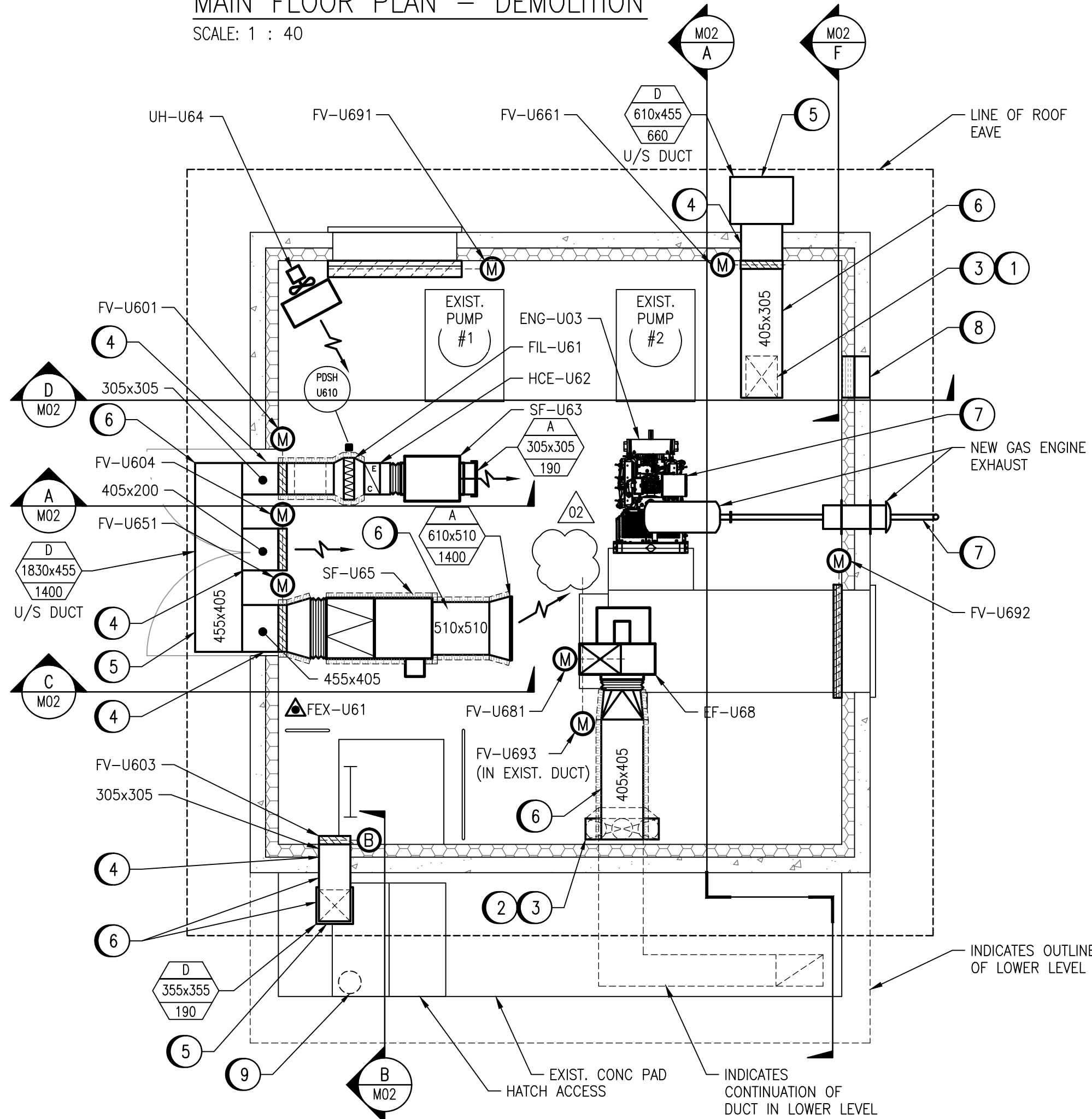


MAIN FLOOR PLAN - DEMOLITION
SCALE: 1 : 40



MAIN FLOOR PLAN - NEW WORK
SCALE: 1 : 40

HEATING COIL SCHEDULE									
TAG	SERVICE	AIRFLOW (L/s)	EAT (C°)	LAT (C°)	CAPACITY (kW)	SIZE (mm)	VOLTS/Ø	ELEMENT	NOTES
HCE-U62	STATION SUPPLY AIR	190	-40	15	11.0	305 x 305	575/3	OPEN COIL	SCR CONTROL
HCE-U66	WET WELL SUPPLY AIR	660	-40	4	35.0	610 x 610	575/3	FINNED TUBULAR	SCR CONTROL

FAN SCHEDULE						
TAG	SERVICE	AIR FLOW (L/s)	ESP (Pa)	MOTOR (kW)	VOLTS/Ø	NOTES
EF-U68	WET WELL EXHAUST AIR	723	375	0.75	120/1	GREENHECK SWD-15-VG, ECM MOTOR C/W TWO SPEED FACTORY CONTROLLER, SPARK B
SF-U63	STATION SUPPLY AIR	190	310	0.56	575/3	GREENHECK BSQ-80
SF-U65	STATION COOLING AIR	1400	375	1.49	575/3	GREENHECK BSQ-140, C/W FACTORY FILTER, 510x510x50 MERV 8 FILTER, INSULATED FAN AND FILTER HOUSING
SF-U67	WET WELL SUPPLY AIR	660	310	0.56	120/1	GREENHECK SQ-140-VG, ECM MOTOR C/W TWO SPEED FACTORY CONTROLLER

STATIONARY ENGINE SCHEDULE								
TAG	SERVICE	MIN. POWER (kW/hp)	FUEL	FUEL CONSUMPTION @ RATED LOAD (kg/hr)	MAX. MIN. FUEL SUPPLY PRESSURE TO ENGINE (kPa)	RPM	ELECTRICS	DESCRIPTION
ENG-U03	STANDBY	56/75	NG	17.32	2.7 / 1.7	1,800	12V	PSI 5.7L NATURALLY ASPIRATED, STAINLESS STEEL, CRITICAL GRADE SILENCER, STAINLESS STEEL EXHAUST, INSULATED WALL THIMBLE

UNIT HEATER SCHEDULE					
TAG	SERVICE	AIR FLOW (L/s)	CAPACITY (kW)	VOLTS/Ø	NOTES
UH-U64	MAIN FLOOR	328	10.0	575/3	QUELLET OAS10036, C/W 24V RELAY, TRANSFORMER AND WALL MOUNTED THERMOSTAT

FILTER SCHEDULE			
TYPE	SERVICE	SIZE	DESCRIPTION
FIL-U61	MAIN FLOOR OUTDOOR AIR	510 x 405 x 100	CAMFIL 30/30

GRILLE AND DIFFUSER SCHEDULE		
TYPE	SERVICE	DESCRIPTION
A	SUPPLY AIR	NAIOLR 67SV-0, BALANCE DAMPER, SINGLE DEFLECTION
B	RETURN AIR	NAIOLR 67FV, ZERO DEFLECTION
C	SUPPLY/EXHAUST AIR	PRICE NSE1, C/W INSECT SCREEN
D	SUPPLY AIR	NAIOLR 67SV, SINGLE DEFLECTION

FIRE EXTINGUISHER SCHEDULE			
TAG	RATING/WEIGHT (MINIMUM)	TYPE	COMMENT
FEX-U61	2A, 5BC, 4.5 KG (10 LB)	DRY CHEMICAL	NEW

VENTILATION SCHEDULE			
AREA	VOLUME (M³)	MIN. AIR CHANGES PER HOUR	MIN. AIRFLOW (L/s)
MAIN FLOOR	93	6	190
WET WELL	344	6	660

DAMPER SCHEDULE										
TAG	SERVICE	AIRFLOW (L/s)	SIZE (mm)	BLADE TYPE	MOUNT	MIN. REQ. TORQUE (Nm)	VOLTS/Ø	CONTROL SIGNAL	FAIL POSITION	NOTES
FV-U601	MAIN FLOOR OUTDOOR AIR	190	305 x 305	OB	FLANGE TO DUCT	1.1	120 AC	0 - 10 VDC	CLOSED	TAMCO 9000 SC
FV-U602	MAIN FLOOR RETURN AIR	190	305 x 305	OB	FLANGE TO DUCT	MECHANICALLY LINKED TO FV-U601				TAMCO 1000
FV-U603	MAIN FLOOR RELIEF	190	305 x 305	PB	REAR FLANGE	N/A	N/A	N/A	N/A	TAMCO 7000 WT
FV-U604	COMBUSTION AIR	70	405 x 200	PB	REAR FLANGE	0.6	24 DC	ON/OFF	OPEN	TAMCO 9000 SC
FV-U651	COOLING AIR	1400	455 x 405	PB	FLANGE TO DUCT	2.4	120 AC	ON/OFF	CLOSED	TAMCO 9000 SC
FV-U661	WET WELL OUTDOOR AIR	660	405 x 300	PB	FLANGE TO DUCT	1.6	120 AC	ON/OFF	CLOSED	TAMCO 9000 SC
FV-U681	WET WELL EXHAUST	723	305 x 405	PB	FLANGE TO DUCT	1.6	120 AC	ON/OFF	CLOSED	TAMCO 9000 SC
FV-U691	N.G. ENGINE COOLING	3285	1220 x 1220	PB	FLANGE TO DUCT	12.6	24 DC	ON/OFF	CLOSED	EXISTING DAMPER
FV-U692	N.G. ENGINE COOLING	3285	990 x 990	PB	FLANGE TO DUCT	12.6	24 DC	ON/OFF	CLOSED	EXISTING DAMPER
FV-U693	N.G. ENGINE COOLING	3285	990 x 305	PB	FLANGE TO DUCT	8.4	24 DC	ON/OFF	OPEN	EXISTING DAMPER

LEGEND:

- EXISTING
- NEW WORK
- - - EXISTING TO BE REMOVED
- Ⓜ MOTORIZED DAMPER
- Ⓟ BACKDRAFT DAMPER
- Ⓛ BALANCE DAMPER
- ⚠ FIRE EXTINGUISHER
- XX TAG WIDTH x HEIGHT (mm)
- FLOW (L/s)

DESIGN CRITERIA:

THE BUILDING ENVIRONMENTAL CONTROL SYSTEMS SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED TO THE REQUIREMENTS OF THE MANITOBA BUILDING CODE. THE MAIN FLOOR IS VENTILATED AT A MINIMUM OF 6 AIR CHANGES PER HOUR CONTINUOUS. WHEN THE MAIN FLOOR IS UNOCCUPIED, THE SYSTEM WILL CONTINUE TO PROVIDE 6 AIR CHANGES PER HOUR WITH 75% RECIRCULATED AIR. THE WET WELL IS VENTILATED AT A MINIMUM OF 6 AIR CHANGES PER HOUR CONTINUOUS WHEN OCCUPIED AND 3 AIR CHANGES WHEN UNOCCUPIED. MORE SPECIFICALLY AS FOLLOWS:

- OUTDOOR CONDITIONS OF -33°C IN WINTER.
- MAIN FLOOR INDOOR CONDITIONS OF 15°C IN WINTER.
- WET WELL SUPPLY AIR AT MINIMUM OF 4°C IN WINTER.

DEMOLITION NOTES

- Ⓐ REMOVE EXISTING FAN, DUCT HEATER, LOUVER AND DUCTWORK.
- Ⓑ REMOVE EXISTING UNIT HEATERS.
- Ⓒ REMOVE EXISTING NATURAL GAS ENGINE, STAND, RADIATOR, AND EXHAUST SYSTEM. RE-USE CLUTCH AND UNIVERSAL JOINTS.
- Ⓓ CUT AND REMOVE LOWER 3m SECTION OF DUCT AND DRIVE SHAFT LOCATED IN WET WELL.
- Ⓔ REMOVE PLYWOOD SECTIONS OF THE CEILING AND BATT INSULATION AS REQUIRED TO COMPLETE MECHANICAL WORK. REPLACE WHEN WORK IS COMPLETE. ENSURE INTEGRITY OF VAPOUR BARRIER IS MAINTAINED.

NEW WORK NOTES

- ① INCREASE SIZE OF EXISTING FLOOR PENETRATION TO ALLOW FOR 405mm x 305mm DUCTWORK.
- ② CORE THREE (3) NEW FLOOR PENETRATIONS.
- ③ SCAN CONCRETE FLOOR FOR REBAR LOCATIONS AND COORDINATE WITH CONTRACT ADMINISTRATOR PRIOR TO MAKING PENETRATIONS.
- ④ NEW PENETRATION THROUGH CONCRETE BLOCK ABOVE LEVEL OF EAVE.
- ⑤ CUT SOFFIT AND WOOD BLOCKING AS REQUIRED TO ALLOW FOR NEW LOUVER. FINISH TO MAKE WEATHER TIGHT.
- ⑥ NEW STAINLESS STEEL DUCTWORK C/W STAINLESS STEEL GOOSENECK.
- ⑦ NEW NATURAL GAS POWERED ENGINE. CONNECT TO EXISTING PUMP #2. RECONNECT EXISTING GAS LINE, NEW EXHAUST SILENCER AND WALL THIMBLE. MODIFY EXISTING SHAFT GUARD TO FIT NEW ENGINE. MODIFY EXISTING BASE TO SUIT NEW ENGINE. EXHAUST TO BE VENTED VERTICALLY THE SAME AS EXISTING. COORDINATE WITH MANITOBA HYDRO FOR INSTALLATION OF NEW 5 PSI REGULATOR AND METER. RE-USE EXISTING CLUTCH AND UNIVERSAL JOINTS. CONTRACTOR TO DETERMINE ON SITE LENGTH AND DIAMETER OF NEW ENGINE SHAFT TO FIT EXISTING EQUIPMENT.
- ⑧ FILL IN EXISTING PENETRATIONS. MATCH EXISTING BRICKWORK. MORTAR AS PER SECTION 030510 OF THE SPECIFICATIONS.
- ⑨ NEW 304SS DUCT, 3 METERS LONG C/W NEW 304SS PLATE FLANGE WELDED TO DUCT TO REPLACE LOWER 3m THAT WAS REMOVED. ATTACH TO EXISTING STEEL DUCT WITH NEW PLATE FLANGE WELDED TO EXISTING DUCT. ISOLATE THE TWO FLANGES GALVANICALLY. EXISTING DUCT IS APPROXIMATELY Ø300mm, 10 GAUGE. CONFIRM DIAMETER AND GAUGE OF EXISTING DUCT ON-SITE AND MATCH.

DRAWING NUMBER	REFERENCE DRAWINGS
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NO.	REVISIONS	DATE	DESIGN	CHECK
02	DELETED NOTE 10, ADDED NOTE E	2016/09/14	TS	-
01	REVISED NOTE 9, ADDED NOTE 10	2016/09/14	TS	-
00	ISSUED FOR TENDER, BID OPP. 767-2016	2016/08/23	TS	SN

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APPROVED BY: I. PARKINSON

SCALE: 1:40
ISSUED FOR CONSTRUCTION BY: K. ZUREK
DATE: 2016-08-29

CONSULTANT NO.:

ENGINEER'S SEAL

ORIGINAL DRAWING SEALED BY:
T. R. SCHICK
SNC-LAVALIN INC.
MEMBER #21892
2016-08-29
REV. 00

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

ROUTE 90 UNDERPASS PUMPING STATION
2016 UPGRADES
MECHANICAL FLOOR PLAN
MAIN FLOOR

CITY DRAWING NUMBER: 1-0310U-M0001
SHEET: 001
REV: 02
SIZE: A1