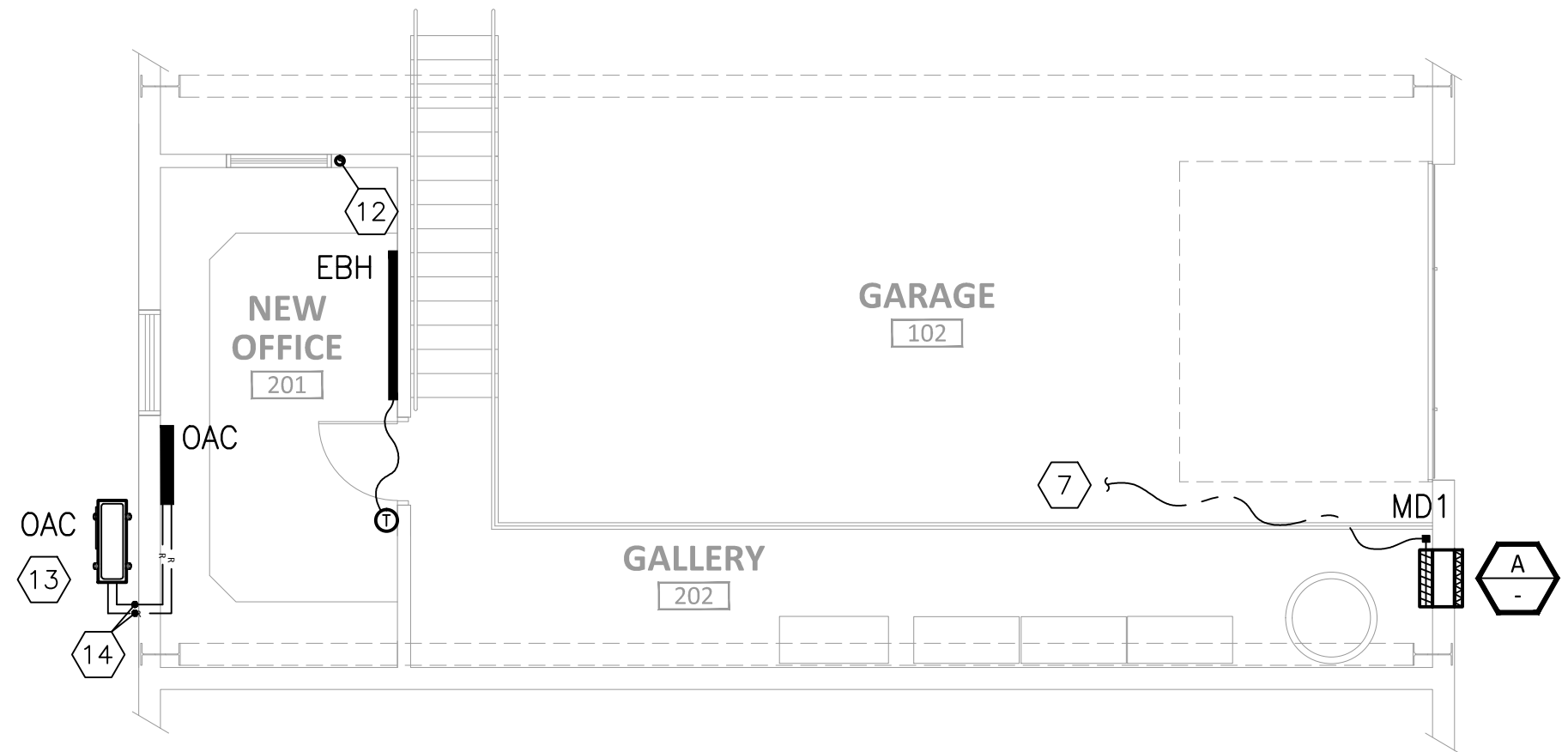


**1 MAIN FLOOR PLAN**  
M6.1 SCALE: 1:75



**2 MEZZANINE FLOOR PLAN**  
M6.1 SCALE: 1:75

GRILLE / LOUVRE SCHEDULE						
MARK	MAKE	MODEL	SIZE	FLOW RATE	DESCRIPTION	REMARKS
△	AIROLITE	K666	1200x650	-	INTAKE AIR LOUVRE	OR EQUAL. C/W INSECT SCREEN. LESS BACKDRAFT DAMPER. PAINT TO MATCH BUILDING EXTERIOR.

HVAC LEGEND

Ⓢ

①

MANUAL SWITCH

THERMOSTAT

FLEXIBLE DUCT

SUPPLY AIR DUCT UP

SUPPLY AIR DUCT DOWN

RETURN AIR DUCT UP

RETURN AIR DUCT DOWN

EXHAUST AIR DUCT UP

EXHAUST AIR DUCT DOWN

BALANCING DAMPER

FIRE DAMPER

GRILLE/LOUVRE MARK

AIR FLOW (CFM)

HVAC KEYNOTES

Ⓢ

→

DENOTES KEYNOTE ON DRAWING

①

RADIANT HEATER VENT UP THRU ROOF COMPLETE WITH VERTICAL TERMINATION KIT, FLASH AND SEAL AT ROOF PENETRATION WEATHER TIGHT WITH DECKTITE.

②

HANDS ON/OFF/AUTO SWITCH TO OPERATE EXHAUST FAN 'EF1' MOUNTED ON WALL.

③

SPEED CONTROL SWITCH FOR ANTI-STRATIFICATION FANS MOUNTED ON WALL.

④

RADIANT HEATER INTAKE UP THRU ROOF COMPLETE WITH VERTICAL TERMINATION KIT, FLASH AND SEAL AT ROOF PENETRATION WEATHER TIGHT WITH DECKTITE.

⑤

600x450 EXHAUST AIR WEATHER HOOD AT A 45° ANGLE DOWNWARD C/W INSECT SCREEN. SEAL AT WALL PENETRATION WEATHER TIGHT.

⑥

CONTROL WIRING CONTINUES TO MOTORIZED DAMPER 'MD1'. SEE MEZZANINE HVAC PLAN 2/M6.1 FOR CONTINUATION.

⑦

CONTROL WIRING CONTINUES TO HANDS ON/OFF/AUTO SWITCH. SEE MAIN FLOOR HVAC PLAN 1/M6.1 FOR CONTINUATION.

⑧

RELOCATE EXISTING EXHAUST FAN C/W EXTERIOR LOUVRE TO NEW LOCATION SHOWN. MODIFY CONTROL WIRING/ELECTRICAL TO SUIT. PATCH WALL AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDINGS.

⑨

CONNECT NEW EXHAUST AIR DUCT TO RELOCATED EXHAUST FAN.

⑩

STUB 500x350 EXHAUST AIR DUCT UP HIGH ALONG U/S OF ROOF C/W METAL MESH STEEL GRILLE.

⑪

100ø DRYER VENT UP CONCEALED IN WALL TO MEZZANINE. SEE MEZZANINE PLAN 2/M6.1 FOR CONTINUATION.

⑫

100ø DRYER VENT UP FROM MAIN FLOOR CONCEALED IN WALL AND UP THRU ROOF TO GOOSE NECK, FLASH AND SEAL AT ROOF PENETRATION WEATHER TIGHT. SEE MAIN FLOOR PLAN 1/M6.1 FOR CONTINUATION.

⑬

HANG CONDENSING UNIT 'OAC' FROM EXTERIOR WALL UP HIGH WITH ANGLE IRON SUPPORTS BOLTED TO WALL.

⑭

REFRIGERANT LINE KIT THROUGH EXTERIOR WALL TO SPLIT SYSTEM INDOOR EVAPORATOR UNIT. SEAL AT WALL PENETRATION WEATHER TIGHT WITH CAULKING AND ESCUTCHEON.

⑮

550x400 EXHAUST AIR WEATHER HOOD AT A 45° ANGLE DOWNWARD C/W INSECT SCREEN. SEAL AT WALL PENETRATION WEATHER TIGHT.

⑯

300x250 EXHAUST AIR WEATHER HOOD AT A 45° ANGLE DOWNWARD C/W INSECT SCREEN. SEAL AT WALL PENETRATION WEATHER TIGHT.

HVAC GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY.

2. ALL DUCT SIZES ARE NET SIZES.

3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.

4. DUCTING TO BE CONNECTED TO FAN UNITS WITH CANVAS CONNECTIONS.

5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES.

6. DUCT ELBOW RADII TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION.

7. ALL DUCTING TO RUN EXPOSED IN A GOOD WORKMANSHIP LIKE MANNER AS PER SMACNA STANDARDS.

8. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.

9. INSULATE ALL EXHAUST DUCTWORK FOR A DISTANCE OF 3m. FROM THE BUILDING OUTLET COMPLETE WITH 25mm FOILBACK FIBREGLASS INSULATION TO BE CANVAS WRAPPED. INSULATE FRESH AIR DUCTWORK FOR ITS ENTIRETY COMPLETE WITH 50mm FOIL BACK FIBREGLASS INSULATION TO BE CANVAS WRAPPED.

10. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 100L AWAY FROM THE NEAREST FRESH AIR INTAKE.

11. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

H.V.A.C. EQUIPMENT SCHEDULE

RH1, RH2 & RH3 – RADIANT HEATER #1, #2 & #3

SUPPLY AND INSTALL SCHWANK "FLEXIBEL" MODEL STS-JZ-100 GAS-FIRED RADIANT HEATER OR EQUAL. UNIT TO PROVIDE 29.31KW HEATING INPUT, 23.45KW OUTPUT AND 6.1m LONG. UNIT TO BE COMPLETE WITH ROOF INTAKE TERMINATION KIT, ROOF VENT TERMINATION KIT, 45° REFLECTOR, THERMOSTAT, GAS FLEX CONNECTION, CHAINS AND MOUNTING HOOKS. CONTRACTOR TO INSTALL AS PER LOCAL GAS INSPECTION AUTHORITY REQUIREMENTS. CLEARANCE TO COMBUSTIBLES BELOW IS 1650mm.

OAC – OFFICE AIR CONDITIONING UNIT #1

SUPPLY AND INSTALL A MITSUBISHI ELECTRIC MODEL PKA-A12KA/PUY-A12NHA3 "MR. SLIM" DX SPLIT DUCTLESS COOLING UNIT OR EQUAL. PIPE EVAPORATOR UNIT CONDENSATE DRAIN TO SANITARY SEWER AS SHOWN ON DRAWING M6.2. UNIT TO BE COMPLETE WITH VARIABLE SPEED INVERTER, SUPER QUIET TECHNOLOGY, SELF DIAGNOSTIC FEATURE, AUTO RESTART AFTER POWER FAILURE, MULTI-FUNCTIONAL SLMSTART REMOTE WITH 7 DAY PROGRAMMABLE TIMER, WINDSCREENS, REFRIGERANT LINE KIT, R-410A REFRIGERANT CHARGE, INVERTER DRIVE AND COMPRESSOR. UNIT TO PROVIDE 3.51KW TOTAL COOLING WITH A SEER OF 15.3. OUTDOOR UNIT PUT-A12NHA3 TO BE 208/230 VOLT, SINGLE PHASE WITH AN MCA OF 13 AMPS, A MAXIMUM BREAKER SIZE OF 15 AMPS, A WEIGHT OF 41kg, AND A SOUND RATING OF 46dBA. INDOOR UNIT PKA-A12KA TO PROVIDE 200 L/S MAX AIR FLOW ON HIGH SPEED WITH A SOUND RATING OF 43dBA. 208/230 VOLT, SINGLE PHASE, MCA OF 1 AMP, MAXIMUM FUSE SIZE OF 15 AMPS, AND A WEIGHT OF 13kg. NOTE POWER ON INDOOR UNIT IS SUPPLIED BY OUTDOOR UNIT ON TERMINALS S1 & S2.

AS – ANTI-STRATIFICATION FAN

SUPPLY AND INSTALL A CANARM MODEL CP48HPWP 1200mm WHITE 9912 L/S REVERSIBLE ANTI-STRATIFICATION FAN OR EQUAL. UNIT TO BE COMPLETE WITH MOUNTING HARDWARE, SAFETY CABLE, AND REMOTE VARIABLE SPEED CONTROLLER. SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.

EF1 – EXHAUST FAN #1

SUPPLY AND INSTALL A GREENHECK MODEL SBE-1H20-3 SIDEWALL BELT DRIVEN PROPELLER EXHAUST FAN OR EQUAL. UNIT TO EXHAUST 1416 L/S @ 62.5 PA WITH A ½ H.P. BELT DRIVEN MOTOR @ 120 VOLT, SINGLE PHASE. UNIT TO BE COMPLETE WITH BACKDRAFT DAMPER, INSECT SCREEN, AND VIBRATION ISOLATORS. UNIT TO OPERATE VIA A HAND OFF/OFF/AUTO SWITCH AND BE REVERSED INTERLOCKED TO OPERATE WITH MOTORIZED DAMPER 'MD1'. IN "AUTO" POSITION, FAN TO OPERATE ON SIGNAL FROM CARBON MONOXIDE/NITROGEN DIOXIDE DETECTION SYSTEM 'GD1' WITH MOTORIZED DAMPER 'MD1' IN "ON" POSITION, FAN TO OPERATE CONTINUOUSLY WITH MOTORIZED DAMPER 'MD1'. UNIT WEIGHT IS APPROXIMATELY 27.2 KG. SEE DETAIL 1/M6.3

EF2 – EXHAUST FAN #2

SUPPLY AND INSTALL A MONOXIVENT BI SERIES BELT DRIVE FUME EXTRACTION FAN MODEL BI-180 OR EQUAL. UNIT TO EXHAUST 1888 L/S @ 1250 PA W/A 7.5 H.P. MOTOR @ 208 VOLT, 3 PHASE. UNIT TO BE HUNG FROM WALL WITH ANGLE IRON SUPPORTS. UNIT TO OPERATE FROM SEPARATE MAGNETIC STARTER/SWITCH IN SHOP AREA. UNIT WEIGHT IS APPROXIMATELY 181 KG.

MD1 – MOTORIZED DAMPER #1

SUPPLY AND INSTALL A GREENHECK MODEL WD-320, 914x914 MOTORIZED DAMPER OR EQUAL. UNIT TO BE C/W 115 VOLT DAMPER MOTOR AND AN AIROLITE MODEL K666 919x914 EXTERIOR EXHAUST LOUVRE C/W INSECT SCREEN AND PAINTED TO MATCH BUILDING EXTERIOR. UNIT 'MD1' TO OPERATE WITH EXHAUST FAN 'EF1' THROUGH ON/OFF/AUTO SWITCH AND ON SIGNAL FROM CARBON MONOXIDE/NITROGEN DIOXIDE DETECTOR 'GD1'. SEE DETAIL 2/M6.6

EH – EXHAUST HOSE

SUPPLY AND INSTALL A MONOXIVENT MODEL 11000-D OVERHEAD EXHAUST SYSTEM OR EQUAL. UNIT TO BE ATTACHED TO RIGID OVERHEAD EXHAUST DUCT MAIN COMPLETE WITH BALANCE, SWIVEL MOUNTING HOOK, SAFETY CABLE, HANGING CHAIN, LIFTING ELBOW, 10.4 METERS OF 1500mm-316C RATED SERIES 4000 HOSE, AND SERIES 8005 RUBBER NOZZLE WITH VICE GRIP AND LOCKING HAND DAMPER.

WEA – WELDING FUME EXTRACTION ARM

SUPPLY AND INSTALL A MONOXIVENT MODEL 15136-TT 4 METER EXTRACTION ARM C/W WALL BRACKET, 150mm SERIES 15000 HOSE, SWIVEL COLLAR, MOUNTING BOLTS, SWIVEL FLANGED ELBOW, FLANGE GASKET, FLANGE CLAMP, INTERNAL ARM MOUNTING SLEEVE AND PIVOT JOINT, ARM, HOOD, DAMPER AND D-SERIES BLOWER EXHAUST FAN MODEL D10 TO PROVIDE 665 CFM @ 1245 Pa S.P. W/A 1 H.P. TEFC MOTOR @ 208 VOLT, 3 PHASE. UNIT TO OPERATE FROM A SWITCH NEARBY INSTALLATION LOCATION. AS SHOWN. UNIT WEIGHT IS APPROXIMATELY 34kg.

GD1 – CARBON MONOXIDE/NITROGEN DIOXIDE DETECTOR #1

SUPPLY AND INSTALL A CRITICAL ENVIRONMENT TECHNOLOGIES GEM-II MODEL GEM-ECCO-END-N MULTI-PURPOSE SELF-CONTAINED GAS MONITOR LOCATED AS PER PLAN. UNIT TO BE COMPLETE WITH INTEGRAL SENSOR, INTEGRAL PLUG AND PLAY "SMART" SENSORS, THERMAL RESETTING FUSE, LED INDICATOR LIGHTS, PVC ENCLOSURE, AND 4-20mA LINEAR OUTPUT SIGNAL UNIT 'GD1' TO START EXHAUST FAN 'EF1' AND OPEN MOTORIZED DAMPER 'MD1' ON LOW ALARM CONDITION WHEN CO CONCENTRATION EXCEEDS 25 PPM AND/OR WHEN NO<sub>2</sub> CONCENTRATION EXCEEDS 3 PPM. UNIT TO INDICATE VISUAL AND AUDIBLE ALARM ON HIGH ALARM CONDITION WHEN NO<sub>2</sub> CONCENTRATION EXCEEDS 5 PPM AND/OR WHEN CO CONCENTRATION EXCEEDS 190 PPM. UNIT ELECTRICAL TO BE 12-28 VAC. UNIT TO BE COMPLETE WITH ENCLOSED EXTERNAL TRANSFORMER (120V ~ 22VAC) TIB-2250. MOUNT UNIT 1200 TO 1500mm ABOVE FINISHED FLOOR.

WM/D – STACKABLE CLOTHES WASHING MACHINE/DRYER

STACKABLE CLOTHES WASHING MACHINE & DRYER SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR, PROVIDE 100ø VENT UP THRU ROOF AS SHOWN. SEE DRAWING M6.2 FOR PLUMBING REQUIREMENTS.

EBH – ELECTRIC BASEBOARD HEATER

QUELLET "SUBLINE" MODEL QDLU502 WALL MOUNTED ELECTRIC BASEBOARD HEATER OR EQUAL. UNIT TO PROVIDE 1500 WATTS HEATING @ 120 VOLT, SINGLE PHASE. UNIT TO BE 1727mm LONG AND WHITE IN COLOR. UNIT TO BE C/W REMOTE DIGITAL HEATING ONLY THERMOSTAT. UNIT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.

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Professional Seal:

Any representations in the tender documents are for the general information of bidders and are not in any way warranted or guaranteed by or on behalf of the owner or the owner's consultants and its subcontract's employees, and neither the owner nor its consultants or its employees, shall be liable for any representations negligent or otherwise contained in the documents. These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract. The contractor shall check all dimensions, elevations and other data as represented on all drawings in the set for consistency and correctness and report to the consultant any discrepancies prior to proceeding with construction. Any costs to the contractor arising from failure to execute this requirement is a cost to the contractor and not to the owner nor the consultant. This term supercedes the specifications. All construction work to be completed in accordance with all applicable code and requirements of all utilities as set out by governing authorities.

Project Title:

**INDIAN HEAD AAFB BUILDING B017 ADDITION**

INDIAN HEAD, SASKATCHEWAN

Issue Record:

Revisions:

Renovated HVAC Plan

Designed By: DJT Scale: AS INDICATED

Drawn By: SMH Date: MAY 2015

Checked By: GAS Date: 2015.05.22

Project No.: 4796

M6.1

Revision No.: - Date: -

Issued For: TENDER

Date Issued: 2015.06.15

Date Plotted: 2015.06.15