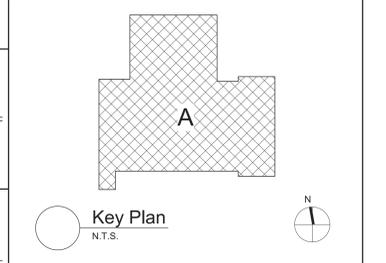


2 Demolition Plan
1/8" = 1'-0"

1 Floor Plan
1/8" = 1'-0"

GENERAL NOTES:

- THE FOLLOWING GENERAL NOTES APPLY TO ALL "GM" SERIES DRAWINGS.
- REFER TO ALL CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS, FOR DETAILED STANDARDS AND REQUIREMENTS.
- REPORT UNSAFE OR UNSATISFACTORY CONDITIONS IN WRITING TO OWNER AND ENGINEER AND RESOLVE ISSUES BEFORE PROCEEDING.
- WORK INCLUDES ALL LABOR AND MATERIALS REQUIRED TO PROVIDE COMPLETE WORKING SYSTEMS.
- COORDINATE PHASING REQUIREMENTS AT JOB MEETINGS AND ON WORK SCHEDULES.
- DO NOT SCALE DRAWINGS. PIPING AND DUCTWORK ARE SHOWN DIAGRAMMATICALLY. IT IS NOT POSSIBLE TO SHOW EVERY TRANSITION, FITTING, ASPECT RATIO CHANGE, ETC. PROVIDE AS REQUIRED TO FIT WITHIN STRUCTURAL CONSTRAINTS. EXAMINE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND VERIFY ALL ACCESS, LOCATIONS, DIMENSIONS, ARRANGEMENTS, ELECTRICAL CHARACTERISTICS AND INTERFERENCE IN THE FIELD PRIOR TO BID.
- VERIFY EXTENT OF CEILING WORK SHOWN ELSEWHERE IN THE CONTRACT DOCUMENTS. PROVIDE FOR ADDITIONAL CEILING SYSTEM REMOVAL, PROTECTION, AND REINSTALLATION AS REQUIRED FOR CONTRACT WORK.
- DEMOLITION DRAWINGS SHOW THE GENERAL SCOPE OF ITEMS AND SYSTEMS TO BE REMOVED. IT IS NOT THE INTENT TO SHOW ALL ITEMS TO BE REMOVED. FIELD VERIFY AND REMOVE ALL ASSOCIATED ITEMS BACK TO POINT OF CONTINUED SERVICE, UNLESS OTHERWISE NOTED. VERIFY WHAT ALL EQUIPMENT SERVES PRIOR TO REMOVAL.
- GIVE ALL REMOVED EQUIPMENT TO THE OWNER. DELIVER ON SITE WHERE DESIGNATED BY THE OWNER. PROMPTLY REMOVE FROM THE SITE AND LEGALLY DISPOSE OF ANY SUCH ITEMS DECLINED BY OWNERS.
- IF UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL CONFLICTS ARE ENCOUNTERED, INVESTIGATE AND REPORT BOTH NATURE AND EXTENT OF THE CONFLICT. RE-ROUTE WORK AS REQUIRED.
- CUT, DRILL, OR OTHERWISE CREATE OPENINGS AS NEATLY AS POSSIBLE AS REQUIRED FOR THE INDICATED CONTRACT WORK. PROVIDE SUPPORT AS REQUIRED FOR AND USE METHODS LEAST LIKELY TO DAMAGE ELEMENTS TO REMAIN. PRIOR TO WORK, VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS INCLUDING CROSS BRACING, ELECTRICAL WIRING, PLUMBING, ETC. PROMPTLY NOTIFY ARCHITECT OF ANY CONFLICTS. DO NOT CUT ANY STRUCTURAL MEMBERS OR OTHER SERVICES UNIT, SPECIFICALLY DIRECTED TO DO SO, PENDING RECEIPT OF DIRECTIVE. REARRANGE SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT DELAY.
- PATCH ALL DISTURBANCES RESULTING FROM DEMOLITION OR NEW WORK TO MATCH SURROUNDING SURFACES. PATCH FOLLOWING DEMOLITION, AND AGAIN FOLLOWING WORK, WHERE HOLES REMAIN FROM REMOVALS. INFILL AND PATCH TO MATCH UNLESS HOLES IS TO BE REUSED.
- PROTECT ALL CONTRACT EQUIPMENT ELEMENTS TO REMAIN. OWNER'S BELONGINGS, AND EQUIPMENT TO BE REUSED OR RETAINED BY OWNER DURING ALL CONTRACT WORK. AT NO ADDITIONAL COST TO OWNER, REPAIR OR REPLACE ITEMS WHICH ARE DAMAGED.
- THOROUGHLY CLEAN FOLLOWING DEMOLITION AND BEFORE BEGINNING CONTRACT INSTALLATIONS. THOROUGHLY CLEAN AGAIN DURING AND FOLLOWING CONTRACT WORK AS REQUIRED. LEAVE ALL WORK AREAS CLEANER THAN FOUND. LEGALLY DISPOSE OF ALL CONSTRUCTION DEBRIS.
- PROVIDE TEMPORARY PIPING, DUCT, HEAT, WEATHERPROOFING, ETC. TO SERVICES TO REMAIN UNTIL PERMANENT INSTALLATIONS CAN BE MADE.
- ALL EXCESS MATERIALS AND SCRAPS ARE CONTRACTOR'S PROPERTY. PROMPTLY REMOVE FROM SITE UNLESS SPECIFICALLY DIRECTED OTHERWISE.
- SEAL ALL FLOOR, WALL AND CEILING PENETRATIONS PER FIRE-RESISTANCE RATINGS NOTED ON CC-SERIES DRAWINGS, BUT NOT LESS THAN 1-HOUR, AND IN ACCORDANCE WITH SECTION 07 41 13 - PENETRATION FIRESTOPPING. THIS INCLUDES ALL NEW PENETRATIONS AND EXISTING UNFIRESTOPPED PENETRATIONS CREATED BY REMOVALS, AS REQUIRED TO PERFORM THE WORK.



S.E.D. Control No. 48-01-01-06-5-010-009

Rev. No.	Date	Description

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TETRA TECH
ARCHITECTS & ENGINEERS

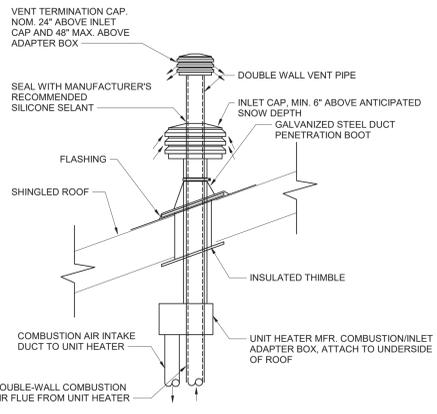
Mahopac Central School District
Mahopac, NY

Reconstruction To:
Mahopac Bus Garage

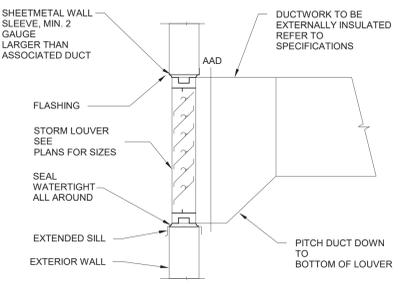
Floor Plans

Drawn By: DPM/jjk	Date: 8/21/20	Drawing Number: GM130
Project No.:	12111-19002	

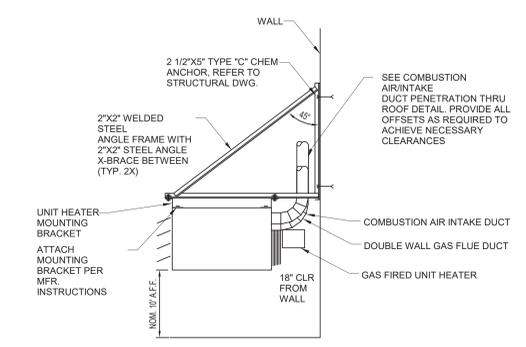
BID SET



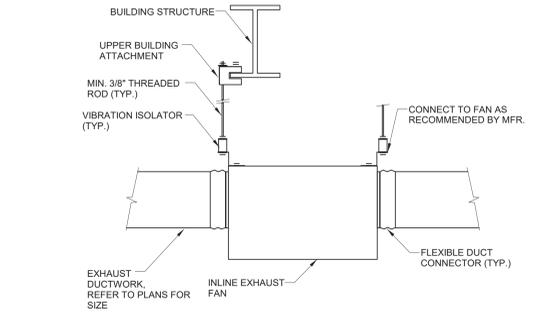
1 Gas Fired Equipment Intake/Vent Detail
NTS



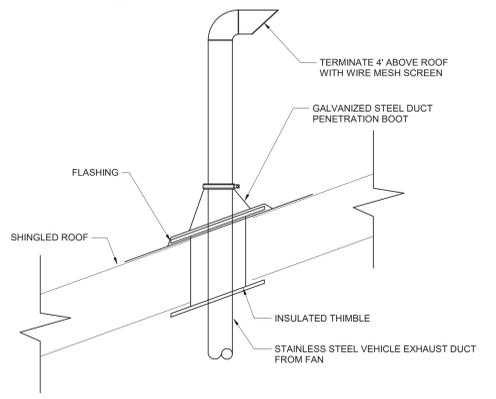
5 Louver Detail
NTS



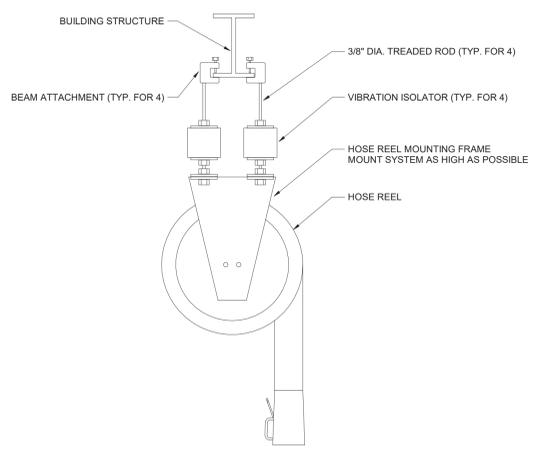
2 Gas-Fired Unit Heater Detail
NTS



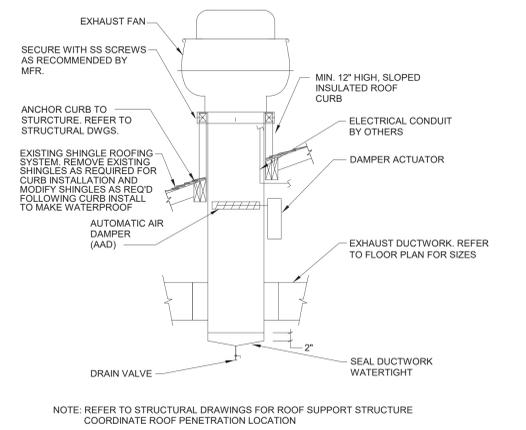
6 Inline Fan Detail
NTS



3 Vehicle Exhaust Duct Roof Penetration Detail
NTS



7 Vehicle Exhaust Hose Reel Mounting Detail
1/2" = 1'-0"



4 Roof Exhaust Fan Detail
NTS

MAKE-UP AIR UNIT (MUA) SCHEDULE														
EQUIP NO.	LOCATION	MODEL	SERVES	AIR QUANTITY		GAS HEAT				FAN MOTOR HP	VOLTAGE	PHASE	NOTES	
				TOTAL AIRFLOW	INPUT (MBH)	OUTPUT CAP. (MBH)	EAT (°F)	LAT (°F)	ESP (IN. WG.)					TSP (IN. WG.)
MUA-1BG	REAR GARAGE	SSCBL-500	REPAIR GARAGE	4700CFM	500	400	10.0	88.0	1.5	1.6	3	208	3	1,2,3,4

- NOTES:
 1. NATURAL GAS, MODULATING BURNER.
 2. PROVIDE UNIT MANUFACTURER'S VERTICAL VENT KIT FOR THRU THE ROOF APPLICATION.
 3. PROVIDE FACTORY FURNISHED VARIABLE SPEED DRIVE AND DISCONNECT SWITCH.
 4. PROVIDE CONTROL TERMINAL STRIP FOR BMS CONTROL INTERFACE.

UNIT HEATER (UH) SCHEDULE														
DWG LABEL	LOCATION	MODEL	MANUFACTURER	NOM. MOUNTING HEIGHT (FT.)	AIRSIDE DATA			CAPACITY		ELECTRICAL			NOTES	
					EAT (°F)	LAT (°F)	AIRFLOW (CFM)	INPUT (MBH)	OUTPUT (MBH)	MCA	VOLTAGE	PHASE		
UH-1BG	GARAGE BAY	UDAS 45	REZNOR	10.0	65.0	119.0	629.0	45.0	37.4	15	115	1	1,2,3,4,7	
UH-2BG	GARAGE BAY	UDAS 45	REZNOR	10.0	65.0	119.0	629.0	45.0	37.4	15	115	1	1,2,3,4,7	
UH-3BG	GARAGE BAY	UDAS 45	REZNOR	10.0	65.0	119.0	629.0	45.0	37.4	15	115	1	1,2,3,4,7	
UH-4BG	GARAGE BAY	UDAS 45	REZNOR	10.0	65.0	119.0	629.0	45.0	37.4	15	115	1	1,2,3,4,7	
UH-5BG	REAR GARAGE	UDAS 30	REZNOR	10.0	65.0	115.0	456.0	30.0	24.6	15	115	1	1,2,3,4,7	
UH-6BG	REAR GARAGE	UDAS 30	REZNOR	10.0	65.0	115.0	456.0	30.0	24.6	15	115	1	1,2,3,4,7	
UH-7BG	OIL TANK AREA	EGHB-2-AK2	REZNOR	7.0	65.0	85.0	510.0			2 kW	15	208	1	3,5,6
UH-8BG	CORRIDOR	EGHB-2-AK2	REZNOR	7.0	65.0	85.0	510.0			2 kW	15	208	1	3,5,6
UH-9BG	BOILER ROOM	EGHB-2-AK2	REZNOR	7.0	65.0	85.0	510.0			2 kW	15	208	1	3,5,6

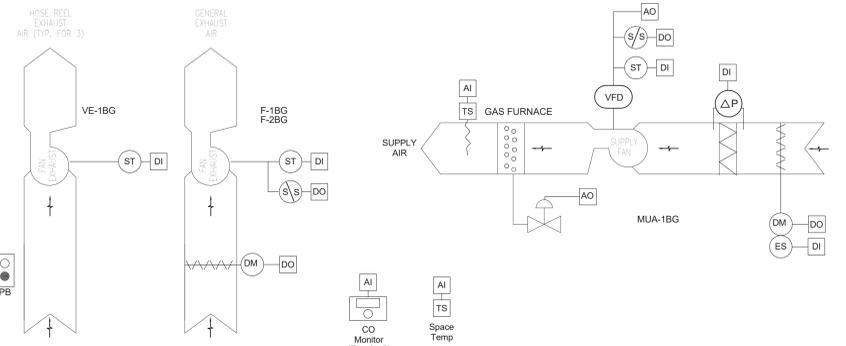
- NOTES:
 1. NATURAL GAS, SINGLE STAGE BURNER.
 2. PROVIDE UNIT MANUFACTURER'S VERTICAL VENT KIT FOR THRU THE ROOF APPLICATION.
 3. PROVIDE FACTORY FURNISHED DISCONNECT SWITCH.
 4. PROVIDE FACTORY MOUNTING HANGER BRACKET.
 5. PROVIDE WITH MANUFACTURER'S STANDARD WALL MOUNTING BRACKET.
 6. PROVIDE WITH MANUFACTURER'S STANDARD INTEGRAL THERMOSTAT.
 7. PROVIDE UNIT MANUFACTURER'S STANDARD WALL-MOUNTED SINGLE STAGE, 24V THERMOSTAT.

FAN (F) SCHEDULE													
EQUIP NO.	LOCATION	MODEL	MANUFACTURER	AIRFLOW (CFM)	SONES	FAN DATA				ELECTRICAL			NOTES
						ESP (IN WG)	DRIVE	MOTOR RPM	HP	VOLTAGE	PHASE		
F-1BG	ROOF	180R8B	LOREN COOK	2725	15.9	1.5	BELT	1725	1 1/2	208	3	1,2,3	
F-2BG	REAR GARAGE	120SQN10D	LOREN COOK	876	4.8	.15	DIRECT	1050	1/6	115	1	2,3,4	
F-3BG	REPAIR BAYS	CMW-11	CAR-MON	870	24	4.0	DIRECT	1250	1	208	3	3,5	
F-4BG	REPAIR BAYS	CMW-11	CAR-MON	870	24	4.0	DIRECT	1250	1	208	3	3,5	
F-5BG	REPAIR BAYS	CMW-11	CAR-MON	870	24	4.0	DIRECT	1250	1	208	3	3,5	

- NOTES:
 1. PROVIDE MANUFACTURER'S STANDARD ALUMINUM, INSULATED ROOF CURB FOR SLOPED ROOF.
 2. PROVIDE MANUFACTURER'S STANDARD HAND-OFF-AUTO SWITCH.
 3. PROVIDE MANUFACTURER'S STANDARD DISCONNECT SWITCH.
 4. PROVIDE MANUFACTURER'S STANDARD FAN SPEED SWITCH FOR BALANCING.
 5. PROVIDE MANUFACTURER'S FAN STARTER, FAN STARTS VIA MANUAL PUSHBUTTON.

LOUVER (L) SCHEDULE											
TAG	SERVES	MODEL	TYPE	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	FREE AREA (S.F.)	AIRFLOW	VELOCITY (FPM)	MAX APD (IN WG)	NOTES
L-1BG	F-2BG	ELF375DXH	EXHAUST	20	18	4	1.0	876 CFM	876	0.075	1,2,3

- NOTES:
 1. DESIGN MAKE: RUSKIN
 2. PROVIDE WITH ALUMINUM INSECT SCREEN.
 3. ANODIZED FINISH. SUBMIT MANUFACTURER'S COLOR CHART FOR APPROVAL BY ARCHITECT.



1. GENERAL: PROVIDE A LOCAL BMS CONTROLLER WITH GRAPHIC USER INTERFACE (GUI) FOR OPERATOR MONITORING, SCHEDULING, ALARMS AND TEMPERATURE SETPOINT ADJUSTMENT. LOCATE CONTROLLER/GUI IN LOCATION APPROVED BY OWNER. PROVIDE A WIRELESS ROUTER FOR COMMUNICATION TO DISTRICT BMS SYSTEM.
2. OCCUPIED MODE:
 A. THE MAKE-UP AIR UNIT AND GENERAL EXHAUST FAN (F-1BG), WILL RUN BASED ON OPERATOR ADJUSTABLE SCHEDULE.
 B. MUA-1BG OUTSIDE AIR DAMPER AND F-1BG EXHAUST DAMPER SHALL BE OPEN ANYTIME THE UNITS ARE IN OPERATION.
 C. WHEN F-1BG IS ON, MUA-1BG SUPPLY AIR VARIABLE SPEED DRIVE (VSD) SHALL MODULATE TO MEET 90% OF THE AIRFLOW QUANTITY OF F-1BG.
 D. THE CONTROLLER SHALL MONITOR THE OVERHEAD DOOR POSITION. IF ANY OVERHEAD DOOR REMAINS OPEN FOR TEN (10) CONTINUOUS MINUTES, MUA-1BG OUTSIDE AIR DAMPER SHALL CLOSE AND MUA-1A SHALL STOP.
 E. UPON A FALL IN SPACE TEMPERATURE AS SENSED BY ITS RESPECTIVE THERMOSTAT, ENABLE UNIT HEATER AND OPEN GAS BURNER VALVE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SETPOINT.
3. THE CONTROLLER SHALL MONITOR MUA-1 SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.
 A. AS THE OUTSIDE AIR TEMPERATURE DROPS FROM 85 DEG. F (ADJ.) TO 20 DEG. F (ADJ.), THE SUPPLY AIR TEMPERATURE SETPOINT SHALL RESET UPWARD FROM 55 DEG. F. TO 95 DEG. F. (ADJ.).
 B. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE GAS BURNER VALVE TO MAINTAIN ITS HEATING SETPOINT.
 C. HEATING SHALL BE ENABLED WHENEVER: THE OUTSIDE AIR TEMPERATURE IS LESS THAN 65 DEG. F. (ADJ.) FAN STATUS IS ON, THE SUPPLY AIR TEMPERATURE IS BELOW HEATING SETPOINT AND OVERHEAD DOORS ARE CLOSED.
 D. GARAGE SPACE TEMPERATURE SHALL BE MONITORED.
4. EXHAUST FANS ASSOCIATED WITH HOSE REELS SHALL BE MANUALLY STARTED.
 A. UPON ACTIVATION OF A HOSE REEL FAN, MUA-1BG VSD SHALL INCREMENTALLY INCREASE ITS OUTPUT TO MEET 90% OF THE COMBINED EXHAUST AIRFLOW QUANTITY. THE REVERSE SHALL OCCUR AS HOSE REEL FANS ARE TURNED OFF.
5. UNOCCUPIED MODE:
 A. CLOSE OUTSIDE AIR AND EXHAUST AIR DAMPERS, DISABLE MUA-1BG AND F-1BG.
 B. UPON A FALL IN SPACE TEMPERATURE AS SENSED BY ITS RESPECTIVE THERMOSTAT, ENABLE UNIT HEATER AND OPEN GAS BURNER VALVE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SETPOINT.
6. ALARMS AND SAFETIES:
 A. THE CONTROLLER SHALL MONITOR FILTER STATUS, ALARM IF DIFFERENTIAL PRESSURE EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
 B. HIGH SUPPLY AIR TEMPERATURE: IF SUPPLY AIR TEMPERATURE IS GREATER THAN 120 DEG. F. (ADJ.).
 C. LOW SUPPLY AIR TEMPERATURE: IF SUPPLY AIR TEMPERATURE IS LESS THAN 45 DEG. F. (ADJ.).
 D. CARBON MONOXIDE SENSOR: ALARM IF CO LEVEL IS GREATER THAN 700 PPM FOR FIVE MINUTES (ADJ.).

8 Garage Ventilation System Control
NTS

CONTROL SYMBOL LEGEND

- (S/S) START/STOP
- (ST) STATUS
- (DM) DAMPER MOTOR
- (ES) END SWITCH
- (TS) TEMPERATURE SENSOR
- (AO) ANALOG OUTPUT
- (AI) ANALOG INPUT
- (DO) DIGITAL OUTPUT
- (DI) DIGITAL INPUT
- (VFD) VARIABLE SPEED DRIVE
- (ΔP) DIFF. PRESS. SENSOR
- (NC) CONTACT (NO OR NC)
- (PB) PUSHBUTTON STARTER

S.E.D. Control No. 48-01-01-06-5-010-009

Rev. No.: Date: Description:



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Mahopac Central School District
 Mahopac, NY

Reconstruction To:
 Mahopac Bus Garage

Schedules, Details and Controls

Drawn By: DPM Date: 8/21/20 Drawing Number:
 Project No.: 12111-19002 Drawing Number: GM131