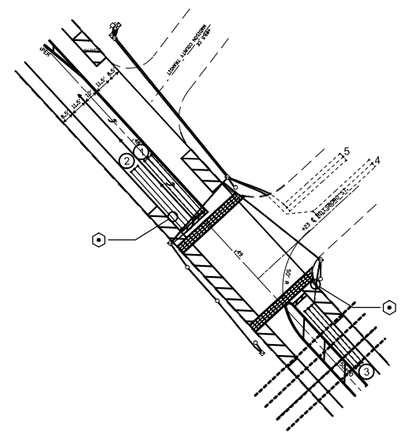
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
HILLSBORO AVE. & MAIN ST.

LOOP#	PHASE #	LOOP SIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1. SB LT CD	5	6 x 50(Q)	3-6-3	820.5	2.4
2. SB THRU CD	2	6 x 50(Q)	3-6-3	834.8	2.7
3. NB THRU CD	6	6 x 50(Q)	3-6-3	837.9	2.8
4. WB LT CD	4	6 x 50(Q)	3-6-3	845.6	2.9
5. WB THRU CD	4	6 x 50(Q)	3-6-3	840.8	2.8

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

Q=QUADRAPOLE

⬢ =SEE DETAIL A



HILLSBORO AVE. & MAIN ST.

100′ 0 100′ 200′

SCALE: 1″ = 100′

N

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
VANDALIA ST. & BUCHANAN ST.

LOOP#	PHASE #	LOOP SIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1. EB LT CD	6	6 x 50(Q)	3-6-3	828	2.5
2. EB THRU CD	1	6 x 50(Q)	3-6-3	829.6	2.6
3. EB RT CD	6	6 x 50(Q)	3-6-3	823.2	2.4
4. NB LT CD	3	6 x 50(Q)	3-6-3	799.0	1.9
5. NB THRU CD	3	6 x 50(Q)	3-6-3	795.7	1.8
6. WB LT CD	5	6 x 50(Q)	3-6-3	813.5	2.2
7. WB THRU CD	2	6 x 50(Q)	3-6-3	810.2	2.1
8. SB THRU CD	4	6 x 50(Q)	3-6-3	824.5	2.5

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

Q=QUADRAPOLE

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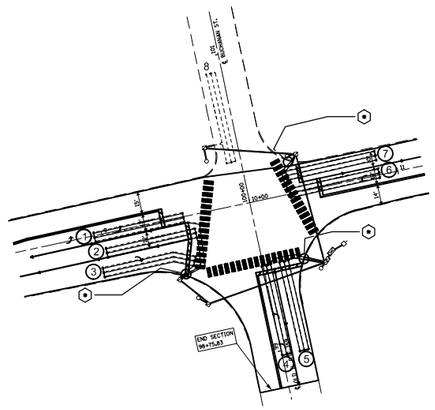

VANDALIA ST. & BUCHANAN ST.

100′ 0 100′ 200′

SCALE: 1″ = 100′

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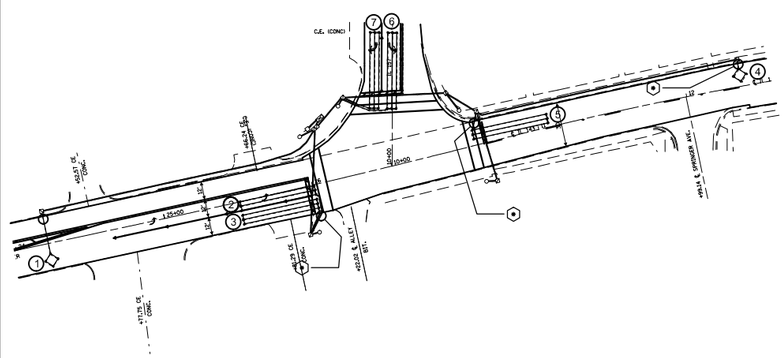
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
E. VANDALIA ST. & ST. ANDREWS AVE.

LOOP#	PHASE #	LOOP SIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1. EB CCO	6	6 x 6	6	308.8	1.6
2. EB LT CD	1	6 x 50(Q)	3-6-3	812.8	2.2
3. EB THRU CD	6	6 x 50(Q)	3-6-3	810.6	2.2
4. WB CCO	2	6 x 6	6	328.4	2.0
5. WB THRU CD	2	6 x 50(Q)	3-6-3	821.2	2.4
6. SB LT CD	8	6 x 50(Q)	3-6-3	804.0	2.0
7. SB RT CD	O.L.A	6 x 50(Q)	3-6-3	804.0	2.0

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

Q=QUADRAPOLE

⬢ =SEE DETAIL A



E. VANDALIA ST. & ST. ANDREWS AVE.

100′ 0 100′ 200′

SCALE: 1″ = 100′

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETECTOR LOOP REPLACEMENT PLAN
2 OF 2

SCALE: | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
789 032	(7Z, 56)RS-1, 65-2RS-4	MADISON	74	38
		CONTRACT NO. 76G71		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		