## HITMAN STUDIOS

# 2116 AISQUITH ST. BALTIMORE, MD 21218 RECORDING STUDIO

#### SCOPE OF WORK

- CONVERSION OF WAREHOUSE INTO RECORDING STUDIO AND BUSINESS OFFICE - NEW MECHANICAL, ELECTRICAL, AND PLUMBING AS PER DRAWINGS

## TYPE IIB - UNPROTECTED **BUSINESS STUDIO**

#### **CODE ANALYSIS**

#### . APPLICABLE CODES

A. INTERNATIONAL BUILDING CODE - 2015

B. MARYLAND BUILDING PERFORMANCE STANDARDS - 2015

C. INTERNATIONAL BUILDING CODE 2015 w. BALTIMORE CITY AMENDMENTS

D. NATIONAL ELECTRIC CODE - 2014

E. INTERNATIONAL FUEL GAS CODE - 2015

F. INTERNATIONAL MECHANICAL CODE - 2015 G. INTERNATIONAL PLUMBING CODE - 2015

H. BALTIMORE CITY BUILDING, FIRE, & RELATED CODES - 2015

I. INTERNATIONAL FIRE CODE - 2015

J. INTERNATIONAL ENERGY CONSERVATION CODE - 2015

K. NFPA 101 LIFE SAFETY CODE - 2015

L. MARYLAND STATE ACCESSIBILITY CODE

2. FIRE PROTECTION SYSTEMS

NO SPRINKLER PROVIDED

3. USE GROUP/OCCUPANY AND CONSTRUCTION TYPE A. USE GROUP/OCCUPANCY - EXISTING BUILDING

PROPOSED USE : B

B. CONSTRUCTION TYPE II-B - IBC TABLE 601

C. BUILDING HEIGHT LIMITATION (IBC TABLE 504)

ALLOWABLE HEIGHT = 55 FT (1 STORY) - W/ OUT SPRINKLERS

ACTUAL HEIGHT = 1 STORY (20' +/-)

D. BUILDING AREA LIMITATION - IBC TABLE 504.3 - 506.1

TOTAL BUILDING ALLOWABLE AREA = 23,000 SF ACTUAL AREA =7,348 SF

I. FIRE RESISTANCE RATINGS PHASE

A. PER IBC TABLE 601 FOR CONSTRUCTION TYPE VA & IBC TABLE 715.4 PRIMARY STRUCTURAL FRAME EXTERIOR BEARING WALLS INTERIOR BEARING WALLS NON BEARING INTERIOR WALLS NON BEARING EXTERIOR WALLS FLOOR CONSTRUCTION 0 HR

ROOF CONSTRUCTION 4. FIRE RESISTANCE RATING PROVIDED PHASE

RATING UNIT PARTITIONS STAIR PARTITIONS FIRE ESCAPE CORRIDOR FIRE BARRIERS FLOORS

0 HR

#### 5. MEANS OF EGRESS ANALYSIS PHASE

A. OCCUPANT LOAD CALCULATION - IBC TABLE 1004.1.2

A-BUSINESS/OFFICE = 3,417 SQ FT (GROSS)/ 100 SQ FT = 34 OCCUPANTS \*INCLUDES ALL STUDIO ROOMS, LOUNGE AREAS, KITCHENETTE, ETC.

-ALL POINTS WITHIN BUILDING ARE WITHIN 100 FT. OF AT LEAST 1 EXIT

B. EGRESS WIDTH PER OCCUPANT IBC TABLE 1005.1

C. NUMBER OF EXITS IBC 1021.2 = 2

ACTUAL NUMBER OF EXITS = 2 D. CORRIDORS WIDTH AS PER TABLE 1020.2

E. <u>COMMON PATH OF TRAVEL LIMIT:</u>
-COMMON PATH OF EGRESS TRAVEL = 100 FT.

-ZONE = B

-MAP = 0009

-PARCEL = 0000

-SECTION = 13 -BLOCK = 4010F

-LOTS = 002B-BUILDING CLASSIFICATION = COMMERCIAL

LOT INFORMATION:

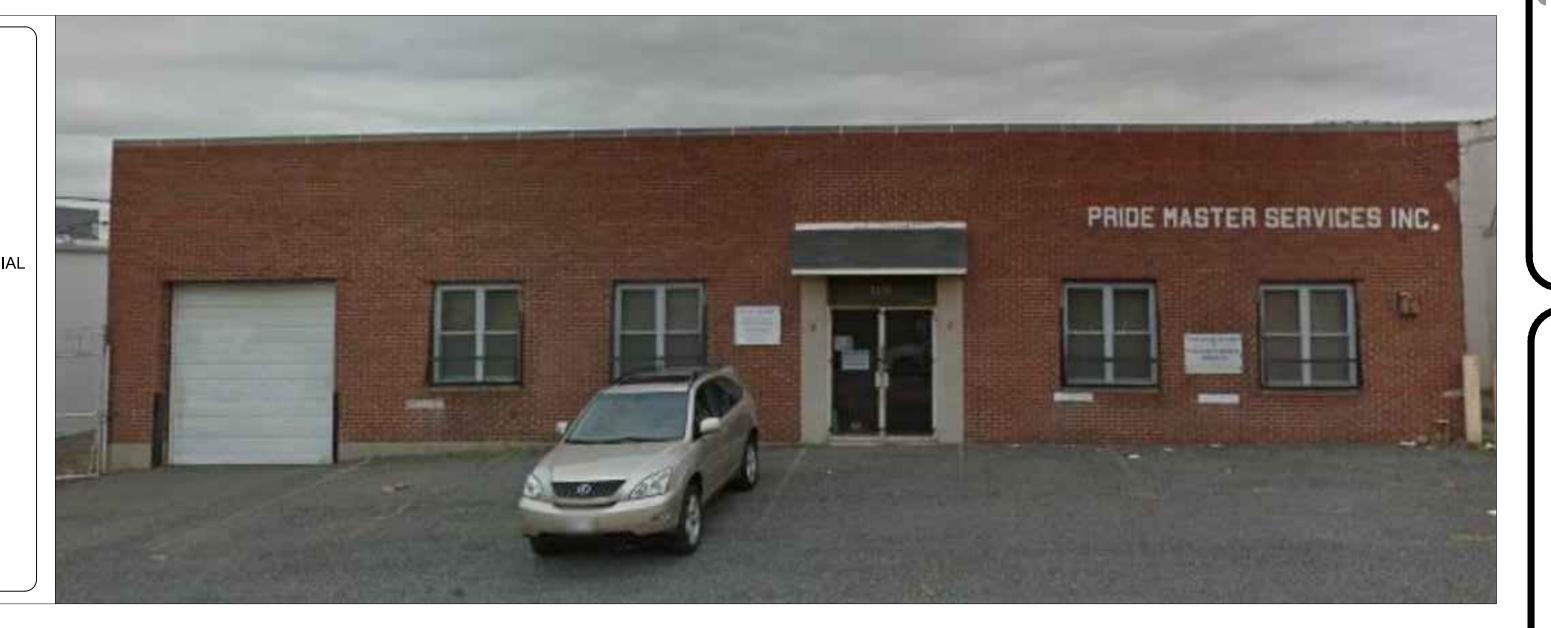
-BUILDING USE = BUSINESS -LOT SIZE = 10,155 SF

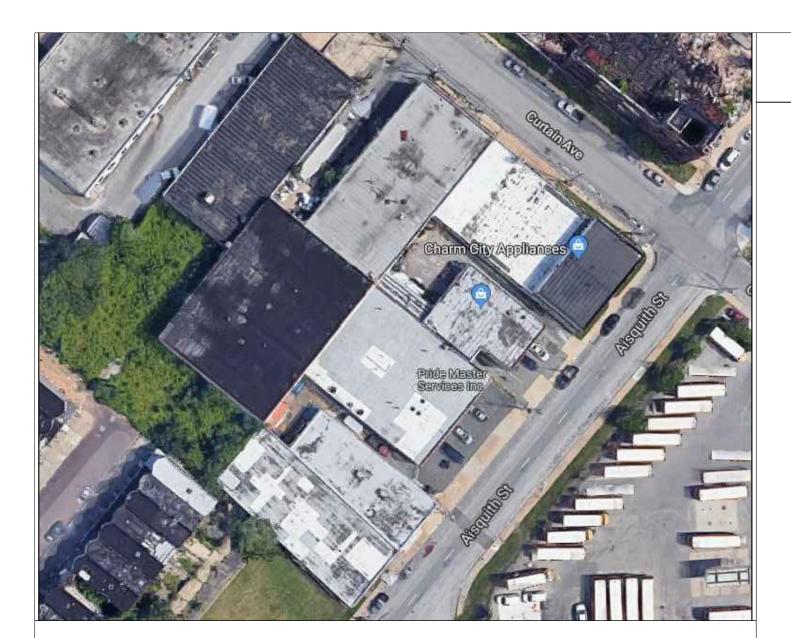
-EX. BUILDING LOT COVERAGE = 74% -PRO. BUILDING LOT COVERAGE = SAME

-PROPERTY BUILT = 1950

-EXISTING BUILDING HEIGHT = +/- 20' -EXISTING ENCLOSED BUILDING AREA = 7,348+/- SF

-PRO. ENCLOSED BUILDING AREA = 7,348 +/- SF





## SITE MAP/VICINITY MAP



## **DRAWING INDEX:**

#### **CS - COVER SHEET**

**ARCHITECTURAL** 

A-1 - SITE PLAN A-2 - FLOOR PLANS

A-3 - ELEVATIONS A-4 - DEMO PLAN

A-5 - WINDOW AND DOOR SCHEDULE

A-6 - REFLECTIVE FLOOR PLAN/

FINISHING SCHEDULE

A-7 - SECTIONS

A-8 - STRUCTURAL PLAN

**MECHANICAL** 

M-1 - MECH. SPECS & SCHEDULES M-2 - MECH. PLAN

**ELECTRICAL** 

E-1 - ELEC. SPECS & SCHEDULES

E-2 - ELEC. PLAN E-3 - LIGHTING PLAN

PLUMBING

P-1 - PLUMB. SPECS & SCHEDULES P-2 - PLUMB. PLAN

STUDIO DESIGN - INDEX

- DEMOLITION PLAN

-STUDIO FLOOR PLAN AND DETAIL

- FLOATING FLOOR PLAN

- CEILING BLOCKING PLAN AC02.2 - CEILING FRAMING PLAN

- GYPSUM WALLBOARD FINISH PLAN & DETAIL

- ACOUSTIC SOFFIT FRAMING PLAN & DETAIL

- FLOOR PLAN & SCHEDULE

AC06 - ACOUSTIC CLOUD PLAN & DETAILS

- REFLECTED CEILING PLAN

- CONTROL ROOM A ELEVATIONS AC12 - TRACKING ROOM A ELEVATIONS

- CONTROL ROOM B ELEVATIONS

- TRACKING ROOM B ELEVATIONS

- CONTROL ROOM C ELEVATIONS

- TRACKING ROOM C ELEVATIONS

AC21 - BUILDING SECTIONS 1 AC22 - BUILDING SECTIONS 2

AC24 - CONTROL ROOM A SECTION

- CONTROL ROOM B SECTION

- CONTROL ROOM C SECTION AC27 - WALL SECTIONS

AC31 - DOOR SCHEDULE & DETAILS AC32 - TRIM, DETAILS

AC34 - DIFFSORBER DETAILS

- 6 BAY CREDENZA DETAILS - 4 BAY CREDENZA DETAILS

AC41 - ELECTRICAL PLAN

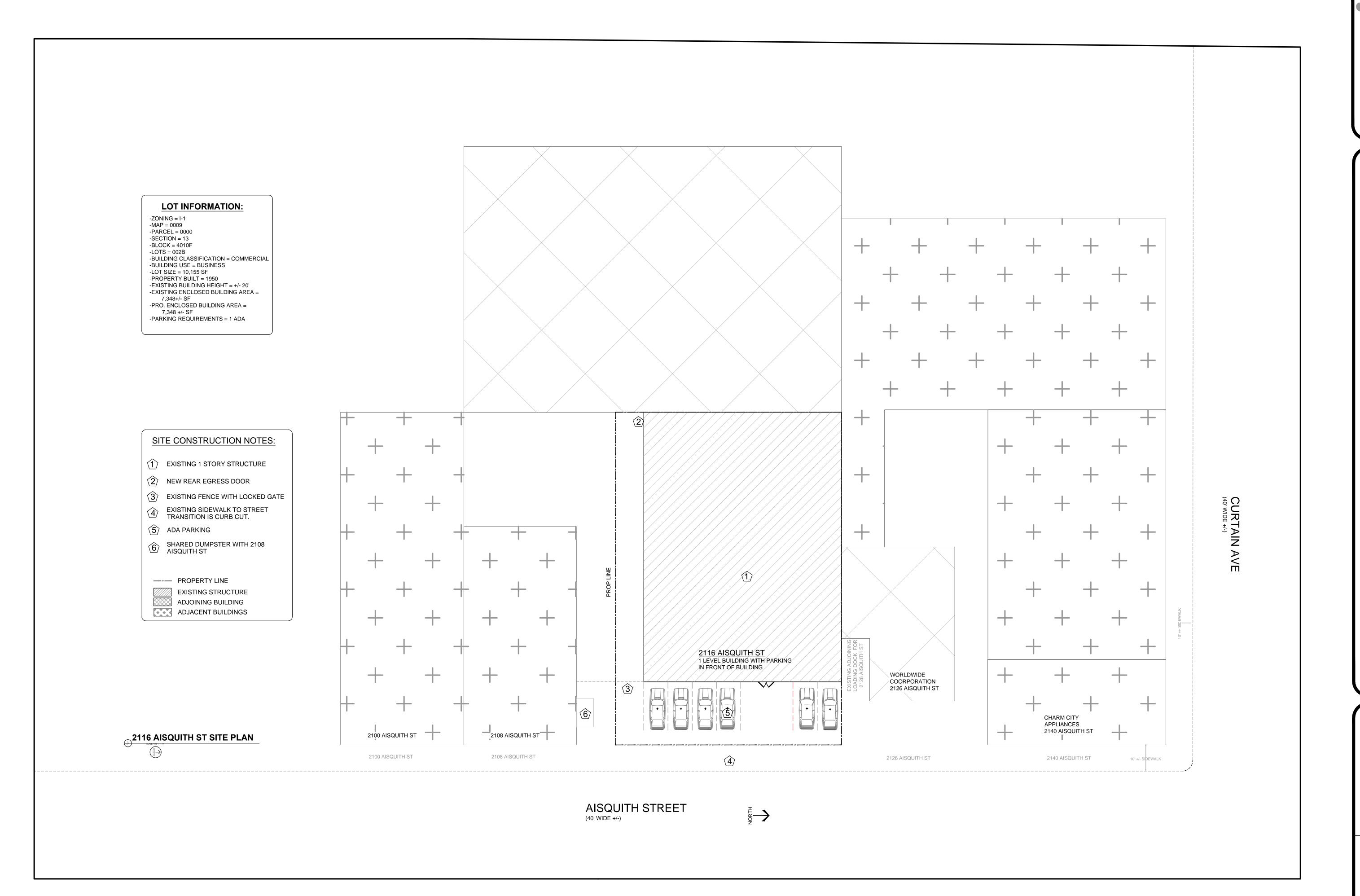
AC42 - LIGHTING PLAN - MECHANICAL PLAN

- SPECIFICATIONS 1

- TECHNICAL WIRING PLAN 1

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CERTIFICATION



NW2 ENGINEERS
3500 BOSTON ST., SUITE 226
BALTIMORE, MD 21224
(P)410.209.0587
(F)410.431.8970

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2116 AISQUITH ST. -11MORE, MD 21218 517E PLAN

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11/20/2018

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#### **DRAWING NOTES:**

EXISTING ENTRANCE: ADA DOUBLE GLASS DOORS WITH METAL ROLL CAGE;
TO BE REPLACED W/ NEW SOLID PANEL, ADA DOUBLE METAL DOORS. SEE DOOR SCHED

FACADE: EXISTING WINDOWS AND METAL SECURITY COVER TO REMAIN. REPAIR AND REPAINT AS NECESSARY

GARAGE DOOR: NEW INSULATED GARAGE DOOR IN EXISTING OPENING. 10' x 10'

REAR WALL: NEW REAR EGRESS DOOR

NEW ENTRY WAY/ VESTIBULE W/ALL WEATHER PROOF TILE FLOORING.

NEW ENTRY OFFICE: INSTALL SECURITY SLIDER/PASS THRU WINDOW WITH 9" COUNTER.

OFFICE SPACE (EXISTING ROOM).

CONFERENCE ROOM WITHIN EXISTING OFFICES (SEE DEMO PLAN) EXISTING WALL TO REMAIN. ADD 6' X 4' GLASS WINDOW, SILL HT 30"

ADA BATHROOM; NEW BATHROOM PLAN FROM MODIFIED EXISTING FIXTURE LAYOUT. SEE A-7 FOR ADA BATHROOM DETAILS.

EXISTING BATHROOM WITH FIXTURES IN EXISTING CONFIGURATION. NEW DOOR LOCATION

NEW BREAK AREA. CONSISTS OF SINK, REFRIGERATOR AND PANTRY CLOSET.

EXISTING GARAGE AREA TO BE CLEANED OUT AND PAINTED (WALLS AND CEILING)

NEW JANITOR SINK WITHIN NEW STORAGE / UTILITY CLOSET.

STUDIO PORTION DESIGN AS PER ALL WORK IN THIS AREA IS NEW. STUDIO PORTION DESIGN AS PER OTHERS. SEE DWGS AC1-AC12 FOR MORE INFO

#### **HEALTH DEPARTMENT NOTES**

1. All piping, conduit, bx cable, and similar construction will be either located inside a wall or installed with a minimum ¾-inch space from the wall or sealed to the wall.

2. All doors to the outside will be self-closing and rodent-proof.

3. A minimum of 50 foot-candles of shielded light will be provided at all work surfaces, and a minimum of 20 foot-candles of shielded light will be provided at all storage areas, toilet rooms, or changing rooms.

4. All restroom doors will be self-closing. All restrooms will be equipped with mechanical exhaust ventilation sized at a minimum rate of 2 cubic feet per minute per square foot of floor area and exhausting directly to the outside. 5. All exposed raw wood will be sealed or painted. All painting will be with

lead-free, non-metallic, easily cleanable paint or a high quality varnish. 6. All annular openings in construction will be sealed/caulked to within 1/32 of an inch.

7. All sink installations will be equipped with hot and cold running water through a mixing valve or combination faucet.

#### **GENERAL CONSTRUCTION NOTES**

**FOUNDATION PLAN:** 

1) CONTRACTOR TO VERIFY IN FIELD THE CONDITION AND ELEVATION OF BOTTOM OF EXISTING FOUNDATION.

FLOOR LEVELS:

1) CONTRACTOR TO VERIFY THE CONDITION OF EXISTING JOISTS & REPLACE ANY THAT ARE DAMAGED

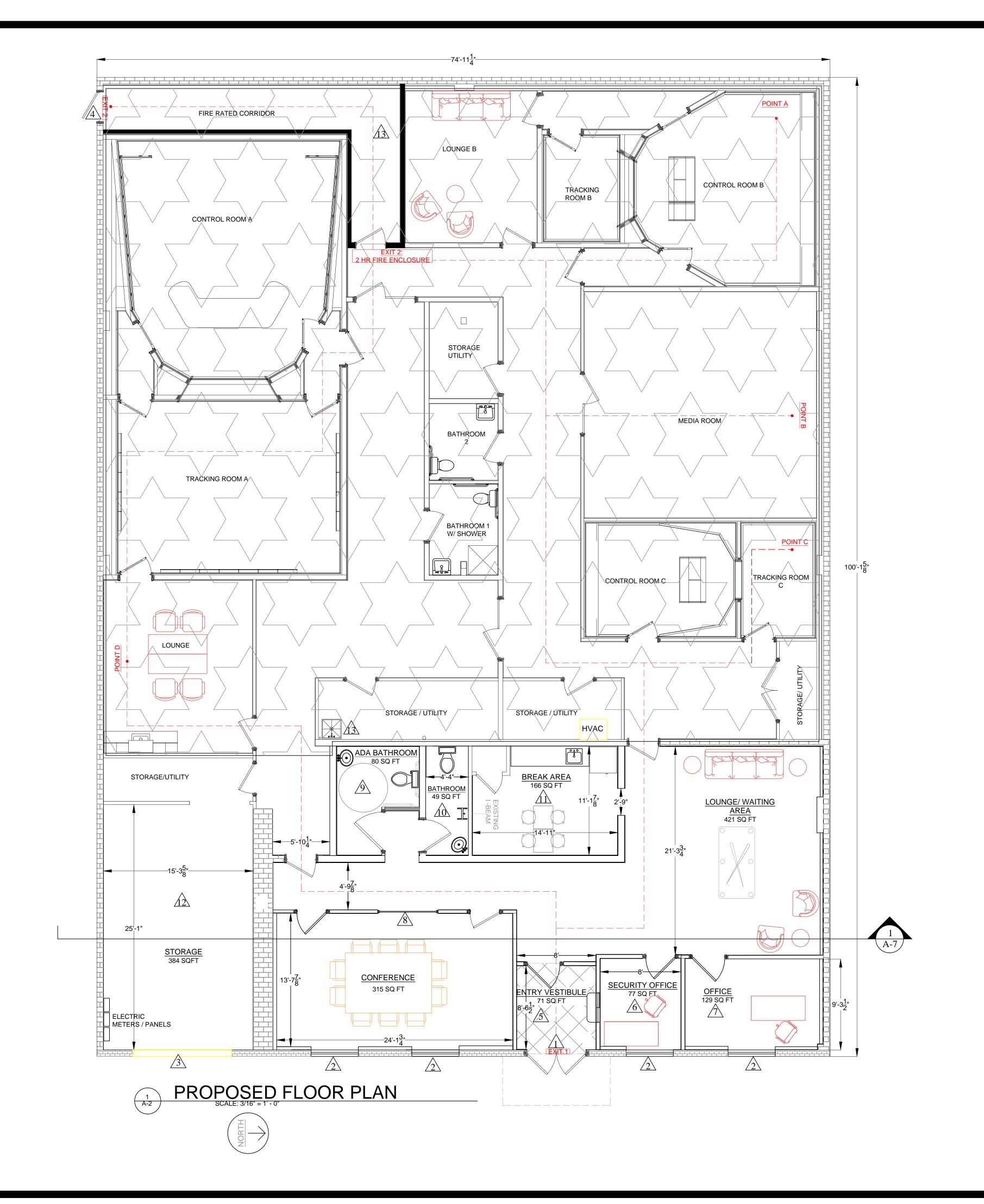
2) CONTRACTOR TO VERIFY ALL MEASUREMENTS & FLOOR TO CEILING HEIGHTS IN FIELD. **ROOF LEVEL:** 

1) CONTRACTOR TO VERIFY THE CONDITION OF EXISTING JOISTS & REPLACE ANY THAT ARE DAMAGED

## FIRE TRAVEL DISTANCE

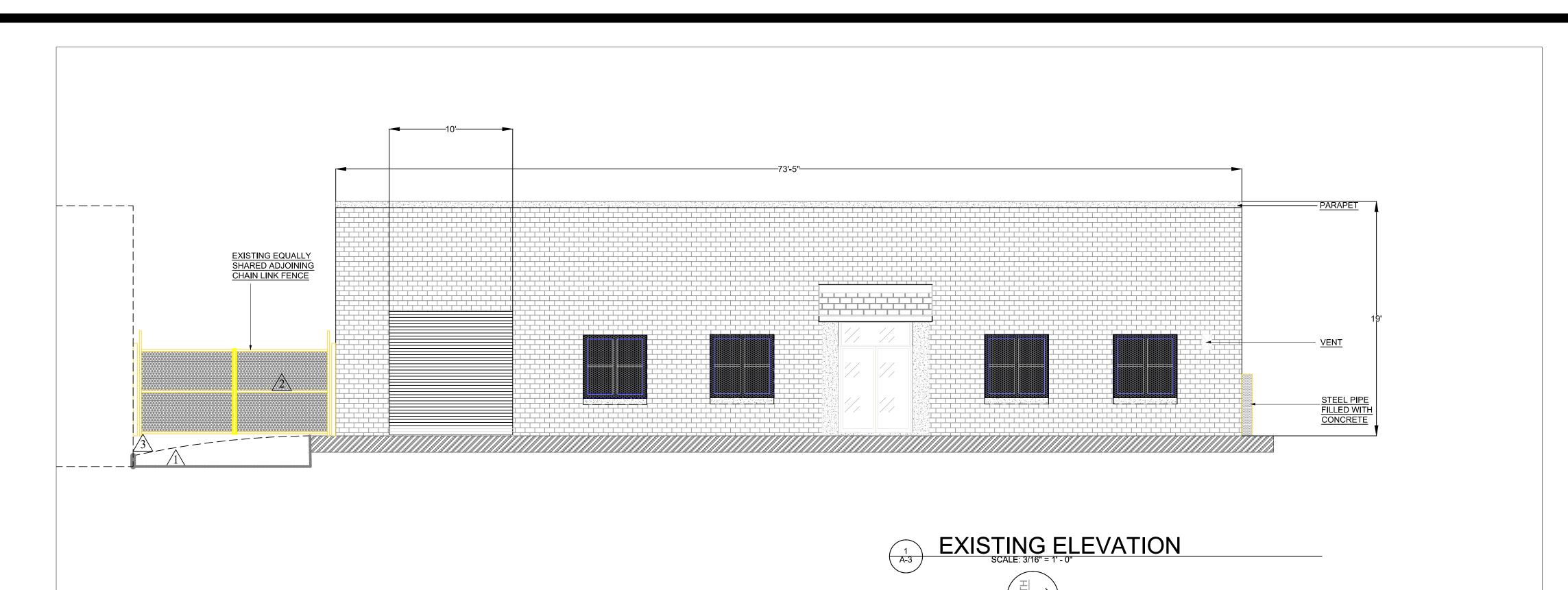
TRAVEL DISTANCE	POINT A	POINT B	POINT C	POINT D
EXIT 1	120'	86'	65'	84'
EXIT 2 1HR FIRE ENCLOSURE	40'	57'	95'	63'

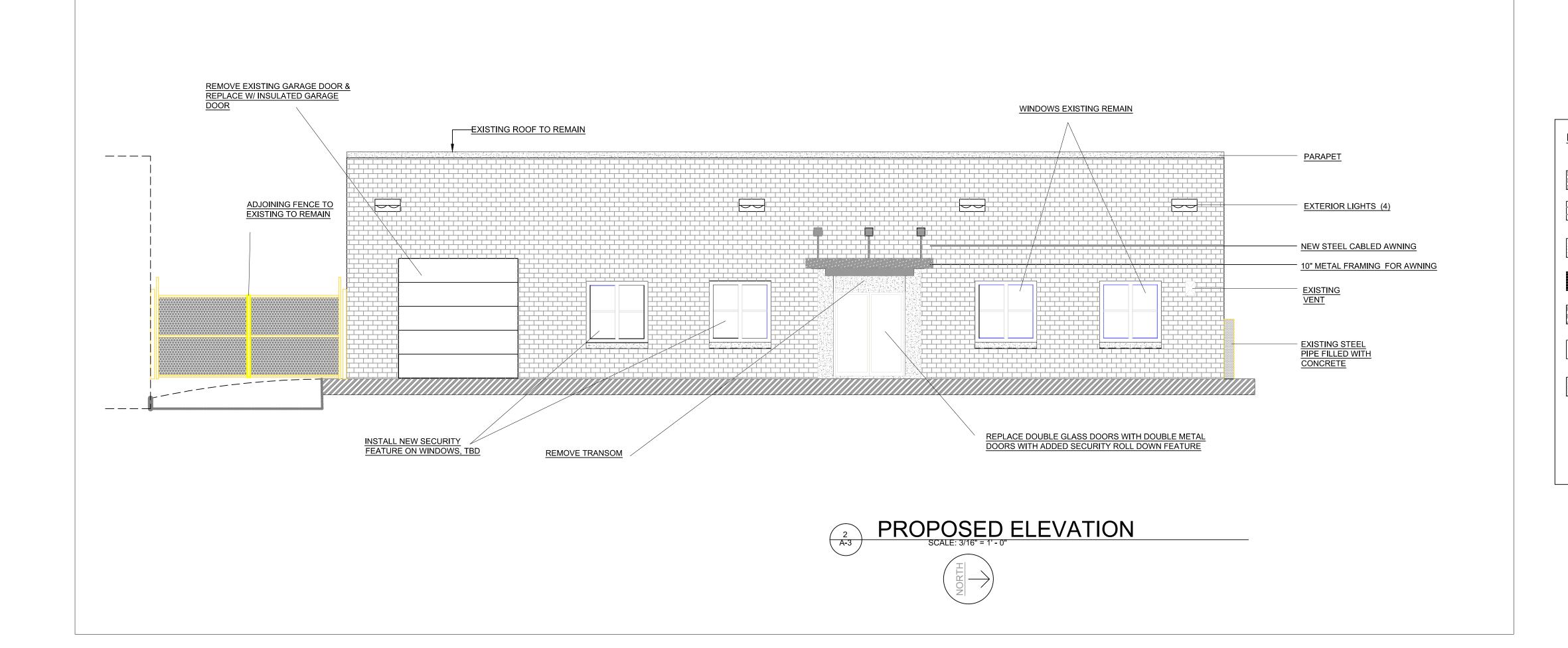
\* NOTE: TRAVEL DISTANCE WITHIN FIREWALL IS 40' - 0".



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# NW2 ENGIN 3500 BOSTON ST BALTIMORE, A

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UNEVEN PAVEMENT GRADE ON SHARED ACCESS ALLEY

**DRAWING NOTES**:

CHAIN LINK FENCE WITH DOOR, EXISTING TO REMAIN

ADJACENT BUILDING, 2108 AISQUITH, SHARES ACCESS ALLEY, FENCE & DUMPSTER

DRAWING LEGEND:

EXISTING BRICK WALL

EXISTING ROOF SHINGLES

EXISTING CONCRETE

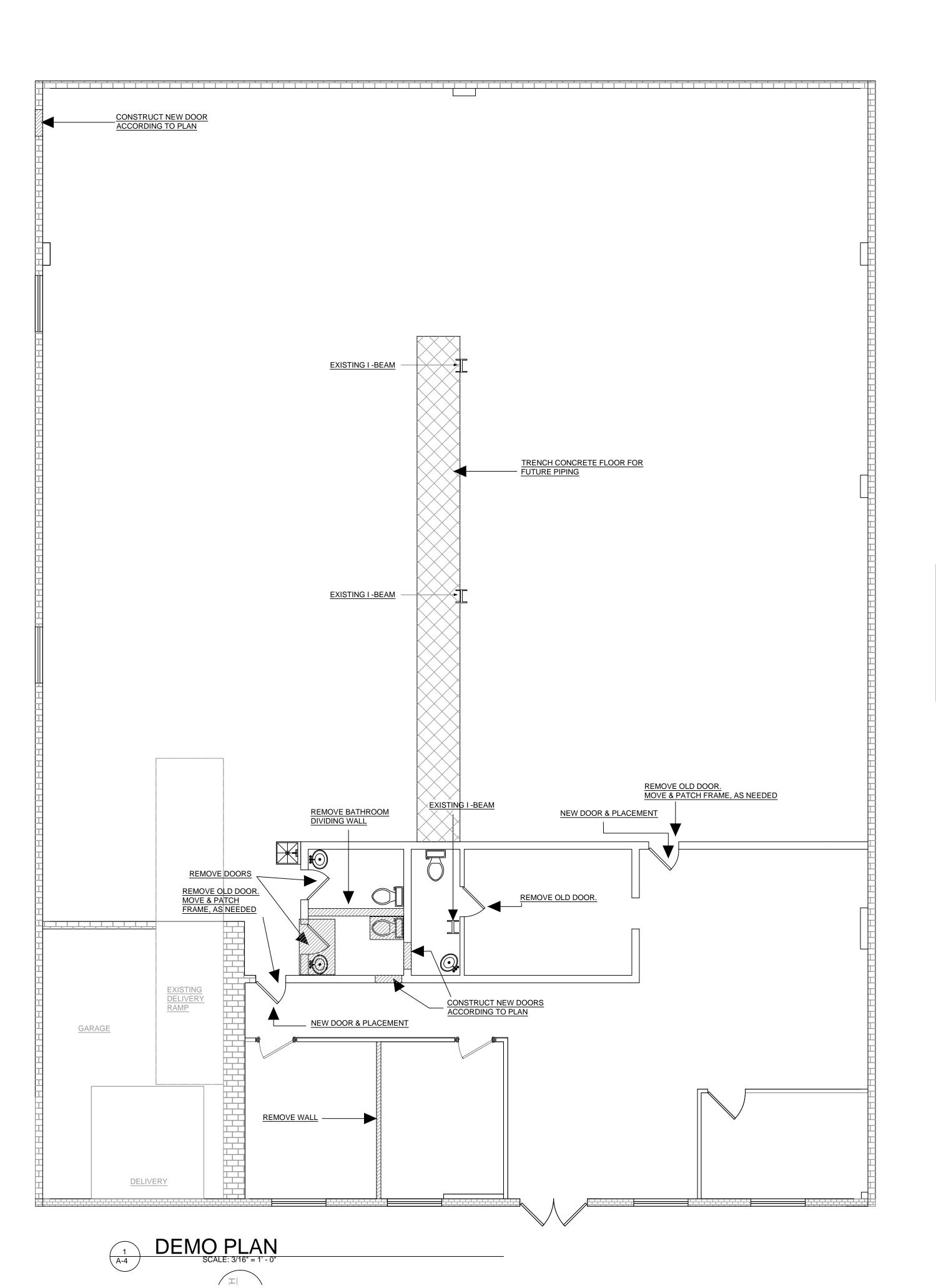
EXISTING FOUNDATION

EXISTING METAL SECURITY

EXISTING VENT

EXISTING BUMPER POST/ BOLLARD

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NW2 ENGINEERS
3500 BOSTON ST., SUITE 226
BALTIMORE, MD 21224
(P)410.209.0587
(F)410.431.8970

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DEMO LEGEND:

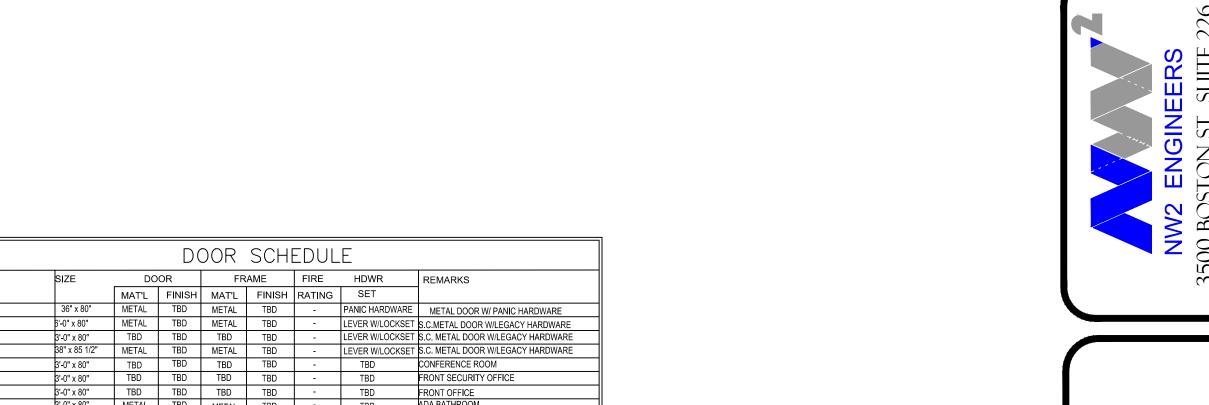
- DEMO WALLS

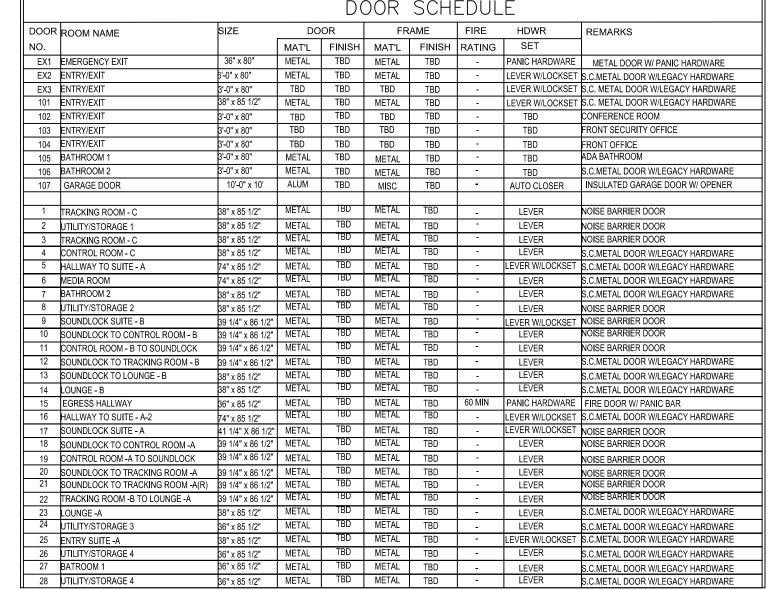
- DEMO FLOORS

- DEMO CEILINGS

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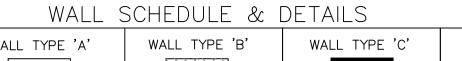


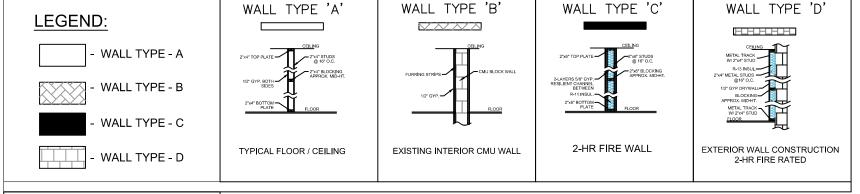
#### HARDWARE GENERAL NOTES:

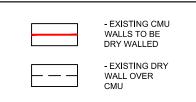
- 1. CONTRACTOR IS RESPONSIBLE FOR FIELD AND VERIFYING ALL DOOR OPENINGS AND ROUGH OPENING DIMENSIONS, FIELD VERIFY AND COORDINATE ACTUAL OPENING DIMENSIONS PRIOR TO FABRICATING OR ORDERING NEW DOORS AND FRAMES. COORDINATE FRAME
- CONTRACTOR IS TO VERIFY PAINT/STAIN OF ALL NEW DOORS AND DOOR TRIM W/OWNER AND/OR DESIGNER
- ALL DOORS TO BE PROVIDED WITH COMMERCIAL GRADE LEVERED HANDLE HARDWARE A.D.A. APPROVED. 4. A LATCH OR OTHER FASTENING DEVICE ON A DOOR SHALL BE PROVIDED WITH A LEVER, HANDLE, PANIC BAR, OR OTHER SIMPLE TYPE OF RELEASING DEVICE HAVING AN OBVIOUS METHOD OF OPERATION UNDER ALL LIGHTING CONDITIONS. DOORS SHALL BE OPEN ABLE WITH
- NO MORE THAN ONE RELEASING DEVICE. ALL DOOR CLOSERS ARE TO BE ADA COMPLIANT. REMOVE ALL EXISTING HARDWARE THAT IS TO BE REPLACED. PATCH EXISTING FINISHES TO MATCH EXISTING ADJACENT FINISH MATERIAL
- COLOR AND TEXTURE. REMOVE EXISTING DOOR STOPS AND HOLDERS THAT ARE TO BE REPLACED. HARDWARE; ALL WINDOWS TO BE PROVIDED WITH MANUFACTURERS TYPE OPERATIONS U.O.N.

THE FLOOR ON BOTH SIDES OF ALL DOORWAYS SHALL BE SUBSTANTIALLY LEVEL AND SHALL HAVE THE SAME ELEVATION ON BOTH SIDES OF THE DOORWAY FOR A DISTANCE AT LEAST EQUAL TO THE WIDTH OF THE WIDEST LEAF, PER SECTION 7.2.1.3 NFPA 101

NO.   HEIGHT WIDTH MAT'L FINISH	/	CATION	SIZI	E	FR/	AME	OPENING TYPE	U-VALUE	SHGC	REMARKS
↑ FRONT 60" 58" VINYL TBD DOUBLE HUNG EXISTING TO	10	CATION	HEIGHT	WIDTH	MAT'L	U-VALUE	31100			
	F	FRONT	60"	58"	VINYL	TBD	DOUBLE HUNG	-	-	EXISTING TO REMAIN
	1									





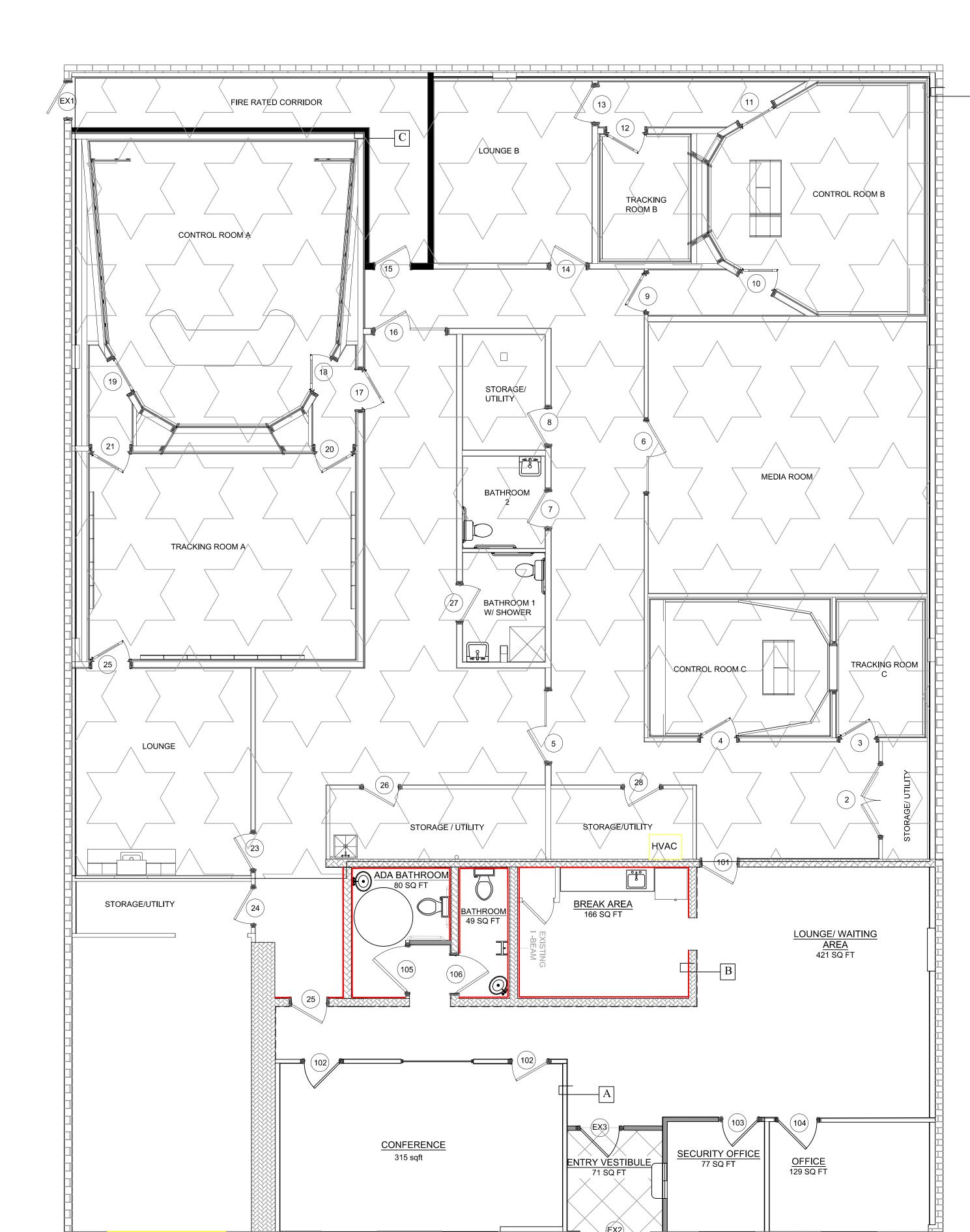


PARTITION & DOOR SCHEDULES

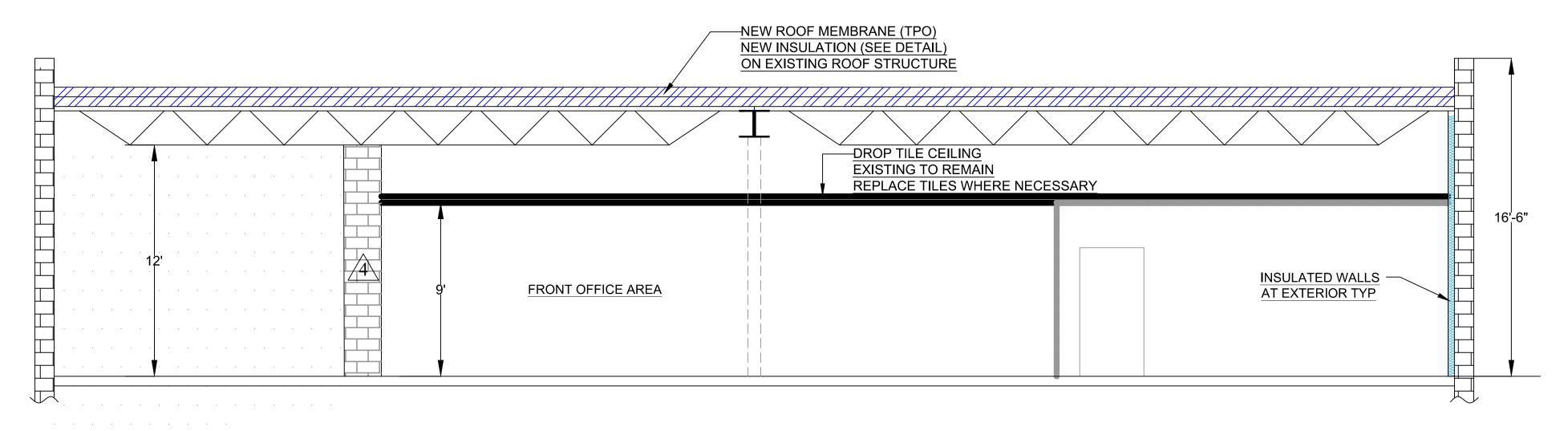


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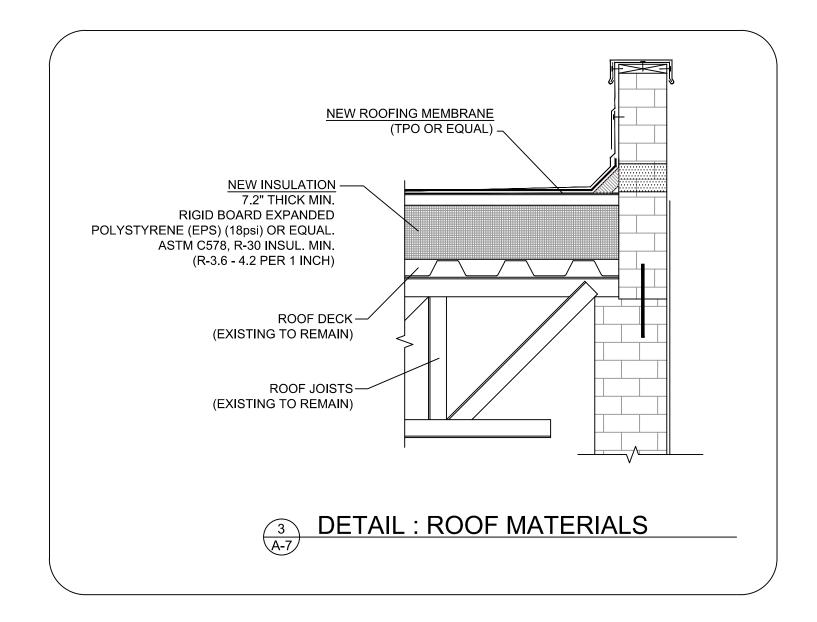
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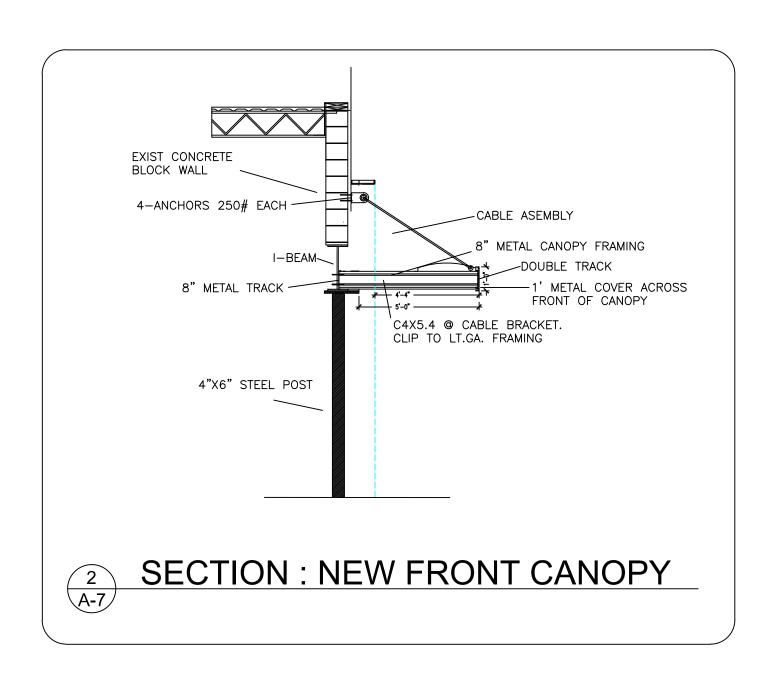






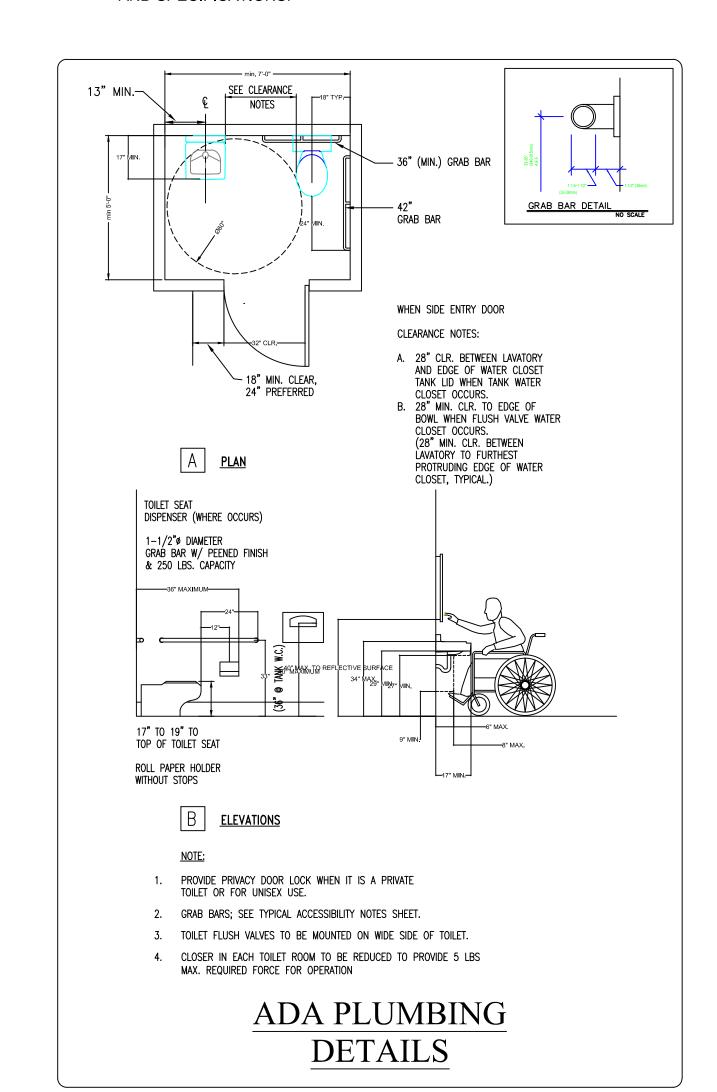






#### **GENERAL NOTES:**

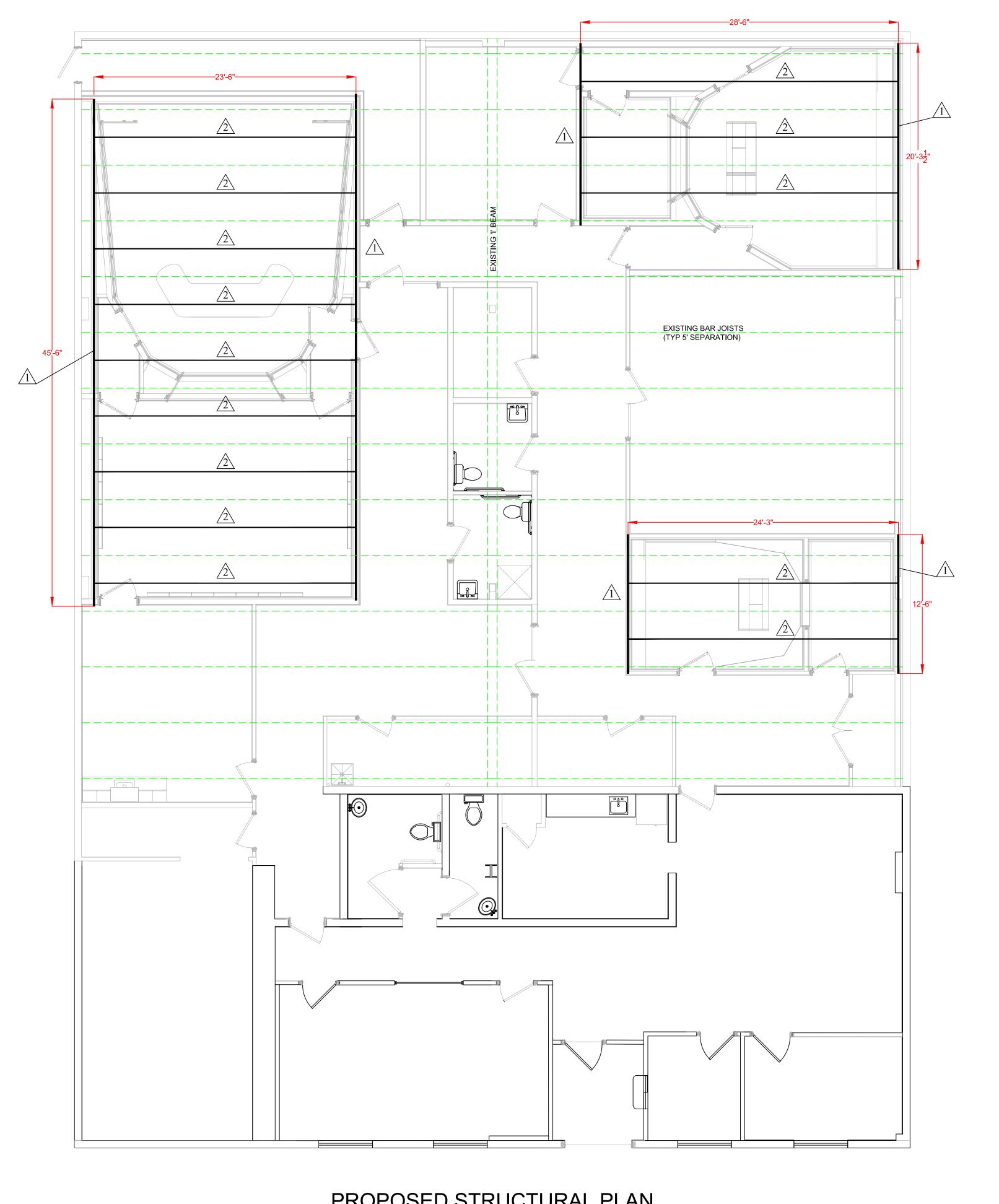
- 1. DO NOT SCALE DRAWINGS FOR PURPOSES OF CONSTRUCTION/ERECTION OF PARTITIONS.
- 2. ANY DEVIATION FROM/OR IN-FIELD ALTERATION TO THESE DRAWINGS/SPECIFICATIONS IS STRICTLY PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER/OWNER. ANY SUCH ALTERATIONS MADE WITHOUT PRIOR APPROVAL SHALL BE CORRECTED AND SHALL BE THE LIABILITY OF THE CONTRACTOR DIRECTLY RESPONSIBLE FOR THE ALTERATION.
- 3. ALL EXISTING STRUCTURES/CONDITIONS (AND RELATED DIMENSIONS AND NOTES) UTILIZED SHALL BE VERIFIED IN FIELD BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER.
- 4. ALL EXISTING COMPONENTS SHALL REMAIN AS IS, UNLESS NOTED OTHERWISE; I.E. CEILING FINISH/HEIGHT, WALL/FLOOR FINISH, ETC.
- 5. THE GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES TO AVOID CONFLICTS. PARTICULARLY WITH MECHANICAL, ELECTRICAL AND PLUMBING PRIOR TO INSTALLATION. UNRESOLVED DISPUTES AND CONFLICTS WILL BE RESOLVED BY THE ENGINEER OR OWNER, REGARDLESS OF WHICH ARE FIRST INSTALLED.
- 6. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH THE BOCA CODE AND LOCAL GOVERNING CODES AND ORDINANCES.
- 7. ALL PLUMBING WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL PLUMBING CODE AND ANY LOCAL GOVERNING CODES AND ORDINANCES.
- ALL ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY LOCAL GOVERNING CODES AND ORDINANCES.
- 9. ALL MECHANICS WORK SHALL BE IN COMPLIANCE WITH THE BASIC MECHANICAL CODE AND ANY LOCAL GOVERNING CODES AND ORDINANCES.
- 10. ALL PIPE AND DUCT PERFERATIONS THRU RATED FLOORS AND WALLS SHALL BE SEALED WITH MATERIAL OF THE SAME RATING.
- 11. UNLESS OTHERWISE NOTED, THE FOLLOWING LOADING IS DESIGN CRITERIA USED IN DETERMINING STRUCTURAL SIZES AND SPECIFICATIONS:





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STION AND DETAIL PLAN

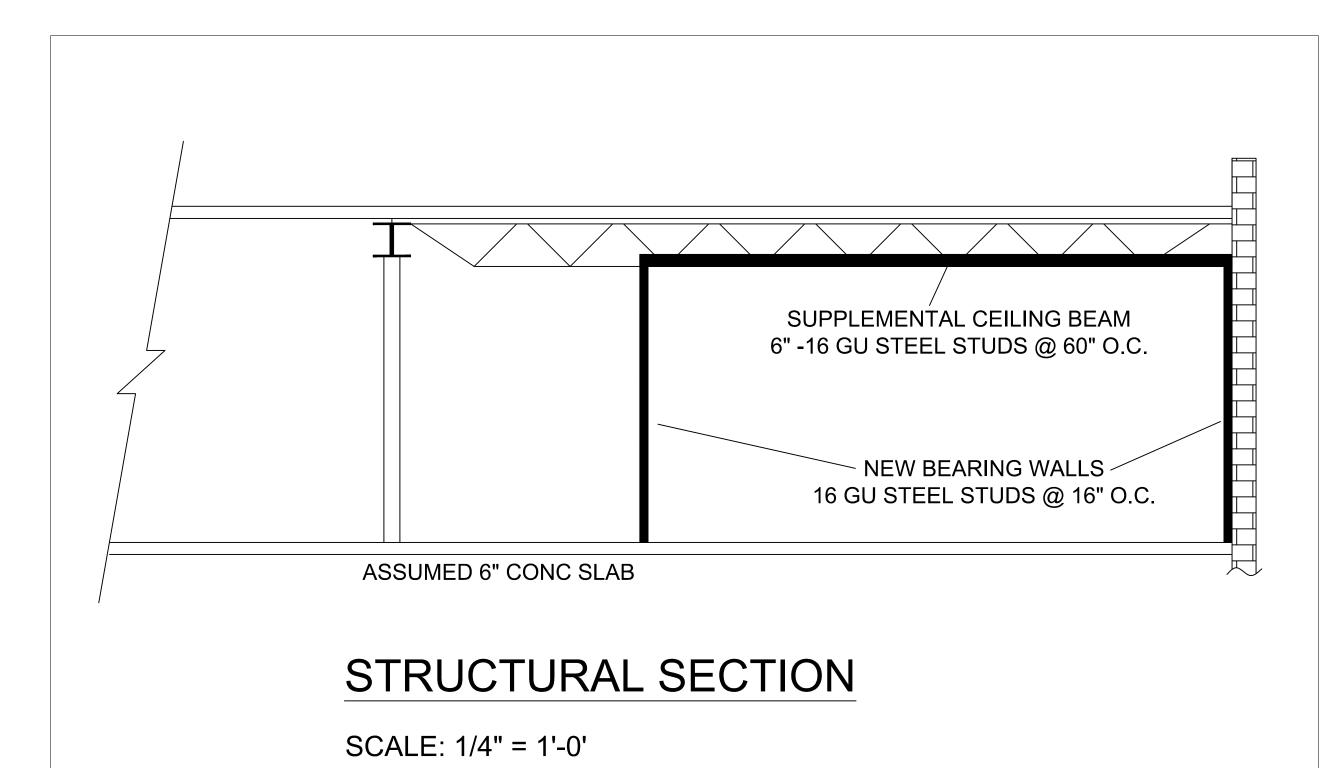
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## **DRAWING NOTES:**

BEARING STRUCTURAL STUD WALL
16 GUAGE 4" METAL STUDS @ 16" O.C.
FULL HEIGHT FROM FLOOR TO BAR JOISTS

SUPPLEMENTAL CEILING JOISTS FOR ACOUSTICAL CEILING WEIGHT 16 GUAGE 6" METAL STUDS



## PROPOSED STRUCTURAL PLAN

SCALE: 3/16" = 1'-0'

2116 BA STRU

#### MECHANICAL SPECIFICATIONS

#### SCOPE

THE WORK COVERED IN THIS SECTION OF THE SPECIFICATIONS CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, AND MATERIAL AND IN PERFORMING ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF THE COMPLETE AIR CONDITIONING AND HEATING SYSTEM. ALL WORK WILL BE COMPLETE AND IN ACCORDANCE WITH THIS SECTION OF THE SPECIFICATIONS AND APPLICABLE DRAWINGS, AND WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT.

#### SPECIFICATIONS AND DRAWINGS

THE MECHANICAL DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE AIR CONDITIONING AND HEATING SYSTEM. THESE SPECIFICATIONS AND DRAWINGS SHALL SUPPLEMENT EACH OTHER. EQUIPMENT, DUCTWORK AND PIPING SHALL FIT INTO THE SPACE ALLOCATED AND SHALL PROVIDE ALL NECESSARY CLEARANCE FOR SERVICING AND MAINTENANCE.

#### CODES AND STANDARDS

THE WORK SHALL COMPLY WITH THE LATEST APPLICABLE REQUIREMENTS FOR THE NFPA AND ALL LOCAL CODES GOVERNING THIS INSTALLATION AS A MINIMUM STANDARD UNLESS SPECIFICATIONS LISTED HEREIN OR SHOWN ON THE PLANS REQUIRE A HIGHER MINIMUM STANDARD.

#### PERMITS AND FEES

THE HVAC CONTRACTOR SHALL PROCURE ALL PERMITS AND PAY ALL FEES ASSOCIATED WITH THE PERMITTING AND INSPECTION PROCESS. THE HVAC CONTRACTOR SHALL ALSO ARRANGE FOR ALL INSPECTIONS. ELECTRICAL

#### THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, WIRE, SEAL-TIGHT, AND DISCONNECTIONS. UNLESS OTHERWISE STIPULATED, THE ELECTRICAL CONTRACTOR SHALL CONNECT THE AIR CONDITIONING UNITS. THE HVAC CONTRACTOR WILL FURNISH ALL MATERIALS, WIRE AND CONNECT THE THERMOSTAT.

#### VIBRATION AND INSULATION

BOTH THE AIR HANDLER UNIT AND CONDENSING UNIT SHALL BE PLACED ON VIBRATION ISOLATORS. THE HVAC CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ELIMINATE ALL EXCESSIVE VIBRATION AND OBJECTIONAL NOISE PROJECTED BY ANY EQUIPMENT INSTALLED UNDER THIS CONTRACT.

#### INSTALLATION

- THE HVAC CONTRACTOR SHALL SUPPLY ONE THERMOSTAT PER AIR SYSTEM. STAGING OF HEATING AND COOLING SHALL BE INDICATED ON THE DRAWINGS.
- ALL REFRIGERATION PIPING TO BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS. JOINTS SHALL BE MADE WITH SILVER SOLDER.
- THE REFRIGERATION SUCTION LINES SHALL BE INSULATED AS FOLLOWS: ABOVE GROUND WITH 1/2 "ARMSTRONG ARMAFLEX" BELOW GROUND/SLAB WITH SAME ENCASED P.V.C. CONDUIT. INSULATION SHALL BE SLIPPED ON PIPING PRIOR TO CONNECTION. ALL BUTT JOINTS TO BE SEALED WITH AN APPROVED ADHESIVE. INSTALLATION OF CONDENSATE LINE IS BY THE HVAC CONTRACTOR. INSULATE ALL LINES RUNNING ABOVE CEILING. SEE DETAIL FOR UNDERGROUND
- D. ALL DUCTWORK SHALL CONFORM TO THE RECOMMENDED CONSTRUCTION FOR LOW PRESSURE DUCTWORK AS APPROVED BY THE SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. SEAL CLASS "C" FOR ALL LOW PRESSURE DUCTWORK. ALL DUCTS SHALL BE MADE OF THE BEST GRADE GALVANIZED SHEET STEEL. THE GAUGE OF THE SHEET STEEL AND DUCT SUPPORTS SHALL CONFORM TO SMACNA STANDARDS. ALL SPIRAL ROUND EXPOSED TO VIEW DUCTWORK SHALL BE FABRICATED BY UNITED McGILL UNI-SEAL SPIRAL LOCKSEAM, GALVANIZED STEEL, SINGLE WALL. OR APPROVED EQUAL.
  - INSULATE OUTSIDE AIR AND SUPPLY AIR DUCTWORK WITH GLASS FIBER 2" THICK, 1 LB. DENSITY DUCT WARP, FACED WITH A REINFORCED ALUMINUM FOIL KRAFT WITH VAPOR BARRIER FACING AND A 2" TAPING FLANGE. CERTAINTEED CUT WRAP OR EQUIVALENT. DUCT INSULATION SHALL CONFORM TO THE REQUIREMENTS OF IMC SECTIONS 604.2 THROUGH 604.13 AND 2012 IECC CODE.
  - SUPPLY AND RETURN AIR REGISTERS SHALL BE TITUS OR THEIR METAL AIRE EQUIVALENT AS INDICATED ON THE DRAWINGS. ALL SUPPLY REGISTERS ARE TO BE EQUIPPED WITH MANUAL DAMPERS.
- EXTRACTORS AND TURNING VANES SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS IN ADDITION TO ALL BENDS OVER 45 DEGREES.
- FILTERS TO BE 2" FIBERBOND DUSTLOK WITH SPOREX ANTIMICROBIAL AGENT AND DUAL PLY CONSTRUCTION, OR IT'S EQUIVALENT. FURNISH TWO ADDITIONAL FILTERS FOR EACH SIZE OF FILTER USED.

#### TESTING AND BALANCING

- UPON COMPLETION OF WORK, THE HVAC CONTRACTOR SHALL USE ACCURATE METERS, INSTRUMENTS OF TYPE AND SIZE AS REQUIRED DETERMINING PROPER AIR FLOW AND DISTRIBUTIONS. CONFIRM THAT ALL FUSE SIZES ARE IN ACCORDANCE WITH THE MOTOR NAMEPLATE DATA.
- AIR QUANTITIES: CHECK EACH BLOWER AND DIFFUSER AS INDICATED ON DRAWINGS FOR CORRECT AND ADEQUATE DIFFUSION. OUTSIDE AIR QUANTITIES TO BE CHECKED AND ADJUSTED AS REQUIRED. AFTER SPACES HAVE BEEN BROUGHT UP TO DESIGN TEMPERATURES AND EQUIPMENT IS FUNCTIONING PROPERLY, RE-BALANCE, IF NECESSARY, BY MEANS OF CALIBRATED THERMOMETERS PLACED IN EACH ROOM AND IN OPEN SPACES, NOT OVER 20' APART. THERMOSTATS: NO DEVIATION IN TEMPERATURE OF MORE THAN 3 DEGREES FAHRENHEIT THROUGHOUT CONDITIONED SPACE. CONTRACTOR SHALL SUBMIT COMPLETE DATA REPORT REGARDING BALANCING, IN ADDITION TO VARIOUS CONTROL SETTINGS FOR APPROVAL OF ARCHITECT.

			G A	S	F	U I	RN	A C	$\mathbb{E}$	S	P	$\mathbb{L}$	IT	S	YS	S T	E M	-	S C	$\mathbb{H}$	E D	U	L F	נ		
TAG NO.	AREA SERVED	NOMINAL TONNAGE		SENSIBLE COOLING CAPACITY MBH	SEER	EER	AIRFLOW CFM	OUTSIDE AIRFLOW CFM	GAS INPUT MBH	GAS OUTPUT MBH		NDOOR ESP INWG		ECTRICAL MCA	_ DATA MCOP	HP	APPROX. WEIGHT LBS.	UNIT NO.		JTDOOF TRICAL MCA		RLA	NET WEIGHT LBS	FURNACE	BASIS OF DESI "GOODMAN" COIL	OUTDOOR UNIT
AHU-1	STUDIO A	5.0	56.5	40.0	14.0	11.7	2000	450	100	96	96	0.1	120/1	13.3	15	1	140	CU-1	240/1	32.6	50	25.0	260	GMEC96100	CAPT4961	GSX14060
AHU-2	STUDIO B & C	5.0	56.5	40.0	14.0	11.7	2000	450	100	96	96	0.1	120/1	13.3	15	1	140	CU-2	240/1	32.6	50	25.0	260	GMEC96100	CAPT4961	GSX14060
4HU-3	OFFICES	4.0	45.0	31.8	14.5	11.7	1600	162	100	96	96	0.1	120/1	13.3	15	1	140	CU-3	240/1	26.2	45	19.9	220	GMEC96100	CAPF4860	GSX14048
NOTE	S: 1. INDO	OR UNITS	SHALL BE	INSTALLED	IN DR	AIN PA	AN WITH	VIBRATION	I ISOLA	TORS.		2.	SEE PLA	NS FOR	MOUNTI	NG PC	SITIONING.					3. PR	OVIDE UI	NIT WITH CON	DENSATE PUMI	P.

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TAG	BASIS OF DE	SIGN MODEL	USE	DESCRIPTION	MATERIAL	NECK DIMENSIONS IN.	FACE DIMENSIONS IN.	FINISH	REMARKS
А	TITUS	PAS	SUPPLY	PERFORATED	STEEL	SEE DWGS	24×24	WHITE	_
В	TITUS	300RL	SUPPLY	GRILLE	STEEL	SEE DWGS	VARIES	WHITE	_
С	TITUS	PAR	RETURN	PERFORATED	STEEL	SEE DWGS	24×24	WHITE	_
D	TITUS	350RL	RETURN	RETURN GRILLE	STEEL	SEE DWGS	VARIES	WHITE	_

#### NOTES:

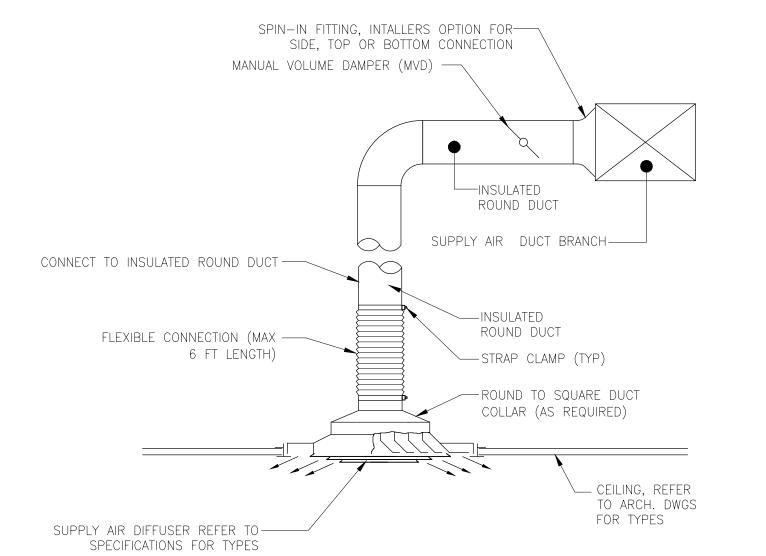
- NOISE GENERATION SHALL BE NC=25 OR LESS.
- 2. EACH AIR DEVICE SHALL HAVE A MANUAL VOLUME DAMPER INSTALLED ON THE DUCT RUN OUT AS CLOSE TO THE MAIN AS POSSIBLE. 3. NECK SIZE AND CFM AS SPECIFIED ON DRAWINGS.
- 4. COORDINATE DIFFUSER FINISHES WITH ARCHITECT. FINISHES MAY VERY BASED ON APPLICATION.

E	X H A	U S	T	F	A N		S C	H E D U	LE
UNIT NO.	AREA SERVED	EXHAUST CFM	WATTS	FAN RPM	E.S.P. IN."	ELECTR VOLTS/ PH	MCA	BASIS OF DESIGN "PANASONIC"	REMARKS
EF-1	BATHROOMS	80	15.9	1500	0.1	120/1	0.13	FV-0510VS1	_

NOT TO SCALE

. FAN TO BE CEILING MOUNTED ONTO BATHROOM CEILING. 2. FAN TO BE CONTROLLED BY OCCUPANCY SENSOR SERVING BATHROOM LIGHTS.

Ţ	U N I	T	H	ΞΑ	T E	R	S C	HEDUL:	E
UNIT NO.	LOCATION	KW	STAGES NO.	VOLTS	PHASE	AMPS	CFM	BASIS OF DESIGN "BERKO"	REMARKS
UH-1	GARAGE	5.0	1	240	1	21.0	350	HUHAA524	_



TYPICAL SUPPLY AIR DIFFUSER CONNECTION

# SIDE OF DUCT. 2 AIR FLOW.

NOTES:

3 FIXED SPLITTER. 4 MANUAL DAMPER.

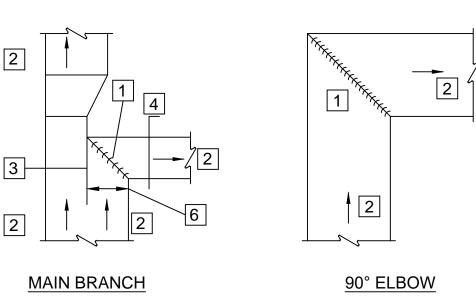
1 TURNING VANES WITH

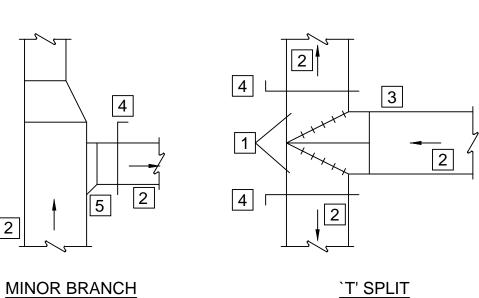
LEADING AND TRAILING

EDGES PARALLEL TO

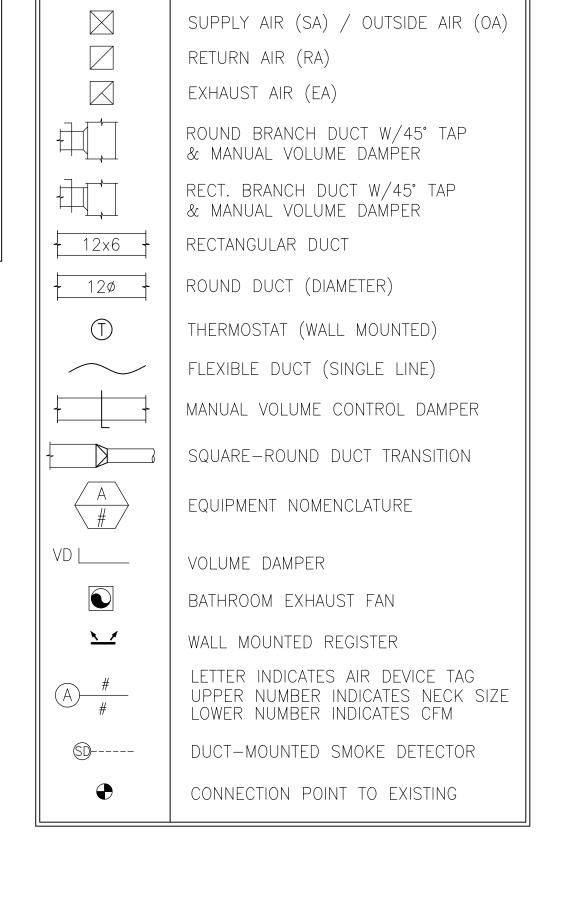
5 45° SHOE TAP.

6 THROAT SIZE.

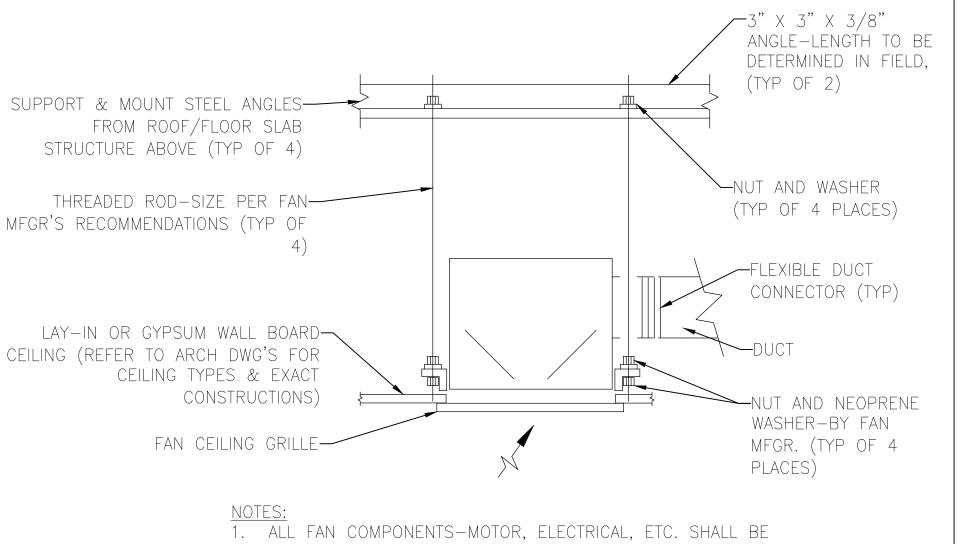




YPICAL DUCTWORK AND CONNECTIONS NOT TO SCALE



LEGEND



SERVICEABLE THROUGH REMOVABLE UNIT MOUNTED CEILING GRILLE.

YPICAL CEILING MOUNTED FAN DETAIL NOT TO SCALE

<u>CERTIFICATION</u> HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

LICENSE NO: EXP DATE: 06.12.20

MARYLAND

MECHANICAL SPECS, SCHEDULE  $\vdash$ 2116 AISQUITH S BALTIMORE, MD 21

SHEET NUMBER

		A	H U	- 1	M	I N I	UMU	U M V	ENI	T I L A	TIOI	N R	A T E	S	
ROOM NAME	ROOM NUMBER	AREA (sqft) (AZ)	AREA OUTDOOR AIR RATE (RA)	EXHAUST AIRFLOW RATE (CFM/sqft)	AREA OUTDOOR AIR (RA*AZ)	OCCUPANT DENSITY (PPL/ 1000sqft)	OCCUPANCY C*F/1000 (PZ)	OCCUPANT OUTDOOR AIR RATE PER IMC 403.3 (RP)			ZONE AIR DISTRIBUTION EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz=Vbz/Ez)	SUPPLY AIR DESIGN (Vpz)	EXHAUST AIR DESIGN	OUTDOOR AIR FRACTION (Zp=Voz/Vpz)
CONTROL A	_	603	0.06	_	37	5	3	5	15	52	1.0*	52	_	_	_
TRACKING A	_	350	0.06	_	21	5	2	5	10	31	1.0*	31	_	_	_
LOUNGE A	_	377	0.06	_	23	5	2	5	10	33	1.0*	33	_	_	_
LEFT HALLWAY	_	667	0.06	_	40	_	_	_	_	40	1.0*	40	_	_	_
BACK HALLWAY	_	214	0.06	_	13	_	_	_	_	13	1.0*	13	_	_	_
					•		TOTAL					169	_	_	_

		A	H U	- 2	M	INI	UMU	J M V	E N	T I L A	TIOI	N R	A T E	S	
ROOM NAME	ROOM NUMBER	AREA (sqft) (AZ)	AREA OUTDOOR AIR RATE (RA)	EXHAUST AIRFLOW RATE (CFM/sqft)	AREA OUTDOOR AIR (RA*AZ)		OCCUPANCY C*F/1000 (PZ)	OCCUPANT OUTDOOR AIR RATE PER IMC 403.3 (RP)			ZONE AIR DISTRIBUTION EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz=Vbz/Ez)	SUPPLY AIF DESIGN (Vpz)	R EXHAUST AIR DESIGN	OUTDOOR AIR FRACTION (Zp=Voz/Vpz)
LOUNGE B	_	229	0.06	_	14	5	2	5	10	24	1.0*	24	_	_	_
TRACKING B	_	100	0.06	_	6	5	1	5	5	11	1.0*	11	_	_	_
CONTROL B	_	285	0.06	_	17	5	2	5	10	27	1.0*	27	_	_	_
MEDIA	_	347	0.06	_	21	5	2	5	10	31	1.0*	31	_	_	_
CONTROL C	_	222	0.06	_	14	5	2	5	10	24	1.0*	24	_	_	_
TRACKING C	_	118	0.06	_	7	5	1	5	5	12	1.0*	12	_	_	_
RIGHT HALLWAY	_	988	0.06	_	60	_	_	_	_	60	1.0*	60	_	_	_
	1		1	•	1		TOTAL			•		189	_	_	_

		A	H U	- 3	M	I N I	U M U	J M V	E N T	I L A	T I O I	N R	A T E	S	
ROOM NAME	ROOM NUMBER	AREA (sqft) (AZ)	AREA OUTDOOR AIR RATE (RA)	EXHAUST AIRFLOW RATE (CFM/sqft)	AREA OUTDOOR AIR (RA*AZ)	OCCUPANT DENSITY (PPL/ 1000sqft)	C*F/1000		OCCUPANT OUTDOOR AIR (RP*PZ)	BREATHING ZONE O.A. (Vbz=RP*PZ+ RA*AZ)	ZONE AIR DISTRIBUTION EFFECTIVENESS (Ez)	ZONE OUTDOOR AIR (Voz=Vbz/Ez)	SUPPLY AIF DESIGN (Vpz)	EXHAUST AIR DESIGN	OUTDOOR AIR FRACTION (Zp=Voz/Vpz)
CONFERENCE	_	316	0.06	_	19	50	15	5	75	94	1.0*	94	_	_	_
SECURITY	_	77	0.06	_	5	5	1	5	5	10	1.0*	10	_	_	_
OFFICE	_	129	0.06	_	8	5	1	5	5	13	1.0*	13	_	_	_
LOUNGE	_	807	0.06	_	49	5	4	5	20	69	1.0*	69	_	_	_
BREAK	_	166	0.06	_	10	5	1	5	5	15	1.0*	15	_	_	_
							TOTAL					201	_	_	_

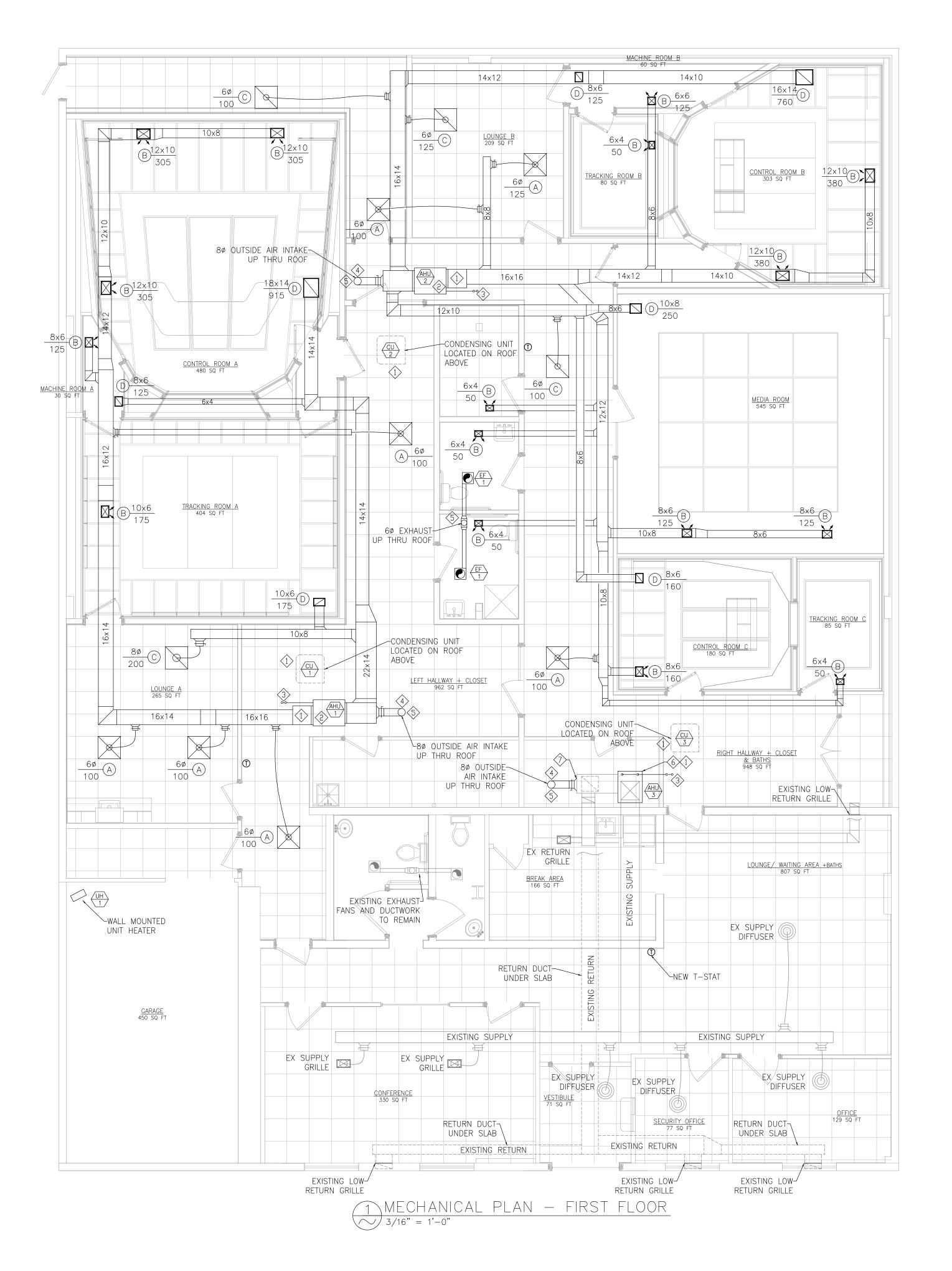
			I	DATE
				DISCRIPTION
			ı	REV

CERTIFICATION I HEREBY CERTIFY THAT
THESE DOCUMENTS
WERE PREPARED OR
APPROVED BY ME, AND I
AM A DULY LICENSED
PROFESSIONAL
ENGINEER UNDER THE
LAWS OF THE STATE OF
MARYLAND

LICENSE NO: 35708 EXP DATE: 06.12.20

MECHANICAL VENTILATION CALCULATIONS 2116 AISQUITH ST BALTIMORE, MD 21218

SHEET NUMBER



GENERAL NOTES

- REFER TO DRAWING M-1 FOR SCHEDULES & SPECIFICATIONS.
- COORDINATE WITH OWNER FOR EXACT LOCATION OF AIR DEVICES IN CEILING.
- DRAWINGS ARE DIAGRAMMATICAL BY NATURE AND SHOULD NOT BE SCALED.
- CONTRACTORS SHALL VERIFY ALL SPACE CONDITIONS PRIOR TO THE START OF CONSTRUCTION.
- DUCT RUNS TO BE COORDINATED WITH ARCHITECTURAL PLANS WITHIN STUDIO RECORDING ROOMS.

#### **DRAWING NOTES**

- INSTALL, SIZE, AND ROUTE REFRIGERATION PIPING AS RECOMMENDED BY SPLIT SYSTEM MANUFACTURER.
- INSTALL DRAIN PAN UNDER HORIZONTALLY INSTALLED AIR HANDLER ABOVE CEILING. OVERFLOW AND CONDENSATE FROM AIR HANDLER COIL TO BE PUMPED TO EXTERIOR. SECONDARY OVERFLOW SHALL BE A FLOAT SWITCH IN DRAIN PAN WHICH SHUTS DOWN UNIT UPON ACTIVATION.
- INTAKE AND FLUE PIPING SERVING FURNACE TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. LOCATE A MINIMUM OF 10' AWAY FROM AIR INTAKES.
- OUTSIDE AIR INTAKE SERVING FURNACE. LOCATE INTAKE A MINIMUM OF 10' AWAY FROM ANY EXHAUST OUTLETS. BALANCE TO CALCULATED CFM ON M-1. PROVIDE OA TAP WITH MOTORIZED DAMPER THAT OPENS UPON UNIT ACTIVATION.
- ROOF CAP TO MATCH DUCT SIZE.
- EXISTING FURNACE TO BE REPLACED. ALL EXISTING CONNECTED SUPPLY & RETURN DUCTWORK TO REMAIN. INSTALL NEW OUTSIDE AIR INTAKE TO EXISTING RETURN PLENUM.

**CERTIFICATION** HEREBY CERTIFY THAT THEREBY CERTIFY THAT
THESE DOCUMENTS
WERE PREPARED OR
APPROVED BY ME, AND I
AM A DULY LICENSED
PROFESSIONAL
ENGINEER UNDER THE
LAWS OF THE STATE OF
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LICENSE NO: 35708 EXP DATE: 06.12.20

2116 AISQUITH ST BALTIMORE, MD 21218 PLAN MECHANICAL

SHEET NUMBER

**M-3** 

#### ELECTRICAL SPECIFICATIONS:

- A. GENERAL: THE REQUIREMENTS OF THE GENERAL, SUPPLEMENTARY AND SPECIAL CONDITIONS OF THE CONTRACT SPECIFICATIONS AND DRAWINGS ARE HEREBY MADE A PART OF THIS SECTION OF THE SPECIFICATIONS. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE AND OPERATING INSTALLATION INCLUDING ALL OBVIOUSLY NECESSARY ITEMS EVEN THOUGH ITEMS ARE NOT INDICATED ON THE DRAWINGS OR SPECIFICATIONS.
- B. PERMITS, SALES TAX, ETC.: THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, STATE SALES TAX, FEDERAL EXCISE TAX, ROYALTIES AND OTHER TAXES OR FEES AS REQUIRED FOR INSTALLATION OF A COMPLETE SYSTEM AS OUTLINED HEREIN AND AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL SECURE ALL NECESSARY LICENSES AND INSURANCE.
- C. CODES: THE WORK SHALL COMPLY WITH LATEST APPLICABLE REQUIREMENTS OF THE NFPA AND ALL LOCAL CODES GOVERNING THIS INSTALLATION AS A MINIMUM STANDARD UNLESS SPECIFICATIONS LISTED HEREIN OR SHOWN ON THE PLANS REQUIRE A HIGHER MINIMUM STANDARD.
- D. BRANDS OF EQUIPMENT: WHERE ONE MANUFACTURER ONLY IS NAMED, THE BIDS SHALL BE BASED ON FURNISHING EQUIPMENT OR MATERIALS BY THIS MANUFACTURER. PRODUCTS OF OTHER MANUFACTURERS WILL BE CONSIDERED FOR USE IF THE ITEM REQUESTED FOR SUBSTITUTION IS EQUAL TO THAT SPECIFIED. WHERE NO MANUFACTURERS ARE NAMED, THE CONTRACTOR SHALL SELECT EQUIPMENT OR MATERIAL WHICH MEETS THE SPECIFICATIONS.
- E. DEPARTURES FROM DRAWINGS: THE CONTRACT DRAWINGS INDICATE THE EXTENT AND GENERAL ARRANGEMENTS OF EQUIPMENT AND SYSTEMS. IF ANY DEPARTURES FROM THE CONTRACT DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREFORE SHALL BE SUBMITTED FOR APPROVAL. NO SUCH DEPARTURES SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL.
- F. CHANGES: THE CONTRACTOR SHALL CONFORM TO ALL REASONABLE CHANGES WITHOUT ADDITIONAL COST.
- G. ERRORS AND OMISSIONS: ALL OBVIOUS ERRORS AND/OR OMISSIONS IN THE ABOVE MENTIONED DOCUMENTS SHALL BE CALLED TO THE ATTENTION OF THE GC AT LEAST FOUR DAYS PRIOR TO THE BID DATE. IF NOTIFICATION IS NOT RECEIVED, NO EXTRAS TO THE ORIGINAL DRAWINGS AND SPECIFICATIONS WILL BE AUTHORIZED.
- H. GUARANTEE: THE CONTRACTOR SHALL PROVIDE A GUARANTEE AGAINST DEFECTIVE WORKMANSHIP, MATERIALS OR EQUIPMENT FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL COSTS ENCOUNTERED IN THE REPLACING OF DEFECTIVE WORK OR MATERIALS. THE CONTRACTOR SHALL CONVEY TO THE OWNER ANY ADDITIONAL GUARANTIES OR WARRANTIES PROVIDED BY THE MANUFACTURER OF AN INDIVIDUAL ITEM, EQUIPMENT OR MATERIAL.

#### 1. RACEWAY

- A. EMT: MAY BE USED FOR ALL BRANCH CIRCUIT WIRING IN AREAS ABOVE GRADE AND WITHIN THE THE BUILDING. ALL EMT SHALL BE GALVANIZED. ALL EMT FITTINGS SHALL BE STEEL WITH SET SCREWS.

  B. PVC: SHALL BE SCHEDULE 40 HIGH IMPACT, UL APPROVED, AND SHALL BE
- INSTALLED UNDERGROUND OR IN THE SLAB.
  C. RIGID CONDUIT: SHALL BE USED FOR ALL EXTERIOR INSTALLATION WHERE

## MECHANICAL DAMAGE IS POSSIBLE. 2. WIRE AND CABLE

- A. CONDUCTORS: SHALL BE COPPER. INSULATION SHALL BE TYPE THHN/THWN FOR ALL SIZES. MINIMUM SIZE WIRE NO. 12, CONDUCTORS NO. 10 AND LARGER ARE TO BE STRANDED. BRANCH CONDUIT OUTLETS SHALL BE CONNECTED AS INDICATED.
- B. COLOR CODES: CONDUCTORS SHALL BE COLOR CODED THROUGHOUT. SAME COLOR SHALL BE USED FOR BRANCH CIRCUIT WIRING OF A GIVEN PHASE. GROUNDED CONDUCTORS NO. 4 AWG AND LARGER MAY BE BLACK, BUT SHALL BE IDENTIFIED WITH COLORED TAPE IN JUNCTION BOXES, PULL BOXES, PANELS AND SERVICE EQUIPMENT.
  - 120/240V OR 120/208V SYSTEMS
  - THREE WIRE CIRCUITS ONE BLACK, ONE RED AND ONE WHITE FOUR WIRE CIRCUITS ONE BLACK, ONE RED, ONE WHITE, ONE BLUE
  - 277/480V SYSTEMS -ONE BROWN, ONE ORANGE, ONE YELLOW, ONE GRAY
  - CONTINUITY OF NEUTRALS OF MULTI-WIRED BRANCH CIRCUITS SHALL NOT BE MADE ON TERMINALS OF ANY DEVICE. THIS WILL ASSURE NO OPENING OF NEUTRAL IN REPLACEMENT OF DEVICE.
- #10 AND BELOW SCOTCHLOK OR EQUAL

#### • #8 AND LARGER — NOT ALLOWED

### 3. BOXES A. OUTLET BOXES: SECTION WELDE

- A. OUTLET BOXES: SECTION WELDED GALVANIZED STAMPED STEEL FOR GANG SIZES REQUIRED. SECTIONAL BOXES WILL NOT BE ACCEPTABLE. BOXES LARGER THAN STANDARD SHALL BE PROVIDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE WHERE NECESSARY TO PREVENT CROWDING OF WIRES
- B. FLOOR BOXES: TO BE CARLON E971FB WITH E97ABR ADAPTER FOR CAST BRONZE COVER PLATES AS MANUFACTURED BY STEEL CITY.

#### 4. WIRING DEVICES A MOUNTING HEIGHT

C. SPLICES:

- A. MOUNTING HEIGHTS:SWITCHES AT 4'0" OR AS NOTED
  - RECEPTACLES AT 18" OR AS NOTED, COORD WITH ARCH
- TELEPHONE OUTLETS AT 18" OR AS NOTED
- B. WALL SWITCHES: SHALL BE CONTRACTOR GRADE, QUIET—TYPE, HIGH PERFORMANCE SWITCHES RATED AT 15A.277V. COLOR AND SWITCH PLATES AS DIRECTED BY THE OWNER/DECORATOR.
- C. RECEPTACLES: SEE GENERAL NOTES ON THIS SHEET FOR REQUIREMENTS.
- D. POWER OUTLETS: LEVITON OR SLATER, TYPE AND SIZE AS NOTED.

  E. DIMMER SWITCHES: SHALL BE EQUAL TO LUTRON #N 1500 ML SLIDE DIMMER WITH TOUCH BUTTON ON/OFF SWITCH WITH LUTRON #N SML FOR THREE WAY CONTROL. LOW VOLTAGE DIMMERS SHALL BE NOVA SERIES,

#### LOAD COORDINATED AS REQUIRED.

- 5. DISCONNECT SWITCHESA. SHALL BE FURNISHED WITH ENCLOSURES AS REQUIRED BY EXPOSURES EITHER NEMA 1 OR 3R AND SHALL BE HORSEPOWER RATED, HEAVY DUTY WITH
- FUSES AS NOTED.

  B. NON-FUSIBLE DISCONNECT SWITCHES: SHALL BE PROVIDED FOR ALL MOTORS LOCATED OUT OF SIGHT OF MOTOR CONTROLLER AND WHERE INDICATED ON THE DRAWINGS. DISCONNECT SWITCHES SHALL DISCONNECT ALL UNGROUNDED CONDUCTORS.
- C. FUSES: TO BE FURNISHED FOR FUSIBLE EQUIPMENT. MOTOR FUSES SHALL BE BUS FUSETRONS RATED BETWEEN 125 AND 150 PERCENT OF MOTOR NAME PLATE RATING. FURNISH EXTRA SET OF SPARE FUSES FOR EACH FUSED DISCONNECT INSTALLED. SPARE FUSES TO BE PLACED WITHIN A FUSE CABINET LOCATED IN THE ELECTRIC ROOM.

#### CABINET LOCATED IN THE

6. PANELBOARD, LOADCENTER

A. LOADCENTERS SHALL BE AS NOTED ON PLANS WITH COVER AND TYPEWRITTEN DIRECTORY INSIDE OF COVER. PANELBOARDS SHALL BE THE PRODUCT OF CUTLER—HAMMER OR SQUARE D.

#### 7. **LIGHTING FIXTURES**

A. UNLESS OTHERWISE NOTED, LIGHT FIXTURES WILL BE FURNISHED AND INSTALLED AS INDICATED ON THE LIGHTING FIXTURE SCHEDULE FOR INSTALLATION BY THE ELECTRICAL CONTRACTOR.

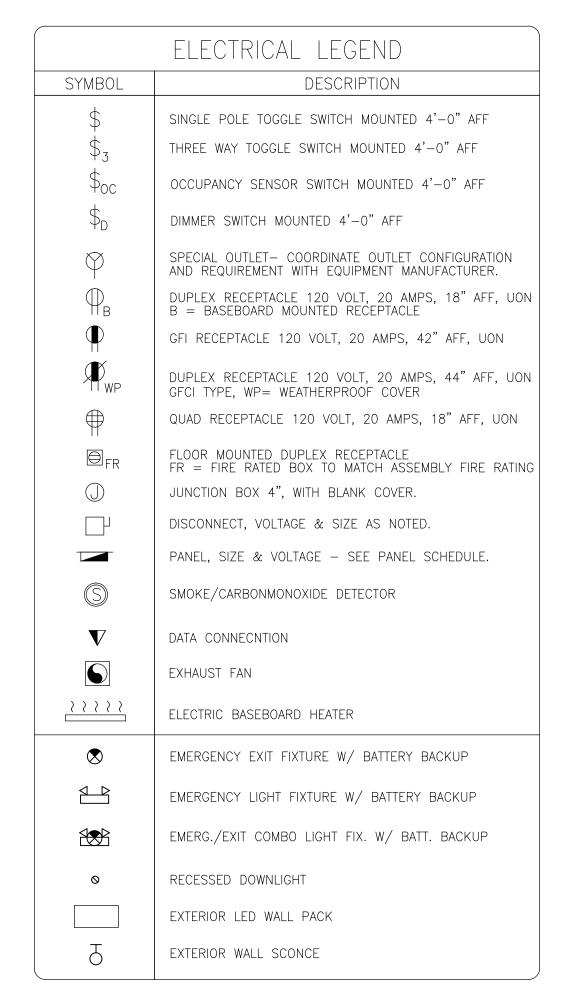
#### 8. IDENTIFICATION

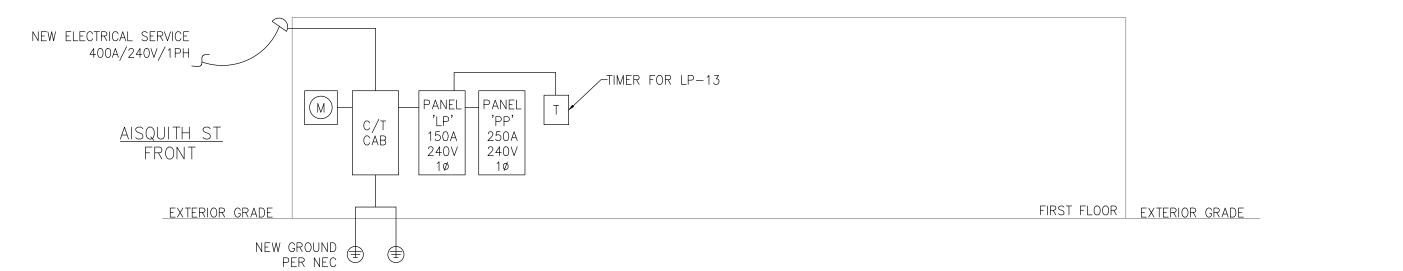
- A. TAG ALL CONDUCTORS AND IDENTIFY MAJOR CONDUITS IN OR AT WIREWAYS, PANELS, PULLBOXES, SWITCHBOARDS, MOTOR CONTROLLERS, CABINETS AND SIMILAR ITEMS TO ASSIST IN FUTURE CIRCUIT TRACING. CONDUCTOR TAGS SHALL BE NONCONDUCTIVE.
- B. IDENTIFY ALL CIRCUITS AND EQUIPMENT TO CORRESPOND WITH THE PLANS AND SPECIFICATIONS.

SCH				$\bigcup$		<u> </u>	N L L		
MAIN: 150 AMP MAIN CIRCUIT B SPEC: SIEMENS TYPE "EQ-LOADO MOUNTING: SURFACE			APPRO'	VED E	QUIVAL	ENT			VOLTAGE: 120/240V, 1ø, 3 WIRE FED FROM: METER & DISC AIC SYMM: SERIES RATED
DESCRIPTION	TRIP	скт.	1	HASE VA		HASE VA	СКТ.	TRIP	DESCRIPTION
OFFICE LIGHTING	20	1	**	**		$\overline{}$	2	20	LOUNGE A & GARAGE LIGHTING
OUNGE LIGHTING	20	3			**	**	4	20	TRACKING ROOM A LIGHTING
BREAK ROOM & BATHROOM LIGHTING	20	5	**	**		$\overline{}$	6	20	CONTROL ROOM A LIGHTING
EFT HALLWAY LIGHTING	20	7		$\overline{}$	**	**	8	20	STUDIO B & MEDIA LIGHTING
OUNGE B & BATHROOM LIGHTING	20	9	**	**		_	10	20	STUDIO A LIGHTING
IGHT HALLWAY LIGHTING	20	11			**	**	12	20	EMERGENCY & EXIT LIGHTING
XTERIOR LIGHTING	20	13	**	<del>-</del>		_	14		SPACE
PACE	_	15		_	_	<u>-</u>	16	_	SPACE
PACE	_	17	_			$\overline{}$	18	_	SPACE
PACE	_	19		_	_	_ <u> </u>	20	_	SPACE
PACE	_	21	_			$\overline{}$	22	_	SPACE
PACE	_	23		_	_	<u>-</u>	24	_	SPACE
PACE	_	25	_	-		_	26	_	SPACE
PACE	-	27			_	-	28	_	SPACE
PACE	_	29	_	-			30	_	SPACE
PACE	_	31			-	-	32	_	SPACE
SPACE	_	33	_	-		$\overline{}$	34	_	SPACE
PACE	_	35			-	-	36	-	SPACE
SPACE	_	37	_	_			38	_	SPACE
SPACE	_	39			-		40	_	SPACE
PACE	_	41	_				42	_	SPACE
**			12	.69	12	.69	LIGHT	ING LO	AD
<b>** LIGHTING LOAD</b> (7250 SQFT x 3.5 VA = 25.375 KVA	)		12	.69	12	.69	KVA	PER PH	IASE (NON-DIVERSIFIED)
(7230  SQFT  X  3.3 VA = 23.373  KVA	)			25.	.38		TOTAL	_ NON-	DIVERSIFIED LOAD
			-	_		_	NON	DIVERSI	FIED LOAD LESS HVAC LOADS
			-	_		_			@ 100%
			-	_		_		INDER (	
		-	_		_	KVA	PER PH	IASE LARGEST (HVAC)	
		-	_		_	TOTAL	_ KVA F	PER PHASE	
						TOTAL DIVERSIFIED KVA			
						TOTAL AMPS			

	SERVICE	LOAD CALCULAT	TION
ANEL 'L ANEL 'P		TOTAL CALCULATED LOAD =	25,380 VA 47,820 VA 73,200 VA
		TOTAL AMPS @ 240V / 10 =	305 AMPS
		NG WILL BE SERVED BY N NV / 10 ELECTRICAL SERV	

						9			
SC	HED		E OF	- PAN	1El	_	P'		
MAIN: 250 AMP MAIN CIRCUIT							VOLTAGE: 120/240V, 1ø, 3 WIRE		
SPEC: SIEMENS TYPE "EQ-LOA		OR .	APPROVED E	QUIVALENT			FED FROM: METER & DISC		
MOUNTING: SURFACE							AIC SYMM: SERIES RATED		
DESCRIPTION	TRIP	скт.	A PHASE KVA	C PHASE KVA	CKT.	TRIP	DESCRIPTION		
FRONT AREA RECEPTS	20	1	1.08 3.0		2	45	CONDENSING UNIT CU-1		
FRONT AREA RECEPTS	20	3		1.44 3.0	4	2	CONDENSING ONLY CO-1		
FRONT AREA RECEPTS	20	5	1.08 3.0		6	45	CONDENSING UNIT CU-2		
FRONT AREA RECEPTS	20	7		0.8 3.0	8	2	CONDENSING ONLY CO-2		
FRONT AREA RECEPTS	20	9	1.5 2.39		10	45	CONDENSING UNIT CU-3		
FRONT AREA RECEPTS	20	11		0.36 2.39	12	2			
GARAGE RECEPT	20	13	0.18   1.6		14	20	FURNACE AHU-1		
LOUNGE ROOM A RECEPTS	20	15		0.18 1.6	16	20	FURNACE AHU-2		
LOUNGE ROOM A RECEPTS	20	17	0.18   1.6		18	20	FURNACE AHU-3		
LOUNGE ROOM A RECEPTS	20	19		0.72   1.08	20	20	CONTROL ROOM C RECEPTS		
TRACKING ROOM A RECEPTS	20	21	1.26   1.08		22	20	CONTROL ROOM C RECEPTS		
TRACKING ROOM A RECEPTS	20	23		1.08   1.08	24	20	TRACKING ROOM C RECEPTS		
TRACKING ROOM A RECEPTS	20	25	0.72   1.08		26	20	MEDIA ROOM RECEPTS		
MACHINE ROOM A RECEPTS	20	27		0.72   1.08	28	20	MEDIA ROOM RECEPTS		
CONTROL ROOM A RECEPTS	20	29	1.08 0.72		30	20	CONTROL ROOM B RECEPTS		
CONTROL ROOM A RECEPTS	20	31		0.72 0.72	32	20	CONTROL ROOM B RECEPTS		
CONTROL ROOM A RECEPTS	20	33	0.72 0.72		34	20	CONTROL ROOM B RECEPTS		
CONTROL ROOM A RECEPTS	20	35		0.72 0.72	36	20	CONTROL ROOM B RECEPTS		
BATHROOM RECEPTS	20	37	0.36 0.72		38	20	MACHINE ROOM B RECEPTS		
STORAGE ROOM RECEPTS	20	39		0.36 1.08	40	20	TRACKING ROOM B RECEPTS		
GARAGE DOOR	20	41	- 0.9		42	20	LOUNGE ROOM B RECEPTS		
GARAGE UNIT HEATER	30			2.5 –	44	_	SPACE		
	2	45	2.5 –		46	_	SPACE		
SPACE	_	47			48	_	SPACE		
SPACE	_	49			50	_	SPACE		
SPACE	_	51			52	_	SPACE		
SPACE	_	53	_   _		54	_	SPACE		
SPACE	_	55			56	_	SPACE		
SPACE	_	57	_   _		58	_	SPACE		
SPACE	_	59		_   -	60	_	SPACE		
			_	_	LIGH	TING LO	AD		
			27.47	25.35	KVA	PER PH	ASE (NON-DIVERSIFIED)		
			52	.82	TOTA	L NON-	DIVERSIFIED LOAD		
			_	_	NON	DIVERSI	FIED LOAD LESS HVAC LOADS		
			_	_	1ST	10 KVA	@ 100%		
			_	<u> </u>	REMA	AINDER (	9 40%		
			_	_	KVA	PER PH	ASE LARGEST (HVAC)		
			_	_	TOTA	L KVA F	PER PHASE		
	_ TO			TOTAL DIVERSIFIED KVA					
							TOTAL AMPS		





1 ELECTRICAL RISER DIAGRAM
NOT TO SCALE

KG

KG

JN

2018

- - - NW2 ENGINEERS

NW2 engineers.c

CERTIFICATION

I HEREBY CERTIFY THAT
THESE DOCUMENTS
WERE PREPARED OR
APPROVED BY ME, AND I
AM A DULY LICENSED

MARYLAND
LICENSE NO: 35708
EXP DATE: 06.12.20

ENGINEER UNDER THE LAWS OF THE STATE OF

PROFESSIONAL

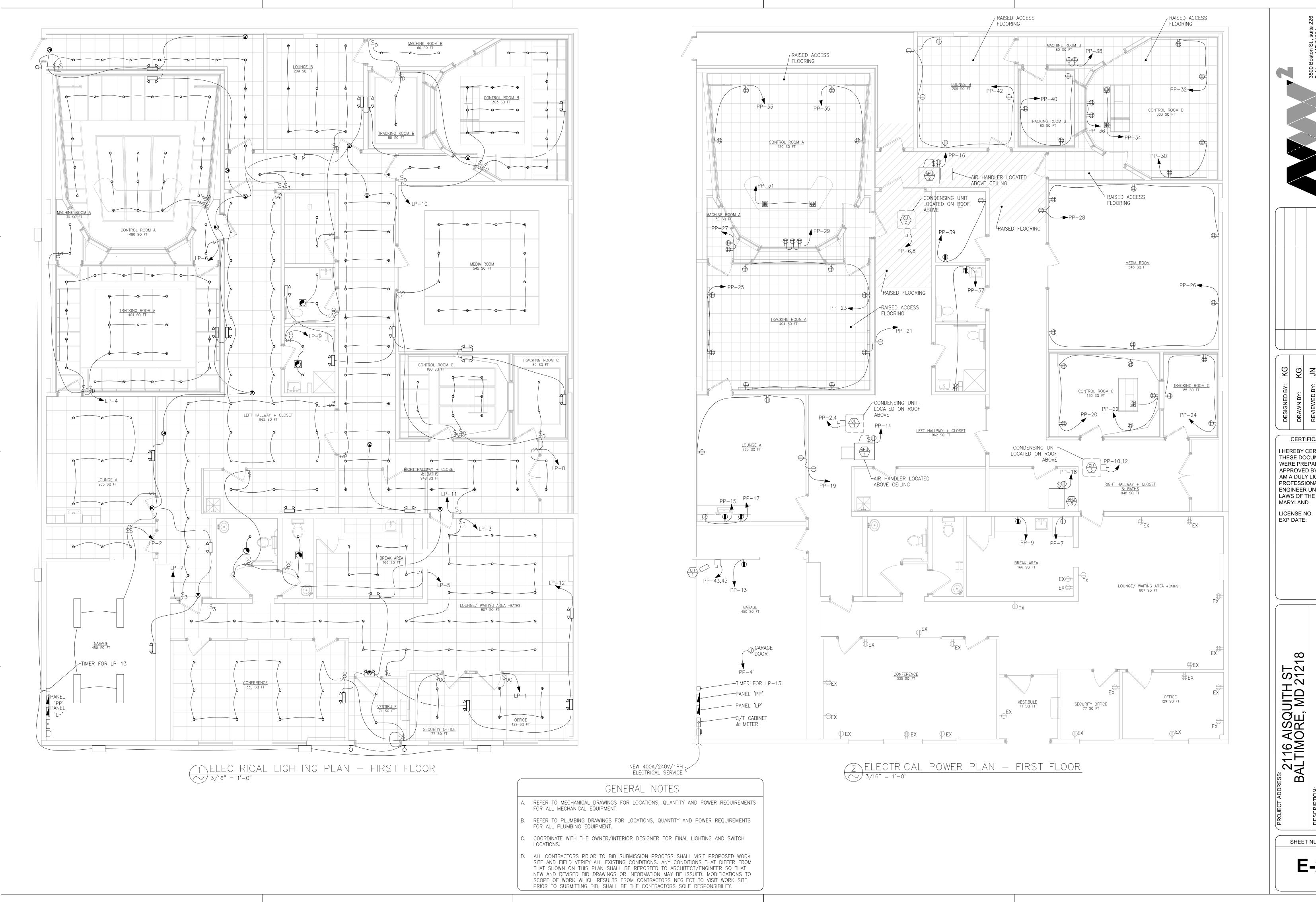
D 21218 ISER DIAGRAM EDUI F

BALTIMORE, MD 212
PTION:
CTRICAL SPECS, RISER
& PANEL SCHEDUL

SHEET NUMBER

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E-1



**CERTIFICATION** 

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

LICENSE NO: 35708 EXP DATE: 06.12.20

ELECTRICAL PLAN

SHEET NUMBER

**E-2** 

#### PLUMBING SPECIFICATIONS

#### 1. SCOPE

A. PLUMBING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE SANITARY SEWER SYSTEM (INCLUDING SOIL AND VENT PIPING), WATER SERVICE, CONNECTION TO WATER METER, TAP VALVES, BOXES, HOT AND COLD WATER SUPPLY SYSTEM, PLUMBING FITTINGS, FIXTURES AND TRIM: AND ALL RELATED FITTINGS AND CONTROLS.

B. WATER METER FEES BY OWNER.

C. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE PART OF THIS CONTRACT.

#### 2. CODES AND STANDARDS

ALL WORK, MATERIALS AND EQUIPMENT SUPPLIED AND INSTALLED UNDER THIS DIVISION SHALL COMPLY WITH THE LATEST EDITION OF THE IBC OR MBPS CODES AS AMENDED BY THE LOCAL GOVERNING BODY.

#### - 3. SUBMITTALS

SEE SCHEDULE ON DRAWINGS.

#### 4. PERMITS AND INSPECTIONS

ALL PERMITS AND FEES FOR PERMITS AND INSPECTIONS SHALL BE PAID FOR BY THIS CONTRACTOR.

#### 5. MATERIALS

A. SANITARY WASTE: PVC (WHERE ALLOWED BY CODE), DUCTILE IRON & CAST IRON, DWV TYPE PIPE AND FITTINGS. a) BELOW FINISHED FIRST SLAB — SCHEDULE 40

DWV (FOAMCORE, CELLURCORE NOT ALLOWED) b) ABOVE FINISHED FIRST FLOOR SLAB FOR SECOND

FLOOR WASTE TO BE CAST IRON "NO-HUB" B. ROOF DRAINS: PVC (WHERE ALLOWED BY CODE), DUCTILE IRON & CAST IRON, DWV TYPE PIPE AND FITTINGS.

a) BELOW FINISHED FIRST FLOOR SLAB -SCHEDULE 40 DWV (FOAMCORE, CELLURCORE NOT ALLOWED)

b) ABOVE FINISHED FIRST FLOOR SLAB TO BE CAST IRON "NO-HUB

#### C. DOMESTIC WATER PIPING

a) ABOVE GRADE - TYPE "L" COPPER SWEATED OR FLANGED

#### D. VENT LINES TO BE SCHEDULE 40 PVC.

E. JOINTS TO BE WROUGHT OR CAST BRONZE. LEAD FREE SOLDER IS TO BE USED ON ALL JOINTS.

F. PROVIDE AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON DRAWINGS. COMPLETE SYSTEM (FIXTURES AND EQUIPMENT) SHALL BE GIVEN AN IN-SERVICE TEST AFTER COMPLETION OF INSTALLATION.

G. UNDERGROUND VALVES SHALL BE INSTALLED IN PRECAST CONCRETE BOXES.

#### 6. INSTALLATION

A. USE MANUFACTURER'S TEMPLATES. CAULK WHERE REQUIRED. PROVIDE BLOCKING FOR ALL FIXTURES AS REQUIRED. ALL WATER PIPING WITHIN THE BUILDING SHALL BE COPPER AND RUN CONTINUOUS ABOVE THE CEILING. NO JOINTS BELOW SLAB. ALL PIPING SHALL BE PROPERLY SUPPORTED WITH HANGERS OF COMPATIBLE MATERIAL AND ALL WATER PIPES PASSING THROUGH CONCRETE SHALL BE SLEEVED TO PREVENT CHEMICAL REACTIONS.

B. ALL HOT & RETURN WATER PIPING TO BE INSULATED. MATERIAL TO BE 1" SECTIONAL GLASS FIBER WITH FACTORY APPLIED, ALL PURPOSE, FIRE RETARDANT JACKET. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

C. VERIFY INVERTS OF SEWER AND DRAINAGE CONNECTIONS BEFORE INSTALLING SEWER LINES. BUILDING DRAINAGE SYSTEM IS BASED ON 1/8"FT. MIN. SLOPE.

D. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

E. HOSE BIBBS SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS AND SHALL HAVE SEPARATE 3/4" MAIN FEED. HOSE BIBBS SHALL HAVE HOSE CONNECTION VACUUM BREAKER. FASTEN SECURELY TO WALL. INSTALL 18" ABOVE FINISHED SLAB.

#### 7. CLEAN-UP

ON COMPLETION OF WORK, REMOVE ALL EXCESS MATERIAL, EQUIPMENT AND DEBRIS. POLISH ALL PLATED OR POLISHED FITTINGS. LEAVE WORK IN CLEAN CONDITION PER GENERAL CONDITIONS.

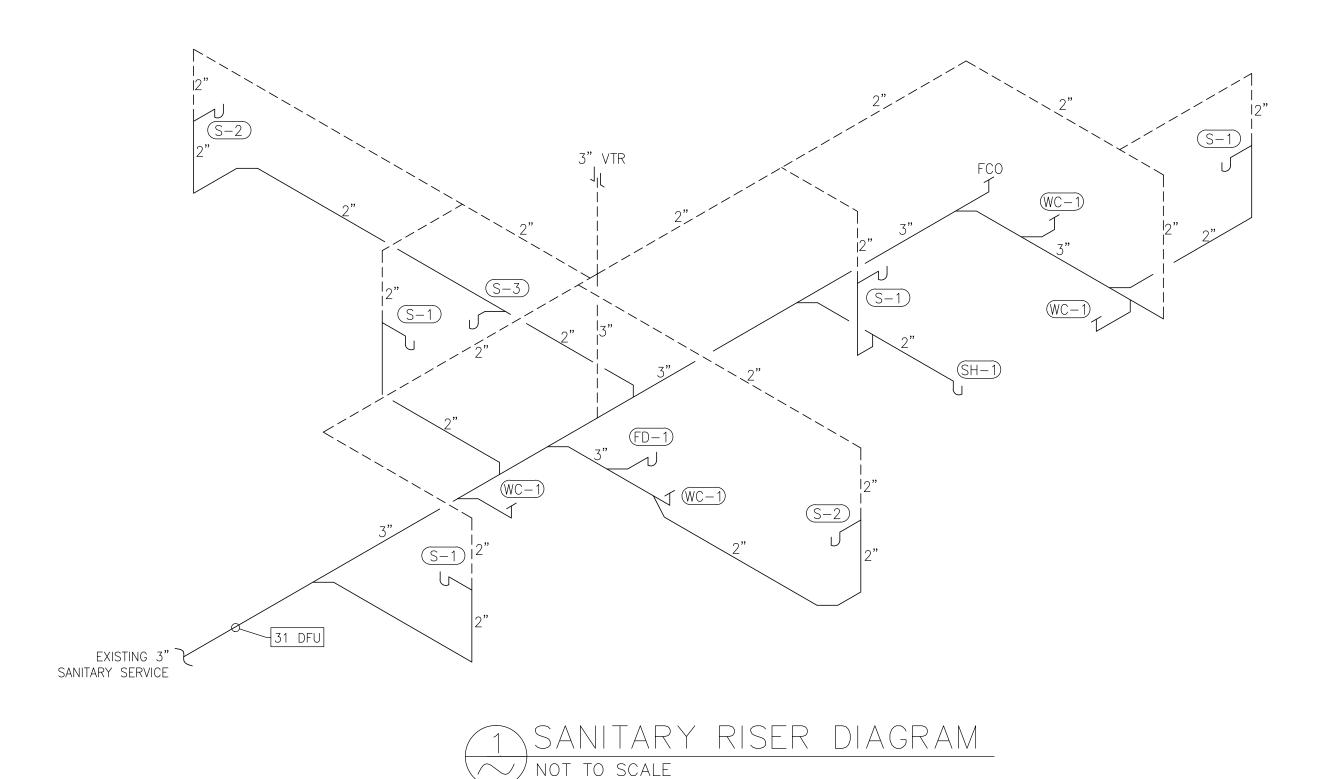
#### 8. GUARANTEE

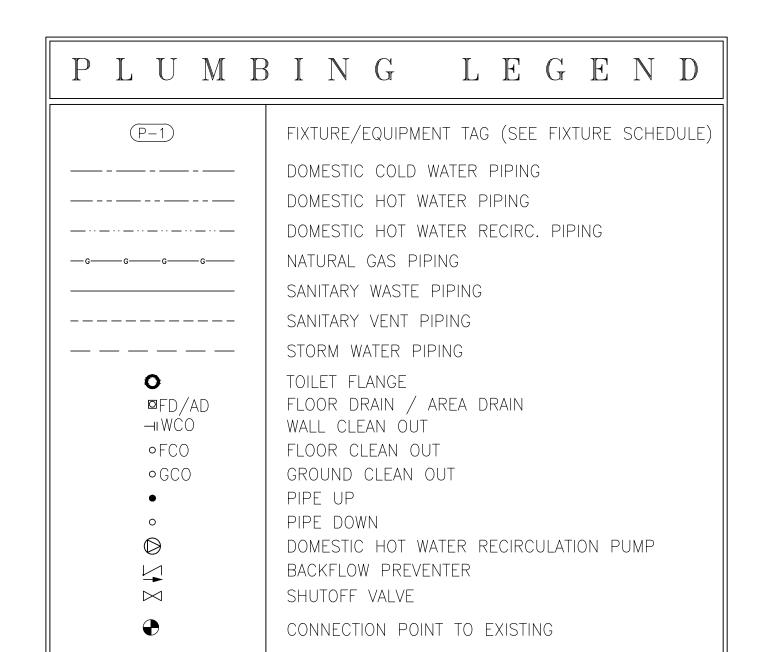
THE PLUMBING CONTRACTOR SHALL DELIVER TO OWNER A WRITTEN GUARANTEE THAT THE PLUMBING WORK IS FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR, FROM THE DATE OF FINAL ACCEPTANCE, AND WILL REPAIR OR REPLACE ALL WORK WHICH BECOMES DEFECTIVE (NOT DUE TO ORDINARY USE) AT NO EXPENSE TO THE OWNER.

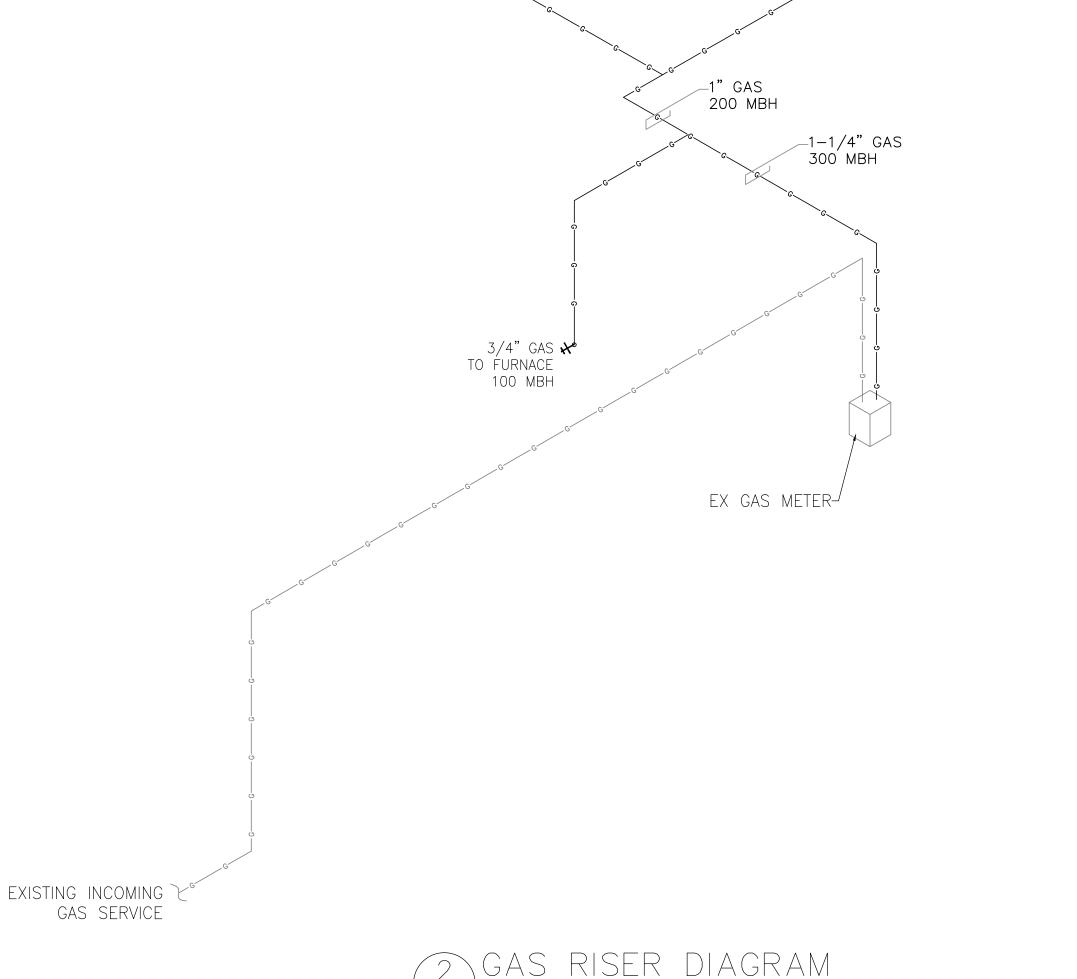
PLUMBING FIXTURE SCHEDULE										
TAG	FUNCTION	CW	HW	SAN	VENT	MFGR	REMARKS			
WC-1	WATER CLOSET	1/2"	-	3"	2"	ТОТО	MODEL: CST244EF#01, COTTON FINISH, 1.28 GPM, ELONGATED, ADA COMPLIANT, UNIVERSAL HEIGHT. SEAT: SC134.			
S-1	BATHROOM SINK	1/2"	1/2"	2"	2"	ТОТО	MODEL: LT308.4, WHEELCHAIR USERS LAVATORY, VITREOUS CHINA, 4" FAUCET CENTER HOLES, ADA COMPLIANT. REQUIRES JAY R. SMITH 0700 CONCEALED ARMS WALL CARRIER OR EQUAL. BELOW SINK PIPING TO BE PROVIDED WITH 'LAV GUARD 2' PIPING COVERS.  FAUCET: SLOAN 'SF-2200' - ELECTRONIC GOOSENECK FAUCET, SENSOR ACTIVATED, 6VDC PLUG-IN ADAPTER POWERED, 4" TRIM PLATE FOR 4" CENTERSET SINK, 2.2 GPM FLOW RATE LAMINAR SPRAY HEAD. PROVIDE WITH 'BDM' MIX-60-A BELOW DECK MECHANICAL MIXING VALVE SET TO 110°.			
S-2	KITCHEN SINK	1/2"	1/2"	2"	2"	ELKAY	MODEL: ECTSRAD25226BG, CROSSTOWN STAINLESS STEEL 25" x 22" x 6" SINGLE BOWL DUAL MOUNT ADA SINK KIT. 304 STAINLESS STEEL, 18 GAUGE, POLISHED SATIN, SINGLE CENTERED FAUCET HOLE, ADA COMPLIANT.  FAUCET: ELKAY 'LKAV4032' — AVADO PULL—DOWN SPRAY ENTERTAINMENT FAUCET, 1.5 GPM FLOW RATE, SINGLE LEVER HANDLE, CHROME FINISH, ADA COMPLIANT, SINGLE FAUCET HOLE.			
S-3	MOP SINK	1/2"	1/2"	3"	2"	ACORN	MODEL: TSH-24 STANDARD HEIGHT TERRAZZO MOP SINK, OUTSIDE DIMENSIONS: 24"L X 24" W X 24" D, STAINLESS STEEL DRAIN BODY  FAUCET: AMERICAN STANDARD MODEL 8344.012 YOKE WALL-MOUNTE UTILITY FAUCET, TOP BRACE, 6" CAST BRASS SPOUT WITH VACUUM BREAKER, VANDAL RESISTANT WRISTBLADE HANDLE			
FD-1	FLOOR DRAIN	_	_	2"	_	ZURN	MODEL: FD-2322-NH2-ST, LOW PROFILE FINISHED AREA FLOOR DRAIN, 5-3/16" SQUARE DRAIN, 2" NO-HUB CONNECTION, CAST IRON BODY, ADJUSTABLE NICKEL BRONZE STRAINER, 1/2" TRAP PRIMER CONNECTION, PROVIDE AUTOMATIC TRAP PRIMER VALVE.			
SH-1	SHOWER	1/2"	1/2"	2"	_	KHOLER	MODEL: K-99898, AWAKEN G110 PREMIUM HANDSHOWER KIT, 2.0 GPM FLOW RATE, ADA COMPLAINT, 36" SLIDEBAR, 60" METAL HOSE. PROVIDE WITH KOHLER 'K-98350' WALL-MOUNT SUPPLY ELBOW, 'K-T15621' VALVE TRIM AND 'K-304-KS' VALVE BODY.			
WH-1	ELECTRIC WATER HEATER	3/4"	3/4"	_	_	AO SMITH	MODEL: PNS-50, PROLINE 50 GALLON ELECTRIC WATER HEATER. 4.5 KW, 50 GALLON, 3/4" GAS & WATER CONNECTIONS, 23" DIAMETER, 0.92 ENERGY FACTOR, 57 GALLON FIRST HOUR RATING.			

3/4" GAS \* TO FURNACE

100 MBH







NOT TO SCALE

3/4" GAS TO FURNACE

100 MBH

\_3/4" GAS

100 MBH

11/16/2018 NTS **CERTIFICATION** 

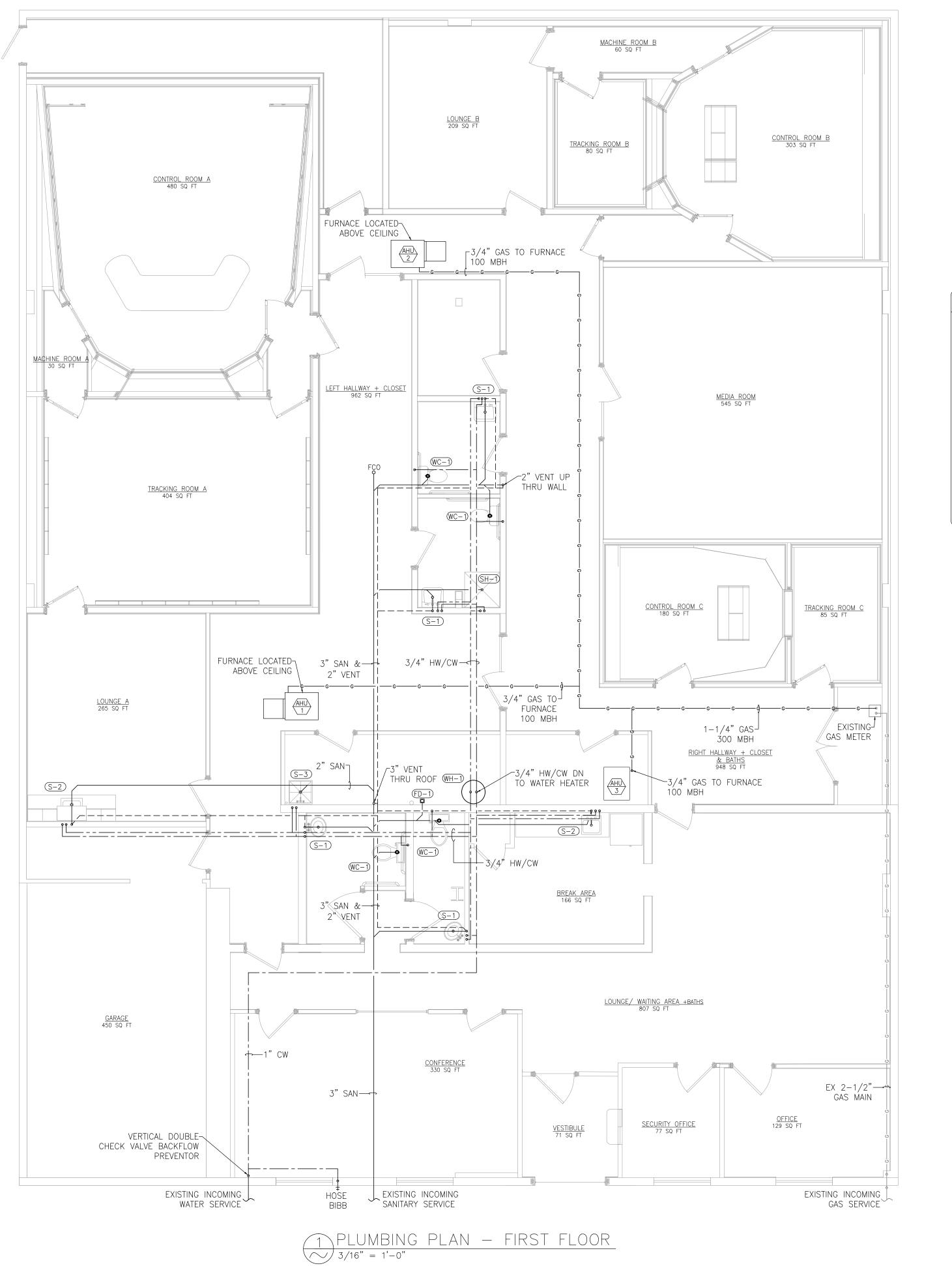
HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND

LICENSE NO: 35708 EXP DATE: 06.12.20

LUMBING SPECS, SCHEDULE RISER DIAGRAMS

SHEET NUMBER

P-1



GENERAL NOTES

A. REFER TO DRAWING P-1 FOR SCHEDULES & SPECIFICATIONS.

RESPONSIBILITY.

- B. COORDINATE WITH OWNER FOR EXACT PLUMBING SPECS.
- C. DRAWINGS ARE DIAGRAMMATICAL BY NATURE AND SHOULD NOT BE SCALED.
- D. ALL CONTRACTORS PRIOR TO BID SUBMISSION PROCESS SHALL VISIT PROPOSED WORK SITE AND FIELD VERIFY ALL EXISTING CONDITIONS. ANY CONDITIONS THAT DIFFER FROM THAT SHOWN ON THIS PLAN SHALL BE REPORTED TO ARCHITECT/ENGINEER SO THAT NEW AND REVISED BID DRAWINGS OR INFORMATION MAY BE ISSUED.

  MODIFICATIONS TO SCOPE OF WORK WHICH RESULTS FROM CONTRACTORS NEGLECT TO VISIT WORK SITE PRIOR TO SUBMITTING BID, SHALL BE THE CONTRACTORS SOLE

3500 Boston St. Baltimore, MD 2 (P)443.990.0008 (F)443.568.133

REV DISCRIPTION DATE

DESIGNED BY: KG

DRAWN BY: KG

REVIEWED BY: JN

DATE: 11/16/2018

SCALE: 3/16" = 1' 0"

CERTIFICATION

I HEREBY CERTIFY THAT
THESE DOCUMENTS
WERE PREPARED OR
APPROVED BY ME, AND I
AM A DULY LICENSED
PROFESSIONAL
ENGINEER UNDER THE
LAWS OF THE STATE OF
MARYLAND

LICENSE NO: 35708 EXP DATE: 06.12.20

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BALTIMORE, MD 21218
PLUMBING PLAN

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SHEET NUMBER

P-2