VOLTAGE DROP CALCULATION

FACP #	0	DGP / XPDR #	0
POWER SUPPLY #	1	CIRCUIT #	1

NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

DUNN OPERATIONS CENTER - OPERATIONS BUILDING
1269 JONESBORO ROAD
HARNETT COUNTY, N.C. 28334

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

1 8 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	35	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR.	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	35	20.26	0.141	0.69%
2	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	30	20.14	0.255	1.25%
3	STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2S(W/R)-F	0.086	35	20.02	0.383	1.88%
4	STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2S(W/R)-F	0.060	40	19.89	0.508	2.49%
5	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	40	19.78	0.618	3.03%
6	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	25	19.72	0.682	3.34%
7	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	30	19.65	0.754	3.69%
8	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	25	19.59	0.810	3.97%
9	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	15	19.56	0.841	4.12%
10	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	15	19.53	0.869	4.26%
11	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	35	19.47	0.928	4.55%
12	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	45	19.40	0.996	4.88%
13	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	20	19.38	1.023	5.01%
14	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	30	19.34	1.057	5.18%
15	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	20	19.32	1.076	5.27%
16	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	50	19.28	1.117	5.48%
17	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	55	19.25	1.152	5.65%
18	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	45	19.22	1.175	5.76%
19	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	35	19.21	1.186	5.81%
20	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	40	19.21	1.194	5.85%
			TOTAL:	0.654	665	END OF LINE VOLTAGE:		19.21

POINT TO POINT METHOD						
CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.654	665	1.194	19.21	5.85%		YES

END OF LINE METHOD						
CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.654	665	2.670	17.73	13.09%		YES

VOLTAGE DROP CALCULATION

FACP #	0	DGP / XPDR #	0
POWER SUPPLY #	1	CIRCUIT #	2

NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

DUNN OPERATIONS CENTER - OPERATIONS BUILDING
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HARNETT COUNTY, N.C. 28334

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

1 8 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	45	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR.	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	45	20.24	0.162	0.79%
2	STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2S(W/R)-F	0.060	35	20.12	0.281	1.38%
3	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	75	19.89	0.510	2.50%
4	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	45	19.76	0.639	3.13%
5	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	50	19.63	0.772	3.79%
6	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	30	19.55	0.849	4.16%
7	STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2S(W/R)-F	0.060	40	19.46	0.945	4.63%
8	STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2S(W/R)-F	0.060	40	19.37	1.026	5.03%
9	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	40	19.31	1.093	5.36%
10	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	35	19.25	1.147	5.62%
11	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	35	19.21	1.194	5.85%
12	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	35	19.16	1.235	6.05%
13	HORN STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2HSC(W/R)-F	0.030	30	19.14	1.265	6.20%
14	HORN STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2HSC(W/R)-F	0.070	35	19.11	1.293	6.34%
15	STROBE [CEILING MOUNTED] [75CD]	SIEMENS	SL2S(W/R)-F	0.060	50	19.09	1.311	6.43%
			TOTAL:	0.586	620	END OF LINE VOLTAGE:		19.09

POINT TO POINT METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.586	620	1.311	19.09	6.43%		YES

END OF LINE METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.586	620	2.231	18.17	10.94%		YES

VOLTAGE DROP CALCULATION

FACP #	0	DGP / XPDR #	0
POWER SUPPLY #	1	CIRCUIT #	3

DUNN OPERATIONS CENTER - OPERATIONS BUILDING
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NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

1 8 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	125	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	125	20.01	0.391	1.92%
2	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.90	0.504	2.47%
3	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.81	0.589	2.89%
4	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.75	0.645	3.16%
5	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.73	0.673	3.30%
			TOTAL:	0.510	305	END OF LINE VOLTAGE:		19.73

POINT TO POINT METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.510	305	0.673	19.73	3.30%		YES

END OF LINE METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.510	305	0.955	19.44	4.68%		YES

VOLTAGE DROP CALCULATION

FACP #	0	DGP / XPDR #	0
POWER SUPPLY #	1	CIRCUIT #	4

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NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

1 8 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	175	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	175	19.85	0.548	2.69%
2	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.74	0.661	3.24%
3	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.65	0.745	3.65%
4	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.60	0.802	3.93%
5	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.57	0.830	4.07%
			TOTAL:	0.510	355	END OF LINE VOLTAGE:		19.57

POINT TO POINT METHOD						
CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.510	355	0.830	19.57	4.07%		YES

END OF LINE METHOD						
CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.510	355	1.112	19.29	5.45%		YES