

2018 IECC CODE COMPLIANCE

R301.1 R401.2	CLIMATE ZONE 4A COMPLIANCE METHOD: MANDATORY AND PRESCRIPTIVE PROVISIONS	R402.4.4	ROOMS CONTAINING FUEL-BURNING APPLIANCES WHERE OPEN COMBUSTION AIR DUCTS PROVIDE COMBUSTION AIR TO OPEN COMBUSTION FUEL BURNING APPLIANCES, THE APPLIANCES AND COMBUSTION AIR SHALL BE LOCATED OUTSIDE THE BUILDING THERMAL ENVELOPE OR ENCLOSED IN A ROOM ISOLATED FROM INSIDE THE THERMAL ENVELOPE. EXCEPTIONS: 1. DIRECT VENT APPLIANCES WITH BOTH INTAKE AND EXHAUST PIPES INSTALLED CONT TO THE OUTSIDE. 2. FIREPLACES AND STOVES COMPLYING WITH SECTION R402.4.2 AND SECTION R1006 OF THE IRC.
R402.1.1	VAPOR RETARDER: WALL ASSEMBLIES IN THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH VAPOR RETARDER REQ'S OF SECTION R702.7 OF THE IRC, 2015 Ed.	R402.4.5	RECESSED LIGHTING: RECESSED LUMINARIES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE LIMIT AIR LEAKAGE.
R402.1.2	ATTIC INSULATION = R-49 RAISED HEEL TRUSSES = R-38	R403.1.1	THERMOSTAT - ALL DWELLING UNITS WILL HAVE AT LEAST ONE (1) PROGRAMMABLE THERMOSTAT FOR EACH SEPARATE HEATING AND COOLING SYSTEM AS PER 2015 IECC SECTION 403.1.1.
R402.1.2	WOOD FRAME WALL:	R403.1.2	WHERE A HEAT PUMP SYSTEM HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT IS USED THE THERMOSTAT SHALL PREVENT THE SUPPLEMENTARY HEAT FROM COMING ON WHEN HEAT PUMP CAN MEET HEATING LOAD.
R402.1.2	R-20 OR R-13 PLUS R5 CONT INSUL	R403.2.1	MECHANICAL DUCT INSUL SUPPLY & RETURN DUCTS IN ATTIC = R-8 MIN. R-6 WHEN LESS THAN 3 INCHES SUPPLY AND RETURN DUCTS OUTSIDE OF CONDITIONED SPACES R-8
R402.1.2	BASEMENT WALL INSULATION:	R403.3.2	ALL OTHER DUCTS EXCEPT THOSE LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE = R-6 MIN. DUCTS LOCATED UNDER CONCRETE SLABS = R-6 MIN
R402.1.2	R-13 / R-10 FOIL FACED CONT. UNINTERRUPTED BATTS FULL HEIGHT	R403.6	DUCT SEALING ALL DUCT, AIR HANDLERS, FILTER BOXES WILL BE SEALED.
R402.1.2	CRAWL SPACE WALL INSUL: R-15/R-10 FOIL FACED CONT. BATTS FULL	R403.6.1	JOINTS AND SEAMS WILL COMPLY WITH SECTION M1601.4.1 OR THE IRC. A DUCT TEST (DUCT BLASTER - DUCT TOTAL LEAKAGE TEST) WILL BE PERFORMED ON ALL HOMES
HEIGHT	EXTENDING FROM FLOOR ABOVE TO FINISH GRADE LEVEL AND THEN VERT OR HORT AN ADDITIONAL 2'-0"	R403.7	AND SHALL BE VERIFIED BY EITHER A POST CONSTRUCTION TEST OR A ROUGH IN TEST. DUCT TIGHTNESS TEST IS NOT REQUIRED IF THE AIR HANDLER AND ALL DUCTS ARE LOCATED WITHIN CONDITIONED SPACE.
R402.1.2	FLOOR INSULATION OVER UNCONDITIONED SPACE = R-19 BATT INSUL	R403.7	MECHANICAL VENTILATION OUTDOOR, (MAKE UP AND EXHAUST), AIR DUCTS TO BE PROVIDED WITH AUTOMATIC OR GRAVITY DAMPER THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING.
R402.1.2	WINDOW U-VALUE / SHGC .35 (U-VALUE) .40 (SHGC)	R404.1	WHOLE HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICIENCY TO COMPLY WITH TABLE R403.6.1
R402.2.10	SLAB ON GRADE FLOORS LESS THAN 12" BELOW GRADE:		EQUIPMENT SIZING SHALL COMPLY WITH R403.7
R402.2.4	R-10 RIGID FOAM BOARD UNDER SLAB EXTENDING EITHER 2'-0" HORT / VERT. ATTIC ACCESS:		LIGHTING EQUIPMENT A MINIMUM OF 75% OF ALL LAMPS (LIGHTS) MUST BE HIGH-EFFICIENCY LAMPS. THIS CONTRACTOR ALSO RESPONSIBLE FOR GENERATING A CERTIFICATE OF COMPLIANCE AND AFFIXING TO ELECTRICAL PANEL OR WITHIN 6 FEET OF THE ELEC PANEL AND BE READILY VISIBLE.
R402.4	ATTIC ACCESS SCUTTLE WILL BE WEATHERSTRIPPED AND INSULATED R-49		
R402.4.1.2	BUILDING THERMAL ENVELOPE (AIR LEAKAGE) EXTERIOR WALLS AND PENETRATIONS WILL BE SEALED PER THIS SECTION OF THE 2015 IECC WITH CAULK, GASKETS, WEATHER STRIPPING OR AN AIR BARRIER OF SUITABLE MATERIAL. SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW SEALING FOR DIFFERTIAL EXPANSION AND CONTRACTION.		
	BUILDING ENVELOPE TIGHTNESS TEST:		
	BUILDING ENVELOPE SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDING 3 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM E 779 or ASTM E 1827 WITH (BLOWER DOOR) AT A PRESSURE OF 0.2 INCHES w.g. (50 PASCALS).		
	TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE BUILDING INSPECTOR.		
R402.4.2	FIREPLACES: NEW WOOD BURNING FIREPLACES WILL HAVE TIGHT-FITTING FLUE DAMPERS OR DOORS, AND OUTDOOR COMBUSTION AIR. FIREPLACE DOORS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL127 (FACTORY BUILT FIREPLACE) AND UL907 (MASONRY FIREPLACE).		

APPLICABLE CODES

NFPA 101  
2018 EDITION

BALTIMORE CITY FIRE AND RELATED CODES (BCFRC)  
2020 EDITION

- Maryland Building Performance Standards / March 2019
- International Building Code / 2018
- National Electrical Code / 2017
- International Fuel Gas Code / 2018
- International Mechanical Code / 2018
- International Plumbing Code / 2018
- International Property Maintenance Code / 2018
- Code / 2018
- International Fire Code / 2018
- International Energy Conservation Code / 2018
- International Green Construction Code / 2012
- International Swimming Pool and Spa Code / 2018

The Fire Extinguishing System shall be tied to the building fire alarm system (IFC: 904.3.5).

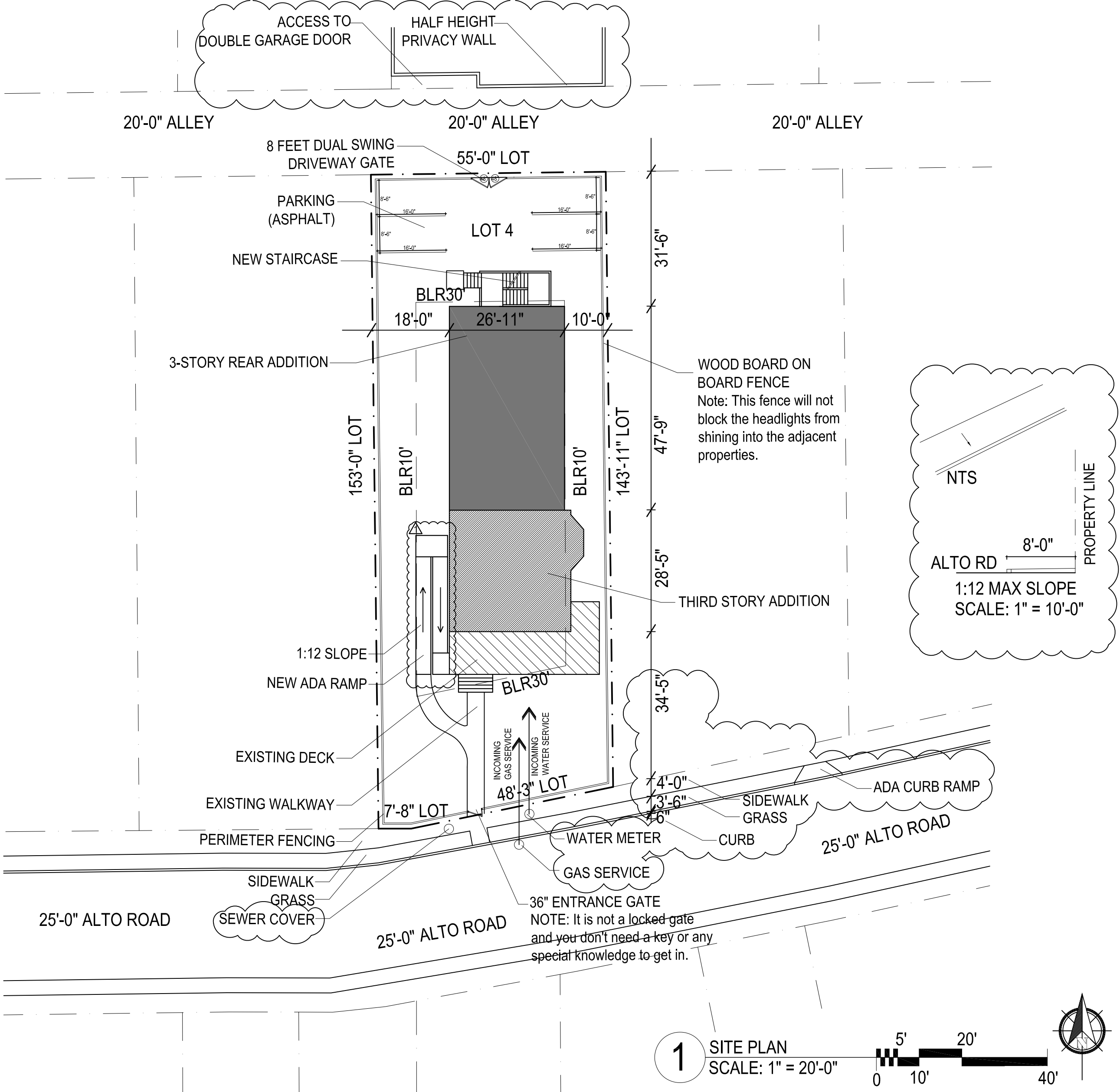
Activation of the Fire Extinguishing System must automatically shut off all fuel and heat components to all equipment under the hood (Section 10.4, 2014 NFPA 96).

DRAWING LIST

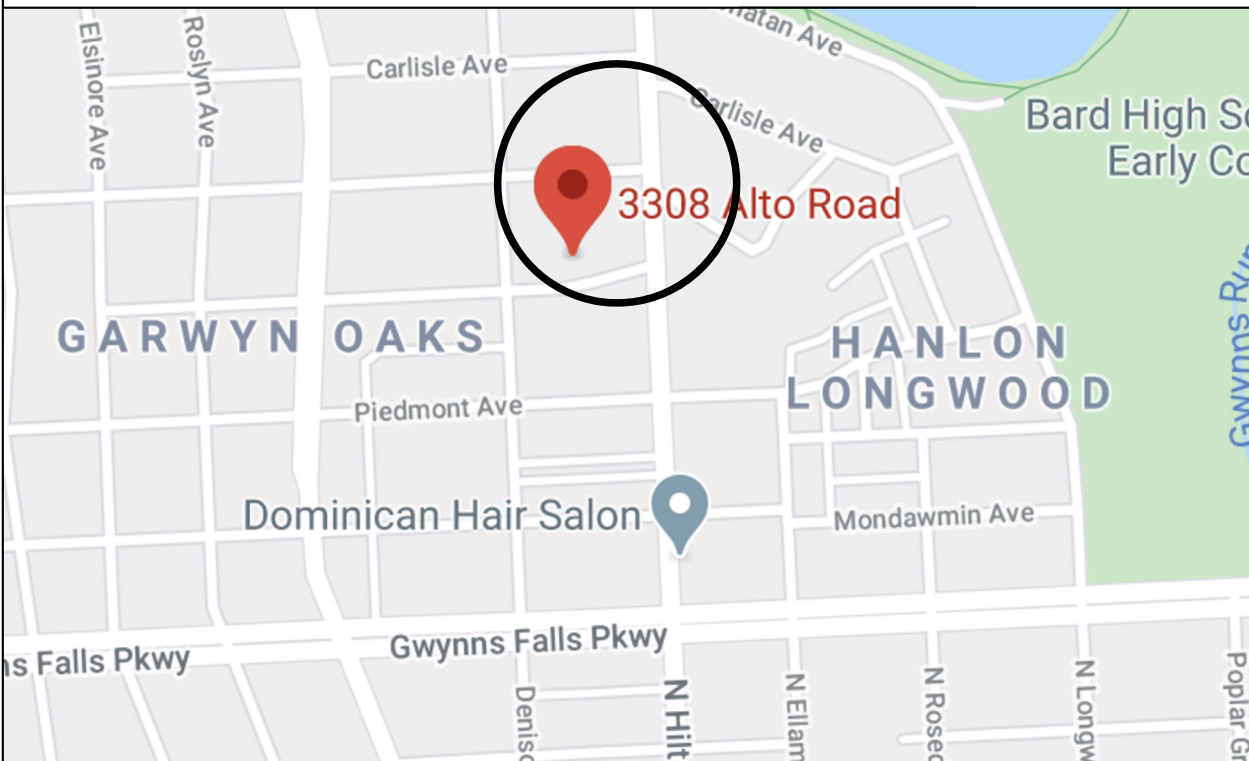
0000-G=G1 TITLE SHEET & SITE PLAN
0020-G=G2 CODE ANALYSIS & LIFE SAFETY
0021-G=G3 DOOR & WINDOW SCHEDULE & NOTES
0001-AD=AD1 BASEMENT DEMO PLAN
0002-AD=AD2 1ST FLOOR DEMO PLAN
0003-AD=AD3 2ND FLOOR DEMO PLAN
0004-AD=AD4 3RD FLOOR DEMO PLAN
0005-AD=AD5 DEMO ELEVATIONS
0006-S=S1 FOUNDATION PLAN
0007-S=S2 1ST FLOOR FRAMING PLAN
0008-S=S3 2ND FLOOR FRAMING PLAN
0009-S=S4 3RD FLOOR FRAMING PLAN
0010-S=S5 ROOF FRAMING PLAN
0011-A=A1 BASEMENT PLAN
0012-A=A2 1ST FLOOR PLAN
0013-A=A3 2ND FLOOR PLAN
0014-A=A4 3RD FLOOR PLAN
0015-A=A5 ROOF PLAN
0016-A=A6 PROPOSED FRONT & REAR ELEVATIONS
0017-A=A7 PROPOSED SIDE ELEVATION
0018-A=A8 PROPOSED SIDE ELEVATION
0019-A=A9 BUILDING SECTION
0022-A=A10 TYPICAL DETAILS
0023-A=A11 TYPICAL DETAILS
MEP BY OTHERS

3308 ALTO ROAD  
BALTIMORE, MD 21216

SCOPE OF WORK:  
CONVERTING EXISTING SINGLE FAMILY TO  
RESIDENTIAL CARE FACILITY  
- INTERIOR RENOVATION, REAR AND SIDE ADDITION



LOCATION PLAN



BUILDING INFORMATION

3308 ALTO ROAD  
2 1/2 STORIES STANDARD UNIT W/ BASEMENT  
USE: RESIDENTIAL  
PRINCIPAL RESIDENCE: NO  
COUNTY USE: 111110  
PRIMARY STRUCTURE BUILT 1910  
LOT AREA: 7,344 SF  
ABOVE GRADE LIVING AREA = 2,010 SF  
DEED REFERENCE: /21503/ 0374  
LEGAL DESCRIPTION: 48-3X153

LEGEND

	NOT IN SCOPE
	EXISTING BUILDING FOOTPRINT
	NEW ADDITION/BUILDING FOOTPRINT

CONSTRUCTION TYPE : Type 5B - Sliding Ext Wall, Unprotected	IBC USE GROUP : R-3 (Single Family Dwelling)
3308 ALTO ROAD — SITE PLAN MAP 15— NEIGHBORHOOD 15050333.03— SECTION 27— BLOCK 3069— LOT 4	ADDITION & INTERIOR RENOVATION SCALE : 1" = 20'-0"
OWNERSHIP : AMILIA CARE INC	OWNERSHIP ADDRESS : 14505 DAYSTONE DR SILVER SPRING, MD 20905

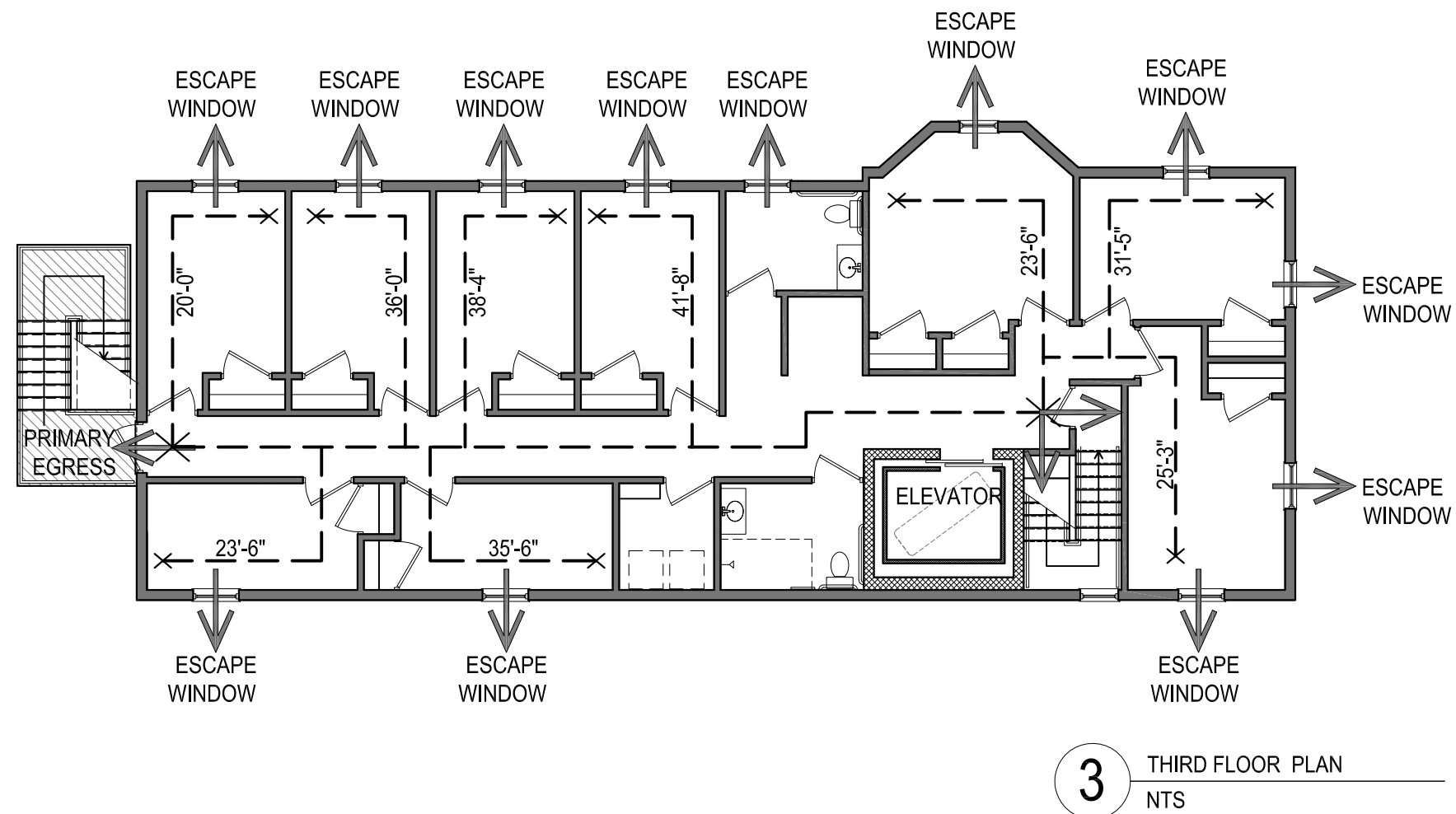
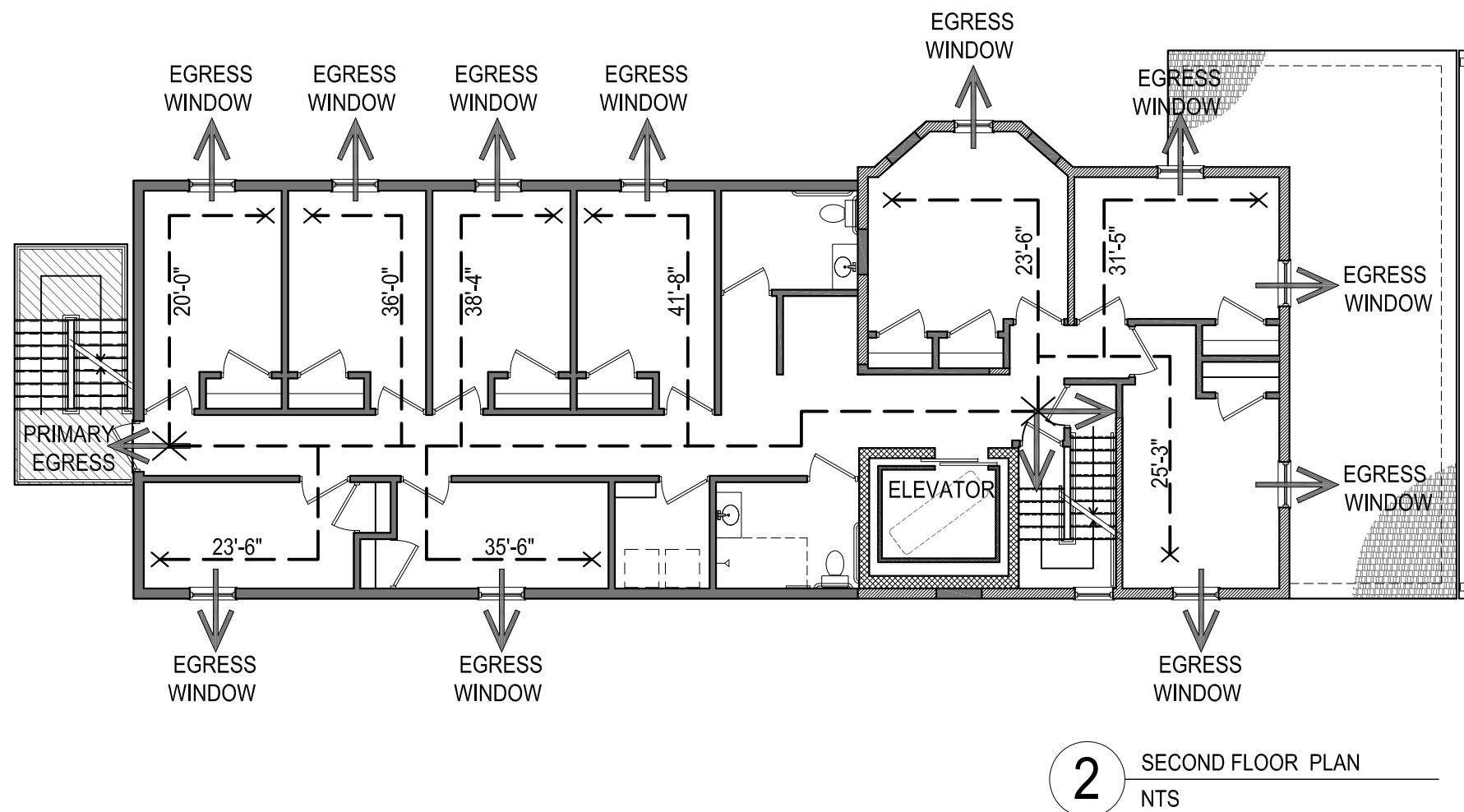
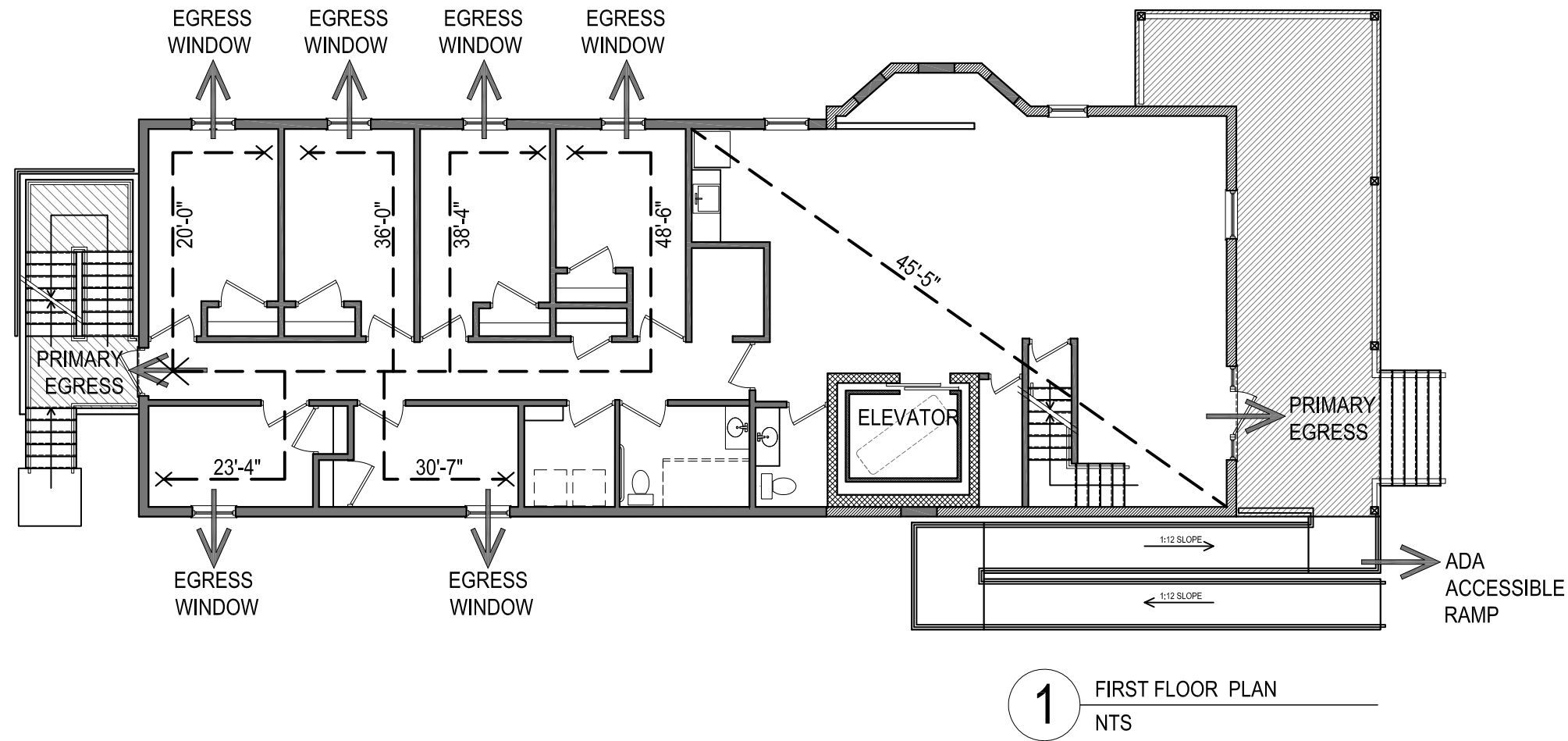
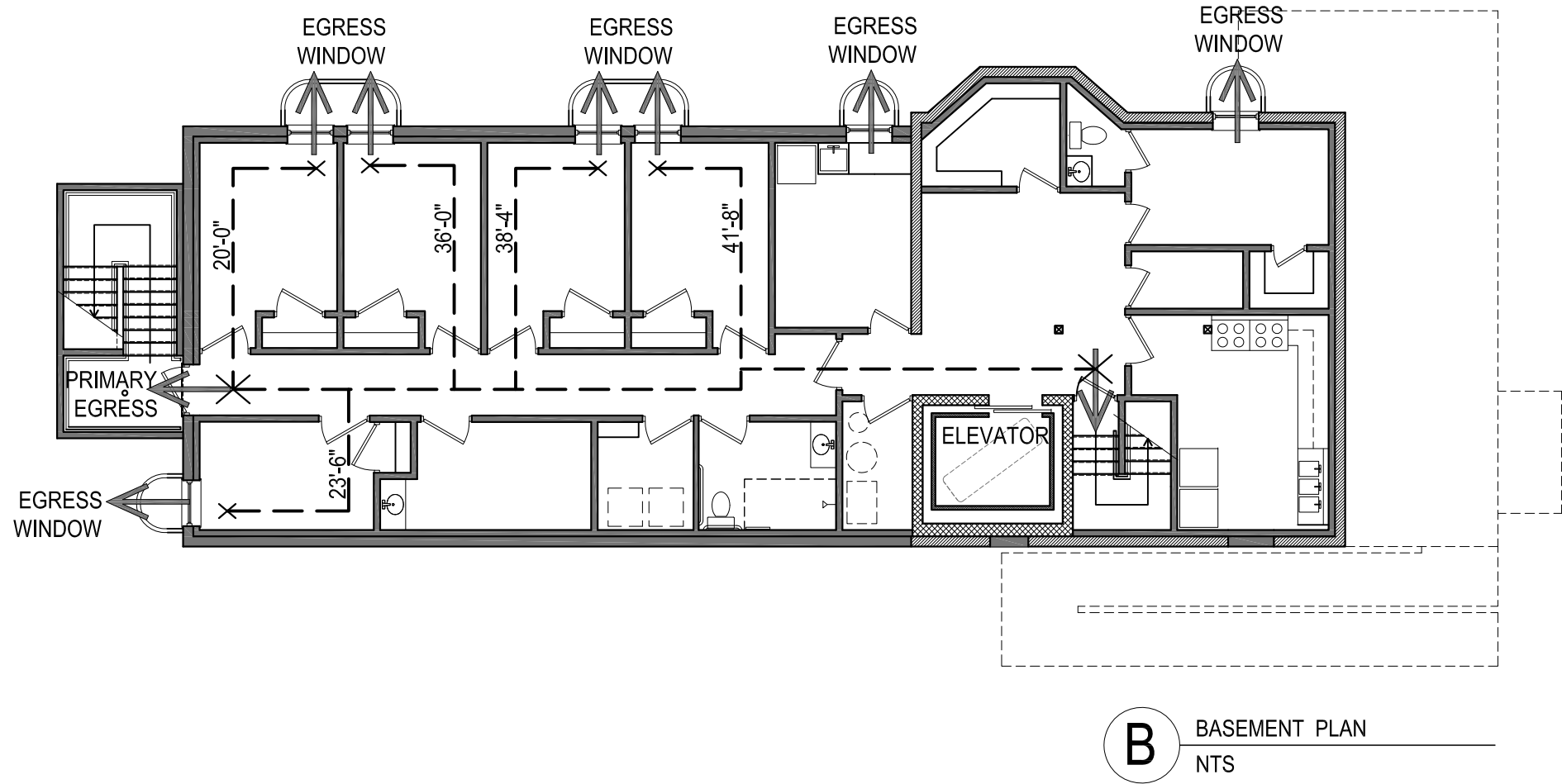
PROFESSIONAL CERTIFICATION:  
(I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT IN THE STATE OF MARYLAND, LICENSE NUMBER 15709, EXPIRATION DATE 3/17/2025.  
CONTRACT DOCUMENTS HAVE BEEN PREPARED BY A LICENSED ARCHITECT IN ACCORDANCE WITH THE MARYLAND PROFESSIONAL ARCHITECT ACT, MD LA 1-15206.

REVISIONS  
2/3/2022

CARBALLO ARCHITECTURE, LLC  
1815 ALICEANNA ST, BALTIMORE, MD 21231  
ADAM CARBALLO, ARCHITECT  
MD LIC # 15709  
443-965-1077

0000-G=G1  
TITLE SHEET & SITE PLAN  
3308 ALTO ROAD  
JOB # 16-441  
DEC 2019

CLIENT :  
MS AMILIA CEMA



## CODE ANALYSIS

	EXISTING	PROPOSED
IBC USE GROUP	R-3 (Single-family)	Institutional Group I-2 (RESIDENTIAL CARE FACILITY/Nursing HOME)
OCCUPANCY CAPACITY (NFPA 101)		
BASEMENT	<49	<49
FIRST FLOOR	<49	<49
SECOND FLOOR	<49	<49
THIRD FLOOR	<49	<49
OCCUPANCY CAPACITY		
BASEMENT	<49	<49
FIRST FLOOR	<49	<49
SECOND FLOOR	<49	<49
THIRD FLOOR	<49	<49
CONSTRUCTION TYPE	5B	5B
BUILDING HEIGHT	34'-0"	34'-0"
NUMBER OF STORIES	3+BASEMENT	3+BASEMENT
NUMBER OF EXITS REQUIRED/SHOWN		
BASEMENT	1/1	2/2
FIRST FLOOR	1/1	2/2
SECOND FLOOR	1/1	2/2
THIRD FLOOR	1/1	2/2
OFF STREET PARKING SPACES PROVIDED	ZERO/ZERO	ZERO/4
LOAD FACTOR	2 PERSONS / BEDROOM MAX	
BASEMENT	6 BEDROOMS * 2= 12 PERSONS	
FIRST FLOOR	5 BEDROOMS * 2=10 PERSONS	
SECOND FLOOR	9 BEDROOMS * 2=18 PERSONS	
THIRD FLOOR	9 BEDROOMS * 2=18 PERSONS	
TOTAL POPULATION	58 PERSONS	

PROPOSED CONSTRUCTION TYPE:  
3A (WD FRAMED - PROTECTED)  
EXISTING BUILDING HEIGHT: 33 FT  
PROPOSED BUILDING HEIGHT: 34 FT  
ALLOWABLE BUILDING HEIGHT: 35 FT

### AREA CALCULATION

BASEMENT	2,149 SF
1ST FLOOR	2,149 SF
2ND FLOOR	2,149 SF
3RD FLOOR	2,149 SF

### AREA OF ALTERATION

BASEMENT	761 SF
1ST FLOOR	761 SF
2ND FLOOR	761 SF
3RD FLOOR	463 SF

### AREA OF NEW ADDITION

BASEMENT	1,388 SF
1ST FLOOR	1,388 SF
2ND FLOOR	1,388 SF
3RD FLOOR	1,686 SF

An automatic sprinkler will be provided as per IBC: 903.  
Sprinkler System classification: NFPA 13.

A fire alarm system and smoke detection system will be  
provided as per IBC: 907.

A two-way communication system complying with Sections  
1009.8.1 and 1009.8.2 shall be provided at the landing  
serving each elevator or bank of elevators on each  
accessible floor that is one or more stories above or below  
the level of exit discharge.



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15709. EXPIRATION DATE 3/17/2025.  
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MD LIC # 15709.

REVISIONS  
2/3/2022

CLIENT  
MR. AMILIA ALCOMA


CARBALLO ARCHITECTURE, LLC  
1816 ALICEANNA ST. BALTIMORE, MD 21231  
ADAM CARBALLO, ARCHITECT  
MD LIC # 15709  
443-965-1077

0020-G=G2  
CODE ANALYSIS & LIFE SAFETY PLAN  
3308 ALTO RD  
JOB # 19-441  
OCT 2021



Fire blocking will be provided vertically at the ceiling at the concealed wall spaces for all new partitions (section 718.2.2, 2018 International Building Code).
All ramps shall be edge protected (IBC: 1012.10).
The kitchen exhaust hood will be attached to a stainless-steel panels.
The wall adjacent to cooking equipment will be stainless-steel panels.
A Type K fire extinguisher is required in the kitchen area for the protection of cooking grease fires.
The kitchen exhaust fan will have an automatic control or a means of interlocking with the protected cooking appliances (Section 507.1.1, 2018 IMC).
Mechanical make-up fan must be interlocked with the kitchen hood exhaust fan (Section 508.1, 2018 IMC).
Cooking equipment that produces grease laden vapors and that might be a source of ignition of grease in the hood or duct shall be protected by a fire-suppression system (NFPA 96: 10.1.2).
Roof assembly class B. Roof assembly/covering shall be tested in accordance with ASTM E108 or UL 790. Additionally the roof covering shall be tested in accordance with ASTM D2898. The minimum roof covering installed shall comply with table 1505.1.

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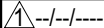
NOTE: WINDOWS TYPE SYMBOL  DENOTES WINDOWS THAT ARE EXISTING TO REMAIN

DOOR & HARDWARE SCHEDULE	FLOOR	DOOR NO.	ROOM NO.	LOCATION	OPENING	DOOR TYPE		MATERIAL	CORE	LOCKSET	VISION PANEL	FIRE RATING	HARDWARE	
	BASEMENT	D001	001	OFFICE	30"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	YES	-	
	BASEMENT	D002	001	CLOSET	24"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D003	002	KITCHEN	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D004	003	HALF BATH	30"	6'-8"	SWING	SINGLE	WD	SOLID	PRIVACY (C)	-	-	
	BASEMENT	D005	004	NURSING STATION	30"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	BASEMENT	D006	015	STAIRCASE #1	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (2 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D007	006	KITCHENETTE	30"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	BASEMENT	D008	005	UTILITY ROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	BASEMENT	D009	-	HALLWAY SEPARATION	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D010	007	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D011	007	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D012	008	FULL BATH	36"	6'-8"	SWING	SINGLE	WD	SOLID	PRIVACY (C)	-	-	
	BASEMENT	D013	009	LAUNDRY ROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	BASEMENT	D014	010	EXERCISE ROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	BASEMENT	D015	011	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D016	011	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D017	012	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D018	012	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D019	013	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D020	013	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D021	014	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	BASEMENT	D022	014	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	BASEMENT	D023	-	STAIRCASE #2	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (2 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D100	100	ENTRY DOOR	36"	6'-8"	SWING	SINGLE	WD	SOLID	ENTRY (A)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D101	100	STAIRCASE #1	30"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (2 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D102	100	STORAGE	24"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	FIRST FLOOR	D103	102	HALF BATH	30"	6'-8"	SWING	SINGLE	WD	SOLID	PRIVACY (C)	-	-	
	FIRST FLOOR	D104	103	FULL BATH	36"	6'-8"	SWING	SINGLE	WD	SOLID	PRIVACY (C)	-	-	
	FIRST FLOOR	D105	104	LAUNDRY ROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	-	
	FIRST FLOOR	D106	105	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D107	105	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	FIRST FLOOR	D108	106	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D109	106	CLOSET	36"	6'-8"	SWING	SINGLE	WD	SOLID	STOREROOM (D)	-	-	
	FIRST FLOOR	D110	107	BEDROOM	36"	6'-8"	SWING	SINGLE	WD	SOLID	PASSAGE (B)	-	YES (1 HOUR)	SELF-CLOSING HINGES/SPRINGS
	FIRST FLOOR	D111	107	CLOSET	36"	6								



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ARCHITECT IN THE STATE OF MARYLAND.  
MY EXPIRATION DATE IS 7/27/2021.  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM A REGISTERED  
PROFESSIONAL ARCHITECT  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN, MD 24-P 1578.

REVISIONS



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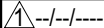
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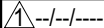
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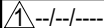
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REVISIONS

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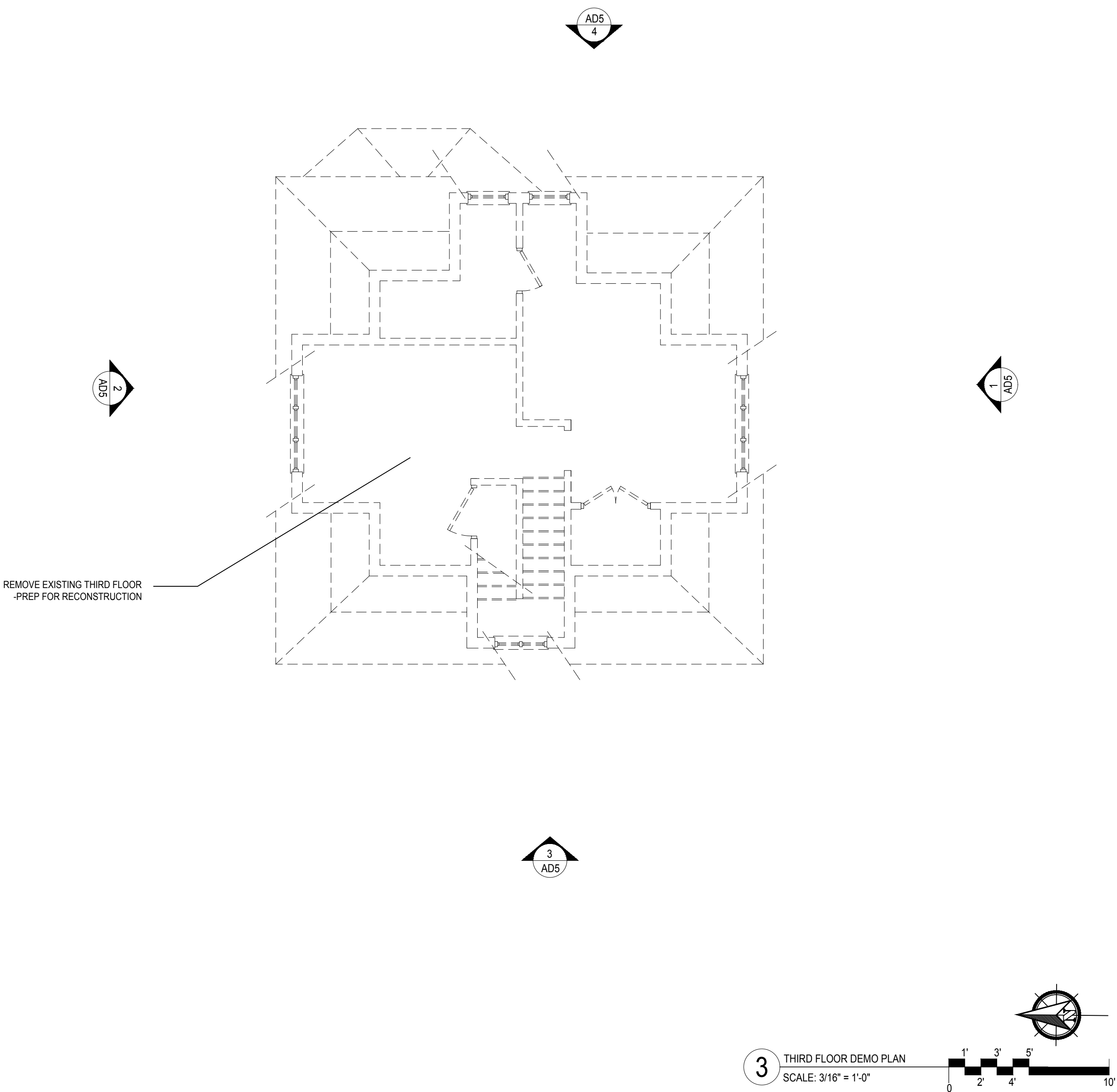
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CLIENT MS AMILIA ALCEMA
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CARBALLO ARCHITECTURE, LLC ADMIN CARBALLO, ARCHITECT MD LIC# 15709 443-745-1100
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0004-AD=AD4 THIRD FLOOR DEMO PLAN	3308 ALTO ROAD JOB # 19-441 DEC 2019
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LEGEND

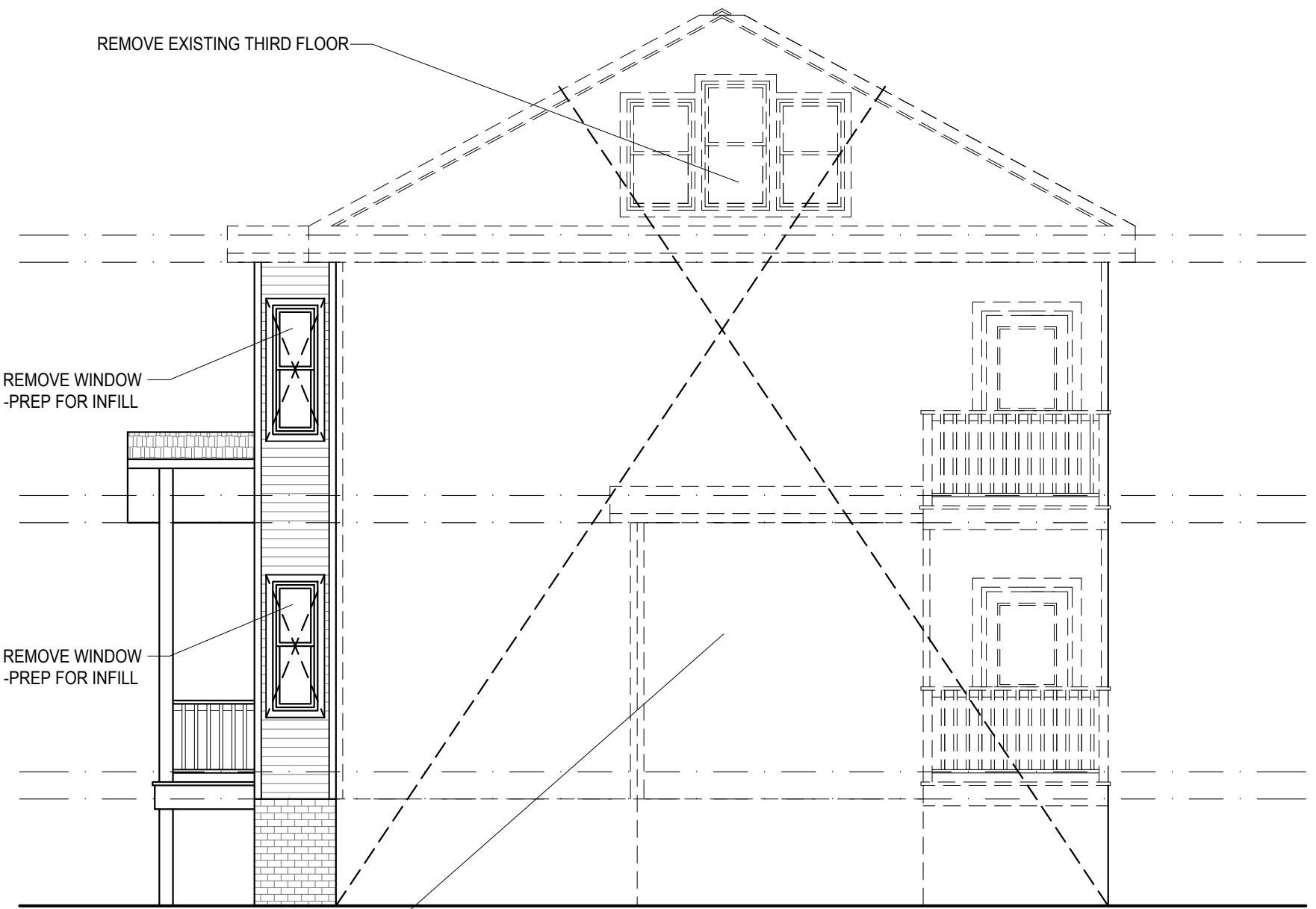
- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

GENERAL NOTES

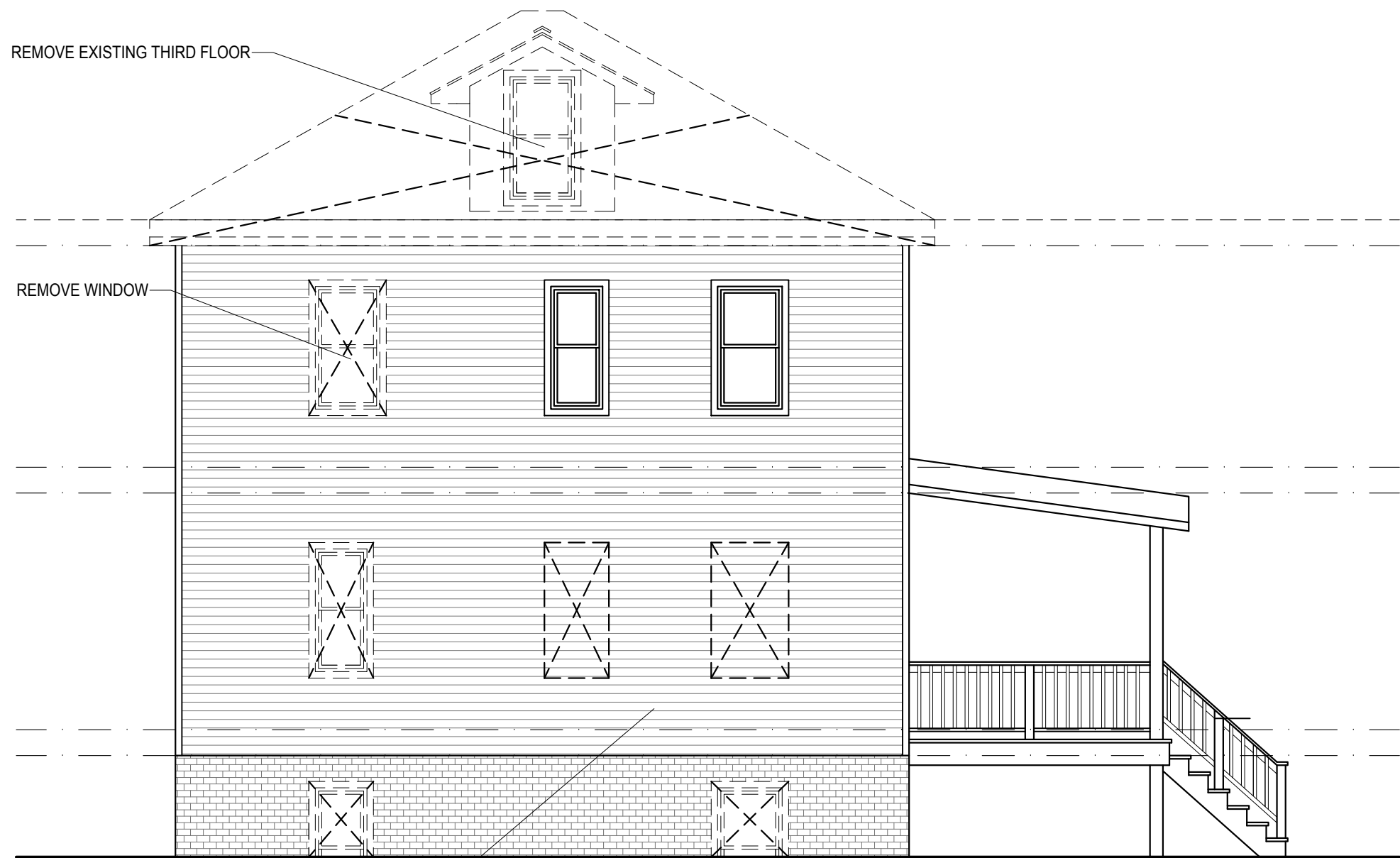
- DO NOT SCALE DRAWINGS.  
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.  
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.  
- INTERIOR FINISHES ARE CLIENT'S CHOICE  
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL 36" DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.



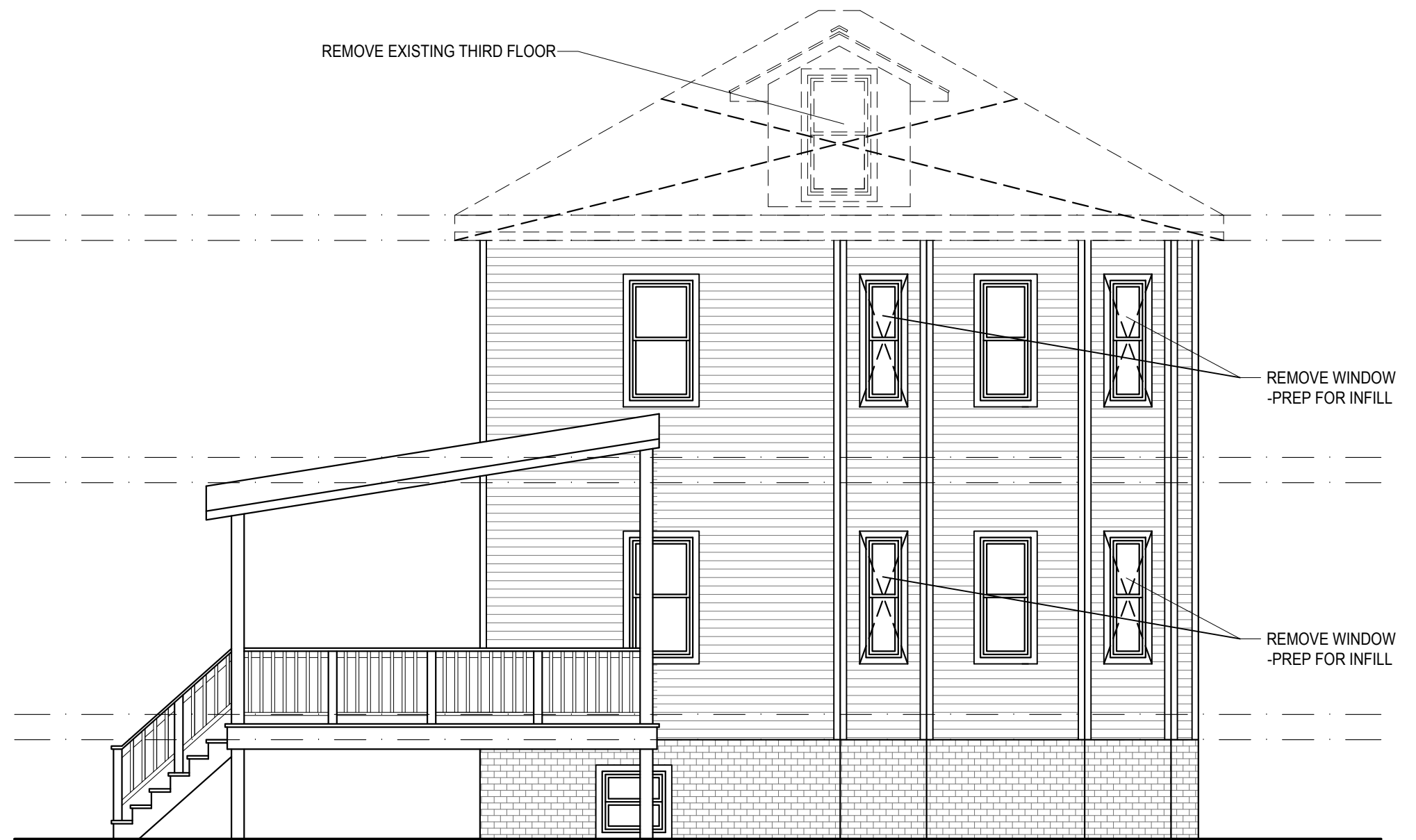
1 DEMO FRONT ELEVATION  
SCALE: 3/16" = 1'-0"



2 DEMO REAR ELEVATION  
SCALE: 3/16" = 1'-0"



3 DEMO SIDE ELEVATION  
SCALE: 3/16" = 1'-0"



4 DEMO SIDE ELEVATION  
SCALE: 3/16" = 1'-0"



PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WAS PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND  
15% EXPIRATION DATE: 7/27/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND APPROVED BY ME  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN AND L&P 15%.

REVISIONS

1. 1/1/2020

2. 1/1/2020

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PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND  
15700 EXPIRATION DATE: 1/27/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED FOR CONFLICT WITH THE  
STATE OF MARYLAND ARCHITECTURE &  
STRUCTURAL DESIGN LAW 15700.

#### REVISIONS

10/5/2021

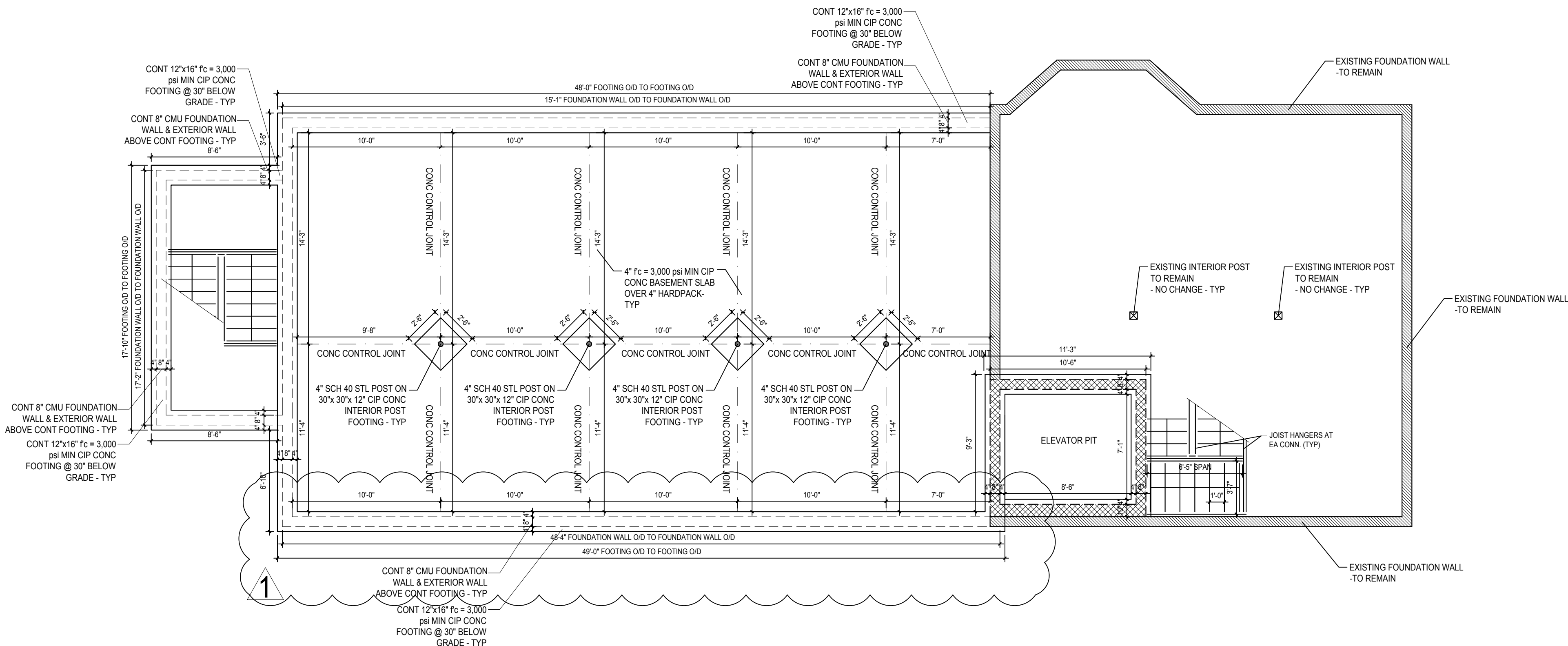
Removed side addition  
to avoid conflict with  
existing sewer line

CLIENT  
MS AMILIA ALCEMA

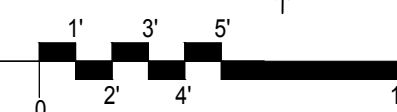
CAPBALLO ARCHITECTURE, LLC  
ADMINISTRATOR, ARCHITECT  
MD LIC# 15709  
443-745-1100

0006-S=S1  
FOUNDATION PLAN

3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



B FOUNDATION PLAN  
SCALE: 3/16" = 1'-0"



#### LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

#### GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.



PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND, LICENSE NUMBER  
15706, EXPIRATION DATE 1/27/2021.  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM A DULY LICENSED  
STRUCTURAL DESIGNER, LICENSE NUMBER  
15706.

#### REVISIONS

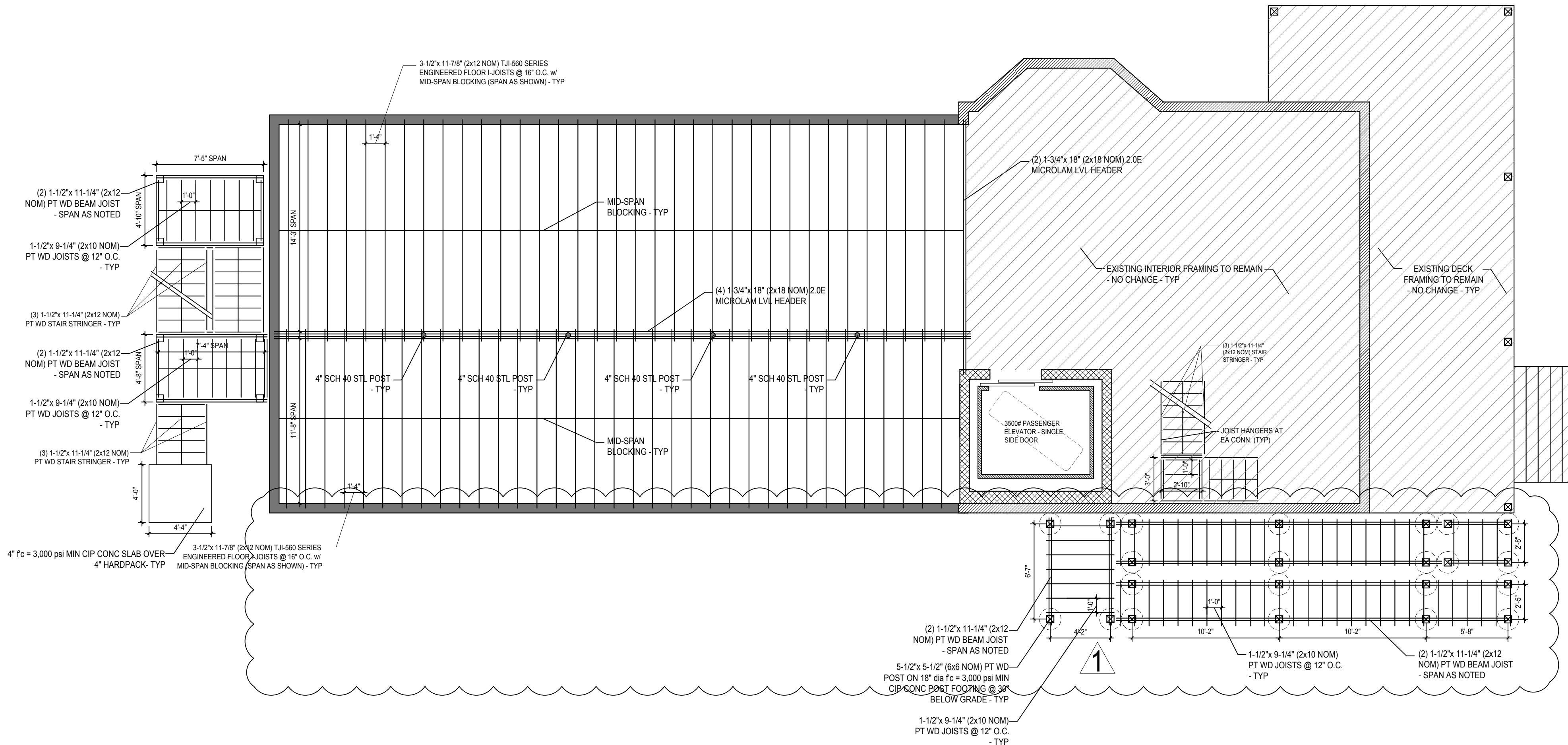
8/5/2020

Removed side addition  
to meet lot coverage  
regulations

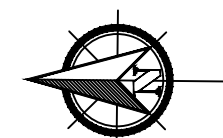
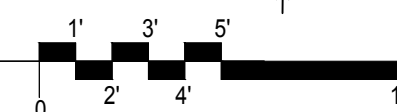
CLIENT  
MS AMILIA ALCEMA

CAPBALLO ARCHITECTURE, LLC  
ADMINISTRATOR, ARCHITECT  
MD LIC# 15709  
443-745-1100

0007-S=S2  
FIRST FLOOR FRAMING PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



1 FIRST FLOOR FRAMING PLAN  
SCALE: 3/16" = 1'-0"



#### LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

#### GENERAL NOTES

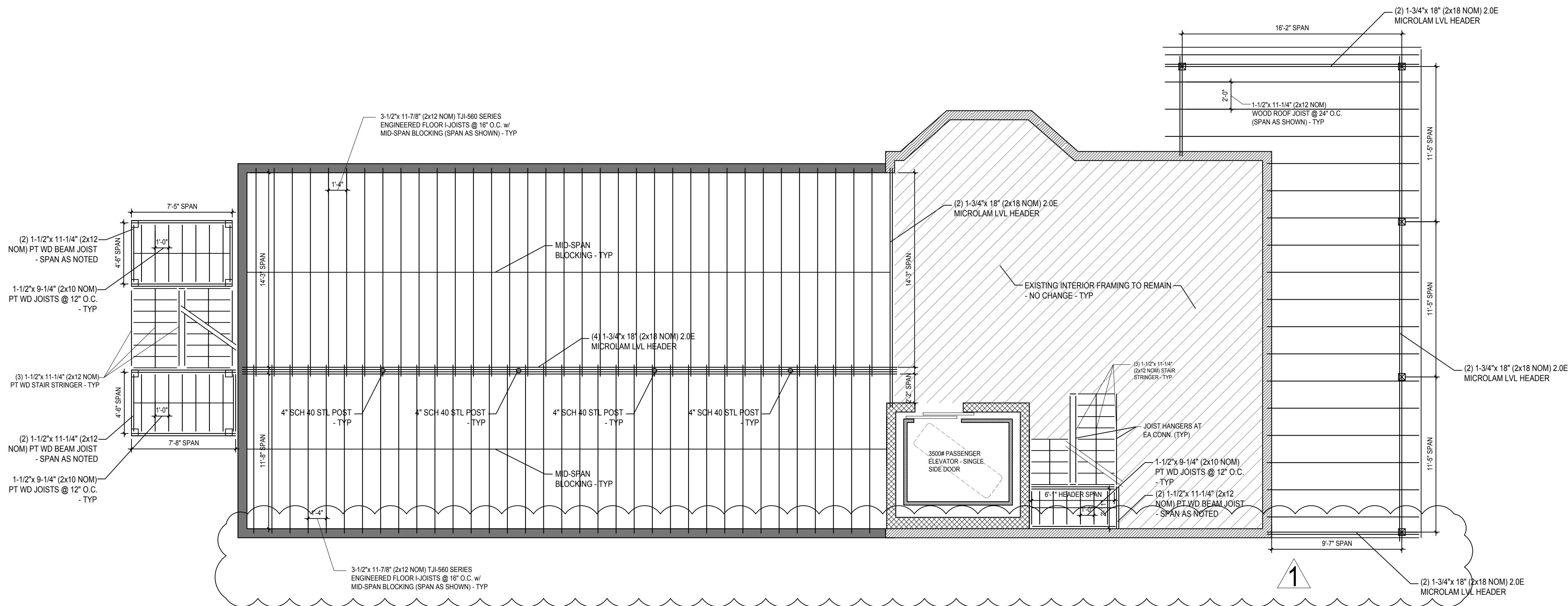
- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.



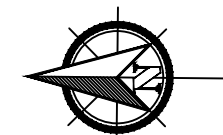
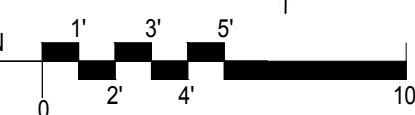


PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND.  
15% EXPIRATION DATE: 1/27/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM AWARE OF THE  
PROJECT FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN. MD L&P 1578.

**REVISIONS**  
1/8/5/2020  
Removed side addition  
to meet lot coverage  
regulations



**2** SECOND FLOOR FRAMING PLAN  
SCALE: 3/16" = 1'-0"



#### LEGEND

	NOT IN SCOPE
	DEMO PARTITION
	EXISTING PARTITION TO REMAIN
	NEW PARTITION

#### GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
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- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.

CLIENT  
MS AMILIA ALCEMA

CARBALLO ARCHITECTURE, LLC  
ADM CARBALLO, ARCHITECT  
MD LIC# 15709  
443-745-1100

**0008-S=S3**  
SECOND FLOOR FRAMING PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019

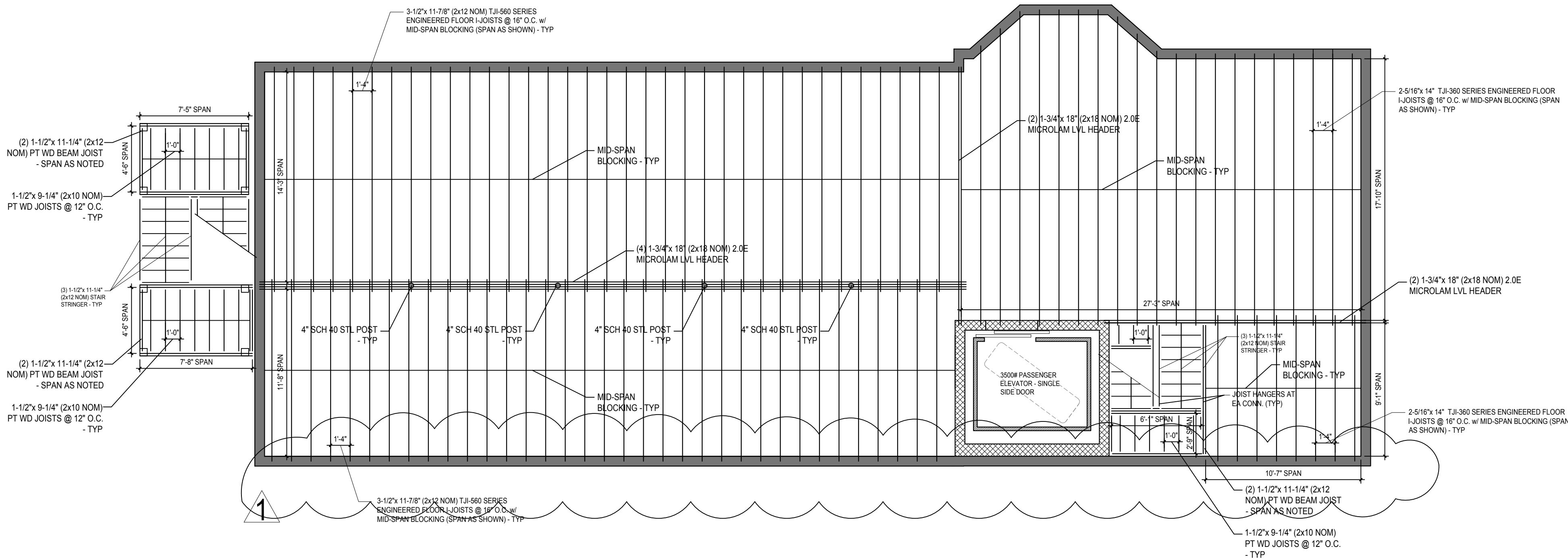


PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND  
MY LICENSE NUMBER IS 15709  
EXPIRATION DATE 1/27/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM AWARE OF THE  
PROJECT FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN MD L&P 15709

#### REVISIONS

10/5/2021

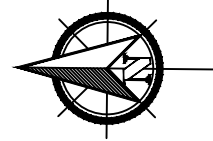
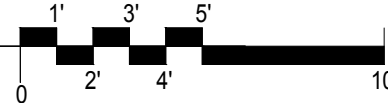
Removed side addition  
to avoid conflict with  
existing sewer line



1

3-1/2"x 11-7/8" (2x12 NOM) TJI-560 SERIES  
ENGINEERED FLOOR JOISTS @ 16" O.C. w/  
MID-SPAN BLOCKING (SPAN AS SHOWN) - TYP

3 THIRD FLOOR FRAMING PLAN  
SCALE: 3/16" = 1'-0"



#### LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

#### GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.

CLIENT  
MS AMILIA ALCEMA

CAPBALLO ARCHITECTURE, LLC  
ADMINISTRATOR, ARCHITECT  
MD LIC# 15709  
443-745-1100

0009-S=S4  
THIRD FLOOR FRAMING PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019

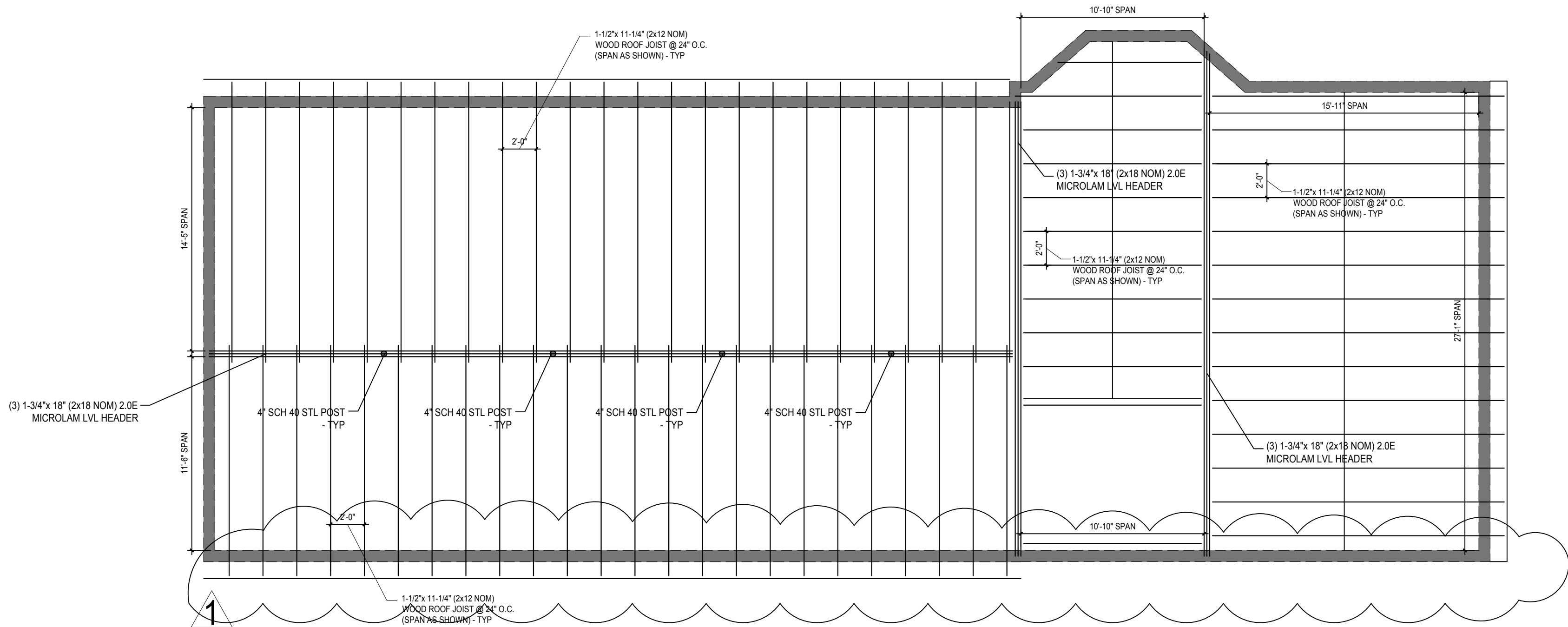




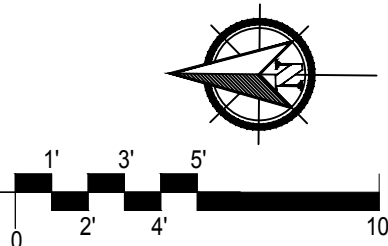
PROFESSIONAL CERTIFICATION:  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND.  
15% EXPIRATION DATE: 1/27/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM A REGISTERED  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN MD L&P 15708

REVISIONS

10/5/2021  
Removed side addition  
to avoid conflict with  
existing sewer line



R ROOF FRAMING PLAN  
SCALE: 3/16" = 1'-0"



LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.

CLIENT  
MS AMILIA ALCEMA

CARBALLO ARCHITECTURE, LLC  
ADM CARBALLO, ARCHITECT  
MD LIC# 15709  
443-745-1100

0010-S=S5  
ROOF FRAMING PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



PROFESSIONAL CERTIFICATION:  
I, ADAM CARBALLO, ARCHITECT, AIA, NO. 14419, AM A DULY LICENSED ARCHITECT IN THE STATE OF MARYLAND. MY EXPIRATION DATE IS 12/31/2025.  
I, MS AMILIA ALCENA, AIA, NO. 14419, AM A DULY LICENSED ARCHITECT IN THE STATE OF MARYLAND. MY EXPIRATION DATE IS 12/31/2025.  
FOR BOTH ARCHITECTURE & STRUCTURAL DESIGN, NO. 14419.

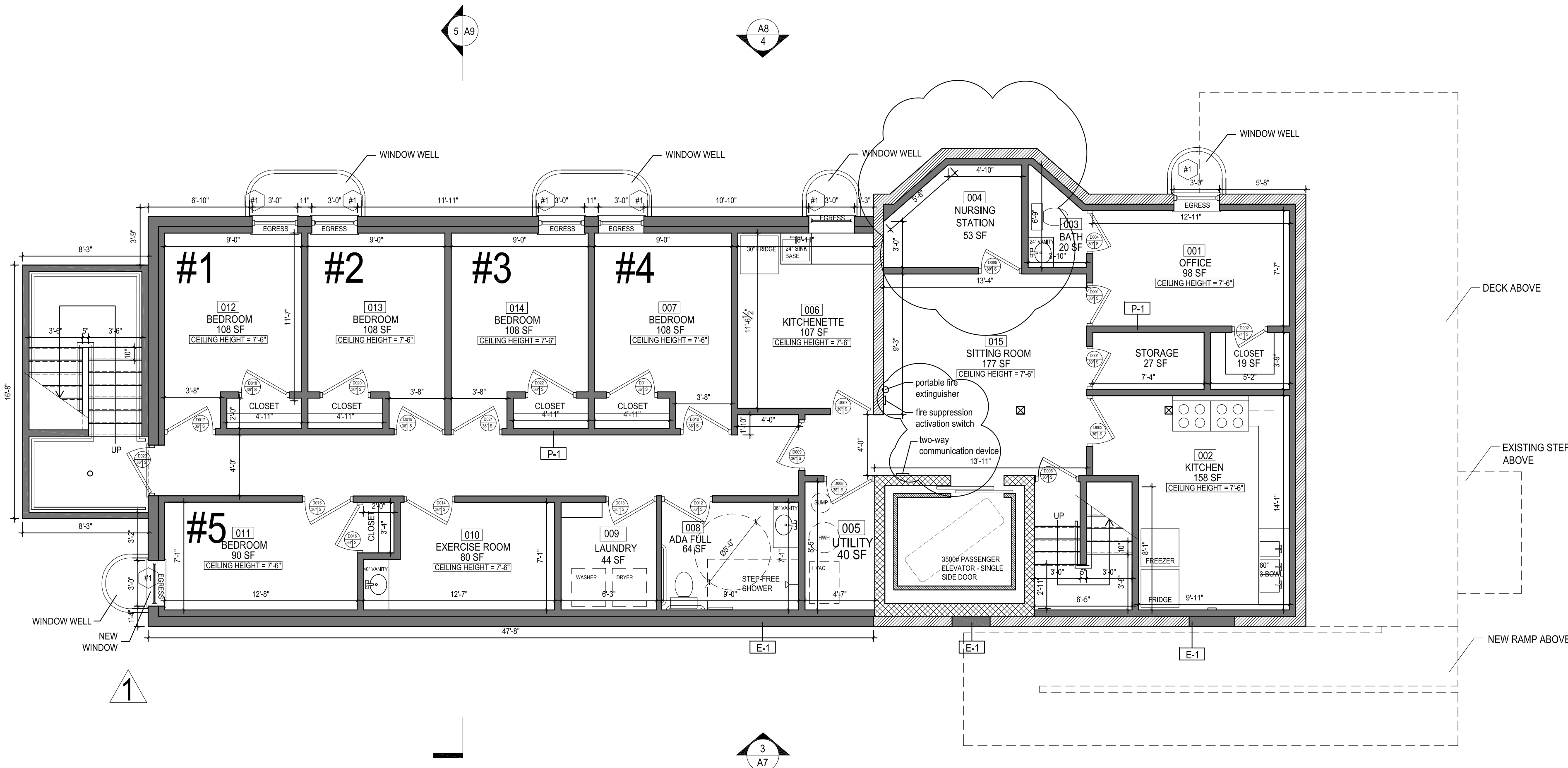
#### REVISIONS

- 10/5/2021  
Removed side addition to meet lot coverage regulations
- 1/3/2022  
Removed side addition to avoid conflict with existing sewer line

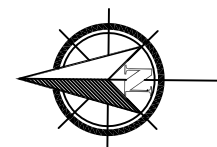
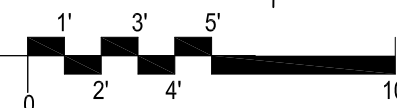
CLIENT  
MS AMILIA ALCENA

CARBALLO ARCHITECTURE, LLC  
ADAM CARBALLO, ARCHITECT  
MD LIC# 14419  
443-745-1100

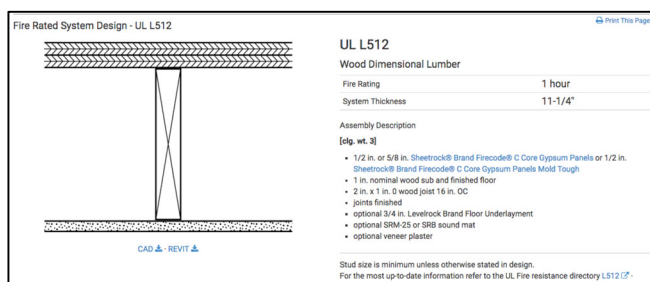
0011-A=A1  
BASEMENT PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



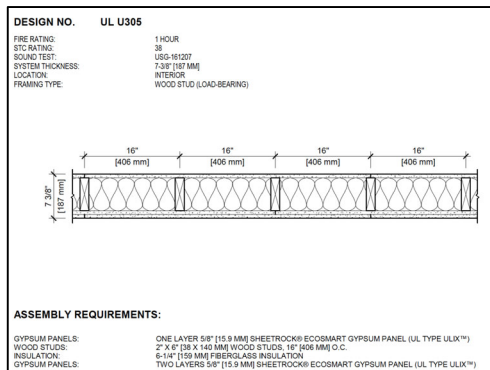
B BASEMENT PLAN  
SCALE: 3/16" = 1'-0"



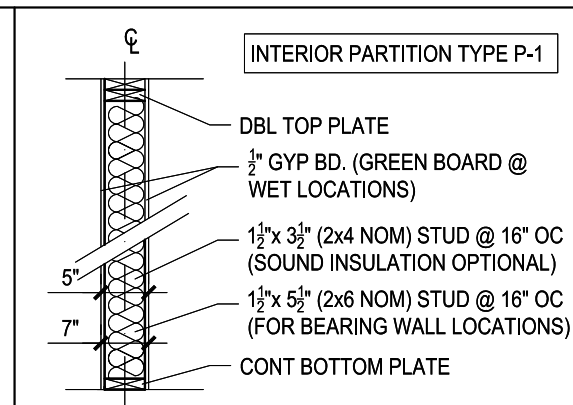
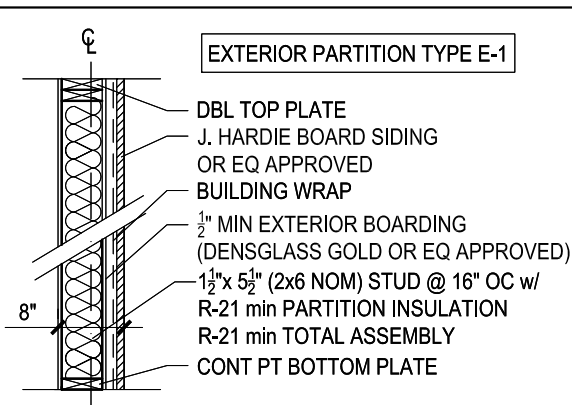
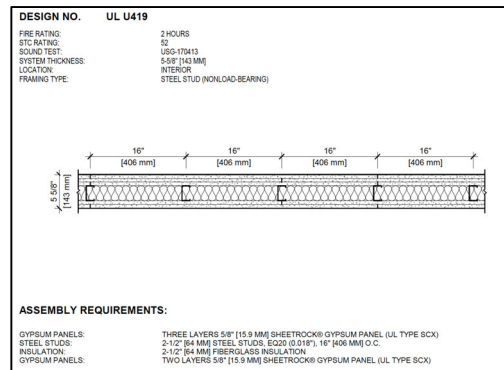
#### ASSEMBLY DETAILS FOR CEILINGS



#### ASSEMBLY DETAILS FOR CORRIDOR & ROOM SEPARATION WALLS



#### ASSEMBLY DETAILS FOR EXIT STAIRS & ELEVATOR



#### LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

#### GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
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- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR STYLE CLIENT'S CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.



## 10/5/2021

10/5/2021  
Improved side addition  
set lot coverage  
restrictions

Improved side addition  
avoid conflict with  
existing sewer line

1/3/2022

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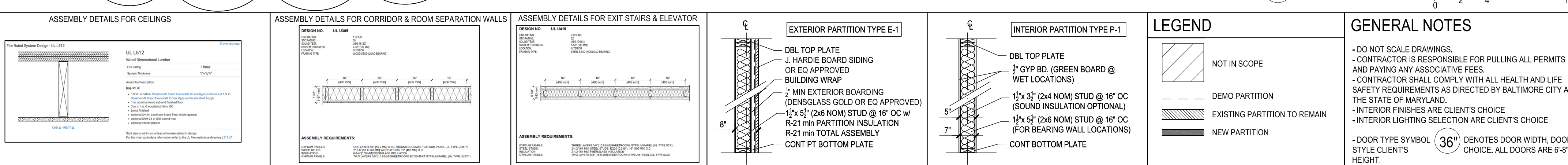
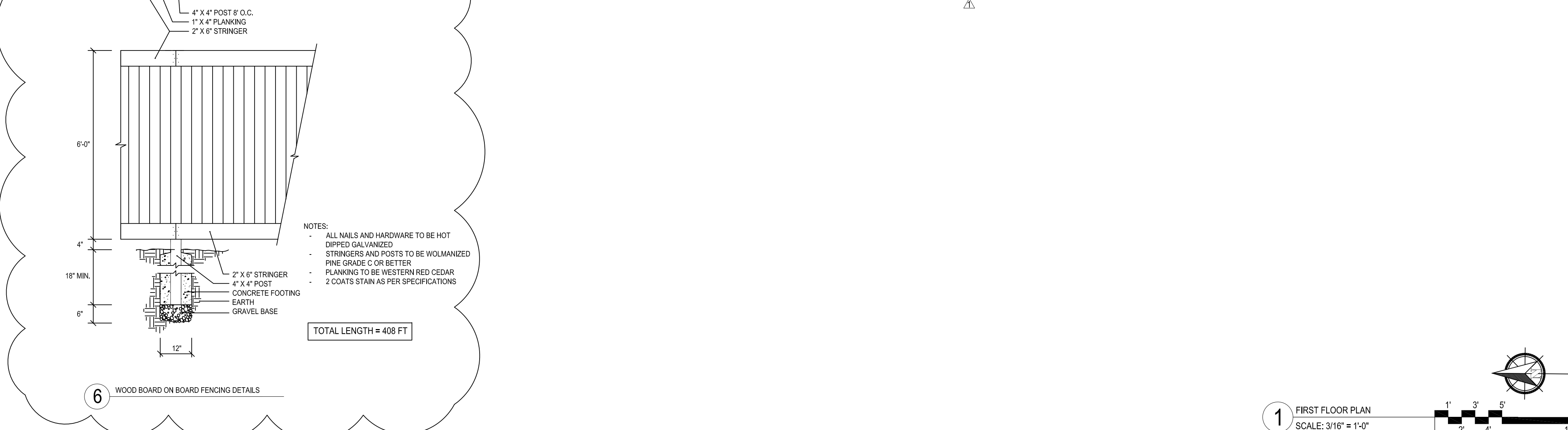
	1980	1985	1990	1995	2000	2005	2010	2015	2020
Population	76.5	80.5	84.5	88.5	92.5	96.5	100.0	103.5	107.0
GDP (constant prices)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Per capita GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Life expectancy at birth	65.0	68.0	71.0	74.0	77.0	80.0	83.0	86.0	89.0
Infant mortality rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fertility rate	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.5	1.0
Urban population	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0
Rural population	80.0	75.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0
Employment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Unemployment	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Government expenditure	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Health expenditure	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Educational expenditure	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Social security expenditure	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Capital formation	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Foreign investment	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Exports	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Imports	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Balance of trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current account balance	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Official development assistance	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Net ODA inflows	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
ODA as % of GDP	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
ODA per capita	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ODA as % of total aid	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid received	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid disbursed	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid committed	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid pledged	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid allocated	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid approved	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid implemented	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid completed	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid available	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid accessible	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid distributed	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid received by beneficiaries	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for development	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for social services	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for health	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for education	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for infrastructure	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for environment	100%	100%	100%	100%	100%	100%	100%	100%	100%
ODA as % of total aid used for disaster relief	100%	100%	100%	100%					

AN

OF R 41

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2		1	
3			1



CARBALLO ARCHITECTURE, LLC  
ADAM CARBALLO, ARCHITECT  
MD LIC# 15709  
443-745-1100

FIRST FLOOR PLAN

3308 ALTO ROAD  
JOB # 19-441





PROFESSIONAL CERTIFICATION:  
I, ADAM CARBALLO, ARCHITECT, AIA, NO. 15709, AMOUNTING TO 15709 HOURS OF PRACTICE SINCE MY LAST EXAMINATION FOR BOTH ARCHITECTURE & STRUCTURAL DESIGN, REG. NO. 4-15709.

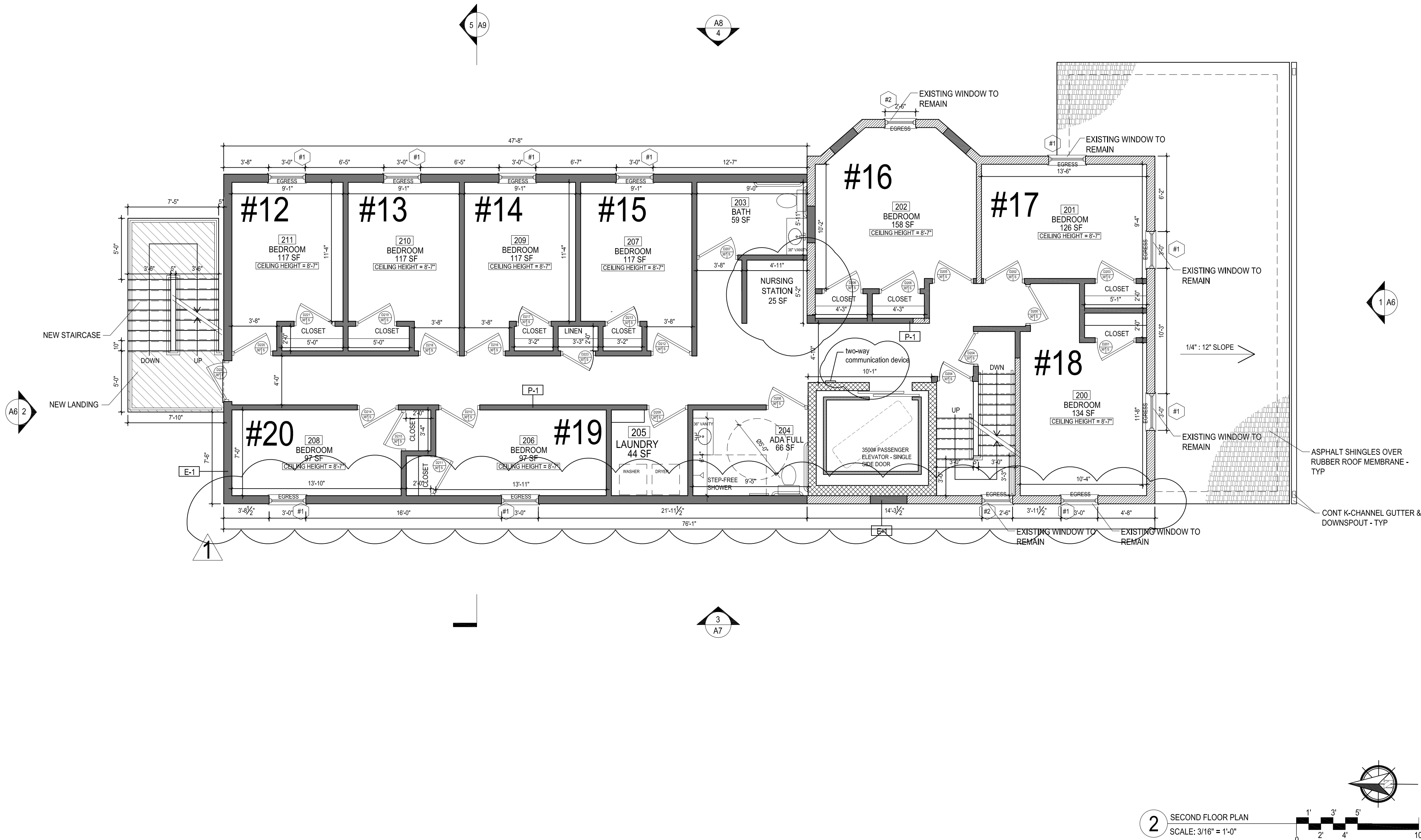
#### REVISIONS

- 10/5/2021  
Removed side addition to meet lot coverage regulations
- 1/3/2022  
Removed side addition to avoid conflict with existing sewer line

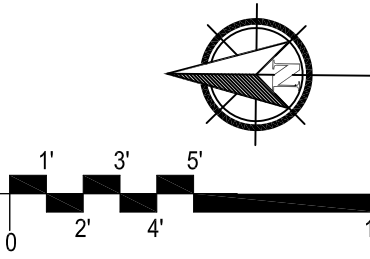
CLIENT  
MS AMILIA ALCEVA

CARBALLO ARCHITECTURE, LLC  
ADAM CARBALLO, ARCHITECT  
MD LIC# 15709  
443-745-1100

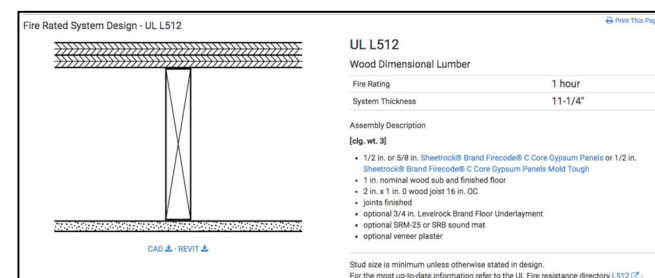
0013-A=A3  
SECOND FLOOR PLAN  
3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



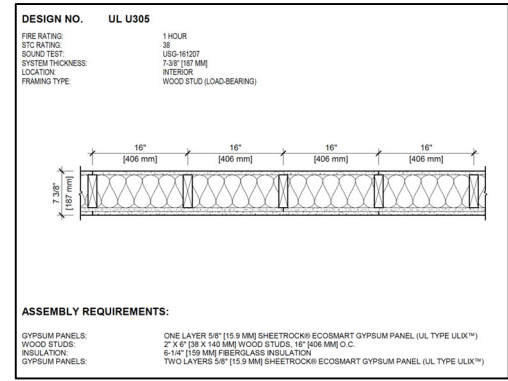
2 SECOND FLOOR PLAN  
SCALE: 3/16" = 1'-0"



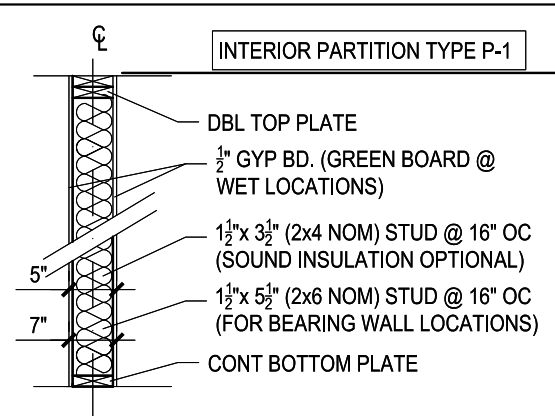
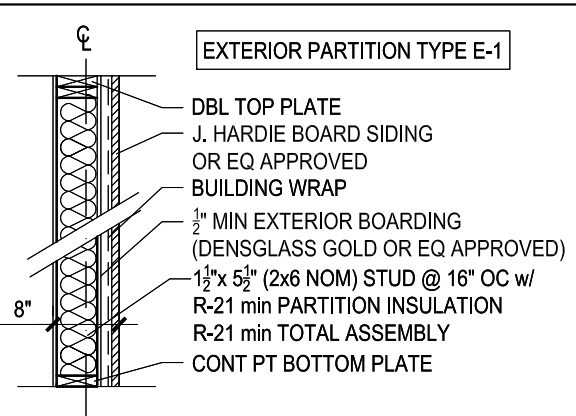
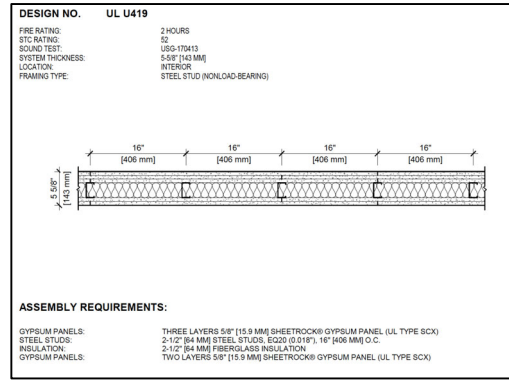
#### ASSEMBLY DETAILS FOR CEILINGS



#### ASSEMBLY DETAILS FOR CORRIDOR & ROOM SEPARATION WALLS



#### ASSEMBLY DETAILS FOR EXIT STAIRS & ELEVATOR

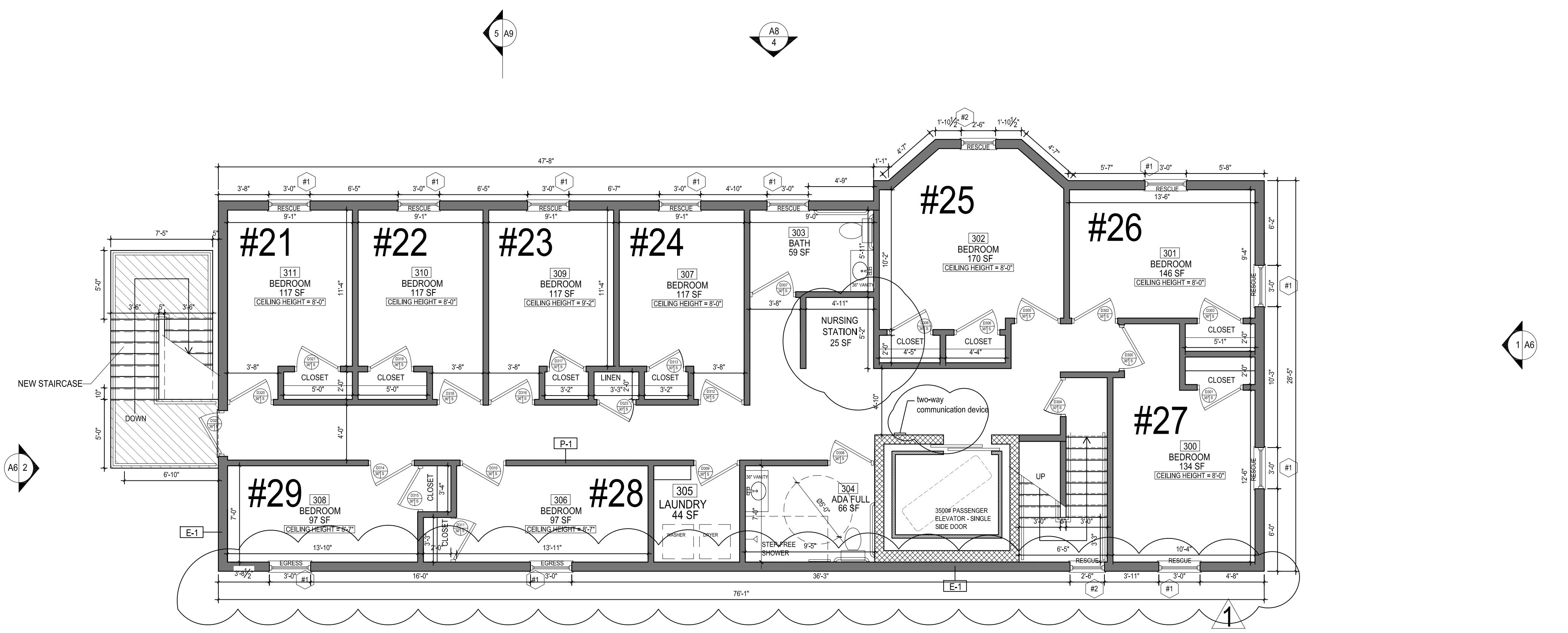


#### LEGEND

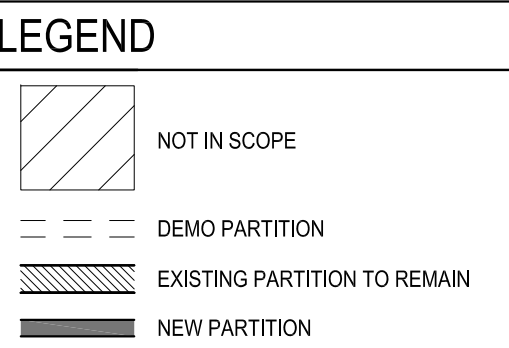
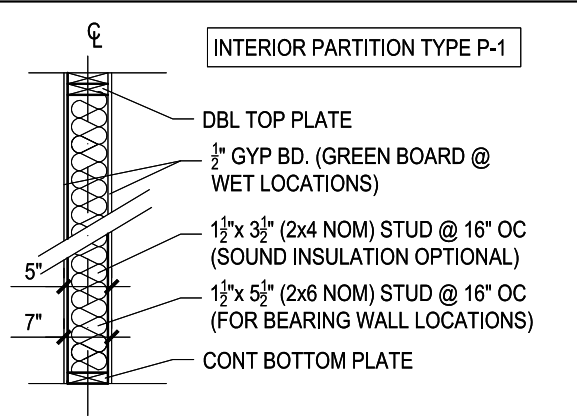
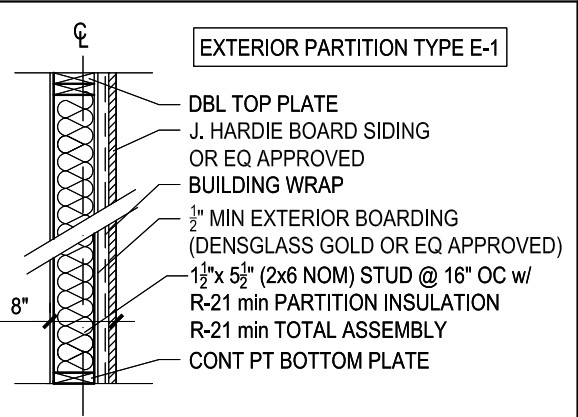
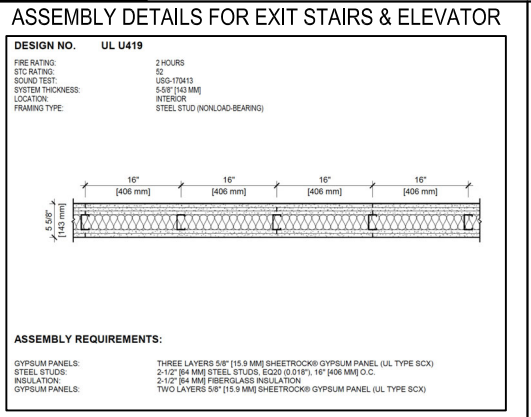
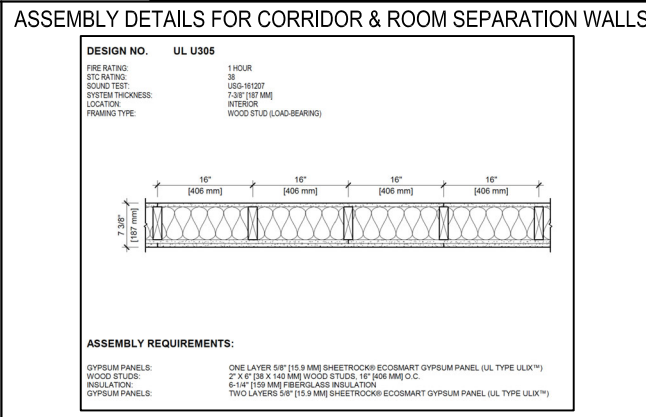
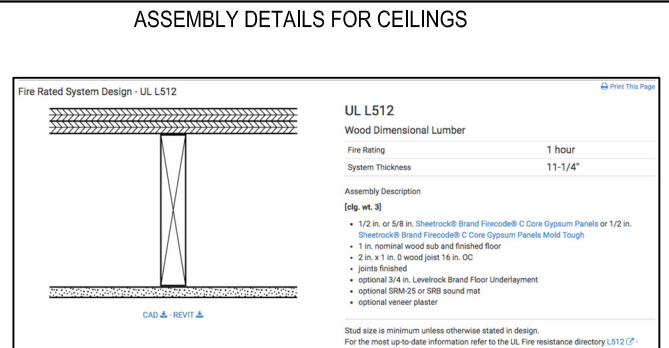
- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

#### GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR STYLE CLIENT'S CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.



3 THIRD FLOOR PLAN  
SCALE: 3/16" = 1'-0"



GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR PULLING ALL PERMITS AND PAYING ANY ASSOCIATIVE FEES.
- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL 36" DENOTES DOOR WIDTH, DOOR STYLE CLIENT'S CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.





PROFESSIONAL CERTIFICATION:  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A DULY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND.  
MY EXPIRATION DATE IS 7/27/2021.  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM NOT PROVIDING  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN. MD 24-4 1519b.

REVISIONS

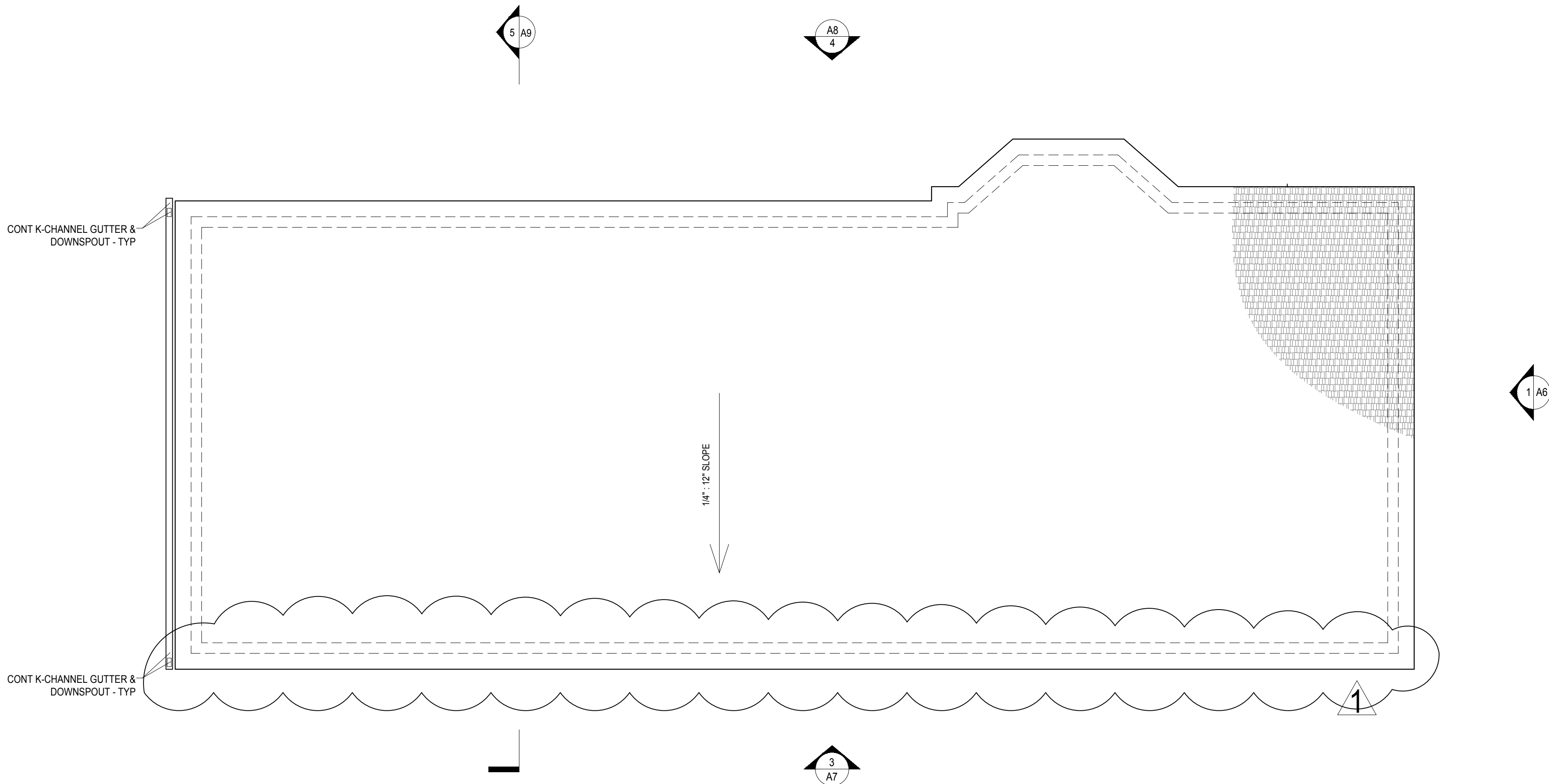
10/5/2021  
Removed side addition  
to avoid conflict with  
existing sewer line

CLIENT  
MS AMILIA ALCEMA

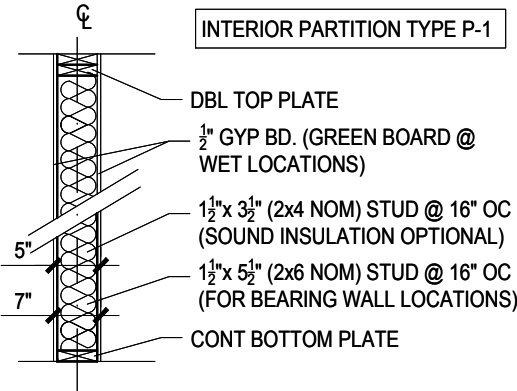
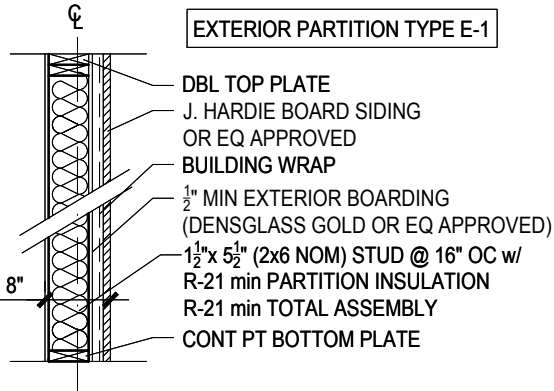
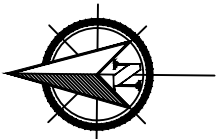
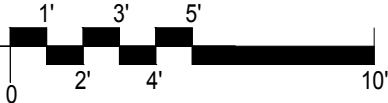
CAPBALLO ARCHITECTURE, LLC  
ADMINISTRATOR, ARCHITECT  
MD LIC# 15709  
443-745-1100

0015-A=A5  
ROOF PLAN

3308 ALTO ROAD  
JOB # 19-441  
DEC 2019



R ROOF PLAN  
SCALE: 3/16" = 1'-0"

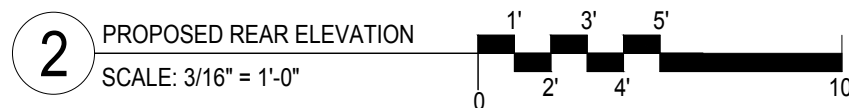
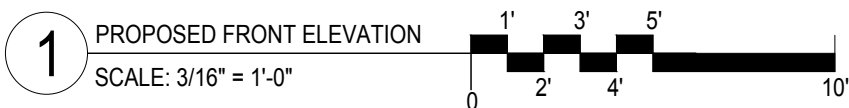


LEGEND

- NOT IN SCOPE
- DEMO PARTITION
- EXISTING PARTITION TO REMAIN
- NEW PARTITION

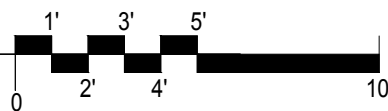
GENERAL NOTES

- DO NOT SCALE DRAWINGS.
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- CONTRACTOR SHALL COMPLY WITH ALL HEALTH AND LIFE SAFETY REQUIREMENTS AS DIRECTED BY BALTIMORE CITY AND THE STATE OF MARYLAND.
- INTERIOR FINISHES ARE CLIENT'S CHOICE
- INTERIOR LIGHTING SELECTION ARE CLIENT'S CHOICE
- DOOR TYPE SYMBOL **36"** DENOTES DOOR WIDTH, DOOR CHOICE. ALL DOORS ARE 6'-8" IN HEIGHT.





3 PROPOSED SIDE ELEVATION  
SCALE: 3/16" = 1'-0"



0017-A=A7

SIDE ELEVATION

3308 ALTO ROAD  
JOB # 19-441  
DEC 2019

CARBALLO ARCHITECTURE, LLC  
ADMINISTRATOR, ARCHITECT

MD LIC# 15709  
443-745-1100

CLIENT  
MS AMILIA ALCEMA

REVISIONS

1. 11/15/2019

PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A LICENSED ARCHITECT  
IN THE STATE OF MARYLAND, LICENSE NUMBER  
15709, EXPIRATION DATE 1/27/2021.  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM NOT PROVIDING  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN, MD L&P 15709.





EXISTING ELEVATION TO REMAIN

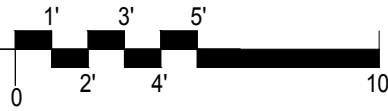
NEW ADDITION

NEW EGRESS WINDOW (CASEMENT  
OPENING w/ EGRESS HINGES) &  
CORRUGATED MTL EGRESS WINDOW  
WELL AS PER IRC R310 - TYP

NEW EGRESS WINDOW (CASEMENT  
OPENING w/ EGRESS HINGES) &  
CORRUGATED MTL EGRESS WINDOW  
WELL AS PER IRC R310 - TYP

NEW EGRESS WINDOW (CASEMENT  
OPENING w/ EGRESS HINGES) &  
CORRUGATED MTL EGRESS WINDOW  
WELL AS PER IRC R310 - TYP

4 PROPOSED SIDE ELEVATION  
SCALE: 3/16" = 1'-0"



0018-A=A8

SIDE ELEVATION

3308 ALTO ROAD

JOB # 19-441

DEC 2019

CARBALLO ARCHITECTURE, LLC

ADAM CARBALLO, ARCHITECT

MD LIC# 15709

443-745-1100

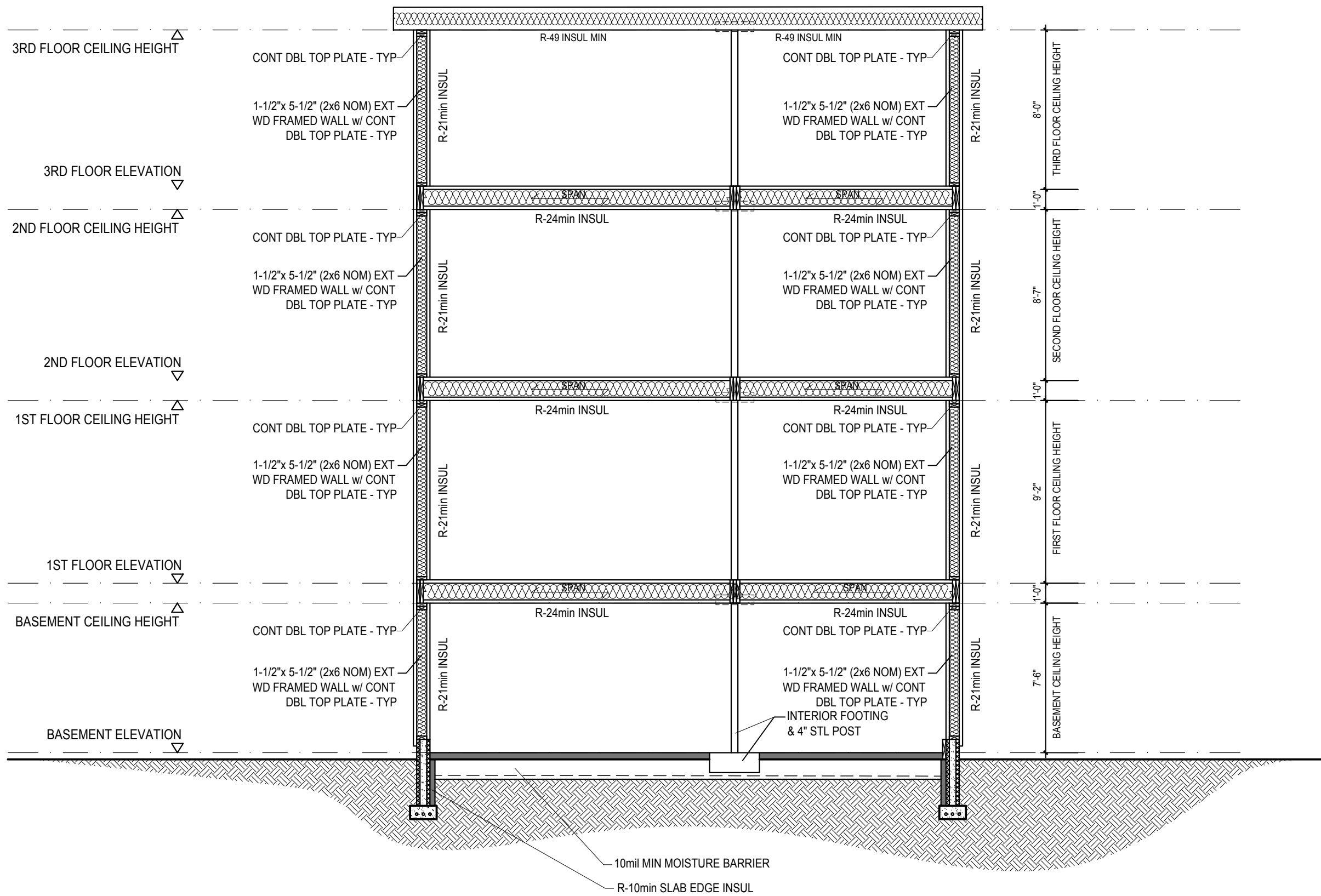
CLIENT  
MS AMILIA ALCEMA

REVISIONS

1. 11/15/2019

PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS  
WAS PREPARED BY ME OR UNDER  
MY CLOSE PERSONAL SUPERVISION  
AND THAT I AM A FULLY LICENSED  
ARCHITECT IN THE STATE OF MARYLAND  
MY LICENSE NUMBER IS 15709  
EXPIRATION DATE 12/31/2021  
CONTRACT DOCUMENTS HAVE BEEN  
REVIEWED AND I AM A REGISTERED  
PROFESSIONAL ARCHITECT  
FOR BOTH ARCHITECTURE &  
STRUCTURAL DESIGN MD L&P 15709





5 BUILDING SECTION  
SCALE: 3/16" = 1'-0"

0 1' 2' 3' 4' 5' 10'



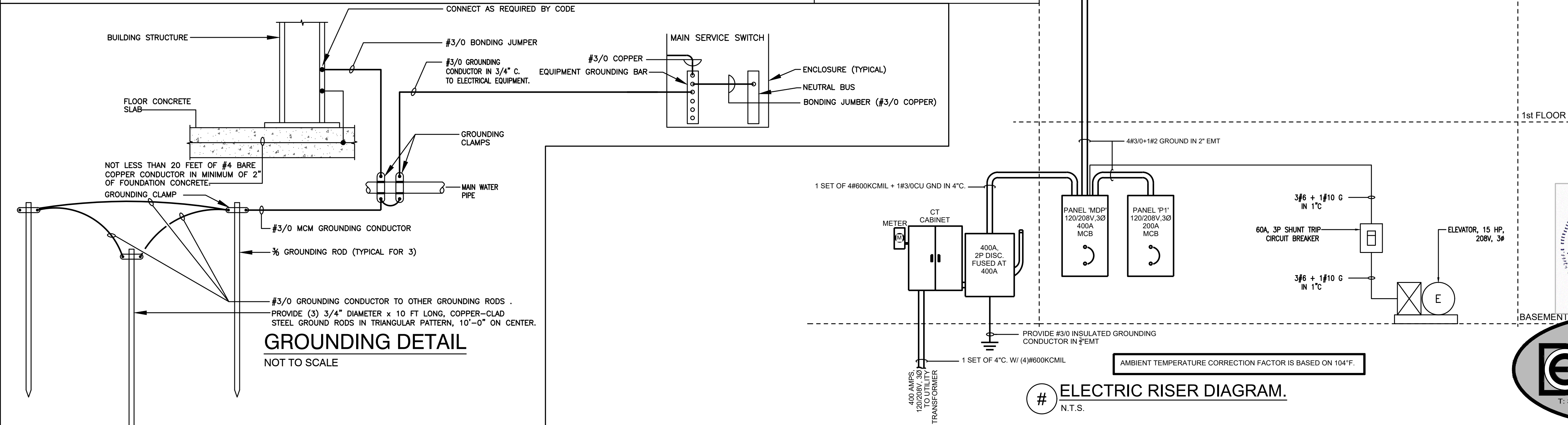
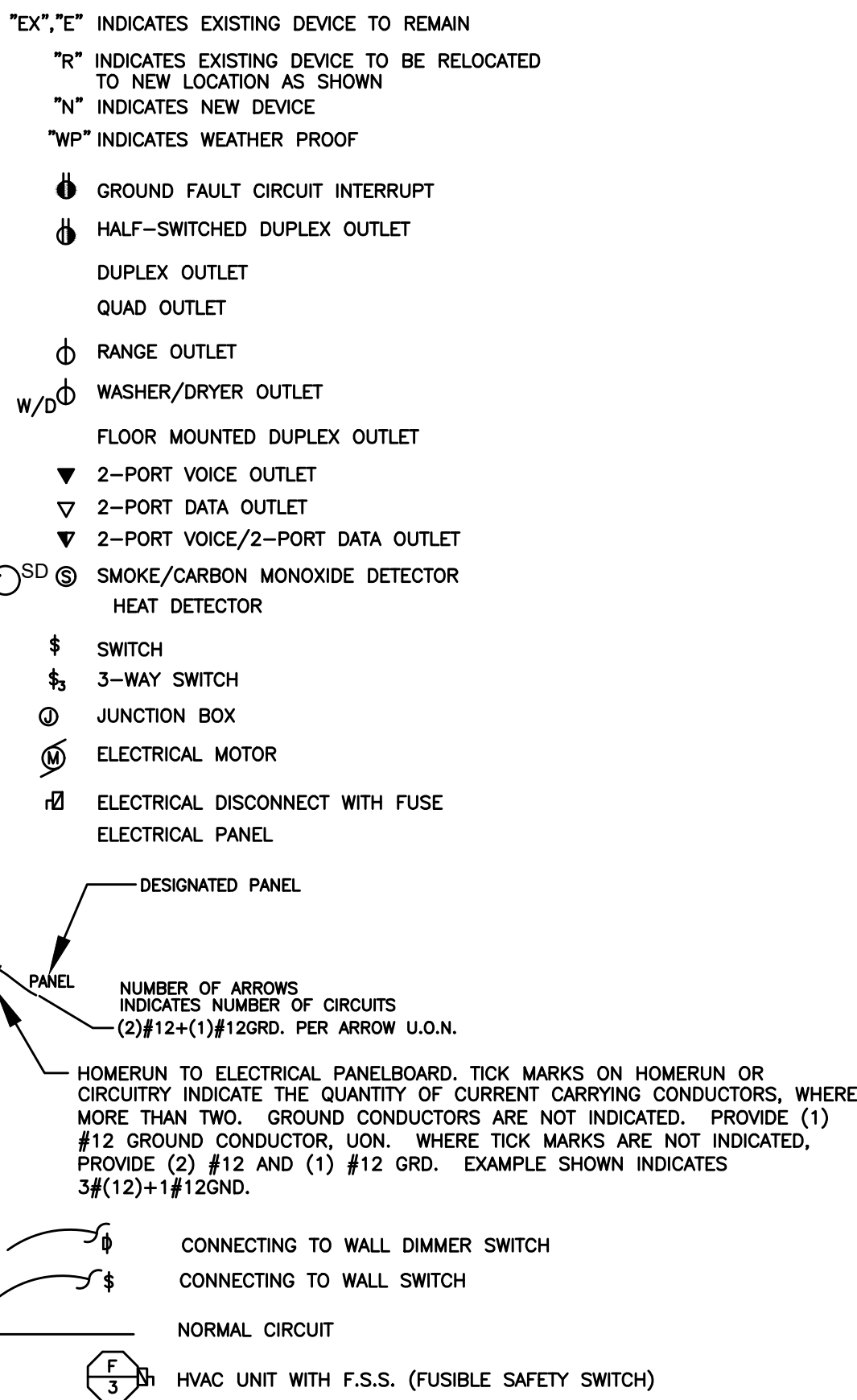
ELECTRICAL GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING STANDARDS:
  - NATIONAL ELECTRIC CODE.
  - STATE BUILDING CODES.
  - CODES AND REQUIREMENTS OF THE LOCAL CITY.
  - NATIONAL FIRE CODE, N.F.P.A.
  - ENGINEERS REQUIREMENTS.
- ALL DIMENSIONS AND EXACT EQUIPMENT LOCATIONS ARE TO BE VERIFIED WITH MECHANICAL AND ARCHITECTURAL DRAWINGS AND CONDITIONS IN THE FIELD.
- ALL WIRE SIZES REFER TO COPPER CONDUCTORS.
- THE GENERAL CONTRACTOR SHALL PROVIDE ACCESS TO ALL CONCEALED EQUIPMENT.
- ALL ELECTRICAL WORK SHALL BE COORDINATED WITH AIR CONDITIONING WORK, CABINET WORK, ALL PARTITION WORK, ETC..
- ALL CONDUITS SHALL BE 3/4" MINIMUM SIZE THROUGHOUT.
- ALL ELECTRICAL WIRING CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
- ALL LIGHT FIXTURES SHALL BE INDEPENDENTLY SUPPORTED.
- ALL LAMPS SHALL BE MANUFACTURED BY G.E./SILVANIA AND FURNISHED BY THIS CONTRACTOR, UNLESS NOTED OTHERWISE.
- THIS CONTRACTOR TO OBTAIN ALL PERMITS AND PERFORM ALL TEST AS REQUIRED BY CODES AND DOCUMENTS.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND CONSULT WITH MECHANICAL DRAWINGS FOR POWER REQUIREMENTS OF THOSE TRADES.
- THE CONTRACTOR SHALL SURVEY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND INFORM THE ENGINEER OF ANY DISCREPANCIES. THE CONTRACTOR SHALL CONSTRUCT ALL WORK TO SUIT EXISTING CONDITIONS.
- ALL WIRING TO BE TYPE NMC CABLE.
- ALL PANELS ARE TO BE PHASE BALANCED WITH A REPORT PROVIDED TO THE LANDLORD.
- CONTRACTOR IS TO UPDATE ALL PANEL SCHEDULES AFFECTED BY HIS WORK, AND PROVIDE WRITTEN COPIES TO THE BUILDING ENGINEER AND LANDLORD.
- ALL PANELS TO BE PROVIDED WITH A TYPED SCHEDULE. A COPY OF THE SCHEDULE IS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- THIS CONTRACTOR SHALL SURVEY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND INFORM THE ENGINEER OF ANY DISCREPANCIES. THE CONTRACTOR SHALL CONSTRUCT ALL WORK TO BUILDING STANDARDS AS REQUIRED BY THE OWNER.
- FIRE AND LIFE SAFETY TIE-IN SHALL BE COMPLETED BY THE BUILDING VENDOR. FOR THIS PROJECT THE BUILDING VENDOR IS 'APPLIED FIRE PROTECTION' PER LANDLORDS REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE FOR TELEPHONE, DATA & SECURITY SYSTEMS: GEM BOX, WITH CONDUIT STUB-UP WITH DRAG LINE FOR CONDUIT RUN IN INSULATED WALLS CONTRACTOR TO PROVIDE DRAGLINE FOR TELEPHONE/DATA JACKS INSTALLED ON NON-INSULATED WALLS. DEVICES, CABLES, WALL PLATES AND SYSTEM TO BE PROVIDED AND INSTALLED BE BY OWNERS TELEPHONE, DATA & SECURITY
- ALL EQUIPMENT TO BE BUILDING STANDARD UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY BUILDING SHUT-DOWNS WITH OWNER, AND AFFECTED TENANTS. ALL SHUT-DOWNS TO BE PERFORMED AFTER HOURS. THERE SHALL BE NO EXTRA COST SUBMITTED BY THIS CONTRACTOR FOR WORK PERFORMED AFTER HOURS. AFTER HOURS WORK SHALL BE INCLUDED IN THE BASE BID.
- CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH PARTITIONS OR SLABS WITH A U.L. APPROVED FIRE/SMOKE STOP TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.
- CONTRACTOR SHALL SUBMIT AT THE COMPLETION OF THE JOB:
  - 3 SETS OF OPERATION AND MAINTENANCE MANUALS
  - COMPLETE AS-BUILT DRAWINGS IN ACAD 2000 FORMAT OR ABOVE
- ALL CABLES RUN IN THE CEILING MUST BE RATED FOR SUCH USE AND IN ACCORDANCE WITH CODES.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIALS, SUPERVISION, SUPPLIES AND REQUIREMENTS, REQUIRED OR OBVIOUSLY NECESSARY TO INSTALL, COMPLETE, READY FOR USE ELECTRICAL SYSTEMS, EQUIPMENT AND ASSOCIATED ITEMS INCLUDED ON THE PLANS.
- THE WORK SHALL BE COORDINATED WITH ALL OTHER TRADES AND PROVIDE OTHERS WITH NECESSARY INFORMATION TO COMPLETE THIS INSTALLATION.
- OBTAIN ALL NECESSARY PERMITS COVERING THIS WORK AND SUBMIT TO THE OWNER, UPON COMPLETION, A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE PROPER AUTHORITIES. ANY TEST REQUIRED BY CODES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH SPECIFICATIONS ON DRAWINGS.
- ANY WORK INSTALLED CONTRARY TO, OR WITHOUT APPROVAL BY THE ENGINEER SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER AND NO EXTRA COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR MAKING THESE CHANGES.
- CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENTS A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS APPROVED BY THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL SHALL BE MAINTAINED AS INDICATED ON THE DRAWINGS. CONTRACTOR MUST SUBMIT PLANS FOR APPROVAL PRIOR TO INSTALLATION.
- ALL CONDUITS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE N.E.P.A. AND LOCAL AND STATE CODES GOVERNING SUCH INSTALLATION AND SHALL BE U.L. LISTED.
- CONTRACTOR TO VERIFY CEILING FINISH CONSTRUCTION WITH FINAL ARCHITECTURAL DRAWINGS PRIOR TO ORDERING FIXTURES AND ORDER FIXTURES WITH PROPER MOUNTING ARRANGEMENTS TO BE COMPATIBLE WITH TYPE OF CEILING WHICH FIXTURE IS TO BE MOUNTED.
- ALL LIGHT FIXTURES SHALL HAVE BASE BUILDING ELECTRONIC BALLAST
- FIRE ALARM SYSTEM IS TO BE TESTED WITH A LETTER BY CONTRACTOR SUBMITTED TO THE LANDLORD.
- ALL CONDUITS SHALL BE TERMINATED WITH FLEXIBLE CONNECTIONS SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND OTHER EQUIPMENT THAT VIBRATES.
- ALL BRANCH C/B'S TO BE RATED 20A. MINIMUM WITH #12 WIRE. UON.
- SURFACE MOUNTED PANEL BOARDS AND OTHER SUCH EQUIPMENT SHALL BE MOUNTED WITH A 1/4" AIR SPACE BETWEEN ENCLOSURE AND WALL. THE DISTANCE FROM TOP CIRCUIT BREAKER HANDLE TO FLOOR SHALL NOT EXCEED 6'-6" UNLESS OTHERWISE NOTED.
- ALL EMERGENCY LIGHTS, EXIT, SMOKE DETECTOR SHALL BE APPROVED BY FIRE MARSHALL. EQUIPMENT SHALL BE ADJUSTED AND/OR ADDED AS REQUIRED.
- ALL PULL BOXES, JUNCTION BOXES, AND SWITCH BOXES IN OFFICE AREA SHALL BE NEMA 1.
- ALL JUNCTION BOXES INDICATED AND/OR REQUIRED SHALL BE SIZED TO ACCOMMODATE INCOMING AND OUTGOING FEEDERS.
- WHERE DEVICES ARE REMOVED FROM WALL DESIGNATED TO REMAIN, CONTRACTOR SHALL PATCH WALL AND PROVIDE MATERIALS AND LABOR AS REQUIRED TO MATCH EXISTING.
- ALL WIRING FOR FIRE ALARM SYSTEM SHALL BE INSTALLED IN 3/4"C. UNLESS OTHERWISE INDICATED. REFER TO OVERVIEW SECTION FOR ADDITIONAL REQUIREMENTS.
- ALL UNUSED WIRING IN CEILING SHALL BE REMOVED BACK TO SOURCE. IF C/B IS NOT REUSED C/B SHALL BE RELABELED AS SPARE.
- CONTRACTOR SHALL COORDINATE/VERIFY ALL ROOM NUMBERS AND NAMES WITH ARCHITECTURAL DRAWINGS.
- CONTRACTOR SHALL COORDINATE ALL RECEPTACLE AND SWITCH HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- CONSULT TENANT OR TENANT'S COMMUNICATIONS VENDOR REGARDING TELEPHONE AND DATA CABLE REQUIREMENTS. ALL CABLE TO BE PLENUM RATED.
- ALL TELEPHONE, DATA & SECURITY WIRING SHALL BE DONE BY SEPARATE TENANT SELECTED CONTRACTOR, ELECTRICAL CONTRACTOR TO COORDINATE WITH TENANT'S SELECTED CONTRACTOR FOR ALL REQUIREMENTS.
- CIRCUITING INDICATED ON DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL RE-BALANCE AND CIRCUIT AS NOT TO DISRUPT ANY EXISTING CORE CIRCUITS/EQUIPMENT. RE-BALANCE PANELS AND PROVIDE NEW, TYPED, PANEL SCHEDULES.
- GANG OUTLETS AND/OR SWITCHES WITH SINGLE FACE PLATE WHERE MULTIPLE DEVICES APPEAR IN A SINGLE LOCATION ON THE DRAWINGS.
- CONSULT TENANT OR TENANT'S SECURITY CONTRACTOR FOR SPECIFICATION AND SPECIAL INSTALLATION REQUIREMENTS.
- LOCATION OF ALL FLOOR MOUNTED OUTLETS TO BE CONFIRMED W/ ARCHITECT PRIOR TO CORE DRILL.
- COORDINATE LOCATION OF ALL FURNITURE WITH INSTALLER PRIOR TO PULLING CABLE, COORDINATE WITH FURNITURE SUPPLIER SYSTEM IN-FEEDS.
- CONTRACTOR TO CONNECT NEW FIRE ALARM DEVICES TO EXISTING BUILDING FIRE ALARMS SYSTEM WITH WIRE AND CONDUIT AS REQUIRED BY EQUIPMENT MANUFACTURER AND NFPA CODES. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY COMPONENTS AND/OR MAKE ANY MODIFICATIONS NECESSARY TO THE FIRE ALARM CONTROL PANEL AND POWER SUPPLY TO ALLOW FOR INSTALLATION OF NEW ADA APPROVED FIRE ALARM DEVICES.
- PANEL BOARDS SHALL BE STANDARD CATALOG ITEMS COMPLYING WITH NEC, UL AND NEMA STANDARDS AND BEAR THE LABEL OF UNDERWRITER'S LABORATORIES. PROVIDE COPPER FULL-SIZE PHASE AND NEUTRAL BUSES WHICH HAVE BEEN RATED IN ACCORDANCE WITH UL 67 HEATE-RISE TESTS. BUS BAR CONNECTIONS SHALL BE COLUMN CONSECUTIVE PHASE-SEQUENCE TYPE. BOTH 120/208V AND 277/480V PANEL BOARDS SHALL HAVE BUS BARS DRILLED AND EQUIPPED WITH ALL HARDWARE FOR BOLT-ON, MOLDED CASE CIRCUIT BREAKERS. PROVIDE A BOLTED ON COPPER GROUNDING BUS WITH MAIN LUG(S). PANEL BOARD SHORT CIRCUIT BRACING AND BREAKER INTERRUPTING CAPACITY SHALL BE AS INDICATED ON THE DRAWINGS BUT SHALL NOT BE LESS THAN 14,000 AMPERES RMS SYMMETRICAL FOR 277/480V SERVICE AND 10,000 AMPERES RMS SYMMETRICAL FOR 120/208V SERVICE. PROVIDE MANUFACTURER'S STANDARD #16-GAGE (MINIMUM) GALVANEALD OR GALVANIZED SHEET STEEL CABINET WITH ENAMEL FRONT "HINGED DOOR IN DOOR" AND A TYPED CIRCUIT DIRECTORY. PANEL BOARD MAIN LUG(S) CONNECTED TO #6 AWG OR LARGER, COPPER CONDUCTORS SHALL BE FURNISHED TO ACCOMMODATE COMPRESSION CONNECTORS. ADEQUATE WIRING SPACE SHALL BE PROVIDED TO ACCOMMODATE THE COMPRESSION CONNECTORS. NEW TENANT RENOVATION PANEL BOARDS SHALL MATCH EXISTING PANEL BOARDS PROVIDED THE ABOVE MINIMUM REQUIREMENTS HAVE BEEN MET.
- ALL DIMMING FLUORESCENT FIXTURES SHALL BE PROVIDED WITH DIMMING BALLAST AND COMPATIBLE DIMMER SWITCH. COORDINATE WITH MANUFACTURER: QUANTITY OF WIRING FOR TYPE OF BALLAST AND COMPATIBLE TYPE OF DIMMER SWITCH. LUTRON TU-WIRE, COMPACT SE AND HI LUME BALLAST ARE PREFERRED.

ELECTRICAL ABBR.

A	AMPERES
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY (MIN)
APPROX	APPROXIMATE
AWG	AMERICAN WIRE GAUGE
ANN	ANNUNCIATOR
ATS	AUTOMATIC TRANSFER SWITCH
BLOG	BUILDING
C	CONDUIT
CATV	CABLE TELEVISION
CKT	CIRCUIT
CONT	CONTINUATION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
COMM	COMMUNICATIONS
CONV.	CONVENIENCE
CS	CABLE SUPPORT
CUH	UNIT HEATER ( CABINET TYPE )
DIA	DIAMETER
DIM	DIMENSION
DP	DISTRIBUTION PANEL
DWG	DRAWING
EW	ELECTRIC WATER COOLER
EX, (E), E	EXISTING TO REMAIN
EXP	EXPLOSION PROOF
FM	FLUSH MOUNTED
F	FUSED
FA	FIRE ALARM
FIN	FINISH
FIX	FIXTURE
FLUOR	FLUORESCENT
GFI	GROUND FAULT INTERRUPTER
G	GROUND
GRD	
GRND	
GRND	
HZ	HERTZ
HP	HORSEPOWER
IG	ISOLATED GROUND
INCAN	INCANDESCENT
J	JUNCTION
JB	JUNCTION BOX
KVA	KILO-VOLT-AMPERE
KW	KILOWATT
LGT	LIGHT
MA	MASTER ANTENNA TELEVISION
MAX	MAXIMUM
MCM	THOUSAND CIRCULAR MILS
MOP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MPC	MINI POWER CENTER
MTG	MOUNT (ED),(NG)
MCC	MOTOR CONTROL CENTER
MER	MECHANICAL EQUIPMENT ROOM
N	NEW ITEMS
NEC	NATIONAL ELECTRICAL CODE
NOT	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P	POLE
PMS	PROPERTY MANAGEMENT SYSTEM
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PB	PULL BOX
R	RELOCATE
RSC	RIGID STEEL CONDUIT
SD	SMOKE DETECTOR
SM	SIMILAR
S/S	STAINLESS STEEL
SW	SWITCH
UON	UNLESS OTHERWISE NOTED
UC	UNDER COUNTER
VP	VAPOR PROOF
V	VOLT
WP	WEATHERPROOF
W	WIRE
WP	WEATHER PROOF
WT	WIRING TROUGH

ELECTRICAL LEGENDS



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3308 ALTO ROAD  
BALTIMORE, MD

**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
ELEC - GEN. NOTES  
SYMS., ABBREVS. &  
SPECS.

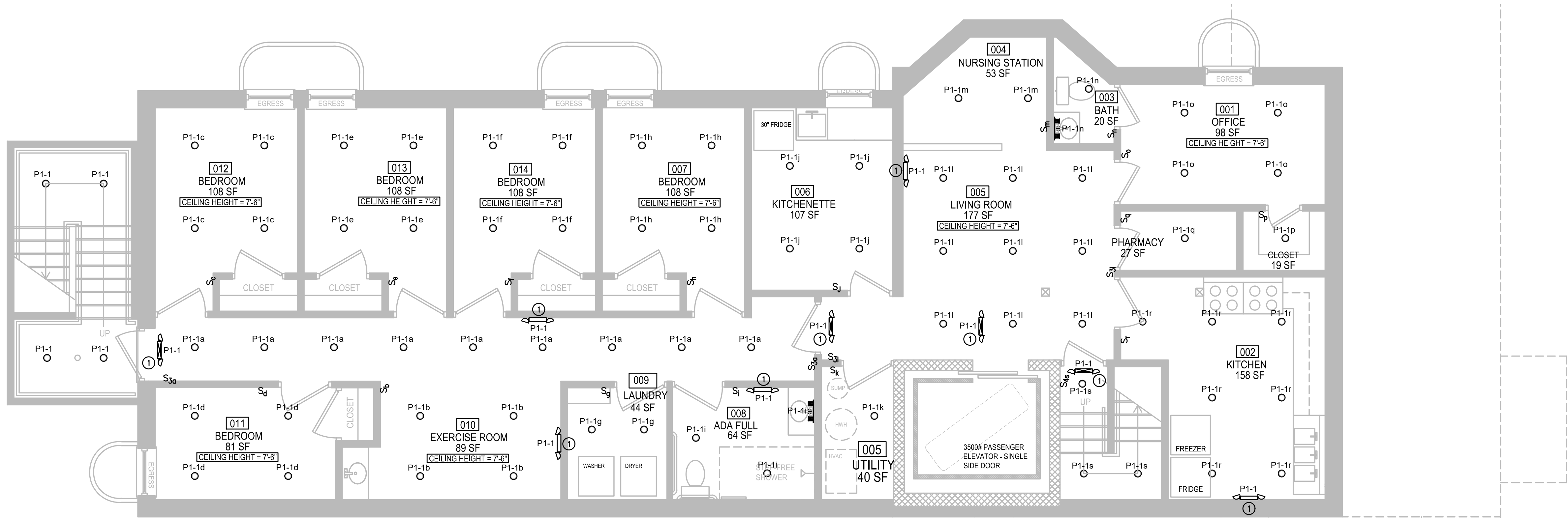
DRAWING No.

**E100**

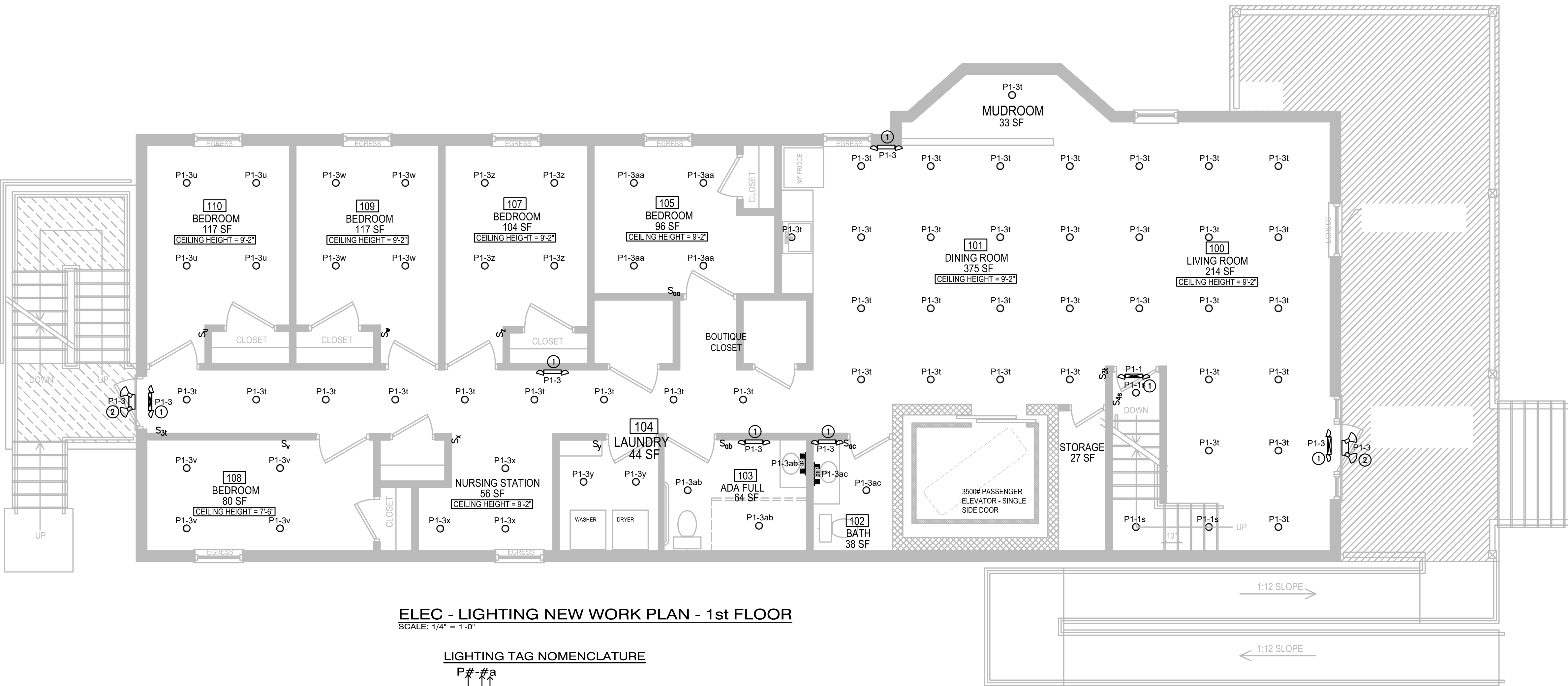
(301) 641-5823

DATE	REVISIONS:	ISSUE DATES:



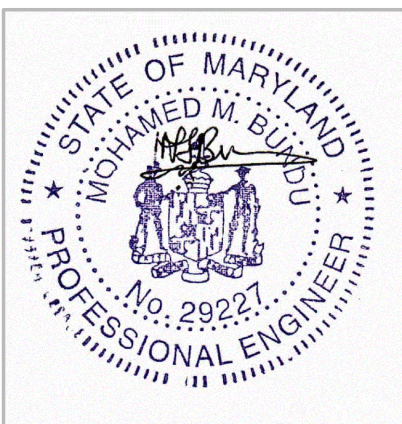


ELEC - LIGHTING NEW WORK PLAN - BASEMENT  
SCALE: 1/4" = 1'-0"



ELEC - LIGHTING NEW WORK PLAN - 1st FLOOR  
SCALE: 1/4" = 1'-0"

**LIGHTING TAG NOMENCLATURE**  
P#-#a  
SWITCHING LETTER  
CIRCUIT NUMBER/HOMERUN  
PANEL NUMBER



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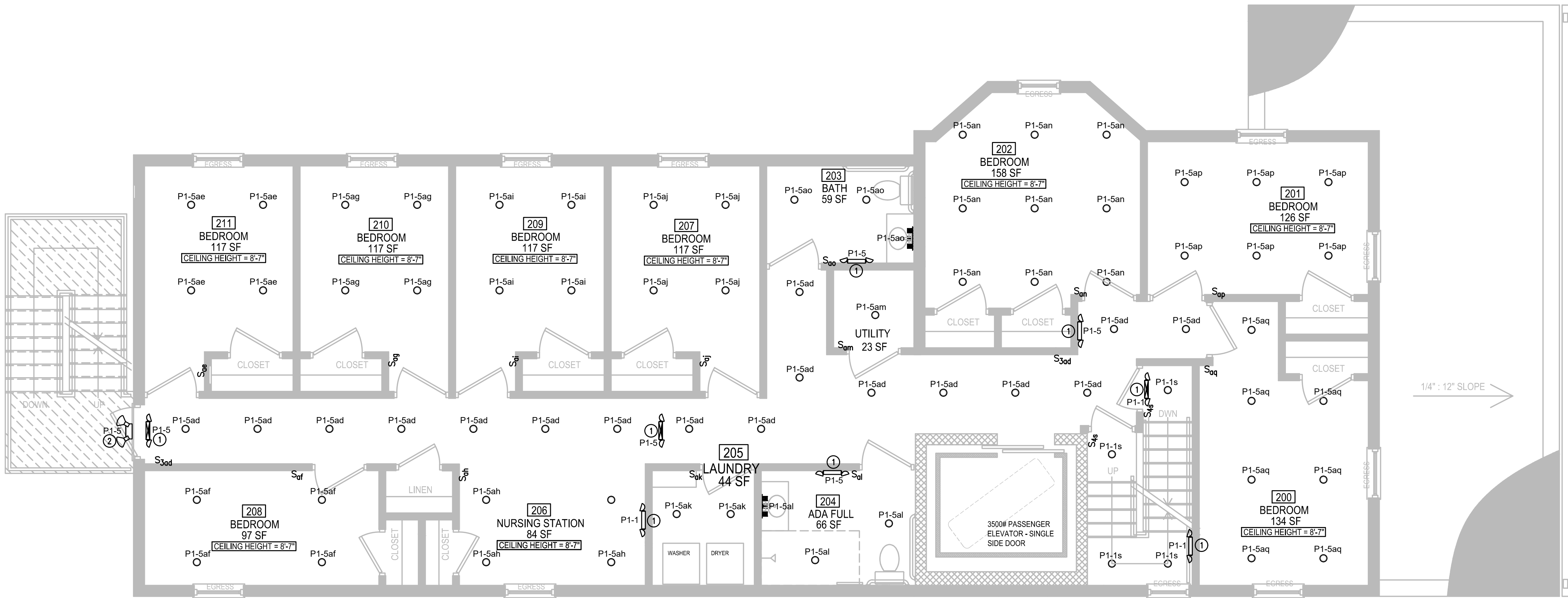
SHEET TITLE:  
**ELEC - LIGHTING  
NEW WORK PLAN -  
BASEMENT & 1st  
FLR**

PROJECT No. \_\_\_\_\_

DRAWING No.  
**E200**

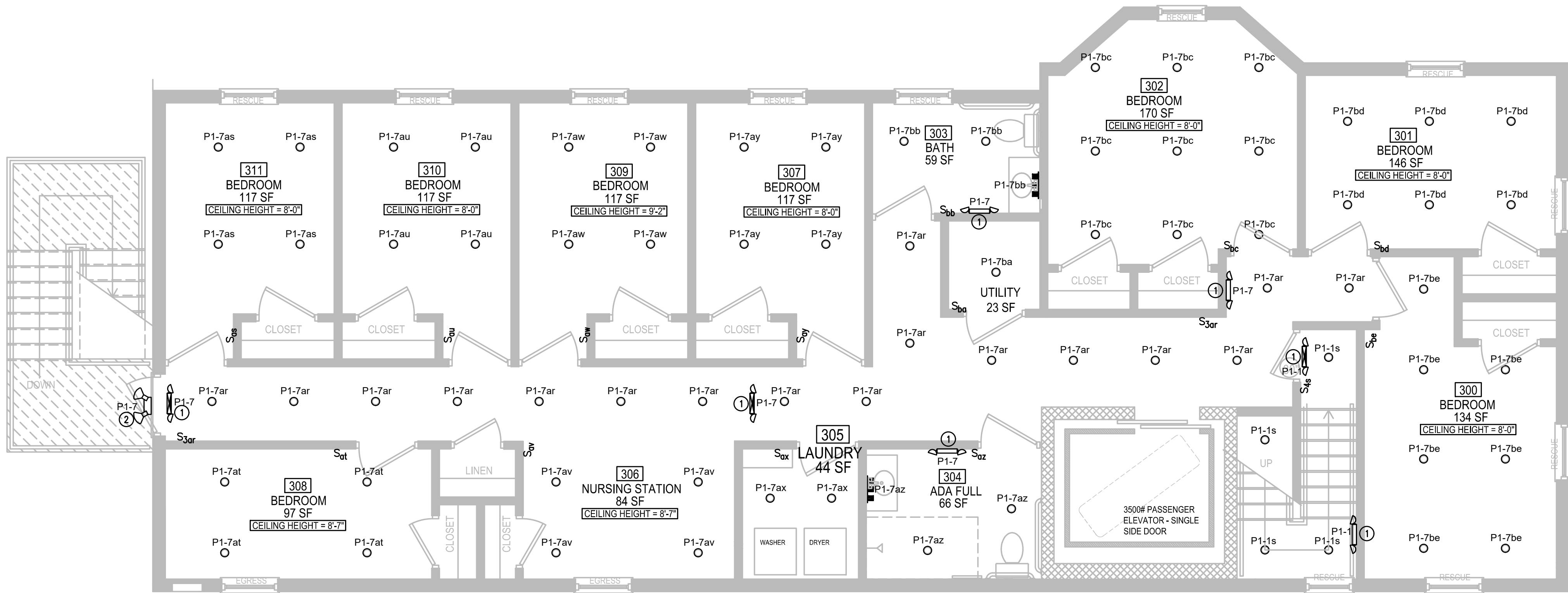
DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB





ELEC - LIGHTING NEW WORK PLAN - 2nd FLOOR

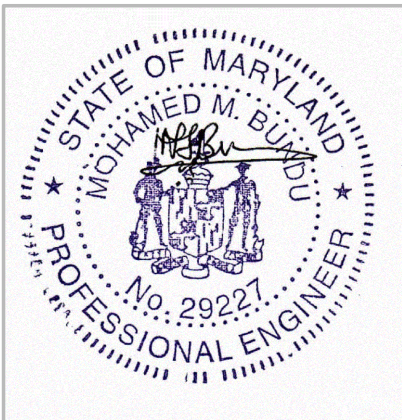
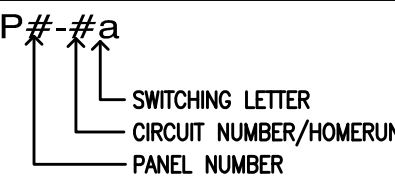
SCALE: 1/4" = 1'-0"



ELEC - LIGHTING NEW WORK PLAN - 3rd FLOOR

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

LIGHTING TAG NOMENCLATURE



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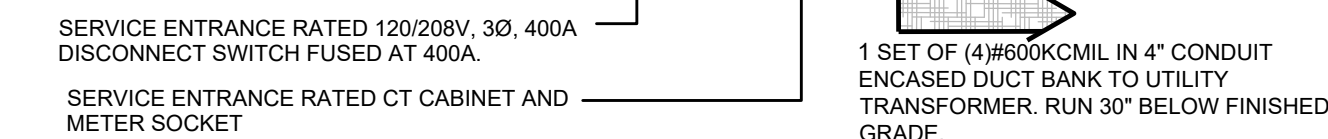
PROJECT No.

SHEET TITLE:  
ELEC - LIGHTING  
NEW WORK PLAN -  
2nd & 3rd FLRS

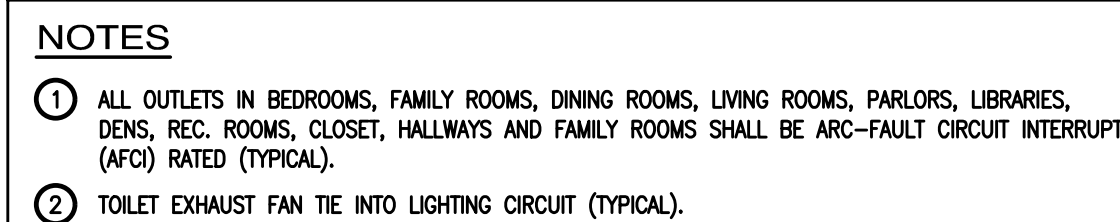
DRAWING No.  
**E300**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHECKED: MMB





CU1 CU2 CU3 CU4



### POWER TAG NOMENCLATURE

P#-#

↑

↑

↑

CIRCUIT NUMBER/HOMERUN

PANEL NUMBER

P#-#a

↑

↑

↑

↑

↑

SWITCHING LETTER

CIRCUIT NUMBER/HOMERUN

PANEL NUMBER



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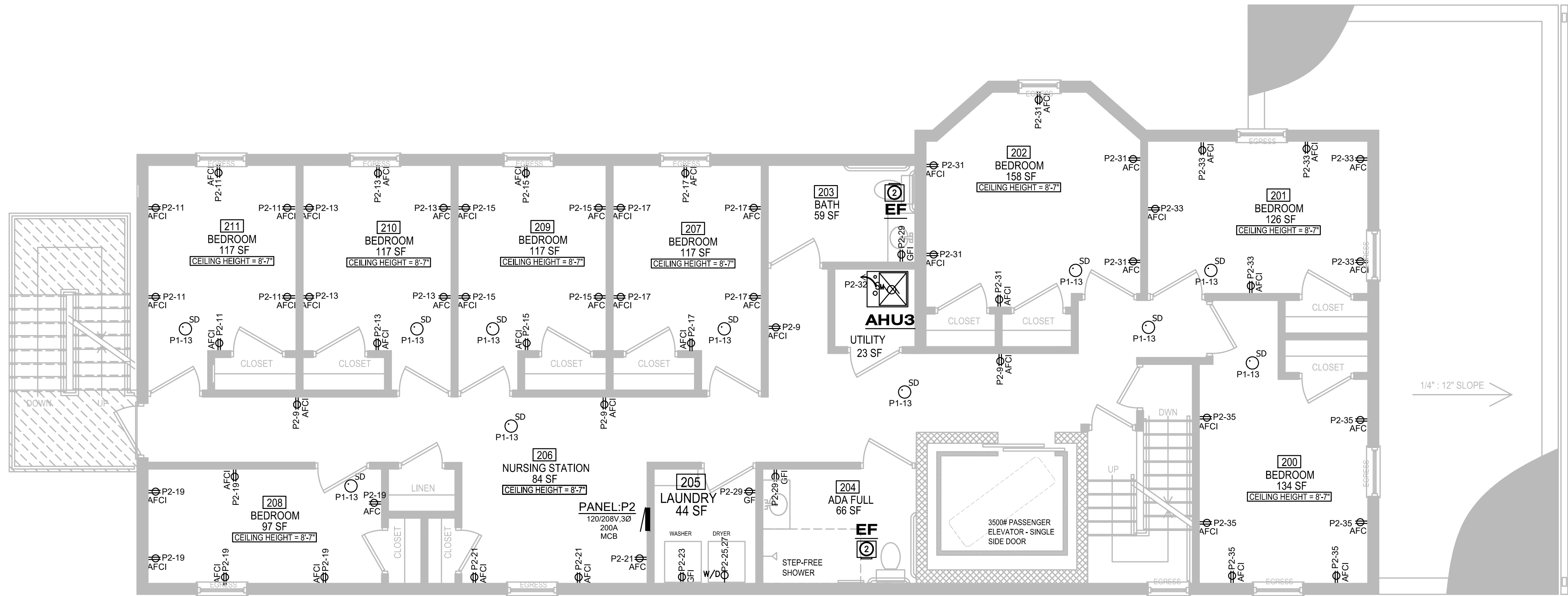
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

SHEET TITLE:  
ELEC - POWER  
NEW WORK PLAN -  
BASEMENT & 1st  
FLR

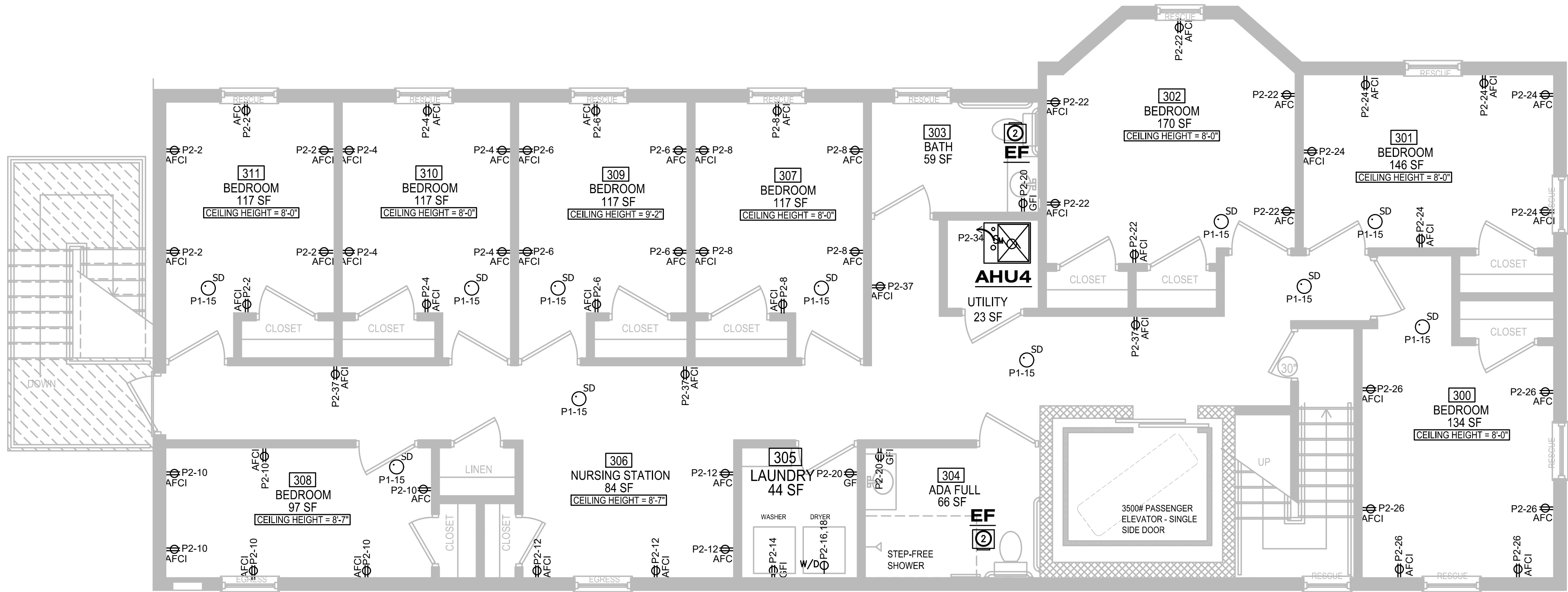
# E400

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHECKED: MMB





ELEC - POWER NEW WORK PLAN - 2nd FLOOR  
SCALE: 1/4" = 1'-0"



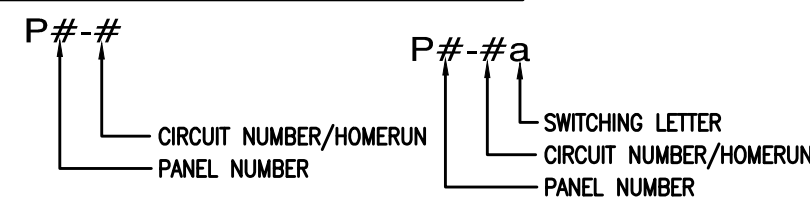
NOTES

- ALL OUTLETS IN BEDROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, REC. ROOMS, CLOSET, HALLWAYS AND FAMILY ROOMS SHALL BE AFCI-FAULT CIRCUIT INTERRUPT (AFCI) RATED (TYPICAL).
- TOILET EXHAUST FAN TIE INTO LIGHTING CIRCUIT (TYPICAL).

ELEC - POWER NEW WORK PLAN - 3rd FLOOR

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

POWER TAG NOMENCLATURE



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DATE	REVISIONS:	ISSUE DATES:

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13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
ELEC - POWER  
NEW WORK PLAN -  
2nd & 3rd FLRS

DRAWING No.  
**E500**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB

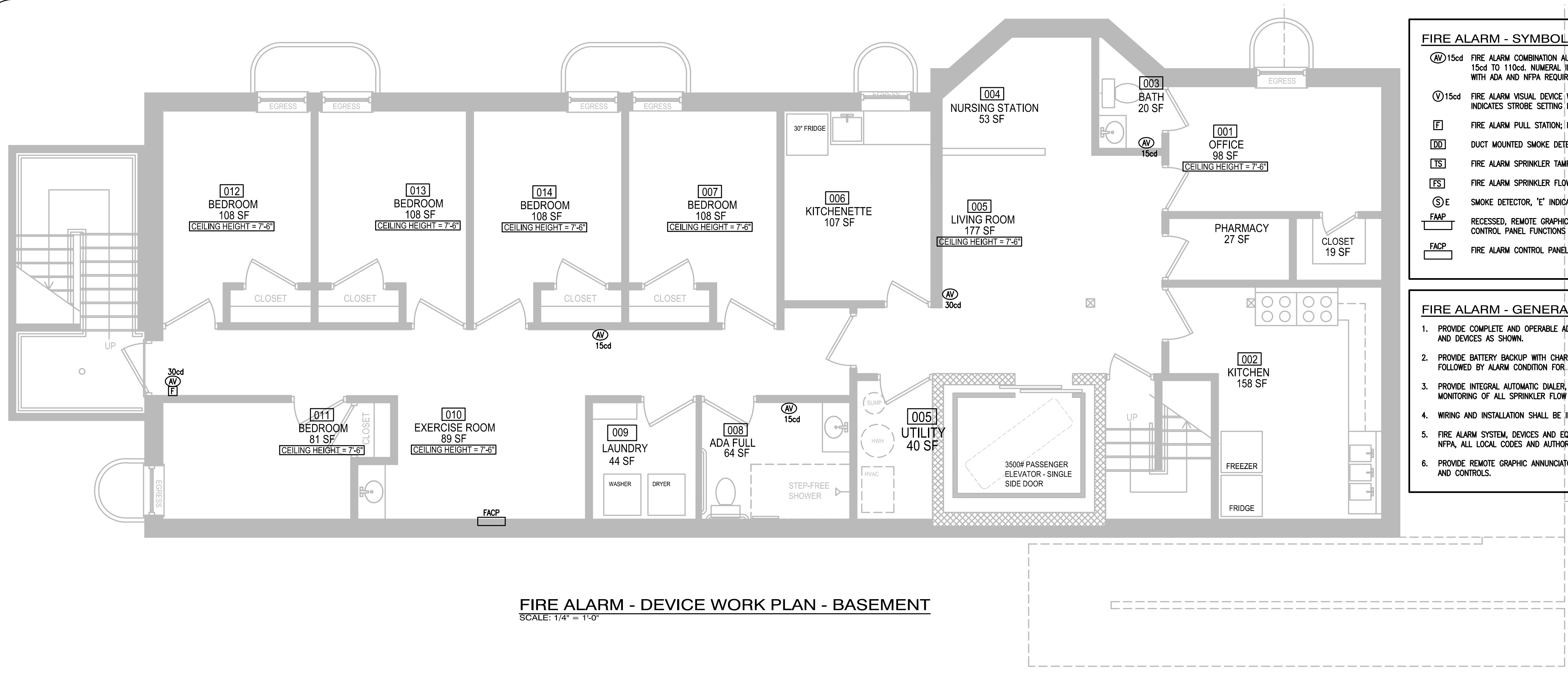


CONTRACTOR SHALL PROVIDE PANEL SCHEDULE/CIRCUIT DIRECTORY/IDENTIFICATION AND SHALL BE MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER ORIGINATES PER NEC 408.4 (A) & (B).

PANEL MDP																			
EXERCISE ROOM																			
Panel Location-				120	208														
Voltage (Phase-Ground/Phase-Phase)																			
Phase- 3				Wire- 4															
Rated Amps- 400				AIC- 22k															
MCB 400				Mounting- Surface															
Circuit	Description	GRD WIRE	Load Type	Breaker Size	Poles	Wire Size	A	B	C	A	B	C	Wire Size	Poles	Breaker Size	Load Type	GRG WIRE	Description	Circuit
1	CU1	#10	MCA	45	2	#6	2.8			2.8			#6	2	45	MCA	#10	CU3	2
3								2.8			2.8								4
5	CU2	#10	MCA	45	2	#6			2.8				#6	2	45	MCA	#10	CU4	6
7							2.8			2.8									8
9	PANEL P1	#2	SP	200	3	#3/0		10.9			17.5		#3/0	3	200	SP	#2	PANEL P2	10
11			SP									13.3				SP			12
13			SP				14.6			16.4						SP			14
15	ELEVATOR	#10	MCA	40	3	#6		4.7						3	40	Spare		SPARE	16
17			MCA													Spare			18
19							4.7									Spare			20
21	SPACE		Space													Space		SPACE	22
23			Space													Space			24
25			Space													Space			26
27	SPACE		Space													Space		SPACE	28
29	SPACE		Space													Space			30

Panel Location- NURSING STATION										PANEL P2												
Voltage (Phase-Ground/Phase-Phase)				120	208																	
Phase- 3				Wire- 4																		
Rated Amps- 200				AIC- 22k																		
MCB 200				Mounting- Surface																		
Circuit	Description	GRD WIRE	Load Type	Breaker Size	Poles	Wire Size	A	B	C	A	B	C	Wire Size	Poles	Breaker Size	Load Type	GRG WIRE	Description	Circuit			
1	DRYER	#12	Misc	30	2	#10	2.5			1.2			#12	1	20	R	#12	RECEPTACLES	2			
3								2.5			1.2		#12	1	20	R	#12	RECEPTACLES	4			
5	RECEPTACLES	#12	R	20	1	#12			0.4				#12	1	20	R	#12	RECEPTACLES	6			
7	FRIDGE	#12	R	20	1	#12	0.6			1.2			#12	1	20	R	#12	RECEPTACLES	8			
9	RECEPTACLES	#12	R	20	1	#12			0.8				#12	1	20	R	#12	RECEPTACLES	10			
11	RECEPTACLES	#12	R	20	1	#12				1.2			#12	1	20	R	#12	RECEPTACLES	12			
13	RECEPTACLES	#12	R	20	1	#12	1.2			1.2			#12	1	20	Misc	#12	WASHER	14			
15	RECEPTACLES	#12	R	20	1	#12		1.2			2.5		#10	2	30	Misc	#12	DRYER	16			
17	RECEPTACLES	#12	R	20	1	#12			1.2			2.5			Misc				18			
19	RECEPTACLES	#12	R	20	1	#12	1.2			0.6			#12	1	20	R	#12	RECEPTACLES	20			
21	RECEPTACLES	#12	R	20	1	#12		0.6			1.2		#12	1	20	R	#12	RECEPTACLES	22			
23	WASHER	#12	Misc	20	1	#12			1.2				#12	1	20	R	#12	RECEPTACLES	24			
25	DRYER	#12	Misc	30	2	#10	2.5			1.2			#12	1	20	R	#12	RECEPTACLES	26			
27			Misc					2.5			0.8		#12	1	20	M	#12	AHU1	28			
29	RECEPTACLES	#12	R	20	1	#12			0.6			0.8	#12	1	20	M	#12	AHU2	30			
31	RECEPTACLES	#12	R	20	1	#12	1.2				0.8		#12	1	20	M	#12	AHU3	32			
33	RECEPTACLES	#12	R	20	1	#12		1.2				0.8	#12	1	20	M	#12	AHU4	34			
35	RECEPTACLES	#12	R	20	1	#12			1.2				#12	1	20	M	#12	SUMP PUMP	36			
37	RECEPTACLES	#12	R	20	1	#12	0.8			0.2			#12	1	20	L	#12	ELEVATOR CAB LIGHTS	38			
39	FIRE ALARM CONTROL PANEL	#12	Misc	20	1	#12		1.0						1	20	Spare		SPARE	40			
41	SPARE		Spare	20	1									1	20	Spare		SPARE	42			
							A	B	C													
							Connected Load															
							16.4	17.5	13.3													
							Connected Amps	136.7	145.8	110.8												
Demand Load Calculation																						
		Factor	Connected Load (KW)			Demand Load (KW)																
Continuous Loads (C)		1.25	0.0			0.0																
Non-Continuous Loads (NC)		1.00	0.0			0.0																
Lighting (L)		1.25	0.2			0.3																
Receptacles (R) - 1st 10 KVA		1.00	10.0			10.0																
Receptacles (R) - Over 10 KVA		0.50	14.4			7.2																
Motor Loads (M)		1.00	4.2			4.2																
Largest Motor Load (M) - 25% Factor		0.25	1.0			0.3																
Assembly (MCA)		1.00	0.0			0.0																
Kitchen (K)		0.70	0.0			0.0																
Cooking (C)		0.70	0.0			0.0																
Miscellaneous (Misc)		1.00	18.4			18.4																
Transformer (T)		1.00	0.0			0.0																
Water Heater (WH)		1.00	0.0			0.0																
Demand Load						40.3																
Demand Amps						111.94																





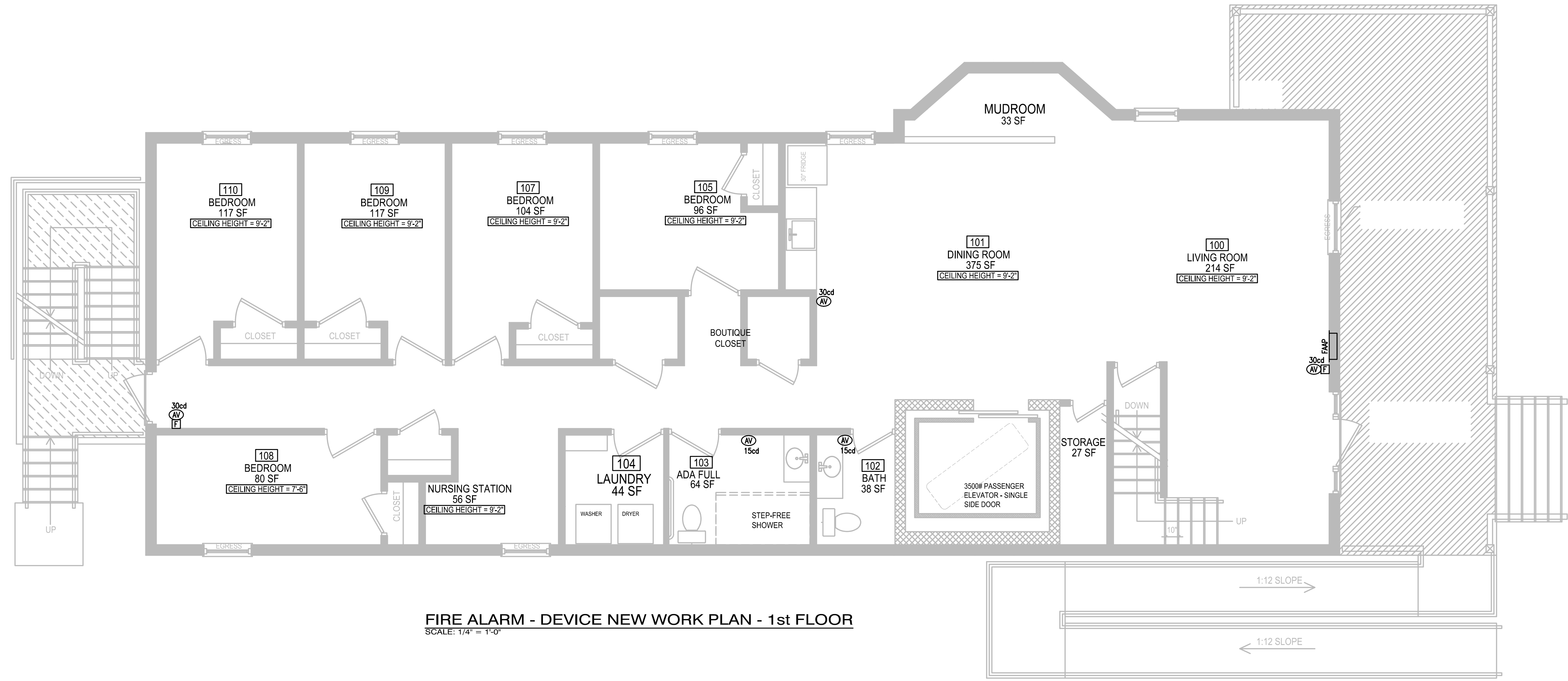
FIRE ALARM - DEVICE WORK PLAN - BASEMENT  
SCALE: 1/4" = 1'-0"

FIRE ALARM - SYMBOL LIST

- AV 15cd FIRE ALARM COMBINATION AUDIBLE/ VISUAL DEVICE WITH CANDELA RATING ADJUSTABLE FROM 15cd TO 110cd. NUMERAL INDICATES STROBE SETTING IN CANDELA. MOUNT IN ACCORDANCE WITH ADA AND NFPA REQUIREMENTS.
- V 15cd FIRE ALARM VISUAL DEVICE WITH CANDELA RATING ADJUSTABLE FROM 15cd TO 110cd. NUMERAL INDICATES STROBE SETTING IN CANDELA. MOUNT AS ABOVE.
- F FIRE ALARM PULL STATION; MOUNT 48" AFF.
- DD DUCT MOUNTED SMOKE DETECTOR, "WP" INDICATES WEATHERPROOF.
- TS FIRE ALARM SPRINKLER TAMPER SWITCH
- FS FIRE ALARM SPRINKLER FLOW SWITCH
- S E SMOKE DETECTOR, "E" INDICATES ELEVATOR RECALL.
- FACP RECESSED, REMOTE GRAPHIC FIRE ALARM ANNUNCIATOR PANEL. DUPLICATE ALL FIRE ALARM CONTROL PANEL FUNCTIONS AND INDICATIONS.
- FACP FIRE ALARM CONTROL PANEL

FIRE ALARM - GENERAL NOTES

1. PROVIDE COMPLETE AND OPERABLE ADDRESSIBLE FIRE ALARM SYSTEM INCLUDING ALL WIRING, EQUIPMENT AND DEVICES AS SHOWN.
2. PROVIDE BATTERY BACKUP WITH CHARGER FOR SYSTEM OPERATION IN STANDBY MODE FOR 72 HOURS FOLLOWED BY ALARM CONDITION FOR 15 MINUTES.
3. PROVIDE INTEGRAL AUTOMATIC DIALER, AUXILIARY CONTACTS FOR MECHANICAL EQUIPMENT SHUT-DOWN, MONITORING OF ALL SPRINKLER FLOW SWITCHES AND TAMPER SWITCHES.
4. WIRING AND INSTALLATION SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
5. FIRE ALARM SYSTEM, DEVICES AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH NFPA, ALL LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
6. PROVIDE REMOTE GRAPHIC ANNUNCIATOR PANEL DUPLICATING FIRE ALARM CONTROL PANEL INDICATIONS AND CONTROLS.



FIRE ALARM - DEVICE NEW WORK PLAN - 1st FLOOR  
SCALE: 1/4" = 1'-0"



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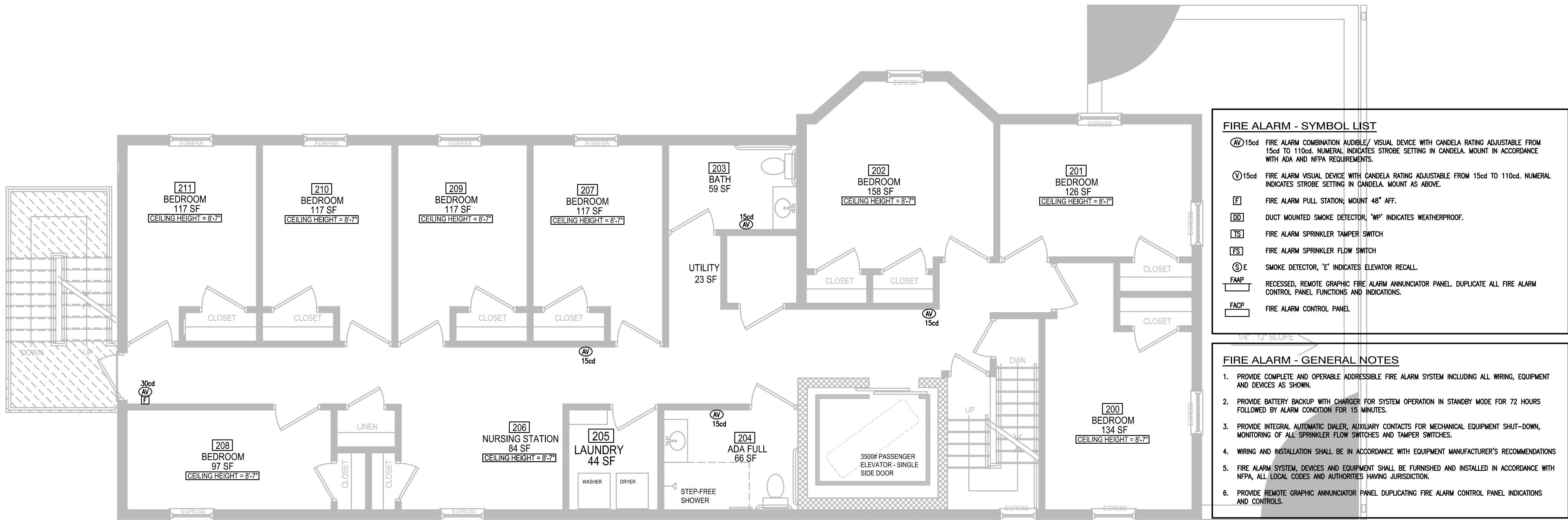
PROJECT No.

SHEET TITLE:  
FIRE ALARM -  
DEVICE NEW  
WORK PLAN -  
BSMENT & 1st FLR

DRAWING No.  
**FA100**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKD: MMB

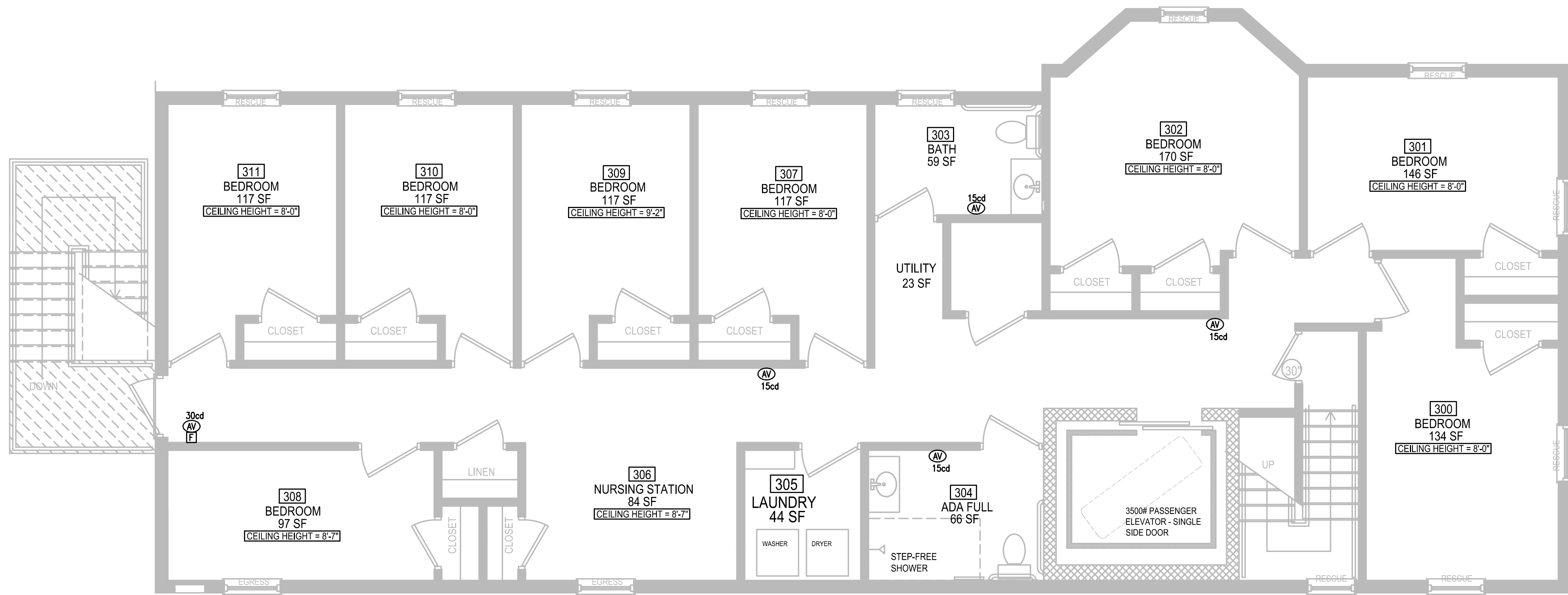




FIRE ALARM - SYMBOL LIST	
AV 15cd	FIRE ALARM COMBINATION AUDIBLE/ VISUAL DEVICE WITH CANDELA RATING ADJUSTABLE FROM 15cd TO 110cd. NUMERAL INDICATES STROBE SETTING IN CANDELA. MOUNT IN ACCORDANCE WITH ADA AND NFPA REQUIREMENTS.
V 15cd	FIRE ALARM VISUAL DEVICE WITH CANDELA RATING ADJUSTABLE FROM 15cd TO 110cd. NUMERAL INDICATES STROBE SETTING IN CANDELA. MOUNT AS ABOVE.
F	FIRE ALARM PULL STATION; MOUNT 48" AFF.
DS	DUCT MOUNTED SMOKE DETECTOR, "WP" INDICATES WEATHERPROOF.
TS	FIRE ALARM SPRINKLER TAMPER SWITCH
FS	FIRE ALARM SPRINKLER FLOW SWITCH
S E	SMOKE DETECTOR, "E" INDICATES ELEVATOR RECALL.
FAAP	RECESSED, REMOTE GRAPHIC FIRE ALARM ANNUNCIATOR PANEL. DUPLICATE ALL FIRE ALARM CONTROL PANEL FUNCTIONS AND INDICATIONS.
FACP	FIRE ALARM CONTROL PANEL.

- FIRE ALARM - GENERAL NOTES**
1. PROVIDE COMPLETE AND OPERABLE ADDRESSIBLE FIRE ALARM SYSTEM INCLUDING ALL WIRING, EQUIPMENT AND DEVICES AS SHOWN.
  2. PROVIDE BATTERY BACKUP WITH CHARGER FOR SYSTEM OPERATION IN STANDBY MODE FOR 72 HOURS FOLLOWED BY ALARM CONDITION FOR 15 MINUTES.
  3. PROVIDE INTEGRAL AUTOMATIC DIALER, AUXILIARY CONTACTS FOR MECHANICAL EQUIPMENT SHUT-DOWN, MONITORING OF ALL SPRINKLER FLOW SWITCHES AND TAMPER SWITCHES.
  4. WIRING AND INSTALLATION SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
  5. FIRE ALARM SYSTEM, DEVICES AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH NFPA, ALL LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
  6. PROVIDE REMOTE GRAPHIC ANNUNCIATOR PANEL DUPLICATING FIRE ALARM CONTROL PANEL INDICATIONS AND CONTROLS.

FIRE ALARM - DEVICE NEW WORK PLAN - 2nd FLOOR  
SCALE: 1/4" = 1'-0"



FIRE ALARM - DEVICE NEW WORK PLAN - 3rd FLOOR  
SCALE: 1/4" = 1'-0"



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ISSUE DATES:	
REVISIONS:	
DATE	

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PROJECT No.

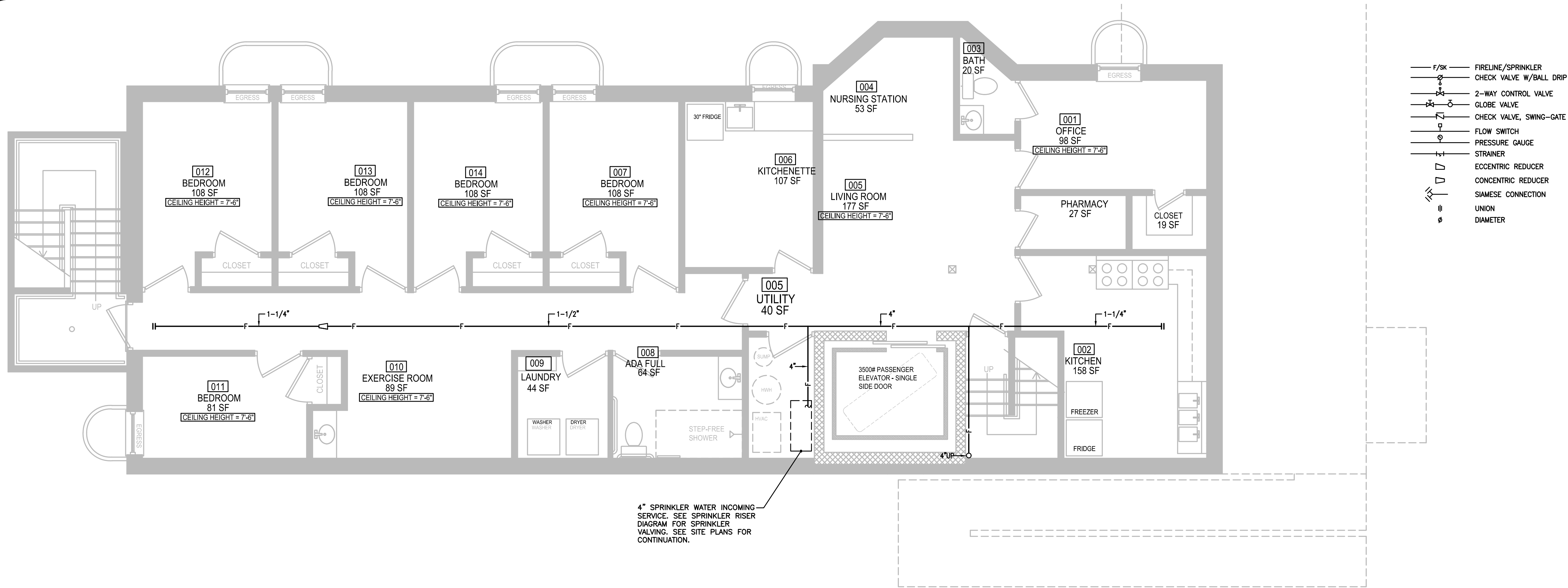
SHEET TITLE:  
**FIRE ALARM -  
DEVICE NEW  
WORK PLAN - 2nd &  
3rd FLRS**

DRAWING No.

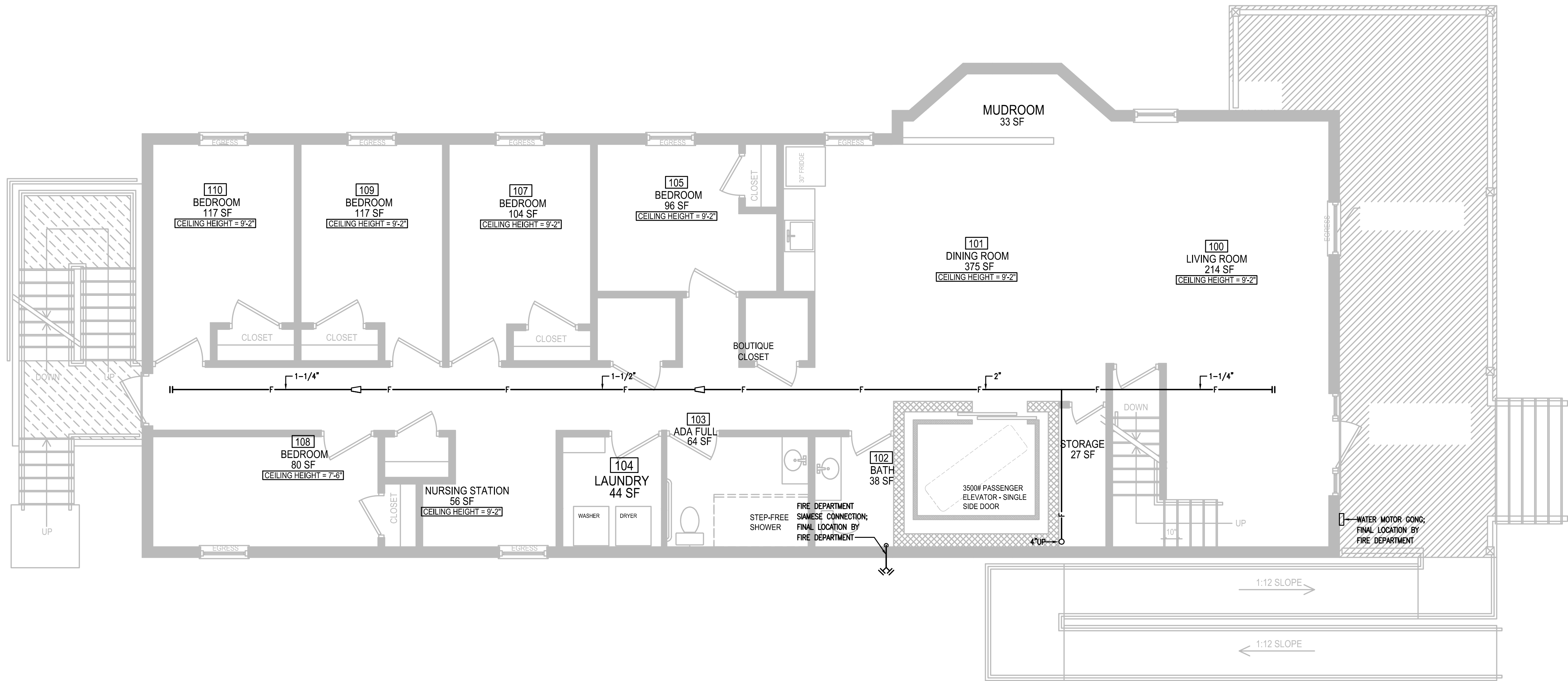
**FA200**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB





FIRE PROTECTION - SPRINKLER PIPING NEW WORK PLAN - BASEMENT  
SCALE: 1/4" = 1'-0"



FIRE PROTECTION - SPRINKLER PIPING NEW WORK PLAN - 1st FLOOR  
SCALE: 1/4" = 1'-0"

- F/SK FIRELINE/SPRINKLER
- CHECK VALVE W/BALL DRIP
- 2-WAY CONTROL VALVE
- GLOBE VALVE
- CHECK VALVE, SWING-GATE
- FLOW SWITCH
- PRESSURE GAUGE
- STRAINER
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- SIAMESE CONNECTION
- UNION
- DIAMETER

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DATE	REVISIONS:		ISSUE DATES:	

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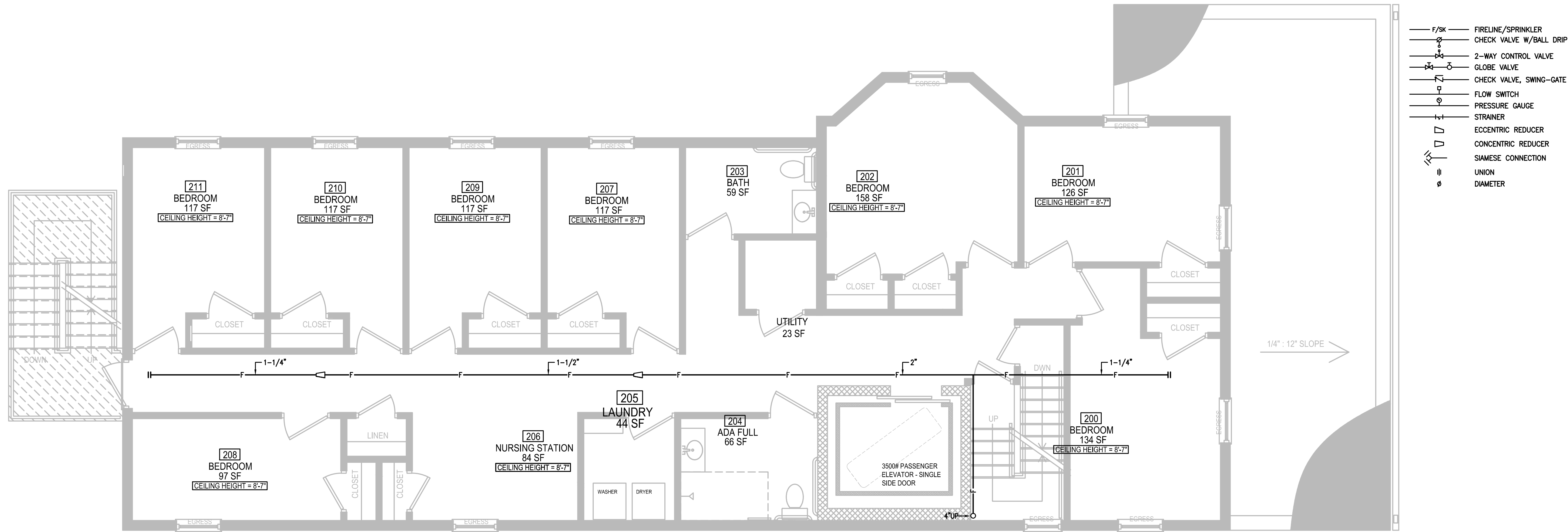
(301) 641-5823

PROJECT No.

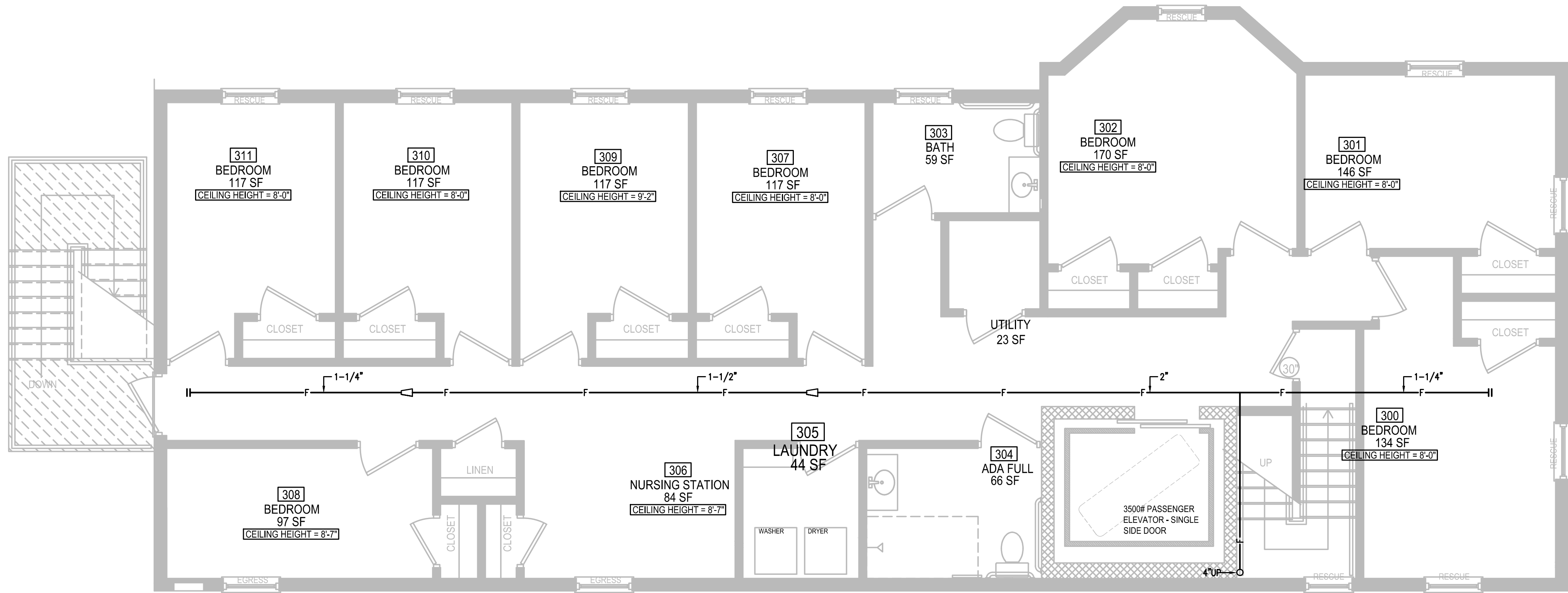
SHEET TITLE:  
FIRE PROTECTION -  
SPRINKLERS BSMT  
& 1st FLR

DRAWING No.  
**FP100**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB



FIRE PROTECTION - SPRINKLER PIPING NEW WORK PLAN - 2nd FLOOR  
SCALE: 1/4" = 1'-0"



FIRE PROTECTION - SPRINKLER PIPING NEW WORK PLAN - 3rd FLOOR  
SCALE: 1/4" = 1'-0"

- F/SK FIRELINE/SPRINKLER
- CHECK VALVE W/BALL DRIP
- 2-WAY CONTROL VALVE
- GLOBE VALVE
- CHECK VALVE, SWING-GATE
- FLOW SWITCH
- PRESSURE GAUGE
- STRAINER
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- SIAMASE CONNECTION
- UNION
- DIAMETER

I certify that these documents were prepared by me and that I am a duly licensed Engineer under the law of the State of Maryland, license number 29227, expiration date, June 16th 2025



DATE	REVISIONS:	ISSUE DATES:				

3308 ALTO ROAD  
BALTIMORE, MD

**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

(301) 641-5823

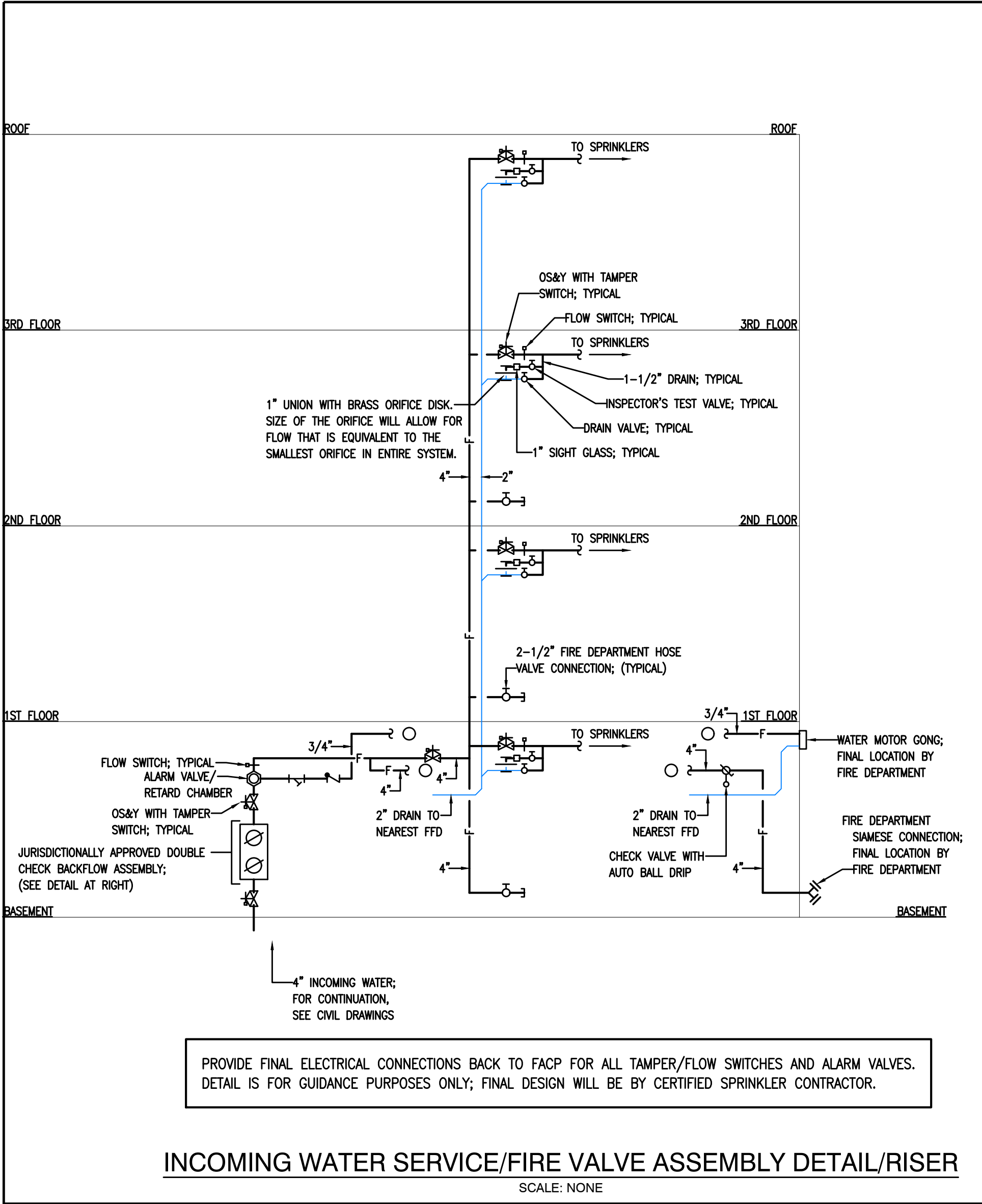
SHEET TITLE:  
**FIRE PROTECTION -  
SPRINKLERS 2nd &  
3rd FLR**

PROJECT No.

DRAWING No.  
**FP200**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHECKED: MMB

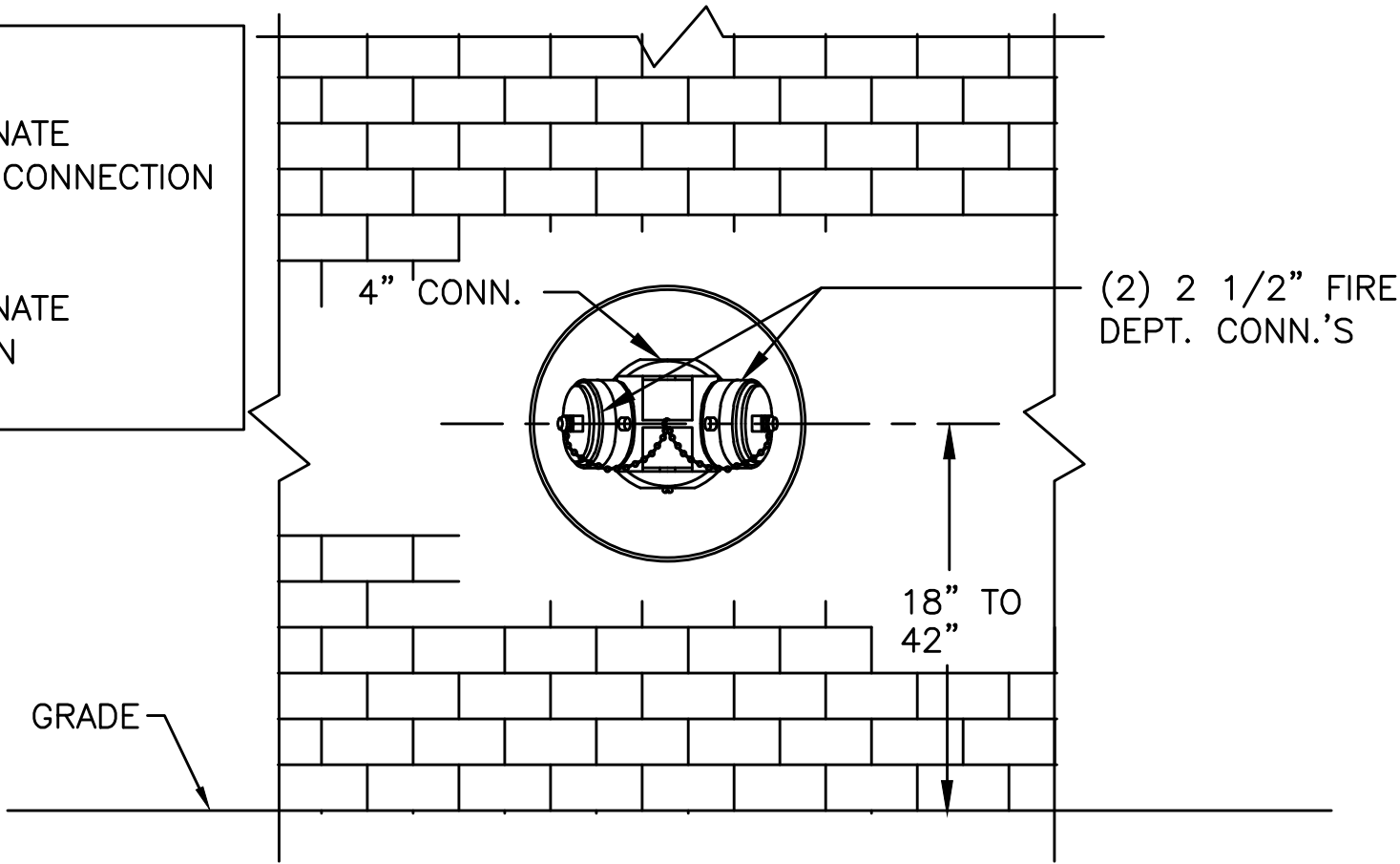




INCOMING WATER SERVICE/FIRE VALVE ASSEMBLY DETAIL/RISER

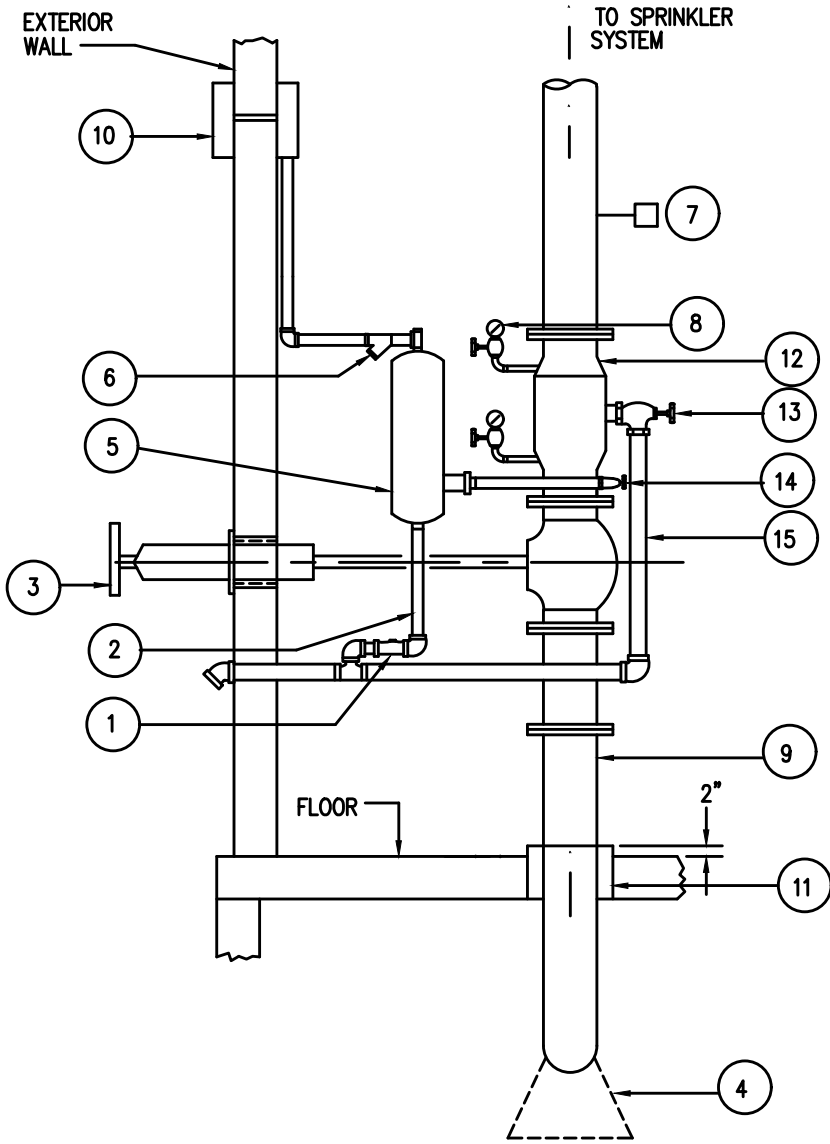
SCALE: NONE

- NOTES
1. SPRINKLER CONTRACTOR TO COORDINATE HEIGHT & LOCATION OF FIRE DEPT. CONNECTION WITH LOCAL FIRE DEPARTMENT.
  2. SPRINKLER CONTRACTOR TO COORDINATE THREADS ON FIRE DEPT. CONNECTION WITH LOCAL FIRE DEPARTMENT.



FIRE DEPARTMENT CONNECTION DETAIL

SCALE: NONE



WET PIPE SYSTEM RISER DETAIL

SCALE: NONE

ITEM	DESCRIPTION
1	CHECK VALVE
2	RETARDING CHAMBER DRAIN
3	WALL MOUNTED POST INDICATOR VALVE
4	THRUST BLOCK
5	RETARDING CHAMBER
6	ALARM LINE STRAINER
7	FLOW SWITCH
8	WATER GAUGE (2 REQUIRED)
9	RISER FROM MAIN WATER SUPPLY
10	WATER MOTOR ALARM
11	WATERTIGHT STEEL SLEEVE
12	WET PIPE ALARM VALVE
13	MAIN DRAIN VALVE
14	ALARM TEST VALVE
15	MAIN DRAIN

- NOTES:
1. PROVIDE TRIM FOR ALARM CHECK VALVE AS REQUIRED BY NFPA 13 OF LATEST EDITION.
  2. CHAIN AND LOCK WPV'S IN OPEN POSITION AT COMPLETION OF PROJECT.
  3. PROVIDE STEEL SLEEVE IN EXTERIOR WALL FOR WPV OPERATING ROD.
  4. ALL PIPE PENETRATIONS THRU EXTERIOR WALL SHALL HAVE STEEL SLEEVE AND ESCUTCHEONS INSIDE AND OUT INCLUDING INSPECTORS TEST.



I certify that these documents were prepared by me and that I am a duly licensed Engineer under the law of the State of Maryland, license number 29227, expiration date, June 16th 2025

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3308 ALTO ROAD

BALTIMORE, MD

**DIVERSIFIED CONSULTING ENGINEERS, LLC**

MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
FIRE PROTECTION -  
RISER DIAGRAM  
AND DETAILS

DRAWING No.

**FP300**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHECKED: MMB



## HVAC - GENERAL NOTES

NOTE: REFER TO DESIGN DOCUMENTS FOR ADDITIONAL NOTES. ALL NOTES FOUND ON THESE DOCUMENTS WILL SUPERSEDE THE FOLLOWING NOTES SHOULD THERE BE A CONFLICT.

1. THESE DRAWINGS ARE INTENDED TO PROVIDE FOR A COMPLETE, FUNCTIONING HVAC SYSTEM AS PER THE CLIENTS REQUIREMENTS. THE CONTRACTOR WILL STUDY THE PLANS AND WILL PROVIDE THE REQUIRED LABOR AND EQUIPMENT IN ORDER TO ACHIEVE ALL GOALS AS REQUIRED BY THESE PLANS. SHOULD THE CONTRACTOR FIND ANY ERRORS OR AMBIGUITIES WITHIN THESE PLANS, THEN SHE/HIS WILL NOTIFY THE ENGINEER IMMEDIATELY PRIOR TO THE SUBMISSION OF FINAL BIDS SUCH THAT THE MATTER CAN BE CLEARED. TO ASSIST IN THIS PROCESS, THE CONTRACTOR WILL BE REQUIRED TO VISIT THE AREA OF WORK PRIOR TO FINAL BID IN ORDER TO VERIFY ALL EXISTING CONDITIONS PERTAINING TO THE SCOPE OF WORK ENCOMPASSED BY THESE DRAWINGS. THE CONTRACTOR, BY SUBMISSIONS OF THEIR FINAL BID, WILL ACCEPT THESE PLANS AS COMPLETE AND ANY CHANGE ORDERS ON THEIR PART BASED UPON THE ACCEPTED PLANS WILL BE UNACCEPTABLE.

2. ALL PLANS ARE DIAGRAMMATIC UNLESS EXPLICITLY INDICATED OTHERWISE. SHOULD THE CONTRACTOR REQUIRE DIMENSIONS/DETAILS REGARDING BUILDING CONSTRUCTION, THEN SHE/HIS WILL REFER TO THE ARCHITECTURAL PLANS. IN ADDITION, THE CONTRACTOR WILL COORDINATE WITH THE ARCHITECTURAL PLANS REGARDING THE LOCATION OF ALL CEILING-MOUNTED DEVICES.

3. ALL MATERIALS AND THEIR INSTALLATION SHALL CONFORM TO IMC.

4. MECHANICAL CONTRACTOR SHALL PAY FOR AND OBTAIN ANY AND ALL PERMITS AND INSPECTIONS AS REQUIRED BY THE SCOPE OF THIS WORK.

5. CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING ALL NEW WORK WITH EXISTING FIELD CONDITIONS. SHOULD A SITUATION ARISE WHERE NEW WORK CONFLICTS WITH EXISTING CONDITIONS, THEN CONTACT THE ENGINEER PRIOR TO THE CONTINUANCE OF WORK REGARDING THIS ITEM. IN ADDITION, THE MECHANICAL CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING NEW WORK WITH ALL OTHER TRADES SUCH AS NOT TO ALLOW FOR CONFLICTS BETWEEN THE DIFFERENT TRADES.

6. THE WORK AREA SHALL BE SWEEP AT THE END OF THE WORK DAY AND ALL TRASH AND DEBRIS SHALL BE DISPOSED OF IN A MANNER AS REQUIRED BY THE CLIENT AND/OR OWNER. DURING CONSTRUCTION, THE FUNCTIONING OF ANY OCCUPIED AREAS ADJACENT TO THE WORK AREA WILL CONTINUE DURING THE CONSTRUCTION PHASE WITHOUT INTERRUPTIONS. ANY WORK REQUIRED WITHIN OCCUPIED AREAS WILL BE PERFORMED DURING THOSE TIMES WHEN THE SPACE IS UNOCCUPIED. THE PRIOR APPROVAL OF THE TENANT AND BUILDING MANAGER WILL BE REQUIRED PRIOR TO COMMENCEMENT OF THIS WORK.

7. ALL EQUIPMENT AND MATERIALS PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE NEW. THERE WILL BE ABSOLUTELY NO ALLOWANCE FOR REUSED MATERIAL UNLESS EXPLICITLY INDICATED OTHERWISE. BY THE OWNER AND ENGINEER. SHOULD IT BE DETERMINED THAT THE CONTRACTOR IS INSTALLING USED EQUIPMENT WITHOUT PROPER PERMISSION, THEN THEY WILL BE REMOVED FROM THE JOB. IN ADDITION, SUBMITTALS FOR ALL NEW EQUIPMENT AND MATERIAL TO BE PROVIDED BY THE MECHANICAL CONTRACTOR WILL BE TURNED IN TO THE MECHANICAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE PURCHASE OF THESE ITEMS.

8. THE CONTRACTOR IS RESPONSIBLE FOR RESEARCHING THE DRAWINGS IN ORDER TO DETERMINE THE QUANTITY OF ALL MECHANICAL ITEMS REQUIRED. NOTE THAT THE SYMBOLS SHOWN ON THE SCHEDULES DEFINE THE TYPE OF EQUIPMENT ONLY, NOT THE QUANTITY.

9. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIAL IN ORDER TO PROVIDE FOR THE PROPER INSTALLATION OF ALL MECHANICAL EQUIPMENT. DISCREPANCIES AS TO WHAT IS REQUIRED AS OPPOSED TO WHAT IS INDICATED ON THE PLANS WILL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK IN ORDER THAT THE ENGINEER MAY CLARIFY THE INTENTION OF THE DESIGN. THIS MUST BE DONE PRIOR TO THE SUBMISSION OF FINAL BIDS. IF THE CONTRACTOR DOES NOT BRING TO THE ENGINEER'S ATTENTION ANY POTENTIAL DISCREPANCIES PRIOR TO THE SUBMISSION OF FINAL BIDS, THEN THE CONTRACTOR HAS ACCEPTED THE DRAWINGS AS SUFFICIENT AND ANY CHANGE ORDERS DURING THE CONSTRUCTION PHASE WILL NOT BE ACCEPTED.

10. NEW DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS. NEW DUCT WILL BE CONSTRUCTED ACCORDING TO THOSE PARAMETERS AND REQUIREMENTS AS PUT FORTH BY SMACNA. ALL DUCT SHALL BE MOUNTED AS CLOSEST TO THE BOTTOM OF THE DECK/SLAB AS IS PERMISSIBLE. CONFORM EXISTING FIELD CONDITIONS PRIOR TO THE FABRICATION OF ANY NEW DUCT. PROVIDE 1" THICKNESS, 1.5 PCF DENSITY INTERNAL ACOUSTIC LINER AS REQUIRED ON THE NEW WORK PLANS. MAINTAIN THIS THICKNESS AND DENSITY UNLESS EXPLICITLY INDICATED OTHERWISE ON THE PLANS. ALL EXTERNAL DUCTWORK TO BE PROVIDED AS INDICATED ON THE DESIGN DOCUMENTS) WILL, UNLESS INDICATED OTHERWISE, BE 1" THICKNESS PAPER/FOIL WITH VAPOR BARRIER.

11. PROVIDE A FLEXIBLE CONNECTION BETWEEN DUCT AND AIR SUPPLY DEVICES AS SHOWN ON PLANS. MAXIMUM FLEXIBLE DUCT CONNECTION SHALL BE 8'-0"; PROVIDE ROUND SHEET METAL EXTENSIONS AS REQUIRED IN ORDER TO MAINTAIN THE 8'-0" REQUIREMENT.

12. ALL MECHANICAL EQUIPMENT AND DEVICES SHALL HAVE FINAL LOCATIONS ADJUSTED IN THE FIELD IN ORDER TO ALLOW FOR LIGHTING FIXTURE AND SPRINKLER PIPING INSTALLATION. CONTRACTOR WILL PROVIDE SHOP DRAWINGS TO THE DESIGN ENGINEER FOR FINAL REVIEW PRIOR TO THE COMMENCEMENT OF WORK.

13. THE CONTRACTOR WILL PREPARE AND SUBMIT TO A REGISTERED STRUCTURAL ENGINEER FOR REVIEW THE LOCATIONS OF ALL MECHANICAL EQUIPMENT AND THEIR RESPECTIVE WEIGHTS AND PROPOSED METHOD OF INSTALLATION. IN ADDITION, THIS DRAWING WILL INDICATE ALL PENETRATIONS THRU WALLS AND SLABS. THE CONTRACTOR WILL NOT PROCEED WITH EQUIPMENT INSTALLATION UNTIL THE REGISTERED STRUCTURAL ENGINEER HAS REVIEWED AND APPROVED (STAMPED/SEALED) ALL DRAWINGS SUBMITTED BY THE CONTRACTOR.

14. ALL INSTALLED EQUIPMENT AND MATERIAL SHALL NOT GENERATE SOUND/VIBRATION LEVELS GREATER THAN THOSE ADVERTISED BY THEIR RESPECTIVE MANUFACTURER.

15. ALL DUCT PENETRATING A FIRE-RATED ASSEMBLY SHALL BE PROVIDED WITH A FIRE DAMPER WITH RATING AT LEAST EQUAL TO THE PARTITION PENETRATED; ALL DUCT PENETRATING A SMOKE-RATED PARTITION WILL HAVE, AT THE PENETRATION POINT, A SMOKE DETECTOR/DAMPER ASSEMBLY. THIS ASSEMBLY, AFTER HAVING DETECTED SMOKE WILL NOTIFY BUILDING FIRE CONTROL SYSTEM AND CLOSE CORRESPONDING SMOKE DAMPER. ALL PIPING PENETRATING FIRE OR SMOKE-RATED PARTITIONS WILL BE SAIED IN AN APPROPRIATE MANNER WITH AN APPROVED SAFING MATERIAL.

16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS PANELS FOR THOSE MECHANICAL UNITS THAT ARE CONCEALED BEHIND CEILING FINISHES THAT ARE NOT ORIGINALLY INTENDED TO BE DISMANTLED; COORDINATE WITH THE ARCHITECT REGARDING ACCESS DOOR FINISHES. REFER TO THE ENGINEERING PLANS FOR DIMENSIONS OF ACCESS DOORS REQUIRED.

17. THE CONTRACTOR WILL PROVIDE MOTOR STARTERS, DISCONNECTS, OR ANY OTHER REQUIRED ELECTRICAL DEVICES NEEDED FOR THE PROPER INSTALLATION OF ANY EQUIPMENT WITHIN THE BOUNDS OF THE CONTRACTORS WORK; THE ELECTRICAL CONTRACTOR WILL INSTALL THESE DEVICES AND PROVIDE FINAL CONNECTIONS. THE ELECTRICAL CONTRACTOR WILL SIMPLY PROVIDE FINAL CONNECTIONS FOR ANY MECHANICAL EQUIPMENT THAT COMES WITH ALL REQUIRED ELECTRICAL DEVICES AS AN INTEGRAL PACKAGE FROM THE MANUFACTURER.

18. THE CONTRACTOR WILL INSTALL ALL MECHANICAL EQUIPMENT IN A MANNER SUCH AS TO MAINTAIN THE FACTORY RECOMMENDED CLEARANCES ABOUT THE UNIT TO ALLOW FOR SERVICEABILITY. THE CONTRACTOR WILL, UPON HAVING FOUND FIELD CONDITIONS LIMITING ACCESS TO A MECHANICAL UNIT, CONTACT THE ENGINEER IN ORDER THAT THE MATTER MAY BE RESOLVED PRIOR TO UNIT INSTALLATION.

## HVAC-SPECIFICATIONS

ADHERE TO THOSE SECTIONS OF THE FOLLOWING SPECIFICATIONS AS REQUIRED BY THIS JOB.

### DUCTWORK:

#### A. SHEET METAL DUCTWORK:

- ALL NEW DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL (UNLESS OTHERWISE INDICATED) AND INSTALLED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS, 1995 EDITION, 2" PRESSURE CLASS. AUDIBLE LEAKAGE WILL NOT BE ALLOWED.
- ALL NEW DUCTWORK MUST BE FIELD VERIFIED PRIOR TO FABRICATION, PURCHASE, OR INSTALLATION. NO ALLOWANCE WILL BE MADE FOR DUCTWORK THAT IS NOT USED.
- ALL DUCTWORK DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS. DUCTWORK SIZES SHALL BE INCREASED TO ACCOMMODATE 1" INTERNAL LINING WHERE INDICATED ON PLANS.
- INSULATION (WHERE EXPLICITLY INDICATED ON DRAWINGS): INSULATE ALL NEW SUPPLY AND RETURN AIR DUCTWORK WITH 1" THICK FIBERGLASS DUCT WRAP WITH VAPOR BARRIER IN ACCORDANCE WITH IMC. SEAL SEAMS TOGETHER W/STAPLES AND AN APPROVED MASTIC SEALANT; THE USE OF DUCT TAPE IS NOT ACCEPTABLE.
- ALL SUPPLY, RETURN, AND OUTSIDE AIR DUCTS SHALL BE LINED WITH 1" THICK FIBERGLASS AEROFLEX DUCT LINER WITH SMOOTH NEOPRENE COATED SURFACE, AS SHOWN ON PLANS. APPLY LINER USING ADHESIVE AND SECURE WITH MECHANICAL FASTENERS SUITABLE FOR ADHESIVE, MECHANICAL, OR WELDED ATTACHMENT TO DUCT. DUCT LINER AND ADHESIVE SHALL COMPLY WITH NFPA STANDARD 90A.
- FLEXIBLE CONNECTIONS SHALL BE PROVIDED BETWEEN DUCTWORK AND TERMINAL DEVICES.

#### B. FLEXIBLE DUCTWORK:

- MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0". USE ROUND METAL DUCTWORK WITH INSULATION WHERE NECESSARY TO MEET THIS REQUIREMENT.
- FLEXIBLE DUCT SHALL BE FACTORY GLASS FIBER INSULATED ASSEMBLY WITH VAPOR BARRIER JACKET AND MAXIMUM THERMAL CONDUCTANCE OF .23 BTU/H / SQUARE FT. PER "F". IT SHALL BE CONSTRUCTED OF MACHINE WOUND SPIRAL ALUMINUM HELIX OR REINFORCED ALUMINUM FOIL FABRIC MECHANICALLY LOCKED INTO ALUMINUM SPIRAL HELIX.
- FLEXIBLE DUCT SHALL BE SUITABLE FOR A 3" W.G. POSITIVE WORKING PRESSURE AND SHALL BE LISTED AS CLASS 1 BY UL AT A FLAME SPREAD NOT TO EXCEED 25 AND SMOKE DEVELOPED NOT OVER 50 AND SHALL COMPLY WITH NFPA 90A.
- MANUFACTURERS: GENFLEX TYPE IHPL, THERMAFLEX TYPE M-KC, OR FLEXMASTER TYPE II OR III.
- FLEXIBLE DUCT SHALL BE CONNECTED TO SHEET METAL DUCTWORK WITH STAINLESS STEEL DUCT CLAMP WITH SWIVEL ACTION SCREW OR 100K NYLON SELF-LOCKING DUCT CLAMP BY FANOUT CORPORATION OR EQUAL.

### PIPING:

#### A. CONDENSATE PIPING:

- 1", SCH 40 PVC.
- PIPING SHALL BE PROPERLY SUPPORTED TO PREVENT SAGGING AND SHALL BE PITCHED TOWARDS GRADE.

#### B. REFRIGERANT PIPING:

- COPPER TUBE AND FITTINGS:
  - DRAWN-TEMPER COPPER TUBING: ASTM B 88, TYPE L (ASTM 88M, TYPE B)
  - WROUGHT-COPPER FITTINGS: ASME B16.22
  - WROUGHT-COPPER UNIONS: ASME B16.22
  - SOLDER-FILLER METALS: ASTM B 32, 95-5 TIN ANTIMONY
  - BRAZING-FILLER METALS: AWS A5.8, CLASSIFICATION BAg-1 (SILVER)

## ABBREVIATIONS

(N)	NEW
ABV	ABOVE
AC	AIR-CONDITIONING UNIT
CU	CONDENSING UNIT
AF	ABOVE FINISHED FLOOR
AHU	AIR-HANDLING UNIT
BTU/H	BRITISH THERMAL UNITS/HOUR
CB	CIRCUIT BREAKER
CD	CEILING DIFFUSER OR CONDENSATE DRAIN
CFM	CUBIC FEET OF AIR/MINUTE
CONN	CONNECTION
CORR	CORRIDOR
DN	DIMETER
DN	DOWN
EA	EACH
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EXH	EXHAUST
EXIST	EXISTING
FD	FIRE DAMPER
FL	FULL LOAD AMPS
FLEX	FLEXIBLE
HP	HEAT PUMP OR HORSEPOWER
HVAC	HEATING, VENT., AIR-COND.
KW	KILOWATT
LRA	LOCKED ROTOR AMPS
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MPS	MINIMUM FUSE SIZE
MIN	MINIMUM
OSA	OUTSIDE AIR
RA	RETURN AIR
RG	RETURN GRILLE
RLA	RATED-LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	SUPPLY FAN
SP	STATIC PRESSURE
TF	TRANSFER FAN
TG	TRANSFER GRILLE
TYP	TYPICAL
UN	UNLESS OTHERWISE NOTED
UP	UP THRU ROOF
V	VOLT
VD	VOLUME DAMPER
W	WITH

## SYMBOLS

①	THERMOSTAT
○	NOTE REFERENCE
(175)	SUPPLY AIR QUANTITY DESIGNATION
(175)	EXHAUST/RETURN AIR QUANTITY DESIGNATION
	RETURN/SUPPLY DUCT UP
	RETURN/SUPPLY DUCT DOWN
	OUTSIDE AIR DUCT UP/DOWN
	NEW DUCTWORK, SINGLE LINE
	NEW DUCTWORK, DOUBLE LINE
	1" INTERNAL SOUND-LINER; 1.5 PCF DENSITY UNLESS OTHERWISE NOTED
	FLEX. DUCT
	CEILING REGISTER, SUPPLY;
	CEILING REGISTER, RETURN;
	VOLUME DAMPER
	PIPE UP/PIPE DOWN
∅	DIAMETER
	EXHAUST/TRANSFER FAN

### GENERAL PLAN NOTES

1.SEE DRAWING M1 FOR SPECIFICATIONS. ANY NOTES ON THIS PLAN WILL SUPERSEDE THOSE FOUND ON M1 SHOULD A CONFLICT ARISE.

2. NOT USED

3. ALL EXHAUST DUCT WILL BE 6X8" SOLID (NO FLEXIBLE PERMITTED). DISCHARGE AT SIDE OF BUILDING IN EXHAUST BRICK VENT AS APPROVED BY ARCHITECT.

4. ALL DRYER EXHAUST DUCT WILL BE 4" SOLID (NO FLEXIBLE PERMITTED). DISCHARGE AT SIDE OF BUILDING IN EXHAUST BRICK VENT AS APPROVED BY ARCHITECT.

5. NOT USED.

6. ALL EQUIPMENT HUNG FROM BELOW/AT THE ROOF WILL REQUIRE THE PRIOR APPROVAL OF A REGISTERED STRUCTURAL ENGINEER.

7. PROVIDE ACCESS DOORS AT ALL THOSE AREAS WHERE EQUIPMENT IS LOCATED BEHIND A CONCEALED CEILING.

8. ALL REFRIGERANT PIPING WILL BE TYPE L COPPER W/BRAZED CONNECTIONS. SIZE ALL PIPING ACCORDING TO THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. INSULATE WITH 1" THICKNESS "ARMA-FLEX" INSULATION.

9. PROVIDE/INSTALL MANUFACTURER SPECIFIED DRYER VENTING AND TERMINATION KITS FOR ALL DRYERS. DRYERS USED IN THIS PROJECT WILL BE CAPABLE OF VENTING UP TO 40' DEVELOPED LENGTH (AS PER MANUFACTURER'S DATA).

10. DISCHARGE ALL CONDENSATE DRAINS AT LOCAL AREA DRAINS OR OUTSIDE ON A SPLASH BLOCK.

11. ALL DOORS WILL BE UNDERCUT A MINIMUM 1".

12. AUXILIARY DRAIN PANS SHALL BE PROVIDED BENEATH ALL AIR-HANDLING UNITS; DISCHARGE AT NEAREST LOCAL AREA DRAIN.

13. ALL THERMOSTATS WILL BE 24/7 PROGRAMMABLE WITH NIGHT SET-BACK.

14. ALL PENETRATIONS THRU THE SIDE OF THE BUILDING (BATHROOM EXHAUST AND DRYER EXHAUST) WILL NEED TO MEET THE CURRENT CODE REQUIREMENTS AS FAR AS DISCHARGE DISTANCES RELATIVE TO OPERABLE WINDOWS. ALL DRYER EXHAUST WILL BE RIGID METAL, NOT FLEXIBLE, AND WILL BE CONSTRUCTED WITHOUT SHEET METAL SCREWS AND WILL HAVE A BACKDRAFT DAMPER (NOT SCREEN) AT POINT OF DISCHARGE. ALL EXHAUST VENTS WILL BE BRICK VENT TYPE AS SELECTED BY THE ARCHITECT. BRICK VENT WILL BE EQUAL IN DIMENSIONS TO ONE COURSE OF BRICK UNLESS OTHERWISE NOTED.

15. VENTILATION RATE IS AS PER IMC 402.1 NATURAL VENTILATION. ALL SPACES WILL CONFORM TO THE MINIMUM 4% OPERABLE WINDOW/DOOR RULE.

16. EACH KITCHEN WILL COME WITH A RECIRCULATING OR VENTED TYPE HOOD SEE CUTSHEET W/EXHAUST LESS THAN 400CFM.

17. PROVIDE LOUVERED DOORS FOR AIR HANDLING UNIT CLOSET.

18. ALL DRYER EXHAUST SYSTEMS SHALL BE PROTECTED BY A THROUGH PENETRATION FIRE-STOP SYSTEM.

### 20. DRYER EXHAUST DUCTS:

THE FOLLOWING ARE RECOMMENDATIONS TO RUN AND INSTALL DRYER VENT DUCTS:

NO. OF 90° TURNS	MAXIMUM LENGTH OF RUN		
	4" DIAMETER FLEX 4" METAL TUBING	4" DIAMETER SHEETS" METAL DUCT	DIAMETER SHEET METAL DUCT
0	30 FT	60 FT	134 FT
1	22 FT	52 FT	115 FT
2	14 FT	44 FT	98 FT
3		32 FT	71 FT
4		28 FT	62 FT

#### NOTES:

1. 4" DIAMETER DUCTS HAVE AN AIR VELOCITY OF 1145 FPM - 5" DIAMETER DUCTS HAVE AN AIR VELOCITY OF 733 FPM - VELOCITIES BELOW 700 FPM ARE NOT RECOMMENDED.

2. INSIDE OF DUCTS SHOULD BE SMOOTH, NO OVERLAPS AGAINST AIR FLOW. NO DUCT SHEET METAL SCREWS JOINING TWO SECTIONS OF DUCTS, NE SCREWS OR FASTENERS OR HANGERS THAT EXTEND INTO DUCT.

3. TWO 45° TURNS ARE EQUIVALENT TO ONE 90° TURN.

4. ALL OTHER COMPONENTS, WALL VENT HOODS, ETC... ARE ALREADY INCLUDED IN CALCULATIONS.

5. INCLUDE ONE INTERIOR (INSIDE DRYER) TURN 90° IF OUTLET IS FROM BOTTOM OF SIDE OF DRYER, AND 0 TURN IF DRYER OULET IS FROM BACK.

### BUILDING LEAKAGE TEST:

CONTRACTOR SHALL SUBMIT AT FINAL INSPECTION A WHOLE-BUILDING BLOWER DOOR TEST SHOWING A PASSING RATING OF <= 5 AIR CHANGES PER HOUR AT A PRESSURE OF 50 PASCAL. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL UPON REQUEST.

### DUCT AIR LEAKAGE TEST:

CONTRACTOR SHALL SUBMIT AT FINAL INSPECTION A DUCT LEAKAGE TEST SHOWING A PASSING RATING OF <= 8 CFM PER 100 SQUARE FEET CONDITIONED FLOOR AREA AT A PRESSURE OF 25 PASCAL. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL UPON REQUEST.

### OUTSIDE AIR CALCULATION

TOTAL AREA = 7584 FT² (1896 FT² PER FLOOR)

AIR CHANGES PER HOUR = 0.35

TOTAL CFM = (ACH X AREA X HEIGHT)/60 = (0.35 X 1896 X 8.5)/60 = 100 CFM PER AHU

### HVAC LINE-SET PROTECTION:

REFRIGERANT LINES SHALL BE INSULATED WITH 1" THICK "ARMA-FLEX" INSULATION WITH R-VALUE = 4.2 AND PROTECTED THERMOPLASTIC POLYOLEFIN, AND HARDCAST SEAL-TACK WHITE. DESIGNED TO GO OVER LINE SETS AS EITHER AN EXTERNAL WRAP OR BRUSHED-ON COATING. LOCATE REFRIGERANT ACCESS PORT OUTSIDE. ACCESS PORTS SHALL BE LOCKED IN COMPLIANCE WITH IMC SECTION 1101.10.

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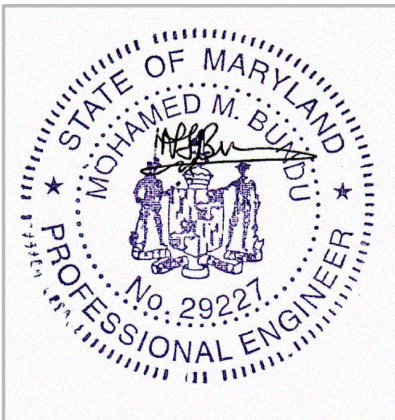
**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
HVAC - GEN. NOTES,  
SYMS., ABBREVS. &  
SPECS.

DRAWING No.

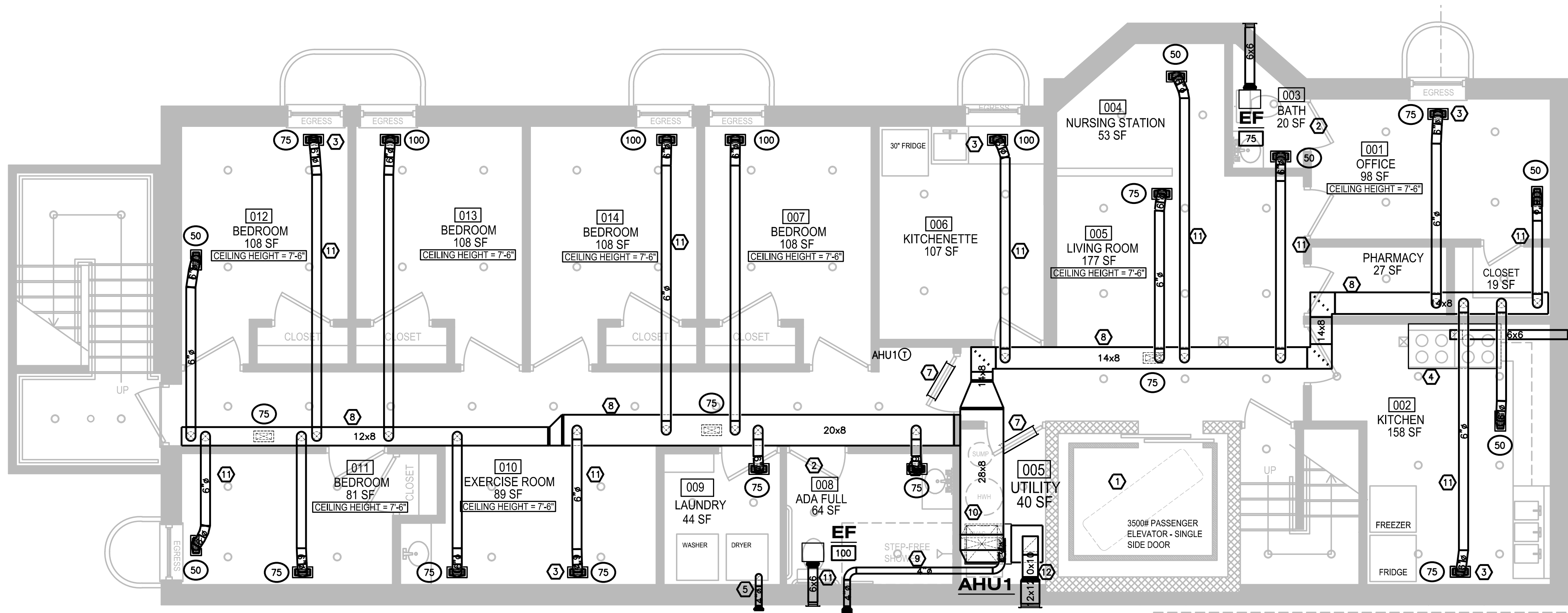
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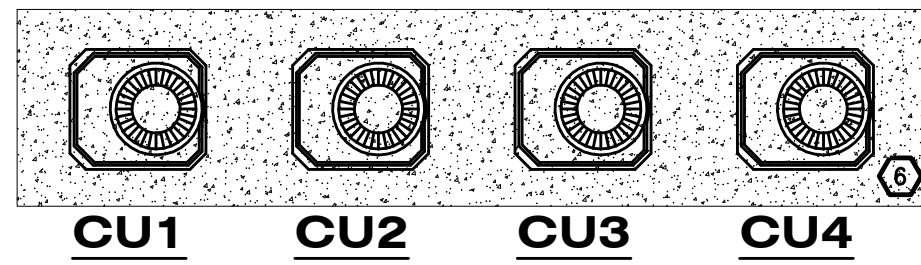
I certify that these documents were prepared by me and that I am a duly licensed Engineer under the law of the State of Maryland, license number 29227, expiration date, June 16th 2025

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB

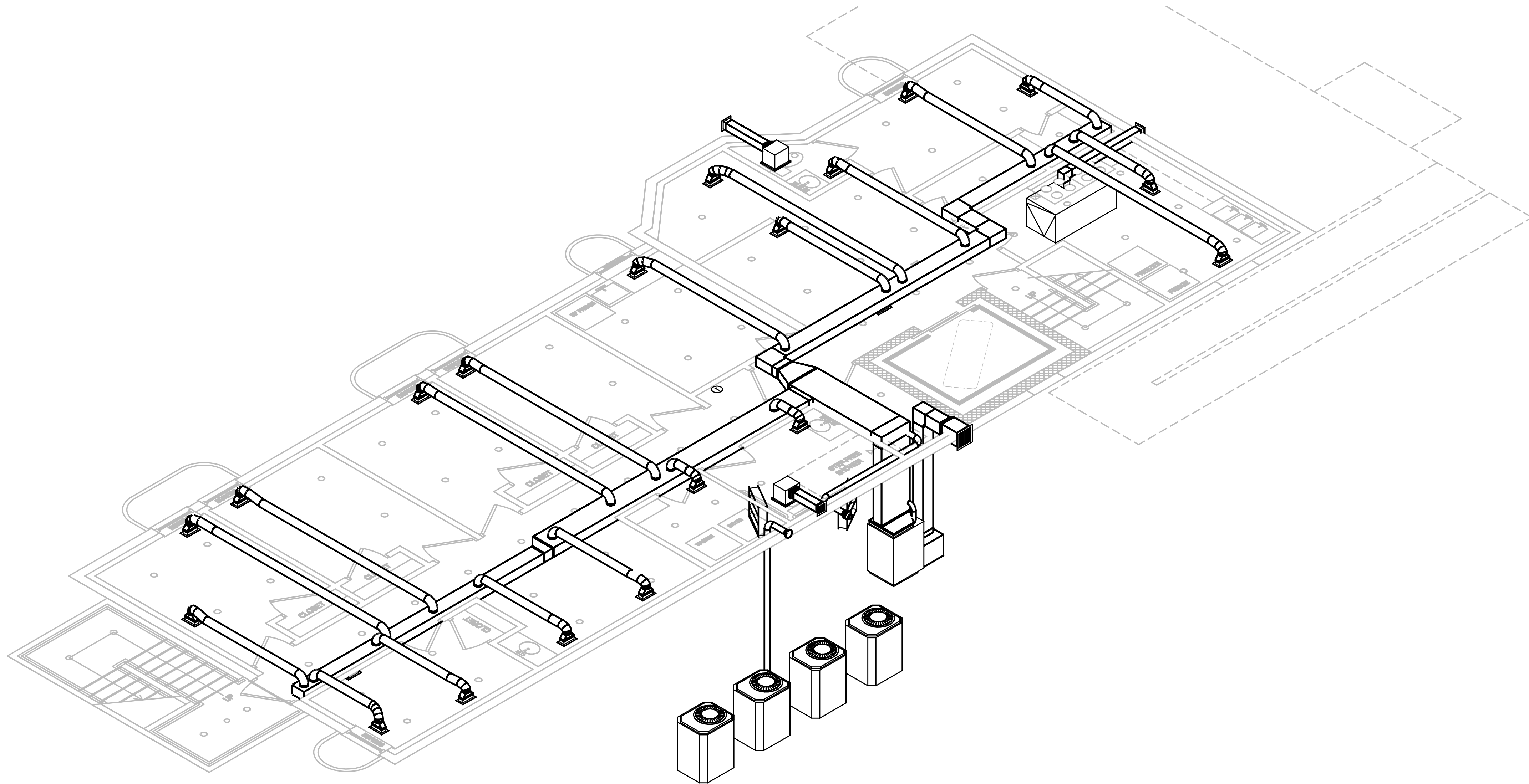




- KEYED PLAN NOTES**
- 1 NEW HYDRAULIC ELEVATOR. COORDINATE WITH MANUFACTURER FOR INSTALLATION.
  - 2 UNDERCUT TOILET DOOR 1" (TYPICAL).
  - 3 TITUS SUPPLY REGISTER, MODEL: 300RS, SIZE 12X4 (TYPICAL).
  - 4 PROVIDE VENTED TYPE HOOD OVER RANGE.
  - 5 PROVIDE DRYER VENT WITH NO NAILERS.
  - 6 PROVIDE CONCRETE MOUNTING PAD FOR CONDENSING UNITS.
  - 7 24X24 DOOR LOUVER.
  - 8 CONTRACTOR TO PROVIDE BULKHEAD FOR DUCTWORK
  - 9 PROVIDE CONCENTRIC VENT FOR AHU PER MANUFACTURER'S RECOMMENDATION
  - 10 DISCHARGE CONDENSATE AT FLOOR DRAIN.
  - 11 RUN DUCTWORK BETWEEN JOIST (TYPICAL).
  - 12 10X10 FRESH AIR DUCT UP THROUGH WALL. PROVIDE MOTORIZED DAMPER, INTERLOCK OPERATION OF MOTORIZED WITH OPERATION OF EVAPORATOR FAN. TERMINATE DUCT W/GRILLE AND 10 FEET AWAY FROM EXHAUST OR ANY TOILET VENT.



HVAC - NEW WORK PLAN - BASEMENT  
SCALE: 1/4" = 1'-0"



I certify that these documents were prepared by me and that I am a duly licensed Engineer under the law of the State of Maryland, license number 29227, expiration date, June 16th 2025



DATE	REVISIONS:	ISSUE DATES:

3308 ALTO ROAD  
BALTIMORE, MD

**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

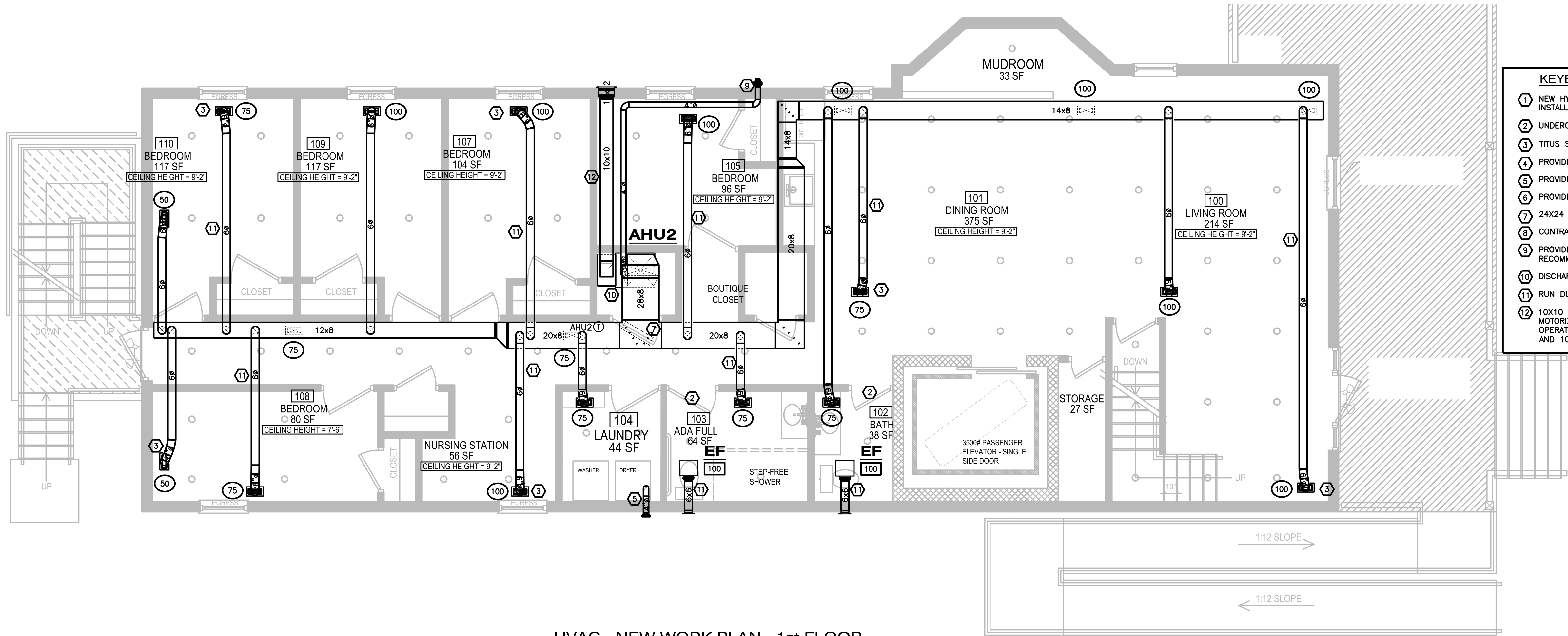
SHEET TITLE:  
HVAC - NEW WORK  
PLAN - BASEMENT

DRAWING No.  
**M200**

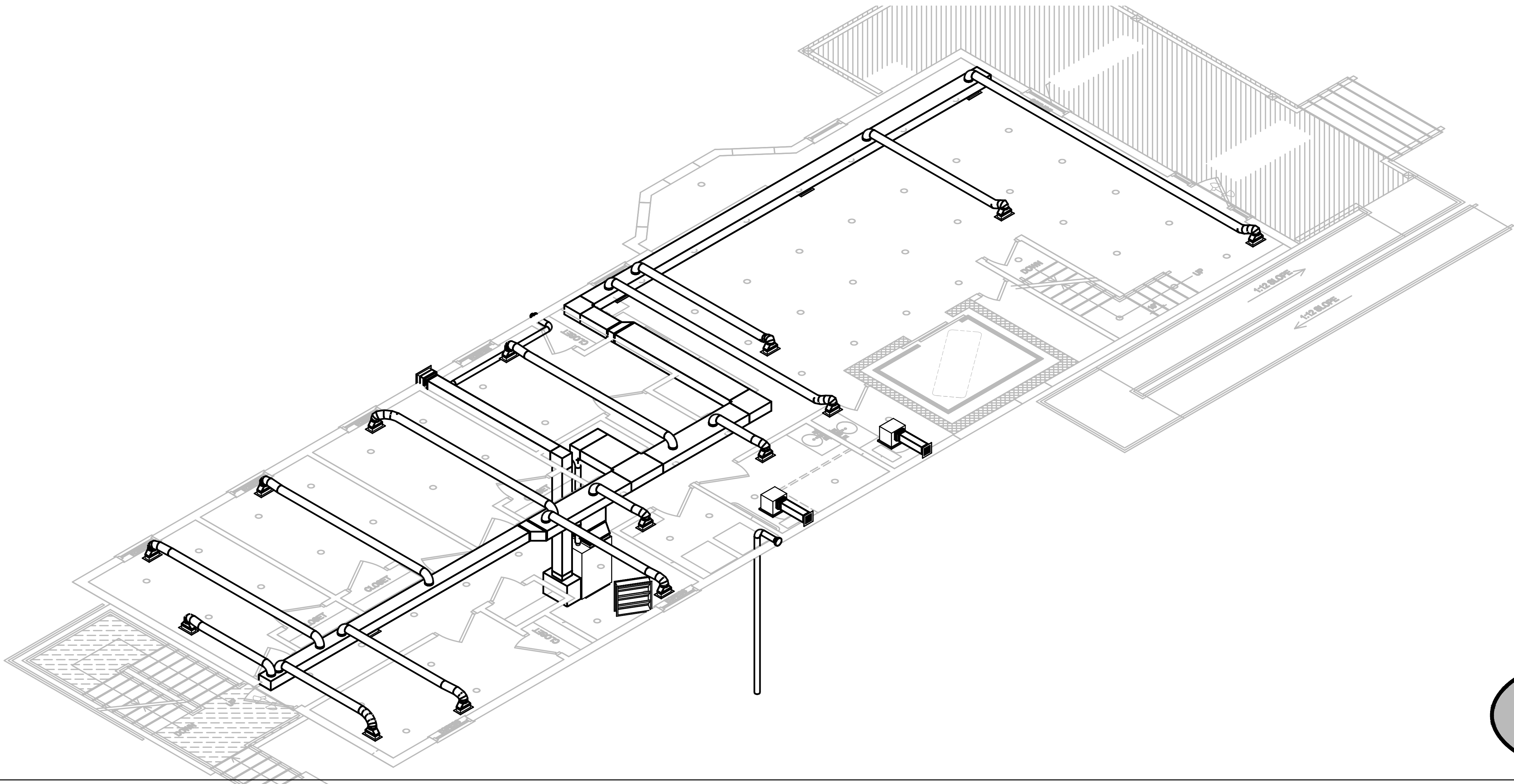
(301) 641-5823

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHECKED: MMB





HVAC - NEW WORK PLAN - 1st FLOOR  
SCALE: 1/4" = 1'-0"



- KEYED PLAN NOTES**
- 1 NEW HYDRAULIC ELEVATOR. COORDINATE WITH MANUFACTURER FOR INSTALLATION.
  - 2 UNDERCUT TOILET DOOR 1" (TYPICAL).
  - 3 TITUS SUPPLY REGISTER, MODEL: 300RS, SIZE 12X4 (TYPICAL).
  - 4 PROVIDE VENTED TYPE HOOD OVER RANGE.
  - 5 PROVIDE DRYER VENT WITH NO NAILERS.
  - 6 PROVIDE CONCRETE MOUNTING PAD FOR CONDENSING UNITS.
  - 7 24X24 DOOR LOUVER.
  - 8 CONTRACTOR TO PROVIDE BULKHEAD FOR DUCTWORK
  - 9 PROVIDE CONCENTRIC VENT FOR AHU PER MANUFACTURER'S RECOMMENDATION
  - 10 DISCHARGE CONDENSATE AT FLOOR DRAIN.
  - 11 RUN DUCTWORK BETWEEN JOIST (TYPICAL).
  - 12 10X10 FRESH AIR DUCT UP THROUGH WALL. PROVIDE MOTORIZED DAMPER. INTERLOCK OPERATION OF MOTORIZED WITH OPERATION OF EVAPORATOR FAN. TERMINATE DUCT W/GRILLE AND 10 FEET AWAY FROM EXHAUST OR ANY TOILET VENT.

I certify that these documents were prepared by me and that I am a duly licensed Engineer under the law of the State of Maryland, license number 29227, expiration date, June 16th 2025



DATE	REVISIONS:	ISSUE DATES:

3308 ALTO ROAD  
BALTIMORE, MD

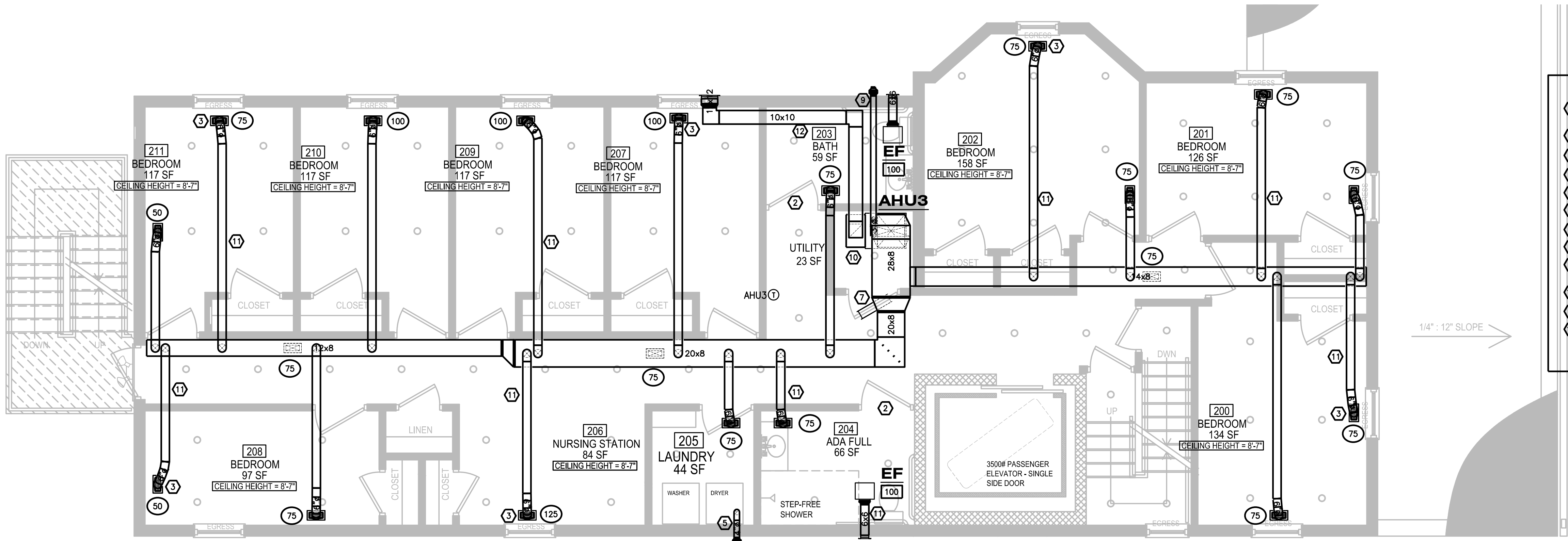
**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

SHEET TITLE:  
HVAC - NEW WORK  
PLAN - 1st FLOOR

PROJECT No.  
  
DRAWING No.  
**M300**

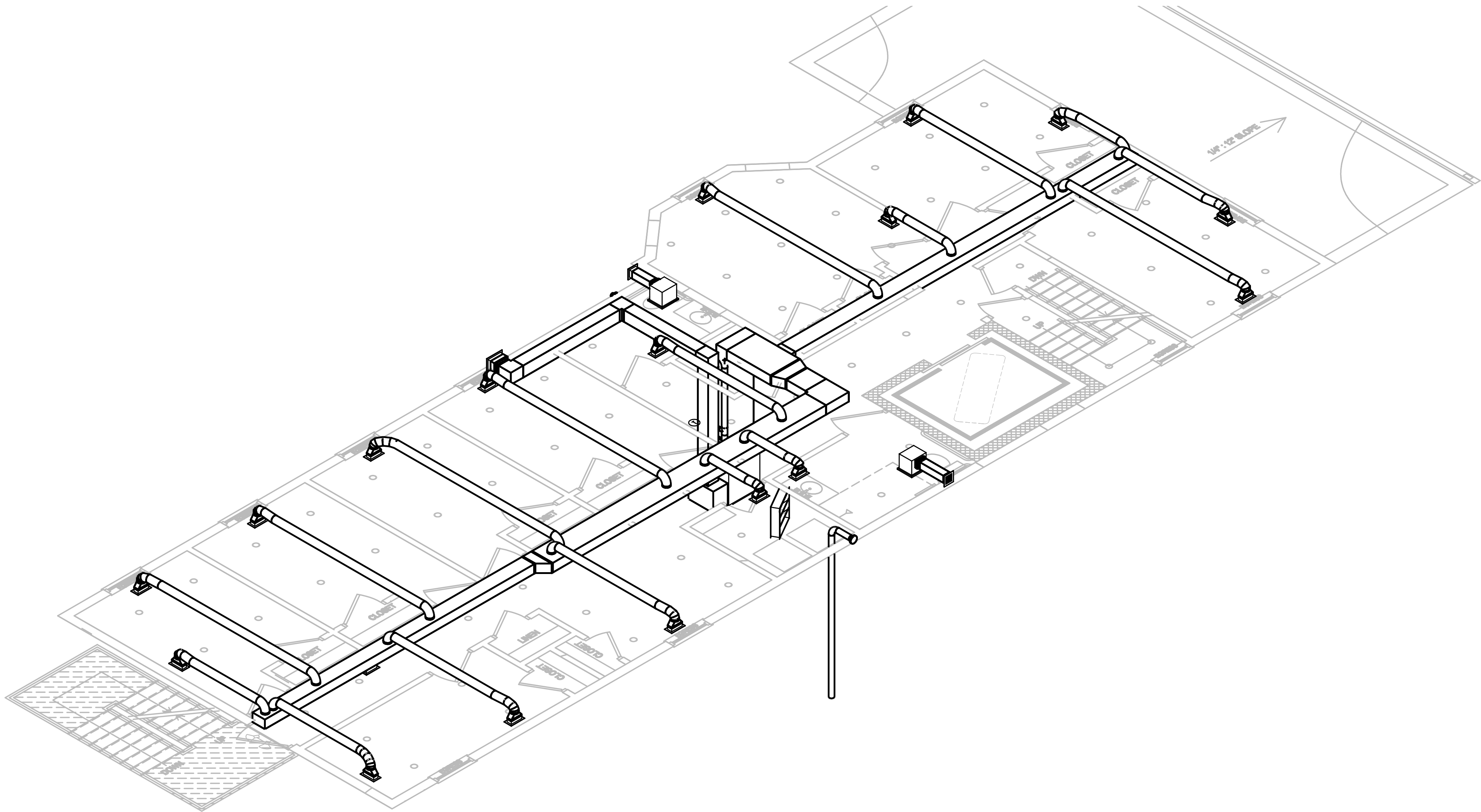
DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB





- KEYED PLAN NOTES**
- 1 NEW HYDRAULIC ELEVATOR. COORDINATE WITH MANUFACTURER FOR INSTALLATION.
  - 2 UNDERCUT TOILET DOOR 1" (TYPICAL).
  - 3 TITUS SUPPLY REGISTER, MODEL: 300RS, SIZE 12X4 (TYPICAL).
  - 4 PROVIDE VENTED TYPE HOOD OVER RANGE.
  - 5 PROVIDE DRYER VENT WITH NO NAILERS.
  - 6 PROVIDE CONCRETE MOUNTING PAD FOR CONDENSING UNITS.
  - 7 24X24 DOOR LOUVER.
  - 8 CONTRACTOR TO PROVIDE BULKHEAD FOR DUCTWORK
  - 9 PROVIDE CONCENTRIC VENT FOR AHU PER MANUFACTURER'S RECOMMENDATION
  - 10 DISCHARGE CONDENSATE AT FLOOR DRAIN.
  - 11 RUN DUCTWORK BETWEEN JOIST (TYPICAL).
  - 12 10X10 FRESH AIR DUCT UP THROUGH WALL. PROVIDE MOTORIZED DAMPER. INTERLOCK OPERATION OF MOTORIZED WITH OPERATION OF EVAPORATOR FAN. TERMINATE DUCT W/GRILLE AND 10 FEET AWAY FROM EXHAUST OR ANY TOILET VENT.

HVAC - NEW WORK PLAN - 2nd FLOOR  
SCALE: 1/4" = 1'-0"



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ISSUE DATES:						
REVISIONS:						
DATE						

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MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

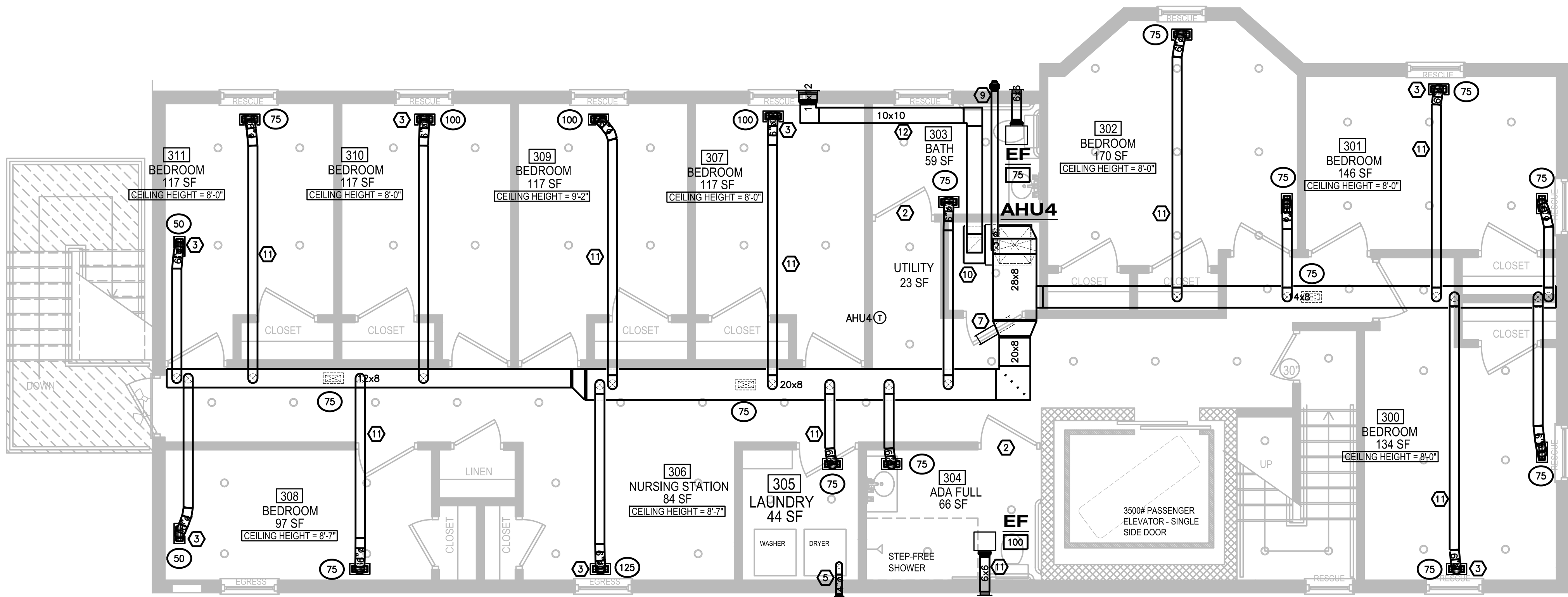
**HVAC - NEW WORK  
PLAN - 2nd FLOOR**

DRAWING No.

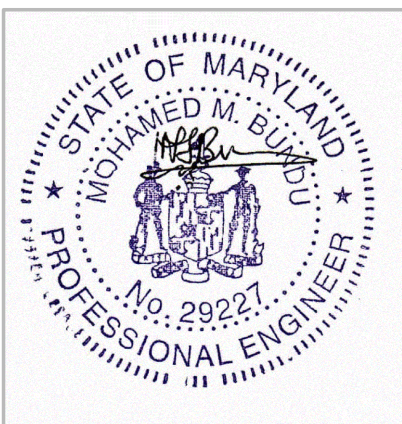
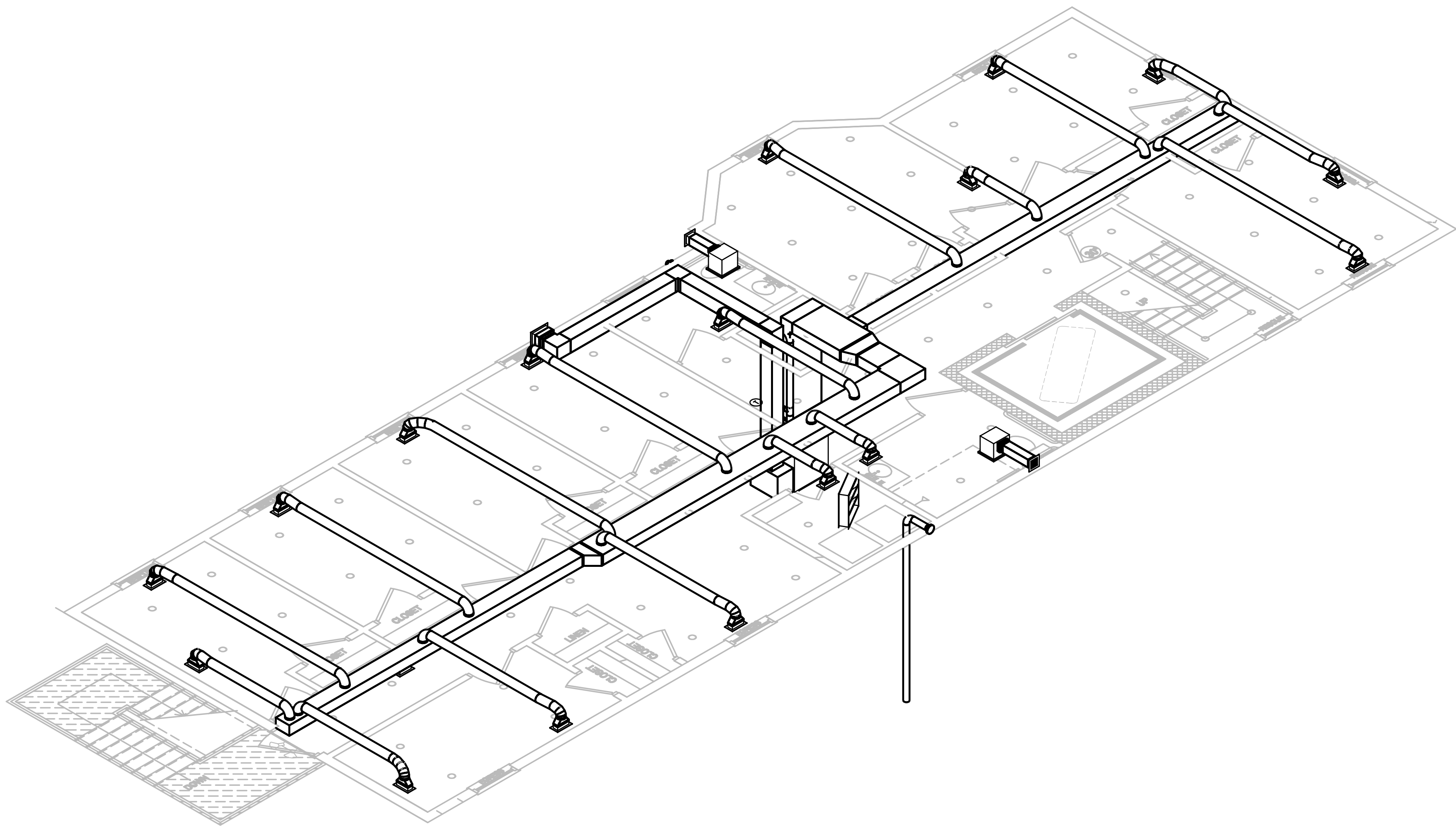
**M400**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKD: MMB





- KEYED PLAN NOTES**
- 1 NEW HYDRAULIC ELEVATOR. COORDINATE WITH MANUFACTURER FOR INSTALLATION.
  - 2 UNDERCUT TOILET DOOR 1" (TYPICAL).
  - 3 TITUS SUPPLY REGISTER, MODEL: 300RS, SIZE 12X4 (TYPICAL).
  - 4 PROVIDE VENTED TYPE HOOD OVER RANGE.
  - 5 PROVIDE DRYER VENT WITH NO NAILERS.
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DATE	REVISIONS:	ISSUE DATES:

3308 ALTO ROAD  
BALTIMORE, MD

**DIVERSIFIED CONSULTING ENGINEERS, LLC**  
MECHANICAL, ELECTRICAL & PLUMBING DESIGN AND CONSULTING  
13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
HVAC - NEW WORK  
PLAN - 3rd FLOOR

DRAWING No.  
**M500**

(301) 641-5823

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB



MECHANICAL CONTRACTOR WILL PROVIDE ANY MOTOR STARTERS, DISCONNECTS, ETC. AS REQUIRED BY THE MECHANICAL EQUIPMENT; THE ELECTRICAL CONTRACTOR WILL INSTALL AND PROVIDE FINAL CONNECTIONS. WHERE THE MECHANICAL SYSTEMS COME WITH INTEGRAL STARTERS, DISCONNECTS, ETC., THE ELECTRICAL CONTRACTOR WILL PROVIDE FINAL CONNECTIONS.

AIR-HANDLING AND AC UNIT SCHEDULE

SYMBOL	MAKE	HEATING CFM			E.S.P.	MODEL	COIL	GAS/ELEC HEAT		COOLING CFM		E.S.P.	COOLING NOMINAL	EVAP. AIR DB (F)	EVAP. AIR WB (F)	COND. AIR DB (F)	POWER	MCA	MOCP	EVAPORATOR MOTOR		UNIT WT. (lbs.)	REMARKS	
		SUPPLY	RETURN	OSA				MBH/KW	ΔT	SUPPLY	RETURN									OSA	QUANTITY			HP
AHJ1-4	GOODMAN	1600	1500	100	0.5"	GMV46708048NA	CA7FA462284**1XV	80 MBH	---	1600	1500	100	0.5"	48,000	80	67	95	115/1#	11.6	15	1	3/4	142	MULTI-POSITION UNIT

-NOMINAL COOLING BASED ON 67°F WB & 40° SUCTION TEMP; SIZE ALL REFRIGERANT PIPING ACCORDING TO MANUFACTURER'S REQUIREMENTS AND INSULATE W/1" THICK "ARMA-FLEX" INSULATION, R-VALUE = 4.2.  
-PROVIDE 24/7 PROGRAMMABLE THERMOSTAT W/NIGHT SET-BACK.  
-ALL COILS ARE CASED

CONDENSING UNIT SCHEDULE

MATRIX ID/SYMBOL	MAKE	MODEL	COND. AIR DB (F)	COOLING (BTUH) NOMINAL	SATURATED SUCTION TEMP. 45°F	POWER 208/1#	CONDENSER FAN MOTOR		COMPRESSOR DATA		UNIT MCA	UNIT MOCP	UNIT WEIGHT (lbs.)	SEER	REMARKS
							QUANTITY	FLA (ea.)	QUANTITY	RLA (ea.)					
CUT-4	GOODMAN	GSX140481K	95	48,000	45°F	208/1#	1	1.3	1	19.9	26.2	45	220	14	

-NOTE: UNITS ARE 14 SEER AND ARE MODULATING.  
-PROVIDE THE FOLLOWING:  
BALL-BEARING FAN MOTORS, TIME DELAY RELAY, CRANKCASE HEATER, ANTI-SHORT-CYCLE TIMER, FILTER/DRYER, LIQUID-LINE SOLENOID VALVE, LOW PRESSURE SWITCH, CONDENSER COIL GUARD, HOUSE PAD TO MOUNT UNIT LEVEL.

FAN SCHEDULE

SYMBOL	MAKE	MODEL	AREA SERVED	SERVICE	CFM	SP	MOTOR	POWER	WEIGHT, LBS.	REMARKS
EF	GREENHECK	SP-7	UNIT BATHROOMS	EXHAUST	75-100	0.60"	80W	120/1#	15	ON/OFF SWITCH

-CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL APPROPRIATE MOUNTING HARDWARE (BRACKETS, ISOLATORS, CURBS, ETC.)  
-ALL FANS WILL COME WITH INTEGRAL BACKDRAFT DAMPER

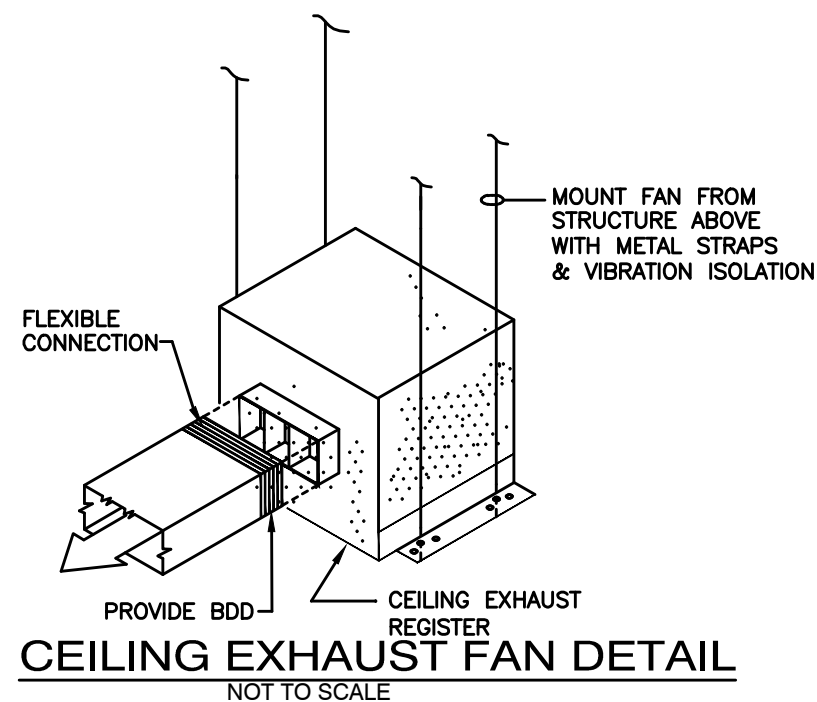
DIFFUSER/REGISTER/GRILLE SCHEDULE

SYMBOL	MAKE	MODEL	SERVICE	MODULE	NECK	RANGE, CFM	REMARKS
■	TITUS	30GRS	SUPPLY		12/4	0-150	-STANDARD SUPPLY AIR DEVICE UNLESS OTHERWISE NOTED
					12/6	151-250	-PROVIDE 6" ROUND DUCT TO 12/4 DEVICE AND ROUND TO SQUARE ADAPTER AT FINAL TIE-IN
							-PROVIDE 8" ROUND DUCT TO 12/6 DEVICE AND ROUND TO SQUARE ADAPTER AT FINAL TIE-IN

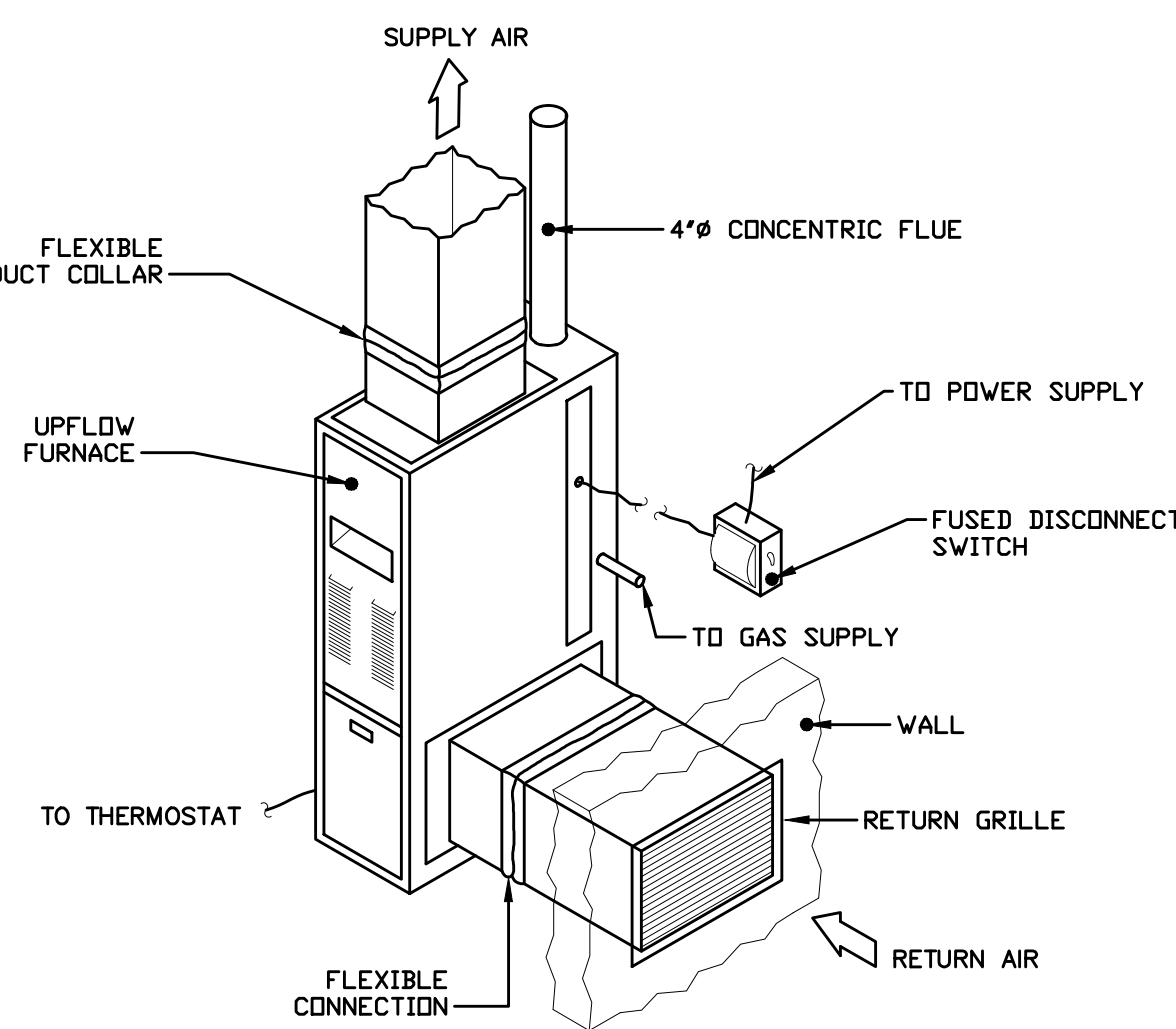
-ALL LOUVERS WILL BE GREENHECK-TYPE, STATIONARY, EXTRUDED ALUMINUM CONSTRUCTION, 50% MINIMUM FREE AREA WITH DRAINABLE HEAD. SIZES CAN BE FOUND ON PLANS.  
-CONTRACTOR WILL BE RESPONSIBLE IN PROVIDING ALL DEVICES IN REQUIRED NUMBERS; COORDINATE W/ARCHITECT FOR COLORS.  
-ALL COLORS AND FINISHES ARE BY THE ARCHITECT  
-ALL DEVICES PENETRATING FIRE-RATED ASSEMBLIES WILL HAVE INTEGRAL UL555C RADIATION DAMPERS

HVAC LINE-SET PROTECTION:

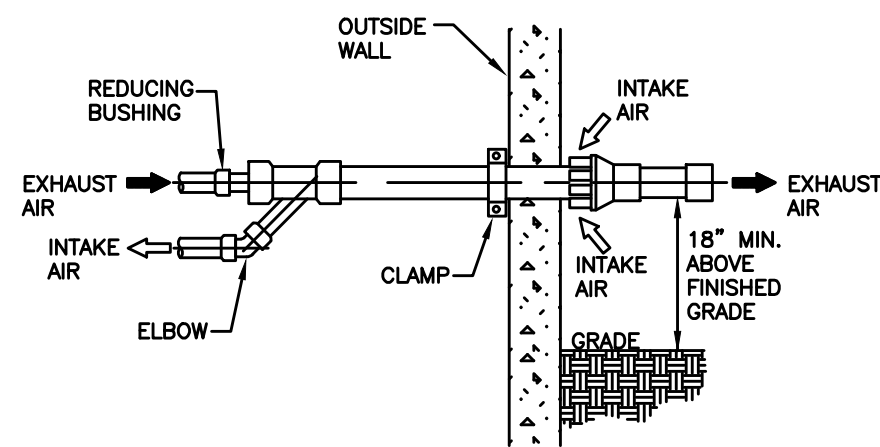
REFRIGERANT LINES SHALL BE INSULATED WITH 1" THICK "ARMA-FLEX" INSULATION WITH R-VALUE = 4.2 AND PROTECTED THERMOPLASTIC POLYOLEFIN, AND HARDCAST SEAL-TACK WHITE. DESIGNED TO GO OVER LINE SETS AS EITHER AN EXTERNAL WRAP OR BRUSHED-ON COATING.



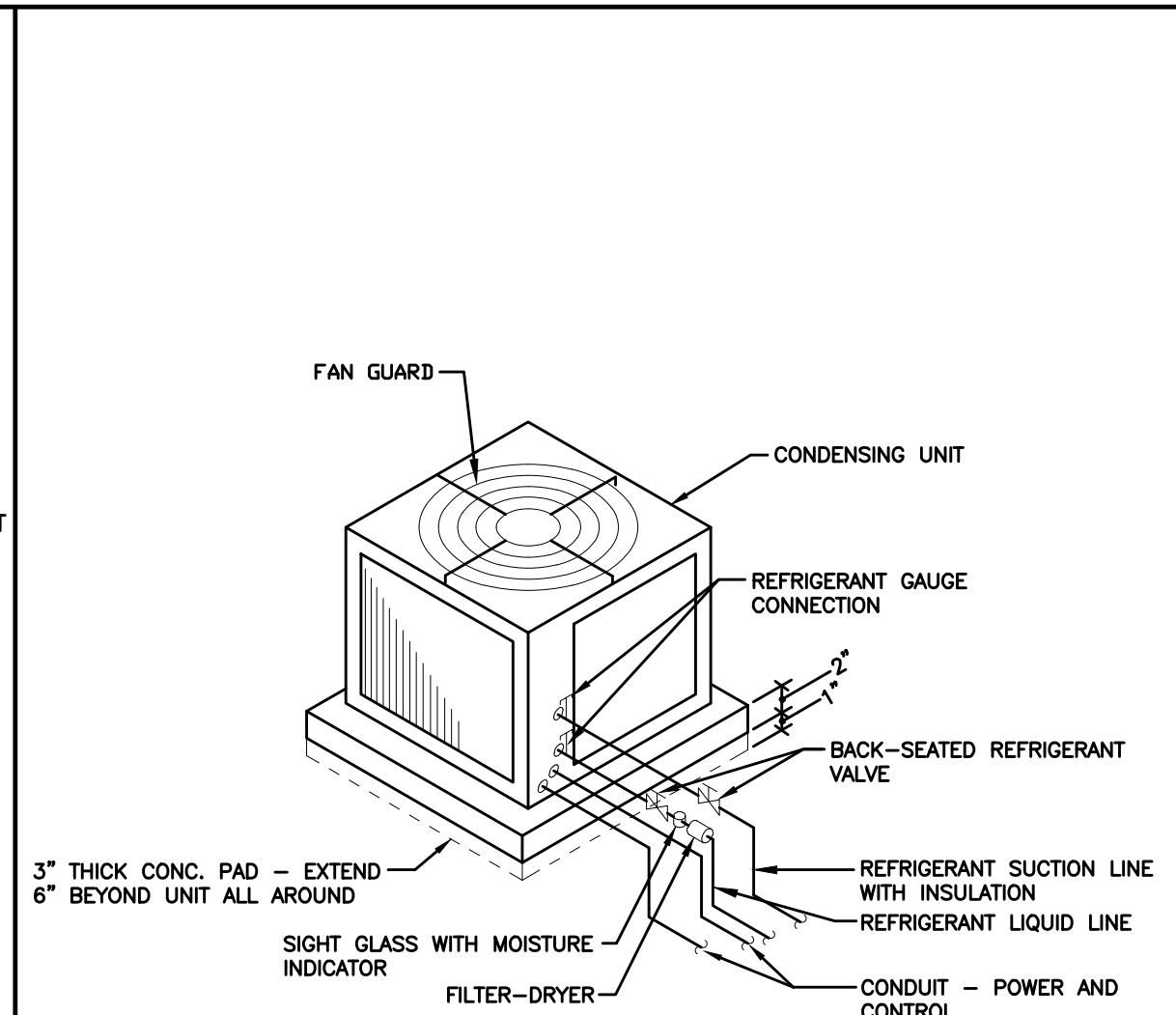
CEILING EXHAUST FAN DETAIL  
NOT TO SCALE



GAS FIRED UPFLOW FURNACE DETAIL  
NO SCALE



CONCENTRIC WALL TERMINATION INSTALLATION DETAIL  
(TYPICAL FOR HIGH EFFICIENCY GAS FURNACES)  
NO SCALE



AIR-COOLED CONDENSING UNIT - SLAB MOUNTED AT GRADE  
NO SCALE

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13452 BREGMAN ROAD, SILVER SPRING, MD 20904

PROJECT No.

SHEET TITLE:  
HVAC - SCHEDULES AND DETAILS.

DRAWING No.

**M600**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB



PLUMBING - GENERAL NOTES

1. INSTALLATION AND MATERIALS OF THE SYSTEMS SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE, OR LATEST APPLICABLE CODE, AND ANY LOCAL AUTHORITIES HAVING JURISDICTION.
2. EXCEPT WHERE EXPLICITLY INDICATED ON THE DRAWINGS, ALL PIPING SHOWN IS AS IT ACTUALLY OCCURS WITHIN THE BUILDING. PROPOSED PLUMBING WORK SHALL BE COORDINATED WITH EXISTING CONDITIONS IN ORDER TO INSURE PROPER INSTALLATION.
3. EXCEPT WHERE OTHERWISE INDICATED, HORIZONTAL SANITARY, WASTE, AND STORM WATER PIPING SHALL SLOPE AT A MINIMUM OF 1/4" PER FOOT, FOR PIPES 3" OR SMALLER. PIPES 4" AND BIGGER SHALL SLOPE AT 1/8" PER FOOT.
4. ALL PIPING SYSTEMS SHALL BE DISINFECTED AS PER ALL APPLICABLE CODE.
5. ALL PIPE PENETRATIONS THROUGH FLOORS OR FIRE-RATED PARTITIONS SHALL BE FIRE-PROOFED WITH APPROPRIATE SLEEVES, FIRE-SAFING MATERIAL, AND CAULKING.
6. DOMESTIC WATER PIPING SHALL BE CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE, CPVC SCHEDULE 40 PIPE ASTM F 441/F 441 M. CPVC SCHEDULE 40 FITTINGS SHALL BE ASTM F 438, SOCKET TYPE. ALL PIPING SHALL BE SUITABLE FOR 150 PSIG WORKING PRESSURE.
7. ALL PIPING HUNG FROM NEW/EXISTING STRUCTURE SHALL BE BE SUPPORTED WITH UL LISTED HANGERS/SUPPORTS SUITABLE FOR THE INTENDED APPLICATION. DESIGN, SELECTION, AND SPACING OF HANGERS AND SUPPORTS SHALL CONFORM TO ANSI B31.1 AND MSS SP-69.
8. SANITARY/VENT AND STORM PIPING SHALL BE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE SOLID-WALL PVC PIPE ASTM D 2665, DRAIN, WASTE, AND VENT. PVC PIPE FITTINGS SHALL BE ASTM D 2665, SOCKET TYPE, MADE TO ASTM D 3311, DRAIN, WASTE, AND VENT PATTERNS.
9. ALL PLUMBING VENTS WITHIN A 10'-0" RADIUS OF EXHAUST VENTS SHALL BE EXTENDED TO A HEIGHT OF 3'-0" ABOVE EXHAUST VENT CROWN.
10. ALL PIPING SHALL HAVE ITS SLOPE AND INVERTS ESTABLISHED PRIOR TO INSTALLATION OF ANY PIPING; SLOPES AS REQUIRED WILL BE MAINTAINED. COORDINATE ALL PIPING WITH ALL OTHER TRADES PRIOR TO THE COMMENCEMENT OF WORK. REFER TO ARCHITECTURAL PLANS BEFORE BEGINNING ANY WORK.
11. ALL CORE DRILLING WILL REQUIRE THE PRIOR APPROVAL OF THE BUILDING OWNER AND A REGISTERED STRUCTURAL ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

VALVING SPECIFICATIONS

- A. GATE VALVES, 2-1/2" AND SMALLER
1. MSS SP-80, CLASS 125, 200 PSI COLD-WORKING PRESSURE, OR CLASS 150, 300 PSI CWP; ASTM B 62 CAST-BRONZE BODY AND BONNET SOLID-BRONZE WEDGE, COPPER-SILICON ALLOY RISING RING, TEFLON-IMPREGNATED PACKING WITH BRONZE PACKING NUT, THREADED OR SOLDERED END CONNECTIONS; ALUMINUM OR MALLEABLE IRON HANDWHEEL.
- B. PLUG VALVES
1. MSS SP-78, 275 PSI CWP, ASTM A 126 CAST-IRON BODY AND BONNET, CAST-IRON PLUG, BUNA N, VITON, OR TEFLON PACKING, FLANGED OR GROOVED END CONNECTIONS; SQUARE-HEAD OPERATOR AND LOOSE WRENCH. PROVIDE WITH MEMORY STOP.
- C. GLOBE VALVES, 2-1/2" AND SMALLER
1. MSS SP-80, CLASS 125, 200 PSI CWP, OR CLASS 150, 300 PSI CWP; ASTM B 62 CAST-BRONZE BODY AND SCREWED BONNET, RUBBER, BRONZE, OR TEFLON DISC, SILICON BRONZE-ALLOY STEM, TEFLON-IMPREGNATED PACKING WITH BRONZE NUT, THREADED OR SOLDERED END CONNECTIONS; AND WITH ALUMINUM OR MALLEABLE IRON HANDWHEEL.
- D. SWING CHECK VALVES, 2-1/2" AND SMALLER
1. MSS SP-80, CLASS 125, 200 PSI CWP, OR CLASS 150, 300 PSI; HORIZONTAL SWING, Y-PATTERN, ASTM 62 CAST-BRONZE BODY AND CAP ROTATING BRONZE DISC WITH RUBBER SEAT OR COMPOSITION SEAT, THREADED END CONNECTIONS.
- E. BUTTERFLY VALVES: NICKEL-PLATED DUCTILE IRON, ALUMINUM BRONZE OR ELASTOMER-COATED DUCTILE IRON DISC FOR CHILLED WATER SYSTEMS, ALUMINUM BRONZE OR EPOXY-COATED DUCTILE IRON DISC FOR HOT WATER SYSTEMS, EPDM SLEEVE AND STEM SEALS.
- F. FLANGES: ASME B16.1 FOR CAST IRON, ASME B16.5 FOR STEEL, AND ASMEB16.24 FOR BRONZE VALVES.
- G. THREADS: ASME B1.20.1
- H. SOLDER JOINTS: ASME B16.18. WHERE SOLDERED END CONNECTIONS ARE USED, USE SOLDER HAVING A MELTING POINT BELOW 84°F FOR GATE, GLOBE, AND CHECK VALVES; BELOW 421°F FOR BALL VALVES.

GAS PIPING SPECIFICATIONS

1. PIPING MATERIALS
- A. CORRUGATED, STAINLESS-STEEL TUBING SYSTEMS: COMPLY WITH AGA LC 1 AND INCLUDE THE FOLLOWING:
1. TUBING: CORRUGATED STAINLESS STEEL WITH PLASTIC JACKET OR COATING.
2. FITTINGS: COPPER ALLOY WITH ENDS MADE TO FIT CORRUGATED TUBING. INCLUDE ENDS WITH THREADS ACCORDING TO ASME B1.20.1 IF CONNECTION TO THREADED PIPE OR FITTINGS IS REQUIRED.
3. STRIKER PLATES: STEEL, DESIGNED TO PROTECT TUBING FROM PENETRATIONS.
2. PREPARATION
- A. CLOSE EQUIPMENT SHUTOFF VALVES BEFORE TURNING OFF FUEL GAS TO PREMISES OR SECTION OF PIPING. PERFORM LEAKAGE TEST TO DETERMINE THAT ALL EQUIPMENT IS TURNED OFF IN AFFECTED PIPING SECTION.
3. TESTING
- A. TEST, INSPECT, AND PURGE PIPING ACCORDING TO NFPA 54 AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST SYSTEM UNTIL SATISFACTORY RESULTS ARE OBTAINED.

PLUMBING ABBREVIATIONS

ABV	ABOVE	F/SP	FIRELINE/STANDPIPE	S/W	SANITARY/WASTE
AFF	ABOVE FINISHED FLOOR	FLA	FULL LOAD AMPERES	UTR	UP THRU ROOF
CO	CLEAN OUT	FLEX	FLEXIBLE	V	VENT
COND	CONDENSATE	GPM	GALLONS PER MINUTE	VTR	VENT THRU ROOF
CONN	CONNECTION	HW	HOT WATER	WCO	WALL CLEAN OUT
CORR	CORRIDOR	I.W.	INDIRECT WASTE		
CW	COLD WATER	MAX	MAXIMUM		
DN	DOWN	MIN	MINIMUM		
EA	EACH	PLBG	PLUMBING		
F/SK	FIRELINE/SPRINKLER	RPM	REVOLUTIONS PER MINUTE		

PLUMBING SYMBOLS

----	COLD WATER PIPING
----	HOT WATER PIPING
-----	VENT
-----	SANITARY/WASTE
	CHECK VALVE W/BALL DRIP
	BALL VALVE
	BUTTERFLY VALVE
	GATE VALVE
	WATER HAMMER ARRESTOR
	GLOBE VALVE
	CHECK VALVE, SWING--GATE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	FLOW SWITCH
	PRESSURE GAUGE
	PRESSURE/TEMPERATURE RELIEF VALVE
	SANITARY PIPING RISER DESIGNATION
	VENT PIPING RISER DESIGNATION
	CW, HW, HWR PIPING RISER DESIGNATION
	THERMOMETER
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	WALL CLEAN-OUT
	FLOOR CLEAN-OUT
	UNION
	SQUARE FT
	DIAMETER

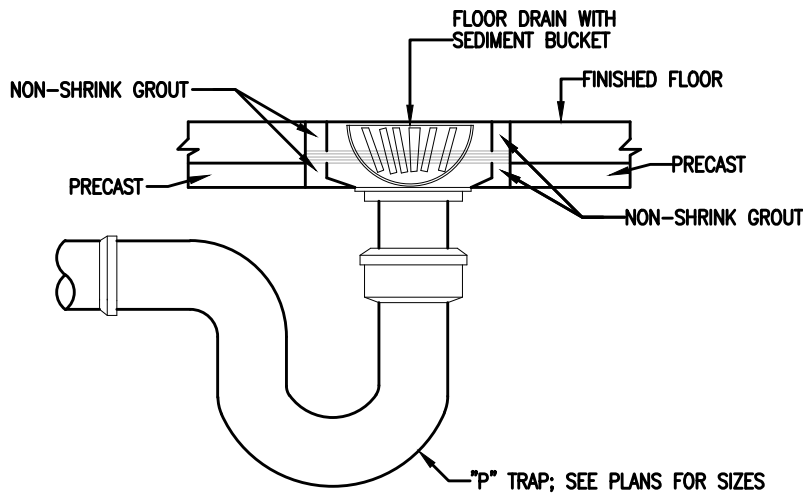
PLUMBING FIXTURE/CONNECTION SCHEDULE

SYMBOL	DESCRIPTION	WASTE	VENT	CW	HW	GAS	MODEL/REMARKS
P1	WATER CLOSET	3"	2"	1/2"	-	-	FLOOR MOUNTED, FLUSH TANK
P2	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	-	COUNTERTOP
P3	3-COMPARTMENT SINK	2"	1-1/2"	1/2"	1/2"	-	COUNTERTOP; PROVIDE WITH 1/2 HP GARBAGE DISPOSER
P4	SINK	1-1/2"	1-1/2"	1/2"	1/2"	-	
P5	CLOTHES WASHER SANITARY BOX						GUY GREY BOX
P6	SHOWER	2"	1-1/2"	1/2"	1/2"	-	
3"FD	FLOOR DRAIN	3"	1-1/2"	-	-	-	FOR DETAILS, SEE PLUMBING SPECIFICATIONS BELOW

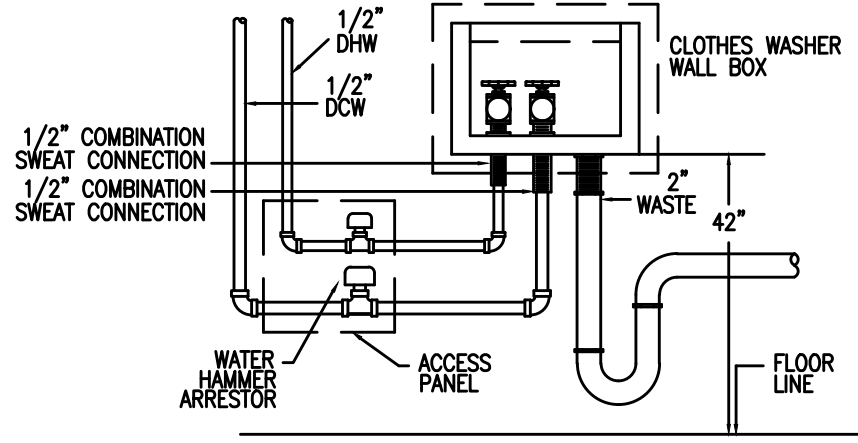
- NOTES:
1. PROVIDE INDIVIDUAL STOP VALVES AT ALL FIXTURES.
2. PROVIDE FLOOR AND WALL CLEANOUTS WHERE INDICATED ON THE PLANS, ZURN OR APPROVED EQUAL.
3. PROVIDE DEEP SEAL TRAPS IN ALL FLOOR SINKS/FLOOR DRAINS.
4. PROVIDE ACCESS PANELS FOR ALL SHUT-OFF VALVES IN WALLS OR ABOVE CEILING AS NEEDED.

PLUMBING FIXTURE SPECIFICATION

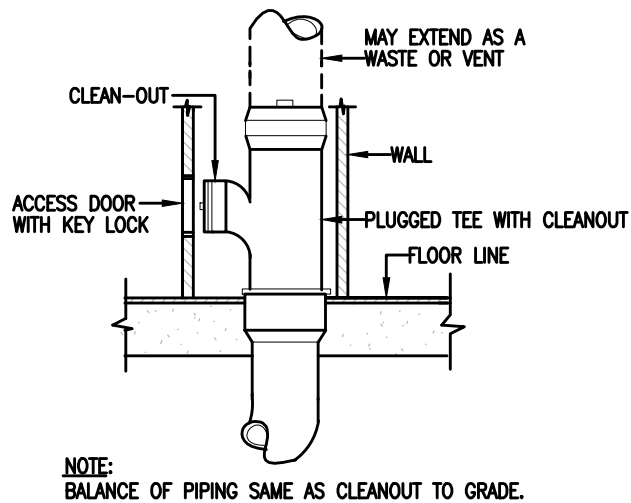
- P1: WATER CLOSET - FLOOR MOUNTED, FLUSH TANK. TO BE SPECIFIED BY ARCHITECT.
- P2: LAVATORY - COUNTERTOP, TO BE SPECIFIED BY ARCHITECT.
- P3: 3-COMPART SINK - COUNTERTOP SINK TO BE SPECIFIED BY ARCHITECT. PROVIDE WITH IN-SINK-ERATOR, 1/2 HP GARBAGE DISPOSER, MODEL BADGER 5, OR APPROVED EQUAL.
- P4: SINK - COUNTERTOP, TO BE SPECIFIED BY ARCHITECT.
- P5: WASHER SAN\_BOX - TO BE SPECIFIED BY ARCHITECT.
- 3"FD: FLOOR DRAIN - ZURN MODEL FD-2290, OR APPROVED EQUAL.
- WH1: WATER HEATER - GAS-FIRED, SEAMLESS GLASS-LINED TYPE WATER HEATER WITH A NOMINAL STORAGE CAPACITY OF 81 GALLONS, 120 MBH GAS INPUT, WITH A HEATER RECOVERY RATE OF 115 GPH AT A TEMPERATURE RISE OF 100°F, WITH CONCENTRIC VENT KITS (SIZE PER MANUFACTURER'S SPECIFICATIONS), AND COMPLETE WITH ASME/AGA APPROVED PRESSURE/TEMPERATURE RELIEF VALVES. CONTROL SHALL BE AN INTEGRATED SOLID STATE TEMPERATURE AND IGNITION CONTROL DEVICE, W/INTEGRAL DIAGNOSTICS, LED FAULT DISPLAY CAPABILITY, AND DIGITAL DISPLAY OF TEMPERATURE SETTINGS, A.O. SMITH MODEL: BTL-120, OR APPROVED EQUAL.



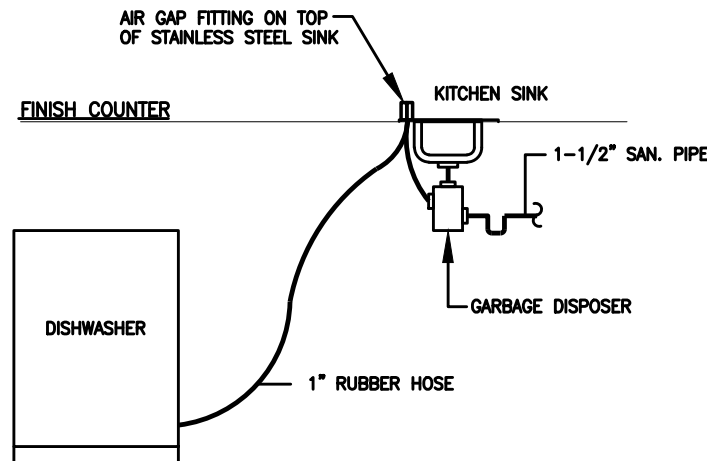
FLOOR DRAIN DETAIL  
SCALE: NONE



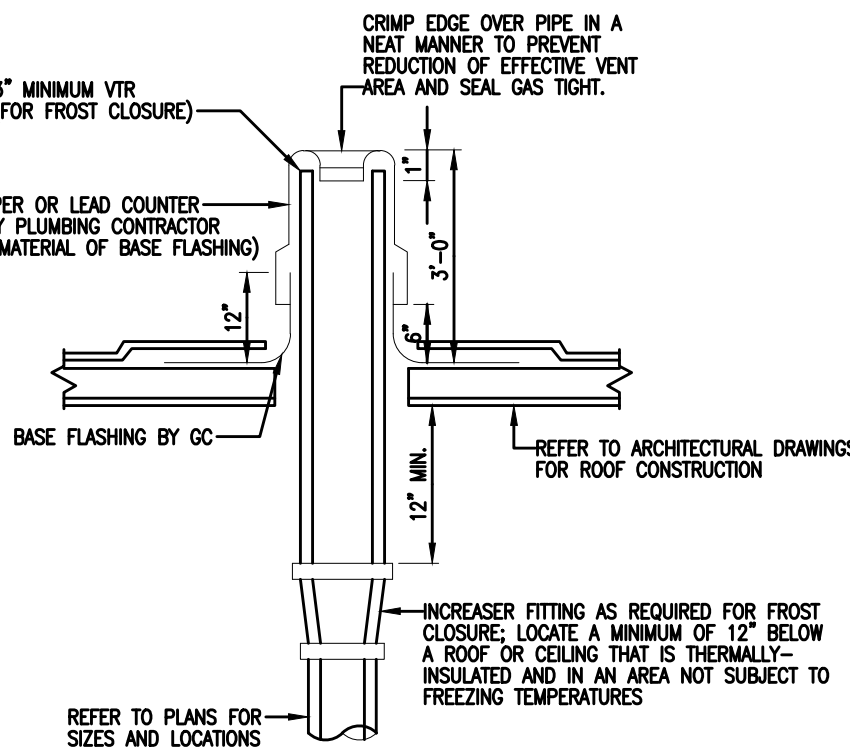
UTILITY WALL BOX FOR WASHER  
SCALE: NONE



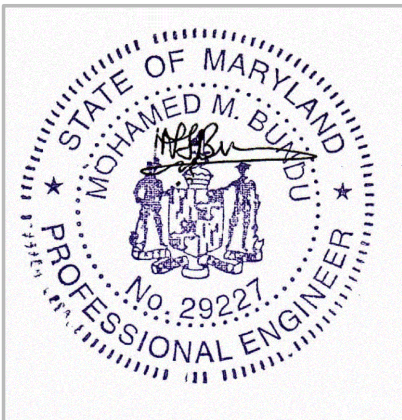
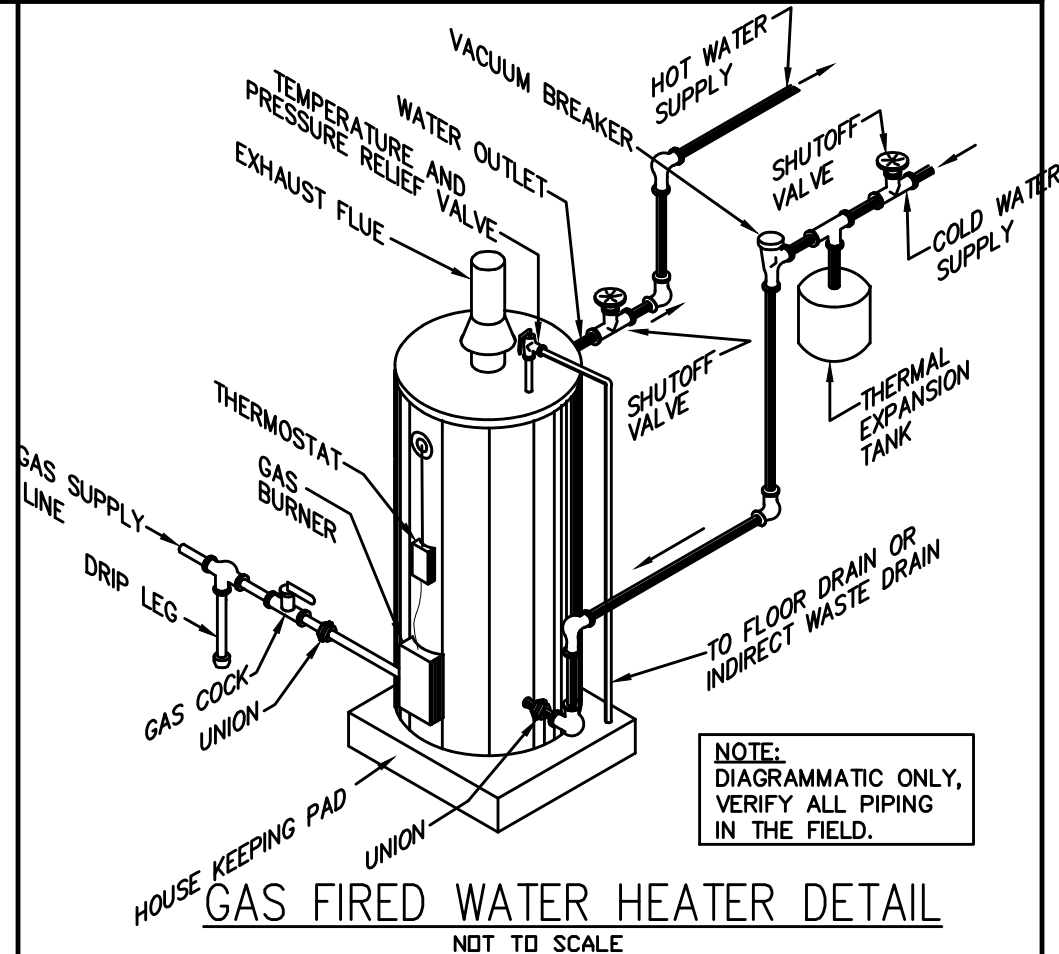
WALL CLEANOUT DETAIL  
SCALE: NONE



DISHWASHER DISCHARGE DETAIL  
SCALE: NONE



PLUMBING VENT THROUGH  
FLAT ROOF DETAIL  
SCALE: NONE



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PROJECT No.

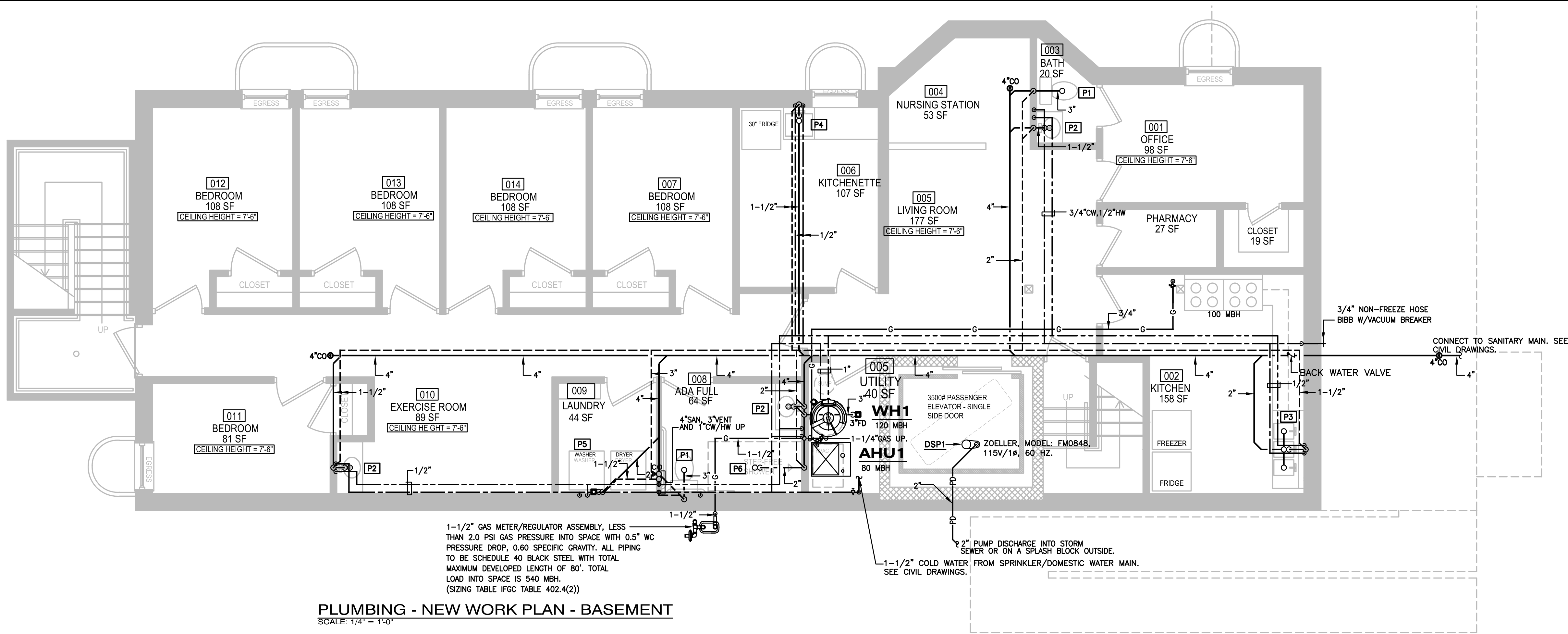
SHEET TITLE:  
PLUMBING - GEN.  
NOTES, SYMS.,  
ABBREVS. & SPECS.

DRAWING No.

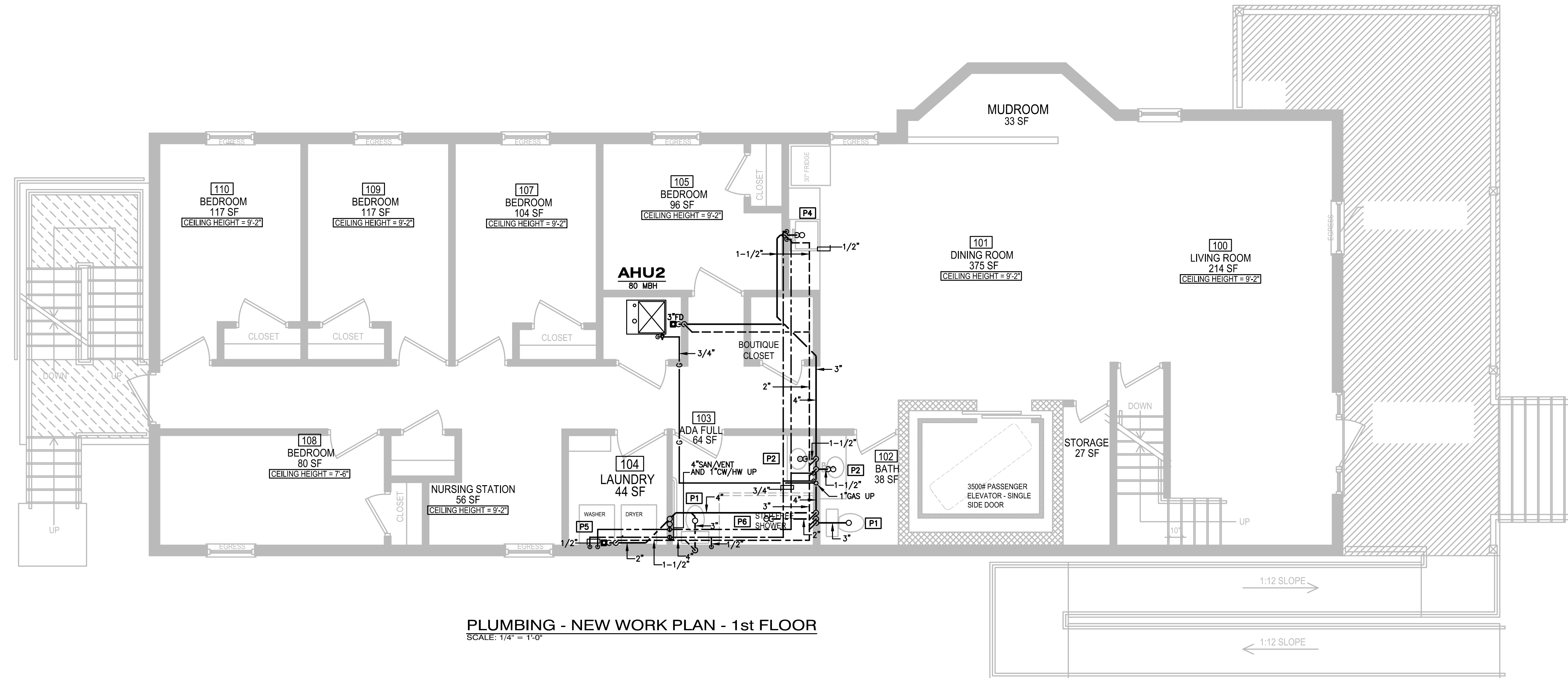
P100

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB





PLUMBING - NEW WORK PLAN - BASEMENT  
SCALE: 1/4" = 1'-0"



PLUMBING - NEW WORK PLAN - 1st FLOOR  
SCALE: 1/4" = 1'-0"

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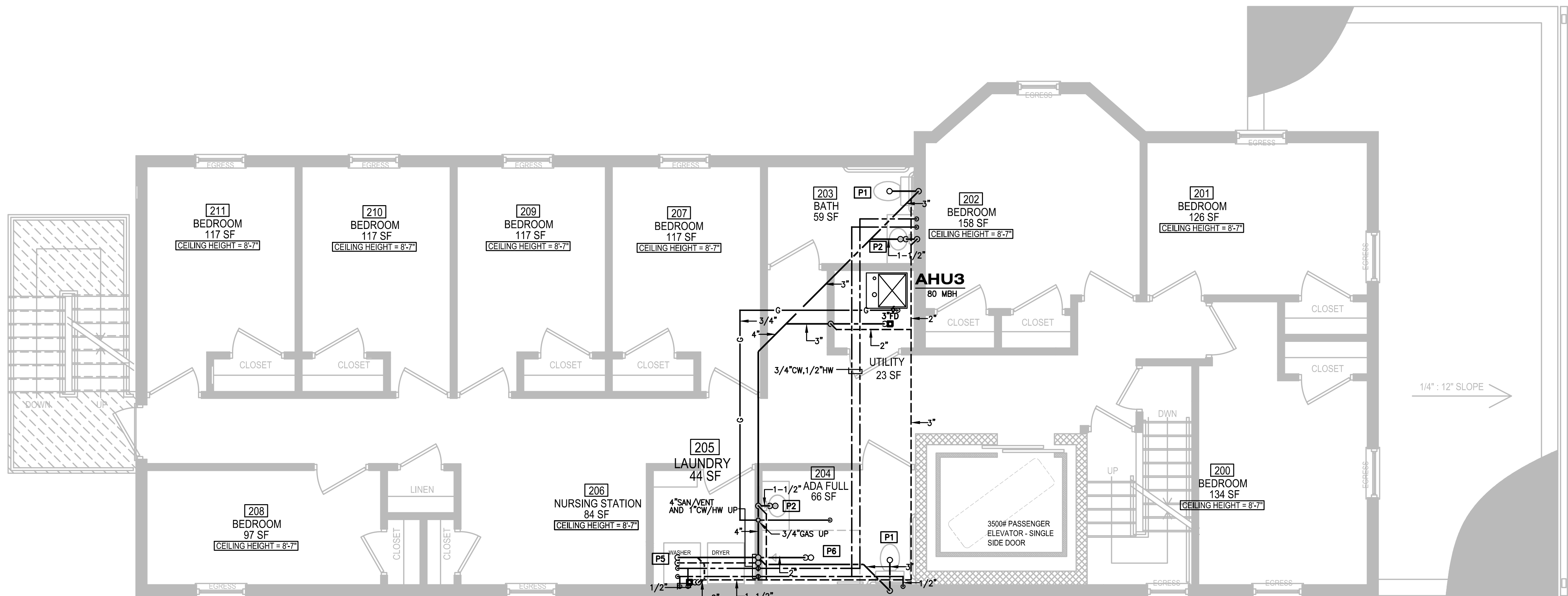
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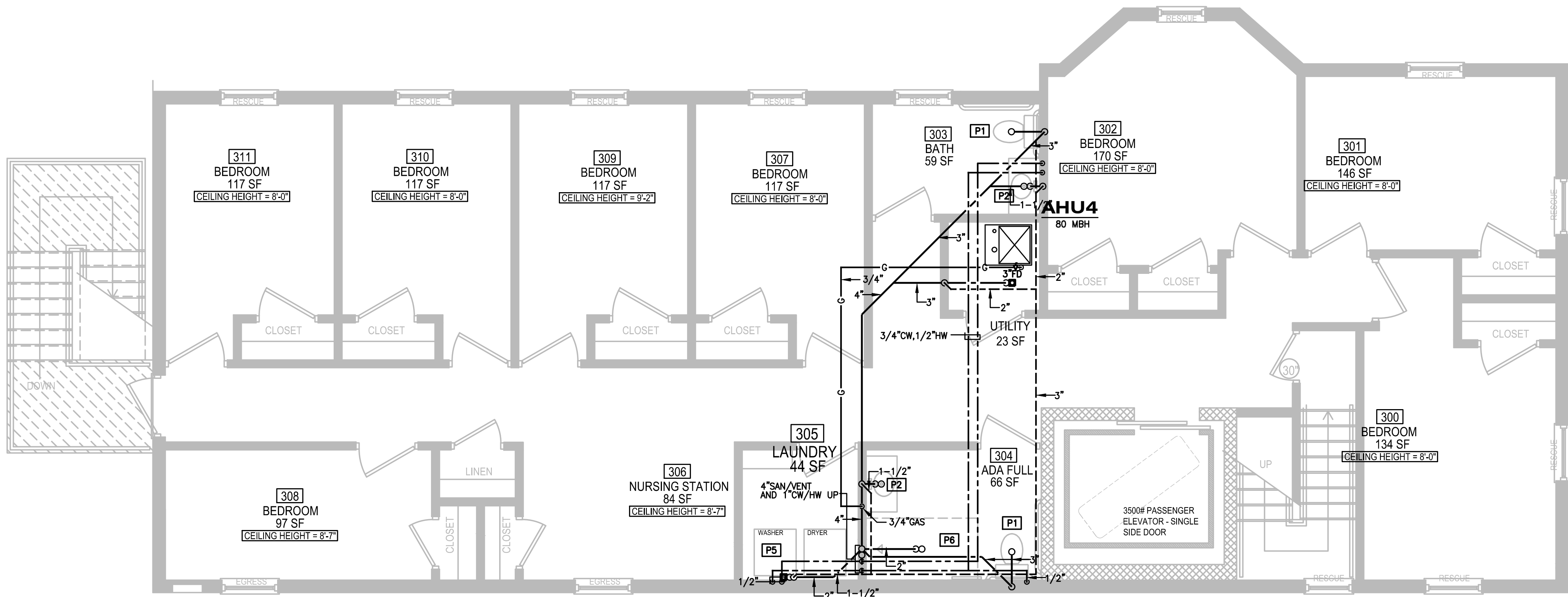
SHEET TITLE:	PROJECT No.
PLUMBING - NEW WORK PLAN - BSMT & 1st FLR	
DRAWING No.	
<b>P200</b>	

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB

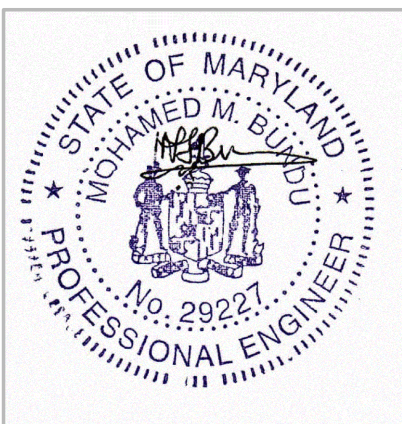




PLUMBING - NEW WORK PLAN - 2nd FLOOR  
SCALE: 1/4" = 1'-0"



PLUMBING - NEW WORK PLAN - 3rd FLOOR  
SCALE: 1/4" = 1'-0"



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SHEET TITLE:  
PLUMBING - NEW  
WORK PLAN - 2nd &  
3rd FLRS

DRAWING No.  
**P300**

PROJECT No.

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB



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## PLUMBING - NEW WORK PLAN - ROOF

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

PROJECT No.

SHEET TITLE:  
**PLUMBING - NEW  
WORK PLAN -  
ROOF**

DRAWING No.

# P400

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB

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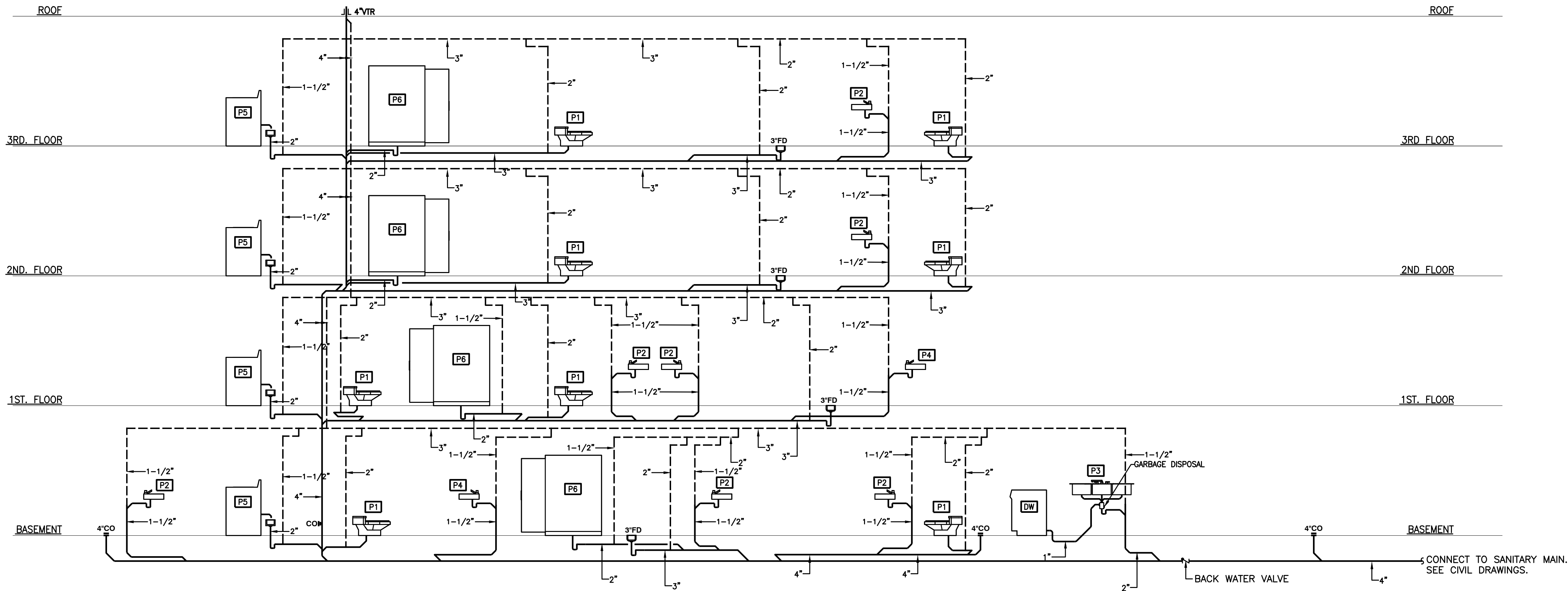
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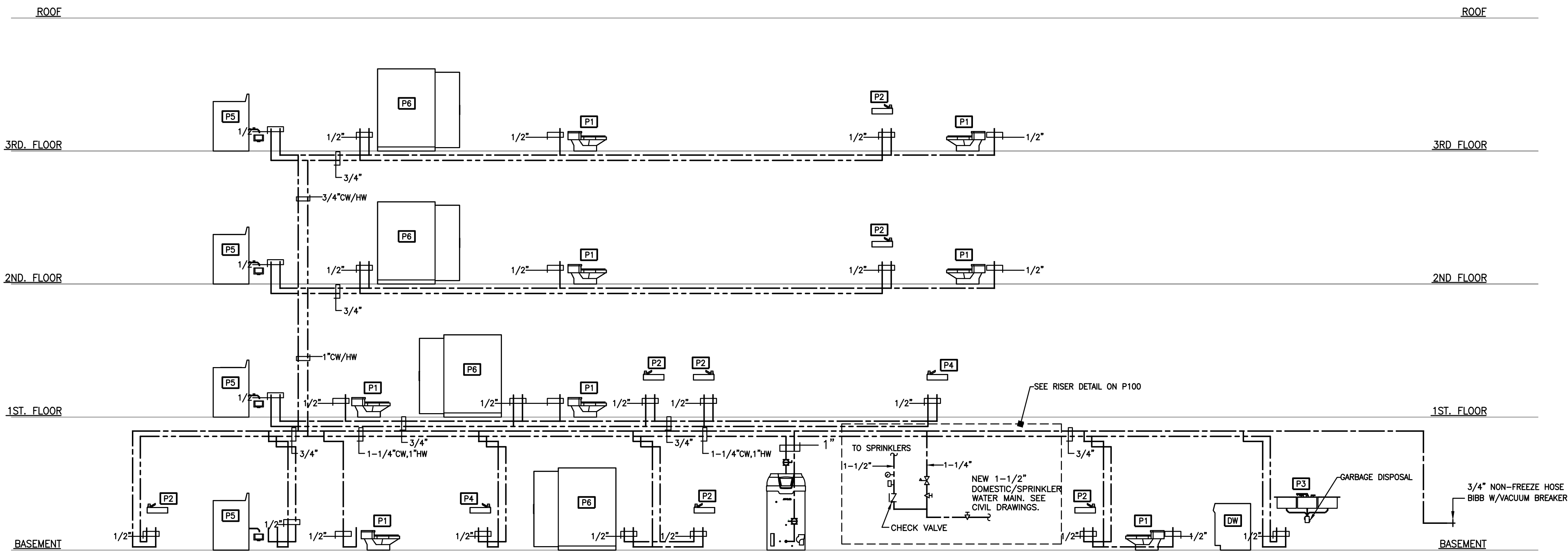
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[illegible]



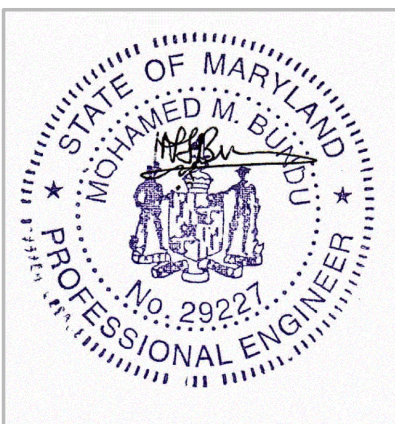


PLUMBING-SANITARY/VENT RISER DIAGRAM  
SCALE: NONE



PLUMBING-CW/HW RISER DIAGRAM  
SCALE: NONE

1. PROVIDE INDIVIDUAL STOP VALVES AT ALL FIXTURES.
2. PROVIDE POINT OF USE TEMPERING VALVES CONFORMING TO ASSE 1070 STANDARDS, FOR ALL ACCESSIBLE HAND WASHING FIXTURES TO INSURE THAT TEMPERED WATER (BETWEEN 86°F AND 109°F) IS BEING DELIVERED.
3. PLUMBING CONTRACTOR TO PROVIDE TRAP PRIMER VALVES FOR ALL FLOOR SINKS, FLOOR DRAINS, AND OPEN SITE DRAINS CONNECTED TO SANITARY MAINS, WHOSE "P"-TRAP MAY BE SUBJECT TO EVAPORATION.



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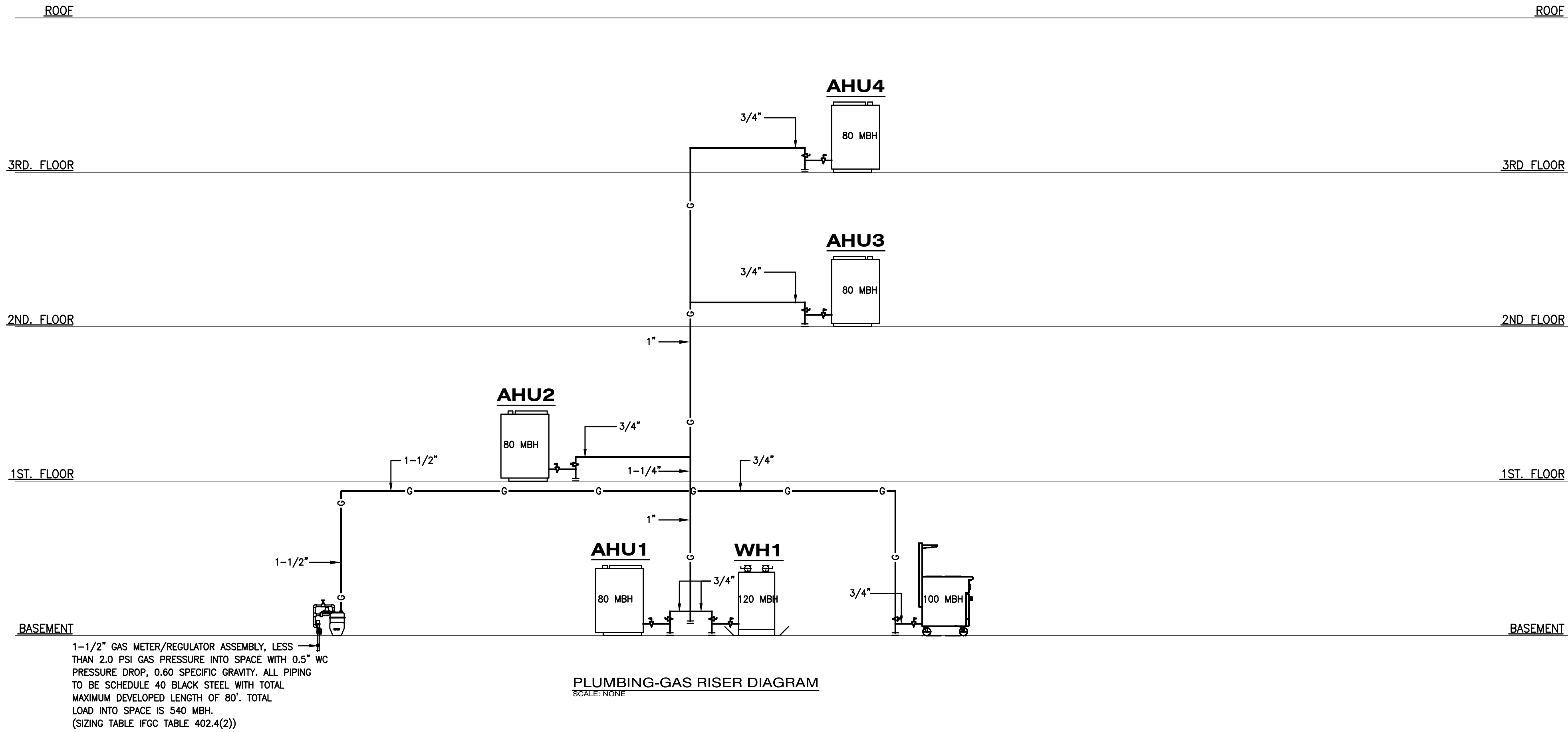
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13452 BREGMAN ROAD, SILVER SPRING, MD 20904

SHEET TITLE:  
**PLUMBING -  
SAN/VENT & CW/HW  
RISER DIAGRAMS**

PROJECT No.

DRAWING No.  
**P500**

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB



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DATE	REVISIONS:	ISSUE DATES:

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13452 BREGMAN ROAD, SILVER SPRING, MD 20904

SHEET TITLE:  
**PLUMBING - GAS  
RISER DIAGRAM.**

DRAWING No.  
**P600**

PROJECT No.

DATE: 12/31/2020 SCALE: AS SHOWN DRAWN BY: MMB CHKED: MMB