05 - MECHANICAL/ELECTRICAL
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
M-001	INDEX OF DRAWINGS		
M-002	MECHANICAL/ELECTRICAL PLAN		
M-003	MECHANICAL SCHEDULE AND DETAILS		

THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

Christopher J. Bonsignore, P.E.
2018.09.21 08:33:40-04'00'

TRANSPORTATION PRINCIPAL ENGINEER

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 9/14/2018

DESIGNER/DRAFTER: EAM

CHECKED BY: JAB

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FD_MSH_MEC_0160_0151_M001.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
THE ROOF REPLACEMENT OF THE REPAIR FACILITY

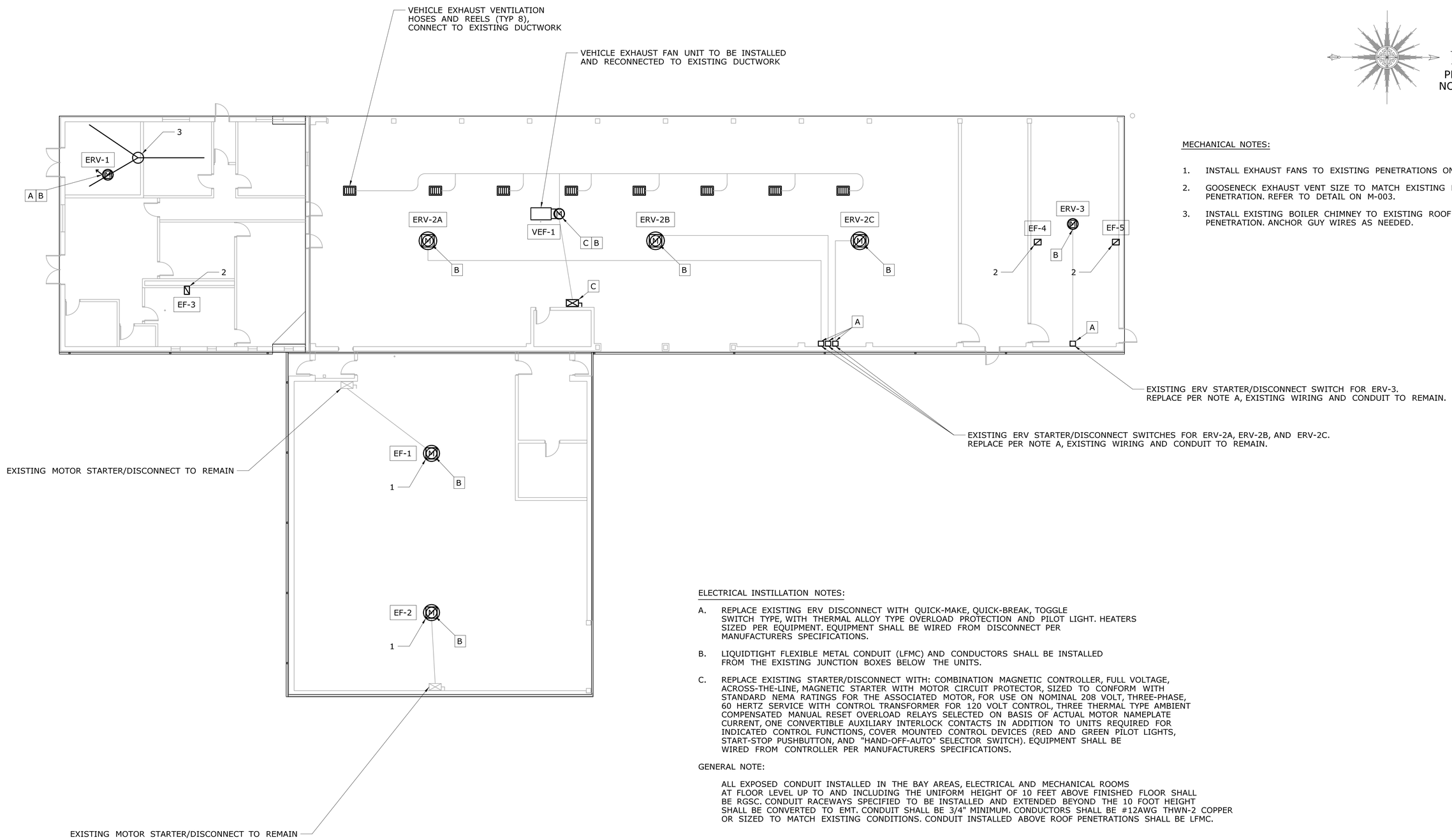
TOWN: WILLINGTON

DRAWING TITLE: INDEX OF DRAWINGS

PROJECT NO. 0160-0151

DRAWING NO. M-001

SHEET NO. 05.01



MECHANICAL NOTES:

1. INSTALL EXHAUST FANS TO EXISTING PENETRATIONS ON ROOF.
2. GOOSENECK EXHAUST VENT SIZE TO MATCH EXISTING ROOF PENETRATION. REFER TO DETAIL ON M-003.
3. INSTALL EXISTING BOILER CHIMNEY TO EXISTING ROOF PENETRATION. ANCHOR GUY WIRES AS NEEDED.

ELECTRICAL INSTILLATION NOTES:

A. REPLACE EXISTING ERV DISCONNECT WITH QUICK-MAKE, QUICK-BREAK, TOGGLE SWITCH TYPE, WITH THERMAL ALLOY TYPE OVERLOAD PROTECTION AND PILOT LIGHT. HEATERS SIZED PER EQUIPMENT. EQUIPMENT SHALL BE WIRED FROM DISCONNECT PER MANUFACTURERS SPECIFICATIONS.

B. LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) AND CONDUCTORS SHALL BE INSTALLED FROM THE EXISTING JUNCTION BOXES BELOW THE UNITS.

C. REPLACE EXISTING STARTER/DISCONNECT WITH: COMBINATION MAGNETIC CONTROLLER, FULL VOLTAGE, ACROSS-THE-LINE, MAGNETIC STARTER WITH MOTOR CIRCUIT PROTECTOR, SIZED TO CONFORM WITH STANDARD NEMA RATINGS FOR THE ASSOCIATED MOTOR, FOR USE ON NOMINAL 208 VOLT, THREE-PHASE, 60 HERTZ SERVICE WITH CONTROL TRANSFORMER FOR 120 VOLT CONTROL, THREE THERMAL TYPE AMBIENT COMPENSATED MANUAL RESET OVERLOAD RELAYS SELECTED ON BASIS OF ACTUAL MOTOR NAMEPLATE CURRENT, ONE CONVERTIBLE AUXILIARY INTERLOCK CONTACTS IN ADDITION TO UNITS REQUIRED FOR INDICATED CONTROL FUNCTIONS, COVER MOUNTED CONTROL DEVICES (RED AND GREEN PILOT LIGHTS, START-STOP PUSHBUTTON, AND "HAND-OFF-AUTO" SELECTOR SWITCH). EQUIPMENT SHALL BE WIRED FROM CONTROLLER PER MANUFACTURERS SPECIFICATIONS.

GENERAL NOTE:

ALL EXPOSED CONDUIT INSTALLED IN THE BAY AREAS, ELECTRICAL AND MECHANICAL ROOMS AT FLOOR LEVEL UP TO AND INCLUDING THE UNIFORM HEIGHT OF 10 FEET ABOVE FINISHED FLOOR SHALL BE RGSC. CONDUIT RACEWAYS SPECIFIED TO BE INSTALLED AND EXTENDED BEYOND THE 10 FOOT HEIGHT SHALL BE CONVERTED TO EMT. CONDUIT SHALL BE 3/4" MINIMUM. CONDUCTORS SHALL BE #12AWG THWN-2 COPPER OR SIZED TO MATCH EXISTING CONDITIONS. CONDUIT INSTALLED ABOVE ROOF PENETRATIONS SHALL BE LFMC.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 9/14/2018

DESIGNER/DRAFTER: EAM

CHECKED BY: JAB

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FD_MSH_MEC_0160_0151_M002.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING

APPROVED BY:

PROJECT TITLE:
THE ROOF REPLACEMENT OF THE REPAIR FACILITY

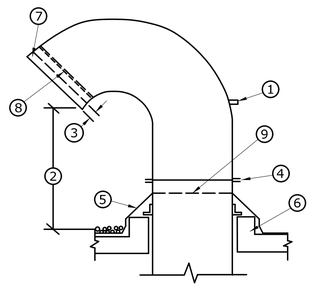
TOWN: WILLINGTON

DRAWING TITLE:
MECHANICAL/ELECTRICAL PLAN

PROJECT NO. 0160-0151

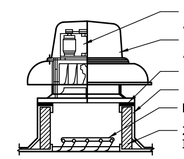
DRAWING NO. M-002

SHEET NO. 05.02



1. HEAVY-GUAGE SHEET-METAL DUCT WITH PITTSBURGH LOCK SEAM
2. 12" MINIMUM
3. 1 1/2" MINIMUM
4. 1 1/2" STANDING, SEAM RIVETED OR BOLTED ON 12" CENTERS
5. FLASHING WITH WELDED CORNER SEAMS
6. ROOF CURB
7. 1 1/2" X 1 1/2" X 1/4" ANGLE,ALL AROUND BOLTED WITH 1/4" BOLTS TO DUCT
8. ALUMINIUM INSECT SCREEN
9. CONNECT TO EXISTING DUCTWORK.

TYPICAL EXHAUST DETAIL



NOTE:

1. OPENING THROUGH ROOF AS SPECIFIED IN SCHEDULE. FIELD VERIFY SIZE WITH EXHAUST FAN AND ROOF CURB.

TYPICAL ROOF MOUNTED EXHAUST FAN (ERV) DETAIL

EXHAUST FAN SCHEDULE

MARK	AREA SERVED	TYPE & MODEL NO.	CFM	SP"	TIP SPEED	FAN RPM	MOTOR
ERV-1	MECHANICAL ROOM	ROOF MOUNTED 120C2B	1051	0.125	3358	1069	1/6 HP
ERV-2(A,B,C)	REPAIR BAY	ROOF MOUNTED 225C3B	3358	0.125	3015	512	1/4 HP
ERV-3	WELD SHOP	ROOF MOUNTED 135C2B	1541	0.125	3813	1079	1/6 HP
EF-(1,2)	STORES AREA	ROOF MOUNTED 210C6B	4244	0.5	4695	854	3/4 HP
VEF-1	VEHICLE EXHAUST	ROOF MOUNTED CMB-30	4000	5.0	-	-	5 HP

NOTES:
1. BASED ON LOREN COOK
2. VEHICLE EXHAUST BASED ON CAR-MON PRODUCTS

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 9/14/2018

DESIGNER/DRAFTER: EAM
CHECKED BY: JAB
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FD_MSH_MEC_0160_0151_M003.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
THE ROOF REPLACEMENT OF THE REPAIR FACILITY

TOWN: WILLINGTON

DRAWING TITLE:
MECHANICAL SCHEDULE AND DETAILS

PROJECT NO. 0160-0151
DRAWING NO. M-003
SHEET NO. 05.03