

Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Hold for Additional Information

Appeal ID: 16542	Project Address: 5959 SE 92nd Ave
Hearing Date: 2/28/18	Appellant Name: Masaye Hoshide
Case No.: M-005	Appellant Phone: 503 892 7104
Appeal Type: Mechanical	Plans Examiner/Inspector: Thomas Ng
Project Type: commercial	Stories: 5 Occupancy: R-2, A-3, A-2, S Construction Type: V-A, I-A
Building/Business Name: Oliver Station	Fire Sprinklers: Yes - fully sprinklered
Appeal Involves: Erection of a new structure	LUR or Permit Application No.: 16-219971-CO
Plan Submitted Option: pdf [File 1] [File 2] [File 3]	Proposed use: Affordable Housing

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	2014 Oregon Mechanical Specialty Code; 503.1.1, 2, Location of Exhaust Outlets
Requires	<p>503.1.1 Location of Exhaust Outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:</p> <p>For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet from property lines; 10 feet from operable openings into buildings; 6 feet from exterior walls and roofs; 30 feet from combustible walls and operable openings into buildings which are in the direction of the exhaust discharge; 10 feet above adjoining grade.</p> <p>For other product conveying outlets: 10 feet from the property lines; 3 feet from exterior walls and roofs; 10 feet from operable openings into buildings; 10 feet above adjoining grade.</p> <p>Per City reviewer code interpretation, City reviewer is requiring 3" muffler exhaust to exhaust through roof and 10 feet away from roof edge. Per city reviewer definition of 'operable openings into buildings' includes exhaust louvers.</p>
Proposed Design	<p>The proposed design is to have clearance per 2014 OSMC 501.3.1 item 2 for product conveying outlets. This has a 10' clearance to operable openings and property lines. This proposed design does not equate exhaust louvers as operable openings into buildings. This proposed design equates exhaust louvers to be operable openings away from buildings. Therefore, the 10 feet clearance from operable openings into buildings should be allowed to overlap with louvers exhausting environmental air. With this overlap, the 3" exhaust muffler would exhaust horizontally and not through the roof above. Proposed design exhausts 3" muffler horizontally away from public sidewalk and towards the back of house parking lot side of project.</p>
Reason for alternative	<p>2014 OSMC 501.3.1 item 2 :</p> <p>We have several reasons outlined below for using the 2014 OSMC 501.3.1 item 2 criteria for the</p>

generator flue exhaust. The 2012 International Mechanical Code is the basis for the 2014 OSMC. Per the 2012 IMC commentary (see previous approved appeal # 14824):

"Item 1 details the requirements for termination points for exhaust ducts that convey explosive or flammable vapors, fumes or dusts, like those exhaust systems that serve operations involving the application of flammable finishes (see Section 502.7), hazardous exhaust systems (see Section 510) and dust, stock and refuse conveyor systems (see Section 511). The intent of this section is to reduce the exposure from the dangerous vapors in the exhaust. This is done to:

- Protect other parts of the building
- Protect other buildings
- Reduce a potential reaction from materials that may be compatible
- Reduce the severity of a fire, in case of ignition"

The generator exhaust is not flammable as it has already combusted in the engine. OSMC 501.3.1 pertains to flammable or explosive exhaust. Per NFPA 37 Standard for the installation and use of stationary combustion engines and gas turbines treats exhaust as a potential ignition source but not as a source of flammable vapor. Per NFPA 37 8.2.3.2 "Exhaust system termination shall not be directed toward combustible material or structures or into atmospheres containing flammable gases, flammable vapors, or combustible dusts."

Past interpretation of this requirement has been to consider the exhaust flue a "product conveying outlet (2014 OSMC 501.3.1 item 2)" as it contains primarily water vapor and carbon dioxide and small quantities of carbon monoxide and small particulate matter typical of diesel engines. For perspective, the generator exhaust is analogous to the exhaust from idling vehicles. The discharge from parking garage exhaust systems is commonly considered environmental exhaust and is used as a specific example of it in the 2012 IMC commentary,

"While the vehicle exhaust would be considered a contaminant, the exhaust rate of 0.75 (cfm/ft2) for a parking garage is considered to be sufficient to provide the occupants with a safe environment. Therefore, the exhaust from a parking garage would then be treated the same as any other environmental air exhaust."

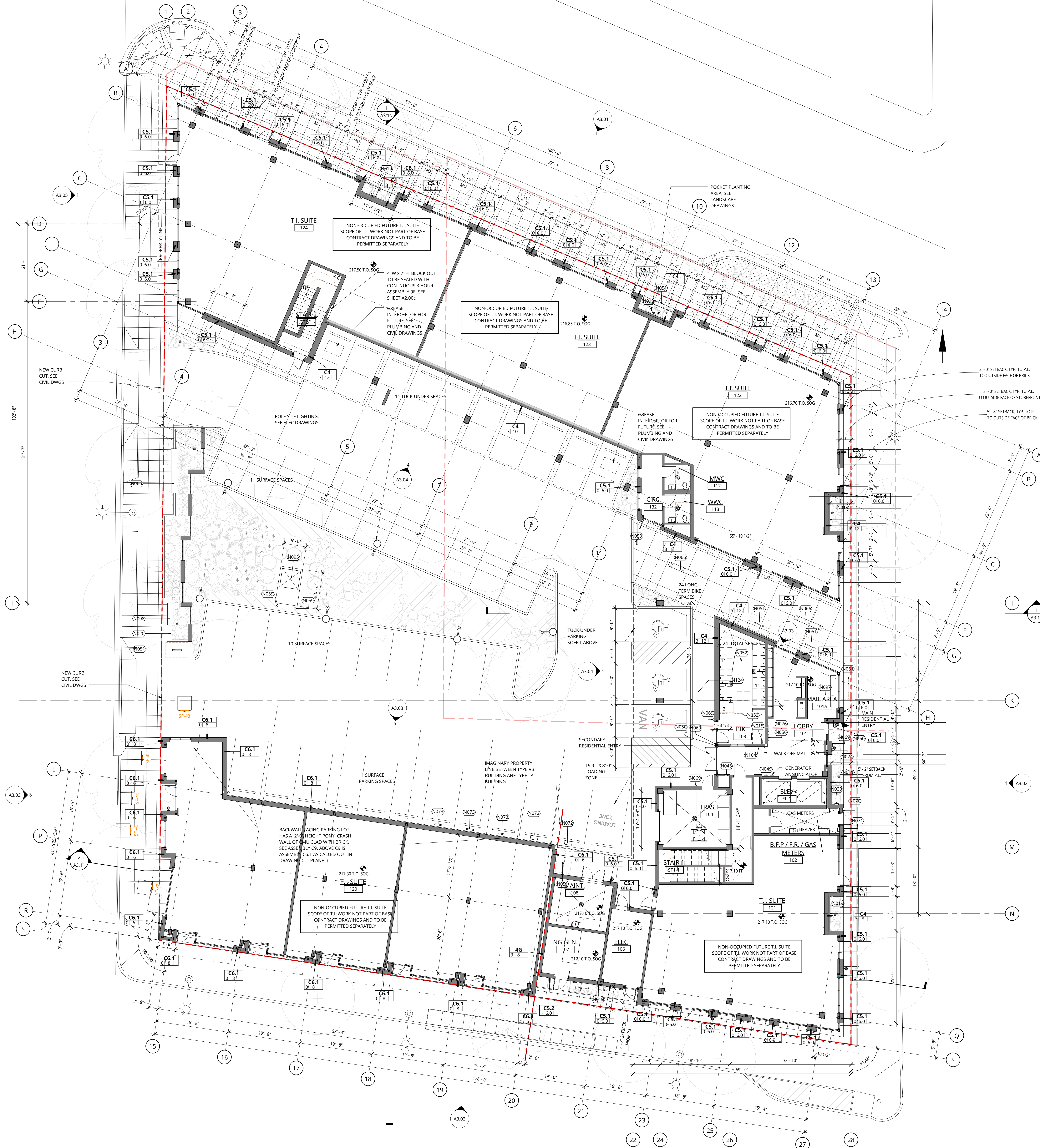
The 10 ft radius clearance that complying with item 2, 'product conveying outlets,' provides dilution in a similar manner to this scenario. The air is expected to rise upward due to the exhaust temperature and the 10 ft radius column of air will allow for adequate dilution of the exhaust. The adjacent exhaust of the generator radiator (24,000 CFM) will serve to further dilute the engine exhaust.

Additionally, the generator will be only running intermittently to either test the emergency equipment or during actual emergency operation

Definition of 'Operable Openings Into Buildings':

We believe it is incorrect to define exhaust louvers exhausting environmental air as operable openings into buildings. Exhaust louvers function to exhaust air away from buildings. While the generator 3" muffler flue runs intermittently to either test the emergency equipment or during actual emergency operation, the adjacent exhaust louvers will be exhausting environmental air away from the building making it physically impossible for flue exhaust to travel back into the building via the exhaust louvers. Exhaust louvers should not be defined as operable openings into buildings. See attached building plans and elevations which demonstrate compliance of the location of the 3" generator muffler per 2014 Oregon Mechanical Specialty Code; 503.1.1, 2, Location of Exhaust Outlets

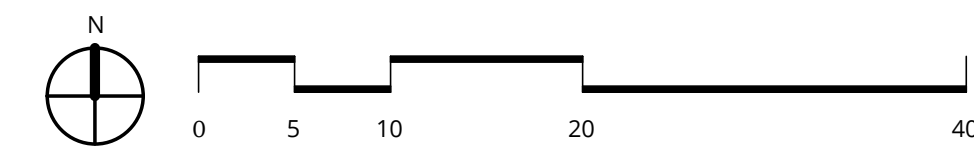
Exhaust vent within 10 feet of operable opening: Hold for additional information.
Appellant may contact Thomas Ng (503 823-7434) with questions.



1 LEVEL 1
A2.01 | 1" = 10'-0"

REFERENCE KEY NOTES	
N015	DOG / BIKE WASH AREA, STAINLESS STEEL WALL FINISH FOR WASH DOWN AREA WITH 6" CONCRETE CURB, SLOT DRAIN WITH CLEAN-OUT
N019	PLANTING POCKET AREA, SEE LANDSCAPE DRAWINGS
N020	CONC PLANTER, SEE LANDSCAPE DRAWINGS
N023	GAS METER REGULATOR ON OUTSIDE FACE OF WALL, SEE PLUMBING DRAWINGS AND CIVIL DRAWINGS
N024	COMMUNICATION ENTRY DEVICE, FULLY RECESSED, T.O. UNIT 48" AFF
N045	FIRE EQUIPMENT CABINET-SEMI RECESSED, SPACED A MAX OF 75' FT APART
N049	TWO WAY COMMUNICATION DEVICE, T.O. UNIT AT 48" AFF MAX
N050	DOOR ADA ACTVATOR, T.O. UNIT AT 48" MAX
N051	BIKE PARKING, SHORT-TERM, SEE G0.01 FOR PARKING SUMMARY
N052	BIKE PARKING, LONG-TERM, WALL MOUNTED, 18" O.C. STAGGERED 6" MOUNTING HEIGHT ON WALL, SEE G0.01 FOR PARKING SUMMARY
N053	BIKE PARKING, ACCESSIBLE, 5% OF TOTAL SPACES, SEE G0.01 FOR PARKING SUMMARY
N056	TRANSIT TRACKER, WALL MOUNTED, SEE ELEC FOR DATA AND POWER COORDINATION
N059	BOLLARDS, SEE CIVIL DRAWINGS
N066	EXTERIOR WOOD BENCH, SEE LANDSCAPE DWGS
N069	CARD READER, COORDINATE WITH ELEC FOR POWER
N070	KNOX BOX, COORDINATE LOCATION WITH FIRE MARSHALL, REQUIRES SEPARATE PERMIT WITH FIRE MARSHALL DEPARTMENT
N071	FDC
N072	ELECTRIC VEHICLE CHARGING STATION
N073	LOW EMISSION VEHICLE PARKING SPACE
N076	PV ARRAY EDUCATIONAL DASHBOARD FLAT PANEL DISPLAY MONITOR, COORDINATE ELEC AND DATA
N095	SURFACE MOUNTED TRANSFORMER ON CONCRETE PAD, SEE CIVIL DRAWINGS
N097	WOOD BENCH, INTERIOR, CUSTOM MILLWORK
N098	WOOD BENCH, EXTERIOR @ CONCRETE PLANTER, SEE LANDSCAPE DWGS
N104	COMMUNITY BULLETIN BOARD, FOC, PROVIDE BLOCKING FOR MOUNTING, N.I.C.
N124	OIL SAND SEPARATOR FOR INTERIOR BIKE WASH AREA, SEE PLUMBING DRAWINGS

- GENERAL NOTES - OVERALL FLOOR PLANS**
- FIELD VERIFY ALL CONDITIONS. REPORT DISCREPANCIES TO ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
 - REFERENCE ENLARGED PLANS (A1-A5, S3 SERIES ENLARGED UNIT PLANS) AND REFLECTED CEILING PLANS (A2-S1-A2-S5) FOR DETAILED DIMENSIONS, WALL TAGS, DOOR TAGS, AND INFORMATION FOR TYPICAL UNIT DESIGN TYPES AND LAYOUT.
 - SEE SLAB PLANS FOR CONCRETE WALL LOCATIONS, UNO. COORDINATE WITH STRUCTURAL DRAWINGS.
 - REFER TO STRUCTURAL DRAWINGS FOR COLUMNS, SHEAR WALL AND BEAM SIZES.
 - SEE FIRE / LIFE SAFETY DRAWINGS SHEETS RLS.11-RLS.16 FOR LOCATIONS OF FIRE EXTINGUISHERS AND EXIT SIGNAGE. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH FIRE MARSHALL.
 - SEE SHEETS A2.00A, A2.00C FOR WALL ASSEMBLIES. SHEET A2.00B FOR FLOOR ASSEMBLIES, AND 2.00D AND 2.00E FOR INTERSECTIONS. REFER TO ASSEMBLIES BOOK FOR FIRESTOPPING PENETRATION DETAILS.
 - REFERENCE SHEET A4.01 DOOR SCHEDULE AND WINDOW TYPES FOR INFORMATION. INSIDE FINISHED DOOR FRAMES AND JAMBS ARE 4" FROM ADJACENT PERPENDICULAR WALLS AT HINGE SIDE, UNO.
 - REFERENCE SHEETS G0.20, G0.21, G0.22 & G0.23 FOR ACCESSIBILITY CLEARANCES. ALL CLEARANCES ARE 30" X 48", 5'-0" DIA. TURNING CIRCLE, OR 5'-0" T-TURN UNO.
 - REFERENCE G0.01 FOR INFORMATION ON RESIDENTIAL DWELLING UNIT TYPES AND DISTRIBUTION.



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OLIVER STATION - WEST BLOCK
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PALINDROME COMMUNITIES LLC

REVISION	DATE	REASON FOR ISSUE
6	Date 6	Revision 6
7	8/9/2017	Revision 7
8	8/20/2017	Revision 8
10	1/8/2018	Revision 10
11	1/30/2018	Revision 11

CONSTRUCTION SET

DATE 2/1/2018	REVISION 11
PROJECT NUMBER 145050	SHEET NUMBER A2.01
SCALE As indicated	



1 LEVEL 2
A2.02 | 1" = 10'-0"

REFERENCE KEY NOTES	
N009	TYPE 1 HOOD EXHAUST FOR FUTURE RETAIL T.J. SCOPE, SEE MECH DWGS
N011	TRASH CHUTE
N045	FIRE EQUIPMENT CABINET-SEMI RECESSED, SPACED A MAX OF 75' FT APART
N049	TWO WAY COMMUNICATION DEVICE, T.O. UNIT AT 48" AFF MAX
N064	EQUIPMENT ROOM SIGNAGE
N067	STANDPIPE, SEE FIRE PROTECTION DWGS
N069	CARD READER, COORDINATE WITH ELEC FOR POWER
N081	MECH SHAFT, AIR SUPPLY TO CORRIDOR AND DWELLING UNITS, SEE MECH DWGS
N102	FLOOR FINISH TRANSITION STRIP
N108	SMALL MIXED-USE RECYCLE CONTAINER, F.O.D. VERIFY EQUIPMENT AND SIZING WITH TRASH SERVICE PROVIDER
N126	STAIRWAYS SHALL BE MARKED AT STREET AND FLOOR LEVELS WITH A SIGN INDICATING THAT THE STAIRWAY CONTINUES TO THE ROOF.
N127	EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE.

- GENERAL NOTES - OVERALL FLOOR PLANS**
- FIELD VERIFY ALL CONDITIONS, REPORT DISCREPANCIES TO ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
 - REFERENCE ENLARGED PLANS (A5.11-A5.53 SERIES ENLARGED UNIT PLANS) AND REFLECTED CEILING PLANS (A2.51-A2.55) FOR DETAILED DIMENSIONS, WALL TAGS, DOOR TAGS, AND INFORMATION FOR TYPICAL UNIT DESIGN TYPES AND LAYOUT.
 - SEE SLAB PLANS FOR CONCRETE WALL LOCATIONS, UNO. COORDINATE WITH STRUCTURAL DRAWINGS.
 - REFER TO STRUCTURAL DRAWINGS FOR COLUMNS, SHEAR WALL AND BEAM SIZES.
 - SEE FIRE/LIFE SAFETY DRAWINGS SHEETS FLS.11-FLS.16 FOR LOCATIONS OF FIRE EXTINGUISHERS AND EXIT SIGNAGE. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH FIRE MARSHALL.
 - SEE SHEETS A2.00a, A2.00c FOR WALL ASSEMBLIES, SHEET A2.00b FOR FLOOR ASSEMBLIES, AND 2.00d AND 2.00e FOR INTERSECTIONS. REFER TO ASSEMBLIES BOOK FOR FIRESTOPPING PENETRATION DETAILS.
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REVISION	DATE	REASON FOR ISSUE
1	Date 1	Revision 1
2	Date 2	Revision 2
3	Date 3	Revision 3
7	8/3/2017	Revision 7
8	8/20/2017	Revision 8

SECOND FLOOR PLAN

CONSTRUCTION SET

DATE 2/1/2018	REVISION 8
PROJECT NUMBER 145050	SHEET NUMBER A2.02
SCALE As indicated	

16-219971: OLIVER STATION WEST BLOCK

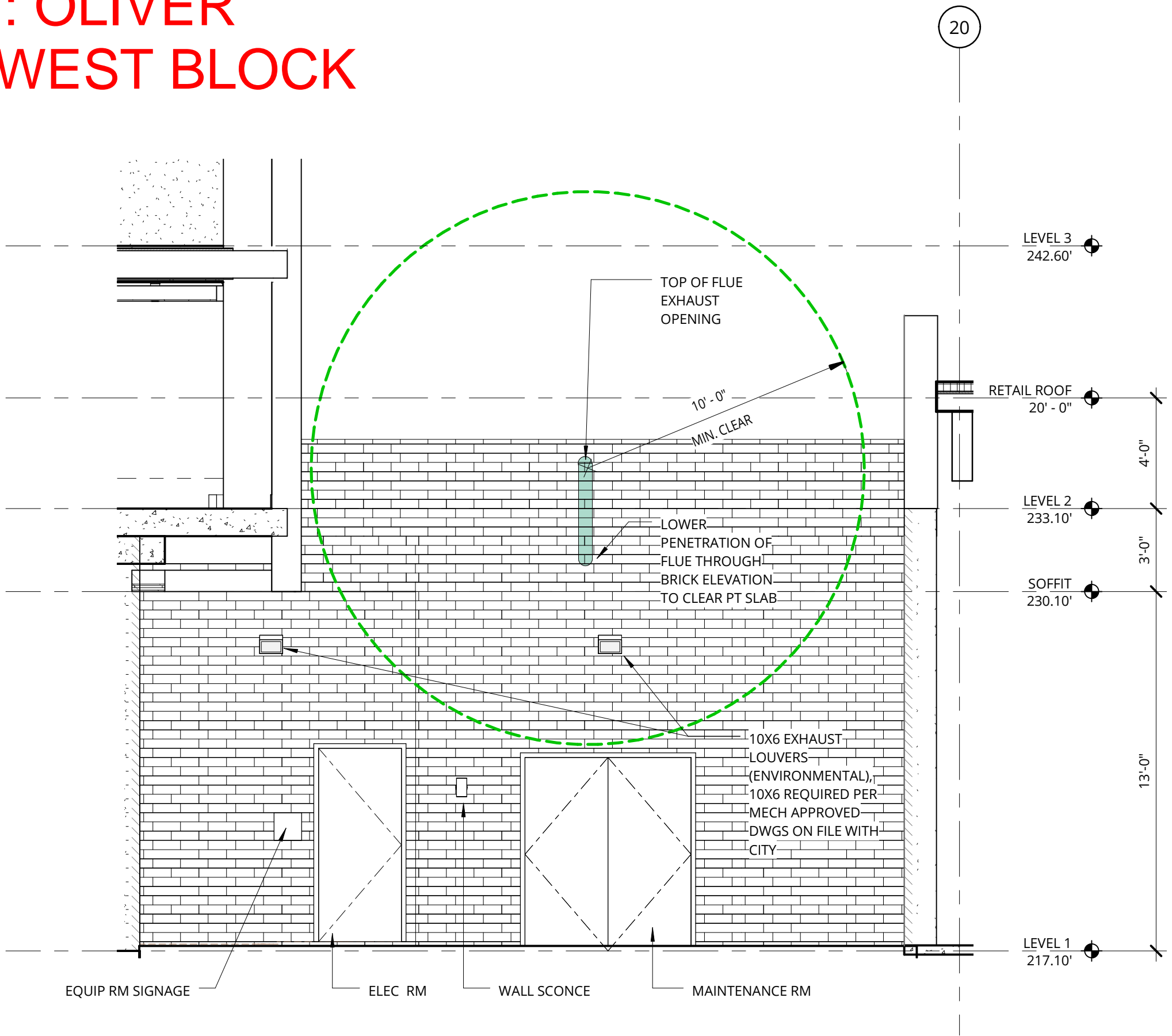
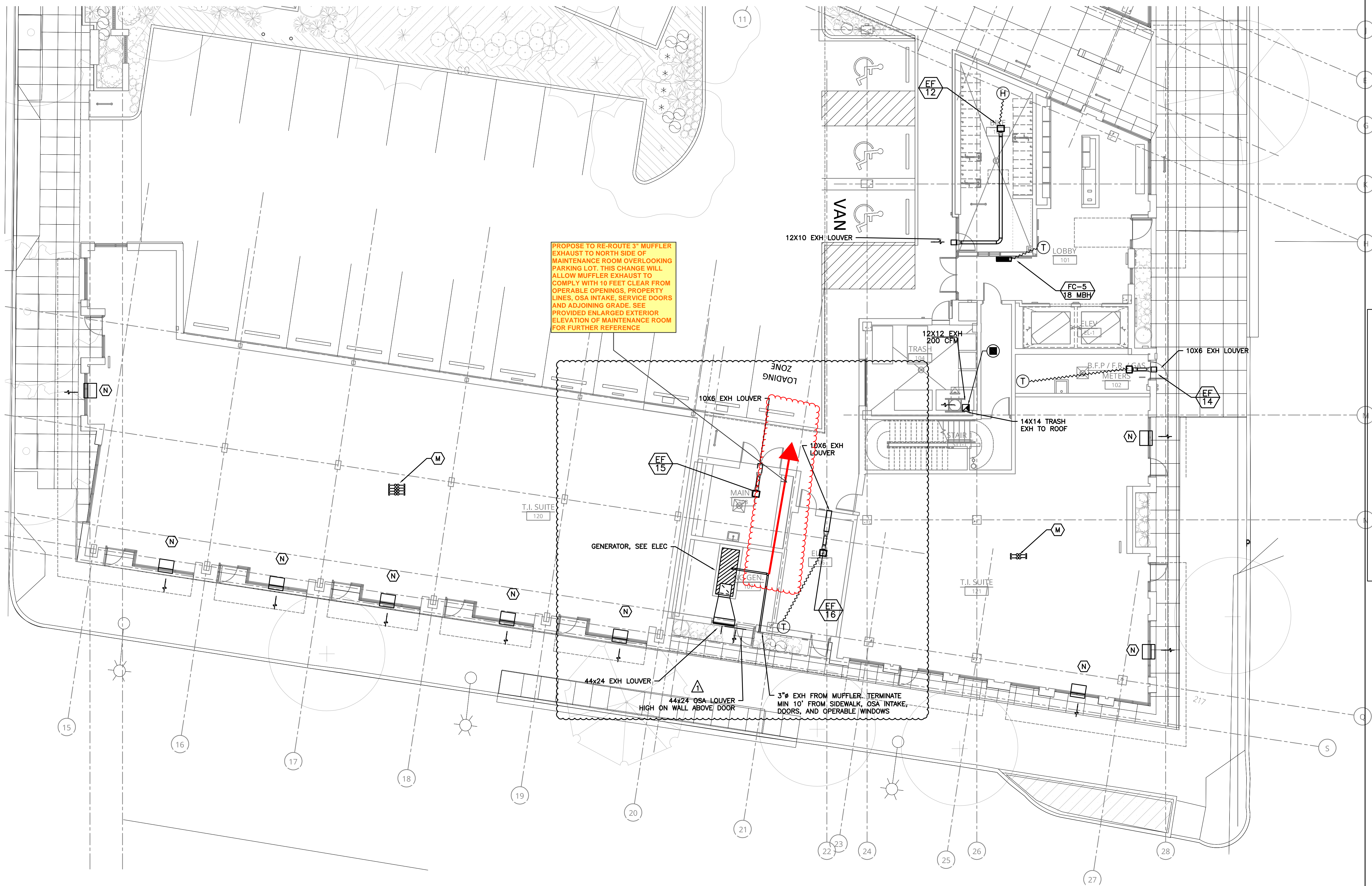


EXHIBIT C: ENLARGED ELEVATION SHOWING MUFFLER LOCATION



MECHANICAL 1ST FLOOR PLAN - WEST - B
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- (A) — SUPPLY DUCT FROM ROOF TO 1ST FLOOR CEILING — TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART
- (B) — 6X6 SA 30 CFM 6X6 SIDEWALL GRILLE WITH CONSTANT AIR REGULAR (CAR) SIZED FOR AIR FLOW SHOWN.
- (C) — 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER, INSULATE FINAL 5' OF DUCTWORK. SEE 1 M6.10
- (D) — 4" BATHROOM EXHAUST ROUTED TO EXTERIOR WALL, TERMINATE WITH SIDE WALL VENT, PROVIDE BACKDRAFT DAMPER AT EXTERIOR WALL (EXHAUST FAN TO HAVE INTEGRAL BACKDRAFT DAMPER), INSULATE FINAL 5' OF DUCTWORK SEE 1 M6.10
- (E) — DWELLING UNIT BATHROOM EXHAUST FAN 1 FAN TO RUN AT 30 CFM CONTINUOUS WITH MOTION SENSOR FOR HIGH SPEED OPERATION. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. SEE 2 M6.10
- (F) — UNIT TRAPS WITH RECESS NOT USED TYP DETAIL. 4" DRYER EXHAUST DUCT
- (G) — AC PORT FOR T IN 6X6 METAL E NOT USED R COOLING UNIT, 5" SLEEVE INSET LL AND ACCESS DOOR AND PLUG ON INSIDE FACE OF
- (H) — LAUNDRY ROOM VENTILATION TRANSFER FAN (100 CFM CEILING FAN) WITH 5" DUCT FROM CEILING FAN TO 6X6 SUPPLY GRILLE IN EACH LAUNDRY ROOM. INTER LOCK EACH FAN (CTs) WITH EACH DRYERS AS NOTED. SEE 7, 8, 20, 21 M6.10
- (I) — RANGE & BATHROOM EXHAUST DUCT UP THROUGH ATTIC TO LOW PROFILE ROOF HEAD.
- (J) — SUPPLY AIR GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 3 FOR GRILLE INSTALLATION, AND SEE 6 FOR TYPICAL F/S INSTALLATION, AND M6.10 CONTROLS.
- (K) — 4" CPVC WATER HEATER FLUE AND COMBUSTION AIR INTAKE ROUTED FROM WATER HEATER TO BE A MIN AIR DISC TO BE A DOORS. R FOOT. NOT USED
- (L) — 20X20 FUTURE GREASE DUCT IN A 30X30 ID SHAFT, GREASE DUCT TO BE INSTALLED AS PART OF TI PROJECTS.
- (M) — REFRIGERANT LINES ROUTED FROM ROOF TO RETAIL SPACE, CAP AT BOTH ENDS FOR FUTURE TI CONNECTIONS.
- (N) — 30X24 OSA INTAKE LOUVER MOUNTED IN STOREFRONT SYSTEM, PROVIDE 18" DEEP PLENUM/BLANKOFF FOR FUTURE TI CONNECTION.
- (O) — ROOM TO ROOM TRANSFER FAN, TJERNLUND AS-1 WITH WALL MOUNTED SWITCH, BLOWER FAN MOUNTED LOW IN LIVING ROOM, WITH HIGH DISCHARGE IN BEDROOM. SET APPROXIMATELY 8" AFF, AND 8" BELOW CEILING. SEE 9 M6.10

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 20	2400	NA	0	RTU-3,4
5TH	24 X 20	2400	NA	0	RTU-3,4
4TH	20 X 20	1800	NA	0	RTU-3,4
3RD	16 X 16	1200	NA	0	RTU-3,4
2ND	14 X 14	600	NA	0	RTU-3,4
ATTIC	20 X 20	1600	NA	0	RTU-1,2,2g
5TH	20 X 20	1600	NA	0	RTU-1,2,2g
4TH	16 X 16	1200	NA	0	RTU-1,2,2g
3RD	16 X 16	800	NA	0	RTU-1,2,2g
2ND	14 X 14	400	NA	0	RTU-1,2,2g

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY NATURAL VENTILATION. OPERABLE WINDOW/DOOR AREAS HAVE BEEN SIZED TO PROVIDE A MINIMUM OF 4% OF THE FLOOR AREA.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS PROVIDING 100% OUTSIDE AIR THAT FAR EXCEEDS THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

LOBBY, COMMUNITY ROOM & FITNESS ROOM ALL HAVE MECHANICAL VENTILATION SIZED TO EXCEED THE MAXIMUM OCCUPANCY.

12-16-16



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PALINDROME COMMUNITIES LLC

REVISION	DATE	REASON FOR ISSUE
1	10/10/2016	BUILDING PERMIT, REV #1
2	12/16/2016	CONSTRUCTION SET, REV #3

WEST BLOCK
MECHANICAL
1ST FLOOR
PLAN

MECH CONSTRUCTION SET

DATE 12/16/2016	REVISION
PROJECT NUMBER 145050	SHEET NUMBER
SCALE	M3.10W-B