

CITY OF GALLUP

VEHICLE SHOP MAINTENANCE

VENTILATION & EXHAUST RENOVATION

APRIL 10, 2020

HUITT-ZOLLARS

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ADVANCEDESIGN™
 CONSULTANTS
 FEIGHT ENGINEERING

SHEET NUMBER	SHEET TITLE
GENERAL	
G-001	COVER SHEET
MECHANICAL	
M1	MECHANICAL PLAN AND SCHEDULE

BUILDING CODE DATA

APPLICABLE CODES:
 2015 NEW MEXICO EXISTING BUILDING CODE
 2015 NEW MEXICO COMMERCIAL BUILDING CODE,
 INCLUDING
 APPENDIX CHAPTERS B, C, E, H, I AND J
 2009 NEW MEXICO ENERGY CONSERVATION CODE
 2009 INTERNATIONAL FIRE CODE

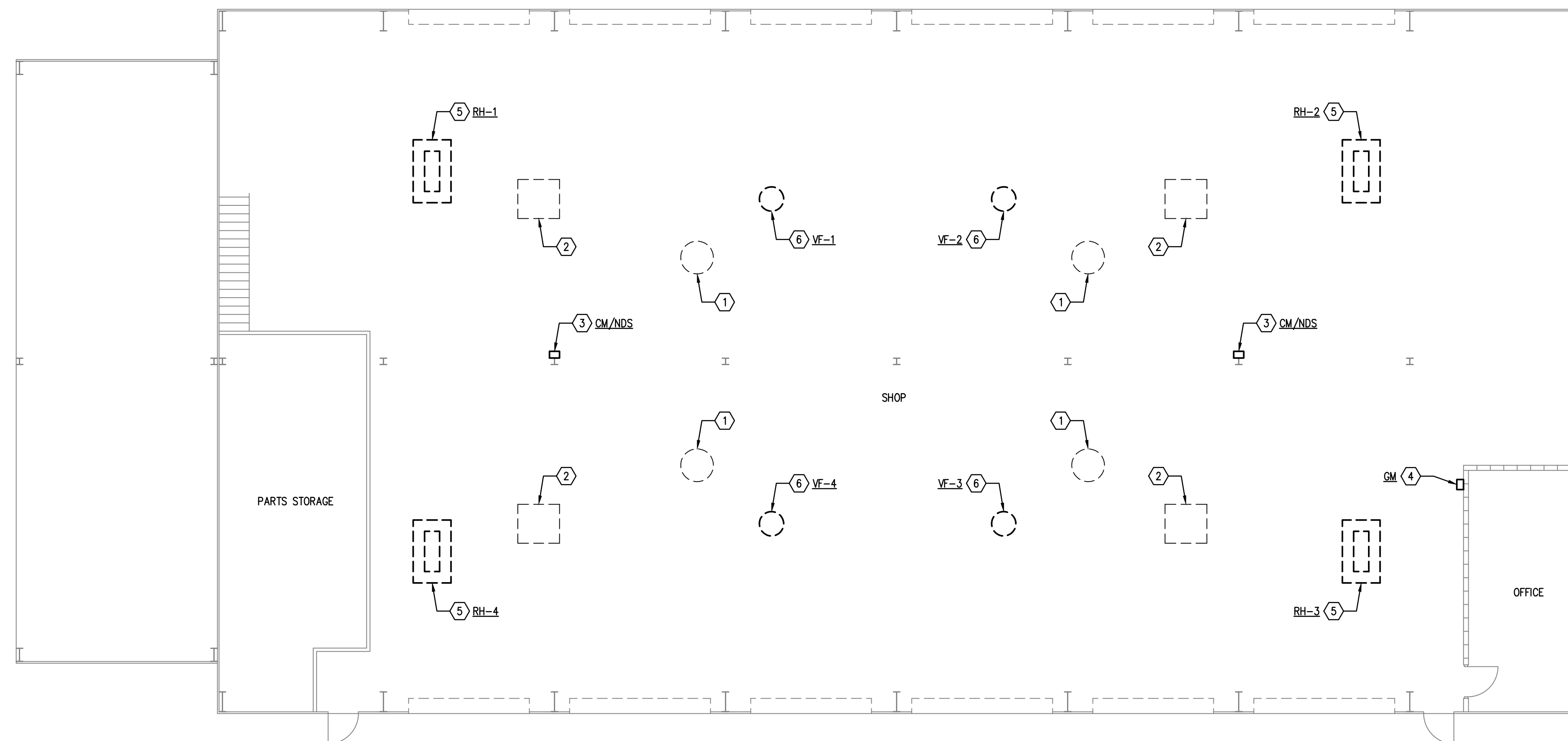
GENERAL CONSTRUCTION NOTES

- A. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ASSOCIATED FEES, AS REQUIRED BY THE GOVERNING AUTHORITIES AND SHALL PAY ALL APPLICABLE TAXES.
- B. CONTRACTOR/SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF LABOR REGULATIONS AND LAWS AS WELL AS ALL SAFETY AND HEALTH REQUIREMENTS.
- C. CONTRACTOR/SUBCONTRACTORS SHALL VISIT THE PROJECT SITE AND CAREFULLY REVIEW THE DRAWINGS PRIOR TO SUBMITTING BIDS, AND SHALL BECOME FAMILIAR WITH THE DRAWINGS AND CONDITIONS AFFECTING THE WORK THROUGH NORMAL VISUAL INSPECTION. IN THE EVENT OF DISCREPANCIES OR QUESTIONS, SUBMIT WRITTEN REQUESTS FOR INFORMATION DIRECTLY TO THE OWNER FOR CLARIFICATION PRIOR TO BID. CONTRACTOR/SUBCONTRACTORS SHALL CALL FOR AND RECEIVE ALL NECESSARY INSPECTIONS BY THE GOVERNING AUTHORITIES DURING THE ENTIRE CONSTRUCTION PERIOD, AND SHALL COMPLY WITH ALL APPLICABLE CODES FOR THE SCOPE OF WORK OF THIS PROJECT AS INDICATED ON THE DRAWINGS.
- D. CONTRACTOR/SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS OF THE DRAWINGS WITH THE ACTUAL PROJECT SITE CONDITIONS PRIOR TO CONSTRUCTION. IN THE EVENT OF DIMENSIONAL DISCREPANCIES, NOTIFY THE OWNER IMMEDIATELY FOR FURTHER DIRECTION. ANY CHANGES TO THE DRAWINGS OR SPECIFICATIONS MUST HAVE THE APPROVAL OF THE OWNER.
- E. REFER TO OTHER APPLICABLE GENERAL NOTES ON OTHER SHEETS OF THIS SET OF DRAWINGS
- F. THE DRAWINGS HAVE BEEN PREPARED IN A MANNER WHICH PRESENTS THE OVERALL CONSTRUCTION SEQUENCE INVOLVING MANY TRADES
- G. ALL WORK PROVIDED BY THE CONTRACTOR/SUBCONTRACTORS SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
- H. PARKING FOR CONTRACTOR PERSONNEL VEHICLES SHALL BE APPROVED BY
- I. COORDINATE WITH THE OWNER FOR WORK / EQUIPMENT TO BE OWNER FURNISHED CONTRACTOR INSTALLED OR OWNER FURNISHED & INSTALLED.
- J. CONTRACTOR SHALL NOT ATTACH ANCHOR DEVICES TO ANY STRUCTURAL MEMBER WITHOUT APPROVAL FROM THE ARCHITECT OR OWNER.
- K. UTILITY SHUT DOWN PROTOCOL SHALL BE SUBMITTED AND APPROVED BY THE OWNER PRIOR TO ANY SYSTEMS SHUTDOWN.
- L. CONTRACTOR TO COORDINATE WITH OWNER FOR THE RELOCATION OF ELECTRICAL FIXTURES AND EQUIPMENT THAT ARE IMPACTED BY NEW CONSTRUCTION. CONTRACTOR IS TO NOTIFY OWNER BEFORE PROCEEDING WITH WORK.
- M. THE TERM "REMOVE" USED IN THIS PLAN SET INCLUDES THE DISPOSAL OF SAID MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS.
- N. HOLES CUT IN SURFACES SHALL BE CORED OR DRILLED FIRST AT ALL CORNERS TO ELIMINATE OVERCUTTING. AS AN OPTION, IF CUTTING TOOLS ARE AVAILABLE THAT ELIMINATE OVERCUTTING THEY MAY BE USED. OVERCUTTING AND PATCHING WILL NOT BE ACCEPTED.
- O. REMOVE ALL CONSTRUCTION DEBRIS FROM INSIDE THE BUILDING(S) AS IT IS PRODUCED. DO NOT WAIT UNTIL THE END OF THE DAY. PLACE IN LARGE COLLECTION CONTAINERS, COMPLY WITH OWNER'S POLICY AND DEPOSIT OFF THE OWNER'S PROPERTY IN A LEGAL DUMP UNLESS OTHERWISE INSTRUCTED.
- P. UTILIZE PLASTIC SHEETING TO CONTAIN DUST. BE CAREFUL NOT TO DAMAGE EXISTING FINISHES TO REMAIN.
- Q. THE CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS, INCLUDING, BUT NOT LIMITED TO HAZARDOUS WASTE AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIALS.
- R. THE CONTRACTOR AGREES TO TAKE NECESSARY SAFETY PRECAUTIONS AS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES TO PROTECT PEDESTRIAN AND VEHICULAR TRAFFIC IN THE CONSTRUCTION AREA, WHICH INCLUDE BUT ARE NOT LIMITED TO: MAINTAINING ADEQUATE WARNING SIGNS, BARRICADES, LIGHTS, GUARD FENCES, WALKS AND BRIDGES.
- S. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM BUILDING, FENCING AND/OR EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

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KEYED NOTES

- 1 EXISTING EXHAUST FAN ON ROOF.
- 2 EXISTING EVAPORATIVE COOLER ON ROOF.
- 3 MOUNT CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR ON WALL AT 4 TO 5 FEET ABOVE FINISH FLOOR. COORDINATE WITH ELECTRICAL. SEE WIRING DIAGRAM THIS SHEET.
- 4 MOUNT GAS MONITOR ON WALL AT 4 TO 5 FEET ABOVE FINISH FLOOR. COORDINATE LOCATION AND POWER WITH ELECTRICAL. SEE WIRING DIAGRAM THIS SHEET.
- 5 MOUNT RELIEF HOOD ON ROOF CURB.
- 6 MOUNT VENTILATION FAN ON ROOF CURB.



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

EXHAUST AIR (E.A.) CALCULATION (AUTO REPAIR/SERVICE)

SPACE NAME	AREA - SQ.FT.	E.A. CFM/SQ.FT.	REQUIRED E.A. - CFM	CODE / TABLE
AUTO REPAIR/SERVICE	9,520	0.75	7,140	2015 UMC TABLE 403.7 (ASHRAE 62.1 TABLE 6.5)

① SEE SEQUENCE OF OPERATION.

CARBON MONOXIDE VENTILATION SYSTEM

GM GAS MONITOR: ARMSTRONG GAS MONITOR WITH SYSTEM TEST SWITCH, HINGED DOOR, ENCLOSURE KEY LOCK, RELAY CONTACTS TO OPERATE VENTILATION FANS, AND RED/YELLOW/GREEN INDICATOR LIGHTS.

SYMBOL	VOLTAGE/ PHASE	VA	MODEL
GM	120/1	30	AMC-1AD1

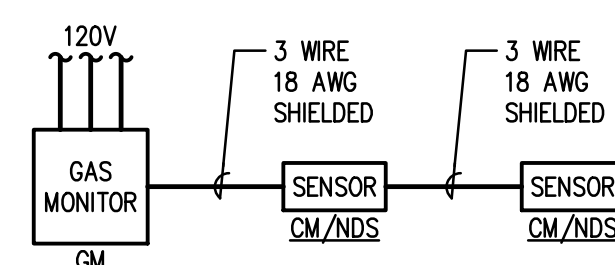
CM/NDS CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR: ARMSTRONG GAS SENSOR FOR DETECTING CARBON MONOXIDE AND NITROGEN DIOXIDE GAS WITH ELECTROCHEMICAL TYPE SENSOR.

SYMBOL	RANGE	TRIP POINTS	INSTALLATION WIRING	MODEL
CM/NDS	0-100 PPM CO	25/100 PPM CO	3 WIRE 18 AWG SHIELDED	AMC-1222
	0-3 PPM NO2	1/3 PPM NO2		

SEQUENCE OF OPERATION

VENTILATION MODE: ON DETECTION OF CARBON MONOXIDE OR NITROGEN DIOXIDE FROM ANY OF THE CARBON MONOXIDE/NITROGEN DIOXIDE SENSORS WILL ENABLE VENTILATION FANS (VF-1 THRU VF-4) AND RELIEF/INTAKE HOODS (RH-1 THRU RH-4) TO OPERATE. CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR OPERATED VENTILATION FAN CONTINUES TO OPERATE UNTIL THERE IS NO DETECTION OF CARBON MONOXIDE OR NITROGEN DIOXIDE.

WIRING DIAGRAM



EQUIPMENT SCHEDULE

VF-# VENTILATION FAN: GREENHECK BELT DRIVE ROOF MOUNTED EXHAUST FAN. PROVIDE WITH ROOF CURB TO MATCH ROOF SLOPE, BACKDRAFT DAMPER, AND DISCONNECT SWITCH.

SYMBOL	CFM	INCHES S.P.	HP	VOLTAGE/ PHASE	RPM	WEIGHT	MODEL
VF-1 THRU VF-4	1,785	0.375	1/3	120/1	1,150	90	CUBE-141

RH-# RELIEF HOOD: GREENHECK FABRA HOOD WITH ROOF CURB TO MATCH ROOF SLOPE, BIRDSCREEN AND 120V MOTORIZED BACKDRAFT DAMPER.

SYMBOL	THROAT SIZE	WEIGHT	MODEL
RH-1 THRU RH-4	18"x48"	75	FG1

Feight Engineering LLC

MECHANICAL • PLUMBING

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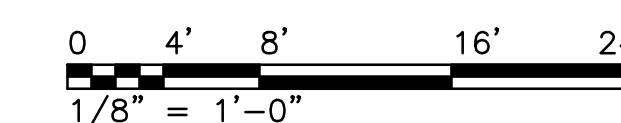
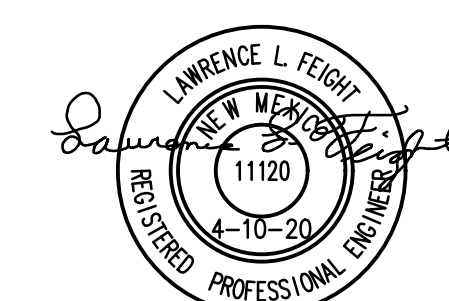
PROJECT NAME:
MAINTENANCE SHOP EXHAUST
GALLUP CITY VEHICLE SERVICES
1940 WAREHOUSE LANE
GALLUP, NM 87301

REVISIONS

No.	DATE	DESCRIPTION

SHEET TITLE:
MECHANICAL PLAN AND SCHEDULE

DESIGNED: LLF SCALE: as shown
DRAFTED: SJH JOB NO. 320-009
DATE: 4-10-2020 COMP. FILE: -



M1