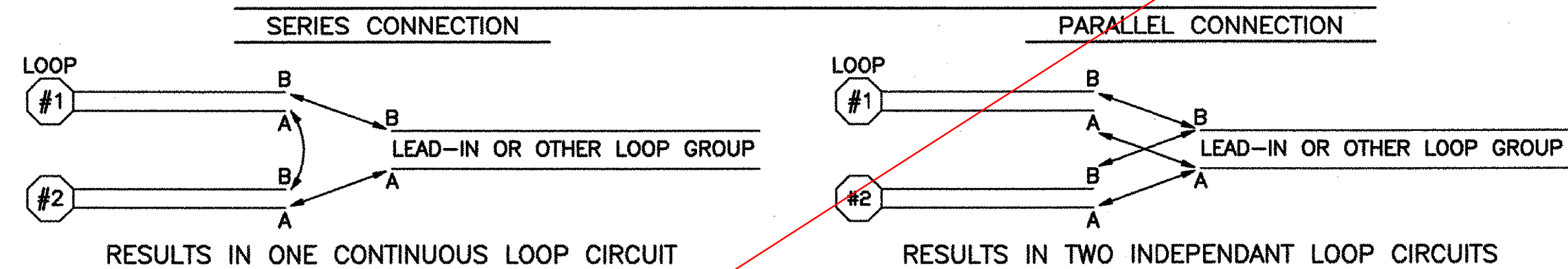


## LOOP INDUCTANCE & RESISTANCE DETAILS

INTERSECTION	LANE	LOOP DETAILS					LEAD - IN			TOTAL		PULLBOX / POLE BASE			LEAD - IN			TOTAL			CONTROLLER CABINET		
		NO.	SIZE	# TURNS	I	R	LEN.	I	R	I	R	NO.	CONNECTION	I	R	LEN.	I	R	I	R	CONNECTION	I	R
RIVERSIDE AVE/ N. WINOOSKI AVE/ HYDE ST INTERSECTION	WB LT	1	6' - OCT	3	69	0.19	17	4	0.06	73	0.25	PB #18	SERIES	223	0.78	144	36	0.47	259	1.25	---	259	1.25
	WB LT	2	6' - OCT	3	69	0.19	18	5	0.06	74	0.25												
	WB LT	3	6' - OCT	3	69	0.19	27	7	0.09	76	0.28												
	WB LT	4	6' - OCT	4	114	0.25	18	5	0.06	119	0.31	PB #19	-----	119	0.31	246	62	0.8	181	1.11	---	170	1.65
	WB TH	5	6' - OCT	3	69	0.19	7	2	0.02	71	0.21	PB #18	SERIES	216	0.68	144	36	0.47	525	1.15	---	252	1.15
	WB TH	6	6' - OCT	3	69	0.19	8	2	0.03	71	0.22												
	WB TH	7	6' - OCT	3	69	0.19	18	5	0.06	74	0.25												
	WB TH	8	6' - OCT	4	114	0.25	7	2	0.02	116	0.27	PB #19	-----	116	0.27	246	62	0.8	178	1.07	---	178	1.07
	EB ALL	9	6' - OCT	3	69	0.19	5	1	0.02	70	0.21	PB #2	SERIES	214	0.68	106	27	0.34	241	1.02	---	241	1.02
	EB ALL	10	6' - OCT	3	69	0.19	8	2	0.03	71	0.22												
	EB ALL	11	6' - OCT	3	69	0.19	17	4	0.06	73	0.25												
	EB ALL	12	6' - OCT	4	114	0.25	6	2	0.02	116	0.27	PB #1	-----	116	0.27	210	53	0.68	169	0.95	---	169	0.95
	NB LT/TH	13	6' - OCT	3	69	0.19	13	3	0.04	72	0.23	PB #6	SERIES	219	0.72	58	15	0.19	234	0.91	---	234	0.91
	NB LT/TH	14	6' - OCT	3	69	0.19	13	3	0.04	72	0.23												
	NB LT/TH	15	6' - OCT	3	69	0.19	22	6	0.07	75	0.26												
	NB RT	16	6' - OCT	3	69	0.19	6	2	0.02	71	0.21	PB #6	SERIES	216	0.68	58	15	0.19	231	0.87	---	231	0.87
	NB RT	17	6' - OCT	3	69	0.19	8	2	0.03	71	0.22												
	NB RT	18	6' - OCT	3	69	0.19	18	5	0.06	74	0.25												
	NB ALL	19	6' - OCT	4	114	0.25	8	2	0.03	116	0.28	PB #5	-----	116	0.28	165	41	0.53	157	0.81	---	157	0.81
	COMM HEALTH SB	20	6' - OCT	3	69	0.19	6	2	0.02	71	0.21	PB #14	SERIES	141	0.42	95	24	0.31	165	0.73	---	165	0.73
	COMM HEALTH SB	21	6' - OCT	3	69	0.19	5	1	0.02	70	0.21												
	APT SB	22	6' - OCT	3	69	0.19	20	6	0.07	75	0.26												
	APT SB	23	6' - OCT	3	69	0.19	21	6	0.07	75	0.26	PB #14	SERIES	150	0.52	95	24	0.31	174	0.83	---	165	0.83

### LOOP CONNECTION DETAILS



- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1) CONNECT LOOP #1 'A' WIRE TO LOOP #2 'B' WIRE</li> <li>2) CONNECT LOOP #1 'B' WIRE TO LEAD-IN 'B' WIRE</li> <li>3) CONNECT LOOP #2 'A' WIRE TO LEAD-IN 'A' WIRE</li> <li>4) REGARDLESS OF THE NUMBER OF LOOPS THERE WILL ONLY BE TWO WIRES CONNECTED TO THE LEAD-IN IN ANY SERIES TYPE CIRCUIT.</li> </ol> | <ol style="list-style-type: none"> <li>1) CONNECT LOOP #1 'B' &amp; LOOP #2 'B' WIRE TO LEAD-IN 'B' WIRE</li> <li>2) CONNECT LOOP #1 'A' &amp; LOOP #2 'A' WIRE TO LEAD-IN 'A' WIRE</li> <li>3) FOR EACH LOOP IN A PARALLEL TYPE CIRCUIT THERE WILL BE TWO WIRES CONNECTED TO THE LEAD-IN. FOR EXAMPLE; THREE LOOPS CONNECTED IN PARALLEL WILL HAVE SIX WIRES CONNECTED TO THE LEAD-IN.</li> </ol> |
|---|--|

### NOTES

- 1) REFER TO STD. E-172 FOR LOOP TESTING DETAILS
- 2) LOOP INDUCTANCE & RESISTANCE READINGS WHICH FALL OUTSIDE THE LIMITS SHOWN ON STD. E-172 BUT CONSIDERED ACCEPTABLE AS DETERMINED BY THE ENGINEER, SHALL BE NOTED ON THIS SHEET.
- 3) SERIES OR PARALLEL INDICATES THE TYPE OF CONNECTION TO GET THE PROPER READINGS, SEE CONNECTION DETAILS.
- 4) LEAD-IN INDUCTANCE IS BASED ON ESTIMATED 25 MICROHENRIES PER 100 FEET.
- 5) RESISTANCE IS BASED ON:  
#14 WIRE = 3.24 OHMS/1000 FT.  
#12 WIRE = 1.98 OHMS/1000 FT.
- 6) I = INDUCTANCE IN MICROHENRIES  
R = RESISTANCE IN MILLIOHMS  
L = LENGTH IN FEET
- 7) LOOP INDUCTANCE FOR 6-FOOT OCTAGONAL LOOPS HAS BEEN CALCULATED USING THE I=KPN FORMULA, WHERE K=5/10+N, P=19.875'  
3-TURN LOOP, I = 69 H  
4-TURN LOOP, I = 114 H
- 8) RESISTANCE OF 3-TURN LOOP = 0.19 M.OHMS  
RESISTANCE OF 4-TURN LOOP = 0.25 M.OHMS (USING AWG #14 WIRE)

PB = PULLBOX  
JB = JUNCTION BOX  
I = INDUCTANCE IN MICROHENRIES  
P = POLE (BASE)  
R = RESISTANCE IN MILLIOHMS

SEE REVISED PLAN

### LOOP INDUCTANCE & RESISTANCE DETAILS

SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY BND DATE 6/92  
 SQUAD LEADER KRQ  
 DESIGN FILE NO. 89108  
 PRF FILE 89108 DATE PLOTTED \_\_\_\_\_  
 PROJ. NAME BURLINGTON  
 PROJ. NO. MEGC 5000(15)  
 SHEET 156 OF 252 SHEETS

DATUM  
VERTICAL \_\_\_\_\_  
HORIZONTAL \_\_\_\_\_