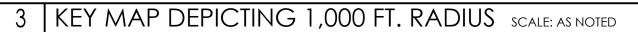
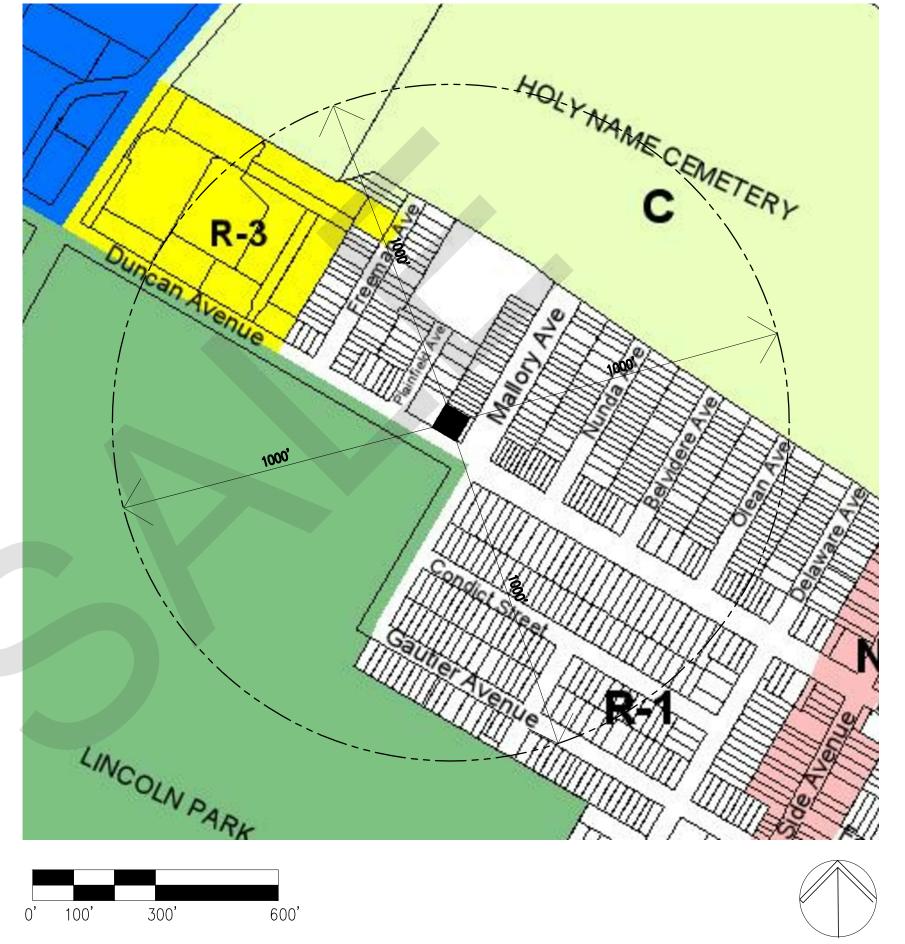


DUNCAN AVENUE





6 ZONING COMPARISON CHART

PREMISES: ZONING DISTRICT: PROPOSED USE:

276 DUNCAN AVE., JERSEY CITY, NEW JERSEY R1 PROPOSED NEW MULTI-FAMILY DWELLING

	REQUIRED	EXISTING	PROPOSED	VARIANCE	COMMENTS
MINIMUM LOT AREA	2,500 SF	5,656.19 SF	NO CHANGE	NO	
MIINMUM LOT WIDTH	25 FT.	67.82 FT.	NO CHANGE	NO	
MINIMUM LOT DEPTH	100 FT.	83.4 FT.	NO CHANGE	YES	NON-CONFORMING
FRONT YARD SETBACK	PRE-DOMINANT	NONE	0 FT.	NO	PRE-DOMINANT
MINIMUM REAR YARD SETBACK*	20 FT.	NONE	15 FT	YES	
MINIMUM SIDE YARD SETBACK	2FT./3FT.	NONE	0 FT./0 FT.	YES	
TOTAL SIDE YARDS	5 FT.	NONE	0 FT.	YES	
MAXIMUM BUILDING HEIGHT	35 FT.	NONE	42.5 FT	YES	MAX. BLDG. HEIGHT DEPEND ON FL. TO FL.
MIN. FLOOR TO CEILING HEIGHT	9 FT.	NONE	9 FT.	NO	MAX. BLDG. HEIGHT=35 FT./3 STORIES
MAX. BUILDING COVERAGE	60%	NONE	82.01%	YES	
MAX. LOT COVERAGE	85%	NONE	100%	YES	
PARKING	NOT REQUIRED	NONE	12	NO	
MAX. CURB CUT WIDTH	10 FT.	NONE	10 FT.	NO	
BICYCLE PARKING CALCULATION:	RESIDENTIAL PARK FORMULA: .5 PER 12 DU X .5 = 6 I	DWELLING UNITS	REQUIRED		

MULTI-FAMILY IS NOT PERMITTED AT R1 ZONE. VARIANCE IS REQUIRED

SEE PAGE G-100 FOR BOARD ON BOARD FENCE & STREET TREE DETAILS

UNIT PER FLOOR (TYPICAL FLOORS 2, 3, 4)			
	AREA	NO. OF BEDROOMS	
UNIT 1	916.70 S.F.	2	
UNIT 2	967.04 S.F.	2	
UNIT 3	938.95 S.F.	2	
UNIT 4	872.47 S.F.	2	



Design & Consultants LLP

35 Journal Square Suite 402 Jersey City, New Jersey 07306

t. (201) 680-7132 www.radellp.com

Raul Cabato, Architect email: raul@radcllp.com

Connecticut License No. 13834 New Jersey License No. 21AI01463700 New York License No. 025075

BUILDING AND ZONING DATA		
MUNICIPALITY		JERSEY CITY
LOT		23,24,25,26
BLOCK		14602
ZONE		R-1
BUILDING CLASSIFICATI	ON	3A
USE GROUP		R2
HEIGHT OF STRUCTURE		42.5 FT.
FLOOR AREA		
FLOOR		AREA
		TOTAL
FIRST FLOOR		2108.33 SF
SECOND FLOOR		4638.89 S.F.
THIRD FLOOR	4638.89 S.F.	
FOURTH FLOOR		4638.89 S.F.
TOTAL AREA		16,025 S.F.

VOLUME	
FLOOR	VOLUME
FIRST FLOOR	21083.3 C.F.
SECOND FLOOR	46,388.90 C.F.
THIRD FLOOR	46,388.90 C.F.
FOURTH FLOOR	46,388.90 C.F.
TOTAL VOLUME	160,250.00 C.F.

APPROVED BY THE PLANNING I	BOARD — CITY OF JERSEY CITY
BOARD SECRETARY	DATE
BOARD CHAIRMAN	- <u>— — </u>
BOTTED OFFICIALITY	DATE

NO.	DATE	COMMENT
APPROVAL	STAMPS AND SIGNATUR	RES

DRAWING TITLE	BSCAN STICKER
PHOTOGRAPH,	
SITE PLAN, ZONING	
COMPARISON CHART	

276 DUNCAN AVE.

JERSEY CITY, NEW JERSEY

BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION

CONSTRUCTION OF NEW

MULTI-FAMILY BUILDING

(4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

EAL	DRAWN BY VM	SCALE AS NOTED
Make Make	CHECKED BY RC	DATE OCTOBER 11, 2018
Mills	FILE	BUILDING PLAN ID NUMBER
	PAGE NO.	Z-100

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GENERAL NOTES

1. EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY DISCREPANCY AND/OR UNCERTAINTY AS TO WHAT MATERIAL OR PRODUCT IS TO BE USED SHOULD BE VERIFIED WITH THE OWNER OR ARCHITECT

2. ALL CONSTRUCTION SHALL COMPLY WITH THE CURRENT BUILDING CODES OF NEW JERSEY. ANY NON-CONFORMING DOCUMENTS DISCOVERED BY CONTRACTOR OR HIS AGENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ARCHITECT.

3. THESE DRAWINGS DO NOT CONTAIN COMPLETE SPECIFICATIONS, DETAILS AND INFORMATION REQUIRED FOR THE INTERIOR FINISHES OF THE PROJECT. ADDITIONAL INFORMATION SHALL BE OBTAINED FROM THE

4. ALL SITE WORK AND LANDSCAPING IS TO BE ESTABLISHED AND DESIGNED BY OTHERS THAN THE ARCHITECT. UNLESS SHOWN ON THESE DRAWINGS, ALL MECHANICAL WORK SUCH AS, BUT NOT LIMITED TO, ELECTRICAL, PLUMBING, HEATING, AIR CONDITIONING, VENTILATING, ETC. ARE TO BE ESTABLISHED AND DESIGNED BY OTHERS.

5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK AND FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

6. ANY ERRORS. OMISSIONS OR INCONSISTENCIES ON THESE DRAWINGS OR ANY VARIATIONS OR AMBIGUITIES BETWEEN THESE DRAWINGS AND ACTUAL SITE AND CONSTRUCTION CONDITIONS AND/OR REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ARCHITECT IN WRITING AND RESOLVED AND DOCUMENTED IN WRITING BEFORE CONTINUING WITH THE WORK IN QUESTION.

7. ALL INTERIOR STUD WALLS ARE DIMENSIONED AT 4-1" UNLESS NOTED OTHERWISE.

8. ASSUME MINIMUM FIBER STRESS 1350 P.S.I. FOR ALL STRUCTURAL BEAMS AND HEADERS UNLESS OTHERWISE NOTED (DOUGLAS FIR).

9. SMOKE DETECTORS TO BE AC POWERED AND U. L. APPROVED W/BATTERY BACKUP.

10. INDIVIDUAL AIR CONDITIONING UNITS MUST HAVE ADEQUATE RETURN

11. ALL LAVATORIES AND BATHS SHALL BE MECHANICALLY VENTILATED THROUGH NON-COMBUSTIBLE DUCTS TO PROVIDE AND CHANGE AIR EVERY 12 MINUTES (UNDERCUT BATHROOM DOOR 1").

12. IN ABSENCE OF NAILING SCHEDULE, PREPARED BY ARCHITECT OR ENGINEERS, ACCEPTED BY BUILDING OFFICIAL, USE NAILING SCHEDULE IN THE CURRENT BUILDING CODE APPENDICES.

13. CONTRACTOR MUST VERIFY ALL DIMENSIONS. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

14. CONTRACTOR MUST VERIFY ALL MEASUREMENTS AT SITE AND BE RESPONSIBLE FOR ACCURACY AND CORRECTNESS OF SAME.

15. CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER

16. ALL PATIOS AND PORCHES TO BE SLOPED 1/8" PER 1"-0" IN DIRECTION INDICATED ON THE FOUNDATION PLANS.

17. ALL SILLS IN CONTACT WITH CONCRETE TO BE WOLMANIZED AND HAVE A CONTINUOUS SILL SEALER (FULL BED OF MASTIC) AND TERMITE

18. PROVIDE SOLID BLOCKING, DOUBLE JOISTS, DBL TRIMMERS AND HEADERS UNDER ALL PARALLEL PARTITIONS, UNDERNEATH TUBS AND STAIR OPENINGS, AS REQUIRED.

19. REMOVE RUBBISH FROM PREMISES AS OFTEN AS NECESSARY OR

20. ALL WORK AREAS SHALL BE CLEANED TO THE SATISFACTION OF THE OWNER BEFORE TURNING SAME OVER TO OWNER.

21. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PIOR TO ORDERING AND INSTALLING ANY EQUIPMENT. FOUR COPIES OF EACH SUBMITTAL ARE REQUIRED. THE CONTRACTOR MAY SUBMIT FOR APPROVAL, 10 DAYS PRIOR TO PRESENTATION OF NEGOTIATED PRICE TO OWNER. ALTERNATE MANUFACTURERS OF ALL ITEMS SPECIFIED ON THESE DRAWINGS. CONTRACTOR MUST CHECK ALL SHOP DRAWINGS, NOTING ANY DISCREPANCIES PRIOR TO SUBMISSION.

22. THE CONTRACTOR SHALL PAY ALL FEES. GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS AND OBTAIN ALL PERMITS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH ALL WORK UNDER THESE CONTRACT DOCUMENTS. HE SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

23. THERE SHALL BE NO DEVIATION FROM SPECIFICATIONS WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.

24. ALL PLUMBING WALLS SHALL BE FRAMED WITH 2 X 6 STUDS. REMAINING INTERIOR STUD WALLS SHALL BE FRAMED WITH 2 X 4 STUDS UNLESS NOTED OTHERWISE.

25. ALL WOOD FRAMING AT BEARING WALLS SHALL BE AS FOLLOWS: 1ST FLOOR 2 X 4'S AT 16"0.C. 2ND FLOOR 2 X 4'S AT 16"O.C.

26. ROOFING SHALL BE CLASS "C" FIBERGLASS SHINGLES.

27. ALL ROOF EDGES SHALL HAVE ICE AND WATER SHIELD EXTENDING FROM BUILDING EDGE TO 24" OVER HEATED SPACE BELOW.

28. ALL EXPOSED MATERIALS FOR PORCHES, SOFFITS, OVERHANGS, ETC. TO BE APPROVED EXTERIOR GRADE.

29. THERE SHALL BE AN AIR SUPPLY VENT IN EVERY BATHROOM (EXHAUST FAN OPTIONAL IF CODE ALLOWS).

30. MINIMUM MECHANICAL VENTILATION REQUIREMENTS ARE:

RESIDENTIAL AREAS 5 AIR CHANGES PER HOUR BATHROOMS 7 AIR CHANGES PER HOUR

31. CORROSION RESISTANT FLASHING IS REQUIRED AT THE TOP AND SIDES OF ALL WINDOWS AND ROOF OPENINGS AND AT THE INTERSECTION OF CHIMNEYS MASONRY AND/OR WOOD CONSTRUCTION AND FRAME WALLS OR APPROVED WATER RESISTANT SHEATHING AND CAULKING TO BE USED AT TOP AND SIDES TO GUARANTEE LEAKPROOF.

APPLICABLE CODES - NEW JERSEY

INTERNATIONAL BUILDING CODE -NJ ED., 2018 OBTAINED FROM: INTERNATIONAL CODE COUNCIL, INC. . [888] 422-7233

angle national fire protection association referenced standards -OBTAINED FROM: NATIONAL FIRE PROTECTION ASSOC. [617] 770-3000 OR WWW.NFPA.ORG

INTERNATIONAL STANDARD PLUMBING CODE, 2018 OBTAINED FROM: NATIONAL ASSOC. OF > PLUMBING-HEATING-COOLING CONTRACTORS IN NEW JERSEY AT [800] 652-7422 OR NAPHCC [800] 533-7694

NATIONAL ELECTRICAL CODE, 2017 OBTAINED FROM: NATIONAL FIRE PROTECTION ASSOC [617] 770-3000

INTERNATIONAL ENERGY CONSERVATION CODE, 2018 (RESIDENTIAL) OBTAINED FROM: INTERNATIONAL CODE COUNCIL [888] 422-7233 > ASHRAE 90.1-2013 (COMMERCIAL)

INTERNATIONAL MECHANICAL CODE, 2018 > OBTAINED FROM: INTERNATIONAL CODE COUNCIL [888] 422-7233

'INTERNATIONAL FUEL GAS CODE, 2018 , OBTAINED FROM: INTERNATIONAL CODE COUNCIL [888] 422-7233

> INTERNATIONAL RESIDENTIAL CODE -NJ ED., 2018 OBTAINED FROM: INTERNATIONAL CODE COUNCIL [888] 422-7233

REHABILITATION SUBCODE - NJAC 5:23-6

OBTAINED FROM: STATE OF NJ, DEPARTMENT OF COMMUNITY AFFAIRS, DIVISION OF CODES AND STANDARDS [609] 984-0040

BARRIER-FREE SUBCODE - NJAC 5: 23-7 OBTAINED FROM: STATE OF NJ, DEPARTMENT OF COMMUNITY > AFFAIRS, DIVISION OF CODES AND STANDARDS [609] 984-0040

ANSI A117.1-2009 , OBTAINED FROM: ANSI 11 WEST 42ND ST NEW YORK, NY 10036

NINTERNATIONAL CODE COUNCIL [888] 422-7233

CITY OF JERSEY CITY CONSTRUCTION PLAN REVIEW FEE COMPUTATION FOR NEW CONSTRUCTION AND **ADDITIONS**

NEW CONSTRUCTION/ADDITIONS FOR BUILDINGS IN USE GROUPS: A-1, A-2, A-3, A-4, A-5, F-1, F-2, S-1, S-2		
VOLUME OF BUILDING = VOLUME OF BUILDING MULTIPLIED BY 0.015 =		

NEW CONSTRUCTION/ADDITIONS FOR BUILDING IN USE GROUPS: B, E, M, R, I, (ALL OTHERS NOT LISTED)		
VOLUME OF BUILDING =	VOLUME OF BUILDING MULTIPLIED BY 0.027 =	

	RENOVATION COSTS	
TOTAL OF TRADES =	TOTAL OF TRADES DIVIDED BY 1000 =	MULTIPLY BY 15.00 =

IF PROJECT CONSISTS OF BOTH NEW CONSTRUCTION AND ALTERATIONS COMBINE THE 2 FEES.

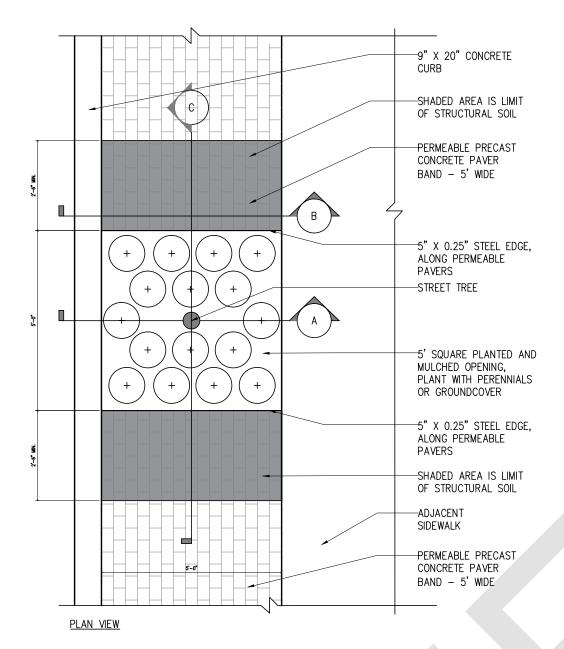
FOOTINGS AND FOUNDATIONS		
SQUARE FOOTAGE OF FLOOR =	MULTIPLY SQ. FT. OF FLOOR BY 3 =	MULTIPLY BY EITHER 0.015 OR 0.027 =

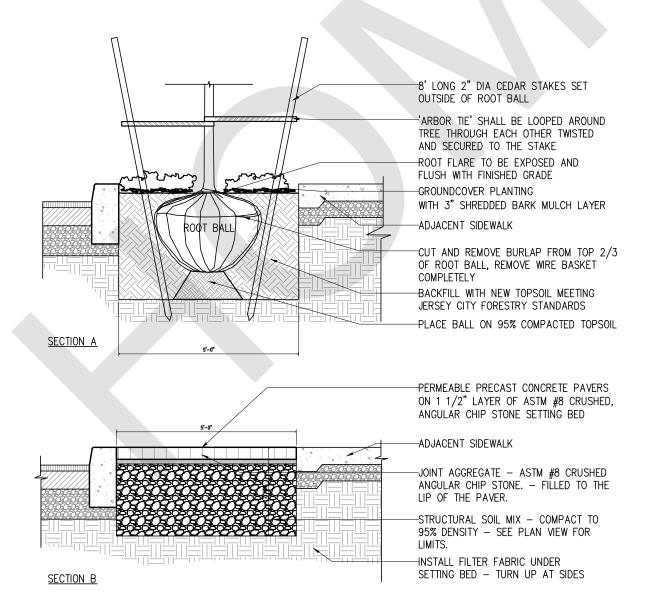
BASED UPON THE CALCULATIONS ABOVE THE TOTAL ESTIMATED FEE IS:

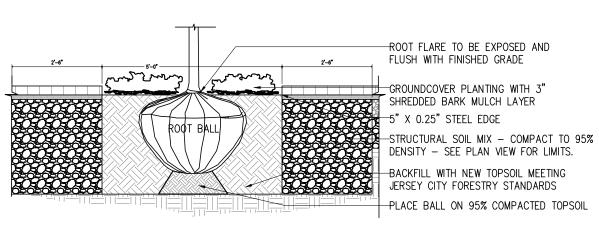
MULTIPLY TOTAL FEE BY 25% = ENCLOSED FOR PLAN REVIEW FEE, ROUNDED TO THE NEAREST DOLLAR.

CHECK IS MADE PAYABLE TO: <u>CITY TREASURER OF JERSEY CITY</u>

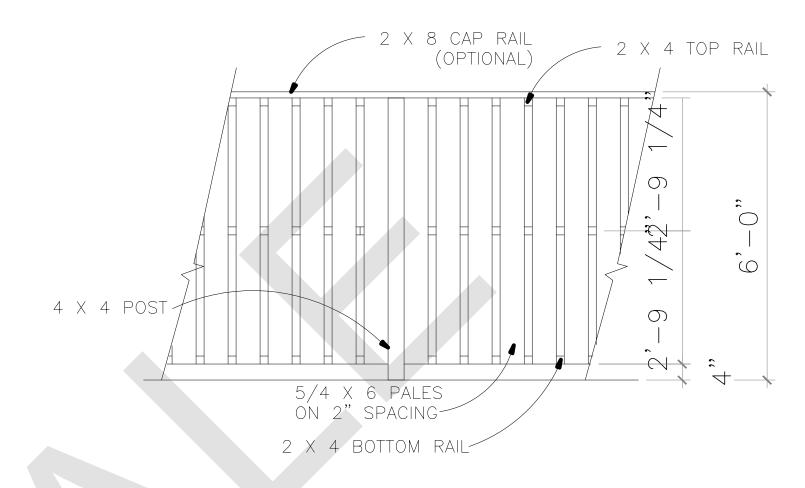
TREE DETAIL RECOMMENDED UNDER POWER LINES QTY SYMBOL COMMON NAME RECOMMENDED CULTIVARS LATIN NAME COOMON HORNBEAM CARPINUS BETULUS FASTIGIATA

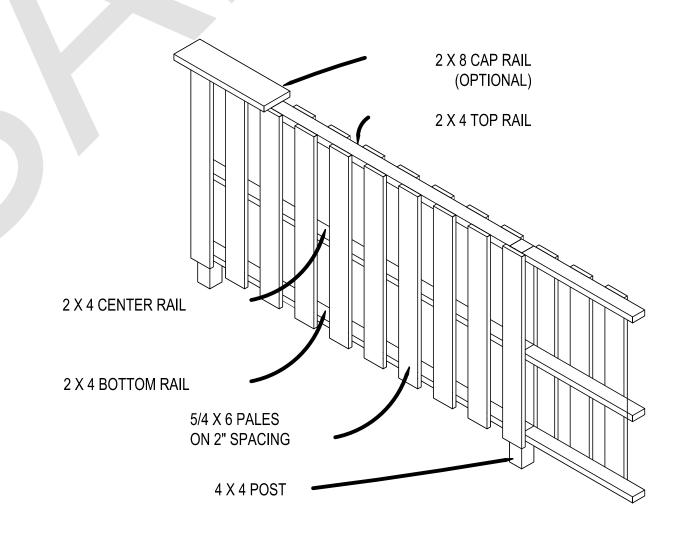




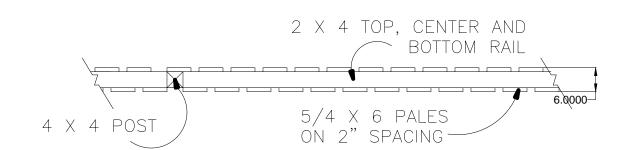


SECTION C STREET TREE PLANTING DETAIL - 5' X 10' OPEN TREE PIT WITH STRUCTURAL SOIL





BOARD ON BOARD





Design &

LLP

Suite 402

Raul Cabato, Architect

email: raul@radcllp.com

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New Jersey License No. 21AI01463700

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www.radellp.com

Jersey City, New

Jersey 07306

<u>/</u>3\ SEPT. 18, 2020 JC BUILDING DEPT. REVISION FEB. 12, 2019 JCMUA REVISION JAN. 24, 2019 JCMUA REVISION DATE COMMENT

PPROVAL STAMPS AND SIGNATURES

GENERAL NOTES, STREET TREE, & BOARD ON BOARD FENCE DETAIL

PROJECT NAME AND ADDRESS 276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW MULTI-FAMILY BUILDING

(4 STORY & 12 APARTMENTS) OWNER'S NAME AND ADDRESS



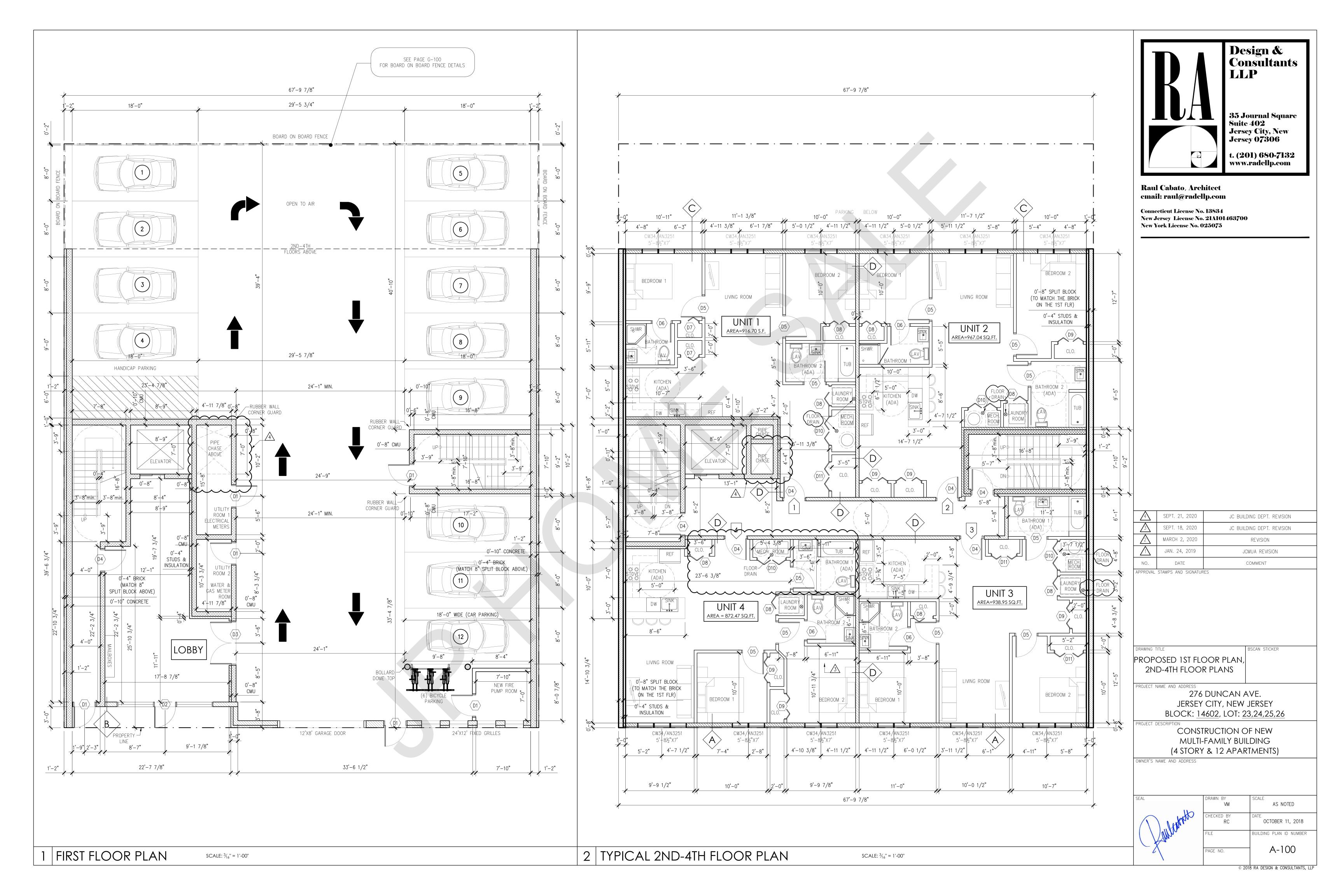
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P	CHECKED BY RC	DATE OCTOBER 11, 2018
	FILE	BUILDING PLAN ID NUMBER G-100
	PAGE NO.	G-100

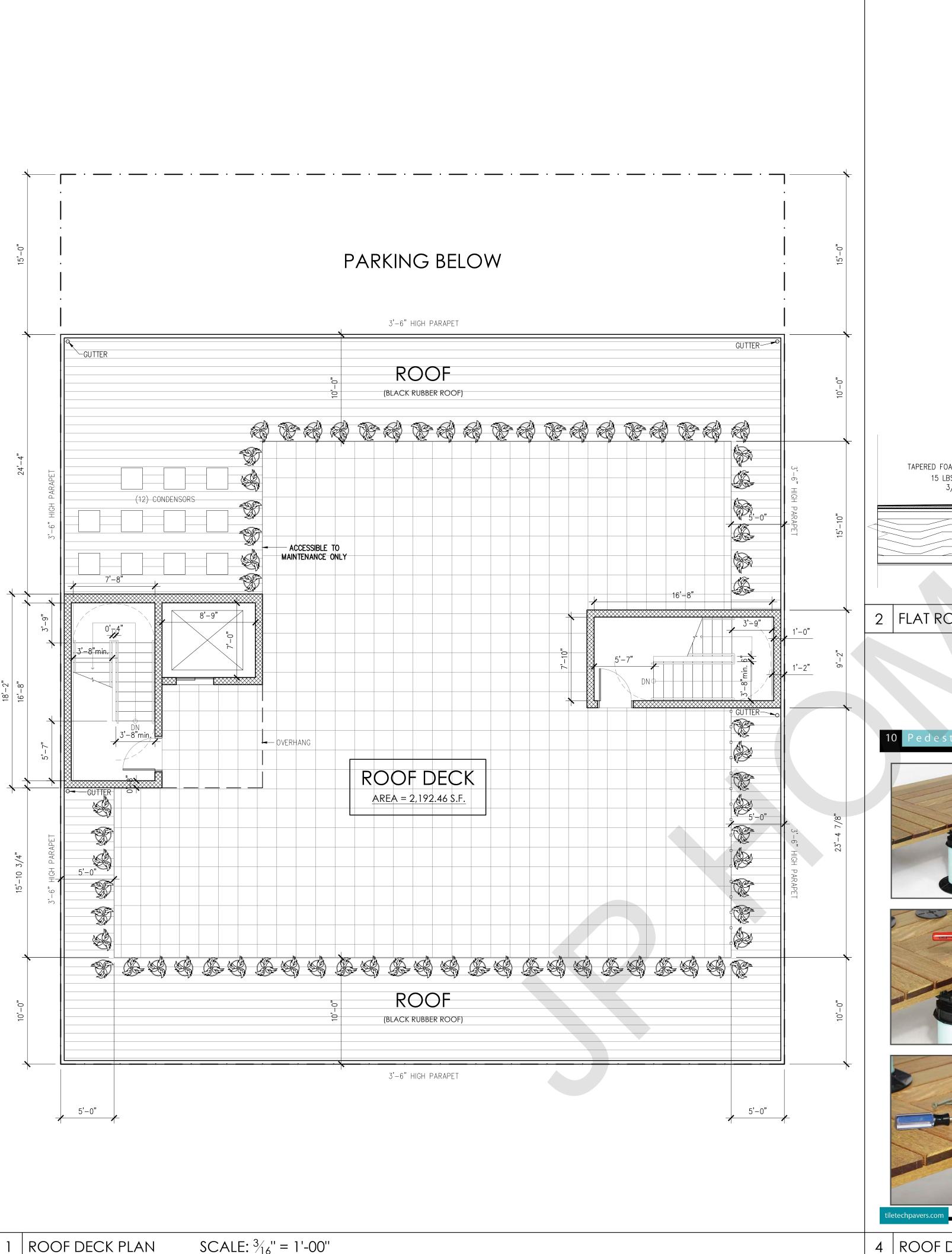
BSCAN STICKER

STREET TREE DETAIL SCALE: NTS 2 BOARD ON BOARD FENCE DETAIL

SCALE: NTS

2018 RA DESIGN & CONSULTANTS, LLI





ROOF DECK

AREA

2,192.46 S.F.

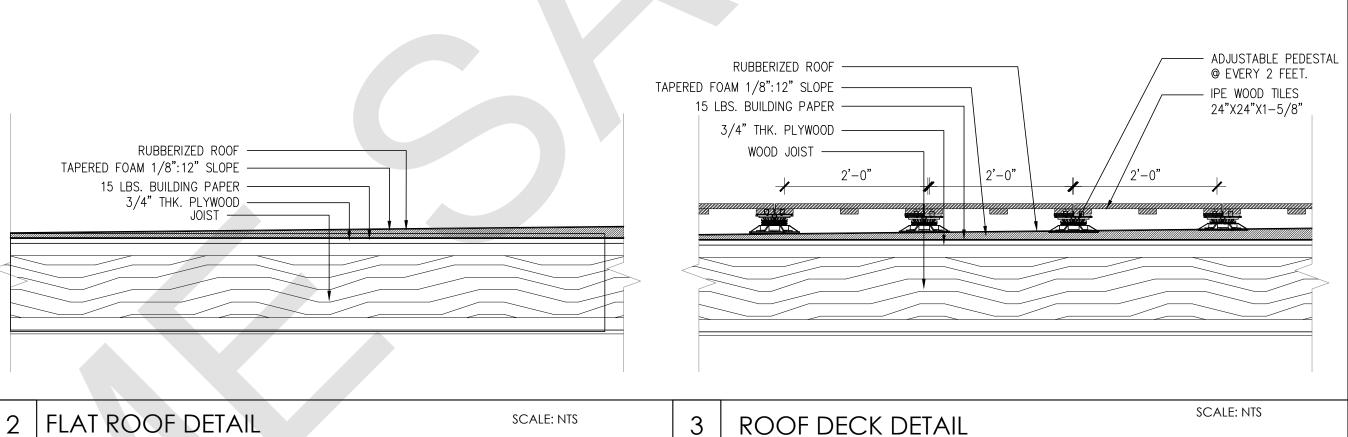
PERCENTAGE

47%



Raul Cabato, Architect email: raul@radcllp.com

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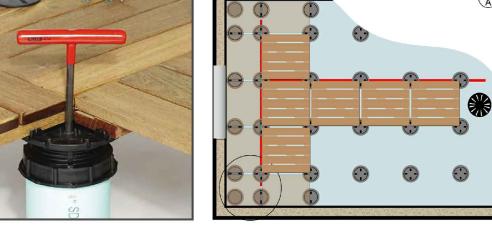
10 Pedestal System - Installation



. In a typical installation do not start first row of pavers at perimeter wall, instead begin installation of full pavers at the second row in the roof field. 2. Mark perpendicular guidelines on substrate surface to ensure square layout. 3. The first height of the pedestal is then determined and PVC pipe is cut with a standard 12" shop saw to the required height, less 3/8" for bottom base and collar insets plus buffer pad. The Uni-Insert will provide and additional 3/4" or

4. Install initial pavers along guidelines forming a "T" pattern. Install remaining field pavers out from "T". 5. Perimeter pavers are installed last and normally cut and less than full size to ensure proper layout and fit. Pedestal spacer tabs can be removed in order to position pedestals at perimeter just tangent to wall.

6. Any section of the roof that receives concrete pavers that is not restrained by an abutting wall or parapet must be "boxed in" by some field installed restraint. No movement should be allowed at the perimeter of a paver system.





ing the life of the waterproofing and improving heat insulation in addition to protecting the substrate surface from UV degradation. Level paving & significant less weight. With no requirement for pecial surface preparations, such as sand or aggregate bedding the floating system provides a level, light weight solution, allowing structures to be built with less loading on structure and at substantially lower cost.

Pedestal System - Installation 11







2	MARCH 2, 2020	REVISION
	JAN. 24, 2019	JCMUA REVISION
NO.	DATE	COMMENT

APPROVAL STAMPS AND SIGNATURES

PROPOSED ROOF PLAN

PROJECT NAME AND ADDRESS

276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

BSCAN STICKER

CONSTRUCTION OF NEW MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

SEAL	DRAWN BY VM	SCALE AS NOTED
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	PAGE NO.	A-101
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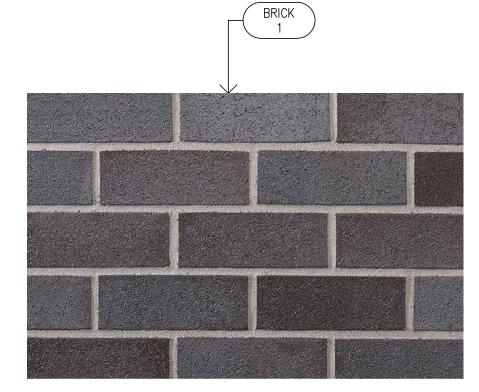
4 ROOF DECK MATERIAL



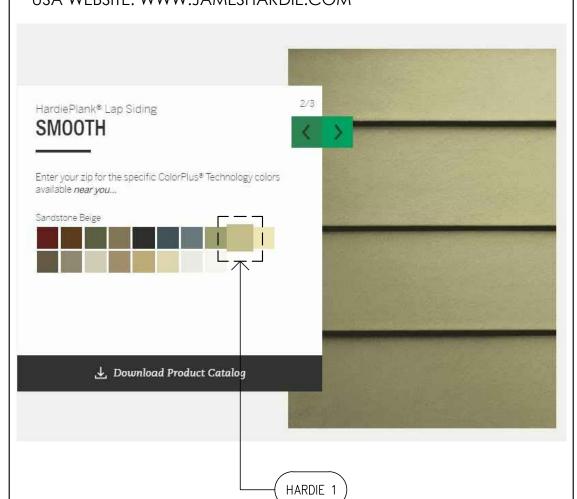




NAME OF PRODUCT: MODULAR ASHBERRY VELOUR A (15-46) COLOR: BLACK/RED
TEXTURE: VELOUR



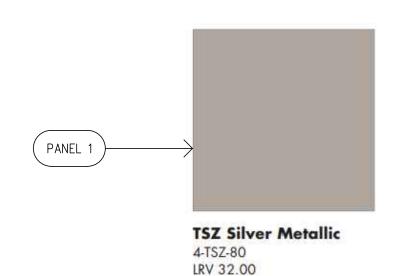
HARDIE PLANK 231 S. LA SALLE ST., SUITE 2000 CHICAGO, ILLINOIS 60604 TOLL-FREE PHONE: 1-888 J-HARDIE (1-888 542-7343) USA WEBSITE: WWW.JAMESHARDIE.COM



COLOR: SANDSTONE BEIGE

ESTOLGA (PANELS & COLUMNS) 3114 TONNELLE AVENUE NORTH BERGEN, NEW JERSEY, 07047 PHONE: 1-888-520-8800 EMAIL: info@alliedmetal.com WEB: http://alliedmetal.com/

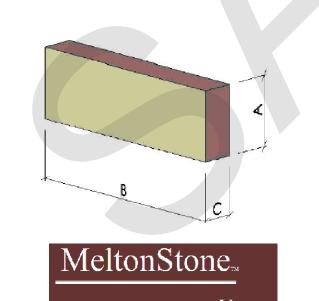




MELTON CLASSICS INCORPORATED P.O. BOX 465020 LAWRENCEVILLE, GA 30042 TELEPHONE: 800-963-3060 FAX: 1-770-962-6988 EMAIL: INFO@MELTONCLASSICS.COM

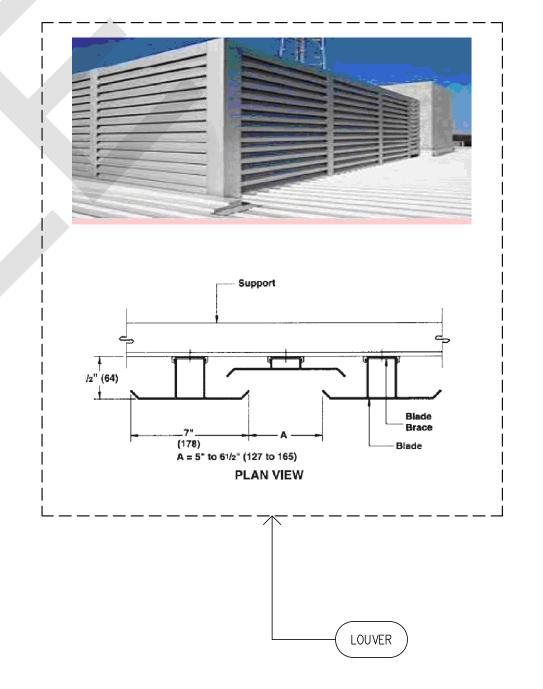


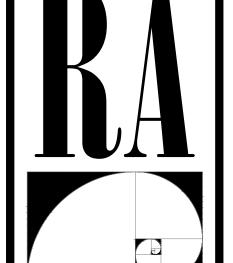
PIE	CE MARK	\boldsymbol{A}	В	C
300-	05	3 5/8"	23 5/8"	3 5/8"
300-	10	7 5/8"	23 5/8"	3 5/8"
300-	15	11 5/8"	23 5/8"	3 5/8"
OCK 300-	20	15 5/8"	23 5/8"	3 5/8"



Manufactued for Web Reps, LLC At the Ruskin/Reliable Factory in Geneva Alabama 800-810-3280 x 101

250T VERTICAL SCREEN EXTRUDED ALUMINUM SIGHTPROOF





Design & Consultants LLP

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t. (201) 680-7132 www.radellp.com

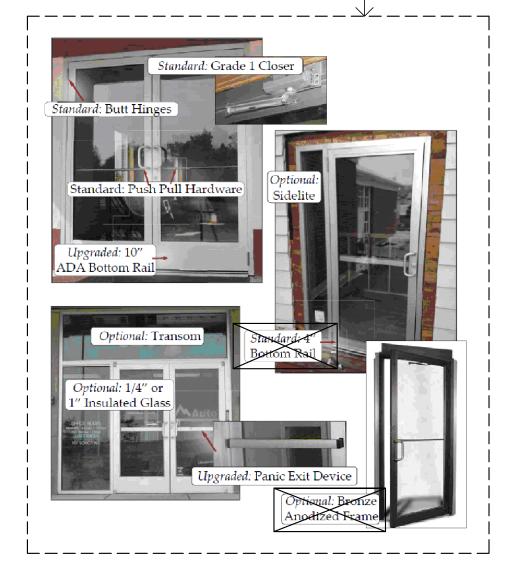
Raul Cabato, Architect email: raul@radcllp.com

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> SEE PAGE A-102 FOR THE ELEVATIONS

BRICK

TUBELITE 3056 WALKER RIDGE DRIVE, NW GRAND RAPIDS, MICHIGAN 49544 PH: 800-866-2227 FX: 616-784-2619 DEPENDABLE@TUBELITEINC.COM WWW.TUBELITEINC.COM





2 HARDIE

-(STORFRNT

ANDERSEN INNOVATION

Red Rook Prairie Grass Dove Gray

Andersen.

ANDERSEN H: 1'-8 ½"
WNDOW 1
AN3251
W: 7'-0"

ANDERSEN H: 4'-0" W: 7'-0"

FOUNDRY FOUNDRY 1225 EAST 58TH ST., NEW YORK, NY 10022 PHONE: 1.844.544.4858 WEBSITE: WWW.FOUNDRYLIGHTING.COM

3 PANEL 1



Technical Specification	ons	Manufacturer Warranty :	2 Year Finish, 5 Year	
ADA:	Yes		Components	
Average Hours :	50000	Material :	Aluminum	
Backplate Height:	14	Number Of Diodes :	4	
Backplate Width:	6			
Base Color :	Black, Silver	Product Weight:	4.9833	
Bulb Included :	Yes	Shade:	Yes	
Bulb Type:	LED	Shade Color :	Cream	
Color Rendering Index (CRI):	83	Shade Material :	Glass	
Color Temperature :	3000K	Shade Shape	Half Cylinder	
ETL Listed :	Yes	St. J. T.	Feebook	
ETL Rating :	Wet Location	Shade Type :	Etched	
Extension :	3	Style:	Modern	
Genre :	Contemporary	Voltage :	120	
Height:	14	Wattage	22	
LED:	Yes			
Light Direction :	Ambient Lighting	Width 2	3	
Lumens :	285			

4 STONE VENEER 5 METAL LOUVER PANELS AT GARAGE

SCHEDULE OF DOORS

DOOR NO. UNIT SIZES		U-FACTOR	EXTERIOR/	DESCRIPTION	
DOOK NO.	WIDTH	HEIGHT	U-IACION	INTEROR	DESCRIT ITON
Dl	3' - 0''	6' - 8''	0.32	EXTERIOR	1 HR FIRE RATED DOOR
D2	3' - 0''	6' - 8''	0.32	EXTERIOR	GLAZED DOOR
D3	5' - 0''	6' - 8''	0.3	EXTERIOR	solid wood door
D4	3' - 0''	6' - 8''	0.32	INTERIOR	1 HR FIRE RATED DOOR
D5	3' - 0''	6' - 8''	0.32	INTERIOR	solid wood door
D6)	2' - 8''	6' - 8''	0.32	INTERIOR	solid wood door
D7)	2' - 6''	6' - 8''	0.32	INTERIOR	BI-FOLD DOORS
D8	2' - 8''	6' - 8''	1.32	INTERIOR	BI-FOLD DOORS
D9	3' - 6"	6' - 8''	2.32	INTERIOR	BI-FOLD DOORS
(D10)	4' - 0''	6' - 8''	3.32	INTERIOR	LOUVERED BI-FOLD DOORS
D11	4' - 0''	6' - 8''	3.32	INTERIOR	BI-FOLD DOORS

NO.	DATE		COMMENT
APPROVAL	STAMPS AND SIGNATUR	RES	
DRAWING T	TITI F		RSCAN STICKER

BSCAN STICKER MATERIAL CUT SHEET PROJECT NAME AND ADDRESS

276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW MULTI-FAMILY BUILDING

(4 STORY & 12 APARTMENTS) OWNER'S NAME AND ADDRESS

lh	DRAWN BY VM	SCALE AS NOTED
Market	CHECKED BY RC	OCTOBER 11, 2018
Mo	FILE	BUILDING PLAN ID NUMBER
	PAGE NO.	A-103

REQUIREMENTS FOR FIRE AND DOMESTIC WATER LINE AND METER INSTALLATIONS

• ALL FIRE SERVICE APPLICATIONS AND ALL DOMESTIC SERVICE APPLICATIONS TWO (2) INCHES AND LARGER MUST BE SUBMITTED TO THE JCMUA'S BUREAU OF WATER ENGINEERING FOR APPROVAL. ALL PLANS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT LICENSED TO PRACTICE IN NEW

• SUBMITTED PLANS SHALL BE STANDARD ENGINEERING DRAWINGS, SIZE 24 INCHES BY 36 INCHES. INCLUDED SHALL BE A SITE PLAN SHOWING ADJACENT STREETS WITH WATER MAIN, SERVICE, AND DETAILS INDICATED. ALSO INCLUDED SHALL BE A KEY MAP SHOWING GENERAL LOCATION WITHIN CITY

• INDICATED ON THE SUBMITTED PLANS SHALL BE SIZE OF TAP LOCATION OF TAPPING AND CURB GATE VALVES, DETAILED METER SET-UP AND SIZE OF FACILITY'S METER. ALSO INDICATED ON THE PLANS SHALL BE THE TYPE OF OCCUPANCY OF THE FACILITY RECEIVING THE WATER SERVICE (I.E. HOSPITAL, WAREHOUSE APARTMENT BUILDING, ETC.) • ALL EXISTING WATER SERVICE LINES TO BE ABANDONED SHALL BE CUT AND CAPPED AT THE MAIN WITHIN 24 HOURS AFTER INSTALLATION OF NEW TAP. A MAXIMUM OF ONE (1) TAP SHALL BE MADE FOR BOTH DOMESTIC AND FIRE SERVICE PER FACILITY. (SEE DRAWING 1-P1 BELOW) THE TAP SHALL BE A MAXIMUM OF ONE (1) SIZE SMALLER THAN THE CITY'S WATER MAIN. NO TAPPING SHALL BE DONE BY ANYONE EXCEPT BY THOSE ISSUED BY THE FACILITY.

• ONLY ONE DOMESTIC/FIRE SERVICE IS ALLOWED PER FACILITY. APPLICANT MAY INSTALL CHECK METERS ON INDIVIDUAL BRANCH CONNECTIONS DOWNSTREAM OF DOMESTIC METER SETUP WHERE THERE IS MORE THAN ONE OWNER/TENANT FOR THE FACILITY. HOWEVER, ONLY ONE WATER BILL WILL BE ISSUED FOR THE FACILITY. • A SOLID DUCTILE IRON TAPPING SLEEVE SUCH AS MUELLER M-615 TAPPING SLEEVE OR APPROVED EQUAL SHALL BE UTILIZED FOR ALL TAPS 2-INCHES AND LARGER. • FOR ALL SERVICES INCLUDED HEREIN, TWO (2) GATE VALVES ARE REQUIRED WHICH ARE TO BE INSTALLED BY THE APPLICANT: A TAPPING VALVE, LOCATED AT THE TAP AND CURB GATE VALVE, LOCATED IN THE SIDEWALK BEFORE THE METER. TAPPING GATES SHALL BE FURNISHED OPENED RIGHT. THE WET TAP UP TO 12" SHALL BE PERFORMED BY THE JCMUA OR ITS AGENT.

• FOR TAPS OFF AT MAINS SIXTEEN (16) INCHES OR LARGER, THE APPLICANT SHALL FURNISH AND INSTALL AN ADDITIONAL GATE VALVE ADJACENT TO THE TAPPING VALVE. NO TAPS SHALL BE PERMITTED ON MAINS LARGER THAN TWENTY (20) INCHES UNLESS THERE IS NO ALTERNATIVE WATER SOURCE AND SPECIAL WRITTEN APPROVAL IS ISSUED

• VALVE BOX PARTS FOR ALL VALVES SHALL BE PROVIDED BY APPLICANT. NO TAPPING GATE VALVES LARGER THAN 2-INCHES. ALL CURB VALVES/STOPS REGARDLESS OF SIZE REQUIRE A VALVE BOX WITH THE WORD "WATER" CAST IN THE COVER. BURIED CORPORATION VALVES/STOPS SHALL BE USED AT THE TAP FOR CLASS K COPPER SERVICES 2- INCHES AND SMALLER. ALL SERVICE PIPE, SIZES 2-INCHES THROUGH 12-INCHES SHALL BE PRESSURE CLASS 350 PSI CEMENT-LINED DUCTILE IRON PIPE WITH MECHANICAL JOINT. • THE APPLICANT SHALL INSTALL THE METER INSIDE THE BUILDING. IF THE BUILDING LINE IS IN EXCESS OF 75 FEET FROM THE MAIN, THE APPLICANT MAY BE REQUIRED TO PLACE THE METER IN A PIT NEAR THE SIDEWALK OR STREET IN CLOSE PROXIMITY TO

• FOR A REGULAR FIRE SUPPRESSION SYSTEM (SERVICE LINE LARGER THAN 2"), A COMBINED REDUCED DETECTOR ASSEMBLY (AMES 5000 SS, AMES 5000 RPDA OR WATTS 909 RPDA*) SHALL BE INSTALLED ON THE MAIN OFFICE FIRE SERVICE LINE AND REDUCED PRESSURE BACKFLOW PREVENTER ON THE BYPASS (AMES 4000 SS OR WATTS 909*) (REFER TO FIGURE 1). ON THE LIMITED FIRE SUPPRESSION SYSTEM (COMBINED SERVICE LINE 1.5" OR 2"), A FIRE LINE DETECTOR CHECK WITH A SINGLE CHECK VALVE (AMES 1000 DCV*) SHALL BE INSTALLED ON THE MAIN FIRE LINE AND A REDUCED PRESSURE BACKFLOW PREVENTER (AMES 4000 SS OR WATTS 909*) SHALL BE INSTALLED DOWNSTREAM OF THE BYPASS (REFER TO FIGURE 2). ALL REGULAR FIRE SUPPRESSION SYSTEM MUST HAVE OS&Y VALVES, HOWEVER, LIMITED FIRE SUPPRESSION SYSTEM MAY USE BALL VALVES (VICTAULIC SERIES 728 FIRELOCK*) INSTEAD OF OS&Y VALVES. THE FIRE UNIT SHALL BE FURNISHED WITH A \$ INCH X \$ INCH METERED BYPASS. BYPASS METERES SHALL BE JERSEY CITY STANDARD SINGLE DISPLACEMENT SENSUS METERS WITH TOUCHPAD AND RADIO CAPABILITIES. THE SAME RADIO MXU UNIT SHALL BE USED FOR A COMBINED DOMESTIC AND FIRE SERVICE. • ALL METERS SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE COMPOUND METERS AND ALL METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND

• ALL METERS SHALL BE ADEQUATELY RESTRAINED WITH METAL BRACKETS FASTENED TO THE FLOOR OR WALL OR OTHER APPROVED MEANS SUCH AS A UNIFLANGES WHERE INTERNAL PIPE PRESSURE AND FLOW WARRANT SUCH RESTRAINTS. METERS, DETECTOR CHECKS, AND VALVES MAY BE SEATED ON THE CONCRETE BLOCK AND TAPERED SHIMS TO PROVIDE ADEQUATE SUPPORT. METERS SHALL BE INSTALLED APPROXIMATELY 36" ABOVE FLOOR GRADE

• ALL METER INSTALLATIONS IN METER PIT OR VAULT SHALL BE PRE-APPROVED BY JCMUA AND HAVE PROPER ACCESS OPENINGS FOR METER READING AND REPLACEMENT.

• EACH COMPOUND METER SHALL HAVE A STRAINER INSTALLED ON THE INLET SIDE IMMEDIATELY BEFORE THE METER. ALL STRAINERS MUST BE PURCHASED FROM JCMUA OR ITS AUTHORIZED AGENT.

• ALL METERS 2" AND LARGER SHALL BE FURNISHED WITH SENSUS ECR/WP REMOTE TOUCH PAD MODULES AND RADIO MXU UNITS FOR BOTH TYPES OF READING

• REMOTE TOUCH PAD MODULE WIRE SHALL BE CONNECTED TO THE METER REGISTER UTILIZING A GEL CAP FOR WATERTIGHT OF ALL TERMINAL CONNECTIONS. TOUCH PADS MAY BE WALL MOUNTED OR LID MOUNTED WHERE A METER PIT IS UTILIZED. TOUCH PADS ARE TO BE INSTALLED ON EXTERIOR BUILDING WALL FACING THE STREET ANE LOCATED AS CLOSE AS POSSIBLE TO STREET. THE RADIO MXU UNIT MUST BE INSTALLED WITH MOUNTING BRACKET AND LIKEWISE IS TO BE INSTALLED IN PROXIMITY

TO STREET. • ALL INSTALLATIONS OF EQUIPMENT AND COMPONENTS SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

• ALL METERS INCLUDING TOUCH PAD MODULES, AND RADIO MXU UNITS SHALL BE PURCHASED THROUGH THE PERMIT CLERK AT JCMUA OFFICE. APPROVED PLANS MUST BE SUBMITTED TO THE PERMIT CLERK FOR ISSUANCE OF REQUIRED PERMIT. • AFTER OBTAINING THE REQUIRED PERMITS (STREET OPENING, TAP AND METER) THE APPLICANT SHALL CALL UWJC AT (201) 239-1108 TO SCHEDULE THE TAP. THE

EXCAVATION SHALL BE COMPLETED TWENTYFOUR (24) HOURS PRIOR TO THE SCHEDULED TAP, AND VERIFIED BY JCMUA OR ITS AUTHORIZED AGENT BEFORE THE TAP WILL BE INSTALLED. EXCAVATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE OSHA REQUIREMENTS FOR SHEETING AND SAFETY.

• UPON COMPLETION OF THE INSTALLATION, THE APPLICANT SHALL SUBMIT THREE (3) SETS OF "AS BUILT" PLANS, TO THE JCMUA"S BUREAU OF WATER ENGINEERING. THE JCMUA WILL AUTHORIZE SUPPLY WATER UPON ACCEPTANCE OF THE AS BUILT

• FIRE SERVICE SHALL BE APPROVED STANDARD INSTALLATION WITH A HERSEY MODEL DDC II DETECTOR CHECK FOR DRY SYSTEMS UTILIZING CHEMICAL SUBSTANCES TO PREVENT FREEZING. ONLY CHEMICALS AND CONCENTRATIONS EXPLICITLY PERMITTED BY NJDEP REGULATIONS FOR FIRE SYSTEMS MAY BE UTILIZED TO PREVENT FREEZING. THE MAIN LINE UNIT MUST CONTAIN TEST COCKS FOR FIELD TESTING. ALTERNATIVE TYPES OF FIRE LINE DETECTOR CHECKS MAY BE UTILIZED AND ARE SUBJECT TO APPROVAL. THE DETECTOR CHECK SHALL BE FURNISHED WITH A 5/8" X 3/4" METERED BYPASS. BYPASS METERS SHALL BE JERSEY CITY STANDARD SINGLE DISPLACEMENT SENSUS METERS WITH TOUCH PAD AND RADIO READ CAPABILITIES. THE SAME RADIO MXU UNIT SHALL BE USED FOR A COMBINED DOMESTIC AND FIRE

SERVICE. AN APPROVED REDUCED PRESSURE BACKFLOW PREVENTER SHALL
 BE INSTALLED ON SERVICE IN ACCORDANCE WITH THE PLUMBING SUBCODE OF THE NEW JERSEY STATE UNIFORM CONSTRUCTION CODE, NJAC 5:23-3.15 AND THE NEW JERSEY SAFE DRINKING WATER ACT NJAC 7:10-10 PHYSICAL CONNECTIONS AND CROSS CONNECTIONS CONTROL BY CONTAINMENT. AN APPROVED REDUCED REDUCED PRESSURE BACKFLOW PREVENTOR IS REQUIRED WHEN THE JCMUA DETERMINES THAT THERE IS A CROSS-CONNECTION HAZARD AND THE FACILITY PRESENTS A THREAT TO THE CITY'S DISTRIBUTION SYSTEM WATER QUALITY, OR THE FACILITY CONTAINS A SUBSTANCE. USES A PROCESS, OR UTILIZES WATER IN A MANNER WHICH MAY CONTAMINATE THE CITY'S DISTRIBUTION SYSTEM. SOME SERVICES WHICH REQUIRE SUCH DEVICES INCLUDE: HOSPITAL, SCHOOL, CHEMICAL PLANT, FACTORY, AND A FACILITY WITH SEWAGE

EJECTORS. • THE REDUCED PRESSURE BACKFLOW PREVENTION DEVICE (RPZ) SHALL BE INSTALLED

WITH THE OS AND Y VALVES AS A UNIT AFTER THE METERS. • FOR DOMESTIC SERVICE, ALL METERS SHALL BE SENSUS MODEL SRH-ECR/WP WHERE THE METER IS INSTALLED INSIDE METER PIT WITH LID COVER. ALL ECR CAPS SHALL BE SILICON SEALED AND FACTORY INSTALLED. ALL METERS SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE COMPOUND METERS. ALL METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND MANIFOLD METERS. SPECIFIED MODEL OR APPROVED EQUAL.

WATER DISTRIBUTION SYSTEM STANDARDS

WATER MAINS SHALL BE PSI 350, CLASS 52 CEMENT LINED, DUCTILE IRON PIPE WITH MECHANICAL JOINTS AND SHALL BE IN CONFORMANCE WITH A.M.S.I. STANDARD A21.5-1976 (A.W.W.A. C151-76)

GATE VALVES SHALL BE IN CONFORMANCE WITH A.N.SI./A.W.W.A. STANDARD VALVES, M&M METROPOLITAN MECHANICAL JOINT VALVES AS MANUFACTURED BY DRESSER COMPANY OR APPROVED EQUAL. VALVES SHALL BE NON-RISING STEM. MECHANICAL JOINT SHALL BE FURNISHED WITH A 2" SUARE OPERATING UNIT SHALL BE OPEN BY TURNING TO THE RIGHT. GATE VALVES 16" OR OVER SHALL BE FURNISHED WITH BY-PASS. VALVE SHALL BE 100% SOLID HEAT CURED EPOXY COATED HOLIDAY-REE

VALVE BOXES SHALL BE JERSEY CITY "STANDARDS" AS MANUFACTURED BY BINGHAM AND TAYLOR, OR APPROVED EQUAL BOXES SHALL HAVE A MIN. OF 81/4" AND SHALL BE AN ADJUSTABLE SCREW TYPE WITH THE BOX EXTENDING FROM THE SURFACE TO 3" ABOVE THE VALVE BONNET BASE. VALVE BOX SHALL BE CAST IRON WITH A STANDARD COAL TAR FOUNDRY DIP WITH CAST IRON WATER DROP COVER. VALVE BOX COVER SHALL BE INSTALLED FLUSH WITH THE EXISTING GRADE ELEVATION.

CONCRETE FOR VALVE SEATS AND THRUST BLOCKS SHALL BE A MINIMUM 28 DAY STRENGTH OF 3000 PSI.

SELECT GRANULAR BACKFILL MATERIAL SHALL BE SOIL AGGREGATE TYPE 1-6 (POROUS FILL, CLEAN SAND, GRAVEL OR STONE) OBTAINED FROM DRY SOURCES AND SHALL BE FROM STUMPS, BRUSH WEEDS, ROOTS RUBBISH, WOOD AND OTHER MATERIAL THAT MAY DECAY. GRADUATION SHALL CONFORM TO THE TABLE 901-2 FOR TYPE 1-6 IN ARTICLE 901.09 OF THE N.J.D.O.T. STANDARD SPECIFICATIONS. BACKFILL MATERIAL SHALL BE PLACE AND COMPACTED IN TWELVE (12) INCH LIFTS. 5. TIE RODS SHALL BE $rac{3}{4}$ " DIAMETER THREADED STEEL BARS RODS SHALL HAVE A MINIMUM YIELD STRESS OF 36,000 PSI.

COUPLINGS SHALL BE DRESSER STYLE NUMBER 153 FOR PIPES SIZES THROUGH 30". FOR LAGER DIAMETER PIPES, DRESSER STYLE NUMBER 38 STEEL COUPLING SHALL BE

8. AFTER THE ENGINEER HAS INSPECTED THE COMPLETED INSTALLATION OF VALVES, AND WATER MAIN, AND BEFORE BACKFILLING THE EXCAVATIONS, THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TPO PRESSURE TEST THE PIPE. THE PIPE SHALL BE PRESSURIZED TO 1.5X THE WORKING PRESUURE FOR A PERIOD OF 2 HOURS. PRESSURE SHALL NOT VARY MORE THAN 5 PSI. THE VALVED SECTION OF PIPE SHALL BE FILLED WITH APPLIED BY MEANS OF A PUMP CONNECTED TO THE PIPE IN A MANNER SATISFACTORY TO THE ENGINEER. BEFORE APPLYING THE TEST PRESSURE. AIR SHALL BE EXPELLED COMPLETELY FROM THE PIPE BY INSTALLING CORPORATION COCKS AT SUCH POINTS SO THAT THE AIR CAN BE ECPELLED AS THE LINE IS FILLED WITH WATER. IF THE JOINTS LEAK, REPAIRS OR REPLACEMENTS SHALL BE MADE. TESTING SHALL BE IN CONFORMANCE WITH A.W.W.A.

STANDARD C600-77. THE CONTRACTOR SHALL DISINFECT ALL WATER MAINS IN ACCORDANCE WITH A.W.W.A. STANDARD FOR "DISINFECTING WATER MAINS" DESIGNATION C-601 COMMECIAL PRODUCTS SUCH AS "HTH" "PERCHLARON", AND "MAXOHLOR" MAY BE USED IN FLAKE OR CRYSTAL FORM, BUT IN NO INSTANCE WILL TABLETS BE PERMITTED TO BE USED IN THE DISINFECTION IF WATER MAINS. THE CHLORINE DOSAGE SHALL INITIALLY PRODUCE 50PPM RESIDUAL TO THE WATER AND MAINTAIN A MINIMUM RESIDUAL OF 25 PPM AFTER 24 HOURS. AFTER SATISFACTORY DISINFECTION OF THE TEST SECTION. THE LINE SHALL BE CONTINUOUSLY FLUSHED UNTIL THE RESULTANT CHLORINE RESIDUAL EQUALS 1 PPM OR THE RESIDUAL OF THE SYSTEM, WHICHEVER IS GREATER. AFTER FINAL FLUSHING AND BEFORE THE WATER MAIN IS PLACES IN SERVICE SAMPLES SHALL BE COLLECTED FROM EACH END OF THE MAIN AND TESTED FOR BACTERIOLOGIC QUALITY. IF THE INITIAL DISINFECTION FAILS TO PRODUCE SATISFACTORY SAMPLES, DISINFECTION SHALL BE REPEATED UNTIL SATISFACTORY SAMPLES HAVE BEEN OBTAINED.

STANDARD REQUIREMENTS FOR NEW SANITARY. STORM SEWERS AND SERVICE LATERALS

10. THRUST BLOCKS AND TIE RODS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS.

BEDDING AND BACKFILL MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF THE NJDOT'S STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, AND THE DESIGN AND CONSTRUCTION OF URBAN STORM WATER MANAGEMENT SYSTEM, ASCE MANUALS AND REPORTS OF ENGINEERING PRACTICE NO: 77, 1993, AS APPLICABLE. ALL SEWER SERVICE CONNECTIONS 6-INCHES IN SIZE OR SMALLER MUST BE MADE DIRECTLY TO THE SEWER MAIN AND ALL CONNECTIONS 8- INCHES IN SIZE OR LARGER MUST BE MADE TO A MANHOLE. WHERE A CONNECTION TO A MANHOLE IS REQUIRED,

MANHOLE BENCH AND CHANNEL , AY REQUIRE MODIFICATION. THE JCMUA REQUIRES THAT SEWER SERVICE CONNECTIONS TO BE RE-USED BE TELEVISED TO VERIFY THEIR INTEGRITY AND THAT THE PIPE IS FREE FORM ANY

EACH BUILDING CONNECTION REQUIRES A CURB CLEAN OUT (REFER TO ATTACHED DETAIL DRAWINGS). T-WYE CLEANOUTS WHICH ENABLES CLEANING IN BOTH DIRECTIONS SHOULD BE INSTALLED ON BOTH THE STORM AND SANITARY LATERAL)

PROPOSED SEWER LATERAL CONNECTION TO JCMUA'S SEWER MAIN SHALL BE MADE ABOVE HORIZONTAL CENTER LINE OF PIPE (REFER TO ATTACHED SEWER CONNECTION DETAILS)

THE SIZE, MATERIAL, DEPTH, CONDITION, DIRECTION OF FLOW AND ANY OTHER RELEVANT CONDITIONS OF THE EXISTING JCMUA SEWER TO WHICH YOU PLAN TO CONNECT MUST BE FIELD VERIFIED BY THE DEVELOPER TO DETERMINE IF SAID CONNECTION IS PHYSICALLY POSSIBLE AND PRACTICAL. IN ADDITION, MANHOLE INVERTS AND RIM ELEVATION MUST BE SHOWN ON PLANS. THIS VERIFICATION IS TO BE INCLUDED ON THI PLANS FOR THE PROJECT.

CIRCULAR HOLE SAWS WHICH ARE APPROXIMATELY SIZED OR HAND DRILLS MUST BE USED TO MAKE THE OPENINGS TO THE EXISTING SEWER TO RECEIVE THE LATERALS. JACKHAMMERS, SLEDGEHAMMERS AND OTHER UNSUITABLE TOOLS OR MACHINERY WHICH MAY DAMAGE THE JCMUA'S SEWER MAIN ARE NOT ALLOWED TO BE USED TO MAKE THE LATERAL OPENINGS. ALL DEBRIS MUST BE REMOVED AND NOT ALLOWED TO FALL INTO PIPE.

A DETAIL OF ANY PROPOSED MANHOLE OR CATCH BASIN SHOWING ALL DIMENSIONS IN ADDITION TO RIM, GRATE AND INVERT ELEVATIONS OF THE STRUCTURE AND ALL PIPES CONNECTED TO THE STRUCTURE MUST BE SHOWN ON PLANS. REFER TO JCMUA. STANDARD DETAIL DRAWINGS FOR MANHOLES AND CATCH BASIN.

PROPOSED MANHOLES CONSTRUCTED IN THE PUBLIC R.O.W. ON EXISTING OR PROPOSED JCMUA SEWERS SHALL BE FURNISHED WITH CONCENTRIC MANHOLE COVERS AS MANUFACTURED BY CAMPBELL FOUNDRY CO., PATTERN # 4428 OR EQUAL WITH OUTSIDE COVER DIAMETER OF 3134" AND INSIDE COVER DIAMETER OF 24 INCHES. THE LETTERS "JCMUA" AND "SEWER" SHALL BE CAST IN THE INSIDE COVER MANHOLE FRAMES SHALL BE CAMPBELL FOUNDRY CO.,# 4428 (FOR 30- INCH OPENING) OR #1206 (FOR 41-INCH OPENING) OR EQUAL FURNISHED WITH A PATTERN # 4428 CONCENTRIC COVER AS SPECIFIED IN THE PRECEDING PARAGRAPH.

REFER TO JCMUA'S STANDARD DETAIL FOR MANHOLE FRAME AND COVERS. 10. STORM INLETS WHICH ARE CONNECTED DIRECTLY TO JCMUA COMBINED SEWERS MUST BI FURNISHED WITH A SUMP AND TRAP AS PER JCMUA STANDARD DETAILS. 11. THE JCMUA HAS A COMBINED SEWER SYSTEM WHICH SURCHARGE DURING WET WEATHER PERIODS RESULTING IN POSSIBLE SEWAGE BACK-UPS THROUGH PLUMBING FIXTURES (SINKS, TOILETS, FLOOR DRAINS, ETC.) BELOW STREET LEVEL. THIS POSSIBILITY MUST BE ADDRESSED DURING THE DESIGN/CONCTRUCTION PHASE.

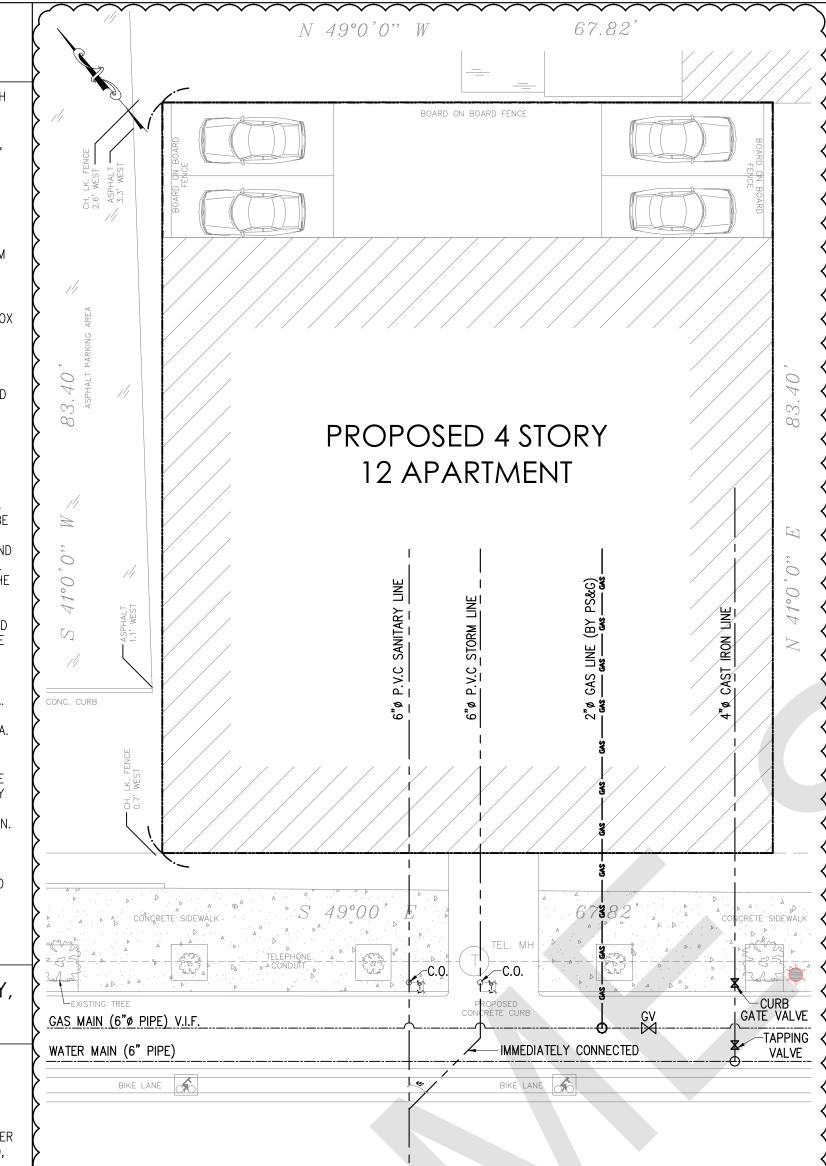
12. A DROP MANHOLE CONNECTION SHALL BE USED WHERE THERE IS A DIFFERENCE IN ELEVATION OF TWO (2) FEET OR GREATER BETWEEN THE INVERT OF A SANITARY COMBINED INLET PIPE TO MANHOLE AND THE CROWN OF THE OUTLET PIPE FROM MANHOLE. REFER TO ATTACHED JCMUA'S STANDARD DETAIL FOR DROP MANHOLE CONNECTION WHICH MUST BE SHOWN ON SITE PLAN IF REQUIRED.

3. TEST PITS MUST BE PERFORMED AT THE DEVELOPER'S EXPENSE DURING THE DESIGN PHASE OF THE PROJECT TO ENSURE THAT PROPOSED SEWERS AND SEWER SERVICES MAY BE CONSTRUCTED AS PROPOSED WITHOUT CONFLICTING WITH OTHER UNDERGROUND UTILITIES OR STRUCTURES.

4. ALL EXISTING SEWER MAINS AND SANITARY LATERALS TO BE ABANDONED MUST BE FILLED WITH CONCRETE SLURRY OR REMOVED FROM THE GROUND. CATCH BASINS AND MANHOLES MUST BE REMOVED FROM THE GROUND. CONNECTIONS MUST BE CUT AND SEALED AT THE MAIN AND PRECAUTIONS MUST BE UNDERTAKEN BY THE CONTRACTOR TO ENSURE CONCRETE AND OTHER MATERIALS DO NOT ENTER THE MAIN CREATE OBSTRUCTION(S).

15. ALL PROPOSED INLETS/CATCH BASINS MUST BE CONSTRUCTED WITH A BICYCLE SAFE GRATE AND CAMPBELL FOUNDRY CO. TYPE 'N 'CURB PIECE WHERE REQUIRED. 16. PROPOSED WATER SERVICES REQUIRE THE REVIEW AND APPROVAL OF THE DIVISION OF

WATER ENGINEERING. 17. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMITS FOR STREET OPENINGS FROM ertTHE JERSEY CITY BUILDING DEPARTMENT LOCATED AT 30 MONTGOMERY STREET, JERSEY CITY, N.J. AND ALL OTHER APPLICABLE PERMITS FROM AGENCIES HAVING JURISDICTION.



DUNCAN AVE

SEWER MAIN (48" Ø RCP)

SCALE: $\frac{3}{32}$ " = 1'-0"

CONNECTION TO PVC, CLAY OR DUCTILE IRON SEWERS RESIDENTIAL DWELLING - IMMEDIATELY CONNECTED STORM — -SANITARY — CLEAN OUT FRESH AIR -CURB LINE — PROVIDE INLET PIPE SCREEN FOR VENT IMMEDIATELY — - COMBINED OPENING SEWER MAIN CONNECTED CONNECTION TO SEWER MAIN SEWER CONNECTION DETAILS FOR RESIDENTIAL DWELLING SCALE: NT

SEWER MAIN -NEW SERVICE CONNECTION **SECTION A-A** STAINLESS STEEL STRAP BOLTS AND NUTS HOLDING SADDLE TO LINER DIAMETER -(SEE SECTION A-A FOR INSTALLATION CONFIGURATION)

TEE SADDLE

EXISTING BRICK SEWER

8 JERSEY CITY SEWERAGE AUTHORITY DETAIL #1

SAWCUT HOLE IN EXISTING SEWER

GROUT MUST BE

FILLED IN BETWEEN

LATERAL AND

BRICK WALL / /

CONNECTION TO CONCRETE SEWERS (SIZE AND SHAPE VARIES) ⁻4" MIN. CONCRETE CIRCULAR SAWCUT HOLE IN PIPE AND GROUT AROUND -BOTTOM OF BELL PIECE PIPE TRENCH -EXISTING OR NEW REINFORCED CONCRETE PIPE FLUSH WITH INNER

WYE SADDLE

SCALE: NTS

JERSEY CITY SEWERAGE AUTHORITY DETAIL #2 SCALE: NTS

PROPOSED STAINLESS —

STEEL CLEAVIS HANGER

PROPOSED 4"OR 6"─

SERVICE PIPE

PROPOSED CONC.

TO SUBGRADE

UNDISTURBED

SUBGRADE

ENCASEMENT DOWN

CROSS SECTION AT

SERVICE CONNECTION

JERSEY CITY SEWERAGE AUTHORITY DETAIL #4 SCALE: NTS

STANDARD SANITARY CLEANOUT

DIAMETER VARIES)

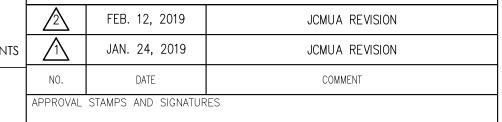
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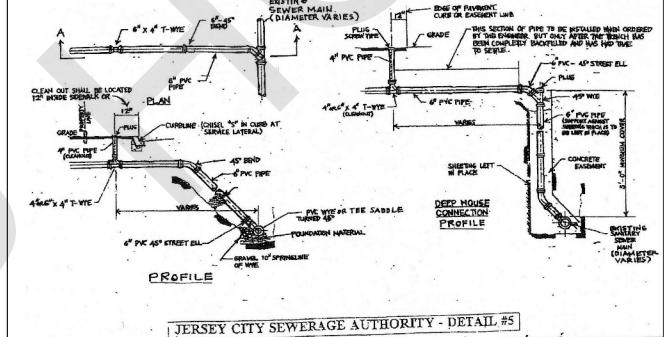
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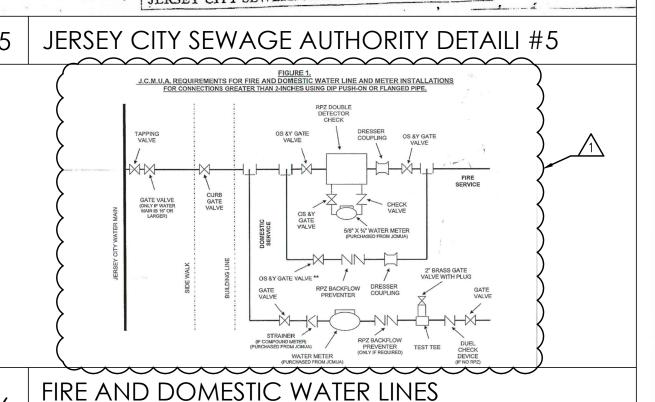
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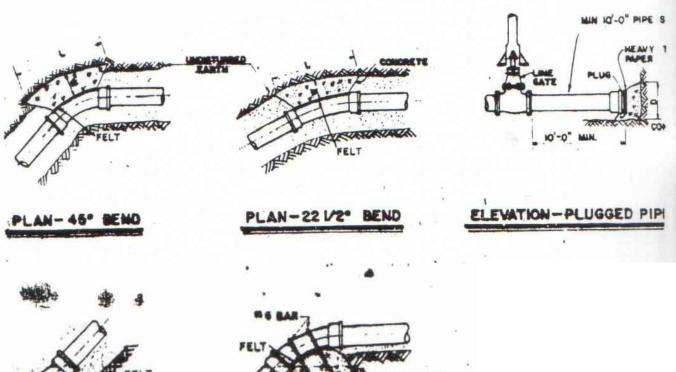


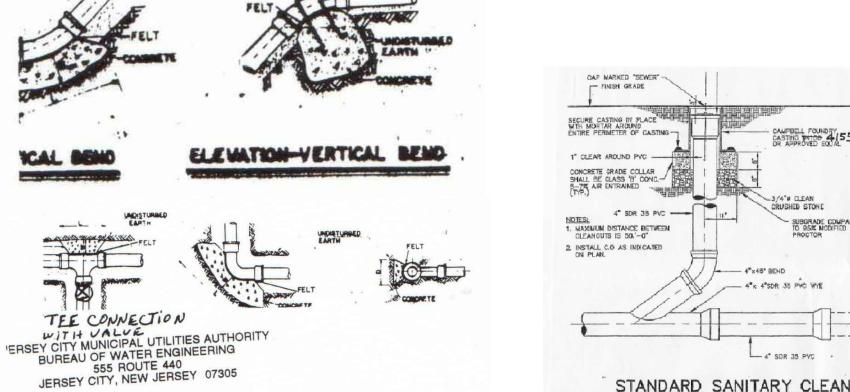
WATER MAIN (16" Ø C.I. PIPE)

4 | SITE PLAN



& METER INSTALLATIONS SCALE:NTS





PROJECT NAME AND ADDRESS 276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26 PROJECT DESCRIPTION CONSTRUCTION OF NEW

MUA

DRAWING TITLE

MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

AS NOTED OCTOBER 25, 2018 JILDING PLAN ID NUMBER MUA-100.00

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BSCAN STICKER

GENERAL NOTES

- 32. ALL DRYER VENTS SHALL BE CONNECTED TO THE OUTSIDE.33. AIR-CONDITIONER CONDENSER PADS MUST BE CONCRETE
- (PRE-CAST).
- 34. UNDERGROUND PIPING SHALL BE INSTALLED ON FIRM BEDDING.

35. NO PVC PIPE SHALL BE EXPOSED OUTSIDE OF BUILDING

- 36. STRUCTURAL DRAWINGS SHALL BE WORKED TOGETHER WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DWGS. TO LOCATE DEPRESSED SLABS, SLOPES, DRAINS, REGLETS, BOLT SETTING. ETC. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- 37. DESIGN LOADS DO NOT INCLUDE SUPERIMPOSED LOADS SUCH AS A/C UNITS AND OTHER MECHANICAL EQUIPMENT. SHOP DWGS. OF EQUIPMENT AND PROPOSED SUPPORT FRAMING SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- 38. THE OWNER SHALL EMPLOY (IF REQUIRED) AN APPROVED TESTING LABORATORY TO MAKE ALL TESTS FOR CONCRETE, SOIL COMPACTION AND WELDING OF STEEL TO INSURE COMPLIANCE WITH PLANS STANDARDS AND
- 39. PROVIDE CAULKING SEALANT TO EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES: BETWEEN WALL AND FOUNDATION, BETWEEN WALL PANELS AT PENETRATIONS; OR UTILITY SERVICES THROUGH WALLS; FLOOR AND ROOF; AND ALL OTHER OPENINGS IN THE EXTERIOR ENVELOPE SHALL BE SEALED WITH AN APPROVED MANNER.
- 40. PROVIDE 22 1/2" x 54 1/2" ATTIC ACCESS.
- 41. AIR INFILTRATION RATE FOR WINDOWS SHALL NOT EXCEED 0.5 CFM PER FOOT OF SASH. TRACK DOORS SHALL NOT EXCEED 0.5 CFM PER SQUARE FEET OF DOOR AREA.
- 42. FIRESTOP ALL STUD WALLS AT 8'-0" VERTICALLY.
- 43. DRYWALL INSTALLATION SHALL BE IN CONFORMANCE WITH THE GYPSUM ASSOCIATION'S RECOMMENDED PRACTICES FOR THICKNESS, NAILING AND TAPING.
 44. ALL FRAMING TO BE IN CONFORMANCE WITH THE NATIONAL FOREST
- PRODUCTS "MANUAL FOR HOUSE FRAMING".

 45. CONTINUOUS BEARING FROM POINT OF LOAD TO FOUNDATION SHALL BE PROVIDED BY MEANS OF COLUMNS AND SOLID BLOCKING AT FLOORS.
- 46. CABINET SUPPLIER TO FIELD MEASURE AREA OF WORK AFTER ROUGH FRAMING, TO ASSURE AN EXACT FIT. THE CABINETS SHALL MATCH PLANS UNLESS OTHERWISE SPECIFIED BY THE OWNER.
- 47. SLOPE GRADE AWAY FROM BUILDING AT 1/2" PER 1'-0" MIN. FOR A DISTANCE OF 10'-0" MINIMUM.
- 48. PROVIDE A SPLASHBLOCK AT EACH DOWNSPOUT UNLESS PROVIDED WITH SPECIFIED DRAIN PIPES.
- 49. WATER RESISTANT GYPSUM OR CEMENTITUOUS BACKER SHALL BE USED WITH SHOWER COMPARTMENTS.
- 50. THERMOSTATS USED FOR HEATING AND COOLING SHALL BE CAPABLE OF BEING SET FROM 55 DEGREES F TO 85 DEGREES F AND SHALL BE CAPABLE OF OPERATING THE SYSTEM'S HEATING AND COOLING SEQUENCE.
- 51. PROVIDE ONE LINE OF BRIDGING FOR EACH 8'-0" OF SPAN FOR FLOOR JOISTS. IT SHALL NOT BE LESS THAN 1" X 3" LUMBER, DBL. NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL
- 52. CONTRACTOR MUST REFER AND COMPLY WITH TRUS JOIST MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS, SPECIFICALLY REGARDING WEB STIFFENER, NAILING, MIN. BEARING LENGTH, FILLER AND BLOCK SIZE REQUIREMENTS.
- 53. DESIGN LOADS:
 FLOORS: 40 PSF LIVE LOAD 15 PSF DEAD LOAD
 ATTICS: 20 PSF LIVE LOAD 10 PSF DEAD LOAD
 ROOF: 30 PSF LIVE LOAD 15 PSF DEAD LOAD
- 54. PROVIDE ICE SHEILD OF BARRIER ALONG PERIMETER OF ROOF CONSISTING OF 2 LAYERS OF UNDERLAYMENT CEMENTED TOGETHER OR OF AN APPROVED WATERPROOFING MEMBRANE WHICH SHALL EXTEND FROM THE EDGE OF THE ROOF EAVE TO A POINT TO AT LEAST 24" FROM THE EXTERIOR WALL LINE OF THE BUILDING TOWARDS THE ROOF RIDGE.
- 55. MINIMUM DEPTH OF THE BOTTOM OF ALL CONC. FOOTINGS TO BE 3'-0" FROM THE NATURAL GRADE LINE.
- 56. COMPUTATION FOR COMBUSTION AIR:
 BTU INPUTS: BOILER 2 X 120,000 BTU = 240,000 BTU
 WATER HEATER 2 X 75,000 BTU = 150,000 BTU
 TOTAL BTU INPUT = 390,000 BTU
 ALLOW (1) ONE SQ. INCH FOR COMBUSTION AIR PER 4000 BTU
 390,000 / 4,000 = 97.5 SQ. INCH = 9.87 X 9.87 OPENING
 PROVIDE UTILITY ROOM WITH A 10" SQ. METAL LOUVERED OPENING AT EXTERIOR WALL FOR COMBUSTION AIR. OTHERWISE, PROVIDE UTILITY ROOM

CONCRETE

1. ALL CONCRETE SHALL TEST 3,000 PSI AT 28 DAYS. THE SLUMP JUST PRIOR TO PLACING SHALL BE 4 INCHES WITHIN A TOLERANCE OF PLUS OR MINUS ONE INCH (MAX.).

WITH LOUVERED DOOR WITH NET OPENING EQUAL TO 20" SQ

- 2. ALL CONCRETE SHALL BE PLACED IN THE DRY. NO CONCRETE SHALL BE PLACED LATER THAN 90 MINUTES AFTER MIXING HAS BEGUN. DEPOSIT CONCRETE IN ITS FINAL POSITION WITHOUT SEGREGATION AND REHANDLING.
- 3. REINFORCING STEEL SHALL BE NEW BILLET HIGH STRENGTH STEEL OF U.S.A. MANUFACTURE CONFORMING TO LATEST A.S.T.M. A-615 GRADE 60 FABRICATED IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE OF THE C.S.R.I., UNLESS OTHERWISE NOTED AND PLACING OF REINFORCING SHALL BE IN ACCORDANCE WITH A.C.I. BUILDING CODE, MANUAL OF STANDARD PRACTICE, AND 2000 IBC
- 4. REINFOCING SHALL HAVE 3" COVER IN FOOTINGS; 2" COVER ON MAIN REINFORCEMENT IN STEM WALLS.
- 5. REINFORCING BARS ARE CONTINUOUS UNLESS OTHERWISE NOTED. LAP MESH 12 INCHES AT SPLICES, LAP STEM WALL BARS 32 BAR DIAMETER AT SPLICES (MIN)
- 6. AT OUTSIDE CORNERS OF CONCRETE FOOTINGS AND STEM WALLS, PROVIDE #4x4'-0" CORNER BARS IN EACH FACE AT SAME SPACING AS HORIZONTAL REINFORCEMENT.
- 7. ALL MASONRY AND/OR CONCRETE WALLS BELOW GRADE SHALL BE
- 8. PROVIDE CONTROL JOINTS IN MASONRY AND/OR CONCRETE WALLS AND CONCRETE SLABS AT REGULAR INTERVALS AS SPECIFIED BY ARCHITECT.

LEGEND AND SYMBOLS

X WINDOW NUMBER

X DETAIL NUMBER

PARTITION/WALL
TYPE

DOOR NUMBER





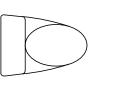


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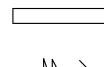
XX FLOOR LEVEL ELEVATION

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REVISION NUMBER



NEW PLUMBING FIXTURE ON NEW DRAIN



NEW WALL

MECHANICAL VENTILATION

SMOKE DETECTOR

CARBON MONOXIDE DETECTOR

S

COMBINATION CARBON MONOXIDE DETECTOR AND SMOKE DETECTOR

CONCRETE FOOTINGS

EXCEPT WHEN DETERMINED BY FIELD LOADING TESTS OR AS OTHERWISE PROVIDED HEREIN, THE MAXIMUM ALLOWABLE PRESSURE ON SUPPORTING SOLID UNDER SPREAD FOOTINGS AT OR NEAR THE SURFACE SHALL NOT EXCEED THE VALUES SPECIFIED IN IBC. PRESUMPTIVE BEARING VALUES SHALL APPLY TO ALL MATERIALS OF SIMILAR PHYSICAL CHARACTERISTICS

CONCRETE IN FOOTINGS SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN THREE THOUSAND (3000) LBS PER SQUARE INCH (PSI) AT TWENTY EIGHT (28) DAYS. CONCRETE FOOTINGS SHALL NOT BE POURED THROUGH WATER. CONCRETE FOOTINGS SHALL BE PROTECTED FROM FREEZING DURING DEPOSITION AND FOR A PERIOD OF NOT LESS THAN FIVE (5) DAYS THEREAFTER.

MASONRY WALLS

FROST PROTECTION:
ALL MASONRY SHALL BE PROTECTED AGAINST FREEZING NOT LESS THAN
FORTY—EIGHT (48) HOURS AFTER INSTALLATION; AND SHALL NOT BE
CONSTRUCTED BELOW TWENTY—EIGHT (28) F° ON FALLING TEMPERATURES,
WITHOUT TEMPORARY HEATED ENCLOSURES OR WITHOUT HEATING
MATERIALS OR OTHER PRECAUTIONS NECESSARY TO PREVENT FREEZING.
FROZEN MATERIALS SHALL NOT BE USED, NOR SHALL FROZEN MASONRY
BE BUILT UPON.

BONDING:
MASONRY WALLS AND PARTITION SHALL BE SECURELY ANCHORED OR
BONDED AT POINTS WHERE THEY INTERSECT BY ONE (1) OF THE
FOLLOWING METHODS: WALL MAY BE BONDED BY LAYING AT LEAST FIFTY
(50) PERCENT OF THE UNITS AT THE INTERSECTION IN TRUE MASONRY
BOND WITH ALTERNATE UNITS HAVING A BEARING OF NOT LESS THAN
EIGHT (8) INCHES UPON THE UNIT BELOW, OR THEY MAY BE ANCHORED
WITH NOT LESS THAN THREE—SIXTEENTHS (3/16) INCH
CORROSION—RESISTANT METAL WIRE TIES OF JOINT REINFORCEMENT AT
VERTICAL INTERVALS NOT TO EXCEED TWO (2) FEET, OR BY OTHER
EQUIVALENT APPROVED ANCHORAGE.

BEARING:
BEAM, GIRDER AND OTHER CONCENTRATED LOADS SHALL BE PROVIDED
WITH A BEARING OF SOLID MASONRY OR HOLLOW UNIT MASONRY FILLED
SOLID WITH MINIMUM 2500 PSI COMPRESSIVE STRENGTH CONCRETE FULL
HEIGHT OF WALL OR PIER.

FOUNDATIONS

1. FOOTINGS ARE DESIGNED TO BEAR ON SOIL HAVING A MINIMUM SAFE BEARING VALUE OF 3500 PSF. FORM SIDES OF FOOTINGS WITH WOOD WHERE REQUIRED.

2. BOTTOMS OF ALL FOOTINGS ARE 3'-0" BELOW EXISTING GRADE UNLESS OTHERWISE NOTED. FOOTING REINFORCEMENT TO RUN CONTINUOUS THROUGH COLUMN FOOTING. USE STEP FOOTING AT SLOPE OF 1 VERTICAL TO 2 HORIZONTAL, IF REQUIRED.

HEADER SCHEDULE

FOR HEADERS SUPPORTING COINCIDENTAL LOADS:

ROOF LOADS

SNOW LOAD

=30 PSF

DEAD LOAD

ATTIC LOADS WITH BEDROOM

LIVE LOAD

DEAD LOAD

=15 PSF

SECOND FLOOR LOADS

LIVE LOAD =40 PSF
DEAD LOAD =15 PSF

EXTERIOR LOAD (MAX. 10 FT. HIGH ABOVE)

DEAD LOAD =150 PLF

INTERIOR:

NO. OF PIECES	SIZE	MAXIMUM CLEAR SPAN	SPECIES/LUMBER
2	2" X 6"	4'-6"	DOUGLAS FIR NO. 2
2	2" X 8"	5'-10"	DOUGLAS FIR NO. 2
2	2" X 10"	7'-2"	DOUGLAS FIR NO. 2
2	2" X 12"	8'-4"	DOUGLAS FIR NO. 2

EXTERIOR:

2	2" X 6"	3'-0"	DOUGLAS FIR NO. 2
2	2" X 8"	3'-10"	DOUGLAS FIR NO. 2
2	2" X 10"	4'-9"	DOUGLAS FIR NO. 2
2	2" X 12"	5'-7"	DOUGLAS FIR NO. 2

STAIR BULKHEAD

CEILING LINE

CEILING LINE

THIRD FLR

SECOND FLR.

CEILING LINE

CEILING LINE

FIRST FLR.

STAIR SECTION

FOURTH FLR.

PROTECTION OF ADJOINING PROPERTIES (JERSEY CITY, NJ)

- OWNERS WHO UNDERTAKE CONSTRUCTION, REHABILITATION, OR DEMOLITION WORK AT THEIR PROPERTY SHALL PROTECT ADJOINING PROPERTIES FROM DAMAGE CAUSED BY THE WORK.
- THE OWNER INTENDING TO UNDERTAKE THE CONSTRUCTION,
 REHABILITATION OR DEMOLITION WORK THAT COULD POTENTIALLY
 DAMAGE ADJOINING PROPERTIES SHALL DELIVER WRITTEN NOTICE OF
 SUCH INTENT TO THE OWNERS AFFECTED PROPERTIES. THE NOTICE
 SHALL REQUEST WRITTEN PERMISSION TO ENTER THE ADJOINING
 PROPERTIES TO DETERMINE THE MEASURES THAT MUST BE TAKEN TO
 SAFEGUARD THE PROPERTIES FROM DAMAGE.
- WRITTEN CONSENT FROM THE OWNERS OF THE ADJOINING PROPERTIES MUST BE OBTAINED PRIOR TO ENTERING THE
- PROPERTIES.
 IN THOSE CASES WHERE OWNERS OF ADJOINING PROPERTIES
 REFUSE ACCESS, WORK SHALL NOT PROCEED UNLESS ACCESS TO
 THE PROPERTIES IS GRANTED BY THE COURTS.
- . THE MEASURES TO BE TAKEN TO SAFEGUARD ADJOINING PROPERTIES SHALL BE SUBMITTED WITH THE PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE CONSTRUCTION OFFICIAL.
- UPON APPROVAL OF THE MEASURES TO SAFEGUARD THE ADJOINING PROPERTIES, THE OWNER INTENDING TO UNDERTAKE THE CONSTRUCTION, REHABILITATION OR DEMOLITION WORK SHALL PROVIDE A COPY OF THE MEASURES TO THE OWNERS OF THE ADJOINING PROPERTIES AND SHALL REQUEST WRITTEN PERMISSION TO IMPLEMENT THE MEASURES PRIOR TO COMMENCEMENT OF WORK.
- 5. WRITTEN CONSENT FROM THE OWNERS OF THE ADJOINING PROPERTIES TO IMPLEMENT THE MEASURES TO SAFEGUARD THE PROPERTIES MUST BE OBTAINED.

6'-10"

EXCAVATION NOTES (JERSEY CITY, NJ)

- 1. PRIOR TO THE ISSUANCE OF PERMITS, A LICENSED STRUCTURAL ENGINEER SHALL BE RETAINED BY THE BUILDER/DEVELOPER FOR OVERSIGHT OF THE EXCAVATION PROCESS OF A BUILDING'S FOOTINGS AND FOUNDATION.
- 2. THE DEVELOPER/BUILDER SHALL PROVIDE DOCUMENTATION TO THE OFFICE OF THE BUILDING OFFICIAL THAT A LICENSED STRUCTURAL ENGINEER HAS BEEN RETAINED FOR ONSITE SUPERVISION. THE DOCUMENTATION SHALL INCLUDE THE ENGINEER'S PROFESSIONAL CREDENTIALS. PRIOR TO THE START OF ANY EXCAVATION, THE OFFICE OF THE BUILDING OFFICIAL SHALL BE CONTACTED AND THE BUILDING INSPECTOR SHALL BE NOTIFIED OF THE CONDITIONS AT THE SITE BY THE LICENSED ENGINEER.
- DEVELOPER/BUILDER SHALL EXCAVATE TEST PIT(S) IN A LOCATION DETERMINED BY THE STRUCTURAL ENGINEER SO AS NOT TO COMPROMISE ANY ADJACENT BUILDING(S). WHEN THE TEST PIT HAS BEEN EXCAVATED AND INSPECTED BY THE ENGINEER AND THE BUILDING OFFICIAL, THE ENGINEER SHALL PROVIDE A SIGNED AND SEALED WRITTEN REPORT TO THE BUILDING DEPARTMENT SPECIFYING THE METHODS THE CONTRACTOR SHALL FOLLOW DURING EXCAVATION.
- 4. NO EXCAVATION SHALL TAKE PLACE UNLESS THE ENGINEER IS PHYSICALLY PRESENT AT THE SITE. SHOULD THE ENGINEER NOT BE PRESENT AT THE SITE, ALL EXCAVATION OPERATIONS SHALL CEASE.
- 5. DURING THE COURSE OF EXCAVATIONS, THE BUILDING INSPECTOR SHALL MAKE PERIODIC INSPECTIONS TO ENSURE COMPLIANCE WITH ALL PROCEDURES LISTED ABOVE.

NOTE:

ARCHITECT IS NOT RESPONSIBLE FOR THE CONTRACTOR'S WAYS AND MEANS OF CONSTRUCTION



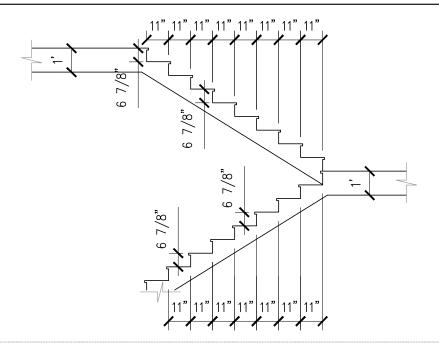
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Connecticut License No. 13834 New Jersey License No. 21A101463700 New York License No. 025075



16**'**-7"

SEPT. 28, 2020
BLDG. CONTRACTOR REVISION

3 SEPT. 18, 2020
JC BUILDING DEPT. REVISION

2 FEB. 12, 2019
JCMUA REVISION

1 JAN. 24, 2019
JCMUA REVISION

NO. DATE
COMMENT

APPROVAL STAMPS AND SIGNATURES

DRAWING TITLE

NOTES & SECTION

THOTEO & DECTIO

PROJECT NAME AND ADDRESS

276 DUNCAN AVE.

JERSEY CITY, NEW JERSEY

BLOCK: 14602, LOT: 23,24,25,26

CONSTRUCTION OF NEW
MULTI-FAMILY BUILDING

(4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS



CHECKED BY RC DATE OCT. 25, 2018

FILE BUILDING PLAN ID NUMBER

PAGE NO.

CHECKED BY OCT. 25, 2018

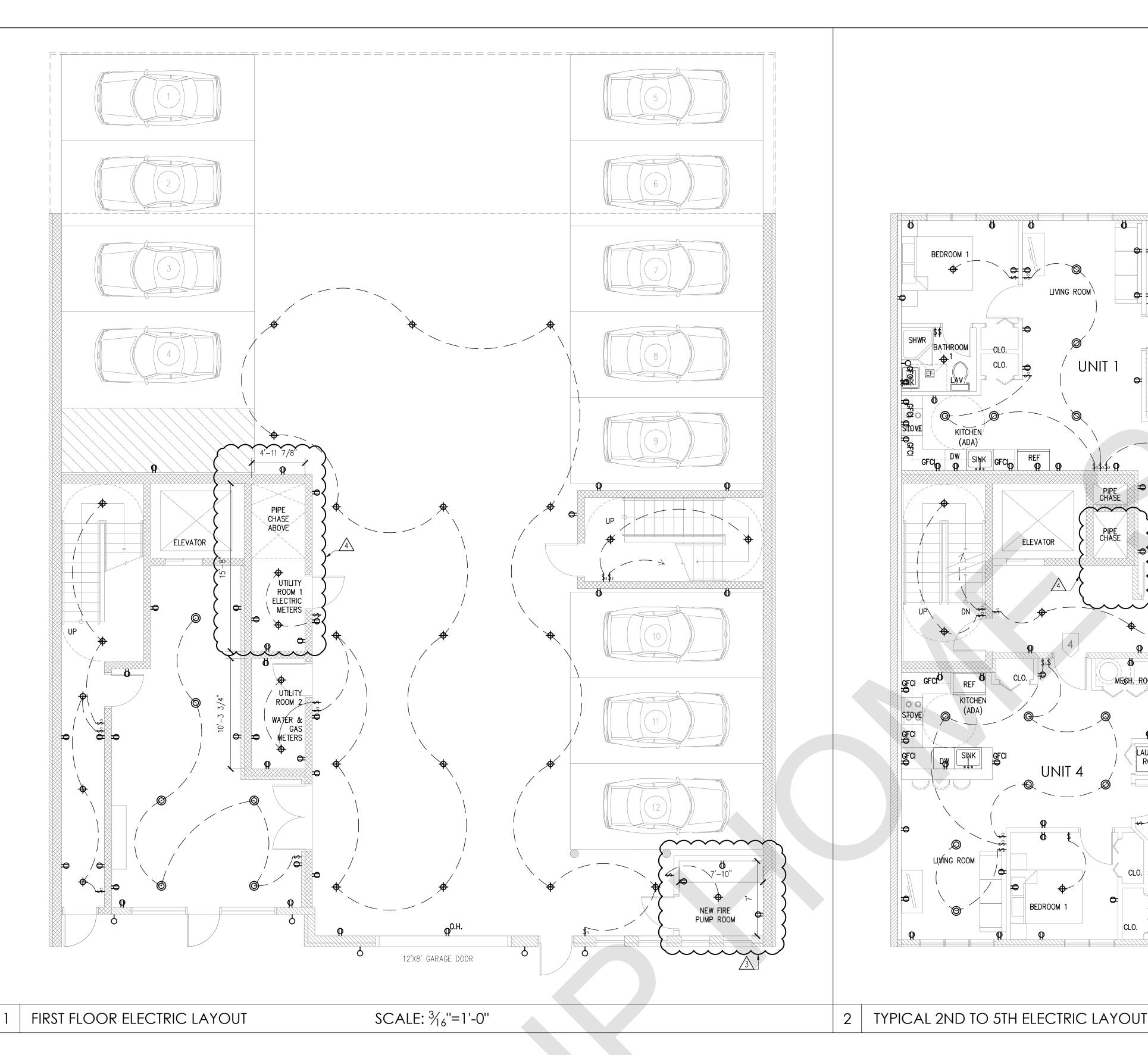
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BSCAN STICKER

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

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BEDROOM BEDROOM 2 LIVING ROOM UNIT 2 / BATHROOM 2 ELEVATOR LAUNDRY ROOM UNIT 3 BEDROOM 2

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4	SEPT. 28, 2020	BLDG. CONTRACTOR REVISION
$\sqrt{3}$	SEPT. 18, 2020	JC BUILDING DEPT. REVISION
2	FEB. 12, 2019	JCMUA REVISION
\triangle	JAN. 24, 2019	JCMUA REVISION
NO.	DATE	COMMENT

APPROVAL STAMPS AND SIGNATURES

DRAWING TITLE

BSCAN STICKER

ELECTRICAL LAYOUT

PROJECT NAME AND ADDRESS 276 DUNCAN AVE.

JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

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ELECTRICAL NOTES

1. ALL CONVENIENCE OUTLET WITH SWITCHES TO BE SWITCHED AT TOP ONLY.

2. ALL SWITCHES TO BE 3'-10" ABOVE FINISHED FLOOR TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.

3. ALL CONVENIENCE OUTLET ARE TO BE 1'-0" ABOVE FINISHED FLOOR TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED. 4. ALL INTERIOR WALL BRACKET FIXTURES TO BE AT 6'-6"ABOVE FINISHED FLOOR TO CENTERLINE OF FIXTURE.(6'-10" AT BATHROOM MIRRORS)

5. ALL EXTERIOR WALL BRACKET FIXTURES TO BE AT 6'-6" ABOVE FINISHED FLOOR TO CENTERLINE OF FIXTURE. 6. SMOKE DETECTORS SHALL BE LOCATED 12" FROM CEILING AND WIRED TOGETHER TO SOUND ALARM AND BATTERY BACKUP. 7. VERIFY LOCATION OF ALL RECEPTACLES FOR APPLIANCES WITH MANUFACTURER'S SPECIFICATIONS.

8. CABLE TELEVISION SERVICE SHALL BE WIRED TO EVERY TELEVISION RECEPTACLE, UNLESS OTHERWISE INSTRUCTED BY OWNER. 9. NO POINT ALONG FLOOR LINE MEASURED HORIZONTALLY SHALL BE MORE THAN 6'-0" FROM A RECEPTACLE OUTLET.

10. ALL ELECTRICAL INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. ALL MATERIAL AND EQUIPMENT SHALL BEAR THE LABEL OR APPROVAL OF THE UNDERWRITERS LABORATORIES, INC.

11. ELECTRICAL CONTRACTOR SHALL, BEFORE CONSTRUCTION, VERIFY SPACE REQUIRED FOR METER INSTALLATION AND SHALL NOTIFY GENERAL CONTRACTOR AND ARCHITECT OF ANY PROBLEM. 12. GROUND FAULT INTERCEPTORS SHALL BE PROVIDED AT ALL BATHROOM AND KITCHEN OUTLETS AS PER SECTION 210-8 N.E.C.

GENERAL NOTES:

 SMOKE AND FIRE DETECTION SYSTEMS IF REQUIRED INSTALLED BY G.C. PER LOCAL CODE.

 LABOR & MATERIAL SUPPLIED BY G.C.
 UNLESS OTHERWISE NOTED
 INSTALLATION OF MATERIAL BY G.C. UNLESS OTHERWISE NOTED ALL DIMENSIONS TO BE VERIFIED BY

GC ON SITE NATIONAL ELECTRICAL CODE, 2017 OBTAINED FROM: NATIONAL FIRE ELECTRICAL OUTLET. PROTECTION ASSOC ELECTRICAL GFCI OUTLET MUST BE 24"

[617] 770-3000

MAX FROM SINK. • ELECTRICAL GFCI OUTLET MUST BE 48" MAX. BETWEEN EACH SPACING ON KITCHEN COUNTER

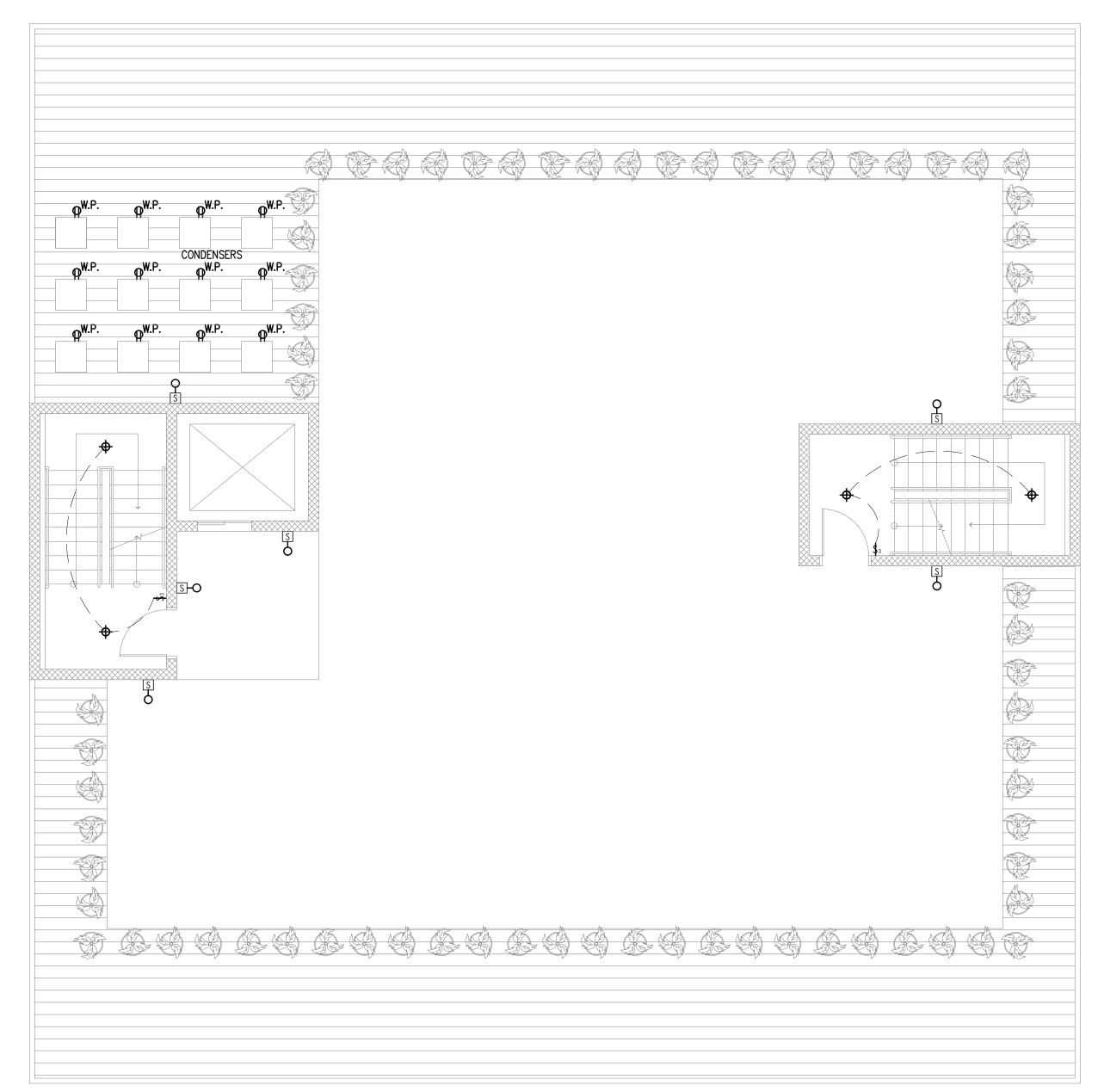
LEGEND

SYMBOL DESCRIPTION

SMOKE DETECTOR SINGLE SWITCH WALL-MOUNTED LIGHT FIXTURE CARBON MONOXIDE WALL-MOUNTED LIGHT FIXTURE WITH SENSOR THREE-WAY SWITCH HEAT DETECTOR RECESSED INCANDESCENT LIGHT FIXTURE GROUND CIRCUITE FAULT INTERRUPTER OUTLET SUSPENDED INCANDESCENT LIGHT FIXTURE ELECTRICAL OUTLET EF WEATHER PROOF OUTLET EXHAUST FAN Φ_{OH} CEILING FAN OVERHEAD OUTLET

SYMBOL DESCRIPTION

SCALE: $\frac{3}{16}$ "=1'-0"

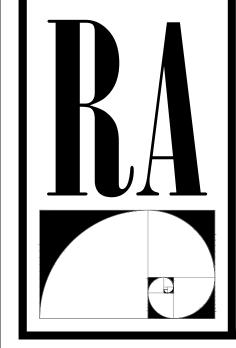


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Symbol	DESCRIPTION	SYMBOL	DESCRIPTION
\$ 3	THREE-WAY SWITCH		WALL-MOUNTED LIGHT FIXTURE WITH SENSOR
$\mathbf{\Phi}_{WP}$	WEATHER PROOF OUTLET	+	SUSPENDED INCANDESCENT LIGHT FIXTURE

ROOF FLOOR ELECTRIC LAYOUT

SCALE: ¾₆"=1'-0"



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NO.	DATE	COMMENT

DRAWING TITLE

BSCAN STICKER

ELECTRICAL LAYOUT & ELECTRICAL RISER DIAGRAM

PROJECT NAME AND ADDRESS

276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW

MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

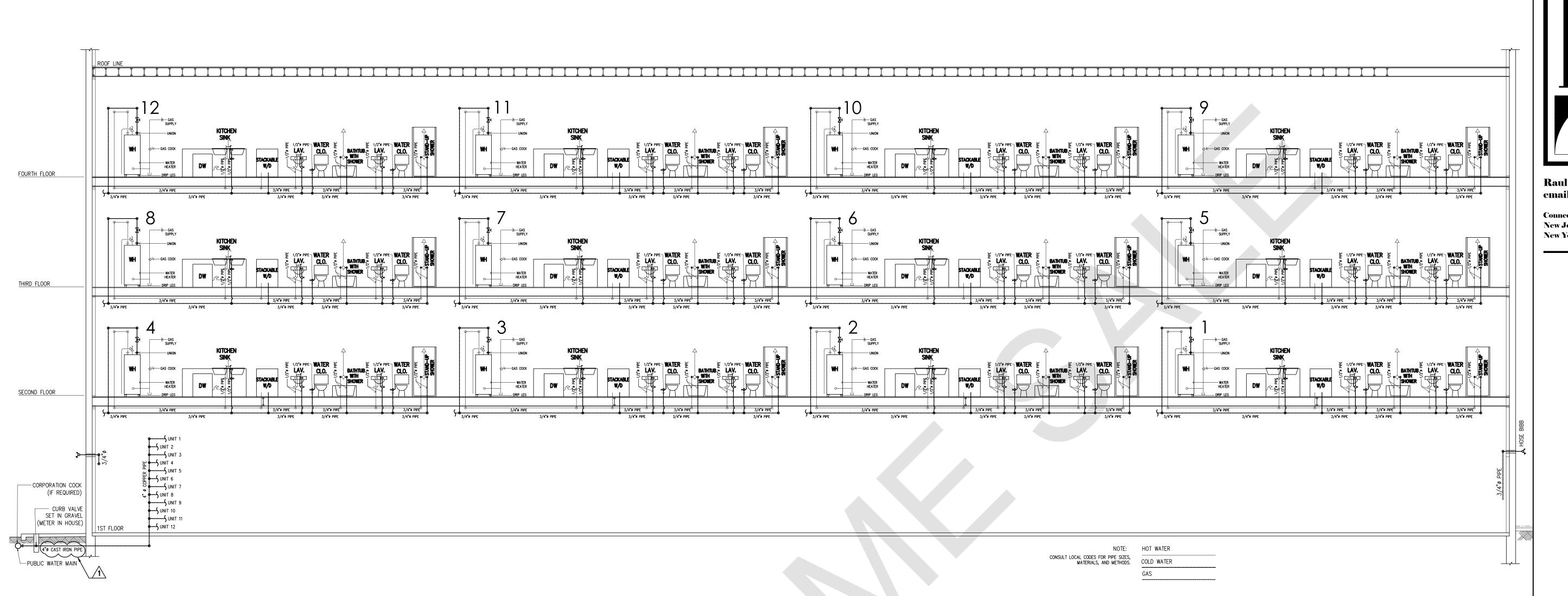
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OCTOBER 25, 2018 BUILDING PLAN ID NUMBER E-101.00

AS NOTED

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JAN. 24, 2019 JCMUA REVISION DATE COMMENT SCALE: NTS PROVAL STAMPS AND SIGNATURES

PLUMBING NOTES:

1. ALL PLUMBING WORK SHALL CONFORM TO THE STANDARDS NEW JERSEY STATE BLDG. CODE AND NEW JERSEY STATE WATER SUPPLY, GAS AND ELECTRICITY AND ALL OTHER AGENCIES HAVING JURISDICTION. 2. THE PLUMBER SHALL OBTAIN ALL PERMITS, INSPECTION ETC. RELATED TO HIS WORK UNDER THIS APPLICATION, AS REQUIRED FOR THE COMPLETION

HOT AND COLD WATER SCHEMATIC DIAGRAM

OF HIS WORK. 3. ALL WORK TO BE DONE BY A PLUMBER LICENSED IN NEW JERSEY

4. ALL PIPING IS TO BE CONCEALED IN WALLS, SOFFITS, OR HUNG CLG'S AND SHALL NOT BE EXPOSED TO VIEW, UNLESS SO NOTED. 5. ALL PIPING THROUGH WALLS, SLABS, ETC. SHALL HAVE STEEL SLEEVES EXTENDING 2" ABOVE FLOOR. THE SPACE BETWEEN THE PIPES AND THE SLEEVES SHALL BE PACKED TO A DEPTH OF NOT LESS THAN 1 INCH FROM EITHER SIDE WITH ROCK WOOL. AFTER ROCK WOOL HAS BEEN INSTALLED AROUND PIPES, A-26" GAUGE SHEET METAL COLLAR SHALL BE SECURED AROUND THE PIPE TO INSURE TIGHTNESS. 6. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED WITH

FIBERGLASS INSULATION WITH FACTORY APPLIED ALL-SERVICE JACKET SECURED IN PLACE WITH SELF-SEALING LAPS. FITTINGS SHALL BE INSURED WITH PREMOULED PVC COVERS SECURED IN PLACE WITH ST. STL TACKS. A. COLD WATER 1/2"

B. HOT WATER AND HOT WATER RETURN 3/4"

WATER SERVICES

1. ALL WATER SERVICES UNDER TWO INCHES (2") IN DIAMETER, WHETHER NEW OR REPLACEMENT, CONSIST OF TWO UNINTERRUPTED LENGTHS OF TYPE K COPPER. SUCH WATER SERVICES SHALL INCLUDE A CURB COCK AND CURB BOX ASSEMBLY. AT ITS APPROACH TO THE TAP, THE WATER SERVICE COIL SHALL INCLUDE AN EXPANSION LOOP THAT COMES AROUND THE RIGHT SIDE OF THE TAP. THE GOOSENECK OF THE TAP, THE CURB COCK AND THE FIRST FITTING IN THE INTERIOR OF THE STRUCTURE SHALL BE FLARE FITTINGS. THE FIRST CONTROL VALVE IN THE STRUCTURE SHALL BE AN IPS VALVE DIRECTLY CONNECTED TO THE FLARE ADAPTER. ALL SUCH WATER SERVICES SHALL BE SLEEVED WHERE THEY ENTER THE STRUCTURE. 2. THE MINIMUM APPROVED REPAIR FOR COPPER WATER SERVICES UNDER TWO INCHES (2"), IN THE PUBLIC RIGHT OF WAY, SHALL CONSIST OF REPLACING THE WATER SERVICE FROM THE TAP TO THE CURB COCK. REPAIRS TO COPPER WATER SERVICES BETWEEN THE CURB COCK AND THE CONTROL VALVE INSIDE THE STRUCTURE SHALL FOLLOW THE NATIONAL

APPROVED. 3. THE REPAIR OF LEAD WATER SERVICES WITH DRESSER COUPLINGS OR OTHER METHODS SHALL BE PROHIBITED. DAMAGED LEAD WATER SERVICES SHALL BE COMPLETELY REPLACED WITH TYPE K COPPER WATER SERVICES.

WATER SERVICES UNDER THE ROADWAY WITH FLARE UNIONS SHALL NOT BE

STANDARD PLUMBING CODE. INTERRUPTING THE INTEGRITY OF COPPER

SEWER CONNECTIONS

. WHERE HERE IS A SEPARATION OF THE STORM AND SANITARY SEWER LEAVING THE STRUCTURE, THE SANITARY LATERAL SHALL INCLUDE A FITTING THAT RECEIVES THE DISCHARGE OF THE STORM LATERAL. THIS COMBINATION SHALL BE MADE WITHIN TWO FEET (2') OF THE CURB. 2. THE CUT INTO THE CITY SEWER MAIN SHALL BE PERFORMED IN SUCH A MANNER THAT THE HOLE IN THE CITY SEWER MAIN BE NO LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE THAT IS TO BE INTRODUCED. 3. WHERE THE COMBINED SEWER LATERAL IS TO CONNECT TO THE CITY SEWER MAIN, A CONNECTION ASSEMBLY HALL BE REQUIRED FOR APPROVAL OF THE INSTALLATION. THE ASSEMBLY CONSISTS OF A HUBBED FIRRING WITH A PIECE OF PIPING COMING OUT OF ONE SIDE OF THE FITTING WITH A DEVELOPED LENGTH NO MORE THAN ONE INCH (1") LONGER THAN THE WIDTH OF THE RISER CLAMP AND THE WALL THICKNESS OF THE CITY SEWER MAIN. THIS ASSEMBLY SHALL BE FITTED IN SUCH A MANNER THAT ONE SIDE OF THE RISER CLAMP RESTS AGAINST THE CITY SEWER MAIN AND THE OTHER SIDE AGAINST THE HUB OF THE FITTING. THE OTHER SIDE OF THE HUBBED FITTING RECEIVES THE SEWER LATERAL PIPE. ONCE THE CONNECTION ASSEMBLY HAS BEEN INSTALLED, THE AREA AROUND WHERE THE ASSEMBLY MEETS THE CITY SEWER MAIN SHALL BE CEMENTED.

40 GAL. ELECTRIC WATER HEATER

DRAWING TITLE

HOT AND COLD WATER SCHEMATIC

BSCAN STICKER

PROJECT NAME AND ADDRESS

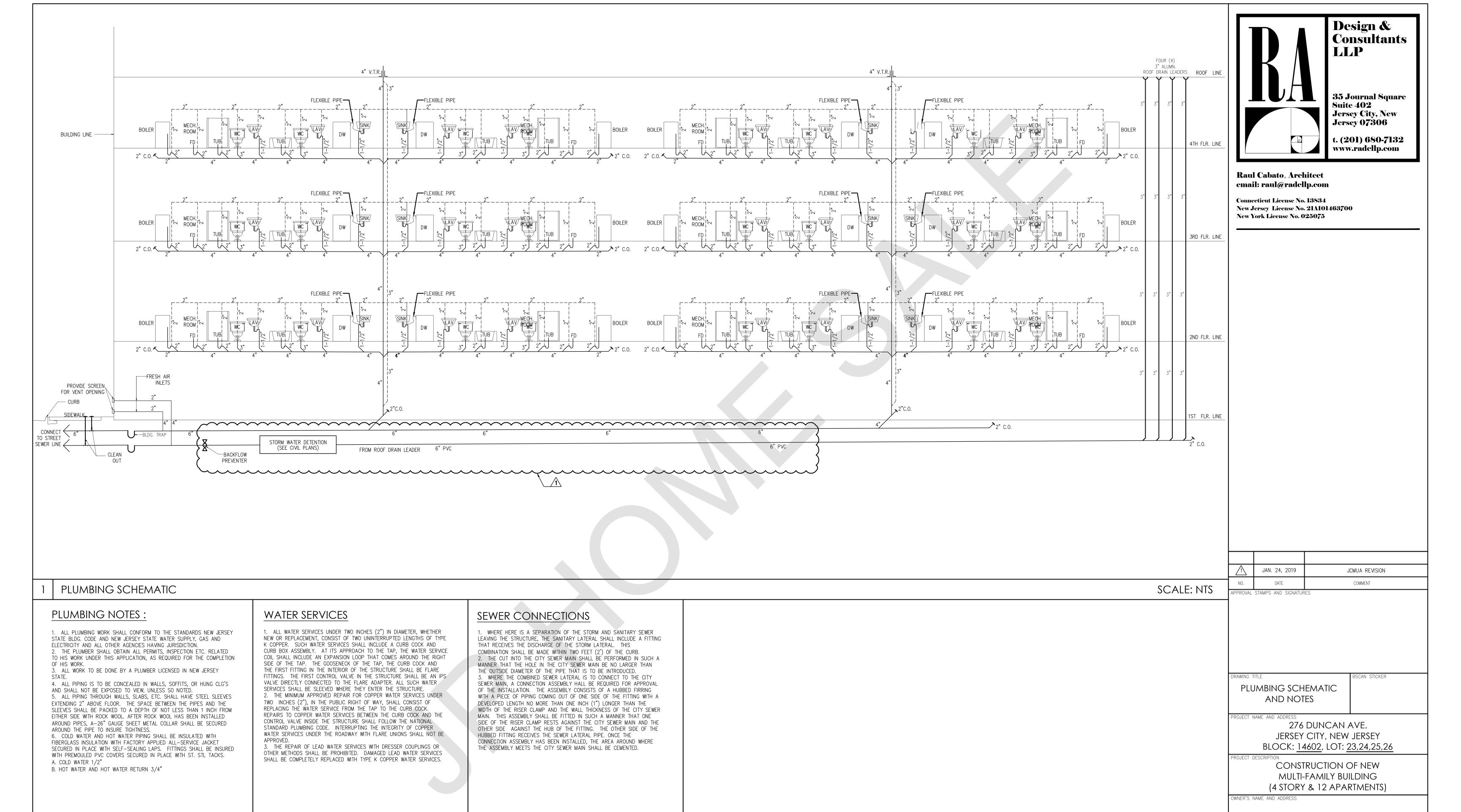
276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION

CONSTRUCTION OF NEW MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

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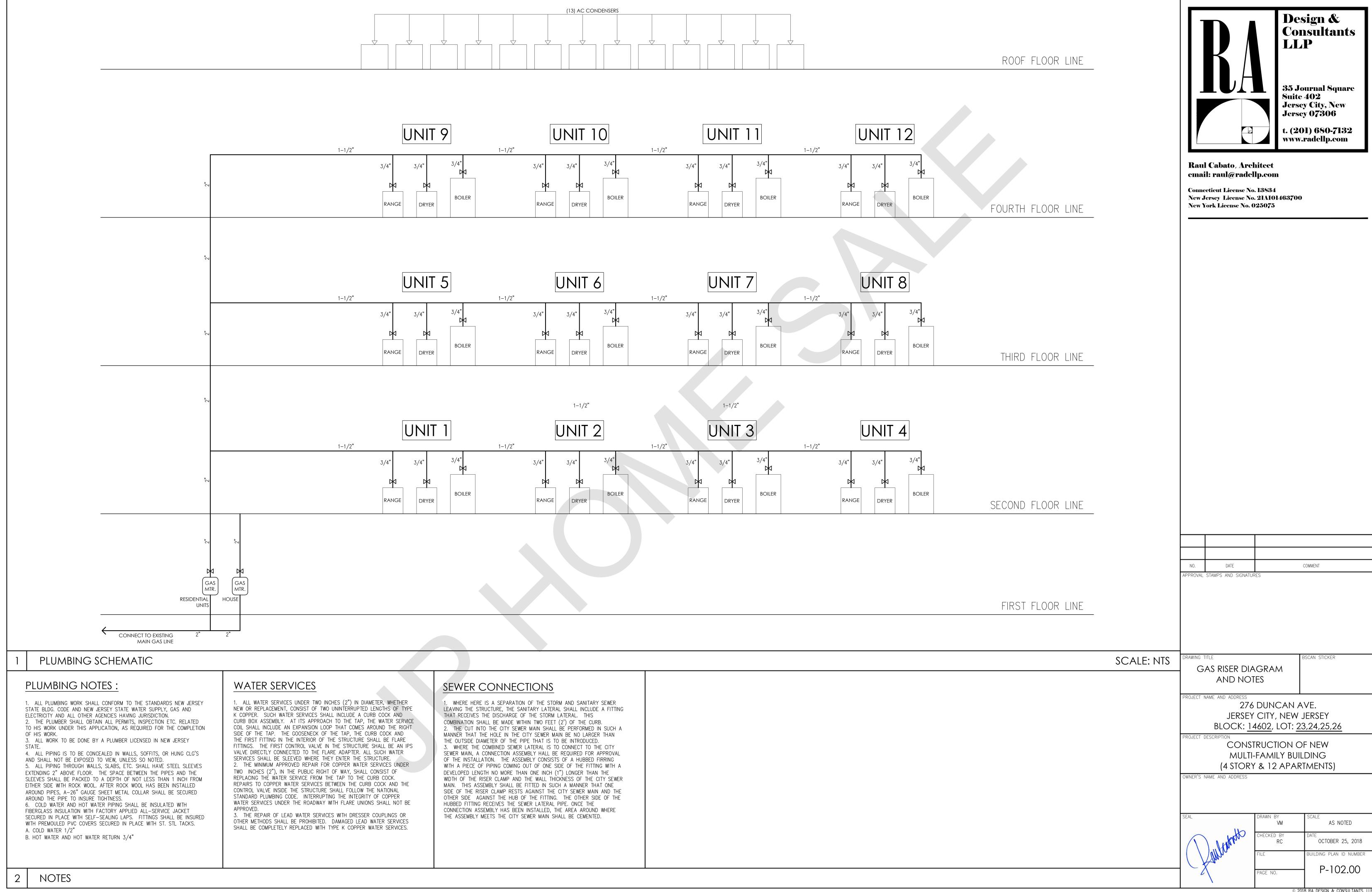


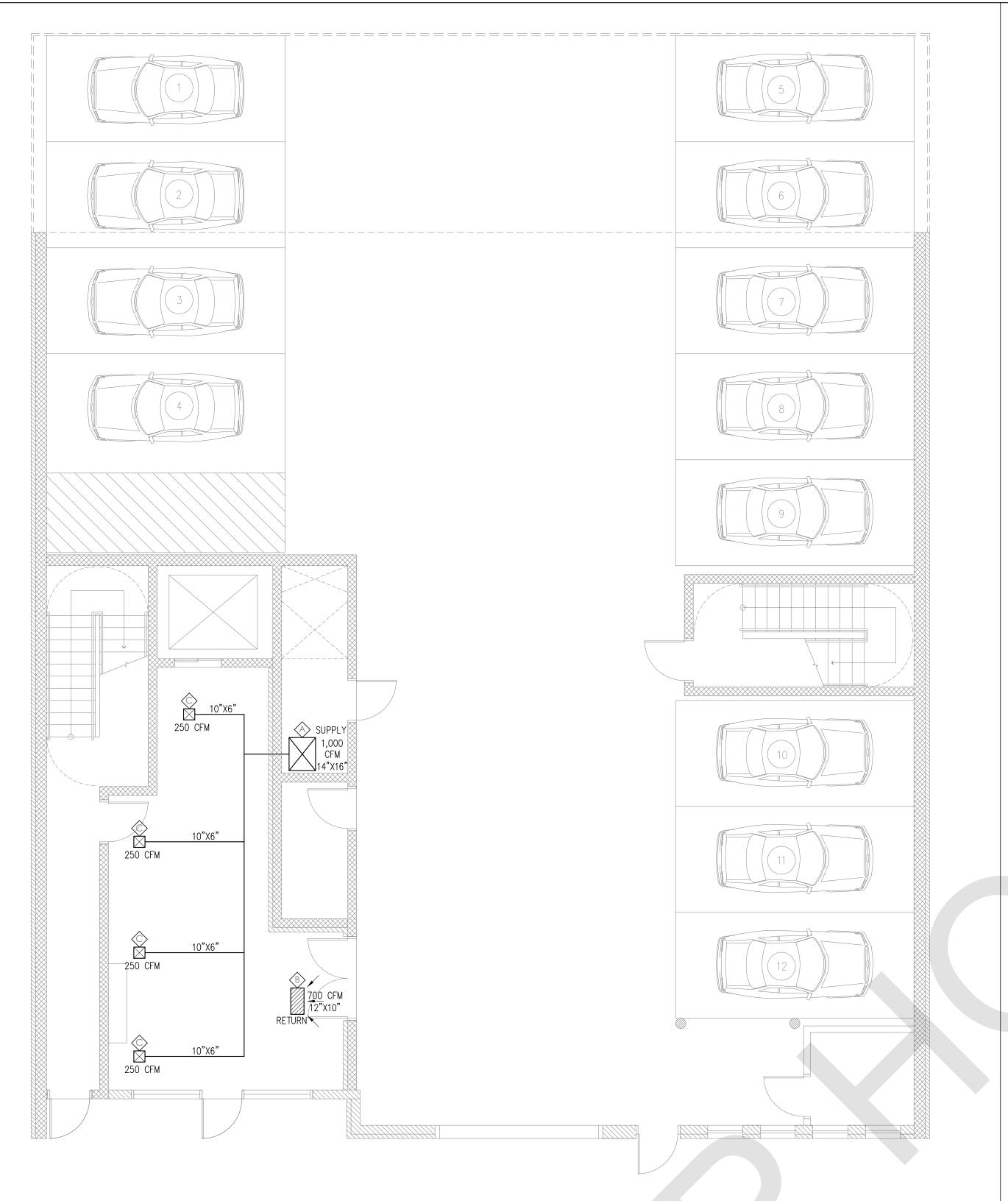
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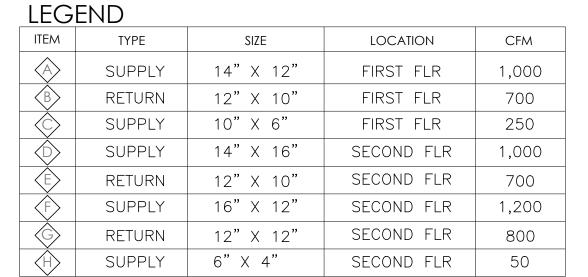
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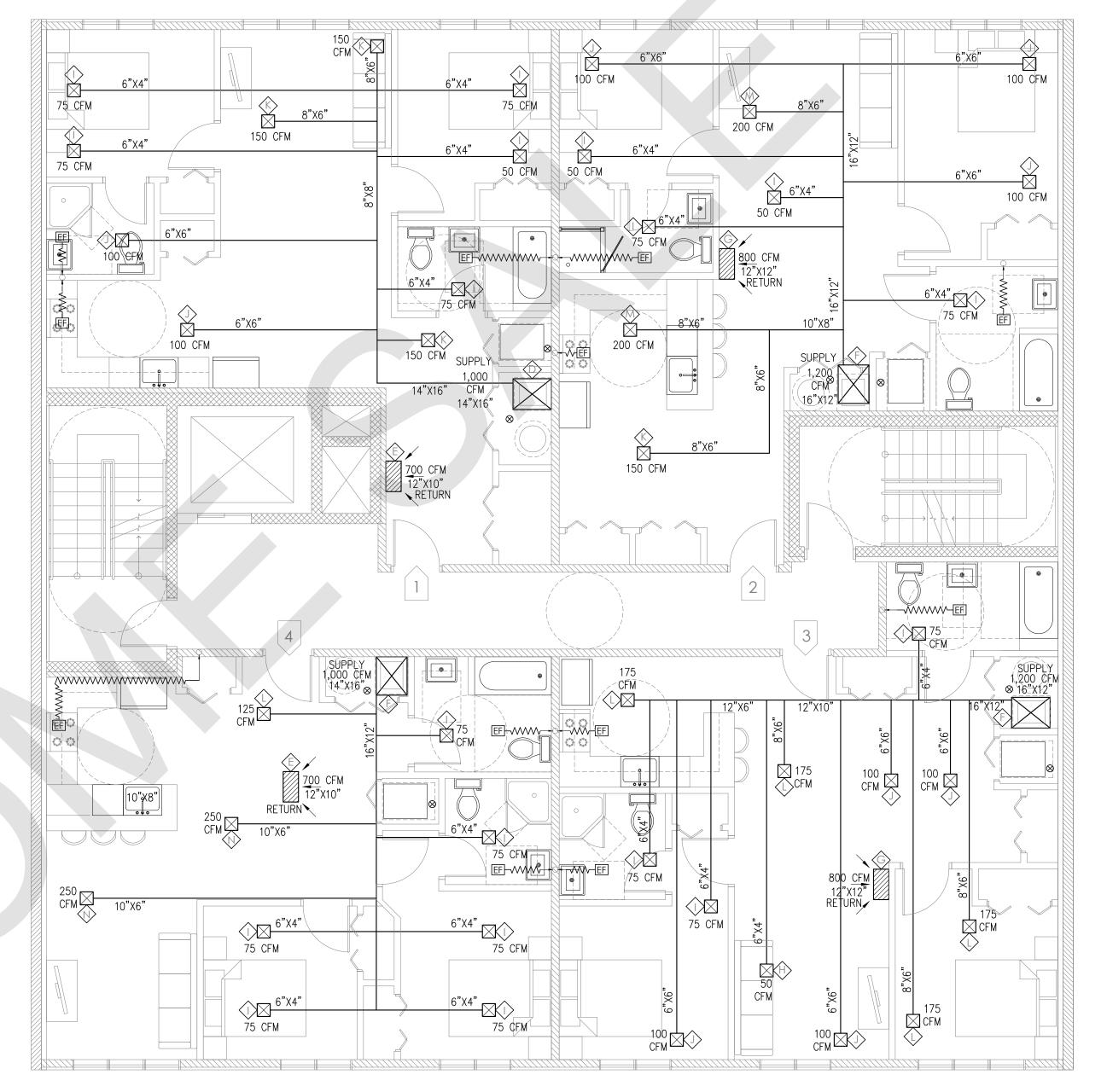
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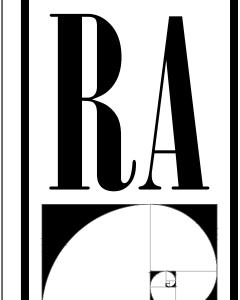






ITEM	TYPE	SIZE	LOCATION	CFM
	SUPPLY	6" X 4"	SECOND FLR	75
	SUPPLY	6" X 6"	SECOND FLR	100
K	SUPPLY	8" X 6"	SECOND FLR	150
	SUPPLY	8" X 6"	SECOND FLR	175
₩	SUPPLY	8" X 6"	SECOND FLR	200
\bigcirc	SUPPLY	10" X 6"	SECOND FLR	250
EF	EXHAUST I	FAN	S FIRE DAI	MPER





Design & Consultants LLP

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Connecticut License No. 13834 New Jersey License No. 21A101463700 New York License No. 025075

4	SEPT. 28, 2020	BLDG. CONTRACTOR REVISION		
3	SEPT. 18, 2020	JC BUILDING DEPT. REVISION		
2	FEB. 12, 2019	JCMUA REVISION		
\triangle	JAN. 24, 2019	JCMUA REVISION		
NO.	DATE	COMMENT		

APPROVAL STAMPS AND SIGNATURES

DRAWING TITLE BSCAN STICKER **HVAC LAYOUT**

PROJECT NAME AND ADDRESS

276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

EAL	DRAWN BY VM	SCALE AS NOTED
Maket	CHECKED BY RC	DATE OCT. 25, 2018
Mar	FILE	BUILDING PLAN ID NUMBE
	PAGE NO.	M-100.00

ST FLOOR HVAC LAYOUT	SCALE: ³ / ₁₆ "=1'-0"	2	TYPICAL 2ND TO 5TH HVAC LAYOUT	SCALE: ³ / ₁₆ "=1'-0"

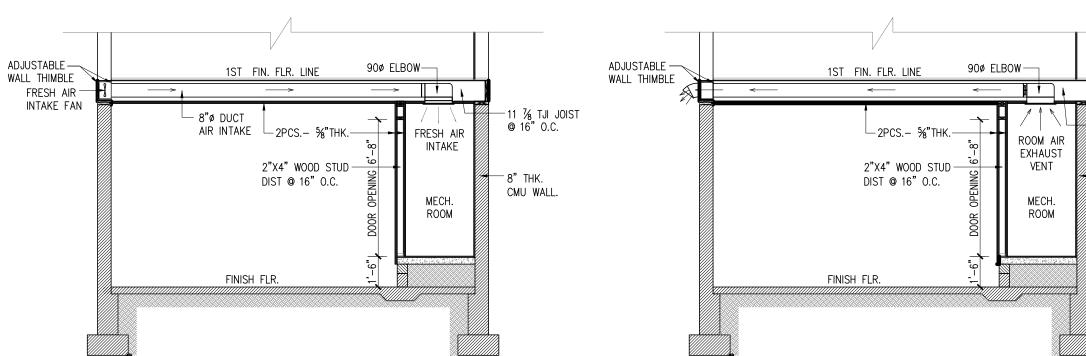
A. HVAC UNITS TO HAVE MANUAL OUTSIDE AIR DAMPER

B. ALL SUPPLY, RETURN DUCTS AND OUTSIDE AIR DUCTS INSIDE BUILDING SHALL BE INSULATED EXTERNALLY WITH 1½" THICK FIBERGLASS WITH A DENSITY OF 1.5 POUNDS PER CUBIC FOOT AND BE COMPLETE WITH VAPOR BARRIER JACKET. ALL DUCT INSULATION, TAPE COVERINGS, AND FLEXIBLE CONNECTORS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS IN ACCORDANCE WITH ASTM

- C. ALL FLEXIBLE DUCTS SHALL BE METAL FLEW CLASS 1 TYPE 500 AIR DUCT AND SHALL BE U.L. LISTED AND HAVE 1" THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OF SEAMLESS, NON-COMBUSTIBLE, CO-POLYMER PLASTIC.
- D. ALL FLEXIBLE DUCTS SHALL BE CONNECTED TO TRUNK OR BRANCH DUCTS WITH A MINIMUM OF THREE SHEET METAL SCREWS AT EACH CONNECTION AND BE TAPED TO PROVIDE AN AIR TIGHT SEAL. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 5'-0".
- . FLEXIBLE DUCT HANGER STRIPS SHALL BE A MINIMUM 2: WIDE BY 22 GAUGE GALVANIZED METAL.
 . ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT PUBLISHED SMACNA STANDARDS FOR LOW-VELOCITY, LOW-PRESSURE DUCTS.

G. ALL CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY HVAC CONTRACTOR.

- H. THERMOSTATS SHALL BE HONEYWELL T-7300/Q7300 B1008 OR EQUAL WITH SHIELDED CABLE. ALL THERMOSTATS AND LOW VOLTAGE WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. ROOF MOUNTED EXHAUST AND SUPPLY FANS SHALL BE FURNISHED WITH BIRD SCREENS. DISCONNECT SWITCHES AND HINGED BASE ON EXHAUST FAN. J. WATER HEATER VENT SHALL BE CLASS "B". PROVIDE PROTECTION OF ADJACENT COMBUSTIBLE MATERIALS TO MEET STATE AND LOCAL CODES. HOLD WATER HEATER VENT A MINIMUM OF 10'-0" FROM OUTSIDE AIR INTAKE ON
- HVAC UNITS K. HVAC CONTRACTOR SHALL INSTALL EXHAUST FAN AND FURNISH AND INSTALL COMPLETE EXHAUST DUCT SYSTEM. DUCTS SHALL BE INSULATED WITH MINERAL WOOL AND COVERED WITH 20 GA. STAINLESS STEEL COVER WHERE EXPOSED. EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF 20 GAUGE SHEET METAL.
- . CONTRACTOR'S EQUIPMENTS SYSTEMS TO FURNISH SUPPLY FAN AND CURB. MECHANICAL CONTRACTOR TO INSTALL SUPPLY FAN, CURB AND DUCT SYSTEM COMPLETE.
- M. PROVIDE NEOPRENE FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN DUCT CONNECTIONS ON HVAC UNITS. N. HVAC CONTRACTOR SHALL BALANCE HVAC SYSTEM TO AIR QUANTITIES INDICATED. PROVIDE TYPED WRITTEN REPORT TO OWNER UPON COMPLETION
- . CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID TO VERIFY ALL EXISTING CONDITIONS.
- ALL WORK SHALL BE FURNISHED AND INSTALLED TO COMPLY WITH ALL STATE AND LOCAL CODES. SMOKE DETECTORS FOR FAN SHUT-DOWN WHERE REQUIRED BY MECHANICAL CODE SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL DRAWINGS.
- R. PROVIDE FIRE DAMPERS @ FIRE RATED ASSEMBLY DUCT PENETRATION.



FRESH AIR INTAKE DETAIL

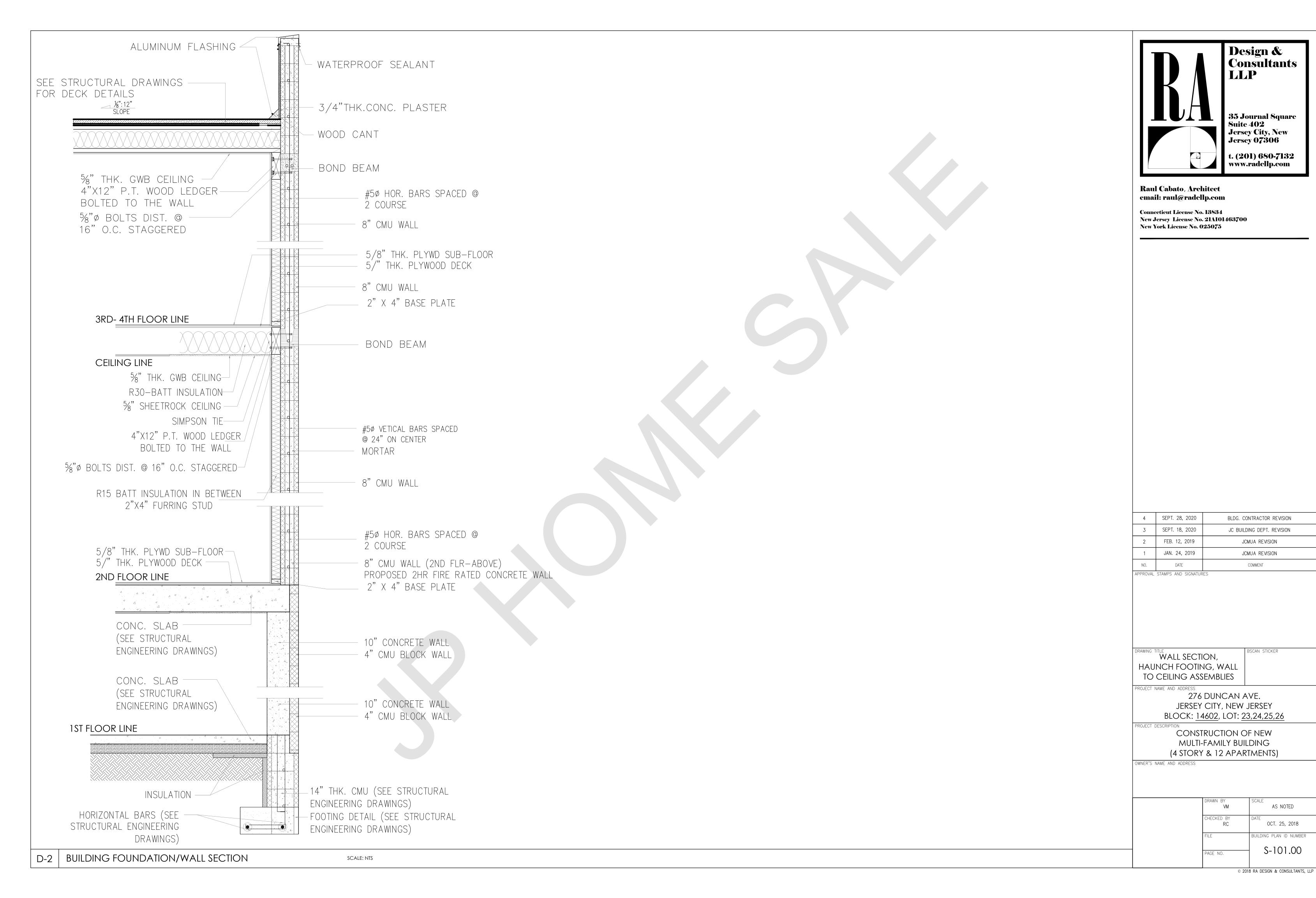
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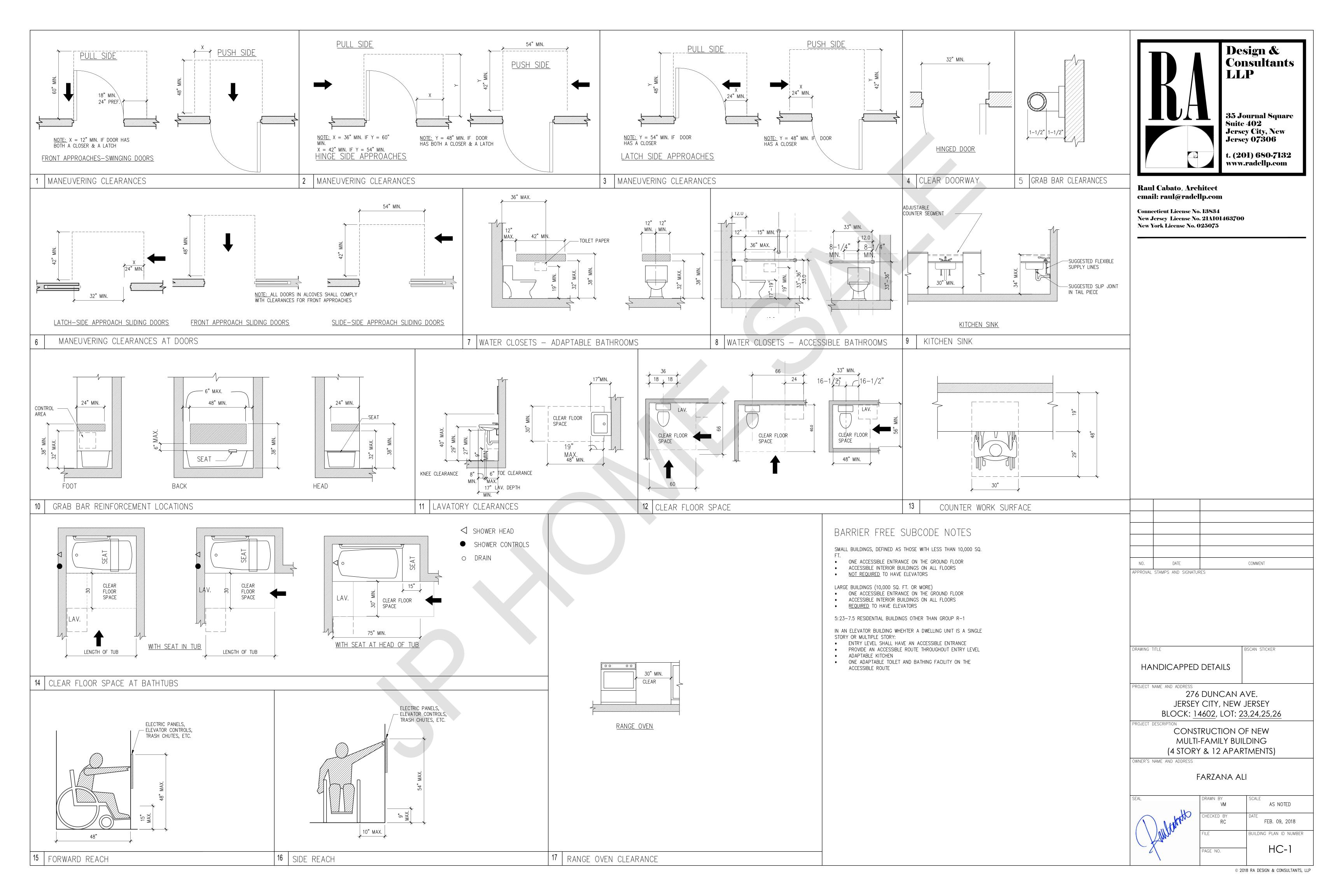
5 ROOM EXHAUST DETAIL

SCALE: NTS

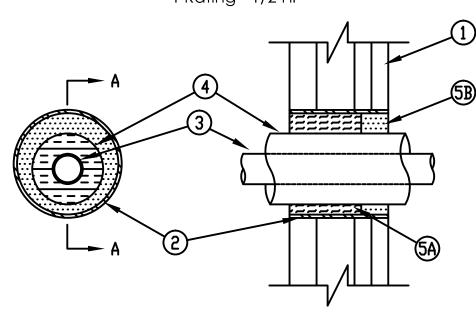
HVAC NOTES

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UL System No. W-L-5143 F Ratings - 1 and 2 Hr (See Items 1 and 5) T Rating - 1/2 Hr



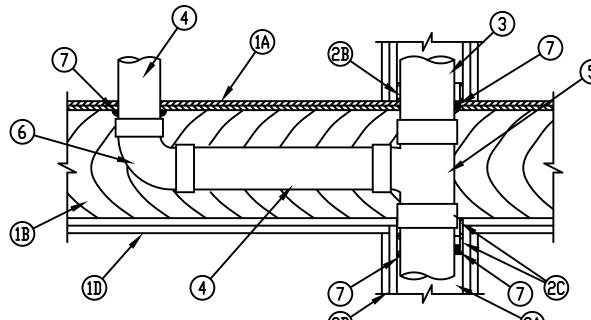
WALL ASSEMBLY - THE 1 OR 2 HR FIRS-RATES GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS IN THE MANNER DESCRIBED IN THE INDIVIDUAL U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION

SECTION A-A

- 1.A. STUDS "C-T" SHAPED STUDS 1-5/6 IN. WIDE BY 2-1/2 IN. DEEP FABRICATED FROM 25 MSG GALV. STEEL, SPACED MAX. 24 IN. O.C. 1.B. GYPSUM BOARDS— ONE LAYER OF NOM 1 IN. THICK, 24 IN. WIDE GYPSUM LINER AND 🔏 IN. THICK, 4 FT. WIDE GYPSUM BOARD WITH SQUARE OR TAPERED EDGES. THY GYPSUM BOARD TYPE, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX. DIAM. OF OPENING IS 4 IN.
- THE HOURLY F RATING OF THE FIRE STOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. 2. METALLIC SLEEVE MAX. 4 IN. DIAM. CYLINDRICAL SLEEVE FABRICATED FROM MIN. 0.016 IN. THICK (28 GAUGE) GALV. SHEET STEEL AND HAVING A MIN. 1 IN. LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL SLEEVE TO BE EQUAL TO THICKNESS OF WALL. SLEEVE INSTALLED BY COILING THE STEEL SHEET TO A DIAM. SMALLER THAN THE THROUGH OPENING, INSERTING THE COIL THROUGH THE OPENING AND RELEASING THE COIL TO LET IN UNCOIL AGAINST THE CIRCULAR CUTOUTS IN THE GYPSUM WALL BOARD LAYERS. SLEEVE MAY ALSO BE FORMED OF NO. 8 STEEL WIRE MESH HAVING A MIN IN. LAP ALONG THE LONGITUDINAL
- THROUGH PENETRATES ONE METALLIC PIPE OR TUBE TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY BE USED: 3.A. COPPER TUBING NOM 1 IN. DIAM. (OR SMALLER) TYPE L COPPER TUBING
- 3.B. COPPER PIPE NOM 1 I. DIAM. (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- 4. TUBE INSULATION PLASTIC NOM 3/4 IN. THICK ACRYLONITRILE BUTADIENE/POLYVINYL CHLORIDE (AB/PVC) FLEXIBLE FOAM FURNISHED IN THE FORM OF TUBING THE ANNULAR SPACE BETWEEN THE INSULATED PIPE AND THE PERIPHERY OF THE STEEL SLEEVE SHALL BE MIN.¼ IN. AND MAX. 1-1/8 IN.
- SEE PLASTICS (QMFZ2 CATEGORY IN THE PLASTICS RECOGNIZED COMPONENT 5. FIRESTOP SYSTEM THE FIRE STOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
- 5.A. A PACKING MATERIAL MIN. 1-5/8 IN. OR 2-1/4 IN. THICKNESS OF MIN. 4 PCF MINERAL WA\OOL BATT INSULATION FIRMLY PACKED INTO SLEEVE ON ONE SIDE OF THE WALL AS A PERMANENT FORM FOR 1 AND 2 HR WALLS, RESPECTIVELY. PACKING MATERIAL TO BE RECESSED FROM THE ROOM SIDE OF THE WALL AS RUQUIRED TO SCCOMODATE TH EREQUIRED THICKNESS OF FILL MATERIAL.
- 5.B. FILL, VOID OR CAVITY MATERIAL SEALANT MIN. 1-1/2 IN. THICKNESS OF FILL MATERIL\AL APPLIED WITHIN SLEEVE, FLUSH WITH ROOM SURFACE OF WALL

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE SEALANT BEARING THE UL CLASSIFICATION MARK

UL System No. F-C-2126 F Rating - 1 and 2 Hr (See Item 1) T Rating - 3/4 and 1-3/4 Hr



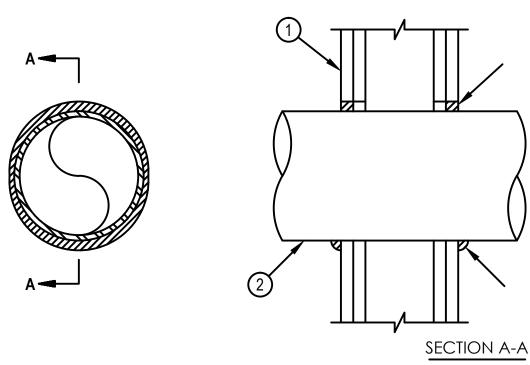
- FLOOR-CEILING ASSEMBLY THE 1 OR 2 HR FIRS-RATED SOLID OR TRUSSED LUMBER JOIST FLOOR-CEILING ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL L500 SERIES FLOOR CEILING DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE RATING OF THE FLOOR-CEILING AND WALL ASSEMBLIES. THE GENERAL CONSTRUCTION FEATURES OF THE FLOOR-CEILING
- FLOOR SYSTEM LUMBER OR PLYWOOD SUBFLOOR WITH FINISH FLOOR LUMBER, PLYWOOD OR FLOOR TOPPING MIXTURE AS SPECIFIED IN THE INDIVIDUAL
- FLOOR-CEILING DESIGN. MAX DIAM. OF THE FLOOR OPENING IS 5-1/2 IN. WOOD JOISTS NOM. 10 IN. DEEP (OR DEEPER) LUMBER, STEEL OR COMBINATION LUMBER AND STEEL JOISTS, TRUSSES OR STRUCTURAL WOOD MEMBERS WITH
- BRIDGING AS REQUIRED AND ENDS FIRESTOPPED. FURRING CHANNELS (NOT SHOWN) - RESILIENT GALV. STEEL FURRING INSTALLED PERPENDICULAR TO WOOD JOISTS BETWEEN WALLBOARD AND WOOD JOISTS AR REQUIRED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. FURRING CHANNELS SPACED MAX 24 IN. OC.
- GYPSUM BOARD- NOM 4 FT. WIDE BY 1/8 IN. THICK AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. WALL BOARD SECURED TO WOOD JOINTS OR
- FURRING CHANNELS AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. CHASE WALL- THE THROUGH PENETRATES SHALL BE ROUTED THROUGH 1 OR 2 HR FIRE-RATED SINGLE, DOUBLE OR STAGGERED WOOD STUD/GYPSUM WALLBOARD CHASE WALL CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING
- STUDS NOM. 2 BY 6 IN. LUMBER STUDS SOLE PLATE NOM. 2 BY 6 IN. LUMBER PLATES
- TOP PLATE THE DOUBLE TOP PLATE SHALL CONSIST OF TWO NOM. 2 BY 6 IN. LUMBER PLATES. MAX. DIAM. OF OPENING IS 5-1/2 IN.
- GYPSUM BOARD— THICKNESS, TYPE, NUMBER OF LAYER AND FASTENERS SHALL BE AS SPECIFIED IN INDIVIDUAL WALL AND PARTITION DESIGN. NON-METALLIC PENETRATES - ONE NON-METALLIC PIPE TO BE INSTALLED WITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE AND PERIPHERY OF OPENING SHALL BE CONTINUOUS CONTRACT, O IN. (POINT CONTACT) TO MAX. IN OR O IN. (POINT CONTACT) TO MAX 1 IN. (SEE ITEM 7). PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOROCEILING ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF
- NON-METALLIC PENETRATES MAY BE USED: POLYVINYL CHLORIDE (PVC) PIPE NOM. 4 DIAM. (OR SMALLER) SCHEDULE 40 CELLULAR OR SOLID CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR
- SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE NOM 4 IN. DIAM. (OR SMALLER) SDR17C PVC PIPE FOR USED IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
- ACRYLONTRILE BUTADIENE STRYENE (ABS) PIPE NOM 4 IN. DIM (OR SMALLER SCHEDULE 40 CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
- BRANCH PIPING ONE NON-METALIC PIPE TO BE CENTERED WITHIN THE FIRE STOP SYSTEM. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR-CEILING ASSEMBLY. MAX. DIAM. OF FLOOR OPENING IS 3½ IN. THE FOLLOWING TYPES AND SIZES OF NON-METALLIC PENETRANTS MAY BE USED: POLYVINYL CHLORIDE (PVC) PIPE NOM. 3 IN. DIAM. (OR SMALLER) SCHEDULE 40 SOLID OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. A CONTINUOUS POINT CONTRACT ANNULAR SPACE IS REQUIRED WITHIN THE FIRESTOP
- CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE NOM. 3 IN. DIAM. (OR SMALLER) SDR17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM SYSTEMS. A CONTINUOUS POINT CONTRACT ANNULAR SPACE IS REQUIRED WITHIN THE FIRE STOP SYSTEM.
- ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE NOM. 3 IN. DIAM. (OR SMALLER) SCHEDULE 40 CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. A CONTINUOUS POINT CONTACT ANNULAR SPACE
- NON-METALIC REDUCING TEE- THE FOLLOWING TYPES AND SIZES OF NON METALLIC REDUCING TEES MY BE USED: POLYVINYL CHLORIDE (PVC) REDUCING TEE NOM. 4 IN. BY 4 IN. BY 3 IN. (OR SMALLER) SCHEDULE 40 SOLID CORE PVC REDUCING TEE FOR USE IN CLOSED (PROCESS OR SUPPLY) VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM
- CHLORINATED POLYVINLY CHLORIDE (CPVC) REDUCING TEE NOM 4 IN. BY 4 IN. BY 3 IN. (OR SMALLER) SDR17 CPVC REDUCING TEE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.
- ACRYLONITRILE BUTADIENE STYRENE (ABS) REDUCING TEE NOM. 4 IN. BY 4 IN. BY 3 IN. (OR SMALLER) SCHEDULE 40 SOLID CORE ABS REDUCING TEE USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. NON-METALIC ELBOW- ONE NON-METALLIC ELBOWS TO BE INSTALLED FLUSH WITH THE UNDERSIDE OF THE FLOORING SYSTEM DIRECTLY BELOW THE OPENING.
- MAX. DIAM. OF FLOOR OPENING IS 3-1/2 IN. THE FOLLOWING TYPES AND SIZES OF NON-METALLIC ELBOWS MAY BE USED: POLYVINYL CHLORIDE (PVC) PIPE NOM. 3 IN. DIAM. (OR SMALLER) SCHEDULE 40 SOLID CORE PVC ELBOW FOR USE IN CLOSED (PROCESS OR SUPPLY) OR
- VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE NOM. 3 IN. DIAM. (OR SMALLER) SDR17 CPVC ELBOW FOR USE IN CLOSED (PROCESS OR SUPPLY) OR

TEE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM SYSTEMS. ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE NOM. 4 IN. BY 4 IN. BY 3 IN. DIAM. (OR SMALLER) SCHEDULE 40 SOLID OR CELLULAR CORE ABS REDUCING

UL System No. W-L-1290 F Rating -- 1 and 2 Hr (See Item 1) T Rating -- 0 Hr L Rating at Ambient -- Less than 1 CFM/Sq Ft

L Rating at 400° F -- Less than 1 CFM/Sa Ft



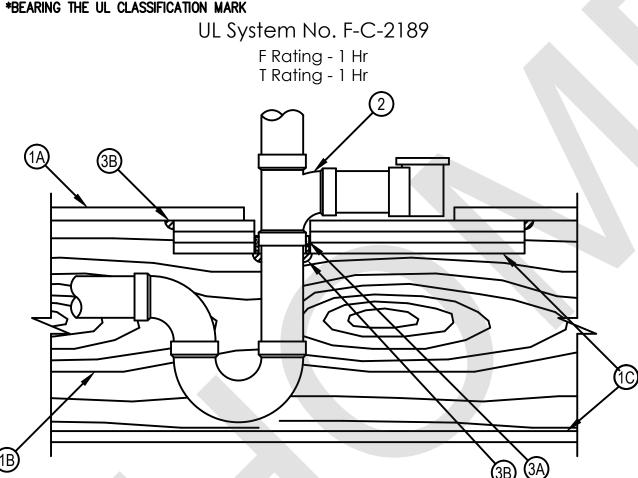
1. WALL ASSEMBLY -- THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES. A. STUDS -- THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF

THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES. B. GYPSUM BOARD*- -- NOM 5/8 IN. THICK. 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 5 IN. THE HOURLY F AND T RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL

ASSEMBLY IN WHICH IT IS INSTALLED. 2. THROUGH PENETRANT -- ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE ANNULAR SPACE BETWEEN THE PIPE OR TUBE AND PERIPHERY OF THE OPENING SHALL BE MIN 0 IN (POINT CONTACT) TO MAX 1/2 IN. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUIT OR TUBE MAY BE

A. STEEL PIPE -- NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE.

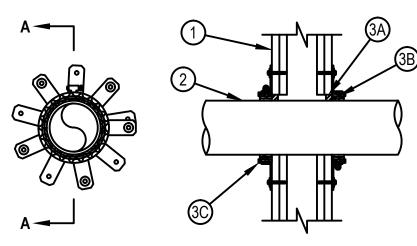
- B. IRON PIPE -- NOM 4 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE. C. CONDUIT -- NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR STEEL CONDUIT.
- D. COPPER TUBE -- NOM 4 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBE. E. COPPER PIPE -- NOM 4 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- 3. FILL. VOID OR CAVITY MATERIAL*—SEALANT —— MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND WALL, A MIN 1/3 IN DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE/WALL INTERFACE. HILTI CONSTRUCTION CHEMCIALS, DIV OF HILTI INC -- CP606 FLEXIBLE FIRESTOP SEALANT



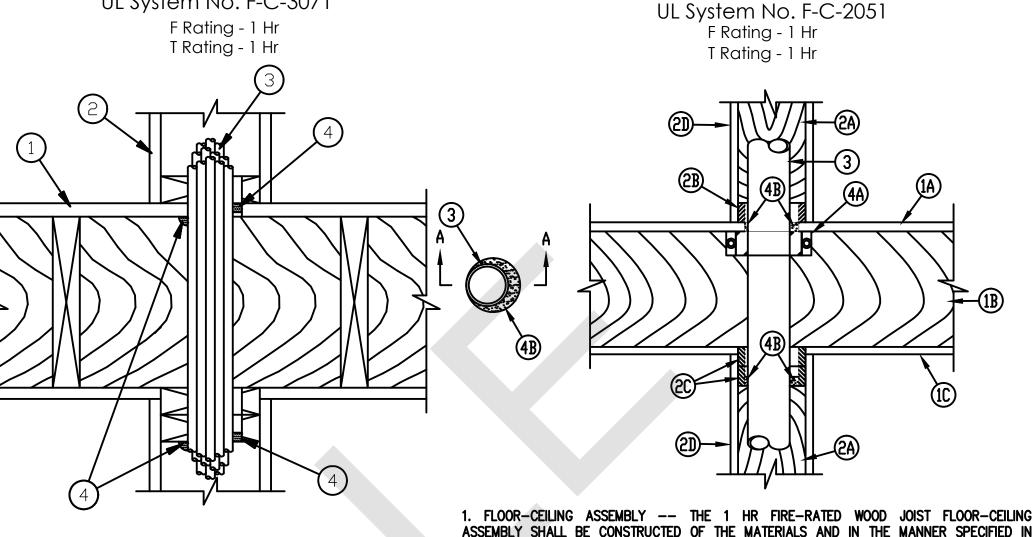
FLOOR-CEILING ASSEMBLY- THE FIRE-RATED SOLID OR TRUSSED LUMBER JOIST FLOOR-CEILING ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN INDIVIDUAL L500 SERIES FLOOR-CEILING DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY. THE GENERAL CONSTRUCTION DETAILS OF THE FLOOR-CEILING ASSEMBLY ARE SUMMARIZED BELOW.

- A. FLOOR SYSTEM-LUMBER OR PLYWOOD SUBFLOOR WITH FINISH FLOOR OF LUMBER, PLYWOOD OR FLOOR TOPPING MIXTURE AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. RECTANGULAR CUTOUT IN FLOORING TO ACCOMMODATE THE BATHTUB DRAIN PIPING (ITEM 2)
- TO BE MAX 8 BY 12 IN. B. WOOD JOISTS- NOM. 10 IN DEEP (OR DEEP) LUMBER, STEEL OR COMBINATION LUMBER AND STEEL JOISTS, TRUSSES OR STRUCTURAL WOOD MEMBERS WITH BRIDGING AS REQUIRED AND
- GYPSUM BOARD NOM. 4 FT WIDE BY 1/8 THICK AS SPECIFIED IN THE INDIVIDUAL FLOOR—CEILING DESIGN. GYPSUM BOARD SECURED TO JOISTS AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. THREE PIECES OF GYPSUM, EACH MIN. 4 IN. LONGER AND WIDER THAN THE CUTOUT IN THE FLOORING, SCREW ATTACHED TO BOTTOM OF FLOORING CONCENTRIC WITH CUTOUT. IN ADDITION, MIN ½ IN. DIAM BY 2 IN. HIGH WAVY BEAD OF FS-ONE SEALANT TO BE APPLIED TO THE TOP PERIMETER OF EACH PIECE OF GYPSUM BOARD PRIOR TO ITS INSTULLATION. DIAM. OPENING HILE-SAWED THROUGH BOTH LAYERS OF THE GYPSUM BOARD PATCH TO BE ½ IN. LARGER THAN OUTSIDE DIAM. OR BATHTUB DRAIN PIPING.

UL System No. W-L-2335 F Rating - 1 and 2 Hr (See Item 1) T Rating - 3/4, 1 and 1-1/2 Hr (See Item 3)



SECTION A-A



AS SUMMARIZED BELOW:

tightly butted.

AT MID-HEIGHT.

THE COLLAR.

DESIGN. MAX DIAM OF OPENING IS 4-3/4 IN.

BE AS SPECIFIED IN THE INDIVIDUAL FLOOR—CEILING DESIGN.

BE AS SPECIFIED IN INDIVIDUAL WALL AND PARTITION DESIGN.

BE RIGÌDLY SUPPORTED ON BOTH SIDES OF FLOOR ASSEMBLY.

HILTI CONSTRUCTION CHEMICALS, DIV OF

16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in.

*BEARING THE UL CLASSIFICATION MARK

HILTI INC -- FS611A OR FS-ONE SEALANT

INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

REQUIRED AND WITH ENDS FIRESTOPPED

THE INDIVIDUAL L500 SERIES FLOOR-CEILING DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY.

PLYWOOD OR FLOOR TOPPING MIXTURE* AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING

LUMBER AND STEEL JOISTS. TRUSSES OR STRUCTURAL WOOD MEMBERS* WITH BRIDGING AS

2. CHASE WALL -- THE THROUGH PENETRANT (ITEM 3) SHALL BE ROUTED THROUGH A 1 HR

FIRE-RATED SINGLE, DOUBLE OR STAGGERED WOOD STUD/GYPSUM WALLBOARD CHASE WALL

CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300

SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL

A. STUDS -- NOM 2 BY 6 IN. LUMBER OR DOUBLE NOM 2 BY 4 IN. LUMBER STUDS.

LUMBER PLATES OR 2 SETS OF PARALLEL NOM 2 BY 4 IN. LUMBER PLATES, TIGHTLY BUTTED.

3. NONMETALLIC PIPE -- NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID CORE

POLYVINYL CHLORIDE (PVC) OR SDR17 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE FOR

USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN. WASTE OR VENT) PIPING

SYSTEMS. ONE PIPE TO BE INSTALLED IN THE FIRESTOP SYSTEM. AN ANNULAR SPACE OF MIN

O IN. (POINT CONTACT) TO MAX 1/4 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE TO

GALV STEEL AVAILABLE FROM SEALANT MANUFACTURER. COLLAR SHALL BE MIN 2 IN. DEEP

WITH A MIN 1-1/4 IN. WIDE BY 2 IN. LONG ANCHOR TABS FOR SECUREMENT TO FLOOR

SURFACE. RETAINER TABS 1-1/4 IN. WIDE BY 3/4 IN. LONG AND LOCATED OPPOSITE THE

ANCHOR TABS ARE FOLDED 90 DEGREE TOWARDS THE PIPE SURFACE TO MAINTAIN THE

annular space around the pipe and to retain the fill material. When pipe is

INSTALLED WITHIN 3/4 IN. OF WOOD JOIST, COLLAR IS TO BE U-SHAPED AROUND PIPE AND

SECURED TO THE WOOD JOIST AND TO THE SURFACE OF FLOOR WITH WOOD SCREWS AND

Washers at every other anchor tab. When pipe is not installed within 3/4 in. of

WOOD JOIST, COLLAR IS TO BE CYLINDRICALLY SHAPED AROUND PIPE, SECURED TO THE

SURFACE OF FLOOR WITH WOOD SCREWS AND WASHERS AT EVERY OTHER ANCHOR TAB AND

PROVIDED WITH A MIN 1/2 IN. WIDE STAINLESS STEEL HOSE CLAMP SECURED TO THE COLLAR

MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR. MIN 3/4 IN.

THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS FLUSH WITH THE BOTTOM

SURFACE OF THE LOWER TOP PLATE. FILL MATERIAL TO BE INSTALLED TO COMPLETELY FILL

B. FILL, VOID OR CAVITY MATERIAL* -- SEALANT -- MIN 3/4 IN. THICKNESS OF FILL

UL System No. W-L-1095

F Ratings - 1 & 2 Hr (See Item 1)

T Ratings - 1 & 2 Hr (See Item 3)

L Rating At Ambient - Less Than 1 CFM/Sq Ft

L Rating At 400 F - 4 CFM/Sq Ft

SECTION A-A

A. STEEL COLLAR -- COLLAR FABRICATED FROM PRECUT 0.017 IN. THICK (28 MSG)

4. FIRESTOP SYSTEM -- THE DETAILS OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:

B. SOLE PLATE -- NOM 2 BY 6 IN. LUMBER OR PARALLEL 2 BY 4 IN. LUMBER PLATES,

C. TOP PLATE -- THE DOUBLE TOP PLATE SHALL CONSIST OF TWO NOM 2 BY 6 IN.

D. GYPSUM BOARD* -- THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS SHALL

A. FLOORING SYSTEM -LUMBER OR PLYWOOD SUBFLOOR WITH FINISH FLOOR OF LUMBER.

B. WOOD JOISTS -- NOM 10 IN. DEEP (OR DEEPER) LUMBER, STEEL OR COMBINATION

C. GYPSUM BOARD* -- THICKNESS, TYPE NUMBER OF LAYERS AND FASTENERS SHALL

. FLOOR-CEILING ASSEMBLY - THE 1 HR FIRE-RATED SOLID OR TRUSSED LUMBER JOIST FLOOR-CEILING ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL L500 SERIES FLOOR-CEILING DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY. THE GENERAL CONSTRUCTION FEATURES OF THE FLOOR-CEILING ASSEMBLY ARE SUMMARIZED BELOW:

UL System No. F-C-3071

A. FLOORING SYSTEM - LUMBER OR PLYWOOD SUBFLOOR WITH FINISH FLOOR OF LUMBER, PLYWOOD OR FLOOR TOPPING MIXTURE* AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN. MAX DIAM OF OPENING SHALL BE

- B. WOOD JOISTS* NOM 10 IN. DEEP (OR DEEPER) LUMBER, STEEL OR COMBINATION LUMBER AND STEEL JOISTS, TRUSSES OR STRUCTURAL WOOD MEMBERS* WITH BRIDGING AS REQUIRED AND WITH ENDS FIRESTOPPED.
- C. GYPSUM BOARD* NOM 4 FT WIDE BY 5/8 IN. THICK AS SPECIFIED IN THE INDIVIDUAL FLOOR—CEILING DESIGN. GYPSUM BOARD SECURED TO WOOD JOISTS OR FURRING CHANNELS AS SPECIFIED IN THE INDIVIDUAL FLOOR-CEILING DESIGN
- 2. CHASE WALL THE THROUGH PENETRANTS SHALL BE ROUTED THROUGH 1 HR FIRE-RATED SINGLE, DOUBLE OR STAGGERED WOOD STUD/GYPSUM BOARD CHASE WALL CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY
- AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES: A. STUDS - NOM 2 BY 6 IN. LUMBER STUDS. B. SOLE PLATE - NOM 2 BY 6 IN. LUMBER PLATES. MAX
- DIAM OF OPENING IS 3 IN. C. TOP PLATE - THE DOUBLE TOP PLATE SHALL CONSIST OF TWO NOM 2 BY 6 IN. LUMBER PLATES. MAX DIAM OF OPENING IS 3 IN. D.
- D. GYPSUM BOARD* THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS SHALL BE AS SPECIFIED IN INDIVIDUAL WALL AND PARTITION DESIGN. 3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLE IN OPENING TO BE MAX 45 PERCENT OF THE CROSS-SECTIONAL
- AREA OF THE OPENING. THE ANNULAR SPACE BETWEEN THE CABLE BUNDLE AND THE PERIPHERY OF THE OPENING TO BE MIN O IN. (POINT CONTACT) TO MAX 1 IN. CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF
- COPPER CONDUCTOR CABLES MAY BE USED: A. MAX 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC INSULATION AND JACKET.
- B. TYPE RG 59/U COAXIAL CABLE WITH POLYETHYLENE (PE) INSULATION AND PVC JACKET. C. MAX 3/C WITH GROUND 2/O AWG ALUMINUM CONDUCTOR
- SER CABLE WITH PVC INSULATION AND JACKET. D. MAX 3/C NO. 8 AWG COPPER CONDUCTOR STEEL CLAD
- E. MAX 3/C NO. 10 WITH GROUND TYPE NM NONMETALLIC SHEATHED (ROMEX) CABLE WITH PVC INSULATION AND
- F. MAX 1 IN. DIAM METAL CLAD TEK CABLE WITH PVC
- 4. FILL, VOID OR CAVITY MATERIALS*-SEALANT MIN 1/2 IN THICKNESS OF FILL MATERIAL APPLIED AROUND THROUGH PENETRANT WITHIN THE ANNULUS ON TOP SURFACE OF FLOOR OR SOLE PLATE OF CHASE WALL. MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS OF THE TOP PLATE FLUSH WITH THE BOTTOM SURFACE OF THE LOWER TOP PLATE. MIN 1/2 IN. BEAD OF FILL MATERIAL APPLIED AT THE PENETRANT/LUMBER INTERFACES AT POINT CONTACT LOCATIONS ON BOTTOM SURFACE OF PLYWOOD OR TOP SURFACE OF SOLE PLATE, AND BOTTOM SURFACE OF LOWER
- TOP PLATE. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP 606 FLEXIBLE FIRESTOP SEALANT

NON-METALLIC PIPES MAY BE USED:

2.A. POLYVINLY CHLORIDE (PVC) PIPE- NOM. 4 IN DIAM. (OR SMALLER SCHEDULE 40 SOILD OR

CPVC FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.

2.C. ACRYLONITRILE BUTADIENCE STYRENE (ABS PIPE - NOM. 4 IN. DIAM (OR SMALLER)

XELLULAR CORE PVC FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN,

CHLORINATED PLOYVINYL CHLORIDE (PVC) PIPE - NOM 4 IN. DIAM (OR SMALLER(SDR13.5

FILL, VOID OR CAVITY MATERIALS — SEALANT — MIN ½ IN THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL

FILL VOID, OR CAVITY MATERIALS — WRAP STRIP — NOM 3/6 IN. THICK BY 1 IN. WIDE INTUMESCENT WRAP STRIP. LAYERS OF WRAP STRIP ARE CONTINUOUSLY WRAPPED AROUND THE PIPE WITH END HELD IN PLACE WITH TAPE. WRAP STRIP BUTTED TIGHTLY AGAINST BOT

CHEDULE 40 SOLID OR CELLULAR CORE ABS FOR USE IN CLOSED (PROCESS OR SUPPLY)

1. Wall Assembly —The 1 or 2 hr fire—rated gypsum wallboard/stud wall *BEARING THE UL CLASSIFICATION MARK assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the WALL ASSEMBLY— THE 1 AND 2 HR FIRE—RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS—WALL FRAMING SHALL CONSIST OF STEEL CHANNEL STUDS. STEEL STUDS TO BE MIN 2.1.4.2 IN MINES AND SALCED MAY 2.4 IN following construction features: A. Studs— Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced A. STUDS-WALL FRAMING SHALL CONSIST OF STEEL CHANNEL STUDS. STEEL STUDS TO BE MIN 2-1/2 IN. WIDE AND SPACED MAX 24 IN.

B. GYPSUM BOARD — THE GYPSUM BOARD TYPE, THICKNESS NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE SPECIFIED IN THE INDIVIDUAL U4000 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY, MAX. DIAM. OF OPENING IS 5 IN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

THROUGH PENETRANTS — ONE NON-METALLIC PIPE TO BE INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. ANNULAR SPACE BETWEEN PIPE AND PERIPHERY OF OPENING TO BE MAIN IN (POINT CONTACT) AND MAX 1/4 IN. PIPE TO BE RIGIDLY SUPPORTED

B. Wallboard, Gypsum 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max size of opening 2-5/8 in. by 18 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall issembly in which it is installed.

2. Electric Metallic Tubing (EMT) — One or more nom 1 in. diam steel electric tubing. The annular space shall be min 1/2 in. to a max 1 in. Conduit to be rigidly supported on both sides of wall assembly.

3. Fill, Void or Cavity Material* — Sealant — For 2 hr F Rating, min 1—1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. For 1 hr F Rating, min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI, Inc. — FS—ONE Sealant *Bearing the UL Classification Marking

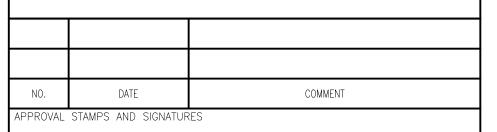
| Design & **Consultants** LLP

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Connecticut License No. 13834 New Jersey License No. 21AI01463700 New York License No. 025075



1-HR FIRE STOP DETAIL

276 DUNCAN AVE.

ROJECT NAME AND ADDRESS

JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26 PROJECT DESCRIPTION

CONSTRUCTION OF NEW MULTI-FAMILY BUILDING (4 STORY & 12 APARTMENTS)

OWNER'S NAME AND ADDRESS

AS NOTED OCTOBER 25, 2018 ILDING PLAN ID NUMBER FS-100.00

Reference: UL Design U301

2-Hour Fire-Resistance Rating Cavity thickness...... 3-1/2" (89 mm) Wall thickness 6" (152 mm) 12 psf (59 kg/m/)

Apply a base layer of 5/8" (15.9 mm) ProRoc™ Type X gypsum board vertically or horizontally with 1-7/8" (48 mm) nails spaced 6" (150 mm) o.c. along edges and in the field. Joints must be offset from joints on the opposite side. Vertical joints must be located over framing members.

Apply a face layer of 5/8" (15.9 mm) ProRoc^{rist} Type X gypsum board vertically or horizontally with 2-3/8" (60 mm) nails spaced 8" (200 mm) a.c. along edges and in the field. Joints must be offset from joints in the underlying layer. Tape and finish joints.



2-Hour Fire-Resistance Rating

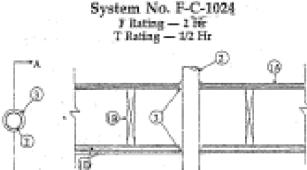
Cavity thickness...... 3-1/2" (89 mm) Wall thickness 10" (254 mm)

Interior

Install insulation between studs. Apply a base layer of 5/8" (15.9 mm) ProRoc™ Type X gypsum board vertically or horizontally with 1-7/8" (48 mm) nails spaced 8" (200 mm) o.c. Vertical joints must be located over framing members.

Apply a face layer of 5/8" (15.9 mm) ProRoc^{est} Typic X gypsium board vertically or horizontally to the interior side with 2-3/8" (60 mm) nalls spaced 8" (200 mm) o.c. Joints must be offset from joints in the underlying layer. Tape and finish joints.

U322, U323, U324, U325, U326, U329, U330, U332, U337, U338, U339, U341, U342, U354, U355, U357, U358, U360.



SECTION A:A. 1. Floor Ceiling Assembly - The 2 hr fire-rated wood joist floor-reffine assembly shall be constructed of the materials and in the manuer specified in Design No. L505, L511 or L536 in the UL Fire Resistance Direc-

tory, as summarized below: A. Flooring System - Lamber or plywood subfloor with finish floor of humber, plywood or Floor Topping Mixture as spedified in the individual Floor-Ceiling Deeign. Max diam of floor open-

B. Wood Joists — Nom 2 by 10 in. humber joints spaced 16 in. OC with non 1 by 3 in. lumber bridging and with ends firestopped C. Furring Charmels — (Not Shover) — Resilient galv steel fairing. installed perpendicular to wood joists between first and second

layers of wallboard (liem HD) and spaced max 24 in, OC. D. Gypsum Board* — Nom 4 ft wide by 5/8 in, thick as specified. in the individual Floor-Ceiling Design. First layer of wallboard. nailed to wood joists. Second layer of wallboard screw-attached to furring channels. Max cliam of ceiling opening is 5-1/2 in.

2. Through Penetrant — One metallic pipe, conduit or fubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor-onling assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe - Nom 4 in. diam (or smaller) Schedule 10 for

heavier) steel pipe. B. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic

subing or 4 in. diam galv steel conduit. C. Copper Tabing - Nom 3 in. diam (or smaller) Type L (or

heavier) copper tubing.

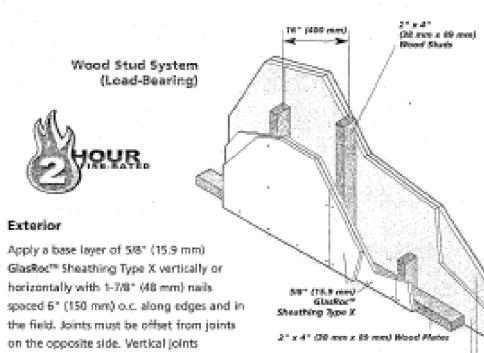
D. Copper Pipe - Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.

The annular space within the finestop system is dependent upon the

nom diam of the through penetrant. If the norn diam of the furously penetiant is 3 in. or less, the annular space within the firestop system shall be a min 0 in. (point contact) to a max 5/8 in. If the nom diam of the through penetrant is greater than 3 in., the annular space within the firestop system shall be a nom 1/2 in. 3. Fill, Void or Cavity Material - Sealant - Min 3/4 in, thickness of

fill material applied within annulus on top surface of floor. Min 5/8 in. faichness of fill material applied within annulus on bottom surface of ceiling. Additional fill material to be tratalled such that a min 1/4 in. crown is formed around the through penetrant on top surface of floor and bottom surface of ceiling. ISOLATEK INTERNATIONAL -Type I

Bearing the UL Classification Mark



Wood Stud System

112" (12.7 min)

must be located over framing 118° (25.9 mm) ProRec^{re} Type X gypsum board Apply a face layer of 5/8" (15.9 mm) GlasRoc^{ts} Sheathing Type X vertically or horizontally with 2-3/8" (60 mm) nails

spaced 8" (200 mm) o.c. along edges and

in the field. Joints must be offset from

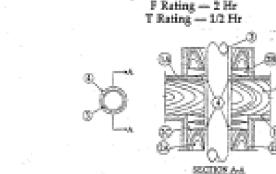
joints in the underlying layer. Tape and

Apply one layer of 1/2" (12.7 mm)

GlasRoc™ Sheathing horizontally to the (318 mm x 435 mm exterior side with 1-3/4" (44 mm) 3-112 ° (99 mm) Glass Filter or roofing nails spaced 6" (150 mm) o.c. Atlantal Wool Vertical joints must be located over framing members and staggered. ProBoot** Time A

Additional UL Design Listings for Wood Stud Systems:

System No. F-C-1026



(38 mm x 89 mm)

1. Floor-Crilling Assembly -- The 2 hr fire-rated wood joist floor-crilling assembly shall be constructed of the materials and in the manner speci fied in Design No. 1.505, L511, or 1.536 in the UL Fire Resistance Directory, as summarized below:

A. Flooring System - Lumber or phywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified

in the individual Ploor Ceiling Design. Max diam of floor open-B. Wood Joists — Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped.

 Furring Channels — (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second. layers of wallboard (born 1D) and spaced max 24 in. OC.

D. Gypsum Board* - Two layers 5/8 in, thick as specified in the individual Floor-Ceiling Design. First layer of wallboard natled to wood joists. Second layer of wallboard screw-attached to furring

2. Chase Wall - The through penetrant (Item 3) shall be roused through a 2 hr fire-eated single, double or staggered wood stud/gypsum wall board chase wall constructed of the materials and in the mariner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

A. Studs -- Nom 2 by 6 in. or double nom 2 by 4 in. himber stude. Sole Plate — Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates,

tightly butted. C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly

butted, Max diam of opening is 5 in.

D. Gypsum Board* — Thickness, type, number of layers and fastertto shall be as specified in individual Wall and Partition Design. A Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop systen. Pipe, conduit or tubing to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes,

conduits or tubing may be used: A. Steel Pipe — Nom 4 in. diam (or smaller) Schedule 10 (or

heavier) steel pipe.

B. Canduit — Nom 4 in. diam. (or smaller) steel electrical metallic whing or steel conduit. C Copper Tubing - Nom 3 in. diam (or smaller) Type L (or

savier) copper tubing. D. Capper Pape - Nom 3 in. diam (or smaller) Regular (or heavier) the meader space within the firestop system is dependent upon the

warn diam of the through penetrant. If the norn diam of the through prostrant is 3 in. or less, the annular space within the firestop by tirm shall be a min 0 in. (point contact) to a max 5/8 in. If the norm firm of the through penetrant is greater than 3 in., the annular Space within the firestop system shall be a nom 1/4 in. 4 Hg, wold or Cavity Material* — Scalant — Min 3/4 in. thickness of material applied within annulus on top surface of floor. Min 5/8 in. Fishes of fill material applied within armulus on lower top plate of

Cone well assembly. Additional fill material to be installed such that a The 1/4 hr. cown is formed around the through penetrant on top surto of four and bottom surface of lower top plate of chase wall assem-

BOLATEK INTERNATIONAL —Type I Stating the UL Classification Mark

WALLS AND INTERIOR PARTITIONS, WOOD-FRAMED

GA FILE NO. WP 4135

GENERIC

Base layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to each side of 2 x 4 wood studs 24" o.c. with 6d coated nails, 17/6" long, 0.085" shank, 1/4" heads, 24" o.c. Face layer 5/s" type X gypsum wallboard or gypsum veneer base applied at right angles to each side with 8d coated nails, 2% long, 0.100" shank, 1/4" heads, 8"

GYPSUM WALLBOARD, WOOD STUDS

Joints staggered 24" each layer and side. Sound tested with stude 16" o.c. and with nails for base layer spaced 6" o.c. (LOAD-BEARING)

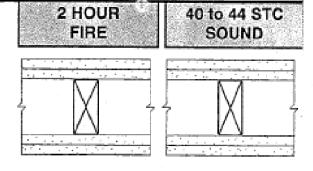
2 HOUR 40 to 44 STC FIRE SOUND

Thickness: 61/6" Approx. Weight: 12 psf FM WP 360, 9-27-74 Fire Test: NGC 2363, 4-1-70

GA FILE NO. WP 4136 GENERIC

GYPSUM WALLBOARD, WOOD STUDS Base layer 5/s' type X gypsum walluoard or veneer base applied parallel or at right angles to each side of 2 x 4 wood stude 16" o.c. with 11/4" Type W drywall screws 12" o.c. Face layer 5/6" type X gypsum wallboard or veneer base applied parallel or at right angles to

each side with 17/s* Type W drywall screws 12" o.c., and offset 6" from screws in base Joints staggered 16" each layer and side. (LOAD-BEARING)



Thickness: 61/8" Approx. Weight: 12 psf Fire Test: SWRI 01-5920-614, 12-5-94 Sound Test: See WP 4135 (NGC 2363, 4-1-70)

Design No. L536

Unrestrained Assembly Rating - 2 Hr. Finish Rating — 71 Min.

2, 2, 3. Flooring Systems The finish flooring (Item 1), vapor seturder

(Bens 2) and the subflooring (Born 3) may consist of any one of the fol-

Finish flooring - 1 by 3 in. T & G and end matched; laid perpendicu

Vapor retarder - Commercial, rosin-steed building paper, 0.010 is

Resilient Furring Channels — Formed of 25 MSG electrogalvanize

steel, spaced 24 in. OC perpendicular to joists and located 12 in. from

each long edge of base layer wallboard. Channels placed with 1/4 in.

ring channel screws. Min end deanance of channels to walls: 3/8 in.

furring channel screws driven through wallboard to joists. Ends to

pendicular to joists with butted end joints of boards located at the joists. Nailed to joists with 8d cement coated cooler nails and spaced 7

in OC in the field of the board. Nails to be 1/2 in from the butted end.

Second layer secured to furring channels by 1 in. long wallboard screws, with long edge perpendicular to the turning channels, with the center line

of boards located under a joist and so placed that the long edge joints are

Secured to furring channels with 1-in, wallboard screws 12 in, OC Butted

end joints of wallboard fastened at additional furring channels as shown

in end joint detail. All acrows located I and 1-3/4 in, from the long edges

BPB CELOTEX —Type FRP.

8. Screw, Ferring Channel — Case-hardened steel, 1-7/8 in. long. 0.150-

shank, self-drilling and self-topping, 0.335-in, diam Phillips-type head.

Alternate Finishing System — (Not Shown) — Wallboard joints cov-

esed with fiber tape and joint compound. As an alternate, norn 3/32 in, thick gypoum veneer plaster may be applied to the entire surface of Closusted veneer baseboard. Joints retracted.

"Beautiff the UL Clossification Mark

dlam shank, diamond point, 0.335-in diem Phillips-type head.
 Screw, Wallboard — Case-hardened steel, 1 tn. long, 0.150-in. diam

staggered with the butted and joints of the first layer.

and the butted end of boards, respectively.

BPB AMÉRICA INC

extend 6 in, beyond each side of end joint.

7. Gypoum Board* — 5/8 in, thick, 4 it wide. First layer installed per-

descrape at the ends and fastened to each joist with 1-7/8 in. long fur-

Additional pieces, 60 in. long, placed immediately adjacent to channels

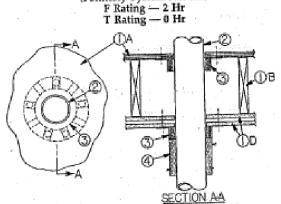
for attachment of end joints of second layer, secured with 1-7/8 in, long

Subflooring - I by 6 in T & G, fastened diagonally to loists.

Wood Joists - 2 by 10 in. spaced 16 in. OC, firestopped.

Cross Bridging — 1 by 3 in.

System No. F-C-2010 (Formerly System No. 514)



 Floor-Ceiling Assembly — The fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner speci-fied in Design Nos. L505, L511, or L536 in the UL Fire Resistance Direc-

tory, as summarized below:
A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling design.

B. Wood Joists — Nom 2 by 10 in. lumber joists spaced 16 in. OC Through-Penetration Firestop Systems (XHEZ)-Continued

with nom 1 by 3 in. lumber bridging and with ends firestopped.

C. Furring Channels — (Not shown) — Resilient galv steel furring channels installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) and spaced may 24 in. OC

D. Gypsum Board* — Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attache to furring channels. The secondary firestop device (Item 3) must be installed in the joist cavity prior to installation of the gypsum

wallboard ceiling.

2. Nonmetallic Pipe — Nom 1-1/2, 2, 3 or 4 in. diam Schedule 40 polyst nyl chloride (PVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Diam of openings hole-sawed through flooring system and through two-layer gypsum wallboard ceiling to be no greater than 1/8 in. larger than outside diam of pipe. Pipe to be installed approximately midway between wood joists and contered in openings. Pipe to be rigidly supported on both sides of floorceiling assembly.

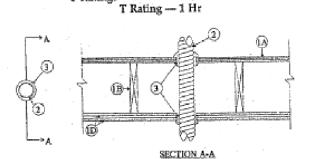
3. Firestop Device* — PVC pipe sleeve (sized to nonmetallic pipe) provided with an intumescent wrap mechanically attached to the sleeve

with a sheet steel restricting collar with steel mounting flange, Firestop device slid onto nonmetallic pipe on underside of subfloor (Hem 1A) and on underside of gypsum wallboard ceiling (Hem 1D) in accordance with the accompanying installation instructions. Firestop device secured to subfloor with min 3/4 in. long steel screws in conjunction with 1-1/4 in. diam steel fender washers in each anchor tab. Firesto device secured to finished gypsum wallboard ceiling with 3/16 in. diam steel toggle bolts (1-7/8 in. grip) in conjunction with 1-1/4 in. diam steel fender washers in each pre-drilled hole in the mounting

POX COUPLINGS INC -Types SIN 1-1/2, SLV 2, SLV 3, SLV 4 Pipe Covering* — Nom 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Min 6 in. length of pipe covering installed around pipe at its egress from the firestop device on the ceiling side of the assembly. Pipe covering secured to pipe with steel wire ties spaced max 4 in. OC.

See Pipe and Equipment Covering Material (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Value of 25 or less and a Smoke Developed Value of 50 or less may be used. Bearing the UL Classification Marking

System No. F-C-1029 F Ratings - 1 and 2 Hr (See Item 1)



 Floor-Ceiling Assembly — The 1 or 2 h fire-rated wood joist floorceiling assembly shall be constructed of the materials and in the manner specified in the UL Fire Resistance Directory. The 1 h fire rated assembly shall be constructed as specified in Design No. L501, L512, or L537. The 2 h fire rated assembly shall be constructed as specified in Design No. L505, L511 or L536. The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly. The general construction details of the floor-ceiling assembly are summarized below:

A. Floor System — Lumber or plywood subfloor with finish floor or lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of opening in flooring

to accommodate piping is 2 in.

B. Wood Joists — Nom 2 by 10 in. lumber joists spaced 16 in. OC. with nom 1 by 3 in. lumber bridging and with ends firestopped.

C. Furring Channels — (Not Shown) — Resilient galv steel furring channels installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 h fire rated assembly.

Furring channels spaced max 24 in OC.

1. Gypsum Board* — Nom 4 ft wide by 5/8 in thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 h fire rated assembly only) screw-attached to furring channels. Max diam of

opening in ceiling to accommodate piping is 2 in.

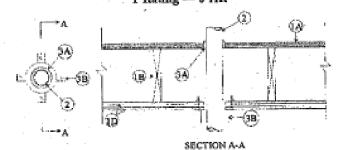
2. Through Penetrating Product* — Flexible Metal Piping — Nom 1-1/4 in. diam (or smaller) steel flexible metal piping. Max one flexible metal piping to be installed in the opening. Circular openings hole-sawed through flooring system and through gypsum wallboard ceiling to be 1/2 in. larger than outside diam of pipe. Piping to be installed approx midway between wood joists and centered in circular openings such that a 1/4 in. annular space is present around its perimeter at each through opening location. Flexible metal piping to be rigidly supported on both sides of floor assembly. Plastic covering on piping shall be removed for a distance of 2 ft on both sides of floor.

WARD MFG INC

3. Fill, Void or Cavity Material* — Caulk — Caulk fill material forced into annular spaces to fill spaces to max extent possible and with a min 1/4 in, high by 3/8 in, wide bead of caulk applied to the perimeter of the flexible piping at its egress from the finished floor and ceiling.

MINNESOTA MINING & MFG CO—CP-25 WB+ Bearing the UL Classification Mark

System No. F-C-2031 T Rating --- 0 Hi



1. Floor Ceiling Assembly - The fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design L505, L511 or L536 in the UL Fire Resistance Directory as A. Floor System - Lumber or plywood subfloor with finish floor of

lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design.

B. Wood Joists — Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. C. Furring Channels — (Not Shown) — Resilient galv steel furring

installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) and spaced max 24 in. OC. D. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attached

to furring channels. Through-Penetrants — One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the firestop system. Diam of openings hole-sawed through flooring system and through two layers gypsum wallboard ceiling to be nom 1/2 in.
larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be

A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Rigid, Nonmetallic Conduit+ — Nom 4 in. diam (or smaller)

Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70). C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in.

diam (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) or vented, (drain, waste or vent) piping systems.

3. Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Material* - Caulk - Fill material forced into annulus to fill space to max extent possible, flush with top surface of floor. Additional fill material to be installed such that a max 1/4 in. crown is formed around the penetrating item.
NELSON FIRESTOP PRODUCTS —CLK N/S (Non-Sag)

Caulk, LBS Scalant or LBS+ Scalant.

B. Firestop Device* — Galv steel collar lined with an intumescent material sized to fit the specific diam of the through-penetrant. Device shall be installed around through-penetrant in accordance with the accompanying installation instructions. Device incorporates anchor tal a for securement to finished gypsum wallboard ceiling by means of 1/8 in. diam by 3 in. long toggle bolts in conjunction with 1/4 in. by 1 in. diam steel fender washers.

Connecticut License No. 13834 New Jersey License No. 21AI01463700

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DATE COMMENT

PROVAL STAMPS AND SIGNATURE

2-HR FIRE STOP DETAIL

PROJECT NAME AND ADDRESS 276 DUNCAN AVE. JERSEY CITY, NEW JERSEY BLOCK: 14602, LOT: 23,24,25,26

PROJECT DESCRIPTION CONSTRUCTION OF NEW MULTI-FAMILY BUILDING

(4 STORY & 12 APARTMENTS) OWNER'S NAME AND ADDRESS

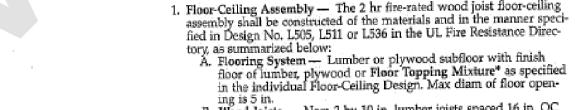


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SCAN STICKER

Floor-Ceiling Assembly — The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner speci-



B. Wood Joists - Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped.

C. Furring Channels — (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second

System No. F-C-2055

T Rating — 2 H

Through-Penetration Firestop Systems (XHEZ)-Continued

layers of wallboard (Item 1D) and spaced max 24 in. OC.

D. Gypsum Board* — Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attached to furring channels.

2. Chase Wall — The through penetrant (Item 3) shall be routed through a 2 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

A. Studs - Nom 2 by 8 in. lumber or double nom 2 by 4 in. lum-B. Sole Plate - Nom 2 by 8 in. lumber or parallel 2 by 4 in. lumber

plates, tightly butted. C. Top Plate — The double top plate shall consist of two nom 2 by 8 in. lumber plates or two sets of nom 2 by 4 in. lumber plates,

tightly butted. Max diam of opening is 5 in. D. Gypsum Board - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design. 3. Through Penetrants — One nonmetallic pipe to be centered within the firestop system. A nom annular space of 1/4 in. is required within the firestop system. Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes

may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2, 3 or 4 in. diam Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system. A nom annular space of 1/4 in. is required within the firestop system.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in.

diam (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 2, 3 or 4 in. diam Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping sys-

3A. Sanitary Tee — (Optional) — The vertical pipe (Item 3) may be provided with a sanitary tee, made of the same material as the pipe, above the top plate of the chase wall for connection of a nom 2, 3 or 4 in. diam Schedule 40 PVC, CPVC or ABS drain pipe which runs horizonally through the concealed space above the ceiling and penetrates the flooring. Diam of the circular opening in the flooring shall be nom 1/2 larger than the diam of the pipe such that a 1/4 in, annular space is

present between the pipe and periphery of the opening.

4. Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Material* - Caulk - Min 3/4 in. thickness of fill material applied within the annulus flush with top surface

RECTORSEAL -Metacaulk 1000 B. Firestop Device — Galv steel collar lined with an internescent material sized to fit specific diam of the through penetrant.

Device to be installed around through penetrant in accordance with accompanying installation instructions. Device incorporates anchor tabs for securement to underside of the chase wall top plate by means of No. 10 by 1-1/2 in. particle board screws in conjunction with 1/4 in. by 5/8 in. washers. Device to be secured

*Bearing the UL Classification Mark

at each tab.
RECTORSEAL --- Metacaulk Pipe Collar