DEPARTMENT OF BUILDINGS GENERAL NOTES

1. THIS APPLICATION IS FOR A NEW BUILDING
2. ALL BUILDING REFERENCES ARE TO THE 2014 BUILDING CODE.
3. THIS BUILDING WILL BE FULLY SPRINKLERED.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NEW YORK CITY BUILDING CODE AND OTHER APPLICABLE RULES AND REGULATIONS.
5. THE OWNER SHALL BE RESPONSIBLE FOR THE SAFE MAINTENANCE OF THE BUILDING AND ITS FACILITIES.
6. CONTRACTOR SHALL ARRANGE FOR ALL NECESSARY INSPECTIONS AND APPROVALS.
7. CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE ALL REQUIRED CERTIFICATES OF INSURANCE AND SHALL COMPLY WITH NEW YORK STATE WORKMEN'S COMPENSATION AND DISABILITY LAWS.
8. CONTRACTOR SHALL EXECUTE CARE AND CAUTION DURING DEMOLITION AND/OR EXCAVATION SO AS NOT TO DAMAGE EXISTING PIPES, CONDUITS, STRUCTURE, ETC. IF DAMAGE OCCURS, CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING IMMEDIATELY.
9. AT LEAST 24 HOUR WRITTEN NOTICE SHALL BE GIVEN TO THE COMMISSIONER BEFORE COMMENCEMENT OF WORK.
10. POSTED OCCUPANCY AND USE: THE BUILDING SHALL BE POSTED WITH A SIGN IN A FORM PRESCRIBED BY THE DEPARTMENT, PERMANENTLY AFFIXED, PLACED IN A CONSPICUOUS LOCATION IN A PUBLIC HALL OR CORRIDOR, STATING LIVE LOADS AND OCCUPANT LOADS IN THE BUILDING AND ALL PARTS THEREOF.
11. ALL MATERIALS, ASSEMBLIES, AND METHODS OF CONSTRUCTION REGULATED BY THE CODE AND NOT LISTED ABOVE SHALL BE SUBJECT TO SEMI-CONTROLLED INSPECTION BY THE PERSON SUPERINTENDING THE CONSTRUCTION, SIGNED COPIES OF ALL TEST AND INSPECTION REPORTS SHALL BE FILED THROUGH THE ARCHITECT, WITH THE EQUIPMENT.
12. ALL MATERIALS OR ASSEMBLIES REQUIRED TO HAVE A FIRE RESISTANCE RATING SHALL COMPLY WITH THE FOLLOWING:

    APPROVED BY THE BOARD OF STANDARDS AND APPEALS BEFORE THE EFFECTIVE DATE OF THE CODE - AND NOT REPEALED. 28-113.2.6

    IT SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E119 AND APPROPRIATELY LABELED BY AN APPROVED TESTING AGENCY
13. ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
14. ALL DOORS SHALL BE AT LEAST 6'-8" HIGH UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS BEFORE ANY WORK IS BEGUN, AND PAY FOR SAME.
16. SPACES AT FLOOR LEVEL AROUND ALL PLUMBING AND VENT CHASES ARE TO BE FILLED COMPLETELY WITH INCOMBUSTIBLE MATERIAL.

HOUSING AND MAINTENANCE CODE NOTES

HEAT AND HOT WATER:

1. THE BUILDING SHALL BE PROVIDED WITH HEAT FROM A CENTRAL HEATING SYSTEM CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE AND THE REGULATIONS OF THE DEPARTMENT AS PER D26-17.01 HMC.
2. A MINIMUM TEMPERATURE SHALL BE MAINTAINED AS PER D26-17.03 HMC.
3. HOT WATER SHALL BE SUPPLIED TO EVERY BATH, SHOWER, WASHBASIN, AND SINK THROUGHOUT THE BUILDING AS PER D26-17.07 HMC.

NUMERALS AND MAIL SERVICE:

1. STREET NUMBERS WILL BE PROVIDED AS PER D26-21.05 HMC TO BE LOCATED AT THE FRONT FACING STREET.
2. ALL MAIL BOXES SHALL BE U.S. POST OFFICE APPROVED.

INTERIOR LIGHTING AND VENTILATION:

1. EVERY LIVING ROOM SHALL HAVE A LEAST ONE WINDOW OPEN TO A STREET, PUBLIC PLACE, OR AN OPEN AND UNOBSTRUCTED YARD, COURT OR OTHER REQUIRED OPEN SPACE ON THE SAME LOT DWELLING.
2. THE TOTAL AREAS OF ALL WINDOWS IN THE ROOM SHALL BE AT LEAST ONE TENTH THE FLOOR AREA OF SUCH ROOM OR 12 S.F. WHICHEVER IS GREATER.
3. SKYLIGHTS OPENING DIRECTLY TO THE OUTER AIR MAY BE SUBSTITUTED FOR WINDOW OPENINGS.
4. AT LEAST 45% OF THE REQUIRED WINDOW AREA SKYLIGHT SHALL BE OPENABLE TO PROVIDE NATURAL VENTILATION.
5. ALL AS PER D26-30.11 HMC.

WASTE STORAGE AND REMOVAL:

1. ALL MATERIALS OR SUBSTANCE WHICH MAY AFFORD HARBORAGE OR PROVIDE FOOD FOR RODENTS, INSECTS OR PESTS SHALL BE KEPT STORED OR REMOVED FROM PREMISES.
2. THE OWNER SHALL PROVIDE AND MAINTAIN METAL CANS OR OTHER APPROVED CONTAINER TO CONTAIN THE WASTES ACCUMULATED BY TH BUILDING DURING A 72 HOUR PERIOD. SUCH CONTAINERS SHALL BE KEPT WITHIN THE DWELLING OR AS REQUIRED BY THE DEPARTMENT OF SANITATION UNTIL TIME FOR THEIR REMOVAL. ALL CONTAINERS SHALL HAVE TIGHT-FITTING COVERS.

KITCHENS:

1. COMBUSTIBLE MATERIAL IMMEDIATELY UNDERNEATH OR WITHIN ONE FOOT OF ANY PERMANENT APPARATUS USED FOR COOKING OR WARMING OF FOOD SHALL BE FIRE RETARDED.
2. THERE SHALL ALWAYS BE AT LEAST TWO FEET OF CLEAR SPACE ABOVE ANY EXPOSED COOKING SURFACE.

2014 SMOKE/CARBON MONOXIDE NOTES:

1. SMOKE/CARBON MONOXIDE DETECTORS OR DEVICES SHALL BE INSTALLED IN ORDINANCE WITH THE HOUSING MAINTENANCE CODE, MULTIPLE DWELLING LAW, THE NEW YORK CITY BUILDING CODE, THE NEW YORK CITY ELECTRICAL CODE AND NFPA 72.
2. SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS MAY BE COMBINED PROVIDING THE DEVICES COMPLY WITH THE PROVISIONS OF TITLE 28 OF THE ADMINISTRATIVE CODE OF THE CITY OF NEW YORK ANY APPLICABLE RULES PROMULGATED THEREUNDER.
3. EACH SMOKE/CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH REFERENCE STANDARD UL2034 AND UL2075 OF THE NEW YORK CITY BUILDING CODE.
4. EACH SMOKE/CARBON MONOXIDE DETECTORS SHALL BE INSTALLED OUTSIDE OF EACH SLEEPING ROOM AND IN THE IMMEDIATE VICINITY OR WITHIN 15'-0" OF THE ENTRANCE TO THE SLEEPING ROOM; INSIDE EACH SLEEPING ROOM; AND ON EACH STORY WITHIN A DWELLING UNIT, INCLUDING BELOW STORIES AND PENTHOUSES PER 907.2.11.1 AND 908.7.1 THROUGH 908.7.4.
5. EACH SMOKE/CARBON MONOXIDE DETECTORS SHALL BE OF A TYPE THAT ALLOWS FOR READILY TESTING OF SUCH DEVICE.
6. DUPLEX UNITS SHALL HAVE A DEVICE LOCATED ON EACH LEVEL IF ONLY ONE MEANS OF EGRESS IS PROVIDED FROM EACH LEVEL.
7. CEILING MOUNTED DEVICES SHALL BE A MINIMUM DISTANCE OF 4" FROM ANY WALL.
8. WALL MOUNTED DEVICES SHALL BE A MINIMUM DISTANCE OF 4" TO A MAXIMUM OF 12" FROM THE CEILING.
9. EACH DWELLING SHALL BE EQUIPPED WITH AN APPROVED TYPE SMOKE/CARBON MONOXIDE DETECTOR DEVICE RECEIVING PRIMARY POWER FROM A DEDICATED BRANCH CIRCUIT OF THE UNSWITCHED PORTION OF A BRANCH CIRCUIT ALSO USED FOR POWER AND LIGHTING, AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE ALARMS SHALL EMIT A SIGNAL WHEN BATTERIES ARE LOW. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTION SWITCH OTHER THAN AS REQUIRED FOR OVER-CURRENT PROTECTION. 907.2.11.1 THROUGH 907.2.11.3.
10. EXISTING BUILDING THAT ARE NOT EQUIPPED WITH HARDWIRED CONNECTIONS SHALL BE SUPPLIED WITH BATTERY OPERATED DEVICES.
11. SUCH SMOKE/CARBON MONOXIDE DETECTOR MUST BE EITHER THE IONIZATION CHAMBER TYPE OR THE PHOTOELECTRIC DETECTOR TYPE AS PER NEW YORK CITY BUILDING CODE SEC. 907 AND 908.
12. A CERTIFICATE OF SATISFACTORY INSTALLATION FOR SMOKE/CARBON MONOXIDE DETECTORS MUST BE FILED WITH THE DIVISION OF CODE ENFORCEMENT H.P.D. 10 DAYS AFTER INSTALLATION.
13. WRITTEN INFORMATION OF TESTING AND MAINTENANCE OF THE DEVICES SHALL BE PROVIDED TO THE DWELLING UNIT OWNER.
14. IN MULTIPLE DWELLINGS (R-2), SMOKE ALARMS SHALL BE ABLE TO SUPPORT VISIBLE ALARM PER ANSI A117.1

ARTICLE FOUR - MULTIPLE DWELLING LAW NOTES

TITLE I
FIRE PROTECTION

SEC. 102. STAIRS.

2. EVERY SUCH FIRE-STAIR SHALL HAVE AN ENTRANCE ON THE ENTRANCE STORY FROM A STREET OR AN ENTRANCE AT THE SIDE OR REAR OF THE DWELLING FROM A YARD, COURT OR PASSAGEWAY HAVING CONTINUOUS, SAFE AND UNOBSTRUCTED ACCESS TO A STREET, EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN PARAGRAPHS B TO J INCLUSIVE OF SUBDIVISION SIX, IN A DWELLING NOT EXCEEDING ONE HUNDRED TWENTY-FIVE FEET IN HEIGHT STORY HAIL, FIRE- STAIR AND FIRE-TOWER SHALL BE AT LEAST THREE FEET IN CLEAR WIDTH, AND WHERE ONLY ONE FIRE-STAIR OR FIRE-TOWER IS REQUIRED SUCH FIRE-STAIR OR FIRE-TOWER SHALL BE AT LEAST THREE FEET EIGHT INCHES IN CLEAR WIDTH. IN A DWELLING EXCEEDING ONE HUNDRED TWENTY-FIVE FEET IN HEIGHT EVERY REQUIRED FIRE-STAIR SHALL BE AT LEAST THREE FEET EIGHT INCHES IN CLEAR WIDTH FROM THE ENTRANCE STORY UP TO A FLOOR LEVEL NO HIGHER THAN ONE HUNDRED FEET BELOW THE CEILING OF THE HIGHEST STORY, AND ABOVE SUCH LEVEL EVERY FIRE-STAIR SHALL BE AT LEAST THREE FEET IN CLEAR WIDTH. EVERY STAIR LANDING AT EVERY FLOOR LEVEL SHALL BE AT LEAST THREE FEET EIGHT INCHES IN CLEAR WIDTH IN EVERY DIRECTION.

6. UNDER THE SPECIAL CONDITIONS DESCRIBED IN PARAGRAPHS A TO J INCLUSIVE AND IN THE FOLLOWING TABLE, WHICH APPLIES ONLY TO CLASS A DWELLINGS, STAIRS SHALL CONFORM TO THE APPLICABLE PROVISIONS OF SUCH PARAGRAPHS AND TABLE. NOTE: TABLE FOUND IN CHAP. 234 OF THE LAWS OF 1964 C. IN A CLASS A DWELLING OR SECTION THEREOF NOT EXCEEDING SIX STORIES IN HEIGHT ONLY ONE STAIR SHALL BE REQUIRED, PROVIDED THE NUMBER OF LIVING ROOMS ON ANY STORY ABOVE THE ENTRANCE STORY DOES NOT EXCEED TWENTY. D. IN A CLASS A DWELLING OR SECTION THEREOF NOT EXCEEDING SIX STORIES IN HEIGHT ONLY ONE STAIR SHALL BE REQUIRED, PROVIDED THE NUMBER OF APARTMENTS HAVING ACCESS TO SUCH STAIR AT EACH STORY DOES NOT EXCEED EIGHT AND THE AGGREGATE NUMBER OF LIVING ROOMS IN SUCH APARTMENTS DOES NOT EXCEED TWENTY-FIVE, EXCEPT THAT THE TOTAL NUMBER OF LIVING ROOMS ABOVE THE FIRST STORY SHALL NOT EXCEED ONE HUNDRED TWENTY-FIVE AND THE TOTAL NUMBER OF APARTMENTS ABOVE THE FIRST STORY SHALL NOT EXCEED FORTY. NO MEANS OF EGRESS FROM ANY APARTMENT TO SUCH STAIR SHALL BE MORE THAN TWENTY-FIVE FEET DISTANT THEREFROM. DOORS AND STAIR ENCLOSURES SHALL CONFORM TO THE PROVISIONS OF PARAGRAPH C.

SEC. 103. EGRESS FROM APARTMENTS.

1. A. EXCEPT AS PROVIDED IN PARAGRAPH B OF THIS SUBDIVISION, THERE SHALL BE AT LEAST ONE MEANS OF EGRESS FROM EACH APARTMENT ON EACH AND EVERY STORY OF SUCH APARTMENT, AND A SECOND MEANS OF EGRESS IF THE FIRST MEANS IS NOT WITHIN FIFTY FEET OF EVERY LIVING ROOM IN SUCH APARTMENT ON SUCH STORY. WHEN TWO MEANS OF EGRESS ARE REQUIRED, THEY SHALL OPEN FROM DIFFERENT ROOMS.

   B. IN ANY CLASS A FIREPROOF DWELLING OR SECTION THEREOF ERECTED UNDER PLANS FILED IN THE DEPARTMENT AFTER SEPTEMBER FIRST, NINETEEN HUNDRED FIFTY-ONE, AN APARTMENT OCCUPYING PARTS OF NOT MORE THAN TWO STORIES SHALL HAVE AT LEAST ONE MEANS OF EGRESS. SUCH REQUIRED MEANS OF EGRESS SHALL BE NOT MORE THAN FORTY FEET FROM ANY ROOM WITHIN SUCH APARTMENT AND SHALL OPEN DIRECTLY UPON A PUBLIC HALL. SUCH PUBLIC HALL SHALL PROVIDE ACCESS TO AT LEAST TWO FIRE-STAIRS, ANY STAIR WITHIN AN APARTMENT SHALL BE AT LEAST TWO FEET SIX INCHES IN WIDTH AND A TERMINUS SHALL BE NOT MORE THAN TWENTY FEET FROM THE DOOR WHICH PROVIDES THE REQUIRED EGRESS TO A PUBLIC HALL, PROVIDED, HOWEVER, THAT SUCH STAIR WITHIN AN APARTMENT SHALL EXTEND DOWNWARDS OR UPWARDS TO THE STORY WHICH PROVIDES THE REQUIRED ACCESS TO AT LEAST TWO FIRE-STAIRS. IN THE EVENT OF BUT ONE SUCH MEANS OF EGRESS, AND IF THE STAIR WITHIN THE APARTMENT EXTENDS DOWNWARDS TO PROVIDE EGRESS TO A PUBLIC HALL, THERE SHALL BE A BALCONY UPON THE UPPER STORY OF THE APARTMENT. IF, HOWEVER, SUCH STAIR EXTENDS UPWARDS TO PROVIDE EGRESS TO A PUBLIC HALL, THE BALCONY SHALL BE LOCATED ON THE LOWER STORY OF THE APARTMENT. SUCH BALCONY SHALL PROVIDE ACCESS FROM THE APARTMENT TO A ROOM OF AN ADJOINING APARTMENT ON THE SAME STORY. SUCH BALCONY SHALL BE CONSTRUCTED OF INCOMBUSTIBLE MATERIAL AND BE CAPABLE OF SUSTAINING A LOAD OF AT LEAST EIGHTY POUNDS PER SQUARE FOOT. ACCESS TO SUCH BALCONY SHALL NOT BE OBSTRUCTED BY SINKS OR KITCHEN FIXTURES OR IN ANY OTHER WAY, AND SHALL BE MAINTAINED UNOBSTRUCTED AT ALL TIMES. BARS, GATES, GRILLES OR OTHER OBSTRUCTING DEVICES ON ANY WINDOW OR DOOR GIVING ACCESS TO OR EGRESS FROM SUCH BALCONY SHALL BE UNLAWFUL.

2. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN PARAGRAPH B OF SUBDIVISION SIX OF SECTION ONE HUNDRED TWO FOR CERTAIN DWELLINGS SIX STORIES OR LESS IN HEIGHT, AT LEAST ONE FIRE- STAIR SHALL BE WITHIN SEVENTY-FIVE FEET OF AT LEAST ONE MEANS OF EGRESS FROM EACH APARTMENT ON EACH STORY THEREOF.
3. WHEN ANY SUCH FIRE-STAIR SERVING ANY APARTMENT AS A REQUIRED MEANS OF EGRESS FROM THE DWELLING OPENS ON THE ENTRANCE STORY OF THE DWELLING EXCLUSIVELY INTO AN ENTRANCE HALL, NO OTHER FIRE-STAIR SERVING THE SAME APARTMENT AS A REQUIRED MEANS OF EGRESS FROM THE DWELLING SHALL OPEN ON SUCH STORY EXCLUSIVELY INTO THE SAME ENTRANCE HALL. ANY REQUIRED FIRE- STAIR NOT OPENING ON SUCH STORY EXCLUSIVELY INTO AN ENTRANCE HALL SHALL OPEN ON A STREET OR IN A YARD, COURT OR PASSAGEWAY AFFORDING CONTINUOUS, SAFE AND UNOBSTRUCTED ACCESS TO A STREET; BUT ANY SUCH REQUIRED FIRE-STAIR SERVING ANY APARTMENT AS A MEANS OF EGRESS FROM THE DWELLING MAY HAVE A SUPPLEMENTARY ENTRANCE INTO THE SAME ENTRANCE HALL AS THAT INTO WHICH ANY OTHER FIRE-STAIR SERVING THE SAME APARTMENT AS A REQUIRED MEANS OF EGRESS FROM THE DWELLING OPENS EXCLUSIVELY.

SEC. 105. SEPARATION AND VENTILATION OF STAIRS.

2. ACCESS TO STAIRS, FIRE-STAIRS AND FIRE-TOWER BALCONIES FROM ANY PUBLIC VESTIBULE OR OTHER PUBLIC HALL SHALL BE THROUGH FIREPROOF DOORS AND ASSEMBLIES, WITH THE DOORS SELF-CLOSING AND AT LEAST THREE FEET WIDE, OR THROUGH PAIRS OF SUCH DOORS AT LEAST FOUR FEET WIDE, CONTAINING IN EITHER CASE A FIXED SASH GLAZED WITH WIRE GLASS AT LEAST THREE HUNDRED SIXTY SQUARE INCHES IN AREA.
3. EVERY STAIR HALL SHALL BE VENTILATED BY A WINDOW, OR BY MOVABLE LOUVRES IN THE SKYLIGHT HAVING AN OPENING OF AT LEAST ONE HUNDRED FORTY-FOUR SQUARE INCHES, OR BY AN OPENING OF AT LEAST ONE HUNDRED FORTY-FOUR SQUARE INCHES NEAR THE TOP OF THE STAIR SHAFT AND COMMUNICATING DIRECTLY WITH THE OUTER AIR. IF A WINDOW IS PROVIDED WHICH DOES NOT OPEN UPON A STREET OR YARD, IT SHALL BE FIREPROOF AND GLAZED WITH WIRE GLASS OF GOOD QUALITY AND HAVE NO PANE MORE THAN THREE HUNDRED SIXTY SQUARE INCHES IN AREA.

SEC. 106. CELLAR AND BASEMENT STAIRS.

A CELLAR OR BASEMENT STAIR MAY BE LOCATED INSIDE THE DWELLING,BUT SHALL NOT BE LOCATED UNDERNEATH A STAIR LEADING TO THE UPPERSTORIES UNLESS IT IS A BASEMENT STAIR LEADING UPWARD FROM ABASEMENT WHICH IS THE MAIN ENTRANCE STORY OF THE DWELLING, ORUNLESS IT IS A STAIR LEADING DOWNWARD FROM THE ENTRANCE STORYWHICH IS SEPARATED BY A FIREPROOF ARCH FROM THE STAIR LEADINGUPWARD FROM THE ENTRANCE STORY. EXCEPT AS OTHERWISE PROVIDED INSUBDIVISION FIVE OF SECTION FIFTY-TWO, ALL INSIDE CELLAR ORBASEMENT STAIRS SHALL BE ENTIRELY ENCLOSED WITH FIREPROOF WALLSAND BE PROVIDED WITH FIREPROOF DOORS AND ASSEMBLIES, WITH THEDOORS SELF-CLOSING, AT ALL OPENINGS.

SEC. 107. PUBLIC HALLS.

1. EVERY PUBLIC VESTIBULE OR OTHER PUBLIC HALL SHALL COMPLY EITHER WITH THE PROVISIONS OF SECTION ONE HUNDRED FORTY-NINE FOR NON-FIREPROOF MULTIPLE DWELLINGS, SO FAR AS APPLICABLE, OR WITH THE PROVISIONS OF SUBDIVISION TWO OF THIS SECTION, EXCEPT THAT THE PROVISIONS AS TO VENTILATION SHALL NOT APPLY TO ANY PART OF AN ENTRANCE HALL WITHIN SIXTY FEET IN A STRAIGHT LINE FROM AN ENTRANCE DOOR.SEC.

108. PARTITIONS.

ALL PARTITIONS SHALL REST DIRECTLY UPON THE FIREPROOF FLOORCONSTRUCTION AND NEVER UPON ANY WOOD FLOORING, AND SHALL EXTENDTO THE FIREPROOF CONSTRUCTION OF THE FLOOR OR ROOF ABOVE.

SPECIAL INSPECTIONS

1. Fire-resistance rated construction	BC 110.3.4
2. Fire Resistance Penetrations and Joints	BC 1704.27

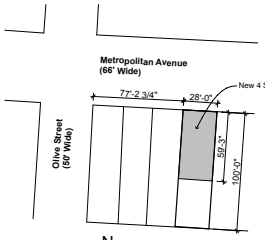
PROGRESS INSPECTIONS

1. Protection of exposed foundation insulation

See EN 202.00 for Energy Code Inspections

DOB SET

Drawing	Name		
GN-100	General Notes, Plot Plan	A-200	Exterior Elevations
GN-101	ADA, Stair, Wall Types	A-201	Exterior Elevations
GN-102	Bathroom Plans and Elevations	A-202	Exterior Elevations
GN-103	Schedules	A-300	Building Sections
GN-104	Building Code Analysis	A-400	Exterior Details
Z-100	Zoning Analysis	A-401	Exterior Details
EN-100	Energy Code Compliance & Wall Assemblies		
EN-101	Energy Code Compliance		
EN-102	Energy Code Compliance		
A-100	Cellar & First Floor Plan		
A-101	Second & Third Floor Plan		
A-102	Fourth Floor Plan & Roof Plan		
A-103	Cellar & First Floor RCP		
A-104	Second & Third Floor RCP		
A-105	Fourth Floor & Roof RCP		

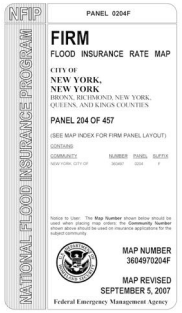


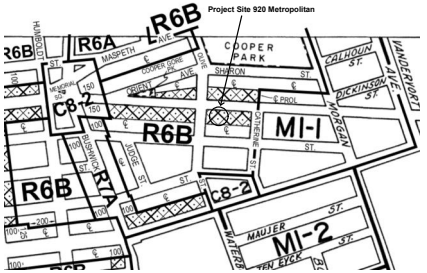
Address: 920 Metropolitan Avenue
Block: 2917
Lot: 6
Zoning District: R6B, C2-4, Quality Housing
Zoning Map: 13b
Use Group: R2
Construction Classification: IB

SCOPE OF WORK
Construction of new fireproof 4 story, 7 unit residential building.

Related Filings:
1. Structural
2. SOE
3. Mechanical
4. Plumbing
5. Sprinkler
6. Fence
7. Shed
8. Foundation
9. BPP
10. Fire Alarm

1 Plot Plan
SCALE: 1" = 50'





Zoning Map
NOT TO SCALE

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.joarchitects.com

For Filing: 5.10.22

920 Metropolitan Avenue

Ambrosino Construction

Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

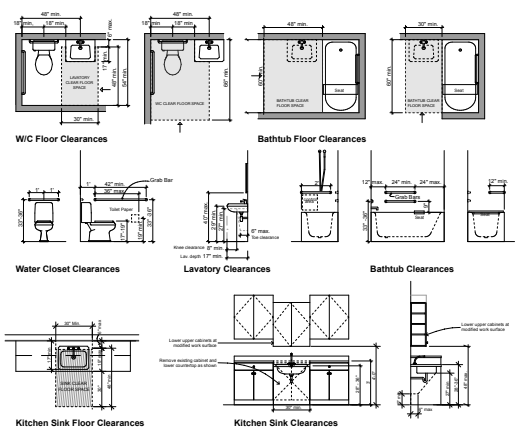
920 Metropolitan Avenue Brooklyn, NY 11211

General Notes, Plot Plan

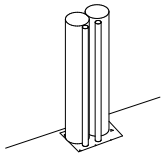
REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019760 STATE OF NEW YORK

GN-100.00

Sheet 1 of 17
DOB Application #B00715872-I1

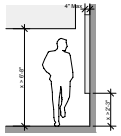


1 Accessibility Diagrams
SCALE: 1/4" = 1'-0"

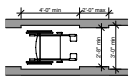


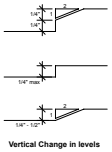
When opening up existing common chase walls to access plumbing lines, verify that the hole in the slab around the pipes has been properly firestopped. If voids are seen, stuff w/ min. 1" thick mineral wool batt insulation firmly packed intWhen opening up existing common chase walls to access plumbing lines, verify that the hole in the slab around the pipes has been properly firestopped. If voids are s

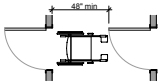
Architect must be notified to inspect firestopping prior to closing up walls.

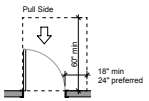


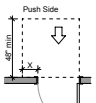
Firestopping Dtl @ Pipe
N.T.S.

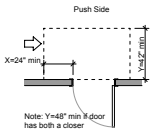


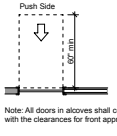




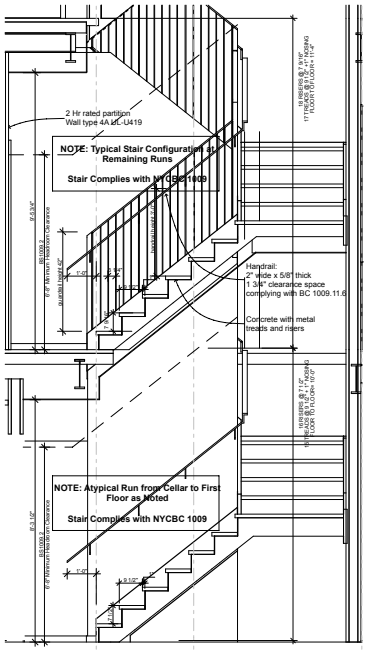




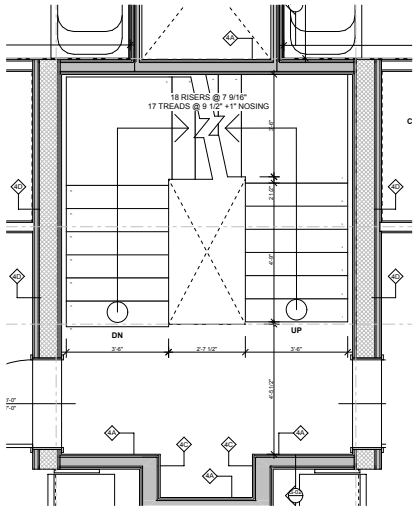




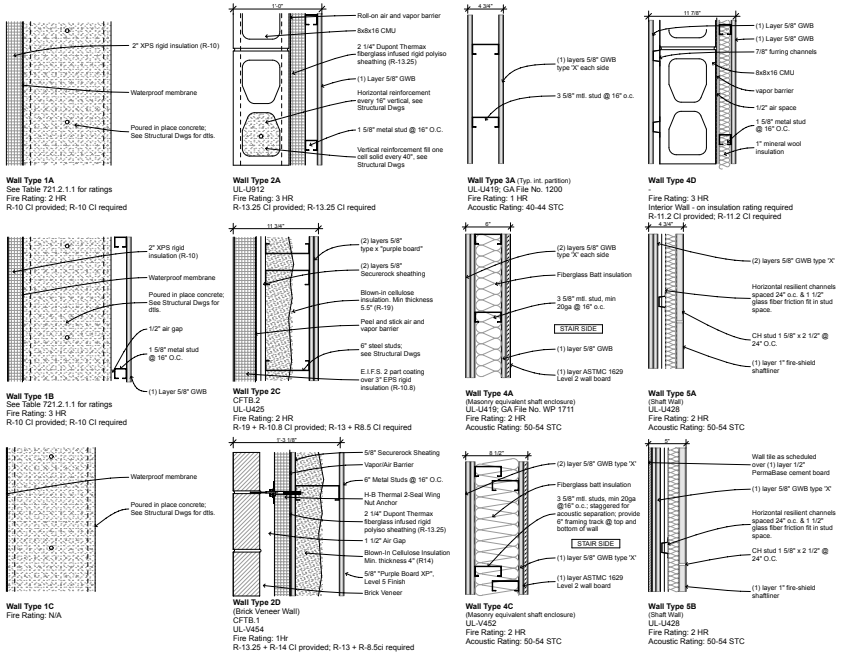
3 Accessibility Diagrams
NOT TO SCALE



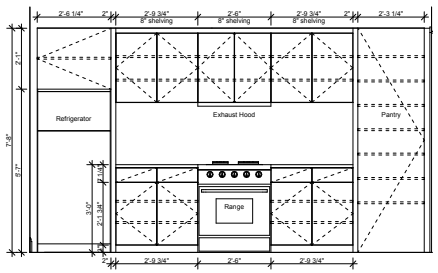
2 Typical Stair Section
SCALE: 1/2" = 1'-0"



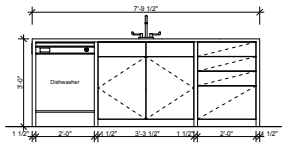
4 Typical Stair Plan
SCALE: 1/2" = 1'-0"



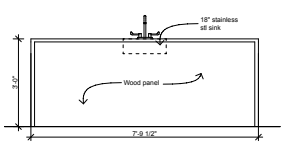
5 Wall Types
SCALE: 1 1/2"= 1'-0"



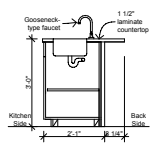
6 Typical Unit Kitchen
SCALE: 1/2" = 1'-0"



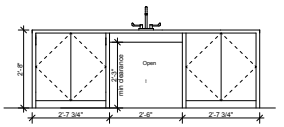
B: Island Elevation: Front



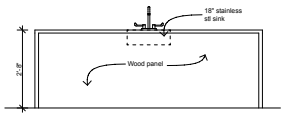
C: Island Elevation: Back



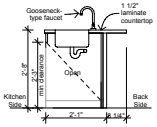
D: Island Section



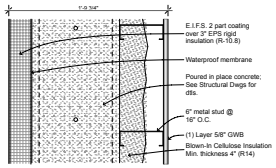
B: Island Adapted Elevation: Front



C: Island Adapted Elevation: Back



D: Island Adapted Section



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ADA, Stair, Wall Types

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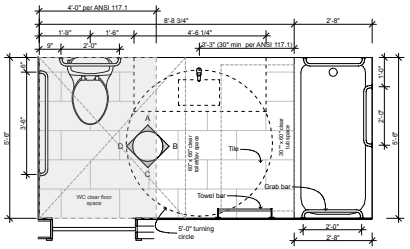
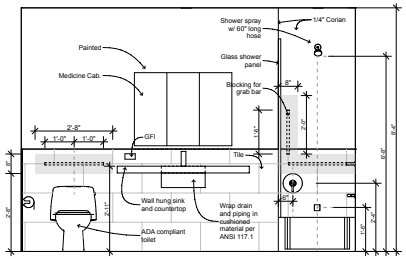
Sheet 2 of 17

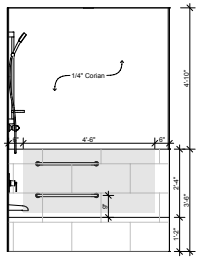
DOB Application #B00715872-I1

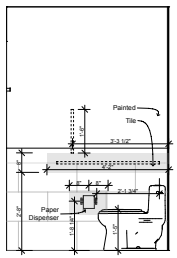
See diagrams (1) GN-101.00 for grab bar locations

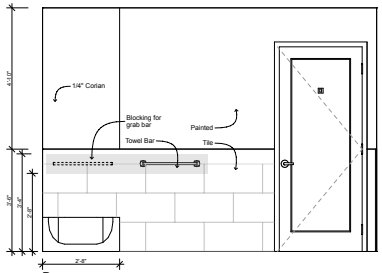


1 **Adaptable Bath Plan**
SCALE: 1/2" = 1'-0"









NOTES:
1. All tile substrate to be Wonderboard cement board.
2. All painted areas to be "Green' mold resistant GWB
3. Tile to be mounted w/ thinset mortar NOT premixed mastic
4. Provide wood blocking for all towel bars, grab bars and TP holder.
5. All painted surfaces to be eggshell finish. Color by Architect.
6. Waterproofing at floor to run up walls at base 6".

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Bathroom Plans and Elevations

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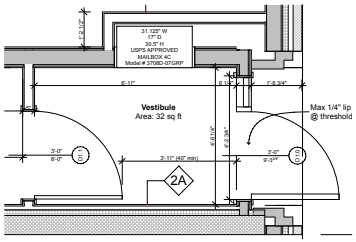
DOB Application #B00715872-I1

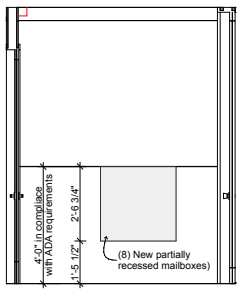
Door Schedule

Floor	ID#	Room	W	H	THK	Type	Material	View from Opening Side	Fire Rating	Manufacturer - Model No.	Assembly U-Factor	SHGC	VT	Air Leakage Rate (CFM/SF)	Notes
Cellar															
	D0.0	Mechanical Room	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	
	D0.1	Hot Water Heaters	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D0.2	Electrical Room	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D0.3	Cellar Hall	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D0.4	Cellar Hall	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D0.5	Storage	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D0.6	Cellar Hall	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D0.7	Janitors CL	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D0.8	Storage	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D0.9	Cellar Hall	2'-10"	7'-0"	1 3/4"	Single Swing	Aluminium		-	Anderson AEHID2880	0.28	0.16	0.35		
	D0.10	Storage	5'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
First Floor															
	D1.0	Entry	3'-0"	9'-3 1/2"	1 3/4"	Single Swing	Aluminium		-	Kawneer 350T Insulpour Thermal Entrance	0.49	0.35	0.35	< 0.2	1" Double Glazing U-0.26 glass
	D1.1	Vestibule	3'-0"	8'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.2	1F Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.3	1F Kitchen/ Living	2'-3 1/4"	7'-8"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.4	1F Kitchen/ Living	4'-4"	7'-6"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D1.5	1F Bathroom	2'-10"	7'-6"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.6	Lobby	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D1.7	Lobby	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D1.8	1R Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.9	1R Kitchen/ Living	3'-7 3/4"	7'-11"	1 3/4"	Single Swing	Aluminium clad wood and glass		-	Anderson AEHID3680	0.28	0.16	0.35	< 0.2	
	D1.10	1R Bedroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D1.11	1R Bedroom	4'-4"	7'-0"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D1.12	1R Bathroom	2'-10"	7'-6"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D1.13	1R Hall	3'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
Second Floor															
	D2.0	2F Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D2.1	2F Hall	4'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D2.2	2F Bathroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D2.3	2F Bedroom	2'-10"	7'-0"		Single Swing	Wood		-	-	N/A	N/A	-	-	
	D2.4	2F Bedroom	4'-4"	7'-0"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D2.5	2R Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D2.6	2R Hall	4'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D2.7	2R Bathroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D2.8	2R Bedroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D2.9	2R Bedroom	4'-4"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D2.10	2R Kitchen/ Living	3'-7 3/4"	7'-11"	1 3/4"	Single Swing	Aluminium clad wood and glass		-	Anderson AEHID3680	0.28	0.16	0.35	< 0.2	
Third Floor															
	D3.0	3F Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D3.1	3F Hall	4'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D3.2	3F Bathroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D3.3	3F Bedroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D3.4	3F Bedroom	4'-4"	7'-0"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D3.5	3R Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D3.6	3R Hall	4'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D3.7	3R Bathroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D3.8	3R Bedroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D3.9	3R Bedroom	4'-4"	7'-0"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D3.10	3R Kitchen/ Living	3'-7 3/4"	7'-11"	1 3/4"	Single Swing	Aluminium clad wood and glass		-	Anderson AEHID3680	0.28	0.16	0.35	< 0.2	
Fourth Floor															
	D4.0	4R Kitchen/ Living	3'-1 3/4"	6'-10"	1 3/4"	Single Swing	Aluminium clad wood		-	Anderson AEHID3068	0.28	0.16	0.35	< 0.2	
	D4.1	4R Kitchen/ Living	3'-0"	7'-0"	1 3/4"	Single Swing	Wood		90m FP/SC	-	N/A	N/A	-	-	gasketed and weatherstripped
	D4.2	4R Hall	4'-3"	7'-0"	1 3/4"	Double Swing	Wood		-	-	N/A	N/A	-	-	
	D4.3	4R Bathroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D4.4	4R Bedroom	4'-4"	7'-0"	1 3/4"	Sliding	Wood		-	-	N/A	N/A	-	-	
	D4.5	4R Bedroom	2'-10"	7'-0"	1 3/4"	Single Swing	Wood		-	-	N/A	N/A	-	-	
	D4.6	4R Kitchen/ Living	3'-7 3/4"	7'-11"	1 3/4"	Single Swing	Aluminium clad wood and glass		-	Anderson AEHID3680	0.28	0.16	0.35	< 0.2	
Roof															
	D5.0	Common Roof	2'-9 3/4"	6'-10"	1 3/4"	Single Swing	Aluminium clad wood		-	Anderson AEHID2868	0.28	0.16	0.35	< 0.2	gasketed and weatherstripped

NOTE: All fire rated doors to be gasketed and weatherstripped



1 Plan at lobby
SCALE: 1/2" = 1'-0"



2 Elevation at Mailboxes
SCALE: 1/2" = 1'-0"

Window Schedule

Home Story Name	ID#	Type	W	H	MFR	Series	Wood	Int Finish.	Glazing	U-Factor	SHGC	Air Leakage (CFM/FT2)
First Floor												
	W1.1	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W1.2	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W1.3	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W1.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W1.5	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W1.6	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
Second Floor												
	W2.1	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.2	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.3	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.5	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.6	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W2.7	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
Third Floor												
	W3.1	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.2	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.3	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.5	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.6	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W3.7	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
Fourth Floor												
	W3.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W4.1	Picture	3'-4 1/2"	7'-0"	Anderson	A series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.25	0.30	<0.2
	W4.2	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W4.3	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
	W4.4	Double Hung	3'-6"	7'-5"	Anderson	E series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.17	<0.2
Roof												
	W5.0	Casement	2'-0"	2'-0"	Anderson	A series	Pine	Wd. paint primed	Dual Pane Low-E. W/Heatlock	0.26	0.25	<0.2
Skylights												
	W5.1	Skylight - Fixed	6'-2"	2'-2"	Velux	FCM 2270				0.48	0.27	<0.1
	W5.2	Skylight - Fixed	6'-2"	2'-2"	Velux	FCM 2270				0.48	0.27	<0.1
	W5.3	Skylight - Fixed	6'-2"	2'-2"	Velux	FCM 2270				0.48	0.27	<0.1

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Schedules

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Sheet 4 of 17

DOB Application #B00715872-I1

2014 NYC Building Code Analysis

CODE	NOTES	
2014 NYC Building Code		
2014 NYC Plumbing Code		
2014 NYC Mechanical Code		
2020 NYC Energy Conservation Code		
New York State Multiple Dwelling Law		

2014 NYC BUILDING CODE SECTIONS

SECTION	DESCRIPTION	REQUIREMENT	PROVIDED
BC 310.1.2	Occupancy group	R-2: Multifamily Dwelling	R-2: Multifamily Dwelling
BC 503 - Table 503	Building height and area limitations	Types1A, 1B, IIA, IIIA, IV Construction allowed	Type IB Construction provided
BC 601 - Table 601			
	Primary structural frame	2 Hr	2 Hr
	Bearing walls - interior	2Hr	2 Hr
	Bearing walls - exterior	2Hr	2 Hr
	Nonbearing walls and partitions - interior	0Hr	See plans
	Floor construction and secondary members	2Hr	2Hr
	Roof construction and secondary members	1Hr	1Hr
BC 602 - Table 602	Fire resistance rating of exterior walls	*Per exception C. See Section 706.1.1 for party walls.*	
BC 705.8 - Table 705.8	Maximum Area of Openings in Exterior Walls	Not required for unprotected openings in exterior walls that have a fire separation distance of 30' or greater and the building is equipped with automatic sprinkler system.	
BC 708.4	Shaft Enclosure - Fire Resistance	*Shaft enclosures shall have a fire-resistance rating of not less than 2 hours where penetrating three stories ore more and not less than 1 hours where penetrating fewer than 3 stories.*	2 Hr Rated Shaft Enclosure Provided - Complies
BC 708.12.1	Smoke venting of stair and other closed shafts	*All closed shafts, including vertical exit enclosures, having a floor area exceeding 4 square feet (0.37m2) shall be provided with a smoke vent in accordance with Sections 708.12.1.1 through 708.12.1.3.*	A 4sf window is being installed as the smoke vent
BC 708.12.1.1	Smoke vent construction	*Smoke vents may be constructed as windows, louvers, skylights, vent ducts, or similar devices. Where a vent duct is installed, such vent ducts shall be enclosed by construction having the same fire-resistance rating as required for the shaft enclosure.*	A 4sf window is being installed as the smoke vent
BC 708.12.1.3.2	Smoke vents located in an exterior wall	*Where the exterior wall serves as part of a shaft enclosure or where a smoke vent duct penetrates the exterior wall of the building, no openings shall be located in the wall within a distance of 30 feet (9144 mm) vertically above the vent opening. nor within 5 feet 1524mm) on either side of the vent opening.*	See Drawings - Complies
BC 1008.1.1.1	Minimum Door Width		See Drawings - Complies
BC 1008.1.1.3	Minimum Door Height		See Drawings - Complies
BC 1009.1	Minimum Stair Width		36 inches
BC 1009.2	Headroom	80" for Residential	80" provided
BC 1009.4.6.1	Sum of Treads & Risers	Per Exception 6.1: *The sum of two risers plus one tread exclusive of nosing shall be not less than 24 inches nor more than 25 1/2 inches.*	See Drawings - Complies
BC 1009.4.6.2	Dimensions of Treads & Risers	Per Exception 6.2: *The maximum riser height seal be 7 3/4 inches and the minimum tread depth shall be 9.5 inches plus nosing.*	See Drawings - Complies
BC 1009.7	Vertical Rise	A flight of stairs may not have a vertical rise greater than 12'	See Drawings - Complies
BC 1009.12	Handrail Quantity	One handrail for stairways within dwelling units	1 handrail provided
BC 1012.3.1	Handrail Type	Handrails should be either Type I or Type II	Handrail Type II provided, see drawings
BC 1012.12	Handrail Height	Handrail Mounting Height to be between 34" min and 38" max	Handrail mounted at 34", see drawings - complies
BC 1013.1	Guards	Guards required on open-sided walking surfaces	3'-6" Guard provided - Complies
BC 1014.4	Intervening public hall in R-2 occupanices	*Per exception 1: No intervening public hall shall be required for any of the following:...a building that complies with Item 4 of Section 1021.2*	Complies; see note pertaining to BC 1021.2.4
BC 1021.2.4	*Per Section 1021.2 Item 4: Buildings of Group R-2 occupancy where all of the following conditions are met:*	*4.1: The building does not exceed 4 stories*	Complies; 4 stories provided
		4.2: The building contains no more than three dwelling units per story	Complies; no more than 2 dwelling units per story
		4.3: The building is of construction Type I or II	Complies; construction Type IB
		4.4: The building does not exceed 2,500 SF per story	Complies; maximum 1,625 SF per story
		4.5: Each dwelling unit has at least one window facing the street or facing a lawful yard with open, unobstructed, and direct access to the street.	Complies
		4.6: The stairway extends to the roof surface through a stairway bulkhead complying with Section 1509.2 provided the roof has a slope not steeper than 20 degrees.	Complies
BC 1509.2	Bulkheads & penthouses	*Per Section 1509.2.1: Bulkheads and penthouses shall be constructed with walls, floors, and roof as required for the building.* *Exception 1: Bulkheads on buildings of Type I and II construction. The exterior walls and roofs of such....with a fire separation distance of more than 5 feet and less than 30 feet shall be of at least 1-hour fire-resistance-rated noncombustible construction. Walls and roofs with a fire separation distance of 30 feet or greater shall be of noncombustible construction. Interior framing and walls shall be of noncombustible construction.*	Complies
BC 1203.4.1.1	Habitable Spaces - Minimum Opening (Ventilation)	*The minimum openable area to the outdoors shall be 5 percent of the floor area of the habitable space being ventilated*	See Drawings - Complies
BC 1203.4.1.2.4	Maximum Depth of Room	30 feet, unless window opens onto a court complying with Section 1206.	See Drawings - Complies
BC 1205.2.1	Habitable Spaces - Minimum Opening (Natural Light)	*The minimum net glazed area shall not be less than 10 percent of the floor area of the room served. Every opening providing required natural light shall be at least 12 square feet of glazed area.*	See Drawings - Complies
BC 1205.2.7	Height of Glazed Areas	Per 1205.2.7.1 *Only that portion of glazed areas higher than 30 inches above the floor shall be considered as providing the required natural lighting.*	See Drawings - Complies

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920 Metropolitan Avenue

Ambrosino Construction

NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

Building Code Analysis

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019760
STATE OF NEW YORK

GN-104.00

Sheet 5 of 17

DOB Application #B00715872-I1

Zoning Information

GENERAL INFORMATION		
Address	920 Metropolitan Avenue, Brooklyn, NY 11211	
Block	2917	
Lot	6	
Zoning District	R6B with C2-4 overlay	
	NOTE: Per ZR 33-011, in any C1 or C2 district mapped within an R6 through R10 District with a letter suffix shall comply with Quality Housing bulk and setback regulations set forth in Article III Chapter 5. All citations below conform to that.	1 tree required
Use/Occupancy	R2	
Street Width	66' (Metropolitan Ave - Narrow Street)	
Construction Class	IB - Noncombustible	
Street Trees	(1) street tree required per 25' of street frontage; (1) street tree proposed, see zoning site plan	
Automatic Sprinkler System	Yes	

OPEN SPACE		
Lot Size	28' x 100'	
Lot Area	2,800 sq ft	
Max. Allowable Lot Coverage	60% (28' x 100' = 2,800 SF x .6) = **1,680 sq ft allowable**	[ZR 23-153]
Proposed Lot Coverage	**1,624 sq ft proposed, complies**	

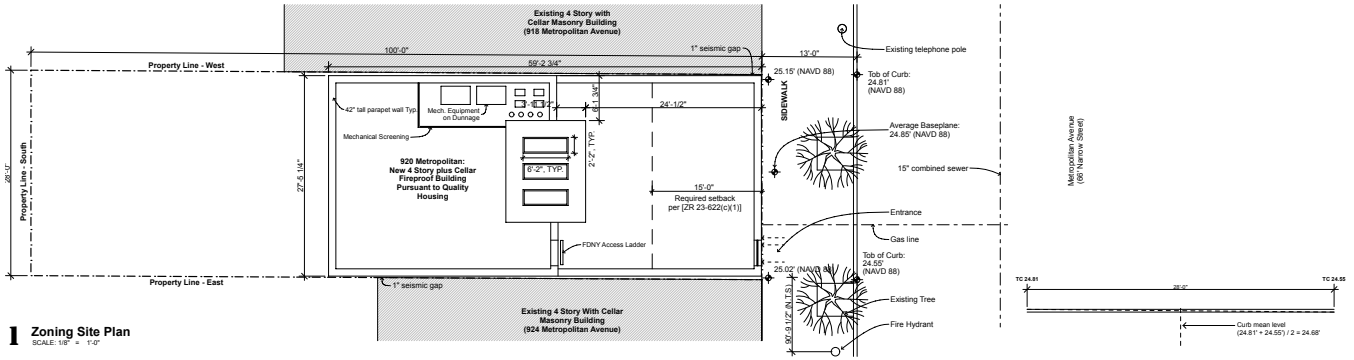
FLOOR AREA		
Max. Allowable FAR	2	[ZR 23-153]
Max Allowable Floor Area	(2,800 sq ft x 2) = **5,600 sq ft allowable**	
Proposed Floor Area	**5,545.3 sq ft proposed, complies**	See plan diagrams for compliance
	1st Floor	1,538.3 sq ft
	2nd Floor	1,566.6 sq ft
	3rd Floor	1,566.6 sq ft
	4th Floor	873.8 sq ft

BULK (see section diagrams for compliance)		
Base Height	30' minimum, 40' maximum	[ZR 23-662] Table 1
Total Building Height	50' maximum	[ZR 23-662] Table 1
Required Setback Above Base Height	15' for Narrow Street	[ZR 23-662 (c)(1)]
Stories	4 + Cellar & Stair Bulkhead	

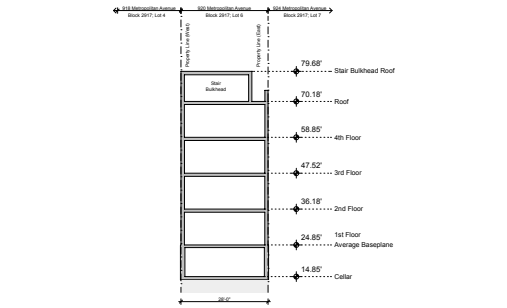
QUALITY HOUSING		
Refuse Storage	No refuse room required; project contains fewer than 9 Dwelling Units	[ZR 28-12]
Recreation Space	No recreation space required; project contains fewer than 9 Dwelling Units	[ZR 28-21]
Planting Areas	No area on the zoning lot is provided between the Street Wall and the Street Line; no plantings required	[ZR 28-23]
Density Per Corridor	Deduct 50% of corridor area at each floor that serves fewer than 11 Dwelling Units; see zoning plan diagrams for proposed deductions per floor	[ZR 28-41]

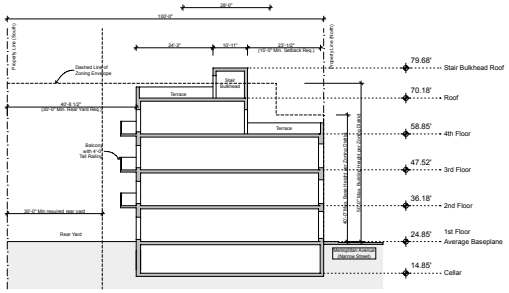
DWELLING UNITS		
Allowable # of Dwelling Units	(Allowable Floor Area)/(Factor for Dwelling Units) = (5,600)/(680) = **8.2 Allowable Dwelling Units**	[ZR 23-22]
Proposed # of Dwelling Units	**7 Dwelling Units, complies**	

PARKING		
Required Parking Spaces	(# Dwelling Units) * 50% = 7 * 50% = 3.5, rounds to 4 parking spaces	[ZR 25-241]
	requirements waived; less than 5 parking spaces required	[ZR 25-261]
Proposed Parking Spaces	0	

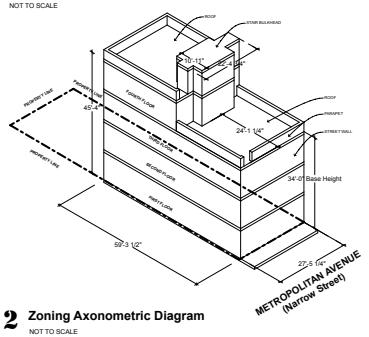


1 Zoning Site Plan
SCALE: 1/8" = 1'-0"





3 Zoning Sections
NOT TO SCALE

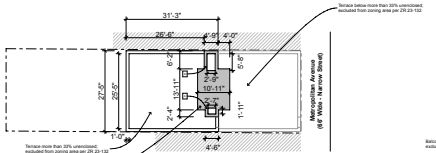


2 Zoning Axonometric Diagram
NOT TO SCALE

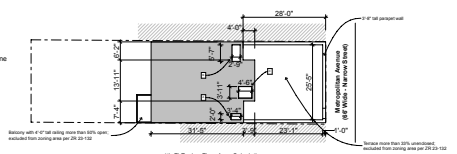
Roofing structures not included in the building height if aggregate area of such structures is less than 33 1/3% of roof on which they are situated [ZR 28-554.1]: Stair Bulkhead, Parapet Wall, Mechanical Equipment Platform

Roof area: = 1,625 sq ft
1/3 of roof area: = 541.7 sq ft
Area of Mech. Penetration: = 20.5 sq ft
Resulting Buildable Floor Area: = 521.2 sq ft

Proposed Stair bulkhead area: 191.7 sq ft
Proposed Mech. Equip. area: 50 sq ft
Proposed Parapet Wall area: 164.4 sq ft
Resulting Buildable Floor Area: = 406.1 sq ft ≤ 521.2 sq ft



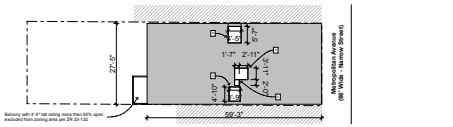
Roof Floor Area Calculations:
Stair Bulkhead Area: (2'-4" x 4'-6") + (10'-11" x 13'-11") + (4'-9" x 6'-2") =
10.5 sq ft + 151.9 sq ft + 29.3 sq ft = 191.7 sq ft
Mech Shafts: Area A (1'-11" x 2'-7") + Area B (2'-9" x 5'-8") = 20.5 sq ft
Roof Area: (27'-5" x 31'-3") + (4'-0" x 13'-11") =
856.8 sq ft + 55.7 sq ft = 912.5 sq ft
Parapet Wall: (1'-0" x 31'-3") + (1'-0" x 25'-5") + (1'-0" x 26'-6")=
31.3 sq ft + 25.4 sq ft + 26.5 sq ft = 83.2 sq ft



4th Fl Zoning Floor Area Calculations:
Roof Area: (24'-1" x 27'-5") + (3'-9" x 7'-4") + (4'-0" x 6'-2") =
660.3 sq ft + 27.5 sq ft + 24.7 sq ft = 712.5 sq ft
Parapet Wall: (1'-0" x 26'-0") + (1'-0" x 27'-10") + (1'-0" x 25'-5")=
26 sq ft + 27.8 sq ft + 25.4 sq ft = 81.2 sq ft

Gross Floor Area:
(27'-5" x 31'-5") = 861.3 sq ft
(3'-9" x 13'-11") = 52.2 sq ft
861.3 sq ft + 52.2 sq ft = 913.5 sq ft

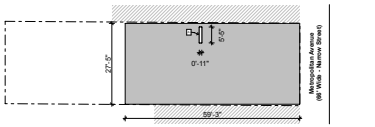
Zoning Area: Gross - Mech. Shaft - Quality Housing Density Deduction per [ZR 28-31]
Mech Shaft A = 2'-0" x 3'-4" = 6.7 sq ft
Mech Shaft B = 2'-0" x 5'-7" = 15.4 sq ft
Corridor Density Deduction = Area C (3'-11" x 4'-6") = 17.6 sq ft
913.5 sq ft - 39.7 sq ft = 873.8 sq ft



3rd Fl Zoning Floor Area Calculations:

Gross Area: 27'-5" x 59'-3" = 1,624 sq ft

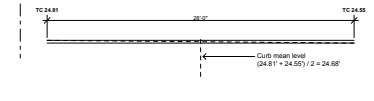
Zoning Area: Gross - Mech. Shaft - Quality Housing Density Deduction per [ZR 28-31]
Mech Shaft A = 3'-9" x 4'-10" = 18.1 sq ft
Mech Shaft B = 4'-5" x 5'-7" = 24.7 sq ft
Corridor Density Deduction = Area C (1'-7" x 2'-0") + Area D (2'-11" x 3'-11") = 14.6 sq ft
1,624 sq ft - 57.4 sq ft =1,566.6 sq ft



Cellar Floor Area Calculations:
Gross Floor Area: 27'-5" x 59'-3" = 1,624 sq ft
Mech. Shaft A: 0'-11" x 5'-5" = 4.9 sq ft

4 Zoning Plan Diagrams
NOT TO SCALE

Average Baseplane
NOT TO SCALE



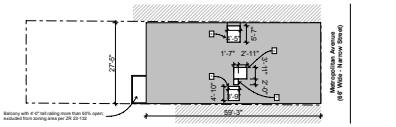
Base Plane
Per [ZR 12-10] Definition of "Baseplane"

For Buildings...with street wall at least 15 feet in width...the level of the baseline is any level between curb level and street wall line level.

Definition of "Street Wall Line"

A "*Street Wall Line*" is that portion of a line drawn parallel to a front lot line at a distance equal to the shallowest depth between the street wall of a building and the front lot line, from which, when viewed directly from above, lines perpendicular to the front lot line may be drawn to a street wall.

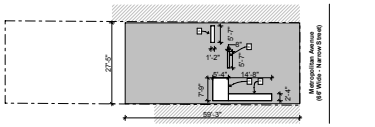
Average Baseplane =
(25.15 + 24.55) / 2 = **24.85'**



2nd Fl Zoning Floor Area Calculations:

Gross Area: 27'-5" x 59'-3" = 1,624 sq ft

Zoning Area: Gross - Mech. Shaft - Quality Housing Density Deduction per [ZR 28-31]
Mech Shaft A = 3'-9" x 4'-10" = 18.1 sq ft
Mech Shaft B = 4'-5" x 5'-7" = 24.7 sq ft
Corridor Density Deduction = Area C (1'-7" x 2'-0") + Area D (2'-11" x 3'-11") = 14.6 sq ft
1,624 sq ft - 57.4 sq ft =1,566.6 sq ft



1st Fl Zoning Floor Area Calculations:

Gross Area: 27'-5" x 59'-3" = 1,624 sq ft

Zoning Area: Gross - Mech. Shaft - Quality Housing Density Deduction per [ZR 28-31]
Mech Shaft A = 1'-2" x 3'-7" = 8.5 sq ft
Mech Shaft B = 8" x 5'-7" = 3.7 sq ft
Corridor Density Deduction = Area C (5'-4" x 7'-9") + Area D (2'-4" x 14'-8") = 75.5 sq ft
1,624 sq ft - 85.7 sq ft =1,538.3 sq ft

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Zoning Analysis

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019769 STATE OF NEW YORK

Z-100.00

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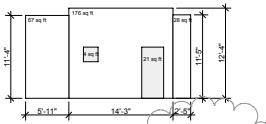
DOB Application #B00715872-I1

NORTH FACADE

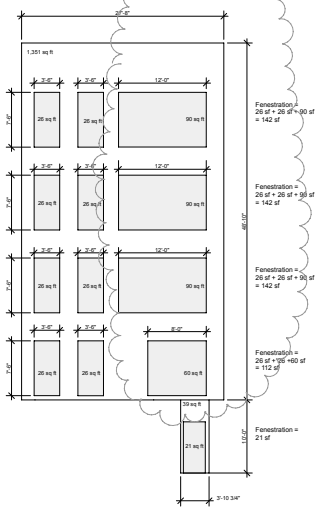
FACE D: 271 SF

Total Fenestration = 25 sf
Total Face Area = 271 sf



FACE C: 1,390 SF

Total Fenestration = 559 sf
Total Face Area = 1,390 sf



Fenestration = 26 sf + 26 sf + 90 sf = 142 sf

Fenestration = 26 sf + 26 sf + 90 sf = 142 sf

Fenestration = 26 sf + 26 sf + 90 sf = 142 sf

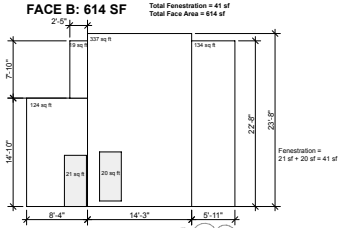
Fenestration = 26 sf + 26 sf + 60 sf = 112 sf

Fenestration = 21 sf

SOUTH FACADE

FACE B: 614 SF

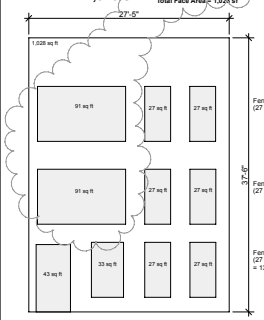
Total Fenestration = 41 sf
Total Face Area = 614 sf



Fenestration = 21 sf + 20 sf = 41 sf

FACE A: 1,028 SF

Total Fenestration = 420 sf
Total Face Area = 1,028 sf



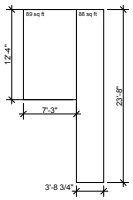
Fenestration = (27 sf x 2) + 91 sf = 145 sf

Fenestration = (27 sf x 2) + 91 sf = 145 sf

Fenestration = (27 sf x 2) + 33 sf + 43 sf = 130 sf

EAST FACADE

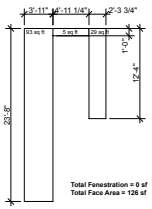
FACE E: 177 SF



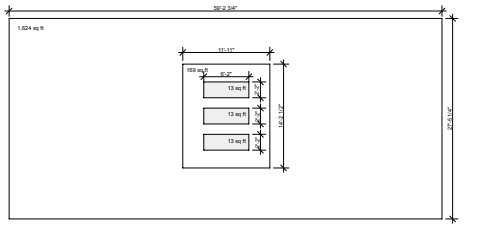
Total Fenestration = 0 sf
Total Face Area = 177 sf

WEST FACADE

FACE F: 126 SF



Total Fenestration = 0 sf
Total Face Area = 126 sf



Roof Skylights

Facade Area Calculations by Face:

North Facade:
Face 'A' = 21'-10 3/4" x 13'-0 1/2" = 1,028 SF

Face 'B' = (5'-11" x 22'-8") + (14'-3" x 23'-8") + (8'-4" x 14'-10") + (2'-5" x 7'-10") = 614 SF

South Facade:
Face 'C' = (27'-8" x 48'-10") + (3'-10 3/4" x 10'-0") = 1,390 SF

Face 'D' = (2'-6" x 11'-5") + (14'-3" x 12'-4") + (5'-11" x 11'-4") = 271 SF

East Facade:
Face 'E' = (7'-3" x 12'-4") + (3'-8 3/4" x 23'-8") = 177 SF

West Facade:
Face 'F' = (3'-11" x 23'-8") + (4'-11 1/4" x 1'-0") + (2'-3 3/4" x 12'-4") = 126 SF

Total Vertical Fenestration: 1,045 SF
Total Facade Area: 3,606 SF

1,045sf = 29% of Total Facade Area.
29% < 30% = complies (Per '20 NYCECC C402.4.1)

Total Skylight Area: 39 SF

39sf = 2.4% of Total Roof Area.
2.4% < 3% = complies (Per '20 NYCECC C402.4.1)

1 Fenestration & Opaque Area Calculations
SCALE: 1/8" = 1'-0"

CLEAR FIELD Thermal Bridges

CF TB.no	Assembly/Thermal Bridge Description	Assembly ID in Energy Analysis	Section Detail Location
CFTB.1	Steel framed wall - blown cellulose insulation, 2 layer Securerock sheathing, polyiso rigid insulation and brick veneer.	-	Wall type 2D GN-101 Elevations 1/EN-100
CFTB.2	Steel framed wall - blown-in cellulose insulation, Securerock sheathing, EPS insulation, EIFS finish	-	Wall type 2C GN-101 Elevations 1/EN-100
CFTB.3	Concrete roof deck with R-35ci	-	Detail 4/A-400

POINT Thermal Bridges

PTB.no	Assembly/Thermal Bridge Description	Size [sq. inches]	Number of Occurence	Section Detail Location
PTB.1	Rear balcony structural members	48	6	2/A-400 and elevation 2/A-200

LINEAR Thermal Bridges

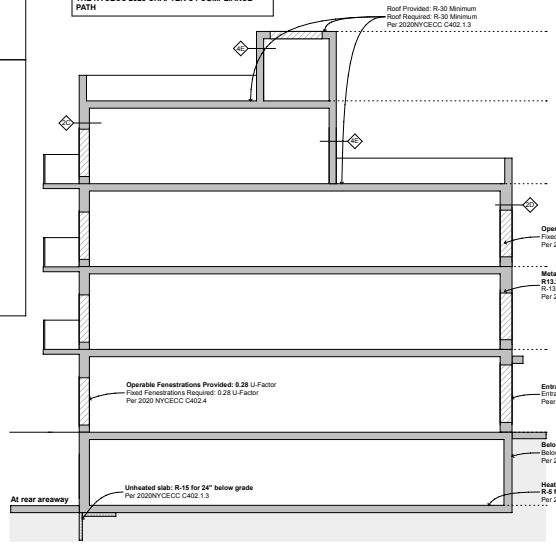
LTB.no	Type of Thermal Bridge	Value [Btu/hr·ft· °F]	Value Source/ Calculation	Total Length [ft]	Assembly ID in Energy Analysis	Section Detail Location
LTB.1	Fenestration Perimeter	0.32	Default value from Table C402.6	769	-	Elevations 1/EN-100
LTB.2	Shelf Angle	0.41	Default value from Table C402.6	40	-	8/A-400

2 Thermal Bridges
SCALE: 1/8" = 1'-0"

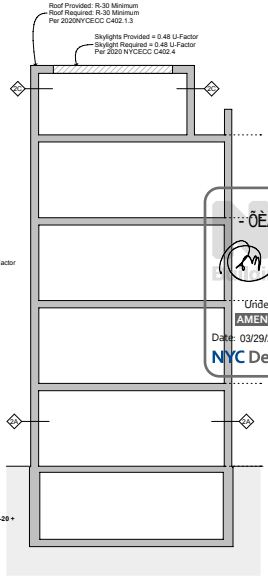
2020 NYCECC Commercial Envelope Tabular Analysis

NYCECC Citation	Provision	Item Description	Code Prescriptive Value (ECC)	Proposed Design Value	Supporting Documentation
C402.1.3, C402.2, Tables C402.1.3, C402.1.4	**Roof Assembly - Insulation entirely above roof deck**	*New steel and concrete roof deck*	*Minimum R-33ci*	*Roof: 9" XPS (R -35) continuous insulation above deck*	*1/A-102 (4th Floor Plan), 2/A-102 (Roof Plan) 1 and 2 A-300 (Building Sections) 2, 3, 4, 5 and 6 A-200 Exterior Details*
Tables C402.1.3, C402.1.4 or Section C402.2	**Walls, above-grade: Metal framed**	*Steel-framed wall, 2x6 framing 16" O.C with brick veneer*	*Minimum R-13 + R-8.5ci*	*R-14 blown-in cellulose between framing + R-13.25 ci installed on the exterior of the building*	*Exterior Wall Type 2D: GN-101 (Wall Types) and A-100, A-102 and A-102 Floor Plans*
		Steel-framed wall, 2x6 framing 16" O.C with EIFS	*Minimum R-13 + R-8.5ci*		*Exterior Wall Type 2C: GN-101 (Wall Types) and A-100, A-102 and A-102 Floor Plans*
Tables C402.1.3, C402.1.4 or Section C402.2	**Below-grade walls**	*Thermal insulation on the exterior of new basement wall.*	*Minimum R-10ci*	*2" Extruded Polystyrene (XPS) = R-10 installed on exterior of walls.*	*Exterior Wall Types 1A and 1B: GN-101 (Basement Floor Plan) 1/A-100 and 4/A-401 Foundation details*
C402.1.3	**Unheated Slabs**	*Slab at rear areaway*	*Minimum R-15 for 24" below*		
C402.2.9	**Continuous insulation**	*Parapet design*	*Parapet shall be wrapped with continuous insulation having minimum R-value equivalent to the adjacent wall assembly. Above-grade wall assembly - 10ci.*	*Parapet wrapped in R-10ci*	*See Drawings 1 and 2 "Thermal Envelope" on drawing EN-101*
C402.4, Table C402.4	**Fenestration (Prescriptive)**	*Fenestration requirements Elevation showing 95° demarcation*	*Window U-factor below 95 feet Umax-0.28 (non metal openings) Umax-0.77 (Entrance doors) SHGCmax - 0.36 Air Leakage - Windows and doors - .20 cfm/ft Air Leakage - Skylights - .30 cfm/ft Air Leakage - Commercial glazed swinging entrance doors - 1.00 cfm/ft*	*Windows and doors- installed below 95 feet U-0.26, SHGC - 0.17, Air leakage <0.2 Skylights U -0.48, SHGC 0.27, air leakage <0.10 Entrance Door U-0.49, SHGC - 0.35, air leakage <1.00 cfm/ft*	*EN-100 (elevation showing windows and doors below 95° demarcation) and Window and Door Schedule GN-103*
C402.4.1	**Maximum area**	*Sample text: Window to wall Ratio*	*Sample text: 30% Maximum*	*19% Proposed*	*See drawing 1 on EN-100*
C402.5	**Air leakage-thermal envelope (Mandatory)**	*Air leakage-thermal envelope*	*The thermal envelope of the building must comply with Sections C402.5.1 through C402.5.8.*	*Per C402.4.1.3 no testing is required as this building is less than 10,000sf*	
C402.5.1	**Air barriers**	*Air barrier material*	*A continuous air barrier for the opaque buildings envelope shall comply with Section C402.5.1.2.1 or C402.5.1.2.2.*	*Continuous Barrier: All vertical surfaces Grace Products "Perm-A-Barrier" self adhesive air and vapor barrier applied to sheathing. Horizontal surfaces roofing membrane*	*See drawing 1 and 2 on EN-102 Air Barrier Continuity*
C402.5.4	**Doors and access openings to shafts, chutes, stairways, and elevator lobbies**	*Sample text: Doors from corridor to stairwell A & stairwell B*	*Access openings from conditioned space to shafts, chutes, stairways and elevator lobbies shall meet C402.5.2 or be gasketed, weatherstripped, or sealed.*	*All doors from corridor to stairway to be gasketed, weatherstripped or sealed.*	*See notes in Door Schedule for all Stairway and Corridor doors sheet GN-103.*
C402.5.7	**Vestibules**	*Building Entrance vestibule*	*Vestibule provided at door separating conditioned space from the exterior.*	*New 7' deep vestibule @ building entrance. Two sets of swinging doors with self-closers.*	*See Floor Plan A-100 and Door Schedule on GN-102*
C402.5.8	**Recessed lighting**	*Recessed luminaires in the thermal envelope to be weather sealed.*	*Recessed luminaires installed in the building thermal envelope shall be sealed to maximum air leakage 2 cfm.*	*Recessed luminaires in the roof ceiling will be IC rated and sealed to less than 2fm*	*See lighting plan and schedule on EN-101*
C402.6	**Thermal bridges (Mandatory)**	*Thermal bridges*	*Clear field thermal bridges are identified on drawings and pre-calculated assembly values are from ASHRAE 90.1 Appendix A. Point thermal bridges greater than Btu2 are identified. Linear thermal bridges are outlined in tabular format including each linear thermal bridge type, the aggregate length for each, the relevant detail and cross-section through each thermal bridge, and the Psi-value for each thermal bridge.*	*Clear field thermal bridges: See Table 2 on sheet EN-100 Point thermal bridges: Point thermal bridges are documented. See Table 2 on sheet EN-100 Linear thermal bridges: See Table 2 on sheet EN100*	*See 2 on EN-100 for tabular format of thermal bridges,details on sheets A-400 and A-401*
C405.3.2(1)	**Interior Lighting Power Allowances: Building Method**	*Power Allowances*	*Total interior lighting power allowance (watts)*		
C406.2	**More efficient HVAC equipment performance**	*Additional Efficiency Package*	*Equipment shall exceed the minimum efficiency requirement listed in Tables 402.3.2(1) through C403.3.2(14) by 10 Percent*	*VRF Hyper Heat heat pump systems are specified*	*See Mechanical Filing*

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND THE SPECIFICATIONS ARE IN COMPLIANCE WITH THE NYCECC 2020 CHAPTER C4 COMPLIANCE PATH



4 Thermal Barrier Diagram N/S
SCALE: 1/8" = 1'-0"



3 Thermal Barrier Diagram E/W
SCALE: 1/8" = 1'-0"

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EN Revision: 08.04.22
EN Revision: 06.09.22
For Filing: 5.10.22

DOB Application #B00715872-P3

920 Metropolitan Avenue
Ambrosino Construction
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AMENDED APPLICATION
Date: 03/29/2023
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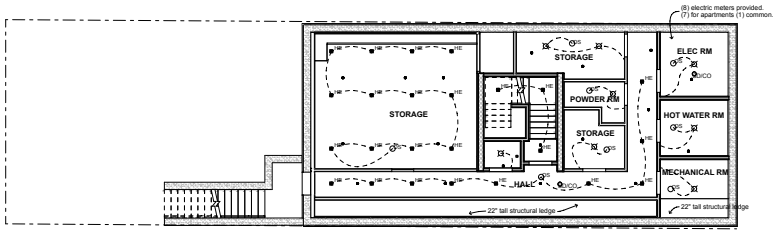
Energy Code Compliance & Wall Assemblies

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019760 STATE OF NEW YORK

EN-100.01

Sheet 27 of 17

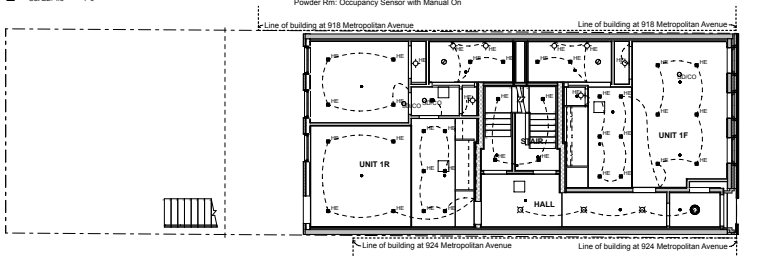


1 Cellar Lighting Diagram

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

Lighting/Power control requirements Per C405.2:
Hall: Occupancy Sensors with Manual On
Storage: Occupancy Sensors with Manual On
Hot Water Room, Electrical Room & Mechanical Rooms: Occupancy Sensors with Manual On
Powder Rm: Occupancy Sensor with Manual On

TOTAL FIXTURES: 32
TOTAL HE FIXTURES: 24

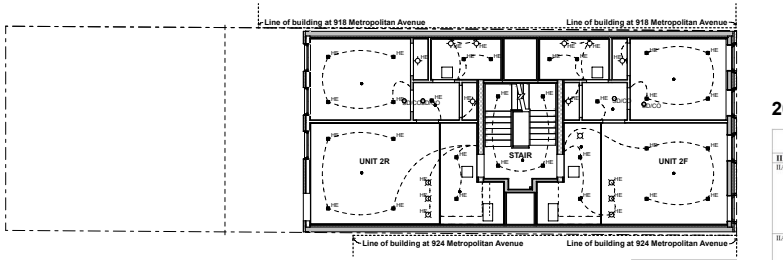


2 First Floor Lighting Diagram

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

Lighting/Power control requirements Per C405.2:
Interior Exit Stairway and exit passageway: No Controls, continuously lit
Dwelling: Manual Control

TOTAL FIXTURES: 47
TOTAL HE FIXTURES: 43

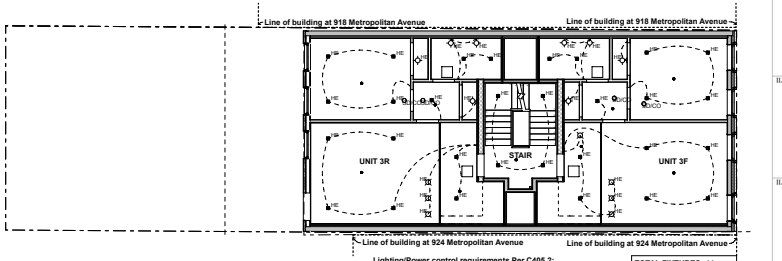


3 Second Floor Lighting Diagram

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

Lighting/Power control requirements Per C405.2:
Interior Exit Stairway: No Controls, continuously lit
Dwelling: Manual Control

TOTAL FIXTURES: 44
TOTAL HE FIXTURES: 44



4 Third Floor Lighting Diagram

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

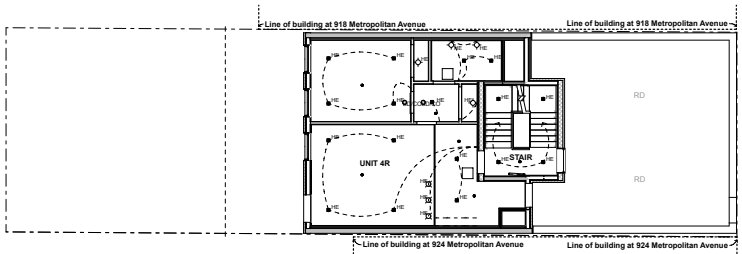
Lighting/Power control requirements Per C405.2:
Interior Exit Stairway: No Controls, continuously lit
Dwelling: Manual Control

TOTAL FIXTURES: 44
TOTAL HE FIXTURES: 44

Interior Lighting Power Allowances:	LPD watts/sq.ft	Area sq.ft	Max Allowance	Watts Proposed
Stairwell	0.50	607	303.5 Watts	276 Watts
Corridor	0.58	550	319 Watts	108 Watts
Storage	0.44	413	181.7 Watts	144 Watts
Electrical/mechanical	0.39	362	141.2 Watts	36 Watts

Lighting Legend

	Wall mounted decorative fixture Lamp: LED 12W
	Surface mounted decorative fixture Lamp: LED 12W
	Recessed downlight Lamp: LED 12W
SD/CO	Combination hardwired smoke and carbon monoxide detector w/ battery backup
OS	Occupancy Sensor

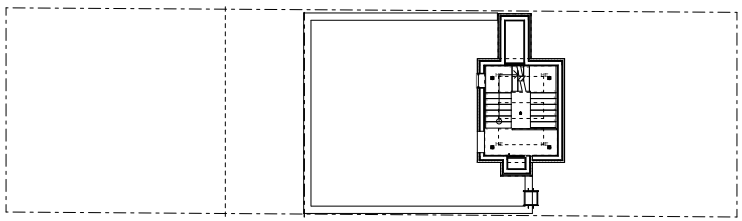


5 Fourth Floor Lighting Diagram

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

Lighting/Power control requirements Per C405.2:
Interior Exit Stairway and exit passageway: No Controls, continuously lit
Dwelling: Manual Control

TOTAL FIXTURES: 24
TOTAL HE FIXTURES: 24



6 Roof Lighting Diagram

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

Lighting/Power control requirements Per C405.2:
Interior Exit Stairway and exit passageway: No Controls, continuously lit

TOTAL FIXTURES: 4
TOTAL HE FIXTURES: 4

'Functional Testing of Lighting Controls' is required

2020 NYCECC Progress Inspections

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter Ch) or Other Criteria	ECC or Other Citation
IIA	**Envelope Inspections**			
IIA1	**Protection of exposed foundation insulation:** Insulation must be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.	As required during foundation work and prior to backfill	Approved construction documents, ASTM C272	C303.2.1; ASHRAE 90.1 – 5.8.1, 5.9
IIA2	**Insulation placement and R-values:** Installed insulation for each component of the conditioned space envelope and at junctions between components, including thermal bridges and heated slab insulation, must be visually inspected to ensure that the R-values are marked, that such R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation also be visually inspected.	As required to verify continuous enclosure while walls, ceilings and floors are open	Approved construction documents	C303.1, C303.2, C402.1, C402.2, C402.6, C406; ASHRAE 90.1 – 5.5, 5.6, 5.8, 5.9, 11 or Appendix G, Appendix I
IIA3	**Fenestration and door U-factor and product ratings:** U-factors, SHGC and VT values of installed fenestration must be visually inspected for conformance with the U-factors, SHGC and VT values identified in the construction drawings by verifying the manufacturer's NFRC labels or, where not labeled, using the ratings in ECC Tables C303.1.3(1), (2) and (3).	As required during installation	Approved construction documents; NFRC 100, NFRC 200, NFRC 300, ANSI/DASMA 105, ASTM E972	C303.1, C303.1.3, C402.1.4, C402.4, C406; ASHRAE 90.1 -5.4.2, 5.5, 5.6, 5.8.2, 5.9, 11 or Appendix G, Appendix I
IIA4	**Fenestration air leakage:** Windows and door assemblies, except site-built windows and/or doors, must be visually inspected to verify that installed assemblies are listed and labeled by the manufacturer to the referenced standard. For curtain wall, storefront glazing, commercial entrance doors and revolving doors, the testing reports must be reviewed to verify that the installed assembly complies with the standard cited in the approved plans. Weatherseals at loading docks must be visually verified.	As required during installation; prior to final construction inspection	NFRC 400, AAMA/WDMA/CSA 101/I.S.2/A440; ASTM E283; ANSI/DASMA 105	C402.5.2, C402.5.6; ASHRAE 90.1 – 5.4.3.2, 5.4.3.3, 5.8.2, 5.9
IIA5	**Fenestration areas:** Dimensions of windows, doors and skylights must be verified by visual inspection.	Prior to final construction inspection	Approved construction documents	C402.4; ASHRAE 90.1 – 5.4, 5.5.4, 5.6, 5.9, 11 or Appendix G
IIA6	**Air barrier visual inspection:** Openings and penetrations in the building envelope, including site-built fenestration and doors, must be visually inspected to verify that a continuous air barrier around the envelope forms an air-tight enclosure. The progress inspector must visually inspect to verify that materials and/or assemblies have been tested and meet the requirements of the respective standards, or must observe the testing of the building and/or assemblies and verify that the building and/or assemblies meet the requirements of the standard, in accordance with the standard(s) cited in the approved plans.	As required during construction	Approved construction documents; ASTM E2178, ASTM E2357, ASTM E1677, ASTM E779, ASTM E283.	C402.5; ASHRAE 90.1 – 5.4.3.1, 5.4.3.5, 5.9
IIC	**Electrical Power and Lighting Systems**			
IIC1	**Metering:** The presence and operation of all required meters for monitoring total electrical energy usage and/or total fuel use, system energy usage, tenant energy usage, or electrical energy usage in the building, in individual dwelling units, or in tenant spaces must be verified by visual inspection.	Prior to final electrical and construction inspection	Approved construction documents	C405.5, C405.11, C405.12; ASHRAE 90.1 – 8.4.3, 8.4.5, 8.4.6, 10.4.5
IIC2	**Lighting in dwelling units:** Lamps in permanently installed lighting fixtures must be visually inspected to verify compliance with high-efficacy requirements.	Prior to final electrical and construction inspection	Approved construction documents	C405.1; ASHRAE 90.1 – 9.1.1
IIC3	**Interior lighting power:** Installed lighting must be verified for compliance with the lighting power allowance by visual inspection of fixtures, lamps, ballasts and transformers.	Prior to final electrical and construction inspection	Approved construction documents	C405.3, C406; ASHRAE 90.1 -9.1, 9.2, 9.5, 9.6, 9.7; 1RCNY §101-07(c)(3)(v)(C)4, Appendix I
IIC4	**Exterior lighting power:** Installed lighting must be verified for compliance with source efficacy and/or the lighting power allowance by visual inspection of fixtures, lamps, ballasts and relevant transformers.	Prior to final electrical and construction inspection	Approved construction documents	C405.4; ASHRAE 90.1 – 9.4.2; 1RCNY §101-07(c)(3)(v)(C)4
IIC5	**Lighting controls**: Each type of required lighting controls, including: • occupant sensors • manual interior lighting controls • light-reduction controls • automatic lighting shut-off • daylight zone controls • sleeping unit controls • exterior lighting controls • egress illumination controls must be verified by visual inspection and tested for functionality and proper operation.	Prior to final electrical and construction inspection	Approved construction documents, including control system narratives	C405.2, C406; ASHRAE 90.1 – 9.4.1, 9.4.3, 9.7, Appendix I
IIC6	**Electric motors and elevators:** Where required by the construction documents for energy code compliance, motor listing or labels be visually inspected to verify that they comply with the respective energy requirements in the construction documents. Elevators and escalators must be inspected for compliance with regenerative drive requirements.	Prior to final electrical and construction inspection	Approved construction documents	C403.8, C405.6, C405.7, C405.8, C405.9; ASHRAE 90.1 – 8.4.4, 10.4, 10.8

EN Revision: 08.18.22

EN Revision: 06.09.22
For Filing: 5.10.22

920 Metropolitan Avenue

Ambrosino Construction

Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

Energy Code Compliance

REGISTERED ARCHITECT
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019769
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EN-101.00

Sheet 8 of 17

DOB Application #B00715872-I1

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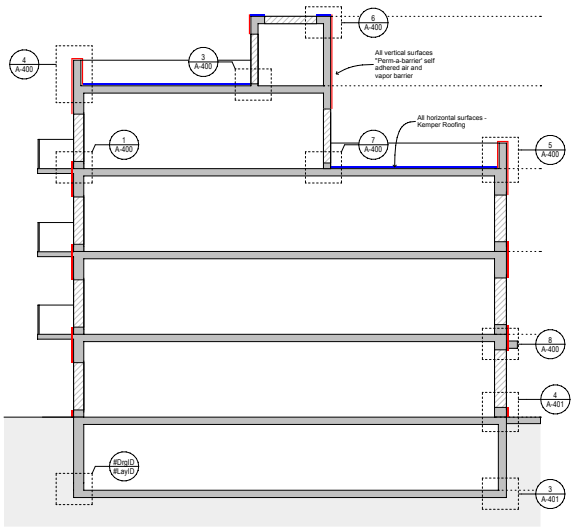
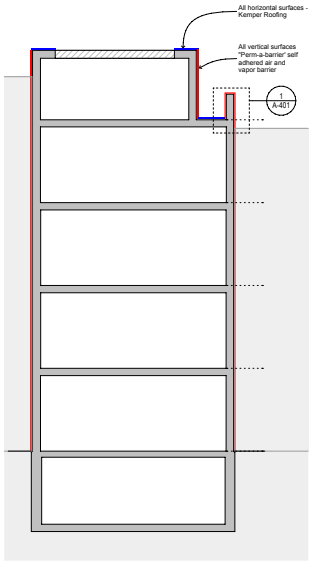


1 **Air Barrier Continuity Section E/W**
SCALE: 1/8" = 1'-0"



2 **Air Barrier Continuity Section E/W**
SCALE: 1/8" = 1'-0"

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EN-102.00

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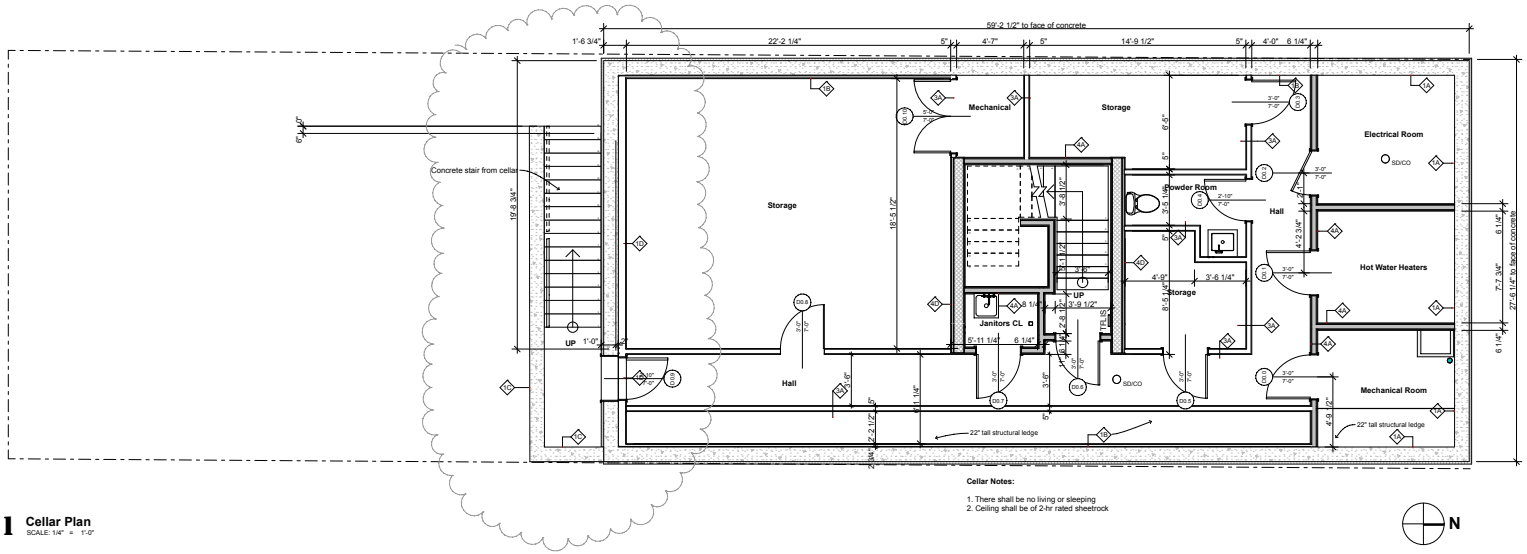
DOB Application #B00715872-I1

Legend

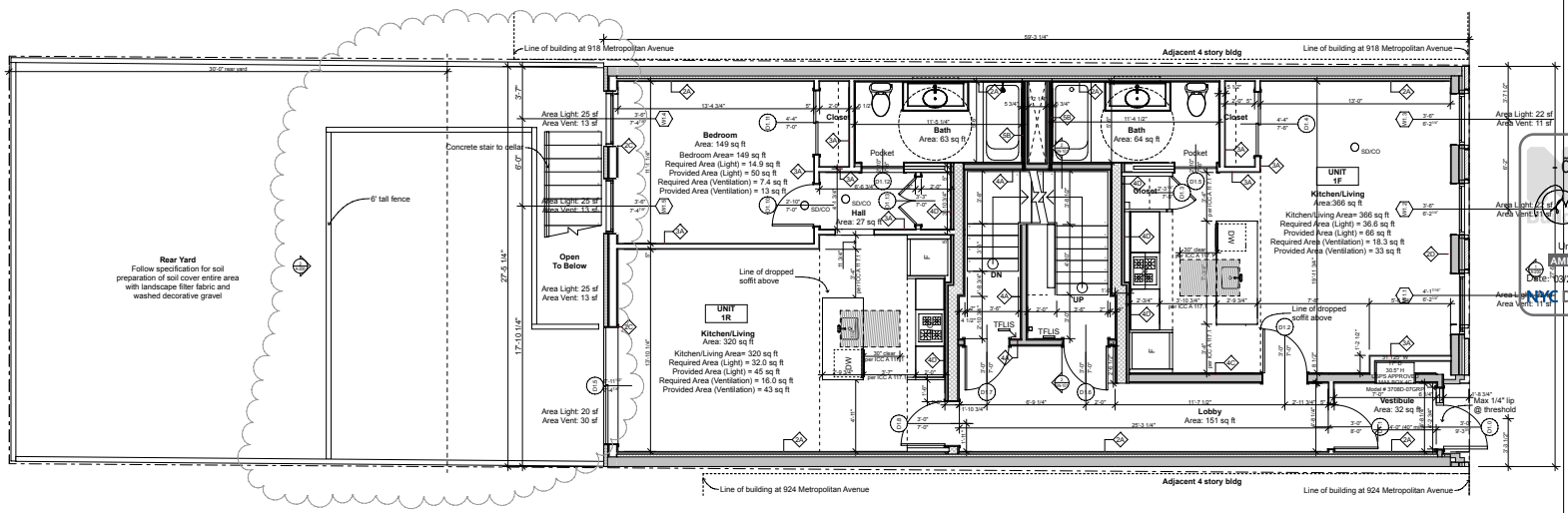
EP	Electrical panel
SD/CO	Smoke & carbon monoxide detector
TX	Toilet exhaust duct
KX	Kitchen exhaust duct
FPSC	Fire-rated self-closing door
SP	Sprinkler standpipe
AD	Area Drain
FD	Floor Drain
RD	Roof Drain
A	Wall Type (See Wall Type Details and fire rating)
# width height sill ht.*	Window size indicator *sill height is measured above finished floor
# width height	Door size indicator
	New wall. Refer to Wall tag reference for details
	New rated wall. Refer to Wall tag reference for details
TFLIS	Tactile Floor Level Identification Sign complying with ICC A117.1



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

Cellar Notes:

1. There shall be no living or sleeping
2. Ceiling shall be of 2-hr rated sheetrock



2 First Floor Plan
SCALE: 1/4" = 1'-0"

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For Objections: 6.23.22
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Cellar & First Floor Plan

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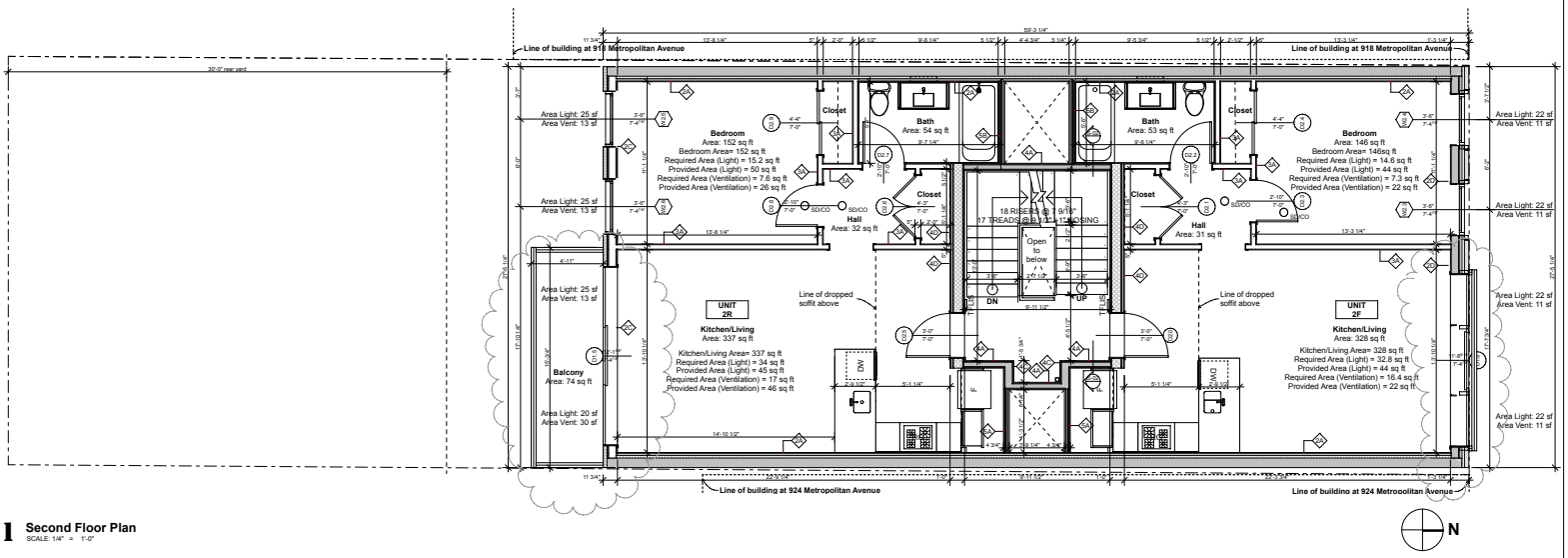
A-100.01
Sheet 26 of 17

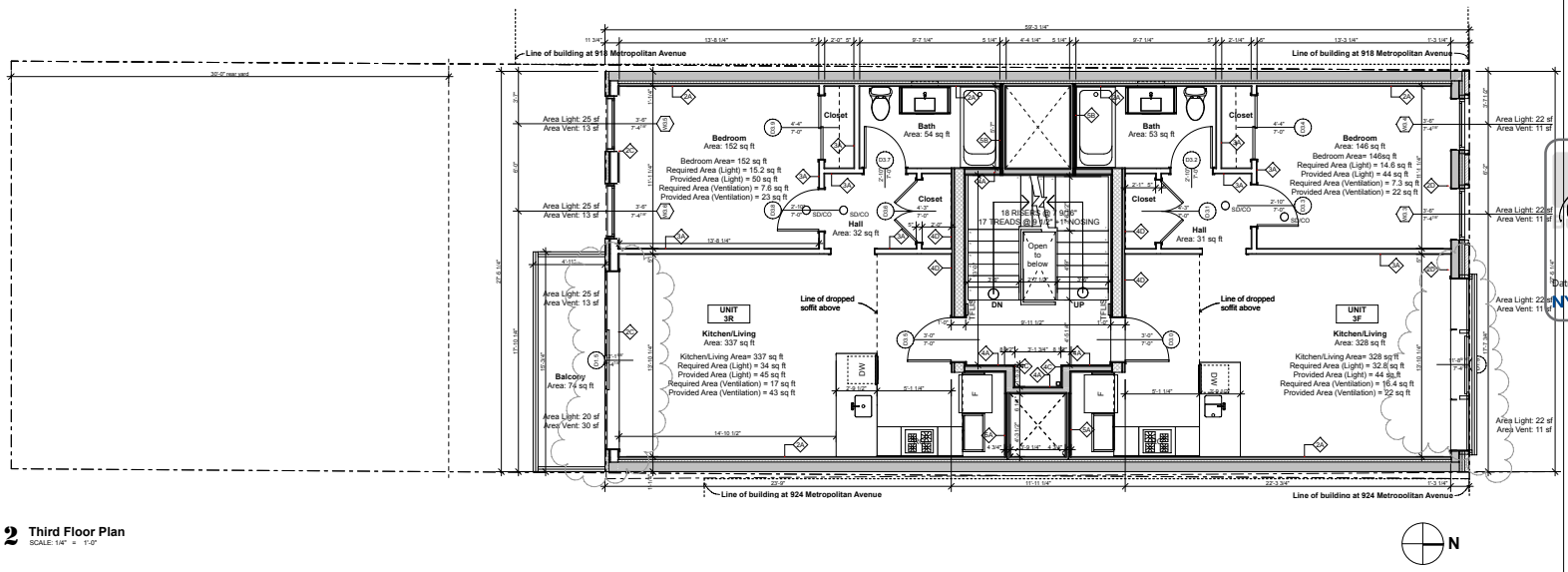
DOB Application #B00715872-P3

Legend

EP	Electrical panel
SD/CO	Smoke & carbon monoxide detector
TX	Toilet exhaust duct
KX	Kitchen exhaust duct
FPSC	Fire-rated self-closing door
SP	Sprinkler standpipe
AD	Area Drain
FD	Floor Drain
RD	Roof Drain
A	Wall Type (See Wall Type Details and fire rating)
# width height SH HT *	Window size indicator *sill height is measured above finished floor
# width height	Door size indicator
	New wall. Refer to Wall tag reference for details
	New rated wall. Refer to Wall tag reference for details
TFLIS	Tactile Floor Level Identification Sign complying with ICC A117.1



1 Second Floor Plan
SCALE: 1/4" = 1'-0"



2 Third Floor Plan
SCALE: 1/4" = 1'-0"

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Second & Third Floor Plan

REGISTERED ARCHITECT
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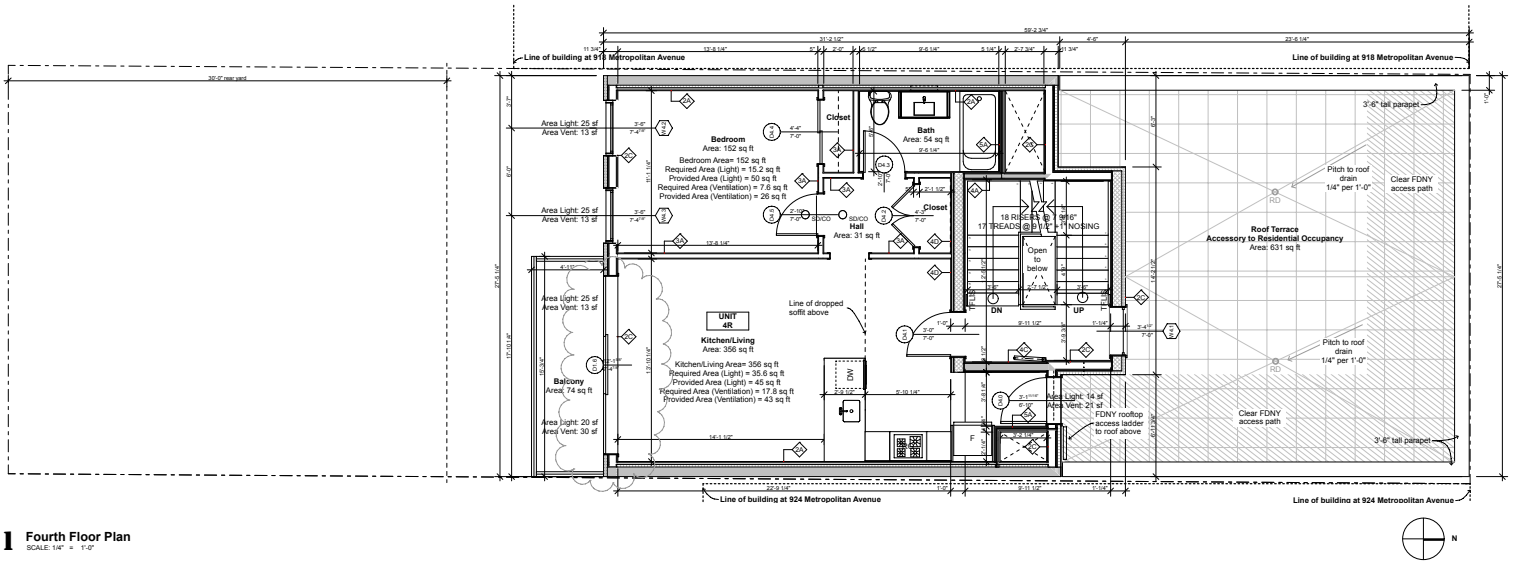
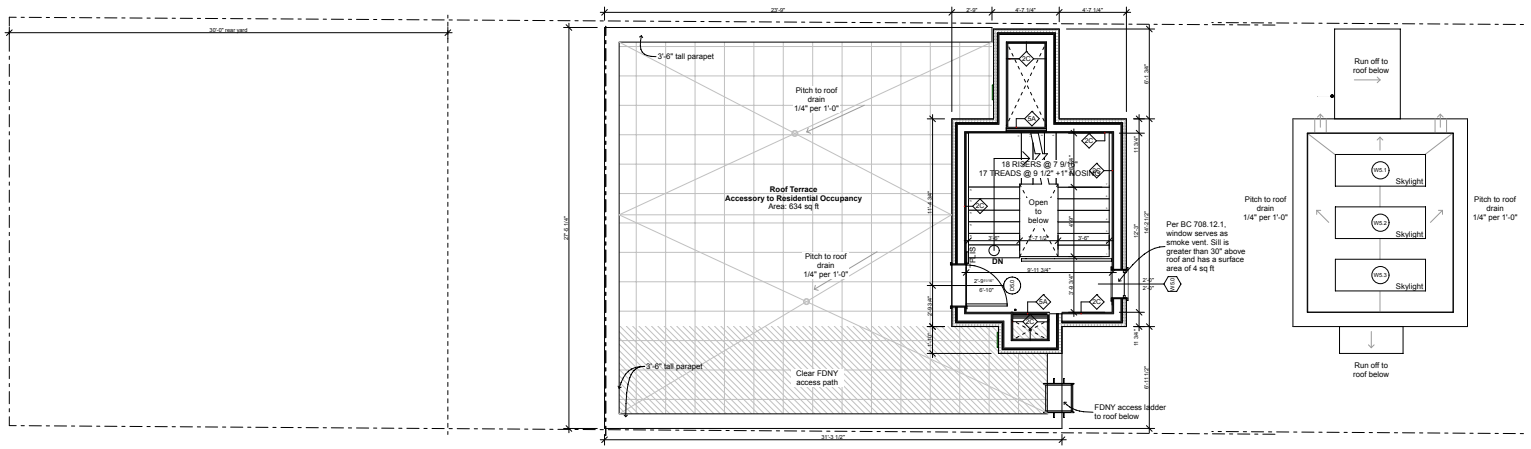
A-101.01
Sheet 29 of 17
DOB Application #B00715872-P3

Legend

EP	Electrical panel
SD/CO	Smoke & carbon monoxide detector
TX	Toilet exhaust duct
KX	Kitchen exhaust duct
FPSC	Fire-rated self-closing door
SP	Sprinkler standpipe
AD	Area Drain
FD	Floor Drain
RD	Roof Drain
A	Wall Type (See Wall Type Details and fire rating)
# width height sill ht.*	Window size indicator *sill height is measured above finished floor
# width height	Door size indicator
	New wall. Refer to Wall tag reference for details
	New rated wall. Refer to Wall tag reference for details
TFLIS	Tactile Floor Level Identification Sign complying with ICC A117.1



1 **Fourth Floor Plan**
SCALE: 1/4" = 1'-0"



2 **Roof Plan**
SCALE: 1/4" = 1'-0"

3 **Bulkhead Roof**
SCALE: 1/4" = 1'-0"

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For Objections: 8.10.22
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920 Metropolitan Avenue
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Fourth Floor Plan & Roof Plan

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A-102.01
Sheet 30 of 17
DOB Application #B00715872-P3

Lighting Legend

All fixtures are LED. Drivers provided; ballasts not applicable

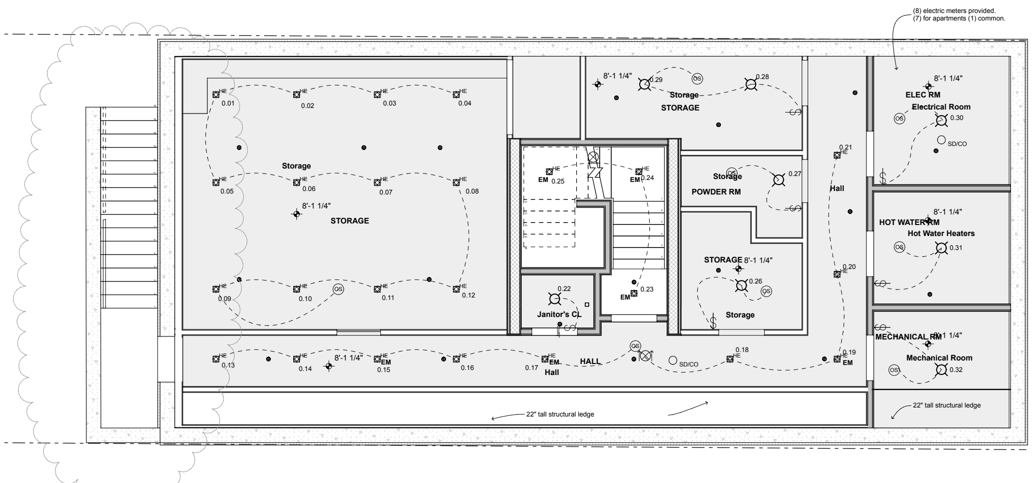
	Surface Mounted Ceiling Light Lamp: 12W
	Recessed Downlight Lamp: 12W
	Bathroom Sconce Lamp: 12W
SD/CO	Combination hardwired smoke and Carbon monoxide detector with battery backup
	Concealed sprinkler head. See Sprinkler Dwgs for dtls.
OS	Occupancy Sensor
HE	High Efficacy Fixture
EM	Emergency illumination fixture. Fixture must provide 1 foot candle min and equipped with 90 minute battery pack or ballast.
	Exit sign. Arrow points to direction of exit.

2020 NYECC Note:

Per C405.1 Exception: Interior Lighting requirements comply with R404.1: Minimum 90% of permanently installed lamps to be high efficacy.

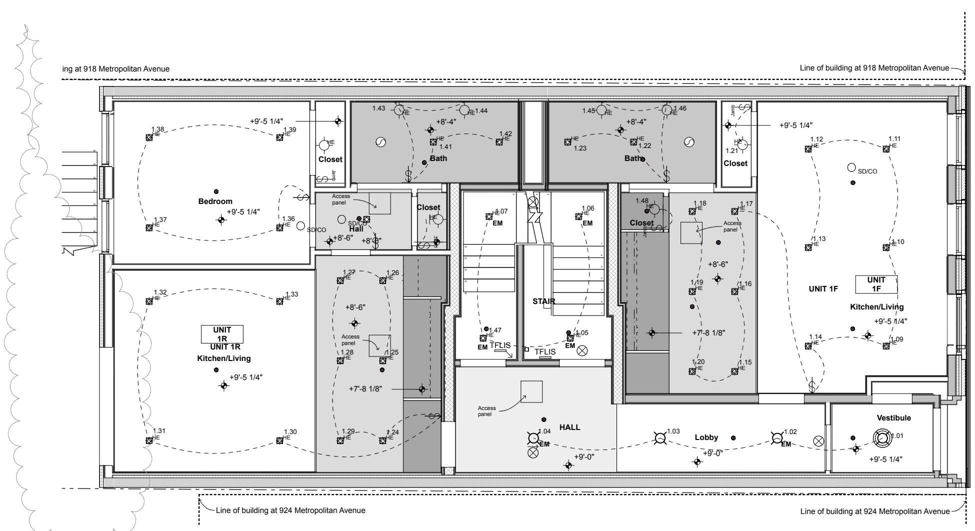
Total Fixtures = 195
Total Fixtures (High Efficacy) = 183

93.8% of fixtures are high efficacy (complies)
This fixture must be IC rated, have an air leakage rating of less than 2cfm and must be sealed to the gypsum board ceiling with a gasket or caulk.



TOTAL FIXTURES: 30
TOTAL HE FIXTURES: 24

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



TOTAL FIXTURES: 46
TOTAL HE FIXTURES: 38

2 First Floor RCP
SCALE: 1/4" = 1'-0"

JOSEPH VANCE ARCHITECTS

111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.jvarchitects.com

PAA: 1.24.23
For Objections: 8.30.22
For Objections: 8.16.22
For Objections: 8.10.22
For Objections: 6.23.22
For Filing: 5.10.22

920 Metropolitan Avenue
Ambrosino Construction
APPROVED
Under Directive 2 of 1975
AMENDED APPLICATION
Date: 03/29/2023
NYC Development Hub

920 Metropolitan Avenue Brooklyn, NY 11211

Cellar & First Floor RCP

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019760 STATE OF NEW YORK

A-103.01

Sheet 31 of 17

DOB Application #B00715872-P3

Lighting Legend

All fixtures are LED. Drivers provided; ballasts not applicable

	Surface Mounted Ceiling Light Lamp: 12W
	Recessed Downlight Lamp: 12W
	Bathroom Sconce Lamp: 12W
SD/CO	Combination hardwired smoke and Carbon monoxide detector with battery backup
	Concealed sprinkler head. See Sprinkler Dwgs for dtls.
OS	Occupancy Sensor
HE	High Efficacy Fixture
EM	Emergency illumination fixture. Fixture must provide 1 foot candle min and equipped with 90 minute battery pack or ballast.
	Exit sign. Arrow points to direction of exit.

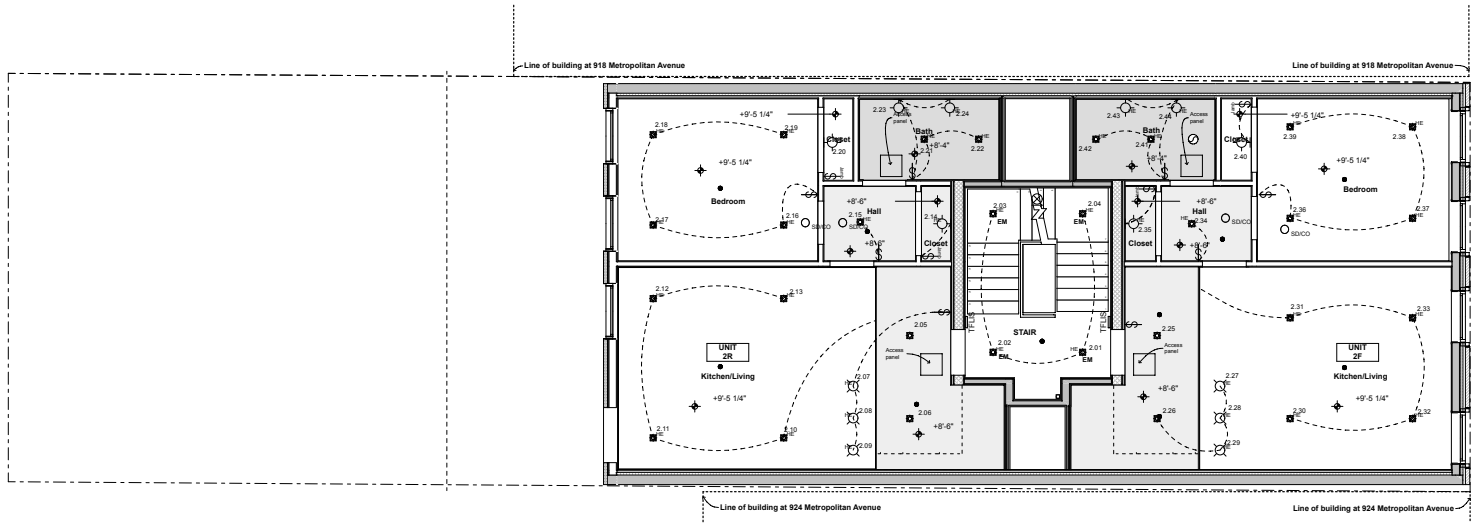
2020 NYECC Note:

Per C405.1 Exception: Interior Lighting requirements comply with R404.1: Minimum 90% of permanently installed lamps to be high efficacy.

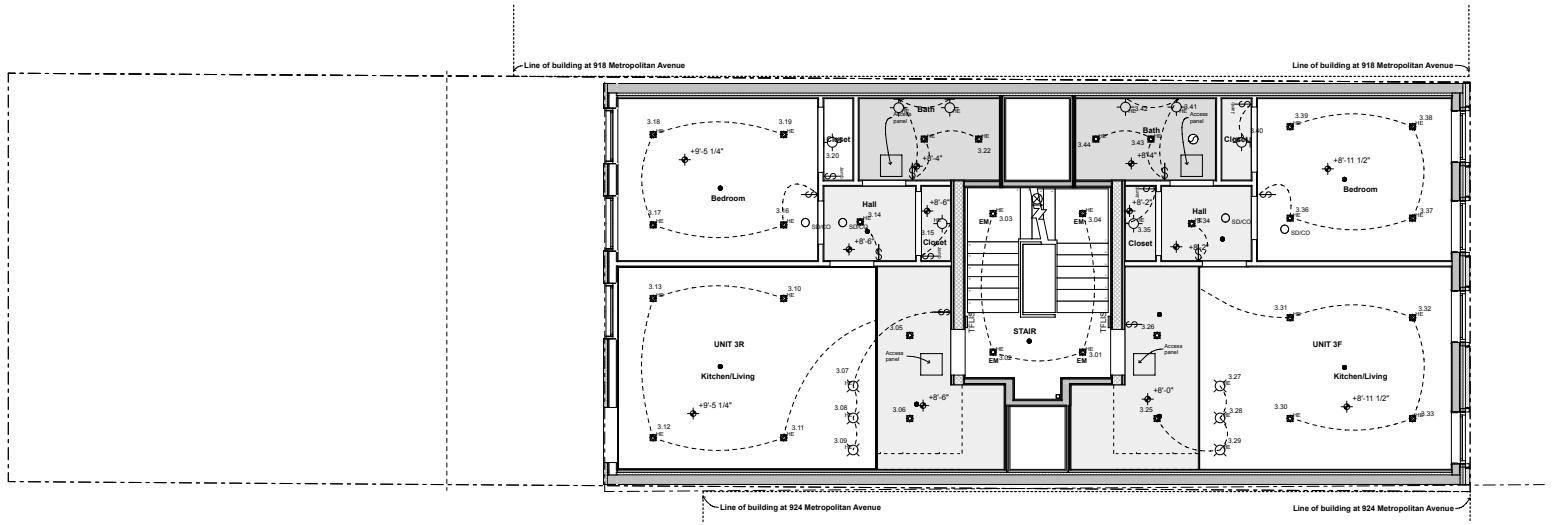
Total Fixtures = 195
Total Fixtures (High Efficacy) = 183

93.8% of fixtures are high efficacy (complies)

This fixture must be IC rated, have an air leakage rating of less than 2cfm and must be sealed to the gypsum board ceiling with a gasket or caulk.



1 **Second Floor RCP**
SCALE: 1/4" = 1'-0"



2 **Third Floor RCP**
SCALE: 1/4" = 1'-0"

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.jvarchitects.com

For Objections: 8.30.22
For Objections: 8.16.22
For Objections: 8.10.22
For Objections: 6.23.22
For Filing: 5.10.22

920 Metropolitan Avenue

Ambrosino Construction

Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

Second & Third Floor RCP

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019769
STATE OF NEW YORK

A-104.00

Sheet 14 of 17

DOB Application #B00715872-I1

Lighting Legend

All fixtures are LED. Drivers provided; ballasts not applicable

	Surface Mounted Ceiling Light Lamp: 12W
	Recessed Downlight Lamp: 12W
	Bathroom Sconce Lamp: 12W
SD/CO	Combination hardwired smoke and Carbon monoxide detector with battery backup
	Concealed sprinkler head. See Sprinkler Dwgs for dtls.
OS	Occupancy Sensor
HE	High Efficacy Fixture
EM	Emergency illumination fixture. Fixture must provide 1 foot candle min and equipped with 90 minute battery pack or ballast.
	Exit sign. Arrow points to direction of exit.

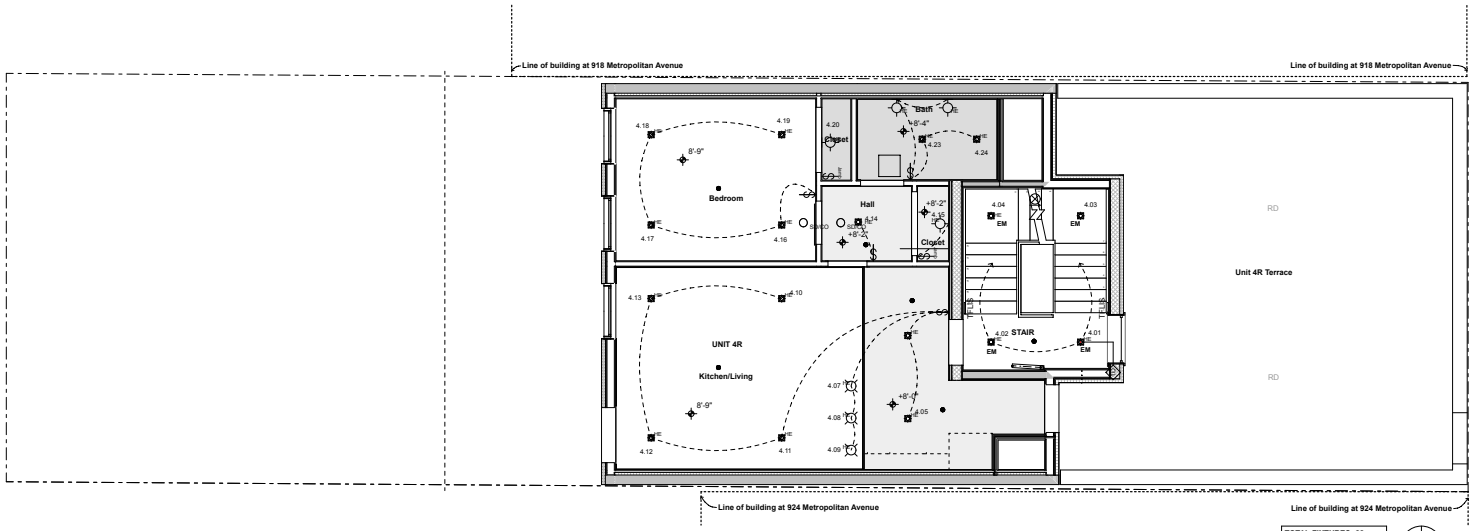
2020 NYECC Note:

Per C405.1 Exception: Interior Lighting requirements comply with R404.1: Minimum 90% of permanently installed lamps to be high efficacy.

Total Fixtures = 195
Total Fixtures (High Efficacy) = 183

93.8% of fixtures are high efficacy (complies)

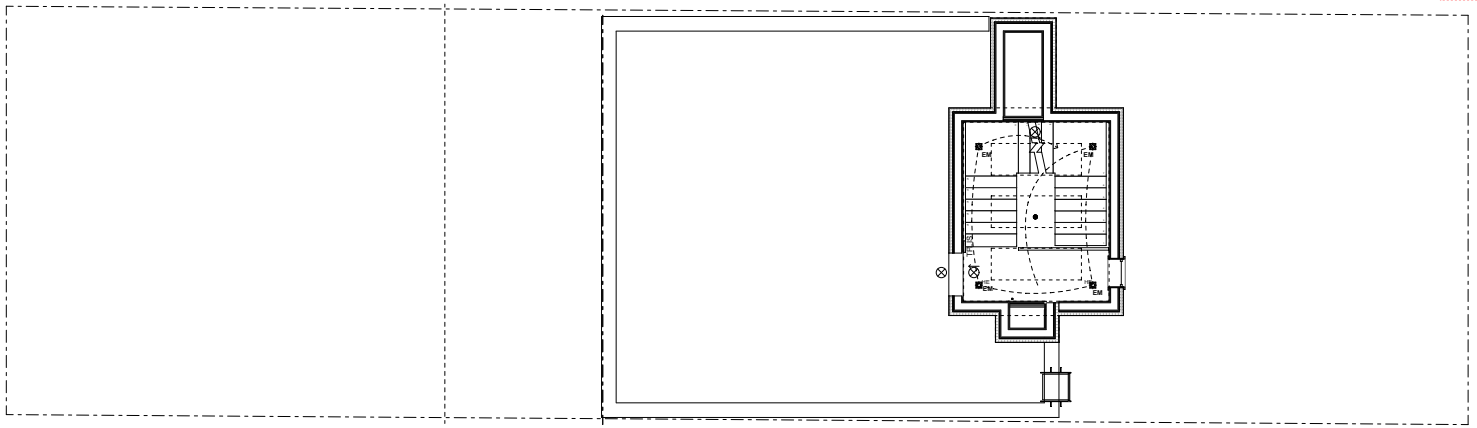
This fixture must be IC rated, have an air leakage rating of less than 2cfm and must be sealed to the gypsum board ceiling with a gasket or caulk.



1 Fourth Floor RCP
SCALE: 1/4" = 1'-0"

TOTAL FIXTURES: 22
TOTAL HE FIXTURES: 20

N



2 Roof RCP
SCALE: 1/4" = 1'-0"

TOTAL FIXTURES: 4
TOTAL HE FIXTURES: 4

N

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.jvarchitects.com

For Objections: 8.30.22
For Objections: 8.23.22
For Objections: 8.16.22
For Objections: 8.10.22
For Objections: 6.23.22
For Filing: 5.10.22

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APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

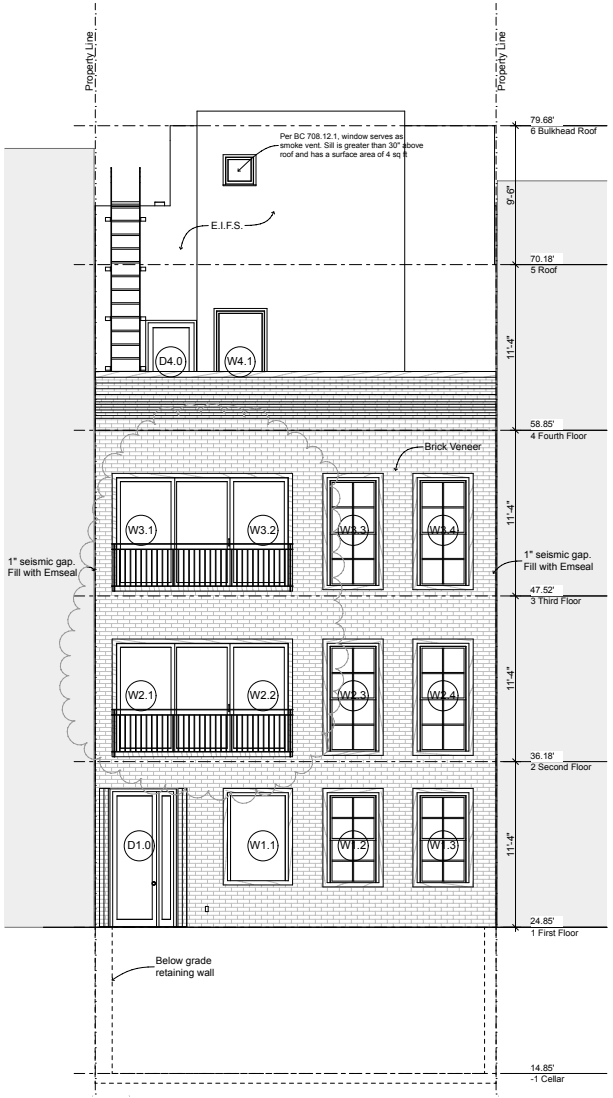
Fourth Floor & Roof RCP

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019769
STATE OF NEW YORK

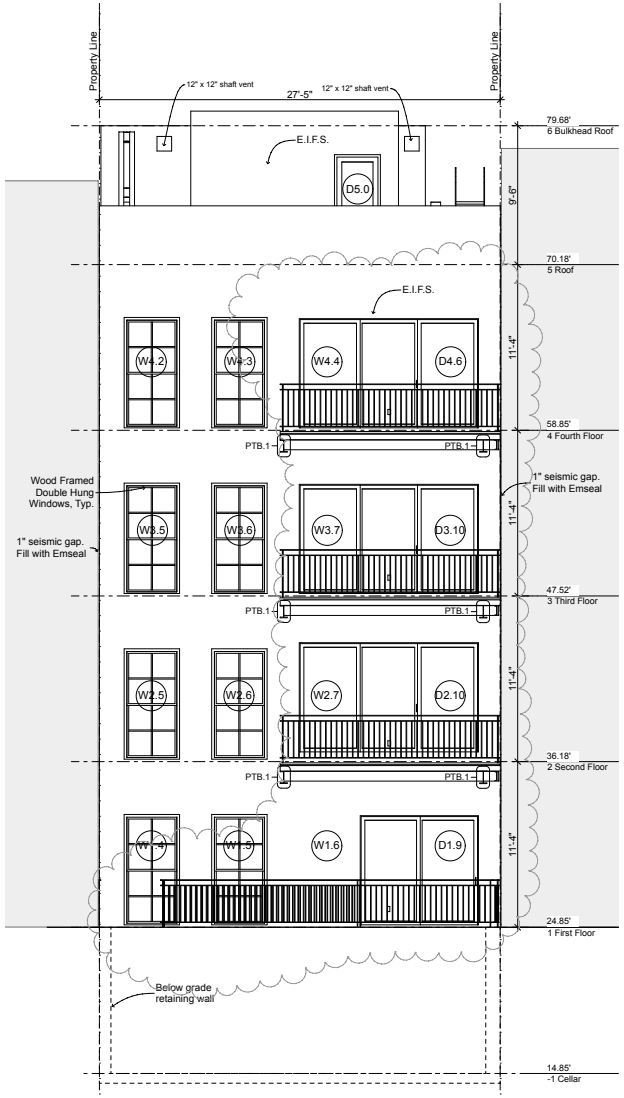
A-105.00

Sheet 15 of 17

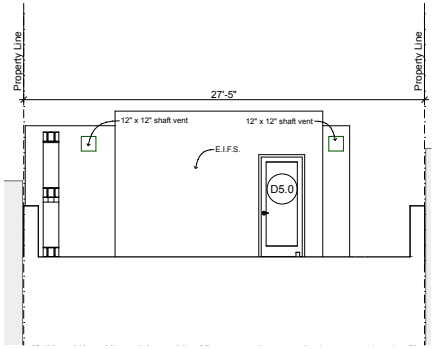
DOB Application #B00715872-I1



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



2 South Elevation
SCALE: 1/4" = 1'-0"



3 South Elevation at stair Bulkhead
SCALE: 1/4" = 1'-0"

JOSEPH VANCE ARCHITECTS
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PAA: 1.24.23
For Objections: 8.23.22
For Objections: 6.23.22
For Filing: 5.10.22

- OEA 1 - AA 01A -
920 Metropolitan Avenue
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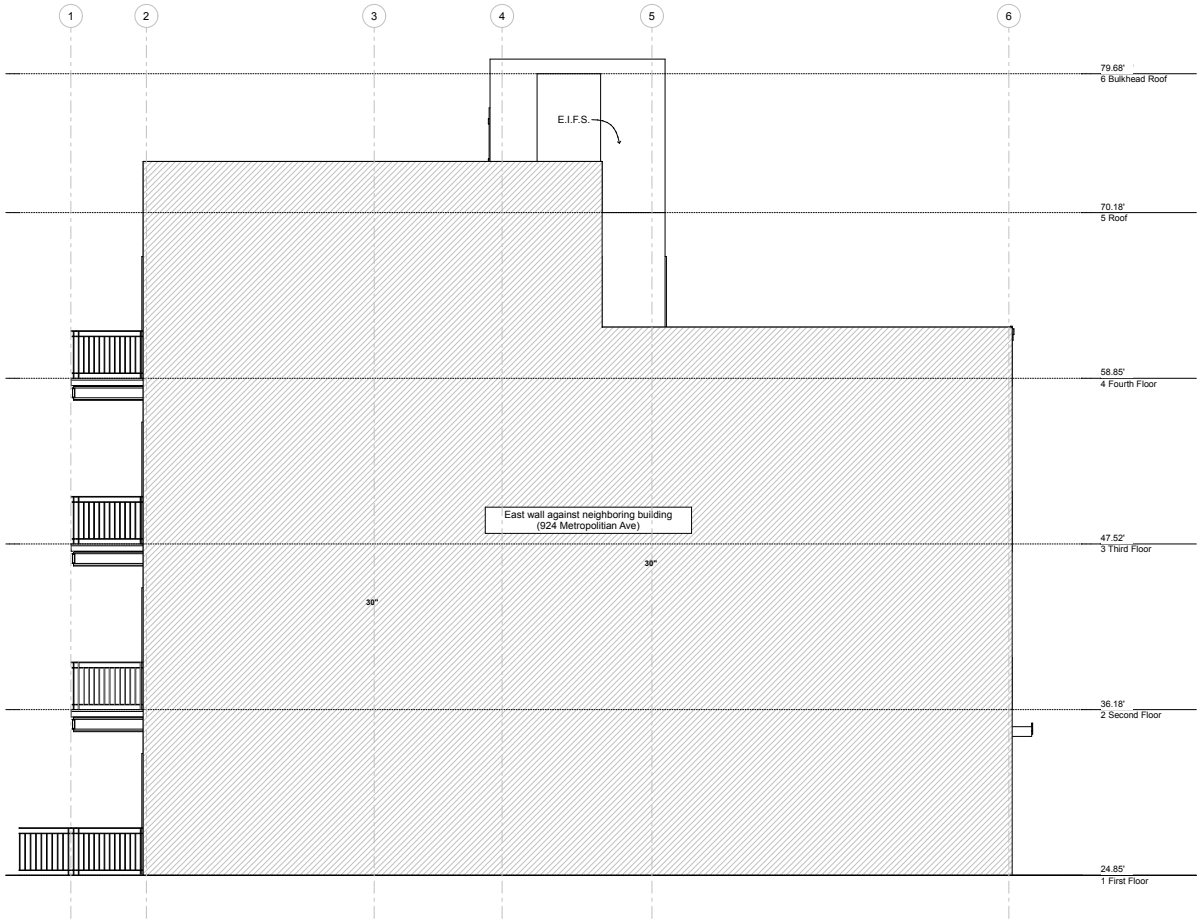
APPROVED
Under Directive 2 of 1975
AMENDED APPLICATION
Date: 03/29/2023
NYC Development Hub

920 Metropolitan Avenue Brooklyn, NY 11211

Exterior Elevations

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019760 STATE OF NEW YORK

A-200.01
Sheet 32 of 17
DOB Application #B00715872-P3



1 **East Elevation**
SCALE: 1/4" = 1'-0"

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
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For Filing: 5.10.22

920 Metropolitan Avenue

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APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

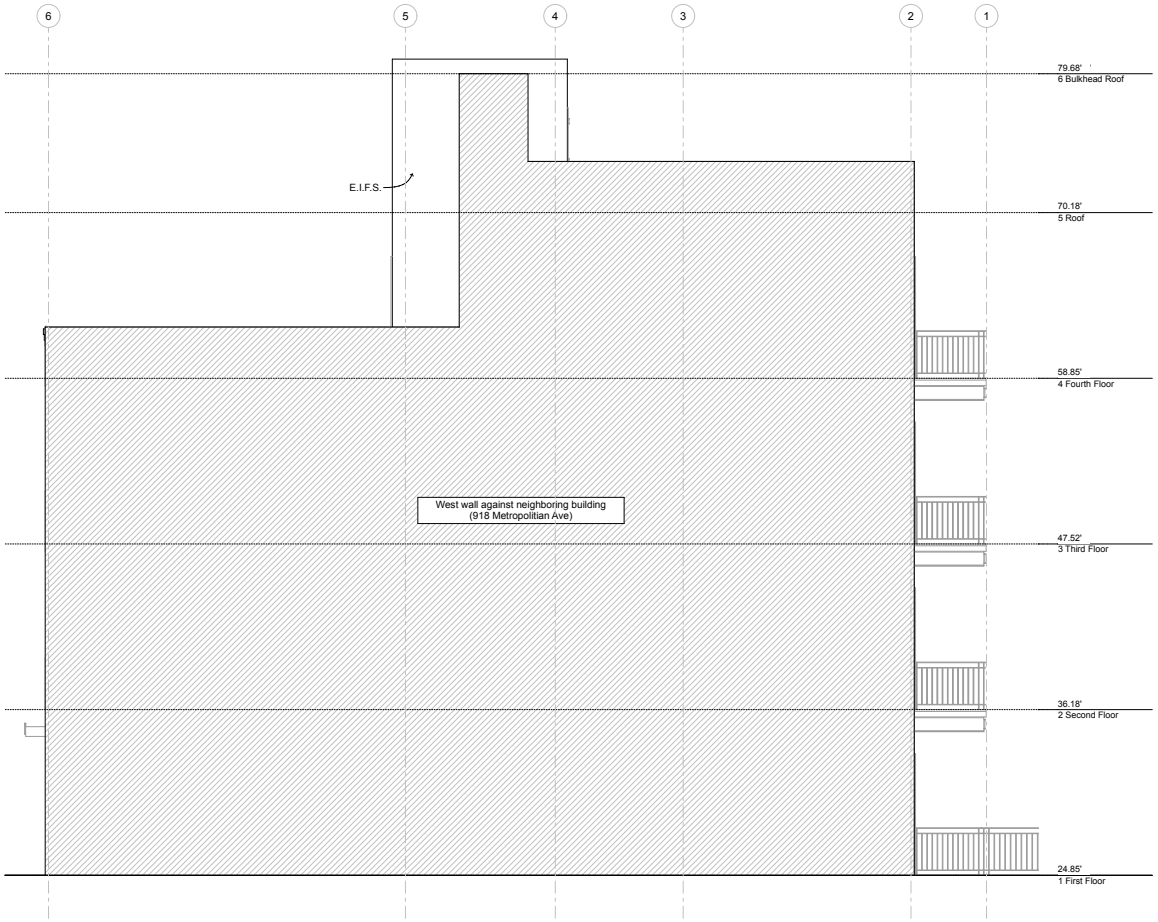
Exterior Elevations

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019769
STATE OF NEW YORK

A-201.00

Sheet 17 of 17

DOB Application #B00715872-I1



1 **West Elevation**
SCALE: 1/4" = 1'-0"

JOSEPH VANCE
ARCHITECTS
111 West 17th Street : New York, NY 10011
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Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

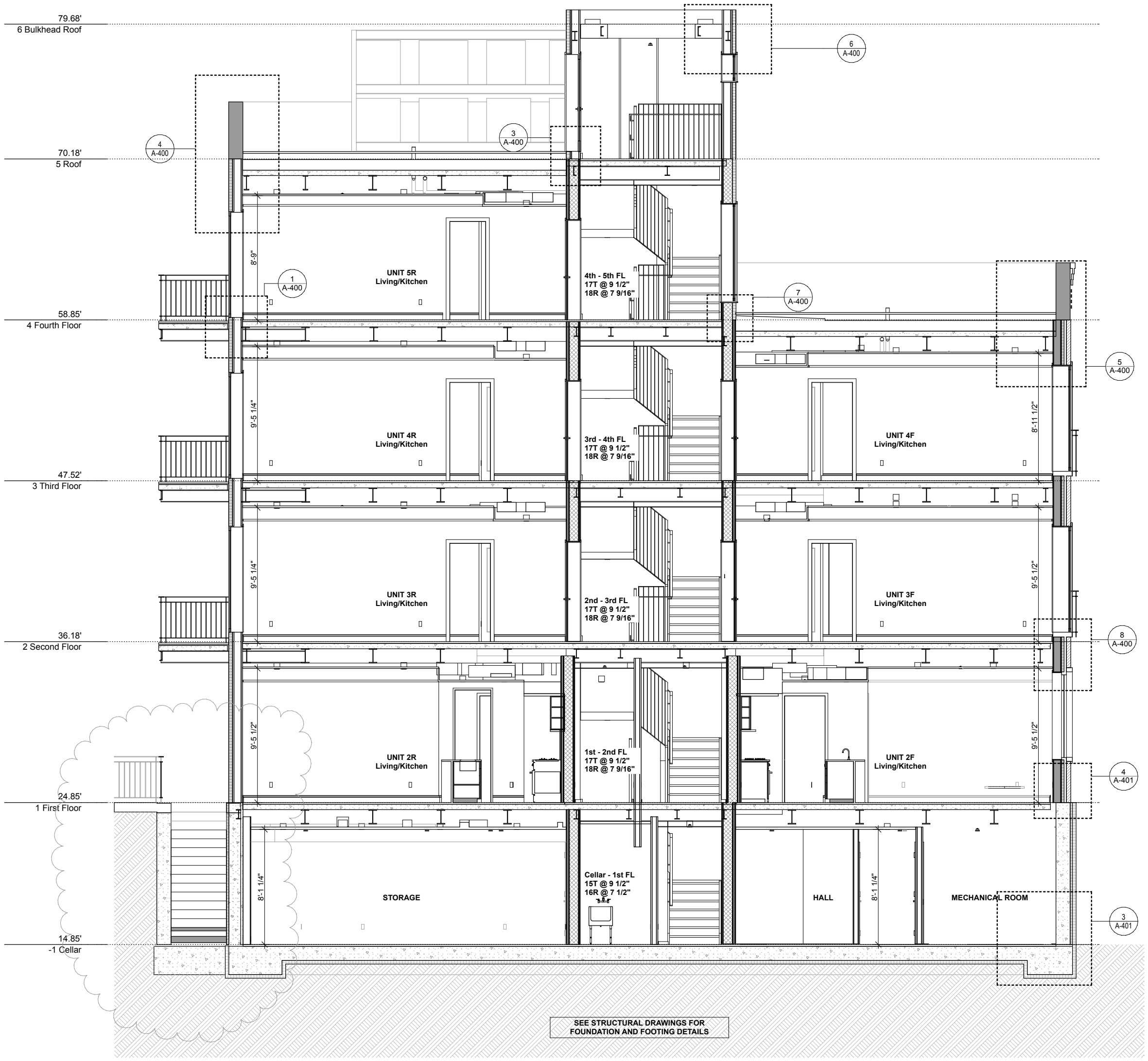
Exterior Elevations

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019769
STATE OF NEW YORK

A-202.00

Sheet 16 of 17

DOB Application #B00715872-I1



1 Longitudinal Building Section
SCALE: 1/4" = 1'-0"

2 Transverse Building Section
SCALE: 1/4" = 1'-0"

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111 West 17th Street : New York, NY 10011
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PAA: 1.24.23
For Filing: 5.10.22

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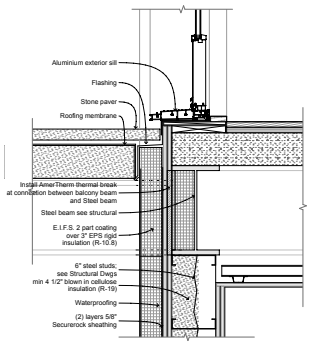
Under Directive 2 of 1975
AMENDED APPLICATION
Date: 03/29/2023
NYC Development Hub

920 Metropolitan Avenue Brooklyn, NY 11211

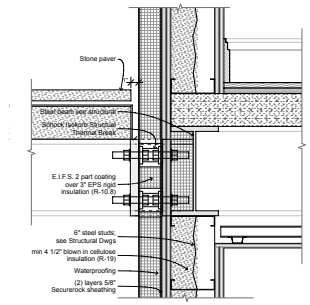
Building Sections

REGISTERED ARCHITECT
JOSEPH EDWARD VANCE
019760
STATE OF NEW YORK

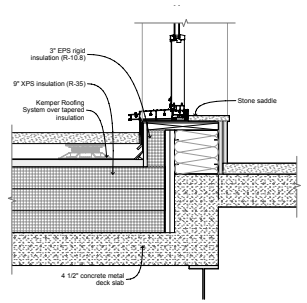
A-300.01
Sheet 33 of 17
DOB Application #B00715872-P3



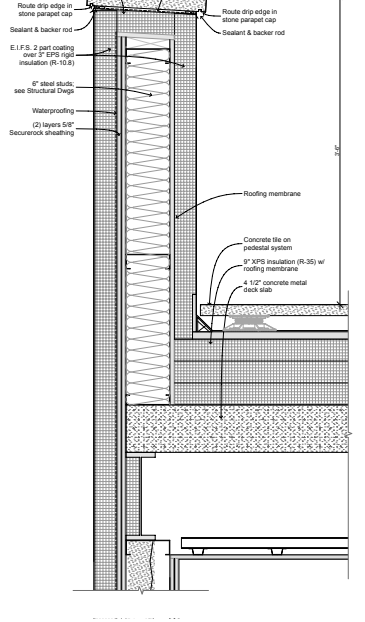
1 Roof to Balcony Detail
SCALE: 1 1/2"= 1'-0"



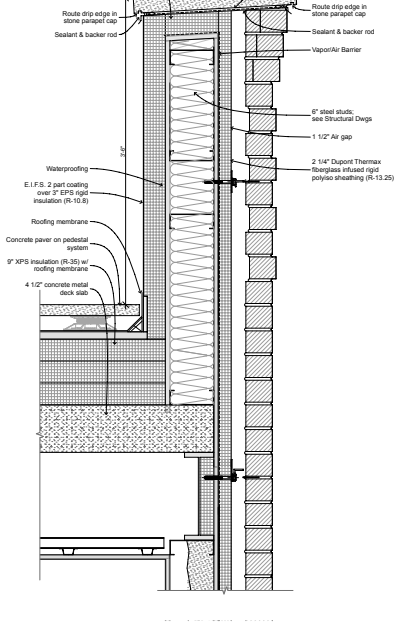
2 Rear Balcony Detail
SCALE: 1 1/2"= 1'-0"



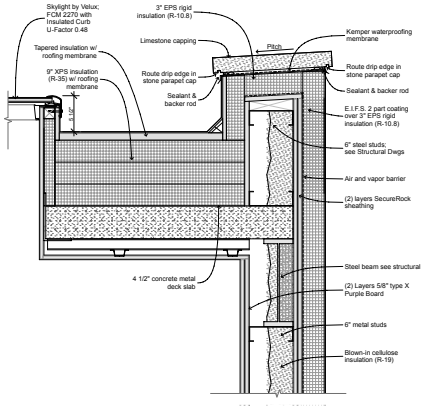
3 Roof threshold detail @ door
SCALE: 1 1/2"= 1'-0"



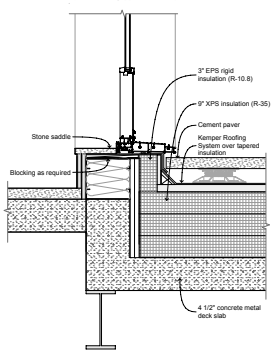
4 South Parapet Detail
SCALE: 1 1/2"= 1'-0"



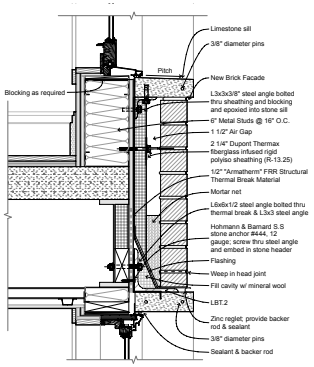
5 North Parapet Detail
SCALE: 1 1/2"= 1'-0"



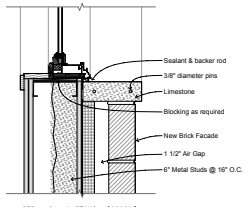
6 Bulkhead Roof Detail
SCALE: 1 1/2"= 1'-0"



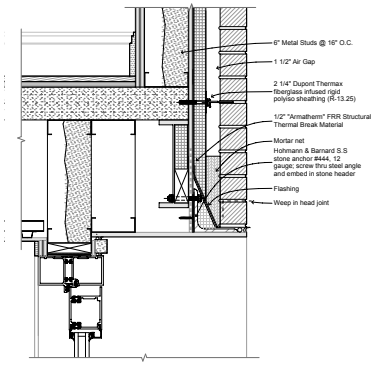
7 Roof to exterior door detail
SCALE: 1 1/2"= 1'-0"



8 Typ. Window Sill/Head Detail
SCALE: 1 1/2"= 1'-0"



9 Window Jamb Detail
SCALE: 1 1/2"= 1'-0"



10 Entry Door Head
SCALE: 1 1/2"= 1'-0"

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.joarchitects.com

EN Revison: 06.09.22
For Filing: 5.10.22

920 Metropolitan Avenue

Ambrosino Construction

NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

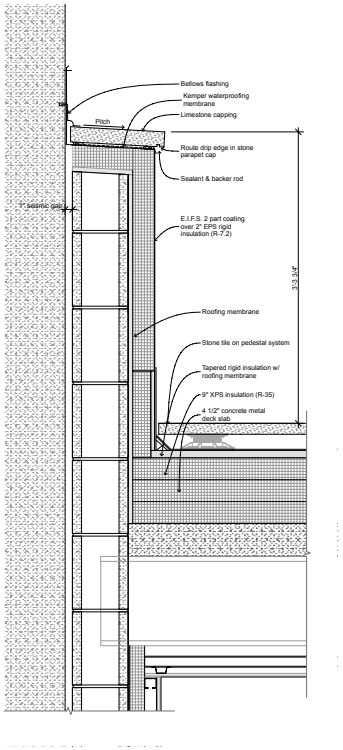
Exterior Details

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019769 STATE OF NEW YORK

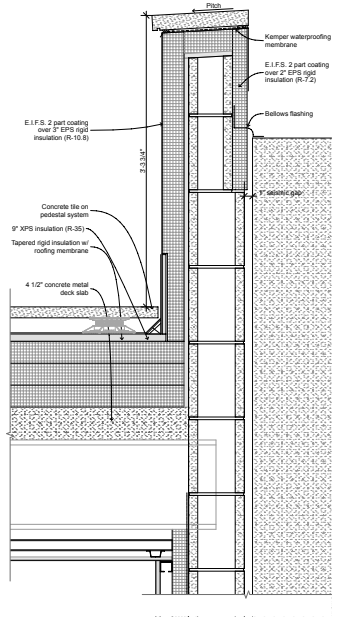
A-400.00

Sheet 20 of 17

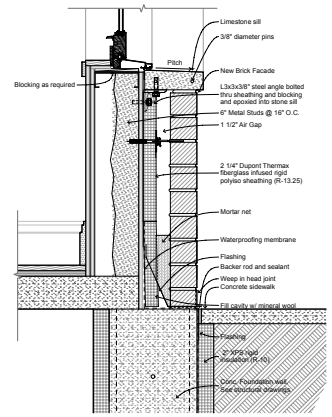
DOB Application #B00715872-I1



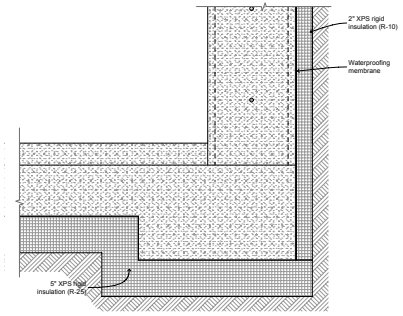
1 **Roof to Adjacent West Building Detail**
SCALE: 1 1/2"= 1'-0"



2 **Roof to Adjacent East Building Detail**
SCALE: 1 1/2"= 1'-0"



4 **Wall to Slab detail**
SCALE: 1 1/2"= 1'-0"



3 **Foorting Detail**
SCALE: 1 1/2"= 1'-0"

JOSEPH VANCE ARCHITECTS
111 West 17th Street : New York, NY 10011
(212) 645-1278 : www.jvarchitects.com

EN Revision: 06.09.22
For Filing: 5.10.22

920 Metropolitan Avenue

Ambrosino Construction

NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 09/06/2022

920 Metropolitan Avenue Brooklyn, NY 11211

Exterior Details

REGISTERED ARCHITECT JOSEPH EDWARD VANCE 019769 STATE OF NEW YORK

A-401.00

Sheet 21 of 17

DOB Application #B00715872-I1

PROJECT DESCRIPTION:

PROPOSED 4 STORY & CELLAR RESIDENTIAL.

SCOPE OF WORK:

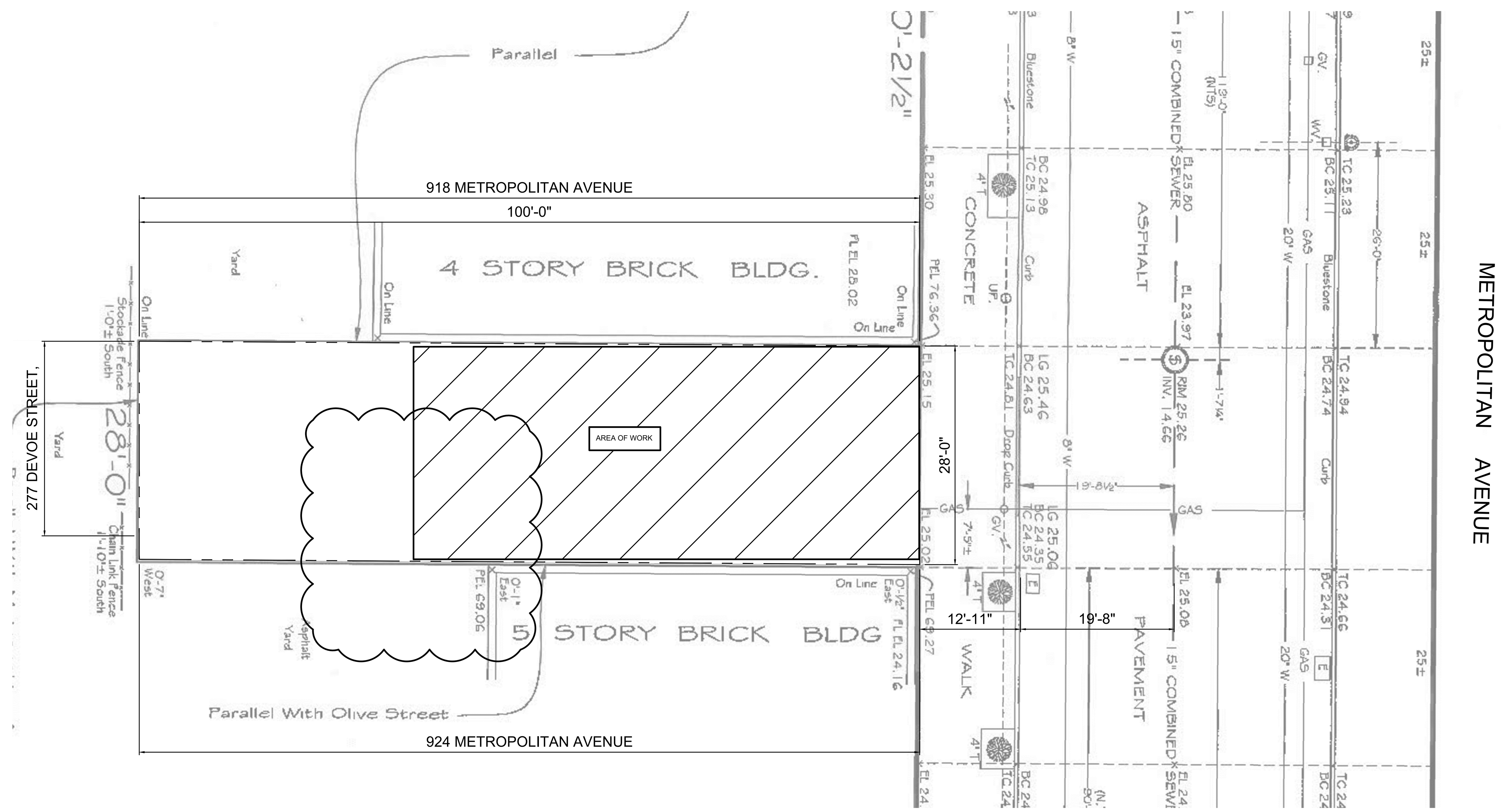
SOLDIER PILES, TIMBER LAGGINGS, WALER, RAKERS, AND STABLE SOIL SLOPE FOR THE PROPOSED EXCAVATION AND FOUNDATION WORK.

DRAWING INDEX		
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE
01	T-001.01	TITLE SHEET
02	SOE-001.01	GENERAL NOTES
03	SOE-002.00	GENERAL NOTES
04	SOE-101.01	SUPPORT OF EXCAVATION PLAN
05	SOE-102.01	MONITORING PLAN
06	SOE-201.01	SUPPORT OF EXCAVATION SECTIONS
07	SOE-202.01	SUPPORT OF EXCAVATION SECTIONS
08	SOE-301.01	SUPPORT OF EXCAVATION DETAILS
09	SOE-302.00	TYPICAL UNDERPINNING DETAILS

LIST OF RELATED JOB NOS.	
JOB TYPE	JOB NUMBER
ARCHITECTURAL	
~~STRUCTURAL~~	~~B00715872-S3~~
FOUNDATION	B00715872-P5
SUPPORT OF EXCAVATION	B00715872-P4

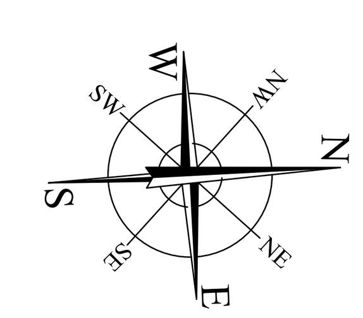
AREA OF EXCAVATION

KEY PLAN:



PLOT PLAN:

SCALE: 3/32"=1'-0"
BLOCK: 2917
LOT: 6



STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

40-12 28TH STREET
LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

NYC
Victor Daza Quinteros
APPROVED
Date: 05/04/2023

NOTE:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE	DESCRIPTION
	05/01/23	UPDATED FOR PAA
	04/12/23	UPDATED
	03/09/23	PER FO
	02/02/23	UPDATED
	11/02/22	UPDATED
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

TITLE SHEET

SEAL & SIGNATURE

DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO: T-001.01
SHEET NO: 01 OF 9

BSCAN STICKER

DOB APPROVAL STAMP

DOB JOB #B00715872-P4

SPECIAL INSPECTIONS:

1. PRIOR TO BEGINNING ANY WORK, THE OWNER SHALL RETAIN THE SERVICES OF S.E.T. , P.C., OR ANOTHER ACCEPTABLE LICENSED PROFESSIONAL ENGINEER WHO SHALL HAVE PROVEN EXPERIENCE ACCEPTABLE TO THE OWNER AND ARCHITECT. MINIMUM REQUIRED QUALIFICATIONS SHALL INCLUDE A PROFESSIONAL LIABILITY INSURANCE COVERAGE OF 1 MILLION DOLLARS AND A MINIMUM PROVEN EXPERIENCE OF 5 YEARS WITH SIMILAR WORK.

2. SPECIAL AND PROGRESS (CONTROLLED) INSPECTIONS REQUIRED BY THE NYC BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY AND / OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER AT NO COST TO THE CONTRACTOR FOR THE FOLLOWING CHECKED ITEMS:

		SPECIAL INSPECTION CATEGORIES	
		STRUCTURAL STEEL -- WELDING	BC 1704.3.1
		STRUCTURAL STEEL -- DETAILS	BC 1704.3.2
		STRUCTURAL STEEL -- HIGH STRENGTH BOLTING	BC 1704.3.3
		STRUCTURAL COLD-FORMED STEEL	BC 1704.3.4
X		CONCRETE -- CAST-IN-PLACE	BC 1704.3.4
		MASONRY	BC 1704.3.5
X		SUBGRADE INSPECTION	BC 1704.7.1
X		SUBSURFACE CONDITIONS -- FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2, BC 1704.7.3
		DEEP FOUNDATION ELEMENTS	BC 1704.8
		HELICAL PILES (BB # 2014-020)	BC 1704.8.5
		STRUCTURAL STABILITY -- EXISTING BUILDING	BC 1704.20.1
X		EXCAVATIONS--SHEETING, SHORING, BRACING	BC 1704.20.2
X		UNDERPINNING	BC 1704.20.3, BC 1814
		MECHANICAL DEMOLITION	BC 1704.20.4
		POST-INSTALLED ANCHORS (BB #2014-018, 2014-019)	BC 1704.32
X		CONCRETE DESIGN MIX	BC 1905.3, BC 1913.5
X		CONCRETE SAMPLING AND TESTING	BC 1905.6, BC 1913.10
		PROGRESS INSPECTION CATEGORIES	
		FOOTING AND FOUNDATION	BC 110.3.1
		STRUCTURAL WOOD FRAME	BC 110.3.3
		FINAL	28-116.2.4.2,
			BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY § 101-10

THE TESTING AGENCY FOR SPECIAL INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE NEW YORK CITY BUILDINGS DEPARTMENT.

3. THE CONTRACTORS ENGINEER SHALL PREPARE PLANS, CALCULATIONS, AND NOTES IN THE FORM OF SHOP DRAWINGS, FOR ALL ITEMS OF WORK WHICH DIFFER FROM WHAT IS SHOWN ON THE SOE DRAWINGS DUE TO FIELD CONDITIONS.

4. COPIES OF SUCH DRAWINGS WHICH INCLUDE THE ARCHITECT'S AND ENGINEER'S COMMENTS SHALL BE FILED WITH THE DEPARMENT OF BUILDINGS (ON AMENDMENT FORMS). ADDITIONALLY, AT COMPLETION OF WORK, FORMS INCLUDING ALL INSPECTION REPORTS PREPARED BY THE CONTRACTOR'S ENGINEER SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.

5. THE SPECIAL INSPECTIONS ENGINEER SHALL DETERMINE THE FREQUENCY OF INSPECTIONS NEEDED AND WHETHER HE OR SHE SHOULD INSPECT THE SITE PERSONALLY OR SEND A PERSON UNDER HIS OR HER DIRECT SUPERVISION. AT A MINIMUM, THE SITE MUST BE INSPECTED TWICE, ONCE AT A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND ONCE DURING CONSTRUCTION OPERATIONS.

6. THE SPECIAL INSPECTIONS ENGINEER, SHALL MAINTAIN A LOG IN HIS OR HER OFFICE WHICH INCLUDES THE FOLLOWING INFORMATION:

(i) ADDRESS OF THE PREMISES, JOB NUMBER, CONTRACTOR NAME AND ADDRESS
(ii) DATE AND TIME OF EACH INSPECTION INCLUDING
 (A) NAMES OF PERSONNEL WHO INSPECTED THE SITE
 (B) ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS GIVEN RELATING TO ANY OF THE FOLLOWING:
  (1) DEVIATIONS FROM THE CONTRACT DOCUMENTS.
  (2) ANTICIPATED FIELD CONDITIONS;
  (3) PROPER EXECUTION OF THE STRUCTURAL WORK;
  (4) GOOD ENGINEERING PRACTICE;
  (5) PRECAUTIONS TAKEN TO MAINTAIN SAFE CONDITIONS, IF WORK IS STOPPED FOR ANY REASON.

(iii) THE DATE OF AND PARTICIPANTS IN ANY CONVERSATIONS WITH THE SPECIAL INSPECTIONS ENGINEER OCCURING OFF-SITE AND RELATING TO ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS.

7. THE SPECIAL INSPECTIONS ENGINEER SHALL RETAIN A COPY OF THE DOCUMENTS DESCRIBED ABOVE IN HIS OR HER OFFICE AND SHALL PROVIDE A COPY TO THE CONTRACTOR AND / OR OWNER TO BE KEPT AT THE CONSTRUCTION SITE.

8. THE SPECIAL INSPECTIONS ENGINEER RESPONSIBLE FOR SPECIAL INSPECTION SHALL REPORT UNSAFE CONDITIONS, WHEN AND IF OBSERVED DURING HIS / HER SITE VISITS, TO THE DEPARTMENT OF BUILDINGS AND / OR ANY OTHER AFFECTED PARTIES OR AGENCIES. IT IS TO BE NOTED THAT THE SPECIAL INSPECTIONS ENGINEER AND ENGINEER OF RECORD ARE NOT RESPONSIBLE IN ANY WAY FOR SITE SAFETY. SITE SAFETY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

9. UPON REQUEST OF THE BUILDINGS DEPARTMENT, THE SPECIAL INSPECTIONS ENGINEER SHALL MAKE AVAILABLE FOR REVIEW BY THE BUILDINGS DEPARTMENT DOCUMENTS AND THE LOG DESCRIBED ABOVE.

SAFETY DURING EXECUTION OF WORK:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL PROVIDE SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BLDG. CODE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR ALL WORKERS. THIS SHALL INCLUDE COMPLIANCE WITH ALL OSHA, STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.

5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

GENERAL

1. THE DESIGNS ON THESE DRAWINGS ARE INTENDED FOR TEMPORARY SUPPORT OF EXCAVATION ONLY.

2. THESE DRAWINGS ARE INTENDED TO BE USED BY ONLY AN EXPERIENCED CONTRACTOR AFTER CONSULTATION WITH THIS OFFICE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR JOB SITE PROBLEMS DUE TO FAILURE TO INTERPRET THE DOCUMENTS CORRECTLY. REPRESENTATIVES OF S.E.T., P.C. ARE AVAILABLE TO ANSWER QUESTIONS AND TO ASSIST THE CONTRACTOR BY EXPLAINING THE DESIGN INTENT. FAILURE BY THE CONTRACTOR TO UNDERSTAND THE COMPLEXITIES OF THE PROJECT AND THE SEQUENCE OF CONSTRUCTION CAN RESULT IN INJURY OR DEATH TO WORKERS. PROCEEDING WITH CONSTRUCTION WITHOUT FULL UNDERSTANDING OF THE PROJECT AND WITHOUT A COMPLETE SET OF DESIGN DOCUMENTS WILL PUT BOTH THE PROJECT AND INDIVIDUALS IN PERIL. THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR ANY CONSEQUENCE OF THAT ACTION.

3. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPELLED OUT IN THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS.

4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT BUILDING CODE OF ALL GOVERNING AUTHORITIES.

5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND DRAWINGS.

6. THE DESIGN PLANS AND NOTES, TO THE BEST OF ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.

7. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.

8. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON JOB AND SHALL BE RESPONSIBLE FOR SAME.

9. ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SHOULD NOT BE USED FOR ORDERING AND/OR FABRICATING MATERIAL. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATING MATERIALS.

10. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BY MEASUREMENTS AT THE JOB SITE AND SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM WORK PROPERLY.

11. DIFFERENT FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF S.E.T., P.C. IMMEDIATELY FOR EVALUATION. IF THE CONDITIONS OBSERVED AS THE EXCAVATION ADVANCES ARE DIFFERENT THAN THE CONDITIONS SHOWN ON THE DESIGN DRAWINGS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER. MODIFICATIONS TO THESE DRAWINGS MAY BE NECESSARY.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES AND BELOW GROUND STRUCTURES IN THE AREA OF WORK PRIOR TO COMMENCEMENT OF WORK.

13. NOTIFY DOB 24 TO 48 HOURS PRIOR TO START OF EXCAVATION (RULE 52).

14. SIDEWLAK CLOSING FROM NYDOT IS REQUIRED TO OVERCUT THE SIDEWALK OR TO PLACE SUPPORT OF EXCAVATION ELEMENTS IN THE SIDEWALK OR STREET.

15. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATION WITH OTHER TRADES, METHODS, SAFETY AND SECURITY ON THE JOB SITE. S.E.T., P.C. AND ITS AGENTS AND EMPLOYEES ARE NOT RESPONSIBLE OR LIABLE FOR THE ABOVE AND SHALL BE HELD HARMLESS AND INDEMNIFIED BY ALL CONTRACTORS AND SUBCONTRACTORS FROM ANY AND ALL CLAIMS, LOSSES, SUITS AND LIABILITIES WHATSOEVER ARISING FROM THE PERFORMANCE OF WORK ON THIS PROJECT.

16. ALL WORK PERFORMED WHICH AFFECTS THE ADJACENT BUILDING OPERATIONS SHALL CAUSE MINIMUM DISTURBANCE TO THE NORMAL OPERATION OF AFFECTED PARTS OF THE BUILDING.

17. PINS, WIRE MESH, AND PARGING MAY BE REQUIRED TO STABILIZE THE FOUNDATION WALL, OR FOOTINGS. LOOSE AREAS OF FOUNDATION WALL OR FOOTINGS THAT ARE DAMAGED OR LOOSE SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR EVALUATION AND REMEDIAL MEASURES.

18. CONSENT FROM OWNERS OF ADJACENT PROPERTIES SHALL BE OBTAINED IF REQUIRED WORK EXTENDS BEYOND PROPERTY LINE.

19. ALL CONTRACTORS MUST VISIT SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET BEFORE SUBMITTING BID. LACK OF THOROUGH UNDERSTANDING OF THE PROJECT REQUIREMENTS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR JUSTIFY A REQUEST FOR EXTRA COMPENSATION.

20. CONTRACTOR SHALL MAKE NO DEVIATION FROM THESE DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.

21. ACCEPTANCE OF DEVIATIONS FROM ANY OF THE REQUIREMENTS OF THESE NOTES SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. ACCEPTANCE OF A DEVIATION FROM ANY REQUIREMENT SHALL NOT BE CONSTRUED AS PERMITTING ANY OTHER DEVIATION.

22. A PERMIT SHALL BE OBTAINED FROM DOT FOR SIDEWALK CLOSURE TO INSTALL SOLDIER PILES OR ANY INTRUSION PAST PROPERTY LINE.

23. CONSTRUCTION OF NEW CONCRETE WALLS AGAINST EXISTING STRUCTURES SHALL COMPLY WITH NYCDOB BUILDINGS BULLETIN #2009-11.

BIDDERS WARRANTY:

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT:

1. THE BIDDER AND ALL SUBCONTRACTORS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND OTHER CONSTRUCTION CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE CONTRACTOR TO BID, FABRICATE, AND INSTALL THE WORK ON TIME, FURTHER THAT,

2. THE BIDDER AND ALL WORKMEN, EMPLOYEES AND SUBCONTRACTORS HE INTENDS TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON; FURTHER THAT,

3. NEITHER THE BIDDER NOR ANY OF HIS EMPLOYEES, AGENTS INTENDED SUPPLIERS OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS, ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER, HIS EMPLOYEES OR AGENTS INCLUDING ARCHITECTS, ENGINEERS OR CONSULTANTS, IN ASSEMBLING THE BID FIGURE; AND FURTHER THAT,THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NOT UPON ANY OTHER WRITTEN REPRESENTATION.

4. THE BIDDER ALSO WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM HIS OWN INVESTIGATIONS HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR ITS PERFORMANCE.

DISCLAIMER:
THE DRAWINGS HEREIN ARE RELATED TO A NEW BUILDING STRUCTURE. THE STRUCTURAL DESIGN WAS BASED UPON AS MUCH OBSERVATION, MEASUREMENT, TESTING, ETC. AS CIRCUMSTANCES PERMITTED, HOWEVER, THERE WERE ASSUMPTIONS MADE ABOUT UNKNOWN CONDITIONS. SHOULD THE OWNER DECIDE NOT TO UTILIZE S.E.T. , P.C. TO VERIFY AND INSPECT THESE CONDITIONS IN THE FIELD, S.E.T. , P.C. WILL NOT BE RESPONSIBLE FOR ANY FAILURE, DAMAGE, INJURY, DELAY, LOSS OF INCOME, EXTRA COST, OR ANY OTHER LOSS DUE TO EXISTING CONDITIONS.

SHOP DRAWING REVIEW:
THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS WITH RESPECT TO CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED IN DUPLICATE. EXCESS DRAWINGS WILL BE DISCARDED. IF REQUIRED BY SPECIFICATIONS, SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, INCLUDING REFLECTION OF EXISTING FIELD CONDITIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER WILL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION FROM THE CONTRACT UNLESS CONTRACTOR ADVISES THE ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY THE ENGINEER IN WRITING. IN THE EVENT THAT THE ENGINEER WILL REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM REVIEW, THE ENGINEER WILL SO NOTIFY THE CONTRACTOR. THE ENGINEER WILL RETURN WITHOUT REVIEW MATERIAL WHICH HAS NOT BEEN APPROVED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER

FIDUCIARY LIABILITY DECLINED:
S.E.T., P.C. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED AS TO S.E.T.. P.C. FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE. S.E.T., P.C. HAS ENDEAVORED AND WILL ENDEAVOR TO PERFORM ITS SERVICES IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OR PRACTICE IN EFFECT AT THE TIME OF PERFORMANCE. BY UTILIZING THESE DOCUMENTS (OR HAVING OTHERS UTILIZE THEM) FOR ANY PURPOSE WHATSOEVER THE OWNER OR DEVELOPER RECOGNIZES THAT NEITHER S.E.T., P.C. OR ANY OF S.E.T., P.C. SUBCONSULTANTS OR SUBCONTRACTORS OWES ANY FIDUCIARY RESPONSIBILITY TO THE OWNER OR DEVELOPER.

EXCAVATION NOTES:

1. CONTRACTOR SHALL CALL 811 BEFORE ANY EXCAVATION BEGINS, FOR UTILITY COMPANIES TO MARK OUT ALL EXISTING UTILITY LINES.

2. PRIOR TO COMMENCEMENT OF MASS EXCAVATION, THE ADJOINING PROPERTIES AND STREETS SHALL BE VISUALLY SURVEYED BY THE CONTRACTOR, SUITABLY MARKED WITH PERMANENT MONITORING POINTS TO BE MEASURED DURING CONSTRUCTION FOR THE PURPOSES OF DETERMINING CONSTRUCTION-RELATED EFFECTS. REPORT WITH PHOTOGRAPHS SHALL BE PROVIDED TO ARCHITECT AND ENGINEER IN TRIPLICATE COPIES. A PRE-CONSTRUCTION DAMAGE CONDITION SURVEY OF THE ADJOINING PROPERTIES SHALL BE MADE IN WRITTEN AND PICTORIAL FORM, AND TWO COPIES SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE.

3. A COMPETENT REPRESENTATIVE OF THE CONTRACTOR SHALL INSPECT THE SUBGRADE OF THE EXCAVATION, ANY AND ALL BRACING AND BLOCKING, AT THE COMMENCEMENT OF EACH SHIFT, TO ASSURE INTEGRITY, PRIOR TO PERMITTING WORKMEN TO WORK WITHIN ANY EXCAVATED AREA. ALL SIDES OR SLOPES OF EXCAVATIONS SHALL BE INSPECTED FOR STABILITY AFTER RAINSTORMS.

4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SUBGRADE CONDITIONS PRIOR TO START OF WORK. THESE DRAWINGS DISCOUNT UNDERGROUND WATER CONDITIONS.

5. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY EXCAVATION RESTRAINT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT AS PER THE SOE DESIGN OUTLINED IN THESE DRAWINGS.

6. ALL EXCAVATION GREATER THAN 5-FT IN DEPTH SHALL BE SHEETED, OR LAGGED AND BRACED.

7. IF BRACING IS USED TO SUPPORT THE EXCAVATION, PROVIDE THE REACTION TO THE BRACING BY PRE-LOADING OR BY THE USE OF SUITABLE WEDGES PROPERLY DRIVEN INTO THE JOINTS UNTIL THE NECESSARY REACTION IS PRODUCED AGAINST THE BANKS.

8. IF MATERIAL BEHIND LAGGING IS LOST OR DISTURBED, LEAVE A 1- TO 1.5-IN SPACE BETWEEN LAGGING BOARDS AND IMMEDIATELY BACKFILL OR GROUT.

9. NO MATERIAL STORAGE SHALL BE PLACED WITHIN 10-FT OF EXCAVATION PERIMETER.

10. BOTTOM OF EXCAVATION ELEVATION AS SHOWN ON THESE DRAWINGS SHALL BE VERIFIED AND COORDINATED IN FIELD WITH CONTRACT DOCUMENTS.

11. EXCAVATION ELEVATIONS SHOWN ON THESE DRAWINGS ARE BASED ON ELEVATIONS SHOWN ON DESIGN STRUCTURAL / ARCHITECTURAL DRAWINGS. ADDITIONAL EXCAVATION MAY BE REQUIRED AS PER STRUCTURAL DESIGN AND CONSTRUCTION REQUIREMENTS.

12. USE HAND TOOLS TO EXCAVATE WITHIN 5-FT OF UNDERGROUND UTILITIES.

13. PROVIDE BLOCK OUTS USING HIGH DENSITY FOAM IN CONCRETE STRUCTURE WHERE SHORING STRUCTURE ELEMENTS PENETRATE NEW FOUNDATION WALL.

14. THOUGH USUALLY SMALL, SETTLEMENT NEARLY ALWAYS ACCOMPANIES EXCAVATION / UNDERPINNING / SHEETING WORK. THE AMOUNT OF SETTLEMENT, IF ANY, WILL VARY BASED ON THE TYPE OF BUILDING, THE CLASS OF SOILS UPON WHICH IT RESTS, THE PRESENCE OR ABSENCE OF GROUNDWATER, THE RESERVE FOUNDATION LOAD CAPACITY OF THE ORIGINAL FOUNDATION AND THE EXCELLENCE AND CARE OF THE WORKMANSHIP OF THE CONTRACTOR INSTALLING THE EXCAVATION / UNDERPINNING / SHEETING. BY USING THESE DRAWINGS TO COMPLETE THE EXCAVATION / UNDERPINNING / SHEETING WORK, THE CONTRACTOR AND THE OWNER UNDERSTAND THE INHERENT RISK AND ASSUME ALL RESPONSIBILITY FOR THE EFFECTS OF ANY SETTLEMENT THAT MIGHT OCCUR. ALL EXCAVATION / UNDERPINNING / SHEETING WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER OF RECORD SHALL BE NOTIFIED IF SETTLEMENTS SHOULD EXCEED 1/4-IN.

15. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION AREA.

DRAINAGE NOTES:

NO CONDITION SHALL BE CREATED AS A RESULT OF CONSTRUCTION OR DEMOLITION OPERATIONS THAT WILL INTERFERE WITH NATURAL SURFACE DRAINAGE, WATER COURSES, DRAINAGE DITCHES, ITC., SHALL NOT BE OBSTRUCTED BY REFUSE, WASTE BUILDING MATERIALS, EARTH, STONES, TREE STUMPS, BRANCHES, OR OTHER DEBRIS THAT MAY INTERFERE WITH SURFACE DRAINAGE OR CAUSE THE IMPOUNDMENT OF SURFACE WATERS.

1. PROTECTION OF FOUNDATIONS:
PROVISION SHALL BE MADE TO PREVENT THE ACCUMULATION OF WATER OR WATER DAMAGE TO ANY FOUNDATIONS ON THE PREMISES OR TO ADJOINING PROPERTY.

2. DRAINAGE OF EXCAVATIONS:
ALL EXCAVATIONS SHALL BE DRAINED, AND THE DRAINAGE SHALL BE MAINTAINED AS LONG AS THE EXCAVATION CONTINUES OR REMAINS. WHERE NECESSARY, PUMPING SHALL BE USED, PROVIDED PROPER PERMITS ARE OBTAINED FROM THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

3. CLOGGING:
PRECAUTIONS SHALL BE TAKEN TO PREVENT CONCRETE OR MORTAR WASHINGS, SAND, GRIT, OR ANY OTHER MATERIAL THAT WOULD CAUSE CLOGGING FROM ENTERING A SEWER OR DRAIN. CONCRETE WASHOUT WATER SHALL ALSO MEET THE REQUIREMENTS OF NYC BC SECTION 3303.15.

STRUCTURAL STABILITY NOTES:

1. SPECIAL INSPECTION OF THE STABILITY AND INTEGRITY OF EXISTING STRUCTURES DURING CONSTRUCTION OPERATIONS IS REQUIRED BY THE NEW YORK CITY BUILDING CODE CHAPTER 17.

2. CONTRACTOR SHALL PREPARE A STRUCTURAL STABILITY PLAN, TO BE SUBMITTED TO THE STRUCTURAL ENGINEER (SIGNED AND SEALED BY THE PROFESSIONAL ENGINEERS RESPONSIBLE FOR ITS DESIGN) FOR REVIEW, AND APPROVAL PRIOR TO ANY DEMOLITION WORK OR MODIFICATIONS TO THE EXISTING STRUCTURE. THIS STRUCTURAL STABILITY PLAN SHALL INCLUDE:

 A. LAYOUT AND DETAILS OF SHORING, BRACING, UNDERPINNING AND OTHER WORK REQUIRED TO MAINTAIN THE STABILITY AND INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION OPERATIONS.

 B. PHASING, STAGING, AND SEQUENCING OF SUCH OPERATIONS.

 C. DESIGN LOADS FOR WHICH THE STABILITY SYSTEM HAS BEEN DESIGNED.

3. OWNER SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE STRUCTURAL STABILITY INSPECTION. THE CONTROLLED INSPECTION ENGINEER SHALL MAINTAIN RECORDS AS REQUIRED BY THE NEW YORK CITY BUILDING CODE. THE CONTROLLED INSPECTION ENGINEER SHALL USE THE STRUCTURAL STABILITY PLAN PREPARED BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER AS THE BASIS FOR THE CONTROLLED INSPECTIONS.

REFERENCES:

1. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

2. SOE PLANS AND SECTIONS ARE BASED ON:
 2.1. ARCHITECTURAL SURVEY BY TRIBOROUGH SURVEYING INC. DATED DECEMBER 2, 2021.
 2.2. ARCHITECTURAL DRAWINGS BY JOSEPH VANCE ARCHITECTS, RECEIVED ON DECEMBER 13, 2021.
 2.3. STRUCTURAL DRAWINGS BY STRUCTURAL ENGINEERING TECHNOLOGIES, DATED MARCH 24, 2021.

3. SUB-SURFACE INFORMATION OBTAINED FROM:
 3.1 BORING LOGS BY STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. DATED NOVEMBER 9, 2021.
 3.2 TEST PIT LOGS BY PG ENVIRONMENTAL SERVICES INC., DATED DECEMBER 4, 2021.

4. LOCATIONS AND ELEVATIONS OF ALL PROPOSED STRUCTURAL BUILDING ELEMENTS SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND SHALL BE SUPERSEDED BY FINAL STRUCTURAL AND ARCHITECTURAL DRAWINGS.

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

40-12 28TH STREET
LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

NYC
Victor Daza Quinteros
APPROVED
Date: 05/04/2023

NOTE:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE	DESCRIPTION
	05/01/23	UPDATED FOR PAA
	04/12/23	UPDATED
	03/09/23	PER FO
	02/02/23	UPDATED
	11/02/22	UPDATED
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

GENERAL NOTES

SEAL & SIGNATURE

DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO:
SOE-001.01

SHEET NO: 02 OF 9

BSCAN STICKER

DOB APPROVAL STAMP

DOB JOB #B00715872-P4

NEW YORK CITY BUILDING CODE COMPLIANCE NOTES:

1. **DEWATERING NOTES:**
AS PER BC10704.21, THE PERSON CAUSING THE SOIL OR FOUNDATION WORK TO BE PERFORMED SHALL DEWATER THE SITE, AS NEEDED, FOR THE PROGRESS OF THE WORK. MEASURES SHALL BE TAKEN TO PREVENT SETTLEMENT, SLOPE FAILURE, AND DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND PROPERTY AFFECTED BY DEWATER OPERATIONS.

2. **DRAINAGE NOTES:**
AS PER BC 3303.14, NO CONDITION SHALL BE CREATED AS A RESULT OF CONSTRUCTION OR DEMOLITION OPERATIONS THAT WILL INTERFERE WITH NATURAL SURFACE DRAINAGE. WATER COURSES, DRAINAGE DITCHES, ETC., SHALL NOT BE OBSTRUCTED BY REFUSE, WASTE BUILDING MATERIALS, EARTH, STONES, TREE STUMPS, BRANCHES, OR OTHER DEBRIS THAT MAY INTERFERE WITH SURFACE DRAINAGE OR CAUSE THE IMPOUNDMENT OF SURFACE WATERS.

2.1 **PROTECTION OF FOUNDATIONS**
AS PER BC 3303.14.1, PROVISION SHALL BE MADE TO PREVENT THE ACCUMULATION OF WATER OR WATER DAMAGE TO ANY FOUNDATIONS ON THE PREMISES OR TO ADJOINING PROPERTY.

2.2 **DRAINAGE OF EXCAVATIONS**
AS PER 3303.14.2, ALL EXCAVATIONS SHALL BE DRAINED, AND THE DRAINAGE SHALL BE MAINTAINED AS LONG AS THE EXCAVATION CONTINUES OR REMAINS. WHERE NECESSARY, PUMPING SHALL BE USED, PROVIDED PROPER PERMITS ARE OBTAINED FROM THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

2.3 **CLOGGING**
AS PER 3303.14.3, PRECAUTIONS SHALL BE TAKEN TO PREVENT CONCRETE OR MORTAR WASHINGS, SAND, GRIT, OR ANY OTHER MATERIAL THAT WOULD CAUSE CLOGGING FROM ENTERING A SEWER OR DRAIN. CONCRETE WASHOUT WATER SHALL ALSO MEET THE REQUIREMENTS OF NYC BC SECTION 3303.15.

3. **FLOOD-RESISTANT CONSTRUCTION NOTES:**
AS PER BC APPENDIX G, CONDITIONS SHALL PROMOTE THE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE AND TO MINIMIZE PUBLIC AND PRIVATE LOSSES DUE TO FLOOD CONDITIONS IN SPECIFIC FLOOD HAZARD AREAS THROUGH THE ESTABLISHMENT OF COMPREHENSIVE REGULATIONS FOR MANAGEMENT OF FLOOD HAZARD DESIGNED TO;

3.1 **PURPOSE**
3.1.1 PREVENT UNNECESSARY DISRUPTION OF COMMERCE, ACCESS AND PUBLIC SERVICE DURING TIMES OF FLOODING;

3.1.2 MANAGE THE ALTERATION OF NATURAL FLOOD PLAINS, STREAM CHANNELS AND SHORELINES;

3.1.3 MANAGE FILLING, GRADING, DREDGING AND OTHER DEVELOPMENT WHICH MAY INCREASE FLOOD DAMAGE OR EROSION POTENTIAL;

3.1.4 PREVENT OR REGULATE THE CONSTRUCTION OF FLOOD BARRIERS WHICH WILL DIVERT FLOODWATERS OR WHICH CAN INCREASE FLOOD HAZARDS;

3.1.5 CONTRIBUTE TO IMPROVED CONSTRUCTION TECHNIQUES IN THE FLOOD PLAIN; AND

3.1.6 COMPLY WITH AND EXCEED THE MINIMUM STANDARDS OF THE NATIONAL FLOOD INSURANCE PROGRAM AS ADMINISTERED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

3.2 **SITE IMPROVEMENT - RETAINING WALLS, DRIVEWAYS, GRADING & FILL**

3.2.1 RETAINING WALL'S GRADING AND FILL COMPLIES WITH REQUIREMENTS IN BC G303.6 & G303.7.

4. **SOILS & FOUNDATIONS DESIGN LOAD NOTES:**
AS PER BC CHAPTER 18 & BC 107.7.1, FOUNDATION PLANS SHALL DEMONSTRATE CODE COMPLIANCE REGARDING DESIGN LOADS, DESIGN ELEVATIONS, AND DETAILS AS TO SIZES, CURE STRENGTHS AND REINFORCEMENTS.

4.1 **ALLOWABLE BEARING PRESSURES, ALLOWABLE STRESSES AND DESIGN FORMULAS**
AS PER BC CHAPTER 18, DESIGN FORMULAS SHALL BE USED WITH THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS SPECIFIED IN SECTION 1605.3. THE QUALITY AND DESIGN OF MATERIALS USED STRUCTURALLY IN EXCAVATIONS AND FOUNDATIONS SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN CHAPTERS 16, 19, 21, 22 AND 23. OTHERWISE, AS PER PROJECT SPECIFIED.

5. **CONSTRUCTION OPERATIONS NOTES:**
AS REQUIRED IN BC 3303.14 & BC 3304.10, CONSTRUCTION OPERATIONS HAVE ACCOUNTED FOR THE PREVENTION OF ACCUMULATION OF WATER, WHICH COULD CAUSE DAMAGE TO NEARBY BUILDING FOUNDATIONS ON THE SUBJECT PROPERTY OR ON ADJACENT PROPERTIES.

6. **RODENT-PROOFING NOTES:**
AS PER BC F102.1, FOR WALLS OR PORTIONS THEREOF WITHIN 2 FEET OF THE OUTSIDE GROUND LEVEL, AND FOR WALLS BELOW THE OUTSIDE GROUND LEVEL, ALL OPENINGS, INCLUDING BUT NOT LIMITED TO, ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, AND CONDUITS, SHALL BE PROTECTED BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, METAL PLATES OR SCREENING DESIGNED TO PREVENT THE PASSAGE OF RODENTS.

7. **SEISMIC LOAD NOTES:**
AS PER BC 1613, EVERY STRUCTURE, AND PORTION THEREOF, INCLUDING NONSTRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7-10, EXCLUDING CHAPTER 14 AND APPENDIX 11A. THE SEISMIC DESIGN CATEGORY FOR A STRUCTURE SHALL BE DETERMINED IN ACCORDANCE WITH EITHER SECTION 1613 OR ASCE 7-10.

7.1 SEISMIC LOAD IS COMPLIANCE WITH NEW YORK CITY SEISMIC CODE: LOCAL LAW 17/95.

8. **SHORING & BRACING NOTES:**
AS PER BC 3305.3.2.6, WHEN PATENTED OR COMMERCIAL DEVICES THAT ARE NOT SUSCEPTIBLE TO DESIGN ARE USED FOR SHORING, BRACING, OR SPLICING, THEY SHALL BE APPROVED BY THE NYC DOB COMMISSIONER. SPLICES SHALL DEVELOP THE FULL STRENGTH OF THE SPLICED MEMBERS. WHERE SHORE HEIGHT EXCEEDS 10 FEET OR WHEN NECESSARY TO PROVIDE STRUCTURAL STABILITY, DIAGONAL BRACING SHALL BE PROVIDED. STRUTS, ANCHORED INTO MASONRY OR TO PANEL JOINTS OF ADJACENT BRACED BAYS MAY BE USED TO PREVENT BUCKLING OF INDIVIDUAL MEMBERS NOT SUPPORTED BY THE DIAGONAL BRACING, BUT BRACING AN ENTIRE TIER OF SHORES WITH STRUTS WITHOUT DIAGONAL BRACING SHALL BE PROHIBITED UNLESS THE SYSTEM CAN BE DEMONSTRATED TO BE BRACED BY OTHER RIGID CONSTRUCTION. THE UNBRACED LENGTH OF SHORES SHALL NOT EXCEED THE MAXIMUM LENGTH DETERMINED IN ACCORDANCE WITH THE REQUIREMENTS OF NYC BC 3305.3.2.6 FOR THE STRUCTURAL MATERIAL USED.

9. **SOIL & ROCK SAMPLING NOTES:**
AS PER BC 1802.5, THE SOIL ROCK CLASSIFICATIONS, NEEDED TO DETERMINE THE PROPER FOUNDATION DESIGN, ARE BASED ON MATERIALS OBTAINED FROM BORINGS, TEST PITS OR OTHER SUBSURFACE EXPLORATION METHODS AS ALLOWED.

UNDERPINNING NOTES:

1. A PRE-CONSTRUCTION SURVEY SHALL BE PERFORMED ON THE BUILDING TO BE UNDERPINNED BY AN INDEPENDENT PROFESSIONAL IN ORDER TO DOCUMENT EXISTING CONDITIONS OF THE BUILDING. PAY PARTICULAR ATTENTION TO AND DOCUMENT SIGNS OF EXISTING STRESS INCLUDING CRACKS, SAGGING, TIGHT DOORS, ETC. THE SURVEY SHALL INCLUDE EACH FLOOR, BOTH INSIDE AND OUT, AND SHALL INCLUDE PICTURES, MEASUREMENTS, ETC.
2. THE CONTRACTOR SHALL OBTAIN AN AGREEMENT WITH NEIGHBOR TO UNDERPIN THEIR BUILDING. NO UNDERPINNING IS TO BE PERFORMED UNTIL SUCH AGREEMENT IS EXECUTED.
3. THE CONTRACTOR SHALL VERIFY THE BOTTOM OF EXISTING FOOTING ELEVATIONS AND LOCATE ALL ADJACENT UTILITIES IN THE FIELD.
4. ALL UNDERPINNING OPERATIONS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER PROVIDING SPECIAL INSPECTION SERVICES.
5. INSPECTOR FOR SPECIAL INSPECTION SHALL BE NOTIFIED A MINIMUM OF 72 HOURS IN ADVANCE OF ANY UNDERPINNING WORK.
6. ALL EXCAVATION FOR UNDERPINNING SHALL BE COMPLETED BY HAND, WITHIN SHEETED PITS, AS SHOWN ON THE DETAILS AND SECTIONS.
7. EXCAVATION FOR UNDERPINNING PIERS MUST BE PERFORMED IN THE DRY. DEWATERING MAY BE NECESSARY PRIOR TO EXCAVATION TO MAINTAIN GROUNDWATER LEVEL A MINIMUM OF 1-FT BELOW THE PROPOSED UNDERPINNING PIER SUBGRADE LEVEL. HAY OR FILTER FABRIC SHALL BE USED TO MINIMIZE MIGRATION OF FINES INTO THE EXCAVATION AREA.
8. DEPTH OF EXCAVATION BELOW FOOTING AND PREVIOUSLY INSTALLED LAGGING BOARDS SHALL NOT EXCEED 18-IN. MAINTAIN TIGHT CONTACT BETWEEN SOIL AND LAGGING BOARDS. IF MATERIAL IS CAVING INTO THE EXCAVATION AREA, DECREASE THE UNBRACED EXCAVATION DEPTH AND/OR GROUT THE MATERIAL TO MINIMIZE LOSS.
9. IF MATERIAL BEHIND LAGGING IS LOST OR DISTURBED, LEAVE A 1- TO 1.5-IN SPACE BETWEEN LAGGING BOARDS TO IMMEDIATELY BACKFILL OR GROUT.
10. IF THE SOILS TO BE SHEETED AND EXCAVATED FOR UNDERPINNING PIERS ARE FOUND TO BE LOOSE, LACKING COHERENCE, AND HAVING A TENDENCY TO "RUN", MAKING THE INSTALLATION OF THE HORIZONTAL TIMBER SHEETING DIFFICULT OR IMPOSSIBLE, THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A GROUTING SUBCONTRACTOR TO STABILIZE THE SOIL PRIOR TO EXCAVATING. CONTRACTOR TO IMMEDIATELY INFORM ENGINEER OF RECORD IF THIS CONDITION OCCURS, AND MAY ALSO PROPOSE ANOTHER REMEDIAL METHOD FOR SOIL STABILIZATION TO S.E.T., P.C. FOR REVIEW.
11. GROUTING TO STABILIZE SOIL AT UNDERPINNING PITS SHALL BE PERFORMED USING SODIUM SILICATE OR MICRO-FINE CEMENT. GROUT MIX DESIGN, EQUIPMENT, DRILLING PROCEDURES, AND SEQUENCE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO S.E.T., P.C. FOR REVIEW.
12. UNDERPINNING PIER SUBGRADE BEARING MATERIAL SHALL BE OF EQUAL OR BETTER CLASS THAN THE ORIGINAL BEARING MATERIAL.
13. MAXIMUM UNDERPINNING PIT WIDTH IS 4-FT FOR CONCRETE FOOTINGS OR 3-FT FOR RUBBLE FOOTINGS UNLESS OTHERWISE NOTED ON THESE DRAWINGS. UNDERPINNING WIDTH MAY BE REDUCED BASED ON S.E.T., P.C. FIELD OBSERVATIONS.
14. NO TWO UNDERPINNING PITS CLOSER THAN 12-FT CENTER TO CENTER, NOR TWO ADJACENT COLUMN FOOTINGS MAY BE UNDERPINNED CONCURRENTLY.
15. EXISTING STONE RUBBLE WALLS TO BE UNDERPINNED SHALL BE TREATED BY PRESSURE INJECTED GROUT OR CEMENT PARGING AT THE DIRECTION OF S.E.T., P.C.
16. ANY LOSS OF STONES FROM EXISTING STONE FOOTINGS OR SIGNS OF INSTABILITY IN THE STONE FOOTING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. STEEL PLATES WITH TIMBER POSTS SHALL BE REQUIRED TO SUPPORT ANY LOOSE STONES OR UNSTABLE AREAS DURING EXCAVATION AND CONCRETING.
17. APPROACH PITS FOR UNDERPINNING SHOULD CAUSE MINIMAL DISTURBANCE TO SOIL SUBGRADE BELOW THE FOOTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN THE APPROACH PITS AND EXCAVATE PITS FOLLOWING OSHA AND LOCAL LAWS.
18. EXCAVATE PITS SUCH THAT A MINIMUM OF 12-FT OF UNDISTURBED SOIL OR CURED UNDERPINNING PIER IS MAINTAINED BETWEEN OPEN PITS UNTIL ALL UNDERPINNING IS COMPLETE UNLESS APPROVED BY S.E.T., P.C.
19. DO NOT LEAVE PITS OPEN OVERNIGHT OR DURING WEEKENDS OR HOLIDAYS UNLESS OTHERWISE PERMITTED BY S.E.T., P.C.
20. UNDERPINNING SHALL BE INSTALLED IN A MANNER SUCH THAT THE EXPOSED FACE OF THE CONCRETE IS VERTICAL (OR AS OTHERWISE SPECIFIED), CLEAN, AND NEAT.
21. UNDERPINNING SHALL BE CONSTRUCTED IN ONE VERTICAL LIFT. THE LIFT SHALL BE WITHOUT INTERMEDIATE HORIZONTAL CONSTRUCTION JOINTS (COLD JOINTS).
22. DEEPER UNDERPINNING PIERS SHALL BE CONSTRUCTED PRIOR TO INSTALLING IMMEDIATELY ADJACENT SHALLOWER PIERS.
23. UNDERPINNING PIERS SHALL BE CARRIED DOWN TO THE ELEVATIONS SHOWN OR TO DRY COMPETENT SOIL, WHICHEVER IS DEEPER. COMPETENT SOIL SHALL BE VERIFIED BY THE ENGINEER. IF COMPETENT SOIL IS NOT FOUND AT THE ELEVATIONS SHOWN ON THE DRAWINGS, THE SPECIAL INSPECTOR SHALL REVIEW THE FIELD CONDITIONS AND MAKE NECESSARY RECOMMENDATIONS TO S.E.T., P.C.
24. LINE DRILL BEDROCK ADJACENT TO ALL FOUNDATION WALLS PRIOR TO ROCK REMOVAL.
25. BOTTOM OF UNDERPINNING CAN BEAR ON CLASS 1B BEDROCK OR BETTER ABOVE UNDERPINNING SUBGRADE LEVEL SHOWN ON THESE DRAWINGS AS DETERMINED BY THE ENGINEER.
26. UNDERPINNING PIERS CAN BE ELIMINATED IF THE EXISTING FOOTING IS BEARING ON CLASS 1B BEDROCK OR BETTER AS DETERMINED BY THE ENGINEER.

DRILLED IN SOLDIER PILE AND LAGGING NOTES:

1. ALL SOLDIER PILES SHALL BE INSTALLED IN THE LOCATION SHOWN ON THESE DRAWINGS.
2. THE CONTRACTOR SHALL PERFORM UTILITY IDENTIFICATION AND EXPLORATION AS NECESSARY PRIOR TO THE DRILLING OPERATIONS.
3. SOLDIER PILE CASING SHALL BE INSTALLED USING INTERNAL FLUSH DUPLEX DRILLING METHOD.
4. NO LOSS OF MATERIAL FROM THE OUTSIDE OF THE SOLDIER PILE IS PERMITTED. THE CONTRACTOR SHALL ADOPT THE NECESSARY DRILLING PROCEDURES TO PREVENT LOSS OF MATERIAL BETWEEN THE ANNULUS AND THE SOLDIER PILE.
5. THE CONTRACTOR SHALL ADJUST DRILLING PROCEDURES AS REQUIRED TO PREVENT SETTLEMENT AND LATERAL MOVEMENT OF BUILDINGS, UTILITIES, AND OTHER STRUCTURES.
6. STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.5-IN. SPLICES IN CASINGS SHALL BE THREADED AND FULLY TIGHTENED.
7. THE BOTTOM CASING OF EACH SOLDIER PILE SHALL BE PROTECTED BY A HIGH-STRENGTH CUTTING SHOE WITH HARDENED CUTTING EDGE.
8. NO CONCRETE OR GROUT SHALL BE PLACED AT ANY SOLDIER PILE LOCATION UNTIL TIP ELEVATION HAS BEEN CONFIRMED, CLEANED OF MUD AND ANY EXTRANEOUS MATERIAL, AND INSPECTED AND APPROVED BY THE SPECIAL INSPECTOR.
9. CONCRETE OR GROUT SHALL BE PLACED CONTINUOUSLY FOR THE FULL DEPTH OF THE SOLDIER PILE STARTING AT THE BOTTOM OF THE SOCKET AND UP TO THE DESIGNED CUTOFF ELEVATION. NO COLD JOINT IS ALLOWED.
10. THE ENGINEER MAY DIRECT AN INCREASE IN SOLDIER PILE LENGTH FROM THAT SPECIFIED ON THESE DRAWINGS IF INFERIOR SOIL OR ROCK IS ENCOUNTERED ABOVE THE ORIGINAL MINIMUM TIP ELEVATION.
11. NO SOLDIER PILE SHALL BE OUT OF PLUMB MORE THAN ONE PERCENT (1%) OF ITS EMBEDDED LENGTH.
12. IF ANY OF THE ABOVE TOLERANCES ARE EXCEEDED, AND IN THE OPINION OF THE ENGINEER REQUIRES CORRECTIVE MEASURES, SUCH CORRECTIVE MEASURES, INCLUDING COSTS OF ENGINEERING AND REDESIGN, SHALL BE PAID FOR BY THE CONTRACTOR.
13. BEFORE LATERAL BRACING (ANCHORS AND/OR RAKERS) IS INSTALLED, MAXIMUM EXCAVATION BELOW BRACING LEVEL IS 1.5-FT UNLESS NOTED ON THESE DRAWINGS.
14. LATERAL BRACING AND SHEETING/SHORING SHALL NOT BE REMOVED UNTIL THE NEW GROUND FLOOR SLAB IS INSTALLED AND THE NEW CONCRETE HAS REACHED THE DESIGN COMPRESSIVE STRENGTH.
15. AT COMPLETION OF THE NEW STRUCTURE, BURN OFF SOLDIER PILES 1-FT BELOW PROPOSED FINISH GRADE.
16. INSTALL CONTROLLED BACKFILL IN ACCORDANCE WITH DESIGN DOCUMENTS, AS REQUIRED.

MATERIALS AND TESTING NOTES:

1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING COMPANY.
2. STRUCTURAL CONCRETE FOR UNDERPINNING PIERS SHALL HAVE A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS.
3. CONCRETE PLACEMENT TIME SHALL NOT EXCEED 2 HOURS OR AS RECOMMENDED BY THE TESTING COMPANY.
4. MAKE A SET OF MINIMUM 5 CYLINDERS EACH DAY GROUT IS BEING PLACED FOR SOLDIER PILES.
5. PERFORM COMPRESSION TEST ON 1 CYLINDER AT 7 DAYS AND 1 AT 14 DAYS. IF THE DESIGN STRENGTH IS ACHIEVED AT 14 DAYS, NO FURTHER TESTING IS REQUIRED, OTHERWISE TEST 1 OR 2 CYLINDERS AT 28 DAYS. 1 OR 2 SAMPLES SHALL BE SAVED FOR 56 DAYS TESTING IF THE PREVIOUS CYLINDERS FAIL TO MEET DESIGN STRENGTH REQUIREMENTS.
6. PROVIDE TESTING RESULTS TO THE CONTRACTOR.
7. IF THE DESIGN STRENGTH REQUIREMENTS ARE NOT MET, APPROVED REMEDIATION SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
8. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.1 USING E-70 ELECTRODES.
9. ALL STRUCTURAL STEEL SHALL BE GRADE 50, ASTM A-572.
10. 1-BAG MIX SHALL CONSIST OF 1 94-LB BAG OF CEMENT TO 1 CUBIC YARD OF SAND. QUANTITY OF WATER SHALL BE ADEQUATE TO ALLOW THE MIX TO FLOW.
11. TIMBER LAGGING SHALL BE ROUGH CUT, FULL SIZE CONSTRUCTION GRADE, WITH A MINIMUM ALLOWABLE BENDING STRESS OF 1600-PSI.
12. MISCELLANEOUS STEEL (PLATES AND WEDGES) SHALL BE ASTM A-36.
13. SOLDIER PILE CASING STEEL SHALL BE GRADE B (42-KSI), ASTM A500.
14. POST-INSTALLED ANCHORS SHALL BE GRADE 36, ASTM F1554.

DEWATERING NOTES:

1. ANY WATER INFLOW INTO THE EXCAVATION AREA SHALL BE CONTROLLED BY SUMPING OR OTHER SUITABLE METHODS. DISPOSAL OF WATER SHALL BE MADE OUT OF THE EXCAVATED AREA IN ACCORDANCE WITH LOCAL REGULATIONS. THE ELEVATION OF THE WATER LEVELS BEYOND THE LIMITS OF THE PROJECT SITE SHALL NOT BE LOWERED SO AS TO CAUSE DISTRESS AND/OR SETTLEMENT TO ADJOINING STRUCTURES. CONTRACTOR SHALL PROVIDE MEANS AND METHODS TO PREVENT LOSS OF FINES DURING DEWATERING.
2. GROUNDWATER WAS NOT ENCOUNTERED WITHIN EXCAVATION SUBGRADE DURING THE SUBSURFACE INVESTIGATION. DEWATERING IS NOT REQUIRED.
3. THE CONTRACTOR SHALL REMOVE THE PERCH WATER USING SUMPS AND PUMPS IF ENCOUNTERED DUE TO PRECIPITATION AND/OR OTHER FACTORS. .

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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OWNER:

NYC
Victor Daza Quinteros
APPROVED
Date: 05/04/2023

NOTE:

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THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE	DESCRIPTION
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

DRAWING TITLE:

GENERAL NOTES

SEAL & SIGNATURE

STATE OF NEW YORK
GEORGE J. CEMBROWICZ
No. 061254
LICENSED PROFESSIONAL ENGINEER

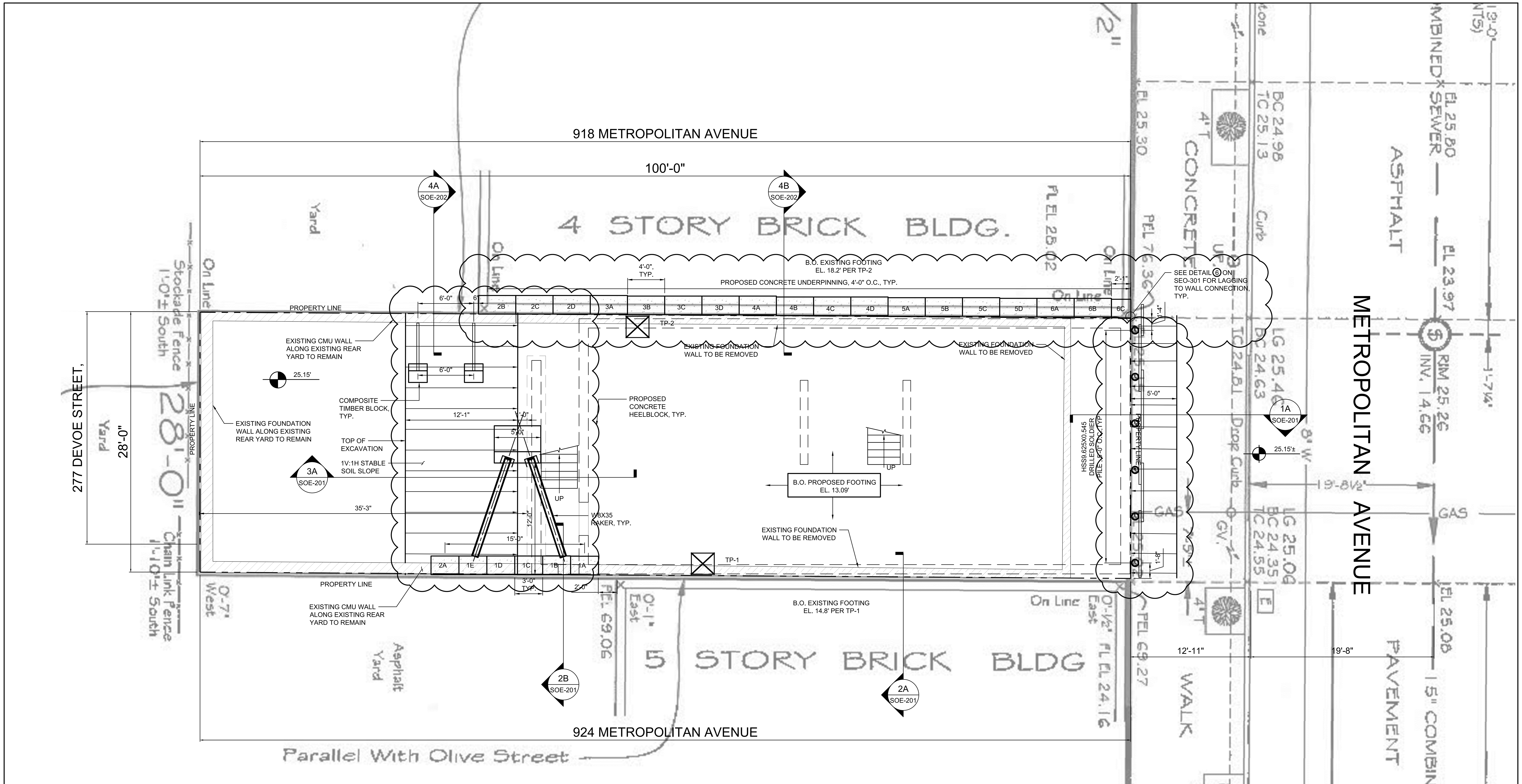
DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO: SOE-002.00
SHEET NO: 03 OF 09

BSCAN STICKER

DOB APPROVAL STAMP

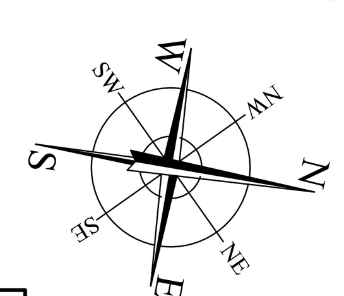
NYC
Victor Daza Quinteros
APPROVED
Date: 08/30/2022

DOB JOB #B00715872-S1



SUPPORT OF EXCAVATION PLAN

SCALE: 3/36" = 1' - 0"



NOTES:

1. TOP OF CELLAR ELEVATION IS AT EL.15.09'. ELEVATIONS ARE BASED ON NAVD88.
2. ⌖ DONATES TOP OF EXISTING GRADE/SIDEWALK ELEVATION.
3. PRIOR TO CONSTRUCTION, IT IS REQUIRED THAT OWNER CONDUCT A CONDITION SURVEY AND PRECONSTRCUTION STRUCTURAL STABILITY REPORT OF ADJACENT PROPERTIES INCLUDING DATED PHOTOGRAPHS, IN ORDER TO DOCUMENT PRE-EXISTING CONDITIONS SUCH AS CRACKS, DETERIORATIONS, ETC. IF ANY CRACKS EXIST ON THE ADJACENT PROPERTIES, IT IS FURTHER RECOMMENDED THAT CRACK MONITORS BE INSTALLED AT LOCATIONS DICTATED BY ENGINEER, AND BE MONITORED AT LEAST ONCE A WEEK DURING CONSTRUCTION (BY ENGINEER OR CRACK MONITORING COMPANY).
4. PRIOR TO CONSTRUCTION, NEW YORK STATE LICENSED LAND SURVEYOR TO ESTABLISH VERTICAL WALL PLANES ALONG PROPERTY LINES, IN ORDER TO LOCATE ANY LINE INCURSIONS BY ADJACENT BUILDINGS ON TO THIS SITE. IF SUCH INCURSIONS OCCUR (I.E. TOP OF ADJACENT BUILDING "LEANS" INTO THIS SITE, ETC.) CONTRACTOR MUST ADJUST BUILDING WALL LINE ACCORDINGLY.
5. OWNER/CONTRACTOR TO OBTAIN WRITTEN PERMISSION/CONSENT FROM ADJACENT BUILDING/OWNER TO PLACE SOLDIER PILES, LAGGINGS, AND UNDERPINNING WITHIN THEIR PROPERTY, AND WRITTEN PERMISSION O RESTORE SAME PROPERTY TO ORIGINAL CONDITIONS.
6. PRIOR TO CONSTRUCTION, IT IS REQUIRED THAT A MONITORING PLAN BE ESTABLISHED BY OWNER, ENGINEER AND CONTRACTOR FRO MONITORING VIBRATION, SOIL MOVEMENT, ETC. DURING EXCAVATION, UNDERPINNING, SHEETING, AND LAGGING OPERATIONS.

LEGEND:

Symbol	Description
↓ ↓ ↓	SOIL SLOPE DIRECTION OF STABLE SOIL SLOPE
▨	PERIMETER OF ADJACENT BUILDING
⌖ 13.09'	SPOT ELEVATION
⊙ B-X	APPROXIMATE BORING LOCATION
☒ TP-X	APPROXIMATE TEST PIT LOCATION

UNDERPINNING SEQUENCE:

1. EXCAVATE SITE GRADE TO 1-FT ABOVE B.O. EXISTING FOOTING ELEVATION.
2. CONSTRUCT "A" PIERS AND WAIT AT LEAST 24-HOUR TO CURE.
3. WEDGE "A" PIERS AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
4. CONSTRUCT "B" PIERS AND WAIT AT LEAST 24-HOUR TO CURE.
5. WEDGE AND DRYPACK "B" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
6. CONSTRUCT "C" PIERS AND WAIT AT LEAST 24-HOUR TO CURE.
7. WEDGE AND DRYPACK "C" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
8. CONSTRUCT "D" PIERS AND WAIT AT LEAST 24-HOUR TO CURE.
9. WEDGE AND DRYPACK "D" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION.
10. CONSTRUCT "E" PIERS AND WAIT AT LEAST 24-HOUR TO CURE (IF APPLICABLE).
11. WEDGE AND DRYPACK "E" PIERS, AND BACKFILL TO 1-FT BELOW T.O. UNDERPINNING ELEVATION (IF APPLICABLE).
12. RE-DRIVE WEDGES AND DRYPACK "A" PIERS.

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NO.	DATE	DESCRIPTION
	05/01/23	UPDATED FOR PAA
	04/12/23	UPDATED
	03/09/23	PER FO
	02/02/23	UPDATED
	11/02/22	UPDATED
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

SUPPORT OF EXCAVATION PLAN

SEAL & SIGNATURE

DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO: SOE-101.01

SHEET NO: 04 OF 9

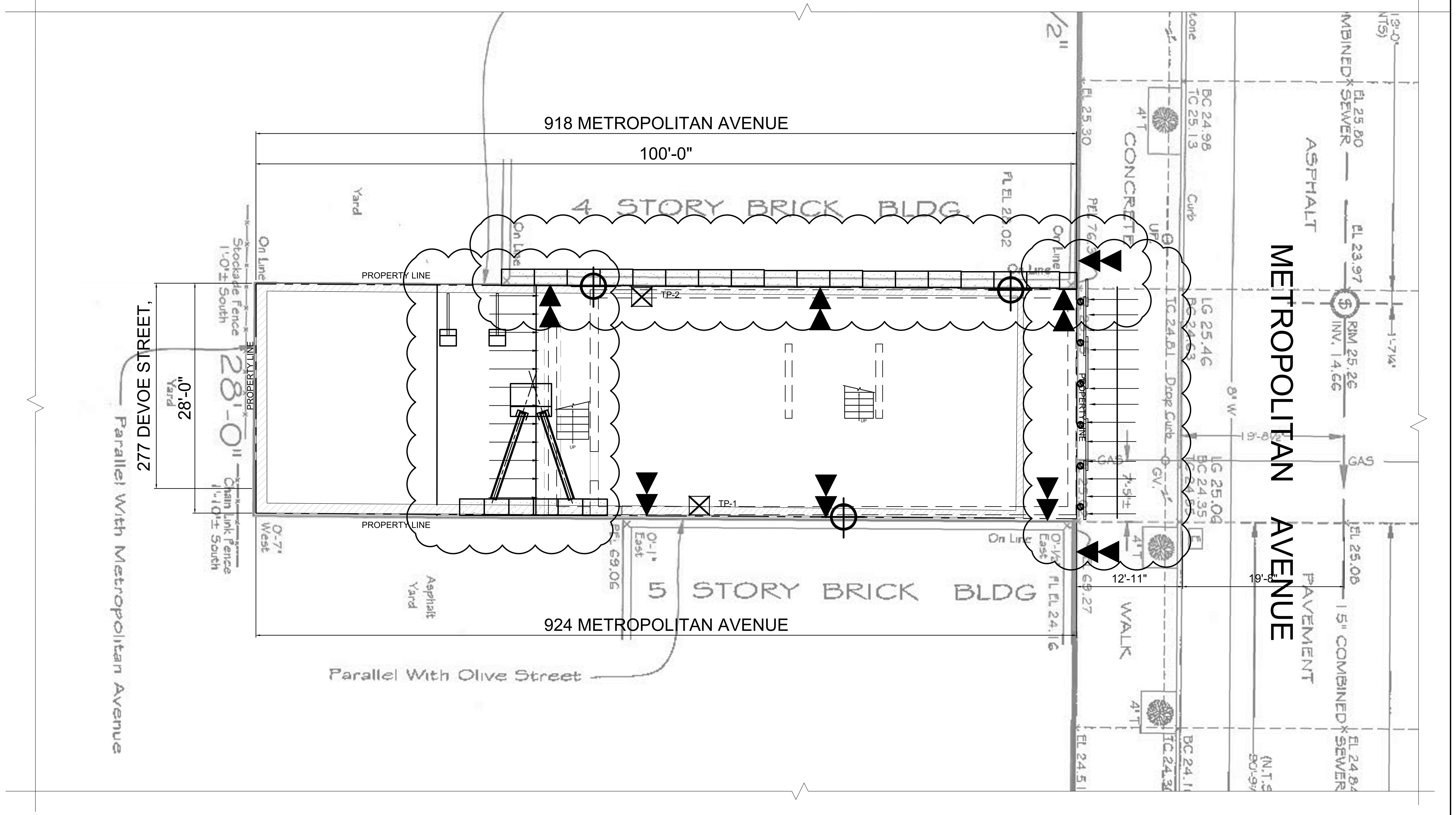
BSCAN STICKER

DOB APPROVAL STAMP

DOB JOB #B00715872-P4

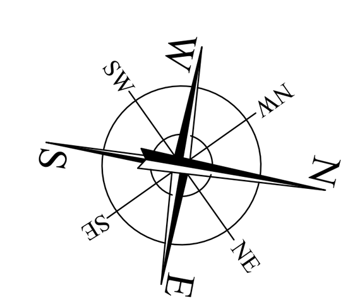
SURVEY AND MONITORING NOTES:

1. A PRE-CONSTRUCTION (PRE-CONDITION) SURVEY OF THE ADJACENT STRUCTURES SHALL BE PERFORMED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND FAMILIARIZE HIMSELF WITH THE RESULTS OF THE SURVEY. THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE ADJACENT STRUCTURES (INSIDE AND OUT) PRIOR TO STARTING THE WORK.
2. MONITOR ADJACENT STRUCTURES BY OPTICAL SURVEY AT ABOUT 25-FT INTERVALS FOR VERTICAL AND LATERAL MOVEMENT.
3. CRACK GAUGES SHALL BE INSTALLED ON EXISTING NEIGHBORING BUILDING CRACKS AND MONITORED AT THE FREQUENCY OUTLINED IN THE MONITORING PROTOCOL TABLE BELOW DURING EXCAVATION AND FOUNDATION CONSTRUCTION.
4. OBTAIN BASELINE READINGS OF THE MONITORING POINTS PRIOR TO EXCAVATION AND NEW CONSTRUCTION. HORIZONTAL AND VERTICAL SURVEY DATA TO BE OBTAINED BY A NEW YORK STATE LICENSED SURVEYOR.
5. OBTAIN AMBIENT TEMPERATURE DURING EACH OPTICAL MONITORING MEASUREMENT.
6. PERFORM OPTICAL SURVEYS AT THE FREQUENCY OUTLINED IN THE MONITORING PROTOCOL TABLE BELOW UNTIL FOUNDATION WALL IS BRACED AND BACKFILL IS COMPLETE. IF MOVEMENT OCCURS, INCREASE THE FREQUENCY OF THE READINGS AS RECOMMENDED BY THE CONTRACTOR OR ENGINEER.
7. VIBRATION MONITORS (SEISMOGRAPHS) SHALL BE PLACED ADJACENT TO AREAS WHERE WORK IS BEING PERFORMED AS NEGOTIATED WITH THE NEIGHBORING BUILDINGS. BASELINE READINGS SHALL BE OBTAINED AT LEAST ONE WEEK PRIOR TO START OF EXCAVATION.
8. NON-LANDMARK BUILDINGS OPTICAL, VIBRATION, AND CRACK MONITORING PROTOCOL:
   - 8.1. IF ALERT LEVEL IS REACHED, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER.
   - 8.2. IF ACTION LEVEL IS REACHED, IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER, OWNER, AND ENGINEER, AND STOP WORK. SAFETY UNIT. THE WORK SHALL RESUME UPON APPROVAL BY THE CONSTRUCTION MANAGER AND APPROVED REMEDIAL MEASURES AND/OR MODIFIED CONSTRUCTION PROCEDURES BY THE ENGINEER. WORK SHALL NOT RESUME UNTIL AGREED UPON CORRECTIVE ACTION IS SUPPLEMENTED BY THE CONTRACTOR AND UPON APPROVAL BY THE CONSTRUCTION MANAGER AND THE ENGINEER.
9. VIBRATION MONITORS SHALL TAKE REAL-TIME READING.
10. ALL VIBRATION MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER, OWNER, ENGINEER, AND SPECIAL INSPECTOR AT THE END OF EACH DAY, AND CONSOLIDATED INTO A MONTHLY REPORT AT THE BEGINNING OF THE NEXT MONTH.
11. ALL OPTICAL MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER, OWNER, ENGINEER, AND SPECIAL INSPECTOR WITHIN TWO DAYS AFTER READING IS TAKEN.
12. ALL CRACK MONITORING DATA SHALL BE PRESENTED TO THE CONSTRUCTION MANAGER, OWNER, ENGINEER, AND SPECIAL INSPECTOR WITHIN TWO DAYS AFTER READING IS TAKEN.



MONITORING PLAN

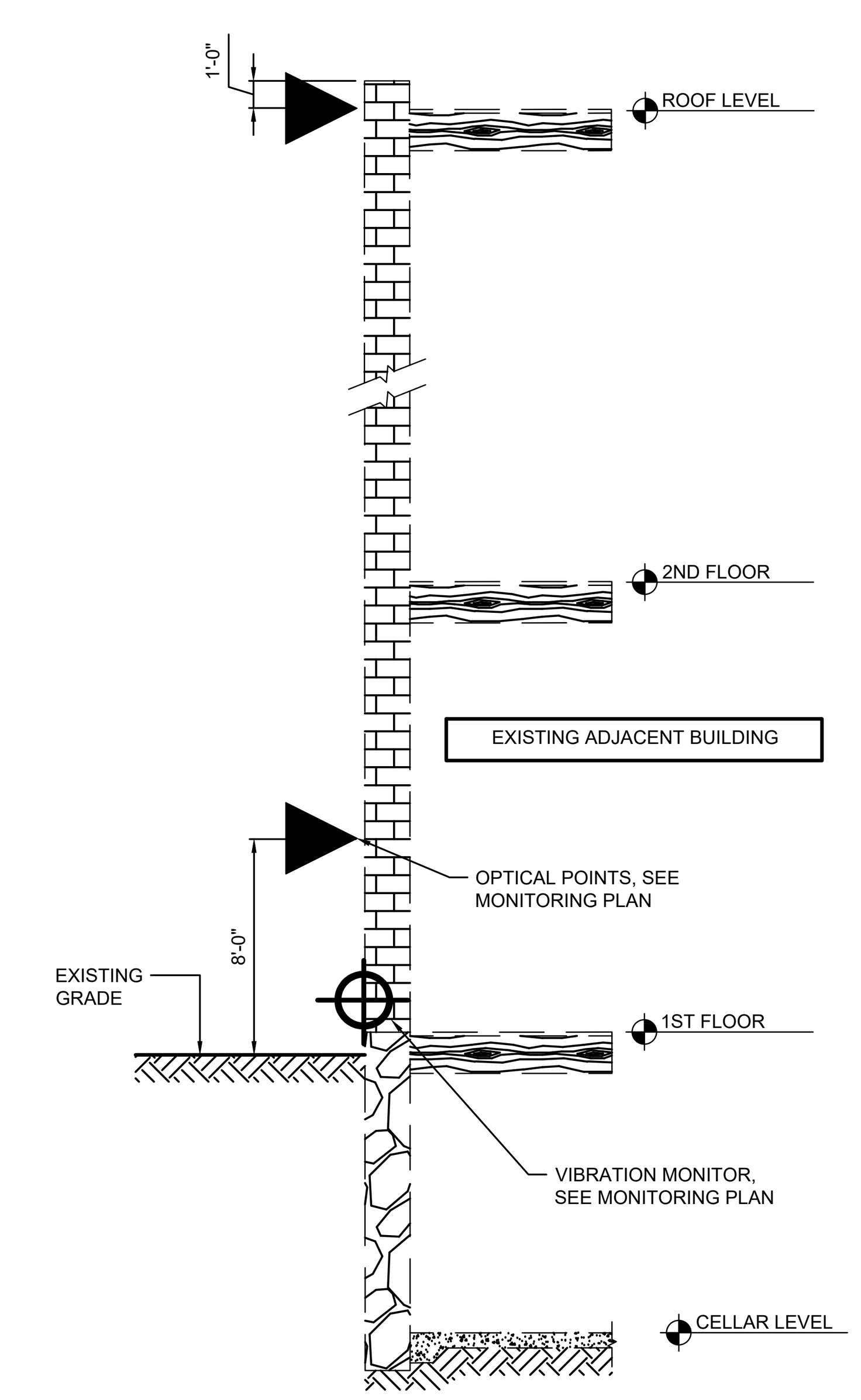
SCALE: 3/32" = 1' - 0"



LEGEND:

- PERIMETER OF ADJACENT BUILDING
- ▼ OPTICAL MONITORING POINT
- ⌖ VIBRATION MONITORING POINT

MONITORING PROTOCOL			
MONITORING TYPE	MONITORING FREQUENCY	ALERT LEVEL	ACTION LEVEL
OPTICAL	(1) TIME PER WEEK DURING SUPPORT OF EXCAVATION (EXCLUDING UNDERPINNING), EXCAVATION, AND FOUNDATION WORK	VERTICAL MOVEMENT = 0.25-IN HORIZONTAL MOVEMENT = 0.25-IN	VERTICAL MOVEMENT = 0.50-IN HORIZONTAL MOVEMENT = 0.50-IN
	(2) TIME PER WEEK DURING UNDERPINNING	VERTICAL MOVEMENT = 0.25-IN HORIZONTAL MOVEMENT = 0.25-IN	VERTICAL MOVEMENT = 0.50-IN HORIZONTAL MOVEMENT = 0.50-IN
VIBRATION	CONTINUOUS REAL TIME VIBRATION MONITORING DURING SUPPORT OF EXCAVATION, EXCAVATION, FOUNDATION, AND PLACING COMPACTED BACKFILL WITHIN 50 FEET OF A MONITOR POINT.	0.25-IPS AT UP TO 20-HZ 0.5-IPS AT BETWEEN 20- AND 40-HZ 1.0-IPS AT HIGHER THAN 40-HZ	0.50-IPS AT UP TO 20-HZ 1.0-IPS AT BETWEEN 20- AND 40-HZ 2.0-IPS AT HIGHER THAN 40-HZ
CRACK	SAME FREQUENCY AS OPTICAL MONITORING	3-MM	6-MM



TYPICAL MONITORING SECTION

N.T.S."

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

NYC
Victor Daza Quinteros
APPROVED
Date: 05/04/2022

NOTE:

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NO.	DATE	DESCRIPTION
	05/01/23	UPDATED FOR PAA
	04/12/23	UPDATED
	03/09/23	PER FO
	02/02/23	UPDATED
	11/02/22	UPDATED
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

MONITORING PLAN

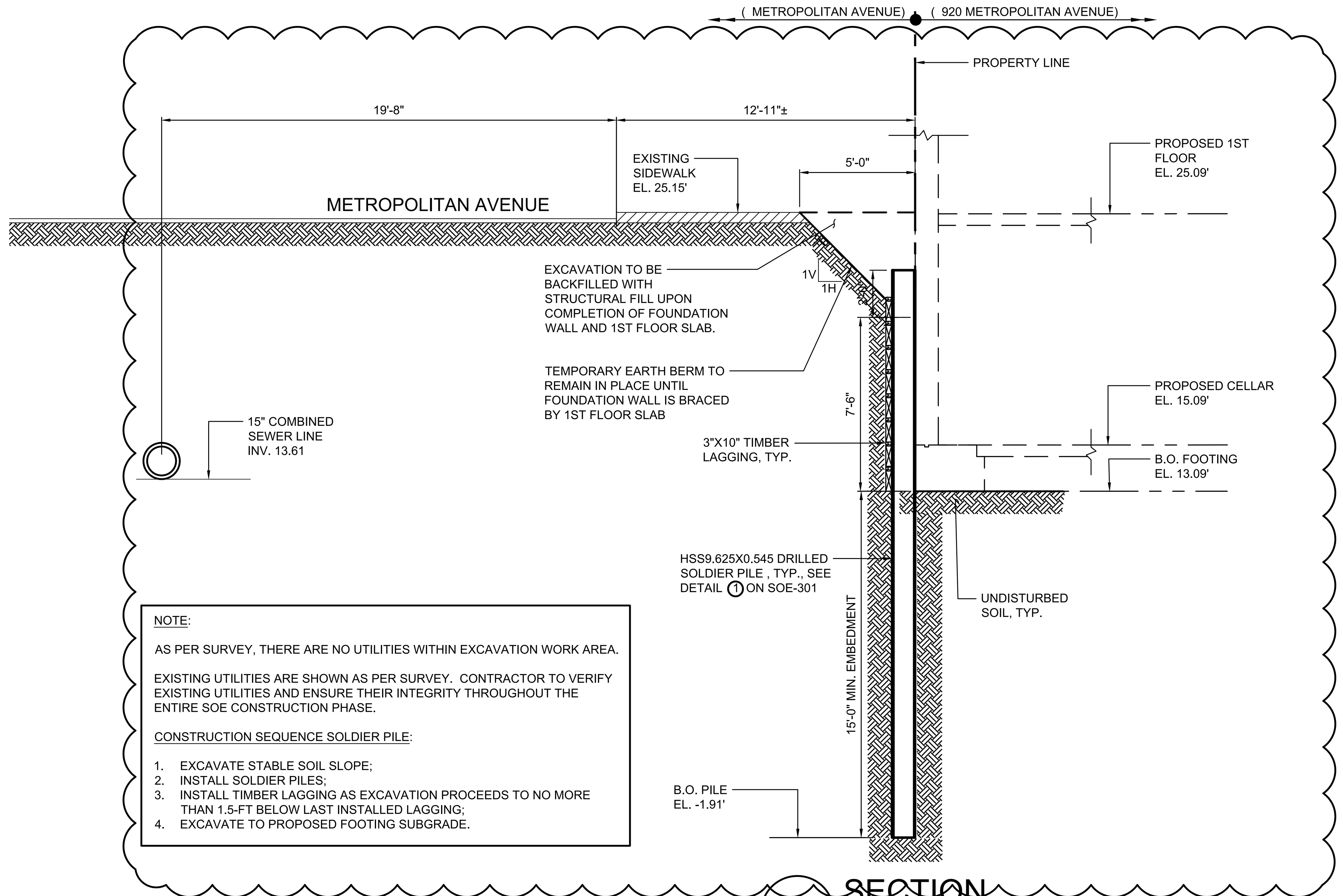
SEAL & SIGNATURE

DATE:	02-21-2022
SCALE:	AS NOTED
DRAWING BY:	A.M.C.
CHECKED BY:	R.G.
DWG NO:	SOE-102.01
SHEET NO:	05 OF 9

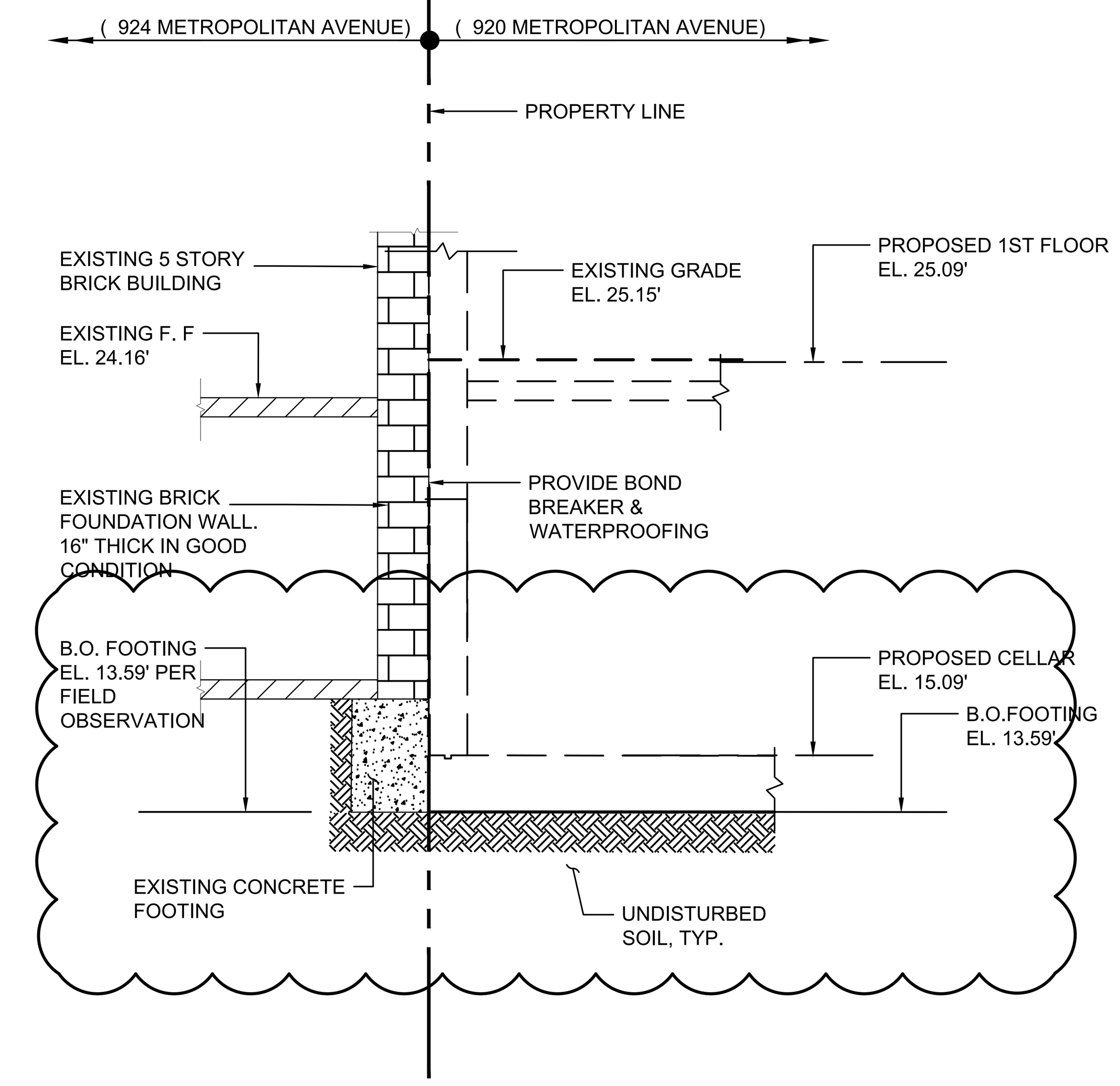
BSCAN STICKER

DOB APPROVAL STAMP

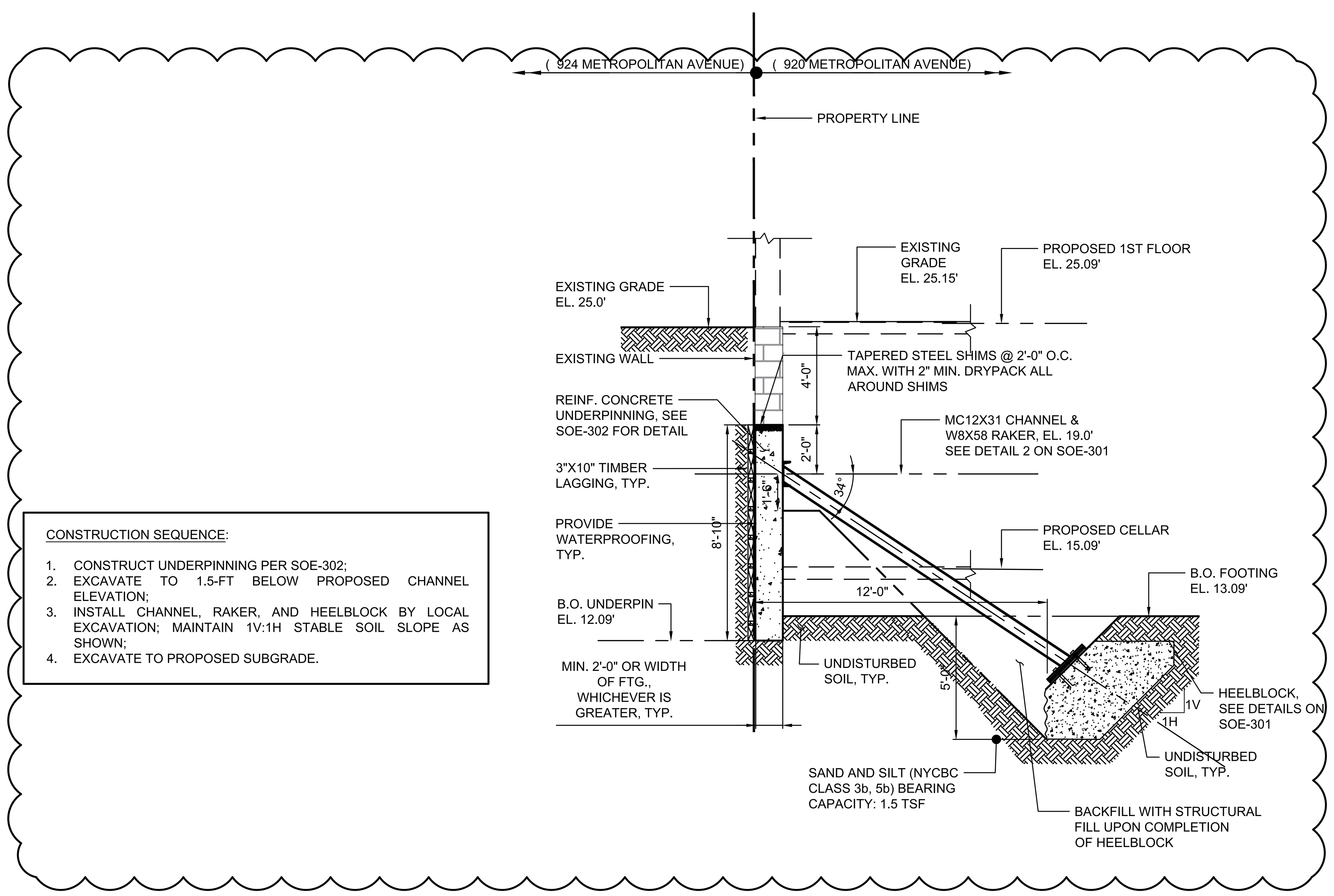
DOB JOB #B00715872-P4



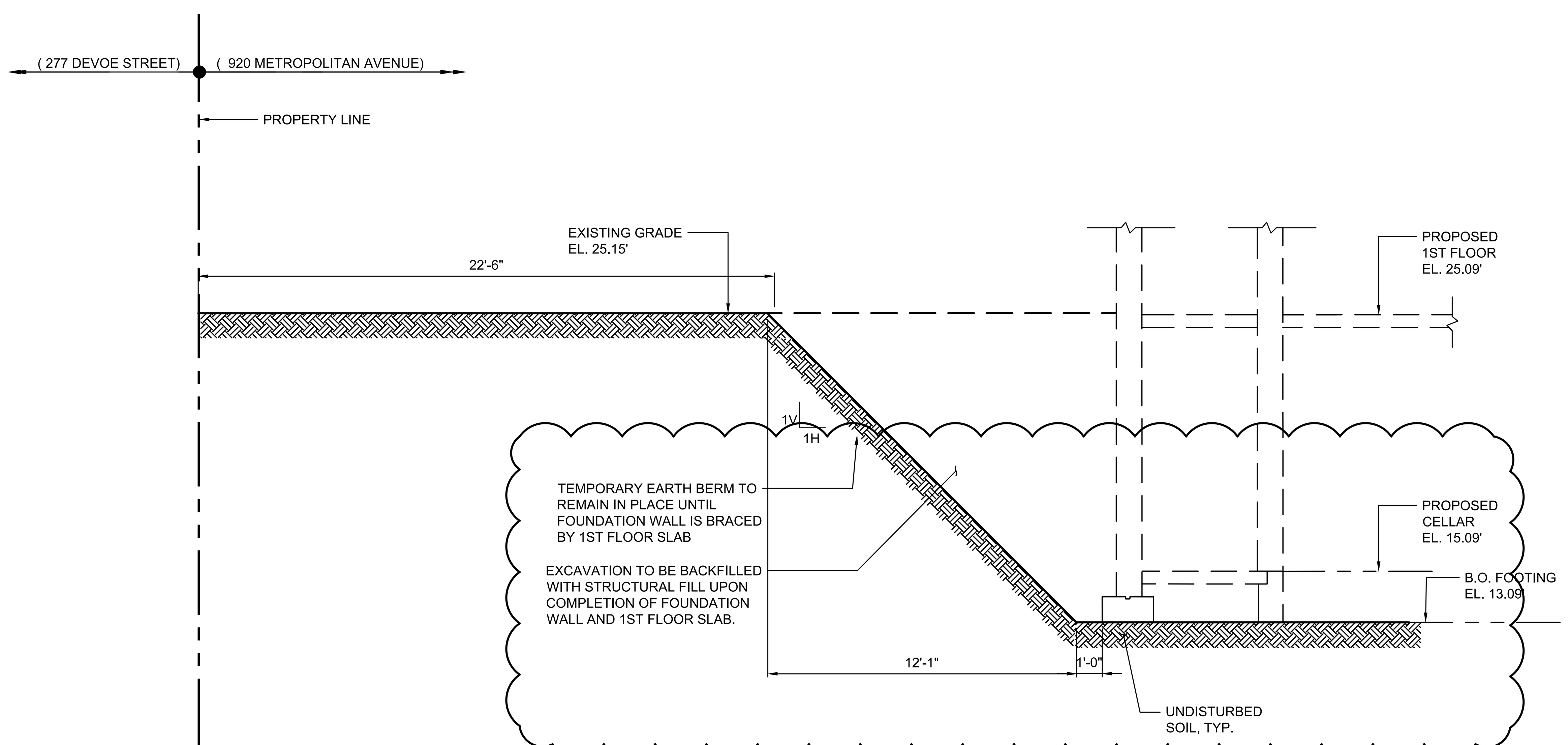
1A SECTION
SCALE: 1/4" = 1' - 0"



2A SECTION
SCALE: 1/4" = 1' - 0"



2B SECTION
SCALE: 1/4" = 1' - 0"



3A SECTION
SCALE: 1/4" = 1' - 0"

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OWNER:

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Victor Daza Quinteros
APPROVED
Date: 05/04/2023

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	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

SUPPORT OF EXCAVATION SECTIONS

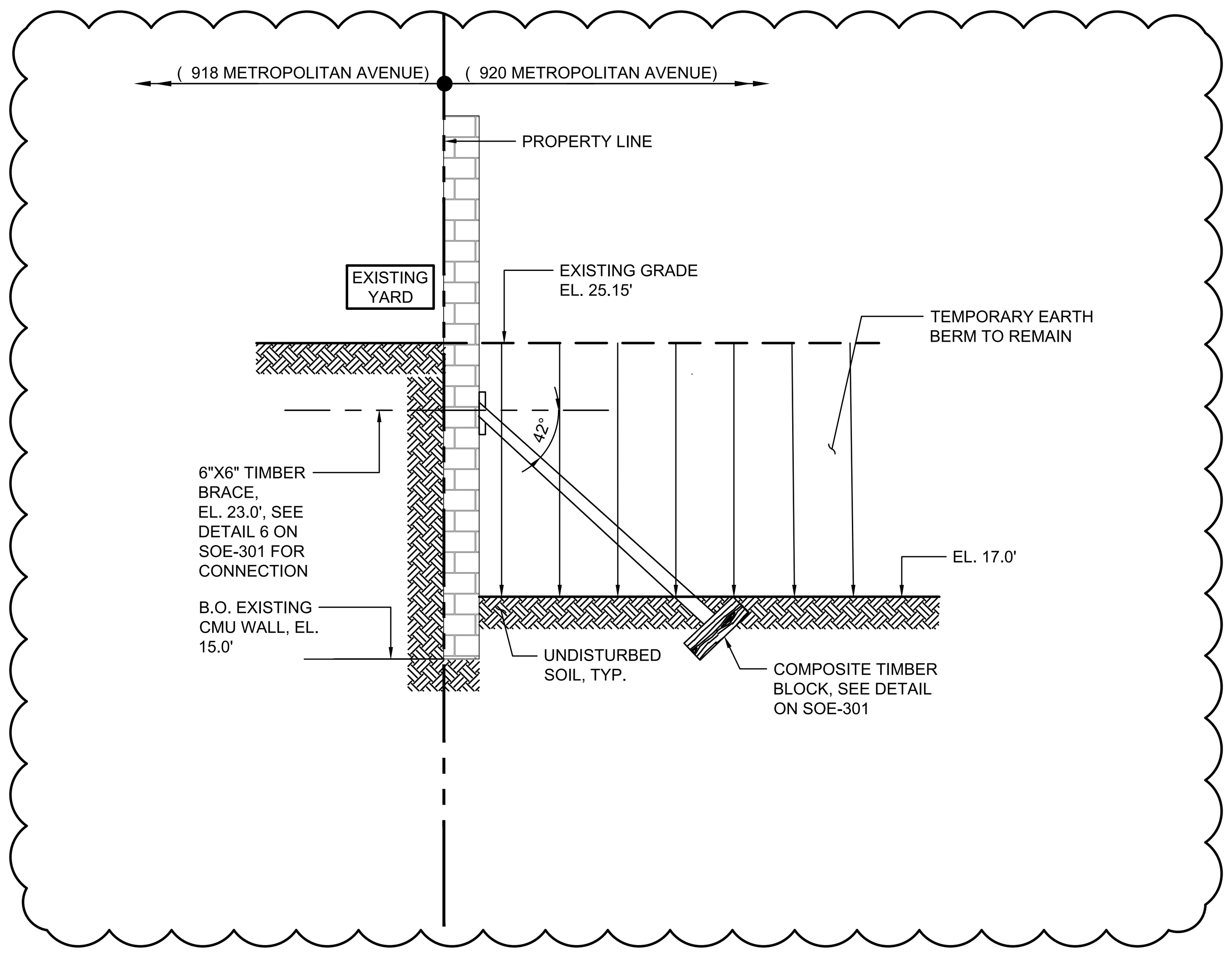
SEAL & SIGNATURE

DATE:	02-21-2022
SCALE:	AS NOTED
DRAWING BY:	A.M.C.
CHECKED BY:	R.G.
DWG NO:	SOE-201.01
SHEET NO:	06 OF 9

BSCAN STICKER

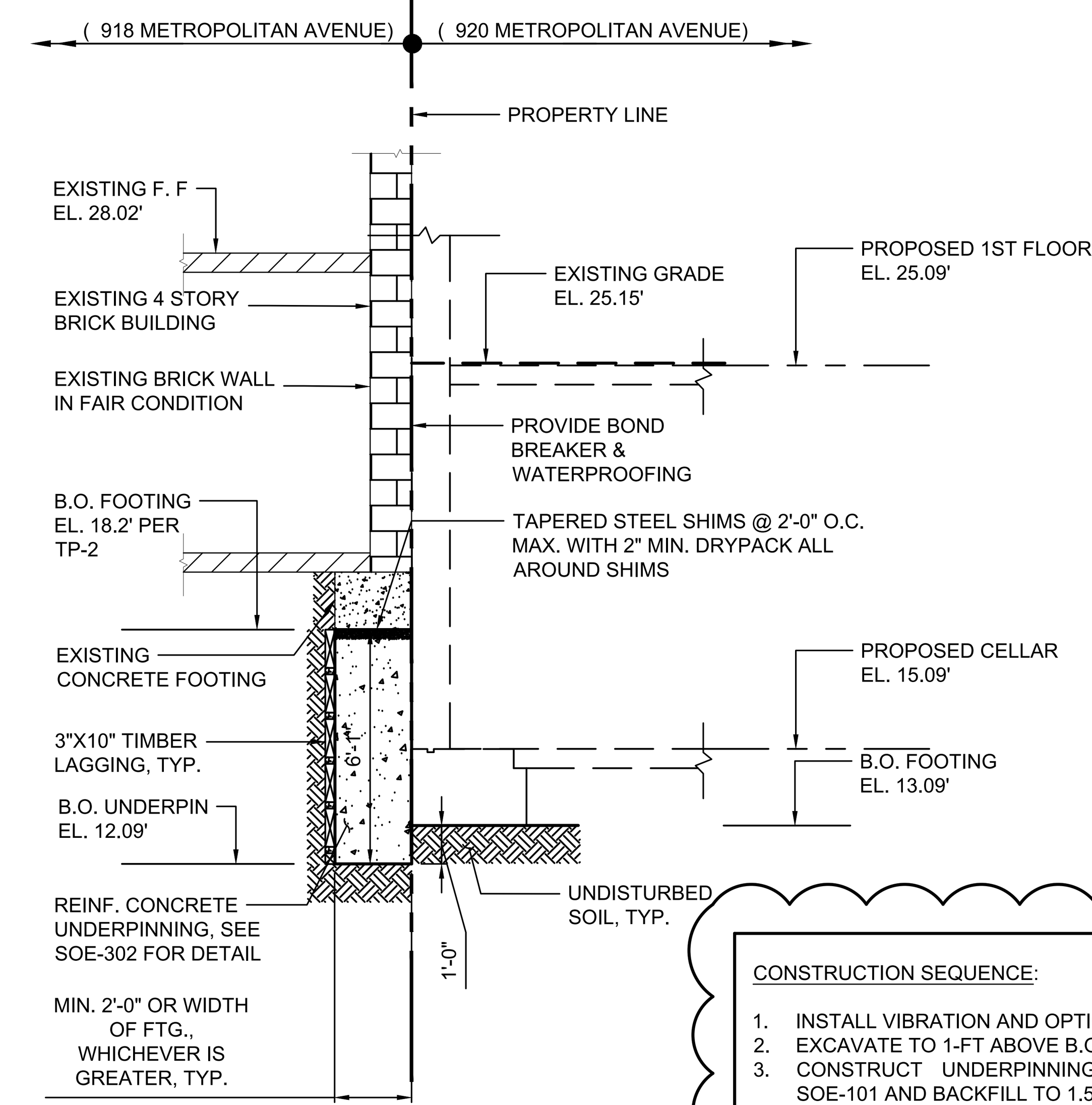
DOB APPROVAL STAMP

DOB JOB #B00715872-P4



4A **SECTION**

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



CONSTRUCTION SEQUENCE:

1. INSTALL VIBRATION AND OPTICAL MONITORING POINTS;
2. EXCAVATE TO 1-FT ABOVE B.O. ADJACENT FOOTING ELEVATION;
3. CONSTRUCT UNDERPINNING PIERS IN SEQUENCE SHOWN ON SOE-101 AND BACKFILL TO 1.5-FT BELOW TOP OF UNDERPINNING;
4. EXCAVATE TO PROPOSED FOOTING SUBGRADE.

4B **SECTION**

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

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OWNER:

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	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY
NO.	**DATE**	**DESCRIPTION**

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

SUPPORT OF EXCAVATION SECTIONS

SEAL & SIGNATURE

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER

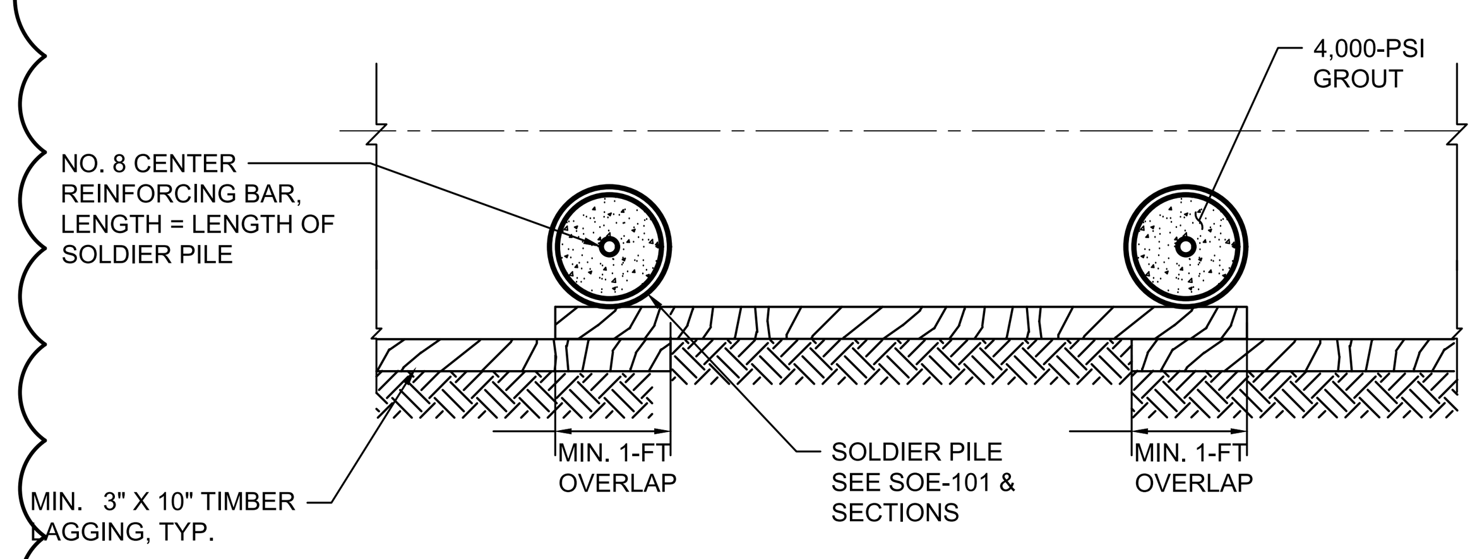
DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO: SOE-202.01

SHEET NO: 07 OF 9

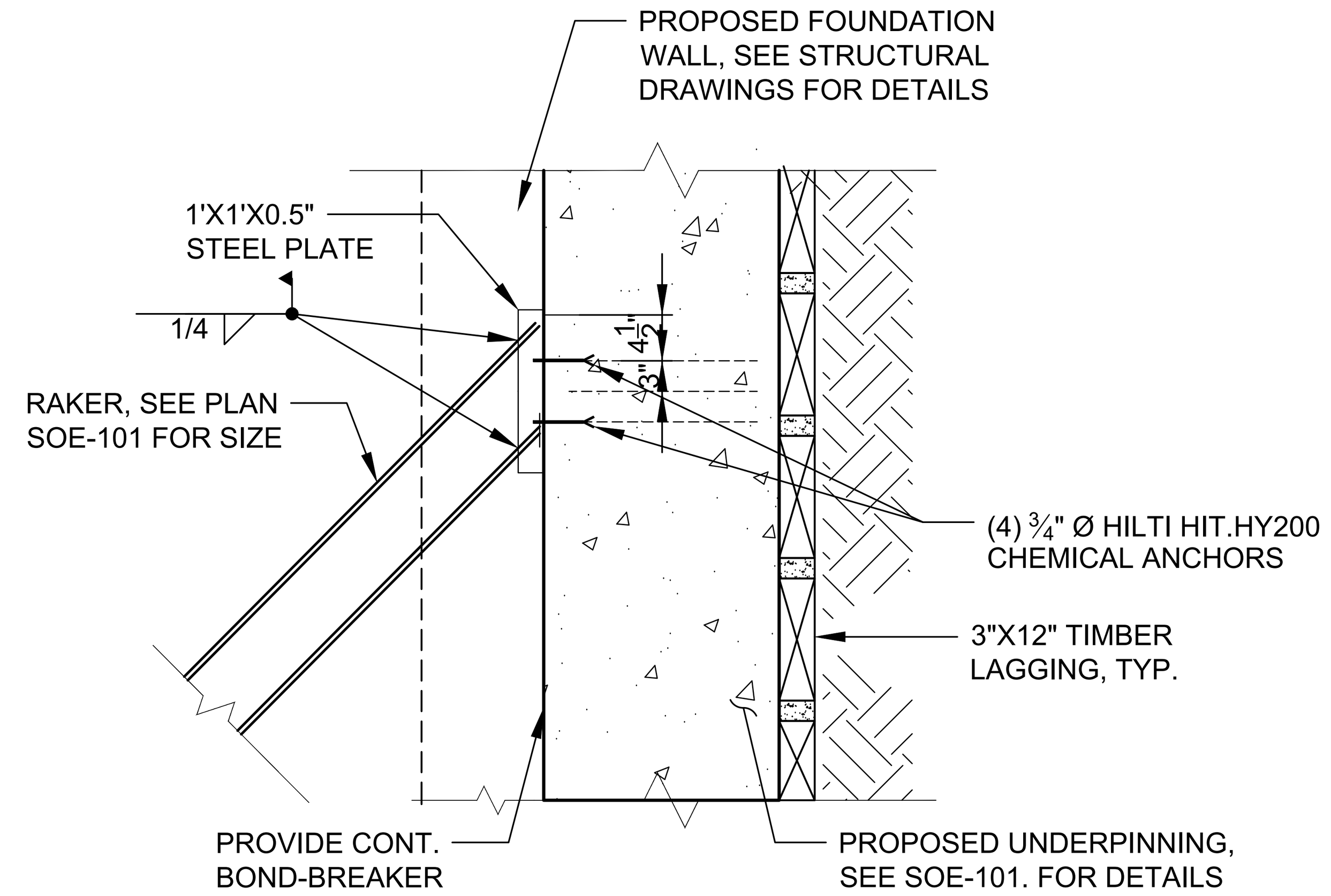
BSCAN STICKER

DOB APPROVAL STAMP

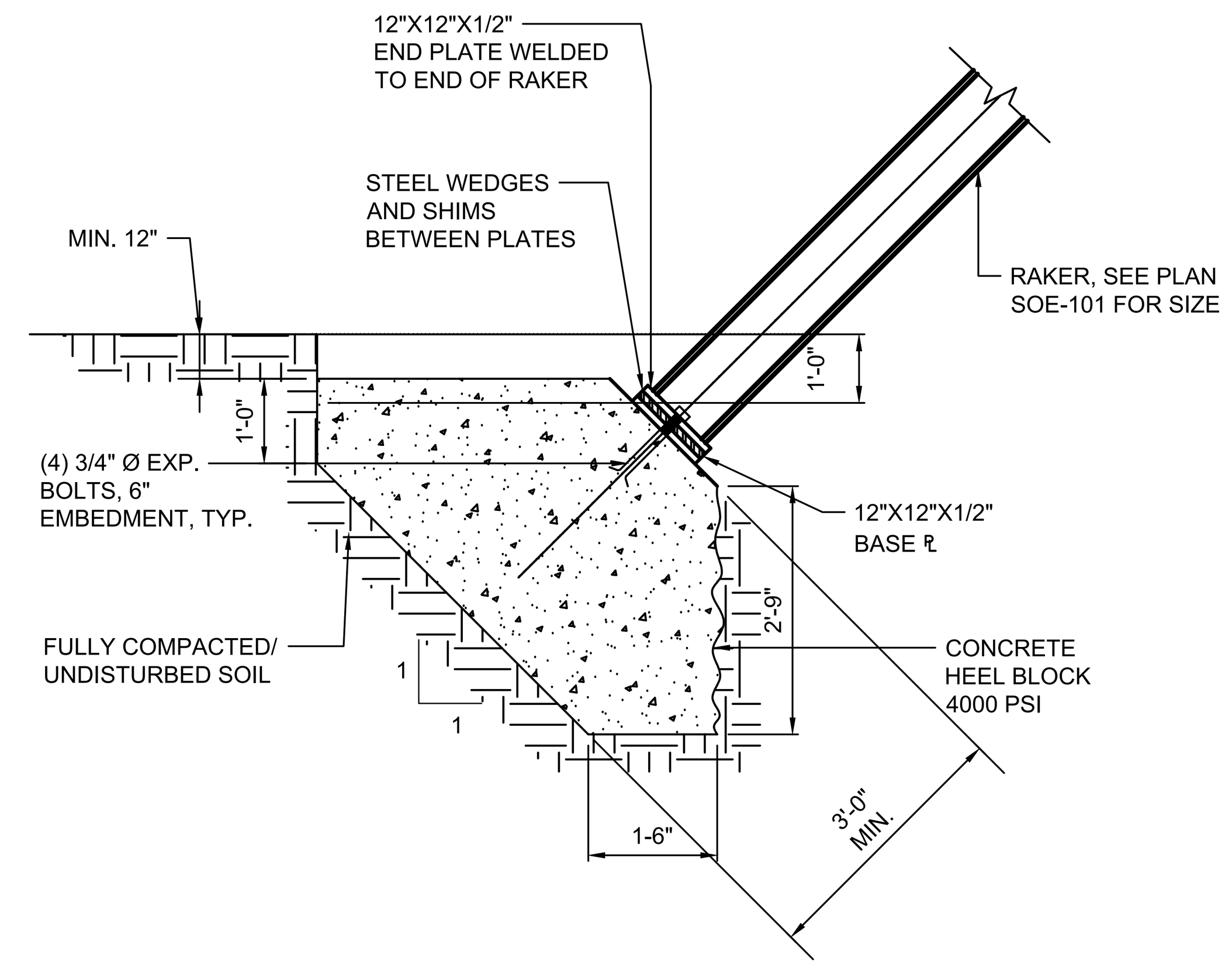
DOB JOB #B00715872-P4



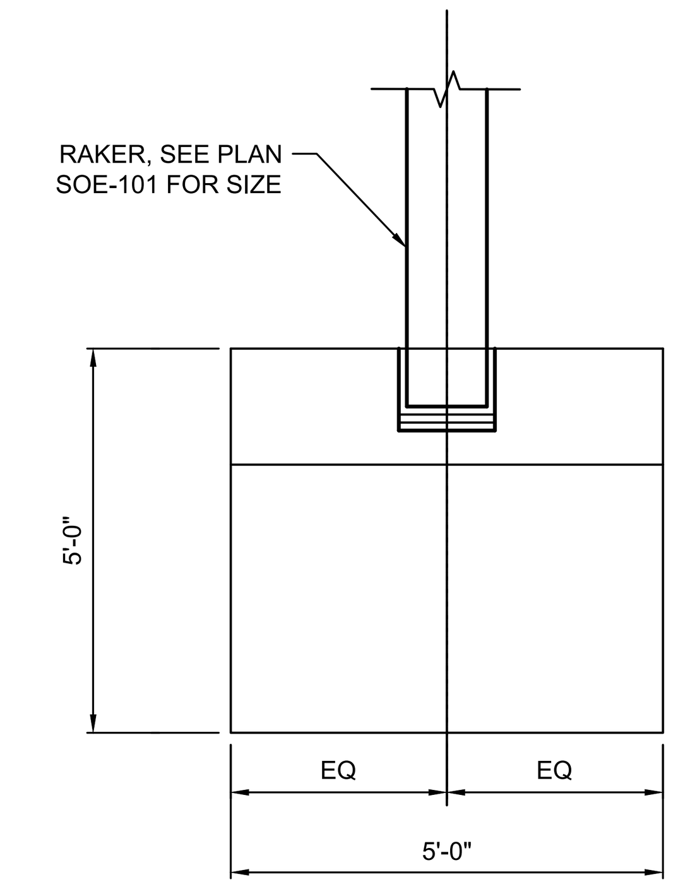
1 DETAIL
1/2"=1-0"



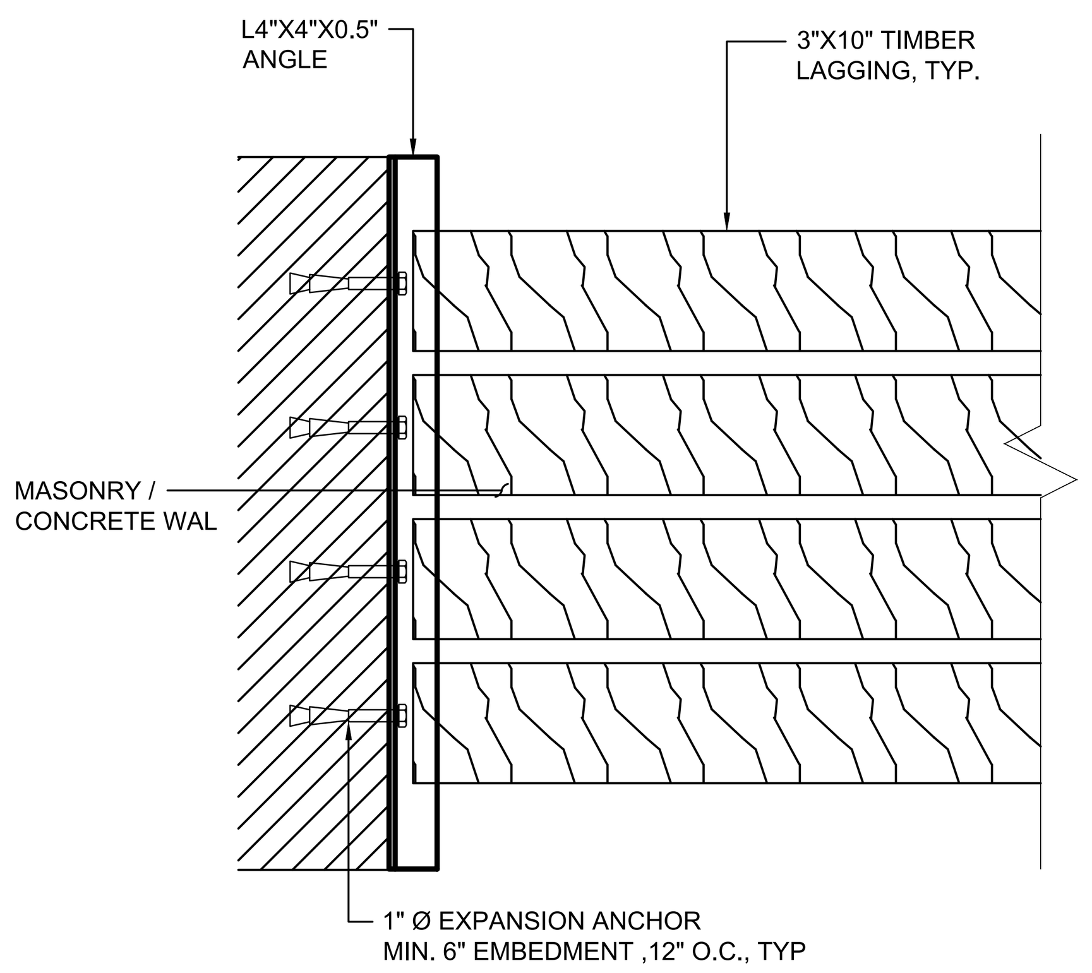
2 RAKER TO UNDERPINNING CONNECTION DETAIL
3/4"=1-0"



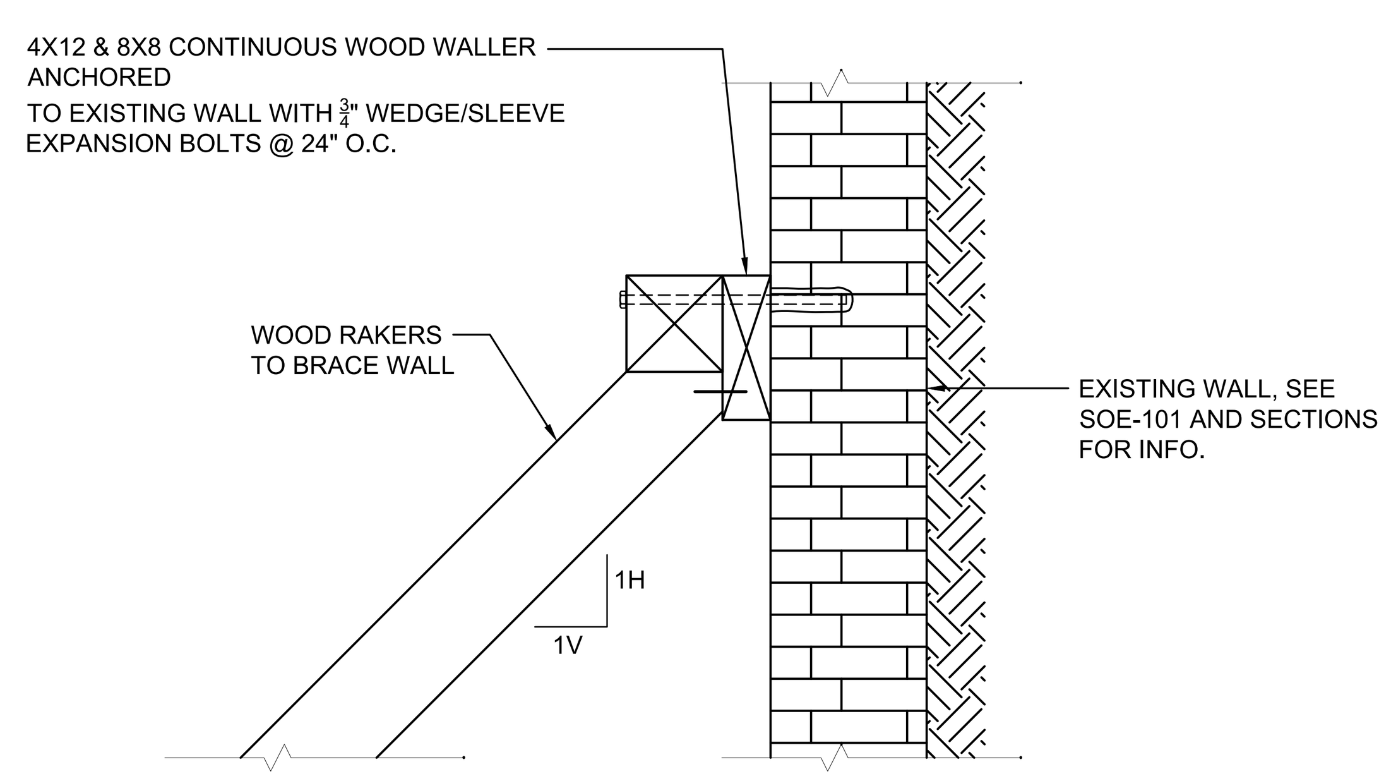
3 HEELBLOCK SECTION VIEW
1/2"=1-0"



4 HEELBLOCK PLAN VIEW
1/2"=1-0"



5 TIMBER LAGGING TO WALL CONNECTION
3/4"=1-0"



6 TIMBER RAKER TO WALL CONNECTION
3/4"=1-0"

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OWNER:

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Victor Daza Quinteros
APPROVED
Date: 05/04/2023

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	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE
BROOKLYN, NY 11211

DRAWING TITLE:

SUPPORT OF EXCAVATION DETAILS

SEAL & SIGNATURE

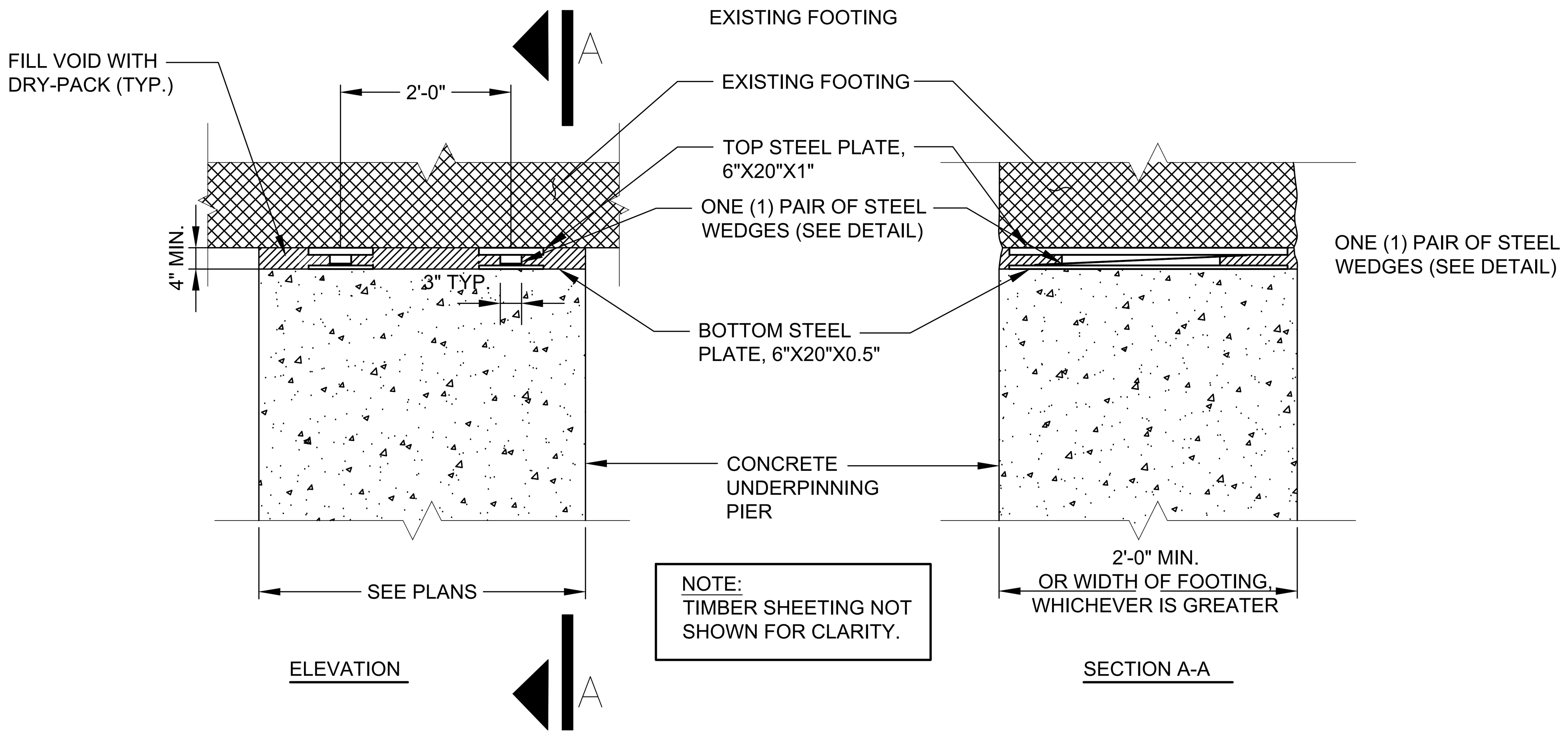
DATE: 02-21-2022
SCALE: AS NOTED
DRAWING BY: A.M.C.
CHECKED BY: R.G.
DWG NO:
SOE-301.01

SHEET NO: 08 OF 9

BSCAN STICKER

DOB APPROVAL STAMP

DOB JOB #B00715872-P4

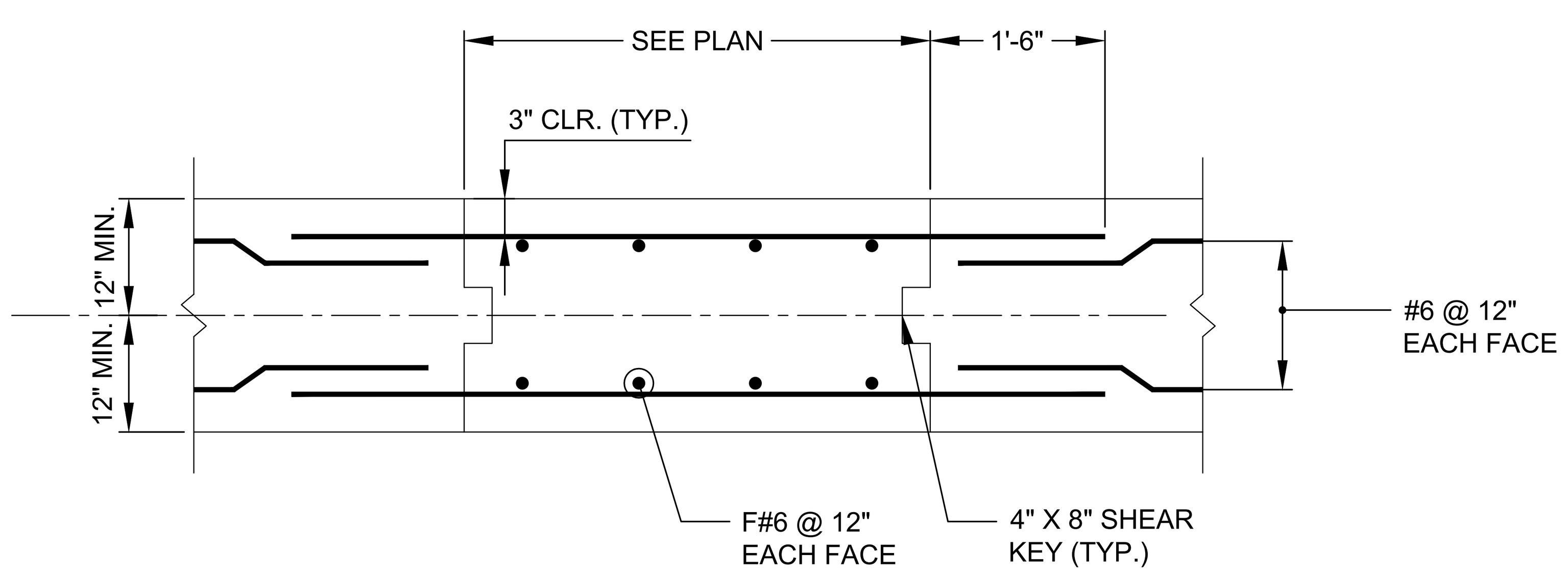


TYPICAL LOAD TRANSFER DETAIL AT UNDERPINNING PIERS

3/4"=1-0"

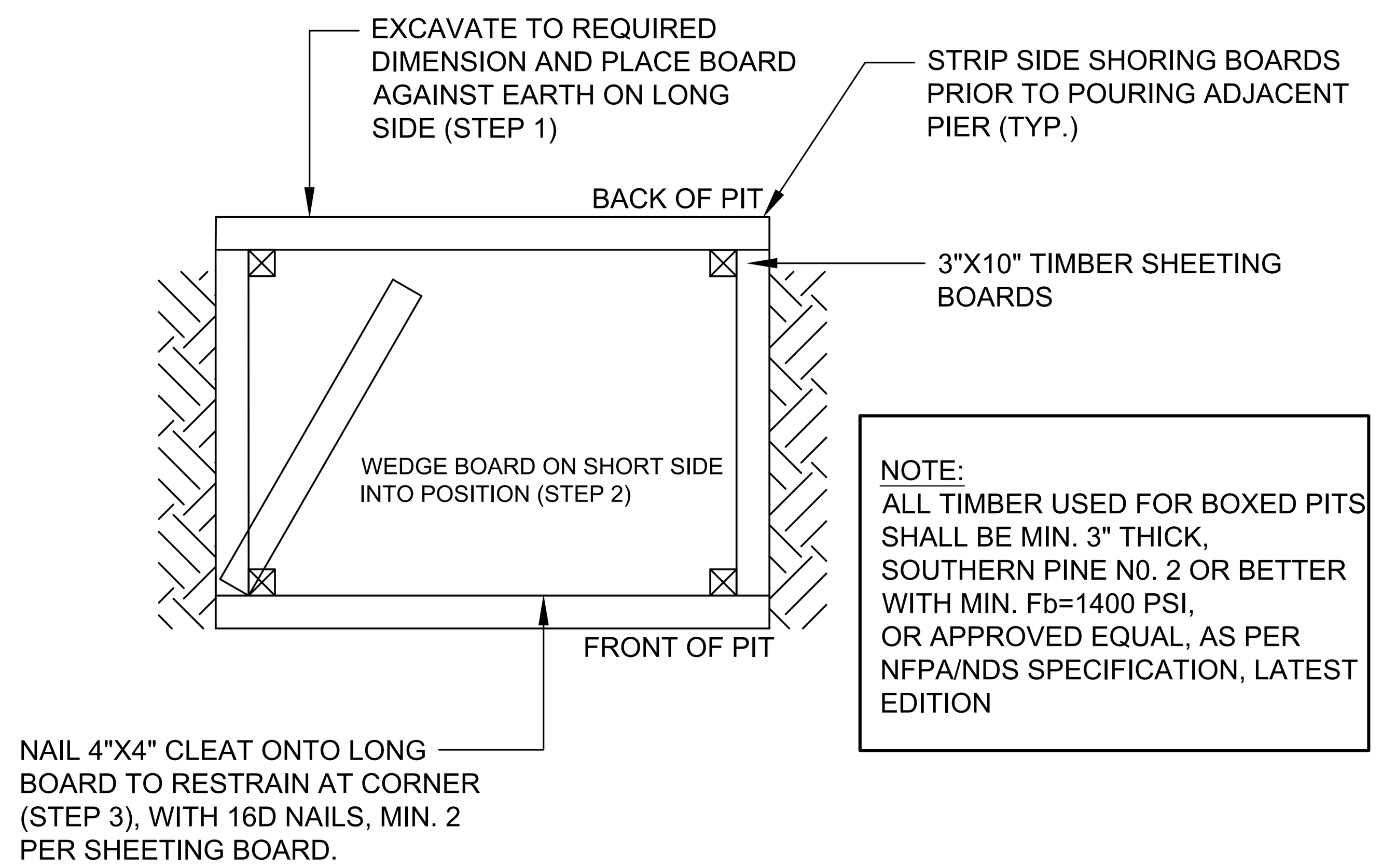
UNDERPINNING CONSTRUCTION PROCEDURE

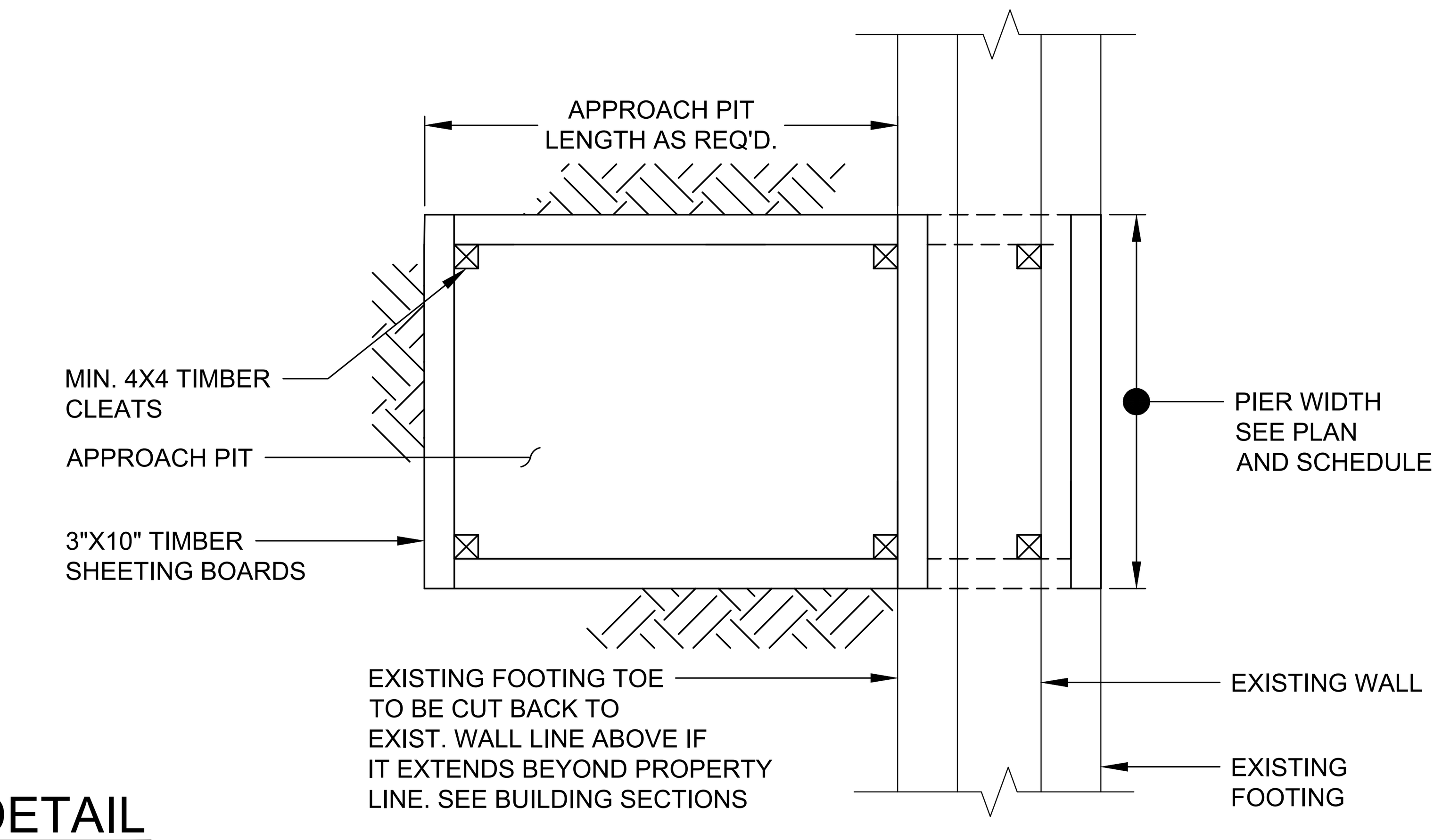
1. EXCAVATE PIT AND SIMULTANEOUSLY PLACE REQUIRED SHEETING AND BRACING, ALL PITS TO BE SHEETED ON ALL FOUR SIDES. PACK VOIDS BEHIND SHEETING WITH SOIL CEMENT OR GROUT. LEAVE A MINIMUM OF 12'-0" BETWEEN OPEN PITS.
2. CLEAN BOTTOM OF EXISTING FOOTING.
3. RECOMPACT DISTURBED SOIL AT BOTTOM OF PIT TO 95% OF THE MAXIMUM DENSITY OF THE SOIL.
4. AFTER UNDEPINNING SUBGRADE IS INSPECTED AND APPROVED BY SPECIAL INSPECTOR, INSTALL REINFORCING STEEL AS SHOWN ON THE UNDERPINNING DETAILS IF APPLICABLE.
5. POUR NEW CONCRETE UNDERPINNING PIER. TOP OF UNDERPINNING PIER SHALL BE SMOOTH AND LEVEL.
6. NO SOONER THAN 24 HOURS AFTER THIS CONCRETE IS CAST, PLACE STEEL PLATE (0.5"X32"X24") ON TOP OF UNDERPINNING PIER. ADD STEEL PLATES AS NECESSARY TO MAKE UP HEIGHT. THEN PLACE TAPERED STEEL WEDGES AT 2'-0" ON CENTER BETWEEN STEEL PLATE AND BOTTOM OF THE FOOTING. CENTER THE WEDGES UNDER THE BOTTOM OF THE FOOTING AND DRIVE THE WEDGES.
7. PACK SOLID WITH DRYPACK INTO SPACE BETWEEN TOP OF THE UNDERPINNING AND BOTTOM OF EXISTING FOOTING. ENSURE THE BACK OF VOID IS FORMED SO THAT THE DRYPACK IS NOT LOST WHEN RAMMED INTO GAPS.
8. REPEAT UNDERPINNING CONSTRUCTION FOR ADJACENT SEGMENTS.



REINFORCEMENT AND SHEAR KEY UNDERPINNING DETAIL

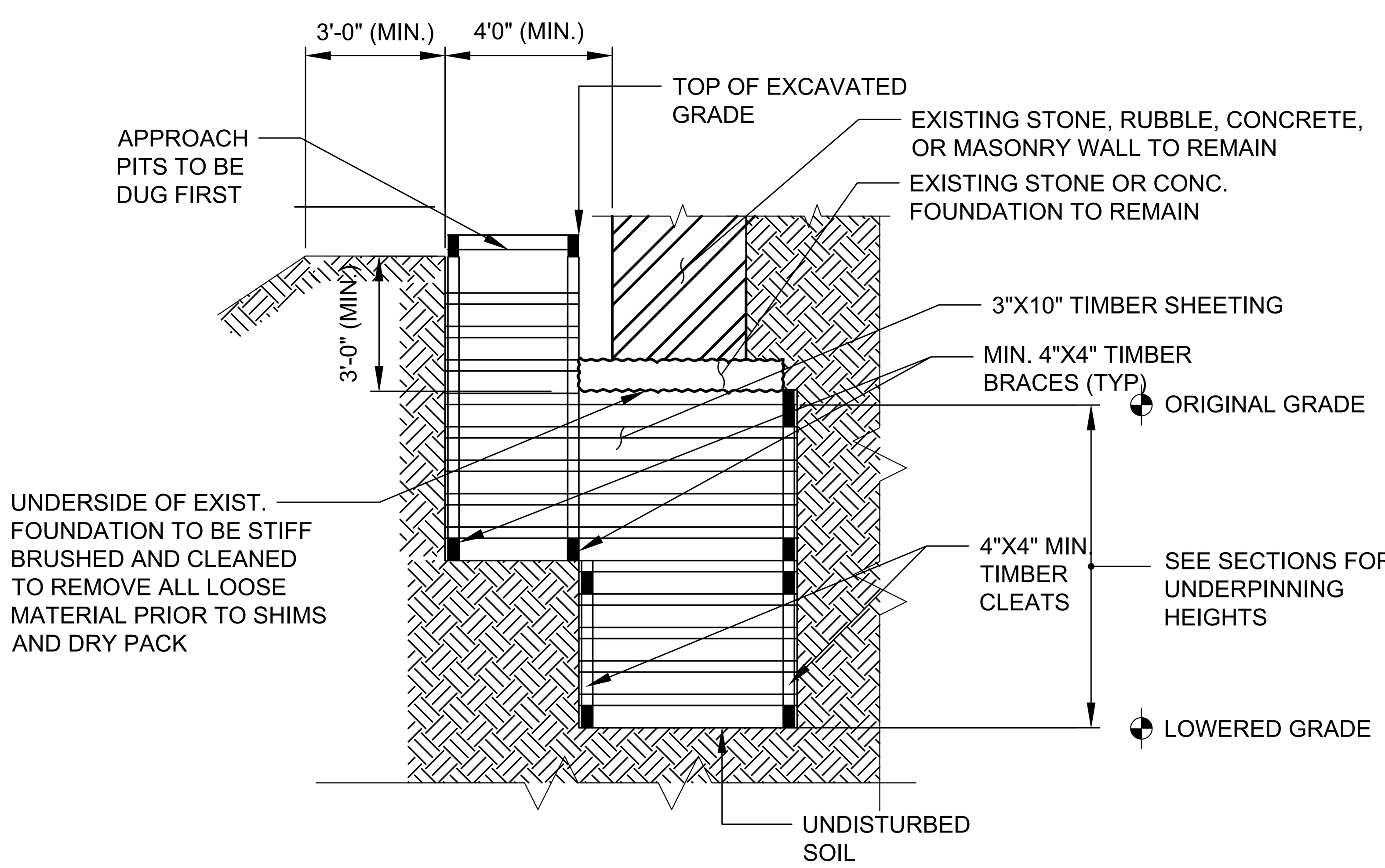
SCALE: 3/4"=1'-0"





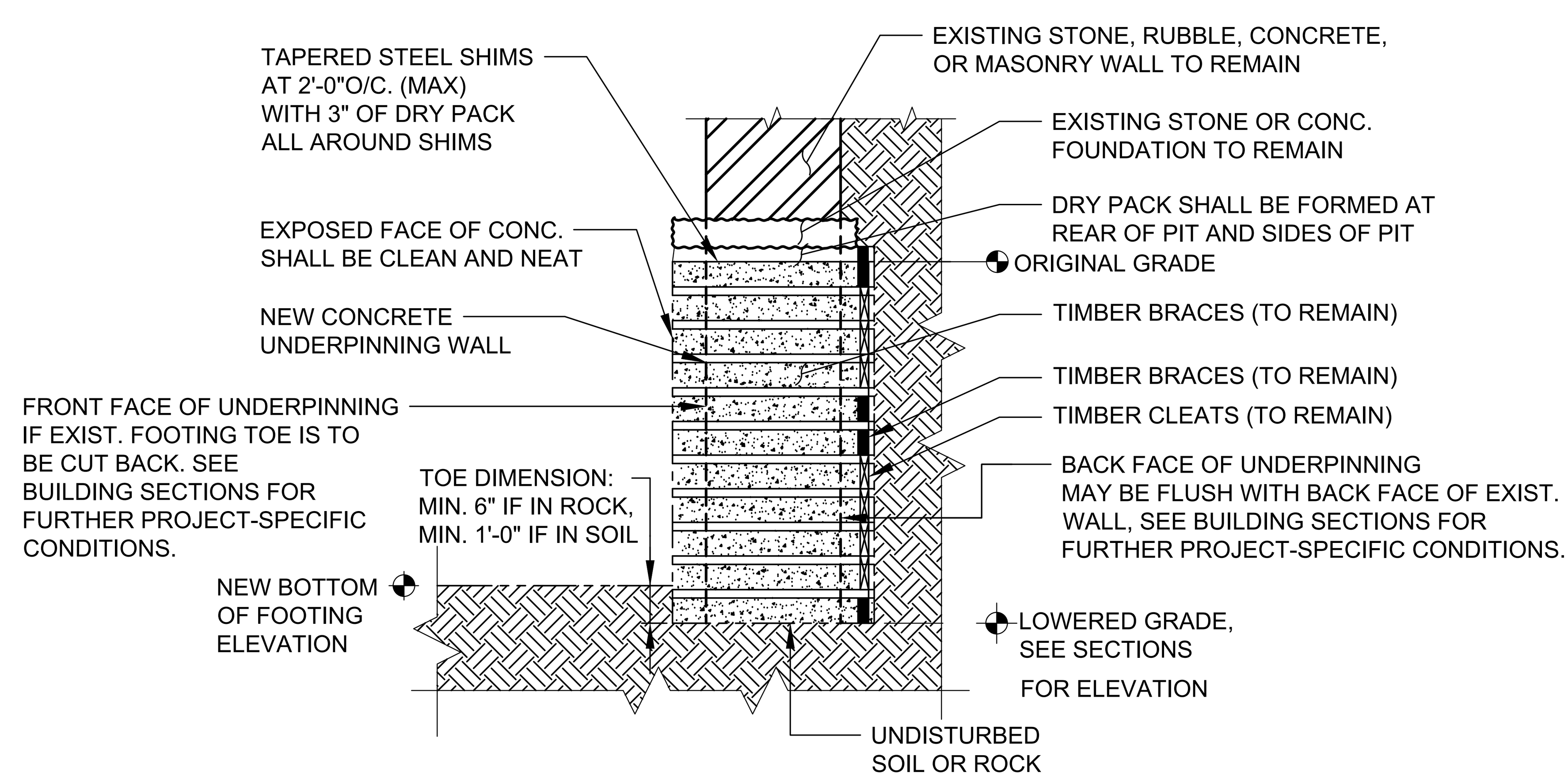
APPROACH PIT SHORING DETAIL

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



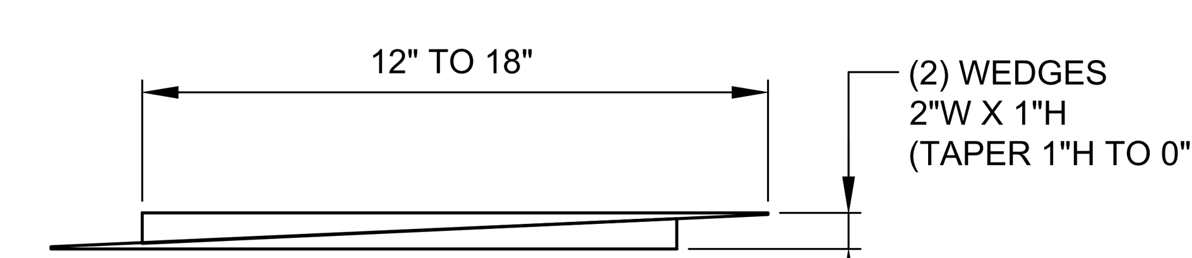
TYPICAL SECTION SHEETING / BRACING

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



TYPICAL SECTION OF CONCRETE UNDERPINNING

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



NOTE:
USE THIN SHIM PLATES AS REQUIRED TO FILL IN ANY VOIDS BETWEEN TOP AND BOTTOM STEEL PLATES.

STEEL WEDGE DETAIL

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

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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NO.	DATE	DESCRIPTION
	08/08/22	PER DOB
	07/01/22	UPDATED FOR FILING
	05/04/22	FILING SET
	03/25/22	PRELIMINARY

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

DRAWING TITLE:

TYPICAL UNDERPINNING DETAILS

SEAL & SIGNATURE

DATE:	02-21-2022
SCALE:	AS NOTED
DRAWING BY:	A.M.C.
CHECKED BY:	R.G.
DWG NO:	SOE-302.00
SHEET NO:	09 OF 09

BSCAN STICKER

DOB APPROVAL STAMP

NYC
Victor Daza Quinteros
APPROVED
Date: 08/31/2022

DOB JOB #B00715872-S1

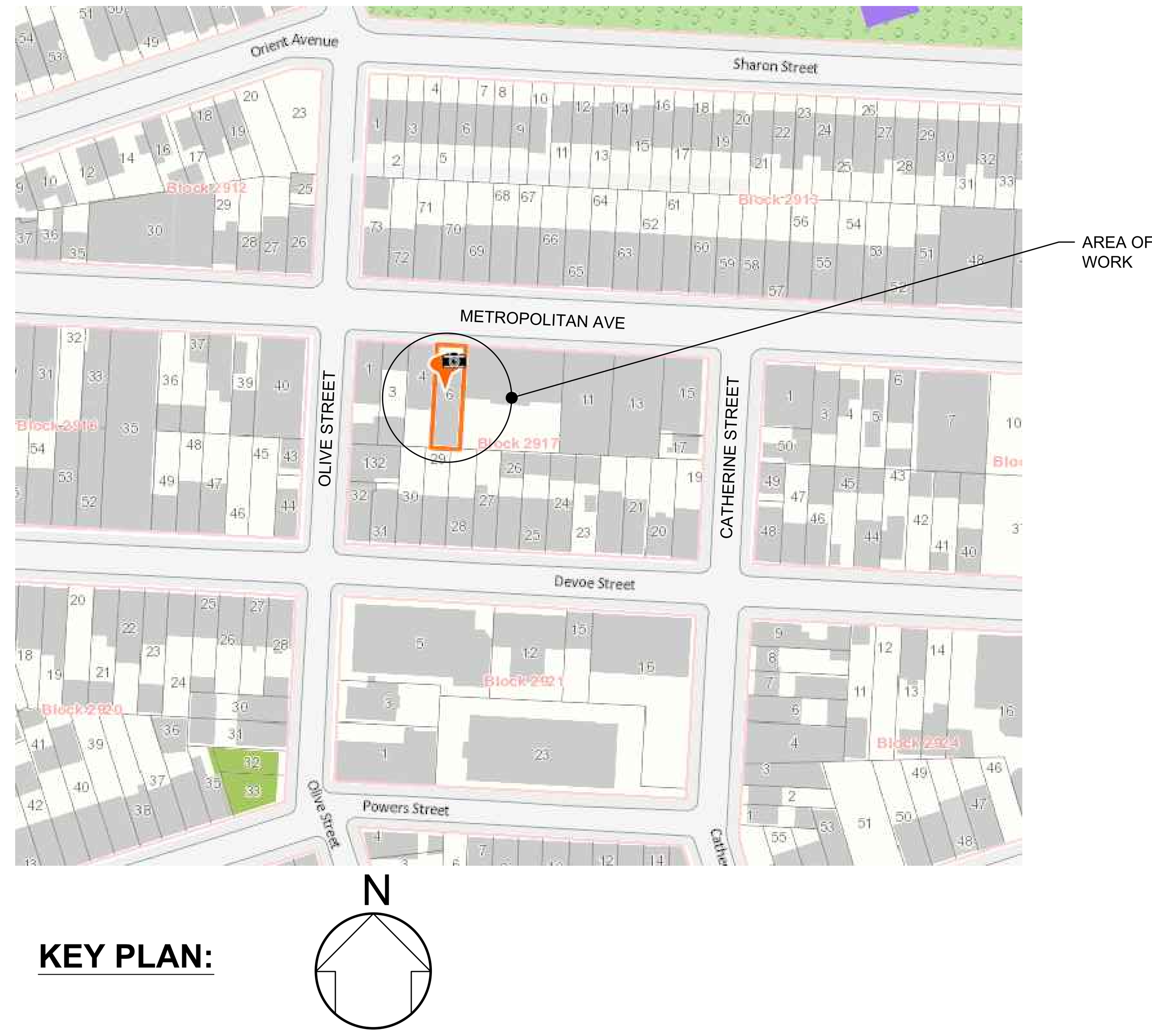
PROJECT DESCRIPTION: NEW 4-STORY MASONRY BUILDING AT 920 METROPOLITAN AVENUE, BROOKLYN, NEW YORK - 11211

SCOPE OF WORK:

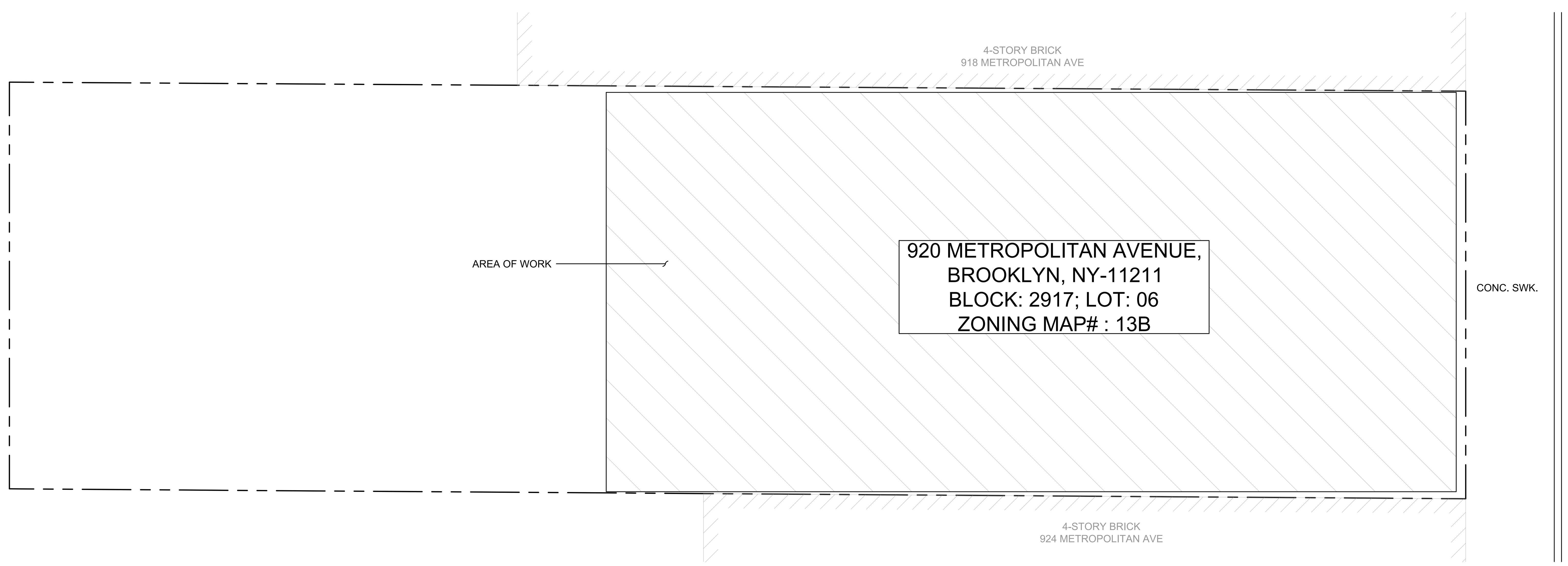
FOUNDATION : THE FOUNDATION SHALL BE CAST IN PLACE CONCRETE FOOTINGS. CONTINUOUS WALL FOOTINGS SHALL BE USED TO SUPPORT THE BEARING WALLS AND MAT FOOTINGS SHALL BE USED FOR SHEAR WALLS. FOUNDATION WALLS SHALL BE CAST IN PLACE CONCRETE WALLS. SEE FO PLANS FOR DETAILS

Sheet List Table

Sheet Number	Sheet Title	Sheet Name
1	T-001.01	TITLE SHEET
2	FO-001.00	GENERAL NOTES
3	FO-002.00	GENERAL NOTES
4	FO-101.01	FOUNDATION PLAN
5	FO-201.00	TYPICAL FOUNDATION DETAILS
6	FO-202.01	FOUNDATION SECTIONS
7	EN-101.00	ENERGY ANALYSIS



KEY PLAN:



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

LIST OF RELATED JOB NOS.

JOB TYPE	JOB NUMBER
GENERAL CONSTRUCTION (NB)	B00715872-I1
MECHANICAL	B00715872-S6
PLUMBING	B00715872-S7
SPRINKLER	B00715872-S4
STRUCTURAL	B00715872-S3
FOUNDATION	B00715872-S2
SOE	B00715872-S1

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OWNER:

DOB NOW BUILD JOB # :

#B00715872-P5

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NO.	DATE:	DESCRIPTION
9	05/10/23	PER DOB
8	03/07/23	UPDATED FDN
7	01/31/23	FOR PAA
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

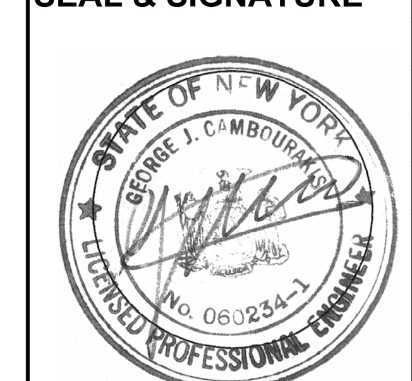
PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

TITLE SHEET

SEAL & SIGNATURE

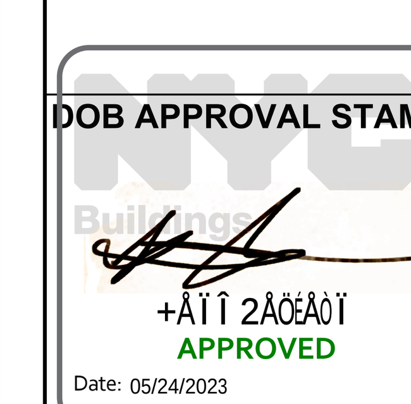


DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO: T-001.01

SHEET NO: 1 OF 7

BSCAN STICKER

DOB APPROVAL STAMP



SPECIAL INSPECTIONS:

1. PRIOR TO BEGINNING ANY WORK, THE OWNER SHALL RETAIN THE SERVICES OF S.E.T. , P.C., OR ANOTHER ACCEPTABLE LICENSED PROFESSIONAL ENGINEER WHO SHALL HAVE PROVEN EXPERIENCE ACCEPTABLE TO THE OWNER AND ARCHITECT. MINIMUM REQUIRED QUALIFICATIONS SHALL INCLUDE A PROFESSIONAL LIABILITY INSURANCE COVERAGE OF 1 MILLION DOLLARS AND A MINIMUM PROVEN EXPERIENCE OF 5 YEARS WITH SIMILAR WORK.

2. SPECIAL AND PROGRESS (CONTROLLED) INSPECTIONS REQUIRED BY THE NYC BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY AND / OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER AT NO COST TO THE CONTRACTOR FOR THE FOLLOWING CHECKED ITEMS:

	SPECIAL INSPECTION CATEGORIES	
	STRUCTURAL STEEL -- WELDING	BC 1704.3.1
	STRUCTURAL STEEL -- DETAILS	BC 1704.3.2
	STRUCTURAL STEEL -- HIGH STRENGTH BOLTING	BC 1704.3.3
	STRUCTURAL COLD-FORMED STEEL	BC 1704.3.4
X	CONCRETE -- CAST-IN-PLACE	BC 1704.3.4
X	MASONRY	BC 1704.3.5
	SUBGRADE INSPECTION	BC 1704.7.1
X	SUBSURFACE CONDITIONS -- FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2, BC 1704.7.3
X	SUBSURFACE INVESTIGATION (TR-4)	BC1802.4
	DEEP FOUNDATION ELEMENTS	BC 1704.8
	HELICAL PILES (BB # 2014-020)	BC 1704.8.5
	STRUCTURAL STABILITY -- EXISTING BUILDING	BC 1704.20.1
	EXCAVATIONS--SHEETING, SHORING, BRACING	BC 1704.20.2
	UNDERPINNING	BC 1704.20.3, BC 1814
	MECHANICAL DEMOLITION	BC 1704.20.4
X	POST-INSTALLED ANCHORS (BB #2014-018, 2014-019)	BC 1704.32
X	CONCRETE DESIGN MIX (TR-3)	BC 1905.3, BC 1913.5
X	CONCRETE SAMPLING AND TESTING (TR-2)	BC 1905.6, BC 1913.10
	PROGRESS INSPECTION CATEGORIES	
X	FOOTING AND FOUNDATION	BC 110.3.1
	STRUCTURAL WOOD FRAME	BC 110.3.3
	FINAL	28-116.2.4.2,
	BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY § 101-10	

THE TESTING AGENCY FOR CONTROLLED INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE NEW YORK CITY BUILDINGS DEPARTMENT.

3. THE CONTRACTORS ENGINEER SHALL PREPARE PLANS, CALCULATIONS, AND NOTES IN THE FORM OF SHOP DRAWINGS, FOR ALL ITEMS OF WORK WHICH DIFFER FROM WHAT IS SHOWN ON THE STRUCTURAL DRAWINGS DUE TO FIELD CONDITIONS. HE SHALL ALSO PREPARE PLANS IN THE FORM OF SHOP DRAWINGS, CALCULATIONS AND NOTES FOR ALL TEMPORARY SHORES AND BRACES AND CLEARLY INDICATE METHOD OF INSTALLATION, SEQUENCE OF OPERATIONS, AND QUALITY CONTROL.

4. THESE SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND ARCHITECT PRIOR TO CONSTRUCTION. WORK SHALL BE EXECUTED FROM REVIEWED SHOP DRAWINGS ONLY.

5. COPIES OF SUCH DRAWINGS WHICH INCLUDE THE ARCHITECT'S AND ENGINEER'S COMMENTS SHALL BE FILED WITH THE DEPARMENT OF BUILDINGS (ON AMENDMENT FORMS). ADDITIONALLY, AT COMPLETION OF WORK, FORMS INCLUDING ALL INSPECTION REPORTS PREPARED BY THE CONTRACTOR'S ENGINEER SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.

6. THE SPECIAL INSPECTIONS ENGINEER SHALL DETERMINE THE FREQUENCY OF INSPECTIONS NEEDED AND WHETHER HE OR SHE SHOULD INSPECT THE SITE PERSONALLY OR SEND A PERSON UNDER HIS OR HER DIRECT SUPERVISION. AT A MINIMUM, THE SITE MUST BE INSPECTED TWICE, ONCE AT A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND ONCE DURING CONSTRUCTION OPERATIONS.

7. THE SPECIAL INSPECTIONS ENGINEER, SHALL MAINTAIN A LOG IN HIS OR HER OFFICE WHICH INCLUDES THE FOLLOWING INFORMATION:

(i) ADDRESS OF THE PREMISES, JOB NUMBER, CONTRACTOR NAME AND ADDRESS
(ii) DATE AND TIME OF EACH INSPECTION INCLUDING
 (A) NAMES OF PERSONNEL WHO INSPECTED THE SITE
 (B) ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS GIVEN RELATING TO ANY OF THE FOLLOWING:
  (1) DEVIATIONS FROM THE CONTRACT DOCUMENTS.
  (2) ANTICIPATED FIELD CONDITIONS;
  (3) PROPER EXECUTION OF THE STRUCTURAL WORK;
  (4) GOOD ENGINEERING PRACTICE;
  (5) PRECAUTIONS TAKEN TO MAINTAIN SAFE CONDITIONS, IF WORK IS STOPPED FOR ANY REASON.

(iii) THE DATE OF AND PARTICIPANTS IN ANY CONVERSATIONS WITH THE SPECIAL INSPECTIONS ENGINEER OCCURING OFF-SITE AND RELATING TO ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS.

8. THE SPECIAL INSPECTIONS ENGINEER SHALL RETAIN A COPY OF THE DOCUMENTS DESCRIBED ABOVE IN HIS OR HER OFFICE AND SHALL PROVIDE A COPY TO THE CONTRACTOR AND / OR OWNER TO BE KEPT AT THE CONSTRUCTION SITE.

9. THE SPECIAL INSPECTIONS ENGINEER RESPONSIBLE FOR SPECIAL INSPECTION SHALL REPORT UNSAFE CONDITIONS, WHEN AND IF OBSERVED DURING HIS / HER SITE VISITS, TO THE DEPARTMENT OF BUILDINGS AND / OR ANY OTHER AFFECTED PARTIES OR AGENCIES. IT IS TO BE NOTED THAT THE SPECIAL INSPECTIONS ENGINEER AND ENGINEER OF RECORD ARE NOT RESPONSIBLE IN ANY WAY FOR SITE SAFETY. SITE SAFETY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

10. UPON REQUEST OF THE BUILDINGS DEPARTMENT, THE SPECIAL INSPECTIONS ENGINEER SHALL MAKE AVAILABLE FOR REVIEW BY THE BUILDINGS DEPARTMENT DOCUMENTS AND THE LOG DESCRIBED ABOVE.

SAFETY DURING EXECUTION OF WORK:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL PROVIDE SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BLDG. CODE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR ALL WORKERS. THIS SHALL INCLUDE COMPLIANCE WITH ALL OSHA, STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.

5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

ENERGY ANALYSIS (EN):

2020 NEW YORK CITY ENERGY CONSERVATION CODE

2016 ASHRAE 90.1 - ENERGY STANDARD FOR BUILDINGS

1. THE FOLLOWING REQUIRED ENERGY CODE PROGRESS INSPECTIONS TO BE FILED WITH (OT) APPLICATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILED ENERGY ANALYSIS.

 1.1. PROTECTION OF EXPOSED FOUNDATION INSULATION
 1.2. INSULATION PLACEMENT AND R-VALUES

2. "THE FOLLOWING FOUNDATION PLAN IS IN COMPLIANCE WITH 2020 NYCECC BY APPLICATION OF ASHRAE 90.1-2016 AS MODIFIED BY APPENDIX CA"

OPAQUE THERMAL ENVELOPE ASSEMBLY REQUIREMENTS		
NYCECC TABLE C402.1.4	ALL OTHER COMMERCIAL	GROUP R >3 STORIES
WALLS, BELOW GRADE		
BELOW-GRADE WALL	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURAL DWGS.

GENERAL CONDITIONS:

1. THESE DRAWINGS ARE INTENDED TO BE USED BY ONLY AN EXPERIENCED CONTRACTOR AFTER CONSULTATION WITH THIS OFFICE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR JOB SITE PROBLEMS DUE TO FAILURE TO INTERPRET THE DOCUMENTS CORRECTLY. REPRESENTATIVES OF S.E.T., P.C. ARE AVAILABLE TO ANSWER QUESTIONS AND TO ASSIST THE CONTRACTOR BY EXPLAINING THE DESIGN INTENT. FAILURE BY THE CONTRACTOR TO UNDERSTAND THE COMPLEXITIES OF THE PROJECT AND THE SEQUENCE OF CONSTRUCTION CAN RESULT IN INJURY OR DEATH TO WORKERS. PROCEEDING WITH CONSTRUCTION WITHOUT FULL UNDERSTANDING OF THE PROJECT AND WITHOUT A COMPLETE SET OF DESIGN DOCUMENTS WILL PUT BOTH THE PROJECT AND INDIVIDUALS IN PERIL. THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR ANY CONSEQUENCE OF THAT ACTION.

2. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPELLED OUT ON THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL DRAWINGS AND NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE DRAWINGS AND NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS. QUESTIONS WILL BE CHEERFULLY ANSWERED BY THE ENGINEER.

3. ALL CONTRACTORS MUST VISIT SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET BEFORE SUBMITTING BID. LACK OF THOROUGH UNDERSTANDING OF THE PROJECT REQUIREMENTS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR JUSTIFY A REQUEST FOR EXTRA COMPENSATION.

4. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON JOB AND SHALL BE RESPONSIBLE FOR SAME.

5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT BUILDING CODE OF ALL GOVERNING AUTHORITIES.

6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND DRAWINGS.

7. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATION WITH OTHER TRADES, METHODS, SAFETY AND SECURITY ON THE JOB SITE. S.E.T., P.C. AND ITS AGENTS AND EMPLOYEES ARE NOT RESPONSIBLE OR LIABLE FOR THE ABOVE AND SHALL BE HELD HARMLESS AND INDEMNIFIED BY ALL CONTRACTORS AND SUBCONTRACTORS FROM ANY AND ALL CLAIMS, LOSSES, SUITS AND LEGAL ACTION WHATSOEVER ARISING FROM THE PERFORMANCE OF WORK ON THIS PROJECT.

8. ACCEPTANCE OF DEVIATIONS FROM ANY OF THE REQUIREMENTS OF THESE NOTES SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. ACCEPTANCE OF A DEVIATION FROM ANY REQUIREMENT SHALL NOT BE CONSTRUED AS PERMITTING ANY OTHER DEVIATION.

BIDDERS WARRANTY:

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT:

1. THE BIDDER AND ALL SUBCONTRACTORS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND OTHER CONSTRUCTION CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE CONTRACTOR TO BID, FABRICATE, AND INSTALL THE WORK ON TIME, FURTHER THAT,

2. THE BIDDER AND ALL WORKMEN, EMPLOYEES AND SUBCONTRACTORS HE INTENDS TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON; FURTHER THAT,

3. NEITHER THE BIDDER NOR ANY OF HIS EMPLOYEES, AGENTS INTENDED SUPPLIERS OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS, ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER, HIS EMPLOYEES OR AGENTS INCLUDING ARCHITECTS, ENGINEERS OR CONSULTANTS, IN ASSEMBLING THE BID FIGURE; AND FURTHER THAT,THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NOT UPON ANY OTHER WRITTEN REPRESENTATION.

4. THE BIDDER ALSO WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM HIS OWN INVESTIGATIONS HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR ITS PERFORMANCE.

DISCLAIMER:
THE DRAWINGS HEREIN ARE RELATED TO A NEW BUILDING STRUCTURE. THE STRUCTURAL DESIGN WAS BASED UPON AS MUCH OBSERVATION, MEASUREMENT, TESTING, ETC. AS CIRCUMSTANCES PERMITTED, HOWEVER, THERE WERE ASSUMPTIONS MADE ABOUT UNKNOWN CONDITIONS. SHOULD THE OWNER DECIDE NOT TO UTILIZE S.E.T. , P.C. TO VERIFY AND INSPECT THESE CONDITIONS IN THE FIELD, S.E.T. , P.C. WILL NOT BE RESPONSIBLE FOR ANY FAILURE, DAMAGE, INJURY, DELAY, LOSS OF INCOME, EXTRA COST, OR ANY OTHER LOSS DUE TO EXISTING CONDITIONS.

SHOP DRAWING REVIEW:
THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS WITH RESPECT TO CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS. IF REQUIRED BY SPECIFICATIONS, SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, INCLUDING REFLECTION OF EXISTING FIELD CONDITIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER WILL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION FROM THE CONTRACT UNLESS CONTRACTOR ADVISES THE ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY THE ENGINEER IN WRITING. IN THE EVENT THAT THE ENGINEER WILL REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM REVIEW, THE ENGINEER WILL SO NOTIFY THE CONTRACTOR. THE ENGINEER WILL RETURN WITHOUT REVIEW MATERIAL WHICH HAS NOT BEEN APPROVED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER

FIDUCIARY LIABILITY DECLINED:
S.E.T., P.C. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED AS TO S.E.T.. P.C. FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE. S.E.T., P.C. HAS ENDEAVORED AND WILL ENDEAVOR TO PERFORM ITS SERVICES IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OF PRACTICE IN EFFECT AT THE TIME OF PERFORMANCE. BY UTILIZING THESE DOCUMENTS (OR HAVING OTHERS UTILIZE THEM) FOR ANY PURPOSE WHATSOEVER THE OWNER OR DEVELOPER RECOGNIZES THAT NEITHER S.E.T., P.C. OR ANY OF S.E.T., P.C. SUBCONSULTANTS OR SUBCONTRACTORS OWES ANY FIDUCIARY RESPONSIBILITY TO THE OWNER OR DEVELOPER.

2020 ENERGY CODE TABULAR ANALYSIS					
NYCECC CITATION	PROVISION	ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIPTIVE VALUE	SUPPORTING DOCUMENTATIO N
CLIMATE ZONE 4: BRONX, NASSAU, KINGS, NEW YORK, QUEENS, RICHMOND, SUFFOLK, WESTCHESTER					
RESIDENTIAL/COMMERCIAL BUILDING THERMAL ENVELOPE					
402 THERMAL ENVELOPE					
402.1.1	VAPOR RETARDER	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURA L DWGS.	REFER TO ARCHITECTURA L DWGS.	N/A
402.1.3	R-VALUE COMPUTATION	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURA L DWGS.	REFER TO ARCHITECTURA L DWGS.	N/A

SHOP DRAWING NOTES:

SUBMISSION AND REVIEW OF SHOP DRAWINGS IS REQUIRED BECAUSE IT WILL BETTER ENSURE A MORE SUCCESSFUL PROJECT COMPLETION, AND WILL ENABLE THE SPECIAL INSPECTIONS AGENCY (SIA) AND ENGINEER OF RECORD (EOR) TO PERFORM THEIR RESPECTIVE SITE INSPECTION AND OBSERVATION DUTIES IN A CLEAR, DEFINITIVE WAY.

IF OWNER AND/OR CONTRACTOR CHOOSE TO NOT PROVIDE SHOP DRAWINGS:

a) SIA MUST INFORM EOR, OWNER, AND CONTRACTOR IF THEIR INSPECTIONS CAN BE PERFORMED PROPERLY OR NOT, AND WRITTEN AGREEMENT MUST BE REACHED WITH ALL INVOLVED PARTIES AS TO HOW TO PROCEED FURTHER.
b) IF CONSTRUCTION ERRORS, OMISSIONS, AND UNSAFE CONDITIONS, OCCUR DUE TO LACK OF SHOP DRAWING SUBMISSIONS, OR LACK OF REQUIRED RE-SUBMISSIONS, OR FOR ANY OTHER REASONS NOT DUE TO FAULT OF EOR AND SIA, THEN SIA MUST SUBMIT NON-CONFORMANCE REPORT (NCR) ON THE SAME DAY OF OCCURRENCE TO ALL INVOLVED PARTIES, AND EOR RESERVES THE RIGHT TO STOP WORK UNTIL DEFECTIVE CONDITIONS ARE CORRECTED. ALL TIME SPENT BY EOR FOR THESE CONDITIONS WILL BE BILLED AS ADDITIONAL SERVICES.

1. SUBMIT ONE REPRODUCIBLE AND TWO (2) PRINTS EACH OR AN ELECTRONIC DRAWING SUBMISSION, OF ALL SHOP DRAWINGS TO ARCHITECT AND ENGINEER OF RECORD (EOR) FOR REVIEW. THE EOR WILL SEND HIS/HER REVIEWED SHOP DRAWINGS TO THE ARCHITECT, WHO WILL PERFORM HIS/HER REVIEW OF THESE DRAWINGS AND SEND TO THE CONTRACTOR FOR HIS OR HER REVIEW, AND TO ALL OTHERS REQUIRING COPIES. SHOP DRAWINGS MUST BE CHECKED BY THE DETAILER PRIOR TO SUBMISSION, FAILURE TO DO SO WILL BE CAUSE FOR REJECTION.

2. REPRODUCTIONS OF STRUCTURAL CONTRACT DOCUMENTS MAY BE SUBMITTED AS ERECTION PLANS PROVIDED THAT S.E.T., P.C. IS CONTACTED AND GRANTS APPROVAL. A NOMINAL FEE WILL BE CHARGED FOR THIS RELEASE OF FILES IN ELECTRONIC FORMAT. DETAILER MUST USE COLUMN AND LINTEL DESIGNATIONS AS SHOWN ON ARCHITECTURAL AND STRUCTURAL DRAWINGS.

3. ALL REVISIONS TO SHOP DRAWINGS AFTER FIRST SUBMISSION MUST BE SO IDENTIFIED ON SUBSEQUENT SUBMISSIONS (I.E. WITH REVISION BUBBLES).

4. REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY CONTRACT RESPONSIBILITIES, EVEN IF SUCH ITEMS ARE NOT SHOWN ON SHOP DRAWINGS.

5. ANY DESIGN CHANGES PROPOSED BY THE DETAILER, MUST BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS AND, UPON REQUEST OF THE EOR, SUBSTANTIATED BY SUBMISSION OF THE CALCULATIONS USED TO DESIGN SUCH CHANGES.

6. ALL SUBCONTRACTORS MUST WORK WITH A FULL SET OF DRAWINGS, INCLUDING, STRUCTURAL, ARCHITECTURAL AND MECHANICAL, ELECTRICAL, PLUMBING. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST ANY DRAWINGS NOT FURNISHED BY THE GENERAL CONTRACTOR.

7. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AT LEAST TEN WORKING DAYS PRIOR TO THE REQUIRED DATE FOR RETURN FROM REVIEW. THE CONTRACTOR WILL BE RESPONSIBLE FOR DEADLINES MISSED DUE TO LATE SHOP DRAWING SUBMISSION.

8. SHOP DRAWINGS MUST BE SUBMITTED TO THE E.O.R. FOR STRUCTURAL WORK RELATED TO THE FOLLOWING:

 8.1. STRUCTURAL STEEL.
 8.2. STRUCTURAL CONCRETE.
 8.3. STRUCTURAL MASONRY.
 8.4. STRUCTURAL COLD FORMED AND/OR LIGHT GAGE STEEL (I.E. STEEL DECKING).
 8.5. STRUCTURAL LUMBER, TIMBER AND WOOD.
 8.6. SUPPORT OF EXCAVATION AND PILES.
 8.7. ANY OTHER STRUCTURAL WORK NOT PREVIOUSLY MENTIONED.

MINIMUM SHOP DRAWINGS REQUIREMENTS

AT A MINIMUM, THE FOLLOWING INFO IS TO BE PROVIDED ON SHOP DRAWINGS:

1. CONCRETE STRUCTURES:
 1.1. SLAB AND BEAM TOP & BOTTOM REINFORCEMENT, CONCRETE STRENGTH, PLANS AND SECTIONS, WITH BAR SPLICE LENGTHS AND LOCATIONS CLEARLY SHOWN.
 1.2. COLUMN REINFORCEMENT & TIES SECTIONS, WITH BAR SPLICE LENGTHS, ELEVATIONS, AND LOCATIONS CLEARLY SHOWN.
 1.3. REBAR SCHEDULES.
  1.3.1. EDGE OF SLAB LOCATION PLANS.
  1.3.2. COLUMN LOCATION PLANS (COORDINATES OR GRID).
  1.3.3. FORMWORK, FOR LOCATIONS OF "STA-FORM" SYSTEM, OR ANY OTHER FORM SYSTEMS THAT WILL ELIMINATE LATERAL LOADS AGAINST EXISTING STRUCTURES DURING POURING OF CONCRETE.
  1.3.4. SEE ALSO CONCRETE NOTES AND DETAILS FOR MORE INFO.

PRE-CONSTRUCTION NOTES:

1) DURING THE DESIGN PHASE, AND PRIOR TO CONSTRUCTION, THE FOLLOWING STEPS, AT A MINIMUM, MUST BE TAKEN:

 A. PRIOR TO CONSTRUCTION IT IS REQUIRED THAT OWNER CONDUCT A CONDITION SURVEY OF ADJACENT PROPERTIES, INCLUDING DATED PHOTOGRAPHS, IN ORDER TO DOCUMENT PRE-EXISTING CONDITIONS, STRUCTURAL STABILITY OF ALL ADJACENT STRUCTURES AND THEIR FOUNDATIONS, AND ASSESSMENT OF ADJACENT STRUCTURES & FOUNDATIONS ABILITY TO SAFELY WITHSTAND THE EFFECTS OF PROPOSED CONSTRUCTION, AND RECOMMENDED BRACING & SHORING, IF REQUIRED. IF CRACKS EXIST ON ADJACENT PROPERTIES, IT IS REQUIRED THAT CRACK MONITORS BE INSTALLED AT LOCATIONS DICTATED BY ENGINEER OF RECORD, AND BE PERIODICALLY MONITORED.
 B. OWNER TO OBTAIN SITE SURVEY SHOWING, AT A MINIMUM, ALL PROPERTY LINES, PARTY WALLS WITH THEIR DIMENSIONS ON EACH SIDE OF PROPERTY LINE, INDEPENDENT WALLS, ENCROACHMENTS BEYOND PROPERTY LINE FOR ENTIRE HEIGHT OF ALL ADJOINING PROPERTIES, NAVD ELEVATIONS, UTILITIES, ETC.
 C. SOIL BORINGS, TEST PITS, AND EXPLORATORY PROBING THAT MAY BE REQUIRED.
 D. MONITORING PLAN, SHOWING TYPE OF MONITORS AND THEIR LOCATIONS.

2) MANDATORY PRE-CONSTRUCTION MEETING (TO BE ORGANIZED BY OWNER AND CONTRACTOR) TO BE HELD PRIOR TO CONSTRUCTION, AND TO BE ATTENDED BY OWNER, DESIGN TEAM, SPECIAL INSPECTIONS AGENCY (SIA), AND CONSTRUCTION TEAM INCLUDING ALL PERTINENT SUB-CONTRACTORS. AT A MINIMUM, THE FOLLOWING ITEMS MUST BE DISCUSSED AND AGREED UPON BY ALL ATTENDING PARTIES:

 A. RESULTS OF FINDINGS OF PRE-CONDITION SURVEY AND STRUCTURAL STABILITY ASSESSMENT REPORT FOR ADJOINING PROPERTIES, AND IMPLEMENTATION OF ANY REMEDIAL MEASURES, BRACING, SHORING, ETC. THAT MAY BE REQUIRED.
 B. CONSTRUCTION TEAM TO CONFIRM THAT THEIR MARK-OUTS, ELEVATIONS, ANY ENCROACHMENTS, ETC. HAVE BEEN COORDINATED WITH SITE SURVEY, PRE-CONDITION SURVEY, AND ACTUAL SITE CONDITIONS.
 C. TYPES, LOCATIONS, AND FREQUENCY OF MONITORING TO BE FINALIZED.
 D. TIMETABLE OF SHOP DRAWINGS AND MATERIAL SUBMITTALS.
 E. COORDINATION WITH SIA FOR TYPES OF INSPECTIONS, FREQUENCY OF INSPECTIONS, SUBMISSION OF NON-CONFORMANCE REPORTS (NCR), ETC. SIA TO ALSO SUBMIT NAME AND CONTACT INFO FOR INSPECTOR TO BE USED FOR THIS PROJECT.
 F. COORDINATION WITH CONSTRUCTION TEAM FOR FULL-TIME PRESENCE AT SITE DURING WORK, AND SUBMISSION OF NAME(S) AND CONTACT INFO FOR SITE SUPERINTENDENT TO BE USED FOR THIS PROJECT.

NEW YORK CITY BUILDING CODE COMPLIANCE NOTES:

1. DEWATERING NOTES:
AS PER BC10704.21, THE PERSON CAUSING THE SOIL OR FOUNDATION WORK TO BE PERFORMED SHALL DEWATER THE SITE, AS NEEDED, FOR THE PROGRESS OF THE WORK. MEASURES SHALL BE TAKEN TO PREVENT SETTLEMENT, SLOPE FAILURE, AND DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND PROPERTY AFFECTED BY DEWATER OPERATIONS.

2. DRAINAGE NOTES:
AS PER BC 3303.14, NO CONDITION SHALL BE CREATED AS A RESULT OF CONSTRUCTION OR DEMOLITION OPERATIONS THAT WILL INTERFERE WITH NATURAL SURFACE DRAINAGE. WATER COURSES, DRAINAGE DITCHES, ETC., SHALL NOT BE OBSTRUCTED BY REFUSE, WASTE BUILDING MATERIALS, EARTH, STONES, TREE STUMPS, BRANCHES, OR OTHER DEBRIS THAT MAY INTERFERE WITH SURFACE DRAINAGE OR CAUSE THE IMPOUNDMENT OF SURFACE WATERS.

2.1 **PROTECTION OF FOUNDATIONS**
AS PER BC 3303.14.1, PROVISION SHALL BE MADE TO PREVENT THE ACCUMULATION OF WATER OR WATER DAMAGE TO ANY FOUNDATIONS ON THE PREMISES OR TO ADJOINING PROPERTY.

2.2 **DRAINAGE OF EXCAVATIONS**
AS PER 3303.14.2, ALL EXCAVATIONS SHALL BE DRAINED, AND THE DRAINAGE SHALL BE MAINTAINED AS LONG AS THE EXCAVATION CONTINUES OR REMAINS. WHERE NECESSARY, PUMPING SHALL BE USED, PROVIDED PROPER PERMITS ARE OBTAINED FROM THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

2.3 **CLOGGING**
AS PER 3303.14.3, PRECAUTIONS SHALL BE TAKEN TO PREVENT CONCRETE OR MORTAR WASHINGS, SAND, GRIT, OR ANY OTHER MATERIAL THAT WOULD CAUSE CLOGGING FROM ENTERING A SEWER OR DRAIN. CONCRETE WASHOUT WATER SHALL ALSO MEET THE REQUIREMENTS OF NYC BC SECTION 3303.15.

3. FLOOD-RESISTANT CONSTRUCTION NOTES:
AS PER BC APPENDIX G, CONDITIONS SHALL PROMOTE THE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE AND TO MINIMIZE PUBLIC AND PRIVATE LOSSES DUE TO FLOOD CONDITIONS IN SPECIFIC FLOOD HAZARD AREAS THROUGH THE ESTABLISHMENT OF COMPREHENSIVE REGULATIONS FOR MANAGEMENT OF FLOOD HAZARD DESIGNED TO:

3.1 **PURPOSE**
3.1.1 PREVENT UNNECESSARY DISRUPTION OF COMMERCE, ACCESS AND PUBLIC SERVICE DURING TIMES OF FLOODING;

3.1.2 MANAGE THE ALTERATION OF NATURAL FLOOD PLAINS, STREAM CHANNELS AND SHORELINES;

3.1.3 MANAGE FILLING, GRADING, DREDGING AND OTHER DEVELOPMENT WHICH MAY INCREASE FLOOD DAMAGE OR EROSION POTENTIAL;

3.1.4 PREVENT OR REGULATE THE CONSTRUCTION OF FLOOD BARRIERS WHICH WILL DIVERT FLOODWATERS OR WHICH CAN INCREASE FLOOD HAZARDS;

3.1.5 CONTRIBUTE TO IMPROVED CONSTRUCTION TECHNIQUES IN THE FLOOD PLAIN; AND

3.1.6 COMPLY WITH AND EXCEED THE MINIMUM STANDARDS OF THE NATIONAL FLOOD INSURANCE PROGRAM AS ADMINISTERED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

3.2 **SITE IMPROVEMENT - RETAINING WALLS, DRIVEWAYS, GRADING & FILL**

3.2.1 RETAINING WALL'S GRADING AND FILL COMPLIES WITH REQUIREMENTS IN BC G303.6 & G303.7.

4. SOILS & FOUNDATIONS DESIGN LOAD NOTES:
AS PER BC CHAPTER 18 & BC 107.7.1, FOUNDATION PLANS SHALL DEMONSTRATE CODE COMPLIANCE REGARDING DESIGN LOADS, DESIGN ELEVATIONS, AND DETAILS AS TO SIZES, CURE STRENGTHS AND REINFORCEMENTS.

4.1 **ALLOWABLE BEARING PRESSURES, ALLOWABLE STRESSES AND DESIGN FORMULAS**
AS PER BC CHAPTER 18, DESIGN FORMULAS SHALL BE USED WITH THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS SPECIFIED IN SECTION 1605.3. THE QUALITY AND DESIGN OF MATERIALS USED STRUCTURALLY IN EXCAVATIONS AND FOUNDATIONS SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN CHAPTERS 16, 19, 21, 22 AND 23. OTHERWISE, AS PER PROJECT SPECIFIED.

5. CONSTRUCTION OPERATIONS NOTES:
AS REQUIRED IN BC 3303.14 & BC 3304.10, CONSTRUCTION OPERATIONS HAVE ACCOUNTED FOR THE PREVENTION OF ACCUMULATION OF WATER, WHICH COULD CAUSE DAMAGE TO NEARBY BUILDING FOUNDATIONS ON THE SUBJECT PROPERTY OR ON ADJACENT PROPERTIES.

6. RODENT-PROOFING NOTES:
AS PER BC F102.1, FOR WALLS OR PORTIONS THEREOF WITHIN 2 FEET OF THE OUTSIDE GROUND LEVEL, AND FOR WALLS BELOW THE OUTSIDE GROUND LEVEL, ALL OPENINGS, INCLUDING BUT NOT LIMITED TO, ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, AND CONDUITS, SHALL BE PROTECTED BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY, METAL PLATES OR SCREENING DESIGNED TO PREVENT THE PASSAGE OF RODENTS.

7. SEISMIC LOAD NOTES:
AS PER BC 1613, EVERY STRUCTURE, AND PORTION THEREOF, INCLUDING NONSTRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7-10, EXCLUDING CHAPTER 14 AND APPENDIX 11A. THE SEISMIC DESIGN CATEGORY FOR A STRUCTURE SHALL BE DETERMINED IN ACCORDANCE WITH EITHER SECTION 1613 OR ASCE 7-10.

7.1 SEISMIC LOAD IS COMPLIANCE WITH NEW YORK CITY SEISMIC CODE: LOCAL LAW 17/95.

8. SHORING & BRACING NOTES:
AS PER BC 3305.3.2.6, WHEN PATENTED OR COMMERCIAL DEVICES THAT ARE NOT SUSCEPTIBLE TO DESIGN ARE USED FOR SHORING, BRACING, OR SPLICING, THEY SHALL BE APPROVED BY THE NYC DOB COMMISSIONER. SPLICES SHALL DEVELOP THE FULL STRENGTH OF THE SPLICED MEMBERS. WHERE SHORE HEIGHT EXCEEDS 10 FEET OR WHEN NECESSARY TO PROVIDE STRUCTURAL STABILITY, DIAGONAL BRACING SHALL BE PROVIDED. STRUTS, ANCHORED INTO MASONRY OR TO PANEL JOINTS OF ADJACENT BRACED BAYS MAY BE USED TO PREVENT BUCKLING OF INDIVIDUAL MEMBERS NOT SUPPORTED BY THE DIAGONAL BRACING, BUT BRACING AN ENTIRE TIER OF SHORES WITH STRUTS WITHOUT DIAGONAL BRACING SHALL BE PROHIBITED UNLESS THE SYSTEM CAN BE DEMONSTRATED TO BE BRACED BY OTHER RIGID CONSTRUCTION. THE UNBRACED LENGTH OF SHORES SHALL NOT EXCEED THE MAXIMUM LENGTH DETERMINED IN ACCORDANCE WITH THE REQUIREMENTS OF NYC BC 3305.3.2.6 FOR THE STRUCTURAL MATERIAL USED.

9. SOIL & ROCK SAMPLING NOTES:
AS PER BC 1802.5, THE SOIL ROCK CLASSIFICATIONS, NEEDED TO DETERMINE THE PROPER FOUNDATION DESIGN, ARE BASED ON MATERIALS OBTAINED FROM BORINGS, TEST PITS OR OTHER SUBSURFACE EXPLORATION METHODS AS ALLOWED.

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REVISIONS:

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BSCAN STICKER

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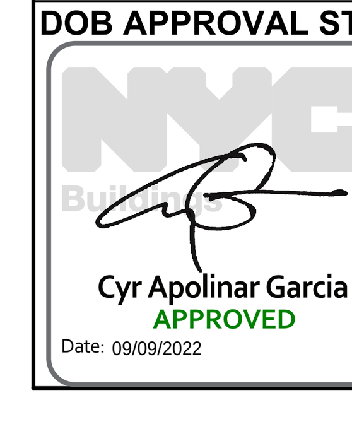


GENERAL NOTES:

1. ALL WORK TO CONFORM TO NEW YORK CITY BUILDING CODE REQUIREMENTS.
2. THE DESIGN PLANS AND NOTES, TO THE BEST OF ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
3. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
4. SECTIONS AND DETAILS NOT DRAWN TO SCALE ARE FOR DIAGRAMMATIC PURPOSES ONLY AND SHOULD NOT BE UNDERSTOOD TO SHOW SPECIFIC DETAILED INFORMATION. INFORMATION PERTAINING TO SIZES, DIMENSIONS, NUMBER OF BOLTS AND OR REBAR, ETCETERA, MAY BE FOUND IN SCHEDULES PROVIDED.
5. CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
6. ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SHOULD NOT BE USED FOR ORDERING AND/OR FABRICATING MATERIAL. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATING MATERIALS.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BY MEASUREMENTS AT THE JOB SITE AND SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM HIS WORK PROPERLY.
8. THE EXCAVATION / UNDERPINNING / SHEETING CONTRACTOR SHALL EXERCISE CAUTION IN THE PROCESS OF THE WORK. IF DAMAGE OCCURS TO THE ADJACENT BUILDING ELEMENTS OR CONTENTS, DUE TO THE NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO RECTIFY ALL DAMAGE AND/OR REIMBURSE PROPERTY OWNERS FOR ANY AND ALL DAMAGES, TO THE SATISFACTION OF ALL CONCERNED PARTIES.
9. THE EXCAVATION / UNDERPINNING / PILING / SHEETING CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ALL ADJACENT STRUCTURES.
10. ANY AND ALL WORK PERFORMED WHICH AFFECTS THE ADJACENT BUILDING OPERATIONS SHALL CAUSE A MINIMUM OF DISTURBANCE TO THE NORMAL OPERATION OF AFFECTED PARTS OF THE BUILDING.

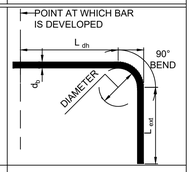
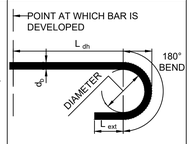
FOUNDATIONS NOTES:

1. FOOTING SHALL BEAR ON UNDISTURBED SOIL AND/OR SUPERVISED COMPACTED FILL, FREE OF FROST, SOIL BEARING CAPACITY IS **2.0 TSF** IN THIS PROJECT. RETAINING/BASEMENT WALLS HAVE BEEN DESIGNED UTILIZING AN ACTIVE FLUID PRESSURE OF 40 PCF AND AN AT REST PRESSURE OF 50 PCF. ELEVATIONS ARE FOR ESTIMATING AND ARE SUBJECT TO REVISION WHEN THE TRUE CONDITIONS ARE REVEALED BY EXCAVATION. CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER OF ANY DOUBTFUL CONDITIONS.
2. CONCRETE FOR FOOTINGS, PIERS, AND SLABS ON GRADE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON DRAWINGS.
3. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. BEFORE ANY FOOTING IS PLACED, THE CONTRACTOR SHALL ESTABLISH BY SURVEY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES, TRENCHES AND PIPING TO REMAIN IN THE FINISHED WORK. THESE LOCATIONS SHALL BE SUBMITTED ON DRAWINGS TO THE ARCHITECT FOR REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL EXISTING CONSTRUCTION AND SHALL REPAIR ANY DAMAGE TO THE SATISFACTION OF THE OWNER AT NO EXTRA COST TO THE OWNER.
5. THE ELEVATIONS OF THE FOOTINGS ARE BASED ON THE BORINGS WHICH CONSTITUTE THE BEST POSSIBLE INFORMATION AVAILABLE. ACTUAL SITE CONDITIONS MAY NECESSITATE DEVIATIONS FROM THESE ELEVATIONS. ANY DEVIATIONS FROM THE ELEVATIONS SHALL BE NOTED ON DRAWINGS AND SUBMITTED TO THE ARCHITECT AND EOR. FOR THEIR APPROVAL PRIOR TO CONSTRUCTION.
6. SOIL UNDER FOOTINGS SHALL BE PROTECTED FROM FREEZING.
7. BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 4 FEET BELOW FINISHED GRADE.
8. CHANGES TO LEVEL OF FOOTINGS MUST BE KEPT WITHIN THE SAFE ANGLE OF REPOSE OF THE SOIL (ONE VERTICAL TO ONE HORIZONTAL).
9. DO NOT BACKFILL BASEMENT OR RETAINING WALLS WITHOUT AUTHORIZATION OF THE ENGINEER. FLOOR SLABS PROVIDING SUPPORT FOR SUCH WALLS MUST BE IN PLACE PRIOR TO BACKFILLING, OR DIAGONAL BRACING MUST BE PROVIDED TO HOLD THE FULL FORCE OF THE BACKFILL UNTIL THE FLOOR SLABS HAVE ATTAINED FULL STRENGTH.
10. CONTRACTOR MUST ADEQUATELY PROTECT WALLS, PIERS, ETC. FROM DAMAGE DUE TO BACKFILLING.
11. CONTRACTOR MUST PREVENT THE FOUNDATIONS FROM BEING PUT IN JEOPARDY BY THE EXCAVATIONS FOR UTILITIES, ETC.
12. WHERE PIPES PASS THROUGH NEW WALLS, DROP FOOTINGS SO THAT PIPES PASS OVER THE TOP OF THE FOOTINGS.
13. DEWATERING PROCEDURES, IF REQUIRED, SHALL NOT DISTURB THE SOIL STRUCTURE.
14. THE CONTRACTOR SHALL EMPLOY ALL MEANS NECESSARY TO INSURE THAT THE STRUCTURAL INTEGRITY OF ANY AND ALL ADJACENT STRUCTURES WILL NOT BE COMPROMISED.
15. DOWELS FROM FOOTINGS INTO PIERS AND GRADE BEAMS SHALL BE THE SAME SIZE AND NUMBER AS VERTICAL REINFORCEMENT IN PIERS, BUTTRESSES, AND WALLS, AND SHALL BE EXTENDED 30 BAR DIAMETER IF NOT OTHERWISE NOTED.
16. CENTERLINES OF FOOTINGS, AND CENTERLINES OF PIERS, COLUMNS, AND BEAMS SHALL BE THE SAME UNLESS OTHERWISE NOTED.
17. ALL REINFORCING BARS SHALL BE LAPPED AS PER EMBEDMENT AND SPLICE LENGTH SCHEDULE ON THE DRAWINGS. LAP GRADE BEAM TOP REINFORCEMENT AT CENTER OF SPAN. LAP GRADE BEAM BOTTOM REINFORCEMENT AT SUPPORT. TERMINATE CONTINUOUS BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.
18. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED PLACEMENT SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT FOR APPROVAL. FOUNDATION WALL CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO PROVIDE A 60'-0" MAXIMUM LENGTH OF CONCRETE PLACEMENT.
19. VERTICAL CONSTRUCTION JOINTS IN FOUNDATION WALLS SHALL BE USED ONLY WHEN UNAVOIDABLE AND SHALL BE LOCATED AT LEAST 8'-0" FROM ANY COLUMN LINE AND AT CENTER LINES BETWEEN SUPPORTS FOR GRADE BEAMS.
20. NO HORIZONTAL CONSTRUCTION JOINT WILL BE PERMITTED IN WALLS AND SLABS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
21. NO BACK FILLING SHALL BE DONE AGAINST UNBRACED FOUNDATION WALLS UNTIL CONCRETE HAS ATTAINED AT LEAST 75% OF ITS 28 DAY STRENGTH, AND WALLS SUSTAIN NO MORE THAN 3'-0" OF EARTH PRESSURE. PROVIDE BRACING AT TOP OF WALLS (OR PROVIDE FLOOR FRAMING) FOR WALLS SUSTAINING MORE THAN 3'-0" OF BACKFILL.
22. PROVIDE 4" MINIMUM DRAINAGE FILL BENEATH CONCRETE SLAB ON GROUND.
23. CONTRACTOR SHALL USE RIGID TEMPLATE TO INSTALL ANCHOR BOLTS.
24. CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION SLOPES
25. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION WALL. IF IT IS NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THAN 8'-0" TO THE WALL, THE CONTRACTOR SHALL BE THE SOLE RESPONSIBLE PARTY AND AT HIS OWN EXPENSE SHALL PROVIDE ADEQUATE SUPPORTS OR BRACE THE WALL TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.
26. FOR LOCATION OF FLOOR DRAINS, CURBS, CONCRETE PADS AND FLOOR DEPRESSIONS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS
27. TOP REINFORCEMENT. IN SLAB AT PARKING OR CAR AREAS SHALL HAVE MINIMUM CLEAR COVER OF 1 1/2 INCHES.

CONCRETE NOTES:

1. ALL CAST-IN-PLACE CONCRETE SHALL BE STONE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4**,000 PSI**.
   - A. FOOTINGS, FOUNDATION WALLS, BUTTRESSES, SLAB ON GRADE: 4000 PSI, NORMAL WEIGHT
   - B. COLUMNS, SHEAR WALLS, STRUCTURAL SLABS: 5000 PSI, NORMAL WEIGHT
   - C. CONCRETE TOPPING PADS & OTHER NON STRUCTURAL ELEMENTS: 3000 PSI, NORMAL WEIGHT
   - D. ALL OTHER CONCRETE: 5000 PSI, NORMAL WEIGHT
2. ALL REINFORCEMENT SHALL BE A-615 GRADE 60 STEEL. WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-185.
3. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
4. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3/4" FOR SLABS, 1-1/2" FOR BEAMS AND 1" FOR WALLS. ALL CONCRETE EXPOSED TO WEATHER OR EARTH FILL SHALL HAVE MINIMUM CONCRETE COVER OF 2" FOR BARS LARGER THAN #5, 1-1/2" FOR #5 BARS OR SMALLER, AND 3" FOR ALL CONCRETE PLACED AGAINST EARTH. ALL CONCRETE PLACED AGAINST PERMANENT SHEETING SHALL HAVE MINIMUM CONCRETE COVER OF 4".
5. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR-ENTRAINMENT AGENT.
6. VERTICAL CONSTRUCTION JOINTS USING APPROVED BULKHEADS MAY BE MADE AT CENTER OF BEAM AND SLAB SPANS WHERE STOP IN CONCRETE WORK IN NECESSARY. LOCATION OF VERTICAL CONSTRUCTION JOINTS IN EXPOSED STRUCTURAL ELEMENTS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. VERTICAL WALL CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO PROVIDE A 60'-0" MAXIMUM LENGTH OF CONCRETE PLACEMENT. SUCH JOINTS SHALL BE LOCATED AT CENTERLINES OF WALL SPANS BETWEEN SUPPORTS.
7. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT FOR APPROVAL.
8. NO HORIZONTAL CONSTRUCTION JOINT WILL BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON PLANS OR SECTIONS.
9. ALL BEAMS AND SLABS TO BE POURED MONOLITHICALLY UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.
11. PIPES OR CONDUITS PLACED IN SLAB ON GRADE SHALL NOT BE SPACED CLOSER THAN 3 X DIAMETER OF PIPES AND CONDUITS PLACED IN SLAB ON GRADE SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLAB WITHIN 2" OF COLUMN FACE.
12. CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
13. FOR WATERPROOFING DETAILS AND LOCATIONS, SEE ARCHITECTURAL DRAWINGS.
14. FOR LOCATION OF FLOOR DRAINS, CURBS, CONCRETE PADS AND FLOOR DEPRESSIONS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
15. CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
16. REINFORCED CONCRETE DESIGN IS ULTIMATE STRENGTH DESIGN AS PER A.C.I. BUILDING CODE. (A.C.I. 318-08).
17. COORDINATE LOCATION OF SLOTTED INSERTS, WELD PLATES, AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
18. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES.
19. ALL CONTRACTORS ARE REQUESTED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND NOT FAMILIARIZING WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK THAT MAY BE REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO OWNER.
20. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS IN BASEMENT WALLS AND CONCRETE SLABS ON GROUND.

STANDARD HOOK GEOMETRY FOR DEVELOPMENT OF DEFORMED BARS IN TENSION

TYPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER, in.	STRAIGHT EXTENSION [1] L_{ext}, in.	TYPE OF STANDARD HOOK
90 - DEGREE HOOK	NO. 3 THROUGH NO. 8	6 d_b	12 d_b	
	NO.9 THROUGH NO. 11	8 d_b		
	NO. 14 AND NO. 18	10 d_b		
180 - DEGREE HOOK	NO. 3 THROUGH NO. 8	6 d_b	GREATER OF 4 d_b AND 2.5 in.	
	NO.9 THROUGH NO. 11	8 d_b		
	NO. 14 AND NO. 18	10 d_b		

[1] A STANDARD HOOK FOR DEFORMED BARS IN TENSION INCLUDES THE SPECIFIC INSIDE BEND DIAMETER AND STRAIGHT EXTENSION LENGTH. IT SHALL BE PERMITTED TO USE A LONGER STRAIGHT EXTENSION AT THE END OF A HOOK. A LONGER EXTENSION SHALL NOT BE CONSIDERED TO INCREASE THE ANCHORAGE CAPACITY OF THE HOOK.

ABBREVIATIONS

ARCH.	ARCHITECTURAL
BC.	BUILDING CODE
BLDG.	BUILDING
BM.	BEAM
BOT.	BOTTOM
CC.	CENTER TO CENTER
C/C	CENTER TO CENTER
CFS	COLD FORMED STEEL
CL.	CENTER LINE
CMU.	CONCRETE MASONRY UNIT
CLR	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT'D	CONTINUED
DBO	DESIGNED BY OTHERS
DIA.	DIAMETER
DIST.	DISTANCE
Ø	DIAMETER
DIM.	DIMENSION
DET.	DETAIL
DTL.	DETAIL
DWG	DRAWING
EJ.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATION OR ELEVATOR
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
EXIST.	EXISTING
FL.	FLOOR
FLR.	FLOOR
FND'N	FOUNDATION
FT.	FEET/FOOT
GC.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
ID.	INSIDE DIAMETER
IN.	INCH
LGS	LIGHT GAUGE STEEL
MAX.	MAXIMUM
MC	MOMENT CONNECTION
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.T.S	NOT TO SCALE
NO.	NUMBER
No.	NUMBER
NYCBC	NEW YORK CITY BUILDING CODE
#	NUMBER
OC.	ON CENTER
O/C	ON CENTER
OD.	OUTSIDE DIAMETER
PL.	PROPERTY LINE
PSF.	POUND PER SQUARE FOOT
PROP.	PROPOSED
REINF.	REINFORCED
RQ'D.	REQUIRED
SQ-FT	SQUARE FOOT
T.O.C.	TOP OF CURB
T.O.S	TOP OF SLAB
TOW.	TOP OF WALL
TSF	TON PER SQUARE FOOT
TYP.	TYPICAL
VIF.	VERIFY IN FIELD
VERT.	VERTICAL
U.O.N	UNLESS OTHERWISE NOTED
W/	WITH
WT.	WEIGHT

CONCRETE DEVELOPMENT AND SPLICE LENGTH NOTES:

LAP SPLICE LENGTH 'Ls' (in)

SIZE	4000 PSI			5000 PSI			6000 PSI		
	TENSION 'Lts'		COMP. 'Lcs'	TENSION 'Lts'		COMP. 'Lcs'	TENSION 'Lts'		COMP. 'Lcs'
	TYP.	TOP.		TYP.	TOP.		TYP.	TOP.	
#3	18	24	12	17	22	12	17	20	12
#4	25	32	15	22	29	15	20	26	15
#5	31	40	19	28	36	19	25	33	19
#6	46	60	23	42	54	23	38	50	23
#7	54	70	27	49	63	27	45	58	27
#8	62	80	30	56	72	30	51	66	30
#9	70	91	34	63	81	34	57	74	34
#10	79	102	39	71	92	39	64	84	39
#11	109	142	62	98	127	53	89	116	53
#14	MECHANICAL SPLICE ONLY								
#18									
#20									

SIZE	STRAIGHT BAR DEVELOPMENT LENGTH 'Ld' (in)								
	4000 PSI			5000 PSI			6000 PSI		
	TENSION 'Ldt'		COMP. 'Ldc'	TENSION 'Ldt'		COMP. 'Ldc'	TENSION 'Ldt'		COMP. 'Ldc'
	TYP.	TOP.		TYP.	TOP.		TYP.	TOP.	
#3	14	18	8	13	17	8	12	16	8
#4	19	25	9	17	22	9	15	20	9
#5\	24	31	12	21	29	11	19	25	10
#6	36	47	14	32	42	13	29	38	12
#7	42	54	17	38	49	15	34	45	14
#8	48	62	19	43	56	17	39	51	15
#9	54	70	21	48	63	19	44	57	17
#10	61	79	24	54	71	22	50	64	20
#11	84	109	27	75	98	24	69	89	22
#14	101	131	32	90	117	29	82	107	26
#18	134	174	43	120	156	39	110	143	35
#20	159	206	48	142	184	45	130	168	45

SIZE	HOOKED TENSION DEVELOPMENT LENGTHS 'Ldh' (in)			HOOKED BAR STRAIGHT EXTENSION 'Lext' (in)		
	4000 PSI	5000 PSI	6000 PSI	4000 PSI	5000 PSI	6000 PSI
#3	8	7	6	6	6	6
#4	10	9	8	8	8	8
#5	12	11	10	10	10	10
#6	15	13	12	12	12	12
#7	17	15	14	14	14	14
#8	19	17	16	15	15	15
#9	22	20	18	1	19	19
#10	25	22	20	21	21	21
#11	34	30	28	23	23	23
#14	NOT PERMITTED					
#18						
#20						

NOTES FOR THE BAR LENGTH TABLES:

1. THESE DEVELOPMENT AND SPLICE LENGTHS ARE COMPUTED FOR UNCOATED BARS IN THE ELEMENTS OF NORMAL WEIGHT CONCRETE WITH THE MINIMUM CLEAR COVER OF ONE BAR DIAMETER,THE MINIMUM CLEAR SPACING OF ONE BAR DIAMETER IN BEAMS AND COLUMNS, AND TWO TIMES THE BAR DIAMETER IN OTHER ELEMENTS.
2. THESE DEVELOPMENT AND SPLICE LENGTHS SHALL BE MULTIPLIED BY ALL OF THE APPLICABLE FACTORS THAT FOLLOW:
   - A. REINFORCING WITH COVER OR SPACING LESS THAN THAT SPECIFIED IN NOTE1:.....X 1.30
   - B. EPOXY-COATED REINFORCING FOR TYPICAL REINFORCEMENT:.....X 1.50
   - C. EPOXY-COATED REINFORCING FOR TOP REINFORCEMENT:.....X 1.31
   - D. REINFORCING PLACED IN LIGHTWEIGHT CONCRETE:.....X 1.30
3. 'Ld' CAN BE USED AS ACI CLASS A SPLICE; 'Ls' CAN BE USED AS ACI CLASS B SPLICE.
4. USE TOP CONDITION FOR ANY HORIZONTAL BARS WITH MORE THAN 12 INCH OF FRESH CONCRETE BELOW.

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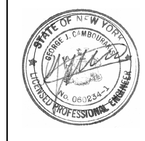

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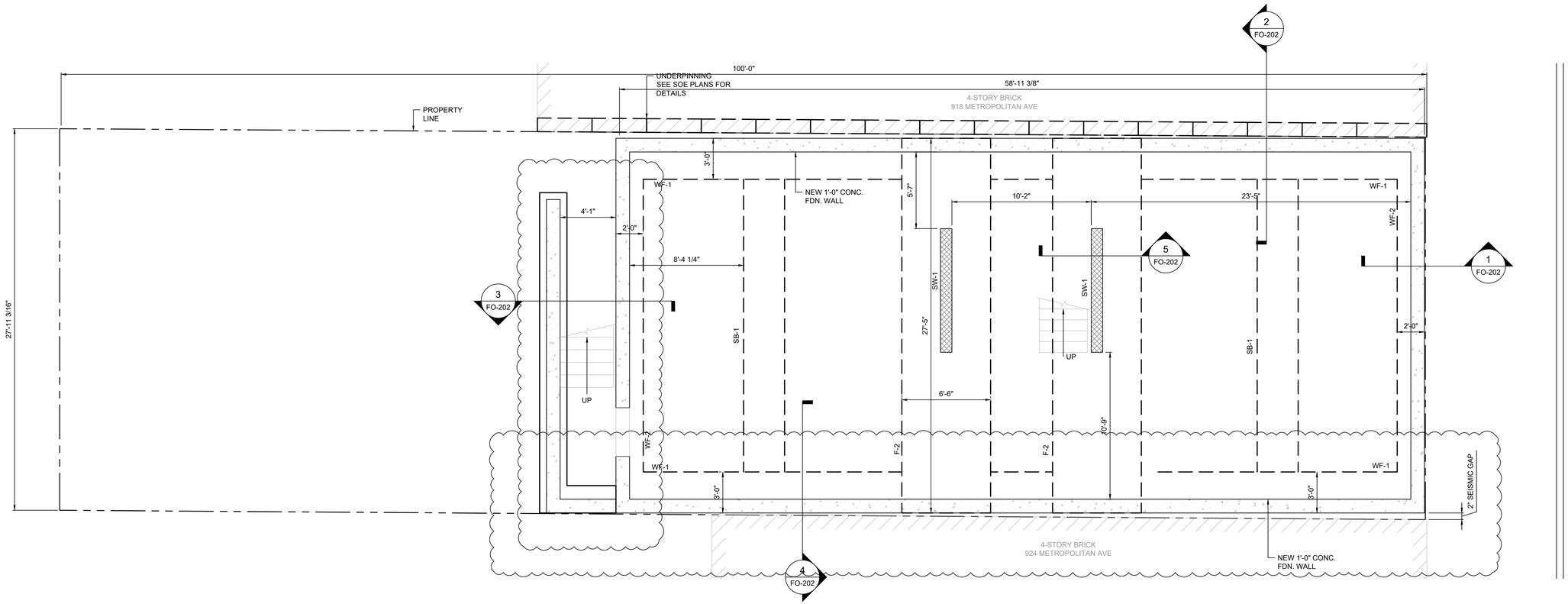

FOUNDATION PLAN

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

NOTES:

1. BOTT. OF FTG. ELEVATION IS -11'-8" U.O.N. ELEVATION IS RELATIVE TO SIDE WALK OR 13.59' NAVD
2. ALL FTG. SHALL BEAR ON SOIL HAVING MIN. 2TSF BEARING CAPACITY.
3. REFER TO FO-201 SERIES FOR FOUNDATION SECTIONS AND DETAILS.
4. REFER TO S-301 SERIES FOR MASONRY SHEAR WALL DETAILS.
5. REFER TO S.O.E. DWGS. FOR UNDERPINNING DETAILS DETAILS.

PLAY KEY:

- DENOTES CMU SHEAR WALL
- DENOTES 12" CONC. FDN. WALL

FOOTING SCHEDULE

MARK	SIZE	DEPTH	REINFORCEMENT				REMARKS
			BOTT. REINF.		TOP. REINF.		
			LONG	SHORT	LONG	SHORT	
F-1	SEE PLANS	24"	#8 @ 12" O.C.	#8 @ 12" O.C.	#8 @ 12" O.C.	#8 @ 12" O.C.	SEE PLAN FOR ADD'L REINF.
f-2	SEE PLANS	24"	#9 @ 6" O.C.	# 5 @ 6"O.C.	#9 @ 6" O.C.	# 5 @ 6"O.C.	---
WF-1	SEE PLANS	24"	2 #5 CONT	#5 @ 12 O.C.	---	---	---
WF-2	SEE PLANS	24"	3 #8 CONT	#5 @ 12 O.C.	---	---	---
SB-1	SEE PLANS	24"	6 #8	6 #8	6 #8	6 #8	---

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OWNER:

DOB NOW BUILD JOB # :

#B00715872-P5

NOTE:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE:	DESCRIPTION
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4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

FOUNDATION PLAN

SEAL & SIGNATURE

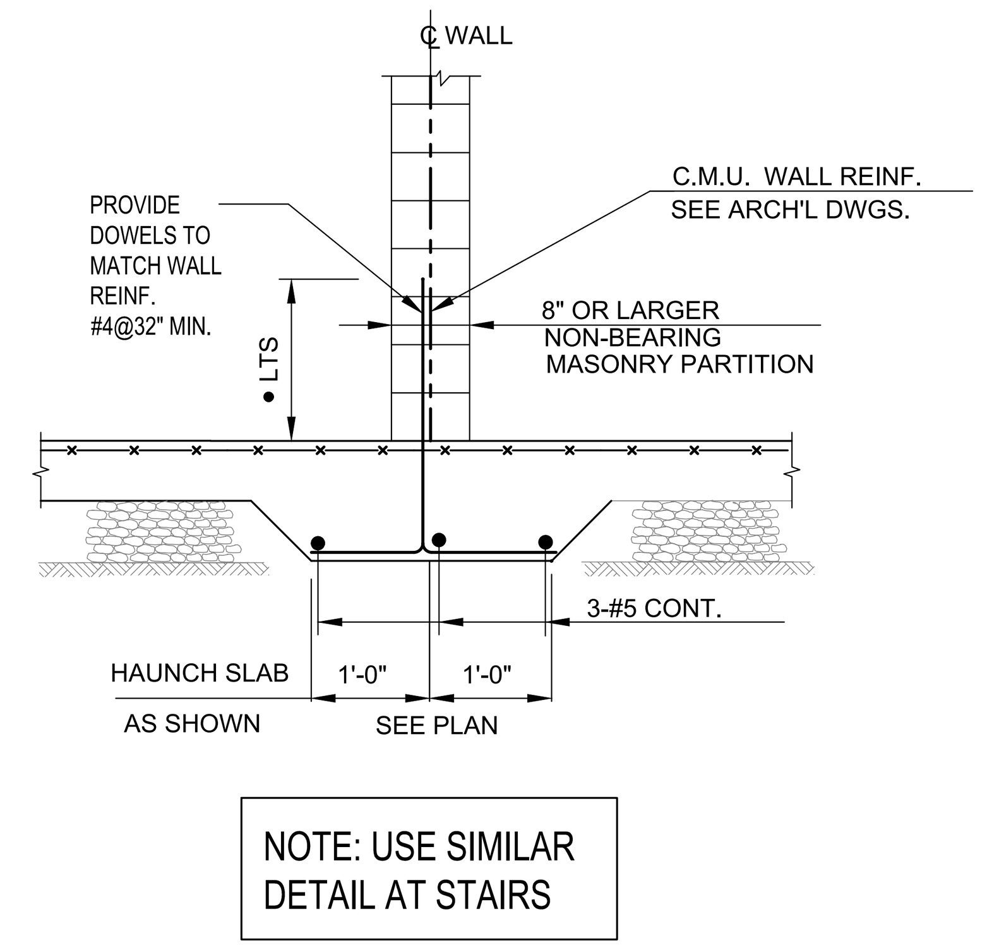
STATE OF NEW YORK — SERGIO J. CAMBRONERO — No. 060284 — LICENSED PROFESSIONAL ENGINEER

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	FO-101.01
SHEET NO:	4 OF 7

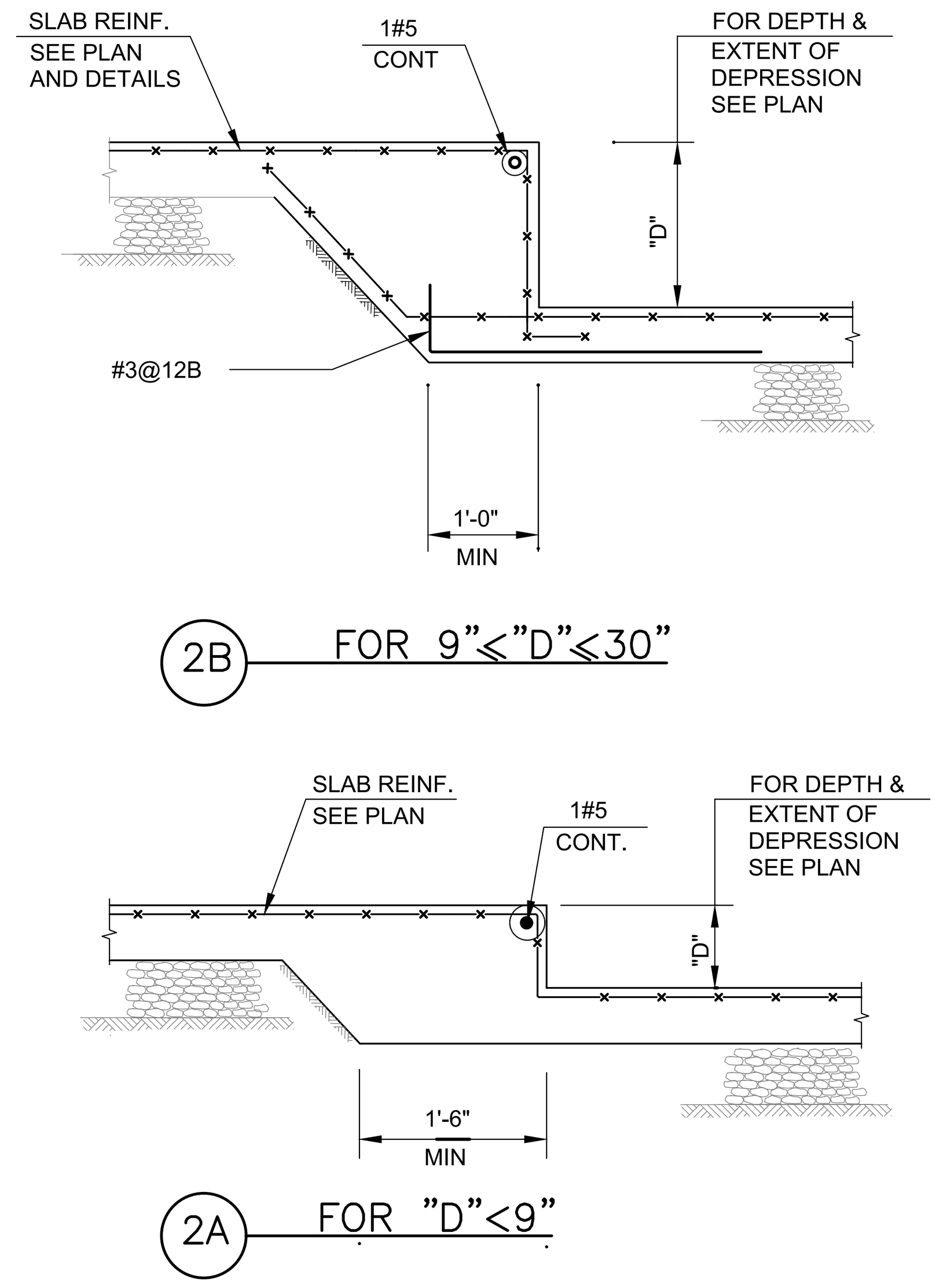
BSCAN STICKER

DOB APPROVAL STAMP

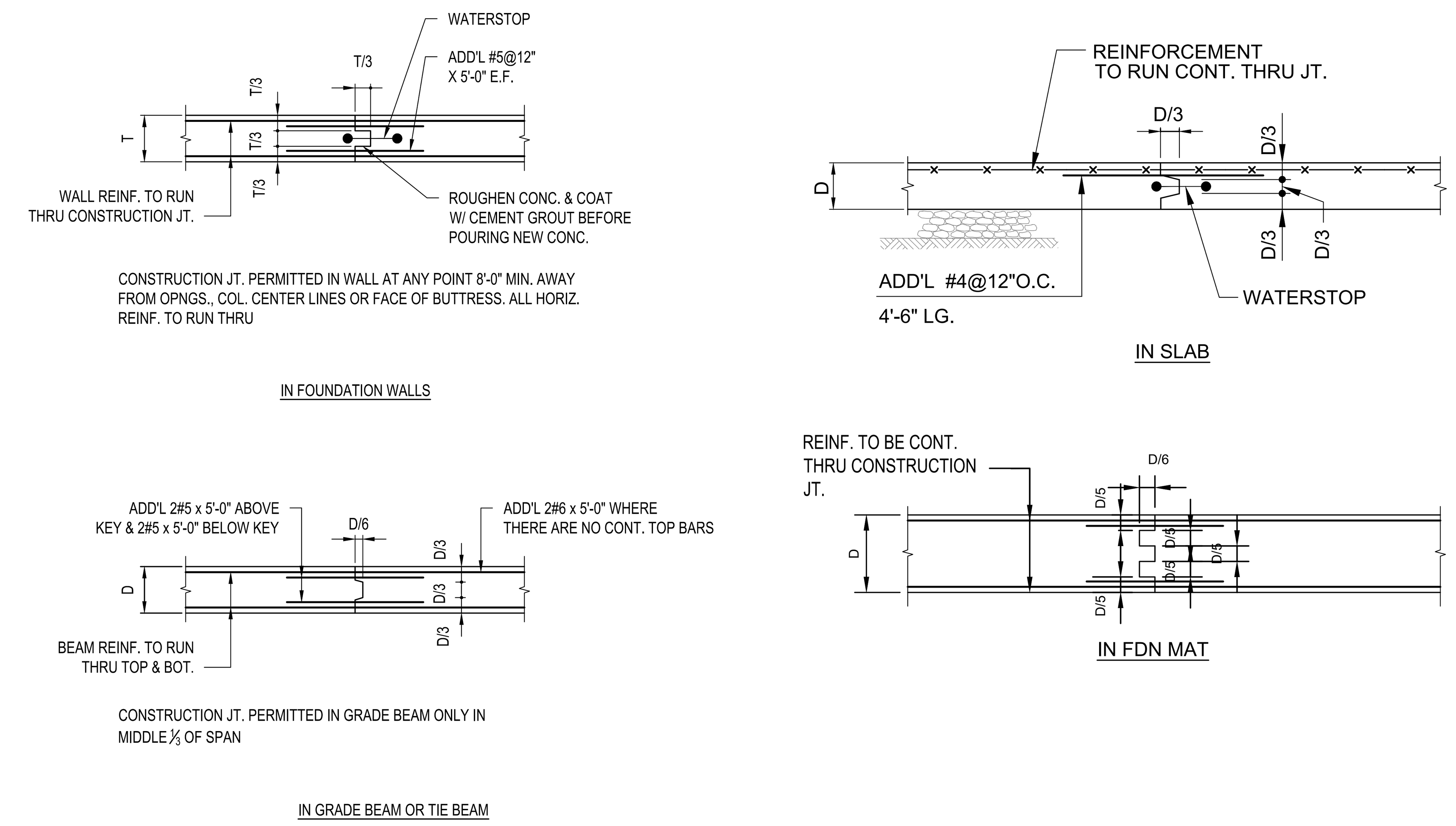
NYC Buildings — APPROVED — Date: 05/24/2023



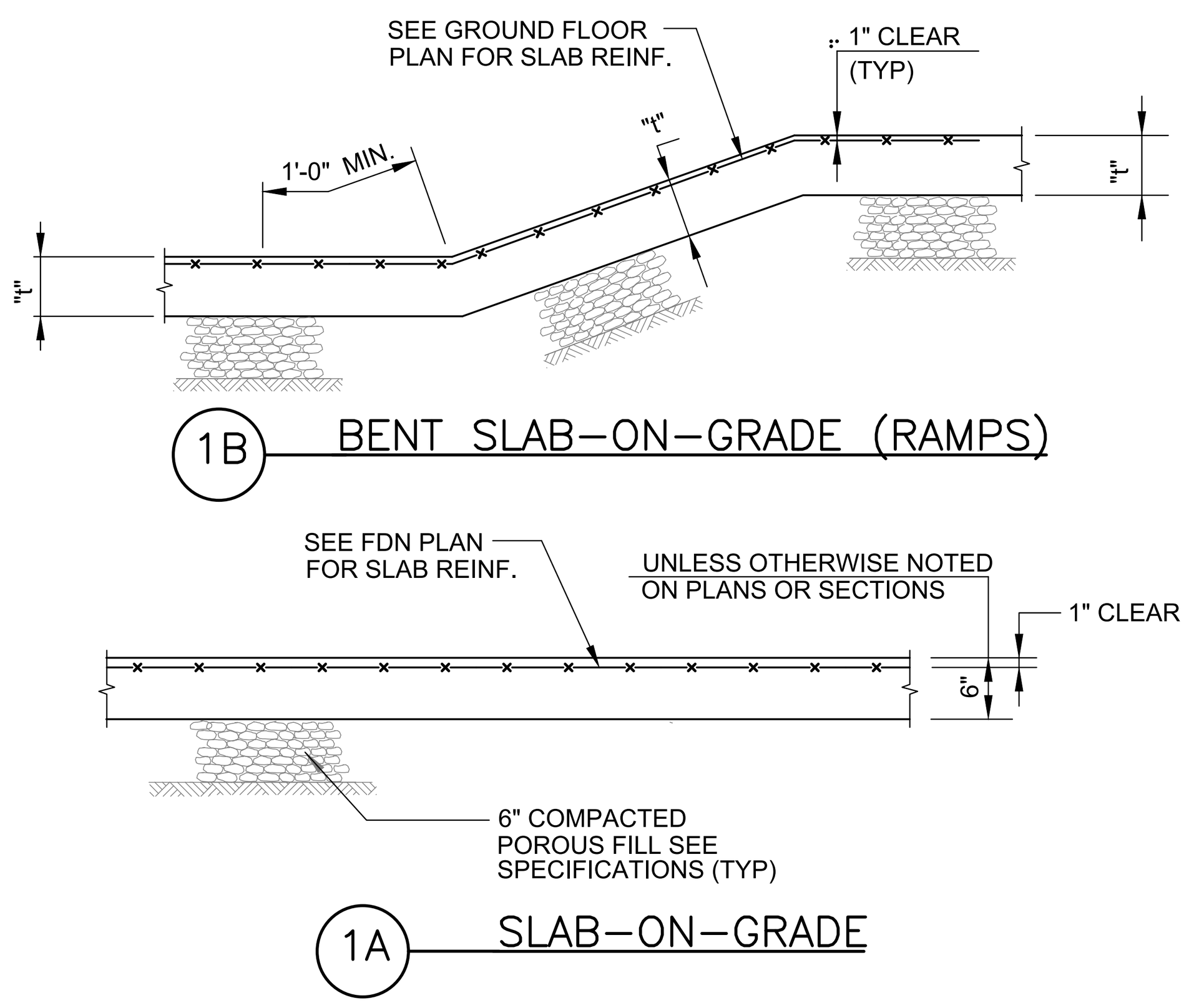
01 SCALE: NTS — MASONRY PARTITION BEARING ON SLAB-ON-GRADE



02 SCALE: NTS — TYPICAL DETAILS OF DEPRESSION IN SLAB-ON-GRADE

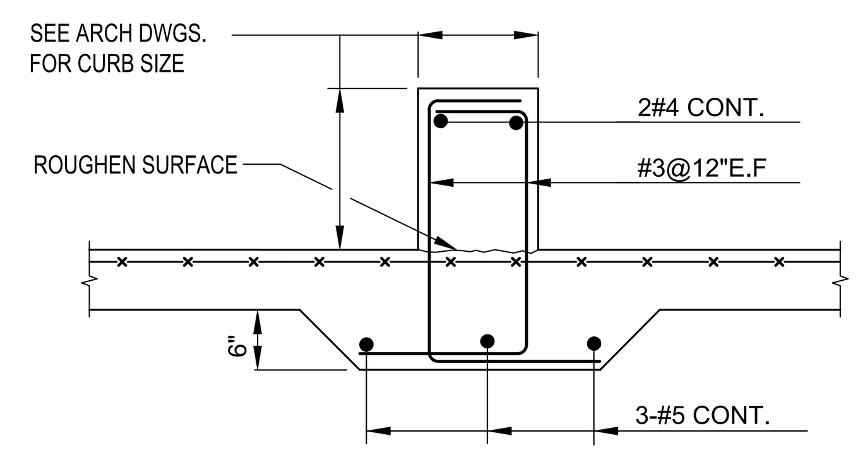


03 SCALE: NTS — TYPICAL CONSTRUCTION JOINT DETAILS

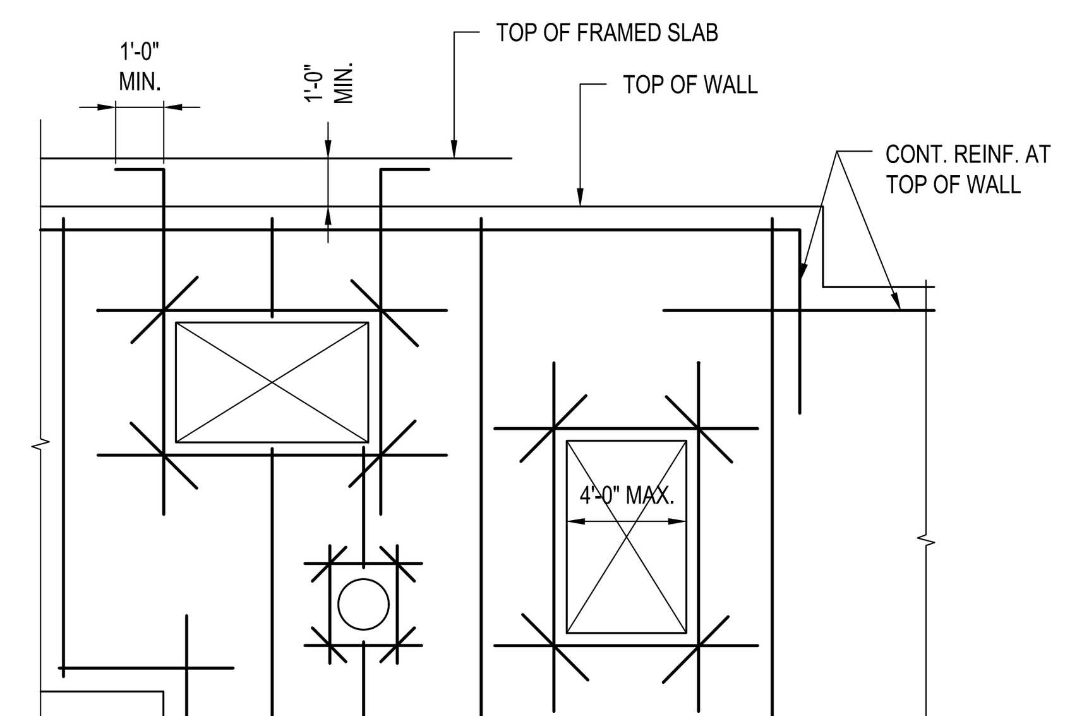


NOTE:
FOR PREPARATION OF SUBGRADE TO RECEIVE S.O.G. SEE GEOTECHNICAL REPORT

05 SCALE: NTS — TYPICAL SLAB-ON-GRADE

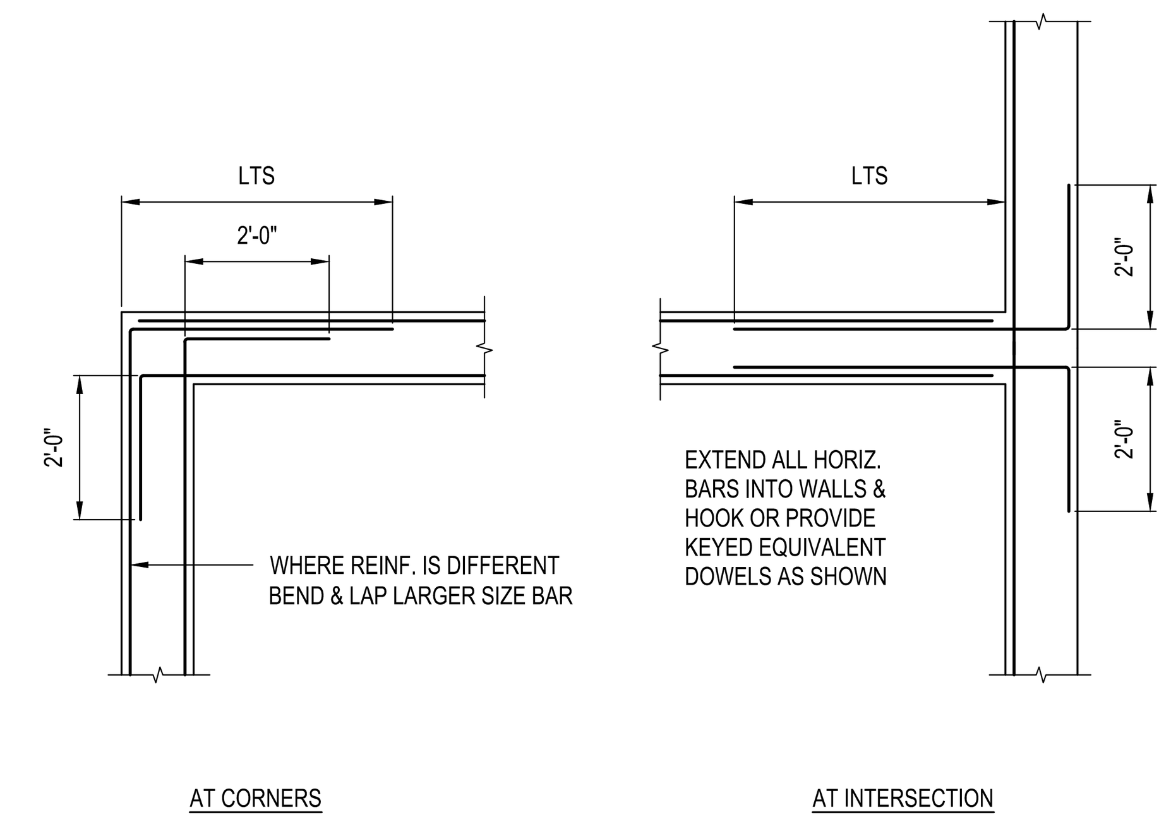


04 SCALE: NTS — TYPICAL DETAIL AT CURB ON SLAB-ON-GRADE

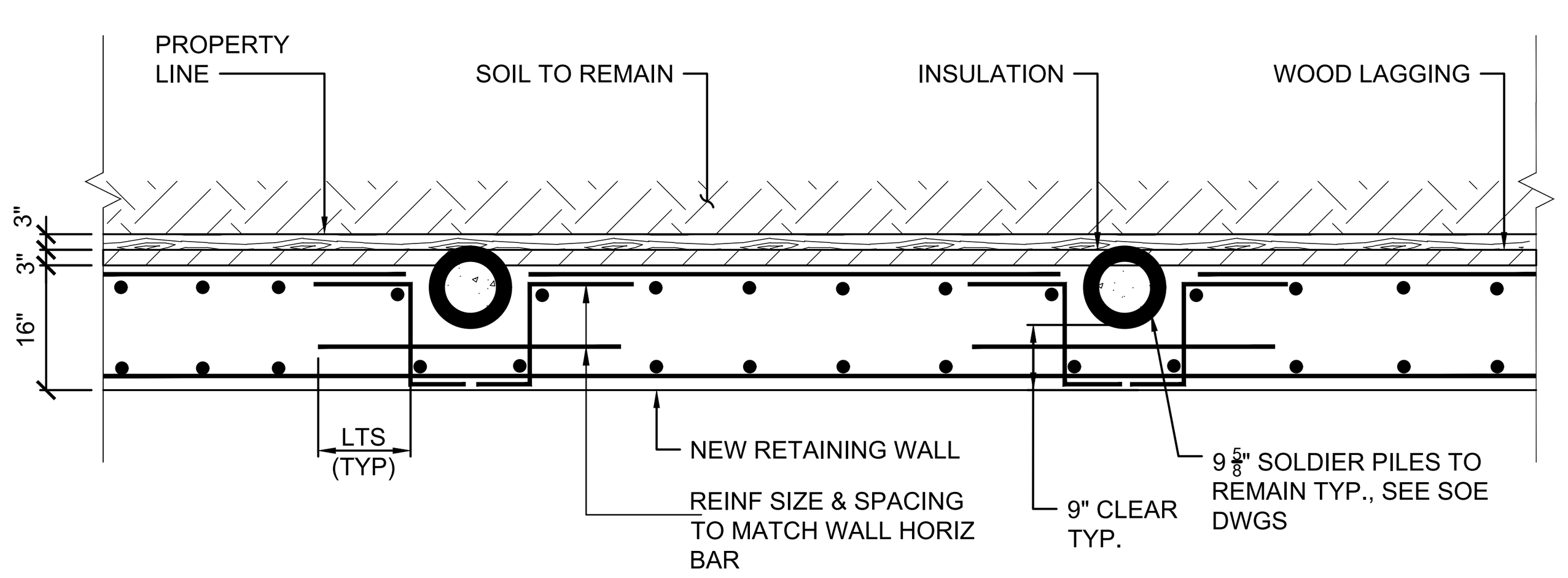


NOTES:
1. ALL INTERRUPTED BARS IN EACH DIRECTION SHALL BE COMPENSATED BY ADD'L BARS EQUAL TO 1/2 THE INTERRUPTED AREA. (OR 2#7 MIN.) AT EACH SIDE OF OPENING.
2. ALL ADD'L CORNER BARS AT OPNGS. ARE 2#3 x 4'-0" (EACH FACE).
3. FOR LENGTH OF SPLICES SEE SCHEDULE OF EMBEDMENT AND SPLICE LENGHTS THIS DWG.
4. WHERE FDN. WALL OPENINGS ARE WIDER THAN 4'-0" CONTRACTOR SHALL SUBMIT LOCATIONS & DIMENSIONS TO ENGINEER FOR REDESIGN.

06 SCALE: NTS — TYPICAL DETAIL OF ADD'L REINFORCEMENT AT CONC. FOUNDATION WALL OPENINGS AND OF SETPS IN TOP & BOTTOM OF FOUNDATION WALL



07 SCALE: NTS — HORIZONTAL WALL REINFORCEMENT DETAIL



09 SCALE: NTS — TYPICAL WALL AT SOLIDER PILE LOCATION

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OWNER:

DOB NOW BUILD JOB # :
#B00715872-S3

NOTE:
STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

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4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT
920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

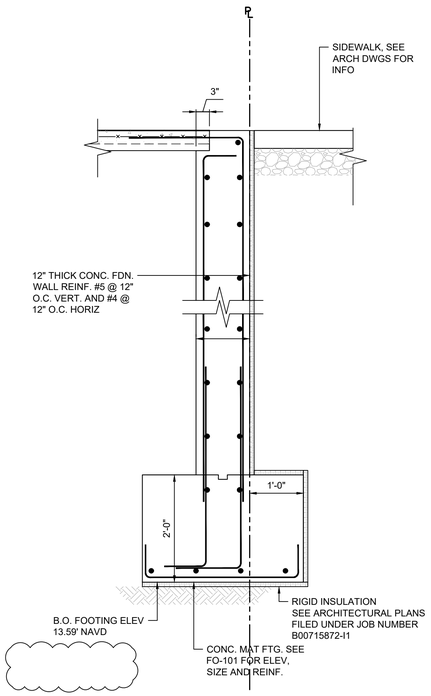
DRAWING TITLE:
TYPICAL FOUNDATION DETAILS

SEAL & SIGNATURE

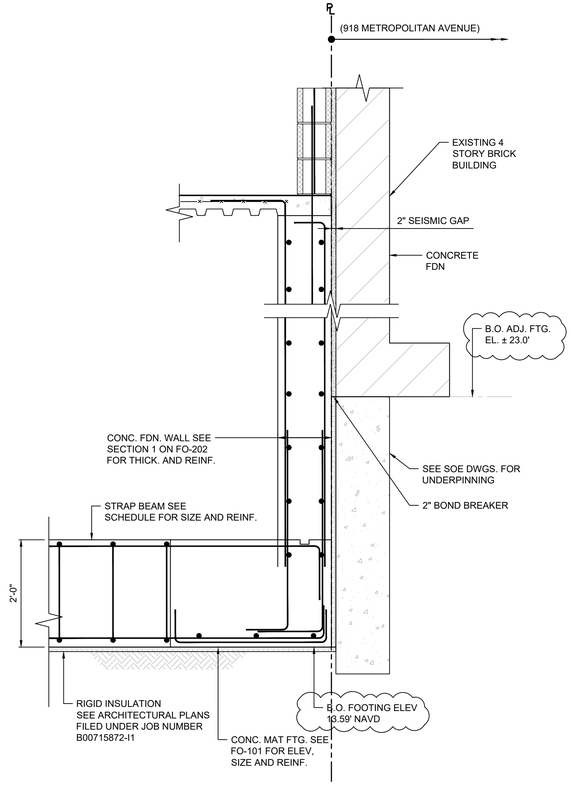
DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	FO-201.00
SHEET NO:	5 OF 13

BSCAN STICKER

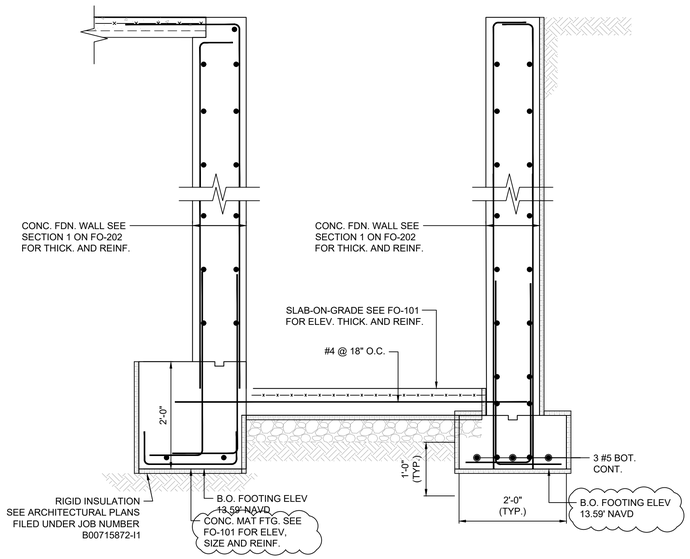
DOB APPROVAL STAMP
Cyr Apolinar Garcia
APPROVED
Date: 09/09/2022



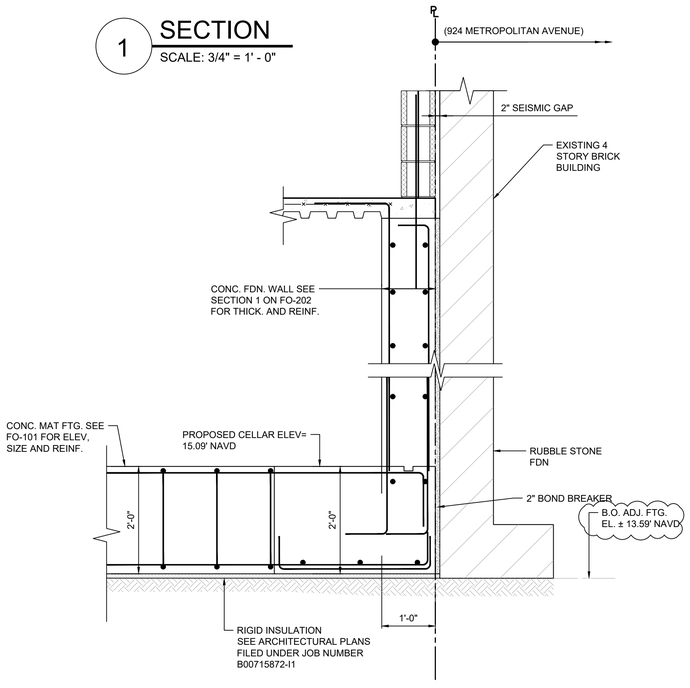
1 SECTION
SCALE: 3/4" = 1' - 0"



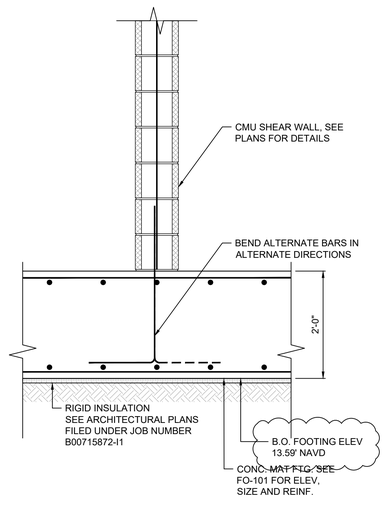
2 SECTION
SCALE: 3/4" = 1' - 0"



3 SECTION
SCALE: 3/4" = 1' - 0"



4 SECTION
SCALE: 3/4" = 1' - 0"



5 SECTION
SCALE: 3/4" = 1' - 0"

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OWNER:

DOB NOW BUILD JOB # :

#B00715872-P5

NOTE:

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3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

FOUNDATION SECTIONS

SEAL & SIGNATURE

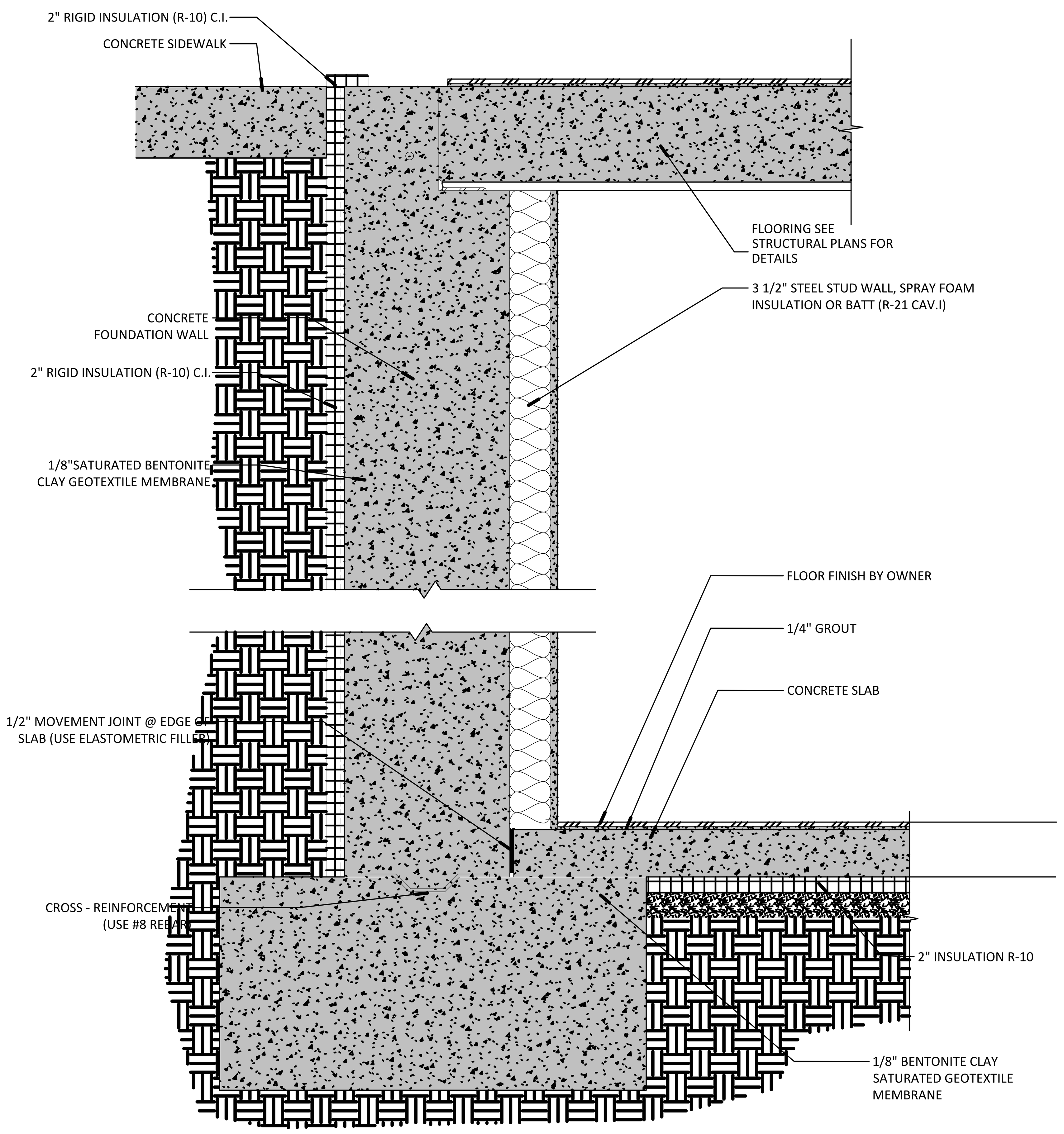
STATE OF NEW YORK · GEORGE J. CAMBRIDGE · No. 066234 · LICENSED PROFESSIONAL ENGINEER

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	FO-202.01
SHEET NO:	6 OF 7

BSCAN STICKER

DOB APPROVAL STAMP

NYC Buildings
APPROVED
Date: 05/24/2023



1 **INSULATION @ FOUNDATION**

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

ENERGY CODE TABULAR ANALYSIS COMMERCIAL

NYCECC CITATION OR OTHER	Provision	Item Description	Proposed Design Value	Code Prescriptive Value	Supporting Documentation
CLIMATE ZONE 4, DESIGN CONDITIONS, MATERIALS, EQUIPMENT AND SYSTEMS					
COMMERCIAL BUILDING THERMAL ENVELOPE					
TABLE 5.5-4	Below-grade Walls	Foundation wall: Concrete foundation wall with Thermal insulation on ext. side	Foundation wall: 2" extruded insulation = R-10 CI	R-10 CI	FOUNDATION WALL EN-FO.00

GENERAL ENERGY NOTES:

ENERGY ANALYSIS
CLIMATE ZONE 4A

1. TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH 2020 NYCECC BY APPLICATION OF ASHRAE 90.1-2016 BY APPENDIX CA.

TABLE II - PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE - COMMERCIAL BUILDINGS

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter C6) or Oher Criteria	ECC or Other Citation
IIA	**ENVELOPE INSPECTIONS**			
IIA1	**Protection of exposed foundation insulation:** Insulation must be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.	As required during foundation work and prior to backfill	Approved construction documents, ASTM C272	C303,2,1: ASHRAE 90.1-5.8.1, 5.9
IIA2	**Insulation placement and R-vales:** Installed insulation for each component of the conditioned space envelope and at junctions between components, including thermal bridges and heated slab insulation, must be visually inspected to ensure that the R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation also be visually inspected.	**As required to verify continuous enclosure while walls, ceilings and floors are open**	Approved construction documents	C303.1, C303.2, C402.1, C402.2, C402.6, C406; ASHRAE 90.1 -5.5, 5.6, 5.8, 5.9, 11 or Appendix G, Appendix I

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OWNER:

DOB NOW BUILD JOB # :

#B00715872-S2

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1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

ENERGY AND INSULATION

SEAL & SIGNATURE

DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO:

FO-203.00

SHEET NO: 7 OF 6

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/09/2022

PROJECT DESCRIPTION: NEW 4-STORY MASONRY BUILDING AT 920 METROPOLITAN AVENUE, BROOKLYN, NEW YORK - 11211

SCOPE OF WORK:

SUPERSTRUCTURE : THE SUPER STRUCTURE SHALL BE MASONRY BEARING WALLS SUPPORTING STEEL BEAMS. THE STRUCTURAL SLAB SHALL BE LIGHT WEIGHT CONCRETE SLAB OVER METAL DECK. MASONRY SHEAR WALLS SHALL BE USED AS LATERAL FORCE RESISTING SYSTEM FOR WIND AND SEISMIC FORCES.

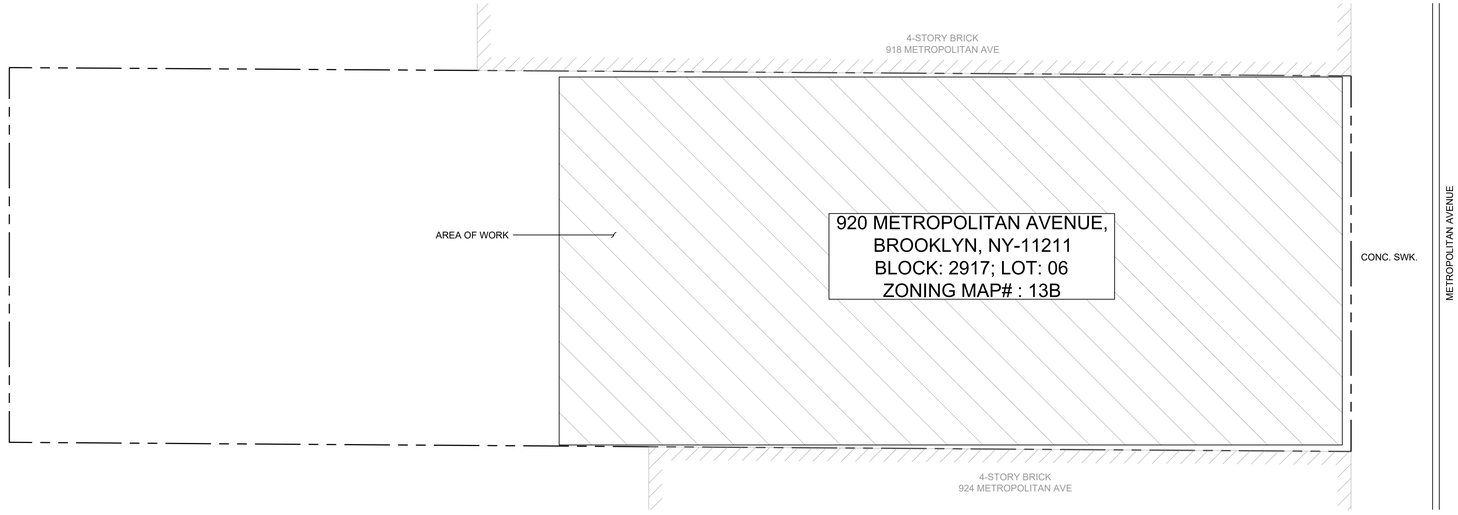
LIST OF SHEETS

SHEET NUMBER	SHEET TITLE	DRAWING TITLE
1	T-001.01	TITLE SHEET AND PLOT PLAN
2	S-001.00	GENERAL NOTES
3	S-002.00	GENERAL NOTES
4	S-003.00	GENERAL NOTES
5	S-101.01	1ST FLOOR FRAMING PLAN
6	S-102.00	2ND AND 3RD FLOORS FRAMING PLAN
7	S-103.00	4TH FLOOR FRAMING PLAN
8	S-104.00	ROOF AND BULKHEAD FRAMING PLANS
9	S-301.00	SHEAR WALL SCHEDULE
10	S-302.00	TYPICAL CMU DETAILS
11	S-401.00	TYPICAL MASONRY DETAILS
12	S-402.00	TYPICAL STEEL DETAILS
13	S-501.00	SECTIONS

LIST OF RELATED JOB NOS.

JOB TYPE	JOB NUMBER
GENERAL CONSTRUCTION (NB)	B00715872-I1
MECHANICAL	B00715872-S6
PLUMBING	B00715872-S7
SPRINKLER	B00715872-S4
STRUCTURAL	B00715872-S3
FOUNDATION	B00715872-S2
SOE	B00715872-S1

KEY PLAN:



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

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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OWNER:

DOB NOW BUILD JOB # :

#B00715872-P6

NOTE:

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3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

TITLE SHEET AND PLOT PLAN

SEAL & SIGNATURE

STATE OF NEW YORK · GEORGE J. CAMBOURIS · NO. 086234-1 · LICENSED PROFESSIONAL ENGINEER

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	T-001.01
SHEET NO:	1 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

SPECIAL INSPECTIONS:

1. PRIOR TO BEGINNING ANY WORK, THE OWNER SHALL RETAIN THE SERVICES OF S.E.T. , P.C., OR ANOTHER ACCEPTABLE LICENSED PROFESSIONAL ENGINEER WHO SHALL HAVE PROVEN EXPERIENCE ACCEPTABLE TO THE OWNER AND ARCHITECT. MINIMUM REQUIRED QUALIFICATIONS SHALL INCLUDE A PROFESSIONAL LIABILITY INSURANCE COVERAGE OF 1 MILLION DOLLARS AND A MINIMUM PROVEN EXPERIENCE OF 5 YEARS WITH SIMILAR WORK.

2. SPECIAL AND PROGRESS (CONTROLLED) INSPECTIONS REQUIRED BY THE NYC BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY AND / OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER AT NO COST TO THE CONTRACTOR FOR THE FOLLOWING CHECKED ITEMS:

	SPECIAL INSPECTION CATEGORIES	
X	STRUCTURAL STEEL -- WELDING	BC 1704.3.1
X	STRUCTURAL STEEL -- DETAILS	BC 1704.3.2
X	STRUCTURAL STEEL -- HIGH STRENGTH BOLTING	BC 1704.3.3
X	STRUCTURAL COLD-FORMED STEEL	BC 1704.3.4
X	CONCRETE -- CAST-IN-PLACE	BC 1704.3.4
X	MASONRY	BC 1704.3.5
	SUBGRADE INSPECTION	BC 1704.7.1
	SUBSURFACE CONDITIONS -- FILL PLACEMENT & IN-PLACE DENSITY	BC 1704.7.2, BC 1704.7.3
X	SPRAY FIRE -RESISTANT MATERIALS	B.C. 1704.11
	DEEP FOUNDATION ELEMENTS	BC 1704.8
	HELICAL PILES (BB # 2014-020)	BC 1704.8.5
	STRUCTURAL STABILITY -- EXISTING BUILDING	BC 1704.20.1
	EXCAVATIONS--SHEETING, SHORING, BRACING	BC 1704.20.2
	UNDERPINNING	BC 1704.20.3, BC 1814
	MECHANICAL DEMOLITION	BC 1704.20.4
	POST-INSTALLED ANCHORS (BB #2014-018, 2014-019)	BC 1704.32
	CONCRETE DESIGN MIX (TR-3)	BC 1905.3, BC 1913.5
	CONCRETE SAMPLING AND TESTING (TR-2)	BC 1905.6, BC 1913.10
	PROGRESS INSPECTION CATEGORIES	
	FOOTING AND FOUNDATION	BC 110.3.1
	STRUCTURAL WOOD FRAME	BC 110.3.3
X	FINAL	28-116.2.4.2,
	BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY § 101-10	

THE TESTING AGENCY FOR CONTROLLED INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE NEW YORK CITY BUILDINGS DEPARTMENT.

3. THE CONTRACTORS ENGINEER SHALL PREPARE PLANS, CALCULATIONS, AND NOTES IN THE FORM OF SHOP DRAWINGS, FOR ALL ITEMS OF WORK WHICH DIFFER FROM WHAT IS SHOWN ON THE STRUCTURAL DRAWINGS DUE TO FIELD CONDITIONS. HE SHALL ALSO PREPARE PLANS IN THE FORM OF SHOP DRAWINGS, CALCULATIONS AND NOTES FOR ALL TEMPORARY SHORES AND BRACES AND CLEARLY INDICATE METHOD OF INSTALLATION, SEQUENCE OF OPERATIONS, AND QUALITY CONTROL.

4. THESE SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND ARCHITECT PRIOR TO CONSTRUCTION. WORK SHALL BE EXECUTED FROM REVIEWED SHOP DRAWINGS ONLY.

5. COPIES OF SUCH DRAWINGS WHICH INCLUDE THE ARCHITECT'S AND ENGINEER'S COMMENTS SHALL BE FILED WITH THE DEPARMENT OF BUILDINGS (ON AMENDMENT FORMS). ADDITIONALLY, AT COMPLETION OF WORK, FORMS INCLUDING ALL INSPECTION REPORTS PREPARED BY THE CONTRACTOR'S ENGINEER SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.

6. THE SPECIAL INSPECTIONS ENGINEER SHALL DETERMINE THE FREQUENCY OF INSPECTIONS NEEDED AND WHETHER HE OR SHE SHOULD INSPECT THE SITE PERSONALLY OR SEND A PERSON UNDER HIS OR HER DIRECT SUPERVISION. AT A MINIMUM, THE SITE MUST BE INSPECTED TWICE, ONCE AT A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND ONCE DURING CONSTRUCTION OPERATIONS.

7. THE SPECIAL INSPECTIONS ENGINEER, SHALL MAINTAIN A LOG IN HIS OR HER OFFICE WHICH INCLUDES THE FOLLOWING INFORMATION:

(i) ADDRESS OF THE PREMISES, JOB NUMBER, CONTRACTOR NAME AND ADDRESS
(ii) DATE AND TIME OF EACH INSPECTION INCLUDING
- (A) NAMES OF PERSONNEL WHO INSPECTED THE SITE
- (B) ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS GIVEN RELATING TO ANY OF THE FOLLOWING:
  - (1) DEVIATIONS FROM THE CONTRACT DOCUMENTS.
  - (2) ANTICIPATED FIELD CONDITIONS;
  - (3) PROPER EXECUTION OF THE STRUCTURAL WORK;
  - (4) GOOD ENGINEERING PRACTICE;
  - (5) PRECAUTIONS TAKEN TO MAINTAIN SAFE CONDITIONS, IF WORK IS STOPPED FOR ANY REASON.

(iii) THE DATE OF AND PARTICIPANTS IN ANY CONVERSATIONS WITH THE SPECIAL INSPECTIONS ENGINEER OCCURING OFF-SITE AND RELATING TO ANY SIGNIFICANT OBSERVATIONS OR INSTRUCTIONS.

8. THE SPECIAL INSPECTIONS ENGINEER SHALL RETAIN A COPY OF THE DOCUMENTS DESCRIBED ABOVE IN HIS OR HER OFFICE AND SHALL PROVIDE A COPY TO THE CONTRACTOR AND / OR OWNER TO BE KEPT AT THE CONSTRUCTION SITE.

9. THE SPECIAL INSPECTIONS ENGINEER RESPONSIBLE FOR SPECIAL INSPECTION SHALL REPORT UNSAFE CONDITIONS, WHEN AND IF OBSERVED DURING HIS / HER SITE VISITS, TO THE DEPARTMENT OF BUILDINGS AND / OR ANY OTHER AFFECTED PARTIES OR AGENCIES. IT IS TO BE NOTED THAT THE SPECIAL INSPECTIONS ENGINEER AND ENGINEER OF RECORD ARE NOT RESPONSIBLE IN ANY WAY FOR SITE SAFETY. SITE SAFETY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

10. UPON REQUEST OF THE BUILDINGS DEPARTMENT, THE SPECIAL INSPECTIONS ENGINEER SHALL MAKE AVAILABLE FOR REVIEW BY THE BUILDINGS DEPARTMENT DOCUMENTS AND THE LOG DESCRIBED ABOVE.

SYMBOLS:

- CONCRETE WALL OR COLUMN
- TOP OR TOP AND BOTTOM ADDITIONAL REINFORCEMENT
- BOTTOM ADDITIONAL REINFORCEMENT
- S — STRESS LINE
- PROPERTY LINE

GENERAL CONDITIONS:

1. THESE DRAWINGS ARE INTENDED TO BE USED BY ONLY AN EXPERIENCED CONTRACTOR AFTER CONSULTATION WITH THIS OFFICE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR JOB SITE PROBLEMS DUE TO FAILURE TO INTERPRET THE DOCUMENTS CORRECTLY. REPRESENTATIVES OF S.E.T., P.C. ARE AVAILABLE TO ANSWER QUESTIONS AND TO ASSIST THE CONTRACTOR BY EXPLAINING THE DESIGN INTENT. FAILURE BY THE CONTRACTOR TO UNDERSTAND THE COMPLEXITIES OF THE PROJECT AND THE SEQUENCE OF CONSTRUCTION CAN RESULT IN INJURY OR DEATH TO WORKERS. PROCEEDING WITH CONSTRUCTION WITHOUT FULL UNDERSTANDING OF THE PROJECT AND WITHOUT A COMPLETE SET OF DESIGN DOCUMENTS WILL PUT BOTH THE PROJECT AND INDIVIDUALS IN PERIL. THE CONTRACTOR ASSUMES TOTAL RESPONSIBILITY FOR ANY CONSEQUENCE OF THAT ACTION.

2. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPELLED OUT ON THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL DRAWINGS AND NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE DRAWINGS AND NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS. QUESTIONS WILL BE CHEERFULLY ANSWERED BY THE ENGINEER.

3. ALL CONTRACTORS MUST VISIT SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS ALL CONDITIONS TO BE MET BEFORE SUBMITTING BID. LACK OF THOROUGH UNDERSTANDING OF THE PROJECT REQUIREMENTS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR JUSTIFY A REQUEST FOR EXTRA COMPENSATION.

4. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CHECK ALL MEASUREMENTS ON JOB AND SHALL BE RESPONSIBLE FOR SAME.

5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT BUILDING CODE OF ALL GOVERNING AUTHORITIES.

6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND DRAWINGS.

7. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATION WITH OTHER TRADES, METHODS, SAFETY AND SECURITY ON THE JOB SITE. S.E.T., P.C. AND ITS AGENTS AND EMPLOYEES ARE NOT RESPONSIBLE OR LIABLE FOR THE ABOVE AND SHALL BE HELD HARMLESS AND INDEMNIFIED BY ALL CONTRACTORS AND SUBCONTRACTORS FROM ANY AND ALL CLAIMS, LOSSES, SUITS AND LEGAL ACTION WHATSOEVER ARISING FROM THE PERFORMANCE OF WORK ON THIS PROJECT.

8. ACCEPTANCE OF DEVIATIONS FROM ANY OF THE REQUIREMENTS OF THESE NOTES SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. ACCEPTANCE OF A DEVIATION FROM ANY REQUIREMENT SHALL NOT BE CONSTRUED AS PERMITTING ANY OTHER DEVIATION.

BIDDERS WARRANTY:

BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT:

1. THE BIDDER AND ALL SUBCONTRACTORS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND OTHER CONSTRUCTION CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE CONTRACTOR TO BID, FABRICATE, AND INSTALL THE WORK ON TIME, FURTHER THAT,

2. THE BIDDER AND ALL WORKMEN, EMPLOYEES AND SUBCONTRACTORS HE INTENDS TO USE ARE SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON; FURTHER THAT,

3. NEITHER THE BIDDER NOR ANY OF HIS EMPLOYEES, AGENTS INTENDED SUPPLIERS OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS, ALLEGEDLY AUTHORIZED OR UNAUTHORIZED FROM THE OWNER, HIS EMPLOYEES OR AGENTS INCLUDING ARCHITECTS, ENGINEERS OR CONSULTANTS, IN ASSEMBLING THE BID FIGURE; AND FURTHER THAT,THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NOT UPON ANY OTHER WRITTEN REPRESENTATION.

4. THE BIDDER ALSO WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE WORK AND THAT FROM HIS OWN INVESTIGATIONS HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK AND THE CHARACTER, QUALITY, QUANTITIES OF MATERIALS AND DIFFICULTIES TO BE ENCOUNTERED, THE KIND AND EXTENT OF EQUIPMENT AND OTHER FACILITIES NEEDED FOR THE PERFORMANCE OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND OTHER ITEMS WHICH MAY, IN ANY WAY, AFFECT THE WORK OR ITS PERFORMANCE.

DISCLAIMER:
THE DRAWINGS HEREIN ARE RELATED TO A NEW BUILDING STRUCTURE. THE STRUCTURAL DESIGN WAS BASED UPON AS MUCH OBSERVATION, MEASUREMENT, TESTING, ETC. AS CIRCUMSTANCES PERMITTED, HOWEVER, THERE WERE ASSUMPTIONS MADE ABOUT UNKNOWN CONDITIONS. SHOULD THE OWNER DECIDE NOT TO UTILIZE S.E.T. , P.C. TO VERIFY AND INSPECT THESE CONDITIONS IN THE FIELD, S.E.T. , P.C. WILL NOT BE RESPONSIBLE FOR ANY FAILURE, DAMAGE, INJURY, DELAY, LOSS OF INCOME, EXTRA COST, OR ANY OTHER LOSS DUE TO EXISTING CONDITIONS.

SHOP DRAWING REVIEW:
THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS WITH RESPECT TO CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS. IF REQUIRED BY SPECIFICATIONS, SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, INCLUDING REFLECTION OF EXISTING FIELD CONDITIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER WILL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION FROM THE CONTRACT UNLESS CONTRACTOR ADVISES THE ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY THE ENGINEER IN WRITING. IN THE EVENT THAT THE ENGINEER WILL REQUIRE MORE THAN TEN (10) WORKING DAYS TO PERFORM REVIEW, THE ENGINEER WILL SO NOTIFY THE CONTRACTOR. THE ENGINEER WILL RETURN WITHOUT REVIEW MATERIAL WHICH HAS NOT BEEN APPROVED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER

FIDUCIARY LIABILITY DECLINED:
S.E.T., P.C. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED AS TO S.E.T.. P.C. FINDINGS, RECOMMENDATIONS, PLANS, SPECIFICATIONS, OR PROFESSIONAL ADVICE. S.E.T., P.C. HAS ENDEAVORED AND WILL ENDEAVOR TO PERFORM ITS SERVICES IN ACCORDANCE WITH GENERALLY ACCEPTED STANDARDS OF PRACTICE IN EFFECT AT THE TIME OF PERFORMANCE. BY UTILIZING THESE DOCUMENTS (OR HAVING OTHERS UTILIZE THEM) FOR ANY PURPOSE WHATSOEVER THE OWNER OR DEVELOPER RECOGNIZES THAT NEITHER S.E.T., P.C. OR ANY OF S.E.T., P.C. SUBCONSULTANTS OR SUBCONTRACTORS OWES ANY FIDUCIARY RESPONSIBILITY TO THE OWNER OR DEVELOPER.

SAFETY DURING EXECUTION OF WORK:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITIONS OF PUBLIC AND WORKER SAFETY DURING EXECUTION OF THE WORK. THIS SHALL INCLUDE COMPLIANCE WITH CHAPTER 33 OF THE NEW YORK CITY BUILDING CODE: SAFEGUARDS DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL PROVIDE SIDEWALK PROTECTION AND PROTECTION OF ADJOINING PROPERTIES, AS REQUIRED BY THE NYC BLDG. CODE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND FILING A SITE SAFETY PLAN AND/OR PROVIDING OTHER WRITTEN ASSURANCES OF SAFE OPERATIONS AS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE WORKING ENVIRONMENT FOR ALL WORKERS. THIS SHALL INCLUDE COMPLIANCE WITH ALL OSHA, STATE AND LOCAL LABOR LAWS WHICH MAY GOVERN THIS TYPE OF WORK.

5. THE CONTRACTOR SHALL PROVIDE REGULAR PERIODIC INSPECTION OF CONSTRUCTION OPERATIONS AS REQUIRED TO ENSURE ONGOING MAINTENANCE OF ALL SAFETY OPERATIONS AND EQUIPMENT. SUCH INSPECTIONS SHALL BE UNDERTAKEN BY AN AGENT OF THE CONTRACTOR WHO IS QUALIFIED TO EVALUATE SUCH OPERATIONS AND EQUIPMENT. THIS INSPECTOR SHALL PREPARE WRITTEN SAFETY REPORTS WHICH SHALL BE MAINTAINED AT THE JOB SITE FOR REVIEW BY THE AUTHORITIES HAVING JURISDICTION.

SHOP DRAWING NOTES:

SUBMISSION AND REVIEW OF SHOP DRAWINGS IS REQUIRED BECAUSE IT WILL BETTER ENSURE A MORE SUCCESSFUL PROJECT COMPLETION, AND WILL ENABLE THE SPECIAL INSPECTIONS AGENCY (SIA) AND ENGINEER OF RECORD (EOR) TO PERFORM THEIR RESPECTIVE SITE INSPECTION AND OBSERVATION DUTIES IN A CLEAR, DEFINITIVE WAY.

IF OWNER AND/OR CONTRACTOR CHOOSE TO NOT PROVIDE SHOP DRAWINGS:

a) SIA MUST INFORM EOR, OWNER, AND CONTRACTOR IF THEIR INSPECTIONS CAN BE PERFORMED PROPERLY OR NOT, AND WRITTEN AGREEMENT MUST BE REACHED WITH ALL INVOLVED PARTIES AS TO HOW TO PROCEED FURTHER.
b) IF CONSTRUCTION ERRORS, OMISSIONS, AND UNSAFE CONDITIONS, OCCUR DUE TO LACK OF SHOP DRAWING SUBMISSIONS, OR LACK OF REQUIRED RE-SUBMISSIONS, OR FOR ANY OTHER REASONS NOT DUE TO FAULT OF EOR AND SIA, THEN SIA MUST SUBMIT NON-CONFORMANCE REPORT (NCR) ON THE SAME DAY OF OCCURRENCE TO ALL INVOLVED PARTIES, AND EOR RESERVES THE RIGHT TO STOP WORK UNTIL DEFECTIVE CONDITIONS ARE CORRECTED. ALL TIME SPENT BY EOR FOR THESE CONDITIONS WILL BE BILLED AS ADDITIONAL SERVICES.

1. SUBMIT ONE REPRODUCIBLE AND TWO (2) PRINTS EACH OR AN ELECTRONIC DRAWING SUBMISSION, OF ALL SHOP DRAWINGS TO ARCHITECT AND ENGINEER OF RECORD (EOR) FOR REVIEW. THE EOR WILL SEND HIS/HER REVIEWED SHOP DRAWINGS TO THE ARCHITECT, WHO WILL PERFORM HIS/HER REVIEW OF THESE DRAWINGS AND SEND TO THE CONTRACTOR FOR HIS OR HER REVIEW, AND TO ALL OTHERS REQUIRING COPIES. SHOP DRAWINGS MUST BE CHECKED BY THE DETAILER PRIOR TO SUBMISSION, FAILURE TO DO SO WILL BE CAUSE FOR REJECTION.

2. REPRODUCTIONS OF STRUCTURAL CONTRACT DOCUMENTS MAY BE SUBMITTED AS ERECTION PLANS PROVIDED THAT S.E.T., P.C. IS CONTACTED AND GRANTS APPROVAL. A NOMINAL FEE WILL BE CHARGED FOR THIS RELEASE OF FILES IN ELECTRONIC FORMAT. DETAILER MUST USE COLUMN AND LINTEL DESIGNATIONS AS SHOWN ON ARCHITECTURAL AND STRUCTURAL DRAWINGS.

3. ALL REVISIONS TO SHOP DRAWINGS AFTER FIRST SUBMISSION MUST BE SO IDENTIFIED ON SUBSEQUENT SUBMISSIONS (I.E. WITH REVISION BUBBLES).

4. REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY CONTRACT RESPONSIBILITIES, EVEN IF SUCH ITEMS ARE NOT SHOWN ON SHOP DRAWINGS.

5. ANY DESIGN CHANGES PROPOSED BY THE DETAILER, MUST BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS AND, UPON REQUEST OF THE EOR, SUBSTANTIATED BY SUBMISSION OF THE CALCULATIONS USED TO DESIGN SUCH CHANGES.

6. ALL SUBCONTRACTORS MUST WORK WITH A FULL SET OF DRAWINGS, INCLUDING, STRUCTURAL, ARCHITECTURAL AND MECHANICAL, ELECTRICAL, PLUMBING. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST ANY DRAWINGS NOT FURNISHED BY THE GENERAL CONTRACTOR.

7. CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AT LEAST TEN WORKING DAYS PRIOR TO THE REQUIRED DATE FOR RETURN FROM REVIEW. THE CONTRACTOR WILL BE RESPONSIBLE FOR DEADLINES MISSED DUE TO LATE SHOP DRAWING SUBMISSION.

8. SHOP DRAWINGS MUST BE SUBMITTED TO THE E.O.R. FOR STRUCTURAL WORK RELATED TO THE FOLLOWING:
   - 8.1. STRUCTURAL STEEL.
   - 8.2. STRUCTURAL CONCRETE.
   - 8.3. STRUCTURAL MASONRY.
   - 8.4. STRUCTURAL COLD FORMED AND/OR LIGHT GAGE STEEL (I.E. STEEL DECKING).

MINIMUM SHOP DRAWINGS REQUIREMENTS

AT A MINIMUM, THE FOLLOWING INFO IS TO BE PROVIDED ON SHOP DRAWINGS:

1. STRUCTURAL STEEL STRUCTURES:
- 1.1. ALL BEAM, COLUMN, TRUSS, ETC. SIZES, LENGTHS, AND MATERIAL STRENGTH.
- 1.2. CONNECTION DETAILS; BOLT AND WELD SIZES AND TYPES.
- 1.3. ERECTION PLAN SHOWING ALL STRUCTURAL MEMBER IDENTIFICATION MARKS, AND ALL PLAN DIMENSIONS.
- 1.4. PIECE DRAWINGS WHICH SUMMARIZE ALL QUANTITIES AND DIMENSIONS.
- 1.5. SEE ALSO STRUCTURAL STEEL NOTES AND DETAILS FOR MORE INFO.

2. CONCRETE STRUCTURES:
- 2.1. SLAB AND BEAM TOP & BOTTOM REINFORCEMENT, CONCRETE STRENGTH, PLANS AND SECTIONS, WITH BAR SPLICE LENGTHS AND LOCATIONS CLEARLY SHOWN.
- 2.2. COLUMN REINFORCEMENT & TIES SECTIONS, WITH BAR SPLICE LENGTHS, ELEVATIONS, AND LOCATIONS CLEARLY SHOWN.
- **2.3. REBAR SCHEDULES.**
  - 2.3.1. EDGE OF SLAB LOCATION PLANS.
  - 2.3.2. COLUMN LOCATION PLANS (COORDINATES OR GRID).
  - 2.3.3. FORMWORK, FOR LOCATIONS OF "STA-FORM" SYSTEM, OR ANY OTHER FORM SYSTEMS THAT WILL ELIMINATE LATERAL LOADS AGAINST EXISTING STRUCTURES DURING POURING OF CONCRETE.
  - 2.3.4. SEE ALSO CONCRETE NOTES AND DETAILS FOR MORE INFO.

3. MASONRY STRUCTURES:
- 3.1. VERIFICATION OF SIZE, TYPE, AND MATERIAL SPEC'S OF CMU, BRICK, AND MORTAR TO BE USED ON THIS PROJECT.
- 3.2. FOR MASONRY SHEAR WALLS, LOCATION PLAN OF WALLS, SHOWING ALL VERTICAL AND HORIZONTAL REBAR LOCATIONS, BAR SPLICE LOCATIONS AND LENGTHS.
- 3.3. LOCATION PLAN OF CMU BOND BEAMS, SHOWING BAR SPLICE LOCATIONS AND LENGTHS.
- 3.4. SEE ALSO MASONRY NOTES AND DETAILS FOR MORE INFO.

4. STEEL DECKING:
- 4.1. ERECTION PLAN SHOWING ALL DECKING SIZES, GAGES, AND LENGTHS.
- 4.2. DETAILS FOR DECK-TO-DECK, DECK-TO-BEAM, DECK-TO-WALL CONNECTIONS (I.E. WELD AND/OR POWDER-ACTUATED-FASTENER SIZES AND LOCATIONS).
- 4.3. DECK CLOSURE AND EDGE OF SLAB DETAILS.
- 4.4. SEE ALSO STEEL DECKING NOTES AND DETAILS FOR MORE INFO.

EXTERIOR WALL DETAILS:

EXTERIOR WALL DETAILS INCLUDING MATERIALS USED IN ASSEMBLY (ANCHORAGE) PER NB APPLICATION #B00715872-I1 SHALL COMPLY WITH BC CHAPTER 14 AND BC 705.

ROOF DETAILS:

ROOF ASSEMBLY DETAILS INCLUDING MATERIALS USED IN ASSEMBLY (ANCHORAGE) PER NB APPLICATION #B00715872-I1 SHALL COMPLY WITH BC CHAPTER 15.

SEISMIC INFORMATION:

FOR SEISMIC INFORMATION SEE DRAWING S-401.

FOR SEISMIC DETAILS AT INTERSECTIONS OF STRUCTURAL ELEMENTS SEE S-400 DRAWINGS.

SUPERSTRUCTURE DETAILS:

FOR TYPICAL SUPERSTRUCTURE DETAILS AT ALL FLOORS INCLUDING DETAILS AT INTERSECTIONS OF STRUCTURAL ELELMENTS SEE S-400 DRAWINGS.

PRE-CONSTRUCTION NOTES:

1) DURING THE DESIGN PHASE, AND PRIOR TO CONSTRUCTION, THE FOLLOWING STEPS, AT A MINIMUM, MUST BE TAKEN:
- A. PRIOR TO CONSTRUCTION IT IS REQUIRED THAT OWNER CONDUCT A CONDITION SURVEY OF ADJACENT PROPERTIES, INCLUDING DATED PHOTOGRAPHS, IN ORDER TO DOCUMENT PRE-EXISTING CONDITIONS, STRUCTURAL STABILITY OF ALL ADJACENT STRUCTURES AND THEIR FOUNDATIONS, AND ASSESSMENT OF ADJACENT STRUCTURES & FOUNDATIONS ABILITY TO SAFELY WITHSTAND THE EFFECTS OF PROPOSED CONSTRUCTION, AND RECOMMENDED BRACING & SHORING, IF REQUIRED. IF CRACKS EXIST ON ADJACENT PROPERTIES, IT IS REQUIRED THAT CRACK MONITORS BE INSTALLED AT LOCATIONS DICTATED BY ENGINEER OF RECORD, AND BE PERIODICALLY MONITORED.
- B. OWNER TO OBTAIN SITE SURVEY SHOWING, AT A MINIMUM, ALL PROPERTY LINES, PARTY WALLS WITH THEIR DIMENSIONS ON EACH SIDE OF PROPERTY LINE, INDEPENDENT WALLS, ENCROACHMENTS BEYOND PROPERTY LINE FOR ENTIRE HEIGHT OF ALL ADJOINING PROPERTIES, NAVD ELEVATIONS, UTILITIES, ETC.
- C. SOIL BORINGS, TEST PITS, AND EXPLORATORY PROBING THAT MAY BE REQUIRED.
- D. MONITORING PLAN, SHOWING TYPE OF MONITORS AND THEIR LOCATIONS.

2) MANDATORY PRE-CONSTRUCTION MEETING (TO BE ORGANIZED BY OWNER AND CONTRACTOR) TO BE HELD PRIOR TO CONSTRUCTION, AND TO BE ATTENDED BY OWNER, DESIGN TEAM, SPECIAL INSPECTIONS AGENCY (SIA), AND CONSTRUCTION TEAM INCLUDING ALL PERTINENT SUB-CONTRACTORS. AT A MINIMUM, THE FOLLOWING ITEMS MUST BE DISCUSSED AND AGREED UPON BY ALL ATTENDING PARTIES:
- A. RESULTS OF FINDINGS OF PRE-CONDITION SURVEY AND STRUCTURAL STABILITY ASSESSMENT REPORT FOR ADJOINING PROPERTIES, AND IMPLEMENTATION OF ANY REMEDIAL MEASURES, BRACING, SHORING, ETC. THAT MAY BE REQUIRED.
- B. CONSTRUCTION TEAM TO CONFIRM THAT THEIR MARK-OUTS, ELEVATIONS, ANY ENCROACHMENTS, ETC. HAVE BEEN COORDINATED WITH SITE SURVEY, PRE-CONDITION SURVEY, AND ACTUAL SITE CONDITIONS.
- C. TYPES, LOCATIONS, AND FREQUENCY OF MONITORING TO BE FINALIZED.
- D. TIMETABLE OF SHOP DRAWINGS AND MATERIAL SUBMITTALS.
- E. COORDINATION WITH SIA FOR TYPES OF INSPECTIONS, FREQUENCY OF INSPECTIONS, SUBMISSION OF NON-CONFORMANCE REPORTS (NCR), ETC. SIA TO ALSO SUBMIT NAME AND CONTACT INFO FOR INSPECTOR TO BE USED FOR THIS PROJECT.
- F. COORDINATION WITH CONSTRUCTION TEAM FOR FULL-TIME PRESENCE AT SITE DURING WORK, AND SUBMISSION OF NAME(S) AND CONTACT INFO FOR SITE SUPERINTENDENT TO BE USED FOR THIS PROJECT.

ENERGY ANALYSIS (EN):

2020 NEW YORK CITY ENERGY CONSERVATION CODE

2016 ASHRAE 90.1 - ENERGY STANDARD FOR BUILDINGS

1. THE FOLLOWING REQUIRED ENERGY CODE PROGRESS INSPECTIONS TO BE FILED WITH (OT) APPLICATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILED ENERGY ANALYSIS.
   - 1.1. PROTECTION OF EXPOSED FOUNDATION INSULATION
   - 1.2. INSULATION PLACEMENT AND R-VALUES

2. "THE FOLLOWING FOUNDATION PLAN IS IN COMPLIANCE WITH 2020 NYCECC BY APPLICATION OF ASHRAE 90.1-2016 AS MODIFIED BY APPENDIX CA"

OPAQUE THERMAL ENVELOPE ASSEMBLY REQUIREMENTS		
NYCECC TABLE C402.1.4	ALL OTHER COMMERCIAL	GROUP R >3 STORIES
WALLS, BELOW GRADE		
BELOW-GRADE WALL	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURAL DWGS.

2020 ENERGY CODE TABULAR ANALYSIS					
NYCECC CITATION	PROVISION	ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIPTIVE VALUE	SUPPORTING DOCUMENTATION
CLIMATE ZONE 4: BRONX, NASSAU, KINGS, NEW YORK, QUEENS, RICHMOND, SUFFOLK, WESTCHESTER					
RESIDENTIAL/COMMERCIAL BUILDING THERMAL ENVELOPE					
402 THERMAL ENVELOPE					
402.1.1	VAPOR RETARDER	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURA L DWGS.	REFER TO ARCHITECTURAL DWGS.	N/A
402.1.3	R-VALUE COMPUTATION	REFER TO ARCHITECTURAL DWGS.	REFER TO ARCHITECTURA L DWGS.	REFER TO ARCHITECTURAL DWGS.	N/A

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH 2020 NYCECC BY THE APPLICATION OF ASHRAE 90.1-2016

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

40-12 28TH STREET
LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

DOB NOW BUILD JOB # :

#B00715872-S3

NOTE:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE:	DESCRIPTION
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

GENERAL NOTES

SEAL & SIGNATURE

STATE OF NEW YORK · GEORGE J. CAMBOURAKIS · No. 060234-1 · LICENSED PROFESSIONAL ENGINEER

DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO: S-001.00
SHEET NO: 2 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022

GENERAL NOTES:

1. ALL WORK TO CONFORM TO NEW YORK CITY BUILDING CODE REQUIREMENTS.
2. THE DESIGN PLANS AND NOTES, TO THE BEST OF ENGINEER'S KNOWLEDGE, COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.
3. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
4. SECTIONS AND DETAILS NOT DRAWN TO SCALE ARE FOR DIAGRAMMATIC PURPOSES ONLY AND SHOULD NOT BE UNDERSTOOD TO SHOW SPECIFIC DETAILED INFORMATION. INFORMATION PERTAINING TO SIZES, DIMENSIONS, NUMBER OF BOLTS AND OR REBAR, ETCETERA, MAY BE FOUND IN SCHEDULES PROVIDED.
5. CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
6. ALL DIMENSIONS INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SHOULD NOT BE USED FOR ORDERING AND/OR FABRICATING MATERIAL. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATING MATERIALS.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BY MEASUREMENTS AT THE JOB SITE AND SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM HIS WORK PROPERLY.
8. THE EXCAVATION / UNDERPINNING / SHEETING CONTRACTOR SHALL EXERCISE CAUTION IN THE PROCESS OF THE WORK. IF DAMAGE OCCURS TO THE ADJACENT BUILDING ELEMENTS OR CONTENTS, DUE TO THE NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO RECTIFY ALL DAMAGE AND/OR REIMBURSE PROPERTY OWNERS FOR ANY AND ALL DAMAGES, TO THE SATISFACTION OF ALL CONCERNED PARTIES.
9. THE EXCAVATION / UNDERPINNING / PILING / SHEETING CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ALL ADJACENT STRUCTURES.
10. ANY AND ALL WORK PERFORMED WHICH AFFECTS THE ADJACENT BUILDING OPERATIONS SHALL CAUSE A MINIMUM OF DISTURBANCE TO THE NORMAL OPERATION OF AFFECTED PARTS OF THE BUILDING.

STRUCTURAL STEEL NOTES:

1. UNLESS OTHERWISE NOTED ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

   A. WIDE-FLANGE SECTIONS: ASTM A992 (Fy = 50 KSI) GRADE 50
   B. ANGLES, CHANNELS, PLATE, AND MEMBERS BUILT-UP FROM PLATE: ASTM A36 (Fy = 36 KSI)
   C. TUBES: ASTM A500 GRADE B (Fy = 46 KSI)
   D. PIPES: ASTM A53 GRADE B TYPE E OR TYPE S (Fy = 35 KSI)
   E. HIGH STRENGTH RODS: ASTM A572 GRADE 60 (Fy = 60 KSI)

2. UNLESS OTHERWISE NOTED, BOLTED CONNECTIONS SHALL BE MADE WITH A325 TYPE 1 BOLTS (MINIMUM DIAMETER 3/4"), BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH "ALLOWABLE STRESS DESIGN - SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
3. BOLTS SPECIFICALLY DESIGNATED AS SLIP-CRITICAL ("SC") SHALL BE FULLY TENSION AND ARE SUBJECT TO CONTROLLED INSPECTIONS. ALL OTHER BOLTS MAY BE TIGHTENED TO THE SNUG-TIGHT CONDITION AND ARE NOT SUBJECT TO CONTROLLED INSPECTIONS.
4. ANCHOR BOLTS SHALL BE F1554 GRADE 55 (Fy = 55 KSI) WITH SUPPLEMENTARY REQUIREMENT S1 FOR WELDABILITY, UNLESS OTHERWISE NOTED.
5. DESIGN OF STEEL CONNECTIONS:

   A. CONNECTIONS NOT FULLY DETAILED IN THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY CONTRACTOR. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK TO SUPERVISE THE PREPARATION OF THE SHOP DRAWINGS FOR THESE CONNECTIONS, AND TO CHECK THE SHOP DRAWINGS FOR COMPLIANCE WITH CONTRACT DOCUMENTS, GOVERNING CODES, AND PREVAILING STANDARDS OF PRACTICE. THE SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THIS PROFESSIONAL ENGINEER AS EVIDENCE OF COMPLIANCE WITH THESE REQUIREMENTS.
   B. STEEL CONNECTIONS SHALL BE DESIGNED TO RESIST THE ULTIMATE FORCES INDICATED ON THE DRAWINGS. WHERE FORCES ARE NOT GIVEN BEAM CONNECTIONS SHALL BE DESIGNED FOR MINIMUM REACTIONS AS BELOW:

W8	10 KIPS
W8 X 15 AND GREATER	20 KIPS
W10	15 KIPS
W12	25 KIPS
W14	35 KIPS

   C. STEEL CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - LOAD AND RESISTANCE FACTOR DESIGN FOR STEEL BUILDINGS". FOLLOWING THE DESIGN AND DETAILING RECOMMENDATIONS OF THE AISC "MANUAL OF STEEL CONSTRUCTION 13TH EDITION".
   D. DESIGN OF STEEL CONNECTIONS FOR SHEAR SHALL INCLUDE THE EFFECTS OF ECCENTRICITY.
   E. CONTRACTOR SHALL PROVIDE STIFFENERS AND REINFORCING PLATES WHERE NEEDED TO RESIST THE LOCAL EFFECTS OF DESIGN LOADS.
   F. "MC" ON PLANS DENOTES MOMENT CONNECTION WHICH IS REQUIRED TO DEVELOP THE FULL MOMENT AND SHEAR CAPACITY OF THE MEMBER.

6. WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS LICENSED BY THE COMMISSIONER OF BUILDINGS AND SHALL CONFORM TO ARTICLE 27-616. WELDING ELECTRODES SHALL BE CLASS E7OXX
7. SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION ON STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS. SHOP DRAWINGS ARE PREPARED AND USED BY THE CONTRACTOR AS INSTRUMENTS TO SEQUENCE HIS WORK AND TO FACILITATE FABRICATION AND ERECTION. REVIEW OF SHOP DRAWINGS SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AND FOR VERIFICATION OF CONTRACTOR DESIGNED CONNECTIONS.FABRICATOR SHALL ALLOW FOR MINIMUM REVIEW PERIOD OF 10 WORKING DAYS. THE FABRICATION SCHEDULE SHALL ALSO ALLOW FOR AT LEASE ONE RESUBMISSION OF EACH DRAWING. STEEL FABRICATOR SHALL PRODUCE A FULL SET OF AS-BUILTS FOR CLIENT AT THE COMPLETION OF THE WORKS. AS-BUILTS SHALL INCLUDE ALL FIELD MODIFICATIONS TO THE STRUCTURAL STEEL.
8. PAINT ALL STEEL AS FOLLOWS, UNLESS OTHERWISE NOTED IN ARCHITECTURAL SPECIFICATIONS:

   G. INTERIOR STRUCTURAL STEEL/FIREPROOFED: NONE
   H. INTERIOR STRUCTURAL STEEL/TO RECEIVE FINISH PAINT:FIRST PREPARE STEEL ACCORDING TO SSPC-SP1 AND SP2 OR SP3. RUST PROHIBITIVE PRIMER CONFORMING TO TT-P-86, TYPE 1, OR TNEMEC EXTERIOR #10-99 OR 88-555.
   I. LINTELS BEAMS, AND COLUMNS EMBEDDED IN MASONRY: FIRST PREPARE STEEL ACCORDING TO SSPC-SP1, AND SP2 OR SP3. 2-COATS, 4-6 MILS THICK EACH, TNEMEC SERIES 135 CHEM BUILD, OR WHEN TEMPERATURE IS BELOW 50 DEGREES:1-COAT TNEMEC 530 POLY-URA-PRIME, 1-2 MILS THICK, AND 1-COAT TNEMEC 161 TNEME-FASCURE, 3-4 MILS.
   J. STEEL EXPOSED TO WEATHER: FIRST PREPARE STEEL ACCORDING TO SSPC-SP1 AND SP2 OR SP3. PAINT 1 SHOP COAT TNEMEC 530 POLY-URA-PRIME, 1-2 MILS THICK. APPLY 2 FIELD COATS TNEMEC 66 UNLESS NOTED OTHERWISE IN THE ARCHITECTURAL SPECIFICATIONS.

   IF EXPOSED TO SUNLIGHT (FADING CRITICAL-COOLING TOWER):
   PRIMER: TNEMEC SERIES 530, 1-2 MILS DFT.
   INTERMEDIATE: TNEMEC SERIES 66, 3-5 MLIS DFT.
   TOP COAT: TNEMEC SERIES 73, 3-5 MILS DFT.

   FOR ALL CASES STRICTLY ADHERE TO MANUFACTURER'S DATA SHEET FOR PREPARATION OF SURFACES TO BE PAINTED. SCARIFY (TO SSPC SP2), ALL SURFACES WITH TNEMEC SERIES 530 PRIOR TO APPLICATION OF FURTHER INTERMEDIATE COATS.

STRUCTURAL STABILITY NOTES:

1. SPECIAL INSPECTION OF THE STRUCTURAL STABILITY AND INTEGRITY OF EXISTING STRUCTURES DURING CONSTRUCTION OPERATIONS IS REQUIRED BY THE NEW YORK CITY BUILDING CODE CHAPTER 17 (SECTION 1704.20.1).
2. CONTRACTOR SHALL PREPARE A STRUCTURAL STABILITY PLAN AND SEQUENCE OF WORK, TO BE SUBMITTED TO THE STRUCTURAL ENGINEER (SIGNED AND SEALED BY THE PROFESSIONAL ENGINEERS RESPONSIBLE FOR ITS DESIGN) FOR REVIEW, AND APPROVAL PRIOR TO ANY DEMOLITION WORK OR MODIFICATIONS TO THE EXISTING STRUCTURE. THIS STRUCTURAL STABILITY PLAN SHALL CONFORM WITH NYCBC 1704.20.1 AND MUST INCLUDE:

   A. LAYOUT AND DETAILS OF SHORING, BRACING, UNDERPINNING AND OTHER WORK REQUIRED TO MAINTAIN THE STABILITY AND INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION OPERATIONS.
   B. PHASING, STAGING, AND SEQUENCING OF SUCH OPERATIONS.
   C. DESIGN LOADS FOR WHICH THE STABILITY SYSTEM HAS BEEN DESIGNED.
   D. REQUIRED CONTROLLED INSPECTIONS AND THEIR FREQUENCY.

3. OWNER SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE STRUCTURAL STABILITY INSPECTION OF EXISTING BUILDINGS. THIS INSPECTOR SHALL REVIEW AND FOLLOW THE APPROVED STRUCTURAL STABILITY PLAN AND SUBMIT AN IN WRITING ALL INSPECTION REPORTS TO THE ENGINEER OF RECORD. ALL INSPECTION REPORTS SHALL CONFORM TO NYCBC

STRUCTURAL METAL DECKING NOTES:

1. COMPOSITE METAL DECK SHALL TYPICALLY BE CONTINUOUS OVER A MINIMUM OF THREE (3) SPANS IN THE DIRECTION INDICATED, USE SINGLE SPANS ONLY WHERE REQUIRED BY FRAMING GEOMETRY.
2. PROVIDE COLUMN CLOSURES, RIDGE AND VALLEY PLATES, CANT STRIPS, RECESSED SUMP PANS, PLATES AT PIPING PENETRATIONS ETC. PROVIDE SUPPLEMENTAL FRAMING AT OPENINGS AS REQUIRED FOR SUPPORT OF METAL DECK. COORDINATE OPENINGS WITH THE DRAWINGS. PROVIDE 24" SQUARE 12 GUAGE REINFORCING PLATE AT ALL ROOF DRAINS.
3. NO LOADS EXCEEDING 50 POUNDS SHALL BE PERMITTED TO BE HUNG FROM ANY METAL DECKING. HANGERS FOR DUCTWORK, PIPING, ETC. SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS OR ARCHORS EMBEDDED IN THE CONCRETE. SUBMIT HANGING LOAD DETAILS FOR REVIEW. TOTAL HUNG LOAD SHALL NOT EXCEED 5 PSF WHETHER HUNG FROM THE SLAB OR THE STRUCTURAL STEEL.
4. ALL METAL DECK SHALL BE FABRICATED FROM STEEL TYPE ASTM A446, HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI. ALL DECKING SHALL BE HOT-DIPPED GALVANIZED.
5. METAL DECK FOR FLOORS AND ROOF SHALL BE COMPOSITE METAL DECK-AS MANUFACTURED BY UNITED STEEL DECK INC., OR EQUAL WITH MINIMUM GAUGE OF THE METAL DECK OF 18 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
6. ALL DECKING SHALL BE WELDED TO THE STRUCTURAL STEEL BY QUALIFIED WELDERS USING PRE-QUALIFIED PROCEDURES. METAL DECKING SHALL BE WELDED AT 12 INCHES MAXIMUM ON CENTER TO THE SUPPORTING STEEL WITH 3/4 INCH DIAMETER WELD. SIDE LAPS SHALL BE FASTENED AT 36 INCHES MAXIMUM ON CENTER.
7. PROVIDE CONTINUOUS SHEET METAL CLOSURES, CANT STRIPS, RIDGE AND VALLEY PLATES, AT ALL DECK ENDS, SLAB EDGES, ETC., AS REQUIRED TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF INSULATION AND ROOFING OR TO PREVENT THE FLOW OF CONCRETE.
8. ALL METAL DECKING SHALL CONFORM TO THE STEEL DECK INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.
9. THE MINIMUM ALLOWABLE DIAPHRAGM SHEAR STRENGTH SHALL BE 400 PLF, UNLESS NOTED OTHERWISE. NO STRESS INCREASE IS ALLOWED.
10. PROVIDE CALCULATIONS FOR ALL METAL DECKS CONSIDERING DIFFERENT SPAN LENGTHS AND CONCRETE THICKNESS.
11. THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING DECK LAYOUT AND DETAILS, LOCATION, GAUGE AND SIZE OF EACH SHOP PIECE OF DECKING. THE SHOP DRAWINGS SHALL CLEARLY SHOW WELDING DETAILS TO STRUCTURAL FRAMING AND SIDE LAP CONNECTION DETAILS.
12. PROVIDE CLOSURE PLATES AT ALL NEW SLAB EDGES, BOTH IN THE NEW CONSTRUCTION AND EXISTING BUILDING. COORDINATE THE EDGE OF SLAB DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS. AT CONCRETE EXPOSED AREAS THE EDGE SHOULD BE BOARD FINISH.

MASONRY NOTES:

GENERAL MASONRY NOTES:

1. ALL STRUCTURAL MASONRY DESIGN AND CONSTRUCTION SHALL COMPLY WITH TMS 402-13/ACI 530-13/ASCE 5-13. ONLY STRUCTURAL MASONRY SHOW ON PLAN AND MASONRY REINFORCEMENT SCHEDULE.
2. LOAD USED FOR MASONRY STRUCTURE IS LISTED IN GENERAL LOADING NOTES, UNLESS OTHERWISE NOTED
3. THE COMPRESSIVE STRENGTH OF CONCRETE MASONRY IS DETERMINED BY UNIT STRENGTH METHOD. THE STRENGTH MUST BE VERIFIED AT THE FIELD BY INSPECTION ON QUALITY TEST.
4. PRIOR TO CONSTRUCTION, VERIFY CERTIFICATES OF COMPLIANCE USED IN MASONRY CONSTRUCTION.
5. CONDUITS, PIPES, AND SLEEVES THROUGH MASONRY WALL MUST BE COORDINATED WITH THE STRUCTURAL ENGINEER.

MASONRY BLOCK SPECIFICATION:

1. THE MINIMUM COMPRESSIVE STRENGTH CMU SHALL BE F'M = 2,500 PSI, DETERMINED BY THE UNIT STRENGTH METHOD.
2. CMU SHALL BE LOAD-BEARING NORMAL WEIGHT AGGREGATE CONCRETE MASONRY UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C-90 GRADE M OR S TYPE 1 WITH MINIMUM AVERAGE NET-AREA COMPRESSIVE STRENGTH OF 3750 PSI. USE TWO CELL HOLLOW BLOCK NOMINAL FACE SIZE 8" X 16" UNLESS OTHERWISE NOTED ON DRAWINGS AND/OR SCHEDULE.
3. MORTAR SHALL CONFORM TO ASTM C270. THE MINIMUM AVERAGE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 1800 PSI FOR TYPE S, AND 2500 PSI FOR TYPE M. MORTAR FOR LEVELING COURSE SHALL BE TYPE M OR S.
4. GROUT SHALL CONFORM TO ASTM C476. MINIMUM GROUT COMPRESSIVE STRENGTH OF SHALL BE EQUAL TO OR GREATER THAN F'M = 2,500 PSI.
5. ADMIXTURES ARE NOT PERMITTED IN SELF-CONSOLIDATING GROUT.
6. THE MINIMUM COMPRESSIVE STRENGTH OF BRICK, f'm, SHALL BE 2200 PSI FOR AN INDIVIDUAL UNITS. AND ALL BRICKS SHALL BE OF TYPE MW (MODERATE EXPOSURE).

MASONRY REINFORCEMENT SCHEDULE AND INSTRUCTION:

1. DEFORMED REINFORCING BARS MUST CONFORM TO ASTM A615 GRADE 60.
2. ALL CELLS AT REBAR LOCATIONS MUST BE FILLED SOLID WITH GROUT.
3. MINIMUM VERTICAL REINFORCEMENT MUST BE 1-#5 AT 40" O.C. CONTINUOUS BETWEEN SUPPORTS, AT ALL CORNERS, AND AT EDGE OF OPENINGS. DEVELOPMENT, LAP SPLICE, AND BEND LENGTH MUST FOLLOW REINFORCING NOTES IN THIS STRUCTURAL SET DOCUMENT.
4. MINIMUM HORIZONTAL REINFORCEMENT MUST BE JOINT REINFORCEMENT AT EVERY OTHER BLOCK COURSES 16" O.C. JOINT REINFORCEMENT SHALL BE ASTM 83 (ASTM A951), MILL GALVANIZED TO ASTM A641, DUR-O-WAL LADUR OR STANDARD TRUSS TYPE. USE 2 No. 9 SIDE ROD SPACED EVERY OTHER BLOCK COURSE IF REQUIRED.

MASONRY PLACEMENT, GROUT, AND BOND BEAM INSTRUCTION:

1. ALL UNITS SHALL BE RUNNING BOND.
2. THE THICKNESS OF BED JOINT SHALL NOT EXCEED 5/8 INCH.
3. AT EDGE OF OPENINGS, PROVIDE 1-#5 AND EXTEND IT TO MINIMUM DEVELOPMENT BAR LENGTH BEYOND OPENING.
4. THE FIRST COURSE ON FOOTING SHALL BE FILLED SOLID WITH CONCRETE.
5. CONCRETE BLOCK BELOW BEAM BEARING POINTS SHALL BE FILLED SOLID WITH GROUT FOR TWO COURSES IN DEPTH AND THREE COURSES IN WIDTH
6. A CONTINUOUS BOND BEAM SHALL BE DIRECTLY BELOW EACH FLOOR FRAMING, REINFORCED WITH 2 #4 HORIZONTAL CONTINUOUS BARS.

LINTELS:

1. STEEL LINTELS SHALL BE INSTALLED OVER ALL OPENINGS IN MASONRY WALLS AS FOLLOWS, UNLESS OTHERWISE NOTED ON PLANS:

WALL THICKNESS	LINTEL SCHEDULE		
	MAX. OPENING	LINTEL SIZE	
4"	0'-0" - 4'-0"	(1) 4"x3½ x5/16"	L
	4'-1" - 5'-0"	(1) 4"x3½x3/8"	L
	5'-1" - 6'-6"	(1) 5"x3½"x5/16"	L
	6'-7" - 8'-0"	(1) 6"x3½"x5/16"	L
8"	0'-0" - 4'-0"	(2) 4"x3½"x5/16"	JL
	4'-1" - 5'-0"	(2) 4"x3½"x3/8"	JL
	5'-1" - 6'-6"	(2) 5"x3½"x5/16"	JL
	6'-7" - 8'-0"	W8x15+5/16"x7"PL	I
12"	0'-0" - 4'-0"	(3) 4"x3½"x5/16"	JJL
	4'-1" - 5'-0"	(3) 4"x3½"x5/16"	JJL
	5'-1" - 6'-6"	(3) 5"x3½"x5/16"	JJL
	6'-7" - 8'-0"	W8x18+5/16"x11"PL	I
	8'-1" - 9'-6"		

LINTELS OVER 4'-0" LONG SHALL BE FIREPROOFED.

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

40-12 28TH STREET
LONG ISLAND CITY, NY 11101
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OWNER:

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#B00715872-S3

NOTE:

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C. HAS NOT BEEN RETAINED TO PERFORM CONTROLLED INSPECTIONS OF ANY KIND FOR THIS PROJECT.

THE DESIGN PROFESSIONAL SHALL BE RELEASED FROM ANY AND ALL LIABILITY IN THE COMMENCEMENT OF ANY WORK PERFORMED WITHIN THESE DOCUMENTS PRIOR TO OBTAINING ALL REQUIRED PERMITS FROM THE RESPECTIVE JURISDICTIONAL AGENCIES

NO.	DATE:	DESCRIPTION
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

GENERAL NOTES

SEAL & SIGNATURE

STATE OF NEW YORK
GEORGE J. CAMBOURAKIS
No. 060234-1
LICENSED PROFESSIONAL ENGINEER

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-002.00
SHEET NO:	3 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022

CONCRETE NOTES:

1. ALL CAST-IN-PLACE CONCRETE SHALL BE STONE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF **4,000 PSI**.
2. ALL REINFORCEMENT SHALL BE A-615 GRADE 60 STEEL. WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-185.
3. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
4. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3/4" FOR SLABS, 1-1/2" FOR BEAMS AND 1" FOR WALLS. ALL CONCRETE EXPOSED TO WEATHER OR EARTH FILL SHALL HAVE MINIMUM CONCRETE COVER OF 2" FOR BARS LARGER THAN #5, 1-1/2" FOR #5 BARS OR SMALLER, AND 3" FOR ALL CONCRETE PLACED AGAINST EARTH. ALL CONCRETE PLACED AGAINST PERMANENT SHEETING SHALL HAVE MINIMUM CONCRETE COVER OF 4".
5. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR-ENTRAINMENT AGENT.
6. VERTICAL CONSTRUCTION JOINTS USING APPROVED BULKHEADS MAY BE MADE AT CENTER OF BEAM AND SLAB SPANS WHERE STOP IN CONCRETE WORK IN NECESSARY. LOCATION OF VERTICAL CONSTRUCTION JOINTS IN EXPOSED STRUCTURAL ELEMENTS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. VERTICAL WALL CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO PROVIDE A 60'-0" MAXIMUM LENGTH OF CONCRETE PLACEMENT. SUCH JOINTS SHALL BE LOCATED AT CENTERLINES OF WALL SPANS BETWEEN SUPPORTS.
7. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT FOR APPROVAL.
8. NO HORIZONTAL CONSTRUCTION JOINT WILL BE PERMITTED IN BEAMS, WALLS, AND SLABS UNLESS SPECIFICALLY SHOWN ON PLANS OR SECTIONS.
9. ALL BEAMS AND SLABS TO BE POURED MONOLITHICALLY UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.
11. PIPES OR CONDUITS PLACED IN SLAB ON GRADE SHALL NOT BE SPACED CLOSER THAN 3 X DIAMETER OF PIPES AND CONDUITS PLACED IN SLAB ON GRADE SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLAB WITHIN 2" OF COLUMN FACE.
12. CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
13. FOR WATERPROOFING DETAILS AND LOCATIONS, SEE ARCHITECTURAL DRAWINGS.
14. FOR LOCATION OF FLOOR DRAINS, CURBS, CONCRETE PADS AND FLOOR DEPRESSIONS SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
15. CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
16. REINFORCED CONCRETE DESIGN IS ULTIMATE STRENGTH DESIGN AS PER A.C.I. BUILDING CODE. (A.C.I. 318-08).
17. COORDINATE LOCATION OF SLOTTED INSERTS, WELD PLATES, AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
18. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES.
19. ALL CONTRACTORS ARE REQUESTED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE, FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND NOT FAMILIARIZING WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK THAT MAY BE REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO OWNER.
20. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS IN BASEMENT WALLS AND CONCRETE SLABS ON GROUND.

MASONRY SPLICING AND DEVELOPMENT LENGTHS:

DEVELOPMENT LENGTH'Ldm' (in)					
SIZE	1000 PSI	1500 PSI	2000 PSI	2500 PSI	3000 PSI
#3	19	16	14	12	11
#4	25	22	18	16	15
#5	31	26	22	20	18
#6	53	43	38	34	31
#7	73	60	52	47	43
#8	112	92	79	71	65
#9	144	116	102	92	84

LAP SPLICE LENGHT 'Lsm' (in) FOR REBAR IN 1500PSI OR STRONGER							
BAR SIZE	#3	#4	#5	#6	#7	#8	#9
SPLICE LENGHT	24	32	40	48	60	92	118

NOTES: ALL DEVELOPMENT AND SPLICE LENGTHS SHOWN ON THE ABOVE TABLE ARE FOR STANDARD UNCOATED REBAR, HAVING A YIELD STRENGTH OF fy = 60000 PSI. CONTRACTOR SHALL REPORT ALL OTHER REBAR AND GAIN APPROVAL FROM EOR BEFORE USING ANY OTHER TYPE OF REBAR. LAP SPLICES SHALL NEVER BE SHORTER THAN DEVELOPMENT LENGTHS FOR THE REBAR SHOWN.

CONCRETE DEVELOPMENT AND SPLICE LENGTH NOTES:

LAP SPLICE LENGTH 'Ls' (in)									
SIZE	4000 PSI			5000 PSI			6000 PSI		
	TENSION 'Lts'		COMP. 'Lcs'	TENSION 'Lts'		COMP. 'Lcs'	TENSION 'Lts'		COMP. 'Lcs'
	TYP.	TOP.		TYP.	TOP.		TYP.	TOP.	
#3	18	24	12	17	22	12	17	20	12
#4	25	32	15	22	29	15	20	26	15
#5	31	40	19	28	36	19	25	33	19
#6	46	60	23	42	54	23	38	50	23
#7	54	70	27	49	63	27	45	58	27
#8	62	80	30	56	72	30	51	66	30
#9	70	91	34	63	81	34	57	74	34
#10	79	102	39	71	92	39	64	84	39
#11	109	142	62	98	127	53	89	116	53
#14	MECHANICAL SPLICE ONLY								
#18									
#20									

SIZE	STRAIGHT BAR DEVELOPMENT LENGTH 'Ld' (in)								
	4000 PSI			5000 PSI			6000 PSI		
	TENSION 'Ldt'		COMP. 'Ldc'	TENSION 'Ldt'		COMP. 'Ldc'	TENSION 'Ldt'		COMP. 'Ldc'
	TYP.	TOP.		TYP.	TOP.		TYP.	TOP.	
#3	14	18	8	13	17	8	12	16	8
#4	19	25	9	17	22	9	15	20	9
#5\	24	31	12	21	29	11	19	25	10
#6	36	47	14	32	42	13	29	38	12
#7	42	54	17	38	49	15	34	45	14
#8	48	62	19	43	56	17	39	51	15
#9	54	70	21	48	63	19	44	57	17
#10	61	79	24	54	71	22	50	64	20
#11	84	109	27	75	98	24	69	89	22
#14	101	131	32	90	117	29	82	107	26
#18	134	174	43	120	156	39	110	143	35
#20	159	206	48	142	184	45	130	168	45

SIZE	HOOKED TENSION DEVELOPMENT LENGTHS 'Ldh' (in)			HOOKED BAR STRAIGHT EXTENSION 'Lext' (in)		
	4000 PSI	5000 PSI	6000 PSI	4000 PSI	5000 PSI	6000 PSI
#3	8	7	6	6	6	6
#4	10	9	8	8	8	8
#5	12	11	10	10	10	10
#6	15	13	12	12	12	12
#7	17	15	14	14	14	14
#8	19	17	16	15	15	15
#9	22	20	18	1	19	19
#10	25	22	20	21	21	21
#11	34	30	28	23	23	23
#14	NOT PERMITTED					
#18						
#20						

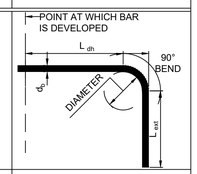
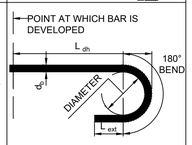
NOTES FOR THE BAR LENGTH TABLES:

1. THESE DEVELOPMENT AND SPLICE LENGTHS ARE COMPUTED FOR UNCOATED BARS IN THE ELEMENTS OF NORMAL WEIGHT CONCRETE WITH THE MINIMUM CLEAR COVER OF ONE BAR DIAMETER,THE MINIMUM CLEAR SPACING OF ONE BAR DIAMETER IN BEAMS AND COLUMNS, AND TWO TIMES THE BAR DIAMETER IN OTHER ELEMENTS.
2. THESE DEVELOPMENT AND SPLICE LENGTHS SHALL BE MULTIPLIED BY ALL OF THE APPLICABLE FACTORS THAT FOLLOW:

A. REINFORCING WITH COVER OR SPACING LESS THAN THAT SPECIFIED IN NOTE1:.....X 1.30
B. EPOXY-COATED REINFORCING FOR TYPICAL REINFORCEMENT:.....X 1.50
C. EPOXY-COATED REINFORCING FOR TOP REINFORCEMENT:.....X 1.31
D. REINFORCING PLACED IN LIGHTWEIGHT CONCRETE:.....X 1.30

3. 'Ld' CAN BE USED AS ACI CLASS A SPLICE; 'Ls' CAN BE USED AS ACI CLASS B SPLICE.
4. USE TOP CONDITION FOR ANY HORIZONTAL BARS WITH MORE THAN 12 INCH OF FRESH CONCRETE BELOW.

STANDARD HOOK GEOMETRY FOR DEVELOPMENT OF DEFORMED BARS IN TENSION

TYPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER, in.	STRAIGHT EXTENSION [1] L_{ext}, in.	TYPE OF STANDARD HOOK
90 - DEGREE HOOK	NO. 3 THROUGH NO. 8	6 d_b	12 d_b	
	NO.9 THROUGH NO. 11	8 d_b		
	NO. 14 AND NO. 18	10 d_b		
180 - DEGREE HOOK	NO. 3 THROUGH NO. 8	6 d_b	GREATER OF 4 d_b AND 2.5 in.	
	NO.9 THROUGH NO. 11	8 d_b		
	NO. 14 AND NO. 18	10 d_b		

[1] A STANDARD HOOK FOR DEFORMED BARS IN TENSION INCLUDES THE SPECIFIC INSIDE BEND DIAMETER AND STRAIGHT EXTENSION LENGTH. IT SHALL BE PERMITTED TO USE A LONGER STRAIGHT EXTENSION AT THE END OF A HOOK. A LONGER EXTENSION SHALL NOT BE CONSIDERED TO INCREASE THE ANCHORAGE CAPACITY OF THE HOOK.

ABBREVIATIONS

ARCH.	ARCHITECTURAL
BC.	BUILDING CODE
BLDG.	BUILDING
BM.	BEAM
BOT.	BOTTOM
CC.	CENTER TO CENTER
C/C	CENTER TO CENTER
CFS	COLD FORMED STEEL
CL.	CENTER LINE
CMU.	CONCRETE MASONRY UNIT
CLR	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT'D	CONTINUED
DBO	DESIGNED BY OTHERS
DIA.	DIAMETER
DIST.	DISTANCE
Ø	DIAMETER
DIM.	DIMENSION
DET.	DETAIL
DTL.	DETAIL
DWG	DRAWING
EJ.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATION OR ELEVATOR
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
EXIST.	EXISTING
FL.	FLOOR
FLR.	FLOOR
FND'N	FOUNDATION
FT.	FEET/FOOT
GC.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
ID.	INSIDE DIAMETER
IN.	INCH
LGS	LIGHT GAUGE STEEL
MAX.	MAXIMUM
MC	MOMENT CONNECTION
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.T.S	NOT TO SCALE
NO.	NUMBER
No.	NUMBER
NYCBC	NEW YORK CITY BUILDING CODE
#	NUMBER
OC.	ON CENTER
O/C	ON CENTER
OD.	OUTSIDE DIAMETER
PL.	PROPERTY LINE
PSF.	POUND PER SQUARE FOOT
PROP.	PROPOSED
REINF.	REINFORCED
RQD.	REQUIRED
RQ'D.	REQUIRED
SQ-FT	SQUARE FOOT
TOC.	TOP OF CURB
T.O.S	TOP OF SLAB
TOFF.	TOP OF FINISHED FLOOR
TOW.	TOP OF WALL
TSF	TON PER SQUARE FOOT
TYP.	TYPICAL
VIF.	VERIFY IN FIELD
VERT.	VERTICAL
U.O.N	UNLESS OTHERWISE NOTED
W/	WITH
WT.	WEIGHT

LATERAL LOAD DESIGN AND CRITERIA:

SEISMIC LOADS

SEISMIC CODE:	ASCE 7-10
RISK CATEGORY:	II
IMPORTANCE FACTOR:	1.00
SITE CLASS:	D
DESIGN CATEGORY:	B
SPECTRAL RESPONSE COEFFICIENTS:	Ss = 0.281g Sds = 0.295g S1 = 0.073g Sd1 = 0.117g
MFRS:	ORDINARY REINFORCED CONCRETE SHEAR WALLS
R =	3.5
Cs=	0.034
BASE SHEAR X-DIRECTION:	124KIP
BASE SHEAR Y-DIRECTION:	124KIP

EQUIVALENT LATERAL FORCE ANALYSIS
A SEISMIC SEPARATION OF 2" WAS USED BETWEEN THIS STRUCTURE AND THE PROPERTY LINE.

WIND LOADS:

WIND ANALYSIS ACCORDING TO:	2014 NYC BUILDING CODE
WIND DESIGN CODE:	ASCE 7-05
BASIC WIND SPEED:	98 MPH
IMPORTANCE FACTOR:	1.0
EXPOSURE CATEGORY:	B
INTERNAL PRESSURE COEFFICIENT:	GCpi = +/-0.18

COMPONENTS AND CLADDING
Pnet = XXpsf
BASE SHEAR X-DIRECTION = 23KIP
BASE SHEAR Y-DIRECTION = 49KIP

GRAVITY LOADS:

UNIFORMLY DISTRIBUTED LIVE LOADS:

GROUND FLOOR LOBBY	100 PSF.
CORRIDORS ABOVE FIRST FLOOR	75 PSF.
EXIT FACILITIES	100 PSF.
MECHANICAL FLOORS	150 PSF. OR ACTUAL WEIGHT
MECHANICAL / FAN ROOMS	75 PSF. FT. OR ACTUAL WEIGHT
SIDEWALKS	600 PSF.
ROOFS	30 PSF. PLUS DRIFT
OCCUPIED ROOFS	100 PSF.
RESIDENTIAL	40 PSF.
BALCONIES / PRIVATE TERRACE	60 PSF.
PUBLIC TERRACE	100 PSF.

DEAD LOADS AND SUPERIMPOSED:
12 PSF PARTITIONS
8 PSF MISCELLANEOUS

SNOW LOAD CRITERIA:

SNOW DESIGNING CODE:	NYC BUILDING CODE 2014
GROUND SNOW LOAD:	30 PSF
SNOW EXPOSURE FACTOR:	Ce = 1.0
THERMAL FACTOR:	Ct = 1.0
SNOW LOAD IMPORTANCE FACTOR:	Is = 1.0

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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40-12 28TH STREET
LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

DOB NOW BUILD JOB # :

#B00715872-S3

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NO.	DATE:	DESCRIPTION
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

GENERAL NOTES

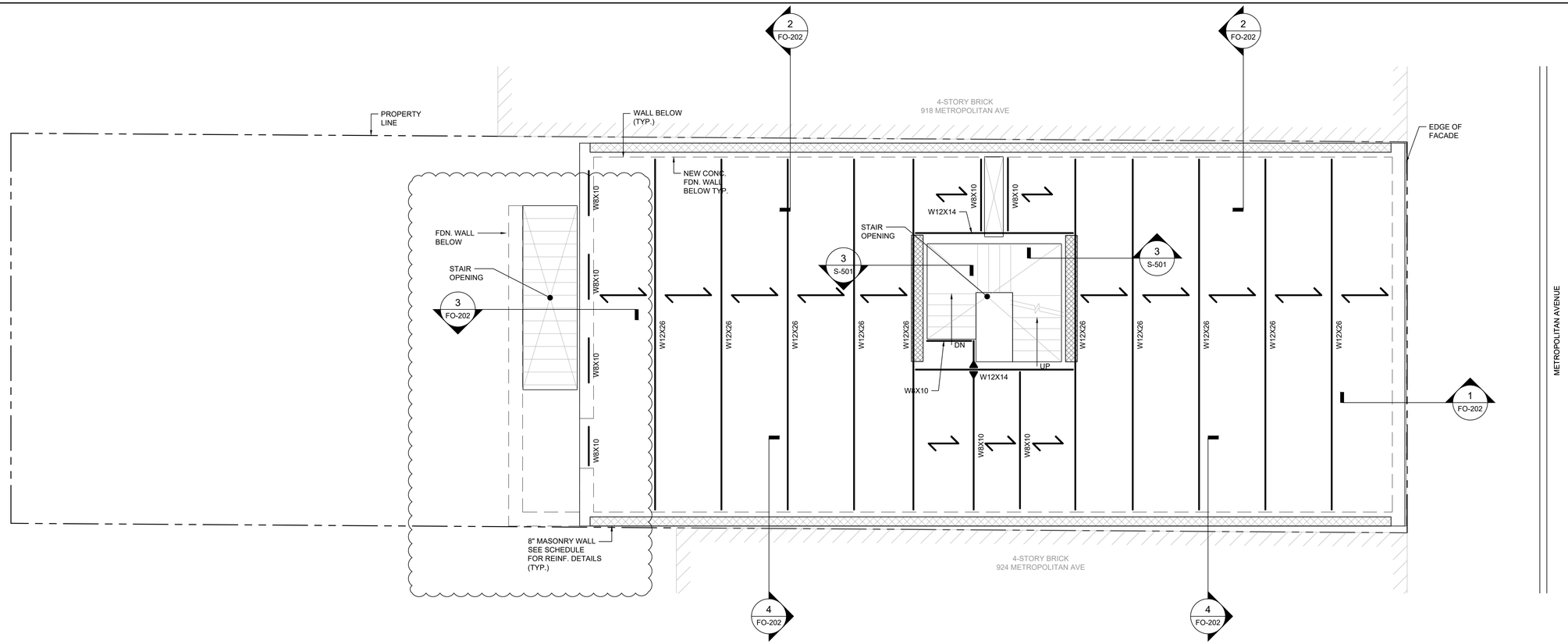
SEAL & SIGNATURE

DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO: S-003.00
SHEET NO: 4 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



1ST FLOOR FRAMING PLAN

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

N

NOTES:

1. TOP OF SLAB ELEVATION IS U.O.N.
2. 4 ½" THICKNESS STRUCTURAL SLAB SPAN PERPENDICULAR TO THE STEEL BEAMS. THE SLAB CONSISTS OF 3 ½" CONCRETE AND 1 ½" 22 GA. METAL DECK SLAB SHALL BE REINF. WITH W6x6-W4xW4 FROM TOP OF SLAB.
3. REFER TO S-200 SERIES FOR STEEL DETAILS.

LEGEND:

- DENOTES 8" CMU BEARING WALL
- DENOTES CMU SHEAR WALL
- DENOTES SPAN DIRECTION OF METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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LONG ISLAND CITY, NY 11101
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OWNER:

DOB NOW BUILD JOB # :

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NO.	DATE:	DESCRIPTION
7	01/31/23	FOR PAA
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

1ST FLOOR FRAMING PLAN

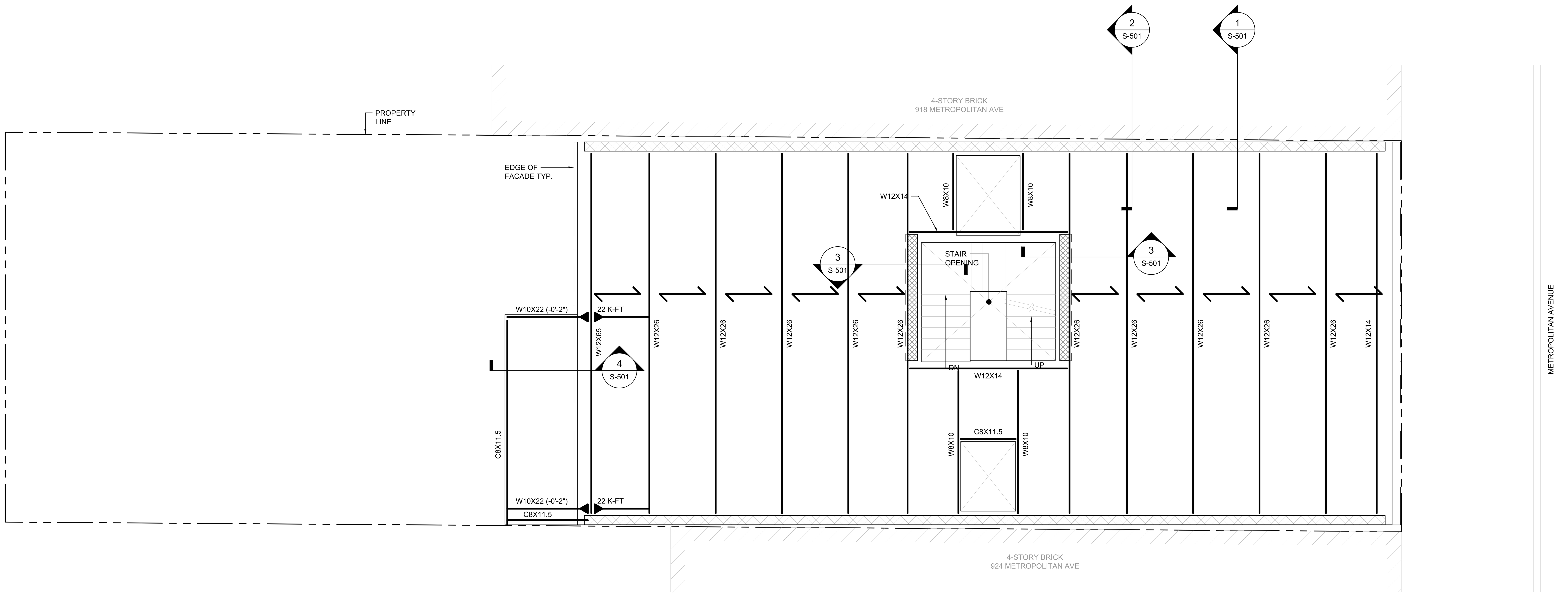
SEAL & SIGNATURE

STATE OF NEW YORK · GEORGE J. CAMBOURIS · LICENSED PROFESSIONAL ENGINEER · No. 081254

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-101.01
SHEET NO:	5 OF 13

BSCAN STICKER

DOB APPROVAL STAMP



2ND AND 3RD FLOORS FRAMING PLAN

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

N

NOTES:

1. TOP OF SLAB ELEVATION IS U.O.N.
2. 4 ½" THICKNESS STRUCTURAL SLAB SPAN PERPENDICULAR TO THE STEEL BEAMS. THE SLAB CONSISTS OF 3 ½" CONCRETE AND 1 ½" 22 GA. METAL DECK SLAB SHALL BE REINF. WITH W6x6-W4xW4 FROM TOP OF SLAB.
3. REFER TO S-200 SERIES FOR STEEL DETAILS.

LEGEND:

- DENOTES 8" CMU BEARING WALL
- DENOTES CMU SHEAR WALL
- DENOTES SPAN DIRECTION OF METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

2ND AND 3RD FLOORS FRAMING PLAN

SEAL & SIGNATURE

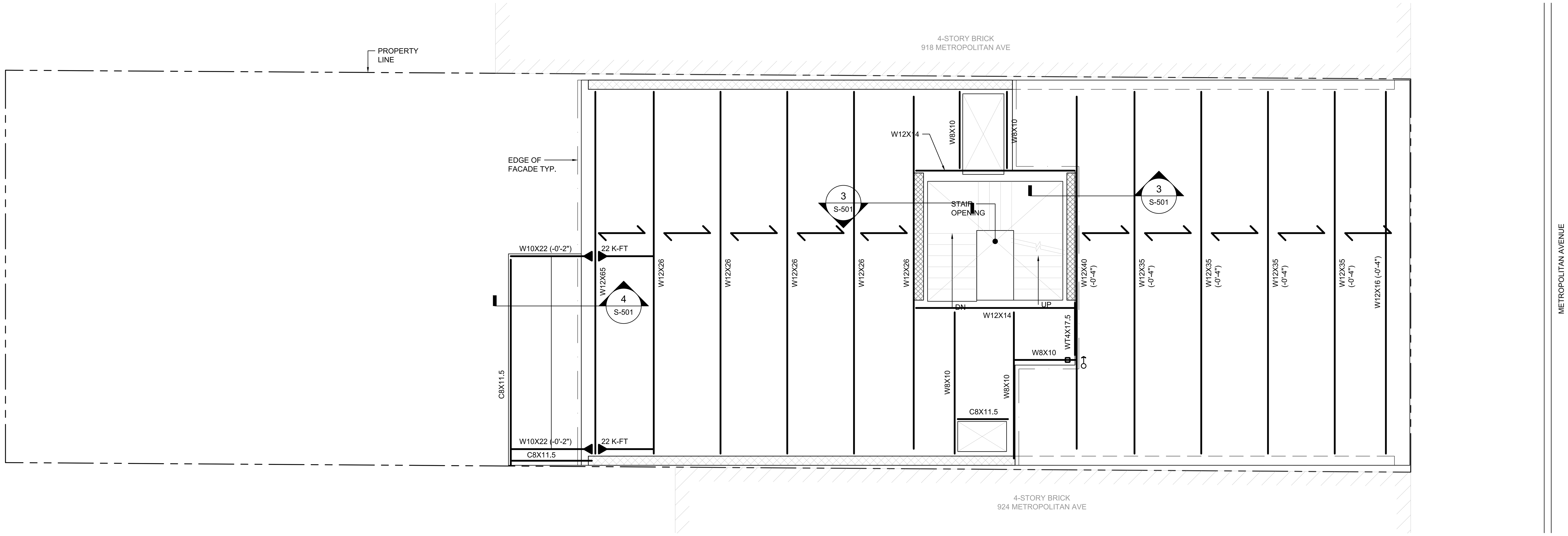
DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO: S-102.00

SHEET NO: 6 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



4TH FLOOR FRAMING PLAN

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

N

NOTES:

1. TOP OF SLAB ELEVATION IS U.O.N.
2. 4 ½" THICKNESS STRUCTURAL SLAB SPAN PERPENDICULAR TO THE STEEL BEAMS. THE SLAB CONSISTS OF 3 ½" CONCRETE AND 1 ½" 22 GA. METAL DECK SLAB SHALL BE REINF. WITH W6x6-W4xW4 FROM TOP OF SLAB.
3. REFER TO S-200 SERIES FOR STEEL DETAILS.

LEGEND:

- DENOTES 8" CMU BEARING WALL
- DENOTES CMU SHEAR WALL
- DENOTES SPAN DIRECTION OF METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION

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3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

4TH FLOOR FRAMING PLAN

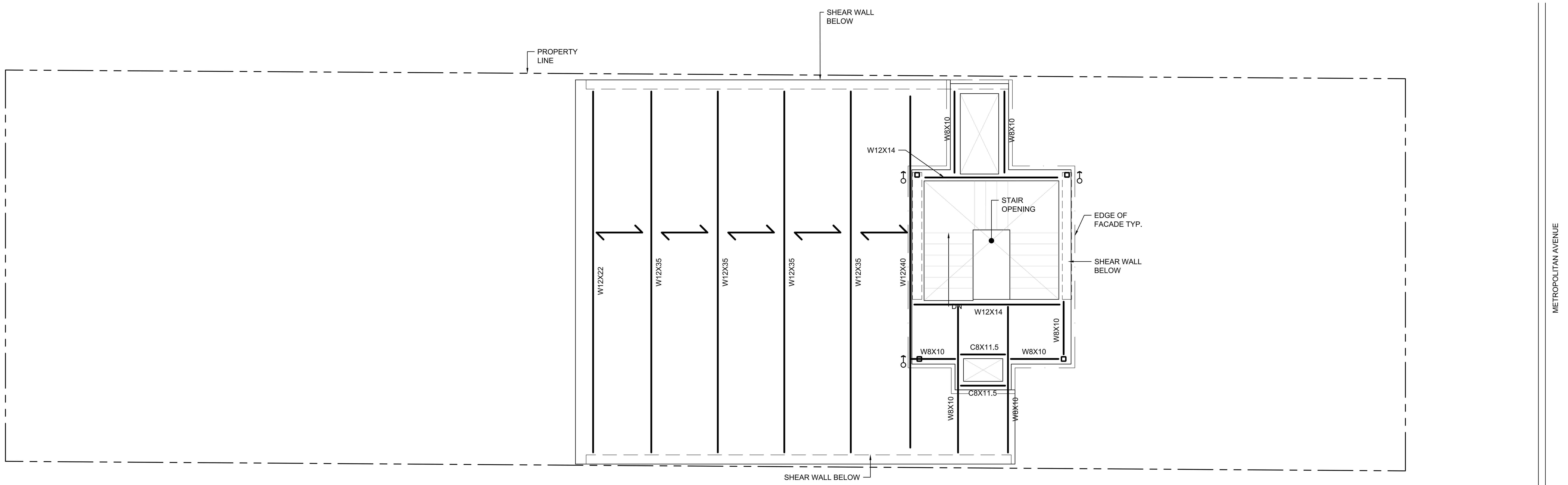
SEAL & SIGNATURE

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-103.00
SHEET NO:	7 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



ROOF FRAMING PLAN

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

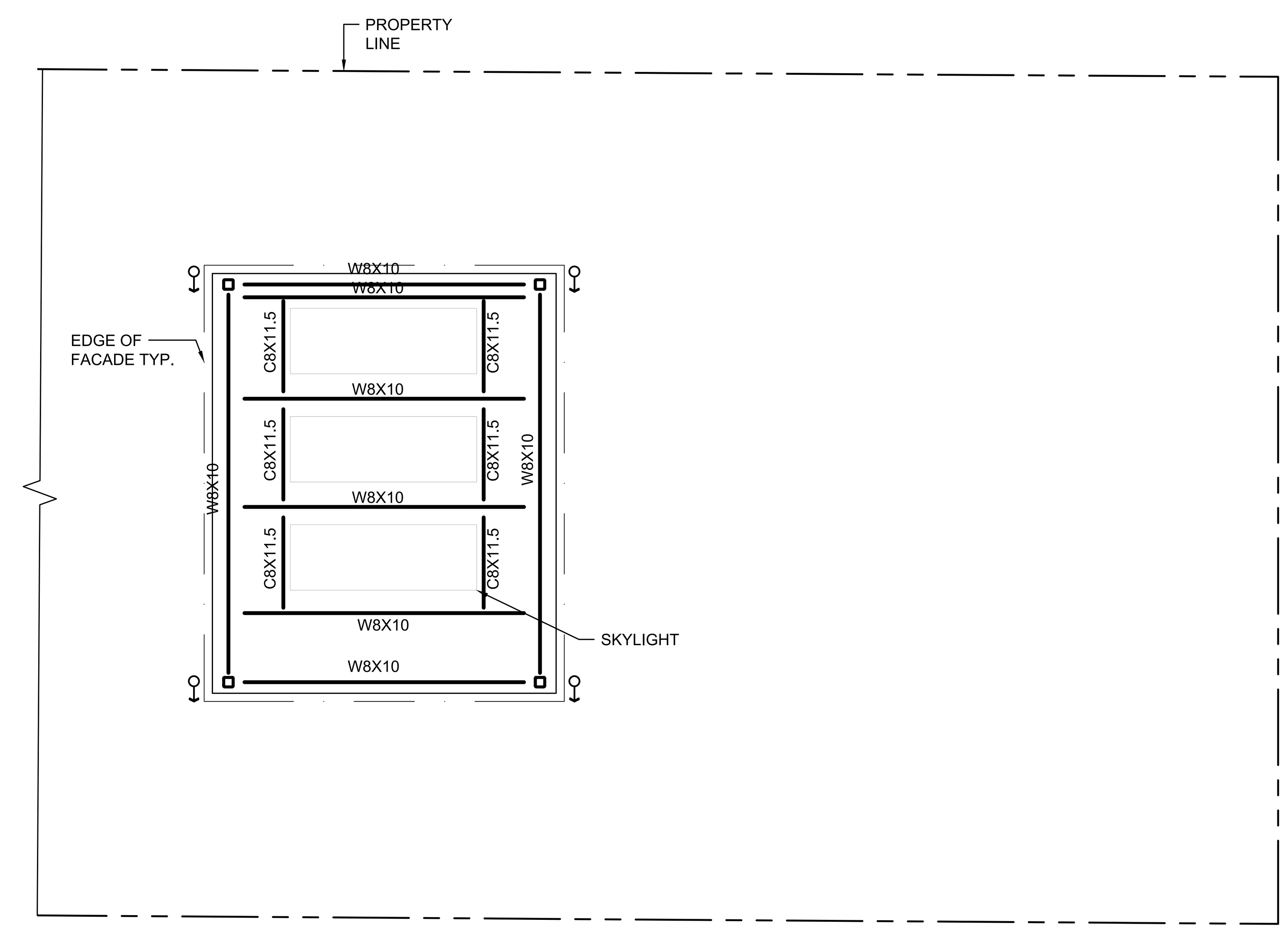
N

NOTES:

1. TOP OF SLAB ELEVATION IS U.O.N.
2. 4 ½" THICKNESS STRUCTURAL SLAB SPAN PERPENDICULAR TO THE STEEL BEAMS. THE SLAB CONSISTS OF 3 ½" CONCRETE AND 1 ½" 22 GA. METAL DECK SLAB SHALL BE REINF. WITH W6x6-W4xW4 FROM TOP OF SLAB.
3. REFER TO S-200 SERIES FOR STEEL DETAILS.

LEGEND:

- DENOTES 8" CMU BEARING WALL
- DENOTES CMU SHEAR WALL
- DENOTES SPAN DIRECTION OF METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION
- DENOTES NEW HSS4X4X3/16 POST
- DENOTES POST UP/DOWN RESPECTIVELY



BULKHEAD FRAMING PLAN

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

N

NOTES:

1. TOP OF SLAB ELEVATION IS U.O.N.
2. 4 ½" THICKNESS STRUCTURAL SLAB SPAN PERPENDICULAR TO THE STEEL BEAMS. THE SLAB CONSISTS OF 3 ½" CONCRETE AND 1 ½" 22 GA. METAL DECK SLAB SHALL BE REINF. WITH W6x6-W4xW4 FROM TOP OF SLAB.
3. REFER TO S-200 SERIES FOR STEEL DETAILS.

LEGEND:

- DENOTES 8" CMU BEARING WALL
- DENOTES CMU SHEAR WALL
- DENOTES SPAN DIRECTION OF METAL DECK
- DENOTES STEEL BEAM
- DENOTES MOMENT CONNECTION
- DENOTES NEW HSS4X4X3/16 POST
- DENOTES POST UP/DOWN RESPECTIVELY

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4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

ROOF AND BULKHEAD FRAMING PLANS

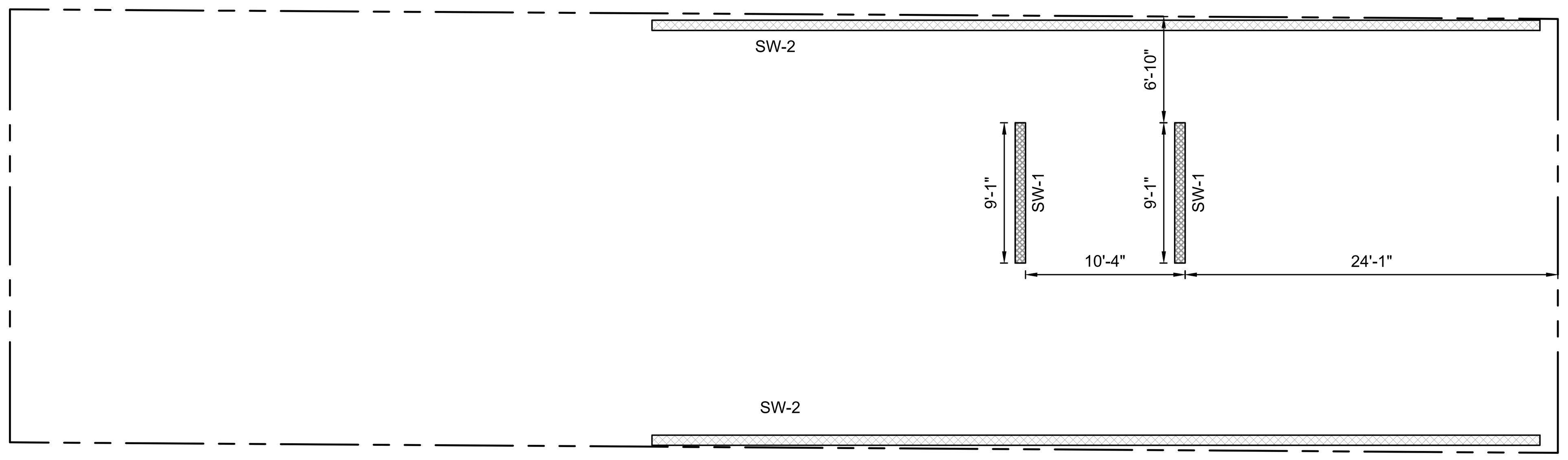
SEAL & SIGNATURE

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-104.00
SHEET NO:	8 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



SHEAR WALL KEY PLAN

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

NOTES:

1. ALL CELLS AT REBAR LOCATIONS TO BE FILLED SOLID WITH GROUT.
2. ALL CELLS DIRECTLY BENEATH BEAM BEARING POINTS TO BE FILLED SOLID WITH GROUT. IF BEAM BEARS ON WALL BETWEEN CELLS, FILL TWO CELLS SOLID.
3. CELLS AT ENDS OF WALLS, AND MIN. TWO CELLS AT ENDS OF RETURN WALLS, TO BE FILLED SOLID WITH GROUT AND REINF. WITH VERT. BARS AS PER WALL SCHEDULE.
4. HORIZONTAL REINFORCEMENT FOR CMU WALLS: PROVIDE HORIZ. 140 TRUSS-TYPE REINF. @ 8" O.C., TYP., U.O.N. ON SCHEDULE ABOVE.
   PROVIDE CONT. BOND BEAM DIRECTLY ABOVE WALL OPENINGS REINF. WITH 2-#5 HORIZ. CONT. BARS.
   PROVIDE CONT. BOND BEAM DIRECTLY BENEATH FLOOR FRAMING, REINF. WITH 2 #5 HORIZ. CONT. BARS.
5. FOR ALL WALLS ADD #3 HORIZONTAL REINFORCEMENT @16" O.C. FOR 1ST FLOOR

SHEAR WALL SHCEDULE		
FLOOR	VERTICAL REINF.	
	SW-1	SW-2
ROOF	#5 @ 8" 8" CMU FULLY GROUTED	#5 @ 24" 8" CMU
4TH	#5 @ 8" 8" CMU FULLY GROUTED	#5 @ 24" 8" CMU
3RD	#5 @ 8" 8" CMU FULLY GROUTED	#5 @ 24" 8" CMU
2ND	#7 @ 8" 8" CMU FULLY GROUTED	#5 @ 24" 8" CMU
1ST	#8 @ 8" 10" CMU FULLY GROUTED	#5 @ 24" 8" CMU
CELLAR	#9 @ 8" 10" CMU FULLY GROUTED	#5 DOWELS TO MATCH VERT. REINF.

SHEAR WALL SCHEDULE

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

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1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

SHEAR WALL SCHEDULE

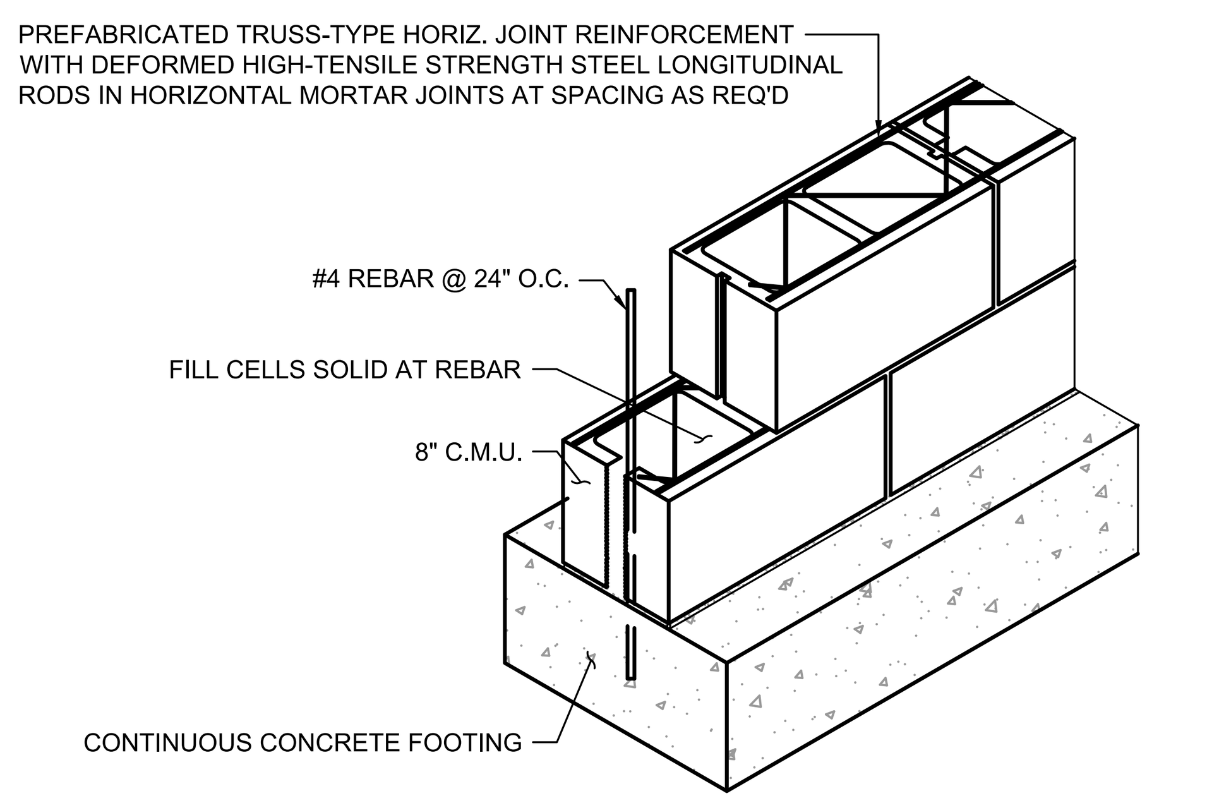
SEAL & SIGNATURE

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-301.00
SHEET NO:	9 OF 13

BSCAN STICKER

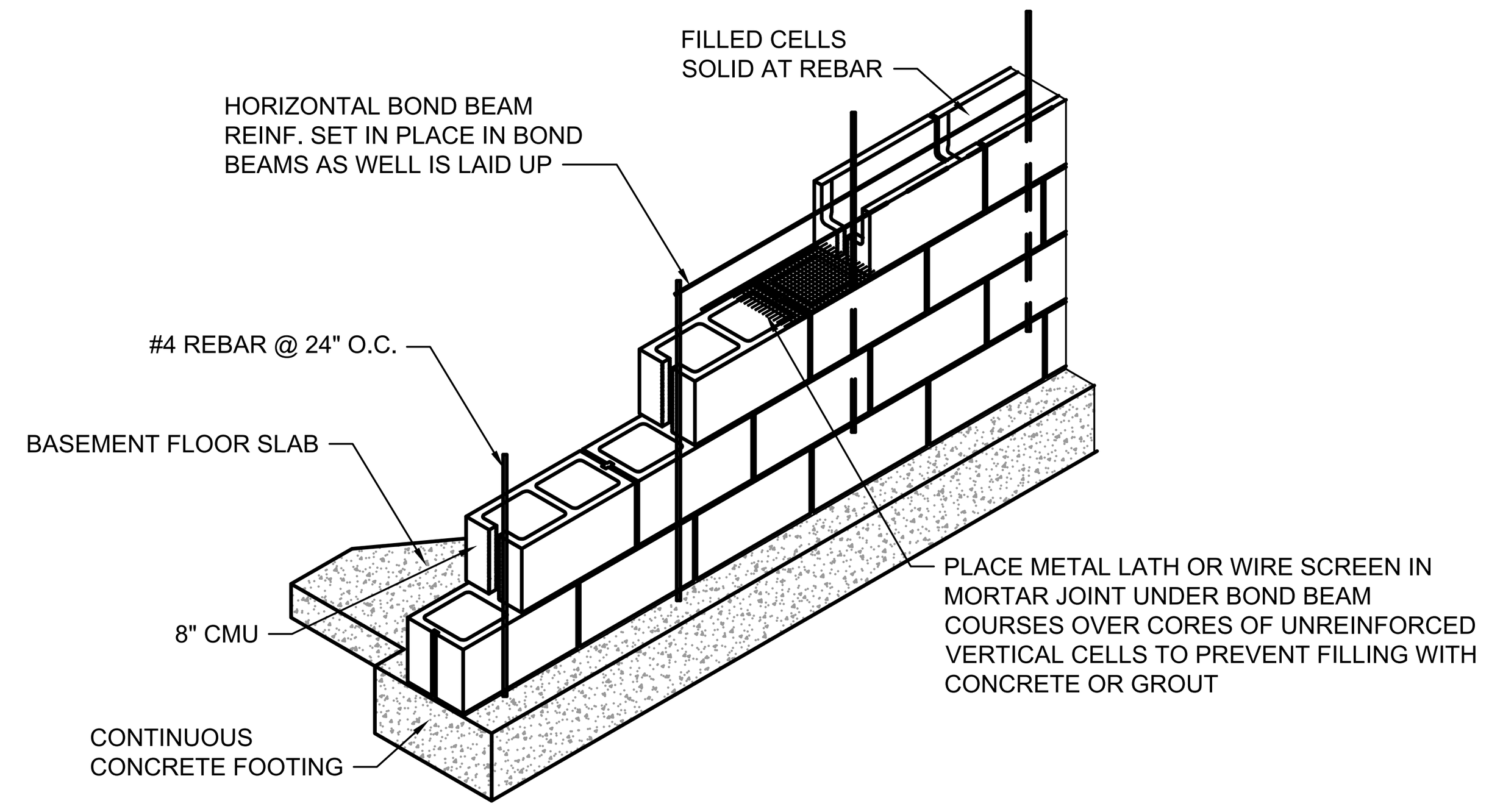
DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



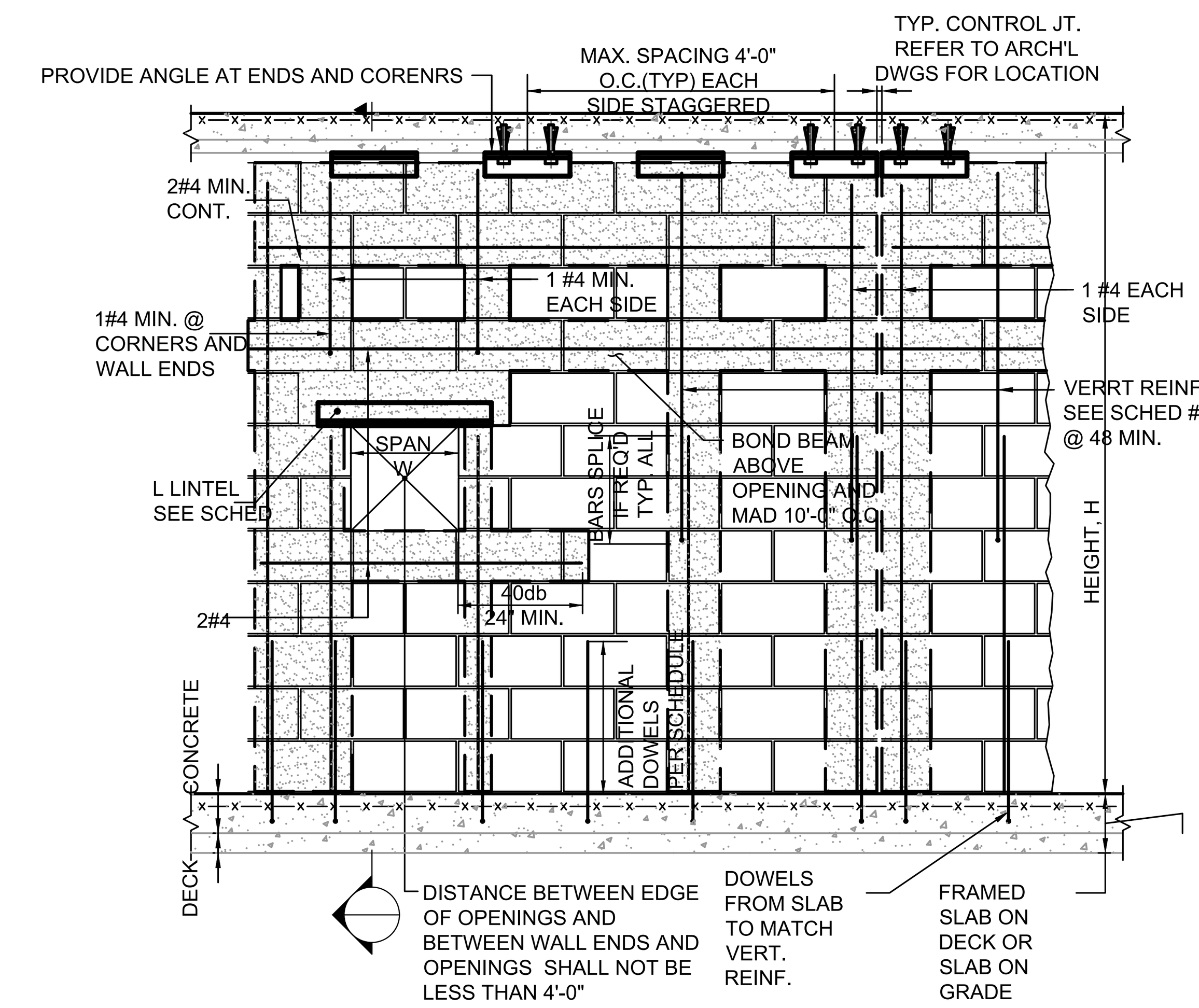
TYPICAL STEEL-REINFORCED MASONRY WALL

SCALE: 1" = 1'-0"



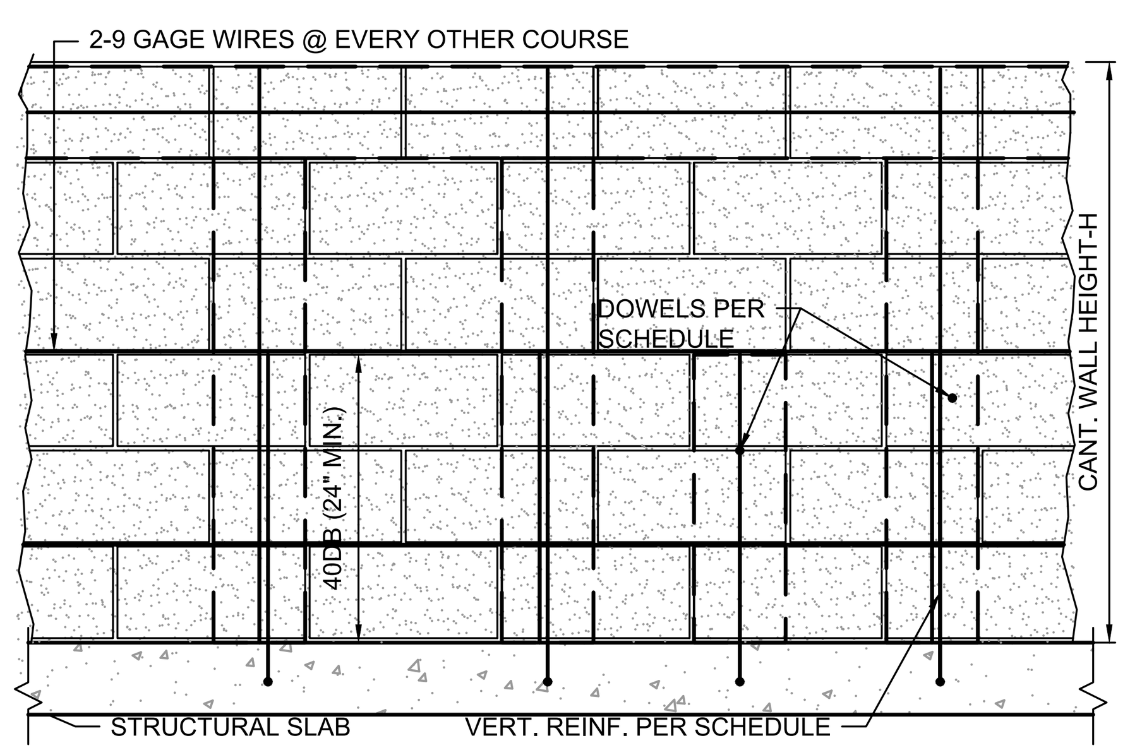
TYPICAL REINFORCED MASONRY WALL

SCALE: 1" = 1'-0"



TYPICAL ELEVATION OF REINFORCED CMU WALL

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



WALL HEIGHT	VERT. BARS	DOWELS	WIND
4' EXTERIOR	#4@64	#4@32	30

TYPICAL PARAPET WALL ELEVATION

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

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5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

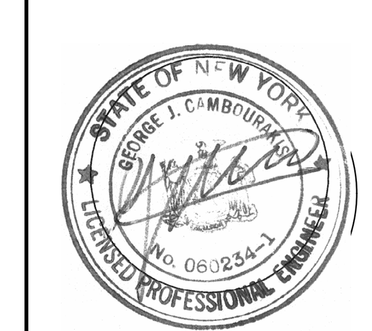
PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

TYPICAL CMU DETAILS

SEAL & SIGNATURE



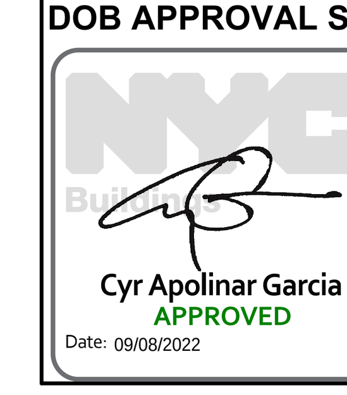
DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO:

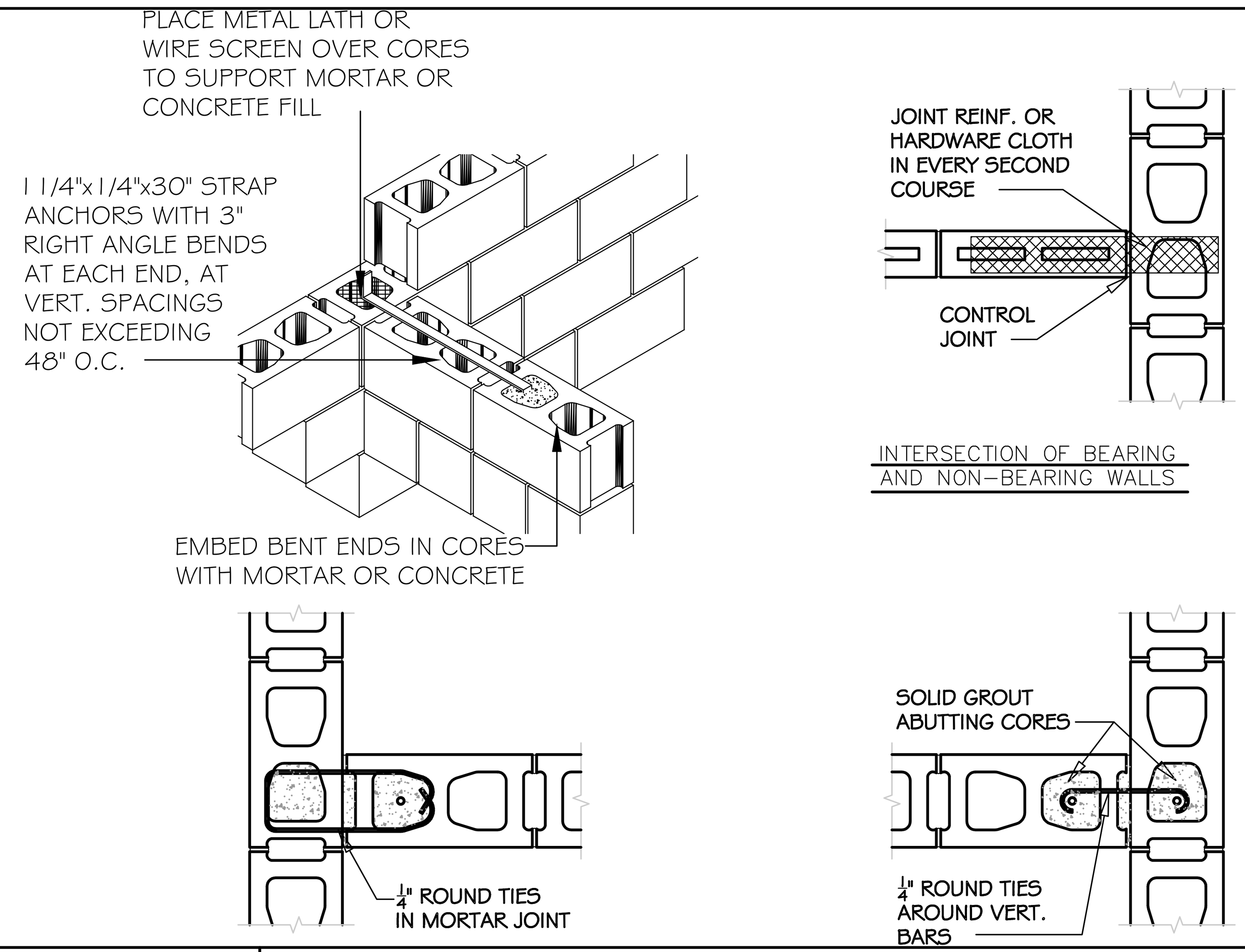
S-302.00

SHEET NO: 10 OF 13

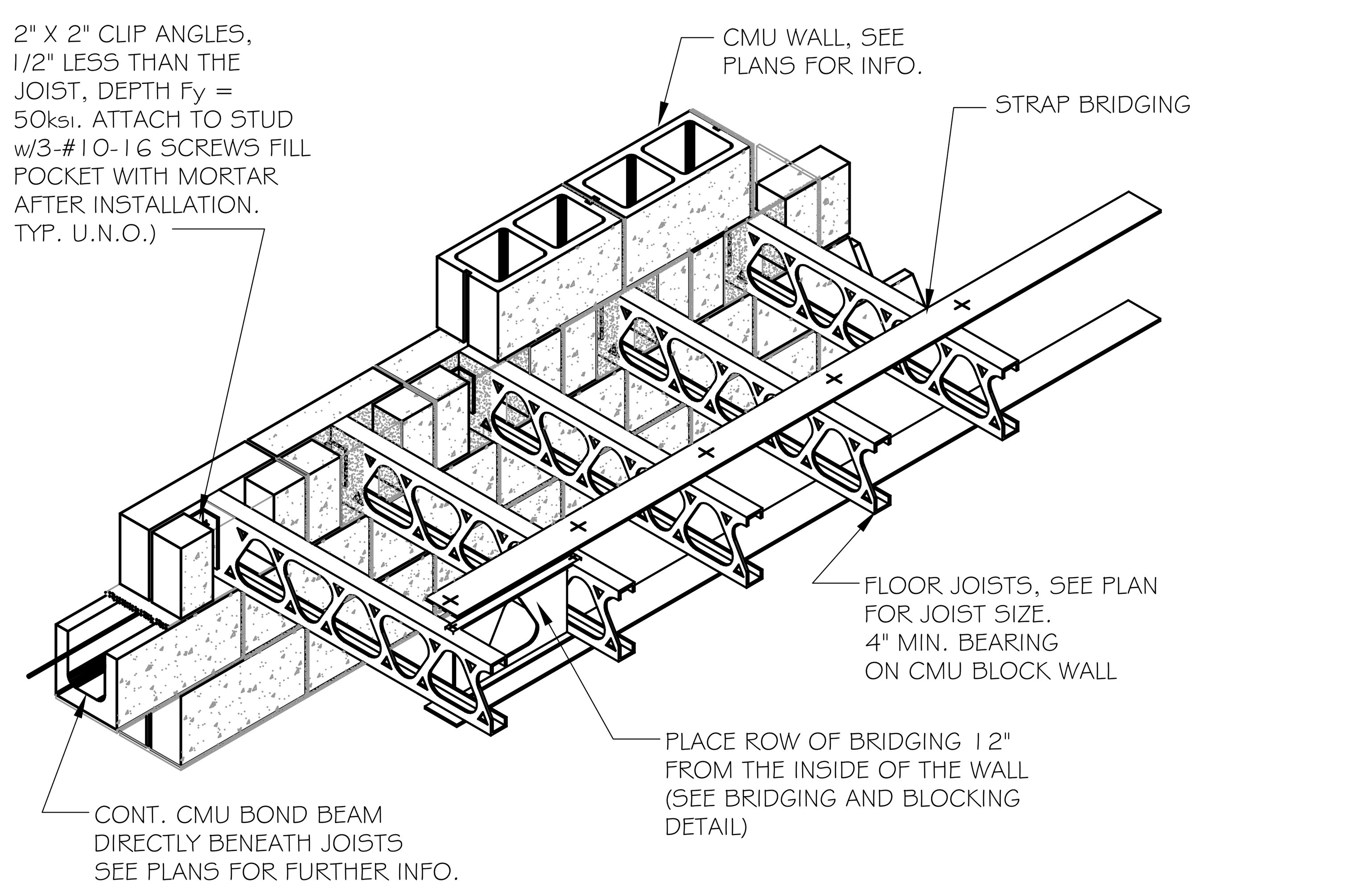
BSCAN STICKER

DOB APPROVAL STAMP

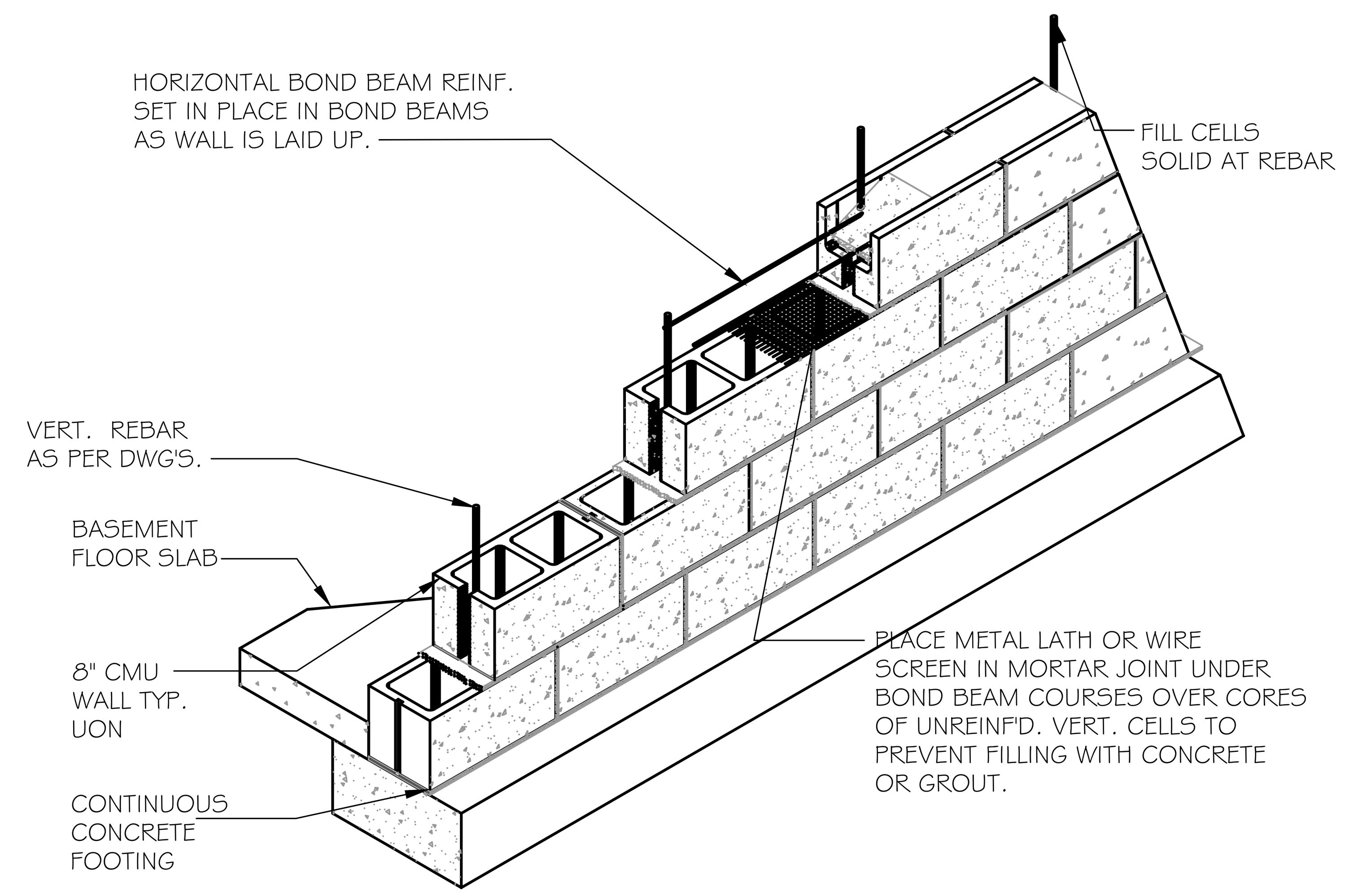




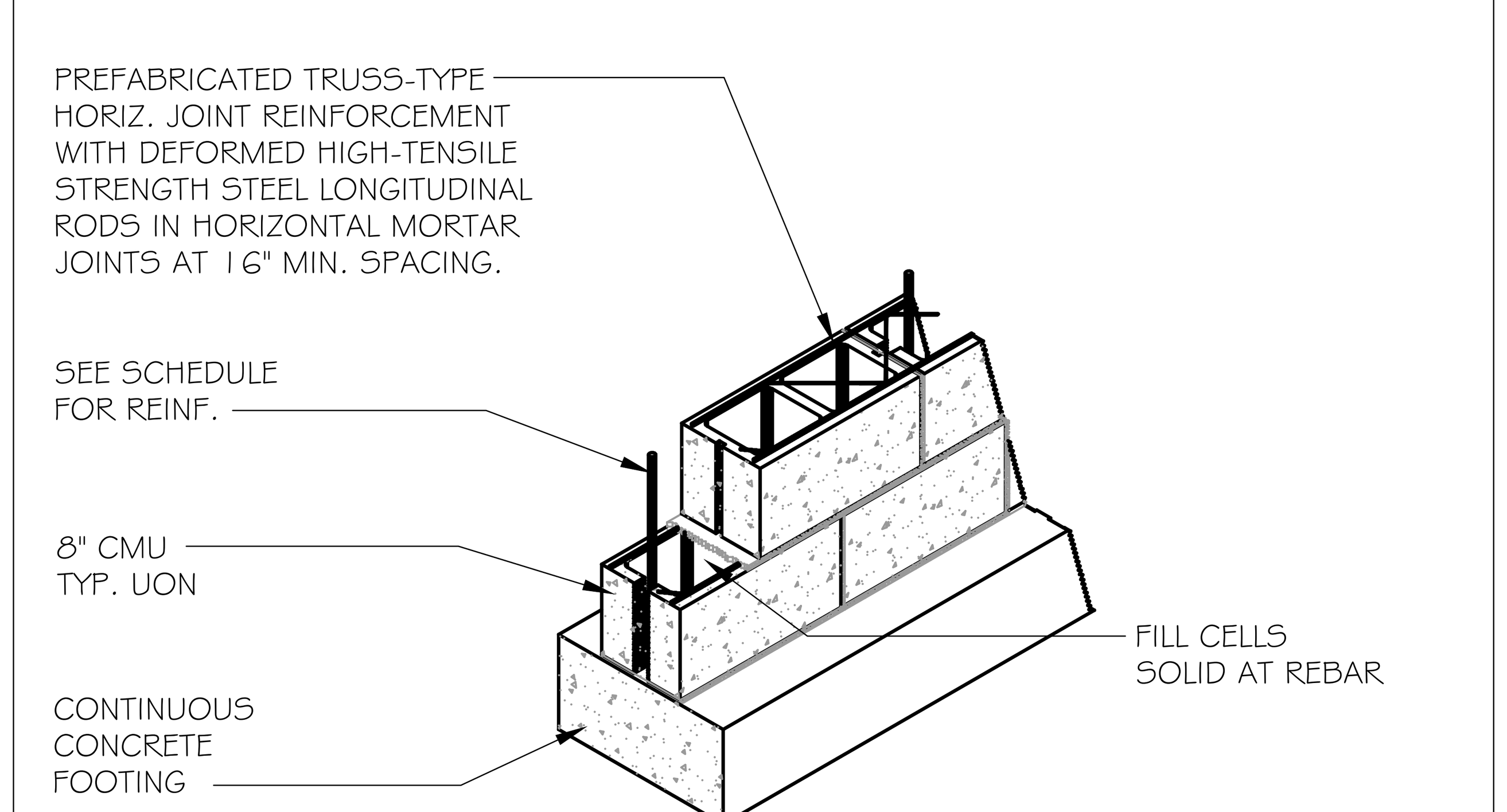
SCALE: 1 = 1'-0" TYPICAL INTERSECTION WALL



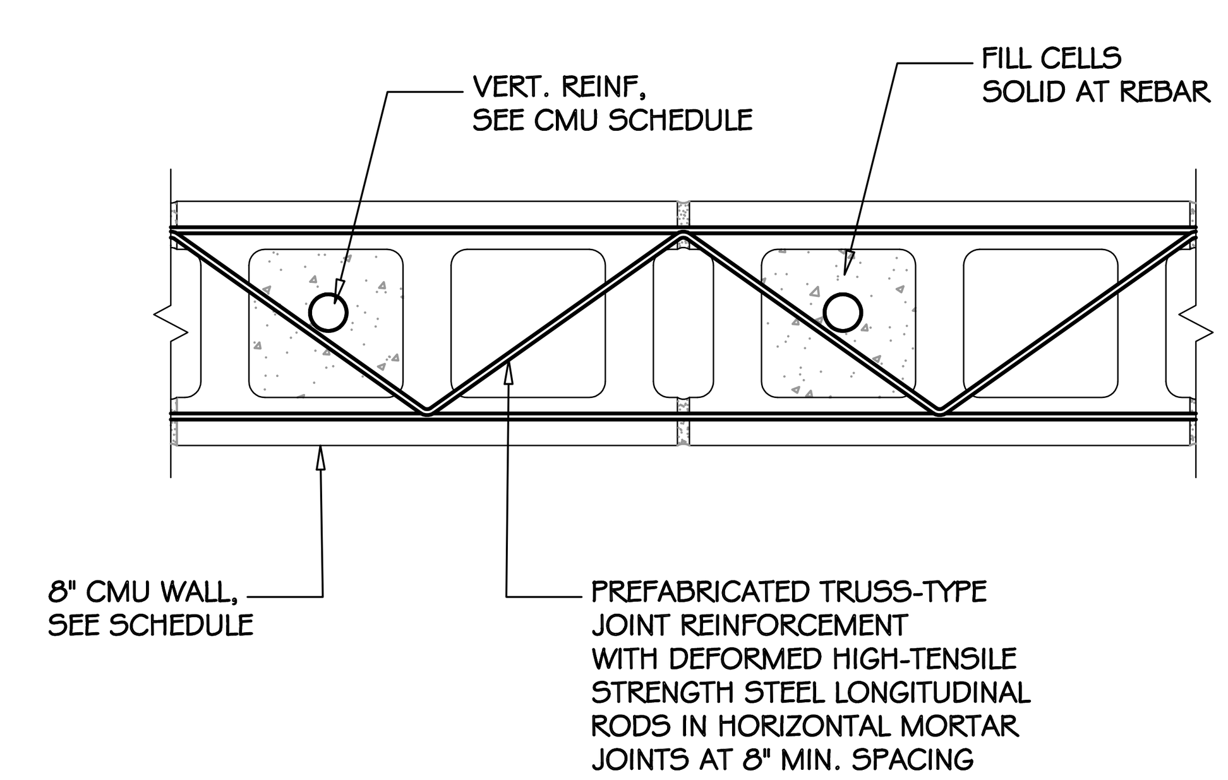
SCALE: 1 = 1'-0" TYPICAL DETAIL JOIST BEARING ON POCKETED CMU WALL



SCALE: 1 = 1'-0" TYPICAL REINFORCED CONCRETE MASONRY WALL



SCALE: 1 = 1'-0" TYPICAL STEEL-TRUST REINFORCED CONCRETE MASONRY WALL



SCALE: 1 = 1'-0" TYPICAL STEEL-TRUST REINFORCED CONCRETE MASONRY WALL

STRUCTURAL ENGINEERING TECHNOLOGIES, P.C.

CONSULTING STRUCTURAL, GEOTECHNICAL, & ENVIRONMENTAL ENGINEERS

40-12 28TH STREET
LONG ISLAND CITY, NY 11101
T:(718)706-7196 Email: info@set-ny.com

OWNER:

DOB NOW BUILD JOB # :
#B00715872-S3

NOTE:

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NO.	DATE:	DESCRIPTION
6	04-06-22	PROGRESS SET
5	03-29-22	PROGRESS SET
4	03-24-22	PROGRESS SET
3	03-18-22	PROGRESS SET
2	02-07-22	PROGRESS SET
1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

TYPICAL MASONRY DETAILS

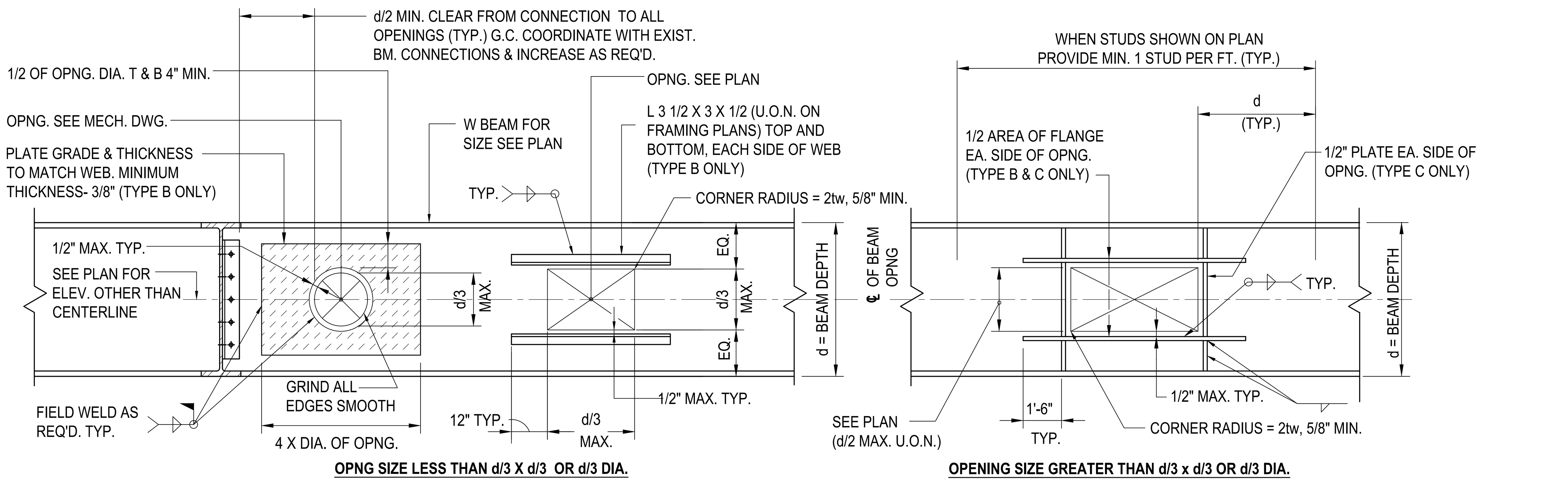
SEAL & SIGNATURE

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-401.00
SHEET NO:	11 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



NOTES:

1. PROVIDE REINFORCING AS NOTED FOR OPENING TYPE. SEE FRAMING PLANS FOR OPENING TYPE. IF NO TYPE IS INDICATED, PROVIDE REINFORCING NOTED FOR TYPE B.
2. TYPE A IS AN UNREINFORCED OPENING.

NOTES:

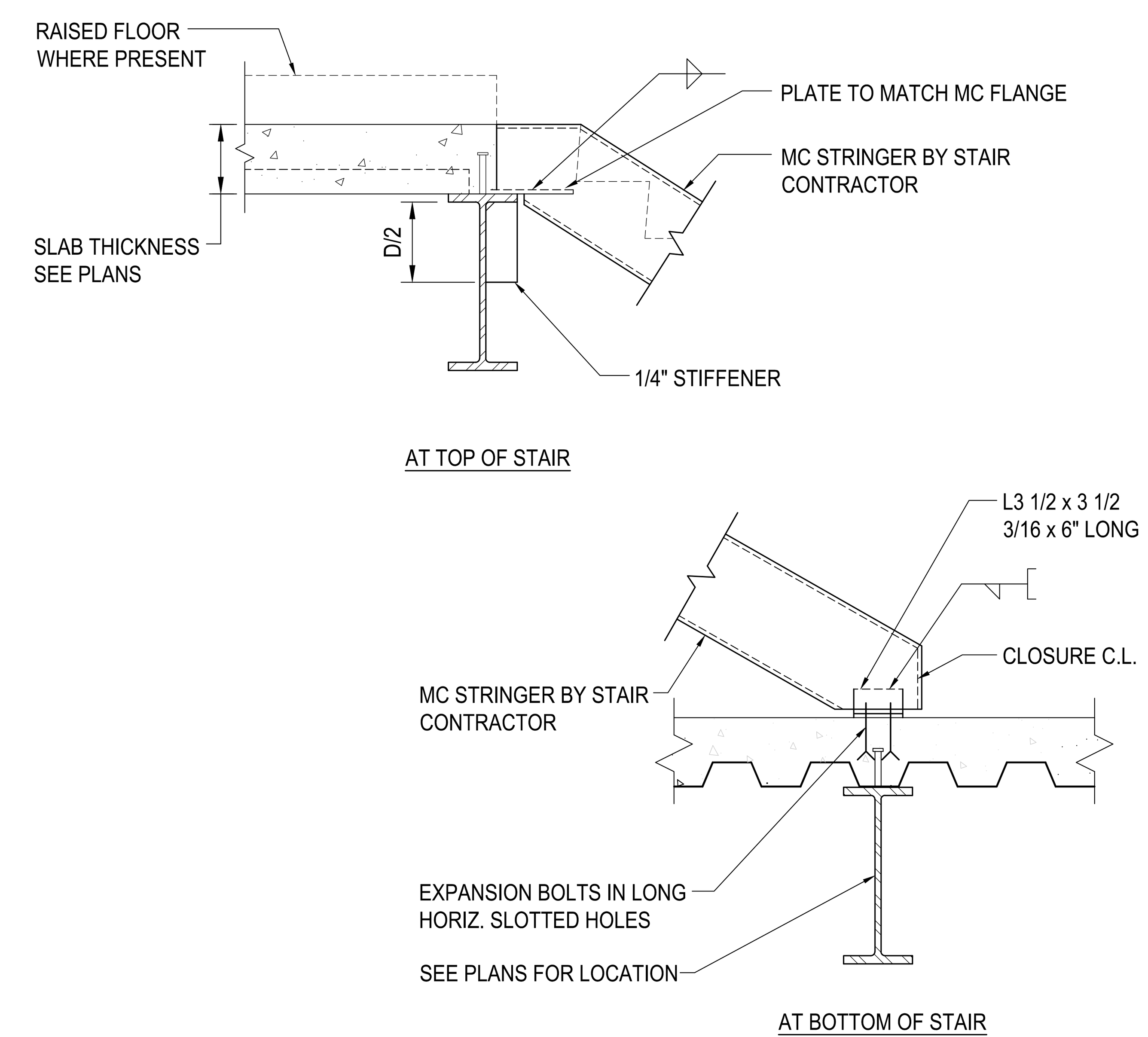
1. PROVIDE REINFORCING AS NOTED FOR OPENING TYPE. SEE FRAMING PLANS FOR OPENING TYPE. IF NO TYPE IS INDICATED, PROVIDE REINFORCING NOTED FOR TYPE C.
2. TYPE A IS AN UNREINFORCED OPENING.
3. PROVIDE PLATES WHERE INDICATED ON BOTH SIDES OF WEBS.
4. PROVIDE SIMILAR REINFORCING AT CIRCULAR OPENINGS.

GENERAL NOTES:

1. FOR SIZE OF OPENINGS SEE PLANS AND MECHANICAL DRAWINGS.
2. WEB REINF. NEED NOT BE PROVIDED FOR OPNGS SIZE SMALLER THAN 3"X3" OR 3" DIA.
3. ALL FILLET WELDS SHALL SATISFY TABLE J2,4 OF AISC ASD SPECIFICATIONS AND SHALL NOT BE LESS THAN 1/4".
4. BEAM PENETRATIONS WITHOUT ELEVATIONS INDICATED ARE TO BE LOCATED AT THE CENTER OF THE WEB OF BEAM. CENTERLINE ELEVATIONS FOR BEAM PENETRATIONS INDICATED ON PLAN ARE FROM TOP FLANGE OF BEAM.

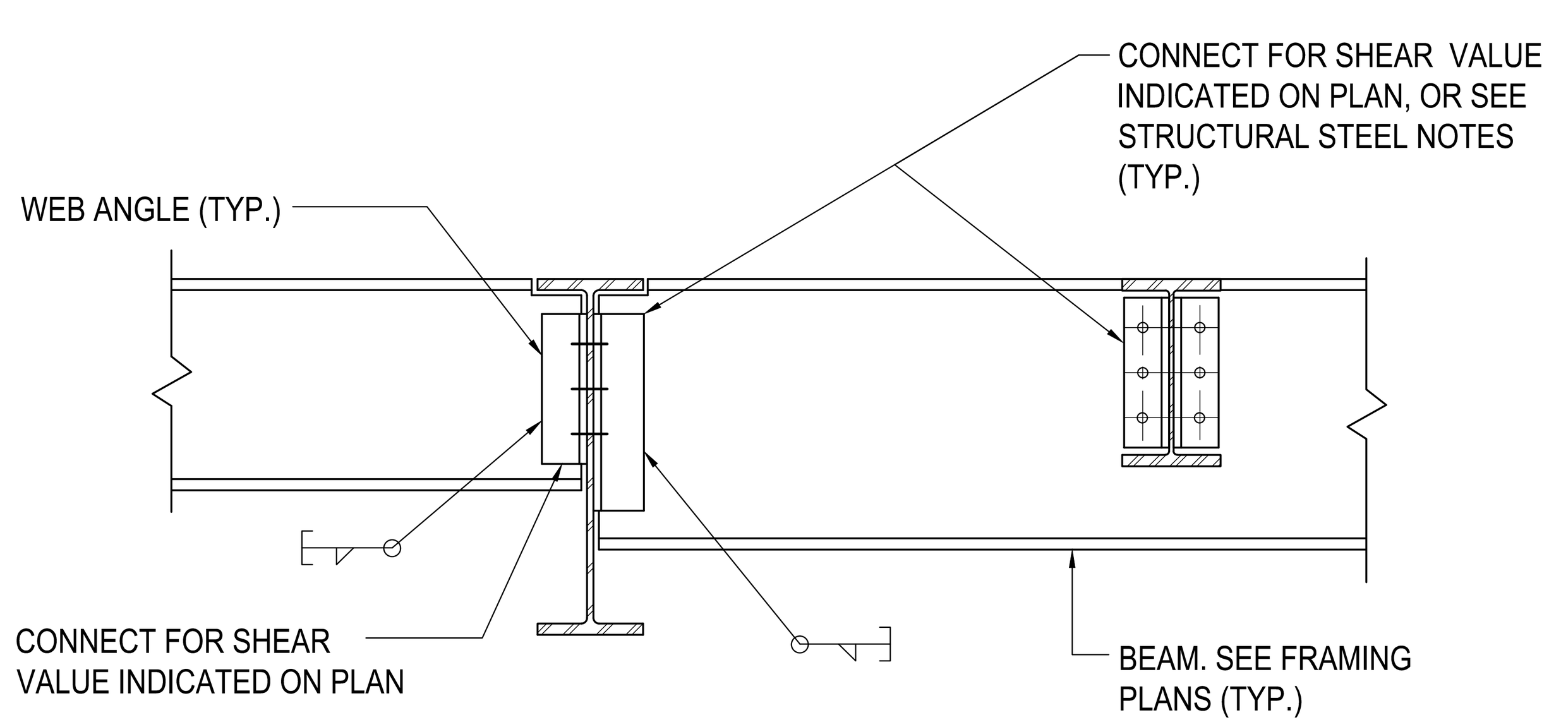
01 TYPICAL TYPICAL REINFORCING DETAIL OF OPENING IN WEB OF STEEL BEAM & GIRDER - TYPES A, B, C

SCALE ¾" = 1'-0"



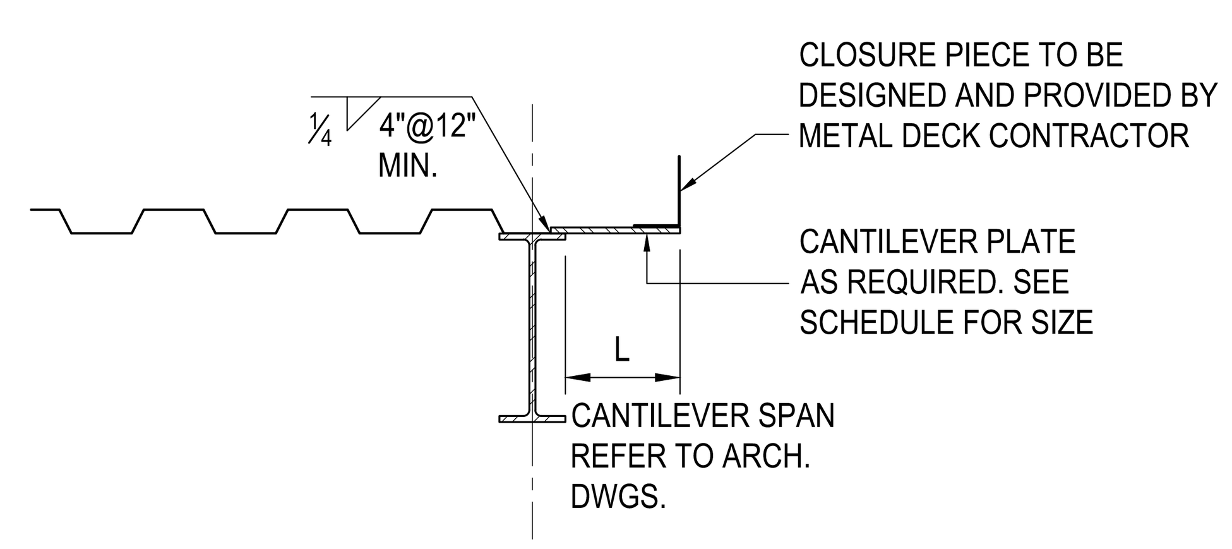
02 TYPICAL DETAIL AT METAL STAIR STRINGER

SCALE ¾" = 1'-0"



03 TYPICAL BEAM TO BEAM SHEAR CONNECTION DETAIL

SCALE ¾" = 1'-0"



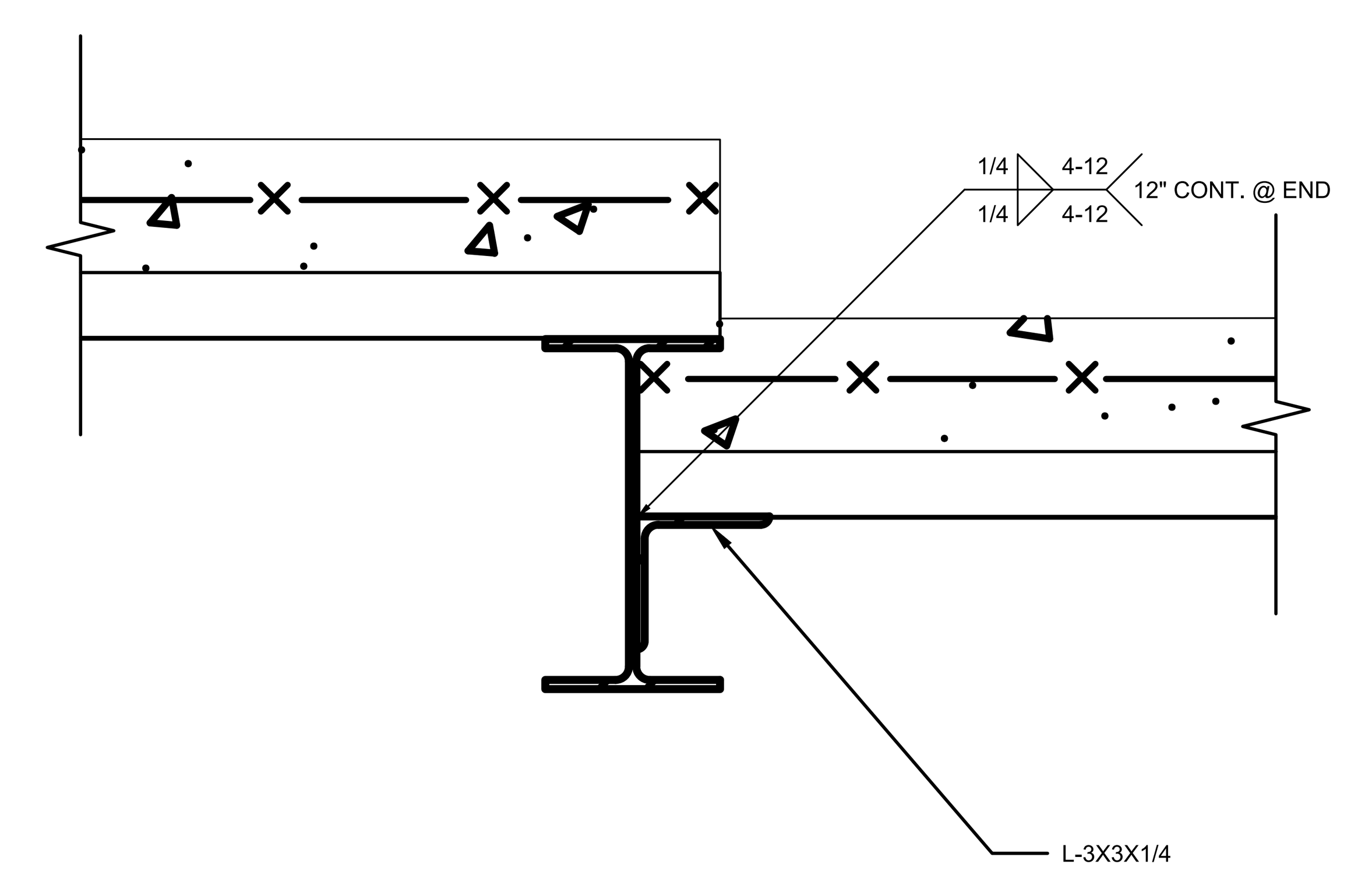
CANTILEVER SPAN L	THICKNESS OF BENT PLATE OR CLOSURE
≤ 2'-0"	3/8"
≤ 1'-4"	1/4"
≤ 1'-0"	10 GAGE
≤ 0'-10"	12 GAGE

NOTES:

1. FOR VALUES OVER TABULATED VALUES, DECK MANUFACTURER TO PROVIDE DETAIL AND SUPPORTING CALCULATIONS FOR ENGINEER'S REVIEW.
2. SEE ADDITIONAL DETAILS AT CURTAINWALL SUPPORT LOCATIONS.

04 TYPICAL DETAIL OF EDGE OF METAL DECK ROOF

SCALE ¾" = 1'-0"



05 TYPICAL DETAIL OF STEP IN SLAB

SCALE 3" = 1'-0"

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1	01-11-22	PROGRESS SET

REVISIONS:

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:

TYPICAL STEEL DETAILS

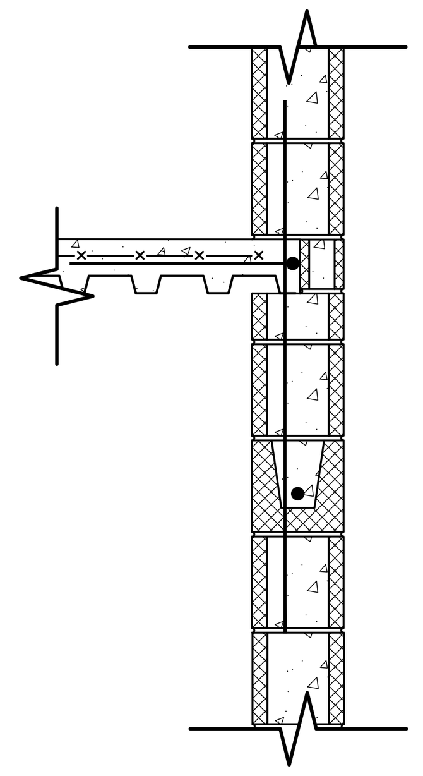
SEAL & SIGNATURE

DATE:	09-14-21
SCALE:	AS NOTED
DRAWING BY:	A.P.
CHECKED BY:	G.J.C.
DWG NO:	S-402.00
SHEET NO:	12 OF 13

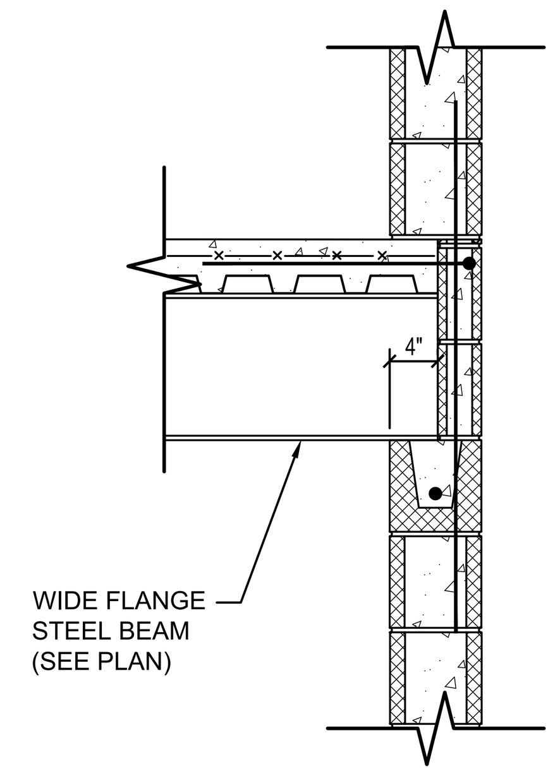
BSCAN STICKER

DOB APPROVAL STAMP

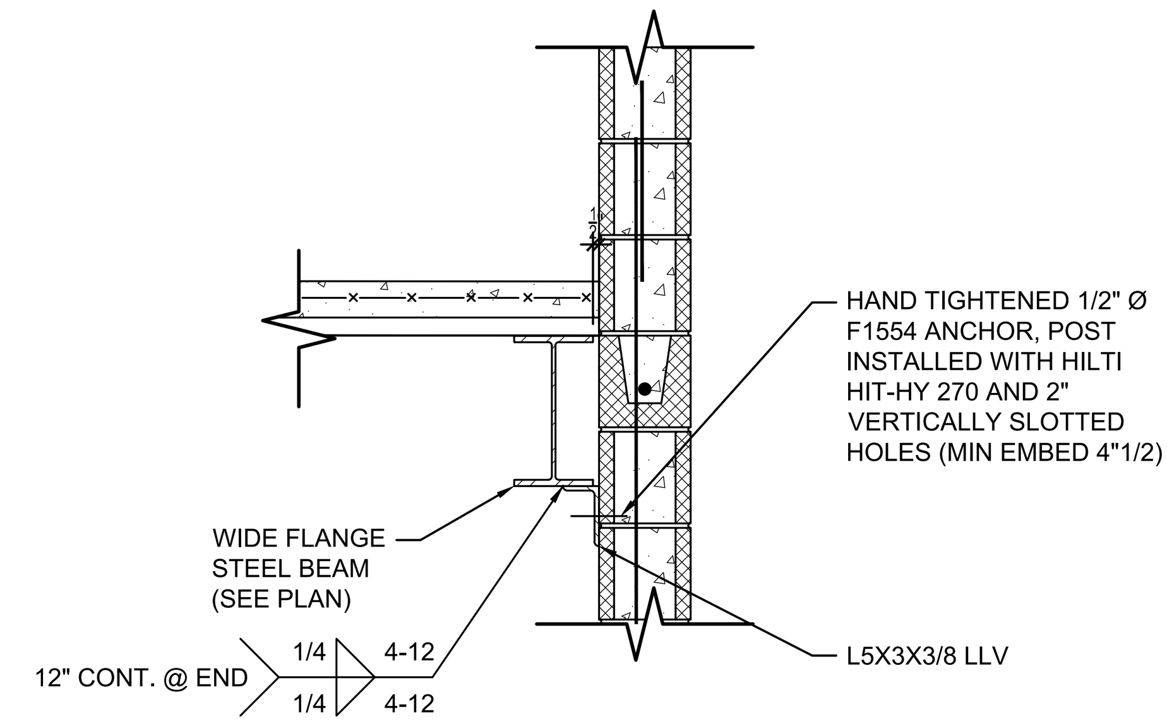
Cyr Apolinar Garcia
APPROVED
Date: 09/08/2022



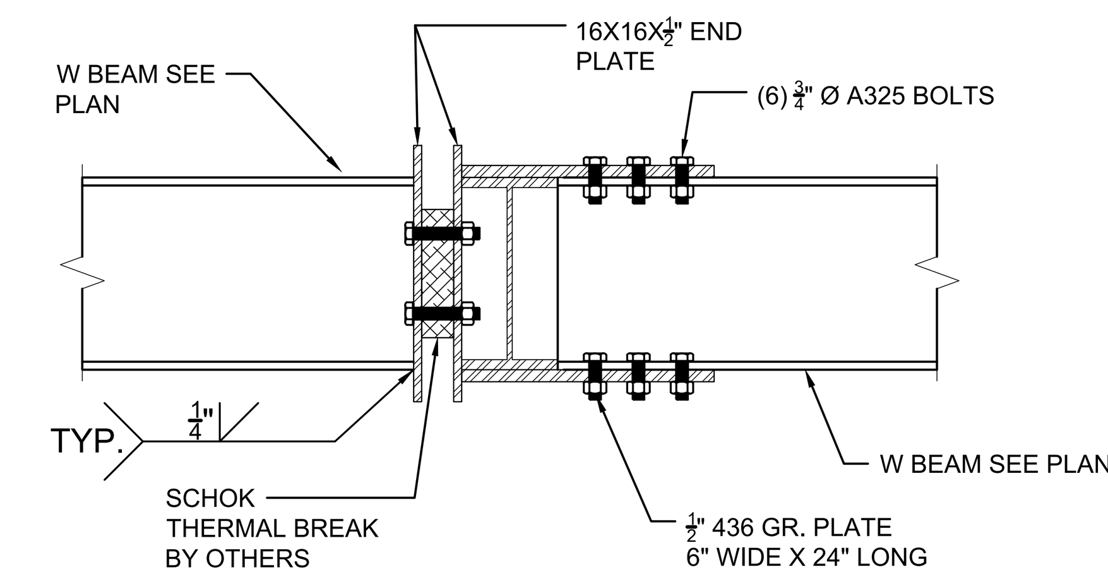
1 SECTION 1
SCALE: 3/4" = 1' - 0"



2 SECTION 2
SCALE: 3/4" = 1' - 0"



3 SECTION 3
SCALE: 3/4" = 1' - 0"



3 SECTION 4
SCALE: 1" = 1' - 0"

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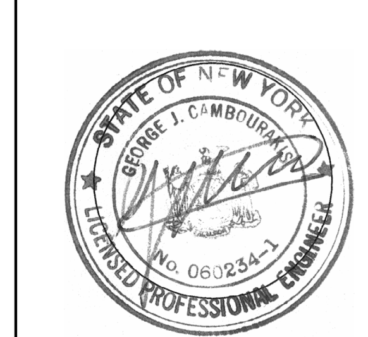
REVISIONS:

PROJECT
920 METROPOLITAN AVENUE, BROOKLYN, NY-11211

DRAWING TITLE:
SECTIONS

SEAL & SIGNATURE

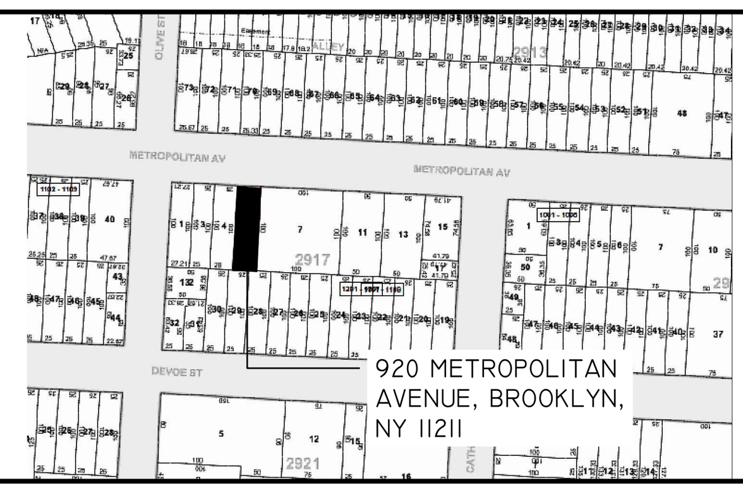


DATE: 09-14-21
SCALE: AS NOTED
DRAWING BY: A.P.
CHECKED BY: G.J.C.
DWG NO:
S-501.00
SHEET NO: 13 OF 13

BSCAN STICKER

DOB APPROVAL STAMP

SITE PLAN



SITE PLAN INFORMATION AND LEGEND

BUILDING INFORMATION
BLOCK: 2917
LOT: 6
ZONING DISTRICT: R6B & C2-4
ZONING MAP: 13B
LOT AREA: 2,800 SF

NOTES:
1. ABBREVIATIONS:
E - EXISTING
P - PROPOSED
EL - ELEVATION
TC - TOP OF CURB
BC - BOTTOM OF CURB
LG - LEGAL GRADE

BASE PLAN CALCULATION

(28.00' + 100.00') / 2 = **64.00'**

EXTENT OF PAVEMENT IMPROVEMENT OR RESTORATION CALCULATION:

METROPOLITAN AVENUE

[66.00' - (13.00'+13.00')] / 2

[66.00' - (26.00')] / 2

40.00' / 2 = 20.00' + 5.00' = 25.00'

BUILDER'S PAVEMENT PLAN NOTES

D.O.T. REFERENCE STANDARDS:		APPLIES (Y/N)
CONCRETE DROP CURB:	H-1015 R79	N
STEEL FACE CURB:	H-1010 R79	Y
ROADWAY:	H-1042	Y
CONCRETE CURB:	H-1044	Y
4" CONC. SIDEWALK:	H-1045 TYPE I	Y
7" SIDEWALK (DRIVEWAY):	H-1045 TYPE II	N
NEW TREE PIT:	H-1046	N
HISTORICAL CURB:	H-1056	N
PEDESTRIAN RAMP:	H-1011	N

HISTORIC CURB NOTE:
1. GRANITE CURB (SAMPLES OF WHICH BE FURNISHED TO THE CITY BY THE CONTRACTOR PRIOR TO INSTALLING GRANITE) IS TO BE MEDIUM GRAY IN COLOR AS APPROVED BY THE ENGINEER.

CONCRETE SIDEWALK NOTE:
1. CONCRETE SHOULD BE CONSTRUCTED OF 5'-0" x 5'-0" FLAGS. FLAG LINES SHOULD BE STRAIGHT. RUFF SURFACED, CRACKED, DEPRESSED, AND OTHER TYPES OF DEFECTED FLAGS, MUST BE CORRECTED TO CONFORM TO D.O.T. STANDARDS.

TRANSVERSE EXPANSION JOINTS NOTE:
1. TRANSVERSE EXPANSION JOINTS SHALL BE ONE-QUARTER INCH (1/4") IN WIDTH AND SHALL BE FILLED WITH PREFORMED JOINT FILLER TO WITHIN ONE INCH (1") OF THE SIDEWALK SURFACE. THE TOP ONE INCH (1") SHALL BE SEALED WITH POURED JOINT FILLER. (TYP.)
2. ROADWAY PAVING SURFACE TEXTURE TO BE SMOOTH, FREE OF SCARS, RUTS, CRACKS, DEPRESSIONS, RIDGES, HUMPS, AND SIMILAR DEFECTS. CONCRETE BASE TO BE FREE OF FRACTURES, EROSION, CRUMBLING, DIFFERENTIAL SETTLEMENTS, AND OTHER STRUCTURAL DEFECTS.
3. NEW 4" THICK CONCRETE SIDEWALK PER D.O.T. H. 1045 STD. (TYP.) AND CONCRETE MUST BE 3,200 PSI OR HIGHER PER N.Y.C. D.O.T. STANDARD SPEC. SECTION 3.05 TABLE 1 AND TABLE IV, SECTION 4.13.3 MATERIALS B (TYP.)
4. RE-PAVE ROADWAY FROM CURB LINE TO MIDDLE +5' OF ROADWAY OR AS DIRECTED BY B.P.P.

STREET TREE REQUIREMENTS

TOTAL No. OF TREES REQUIRED ON METROPOLITAN AVENUE:	1
EXISTING TREES TO PROTECT:	3
PROPOSED TREES TO REMOVE / RELOCATE:	0
PROPOSED TREES TO PLANT ON-SITE:	0
TREES TO PLANT OFF-SITE:	0
TREES TO PAY INTO THE TREE FUND:	1

NOTES:
1. EXACT LOCATIONS TO BE DETERMINED BY DEPARTMENT OF PARKS AND RECREATION.
2. ALL PIT SIZES INDICATED ARE TO BE FULLY EXCAVATED TO THE DIMENSIONS LABELED AND REPLACED WITH NEW TOPSOIL TO NYC PARKS STANDARDS.
3. ** WILL CONTACT NYC PARKS IF ANY UNDERGROUND INFRASTRUCTURE (GAS/WATER/ ELECTRIC ETC.) AFFECTS ANY PROPOSED/EXISTING TREES ON SITE. WE ARE AWARE ANY WORK DONE ON OR NEAR A CITY TREE REQUIRES A PERMIT FROM NYC PARKS. THIS INCLUDES UTILITIES, SIDEWALKS, PRUNING OR ANY OTHER WORK THAT MAY IMPACT ANY TREE WITHIN THE DRIPLINE; DONE BY THE GENERAL CONTRACTOR OR ANY SUBCONTRACTORS. WILL FOLLOW NYC PARKS PLANTING SPECIFICATIONS AND FORWARD AMENDED PLAN **

SLOPE COMPUTATIONS

METROPOLITAN AVENUE CROSS SLOPE COMPUTATIONS

	EL	TC	DISTANCE	SLOPE	COMPLIANCE 1.67%-5.00%
A	P 25.42'	E 24.81'	28.00'	2.18%	OK
B	E 25.02'	E 24.55'	28.00'	1.68%	OK

METROPOLITAN AVENUE GUTTER SLOPE COMPUTATIONS

	BC	BC	DISTANCE	SLOPE	COMPLIANCE 0.5% MIN
A B	E 24.63'	E 24.35'	28.00'	1.00%	OK

LIST OF ESTIMATED QUANTITIES

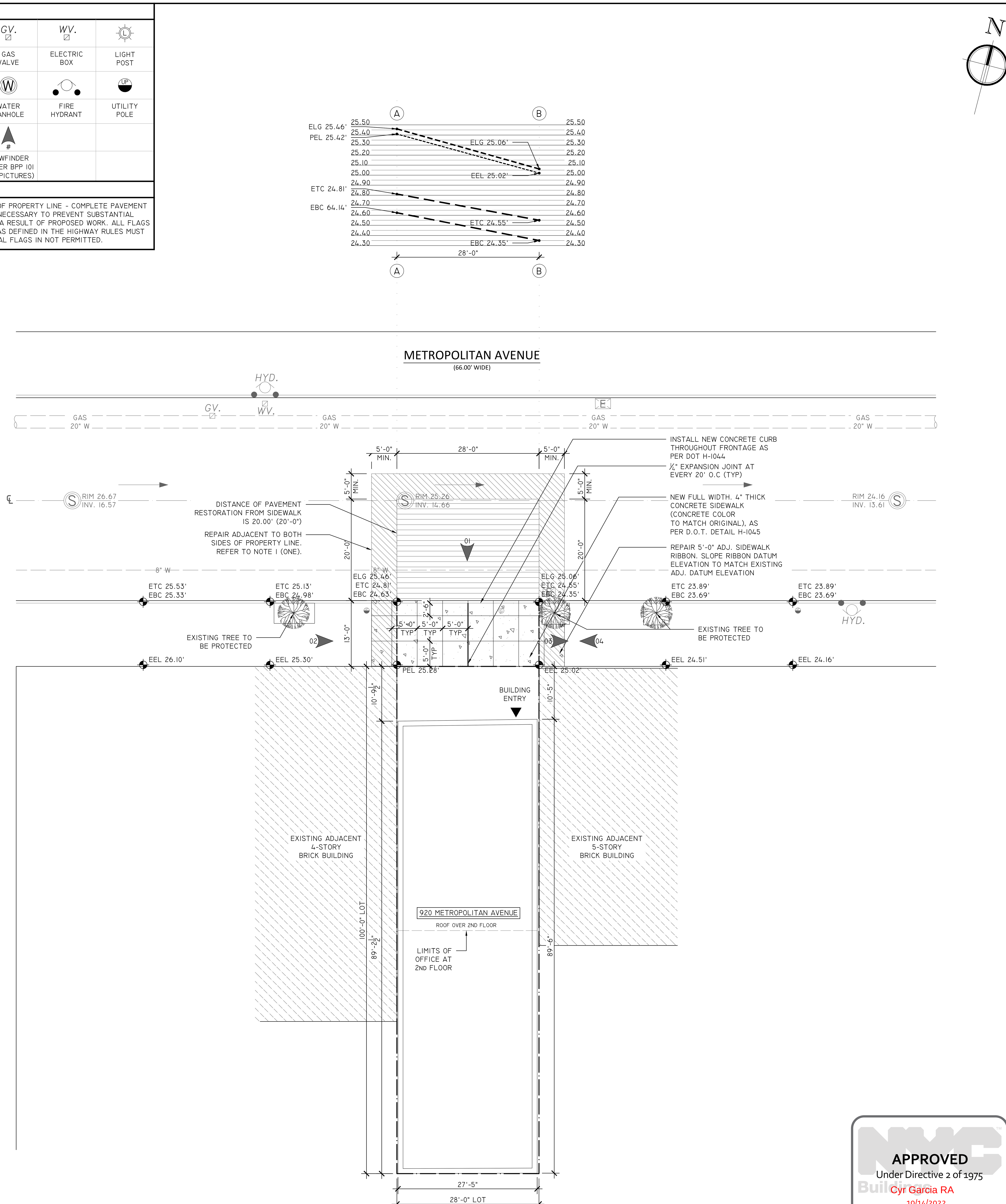
NEW CURB	28.00	LIN. FT.
NEW SIDEWALK	461.11	SQ. FT.
NEW ROADWALK	111.14	SQ. YDS.
NEW TREES	REFER TO TREE REQ.	EACH
NEW CB'S	0	EACH
NEW DIP	0	LIN. FT.
NEW MANHOLES	0	EACH

SITE PLAN LEGEND

BUILDING ENTRANCE	ELECTRIC VALVE	GAS VALVE	ELECTRIC BOX	LIGHT POST
SEWER MANHOLE	ELECTRIC MANHOLE	WATER MANHOLE	FIRE HYDRANT	UTILITY POLE
TREE	NORTH ARROW	VIEWFINDER (REFER BPP 101 AND PICTURES)		

NOTE

1. REPAIR ADJACENT TO BOTH SIDES OF PROPERTY LINE - COMPLETE PAVEMENT AND CURB - TO THE MINIMUM WIDTH NECESSARY TO PREVENT SUBSTANTIAL DEFECTS AND TRIPPING HAZARDS AS A RESULT OF PROPOSED WORK. ALL FLAGS CONTAINING SUBSTANTIAL DEFECTS AS DEFINED IN THE HIGHWAY RULES MUST BE REPLACED; PATCHING OF INDIVIDUAL FLAGS IN NOT PERMITTED.



APPROVED
Under Directive 2 of 1975
Cyr Garcia RA
10/14/2022

BOROUGH:	BROOKLYN	BIN #:	3070360
DOB APP#:	B00715872-I1	JOB #:	340862971

NEW YORK CITY DEPARTMENT OF TRANSPORTATION BUILDERS PAVEMENT PLAN

PROJECT DATA

PROJECT STREET ADDRESS: 920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

BLOCK: 2917 ZONING MAP #: 13B
LOT(S): 6 ZONING DISTRICT: R6B, C2-4

OWNER'S NAME: OWNER'S CONTACT:
OWNER'S ADDRESS:

GENERAL REQUIREMENTS:

1. ALL DESIGNS, MATERIALS, CONSTRUCTION METHODS AND WORKMANSHIP SHALL COMPLY WITH THE FOLLOWING PUBLICATIONS OF THE BUREAU OF HIGHWAYS: STANDARD SPECIFICATIONS, STANDARD DETAILS OF CONSTRUCTION, RULES OF THE BUREAU OF HIGHWAY OPERATIONS, GUIDELINES FOR THE DESIGN OF INFRASTRUCTURE COMPONENTS.
2. ALL NON STANDARD MATERIALS AND CONSTRUCTION PROCEDURES SHALL BE SPECIFICALLY APPROVED IN WRITING BY THE DEPARTMENT OF TRANSPORTATION.
3. ANY WORK NOT COMPLYING WITH THE REQUIREMENTS OF THE DOT SHALL BE REMOVED AND REPLACED.
4. THIS PLAN SHALL BE VALID FOR THE ISSUANCE OF CONSTRUCTION PERMITS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF APPROVAL OR SELF CERTIFICATION, AS APPLICABLE.
5. ALL SIDEWALKS AND STREET AREAS CONSTRUCTED UNDER THIS PLAN SHALL REMAIN OPEN TO THE PUBLIC AT ALL TIMES.

ISSUANCE OF THE PERMITS:

6. NO SIDEWALK, CURB OR ROADWAY WORK SHALL BE DONE WITHOUT A PERMIT FROM THE BOROUGH HIGHWAY SUPERINTENDENT. APPLICATION SHALL BE MADE THREE (3) DAYS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL REQUIRED INSURANCE COVERAGE ON FILE.
7. NO WORK ON DRAINAGE STRUCTURES SHALL BE DONE WITHOUT A PERMIT FROM THE BOROUGH OFFICE OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
8. ANY VAULT WORK AT THE SITE SHALL BE DONE AS PER THE APPLICABLE RULES OF THE DOT AND THE DEPARTMENT OF BUILDINGS.

CONSTRUCTION ACTIVITY:

9. A CONSTRUCTION PLAN SHOWING MAINTENANCE AND PROTECTION OF TRAFFIC, INCLUDING PLACEMENT OF SIDEWALK BRIDGES, BARRIERS AND SIGNAGE SHALL BE SUBMITTED TO THE BOROUGH HIGHWAY OFFICE BEFORE CONSTRUCTION BEGINS.
10. NO SIDEWALK SHALL BE CLOSED WITHOUT A PERMIT. PEDESTRIAN AND TRAFFIC SAFETY SHALL BE PROTECTED AT ALL TIMES. ROADWAY CLOSINGS SHALL BE AS DIRECTED.
11. THE SITE SHALL BE MAINTAINED IN A CLEAN AND SAFE CONDITION. FINAL SIGN-OFF
12. PERMITS SHALL BE PRESENTED FROM ALL PUBLIC AGENCIES AND UTILITIES HAVING OWNERSHIP OF STRUCTURES RELOCATED OR REMOVED DURING CONSTRUCTION.
13. ALL PAVEMENT MARKINGS INCLUDING THERMOPLASTIC LANE DIVIDERS, REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN KIND TO THE BUREAU OF TRAFFIC STANDARDS.
14. ALL EXISTING CATCH BASINS ON SITE SHALL BE CLEANED AND MADE OPERABLE.
15. ALL DAMAGE CAUSED BY CONSTRUCTION ON THIS PROJECT OUTSIDE THE PROJECT LIMITS SHALL BE REPAIRED AS DIRECTED.
16. THE ROADWAY SHALL BE PAVED TO THE REQUIREMENTS OF THE DOT AND AS DIRECTED.

DOT APPROVAL

PROPOSED AND EXISTING WORK SHOWN HERE REVIEWED FOR COMPLIANCE WITH ALL APPLICABLE RULES AND REQUIREMENTS BY :

PLAN EXAMINER

APPROVAL FOR ISSUANCE OF WORK PERMITS GRANTED BY :

CHIEF / BUILDERS PAVEMENT SECTION DATE

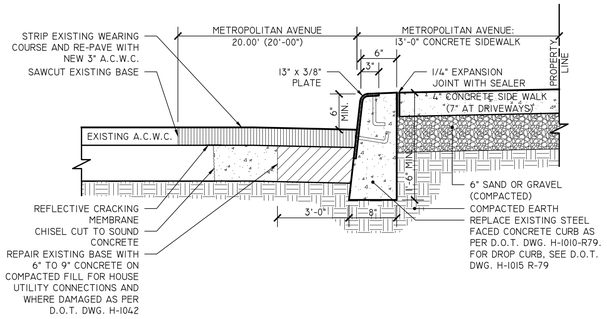
THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED.

DRAWN BY:
PROJECT No.:
DATE: 7/28/2022

DRAWING No.:
BPP-100.00

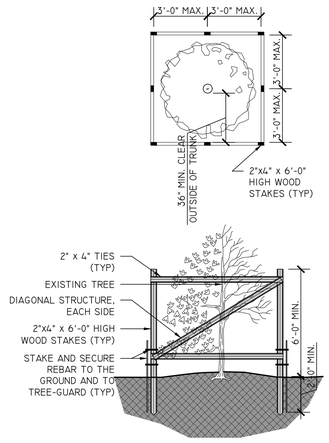
01 OF #

DETAILS



NOTES:
1. STRIP EXISTING ROADWAY.
2. SAWCUT ALL EDGES OF ASPHALTIC CONC. WEARING COURSE.
3. REPAIR OR REPLACE EXIST. CONC. BASE WITH A 6" TO 9" CONC. BASE.
4. TACK COAT ALL EDGES AND SURFACES.
5. RESURFACE WITH A 3" MIN. ASPHALTIC CONC. WEARING COURSE.
6. TOPSOIL COMPACTING TO A MINIMUM OF 95% OF STANDARD PROCTOR TEST.
7. ALL MATERIALS AND CONSTRUCTION METHODS USED ARE TO CONFORM TO SECTION 4.08 OF THE BUREAU OF HIGHWAY OPERATIONS SPECIFICATIONS, LATEST EDITION AS AMENDED.

1 ROADWAY PAVING DETAIL FOR OCEAN PARKWAY SERVICE ROAD
SCALE: 1" = 1'-0"



§27-1030 PROTECTION OF TREES
NO TREES OUTSIDE THE STREET LINE SHALL BE DISTURBED OR REMOVED WITHOUT THE PERMISSION OF THE COMMISSIONER OF PARKS AND RECREATION. PROTECTION MEETING THE REQUIREMENTS OF THE DEPARTMENT OF PARKS AND RECREATION SHALL BE PROVIDED AROUND THE TRUNKS OF ALL SUCH TREES, AND WRITTEN NOTIFICATION SHALL ALSO BE MADE TO THE DEPARTMENT OF PARKS AND RECREATION AT LEAST FORTY-EIGHT HOURS PRIOR TO COMMENCEMENT OF SUCH WORK. NO DELETERIOUS, CAUSTIC, OR ACID MATERIAL SHALL BE DUMPED OR MIXED WITHIN TEN FEET OF ANY SUCH TREE, NOR SHALL SALT FOR THE REMOVAL OF ICE OR SNOW BE APPLIED WHEN RUNOFF WILL DRAIN TO A TREE.

2 EXISTING TREE PROTECTION DETAILS
SCALE: 1/4" = 1'-0"

NOTES

NEW CURB:
AS PER DOT GUIDELINES SECTION VIII (D) MATERIAL
1. REQUIRED: STANDARD SPECIFICATION CONCRETE ONLY
2. PERMITTED ALTERNATIVE: AS PER DOT'S SPECIAL STREET PAVEMENT REQUIREMENTS. SEE APPENDIX J: DISTINCTIVE SIDEWALK
3. SLIP RESISTANCE OF ALL MATERIALS
   A. MIN. FRICTION FACTOR (STATIC) — SURFACE
      .6 — LEVEL
      .8 — RAMPS
4. TEST METHOD: AS REQUIRED UNDER DOT'S SPECIAL STREET PAVEMENT REQUIREMENTS.

NEW SIDEWALK:
AS PER DOT GUIDELINES SECTION IX (B) CURB TYPE
1. STEEL-FACED CONCRETE
   A. REQUIRED USAGE: AREAS ZONED M, C, AND R-7 AND ABOVE, AND FOR ALL CORNERS, EXCEPT AS APPROVED BY THE COMMISSIONER.
   B. PERMITTED COLOR: NATURAL (UNPIGMENTED) CONCRETE ONLY.

NEW ROADWAY:
AS PER DOT GUIDELINES SECTION X (D) REQUIRED MATERIALS
1. NEW ROAD:

COURSE	MATERIAL	MINIMUM THICKNESS
TOP	ASPHALTIC CONCRETE WEARING COURSE	3"
BASE	CONCRETE	6" - 9"
SUBBASE	COMPACTED SELECTED MATERIAL	N/A

*MATCH EXISTING THICKNESS OR AS REQUIRED BY TRAFFIC AND SOIL CONDITIONS

NOTE: FOR QUANTITIES REFER TO LIST OF ESTIMATED QUANTITIES ON SHEET BPP-100

BOROUGH:	BROOKLYN	BIN #:	3070360
DOB APP#:	B00715872-I1	JOB #:	321559336

NEW YORK CITY DEPARTMENT OF TRANSPORTATION BUILDERS PAVEMENT PLAN

PROJECT DATA

PROJECT STREET ADDRESS: 920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

BLOCK: 2917 — ZONING MAP #: 13B
LOT(S): 6 — ZONING DISTRICT: R6B, C2-4

OWNER'S NAME: — OWNER'S CONTACT:
OWNER'S ADDRESS:

GENERAL REQUIREMENTS:

1. ALL DESIGNS, MATERIALS, CONSTRUCTION METHODS AND WORKMANSHIP SHALL COMPLY WITH THE FOLLOWING PUBLICATIONS OF THE BUREAU OF HIGHWAYS: STANDARD SPECIFICATIONS, STANDARD DETAILS OF CONSTRUCTION, RULES OF THE BUREAU OF HIGHWAY OPERATIONS, GUIDELINES FOR THE DESIGN OF INFRASTRUCTURE COMPONENTS.
2. ALL NON STANDARD MATERIALS AND CONSTRUCTION PROCEDURES SHALL BE SPECIFICALLY APPROVED IN WRITING BY THE DEPARTMENT OF TRANSPORTATION.
3. ANY WORK NOT COMPLYING WITH THE REQUIREMENTS OF THE DOT SHALL BE REMOVED AND REPLACED.
4. THIS PLAN SHALL BE VALID FOR THE ISSUANCE OF CONSTRUCTION PERMITS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF APPROVAL OR SELF CERTIFICATION, AS APPLICABLE.
5. ALL SIDEWALKS AND STREET AREAS CONSTRUCTED UNDER THIS PLAN SHALL REMAIN OPEN TO THE PUBLIC AT ALL TIMES.

ISSUANCE OF THE PERMITS:

6. NO SIDEWALK, CURB OR ROADWAY WORK SHALL BE DONE WITHOUT A PERMIT FROM THE BOROUGH HIGHWAY SUPERINTENDENT. APPLICATION SHALL BE MADE THREE (3) DAYS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL REQUIRED INSURANCE COVERAGE ON FILE.
7. NO WORK ON DRAINAGE STRUCTURES SHALL BE DONE WITHOUT A PERMIT FROM THE BOROUGH OFFICE OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
8. ANY VAULT WORK AT THE SITE SHALL BE DONE AS PER THE APPLICABLE RULES OF THE DOT AND THE DEPARTMENT OF BUILDINGS.

CONSTRUCTION ACTIVITY:

9. A CONSTRUCTION PLAN SHOWING MAINTENANCE AND PROTECTION OF TRAFFIC, INCLUDING PLACEMENT OF SIDEWALK BRIDGES, BARRIERS AND SIGNAGE SHALL BE SUBMITTED TO THE BOROUGH HIGHWAY OFFICE BEFORE CONSTRUCTION BEGINS.
10. NO SIDEWALK SHALL BE CLOSED WITHOUT A PERMIT. PEDESTRIAN AND TRAFFIC SAFETY SHALL BE PROTECTED AT ALL TIMES. ROADWAY CLOSINGS SHALL BE AS DIRECTED.
11. THE SITE SHALL BE MAINTAINED IN A CLEAN AND SAFE CONDITION. FINAL SIGN-OFF
12. PERMITS SHALL BE PRESENTED FROM ALL PUBLIC AGENCIES AND UTILITIES HAVING OWNERSHIP OF STRUCTURES RELOCATED OR REMOVED DURING CONSTRUCTION.
13. ALL PAVEMENT MARKINGS INCLUDING THERMOPLASTIC LANE DIVIDERS, REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN KIND TO THE BUREAU OF TRAFFIC STANDARDS.
14. ALL EXISTING CATCH BASINS ON SITE SHALL BE CLEANED AND MADE OPERABLE.
15. ALL DAMAGE CAUSED BY CONSTRUCTION ON THIS PROJECT OUTSIDE THE PROJECT LIMITS SHALL BE REPAIRED AS DIRECTED.
16. THE ROADWAY SHALL BE PAVED TO THE REQUIREMENTS OF THE DOT AND AS DIRECTED.

DOT APPROVAL

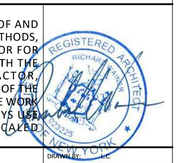
PROPOSED AND EXISTING WORK SHOWN HERE REVIEWED FOR COMPLIANCE WITH ALL APPLICABLE RULES AND REQUIREMENTS BY :

PLAN EXAMINER

APPROVAL FOR ISSUANCE OF WORK PERMITS GRANTED BY :

CHIEF / BUILDERS PAVEMENT SECTION — DATE

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED.



DRAWN BY:
PROJECT No.:
DATE: 7/28/2022

DRAWING No.:
BPP-101.00

02 OF #

BUILDING DEPARTMENT NOTES

1. ENERGY UTILIZATION.

HEATING, VENTILATING AND AIR-CONDITIONING SYSTEMS OF ALL STRUCTURES SHALL BE DESIGNED AND INSTALLED FOR EFFICIENT UTILIZATION OF ENERGY IN ACCORDANCE WITH ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK CITY.

4. VIBRATION ISOLATION.

SUPPLEMENTAL RESTRAINT SHALL BE USED WHERE VIBRATION ISOLATION OF EQUIPMENT AND APPLIANCES IS EMPLOYED (TO ACCOMPLISH THE SUPPORT AND RESTRAINT).

5. REPAIR.

DEFECTIVE PARTS OR MATERIALS SHALL BE REPLACED OR REPAIRED IN SUCH A MANNER SO AS TO PRESERVE THE ORIGINAL APPROVAL OR LISTING.

6. WIND RESISTANCE

MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS THAT ARE EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH 2014 NEW YORK CITY BUILDING CODE.

7. FLOOD HAZARD.

FOR STRUCTURES LOCATED IN AREAS OF SPECIAL FLOOD HAZARD, MECHANICAL SYSTEMS, EQUIPMENT AND APPLIANCES SHALL COMPLY WITH APPENDIX G OF 2014 NEW YORK CITY BUILDING CODE.

8. SEISMIC RESISTANCE.

IN ACCORDANCE WITH 2014 NEW YORK CITY BUILDING CODE, EVERY STRUCTURE, AND PORTION THEREOF, INCLUDING NONSTRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS, SHALL BE DESIGNED AND INSTALLED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS.

9. STRUCTURAL SAFETY.

THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY INSTALLATION OR REPAIRING OF MECHANICAL SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE IS REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLATION OR REPAIR OF MECHANICAL SYSTEMS, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A CONDITION THAT COMPLY WITH 2014 NEW YORK CITY BUILDING CODE REQUIREMENTS.

10. RIGID DUCT PENETRATIONS.

DUCT SYSTEM PENETRATIONS OF WALLS, FLOORS, CEILINGS AND ROOFS AND AIR TRANSFER OPENINGS IN SUCH BUILDING COMPONENTS SHALL BE PROTECTED AS REQUIRED BY SECTION 607 OF 2014 NEW YORK CITY MECHANICAL CODE.

11. VENTILATION REQUIRED.

EVERY OCCUPIED SPACE SHALL BE VENTILATED BY NATURAL MEANS IN ACCORDANCE WITH SECTION 402 OR BY MECHANICAL MEANS IN ACCORDANCE WITH SECTION 403 OF 2014 NEW YORK CITY MECHANICAL CODE.

12. OUTDOOR DISCHARGE.

A. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED OUTDOORS AT A POINT WHERE IT WILL NOT CAUSE A NUISANCE AND FROM WHICH IT CANNOT BE SECONDARILY DRAWN INTO A VENTILATING SYSTEM. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC OR CRAWL SPACE.
B. DUCT SYSTEM USED FOR THE MOVEMENT OF AIR IN HEATING, VENTILATING AND EXHAUST SYSTEMS SHALL CONFORM TO THE PROVISIONS OF CHAPTER 6 OF 2014 NEW YORK CITY MECHANICAL CODE.
C. DUCT INSULATION SHALL CONFORM TO THE REQUIREMENT OF SECTIONS 604.2 THROUGH 604.13 OF 2014 NEW YORK CITY MECHANICAL CODE AND ENERGY CONSERVATION CODE OF NEW YORK CITY.
D. CENTRAL HEATING SYSTEM SHALL BE PROVIDED WITH APPROVED AIR FILTERS. THE FILTERS SHALL BE INSTALLED IN THE RETURN AIR SYSTEM, UPSTREAM FROM ANY HEAT EXCHANGER OR COIL, IN AN APPROVED CONVENIENT LOCATION. LIQUID ADHESIVE COATINGS USED ON FILTERS SHALL HAVE A FLASH POINT NOT LOWER THAN 325° F (163° C).
E. FUEL-GAS PIPING SYSTEMS, FUEL-GAS UTILIZATION EQUIPMENT AND RELATED ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH SECTIONS 101.2.2 THROUGH 101.2.5 OF 2014 NEW YORK CITY FUEL GAS CODE.

13. PIPING SYSTEMS.

THESE REGULATIONS COVER PIPING SYSTEMS FOR NATURAL GAS WITH AN OPERATING PRESSURE OF 125 PSIG (862 kPa GAUGE) OR LESS. COVERAGE SHALL EXTEND TO THE OUTLET OF THE EQUIPMENT SHUTOFF VALVES. PIPING SYSTEMS REQUIREMENTS SHALL INCLUDE DESIGN, MATERIALS, COMPONENTS, FABRICATION, ASSEMBLY, INSTALLATION, TESTING, INSPECTION, OPERATION AND MAINTENANCE.

14. ENERGY UTILIZATION.

HEATING AND VENTILATING SYSTEMS OF ALL STRUCTURES SHALL BE DESIGNED AND INSTALLED FOR EFFICIENT UTILIZATION OF ENERGY IN ACCORDANCE WITH ENERGY CONSERVATION CODE OF NEW YORK CITY. HYDRONIC PIPING, VENTILATION AND OTHER MECHANICAL SYSTEMS NOT COVERED BY THIS CODE SHALL COMPLY TO 2014 NEW YORK CITY MECHANICAL CODE.

NOTES

1. ACCORDING TO SECTION 603.1 OF 2014 NEW YORK CITY MECHANICAL CODE, AN AIR DISTRIBUTION SYSTEM SHALL BE DESIGNED AND INSTALLED TO SUPPLY THE REQUIRED DISTRIBUTION OF AIR. THE INSTALLATION OF AN AIR DISTRIBUTION SYSTEM SHALL NOT AFFECT THE FIRE PROTECTION REQUIREMENTS SPECIFIED IN THE NEW YORK CITY BUILDING CODE. DUCTS SHALL BE CONSTRUCTED, BRACED, REINFORCED AND INSTALLED TO PROVIDE STRUCTURAL STRENGTH AND DURABILITY.
2. ACCORDING TO SECTION 603.10 OF 2014 NEW YORK CITY MECHANICAL CODE, DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FT (3048 MM) OR BY OTHER APPROVED DUCT SUPPORT SYSTEMS DESIGNED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE. FLEXIBLE AND OTHER FACTORY-MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. DUCTS SHALL NOT BE HUNG FROM OR SUPPORTED BY SUSPENDED CEILING.
3. WHERE DUCT CROSS-SECTIONAL AREA EXCEEDS 8 FT^2 ANGLE STIFFENERS SHALL BE INSTALLED AROUND CIRCUMFERENCE AT EVERY 4'-0".
4. FOR DUCTS OVER 48" WIDE, HANGERS SHALL TURN UNDER DUCT AT LEAST 2" AND SHALL BE FASTENED TO THE BOTTOM AS WELL AS TO THE SIDES OF DUCT.
5. DUCT HANGERS:
   - FOR DUCTS WITH A CROSS-SECTIONAL AREA OF 4 FT^2 OR LESS, HANGERS SHALL BE NOT MORE THAN 8 FT APART.
   - FOR DUCT WITH A CROSS-SECTIONAL AREA OF MORE THAN 4 FT^2 BUT NOT OVER 8 FT^2 HANGERS SHALL BE NOT MORE THAN 6 FT. APART, AND
   - FOR DUCTS WITH A CROSS-SECTIONAL AREA OF MORE THAN 8 FT^2 HANGERS SHALL BE NOT MORE THAN 4 FT APART.
   - THE DISTANCES BETWEEN HANGERS SHALL BE MEASURED LINEARLY ALONG THE DUCT.
6. VERTICAL DUCTS SHALL BE SECURELY SUPPORTED AT EACH FLOOR LEVEL BY CONTINUOUS LENGTHS OF STRUCTURAL ANGLES OF A SIZE AT LEAST EQUIVALENT TO THAT FOR STIFFENING. THE ANGLES SHALL BE FASTENED TO THE OPPOSITE SIDES OF THE DUCT AND SHALL EXTEND ACROSS THE OPENING AND BEAR UPON THE STRUCTURE OR SLAB ON BOTH SIDES OF THE OPENING.
7. SUPPLY AND RETURN DUCTS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND WHERE LOCATED OUTSIDE THE BUILDING WITH A MINIMUM OF R-8 INSULATION .
8. ALL SUPPLY DUCTWORK SHALL BE SEALED AIRTIGHT WITH MINNESOTA MINING CO.; TYPE 800 SEALED COMPOUND.

HVAC SYSTEM SPECIFICATION

A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES & ORDINANCES. CONTRACTOR SHALL FOLLOW THE LATEST EDITION OF STANDARDS OF ASHRAE AND SMACNA DURING THE INSTALLATION OF THE SYSTEM.

B. THE WORK UNDER THIS CONTRACT SHALL BE PERFORMED SIMULTANEOUSLY WITH THE WORK OF OTHER TRADES, SO AS NOT TO DELAY THE OVERALL PROGRESS OF WORK.

C. THIS CONTRACTOR SHALL CHECK FIELD CONDITIONS PRIOR TO SUBMITTING A PROPOSAL. ANY CHANGES RESULTING FROM CONDITIONS ARISING IN THE FIELD SHALL BE MADE BY THIS CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.

D. THE WORK INDICATED ON THESE DRAWINGS IS DIAGRAMMATIC AND IS INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE GENERAL ARRANGEMENT OF DUCTWORK, PIPING AND EQUIPMENT. THE CONTRACTOR MAY MAKE CHANGES IN WRITING, SUBJECT TO THE OWNER'S APPROVAL,WITH NO ADDITIONAL COST TO THE CONTRACT.

E. ALL MATERIALS, WORK, INCIDENTAL ACCESSORIES OR OTHER DETAILS NOT SHOWN AND/OR NOT SPECIFIED BUT NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION SHALL BE PROVIDED BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

F. IT IS THE INTENTION OF THE CONTRACT DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED ALL MATERIALS SHALL BE NEW AND COMPLY WITH WORK, TESTED AND READY FOR OPERATION. THE REQUIREMENTS OF 2014 DEPARTMENT OF BUILDINGS, 2014 NEW YORK CITY MECHANICAL CODE AND ALL AGENCIES HAVING JURISDICTION.

G. IF ANY EXISTING DUCTWORK, PIPES, UTILITIES, ECT. ARE DAMAGED DURING THE INSTALLATION, WHETHER OR NOT DUE TO CONTRACTOR'S NEGLIGENCE, IT SHALL BE REPAIRED OR REPLACED AND LEFT IN CONDITION SATISFACTORY TO THE OWNER.

H. ALL SUPPLY AND RETURN DUCTWORK WITHIN 15 FEET OF AIR HANDLING UNIT SHALL HAVE 1" THICK ACOUSTIC LINING.

I. ALL DUCTWORK PENETRATING FIRE RATED WALLS SHALL HAVE APPROVED FIRE DAMPERS AND ACCESS DOORS.

J. THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL DUCTWORK AND EQUIPMENT TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

K. THIS CONTRACTOR SHALL MAKE ANY AND ALL TESTS REQUIRED TO DEMONSTRATE THAT THE OPERATION OF THE INSTALLED SYSTEM COMPLIES WITH ALL CODE'S APPLICABLE REQUIREMENTS OF THE DRAWINGS, SPECIFICATIONS, AND OTHER CONTRACT DOCUMENTS.

L. SUPPLY AND RETURN AIR DUCTS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND A MINIMUM OF R-8 INSULATION WHEN LOCATED OUTSIDE THE BUILDING. PIPING INSULATION SHALL BE INSTALLED PER 6.4.4.1.3 ASHRAE 90.1-2013.

M. ALL INSULATION AND ACCESSORIES SHALL BE INSTALLED AS RECOMMENDED BY MANUFACTURER.

VENTILATION NOTES:

1. UPON COMPLETION OF THE VENTILATING SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT QUALIFIED TO CONDUCT SUCH TEST, OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF VENTILATING SYSTEMS AND QUALIFIED TO CONDUCT SUCH TESTS. THE TEST SHALL SHOW COMPLIANCE WITH 2014 NEW YORK CITY MECHANICAL CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED.
2. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT OR OTHER QUALIFIED PERSON WHO CONDUCTS THE TEST SHALL FILE A CERTIFICATE AS TO WHETHER THE TEST SHOWS THAT THE RATE OF AIR SUPPLY AND EXHAUST COMPLIES WITH REQUIREMENTS OF THE CODE PERTAINING TO VENTILATION.
3. A STATEMENT SHALL BE FILED BY THE OWNER THAT THE SYSTEM OF VENTILATION WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN SECTION MC 401 OF 2014 NEW YORK CITY MECHANICAL CODE.
4. VENTILATION SYSTEM INSTALLED COMPLIES WITH THE MINIMUM CODE REQUIREMENTS AS PER 27-753 & 27-754.
5. ALL TOILET ROOMS TO BE VENTILATED IN ACCORDANCE WITH SECTION 27-759.

OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER BY THE MECHANICAL CONTRACTOR AND INCLUDE ALL OF THE FOLLOWING:

1. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
2. MANUFACTURER'S OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
3. NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY.
4. HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN SYSTEM PROGRAMMING INSTRUCTIONS.
5. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SETPOINTS.

NOTE:

MINIMUM VENTILATION RATES TO COMPLY WITH TABLE 403.3 OF THE NYC MECHANICAL CODE.
DOMESTIC KITCHEN EXHAUST SHALL COMPLY SECTION 505 OF THE NYC MECHANICAL CODE.
BATHROOM VENTILATION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1203.4.2.1 OF THE NYC BUILDING CODE.

NOTES:

MECHANICAL EQUIPMENT AND BUILDING SYSTEMS SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH 2014 NEW YORK CITY MECHANICAL CODE AND 2014 NEW YORK CITY FUEL GAS CODE.

THE ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR REVIEW BEFORE PROCEEDING WITH FABRICATION.

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES

NO CHANGE IN USE, EGRESS OR OCCUPANCY UNDER THIS APPLICATION.

920 METROPOLITAN AVE, BROOKLYN, NY 11211
ENERGY ANALYSIS, COMMERCIAL, CLIMATE ZONE 4A — Table 1

ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE-PRESCRIBED VALUE AND CITATION	PLANS REFERENCE #
INSTALL NEW SPLIT SYSTEM CONDENSING UNIT HEAT PUMP MITSUBISHI ELECTRIC, 2.5T	17.0 SEER 10.4 HSPF	13.0 SEER, 7.7 HSPF NYC ECC 2020 TABLE C403.3.2(11)	MS-008.00
INSTALL NEW SPLIT SYSTEM CONDENSING UNIT HEAT PUMP MITSUBISHI ELECTRIC, 4T	16.5 SEER 11.0 HSPF	13.0 SEER, 7.7 HSPF NYC ECC 2020 TABLE C403.3.2(11)	MS-008.00
INSTALL NEW SPLIT SYSTEM CONDENSING UNIT HEAT PUMP MITSUBISHI ELECTRIC, 3T	17.5 EER 10.4 HSPF	13.0 SEER, 7.7 HSPF NYC ECC 2020 TABLE C403.3.2(11)	MS-008.00

DRAWINGS LIST

DRAWING NO.	DRAWING TITLE
MS-001.00	PLOT PLAN, NOTES, LEGEND
MS-002.00	SEQUENCE OF OPERATION
MS-003.00	CELLAR AND 1ST FLOOR PLANS
MS-004.00	2ND AND 3RD FLOOR PLANS
MS-005.00	4TH, ROOF AND BULKHEAD ROOF PLANS
MS-006.00	SCHEDULES, RISER DIAGRAM
MS-007.00	DETAILS
MS-008.00	PART OF SANITARY RISER DIAGRAM WITH CONDENSATE DISCHARGEENERGY ANALYSIS
EN-001.00	ENERGY ANALYSIS

OUTDOOR AIR SUPPLY AND EXHAUST OPENINGS IN THE BUILDING ENVELOPE, DUCTS, OR EQUIPMENT SHALL BE PROVIDED WITH CLASS I MOTORIZED DAMPERS.

PROFESSIONAL STATEMENT:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH 2020 NYC ECC

NYC ECC TABLE C403.11.3
MINIMUM PIPE INSULATION THICKNESS (THICKNESS IN INCHES) — TABLE 4

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU·IN/(H·FT²·°F)	MEAN RATING TEMPERATURE, °F	< 1	1 to < 1½	1½ to < 4	4 to < 8	>8
105 -140	0.21 -0.28	100	1.0	1.0	1.5	1.5	1.5
40 -60	0.21 -0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 -0.26	50	0.5	1.0	1.0	1.0	1.5

HEATING AND COOLING LOADS — TABLE 5

LOAD TYPE	TOTAL CAPACITY
HEATING	289,600 BTU/Hr.
COOLING	272,400 BTU/Hr.
EL. HEATING	20,400 BTU/Hr.
EL. HWH	122,840 BTU/Hr.
TOTAL HEATING	432,840 BTU/Hr.

HEATING AND COOLING LOAD CALCULATIONS FOR DERIVING CORRECT EQUIPMENT SIZE ARE PERFORMED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA STANDARD 183 HVAC SYSTEMS AND EQUIPMENT HANDBOOK.

THE INTERIOR DESIGN TEMPERATURES USED FOR HEATING AND COOLING LOAD CALCULATIONS SHALL BE A MAXIMUM OF 72°F (22°C) FOR HEATING AND MINIMUM OF 75°F (24°C) FOR COOLING.

SCOPE OF WORK

INSTALLATION OF MECHANICAL SYSTEM FOR ENTIRE BUILDING IN CONJUNCTION WITH NB APPLICATION #----

INCLUDING:
1. INSTALLATION OF CONDENSER UNITS AND AIR HANDLERS
2. DUCT INSTALLATION
3. REFRIGERANT PIPING INSTALLATION

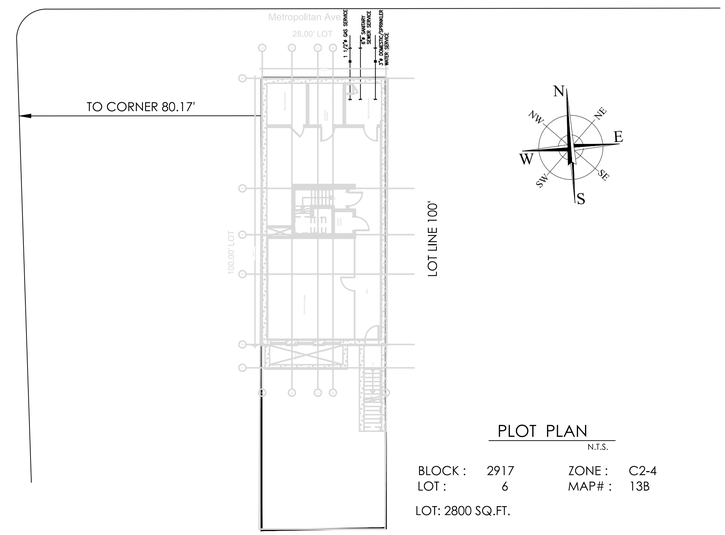
SPECIAL INSPECTION	
MECHANICAL SYSTEMS	BC 1704.16

THIS PROJECT DOES NOT REQUIRE COMMISSIONING AS PER C408 OF 2020 NYC ECC

LEGEND	
⟨⟩	DUCTWORK
F.D.	FIRE DAMPER WITH ACCESS DOOR
M.D., —Ⓜ	MOTORIZED DAMPER (CLASS I)
L	VOLUME DAMPER
▨	EXHAUST GRILL
▩	SUPPLY DIFFUSER
Ⓣ	7 DAY PROGRAMMABLE THERMOSTAT
EH-1	ELECTRIC HEATER
S/A	SUPPLY AIR
R/A	RETURN AIR
—R—	REFRIGERANT PIPING
TR. GR.	TRANSFER GRILL
BD	GRAVITY DAMPER

TABLE 6

COMMERCIAL ENERGY EFFICIENCY
1. HEATING AND COOLING LOAD CALCULATION.
HEATING AND COOLING LOAD CALCULATIONS FOR DERIVING CORRECT EQUIPMENT SIZE ARE ARE PERFORMED IN ACCORDANCE WITH ASHRAE/ACCA 183 (NYC ECC 2020 C403.1.1).
2. SYSTEM CONTROLS.
EACH HEATING AND COOLING SYSTEM SHALL BE PROVIDED WITH CONTROLS . THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. (NYC ECC 2020 C403.4.1-C403.4.5).
3. AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES.
PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAN ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR. (NYC ECC 2020 C403.2.4.2.2).
4. STAIRWAY AND SHAFT VENT DAMPERS.
STAIR AND ELEVATOR SHAFT VENTS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS THAT ARE CAPABLE OF BEING AUTOMATICALLY CLOSED DURING NORMAL BUILDING OPERATION AND ARE INTERLOCKED TO OPEN AS REQUIRED BY FIRE AND SMOKE DETECTION SYSTEMS. STAIRWAY AND SHAFT VENT SHALL BE PROVIDED WITH MOTORIZED DAMPERS ,THEY SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 4 CFM/FT^2 OF DAMPER SURFACE AREA AT 1.0 INCH WATER GAUGE AND SHALL BE LABELED BY AN APPROVED AGENCY WHEN TESTED IN ACCORDANCE WITH AMCA STANDARD 500 FOR SUCH PURPOSE (NYC ECC 2020 C403.7.7).
5. DUCT AND PLENUM INSULATION AND SEALING.
ALL SUPPLY AND RETURN AIR DUCTS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-8 INSULATION WHEN LOCATED OUTSIDE THE BUILDING. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-6 INSULATION (NYC ECC 2020 C403.11.1)
6. COMMISSIONING.
THE COMMISSIONING OF BUILDING MECHANICAL SYSTEMS, SERVICE WATER HEATING SYSTEMS, ELECTRICAL POWER AND LIGHTING SYSTEM ARE NOT REQUIRED AS PER SECTION C408 OF 2020 NYC ECC.



PLOT PLAN
N.T.S.

BLOCK : 2917 ZONE : C2-4
LOT : 6 MAP# : 13B

LOT: 2800 SQ.FT.

DUCTWORK

A. ALL DUCTWORK SHALL BE MADE OUT OF GALVANIZED STEEL WITH GAUGES CONFORMING TO THE LATEST ASHRAE GUIDE. INSTALL HORIZONTAL DUCTS WITH GALVANIZED HANGAR STRAPS ATTACHED TO BOTH SIDES AND TO THE BOTTOM OF A DUCT AT INTERVALS NOT EXCEEDING 4'-0". PROVIDE ACCESS DOORS FOR ALL TYPES OF DAMPERS. ALL ACCESS DOORS SHALL HAVE HEAVY-DUTY BRASS FINISHED HINGES AND LATCHES. AFTER FANS ARE IN OPERATION ALL DUCTS THAT RATTLE, VIBRATE, BUCKLE OR GENERATE NOISE SHALL BE REPAIRED AND/OR BRACED WITH STIFFENERS AND/OR SUPPORTS UNTIL THEY ARE RIGID AND FREE OF ANY VIBRATION. REPLACE ALL DAMPERS AND ACCESSORIES THAT RATTLE OR GENERATE NOISE WHEN FANS ARE OPERATING. ALL RECTANGULAR ELBOWS SHALL BE EQUIPPED WITH TURNING VANES. SUPPLY DUCTS BRANCH TAKEOFFS SHALL BE CONSTRUCTED WITH NECKS AND SPLITTER DAMPERS EXCEPT WHERE INDICATED OTHERWISE.
B. ALL SUPPLY DUCTWORK SHALL BE SEALED AIRTIGHT WITH MINNESOTA MINING CO.; TYPE 800 SEALED COMPOUND.

DUCT INSULATION
WHERE THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM IS NOT GREATERTHAN 15°F (8°C). (C403.11.1, NYCECC 2020)

A. ALL INSULATION AND ACCESSORIES SHALL BE INSTALLED AS RECOMMENDED BY MANUFACTURER.
B. ALL NEW DUCT INSULATION SHALL BE 1-1/2" THICK.
C. ALL SUPPLY AND RETURN DUCTS (15'-0" FROM UNIT) SHALL BE INTERNALLY LINED WITH 1" THICK ACOUSTIC AEROFLEX DUCT LINER. DUCT SIZE SHALL BE INCREASED TO PROVIDE CLEAR INSIDE DIMENSIONS AS NOTED ON PLAN.

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No.	DATE	DESCRIPTION

Cyr Apolinar Garcia APPROVED Date: 08/23/2021

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

PLOT PLAN, NOTES, LEGEND

DOB NOW JOB No.
B00715872-S6

SEAL & SIGNATURE

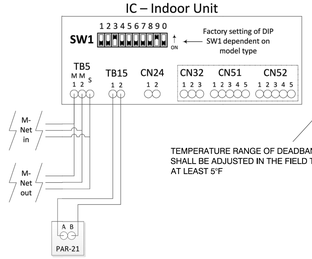
STATE OF NEW YORK DMITRY LEVIN 095837 LICENSED PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	MS-001.00
CAD FILE No.	01 OF 08

Indoor Unit Sequence of Operations – Auto Mode

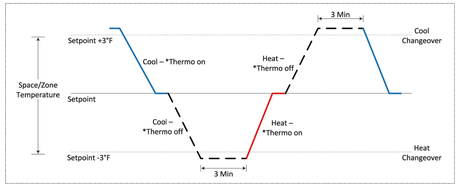
Last Edit: 11/15/2017 11:42:49 AM

IC – Indoor Unit



TEMPERATURE RANGE OF DEADBAND SHALL BE ADJUSTED IN THE FIELD TO AT LEAST 5°F

- Auto: According to set temperature, cooling operation starts if the room temperature is too hot and heating operation starts if the room temperature is too cold.
- During automatic operation, if the room temperature changes and remains ◆0°F (adj. 1.8°F – 9.0°F) or more above set temperature for 3 minutes, the indoor unit mode changes to AutoCool. If the room temperature changes and remains 3.0°F (adj. 1.8°F – 9.0°F) or more below set temperature for 3 minutes, the indoor unit mode changes to AutoHeat.
- During Cool/Heat-Thermo on, operation of space conditioning is accomplished by Cool Mode sequence/Heat Mode sequence. Auto Mode is the decision by the indoor unit's logic to select Cool Mode control or Heat Mode control based on zone conditions. Because the room temperature is automatically adjusted in order to maintain a fixed effective set temperature, cooling operation and heating operation is performed using mode specific deadbands once set temperature is reached. (automatic energy-saving operation)
- See table below for cyclic example



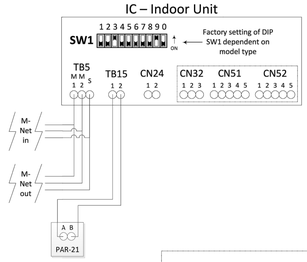
* - Thermo on is the condition of the LEV (linear expansion valve) modulation during load demand

* - Thermo off is the condition of the LEV (linear expansion valve) at static minimum position while no load demand

Indoor Unit Sequence of Operations – Cool Mode

Last Edit: 1/5/2012 12:07:22 PM

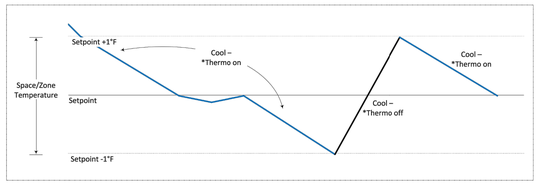
IC – Indoor Unit



- Cooling: Upon a call for cooling, the indoor unit will modulate it's LEV to maintain the set temperature +1.0°F/-1.0°F.
- An initial call for cooling, which will be based on a fixed deadband from set temperature of +1.0°F, will command the indoor unit's LEV to open and modulate based on the zone's effective space temperature and deviation from set temperature. As the zone temperature drops, the LEV will modulate to a thermo off condition based on a fixed deadband from set temperature of -1.0°F. The indoor unit will maintain a thermo off condition until the zone temperature reaches the initial call for cooling limit.
- See table below for cyclic example.

* - Thermo on is the condition of the LEV (linear expansion valve) modulation during load demand

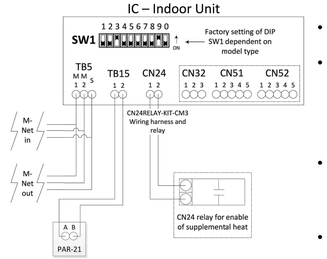
* - Thermo off is the condition of the LEV (linear expansion valve) at static minimum position while no load demand



Indoor Unit Sequence of Operations – Heat Mode

Last Edit: 1/5/2012 12:07:22 PM

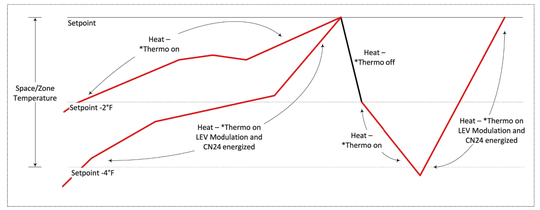
IC – Indoor Unit



- Heating: Upon a call for heating, the indoor unit will modulate it's LEV to maintain the set temperature with a fixed deadband of -2.0°F.
- An initial call for heating, which will be based on a fixed deadband from set temperature of -2.0°F, will command the indoor unit's LEV to open and modulate based on the zone's effective space temperature and deviation from set temperature. As the zone temperature rises, the LEV will modulate to a thermo off condition based on the set temperature of the zone. The indoor unit will maintain a thermo off condition until the zone temperature reaches the initial call for heating limit.
- In the event that the indoor unit can not maintain set temperature and the zone temperature continues to fall, CN24 output will energize when the zone temperature drops 4.0°F (adj. 1.8°F – 9.0°F) below set temperature to enable a supplemental source of heating. CN24 will remain energized until zone temperature reaches set temperature.
- See table below for cyclic example.

* - Thermo on is the condition of the LEV (linear expansion valve) modulation during load demand

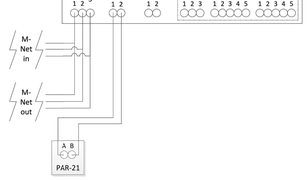
* - Thermo off is the condition of the LEV (linear expansion valve) at static minimum position while no load demand



Indoor unit Sequence of Operations – Dry Mode

Last Edit: 1/5/2012 12:07:22 PM

IC – Indoor Unit



- Dry: Dry mode is used to reduce the moisture or latent content of the air in the conditioned space without significantly impacting room temperature. Reduction is accomplished by reducing the airflow across the indoor unit's heat exchanger while controlling the temperature of the coil's surface to just below the dew point of the return air. Dry mode is initiated by the remote controller mode selection or the command from a BMS gateway (BACnet or LonWorks).
- Upon initiating a call for dry mode, the zone temperature and set temperature will be monitored for operating conditions. The zone temperature must be above 64°F for dry mode to be effective and the indoor unit's set temperature will affect the dry mode cycle. If the indoor unit is in a demand condition (zone temperature is above set temperature) and the zone temperature is within parameter ranges, the LEV (linear expansion valve) and the fan work simultaneously to "wring out" moisture or latent content of the airstream.
- See table below for operating conditions during dry mode.

* - Thermo on Signal is the condition of the zone temperature 2.0°F above set temperature after starting operation

* - Dry Thermo on is the condition of the LEV (linear expansion valve) modulating to maintain return above dew point

* - Dry Thermo off is the condition of the LEV (linear expansion valve) at minimum position

Room Temperature	3 min. passed since starting operation		*Dry Thermo on time in minutes	*Dry Thermo off time in minutes
	*Thermo on Signal	Room Temp		
Over 64°F	On	Temp >= 83°F	9	3
		83°F > Temp >= 79°F	7	
		79°F > Temp >= 75°F	5	
		75°F > Temp	3	
	Off	Any Temp	3	10
Less than 64°F	*Dry Thermo off			

Indoor Unit Sequence of Operations:

A. **On/Off Control:** the indoor units can be commanded ON/OFF either by a schedule in the Central Controller, at the Remote Controller, or by the BMS. If all indoor units are off, the outdoor unit shall turn off. With the Night Setback Function/Mode, the system shall cycle on during unoccupied periods as needed to maintain unoccupied temperature set point.

B. **Space Temperature Control:** the indoor unit shall modulate its internal linear expansion valve (LEV) to maintain the temperature set point via the indoor unit's internal controls.
   1. The set point is adjustable at the remote controller, central controller, or through a BMS interface. The temperature set point can also be scheduled at the remote controller or the central controller.

C. **Mode Control:**
   1. **Auto Mode:**
      - **NOTE:** only available on indoor units connected to the R2/WR2-Series system.
      a. The indoor unit shall determine whether it should be in auto-heat mode or auto-cool mode based on space temperature relative to temperature set point. If the indoor unit is in auto heat mode, the indoor unit control board shall follow the heat mode sequence. If the indoor unit is in auto cool mode, the indoor unit control board shall follow the cool mode sequence.
      b. The indoor unit shall switch from AutoHeat to AutoCool when the space temperature rises above and remains above the temperature set point plus the dead band for 3 minutes.
      c. The indoor unit will switch from AutoCool to AutoHeat when the space temperature drops below and remains below the temperature set point minus the dead band for 3 minutes.
   2. **Heating Mode:** the indoor unit shall modulate its linear expansion valve (LEV) to maintain temperature set point.
   3. **Cooling Mode:** the indoor unit shall modulate its linear expansion valve (LEV) to maintain temperature set point.

D. **Fan/Vane Control:** fan speed and vane direction (if applicable) shall be adjustable by the user at the remote controller and/or the central controller.

Auxiliary Heat Sequence of Operations:

- **NOTE:** Indoor unit has to be in HEAT mode in order to energize supplemental heating contacts.

A. **Option 1: in Zone Temperature:** when zone temperature falls more than 4.0°F default (adjustable) below heating temperature set point the indoor unit will energize supplemental heating output. Both the supplemental heat and the CITY MULTI heat pump will be active once space temperature drops 4.0°F (adjustable) below heating temperature set point. When the space temperature rises to set point, the supplemental heating output is deactivated and the supplemental heat source turns off.

B. **Option 2: Outdoor Unit Method:** three outdoor ambient temperature ranges shall be defined by the user via the Maintenance Tool. On a call for heating, at the highest range, the system shall utilize only the Heat Pump to maintain temperature set point. Within the middle range, the system shall utilize both supplemental heating source and the heat

pump to maintain temperature set point. In the low range, the system shall use only the supplemental heating source to maintain temperature set point.

C. **Supplemental Heat during Defrost/Error:**
   1. **Ducted Indoor Units:** when the indoor unit is operating in Defrost or Error conditions, a series of dip switch settings and fan speed jumper removal, the fan can either be disabled or enabled, and the supplemental heating contact can either be energized or de-energized. If the fan is permitted to run, the fan speed setting during Defrost and Error conditions is adjustable via dip switches.
   2. **Non-Ducted Indoor Units:** when indoor unit is operating in Defrost or Error conditions, the fan shall be disabled and the supplemental heating contact shall be energized.

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No.	DATE	DESCRIPTION

Cyr Apolinar Garcia APPROVED Date: 09/21/2021

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

PLOT PLAN, NOTES, LEGEND

DOB NOW JOB No.

B00715872–S6

SEAL & SIGNATURE

STATE OF NEW YORK DMITRY LEVIN 088837 LICENSED PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
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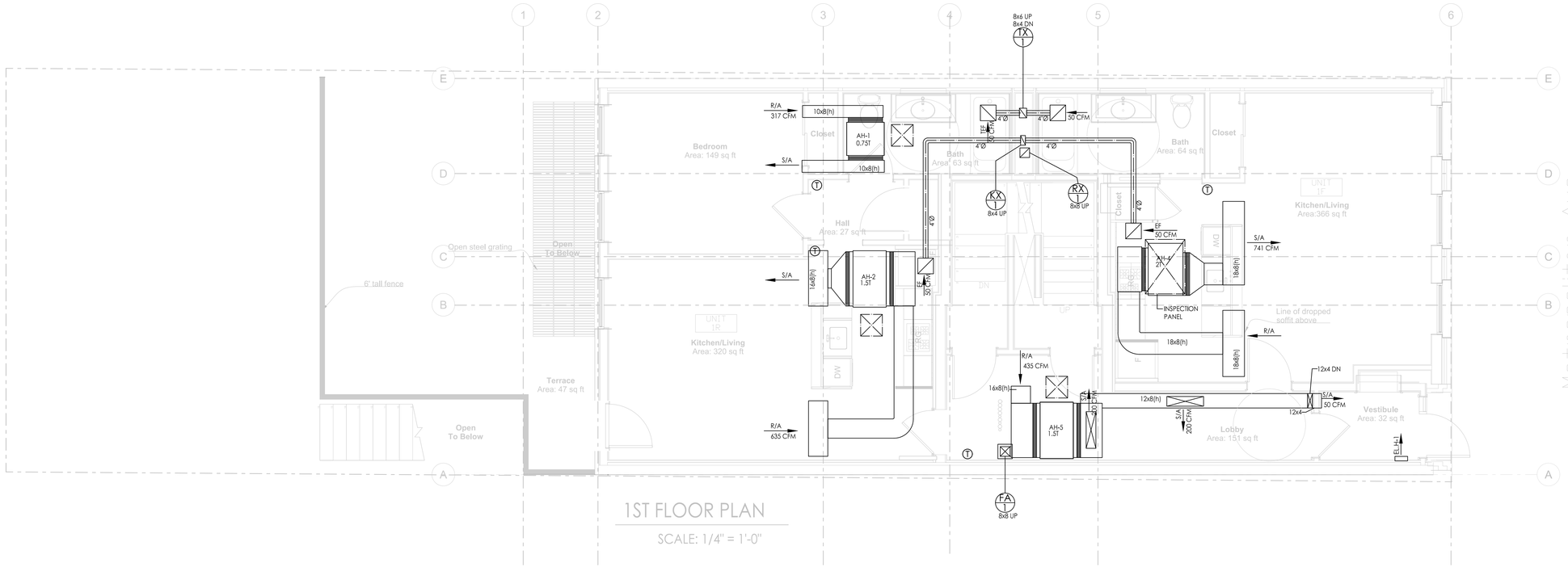
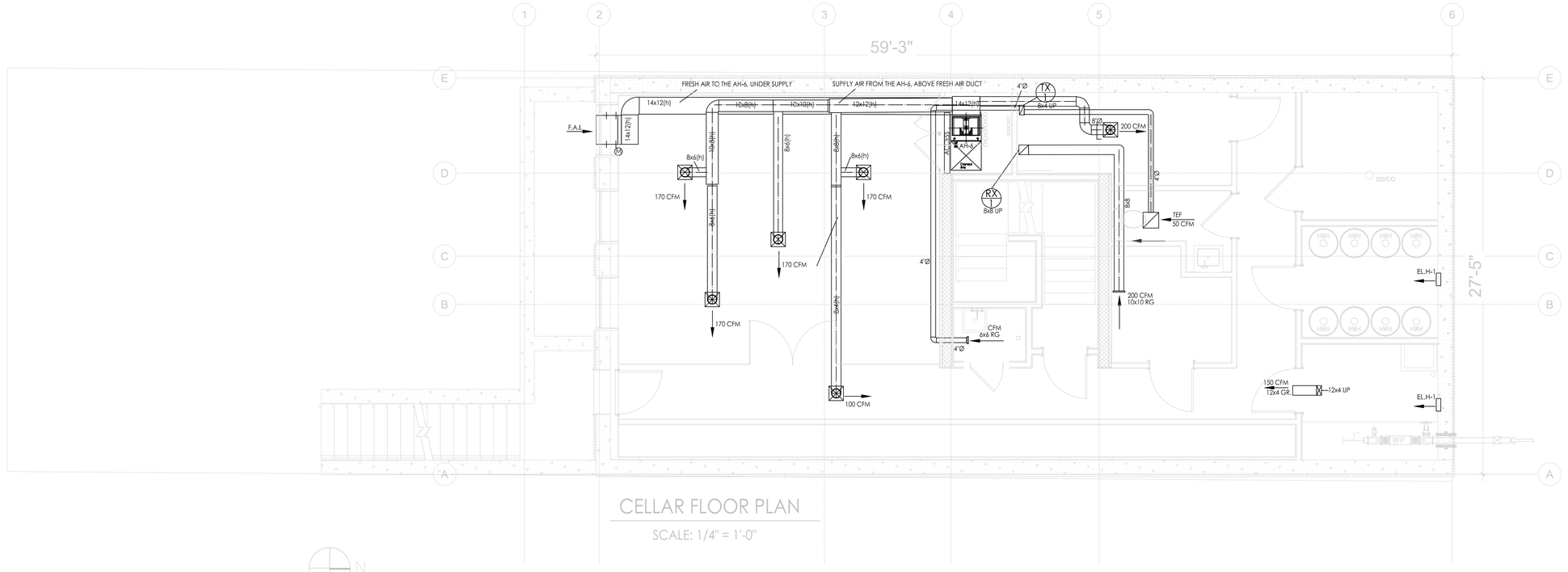


1ST FLOOR PLAN

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



CELLAR FLOOR PLAN

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

N

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Cyr Apolinar Garcia
APPROVED
DATE: 08/31/2022

No.	DATE	DESCRIPTION

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

CELLAR AND 1ST FLOOR PLANS

DOB NOW JOB No.

B00715872-S6

SEAL & SIGNATURE

STATE OF NEW YORK · DMITRY LEVIN · 095837 · LICENSED PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
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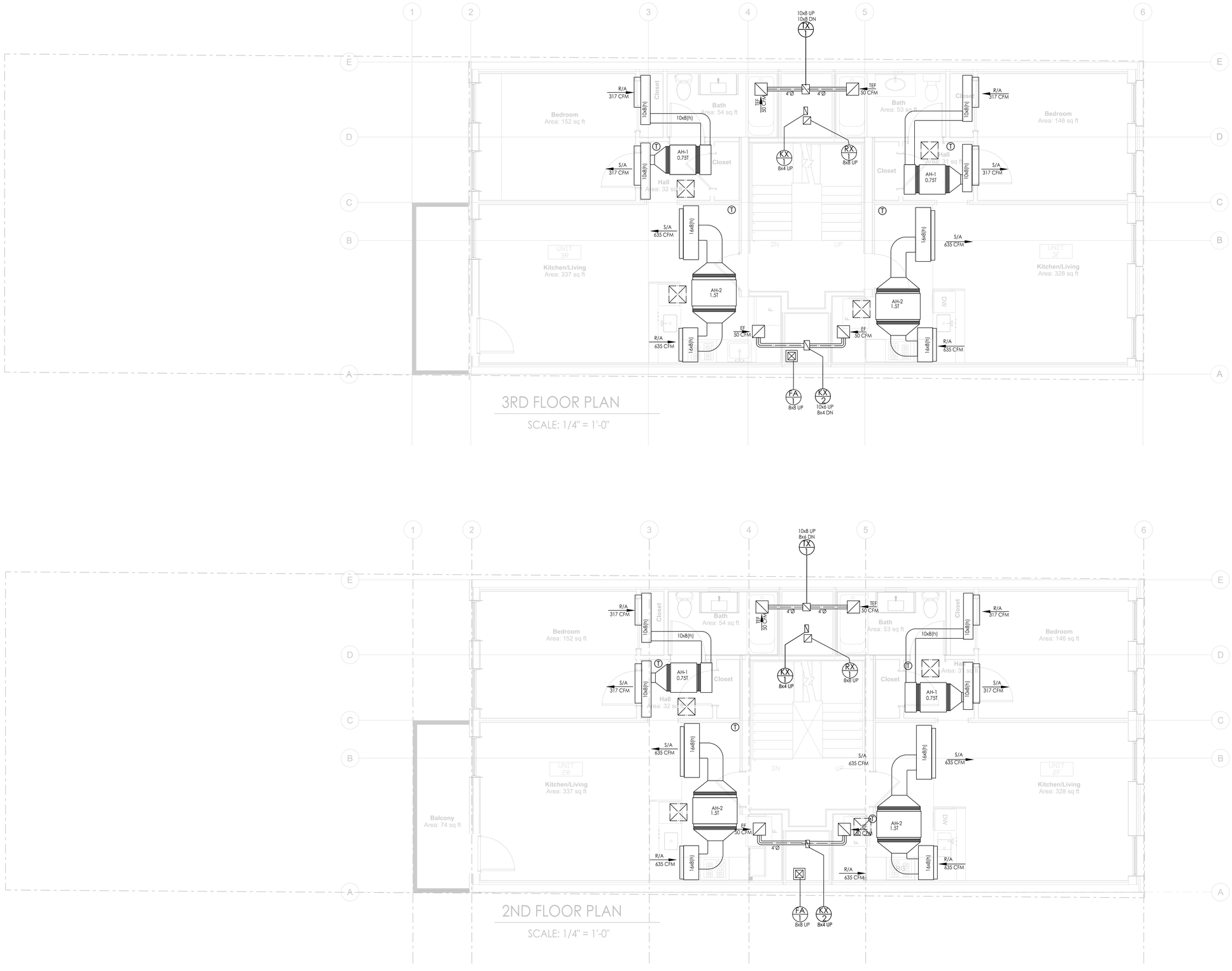

3RD FLOOR PLAN

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

2ND FLOOR PLAN

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

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No.	DATE	DESCRIPTION

Cyr Apolinar Garcia
APPROVED
DATE: 08/21/2022

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

2ND AND 3RD FLOOR PLANS

DOB NOW JOB No.

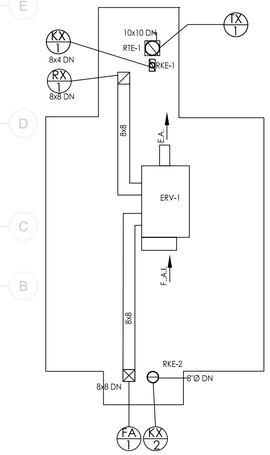
B00715872-S6

SEAL & SIGNATURE

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	MS-004.00
CAD FILE No.	

ROOF PLAN

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



BULKHEAD ROOF PLAN

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

4TH FLOOR PLAN

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

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No.	DATE	DESCRIPTION

Cyr Apolinar Garcia
APPROVED
DOB: 08/21/2022

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

4TH FLOOR PLAN. ROOF AND BULKHEAD ROOF PLANS

DOB NOW JOB No.

B00715872–S6

SEAL & SIGNATURE

STATE OF NEW YORK · DMITRY LEVIN · 095837 · LICENSED PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
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DWG. NO.:	MS-005.00
CAD FILE No.	05 OF 08

TABLE 6.2

№	A/C #	TOTAL UNITS	A/C UNIT	MOD.#	COOLING CAPACITY TON (MBH)	HEATING CAPACITY MBH	SEER (EER)	HSPF	AIR FLOW (CFM)	UNIT SUPPLY VOLTAGE	MIN. AMPACITY (AMP)	MAX. FUZE SIZE (AMP)	WEIGHT (LBS)	REMARKS	SERVING
AIR CONDITIONER UNITS SCHEDULE (MITSUBISHI ELECTRIC) — M-SERIES AND P-SERIES (HYPER)															
1	AH-1	1	HORIZONTAL-DUCTED	SEZ-KD09NA4	0.75 (9.0)	10.9	N/A	N/A	317	208/230-1-60	1.0	15	42		BEDROOM
2	AH-2	1		SEZ-KD18NA4	1.5 (17.2)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		KITCHEN/LIVING
3	CU-1	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	30.5	40	189		UNIT 1R
4	AH-4	1	HORIZONTAL-DUCTED	PEAD-A24AA7	2.0 (24.0)	25.0	N/A	N/A	741	208/230-1-60	1.0	15	62		KITCHEN/LIVING
5	CU-2	1	OUTDOOR UNIT	SUZ-KA24NAHZ	2.0 (24.0)	25.0	15.0	9.0	——	208/230-1-60	17.0	25	190		UNIT 1F
6	AH-1	1	HORIZONTAL-DUCTED	SEZ-KD09NA4	0.75 (9.0)	10.9	N/A	N/A	317	208/230-1-60	1.0	15	42		BEDROOM
7	AH-2	1		SEZ-KD18NA4	1.5 (17.2)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		KITCHEN/LIVING
8	CU-3	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	30.5	40	189		UNIT 2R
9	AH-1	1	HORIZONTAL-DUCTED	SEZ-KD09NA4	0.75 (9.0)	10.9	N/A	N/A	317	208/230-1-60	1.0	15	42		BEDROOM
10	AH-2	1		SEZ-KD18NA4	1.5 (17.2)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		KITCHEN/LIVING
11	CU-4	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	30.5	40	189		UNIT 2F
12	AH-1	1	HORIZONTAL-DUCTED	SEZ-KD09NA4	0.75 (9.0)	10.9	N/A	N/A	317	208/230-1-60	1.0	15	42		BEDROOM
13	AH-2	1		SEZ-KD18NA4	1.5 (17.2)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		KITCHEN/LIVING
14	CU-5	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	30.5	40	189		UNIT 3R
15	AH-1	1	HORIZONTAL-DUCTED	SEZ-KD09NA4	0.75 (9.0)	10.9	N/A	N/A	317	208/230-1-60	1.0	15	42		BEDROOM
16	AH-2	1		SEZ-KD18NA4	1.5 (17.2)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		KITCHEN/LIVING
17	CU-6	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	30.5	40	189		UNIT 3F
18	AH-3	1	HORIZONTAL-DUCTED	PEAD-A12AA7	1.0 (12.0)	17.0	N/A	N/A	494	208/230-1-60	1.45	15	58		BEDROOM
19	AH-4	1		PEAD-A24AA7	2.0 (24.0)	25.0	N/A	N/A	741	208/230-1-60	1.0	15	62		KITCHEN/LIVING
20	CU-7	1	OUTDOOR UNIT	MXZ4C36NAHZ2	3.0 (36.0)	45.0	17.45	10.7	——	208/230-1-60	42	50	276		UNIT 4R
21	AH-5	1	HORIZONTAL-DUCTED	SEZ-KD18NA4R1	1.5 (18.0)	21.6	N/A	N/A	635	208/230-1-60	1.0	15	62		VESTIBULE, LOBBY(1ST FL) HALL (CELLAR)
22	CU-8	1	OUTDOOR UNIT	MXZ3C30NAHZ2	2.5 (27.4)	27.6	17.0	10.4	——	208/230-1-60	17	20	131		COMMON SPACE

TOTAL COOLING CAPACITY: 272,400 BTU/H
TOTAL HEATING CAPACITY: 289,600 BTU/H

TABLE 6.3

№	A/C #	TOTAL UNITS	A/C UNIT	MOD.#	COOLING CAPACITY TON (MBH)	HEATING CAPACITY MBH	SEER	HSPF	AIR FLOW (CFM)	UNIT SUPPLY VOLTAGE	MIN. AMPACITY (AMP)	MAX. FUZE SIZE (AMP)	WEIGHT (LBS)	SERVING
100% OUTSIDE AIR PROCESSING UNIT (MITSUBISHI ELECTRIC) — SPLIT-TYPE AIR CONDITIONER (S-SERIES HYPER HEATING)														
1	AH-6	1	MULTI-POSITION	PVFY-P48NAMU-E1	4.0 (48.0)	28.0	—	—	980	208/230-1-60	5.6	15	172	COMMON
2	CU-9	1	OUTDOOR UNIT	PUMY-HP48NKMU	4.0 (48.0)	54.0	16.5	11.0	—	208/230-3-60	36	40	267	LOUNGE

TABLE 6.4

№	FAN #	TOTAL FANS	MOD.#	AIR FLOW (CFM)	STATIC PRESSURE	SONES	V/Hz	CURRENT AMPS.	POWER (WATT)	ENERGY EF. (CFM/Watt)	WEIGHT LBS.	REMARKS
FAN UNITS SCHEDULE (PANASONIC) — CEILING MOUNTED EXHAUST FAN												
1	TEF	7	FV-08VKM3	50	0.25"	0.3	120/60	0.02	7.5	7.7	10.4	EQUIPPED WITH ELECTRONICALLY COMMUTATED MOTORS
2	EF	7	FV-08VKM3	50	0.25"	0.3	120/60	0.02	7.5	7.7	10.4	

TURBINE VENTILATOR SCHEDULE

№	FAN #	MOD.#	CFM 4 MI. WIND	NECK DIAMETER
AIR VENT — INTERNALLY BRACED TURBINE				
1	RTE-1	2C530	425	10"
2	RKE-1	4C850	100	4"
3	RKE-1	4C850	250	8"

TABLE 6.5

№	HEATER #	TOTAL HEATERS	HEATER TYPE	MOD.#	STOCK #	HEATING CAPACITY (BTU/Hr)	UNIT SUPPLY VOLTAGE	AMPERAGE	WATTS	WEIGHT (LBS)	REMARKS
ELECTRIC HEATER (Qmark)											
1	EL. H-1	4	BUILT-IN WALL HEATER	SED2024	5ZK70	6,824	240/208	8.4	2000	11	WITH THERMOSTAT

DUCT AND PLENUM INSULATION (C403.11.1; 6.4.4.1.2):

SUPPLY AND RETURN AIR DUCTS AND PLENUMS MUST BE DESIGNED AS FOLLOWS:

- LOCATION: IN UNCONDITIONED SPACE. REQUIREMENT: INSULATED WITH MIN. R-6 INSULATION
- LOCATION: OUTSIDE THE BUILDING. REQUIREMENT: INSULATED WITH MIN. R-8 INSULATION
- LOCATION: WITHIN A BUILDING ENVELOPE ASSEMBLY. REQUIREMENT: SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED SPACE BY MIN. R-8 INSULATION

EXCEPTION: WHERE THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM IS NOT GREATER THAN 15°F (8°C). (C403.11.1, NYCECC 2020)

DUCT SYSTEM SEALING (C403.11.2; 6.4.4.2.1):

- JOINTS, SEAMS AND CONNECTIONS OF DUCTS, AIR HANDLERS, AND FILTER BOXES MUST BE SEALED.
- DRAWINGS MUST CLEARLY INDICATE PRESSURE CLASSIFICATIONS OF THE PROPOSED DUCT SYSTEMS IN ACCORDANCE WITH NYC MECHANICAL CODE.
- FOR HIGH-PRESSURE DUCT SYSTEMS THAT OPERATE AT A STATIC PRESSURE > 3 INCHES WATER GAUGE, DRAWINGS MUST SPECIFY THE DUCT LEAKAGE TEST REQUIREMENTS IN ACCORDANCE WITH THE SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL.

COMPRESSORS.
COMPRESSORS AND DRIVES LOCATED ONA FLOOR OTHER THAN A FLOOR ON GRADE SHALL BE MOUNTED ON VIBRATION ISOLATORS HAVING A MINIMUM ISOLATION EFFICIENCY OF 90 PERCENT AT THE LOWEST DISTURBING FREQUENCY. EACH ISOLATOR SHALL INCORPORATE A LEVELING DEVICE AND A RESILIENT PAD HAVING A MINIMUM THICKNESS OF 1/4INCH (6.4 MM).(MC 928.3.6)

NOTE 6.1.
AC CONDENSATE DRAIN DIAGRAM IS LOCATED ON THE PLUMBING DRAWINGS.

HEATING AND COOLING LOAD CALCULATIONS FOR DERIVING CORRECT EQUIPMENT SIZE ARE PERFORMED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA STANDARD 183 HVAC SYSTEMS AND EQUIPMENT HANDBOOK.

THE INTERIOR DESIGN TEMPERATURES USED FOR HEATING AND COOLING LOAD CALCULATIONS SHALL BE A MAXIMUM OF 72°F (22°C) FOR HEATING AND MINIMUM OF 75°F (24°C) FOR COOLING.

TABLE 6.2

REFRIGERANT OPERATING TEMPERATURES		
VRF PIPING	SUCTION LINE	LIQUID LINE
TEMPERATURE RANGE	35°F–50°F	70°F–90°F

PROTECTION OF PIPING INSULATION NOTE 4.2:

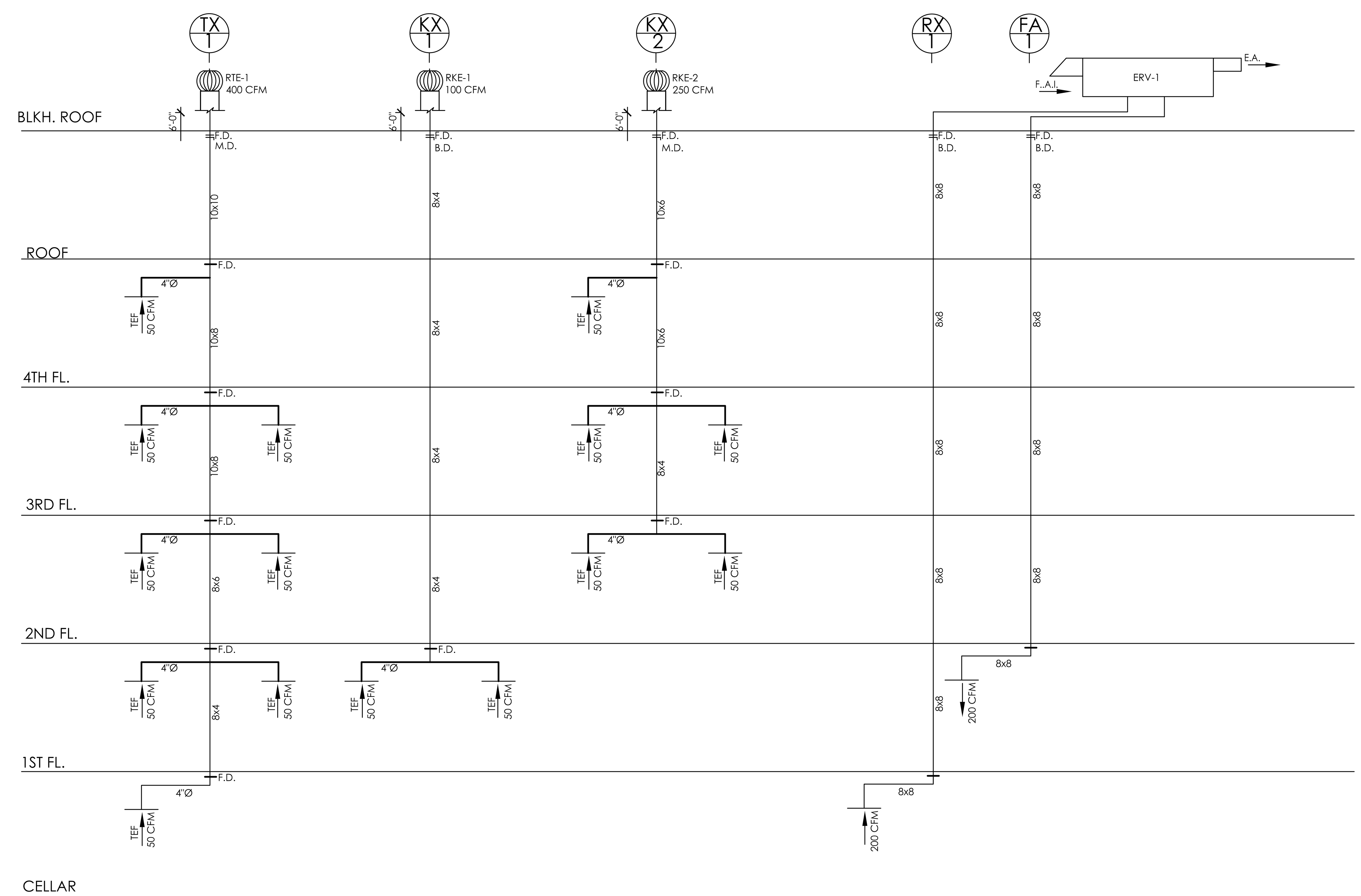
PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT CAUSED BY SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL.
ALUMINUM ROLL JACKETING IS THE PREMIER PROTECTIVE OUTER SURFACE COVERING FOR MECHANICAL INSULATION SYSTEMS INCLUDING PIPE, VESSELS, AND EQUIPMENT. IT PROTECTS THE INSULATION AND UNDERLYING PIPE/VESSEL FROM PHYSICAL DAMAGE, UV EXPOSURE, CORROSIVE ATMOSPHERES, AND WATER.
PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE BY ALUMINUM JACKET: ASTM B209 (ALL EXTERIOR REFRIGERANT PIPING SERVING AIR COOLED CONDENSER).

1. THICKNESS: 0.016-INCH SHEET.
2. FINISH: EMBOSSED.
3. JOINING: LONGITUDINAL SLIP JOINTS AND 2-INCH LAPS.
4. FITTINGS: 0.016-INCH THICK DIE SHAPED FITTING COVERS WITH FACTORY ATTACHED PROTECTIVE LINER.
5. METAL JACKET BANDS: 3/8 INCH WIDE; 0.010-INCH THICK STAINLESS STEEL.

(OR EQUAL MATERIAL)

TABLE 6.6

№	FAN #	TOTAL FANS	MANUFACTURER/ MODEL	AIR FLOW (CFM)	SP (IN)	SONES	MCA	VOLTAGE	FUSE	WEIGHT LBS	AHRI 1060
Energy Recovery Ventilator SCHEDULE — RENEWAIRE											
1	ERV-1	1	EV450RT-ECM	200	0.15	2.7	10.1 A	120/1/60	15	246.0	L85-G5



EXHAUST SYSTEMS RISER DIAGRAMS
N.T.S.

NOTE 12.1

1. ALL TOILET FANS OPERATIONAL 24/7.
2. ALL KITCHEN FANS OPERATIONAL 24/7.
3. ELECTRIC HEATER THERMOSTATS FOR COMMON SPACES, VESTIBULE AND UTILITY ROOMS, WILL BE PROGRAMMED TO KEEP A CONSTANT TEMPERATURE OF 50 DEGREES.
4. ELECTRIC HEATERS IN APARTMENT WILL BE MANUALLY CONTROLLED BY OCCUPANTS.

SHUTOFF DAMPERS ARE NOT REQUIRED AS PER SECTION 6.4.3.4.2 (EXCEPTION 5) OF THE 2020 NYC ECC APPENDIX CA (ASHRAE 90.1–2016)

EXCEPTION 5: SHUTOFF DAMPERS ARE NOT REQUIRED IN VENTILATION OR EXHAUST SYSTEMS THAT ARE REQUIRED BY THE NEW YORK CITY MECHANICAL CODE TO HAVE FANS THAT OPERATE CONTINUOUSLY, 24 HOURS PER DAY, 7 DAYS PER WEEK.
SEE NOTE 12.1 ON THIS PAGE.

STAIR AND ELEVATOR SHAFT VENTS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS THAT ARE CAPABLE OF AND CONFIGURED TO AUTOMATICALLY CLOSE DURING NORMAL BUILDING OPERATION AND ARE INTERLOCKED TO OPEN AS REQUIRED BY FIRE AND SMOKE DETECTION SYSTEM. (DAMPERS REQUIRED AS PER SECTION 6.4.3.4.1 – STAIRS AND ELEVATORS)

FAN MOTOR POWER LIMITATION (C403.8.1; C403.8.2; 6.5.3.1.1; 6.5.3.1.2):

- THAT EACH INDIVIDUAL FAN SYSTEM POWER IN THE HVAC SYSTEM DOES NOT EXCEED THE ALLOWABLE FAN SYSTEM MOTOR NAMEPLATE HORSEPOWER (OPTION 1), OR FAN SYSTEM BRAKE HORSEPOWER (OPTION 2).
- THE FAN BRAKE HORSEPOWER FOR EACH FAN LISTED ON THE SCHEDULE MUST BE ≤ THE FIRST AVAILABLE MOTOR SIZE GREATER THAN THE HP VALUE CALCULATED PER SECTION C403.8.2.

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NYC Buildings
Cyr Apolinar Garcia
APPROVED
Date: 08/21/2022

No.	DATE	DESCRIPTION

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

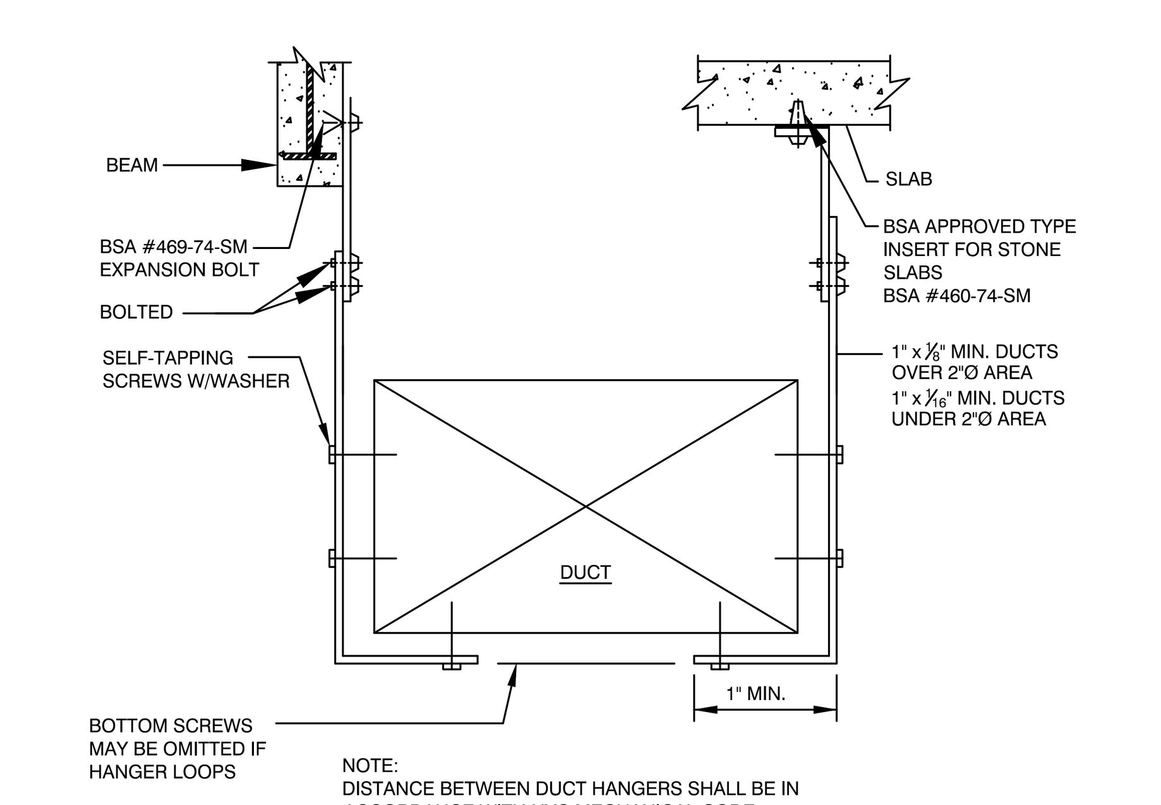
SCHEDULES

DOB NOW JOB No.
B00715872–S6

SEAL & SIGNATURE
STATE OF NEW YORK · DMITRY LEVIN · LICENSED PROFESSIONAL ENGINEER · 095837 · EXCELSIOR

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	MS-006.00
CAD FILE No.	06 OF 08

DETAIL 12.1

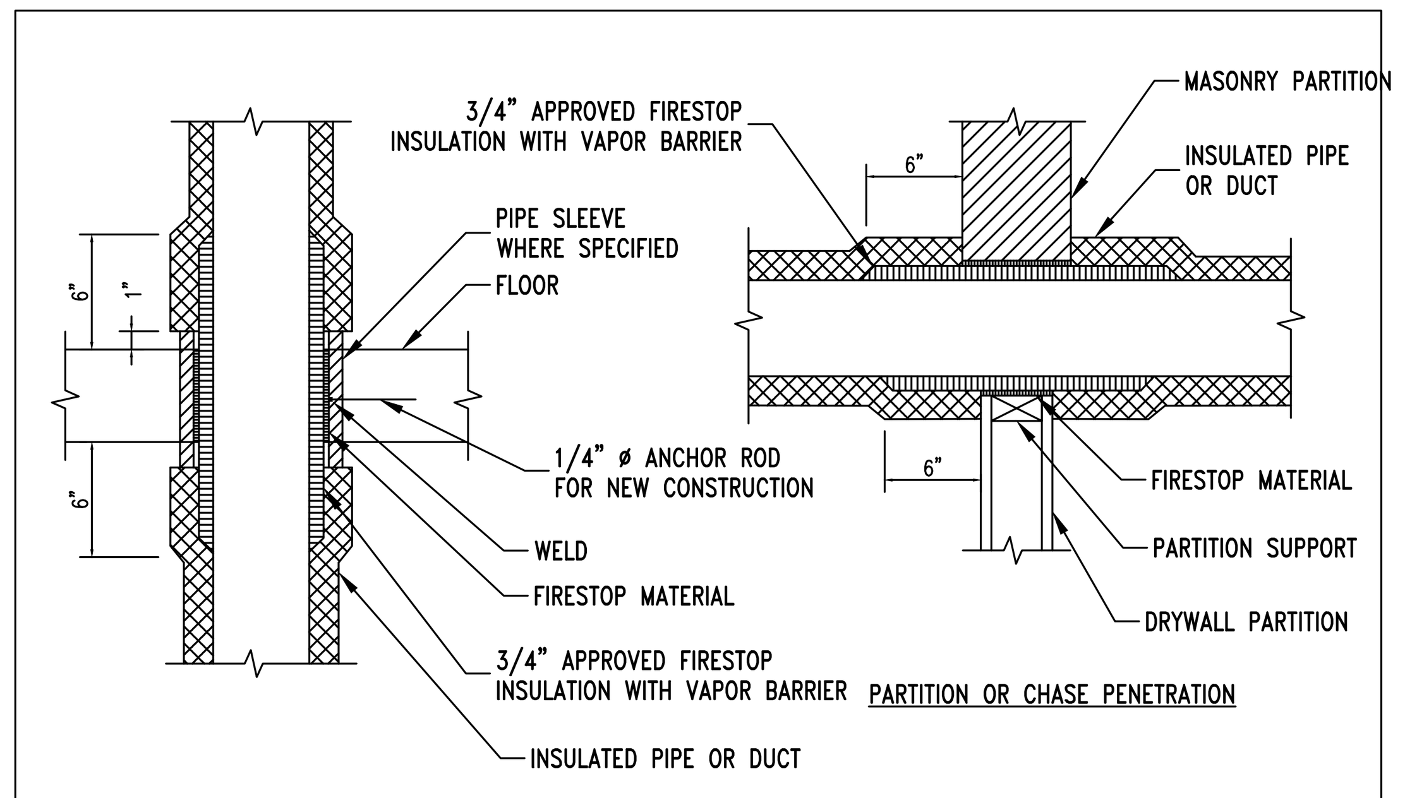


NOTE:
DISTANCE BETWEEN DUCT HANGERS SHALL BE IN ACCORDANCE WITH NYC MECHANICAL CODE

DUCT SIZE	HANGER SIZE	MAX. SPACING
Up to 2 sq. ft.	1" x 1/16"	8'-0"
2 to 8 sq. ft.	1" x 1/8"	6'-0"
over 8 sq. ft.	1" x 1/8"	4'-0"

DUCT HANGING DETAIL
NO SCALE

DETAIL 12.2

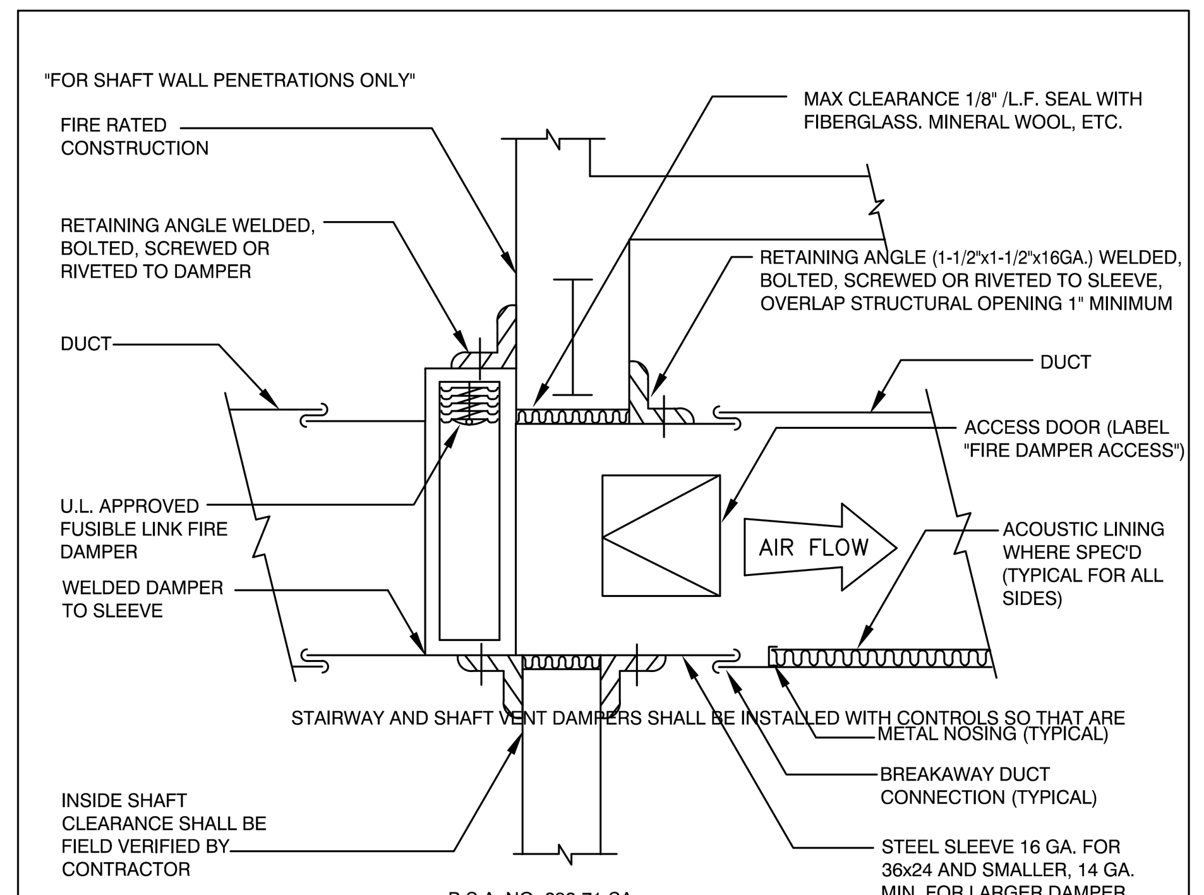


NOTE:

APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101. REFER TO SPECIFICATIONS SECTION 07 84 00, FIRE STOPPING SYSTEMS.

PIPE/DUCT PENETRATION OF SMOKE/FIRE BARRIERS
NOT TO SCALE

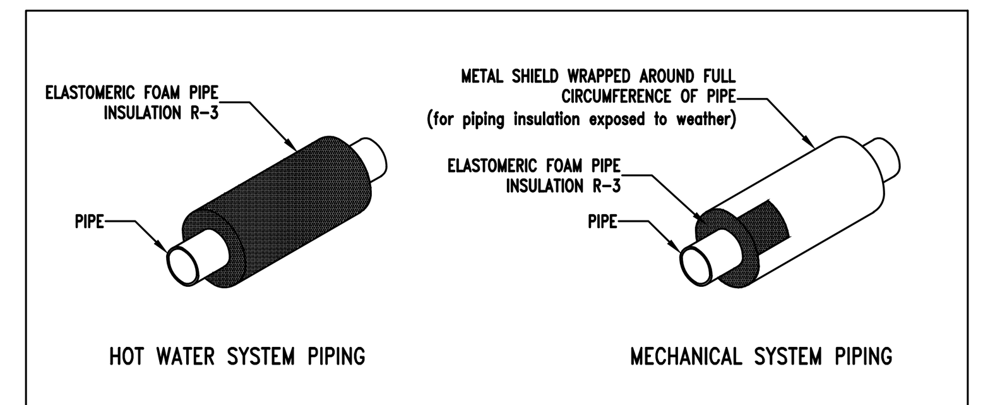
DETAIL 12.3



NOTE:
THE INSTALLATION OF FIRE STOPPING MATERIALS SHALL BE SUBJECT TO SPECIAL INSPECTIONS AND PROGRESS INSPECTIONS IN ACCORDANCE WITH NYC BLDG. CODE SECTIONS BC 1704.25 AND BC 109.3.4.

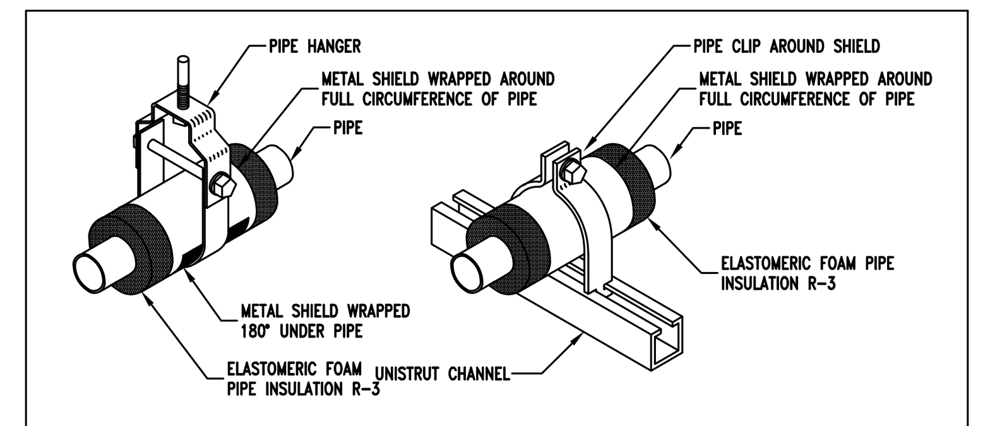
FIRE DAMPER DETAIL
NO SCALE

DETAIL 12.4



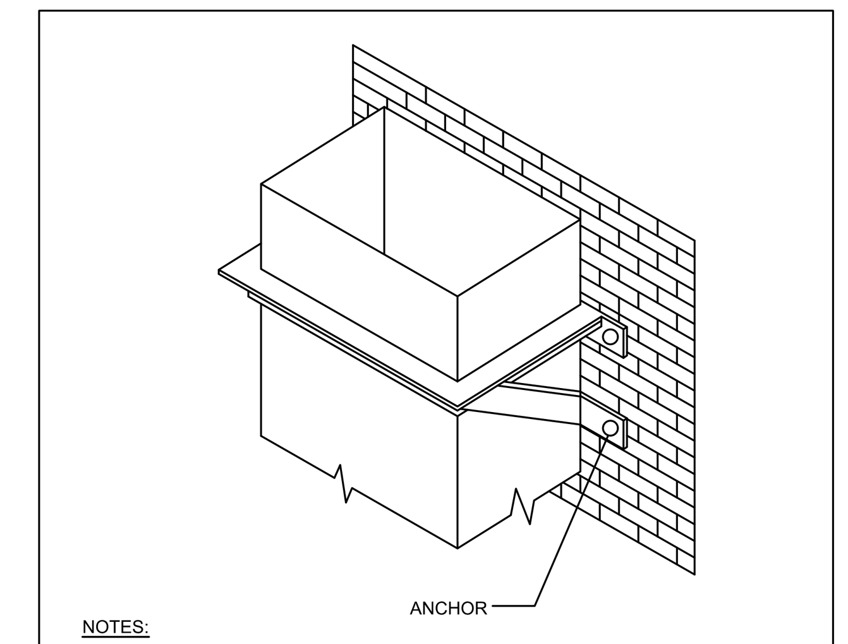
PIPING INSULATION DETAIL
NOT TO SCALE

DETAIL 12.5



TYPICAL PIPE SUPPORT DETAIL FOR INSULATED PIPE
NOT TO SCALE

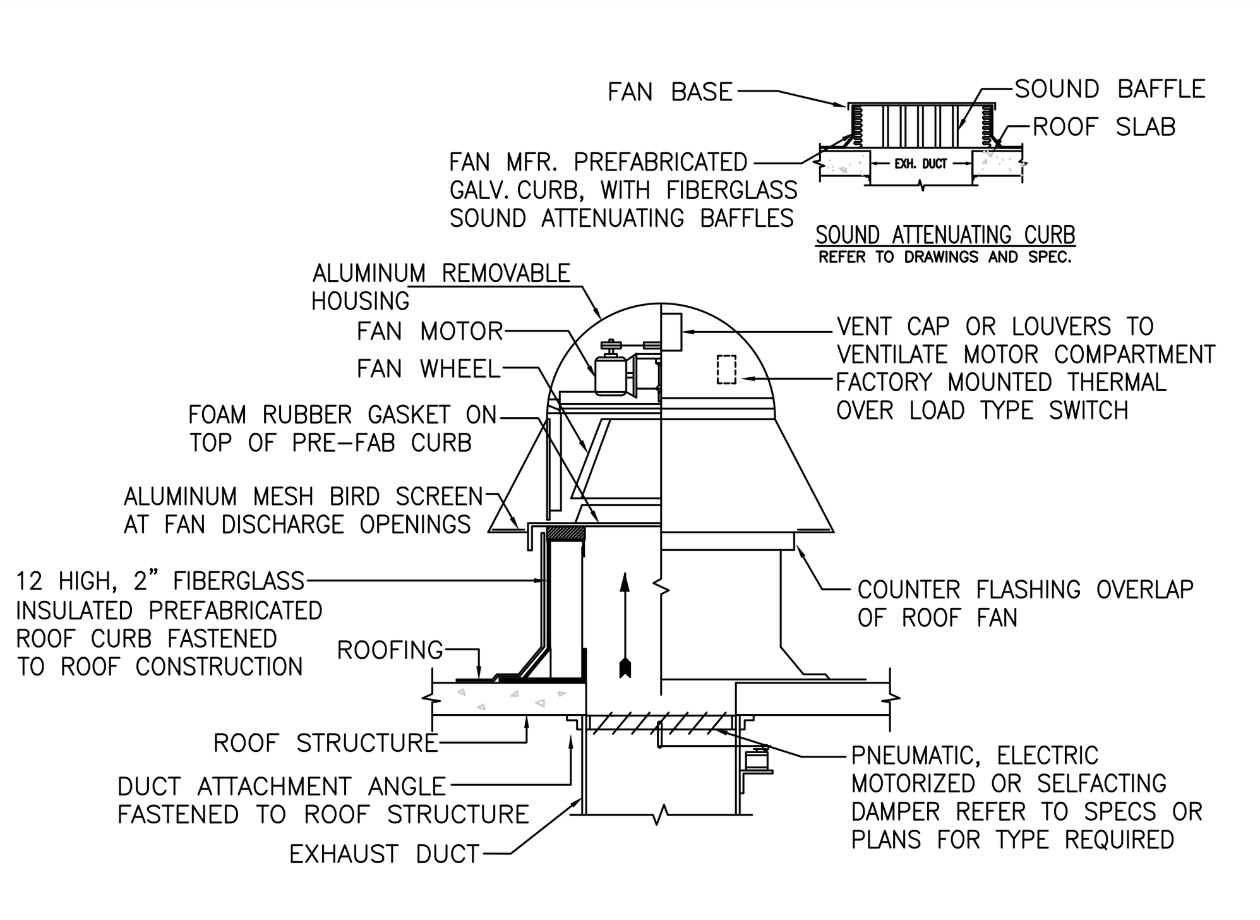
DETAIL 12.6



NOTES:
1. BRACKETS ARE SIZED FOR 12 FEET OF DUCT MAXIMUM.
2. LOCATE DUCTS AGAINST WALL OR MAXIMUM OF 2" AWAY FROM WALL.
3. EACH WALL ANCHOR SHALL SATISFY THE FOLLOWING CRITERIA UNLESS OTHER ANALYSIS IS MADE:
   A. TENSILE LOAD= 3/8 x DUCT WEIGHT; SAFETY FACTOR OF 4.
   B. SHEAR LOAD= 1/2 x DUCT WEIGHT; SAFETY FACTOR OF 4.

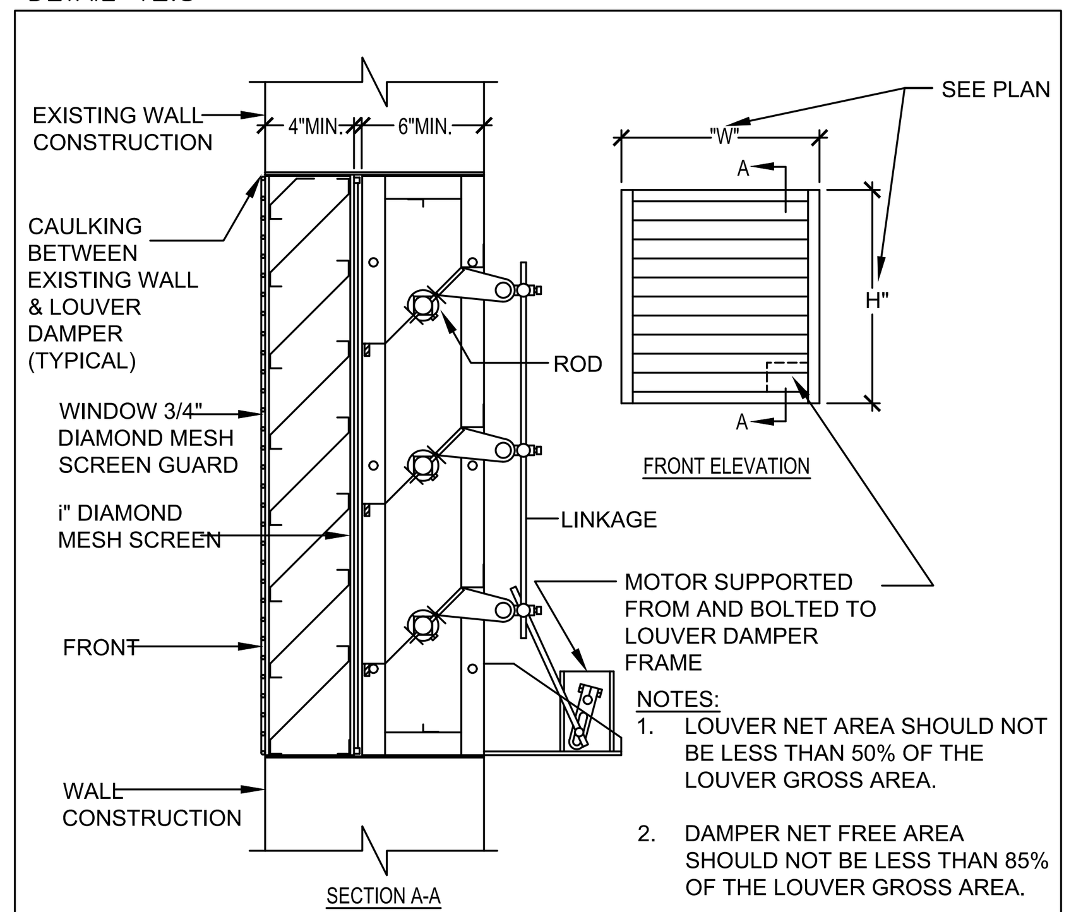
DUCT RISER SUPPORT DETAIL
NO SCALE

DETAIL 12.7



ROOF TYPE EXHAUST FAN (WITH PREFABRICATED CURB)
NO SCALE

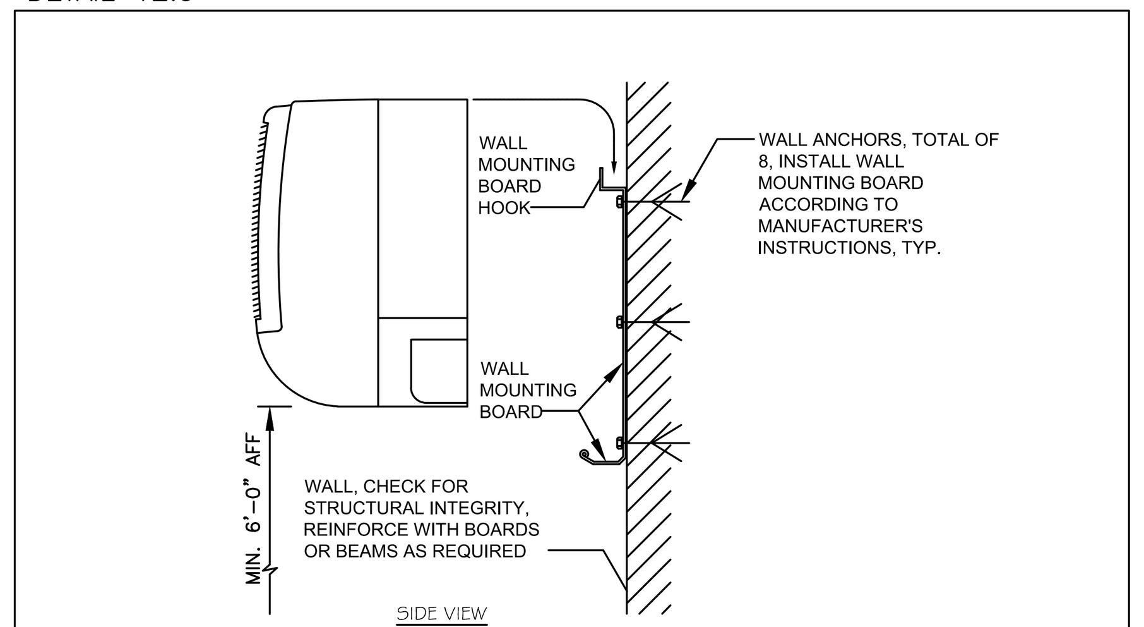
DETAIL 12.8



NOTES:
1. LOUVER NET AREA SHOULD NOT BE LESS THAN 50% OF THE LOUVER GROSS AREA.
2. DAMPER NET FREE AREA SHOULD NOT BE LESS THAN 85% OF THE LOUVER GROSS AREA.

MOTORIZED LOUVER DAMPER DETAIL
NO SCALE

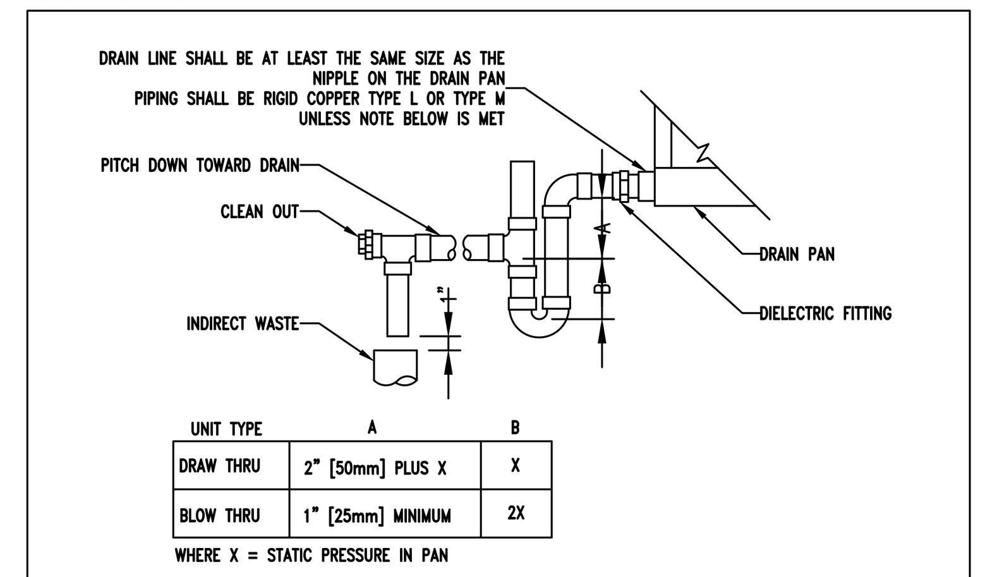
DETAIL 12.9



NOTES:
1. THIS DETAIL REFERS TO BASIS OF DESIGN MANUFACTURER ONLY.
2. INSTALL UNIT HORIZONTALLY LEVEL.
3. INSTALL UNIT IN POSITION ALLOWING FOR ALL REQUIRED CLEARANCES FOR INSTALLATION, MAINTENANCE AND PROPER AIRFLOW AS PER MANUFACTURER'S INSTRUCTIONS.
4. THIS DETAIL APPLIES TO INSTALLATIONS ON MASONRY TYPE WALLS ONLY.
5. FOR DRYWALL APPLICATIONS PROVIDE UNISTRUT INTERMEDIATE SUPPORTS AND SUITABLE FASTENERS.

WALL MOUNTED AC INDOOR UNIT SUPPORT DETAIL
NO SCALE

DETAIL 12.10



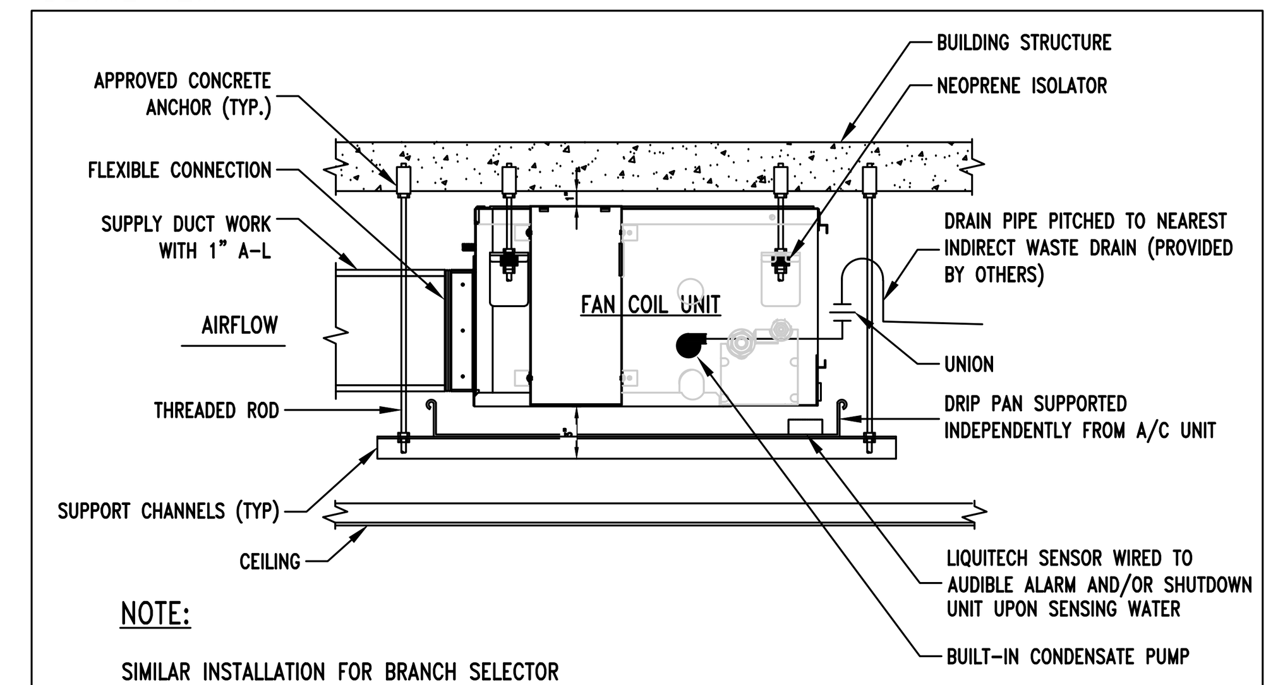
UNIT TYPE	A	B
DRAW THRU	2" [50mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

NOTES:
1. CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL VA AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS.
2. DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.

AIR HANDLING UNIT DRAIN TRAP DETAIL
NOT TO SCALE

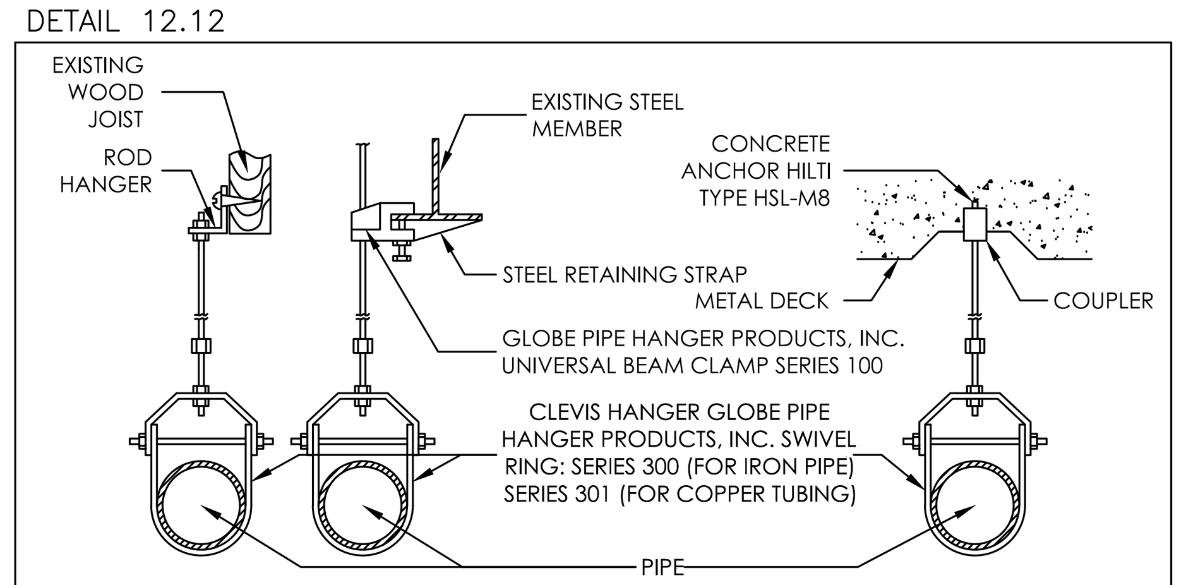
DETAIL 12.11



NOTE:
SIMILAR INSTALLATION FOR BRANCH SELECTOR

CEILING MOUNTED FAN COIL UNIT SUPPORT DETAIL
NOT TO SCALE

DETAIL 12.12

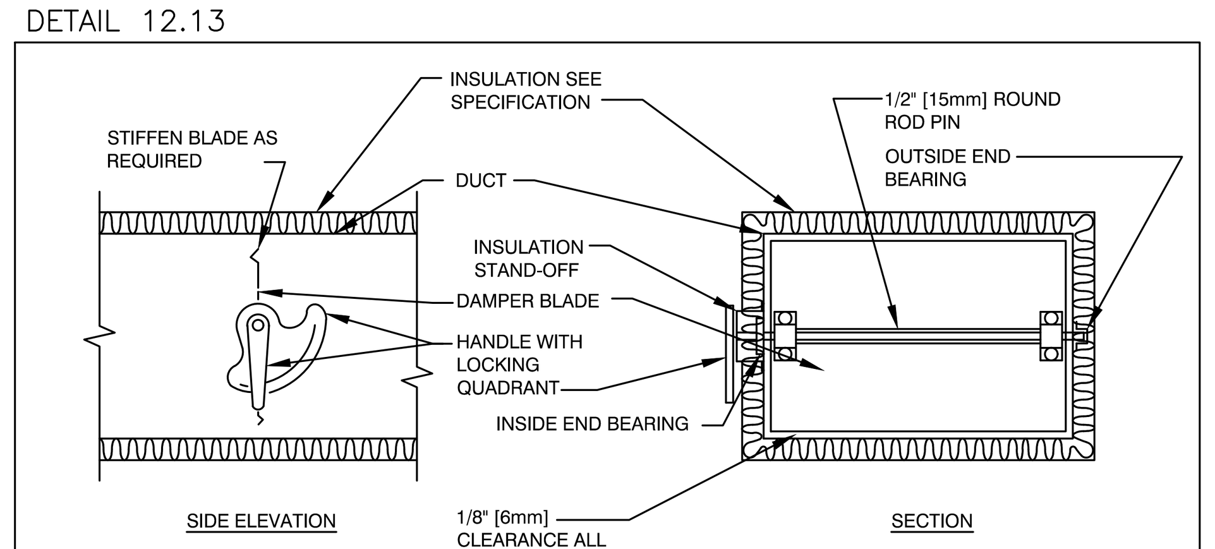


HANGER ROD SPACING AND SIZE SCHEDULE

NOM. PIPE SIZE (INCHES)	STEEL PIPE MAX. SPAN (FEET)	COPPER TUBE MAX. SPAN (FEET)	MINIMUM ROD DIAMETER (INCHES)
1	7	6	3/8
1-1/4	7	6	3/8
1-1/2	9	8	3/8
2	10	8	3/8
2-1/2	11	9	1/2
3	12	10	1/2
3-1/2	12	10	1/2
4	12	10	5/8, 1/2 FOR COPPER
5	12	10	5/8, 1/2 FOR COPPER
6	12	10	3/4, 5/8 FOR COPPER

FIRE PROTECTION PIPE HANGER DETAIL
NOT TO SCALE

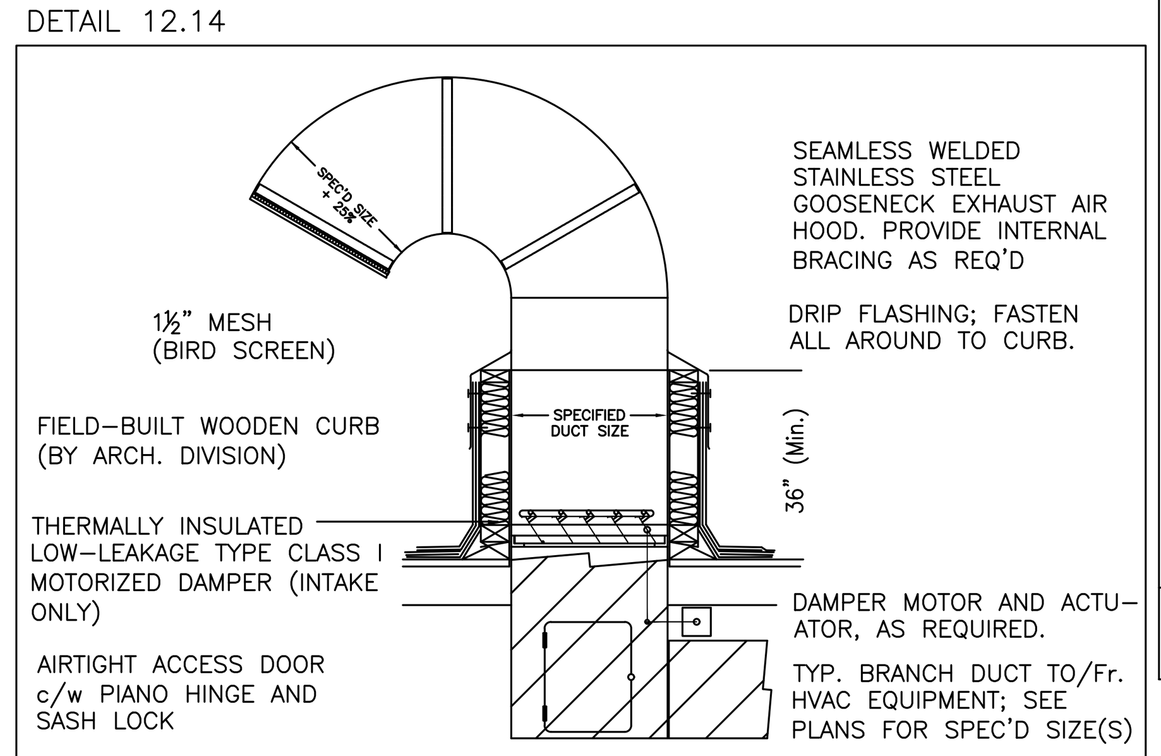
DETAIL 12.13



NOTES:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

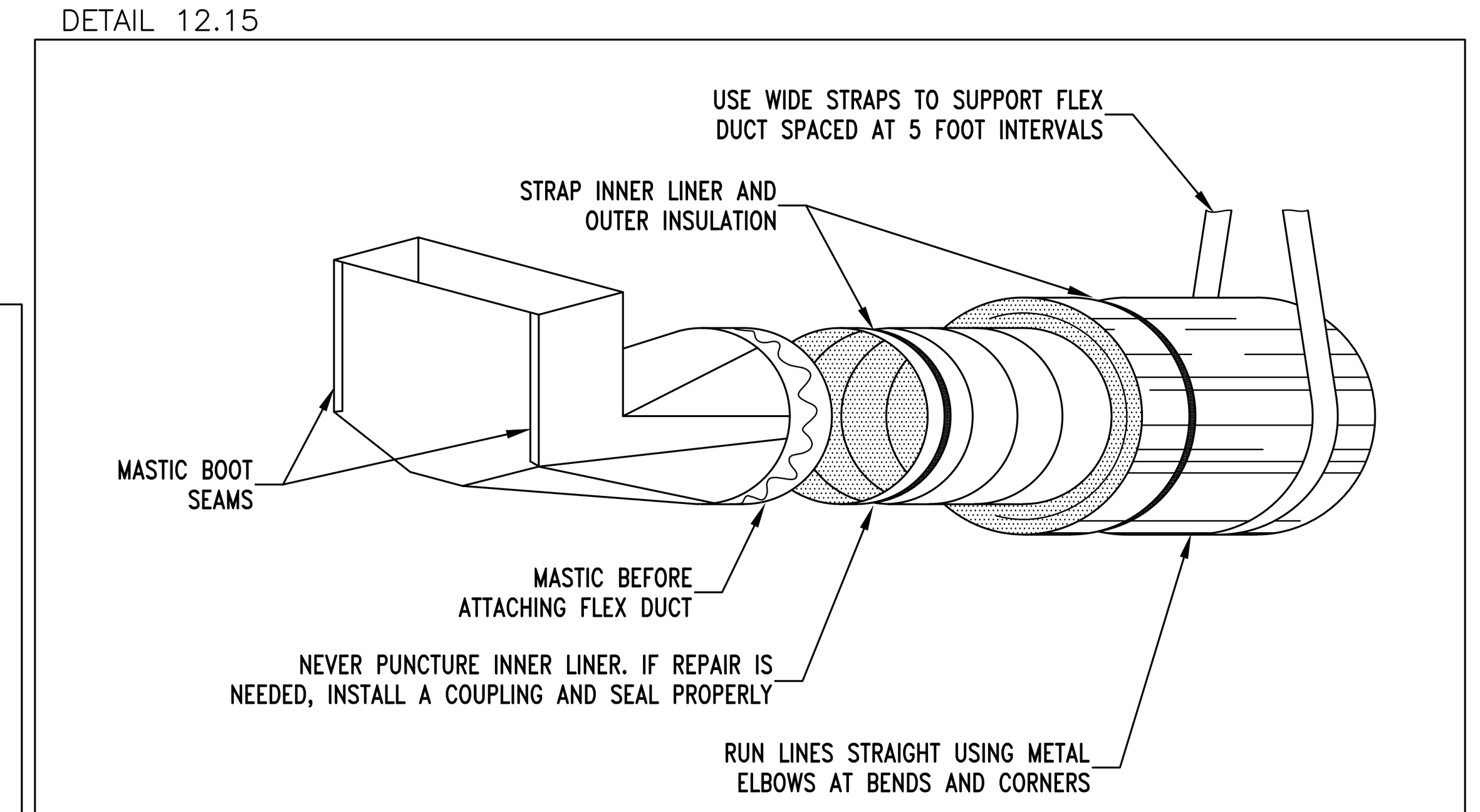
VOLUME DAMPER DETAIL
NO SCALE

DETAIL 12.14



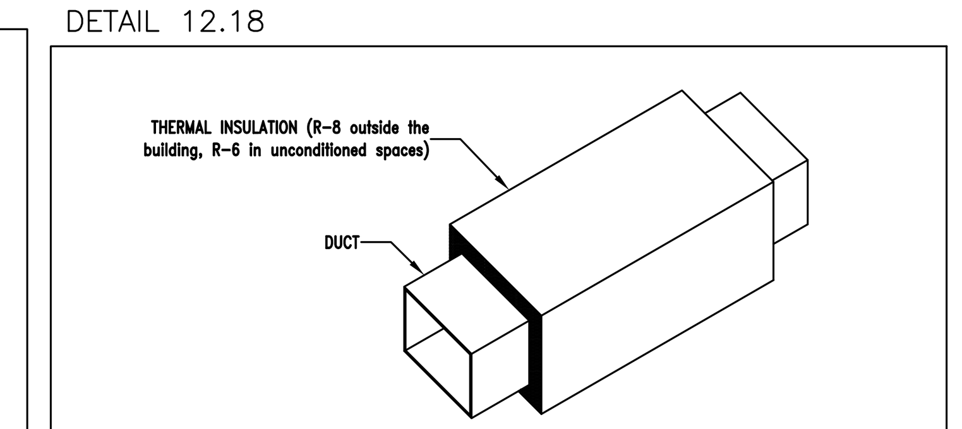
GOOSE NECK DETAIL
NO SCALE

DETAIL 12.15



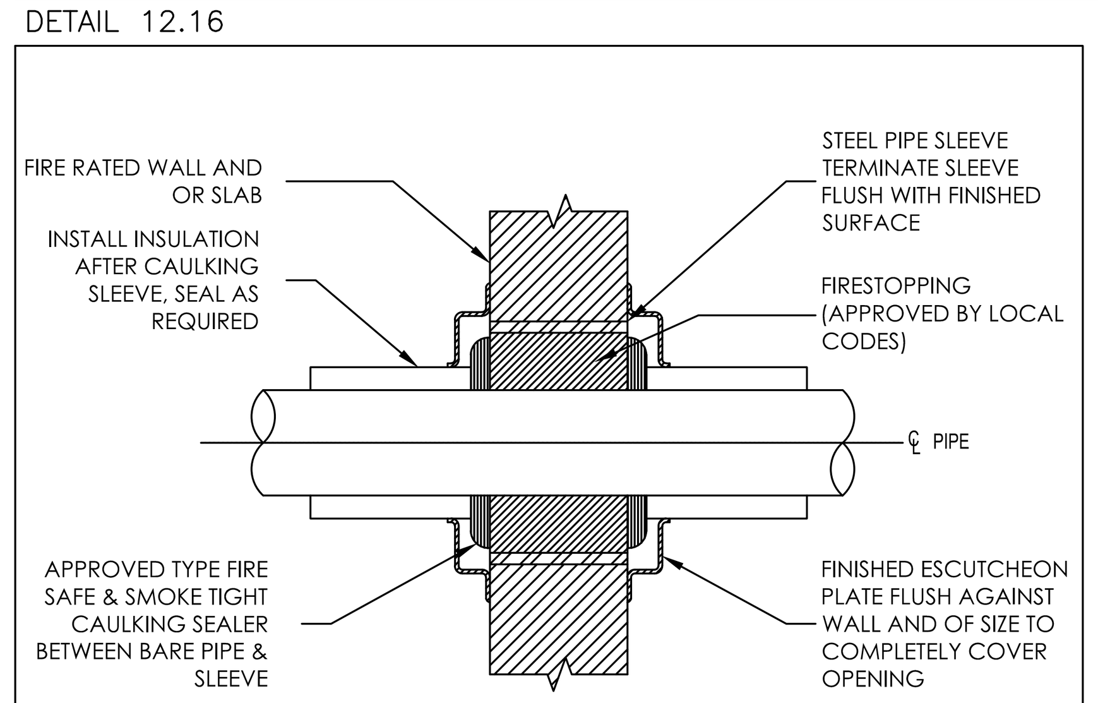
DUCT LINER DETAIL
NOT TO SCALE

DETAIL 12.18



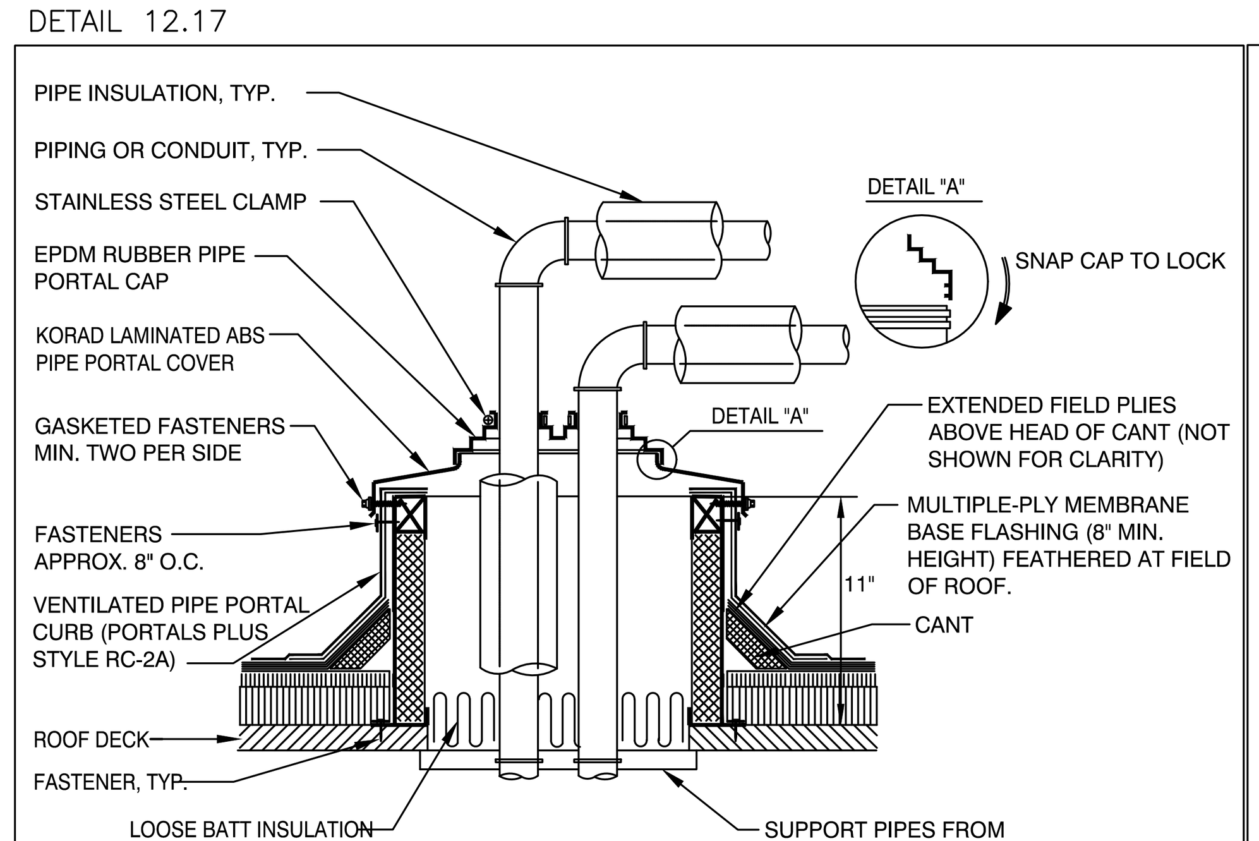
DUCT INSULATION DETAIL
NOT TO SCALE

DETAIL 12.16



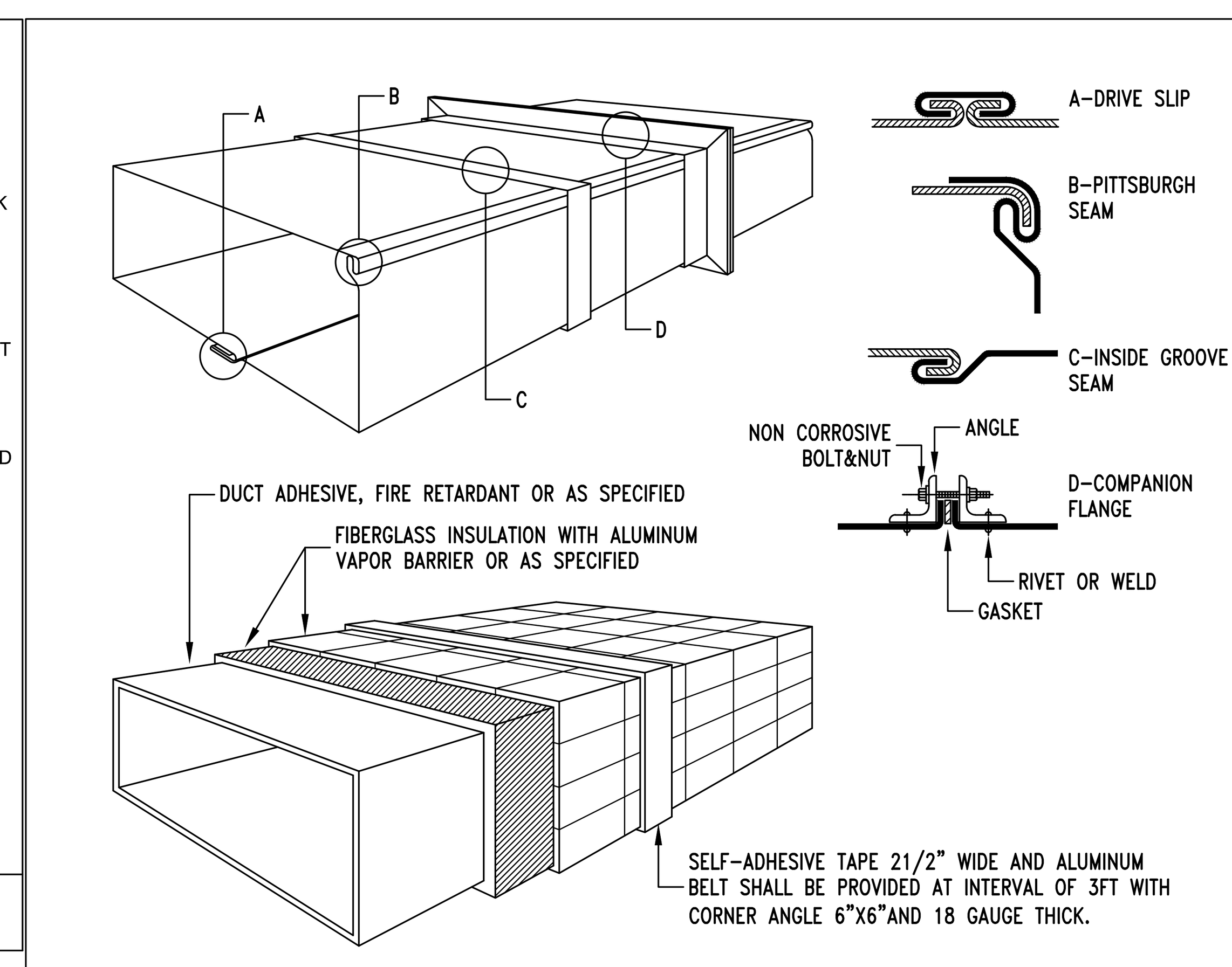
PIPE SLEEVE THRU FIRE RATED WALL
NOT TO SCALE

DETAIL 12.17

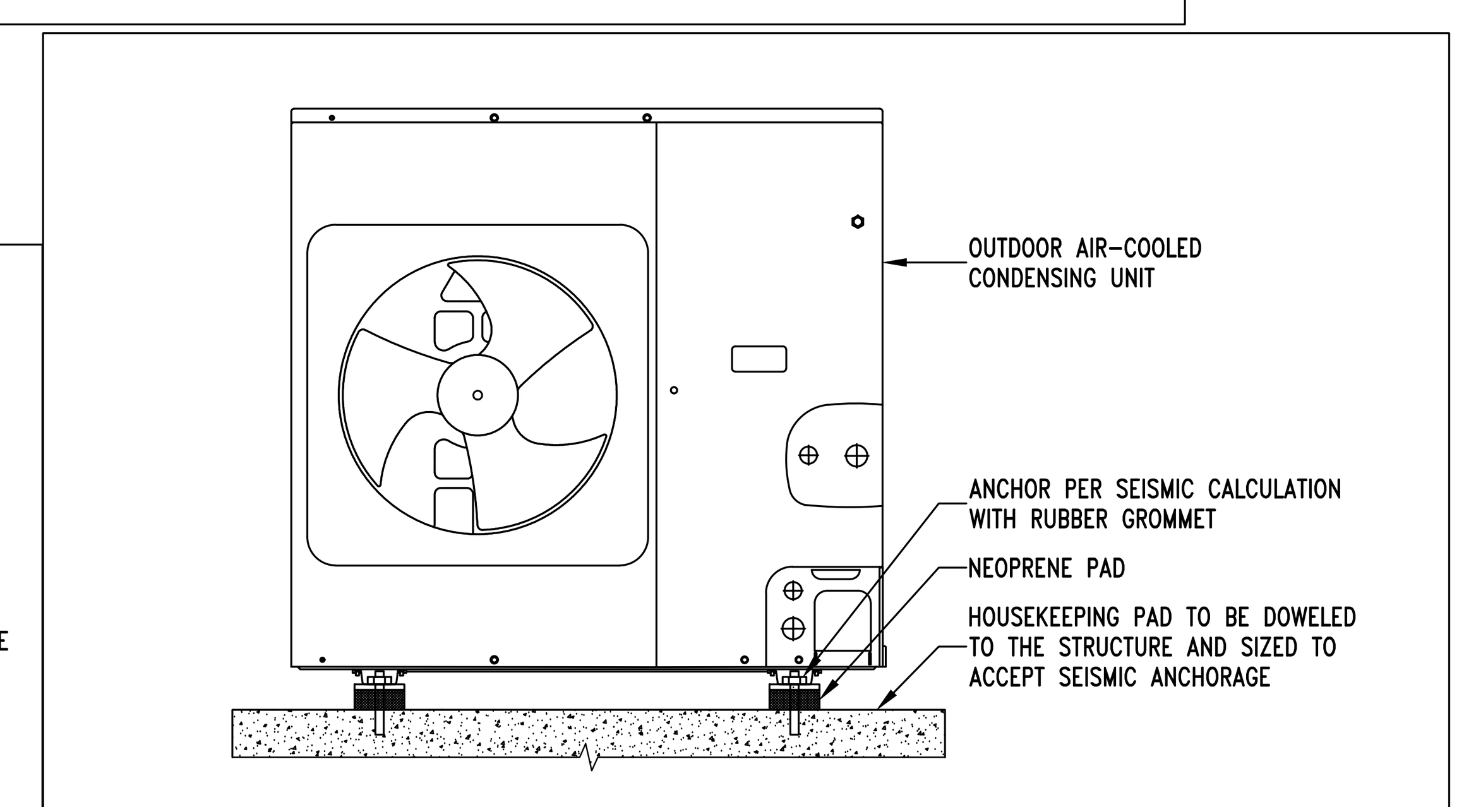


NOTES:
1. THIS DETAIL IS BASED ON PRODUCTS MANUFACTURED BY ROOF PRODUCTS & SYSTEMS CORP. AND PORTALS PLUS.
2. THIS DETAIL ILLUSTRATES THE METHOD OF GROUPING PIPING AND ELECTRICAL CONDUIT THAT MUST PENETRATE THE ROOF. REFER TO FLOOR PLANS AND COORDINATE WITH ELECTRICAL CONTRACTOR TO DETERMINE THE EXACT NUMBER OF PIPES AND CONDUITS.

REFRIGERANT PIPING ROOF PENETRATION DETAIL
NO SCALE



RECTANGULAR DUCT INSULATION
NOT TO SCALE



OUTDOOR CONDENSING UNIT MOUNTING DETAIL (GRADE)
NOT TO SCALE

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Cyr Apolinar Garcia
APPROVED

No.	DATE	DESCRIPTION

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

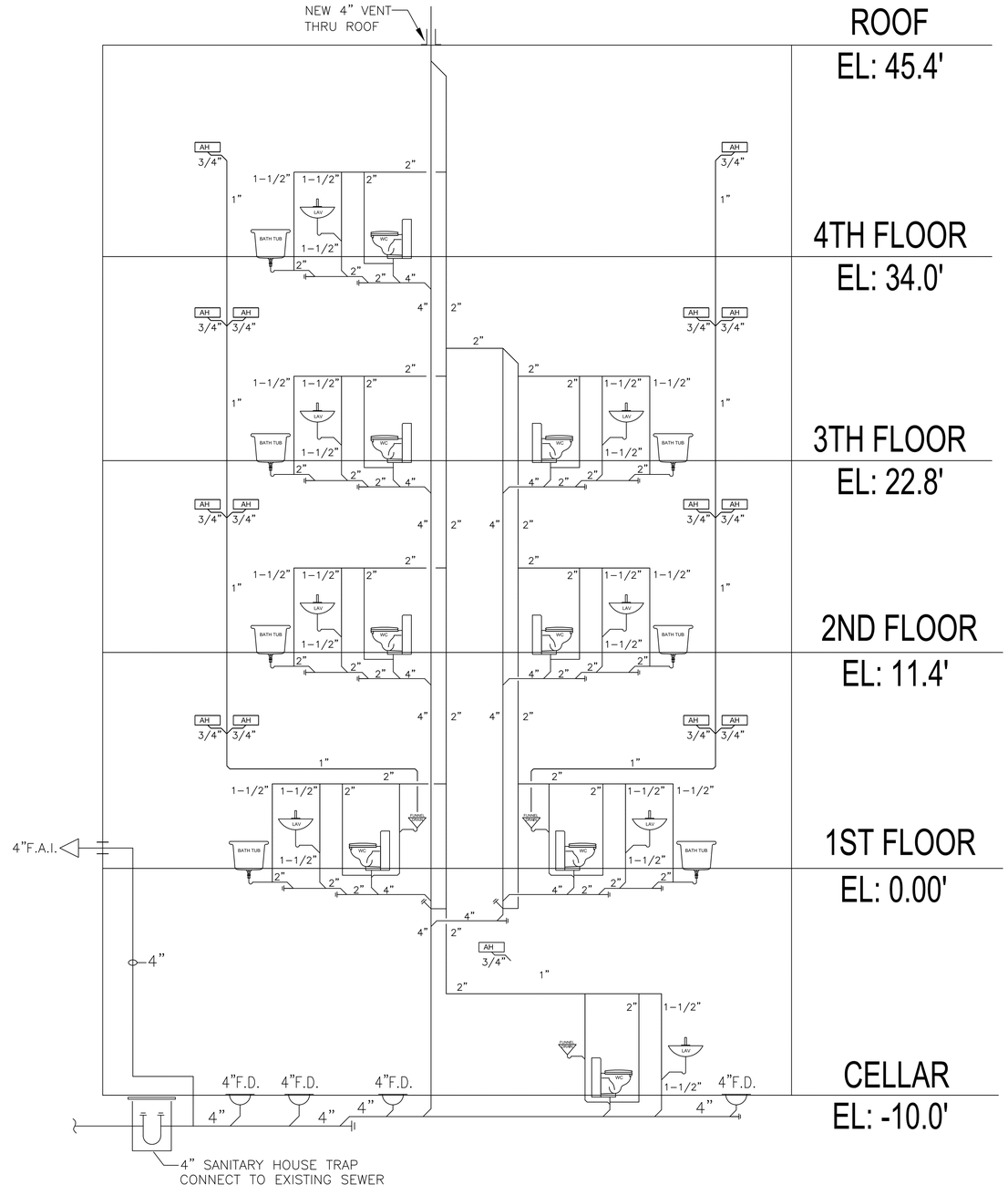
DETAILS

DOB NOW JOB No.
B00715872-S6

SEAL & SIGNATURE

STATE OF NEW YORK
DMITRY LEVIN
PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	MS-007.00
CAD FILE No.	07 OF 08



PART OF SANITARY RISER DIAGRAM WITH CONDENSATE DISCHARGE

SCALE: NONE

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No.	DATE	DESCRIPTION

Cyr Aguilar Garcia APPROVED

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

PART OF SANITARY RISER DIAGRAM WITH CONDENSATE DISCHARGE

DOB NOW JOB No.

B00715872-S6

SEAL & SIGNATURE

STATE OF NEW YORK · DMITRY LEVIN · 095837 · PROFESSIONAL ENGINEER

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	MS-008.00
CAD FILE No.	08 OF 08

PROFESSIONAL STATEMENT:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, ALL WORK UNDER THIS APPLICATION IS IN COMPLIANCE WITH THE NYCECC 2020.

TABLE II - PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE - COMMERCIAL BUILDING

	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER C6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB	MECHANICAL AND SERVICE WATER HEATING INSPECTIONS			
IIB2	SHUTOFF DAMPERS	AS REQUIRED DURING INSTALLATION	APPROVED CONSTRUCTION DOCUMENTS; AMCA 500D	C402.5.5, C403.7.7
IIB3	HVAC-R, COMMERCIAL KITCHEN EQUIPMENT, AND SERVICE WATER HEATING EQUIPMENT	PRIOR TO FINAL PLUMBING AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENT	C403.1, C403.2, C403.7.5, C404.2, C404.5, C404.9, C405.10, C406
IIB4	HVAC-R, AND SERVICE WATER HEATING SYSTEM CONTROLS	AFTER INSTALLATION AND PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403,C404,C406
IIB5	HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION	AFTER INSTALLATION AND PRIOR TO CLOSING SHAFTS, CEILING AND WALLS	APPROVED CONSTRUCTION DOCUMENTS	C403.11,C404.4, C405.5,MC603.9
IIB6	DUCT LEAKAGE TESTING, INSULATION AND DESIGN	AFTER INSTALLATION AND SEALING AND PRIOR TO CLOSING SHAFTS, CEILING AND WALLS	APPROVED CONSTRUCTION DOCUMENTS	C403.11
IID	OTHER			
IID1	MAINTENANCE INFORMATION	PRIOR TO SIGN-OFF OR ISSUANCE OF CERTIFICATE OF OCCUPANCY	APPROVED CONSTRUCTION DOCUMENTS	C408.11, C408.2.5.2, C408.3.2

THIS PROJECT DOES NOT REQUIRE COMMISSIONING AS PER C408 OF 2020 NYC ECC

HEATING AND COOLING LOADS

№	TAG #	TOTAL UNIT	COOLING CAPACITY, (MBH)	HEATING CAPACITY, (MBH)
1	CU–1	1	2.5 T (27.4)	27.6
1	CU–2	1	2.0 T (24.0)	25.0
1	CU–3	1	2.5 T (27.4)	27.6
1	CU–4	1	2.5 T (27.4)	27.6
2	CU–5	1	2.5 T (27.4)	27.6
3	CU–6	1	2.5 T (27.4)	27.6
4	CU–7	1	3.0 T (36.0)	45.0
5	CU–8	1	2.5 T (27.4)	27.6
6	CU–9	1	4.0 T (48.0)	54.0
7	EH–1	3	–	20.4
8	EL. WH	8	–	122.84
TOTAL COOLING:			272,400 BTU/h	
TOTAL HEATING:				432,840 BTU/h

SPECIAL INSPECTION:

MECHANICAL SYSTEM

TABULAR ENERGY ANALYSIS
(2020 ENERGY CONSERVATION CODE. CHAPTER C4 COMMERCIAL ENERGY EFFICIENCY)
CLIMATE ZONE 4A

MECHANICAL SYSTEM

NYCECC CITATION	PROVISION	ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIPTIVE VALUE	SUPPORTING DOCUMENTATION
C403.1.1	Calculation of heating and cooling loads	Minimum and maximum temperatures for interior design load calculations	Design loads are determined in accordance with the procedures described in the ASHRAE/ACCA 183.	Design loads shall be determined in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure using the design parameters specified in Chapter C3.	Note and Load calculation summary, MS-001
C403.3.1	Equipment sizing	Equipment sizing	Specified equipment sized within load calculation limits	The output capacity of heating and cooling equipment shall be not greater than that of the smallest available equipment size that exceeds the loads calculated in accordance with Section C403.1.1	
TABLE C403.3.2(1)	Minimum efficiency requirements: electrically operated unitary air conditioners and condensing units	MITSUBISHI ELECTRIC heat pump, without heat recovery, 24,000 Btu/h (condenser capacity)	15.0 SEER	13 SEER	AC units Schedule MS-006
		MITSUBISHI ELECTRIC heat pump, without heat recovery, 27,400 Btu/h (condenser capacity)	17.0 SEER		
		MITSUBISHI ELECTRIC heat pump, without heat recovery, 36,000 Btu/h (condenser capacity)	17.45 SEER		
		MITSUBISHI ELECTRIC heat pump, without heat recovery, 48,000 Btu/h (condenser capacity)	16.5 SEER		
C403.4.1	Thermostatic controls	Thermostats/humidistats for mechanical zones	One thermostat is provided for each zone	The supply of heating and cooling energy to each zone shall be controlled by individual thermostatic controls capable of responding to temperature within the zone	Thermostats shown on mechanical plans, MS-003 - MS-005
C403.4.2	Off-hour controls	Zones Control System	Each thermostat is programmable to meet requirements	Each zone shall be provided with thermostatic setback controls that are controlled by either an automatic time clock or programmable control system	See mechanical control sequences, Drawing MS-002.
C403.4.2.1	Thermostatic setback	Maintenance of zone temperature	Each thermostat is programmable to meet requirements	Thermostatic setback controls shall be configured to set back or temporarily operate the system to maintain zone temperatures down to 55°F or up to 85°F	See mechanical control sequences, Drawing MS-001,MS-002.
C403.2.4.2	Automatic setback and shutdown	Time clock or programmable controls	Each thermostat is programmable to meet requirements	Automatic time clock or programmable controls shall be capable of starting and stopping the system for seven different daily schedules per week and retaining their programming and time setting during a loss of power for not fewer than 10 hours. Additionally, the controls shall have a manual override that allows temporary operation of the system for up to 2 hours; a manually operated timer configured to operate the system for up to 2 hours; or an occupancy sensor	See mechanical control sequences, Drawing MS-001,MS-002.
C403.7.7	Shutoff dampers	Outside air intakes and exhaust opening control	Stairway and shaft vents are provided with motorized dampers to shut off when not in use. Other outdoor air intake and exhaust are provided with gravity (nonmotorized) dampers. Exception 3: Gravity (nonmotorized) dampers is permitted where the design exhaust capacity is not greater than 300 cfm.	Outdoor air intake and exhaust openings and stairway and shaft vents shall be provided with Class I motorized dampers. Stairway and shaft vent dampers shall be installed with automatic controls configured to open upon the activation of any fire alarm initiating device of the building's fire alarm system or the interruption of power to the damper	See mechanical Drawing MS-005.
C403.11.3	Piping insulation	Horizontal-Ducted A/H Piping serving Diameter-5/8" Piping insulation-1"	Piping insulation meets requirements. A). For piping smaller than 11/2 inches and located in partitions within conditioned spaces, reduction of these thicknesses by 1 inch shall be permitted.	Piping serving as part of a heating or cooling system shall be thermally insulated in accordance with Table C403.11.3	See mechanical Drawing MS-001.
C408.2	System Commissioning	Total system cooling capacity = 272.400 btu/h Total system heating capacity = 432.840 btu/h	HVAC system does not require commissioning	System commissioning exceptions: The total mechanical equipment capacity is more than 480,000 btu/h cooling capacity and 600,000 btu/h combined service water-heating and space-heating capacity	SEE MECHANICAL DRAWING MS-006.
C403.7.4	Energy recovery ventilation systems	Energy recovery ventilation systems ERV-1	Energy recovery ventilation systems ERV-1, 200 CFM	Where the supply airflow rate of a fan system exceeds the values specified in Tables C403.7.4(1) and C403.7.4(2), the system shall include an energy recovery system. The energy recovery system shall be configured to provide a change in the enthalpy of the outdoor air supply of not less than 50 percent of the difference between the outdoor air and return air enthalpies, at design conditions. Where an air economizer is required, the energy recovery system shall include a bypass or controls that permit operation of the economizer as required by Section C403.5.	SEE MECHANICAL DRAWING MS-005,MS-006.
C403.11.1	Duct and plenum insulation		Exception: Where the design temperature difference between the interior and exterior of the duct or plenum is not greater than 15°F (8°C). (C403.11.1)	Supply and return air ducts and plenums must be designed as follows: - location: in unconditioned space. requirement: insulated with min. R-6 insulation - location: outside the building. requirement: insulated with min. R-8 insulation - location: within a building envelope assembly. requirement: separated from the building exterior or unconditioned space by min. R-8 insulation	SEE MECHANICAL DRAWING MS-001, MS-006, MS-007.
C403.11.2	Duct system sealing		Duct system sealing meets requirements	Joints, seams and connections of ducts, air handlers, and filter boxes must be sealed. Drawings must clearly indicate pressure classifications of the proposed duct systems in accordance with nyc mechanical code. For high-pressure duct systems that operate at a static pressure > 3 inches water gauge, drawings must specify the duct leakage test requirements in accordance with the smacna hvac air duct leakage test manual.	SEE MECHANICAL DRAWING MS-001, MS-006, MS-007.
C403.2.2	Ventilation		Ventilation system is provided in accordance with Chapter 4 of the New York City Mechanical Code and M.C. Table 403.3	Ventilation, either natural or mechanical, shall be provided in accordance with Chapter 4 of the New York City Mechanical Code. Where mechanical ventilation is provided, the system shall provide the capability to reduce the outdoor air supply to the minimum required by Chapter 4 of the New York City Mechanical Code.	SEE MECHANICAL DRAWING MS-001, MS-006, MS-007.

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NYC Buildings — Cyr Apolinar Garcia APPROVED Date: 08/21/2022

No.	DATE	DESCRIPTION

PROJECT

920 METROPOLITAN AVE, BROOKLYN, NY 11211

DRAWING TITLE

HVAC ENERGY ANALYSIS

DOB NOW JOB No. EN–B00715872–S6

SEAL & SIGNATURE: STATE OF NEW YORK · DMITRY LEVIN · LICENSED PROFESSIONAL ENGINEER · 095837 · EXCELSIOR

DATE:	11-17-21
DRAWN BY:	V.B.
CHK BY:	D.L.
DWG. NO.:	EN-001.00
CAD FILE No.	01OF 01

PLUMBING SPECIFICATION

1. GENERAL CONDITIONS

THE PROVISIONS OF DIVISION 1 SHALL APPLY TO THE WORK OF THIS SECTION.

2. GENERAL

A. CONTRACTOR SHALL PROVIDE PROOF OF ADEQUATE INSURANCE TO HOLD OWNER, ARCHITECT, AND ENGINEER HARMLESS FOR ANY LIABILITY CLAIMS ARISING FROM PERFORMANCE OF HIS WORK.

B. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT UNNECESSARY DAMAGE TO BUILDING STRUCTURE AND PROTECT BUILDING OCCUPANTS.

C. CONTRACTOR SHALL VISIT JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS RELATIVE TO THE INSTALLATION OF THE WORK. NO ALLOWANCE WILL BE MADE FOR HIS FAILURE TO DO SO.

D. CONTRACTOR SHALL REVIEW THE PLANS OF OTHER TRADES AND COORDINATE HIS WORK TO PROVIDE FOR ADEQUATE SPACE AND CLEARANCES AS THE WORK PROGRESSES.

E. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH RULES AND REGULATIONS OF NEW YORK CITY BUILDING CODE, BASE BUILDING STANDARDS AND ALL OTHER AUTHORITIES HAVING JURISDICTION.

F. CONTRACTOR SHALL PAY ALL FEES, OBTAIN ALL NECESSARY PERMITS, AND COORDINATE UTILITY WORK.

G. ALL PIPING SHALL BE CONCEALED WITHIN THE HUNG CEILINGS ALL WALLS. NO EXPOSED PIPING WILL BE ALLOWED.

H. ROUGHING AND FINAL CONNECTIONS TO EQUIPMENT WHICH IS FURNISHED BY OTHERS SHALL BE INSTALLED BY THIS CONTRACTOR.

I. FOR EXACT LOCATION OF PARTITIONS, CEILING HEIGHTS, SOFFITS, ETC., REFER TO THE ARCHITECTURAL DRAWINGS.

J. WASTE LINES INSTALLED AT CEILING OF SPACE BELOW THE FLOOR SHALL BE RUN TIGHT TO SLAB OR BOTTOM OF BEAMS.

K. THE CONTRACTOR SHALL RUN ALL PIPING AS REQUIRED TO PERFORM ALL WORK SHOW IN THE DRAWINGS AND COORDINATE LOCATIONS OF EXISTING DRAINAGE, WATER SUPPLY, ETC. AS REQUIRED TO COMPLETE ALL PLUMBING WORK SHOWN.

L. THE WORK UNDER THIS CONTRACT SHALL BE PERFORMED SIMULTANEOUSLY WITH THE WORK OF OTHER TRADES, SO AS NOT TO DELAY THE OVERALL PROGRESS OF WORK.

3. SHOP DRAWING SUBMISSIONS

APPROVAL PRIOR TO PURCHASE.

A. SIX (6) COPIES OF FIXTURES MANUFACTURER'S DATA SHALL BE SUBMITTED FOR

4. SCOPE OF WORK

A. FURNISH AND INSTALL ALL LABOR AND MATERIALS FOR INSTALLATION OF:
1) DRAINAGE AND VENT PIPING
2) HOT AND COLD WATER PIPING
3) ROUGHING AND FINAL CONNECTIONS FOR EQUIPMENT FURNISHED BY OTHERS
4) FURNISH AND INSTALL NEW PLUMBING FIXTURES.

5. PIPE INSTALLATION

A. ALL PIPING SHALL BE INSTALLED IN AN APPROVED MANNER.

B. DRAIN LINES SHALL HAVE REQUIRED UNIFORM SLOPE OF 1/4" PER FOOT MINIMUM. 1/8" PER FOOT WILL BE PERMITTED ON MAIN DRAIN LINES WHERE REQUIRED TO MAINTAIN CLEARANCES. ALL PIPING SHALL BE AMPLY SUPPORTED TO PREVENT ANY SAGGING OR BOWING.

C. WATER PIPING SHALL BE RUN PARALLEL TO BUILDING WALLS, AND SHALL BE AMPLY SUPPORTED. PROVIDE STOP VALVES AT ALL EQUIPMENT AND FIXTURES. PROVIDE SECTION SHUTOFF VALVE AT CONNECTIONS TO EXISTING PIPING.

D. CONTRACTOR SHALL PERFORM ALL NECESSARY CUTTING AND ROUGH PATCHING FOR THE ADMISSION OF HIS WORK.

6. MATERIALS

A. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS.

B. PIPING: WHERE POSSIBLE PIPE MATERIALS SHALL MATCH EXISTING PIPE MATERIALS OR SHALL BE AS FOLLOWS:

SOIL, WASTE, OR VENT PIPING – CAST IRON "NO–HUB" PIPE AND FITTING (CISPI 301) ABOVE GROUND.

WATER PIPING – TYPE "L" COPPER TUBING "HARD TEMPER" WITH CAST BRASS SOLDER FITTINGS. NIBCO OR APPROVED EQUAL.

C. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH SCREWED MALLEABLE IRON FITTINGS.

D. VALVES – VALVES ON WATER PIPING SHALL BE ALL BRONZE AS MANUFACTURED BY MILWAUKEE VALVE COMPANY , OR NIBCO. VALVES ON GAS PIPING SHALL BE WALWORTH LUBRICATED PLUG VALVES.

E. ALL HORIZONTAL STORM AND WASTE PIPING CONCEALED WITHIN HUNG CEILINGS OR WALLS AND ALL HOT AND COLD WATER PIPING SHALL BE INSULATED WITH CERTAINTEED OR APPROVED EQUAL 2" THICK FIBERGLASS INSULATION WITH ALL SERVICE JACKET (ASJ).

7. PLUMBING FIXTURES

ALL PLUMBING FIXTURES SHALL BE FIRST QUALITY UNBLEMISHED AND SHALL INCLUDE ALL PERTINENT OPERATION DEVICES. COLORS SHALL BE AS SELECTED BY ARCHIRETECT. ALL FIXTURES AMERICAN STANDARD UNLESS OTHERWISE INDICATED.

8. TESTING

A. ALL NEW INSTALLED SANITARY, HOT AND COLD WATER PIPING SHALL BE THOROUGHLY TESTED IN ACCORDANCE WITH N.Y. CITY BUILDING CODE OF 2014.

WATER RISER DIAGRAM NOTES

1. INSTALLATION SHALL BE INSTALLED IN STRICT CONFORMITY WITH ALL REQUIREMENTS OF THE NEW YORK CITY PLUMBING CODE AND ALL PERTINENT REFERENCE STANDARDS GOVERNING WATER WORK.

2. WATER INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE LOCAL AUTHORITIES REQUIREMENTS.

3. ALL WATER SUPPLIES SHALL BE OVER THE RIM SUPPLY OR SHALL BE PROVIDED WITH APPROVED TYPE VACUUM BREAKERS INCLUDING ALL WATER CLOSET FLUSH VALVES AND HOSE BIB CONNECTIONS.

4. ALL WATER PIPING SHALL BE SIZED TO PRODUCE VELOCITIES NOT IN EXCESS OF 8" PER SECOND AND SHALL HAVE A MINIMUM OF 8 P.S.I. AT EVERY FIXTURE.

5. EXPANSION LOOPS AND ANCHORS SHALL BE PROVIDED FOR EXPANSION IS HOT RECIRCULATING PIPING LINES.

6. ALL CONNECTIONS TO EQUIPMENT OF DISSIMILAR MATERIAL SHALL BE PROVIDED WITH DIELECTRIC UNIONS.

7. PROVIDE VALVES ON ALL BRANCH LINES TO EACH FIXTURE AND EQUIPMENT INCLUDING BRANCHES FROM MAINS AND FROM RISER. ALL RISER AND MAINS SHALL BE PROVIDED WITH VALVES.

8. WHERE BRANCH SUPPLIES ARE TRAPPED AT LOW POINTS, AND WHERE BRANCH OR MAINS SUPPLY FIXTURES OR EQUIPMENT LOCATED HIGHER THAN SUPPLY MAIN, PROVIDE DRAIN BIBS ON LINE.

9. FIXTURES PROVIDED BY G.C. ARE TO BE INSTALLED AND SET BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL TRAPS, TRIM NOT PROVIDED BY THE G,C, AND SHALL CONNECT ALL FIXTURES, EQUIPMENT AND MAKE FINAL CONNECTIONS.

10. THIS CONTRACTOR SHALL CONNECT AND PROVIDE ALL NECESSARY SERVICES TO ALL FIXTURES AND EQUIPMENT INDICATED ON THE PLUMBING AND ARCHITECTURAL DRAWINGS.

11. PLUMBING CONTRACTOR TO COORDINATE LAYOUT WITH THE KITCHEN EQUIPMENT SUPPLIER.

GENERAL NOTES

1. PROVIDE NEW BUILDING SERVICES AND CONNECT THEM TO EXISTING STREET MAINS.

2. CONNECT NEW WASTE, VENT AND COLD WATER SERVICES TO NEW BUILDING SERVICES. FIELD VERIFY EXACT LOCATION OF PIPING FOR EXACT LOCATION OF POINT OF CONNECTION.

3. ALL DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS BEFORE STARTING ANY WORK.

4. ALL NEW CONNECTIONS TO SERVICES SHALL BE MADE IN AN APPROVED MANNER.

5. BEFORE SUBMITTING PROPOSAL, BIDDERS SHALL CAREFULLY EXAMINE FIELD CONDITIONS AND CONTRACT DRAWING OF ALL TRADES. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT REQUIRED EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED DUE TO DIFFICULTIES, WHICH COULD HAVE BEEN FORESEEN, WILL NOT BE RECOGNIZED.

PLUMBING SYSTEM AND EQUIPMENT SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE 2014 NEW YORK CITY BUILDING CODE AND THE 2014 NEW YORK CITY PLUMBING CODE.

THE ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB–CONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR REVIEW BEFORE PROCEEDING WITH FABRICATION.

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

NO CHANGE IN USE, EGRESS OR OCCUPANCY UNDER THIS APPLICATION.

PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE – COMMERCIAL BUILDING NYCECC–2020

	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB	MECHANICAL AND SERVICE WATER HEATING INSPECTIONS			
IIB3	HVAC AND SERVICE WATER HEATING EQUIPMENT	PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403.1, C403.2, C403.3, C403.7.5, C404.2, C404.5, C404.9, C405.10, C406;
IIB4	HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS	AFTER INSTALLATION AND PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403, C404, C406;
IIB5	HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION	AFTER INSTALLATION AND PRIOR TO CLOSING SHAFTS, CEILING AND WALLS	APPROVED CONSTRUCTION DOCUMENTS	C403.11, C404.4, C405.5
IID	OTHER			
IID1	MAINTENANCE INFORMATION	PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C408.1.1, C408.2.5.2, C408.3.2;

SYMBOLS LIST & ABBREVIATIONS

	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	HOT WATER RETURN PIPING (HWR)
	VENT PIPING
	WASTE OR SANITARY PIPING UNDER FLOOR
	BALL VALVE
	CHECK VALVE
	SHUT–OFF VALVE
	CHECK VALVE
	BALANCING VALVE
	SOLINOID VALVE
	CLEANOUT
FD	FLOOR DRAIN
	VACUUM BREAKER
V.	VENT
W.	WASTE
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	GPM	GALLON PER MINUTE
FFS	FLOOR SINK W/FUNNEL	IN.	INCHES
APPROX	APPROXIMATE	IW	INDERECT WASTE
ARCH	ARCHITECTURAL	HB	HOSE BIBB
&	AND	HW	HOT WATER
@	AT	HWR	HOT WATER RECIRCULATING
BFF	BELOW FINISHED FLOOR	MIN	MINIMUM
BLDG	BUILDING	#, NO.	NUMBER
BP	BACKFLOW PREVENTOR	NTS	NOT TO SCALE
BV	BACKWATER VALVE	OFD	OVERFLOW DRAIN
CLG	CEILING	PH	PHASE
CFH	CUBIC FEET PER HOUR	PLBG	PLUMBING
CO	CLEANOUT	PRESS.	PRESSURE
CODP	CLEANOUT W/DECK PLATE	QTY	QUANTITY
CW	COLD WATER	REQ'D	REQUIRED
DIA, ø	DIAMETER	RD	ROOF DRAIN
DN	DOWN	RM	ROOM
DWG	DRAWING	RPZ	REDUCED PRESSURE PRINCIPLE ASSEMBLY
DCDV	DOUBLE CHECK DETECTOR VALVE	SQ FT	SQUARE FOOT
DCV	DOUBLE CHECK VALVE	SRV	SAFETY RELIEF VALVE
EA	EACH	TBD	TO BE DETERMINED
EQ	EQUAL	TP	TRAP PRIMER
EQUIP	EQUIPMENT	TS	TEMPER SWITCH
EXIST	EXISTING	TW	TEMPERED WATER
FAI	FRESH AIR INTAKE	TYP	TYPICAL
FD	FLOOR DRAIN	VTR	VENT THRU ROOF
FS	FLOOR SINK	V	VENT
FT	FEET	WCO	WALL CLEANOUT
FU	FIXTURE UNIT	W	WIDTH
		W/	WITH

NOTE: ALL ABBREVATIONS ARE NOT NECESSARILY SHOWN ON DRAWINGS.

DRAWINGS LIST

PL–001	PLUMBING NOTES, SYMBOLS AND SPECIFICATIONS
PL–002	PLUMBING DETAILS
PL–003	GAS & WATER RISER DIAGRAMS
PL–004	STORM & SANITARY RISER DIAGRAMS
PL–005	PLUMBING CELLAR & 1ST FLOOR PLANS.
PL–006	PLUMBING 2ND & 3RD FLOOR PLANS.
PL–007	PLUMBING 4TH & ROOF FLOOR PLANS.
PL–008	PLUMBING RECIRCULATION HW PUMP.
EN–001	PLUMBING ENERGY ANALYSIS.

PLUMBING FIXTURE SCHEDULE

FIXTURES	FLOORS						
	CELLAR	001	002	003	004	ROOF	
SINK – RESIDENTIAL		2	2	2	1		
DISHWASHER		2	2	2	1		
TOILET	1	2	2	2	1		
LAVATORY	1	2	2	2	1		
BATH TUB		2	2	2	1		
FLOOR DRAIN	6						
ROOF DRAIN					2	2	
AREA DRAIN	2						
RPZ/BFP	1						
ELECTRIC WATER HEATER	8						
ELECTRIC RANGE		2	2	2	1		
HOSE BIB	1						
SINK – NON RESIDENTIAL	1						

PLUMBING SCOPE OF WORK

SCOPE INCLUDES	INSTALLATION TYPES	TOTAL QUANTITY
NEW INSTALLATION	SANITARY PIPING	1
NEW INSTALLATION	DOMESTIC WATER PIPING	1
NEW INSTALLATION	WATER SERVICE PIPING	1
NEW INSTALLATION	WATER METER	1
NEW INSTALLATION	BACKFLOW PREVENTER	1
NEW INSTALLATION	STORM DRAINAGE PIPING	1
NEW INSTALLATION	ROOF DRAINS	4
NEW INSTALLATION	AREA DRAINS	2
NEW INSTALLATION	FLOOR DRAINS	6
NEW INSTALLATION	TOILETS	8
NEW INSTALLATION	BATHTUBS	7
NEW INSTALLATION	LAVATORIES	8
NEW INSTALLATION	SINKS–RESIDENTIAL	7
NEW INSTALLATION	DISHWASHER	7
NEW INSTALLATION	ELECTRIC RANGE	7
NEW INSTALLATION	ELECTRIC WATER HEATER	8
NEW INSTALLATION	SINKS–NON RESIDENTIAL	1
NEW INSTALLATION	HOSE BIB	1

TABLE 1

HOT WATER ENERGY NOTE:
ALL HOT WATER HEATERS & HOT WATER SUPPLY PIPING SHALL MEET THE REQUIREMENTS OF SECTION C404 OF THE 2020 NYCECC AND MUST BE VERIFIED THROUGH DATA BY THE MANUFACTURER OR THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM.

CONTRACTOR SHALL BE RESPONSIBLE TO ENGAGE A SEPARATE ENGINEERING COMPANY TO FILE THE HOT WATER HEATERS/BOILERS WITH DEP BUREAU OF AIR RESOURCES. (IF APPLICABLE)

SPECIAL INSPECTION

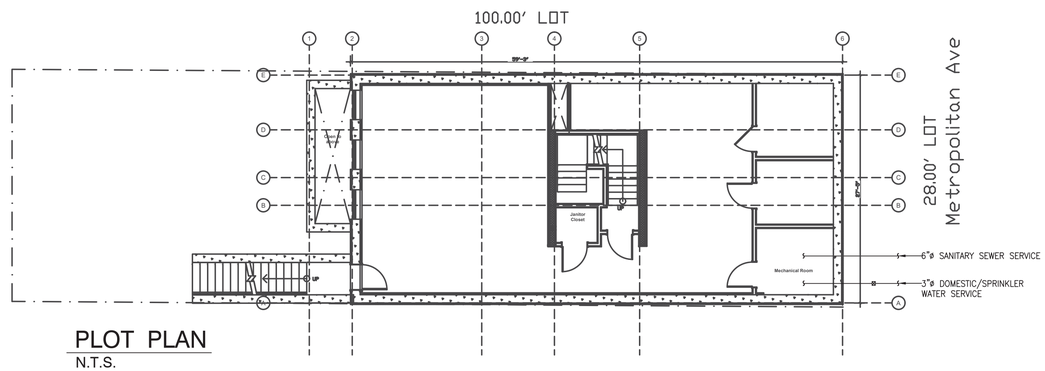
1. PRIVATE ON–SITE STORM WATER DRAINAGE DISPOSAL SYSTEM AND DETENTION FACILITIES
2. FIRE–RESISTANT PENETRATIONS & JOINTS

PROFESSIONAL STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH NYCECC–2020.

RECIRCULATION PUMP SCHEDULE

DESCRIPTION	MODEL	FLOW, GPM	PUMP HEAD FT	RPM	ELECTRICAL DATA			NOTES
					HP	VOLTAGE	AMPS	
HOT WATER RECIRCULATION PUMP	TACO COMFORT SOLUTION MODEL #006	11.5	9.5	3250	1/40	115–1–60	0.52	TO BE PROVIDE VACATION MODE



PLOT PLAN
N.T.S.

BLOCK: 2917 ZONE: R6B
LOT: 6 MAP: 13B

LOT: 2800 SF

THIS APPLICATION IS FOR PLUMBING WORK TYPE ONLY

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NYC Buildings
Michael Rahimi
APPROVED
Date: 08/11/2022

No.	DATE	DESCRIPTION
1	03/15/22	NEW CELLAR PLAN

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

DRAWING TITLE

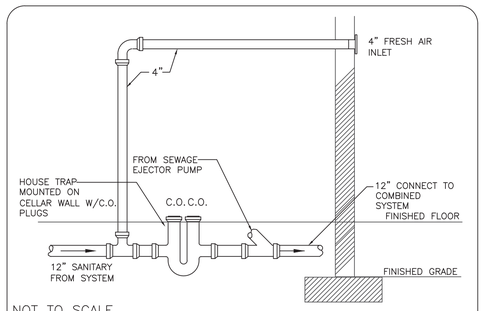
PLUMBING SPECIFICATIONS, NOTES, ABBREVIATIONS & PLOT PLAN.

DOB NOW JOB No.
B00715872-S7

SEAL & SIGNATURE

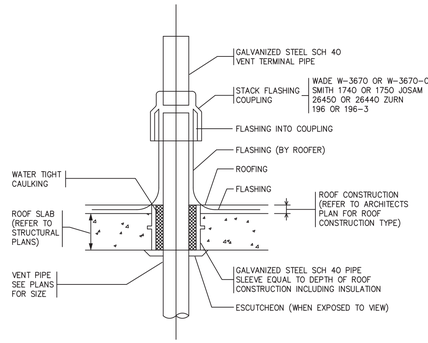
STATE OF NEW YORK · DMITRY LEVIN · 109837 · LICENSED PROFESSIONAL ENGINEER

DATE:	07-20-22
DRAWN BY:	V.A.
CHK BY:	D.L.
DWG. NO.:	PL-001.00
CAD FILE No.	01 OF 08



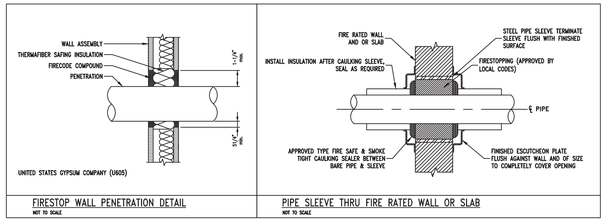
NOT TO SCALE

SANITARY HOUSE TRAP DETAIL



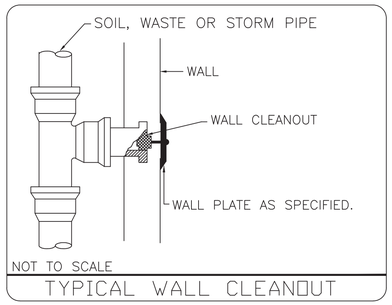
VENT THRU ROOF - FLASHING

NOT TO SCALE



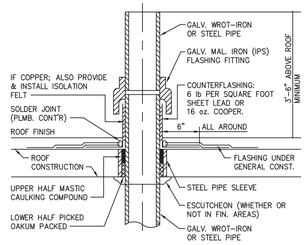
FIRESTOP WALL PENETRATION DETAIL
NOT TO SCALE

PIPE SLEEVE THRU FIRE RATED WALL OR SLAB
NOT TO SCALE



NOT TO SCALE

TYPICAL WALL CLEANOUT



VENT STACK DETAIL

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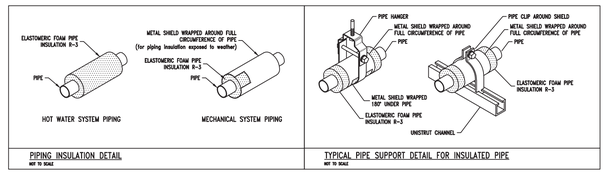
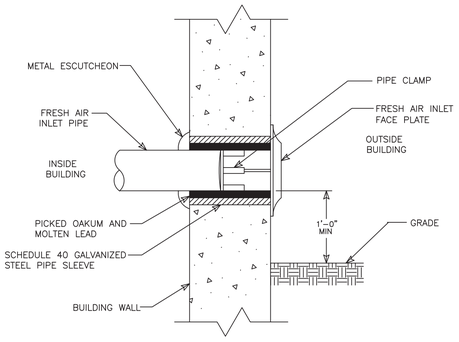


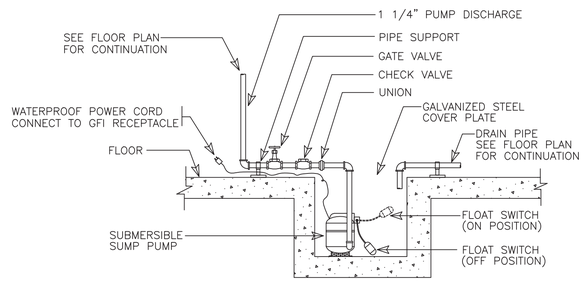
PIPING INSULATION DETAIL
NOT TO SCALE

TYPICAL PIPE SUPPORT DETAIL FOR INSULATED PIPE
NOT TO SCALE



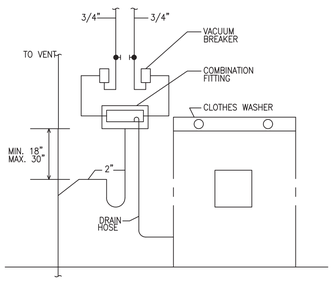
FRESH AIR INLET DETAIL

NOT TO SCALE



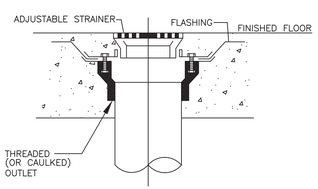
SUBMERSIBLE SUMP PUMP DETAIL

NOT TO SCALE



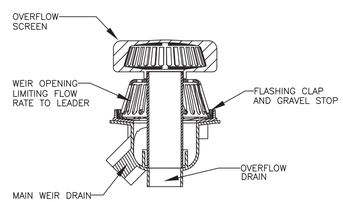
WASHING MACHINE CONNECTION DETAIL

NOT TO SCALE



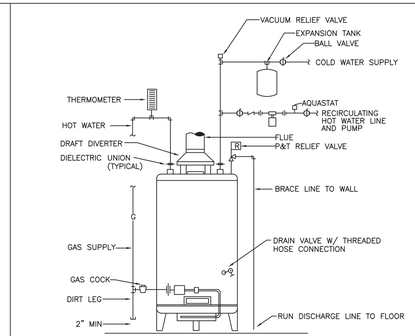
FLOOR DRAIN DETAIL

NOT TO SCALE



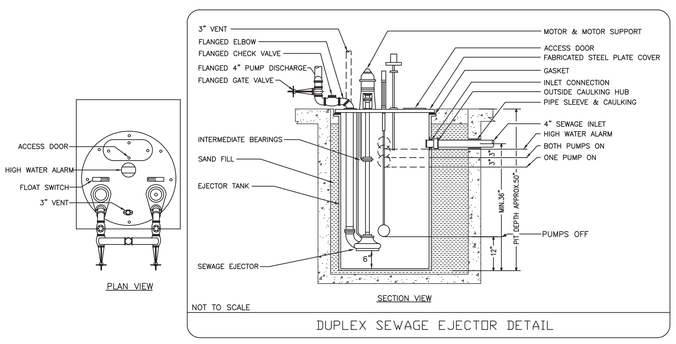
ROOF DRAIN DETAIL

NOT TO SCALE



WATER HEATER DETAIL

NOT TO SCALE



NOT TO SCALE

DUPLEX SEWAGE EJECTOR DETAIL

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NYC Buildings

Michael Rahimi
APPROVED
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920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

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PLUMBING DETAILS.

DOB NOW JOB No.

B00715872-S7

SEAL & SIGNATURE

STATE OF NEW YORK DMITRY LEVIN 095837 LICENSED PROFESSIONAL ENGINEER

DATE:	07-20-22
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CHK BY:	D.L.
DWG. NO.:	PL-002.00
CAD FILE No.	02 OF 08

TABLE 2

WATER-HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE REQUIREMENTS OF TABLE C404.2 (ECC 2020). THE EFFICIENCY SHALL BE VERIFIED THROUGH DATA FURNISHED BY THE MANUFACTURER OR THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM.

HEATED-WATER CIRCULATION SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION C404.6.1 (NYCECC 2020)
HEAT TRACE TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION C404.6.2 (NYCECC 2020)
CONTROLS FOR HOT WATER STORAGE SHALL BE IN ACCORDANCE WITH SECTION C404.6.3 (NYCECC 2020)
AUTOMATIC CONTROLS,TEMPERATURE SENSORS & PUMPS SHALL BE ACCESSIBLE. MANUAL CONTROLS SHALL BE READILY ACCESSIBLE.

TABLE 3

TABLE C403.11.3 (2020 NYCECC, COMMERCIAL ENERGY EFFICIENCY)
MINIMUM PIPE INSULATION THICKNESS (THICKNESS IN INCHES)
HOT WATER SYSTEMS & DOMESTIC WATER SYSTEMS

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)					NOTES	
	CONDUCTIVITY BTU·IN/(H·FT²·°F)	MEAN RATING TEMPERATURE, °F	< 1	1 to < 1½	1½ to < 4	4 to < 8	≤ 8	MATERIAL	STANDARD
105 -140	0.22 -0.28	100	1.0	1.0	1.5	1.5	1.5	Copper or copper-alloy tubing (TYPE K, L)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447
40 -60	0.22 -0.27	75	0.5	0.5	1.0	1.0	1.0		

INSULATE ALL WATER & HEATING PIPING

TABLE C404.5.1 (2020 NYCECC COMMERCIAL BUILDING) PIPING VOLUME AND MAXIMUM PIPING LENGTHS

NOMINAL PIPE SIZE (inches)	VOLUME (liquid ounces per foot length)	MAXIMUM PIPING LENGTHS (feet)		
		System w/out a circulation loop or heat-traced line	System with a circulation loop or heat-traced line	Lavatory faucets-public (metering and nonmetering)
1/4	0.33	50	16	6
5/16	0.5	50	16	4
3/8	0.75	50	16	3
1/2	1.5	43	16	2
5/8	2	32	12	1
3/4	3	21	8	0.5
7/8	4	16	6	0.5
1	5	13	5	0.5
1 1/4	8	8	3	0.5
1 1/2	11	6	2	0.5
2 or larger	18	4	1	0.5

FIXTURE CONNECTION SCHEDULE

FIXTURE / ABBREVIATION	WASTE/SAN.	VENT	CW	HW
WATER CLOSET / WC	4"	2"	3/4"	–
LAVATORY / LAV	1 1/2"	1 1/2"	3/4"	3/4"
BATHTUB / BT	2"	1 1/2"	3/4"	3/4"
KITCHEN SINK / KS	2"	1 1/2"	3/4"	3/4"
DISHWASHER / DW	1 1/2"	1 1/2"	–	3/4"
HOSE BIB / HB	–	–	1/2"	–

TABLE 4

PROTECTION OF PIPING INSULATION NOTE:

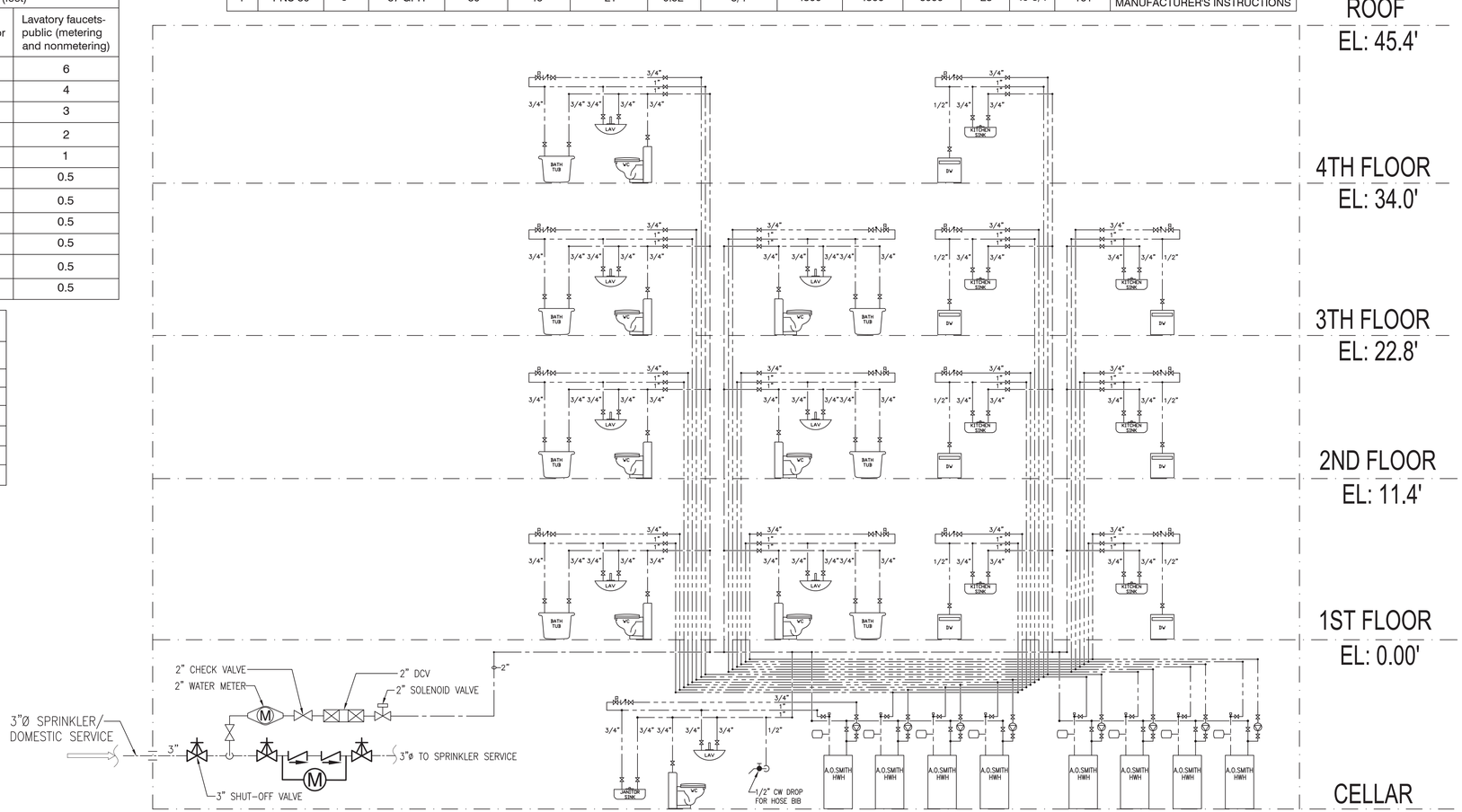
PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT CAUSED BY SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL.
ALUMINUM ROLL JACKETING IS THE PREMIER PROTECTIVE OUTER SURFACE COVERING FOR MECHANICAL INSULATION SYSTEMS INCLUDING PIPE, VESSELS, AND EQUIPMENT. IT PROTECTS THE INSULATION AND UNDERLYING PIPE/VESSEL FROM PHYSICAL DAMAGE, UV EXPOSURE, CORROSIVE ATMOSPHERES, AND WATER.
PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE BY ALUMINUM JACKET: ASTM B209 (ALL EXTERIOR REFRIGERANT PIPING SERVING AIR COOLED CONDENSER).

1. THICKNESS: 0.016-INCH SHEET.
2. FINISH: EMBOSSED.
3. JOINING: LONGITUDINAL SLIP JOINTS AND 2-INCH LAPS.
4. FITTINGS: 0.016-INCH THICK DIE SHAPED FITTING COVERS WITH FACTORY ATTACHED PROTECTIVE LINER.
5. METAL JACKET BANDS: 3/8 INCH WIDE; 0.010-INCH THICK STAINLESS STEEL.

(OR EQUAL MATERIAL)

ELECTRIC HOT WATER HEATER SCHEDULE (A.O.SMITH)

N⁰	MODEL NUMBER	TOTAL	FIRST HOUR RATING	GALLON CAPACITY	RATED STORAGE VOLUME	RECOVERY @ 90°F RISE GALLON PER HOUR	ENERGY FACTOR	WATER CONNECTION	ELEMENT WATTAGE 240V			DIMENSIONS		WEIGHT LBS.	NOTES
									STANDARD	MINIMUM	MAXIMUM	DIA, IN	H, IN		
1	PNS-50	8	57 GPH	50	46	21	0.92	3/4"	4500	4500	6000	23	49-3/4	161	SHALL BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS



DOMESTIC WATER RISER DIAGRAM

SCALE: NONE

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PLUMBING GAS & WATER RISER DIAGRAMS.

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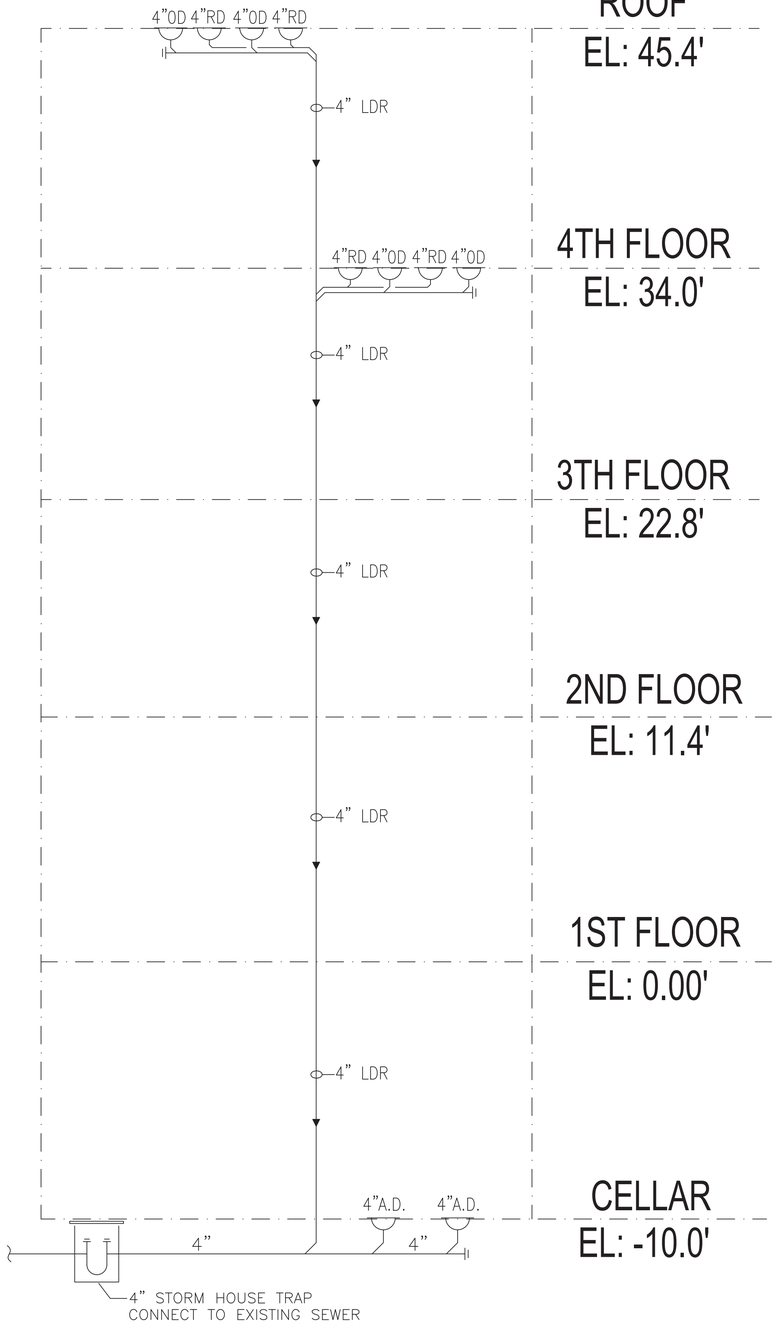
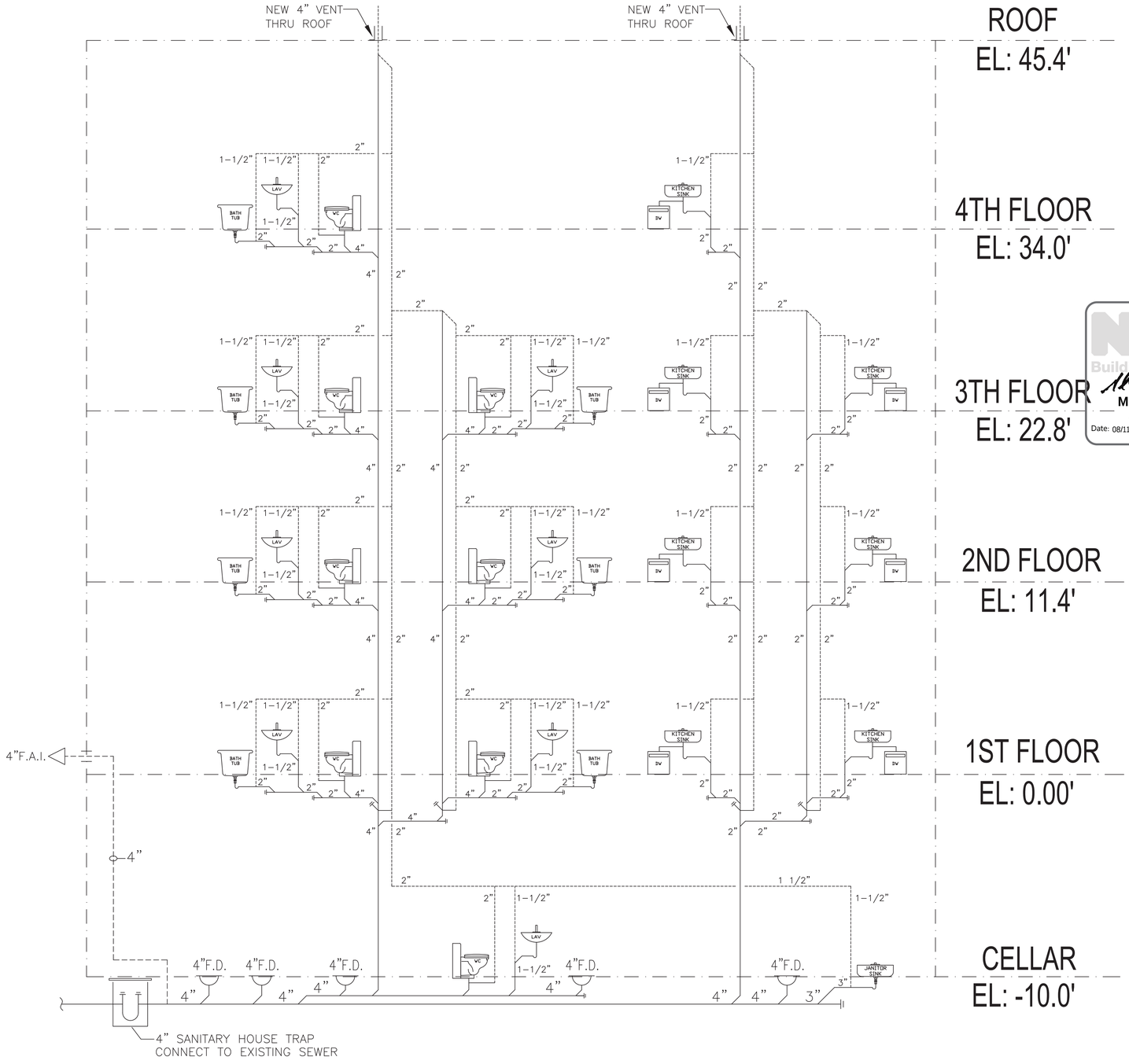


STORM RISER DIAGRAM

SCALE: NONE



SANITARY RISER DIAGRAM

SCALE: NONE

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920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

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PLUMBING STORM & SANITARY RISER DIAGRAMS.

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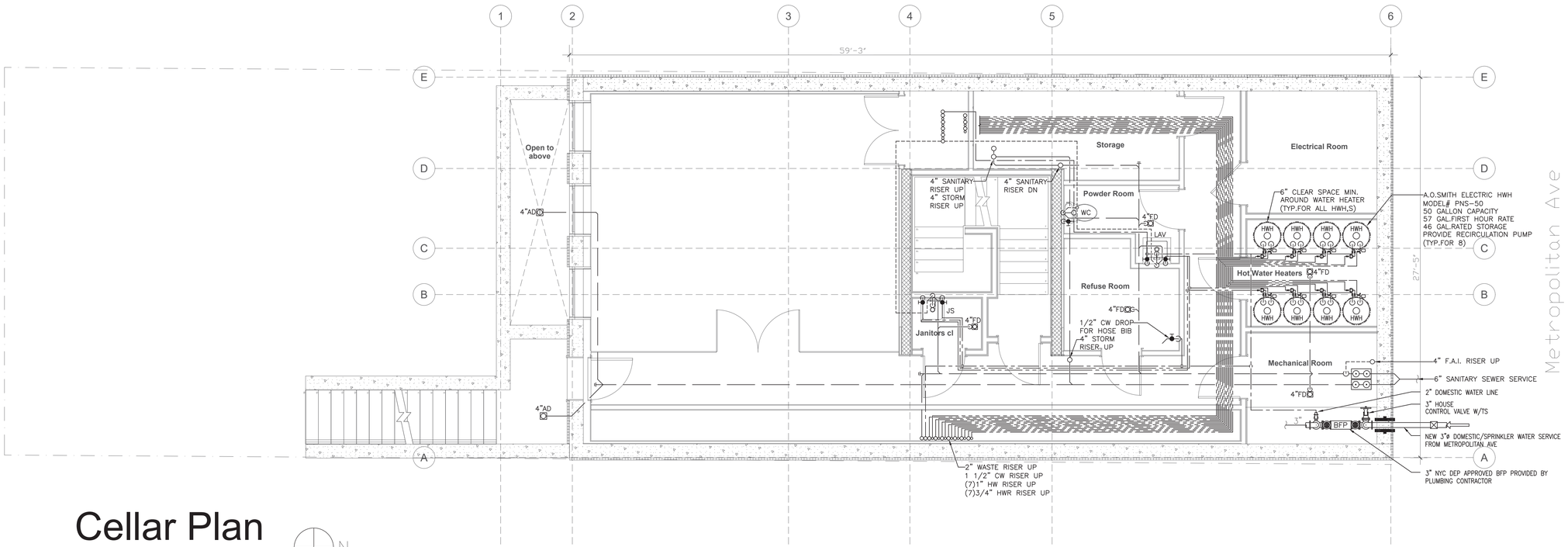
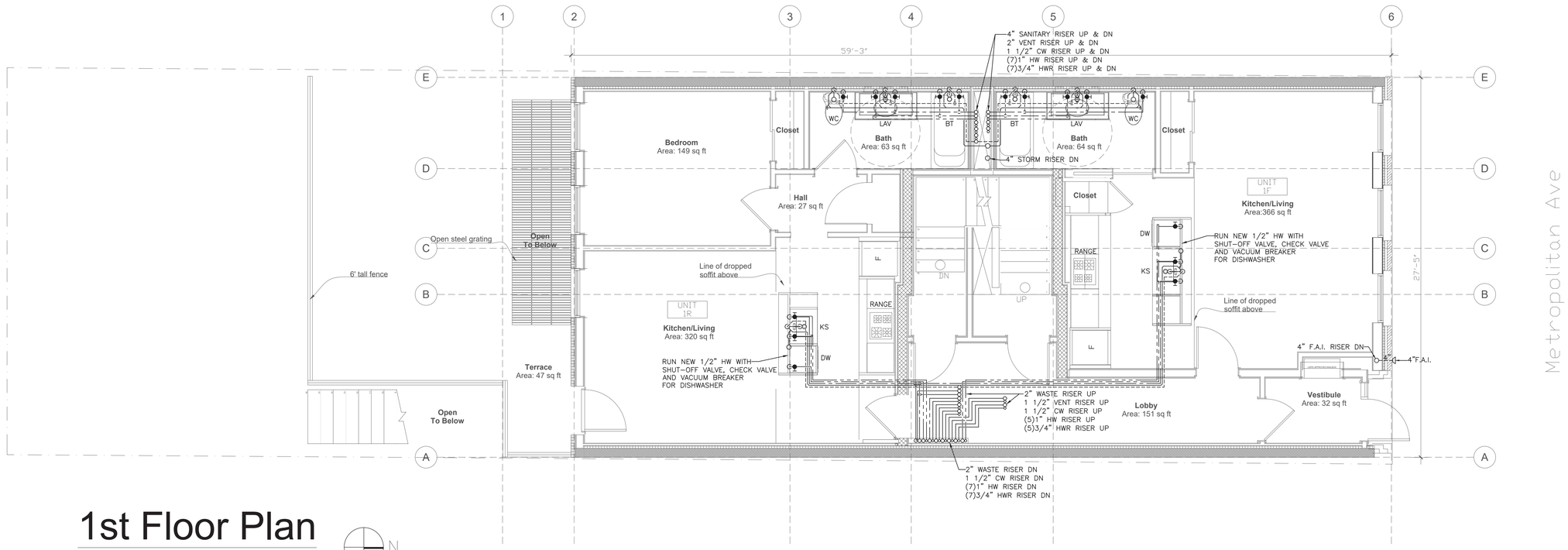


Cellar Plan

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

N



1st Floor Plan

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

N

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DRAWING TITLE

PLUMBING CELLAR & 1ST FLOOR PLANS.

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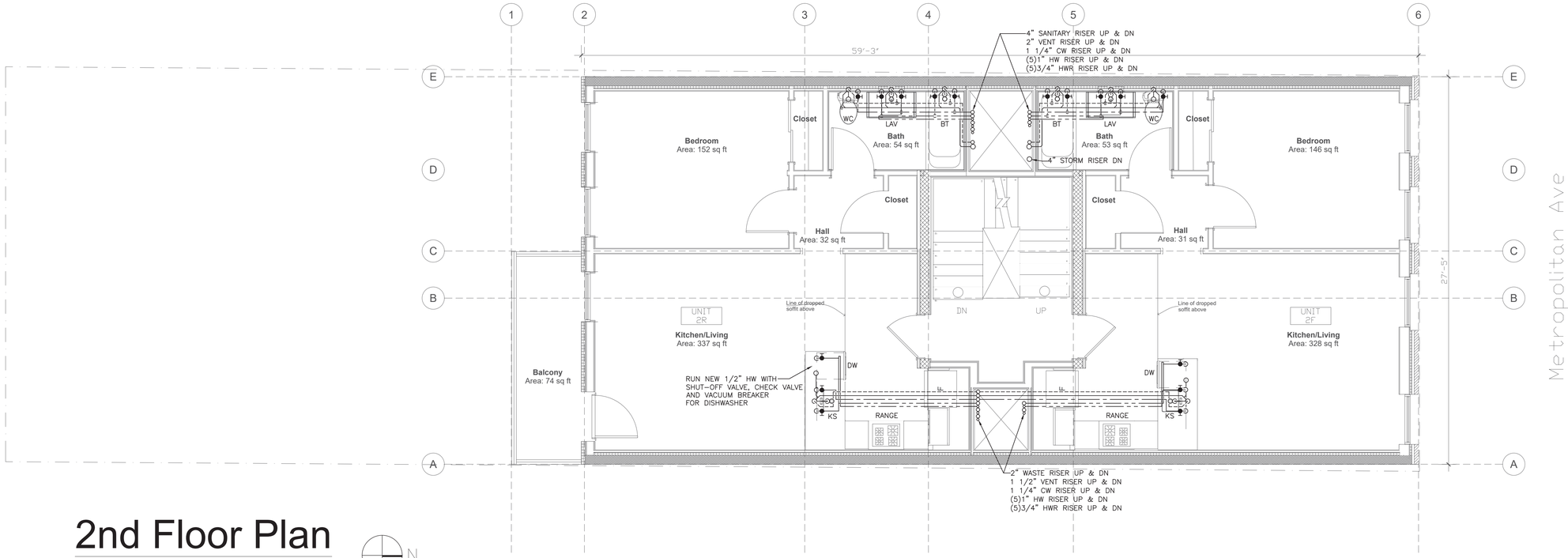

2nd Floor Plan

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

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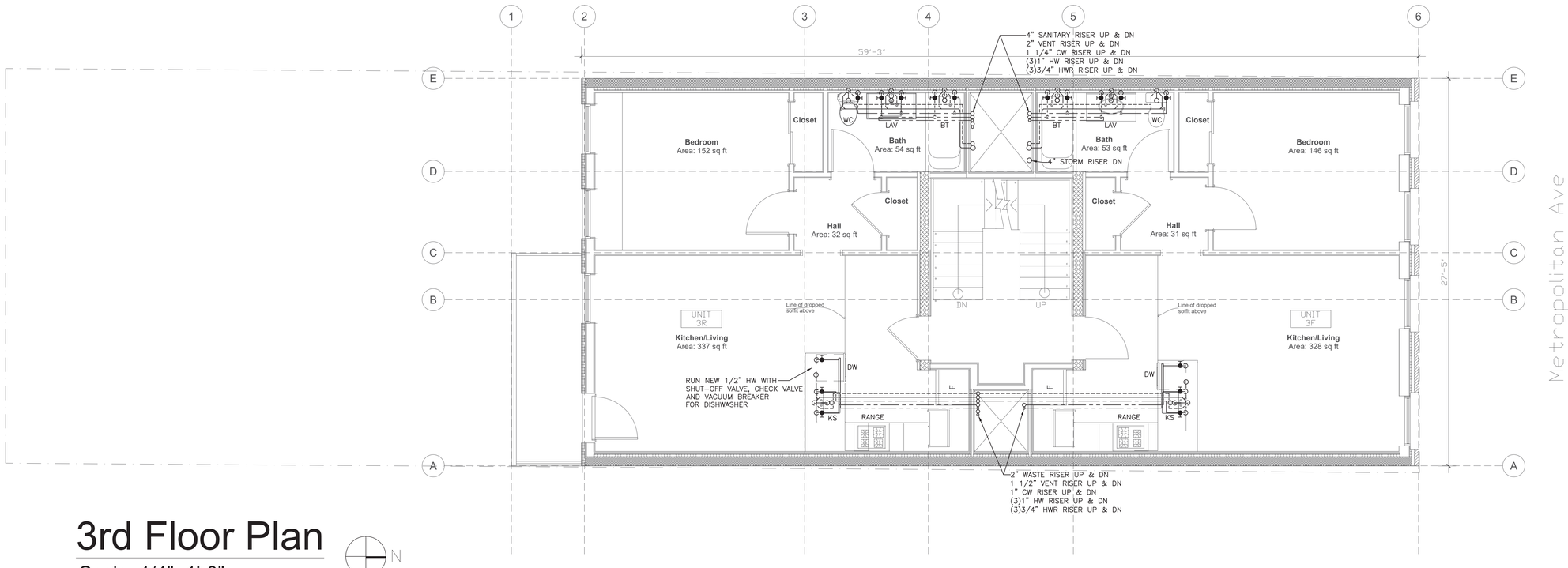

3rd Floor Plan

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

N

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1	03/15/22	NEW CELLAR PLAN

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920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

DRAWING TITLE

PLUMBING 2ND & 3RD FLOOR PLANS.

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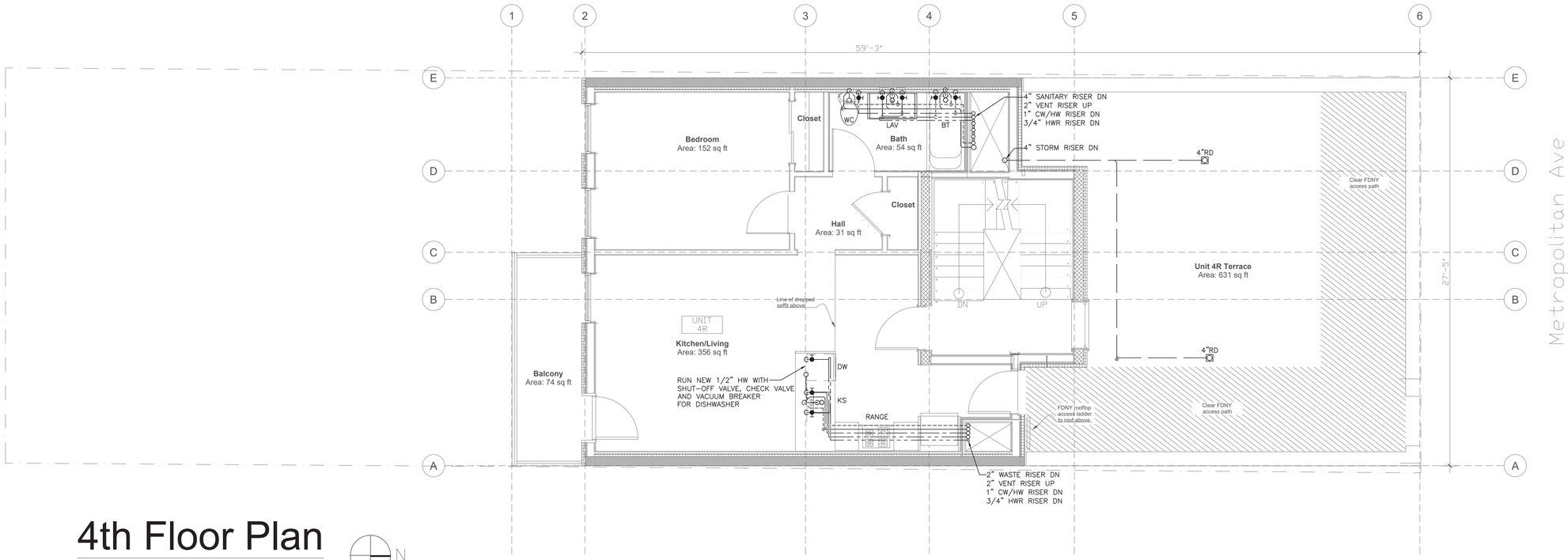

4th Floor Plan

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

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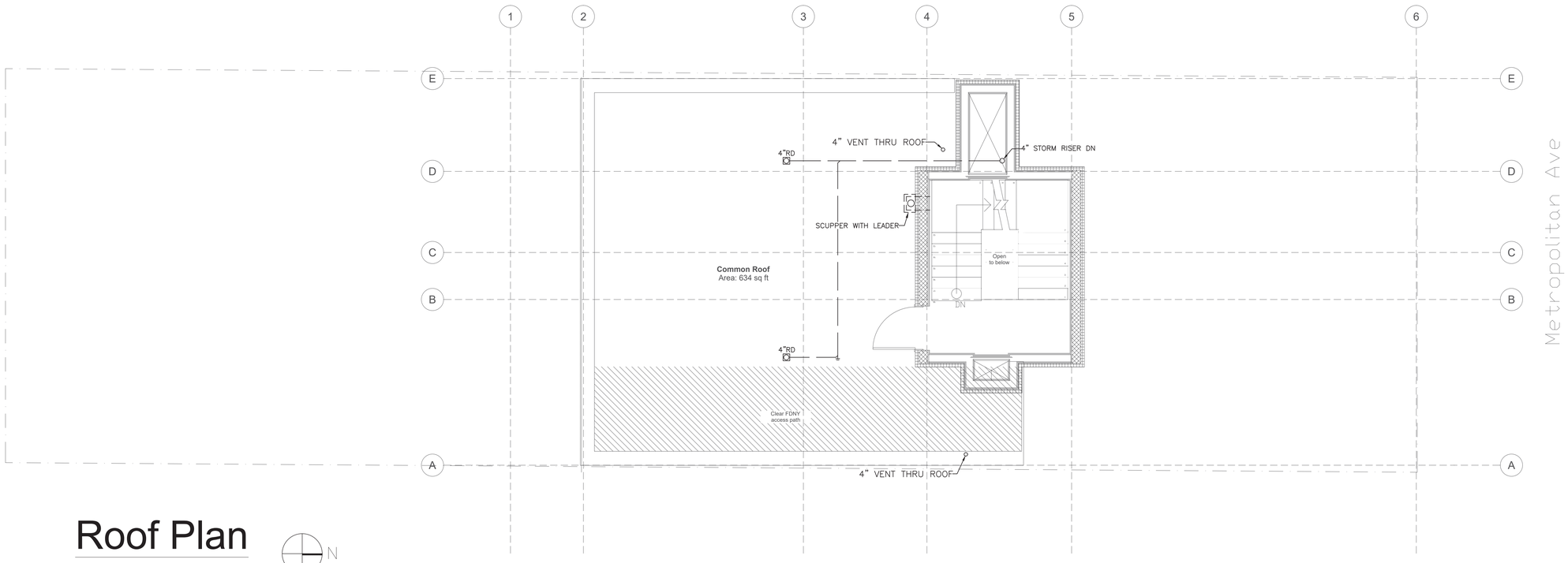

Roof Plan

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

N

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PLUMBING 4TH FLOOR & ROOF PLANS.

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©Taco Catalog # 100-97
Supersedes: 10/20/15

SmartPlus®
HOT WATER RECIRCULATION

The smart way to instant **hot water** comfort.

Patent# US 8, 594, 853 B2

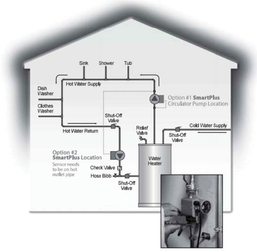
Taco Comfort Solutions®
A Taco Family Company

Effective Date: 03/31/17
Printed in USA

SmartPlus®

The Problem: Waiting for Hot Water

It's a common problem: turn on the faucet or shower for hot water, then wait for it to arrive. In fact, the wait can be up to two minutes in larger homes with multiple bathrooms and long runs of pipe between the plumbing fixtures and the water heater! With a Taco SmartPlus circulator in place, there's no more wait. Instant hot water!



Waiting Means Wasting

Waiting for hot water sends millions of gallons of cooled water down the drain each year. In fact, an average family of four wastes up to 12,000 gallons of water each year waiting for hot water.* Water conservation is so important that many US states and municipalities routinely impose watering bans and offer rebate incentives to help conserve this natural resource.

*Source: Dept. of Energy

Estimated Annual Water Savings

Pipe Type	Hot Water Supply Length (ft.)	Pipe Water Volume (gallons)	Daily Water Volume Wasted (gallons)*	Annual Water Volume Saved (gallons)
1/2" Copper Type 'L'	100	1.2 per 100	12	4,400
	150		18	6,600
	200		24	8,800
	250		30	11,000
	300		36	13,200
3/4" Copper Type 'L'	100	2.5 per 100	25	9,200
	150		37	13,700
	200		50	18,300
	250		62	23,000
	300		75	27,500

*Assume average of 10 cycles per day.

Energy Down The Drain

Of course, all that "waiting water" contains some heat energy (BTUs), even if it's only room temperature. Wasting those BTU's and starting over with fresh, cold water to heat up requires even more heat energy. So in addition to wasting water, millions of BTU's and energy dollars are wasted, too.

How a Domestic Hot Water Recirculation System Works

A standard DHW system requires a dedicated return line from the furthest fixture back to the water heater. The return line is connected to a tee at the tank drain valve or to the tank's cold water supply line. A Taco SmartPlus circulator pump is installed on the hot water supply line, or on the hot water return line, and controlled by the SmartPlus electronic control board.

How the SmartPlus Circulator Works

The SmartPlus circulator has a mode select toggle switch on the electronic control board that allows for 2 operation modes. "Pulse" or "Smart" mode can be selected using the toggle switch located on the electronic control board. Pulse mode is indicated by a flashing yellow LED light. A solid yellow LED light indicates the pump is set to Smart mode. All operation is automatic, no manual timer or temperature setting is required.

FOR HOT WATER RECIRCULATION

Pulse Mode

When set for Pulse mode, the SmartPlus circulator will run automatically every 10 minutes to maintain hot water at all fixtures. The run time is adjustable from 1 to 10 minutes.

Smart Mode

The run time is adjustable from 1 to 10 minutes. When set for Smart mode, the circulator will run in Pulse mode as above for the first 7 days. During the first 7 days, the SmartPlus will monitor and record the household's hot water usage pattern. For the next 7 days, the SmartPlus will use the preceding week's usage pattern to cycle the pump. This process will be repeated every 7 days.

MATERIALS OF CONSTRUCTION

Stator Housing.....Steel
Cartridge.....Stainless Steel
Impeller.....Noryl
Shaft.....Ceramic
Bearings.....Carbon
O-Ring.....EPDM
Casing (Volute).....Bronze, sweat, 1/2" & 3/4" (006)
Stainless Steel, 3/4" NPT (006)
Stainless Steel, flanged (008)

Features & Benefits

Smart Mode — *When set to Smart mode the pump will automatically learn the weekly household hot water usage patterns.*

Variable Run Time Setting — *Adjustable run time can be set between 1 to 10 minutes for varying domestic hot water pipe sizes and loop length.*

72 Hour Memory Backup — *Should a power outage occur, the SmartPlus (in Smart mode only) will retain its recorded settings and internal timer for 72 hours. When power is restored, the SmartPlus will return to its programmed mode setting, either "Pulse" or "Smart."*

Vacation Function — *After 36 hours of inactivity the pump will automatically TURN OFF and remain off until hot water usage is detected again.*

Exercise Function — *While in vacation mode the pump will cycle on once every 7 days and run for 10 seconds to prevent any corrosion or scale buildup.*

Factory Installed 6' Line Cord

Remote Sensor Included

Optional IFC® (Integral Flow Check)

Unmatched Reliability-Maintenance Free

Water Conservation — *The average residence can save up to 12,000 gallons of water per year-water that normally goes down the drain while waiting for hot water.*

Comfort and Convenience — *Once the pump is set to the desired operating mode it never needs to be set again. Hot water is always available in seconds.*

Efficiency — *Smart/Pulse operation maximizes hot water comfort and energy savings*

Reliability — *SmartPlus provides quiet operation and industry leading electronics with Taco 006 and 008 circulators for proven performance & dependability.*

3 Year Warranty

LED Indicator lights
- GREEN — *Power*
- YELLOW — *Mode*
- RED — *Error code diagnostics*

Choosing the Correct SmartPlus Circulator for the Job

Pump Selection Charts
This information is provided as a guide only. Find the table below that best describes the design you plan to use. Select the circulator based on the supply and return pipe size, pipe line length, and circulator model. Do not oversize the pump or high velocity noise and erosion corrosion of the system piping may result.

1/2" Supply and Return Lines

Model Number	Supply Pipe Maximum Length (ft.)	Total Maximum Pipe Length (ft.)
006	100	250
008	250	450
006-IFC*	100	250
008-IFC*	250	450

*With Optional Integral Flow Check

3/4" Supply and Return Lines

Model Number	Supply Pipe Maximum Length (ft.)	Total Maximum Pipe Length (ft.)
006	150	300
008	300	600
006-IFC*	150	300
008-IFC*	300	600

*With Optional Integral Flow Check

Assumptions

Flow = 1 GPM

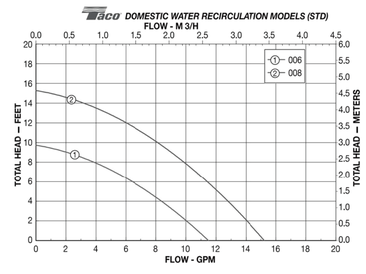
Max. Velocity = 3 ft./sec.

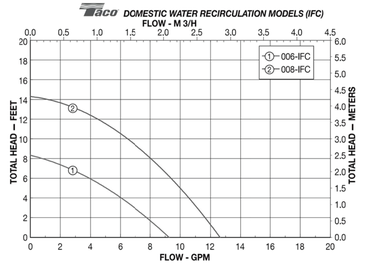
Allowances have been added for pressure drop of other typical system components

Type L Copper Tubing

Supply & Return Piping are equal in length

Performance Field Information - 60 Hz





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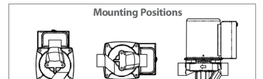
Mounting Positions



Model Nomenclature

- IQ – SmartPlus
- B – Bronze
- BC – Bronze, Panel Mount Tap
- ST – Stainless Steel, 3/4" FNPT
- SF – Stainless Steel, Flanged
- IFC – Integral Flow Check

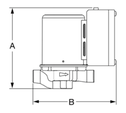
Performance Data

Model	Flow Range	Head Range
006	0 - 11.5 GPM	0 - 9.5 Feet
008	0 - 15 GPM	0 - 15 Feet
006-IFC	0 - 9 GPM	0 - 8.5 Feet
008-IFC	0 - 13 GPM	0 - 14.5 Feet

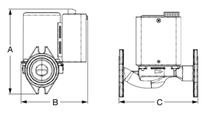
Electrical Data

Model	Volts	Hz	Ph	Amps	RPM	HP
006	115	60	1	0.52	3250	1/40
008				0.84		1/25

Model 006



Model 008



Model	Connection	Casing	A		B		C		Ship Wt.	
			In.	mm.	In.	mm.	In.	mm.	lbs.	kg
006-IQB4	3/4" Sweat	Bronze	6-1/2	165	6	152	3-3/4	95	7.0	3.2
006-IQBC4	1/2" Sweat		7-1/4	184						
006-IQBC7-IFC	3/4" Sweat									
006-IQBC7-1IFC	1/2" Sweat									
006-IQST4	3/4" NPT	Stainless Steel	6-1/2	165						
008-IQSF6	Flanged		7	177	5-1/2	140	6-1/2	165	8.0	3.6
008-IQSF6-IFC	Flanged									

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A Taco Family Company

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Taco (Canada) Ltd., 8450 Lawson Road, Unit #3, Milton, Ontario L9T 0J8 / (905) 564-9422 / Fax (905) 564-9436

www.TacoComfort.com

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NYC Buildings
Michael Rahimi
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PLUMBING RECIRCULATION HOT WATER PUMP SUBMITTAL.

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CAD FILE No.	08 OF 08

TABLE C404.5.1 (2020 NYCECC COMMERCIAL BUILDING) PIPING VOLUME AND MAXIMUM PIPING LENGTHS

NOMINAL PIPE SIZE (inches)	VOLUME (liquid ounces per foot length)	MAXIMUM PIPING LENGTH (feet)	
		Public lavatory faucets	Other fixtures and appliances
1/4	0.33	6	50
5/16	0.5	4	50
3/8	0.75	3	50
1/2	1.5	2	43
5/8	2	1	32
3/4	3	0.5	21
7/8	4	0.5	16
1	5	0.5	13
1 1/4	8	0.5	8
1 1/2	11	0.5	6
2 or larger	18	0.5	4

PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE – COMMERCIAL BUILDING NYCECC–2020

	INSPECTION/TEST	PERIODIC (MINIMUM)	REFERENCE STANDARD (SEE ECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIB	MECHANICAL AND SERVICE WATER HEATING INSPECTIONS			
IIB3	HVAC AND SERVICE WATER HEATING EQUIPMENT	PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403.1, C403.2, C403.3, C403.7.5, C404.2, C404.5, C404.9, C405.10, C406;
IIB4	HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS	AFTER INSTALLATION AND PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C403, C404, C406;
IIB5	HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION	AFTER INSTALLATION AND PRIOR TO CLOSING SHAFTS, CEILING AND WALLS	APPROVED CONSTRUCTION DOCUMENTS	C403.11, C404.4, C405.5
IID	OTHER			
IID1	MAINTENANCE INFORMATION	PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	C408.1.1, C408.2.5.2, C408.3.2;

TABULAR ENERGY ANALYSIS (2020 ENERGY CONSERVATION CODE. CHAPTER C4 COMMERCIAL ENERGY EFFICIENCY)

NYCECC CITATION	PROVISION	ITEM DESCRIPTION	PROPOSED DESIGN VALUE	CODE PRESCRIPTIVE VALUE	SUPPORTING DOCUMENTATION
	SERVICE WATER				
C403.11.3, C404, Table C404.2	*Service water-heating equipment performance efficiency.*	*Electric water heater HWH A.O.Smith PNS-50 (46 Gallon Capacity)*	*0.92 EF Electric input: 4500W/4500W*	*ENERGY FACTOR = 0.92*	*See drawing PL-003.00, PL-005.00*
C404.4	*Insulation of piping*	*Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated in accordance with Table C403.11.3*	*All piping insulated as per requirements*	*Piping from a water heater shall be thermally insulated in accordance with Table C403.2.10*	*See table of minimum pipe insulation thickness, drawing PL-003.00*
C404.5.1	*Efficient Heated Water Supply Piping*	*Maximum allowable pipe length method*	*Maximum piping length for public lavatory faucet ½" = 2'*	*Maximum piping length for public lavatory faucet ½" = 2' Table C404.5.1*	*See table, drawing PL-003.00*
C404.6	*Circulation systems*	*Circulating pumps*	*Buil-in recirculation system included on all A.O.Smith HWH models*	*Automatic circulating hot water system pumps and heat trace to be turned off manually or automatically when hot water system is not in operation*	*See drawing PL-001.00, PL-003.00, PL-008.00*

TABLE C403.11.3 (2020 NYCECC, COMMERCIAL ENERGY EFFICIENCY) MINIMUM PIPE INSULATION THICKNESS (THICKNESS IN INCHES) HOT WATER SYSTEMS & DOMESTIC WATER SYSTEMS

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU·IN/(H·FT²·°F)	MEAN RATING TEMPERATURE, °F	< 1	1 to < 1½	1½ to < 4	4 to < 8	≥ 8
105 -140	0.21 -0.28	100	1.0	1.0	1.5	1.5	1.5
40 -60	0.21 -0.27	75	0.5	0.5	1.0	1.0	1.0

NOTES

MATERIAL	STANDARD
Copper or copper-alloy tubing (TYPE K, L)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447

PROFESSIONAL STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH NYCECC–2020.

THIS APPLICATION IS FOR PLUMBING WORK TYPE ONLY

Levin Engineering PLLC

- 28 Dooley Street, 2nd Floor Brooklyn, NY 11235
- Phone (718) 332-2266
- www.levin-engineering.com
- info@levin-engineering.com

NYC Building Connect
Michael Rahimi
APPROVED
Date: 08/11/2022

No.	DATE	DESCRIPTION
1	03/15/22	NEW CELLAR PLAN

PROJECT

920 METROPOLITAN AVENUE, BROOKLYN, NY 11211

DRAWING TITLE

PLUMBING ENERGY ANALYSIS.

DOB NOW JOB No.
B00715872-S7

SEAL & SIGNATURE

STATE OF NEW YORK DMITRIY LEVIN 095837 LICENSED PROFESSIONAL ENGINEER

DATE:	07-20-22
DRAWN BY:	V.A.
CHK BY:	D.L.
DWG. NO.:	EN-001.00
CAD FILE No.	01 OF 01

NEW YORK CITY BUILDING DEPARTMENT SPRINKLER NOTES

1. THE INSTALLATION, COMPONENTS, SIZING, SPACING, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL CONFORM TO THE 2014 NEW YORK CITY BUILDING CODE APPENDIX Q, SECTION BC Q102 AND SECTION BC903.
2. ONLY APPROVED MATERIALS SHALL BE USED AS PER CHAPTER 6 OF APPENDIX Q, SECTION BCQ102.
3. DIRECT CONNECTION OF SPRINKLERS TO THE PUBLIC WATER SYSTEM SHALL CONFORM TO SECTION BCQ102.1 SEE 23.1.1. NFPA-13R 2007.
4. SPRINKLER SHALL BE PROTECTED AGAINST FREEZING AND INJURY AS PER APPENDIX Q BCQ102, SEC 8.15.3 AND 6.2.8. NFPA-13R 2007.
5. INSPECTION AND TESTS OF SPRINKLERS SHALL BE CONDUCTED AS SEC. 901.5 AND APPENDIX Q, SEC. BCQ102, CH. 16.
6. THE OCCUPANCY OF THE AREAS TO BE SPRINKLERED IN ACCORDANCE WITH SECTION 5.2 AND A.5.2 OF APPENDIX Q SECTION BCQ102.
7. WATER SUPPLY TEST PIPES AND GAUGES SHALL BE PROVIDED AS PER SECTION 8.16.1 AND 8.16.4 NFPA-13R 2007 OF APPENDIX Q, SECTION BCQ102.
8. PIPING, FITTINGS, SPECIFICATIONS, PIPE SCHEDULES, SYSTEM TEST PIPES, PROTECTION AGAINST CORROSION, DAMAGE, VALVES, HANGERS, SPRINKLERS GUARDS AND SHIELDS SHALL BE AS PER APPENDIX Q SECTION BCQ102, CHAPTERS 6 AND 9.
9. STOCK OF EXTRA SPRINKLERS WILL BE FURNISHED AS PER SECTION 6.2.9 APPENDIX Q, SECTION BCQ102 (REQUIRED FOR EACH TEMPERATURE RATING).
10. SPRINKLER ALARM SHALL BE IN ACCORDANCE WITH SECTION 8.16.1 OF APPENDIX Q, SECTION BCQ102.
11. SPACING, LOCATION AND POSITION OF SPRINKLER WILL BE AS PER SECTION 8 OF APPENDIX Q, SECTION BCQ102.
12. ALL BLIND SPACES EXCEEDING 6" IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIAL WILL BE SPRINKLERED.
13. ALL PIPE PASSING THROUGH WALLS WILL COMPLY WITH SECTION BC712.
14. THERE IS NO HIGH PILED STORAGE AS DEFINED IN SECTION 3-3.12 OF APPENDIX Q, SECTION BC Q102.
15. DISTANCE OF SPRINKLERS FROM HEAT SOURCE SHALL BE IN AS PER TABLES 9.3.2.5 (a) AND 8.3.2.5 (b) NFPA-13R.
16. AS PER SECTION BC903.1.2 PROVIDE DEPARTMENT OF WATER SUPPLY LETTER WITH FLOW TEST DATE IF THERE IS A DIRECT CONNECTION TO THE STREET WATER SUPPLY.
17. ALL PIPES PASSING THROUGH FOUNDATION WALLS SHALL BE PROTECTED AS PROVIDED BY SECTION 305.5 OF THE PLUMBING CODE.
18. THIS APPLICATION IS NOT FILED AS A RESULT OF ACTION BY THE FIRE COMMISSIONER AS AUTHORIZED BY BS & A TO MODIFY THE CERTIFICATE OF OCCUPANCY NOR IS SUCH ACTION PENDING.
19. ALL VALVES SHALL BE IDENTIFIED AS REQUIRED BY SECTION 6.7.4. OF APPENDIX Q, SECTION BCQ102.
20. DRAINAGE SHALL CONFORM TO SECTION 8.15.2 OF APPENDIX Q, SECTION BCQ102.
21. A ONE PIECE REDUCING FITTING OF GOOD DESIGN SHOULD BE USED WHEREVER A CHANGE IS MADE IN THE SIZE OF PIPE, AS PER SECTION 6.4.6 OF APPENDIX Q, SECTION BCQ102.
22. ALL VALVES ON CONNECTIONS TO WATER SUPPLIES TO SPRINKLER SHALL BE APPROVED O.S. & Y. OR APPROVED INDICATOR TYPE.
23. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED TYPE AS PER 6.7.3 OF APPENDIX Q, SECTION BCQ102.
24. HANGERS SHOULD BE SUPPORTED BY WROUGHT IRON U TYPE OR APPROVED ADJUSTABLE HANGERS. HANGERS SHALL BE OF THE TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED, AS PER CHAPTER 9, OF APPENDIX Q, SECTION BCQ102.
25. PROVISIONS SHOULD BE MADE TO FACILITATE FLUSHING SYSTEM PIPING BY PROVIDING FLUSHING CONNECTIONS CONSISTING OF A CAPPED NIPPLE 4" LONG ON END OF A CROSS MAIN AS PER SECTION 8.14.16 OF APPENDIX Q, SECTION BCQ102.
26. SPRINKLER SHALL BE AN APPROVED TYPE AS PER SECTION 8.3 OF APPENDIX Q, SECTION BCQ102.
27. TEMPERATURE RATING SHALL COMPLY WITH SECTION 8.3.2 OF APPENDIX Q, SECTION BCQ102.
28. 18" MINIMUM CLEARANCE TO BELOW SPRINKLER DEFLECTOR AS PER SECTION 8.5.6. OF APPENDIX Q, SECTION BCQ102.
29. SPACING AND LOCATION OF SPRINKLERS SHALL COMPLY WITH CHAPTER 8 OF APPENDIX Q, SECTION BCQ102.
30. SPRINKLER SYSTEM COMPLIES WITH NFPA 13R-2007 AS MODIFIED BY APPENDIX Q, SECTION BCQ102.
31. SOURCES OF WATER SUPPLY FOR SPRINKLER SYSTEMS AS PER CHAPTER 15 OF APPENDIX Q, SECTION BCQ102.
32. PIPE SCHEDULE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION 14.5 OF APPENDIX Q, SECTION BCQ102.
33. AUTOMATIC INTERLOCK CUTOFF SWITCH FOR VENTILATION WILL CONFORM TO CHAPTER 6 OF THE MECHANICAL CODE (APPLICABLE ONLY IF THERE IS AN AIR SYSTEM UTILIZING RECIRCULATED AIR AND REQUIRING A THERMOSTATIC DEVICE).
34. HYDRAULICALLY DESIGNED SYSTEMS SHALL BE IN ACCORDANCE WITH CHAPTER 14 OF APPENDIX Q, SECTION BCQ102.
35. THIS APPLICATION IS MADE ONLY FOR WORK INDICATED ON THE SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
36. SPRINKLER PIPING SHALL BE PAINTED IN ACCORDANCE WITH LOCAL LAW 58/2009.

GENERAL SPRINKLER NOTES

1. THE INSTALLATION COMPONENTS, SIZING, SPACING, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL ALL SPRINKLER WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF N.F.P.A.-13 2007 EDITION AND ALL LOCAL AUTHORITIES.
2. CONTRACTOR SHALL FIELD VERIFY EXACT ELEVATION, LOCATION AND PIPE SIZES OF EXISTING SPRINKLER HEADS AND PIPING BEFORE INSTALLATION OF NEW WORK.
3. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SHALL INSTALL NEW WORK TO CLEAR DUCTWORK AND LIGHTING FIXTURES.
4. ALL SPRINKLER WORK SHALL COMPLY WITH BUILDING STANDARDS AND REQUIREMENTS.
5. ALL SPRINKLER HEADS SHALL BE INSTALLED AT CENTER OF TILE.
6. GENERAL CONTRACTOR SHALL COORDINATE FINAL FURNITURE/EQUIPMENT HEIGHT ELEVATIONS AND LOCATIONS WITH SPRINKLER INSTALLATION. ENGINEER SHALL BE NOTIFIED WHEN FURNITURE/EQUIPMENT IS LESS THAN 18" TO UNDERSIDE OF CEILING.
7. THE SPRINKLER SYSTEMS ARE TO BE HYDROSTATIC TESTED FOR A (2) HOUR MINIMUM AT 200 LBS. PRESSURE AND ARE TO BE WITNESSED BY AUTHORIZED BUILDING PERSONNEL. COORDINATE ALL TESTING WITH BUILDING MANAGER.
8. PIPES SIZES SHOWN ARE BASED ON DESIGN PIPING LAYOUTS ONLY. ACTUAL PIPE SIZES SHALL BE DETERMINED BY CONTRACTORS HYDRAULIC CALCULATIONS BASED ON HIS INSTALLATION DRAWINGS. CONTRACTOR SHALL ALLOW FOR THIS AND INCLUDE THIS IN HIS CONTRACT PRICE.
9. DRAWING INDICATES SPRINKLER SYSTEM DESIGN ONLY. CONTRACTOR RESPONSIBLE FOR OFFSETS, DROPS AND RISES FOR COORDINATION WITH OTHER TRADES.
10. G.C. SHALL COORDINATE AND ARRANGE FOR DRAINING AND DEACTIVATION OF EXISTING SPRINKLER SYSTEM WITH BUILDING MANAGEMENT AS REQUIRED.
11. THERE SHALL BE AT LEAST ONE FDNY CERTIFIED FIREGUARD ON DUTY WHEN WORK IS ONGOING AND TEMPORARY LOOP IS IMPAIRED. THE FIREGUARD SHALL PERFORM CONSTANT PATROLS OF THE AREAS WITH IMPAIRED FIRE PROTECTION. ALL FIREGUARDS SHALL BE EQUIPPED WITH AT LEAST ONE APPROVED MEANS FOR NOTIFICATION. PRE-PROGRAMMED TO DIAL THE FIRE DEPARTMENT BOROUGH DISPATCHER'S OFFICE (212-570-4300) TO REPORT ACCURATE AND TIMELY INFORMATION TO THE FIRE DEPARTMENT.
12. G.C. SHALL BE RESPONSIBLE FOR ALL FINAL TESTS AND INSPECTIONS OF COMPLETED WORK REQUIRED BY THE BUILDING MANAGEMENT PRIOR TO OCCUPANCY OF SPACE.
13. ALL SPRINKLER WORK SHALL BE TESTED AND MADE OPERATIONAL PRIOR TO CARPET AND FURNITURE INSTALLATION. G.C. SHALL REPAIR AND/OR REPLACE ALL FINISHES DAMAGED BY DEFECTIVE SPRINKLER WORK AT HIS EXPENSE.
14. G.C. SHALL PROPERLY TEST AND INSPECT EXISTING SPRINKLER SYSTEM PRIOR TO COMMENCEMENT OF WORK AND SHALL NOTIFY BUILDING MANAGEMENT IMMEDIATELY IF REPAIR OF EXISTING SPRINKLER SYSTEM IS REQUIRED.
15. ALL BURNING, CUTTING, SOLDERING AND WELDING SHALL BE COORDINATED WITH BUILDING FIRE SYSTEMS WITH BUILDING MANAGEMENT, AS REQUIRED.
16. G.C. SHALL COORDINATE ARRANGEMENTS FOR TEMPORARY DISCONNECT AND RECONNECT WITH MANAGEMENT PRIOR TO COMMENCEMENT OF WORK.
17. G.C. SHALL BE RESPONSIBLE FOR OBTAINING PERMITS AND APPROVALS REQUIRED BY BUILDING INSPECTOR AND FIRE MARSHALL IN CONJUNCTION WITH CHANGES TO EXISTING SPRINKLER SYSTEM.
18. REFER TO ENGINEERING DRAWINGS FOR SPRINKLER HEADS, LIGHT SENSORS AND FIRE DETECTION DEVICES.
19. PIPE SIZE TO BE MINIMUM OF ONE INCH (1").
20. ALL SERVICE SHUTDOWNS SHALL BE BY BASE BUILDING ENGINEERS. MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO THE BUILDING OFFICE PRIOR TO SHUT DOWN.
21. ALL WORK TO BE DONE DURING THE HOURS DESIGNATED BY OWNER.
22. EXISTING PIPING SERVING ADJACENT AREAS NOT IN AREA OF WORK SHALL REMAIN ACTIVE AND WITHOUT DISTURBANCE
23. A FIRE WATCH GUARD WITH A CERTIFICATE OF FITNESS SHALL BE MAINTAINED DURING SHUT DOWNS AND ALL HOURS WHEN OPERATIONS ARE NOT IN PROGRESS OR FDNY FIREGUARDS ARE NOT PRESENT. WATCH SERVICES SHALL BE CONDUCTED BY A COMPETENT PERSON. FDNY CERTIFICATION IS NOT REQUIRED. G.C. SHALL BE RESPONSIBLE FOR THE FIRE WATCH AND ALL PROTECTIVE MEASURES REQUIRED BY MANAGEMENT & FDNY AT HIS EXPENSE.
24. UPON COMPLETION OF ALL SPRINKLER WORK, CONTRACTOR SHALL TEST AND INSPECT ENTIRE SPRINKLER SYSTEM. ENTIRE SYSTEM SHALL BE FULLY OPERATIONAL AND APPROVED IN COMPLIANCE WITH ALL AHJ.
25. UPON SUCCESSFUL COMPLETION OF ALL TESTING, CONTRACTOR SHALL PRIME AND PAINT ALL EXPOSED SPRINKLER PIPING. COLOR AND FINISH SHALL BE AS PER ARCHITECT.
26. CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO PROVIDE (5) FIVE ADDITIONAL SPRINKLERS INSTALLED. EXACT LOCATIONS OF THESE SPRINKLER HEADS SHALL BE DETERMINED IN FIELD.
27. ERECT TEMPORARY SPRINKLER LOOP IN AND AROUND BUILDING CORE AREA TO PROTECT THE FACILITY DURING REMOVALS AND SUBSEQUENT CONSTRUCTION ACTIVITIES. AND REMOVAL OF THE SAME AFTER ENTIRE FLOOR IS COMPLETELY SPRINKLERED AND ACTIVATED.

ALARMS:

LOCAL WATERFLOW ALARMS SHALL BE PROVIDED ON ALL SPRINKLER SYSTTEMS IN HOMES NOT EQUIPPED WITH SMOKE ALARMS OR SMOKE DETECTORS IN ACCORDANCE WITH NFPA 72, NATIONAL FIRE ALARM CODE AS MODIFIED BY NYC.

DESIGN METHOD

DESIGN CRITERIA FOR HYDRAULICALLY DESIGNED (NFPA 13R-2007 SECTION 6.8.1). DESIGN DENSITY, HYDRAULICALLY REMOTE AREA, HAZARD OCCUPANCY, COMMODITY CLASS, NUMBER OF HEADS CALCULATED, K-FACTOR, COVERAGE AREA PER SPRINKLER HEAD, FLOW, ETC.

THE NUMBER OF DESIGN SPRINKLERS UNDER FLAT, SMOOTH, HORIZONTAL CEILINGS SHALL INCLUDE ALL SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR ADJACENT SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND.

PROPOSED SCOPE OF WORK IS EXEMPT FROM ENERGY COMPLIANCE AS PER SECTION ECC 101.6

THE ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THIS DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR REVIEW BEFORE PROCEEDING WITH FABRICATION.

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

NO CHANGE IN USE, EGRESS OR OCCUPANCY UNDER THIS APPLICATION

DESIGN CRITERIA

INSIDE DWELLING UNITS:

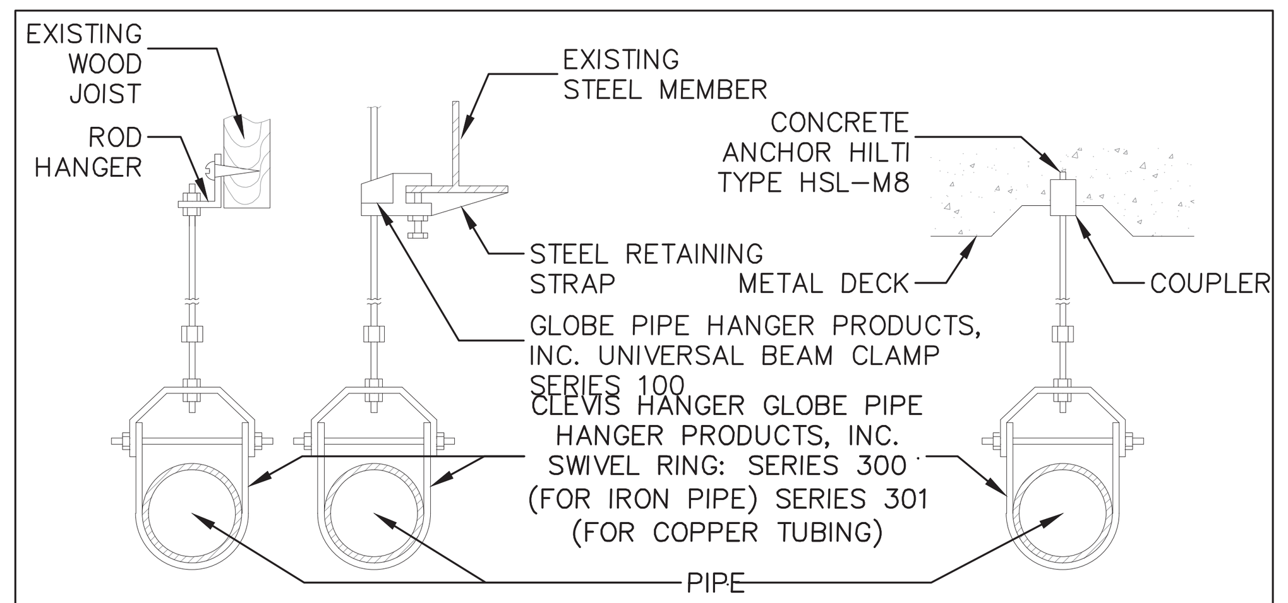
ENTIRE SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO MEET FOLLOWING CRITERIA IN ACCORDANCE WITH NYCBC Q 104 AND NFPA-13R, 2007:

1. THE SYSTEM SHALL PROVIDE A DISCHARGE OF NOT LESS THAN 18 GPM TO ANY SINGLE OPERATING SPRINKLER AND NOT LESS THAN 13 GPM PER SPRINKLER TO THE NUMBER OF DESIGN SPRINKLERS, BUT NOT LESS THAN THE LISTING OF THE SPRINKLERS. OTHER DISCHARGE MAY BE USED WITH SPECIAL SPRINKLERS THAT HAVE BEEN LISTED FOR SUCH SPECIFIC RESIDENTIAL INSTALLATION CONDITIONS.
2. THE NUMBER OF DESIGN SPRINKLERS SHALL INCLUDE ALL SPRINKLERS WITHIN COMPARTMENT TO A MAXIMUM OF 4 SPRINKLERS UNDER FLAT, SMOOTH, HORIZONTAL CEILING.
3. PIPING SHALL BE SIZED IN ACCORDANCE WITH HYDRAULIC CALCULATION PROCEDURES TO COMPLY WITH NYC BC Q103 & NFPA-13R.
4. HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO CONNECTION TO WATER SUPPLY.
5. RESULT OF HYDRAULIC CALCULATIONS SHALL INDICATE MINIMUM 5% PRESSURE SAFETY MARGIN, I.E. EXCESS OF PRESSURE AVAILABLE OVER PRESSURE REQUIRED.

OUTSIDE DWELLING UNITS:

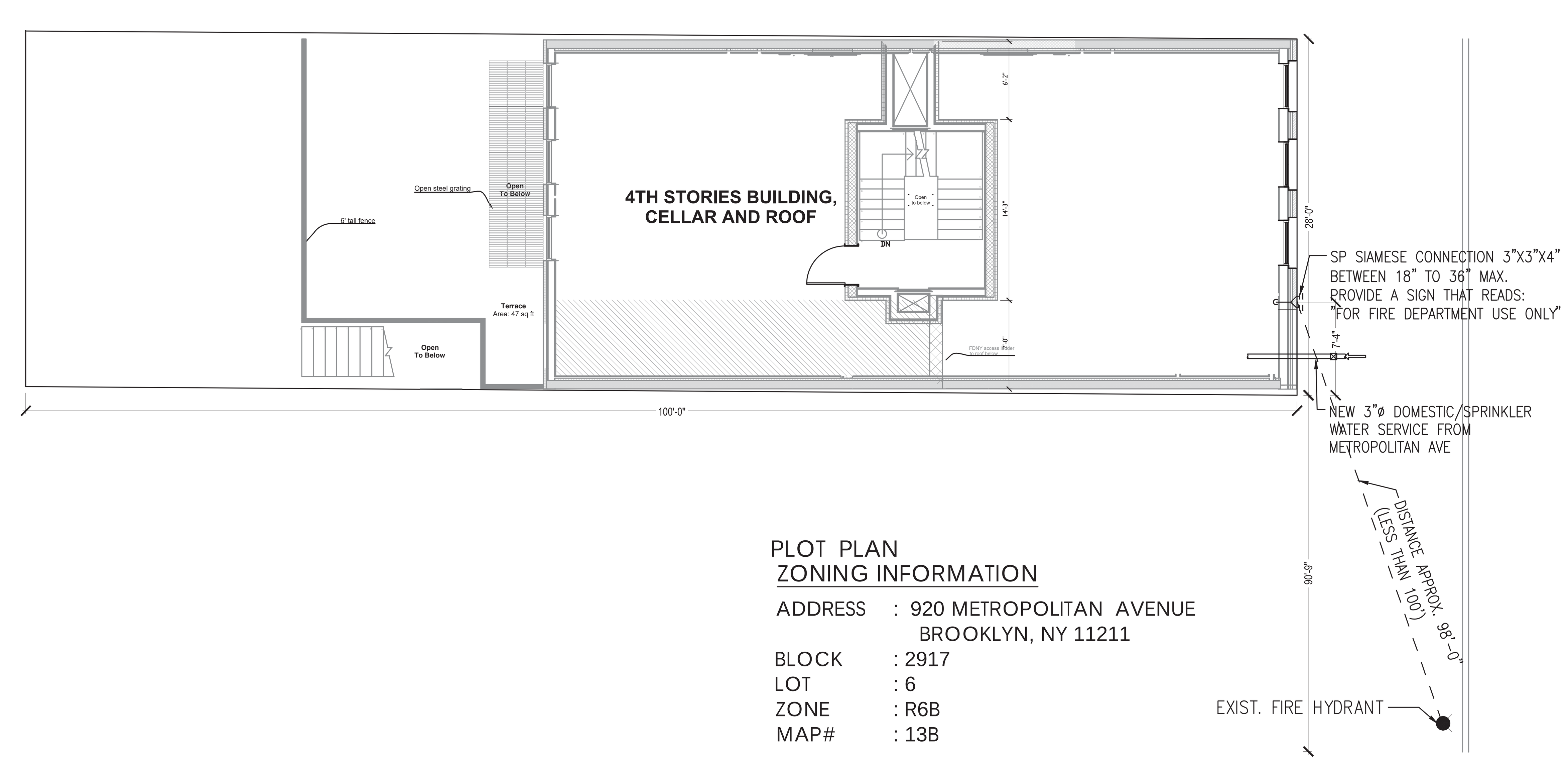
ENTIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO MEET FOLLOWING CRITERIA IN ACCORDANCE WITH NYCBC Q 106 AND NFPA-13, 2007:

1. EXACT LOCATION OF SPRINKLER HEADS IN FINISHED AREAS WITH EXPOSED CEILINGS AND WITH SUSPENDED CEILINGS SHALL BE AS INDICATED ON ARCHITECTURAL REFLECTED CEILING PLANS.
2. WHENEVER ROLL GROOVED CONNECTIONS ARE USED, ALLOWANCE FOR ADDITIONAL PRESSURE LOSS AT GROOVES SHALL BE MADE AS FOLLOWS:
   A. FOR EACH COUPLING ON STRAIGHT RUN INCLUDING STRAIGHT FLOW THROUGH TEE OR CROSS: ADD 1 EQUIVALENT FOOT OF PIPE.
   B. FOR EACH COUPLING AT ELBOW, TEE OR CROSS WHERE DIRECTION OF FLOW CHANGES: ADD 2 EQUIVALENT FEET OF PIPE.
3. EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA-13.
4. WHEREVER GROOVED FITTINGS ARE USED IN CONJUNCTION WITH LIGHTWALL PIPE, EQUIVALENT FITTING LENGTHS INDICATED IN NFPA-13 SHALL BE INCREASED BY 30%.
5. DISCHARGE FROM EACH SPRINKLER HEAD SHALL NOT BE LESS THAN REQUIRED FOR AREA COVERED BY THIS HEAD. AREA COVERAGE PER HEAD SHALL BE DETERMINED IN ACCORDANCE WITH NFPA-13, PARAGRAPH 7-4.30.1.2.
6. MINIMUM PRESSURE AT SPRINKLER HEAD 7 PSI.
7. HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO CONNECTION TO WATER SUPPLY.
8. CONTRACTOR SHALL BASE ALL HYDRAULIC CALCULATIONS ON AVAILABLE PRESSURE AT CONNECTION TO WATER SUPPLY.
10. RESULT OF HYDRAULIC CALCULATIONS SHALL INDICATE MINIMUM 5% PRESSURE SAFETY MARGIN, I.E. EXCESS OF PRESSURE AVAILABLE OVER PRESSURE REQUIRED.



HANGER ROD SPACING AND SIZE SCHEDULE			
NOM. PIPE SIZE (INCHES)	STEEL PIPE MAX. SPAN (FEET)	COPPER TUBE MAX. SPAN (FEET)	MINIMUM ROD DIAMETER (INCHES)
1	7	6	3/8
1-1/4	7	6	3/8
1-1/2	9	8	3/8
2	10	8	3/8
2-1/2	11	9	1/2
3	12	10	1/2

FIRE PROTECTION PIPE HANGER DETAIL
NOT TO SCALE



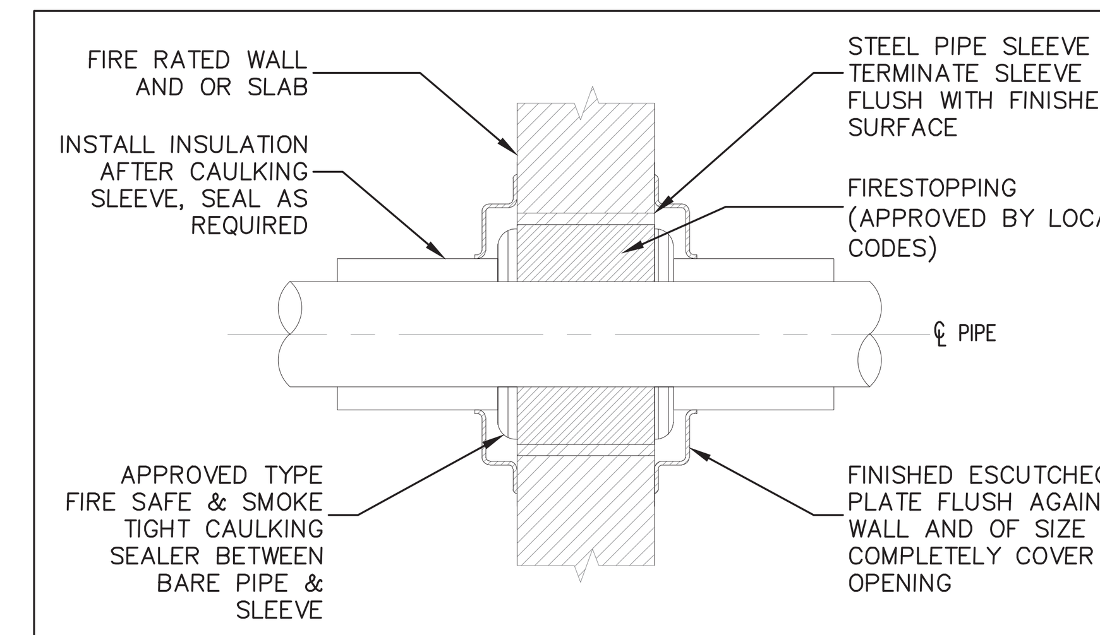
PLOT PLAN

ZONING INFORMATION

ADDRESS : 920 METROPOLITAN AVENUE
BROOKLYN, NY 11211
BLOCK : 2917
LOT : 6
ZONE : R6B
MAP# : 13B

PIPE AND FIXTURE SCHEDULE (SPRINKLER APPLICATION)						
SYMBOL	FIXTURE TYPE	LOCATION	MODEL	MANUFACT.	APPROVALS	DESCRIPTIONS
◎	COMMERCIAL PENDENT SPRINKLER HEAD	CEILING AREA	F1FR56 (SIN RA1714)	RELIABLE OR APPROVED EQUIL	UL NYC MEA 258-93-E	1/2"Ø ORIFICE TEMPERATURE RATING 155°F
◎	RESIDENTIAL FLAT CONCEALED SPRINKLER HEAD	HUNG CEILING AREA	RFC-49 (SIN RA0616)	RELIABLE OR APPROVED EQUIL	cULus Listed FM Approved LPCB Approved VdS Approved [165°F (74°C) only] CE Listed	1/2"Ø ORIFICE TEMPERATURE RATING 165°F
○	UPRIGHT INTERMEDIATE LEVEL SPRINKLE HEAD	HUNG CEILING AREA	F1FR56 (SIN R3195)	RELIABLE OR APPROVED EQUIL	APPROVAL ORGANIZATIONS 1. Listed by Underwriters Laboratories, Inc. and Certified for Canada (cULus) 2. Certified by FM Approvals	1/2"Ø ORIFICE TEMPERATURE RATING 155°F

NOTE: COORDINATE ALL SPRINKLER COLOR FINISHES WITH ARCHITECT.

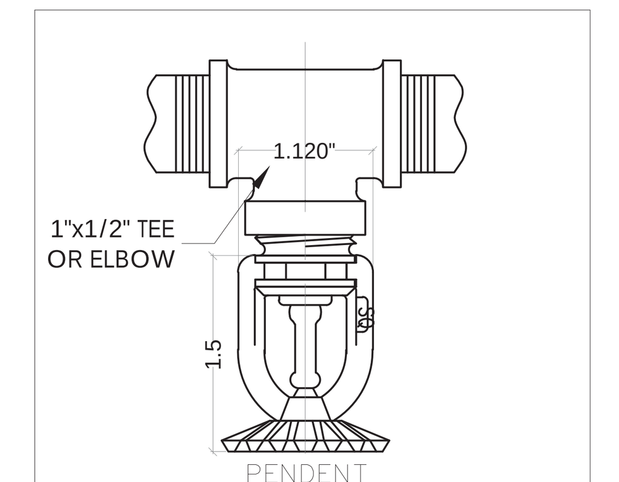


PIPE SLEEVE THRU FIRE RATED WALL
NOT TO SCALE

APPROVED
Date: 06/14/2022

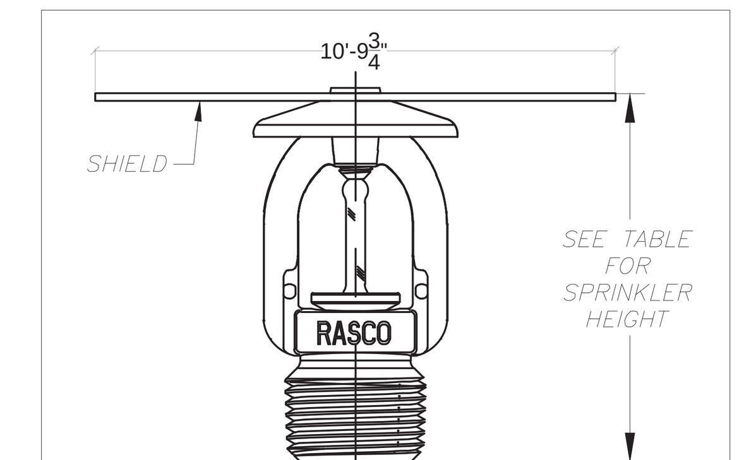
DESIGN CRITERIA INFORMATION SYSTEM

1. AREA OF APPLICATION #1 = 445 SQ.FT.
2. OCCUPANCY CLASSIFICATION = LIGHT HAZARD
3. MAXIMUM COVERAGE PER SPRINKLER HEAD 180 MAX SQ. FT.
4. DESIGN DENSITY = 0.05 GPM/SQ.FT.
5. NUMBER OF SPRINKLER HEADS WITHIN AREA OF APPLICATION = 4
6. "K" FACTOR OF SPRINKLER HEADS = 4.9
7. SPRINKLER SYSTEM DEMAND = 55.1 GPM 35.5 PSI
8. AVAILABLE WATER SUPPLY = 500 GPM 58.9 PSI
9. DESIGN CRITERIA REQUIREMENTS BASED ON:
   * NEW YORK CITY BUILDING CODE
   * NFPA-13R Sec. 8.1.2 v. 2007 AS MODIFIED PER APPENDIX Q



PENDENT SPRINKLER

RELIABLE MODEL # F1FR56, 1/2"Ø ORIFICE
TEMP RATING 155°F,(SIN) R1714
Underwriters Laboratories Inc. and
Certified for Canada (cULus)
in accordance with ANSI/UL199

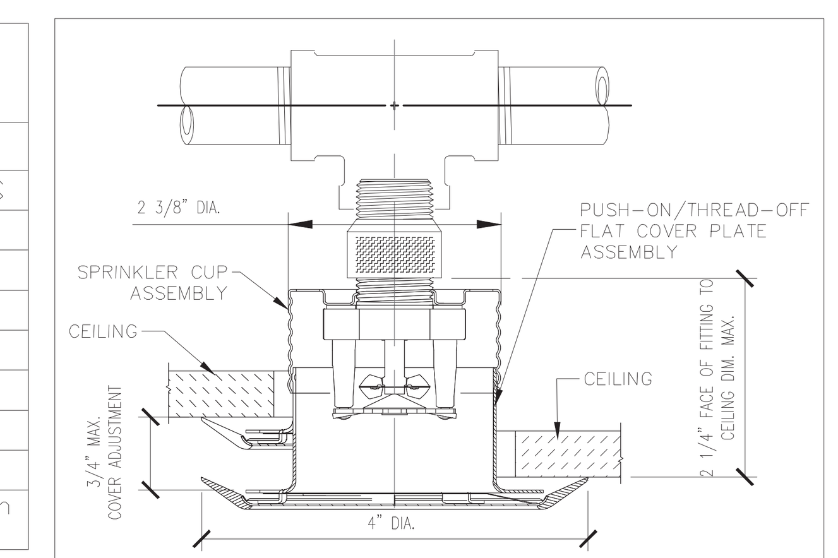


UPRIGHT INTERMEDIATE LEVEL SPRINKLER

QUICK RESPONSE, MODEL F1FR56, 1/2"Ø ORIFICE
TEMP RATING 175°F, Identification #(SIN) R3195
APPROVAL ORGANIZATIONS
1.Listed by Underwriters Laboratories, Inc. and
Certified for Canada (cULus)
2.Certified by FM Approvals

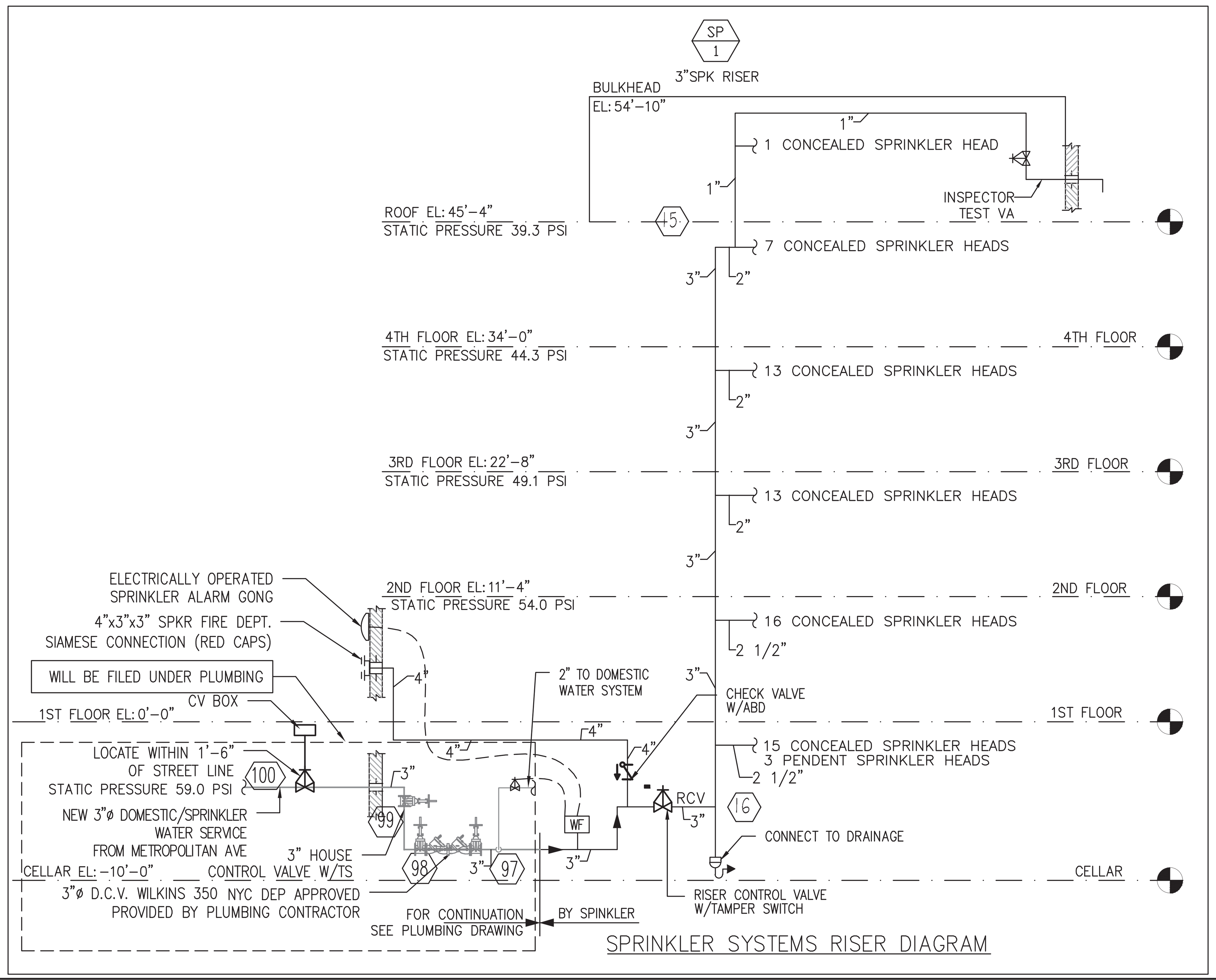
LEGEND	
SYMBOL	DESCRIPTION
▬	NEW SPRINKLER PIPING
	OS&Y VALVE WITH TAMPER SWITCH
	CHECK VALVE
	PIPE DROP OR DOWN
	PIPE CONNECTION, TOP
	PIPE CONNECTION, BOTTOM
	PIPE RISE OR UP
	PRESSURE GAUGE W/VALVE
	PIPE BREAK
	FIRE DEPARTMENT CONNECTION

TABLE 22.5.2.2.1 LIGHT HAZARD PIPE SCHEDULES			
STEEL		COPPER	
INCHES	SPRINKLERS	INCHES	SPRINKLERS
1	2	1	2
1-1/4	3	1-1/4	3
1-1/2	5	1-1/2	5
2	10	2	12
2 1/2	30	2 1/2	40
3	60	3	65
3 1/2	100	3 1/2	115
4	See Section 8.2	4	See Section 8.2



RELIABLE RESIDENTIAL FLAT CONCEALED SPRINKLER

MODEL RFC49 7/16" ORIFICE, TEMP RATING 165°F, K=4.9



SPRINKLER SYSTEMS RISER DIAGRAM

DRAWINGS LIST	
SP-001.00	NOTES, PLOT PLAN, RISER DIAGRAM, DETAILS, SYMBOLS
SP-002.00	CELLAR & 1ST FLOOR PLANS
SP-003.00	2ND FLOOR & 3RD FLOOR PLANS
SP-004.00	4TH FLOOR & ROOF FLOOR PLANS

SCOPE OF WORK:

1. INSTALLATION OF SPRINKLER SYSTEM FOR ENTIRE BUILDING. DESIGNED BY HYDRAULIC CALCULATION PER NFPA-13R 2007, SECTION 8.4.4.
2. NO CHANGE IN USE, EGRESS OR OCCUPANCY.

SPECIAL INSPECTIONS:

1. SPRINKLER SYSTEMS BC 1704.23
2. FIRE RESISTANT PENETRATIONS AND JOINTS BC 1704.27

FOR SPRINKLER USE ONLY

Levin Engineering PLLC

- 28 Dooley Street, 2nd Floor Brooklyn, NY 11235
- Phone (718) 332-2266
- www.levin-engineering.com
- info@levin-engineering.com

No.	DATE	DESCRIPTION

PROJECT
920 Metropolitan Avenue, Brooklyn, NY 11211

DRAWING TITLE
NOTES, DETAILS, PLOT PLAN, LEGEND & SPRINKLER RISER DIAGRAM

DOB NOW JOB No.
B00715872-S4

SEAL & SIGNATURE

DATE:	11-17-21
DRAWN BY:	I.K.
CHK BY:	D.L.
DWG. NO.:	SP-001.00
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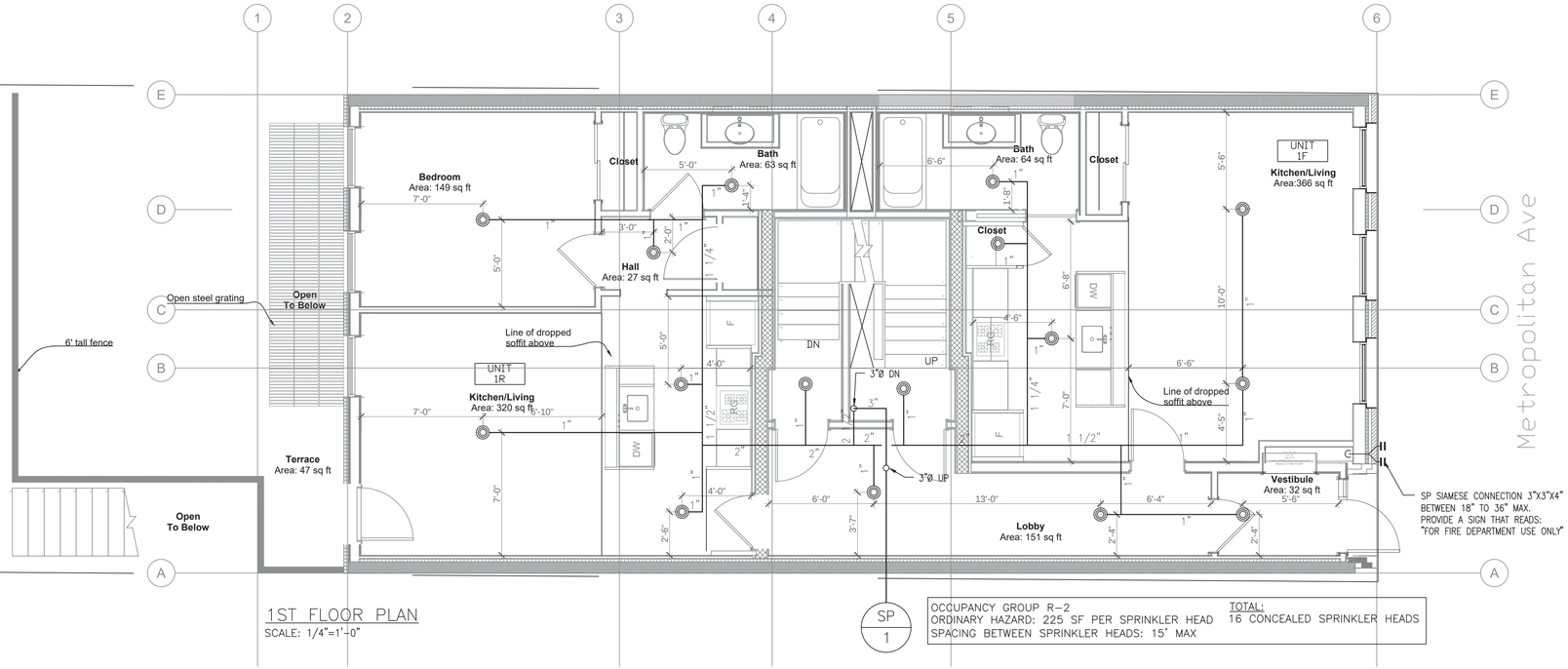
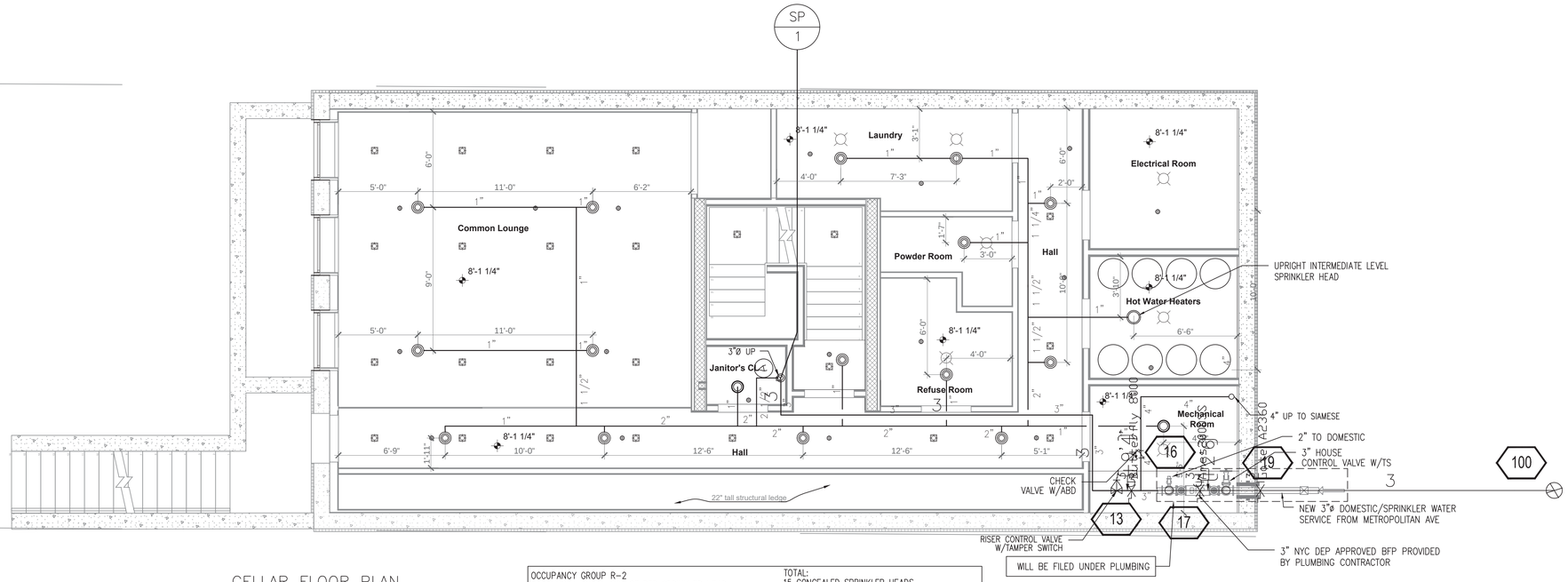


1ST FLOOR PLAN

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

OCCUPANCY GROUP R-2
ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD
SPACING BETWEEN SPRINKLER HEADS: 15' MAX

TOTAL:
16 CONCEALED SPRINKLER HEADS



CELLAR FLOOR PLAN

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

OCCUPANCY GROUP R-2
ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD
SPACING BETWEEN SPRINKLER HEADS: 15' MAX

TOTAL:
15 CONCEALED SPRINKLER HEADS
2 PENDENT SPRINKLER HEADS
1 UPRIGHT INTERMEDIATE LEVEL SPRINKLER HEAD

FOR SPRINKLER USE ONLY

CELLAR

UNLESS NOTED OTHERWISE	
CEILING ELEVATION:	
MAIN PIPE ELEVATION:	9'4"
BRANCH PIPE ELEVATION:	9'4"
ELEVATION FROM JOB REF:	-10"-0"

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DRAWING TITLE

CELLAR & 1ST FLOOR PLANS

DOB NOW JOB No.

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STATE OF NEW YORK DMITRY LEVIN 095831 LICENSED PROFESSIONAL ENGINEER

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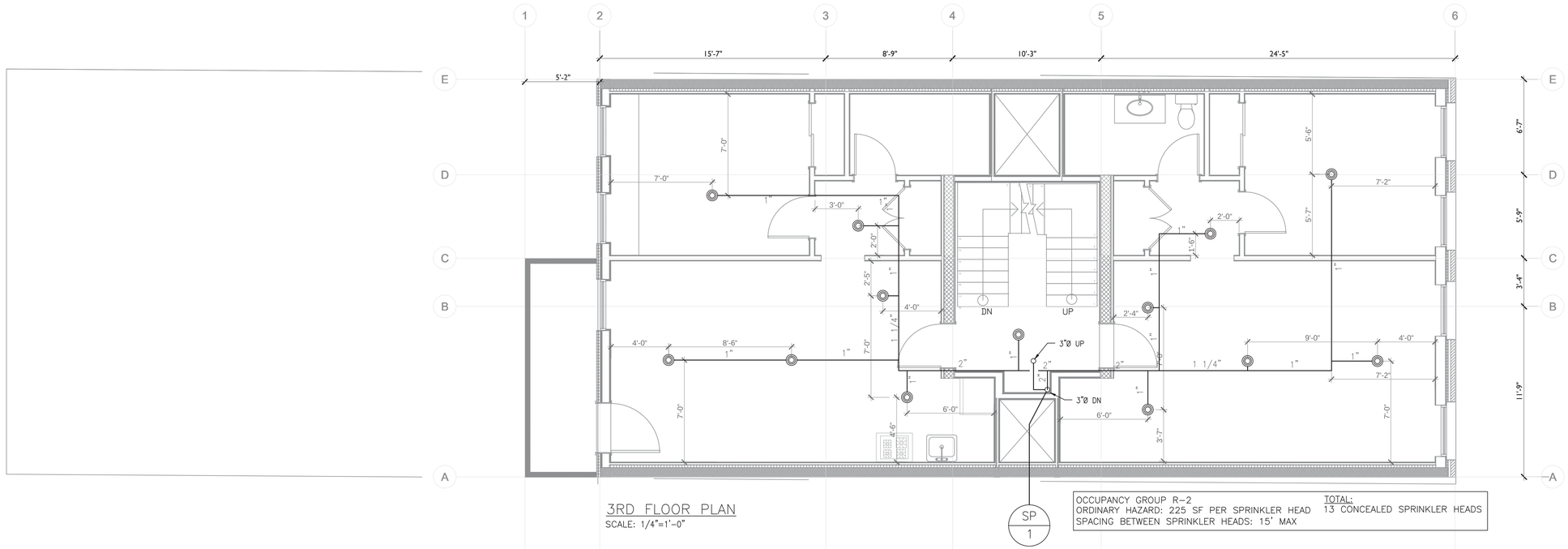
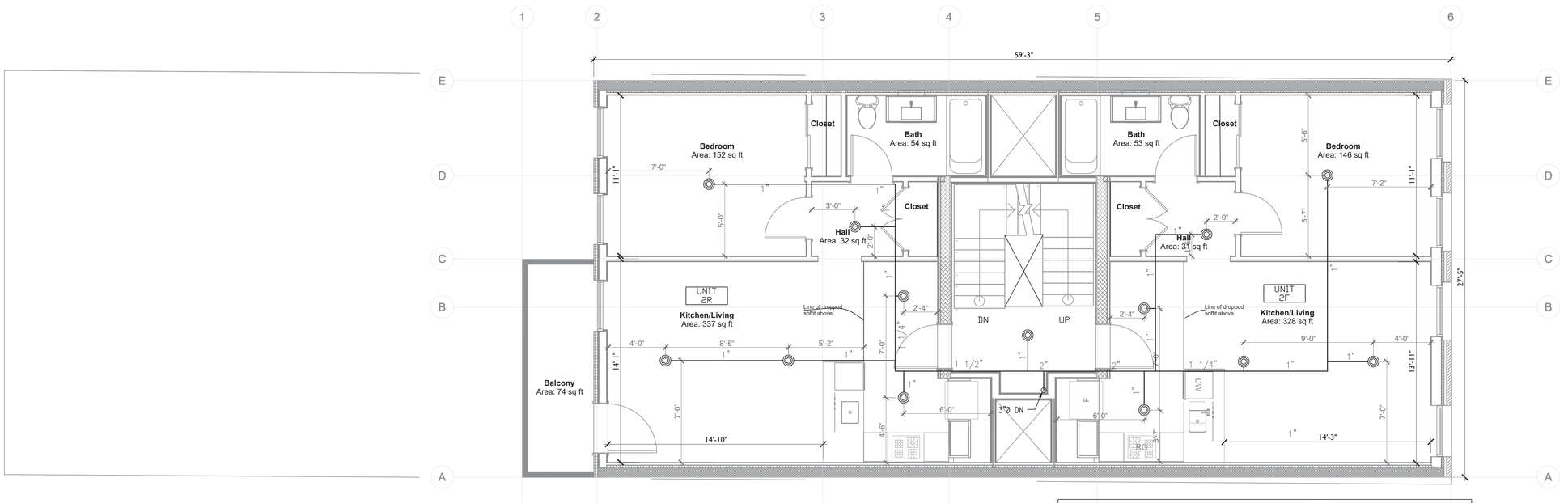


3RD FLOOR PLAN
SCALE: 1/4"=1'-0"

SP 1

OCCUPANCY GROUP R-2
ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD
SPACING BETWEEN SPRINKLER HEADS: 15' MAX

TOTAL:
13 CONCEALED SPRINKLER HEADS



2ST FLOOR PLAN
SCALE: 1/4"=1'-0"

OCCUPANCY GROUP R-2
ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD
SPACING BETWEEN SPRINKLER HEADS: 15' MAX

TOTAL:
13 CONCEALED SPRINKLER HEADS

FOR SPRINKLER USE ONLY

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DRAWING TITLE

2ND & 3RD FLOOR PLANS

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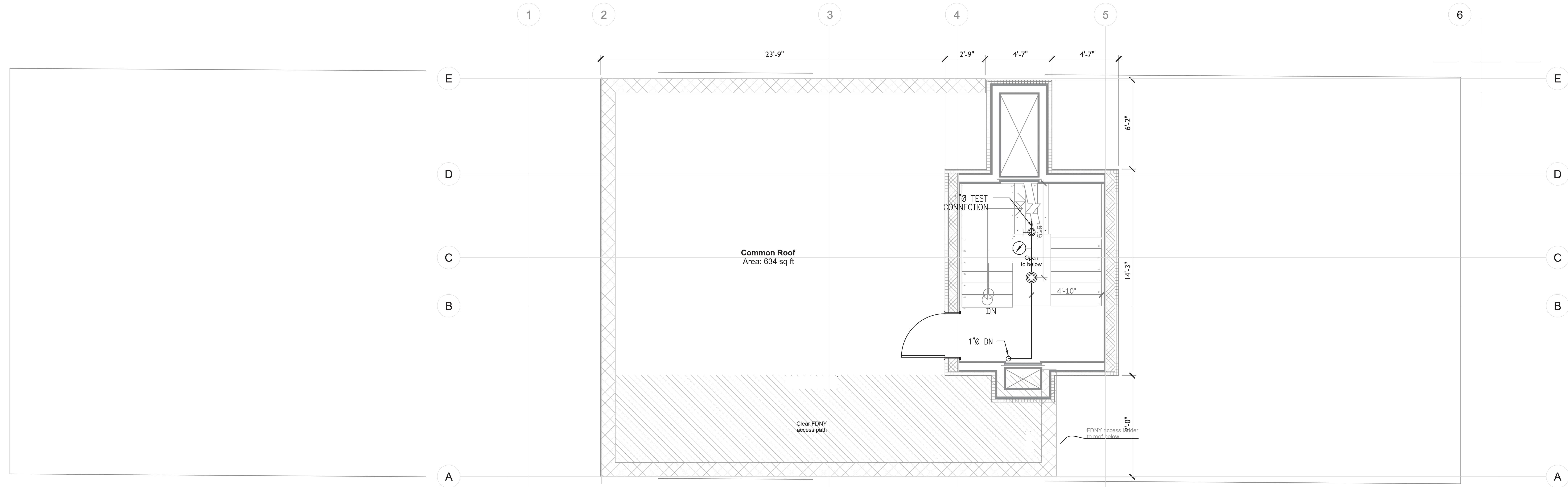
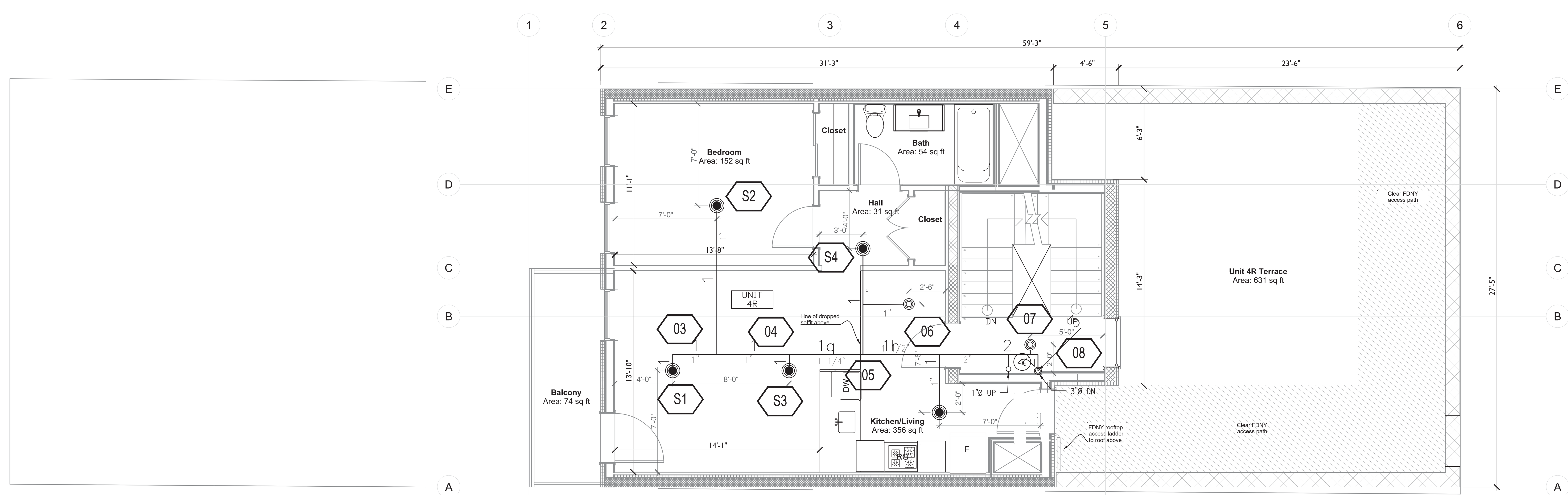


ROOF PLAN
SCALE: 1/4"=1'-0"

OCCUPANCY GROUP R-2 ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD SPACING BETWEEN SPRINKLER HEADS: 15' MAX	TOTAL: 1 CONCEALED SPRINKLER HEAD



4TH FLOOR PLAN
SCALE: 1/4"=1'-0"

OCCUPANCY GROUP R-2 ORDINARY HAZARD: 225 SF PER SPRINKLER HEAD SPACING BETWEEN SPRINKLER HEADS: 15' MAX	TOTAL: 7 CONCEALED SPRINKLER HEADS

FOR SPRINKLER USE ONLY

4th FL

UNLESS NOTED OTHERWISE	
CEILING ELEVATION:	9'
MAIN PIPE ELEVATION:	9'6"
BRANCH PIPE ELEVATION:	9'6"
ELEVATION FROM JOB REF:	34'-0"

TOS 45'-0"

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NYC APPROVED
Date: 06/14/2022

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PROJECT
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DRAWING TITLE
4TH & ROOF FLOOR PLANS

DOB NOW JOB No.
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