GENERAL NOTES-PROJECT

* COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
* THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
* FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
* FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
* LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS, AND OTHER ELECTRICAL EQUIPMENT.
* ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
* PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
* FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
* INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
* LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
* INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
* REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
* THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN TENANT SPACE AND WITHIN CLOSE PROXIMITY OF TENANT SPACE.
* WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK.

GENERAL NOTES-FIRE PROTECTION

* THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.
* DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
* THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
* ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM.
* PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE REVISED FLOOR PLAN. PROVIDE A COMPLETE WET TYPE SYSTEM INCLUDING NEW BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
* THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
* THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE ELECTRICAL CONTRACTOR PRIOR TO STARTING WORK.

GENERAL NOTES-HVAC

* SEAL ALL WALL PENETRATIONS WATER TIGHT.
* ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.

INDEX OF MECHANICAL DRAWINGS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed **PROFESSIONAL ENGINEER** under the laws of the State of Minnesota.

Signature

PAUL D. HASLACH
Name

24488 License #

07/17/14 Date

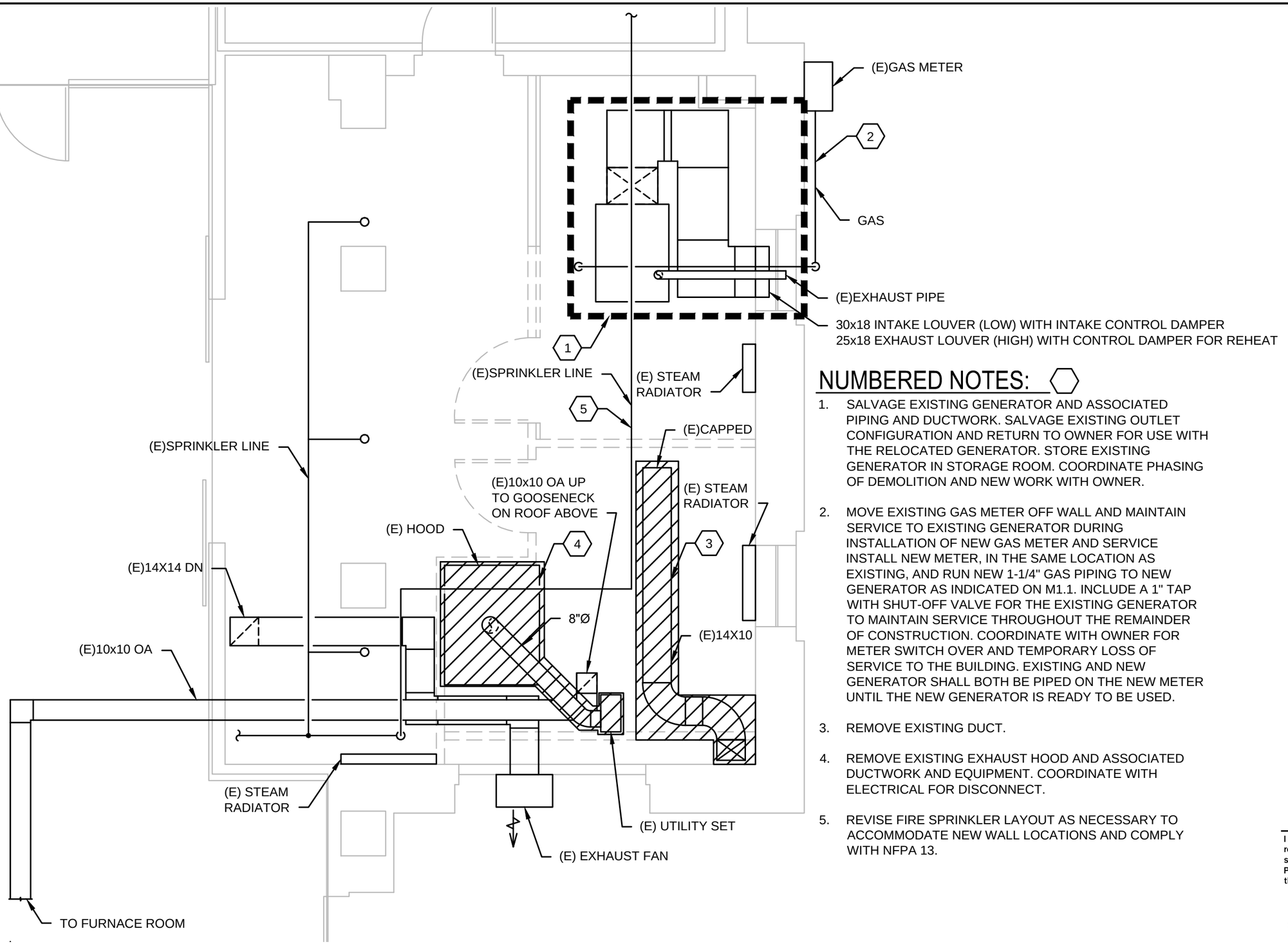
M0.1

Date: 7/17/14
Drawn: KJD
Checked: LAO
Proj.No.: 83295

Gausman & Moore
Mechanical and Electrical Engineers

City of Duluth City Hall
Generator Replacement

MECHANICAL TITLE SHEET



NUMBERED NOTES:

1. SALVAGE EXISTING GENERATOR AND ASSOCIATED PIPING AND DUCTWORK. SALVAGE EXISTING OUTLET CONFIGURATION AND RETURN TO OWNER FOR USE WITH THE RELOCATED GENERATOR. STORE EXISTING GENERATOR IN STORAGE ROOM. COORDINATE PHASING OF DEMOLITION AND NEW WORK WITH OWNER.
2. MOVE EXISTING GAS METER OFF WALL AND MAINTAIN SERVICE TO EXISTING GENERATOR DURING INSTALLATION OF NEW GAS METER AND SERVICE INSTALL NEW METER, IN THE SAME LOCATION AS EXISTING, AND RUN NEW 1-1/4" GAS PIPING TO NEW GENERATOR AS INDICATED ON M1.1. INCLUDE A 1" TAP WITH SHUT-OFF VALVE FOR THE EXISTING GENERATOR TO MAINTAIN SERVICE THROUGHOUT THE REMAINDER OF CONSTRUCTION. COORDINATE WITH OWNER FOR METER SWITCH OVER AND TEMPORARY LOSS OF SERVICE TO THE BUILDING. EXISTING AND NEW GENERATOR SHALL BOTH BE PIPED ON THE NEW METER UNTIL THE NEW GENERATOR IS READY TO BE USED.
3. REMOVE EXISTING DUCT.
4. REMOVE EXISTING EXHAUST HOOD AND ASSOCIATED DUCTWORK AND EQUIPMENT. COORDINATE WITH ELECTRICAL FOR DISCONNECT.
5. REVISE FIRE SPRINKLER LAYOUT AS NECESSARY TO ACCOMMODATE NEW WALL LOCATIONS AND COMPLY WITH NFPA 13.

1 / M1.0 GROUND FLOOR DEMOLITION PLAN

SCALE: 0' 4'

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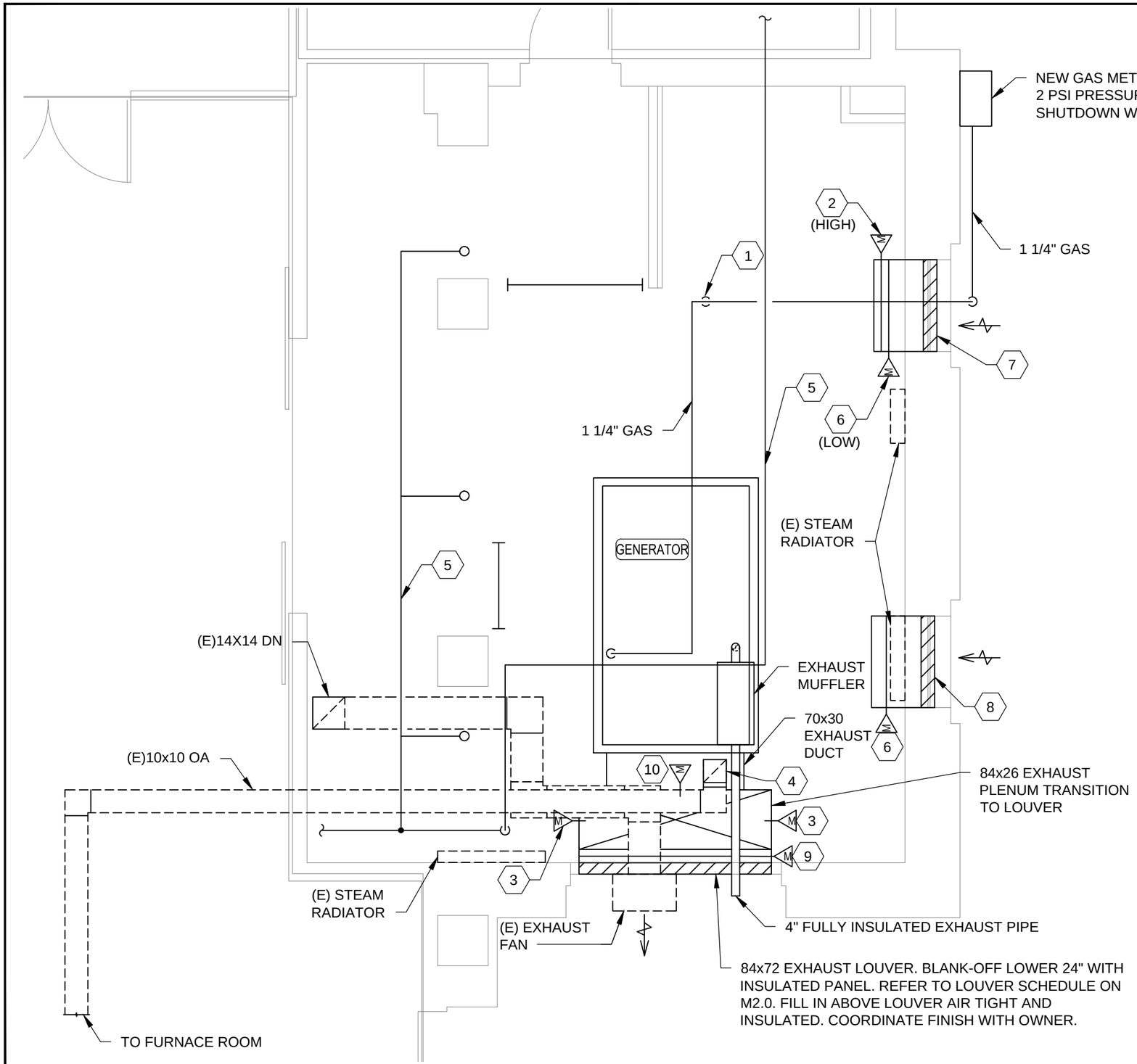
Mechanical and Electrical Engineers

DULUTH

City of Duluth City Hall
Generator Replacement

GROUND FLOOR DEMOLITION PLAN



1 / M1.1 GROUND FLOOR MECHANICAL PLAN

SCALE: 0' 4'

NUMBERED NOTES:

1. PROVIDE TEMPORARY CONNECTION WITH SHUT-OFF VALVE TO EXISTING GENERATOR BEFORE REMOVING EXISTING GAS PIPING. COORDINATE PHASING WITH OWNER PRIOR TO WORK.
2. 36x12 INSULATED COMBUSTION AIR DAMPER
3. 24x46 RECIRCULATION AIR MOTORIZED DAMPER. REFER TO 1/M2.0.
4. (E)10x10 OA UP TO GOOSENECK ON ROOF ABOVE
5. (E) FIRE SPRINKLER LINES. MODIFY SYSTEM AS NECESSARY TO COMPLY WITH NFPA 13.
6. INSULATED MOTORIZED INTAKE DAMPER PER SPECIFICATIONS.
7. 36x66 INTAKE LOUVER. REFER TO LOUVER SCHEDULE ON M2.0. BLANK-OFF LOWER 8" WITH INSULATED PANEL. FILL IN ABOVE LOUVER AIR TIGHT AND INSULATED. COORDINATE FINISH WITH OWNER.
8. 36x72 INTAKE LOUVER. REFER TO LOUVER SCHEDULE ON M2.0. BLANK-OFF LOWER 8" WITH INSULATED PANEL. FILL IN ABOVE LOUVER AIR TIGHT AND INSULATED. COORDINATE FINISH WITH OWNER.
9. INSULATED MOTORIZED EXHAUST DAMPER PER SPECIFICATIONS.
10. 82x28 RECIRCULATION AIR MOTORIZED DAMPER. REFER TO 1/M2.0.

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Mechanical and Electrical Engineers

DULUTH MINNESOTA

City of Duluth City Hall
Generator Replacement

GROUND FLOOR MECHANICAL PLAN

LOUVER SCHEDULE

UNIT NO.	LOCATION	TYPE	MANUFACTURER	MODEL NO.	LENGTH (IN)	WIDTH (IN)	FREE AREA (SQ. FT)	WATER PENETRATION (OZ/FT2)	CFM	STATIC PRESSURE (IN W.G.)	REMARKS
L-1	DOOR	EXHAUST	GREENHECK	ESD-435	72	84	24.67	<0.01	19000	.2	BIRDSCREEN
L-2	WINDOW	INTAKE	GREENHECK	ESD-435	72	36	10.29	<0.01	11575	.2	BIRDSCREEN
L-3	WINDOW	INTAKE	GREENHECK	ESD-435	66	36	9.36	<0.01	7425	.2	BIRDSCREEN

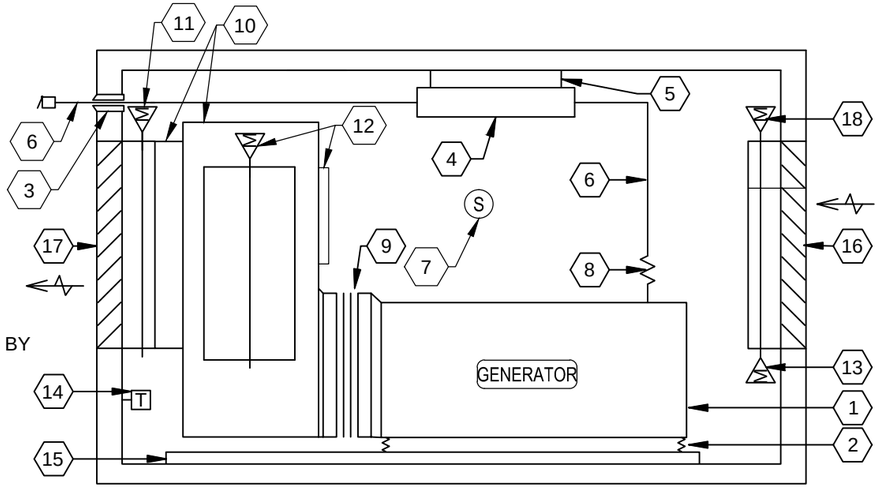
DAMPER SEQUENCE OF OPERATION:

IN GENERATOR RUN MODE:

- ON START UP OF THE GENERATOR:
  - RECIRCULATION MOTORIZED DAMPERS ARE NORMALLY OPEN
  - COMBUSTION AIR MOTORIZED DAMPER SHALL OPEN
  - WHEN ROOM TEMPERATURE RISES ABOVE SETPOINT OF 95°F (ADJ.) THE OUTSIDE AIR MOTORIZED DAMPERS AND EXHAUST AIR MOTORIZED DAMPER SHALL OPEN. ONCE THE OUTDOOR AIR AND EXHAUST AIR DAMPERS ARE PROVEN OPEN BY END SWITCH, THE RECIRCULATION MOTORIZED DAMPERS SHALL CLOSE.
- IN GENERATOR STOP MODE:
  - OUTDOOR AIR, COMBUSTION AIR, AND EXHAUST AIR MOTORIZED DAMPERS SHALL CLOSE.
  - RECIRCULATION AIR DAMPERS SHALL OPEN.

EMERGENCY GENERATOR NUMBERED NOTES:

1. EMERGENCY GENERATOR FURNISHED AND INSTALLED BY DIVISION 26 CONTRACTOR.
2. SPRING ISOLATORS. FURNISHED AND INSTALLED BY DIVISION 26 CONTRACTOR.
3. EXHAUST FLUE WALL THIMBLE. FURNISHED BY DIVISION 23 CONTRACTOR AND INSTALLED BY DIVISION 23 CONTRACTOR.
4. MUFFLER FURNISHED BY DIVISION 26 CONTRACTOR AND INSTALLED BY DIVISION 23 CONTRACTOR.
5. MUFFLER HANGERS BY DIVISION 23 CONTRACTOR AND INSTALLED BY DIVISION 23 CONTRACTOR.
6. EXHAUST FLUE. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
7. DAMPER RESET TEMPERATURE SENSOR. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
8. EXHAUST FLUE FLEX CONNECTION. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
9. DUCT TRANSITION AND FLEX CONNECTION. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
10. EXHAUST AIR DUCTWORK. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
11. EXHAUST AIR MOTORIZED DAMPER, NORMALLY CLOSED. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
12. RECIRCULATION AIR MOTORIZED DAMPER, NORMALLY OPEN. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
13. OUTSIDE AIR MOTORIZED DAMPER, NORMALLY CLOSED. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
14. EXHAUST, RECIRCULATION, AND OUTSIDE AIR MOTORIZED DAMPER CONTROL. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR. REFER TO CONTROL SEQUENCE ON M2.0.
15. CONCRETE HOUSEKEEPING PAD. FURNISHED AND INSTALLED BY DIVISION 26 CONTRACTOR.
16. INTAKE AIR LOUVER. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
17. EXHAUST AIR LOUVER. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.
18. COMBUSTION AIR MOTORIZED DAMPER, NORMALLY CLOSED. FURNISHED AND INSTALLED BY DIVISION 23 CONTRACTOR.



1 M2.0 EMERGENCY GENERATOR SCHEMATIC

NO SCALE

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Signature

PAUL D. HASLACH

Name

24488 License #

07/17/14 Date

M2.0

Date: 7/17/14 Drawn: KJD Checked: LAO Proj.No.: 83295

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DULUTH MINNESOTA

City of Duluth City Hall Generator Replacement

MECHANICAL DETAILS AND SCHEDULES

INDEX OF ELECTRICAL DRAWINGS

GENERAL NOTES:

A ELECTRICAL CONTRACTOR TO INCLUDE DEMOLITION INDICATED ON THESE PLANS TO FACILITATE 45 KVA GENERATOR AND ASSOCIATED GEAR REMOVAL AND INSTALLATION OF NEW 300 KVA GENERATOR AND ASSOCIATED GEAR. THIS INCLUDES BUT IS NOT LIMITED TO GENERAL CONSTRUCTION, MECHANICAL, AND ELECTRICAL WORK FOR COMPLETE AND OPERATIONAL SYSTEM. COORDINATE ALL PHASES WITH OWNER TO FACILITATE DEMOLITION AND NEW CONSTRUCTION. COORDINATE ALL OUTAGES WITH OWNER PER SPECIFICATIONS. OWNER RETAINS RIGHT TO FIRST SALVAGE. PROVIDE DISPOSAL OF ALL REMOVED MATERIAL.

B INCLUDE CUTTING, PATCHING, AND RESTORATION OF FINISHES NECESSARY FOR THIS WORK. SURFACES DAMAGED BY THIS WORK AND SPACES AROUND CONDUITS PASSING THROUGH FLOORS AND WALLS SHALL BE NEATLY CUT OR PENETRATED IN ANY MANNER WITHOUT PRIOR APPROVAL BY AUTHORIZED REPRESENTATIVE. THE SPACES AROUND THE CONDUITS SHALL BE SEALED TO PREVENT ENTRANCE OF MOISTURE. PATCHED AND FINISHED TO MATCH.

C LEAVE THE SITE CLEAN AND READY FOR OCCUPANCY. REMOVE DIRT, DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT AND WIRE SCRAPS AND MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THIS DIVISION OF THE WORK DURING CONSTRUCTION. COMPONENTS SHALL BE FREE OF DUST, GRIT, AND FOREIGN MATERIALS LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.

LP3LS-G03 — LP3LS-G03 — LP3LS-G03

PANEL NAME: LP3LS-G03		VOLT:	208Y/120								BUS SIZE:	100 AMPS	REMARKS:		
LOCATION:		PH:	3								MAIN BRKR:	100 AMPS	18K AIC RATING		
MOUNTING: SURFACE		WIRE:	4	V.A.	V.A.	V.A.	V.A.	V.A.	V.A.		GND BUS:	YES	GR: NO		
RM. NO.	LOAD DESCRIPTION	TYPE	BRKR	CCT							CCT	BRKR	TYPE	LOAD DESCRIPTION	RM. NO.
	PANEL MNTED RECEPT	R	20/1	1	180			500			2	20/1	C	BATTERY CHARGER	
	ROOM LIGHTING	L	20/1	3		500			1600		4	20/1	N	BLOCK HEATER	
	SPARE		20/1	5			0			150	6	20/1	M	RE-CIRC DAMPERS	
	SPARE		20/1	7	0			150			8	20/1	M	INTAKE EXHAUST DAMPERS	
	SPARE		20/1	9		0			300		10	20/1	C	GEN SET CONTROL PANEL	
	SPARE		20/1	11			0			0	12	20/1		SPARE	
	SPARE		20/1	13	0			0			14	20/1		SPARE	
	SPARE		20/1	15		0			0		16	20/1		SPARE	
	SPARE		20/1	17			0			0	18	20/1		SPARE	
	SPARE		20/1	19	0			0			20	20/1		SPARE	
	SPACE & BUS			21						0	22	20/1		SPARE	
	SPACE & BUS			23							24			SPACE & BUS	
	SPACE & BUS			25							26			SPACE & BUS	
	SPACE & BUS			27							28			SPACE & BUS	
	SPACE & BUS			29							30			SPACE & BUS	
	SPACE & BUS			31							32			SPACE & BUS	
	SPACE & BUS			33							34			SPACE & BUS	
	SPACE & BUS			35							36			SPACE & BUS	
	SPACE & BUS			37							38			SPACE & BUS	
	SPACE & BUS			39							40			SPACE & BUS	
	SPACE & BUS			41							42			SPACE & BUS	

PER PHASE TOTAL VA	830	2400	150
TOTAL CONNECTED VA		3380	V.A.
TOTAL CONNECTED AMPS		9	AMPS
3 x HIGHEST PHASE		7200	V.A.
HIGHEST AMPS		20	AMPS

7/16/2014

LOAD TYPE		CONNECTED	MULTIPLIER	TOTAL
L =	LIGHTING	500	X 1.25 =	625
C =	CONTINUOUS	800	X 1.25 =	1000
LM =	LARGEST MOTOR	0	X 1.25 =	0
M =	REMAINING MOTORS	300	X 1 =	300
N =	NON-CONTINUOUS	1600	X 1 =	1600
R =	RECEPTACLE	180	* =	180
K/K2/K3 =	KITCHEN EQUIP	0	** =	0
TOTAL CALCULATED LOAD (VA)			=	3705
TOTAL CALCULATED AMPS			=	10

* 1ST 10KVA + (>10KVA)/2
** 0 PIECES @ 100%

LP3E-G04 — LP3E-G04 — LP3E-G04

PANEL NAME: LP3E-G04		VOLT:	208Y/120								BUS SIZE:	225 AMPS	REMARKS: EXISTING PANEL		
LOCATION:		PH:	3								MAIN BRKR:	MLO			
MOUNTING: SURFACE		WIRE:	4	V.A.	V.A.	V.A.	V.A.	V.A.	V.A.		GND BUS:	YES	GR:		
RM. NO.	LOAD DESCRIPTION	TYPE	BRKR	CCT							CCT	BRKR	TYPE	LOAD DESCRIPTION	RM. NO.
	SUB-PANEL PENT-HOUSE	C	30	1							2	60	C	POLICE DESK EMPNL	
		C	2	3							4	/	C		
	GARAGE DOOR	N	20/1	5							6	3	C		
	TELEPHONE RELAY	N	20/1	7							8	40	C	POLICE TRAINING PNL	
	GARAGE DOOR	N	20/1	9							10	/	C		
	TELEPHONE RELAY	N	20/1	11							12	3	C		
	SPACE & BUS			13							14			SPACE & BUS	
	SPACE & BUS			15							16			SPACE & BUS	
	SPACE & BUS			17							18			SPACE & BUS	
	SPACE & BUS			19							20			SPACE & BUS	
	SPACE & BUS			21							22			SPACE & BUS	
	SPACE & BUS			23							24			SPACE & BUS	
	SPACE & BUS			25							26			SPACE & BUS	
	SPACE & BUS			27							28			SPACE & BUS	
	SPACE & BUS			29							30			SPACE & BUS	
	SPACE & BUS			31							32			SPACE & BUS	
	SPACE & BUS			33							34			SPACE & BUS	
	SPACE & BUS			35							36			SPACE & BUS	
	SPACE & BUS			37							38			SPACE & BUS	
	SPACE & BUS			39							40			SPACE & BUS	
	SPACE & BUS			41							42			SPACE & BUS	

PER PHASE TOTAL VA	0	0	0
TOTAL CONNECTED VA		0	V.A.
TOTAL CONNECTED AMPS		0	AMPS
3 x HIGHEST PHASE		0	V.A.
HIGHEST AMPS		0	AMPS

7/1/2014

LOAD TYPE		CONNECTED	MULTIPLIER	TOTAL
L =	LIGHTING	0	X 1.25 =	0
C =	CONTINUOUS	0	X 1.25 =	0
LM =	LARGEST MOTOR	0	X 1.25 =	0
M =	REMAINING MOTORS	0	X 1 =	0
N =	NON-CONTINUOUS	0	X 1 =	0
R =	RECEPTACLE	0	* =	0
K/K2/K3 =	KITCHEN EQUIP	0	** =	0
TOTAL CALCULATED LOAD (VA)			=	0
TOTAL CALCULATED AMPS			=	0

* 1ST 10KVA + (>10KVA)/2
** 0 PIECES @ 100%

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

Signature

DAVE T. BLUME
Name

24671 — License #

07/17/14 — Date

E0.1

Date: 07/17/14
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Proj.No.: 83295

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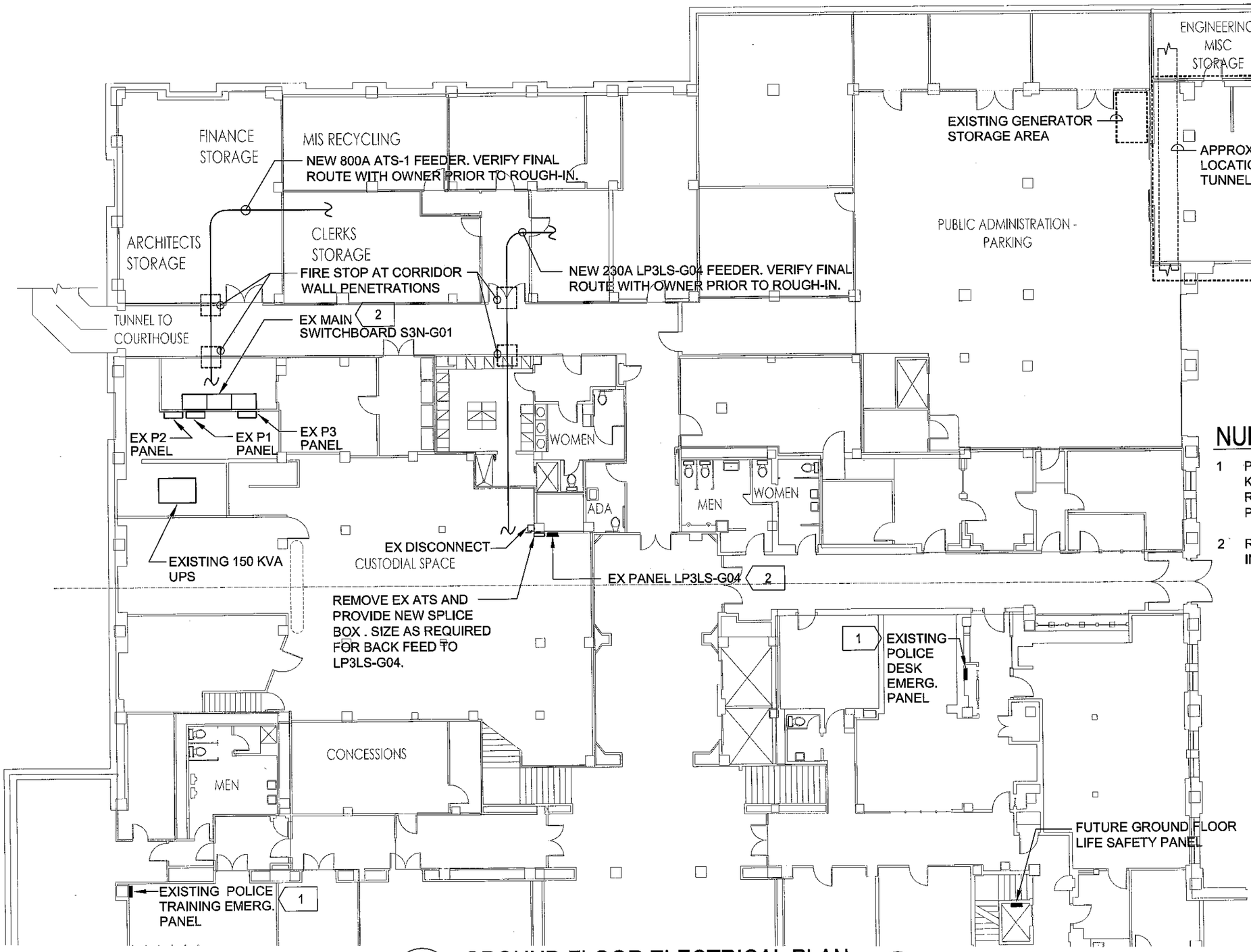
DULUTH MINNESOTA

City of Duluth City Hall Generator Replacement

TITLE SHEET



NUMBERED NOTES: X

1 PANEL CONNECTED TO EXISTING 45 KVA GENERATOR. POWER TO RECONNECT TO NON-EMERGENCY POWER SOURCE.

2 RE-LABEL EXISTING PANEL AS INDICATED.

1 E1.1 GROUND FLOOR ELECTRICAL PLAN

SCALE: 0' 16'

N PLAN

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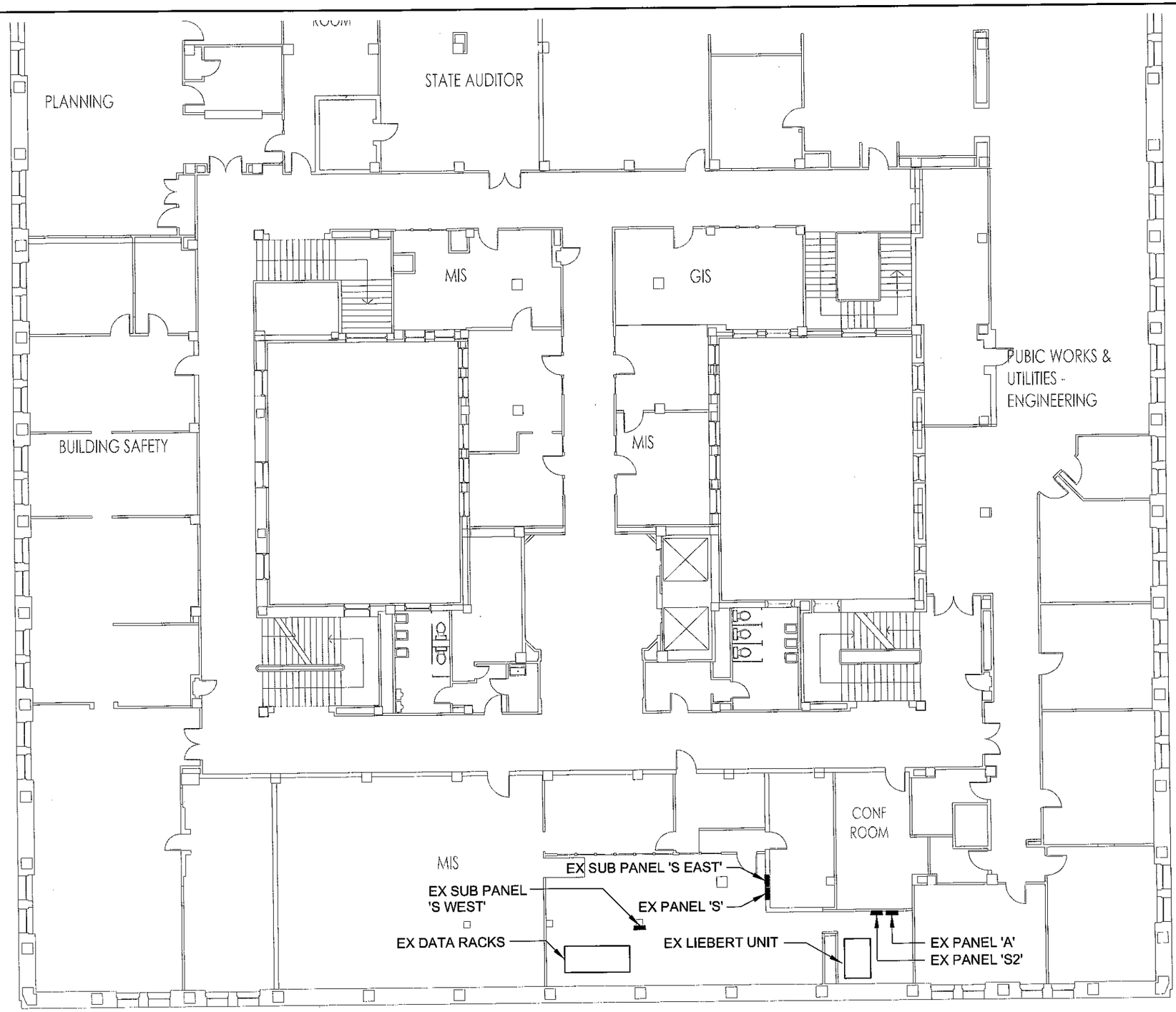
GROUND FLOOR ELECTRICAL PLAN



1 / E2.1 SECOND FLOOR ELECTRICAL PLAN

SCALE: 0' 16'

N PLAN

GENERAL NOTES:

A INFORMATION INDICATED ON THIS DRAWING IS FOR ONE LINE DIAGRAM REFERENCE ONLY.

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Signature

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24671 License #

07/17/14 Date

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DULUTH

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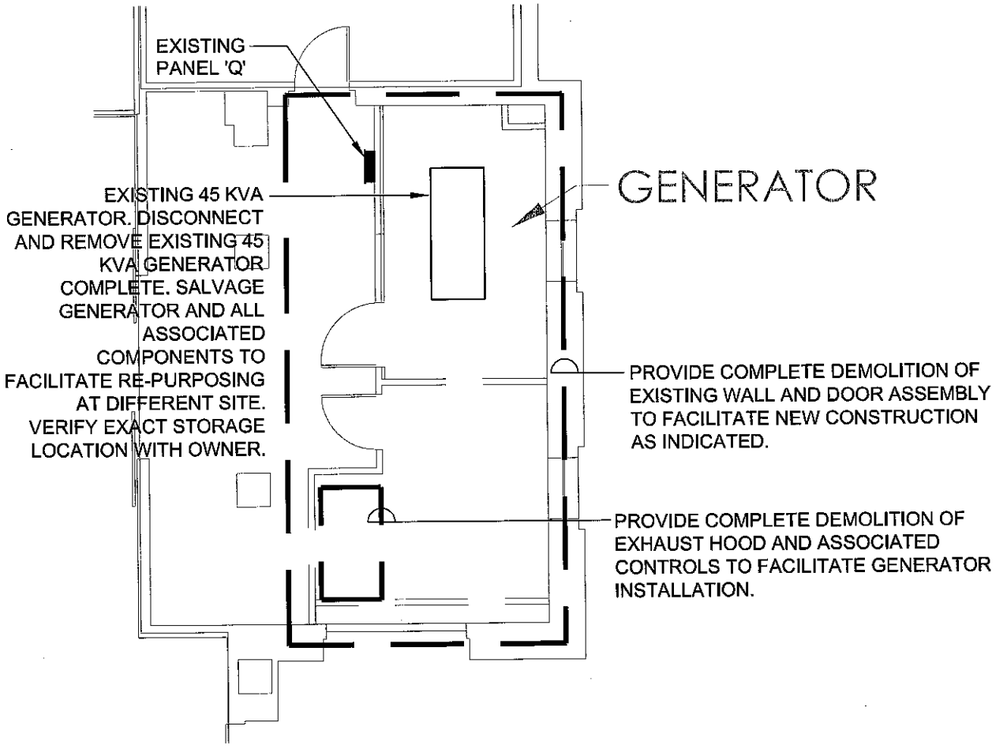
Generator Replacement

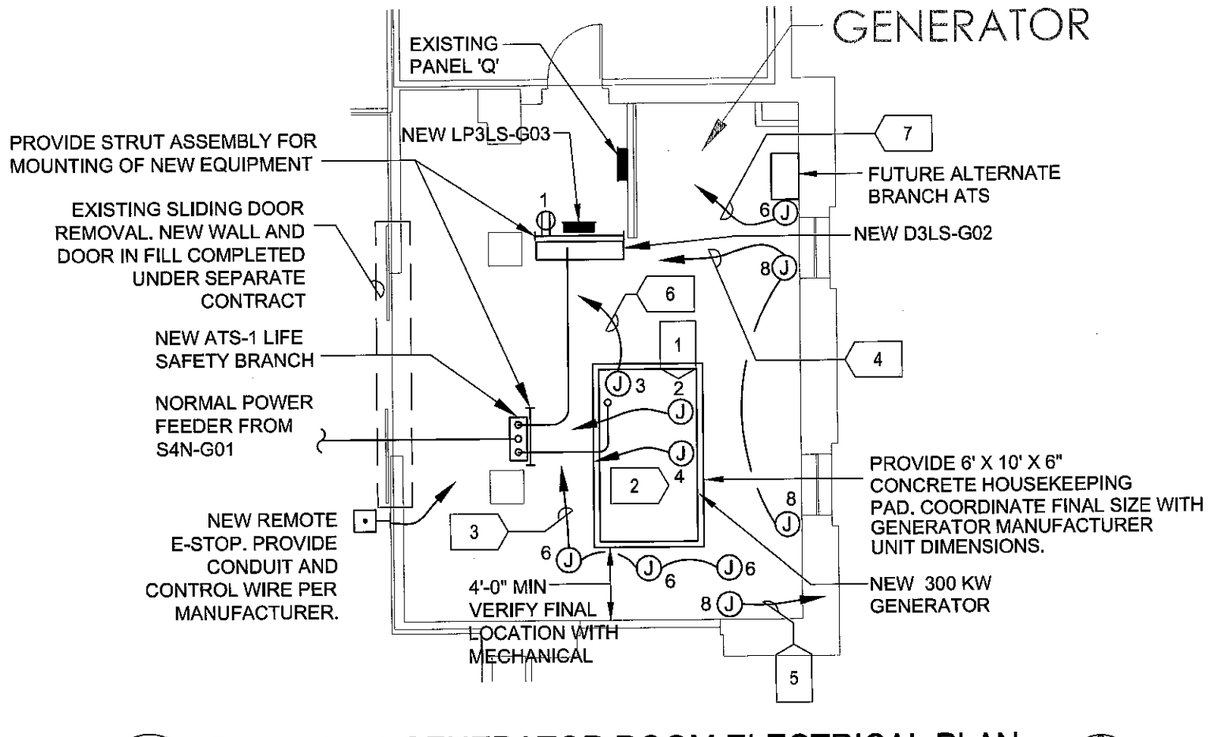
SECOND FLOOR
ELECTRICAL PLAN



1 E3.1 ENLARGED DEMOLITION PLAN

SCALE: 0' 8'

PLAN N



2 E3.1 ENLARGED GENERATOR ROOM ELECTRICAL PLAN

SCALE: 0' 8'

PLAN N

NUMBERED NOTES: X

1 PROVIDE 120V CONNECTION TO BATTERY CHARGER.

2 PROVIDE 120V CONNECTION TO BLOCK HEATER.

3 PROVIDE 120V CONNECTION AND CONTROL RELAY FOR RE-CIRCULATION DAMPER ASSEMBLY. COORDINATE VOLTAGE AND CONNECTION REQUIREMENTS WITH DIVISION 23, TYPICAL OF THREE (3) LOCATIONS.

4 PROVIDE 120V CONNECTION AND CONTROL RELAY FOR INTAKE AIR DAMPER ASSEMBLY AND LIMIT SWITCH FOR ENGINE START SIGNAL. COORDINATE VOLTAGE AND CONNECTION REQUIREMENTS WITH DIVISION 23, TYPICAL OF TWO (2) LOCATIONS.

5 PROVIDE 120V CONNECTION AND CONTROL RELAY FOR EXHAUST AIR DAMPER ASSEMBLY. COORDINATE VOLTAGE AND CONNECTION REQUIREMENTS WITH DIVISION 23.

6 PROVIDE 120V CONNECTION TO GENERATOR CONTROL PANEL FOR CONTROL POWER.

7 PROVIDE 120V CONNECTION AND CONTROL RELAY FOR COMBUSTION AIR DAMPER ASSEMBLY. COORDINATE VOLTAGE AND CONNECTION REQUIREMENTS WITH DIVISION 23.

GENERAL NOTES:

A RELOCATE EXISTING GENERATOR ROOM LIGHTING FIXTURES AS REQUIRED FOR UNIFORM COVERAGE AND SINGLE AREA CONTROL SWITCH. RECONNECT TO NEW PANEL LP3LS-C03, CIRCUIT 10.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

Signature

DAVE T. BLUME
Name

24671 License #

07/17/14 Date

E3.1

Date: 07/17/14
Drawn: LAH
Checked: SLH
Proj.No: 83295

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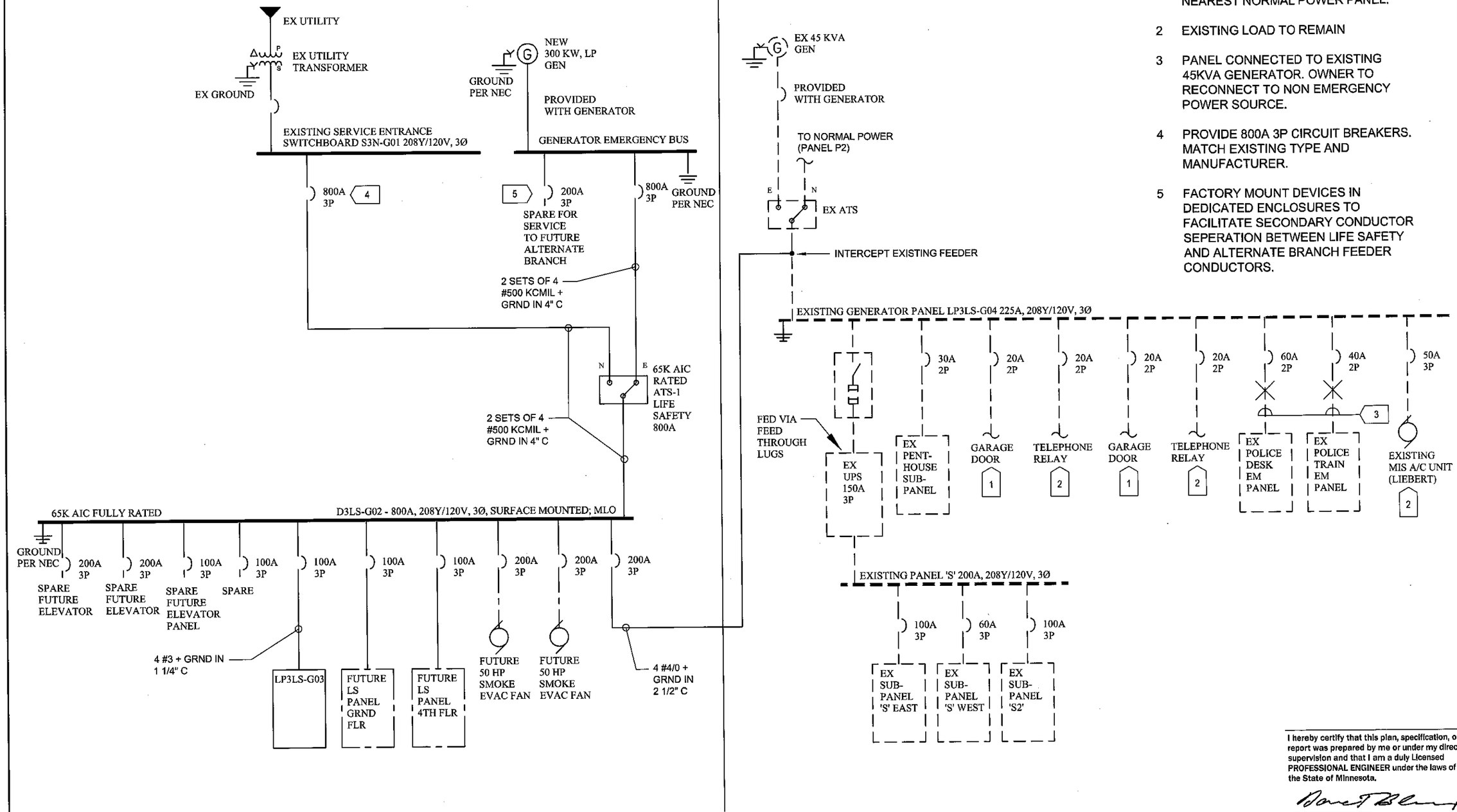
DULUTH

City of Duluth City Hall Generator Replacement

DETAILS & SCHEDULES SHEET



NUMBERED NOTES: X

1. DISCONNECT AND RECONNECT TO NEAREST NORMAL POWER PANEL.
2. EXISTING LOAD TO REMAIN
3. PANEL CONNECTED TO EXISTING 45KVA GENERATOR. OWNER TO RECONNECT TO NON EMERGENCY POWER SOURCE.
4. PROVIDE 800A 3P CIRCUIT BREAKERS. MATCH EXISTING TYPE AND MANUFACTURER.
5. FACTORY MOUNT DEVICES IN DEDICATED ENCLOSURES TO FACILITATE SECONDARY CONDUCTOR SEPERATION BETWEEN LIFE SAFETY AND ALTERNATE BRANCH FEEDER CONDUCTORS.

1 / E4.1 PARTIAL EXISTING/REVISED ONE-LINE DIAGRAMS

SCALE: 0' NTS

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Signature

DAVE T. BLUME
Name

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ONE-LINE DIAGRAM