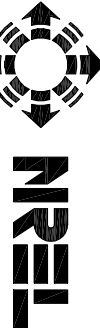


GENERAL NOTES:

1. ALL PANELS/DGGS SHALL BE DE-ENERGIZED WHEN COVERS ARE REMOVED FOR MAINTENANCE OR REPAIRS.
2. CONTRACTOR TO PLACE COPY OF UPDATED PANEL SCHEDULE IN AS-BUILT DRAWING UPDATES.



National Renewable Energy Laboratory

1977 Oak Boulevard • Boulder • Colorado 80501-5000

U.S. Department of Energy

By Michael Roeschman Institute • Boulder • Colorado

FTLB

THERMO-CHEM LABORATORY 101 CONVERSION

LAB 101 SCHEDULES

ISSUING NO. 0557X

FTLB-135-

NREL PROJECT NO.

EX2010034

ISSUING NO. 0557X

E-09

NREL WORK ORDER NO.

13

REVISION NO.

0

REASON NO.

PANEL: FL		TYPE: xxx		<input checked="" type="checkbox"/> NEUTRAL <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> ISO-980		<input type="checkbox"/> MAIN CB <input type="checkbox"/> MLO		SIZE :		225 AMP		
LOCATION: FTLB 305		APACITY = 225 AMPS		<input type="checkbox"/> MLO <input type="checkbox"/> SURFACE <input type="checkbox"/> RECESSED								
AC RATING = 10K AMPS		VOLTAGE = 208/120V, 3PH, 4W										
TYPE	VA	DESCRIPTION	P	CB	PH	OKT	CB	P	DESCRIPTION	VA	TYPE	
M	500	EXST LOAD	1	20	1	A	2	20	1	EXST LOAD	250	M
R	180	EXST LOAD	1	20	3	B	4	20	1	SPACE	-	R
R	180	EXST LOAD	1	20	5	C	6	20	1	EXST LOAD	180	R
M	400	NEW FAN LOFT	1	20	7	A	8	20	1	EXST LOAD	360	M
M	250	EXST LOAD	1	20	9	B	10	20	1	EXST LOAD	250	M
M	400	EXST LOAD	1	20	11	C	12	20	1	EXST LOAD	250	M
M	200	EXST LOAD	1	20	13	A	14	20	1	EXST LOAD	250	M
R	180	EXST LOAD	1	20	15	B	16	20	1	EXST LOAD	300	M
M	500	EXST LOAD	1	20	17	C	18	20	1	EXST LOAD	500	M
M	700	EXST LOAD	1	20	19	A	20	20	1	EXST LOAD	250	M
R	360	EXST LOAD	1	20	21	B	22	20	1	EXST LOAD	120	E
R	360	EXST LOAD	1	20	23	C	24	20	1	EXST LOAD	150	M
M	150	EXST LOAD	1	20	25	A	26	20	1	EXST LOAD	300	M
R	360	NEW FAN LOFT	1	20	27	B	28	20	1	EXST LOAD	300	M
R	360	NEW FAN LOFT	1	20	29	C	30			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	31	A	32			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	33	B	34			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	35	C	36			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	37	A	38			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	39	B	40			SPACE	-	M
M	350	NEW FAN LOFT U/L	1	20	41	C	42			SPACE	-	M
PH LOADING:												
A=		x		VA		R = RECEPTACLE						
B=		x		VA		M = MOTORS						
C=		x		VA		E = EQUIPMENT						
						H = HEATING						
						F = TRANSFORMER						
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	LOAD (VA)	NEC LOAD (VA)	DEPARTED DEMAND LOAD (VA)							
LIGHTING	1880	1.0	1880	1.75	0							
REC REMAINING	0	0.5	0	1.0	0							
ROVING MOTORS	7400	1.0	7400	1.25	0000.0							
HEATING	0000	1.0	0	1.25	0000.0							
TOTAL	x		x		9380	26.5 AMPS						
DEPARTED DEMAND LOAD						26.5 AMPS						
SPARE CAPACITY						26.5 AMPS						
TOTAL						26.5 AMPS						

PANEL: FH		TYPE: xxx		<input checked="" type="checkbox"/> NEUTRAL	<input checked="" type="checkbox"/> GROUND	<input type="checkbox"/> ISO-CBD	<input type="checkbox"/> MAIN CB	SIZE :	AMP			
LOCATION: FTLB 305		APACITY = 277 AMPS		<input type="checkbox"/> MLO	<input type="checkbox"/> MLO	<input type="checkbox"/> MLO	<input type="checkbox"/> SURFACE					
FED FROM: FTHP (1)		VOLTAGE = 277/480V, 3PH, 4W		<input type="checkbox"/> RECESSED								
TYPE	VA	DESCRIPTION	P	CB	OKT	PH	OKT	CB	P	DESCRIPTION	VA	TYPE
L	900	EXST LOAD	1	20	1	A	2	20	1	EXST LOAD	540	L
L	810	NEW FAN LOFT LUG.	1	20	3	B	4			SPACE		
		SPACE			5	C	6			SPACE		
M	1320	PCP 01	3	15	7	A	8	15	3	TOP-01	2900	M
		1			9	B	10			2HP		
		1			11	C	12			1		
		SPACE			13	A	14	15	3	TOP-02 1 HP	0	M
		SPACE			15	B	16			STANBY		
		SPACE			17	C	18			1		
		SPACE			19	A				SPACE		
		SPACE			21	B				SPACE		
		SPACE			23	C				SPACE		
DEPARTED DEMAND LOAD = 8.4 AMPS											8.4	AMPS
SPARE CAPACITY = 8.4 AMPS											8.4	AMPS
TOTAL = 5600											5600	

A = 2620 VA		R = RECEPTACLE		L = LIGHTING		N = NEUTRAL		P = PHASE-BRAND	
B = 2190 VA		M = MOTOR		E = EQUIPMENT		H = HEATING		P = PHASE-BRAND	
C = 1380 VA									
LOAD	CONNECTED LOAD (VA)	DEMAND	DEMAND	DEMAND	DEMAND	DEMAND	DEMAND	DEMAND	DEMAND
TYPE	LOAD (VA)	FACTOR	LOAD (VA)	NEC	LOAD (VA)	NEC	LOAD (VA)	NEC	LOAD (VA)
LIGHTING	2250	1.0	0	1.25	2812	1.25	2812	1.25	2812
REC	0	1.0	0	1.0	0	1.0	0	1.0	0
REMAINING MOTORS	0	0.5	0	1.0	0	1.0	0	1.0	0
LARGEST MOTORS	4160	1.0	0000	1.25	0000.0	1.25	0000.0	1.25	0000.0
REMAINING MOTORS	4160	1.0	0000	1.0	4160	1.0	4160	1.0	4160
HEATING	0000	1.0	0000	1.25	0000.0	1.25	0000.0	1.25	0000.0
HEATING	0	1.0	0	1.25	0000.0	1.25	0000.0	1.25	0000.0
TOTAL	5600		x		6912		6912		6912

PANEL: FPPH2		TYPE: REPLACED		<input checked="" type="checkbox"/> NEUTRAL		<input checked="" type="checkbox"/> GROUND		SIZE :		225 AMP		
LOCATION: FTLE 307 EAST FAN LOFT				<input type="checkbox"/> 50-980		<input type="checkbox"/> MAIN CB						
APACITY = 225 AMPS				<input checked="" type="checkbox"/> MLO		<input checked="" type="checkbox"/> SURFACE						
AC RATING = 10K AMPS				<input type="checkbox"/> RECESSED								
VOLTAGE = 277/480V, 3PH, 4W												
TYPE	VA	DESCRIPTION	P	CB	OKT	PH	OKT	CB	P	DESCRIPTION	VA	TYPE
M	27099	EX-3A	3	40	1	A	2	40	3	EX-3B	27099	M
M			—	—	3	B	4	—	—			
M			—	—	5	C	6	—	—			
M	2490	P13A	3	15	7	A	8	15	3	P13	2490	M
M			—	—	9	B	10	—	—			
M			—	—	11	C	12	—	—			
M	2400	P12A	3	15	13	A	14	15	3	P12	2400	M
M			—	—	15	B	16	—	—			
M			—	—	17	C	18	—	—			
M	9418	EF-5A	3	50	19	A	20	50	3	EF-5B	9418	M
M	9418	EF-5A	—	25	21	B	22	—	—	EF-5B	9418	
M	9418	EF-5A	—	23	23	C	24	—	—	EF-5B	9418	
M			1	20	25	A	26	20	1			
M			1	20	27	B	28	20	1			
M			1	20	29	C	30	20	1			
M			1	20	31	A	32	20	1			
M			1	20	33	B	34	20	1			
M			1	20	35	C	36	20	1			
M			1	20	37	A	38	20	1			
M			1	20	39	B	40	20	1			
M			1	20	41	C	42	20	1			
DEPARTED DEMAND LOAD = 153.1 AMPS												
SPARE CAPACITY = 153.1 AMPS												
TOTAL = 127,287												

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PANEL: 11H5		TYPE: ITE - CDP		<input checked="" type="checkbox"/> NEUTRAL	<input checked="" type="checkbox"/> GROUND	<input type="checkbox"/> ISO-980	<input type="checkbox"/> MAIN CB	SIZE :			
LOCATION: 101		APACITY = 225 AMPS		<input type="checkbox"/> MLO	<input type="checkbox"/> MLO	<input type="checkbox"/> MLO	<input type="checkbox"/> SURFACE				
FED FROM: PPH5-2		AC RATING = 10K AMPS		<input type="checkbox"/> RECESSED							
VOLTAGE = 480/277V, 3PH, 4W											
TYPE	DESCRIPTION	P	CB	OKT	PH	OKT	CB	P	DESCRIPTION	VA	TYPE
L	1240 RM 101 LIGHTS	1	20	1	A	2	20	1	LUGS RM103,06,07	2450	L
L	900 OUTDOOR LUGS	1	20	3	B	4	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	5	C	6	20	2	SPACE		
M	6315 EXHAUST FAN	3	50	7	A	8	15	3	NEW P-104/P-108	7977	M
M	6315 EXHAUST FAN	3	50	9	B	10					
M	6315 EXHAUST FAN	3	50	11	C	12					
M	6315 EXHAUST FAN	3	50	13	A	14	15	3	NEW P-948/P-1148	11301	M
M	6315 EXHAUST FAN	3	50	15	B	16					
M	6315 EXHAUST FAN	3	50	17	C	18					
M	6315 EXHAUST FAN	3	50	19	A	20	30	3	SPACE		
M	6315 EXHAUST FAN	3	50	21	B	22					
M	6315 EXHAUST FAN	3	50	23	C	24					
M	6315 EXHAUST FAN	3	50	25	A	26	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	27	B	28	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	29	C	30	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	31	A	32	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	33	B	34	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	35	C	36	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	37	A	38	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	39	B	40	20	1	SPACE		
M	6315 EXHAUST FAN	3	50	41	C	42	20	1	SPACE		