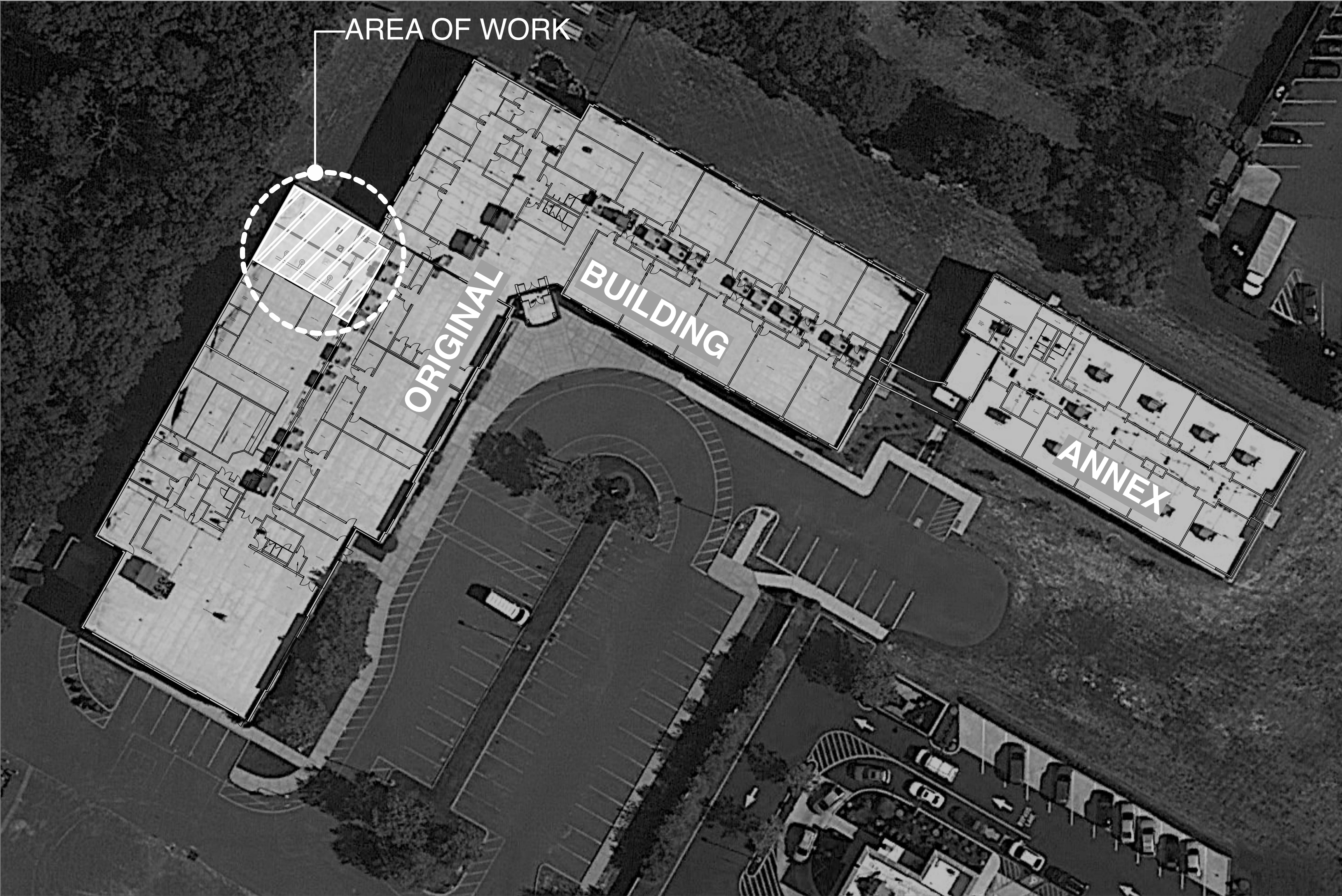


ANIMATION & RECORDING STUDIOS

CHARTERTECH HIGH SCHOOL FOR THE PERFORMING ARTS

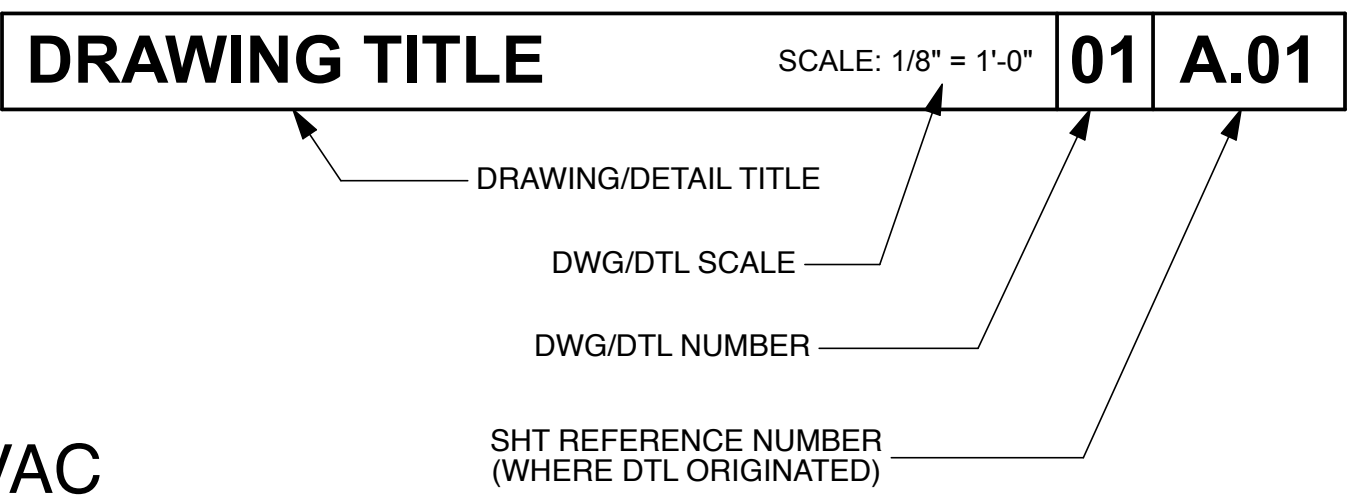
413 NEW ROAD
SOMERS POINT, NEW JERSEY 08244



LIST OF DRAWINGS

- CS COVER SHEET
- A1.0 DEMO & PROPOSED PLANS
- A1.1 DETAILS
- H-1 FLOOR PLANS, DETAILS & SPECIFICATIONS - HVAC
- E-1 PARTIAL FIRST FLOOR PLAN - ELECTRICAL
- E-2 SPECIFICATIONS - ELECTRICAL

DRAWING KEY



CharterTech HS Animation & Recording Studios

Alterations Building Code Analysis

Use and Construction Type

0304.1 Because these spaces will be used for educational purposes through the 12th grade, they shall be classified per the *International Building Code/New Jersey 2015 (IBC/NJ)* as **Use Group E, Education**.

0602.5 Because the proposed construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by the *IBC/NJ*, it shall be classified per the *IBC/NJ* as **Construction Type III-B**.

Table 1004.1.1 - Maximum Floor Area Allowances per Occupant:
• Education, Classroom 20 SF net

1 Proposed Occupancy of Alteration:
• Egress Load for Recording Room 101 – 552 SF ÷ 20 = 28
• Egress Load for Animation Studio 102 – 587 SF ÷ 20 = 29

5:23-2.4(a) As the proposed Work is being performed on an existing structure, this project shall conform to the requirements of the *New Jersey Uniform Construction Code (NJUCC) Rehabilitation Subcode*.

5:23-2.15 Construction Permit(s) application for the Work shall be submitted by the Contractor(s) per *NJUCC* Section 5:23-2.15.

5:23-2.16(b) A true copy of the Construction Permit(s) shall be kept on the site of operations open to inspection during the entire time of prosecution of the Work and until the completion of the same.

5:23-2.16(i) At least 24 hours Notice of Start of Work under a Construction Permit shall be given to the Construction Official.

5:23-2.16(j) Construction Permit(s) issuance shall be conditioned upon payment of appropriate fees, the Contractor's & Owner's assurance that the Work will conform to the requirements of the Code applicable to the Work for which the permit has been issued, including prior approvals and any approved amendments thereto, that the permit is a license to proceed with the Work and shall not be construed as authority to violate, cancel, or set aside any of the provisions of the regulations, that the Owner & Contractor will assist the Enforcing Agency in its inspection work, if requested, and that all escrows required to be paid by the applicant in connection with the Work have been paid.

5:23-2.18(b) The Construction Official and appropriate Subcode Officials will carry out periodic inspections during the progress of the Work to ensure that Work inspected conforms to the requirements of the Code.

5:23-2.18(b)2 Inspections for all subcodes of construction shall be limited to those required for one- and two-family dwellings plus the following: fire suppression systems; heat producing devices; any special inspections required by any subcode the regulations. The mid-point inspection shall include a review for compliance with *IBC Chapter 11, Accessibility*.

5:23-2.18(c)1 The Contractor shall notify the enforcing agency when the Work is ready for any required inspection specified by the *NJUCC* or required by the Construction Official or appropriate Subcode Official. This notice shall be given at least 24 hours prior to the time the inspection is desired. This notice shall represent an attestation on the part of the Contractor that the work has been completed in conformance with the code and is ready for inspection.

5:23-2.18(c)2 The *NJUCC* states that Inspections shall be performed within three business days of the time for which it was requested. The Work shall not proceed in a manner that will preclude the inspection until it has been made.

5:23-2.18(d) Upon completion of the Work, and before the issuance of a Certificate of Use and Occupancy required by the *NJUCC*, a final inspection shall be made, and any violations of the code shall be noted and the holder of the permit shall be notified of any discrepancies by the Construction Official.

5:23-2.18(d)1 The final inspection shall include: 1) Installation of all interior & exterior finish materials, sealing of exterior joints, mechanical system & other required equipment; 2) electrical wiring, devices, & fixtures; 3) plumbing piping, trim, and fixtures; 4) Code-required Tests; 5) a review for compliance with *IBC/NJ Chapter 11, Accessibility*; and 6) verification of compliance with *NJUCC* 5:23-3.5, Posting Structures.

5:23-2.21(e) The actual construction of the Work shall be the responsibility of the Contractor(s) as identified on the approved construction permit, and shall involve execution of the Work in accordance with the regulations, execution & control of all methods of construction in a safe & satisfactory manner, and execution all Work in accordance with the *NJUCC* and those portions of the plans and specifications controlled by the *NJUCC*. The Contractor(s) shall render all such construction services as required to effect a safe & satisfactory installation of the project.

5:23-2.21(e)5 Upon completion of the construction, the Contractor(s) shall certify to the best of their knowledge & belief that such has been done substantially in accordance with the *NJUCC* and with those portions of the plans & specifications controlled by the *NJUCC*, with any substantially deviations specifically noted.

5:23-2.23(b) A building or structure renovated or altered shall not be occupied or used until the Certificate of Approval shall have been issued by the Construction Official, certifying that the Work has been completed in accordance with the provisions of the *NJUCC*, except as is otherwise provided in the regulations.

5:23-2.29(a) The Owner of any premises upon which a building or structure is to be constructed or rehabilitated shall be deemed to have consented to inspection by the enforcing agency, of the entire premises and of any and all construction being performed on it until a Certificate of Continued Occupancy has been issued.

5:23-3.5(b) Every building and structure and part thereof designed for use as a place of public assembly or as an institutional building for harboring people for penal, correctional, educational, medical, or other care or treatment (*Use Groups A, E, & I*) shall be posted with an approved placard designating the maximum Occupancy Load.

5:23-3.5(c) All posting signs shall be furnished by the Owner and shall be of permanent design; they shall not be removed, or defaced and, if lost, removed or defaced, shall be immediately replaced.

5:23-6.3(a) Because the Work consists of the rearrangement of space by the construction of walls or partitions or by a change in ceiling height, the addition or elimination of any door or window, the extension & rearrangement of any system, the installation of additional equipment or fixtures, and any work that imposes additional loads on a primary structural component, the project shall be deemed an "Alteration".

5:23-6.6(c) The Work shall not cause any diminution of existing structural strength, system capacity, or mechanical ventilation below that which exists at the time of application for a permit, or that which is required by the applicable subcodes of the *NJUCC*, whichever is lower. The replacement or addition of fixtures, equipment, or appliances shall not increase loads on these systems unless the system is upgraded in accordance with the applicable subcode of the *NJUCC* to accommodate the increased load.

5:23-6.6(c)1 Newly introduced fixed loads shall not exceed the uniformly distributed live loads or concentrated live load criteria of *IBC/NJ* Table 1607.1, and shall not create deflection that exceeds the standards set forth in *NJUCC* Section 5:23-6.6(c)1i-iii. Fixed loads shall mean uniform or concentrated loads and shall include but not be limited to, equipment, files, library stacks, or similar loading conditions.

5:23-6.6(c)1i For steel frame construction, deflection shall not exceed L/240 for roofs with a slope of 3 in 12 or less or L/180 for roofs with a slope of greater than 3 in 12 and for floors.

5:23-6.6(c)2 Any fire projection system providing partial or redundant protection originally installed to protect a special hazard that no longer exists and that is not required in accordance with the current *NJUCC* is allowed to be removed with the written approval of the Fire Subcode Official and Fire Official. All disconnected equipment and devices, such as pull stations, nozzles, detectors, sprinklers, sensors, panels, and hose connections, shall be removed so as not to give a false indication that the structure, area or space is protected.

5:23-6.6(c)3 No work shall be undertaken that diminishes accessibility below that which is required by the *IBC/NJ Chapter 11, Accessibility*.

5:23-6.6(c)4 Construction materials used as part of an Alteration project shall be consistent with the existing construction type or the allowable construction type, whichever is less restrictive.

5:23-6.6(d)1-4 The following products and practices shall not be used: 1) wood paneling used as an interior finish not in conformance with *NJUCC* 5:23-6.11; 2) carpeting used for floor covering that fails to meet the DOC FF-1 "Pill Test"; 3) unlisted or unapproved electrical products, and, 4) plumbing materials listed under *NJUCC* 5:23-6.6(d)3.

5:23-6.6(d)7 A mirror shall not be placed in or adjacent to any means of egress so as to confuse the direction of egress or give the appearance of a doorway, exit, or passageway. Draperies or similar hangings shall not obscure an exit.

5:23-6.6(c)3 When a space is reconfigured, the altered space shall comply with the *IBC/NJ Chapter 11, Accessibility*.

5:23-6.6(c)4i When new door openings are created, existing door openings are enlarged, or door assemblies are replaced and the required door width can be achieved within the existing opening, the new door shall comply with *ICC/ANSI A117.1, Section 404*.

5:23-6.6(e)7 Replacement glass shall comply with the "Safety Glazing" requirements of the *IBC/NJ* and shall be installed in the "Specific Hazardous Locations" as specified by *IBC/NJ* Sections 2406.4 & 2406.5.

5:23-6.6(c)8 If a fireproofing material is removed that is integral to the rating of an existing fire-rated assembly, the material shall be replaced so that the rating is preserved.

5:23-6.6(c)15 When a new refrigerant is introduced, the requirements of the *International Mechanical Code 2015 (IMC)* applicable to that refrigerant, if any, shall be met. This shall apply to the installation of new equipment, the replacement of existing equipment with equipment using a different refrigerant, or the replacement of the refrigerant in existing equipment with a different refrigerant.

5:23-6.6(c)17 When the Work being performed creates or exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space), any accessible voids in insulation shall be filled using insulation meeting the R-values of Table 5.5-4 or 5.5-5 of the commercial energy code.

5:23-6.6(c)18 When fenestration (windows, skylights, or doors) is newly installed or replaced, the U-factor (thermal transmittance) shall not exceed the U-factor of Table 5.5-4 or 5.5-5 of the commercial energy code.

5:23-6.6(c)19 Ducts that are newly installed or replaced shall be installed with insulation meeting the R-values of Section 6.4.4.1.2 of the commercial energy code.

5:23-6.6(c)20 The total replacement of a building lighting system or newly installed lighting system shall meet Section 9.1.2 of the commercial energy code.

5:23-6.6(g) In buildings containing a fuel burning appliance or having an attached garage, carbon monoxide detection equipment shall be installed in accordance with Section 915 of the *IBC/NJ*.

5:23-6.6(i) All materials and methods used shall comply with requirements specified in *NJUCC* 5:23-6.8, Materials & Methods.

5:23-6.6(j) All new building elements, as listed in *NJUCC* 5:23-6.9 shall comply with the requirements of that section.

This code analysis is based upon NJAC 5:23, the New Jersey Uniform Construction Code. The most recent Update (20 August 2018) was received at RYEBREAD Architects on 19 October 2018.

PRINT DATE: 4/29/19

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ANIMATION & RECORDING STUDIOS

CHARTERTECH HIGH SCHOOL FOR THE PERFORMING ARTS
413 NEW ROAD
SOMERS POINT, NJ 08244

TITLE

COVER SHEET

DRAWING DATE:
19 APR 2019

REVISION DATE:

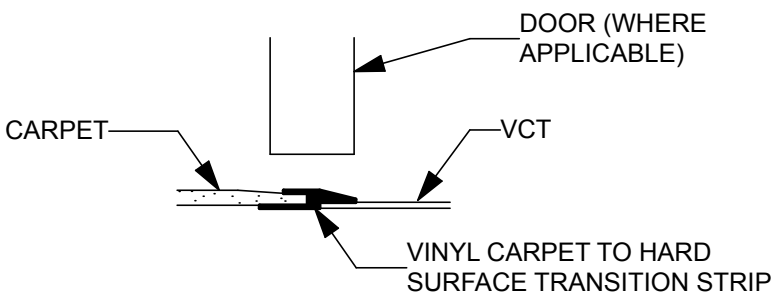
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COMMISSION NO.:
5559B

CS

1 OF 1



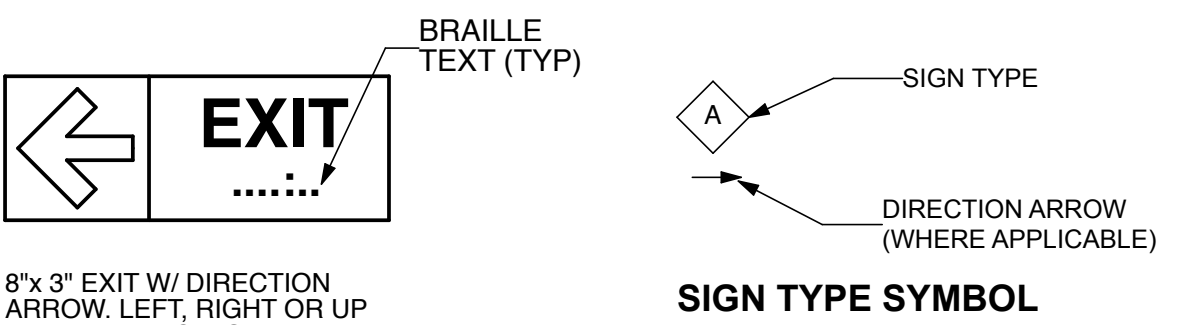
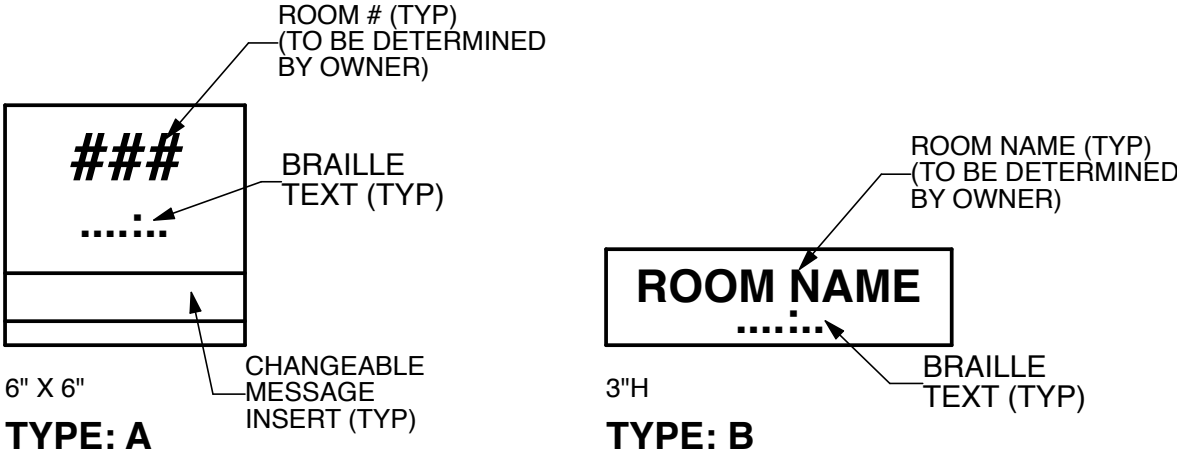
THRESHOLD DETAIL T-1 SCALE: 3" = 1'-0" 05

DOOR SCHEDULE													
DOOR				FRAME				REMARKS					
NUMBER	TYPE	WIDE	HEIGHT	THICKNESS	MATERIAL	GLAZ'G TYPE	TYPE	WIDE	HEIGHT	MATERIAL	GLAZ'G TYPE	RAT'G (MIN)	THRESHOLD
101.1	D-1	3'-0"	7'-0"	1 3/4"	SC	SG-1	F-1	3'-4"	7'-2"	SC	N/A	N/A	3.0
101A.1	D-2	(2) 3'-0"	7'-0"	1 3/4"	WD	N/A	F-2	6'-4"	7'-2"	PHM	N/A	N/A	1.0
102.1	D-1	3'-0"	7'-0"	1 3/4"	WD	SG-1	F-1	3'-4"	7'-2"	PHM	N/A	N/A	2.0

KEY:
WD Wood
SC Sound Control Door & Frame
PHM Painted Hollow Metal
SG-1 1/4" Safety Glass
N/A Not Applicable

ROOM FINISH SCHEDULE									
RM #	ROOM NAME	FLR	BASE	WALLS				CLG	CLG. HT.
				NORTH	EAST	SOUTH	WEST		
100	CORRIDOR	VCT	RUB	PTD	PTD	PTD	PTD	APC	9'-0"
101	RECORDING	CPT	RUB	PTD	PTD	PTD	PTD	APC	12'-0"
101A	STORAGE	VCT	RUB	PTD	PTD	PTD	PTD	EXP	
102	ANIMATION	VCT	RUB	PTD	PTD	PTD	PTD	EXP	

KEY:
VCT Vinyl Composition Tile
CPT Carpet Tile
RUB Rubber Wall Base
PTD Painted
APC Acoustical Panel Ceiling
EXP Exposed
E Existing



SIGNAGE MOUNTED ON GLASS:

SIGNAGE REQUIRED TO BE MOUNTED TO GLASS SHALL HAVE A BLANK BACK PANEL MADE OF THE SAME MATERIAL AND OF THE SAME SIZE AND COLOR AS THE SIGN ADHERED TO THE OPPOSITE SIDE OF THE GLASS.

MOUNTING LOCATION AND HEIGHT:

WHERE PERMANENT IDENTIFICATION WITH TACTILE CHARACTERS IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. AT DOUBLE LEAF DOORS, THE SIGN SHALL BE TO THE RIGHT OF THE RIGHT-HAND DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF A SINGLE DOOR, OR THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE ON THE NEAREST ADJACENT WALL. SIGNS SHALL HAVE AN 18-INCH MINIMUM SPACE ON THE FLOOR OR GROUND, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION. WHERE SIGNS ARE INDICATED TO BE MOUNTED ON A WINDOW OR SIDELITE, A BLANK BACKER PANEL OF THE SAME SIZE AND COLOR AS THE SIGN SHALL BE PROVIDED ON THE OPPOSITE SIDE OF THE GLASS. MOUNTING HEIGHTS SHALL BE AS FOLLOWS:

60-INCHES MAXIMUM TO 48-INCHES MINIMUM ABOVE FINISH FLOOR TO THE BASELINE OF THE CHARACTERS.

RAISED AND BRAILLED CHARACTERS AND PICTORIAL SYMBOL SIGNS:

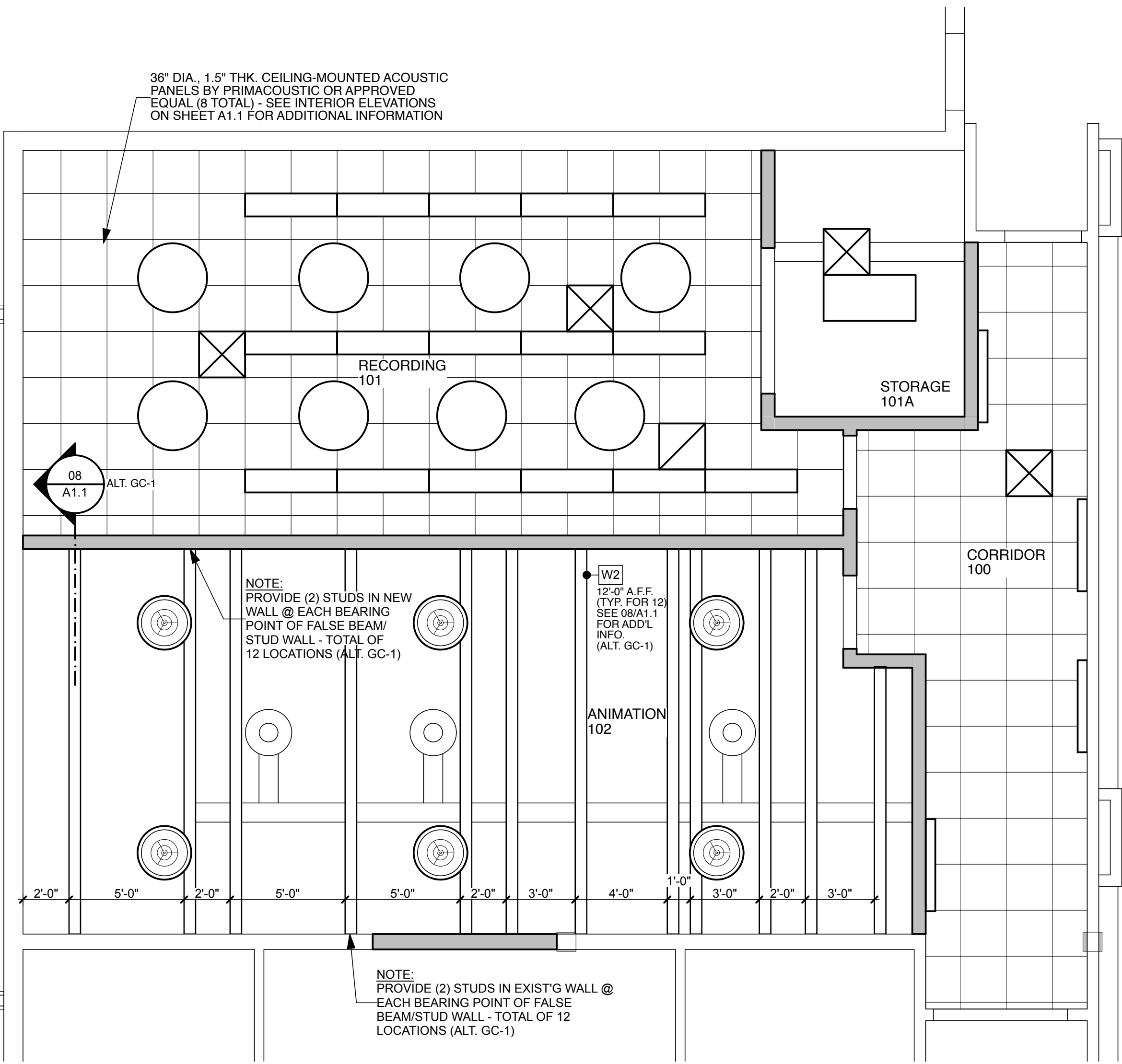
LETTERS AND NUMERALS SHALL BE RAISED 1/32-INCH, UPPER CASE, SANS SERIF OR SIMPLE SERIF TYPE AND SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8-INCH HIGH, BUT NO HIGHER THAN 2-INCHES. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6-INCHES MINIMUM IN HEIGHT. REFER TO TABLES 703.4.2.4 & 703.5 FOR REQUIRED CHARACTER AND BRAILLE DIMENSIONS.

FINISH AND CONTRAST:

THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE MATTE, OR OTHER NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

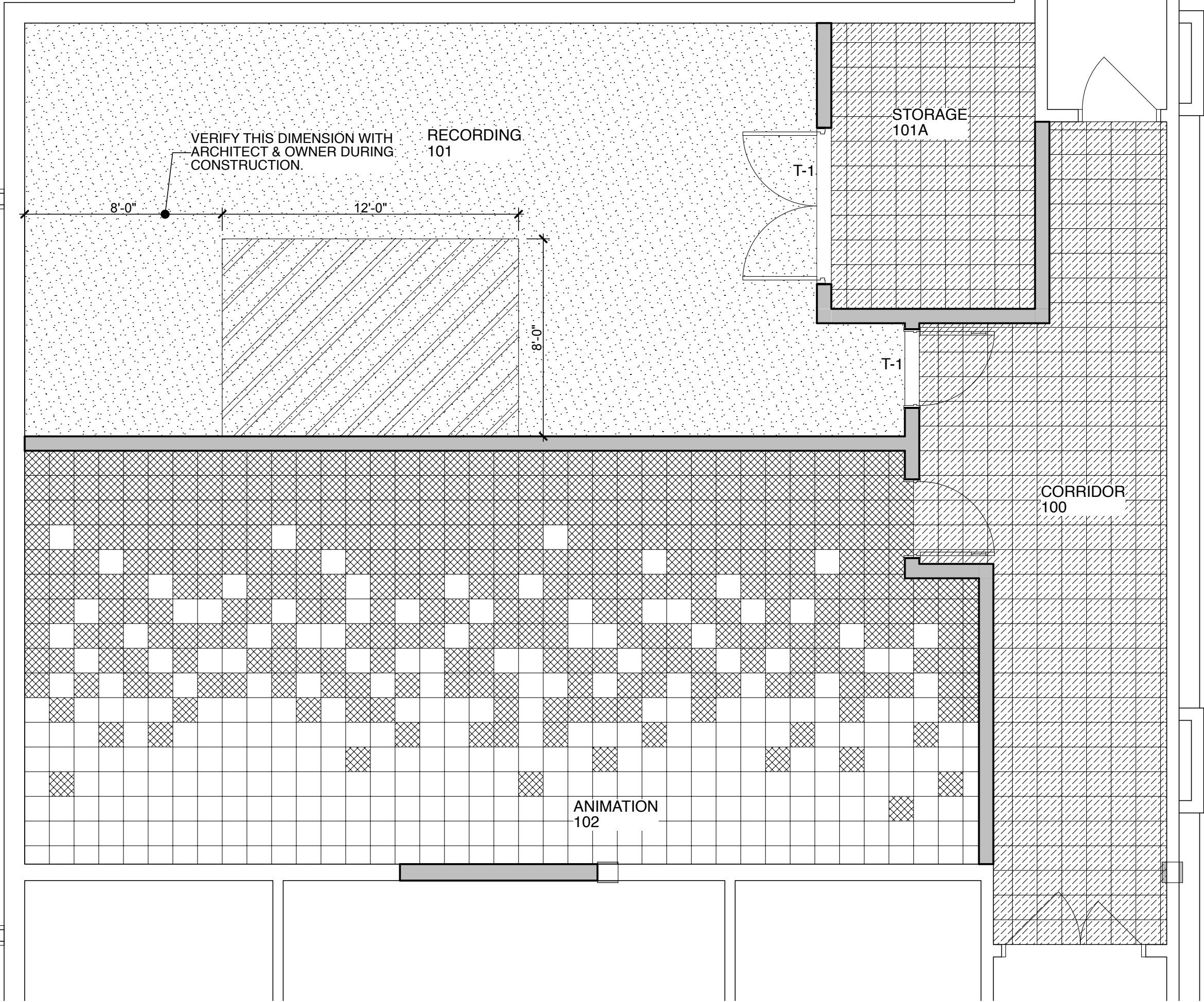
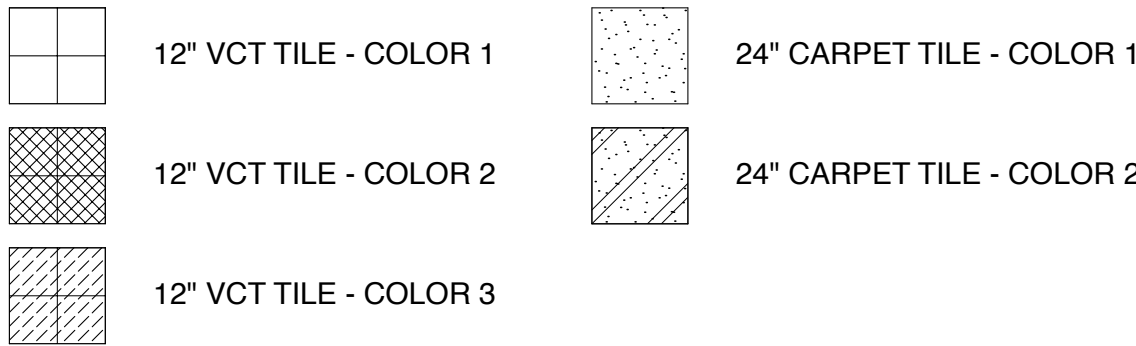
REFER TO ICC/ANSI A117.1-2009 FOR ADDITIONAL REQUIREMENTS

BARRIER FREE/SIGNAGE TYPES 06

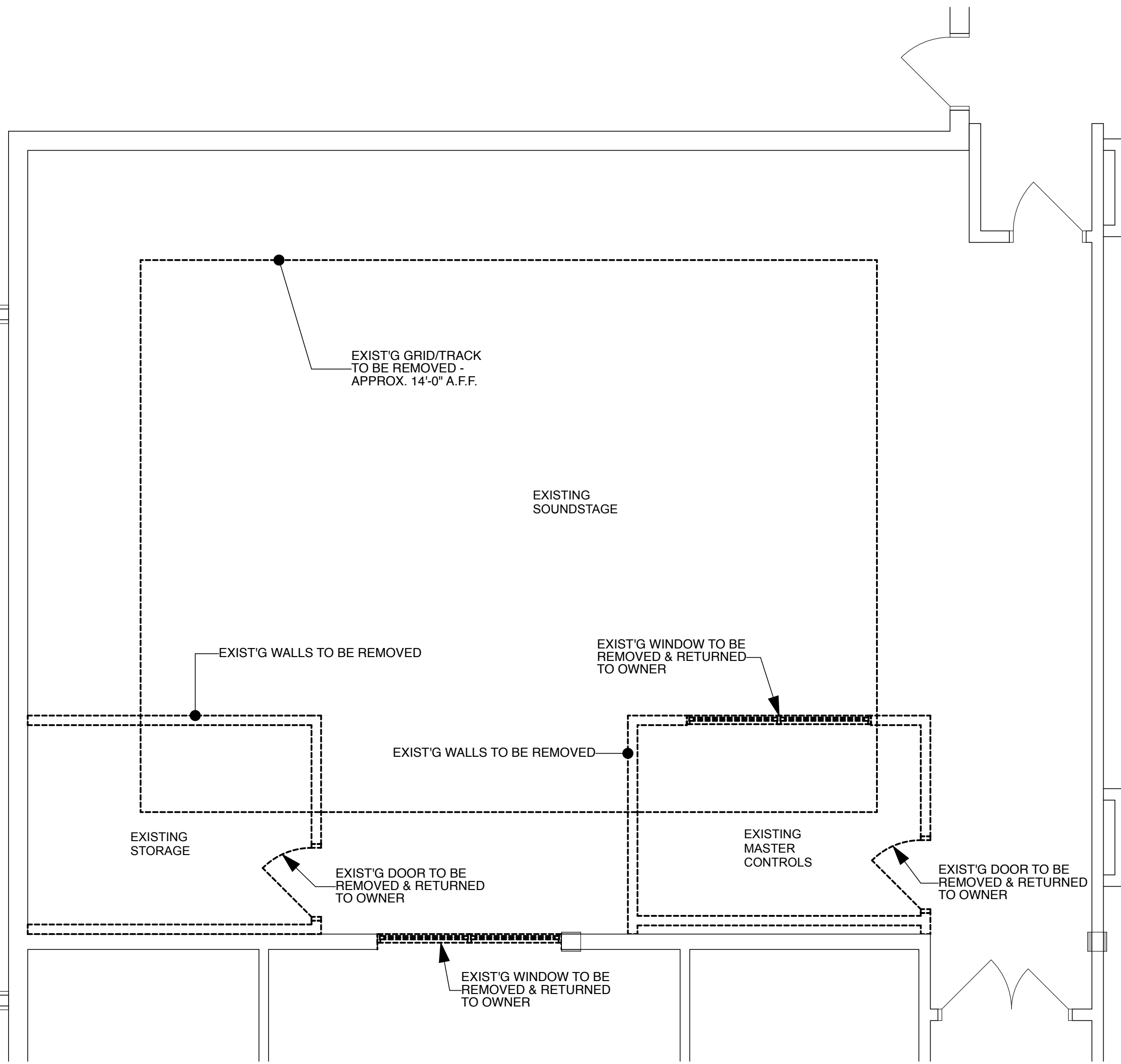


REF CLG PLAN SCALE: 1/4" = 1'-0" 03 A1.0

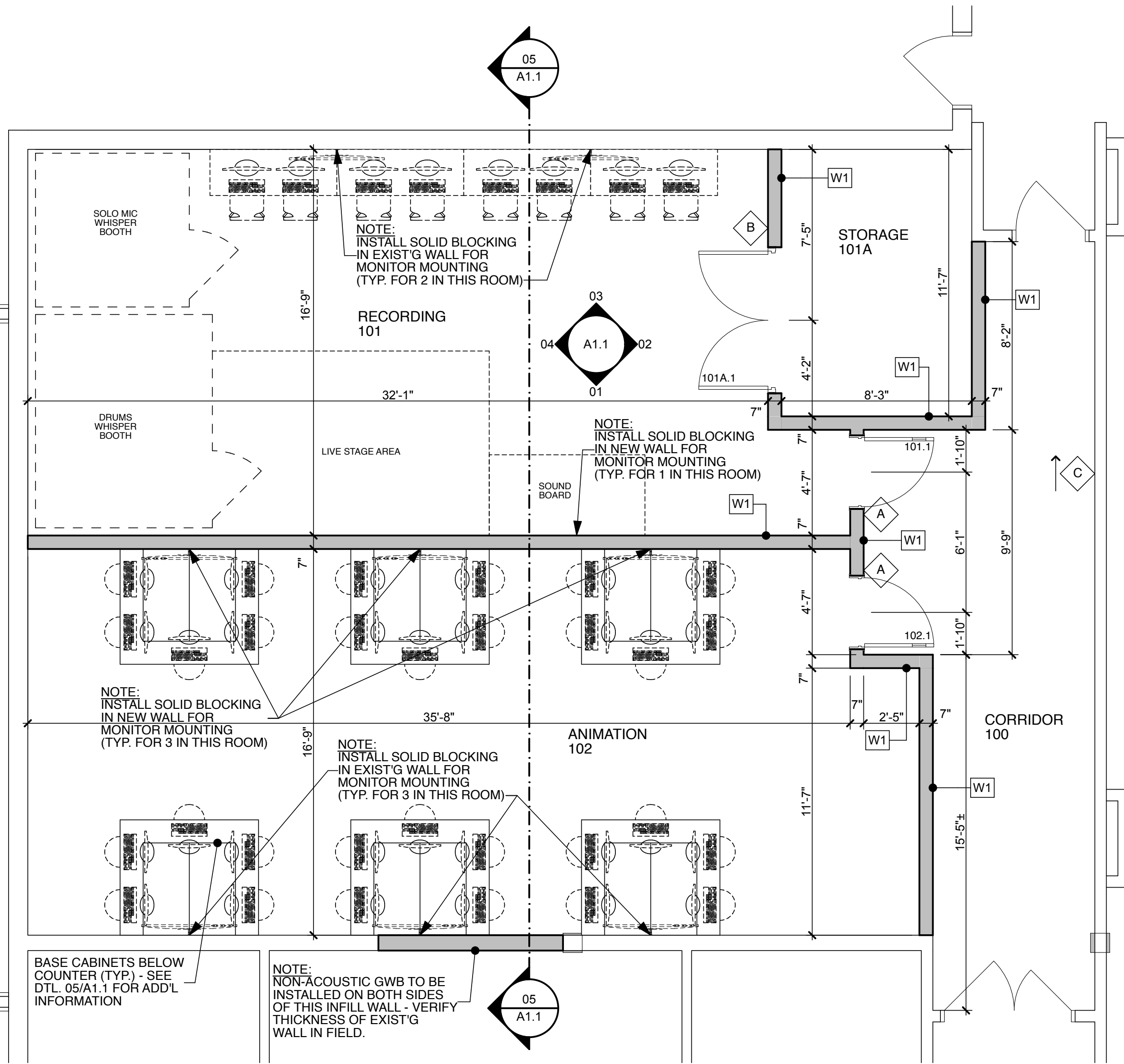
FLOORING KEY:



FLOOR PATTERN PLAN SCALE: 1/4" = 1'-0" 04 A1.0

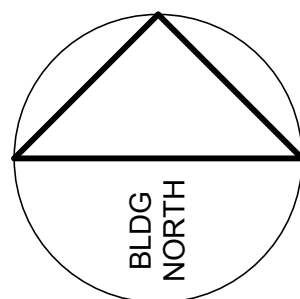


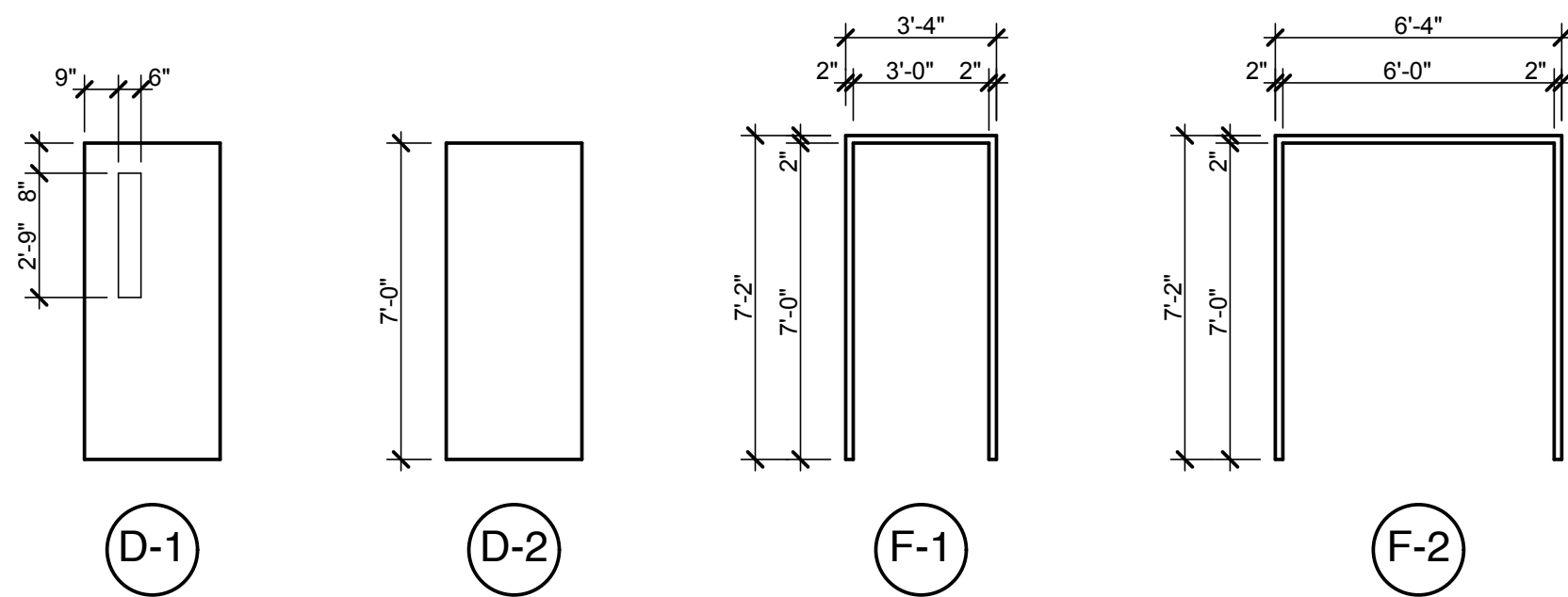
DEMO PLAN SCALE: 1/4" = 1'-0" 01 A1.0



PROPOSED PLAN SCALE: 1/4" = 1'-0" 02 A1.0

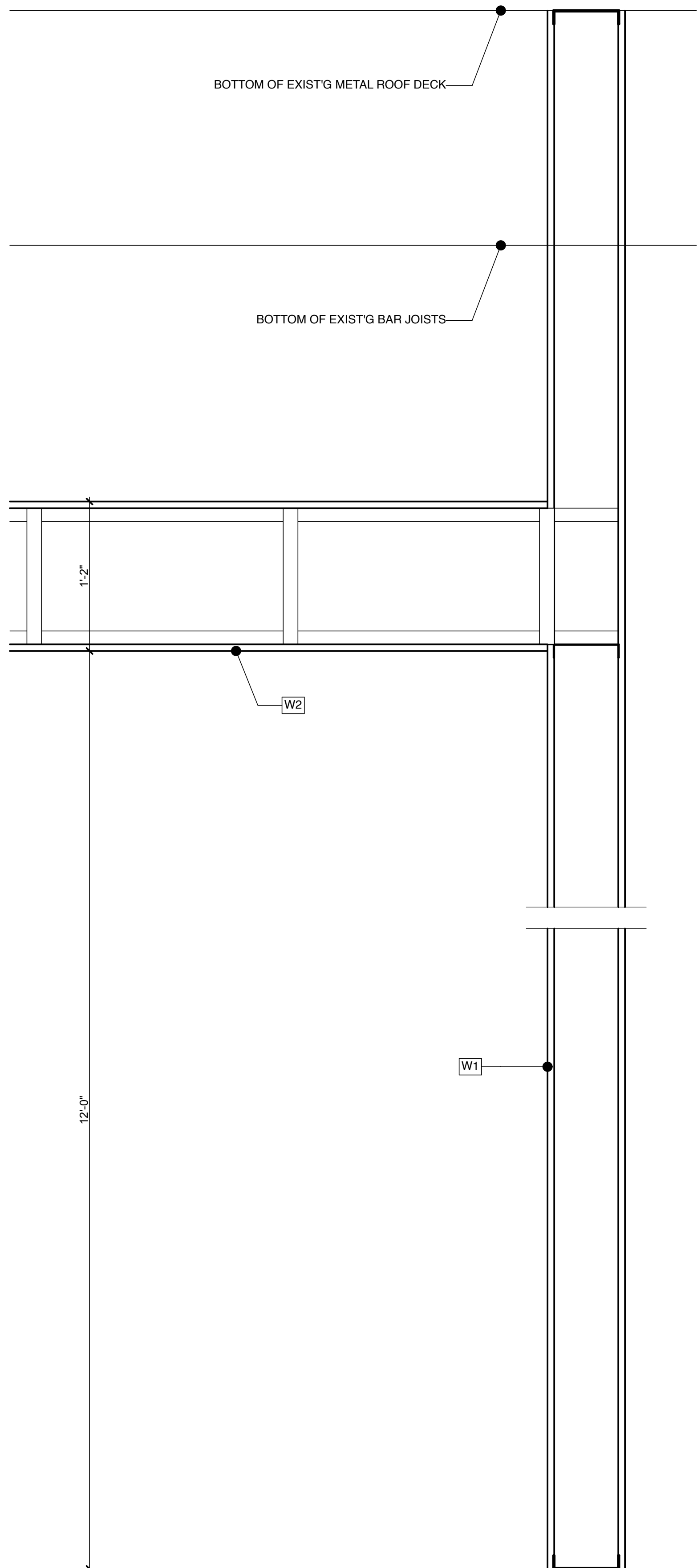
NOTE:
ALL DASHED ITEMS TO BE PROVIDED BY OWNER (N.I.C.)





DOOR/FRAME TYPES

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

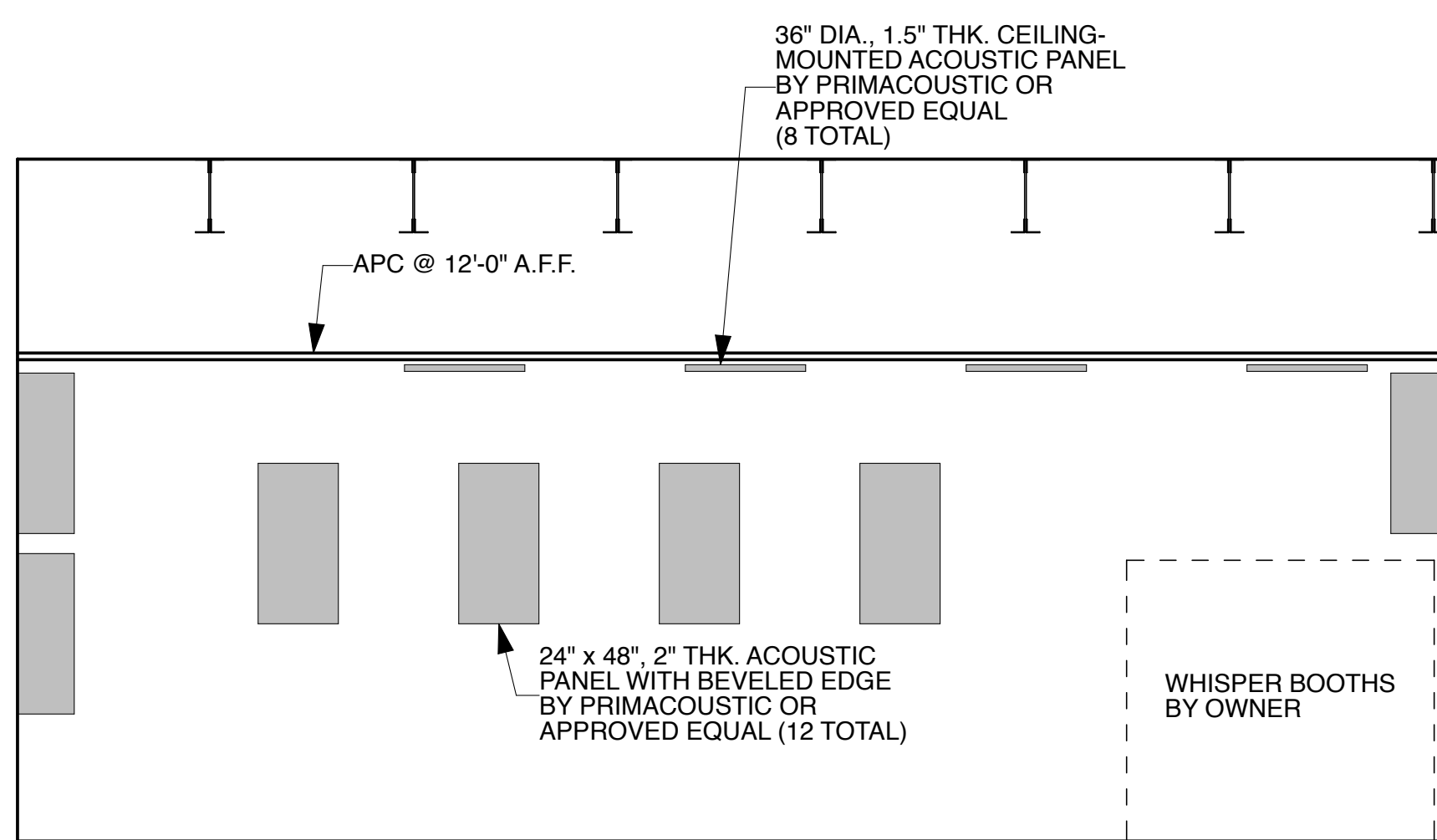


BUILDING SECTION

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

08 A1.1

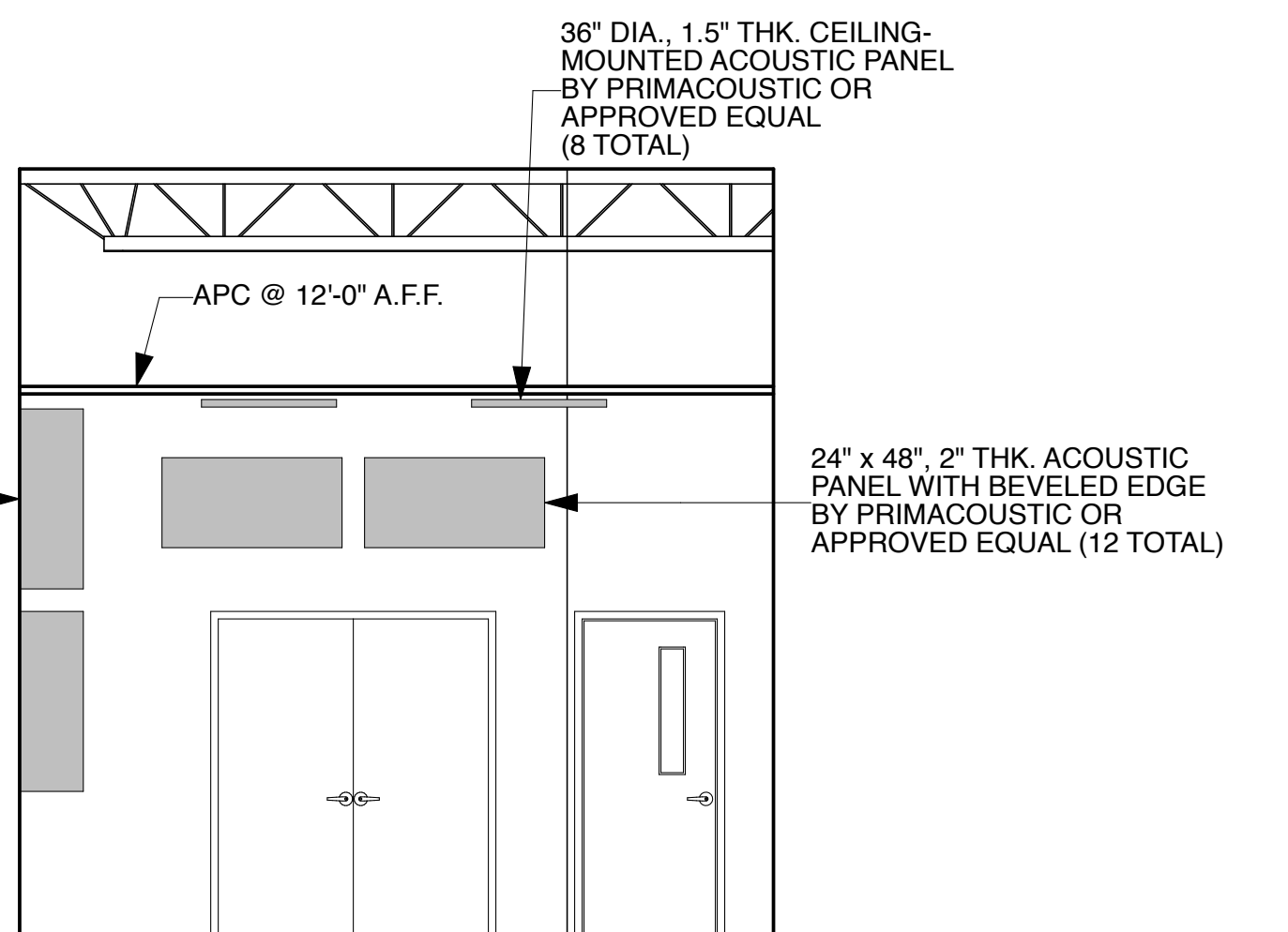
ALT. GC-1



INTERIOR ELEVATION

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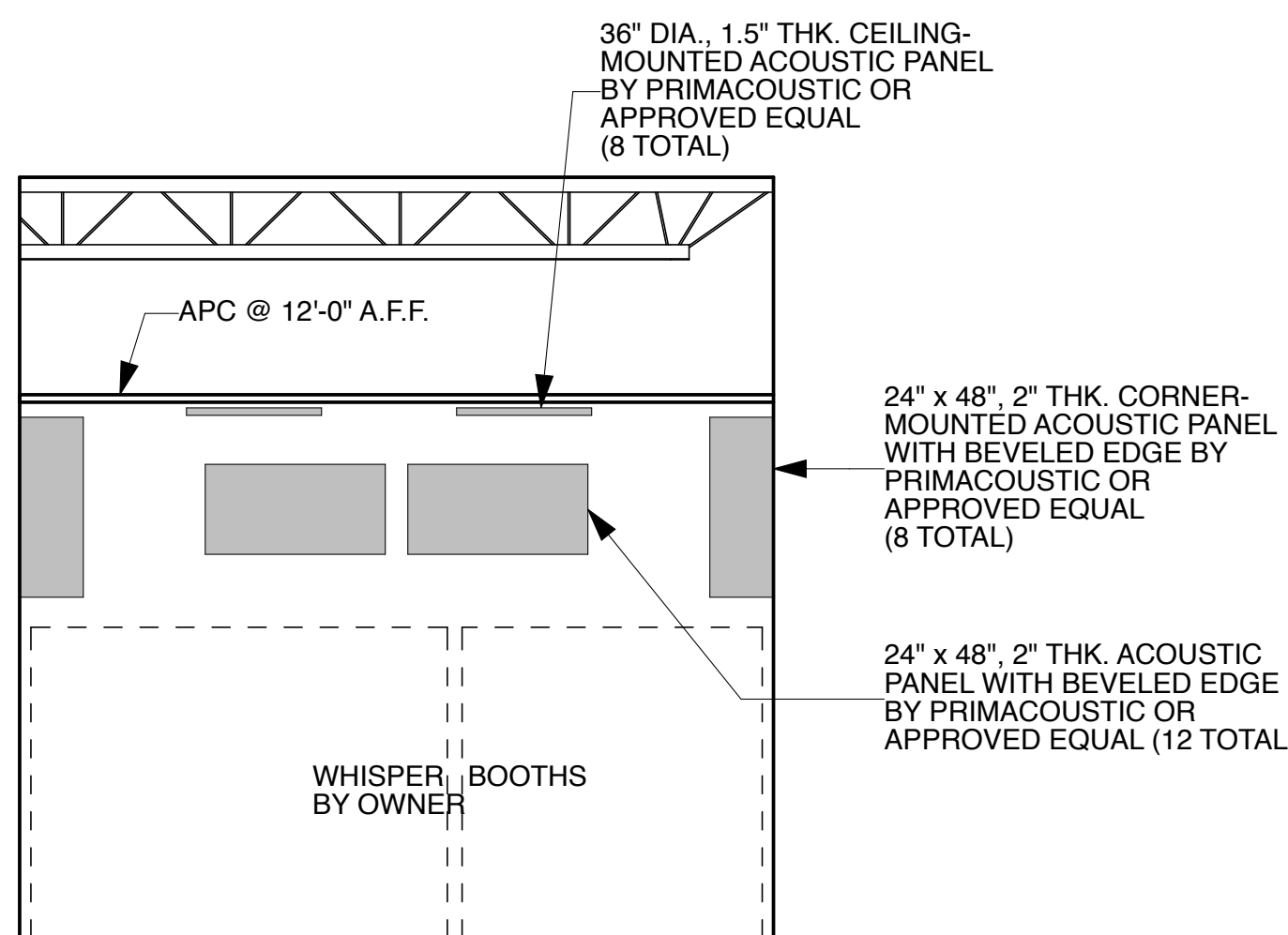
01 A1.1



INTERIOR ELEVATION

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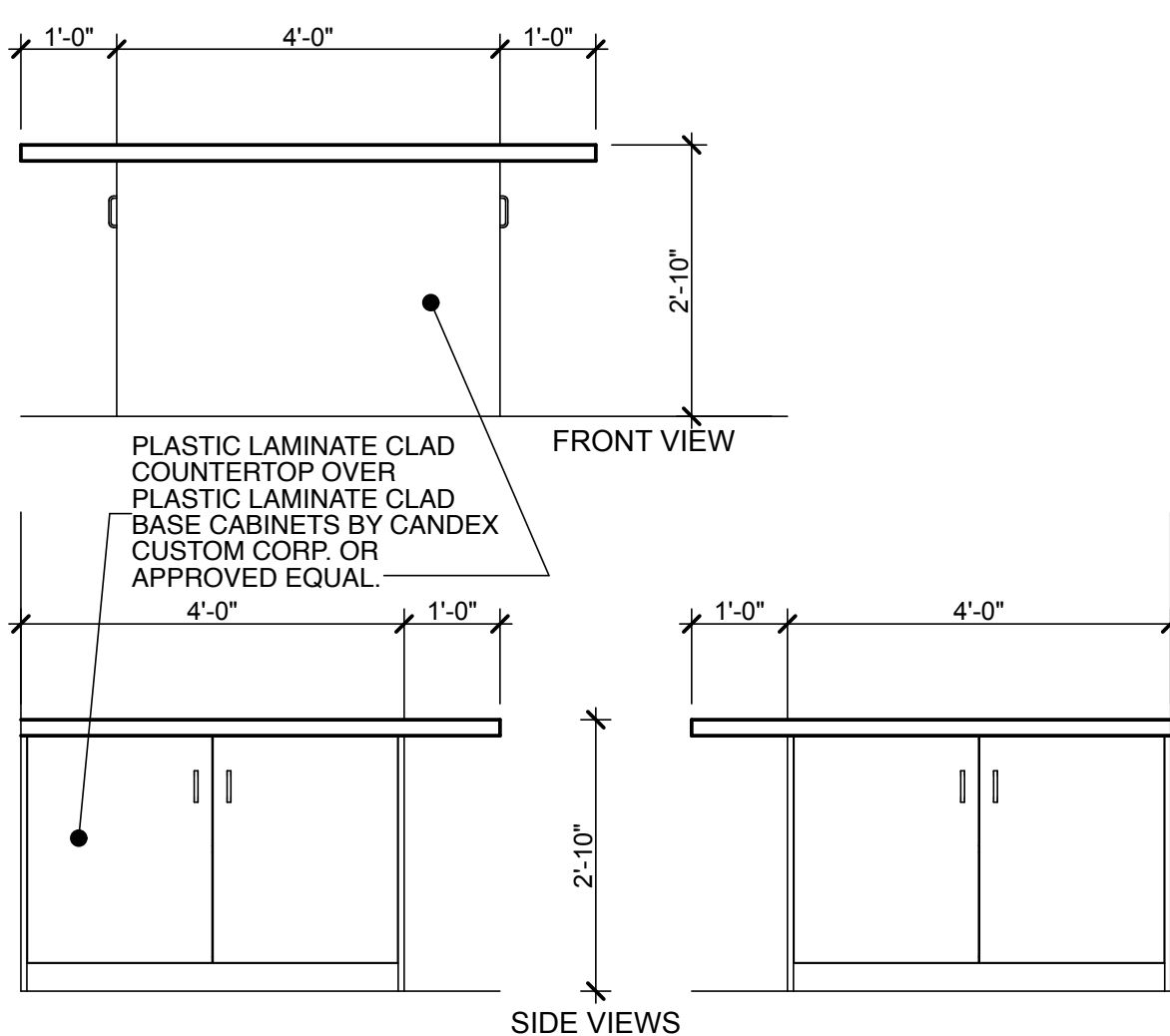
02 A1.1



INTERIOR ELEVATION

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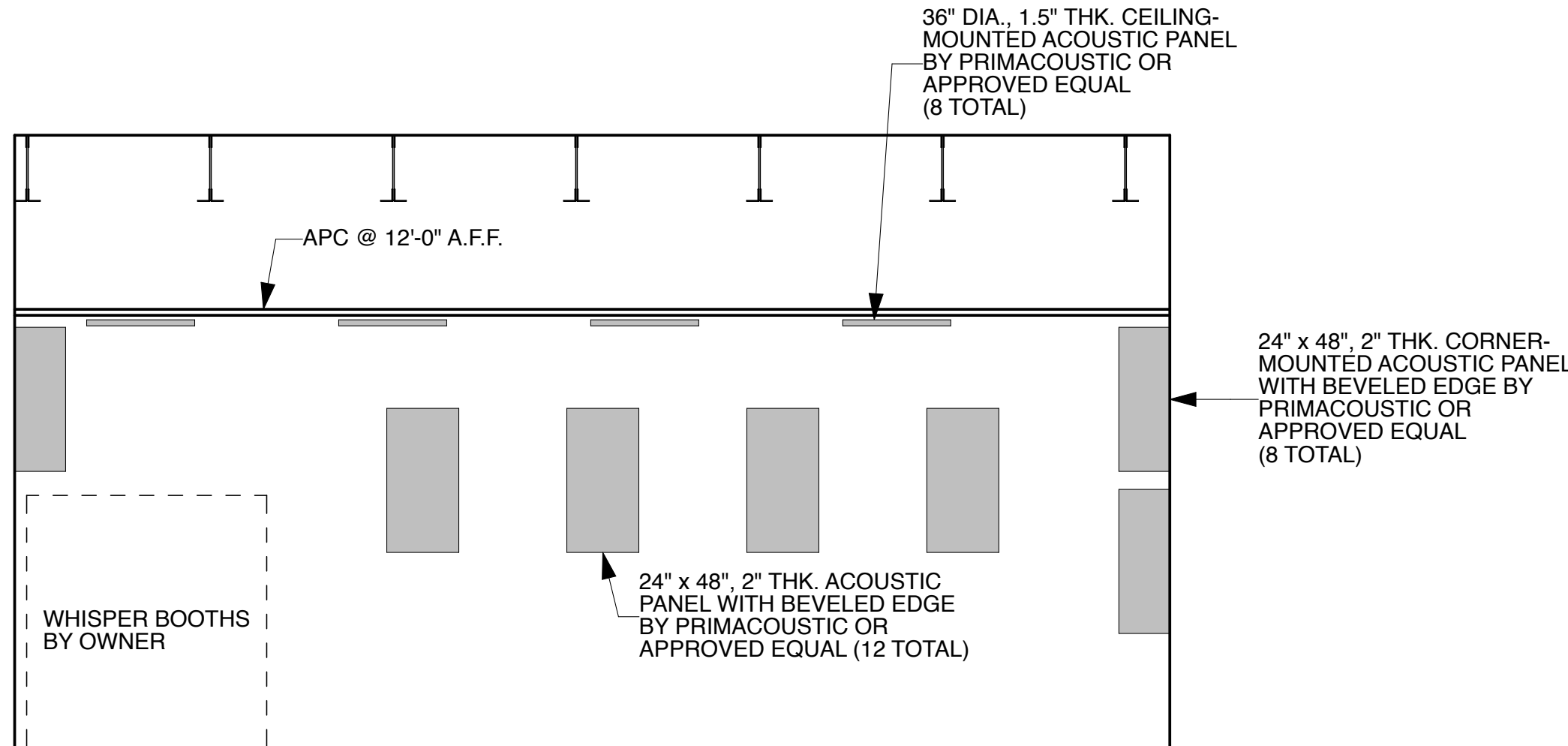
04 A1.1



TYP. ANIMATION WORKSTATION

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

07 A1.1

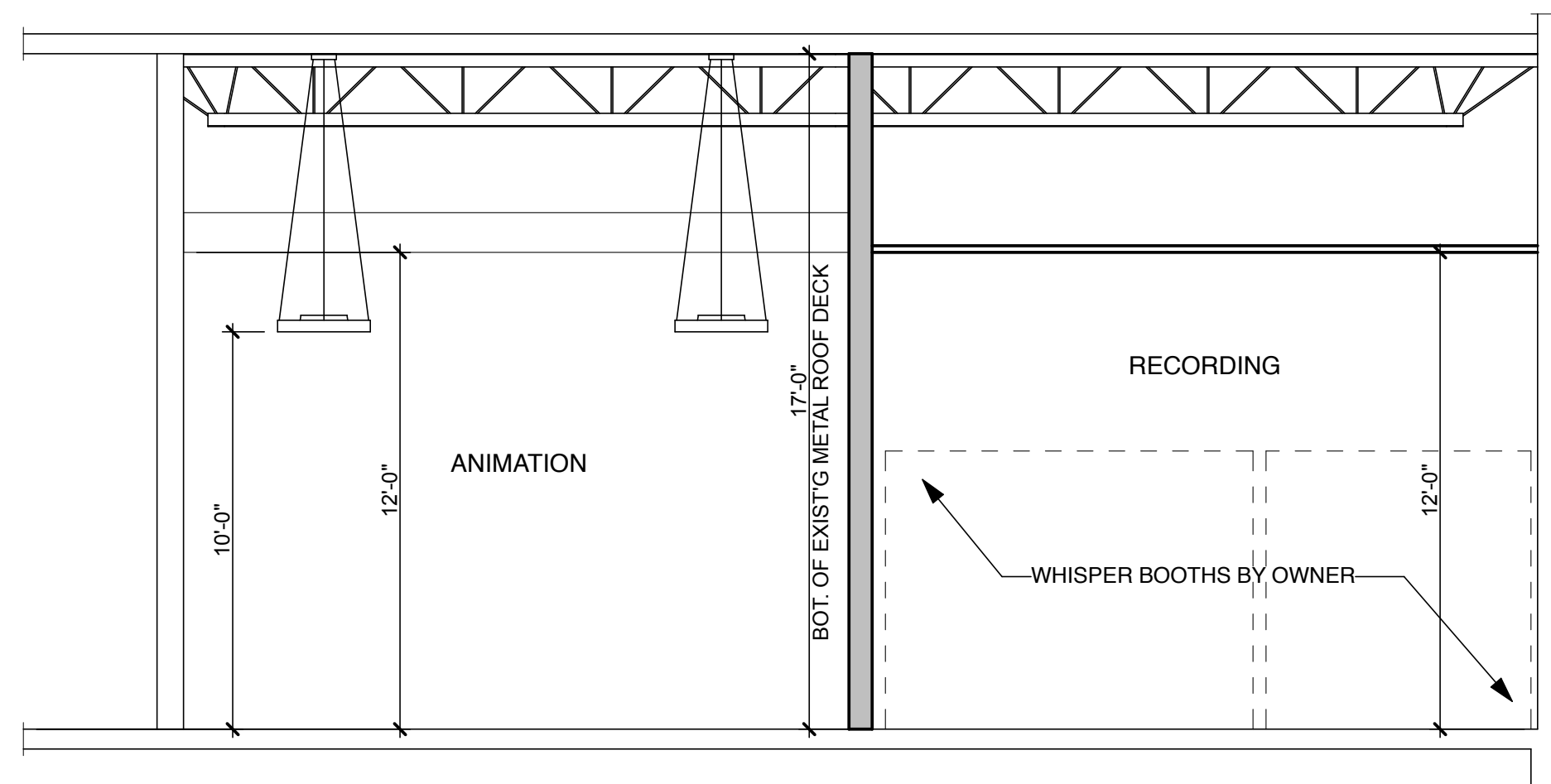


INTERIOR ELEVATION

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

03 A1.1

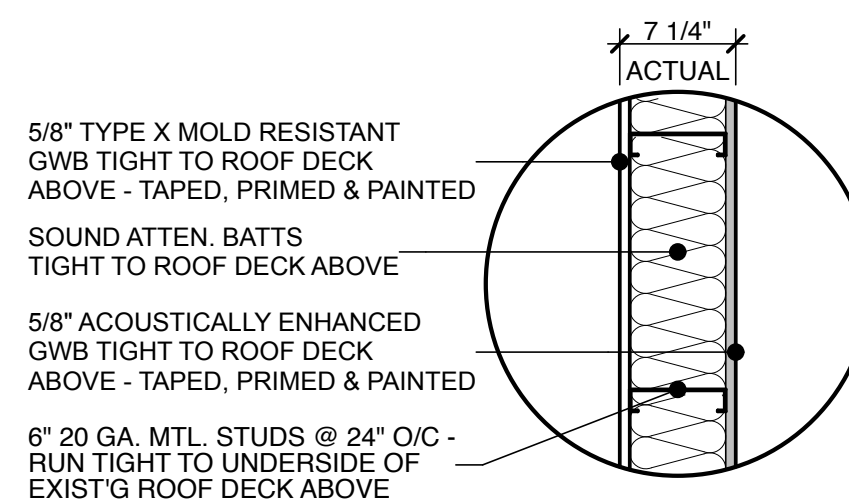
ACOUSTIC PANEL NOTES:
1. CONTRACTOR TO PROVIDE & INSTALL ALL ACOUSTICAL PANELS, INCLUDING REQUIRED MOUNTING HARDWARE FROM ACOUSTICAL PANEL MANUFACTURER
2. ACOUSTIC PANEL LOCATIONS SHOWN ARE APPROXIMATE - FINAL LOCATIONS TO BE DETERMINED IN FIELD.



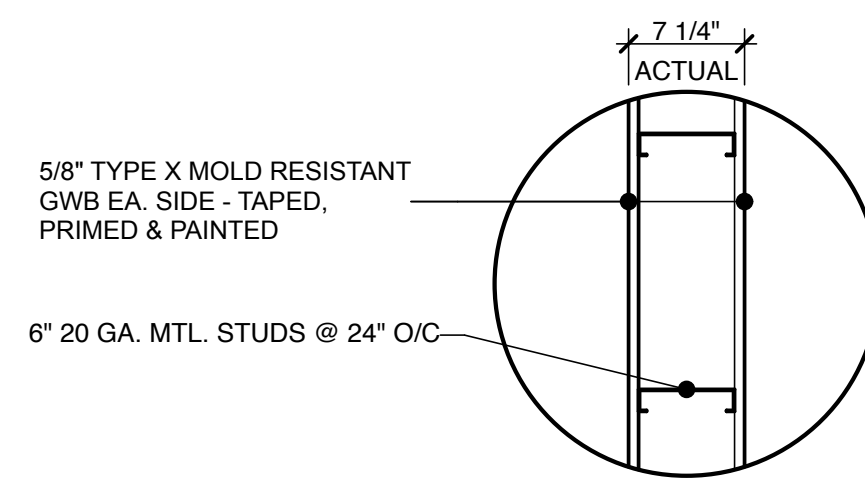
BUILDING SECTION

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

05 A1.1



WALL TYPE W1



WALL TYPE W2
ALT. GC-1

WALL TYPES

SCALE: 1" = 1'-0"

06

PRINT DATE: 4/29/19

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ANIMATION & RECORDING STUDIOS

CHARTERTECH HIGH SCHOOL FOR THE PERFORMING ARTS
413 NEW ROAD
SOMERS POINT, NJ 08244

TITLE
DETAILS & WALL SECTION

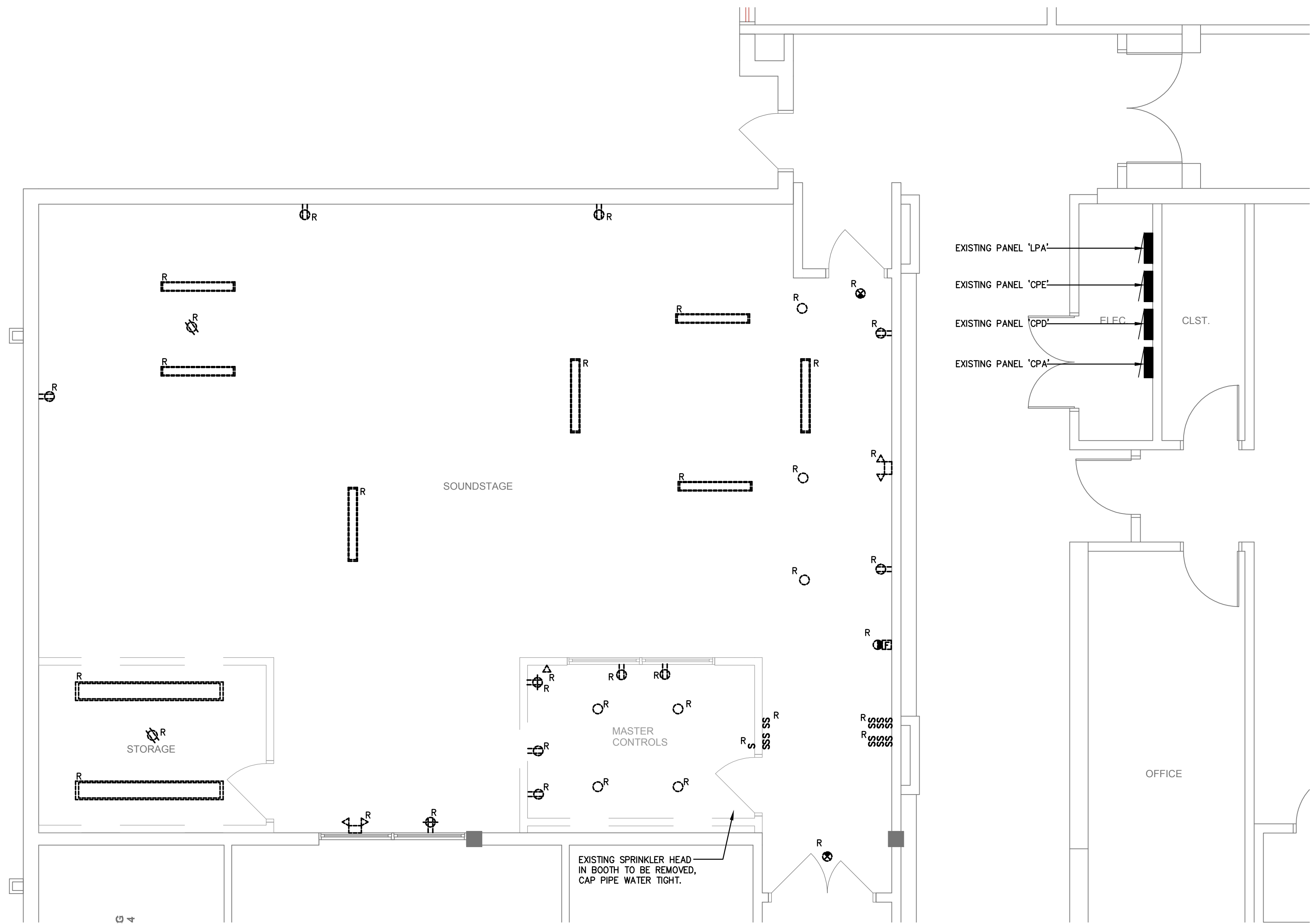
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19 APR 2019

REVISION DATE:

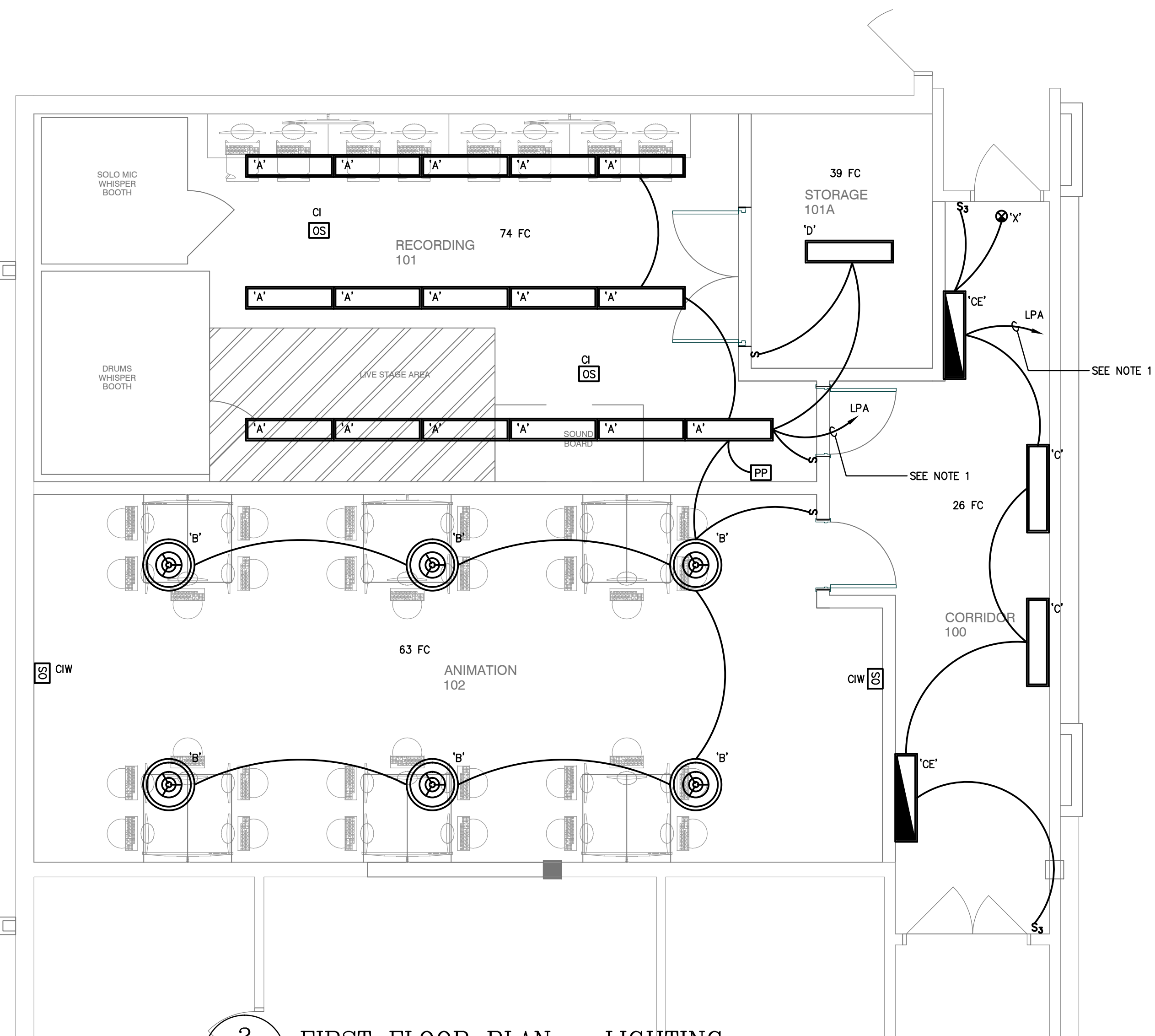
DRAWN BY:
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COMMISSION NO.:
5559B

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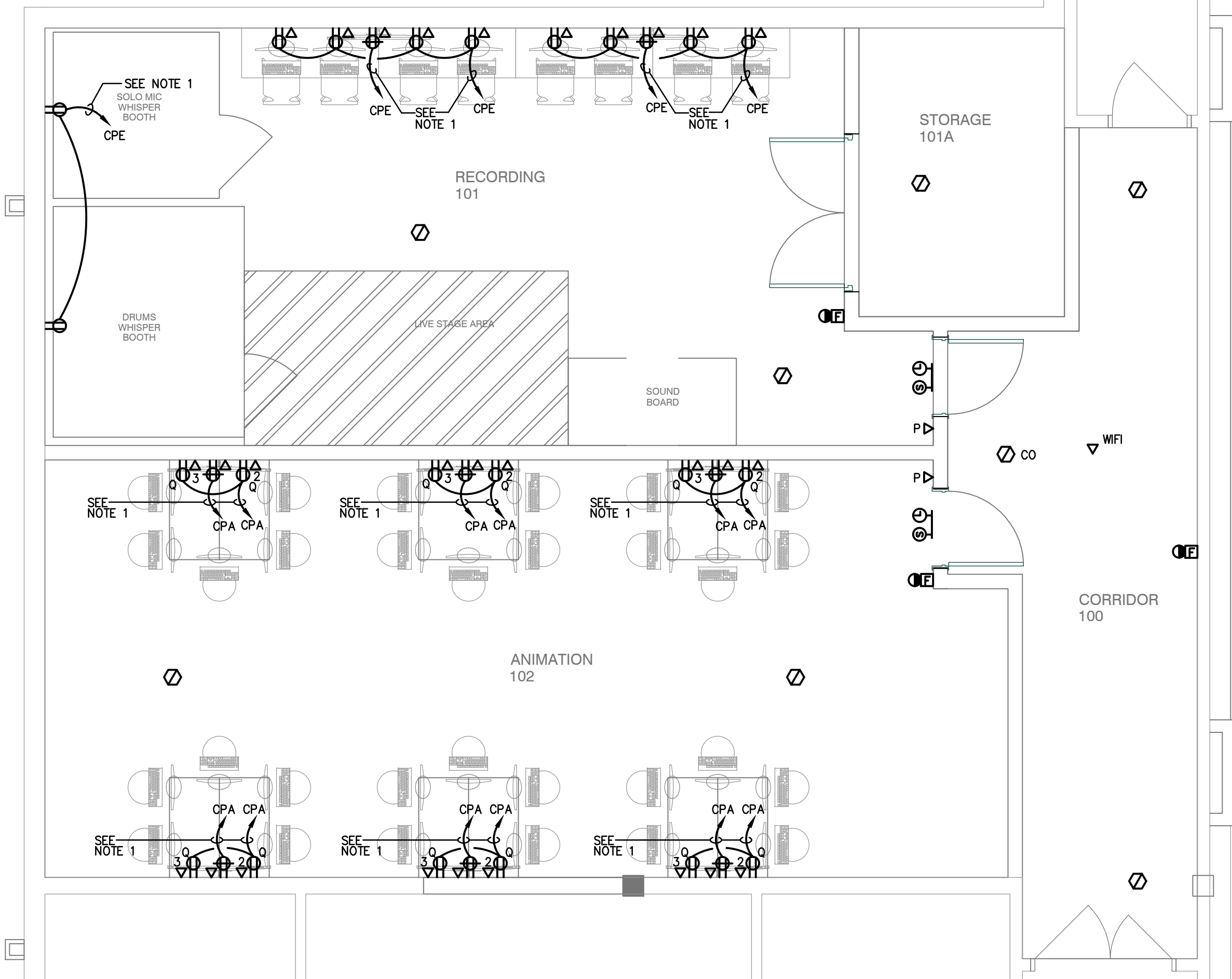
2 OF 2



1 FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
SCALE 1/4" = 1'-0"



2 FIRST FLOOR PLAN - LIGHTING
SCALE 1/4" = 1'-0"



3 FIRST FLOOR PLAN - POWER
SCALE 1/4" = 1'-0"

NOTES:

1. PROVIDE AND CONNECT TO NEW 20A/1P CIRCUIT BREAKER, IN EXISTING PANEL, CIRCUIT VIA 2 #12 & 1 #12 GRD - 3/4".

LIGHTING FIXTURE SCHEDULE					
ID	LAMPS	MANUF.	CAT. NO.	MOUNTING	DESCRIPTION
A	(1)-24.5W LED SPX 35	METALUX	14SR-LD2-30-C-UNV-LB35-CD1	RECESSED	1'x4' TROFFER FIXTURE, HOUSING, WHITE ENAMEL FINISH, DIMMING DRIVER, 120V INPUT
B	(1)-24.5W LED SPX 35	METALUX	324-LED/60-120-XXX-0A	PENDANT	28" OUTER DIAMETER X 14" INNER DIAMETER PENDANT FIXTURE, FINISH AS SELECTED BY ARCHITECT, 120V INPUT
C	(1)-24.5W LED SPX 35	METALUX	ED25-500-80-35-UB-4-XX-XX UNV-MD-1-SC-XXX-FL	SURFACE	2.5"W X 4' FIXTURE WITH ULTRA BEND LENS, FINISH AS SELECTED BY ARCHITECT, 90 MINUTE EMERGENCY BATTERY BACKUP, 120V INPUT
CE	(1)-24.5W LED SPX 35	METALUX	ED25-1000-80-35-UB-4-XX-XX UNV-MD-1-SC-XXX-FL-B	SURFACE	2.5"W X 4' FIXTURE WITH ULTRA BEND LENS, FINISH AS SELECTED BY ARCHITECT, 90 MINUTE EMERGENCY BATTERY BACKUP, 120V INPUT
D	(1)23W LED SPX 35	METALUX	4SLTP403500-UNV	PENDANT	LENSED STRIP LIGHT, 120V INPUT
X	LED	SURE-LITE	CAX-6-00-R-W	WALL/CEILING	DIE-CAST ALUMINUM EXIT SIGN, WHITE BODY AND FACE WITH 6" x 3/4" RED LETTERS, SINGLE OR DOUBLE FACE AS REQ'D, ARROWS AS SHOWN, 120V INPUT

- LIGHTING FIXTURE NOTES:**
- ALL FIXTURES SPECIFIED WITH EMERGENCY BACKUP SHALL BE PROVIDED WITH AN ADDITIONAL 120V/1P SIGNAL TO MONITOR NORMAL POWER FAILURE.
 - CONNECT ALL EXIT SIGNS AHEAD OF ALL SWITCHING AND LIGHTING CONTROL.
- AUTOMATIC LIGHTING CONTROL NOTES:**
- FURNISH AND INSTALL ALL OCCUPANCY SENSORS AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER'S WRITTEN WIRING INSTRUCTIONS.
 - COORDINATE QUANTITY OF RELAYS & POWER PACKS IN THE FIELD AND PROVIDE AS REQUIRED.
 - VERIFY ALL OCCUPANCY SENSORS TO BE FURNISHED AND INSTALLED WITH LOW VOLTAGE OR LINE VOLTAGE INPUTS. LINE VOLTAGE OCCUPANCY SENSORS SHALL BE INSTALLED IN PARALLEL FOR THE COMMON CONTROL OF A SINGLE SPACE.

DEMOLITION NOTES:

- THESE DEMOLITION PLANS ARE INTENDED TO BE USED AS A GUIDE TO THE CONTRACTOR. ALL DEMOLITION WORK REQUIRED, OR NECESSARY FOR THE INSTALLATION OF NEW WORK OR THE REMOVAL OF EXISTING EQUIPMENT, IS HEREBY INCLUDED, WHETHER SHOWN ON THESE PLANS OR NOT. REFER TO DRAWINGS OF ALL TRADES FOR ADDITIONAL WORK, AND COORDINATE IN THE FIELD.
- THE CONTRACTOR SHALL VERIFY ACTUAL SITE CONDITIONS PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR SHALL INCLUDE ALL DEMOLITION WORK NECESSARY FOR THE EFFECTIVE INSTALLATION AND PERFORMANCE OF NEW SYSTEMS. THE CONTRACTOR SHALL ALSO INCLUDE TEMPORARY REMOVAL AND REINSTALLATION OF EXISTING WORK WHEREVER NECESSARY. THE OWNER SHALL NOT ACCEPT EXTRA COSTS ASSOCIATED WITH THE DEMOLITION AND/OR TEMPORARY REMOVAL/REINSTALLATION WORK FROM THE CONTRACTOR.
- THIS CONTRACTOR SHALL REMOVE ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON THE DEMOLITION PLANS, OR THAT ARE NO LONGER NEEDED BY THE OWNER. ALL EXISTING WIRING AND CONDUIT WHERE NO LONGER REQUIRED SHALL BE REMOVED BACK TO EXISTING PANEL. ALL EXISTING DISCONNECTED CIRCUITS NOT BEING REUSED SHALL BE TURNED OFF AND LABELED "SPARE" WHERE CONDUITS ARE INACCESSIBLE, REMOVE WIRE AND ABANDON CONDUITS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY POWER IS BEING PROVIDED TO ALL EXISTING EQUIPMENT REQUIRED TO REMAIN IN SERVICE. RECONNECT ALL DISTURBED FACILITIES WHICH ARE EXISTING TO REMAIN AND PLACE THEM IN OPERATIONAL CONDITION.
- REMOVE ALL WIRING DEVICES FROM WALLS TO BE DEMOLISHED. REMOVE EXISTING LIGHT SWITCHES WHERE NO LONGER REQUIRED. REUSE ALL EXISTING CONCEALED CONDUIT AND RECESSED DEVICE BOXES WHERE POSSIBLE. ABANDON BOXES IF THEY ARE IN EXISTING WALLS TO REMAIN. PATCH WALLS OVER ABANDONED BOXES TO MATCH ADJACENT SURFACES.
- REMOVE ABANDONED OUTLET BOXES, SURFACE METAL RACEWAY AND CONDUIT THAT WOULD BE EXPOSED, AND REPAIR DISTURBED SURFACES TO MATCH ADJACENT AREAS.
- MAJOR PIECES OF EQUIPMENT ARE TO BE TURNED OVER TO THE OWNER FOR HIS USE, OR AT THE OWNER'S DISCRETION, REMOVED FROM THE SITE AND DISPOSED OF, IF NO LONGER REQUIRED.
- PATCH ALL WALLS TIGHT AT REMOVALS. MAINTAIN FIRE RATINGS AS REQUIRED.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF WALL FINISHES AND CEILINGS TO BE REPLACED. ALL EXISTING DEVICES TO REMAIN SHALL BE TEMPORARILY DISCONNECTED AND REINSTALLED, WHERE TEMPORARY REMOVAL IS NOT POSSIBLE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF EXISTING EQUIPMENT IN PLACE.

SYMBOL LIST & ABBREVIATIONS	
	LIGHT FIXTURE - REFER TO LIGHTING FIXTURE SCHEDULE
	LIGHT FIXTURE WITH INTEGRAL BATTERY BACKUP - REFER TO LIGHTING FIXTURE SCHEDULE
	EXIT SIGN - REFER TO LIGHTING FIXTURE SCHEDULE
	OCCUPANCY SENSOR - LETTER DENOTES TYPE OF SENSOR TO BE INSTALLED. WATTS/STOPPER OR APPROVED EQUAL. CI = CI-300, CI1 = CI1-355 PASSIVE INFRARED SENSOR PW = PW-100 PASSIVE INFRARED WALL SWITCH SENSOR
	POWER PACK TRANSFORMER AND RELAY, OUTPUT RELAYS RATED 20A, BALLAST OR INCANDESCENT, PROVIDE QUANTITY OF RELAYS AS REQUIRED, REFER TO AUTOMATIC LIGHTING CONTROL NOTES
	DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, GROUNDED GFI INDICATES GROUND FAULT INTERRUPTION, TR INDICATES TAMPER-RESISTANT WITH UL LISTED TAMPER-RESISTANT SHUTTER, REFER TO AUTOMATIC LIGHTING CONTROL NOTES
	DOUBLE DUPLEX RECEPTACLE (QUAD)
	VOICE/DATA/VIDEO OUTLET - 4" X 4" OUTLET BOX WITH 1-1/4" STUBBED UP ABOVE NEAREST ACCESSIBLE CEILING. VERIFY LOCATION IN FIELD, NUMERAL INDICATES # OF RJ45 JACKS
	CLASSROOM PHONE OUTLET - 4" X 4" OUTLET BOX WITH 1-1/4" STUBBED UP ABOVE NEAREST ACCESSIBLE CEILING. VERIFY LOCATION IN FIELD, PROVIDE FACEPLATE WITH RJ45 JACK
	WFI ACCESS POINT OUTLET - 4" X 4" OUTLET BOX IN CEILING PROVIDE FACEPLATE WITH RJ45 JACK
	SINGLE POLE SWITCH
	DISCONNECT SWITCH
	208/120V PANELBOARD
	FIRE ALARM CONTROL PANEL
	FIRE ALARM AUDIO/VISUAL DEVICE
	FIRE ALARM VISUAL DEVICE
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM HEAT DETECTOR
	FIRE ALARM HEAT DETECTOR (LOCATED ABOVE CEILING)
	FIRE ALARM SMOKE DETECTOR
	FIRE ALARM COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
	CLOCK/SPEAKER (COORDINATE TYPE WITH SCHOOL)
	WIRE & CONDUIT, CONCEALED IN CEILING OR WALL
	WIRE & CONDUIT, HOMERUN TO PANEL
	CONNECTION TO EQUIPMENT
	AIR HANDLING UNIT
	CU
	E
	EXISTING TO REMAIN
	EF
	EXHAUST FAN
	R
	EXISTING TO BE REMOVED
	RL
	RELOCATE EXISTING TO THIS LOCATION, COORDINATE EXACT LOCATION IN FIELD, PROVIDE NEW WIRING TO EXTEND EXISTING WIRING AS REQUIRED, MATCH EXISTING WIRING TYPE AND SIZE
	WP
	WEATHERPROOF

ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS

Drawings and general provisions of the contract including general and supplementary conditions addenda and other division 01 specification section apply to these documents.

Drawings are diagrammatic. Sizes and locations of equipment are shown to scale where possible, but may be distorted for clarity on the Drawings. Final locations shall be as required or directed.

Light and power system riser diagrams and schematic diagrams generally indicate equipment and connections to be used for various systems. System conduit and wiring shall be as required. Provide all work shown on diagrams whether or not it is duplicated on the plans.

SCOPE OF WORK

In general the work includes, but is not limited to the following:

1. Raceways and Installation Components.
2. Wire and Cable.
3. Panelboard (Modifications)
4. Fuses.
5. Safety and Disconnect Switches.
6. Motor Installations.
7. Grounding.
8. Control Equipment
9. Testing.
10. Seismic Restraints.
11. Furnishing of Access Doors.
12. Furnishing and setting of all sleeves through the floors, roof, and walls where required, including waterproofing, and fireproof sealing, and cap flashing.
13. Cutting, drilling and boring associated with electrical work.
14. Prime painting, where required for electrical equipment and installation.
15. Provisions for temporary light and power.
16. Final connection of all equipment unless otherwise noted.

QUALITY ASSURANCE AND STANDARDS

The complete installation shall be in accordance with NUCC (The State Building Code).

Contractor shall be responsible for securing all permits and obtaining all necessary approvals. He shall complete all required forms and pay all associated fees.

SUBMITTALS

The Contractor shall submit shop drawings for all systems and components with such promptness as to cause no delay in his own work or that of another contractor.

EXAMINATION OF EXISTING CONDITIONS ON PREMISES

Before submitting his bid, this Contractor shall visit the site of the work and shall thoroughly familiarize himself with the existing conditions affecting the work. By the act of submitting a bid, the Contractor shall be deemed to have made such an examination, to have accepted such conditions, and to have made allowance therefor in preparing his bid. No additional compensation will be granted on account of extra work made necessary by the Contractor's failure to investigate such existing conditions. Verify all grades, elevations, dimensions, and clearances at the site.

COORDINATION OF WORK WITH OTHER TRADES

The contractor shall coordinate the work of this Section with the work of all other Contracts and all the Utility Companies. It shall be so arranged that there will be no delay in the proper installation and completion of all work.

INSPECTION AND TESTS

The entire wiring system must test free from shorts and open circuits. Every ground shall be tested for compliance with standards listed below.

PROTECTION, MAINTENANCE AND PRODUCT HANDLING OF ELECTRICAL EQUIPMENT

Electrical equipment shall be delivered and stored at the site, properly packed and crated until finally installed.

Provide effective protection against damage for all material and equipment during shipment and storage at the Project Site.

This Contractor shall be responsible for the maintenance of all installed equipment and systems until final acceptance by the Owner.

GUARANTEE

This Contractor shall guarantee in writing to the Owner that all work installed by him shall be free of defects in workmanship and materials and that all apparatus will develop the capacities and of work by the Architect, any defects in workmanship, materials or performance appear, he will remedy characteristics as indicated, and that, if during a period of not less than two years from date of final approval them without any cost to the Owner.

ACCESSIBILITY AND MEASUREMENTS

All work shall be installed so as to be readily accessible for operation, maintenance, and repair. Minor deviations from the plans may be made to accomplish this, subject to approval.

Before ordering any material or doing any work, the Contractor shall verify all measurements at the Building, and shall be responsible for the correctness of same as related to the work under this Contract.

TEMPORARY LIGHT AND POWER

The Electrical Contractor shall furnish, install, and maintain the temporary lighting and power system for all Contractors. Provide temporary power for all construction areas as required. The use of electricity shall be kept to a minimum.

The Owner will pay for all energy required by the temporary lighting and power system.

Provide all wiring, supports, lamp sockets, receptacle sockets and any other materials, supplies or equipment necessary for temporary light and power system.

Ground fault protection required by OSHA.

Install separate stringer circuits for lighting and receptacles. Provide one lamp socket and one duplex receptacle for every 400 square feet of general construction area. (Approximately 20 feet on centers).

Provide sufficient supplementary temporary lighting to permit proper execution of the work.

Keep the temporary lighting and power system operational commencing fifteen (15) minutes before the established starting time of that trade which starts work earliest in the morning and ending fifteen (15) minutes after the established quitting time of that trade which stops work latest in the evening.

IDENTIFICATION NAMEPLATES

Identify and mark all electrical equipment to meet OSHA standards and as specified herein.

Unless otherwise noted, nameplates shall be black laminate with white letters of uniform size consisting of reasonably large capital letters, 3/16 inch minimum.

SEISMIC RESTRAINTS

Provide lateral restraints for all electrical equipment installed on project, i.e., Battery racks, ballast racks, cable trays, conduit, generators, lighting fixtures, panels and transformers. Typically, lateral restraints shall consist of angle iron and "uni-strut" bracing, cross bracing, hanger rods, anchor clips, expansion shield anchor bolts, etc. The purpose of the restraints is to provide resistance to lateral (horizontal) movement during earthquake.

All equipment shall be anchored to the floor, ceiling structure or walls.

All suspended equipment, wiring trough and conduit trade size 2-1/2" or larger shall have (lateral) horizontal bracing capable of resisting 50% of the equipment weight. Horizontal bracing shall be placed at each point where vertical supports are specified or required.

All life safety equipment, and conduit shall have lateral bracing capable of resisting 100% of the equipment weight.

Recessed and surface mounted light fixtures must be secured to the ceiling system so as to resist 50% of their weight laterally, i.e. a 40 pound fixture must be resistant to a 20 pound lateral force. Life safety lighting fixture must be secured to the ceiling system so as to resist 100% of their weight laterally. Suitable anchor clips must be provided for all lay-in fixtures. Surface mounted fixtures must be supported at two points in addition to the outlet box.

RACEWAYS AND INSTALLATION COMPONENTS

The requirements of this Section apply to raceway work specified elsewhere in these specifications.

The work includes the providing of completely coordinated grounded raceway systems complete with boxes, fittings, flexible connections to vibrating equipment and accessories, as specified and as required for a complete system.

Raceways and fittings shall be manufactured by Triangle or approved equal by Allied or Republic.

Rigid steel conduit shall be full weight steel pipe, hot dip galvanized inside and outside, threaded, minimum 3/4 inch.

Intermediate metal conduit (MC) shall be intermediate steel pipe, hot dip galvanized, threaded, minimum 3/4 inch.

Rigid steel and MC conduit fittings shall be standard threaded couplings, locknuts, bushings, and elbows. Material shall be steel or malleable iron only.

Rigid steel conduit shall be used for underground installation; in wet, damp or wash down locations; for exposed runs on the exterior of the building; embedded in concrete or masonry or below concrete that is in contact with earth.

Intermediate metal conduit (MC) may be used in place of rigid steel in dry locations only.

Liquid-tight flexible steel conduit (Seal-tite) shall be zinc coated, consist of flexible galvanized steel tubing over which is extruded a liquid-tight sheathing of polyvinyl chloride (PVC). Conduit shall be provided with a continuous copper bonding conductor wound spirally between the convolutions.

For indoor applications, boxes shall have a gray enamel finish. For outdoor and damp locations, boxes shall be galvanized.

Liquid-tight flexible metal conduit fittings shall incorporate a threaded grounding cone, a steel or plastic compression ring, and a gland for tightening. Connectors shall have insulated threads.

Individual conduit hangers, shall be designed for the purpose, and have pre-assembled closure bolt and nut, and provisions for receiving hanger rod.

Multiple conduit (trapeze) hangers shall be not less than 1-1/2 by 1-1/2 inch, 12 gauge steel, cold formed, lippled channels. Hanger rods shall be not less than 3/8-inch diameter steel.

All anchors types shall be a type approved for the purpose and intended use.

Provide and assume responsibility for locating and maintaining in proper position all penetrations and sleeves required for the work.

Openings through floors and walls in which cables, conduits, or pipe pass shall be sealed by U.L. classified smoke and fire stop fittings, and have an hourly rating equal to the fire rating of the floor or wall. Fittings shall be similar to O-Z/Gedney Type "CFS" or "CFS".

Penetrations through fire-rated floors in which wiring for floor service outlets are routed shall be sealed by U.L. classified smoke and fire-stop fittings, and shall have an hourly rating equal to the floor ratings. Fittings shall be similar to O-Z/Gedney Type "PITS".

Junction, splice and pull boxes shall be made of code gauge sheet steel with removable covers fastened with brass or stainless steel screws, except as noted, and will include insulated supports for cables. Box dimensions shall conform to N.E.C. requirements.

Provide junction, splice and/or pull boxes as noted or as required to facilitate pulling of conductors or in raceway runs that have more than three (3) 90-degree bends.

Boxes shall have a gray enamel finish.

Wireways shall be as manufactured by Square D, General Electric, or approved equal.

Wireways shall be square, brake-formed of code gauge steel, furnished in standard 10-foot sections with knockouts as required. Wireways shall be of the screw cover type and all necessary offset and elbow fittings. They shall have a gray enamel finish. Size shall be as required for proper cable fill.

Install raceway and installation components as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and in accordance with the recognized industry practices, to ensure that products serve intended function.

Raceway supports shall be provided by means of ceiling trapeze, strap hangers, or wall brackets. Use structural steel angles or channels, or manufactured steel support system. Spacing of supports shall be as per NEC and per manufacturer's recommendations but in no case shall exceed 8'-0" on centers. Provide U-bolts at each floor level for riser raceways and anchor to acceptable supports. Secure raceways to supports with pipe straps or U-bolts.

Mechanically join all metal raceways, enclosures and junction boxes to assure continuity.

Branch circuit conduits shall be supported by the existing structure.

Provide expansion-deflection fittings at expansion joints in accordance with manufacturer's recommendations. Expansion-deflection fittings shall be used for all trade sizes 1-1/4" or larger. For trade sizes up to 1" in size, a suitable length of flexible conduit (or liquid-tight flexible conduit) with sufficient slack for movement and grounding conductor fastened on each side of joint shall be permitted.

Liquid-tight flexible steel conduit shall be used in damp locations for final connections to motor terminal boxes, transformers, and other vibrating equipment in damp and dry locations.

In general, cutting and core drilling is to be avoided. Where it becomes necessary, locations are to be coordinated with other trades, the Owner. There is to be no cutting or core drilling without prior approval.

Provide junction, splice and pull boxes where required to facilitate installation of wiring, whether or not shown on Drawings. Size boxes according to code and provide interior partitions, insulated supports, hot dip galvanized angle iron braces, screw-on one-piece or split covers, ground connectors, and other accessories as required.

WIRE AND CABLE

The work includes providing wire and cable complete with all accessories in accordance with Drawings and Specifications and as required for a complete system. Wiring size referenced in this Section shall be AWG, except as noted.

This project has been designed for copper conductors. Aluminum conductors are not acceptable and shall not be used. Cable shall be manufactured by Triangle or approved equal by Carol or Guardian Products.

No. 10 and smaller conductors shall be ASTM Standard, solid, copper; and, No. 8 and larger conductors shall be ASTM standard, stranded copper.

Minimum conductor size shall be No. 12 for lighting and power and No. 14 for control and alarm. Increase wire sizes as required for long runs to overcome voltage drop.

Communications and signal wiring shall conform to the recommendations of the manufacturer's communication and signal systems and shall be specified in respective Sections of these Specifications.

"THWN" or "XHHW" insulation shall be used for interior branch circuit and feeder wiring. Rating shall be 90°C in dry locations and 75°C in wet locations.

Green colored insulated wire shall be used for all grounding applications.

Phase wires shall be color-coded as follows:

- 1. 120/208 volt system: Black for A phase, Red for B Phase, Blue for C Phase

Neutral conductors shall be white for 120/208 volts.

Provide O-Z/Gedney Type "CSB" series or approved equal seal fittings between the wire and conduit for all cable and wire entering the building from underground, including service cables.

Not more than 3 current carrying conductors shall be in one (1) conduit unless otherwise indicated. Provide one neutral conductor for each 3 phase 4 wire homerun to a panelboard unless otherwise noted.

MC cable shall comply with the NEC article 330. MC cable shall be as manufactured by AFC or approved equal by Guardian Products.

MC cable shall include a green insulated ground wire of the same size as the other conductors.

Run MC cable in dry hollow metal partitions and above suspended ceilings. Install cable as slack span; do not pull tight. Maintain at least 6" clearance between parallel runs of light and power wiring to avoid inductive coupling. Maintain at least 24" clearance from hot water and steam piping. Provide conduit sleeves through walls and partitions that obstruct horizontal passage of wiring, and seal sleeves after installation of cables. Cable shall be secured by approved staples, hangers or similar fittings independent of ceiling grids or supports.

MC cable shall be used in conjunction with conduit. Cable shall only be permitted for single phase circuits in hollow metal walls and above accessible ceilings. Single phase cable runs shall be gathered into three phase conduit homeruns. In no case shall cable enter directly into panelboards.

Secure MC cable to ceiling structure at intervals not to exceed 6 feet and within 12 inches of every outlet box, junction box, or fitting.

Make wire splices electrically and mechanically secure. Install small wire connectors so that no bare conductor is exposed. Tighten bolts on large conductor connectors so that conductor is deformed, but do not break strands of wire. Use compression tool with proper die for compression connectors in accordance with manufacturer's recommendations, so that conductors are deformed but not broken. Apply insulation over splice so that insulation thickness is at least 1-1/2 times that on conductor. Lap applied insulation at least 1" over conductor insulation so that no bare conductor is exposed.

In general, all feeders No. 8 and larger shall be continuous from point of origin to equipment being served. Splices shall only be used where necessary and with prior written approval of the Engineer. Terminate conductors on terminal strips in equipment where terminal strips are used. Provide appropriate connectors, or hook connectors around terminal screws as required.

Provide encapsulated splice kits (3-M type 85 series or approved equal) for all splices in areas subject to moisture, including wet locations inside buildings and underground handholes, manholes, and buried junction boxes; install splice kit in accordance with manufacturer's recommendations and make splice waterproof. Apply sealing putty to surround each cable. Install mold body so that resin covers each cable sheath by a minimum of one inch.

All copper conductors No. 8 and larger shall be terminated, spliced, and tapped with color-keyed compression connectors, as manufactured by Thomas & Betts Co., Series 54000, Ideal Industries Series 87000, or approved equal. The manufacturer's recommended tooling shall be used. Mechanical type connectors shall not be used.

All copper conductors No. 10 AWG & smaller shall be terminated and spliced with Ideal Industries wing-nut wire connectors or approved equal compression connectors. The flame-retardant thermoplastic insulated type shall be used to isolate the terminal from other metal parts and equipment.

Use insulating boots supplied for compression connectors or fill joint with "Scotchfill" insulating putty and serve (3) 1/2" lap layers of "Scotch" #33 electrical tape.

WIRING DEVICES AND INSTALLATION COMPONENTS

All local switches near doors shall be located at strike side of door as finally hung, whether so indicated on the Drawings or not.

Height of outlets from finished floor to centerline of outlet shall be as follows:

Bracket Outlet in toilets: as required to clear top of mirror or behind medicine cabinet if light is part of cabinet.

Receptacle outlets: 1'-6", unless otherwise noted

Receptacle outlets in mechanical spaces: 3'-8"

Motor controllers: 5'-0"

Safety and disconnect switches: 5'-0"

Panelboards (Lighting and Power): 6'-6" above finished floor to top

Exit Lights, where wall mounted: 2" above door frame to bottom of light

* The top of the wall device is to be even with the top of the door frame (47"-2") rough-in outlet box accordingly.

Wiring devices and installation components shall be manufactured by Hubbell, Bryant Electric, Pass & Seymour, Leviton, Cooper Industries-Arrow Hart, or General Electric.

Switches shall be heavy-duty specification grade, toggle, quiet type, fully enclosed in composition cases, color as selected by Architect at shop drawing stage. They shall be rated 20 amp, 120/277 volt, AC.

Receptacles shall be the grounding type, composition base, meeting NEMA standards, publication WD-1-1971, color as selected by Owner.

Duplex Convenience Receptacles shall be 20 amps, 125 volts, 2 pole, 3 wire, U ground slot type, Hubbell No. BR20.

Ground Fault Interrupter Duplex Receptacles: 20 amps, 125 volts, 2 pole, 3 wire, Hubbell No. GF-5352, with weatherproof cover, Hubbell No. 5321.

Where more than one switch or receptacle is being installed, provide multiple gang plates for number of devices as required.

Provide barriers in multi-gang boxes servicing multiple 277 volt circuits so as not to introduce 480 volts into a section.

Plates shall be beveled stainless steel satin chrome finish #302, of minimum .035" thickness.

Manual motor starters shall be Allen Bradley Bulletin 600 or approved equal by Square D or General Electric and shall be horsepower rated, and voltage rated for the motor load.

Wallboard and masonry shall fit snugly to all sides of outlet boxes, gromt and patch as required.

Convenience receptacles shall be mounted with ground pole up, except those mounted above counter levels.

Local wall switches and receptacles shall be mounted vertically unless otherwise indicated.

PANELBOARD (MODIFICATIONS)

Panel circuit breaker overcurrent protective devices shall be as scheduled on the Drawings and as specified. All breakers shall be bolted-on thermal magnetic type.

Panel circuit breakers shall be rated for 10,000 RMS symmetrical amperes minimum interrupting rating at 120/208 volts. Provide higher ratings as required or as scheduled on the Drawings.

Provide handle-locking attachments for all circuit breakers serving emergency lights, exit lights, clocks, and other functions indicated.

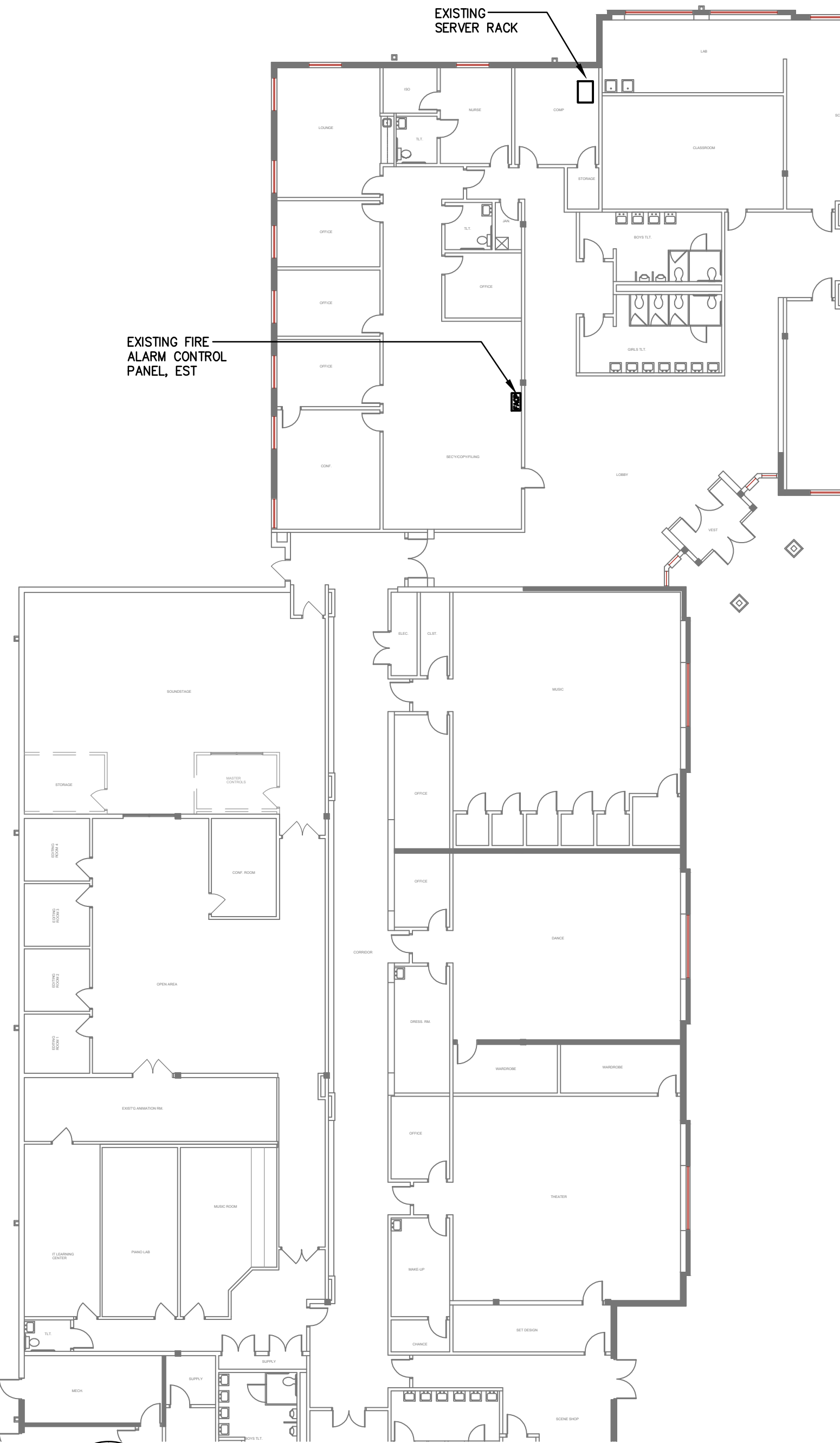
Furnish and install a typewritten circuit directory. Hand written will not be accepted.

GROUNDING

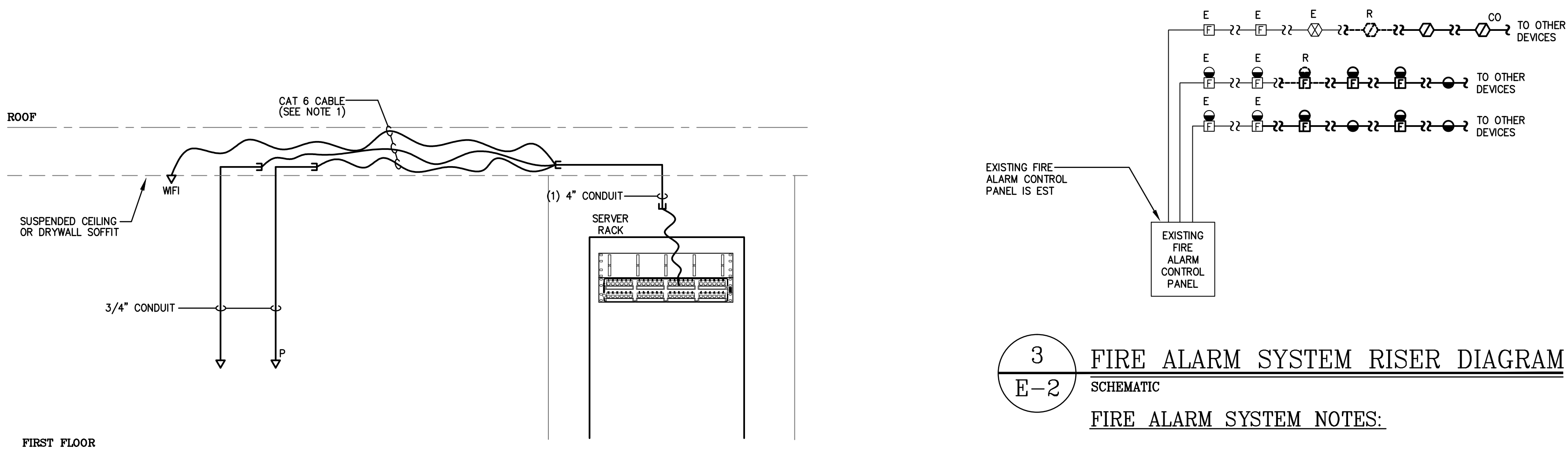
Grounding equipment shall be manufactured by Chance, Burndy, Cadwell, Thomas & Betts, Blackburn, or O-Z/Gedney.

The complete electrical installation shall be permanently and effectively grounded in accordance with all code requirements, whether or not such connections are specifically shown or specified. Measured resistance to ground shall be 5 ohms, maximum. All parts of the electrical installation shall be grounded.

Ground conductors shall be sized in accordance with the National Electrical Code. Ground conductors shall be continuous without splices.



1 OVERALL FLOOR PLAN - ELECTRICAL
E-2 SCALE 1/16" = 1'-0"



3 FIRE ALARM SYSTEM RISER DIAGRAM
E-2 SCHEMATIC

FIRE ALARM SYSTEM NOTES:

1. PROVIDE ALL WIRING AS RECOMMENDED BY MANUFACTURER. ALL WIRING SHALL BE IN CONDUIT. FIRE ALARM LABELED MC CABLE MAY BE USED IN CONCEALED LOCATIONS WHERE PERMITTED BY CODE.
2. ALL EQUIPMENT AND WIRING SHALL MATCH EXISTING.
3. CONTRACTOR IS RESPONSIBLE FOR INSURING THAT COMPLETE SYSTEM MEETS ALL APPLICABLE CODES AND FOR OBTAINING FINAL APPROVAL FROM LOCAL FIRE INSPECTOR(S).
4. PROVIDE AT EACH LOCATION SHOWN, AUDIO/VISUAL DEVICES WITH OUTPUT LEVELS AS RECOMMENDED BY MANUFACTURER FOR THE SPACE TO COMPLY WITH ADA & CODE REQUIREMENTS. PROVIDE ADDITIONAL DEVICES TO THOSE SHOWN F/AS REQUIRED TO MEET LEVELS.
5. FIRE ALARM SHOP DRAWINGS MUST BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER AND AFTER THEY HAVE BEEN REVIEWED AND APPROVED BY A/E, THEY MUST BE SUBMITTED TO AHJ FOR THEIR APPROVAL PRIOR TO RELEASE OR INSTALLATION OF ANY WORK. FIRE ALARM SHOP DRAWING MUST CONTAIN SCALES OF PROPORTION THAT INCLUDE LOCATIONS OF ALL INITIATING, NOTIFICATION DEVICES, CONTROL UNIT, ANNUNCIATORS AND POWER SUPPLIES. INDICATE CANDLEA RATING FOR ALL VISUAL DEVICES AND DB RATINGS FOR AUDIBLE DEVICES. PROVIDE MOUNTING DETAILS FOR ALL DEVICES. INCLUDE MANUFACTURER'S CUT SHEET FOR EACH TYPE OF DEVICE, A COMPLETE FIRE ALARM RISER, VOLTAGE DROP AND BATTERY CALCULATIONS, A COMPLETE SEQUENCE OF OPERATION AND ALL INFO REQUIRED BY IBC 9071.1.
6. UPON COMPLETION OF FIRE ALARM WORK, PROVIDE A RE-ACCEPTANCE TEST OF THE ENTIRE SYSTEM PER NFPA 72.

2 TELEPHONE/DATA RISER DIAGRAM
E-2 SCHEMATIC

NOTES:

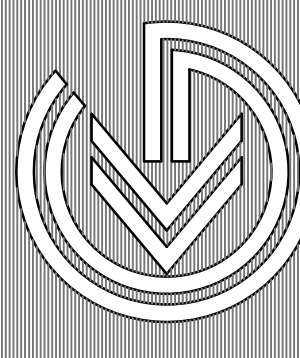
1. PROVIDE CAT6 PLENUM RATED CABLE TO EACH VOICE/DATA/PHONE AND WIFI OUTLETS. PROVIDE CABLE WITH RJ45 JACK AND TERMINATE ON BOTH ENDS. PROVIDE (1) CAT 6 CABLE FOR EACH RJ45 JACK IN OUTLET.
2. PROVIDE TERMINATION OF ALL CAT6A CABLES ON PATCH PANELS IN SERVER RACKS. PATCH PANELS ARE EXISTING IN SERVER RACK.
3. ALL CONCEALED WIRING SHALL BE APPROVED PLENUM RATED CABLE HARNESS TO BUILDING STEEL WITH TIE WRAPS 6" ON CENTER. ALL WIRING CONCEALED IN WALLS AND INACCESSIBLE CEILING AND IN AREA OF EXPOSED CONSTRUCTION SHALL BE IN CONDUIT.
4. PROVIDE FIRE RATED THROUGH WALL PENETRATIONS, EZ-PATH SERIES 444 WITH EZD444ES AND EZD044AS ACCESSORIES, WHERE CONDUITS PENETRATE FIRE RATED WALLS AND FLOORS, COORDINATE WITH ARCHITECTURAL DRAWINGS.
5. ALL VOICE/DATA WIRING AND JACKS SHALL BE PERMANENTLY LABELED TO MATCH CORRESPONDING PATCH PANEL TERMINATION NUMBERS.

PRINT DATE: 1/7/19

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TITLE: SPECIFICATIONS AND DIAGRAMS - ELECTRICAL

DRAWING DATE:
19 APR 2019

REVISION DATE:

DRAWN BY:

COMMISSION NO.:

5559B

E-2