MAIN SWITCHBOARD "MSB"

277/480V, 3ø, 4W
3,000A MCB

S.C.I.= 50,000A
MAIN ELEC. RM.

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	1200	3	–	450.0	(3)-(4"C., 4#500kcmil & #3/0 GND.)	EXISTING MAIN SWITCHBOARD
2	125	3	40	47.0	1 1/4"C – 3#4 & #6 GND.	ELEVATOR
3	700	3	–	430.0	SEE ONE-LINE DIAGRAM	CHILLER #3
4	300	3	–	*212.0	3 1/2"C.–4#500kcmil, & #3 GND.	PANEL "MDPP"
5	250	3	–	*140.0	2"C.–4#350kcmil, & #4 GND.	PANEL "DP2"
6	150	3	–	(*140)	2"C (EMPTY)	SPACE (FOR FUTURE PANEL "DP3")
7	250	3	–	120.0	2"C.–4#300kcmil, & #4 GND.	PANEL "DP4"
8	250	3	–	*140	2"C.–4#300kcmil, & #4 GND.	PANEL "DP5"
9	250	3	–	165.0	2"C.–4#350kcmil, & #4 GND.	PANEL "DP1"
10	100	3	–	*26.0	1 1/4"C.–4#3 & #8 GND.	AT5–1 (PANEL "EDPL")
11	600	3	–	*466.0	(2)–(3"C., 3#350kcmil & #1 GND.)	AT5–2 (PANEL "EDPS1")
12	600	3	–	*435.0	(2)–(3"C., 3#350kcmil & #1 GND.)	AT5–3 (PANEL "EDPS3")
13	200	3	–	102.0	2 1/2"C.–4#4/0 & #6 GND.	PANEL "MDPB"
14	200	3	–	*98.0	2 1/2"C.–4#4/0 & #6 GND.	PANEL "MDPB"
15	60	3	–	–	INTERNAL CONNECTION	TVSS
16						SPACE
17						SPACE
18						SPACE
19	225	3	–	–	2 1/2"C.–3#4/0 & #4 GND.	PANEL "MDPP1"
20						SPACE

* – INCLUDING FUTURE ESTIMATED LOADS

PANELBOARD "MDPP"

277/480V, 3ø, 4W
400A MLO

S.C.I.=35,000A
MECH. PENTHOUSE RM.

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	100	3	50.0	54.0	1"C – 3#4 & #8GND.	AHU–3
2	100	3	–	10.0	1"C – 4#10 & #10GND.	15 KVA TRANSFORMER (PANEL "MPP")
3	125	3	60	64.0	1 1/2"C – 3#2 & #6GND.	AHU–4
4	70	3	25.0	28	3/4"C – 3#8 & #8GND.	EF–22
5	50	3	15.0	17.5	3/4"C – 3#10 & #10GND.	PUMP P–6
6	50	3	15.0	17.5	3/4"C – 3#10 & #10GND.	PUMP P–7
7	20	1	–	2.0	1/2"C – 2#12 & #12GND.	LIGHTING
8	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–4
9	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–9
10	15	3	2.0	2.8	1/2"C – 3#12 & #12GND.	EF–8
11	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–10
12	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–7
13	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–14
14	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–15
15	15	3	2.0	4.0	1/2"C – 3#12 & #12GND.	EF–18
16	50	3	15	17.5	3/4"C – 3#10 & #10GND.	PUMP P–8
17		3				SPACE
18		3				SPACE
19	20	1	–	1.2	1/2"C – 3#12 & #12GND.	4th & 5th FL LTG.
20		1				SPACE
21		1				SPACE
22		1				SPACE

* – INCLUDING FUTURE ESTIMATED LOADS

PANELBOARD "MDPB"

277/480V, 3ø, 4W
225A MLO

S.C.I.=35,000A
MAIN ELEC. RM.

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	15	3	2(1.5)	2.2	1/2"C – 3#12 & #12GND.	CP–1
2	15	3	2(1.0)	3.0	1/2"C – 3#12 & #12GND.	EJ–1, EJ–2
3	20	3	5.0	6.5	1/2"C – 3#12 & #12GND.	VAC–1
4	15	2	–	1.5	1/2"C – 2#12 & #12GND.	HTR–3
5	20	3	–	12.0	1/2"C – 3#12 & #12GND.	HTR–4
6	15	3	3(1.0)	5.5	1/2"C – 3#12 & #12GND.	AD–1
7	③	3	(5.0)	(6.5)	–	SPACE (FOR FUTURE EQUIPMENT–VAC–2)
8	③	3	(15.0)	(17.5)	–	SPACE (FOR FUTURE EQUIPMENT–VAC–2)
9	15	3	2(1.0)	3.3	1/2"C – 3#12 & #12GND.	AD–2
10	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	EF–5
11	15	3	0.75	1.2	1/2"C – 3#12 & #12GND.	FCU–1
12	15	3	0.5	0.9	1/2"C – 3#12 & #12GND.	FCU–2
13	20	3	5.0	6.5	1/2"C – 3#12 & #12GND.	DOCK LIFT
14	15	3	2(3.0)	4.0	1/2"C – 4#12 & #12GND.	BOILER FEED SYSTEM
15	15	3	0.75	1.2	1/2"C – 3#12 & #12GND.	STEAM BOILER
16	80	3	–	25.0	1 1/4"C – 3#4 & #8GND.	45 KVA TRANSFORMER (PANEL "MPB")
17	15	3	1.0	1.5	1/2"C – 3#12 & #12GND.	OA SUPPLY
18		3				SPACE
19		3				SPACE
20		3				SPACE

PANELBOARD "EDP"

277/480V, 3ø, 4W
800A MLO

S.C.I.=35,000A
MAIN ELEC. RM.

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	100	3	–	*26.0	1 1/4"C. – 4#3 & #8 GND.	AT5–1 (PANEL "EDPL")
2	600	3	–	*466.0	(2)–(3"C., 3#350kcmil & #1 GND.)	AT5–2 (PANEL "EDPS1")
3	600	3	–	*435.0	(2)–(3"C., 3#350kcmil & #1 GND.)	AT5–3 (PANEL "EDPS3")
4	⑥	3				SPACE

* – INCLUDING FUTURE ESTIMATED LOADS

NOTE:
1. PROVIDE NEW CIRCUIT BREAKER IN THE EXISTING SPACE. THE CIRCUIT BREAKER SHORT-CIRCUIT INTERRUPTING RATING SHALL MATCH EXISTING DEVICES.

PANELBOARD "EDPS1"

480V, 3ø, 3W
600A MLO

S.C.I.=35,000A
MAIN ELEC. RM.

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	70	3	2.0	3.0	1"C – (EMPTY)	SPACE (FOR FUTURE TRANSF. PANEL "EPPP")
2	50	3	–	*20.0	1"C – 3#6 & #10GND	30 KVA TRANSFORMER (PANEL "EPPA")
3	50	3	–	4.0	3/4"C – 3#10 & #10GND.	15KVA TRANSFORMER (PANEL "EPP1")
4	50	3	15.0	17.5	3/4"C – 3#10 & #10GND.	AC–1
5	20	3	–	6.5	3/4"C – 4#12 & #12GND.	AIR SHOWER
6	20	1	–	2.0	3/4" – 2#10 & #12 GND.	HUMIDIFIER 1 & 2
7	20	1	–	2.0	3/4" – 2#10 & #12 GND.	SITE LIGHTING
8	20	3	–	10.8	1/2"C – 3#12 & #12GND.	GLASS DRYER, RM. 89
9	20	3	–	3.0	1/2" C. – 3#12 & #12GND.	GLASS WASHER, RM. 89
10	20	1	–	2.0	1/2"C – 2#12 & #12GND.	LIGHTING
11	–	3			(EXISTING)	SPARE
12	15	3	(2)1.0	1.5	(2)– (1/2"C. 3#12 & #12GND.)	GAS BOOSTER PUMPS
13	80	3		47.0	2"C. 4#1/0 & #6GND.)	45 KVA TRANSFORMER (PANEL "EPPS")
14		3				SPACE
15		1				SPACE
16		1				SPACE
17		1				SPACE
18		1				SPACE
19		1				SPACE
20		1				SPACE

PANELBOARD "EDP"

120/208V, 3ø, 4W
500A MCB
W/ TVSS DEVICE

S.C.I.=22,000A
ELEC. RM. 187

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	150	3	–	40.0	2"C – 4#1/0 & #6GND.	PANEL "PP1"
2	80	3	–	16.0	1 1/4"C – 4#4 & #8GND.	PANEL "PP181"
3	80	3	–	16.0	1 1/4"C – 4#4 & #8GND.	PANEL "PP182"
4	80	3	–	16.0	1 1/4"C – 4#4 & #8GND.	PANEL "PP183"
5	80	3	–	16.0	1 1/4"C – 4#4 & #8GND.	PANEL "PP192"
6	80	3	–	16.0	1 1/4"C – 4#4 & #8GND.	PANEL "PP194"
7	40	3	–	10.0	1 1/4"C – 4#8 & #10GND.	PANEL "PP196"
8	100	3	–	16.0	1 1/4"C – 4#3 & #8GND.	PANEL "PP21"
9		3				SPACE
10		3				SPACE
11	60	3	–	–	INTERNAL CONNECTION	TVSS

PANELBOARD "DPB"

277/480V, 3ø, 4W
225A MLO

S.C.I.=35,000A
ELEC. RM. 87

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	150	3	–	61.0	1 1/2"C. – 3#1/0 & #6GND.	75 KVA TRANSFORMER (PANEL "PPB")
2	25	3	–	10.0	1/2"C – 3#12 & #10GND.	CAGE/RACK WASHER
3	20	1	–	2.0	1/2"C – 2#12 & #12GND.	LIGHTING
4	20	1	–	3.2	1/2"C – 2#12 & #12GND.	LIGHTING
5	20	1	–	3.0	1/2"C – 2#12 & #12GND.	LIGHTING
6	20	1	–	2.0	3/4" – 2#10 & #12 GND.	SITE LIGHTING
7	20	1	–	2.0	3/4" – 2#10 & #12 GND.	SITE LIGHTING
8	20	3	–	10.8	1/2"C – 3#12 & #12GND.	GLASS DRYER, RM. 89
9	20	3	–	3.0	1/2" C. – 3#12 & #12GND.	GLASS WASHER, RM. 89
10	20	1	–	2.0	1/2"C – 2#12 & #12GND.	LIGHTING
11	20	3				SPARE
12		3				SPACE
13		3				SPACE
14		3				SPACE
15		1				SPACE
16		1				SPACE
17		1				SPACE
18		1				SPACE
19		1				SPACE
20		1				SPACE

PANELBOARD "EDPS2"

480V, 3ø, 3W
600A MLO

S.C.I.=35,000A
MECHANICAL PENTHOUSE

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	80	3	30.0	33.0	3/4"C. – 3#8 & #8GND.	EF–2
2	70	3	25.0	28.0	3/4"C – 3#8 & #8GND.	P–3
3	400	3	–	194.0	2 1/2"C. – 4#700kcmil & #4GND.	CH–2
4	70	3	25	28.0	3/4"C. – 3#8 & #8GND.	FAN EF–19
5	70	3	25	28.0	3/4"C. – 3#8 & #8GND.	PUMP P–9
6		3				SPACE
7		3				SPACE
8		3				SPACE

PANELBOARD "EDPS3"

480V, 3ø, 3W
600A MLO

S.C.I.=35,000A
MECHANICAL PENTHOUSE

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	80	3	30.0	33.0	3/4"C. – 3#8 & #8GND.	EF–1
2	80	3	30.0	33.0	3/4"C. – 3#8 & #8GND.	EF–3
3	70	3	25.0	28.0	3/4"C – 3#8 & #8GND.	P–1
4	70	3	25.0	28.0	3/4"C. – 3#8 & #8GND.	P–2
5	30	3	7.5	9.1	1/2"C. – 3#12 & #12GND.	P–4
6	30	3	7.5	9.1	1/2"C. – 3#12 & #12GND.	P–5
7	400	3	–	194.0	2 1/2"C. – 4#700kcmil & #4GND.	CH–1
8	70	3	25	28.0	3/4"C. – 3#8 & #8GND.	FAN EF–20
9	70	3	25	28.0	3/4"C. – 3#8 & #8GND.	FAN EF–21
10	③	3	(30)	(33.0)	–	SPACE (FOR FUTURE EQUIPMENT–EF)
11	30	3	–	2.0	1"C. – 3#10 & #10GND.	15 KVA TRANSFORMER (PANEL "EPPP")
12		3				SPACE
13		3				SPACE
14		3				SPACE

SCOPE OF WORK

PANELBOARD "MPP1"

480V, 3ø, 3W
225A MLO
SURFACE MOUNTED

S.C.I.=35,000A
MECHANICAL PENTHOUSE
(NEW)

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	100	3	40.0	43.0	1 1/4"C. – 3#4 & #8GND.	AHU–5
2	80	3	30.0	33.0	1 1/4"C – 3#6 & #8GND.	EF–24
3	80	3	–	45.0	1 1/4"C. – 3#4 & #8GND.	PANEL "PPL1" VIA 45 KVA XFMR.
4	15	3	1.5	2.2	1/2"C – 3#12 & #12GND.	EF–25
5	15	3	1.5	2.2	1/2"C – 3#12 & #12GND.	EF–26
6	20	3	3	3.8	1/2"C – 3#12 & #12GND.	VACUUM UNIT
7		3				SPACE
8		3				SPACE
9		3				SPACE
10		3				SPACE

NOTES:
1 – PROVIDE SPACE FOR (3)100A FRAME SIZE, 3 POLE CIRCUIT BREAKERS.
2 – PROVIDE SPACE FOR 250A, 3 POLE CIRCUIT BREAKER.
3 – PROVIDE SPACE FOR 100A FRAME SIZE, 3 POLE CIRCUIT BREAKER.
4 – PROVIDE SHUNT TRIP, 120V COIL.
5 – PROVIDE PANEL WITH ISOLATED GROUND BUS.
6 – PROVIDE SPACE FOR 200A, 3 POLE CIRCUIT BREAKER.
7 – PROVIDE PANEL WITH TVSS DEVICE.
8 – PROVIDE SPACE FOR 300A, 3 POLE CIRCUIT BREAKER.

PANELBOARD "DPP4"

120/208V, 3ø, 4W
400A MCB
W/ TVSS DEVICE

S.C.I.=22,000A
ELEC. RM. 487

CKT. NO.	CKT. BKR. AMPS	POLES	LOAD (CONN.) HP	KVA	FEEDER	EQUIPMENT
1	100	3	–	–	–	SPACE
2	80	3	–	15.0	1 1/4"C. – 4#6 & 1#8GND.	PANEL "PP481"
3	100	3	–	25.0	1 1/4"C. – 4#3 & 1#8GND.	PANEL "PP482"
4	80	3	–	15.0	1 1/4"C. – 4#4 & 1#8GND.	PANEL "PP486"
5	80	3	–	14.0	1 1/4"C. – 4#4 & 1#8GND.	PANEL "PP492"
6	80	3	–	13.0	1 1/4"C. – 4#4 & 1#8GND.	PANEL "PP494"
7	80	3	–	10.0	1 1/4"C. – 4#4 & 1#8GND.	PANEL "PP496"
8	80	3	–	14.0	1 1/4"C. – 4#4 & 1#8GND.	PANEL "PP493"
9	100	3	–	–	–	SPACE
10	100	3	–	–	–	SPACE
11	60	3	–	–	INTERNAL CONNECTION	TVSS

SCOPE OF WORK

SCHEDULE OF PANELBOARDS

PANEL	MOUNTING	VOLTAGE	TYPE	MAINS SIZE	ACTUAL CIRCUIT BREAKERS	SPARE 20A/1P	SPACE -/1P	TOTAL POLES	S.C.I. RATING
PP181	RECESSED	120/208V, 3ø, 4W	MLO	125A	15/1 20/1 25/1 30/1 35/1 15/2 20/2 30/2 50/2 60/2 80/3 15/3 20/3 30/3 50/3 60/3 100/3 150/3 200/3	6	10	30	10K
PP182	RECESSED	120/208V, 3ø, 4W	MLO	125A		6	10	30	10K
PP186	RECESSED	120/208V, 3ø, 4W	MLO	125A		5	10	30	10K
PP192	RECESSED	120/208V, 3ø, 4W	MLO	125A		5	10	30	10K
PP194	RECESSED	120/208V, 3ø, 4W	MLO	125A		4	10	30	10K
PP196	RECESSED	120/208V, 3ø, 4W	MLO	125A		4	10	30	10K
PP481	RECESSED	120/208V, 3ø, 4W	MLO	100A		7	8	30	10K
PP482	RECESSED	120/208V, 3ø, 4W	MLO	100A		6	7	42	10K
PP486	RECESSED	120/208V, 3ø, 4W	MLO	100A		7	8	30	10K
PP492	RECESSED	120/208V, 3ø, 4W	MLO	100A		7	10	30	10K
PP493	RECESSED	120/208V, 3ø, 4W	MLO	100A		9	12	30	10K
PP494	RECESSED	120/208V, 3ø, 4W	MLO	100A		7	10	30	10K
PP496	RECESSED	120/208V, 3ø, 4W	MLO	100A		9	10	30	10K
PPB	SURFACE	120/208V, 3ø, 4W	MCB	250A	37 / 2 2 1 / 2	8	11	72	10K
PP1	SURFACE	120/208V, 3ø, 4W	MLO	225A	56 / 2	4	8	72	18K
MPB	SURFACE	120/208V, 3ø, 4W	MCB	150A	15 / 6 1	5	8	42	18K
MPP	SURFACE	120/208V, 3ø, 4W	MCB	50A	10 / 1 1	4	11	30	10K
EPPP	SURFACE	120/208V, 3ø, 4W	MCB	50A	31 / 1 1	12	24	72	10K
EPP4	SURFACE	120/208V, 3ø, 4W	MLO	100A	26 / 2 1	5	4	42	10K
EPP	SURFACE	120/208V, 3ø, 4W	MCB	50A	6 / 1	4	11	24	10K
EPPA	SURFACE	120/208V, 3ø, 4W	MCB	50A	4 / 1	4	10	18	10K
EPP1	SURFACE	277/480V, 3ø, 4W	MLO	125A	2 / 1 1	5	11	42	25K
EPP4	SURFACE	277/480V, 3ø, 4W	MLO	100A	4 / 1	8	9	24	25K
DP1	SURFACE	277/480V, 3ø, 4W	MLO	400A	9 / 1 1	7	16	42	25K
DP2	SURFACE	277/480V, 3ø, 4W	MLO	400A	10 / 1 1	10	11	42	25K
DP4	SURFACE	277/480V, 3ø, 4W	MLO	400A	10 / 1	8	12	42	25K
DP5	SURFACE	277/480V, 3ø, 4W	MLO	400A	6 / 1 1	10	8	42	25K
PP41	SURFACE	120/208V, 3ø, 4W	MCB	100A	34 / 1	0	4	42	10K
PP21	SURFACE	120/208V, 3ø, 4W	MLO	100A	22	2	18	42	10K
MPP1	SURFACE	277/480V, 3ø, 4W	MCB	100A	SEE DRAWINGS D4045.00				
PP11	SURFACE	120/208V, 3ø, 4W			SEE DRAWINGS D4045.00				
PPP51	SURFACE	120/208V, 3ø, 4W	MCB	150A	32 / 1	0	0	42	10K
PPP22	SURFACE	120/208V, 3ø, 4W	MCB	150A	30 / 1	6	3	42	10K
EPP5	SURFACE	120/208V, 3ø, 4W	MCB	150A	6 / 10 / 2	6	14	42	10K

OWNER REVIEW
NAME DATE

RESEARCH WING PHASE III FIT-OUT

UNIVERSITY OF SOUTHERN MAINE
70 FALMOUTH STREET
PORTLAND, MAINE

△ = CLOUDED CHANGE

ISSUE LOG

NO.	DATE	DESCRIPTION
A	03.08.06	80% PROGRESS PRINT
B	03.16.06	PROGRESS PRINT
C	03.22.06	100% OC REVIEW
	05.03.06	SCOPE REVISION
	06.21.06	ISSUED FOR CONSTRUCTION

FOR NEW FEEDERS UTILIZING #2 WIRE AND LARGER, INDICATED WIRE AND CONDUIT ARE SIZED BASED ON THE COPPER WIRE MATERIAL. E.C. IS RESPONSIBLE FOR RECALCULATING AND RESIZING OF THE REQUIRED ALUMINUM WIRE AND CONDUIT. REFER TO SPECIFICATION.

SCOPE OF WORK SHOWN ON THIS DRAWING INCLUDES BUT IS NOT LIMITED TO INFRASTRUCTURE SCOPE.

SYMMES MAINI & MCKEE ASSOCIATES
SMMA
1000 Massachusetts Avenue
Cambridge, Massachusetts 02138
617.547.5400 Fax 617.354.5758

© SYMMES MAINI & MCKEE ASSOCIATES, INC. 2004

JOB NO. 03049.10
PROJ. MGR. RCH
PROJ. ARCH. / ENGR. SD
CHECKED BY
DRAWN BY SAI
SCALE NONE

PANELBOARD SCHEDULES

E8.01