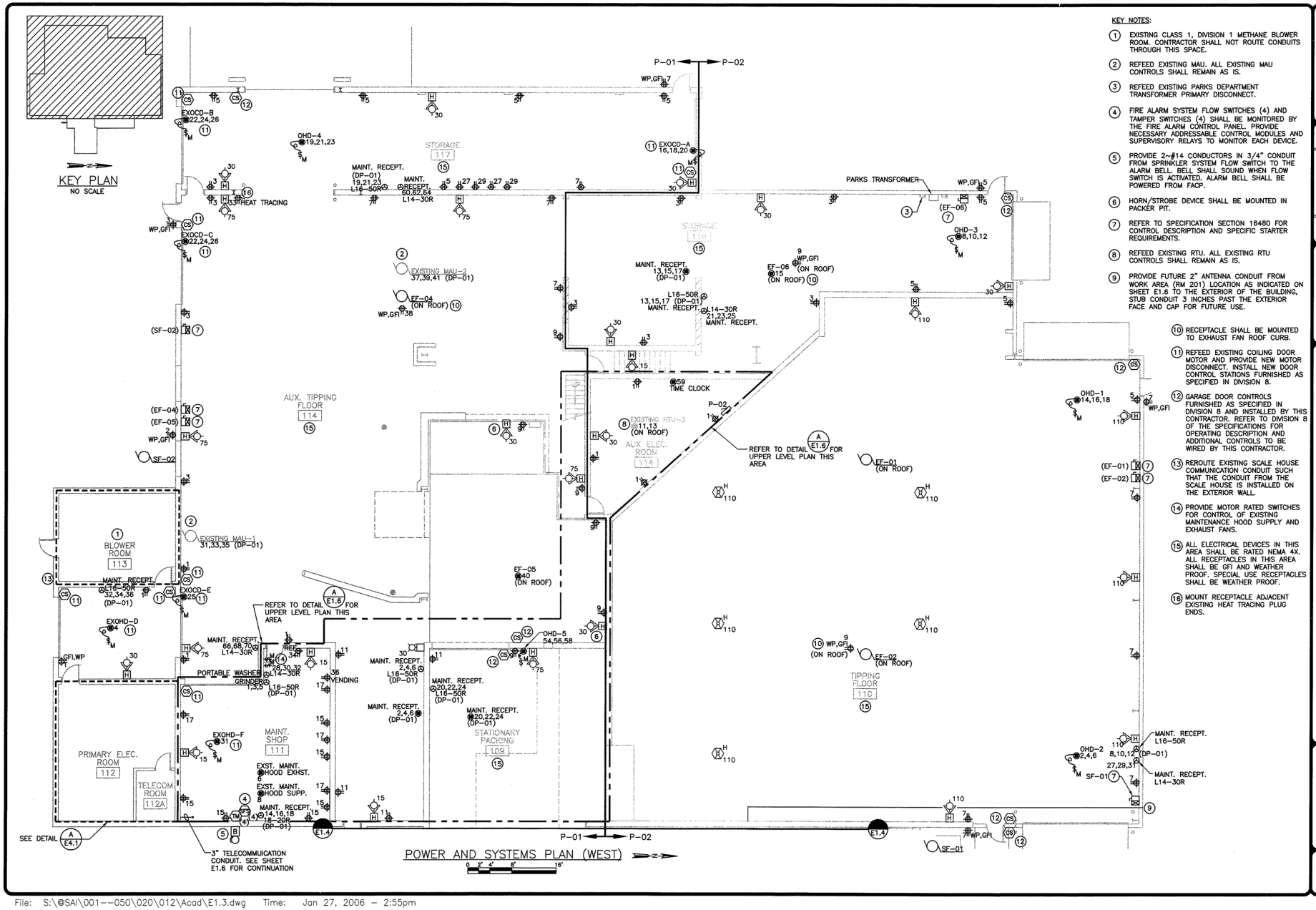


KEY NOTES:

1. EXISTING CLASS 1, DIVISION 1 METHANE BLOWER ROOM. CONTRACTOR SHALL NOT ROUTE CONDUITS THROUGH THIS SPACE.
2. REFEED EXISTING MAU. ALL EXISTING MAU CONTROLS SHALL REMAIN AS IS.
3. REFEED EXISTING PARKS DEPARTMENT TRANSFORMER PRIMARY DISCONNECT.
4. FIRE ALARM SYSTEM FLOW SWITCHES (4) AND TAMPER SWITCHES (4) SHALL BE MONITORED BY THE FIRE ALARM CONTROL PANEL. PROVIDE NECESSARY ADDRESSABLE CONTROL MODULES AND SUPERVISORY RELAYS TO MONITOR EACH DEVICE.
5. PROVIDE 2-#14 CONDUCTORS IN 3/4" CONDUIT FROM SPRINKLER SYSTEM FLOW SWITCH TO THE ALARM BELL. BELL SHALL SOUND WHEN FLOW SWITCH IS ACTIVATED. ALARM BELL SHALL BE POWERED FROM FACP.
6. HORN/STROBE DEVICE SHALL BE MOUNTED IN PACKER PIT.
7. REFER TO SPECIFICATION SECTION 16480 FOR CONTROL DESCRIPTION AND SPECIFIC STARTER REQUIREMENTS.
8. REFEED EXISTING RTU. ALL EXISTING RTU CONTROLS SHALL REMAIN AS IS.
9. PROVIDE FUTURE 2" ANTENNA CONDUIT FROM WORK AREA (RM 201) LOCATION AS INDICATED ON SHEET E1.6 TO THE EXTERIOR OF THE BUILDING, STUB CONDUIT 3 INCHES PAST THE EXTERIOR FACE AND CAP FOR FUTURE USE.
10. RECEPTACLE SHALL BE MOUNTED TO EXHAUST FAN ROOF CURB.
11. REFEED EXISTING COILING DOOR MOTOR AND PROVIDE NEW MOTOR DISCONNECT. INSTALL NEW DOOR CONTROL STATIONS FURNISHED AS SPECIFIED IN DIVISION 8.
12. GARAGE DOOR CONTROLS FURNISHED AS SPECIFIED IN DIVISION 8 AND INSTALLED BY THIS CONTRACTOR. REFER TO DIVISION 8 OF THE SPECIFICATIONS FOR OPERATING DESCRIPTION AND ADDITIONAL CONTROLS TO BE WIRED BY THIS CONTRACTOR.
13. REROUTE EXISTING SCALE HOUSE COMMUNICATION CONDUIT SUCH THAT THE CONDUIT FROM THE SCALE HOUSE IS INSTALLED ON THE EXTERIOR WALL.
14. PROVIDE MOTOR RATED SWITCHES FOR CONTROL OF EXISTING MAINTENANCE HOOD SUPPLY AND EXHAUST FANS.
15. ALL ELECTRICAL DEVICES IN THIS AREA SHALL BE RATED NEMA 4X. ALL RECEPTACLES IN THIS AREA SHALL BE GFI AND WEATHER PROOF. SPECIAL USE RECEPTACLES SHALL BE WEATHER PROOF.
16. MOUNT RECEPTACLE ADJACENT EXISTING HEAT TRACING PLUG ENDS.

NO.	REVISIONS	DATE:

DATE: JANUARY 2006
DES BY: CPH CHK BY: SPZ
RECORD DRAWING
BY:
DATE:
CONTRACTOR:

POWER AND SYSTEMS PLAN (WEST)

OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.® ENGINEERS

SHEET
E1.3

JOB NO. 1-020-012

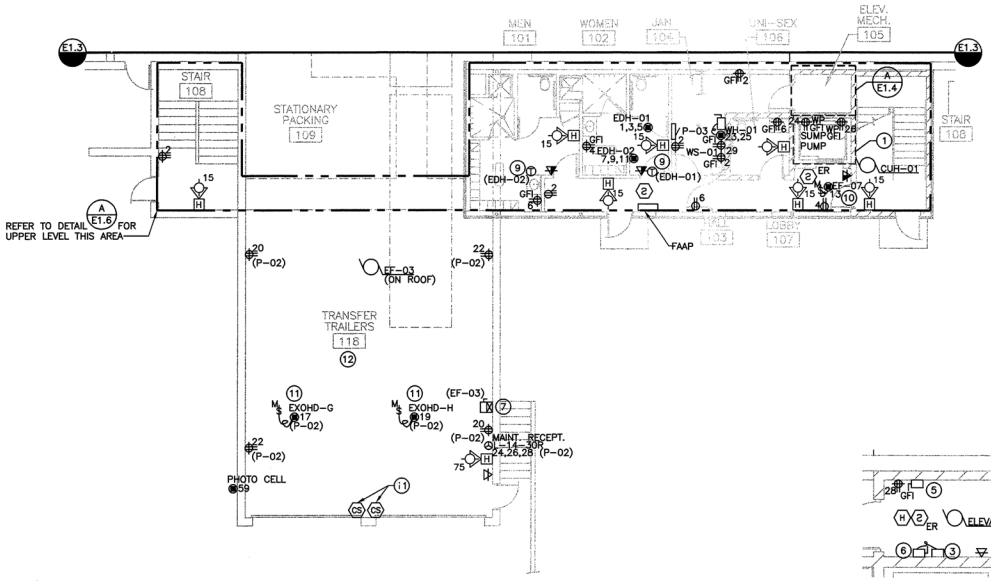
File: S:\@SAI\001--050\020\012\Acad\E1.3.dwg Time: Jan 27, 2006 - 2:55pm

GENERAL NOTES:

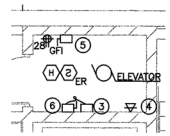
1. ELECTRICAL EQUIPMENT AND DEVICES ON THIS DRAWING SHALL BE POWERED FROM P-03 UNLESS NOTED OTHERWISE.

KEY NOTES:

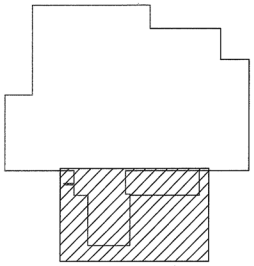
1. ELECTRICAL EQUIPMENT IN THIS AREA SHALL BE LOCATED IN ELEVATOR PIT.
2. PROVIDE DEDICATED PHONE LINE FOR ELEVATOR CONTROL PANEL.
3. PROVIDE ELEVATOR RECALL ADDRESSABLE CONTROL MODULE FOR MONITORING ELEVATOR RECALL SMOKE AND HEAT DETECTORS. CONTROL MODULES SHALL BE LOCATED WITHIN 3 FEET OF THE ELEVATOR CONTROL PANEL.
4. PROVIDED DEDICATED PHONE LINE FOR ELEVATOR CONTROLLER.
5. PROVIDE 120V SINGLE POLE LOCKABLE TYPE DISCONNECT FOR ELEVATOR CAB LIGHTS, P-03, CIRCUIT 30.
6. PROVIDE DISCONNECT WITH AUXILIARY DRY CONTACTS FOR HYDRAULIC ELEVATOR BATTERY LOWERING SYSTEM AND ELEVATOR SHUNT TRIP SYSTEM. DISCONNECT SHALL BE WIRED SUCH THAT IN THE "OFF" POSITION, THE ELEVATOR LOWERING SYSTEM AND ELEVATOR SHUNT TRIP SYSTEM ARE DEACTIVATED ALLOWING FOR ELEVATOR PIT ACCESS/MAINTENANCE. IN THE "ON" POSITION, ELEVATOR LOWERING AND SHUNT TRIP SYSTEMS SHALL OPERATE PER MANUFACTURERS REQUIREMENTS. CONTRACTOR SHALL PROVIDE NECESSARY FUSING FOR ELEVATOR LOWERING AND SHUNT TRIP SYSTEMS DISCONNECT IN ELEVATOR PANEL.
7. REFER TO SPECIFICATION SECTION 16480 FOR CONTROL DESCRIPTION AND SPECIFIC STARTER REQUIREMENTS.
8. NOT USED.
9. PROVIDE LOW VOLTAGE THERMOSTAT JUNCTION BOX AND 3/4" CONDUIT FROM THERMOSTAT TO DUCT HEATER.
10. EF-07 SHALL BE CIRCUITED THROUGH SINGLE POLE CONTRACTOR. PROVIDE 120 VOLT, 20 AMP RATED CONTACTOR IN NEMA 1 ENCLOSURE FOR CONTROL OF EF-07. PROVIDE 2~#14 IN 3/4" CONDUIT FROM CONTACTOR TO RTU-01 PROGRAMMABLE THERMOSTAT FOR CONTROL OF FAN.
11. REFEED EXISTING COILING DOOR MOTOR AND PROVIDE NEW MOTOR DISCONNECT. INSTALL NEW DOOR CONTROL STATIONS FURNISHED AS SPECIFIED IN DIVISION 8.
12. ALL ELECTRICAL DEVICES IN THIS AREA SHALL BE RATED NEMA 4X. ALL RECEPTACLES IN THIS AREA SHALL BE GFI AND WEATHER PROOF. SPECIAL USE RECEPTACLES SHALL BE WEATHER PROOF.



POWER AND SYSTEMS PLAN (EAST)



A/E1.4 ELEV. MECH ROOM



KEY PLAN
NO SCALE

NO.	REVISIONS	DATE:

DATE: JANUARY 2006
DES BY: CPH CHK BY: SPZ
RECORD DRAWING
BY:
DATE:
CONTRACTOR:

POWER AND SYSTEMS PLAN (EAST)

OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.® ENGINEERS

SHEET
E1.4

JOB NO. 1-020-012

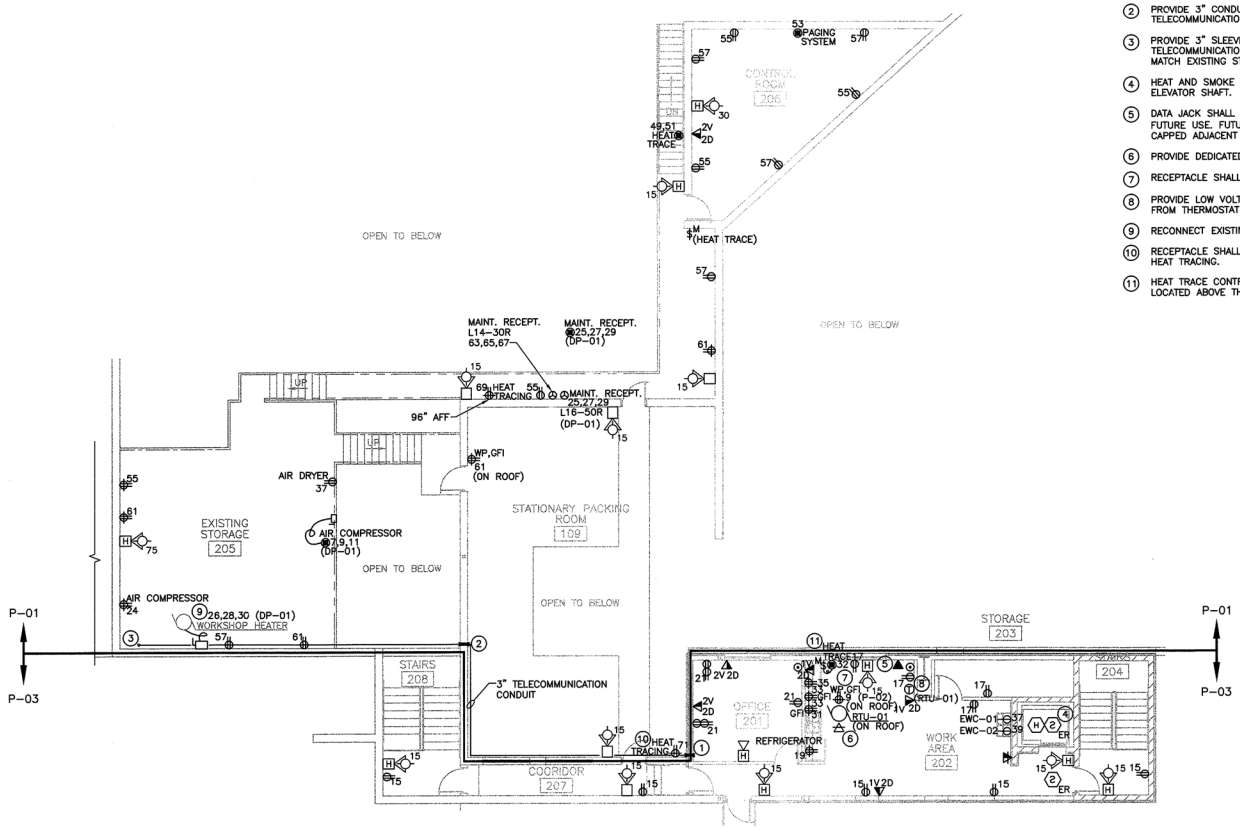
File: S:\@SAI\001--050\020\012\Acad\E1.4.dwg Time: Jan 27, 2006 - 2:55pm

GENERAL NOTES:

1. ALL ELECTRICAL DEVICES ON THIS SHEET SHALL BE CIRCUITED PER PANEL DIVISION LINES.

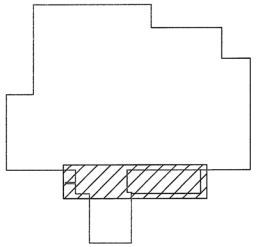
KEY NOTES:

1. PROVIDE 3" CONDUIT SLEEVE THROUGH INTERIOR WALL ABOVE SUSPENDED CEILING FOR TELECOMMUNICATION CONDUIT.
2. PROVIDE 3" CONDUIT SLEEVE THROUGH INTERIOR WALL FOR TELECOMMUNICATION CONDUIT.
3. PROVIDE 3" SLEEVE THROUGH FLOOR SLAB FROM WORKSHOP FOR TELECOMMUNICATION CONDUIT. PROVIDE FIRE PENETRATION SEALANT TO MATCH EXISTING STRUCTURE FIRE RATING.
4. HEAT AND SMOKE DETECTORS SHALL BE MOUNTED AT THE TOP OF ELEVATOR SHAFT.
5. DATA JACK SHALL BE MOUNTED ABOVE THE SUSPENDED CEILING FOR FUTURE USE. FUTURE 2" ANTENNA CONDUIT SHALL BE TERMINATED AND CAPPED ADJACENT TO THE DATA JACK.
6. PROVIDE DEDICATED PHONE LINE FOR RTU-01.
7. RECEPTACLE SHALL BE SURFACE MOUNTED ON RTU.
8. PROVIDE LOW VOLTAGE THERMOSTAT JUNCTION BOX AND 3/4" CONDUIT FROM THERMOSTAT TO RTU-01.
9. RECONNECT EXISTING WORKSHOP HEATER AND CONTROLS.
10. RECEPTACLE SHALL BE MOUNTED ADJACENT PLUG ENDS FOR EXISTING HEAT TRACING.
11. HEAT TRACE CONTROL MODULE AND MOTOR RATED DISCONNECT SHALL BE LOCATED ABOVE THE SUSPENDED CEILING.



A/E1.6 UPPER LEVEL POWER AND SYSTEMS PLAN

0 2' 4' 8' 16'



KEY PLAN
NO SCALE

NO.	REVISIONS	DATE:

DATE: JANUARY 2006
DES BY: CPH CHK BY: SPZ
RECORD DRAWING
BY:
DATE:
CONTRACTOR:

UPPER LEVEL POWER AND SYSTEMS PLAN

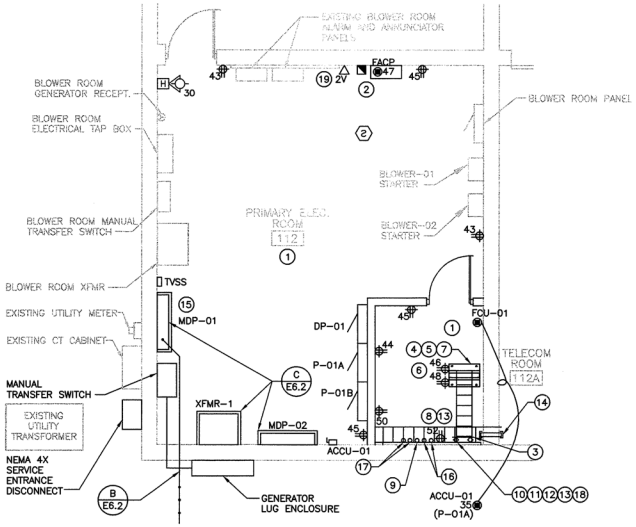
OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.® ENGINEERS

SHEET
E1.6

JOB NO. 1-020-012

File: S:\@SAI\001--050\020\012\Acad\E1.6.dwg Time: Jan 27, 2006 - 2:55pm



A E4.1 ENLARGED PRIMARY ELECTRICAL PLAN

0 1' 2' 4' 8'

GENERAL NOTES:

1. SEE ONE-LINE DIAGRAM ON SHEET E5.2 FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. ALL ELECTRICAL DEVICES IN THIS AREA SHALL BE CIRCUITED TO PANEL P-01A.
2. FIRE ALARM CONTROL PANEL SHALL BE FED FROM A DEDICATED CIRCUIT BREAKER. CIRCUIT BREAKER SHALL BE RED IN COLOR AND PERMANENTLY LABELED FACP.
3. PROVIDE TELECOMMUNICATIONS GROUNDING BUSBAR ON EQUIPMENT MOUNTING BACKBOARD. BOND EQUIPMENT RACKS TO TGB WITH #6 GROUNDING CONDUCTORS. TGB SHALL BE CONNECTED DIRECTLY TO MDP-01 GROUND GRID. PROVIDE 3/0 GROUNDING CONDUCTOR IN 1 1/2" PVC CONDUIT FROM TGB TO MDP-01 GROUND GRID.
4. PROVIDE 84" FREE STANDING EQUIPMENT RACK. EQUIPMENT RACK SHALL PROVIDE SUPPORT FOR FIBER PATCH PANELS (PROVIDED BY OTHERS), VERTICAL AND HORIZONTAL CABLE MANAGEMENT, 2~24 PORT PATCH PANEL (ONE VOICE, ONE DATA), 1~POWER STRIP/SURGE SUPPRESSOR AND EQUIPMENT GROUND BAR.
5. PROVIDE ONE RACK MOUNTED UPS UNIT IN EQUIPMENT RACK.
6. PROVIDE SURFACE MOUNTED OUTLETS(2) ON EQUIPMENT RACK. OUTLETS SHALL BE MOUNTED ON RACK VERTICAL MEMBERS AT 24" AND 60" AFF.
7. PROVIDE ONE SURGE STRIP AND GROUND BAR ON EQUIPMENT RACK.
8. PROVIDE LADDER TYPE CABLE TRAY AS SHOWN ON THE DRAWING. LOCATE CABLE TRAY 9'-0" ABOVE FINISHED FLOOR. PROVIDE VERTICAL TRANSITION FROM 9' TRAY TO EQUIPMENT RACK. CONNECT TRAY TO EQUIPMENT RACK TO STABILIZE RACK. BOND THE CABLE TRAY TO THE TGB AND EQUIPMENT RACKS WITH #6 GROUND CONDUCTOR.
9. STUB FIBER CONDUIT AS INDICATED ON SHEET C1.1 12" AFF. REFER TO DETAIL J E6.2 FOR CONDUIT INSTALLATION
10. PROVIDE 72" WIDE BY 48" HIGH EQUIPMENT MOUNTING BACKBOARD 24" AFF.
11. WALL MOUNT PHONE SERVICE DEMARC AND ENTRANCE PROTECTION ON EQUIPMENT BACKBOARD. DEMARC AND ENTRANCE PROTECTION PROVIDED BY TELEPHONE COMPANY.
12. PROVIDE 110 TERMINATION BLOCKS ON EQUIPMENT BACKBOARD FOR VOICE CROSS CONNECTS BETWEEN THE DEMARC AND THE PATCH PANEL
13. TERMINATE VOICE AND DATA STATION CABLES IN RACK MOUNTED PATCH PANEL. PROVIDE AND MANAGE 6 FEET OF SLACK IN STATION CABLES BETWEEN THE WALL SLEEVE AND THE EQUIPMENT RACK.
14. PROVIDE 3" CONDUIT SLEEVE THROUGH INTERIOR WALL FOR TELECOMMUNICATION CONDUIT. PROVIDE VERTICAL CABLE TRAY SECTION FROM CONDUIT PENETRATION TO HORIZONTAL CABLE TRAY.
15. PROVIDE ADDRESSABLE CONTROL MODULE FOR ELEVATOR SHUNT TRIP CIRCUIT BREAKER LOCATED IN MDP-01. SHUNT TRIP CONTROL SHALL BE SUCH THAT IF THE HEAT DETECTOR LOCATED IN EITHER THE ELEVATOR EQUIPMENT ROOM OR ELEVATOR SHAFT ARE ACTIVATED, THEY WILL SEND A SIGNAL TO THE ELEVATOR SHUNT TRIP CONTROL MODULE WHICH WILL IN TURN SEND A SIGNAL TO TRIP THE SHUNT TRIP BREAKER. ALL POWER CAPABLE OF MOVING THE ELEVATOR INCLUDING ANY AUTOMATIC LOWERING SHALL BE DE-ENERGIZED. PROVIDE CONTROL WIRING AND CONDUIT AS NECESSARY.
16. PROVIDE 2~2" FUTURE ANTENNA CONDUITS FROM THE TOP OF CABLE TRAY STUBBED 12" ABOVE THE ROOF. REFER TO DETAIL D E6.2 FOR CONDUIT ROOF PENETRATION.
17. PROVIDE 1~2" AND 1~3" CONDUIT STUBBED 12" AFF FOR TELEPHONE AND CABLE TV ENTRANCE. REFER TO DETAIL J E6.2 FOR CONDUIT INSTALLATION.
18. MOUNT CABLE TELEVISION DEMARC AND CABLE TELEVISION SPLITTER ON EQUIPMENT BACKBOARD.
19. TERMINATE TWO VOICE STATION CABLES WITH RJ31X JACKS TO SERVE FIRE ALARM CONTROL PANEL.

NO.	REVISIONS	DATE:

DATE: JANUARY 2006
DES BY: CPH CHK BY: SPZ
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BY:
DATE:
CONTRACTOR:

ENLARGED PRIMARY ELECTRICAL PLAN

OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.® ENGINEERS

SHEET
E4.1

JOB NO. 1-020-012

File: S:\@SAI\001--050\020\012\Acad\E4.1.dwg Time: Jan 27, 2006 - 3:06pm

POWER PANEL P-01A*

Service: 120/208V, 3ϕ, 4W — Enclosure: NEMA 1 — Mounting: Surface
Main Breaker: 225A M.L.O — Main Bus: Copper
Location: Primary Elec. Room — SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
Receptacles	20	1	1	900			360			2	20	1	Exterior Receptacles
Receptacles	20	1	3		900			1176		4	20	1	EXOHD-D
Receptacles	20	1	5			900			1000	6	20	1	Maintenance Hood Supply Fan
Receptacles	20	1	7	900			1000			8	20	1	Maintenance Hood Exhaust Fan
Receptacles	20	1	9		900			443		10	20	3	EXOCD-B
Receptacles	20	1	11			720			443	12			
Spare	20	1	13	0			443			14			
Maint. Shop Receptacles	20	1	15		720			443		16	20	3	EXOCD-A
Maint. Shop Receptacles	20	1	17			720			443	18			
OHD-4	20	3	19	576			443			20	20	3	EXOCD-C
			21		576			576		22			
			23			576			576	24			
EXOCD-E	20	1	25	1176			576			26			
Work Bench Recepts. Rm 117	20	1	27		360			1000		28	20	3	Portable Washer
Work Bench Recepts. Rm 117	20	1	29			360			1000	30			
EXOHD-F	20	1	31	1176			1000			32			
Heat Tracing Rm 114	20	1	33		1500			1000		34	20	1	Refrigerator Maint. Shop
ACCU-01, FCU-01	20	1	35			1254			1000	36	20	1	Vending Maint. Shop
Air Dryer	20	1	37	1000			180			38	20	1	Roof Receptacle
	20	1	39		0			0		40	20	1	EF-05
	20	1	41			0			0	42	20	1	
Total Load per Phase per Side (VA)				5728	4956	4530	4002	4638	4462				

Total Load Phase A (VA)	9730	VA	Total Connected Load (A)	79	A
Total Load Phase B (VA)	9594	VA	Total Connected Load + 25%	98	A
Total Load Phase C (VA)	8992	VA	Spare 25%	25	A
Total Connected Load (VA)	28316	VA	Feeder Load	123	A

*Provide feed through lugs to Panel P-01B

POWER PANEL P-01B

Service: 120/208V, 3ϕ, 4W — Enclosure: NEMA 1 — Mounting: Surface
Main Breaker: 225A M.L.O — Main Bus: Copper
Location: Primary Elec. Room — SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
RM 112 and Telecomm Recepts.	20	1	43	540			180			44	20	1	Telecom RM Recept
RM 112 and Telecomm Recepts.	20	1	45		540			180		46	20	1	Telecom RM Recept
FACP RM 112	20	1	47			1000			180	48	20	1	Telecom RM Recept
Sprinkler System Heat Trace RM 206	30	2	49	2400			180			50	20	1	Telecom RM Recept
			51		2400			180		52	20	1	Telecom RM Recept
Paging System	20	1	53			1000			576	54	30	3	OHD-5
Recepts RM 205 and 206	20	1	55	1080			576			56			
Recepts RM 205 and 206	20	1	57		1080			576		58			
Timeclock and Photocell RM 114	20	1	59			1000			2400	60	30	3	Maintenance Recept. Rm 117
Recepts RM 205 and 206	20	1	61	720			2400			62			
Maintenance Recept Rm 205	30	3	63		2400			2400		64			
			65			2400			2400	66			
			67	2400			2400			68	30	3	Maintenance Recept. Rm 114
Heat Tracing Rm 205	20	1	69		1500			2400		70			
Heat Tracing Rm 109	20	1	71			1500				72	20	1	
	20	1	73							74	20	1	
	20	1	75							76	20	1	
	20	1	77							78	20	1	
	20	1	79				0			80	20	1	
	20	1	81		0			0		82	20	1	
	20	1	83			0			0	84	20	1	
Total Load per Phase per Side (VA)				7140	7920	6900	5736	5736	5556				

Total Load Phase A (VA)	12876	VA	Total Connected Load (A)	108	A
Total Load Phase B (VA)	13656	VA	Total Connected Load + 25%	135	A
Total Load Phase C (VA)	12456	VA	Spare 25%	34	A
Total Connected Load (VA)	38988	VA	Feeder Load	169	A

POWER PANEL P-02

Service: 120/208V, 3ϕ, 4W — Enclosure: NEMA 1 — Mounting: Surface
Main Breaker: 225A M.C.B. — Main Bus: Copper
Location: Aux. Electrical Rm — SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
Aux. Elec. Rm Receptacles	20	1	1	720			576			2	20	3	OHD-2
Storage Area Receptacles	20	1	3		900			576		4			
Storage Area Receptacles	20	1	5			900			576	6			
Tipping Floor Receptacles	20	1	7	1080			576			8	20	3	OHD-3
Roof Receptacles	20	1	9		540			576		10			
Existing Control Room RTU-3	30	2	11			2121			576	12			
			13	2121			576			14			
EF-06	20	1	15		864			576		16	20	3	OHD-1
EXOHD-G	20	1	17			1176			576	18			
EXOHD-H	20	1	19	1176			360			20	20	1	Transfer Trailer Receptacles Rm 118
Maintenance Recept Rm 116	30	3	21		2400			360		22	20	1	Transfer Trailer Receptacles Rm 118
			23			2400			2400	24	30	3	Maintenance Recept. Rm 118
			25	2400			2400			26			
Maintenance Recept Rm 110	30	3	27		2400			2400		28			
			29			2400			0	30	20	1	
			31	2400			0			32	20	1	
	20	1	33		0			0		34	20	1	
	20	1	35			0			0	36	20	1	
	20	1	37	0			0			38	20	1	
	20	1	39		0			0		40	20	1	
	20	1	41			0			0	42	20	1	
Total Load per Phase per Side (VA)				9897	7104	8997	4488	4488	4128				

Total Load Phase A (VA)	14385	VA	Total Connected Load (A)	109	A
Total Load Phase B (VA)	11592	VA	Total Connected Load + 25%	136	A
Total Load Phase C (VA)	13125	VA	Spare 25%	34	A
Total Connected Load (VA)	39102	VA	Feeder Load	170	A

OFFICE PANEL P-03

Service: 120/208V, 3ϕ, 4W — Enclosure: NEMA 1 — Mounting: Surface
Main Breaker: 225A M.C.B. — Main Bus: Copper
Location: Janitors Closet — SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
EDH-01	20	3	1	480			720			2	20	1	Receptacles
			3		480			720		4	20	1	Receptacles
			5			480			540	6	20	1	Receptacles
EDH-02	20	3	7	720			64			8	20	1	Elevator Pit Light
			9		720					10	20	1	
			11			720			725	12	20	1	Rm 102, 103, 108 Lights
EF-07	20	1	13	500			833			14	20	1	Rm 104, 105, 106, 107, Stair Lights
Rm 201, 203, 204 Recepts	20	1	15		900			400		16	20	1	Exit Lights
Rm 201, 202 Recepts	20	1	17			720			352	18	20	1	Stairs, Corridor
Refrigerator	20	1	19	1000			1331			20	20	1	Rm 200, 201, 202 Lights
Office Recepts	20	1	21		900			125		22	20	1	Stair Lights Rm 203
Water Heater RM 104	25	2	23			1690			1176	24	20	1	Elevator Pit Sump Pump
			25	1690			180			26	20	1	Elevator Pit Recept
	20	1	27		0			180		28	20	1	Elevator Mechanical Rm Recept
Water Softener RM 104	20	1	29			300			500	30	20	1	Elevator Cab Lights
Work Area Rm 201 Recepts.	20	1	31	180			1500			32	30	2	Heat Trace Rm 201
Work Area Rm 201 Recepts.	20	1	33		180			1500		34			
Work Area Rm 201 Recepts.	20	1	35			180			0	36	20	1	
EVIC Rm 201	20	1	37	1000			0			38	20	1	
EVIC Rm 201	20	1	39		1000			0		40	20	1	
	20	1	41			0			0	42	20	1	
Total Load per Phase per Side (VA)				5570	4180	4090	4628	2925	3293				

Total Load Phase A (VA)	10198	VA	Total Connected Load (A)	69	A
Total Load Phase B (VA)	7105	VA	Total Connected Load + 25%	86	A
Total Load Phase C (VA)	7383	VA	Spare 25%	21	A
Total Connected Load (VA)	24686	VA	Feeder Load	107	A

LIGHTING PANEL LP-01

Service: 120/208V, 3ϕ, 4W — Enclosure: NEMA 1G — Mounting: Surface
Main Breaker: 225A M.C.B. — Main Bus: Copper
Location: Aux. Electrical Room — SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
Tipping Floor Lights Rm 110	30	1	1	2200			928			2	20	1	Aux. Electrical Room Lights Rm
Tipping Floor Lights Rm 110	30	1	3		2200			1120		4	20	1	Pri. Elec. Rm 112, Maint. Shop 111 Lites
Tipping Floor Lights Rm 110	30	1	5			2200			2200	6	30	1	Stationary Packaging Lights Rm 109
Tipping Floor Lights Rm 110	20	1	7	1760			2200			8	30	1	Transfer Trailers Lights Rm 118
Storage Lights Rm 116	30	1	9		2200			1760		10	20	1	Mezz. Lighting
Storage Lights Rm 117	20	1	11			1760			1000	12	20	1	Exit Lights
Aux. Tipping Floor Lights Rm 114	30	1	13	2200			1005			14	20	1	Exterior Lights
Aux. Tipping Floor Lights Rm 114	30	1	15		2200			1470		16	20	1	Exterior Lights
Aux. Tipping Floor Lights Rm 114	30	1	17			2200				18	20	1	Storage Area Workshop Lights
	20	1	19	0			0			20	20	1	
	20	1	21		0			0		22	20	1	
	20	1	23			0			0	24	20	1	
	20	1	25	0			0			26	20	1	
	20	1	27		0			0		28	20	1	
	20	1	29			0			0	30	20	1	
	20	1	31	0			0			32	20	1	
	20	1	33		0			0		34	20	1	
	20	1	35			0			0	36	20	1	
	20	1	37	0			0			38	20	1	
	20	1	39		0			0		40	20	1	
	20	1	41			0			0	42	20	1	
Total Load per Phase per Side (VA)				6160	6600	6160	4133	4350	3200				

Total Load Phase A (VA)	10293	VA	Total Connected Load (A)	85	A
Total Load Phase B (VA)	10950	VA	Total Connected Load + 25%	106	A
Total Load Phase C (VA)	9360	VA	Spare 25%	27	A
Total Connected Load (VA)	30603	VA	Feeder Load	133	A

DISTRIBUTION PANEL DP-01

Service: 277/480V, 3ϕ, 4W — Enclosure: NEMA 1 — Mounting: Surface
Main Breaker: 225A M.C.B. — Main Bus: Copper
Location: — SCIC: 42 kAIC

Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Amps	Poles	Room Number/Description
Grinder Maint. Shop	20	3	1	1000			1000			2	20	3	Maintenance Recept. Shop
			3		1000			1000		4			
			5			1000			1000	6			
Air Compressor	20	3	7	1760			1000			8	20	3	Maintenance Recept. Rm 110
			9		1760			1000		10			
			11			1760			1000	12			
Maintenance Recept Rm 116	20	3	13	1000			1000			14	20	3	Maintenance Recept. Shop
			15		1000			1000		16			
			17			1000			1000	18			
Maintenance Recept Rm 117	20	3	19	1000			1000			20	20	3	Maintenance Recept. Stationary Packing Rm 109
			21		1000			1000		22			
			23			1000			1000	24			
Maintenance Recept Rm 205	20	3	25	1000			2878			26	30	3	Workshop Heater
			27		1000			2878		28			
			29			1000			2878	30			
Existing MAU-1; Auxilliary Tipping	20	3	31	2103			1000			32	20	3	Maintenance Recept. Rm 114
			33		2103			1000		34			
			35			2103			1000	36			
Existing MAU-2; Auxilliary Tipping	20	3	37	2103			0			38	20	3	Spare
			39		2103			0		40			
			41			2103			0	42			
Total Load per Phase per Side (VA)				9966	9966	9966	7878	7878	7878				

Total Load Phase A (VA)	17844	VA	Total Connected Load (A)	149	A
Total Load Phase B (VA)	17844	VA	Total Connected Load + 25%	186	A
Total Load Phase C (VA)	17844	VA	Spare 25%	46	A
Total Connected Load (VA)	53532	VA	Feeder Load	232	A

NO.	REVISIONS	DATE:

DATE: JANUARY 2006
DES BY: CPH CHK BY: SPZ
RECORD DRAWING
BY:
DATE:
CONTRACTOR:

SCHEDULES

OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.®
ENGINEERS

SHEET
E6.1

JOB NO. 1-020-012

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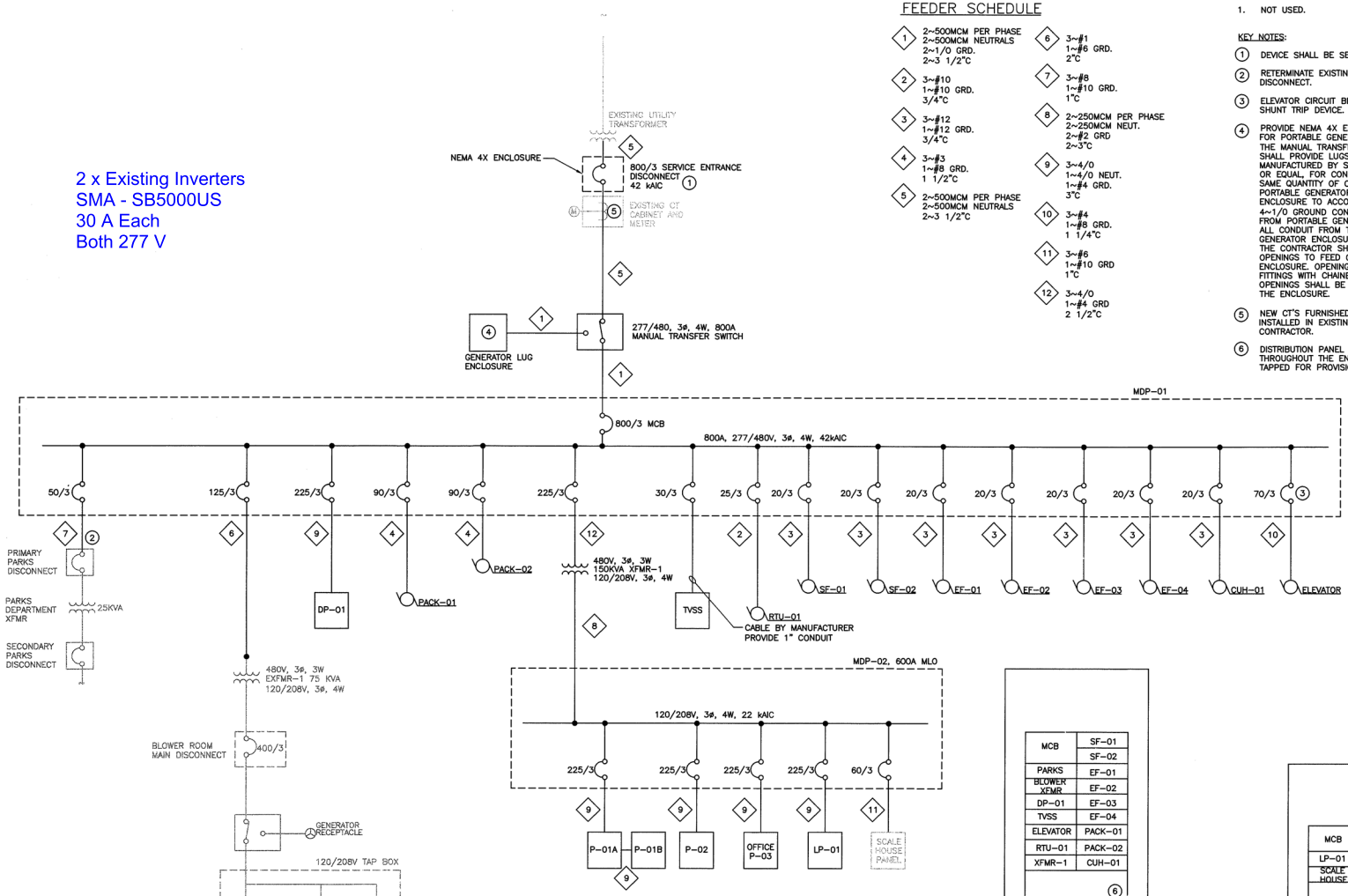
2 x Existing Inverters
SMA - SB5000US
30 A Each
Both 277 V



ONE-LINE DIAGRAM
NO SCALE

FEEDER SCHEDULE

1. 2~500MCM PER PHASE
   2~500MCM NEUTRALS
   2~1/0 GRD.
   2~3 1/2"C
2. 3~#10
   1~#10 GRD.
   3/4"C
3. 3~#12
   1~#12 GRD.
   3/4"C
4. 3~#3
   1~#8 GRD.
   1 1/2"C
5. 2~500MCM PER PHASE
   2~500MCM NEUTRALS
   2~3 1/2"C
6. 3~#1
   1~#6 GRD.
   2"C
7. 3~#8
   1~#10 GRD.
   1"C
8. 2~250MCM PER PHASE
   2~250MCM NEUT.
   2~#2 GRD
   2~3"C
9. 3~4/0
   1~4/0 NEUT.
   1~#4 GRD.
   3"C
10. 3~#4
    1~#8 GRD.
    1 1/4"C
11. 3~#6
    1~#10 GRD
    1"C
12. 3~4/0
    1~#4 GRD
    2 1/2"C

GENERAL NOTES:

1. NOT USED.

KEY NOTES:

1. DEVICE SHALL BE SERVICE ENTRANCE RATED.
2. RETERMINATE EXISTING WIRE AND CONDUIT IN NEW DISCONNECT.
3. ELEVATOR CIRCUIT BREAKER SHALL BE EQUIPPED WITH SHUNT TRIP DEVICE.
4. PROVIDE NEMA 4X ENCLOSURE SIZED AS REQUIRED FOR PORTABLE GENERATOR HARDWIRE CONNECTION TO THE MANUAL TRANSFER SWITCH (MTS). CONTRACTOR SHALL PROVIDE LUGS IN ENCLOSURE AS MANUFACTURED BY SQUARE D, CLASS 9080, TYPE LP, OR EQUAL, FOR CONDUCTORS INDICATED PLUS THE SAME QUANTITY OF CONDUCTORS FROM THE PORTABLE GENERATOR. CONTRACTOR SHALL SIZE ENCLOSURE TO ACCOMMODATE 16~500 MCM AND 4~1/0 GROUND CONDUCTORS, 10 TO ATS AND 10 FROM PORTABLE GENERATOR. CONTRACTOR SHALL RUN ALL CONDUIT FROM THE MTS TO THE PORTABLE GENERATOR ENCLOSURE AS SHOWN ON SHEET E4.1. THE CONTRACTOR SHALL ALSO PROVIDE ADEQUATE OPENINGS TO FEED GENERATOR CABLES INTO ENCLOSURE. OPENING SHALL HAVE CHASE NIPPLE FITTINGS WITH CHAINED AND THREADED CAPS. OPENINGS SHALL BE PROVIDED ON THE BOTTOM OF THE ENCLOSURE.
5. NEW CT'S FURNISHED BY UTILITY COMPANY AND INSTALLED IN EXISTING CT CABINET BY THIS CONTRACTOR.
6. DISTRIBUTION PANEL BUSSING SHALL EXTEND THROUGHOUT THE ENTIRE PANEL. BUS SHALL BE TAPPED FOR PROVISIONAL CIRCUIT BREAKERS.

MCB	SF-01
	SF-02
PARKS	EF-01
BLOWER XFMR	EF-02
DP-01	EF-03
TVSS	EF-04
ELEVATOR	PACK-01
RTU-01	PACK-02
XFMR-1	CUH-01

6

A E5.2 MDP-01 ELEVATION VIEW
NO SCALE

MCB	P-01A/B
	P-02
LP-01	P-03
SCALE HOUSE	

6

B E5.2 MDP-02 ELEVATION VIEW
NO SCALE

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DES BY: CPH CHK BY: SPZ
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BY:
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CONTRACTOR:

ELECTRICAL ONE-LINE DIAGRAM - 2

OLIN AVENUE WASTE TRANSFER STATION MODIFICATIONS
CITY OF MADISON
DANE COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.®
ENGINEERS

SHEET
E5.2

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