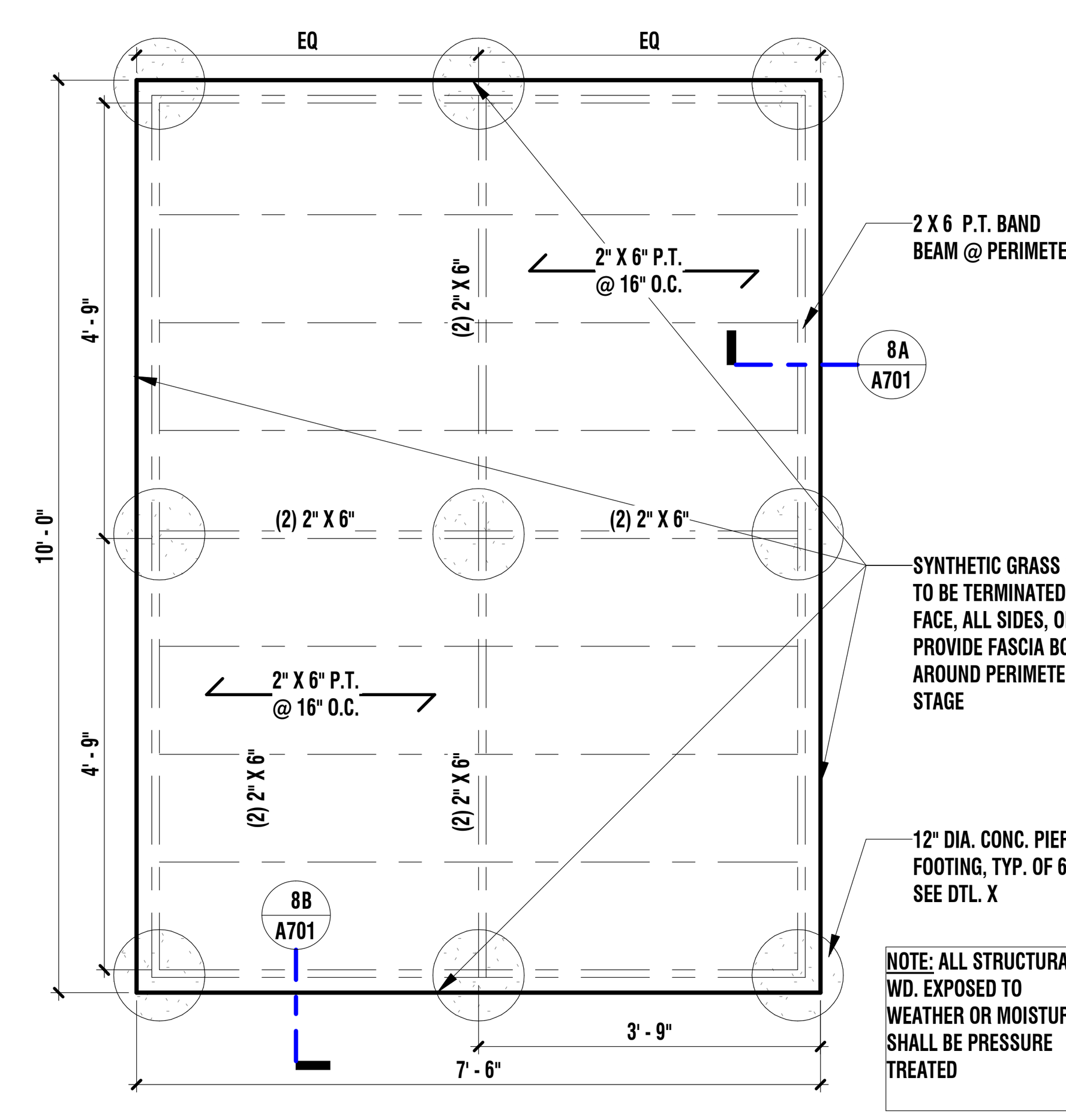
6 FENCE SECTION
SCALE: 1/2" = 1'-0"



7 CANOPY POST FOOTING
SCALE: 1/2" = 1'-0"



8 STAGE FOOTING/JOIST DETAIL
SCALE: 3/4" = 1'-0"



9 STAGE FRAMING PLAN
SCALE: 1/2" = 1'-0"

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SHEET TITLE:
PLAYGROUND PLANS, DETAILS & NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
A701

STRUCTURAL GENERAL NOTES:

1.0 GENERAL
1. All work shall conform to the "2020 Building Code of New York State" and to all other applicable Federal, State, and Local regulations.
2. In case of conflict between the General Notes and details, the most rigid requirements shall govern.
3. Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding places shall be repeated.
4. Job site safety and construction procedures are the sole responsibility of the Contractor.
5. The Contractor shall provide for dewatering as required during excavation and construction.
6. The Contractor shall coordinate openings, sleeves, concrete housekeeping pads, inserts, and depressions shown on the Architectural, Structural, Mechanical, Electrical, and Plumbing Drawings.
7. See Architectural Drawings for locations of masonry and drywall non-load bearing partitions. Provide slip connections that allow vertical movement at the heads of all such partitions. Connections shall be designed to support the top of the walls laterally for the code-required lateral load.
8. All costs of investigation and/or redesign due to Contractor improper installation of structural elements or other items not in conformance with the Contract Documents shall be at the Contractor's expense.
9. The structural drawings shall be used in conjunction with the specifications, architectural and mechanical drawings. If there is a discrepancy between drawings, it is the Contractor's responsibility to notify the Architect prior to performing the work.
10. If the existing field conditions do not permit the installation of the work in accordance with the details shown, the Contractor shall notify the Architect/Engineer immediately and provide a sketch of the condition with his proposed modification of the details given on the Contract Documents. Do not commence work until condition is resolved and modification is approved by the Architect.
11. The Contractor shall be responsible to determine allowable construction loads and to provide design and construction of falsework, formwork, stagings, bracing, sheeting, and shoring, etc.
12. Contractor to provide sheeting, bracing, and underpinning as necessary to prevent any lateral or vertical movements of existing buildings, streets, and any existing utility lines.
13. Bracing, sheeting, shoring, etc., required to insure the structural integrity of the existing buildings or new construction, sidewalks, utilities, etc., shall be designed by a Professional Engineer engaged by the Contractor. Detailed signed and sealed shop drawings shall be prepared indicating all work to be performed. Submit the shop drawings in accordance with the Contract requirements.
14. In no case shall heavy equipment be permitted closer than 8'-0" from any foundation wall. If it is necessary to operate such equipment closer than 8'-0" to the wall, the Contractor shall be the sole responsible party and, at his own expense, shall provide adequate supports or brace the wall to withstand the additional loads superimposed from such equipment.
15. No blasting shall be permitted without written approval.
16. Shop drawings for all structural materials to be submitted to Architect for review prior to the start of fabrication or commencement of work. Review period shall be a minimum of two (2) weeks.
17. Shop drawings shall bear the Contractor's stamp of approval which shall constitute certification that the Contractor has verified all construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the Contract Documents.
18. The shop drawings shall include dimensioned floor and roof edges, openings and sleeves at all floors required for all trades.
19. The structural drawings shall govern the work for all structural features, unless noted otherwise. The architectural drawings shall govern the work for all dimensions.
20. Inspection is required of all construction delineated on the Structural Drawings and/or specifications. The Owner shall employ a Testing/Inspection Agency which shall provide personnel with the following minimum qualifications:
   A. Certified by Institute of Certified Engineering Technicians, or other recognized comparable organization, and,
      1. For inspection, sampling, testing concrete and masonry: ACI Certified Concrete Field-Testing Technician, Grade I; and Construction Inspector, Level II.
21. Submit periodic reports within one business day after receipt by the Contractor to Architect/Engineer and the construction code official during construction. Submit final inspection report summary for each division of work, certified by a licensed professional Engineer, that inspections were performed and that work was performed in accordance with Contract Documents.
22. All materials shall be stored to protect them from exposure to the elements.

2.0 EARTHWORK
1. Engineered (controlled compacted) fill within the building area shall be constructed prior to footing excavation.
2. Excavation shall be performed so as not to disturb existing adjacent buildings, streets, and utility lines. Verify location of all utilities prior to commencement of work. Hand excavate around utilities as required.
3. Compact soil to not less than the following percentages of maximum density of modified proctor (ASTM D1557):
   Under building foundations - 95%
   Under building slabs, steps, pavements - 92%
4. Remove existing vegetation, topsoil, and unsatisfactory soil materials. Proof roll subgrade to obtain uniformly densified substrata prior to placing fill material evenly in 8" thick (maximum) layers and compacting to required density.
5. The Owner/Contractor shall retain the services of a Professional Geotechnical Engineer, subject to the approval of the Architect, to perform soil testing and inspection. The engineer shall inspect the subgrade to verify bearing levels and ensure that the safe bearing capacity meets or exceeds the design value indicated below. Reports shall be submitted to the Architect outlining the work performed and test results.
6. Backfill shall be brought up simultaneously on each side of walls and grade beams, with a grade difference not to exceed 2'-0" at any time.
7. Do not backfill against basement walls until basement slab on grade and all framed slabs are in place and have attained the specified design strength. Provide temporary shoring where required.

5.0 MASONRY
1. Masonry has been designed in accordance with the Building Code Requirements for Masonry Structures (TMS 402-2016) and shall be constructed in accordance with the Specifications for Masonry Structures (TMS 402-2016), except where otherwise modified by these General Notes and Specifications.
2. Mortar shall conform to ASTM C270, Type M or S. All Portland cement shall conform to ASTM C150, Type I. Lime shall conform to ASTM C207 and masonry cement shall conform to ASTM C91.
3. Grout shall conform to ASTM C476 and shall have a minimum 28 day compressive strength of 3000 psi. Slump of grout shall be 8 to 10 inches and the maximum aggregate size shall be 3/8" (aggregate graded to produce fine grout in conformance with ASTM C476 and C404).
4. Concrete Block Units:
   A. Solid and hollow load bearing units per ASTM C90, Type N-1, as required to provide 28 day compressive strength, f'm as noted below.
5. Minimum 28-day compressive strength of masonry, f'm shall be 2,500 psi, unless noted otherwise.
6. Full bed and head joints shall be provided.
7. Horizontal Joint Reinforcing: ASTM A82; 9-gage truss-type, galvanized.
8. Deformed bar reinforcement shall conform to ASTM A615, Grade 60 and shall be full height of walls unless otherwise noted. Provide bar spacers and positioners as required to properly locate and stabilize reinforcing during grouting operations. Grout all reinforced cells solid with grout.
9. Hollow concrete units below grade and slab on grade shall be normal weight and have all cells grouted solid.
10. Provide and install temporary bracing required insuring stability of all walls during construction and until erection of attached structural framing is completed.
11. Provide galvanized horizontal joint reinforcement in all walls and partitions at 16" o.c. unless otherwise shown or noted. Provide one (1) piece prefabricated units at 8" o.c. at all wall corners and intersections.
12. Lap splices for deformed reinforcing bars used in masonry construction shall be 50 bar diameters.
13. Submit grout mix design and masonry unit certifications to the Architect for review.
14. Grout placement shall not start until the placement of reinforcing has been approved by the Inspection Agency.
15. Fill all cells in top two courses below finished floor, CMU lintels, bond beams, and beam bearings and cells with reinforcement full height solid with grout.
16. Allow grout in reinforced CMU walls to cure a minimum of 48 hours before imposing concentrated or other loads from above.
17. Provide bond beams with two (2) #4 horizontal reinforcement continuous in all masonry walls at each framing level. Provide a minimum of two (2) #4 bars at the ends of all walls and on each side of each opening.
18. All piers and partitions shall be bonded or anchored to adjacent masonry walls. Provide ties to adjacent floor and roof construction in accordance with details on drawings.
19. The Contractor shall verify all openings below lintels indicated are adequate to accept doorframes, louvers, etc. as shown on the Architectural and Mechanical Drawings. Notify the Architect and Structural Engineer of any discrepancies prior to lintel installation.
20. No openings shall be placed above any lintel within a height less than or equal to the width of the clear opening below the lintel, unless specifically shown or approved by the Structural Engineer.
21. All masonry work to be executed in cold weather shall be in conformance with the recommendations for cold weather construction found in the Building Code Requirements for Masonry Structures (TMS 402-2016) and shall be constructed in accordance with the Specifications for Masonry Structures (TMS 402-2016) with the following additions: For all conditions when temperatures fall below 40 degrees F, the temperature of the newly laid masonry or newly grouted masonry shall be maintained above 32 degrees F for a minimum of 24 hours using the methods described in ACI 530.1.
22. The Testing and Inspection Agency shall monitor the proportioning, mixing, and consistency of mortar and grout; the placement of mortar, grout, and masonry units; and the placement of reinforcing steel for compliance with the Contract Documents.

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6.0 STRUCTURAL STEEL
1. Fabrication and erection of structural steel shall conform to the "Steel Construction Manual", 15th Edition, American Institute of Steel Construction including Specifications for Structural Steel Buildings, Specification for Structural Joints Using ASTM A325 or A490 Bolts, and AISC Code of Standard Practice except Sections 4.2 and 7.9 which shall not be applicable to this project.
2. All welding shall be performed by certified welders and shall conform to "Structural Welding Code ANSI/AWS D1.4-17", American Welding Society.
3. Wide flange shapes: ASTM A992 or A572, Grade 50.
4. Structural shapes & plates: ASTM A36, A572 or A992.
5. Steel pipe: ASTM A53, GRADE B.
6. Steel tubing (square, rect. or round): ASTM A500, Grade B.
7. Galvanized structural steel:
   A. Structural shapes and rods ASTM A123.
   B. Bolts, fasteners and hardware ASTM A153.
8. All bolted connections shall be with ASTM A325 high strength bolts 3/4" minimum diameter, unless noted otherwise.
9. All bolted connections on wind bracing members and columns shall be slip critical connections.
10. Anchor rods shall conform to ASTM F1554, Grade 36, unless noted otherwise.
11. Welding electrodes shall be E70XX for manual arc welding and F7X-EXXX for submerged arc welding. All welders shall be certified by the AWS. Minimum weld size shall be 3/16" unless noted otherwise.
12. Welding of reinforcing bars to other bars or structural steel: E90-XX electrode.
13. Cuts, holes, coping, etc. required for other trades or field conditions shall be shown on the shop drawings and made in the shop. Cutting or burning of main structural members in the field will not be permitted.
14. Submit shop drawings for fabrication and erection of structural steel. Clearly indicate coordinated dimensions of mechanical unit and roof penetration sizes. Shop and Erection drawings must show all shop/floor and field welds. Initial shop drawing submittal shall include proposed connection details and job standards. Provide signed and sealed calculations for all non-standard connection details, braced bay connections and moment connections showing design capacities.
15. Steel members shown on plan shall be equally spaced unless noted otherwise.
16. The General Contractor and Steel Erector shall notify the Structural Engineer of any fabrication or erection errors or deviations and receive written approval before any field corrections are made.
17. Alternate connection details may be used if such details are submitted to the engineer for review and approval. However, the engineer shall be the sole judge of acceptance and the Contractor's bid shall anticipate the use of those details shown on the drawings. The Contractor is responsible for the design of such alternate details which he proposes.
18. Main support members for the metal deck are shown. During preparation, submission, and review of shop drawings, any additional angles or miscellaneous attachment details required to support the metal deck at the required elevation shall be provided by the Structural Steel Contractor.
19. All steel shall be painted with shop standard primer unless noted otherwise.
20. Steel angles and plates along with bolts and washers, in direct contact with exterior finish masonry, and all exterior exposed structural steel, shall be hot-dipped galvanized.
21. All exterior exposed structural steel shall be hot-dipped galvanized per ASTM A123.
22. Existing framing requiring welding shall be thoroughly cleaned to ensure proper welding. Provide temporary shoring when welding to existing steel.
23. Field welded surfaces within four (4) inches of weld shall be cleaned and ground smooth. After welding coat the exposed area with appropriate primer/paints as specified.
24. Guys and other bracing required to provide lateral stability to steel frame shall be adequately sized and anchored. This bracing shall remain until permanent bracing elements and attached construction is installed.
25. The steel structure is a non-self-supporting steel frame and is dependent upon diaphragm action of the metal (roof/floor) deck and attachment to the masonry walls and braced bays for stability and for resistance to wind and seismic forces. Provide all temporary supports required for stability and for resistance to wind and seismic forces until these elements are complete and are capable of providing this support.
26. All connections shall be "Framed Beam Connections" designed in accordance with the AISC Manual and the ends reactions from the "Uniform Load Tables", but not less than 6 kips. Provide double angle connections or knife plates connections full depth of supporting beam, unless otherwise approved. Minimum two (2) bolts per connection. Unless otherwise noted, composite beams to be designed for 80% of the "total" uniform load capacity. Single angle or shear tab connections are not acceptable. All beam to column connections shall be designed for the minimum shear reaction indicated above in combination with a 10 kip axial force (acting in both tension and compression).
27. Visually inspect all fillet welds. 10% of all field fillet welds in primary connections and multi-pass welds shall be tested by the magnetic particle method, complying with E109, performed on the root pass and on the finished weld.
28. 100% of full penetration welds shall have ultrasonic inspection, complying with ASTM E164.
29. 100% of welds in beam and column moment connections shall have ultrasonic inspection, complying with ASTM E164.
30. Field test bolted connections and shear studs in accordance with AISC.
31. Delete paint on all steel to receive sprayed-on fireproofing or concrete encasement.
32. All steel shall be thoroughly cleaned by power tool cleaning prior to painting. All architecturally exposed structural steel shall be cleaned with commercial blast cleaning.
33. All dissimilar metals shall be treated or properly separated to prevent galvanic and/or corrosive effects.
34. All connections shall be symmetrical about the axis of the member connected. Provide only one grade of bolt for each bolt diameter to be used in the connections. Do not mix grade of bolts.
35. The contractor shall prepare a written erection plan & calculations to be submitted to the engineer for review. This plan is to indicate, as a minimum, sequence of erection operations, calculations indicating erection stresses, field splice locations, field splice details, and location of temporary shoring, scaffolding, bracing, etc. The stresses caused during erection and handling shall not exceed allowable member stresses. The erection plan and calculations shall be prepared and stamped by a registered professional engineer in the project's jurisdiction.

7.0 STRUCTURAL WOOD
1. Design, fabrication, and construction of wood framing shall conform with the following codes and standards.
   A. "National Design Specifications for Wood Construction", 2018 Edition. (with supplement), American Forest and Paper Association.
   B. "Timber Construction Manual", Sixth Edition, as adopted by the American Institute of Timber Construction, including the "Code of Standard Practice", AITC 104-03.
   C. ANSI/TPI 1-2014 "Design Specifications for Metal Plate-Connected Wood Truss Construction and Commentary", Truss Plate Institute
   D. Building Component Safety Information BCSI 1-18 "Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses," Wood Truss Council of America and Truss Plate Institute.
2. Base Design Values for roof/floor joist framing: Doug-Fir No.2 (Fb = 850 psi, Fv = 180 psi, E = 1,600,000 psi) minimum.
3. Base Design Value for non-load bearing wood studs and bracing: Doug Fir Stud Minimum compression parallel to grain Fc =850 psi, minimum tension parallel to grain, Ft = 400 psi, minimum compression perpendicular to grain, 625 psi.
4. All plywood sheathing shall comply with APA. Plywood shall meet C-D Interior APA, Structural I and II C-D Interior APA, or Structural I and II C-C Exterior APA. Attachment to be in accordance with IBC requirements. All plywood to have exterior glue.
5. Roof sheathing shall be APA rated sheathing, 19/32" thick, 42/20.
6. Floor Sheathing shall be APA rated Sturd-I-Floor, 23/32" thick, 48/24.
7. Wall sheathing shall be APA rated sheathing 1/2" thick, 32/16.
8. Wood framing marked Microllam LVL (laminated veneer lumber) shall be as manufactured by Truss Joist MacMillan or approved equal. Minimum extreme fiber in bending, Fb = 2,800 psi; minimum horizontal shear, Fv = 285 psi; minimum modulus of elasticity, E = 2,000,000 psi.
9. Wood framing marked Parallam PSL (parallel strand lumber) shall be as manufactured by Truss Joist MacMillan or approved equal. Minimum extreme fiber in bending, Fb = 2,900 psi; minimum horizontal shear, Fv = 290 psi; minimum modulus of elasticity, E = 2,000,000 psi.
10. All members shown on plan with designation "PSL" shall be parallam PSL members. All parallam structural lumber shall be APA rated, exposure I. All adhesives shall comply with ANSI/AIV A190.1 "Wet-Use" Type.
11. Wood framing marked Timberstrand LSL (laminated strand lumber) shall be as manufactured by Truss Joist MacMillan or approved equal. Minimum extreme fiber in bending, Fb = 2,600 psi; minimum horizontal shear, Fv = 400 psi; minimum modulus of elasticity, E = 1,700,000 psi.
12. All side loaded parallam beams or columns shall be solid and shall not be composed of multiple plies. Top loaded parallam beams may be composed of multiple plies of 1-3/4" inch thickness members and shall be nailed by minimum of two rows of 16d nails at 12 inches on center and glued together with an exterior type adhesive.
13. All parallam beam ends which frame into beams shall be hung with hangers as manufactured by Kant-Sag or with approved substitutes with working load capacities equivalent to the "THD" or "DHO" series hangers.
14. Provide end-coat sealing to end and cross cuts after cutting to final length for all parallam beams.
15. Provide nailing pattern in compliance with IBC recommended fastening schedule when joining two or more framing members.
16. Provide double layer plywood under all ceramic tile floors.
17. Base Design Value for all other structural wood framing: minimum extreme fiber in bending, Fb = 850 psi; minimum horizontal shear, Fv = 180 psi; minimum compression parallel to grain, Fc = 1,400 psi.
18. Hanger connections for joists, beams, trusses, and manufactured wood framing shall be Strong-Tie connectors by Simpson (Truss Joist MacMillan).

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19. See International Building Code for minimum bracing and fastening requirements.
20. Members shall be set with crown up and have a minimum of 3" bearing.
21. Splice double sole plates directly over stud. Stagger splice of each plate.
22. All joists and rafters shall be rigidly bridged at intervals not exceeding 8'-0".
23. Guys and other bracing required to provide lateral stability to wood frames shall be adequately sized and anchored. This bracing shall remain until permanent bracing elements and attached construction is installed.
24. The wood structure is a non-self-supporting frame and is dependent upon diaphragm action of the panels and attachment to the shear walls for stability and for resistance to wind and seismic forces. Provide all temporary supports required for stability and for resistance to wind and seismic forces until these elements are complete and are capable of providing this support.
25. All bolts and lag bolts shall be fitted with galvanized, malleable iron or steel plate washers.
26. All wood members exposed to exterior to be pressure treated.
27. Provide fasteners, anchors and connectors with adequate corrosion protection, where in contact with treated wood. Provide minimum ZMAX coating where Simpson connectors are used in contact with treated wood.
28. Provide solid blocking in truss plenum between floors matching post/studs from above.
29. All connections for wood members shall not be less than the minimum requirements set forth in BCNYS Table 2304.10.1

8.0 DESIGN DATA
1. Governing Code: 2020 Building Code of New York State
2. Floor Live Load:
   A. Uniform 100 PSF (Slab on Grade)
   B. Uniform 80 PSF (Corridors)
   C. Uniform 40 PSF (Classrooms)
   D. Live Load Reduction: As per the Code

3. Roof Live Load
   A. Live Load 20 PSF
   B. Snow Load:

   Pg (Ground Snow Load) 30 PSF
   Pf (Flat Snow Load) 21 PSF
   Ce (Snow Exposure Factor) 1.0
   I (Snow Load Importance Factor) 1.0
   Ct (Thermal Factor) 1.0

4. Wind Load:
   A. Ultimate Wind Speed 115 MPH (Risk Category II)
   B. Wind Exposure B
   C. Internal Pressure Coefficient +/- 0.18
   D. Components & Cladding Wind Pressure: As per the Code

5. Earthquake Design Data:
   A. Seismic Occupancy Category II
   B. Seismic Importance Factor, I 1.0
   C. Ss (Mapped Spectral Response Acc. at Short Period) 0.292
   D. S1 (Mapped Spectral Response Acc. at 1 Second Period) 0.061
   E. Seismic Site Classification D
   F. Sds (Spectral Response Coefficient) 0.305
   G. Sd1 (Spectral Response Coefficient) 0.098
   H. Seismic Design Category B

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6. Rain Intensity: 3.0 inches per hour (100 year hourly rainfall rate fig. 1611.1)

7. Handrails/Guard/Grab Bars
   A. Hand rails and guards shall be designed to withstand 50 pounds per linear foot line load or concentrated load of 200 pounds (more conservative load of the two as per the layout).
   B. Grab bars shall be designed to resist single concentrated load of 250lbs applied in any direction at any point on the grab bar.

JAM ARCH

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REGISTERED ARCHITECT
JUSTIN ALLEN MIHALIK
STATE OF NEW YORK
027468

JUSTIN A. MIHALIK, AIA NY LIC #: 27468

Lightbridge Academy SM
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

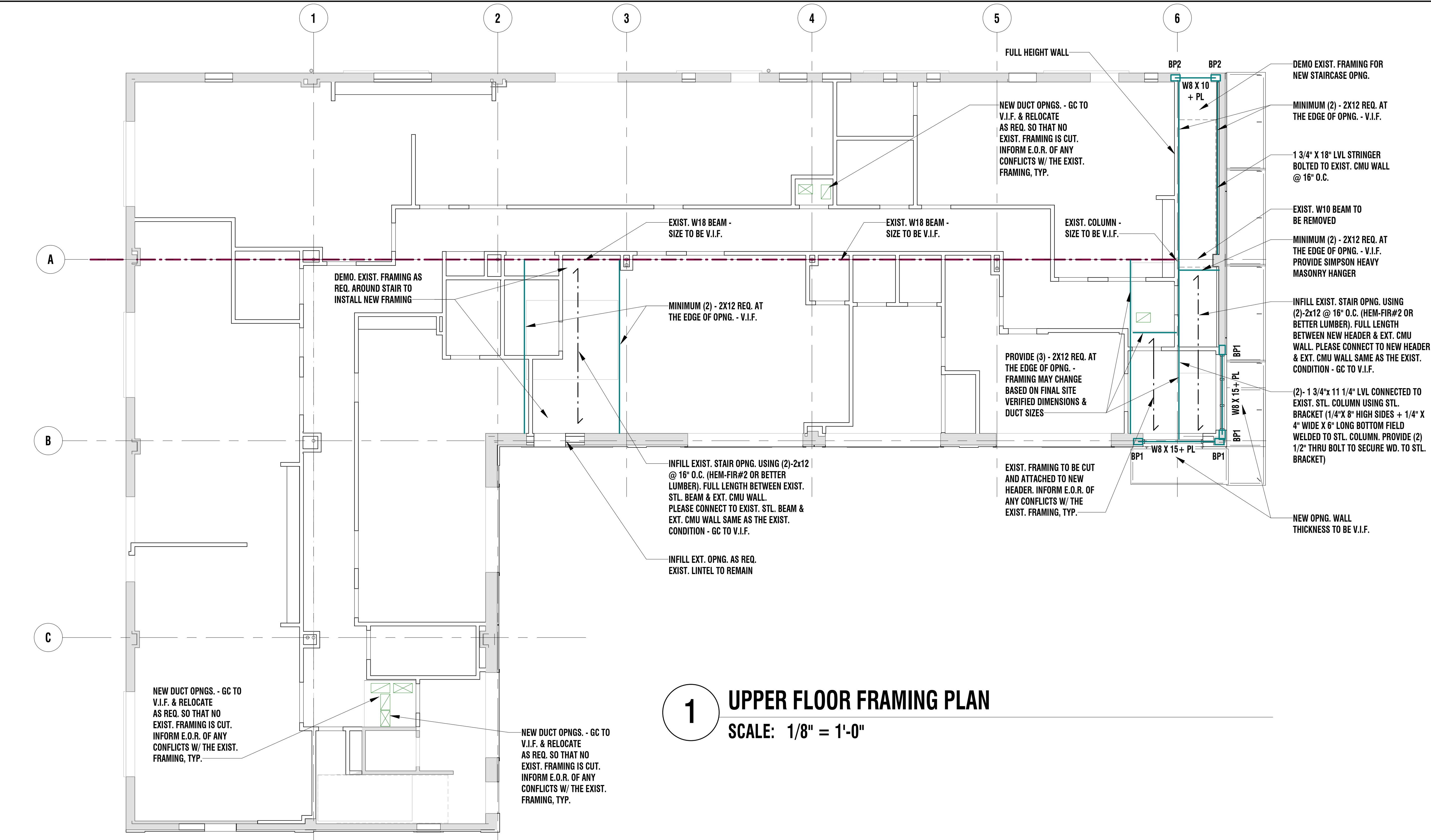
OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
STRUCTURAL GENERAL NOTES

Rev. #	Revision Date	Revision Description
1	1/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

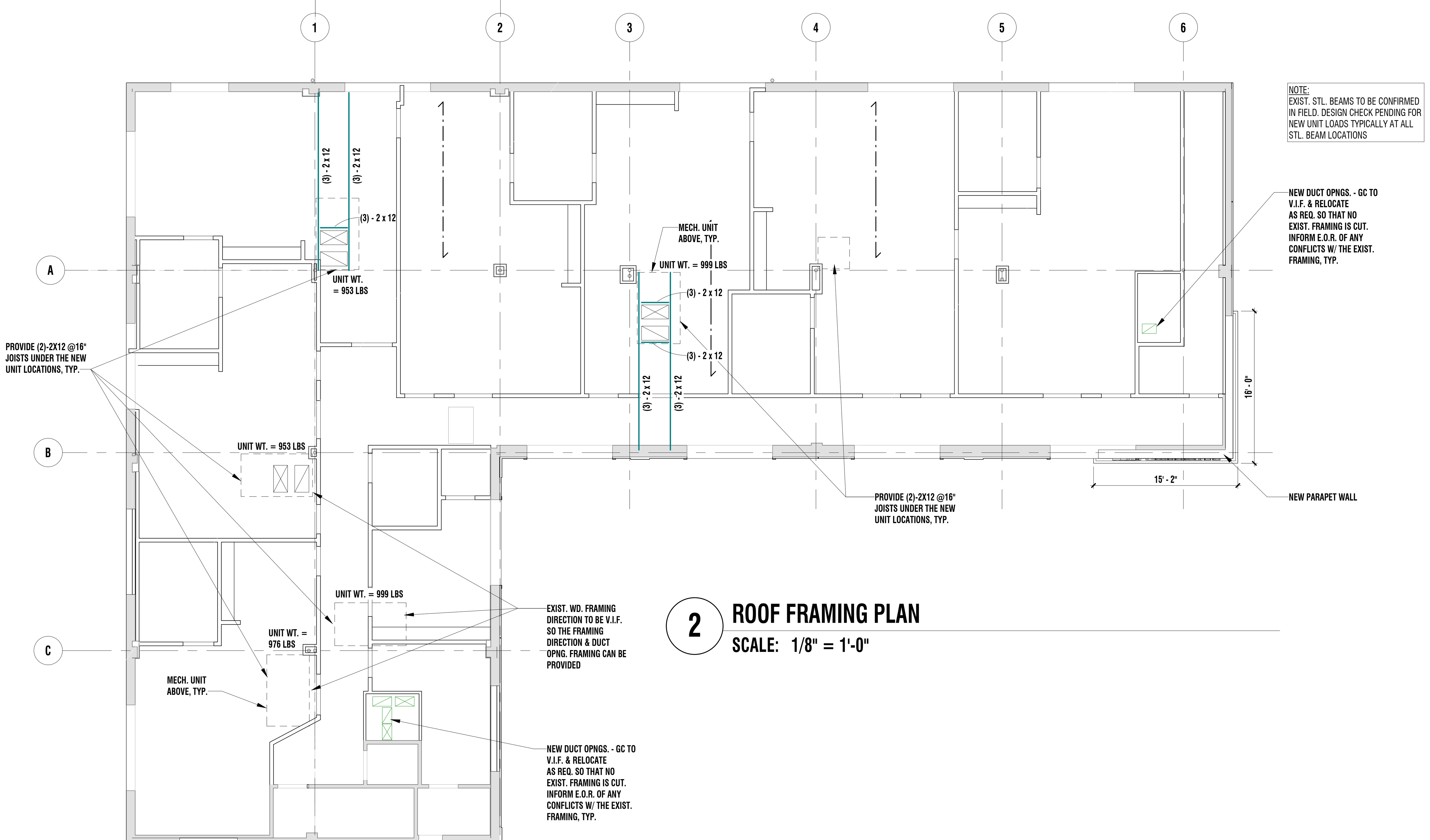
JOB NUMBER:	2019-01.15
DATE:	07/23/2019
DRAWN BY:	OS/KM
CHECKED BY:	JAM/KM

SHEET NO.
S001



1 UPPER FLOOR FRAMING PLAN

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



NOTE:
EXIST. STL. BEAMS TO BE CONFIRMED IN FIELD. DESIGN CHECK PENDING FOR NEW UNIT LOADS TYPICALLY AT ALL STL. BEAM LOCATIONS

2 ROOF FRAMING PLAN

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

GENERAL NOTES

1 REFER TO DWG. G000 FOR BUILDING CODE INFORMATION.
2 REFER TO DWG. G001 FOR GENERAL CONDITIONS.
3 REFER TO DWG. A101 & A102 FOR GROUND FLOOR AND UPPER FLOOR CONSTRUCTION PLANS.

GENERAL NOTES - STRUCTURAL

1 ALL PATCHING OF SLAB SHALL BE TO MATCH THE EXISTING SLAB ELEVATION.
2 CONTRACTOR SHALL COORDINATE LOCATIONS OF WALLS PRIOR RO LOCATING COLUMNS AN FOOTINGS. TO BE APPROVED BY ARCHITECT PRIOR TO CUTTING SLAB.
3 CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING OF EXISTING SLAB AS REQUIRED FOR INSTALLATION OF NEW STRUCTURE.
4 CONTRACTOR TO PROVIDE ALTERNATE PRICE FOR POURED CONCRETE FOUNDATION WALL.
5 INFORM THE E.O.R./ARCHITECT OF ANY DISCREPANCY FOUND IN FIELD THAT DOES NOT MATCH THE DRAWINGS.
6 EXISTING BEAMS, FRAMING, AND COLUMNS WILL NEED TO BE MEASURED IN FIELD AND THE DESIGN NEEDS TO BE CONFIRMED ONCE THE ACTUAL SIZES ARE AVAILABLE
7 ALL DIMENSIONS AND EXISTING CONDITIONS ARE TO BE VERIFIED IN FIELD.

FRAMING PLAN LEGEND

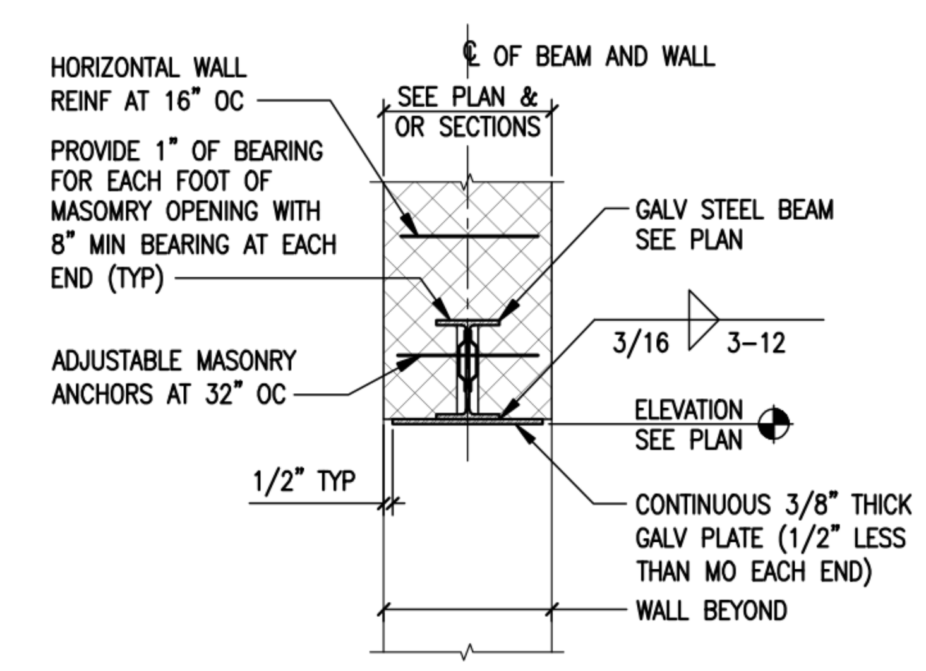
BP1 DENOTES 3/4" X 7" X 12" BEARING PLATE 1/ (2)- 3/4" X 6" LONG HEADED ANCHOR. GROUT CELLS SOILD 3 COURSES MIN. BELOW BEAM BEARING

BP2 DENOTES 3/4" X 7" X 8" BEARING PLATE 1/ (2)- 3/4" X 6" LONG HEADED ANCHOR. GROUT CELLS SOILD 3 COURSES MIN. BELOW BEAM BEARING

MISCELLANEOUS STEEL ANGLE MASONRY WALL LINTEL SCHEDULE

WALL THICKNESS	MASONRY OPENING UP TO 4'–0"	MASONRY OPENING 4'–1" TO 6'–0"	MASONRY OPENING 6'–1" TO 8'–0"
4" WALL	L 3 1/2x3 1/2x5/16	L 4x3 1/2x5/16	L 6x3 1/2x5/16
6" WALL	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x3/8
8" WALL	JL 3 1/2x3 1/2x5/16	JL 4x3 1/2x5/16	JL 6x3 1/2x5/16
10" WALL	L 5x3 1/2x1/4(∗) + L 4x3 1/2x1/4(∗)	L 5x3 1/2x1/4(∗) + L 4x3 1/2x1/4(∗)	L 5x5x5/16(∗) + L 4x4x5/16(∗)
12" WALL	JL L 3 1/2x3 1/2x5/16	JL L 4x3 1/2x5/16	JL L 6x3 1/2x5/16
16" WALL	JL JL 3 1/2x3 1/2x5/16	JL JL 4x3 1/2x5/16	JL JL 6x3 1/2x5/16

NOTES:
1. THIS SCHEDULE IS FOR THOSE OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCH AND MECH DRAWINGS FOR LOCATION AND SIZE OF OPENINGS FOR NON–BEARING MASONRY WALLS.
2. PROVIDE MINIMUM 6" BEARING ON BRICK, SOLID OR GROUTED SOLID CONCRETE BLOCK, BUT NOT LESS THAN 1" OF BEARING PER FOOT OF SPAN.
3. WHERE OPENINGS ARE LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL, CONNECTION NOT TO PROTRUDE INTO OPENING.
4. ALL EXTERIOR LINTELS SHALL BE HOT DIPPED GALVANIZED PER ASTM 123.
5. ALL ANGLES LONG LEG VERTICAL UNLESS NOTED BY (∗) WHEN NOTED BY (∗) USE LONG LEG HORIZONTAL.
6. AT CAVITY WALLS, INCREASE THE HORIZONTAL LEG OF EXTERIOR ANGLE BY WIDTH OF CAVITY.



NOTES:
1. WHERE OPENING OCCURS WITH IN TWO (2) FEET OF COLUMN, CONNECT LINTEL TO COLUMN.
2. LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
3. FILL CAVITY WITH SOLID CMU AT JAMBS TO INSURE FULL BEARING.

3 TYP. BEAM LINTEL DETAIL

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

JAM ARCH

ARCHITECT OF RECORD:
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JUSTIN A. MIHALIK, AIA LIC #: 27468

Lightbridge Academy
Innovators in Educational Child Care

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 LEGION DRIVE
VALHALLA, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1 , LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 NELSON ROAD
SCARSDALE, NY 10583

SHEET TITLE:
FLOOR FRAMING PLANS, SCHEDULE, DETAILS & NOTES

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 07/23/2019
DRAWN BY: OS/KM
CHECKED BY: JAM/KM

SHEET NO.
S101

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2020 New York State Energy Conservation Construction Code
Project Title: LB Valhalla
Project Type: Alteration

Construction Site:
26 & 36 Legion Drive
Valhalla, New York 10595

Owner/Agent:
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, New York 10583

Designer/Contractor:
KEA Engineers
186 Wood Ave South
Iselin, New Jersey 08830

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Office (Common Space Types:Office - Enclosed)	222	0.93	206
2-Staff Lounge (Common Space Types:Lounge/Breakroom)	160	0.62	99
3-Conference Room (Common Space Types:Conference/Meeting/Multipurpose)	125	1.07	134
4-Classroom #1 (Common Space Types:Classroom/Lecture/Training)	564	0.96	541
5-Classroom #2 (Common Space Types:Classroom/Lecture/Training)	449	0.96	431
6-Classroom #3 (Common Space Types:Classroom/Lecture/Training)	445	0.96	427
7-Classroom #4 (Common Space Types:Classroom/Lecture/Training)	413	0.96	396
8-Classroom #5 (Common Space Types:Classroom/Lecture/Training)	449	0.96	431
9-Classroom #6 (Common Space Types:Classroom/Lecture/Training)	432	0.96	415
10-Classroom #7 (Common Space Types:Classroom/Lecture/Training)	435	0.96	418
11-Classroom #8 (Common Space Types:Classroom/Lecture/Training)	414	0.96	397
12-Classroom #9 (Common Space Types:Classroom/Lecture/Training)	438	0.96	420
13-Classroom #10 (Common Space Types:Classroom/Lecture/Training)	446	0.96	428
14-Classroom #11 (Common Space Types:Classroom/Lecture/Training)	493	0.96	473
15-Classroom #12 (Common Space Types:Classroom/Lecture/Training)	492	0.96	472
16-Classroom #13 (Common Space Types:Classroom/Lecture/Training)	569	0.96	546
17-Classroom #14 (Common Space Types:Classroom/Lecture/Training)	566	0.96	543
18-Closet 116 (Common Space Types:Storage <50 sq.ft.)	41	0.46	19
19-Buggy 112 (Common Space Types:Storage <50 sq.ft.)	49	0.46	23
20-Toy Storage 122B (Common Space Types:Storage <50 sq.ft.)	20	0.46	9
21-Storage 105A (Common Space Types:Storage <50 sq.ft.)	23	0.46	11
22-Storage 211A (Common Space Types:Storage <50 sq.ft.)	38	0.46	17
23-Storage 213A (Common Space Types:Storage <50 sq.ft.)	26	0.46	12
24-Stair #1 (Common Space Types:Stairwell)	154	0.58	89
25-Stair #2 (Common Space Types:Stairwell)	215	0.58	125
26-Existing Elec 102 (Common Space Types:Electrical/Mechanical)	61	0.43	26
27-IT 104B (Common Space Types:Electrical/Mechanical)	23	0.43	10
28-Mech Closet 111A (Common Space Types:Electrical/Mechanical)	12	0.43	5
29-First Floor Corridor (Common Space Types:Corridor/Transition <8 ft wide)	787	0.66	519
30-Second Floor Corridor (Common Space Types:Corridor/Transition <8 ft wide)	725	0.66	478
31-Infant Pantry 110 (Common Space Types:Storage)	125	0.63	79
32-Infant Pantry 114 (Common Space Types:Storage)	123	0.63	77
33-Bonding Room 119 (Common Space Types:General Seating Area)	61	0.42	26

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
34-Vestibule 100 (Common Space Types:Corridor/Transition <8 ft wide)	87	0.66	57
35-Toilet 120A (Common Space Types:Restrooms)	47	0.85	40
36-Toilet 122A (Common Space Types:Restrooms)	47	0.85	40
37-Toilet 106A (Common Space Types:Restrooms)	47	0.85	40
38-Staff ADA 107 (Common Space Types:Restrooms)	57	0.85	48
39-Toilet 209A (Common Space Types:Restrooms)	88	0.85	75
40-Toilet 207A (Common Space Types:Restrooms)	97	0.85	82
41-Staff ADA 214 (Common Space Types:Restrooms)	57	0.85	48
42-Toilet 206A (Common Space Types:Restrooms)	95	0.85	81
43-Toilet 203A (Common Space Types:Restrooms)	89	0.85	76
		Total Allowed Watts =	8894

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Office (Common Space Types: Office - Enclosed, 222 sq.ft.)				
LED 1: 2x4 LED: Other:	1	3	30	90
LED 4: Exit Sign: Other:	1	1	5	5
Staff Lounge (Common Space Types: Lounge/Breakroom, 160 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 4: Exit Sign: Other:	1	1	5	5
Conference Room (Common Space Types: Conference/Meeting/Multipurpose, 125 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 4: Exit Sign: Other:	1	1	5	5
Classroom #1 (Common Space Types: Classroom/Lecture/Training, 564 sq.ft.)				
LED 1: 2x4 LED: Other:	1	8	30	240
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #2 (Common Space Types: Classroom/Lecture/Training, 449 sq.ft.)				
LED 1: 2x4 LED: Other:	1	7	30	210
LED 2: Interior Sconce: Other:	1	2	10	20
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #3 (Common Space Types: Classroom/Lecture/Training, 445 sq.ft.)				
LED 1: 2x4 LED: Other:	1	6	30	180
LED 2: Interior Sconce: Other:	1	2	10	20
LED 4: Exit Sign: Other:	1	1	5	5
Classroom #4 (Common Space Types: Classroom/Lecture/Training, 413 sq.ft.)				
LED 1: 2x4 LED: Other:	1	8	30	240
LED 2: Interior Sconce: Other:	1	2	10	20
LED 4: Exit Sign: Other:	1	1	5	5
Classroom #5 (Common Space Types: Classroom/Lecture/Training, 449 sq.ft.)				
LED 1: 2x4 LED: Other:	1	9	30	270
LED 2: Interior Sconce: Other:	1	2	10	20
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #6 (Common Space Types: Classroom/Lecture/Training, 432 sq.ft.)				
LED 1: 2x4 LED: Other:	1	9	30	270
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #7 (Common Space Types: Classroom/Lecture/Training, 435 sq.ft.)				
LED 1: 2x4 LED: Other:	1	7	30	210
LED 4: Exit Sign: Other:	1	2	5	10

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Classroom #8 (Common Space Types: Classroom/Lecture/Training, 414 sq.ft.)				
LED 1: 2x4 LED: Other:	1	7	30	210
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #9 (Common Space Types: Classroom/Lecture/Training, 438 sq.ft.)				
LED 1: 2x4 LED: Other:	1	7	30	210
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #10 (Common Space Types: Classroom/Lecture/Training, 446 sq.ft.)				
LED 1: 2x4 LED: Other:	1	9	30	270
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #11 (Common Space Types: Classroom/Lecture/Training, 493 sq.ft.)				
LED 1: 2x4 LED: Other:	1	7	30	210
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #12 (Common Space Types: Classroom/Lecture/Training, 492 sq.ft.)				
LED 1: 2x4 LED: Other:	1	8	30	240
LED 4: Exit Sign: Other:	1	2	5	10
Classroom #13 (Common Space Types: Classroom/Lecture/Training, 569 sq.ft.)				
LED 1: 2x4 LED: Other:	1	11	30	330
LED 4: Exit Sign: Other:	1	3	5	15
Classroom #14 (Common Space Types: Classroom/Lecture/Training, 566 sq.ft.)				
LED 1: 2x4 LED: Other:	1	9	30	270
LED 4: Exit Sign: Other:	1	2	5	10
Closet 116 (Common Space Types: Storage <50 sq.ft., 41 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Buggy 112 (Common Space Types: Storage <50 sq.ft., 49 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Toy Storage 122B (Common Space Types: Storage <50 sq.ft., 20 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Storage 105A (Common Space Types: Storage <50 sq.ft., 23 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Storage 211A (Common Space Types: Storage <50 sq.ft., 38 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Storage 213A (Common Space Types: Storage <50 sq.ft., 26 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
Stair #1 (Common Space Types: Stairwell, 154 sq.ft.)				
LED 6: Stair Light: Other:	1	2	50	100
LED 4: Exit Sign: Other:	1	1	5	5
Stair #2 (Common Space Types: Stairwell, 215 sq.ft.)				
LED 6: Stair Light: Other:	1	2	50	100
LED 4: Exit Sign: Other:	1	1	5	5
Existing Elec 102 (Common Space Types: Electrical/Mechanical, 61 sq.ft.)				
LED 6: Stair Light: Other:	1	1	50	50
LED 3: EM Wallpack: Other:	2	1	11	11
LED 5: Exterior EM: Other:	1	1	15	15
IT 104B (Common Space Types: Electrical/Mechanical, 23 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Mech Closet 111A (Common Space Types: Electrical/Mechanical, 12 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
First Floor Corridor (Common Space Types: Corridor/Transition <8 ft wide, 787 sq.ft.)				
LED 1: 2x4 LED: Other:	1	16	30	480
LED 3: EM Wallpack: Other:	2	6	11	64
LED 4: Exit Sign: Other:	1	7	5	35
Second Floor Corridor (Common Space Types: Corridor/Transition <8 ft wide, 725 sq.ft.)				

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LED 1: 2x4 LED: Other:	1	12	30	360
LED 3: EM Wallpack: Other:	2	3	11	32
LED 4: Exit Sign: Other:	1	4	5	20
Infant Pantry 110 (Common Space Types: Storage, 125 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
Infant Pantry 114 (Common Space Types: Storage, 123 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
Bonding Room 119 (Common Space Types: General Seating Area, 61 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Vestibule 100 (Common Space Types: Corridor/Transition <8 ft wide, 87 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 4: Exit Sign: Other:	1	1	5	5
Toilet 120A (Common Space Types: Restrooms, 47 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 122A (Common Space Types: Restrooms, 47 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 106A (Common Space Types: Restrooms, 47 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Staff ADA 107 (Common Space Types: Restrooms, 57 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 209A (Common Space Types: Restrooms, 88 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 207A (Common Space Types: Restrooms, 97 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 3: EM Wallpack: Other:	2	1	11	11
Staff ADA 214 (Common Space Types: Restrooms, 57 sq.ft.)				
LED 1: 2x4 LED: Other:	1	1	30	30
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 206A (Common Space Types: Restrooms, 95 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 3: EM Wallpack: Other:	2	1	11	11
Toilet 203A (Common Space Types: Restrooms, 89 sq.ft.)				
LED 1: 2x4 LED: Other:	1	2	30	60
LED 3: EM Wallpack: Other:	2	1	11	11
			Total Proposed Watts =	6008

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 New York State Energy Conservation Construction Code requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian - President — Signature — 01/19/2023
Name - Title — Date

COMcheck Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2020 New York State Energy Conservation Construction Code
Project Title: LB Valhalla
Project Type: Alteration
Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site:
26 & 36 Legion Drive
Valhalla, New York 10595

Owner/Agent:
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, New York 10583

Designer/Contractor:
KEA Engineers
186 Wood Ave South
Iselin, New Jersey 08830

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Building Facade (Illuminated area of facade wall or surface)	7860 ft2	0.07	No	590
			Total Tradable Watts (a) =	0
			Total Allowed Watts =	590
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Building Facade (Illuminated area of facade wall or surface, 7860 ft2): Non-tradable Wattage				
LED 5: Exterior EM: Other:	1	5	15	75
LED 7: Exterior Wall Pack: Other:	1	3	58	174
LED 8: Exterior Surface fixture: Other:	1	11	34	374
			Total Tradable Proposed Watts =	0

Exterior Lighting PASSES

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2020 New York State Energy Conservation Construction Code requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian - President — Signature — 01/19/2023
Name - Title — Date

COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2020 New York State Energy Conservation Construction Code
Project Title: LB Valhalla
Location: White Plains, New York
Climate Zone: 4a
Project Type: Alteration

Construction Site:
26 & 36 Legion Drive
Valhalla, New York 10595

Owner/Agent:
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, New York 10583

Designer/Contractor:
KEA Engineers
186 Wood Ave South
Iselin, New Jersey 08830

Mechanical Systems List

Quantity	System Type & Description
1	HP-1 (Single Zone w/ PerimeterSystem): Heating: 1 each - Unit Heater, Electric, Capacity = 49 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Split System, Capacity = 48 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 17.50 SEER, Required Efficiency = 13.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: AHU1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: AHU1 Supply, Constant Volume, 1600 CFM, 0.8 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
1	RTU-2 (Single Zone w/ PerimeterSystem): Heating: 1 each - Central Furnace, Gas, Capacity = 96 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et cr 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 14.20 SEER, Required Efficiency = 14.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: RTU2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: RTU2 Supply, Constant Volume, 1600 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
2	RTU-3,4 (Single Zone w/ PerimeterSystem): Heating: 1 each - Central Furnace, Gas, Capacity = 104 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et cr 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.20 SEER, Required Efficiency = 14.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: RTU3 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: RTU3 Supply, Constant Volume, 2000 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
2	RTU-5,6 (Single Zone w/ PerimeterSystem): Heating: 1 each - Central Furnace, Electric, Capacity = 60 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 57 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.20 SEER, Required Efficiency = 14.00 SEER Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: RTU3 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans:

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STATE OF NEW YORK ARMEN YOVHANNES KHACHATURIAN 062261-1 LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ENERGY COMCHECK
MECHANICAL COMPLIANCE

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
EN-001

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Quantity	System Type & Description
	RTU3 Supply, Constant Volume, 2000 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
4	ECH-1 (Unknown w/ PerimeterSystem): Heating: 1 each - Unit Heater, Electric, Capacity = 14 kBtu/h No minimum efficiency requirement applies
4	ECH-2 (Unknown w/ PerimeterSystem): Heating: 1 each - Unit Heater, Electric, Capacity = 2 kBtu/h No minimum efficiency requirement applies
1	Water Heater: Electric Storage Water Heater, Capacity: 80 gallons w/ Circulation Pump Proposed Efficiency: 0.00 SL, %/h (if > 12 kW), Required Efficiency: 0.64 SL, %/h (if > 12 kW)

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 New York State Energy Conservation Construction Code requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Armen Khachaturian - President		01/19/2023
Name - Title	Signature	Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2020 New York State Energy Conservation Construction Code

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2, C403.12.3 [FO9][3]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1, C404.6.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

JAM ARCH

ARCHITECT OF RECORD:

J.A. Mihalik Architect

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ISELIN, NJ 08830
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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261–1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ENERGY COMCHECK
MECHANICAL COMPLIANCE

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
EN-002

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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.11.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.1 [ME65][3]	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.3 [ME117][2]	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.5 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.5 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.5 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.5 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.1 [ME71][2]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.5.5 [ME113][2]	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.5 [ME113][2]	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Systems with design outdoor air of less than 1200 cfm.
C403.7.2 [ME115][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.1, C403.11.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.3 [ME124][1]	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.3 [ME124][1]	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.4 [ME125][1]	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.4 [ME125][1]	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.5.3.5 [ME126][1]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.5 [ME126][1]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

JAM ARCH

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261–1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ENERGY COMCHECK
MECHANICAL COMPLIANCE

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
EN-003

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.5 [EL28][1]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.6 [EL30][1]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.4 [FI25][2]	All piping insulated in accordance with section details and Table C403.11.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.3 [FI32][1]	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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STATE OF NEW YORK · ARMEN KHACHATURIAN · 062261-1 · LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261–1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ENERGY COMCHECK
LIGHTING COMPLIANCE

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
EN-004

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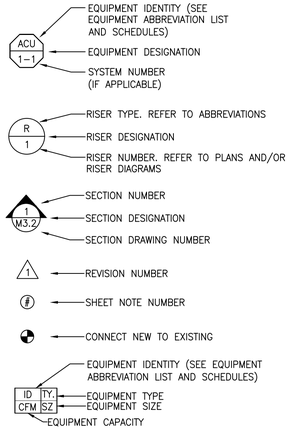
MECHANICAL DRAWING / REVISION LOG

		ISSUE:	DATE:
●	NEW OR REVISED ISSUE		
○	NON REVISED ISSUE		
		PERMIT SET	08/08/2022
		DOB COMMENTS	01/19/2023

NUMBER	NAME		
M-001	MECHANICAL COVER SHEET	●	●
M-101D	MECHANICAL FIRST FLOOR DEMOLITION PLAN	●	
M-102D	MECHANICAL ROOF DEMOLITION PLAN	●	
M-101	MECHANICAL FIRST FLOOR PLAN	●	
M-102	MECHANICAL SECOND FLOOR PLAN	●	
M-103	MECHANICAL ROOF PLAN	●	
M-201	MECHANICAL DETAILS	●	
M-202	MECHANICAL DETAILS	●	
M-301	MECHANICAL SCHEDULES	●	
M-302	MECHANICAL SCHEDULES	●	
M-401	MECHANICAL SPECIFICATIONS	●	●

KEY TO SYMBOLS

SYMBOL — DESCRIPTION



COMMISSIONING REQUIREMENTS

TOTAL SPACE COOLING CAPACITY: 330.7 MBH < 480 MBH
TOTAL SPACE HEATING CAPACITY: 564 MBH
SERVICE WATER HEATING CAPACITY: 30.7 MBH
TOTAL SYSTEM HEATING CAPACITY: 594 MBH < 600 MBH

BUILDING SYSTEM COMMISSIONING NOT REQUIRED.

DUCTWORK SYMBOLS

	SUPPLY AIR DUCT UP
	EXHAUST OR RETURN AIR DUCT UP
	SUPPLY AIR DUCT DOWN
	EXHAUST OR RETURN AIR DUCT DOWN
	DUCT WITH ACOUSTIC LINING
	CEILING DIFFUSER
	CEILING GRILLE
T S	THERMOSTAT, SENSOR
U L	UNDERCUT DOOR / LOUERED DOOR
	VOLUME DAMPER
	ACCESS DOOR
	CABINET UNIT HEATER (CUH)
	FLEXIBLE CONNECTION
	FIRE DAMPER (HORIZONTAL/VERTICAL)
	COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL/VERTICAL)
	ROOF TOP UNIT
	ROOF TOP EXHAUST FAN
ØDSD	DUCT SMOKE DETECTOR
	CEILING HUNG UNIT HEATER
	ELECTRIC CEILING HEATER
	MOTORIZED DAMPER

MECHANICAL GENERAL NOTES

1. LOW PRESSURE BRANCH DUCTWORK (SUPPLY AND RETURN) SHALL BE PROVIDED WITH VOLUME CONTROL DAMPERS AS REQUIRED.
2. PROVIDE FIRE DAMPERS AT FIRE RATED WALL PENETRATIONS AS REQUIRED. SHEET METAL ACCESS DOORS AS WELL AS ACCESS DOORS IN FINISHED CONSTRUCTION SHALL BE PROVIDED FOR ALL DAMPERS AS REQUIRED.
3. BORDER TYPES, COLOR, FINISHES, AND METHOD OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING DETAILS AND SPECIFICATIONS.
4. THERMOSTATS SHOULD BE LOCATED 4'-0" A.F.F. IN THE CONFERENCE ROOM. TEMPERATURE SENSORS IN CLASSROOMS ARE TO BE LOCATED 5'-0" A.F.F. WHERE INDICATED ON PLANS (SEE M-101). FINAL LOCATIONS TO BE VERIFIED WITH THE ARCHITECT. MANUFACTURER'S LOGO SHALL NOT BE EXPOSED.
5. WHERE PIPING CONNECTIONS FOR EQUIPMENT SUCH AS PUMPS, UNIT HEATERS, HEAT EXCHANGERS, ETC. DIFFER FROM THE LINE SIZE PIPING, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FURNISH AND INSTALL THE NECESSARY REDUCER/EXPANDER FITTINGS TO ENABLE CONNECTION BETWEEN THE PIPING SYSTEM AND THE EQUIPMENT.
6. REFER TO SCHEDULE SHEETS FOR THE DIFFUSER, GRILLE AND REGISTER SPECIFICATIONS.
7. HVAC DESIGN CRITERIA SHALL COMPLY WITH THE STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE) GUIDELINES, ETC.
8. ALL METAL LOUVERS, AND ALL BLANK OFF PANELS (INSULATED OR NOT INSULATED, ACTIVE OR INACTIVE) FOR LOUVERS SHALL BE PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS. WIRE MESH SCREENS FOR LOUVERS SHALL BE PROVIDED BY THE LOUVER MANUFACTURER. ALL OTHER WIRE MESH SCREENS SHALL BE PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS.
9. THIS CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE OWNER AND/OR ENGINEER FOR EXPEDITING AND RESOLVE.
10. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO OTHER AREAS OF THE BUILDING WHICH ARE TO REMAIN IN OPERATION. ISOLATE WORK AREAS BY MEANS OF TEMPORARY PARTITIONS AND/OR TARPS TO KEEP DUST AND DIRT WITHIN THE CONSTRUCTION AREA.
11. CONTRACTOR SHALL REPLACE ALL HVAC FILTERS AT TIME OF CERTIFICATE OF OCCUPANCY.

MECHANICAL DEMO NOTES

1. CONTRACTOR SHALL COORDINATE THE FULL EXTENT OF DEMOLITION SCOPE WITH THE ARCHITECT AND THE OWNER.
2. ALL EXISTING RTUs SHALL BE DEMOLISHED AND REMOVED FROM THE SITE. CONTRACTOR SHALL EVALUATE EXISTING ROOF CURBS AND MAIN DUCTS TO BE REUSED IN NEW SYSTEMS. CONTRACTOR SHALL PROVIDE CURB ADAPTER AS REQUIRED TO REUSE EXISTING ROOF CURBS.
3. CONTRACTOR SHALL COORDINATE NEW EXHAUST LOCATIONS WITH EXISTING EXHAUST DUCTWORK AND EXHAUST FANS TO REMAIN.
4. CONTRACTOR SHALL CAP OR PATCH ANY OPENINGS ON EXISTING DUCTS TO REMAIN WITH A SHEETMETAL PLATE AND SEAL WITH MINNESOTA MINING Co. EC-800 SEALANT.
5. PROVIDE A TEMPORARY CAP ON ALL OPEN DUCTWORK THAT IS TO REMAIN AND IS SCHEDULED FOR RE-ATTACHMENT TO NEW DUCTWORK.
6. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.
7. DEMOLITION CONTRACTOR SHALL COORDINATE ALL DEMOLITION AND REMOVAL OF DEBRIS WITH THE BUILDING AND GIVE THE BUILDING 48 HOURS NOTIFICATION PRIOR TO THE START OF DEMOLITION.
8. ALL ITEMS DEMOLISHED AND NOT NOTED FOR REUSE SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UNLESS INDICATED OTHERWISE.
9. CONTRACTOR SHALL COVER AND PROTECT ALL SLAB HUNG EQUIPMENT, DIFFUSERS AND REGISTERS TO REMAIN AND RETURN AIR STUBS AS REQUIRED BEFORE DEMOLITION IS TO COMMENCE.
10. ALL DEMOLITION WORK SHALL COMPLY WITH BUILDING CODE FOR SAFE WORKMANSHIP AND SHALL BE PERFORMED IN COORDINATION WITH THE BUILDINGS REQUIREMENTS.
11. ALL SHUT DOWNS OF EXISTING SYSTEMS SHALL BE SCHEDULED AND APPROVED BY THE OWNER PRIOR TO COMMENCING WITH WORK.
12. USE OF THE BUILDING CORRIDORS FOR HANDLING OF THE REMOVED EQUIPMENT AND MATERIALS SHALL BE AT THE DIRECTION OF THE OWNER AND SHALL BE COORDINATED WITH THEIR OPERATIONS.
13. DO NOT CUT BUILDING ELEMENTS WITHOUT WRITTEN PERMISSION FROM THE OWNER OR AN OWNER'S REPRESENTATIVE. PATCH AND REPAIR ANY CUTS OR DAMAGE TO MATCH THE EXISTING CONSTRUCTION.
14. PRIOR TO PERFORMING ANY WORK, THE MECHANICAL CONTRACTOR SHALL INSPECT THE EXISTING DUCTWORK, PIPES, AND EQUIPMENT FOR DEFECTS. MECHANICAL CONTRACTOR SHALL REPORT ANY NOTABLE DEFECTS TO THE ENGINEER OF RECORD, GENERAL CONTRACTOR, AND OWNER.

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
ALD	AUTOMATIC LOUVER DAMPER
BDD	BACKDRAFT DAMPER
BMS	BUILDING MANAGEMENT SYSTEM
BRD	BAROMETRIC RELIEF DAMPER
BVR	BUILDING VENTILATION RETURN RISER
BVS	BUILDING VENTILATION SUPPLY RISER
BXR	BUILDING EXHAUST RISER
CAV	CONSTANT AIR VOLUME
CD	CEILING DIFFUSER
COD	CLEAN OUT DOOR
CP	CONDENSATE PUMP
CR(G)	CEILING REGISTER OR GRILLE
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CCUH	CEILING CABINET UNIT HEATER
DFR	DUCT MOUNTED FURNACE
EMR	ELEVATOR MACHINE ROOM
EF	EXHAUST FAN
EG	EXHAUST GRILL
EX	EXHAUST
FAI	FRESH AIR INTAKE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FL	FIRE LIFT
GEF	GARAGE EXHAUST FAN
FSD	COMBINATION FIRE/SMOKE DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MLWMS	METAL LOUVER WITH WIRE MESH SCREEN
NC	NORMALLY CLOSED
NK	NECK SIZE
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
PC	PUMPED CONDENSATE
RA	RETURN AIR
RG	RETURN GRILL
RTU	ROOFTOP AIR CONDITIONING UNIT
S	SUPPLY
SA	SUPPLY AIR
SD	SMOKE DAMPER
SF	SQUARE FEET
SP	STAIR PRESSURIZATION RISER
SR	SUPPLY REGISTER
SPF	STAIR PRESSURIZATION FAN
S/S	STAINLESS STEEL
TR	TRASH ROOM RISER
TR(G)	TOP REGISTER OR GRILLE
TRX	TRASH ROOM EXHAUST RISER
TX	TOILET EXHAUST
TXF	TOILET EXHAUST FAN
UC	UNDERCUT DOOR
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
VD	VOLUME DAMPER
VI	VIBRATION ISOLATOR
WMS	WIRE MESH SCREEN

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STATE OF NEW YORK — ARMEN YOVAGHATHURIAN — 062261-1 — LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL COVER SHEET

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M-001

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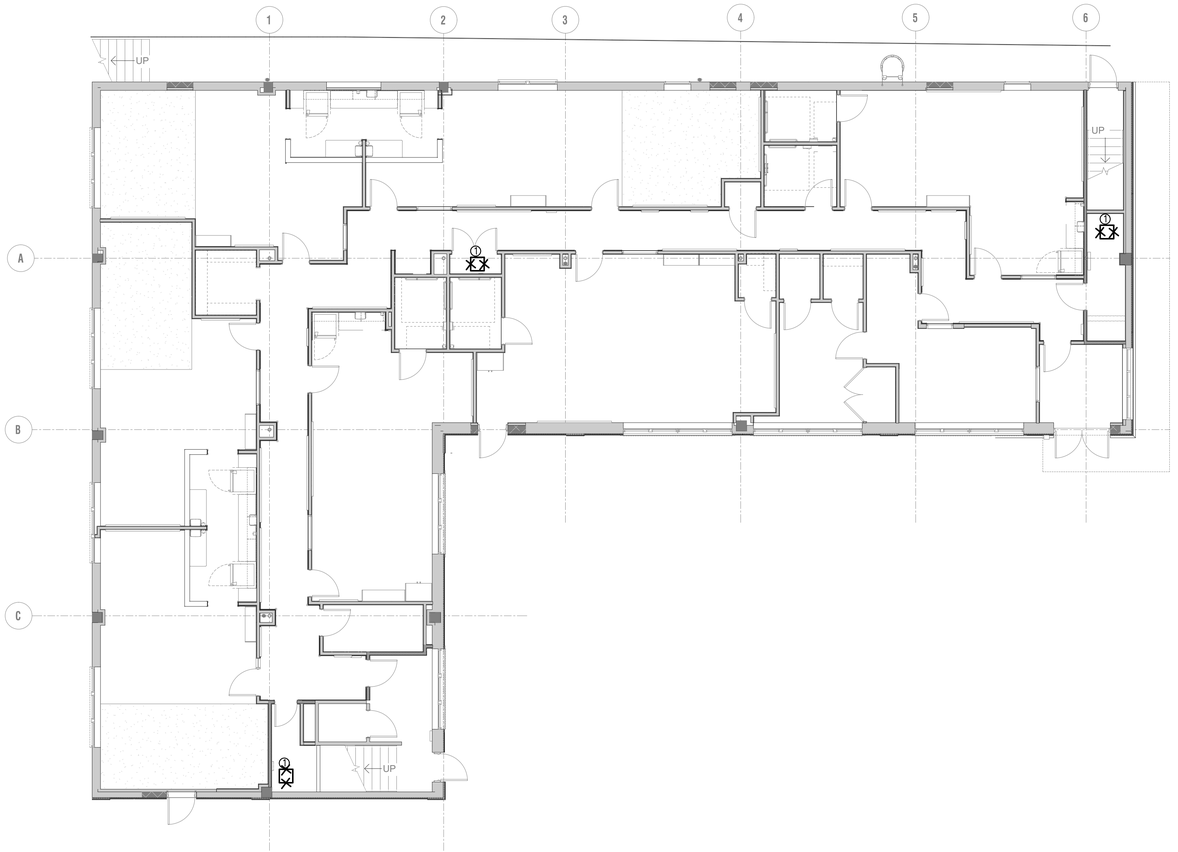
MECHANICAL KEY NOTES:

1. APPROXIMATE LOCATION OF EXISTING FURNACE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND LOCATION OF CONDENSING UNIT. CONTRACTOR SHALL DEMOLISH ALL EXISTING HVAC SYSTEMS AND REMOVE THEM FROM THE SITE.

MECHANICAL GENERAL NOTES:

- CONTRACTOR SHALL COORDINATE FULL EXTENT OF DEMOLITION SCOPE WITH THE ARCHITECT AND THE OWNER. ALL EXISTING HVAC EQUIPMENT, DUCTS, PIPES, ETC SHALL BE DEMOLISHED.
- ALL EQUIPMENT LOCATIONS SHOWN ON THIS DEMO PLAN ARE APPROXIMATE LOCATIONS. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATIONS FOR ALL EQUIPMENT.
- CONTRACTOR SHALL INCLUDE ALL APPURTENANCES OF DEMOLISHED EQUIPMENT IN DEMOLITION SCOPE UNLESS OTHERWISE NOTED.
- MECHANICAL CONTRACTOR SHALL FIELD VERIFY OPERATIONAL INTEGRITY OF ALL HVAC SYSTEMS LEFT AFTER DEMOLITION.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DEMOLITION WORK WITH OTHER TRADES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DAMAGED EQUIPMENT OR APPURTENANCES NOT INTENDED FOR DEMOLITION.



MECHANICAL FIRST FLOOR DEMOLITION PLAN

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

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179 Nelson Road
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MECHANICAL FIRST FLOOR DEMOLITION PLAN

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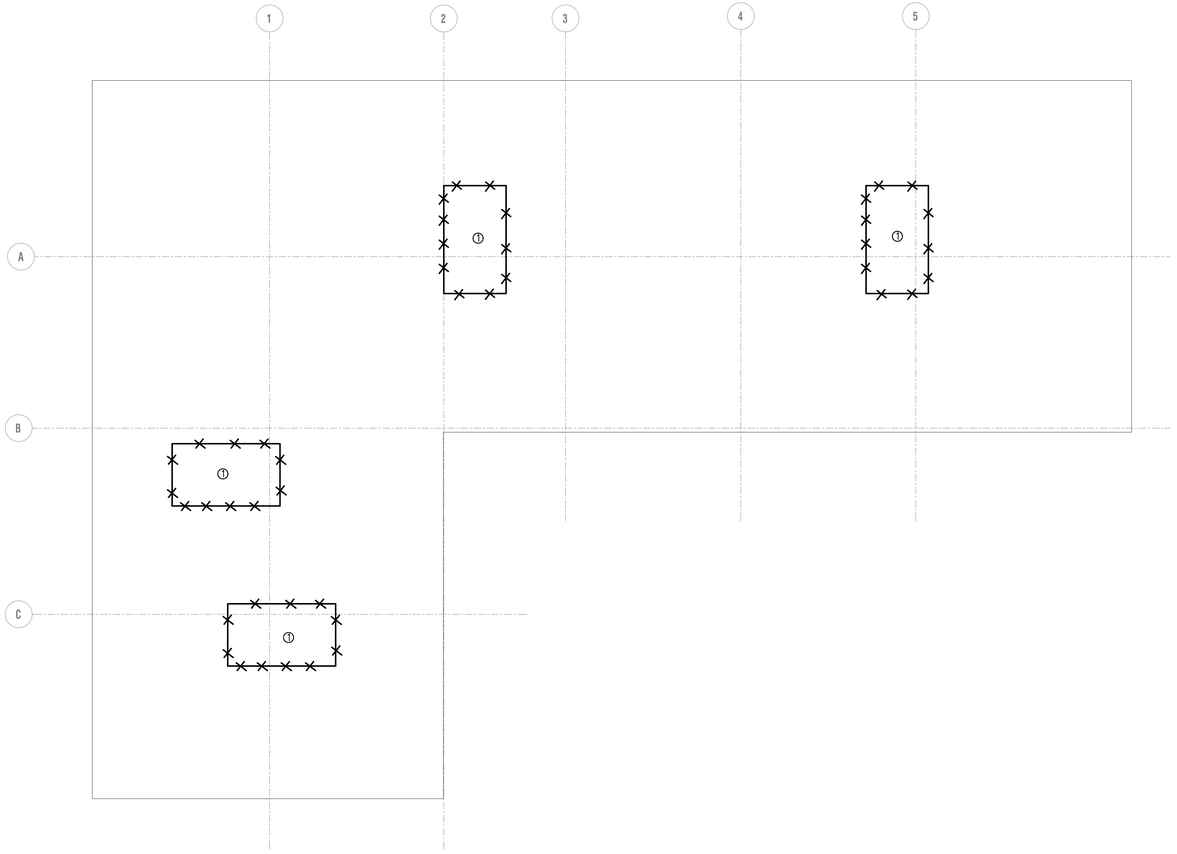
MECHANICAL KEY NOTES:

1. APPROXIMATE LOCATION OF EXISTING RTU. CONTRACTOR SHALL DEMOLISH EXISTING UNIT AND FIELD COORDINATE REUSING EXISTING CURBS FOR NEW UNITS. PROVIDE CURB ADAPTERS AS REQUIRED. IF THE EXISTING CURBS CANNOT BE USED, CONTRACTOR SHALL DEMOLISH AND REMOVE THEM FROM THE SITE. CONTRACTOR SHALL SEAL ANY EXISTING ROOF PENETRATIONS NOT TO BE REUSED. ALL OTHER EXISTING ROOF TOP EQUIPMENT AND ASSOCIATED APPURTENANCES SHALL BE DEMOLISHED AND REMOVED FROM THE SITE.

MECHANICAL GENERAL NOTES:

- CONTRACTOR SHALL COORDINATE FULL EXTENT OF DEMOLITION SCOPE WITH THE ARCHITECT AND THE OWNER.
- ALL EQUIPMENT LOCATIONS SHOWN ON THIS DEMO PLAN ARE APPROXIMATE LOCATIONS. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATIONS FOR ALL EQUIPMENT.
- CONTRACTOR SHALL INCLUDE ALL APPURTENANCES OF DEMOLISHED EQUIPMENT IN DEMOLITION SCOPE UNLESS OTHERWISE NOTED.
- MECHANICAL CONTRACTOR SHALL FIELD VERIFY OPERATIONAL INTEGRITY OF ALL HVAC SYSTEMS LEFT AFTER DEMOLITION.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DEMOLITION WORK WITH OTHER TRADES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DAMAGED EQUIPMENT OR APPURTENANCES NOT INTENDED FOR DEMOLITION.



MECHANICAL ROOF DEMOLITION PLAN

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

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:

LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:

BLOCK: 1, LOT: 91

OWNER

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179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL ROOF DEMOLITION PLAN

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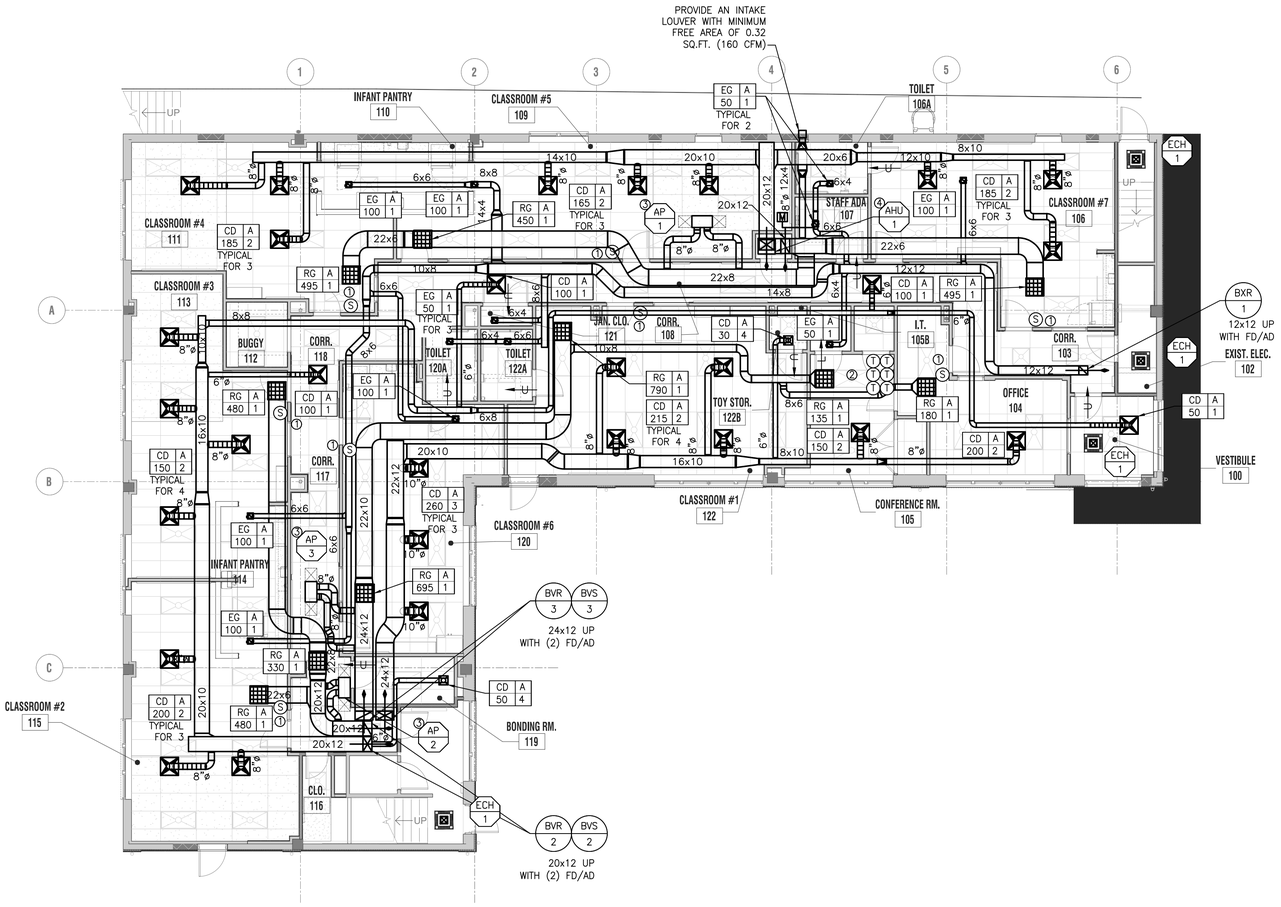
MECHANICAL KEY NOTES:

1. RUN CONTROL WIRING FROM TEMPERATURE SENSOR IN THE CLASSROOM TO THE CORRESPONDING THERMOSTAT IN THE CONFERENCE ROOM.
2. RUN CONTROL WIRING FROM (6) THERMOSTATS TO THE CORRESPONDING RTUs. INSTALL THERMOSTATS IN 2x3 GROUPING IN THE CONFERENCE ROOM, BEHIND THE CLOSET DOOR. COORDINATE FINAL INSTALLATION LOCATIONS WITH ARCHITECT.
3. INSTALL MICROCON–600 UNITS AS PER MANUFACTURER'S GUIDELINES. THE INTAKE AND OUTLET TAKEOFFS FOR THE UNIT ON THE SUPPLY AIR MAIN TRUNK SHALL BE AT LEAST 6 FEET APART.
4. INSTALL AHU IN THE CLOSET AS PER MANUFACTURER'S INSTRUCTIONS ON A 24" FLOOR STAND. SPILL CONDENSATE IN FLOOR DRAIN IN THE CLOSET. PROVIDE FIRE DAMPER IN SUPPLY AND RETURN DUCTWORK WHEN PENETRATING RATED CEILING. PROVIDE A MOTORIZED DAMPER IN OA DUCTWORK, AND CONNECT OA DUCT TO RETURN MAIN. INTERLOCK MOTORIZED DAMPER WITH AHU OPERATION. DAMPER SHALL OPEN WHEN AHU ACTIVATES AND CLOSE WHEN AHU DEACTIVATES.

MECHANICAL GENERAL NOTES:

- ALL PENETRATIONS REQUIRED FOR EQUIPMENT (DUCT, PIPES, ETC.) THROUGH ANY WALL SHALL BE PROPERLY SEALED OFF TO MAINTAIN THE INTEGRITY OF THE STRUCTURE.
- ALL ROUND RIGID AND FLEXIBLE DUCTWORK WITHIN THE SPACE TO HAVE EXTERNAL INSULATION.
- PROVIDE VOLUME DAMPERS ON EACH BRANCH TAKE OFF FROM DUCT MAIN AND ON EACH DIFFUSER TAKE OFF FROM BRANCH DUCT OR MAIN WHETHER SHOWN ON THIS PLAN OR NOT.
- PROVIDE FIRE DAMPERS OR FIRE SMOKE DAMPERS AS REQUIRED AT ANY PENETRATION OF A FIRE RATED MEMBRANE WHETHER SHOWN ON THIS PLAN OR NOT.
- UNDERCUT ALL DOORS 1" AS INDICATED ON THIS PLAN.



MECHANICAL FIRST FLOOR PLAN

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

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STATE OF NEW YORK — ARMEN KHACHATURIAN — 062261-1 — LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

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LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
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179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL FIRST FLOOR PLAN

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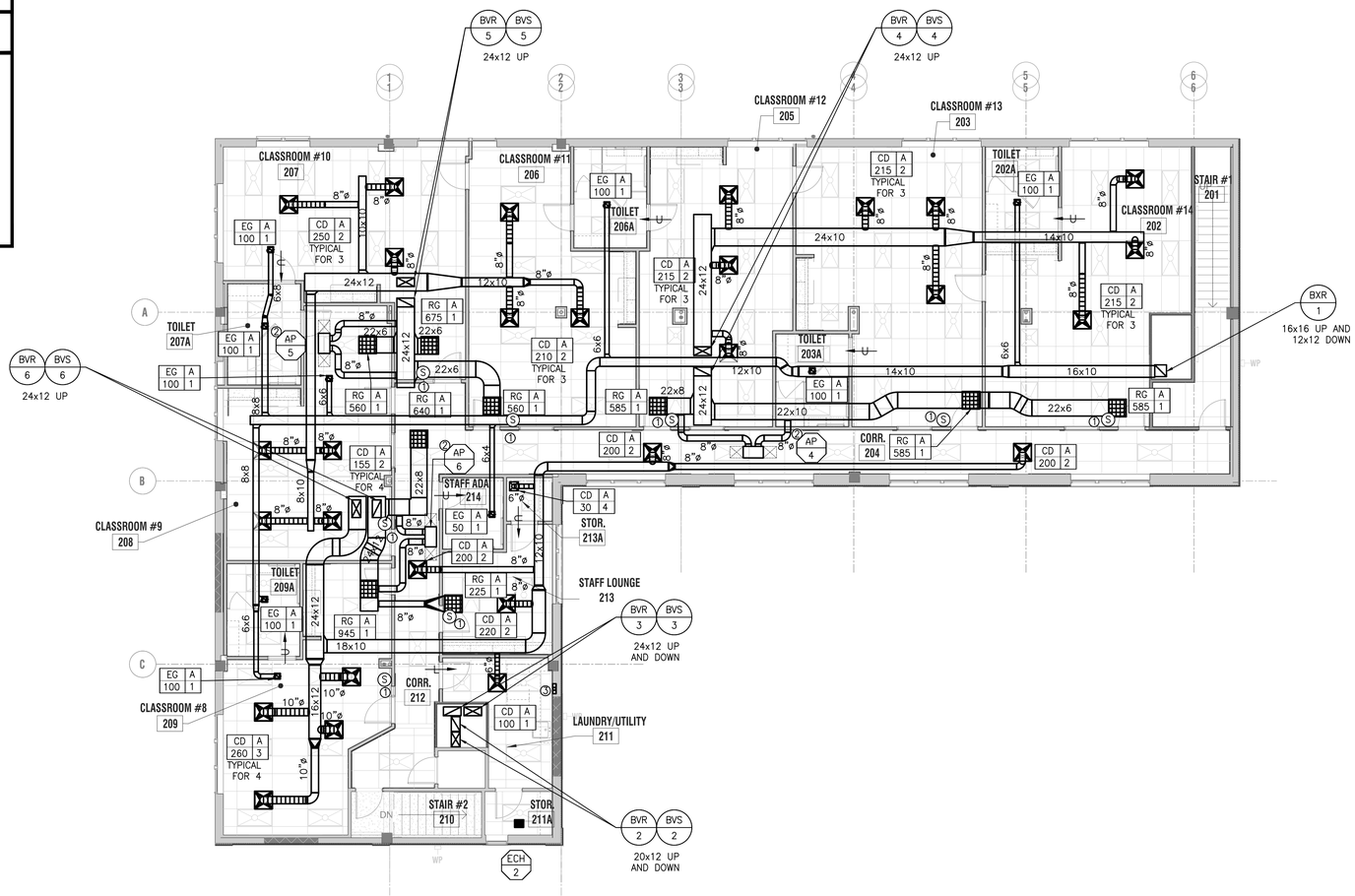
MECHANICAL KEY NOTES:

1. RUN CONTROL WIRING FROM TEMPERATURE SENSOR IN THE CLASSROOM TO THE CORRESPONDING THERMOSTAT IN THE CONFERENCE ROOM ON THE FIRST FLOOR.
2. INSTALL MICROCON-600 UNITS AS PER MANUFACTURER'S GUIDELINES. THE INTAKE AND OUTLET TAKEOFFS FOR THE UNIT ON THE RETURN OR SUPPLY AIR MAIN TRUNK SHALL BE AT LEAST 6 FEET APART.
3. PROVIDE DRYERBOX VENT BOX MODEL 350. RUN 4"ø DRYER EXHAUST UP THROUGH THE ROOF AS SHOWN. PROVIDE DRYER RATED ROOF CAP AT TERMINATION.

MECHANICAL GENERAL NOTES:

- ALL PENETRATIONS REQUIRED FOR EQUIPMENT (DUCT, PIPES, ETC.) THROUGH ANY WALL SHALL BE PROPERLY SEALED OFF TO MAINTAIN THE INTEGRITY OF THE STRUCTURE.
- ALL ROUND RIGID AND FLEXIBLE DUCTWORK WITHIN THE SPACE TO HAVE EXTERNAL INSULATION.
- PROVIDE VOLUME DAMPERS ON EACH BRANCH TAKE OFF FROM DUCT MAIN AND ON EACH DIFFUSER TAKE OFF FROM BRANCH DUCT OR MAIN WHETHER SHOWN ON THIS PLAN OR NOT.
- PROVIDE FIRE DAMPERS OR FIRE SMOKE DAMPERS AS REQUIRED AT ANY PENETRATION OF A FIRE RATED MEMBRANE WHETHER SHOWN ON THIS PLAN OR NOT.
- UNDERCUT ALL DOORS 1" AS INDICATED ON THIS PLAN.



MECHANICAL SECOND FLOOR PLAN

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

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Valhalla, NY 10595

LEGAL DESCRIPTION:

BLOCK: 1, LOT: 91

OWNER

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SHEET TITLE:

MECHANICAL SECOND FLOOR PLAN

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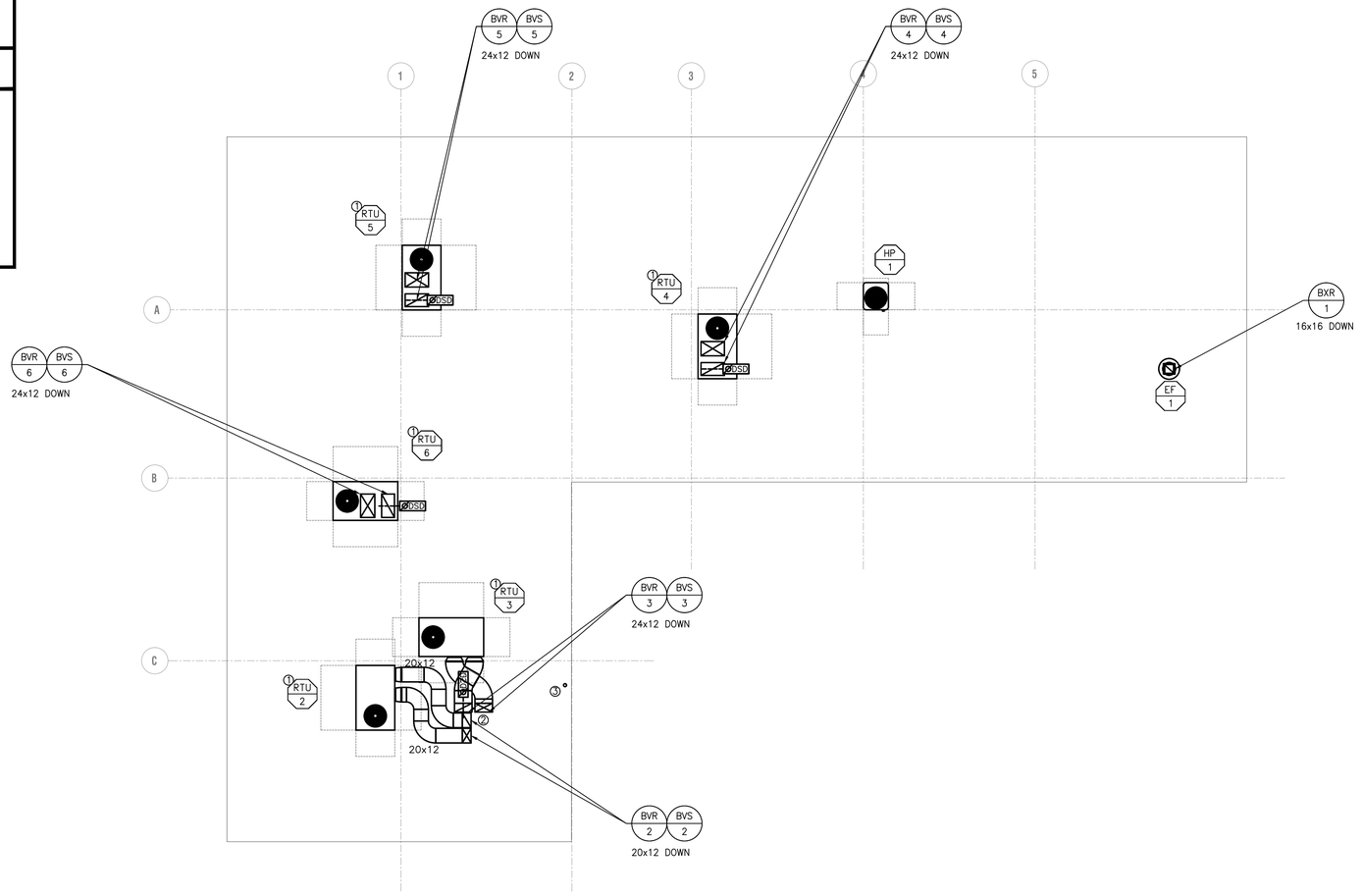
MECHANICAL KEY NOTES:

1. INSTALL NEW RTU AS PER MANUFACTURER'S INSTRUCTIONS. SPILL CONDENSATE ONTO ROOF. FINAL LOCATION TO BE COORDINATED IN THE FIELD AND REVIEWED BY STRUCTURAL ENGINEER. BIPOLAR IONIZATION FILTER, BPF-1, SHALL BE INSTALLED AT THE RETURN OPENING OF EACH RTU AS PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE WEATHERPROOF ENCLOSURE AND INSULATION FOR ALL DUCTWORK PENETRATING THE ROOF.
3. PROVIDE DRYER VENT CAP. RAISE CAP AT LEAST 24" ABOVE THE ROOF. LOCATE EXHAUST 10' AWAY FROM OUTSIDE AIR INTAKE AND 3' AWAY FROM OPERABLE FENESTRATION.

MECHANICAL GENERAL NOTES:

- EXHAUST FANS, PLUMBING VENTS, AND ANY OTHER EXHAUST SHOULD BE LOCATED MINIMUM 10' FROM ANY MECHANICAL AIR INTAKE.
- PROVIDE "P" TRAP ON THE RTU AS REQUIRED BY THE MANUFACTURER, SEE MANUFACTURER RECOMMENDATION. SPILL CONDENSATE ON THE ROOF.
- ALL MECHANICAL ROOF EQUIPMENT SHALL BE INSTALLED MINIMUM 10' AWAY FROM THE ROOF EDGE.
- FALL PROTECTION SHALL BE PROVIDED WHERE MECHANICAL EQUIPMENT IS LESS THAN 10' FROM THE ROOF EDGE.



MECHANICAL ROOF PLAN

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

ARCHITECT OF RECORD:

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Valhalla, NY 10595

LEGAL DESCRIPTION:

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Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL ROOF PLAN

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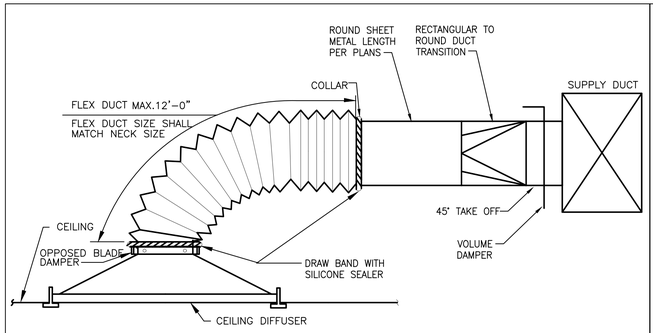
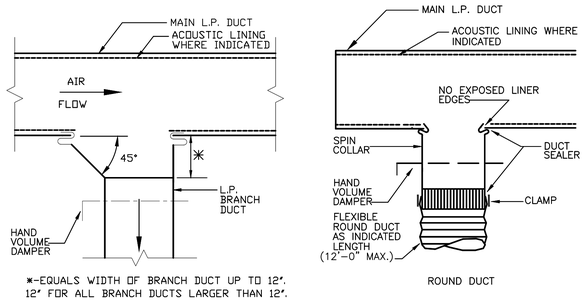
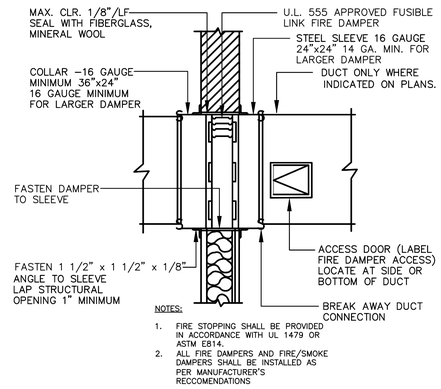


TYPICAL DIFFUSER CONNECTION
(SIDE OF DUCT CONNECTION)
NOT TO SCALE

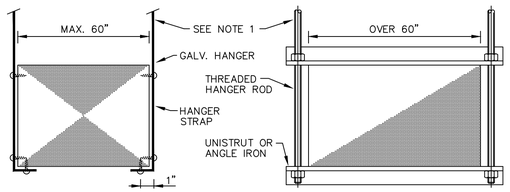


TYPICAL SUPPLY AIR BRANCH DUCT TAKE-OFF
NOT TO SCALE

TYPICAL LOW PRESSURE BRANCH DUCT TAKE-OFF
NOT TO SCALE



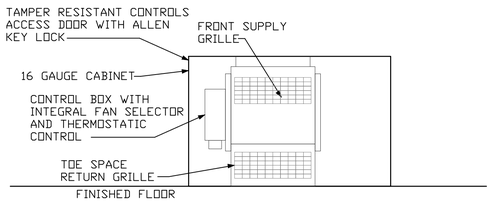
FIRE DAMPER DETAIL
NOT TO SCALE



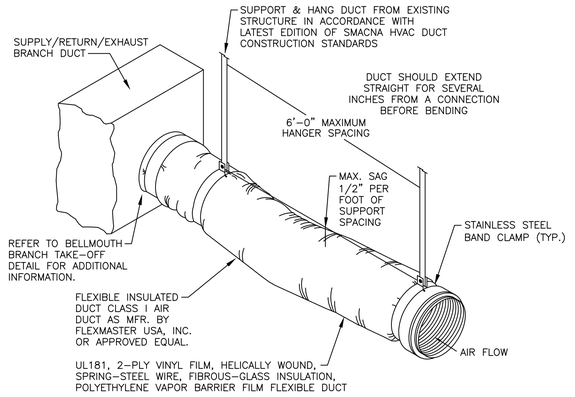
NOTES:

1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION.
3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

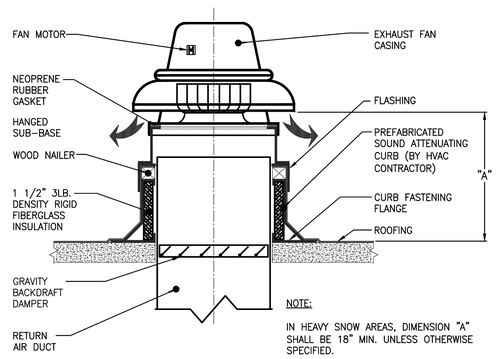
DUCT HANGER SUPPORT DETAIL
NOT TO SCALE



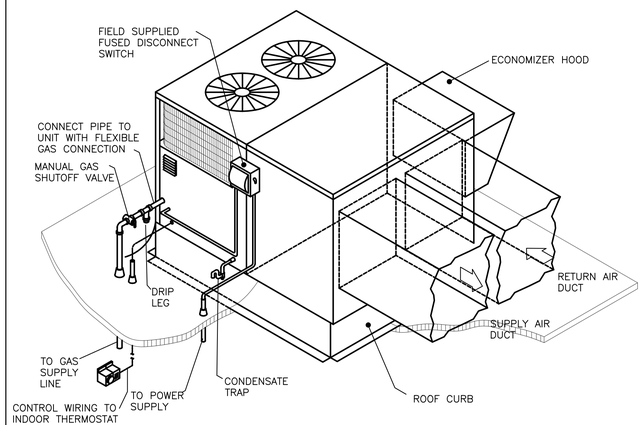
ELECTRIC CABINET UNIT HEATER
NOT TO SCALE



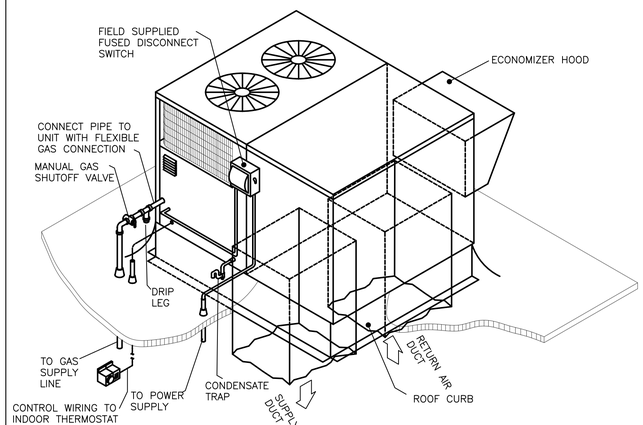
FLEXIBLE DUCT SUPPORT DETAIL
NOT TO SCALE



ROOF MOUNTED EXHAUST FAN DETAIL
NOT TO SCALE



PACKAGED ROOFTOP UNIT WITH HORIZONTAL SUPPLY AND RETURN DUCT CONNECTIONS
NOT TO SCALE



PACKAGED ROOFTOP UNIT WITH BOTTOM SUPPLY AND RETURN DUCT CONNECTIONS
NOT TO SCALE

JAM ARCH
ARCHITECT OF RECORD:
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ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL DETAILS

Rev. #	Revision Date	Revision Description
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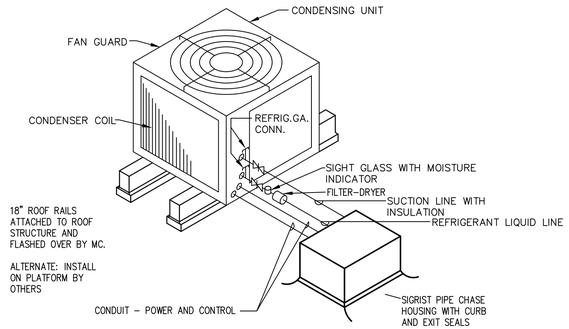
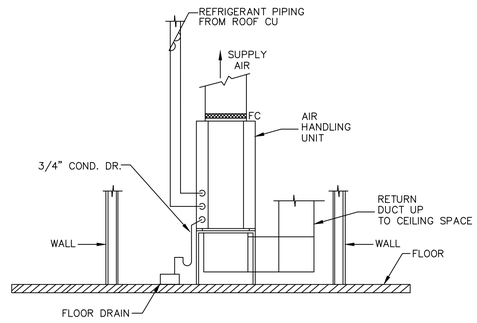


CONDENSING UNIT MOUNTED ON ROOF

NOT TO SCALE



AIR CONDITIONING SYSTEM DETAIL WITH VERTICAL AIR HANDLING UNIT

NOT TO SCALE

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AIR COOLED PACKAGED ROOFTOP AIR CONDITIONING UNITS (ELECTRIC HEAT, TRANE)

RTU #

UNIT No.	LOCATION	TONS	COOLING CAPACITY		ENTER. AIR TEMP. COOLING (°F)		LEAVING UNIT AIR TEMP. COOLING (°F)		EVAPORATOR FAN SECTION			OA CFM	ELECTRIC HEAT (2 STAGE)		ENTERING AIR TEMP. HEATING (°F)	LEAVING AIR TEMP. HEATING (°F)	COMPRESSOR		CONDENSER FAN SECTION		ELECTRICAL			WEIGHT (LBS)	MANUFACTURER MODEL NUMBER	EER	NOTES
			TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	DB	WB	DB	WB	EXT. S.P. (IN.)	BHP	CFM		STAGE 1 (KW)	STAGE 2 (KW)	DB	DB	No.	REFRIG.	MOTOR HP	NO. OF FANS	VOLTS/ PHASE	MIN. CIRCUIT AMPACITY (A)	MAX FUSE SIZE (A)				
RTU–5	ROOF	5 TON	57,220	42,510	80	67	60.62	57.95	1.0	0.93	2,000	480	8.7	8.7	70.0	106.17	1	R–410A	0.5	1	208/3	73.0	80	953	TRANE THC067E3RJA	13.0	1–5
RTU–6	ROOF	5 TON	57,220	42,510	80	67	60.62	57.95	1.0	0.93	2,000	480	8.7	8.7	70.0	106.17	1	R–410A	0.5	1	208/3	73.0	80	953	TRANE THC067E3RJA	13.0	1–5

NOTES:
1. PROVIDE UNIT MOUNTED NEMA–3R WEATHERPROOF DISCONNECT SWITCH, HOT GAS REHEAT, LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF.
2. PROVIDE TEMPERATURE SENSORS IN EACH ROOM SERVED BY THE UNIT FOR TEMPARATURE AVERAGING WITH A THERMOSTAT IN THE CONFERENCE ROOM AS SHOWN ON THE FLOOR PLANS.
3. PROVIDE MINIMUM 18" SPRING ISOLATED ROOF CURB.
4. COORDINATE INLET AND OUTLET ORIENTATION WITH FLOOR PLANS
5. PROVIDE WITH FIELD INSTALLED RAWAL APR VALVE AND CONTROLS.

AIR COOLED PACKAGED ROOFTOP AIR CONDITIONING UNITS (GAS HEAT, TRANE)

RTU #

UNIT No.	LOCATION	TONS	COOLING CAPACITY		ENTER. AIR TEMP. COOLING (°F)		LEAVING UNIT AIR TEMP. COOLING (°F)		EVAPORATOR FAN SECTION			OA CFM	GAS HEAT		ENTERING AIR TEMP. HEATING (°F)	LEAVING AIR TEMP. HEATING (°F)	COMPRESSOR		CONDENSER FAN SECTION		ELECTRICAL			WEIGHT (LBS)	MANUFACTURER MODEL NUMBER	EER	NOTES
			TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)	DB	WB	DB	WB	EXT. S.P. (IN.)	BHP	CFM		CAPACITY INPUT (BTU/H)	CAPACITY OUTPUT (BTU/H)	DB	DB	No.	REFRIG.	MOTOR HP	NO. OF FANS	VOLTS/ PHASE	MIN. CIRCUIT AMPACITY (A)	MAX FUSE SIZE (A)				
RTU–2	ROOF	4 TON	47,230	34,330	80	67	60.45	57.63	1.0	0.82	1,600	320	120,000	96,000	70.0	125.7	1	R–410A	0.4	1	208/3	24.0	35	976	TRANE YHC048E3ZA	11.6	1–5
RTU–3	ROOF	5 TON	60,280	44,120	80	67	59.92	57.42	1.0	0.98	2,000	200	130,000	104,000	70.0	118.4	1	R–410A	0.5	1	208/3	26.0	40	999	TRANE YHC060E3ZA	11.9	1–5
RTU–4	ROOF	5 TON	60,280	44,120	80	67	59.92	57.42	1.0	0.98	2,000	480	130,000	104,000	70.0	118.4	1	R–410A	0.5	1	208/3	26.0	40	999	TRANE YHC060E3ZA	11.9	1–5

NOTES:
1. PROVIDE UNIT MOUNTED NEMA–3R WEATHERPROOF DISCONNECT SWITCH, HOT GAS REHEAT, LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF, AND STAINLESS STEEL GAS HEAT EXCHANGER.
2. PROVIDE TEMPERATURE SENSORS IN EACH ROOM SERVED BY THE UNIT FOR TEMPARATURE AVERAGING WITH A THERMOSTAT IN THE CONFERENCE ROOM AS SHOWN ON THE FLOOR PLANS.
3. PROVIDE MINIMUM 18" SPRING ISOLATED ROOF CURB.
4. COORDINATE INLET AND OUTLET ORIENTATION WITH FLOOR PLANS.
5. PROVIDE WITH FIELD INSTALLED RAWAL APR VALVE AND CONTROLS.

SPLIT SYSTEM HEAT PUMP (TRANE)

HP X

TAG	AC UNIT	TOTAL CAPACITY (BTU/HR)	SENSIBLE COOLING CAPACITY (BTU/HR)	TONS	HEAT PUMP HEATING CAPACITY (BTU/HR)	COMPRESSOR			ELECTRICAL			WEIGHT	MANUFACTURER MODEL NUMBER	SEER	REMARKS
						RLA	LRA	REFRIG	VOLTS/ PHASE/ HZ	MIN. CIRCUIT AMPACITY (A)	MAX FUSE SIZE (A)				
HP–1	AHU–1	48,200	36,200	4.0	31,000	9.0	56.0	R–410A	208/3/60	18	30	329	TRANE 4TWA7048A3000A	17.5	NOTES 1–5

NOTES:
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE RUBBER ISOLATOR KIT FOR CONDENSING UNIT. INSTALL ON MINIMUM 18" ROOF RAILS AND FASTEN UNITS TO THE RAILS.
3. UNITS SHALL BE RATED AT 95 DEG F DB / 75 DEG F WB.
4. PROVIDE NON–BLEED TXV KIT FOR COOLING COIL.
5. FIELD VERIFY OVERALL REFRIGERANT LINE LENGTH AND SIZES. CONFIRM LENGTH AND SIZES WITH MANUFACTURER.

AIR HANDLING UNITS WITH BACKUP ELECTRIC HEAT (TRANE)

AHU –

TAG	CU	NOMINAL COOLING CAPACITY		HEAT PUMP CAPACITY (BTU/HR)	BLOWER FAN SECTION					ELECTRICAL				WEIGHT	MANUFACTURER MODEL NUMBER	REMARKS
		TOTAL CAPACITY (BTU/HR)	SENSIBLE CAPACITY (BTU/HR)		CFM	OA CFM	EXT. S.P. (in)	MOTOR HP	RPM	VOLTS/ϕ/Hz	KW CAPACITY ELECTRIC HEAT	MCA PRIMARY CIRCUIT	MAX FUSE SIZE (A) PRIMARY CIRCUIT			
AHU–1	HP–1	48,200	36,200	31,000	1,600	160	0.7	3/4	1050	208/1/60	14.4	93	100	175	TRANE TAM9A0C48V41DA	NOTES 1–5

NOTE:
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE 7–DAY FULLY PROGRAMMABLE THERMOSTAT IN THE CONFERENCE ROOM WITH AVERAGING TEMPERATURE SENSORS IN EACH ROOM SERVED.
3. PROVIDE CONDENSATE OVERFLOW SWITCH.
4. INSTALL AHU ON 24" FLOOR STAND IN MECHANICAL CLOSET.
5. PROVIDE BACKUP ELECTRIC HEATER POWERED BY AHU AS SECONDARY HEAT. HEAT PUMP SHALL BE PRIMARY HEAT. PROVIDE AHU WITH SINGLE POINT ELECTRIC CONNECTION.

AIR TERMINALS

XX | A
XXX | X

TAG	TITUS OR EQUAL				
	TYPE	CFM RANGE	NECK SIZE	NOMINAL FACE SIZE	MODEL
CD–1	CEILING DIFFUSERS	0 – 100	6"ø	24 X 24	TMSA
CD–2	CEILING DIFFUSERS	101 – 250	8"ø	24 X 24	TMSA
CD–3	CEILING DIFFUSERS	251 – 400	10"ø	24 X 24	TMSA
CD–4	CEILING DIFFUSERS	0 – 100	6"ø	12 X 12	TMSA
SG–1	SUPPLY GRILLE	0 – 180	8 X 6	10 X 8	300RL
RG–1	RETURN GRILLE	0 – 1600	22 X 22	24 X 24	350RL
RG–2	RETURN GRILLE	0 – 290	12 X 6	14 X 8	350RL
EG–1	RETURN GRILLE	0 – 100	6 x 6	8 x 8	350RL
TG–1	TRANSFER GRILLE	0 – 140	6 x 6	8 x 8	350RL

NOTES:
1. BORDER TYPE TO BE COMPATIBLE WITH CEILING TYPE.
2. COLOR AND FINISH TO BE REVIEWED AND APPROVED BY THE ARCHITECT.
3. PROVIDE VOLUME BRANCH DAMPER. WHERE LOCATED IN INACCESSIBLE AREAS, PROVIDE CABLE OPERATED DAMPER LOCATED IN THE BRANCH, OPERABLE THROUGH THE FACE OF THE DIFFUSER (KEY OPERATED).

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VENTILATION TABLE

ZONE NAME	FLOOR	UNIT SERVING	ZONE AREA (SQ.FT.)	ZONE POPULATION # OF PEOPLE	PRIMARY AIRLFOW RATE (CFM)	OA RATE PER PERSON (CFM)	OA RATE PER AREA (CFM)	OA RATE REQUIRED FOR PEOPLE (CFM)	OA RATE REQUIRED FOR AREA (CFM)	OA RATE IN BREATHING ZONE (CFM)	AIR DISTRIBUTION EFFECTIVENESS	OA REQUIRED IN ZONE BEFORE IAQ	MINIMUM OA REQUIRED IN ZONE AFTER IAQ	CFM OF OA SUPPLIED
CLASSROOM 1	FIRST	RTU-3	566	18	875	10	0.18	180	102	282	0.8	352	50	88
CLASSROOM 2	FIRST	RTU-2	520	10	600	10	0.18	100	94	194	0.8	242	30	120
CLASSROOM 3	FIRST	RTU-2	514	10	600	10	0.18	100	93	193	0.8	241	30	120
CLASSROOM 4	FIRST	RTU-1	496	9	550	10	0.18	90	89	179	0.8	224	25	55
CLASSROOM 5	FIRST	RTU-1	556	10	500	10	0.18	100	100	200	0.8	250	30	50
CLASSROOM 6	FIRST	RTU-3	448	12	775	10	0.18	120	81	201	0.8	251	35	78
CLASSROOM 7	FIRST	RTU-1	452	12	550	10	0.18	120	81	201	0.8	252	35	55
BONDING ROOM	FIRST	RTU-2	59	2	50	5	0.06	10	4	14	0.8	17	10	10
CONFERENCE ROOM	FIRST	RTU-3	138	5	150	5	0.06	25	8	33	0.8	42	15	15
CORRIDOR	FIRST	RTU-2	837	0	350	0	0.06	0	50	50	0.8	63	10	70
OFFICE	FIRST	RTU-3	209	6	200	5	0.06	30	13	43	0.8	53	20	20
CLASSROOM 8	SECOND	RTU-6	454	12	1,050	5	0.12	60	55	115	0.8	143	40	105
CLASSROOM 9	SECOND	RTU-5	456	12	625	10	0.18	120	82	202	0.8	253	35	63
CLASSROOM 10	SECOND	RTU-5	532	12	750	10	0.18	120	96	216	0.8	270	35	75
CLASSROOM 11	SECOND	RTU-5	512	16	625	10	0.18	160	92	252	0.8	315	45	63
CLASSROOM 12	SECOND	RTU-4	513	16	650	0	0.06	0	31	31	0.8	39	45	65
CLASSROOM 13	SECOND	RTU-4	597	18	650	10	0.18	180	108	288	0.8	359	50	65
CLASSROOM 14	SECOND	RTU-4	586	18	650	10	0.18	180	106	286	0.8	357	50	65
STAFF LOUNGE	SECOND	RTU-6	185	4	250	5	0.06	20	11	31	0.8	39	15	25
CORRIDOR	SECOND	RTU-6	652	0	600	0	0.06	0	39	39	0.8	49	10	60

UNIT HEATERS

ECH X

NO.	MAKE	MODEL	KW	VOLTS	PHASE	AMPS	CB SIZE AMPS	THERMOSTAT	MOUNTING	REMARKS
ECH-1	QMARK	CDF548	4	208	1	19.2	25	INTEGRAL	CEILING MOUNTED	NOTE: 1-4
ECH-2	QMARK	QCH1101F	0.5	120	1	4.7	15	INTEGRAL	CEILING MOUNTED	NOTE: 1-3

NOTES:
1. PROVIDE THERMOSTAT.
2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
3. PROVIDE THERMAL OVERLOAD PROTECTION WITH MANUAL RESET.
4. PROVIDE WITH MOUNTING BRACKETS.

AIR PURIFICATION SYSTEM

AP X

TAG	MANUFACTURER	MODEL	LOCATION	AREA SERVED	CFM	ELECTRICAL					WEIGHT LBS	REMARKS
						POWER(W)	VOLTS	PHASE	HZ	AMPERAGE(A)		
AP-1,2,3, 4,5,6	RGF ENVIRONMENAL GROUP	MICROCON-600	RETURN MAIN	SEE PLAN	600	225	120	1	60	2	40	1-4

NOTES:
1. UNIT SHALL BE INSTALLED IN PARALLEL WITH THE MAIN RETURN DUCT FOR EACH RTU AS PER MANUFACTURER'S GUIDELINES.
2. UNIT SHALL BE EQUIPPED WITH FILTRATION SYSTEM AND REME-LED SYSTEM
3. PROVIDE ELECTRICAL OUTLET WITHIN 7 FEET OF THE UNIT AS PER MANUFACTURER GUIDELINES.
4. ALL PRICING AND ORDERS MUST BE DONE DIRECTLY THROUGH RGF, ROM LAUREANO: RLAUREANO@RGF.COM 561-318-4679.

EXHAUST FANS

(GREENHECK)

EF X

FAN No.	LOCATION	SERVICE	FAN					MOTOR		POWER			WEIGHT (LBS)	MANUFACTURER MODEL NUMBER	REMARKS
			CFM	STATIC PRESS. (IN WTR)	R.P.M.	UNIT TYPE	UNIT SIZE	HP	DRIVE TYPE	VOLTS	PHASE	Hz			
EF-1	ROOF	EXHAUST	1,650	1.5	1,725	G	140	1	DIRECT	115	1	60	68	GREENHECK G-140-VG	NOTES 1-5

NOTES:
1. PROVIDE ALUMINUM BIRDSCREEN
2. PROVIDE WITH MINIMUMM 18" ROOF CURB.
3. PROVIDE GRAVITY BACKDRAFT DAMPER.
4. PROVIDE UNIT MOUNTED NEMA-3R DISCONNECT SWITCH.
5. FAN SHALL OPERATE 24/7.

BIPOLAR IONIZATION FILTER

BPF X

TAG	MANUFACTURER	MODEL	LOCATION	ELECTRICAL					WEIGHT LBS	REMARKS
				POWER(W)	VOLTS	PHASE	HZ	AMPERAGE(A)		
BPF-1	PHENOMENAL AIRE	R 6.0	RETURN INLET	12	24	1	60	0.50	1	1 & 2

NOTES:
1. UNIT SHALL BE INSTALLED IN RETURN SIDE OF AHU AFTER THE FILTER AND BEFORE THE COIL.
2. UNIT SHALL BE POWERED BY ASSOCIATED RTU. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.

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SHEET NO.
M-302

1. SCOPE OF WORK

1.1. THE WORK UNDER THIS SECTION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, HOISTING, SCAFFOLDING, SUPPORT, SUPERVISION., SERVICES AND OPERATIONS NECESSARY TO COMPLETE THE INSTALLATION OF THE HEATING, VENTILATING AND AIR CONDITIONING WORK SHOWN IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE SCOPE OF WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING.

2. GENERAL CONDITIONS - HVAC

2.1. THE GENERAL CONDITIONS AND THE SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AND THE ARCHITECTS AND ENGINEER'S SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

2.2. THE ENTIRE INSTALLATION SHALL CONFORM WITH THE MOST RECENTLY REVISED VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS, CODES, ORDINANCES OF FEDERAL, STATE AND LOCAL AUTHORITES HAVING JURISDICTION, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: THE STATE ENERGY CONSERVATION CODE, IBC CODE, NATIONAL ELECTRIC CODE, INDUSTRIAL RISK INSURERS, ELECTRIC TESTING LABORATORY, ASHRAE, ASME, NFPA, AND UL.

2.3. ALL WORK AND MATERIALS SHALL BE GUARANTEED AS TO QUALITY AND WORKMANSHIP, AND GUARANTEED AGAINST ALL DEFECTS, FOR A PERIOD OF ONE YEAR.

2.4. THE CONTRACTOR AND SUBCONTRACTORS, IF ANY, COVENANT AND AGREE:

2.4.1. TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, ARCHITECT AND CONSULTING ENGINEERS AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEYS' FEES, ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS OR HIS OR THEIR AGENTS, SERVANTS AND EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES, OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIALS, METHODS OR TOOLS.

2.4.2. TO EXECUTE THE WORK IN THE BEST AND MOST THOROUGH MANNER AND TO THE SATISFACTION OF THE OWNER, ARCHITECT AND CONSULTING ENGINEERS, WHO WILL JOINTLY INTERPRET THE MEANING OF THE DRAWINGS AND SPECIFICATIONS AND SHALL HAVE THE POWER TO REJECT ANY WORK AND MATERIALS WHICH, IN THEIR JUDGMENT, ARE NOT IN FULL ACCORDANCE THEREWITH.

2.4.3. TO BE RESPONSIBLE FOR ALL MATERIAL UNTIL COMPLETION AND FINAL ACCEPTANCE. REPLACE ANY MATERIAL AND/OR EQUIPMENT WHICH MAY BE DAMAGED, LOST OR STOLEN AND TO DO OVER ANY REJECTED WORK WITHOUT ADDITIONAL COST TO THE OWNER. GUARD THE BUILDING AND ITS CONTENTS AGAINST DAMAGE BY THE CONTRACTOR OR HIS EMPLOYEES, AND MAKE GOOD ANY DAMAGE FREE OF CHARGE.

2.4.4. THAT HE WILL PROVIDE AND MAINTAIN A SAFE PLACE TO WORK AND THAT HE WILL COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF, AND THAT HE AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, ARCHITECT AND CONSULTING ENGINEERS FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES, ARISING FROM A FAILURE OR ALLEGED FAILURE ON HIS PART PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT, ERROR OR OMISSION ALLEGEDLY RESULTING IN THE DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES, OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIAL OR TOOLS.

2.4.5. THAT ANY CONTROVERSY OR DISPUTE TO WHICH THE CONTRACTOR, OWNER, ARCHITECT OR CONSULTING ENGINEERS ARE PARTIES SHALL BE SUBMITTED TO ARBITRATION BEFORE THE AMERICAN ARBITRATION ASSOCIATION FOR DECISION IN ACCORDANCE WITH THE RULES OF SUCH ASSOCIATION FOR CONSTRUCTION INDUSTRY DISPUTES. THE CONTRACTOR AGREES TO MAKE AVAILABLE TO THE CONSULTING ENGINEERS, ON DEMAND, SIGNED COPIES OF THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR AND BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS. THE CONTRACTOR AGREES THAT BY SUBMITTING A BID WHICH IS ACCEPTED, THIS PARAGRAPH SHALL BE DEEMED A WRITTEN AGREEMENT TO SUBMIT TO ARBITRATION ANY CONTROVERSY THEREAFTER ARISING.

2.4.6. PUT WORK IN PLACE AS FAST AS REASONABLY POSSIBLE; AT ALL TIMES, KEEP A COMPETENT FOREMAN IN CHARGE OF THE WORK AND FACILITATE ITS INSPECTION BY THE CONTRACTOR, ARCHITECT AND CONSULTING ENGINEERS.

2.4.7. EXCEPT FOR SUCH CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE OWNER, ARCHITECT AND CONSULTING ENGINEERS, IN ACCORDANCE WITH ALTERNATES OR OPTIONS STATED HEREAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, COMPLETE IN EVERY WAY FOR EFFICIENT AND SATISFACTORY OPERATION WHEN DELIVERED TO THE OWNER.

2.4.8. THAT THE MATERIALS WILL BE NEW AND THE WORKMANSHIP SUPPLIED UNDER THESE SPECIFICATIONS WILL BE OF THE BEST GRADE, THE APPARATUS WILL BE ERECTED IN A PRACTICAL AND FIRST CLASS MANNER, IT WILL BE COMPLETE AND READY FOR OPERATION, NOTHING OMITTED IN THE WAY OF LABOR AND MATERIAL REQUIRED TO MAKE IT SO, ALTHOUGH NOT SPECIFICALLY SHOWN IN DETAIL OR MENTIONED HEREIN, AND THAT IT WILL BE DELIVERED IN GOOD WORKING ORDER, COMPLETE AND PERFECT IN EVERY RESPECT WITHOUT ADDITIONAL COST.

2.4.9. THAT SUBMISSION OF A BID IS A REPRESENTATION THAT THEY HAVE BECOME THOROUGHLY ACQUAINTED WITH THE WORK INVOLVED AND HAVE OBTAINED AND VERIFIED AT THE BUILDING ALL MEASUREMENTS NECESSARY FOR THE PROPER INSTALLATION OF WORK. FURNISH TO ALL SECTIONS ANY INFORMATION RELATING TO WORK OF THIS SECTION NECESSARY FOR THE PROPER INSTALLATION OF THEIR SECTIONS. THE CONTRACTOR SHALL COORDINATE FOR FINISHES ADJACENT TO WORK OF THIS SECTION AND TO ARRANGE TO HAVE VISIBLE PORTIONS OF WORK FIT IN AND HARMONIZE WITH THE FINISH IN A MANNER SATISFACTORY TO THE ARCHITECT.

2.4.10. TO MAKE EVERY EFFORT TO FURNISH ALL EQUIPMENT OF ANY GENERIC TYPE FROM ONE MANUFACTURER.

2.4.11. WHERE INCONSISTENCIES OCCUR BETWEEN THE PLANS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT ITSELF, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY OR HIGHER COST HAS BEEN INCLUDED IN THE BASE BID.

2.5. THE CONTRACTOR SHALL PREPARE AND SUBMIT ALL APPLICATIONS TO AUTHORITIES AND OBTAIN ALL NECESSARY BUILDING PERMITS, EQUIPMENT USE PERMITS, COMPLETE ALL TESTS AND PAY ALL NECESSARY FEES.

2.6. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURFACES, UTILITIES, MECHANICAL SYSTEMS, ETC., AND REPAIR ALL DAMAGES TO SAME DURING THE COURSE OF THIS CONTRACTOR'S WORK, AT HIS EXPENSE.

2.7. REMOVABLE ACCESS TILES OR ACCESS DOORS ARE REQUIRED IN HUNG CEILING FOR VOLUME DAMPERS, FIRE DAMPERS, AUTOMATIC LOUVER DAMPERS, SMOKE DETECTORS, VALVES, AND ALL OTHER MECHANICAL EQUIPMENT WHICH REQUIRES SERVICE. FURNISH ACCESS LOCATION REQUIREMENTS TO CONSTRUCTION MANAGER/GENERAL CONTRACTOR.

2.8. SUBMIT SHEET METAL SHOP STANDARDS, EQUIPMENT CUTS, DETAILED COORDINATED SHOP DRAWINGS OF ALL PIPING AND DUCT LAYOUTS FOR APPROVAL. PREPARE AND SUBMIT DRAWINGS SHOWING THE METHOD OF SUPPORT AND WEIGHT OF ALL EQUIPMENT, PIPING AND DUCTWORK FOR REVIEW BY THE ARCHITECT, ENGINEER AND BUILDING STRUCTURAL ENGI-NEER. PROMPTLY REVISE SHOP DRAWINGS AS REQUIRED BY THE OWNER, ARCHITECT OR ENGINEER AND RESUBMIT FOR FINAL APPROVAL. NO WORK SHALL START UNTIL EQUIPMENT CUTS, SHOP STANDARDS AND SHOP DRAWINGS ARE SUBMITTED AND APPROVED BY ARCHITECT AND/OR ENGINEER. COORDINATED DRAWINGS SHALL INCLUDE ALL MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION AND GENERAL CONSTRUCTION DRAWINGS.

2.9. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND/OR SAMPLES WITH REASONABLE PROMPTNESS AND WILL RETURN THEM TO THE CONTRACTOR STAMPED TO INDICATE THE APPROPRIATE ACTION AS FOLLOWS:

2.9.1. "NO EXCEPTION TAKEN" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS.

2.9.2. "MAKE CORRECTIONS NOTED" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE ARCHITECT'S AND/OR ENGINEERS NOTATIONS AND THE CONTRACT DOCUMENTS. A COPY OF THE CORRECTED SUBMITTAL MUST BE RETURNED TO THE ARCHITECT AND/OR ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE NOTATIONS, THE CONTRACTOR MUST RESUBMIT AS DESCRIBED FOR SUBMITTALS STAMPED "REVISE AND RESUBMIT"

2.9.3. "REVISE AND RESUBMIT" MEANS THAT THE CONTRACTOR MUST COMPLY WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND RESUBMIT BEFORE FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE PROJECT SITE.

2.9.4. "REJECTED" MEANS THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURE OR CONSTRUCTION SHALL NOT PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE PROJECT SITE.

2.9.5 PREPARE AND FURNISH TO THE OWNER "AS-BUILT" DRAWINGS UTILIZING THE LATEST VERSION OF AUTOCAD EMPLOYING THE BUILDING OWNER'S LAYERING SYSTEM FOR ALL WORK INSTALLED. PROVIDE OPERATING AND MAINTENANCE MANUALS (3 COPIES), INCLUDING WIRING DIAGRAMS, LUBRICATION CHARTS AND RECOMMENDED PREVENTATIVE MAINTENANCE PROCEDURES, FOR EACH SYSTEM OR PIECE OF EQUIPMENT.

3. FIRE DAMPERS

3.1. FIRE DAMPERS SHALL BE DYNAMIC TYPE, RATED TO CLOSE AGAINST AIR FLOW WITH A MINIMUM 6.0 INCHES W.G. PRESSURE DIFFERENTIAL ACROSS THE CLOSED DAMPER, UL LISTED AND BE APPROVED FOR USE AND BEAR THE LABEL OF THE LOCAL GOVERNING AGENCY WHERE REQUIRED. 3.2. REFER TO ARCHITECT'S DRAWINGS FOR LOCATION OF FIRE-RATED PARTITIONS. INSTALL FIRE DAMPERS WITH ACCESS DOORS IN ALL EXISTING AND NEW DUCTWORK, ALL RETURN AIR OPENINGS AND/OR MASONRY OPENINGS WHICH CROSS FIRE- RATED PARTITIONS. 3.3. FIRE DAMPERS MUST BE INSTALLED IN ACCORDANCE WITH UL555 AND MANUFACTURER'S INSTRUCTIONS. EXISTING FIRE DAMPERS MUST BE PROVIDED WITH ANGLE IRON FRAMES WHERE REQUIRED.

4. GRILLES, REGISTERS, DIFFUSERS

4.1 CEILING DIFFUSERS, RETURN GRILLES AND REGISTERS SHALL BE SIZED IN ACCORDANCE WITH THE TABLES ON THE DRAWING. SUPPLY REGISTERS SHALL BE FURNISHED WITH O.B.D.'S AND PATTERN CONTROLLERS. RETURN REGISTERS SHALL BE PROVIDED WITH O.B.D.'S. FRAME AND BORDER TYPES ARE TO BE COMPATIBLE WITH CEILING CONSTRUCTION. THE COLOR OF ALL AIR DEVICES IS SUBJECT TO THE OWNERS APPROVAL. PROVIDE BLANK- OFF BAFFLES IN CEILING DIFFUSERS AS SHOWN ON DRAWINGS. FOR EXACT LOCATIONS OF DIFFUSERS, GRILLES AND REGISTERS, REFER TO ARCHITECTURAL DRAWINGS.

4.2 AIR DISTRIBUTION DEVICES (DIFFUSERS, REGISTERS, LINEARS, AIR SLOTS, ETC.) INSTALLED IN INACCESSIBLE CEILINGS SHALL BE PROVIDED WITH REMOTE DUCT MOUNTED OBD'S OPERABLE THROUGH THE FACE OF THE AIR DISTRIBUTION DEVICE.

4.3 AS PART OF THIS WORK, ALL AIR OUTLETS SHOWN ON DESIGN DRAWINGS SHALL BE BALANCED BY AN INDEPENDENT BALANCER. SUBMIT BALANCING REPORTS FOR APPROVAL TO ARCHITECT AND ENGINEER.

5. SHEETMETAL AND DUCTWORK

5.1. DUCT LAYOUT SHOWN IS A SCHEMATIC REPRESENTATION OF DESIGN INTENT. NO ADDED COMPENSATION SHALL BE PERMITTED FOR VARIATIONS DUE TO FIELD CONDITIONS. COORDINATION WITH BOTH NEW AND EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED. ANY MAJOR VARIANCES OR DISCREPANCIES ARE TO BE INDICATED ON THE SHOP DRAWINGS AND REPORTED TO THE ARCHITECT AND/OR ENGINEER.

5.2. SHEET METAL DUCT AND PLENUM CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF SMACNA, "HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE" LATEST EDITION, WITH THE EXCEPTIONS HEREIN NOTED.

5.3. SHOP STANDARDS FOR SHEET METAL AND DUCT CONSTRUCTION MUST BE SUBMITTED AND APPROVED PRIOR TO FABRICATION.

5.4. NEW SUPPLY DUCTWORK FROM A/C UNIT SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH TABLE 1-5 FOR 1" OR LESS PRESSURE.

5.6. ALL BRANCH DUCTWORK (SUPPLY AND RETURN) SHALL BE PROVIDED WITH VOLUME CONTROL DAMPERS. VOLUME CONTROL DAMPERS SHALL BE OF THE QUADRANT TYPE CONSTRUCTED IN ACCORDANCE WITH FIGURES 2-12 AND 2-13 OF THE SMACNA STANDARDS.

5.7. WHEREVER REINFORCING IS REQUIRED ON 2 SIDES, THE ENDS OF THE REINFORCING MUST BE CONNECTED TOGETHER BY MEANS OF RODS OR ANGLES AS SHOWN IN FIGURE 1-11 OF THE SMACNA STANDARDS.

5.8. THE USE OF BUTTON PUNCH, SNAP-LOCK (L-2), STANDING SEAM (L-4) AND SINGLE CORNER SEAM (LO-5) LONGITUDINAL SEAMS IS PROHIBITED.

5.9. THE FOLLOWING TRANSVERSE JOINTS ARE NOT PERMITTED: LAP (T-4), REINFORCED S SLIP (T-7), STANDING SEAMS (T-15 AND T-16), POCKET LOCK (T-17, T-18 AND T-19) AND CAPPED FLANGE (T-20).

5.10. WHERE MANUFACTURED TRANSVERSE JOINTS ARE USED (SMACNA T-25A, T-25B, I.E. DUCT MATE, TDC, TDF ETC.), THEY SHALL BE SUBMITTED WITH AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDS FOR CONSTRUCTION AND INSTALLATION.

6. DUCTWORK ACCESSORIES

6.1. VOLUME DAMPERS TO BE FACTORY FABRICATED, WITH REQUIRED HARDWARE AND ACCESSORIES. CLOSE DUCT PENETRATIONS FOR DAMPER COMPONENTS TO SEAL DUCT CONSISTENT WITH PRESSURE CLASS.

6.1.1 VOLUME DAMPERS: MULTIPLE-OPPOSED BLADE TYPE IN RECTANGULAR APPLICATIONS, AND SINGLE-BLADE IN ROUND APPLICATIONS, STANDARD LEAKAGE RATING, AND SUITABLE FOR HORIZONTAL OR VERTICAL APPLICATIONS.

A. STEEL FRAMES: HAT-SHAPED, GALVANIZED SHEET STEEL CHANNELS, MINIMUM OF 0.064 INCH THICK, WITH MITERED AND WELDED CORNERS, FRAMES WITH FLANGES WHERE INDICATED FOR ATTACHING TO WALLS AND FLANGELESS FRAMES WHERE INDICATED FOR INSTALLING IN DUCTS.

B. ROLL-FORMED STEEL BLADES: 0.064-INCH THICK, GALVANIZED SHEET STEEL.

C. BLADE AXLES: GALVANIZED STEEL

D. BEARINGS: OIL-IMPREGNATED BRONZE

E. TIE BARS AND BRACKETS: GALVANIZED STEEL.

6.2. ACCESS DOORS TO BE FABRICATED AIRTIGHT AND SUITABLE FOR DUCT PRESSURE CLASS.

6.2.1 DOORS RECTANGULAR DUCT: DOUBLE WALL, DUCT MOUNTING, SQUARE OR RECTANGULAR, FABRICATED OF GALVANIZED SHEET METAL WITH INSULATION TO MATCH ADJACENT DUCTWORK AND THICKNESS AS INDICATED FOR DUCT PRESSURE CLASS. INCLUDE 1 BY 1 INCH BUTT OR PIANO HINGE AND CAM LATCHES.

6.2.2. FRAME: GALVANIZED SHEET STEEL, WITH BEND-OVER TABS AND FOAM GASKETS. PROVIDE NUMBER OF HINGES AND LOCKS AS FOLLOWS:

A. LESS THAN 12 INCHES SQUARE: SECURE WITH TWO SASH LOCKS

B. UP TO 18 INCHES SQUARE: TWO HINGES AND TWO SASH LOCKS

C. UP TO 24 BY 48 INCHES: THREE HINGES AND TWO COMPRESSION LATCHES WITH OUTSIDE AND INSIDE HANDLES

D. SIZES 24 BY 48 INCHES AND LARGER: ONE ADDITIONAL HINGE

6.2.3. DOORS ROUND DUCT: DOUBLE WALL, DUCT MOUNTING, AND ROUND, FABRICATED OF GALVANIZED SHEET METAL WITH INSULATION FILL AND 1-INCH THICKNESS. INCLUDE CAM LATCHES.

6.2.4. FRAME: GALVANIZED SHEET STEEL, WITH SPIN-IN NOTCHED FRAME. SEAL AROUND FRAME ATTACHMENT TO DUCT AND DOOR TO FRAME WITH NEOPRENE OR FOAM RUBBER.

6.2.5. ACCESS DOORS TO BE FABRICATED AIRTIGHT AND SUITABLE FOR DUCT PRESSURE CLASS.

6.3. TEMPORARY TEST HOLES: CUT OR DRILL IN DUCTS AS REQUIRED. CAP WITH NEAT PATCHES, NEOPRENE PLUGS, THREADED PLUGS, OR THREADED OR TWIST-ON METAL CAPS.

6.4. TURNING VANES: GALVANIZED STEEL SHALL BE DOUBLE THICKNESS VANES WITH 2-INCH INSIDE RADIUS WHERE CALLED OUT ON PLANS.

6.5. WIRE MESH SCREEN (WMS): No. 16 USSG, 4" SQUARE MESH IN 1-INCH WIDE GALVANIZED STEEL ENCLOSING FRAME. FLANGED DUCT OPENING TO RECEIVE FRAME.

7. SMOKE AND COMBINATION FIRE AND SMOKE DAMPERS

7.1. DAMPER AND ACTUATOR TESTED AND LABELED ACCORDING TO UL555S AND UL 555. RATING AS REQUIRED FOR THE APPLICATION BUT NOT LESS THAN 1-1/2 HOUR RATING. LEAKAGE CLASSIFICATION SHALL BE UL555S CLASS I OR CLASS II. TEMPERATURE RATING: MINIMUM 250 DEGRESS VELOCITY AND PRESSURE RATING: MINIMUM 2,000 FPM VELOCITY AND MINIMUM 4 INCHES WATER GAGE PRESSURE RATINGS IN LOW VELOCITY (LESS THAN OR EQUAL TO 2,000 FPM) APPLICATIONS.

7.2. THERMAL SWITCH: RESETABLE, 165 DEGREES F RATED.

7.3. FRAME AND BLADES: 0.064-INCH, GALVANIZED SHEET STEEL.

7.4. MOUNTING SLEEVE: FACTORY-INSTALLED, MINIMUM 0.040-INCH THICK, GALVANIZED SHEET STEEL, LENGTH TO SUIT WALL OR FLOOR APPLICATION.

7.5. DAMPER MOTORS: PROVIDE FOR TWO-POSITION ACTION.

A. SPRING RETURN MOTORS: BRUSHLESS DC MOTOR WITH POSITION INDICATOR. EQUIPPED WITH AN INTEGRAL SPIRAL-SPRING MECHANISM.

B. ELECTRICAL CONNECTION: 115V, SINGLE PHASE, 60HZ.

8. DUCTWORK INSULATION AND ACOUSTIC TREATMENT

8.1. THERMAL AND ACOUSTICAL INSULATION AND ACCESSORY MATERIALS SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC., FOR A FIRE HAZARD CLASSIFICATION NOT TO EXCEED THE FOLLOWING: FLAME SPREAD, 25; FUEL CONTRIBUTION, 50; SMOKE DEVELOPED, 50, AS TESTED UNDER ASTM E-84, NFPA 255 OR UL 723 PROCEDURES.

8.2. WHERE INDICATED AND AS REQUIRED BY CODE, DUCTWORK SHALL BE ACOUSTICALLY LINED WITH 1 INCH THICK, 1-1/2 POUND DENSITY, MATTE-FACE DUCT-LINER FORMULATED WITH AN IMMOBILIZED EPA REGISTERED ANTI-MICROBIAL AGENT. DIMENSIONS OF LINED DUCTS ARE CLEAR INSIDE WITH LINING INSTALLED. DUCT LINER SHALL BE ADHERED BY A FIRE RETARDANT ADHESIVE. MECHANICAL FASTENERS SUCH AS GRIP NAILS, WHICH DO NOT PIERCE THE SHEET METAL SHALL BE INSTALLED ON 16 INCH CENTERS ON TOP SECTIONS (WHEN WIDTH EXCEEDS 16 INCHES), AND ON SIDES (WHEN HEIGHT EXCEEDS 24 INCHES). ALL ABUTTING EDGES OF ACOUSTIC LINING SHALL BE CAULKED, AND EXPOSED EDGES OF ACOUSTIC LINING SHALL BE PROVIDED WITH SHEET METAL NOSINGS.

8.3. AS REQUIRED BY CODE, ALL RECTANGULAR SUPPLY DUCTWORK WITHIN 15 FEET AND RETURN DUCTWORK WITHIN 10 FEET OF THE HVAC UNIT SHALL BE INTERNALLY LINED. INTERNAL LINING SHALL BE 1-INCH THICK, 1-1/2 LB DENSITY LINER. LINER SHALL HAVE A COATED SURFACE EXPOSED TO AIRSTREAM TO PREVENT EROSION. APPLY ADHESIVES AND MECHANICAL FASTENERS AS RECOMMENDED BY SMACNA AND THE MANUFACTURER TO PREVENT LINER SEPARATION FROM THE DUCT. ALL TRANSVERSE EDGES SHALL BE COATED WITH ADHESIVE.

8.4. CONCEALED NEW AND SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH A MINIMUM R-8 INCH THICK, 3/4 POUND DENSITY FIBER GLASS BLANKET WITH FACTORY-APPLIED SCRIM REINFORCED, FOIL FACED VAPOR BARRIER (FSK) WITH 2 INCH FLANGE. WRAP INSULATION TIGHTLY ON DUCT AND FIRMLY BUTT ALL JOINTS WITH 2 INCH FLANGE OVERLAP AT ALL SEAMS. ADHERE TO DUCT WITH 2/3 COVERAGE OF ADHESIVE APPLIED 4 INCH WIDE BANDS, 8 INCHES ON CENTERS. SEAL ALL JOINTS AND SEAMS WITH MINIMUM 3 INCH WIDE FSK TAPE. SUPPORT INSULATION ON THE BOTTOM OF RECTANGULAR DUCTS OVER 36 INCHES WIDE WITH A SINGLE ROW OF WELD PINS AND SPEED WASHERS, WIRE WRAPPING IS NOT PERMITTED. CUT WELD PINS OFF FLUSH WITH TOP OF SPEED WASHERS AND COVER WITH FSK TAPE TO MAINTAIN VAPOR BARRIER. WHERE ACOUSTICAL LINING IS INDICATED, NO THERMAL INSULATION IS REQUIRED.

9. REFRIGERANT PIPING AND FITTINGS

9.1. HARD COPPER TUBE: ASTM B280, TYPE ACR, CLEAN, DRY, DRAWN TEMPER, AND CAPPED.

9.1.1 SOFT COPPER TUBE: ASTM B280, TYPE ACR, CLEAN, DRY, ANNEALED TEMPER, AND CAPPED. ANNEALED COPPER TUBING MUST NOT BE USED FOR PIPING WITH AN OUTSIDE DIAMETER (O.D.) LARGER THAN 0.625-INCH.

9.2. FITTINGS: COPPER, ASME B16.22, WROUGHT COPPER STREAMLINED PATTERN

9.3. JOINING MATERIALS: BRAZING FILLER METALS, AWS A5.8, CLASSIFICATION BAg-1 (SILVER) FLARED: BRONZE OR BRASS FOR REFRIGERATION, ASME B16.26

9.4. MOISTURE INDICATORS: 500 PSIG OPERATING PRESSURE, 200°F OPERATING TEMPERATURE, FORGED BRASS BODY, WITH REPLACEABLE, POLISHED, OPTICAL VIEWING WINDOW WITH COLOR-CODED MOISTURE INDICATOR, AND SOLDER-END CONNECTIONS.

9.5. FILTER DRYER: 350 PSIG OPERATING PRESSURE, 225°F OPERATING TEMPERATURE, STEEL SHELL, AND WROUGHT-COPPER FITTINGS, FOR SOLDER-END CONNECTION, MOLDED-FELT CORE SURROUNDED BY DESICCANT.

9.6. FIELD QUALITY CONTROL: INSPECT AND TEST REFRIGERANT PIPING ACCORDING TO ASME B31.5, CHAPTER VI.

9.7. FIELD QUALITY CONTROL: INSPECT AND TEST REFRIGERANT PIPING ACCORDING TO ASME B31.5, CHAPTER VI.

9.8. PIPING TEST: PRESSURE TEST WITH NITROGEN TO 200 PSIG. PERFORM FINAL TESTS AT 27-PSIG VACUUM AND 200 PSIG USING HALIDE TORCH OR ELECTRONIC LEAK DETECTOR. TEST TO NO LEAKAGE.

9.8.1 TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED OR MALFUNCTIONING CONTROLS OR EQUIPMENT.

9.8.2 REPAIR LEAKS USING NEW MATERIALS; RETEST.

9.9. PIPING INSULATION: FLEXIBLE ELASTOMERIC, CLOSED-CELL, SPONGE OR EXPANDED-RUBBER MATERIALS. COMPLY ASTM C534, TYPE I FOR TUBULAR MATERIALS. TEMPERATURE: -70°F TO 220°F. THERMAL CONDUCTIVITY: 0.27 AVERAGE MAXIMUM AT 75°F FIRE PERFORMANCE CHARACTERISTICS: FLAME SPREAD-25, SMOKE DEVELOPMENT-50.

9.9.1 INSULATION THICKNESS: 1" THICK INSULATION FOR PIPING 1-1/2" AND BELOW, 1-1/2" THICK INSULATION FOR PIPING 2" TO 4".

9.10 REFRIGERANT LINE SIZES BETWEEN INDOOR AND OUTDOOR EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR CAPACITIES REQUIRED AND PIPE LENGTHS TO BE INSTALLED.

9.11 LISTED AND LABELED SELF-CONTAINED, FACTORY-BUILT EQUIPMENT AND APPLIANCES SHALL BE TESTED IN ACCORDANCE WITH UL 207, 412, 471 OR 1995

10. CONDENSATE DRAIN PIPING

10.1. CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE TYPE PVC. PIPE SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 1/8-INCH PER FOOT. PIPING SHALL BE INSULATED, WHERE CALLED OUT ON PLANS, WITH MINIMUM .5" THICK ARMSTRONG AP ARMAFLEX OR EQUAL.

11. PIPING SUPPORT

11.1. SUPPORT PIPING WITH ADJUSTABLE HANGERS OR SUPPORTS. SPACE HANGERS OR SUPPORTS, AS NECESSARY TO MAINTAIN SLOPE AND PREVENT SAGGING. DO NOT USE PERFORATED METAL STRAP IRON OR BAND IRON HANGERS. OFFSETS IN HANGERS SHALL NOT BE PERMITTED. THREADS SHALL BE ON ENDS ONLY WHERE HANGER RODS ARE INSTALLED EXPOSED IN FINISHED AREAS.

11.2. USE HANGERS OR SUPPORTS ON INSULATED PIPING SIZED TO PERMIT INSULATION PASSING CONTINUOUSLY THROUGH HANGER. SUPPORT INSULATED PIPING OUTSIDE OF COVERING. USE 16-GAUGE GALVANIZED SHEET METAL SHIELDS FOR PROTECTING PIPE COVERING. SHIELDS SHALL BE A MINIMUM OF SIX-INCHES LONG FOR PIPE SIZES UP THROUGH 2-1/2-INCHES AND NINE-INCHES LONG FOR THREE THROUGH SIX-INCH PIPE. WHERE ROLLER SUPPORTS OR HANGERS ARE USED PIPE COVERING PROTECTION SADDLES SHALL BE USED IN LIEU OF SHIELDS. SADDLES AND SHIELDS SHALL BE STANDARD CATALOGUED PRODUCTS.

11.3. HANGERS SUPPORTING COPPER PIPE SHALL BE COPPER PLATED STEEL.

11.4. PIPE HANGERS SHALL BE SUPPORTED FROM BUILDING STRUCTURE WITH "C" CLAMPS SIZED AND PLACED TO ACCOMMODATE THE LOADS IMPOSED BY THE PIPING SYSTEM.

11.5. HANGERS, SUPPORTS AND APPURTENANCES SHALL BE AS MANUFACTURED BY F&S CENTRAL, CARPENTER AND PATERSON, GRINNELL OR APPROVED EQUAL. THE FOLLOWING, AS MANUFACTURED BY F&S CENTRAL ARE REPRESENTATIVE OF THE TYPES AND QUALITY REQUIRED. PIPE RINGS-FIG. No. 4, 22, AND 86; CLAMPS-FIG. No. 88, 91 AND 92; BRACKETS-FIG. No. 65, 800, 801, 805 AND 850; RODS AND ROD ATTACHMENTS-FIG. No. 225, 226, 11, 33, 39, AND 966; SADDLES-FIG. No. 420, 421, 424 AND 427. 11.6. HANGER SPACING: THE SPACING OF SINGLE HANGERS FOR STRAIGHT, HORIZONTAL OR VERTICAL RUNS OF PIPE SHALL NOT EXCEED SPANS LISTED IN TABLE. THE SPACING OF MULTIPLE TRAPEZE HANGERS SHALL NOT EXCEED TEN FEET. A HANGER SHALL BE PLACED WITHIN ONE FOOT OF EACH HORIZONTAL ELBOW.

HANGER SPACING TABLE

PIPE SIZE (IN)	MAX. SPAN (FEET)	MIN. ROD SIZE (IN)
$\frac{1}{2}$ TO 1	5'-0"	$\frac{1}{4}$"
1 $\frac{1}{4}$	7'-0"	$\frac{3}{8}$"
1-$\frac{1}{2}$ TO 2	8'-0"	$\frac{3}{8}$"
2-1/2	9'-0"	$\frac{3}{8}$"

12. TESTING AND BALANCING

12.1. HVAC CONTRACTOR SHALL PERFORM PROPORTIONAL BALANCING AND PROVIDE REPORTS FOR REVIEW AND APPROVAL.

12.2. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY.

12.3. FANS AND AIR HANDLING UNITS SHALL BE BALANCED TO WITHIN +5% OF THEIR CAPACITIES. ALL OTHER AIR QUANTITIES SHALL BE BALANCED TO WITHIN +10% OF THE DESIGN QUANTITIES.

13. CLEANING

13.1. DUCTWORK: DUCTS SHALL BE THROUGHLY CLEANED SO THAT NO DIRT OR DUST SHALL BE DISCHARGED FROM DIFFUSERS, REGISTERS, OR GRILLES WHEN SYSTEM IS IN OPERATION.

13.2. EQUIPMENT: AFTER COMPLETION OF PROJECT, CLEAN THE EXTERIOR SURFACE OF EQUIPMENT INCLUDED IN THIS SECTION, INCLUDING REMOVAL OF CONCRETE RESIDUE.

13.3. WORK AREA: AFTER COMPLETION OF PROJECT, REMOVE ALL CONSTRUCTION DEBRIS, TEMPORARY FACILITIES AND EQUIPMENT FROM WORK AREA. CLEAN WORK AREA TO PERMIT OCCUPATION.

14. CONTROLS

14.1. THE HVAC CONTRACTOR SHALL PROVIDE ALL MATERIAL, COMPONENTS, DEVICES, LOCAL THERMOSTATS, SAFETY DEVICES, CONTROL PANELS, CONTROL DAMPERS (LOW LEAKAGE TYPE), CONTROLLERS, TRANSFORMERS, ACTUATORS, SENSING DEVICES, TIME CLOCKS, RELAYS, CONTROL WIRING DIAGRAMS (LINE AND LOW VOLTAGE), INTERLOCKING WIRING, SMOKE DETECTORS, LABOR, ETC, INDICATED, REQUIRED OR SPECIFIED.

14.2. WORK SHALL INCLUDE ALL WIRING, CONTROL EQUIPMENT, AND ACCESSORIES NECESSARY TO MAKE THIS SYSTEM COMPLETE. ALL WIRING SHALL BE 24 VOLT. COORDINATE WITH MANUFACTURER FOR INTERCONNECTION WITH CONTROLS INCLUDED IN EQUIPMENT.

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062261-1

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

MECHANICAL SPECIFICATIONS

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
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SHEET NO.
M-401

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ELECTRICAL DRAWING / REVISION LOG

●	NEW OR REVISED ISSUE							
○	NON REVISED ISSUE							
		DATE:	08/08/2022	01/19/2023				
		ISSUE:	PERMIT SET	DOB COMMENTS				
NUMBER	NAME							
E-001	ELECTRICAL COVER SHEET		●	●				
E-101	ELECTRICAL FIRST FLOOR POWER PLAN		●	○				
E-102	ELECTRICAL SECOND FLOOR POWER PLAN		●	○				
E-103	ELECTRICAL ROOF POWER PLAN		●	○				
E-201	ELECTRICAL FIRST FLOOR LIGHTING PLAN		●	●				
E-202	ELECTRICAL SECOND FLOOR LIGHTING PLAN		●	○				
E-301	ELECTRICAL SPECIFICATIONS		●	○				
E-401	ELECTRICAL DETAILS		●	○				
E-402	ELECTRICAL DETAILS		●	○				
E-403	LIGHTBRIDGE ACADEMY ELECTRICAL EQUIPMENT DETAILS		●	○				
E-501	ELECTRICAL RISER DIAGRAMS		●	●				
E-601	ELECTRICAL PANEL SCHEDULES		●	●				

ELECTRICAL SYMBOLS LEGEND

J	JUNCTION BOX
S	SINGLE POLE, 120/277V LIGHT SWITCH: COMMERCIAL GRADE 'a' REPRESENTS CONTROL DESIGNATION.
S3	SINGLE POLE, 120/277V 3-WAY LIGHT SWITCH: COMMERCIAL GRADE 'a' REPRESENTS CONTROL DESIGNATION.
OS	OCCUPANCY SENSOR SWITCH. WATTSTOPPER #DW-100. (AUTO ON/AUTO OFF)
VS	VACANCY SENSOR SWITCH. WATTSTOPPER #DW-100. (MANUAL ON/AUTO OFF)
VSD	SINGLE POLE, WALL MOUNTED VACANCY (MANUAL ON/AUTO OFF) DIMMER SWITCH WATTSTOPPER #PW-311
VS	CEILING MTD. VACANCY SENSOR. WATTSTOPPER DT-300 W/BZ-150 POWERPACK.
OS	CEILING MTD. OCCUPANCY SENSOR. WATTSTOPPER UT-300 W/BZ-150 POWERPACK.
	120V 20A GFI DUPLEX RECEPTACLE COMMERCIAL GRADE.
	120V 20A DUPLEX RECEPTACLE COMMERCIAL SPECIFICATION GRADE.
	120V 20A QUAD RECEPTACLE COMMERCIAL SPECIFICATION GRADE.
	120V 20A CEILING MTD. DUPLEX RECEPTACLE COMMERCIAL SPECIFICATION GRADE.
TH	THERMAL DISCONNECT SWITCH. SIZE AS REQUIRED.
H a/c	UNFUSED DISCONNECT SWITCH. 'A'=NEMA RATING, 'B'=SWITCH RATING, 'C'=NUMBER OF POLES.
H a/c	FUSED DISCONNECT SWITCH. 'A'=NEMA RATING, 'B'=SWITCH RATING, 'C'=FUSE SIZE, 'D'= NUMBER OF POLES.
	TELEPHONE OUTLET. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE CEILING.
	DATA OUTLET. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE CEILING.
	COMBINATION TELEPHONE/DATA OUTLET. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE CEILING.
P	P.A. SYSTEM/MUSIC SPEAKER. EC TO PROVIDE 4X4 BACK BOX & 3/4"C STUBBED ABOVE HUNG CEILING.
WI-FI	WI-FI BOOSTER
S2 a,b	WATTSTOPPER LOW VOLTAGE 2 BUTTON ANALOG SWITCH LVSW-102. 'a','b' REPRESENT CONTROL DESIGNATION.
S3 a,b,c	WATTSTOPPER LOW VOLTAGE 3 BUTTON ANALOG SWITCH LVSW-103. 'a','b','c' REPRESENT CONTROL DESIGNATION.
S4 a,b,c,d	WATTSTOPPER LOW VOLTAGE 4 BUTTON ANALOG SWITCH LVSW-104. 'a','b','c','d' REPRESENT CONTROL DESIGNATION.
X	ENCLOSED CIRCUIT BREAKER, 'X' REPRESENTS NUMBER OF POLES AND 'Y' REPRESENTS FUSE SIZE.
CSP	TWO WAY COMMUNICATION EMERGENCY CALL BOX – SEE RISER FOR SPECIFICATIONS.

SECURITY DEVICE LEGEND

RA	REMOTE ACCESS SENSOR. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE ACCESSIBLE CEILING.
FR	FACIAL RECOGNITION SYSTEM SCANNER, PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE ACCESSIBLE CEILING.
	CAMERA. PROVIDE 3/4" CONDUIT TO SERVER ROOM WHERE WIRING IS EXPOSED.
MD	MOTION DETECTOR. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE ACCESSIBLE CEILING.
KP	KEYPAD DOOR ENTRY
PB	PANIC BUTTON
DR	DOOR RELEASE BUTTON. PROVIDE BACKBOX & 1" EC STUBBED AND BUSHED ABOVE ACCESSIBLE CEILING.

NOTE: ALL CONDUIT, BACK BOXES, AND WIRING TO BE PROVIDED AND INSTALLED BY CONTRACTOR. ALL CAMERAS AND EQUIPMENT FOR THE SECURITY SYSTEM TO BE PROVIDED BY LIGHTBRIDGE.

ABBREVIATIONS

A	AMPERE
A/C	AIR CONDITIONING
A.F.F.	ABOVE FINISH FLOOR
A.R.	AS REQUIRED
ARCH	ARCHITECT
B.B.	BASE BUILDING
BLDG	BUILDING
C, CDT	CONDUIT
C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CRAC	COMPUTER ROOM AIR CONDITIONER
D	DEMOLISH
DEPT.	DEPARTMENT
DJ	DOOR JAM
DN	DOWN
DP	DISTRIBUTION PANEL
DWG	DRAWING
E, EX	EXISTING
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EQUIP	EQUIPMENT
ER	EXISTING TO BE RELOCATED
FIXT	FIXTURE
FL	FLOOR
FLUOR	FLUORESCENT
G, GND	GROUND
GALV	GALVANIZED
GFI	GROUND FAULT INTERRUPTER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
IG	ISOLATED GROUND
LP	LIGHTING PANEL
KP	KEY PAD
LS	LIFE SAFETY
MANF	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
M.O.A.	MULTI-OUTLET ASSEMBLY
MTD	MOUNTED
N	NEW
NL	NIGHT LIGHT
N.I.C	NOT IN CONTRACT
No., #	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
POTS	PLAIN OLD TELEPHONE SERVICE
R, RE	RELOCATED EXISTING EQUIPMENT
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SPEC	SPECIFICATION
SW	SWITCH
TC	TIME CLOCK
TEL	TELEPHONE
TRAC	TECHNOLOGY ROOM AIR CONDITIONER
T/F, XFMR	TRANSFORMER
TYP.	TYPICAL
U.O.N	UNLESS OTHERWISE NOTED
UP	UTILITY PANEL
V	VOLT
W/	WITH
WP	WEATHER PROOF WHILE IN USE

GENERAL ELECTRICAL NOTES

1. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRIC CODE, STATE LAWS, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIAL, AND LABOR TO SATISFY A COMPLETE AND WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
3. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED.
4. CONTRACTOR TO CONFIRM EXACT LOCATION OF EXISTING AND NEW EQUIPMENT WITH OWNERS AGENTS.
5. CONDUIT RUNS ARE DIAGRAMMATICALLY SHOWN ON THE DRAWINGS. FINAL ROUTING OF THE CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR.
6. FIELD MOUNTED DEVICES SUCH AS SWITCHES, MOTOR STARTERS, RECEPTACLES, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. SWITCH MOUNTING HEIGHT SHALL BE 48" ABOVE FINISHED FLOOR AND RECEPTACLE MOUNTING HEIGHT SHALL BE 18" ABOVE FINISHED FLOOR.
7. POWER WIRING SHALL BE COPPER CONDUCTOR WITH "THHN OR THWN" INSULATION RATED 600 VOLTS. MINIMUM WIRE SIZE OF POWER WIRING SHALL BE #12 AWG. LIGHTING AND RECEPTACLE BRANCH CIRCUIT WIRING SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON DRAWINGS OR SCHEDULES.
8. 20 AMP HOME RUN CIRCUITS MORE THAN 75 FEET FROM THE PANEL– BOARD SHALL BE MADE WITH #10 AWG OR LARGER AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MAXIMUM.
9. THE DESIGN TEMPERATURE OF THE CONDUCTORS AND THEIR TERMINATIONS SHALL BE 75°C.
10. THE TYPE OF CONDUIT SHALL BE AS FOLLOWS FOR ALL FEEDERS AND DISTRIBUTION CIRCUITS, UNLESS OTHERWISE SPECIFIED.

APPLICATION	TYPE OF CONDUIT
BURIED IN CONCRETE OR MASONRY, OR OUTDOORS	PVC
SERVICE ENTRANCE	PVC
SUPPLY TO DISTRIBUTION PANELS AND HVAC EQUIPMENT	EMT
BRANCH CIRCUITS	EMT OR MC

11. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING SYSTEMS (AS REQUIRED) IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
12. ALL RECEPTACLES SHALL BE GROUNDING TYPE.
13. ALL RECEPTACLES INSTALLED IN BATHROOMS AND KITCHENS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION AS REQUIRED BY THE NATIONAL ELECTRIC CODE.
14. ALL ELECTRIC MATERIALS AND EQUIPMENT FOR THE PROJECT SHALL BE NEW AND U.L. OR EQUALLY APPROVED.
15. CONTRACTOR TO CONFIRM EXACT LOCATION OF METERS WITH ELECTRIC UTILITY.
16. SUBMIT TO THE OWNER CERTIFICATES OF INSPECTIONS IN DUPLICATE FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION.
17. PERFORMANCE AND WITNESSING OF TESTS
    A. THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND QUALIFIED PERSONNEL OR FIRM TO PERFORM ALL REQUIRED TESTS.
    B. ALL NEW AND RECONNECTED ELECTRICAL CIRCUIT SHALL BE TESTED TO INSURE CIRCUIT CONTINUITY, INSULATION RESISTANCE, PROPER SPLICING AND GROUNDING IN ACCORDANCE WITH THE LATEST STANDARDS AS STATED ABOVE. BEFORE CONNECTING POWER CABLES TO MOTORS, THE INSULATION RESISTANCE OF ALL MOTOR WINDINGS SHALL BE TESTED IN ACCORDANCE WITH THE ABOVE STANDARDS.
    C. ANY CONTRACTOR FURNISHED AND/OR INSTALLED SPLICE, RECOMMENDED VOLTAGE AND INSULATION RESISTANCE TESTS, SHALL BE CONNECTED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
    D. NO EQUIPMENT SHALL BE ENERGIZED UNTIL ALL TESTS AND ADJUSTMENTS HAVE BEEN MADE.
    E. THREE COPIES OF ALL TEST RESULTS SHALL BE DELIVERED TO THE OWNER.
18. ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE MECHANICAL WORK AS CALLED FOR IN MECHANICAL SPECIFICATIONS.
19. ALL LOW VOLTAGE WIRING RELATED TO TELEPHONE AND COMPUTER TO BE PROVIDED BY CONTRACTOR.
20. IF SPACE ABOVE CEILING IS MEANT TO BE USED AS A PLENUM RETURN, ALL CONDUIT AND EQUIPMENT ABOVE CEILING AND IN INHABITABLE AIR HANDLING ROOMS SHALL BE METALLIC OR A PLENUM RATED MATERIAL.
21. ALL BREAKERS SERVING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.

FIRE ALARM SYSTEM INSTALLATION NOTES

1. THE FIRE ALARM SYSTEM SHALL BE INSTALLED AS TO BE IN FULL COMPLIANCE WITH THE GUIDELINE FOR THE INSTALLATION OF FIRE ALARM SYSTEMS BY NFPA 72, ALL CODES, ORDINANCES, RULES, ORDERS AND OTHER LEGAL REQUIREMENTS OF THE CITY AND PUBLIC AUTHORITIES WHICH BEAR ON THE PERFORMANCE OF THIS WORK.
2. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE FIRE ALARM SYSTEM COMPLETE AND OPERABLE AS SHOWN ON THE DRAWINGS. ANY ITEM OR SERVICE REQUIRED TO INSTALL, CONSTRUCT, STARTUP OR OPERATE THIS SYSTEM SHALL BE CONSIDERED TO BE INCLUDED IN THIS SCOPE OF WORK EVEN IF IT IS NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS OR DRAWINGS.
3. FURNISH AND INSTALL AN ADDRESSABLE FIRE ALARM SYSTEM, CONTROL PANEL WITH STYLE A INITIATING DEVICE CIRCUITRY AND STYLE Y INITIATING APPLIANCE CIRCUITRY. BATTERY BACKUP OPERATION SHALL BE FOR A MINIMUM OF 48 HOURS WITH A FIVE MINUTE RINGDOWN AT THE END OF THE 48 HOUR PERIOD. PROVIDE A NAMEPLATE READING "FIRE ALARM CONTROL PANEL" ON THE FRONT. INSTALL FIRE DEPARTMENT LOCK AS REQUIRED.
4. INSTALL 1/2" MINIMUM SIZE EMT CONDUIT WITH COUPLINGS AND EXPANSION JOINTS; CABLE WITHOUT CONDUIT IS PERMITTED WHERE INSTALLED NOT EXPOSED; ROUTE AS REQUIRED.
5. FIRE ALARM CABLE SHALL BE SOLID CONDUCTORS, STRANDED CONDUCTORS ARE NOT ACCEPTABLE.
6. FURNISH AND INSTALL END-OF-LINE RESISTORS AND CLEARLY MARK THE LOCATION OF THIS DEVICE.
7. COVER ALL SMOKE DETECTORS UNTIL THE FINAL FIRE DEPARTMENT INSPECTION.
8. FURNISH AND INSTALL NAMEPLATES IN ACCORDANCE WITH THE FIRE DEPARTMENT GUIDELINES.
9. FURNISH AND INSTALL THE FOLLOWING (OR EQUAL): PULL STATIONS – GAMEWELL 30652-02, SMOKE DETECTOR – GAMEWELL 70884, HEAT DETECTOR – GAMEWELL 50417, HORN/LIGHT UNITS – GAMEWELL 7000 SERIES WITH 75 CANDELA STROBE & ADA REQUIRED STROBE ONLY – GAMEWELL LSM 75 CANDELA STROBE
   NOTE: THE ABOVE MANUFACTURER'S CATALOG NUMBERS INDICATE RECOMMENDED INSTALLATION. EQUAL SUBSTITUTIONS ARE ACCEPTABLE AND SHALL BE NOTED IN THE SHOP DRAWING/ SUBMITTAL PROCESS
10. CONNECT DUCT SMOKE DETECTORS IN THE HVAC SYSTEM (FURNISHED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR) TO ACTIVATE THE FIRE ALARM SYSTEM AND SHUTDOWN THE HVAC SYSTEM IN THE EVENT OF SMOKE IN THE DUCTS.
11. ALL FIRE ALARM SYSTEM COMPONENTS SHALL BE UL LISTED.
12. FURNISH AND INSTALL KNOX BOX (OR EQUAL), SIZE AND LOCATION AS DIRECTED BY THE FIRE
13. A SPRINKLER SYSTEM IS TO BE INSTALLED, FURNISH AND INSTALL TAMPER AND FLOW SWITCHES ACCORDING TO THE REQUIREMENTS OF THE FIRE DEPARTMENT.
14. LOCATE THE SMOKE DETECTOR TEST STATIONS IN THE SAME LOCATION AS THE FIRE ALARM CONTROL PANEL OR AS DIRECTED BY THE FIRE DEPARTMENT.
15. FURNISH & INSTALL FIRE ALARM MASTER BOX OR AUTOMATIC DIALER AND UL LISTED CENTRAL MONITORING STATION ACCORDING TO THE REQUIREMENTS OF THE TOWN FIRE DEPARTMENT, WHEN USING CENTRAL MONITORING STATION INCLUDE ALL ASSOCIATED STARTUP FEES.

FIRE ALARM DEVICE LEGEND

	FIRE ALARM 30 CD STROBE NOTIFICATION DEVICE (U.O.N.)
F	MANUAL FIRE ALARM PULL STATION (PROVIDE COVER WHERE ACCESSIBLE TO CHILDREN, INCLUDING CLASSROOMS AND HALLS)
F	FIRE ALARM 75 CD SPEAKER/STROBE NOTIFICATION DEVICE (U.O.N.)
R	RELAY
IAM	INTERFACEABLE ADDRESSABLE MODULE
IAM	IAM WITH RELAY
	TEST/RESET KEY SWITCH W/ LED
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
DSD	DUCT SMOKE DETECTOR
WF	WATER FLOW
TS	TAMPER SWITCH
FSD	FIRE SMOKE DAMPER (ACTIVATED VIA DUCT SMOKE DETECTOR WITHIN 5' OR LOCAL AREA SMOKE DETECTOR)
SD/CO	SMOKE/CARBON DETECTOR COMBINATION DETECTOR WITH TEMPORAL 4 SOUNDER BASE
FACP	FIRE ALARM CONTROL PANEL
RAAP	FIRE ALARM REMOTE ANNUNCIATOR PANEL

TYPICAL DEVICE MOUNTING HEIGHTS (U.O.N)

RECEPTACLES (U.O.N)	18" AFF
RECEPTACLES (COUNTER)	42" AFF
RECEPTACLES (BATHROOMS)	48" AFF
LIGHT SWITCHES	48" AFF TO TOP OF DEVICE
DISCONNECT SWITCHES	NEC 404.8(A)
TELEPHONE OUTLETS	50" AFF (U.O.N)
COMPUTER OUTLETS	18" AFF (U.O.N)
CLOCK OUTLETS	84" AFF
FIRE ALARM PULL STATION	42" AFF TO BOTTOM OF DEVICE / 44" AFF TO CENTER OF DEVICE
FIRE ALARM AUDIO/VISUAL ALARM	88" AFF TO BOTTOM OF DEVICE (80" AFF MIN TO BOTTOM OF LENS/96" AFF MAX)
EXIT LIGHTS (WALL MTD)	12" ABOVE DOOR
EMERGENCY LIGHTS(WALL MTD)	90" AFF
TV OUTLETS	68" AFF (U.O.N)
AUDIO OUTLETS	90" AFF (U.O.N)
DOOR RELEASE BUTTON	48" AFF (U.O.N)
PA ANNUNCIATOR PANEL	48" AFF TO TOP OF DEVICE
PA SPEAKERS	82" AFF TO BOTTOM OF DEVICE
PANIC BUTTON	48" AFF (U.O.N)

NOTE: DIMENSIONS ARE TO DEVICE CENTERLINE UNLESS OTHERWISE NOTED

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
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LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL COVER SHEET

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
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E-001

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ELECTRICAL GENERAL REQUIREMENTS:

TELEPHONE
1. CONTRACTOR SHALL PROVIDE AND INSTALL TELEPHONE CABLES AT LOCATIONS SHOWN ON PLANS.
2. CONTRACTOR SHALL TERMINATE ALL CABLING TO I.T. CLOSET.

RECEPTACLES:
1. ALL RECEPTACLES SHALL BE TAMPER RESISTANT AS MANUFACTURED BY "PASS & SEYMOUR". CHILD PROOF GFCI RECEPTACLE.

PANEL BOARDS:
1. CIRCUIT BREAKERS SHALL HAVE A COMMON TRIP ON ALL MULTI-POLE BREAKERS AND CONTRACTOR TO PROVIDE LABELING.
2. BUS AND HARDWARE SHALL BE BRACED FOR INTERRUPTING CAPACITY AS SHOWN ON PANEL BOARD SCHEDULE. BREAKERS SHALL MATCH AIC RATING OF PANEL AT PANEL VOLTAGE. ALL BUSSING SHALL BE COPPER.
3. PROVIDE EACH PANEL BOARD WITH GREEN CODED GROUND BAR, FOR GREEN EQUIPMENT GROUND WIRES. EACH BAR TO HAVE A MINIMUM CAPACITY FOR THE NUMBER OF POLES IN PANEL WITH SOLDER-LESS. BOX LUGS FOR WIRE SIZE NO. 12 MINIMUM TO NO. 4 MAXIMUM. ONE WIRE PER LUG. LOCATE BAR ADJACENT TO NEUTRAL BAR BOLT OR WELD TO BACK BOX.
4. MAIN CIRCUIT BREAKERS & SWITCH BOARDS WHERE REQUIRED, MUST BE APPROVED BY LOCAL UTILITY.

RECEPTACLES CONTINUED:
5. PROVIDE 208Y/120V PANEL-BOARDS WITH AN ISOLATED NEUTRAL BAR. THERE SHALL BE AS MANY TERMINALS AS THERE ARE CIRCUIT POLES. THE TERMINAL FOR THE FEEDER NEUTRAL SHALL MATCH THE SIZE OF THE FEEDER PHASE TERMINATION(S).
6. LANDLORD/CONTRACTOR SHALL LABEL ALL CIRCUIT BREAKERS.
7. LANDLORD/CONTRACTOR SHALL INSTALL ALL DISTRIBUTION DEVICES, INCLUDING J-BOXES. SWITCHES AND RECEPTACLES PER LOCAL BUILDING CODES AND THE APPROVED PLANS. EACH CLASSROOM LIGHTING SYSTEM SHALL BE SEPARATELY SWITCHED AND THE LOCATION OF LIGHT SWITCHES SHALL BE CONVENIENT TO THE ENTRANCE OF EACH CLASSROOM, SHARED TOILET BETWEEN CLASSROOMS SHALL BE SWITCHED FOR THREE WAY OPERATIONS.

OUTLET BOXES
1. GALVANIZED STAMPED STEEL FOR ALL INTERIOR LOCATIONS. MOUNT ALL BOXES SO THAT COVERS AND PLATES WILL MOUNT FLUSH WITH THE WALL AND CEILING FINISH SURFACE. PROVIDED PLASTER RINGS AS NECESSARY. GOOF RINGS ARE ACCEPTABLE.
2. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR CHANGES.
3. SUITABLE GALVANIZED BARS, ROD GANGERS OR CADDY CLIPS SHALL BE USED THROUGHOUT THE WORK. WOODEN SUPPORTS, STRIPES, TIE WIRES, OR MAKESHIFT DEVICES SHALL NOT BE USED.
4. BOXES SHALL NOT BE LESS THAN 1 ½" DEEP. IN GENERAL OUTLET BOXES SHALL BE OF SUFFICIENT DEPTH SO THAT CONDUIT ENTERING WITHIN TILE WALLS NEED NOT BE OFFSET SO THAT TILES HAVE TO BE CHIPPED OR ALTERED. ALL BOXES SHALL BE SET LEVEL AND PLUMB.
5. PROVIDE RAIN TIGHT CAST METAL BOXES WITH THREADED CONDUIT HOLES AND CAST METAL FACE PLATES, COVERS SHALL MAINTAIN RATING WHILE IN USE.
6. REFER TO "TYPICAL DEVICE MOUNTING HEIGHTS" TABLE ON ELECTRICAL COVER SHEET AND "TYPICAL MOUNTING HEIGHT DETAIL" ON ELECTRICAL DETAILS SHEET FOR MOUNTING HEIGHTS. ANY CHANGES TO OUTLET MOUNTING HEIGHTS SHALL BE COORDINATED WITH OWNER.
7. WHEN INSTALLED (IN MASONRY WALLS), LOCATE BOTTOM OF BOX AT NEAREST MASONRY JOINT TO DIMENSION INDICATED. WHERE OUTLETS OCCUR ABOVE COUNTERS, OR CABINETS, CORRELATE HEIGHT OF OUTLET WITH EQUIPMENT SO DEVICE WILL CLEAR ALL TRIM.
8. ALL RECEPTACLE AND SWITCH PLATES SHALL BE WHITE.

SAFETY SWITCHES:
1. SAFETY SWITCHES, FUSIBLE HEAVY DUTY.

METER CENTER:
1. WHERE REQUIRED, METER MUST BE APPROVED BY LOCAL UTILITY.

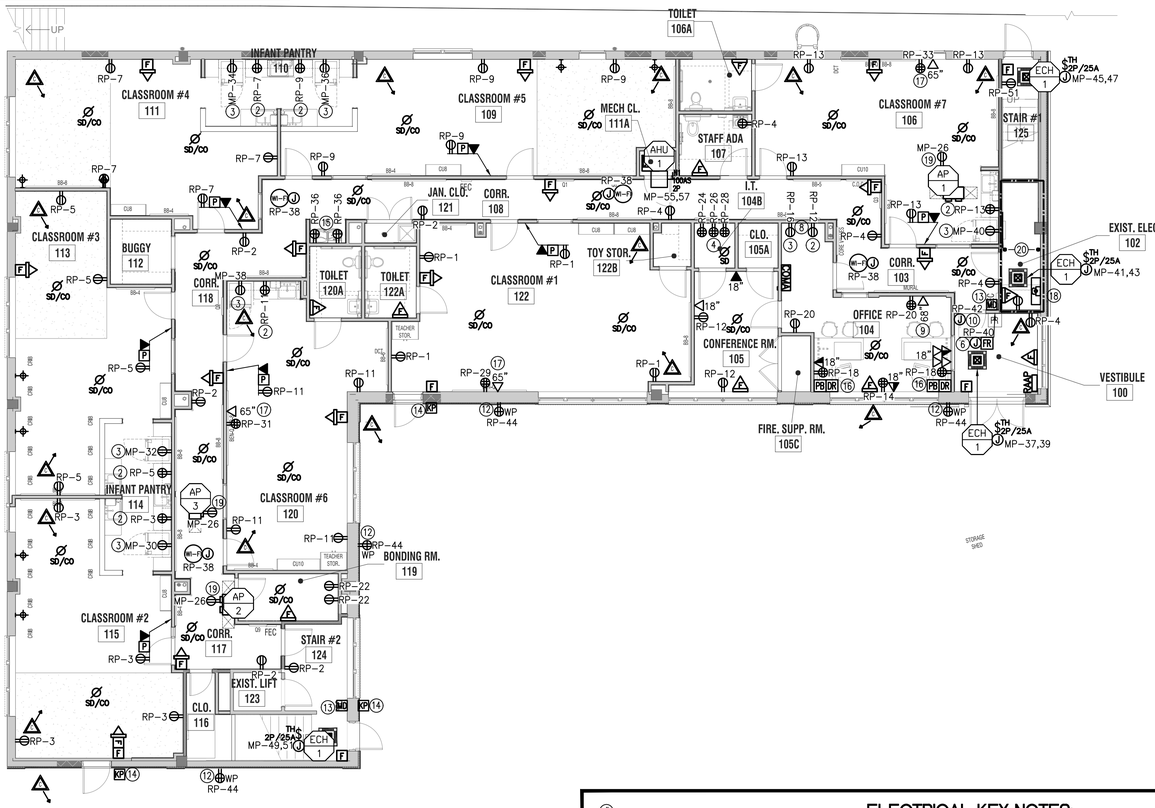
WIRING DEVICES:
1. PROVIDE SPECIFICATION GRADE WIRING DEVICES OF 20 AMP RATING MINIMUM. AS REQUIRED ON THE PLANS. SWITCHES SHALL BE QUIET TYPE.
2. SWITCHES, WHERE REQUIRED SHALL BE MOUNTED ON THE STRIKE SIDE OF DOORS AS FINALLY HUNG.
3. DEVICES SHALL HAVE SMOOTH NYLON PLATE-FIT & TYPE AS REQUIRED BY DEVICE. OUTLETS WITHOUT DEVICES. EXCEPT TELEPHONE, TO HAVE BLANK PLATES. FASTEN PLATES IN PLACE BY OVAL, HEAD, SCREWS MATCHING PLATE.

PUBLIC ANNOUNCEMENT SYSTEM:
1. PUBLIC ANNOUNCEMENT SYSTEM SHALL BE WIRED FOR THE FOLLOWING ZONES:
A. ZONE 1 – CLASSROOMS
B. ZONE 2 – CORRIDOR
C. ZONE 3 – PLAYGROUND
D. ZONE 4 – MULTI-PURPOSE ROOM

VOICE/DATA, TELEPHONE, CCTV, SECURITY:
1. SEE ARCHITECTURAL DRAWING FOR SPECIFICATIONS

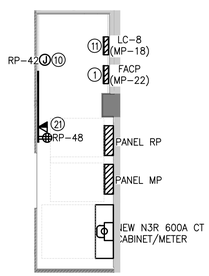
ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS SHOW THE INTENT OF THE NEW CIRCUITING DESIGN.
2. ALL WIRING/CABLING AND OTHER TELCO/DATA DEVICES SHALL BE PROVIDED BY TELCO/DATA CONTRACTOR. GENERAL CONTRACTOR SHALL VERIFY LOCATIONS OF DEVICES AND PROVIDE NECESSARY ROUGH-INS.
3. MOUNTING HEIGHTS FOR WALL OUTLETS AS PER "TYPICAL DEVICE MOUNTING HEIGHTS" TABLE ON ELECTRICAL COVER SHEET AND "TYPICAL MOUNTING HEIGHT DETAIL" ON ELECTRICAL DETAILS SHEET. ANY CHANGES TO OUTLET MOUNTING HEIGHTS SHALL BE COORDINATED WITH OWNER.
4. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT.
5. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
6. PROVIDE GFCI RECEPTACLES WHERE SHOWN AND AS REQUIRED BY CODE. ALL RECEPTACLES SHALL BE TAMPER RESISTANT. PROVIDE GFCI RECEPTACLES IF DISTANCE FROM THE SINK IS WITHIN 6' AS PER NEC REQUIREMENTS.
7. LANDLORD/CONTRACTOR SHALL PROVIDE AND INSTALL COMPUTER ROUGH-INS IN ALL CLASSROOMS, OFFICE(S), RECEPTION AREA AND LOBBY/VESTIBULE AS PER THE APPROVED PLANS.
8. CONTRACTOR SHALL COORDINATE DEVICE LOCATIONS & INSTALLATION OF SECURITY SYSTEM WITH LIGHTBRIDGE.
9. CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF WHITEBOARDS.



ELECTRICAL FIRST FLOOR POWER PLAN

SCALE: ⅛" = 1'-0"



ELECTRICAL ROOM PART PLAN

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

ELECTRICAL KEY NOTES:

1. APPROXIMATE LOCATION OF FIRE ALARM CONTROL PANEL. COORDINATE EXACT LOCATION WITH FIRE MARSHAL.
2. COUNTER-TOP RECEPTACLE TO BE MOUNTED 42" AFF. COORDINATE FOR FINAL LOCATION.
3. RECEPTACLE FOR REFRIGERATOR TO BE MOUNTED AT 18" AFF. COORDINATE FOR FINAL LOCATION.
4. COORDINATE COMPUTER/SERVER CLOSET REQUIREMENTS WITH IT VENDOR. (3) QUAD RECEPTACLES MOUNTED AT 48" AFF. EQUIPMENT SHALL BE MOUNTED ON FULL WALL FIRE RATED BACK BOARD. SEE DETAIL ON DRAWING E-403.
5. NOT USED.
6. POWER FOR FACIAL RECOGNITION SYSTEM. REFER TO DRAWING A-100, A-405 FOR PLACEMENT DETAIL, AND E-403 FOR FURTHER DETAILS. COORDINATE EXACT REQUIREMENTS WITH LOW VOLTAGE SYSTEM CONSULTANT.
7. NOT USED.
8. REFER TO DETAIL 10 ON ARCHITECTURAL DRAWING A-403 FOR PLACEMENT OF CONVENIENCE/UNDERCOUNTER FRIDGE RECEPTACLES.
9. REFER TO WATCHMEGROW DETAIL ON DRAWING E-403 FOR INSTALLATION REQUIREMENTS.
10. PROVIDE 120V CIRCUIT FOR ACCESS CONTROL PANEL FOR ELECTRIC DOOR STRIKE SYSTEM. REFER TO PANEL SCHEDULE FOR CIRCUITING. DOOR STRIKE LOCATIONS AS SHOWN ON PLAN.
11. PROPOSED LOCATION OF LIGHTING CONTROL PANEL. EC SHALL FURNISH AND INSTALL LIGHTING RELAY PANEL (WATTSTOPPER LC8 OR APPROVED EQUAL). REFER TO ELECTRICAL DETAILS SHEET FOR FURTHER REQUIREMENTS.
12. EC TO COORDINATE FINAL LOCATION OF OUTDOOR WEATHERPROOF RECEPTACLES WITH OWNER/ARCHITECT PRIOR TO BID AND INSTALLATION.
13. CONTRACTOR SHALL FIELD VERIFY FINAL LOCATION FOR ALL MOTION DETECTOR SYSTEMS PRIOR TO INSTALLATION.
14. CONTRACTOR SHALL FIELD VERIFY FINAL MOUNTING HEIGHT AND LOCATION OF KEYPAD TO BE INSTALLED AT CLASSROOM DOORS PRIOR TO BID AND INSTALLATION.
15. EC TO COORDINATE EXACT REQUIREMENTS FOR WATER COOLER WITH MANUFACTURER PRIOR TO BID AND INSTALLATION.
16. EC SHALL COORDINATE EXACT LOCATION OF DOOR RELEASE (MOUNTED AT 48"AFF) IN FIELD PRIOR TO INSTALLATION.
17. REFER TO INTERACTIVE WHITEBOARD DETAIL ON SHEET E-403 AND DRAWING G-105 FOR INSTALLATION REQUIREMENTS.
18. EC TO VERIFY EXACT LOCATION OF INCOMING SERVICE AND COORDINATE EXACT LOCATION OF CT CABINET/METER PRIOR TO BID AND INSTALLATION.
19. RECEPTACLE FOR MICROCON UNITS TO BE LOCATED ABOVE CEILING, AND WITHIN 6' FROM RTU ENTRANCE TO BUILDING. EC SHALL NOT RUN FLEXIBLE CORD WIRING FOR UNIT UNLESS SPECIFICALLY REQUIRED BY MANUFACTURER. PROVIDE J-BOX AND DISCONNECT SWITCH FOR HARDWIRED UNITS, DISCONNECT ONLY REQUIRED IF NOT INTEGRAL OR IF POWERED VIA RECEPTACLE.
20. REFER TO PART PLAN ON THIS SHEET FOR ELECTRICAL EQUIPMENT LAYOUT AND COMPLETE SCOPE OF WORK IN THIS ROOM.
21. FULL WALL FIRE RATED PLYWOOD BACKBOARD. MOUNT BLACKBOX UNIT AND ACCESSORIES ON BACKBOARD. (2) 4" CONDUITS FOR TELEPHONE SERVICE AT TENANT'S TEL/DATA BACKBOARD. COORDINATE REQUIREMENTS WITH LOCAL TELEPHONE DISTRIBUTION BOARD. MAINTAIN REQUIRED CLEARANCES.

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL FIRST FLOOR POWER PLAN

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER:	2019-01.15
DATE:	08/08/2022
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E-101

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ELECTRICAL GENERAL REQUIREMENTS:

TELEPHONE
1. CONTRACTOR SHALL PROVIDE AND INSTALL TELEPHONE CABLES AT LOCATIONS SHOWN ON PLANS.
2. CONTRACTOR SHALL TERMINATE ALL CABLING TO I.T. CLOSET.

RECEPTACLES:
1. ALL RECEPTACLES SHALL BE TAMPER RESISTANT AS MANUFACTURED BY "PASS & SEYMOUR". CHILD PROOF GFCI RECEPTACLE.

PANEL BOARDS:
1. CIRCUIT BREAKERS SHALL HAVE A COMMON TRIP ON ALL MULTI-POLE BREAKERS AND CONTRACTOR TO PROVIDE LABELING.
2. BUS AND HARDWARE SHALL BE BRACED FOR INTERRUPTING CAPACITY AS SHOWN ON PANEL BOARD SCHEDULE. BREAKERS SHALL MATCH AIC RATING OF PANEL AT PANEL VOLTAGE. ALL BUSSING SHALL BE COPPER.
3. PROVIDE EACH PANEL BOARD WITH GREEN CODED GROUND BAR, FOR GREEN EQUIPMENT GROUND WIRES. EACH BAR TO HAVE A MINIMUM CAPACITY FOR THE NUMBER OF POLES IN PANEL WITH SOLDER-LESS. BOX LUGS FOR WIRE SIZE NO. 12 MINIMUM TO NO. 4 MAXIMUM. ONE WIRE PER LUG. LOCATE BAR ADJACENT TO NEUTRAL BAR BOLT OR WELD TO BACK BOX.
4. MAIN CIRCUIT BREAKERS & SWITCH BOARDS WHERE REQUIRED, MUST BE APPROVED BY LOCAL UTILITY.

RECEPTACLES CONTINUED:
5. PROVIDE 208Y/120V PANEL-BOARDS WITH AN ISOLATED NEUTRAL BAR. THERE SHALL BE AS MANY TERMINALS AS THERE ARE CIRCUIT POLES. THE TERMINAL FOR THE FEEDER NEUTRAL SHALL MATCH THE SIZE OF THE FEEDER PHASE TERMINATION(S).
6. LANDLORD/CONTRACTOR SHALL LABEL ALL CIRCUIT BREAKERS.
7. LANDLORD/CONTRACTOR SHALL INSTALL ALL DISTRIBUTION DEVICES, INCLUDING J-BOXES. SWITCHES AND RECEPTACLES PER LOCAL BUILDING CODES AND THE APPROVED PLANS. EACH CLASSROOM LIGHTING SYSTEM SHALL BE SEPARATELY SWITCHED AND THE LOCATION OF LIGHT SWITCHES SHALL BE CONVENIENT TO THE ENTRANCE OF EACH CLASSROOM, SHARED TOILET BETWEEN CLASSROOMS SHALL BE SWITCHED FOR THREE WAY OPERATIONS.

OUTLET BOXES
1. GALVANIZED STAMPED STEEL FOR ALL INTERIOR LOCATIONS. MOUNT ALL BOXES SO THAT COVERS AND PLATES WILL MOUNT FLUSH WITH THE WALL AND CEILING FINISH SURFACE. PROVIDED PLASTER RINGS AS NECESSARY. GOOF RINGS ARE ACCEPTABLE.
2. THE ENGINEER RESERVES THE RIGHT TO MAKE MINOR CHANGES.
3. SUITABLE GALVANIZED BARS, ROD GANGERS OR CADDY CLIPS SHALL BE USED THROUGHOUT THE WORK. WOODEN SUPPORTS, STRIPES, TIE WIRES, OR MAKESHIFT DEVICES SHALL NOT BE USED.
4. BOXES SHALL NOT BE LESS THAN 1 ½" DEEP. IN GENERAL OUTLET BOXES SHALL BE OF SUFFICIENT DEPTH SO THAT CONDUIT ENTERING WITHIN TILE WALLS NEED NOT BE OFFSET SO THAT TILES HAVE TO BE CHIPPED OR ALTERED. ALL BOXES SHALL BE SET LEVEL AND PLUMB.
5. PROVIDE RAIN TIGHT CAST METAL BOXES WITH THREADED CONDUIT HOLES AND CAST METAL FACE PLATES, COVERS SHALL MAINTAIN RATING WHILE IN USE.
6. REFER TO "TYPICAL DEVICE MOUNTING HEIGHTS" TABLE ON ELECTRICAL COVER SHEET AND "TYPICAL MOUNTING HEIGHT DETAIL" ON ELECTRICAL DETAILS SHEET FOR MOUNTING HEIGHTS. ANY CHANGES TO OUTLET MOUNTING HEIGHTS SHALL BE COORDINATED WITH OWNER.
7. WHEN INSTALLED (IN MASONRY WALLS), LOCATE BOTTOM OF BOX AT NEAREST MASONRY JOINT TO DIMENSION INDICATED. WHERE OUTLETS OCCUR ABOVE COUNTERS, OR CABINETS, CORRELATE HEIGHT OF OUTLET WITH EQUIPMENT SO DEVICE WILL CLEAR ALL TRIM.
8. ALL RECEPTACLE AND SWITCH PLATES SHALL BE WHITE.

SAFETY SWITCHES:
1. SAFETY SWITCHES, FUSIBLE HEAVY DUTY.

METER CENTER:
1. WHERE REQUIRED, METER MUST BE APPROVED BY LOCAL UTILITY.

WIRING DEVICES:
1. PROVIDE SPECIFICATION GRADE WIRING DEVICES OF 20 AMP RATING MINIMUM. AS REQUIRED ON THE PLANS. SWITCHES SHALL BE QUIET TYPE.
2. SWITCHES, WHERE REQUIRED SHALL BE MOUNTED ON THE STRIKE SIDE OF DOORS AS FINALLY HUNG.
3. DEVICES SHALL HAVE SMOOTH NYLON PLATE-FIT & TYPE AS REQUIRED BY DEVICE. OUTLETS WITHOUT DEVICES, EXCEPT TELEPHONE, TO HAVE BLANK PLATES. FASTEN PLATES IN PLACE BY OVAL, HEAD, SCREWS MATCHING PLATE.

PUBLIC ANNOUNCEMENT SYSTEM:
1. PUBLIC ANNOUNCEMENT SYSTEM SHALL BE WIRED FOR THE FOLLOWING ZONES:
A. ZONE 1 – CLASSROOMS
B. ZONE 2 – CORRIDOR
C. ZONE 3 – PLAYGROUND
D. ZONE 4 – MULTI-PURPOSE ROOM

VOICE/DATA, TELEPHONE, CCTV, SECURITY:
1. SEE ARCHITECTURAL DRAWING FOR SPECIFICATIONS

ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS SHOW THE INTENT OF THE NEW CIRCUITING DESIGN.
2. ALL WIRING/CABLING AND OTHER TELCO/DATA DEVICES SHALL BE PROVIDED BY TELCO/DATA CONTRACTOR. GENERAL CONTRACTOR SHALL VERIFY LOCATIONS OF DEVICES AND PROVIDE NECESSARY ROUGH-INS.
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6. PROVIDE GFCI RECEPTACLES WHERE SHOWN AND AS REQUIRED BY CODE. ALL RECEPTACLES SHALL BE TAMPER RESISTANT. PROVIDE GFCI RECEPTACLES IF DISTANCE FROM THE SINK IS WITHIN 6' AS PER NEC REQUIREMENTS.
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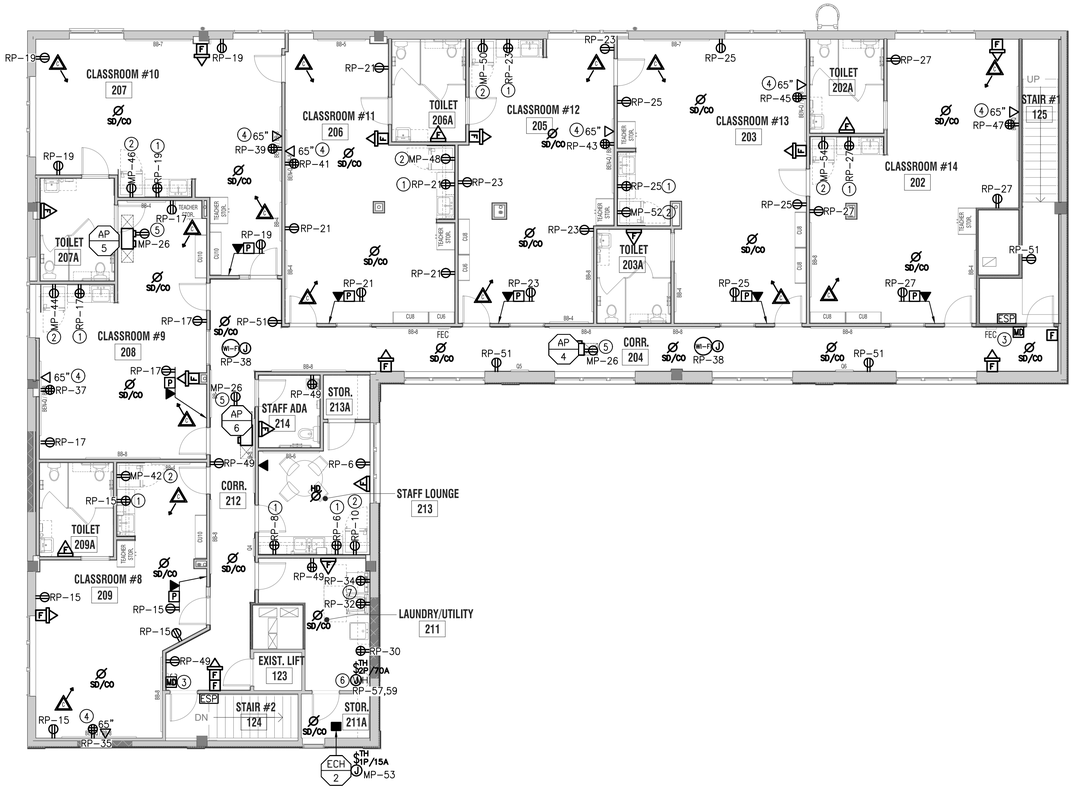

ELECTRICAL SECOND FLOOR POWER PLAN
SCALE: ⅛" = 1'-0"

ELECTRICAL KEY NOTES:

1. COUNTER-TOP RECEPTACLE TO BE MOUNTED 42" AFF. COORDINATE FOR FINAL LOCATION.
2. RECEPTACLE FOR REFRIGERATOR TO BE MOUNTED AT 18" AFF. COORDINATE FOR FINAL LOCATION.
3. CONTRACTOR SHALL FIELD VERIFY FINAL LOCATION FOR ALL MOTION DETECTOR SYSTEMS PRIOR TO INSTALLATION.
4. REFER TO INTERACTIVE WHITEBOARD DETAIL ON SHEET E-403 AND DRAWING G-105 FOR INSTALLATION REQUIREMENTS.
5. RECEPTACLE FOR MICROCON UNITS TO BE LOCATED ABOVE CEILING, AND WITHIN 6' FROM RTU ENTRANCE TO BUILDING. EC SHALL NOT RUN FLEXIBLE CORD WIRING FOR UNIT UNLESS SPECIFICALLY REQUIRED BY MANUFACTURER. PROVIDE J-BOX AND DISCONNECT SWITCH FOR HARDWIRED UNITS, DISCONNECT ONLY REQUIRED IF NOT INTEGRAL OR IF POWERED VIA RECEPTACLE.
6. POWER FOR WATER HEATER. COORDINATE EXACT CONTROL REQUIREMENTS WITH MANUFACTURER PRIOR TO BID AND INSTALLATION.
7. COORDINATE EXACT ELECTRICAL REQUIREMENTS AND RECEPTACLE TYPE FOR WASHER/DRYER (MOUNTED AT 48" AFF) WITH MANUFACTURER PRIOR TO BID AND INSTALLATION

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL SECOND FLOOR POWER PLAN

Rev. #	Revision Date	Revision Description
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ELECTRICAL GENERAL REQUIREMENTS:

TELEPHONE
1. CONTRACTOR SHALL PROVIDE AND INSTALL TELEPHONE CABLES AT LOCATIONS SHOWN ON PLANS.
2. CONTRACTOR SHALL TERMINATE ALL CABLING TO I.T. CLOSET.

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3. PROVIDE EACH PANEL BOARD WITH GREEN CODED GROUND BAR, FOR GREEN EQUIPMENT GROUND WIRES. EACH BAR TO HAVE A MINIMUM CAPACITY FOR THE NUMBER OF POLES IN PANEL WITH SOLDER-LESS. BOX LUGS FOR WIRE SIZE NO. 12 MINIMUM TO NO. 4 MAXIMUM. ONE WIRE PER LUG. LOCATE BAR ADJACENT TO NEUTRAL BAR BOLT OR WELD TO BACK BOX.
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6. REFER TO "TYPICAL DEVICE MOUNTING HEIGHTS" TABLE ON ELECTRICAL COVER SHEET AND "TYPICAL MOUNTING HEIGHT DETAIL" ON ELECTRICAL DETAILS SHEET FOR MOUNTING HEIGHTS. ANY CHANGES TO OUTLET MOUNTING HEIGHTS SHALL BE COORDINATED WITH OWNER.
7. WHEN INSTALLED (IN MASONRY WALLS), LOCATE BOTTOM OF BOX AT NEAREST MASONRY JOINT TO DIMENSION INDICATED. WHERE OUTLETS OCCUR ABOVE COUNTERS, OR CABINETS, CORRELATE HEIGHT OF OUTLET WITH EQUIPMENT SO DEVICE WILL CLEAR ALL TRIM.
8. ALL RECEPTACLE AND SWITCH PLATES SHALL BE WHITE.

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1. SAFETY SWITCHES, FUSIBLE HEAVY DUTY.

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1. WHERE REQUIRED, METER MUST BE APPROVED BY LOCAL UTILITY.

WIRING DEVICES:
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VOICE/DATA, TELEPHONE, CCTV, SECURITY:
1. SEE ARCHITECTURAL DRAWING FOR SPECIFICATIONS

ELECTRICAL GENERAL NOTES:

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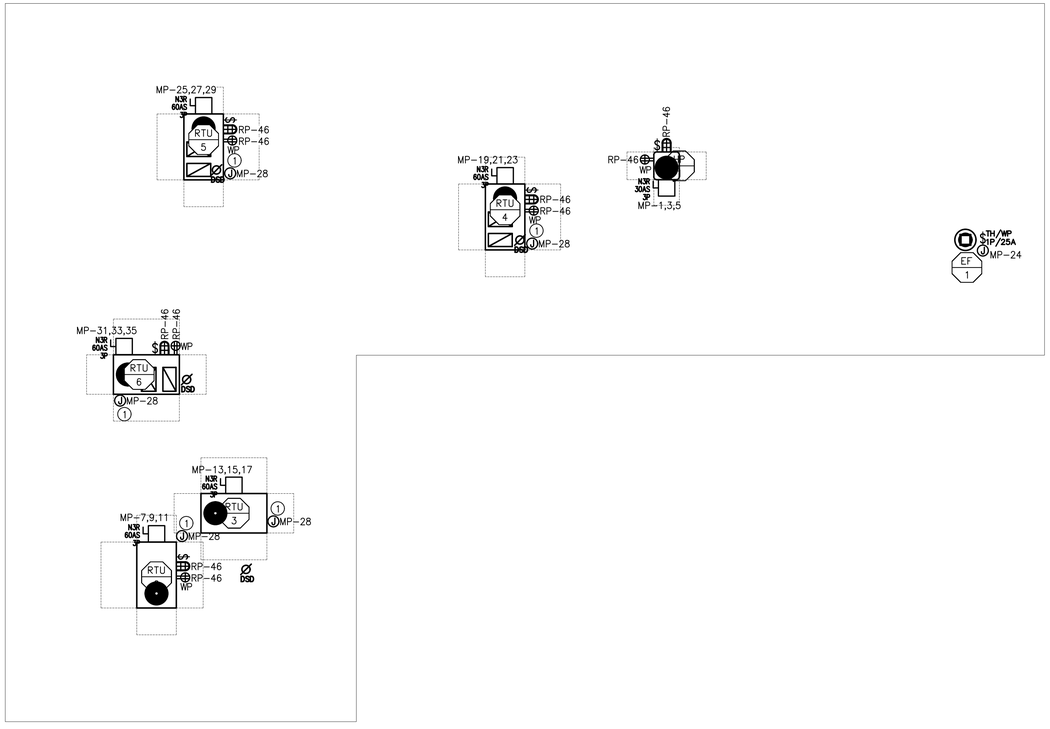
8. CONTRACTOR SHALL COORDINATE DEVICE LOCATIONS & INSTALLATION OF SECURITY SYSTEM WITH LIGHTBRIDGE.
9. CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF WHITEBOARDS.

(E) ELECTRICAL KEY NOTES:

1. PROVIDE GFCI PROTECTED CIRCUIT TO ALL BIPOLAR IONIZATION FILTER DEVICES LOCATED AT THE RETURN OPENING OF EACH ROOF TOP UNIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR FINAL LOCATION AND MANUFACTURER'S SPECIFICATIONS FOR CONNECTION.



ELECTRICAL ROOF POWER PLAN
SCALE: ⅛" = 1'-0"

JAM ARCH

ARCHITECT OF RECORD:
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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
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PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
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SHEET TITLE:
ELECTRICAL ROOF POWER PLAN

Rev. #	Revision Date	Revision Description
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LIGHTING GENERAL NOTES:

1. THESE DRAWINGS SHOW THE INTENT OF THE NEW CIRCUITING DESIGN.
2. PROVIDE AN UN-SWITCHED HOT LEG TO ALL NIGHT LIGHT, EMERGENCY AND EXIT FIXTURES.
3. EACH SPACE THAT IS ENCLOSED BY CEILING-HEIGHT PARTITIONS MUST HAVE AT LEAST ONE CONTROL DEVICE THAT INDEPENDENTLY CONTROLS THE GENERAL LIGHTING IN THE SPACE. EACH CLASSROOM LIGHTING SYSTEM SHALL BE SEPARATELY SWITCHED AND THE LOCATIONS OF LIGHT SWITCHES SHALL BE CONVENIENT TO THE ENTRANCE OF EACH CLASSROOM, SHARED TOILET BETWEEN CLASSROOMS SHALL BE SWITCHED FOR THREE WAY OPERATION.
4. ALL EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE WIRED LIGHTS AND SHOULD BE WIRED AS 'NL' (NIGHT LIGHT).
5. ALL OUTDOOR AND INDOOR LIGHTING FIXTURES SHALL BE CONNECTED TO PANELS AS PER CIRCUIT NUMBERS ON DRAWINGS.
6. G.C. SHALL PROVIDE AND INSTALL A DOOR BELL IN THE VESTIBULE AREA. LOCATED AND WIRED TO BE HEARD IN THE LOBBY AREA AND OFFICE.
7. CONTRACTOR SHALL LOCATE VACANCY SENSOR WITH OVERRIDE WALL SWITCH AT HEIGHT AND LOCATION BEST SUITED FOR OPTIMUM PERFORMANCE. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
8. ANY ACCESS/MAINTENANCE DOORS IN CEILING SHALL NOT BE BLOCKED BY ANY DUCT, PIPES, ELECTRICAL CONDUITS/WIRES, OR OTHER HARD TO REMOVE OBJECTS. AT LEAST ONE SWITCH SHALL BE LOCATED AT THE USUAL POINT OF ENTRY AND EXIT OR AS REQUIRED BY CODE.
9. EMERGENCY WALL PACK FIXTURES SHALL BE CONNECTED TO CIRCUIT SERVING FIXTURES LOCAL TO AREA.

ADDITIONAL LIGHTING COORDINATION NOTE:

THE NUMBER OF LIGHTING ZONES IN EACH CLASSROOM CORRESPONDS THE NUMBER OF BZ-150 POWERPACKS REQUIRED PER CLASSROOM. POWERPACKS TO BE PLACED ABOVE CEILING IN CLASSROOMS. REFER TO LIGHTING CONTROL DIAGRAM ON DRAWING E-402 FOR FURTHER COORDINATION AND DEVICES REQUIRED.

LIGHTING KEY NOTES:

1. EXTERIOR LIGHTING AND/OR SIGNAGE SHALL BE CONTROLLED VIA PHOTOCELL AND ALSO TIME SCHEDULE. SIGNAGE LIGHTING MUST BE SHUT OFF FROM THE HOURS OF MIDNIGHT TO 6AM. COORDINATE EXACT LOCATION OF EXTERIOR SIGNAGE PRIOR TO BID AND INSTALLATION.
2. EC TO FURNISH AND INSTALL MOMENTARY SWITCHES (WATTSTOPPER DCC2 W/BZ-150 POWERPACK OR APPROVED EQUAL) FOR CORRIDOR LIGHTING.

LIGHTING CONTROL NARRATIVE:

OPEN AREAS/CORRIDORS (TIME CONTROLLED):
1. CONTROLLED VIA TIME SCHEDULE LIGHTING CONTROL PANEL/CONTACTOR.
2. PROVIDE LOCAL MANUAL ON/OFF SWITCH DOWNSTREAM OF AUTOMATIC RELAYS.

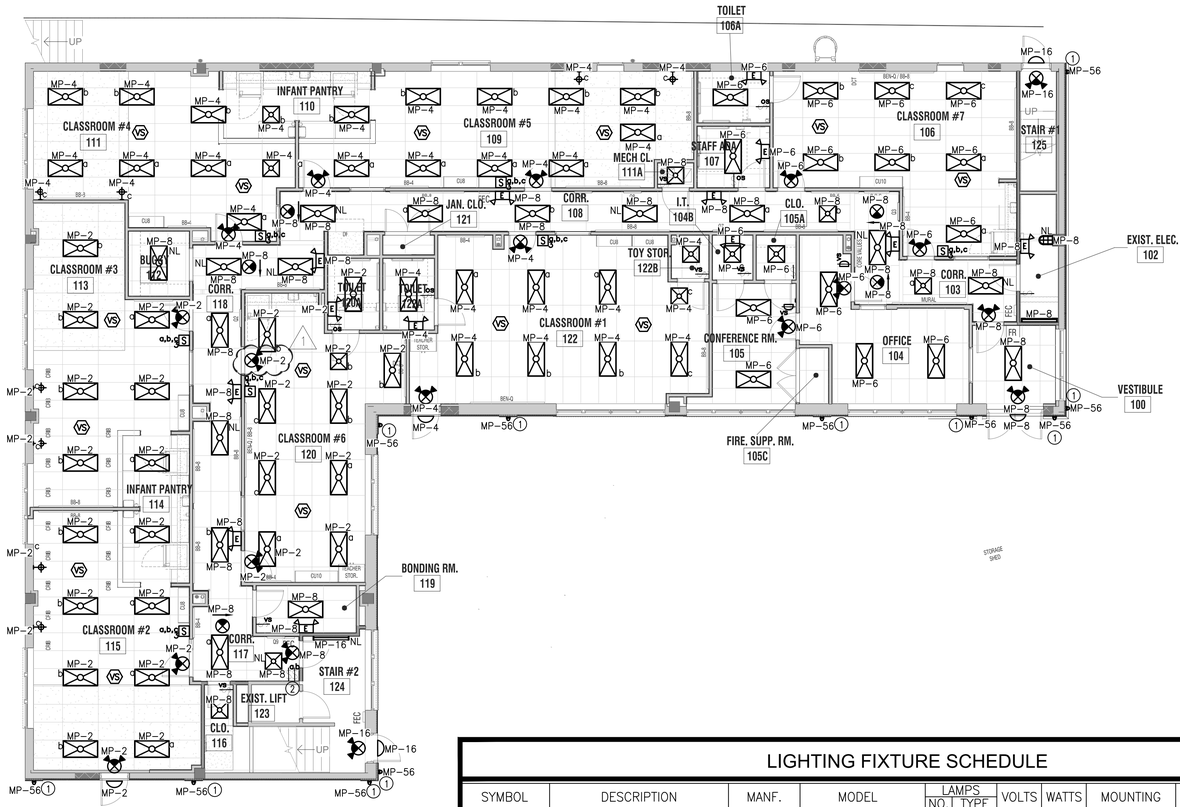
CLASSROOMS/CLOSETS/STORAGE/OFFICE (VACANCY SENSOR CONTROLLED):
1. CONTROLLED VIA OCCUPANCY SENSORS IN VACANCY MODE.
2. MANUAL ON/AUTOMATIC OFF. 20-MINUTE OFF SETTING
3. PROVIDE LOCAL OVERRIDE SWITCH.

RESTROOMS (OCCUPANCY SENSOR CONTROLLED):
1. CONTROLLED VIA OCCUPANCY SENSORS.
2. AUTOMATIC ON/AUTOMATIC OFF. 15-MINUTE OFF SETTING
PROVIDE LOCAL OVERRIDE

UTILITY ROOMS (MANUALLY ON/OFF):
1. CONTROLLED VIA LOCAL MANUAL ON/OFF SWITCH.

GENERAL SITE LIGHTING NOTES:

- ALL UNDERGROUND PVC CONDUIT SHALL BE 4". INSTALL IN SAND BED, MIN. 24" BELOW GRADE. INSTALL CAUTION TAPE 6" FROM SURFACE.
- EXACT LOCATION OF SITE LIGHTING SHALL BE AS PER CIVIL PLANS. CIRCUITING AND CONTROL INTENT AS SHOWN ON ELECTRICAL SITE PLAN.
- ALL SITE LIGHTING FIXTURES SHALL BE CONTROLLED VIA TIME CLOCK AND PHOTO CELL. COORDINATE TIME SCHEDULE WITH OWNER. REFER TO LIGHTING DETAILS DRAWINGS FOR CONTROLS.



ELECTRICAL FIRST FLOOR LIGHTING PLAN

SCALE: ⅛" = 1'-0"

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	MANF.	MODEL	LAMPS NO.	LAMPS TYPE	VOLTS	WATTS	MOUNTING	REMARKS
	2X4 LED RECESSED TROFFER LIGHT FIXTURE	LITHONIA LIGHTING	2BLT4-30L-ADP-120-MP850	1	LED	120V	30W	RECESSED	FIXTURES TAGGED WITH "NL" SHALL BE WIRED AS A NIGHT LIGHT.
	2X2 LED RECESSED TROFFER LIGHT FIXTURE	LITHONIA LIGHTING	2BLT2-33L-ADP-120-MP850	1	LED	120V	30W	RECESSED	FIXTURES TAGGED WITH "NL" SHALL BE WIRED AS A NIGHT LIGHT.
	COMBINATION EXIT AND EMERGENCY LED LIGHTING FIXTURE	LITHONIA	ECR-LED-M6	2	LED	120/277V	4.3	SURFACE	PROVIDE 90 MINUTE BATTERY BACK UP
	LED EXIT SIGN	LITHONIA	EXR-LED-M6	N/A	LED	120/277V	3.3	SURFACE	ARROWS DENOTE DIRECTIONAL FIXTURE AS NEEDED.PROVIDE 90 MINUTE BATTERY BACK UP
	EXTERIOR EMERGENCY FIXTURE	DUAL-LITE	PGZ-HTR	1	LED	120/277V	15W	SURFACE	PROVIDE 90 MINUTE BATTERY BACK UP
	INTERIOR SURFACE MOUNTED WALL FIXTURE	AYRE	PARK SCONCE PAR1	1	LED	120V	9.5W	WALL	9.5W LED, 800 LUMENS, 2700K. TO BE MOUNTED AT 72" AFF. OIL RUBBED BRONZE FINISH.
	EMERGENCY LED LIGHTING FIXTURE	LITHONIA	ELM6L LTP LED	2	11W/9.6V LED	120-277V	10.6	SURFACE	PROVIDE 90 MINUTE BATTERY BACK UP
	JELLY JAR FIXTURE (WEATHERPROOF)	LITHONIA	OLVTWM	1	LED	120-277V	15W	WALL	
	EXTERIOR SURFACE MOUNTED UP/DOWN WALL FIXTURE	PROGRESS LIGHTING	P5675-20/30K	2	LED	120V	34W	WALL	COORDINATE MTG. HT. WITH ARCHITECT. PROVIDE COVER LENS.
	EXTERIOR WALL PACK FIXTURE	LUMARK	XTOR6B	1	LED	120V	58W	WALL	COORDINATE MTG. HT. WITH ARCHITECT. PROVIDE COVER LENS.
	WALL MTD 46" STAIR LIGHTER	LUMINAIRE LED	TSL94-46"-50W-3500K-M7-120	1	LED	120V	50W	WALL/CEILING	PROVIDE OWNER WITH OPTION FOR CAGE. PROVIDE WITH EMERGENCY PACK AND SENSOR FOR REDUCED OUTPUT. MOUNTED AT 9'-00" AFF TO TOP OF FIXTURE.

LIGHTING FIXTURE SCHEDULE NOTES:
1. FIXTURES RATED FOR A HIGHER MAXIMUM WATTAGE SHALL BE FURNISHED WITH A CUSTOM MAXIMUM WATTAGE LABEL FROM THE MANUFACTURER. THE LABEL SHALL LIST THE MAXIMUM WATTAGE SHOWN IN THIS FIXTURE SCHEDULE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LIGHTING FIXTURE SCHEDULES AND EXACT FIXTURE LOCATIONS.
3. ALL COLORS, TRIMS, AND FINISHES SHALL BE APPROVED BY ARCHITECT.

JAM ARCH

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ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL FIRST FLOOR LIGHTING PLAN

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
E-201

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LIGHTING GENERAL NOTES:

1. THESE DRAWINGS SHOW THE INTENT OF THE NEW CIRCUITING DESIGN.
2. PROVIDE AN UN-SWITCHED HOT LEG TO ALL NIGHT LIGHT, EMERGENCY AND EXIT FIXTURES.
3. EACH SPACE THAT IS ENCLOSED BY CEILING-HEIGHT PARTITIONS MUST HAVE AT LEAST ONE CONTROL DEVICE THAT INDEPENDENTLY CONTROLS THE GENERAL LIGHTING IN THE SPACE. EACH CLASSROOM LIGHTING SYSTEM SHALL BE SEPARATELY SWITCHED AND THE LOCATIONS OF LIGHT SWITCHES SHALL BE CONVENIENT TO THE ENTRANCE OF EACH CLASSROOM, SHARED TOILET BETWEEN CLASSROOMS SHALL BE SWITCHED FOR THREE WAY OPERATION.
4. ALL EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE WIRED LIGHTS AND SHOULD BE WIRED AS 'NL' (NIGHT LIGHT).
5. ALL OUTDOOR AND INDOOR LIGHTING FIXTURES SHALL BE CONNECTED TO PANELS AS PER CIRCUIT NUMBERS ON DRAWINGS.
6. G.C. SHALL PROVIDE AND INSTALL A DOOR BELL IN THE VESTIBULE AREA. LOCATED AND WIRED TO BE HEARD IN THE LOBBY AREA AND OFFICE.
7. CONTRACTOR SHALL LOCATE VACANCY SENSOR WITH OVERRIDE WALL SWITCH AT HEIGHT AND LOCATION BEST SUITED FOR OPTIMUM PERFORMANCE. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
8. ANY ACCESS/MAINTENANCE DOORS IN CEILING SHALL NOT BE BLOCKED BY ANY DUCT, PIPES, ELECTRICAL CONDUITS/WIRES, OR OTHER HARD TO REMOVE OBJECTS. AT LEAST ONE SWITCH SHALL BE LOCATED AT THE USUAL POINT OF ENTRY AND EXIT OR AS REQUIRED BY CODE.
9. EMERGENCY WALL PACK FIXTURES SHALL BE CONNECTED TO CIRCUIT SERVING FIXTURES LOCAL TO AREA.

ADDITIONAL LIGHTING COORDINATION NOTE:

THE NUMBER OF LIGHTING ZONES IN EACH CLASSROOM CORRESPONDS THE NUMBER OF BZ-150 POWERPACKS REQUIRED PER CLASSROOM. POWERPACKS TO BE PLACED ABOVE CEILING IN CLASSROOMS. REFER TO LIGHTING CONTROL DIAGRAM ON DRAWING E-402 FOR FURTHER COORDINATION AND DEVICES REQUIRED.

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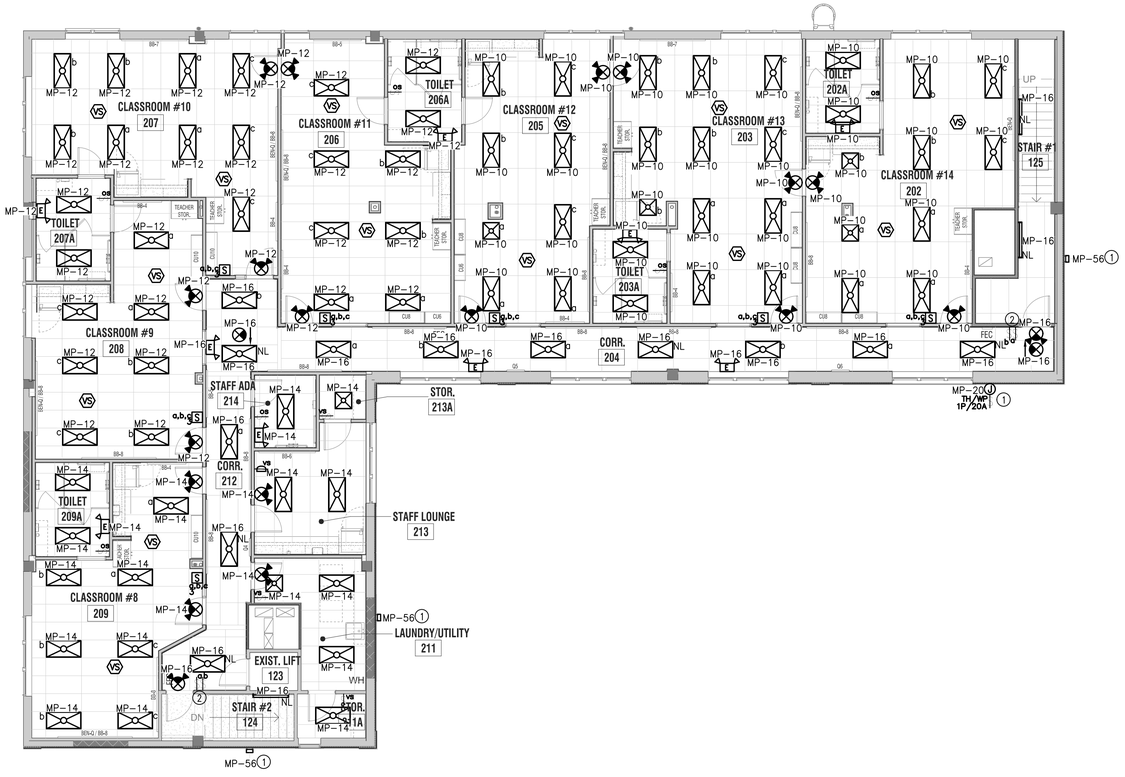

ELECTRICAL SECOND FLOOR LIGHTING PLAN
SCALE: 1/8" = 1'-0"

JAM ARCH

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ELECTRICAL SECOND FLOOR LIGHTING PLAN

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
E-202

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A. CONTRACT PERFORMANCE

1. EXECUTE THE WORK IN THE BEST AND MOST THOROUGH MANNER & TO THE SATISFACTION OF THE CONSULTING ENGINEER, WHO WILL JOINTLY INTERPRET THE MEANING OF THE DRAWINGS AND SPECIFICATIONS AND SHALL HAVE THE POWER TO REJECT ANY WORK AND MATERIALS WHICH, IN THEIR JUDGMENT, ARE NOT IN FULL ACCORDANCE THEREWITH.

2. EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE CONSULTING ENGINEERS, IN ACCORDANCE WITH ALTERNATES OF OPTIONS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS, COMPLETE IN EVERY WAY AND READY FOR SATISFACTORY AND EFFICIENT OPERATION WHEN DELIVERED TO THE OWNER.

3. WHERE DISAGREEMENTS OCCUR BETWEEN THE PLANS AND THE SPECIFICATIONS, OR WITHIN EITHER DOCUMENT ITSELF, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY OR HIGHER COST SHALL BE INCLUDED IN THE BASE BID.

4. THE DRAWINGS SHOW THE VARIOUS CONDUIT AND PIPING SYSTEMS SCHEMATICALLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY JUNCTION BOXES, PULL BOXES, SUPPORT AND ACCESSORIES TO MEET APPLICABLE CODES, BUILDING STANDARDS AND FULFILL CONTRACT DOCUMENTS. NO ADDED COMPENSATION WILL BE PERMITTED FOR VARIATIONS DUE TO FIELD CONDITIONS.

5. THE CONTRACTOR COVENANTS AND AGREES THAT HE AND HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES WILL PROVIDE AND MAINTAIN A SAFE PLACE TO WORK AND THAT HE AND THEY WILL COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF AND THE CONTRACTOR AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES TO PROVIDE AND MAINTAIN A SAFE PLACE TO WORK OR TO COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF.

6. THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIAL OR TOOLS.

7. THE CONTRACTOR AGREES THAT ANY CONTROVERSY OR DISPUTE TO WHICH THE CONTRACTOR, THE ARCHITECT, AND THE CONSULTING ENGINEERS ARE PARTIES SHALL BE SUBMITTED TO ARBITRATION FOR DECISION IN ACCORDANCE WITH THE RULES OF SUCH ASSOCIATION FOR CONSTRUCTION INDUSTRY DISPUTES. ALL SUBCONTRACTORS LIKEWISE AGREE TO SUBMIT TO SUCH ARBITRATION ANY DISPUTE BETWEEN OR AMONG THEM, THE CONTRACTOR, THE ARCHITECT AND THE CONSULTING ENGINEERS, AND THE CONTRACTOR AGREES TO MAKE AVAILABLE TO THE CONSULTING ENGINEERS ON DEMAND SIGNED COPIES OF THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR AND BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS. THE CONTRACTOR AND EACH SUBCONTRACTOR AGREE THAT BY SUBMITTING A BID WHICH IS ACCEPTED, THIS PARAGRAPH SHALL BE DEEMED A WRITTEN AGREEMENT TO SUBMIT ANY CONTROVERSY THEREAFTER ARISING ARBITRATION.

8. ALL WORK SHALL BE DONE IN CONFORMANCE WITH ALL GOVERNING CODES, INCLUDING AMENDMENTS, BULLETINS, ETC., AS WELL AS STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.

9. OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE ALL NECESSARY FORMS. PAY ALL INSPECTION FEES.

10. COORDINATE SCHEDULING OF ALL WORK TO BE PERFORMED WITH OWNER AND/OR HIS AGENT AND INCLUDE ALL NECESSARY PREMIUM TIME REQUIRED FOR SHUTDOWNS, WORK IN OCCUPIED AREAS, ETC.

11. ALL AREAS ASSOCIATED WITH WORK TO BE PERFORMED SHALL BE EXAMINED PRIOR TO BID SUBMISSION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR CONDITIONS FOUND DURING INSTALLATION.

12. BEFORE COMMENCING WORK, EXAMINE ALL ADJOINING WORK ON WHICH THIS WORK IS IN ANY WAY DEPENDENT FOR PERFECT WORKMANSHIP ACCORDING TO THE INTENT OF THIS SPECIFICATION, AND REPORT TO THE CONSTRUCTION MANAGER ANY CONDITION WHICH PREVENTS PERFORMANCE OF FIRST-CLASS WORK. NO "WAIVER OF RESPONSIBILITY" FOR INCOMPLETE, INADEQUATE OR DEFECTIVE ADJOINING WORK WILL BE CONSIDERED UNLESS NOTICE HAS BEEN FILED BEFORE SUBMITTAL OF A PROPOSAL.

13. COORDINATE ALL WORK WITH OTHER TRADES TO INSURE INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

14. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY OWNER.

15. INCLUDE ALL LABOR, MATERIALS, AND APPURTENANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING OF ALL WORK. COMPLETE AND MAKE READY FOR OPERATION IN A MANNER SATISFACTORY TO THE ARCHITECT AND CONSULTING ENGINEER, ALL WORK SHOWN ON DRAWINGS AND SPECIFIED HEREIN.

16. ALL WORK SHALL BE GUARANTEED FOR TWO (2) FULL YEARS FROM THE DATE WHEN THE OWNER HAS ISSUED A "CERTIFICATE OF SUBSTANTIAL COMPLETION".

B. INSTALLATION PROCEDURE

1. THIS CONTRACTOR'S WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: FURNISHING AND INSTALLATION OF ALL ELECTRICAL WORK, INCLUDING ELECTRICAL AND COMMUNICATIONS OUTLETS IN WALLS AND FLOOR, LIGHTING FIXTURES WITH LAMPS, SWITCHES, DIMMERS, EMERGENCY BATTERY UNITS, ETC., AND ASSOCIATED BRANCH CIRCUIT WIRING, DISCONNECT SWITCHES, SPECIAL RECEPTACLES, ETC. ALL SPECIAL EQUIPMENT, SUCH AS FANS, AIR CONDITIONING UNITS, COPIERS, ETC. WILL BE FURNISHED BY OTHERS (U.O.N.). WHERE EQUIPMENT REQUIRES PERMANENT CONNECTIONS, THESE CONNECTIONS SHALL BE PROVIDED WITH APPROPRIATE DISCONNECTING MEANS.

2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON DRAWINGS WITH OTHER TRADES TO ASSURE THAT ALL SYSTEMS ARE COMPLETE AND OPERATIONAL. THIS CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOCATIONS AND CONDUIT RUNS SUPPLIED AND/OR INSTALLED UNDER THIS SECTION TO AVOID CONFLICTS OR OBSTRUCTIONS TO OTHER TRADES. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY PULL BOXES, VERTICAL SUPPORT BOXES, AND CONDUIT OFFSETS REQUIRED TO ACCOMPLISH THE ABOVE NOTED COORDINATION AT NO ADDITIONAL COST TO THE OWNER, WHETHER OR NOT INDICATED ON PLANS. ALL VERTICAL SUPPORT BOXES, PULL BOXES, ETC. SHALL BE INSTALLED WHERE REQUIRED TO FACILITATE PULLS AND AT CODE REQUIRED INTERVALS, AT A MINIMUM.

3. CONDUIT RUNS INDICATED ON PLAN ARE FOR REFERENCE ONLY. EXACT LOCATIONS AND ELEVATION SHALL BE DETERMINED AFTER COORDINATION WITH OTHER TRADES. THIS CONTRACTOR SHALL SUPPLY, AS PART OF THEIR SHOP DRAWING SUBMISSION, THE EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT AND CONDUIT RUNS INCLUDING PROPOSED LOCATIONS AND MEANS OF SUPPORT AS WELL AS THE EXPECTED LOAD CONCENTRATION AT THE POINTS OF ATTACHMENT. THE ABOVE NOTED INFORMATION SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER BEFORE ANY WORK IS TO COMMENCE.

4. FURNISH AND INSTALL ALL NECESSARY CABLE SUPPORT BOXES, PULL BOXES AND CONDUIT SUPPORTS, WHERE NOTED AND AS REQUIRED BY APPLICABLE CODES. ALL LOW TENSION (COMMUNICATIONS, SECURITY, A/V, ETC.) CONDUIT, FIRE ALARM CONDUIT, ETC., WHICH HAVE RUNS IN EXCESS OF 100 FEET IN LENGTH AND/OR CONTAINING BENDS IN EXCESS OF 180 DEGREES SHALL BE PROVIDED WITH A PULLBOX. ALL PULLBOXES SHALL BE LABELED FOR THEIR INTENDED USE. DECALS SHALL BE PROVIDED TO INDICATE VOLTAGE LEVEL. FIRE ALARM SYSTEM BOXES SHALL BE PAINTED RED, AND ALL WIRE AND CABLE PROVIDED UNDER THIS SECTION SHALL BE TAGGED (WITH FEEDER OR BRANCH CIRCUIT DESIGNATION) AT ALL BOXES. WHERE CONDUIT BENDS ARE REQUIRED IN COMMUNICATIONS RACEWAY SYSTEMS, THE RADIUS OF THE RACEWAY BEND SHALL NOT BE LESS THAN TEN TIMES THE DIAMETER OF THE RACEWAY. PULL BOXES FOR COMMUNICATION RACEWAYS WILL BE PROVIDED IN STRAIGHT PULLS ONLY. LABEL EACH RACEWAY (PER TECHNOLOGY DEPT. REQUIREMENTS) EVERY 50 FEET HORIZONTALLY AND ON EACH FLOOR VERTICALLY. SUBMIT LABELING SYSTEM FOR REVIEW.

5. UNLESS SPECIFICALLY APPROVED, NO WIRES SHALL BE PULLED IN UNTIL THE CONDUIT SYSTEM IS COMPLETED. NO GREASE OR OIL SHALL BE USED TO FACILITATE THE PULLING OF WIRES; ONLY APPROVED PULLING COMPOUND SHALL BE USED. ALL WIRES SHALL BE CONTINUOUS BETWEEN OUTLET AND OUTLET, OR FROM PANELBOARD TO THE FIRST OUTLET. JOINTS THAT BECOME NECESSARY IN CIRCUIT WORK AT THE OUTLETS SHALL BE MADE WITH APPROVED PRESSURE CONNECTORS. ALL JOINTS SHALL BE COVERED WITH AN INSULATION EQUAL TO THAT ON THE CONDUCTORS. APPROVED PRESSURE CONNECTORS, IDEAL WINGNUTS, SCOTCH-LOCK, BUCHANAN, OR AS APPROVED, SHALL BE USED.

6. EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES, SWITCHES, WALL OUTLETS, ETC., SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS.

7. NO ELECTRICAL CONNECTIONS SHALL BE MADE TO, OR WORK PERFORMED ON, ENERGIZED EQUIPMENT.

8. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE ACCORDING TO VENDOR APPROVED SHOP DRAWINGS.

9. VERIFY ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT TO BE USED. ALL SPECIAL PURPOSE OUTLETS INDICATED ON PLAN SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION, TO ENSURE PROPER WIRING AND COMPATIBILITY WITH ATTACHMENT PLUGS OR JUNCTION BOXES THAT MAY BE FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT.

10. COORDINATE ALL LOCATIONS AND HEIGHTS OF STUB-UPS AND OUTLETS IN FIELD WITH VENDORS AND/OR FURNITURE MANUFACTURERS' APPROVED SHOP DRAWINGS. ALL RECEPTACLES ARE TO BE ACCESSIBLE.

11. ELECTRICAL CONTRACTOR SHALL ENSURE THAT CODE REQUIRED QUANTITY OF OUTLETS HAVE BEEN FURNISHED AND INSTALLED. PROVIDE DEDICATED CIRCUITS FOR OUTLETS AS REQUIRED BY CODE.

12. ALL RECEPTACLES SHALL BE ACCESSIBLE BELOW COUNTERS OR BEHIND EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF EQUIPMENT RECEPTACLES WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND THE LOCAL INSPECTOR.

13. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTS FOR ALL EQUIPMENT PER CODE AND SHALL COORDINATE ALL DISCONNECT SWITCH REQUIREMENTS AND LOCATIONS WITH THE ELECTRICAL INSPECTOR, VENDORS APPROVED SHOP DRAWING AND FINAL EQUIPMENT LOCATIONS.

14. ELECTRICAL CONTRACTOR SHALL VERIFY PHASE LOAD BALANCING ON ALL PANELS UPON COMPLETION OF THE ELECTRICAL INSTALLATION. INCLUDE RE-DISTRIBUTION OF CIRCUITS WITHIN PANELS TO BALANCE WITHIN A 10% WINDOW (±5%).

15. ALL CONDUIT AND CABLE "HOMERUNS" SHALL CONSIST OF A SINGLE CIRCUIT PER CONDUIT FOR FEEDERS SERVED BY AN OVERCURRENT PROTECTIVE (OCP) DEVICE IN EXCESS OF 20 AMPERES, SINGLE POLE. WHERE WIRE AND CONDUIT BRANCH CIRCUITS SHARE A CONDUIT HOMERUN, (OCP LESS THAN OR EQUAL TO 20 AMPERES SINGLE POLE) THERE SHALL BE A MAXIMUM OF SIX CIRCUITS COMBINED IN A RACEWAY TO THE PANELBOARD, UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE DERATED PER NATIONAL ELECTRICAL CODE (LATEST VERSION). COMBINING OF MULTIPLE HOMERUNS (MORE THAN SIX) IN A SINGLE CONDUIT SHALL NOT BE PERMITTED.

16. ALL CONDUIT SHOWN FOR INDOOR WORK AS WELL AS FOR WEATHER PROTECTED GARAGE AREAS SHALL BE EMT (3/4" MINIMUM) WITH MALLEABLE SET-SCREW TYPE CONNECTORS AND COUPLINGS. DIE-CAST FITTINGS ARE NOT ACCEPTABLE.

17. ALL CONDUIT SHOWN FOR OUTDOOR WORK SHALL BE SCHEDULE 40 PVC (3/4" MINIMUM). ALL JOINTS SHALL BE CLEANED WITH AN APPROVED SOLVENT PRIOR TO GLUING TO ENSURE WATERTIGHT CONNECTION. ANY CONDUITS FOUND WITH WATER IN THEM SHALL BE REPLACED AT THE SOLE EXPENSE OF THE CONTRACTOR.

18. PROVIDE IMC CONDUIT WITH THREADED COUPLINGS WHERE REQUIRED BY CODE.

19. TYPE MC CABLE SHALL BE UTILIZED FOR BRANCH LIGHTING AND RECEPTACLE CIRCUITRY,

20. INCLUDE ALL LABOR, MATERIALS, AND APPLICATIONS REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING OF ALL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, IN A MANNER SATISFACTORY TO THE ARCHITECT.

21. ALL WORK AND/OR EQUIPMENT INSTALLED OUTDOORS SHALL BE APPROVED FOR USE IN WET LOCATIONS.

22. WHERE CONDUITS, CABLE TRAY OR OTHER ELECTRICAL EQUIPMENT PENETRATE FIRE OR SMOKE RATED WALLS, PARTITIONS, FLOOR SLABS, ETC., THE SPACE BETWEEN THE SLEEVE OR CUTOUT AND THE ELECTRICAL EQUIPMENT SHALL BE CAULKED WITH A UL LISTED, INTUMESCENT TYPE, APPROVED FIRESTOP SYSTEM. SPACE BETWEEN THE SLEEVE OR CUTOUT AND THE ELECTRICAL EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR CONDUIT SIZE AND DAMMING MATERIAL THICKNESS FOR THE TYPE OF RATED CONSTRUCTION FOR WHICH THE SYSTEM IS TO BE USED. THE FIRESTOP SYSTEM SHALL BE AS MANUFACTURED BY 3M FIRE PROTECTION PRODUCTS OR AS APPROVED. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING OF WALLS AND FLOORS.

23. WHERE WORK IS ONGOING IN ELECTRICAL PANELS THE COVERS ARE NOT TO BE LEFT OFF UNLESS WORK IS CURRENTLY BEING PERFORMED ON THE PANEL. COVERS SHALL BE REPLACED EACH NIGHT AT THE END OF SHIFT.

24. TEMPORARY POWER AND LIGHTING SHALL BE PROVIDED THROUGHOUT CONSTRUCTION AREAS FROM TEMPORARY SERVICE(S) AND WEATHERPROOF PANEL(S). ALL RECEPTACLES SHALL BE GFCI TYPE AND HAVE PROTECTIVE COVERS. ALL TEMPORARY LIGHTS SHALL BE UL APPROVED WITH ONE 100 WATT ROUGH SERVICE INCANDESCENT LAMP EVERY 100 SQUARE FEET.

C. ARCHITECT'S AND/OR ENGINEER'S REVIEW

1. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASE OF ANY EQUIPMENT. ANY WORK OR EQUIPMENT INSTALLED PRIOR TO REVIEW OF SHOP DRAWINGS AND FOUND TO BE UNACCEPTABLE SHALL BE REMOVED AND MODIFIED AT THE CONTRACTOR'S SOLE EXPENSE INCLUDING ANY RESULTANT SCHEDULING DELAYS EXPERIENCED BY ANY TRADE.

2. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR COMPLIANCE WITH CODE. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH MAY HAVE BEEN OMITTED FROM SHOP DRAWING SUBMITTALS.

3. THE REVIEW OF A SEPARATE ITEM SHALL NOT INDICATE REVIEW OF THE COMPLETE ASSEMBLY IN WHICH IT FUNCTIONS. NOTHING IN THE ARCHITECT'S AND/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES SHALL BE CONSIDERED AS AUTHORIZING:
   - 3.1. A DEPARTURE FROM CONTRACT DOCUMENTS OR SPECIFICATIONS, OR,
   - 3.2. ADDITIONAL COST TO THE OWNER, OR,
   - 3.3. INCREASED TIME FOR COMPLETION OF THE WORK.

4. NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR IN THE FIELD UNTIL THE ARCHITECT AND/OR ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWING.

5. SAMPLES SHALL BE SUBMITTED FOR REVIEW WHEN REQUESTED BY THE ARCHITECT AND/OR ENGINEER.

6. TWO WEEKS AFTER AWARD OF CONTRACT SUBMIT A SHOP DRAWING LOG FOR REVIEW WITH SUBMITTAL DATES AND SUBMITTAL TYPE.

7. PROVIDE OPERATIONS AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND MATERIALS.

D. RECORD DRAWINGS

1. PREPARE AND FURNISH TO OWNER "AS BUILT" PLANS FOR ALL WORK INSTALLED. PROVIDE CAD DRAWINGS AND CAD FILES ON A COMPACT DISC COMPLETED IN THE LATEST VERSION OF AUTOCAD. ALL DRAWINGS SHALL BE IN A STYLE COMMENSURATE WITH THE ENGINEERING DESIGN. THE ENGINEERING DESIGN CAD DRAWINGS OR BACKGROUNDS WILL BE FURNISHED FOR USE TO THIS CONTRACTOR FOR THE PURPOSE OF THIS SUBMISSION (SUBMIT A CAD INDEMNIFICATION AGREEMENT).

2. DURING CONSTRUCTION, KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK AS SHOWN ON DRAWINGS AND THAT WHICH IS ACTUALLY INSTALLED. THIS RECORD SET OF PRINTS SHALL BE KEPT AT JOB SITE FOR INSPECTION.

3. UPON COMPLETION OF THE INSTALLATION. SUBMIT ONE SET OF BLACK AND WHITE PRINTS OF THESE "AS-BUILT" RECORD DRAWINGS TO THE CONSULTING ENGINEER FOR REVIEW. AFTER REVIEW BY THE CONSULTING ENGINEER, MAKE NECESSARY CHANGES TO THESE PRINTS AND THEN DELIVER THEM TO THE OWNER FOR RECORD. FINAL PAYMENT WILL BE WITHHELD UNTIL COMPLETION OF "AS-BUILT" DRAWINGS.

4. AS-BUILT DRAWINGS SHALL CONTAIN EXACT ROUTING AND ELEVATIONS OF ALL CONDUIT BANKS, ACTUAL PANELBOARD CIRCUIT BREAKER POLE POSITIONS USED FOR EACH CIRCUIT, AND EXACT LOCATION OF ALL EQUIPMENT. ALL DIMENSIONS SHALL BE REFERENCED TO BUILDING STRUCTURE CENTERLINES.

E. EQUIPMENT SPECIFICATIONS

1. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UL LISTED AND SHALL CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.

2. ALL EQUIPMENT (ELECTRICAL AND MECHANICAL) SHALL BE SPECIFIED TO HAVE VOLTAGE RATINGS COMPATIBLE WITH THE PROVISIONS OF ANSI C84.

3. ALL LOW TENSION CONDUIT FOR DATA, TELEPHONE, SECURITY, A/V, TELEVISION, ETC., SHALL BE WIRED TO A COMMON POINT. TWO ¾" EMT CONDUITS SHALL BE RUN FROM EACH DWELLING UNIT TO THE BUILDING TELEPHONE AND CABLE CLOSET. ALL WIRING WITHIN THE UNIT SHALL BE RUN CONCEALED IN WALLS AND ABOVE CEILINGS. PROTECT CABLES THAT ARE RUN IN METAL STUDS WITH APPROVED GROMMETS.

4. ALL WALL MOUNTED TELEPHONE AND CABLE JACKS SHALL BE AT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. IN KITCHENS ALL OUTLETS SHALL BE COUNTER HEIGHT. COORDINATE HEIGHT WITH BACKSPLASH AT COUNTER. IN THE EVENT THAT OUTLETS ARE SHOWN AT THE SAME LOCATION, UTILIZE ONE BOX AND ONE SINGLE GANG COVER FOR BOTH.

5. ALL 15A OR 20A, SINGLE POLE, 120 VOLT OR 208 VOLT BRANCH CIRCUIT RUNS IN EXCESS OF 100 FEET FROM THE PANEL TO THE DEVICE SHALL BE PROVIDED WITH #10 MINIMUM AWG WIRE FOR ITS ENTIRE LENGTH.

6. JUNCTION OR PULL BOXES SHALL BE FURNISHED AND INSTALLED WHERE INDICATED ON PLANS AND WHEREVER ELSE SUCH A BOX MAY BE NECESSARY TO FACILITATE INSTALLATION OR CONFORM TO CODE REQUIREMENTS. COORDINATE LOCATIONS OF SAME WITH ARCHITECT FOR ACCESSIBILITY AND AESTHETIC CONSIDERATIONS. GENERALLY, JUNCTION BOXES AND PULL BOXES SHALL BE INSTALLED EVERY 100 FEET IN CONDUIT HORIZONTAL RUNS AND SHALL NOT BE EXPOSED IN FINISHED SPACES. ALL CABLES WITHIN PULL BOXES SHALL BE PROPERLY TAGGED FOR IDENTIFICATION. LABEL ALL CONDUITS WITH FEEDER DESIGNATION, AT ENTRY AND EXIT TO THE BOX.

7. INSULATING BUSHINGS OR INSULATING THROATS SHALL BE INSTALLED ON ALL FITTINGS.

F. LIGHTING FIXTURES

1. ALL FLUORESCENT LIGHT FIXTURES SHALL BE PROVIDED WITH HIGH POWER FACTOR, HIGH FREQUENCY ELECTRONIC BALLASTS. BALLASTS SHALL BE UL LISTED, CLASS P, SOUND RATED A.

2. ALL LIGHTING FIXTURES SHALL BE CONNECTED USING MAXIMUM 6 FOOT LENGTH OF FLEXIBLE METAL CONDUIT FROM ACCESSIBLE CEILING OUTLET BOX USING LOCK NUT TYPE FITTINGS WITH GROUNDING AS REQUIRED BY GOVERNING CODES. PROVIDE #12 GROUND WIRE.

3. ALL SELF CONTAINED EMERGENCY LIGHTING FIXTURES SHALL CONTAIN AN INTEGRAL EMERGENCY BATTERY UNIT, CONSISTING OF NICKEL-CADIUM BATTERY AND AN AUTOMATIC SOLID STATE CHARGER WITH VISIBLE CHARGING LED. UNIT SHALL PROVIDE 87.5 PERCENT RATED VOLTAGE OUTPUT FOR MINIMUM OF 90 MINUTES. EMERGENCY BATTERY UNIT SHALL BE AS MANUFACTURED BY LIGHT ALARMS ELECTRONICS CORP., EMERGI-LITE OR DUAL-LITE.

4. ALL EXIT SIGNS SHALL BE PROVIDED WITH AN EMERGENCY BATTERY WITH 90 MINUTES (MIN.) OF BATTERY LIFE. BATTERY SHALL BE SPECIFIC TO EXIT SIGN MANUFACTURER.

5. BRANCH CIRCUITS SHALL IN ALL CASES CONTAIN THE NECESSARY NUMBER OF WIRES TO AFFORD THE SWITCH CONTROL INDICATED. ALL LIGHTING CIRCUITS WHICH ARE CONTROLLED BY DIMMERS SHALL NOT SHARE A NEUTRAL WITH ANOTHER CIRCUIT, BUT SHALL HAVE A SEPARATE NEUTRAL CONDUCTOR TO THE PANEL, WHETHER OR NOT INDICATED ON PLAN. EACH DIMMER SHALL BE SEPARATELY GANGED (FULLY ENCLOSED).

6. ALL LIGHT FIXTURES SHALL BE SPECIFIED ON THE ELECTRICAL AND/OR ARCHITECTURAL DOCUMENTS. IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO OBTAIN THE EXACT FIXTURE SPECIFICATIONS FOR THE PROJECT PRIOR TO THE SUBMISSION OF BID. REGARDLESS OF WHERE THE FIXTURE, LAMPS AND BALLASTS ARE SPECIFIED, THIS CONTRACTOR SHALL INCLUDE HIGH POWER FACTOR/ENERGY EFFICIENT BALLASTS AND HIGH EFFICIENCY LAMPS WHICH MEET OR EXCEED THE REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE.

G. SLEEVES

1. PROVIDE SLEEVES FOR ALL CONDUIT PASSING THROUGH FLOORS, WALLS, PARTITIONS AND ROOFS. SLEEVED ASSEMBLIES SHALL BE APPROVED FOR INTENDED USE FOR ALL WATERPROOF INSTALLATIONS (ROOF, FOUNDATION WALL, ETC.). PROVIDE OZ GEDNEY ASSEMBLIES, OR AS REVIEWED.

2. PROVIDE SLEEVES WITH AN I.D. AT LEAST 1/2 INCH GREATER THAN OUTSIDE OF CONDUIT SERVED.

H. PANELBOARDS

1. ALL PANELBOARDS SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED, AS REQUIRED, IN CODE GAUGE STEEL CABINETS, WITH STEEL TRIM, CONCEALED HINGES, DOORS AND FLUSH TYPE LOCKS, ALL KEYED ALIKE. PROVIDE FLUSH DOORS WHERE INDICATED ON DOCUMENTS.

2. ALL BUSES, INCLUDING NEUTRAL, SHALL BE ELECTRICAL GRADE HARD- DRAWN COPPER AND SIZED IN CONFORMANCE WITH NEMA STANDARDS. BUSES SHALL BE ARRANGED FOR SEQUENCE PHASING AND LOADS SHALL BE BALANCED AS EQUALLY AS POSSIBLE AMONGST THE THREE PHASES.

3. PANELBOARDS FOR COMMON AREAS AND SERVICE EQUIPMENT SHALL BE EQUIPPED WITH QUICK-MAKE, QUICK-BREAK FUSED SWITCHES OR BOLT-ON MOLDED CASE CIRCUIT BREAKERS, OF VOLTAGE REQUIRED, AND OF SIZE AND NUMBER OF POLES INDICATED ON THE SCHEDULES.

4. A TYPE WRITTEN DIRECTORY SHALL BE PROVIDED ON THE INSIDE OF THE DOOR OF EACH PANEL, INDICATING THE LOAD SERVED BY EACH CIRCUIT. UTILIZE ARCHITECTURAL DRAWINGS TO INDICATE ROOM NAMES AND NUMBERS OF ALL EQUIPMENT SERVED.

5. POWER, LIGHTING AND UTILITY PANELS FOR 120/208 VOLT SHALL BE BOLT-ON CIRCUIT BREAKER TYPE UNLESS OTHERWISE NOTED. SINGLE POLE BRANCHES SHALL BE BOLT-ON TYPE OF AT LEAST 10,000 AMPERES RMS SYMMETRICAL INTERRUPTING CAPACITY (OR AS INDICATED ON THE DRAWINGS). MULTIPLE POLE BREAKERS SHALL BE COMMON TRIP, OF THE CAPACITY AND NUMBER OF POLES AS INDICATED IN SCHEDULES. PANELBOARDS SHALL BE EQUIPPED WITH SOLID NEUTRAL AND GROUND BARS AND CONTAIN THE NUMBER OF POLES, OVERCURRENT DEVICES AND BUSED SPACES AS SPECIFIED IN SCHEDULE.

I. FUSES

1. ALL FUSES SHALL BE OF THE SAME MANUFACTURER, BUSSMANN, OR AS APPROVED, AND SHALL BE INSTALLED, AS REQUIRED, IN ALL CUTOUTS, PANELS AND SAFETY SWITCHES.

2. UNLESS OTHERWISE NOTED, FUSES SHALL BE BUSSMAN TYPE LPN, LPS OR KRP-C.

J. GENERAL

1. OUTLET BOXES SHALL BE CODE GAUGE GALVANIZED STAMPED STEEL, 4 INCH SQUARE BY 1-1/2 INCHES DEEP FOR POWER AND 4 INCHES SQUARE BY 2-1/2 INCHES DEEP FOR COMMUNICATION, FIRMLY ANCHORED IN PLACE. BOX VOLUME SHALL BE AS REQUIRED BY GOVERNING CODES WITH BLANK COVERS PROVIDED FOR ALL BOXES USED FOR JUNCTION PURPOSES. GEM BOXES SHALL ONLY BE USED WHERE DIMENSIONAL RESTRAINTS EXIST AND WHERE THE CONTRACTOR HAS OBTAINED PERMISSION FROM THE ENGINEER. MULTI-GANG BOXES SHALL BE PROVIDED WITH EXTENSION COLLARS MOUNTED WITHIN 1/8 INCH OF OUTER SURFACE. WHERE OUTLET BOXES ARE SHOWN FOR FLUSH MOUNTED DEVICES, A SINGLE GANG PLASTER RING SHALL BE PROVIDED, AND MOUNTED WITHIN 1/8 INCH OF OUTER SURFACE.

2. DISCONNECT SWITCHES SHALL BE QMQB FUSIBLE OR NONFUSIBLE WITH CURRENT AND VOLTAGE RATING AS INDICATED ON PLANS. SWITCHES SHALL BE HORSEPOWER RATED, ENCLOSED TYPE, SUITABLE FOR PADLOCKING IN OPEN POSITION.

3. HORSEPOWER RATED THERMAL SWITCHES (BRYANT OR AS APPROVED) SHALL BE USED FOR ALL MOTOR CIRCUITS. ELECTRICAL CONTRACTOR SHALL INSTALL WHERE APPLICABLE TOGGLE SWITCHES FOR USE AS DISCONNECT. THESE SWITCHES SHALL BE "T" RATED FOR RESISTANCE LOADS AND "M" RATED FOR MOTOR LOADS.

4. STANDARD DUPLEX CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE NEMA 5-15R, 5-20R, 2 POLE, 3 WIRE, GROUNDED, 15 OR 20 AMPERE RATED FOR DEVICES SHOWN ON A 15 OR 20 AMPERE CIRCUIT (RESPECTIVELY). PROVIDE DEVICES RATED TO THE EQUIVALENT CIRCUIT BREAKER SIZE UNLESS OTHERWISE NOTED. GROUND FAULT TYPE SHALL BE USED WHERE REQUIRED BY GOVERNING CODES INCLUDING ALL DEVICES SHOWN TO BE WITHIN SIX FEET OF A SINK/WATER.

5. SWITCHES SHALL BE FLUSH, COMMERCIAL SPECIFICATION GRADE, QUIET TUMBLER TYPE, GROUNDED, BEHIND COMMON PLATE PLATE WITH BARRIERED BACK BOX WHERE REQUIRED BY CODE FOR MULTIPLE CIRCUITS GREATER THAN 250 VOLTS. SINGLE POLE SWITCHES SHALL BE 20 AMPERES, 120 VOLT.

6. DEVICE TYPES, MANUFACTURERS AND COLORS SHALL BE SPECIFIED BY THE ARCHITECT UNLESS OTHERWISE NOTED. IF NO SPECIFICATION HAS BEEN PROVIDED, THIS CONTRACTOR SHALL OBTAIN ALL INFORMATION REGARDING THE ABOVE FROM THE ARCHITECT PRIOR TO THE SUBMISSION OF BID, OR SHALL INCLUDE THE ABILITY TO FURNISH ANY MANUFACTURER SELECTED BY THE ARCHITECT DURING THE SHOP DRAWING SUBMISSION PHASE.

7. ALL CABLE SHALL BE COPPER WITH THWN OR THHN INSULATION, EMPLOYED AT THE 75°C CODE RATED AMPACITY. NO SMALLER THAN No.12 AWG SHALL BE USED UNLESS SPECIFICALLY NOTED ON PLANS. COLOR CODING SHALL CONFORM TO CODE REQUIREMENTS. DERATE ALL CABLES PER LATEST VERSION OF THE NATIONAL ELECTRICAL CODE.

8. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID CU CONDUCTORS. ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER.

9. ALL SUPPLIED LUGS FOR EQUIPMENT REQUIRING HARD-WIRED CONNECTIONS, ETC. SHALL BE DOUBLE INDENT, 2 BOLT HOLE, LONG BARREL AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (T & B OR BURNDY OR AS REVIEWED). MECHANICAL LUGS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE LUG VENDOR.

10. ALL SUPPLIED IN-LINE SPLICE CONNECTORS, "T" CONNECTORS, ETC,. SHALL BE DOUBLE INDENT (PER CONDUCTOR), LONG BARREL AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (T & B, BURNDY OR AS REVIEWED). MECHANICAL CONNECTORS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE CONNECTOR VENDOR.

11. PROVIDE LOCAL DISCONNECTS FOR ALL MOTORS AND HARD-WIRED ELECTRICAL EQUIPMENT, WHETHER OR NOT SHOWN ON PLAN. DISCONNECTS SHALL BE SIZED PER THE OVERCURRENT PROTECTION AND LOCATED PER THE ENGINEER AND ARCHITECT.

12. PROVIDE LOCAL DISCONNECTS FOR ALL MOTORS AND HARD-WIRED ELECTRICAL EQUIPMENT, WHETHER OR NOT SHOWN ON PLAN. DISCONNECTS SHALL BE SIZED PER THE OVERCURRENT PROTECTION AND LOCATED PER THE ENGINEER AND ARCHITECT.

13. PROVIDE A 120 VOLT DEDICATED CIRCUIT FOR EACH CONDENSATE PUMP FOR ALL AC UNITS. COORDINATE WITH THE ENGINEER, THE PANEL AND BREAKER POSITION, PRIOR TO INSTALLATION.

14. ALL EQUIPMENT MATERIALS SHALL BE NEW, UL LISTED AND SHALL CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.

15. ALL EQUIPMENT (ELECTRICAL AND MECHANICAL) SHALL BE SPECIFIED TO HAVE VOLTAGE RATINGS COMPATIBLE WITH THE PROVISIONS OF ANSI C84.

16. ALL FEEDERS TO ELECTRICAL PANELS/GEAR AND HVAC EQUIPMENT SHALL BE IN CONDUIT

17. DISCONNECTS FOR INCOMING SERVICE SHALL BE SERVICE RATED.

JAM ARCH

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ARMEN KHACHATURIAN 062261-1

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261–1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL SPECIFICATIONS

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
E-301

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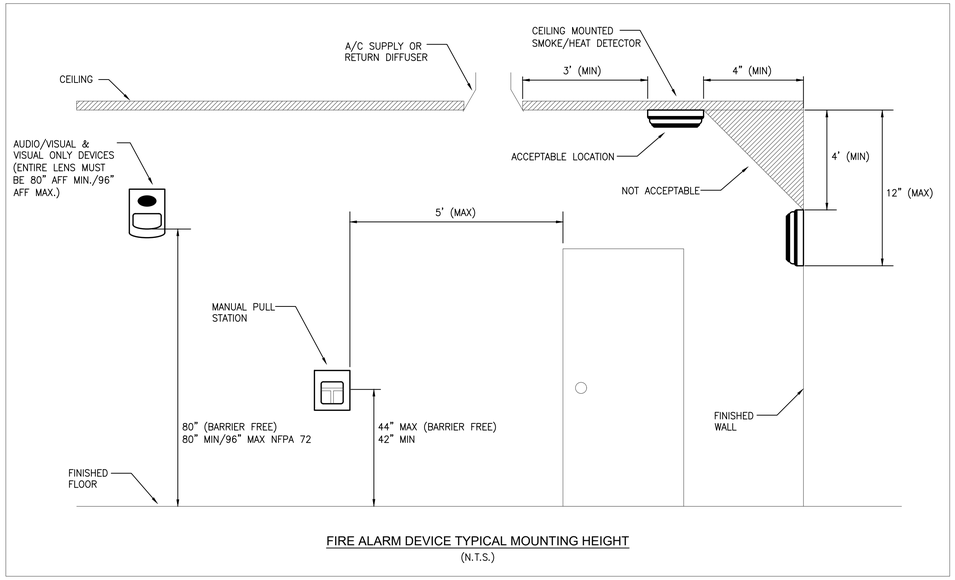
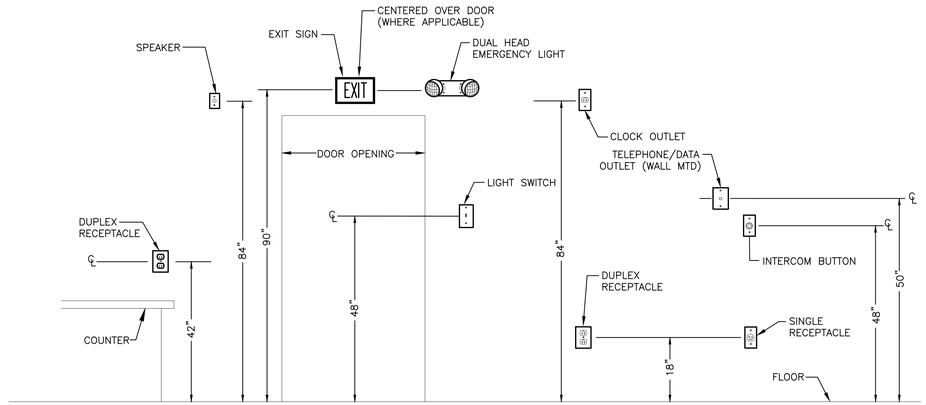


FIRE ALARM DEVICE TYPICAL MOUNTING HEIGHT

(N.T.S.)



TYPICAL MOUNTING HEIGHT DETAIL

(N.T.S.)

COPPER BRANCH CIRCUIT WIRE SIZING TABLES – 208V – 3% VOLTAGE DROP

	C/B TRIP	208V, 3P, 3W 120V/208V, 3P, 4W			208V, 2P, 2W 120V/208V, 2P, 3W				120V, 1P, 2W				
DISTANCE IN FEET	15	177	273	429	153	236	371	578	88	136	214	333	500	625
MINIMUM WIRE SIZE		12	10	8	12	10	8	6	12	10	8	6	4	3
DISTANCE IN FEET	20	132	205	322	115	177	279	433	66	102	161	250	375	469
MINIMUM WIRE SIZE		12	10	8	12	10	8	6	12	10	8	6	4	3
DISTANCE IN FEET	30	136	214	334	118	186	289	433	68	107	167	250	313	375
MINIMUM WIRE SIZE		10	8	6	10	8	6	4	10	8	6	4	3	2
DISTANCE IN FEET	40	161	250	375	139	217	325	406	80	125	188	234	281	352
MINIMUM WIRE SIZE		8	6	4	8	6	4	3	8	6	4	3	2	1
DISTANCE IN FEET	50	129	200	300	111	173	260	325	64	100	150	188	225	281
MINIMUM WIRE SIZE		8	6	4	8	6	4	3	8	6	4	3	2	1
DISTANCE IN FEET	60	167	250	313	144	217	271	325	83	125	156	188	234	
MINIMUM WIRE SIZE		6	4	3	6	4	3	2	6	4	3	2	1	
DISTANCE IN FEET	70	214	268	322	168	232	279	348	107	134	161	201		
MINIMUM WIRE SIZE		4	3	2	4	3	2	1	4	3	2	1		
DISTANCE IN FEET	80	188	235	281	163	203	244	305	94	117	141	176		
MINIMUM WIRE SIZE		4	3	2	4	3	2	1	4	3	2	1		
DISTANCE IN FEET	90	208	250	313	181	217	271		104	125	156			
MINIMUM WIRE SIZE		3	2	1	3	2	1		3	2	1			
DISTANCE IN FEET	100	188	225	281	163	195	244		94	113	141			
MINIMUM WIRE SIZE		3	2	1	3	2	1		3	2	1			

NOTES:

1. READ ACROSS TO THE RIGHT FROM C/B TRIP TO DESIRED VOLTAGE CHARACTERISTICS AND NEXT GREATER DISTANCE THAN CIRCUIT IN QUESTION.
2. READ DOWN TO MINIMUM WIRE SIZE.
3. DISTANCES ARE TO THE CENTER OF CONCENTRATED LOAD SUCH AS CLASSROOM LIGHTING OR THE MIDPOINT OF DISTRIBUTED LOAD SUCH AS CORRIDOR LIGHTING.
4. EQUIPMENT GROUNDING CONDUCTORS SHALL BE INCREASED IN SIZE PROPORTIONATELY PER NEC.

RACEWAY SIZING

ALL RACEWAYS SHALL BE SIZED IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE IN EFFECT AS A MINIMUM SIZE. THE MORE COMMON SIZES ARE INCLUDED HERE FOR THE CONTRACTOR'S CONVENIENCE.

WIRE SIZE	NO. OF CONDUCTORS	MINIMUM CONDUIT SIZE
12	3	3/4"
12	4	3/4"
12	5	3/4"
12	6	3/4"
12	7	3/4"
12	8	3/4"
10	3	3/4"
10	4	3/4"
10	5	3/4"
10	6	3/4"
10	7	3/4"
10	8	3/4"

WIRE SIZE	NO. OF CONDUCTORS	MINIMUM CONDUIT SIZE
8	3	3/4"
8	4	3/4"
8	5	3/4"
8	6	1"
8	7	1"
8	8	1"
6	3	3/4"
6	4	3/4"
6	5	1"
6	6	1"
6	7	1-1/4"
6	8	1-1/4"

NOTES TO PANELBOAD SCHEDULES AND BRANCH CIRCUIT WIRE SIZING TABLES.

WIRE SIZING

UNLESS OTHERWISE INDICATED, MINIMUM WIRE AMPACITY SHALL BE GREATER THAN OR EQUAL TO THE BRANCH CIRCUIT TRIP BASED ON COPPER CONDUCTOR WITH 90-DEGREE C THHN INSULATION APPLIED AT ITS 75-DEGREE C AMPACITY.

REFER TO THE BRANCH CIRCUIT WIRE SIZING TABLES FOR DISTANCE LIMITATIONS FOR THE MINIMUM WIRE SIZE AND FOR SELECTING THE PROPER WIRE SIZE FOR THE DISTANCE AND VOLTAGE DROP INVOLVED.

NUMBER OF CONDUCTORS

QUANTITIES OF WIRES SHALL BE BASED ON AN INDIVIDUAL HOMERUN FOR EACH CIRCUIT AS FOLLOWS.

	PHASE CONDUCTOR	FULL CIRCUIT SIZE NEUTRAL CONDUCTOR	FULL CIRCUIT SIZE EQUIPMENT GROUNDING CONDUCTOR	FULL CIRCUIT SIZE ISOLATED GROUND CONDUCTOR
1 POLE CIRCUIT	1	1	1	0
1 POLE DATA / COMPUTER CIRCUIT	1	1	1	1
2 POLE CIRCUIT	2	1	1	0
3 POLE CIRCUIT	3	1	1	0
3 POLE MOTOR CIRCUIT	3	0	1	0

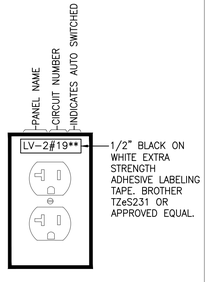
	PHASE CONDUCTOR	FULL CIRCUIT SIZE NEUTRAL CONDUCTOR	FULL CIRCUIT SIZE EQUIPMENT GROUNDING CONDUCTOR	FULL CIRCUIT SIZE ISOLATED GROUND CONDUCTOR
TWO 1 POLE HOMERUNS	2	2	1	0
TWO 1 POLE DATA/COMP. CIRCUIT HOMERUNS	2	2	1	1
THREE 1 POLE HOMERUNS	3	3	1	0
THREE 1 POLE DATA/COMP. CIRCUIT HOMERUNS	3	3	1	1

CONSECUTIVE INDIVIDUAL 20 AMP LINE TO NEUTRAL BRANCH CIRCUITS MAY NOT BE COMBINED INTO MULTI-WIRE BRANCH CIRCUITS HAVING HOMERUNS WITH A COMMON NEUTRAL CONDUCTOR.

SINGLE PHASE, TWO POLE, TWO WIRE, LINE TO LINE, BRANCH CIRCUITS AND SINGLE PHASE, TWO POLE, THREE WIRE, LINE TO LINE PLUS NEUTRAL, BRANCH CIRCUITS SHALL HAVE INDIVIDUAL UNCOMBINED HOMERUNS.

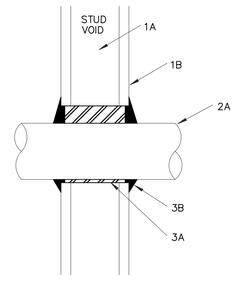
COMBINED TWO AND THREE CIRCUIT HOMERUNS SHALL HAVE SEPARATE NEUTRALS FOR EACH BUT A COMMON EQUIPMENT GROUNDING CONDUCTOR AND A COMMON ISOLATED GROUNDING CONDUCTOR MAY BE USED.

NOTE: ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT NUMBER LABELS ON ALL RECEPTACLES IN LIGHTBRIDGE ACADEMY AS SHOWN BELOW



RECEPTACLE LABEL DETAIL

(N.T.S.)



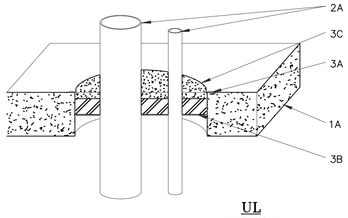
WALL ASSEMBLY
1A 1HR OR 2HR RATED MIN 2x3 STL STUDS @ MAX 24"oc
1B (1) LAYER (1HR) OR (2) LAYER (2HR) 5/8" GWB, TYPE X. MAX DIAMETER OPENING OF 24 SQ IN

PENETRANT
2A ONE OF THE FOLLOWING MAY BE USED:
MAX 24" STL PIPE OR CONDUIT
MAX 24" IRON PIPE
MAX 6" CONDUIT OR EMT
MAX 6" COPPER PIPE OR
ANNULAR SPACE: 1/8" TO MAX 1/2"

FIRESTOPPING
3A MINERAL WOOL BACKING FILLED TO DEPTH OF WALL SPACE
3B 1/4" SEALANT w/ 1/4" CROWN AND OVERLAP GWB 1/4" FOR 2HR OR ½" CROWN AND ½" OVERLAP FOR 1HR.

UL SYSTEM WL 1089

N.T.S.



FLOOR ASSEMBLY
1A 2HR RATED MIN 4-1/2" CONC FLOOR MAX OPENING OF 15"

PENETRANT
2A UP TO 4 OF THE FOLLOWING IN ANY COMBINATION. ONLY 2 OF WHICH ARE GREATER THAN 2":
MAX 4" STL PIPE OR CONDUIT
MAX 4" COPPER PIPE OR TUBING
ANNULAR SPACE: 2" – 3"
MAX 4" EMT

FIRESTOPPING
3A MINERAL WOOL COMPRESSED INTO ANNULAR SPACE MIN 2
3B AT FLOOR SURFACE 1" DEEP SEALANT FINISHED FLUSH w/ FLOOR

UL SYSTEM CAJ1088-F

N.T.S.

NOTE:

1. THE ABOVE DETAILS ARE PROVIDED TO AID IN THE INSTALLATION AND SELECTION OF THE UL LISTED DESIGN (FLAMESAFE FS-1900 SERIES SEALANT). THE CONTRACTOR SHALL SUBMIT PRODUCT DATA DETAILS AND SHOP DWGS FOR ALL PENETRATIONS.
2. SYSTEM DESIGN EVALUATED TO THE UL 1479 (ASTM E814) FIRE TESTS OF THROUGH – PENETRATION FIRESTOPS.
3. REFER TO THE UL LIST DESIGN FOR COMPLETE INFORMATION AND THE UL FIRE RESISTANCE DIRECTORY FOR COMPONENTS REQUIRING UL CLASSIFICATION.

TYPICAL DETAILS OF CONDUITS THRU RATED WALLS OR FLOORS

NOT TO SCALE

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:

LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:

BLOCK: 1, LOT: 91

OWNER

LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL DETAILS

Rev. #	Revision Date	Revision Description
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JOB NUMBER: 2019-01.15
DATE: 08/08/2022
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CHECKED BY: AK

SHEET NO.

E-401

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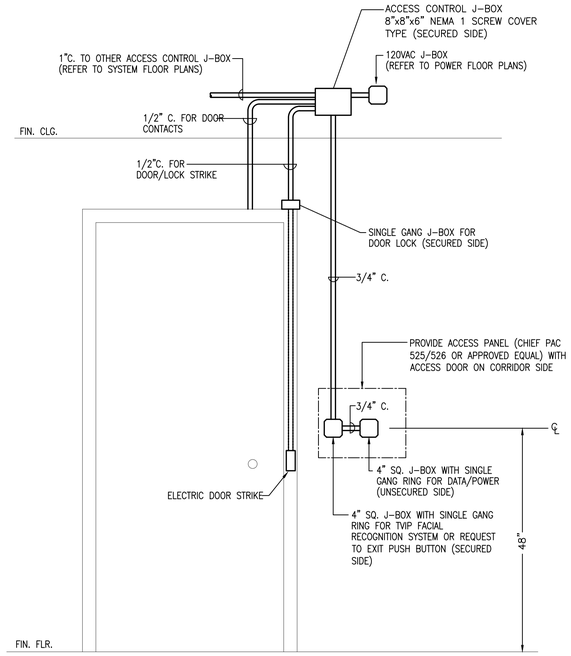
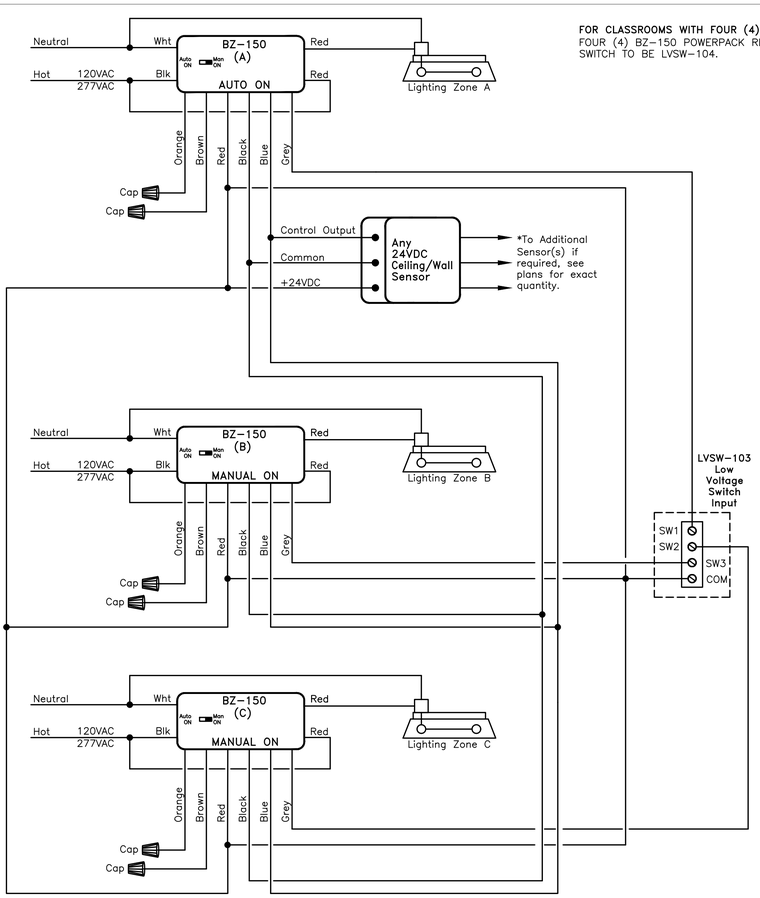
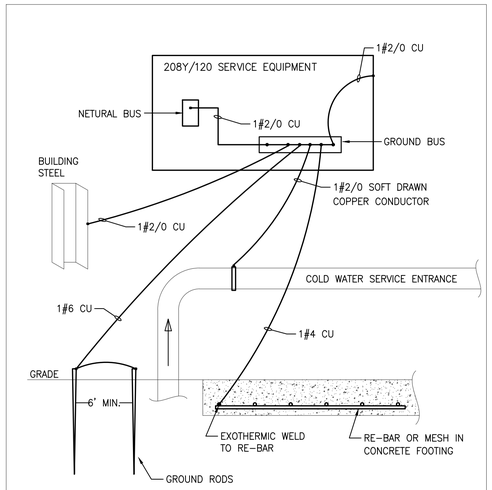


ACCESS CONTROL CONDUIT DETAIL FOR FACIAL RECOGNITION SYSTEM
(N.T.S.)

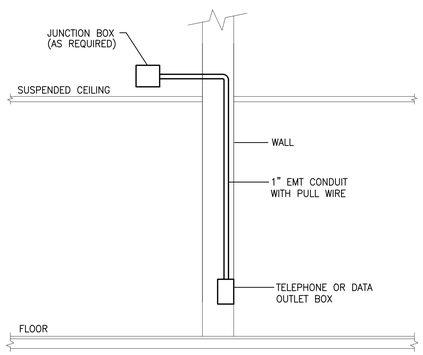


FOR CLASSROOMS WITH FOUR (4) LIGHTING ZONES:
FOUR (4) BZ-150 POWERPACK REQUIRED, AND SWITCH TO BE LVSW-104.

LIGHTING CONTROL WIRING DIAGRAM
FOR CLASSROOMS WITH (3) ZONES
(N.T.S.)



SERVICE GROUNDING DETAIL
(N.T.S.)



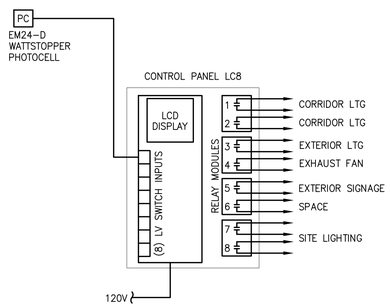
TYPICAL EMPTY CONDUIT FOR
TELEPHONE/DATA RACEWAY
(N.T.S.)

RELAY CONTROL SCHEDULE

CONTROL PANEL /CONTACTOR	RELAY DESIGN.	CIRCUIT CONTROLLED	CONTROL DESIGNATION	OVERRIDE DESIGNATION
LC8	1	MP-8	CORRIDOR LTG	PANEL
	2	MP-16	CORRIDOR LTG	PANEL
	3	MP-56	EXTERIOR LTG	PC
	4	MP-24	EXHAUST FAN	PANEL
	5	MP-20	EXTERIOR SIGNAGE	PC
	6		SPARE	
	7	RP-53,55	SITE LIGHTING	PC
	8			

NOTES:

1. EC SHALL FURNISH AND INSTALL ALL EQUIPMENT SHOWN.
2. PROVIDE WATTSTOPPER LC-8 LIGHTING CONTROL PANEL.
3. PROVIDE 3 WIRE LOW VOLTAGE MOMENTARY OVERRIDE SWITCH.
4. TIME SCHEDULE TO BE COORDINATED WITH TENANT.
5. PROVIDE (4) DUAL SINGLE-POLE RELAYS MODULES.
6. LV SWITCH SHALL SERVE AS MANUAL OVERRIDE SWITCH FOR GENERAL LIGHTING.
7. ALL 120V LOCAL SWITCHES SHALL BE WIRED DOWNSTREAM OF RELAYS.
8. COORDINATE EXACT LOCATION OF PHOTOCELL IN FIELD. PHOTOCELL SHALL FACE NORTHERN SKY.



AUTOMATIC LIGHTING CONTROL DETAIL
(N.T.S.)

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ELECTRICAL DETAILS

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E-402

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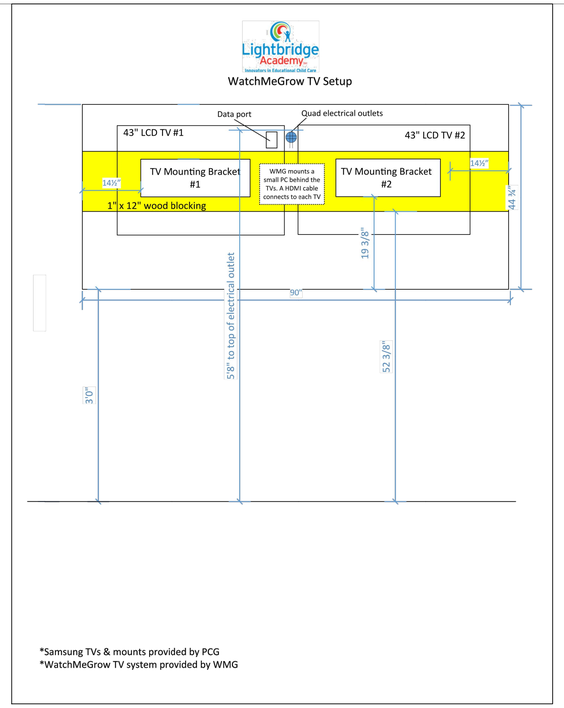
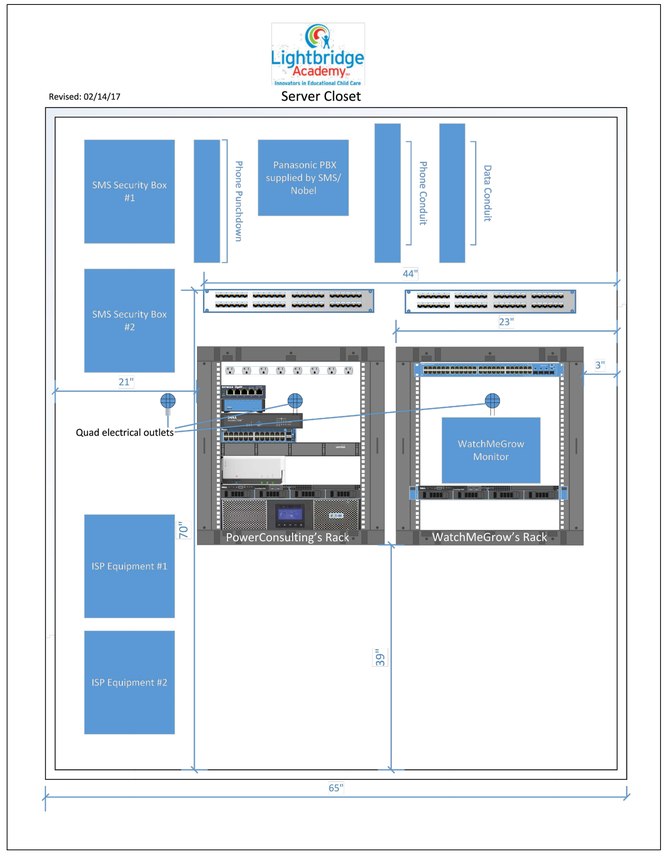
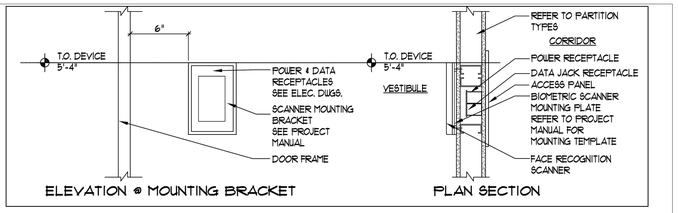


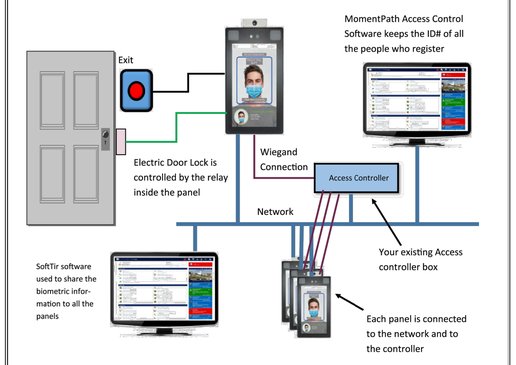
WATCHMEGROW TV SETUP
(N.T.S.)



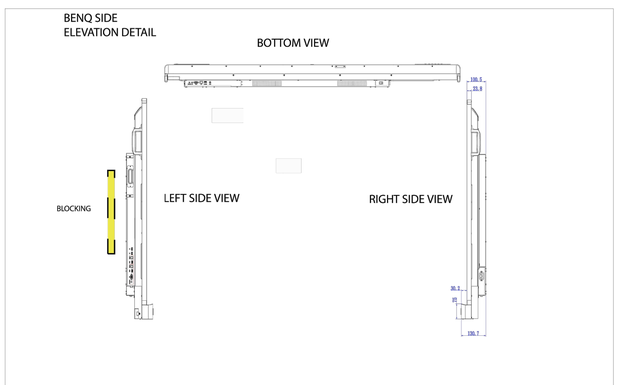
LIGHTBRIDGE ACADEMY SERVER CLOSET DETAIL
(N.T.S.)



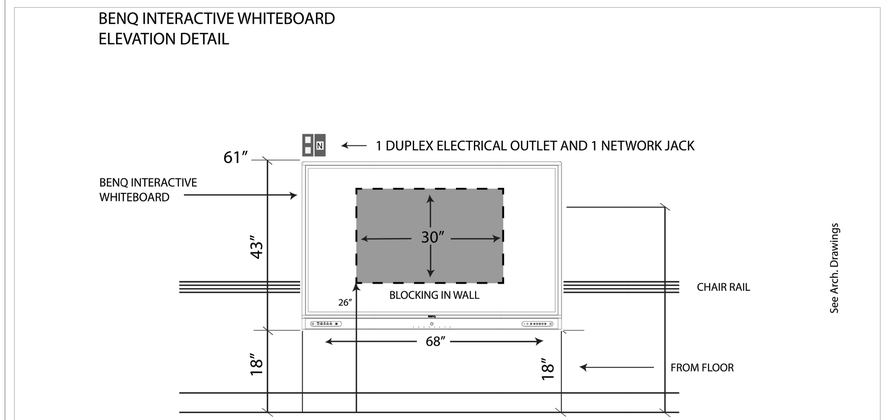
FACIAL RECOGNITION SCANNER DETAIL
(N.T.S.)



LIGHTBRIDGE PROJECTOR MOUNT ELEVATION
(N.T.S.)



LIGHTBRIDGE PROJECTOR MOUNT ELEVATION
(N.T.S.)



LIGHTBRIDGE INTERACTIVE WHITEBOARD ELEVATION
(N.T.S.)

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STATE OF NEW YORK ARMEN YOVACHATURIAN 062261-1 LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

LIGHTBRIDGE ACADEMY ELECTRICAL EQUIPMENT DETAILS

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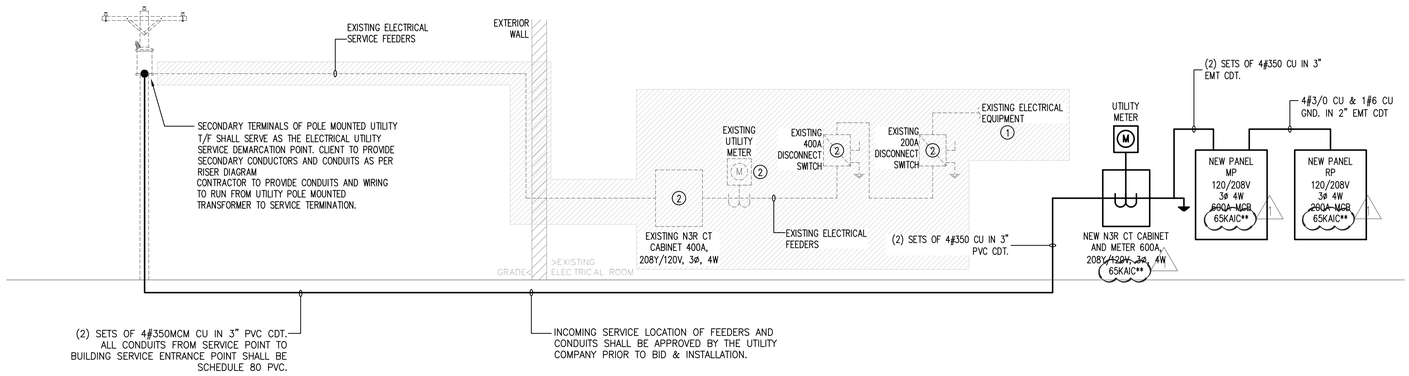
E-403

LEGEND	
SYMBOL	DESCRIPTION
----------	EXISTING TO REMAIN
————	NEW
- - - - - -	EXISTING TO BE REMOVED

LOCATION OF ELECTRICAL EQUIPMENT SHALL BE COORDINATED WITH AUTHORITIES HAVING JURISDICTION AND UTILITY COMPANY. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT WIRE SIZE REQUIRED. REFER TO APPLICABLE VERSION OF THE N.E.C.

1

** FAULT CURRENT RATING FOR BID PURPOSES ONLY. EC IS RESPONSIBLE FOR OBTAINING ACTUAL FAULT CURRENT AVAILABLE ON SITE ONCE CONTACT WITH UTILITY HAS BEEN ESTABLISHED AND SUBMIT TO ENGINEER OF RECORD FOR REVIEW.



KEYED NOTES: (#)

1. ALL ELECTRICAL PANELBOARDS AND LOAD CENTERS SHALL BE DEMOLISHED AND REPLACED WITH NEW AS PER BASE DESIGN.
2. EC SHALL FIELD INSPECT EXISTING EQUIPMENT AND DETERMINE IF IT IS STILL WITHIN ITS EXPECTED USEFUL LIFE AND NEC CODE REQUIRED CLEARANCES ARE MAINTAINED.

ELECTRICAL RISER DIAGRAM
(N.T.S.)

RISER DIAGRAM GENERAL NOTES

A. ELECTRICAL EQUIPMENT, AND MATERIAL SHALL BE LISTED, LABELED, AND INSTALLED PER RECOGNIZED ELECTRICAL TESTING LABORATORY.

B. PANELS AND SUB PANELS REQUIRE A LETTER ON LETTERHEAD FROM THE INSTALLER THAT THE TORQUE REQUIREMENTS HAVE BEEN MET TO THE MANUFACTURER'S INSTRUCTIONS.

C. TWO OR MORE CONDUCTORS THAT LAND ON A SINGLE LUG SHALL BE LISTED FOR THAT USE.

D. THE DESIGN TEMPERATURE OF THE CONDUCTORS AND THEIR TERMINATIONS SHALL BE 75°C.

E. PARALLEL FEEDER CONDUCTORS SHALL BE CUT TO EXACTLY THE SAME LENGTHS AND SHALL BE FROM THE SAME FACTORY RUN. ALL CONNECTIONS FOR SAME SHALL BE TORQUED TO IDENTICAL VALUES.

F. CONDUCTORS BELOW GRADE OR SUBJECT TO MOISTURE SHALL BE "XHHW-2".

G. PROVIDE FACTORY SERIES COORDINATION FOR ALL CIRCUIT BREAKERS (INCLUDING ALL BRANCH BREAKERS), RELATIVE TO "UPSTREAM" BREAKERS, SO THAT ONLY THE BREAKER CLOSEST IN THE CIRCUIT TO THE LOAD TRIPS UPON AN OVERLOAD OR FAULT CONDITION.

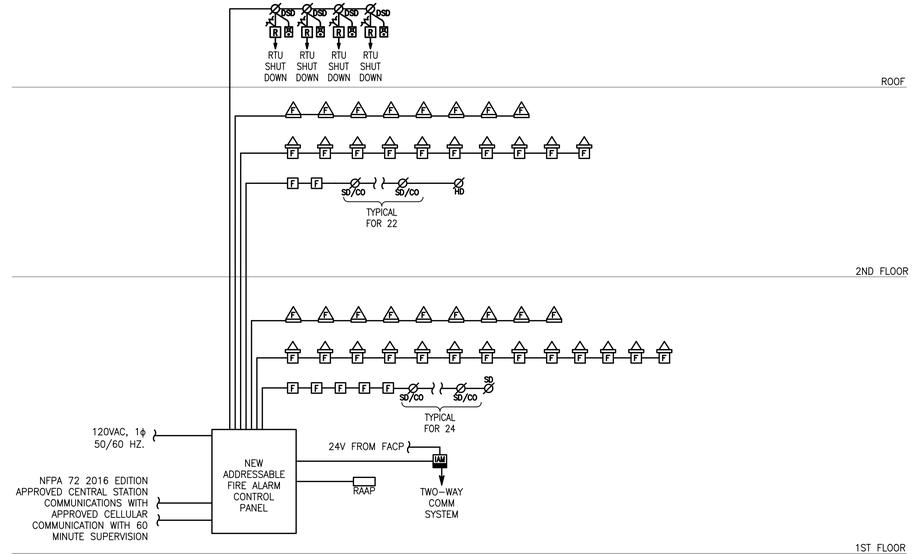
H. POWER DISTRIBUTION EQUIPMENT SUPPLIER SHALL PROVIDE EQUIPMENT APPROPRIATELY RATED AND BRACED TO ACCOMMODATE THE AVAILABLE FAULT CURRENT AT THE UTILITY COMPANY TRANSFORMER SECONDARIES. THIS SUPPLIER SHALL ACCORDINGLY PROVIDE ANY RELATED CALCULATIONS SO THAT THEIR EQUIPMENT IS PROPERLY COORDINATED FOR THE AVAILABLE FAULT CURRENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THIS SUPPLIER WITH COPIES OF THE ELECTRICAL DOCUMENTS AS REQUIRED SO THAT PROPERLY RATED/BRACED EQUIPMENT IS PROVIDED UNDER BASE BID.

I. WORKING CLEARANCES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANEL-BOARDS, TRANSFORMERS, STARTERS, DISCONNECTS, ETC. AS APPLICABLE) IN STRICT COMPLIANCE WITH N.E.C. CHAPTER 1, PART B, SECTION 110-26(A). LOCATIONS SHOWN ON FLOOR PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH THE ABOVE N.E.C. REFERENCE. THIS REQUIREMENT APPLIES TO EQUIPMENT ON FLOOR PLANS AS WELL AS TO EQUIPMENT SHOWN ON RISER.

J. LOCATE ANY RELATED PULL-BOXES SO THAT THEY WILL BE FULLY ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. AS WITH ALL WORK, COORDINATE IN ADVANCE WITH ALL OTHER TRADES.

K. ALL INDOOR PANELS SHALL BE IN NEMA-1 ENCLOSURES AND ALL OUTDOOR PANELS SHALL BE NEMA-3R (U.O.N.).

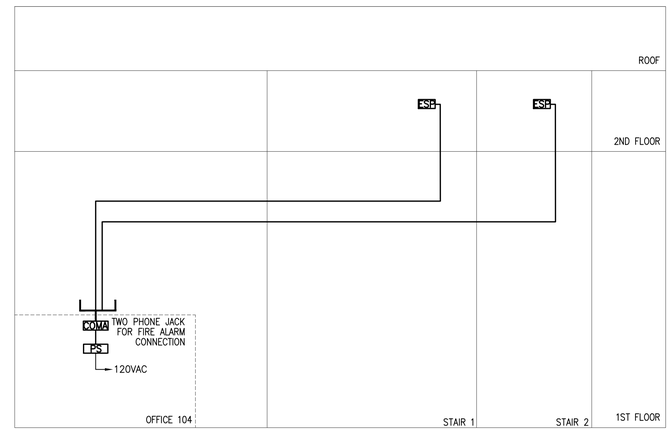
L. PERFORM INSULATION INTEGRITY TESTING (MEGGERING) FOR ALL EXISTING BRANCH AND FEEDER CIRCUITS TO BE REUSED.



FIRE ALARM NOTES

1. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A NEW STANDALONE ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE CAPABILITY.
2. ALL EQUIPMENT AND DEVICES USED SHALL BE BY APPROVED MANUFACTURERS AND SHALL BE LISTED FOR THEIR USE.
3. PROVIDE SUFFICIENT CAPACITY FOR FUTURE DEVICES.

FIRE ALARM RISER DIAGRAM
(N.T.S.)



ESP EMERGENCY CALL BOX
RATH COMMUNICATIONS – MODEL# 2100-956SSRC2 (OR APPROVED EQUAL)

COMA BASE STATION
RATH COMMUNICATIONS – MODEL# 2500-205B (OR APPROVED EQUAL)

PS POWER SUPPLY
RATH COMMUNICATIONS – MODEL# 2500-PWR24 (OR APPROVED EQUAL)

NOTES:
1. VENDOR/CONTRACTOR IS TO PROVIDE SHOP DRAWING TO OWNER/ARCHITECH FOR APPROVAL PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR ALL DEVICES FOR A COMPLETED WORKING SYSTEM.
3. ALL WIRING AS PER MANUFACTURER'S RECOMMENDATIONS.

TWO-WAY EMERGENCY COMMUNICATIONS SYSTEM RISER
(N.T.S.)

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ELECTRICAL RISER DIAGRAM

Rev. #	Revision Date	Revision Description
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PANEL DESIGNATION **MP**

VOLTAGE	PHASE	POLES	WIRES	AIC
208Y/120V	3	60	4	65K**

G WIRE SIZE	Ø WIRE SIZE	CKT No.	DESCRIPTION	CB AMPS	CB POLES	PH. A VA	PH. B VA	PH. C VA	CB POLES	CB AMPS	DESCRIPTION	CKT No.	Ø WIRE SIZE	G WIRE SIZE	
		1				2160			1	20	CLASSROOM 2/3/6 LIGHTING	2	2#12	1#12	
1#10	3#10	3	HP-1 HEAT PUMP	30	3	900	2160		1	20	CLASSROOM 1/4/5 LIGHTING	4	2#12	1#12	
		5					950	2160	1	20	CLASSROOM 7/MISC. LIGHTING	6	2#12	1#12	
		7				2880			1	20	1ST FL CORRIDOR/MISC. LIGHTING	8	2#12	1#12	
1#10	3#8	9	RTU-2 ROOFTOP UNIT	35	3	750	2880		1	20	CLASSROOM 12/13/14 LIGHTING	10	2#12	1#12	
		11					1050	2880	1	20	CLASSROOM 9/10/11 LIGHTING	12	2#12	1#12	
		13				3120		900	1	20	CLASSROOM 8/MISC. LIGHTING	14	2#12	1#12	
1#10	3#8	15	RTU-3 ROOFTOP UNIT	40	3	600	3120		1	20	2ND FL CORRIDOR/STAIR LIGHTING	16	2#12	1#12	
		17					700	3120	1	20	LIGHTING CONTACTOR PANEL	18	2#12	1#12	
		19				3120		500	1	20	EXTERIOR SIGNAGE	20	2#12	1#12	
1#10	3#8	21	RTU-4 ROOFTOP UNIT	40	3	500	3120		1	20	FIRE ALARM CONTROL PANEL	22	2#12	1#12	*
		23					500	3120	1	25	EF-1 EXHAUST FAN	24	2#10	1#10	
		25				8760		2300	1	20	MICROCONS AP-1 THROUGH 6	26	2#12	1#12	
1#8	3#4	27	RTU-5 ROOFTOP UNIT	80	3	1350	8760		1	20	BIPOLAR IONIZATION FILTER/DAMPERS	28	2#12	1#12	
		29					200	8760	1	20	CLASSROOM 2 REFRIGERATOR	30	2#12	1#12	(G)
		31				8760		800	1	20	CLASSROOM 3 REFRIGERATOR	32	2#12	1#12	(G)
1#8	3#4	33	RTU-6 ROOFTOP UNIT	80	3	800	8760		1	20	CLASSROOM 4 REFRIGERATOR	34	2#12	1#12	(G)
		35					800	8760	1	20	CLASSROOM 5 REFRIGERATOR	36	2#12	1#12	(G)
		37				2000		800	1	20	CLASSROOM 6 REFRIGERATOR	38	2#12	1#12	(G)
1#10	2#10	39	ECH-1 ELECTRIC CEILING HEATER	25	2	800	2000		1	20	CLASSROOM 7 REFRIGERATOR	40	2#12	1#12	(G)
		41					800	2000	1	20	CLASSROOM 8 REFRIGERATOR	42	2#12	1#12	(G)
1#10	2#10	43	ECH-1 ELECTRIC CEILING HEATER	25	2	2000		800	1	20	CLASSROOM 9 REFRIGERATOR	44	2#12	1#12	(G)
		45				800	2000		1	20	CLASSROOM 10 REFRIGERATOR	46	2#12	1#12	(G)
1#10	2#10	47	ECH-1 CABINET UNIT HEATER	25	2		800	2000	1	20	CLASSROOM 11 REFRIGERATOR	48	2#12	1#12	(G)
		49				2000		800	1	20	CLASSROOM 12 REFRIGERATOR	50	2#12	1#12	(G)
1#10	2#10	51	ECH-1 CABINET UNIT HEATER	25	2	800	2000		1	20	CLASSROOM 13 REFRIGERATOR	52	2#12	1#12	(G)
1#12	2#12	53	ECH-2 ELECTRIC CEILING HEATER	15	1			500	1	20	CLASSROOM 14 REFRIGERATOR	54	2#12	1#12	(G)
		55				7200			1	20	EXTERIOR LIGHTING	56	2#12	1#12	
1#8	2#3	57	AHU-1 AIR HANDLING UNIT	100	2		7200		1	20	SPACE	58			
		59	SPACE	20	1				1	20	SPACE	60			
						11680			3	200	SUB-PANEL RP	SUB-FEED	4#3/0	1#6	
							16380								
								14010							
			VA:			60,980	64,980	55,610							

CONNECTED LOAD
KVA: 181.6
AMPS: 504.4

REMARKS
(*) LOCKABLE CIRCUIT BREAKER
(G) PROVIDE GFCI CIRCUIT BREAKER
(**) FAULT CURRENT RATING FOR BID PURPOSES ONLY, PANEL MUST BE BRACED FOR ACTUAL AVAILABLE FAULT CURRENT ON SITE.

MAIN
BUS 600 AMPS
BRKR - AMPS
☒ NEW PANEL
☐ EXISTING PANEL
☒ MAIN CIRCUIT BREAKER
☐ MAIN LUGS ONLY
☐ FLUSH MOUNTED
☒ SURFACE MOUNTED
☐ BOTTOM FEED
☐ TOP FEED

OPTIONS
☐ 200% NEUTRAL
☒ GROUND BUS
☐ ISOLATED GROUND BUS
☐ DOOR-IN-DOOR CONSTRUCTION
☐ STAINLESS STEEL COVER
☐ NEMA 3R PANEL
☒ SUB-FEED MAIN C.B. (3P) QTY: 1 AMPS: 200A
☐ CONTACTOR AMPS:_____ CKT'S CONTROLLED:_____
☐ OTHER: _____
☐ OTHER: _____

PANEL DESIGNATION **RP**

VOLTAGE	PHASE	POLES	WIRES	AIC
208Y/120V	3	84	4	65K**

G WIRE SIZE	Ø WIRE SIZE	CKT No.	DESCRIPTION	CB AMPS	CB POLES	PH. A VA	PH. B VA	PH. C VA	CB POLES	CB AMPS	DESCRIPTION	CKT No.	Ø WIRE SIZE	G WIRE SIZE	
1#12	2#12	1	CLASSROOM 1 OUTLETS	20	1	720			1	20	1ST FL CORRIDOR RECEPTACLES	2	2#12	1#12	
1#12	2#12	3	CLASSROOM 2 OUTLETS	20	1	900	900		1	20	1ST FL CORRIDOR RECEPTACLES	4	2#12	1#12	
1#12	2#12	5	CLASSROOM 3 OUTLETS	20	1		1080	900	1	20	STAFF LOUNGE OUTLETS	6	2#12	1#12	
1#12	2#12	7	CLASSROOM 4 OUTLETS	20	1	900		360	1	20	STAFF LOUNGE OUTLETS	8	2#12	1#12	
1#12	2#12	9	CLASSROOM 5 OUTLETS	20	1	360	900		1	20	STAFF LOUNGE REFRIGERATOR	10	2#12	1#12	(G)
1#12	2#12	11	CLASSROOM 6 OUTLETS	20	1		800	900	1	20	CONF. ROOM/OFFICE RECEPTACLES	12	2#12	1#12	
1#12	2#12	13	CLASSROOM 7 OUTLETS	20	1	900		720	1	20	OFFICE PRINTER/COPIER	14	2#12	1#12	
1#12	2#12	15	CLASSROOM 8 OUTLETS	20	1	500	900		1	20	OFFICE REFRIGERATOR	16	2#12	1#12	
1#12	2#12	17	CLASSROOM 9 OUTLETS	20	1		800	900	1	20	OFFICE WORKSTATIONS	18	2#12	1#12	
1#12	2#12	19	CLASSROOM 10 OUTLETS	20	1	900		720	1	20	CCTV/OFFICE RECEPTACLES	20	2#12	1#12	
1#12	2#12	21	CLASSROOM 11 OUTLETS	20	1	540	900		1	20	BONDING ROOM RECEPTACLES	22	2#12	1#12	
1#12	2#12	23	CLASSROOM 12 OUTLETS	20	1		360	900	1	20	DEDICATED IT QUAD OUTLET	24	2#12	1#12	
1#12	2#12	25	CLASSROOM 13 OUTLETS	20	1	900		360	1	20	DEDICATED IT QUAD OUTLET	26	2#12	1#12	
1#12	2#12	27	CLASSROOM 14 OUTLETS	20	1	360	900		1	20	DEDICATED IT QUAD OUTLET	28	2#12	1#12	
1#12	2#12	29	CLASSROOM 1 IWB	20	1		360	360	1	20	WATER HEATER RECIRC PUMP	30	2#12	1#12	
1#12	2#12	31	CLASSROOM 6 IWB	20	1	360		150	1	20	WASHER	32	2#12	1#12	
1#12	2#12	33	CLASSROOM 7 IWB	20	1	500	360		1	20	DRYER	34	2#12	1#12	
1#12	2#12	35	CLASSROOM 8 IWB	20	1		500	360	1	20	WATER FOUNTAINS	36	2#12	1#12	
1#12	2#12	37	CLASSROOM 9 IWB	20	1	360		600	1	20	WIFI SYSTEM	38	2#12	1#12	
1#12	2#12	39	CLASSROOM 10 IWB	20	1	500	360		1	20	FACIAL RECOGNITION SYSTEM	40	2#12	1#12	
1#12	2#12	41	CLASSROOM 11 IWB	20	1		500	360	1	20	ELECTRIC DOOR STRIKE SYSTEM	42	2#12	1#12	
1#12	2#12	43	CLASSROOM 12 IWB	20	1	360		200	1	20	OUTDOOR RECEPTACLES	44	2#12	1#12	
1#12	2#12	45	CLASSROOM 13 IWB	20	1	720	360		1	20	ROOFTOP RECEPTACLES	46	2#12	1#12	
1#12	2#12	47	CLASSROOM 14 IWB	20	1		1000	360	1	20	TEL/DATA RECEPTACLE	48	2#12	1#12	
1#12	2#12	49	2ND FL CORRIDOR RECEPTACLES	20	1	900		360	1	20	SPACE	50	2#12	1#12	
1#12	2#12	51	2ND FL CORRIDOR RECEPTACLES	20	1		900		1	20	SPACE	52	2#12	1#12	
1#8	2#8	53	SITE LIGHTING	30	2			1000	1	20	SPACE	54	2#12	1#12	
		55				1000			1	20	SPACE	56	2#12	1#12	
1#8	2#4	57	EWH-1 ELECTRIC WATER HEATER	70	2		4500		1	20	SPACE	58	2#12	1#12	
		59						4500	1	20	SPACE	60	2#12	1#12	
1#12	2#12	61	SPACE	20	1				1	20	SPACE	62	2#12	1#12	
1#12	2#12	63	SPACE	20	1				1	20	SPACE	64	2#12	1#12	
1#12	2#12	65	SPACE	20	1				1	20	SPACE	66	2#12	1#12	
1#12	2#12	67	SPACE	20	1				1	20	SPACE	68	2#12	1#12	
1#12	2#12	69	SPACE	20	1				1	20	SPACE	70	2#12	1#12	
1#12	2#12	71	SPACE	20	1				1	20	SPACE	72	2#12	1#12	
1#12	2#12	73	SPACE	20	1				1	20	SPACE	74	2#12	1#12	
1#12	2#12	75	SPACE	20	1				1	20	SPACE	76	2#12	1#12	
1#12	2#12	77	SPACE	20	1				1	20	SPACE	78	2#12	1#12	
1#12	2#12	79	SPACE	20	1				1	20	SPACE	80	2#12	1#12	
1#12	2#12	81	SPACE	20	1				1	20	SPACE	82	2#12	1#12	
1#12	2#12	83	SPACE	20	1				1	20	SPACE	84	2#12	1#12	
			VA:			11,680	16,380	14,010							

CONNECTED LOAD
KVA: 42.1
AMPS: 116.9

REMARKS
(G) PROVIDE GFCI CIRCUIT BREAKER
(**) FAULT CURRENT RATING FOR BID PURPOSES ONLY, PANEL MUST BE BRACED FOR ACTUAL AVAILABLE FAULT CURRENT ON SITE.

MAIN
BUS 200 AMPS
BRKR - AMPS
☒ NEW PANEL
☐ EXISTING PANEL
☐ MAIN CIRCUIT BREAKER
☒ MAIN LUGS ONLY
☐ FLUSH MOUNTED
☒ SURFACE MOUNTED
☐ BOTTOM FEED
☐ TOP FEED

OPTIONS
☐ 200% NEUTRAL
☒ GROUND BUS
☐ ISOLATED GROUND BUS
☐ DOOR-IN-DOOR CONSTRUCTION
☐ STAINLESS STEEL COVER
☐ NEMA 3R PANEL
☐ SUB-FEED MAIN C.B. (3P) QTY: _____ AMPS: _____
☐ CONTACTOR AMPS:_____ CKT'S CONTROLLED:_____
☐ OTHER: _____
☐ OTHER: _____

ELECTRICAL LOAD CALCULATION

LOAD TYPE	CONNECTED VA	MULTIPLIER PER NEC	ADJUSTED VA LOAD
LIGHTING	9,824	1.25	12,280.0
RECEPTACLES & MISC. UP TO 10,000 VA	10,000	1.00	10,000.0
RECEPTACLES & MISC. OVER 10,000 VA	6,920	0.50	3,460.0
WATER HEATING	9,000	1.00	9,000.0
MISC. FANS, PUMPS, AND EQUIPMENT	28,187	1.00	28,187.0
ELECTRIC SPACE HEATING	30,900	0.00	0.0
HVAC (COOLING MODE)	86,400	1.00	86,400.0
TOTAL LOAD	181,231		149,327.0
MAXIMUM ANTICIPATED DRAW ON PANEL "MP" AT 208V, 3ø IN AMPS:			414.8

* THE ELECTRIC SPACE HEATING LOAD HAS BEEN OMITTED FROM THE LOAD CALCULATION. THE HVAC (COOLING MODE) LOAD & THE ELECTRIC SPACE HEATING LOADS WILL NOT OPERATE SIMULTANEOUSLY. THE LARGER OF THE LOADS HAS BEEN SELECTED.

JAM ARCH

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

ELECTRICAL PANEL SCHEDULES

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
E-601

PLUMBING DRAWING / REVISION LOG

● NEW OR REVISED ISSUE
○ NON REVISED ISSUE

NUMBER	NAME	ISSUE: ISSUED FOR PERMIT			DATE: 08/08/2022		
P-001	PLUMBING COVER SHEET	●					
P-100	PLUMBING UNDERGROUND DRAINAGE PLAN	●					
P-101	PLUMBING FIRST FLOOR DRAINAGE PLAN	●					
P-102	PLUMBING SECOND FLOOR DRAINAGE PLAN	●					
P-103	PLUMBING ROOF DRAINAGE PLAN	●					
P-104	PLUMBING FIRST FLOOR SUPPLY PLAN	●					
P-105	PLUMBING SECOND FLOOR SUPPLY PLAN	●					
P-106	PLUMBING ROOF SUPPLY PLAN	●					
P-201	PLUMBING RISER DIAGRAMS	●					
P-301	PLUMBING SPECIFICATIONS	●					
P-401	PLUMBING DETAILS	●					

MATERIAL SCHEDULE

SYSTEMS	PIPE													FITTINGS										JOINTS						
	REQUIRED	SERVICE C.I. PIPE (HUB & SPIGOT)	NO-HUB C.I. PIPE	P.V.C. SCH. 40 DRAINAGE PIPE	C.P.V.C. SCH. 40	BLACK IRON	GALVANIZED STEEL	COPPER TUBING TYPE 'L'	COPPER TUBING TYPE DWV	DUCTILE IRON PIPE	X-LINKED POLYETHYLENE	SERVICE C.I. FITTINGS (HUB & SPIGOT)	NO-HUB C.I. FITTINGS	P.V.C. D.W.V. FABRICATED	C.P.V.C. SCH. 40	BLACK IRON	GALVANIZED STEEL	COPPER SOLDER FITTINGS	FLANGED DUCTILE IRON PIPE	BRASS ASTM F1960 LISTED	ELASTOMERIC GASKET	PVC SOLVENT CEMENT	CPVC SOLVENT CEMENT	THREADED	SOLDERED 95-5	FLANGED DUCTILE IRON PIPE	COLD EXPANSION RING
SANITARY BUILDING DRAIN (UNDER GROUND)	●	●		A								●		A								●	A					
SANITARY BUILDING DRAIN	●		●	A									●	A								●	A					
SANITARY STACKS	●		●	A									●	A								●	A					
SANITARY BRANCHES	●		●	A									●	A								●	A					
VENT STACKS	●		●	A									●	A								●	A					
VENT BRANCHES	●		●	A									●	A								●	A					
STORM BUILDING DRAIN (UNDER GROUND)	●	●		A								●		A								●	A					
STORM BUILDING DRAIN	●		●	A									●	A								●	A					
STORM STACKS	●		●	A									●	A								●	A					
STORM BRANCHES	●		●	A									●	A								●	A					
C.W. (SERVICE)	●										●								●									●
C.W. (DISTRIBUTION)	●							●										●							●			
H.W. (DISTRIBUTION)	●							●										●							●			
GAS (DISTRIBUTION)	●					●										●								●				
FLUE POWER VENTING	●			A	●									A	●							A	●					
INDIRECT WASTE	●			A					●					A				●				A			●			
SUMP DISCHARGE	●			●										●								●						
ELEVATOR SHAFT SUMP PUMP DISCHARGE	●			A		●								A			●					A		●				

NOTES:
'A' – PROVIDE DEDUCT ALTERNATE PRICE TO INSTALL ALTERNATE MATERIAL
ALL MATERIALS INSTALLED WITHIN A PLENUM ARE TO HAVE A 25 FLAME SPREAD & 50 SMOKE DEVELOPED WHEN TESTED ACCORDING TO ASTM E84 OR BE INSULATED WITH 3M FIRE BARRIER PLENUM WRAP 5A+, OR APPROVED EQUAL, SO AS TO COMPLY WITH THE ABOVE REQUIREMENTS.

FLOOR DRAIN SCHEDULE

TAG	LOCATION	MAKE	MODEL	DISCRIPTION	OUTLET SIZE	TRAP SEAL	TRAP PRIMER
FD-1	BATHROOMS	ZURN	Z415-6S-2NH	FLOOR DRAIN 6" SQUARE, 2" NO-HUB OUTLET	2"	4"	YES
TD-1	WATER SPRINKLER PLAY AREA	ZURN	Z884	TRENCH DRAIN, 3" NO-HUB OUTLET	3"	–	NO
FFD-1	HVAC CLOSET	ZURN	Z415E-4NH	FUNNEL FLOOR DRAIN, 4" FUNNEL, 4" NO-HUB OUTLET	4"	4"	YES

NOTES:
1. ALL TRAPPED FLOOR DRAINS SHALL BE INSTALLED WITH AN ASSE 1018 OR ASSE 1044 TRAP SEAL PROTECTION DEVICE.

BACKFLOW PREVENTERS / VACUUM BREAKERS SCHEDULE

APPLICATION	MFR.	MODEL #	DISCRIPTION
PLAYGROUND SPRINKLER	WATTS	1" LF009	1" REDUCED PRESSURE ZONE ASSEMBLY LOCATED IN SPRINK. ROOM 104
COFFEE MAKER	WATTS	LF288AC	–
REFRIG./ICE MAKER	WATTS	LFN9C	DUAL CHECK WITH ATMOSPHERIC VENT
WATER HEATER	WATTS	LF7	SINGLE CHECK

NOTES:
1. ADDITIONAL BACKFLOW PREVENTER OR VACUUM BREAKERS ARE NOT REQUIRED WHERE SUCH DEVICES ARE INSTALLED INTEGRAL TO THE EQUIPMENT.

RECIRCULATION PUMP SCHEDULE

ITEM NO.	MANUFACTURER	MODEL	VOLTAGE	HP	RPM	GPM	FT. HD.
RP-1	TACO	006-B4-PNP	115/1/60	1/40	3250	2.0	9

NOTES:
1. RECIRCULATION PUMP IS PROVIDED WITH A AN INTEGRAL TIMER TO CONTROL PUMP ON / OFF TIMES OF DAY. PUMP TO BE PROVIDED WITH AND CONTROLLED BY AN AQUASTAT TO BE COORDINATED WITH THE LINE TEMPERATURE.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MAKE	MODEL	FAUCET	PIPING CONNECTIONS COLD	HOT	TRAP	VENT	COMMENTS
SK-1	STAINLESS STEEL, SELF-RIMMING, TRIPLE COMPARTMENT SINK. FURNISH WITH TOP MOUNT TWO HANDLE ADA FAUCET.	ELKAY	LGR4332C	KOHLER K15888 WITH K158504M	1/2"	1/2"	1½"	1½"	PROVIDE ¾" CW LINE THROUGH THE COUNTER FOR FUTURE CONNECTION FOR OVER THE COUNTER WATER DISPENSER.
SK-2	STAINLESS STEEL, SINGLE COMPARTMENT SINK. FURNISH WITH TOP MOUNT SINGLE HANDLE ADA FAUCET.	DAYTON (ELKAY)	DAYTON 1252224DF	ELKAY LK2478CR	1/2"	1/2"	1½"	1½"	PROVIDE INDIVIDUAL THERMOSTATIC MIXING VALVE AT EACH FAUCET, ASSE 1070 COMPLIANT. SET THERMOSTATIC MIXING VALVE TEMPERATURE AT 110'F MAXIMUM FOR ALL HAND SINKS.
SK-3	33"X23"X25" SINGLE PIECE SLOP SINK WITH 6" SWING SPOUT FAUCET WITH AERATOR.	MUSTEE	14CP UTILATUB	MUSTEE 93.600	1/2"	1/2"	3"	2"	COMBO LAUNDRY/UTILITY TUB, ALL ACCESSORIES AND FAUCET IS INCLUDED IN COMBO BOX.
LAV-1	VITREOUS CHINA LAVATORY FURNISH WITH CENTERSET, TWO HANDLE, FULLY ADA COMPLAINT	GERBER	12-654	GERBER 43-411	3/8"	3/8"	1½"	1½"	PROVIDE WITH 0.5 GPM AERATOR. TO BE INSTALLED @ 25" A.F.F. TO RIM IN ALL CHILDREN'S CLASSROOMS & TOILET ROOMS. PROVIDE INDIVIDUAL THERMOSTATIC MIXING VALVE AT EACH FAUCET, ASSE 1070 COMPLIANT. SET THERMOSTATIC MIXING VALVE TEMPERATURE AT 110'F MAXIMUM FOR ALL LAVATORIES.
WC-1	ELONGATED, CHILDREN USE TANK TYPE WATER CLOSET WITH 1.28 GPF FLUSH. FLOOR OUTLET	GERBER	HE-20-601		1/2"	NA	INTEGRAL	2"	PROVIDE TOILET SEAT OPEN FRONT TYPE, LEVER HANDLE HAS TO BE OPEN SIDE OF ROOM. DISTANCE FROM CENTERLINE OF TOILET TO FINISH SIDE WALL SHALL BE 12", SEE DWG#A400 FOR MORE DETAIL.
WC-2	ELONGATED, CHILDREN USE TANK TYPE WATER CLOSET WITH 1.28 GPF FLUSH. FLOOR OUTLET	KOHLER	K-3722		1/2"	NA	INTEGRAL	2"	PROVIDE TOILET SEAT OPEN FRONT TYPE, LEVER HANDLE HAS TO BE OPEN SIDE OF ROOM. DISTANCE FROM CENTERLINE OF TOILET TO FINISH SIDE WALL SHALL BE 16", SEE DWG#A400 FOR MORE DETAIL.
WC-3	ADA COMPLIANT, ELONGATED, PRESSURE ASSISTED TANK TYPE WATER CLOSET WITH 1.6 GPF FLUSH. FLOOR OUTLET	GERBER	21-318		1/2"	NA	INTEGRAL	2"	PROVIDE TOILET SEAT OPEN FRONT TYPE, LEVER HANDLE HAS TO BE OPEN SIDE OF ROOM. DISTANCE FROM CENTERLINE OF TOILET TO FINISH SIDE WALL SHALL BE 18", SEE DWG#A400 FOR MORE DETAIL.
DF-1	BOTTLE FILLING STATION & VERSATILE BI-LEVEL ADA COOLER. CAPACITY OF 8.0 GPH, FILTER IS INCLUDED	ELKAY	LZSTL8WSSP		3/8"	NA	1½"	1¼"	115V/60HZ/5AMPS POWER SUPPLY
CW-1	RECESSED CLOTHES WASHER SUPPLY BOX WITH ¼ TURN BALL VALVES AND 2" STANDPIPE CONNECTION.	OATEY	38398	INCLUDED	1/2"	1/2"	2"	1½"	PROVIDE WITH FIRE RATED BOX CONSTRUCTION OPTION AND PLASTIC WHITE TRIM FOR BOX.
HB-1	ANIT-SIPHON, AUTOMATIC DRAINING NON FREEZE WALL HYDRANT WITH INTEGRAL BACKFLOW PREVENTER	ZURN	Z1321-C		1/2"	NA	NA	NA	
MS-1	FIBERGLASS MOP SERVICE BASIN, 24"X24"X10" WITH CHROME PLATED SERVICE FAUCET WITH WALL BRACE HOSE THREAD ON SPOUT & INTEGRAL VACUUM BREAKER.	MUSTEE	63M	MUSTEE 63.600A	1/2"	1/2"	3"	2"	PROVIDE WITH MUSTEE 65.600 MOP HANGER AND 67.2424 DURAGUARD WALL GUARDS. FAUCET HEIGHT TO BE 36" FROM BASIN.
PS-1	INTERCHANGEABLE FLUSH MOUNT FEATURE	BASKET WEAVE	BSWV-001LF-2CS		1"	NA	NA	NA	RAIN DROP PRODUCTS LLC. PROVIDE LOW FLOW SPRINKLERS AND 1" CW SUPPLY.

ELECTRIC HOT WATER HEATERS

TAG	CAPACITY (GAL.)	RECOVERY @ 100'F RISE (GPH)	ELEMENT POWER (kW)	U.E.F.	TEMP. SET POINT	POWER REQ. (V/PH)	FLA	MOCP	DIAMETER (IN.)	HEIGHT (IN.)	WATER CONN. (IN.)	MANUFACTURER MAKE AND MODEL	COMMENTS
WH-1	80	36	(2) 4.5	0.92	140'F	208/1	43.2	–	24	59⅜"	1	A.O. SMITH DEN-80	NOTES 1, 2, 3

NOTES:
1. PROVIDE ALL PIPING ACCESSORIES AND APPURTENANCES AS PER THE HOT WATER HEATER INSTALLATION DETAIL.
2. SIMULTANEOUS OPERATION CONFIGURATION, 9KW TOTAL.
3. HOT WATER TEMPERATURE MUST NEVER EXCEED 110'F AT ANY FAUCET ACCESSIBLE TO CHILDREN.

ABBREVIATIONS

ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACK FLOW PREVENTOR
BLDG	BUILDING
BLW	BELOW
BSMT	BASEMENT
CB	CATCH BASIN
CI	CAST IRON
℄	CENTER LINE
CLG	CEILING
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CSST	CORRUGATED STAINLESS STEEL TUBING
CW	COLD WATER
°C	DEGREES CENTIGRADE
DPCO	DECKPLATE CLEANOUT
DIA	DIAMETER
DIAG	DIAGRAM
DISCH	DISCHARGE
DN	DOWN
DWG	DRAWING
(E)	EXISTING
EA	EACH
EHD	EQUILVENT HYDRAULIC DIAMETER
ELEV	ELEVATION
ENT	ENTERING
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EWC	ELECTRIC WATER COOLER
EW	EYE WASH
EXT	EXTERNAL
°F	DEGREES FAHRENHEIT
FAI	FRESH AIR INLET
FD	FLOOR DRAIN
FL	FLANGE
FLEX	FLEXIBLE
FLR	FLOOR
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
G	GAS
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIBB
HD	HEAD
HR	HOUR
HTR	HEATER
HW	HOT WATER
ID	INTERNAL DIAMETER
INCL	INCLUDING
INV	INVERT
INWC	INCHES OF WATER COLUMN
LAV	LAVATORY
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NH	NO HUB
No	NUMBER
NO	NORMALLY OPEN
NPW	NON-POTABLE WATER
NOM	NOMINAL
NTS	NOT TO SCALE
OPG	OPENING
OZ	OUNCE
PART	PARTIAL
PERF	PERFORATED
PEX	CROSS LINKED POLYETHYLENE TUBING
PH	PHASE
PIV	POST INDICATOR VALVE
POS	POSITIVE
PRESS	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PC	PLUMBING CONTRACTOR
QTY	QUANTITY
RD	ROOF DRAIN
REQD	REQUIRED
RM	ROOM
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SAN	SANITARY
SCH	SCHEDULE
SHO	SHOWER
SPEC	SPECIFICATION
S/S	SERVICE SINK
ST	STORM
STD	STANDARD
SUP	SUPPLY
SYS	SYSTEM
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TYP	TYPICAL
URN	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WM	WATER METER

NOTE

1. THESE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND ALL PIPING IS DIAGRAMMATIC.
2. DO NOT SCALE THESE PLUMBING DRAWINGS.
3. PROVIDE PLUMBING SHOP DRAWINGS FOR APPROVAL.

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	HOT WATER RETICULATING PIPING
	COLD WATER PIPING
	TEMPERED WATER PIPING
	HOT WATER PIPING
CF	FILTERED COLD WATER
G	NATURAL GAS PIPING
	SANITARY, SOIL, WASTE PIPING
ST	STORM PIPING
V	VENT PIPING
	EXISTING PIPING
	EXSITING PIPING TO BE REMOVED
PD	PUMP DISCHARGE
C	CONDENSATE PIPING

KEY TO SYMBOLS

SYMBOL DESCRIPTION

ACU 1-1 — EQUIPMENT IDENTITY (SEE EQUIPMENT ABBREVIATION LIST AND SCHEDULES); EQUIPMENT DESIGNATION; SYSTEM NUMBER (IF APPLICABLE)

R 1 — RISER TYPE. REFER TO ABBREVIATIONS; RISER DESIGNATION; RISER NUMBER. REFER TO PLANS AND/OR RISER DIAGRAMS

1 M-31 — SECTION NUMBER; SECTION DESIGNATION; SECTION DRAWING NUMBER

1 — REVISION NUMBER

1 — SHEET NOTE NUMBER

CONNECT NEW TO EXISTING

KEY TO SYMBOLS

SYMBOL	DESCRIPTION
	PIPE UP
	PIPE DOWN
	SHUT OFF VALVE
	THREE WAY VALVE
	GAS COCK
M	WATER METER
	REDUCED PRESSURE ZONE ASSEMBLY
	CHECK VALVE
	STRAINER
	UNION
	CAPPED LINE
	THERMOMETER
	THERMOSTATIC MIXING VALVE
	FLOOR DRAIN
	FLOOR SINK
FCO	CLEAN OUT DECK PLATE
CO	CLEAN OUT
	POINT OF CONNECTION
	ROOF DRAIN
	HOSE BIB
	PUMP
	VACUUM RELIEF VALVE
	PRESSURE REDUCING VALVE
	BALANCING VALVE

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STATE OF NEW YORK — ARMEN YOVAGHNATHAN KHACHATURIAN — 062261-1 — LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:
PLUMBING
COVER SHEET

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
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P-001

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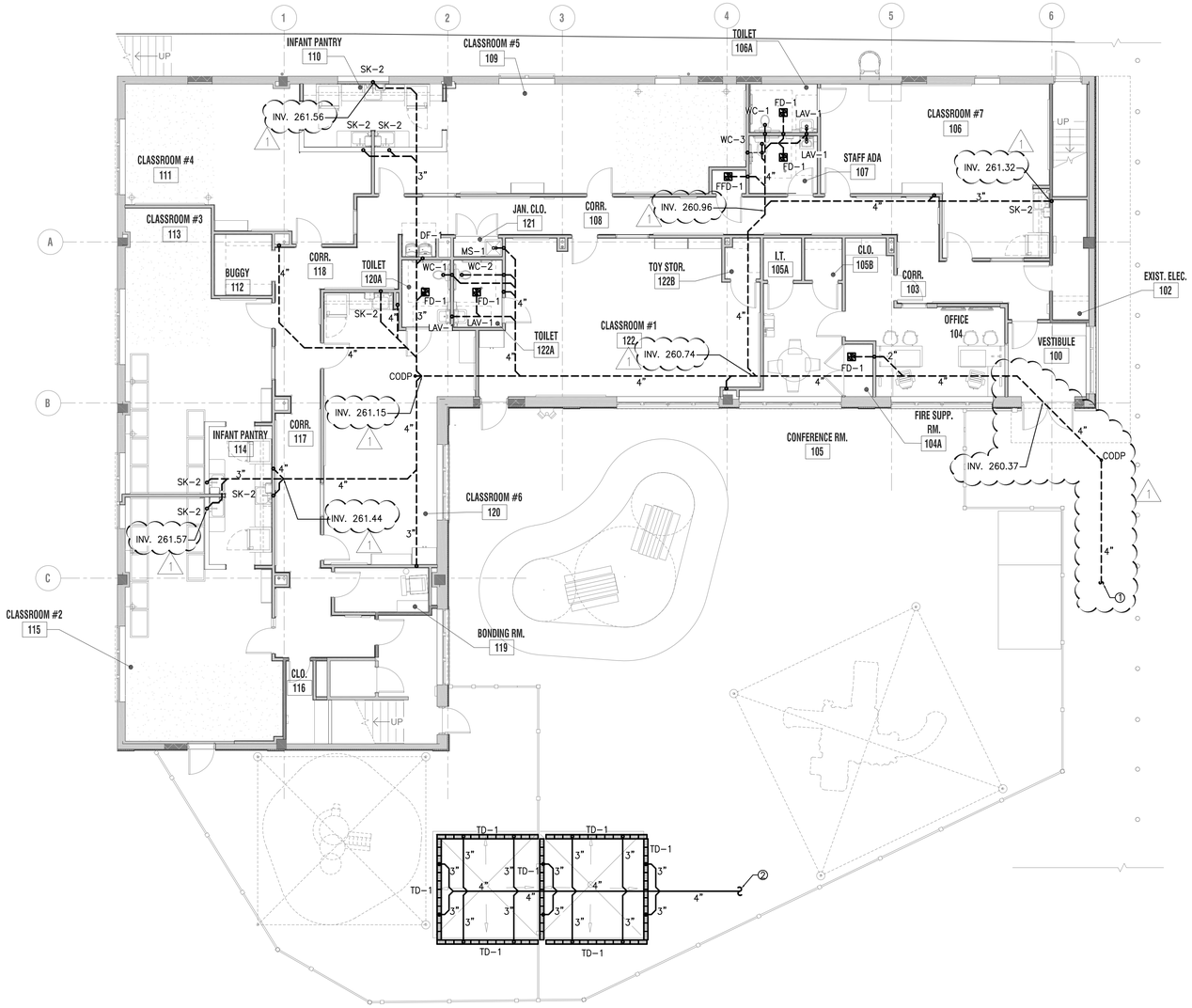
PLUMBING DESIGN KEY NOTES: (#)

1. CONNECT 4" SANITARY WASTE TO EXISTING SANITARY CONNECTION AT SITE, VERIFY IN FIELD EXACT LOCATION.
2. CONNECT TO NEAREST SITE UNDERDRAIN, BY CIVIL.

PLUMBING GENERAL NOTES:

- PROVIDE ALL SANITARY, WASTE AND STORM PIPING WITH A MINIMUM PITCH OF ¼" PER FOOT FOR ALL PIPE SIZES 2½" OR SMALLER AND ⅛" PER FOOT FOR ALL PIPE SIZES 3" AND LARGER.
- ALL EXISTING EXTERIOR STORM LEADERS, GUTTERS, CONDUCTORS AND RELATED DRAINAGE PIPING TO BE REMOVED AND REPLACED IN KIND. (1)



PLUMBING UNDERGROUND DRAINAGE PLAN

SCALE: ⅛" = 1'-0"

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PLUMBING UNDERGROUND DRAINAGE PLAN

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P-100

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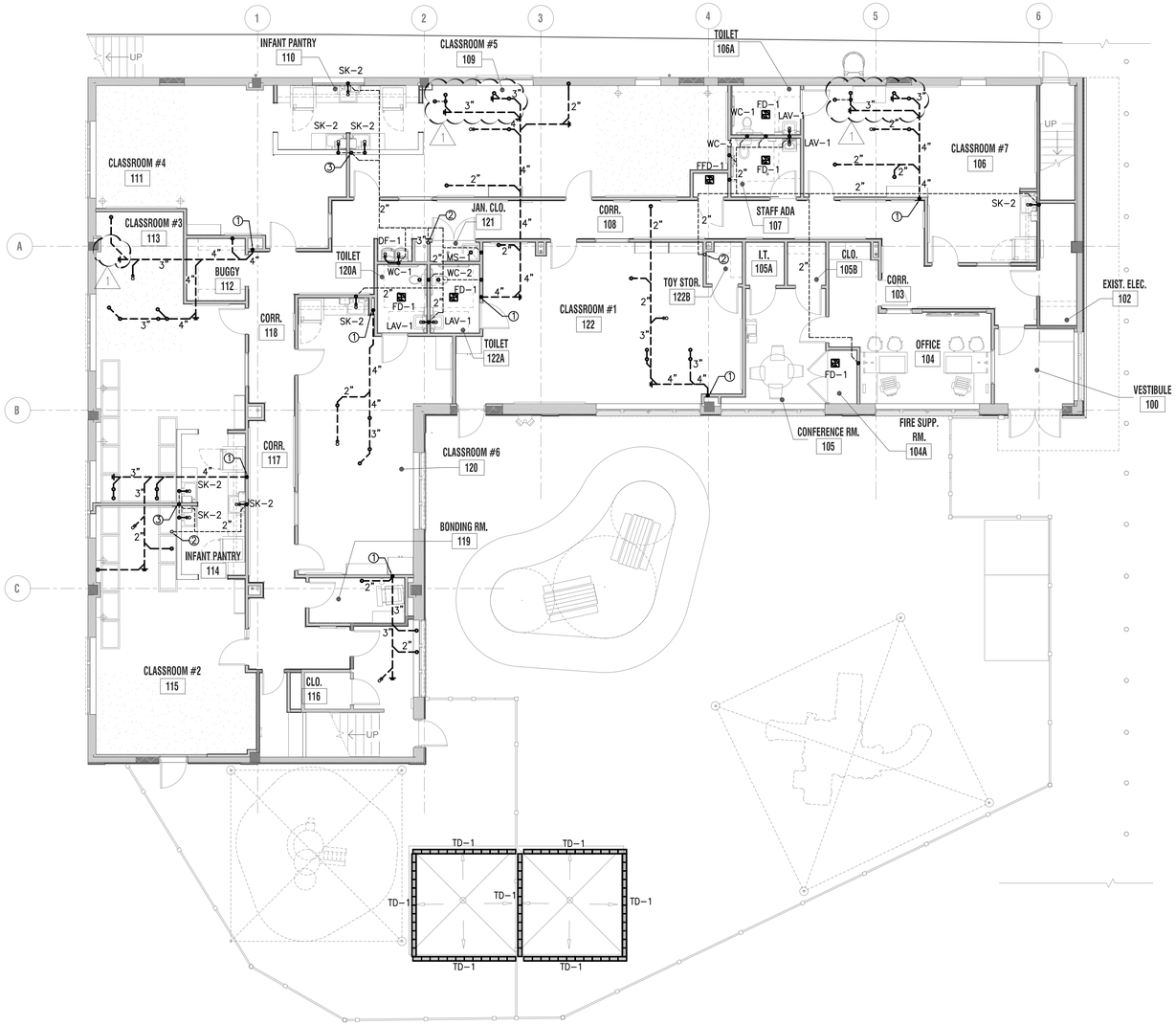
PLUMBING DESIGN KEY NOTES: (#)

1. SANITARY/WASTE PIPING DROP AND DOWN TO UNDERGROUND.
2. CONTRACTOR TO PROVIDE NEW 3" VENT THROUGH ROOF AS SHOWN ON PLAN.
3. COMBINE VENT PIPING BELOW COUNTER LEVEL, RISE AT FULL HEIGHT WALL.

PLUMBING GENERAL NOTES:

- PROVIDE ALL SANITARY, WASTE AND STORM PIPING WITH A MINIMUM PITCH OF ¼" PER FOOT FOR ALL PIPE SIZES 2½" OR SMALLER AND ⅛" PER FOOT FOR ALL PIPE SIZES 3" AND LARGER.
- ALL EXISTING EXTERIOR STORM LEADERS, GUTTERS, CONDUCTORS AND RELATED DRAINAGE PIPING TO BE REMOVED AND REPLACED IN KIND. 1



PLUMBING FIRST FLOOR DRAINAGE PLAN

SCALE: ⅛" = 1'-0"

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SHEET TITLE:

PLUMBING FIRST FLOOR DRAINAGE PLAN

Rev. #	Revision Date	Revision Description
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	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER:	2019-01.15
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P-101

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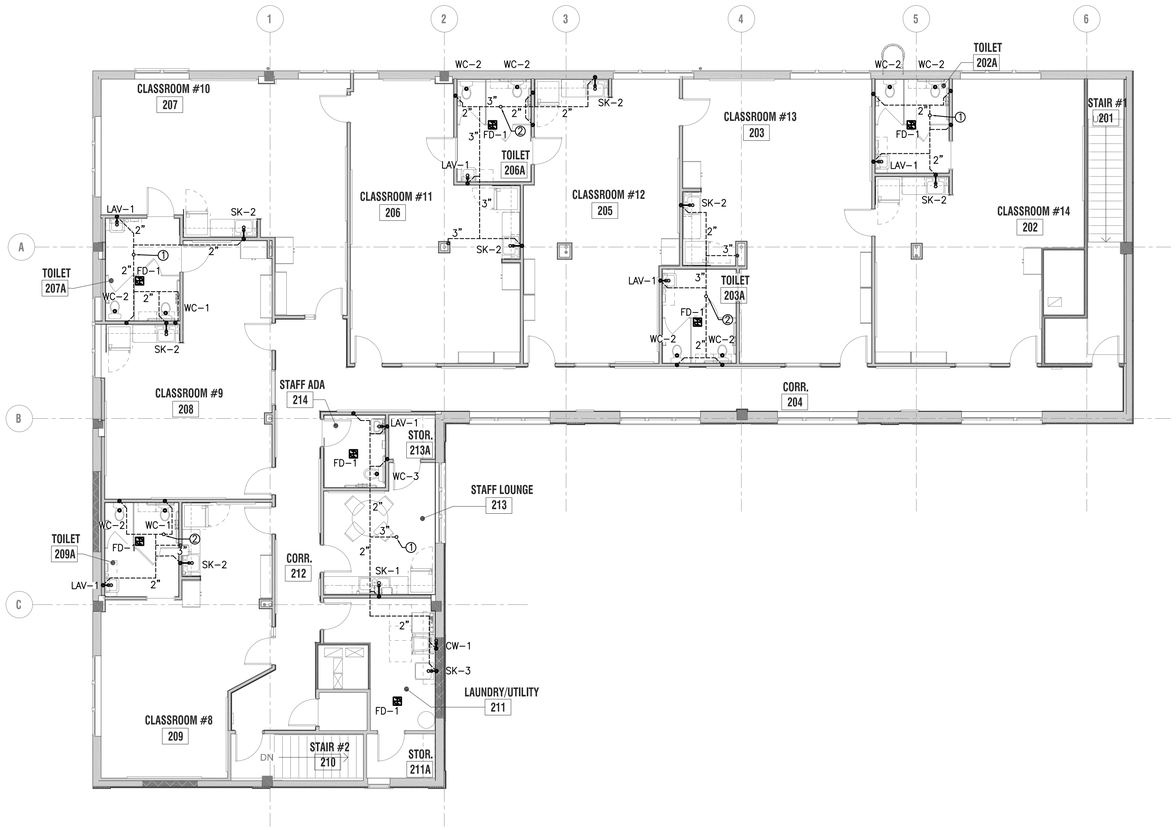
PLUMBING DESIGN KEY NOTES: (#)

1. CONTRACTOR TO PROVIDE NEW 3" VENT THROUGH ROOF AS SHOWN ON PLAN.
2. CONTRACTOR TO PROVIDE NEW 4" VENT THROUGH ROOF AS SHOWN ON PLAN.

PLUMBING GENERAL NOTES:

- PROVIDE ALL SANITARY, WASTE AND STORM PIPING WITH A MINIMUM PITCH OF ¼" PER FOOT FOR ALL PIPE SIZES 2½" OR SMALLER AND ⅛" PER FOOT FOR ALL PIPE SIZES 3" AND LARGER.
- ALL EXISTING EXTERIOR STORM LEADERS, GUTTERS, CONDUCTORS AND RELATED DRAINAGE PIPING TO BE REMOVED AND REPLACED IN KIND. (1)



PLUMBING SECOND FLOOR DRAINAGE PLAN

SCALE: ⅛" = 1'-0"

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PLUMBING SECOND FLOOR DRAINAGE PLAN

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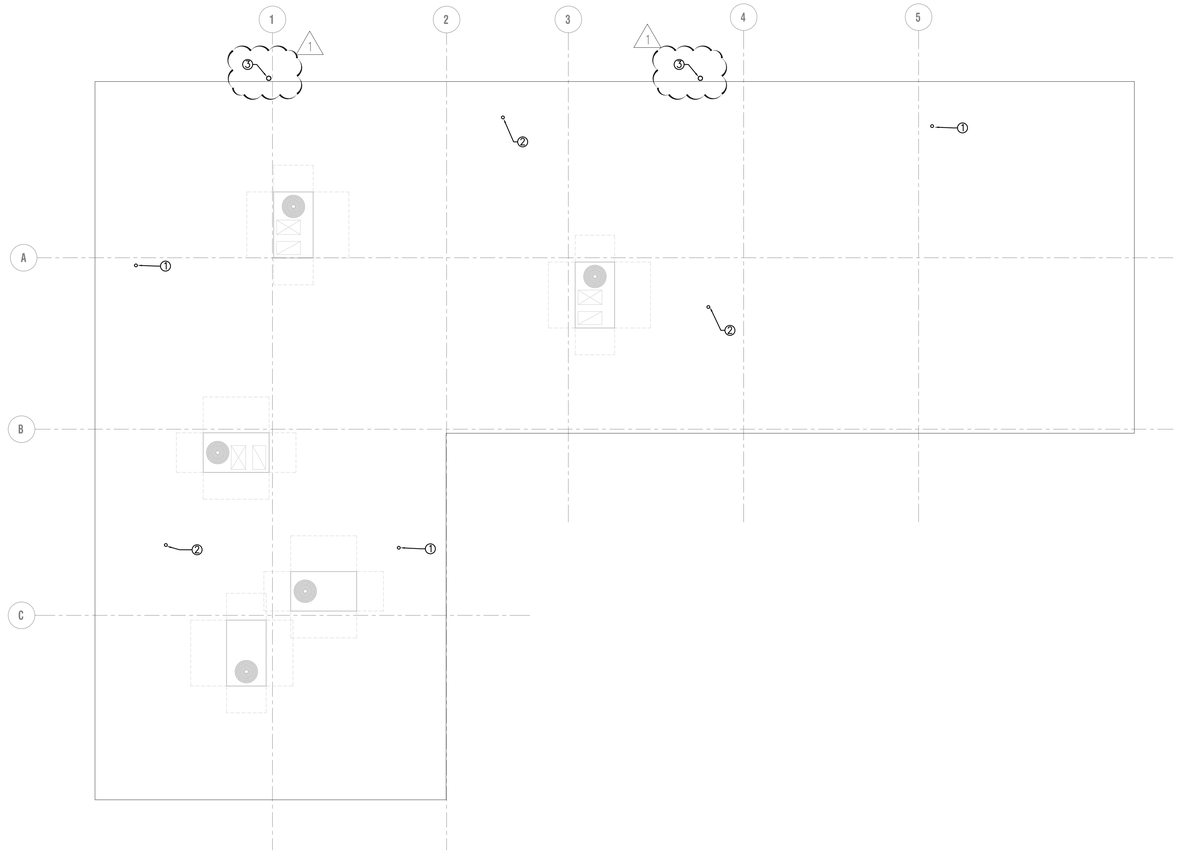
PLUMBING DESIGN KEY NOTES: (#)

1. CONTRACTOR TO PROVIDE NEW 3" VENT THROUGH ROOF AS SHOWN ON PLAN.
2. CONTRACTOR TO PROVIDE NEW 4" VENT THROUGH ROOF AS SHOWN ON PLAN.
3. EXISTING EXTERIOR STORM LEADER TO BE REPLACED IN KIND. REFER TO ARCHITECTURAL DRAWINGS.

PLUMBING GENERAL NOTES:

- PROVIDE ALL SANITARY, WASTE AND STORM PIPING WITH A MINIMUM PITCH OF ¼" PER FOOT FOR ALL PIPE SIZES 2½" OR SMALLER AND ⅛" PER FOOT FOR ALL PIPE SIZES 3" AND LARGER.
- ALL EXISTING EXTERIOR STORM LEADERS, GUTTERS, CONDUCTORS AND RELATED DRAINAGE PIPING TO BE REMOVED AND REPLACED IN KIND.



PLUMBING ROOF DRAINAGE PLAN

SCALE: ⅛" = 1'-0"

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PLUMBING ROOF DRAINAGE PLAN

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ⓟ PLUMBING DESIGN KEY NOTES:

1. WATER SPRINKLER MANIFOLD TO BE LOCATED 17" AFF INSIDE 50 GAL. RESIN DECK BOX. CONTRACTOR TO COORDINATE EXACT DIMENSION OF DECK BOX AND INSTALLATION HEIGHT AND INFORM ARCH/OWNER OF ANY ISSUES PRIOR TO INSTALLATION IN FIELD. LOCATE RPZ ASSEMBLY IN SPRINKLER SERVICE ROOM.
2. PROVIDE EACH SPRINKLER CONNECTION WITH ISOLATION CONTROL VALVE AND FLOW CONTROL VALVE. FLOW CONTROL VALVE TO BE 1" WATTS IDROSET SERIES CSD OR EQUAL. ADJUST IN FIELD THE MAXIMUM FLOW FOR EACH SPRINKLER TO BE 1.4 GPM AS RECOMMENDED BY PS-1 SPRINKLER MANUFACTURER.
3. EXISTING GAS SERVICE METER. 380 CFH NEW CONNECTED LOAD. REGULATE GAS SERVICE PRESSURE TO 7"W.C..
4. HOT AND COLD WATER BRANCH DROP BELOW COUNTER LEVEL.
5. 1"RPZ FOR PLAYGROUND SPRINKLER AND IRRIGATION SUPPLY. WATTS LF009 OR EQUAL.

PLUMBING GENERAL NOTES:

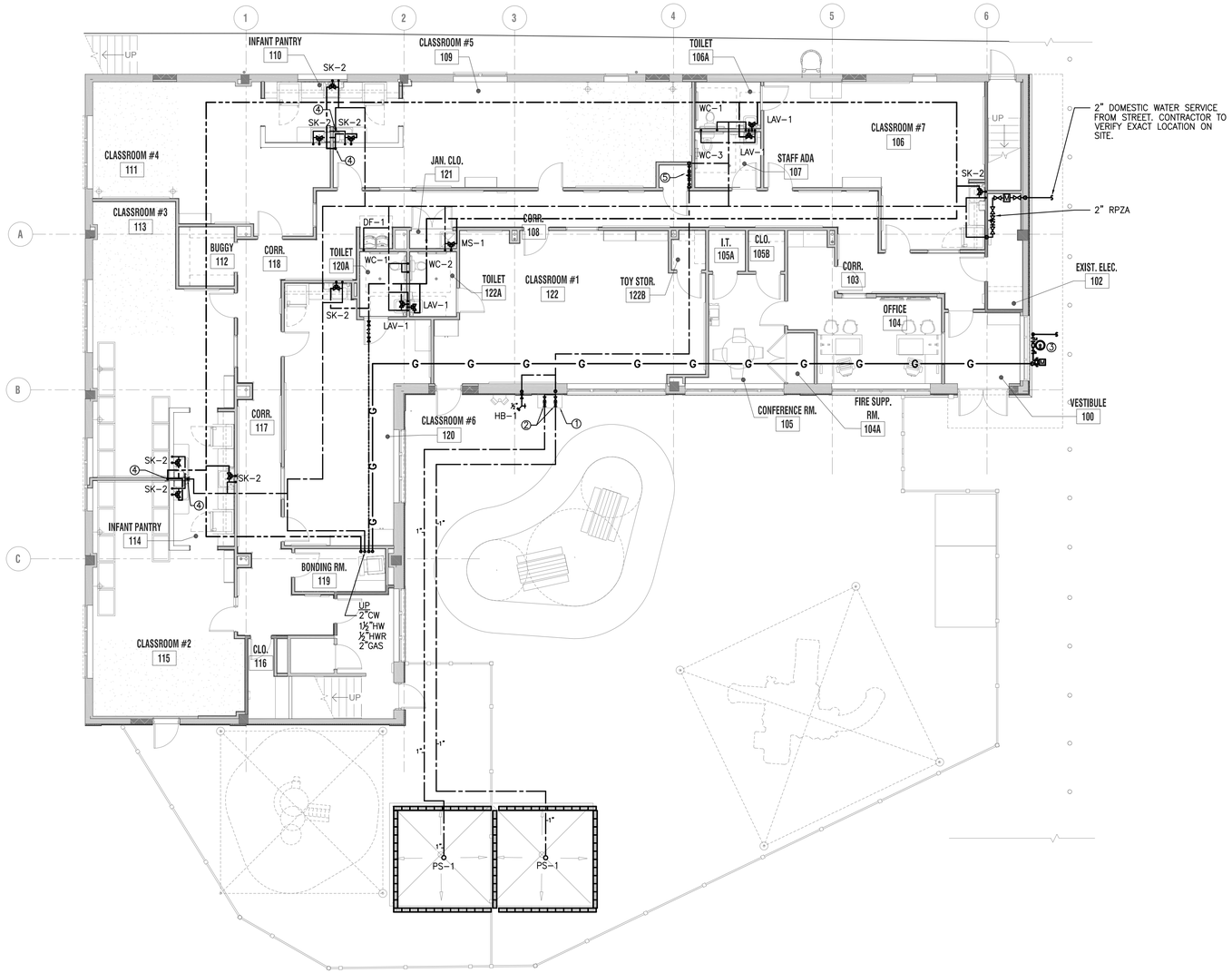
- PROVIDE THERMOSTATIC MIXING VALVE AT ALL LAVATORIES AND HAND WASHING SINKS AT TEMP 110°F.
- PROVIDE WATER HAMMER ARRESTOR AT EVERY QUICK CLOSING VALVE OF PLUMBING FIXTURES. WATER HAMMER ARRESTORS SHALL CONFORM WITH ASSE 1010.
- THE BUILDING SERVICE WATER HEATING IS PROVIDED WITH A CIRCULATED SYSTEM AS PER 2020 ECCCNYS C404.6.1 AND THE PIPING SYSTEM HAS BEEN DESIGNED AS PER C404.5.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD.
- THE FROST DEPTH FOR THIS REGION IS APPROXIMATELY 42" BELOW GRADE. ALL NEW DOMESTIC WATER SUPPLY PIPING TO BE INSTALLED UNDERGROUND AT THE BUILDING EXTERIOR SHALL BE PROVIDED WITH A MINIMUM OBVERT OF 48" BELOW GRADE.

1

GAS SIZE BASED ON FUEL GAS CODE OF NEW YORK STATE 2020
TABLE 402.4(2) SCHEDULE 40 METALLIC PIPE
GAS : NATURAL
INTEL PRESSURE : LESS THAN 2 PSI
PRESSURE DROP : 0.5 IN. W.C.
SPECIFIC GRAVITY : 0.60

MAXIMUM PIPE LENGTH 230 FEET
TOTAL LOAD : 380 MBH

1



PLUMBING FIRST FLOOR SUPPLY PLAN

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

JAM ARCH

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
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179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

PLUMBING FIRST FLOOR SUPPLY PLAN

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
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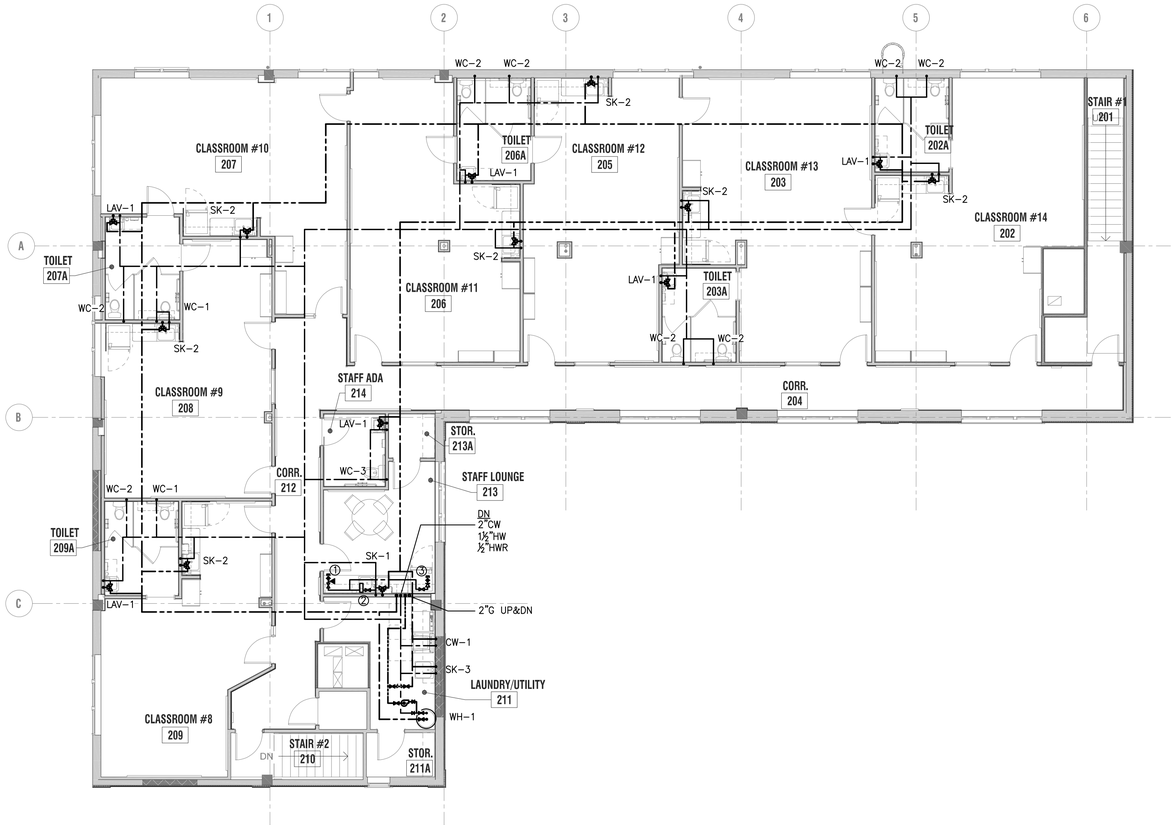
(#) PLUMBING DESIGN KEY NOTES:

1. ⅜" DOMESTIC COLD WATER CONNECTION FOR COUNTERTOP APPLIANCE. PROVIDE WITH ISOLATION SHUTOFF VALVE, VACUUM BREAKER, AND UNION FITTING.
2. PROVIDE CARTRIDGE WATER FILTER FOR PANTRY APPLIANCES. PROVIDE WITH (2) SPARE CARTRIDGES FOR TENANT USE.
3. ⅜" DOMESTIC COLD WATER CONNECTION FOR INTEGRAL REFRIGERATOR ICE MAKER. PROVIDE WITH ISOLATION SHUTOFF VALVE, DUAL CHECK VALVE WITH ATMOSPHERIC VENT, AND UNION FITTING.

PLUMBING GENERAL NOTES:

- PROVIDE THERMOSTATIC MIXING VALVE AT ALL LAVATORIES AND HAND WASHING SINKS AT TEMP 110°F.
- PROVIDE WATER HAMMER ARRESTOR AT EVERY QUICK CLOSING VALVE OF PLUMBING FIXTURES. WATER HAMMER ARRESTORS SHALL CONFORM WITH ASSE 1010.
- THE BUILDING SERVICE WATER HEATING IS PROVIDED WITH A CIRCULATED SYSTEM AS PER 2020 ECCCNYS C404.6.1 AND THE PIPING SYSTEM HAS BEEN DESIGNED AS PER C404.5.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD.
- THE FROST DEPTH FOR THIS REGION IS APPROXIMATELY 42" BELOW GRADE. ALL NEW DOMESTIC WATER SUPPLY PIPING TO BE INSTALLED UNDERGROUND AT THE BUILDING EXTERIOR SHALL BE PROVIDED WITH A MINIMUM OBVERT OF 48" BELOW GRADE

1



PLUMBING SECOND FLOOR SUPPLY PLAN

SCALE: ⅛" = 1'-0"

JAM ARCH

ARCHITECT OF RECORD:

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PLUMBING SECOND FLOOR SUPPLY PLAN

Rev. #	Revision Date	Revision Description
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PLUMBING GENERAL NOTES:

- PROVIDE THERMOSTATIC MIXING VALVE AT ALL LAVATORIES AND HAND WASHING SINKS AT TEMP 110°F.
- PROVIDE WATER HAMMER ARRESTOR AT EVERY QUICK CLOSING VALVE OF PLUMBING FIXTURES. WATER HAMMER ARRESTORS SHALL CONFORM WITH ASSE 1010.
- THE BUILDING SERVICE WATER HEATING IS PROVIDED WITH A CIRCULATED SYSTEM AS PER 2020 ECCCNYS C404.6.1 AND THE PIPING SYSTEM HAS BEEN DESIGNED AS PER C404.5.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD.
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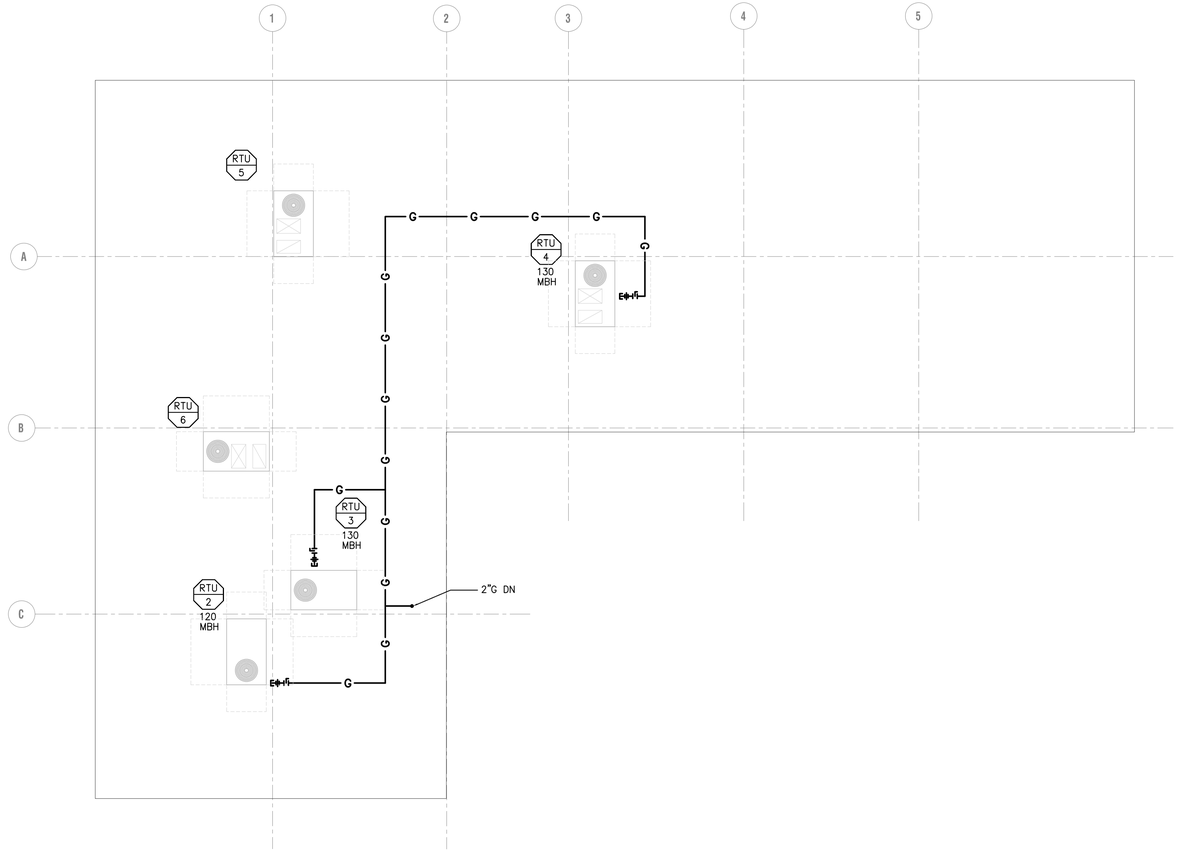
1



PLUMBING ROOF SUPPLY PLAN

SCALE: ⅛" = 1'-0"

JAM ARCH

ARCHITECT OF RECORD:

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STATE OF NEW YORK · ARMEN KHACHATURIAN · 062261-1 · LICENSED PROFESSIONAL ENGINEER

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PLUMBING ROOF SUPPLY PLAN

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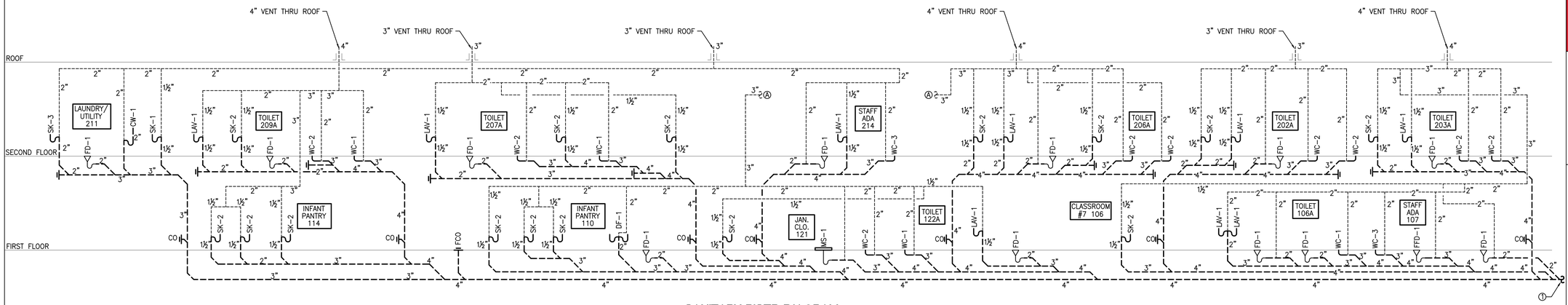
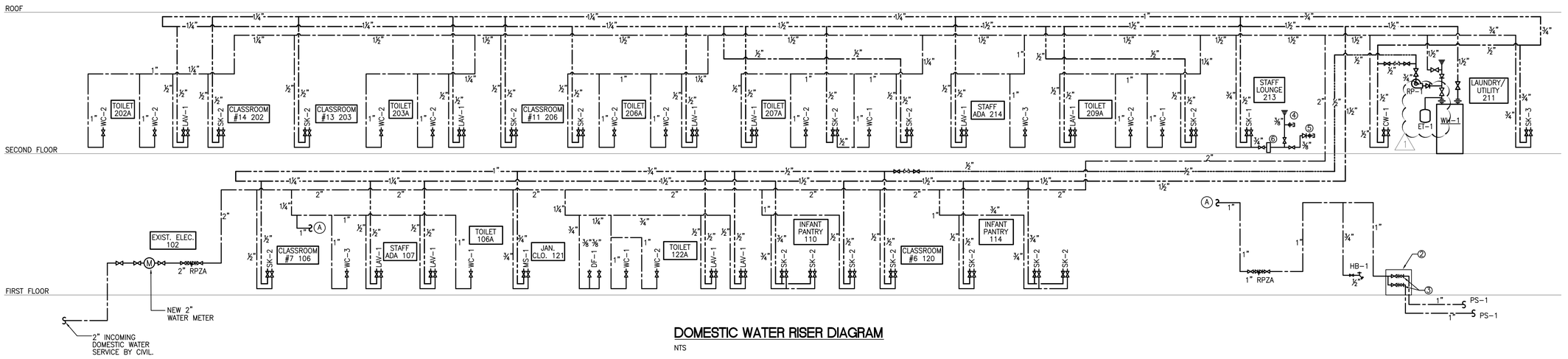


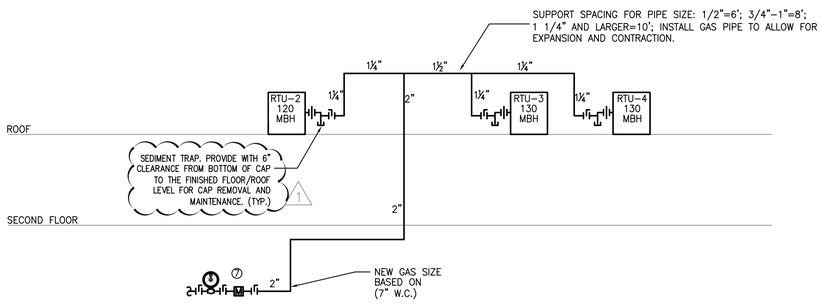
SANITARY RISER DIAGRAM

NTS



DOMESTIC WATER RISER DIAGRAM

NTS



GAS RISER DIAGRAM

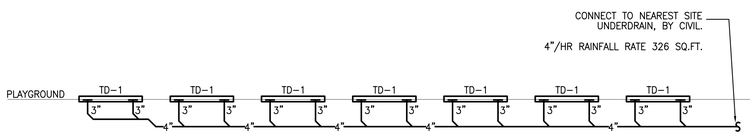
NTS

GAS SIZE BASED ON FUEL GAS CODE OF NEW YORK STATE 2020
TABLE 402.4(2) SCHEDULE 40 METALLIC PIPE
GAS : NATURAL
INTEL PRESSURE : LESS THAN 2 PSI
PRESSURE DROP : 0.5 IN. W.C.
SPECIFIC GRAVITY : 0.60

MAXIMUM PIPE LENGTH 230 FEET
TOTAL LOAD : 380 MBH

GAS SERVICE ALTERATION NOTE

- ALTERATIONS TO THE BUILDING GAS EQUIPMENT IS PENDING CON-EDISON APPROVAL AS PER THE WESTCHESTER COUNTY GAS SUPPLY MORATORIUM. GAS SCOPE OF WORK WILL BE APPROVED BY CON-EDISON UPON CONFIRMATION THAT THE NEW TOTAL BUILDING GAS DEMAND OF 380 MBH IS LESS THAN THE EXISTING GAS DEMAND OF THE EXISTING BUILDING. GENERAL CONTRACTOR TO VERIFY IN FIELD AND WITH THE UTILITY COMPANY THAT THE NEW TOTAL OF 380 MBH IS LESS THAN THE EXISTING GAS DEMAND PRIOR TO THE COMMENCEMENT OF WORK.



STORM RISER DIAGRAM

NTS

PLUMBING GENERAL NOTES:

- PROVIDE THERMOSTATIC MIXING VALVE AT ALL LAVATORIES AND HAND WASHING SINKS AT TEMP. 110°F.
- PROVIDE WATER HAMMER ARRESTOR AT EVERY QUICK CLOSING VALVE OF PLUMBING FIXTURES. WATER HAMMER ARRESTORS SHALL CONFORM WITH ASSE 1010.
- PROVIDE ALL SANITARY, WASTE AND STORM PIPING WITH A MINIMUM PITCH OF ¼" PER FOOT FOR ALL PIPE SIZES 2½" OR SMALLER AND ⅛" PER FOOT FOR ALL PIPE SIZES 3" AND LARGER.
- THE BUILDING SERVICE WATER HEATING IS PROVIDED WITH A CIRCULATED SYSTEM AS PER 2020 ECCCNYS C404.6.1 AND THE PIPING SYSTEM HAS BEEN DESIGNED AS PER C404.5.1 MAXIMUM ALLOWABLE PIPE LENGTH METHOD.
- THE FROST DEPTH FOR THIS REGION IS APPROXIMATELY 42" BELOW GRADE. ALL NEW DOMESTIC WATER SUPPLY PIPING TO BE INSTALLED UNDERGROUND AT THE BUILDING EXTERIOR SHALL BE PROVIDED WITH A MINIMUM OBVERT OF 48" BELOW GRADE.

PLUMBING DESIGN KEY NOTES:

1. CONNECT 4" SANITARY WASTE TO 4" SANITARY CONNECTION AS SHOWN ON CIVIL ENGINEER'S PLAN, COORDINATE IN FIELD EXACT LOCATION.
2. WATER SPRINKLER MANIFOLD TO BE LOCATED 17" AFF INSIDE 50 GAL. RESIN DECK BOX. CONTRACTOR TO COORDINATE EXACT DIMENSION OF DECK BOX AND INSTALLATION HEIGHT AND INFORM ARCH/OWNER OF ANY ISSUES PRIOR TO INSTALLATION IN FIELD. LOCATE RPZ ASSEMBLY IN SPRINKLER SERVICE ROOM.
3. PROVIDE EACH SPRINKLER CONNECTION WITH ISOLATION CONTROL VALVE AND FLOW CONTROL VALVE. FLOW CONTROL VALVE TO BE 1" WATTS IDROSET SERIES CSD OR EQUAL. ADJUST IN FIELD THE MAXIMUM FLOW FOR EACH SPRINKLER TO BE 1.4 GPM AS RECOMMENDED BY PS-1 SPRINKLER MANUFACTURER.
4. ⅜" DOMESTIC COLD WATER CONNECTION FOR COUNTERTOP APPLIANCE. PROVIDE WITH ISOLATION SHUTOFF VALVE, VACUUM BREAKER, AND UNION FITTING.
5. ⅜" DOMESTIC COLD WATER CONNECTION FOR INTEGRAL REFRIGERATOR ICE MAKER. PROVIDE WITH ISOLATION SHUTOFF VALVE, DUAL CHECK VALVE WITH ATMOSPHERIC VENT, AND UNION FITTING.
6. PROVIDE CARTRIDGE WATER FILTER FOR PANTRY APPLIANCES. PROVIDE WITH (2) SPARE CARTRIDGES FOR TENANT USE.
7. EXISTING GAS SERVICE METER. 380 CFH NEW CONNECTED LOAD. REGULATE GAS SERVICE PRESSURE TO 7"W.C..

JAM ARCH

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ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:
PLUMBING
RISER DIAGRAMS

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
P-201

1. SCOPE OF WORK:

1.1. ALL WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED UNDER THE BASE BID, EXCEPT WHERE THERE IS SPECIFIC REFERENCE TO EXCLUSION AND INCORPORATION IN OTHER QUOTATIONS.

2. GENERAL:

2.1. EXISTING PIPING WHERE INDICATED FOR EXISTING SYSTEMS IS DIAGRAMMATIC ONLY.

2.2. BECOME THOROUGHLY FAMILIAR WITH ACTUAL BUILDING SYSTEMS, WHICH ARE TO BE CHANGED, ALTERED, OR TO WHICH NEW CONNECTIONS ARE TO BE MADE. VERIFY ALL EXISTING CONDITIONS INCLUDING PIPE SIZE, LOCATION, AND ELEVATION.

2.3. THE INTENT OF THE WORK IS INDICATED ON THE DRAWINGS AND DESCRIBED HEREINAFTER. NO CONSIDERATION WILL BE GRANTED FOR REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR REGARDING ACTUAL PHYSICAL CONDITIONS AT THE SITE.

2.4. COORDINATE WORK WITH ALL TRADES AND EXISTING CONDITIONS OF THE JOB SITE AND MAINTAIN REQUIRED CEILING HEIGHTS AND SPACE CONDITIONS.

2.5. ALL EQUIPMENT SHALL BE ASBESTOS FREE AND INDICATED AS SUCH.

2.6. PROVIDE APPROVED BACKFLOW PREVENTION FOR CONNECTION TO NON – POTABLE FIXTURES AND EQUIPMENT AS REQUIRED BY CODE.

2.7. ALL PIPING AND EQUIPMENT SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE IN EACH APPLICATION. WHERE OVERHEAD CONDITIONS DOES NOT PERMIT THE FASTENING OF HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND APPROVED. DO NOT USE EXPANSION SHIELDS.

2.8. NO PLUMBING WORK SHALL BE HUNG FROM DUCTWORK OR THE HANGERS OF OTHER TRADES.

2.9. DUE TO THE NATURE OF ALTERATION WORK WHICH REQUIRES THE BUILDING OR FACILITY TO BE KEPT OPERABLE AT ALL TIMES, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL ACTIVITIES, CONNECTIONS, SHUT DOWNS AND THE LIKE WITH THE GENERAL CONTRACTOR, TENANT, AND BUILDING OWNER. ANY INTERRUPTIONS OF BUILDING SERVICES INCLUDING PHYSICAL ACCESS TO ADJACENT SPACES MUST BE COORDINATED WITH THE BUILDING OWNER. ALL TEMPORARY CONNECTIONS OR AFTER–HOUR WORK SHALL BE SO ARRANGED WITH ALL PARTIES INVOLVED.

2.10. IF THIS TRADE MUST PERFORM WORK IN OCCUPIED AREAS, IT SHALL MAKE ARRANGEMENTS WITH THE GENERAL CONTRACTOR AND THE OWNER AS TO THE TIME AND METHOD IN WHICH THIS WORK SHALL BE PERFORMED. ARRANGE FOR ALL ADJACENT AREAS TO BE PROPERLY PROTECTED AGAINST DAMAGE, DEBRIS, DIRT AND DUST.

2.11. PROVIDE AS PART OF NEW WORK:

2.11.1. HANGERS AND SUPPORTS FOR PIPING
2.11.2. SCAFFOLDING, RIGGING, AND HOISTING
2.11.3. RUBBISH REMOVAL AND CLEANING
2.11.4. CUTTING AND PATCHING
2.11.5. SLEEVES, OPENINGS AND THE CORE DRILLING OF EXISTING SLABS
2.11.6. CAULKING, FIREPROOFING, AND THE PACKING AND FILLING OF SLEEVES AND OPENINGS
2.11.7. SHOP DRAWINGS AND "AS BUILT" DRAWINGS
2.11.8. OBTAINING ALL REQUIRED PERMITS, APPROVALS, ACCEPTANCE, FILING AND INSPECTION CERTIFICATES
2.11.9. GUARANTEE ALL WORK, LABOR AND MATERIALS FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE
2.11.10. VERIFYING EXISTING CONDITIONS AT THE PROJECT SITE
2.11.11. TESTS: OPERATION, PERFORMANCE AND CODE–REQUIRED TESTS
2.11.12. PROTECTION OF WORK AND ADJACENT SPACES DURING CONSTRUCTION
2.11.13. COORDINATION WITH OTHER TRADES
2.11.14. IDENTIFICATION: VALVE TAGS, VALVE TAG SCHEDULES, AND PIPING IDENTIFICATION

2.12. DRAWINGS ARE DIAGRAMMATIC AND THEREFORE DO NOT RELIEVE THIS CONTRACTOR FROM PROVIDING ALL WORK AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION ACCORDING TO THE REQUIREMENTS.

2.13. THE ARRANGEMENT, POSITION, AND CONNECTION OF PIPES, DRAINS, VALVES, ETC., INDICATED ON THE DRAWINGS SHALL BE TAKEN AS A CLOSE APPROXIMATION, AND WHILE THEY SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, THE RIGHT IS RESERVED BY THE OWNER TO CHANGE THE LOCATIONS TO ACCOMMODATE ANY CONDITIONS WHICH MAY ARISE DURING THE PROGRESS OF THE WORK, WITHOUT ADDITIONAL COMPENSATION TO THIS CONTRACTOR FOR SUCH CHANGES, PROVIDED THAT THE CHANGES ARE REQUESTED PRIOR TO THE INSTALLATION OF THIS CONTRACTOR'S WORK.

2.14. THE RESPONSIBILITY FOR ACCURATELY LAYING OUT THE WORK RESTS WITH THIS CONTRACTOR. SHOULD IT BE FOUND THAT ANY OF HIS WORK IS SO LAID OUT THAT INTERFERENCE WILL OCCUR, HE SHALL SO REPORT THAT TO THE GENERAL CONTRACTOR.

2.15. ALL MATERIALS AND FIXTURES USED FOR THE ENTIRE PLUMBING PROJECT SHALL BE NEW AND VOID OF ANY DEFECTS. ALL MATERIALS AND FIXTURES SHALL CARRY STANDARD MANUFACTURES WARRANTY AGAINST ANY DEFECTS AND / OR DEFICIENCIES.

3. CODES, PERMITS, AND INSPECTIONS:

3.1. INSTALL ALL WORK IN FULL ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION OVER THESE MATTERS, AS WELL AS WITH ANY REQUIREMENTS OF NFPA, UL, FM, ETC, AND OTHER APPLICABLE CODES.

3.2. SECURE AND PAY FOR ALL NECESSARY APPROVALS, PERMITS, INSPECTIONS, CARTING, LEGAL DUMPING, ETC., AND DELIVER THE OFFICIAL RECORDS OF THE GRANTING OF PERMITS TO THE OWNER.

3.3. PAY ALL FILING FEES TO OBTAIN RELEASE OF APPROVED PLANS.

3.4. PAY ROYALTIES OR FEES REQUIRED IN CONNECTION WITH THE USE OF PATENTED DEVICES OR SYSTEMS, AND SAVE THE OWNER, THE ARCHITECT, THE CONSULTING ENGINEER, AND THE TENANT HARMLESS FROM ANY CLAIMS OR LAWSUITS ARISING FROM SUCH USE, AND INDEMNIFY EACH THEREOF AGAINST ATTORNEYS' FEES IN CONNECTION THEREWITH.

3.5. PROVIDE ALL SIGNS REQUIRED BY THE MUNICIPAL AUTHORITIES.

4. GUARANTEES AND CERTIFICATIONS:

4.1. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF OTHER TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEE PERIODS. THE DURATION OF GUARANTEE PERIODS SHALL BE ONE YEAR FROM THE DATE SUBSTANTIAL COMPLETION.

5. ENGINEER'S REVIEW, SHOP DRAWINGS, AND CERTIFICATIONS:

5.1. PREPARE AND SUBMIT DETAILED SHOP DRAWINGS. THE ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THIS TRADE OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THIS TRADE OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH HAVE BEEN OMITTED FROM THE SHOP DRAWING SUBMITTALS.

5.2. NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR IN THE FIELD UNTIL THE ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWINGS. PRIOR TO ASSEMBLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED: SCALED FLOOR PLAN AND CEILING DRAWINGS WITH DIMENSIONED LOCATIONS OF ALL PIPING AND EQUIPMENT INCLUDING SIZES, ELEVATIONS, AND APPROPRIATE INDICATION OF COORDINATION BETWEEN STRUCTURAL AND MECHANICAL ELEMENTS. MANUFACTURER'S CATALOGUE CUTS OF ALL EQUIPMENT TO BE USED. SAMPLES OF ALL DEVICES, WHICH WILL BE CLEARLY VISIBLE TO VIEW. ALL SUBMITTALS SHALL BE PROPERLY IDENTIFIED WITH PROJECT NAME, ARCHITECT, ENGINEER, AND SUBCONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER. PROVIDE CLEAR DETAILED REPRODUCIBLE "AS–BUILT" DRAWINGS UPON COMPLETION OF WORK AND PROVIDE SETS OF THE SAME TO LANDLORD AS DIRECTED.

5.3. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES WITH REASONABLE PROMPTNESS AND WILL RETURN THEM TO THE CONTRACTOR STAMPED TO INDICATE THE APPROPRIATE ACTION AS FOLLOWS:

5.3.1. "NO EXCEPTIONS TAKEN" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS.

5.3.2. "MAKE CORRECTIONS NOTED" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND THE CONTRACT DOCUMENTS. A COPY OF THE CORRECTED SUBMITTAL SHALL BE RETURNED TO THE ARCHITECT AND/OR ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE NOTATIONS, THE CONTRACTOR SHALL RESUBMIT AS DESCRIBED FOR SUBMITTALS STAMPED "REVISE AND RESUBMIT".

5.3.3. "REVISE AND RESUBMIT" MEANS THAT THE CONTRACTOR MUST COMPLY WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND RESUBMIT BEFORE FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

5.3.4. "REJECTED" MEANS THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURER CONSTRUCTION SHALL NOT PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

6. DEMOLITION, CONNECTIONS TO EXISTING WORK, AND ALTERATION:

6.1. REFER TO THE CONTRACT DOCUMENTS FOR THE EXTENT OF SYSTEMS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY AND INCLUDE IN THE BID ALL REMOVALS REQUIRED FOR THE COMPLETION OF WORK.

6.2. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING SYSTEMS TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. SUBMIT TO OWNER AND ARCHITECT FOR APPROVAL, DATE AND SCHEDULE OF ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS THEY WILL NOT INTERFERE WITH REGULAR OPERATION OF EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL OF THE SAME HAS BEEN OBTAINED FROM OWNER.

6.3. MAKE TEMPORARY CONNECTIONS AS REQUIRED BETWEEN NEW AND EXISTING WORK TO INSURE CONTINUOUS OPERATION OF THE FACILITY. ALL COSTS ASSOCIATED WITH AND RESULTING FROM TEMPORARY CONNECTIONS SHALL BE BORNE BY THIS CONTRACTOR.

6.4. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND APPROVED MANNER. RESTORE ANY DISTURBED EXISTING WORK TO ITS ORIGINAL CONDITION.

6.5. PROVIDE CAPS, PLUGS, AND OUTLETS AS REQUIRED ON EXISTING PIPING.

6.6. REMOVE AND /OR RELOCATE EXISTING PIPING AND OTHER WORK AS REQUIRED TO COMPLETE FINAL INSTALLATION OF NEW PIPING WORK.

6.7. ANY PIPING RENDERED DEFUNCT BY THIS ALTERATION WORK SHALL BE REMOVED. ALERT THE ARCHITECT AND GENERAL CONTRACTOR OF ANY "DISCOVERED" ABANDONED PIPING. IN GENERAL, ALL ABANDONED, INACTIVE, OR SUPERFLUOUS PIPING, INCLUDING HANGERS AND CLAMPS SHALL BE REMOVED.

6.8. ALL NEW AND EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK.

7. CUTTING AND PATCHING:

7.1. DO ANY CUTTING REQUIRED FOR THE PASSAGE OR INSTALLATION OF PIPES, SUPPORTS, AND THE LIKE. IN GENERAL, OTHERS WILL DO DEMOLITION OF EXISTING WALLS AND CEILINGS.

7.2. OTHERS WILL DO ALL PATCHING. THE EXPENSE OF CUTTING AND RESTORING SURFACES TO THEIR ORIGINAL CONDITION WHEN CAUSED BY THIS TRADE'S FAILURE TO PERFORM ITS PRELIMINARY WORK SHALL BE BORNE BY THIS TRADE.

8. SLEEVES:

8.1. PROVIDE 18 GAUGE GALVANIZED SHEET METAL SLEEVES FOR ALL PIPES PASSING THROUGH WALLS OR FLOORS. PROVIDE SLEEVES WITH AN I.D. OF AT LEAST 1/2" GREATER THAN THE OUTSIDE OF THE PIPE, INCLUDING INSULATION WHICH MUST BE CONTINUOUS THROUGH THE SLEEVE. PACK SPACE BETWEEN PIPES AND SLEEVES WITH AN APPROVED FIRESTOP MATERIAL. WHERE SLEEVES PASS THROUGH RATED CONSTRUCTION, FIT ESCUTCHEONS ON BOTH SIDES OF CONSTRUCTION.

9. GENERAL INSTALLATION OF PIPE:

9.1. MAINTAIN A MINIMUM OF 1/8" PITCH PER FOOT IN THE DIRECTION OF FLOW ON ALL DRAINAGE LINES.

9.2. USE REDUCING FITTINGS, UNLESS OTHERWISE APPROVED IN SPECIAL CASES, IN MAKING REDUCTION IN SIZE OF PIPE. BUSHINGS WILL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED.

9.3. WHERE CHROME PLATED PIPING IS INSTALLED, CUT AND THREAD PIPE SO THAT NO UN–PLATED PIPE THREADS ARE VISIBLE UPON COMPLETING OF WORK.

9.4. CONNECTION TO GAS APPLIANCES SHALL INCLUDE AN EQUIPMENT SHUTOFF, A DIRT LEG AND FINAL CONNECTION SHALL BE MADE WITH A ANSI Z21.24 LISTED FLEXILE CONNECTOR SIZED PER EQUIPMENT CONNECTION SIZE WITH A MAXIMUM LENGTH OF 3' EXCEPT FOR RANGE AND DOMESTIC CLOTHES WASHER WHICH SHALL HAVE A MAX LENGTH OF 6'. CONNECTORS TO BE USED OUTDOORS SHALL ALSO BE ANSI Z21.75 LISTED. CONNECTORS FOR MOVABLE AND COMMERCIAL COOKING EQUIPMENT SHALL BE LISTED AS COMPLYING WITH ANSI Z21.69.

10. MATERIALS OF PIPING SYSTEMS:

10.1. PVC PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D 1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. FITTINGS SHALL CONFORM TO ASTM D 2665. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564, PRIMER SHALL CONFORM TO ASTM F 656. THE SYSTEM IS INTENDED FOR NON–PRESSURE DRAINAGE APPLICATIONS WHERE THE TEMPERATURE WILL NOT EXCEED 140°F. ANY PENETRATIONS OF FIRE RESISTANCE RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED WITH A FIRE COLLAR TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479.

10.2. HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A–888 AND CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE . HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 FOR STANDARD COUPLINGS OR ASTM C–1540 FOR HEAVY DUTY COUPLINGS WHERE INDICATED. GASKETS SHALL CONFORM TO ASTM C–564. ALL PIPE AND FITTINGS TO BE PRODUCED BY A SINGLE MANUFACTURER AND ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS. COUPLINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S BAND TIGHTENING SEQUENCE AND TORQUE. TIGHTEN BANDS WITH A PROPERLY CALIBRATED TORQUE LIMITING DEVICE. TEST THE SYSTEM HYDROSTATICALLY AFTER INSTALLATION TO 10 FT. OF HEAD (4.3 PSI MAXIMUM).

10.3. COPPER WATER PIPING SHALL BE SEAMLESS DRAWN OR EXTRUDED TYPE "L" COPPER TUBING, HARD TEMPER IN ACCORDANCE WITH ASTM B–88. FITTINGS SHALL BE WROUGHT OR CAST BRASS SOLDERED FITTINGS CONFORMING WITH ASME B16.18 OR ASME B16.22. SOLDER JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM B 828 USING ASTM B–32 LEAD FREE SOLDER AND ASTM B–813 FLUX. ALL COMPONENTS OF THE DOMESTIC WATER SYSTEM ARE TO BE NSF 61 LISTED FOR USE IN POTABLE WATER SYSTEMS.

10.4. CROSS–LINKED POLYETHYLENE TUBING SHALL MEET THE SDR–9 DIMENSION STANDARD AND PERFORMANCE SPECIFICATIONS OF ASTM F–876/F–877 AND CSA B137.5 AND BE APPROVED FOR USE WITH ASTM F1807 AND ASTM F1960 FITTING SYSTEMS. TUBING SYSTEM SHALL ALSO COMPLY WITH ANSI/NSF 14 AND 61 AS SUITABLE FOR USE WITH POTABLE WATER. TEMPERATURE AND PRESSURE RATINGS SHALL BE 160 PSI AT 73.4°F, 100 PSI AT 180°F, AND 80 PSI AT 200°F. ANY PENETRATIONS OF FIRE RESISTANCE RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED WITH A FIRE COLLAR TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479.

10.5. BLACK IRON PIPE SHALL BE SCHEDULE 40 WELDED PIPE CONFORMING TO ASTM A–53 OR SEAMLESS DRAWN PIPE CONFORMING TO ASTM A–53 AND A–106. PIPE SHALL BE INSTALL WITH TAPERED THREADED OR WELDED JOINTS. A SOFT SETTING THREAD SEALANT SHALL BE USED ON ALL THREADED JOINTS. FITTINGS SHALL BE BLACK MALLEABLE IRON FITTINGS.

10.6. CORRUGATED STAINLESS STEEL TUBING SHALL BE MANUFACTURED TO COMPLY WITH ANSI LC 1–97 WITH ALL ADDENDA AND BE LISTED BY CSA. TUBING SHALL BE MANUFACTURED FROM 300 SERIES STAINLESS STEEL STRIP CONFORMING TO ASTM A240. TUBING SHALL HAVE A UV RESISTANT, FIRE RATED POLYETHYLENE JACKET DESIGNED TO COMPLY WITH ASTM E–84 FOR FLAME SPREAD AND SMOKE DEVELOPMENT. TUBING SHALL BE RATED FOR OPERATION UP TO 5 PSI. FITTINGS SHALL BE BRASS FLARE FITTING AS LISTED BY CSA.

10.7. PROVIDE APPROVED TYPE VACUUM BREAKERS AND/OR CHECK VALVES, OR BACKFLOW PREVENTORS AS HEREIN SPECIFIED ON ALL EQUIPMENT AND FIXTURE CONNECTIONS REQUIRED BY CODE, INDICATED ON THE DRAWINGS, AS SPECIFIED, OR AS REQUIRED FOR THE PROPER FUNCTIONING OF THE EQUIPMENT.

10.8. ALL PIPING EXPOSED TO VIEW SHALL BE CHROME PLATED. THE TERM EXPOSED TO VIEW SHALL APPLY TO ALL PIPING FROM THE POINT WHERE IT LEAVES THE WALL, CEILING, OR FLOOR CONSTRUCTION, TO THE POINT OF FINAL CONNECTION TO THE FIXTURE. PIPING BUILT INTO FIXED BENCHWORK WITH ACCESS DOORS OR PANELS SHALL NOT BE CONSIDERED "EXPOSED TO VIEW."

11. INSULATION:

11.1. ON HOT AND COLD WATER PIPING, AND PIPING FROM WATER COOLERS, PROVIDE OWENS–CORNING ½" FIBERGLAS INSULATION WITH FACTORY APPLIED SELFSEALING VAPOR BARRIER JACKETS. FOR RECIRCULATED HOT WATER INSULATION SHALL BE 1" THICK. FOR COLD WATER SERVICE, ALL VAPOR BARRIERS SHALL BE SEALED AND CONTINUOUS.

11.2. ALL INSULATION AND VAPOR BARRIERS SHALL BE SEALED AND CONTINUOUS THROUGH HANGERS, SLEEVES, FITTINGS, VALVES, ETC.

11.3. ON RAIN CONDUCTORS WHICH PASS THROUGH OCCUPIED AREAS PROVIDE 1½" THICK FIBERGLASS INSULATION WITH FACTORY APPLIED SELFSEALING VAPOR BARRIER JACKET.

11.4. ALL EXPOSED SUPPLY AND WASTE PIPING UNDER PUBLIC LAVATORIES AND SINKS SHALL BE INSULATED TO PROTECT AGAINST CONTACT IN ACCORDANCE WITH ANSI A117.1 SECTION 606.6.

12. VALVES:

12.1. ALL WATER VALVES SHALL BE TWO PIECE, FULL PORT BALL VALVES WITH THREADED CONNECTIONS, APOLLO AS STANDARD. NOTE: SOLDERED OR BRAISED CONNECTIONS WILL NOT BE ACCEPTED.

12.2. GAS CONTROL VALVES SHALL BE APOLLO 94ALF–A SERIES OR APPROVED EQUAL CONFORMING TO ANSI Z21.15.

12.3. THERMOSTATIC MIXING VALVES SHALL BE INSTALLED TO PROVIDE TEMPERED WATER (MAX. TEMP. 110°F) TO PUBLIC USE HAND WASHING FACILITIES AND SHALL BE LISTED IN ACCORDANCE WITH ASSE 1070.

12.4. ALL CHECK VALVES ARE TO BE ASSE 1024 DUAL CHECK VALVES UNLESS OTHERWISE NOTED.

12.5. PRESSURE VACUUM BREAKERS SHALL BE INSTALLED 12" ABOVE THE HIGHEST OUTLET THEY ARE PROTECTING. THE VACUUM BREAKER SHALL RENDER POSITIVE PROTECTION AGAINST BACK–SIPHONAGE AND INCORPORATE A CHECK VALVE AND INLET SHUT–OFF.

12.6. VACUUM BREAKERS SHALL BE RATED TO 150 PSI WORKING PRESSURE AND SHALL WITHSTAND TEMPERATURES TO 170 F. THE VACUUM RELIEF VALVE MUST BE OF BRASS CONSTRUCTION WITH A SPRING LOADED DIAPHRAGM MEMBER TO ASSURE POSITIVE OPENING OF AIR INLET WHEN BACK–SIPHONAGE OCCURS. PRESSURE VACUUM BREAKERS SHALL BE WATTS # 800 OR AS APPROVED.

13. HANGERS:

13.1. PROVIDE SUITABLE AND SUBSTANTIAL HANGERS AND SUPPORTS FOR ALL PIPING. SUPPORT HORIZONTAL PIPING IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

MATERIAL	PIPE SIZE	MAX. HANGER
COPPER TUBE	1¼" & SMALLER	6'–0"
COPPER TUBE	1½" & LARGER	10'–0"
THREADED STEEL	1" & SMALLER	6'–0"
THREADED STEEL	1¼" & LARGER	10'–0"
PEX	ALL	32"
PVC	ALL	4'–0"
NO–HUB C.I.	ALL	5'–0"

13.2. THREADED ROD FOR HANGERS SUPPORTING PIPING UP TO 2" SHALL BE ⅜". FROM PIPING FROM 2½"–4" SHALL BE ½".

13.3. NO–HUB PIPING SHALL HAVE A MINIMUM OF TWO HANGERS PER LENGTH OF PIPE. PIPE HANGERS TO BE INSTALLED ON EACH SIDE OF THE JOINT.

14. PLUMBING FIXTURES:

14.1. ALL PLUMBING FIXTURES FINISHES AND TRIM SHALL BE SPECIFIED BY THE ARCHITECT.

14.2. ALL PIPING ESCUTCHEONS, FIXTURE TAILPIECES, TRAPS, ETC., EXPOSED TO VIEW TO BE CHROME PLATED.

14.3. PROVIDE FIXTURE SUPPORTS, I.E. CHAIR CARRIERS, LAVATORY SUPPORTS.

15. CLEANING:

15.1. PRIOR TO UTILIZATION THE POTABLE WATER SYSTEM SHALL BE FLUSHED WITH CLEAN WATER UNTIL WATER RUNS CLEAR AND FREE OF DEBRIS OR PARTICLES. FLUSHING SHALL BE PREFORMED WITH ANY STRAINERS OR AERATORS REMOVED.

15.2. AFTER FLUSHING, THE POTABLE WATER SYSTEM SHALL BE DISINFECTED BY FILLING THE SYSTEM WITH A WATER/ CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE; THE SOLUTION SHALL BE ALOUD TO STAND FOR AT LEAST 24 HOURS. ALTERNATELY A WATER/ CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION CAN BE USED FOR A DURATION OF AT LEAST 3 HOURS BUT NO MORE THAN 6 HOURS.

15.3. AFTER DISINFECTION THE SYSTEM SHALL BE FLUSHED WITH POTABLE WATER UNTIL THE CHLORINE LEVELS AT ALL OUTLETS ARE EQUAL TO THAT OF THE INCOMING WATER SUPPLY.

15.4. A CERTIFICATION OF PERFORMANCE AND LABORATORY TEST REPORT SHOWING THE ABSENCE OF COLIFORM ORGANISMS IN THE POTABLE WATER SYSTEM SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION.

16. TESTS:

16.1. PRIOR TO SUBMITTING AN APPLICATION FOR FINAL ACCEPTANCE OF THE WORK, ALL TESTS DEEMED NECESSARY TO SHOW PROPER EXECUTION OF THE WORK SHALL HAVE BEEN PERFORMED AND COMPLETED IN THE PRESENCE OF AN ARCHITECT'S / OWNER'S REPRESENTATIVE. SCHEDULING OF ALL TESTING PROCEDURES SHALL BE ARRANGED TO SUIT THE CONVENIENCE OF THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE.

16.2. SUBJECT THE DRAINS, WASTE AND VENT PIPING TO A WATER TEST IN ACCORDANCE WITH ALL LOCAL REQUIREMENTS. THE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE EQUIVALENT TO AT LEAST A TEN FOOT OF HEAD OF WATER. AFTER FILLING, DISCONNECT WATER SUPPLY AND LET IT STAND FOR FIFTEEN (15) MINUTES UNDER TEST, DURING WHICH TIME THERE SHALL BE NO LOSS OR LEAKAGE.

16.3. TEST ALL INTERIOR WATER DISTRIBUTION SYSTEMS TO A PRESSURE OF AT LEAST 50 PSI HIGHER THAN THEIR NORMAL OPERATING STATIC PRESSURE. MINIMUM TEST SHALL BE GAUGE SET AT 150 PSI, WHICH SHALL STAND FOR TWO HOURS WITH NO LOSS IN PRESSURE.

16.4. FURNISH AND PAY FOR ALL DEVICES, MATERIALS, SUPPLIES AND LABOR REQUIRED IN CONNECTION WITH TESTS. MAKE ALL TESTS IN THE PRESENCE, AND TO THE SATISFACTION OF THE OWNER, ENGINEER, PLUMBING AND OTHER INSPECTORS OF THE AGENCIES HAVING JURISDICTION, AND ANY APPLICABLE INSURANCE ASSOCIATIONS AND PUBLIC UTILITIES. REPAIR, OR IF REQUIRED BY THE ENGINEER, REPLACE DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE OWNER. REPEAT TESTS AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY. RESTORE TO ITS ORIGINAL CONDITION ANY WORK DAMAGED OR DISTURBED BY TESTS, ENGAGING THE ORIGINAL TRADES TO DO THE RESTORATION WORK. NOTIFY THE OWNER, ENGINEER, AND INSPECTORS HAVING JURISDICTION AT LEAST 48 HOURS IN ADVANCE OF MAKING THE REQUIRED TESTS SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS THE SAME.

16.5. TEST GAS DISTRIBUTION SYSTEM AT AN AIR PRESSURE OF 1.5 TIMES THE PROPOSED MAXIMUM WORKING PRESSURE BUT NOT LESS THAN 3 PSIG. THE TEST DURATION SHALL BE 30 MINUTES FOR EACH 500 CUBIC FEET OF PIPE OR FRACTION THERE OF WITH NO DROP IN PRESSURES.

16.6. ALL TESTABLE BACKFLOW PREVENTION DEVICES SHALL BE FIELD TESTED IN ACCORDANCE WITH ASSE 5010, BY ASSE 5000 CERTIFIED INDIVIDUAL, PRIOR TO FINAL INSPECTION. COPIES OF TEST RESULTS SHALL BE SENT TO THE AHJ AND WATER SUPPLIER.

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STATE OF NEW YORK ARMEN YOVAN KHACHATURIAN 062261-1 LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:
PLUMBING SPECIFICATIONS

Rev. #	Revision Date	Revision Description
1	01/19/2023	BLDG. DEPT. COMMENTS
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
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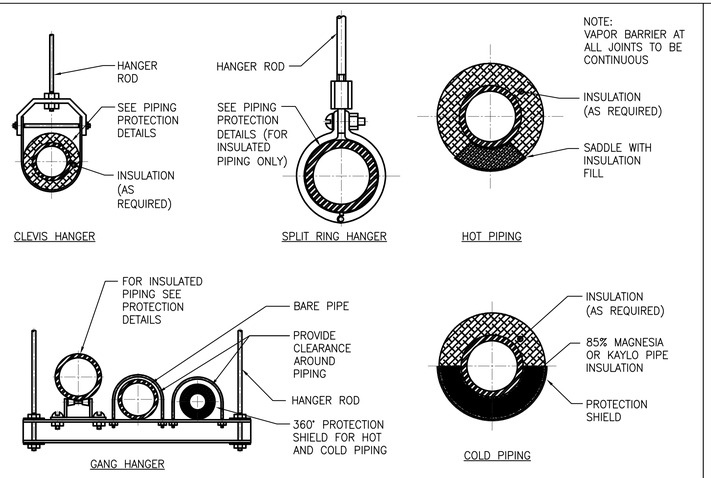
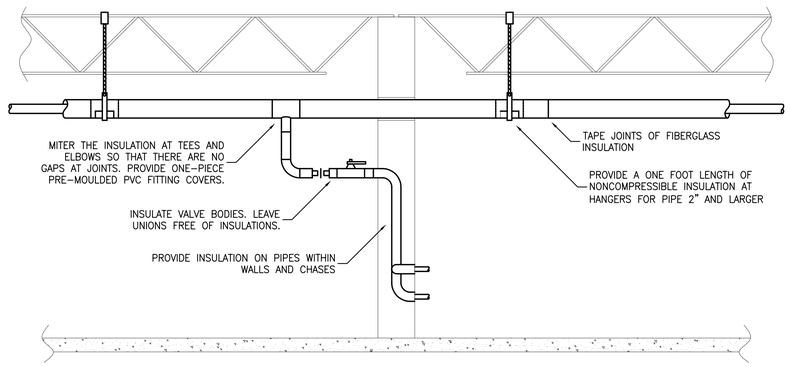
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
P-301



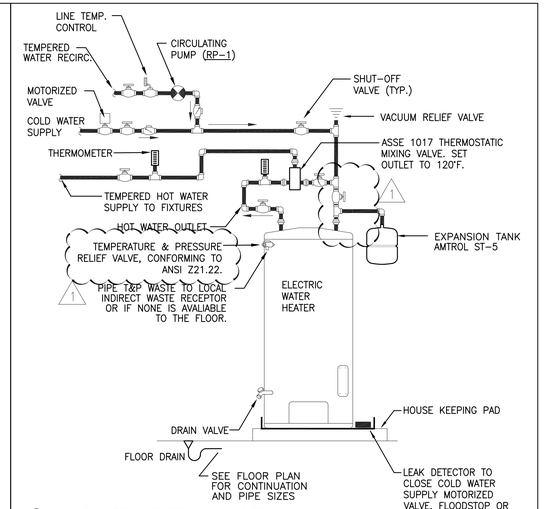
1 PIPING SUPPORT AND INSULATION DETAIL
NOT TO SCALE

15083

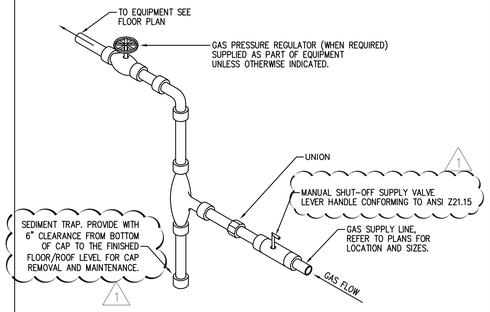


PROVIDE FIBERGLASS INSULATION WITH ALL-SERVICE JACKET WITH VAPOR BARRIER ON INTERIOR COLD AND HOT WATER PIPING, CONDENSATE DRAIN PIPE, AND STORM PIPE. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING INSULATION. INSTALL ALL ITEMS PER SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS. MAINTAIN VAPOR BARRIER ON COLD WATER AND CONDENSATE PIPING BY MEANS OF SEALANT AND TAPE. FLAME SPREAD AND SMOKE-DEVELOPED INDEXES SHALL NOT EXCEED 25/50. SEAL EXPOSED ENDS OF FIBERGLASS INSULATION WITH ADHESIVE MASTIC.

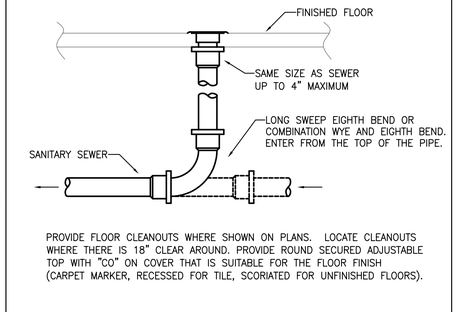
2 PIPE INSULATION DETAIL
NOT TO SCALE



3 HOT WATER HEATER PIPING DETAIL
NOT TO SCALE

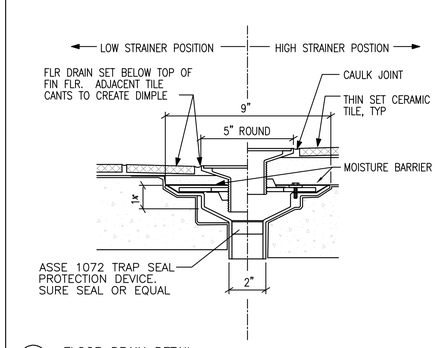


4 DETAIL OF GAS CONNECTION
NOT TO SCALE



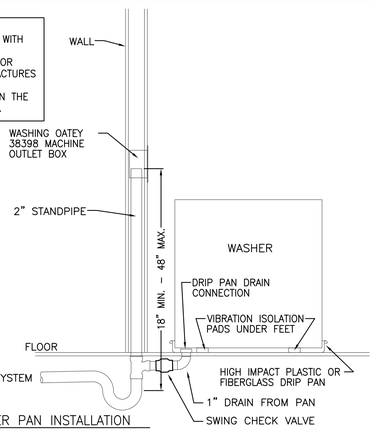
PROVIDE FLOOR CLEANOUTS WHERE SHOWN ON PLANS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND. PROVIDE ROUND SECURED ADJUSTABLE TOP WITH "CO" ON COVER THAT IS SUITABLE FOR THE FLOOR FINISH (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS).

5 FLOOR CLEANOUT DETAIL
NOT TO SCALE

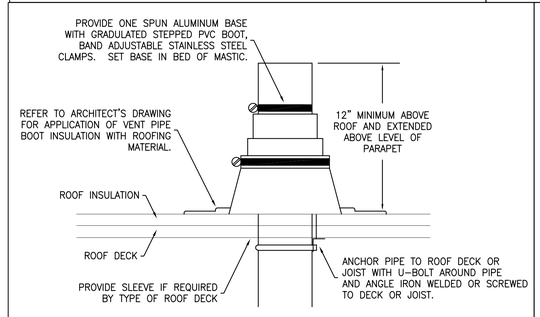


6 FLOOR DRAIN DETAIL
NOT TO SCALE

NOTES:
1. VERIFY DRAIN PAN SIZE WITH WASHING MACHINE SIZE.
2. VERIFY REQUIREMENTS FOR STANDPIPE WITH MANUFACTURES RECOMMENDATIONS.
3. MACHINE OUTLET BOX ON THE SIDE TO BE ACCESSIBLE.

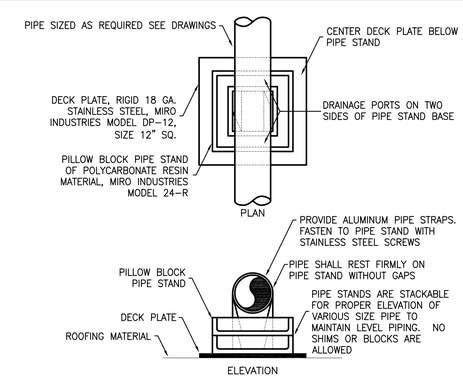


7 CLOTHES WASHER PAN INSTALLATION
NOT TO SCALE



REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MINIMUM TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. PROVIDE 1" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET ON VENT PIPE INSIDE BUILDING WITHIN SIX FEET OF VENT THRU ROOF LOCATION. VERIFY FLASHING AND COUNTER FLASHING WITH ROOFING CONTRACTOR.

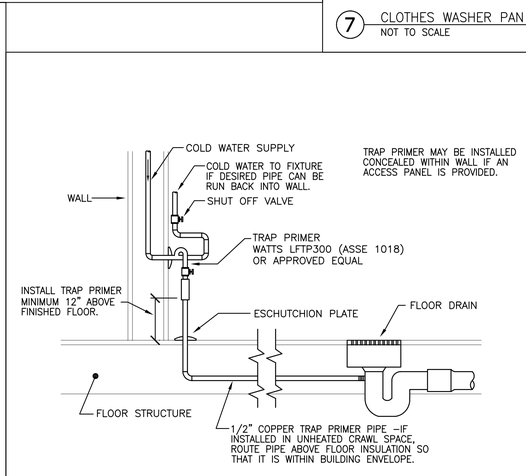
8 VENT THROUGH ROOF DETAIL (VTR)
NOT TO SCALE



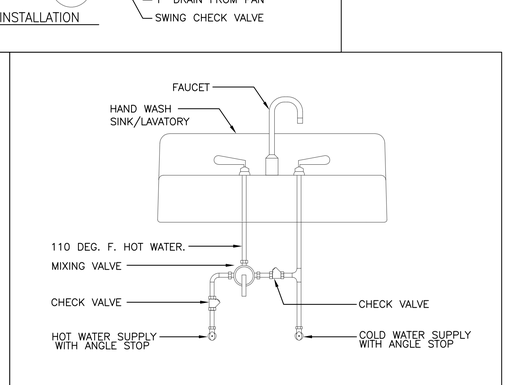
PIPE STAND GOOD FOR 1/2" TO 3 1/2" STEEL PIPE SIZES ONLY.

SUPPORT SPACING FOR PIPE SIZE: 1/2"=6'; 3/4"-1"=8'; 1 1/4" AND LARGER=10'; PLACE DECK PLATES ON ROOFING, SET PIPE STAND FREE ON DECK PLATES, STACK PIPE STAND WHERE REQUIRED TO ELEVATE PIPING. INSTALL GAS PIPE TO ALLOW FOR EXPANSION AND CONTRACTION. PRIMER COAT AND PAINT EXTERIOR GAS PIPE LIGHT GREEN COLOR.

9 ON ROOF PIPING SUPPORT DETAIL
NOT TO SCALE



10 FLOOR DRAIN TRAP PRIMER DETAIL
NOT TO SCALE



11 LOCAL MIXING VALVE AT LAVATORY AND HAND SINKS
NOT TO SCALE

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FIRE PROTECTION DRAWING / REVISION LOG

● NEW OR REVISED ISSUE
○ NON REVISED ISSUE

NUMBER	NAME	ISSUE: ISSUED FOR PERMIT	DATE: 08/08/2022		
FP-001	FIRE PROTECTION COVER SHEET	●			
FP-101	FIRE PROTECTION FIRST FLOOR PLAN	●			
FP-102	FIRE PROTECTION SECOND FLOOR PLAN	●			
FP-103	FIRE PROTECTION ROOF PLAN	●			
FP-301	FIRE PROTECTION SPECIFICATIONS	●			

SPECIALTY EQUIPMENT

TAG	TYPE	DESCRIPTION	SIZE	MANUFACTURER	MODEL NUMBER	NOTES
DV-1	DRY	DRY VALVE ASSEMBLY	3"	RELIABLE	MODEL FX	PROVIDE BASIC TRIM, MODEL A-2 AUTOMATIC PRESSURE MAINTENANCE DEVICE AND TANK MOUNTED AIR COMPRESSOR
	DRY	PRESSURE MAINTENANCE DEVICE	–	GENERAL AIR PRODUCTS	AMD-1	
DVC-1	DRY	AIR COMPRESSORS (TANK MOUNTED)	34"x13"x27" (250 GAL. SYSTEM CAPACITY)	GENERAL AIR PRODUCTS	OL25033ACT	ELECTRICAL REQUIREMENTS: 1/3 HP, 115V, 1 PHASE, FLA 7.4 RUNNING AMPS. TANK SIZE 10 GALLONS. WEIGHT 77 LBS. PROVIDE PRESSURE SWITCH: SWP60401U-H

FIRE PROTECTION MATERIAL SCHEDULE

SYSTEM	PIPE	FITTINGS	JOINTS	REMARKS
SPRINKLER	STEEL SCHED 40 BLACK	MALLEABLE IRON DUCTILE IRON	THREADED MECH. JOINT-FLANGED VICTAULIC	TO BE USED DOWNSTREAM OF SPRINKLER FLOOR CONTROL VALVE. ASSEMBLY, PIPE SIZE 2" & SMALLER.
SPRINKLER	BLACK	MALLEABLE IRON VICTAULIC DUCTILE IRON	MECH. JOINT-FLANGED VICTAULIC	TO BE USED ON RISERS AND MAINS, PIPE SIZES 2½" AND LARGER.
SPRINKLER DRAIN PIPE	STEEL SCHED 40 GALVANIZED	GALVANIZED	THREADED	

NOTES:
1. ALL MATERIALS SELECTED ON THIS SCHEDULE MUST BE APPROVED BY THE LOCAL AUTHORITIES.
2. USE OF ANY PIPING OR TUBING WITH ID & OD OTHER THEN SCHEDULE 10 & SCHEDULE 40 IS NOT PERMITTED.

FIRE PROTECTION DESIGN CRITERIA

SYSTEM TYPE	OCCUPANCY CLASSIFICATION	CODE REFERENCE	AREA OF OPERATION	MAX. PROTECTION AREA PER SPRINKLER	MINIMUM DENSITY (GPM/SQ.FT)	MAXIMUM SPACING	SPRINKLER HEAD LOCATION/TYPE
WET	ORDINARY HAZARD GROUP1	NFPA13	1500 FT.²	130 FT.²	0.15	15 FT.	CEILING/NO CEILING MECH. EQUIPMENT AREAS PENDANT OR UPRIGHT
WET	LIGHT HAZARD	NFPA13	1500 FT.²	225 FT.²	0.10	15 FT.	CEILING/NO CEILING PENDANT OR UPRIGHT
DRY	LIGHT HAZARD	NFPA13	1950 FT.²	144 FT.²	0.10	12 FT.	UNHEATED CEILING SPACE COIN PENDANT

FIRE HOSE VALVE, FIRE VALVE CABINET, FIRE DEPARTMENT CONNECTION SCHEDULE

TYPE	DESCRIPTION	SIZE	MANUFACTURER	MODEL NUMBER	NOTES
FDC	FIRE DEPARTMENT SIAMESE	2-½"X 2-½"X 4"	POTTER ROEMER	5761	FLUSH MOUNTED

SCHEDULE OF SPRINKLER HEADS

SYMBOL	MFR.	MODEL	SIN	TYPE	LOCATION	FINISH & REMARKS	TEMP. RATING	'K' FACTOR	HEAD COVERAGE	MIN. FLOW	MIN. PRESS.	LISTINGS
⊙	RELIABLE	G5-56	RA3415	QUICK RESPONSE CONCEALED PENDANT	THROUGHOUT THE FACILITY IN AREAS WITH SUSPENDED CEILINGS UNLESS OTHERWISE NOTED	AS SELECTED BY ARCHITECT	175°F	5.6	225 SQ.FT. MAX	–	7 PSI	UL FM
○	RELIABLE	KFR56-300	RA3924	QUICK RESPONSE EXPOSED UPRIGHT	THROUGHOUT THE FACILITY IN AREAS WITH OPEN CEILINGS UNLESS OTHERWISE NOTED	AS SELECTED BY ARCHITECT	165°F	5.6	225 SQ.FT. MAX	–	7 PSI	UL
▶	RELIABLE	KFR56-300	RA3934	QUICK RESPONSE HORIZONTAL SIDEWALL	WITHIN 24" FROM BOTTOM OF ELEVATOR SHAFT	AS SELECTED BY ARCHITECT	165°F	5.6	14' x 14'	–	7 PSI	UL

NOTES:
1. SPRINKLER HEADS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE METAL WIRE GUARDS WHERE SPRINKLERS ARE SUBJECT TO DAMAGE, SUCH AS WITH-IN THE GYMNASIUM, ETC. AND SPRINKLER HEADS LOCATED UNDER HVAC DUCTS IN MECHANICAL EQUIPMENT ROOMS WHEN LOCATED LOWER THAN 7'-0" A.F.F. ETC.
3. ALL SPRINKLER HEADS THROUGHOUT THE FACILITY SHALL BE OF THE ORDINARY TEMPERATURE RATING EXCEPT AS FOLLOWS:
   a. SPRINKLER HEADS IN SHOWERS SHALL BE OF INTERMEDIATE TEMPERATURE RATING (175° TO 225°).
   b. SPRINKLER HEADS LOCATED CLOSE TO HEATERS, STEAM PIPING OR LOW-PRESSURE BLOW-OFF VALVE SHALL BE OF THE TEMPERATURE RATING AS REQUIRED BY NFPA 13.
   c. ALL HEAT GENERATING EQUIPMENT WHICH CAN AFFECT THE TEMPERATURE RATING OF THE SPRINKLER HEADS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS PRIOR TO SUBMISSION FOR APPROVAL.
4. SPRINKLER HEADS MINIMUM FLOW & MINIMUM PRESSURE REQUIREMENTS TO BE BASED ON HYDRAULIC CALCULATION DESIGN DENSITIES.
5. ALL SPRINKLER HEAD FINISHES TO BE APPROVED BY ARCHITECT.

SPRINKLER DEMOLITION NOTES

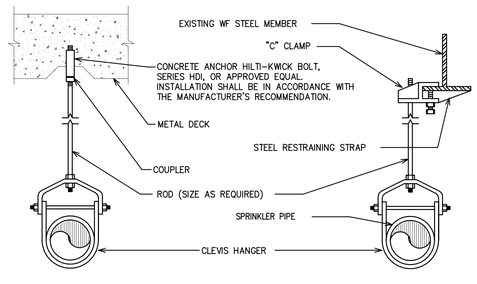
1. PROVIDE ALL MATERIALS, LABOR AND SUPERVISION REQUIRED TO REMOVE, RELOCATE AND ALTER THE EXISTING SYSTEMS AS INDICATED ON THE PLANS.
2. CONTRACTOR SHALL INVESTIGATE SPACE BEFORE STARTING TO DEMOLISH THE WORK, AND BE FAMILIAR WITH THE SYSTEM TO BE REMOVED. HE SHALL REPORT TO LANDLORD, ARCHITECT AND ENGINEER ANY DEVIATION FROM SCOPE OF WORK TO BE DEMOLISHED.
3. PROTECT ALL EQUIPMENT THAT IS TO REMAIN FROM DAMAGE, WATER, DUST, ETC. OR REPLACE AS REQUIRED AT CONTRACTOR'S EXPENSE.
4. PRIOR TO START OF WORK, CONTRACTOR SHALL REVIEW THESE DRAWINGS AND CAREFULLY INSPECT THE SITE WITH REGARD TO EXISTING CONDITIONS. SHOULD IT BE OBSERVED THAT SOME CONDITIONS ARE IN DISCREPANCY WITH THOSE SHOWN ON THE PLANS, SUCH CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER FOR REVIEW AND POSSIBLE CORRECTIVE MEASURES.
5. ALL EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, RELOCATED, TURNED OVER TO THE OWNER (OBTAIN RECEIPT), OR SALVAGED AS DIRECTED.
6. PROVIDE INTERIM WORK, IF REQUIRED, FOR CONTINUED UNINTERRUPTED SERVICES WHERE SHUTDOWN IS REQUIRED. SCHEDULE WORK WITH FIRE DEPARTMENT AND CONFORM TO LOCAL FIRE DEPARTMENT REQUIREMENTS.
7. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF NEW WORK. AT COMPLETION OF THE WORK THOROUGHLY CLEAN PREMISES BY REMOVING TOOLS, DEBRIS, ETC.

PERFORMANCE SPECIFICATION CRITERIA

SPRINKLER PLANS AS SHOWN ARE FOR BIDDING PURPOSES ONLY. SPRINKLER CONTRACTOR IS TO OBTAIN CURRENT HYDRANT TEST DATA AND PROVIDE HYDRAULIC CALCULATIONS FOR SYSTEM PIPE SIZING IN ACCORDANCE WITH NFPA 13. CONTRACTOR IS TO SUBMIT SHOP DRAWINGS INDICATING HYDRAULIC CALCULATIONS, PIPING LAYOUT & SIZING. SHOP DRAWINGS AND CALCULATIONS ARE TO BE SIGNED & SEALED BY A PROFESSIONAL ENGINEER, AND REVIEWED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION. ALL WORK IS TO BE DONE IN ACCORDANCE WITH ALL STATE, LOCAL, GOVERNING AND APPLICABLE CODES.

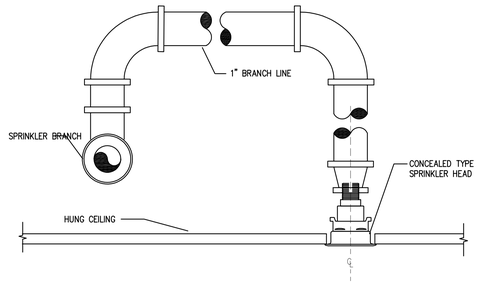
SPRINKLER NOTES

1. THIS CONTRACTOR SHALL PROVIDE FIRE PROTECTION THROUGHOUT THE ENTIRE SPACE WITHIN THE SCOPE OF WORK AS REQUIRED BY THE LOCAL CODES, LOCAL FIRE DEPARTMENT REGULATIONS, BUILDING MANAGEMENT REQUIREMENTS AND NFPA 13 FOR THE DURATION OF THE PROJECT. ANY TEMPORARY FIRE PROTECTION SHALL BE REMOVED UPON ACTIVATION OF PERMANENT FIRE PROTECTION SYSTEM.
2. ALL SPRINKLER WORK, EQUIPMENT, AND MATERIALS FURNISHED UNDER THE FIRE PROTECTION SCOPE OF WORK SHALL BE IN COMPLETE ACCORDANCE WITH THE NEW YORK STATE INTERNATIONAL BUILDING CODE 2015 AS AMENDED BY THE UNIFORM CODE 2017 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
3. ANY AND ALL PERMITS REQUIRED FOR INSTALLATION OF ANY MATERIAL SHALL BE OBTAINED AS PART OF THE WORK INCLUDING ALL FEES OR EXPENSES INCURRED.
4. ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE. REFER TO SPECIFICATIONS AND SPRINKLER HEAD SCHEDULE FOR SPRINKLER HEAD INFORMATION.
5. SPRINKLER HEADS SHALL BE CENTERED IN TILE AND COORDINATED WITH ALL CEILING ELEMENTS SUCH AS LIGHTS AND DIFFUSERS. CONTRACTOR SHALL ALLOW FOR ALL REQUIRED FITTINGS TO ACHIEVE THIS AND INCLUDE THIS IN THEIR CONTRACT PRICE.
6. CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH NEW WORK OF OTHER TRADES AND EXISTING CONDITIONS. ROUTING OF SPRINKLER MAINS, BRANCHES AND HEADS SHALL BE THOROUGHLY COORDINATED WITH OTHER TRADES AND BUILDING STRUCTURE PRIOR TO SUBMISSION OF COORDINATED SHOP DRAWINGS. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND SUBMITTING COORDINATION DRAWINGS FOR APPROVAL TO AUTHORITY HAVING JURISDICTION.
7. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING, PIPE SIZES, POINTS OF CONNECTIONS FIXTURES AND EQUIPMENT PRIOR TO COMMENCEMENT OF WORK.
8. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL, STORAGE AND CUTTING OF ANY CEILING TILES TO ACCOMMODATE SPRINKLER HEADS NEW AND RELOCATED. THE CONTRACTOR SHALL ALSO REINSTALL THE CEILING TILES AND REPLACE ANY DAMAGED TILES AS IT RELATES TO THE FIRE PROTECTION SCOPE OF WORK.
9. MINIMUM PIPE SIZE TO ANY SPRINKLER HEAD SHALL BE 1 INCH.

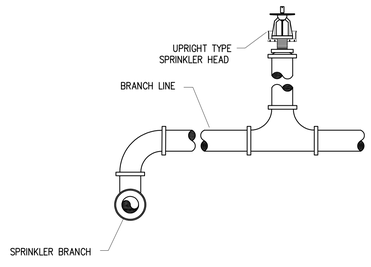


NOTES:
1. CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1"
2. GENERAL PURPOSE HANGERS MAY BE USED ON 1" SPRINKLER PIPING ONLY.

TYPICAL HANGING DETAIL
NOT TO SCALE



CONCEALED SPRINKLER HEAD INSTALLATION



UPRIGHT SPRINKLER HEAD INSTALLATION
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1. GENERAL:

1.1. ALL PROVISIONS IN THE GENERAL SPECIFICATIONS ABOVE APPLY TO THE FIRE PROTECTION SPECIFICATIONS.

1.2. THE FIRE PROTECTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE AND NFPA INSTALLATION OF SPRINKLER SYSTEMS. THE ENGINEERING PLANS PROVIDED ARE PRELIMINARY PLANS AS DEFINED IN NFPA PROVIDED FOR SCOPE AND REVIEW BY THE AUTHORITY HAVING JURISDICTION. WORKING PLANS AND HYDRAULIC CALCULATIONS IN ACCORDANCE WITH NFPA SHALL BE DESIGNED & PROVIDED BY THE SPRINKLER CONTRACTOR, SIGNED AND SEALED BY A P.E. LICENSED IN THE STATE HAVING JURISDICTION.

1.3. THE FIRE PROTECTION DRAWINGS ARE DIAGRAMMATIC, AND THEREFORE DO NOT RELIEVE THIS CONTRACTOR FROM PROVIDING ALL WORK AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION ACCORDING TO THEIR REQUIREMENTS. THE NUMBER AND SPACING OF SPRINKLER HEADS, SPACING AND SIZE OF A PIPE LOCATION AND NUMBER OF VALVES, METHOD OF DRAWING LINES, ALARM VALVES, AND ALL OTHER WORK AND DETAILS SHALL BE AS REQUIRED BY THE OWNER'S UNDERWRITES, NFPA, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.

1.4. THE SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF TILES, GRIDS AND/OR ALIGNED WITH LIGHTS, DIFFUSERS, ETC., AS INDICATED ON ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS. AT THE COMPLETION OF THE INSTALLATION, IF ANY HEADS ARE FOUND TO EXCEED THE ABOVE–MENTIONED TOLERANCE, SAME SHALL BE REMOVED AND REINSTALLED BY THIS CONTRACTOR.

1.5. THE ARRANGEMENT, POSITIONS AND CONNECTIONS OF PIPE, DRAINS, VALVES, ETC., SHOWN ON THE DRAWINGS SHALL BE TAKEN AS A CLOSE APPROXIMATION AND WHILE THEY SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, THE RIGHT IS RESERVED BY THE OWNER TO CHANGE LOCATIONS, TO ACCOMMODATE ANY CONDITIONS WHICH MAY ARISE DURING THE PROGRESS OF THE WORK, WITHOUT ADDITIONAL COMPENSATION TO THIS CONTRACTOR FOR SUCH CHANGES, PROVIDED THAT THE CHANGES ARE REQUESTED PRIOR TO THE INSTALLATION OF THIS CONTRACTOR'S WORK. THE RESPONSIBILITY FOR ACCURATELY LAYING OUT THE WORK RESTS WITH THIS CONTRACTOR. SHOULD IT BE FOUND THAT ANY OF HIS WORK IS SO LAID OUT THAT INTERFERENCE WILL OCCUR, HE SHALL SO REPORT THAT TO THE OWNER.

1.6. PROVIDE ALL SPRINKLER HEADS IN STRICT ACCORDANCE WITH APPROVED SHOP DRAWINGS. THE ARCHITECT AND OWNER RESERVE THE RIGHT TO REJECT ANY AND ALL WORK NOT IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.

1.7. ALL PIPING AND EQUIPMENT SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE IN EACH APPLICATION. WHERE OVERHEAD CONDITIONS DOES NOT PERMIT THE FASTENING OF HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND APPROVED. DO NOT USE EXPANSION SHIELDS.

1.8. NO FIRE PROTECTION WORK SHALL BE HUNG FROM DUCTWORK OR THE HANGERS OF OTHER TRADES.

1.9. BECOME THOROUGHLY FAMILIAR WITH ACTUAL BUILDING SYSTEMS, WHICH ARE TO BE CHANGED, ALTERED, OR TO WHICH NEW CONNECTIONS ARE TO BE MADE. VERIFY ALL EXISTING CONDITIONS INCLUDING PIPE SIZE, LOCATION, AND ELEVATION.

1.10. THE INTENT OF THE WORK IS INDICATED ON THE DRAWINGS AND DESCRIBED HEREINAFTER. NO CONSIDERATION WILL BE GRANTED FOR REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR REGARDING ACTUAL PHYSICAL CONDITIONS AT THE SITE.

1.11. COORDINATE WORK WITH ALL TRADES AND EXISTING CONDITIONS OF THE JOB SITE AND MAINTAIN REQUIRED CEILING HEIGHTS AND SPACE CONDITIONS.

1.12. ALL EQUIPMENT SHALL BE ASBESTOS FREE AND INDICATED AS SUCH.

1.13. DUE TO THE NATURE OF ALTERATION WORK WHICH REQUIRES THE BUILDING OR FACILITY TO BE KEPT OPERABLE AT ALL TIMES, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL ACTIVITIES, CONNECTIONS, SHUT DOWNS AND THE LIKE WITH THE GENERAL CONTRACTOR, TENANT, AND BUILDING OWNER. ANY INTERRUPTIONS OF BUILDING SERVICES INCLUDING PHYSICAL ACCESS TO ADJACENT SPACES MUST BE COORDINATED WITH THE BUILDING OWNER. ALL TEMPORARY CONNECTIONS OR AFTER–HOURS WORK SHALL BE SO ARRANGED WITH ALL PARTIES INVOLVED.

1.14. THIS TRADE MUST PERFORM WORK IN OCCUPIED AREAS, IT SHALL MAKE ARRANGEMENTS WITH THE GENERAL CONTRACTOR AND THE OWNER AS TO THE TIME AND METHOD IN WHICH THIS WORK SHALL BE PERFORMED. ARRANGE FOR ALL ADJACENT AREAS TO BE PROPERLY PROTECTED AGAINST DAMAGE, DEBRIS, DIRT AND DUST.

1.15. PROVIDE AS PART OF NEW WORK:

1.15.1. HANGERS AND SUPPORTS FOR PIPING

1.15.2. SCAFFOLDING, RIGGING, AND HOISTING

1.15.3. RUBBISH REMOVAL AND CLEANING

1.15.4. CUTTING AND PATCHING

1.15.5. SLEEVES, OPENINGS AND THE CORE DRILLING OF EXISTING SLABS

1.15.6. CAULKING, FIREPROOFING, AND THE PACKING AND FILLING OF SLEEVES AND OPENINGS

1.15.7. SHOP DRAWINGS AND "AS BUILT" DRAWINGS

1.15.8. OPERATING AND MAINTENANCE INSTRUCTIONS

1.15.9. OBTAINING ALL REQUIRED PERMITS, APPROVALS, ACCEPTANCE, FILING AND INSPECTION CERTIFICATES

1.15.10. GUARANTEE ALL WORK, LABOR AND MATERIALS FOR ONE YEAR FOLLOWING DATE OF SUBSTANTIAL COMPLETION

1.15.11. VERIFYING EXISTING CONDITIONS AT THE PROJECT SITE

1.15.12. SPARE PARTS AND TOOLS

1.15.13. TESTS: OPERATION, PERFORMANCE AND CODE–REQUIRED TESTS

1.15.14. PROTECTION OF WORK AND ADJACENT SPACES DURING CONSTRUCTION

1.15.15. COORDINATION WITH OTHER TRADES

1.15.16. IDENTIFICATION: VALVE TAGS, VALVE TAG SCHEDULES, AND PIPING IDENTIFICATION

2. SCOPE OF WORK:

2.1 PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORT AND SUPERVISION FOR THE FURNISHING AND INSTALLING OF ALL THE FIRE PROTECTION WORK, AND ALL RELATED WORK, COMPLETE, IN ACCORDANCE WITH THE CONTRACT DOCUMENT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

2.1.1. PROVIDE A COMPLETE AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH THE OWNERS UNDERWRITER'S, NFPA, AND THE RULES OF ALL AUTHORITIES HAVING JURISDICTION.

2.1.2. SPRINKLER SYSTEMS SHALL INCLUDE CONNECTIONS TO THE SPRINKLER PIPING AND PROVISION OF A COMBINATION SHUTOFF VALVE AND PRESSURE REDUCING VALVE, FLOW SWITCH AND A DRAIN/TEST CONNECTION CONNECTED TO A VERTICAL DRAIN RISER SERVING THE FLOOR CONTROL VALVE.

2.1.3. THE SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY CALCULATED TO THE FOLLOWING PARAMETERS:

2.1.3.1. OFFICE AREAS AND THE LIKE: LIGHT HAZARD, 0.10 GPM/SQ FT. OVER 1,500 SQ.FT.

2.1.3.2. STORAGE, SHOWROOM, MECHANICAL EQUIPMENT ROOMS: ORDINARY HAZARD, 0.15 GPM/SQ.FT. OVER 1,500 SQ.FT.

2.1.4. INCLUDE ALL PIPE, FITTINGS, BRANCHES, VALVES, ALARM VALVES, LADDERS, SIGNS, PROTECTIVE PAINTING, ALARM SWITCHES, TEST CONNECTION, SPRINKLER HEADS, DRAINS, TESTS, ALARM PANELS, ETC., IN FULL ACCORDANCE WITH UNDERWRITERS' AND MUNICIPAL REQUIREMENTS.

2.1.5. DO ANY CUTTING REQUIRED FOR THE PASSAGE OR INSTALLATION OF PIPES, SUPPORTS, AND THE LIKE. IN GENERAL, DEMOLITION OF EXISTING WALLS AND CEILINGS WILL BE DONE BY OTHERS.

2.1.6. ALL PATCHING WILL BE DONE BY OTHERS. THE EXPENSE OF CUTTING AND RESTORING SURFACES TO THEIR ORIGINAL CONDITION WHEN CAUSED BY THIS TRADE'S FAILURE TO PERFORM ITS PRELIMINARY WORK, SHALL BE BORNED BY THIS TRADE.

3. DEMOLITION, CONNECTIONS TO EXISTING WORK, AND ALTERATION:

3.1. REFER TO THE CONTRACT DOCUMENTS FOR THE EXTENT OF SYSTEMS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY AND INCLUDE IN THE BID ALL REMOVALS REQUIRED FOR THE COMPLETION OF WORK.

3.2. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING SYSTEMS TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. SUBMIT TO OWNER AND ARCHITECT FOR APPROVAL, DATE AND SCHEDULE OF ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS THEY WILL NOT INTERFERE WITH REGULAR OPERATION OF EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL OF THE SAME HAS BEEN OBTAINED FROM OWNER.

3.3. MAKE TEMPORARY CONNECTIONS AS REQUIRED BETWEEN NEW AND EXISTING WORK TO INSURE CONTINUOUS OPERATION OF THE FACILITY. ALL COSTS ASSOCIATED WITH AND RESULTING FROM TEMPORARY CONNECTIONS SHALL BE BORNE BY THIS CONTRACTOR.

3.4. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND APPROVED MANNER. RESTORE ANY DISTURBED EXISTING WORK TO ITS ORIGINAL CONDITION.

3.5. PROVIDE CAPS, PLUGS, AND OUTLETS AS REQUIRED ON EXISTING PIPING.

3.6. REMOVE AND / OR RELOCATE EXISTING AND OTHER WORK AS REQUIRED TO COMPLETE FINAL INSTALLATION.

3.7. ANY PIPING RENDERED DEFUNCT BY THIS ALTERATION WORK SHALL BE REMOVED. ALERT THE ARCHITECT AND GENERAL CONTRACTOR OF ANY "DISCOVERED" ABANDONED PIPING. IN GENERAL, ALL ABANDONED, INACTIVE, OR SUPERFLUOUS PIPING, INCLUDING HANGERS AND CLAMPS SHALL BE REMOVED.

3.8. ALL NEW AND EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK.

4. SLEEVES:

4.1. PROVIDE SLEEVES FOR ALL PIPES PASSING THROUGH FLOORS, WALLS AND CONCRETE, OR CONCRETE FIREPROOFED BEAMS. SLEEVES IN CONCRETE BEAMS, THROUGH CONCRETE WALLS, AND EXPOSED PIPES PENETRATING FLOORS: SCHEDULE 40 STEEL PIPE. SLEEVES WITHIN FURRED OUT ENCLOSURES IN FLOORS, THROUGH PARTITIONS, STEEL BEAMS AND WALLS: 18 GAUGE GALVANIZED SHEET METAL.

4.2. PROVIDE SLEEVES WITH AN I.D. AT LEAST 1/2 IN. GREATER THAN OUTSIDE OF PIPE SERVED, INCLUDING PIPE INSULATION WHICH MUST BE CONTINUOUS THROUGH SLEEVE. FINISH SLEEVES FLUSH WITH UNDERSIDE OF SLAB AND 1 IN. ABOVE FINISHED FLOOR.

4.3. WHERE PIPING PENETRATES WALLS (OTHER THAN FOUNDATION WALLS), PARTITIONS, FLOOR SLABS, ETC., SPACE BETWEEN PIPING AND SLEEVE SHALL BE PACKED WITH "3M" M.E.A. APPROVED FIRE–RATED MATERIAL. WHERE SLEEVES PASS THROUGH FIRE–RATED CONSTRUCTION, FIT ESCUTCHEON ON BOTH SIDES OF CONSTRUCTION.

4.4. PROVIDE WATERPROOF TYPE PIPE SLEEVES, ZURN Z–197 WITH GALVANIZED SCHEDULE 40 PIPE EXTENSIONS WHERE PENETRATING MEMBRANE WATERPROOFED FLOORS.

5. CODES, PERMITS, AND INSPECTIONS:

5.1. INSTALL ALL WORK IN FULL ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION OVER THESE MATTERS, AS WELL AS WITH ANY REQUIREMENTS OF NFPA, UL, FM, BSA, MEA, ETC, AND OTHER APPLICABLE CODES.

5.2. SECURE AND PAY FOR ALL NECESSARY APPROVALS, PERMITS, INSPECTIONS, CARTING, LEGAL DUMPING, ETC., AND DELIVER THE OFFICIAL RECORDS OF THE GRANTING OF PERMITS TO THE OWNER.

5.3. PAY ALL FILING FEES TO OBTAIN RELEASE OF APPROVED PLANS.

5.4. PAY ROYALTIES OR FEES REQUIRED IN CONNECTION WITH THE USE OF PATENTED DEVICES OR SYSTEMS, AND SAVE THE OWNER, THE ARCHITECT, THE CONSULTING ENGINEER, AND THE TENANT HARMLESS FROM ANY CLAIMS OR LAWSUITS ARISING FROM SUCH USE, AND INDEMNIFY EACH THEREOF AGAINST ATTORNEYS' FEES IN CONNECTION THEREWITH.

5.5. PROVIDE ALL SIGNS REQUIRED BY THE MUNICIPAL AUTHORITIES.

7. IDENTIFICATION OF SYSTEMS:

7.1. PROVIDE A TAG FOR EACH VALVE, THREE INCH DIAMETER BRASS OR ALUMINUM TAGS STAMPED WITH DESIGNATING NUMBERS TWO INCHES HIGH, PAINTED WITH WHITE ENAMEL; BACKGROUND PAINTED WITH RED ENAMEL. ATTACH TAG TO VALVE HANDLE OR SPINDLE WITH BRASS CHAIN.

8. HANGERS, INSERTS, AND PIPE SUPPORTS:

8.1. PROVIDE SUITABLE AND SUBSTANTIAL HANGERS AND SUPPORTS FOR ALL PIPING.

8.2. SPACE SUPPORTS SO THAT THERE IS AT LEAST ONE HANGER FOR EACH LENGTH OF PIPE, WITH ONE HANGER WITHIN 30 INCHES OF THE END SPRINKLER HEAD. WHERE THIS WOULD REQUIRE HANGERS CLOSER THAN 6 FEET 0 INCHES APART, HANGER SPACING MAY BE INCREASED TO 10 FEET 0 INCHES BETWEEN HANGERS FOR PIPES UP TO AND INCLUDING 2 INCH IPS AND 12 FEET 0 INCHES BETWEEN HANGERS FOR PIPES 2–1/2 INCH IPS AND LARGER. WHERE POSSIBLE, FASTEN HANGER RODS TO STRUCTURAL STEEL BEAMS.

8.3. SUPPORT HANGERS FROM APPROVED CONCRETE INSERTS WHERE CONCRETE SLABS EXIST. IF ANY PIPE HAS TO BE HUNG IN A SPACE WHERE NO INSERTS HAVE BEEN PROVIDE, DRILL A HOLE FROM BELOW THROUGH STONE CONCRETE SLABS, AND PROVIDE A ROD AND HANGER ATTACHED TO AN APPROVED FISHPLATE, OR FOR PIPES SMALLER THAN 3 INCH IPS, INSTALL A PHILLIPS RED HEAD STUD CONCRETE ANCHOR OR OTHER.

8.4. DO NOT HANG PIPING FROM DUCTWORK OR PIPING.

8.5. THIS CONTRACTOR MAY COORDINATE WITH THE OTHER CONTRACTORS TO USE COMMON MEANS OF SUPPORT. SUBMIT FOR APPROVAL ALL PERTINENT DESIGN DATA RELATING TO THE SUPPORT, AS WELL AS VERIFICATION OF THE RESPONSIBILITY FOR THE SUPPORT.

9. VALVES:

9.1 ALL WATER CONTROL VALVES WITHING THE BUILDING SHALL BE MILWAUKEE "GATE 2885–FP" OS&Y WEDGE GATE VALVES WITH PAINTED IRON WHEEL HANDLES, SHALL HAVE THE NAME OF THE MANUFACTURER AND WORKING PRESSURE CAST OR STAMPED THEREON.

9.2 VALVES CONTROLLING SPRINKLER BUTTERFLY, BALL OR OS&Y GATE VALVES.

9.2.1. BALL VALVES SHALL BE MILWAUKEE "BA–100" OR APPROVED ALL BRASS OR BRONZE CONSTRUCTION WITH REPLACEABLE TEFLON SEAT RING, TWO–PIECE UNION OR THREE–PIECE BOLTED CONSTRUCTION, WITH STUFFING BOX; WORKING PRESSURE SHALL NOT BE LESS THAN 175 PSI AT 175°F. AND SHALL CONFORM WITH ANSI STANDARDS. ALL VALVES SHALL BE STANDARD PORT UNLESS FULL–PORTED VALVES ARE INDICATED ON PLANS. THREADED VALVES USED IN BRAZED OR SOLDERED PIPING SYSTEMS SHALL BE FITTED WITH ADAPTERS. WHEN BRAZED OR SOLDERED END VALVES ARE USED, TEFLON SEATS MUST BE REMOVED PRIOR TO SOLDERING OR BRAZING.

9.2.2. BUTTERFLY VALVES SHALL BE MILWAUKEE BUTTERBALL "BB–SC" SERIES SLOW CLOSING INDICATING WAFER TYPE BUTTERFLY VALVE WITH OR WITHOUT SUPERVISORY TAMPER SWITCH ASSEMBLY (USE SCREWED LUG TYPE WHEN VALVE HAS TO PERFORM DEAD–END SERVICE): CAST IRON BODY TO 200 PSI WWP, DUCTILE IRON FOR HIGHER PRESSURES, INSTALLED BETWEEN FLANGES OF SIMILAR RATING. ACTUATORS SHALL BE MANUAL GEAR TYPE WITH HANDWHEEL; AND VALVE SHALL INCORPORATE A VISIBLE INDICATION OF OPEN OR CLOSED POSITION.

9.2.3. PRESSURE REGULATING VALVES (PRV) WHERE INSTALLED SHALL BE COMBINATION SHUTOFF AND PRESSURE REGULATING TYPE 400 PSI WWP BRONZE BODY WITH BALANCED PISTON. VALVE SHALL BE ZURN SERIES Z3004 "PRESSURE–TRU" OR POTTER ROEMER SERIES PRV–400–2.5 "REG–U–MATIC" OR AS APPROVED. PROVIDE PRESSURE GAUGE DOWNSTREAM OF PRV.

9.2.4. PROVIDE LADDERS TO ALL VALVES LOCATED MORE THAN 7 FEET 0 INCHES ABOVE FLOOR.

10. SPRINKLER HEADS:

10.1. PROVIDE AUTOMATIC SPRINKLER HEADS OF FINISH AS APPROVED BY THE OWNER, THE MUNICIPAL AUTHORITIES AND BY THE INSURING AGENCIES HAVING JURISDICTION. COVER PLATE FLUSH TYPE SPRINKLER HEADS SHALL BE RELIABLE MODEL "G4A" 5/16 INCH PLATE DIAMETER FINISH AS SELECTED BY OWNER; ALL OTHER SPRINKLER HEADS SHALL BE RELIABLE MODEL "G" AUTOMATIC WATER SPRAY HEADS, OR AS APPROVED.

10.2. ALL HEADS SHALL BE "STANDARD" 1/2 INCH DIAMETER ORIFICE, UPRIGHT, PENDENT, FLUSH TYPE PENDENT, COVER PLATE FLUSH TYPE, OR DRY TYPE PENDENT, TO FIT THE CONDITIONS IN WHICH THEY ARE INSTALLED.

10.3. ALL HEADS SHALL BE OF THE PROPER TEMPERATURE RATING FOR THE LOCATIONS IN WHICH THEY ARE INSTALLED. IN GENERAL, TEMPERATURE RATING SHALL BE 165°F., EXCEPT FOR MECHANICAL EQUIPMENT ROOMS, WHICH SHALL BE 286°F.

11. SPRINKLER SYSTEM APPURTENANCES:

11.1. PROVIDE THE SPRINKLER SYSTEM APPURTENANCES REQUIRED TO PROVIDE FIRE PROTECTION FOR THE RENOVATED AREA.

11.2. DETECTOR CHECK VALVE SHALL BE WATTS MODEL No. 709DCDA.

12. ALARM DEVICES:

12.1. ALL INTERCONNECTING ELECTRICAL WIRING WILL BE FURNISHED UNDER THE SPECIFICATIONS OF OTHER TRADES. PROVIDE ALL SWITCHES DIRECTLY CONNECTED TO EQUIPMENT PROVIDED BY THIS TRADE, REQUIRED FOR THE TRANSMISSION OF ALARM IMPULSES. SWITCHES SHALL BE OPEN OR CLOSED TYPE TO CONFORM WITH THE ALARM SYSTEM TO WHICH THEY ARE CONNECTED.

12.2. PROVIDE TAMPER SWITCHES FOR THE FOLLOWING VALVES:

12.2.1. ALL VALVES CONTROLLING THE FLOW OF WATER TO SPRINKLER HEADS, INCLUDING FLOOR CONTROL VALVES, AND METER VALVES, ETC.

12.2.2. SWITCHES SHALL GIVE AN ALARM IF THE VALVES SERVED ARE CLOSED, THE SWITCHES ARE REMOVED, OR IF THE COVER IS OPENED. VALVE STEMS SHALL BE NOTCHED TO TAKE THE SWITCHES. SWITCHES SHALL BE ACME FIRE ALARM CO. TYPE OSYS–U, OR AS APPROVED.

12.3. PROVIDE THE FOLLOWING FLOW ALARM DEVICES:

12.3.1. RETARD CHAMBER AND CLOSED CIRCUIT ELECTRIC SWITCH FOR EACH ALARM VALVE.

12.3.2. PADDLE TYPE WATER FLOW DETECTORS, CLOSED CIRCUIT TYPE WITH AN ADJUSTABLE RETARD OR TIME DELAY TO PREVENT FALSE ALARMS DUE TO WATER PRESSURE SURGES. SWITCHES SHALL BE ACME FIRE ALARM CO., TYPE WFD, OR AS APPROVED.

13. SPRINKLER DRAINS:

13.1. PROVIDE ALL NECESSARY DRAIN VALVES, CAPPED NIPPLES, AUXILIARY PIPING, ETC., AS REQUIRED TO DRAIN TRAPPED PORTIONS OF THE SYSTEM.

13.2. INSPECTORS TEST CONNECTIONS SHALL BE PROVIDED WITH A SIGHT CONNECTION AND PIPED TO WASTE.

13.3. MAIN DRAIN AND TEST CONNECTION SHALL BE PIPED TO WASTE.

13.4. PROVIDE ALL PIPING REQUIRED TO SPILL THE DRAINS AND TEST CONNECTIONS TO THE FLOOR, FUNNEL OR OTHER DRAINAGE CONNECTIONS PROVIDED UNDER THE PLUMBING CONTRACT, OR ARRANGE WITH THE PLUMBING CONTRACTOR TO PROVIDE ADDITIONAL DRAINAGE FACILITIES, IN WHICH CASE PAY ALL CHARGES RELATED TO THE ADDITIONAL PLUMBING WORK.

14. ACCESS DOORS FOR FINISHED CONSTRUCTION:

14.1. PROVIDE ACCESS DOORS AS REQUIRED FOR ALL CONCEALED VALVES, CLEANOUTS AND OTHER ELEMENTS REQUIRING ACCESS ABOVE CEILINGS OR BEHIND WALLS OR AS INDICATED ON THE DRAWINGS. THE INSTALLATION OF ALL DOORS WILL BE PERFORMED UNDER THE SPECIFICATIONS OF ANOTHER TRADE. COORDINATE THE WORK AND ASSUME RESPONSIBILITY FOR THE ACCESSIBILITY OF ALL VALVES.

14.2. USE THE FOLLOWING TYPE DOORS AS MANUFACTURED BY KARP ASSOCIATES, INC.

14.2.1. IN PLASTER CEILINGS, KARP DSC 210–PL.

14.2.2. IN 3 HOUR MASONRY ENCLOSURES (PIPE OR DUCT SHAFTS), KARP DSC–211–FRT WITH 1–1/2 INCH VERMICULITE PLASTER FILL. METAL LATH LINING FOR PLASTER SHALL BE SELF–FURRING TYPE, TACK WELDED TO PAN.

14.2.3. IN NON–RATED MASONRY, KARP DSC–211.

14.2.4. IN DRY WALL CONSTRUCTION, KARP DSC–214M.

14.3. SIZE ACCESS DOORS AS INDICATED ON THE DRAWINGS, OR AS SPECIFIED, BUT NOT SMALLER THAN 16 INCHES BY 16 INCHES. WHERE MORE THAN TWO VALVES ARE SERVED BY A DOOR AND THE BONNETS ARE WITHIN 12 INCHES OF THE FACE OF THE DOOR, THE SIZE OF THE DOOR SHALL BE INCREASED SO THAT ALL PORTIONS OF THE VALVES ARE WITHIN THE AREA DEFINED BY THE OPENING IN THE DOOR. WHERE THE BONNETS OF THE VALVES ARE MORE THAN 12 INCHES FROM THE FACE OF THE DOOR, THE DOORS SHALL HAVE A MINIMUM OF 20 INCH X 20 INCH CLEAR OPENING.

14.4. FURNISH BUTTONS OR TABS TO CEILING CONTRACTOR FOR SETTING, AS APPROVED BY ARCHITECT, TO INDICATE LOCATION OF VALVES, CLEANOUTS OR OTHER EQUIPMENT LOCATED ABOVE REMOVABLE TYPE CEILINGS WHERE ACCESS DOORS ARE NOT FURNISHED.

15. TESTS:

15.1. TEST THE SYSTEMS BEFORE ANY PAINT IS APPLIED.

15.2. TEST ALL SYSTEMS IN FULL ACCORDANCE WITH APPLICABLE UNDERWRITERS' AND MUNICIPAL REQUIREMENTS, BUT IN NO CASE SHALL THE SPRINKLER SYSTEM BE TESTED AT LESS THAN 200 LBS. HYDROSTATIC PRESSURE. APPLY THE TEST FOR A MINIMUM OF TWO (2) CONSECUTIVE HOURS WITH NO LOSS IN PRESSURE. PRIOR TO APPLYING THE HYDROSTATIC TEST ON A DRY PIPE SYSTEM, IT SHALL BE TESTED WITH 40 PSIG COMPRESSED AIR FOR A PERIOD OF 24 HOURS WITH A PRESSURE LOSS NOT TO EXCEED 1½" PSIG.

15.3. FURNISH AND PAY FOR ALL DEVICES, MATERIALS, SUPPLIES, LABOR AND POWER REQUIRED IN CONNECTION WITH TESTS. MAKE ALL TESTS IN THE PRESENCE AND TO THE SATISFACTION OF THE ENGINEER, INSURANCE UNDERWRITERS AND CITY INSPECTORS HAVING JURISDICTION.

15.4. REPAIR, OR IF REQUIRED BY THE ENGINEER REPLACE, DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE OWNER. REPEAT TESTS AS DIRECTED, UNTIL ALL WORK IS PROVEN SATISFACTORY.

15.5. RESTORE TO ITS ORIGINAL CONDITION ANY WORK DAMAGED OR DISTURBED BY TESTS, ENGAGING THE ORIGINAL TRADES TO DO THE WORK OF RESTORATION.

15.6. NOTIFY THE ENGINEER AND INSPECTORS HAVING JURISDICTION AT LEAST 48 HOURS IN ADVANCE OF MAKING THE REQUIRED TESTS, SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS THE TESTS.

15.7. TEST EQUIPMENT IN SERVICE AND DEMONSTRATE THAT THE EQUIPMENT PERFORMS THE WORK INTENDED FOR IT AND THAT IT COMPLIES WITH THE REQUIREMENTS OF THESE SPECIFICATIONS FOR SUCH EQUIPMENT.

16. GUARANTEES AND CERTIFICATIONS:

16.1. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF OTHER TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEE PERIODS. THE DURATION OF GUARANTEE PERIODS SHALL BE ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

17. ENGINEER'S REVIEW, SHOP DRAWINGS, AND CERTIFICATIONS:

17.1. PREPARE AND SUBMIT DETAILED SHOP DRAWINGS. THE ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THIS TRADE OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THIS TRADE OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH HAVE BEEN OMITTED FROM THE SHOP DRAWING SUBMITTALS.

17.2. NO PART OF THE WORK SHALL BE STARTED IN THE SHOP OR IN THE FIELD UNTIL THE ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT PORTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP DRAWINGS. PRIOR TO ASSEMBLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED: SCALED FLOOR PLAN AND CEILING DRAWINGS WITH DIMENSIONED LOCATIONS OF ALL PIPING AND EQUIPMENT INCLUDING SIZES, ELEVATIONS, AND APPROPRIATE INDICATION OF COORDINATION BETWEEN STRUCTURAL AND MECHANICAL ELEMENTS. MANUFACTURER'S CATALOGUE CUTS OF ALL EQUIPMENT TO BE USED. SAMPLES OF ALL DEVICES, WHICH WILL BE CLEARLY VISIBLE TO VIEW. ALL SUBMITTALS SHALL BE PROPERLY IDENTIFIED WITH PROJECT NAME, ARCHITECT, ENGINEER, AND SUBCONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER. PROVIDE CLEAR DETAILED REPRODUCIBLE "AS–BUILT" DRAWINGS UPON COMPLETION OF WORK AND PROVIDE SETS OF THE SAME TO LANDLORD AS DIRECTED.

17.3. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES WITH REASONABLE PROMPTNESS AND WILL RETURN THEM TO THE CONTRACTOR STAMPED TO INDICATE THE APPROPRIATE ACTION AS FOLLOWS:

17.3.1. "NO EXCEPTIONS TAKEN" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS.

17.3.2. "MAKE CORRECTIONS NOTED" MEANS THAT FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED PROVIDING THE SUBMITTAL COMPLIES WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND THE CONTRACT DOCUMENTS. A COPY OF THE CORRECTED SUBMITTAL SHALL BE RETURNED TO THE ARCHITECT AND/OR ENGINEER FOR RECORD. IF, FOR ANY REASON, THE CONTRACTOR CANNOT COMPLY WITH THE NOTATIONS, THE CONTRACTOR SHALL RESUBMIT AS DESCRIBED FOR SUBMITTALS STAMPED "REVISE AND RESUBMIT".

17.3.3. "REVISE AND RESUBMIT" MEANS THAT THE CONTRACTOR MUST COMPLY WITH THE ARCHITECT'S AND/OR ENGINEER'S NOTATIONS AND RESUBMIT BEFORE FABRICATION, MANUFACTURE OR CONSTRUCTION MAY PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

17.3.4. "REJECTED" MEANS THAT THE SUBMITTAL DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS AND THAT FABRICATION, MANUFACTURER CONSTRUCTION SHALL NOT PROCEED. SUBMITTALS STAMPED IN THIS MANNER ARE NOT PERMITTED ON THE JOB SITE.

JAM ARCH

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ARMEN KHACHATURIAN, P.E. – NY LICENSE #062261–1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:
LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:
BLOCK: 1, LOT: 91

OWNER
LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:
FIRE PROTECTION SPECIFICATIONS

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
DRAWN BY: ML/WC/MB
CHECKED BY: AK

SHEET NO.
FP-002

DRAWING NOTES

1. SPRINKLER CONTRACTOR TO COORDINATE SPRINKLER HEAD LOCATIONS, PIPING AND OTHER FIRE PROTECTION EQUIPMENT WITH HVAC EQUIPMENT, LIGHTING AND OTHER CEILING STRUCTURE.
2. ANY EXISTING FIRE PROTECTION FEED MAIN OR CROSS MAIN IN STREET TO BE COORDINATED WITH LANDLORD, VERIFY EXISTING PIPE SIZE BEFORE TIE-IN.
3. FIRE PROOFING TO BE COORDINATE WITH EACH FLOOR PENETRATION. NON COMBUSTIBLE CONCEALED CEILING SPACE NO HEADS ARE REQUIRED, FIELD VERIFY & PROVIDE HEADS IF IT IS REQUIRED AS PER NFPA STANDARD AND FIELD CONDITIONS.
4. ALL SPRINKLER HEADS IN AREA OF WORK TO BE FULLY COORDINATED WITH ALL NEW CEILING ELEMENTS IN ADDITION TO WORK FROM OTHER TRADES.
5. NEW BRANCHES SHALL BE EXTENDED FROM THE NEW 4 INCH SPRINKLER MAIN AS NEEDED TO PROVIDE COMPLETE SPRINKLER COVERAGE THROUGHOUT.
6. CONTRACTOR TO PROVIDE SPRINKLER HYDRAULIC CALCULATIONS BASED ON HYDRANT FLOW TEST NO OLDER THAN ONE YEAR IN ADDITION TO SHOP DRAWINGS FOR REVIEW AND APPROVAL.

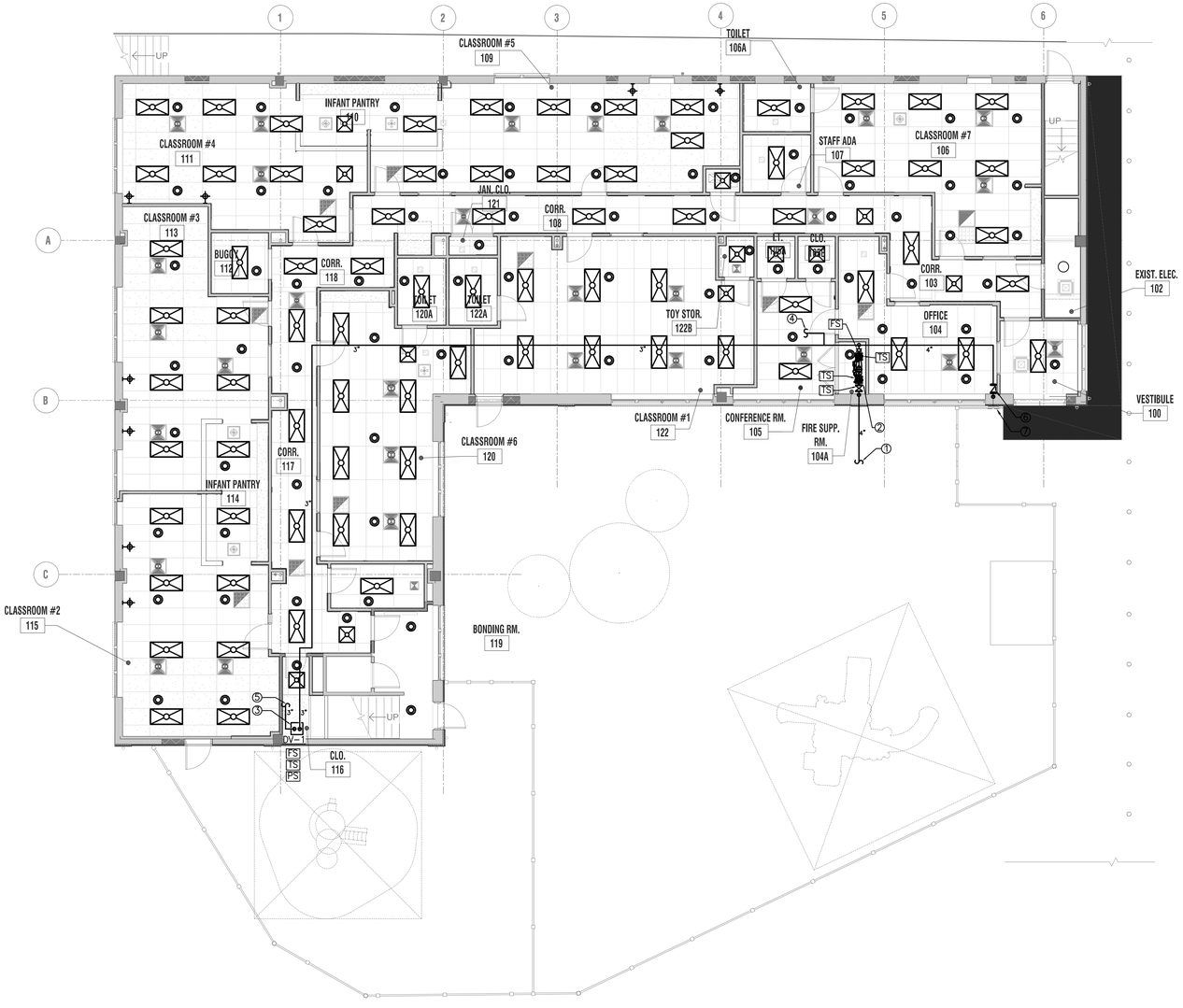
(#) FIRE PROTECTION DESIGN KEY NOTES:

1. 4" FIRE WATER SUPPLY FROM SITE. BACKFLOW PREVENTION DEVICE LOCATED AT EXTERIOR, BY CIVIL.
2. 4" DOUBLE-CHECK DETECTOR ASSEMBLY FOR SPRINKLER SUPPLY. PROVIDE WET SPRINKLER RISER CHECK VALVE ASSEMBLY FOR WET SPRINKLER SYSTEM THROUGHOUT.
3. PROVIDE DRY PIPE VALVE ASSEMBLY FOR CONCEALED CEILING SPACE SPRINKLER SYSTEM BELOW THE ROOF.
4. 4" SUPPLY TO SERVE WET SPRINKLERS THROUGHOUT.
5. 4" DRY SPRINKLER SUPPLY TO SERVE CONCEALED CEILING SPACE SPRINKLER SYSTEM BELOW THE ROOF.
6. CHECK VALVE WITH AUTOMATIC BALL DRIP.
7. 2½"X2½"X4" FIRE DEPARTMENT CONNECTION. VERIFY THREAD CONNECTION DIMENSIONS AND FINAL LOCATION WITH LOCAL AUTHORITY.

LEGEND :

- NEW CONCEALED SPRINKLER HEADS
- NEW UPRIGHT SPRINKLER HEADS
- ISOLATION VALVE
- CHECK VALVE
- [PS] PRESSURE SWITCH
- [FS] FLOW SWITCH
- [TS] TAMPER SWITCH

DESIGN AREA CRITERIA	
OCCUPANCY CLASSIFICATION:	LIGHT HAZARD
DESIGN DENSITY:	0.10 GPM/ SQ.FT.
K-FACTOR:	5.6



FIRE PROTECTION FIRST FLOOR PLAN

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

JAM ARCH

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STATE OF NEW YORK — ARMEN KHACHATURIAN — 062261-1 — LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:

LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:

BLOCK: 1, LOT: 91

OWNER

LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

FIRE PROTECTION FIRST FLOOR PLAN

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

JOB NUMBER: 2019-01.15
DATE: 08/08/2022
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FP-101

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DRAWING NOTES

1. SPRINKLER CONTRACTOR TO COORDINATE SPRINKLER HEAD LOCATIONS, PIPING AND OTHER FIRE PROTECTION EQUIPMENT WITH HVAC EQUIPMENT, LIGHTING AND OTHER CEILING STRUCTURE.
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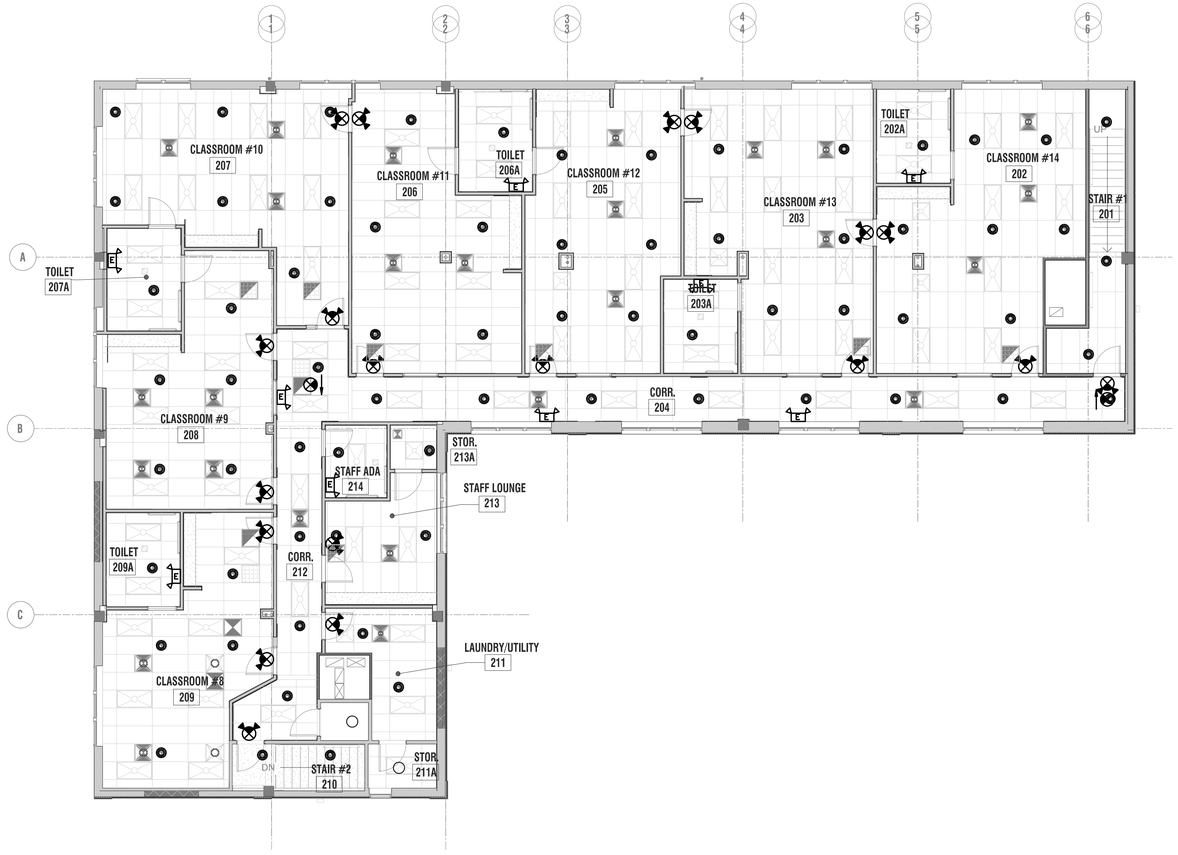
4. ALL SPRINKLER HEADS IN AREA OF WORK TO BE FULLY COORDINATED WITH ALL NEW CEILING ELEMENTS IN ADDITION TO WORK FROM OTHER TRADES.
5. NEW BRANCHES SHALL BE EXTENDED FROM THE NEW 4 INCH SPRINKLER MAIN AS NEEDED TO PROVIDE COMPLETE SPRINKLER COVERAGE THROUGHOUT.
6. CONTRACTOR TO PROVIDE SPRINKLER HYDRAULIC CALCULATIONS BASED ON HYDRANT FLOW TEST NO OLDER THAN ONE YEAR IN ADDITION TO SHOP DRAWINGS FOR REVIEW AND APPROVAL.

LEGEND :

- NEW CONCEALED SPRINKLER HEADS
- ISOLATION VALVE
- CHECK VALVE
- NEW UPRIGHT SPRINKLER HEADS

DESIGN AREA CRITERIA	
OCCUPANCY CLASSIFICATION:	LIGHT HAZARD
DESIGN DENSITY:	0.10 GPM/ SQ.FT.
K-FACTOR:	5.6



FIRE PROTECTION SECOND FLOOR PLAN

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

JAM ARCH

ARCHITECT OF RECORD:

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STATE OF NEW YORK — ARMEN KHACHATURIAN — 062261-1 — LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

PROJECT:

LIGHTBRIDGE ACADEMY
26 & 36 Legion Drive
Valhalla, NY 10595

LEGAL DESCRIPTION:

BLOCK: 1, LOT: 91

OWNER

LBA OF WESCHESTER, LLC.
179 Nelson Road
Scarsdale, NY 10583

SHEET TITLE:

FIRE PROTECTION SECOND FLOOR PLAN

Rev. #	Revision Date	Revision Description
	08/08/2022	ISSUED FOR PERMIT

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SHEET NO.

FP-102

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DRAWING NOTES

1. SPRINKLER CONTRACTOR TO COORDINATE SPRINKLER HEAD LOCATIONS, PIPING AND OTHER FIRE PROTECTION EQUIPMENT WITH HVAC EQUIPMENT, LIGHTING AND OTHER CEILING STRUCTURE.
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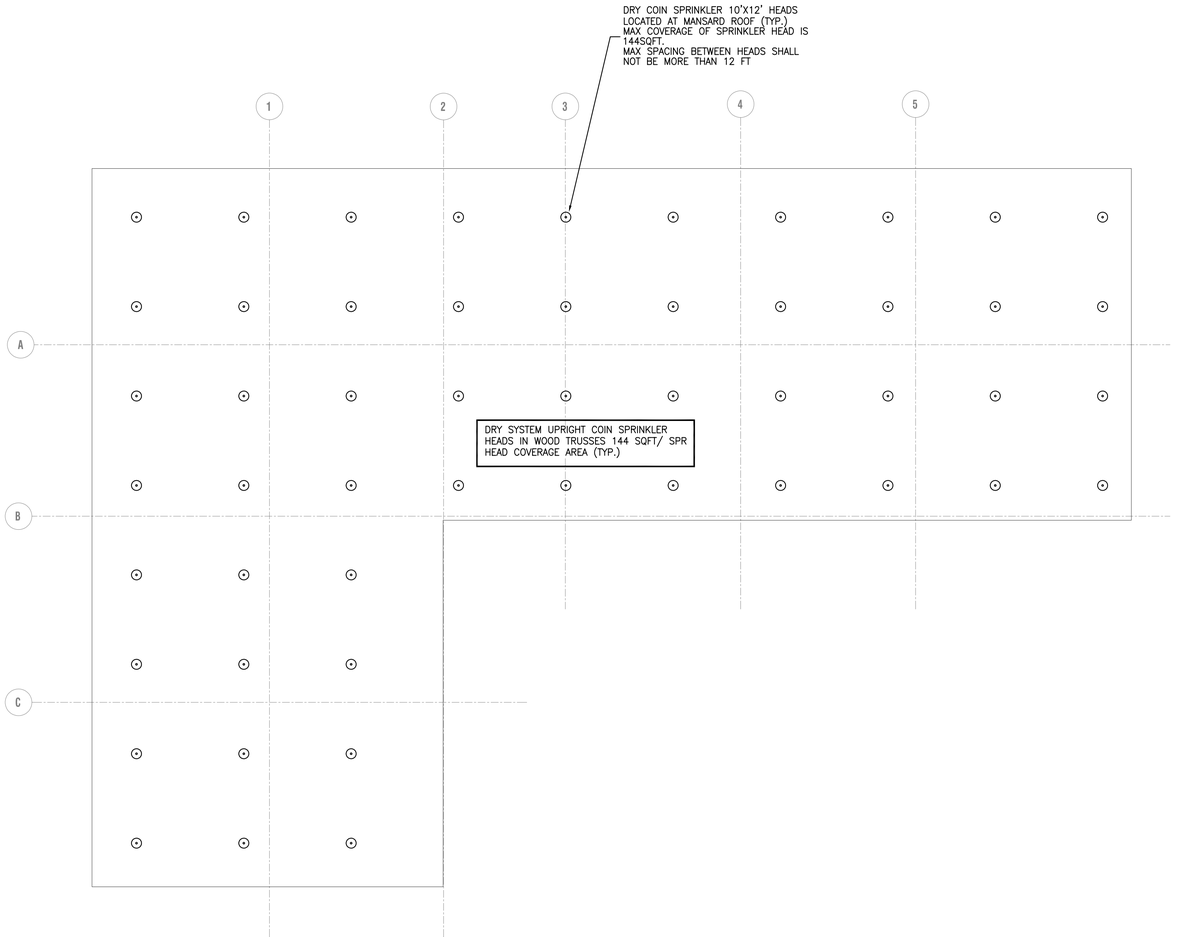
LEGEND :

⊙ UPRIGHT HEADS IN CONCEALED COMBUSTIBLE CEILING SPACE

DESIGN AREA CRITERIA	
OCCUPANCY CLASSIFICATION:	LIGHT HAZARD (DRY)
DESIGN DENSITY:	0.10 GPM/ SQ.FT.
K-FACTOR:	5.6



FIRE PROTECTION ROOF PLAN

SCALE: ⅛" = 1'-0"

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STATE OF NEW YORK ARMEN YOVHANNESOVICH KHACHATURIAN 062261-1 LICENSED PROFESSIONAL ENGINEER

ARMEN KHACHATURIAN, P.E. - NY LICENSE #062261-1
NY CERTIFICATE OF AUTHORIZATION #0019115

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SHEET TITLE:

FIRE PROTECTION ROOF PLAN

Rev. #	Revision Date	Revision Description
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