

V-473 OXFORD, MS -- WIRE SCHEDULE

AMPS/PH	CABLE ID	MAX LENGTH		WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
		208V	460V	
	SPR			3 PHASE 4 WIRE (THHN/THWN)
	PRV			WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
	CO.0			PROVIDE SPARE BREAKER - SIZE AND QUANTITY AS INDICATED
	CO.1			PROVIDE SPACE ONLY FOR FUTURE BREAKER - SIZE & QTY AS INDICATED
	CO.2			EXISTING FEEDER TO REMAIN
	CO.2			EXISTING FEEDER TO BE DISCONNECTED AND REMOVED
	CO.2			NEW FEEDER SUPPLIED AND INSTALLED BY UTILITY/OTHERS
20	4C0	112	250	3/4" CONDUIT WITH 4 x # 12 Cu + # 12 Cu G
30	4C0	112	250	3/4" CONDUIT WITH 4 x # 10 Cu + # 12 Cu G
40	4C1	112	250	3/4" CONDUIT WITH 4 x # 8 Cu + # 12 Cu G
50	4C2	141	312	1" CONDUIT WITH 4 x # 6 Cu + # 10 Cu G
70	4C3	155	343	1 1/4" CONDUIT WITH 4 x # 4 Cu + # 8 Cu G
90	4C4	219	485	1 1/2" CONDUIT WITH 4 x # 2 Cu + # 8 Cu G
100	4C5	173	382	1 1/2" CONDUIT WITH 4 x # 1/0 Al + # 6 Al G
125	4C7	153	339	2" CONDUIT WITH 4 x # 2/0 Al + # 4 Al G
150	4C8	153	339	2" CONDUIT WITH 4 x # 3/0 Al + # 4 Al G
175	4C9	152	337	2 1/2" CONDUIT WITH 4 x # 4/0 Al + # 4 Al G
200	4C10	157	348	2 1/2" CONDUIT WITH 4 x # 250kcmil Al + # 2 Al G
225	4C11	160	355	2 1/2" CONDUIT WITH 4 x # 300kcmil Al + # 2 Al G
400	4C15	157	348	(2) SETS OF 2 1/2" CONDUIT WITH 4 x # 250kcmil Al + # 1 Al G
800	4C20	194	430	(3) SETS OF 3" CONDUIT WITH 4 x # 500kcmil Al + # 3/0 Al G
1600	4C23	194	430	(6) SETS OF 3" CONDUIT WITH 4 x # 500kcmil Al + # 350kcmil Al G
2500	4C25	187	413	(9) SETS OF 3 1/2" CONDUIT WITH 4 x # 500kcmil Al + # 600kcmil Al G
3000	4C26	172	382	(10) SETS OF 4" CONDUIT EACH WITH 4 x # 500kcmil Al + 600 kcmil Al G

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		208V	460V	
				3 PHASE 3 WIRE (THHN/THWN)
20	3C0	112	250	3/4" CONDUIT WITH 3 x # 12 Cu + # 12 Cu G
30	3C0	112	250	3/4" CONDUIT WITH 3 x # 10 Cu + # 12 Cu G
40	3C1	112	250	3/4" CONDUIT WITH 3 x # 8 Cu + # 10 Cu G
50	3C2	141	312	1" CONDUIT WITH 3 x # 6 Cu + # 10 Cu G
70	3C3	155	343	1" CONDUIT WITH 3 x # 4 Cu + # 8 Cu G
90	3C4	219	485	1 1/4" CONDUIT WITH 3 x # 2 Cu + # 8 Cu G
125	3C7	153	339	1 1/2" CONDUIT WITH 3 x # 2/0 Al + # 4 Al G
175	3C9	152	337	2" CONDUIT WITH 3 x # 4/0 Al + # 4 Al G
800	3C20	194	430	(3) SETS OF 3" CONDUIT WITH 3 x # 500kcmil Al + # 3/0 Al G
1200	3C22	172	382	(4) SETS OF 3" CONDUIT WITH 3 x # 500kcmil Al + # 250kcmil Al G

AMPS/PH	CABLE ID	MAX LENGTH		WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
		120V	277V	
				1 PHASE 3 WIRE (THHN/THWN)
20	2C0	65	150	3/4" CONDUIT WITH 2 x # 12 Cu + # 12 Cu G
30	2C0	65	150	3/4" CONDUIT WITH 2 x # 10 Cu + # 12 Cu G
40	2C1	65	150	3/4" CONDUIT WITH 2 x # 8 Cu + # 10 Cu G
50	2C2	81	188	3/4" CONDUIT WITH 2 x # 6 Cu + # 10 Cu G

AMPS/PH	CABLE ID	MAX LENGTH		WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
		208V	460V	
				3 PHASE 4 WIRE+G (THHN/THWN)
300	4IG13	172	382	3" CONDUIT WITH 4 x # 500kcmil Al + # 1 Al G + # 1 Al G

AMPS/PH	CABLE ID	MAX LENGTH		WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
		120V	277V	
				1 PHASE 3 WIRE+G (THHN/THWN)
20	2C0	65	150	3/4" CONDUIT WITH 2 x # 10 Cu + # 10 Cu G

AMPS/PH	CABLE ID	MAX LENGTH		WIRE/FEEDER DESCRIPTION - CONDUIT - CONDUCTORS - GROUND
		208V	460V	
				3 PHASE 4 WIRE - FIRE RATED (RHW-2)
100	4F5	173	382	2" CONDUIT WITH 4 x # 1/0 Al + # 6 Al G
175	4F9	152	337	2 1/2" CONDUIT WITH 4 x # 4/0 Al + # 4 Al G

** DENOTES GROUND CONDUCTOR SIZE TO BE EQUAL TO PHASE CONDUCTOR SIZE

1 - IF CIRCUIT LENGTH EXCEEDS RESPECTIVE MAXIMUM LENGTH INDICATED ABOVE CONTRACTOR TO ALLOW FOR AND INSTALL LARGER CONDUCTOR AND CORDUIT SIZE TO MEET NEC REQUIREMENTS FOR VOLTAGE DROP
2 - DISREGARD CABLE IDs NOT USED

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		208V	460V	
150	4Cu8	153	339	2" CONDUIT WITH 4 x # 3/0 Cu + # 6 Cu G

V-473 OXFORD, MS -- GENERATOR SCHEDULE

PLAN MARK	MODEL	MODEL	VOLTAGE	STANDARD KW	LOAD PF	DERATING	TEMP	RATED KVA	FUEL		
									Type	Rate	Pressure
GEN#1	K-0046625	K100-NG-027/480	277/480 V	100	0.9	0%	3%	108.2	Natural Gas	1116 cJ/hr	11-14"

SITE AMBIENT: Deg F
SITE ALTITUDE: 512 Ft above sea level

V-473 OXFORD, MS -- TRANSFORMER SCHEDULE

TX NAME	VOLTAGE	KVA	CONFIG	BREAKER/FUSE			AIC	Type	Status
				Primary	Secondary	%Z			
TX1	480/208	480/2500	DELTA/WYE	MV Fuse	3000	5.75%	120773	Supplied by Utility Co	New
TX2	480/208	1000	DELTA/WYE	Exist	Exist	5.75%	48309	Removed by Utility Co	Demolished
TX3	480/208	750	DELTA/WYE	1200	2500	5.75%	36232	Nema 3R	New
TLH	480/208	75	DELTA/WYE	125	300	3.00%	6944	Screened	New
TLHA	480/208	45	DELTA/WYE	70	175	3.10%	4032	Nema 1	New

V-473 OXFORD, MS -- LOAD CALCULATIONS

ELECTRICAL SERVICE LOAD CALCULATION	Utility Voltage = 277/480 V		MAIN SWITCH	3000 Amps
	VA	W		
LIGHTING LOADS	106,726 VA	x 1.25 =	133,407 VA	
TRACK LIGHTING	21,810 VA	x 1.00 =	21,810 VA	
GENERAL USE RECEPTACLES	131,641.00 VA	(10K @ 1.00 + 121641VA @ 0.50) =	70821 VA	
DEDICATED RECEPTACLES	139,981 VA	x 1.00 =	139,981 VA	
CLEAN DATA POWER	77,196 VA	x 0.50 =	38,598 VA	
KITCHEN EQUIPMENT	284,863 VA	x 0.65 =	185,031 VA	
HVAC	590,726 VA	x 1.00 =	590,726 VA	
REFRIGERATION EQUIPMENT	698,057 VA	x 1.00 =	698,057 VA	
MOTOR LOAD	37,542 VA	x 1.00 =	37,542 VA	
MISC OR APPLIANCE	49,081 VA	x 1.00 =	49,081 VA	
TOTAL	NEC CALCULATED LOAD = 1965KVA @ 277/480 V		2,365 Amp	
	PREVIOUS PEAK DEMAND (PER OXFORD ELECTRIC DEPARTMENT)		476 kW	

GENERATOR LOAD CALCULATION	Utility Voltage = 277/480 V		MAIN SWITCH	3000 Amps
	VA	W		
LIGHTING LOADS	17,146 VA	x 1.25 =	21,433 VA	
GENERAL USE RECEPTACLES	16,705.00 VA	(10K @ 1.00 + 6705VA @ 0.50) =	13353 VA	
CLEAN DATA POWER	77,196 VA	x 0.75 =	57,897 VA	
REFRIGERATION EQUIPMENT	1,800 VA	x 1.00 =	1,800 VA	
TOTAL	NEC CALCULATED LOAD = 102KVA @		123 Amp	

V-473 OXFORD, MS -- NEW PANEL FAULT LEVEL CALCULATIONS

SOURCE	PANEL/EQUIP		CONDUCTORS				CALCULATED AIC (sym RMS)				
	PANEL/EQUIP	L-N VOLTS	AC	Cu/Al	SIZE	LENGTH	CU	AL	Y" FACTOR	AMPS	MVA
UTILITY	MSB2	277	60000	Cu	500 kcmil	10	2185	1815	0.15	52228	43.40
MSB2	PPA	277	52228	Al	500 kcmil	3	187	18756	1.20	23725	19.72
MSB2	HA	277	52228	Al	1/0 AWG	2	187	5777	1.81	18594	15.45
MSB2	HB	277	52228	Al	3/0 AWG	2	187	8826	1.26	23130	19.22
MSB2	HC	277	52228	Al	1/0 AWG	2	187	5777	29.90	1690	1.40
MSB2	HE	277	52228	Al	3/0 AWG	2	187	8826	17.58	2812	2.34
MSB2	HEM	277	52228	Al	1/0 AWG	2	187	5777	27.19	1853	1.54
MSB2	HF	277	52228	Al	250 kcmil	3	187	12122	10.53	4528	3.76
MSB2	HG	277	52228	Al	250 kcmil	2	187	12122	0.47	35494	29.50
MSB2	HQ	277	52228	Al	500 kcmil	6	10	18756	0.03	50755	42.18
MSB2	RTU-1	277	52228	Al	4/0 AWG	2	187	10741	12.04	4005	3.33
MSB2	RTU-2	277	52228	Al	4/0 AWG	2	187	10741	9.91	4786	3.98
TX1	MSB	120	3232	Al	500 kcmil	9	33	18756	0.10	32871	11.83
TX2	MSB	120	32871	Al	250 kcmil	35	35	12122	1.37	13871	4.99
TX3	MSB	120	32871	Al	1/0 AWG	35	35	5777	2.87	8484	3.05
TX4	MSB	120	32871	Al	1/0 AWG	35	35	5777	2.87	8484	3.05
TX5	MSB	120	32871	Al	250 kcmil	35	35	12122	1.37	13871	4.99
TX6	MSB	120	32871	Al	250 kcmil	499	499	12122	19.53	1601	0.58
TX7	MSB	120	32871	Al	250 kcmil	295	295	12122	11.55	2620	0.94
TX8	MSB	120	32871	Al	250 kcmil	2	480	12122	9.39	3163	1.14
TX9	MSB	120	32871	Al	250 kcmil	450	450	12122	17.61	1766	0.64
TX10	MSB	120	32871	Al	250 kcmil	206	206	12122	8.06	3627	1.31
TX11	MSB	120	32871	Al	300 kcmil	499	499	13910	17.02	1824	0.66
TX12	MSB	120	32871	Al	250 kcmil	2	71	12122	1.39	13757	4.95
TX13	MSB	120	32871	Al	250 kcmil	162	162	12122	6.34	4478	1.61
TLH	LH	120	6944	Al	3/0 AWG	10	10	8826	0.11	6236	2.25
TLHA	LHA	120	4032	Al	3/0 AWG	10	10	8826	0.07	3783	1.36
EQUIPMENT											
HG	RTU-9	277	35494	Cu	12 AWG	260	617		93.52	376	0.31
HG	RTU-10	277	35494	Cu	2 AWG	103	5907		3.87	7288	6.06
HG	RTU-13	277	35494	Cu	6 AWG	235	2682		18.45	1736	1.44
HG	RTU-14	277	35494	Cu	6 AWG	128	2682		10.59	3061	2.54
HG	RTU-15	277	35494	Cu	12 AWG	112	617		40.29	860	0.71
HG	RTU-16	277	35494	Cu	8 AWG	192	1557		27.37	1251	1.04
HG	RTU-17	277	35494	Cu	6 AWG	90	2682		7.45	4201	3.49
HF	RTU-6	277	4528	Cu	6 AWG	275	2682		2.90	1160	0.96
HF	RTU-7	277	4528	Cu	6 AWG	56	2682		0.59	2846	2.36
HF	RTU-8	277	4528	Cu	6 AWG	238	2682		2.51	1289	1.07
PPA	PRO-A	120	23725	Al	2/0 AWG	277	7187	13.20		1671	0.60
PPA	PRO-B	120	23725	Al	2/0 AWG	262	7187	12.48		1760	0.63
PPA	PRO-C	120	23725	Al	2/0 AWG	39	7187	1.86		8301	2.99
PPA	PRO-D	120	23725	Al	2/0 AWG	26	7187	1.24		10597	3.82
PPA	PRO-E	120	23725	Al	2/0 AWG	20	7187				