

Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Hold for Additional Information

Appeal ID: 16541	Project Address: 5990 SE 92nd Ave
Hearing Date: 2/28/18	Appellant Name: Masaye Hoshide
Case No.: M-004	Appellant Phone: 5038927104
Appeal Type: Mechanical	Plans Examiner/Inspector: Thomas Ng
Project Type: commercial	Stories: 5 Occupancy: R-2, A-2,A-3, 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.: 16-220000-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

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:

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.

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.

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.

Proposed Design

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.

Reason for alternative 2014 OSMC 501.3.1 item 2 :

We have several reasons outlined below for using the 2014 OSMC 501.3.1 item 2 criteria for the

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

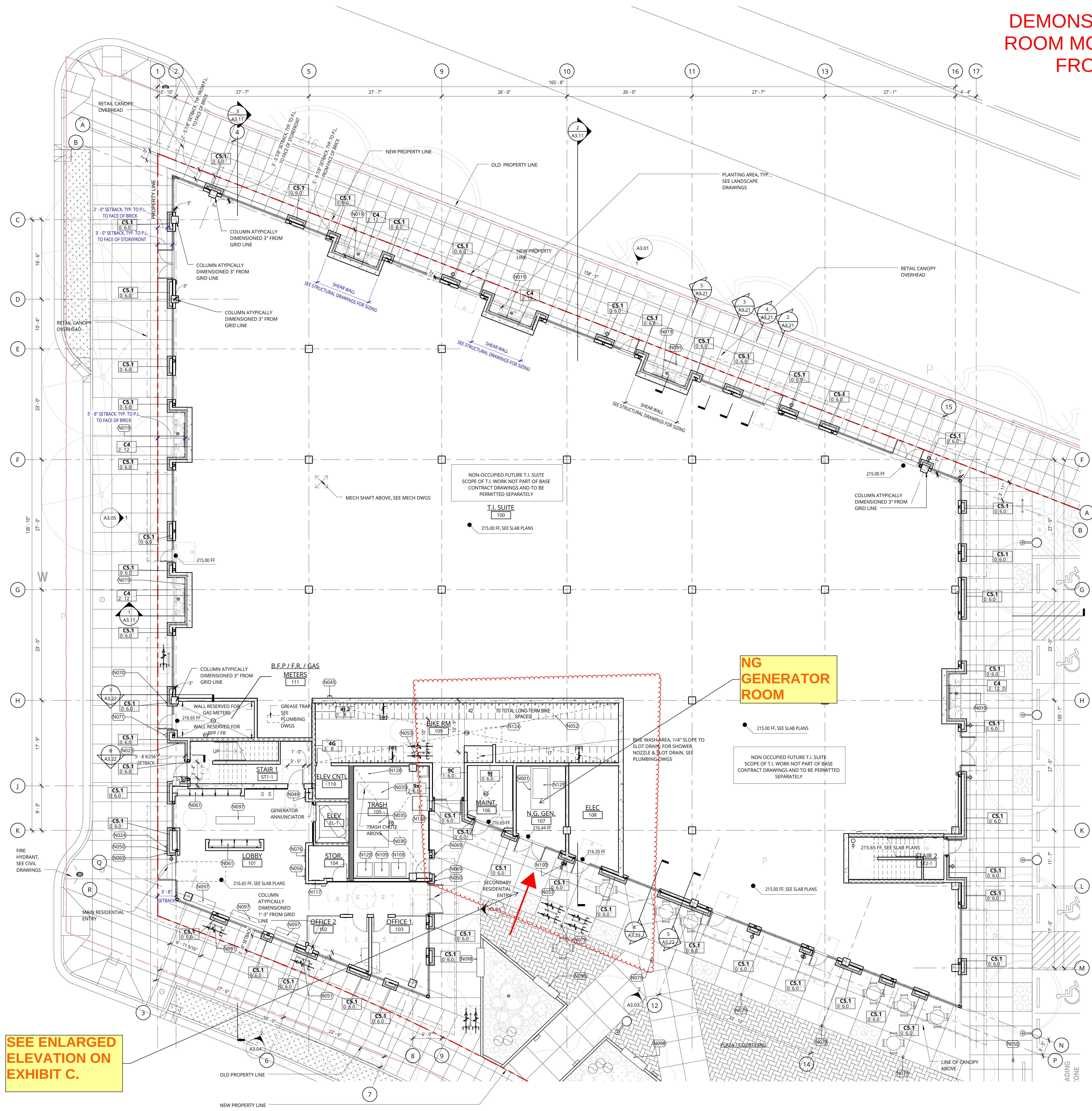
Definition of 'Operable Openings Into Buildings':

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.

EXHIBIT A: LEVEL 1

DEMONSTRATES NG GENERATOR ROOM MORE THAN 10 FEET CLEAR FROM PROPERTY LINES



REFERENCE KEY NOTES	
N001	CONCRETE EQUIP PAD, SEE MEP DWGS AND STRUCTURAL DWGS
N019	PLANTING POCKET AREA, 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
N035	TRASH BIN, N.I.C. VERIFY EQUIPMENT AND SIZING WITH TRASH SERVICE PROVIDER
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 ACTIVATOR, T.O. UNIT AT 48" MAX
N051	BIKE PARKING, SHORT-TERM, SEE GO.01 FOR PARKING SUMMARY
N052	BIKE PARKING, LONG-TERM, WALL-MOUNTED, 18" O.C. STAGGERED 6" MOUNTING HEIGHT ON WALL, SEE GO.01 FOR PARKING SUMMARY
N053	BIKE PARKING, ACCESSIBLE, 5% OF TOTAL SPACES, SEE GO.01 FOR PARKING SUMMARY
N056	TRANSIT TRACKER, WALL MOUNTED, SEE ELEC FOR DATA AND POWER COORDINATION
N059	BOLLARDS, SEE CIVIL DRAWINGS
N061	MAILBOXES, 9 MAIL SLOTS AND 2 PARCEL BOXES PER MODULE, SEE ACCESSIBILITY DIAGRAMS FOR REQUIRED EQUIPMENT HEIGHTS, FRAMED IN FULL HEIGHT GWB WALLS
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
N076	PV ARRAY EDUCATIONAL DASHBOARD FLAT PANEL DISPLAY MONITOR, COORDINATE ELEC AND DATA DWGS
N079	BOLLARD WITH LIGHT, SEE CIVIL DWGS AND ELEC DWGS
N097	WOOD BENCH, INTERIOR, CUSTOM MILLWORK
N098	WOOD BENCH, EXTERIOR @ CONCRETE PLANTER, SEE LANDSCAPE DWGS
N100	DERO BIKE REPAIR STATION, FORC
N109	
N117	ELECTRIC WALL HEATER, SEE ELEC AND MECH DRAWINGS
N124	OIL SAND SEPARATOR FOR INTERIOR BIKE WASH AREA, SEE PLUMBING DRAWINGS
N128	GREASE INTERCEPTOR, INSIDE BUILDING, SEE PLUMBING DWGS
N129	NATURAL GAS GENERATOR, SEE ELEC & PLUMBING DWGS

GENERAL NOTES- OVERALL PLANS

1. FIELD VERIFY ALL CONDITIONS. REPORT DISCREPANCIES TO ARCHITECT PRIOR TO COMMENCEMENT OF WORK
2. DIMENSIONS ARE TO GRIDLINE, FACE OF (FO) CONCRETE, FO MASONRY, FO FRAMING AT EXTERIOR WALLS, FRAMING CENTERLINE (CL) AT PARTITIONS (OR FACE OF STUD) - VERIFY. CL OF AIR SPACE IN DOUBLE STUD ASSEMBLIES AND CL OF DOORS AND WINDOWS, UNO.
3. REFERENCE SLAB PLANS FOR CONCRETE WALL LOCATIONS, UNO.
4. 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.
5. REFERENCE ENLARGED PLANS (A.11, A.5, A.4 SERIES) FOR DETAILED DIMENSIONS, WALL TAGS, DOOR TAGS, ETC.
6. REFER TO STRUCTURAL DRAWINGS FOR COLUMNS, SHEAR WALL AND BEAM SIZES.
7. REFERENCE FIRE/LIFE-SAFETY DRAWINGS (FLS.11-FLS.16) FOR LOCATIONS OF FIRE EXTINGUISHERS AND EXIT SIGNAGE. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH FIRE MARSHALL.
8. FIRE PROTECTION ENGINEER TO LOCATE PULL BOXES PER IBC 907.2.
9. REFERENCE SHEETS GO.20, GO.21, GO.22 & GO.23 FOR ACCESSIBILITY CLEARANCES. ALL CLEARANCES ARE 30" X 48", 5'-0" DIA TURNING CIRCLE, OR 5'-0" T-TURN UNO.
10. REFERENCE GO.01 FOR INFORMATION ON RESIDENTIAL DWELLING UNIT TYPES AND DISTRIBUTION.

REGISTERED ARCHITECT
STATE OF OREGON
5488

Ankrom Moisan

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OLIVER STATION - EAST BLOCK
SE FOSTER ROAD AND SE 92ND AVE, LENTS, PORTLAND OR

PALINDROME COMMUNITIES LLC

REVISION	DATE	REASON FOR ISSUE
1	8/11/2016	Revision 1
2	8/15/2016	Revision 2
6	2/15/2016	Revision 6
7	5/31/2017	Revision 7
10	1/10/2018	Revision 10

FIRST FLOOR PLAN

CONSTRUCTION SET

DATE 1/24/2018	REVISION 10
PROJECT NUMBER 145050	SHEET NUMBER A2.01
SCALE As indicated	

1 LEVEL 1
A2.01 | 1/8" = 1'-0"

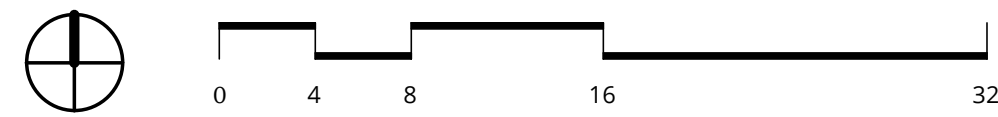


EXHIBIT B:
LEVEL 2 PLAN FOR
REFERENCE ONLY



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OLIVER STATION - EAST BLOCK
SE FOSTER ROAD AND SE 92ND AVE, LENTS, PORTLAND OR

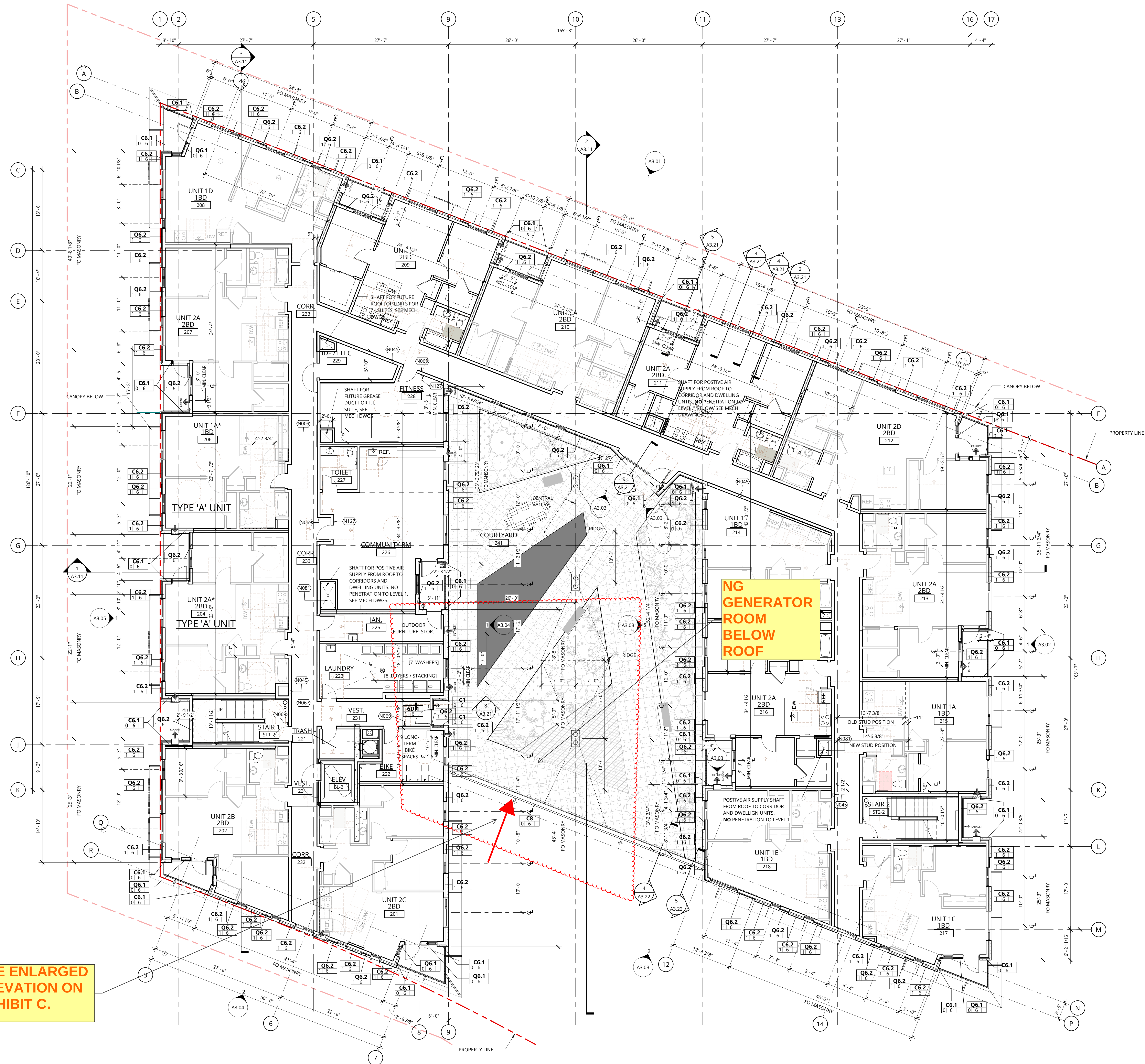
PALINDROME COMMUNITIES LLC

REVISION	DATE	REASON FOR ISSUE
1	8/11/2016	Revision 1
3	12/12/16	Revision 3
7	5/31/2017	Revision 7
8	8/20/2017	Revision 8

SECOND FLOOR PLAN

CONSTRUCTION SET

DATE 1/24/2018	REVISION 8
PROJECT NUMBER 145050	SHEET NUMBER A2.02
SCALE As indicated	



REFERENCE KEY NOTES	
N009	TYPE 1 HOOD EXHAUST FOR FUTURE RETAIL T.L. SCOPE, SEE MECH DWGS
N045	FIRE EQUIPMENT CABINET-SEMI RECESSED, SPACED A MAX OF 75 FT APART
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
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 PLANS

- FIELD VERIFY ALL CONDITIONS. REPORT DISCREPANCIES TO ARCHITECT PRIOR TO COMMENCEMENT OF WORK
- DIMENSIONS ARE TO GRIDLINE, FACE OF (F.O.) CONCRETE, F.O. MASONRY, F.O. FRAMING AT EXTERIOR WALLS, FRAMING CENTERLINE (CL) AT PARTITIONS (OR FACE OF STUD - VERIFY), CL OF AIR SPACE IN DOUBLE STUD ASSEMBLIES AND CL OF DOORS AND WINDOWS, UNO.
- REFERENCE SLAB PLANS FOR CONCRETE WALL LOCATIONS, UNO.
- 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 ASSEMBLY BOOK FOR FIRESTOPPING PENETRATION DETAILS.
- REFERENCE ENLARGED PLANS (A5.11-A5.54 SERIES) FOR DETAILED DIMENSIONS, WALL TAGS, DOOR TAGS, ETC.
- REFER TO STRUCTURAL DRAWINGS FOR COLUMNS, SHEAR WALL AND BEAM SIZES.
- REFERENCE FIRE/LIFE-SAFETY DRAWINGS (PLS. 11-PLS. 16) FOR LOCATIONS OF FIRE EXTINGUISHERS AND EXIT SIGNAGE. COORDINATE EXACT LOCATIONS AND QUANTITIES WITH FIRE MARSHALL.
- FIRE PROTECTION ENGINEER TO LOCATE PULL BOXES PER IBC 907.2.
- 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" TURN UNO.
- REFERENCE G0.01 FOR INFORMATION ON RESIDENTIAL DWELLING UNIT TYPES AND DISTRIBUTION.

SEE ENLARGED
ELEVATION ON
EXHIBIT C.

1 LEVEL 2
A2.02 | 1/8" = 1'-0"

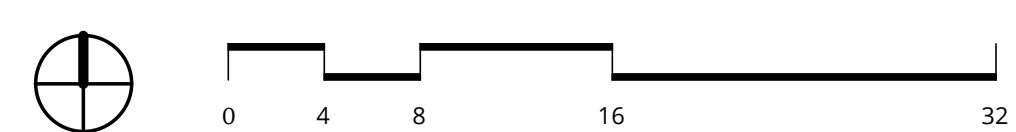


EXHIBIT C: EAST BLOCK,
ENLARGED ELEVATION OF NG
GENERATOR ROOM

3" MUFLER EXHAUST, 10
FEET FROM OSA INTAKE,
OPERABLE OPENINGS
INTO BUILDING, SERVICE
DOORS, PROPERTY LINES,
AND GRADE

12

A2

MP1c

A2

DUMMY LOUVER WITH
BACK PANEL, NO INTAKE
OR EXHAUST.

EXHAUST LOUVER, 10X6
REQUIRED, 33X51
PROVIDED, EXCESS TO BE
BACKPANELED, SEE MECH
DWGS

EXHAUST LOUVER,
44X24 REQUIRED, 72
X51 PROVIDED, EXCESS
TO BE BACKPANELED,
SEE MECH DRAWINGS

DUMMY LOUVER WITH
BACK PANEL, NO INTAKE
OR EXHAUST.

EXHAUST LOUVER, 10X6
REQUIRED, 25X51
PROVIDED, EXCESS TO BE
BACKPANELED, SEE MECH
DWGS

10'-0"
3" MUFLER EXHAUST CLEARANCE

2'-9"

6'-0"

2'-1"

4'-3"

4'-3"

4'-3"

ALIGN C.L.
FIXTURE TO C.L.
OF DOOR
HEADER
MULLION, TYP.;
CENTER ALONG
BRICK PIER, TYP.

BR-1

BR-1

BR-1

BR-1

MAINTENANCE RM

NG GENERATOR RM

ELEC RM

SF-23.3

SF-23.2

SF-23

SF-22

SF-21

216.65 T.O. SOG

216.65 T.O. SOG

216.44 T.O. SOG

216.20 T.O. SOG

215.65 T.O. CURB

216.63

216.42

216.18

215.63

LEV

2

LEV

2

SO

2

B.O. STL

2

LEV

2

3" MUFFLER EXHAUST, 10 FEET FROM OSA INTAKE, OPERABLE OPENINGS INTO BUILDING, SERVICE DOORS, PROPERTY LINES, AND GRADE

12

A2

MP1c

A2

DUMMY LOUVER WITH BACK PANEL, NO INTAKE OR EXHAUST.

EXHAUST LOUVER, 10X6 REQUIRED, 33X51 PROVIDED, EXCESS TO BE BACKPANELED, SEE MECH DWGS

EXHAUST LOUVER, 44X24 REQUIRED, 72 X51 PROVIDED, EXCESS TO BE BACKPANELED, SEE MECH DWGS

DUMMY LOUVER WITH BACK PANEL, NO INTAKE OR EXHAUST.

EXHAUST LOUVER, 10X6 REQUIRED, 25X51 PROVIDED, EXCESS TO BE BACKPANELED, SEE MECH DWGS

10' - 0"
3" MUFFLER EXHAUST CLEARANCE

2' - 9"

6' - 0"

2' - 1"

4' - 3"

4' - 3"

4' - 3"

BR-1

BR-1

BR-1

BR-1

SF-23.3

SF-23.2

SF-23

SF-22

SF-21

MAINTENANCE RM

NG GENERATOR RM

ELEC RM

ALIGN C.L. FIXTURE TO C.L. OF DOOR HEADER MULLION, TYP.; CENTER ALONG BRICK PIER, TYP.

EQ

EQ

216.65 T.O. SOG

216.65 T.O. SOG

216.44 T.O. SOG

216.20 T.O. SOG

215.65 T.O. CURB

216.63

216.42

216.18

215.63

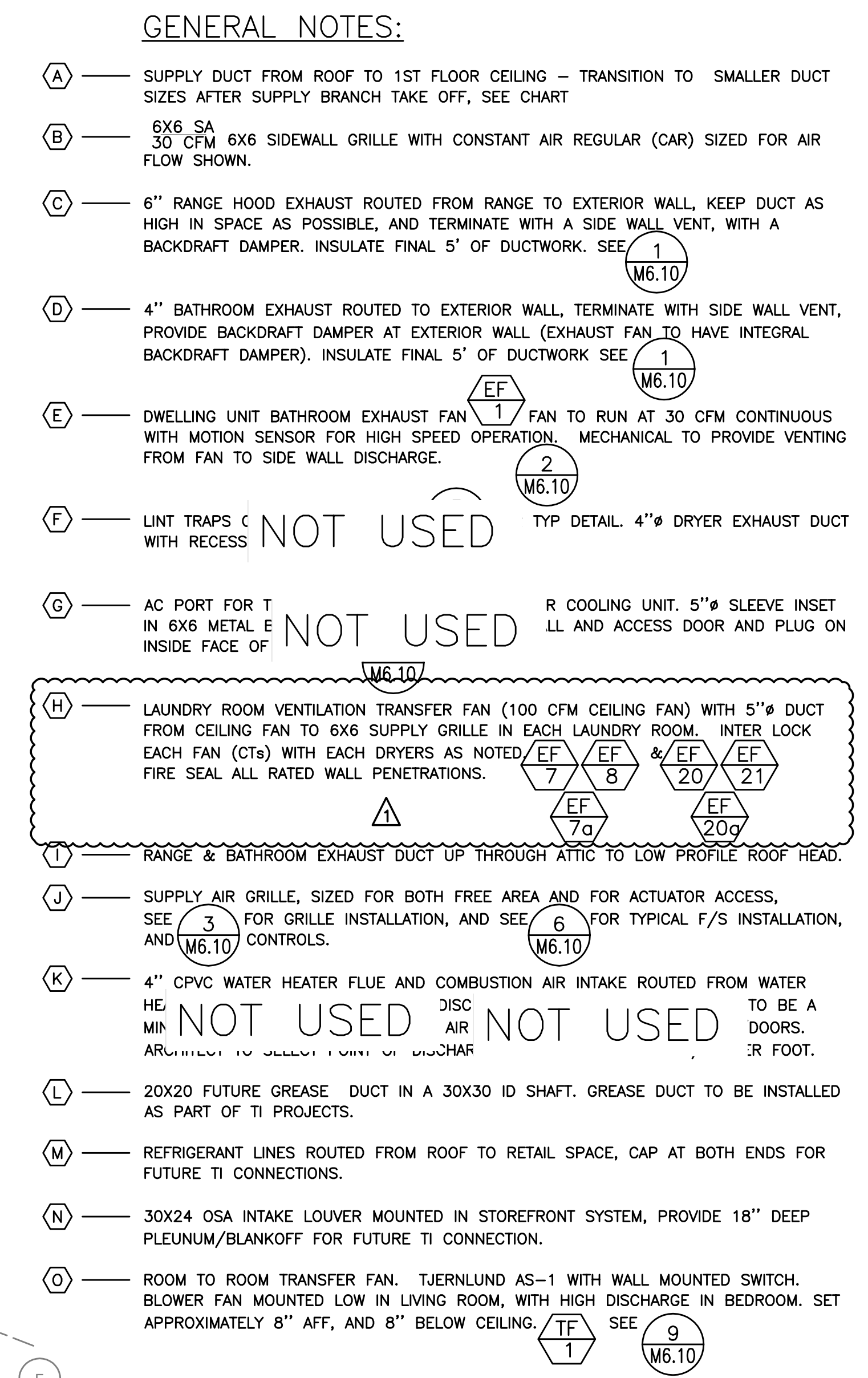
LEV 2

LEV 2

SO 2

B.O. STL 2

LEV 2



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-1,2,2a
5TH	20 X 20	1600	NA	0	RTU-1,2,2a
4TH	16 X 16	1200	NA	0	RTU-1,2,2a
3RD	16 X 16	800	NA	0	RTU-1,2,2a
2ND	14 X 14	400	NA	0	RTU-1,2,2a

VENTILATION CALCULATIONS:

H 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

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