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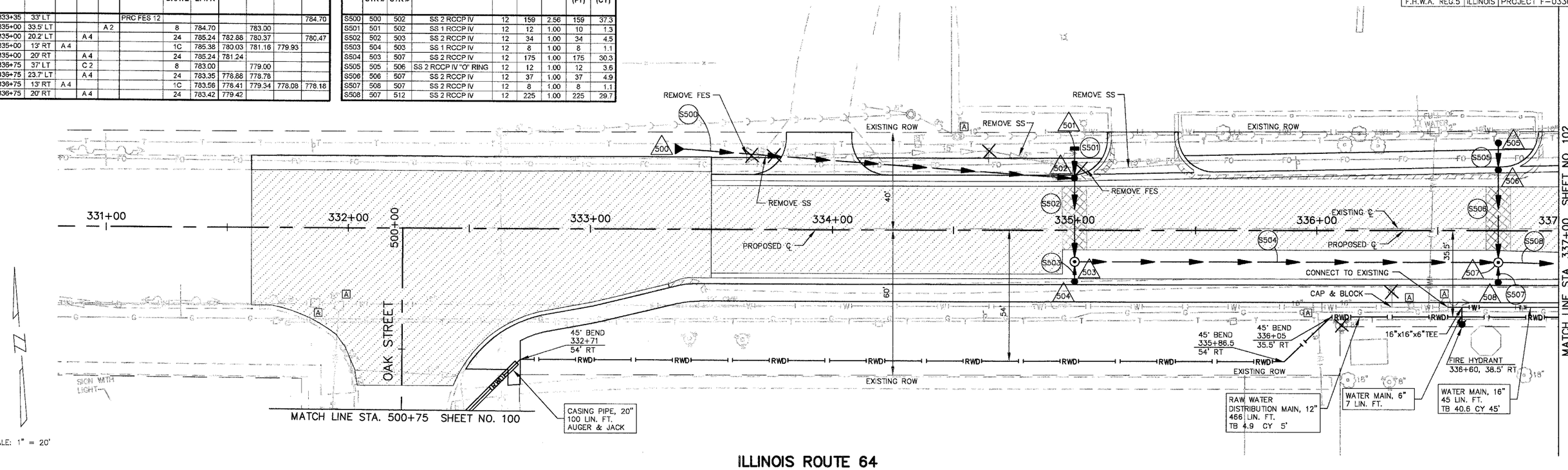
DRAINAGE STRUCTURE TABLE STA. 331+00 TO STA. 337+00

NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	OTHER	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
500	333+35	33' LT				PRC FES 12						784.70
501	335+00	33.5' LT			A 2		8	784.70		783.00		
502	335+00	20.2' LT		A 4			24	785.24	782.88	780.37		780.47
503	335+00	13' RT	A 4				1C	785.38	780.03	781.16	779.93	
504	335+00	20' RT		A 4			24	785.24	781.24			
505	336+75	37' LT		C 2			8	783.00		779.00		
506	336+75	23.7' LT		A 4			24	783.35	778.88	778.78		
507	336+75	13' RT	A 4				1C	783.56	778.41	779.34	778.08	778.18
508	336+75	20' RT		A 4			24	783.42	779.42			

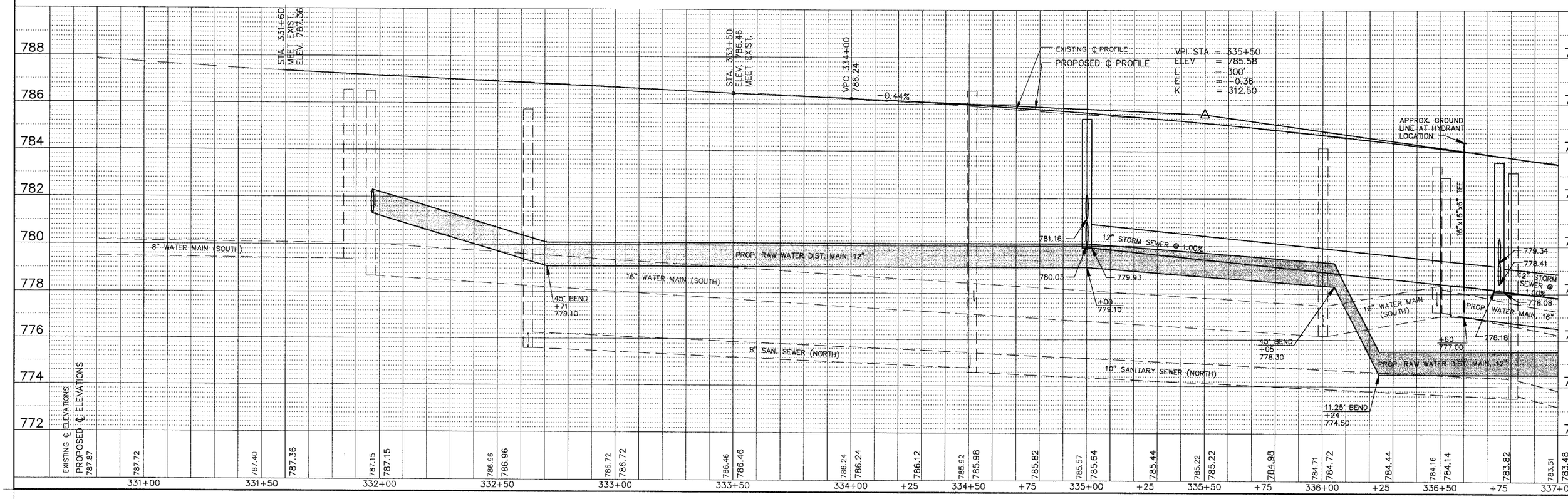
PIPE TABLE STA. 331+00 TO STA. 337+00

PIPE NO.	PIPE LOCATION FROM STR #	PIPE LOCATION TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	TRENCH BACKFILL VOL (CY)
S500	500	502	SS 2 RCCP IV	12	159	2.56	159	37.3
S501	501	502	SS 1 RCCP IV	12	12	1.00	10	1.3
S502	502	503	SS 2 RCCP IV	12	34	1.00	34	4.5
S503	504	503	SS 1 RCCP IV	12	8	1.00	8	1.1
S504	503	507	SS 2 RCCP IV	12	175	1.00	175	30.3
S505	505	506	SS 2 RCCP IV "O" RING	12	12	1.00	12	3.6
S506	506	507	SS 2 RCCP IV	12	37	1.00	37	4.9
S507	508	507	SS 2 RCCP IV	12	8	1.00	8	1.1
S508	507	512	SS 2 RCCP IV	12	225	1.00	225	29.7

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
UTILITY PLAN STA. 331+00 TO STA. 337+00				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



ILLINOIS ROUTE 64



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F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
UTILITY PLAN STA. 337+00 TO STA. 342+25			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

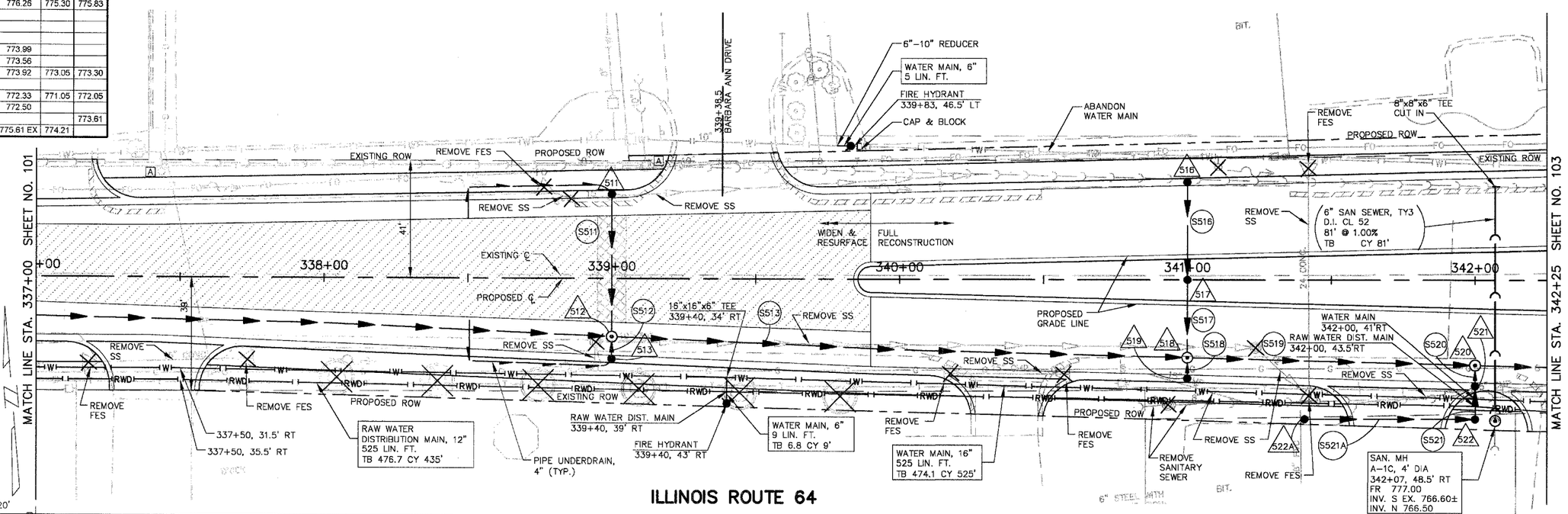
DRAINAGE STRUCTURE TABLE STA. 337+00 TO STA. 342+25

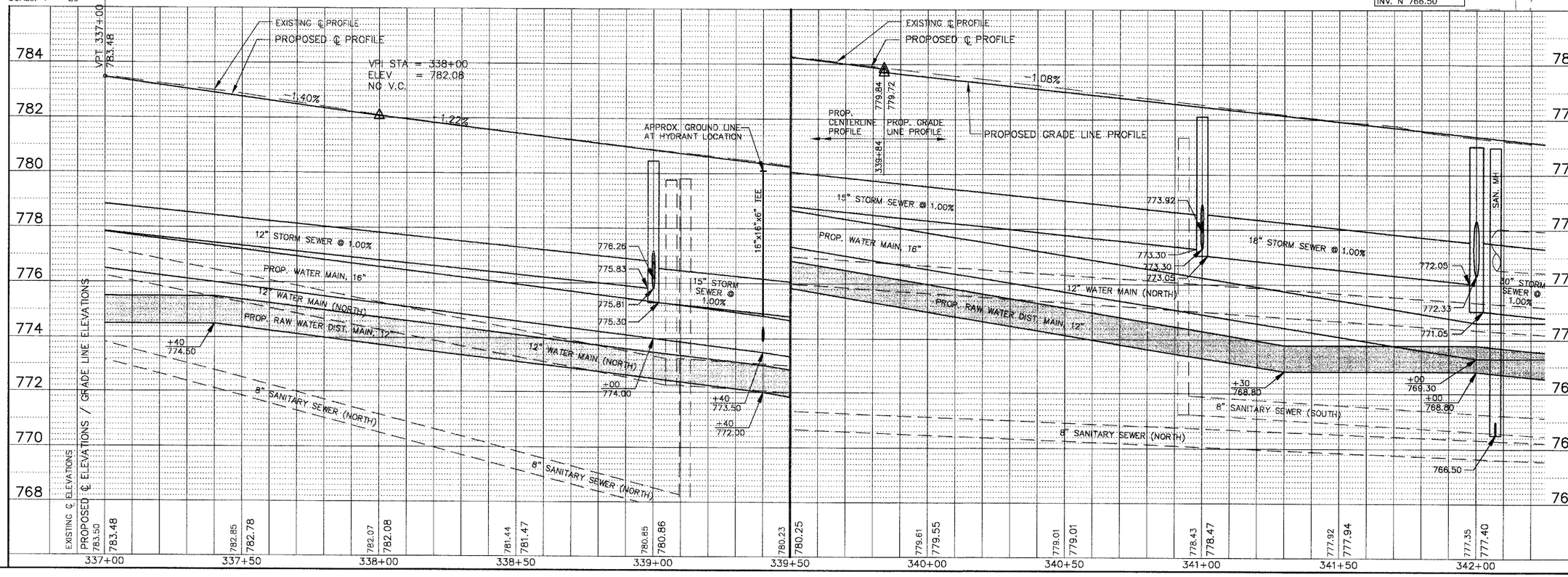
NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	PRC FES (IN. DIA.)	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
509	NOT	USED										
510	NOT	USED										
511	339+00	28.2' LT		A 4			24	780.30		776.30		
512	339+00	20.0' RT	A 4				1C	780.46	775.81	776.26	775.30	775.83
513	339+00	26.4' RT		A 4			24	780.33	776.33			
514	NOT	USED										
515	NOT	USED										
516	341+00	32.75' LT		A 4			24	777.99		773.99		
517	341+00	CL		A 4			1P	778.51	773.66	773.56		
518	341+00	26.75' RT	A 4				1C	778.11	773.30	773.92	773.05	773.30
519	341+00	32.75' RT		A 4			24	777.99	773.99			
520	342+00	29.25' RT	A 5				1C	777.04		772.33	771.05	772.05
521	342+00	35.25' RT		A 5			24	778.92	772.40	772.50		
522	342+00	48' RT		A 5			8	776.90	772.61			773.61
522A*	341+39.5	48' RT		C 2			8	777.10		775.61 EX	774.21	

*LOCATE TO INTERCEPT EXIST. 8" PVC SS

PIPE TABLE STA. 337+00 TO STA. 342+25

PIPE NO.	PIPE LOCATION FROM STR #	PIPE LOCATION TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	TRENCH BACKFILL VOL (CY)
S509	NOT	USED						
S510	NOT	USED						
S511	511	512	SS 2 RCCP IV	12	49	1.00	49	6.5
S512	513	512	SS 1 RCCP IV "O" RING	12	7	1.00	7	0.9
S513	512	518	SS 2 RCCP IV	15	200	1.00	200	24.2
S514	NOT	USED						
S515	NOT	USED						
S516	516	517	SS 2 RCCP IV	12	33	1.00	33	4.4
S517	517	518	SS 2 RCCP IV	12	26	1.00	26	3.4
S518	519	518	SS 1 RCCP IV "O" RING	12	7	1.00	7	0.9
S519	518	520	SS 2 RCCP IV	18	100	1.00	100	10.5
S520	521	520	SS 1 RCCP IV "O" RING	24	7	1.00	7	0.8
S521	522	521	SS 1 RCCP IV "O" RING	24	11	1.00	11	3.3
S521A	522A	522	SS 1 DI CL 52	12	60	1.00	60	7.9





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DRAINAGE STRUCTURE TABLE STA. 342+25 TO STA. 347+25

NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
S23	343+20	38.25' LT		A 4*		24	775.83		772.44		
S24	343+20	CL		A 4		1P	776.04	772.05	771.41		
S25	343+20	32.25' RT	A 5			1C	775.75	771.09	771.75	769.75	769.85
S26	NOT USED										
S27	343+24.5	38.36' RT		A 4		24	775.59	771.83	772.19 EX		
S28	344+20	33.0' RT	A 5			1C	774.67		770.44	768.65	768.75
S29	344+20	40.37' RT		C 2		24	774.52	770.52			
S30	345+20	39.0' LT		A 4*		24	773.39		769.93		
S31	345+20	4.0' LT		A 4		1P	773.67	769.57	768.93		
S32	345+20	7.18' RT		A 4		SPL1	773.75	768.83	768.73		
S33	345+20	39.0' RT	A 5			1C	773.39	768.41	769.14	767.55	767.65
S34	345+20	45.99' RT		C 2		24	773.22	769.22			
S35	346+30	8.5' LT		A 4		1P	772.29		768.29		
S36	346+20	1.31' LT		A 4		SPL 1	772.43	768.17	768.07		
S37	346+20	39.0' RT	A 5			1C	772.19	767.67	767.76	765.28	766.55
S38	346+20	51.0' RT		C 2		24	771.89	767.89			
S39	347+00	39.0' LT		A 4*		24	771.23		767.77		
S40	347+20	7.54' LT		A 4		11V	771.13	767.41	766.77		
S41	347+20	39.0' RT	A 5			1C	770.99	766.30	766.56	762.28	764.38
S42	347+20	51.0' RT		C 2		24	770.69	766.69			

* 1' SUMP

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	102

UTILITY PLAN STA. 342+25 TO STA. 347+25
F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(06)

8" SAN SEWER, TY3
D.I. CL 52
10' @ 0.40%
TB 10.5 CY 10'

SAN. MH
A-1C, 4' DIA
342+57, 31.5' LT
FR 776.42
INV. S 766.00
INV. W 765.45
INV. E EX. 765.45±

6" SAN SEWER, TY3
D.I. CL 52
83' @ 0.50%
TB 84.0 CY 83'

MATCH LINE STA. 342+25 SHEET NO. 102

MATCH LINE STA. 347+25 SHEET NO. 94

CAP & BLOCK
CONNECT TO EXIST.
45° BEND
ABANDON WATER MAIN
PROPOSED ROW
EXISTING ROW
CONNECT TO EXIST.
CASING PIPE, 16" 60 LIN. FIT. AUGER & JACK
6"x6"x6" TEE
WATER MAIN, 6" 104 LIN. FT. TB 27.3 CY 44'
WATER MAIN, 6" 181 LIN. FT. TB 189.8 CY 181' MAINTAIN 5' (MIN.) COVER
TEMP. CONSTR. EASEMENT
FIRE HYDRANT 345+70, 51' LT
90° BEND
PROP. COPPER WATER SERVICE, 1"
PROPOSED GRADE LINE
CURVE #1
PC
PROPOSED ℄
PROVIDE 1.5 FT. CLEARANCE FROM BOTTOM OF STORM SEWER TO TOP OF WATER MAIN. USE 45° BENDS TO ATTAIN PROPER WATER MAIN DEPTH.
REMOVE SAN. SEWER
REMOVE SS
16"x16"x6" TEE
EXISTING ROW
PROPOSED ROW
RWD!
REMOVE SAN. SEWER
SANITARY CLEANOUT 342+57, 52' RT
FIRE HYDRANT 342+90, 53' RT
WATER MAIN, 6" 9 LIN. FT. TB 6.8 CY 9'
343+00 50.5' RT
VALVE VAULT A-1C, 5' DIA 343+00, 44.5' RT FR 776.30 W/GATE VALVE 16"
CONNECT TO EXIST. SS
16"x16"x6" TEE
VALVE VAULT A-1C, 5' DIA ECCENTRIC 343+95, 44' RT FR 775.23 W/GATE VALVE 6"
PIPE UNDERDRAIN, 4" (TYP.)
RAW WATER DISTRIBUTION MAIN, 12" 505 LIN. FT. TB 544.4 CY 505'
WATER MAIN, 16" 505 LIN. FT. TB 472.2 CY 505'
346+05, 56' RT
346+30, 62' RT
16"x16"x6" TEE
WATER MAIN, 6" 9 LIN. FT. TB 6.8 CY 9'
FIRE HYDRANT 346+50, 65' RT
PROPOSED ROW

ILLINOIS ROUTE 64 ℄ CURVE #1

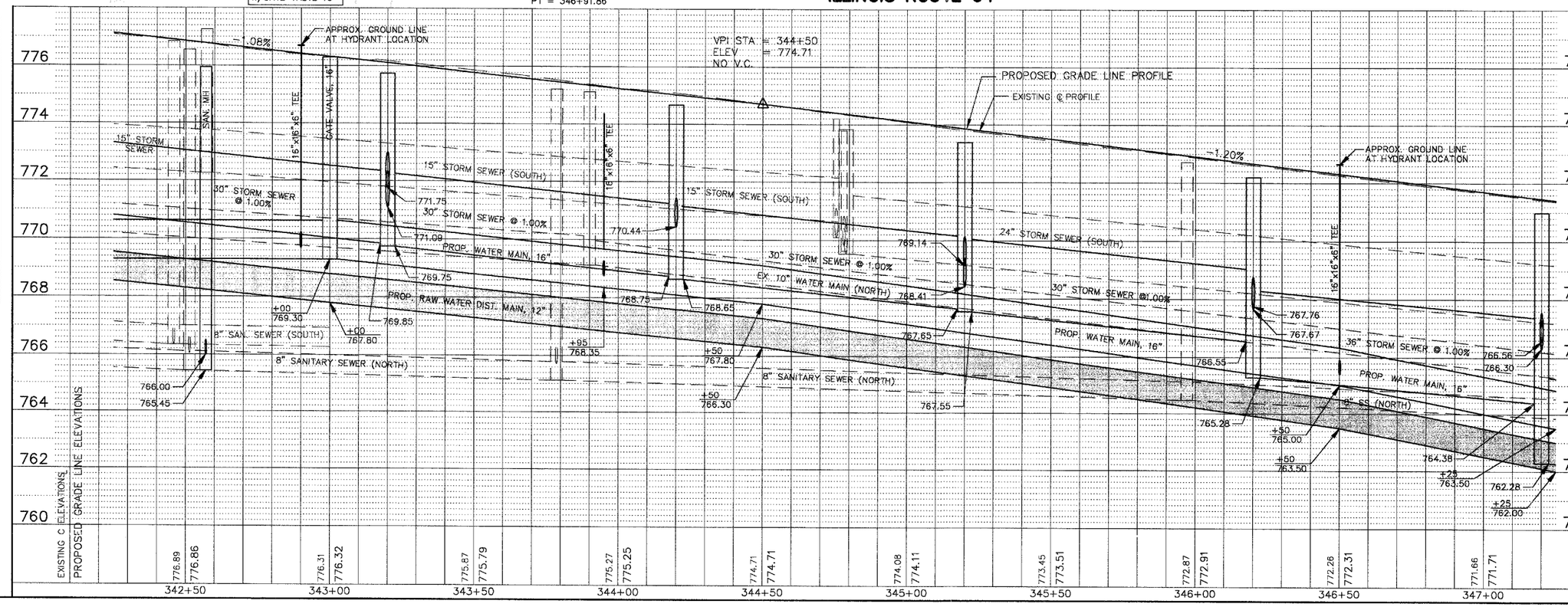
RADIUS = 4273.00'
ARC LENGTH = 340.00'
CHORD LENGTH = 339.91'
TANGENT LENGTH = 170.09'
DEGREE OF CURVE = 01°-20'-27"
MID ORDINATE = 3.38'
EXTERNAL SECANT = 3.38'
INCLUDED ANGLE = 04°-33'-32"
PC = 343+51.85
PT = 346+91.86

SCALE: 1" = 20'

ILLINOIS ROUTE 64

DRAINAGE STRUCTURE TABLE STA. 342+25 TO STA. 347+25

PIPE NO.	PIPE LOCATION FROM STR #	PIPE LOCATION TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	TRENCH BACKFILL VOL (CY)
S522	520	525	SS 2 RCCP IV	30	120	1.00	120	19.0
S523	523	524	SS 2 RCCP IV "O" RING	12	39	1.00	39	5.4
S524	524	525	SS 2 RCCP IV	12	32	1.00	32	4.2
S525	NOT	USED						
S526	527	525	SS 1 RCCP IV "O" RING	15	8	1.00	8	1.0
S527	525	526	SS 2 RCCP IV "O" RING	30	100	1.00	100	15.8
S528	529	528	SS 1 RCCP IV "O" RING	12	8	1.00	8	1.1
S529	528	533	SS 2 RCCP IV	30	100	1.00	100	15.8
S530	530	531	SS 2 RCCP IV	12	36	1.00	36	4.8
S531	531	532	SS 2 RCCP IV	12	10	1.00	10	1.3
S532	532	533	SS 2 RCCP IV	12	32	1.00	32	4.2
S533	534	533	SS 1 RCCP IV "O" RING	12	8	1.00	8	1.1
S534	533	537	SS 2 RCCP IV	30	100	1.00	100	12.4
S535	535	536	SS 1 RCCP IV	12	12	1.00	12	1.6
S536	536	537	SS 2 RCCP IV	12	40	1.00	40	5.3
S537	538	537	SS 2 RCCP IV "O" RING	12	13	1.00	13	1.7
S538	537	541	SS 2 RCCP IV	36	100	1.00	100	24.4
S539	539	540	SS 1 RCCP IV	12	36	1.00	36	4.8
S540	540	541	SS 2 RCCP IV	12	47	1.00	47	8.1
S541	542	541	SS 2 RCCP IV "O" RING	12	13	1.00	13	1.7



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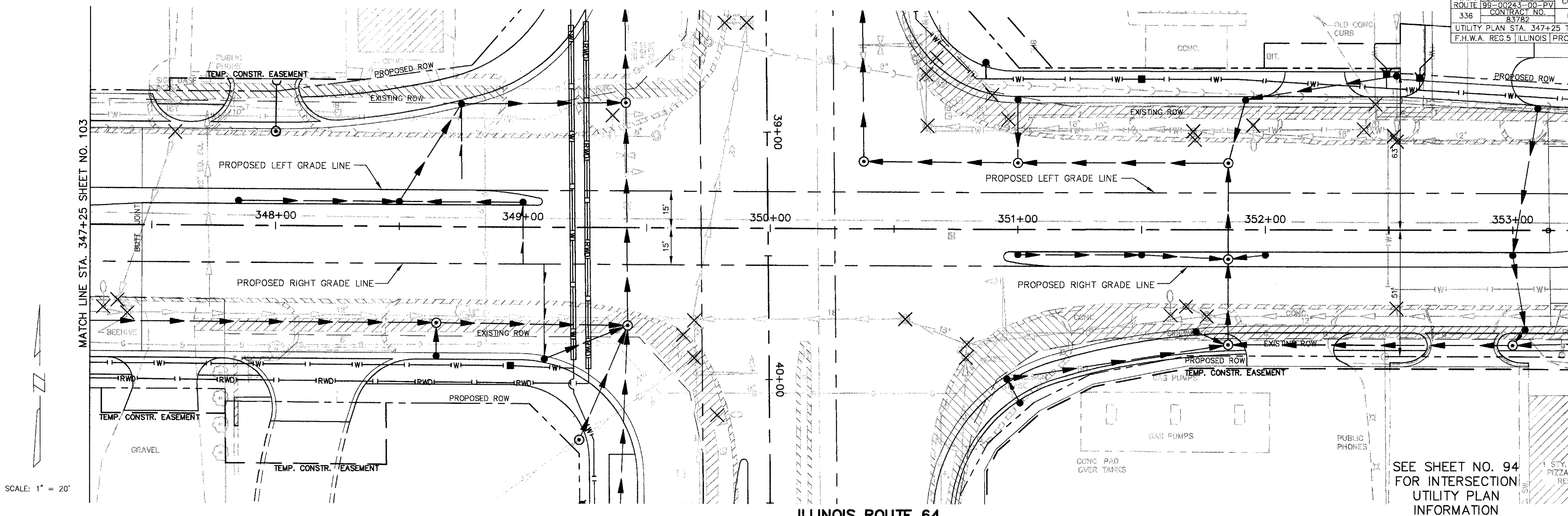
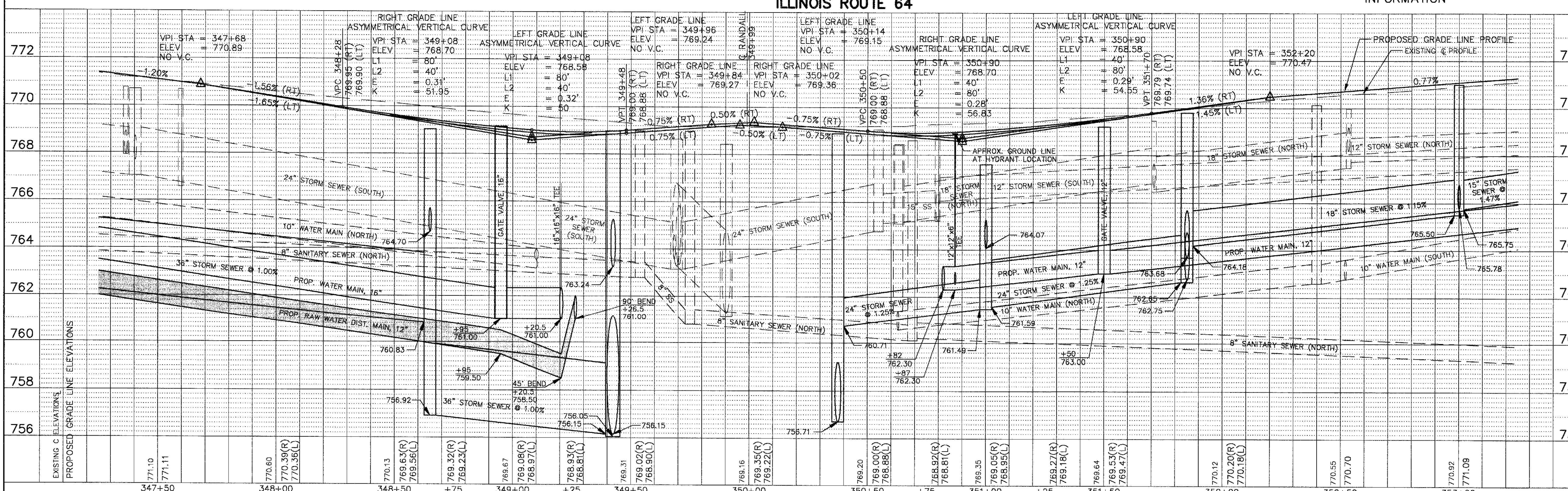
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV / CONTRACT NO. 83782	KANE	268	1
UTILITY PLAN STA. 347+25 TO STA. 353+25				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



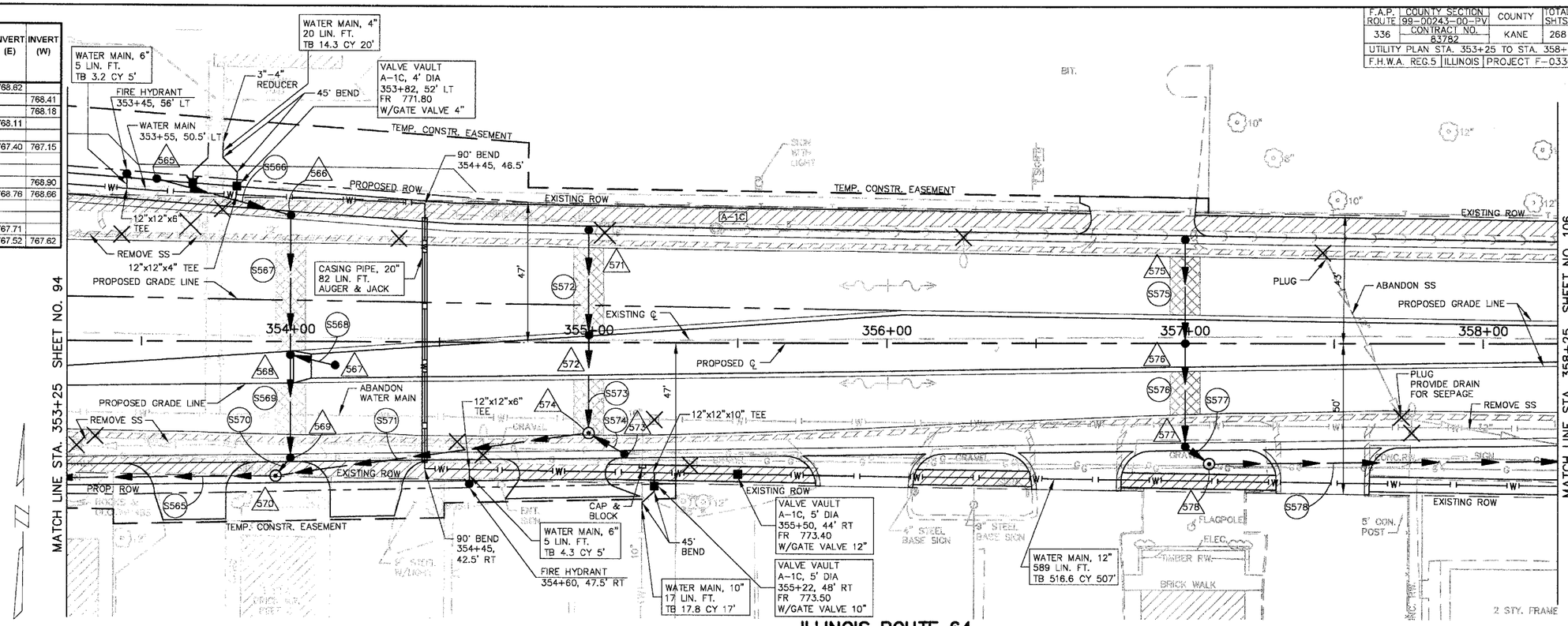


DRAINAGE STRUCTURE TABLE STA. 353+25 TO STA. 358+25

NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	OTHER	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
565*	353+55	54.5' LT		C 2			1C	771.36	768.92 EX.		768.62	
566	354+00	41.14' LT		A 4			24	771.41		768.31		768.41
567	354+15	7.8' RT		A 4			1P	772.14				768.18
568	354+00	3.14' RT		A 4			11V	771.72	768.11	768.01	768.11	
569	354+00	37.73' RT		A 4			24	771.49	767.85	767.49		
570	353+95	45.0' RT	A 4				1C	771.90	767.41		767.40	767.15
571	355+00	36.45' LT		A 4			24	772.47		769.47		
572	355+00	3.76' LT		A 4			SPL1	772.82	769.32	769.22		
573	355+13	36.05' RT		A 4			24	772.57				768.90
574	355+00	30.25' RT	A 4				1C	772.59	769.07		768.76	768.66
575	357+10	33.35' LT		A 4			24	772.21		768.21		
576	357+10	CL		A 4			1P	772.73	768.06	767.96		
577	357+10	33.13' RT		A 4			24	772.21	767.81		767.71	
578	357+10	38.0' RT	A 4				1C	772.60			767.52	767.62

* LOCATE TO INTERCEPT EXISTING 6" STORM SEWER

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 63782	KANE	268
UTILITY PLAN STA. 353+25 TO STA. 358+25			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

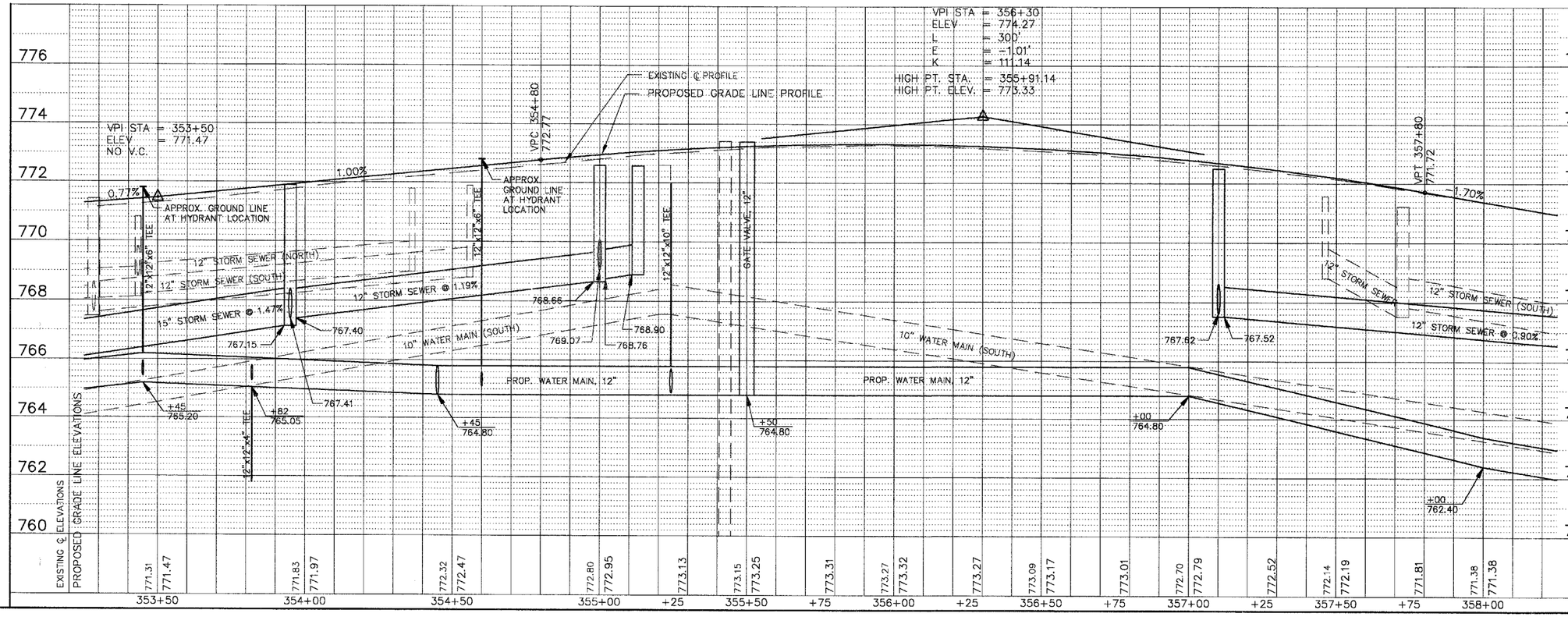


ILLINOIS ROUTE 64

SCALE: 1" = 20'

DRAINAGE STRUCTURE TABLE STA. 353+25 TO STA. 358+25

PIPE NO.	PIPE LOCATION FROM STR #	PIPE LOCATION TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	TRENCH BACKFILL VOL (CY)
S565	570	564	SS 2 RCCP IV	15	95	1.47	95	35.6
S566	565	566	SS 1 RCCP IV "O" RING	12	46	0.46	46	7.0
S567	566	568	SS 1 RCCP IV "O" RING	12	45	0.44	45	5.9
S568	567	568	SS 1 RCCP IV	12	15	0.47	15	2.0
S569	568	569	SS 1 RCCP IV	12	35	0.46	35	4.6
S570	569	570	SS 2 RCCP IV	12	8	1.00	8	2.4
S571	574	570	SS 2 RCCP IV "O" RING	12	106	1.19	106	18.4
S572	571	572	SS 1 RCCP IV	12	34	0.44	34	4.5
S573	572	574	SS 1 RCCP IV	12	33	0.45	33	4.3
S574	573	574	SS 1 RCCP IV "O" RING	12	14	1.00	14	2.3
S575	575	576	SS 2 RCCP IV	12	34	0.44	34	4.5
S576	576	577	SS 2 RCCP IV	12	34	0.44	34	4.5
S577	577	578	SS 2 RCCP IV "O" RING	12	10	0.90	10	3.8
S578	578	582	SS 2 DI CL 52	12	157	0.90	47	14.1



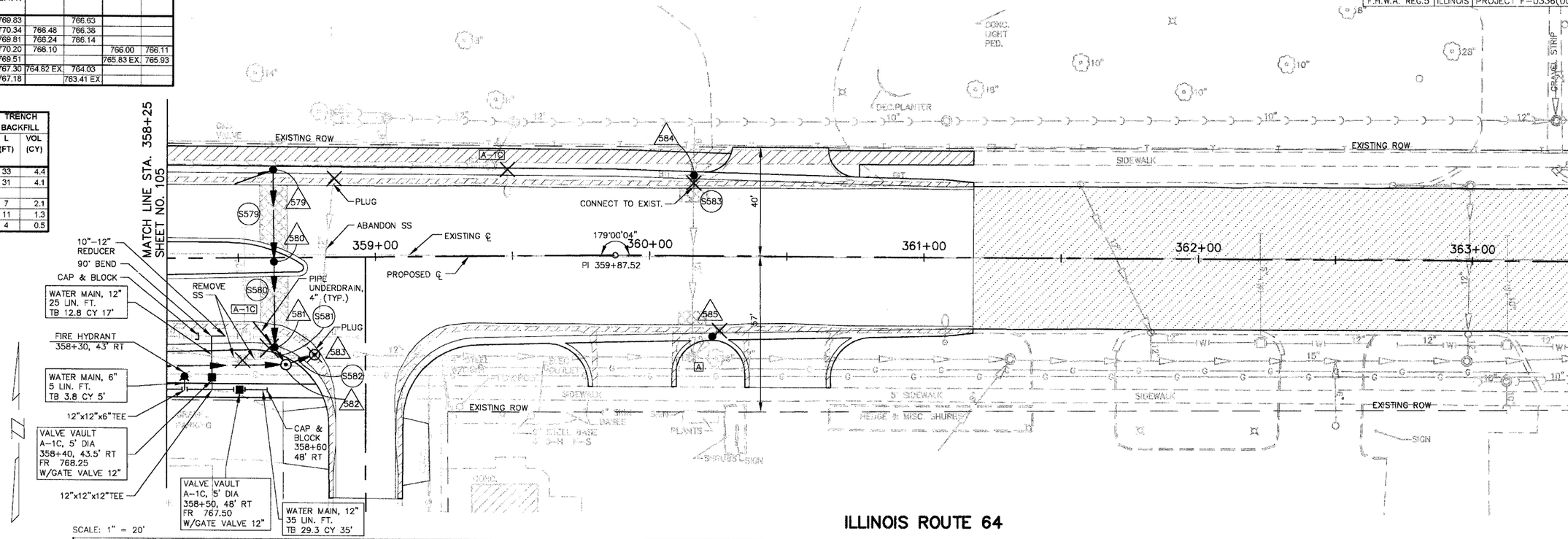
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	10
UTILITY PLAN STA. 358+25 TO STA. 363+00				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

PIPE TABLE STA. 358+25 TO STA. 363+00

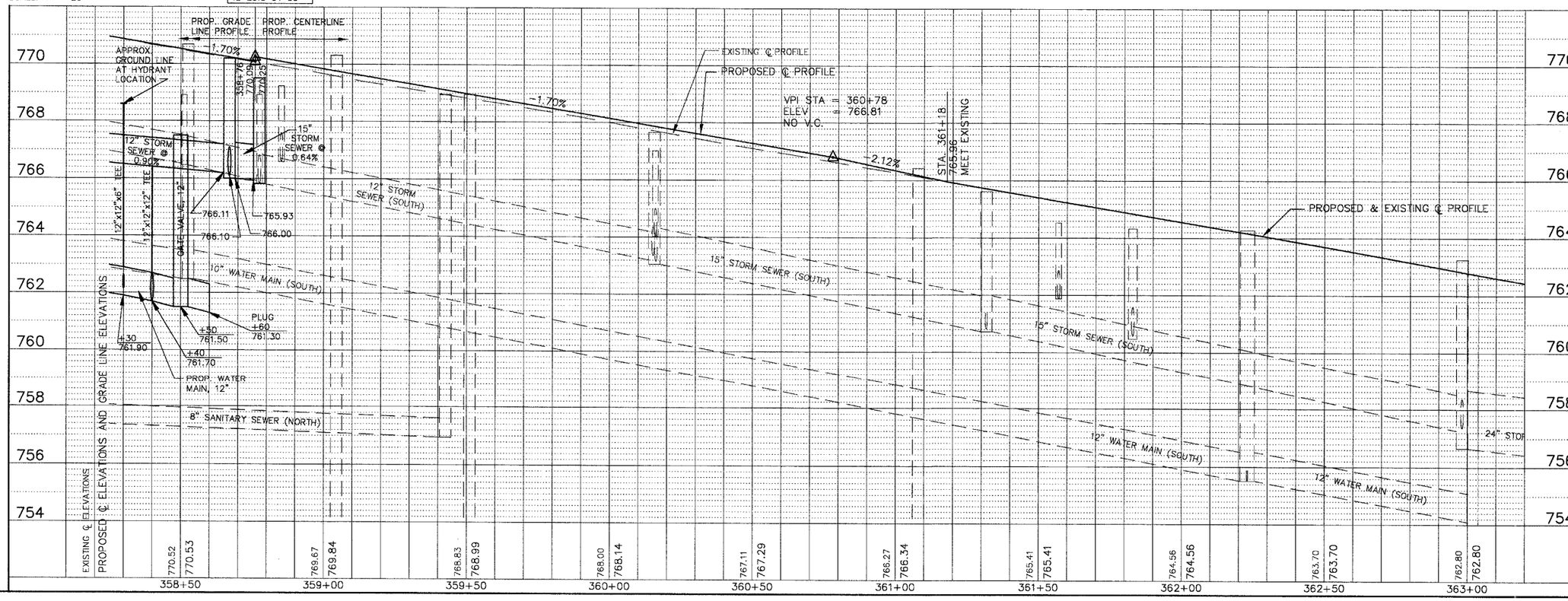
NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	OTHER	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
579	358+63	30.95' LT		A4			24	769.83		766.63		
580	358+63	1.5' RT		A4			1P	770.34	766.48	766.38		
581	358+63	32.06' RT		A4			24	769.81	766.24	766.14		
582	358+87	39.0' RT	A4				1C	770.20	766.10		766.00	766.11
583	358+77.5	35.5' RT	A4				1C	769.51			765.83 EX.	765.93
584	360+16	28.30' LT		A4			24	767.30	764.82 EX.	764.03		
585	360+23	28.13' RT		A4			24	767.18		763.41 EX.		

PIPE TABLE STA. 358+25 TO STA. 363+00

PIPE NO.	PIPE LOCATION FROM STR #	TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	VOL (CY)
S579	579	580	SS 1 RCCP IV	12	33	0.45	33	4.4
S580	580	581	SS 1 RCCP IV	12	31	0.45	31	4.1
			"O" RING					
S581	581	582	SS 1 RCCP IV	12	7	0.57	7	2.1
S582	582	583	SS 1 RCCP IV	15	11	0.64	11	1.3
S583	584	EX	SS 1 RCCP IV	12	4	1.00	4	0.5



ILLINOIS ROUTE 64



DRAINAGE STRUCTURE TABLE STA. 244+00 TO STA. 247+00

NO.	STA.	OFFSET	STRUCTURE TYPE/SIZE MH	CB	INL	OTHER	FRAME & GRATE	RIM ELEV EP/FR	INVERT (N)	INVERT (S)	INVERT (E)	INVERT (W)
301	245+98	18.55' RT		A 4			24	753.80	749.80			
302	245+98	15.83' LT		A 4			24	753.83	749.34	749.44		
303	245+98	24.0' LT		B			7	753.00		749.27	746.00	750.00 EX.

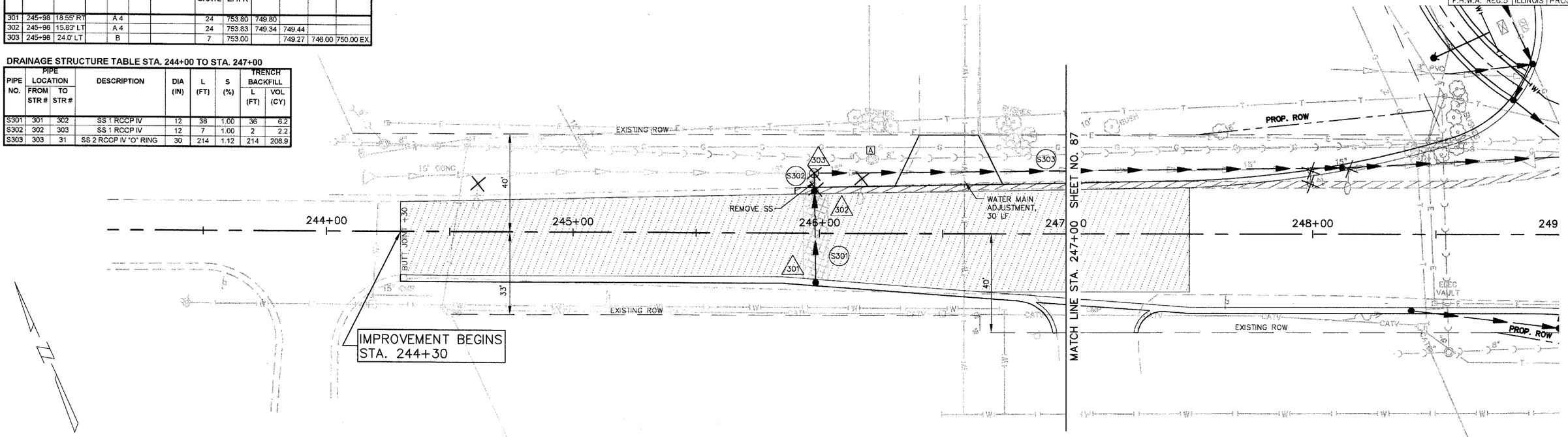
DRAINAGE STRUCTURE TABLE STA. 244+00 TO STA. 247+00

PIPE NO.	PIPE LOCATION FROM STR #	PIPE LOCATION TO STR #	DESCRIPTION	DIA (IN)	L (FT)	S (%)	TRENCH BACKFILL L (FT)	TRENCH BACKFILL VOL. (CY)
S301	301	302	SS 1 RCCP IV	12	38	1.00	36	6.2
S302	302	303	SS 1 RCCP IV	12	7	1.00	2	2.2
S303	303	31	SS 2 RCCP IV "O" RING	30	214	1.12	214	208.9

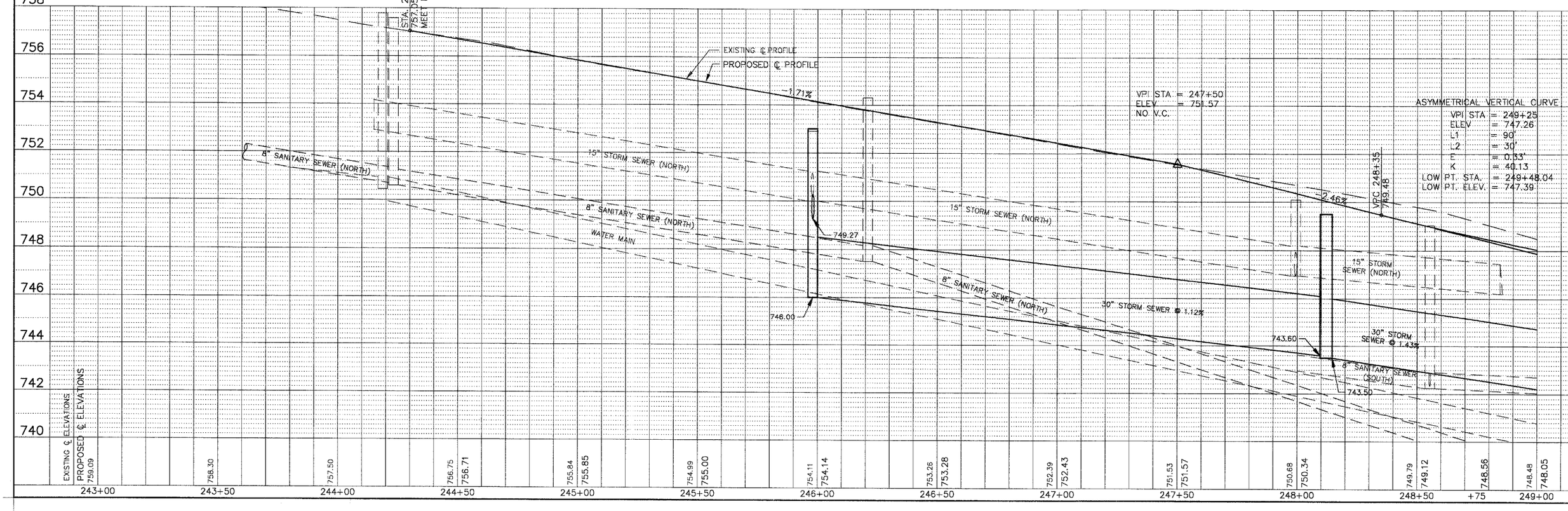
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268

UTILITY PLAN STA. 244+30 TO STA. 249+00

F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(0



DEAN STREET



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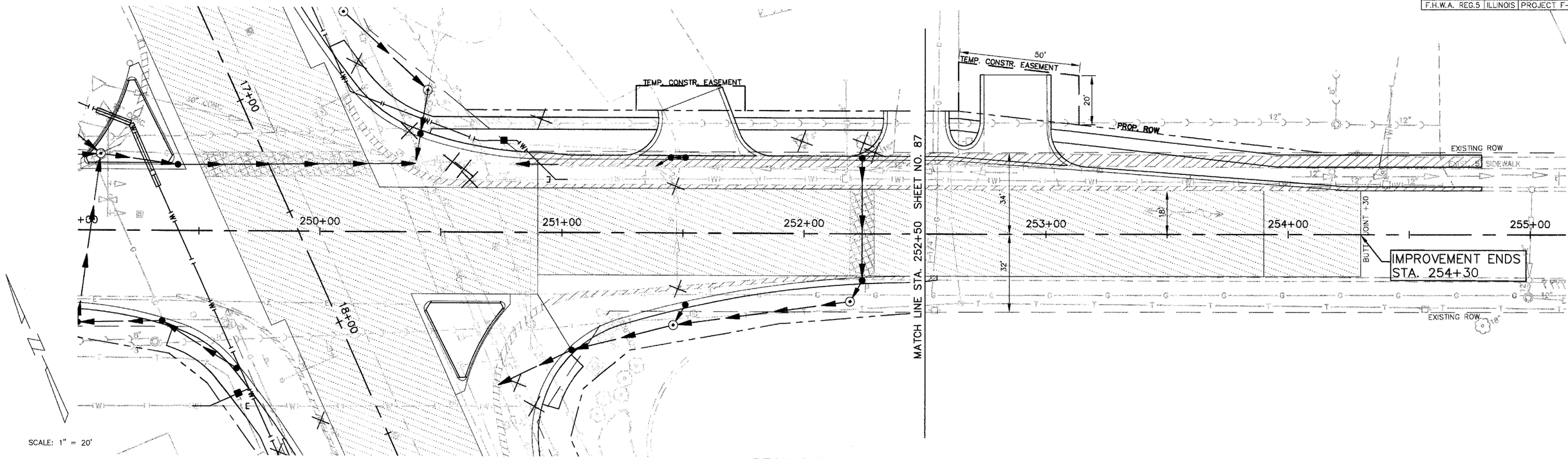
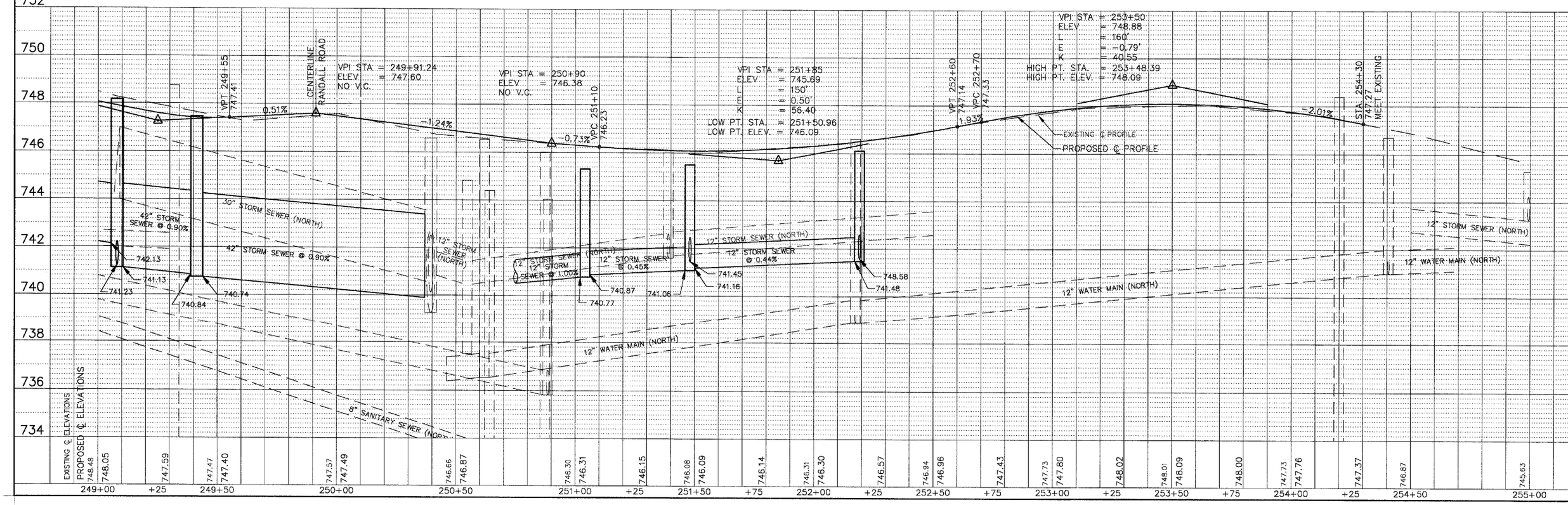
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
UTILITY PLAN STA. 249+00 TO STA. 254+30				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



DEAN STREET



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F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
RANDALL / IL. ROUTE 64 PAVEMENT ELEVATI			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

IL. ROUTE 64

RANDALL ROAD

TEMP. CONSTR. EASEMENT

PROP. CONSTR. EASEMENT

PROP. ROW

EOP TWO CENTER CURVE
70'R-300'R
9' OFFSET

350+98.93
51.00' LT

38+38.98
51.00' LT

50'R

351+96.97
39.00' RT

351+13.87
50.74' RT

+95 LOW PT.
768.58

40+56.33
63.00' LT

+81 LOW PT.
768.49

38+19.49
63.00' RT

40+38.85
51' RT

+09 LOW PT.
768.68

348+99.06
51.00' RT

348+84.13
50.74' LT

348+01.03
39.00' LT

+10 LOW PT.
766.78

+00 LOW PT.
766.55

+10 LOW PT.
767.02

+10 LOW PT.
766.48

+78 LOW PT.
769.14

LOW PT.
769.00

+70 LOW PT.
768.72

37+00

38+00

39+00

40+00

41+00

42+00

348+00

349+00

350+00

351+00

352+00

PGL

SCALE: 1" = 20'

LEGEND

768.00 — PROPOSED ELEVATION

2% — PROPOSED SLOPE

NOTE:
SEE SHEET NO. FOR EDGE OF PAVEMENT RETURN PROFILES

November 18, 2004 12:52:09 p.m.
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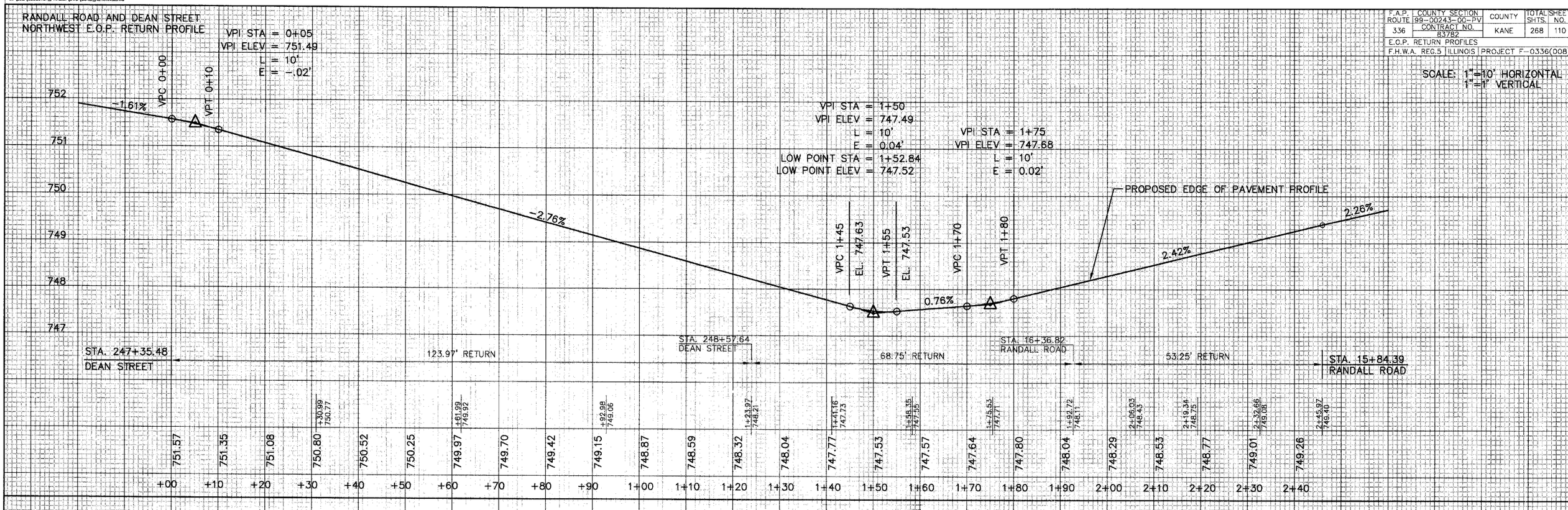
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	110

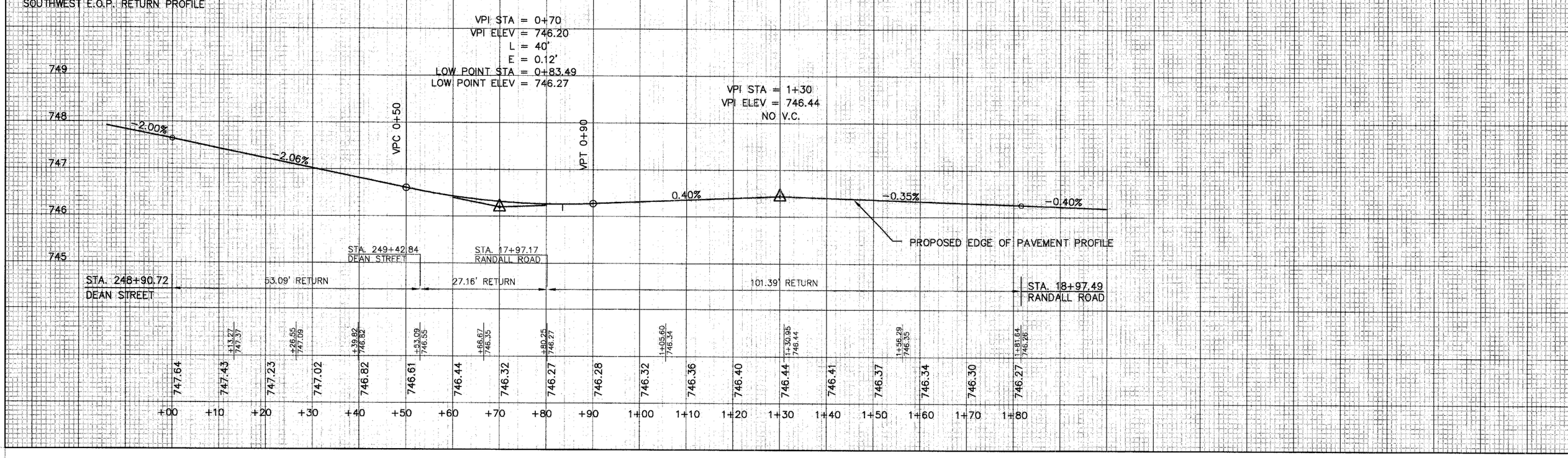
E.O.P. RETURN PROFILES
F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(008

SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL

RANDALL ROAD AND DEAN STREET NORTHWEST E.O.P. RETURN PROFILE



RANDALL ROAD AND DEAN STREET SOUTHWEST E.O.P. RETURN PROFILE



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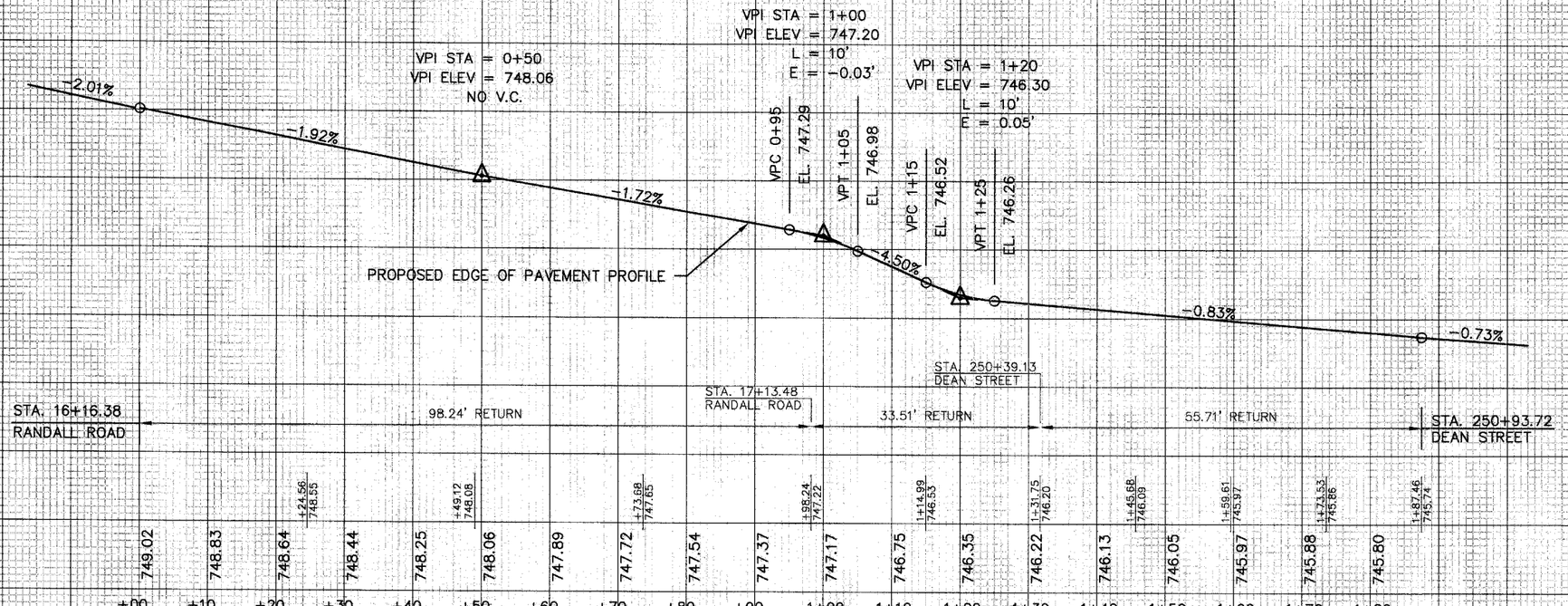
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	111

E.O.P. RETURN PROFILES

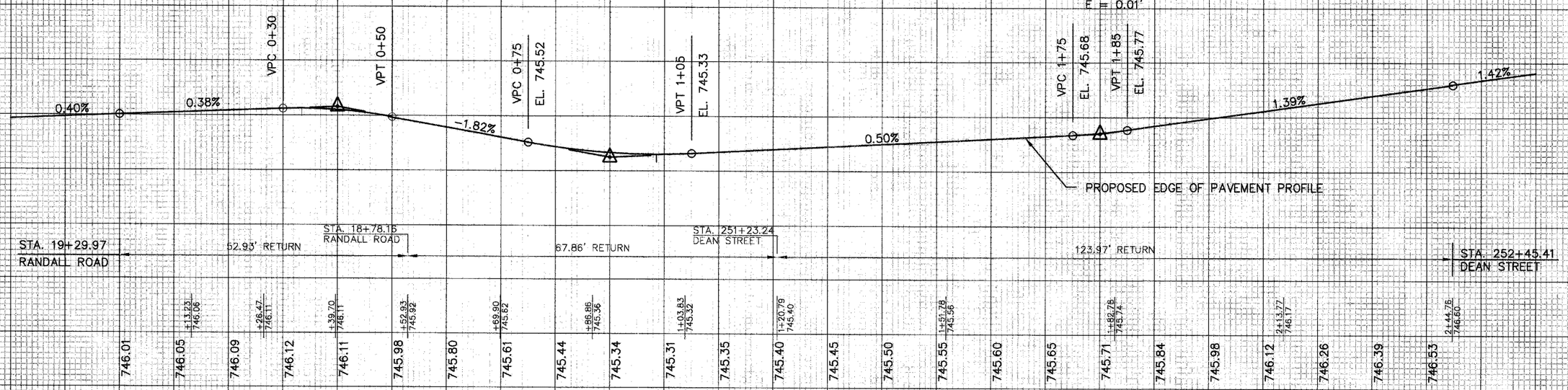
F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(008

SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL

RANDALL ROAD AND DEAN STREET
NORTHEAST E.O.P. RETURN PROFILE



RANDALL ROAD AND DEAN STREET
SOUTHEAST E.O.P. RETURN PROFILE



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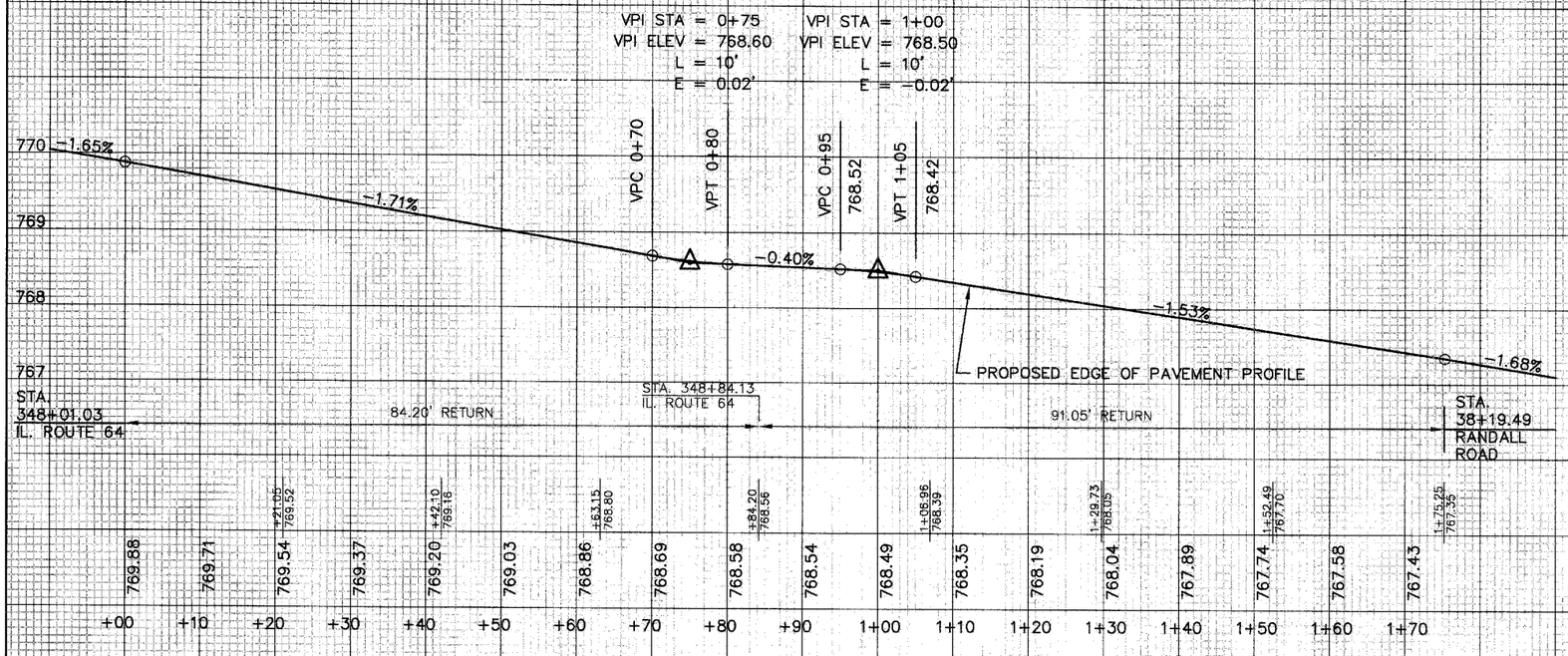
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	112

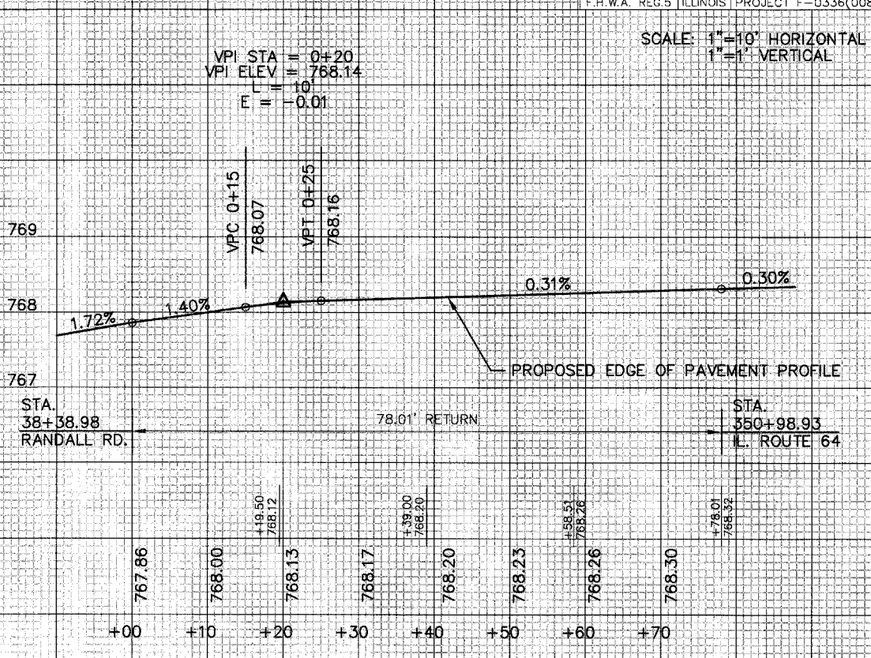
E.O.P. RETURN PROFILES
F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(008

SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL

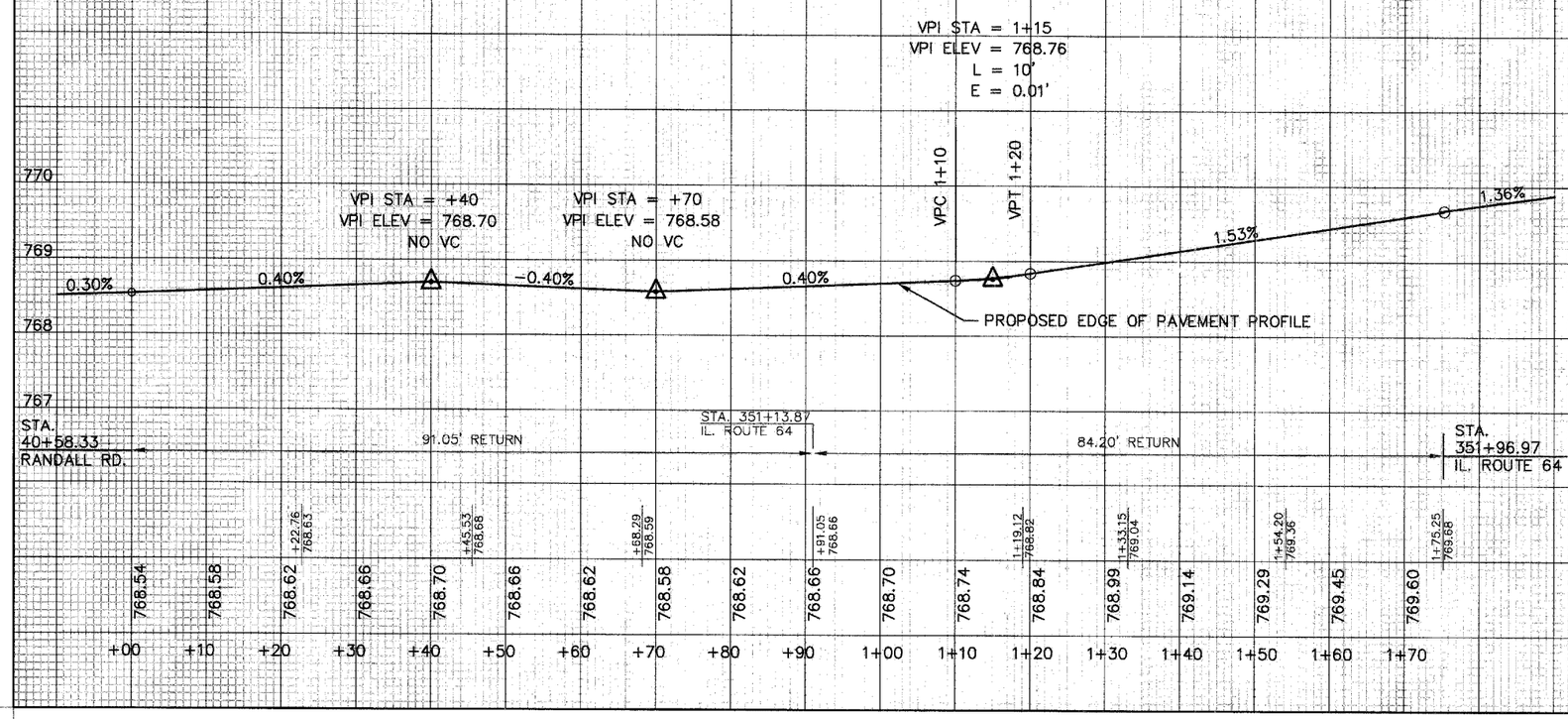
RANDALL ROAD AND IL. ROUTE 64
NORTHWEST E.O.P. RETURN PROFILE



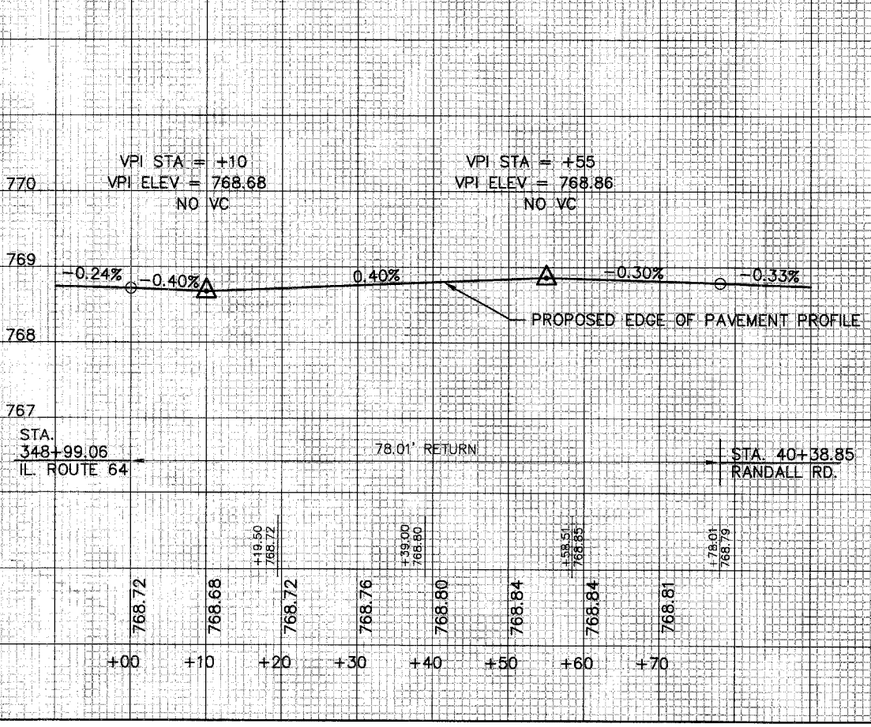
RANDALL ROAD AND IL. ROUTE 64
NORTHEAST E.O.P. RETURN PROFILE



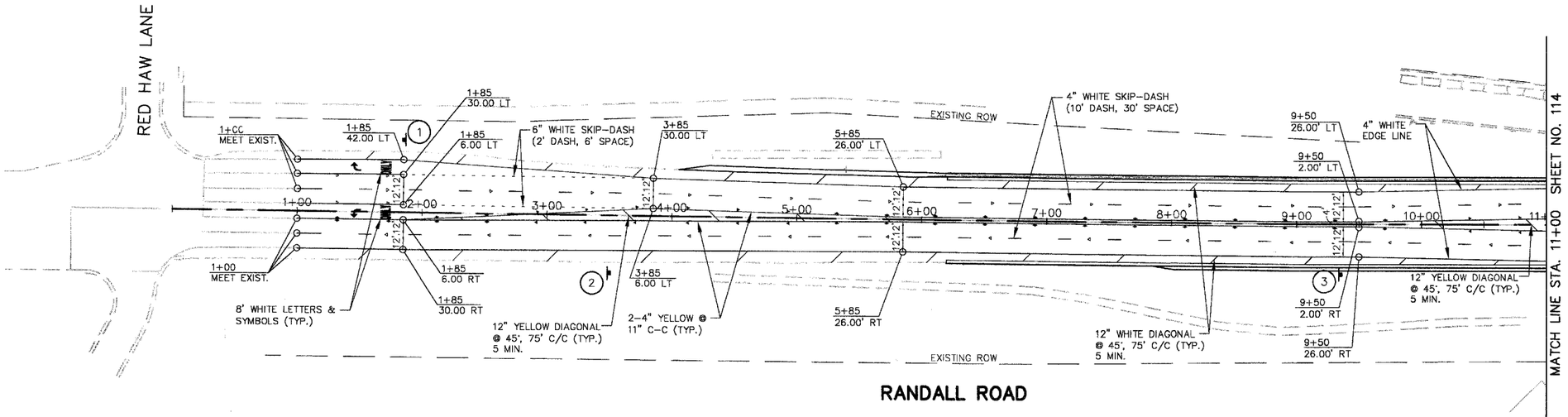
RANDALL ROAD AND IL. ROUTE 64
SOUTHEAST E.O.P. RETURN PROFILE



RANDALL ROAD AND IL. ROUTE 64
SOUTHWEST E.O.P. RETURN PROFILE



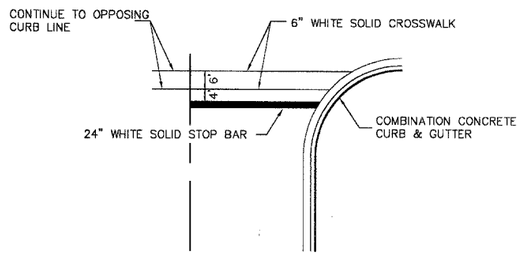
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
PAVEMENT MARKING PLAN			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



SCALE: 1" = 50'

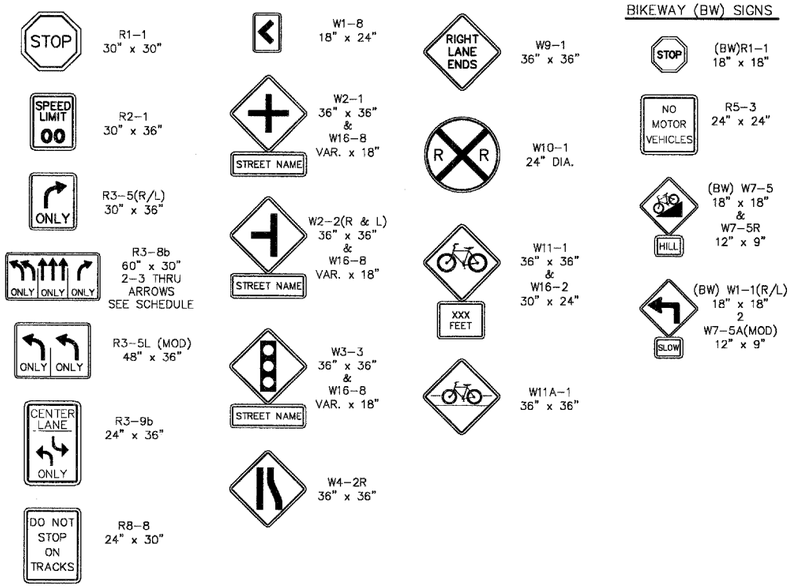
SIGN SCHEDULE - STA. 1+00 TO STA. 11+00

NO.	STATION	OFFSET	SIGN TYPES	SUPPL. INFO.	TOTAL SIGN AREA	POST TYPE	TOTAL POST LENGTH
1	1+85	58' LT	R3-5R	-	7.5	2T	21.0
2	3+50	46' RT	R2-1	"45"	7.5	2T	24.0
3	9+35	40' RT	W3-3 & W16-8	"DEAN STREET"	13.0	2T	25.5



TYPICAL STOP BAR – CROSSWALK MARKINGS

PAVEMENT MARKING AND SIGNING LEGEND



- ▷ ONE-WAY CRYSTAL MARKER
- ▶ ONE-WAY AMBER MARKER
- ◆ TWO-WAY AMBER MARKER
- (11) PROPOSED SIGN – SEE SCHEDULE

SIGNS

THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE EXISTING SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS. AN INVENTORY OF ALL EXISTING SIGNS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THIS WORK. THIS WORK WILL BE CONSIDERED INCLUDED IN THE CONTRACT.

ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:

1. SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.

2. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO TRAFFIC FOR WHICH IT IS INTENDED IN ACCORDANCE WITH ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS.

3. ALL SIGNS SHALL BE RE-ERECTED IN PERMANENT LOCATIONS AS THE ROADWAY IS COMPLETED. HORIZONTAL LOCATION FROM THE EDGE OF PAVEMENT SHALL BE AS DESIGNATED BY THE ENGINEER.

4. ALL EXISTING SIGNS THAT ARE REPLACED BY NEW SIGNS IN PERMANENT LOCATIONS, OR OTHERWISE DETERMINED BY THE ENGINEER TO BE OBSOLETE, SHALL BE REMOVED AND DELIVERED TO THE STATE, COUNTY, OR CITY, AS APPROPRIATE.

5. LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

February 04, 2005 11:36:17 a.m.
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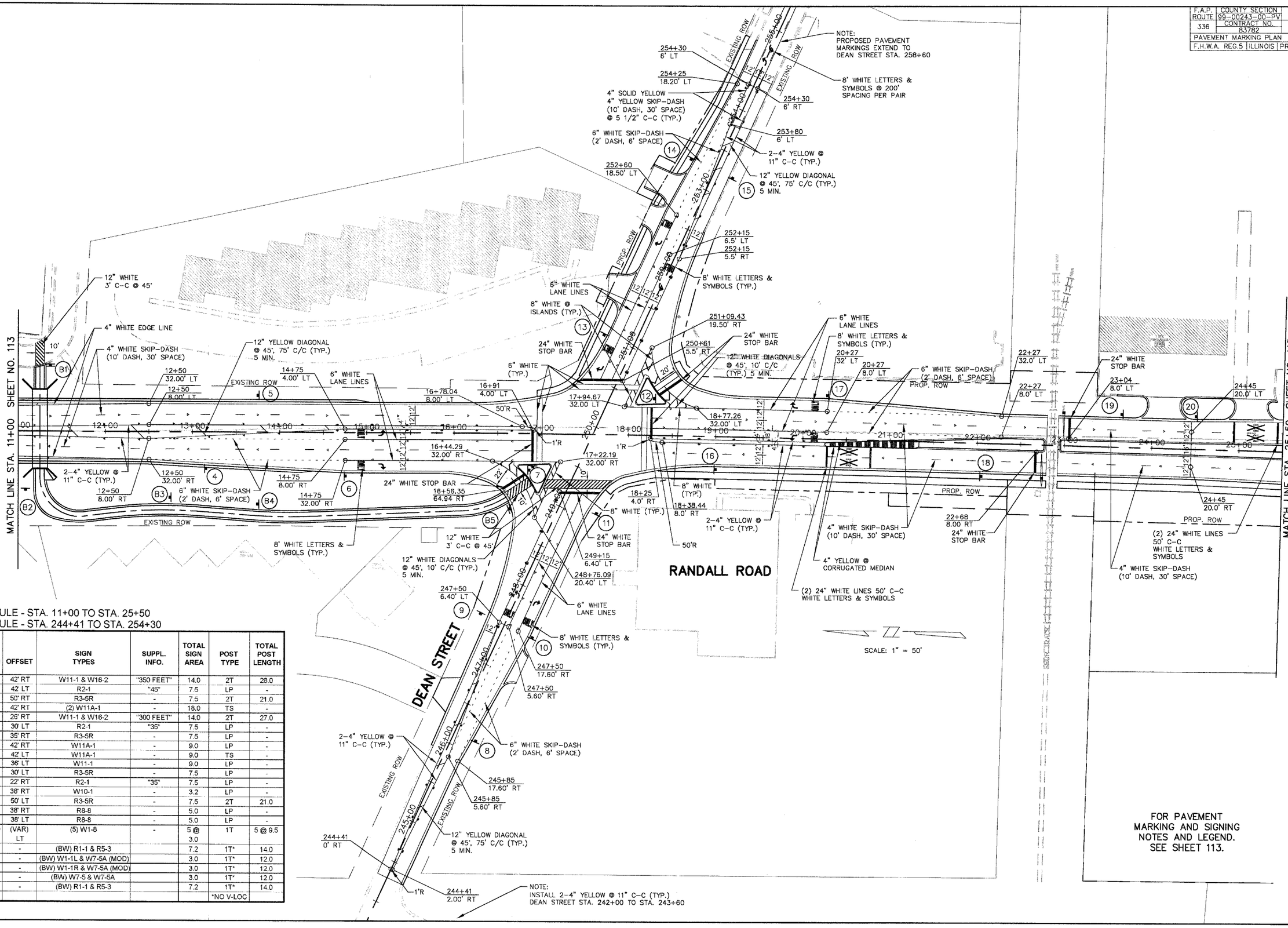
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	113
PAVEMENT MARKING PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



SIGN SCHEDULE - STA. 11+00 TO STA. 25+50
SIGN SCHEDULE - STA. 244+41 TO STA. 254+30

NO.	STATION	OFFSET	SIGN TYPES	SUPPL. INFO.	TOTAL SIGN AREA	POST TYPE	TOTAL POST LENGTH
4	13+15	42' RT	W11-1 & W16-2	"350 FEET"	14.0	2T	28.0
5	13+75	42' LT	R2-1	"45"	7.5	LP	-
6	14+75	50' RT	R3-5R	-	7.5	2T	21.0
7	16+86	42' RT	(2) W11A-1	-	18.0	TS	-
8	246+15	26' RT	W11-1 & W16-2	"300 FEET"	14.0	2T	27.0
9	247+50	30' LT	R2-1	"35"	7.5	LP	-
10	247+50	35' RT	R3-5R	-	7.5	LP	-
11	249+10	42' RT	W11A-1	-	9.0	LP	-
12	18+29	42' LT	W11A-1	-	9.0	TS	-
13	251+00	36' LT	W11-1	-	9.0	LP	-
14	253+25	30' LT	R3-5R	-	7.5	LP	-
15	253+25	22' RT	R2-1	"35"	7.5	LP	-
16	19+00	38' RT	W10-1	-	3.2	LP	-
17	20+27	50' LT	R3-5R	-	7.5	2T	21.0
18	22+05	38' RT	R8-8	-	5.0	LP	-
19	23+65	38' LT	R8-8	-	5.0	LP	-
20	24+50 TO 32+40	(VAR) LT	(5) W1-8	-	5 @ 3.0	1T	5 @ 9.5
B1	-	-	(BW) R1-1 & R5-3		7.2	1T*	14.0
B2	-	-	(BW) W1-1L & W7-5A (MOD)		3.0	1T*	12.0
B3	-	-	(BW) W1-1R & W7-5A (MOD)		3.0	1T*	12.0
B4	-	-	(BW) W7-5 & W7-5A		3.0	1T*	12.0
B5	-	-	(BW) R1-1 & R5-3		7.2	1T*	14.0
						*NO V-LOC	

February 04, 2005 11:35:17 a.m.
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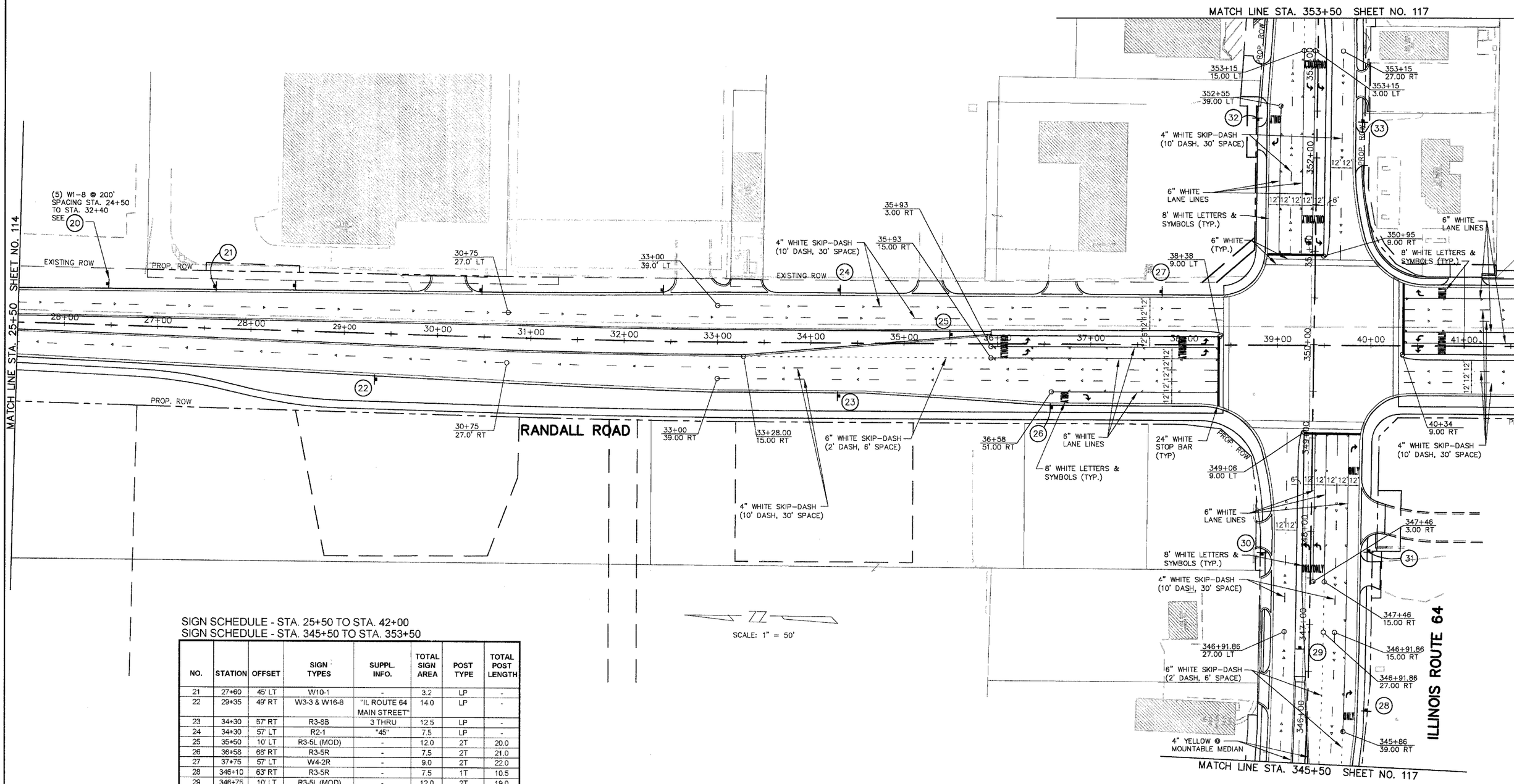
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV	KANE	268
	CONTRACT NO. 83782		

PAVEMENT MARKING PLAN

F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(0

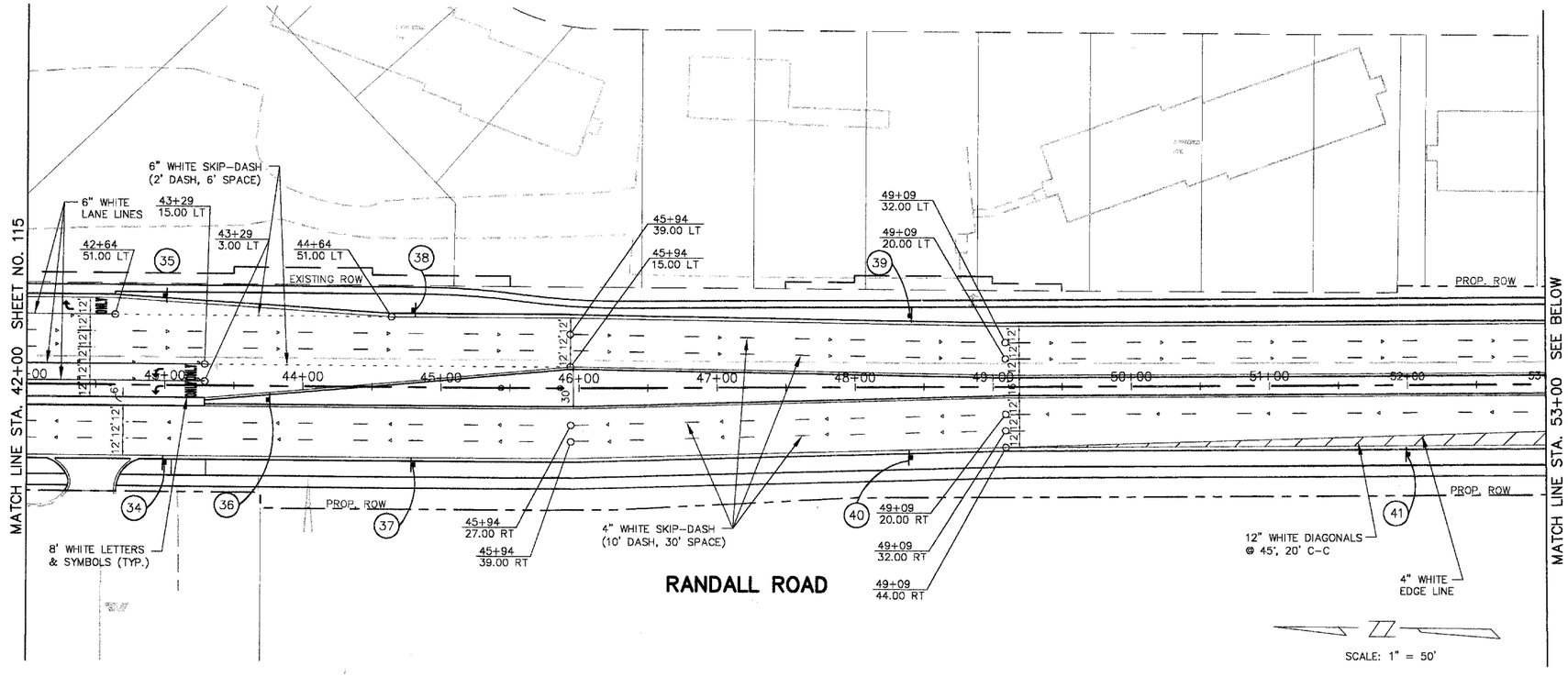


SIGN SCHEDULE - STA. 25+50 TO STA. 42+00
SIGN SCHEDULE - STA. 345+50 TO STA. 353+50

NO.	STATION	OFFSET	SIGN TYPES	SUPPL. INFO.	TOTAL SIGN AREA	POST TYPE	TOTAL POST LENGTH
21	27+60	45' LT	W10-1	-	3.2	LP	-
22	29+35	49' RT	W3-3 & W16-8	"IL ROUTE 64 MAIN STREET"	14.0	LP	-
23	34+30	57' RT	R3-8B	3 THRU	12.5	LP	-
24	34+30	57' LT	R2-1	"45"	7.5	LP	-
25	35+50	10' LT	R3-5L (MOD)	-	12.0	2T	20.0
26	36+58	68' RT	R3-5R	-	7.5	2T	21.0
27	37+75	57' LT	W4-2R	-	9.0	2T	22.0
28	346+10	63' RT	R3-5R	-	7.5	1T	10.5
29	346+75	10' LT	R3-5L (MOD)	-	12.0	2T	19.0
30	347+75	52' LT	R2-1	"35"	7.5	LP	-
31	347+75	65' RT	R3-5R	-	7.5	LP	-
32	352+40	64' LT.	R3-5R	-	7.5	LP	-
33	352+40	49' RT	R2-1	"35"	7.5	LP	-

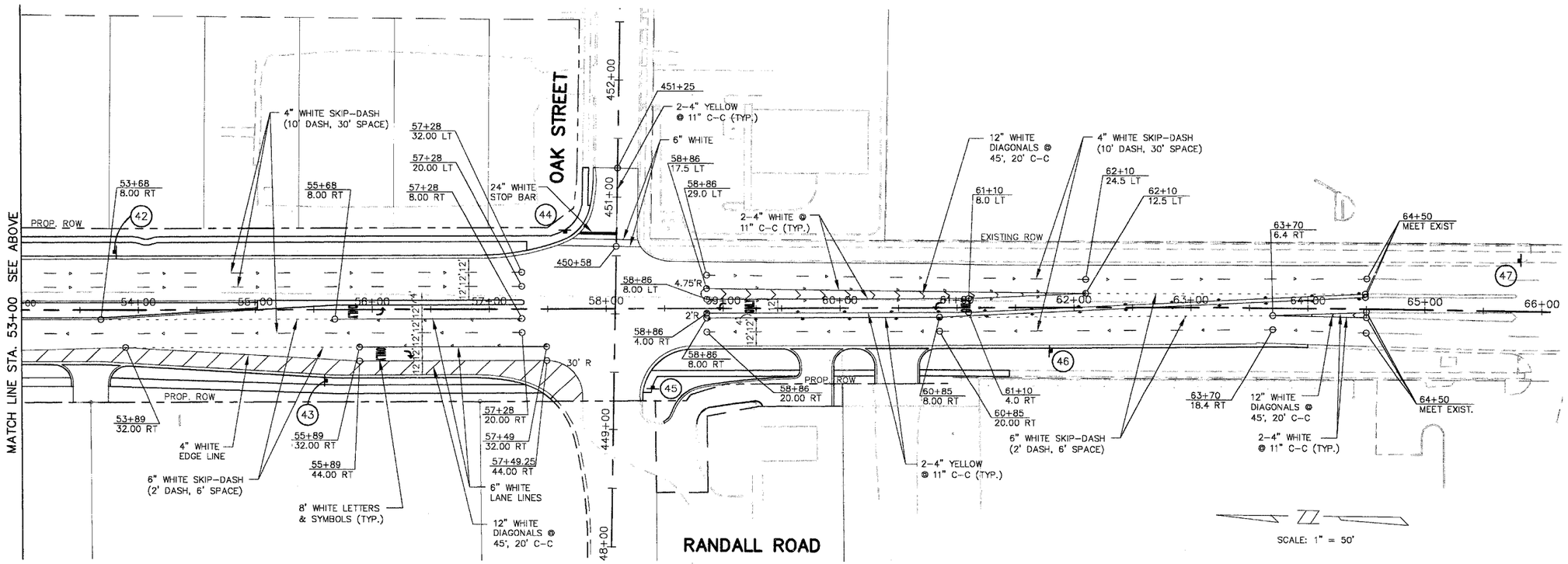
FOR PAVEMENT MARKING AND SIGNING NOTES AND LEGEND. SEE SHEET 113.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
PAVEMENT MARKING PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



SIGN SCHEDULE - STA. 42+00 TO STA. 64+50
SIGN SCHEDULE - STA. 449+00 TO STA. 451+25

NO.	STATION	OFFSET	SIGN TYPES	SUPPL. INFO.	TOTAL SIGN AREA	POST TYPE	TOTAL POST LENGTH
34	43+00	56' RT	W4-2R	-	9.0	LP	-
35	43+00	65' LT	R3-5R	-	7.5	LP	-
36	43+75	10' RT	R3-5L (MOD)	-	12.0	2T	20.0
37	44+80	56' RT	R2-1	"45"	7.5	LP	-
38	44+80	56' LT	R3-8B	3 THRU	12.5	LP	-
39	48+40	52' LT	W3-3 & W16-8	"IL ROUTE 64 MAIN STREET"	14.0	LP	-
40	48+40	51' RT	W9-1		9.0	LP	-
41	52+00	50' RT	W2-1 & W16-8	"OAK STREET"	13.0	LP	-
42	53+80	50' LT	R2-1	"45"	7.5	LP	-
43	55+60	61' RT	R3-5R	-	7.5	LP	-
44	450+70	44' LT	R1-1	-	5.2	1T	10.0
45	449+37	33' RT	R1-1	-	5.2	1T	10.0
46	61+80	37' RT	R2-1	"45"	7.5	2T	21.0
47	65+80	44' LT	W2-1 & W16-8	"OAK STREET"	13.0	2T	23.0
48-49	NOT USED						



FOR PAVEMENT MARKING AND SIGNING NOTES AND LEGEND. SEE SHEET 113.

February 04, 2005 11:35:17 a.m.
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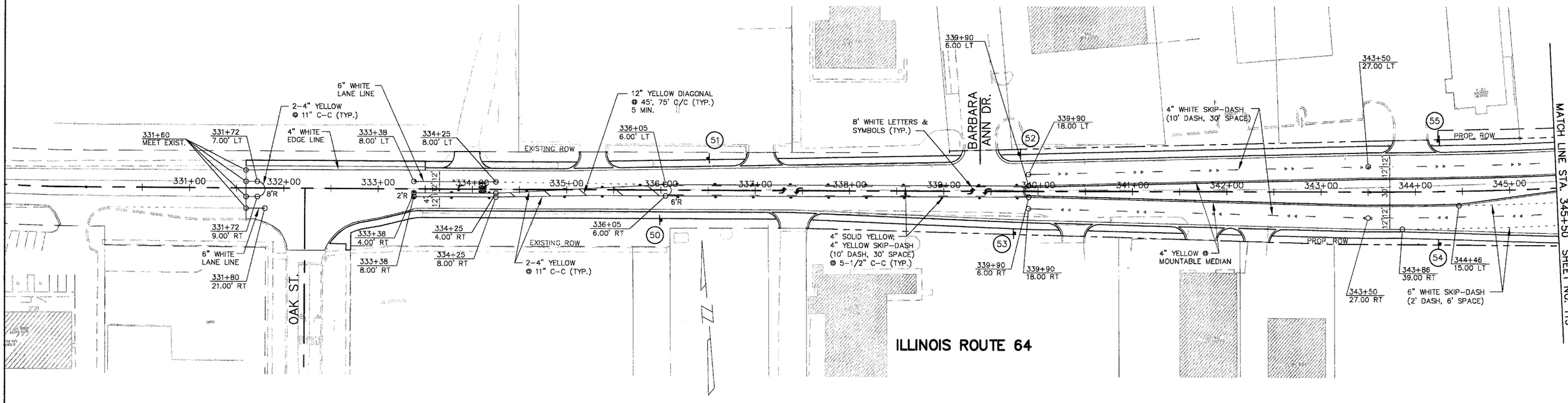
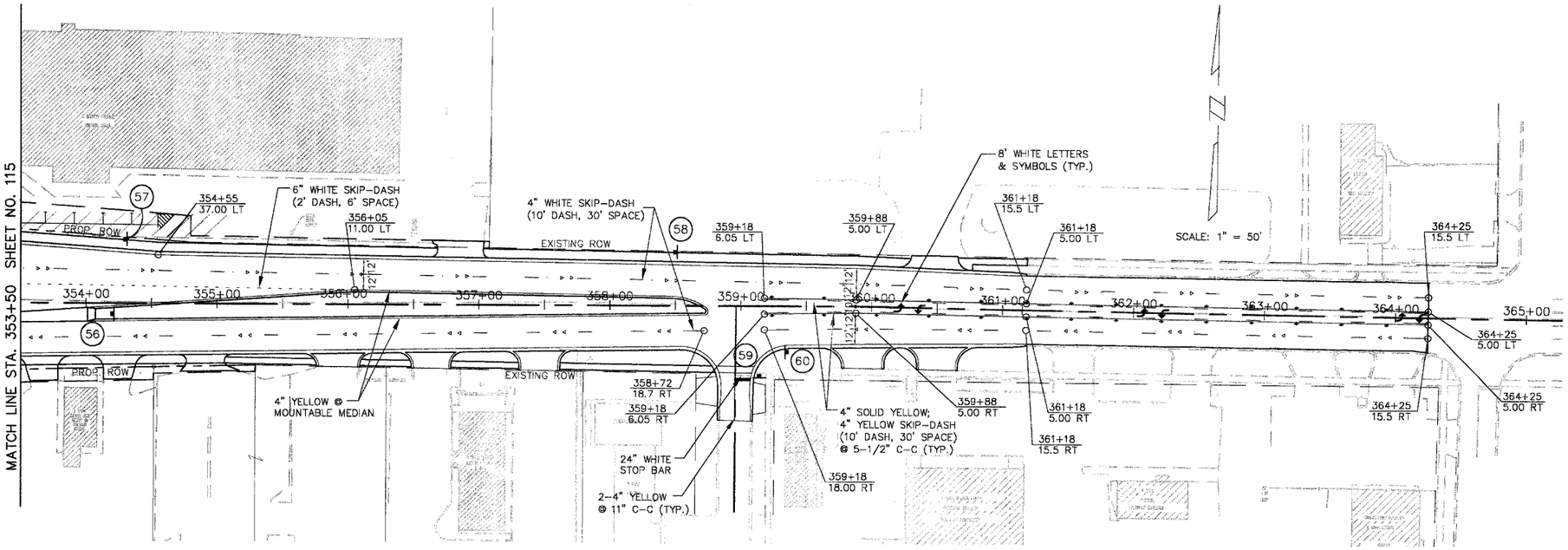
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268

PAVEMENT MARKING PLAN

F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336(0



SCALE: 1" = 50'



SIGN SCHEDULE - STA. 331+60 TO STA. 345+50
SIGN SCHEDULE - STA. 353+50 TO STA. 364+25

NO.	STATION	OFFSET	SIGN TYPES	SUPPL. INFO.	TOTAL SIGN AREA	POST TYPE	TOTAL POST LENGTH
50	336+00	31' RT	R2-1 & R3-9B	"35"	13.5	2T	27.0
51	336+50	34' LT	W2-2L & W16-8	"OAK STREET"	13.0	2T	27.0
52	339+75	43' LT	R3-9B	-	6.0	LP	-
53	339+75	44' RT	W3-3 & W16-8	"RANDALL ROAD"	14.0	LP	-
54	344+25	55' RT	R3-8B	2 THRU	12.5	LP	-
55	344+25	54' LT	W4-2R	-	9.0	LP	-
56	354+20	8' RT	R3-5L (MOD)	-	12.0	2T	20.0
57	354+30	49' LT	R3-8B	2 THRU	12.5	LP	-
58	358+50	41' LT	W3-3 & W16-8	"IL ROUTE 64 MAIN STREET"	14.0	LP	-
59	359+14	54' RT	R1-1	-	5.2	1T	10.0
60	359+35	35' RT	R3-9B	-	6.0	1T	10.0

FOR PAVEMENT MARKING AND SIGNING NOTES AND LEGEND. SEE SHEET 113.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	118
TRAFFIC SIGNAL QUANTITIES				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

TRAFFIC SIGNAL SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL QUANTITY	RED HAW LANE & RANDALL RD	DEAN STREET & RANDALL RD	ILLINOIS RTE. 64 & RANDALL RD	PRAIRIE STREET & RANDALL RD	ILLINOIS RTE. 38 & RANDALL RD	RANDALL RD. SYSTEM INTERCONNECT
SIGN PANEL - TYPE 1	SQ FT	82		27	55			
SIGN PANEL - TYPE 2	SQ FT	25			25			
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	5005		410	115			4480
CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL	FOOT	270		70	200			
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	20		20				
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	190		20	170			
CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL	FOOT	16		16				
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	65						65
CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	105		105				
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	1290		560	700			30
HANDHOLE	EACH	11		6				9
DOUBLE HANDHOLE	EACH	7		2	5			
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	5500		535	485			4480
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1		1				
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1			1			
TRANSCEIVER - FIBER OPTIC	EACH	2		1	1			
UNINTERRUPTIBLE POWER SUPPLY	EACH	2		1	1			
ELECTRICAL CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	7600						7600
ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3697		1764	1933			
ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	6670		3455	3215			
ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	4886		1016	3870			
ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	5289		3084	2205			
ELECTRICAL CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1330		1330				
ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 16, 5.5 PAIR	FOOT	2258		1120	1140			
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	187		61	126			
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	7962						7962
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1798		832	966			
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	1934		654	1280			
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	85			85			
TRAFFIC SIGNAL POST, PAINTED STEEL 10 FT.	EACH	2		2				
TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.	EACH	6		2	4			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MOUNTING HEIGHT	EACH	1		1				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MOUNTING HEIGHT	EACH	1		1				

	ITEM	UNIT	TOTAL QUANTITY	RED HAW LANE & RANDALL RD	DEAN STREET & RANDALL RD	ILLINOIS RTE. 64 & RANDALL RD	PRAIRIE STREET & RANDALL RD	ILLINOIS RTE. 38 & RANDALL RD	RANDALL RD. SYSTEM INTERCONNECT
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MOUNTING HEIGHT	EACH	2		2				
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45 FT. MOUNTING HEIGHT	EACH	1			1			
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45 FT. MOUNTING HEIGHT	EACH	1			1			
	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45 FT. MOUNTING HEIGHT	EACH	2			2			
	CONCRETE FOUNDATION, TYPE A	FOOT	38		19	19			
	CONCRETE FOUNDATION, TYPE D	FOOT	8		4	4			
	CONCRETE FOUNDATION, TYPE E 36" DIAMETER	FOOT	120		60	60			
	DRILL EXISTING HANDHOLE	EACH	1						1
	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM	EACH	20		8	12			
	INDUCTIVE LOOP DETECTOR	EACH	6		6				
	DETECTOR LOOP, TYPE 1	FOOT	162		162				
*	LIGHT DETECTOR	EACH	7		3	4			
*	LIGHT DETECTOR AMPLIFIER	EACH	2		1	1			
	PEDESTRIAN PUSH-BUTTON	EACH	16		8	8			
	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2		1	1			
	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	1			1	1	
	MAINTAIN EXISTING TRAFFIC SIGNAL INTERCONNECT	L. SUM	1						1
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2		1	1			
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	4330						4330
	REMOVE EXISTING HANDHOLE	EACH	27		10	13			4
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	18		9	9			
	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 3-SECTION, MAST ARM MTD	EACH	12		2	10			
	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, BRACKET MTD	EACH	2			2			
	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, MAST ARM MTD	EACH	8		6	2			
	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 5-SECTION, BRACKET MTD	EACH	2		2				
	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD	EACH	6		2	4			
	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED	EACH	14		6	8			
	PEDESTRIAN SIGNAL HEAD, L.E.D., 3-FACE, BRACKET MOUNTED	EACH	2		2				
	SERVICE INSTALLATION, GROUND MOUNTED	EACH	2		1	1			
	VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)	EACH	2		1	1			
	REMOTE-CONTROLED VIDEO SYSTEM	EACH	1			1			
	VIDEO TRANSMISSION SYSTEM	EACH	1			1			
	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	L. SUM	1						1

* 100% TO BE PAID BY THE CITY OF ST. CHARLES

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL
SCHEDULE OF QUANTITIES

RANDALL ROAD
(RED HAW LANE TO IL. RTE. 38)

SCALE: NONE
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	119
STANDARD TRAFFIC SIGNAL DESIGN DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

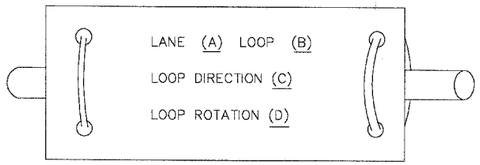
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

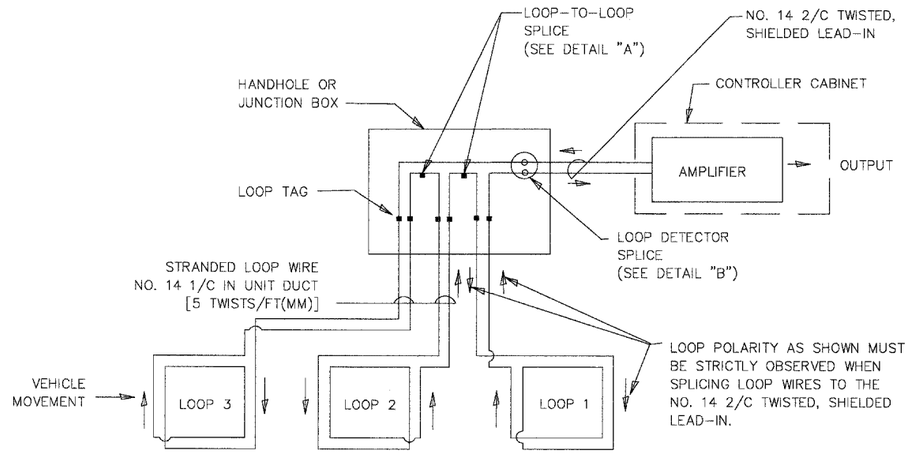


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

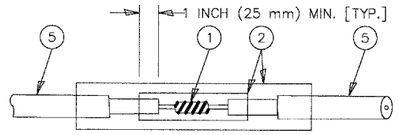
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

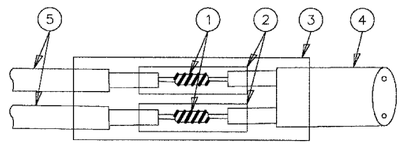


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

NAME	DATE
REVISIONS	

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

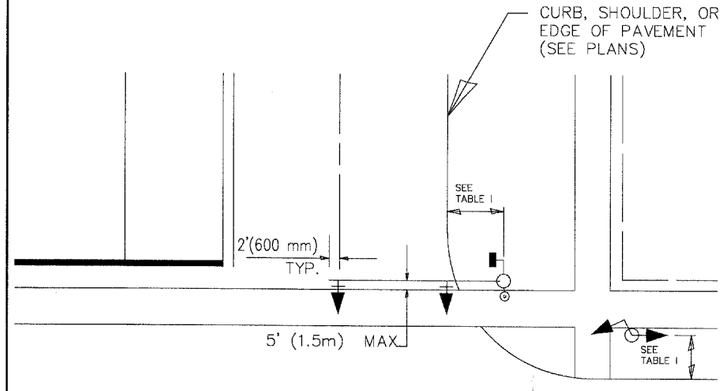
SCALE: VERT. NONE HORZ.
DATE: 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

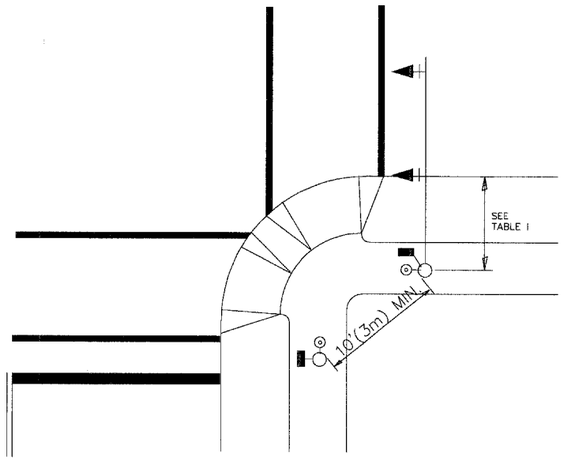
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	120
STANDARD TRAFFIC SIGNAL DESIGN DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION. EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

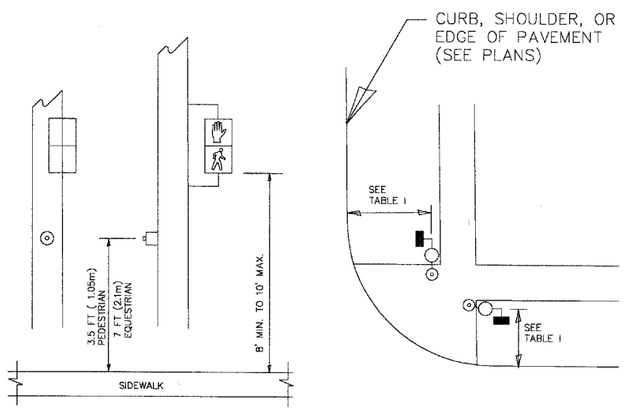


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

NAME	DATE
REVISIONS	

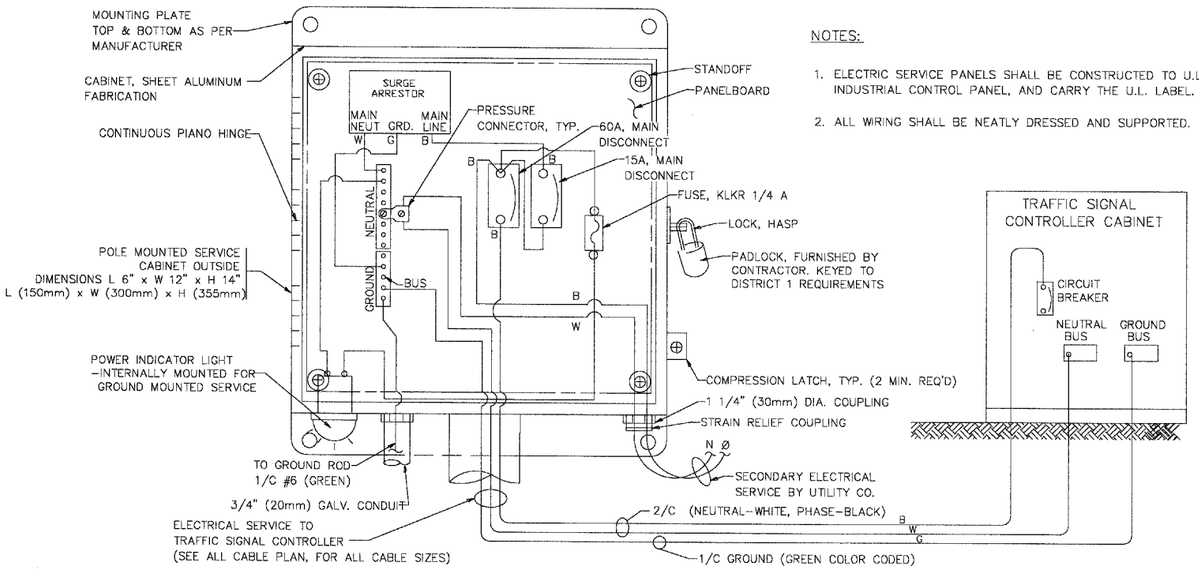
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORZ.
DATE: 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

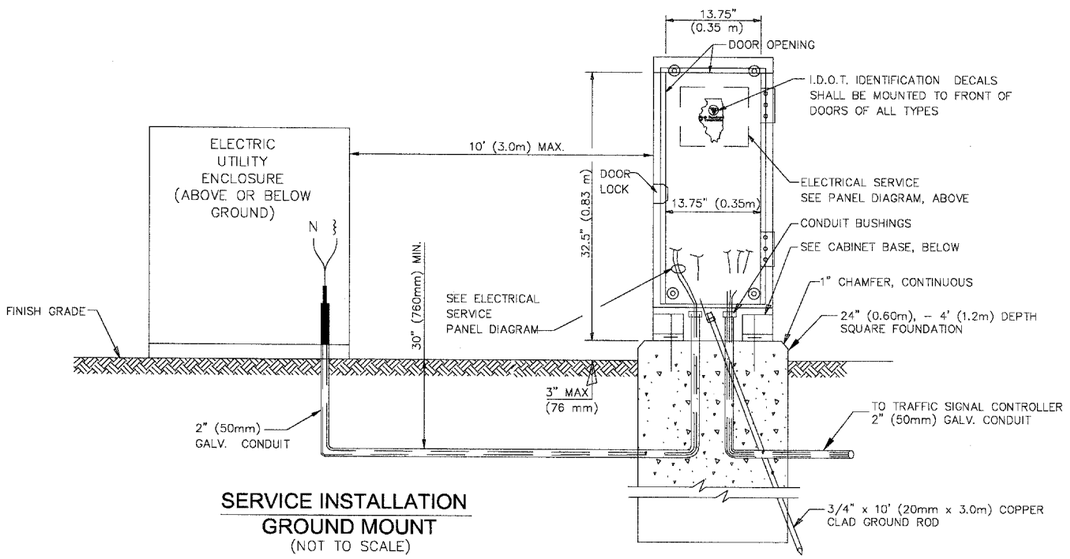
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	121
STANDARD TRAFFIC SIGNAL DESIGN DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		



NOTES:

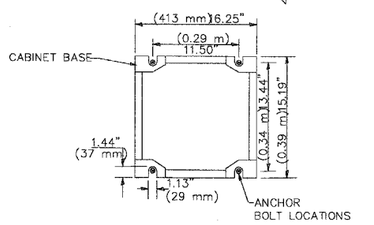
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)



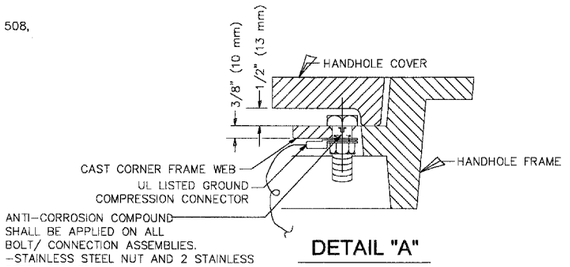
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

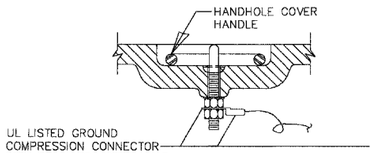


CABINET - BASE BOLT PATTERN

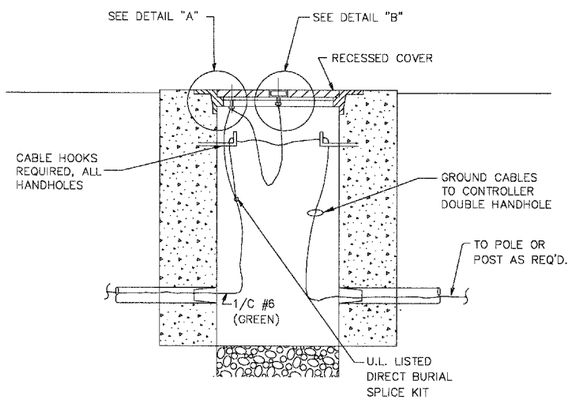
(NOT TO SCALE)



DETAIL "A"

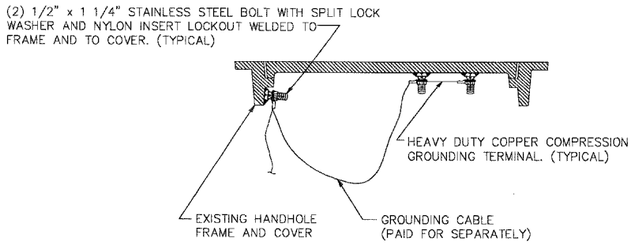


DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)



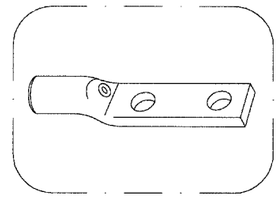
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

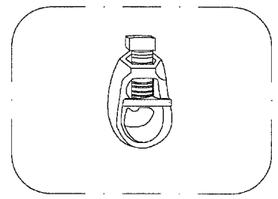
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC,). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



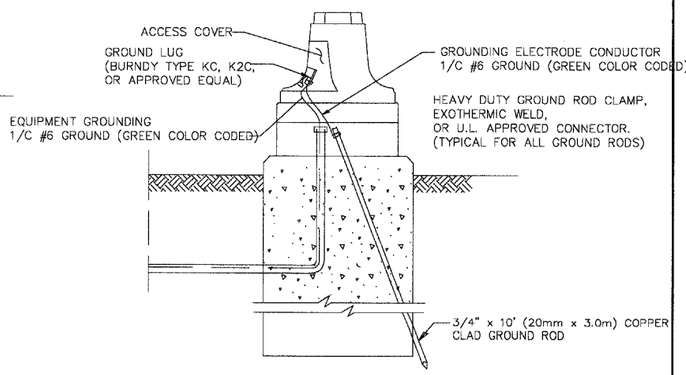
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL

(NOT TO SCALE)

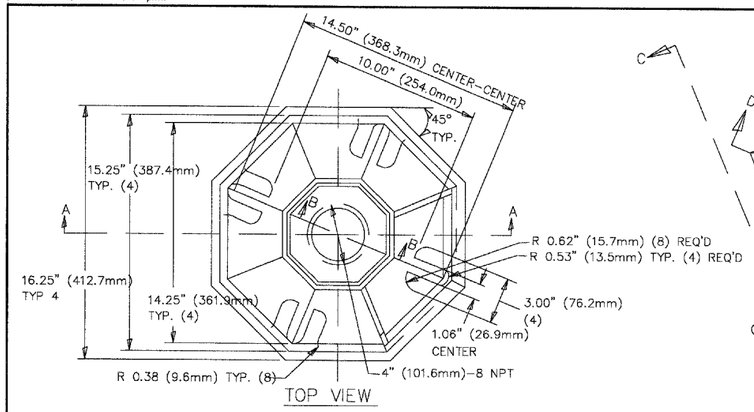
NAME	DATE
REVISIONS	

ILLINOIS DEPARTMENT OF TRANSPORTATION

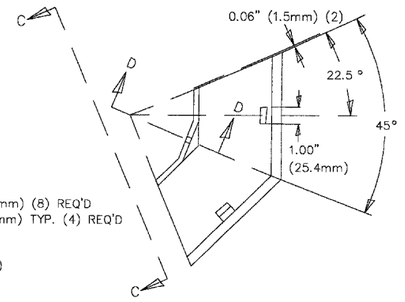
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

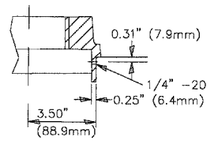
SCALE: VERT. NONE HORZ.
DATE: 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

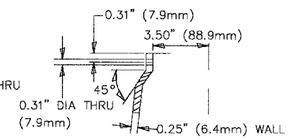


TOP VIEW

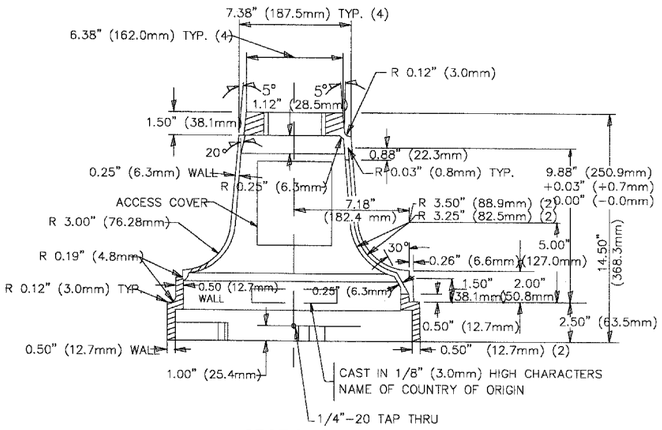




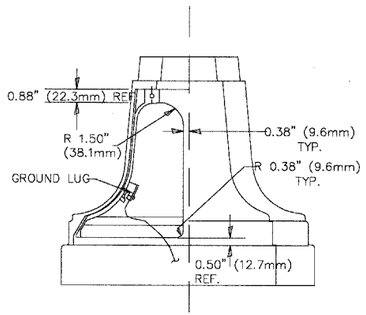
SECTION B-B



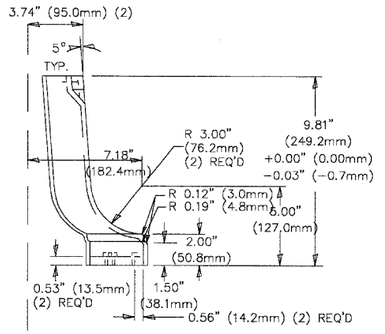
SECTION D-D



SECTION A-A

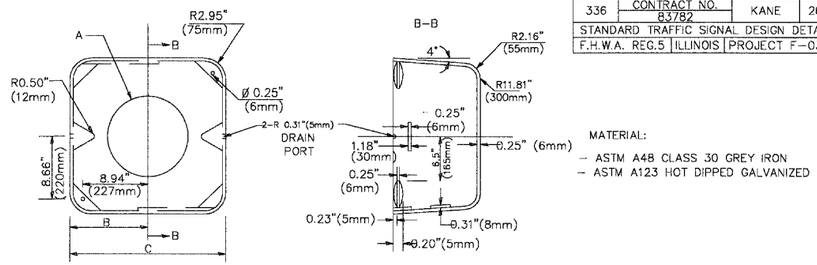


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	122
STANDARD TRAFFIC SIGNAL DESIGN DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

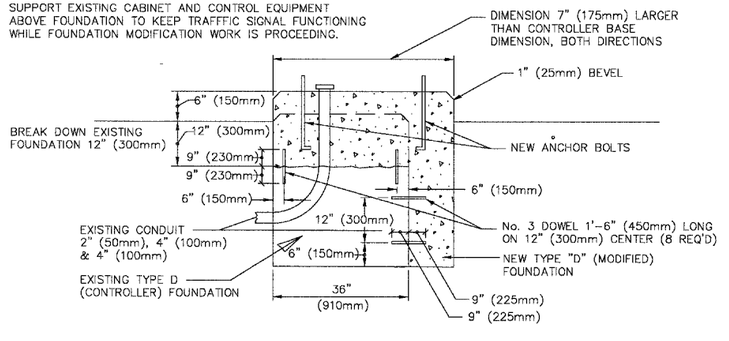


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

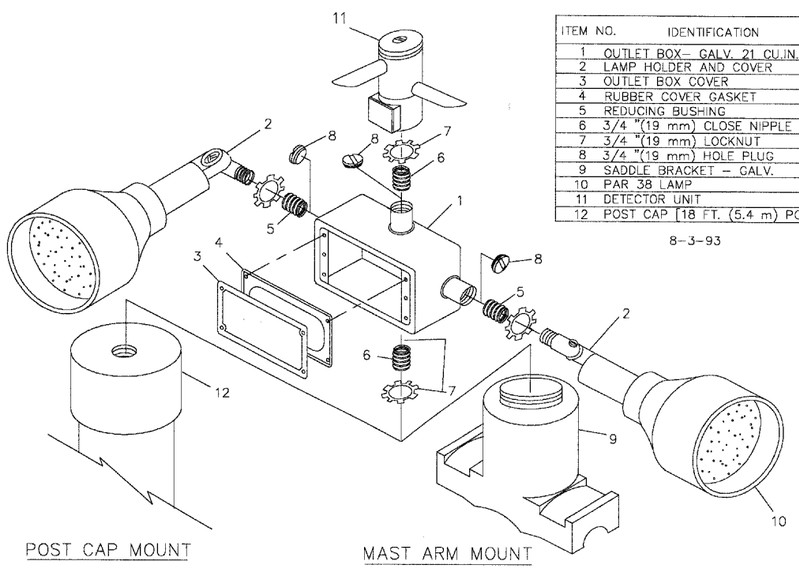
SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

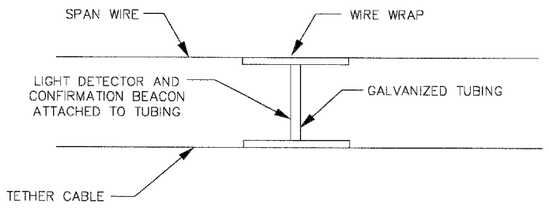
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4 "(19 mm) CLOSE NIPPLE
7	3/4 "(19 mm) LOCKNUT
8	3/4 "(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

NOTES:

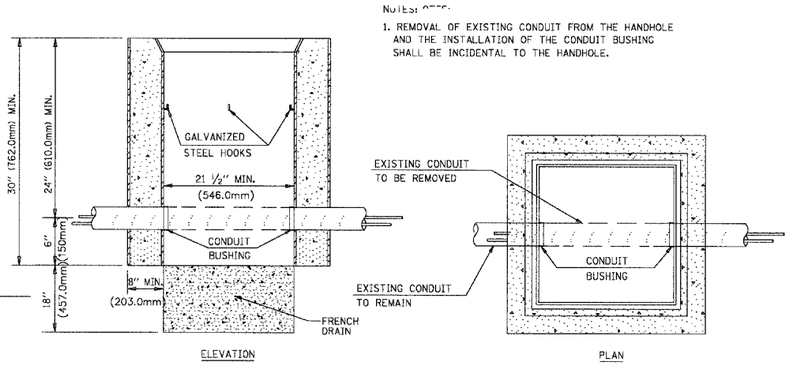
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



ELEVATION

PLAN

DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

		ILLINOIS DEPARTMENT OF TRANSPORTATION
		DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
	DATE	SCALE: VERT. NONE HORZ.
REVISIONS		DATE: 1-01-02
		DRAWN BY: RWP DESIGNED BY: DAD CHECKED BY: DAZ SHEET 4 OF 4

D:\DZ\03D0181_PHASE1\DWG\RANDALL_STAGING_1.DWG
February 04, 2005 10:24:43 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
TEMPORARY TRAFFIC SIGNAL INSTALLATION			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- UD UNIT DUCT
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING COMBINATION STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTE: EXISTING SIGNAL CONDUITS, LOOP DETECTORS AND MAGNETIC DETECTORS SHALL BE ABANDONED.

SCALE: 1" = 20'

1 EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: KANE COUNTY D.O.T.

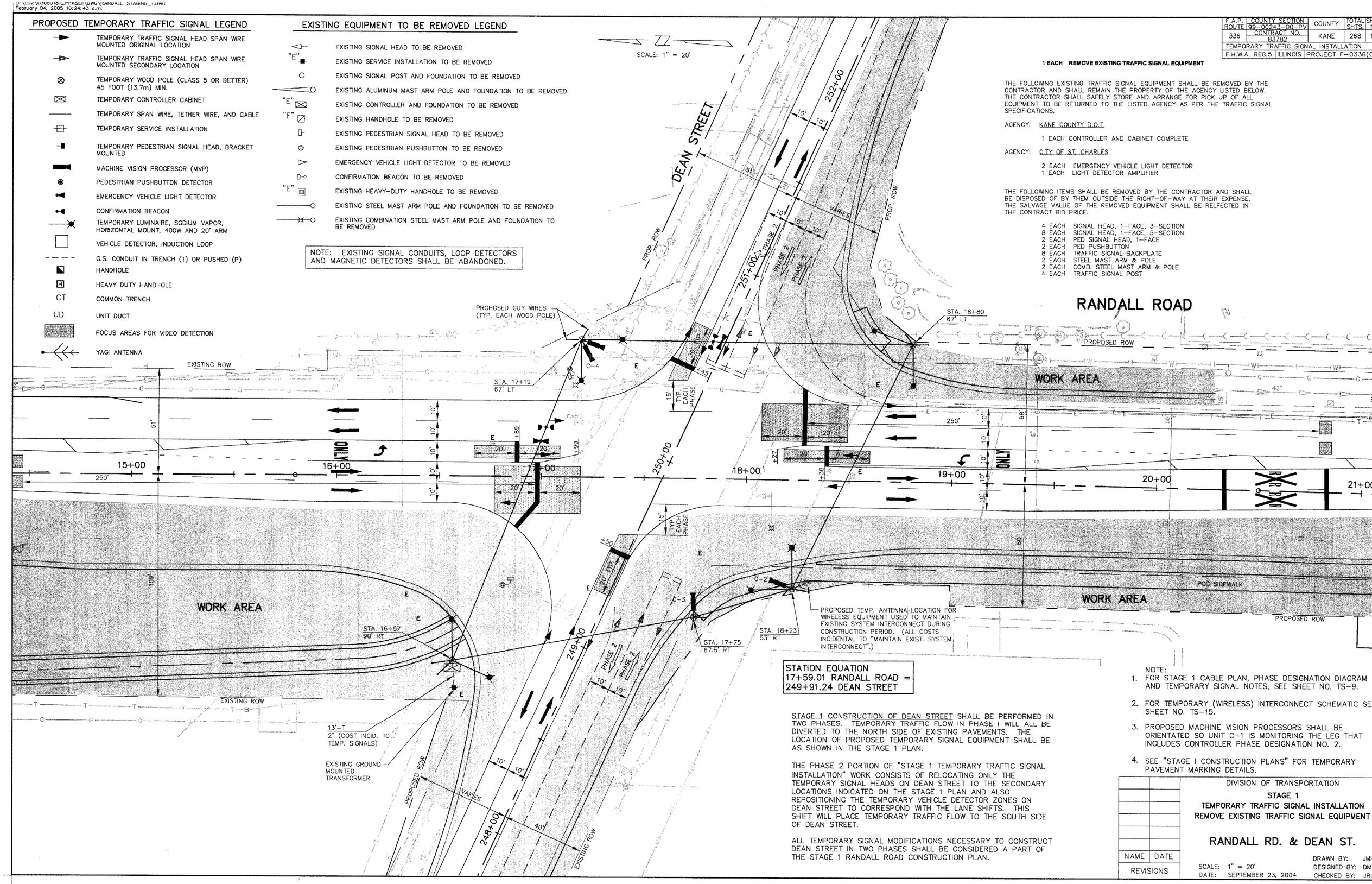
1 EACH CONTROLLER AND CABINET COMPLETE

AGENCY: CITY OF ST. CHARLES

2 EACH EMERGENCY VEHICLE LIGHT DETECTOR
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWNG ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE RELFECTED IN THE CONTRACT BID PRICE.

4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
2 EACH PED SIGNAL HEAD, 1-FACE
2 EACH PED PUSHBUTTON
8 EACH TRAFFIC SIGNAL BACKPLATE
2 EACH STEEL MAST ARM & POLE
2 EACH COMB. STEEL MAST ARM & POLE
4 EACH TRAFFIC SIGNAL POST



STATION EQUATION
17+59.01 RANDALL ROAD = 249+91.24 DEAN STREET

STAGE 1 CONSTRUCTION OF DEAN STREET SHALL BE PERFORMED IN TWO PHASES. TEMPORARY TRAFFIC FLOW IN PHASE I WILL ALL BE DIVERTED TO THE NORTH SIDE OF EXISTING PAVEMENTS. THE LOCATION OF PROPOSED TEMPORARY SIGNAL EQUIPMENT SHALL BE AS SHOWN IN THE STAGE 1 PLAN.

THE PHASE 2 PORTION OF "STAGE 1 TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK CONSISTS OF RELOCATING ONLY THE TEMPORARY SIGNAL HEADS ON DEAN STREET TO THE SECONDARY LOCATIONS INDICATED ON THE STAGE 1 PLAN AND ALSO REPOSITIONING THE TEMPORARY VEHICLE DETECTOR ZONES ON DEAN STREET TO CORRESPOND WITH THE LANE SHIFTS. THIS SHIFT WILL PLACE TEMPORARY TRAFFIC FLOW TO THE SOUTH SIDE OF DEAN STREET.

ALL TEMPORARY SIGNAL MODIFICATIONS NECESSARY TO CONSTRUCT DEAN STREET IN TWO PHASES SHALL BE CONSIDERED A PART OF THE STAGE 1 RANDALL ROAD CONSTRUCTION PLAN.

NOTE:
1. FOR STAGE 1 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-9.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SE SHEET NO. TS-15.
3. PROPOSED MACHINE VISION PROCESSORS SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG THAT INCLUDES CONTROLLER PHASE DESIGNATION NO. 2.
4. SEE "STAGE I CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 1
TEMPORARY TRAFFIC SIGNAL INSTALLATION
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

RANDALL RD. & DEAN ST.

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004
DRAWN BY: JM
DESIGNED BY: DM
CHECKED BY: JRI

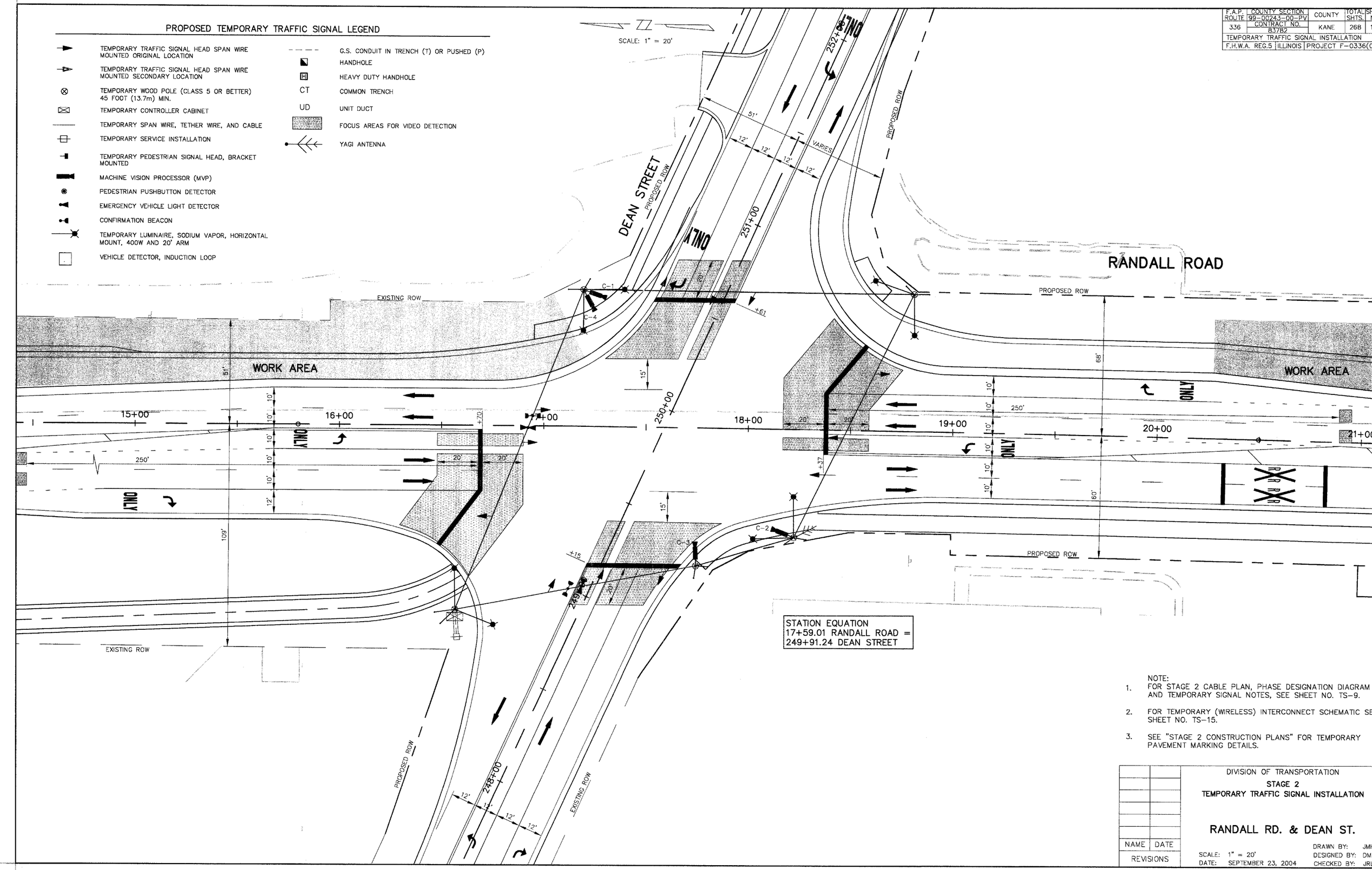
February 04, 2005 11:15:57 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV	KANE	268
	CONTRACT NO. 83782		
TEMPORARY TRAFFIC SIGNAL INSTALLATION			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- UD UNIT DUCT
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

SCALE: 1" = 20'



STATION EQUATION
17+59.01 RANDALL ROAD =
249+91.24 DEAN STREET

NOTE:
1. FOR STAGE 2 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-9.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SE SHEET NO. TS-15.
3. SEE "STAGE 2 CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION
STAGE 2
TEMPORARY TRAFFIC SIGNAL INSTALLATION

RANDALL RD. & DEAN ST.

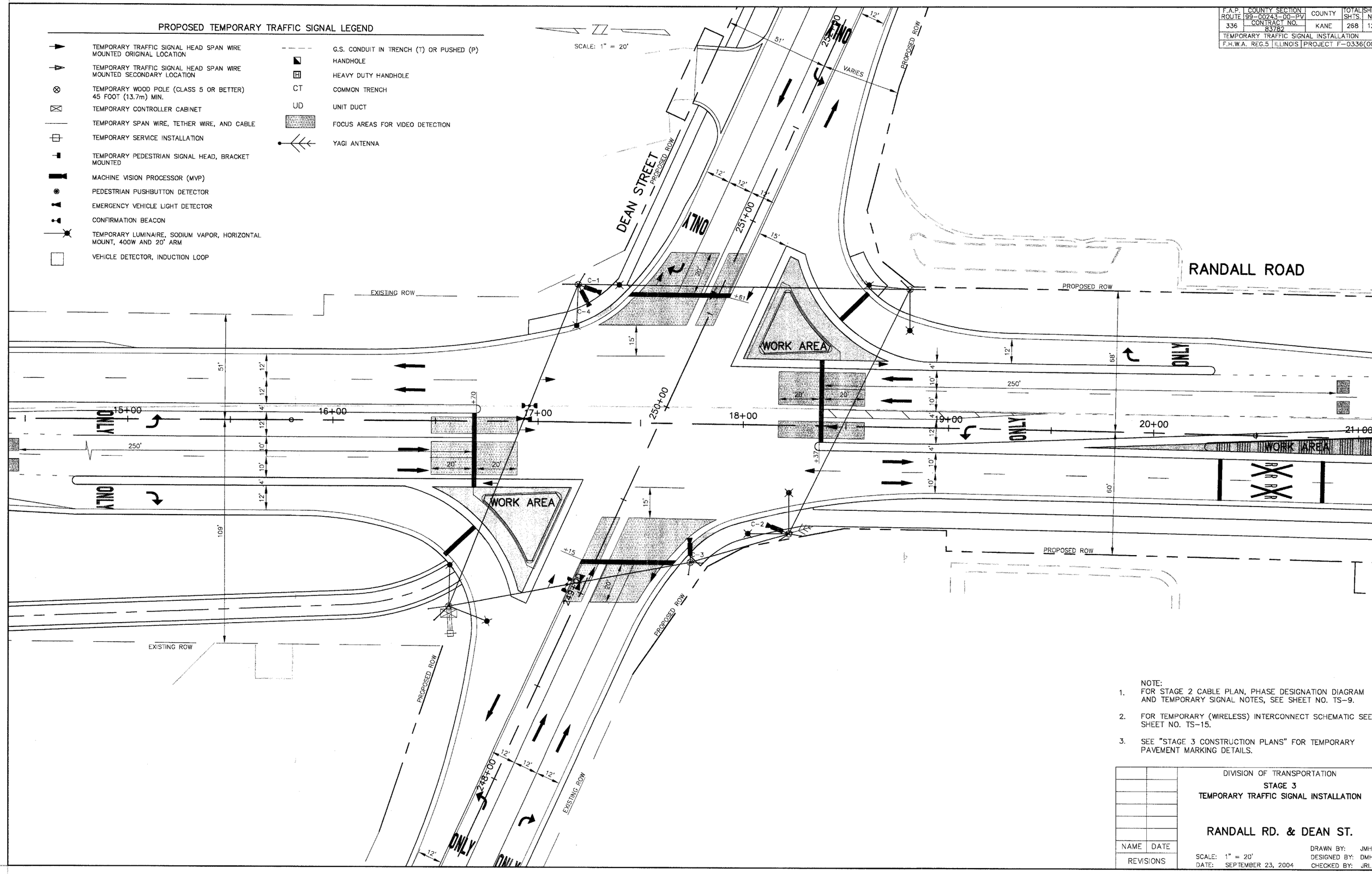
SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004
DRAWN BY: JM
DESIGNED BY: DM
CHECKED BY: JR

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	NO.
336	99-00243-00-PV CONTRACT NO. 83762	KANE	268	12
TEMPORARY TRAFFIC SIGNAL INSTALLATION				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- UD UNIT DUCT
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

SCALE: 1" = 20'



NOTE:
1. FOR STAGE 2 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-9.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SEE SHEET NO. TS-15.
3. SEE "STAGE 3 CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 3

TEMPORARY TRAFFIC SIGNAL INSTALLATION

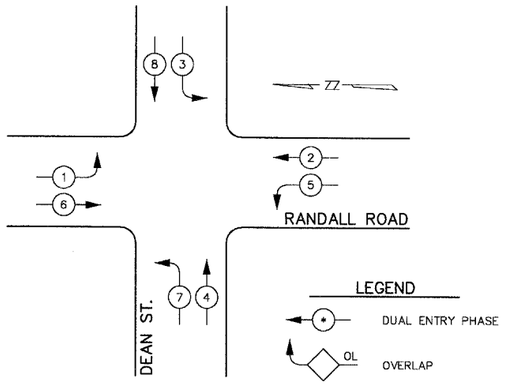
RANDALL RD. & DEAN ST.

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

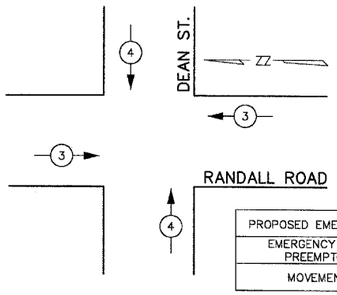
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
TEMPORARY CABLE PLAN			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

STAGE 1, 2 & 3 TEMPORARY TRAFFIC SIGNAL CONTROLLER SEQUENCE

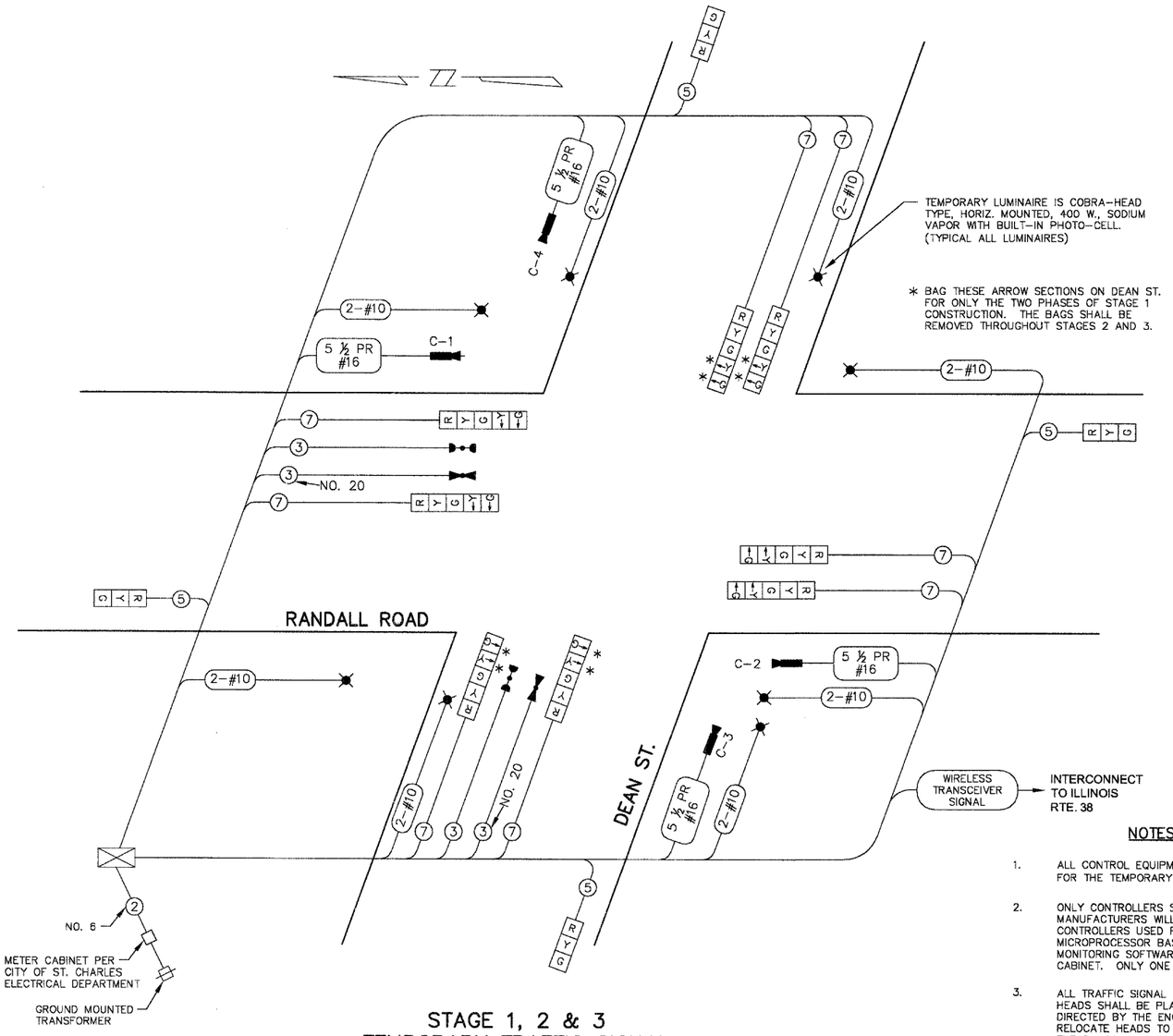


PHASE DESIGNATION DIAGRAM

TEMPORARY TRAFFIC SIGNAL EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑



STAGE 1, 2 & 3 TEMPORARY TRAFFIC SIGNAL CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

- TEMPORARY TRAFFIC SIGNAL SECTION 12"
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- (5) INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PUSHBUTTON DETECTOR
- 12" PEDESTRIAN SIGNAL SECTION
- MACHINE VISION PROCESSOR
- TEMPORARY LUMINAIRE, S.V. 400W

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	x WATTAGE INCAND.	x WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	~~17~~	0.50	810.0
(YELLOW)	12	135	25	0.25	405.0
(GREEN)	12	135	~~15~~	0.25	405.0
ARROW	16	135	~~12~~	0.10	216.0
PED. SIGNAL		90	25	1.00	0.0
CONTROLLER	1	100	~~100~~	1.00	100.0
ILLUM. SIGN		84		0.05	0.0
VIDEO DETECT	4	23	23	1.00	92.0
LUMINAIRE	8	400		0.50	1600.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	3628.0

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL. 60174

ENERGY SUPPLY CONTACT: Tom Lesiewicz
PHONE: (630) 377-4486
COMPANY: St. Charles Electric Department

NOTES FOR TEMPORARY TRAFFIC SIGNAL

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNALS(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCTPED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPOARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. ALL TEMPORARY SIGNAL HEADS SHALL USE INCANDESCENT BULBS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING SYSTEM.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 1, 2 & 3
TEMPORARY TRAFFIC SIGNAL CABLE PLAN
PHASE DESIGNATION DIAGRAM

RANDALL RD. & DEAN STREET

SCALE: NONE
DATE: SEPTEMBER 23, 2004
DRAWN BY: JM
DESIGNED BY: DM
CHECKED BY: JR

D:\L02\0305181_PHASEII\DWG\RANDALL_STAGING_1.DWG
February 04, 2005 10:24:43 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	12
STAGE 1 TEMPORARY TRAFFIC SIGNALS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- EXISTING CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTE: EXISTING SIGNAL CONDUITS, LOOP DETECTORS AND MAGNETIC DETECTORS SHALL BE ABANDONED.

SCALE: 1" = 20'

1 EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET COMPLETE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS:
AGENCY: CITY OF ST. CHARLES

2 EACH EMERGENCY VEHICLE LIGHT DETECTOR
1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
4 EACH TRAFFIC SIGNAL BACKPLATE
4 EACH ALUMINUM MAST ARM AND POLE
4 EACH TRAFFIC SIGNAL POST
1 EACH SERVICE INSTALLATION

ILLINOIS ROUTE 64
RANDALL ROAD
AUTO REPAIR SHOP
AMOCO GAS STATION
WORK AREA
EXISTING ROW
PROPOSED ROW
TEMP. CONST. EASMT.
LIMITS OF EXISTING PAVEMENT
GAS PUMPS
CONC. PAD OVER TANKS
PROPOSED GUY WIRES (TYP. EACH WOOD POLE)
STA. 38+53 89' LT
STA. 40+20 91' LT
STA. 38+48 90' RT
STA. 40+16 84' RT
C-1
C-2
C-3
C-4
ONLY
15' TYP.
250'
65'
51'
74'
77'
85'
67'
71'
VARIES
352+00
351+00
350+00
349+00
348+00
37+00
38+00
39+00
40+00
41+00
42+00

STATION EQUATION
39+38.91 RANDALL ROAD =
349+99 IL. ROUTE 64

PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- HANDHOLE
- H HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- UD UNIT DUCT
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

PROPOSED TEMP. ANTENNA LOCATION FOR WIRELESS EQUIPMENT USED TO MAINTAIN EXISTING SYSTEM INTERCONNECT DURING CONSTRUCTION PERIOD. (ALL COSTS INCIDENTAL TO "MAINTAIN EXISTING SYSTEM INTERCONNECT".)

APPROX. LOCATION OF RELOCATED POWER POLE, ACTUAL LOCATION TO BE DETERMINED BY OTHERS AT TIME OF CONSTRUCTION.

NOTE:
1. FOR STAGE 1 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-12.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SEE SHEET NO. TS-15.
3. PROPOSED MACHINE VISION PROCESSORS SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG THAT INCLUDES CONTROLLER PHASE DESIGNATION NO. 2.
4. SEE "STAGE I CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION
STAGE 1
TEMPORARY TRAFFIC SIGNAL INSTALLATION
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

RANDALL RD. & ILLINOIS RTE. 64

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004
DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

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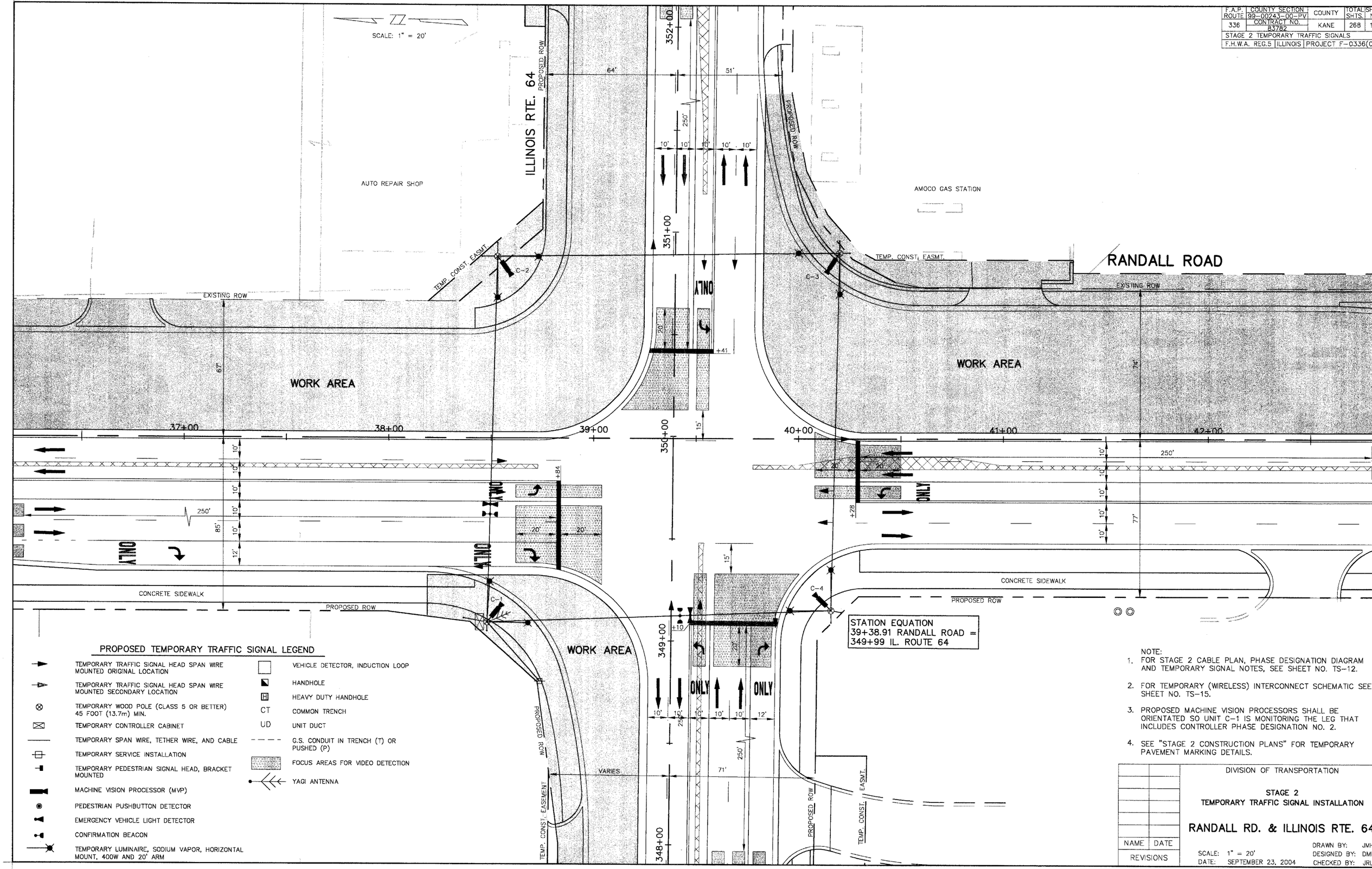
February 04, 2005 11:15:57 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
STAGE 2 TEMPORARY TRAFFIC SIGNALS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

SCALE: 1" = 20'



PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT — COMMON TRENCH
- UD — UNIT DUCT
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

STATION EQUATION
39+38.91 RANDALL ROAD =
349+99 IL. ROUTE 64

NOTE:
1. FOR STAGE 2 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-12.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SEE SHEET NO. TS-15.
3. PROPOSED MACHINE VISION PROCESSORS SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG THAT INCLUDES CONTROLLER PHASE DESIGNATION NO. 2.
4. SEE "STAGE 2 CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 2
TEMPORARY TRAFFIC SIGNAL INSTALLATION

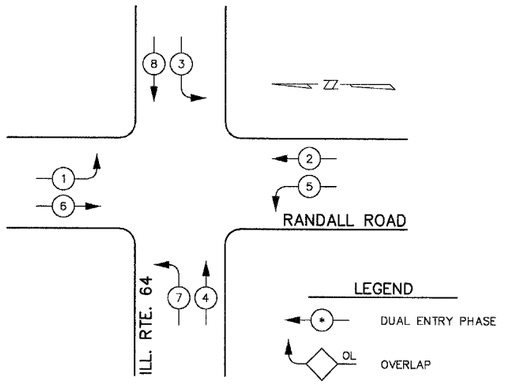
RANDALL RD. & ILLINOIS RTE. 64

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMI
CHECKED BY: JRL

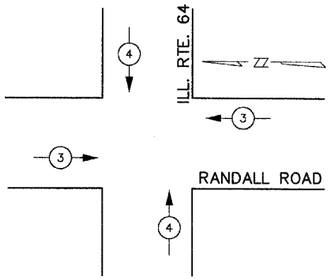
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHE NO
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	12
TEMPORARY CABLE PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

STAGE 1 & 2 TEMPORARY TRAFFIC SIGNAL CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

TEMPORARY TRAFFIC SIGNAL EMERGENCY VEHICLE PREEMPTION SEQUENCE

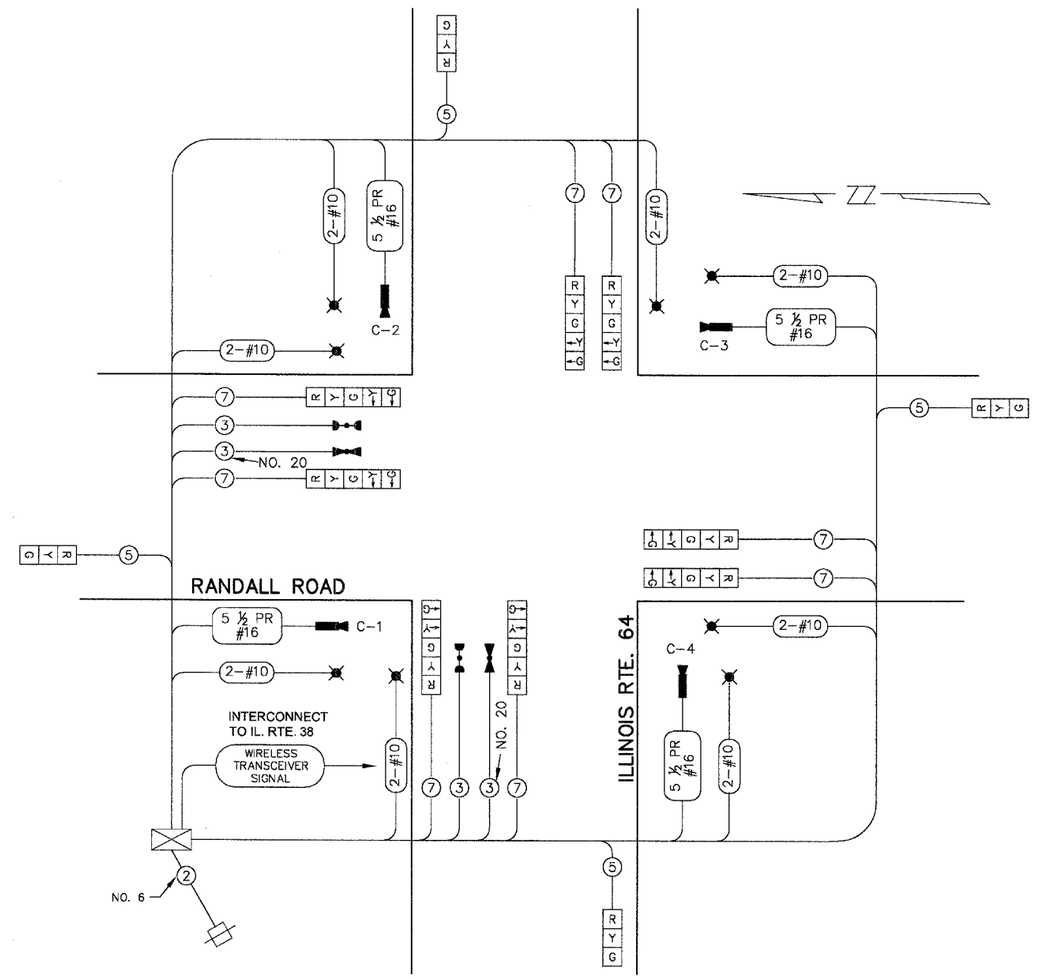


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE INCAND.	x WATTAGE LED	% OPERATION	
SIGNAL (RED)	12	135	~~17~~	0.50	810.0
(YELLOW)	12	135	~~25~~	0.25	405.0
(GREEN)	12	135	~~15~~	0.25	405.0
ARROW	16	135	~~12~~	0.10	216.0
PED. SIGNAL		90	~~25~~	1.00	0.0
CONTROLLER	1	100		1.00	100.0
ILLUM. SIGN		84		0.05	0.0
VIDEO DETECT	4	23	~~28~~	1.00	92.0
LUMINAIRE	4	400		0.50	800.0
.					
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	2828.0

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL 60174

ENERGY SUPPLY CONTACT: Tom Lesiewicz
PHONE: (630) 377-4486
COMPANY: St. Charles Electric Department



STAGE 1 & 2 TEMPORARY TRAFFIC SIGNAL CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION 12"
- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- (5) — INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- 12" PEDESTRIAN SIGNAL SECTION
- MACHINE VISION PROCESSOR (MVP)
- TEMPORARY LUMINAIRE, S.V. 400 W

NOTES FOR TEMPORARY TRAFFIC SIGNAL

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNALS(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCTPED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPOARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. ALL TEMPORARY SIGNAL HEADS SHALL USE INCANDESCENT BULBS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING SYSTEM.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 1 & 2
TEMPORARY TRAFFIC SIGNAL CABLE PLAN
PHASE DESIGNATION DIAGRAM

RANDALL RD. & ILLINOIS RTE. 64

SCALE: NONE
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

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February 04, 2005 11:20:11 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
STAGE 3 TEMPORARY TRAFFIC SIGNALS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

SCALE: 1" = 20'

ILLINOIS RTE. 64

RANDALL ROAD

PROPOSED ROW

CONCRETE SIDEWALK

AUTO REPAIR SHOP

AMOCO GAS STATION

EXISTING ROW

TEMP. CONST. EASMT.

TEMP. CONST. EASEMENT

WORK AREA

ONLY

C-1

C-2

C-3

C-4

A

STATION EQUATION
39+38.91 RANDALL ROAD =
349+99 IL. ROUTE 64

PROPOSED TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- MACHINE VISION PROCESSOR (MVP)
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400W AND 20' ARM
- VEHICLE DETECTOR, INDUCTION LOOP
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT COMMON TRENCH
- UD UNIT DUCT
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- FOCUS AREAS FOR VIDEO DETECTION
- YAGI ANTENNA

SIGN (A)

LEFT ON GREEN ARROW ONLY

R10-5
24" x 30"
5.0 SQ. FT.
REQUIRED - 8 EA.
(COST INCIDENTAL TO TEMP. SIGNAL)

NOTE:
1. FOR STAGE 3 CABLE PLAN, PHASE DESIGNATION DIAGRAM AND TEMPORARY SIGNAL NOTES, SEE SHEET NO. TS-14.
2. FOR TEMPORARY (WIRELESS) INTERCONNECT SCHEMATIC SEE SHEET NO. TS-15.
3. PROPOSED MACHINE VISION PROCESSORS SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG THAT INCLUDES CONTROLLER PHASE DESIGNATION NO. 2.
4. SEE "STAGE 3 CONSTRUCTION PLANS" FOR TEMPORARY PAVEMENT MARKING DETAILS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 3
TEMPORARY TRAFFIC SIGNAL INSTALLATION

RANDALL RD. & ILLINOIS. RTE. 64

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

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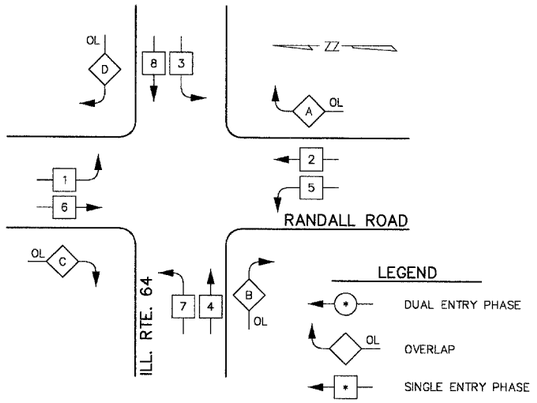
November 18, 2004 1:41:20 p.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
TEMPORARY CABLE PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

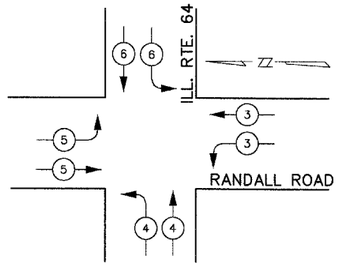
STAGE 3 TEMPORARY TRAFFIC SIGNAL CONTROLLER SEQUENCE



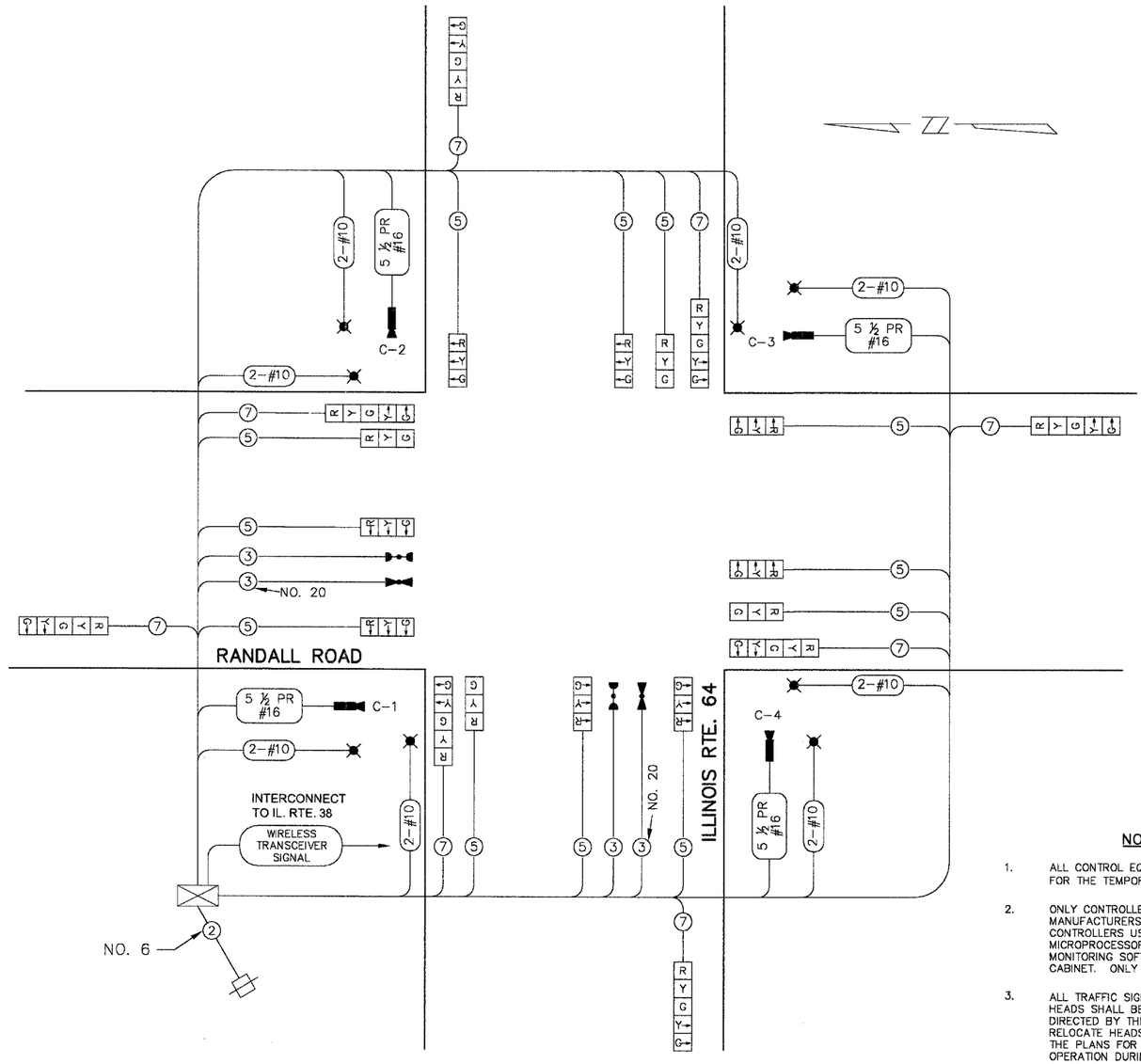
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
B	=	4	+	5
C	=	6	+	7
D	=	8	+	1

TEMPORARY TRAFFIC SIGNAL EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				



STAGE 3 TEMPORARY TRAFFIC SIGNAL CABLE PLAN

TEMPORARY CABLE PLAN LEGEND

- TEMPORARY TRAFFIC SIGNAL SECTION 12"
- TEMPORARY CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- (5) INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- 12" PEDESTRIAN SIGNAL SECTION
- MACHINE VISION PROCESSOR (MVP)
- TEMPORARY LUMINAIRE, S.V. 400 W

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	x WATTAGE INCAND.	x WATTAGE LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	20	135	~~17~~	0.50	1350.0
(YELLOW)	20	135	~~26~~	0.25	675.0
(GREEN)	20	135	~~18~~	0.25	675.0
ARROW	16	135	~~12~~	0.10	216.0
PED. SIGNAL		90	~~26~~	1.00	0.0
CONTROLLER	1	100		1.00	100.0
ILLUM. SIGN		84		0.05	0.0
VIDEO DETECT	4	23	~~26~~	1.00	92.0
LUMINAIRE	8	400		0.50	1600.0
-					
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	4708.0

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL 60174

ENERGY SUPPLY CONTACT: Tom Lesiewicz
PHONE: (630) 377-4486
COMPANY: St. Charles Electric Department

NOTES FOR TEMPORARY TRAFFIC SIGNAL

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNALS(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCTPED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPOARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. ALL TEMPORARY SIGNAL HEADS SHALL USE INCANDESCENT BULBS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING SYSTEM.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

STAGE 3
TEMPORARY TRAFFIC SIGNAL CABLE PLAN
PHASE DESIGNATION DIAGRAM

RANDALL RD. & ILLINOIS RTE. 64

SCALE: NONE
DATE: SEPTEMBER 23, 2004
DRAWN BY: JMH
DESIGNED BY: DMI
CHECKED BY: JRL

D:\LD2\03050181_PHASEII\DWG\TS-INTERCONNECT.DWG
November 18, 2004 1:45:00 p.m.

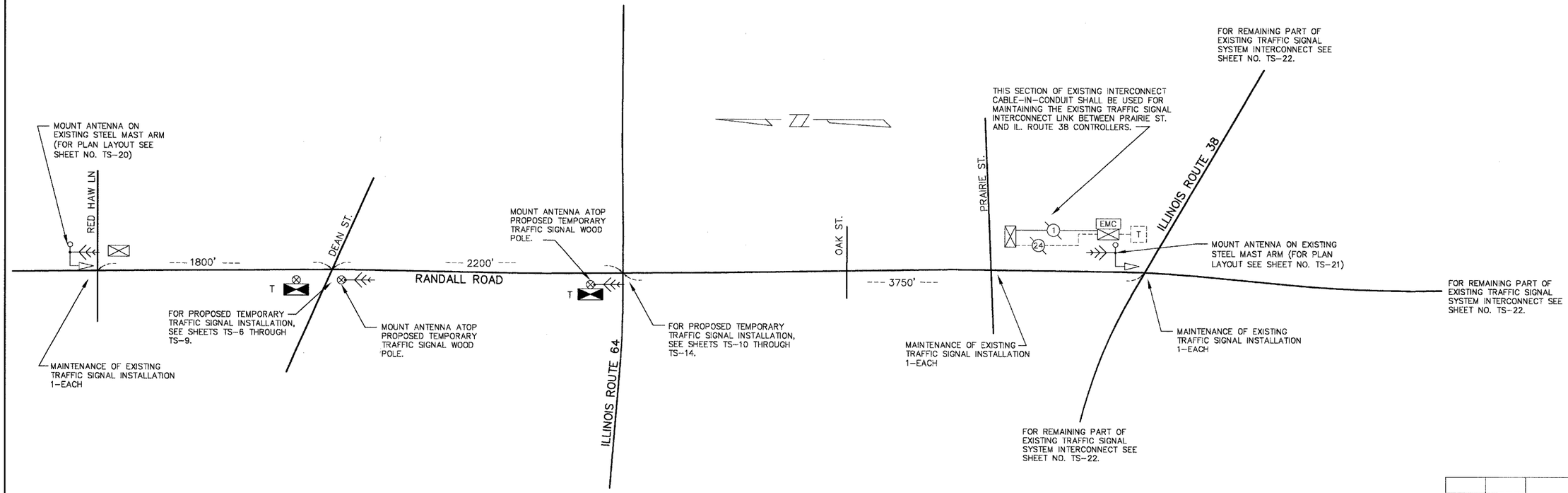
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
TEMPORARY INTERCONNECT SCHEMATIC				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

WIRELESS INTERCONNECT SCHEMATIC LEGEND

EXISTING	PROPOSED	
EMC	MC	MASTER CONTROLLER
		INTERSECTION CONTROLLER
T	T	TEMPORARY CONTROLLER
		SIGNAL HEAD
		SIGNAL POST
		MAST ARM ASSEMBLY AND POLE, STEEL
'E'		TEMPORARY WOOD POLE
'E'		YAGI ANTENNA (SHOWING DIRECTION TO BE INSTALLED)
24	24	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12
1	1	ELECTRIC CABLE, 1/C NO. 14
T	T	TELEPHONE CONNECTION

TEMPORARY TRAFFIC SIGNAL INTERCONNECT SCHEDULE OF QUANTITIES

1	L. SUM	MAINTAIN EXISTING TRAFFIC SIGNAL INERCONNECT
3	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION



PROPOSED
TEMPORARY TRAFFIC SIGNAL (WIRELESS) INTERCONNECT SCHEMATIC

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING SYSTEM.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNALS INTERCONNECT SCHEMATIC

RANDALL ROAD
(FROM RED HAW LANE TO IL. ROUTE 38)

SCALE: NONE
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

D:\LD2\03050181_PHASEII\DWG\TRAFFICSIGNALS-DEAN.DWG
April 05, 2005 2:28:30 p.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
PROPOSED TRAFFIC SIGNAL PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

CONSTRUCTION NOTES

1. ALL PROPOSED COMBINATION MAST ARMS SHALL HAVE 15' TRUSS TYPE LIGHTING ARMS AT 40' MOUNTING HEIGHTS FOR LUMINAIRES. FOR ALL LIGHTING DETAILS AND QUANTITIES SEE ROADWAY LIGHTING PLAN.
2. PROPOSED MVP'S SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG INCLUDING TRAFFIC CONTROLLER PHASE DESIGNATION NO. 2.
3. ALL VEHICLE DETECTOR LOOPS ARE TYPE I AND SHALL BE SAWCUT INTO PROPOSED BINDER CRS.
4. ALL TRAFFIC SIGNAL POSTS AND STEEL COMBINATION MAST ARMS AND POLES SHALL DARK BRONZE COLOR.
5. ALL SIGNAL HEADS SHALL HAVE BLACK POLYCARBONATE HOUSINGS AND GLOSS BLACK CONNECTING HARDWARE/MOUNTING BRACKETS.

STATION EQUATION
17+59.01 RANDALL ROAD =
249+91.24 DEAN STREET

RANDALL ROAD

DEAN STREET

MATCH LINE STA. 14+50

MATCH LINE STA. 14+50

DILEMMA ZONE DETECTION LOOPS

UPS CABINET SHALL INCLUDE A MIN. OF (4) EACH, 12-VOLT BATTERIES - FOR DETAILS SEE SPEC. PROVISIONS.

36" DIA. FOUNDATION x 15' WITH (2) 2 ½" PVC RACEWAYS FOR ROAD LIGHTING USEAGE

36" DIA. FOUNDATION x15' WITH (3) 2 ½" PVC RACEWAYS FOR ROAD LIGHTING USEAGE

2" INTERCONNECT CONDUIT TO ILL. ROUTE 64

2" INTERCONNECT CONDUIT TO RED HAW LANE

EXISTING GROUND MOUNTED TRANSFORMER (FOUNDATION, TYPE A, 3 FT)

TRAFFIC SIGNAL LEGEND

EXISTING	PROPOSED	
		CONTROLLER
B "E"	B	UNINTERRUPTIBLE POWER SUPPLY (UPS)
		SERVICE INSTALLATION
		SIGNAL HEAD
		SIGNAL HEAD WITH BACKPLATE
		SIGNAL HEAD, PEDESTRIAN
		SIGNAL POST
		MAST ARM ASSEMBLY AND POLE, STEEL
		MAST ARM ASSEMBLY AND POLE, ALUMINUM
'E'		HANDHOLE
H 'E'	H	HEAVY DUTY HANDHOLE
'E'		DOUBLE HANDHOLE
		G.S. CONDUIT IN TRENCH OR PUSHED
		PEDESTRIAN PUSHBUTTON DETECTOR
		DETECTOR LOOP
"E"		CAST IRON JUNCTION BOX
	CT	COMMON TRENCH
	UD	UNIT DUCT
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
"P"	"P"	SIGNAL HEAD "PROGRAMMED"
		MACHINE VISION PROCESSOR (MVP)
		DOME CAMERA (PTZ)
T	T	TELEPHONE SERVICE

EXISTING	PROPOSED	
"E"		ILLUMINATED SIGN, "NO LEFT TURN"
"E"		ILLUMINATED SIGN, "NO RIGHT TURN"
		CONDUIT SPLICE
"E"		WOOD POLE
"E"		RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR II
		VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
		CONTROLLER-RAILROAD
V		FOCUS AREAS FOR VIDEO DETECTION
		LUMINAIRE
		AREA OF DEPRESSED CURB

POSTED SPEED LIMIT

RANDALL ROAD.....45 MPH
DEAN STREET.....30 MPH

DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION

RANDALL RD. & DEAN STREET

NAME	DATE
REVISIONS	

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMB
CHECKED BY: JRL

TS-16

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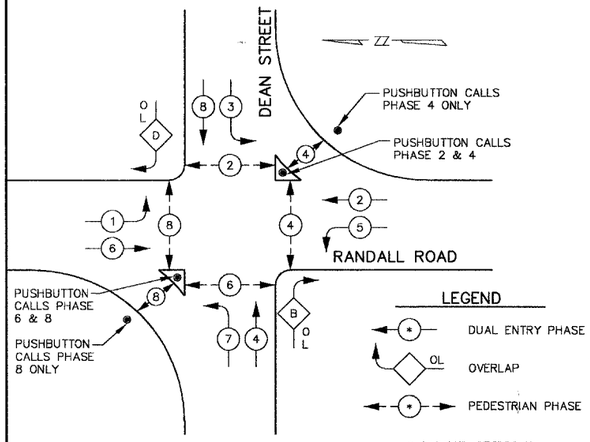
April 07, 2005 9:37:09 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
CABLE PLAN			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-033	

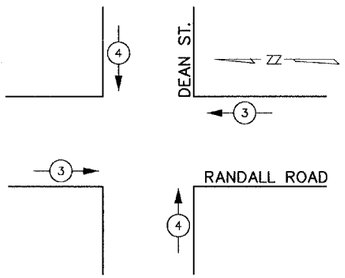
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE		DISPLAY
B	=	4	+	5	-	4
D	=	8	+	1	-	8

EMERGENCY VEHICLE PREEMPTION SEQUENCE

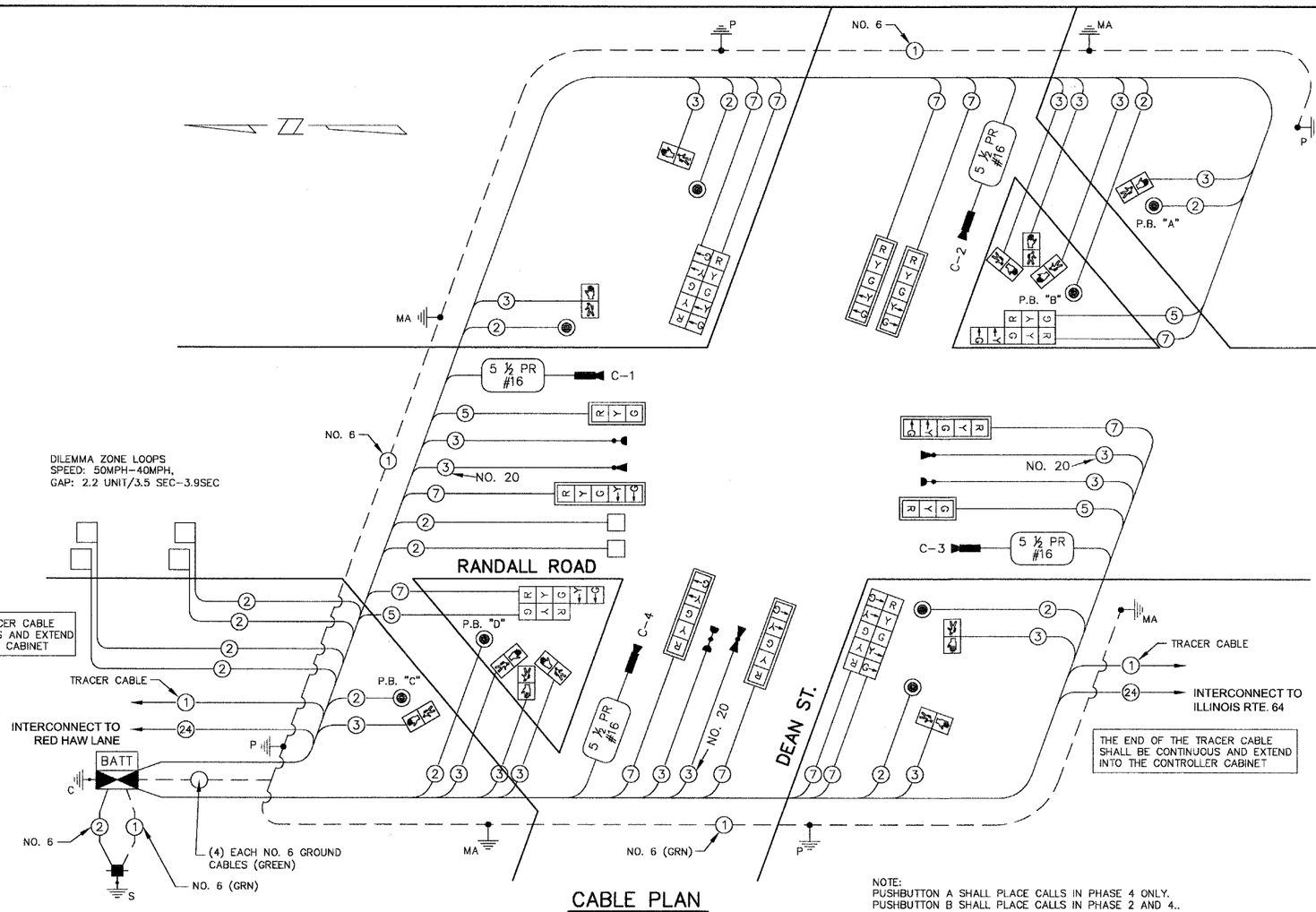


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	16	~~135~~	17	0.50	136.0
(YELLOW)	16	~~135~~	25	0.25	100.0
(GREEN)	16	~~135~~	15	0.25	60.0
ARROW	12	~~135~~	12	0.10	14.4
PED. SIGNAL	12	~~69~~	25	1.00	300.0
CONTROLLER	1	~~160~~	100	1.00	100.0
ILLUM. SIGN				0.05	0.0
VIDEO DETECT	4	~~23~~	23	1.00	92.0
-					
-					
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	802.4

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL. 60174

ENERGY SUPPLY CONTACT: Tom Leslewicz
PHONE (630) 377-4466
COMPANY St. Charles Electric Department



CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDISTRIAN SIGNAL SECTI
		12" (300mm) PEDESTRIAN SIGNAL SEC
		CONTROLLER CABINET
BATT "E"	BATT	UNINTERRUPTIBLE POWER SUPPLY
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
"E"		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(1)	(1)	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F
(IP)	(IP)	SINGLE PAIR IN COAXIAL CABLE
		MACHINE VISION PROCESSOR (MVP)
		DOME CAMERA (PTZ)
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD.
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, (H) DOUBLE HANDHOLE (H), OR CONTROL
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

CABLE PLAN
SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM
27	SQ FT	SIGN PANEL - TYPE 1
410	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
70	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
20	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
20	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
16	FOOT	CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL
105	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
560	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6	EACH	HANDHOLE
2	EACH	DOUBLE HANDHOLE
535	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET

QTY	UNIT	ITEM
1	EACH	TRANSCEIVER - FIBER OPTIC
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1	EACH	VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)
1	EACH	VIDEO TRANSMISSION SYSTEM
1764	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C
3455	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C
1016	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C
3084	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C
1330	FOOT	ELECTRICAL CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
61	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
832	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
* 654	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
1120	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION, NO. 16, 5.5 PAIR
2	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
19	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D

QTY	UNIT	ITEM
60	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER
8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM
6	EACH	INDUCTIVE LOOP DETECTOR
162	FOOT	DETECTOR LOOP, TYPE 1
* 3	EACH	LIGHT DETECTOR
* 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
2	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 3-SECTION, MAST ARM MTD
6	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, MAST ARM MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 5-SECTION, BRACKET MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD
6	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 3-FACE, BRACKET MOUNTED
1	EACH	SERVICE INSTALLATION, GROUND MOUNTED

* 100% TO BE PAID BY THE CITY ST. CHARLES

FOUNDATION	DEPTH FT. (m)	CABLE SLACK	FT. (m)	VERTICAL CABLE	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
<30' MA 30" (750mm) DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
<40' MA 30" (750mm) DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
<40' MA 36" (900mm) DIA.	11 (3.4)	ELECTIRC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
<50' MA 36" (900mm) DIA.	13 (4.0)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
>50' MA 36" (900mm) DIA.	15 (4.6)			POST MOUNTED	6(1.8)

NOTE:
PUSHBUTTON A SHALL PLACE CALLS IN PHASE 4 ONLY.
PUSHBUTTON B SHALL PLACE CALLS IN PHASE 2 AND 4..
PUSHBUTTON C SHALL PLACE CALLS IN PHASE 8 ONLY.
PUSHBUTTON D SHALL PLACE CALLS IN PHASE 6 AND 8.

PROPOSED TRAFFIC SIGNAL EQUIPMENT SHA
BE ONLY EAGLE BRAND OF CONTROLLERS &
AUTO-SCOPE BRAND OF VIDEO VEHICLE
DETECTION EQUIPMENT SO AS TO MATCH
EXISTING SYSTEMS OR LOCAL STANDARDS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION
CABLE PLAN
PHASE DESIGNATION DIAGRAM
SCHEDULE OF QUANTITIES

RANDALL RD. & DEAN ST.

SCALE: NONE
DATE: SEPTEMBER 23, 2004
DRAWN BY:
DESIGNED BY:
CHECKED BY:

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April 05, 2005 2:44:56 p.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHE NO
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	13
PROPOSED TRAFFIC SIGNALS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0C		

TRAFFIC SIGNAL LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED	
		CONTROLLER			DETECTOR LOOP
B "E"	B	UNINTERRUPTIBLE POWER SUPPLY (UPS)			EMERGENCY VEHICLE LIGHT DETECTOR
		SERVICE INSTALLATION			CONFIRMATION BEACON
		SIGNAL HEAD		CT	COMMON TRENCH
		SIGNAL HEAD WITH BACKPLATE		UD	UNIT DUCT
		SIGNAL HEAD, PEDESTRIAN			LUMINAIRE
		SIGNAL POST			SIGN
		MAST ARM ASSEMBLY AND POLE, STEEL			MACHINE VISION PROCESSOR (MVP)
H "E"	H	HANDHOLE			DOME CAMERA (PTZ)
H "E"	H	HEAVY DUTY HANDHOLE	V		FOCUS AREA FOR VIDEO DETECTION
H "E"	H	DOUBLE HANDHOLE			AREA OF DEPRESSED CURB
		G.S. CONDUIT IN TRENCH OR PUSHED			
		PEDESTRIAN PUSHBUTTON DETECTOR			

MATCH LINE STATION 352+00

MATCH LINE STATION 348+00

ILLINOIS ROUTE 64

RANDALL ROAD

ILL. RTE. 64

PROPOSED ROW

P.C.C. SIDEWALK

INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

6" BARRIER MEDIAN

PROP. ROW

PROP. TEMP. CONST. EASE.

EXISTING ROW

PROP. TEMPORARY CONSTR. EASEMENT

APPROXIMATE LOCATION OF PROPOSED TRANSFORMER PAD. ACTUAL LOCATION TO BE DETERMINED IN FIELD BY ST. CHARLES ELECTRICAL DEPT. AT TIME OF CONSTRUCTION. (FOUNDATION, T-A, 3 FT.)

UPS CABINET SHALL INCLUDE MIN. OF (4) EACH, 12-VOLT BATTERIES - FOR DETAILS SEE SPEC. PROVISIONS.

105'-T 2" (TEL. SERVICE)

105'-T 2" (ELECT. SERVICE)

5'-CT (4) 4"

24'-T 3"

16' POST

24'-T 2 1/2"

36" DIA. FOUNDATION x15' WITH (3) 2 ½" DIA. RACEWAYS FOR ROAD LIGHTING USEAGE

36" DIA. FOUNDATION x15' WITH (3) 2 ½" DIA. RACEWAYS FOR ROAD LIGHTING USEAGE

26'-T 3"

8'-T 2 1/2"

55' MA

C-1

C-2

C-3

C-4

20'-CT; 140'-P (2) 4"

35'-CT; 140'-P (2) 4"

136'-P; 30'-T 4"

40'-T 2 1/2"

12'-T 3"

28'-T 2 1/2"

15'-T 3"

2" INTERCONNECT CONDUIT TO PRAIRIE ST.

2" INTERCONNECT CONDUIT TO DEAN ST.

30' TYP.

15' TYP.

250' TYP.

98'

104'

93'

71'

VARIES

STATION EQUATION
39+38.91 RANDALL ROAD =
349+99 IL. ROUTE 64

SIGN (A)

LEFT ON GREEN ARROW ONLY

R10-5
24" x 30"
5.0 SQ. FT.
REQUIRED - 8 EA.

SIGN PANEL - TYPE 1

POSTED SPEED LIMITS

RANDALL ROAD.....45 MPH

ILLINOIS ROUTE 64.....35 MPH

CONSTRUCTION NOTES

1. ALL PROPOSED COMBINATION MAST ARMS AT RANDALL ROAD & IL. ROUTE 64 SHALL USE 90' DUAL, 15' TRUSS TYPE LIGHTING ARMS AT 45' MOUNTING HEIGHTS FOR LUMINAIRES. FOR ALL LIGHTING DETAILS AND QUANTITIES SEE ROADWAY LIGHTING PLANS.
2. ALL TRAFFIC SIGNAL POSTS AND STEEL COMBINATION MAST ARMS AND POLES SHALL BE DARK BRONZE COLOR.
3. ALL SIGNAL HEADS SHALL HAVE BLACK POLYCARBONATE HOUSINGS AND GLOSS BLACK CONNECTING HARDWARE/MOUNTING BRACKETS.
4. PROPOSED MVP'S SHALL BE ORIENTATED SO UNIT C-1 IS MONITORING THE LEG INCLUDING TRAFFIC CONTROLLER PHASE DESIGNATION NO. 2.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION

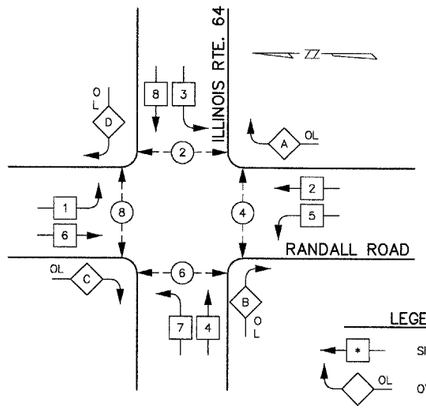
RANDALL RD. & ILLINOIS RTE. 64

SCALE: 1" = 20'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
CABLE PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

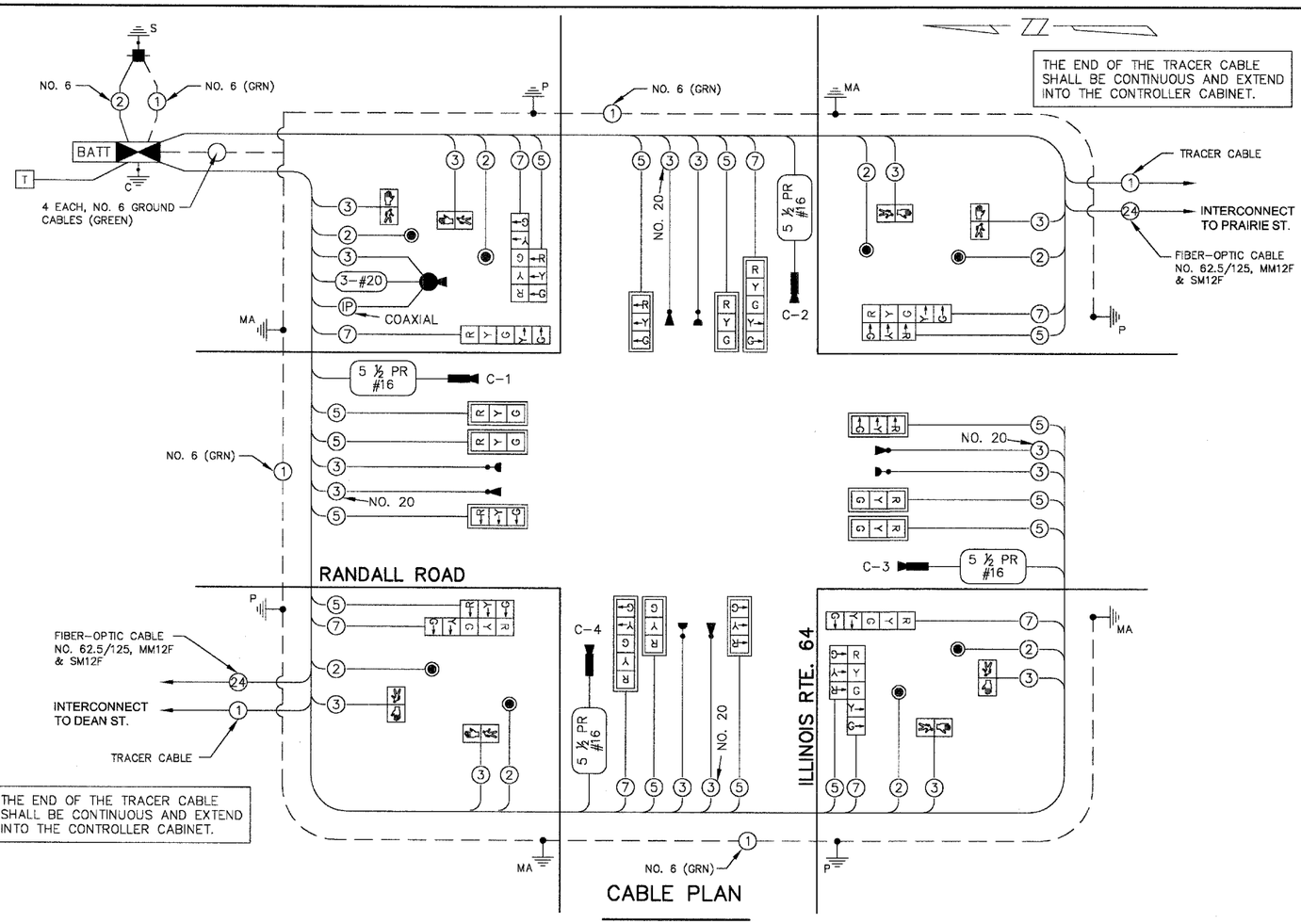
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

* NUMBER REFERS TO ASSOCIATED PHASE

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
B	=	4	+	5
C	=	6	+	7
D	=	8	+	1

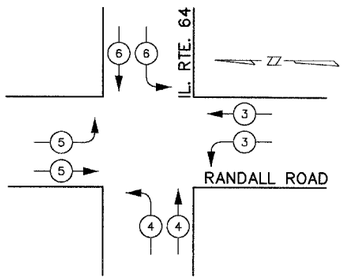


CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDISTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
BATT "E"	BATT	UNINTERRUPTIBLE POWER SUPPLY
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
"E"		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
1	1	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
24	24	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F
IP	IP	SINGLE PAIR IN COAXIAL CABLE
		MACHINE VISION PROCESSOR (MVP)
		DOME CAMERA (PTZ)
"P"	"P"	SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD.
		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM
55	SQ FT	SIGN PANEL - TYPE 1
25	SQ FT	SIGN PANEL - TYPE 2
115	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
200	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
170	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
700	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
5	EACH	DOUBLE HANDHOLE
465	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1	EACH	VIDEO DETECTION SYSTEM (FULL INTERSECTION)
1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
1	EACH	VIDEO TRANSMISSION SYSTEM
1	EACH	TRANSCEIVER - FIBER OPTIC
1933	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C
3215	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C
3870	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C
2205	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C
1140	FOOT	ELECTRICAL CABLE IN CONDUIT, COMMUNICATION NO. 16 5.5 PAIR
126	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
966	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1280	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
85	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL

QTY	UNIT	ITEM
4	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
19	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D
60	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM
* 4	EACH	LIGHT DETECTOR
* 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
13	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
10	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 3-SECTION, MAST ARM MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, BRACKET MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, MAST ARM MTD
4	EACH	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD
8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED
1	EACH	SERVICE INSTALLATION, GROUND MOUNTED

* 100% TO BE PAID BY CITY OF ST. CHARLES

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE INCAND.	x WATTAGE LED	% OPERATION	
SIGNAL (RED)	22	~~135~~	17	0.50	187.0
(YELLOW	22	~~135~~	25	0.25	137.5
(GREEN)	22	~~135~~	15	0.25	82.5
ARROW	16	~~135~~	12	0.10	19.2
PED. SIGNAL	8	~~90~~	25	1.00	200.0
CONTROLLER	1	~~100~~	100	1.00	100.0
ILLUM. SIGN		~~84~~		0.05	
VIDEO DETECT	5	~~28~~	23	1.00	115.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	841.2

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL. 60174

ENERGY SUPPLY CONTACT: Tom Lesiewicz
PHONE: (630) 377-4486
COMPANY: St. Charles Electric Department

FOUNDATION	DEPTH FT. (m)	CABLE SLACK	FT. (m)	VERTICAL CABLE	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
<30' MA 30" (750mm) DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
<40' MA 30" (750mm) DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
<40' MA 36" (900mm) DIA.	11 (3.4)	ELECTIRC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
<50' MA 36" (900mm) DIA.	13 (4.0)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
≥50' MA 36" (900mm) DIA.	15 (4.6)			POST MOUNTED	5(1.8)

PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE ONLY EAGLE BRAND OF CONTROLLERS & AUTO-SCOPE BRAND OF VIDEO VEHICLE DETECTION EQUIPMENT SO AS TO MATCH EXISTING SYSTEMS OR LOCAL STANDARDS.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION
CABLE PLAN
PHASE DESIGNATION DIAGRAM
SCHEDULE OF QUANTITIES

RANDALL RD. & ILLINOIS RTE. 64

SCALE: NONE
DATE: SEPTEMBER 23, 2004
DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

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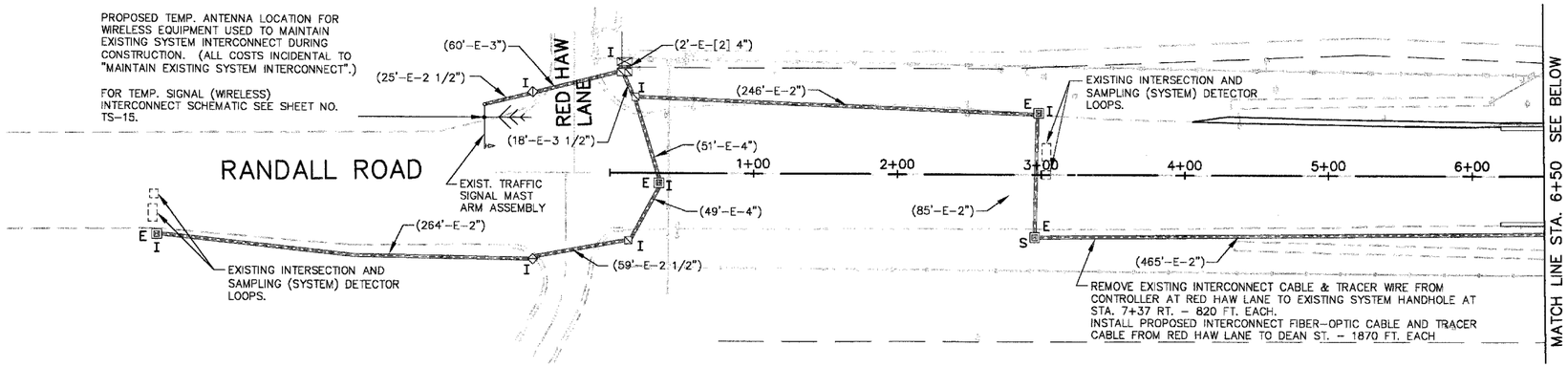
February 04, 2005 11:59:01 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	13
PROPOSED SYSTEM INTERCONNECT PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

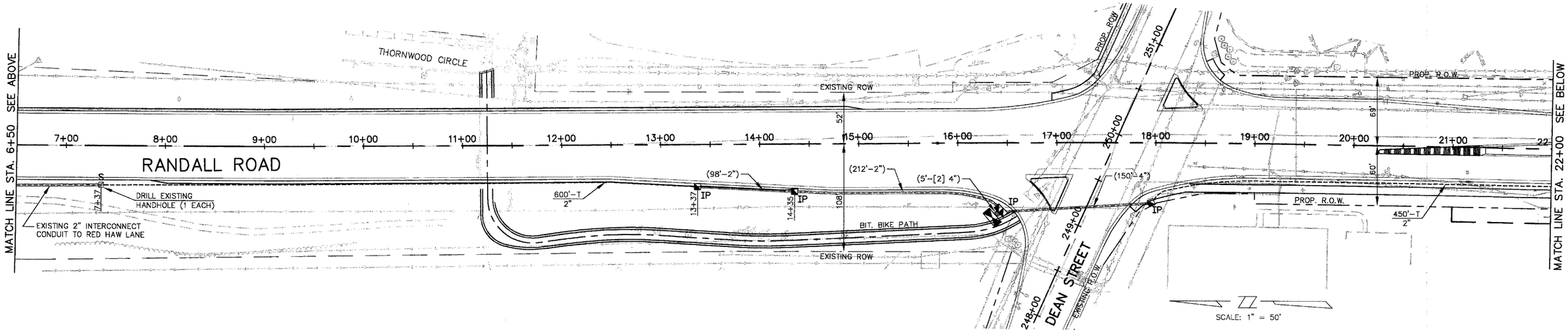
PROPOSED TEMP. ANTENNA LOCATION FOR WIRELESS EQUIPMENT USED TO MAINTAIN EXISTING SYSTEM INTERCONNECT DURING CONSTRUCTION. (ALL COSTS INCIDENTAL TO "MAINTAIN EXISTING SYSTEM INTERCONNECT".)

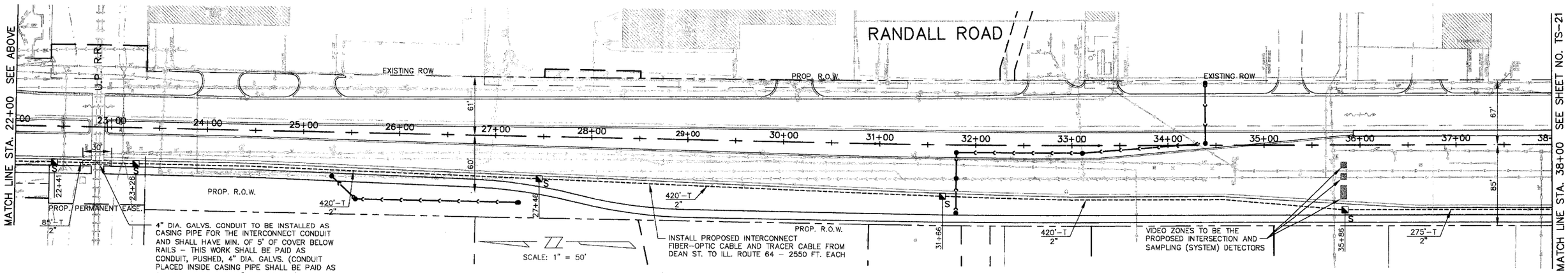
FOR TEMP. SIGNAL (WIRELESS) INTERCONNECT SCHEMATIC SEE SHEET NO. TS-15.



INTERCONNECT PLAN LEGEND

EXISTING	PROPOSED	
⊠	⊠	CONTROLLER
⊠ 'E'	⊠	HANDHOLE
⊠ 'E'	⊠	DOUBLE HANDHOLE
⊞ 'E'	⊞	HEAVY DUTY HANDHOLE
═══	- - - -	G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
⬚	⬚	DETECTOR LOOP
	UD	UNIT DUCT
	S	SYSTEM
	IP	INTERSECTION
V	▨	VIDEO DETECTION ZONE
'E'		YAGI ANTENNA





		DIVISION OF TRANSPORTATION
		PROPOSED SYSTEM INTERCONNECT PLAN (STA. 7+00 TO STA. 38+00)
		SHEET 1 OF 3
		RANDALL ROAD
NAME	DATE	
REVISIONS		SCALE: 1" = 50' DATE: SEPTEMBER 23, 2004
		DRAWN BY: JMH DESIGNED BY: DMH CHECKED BY: JRL

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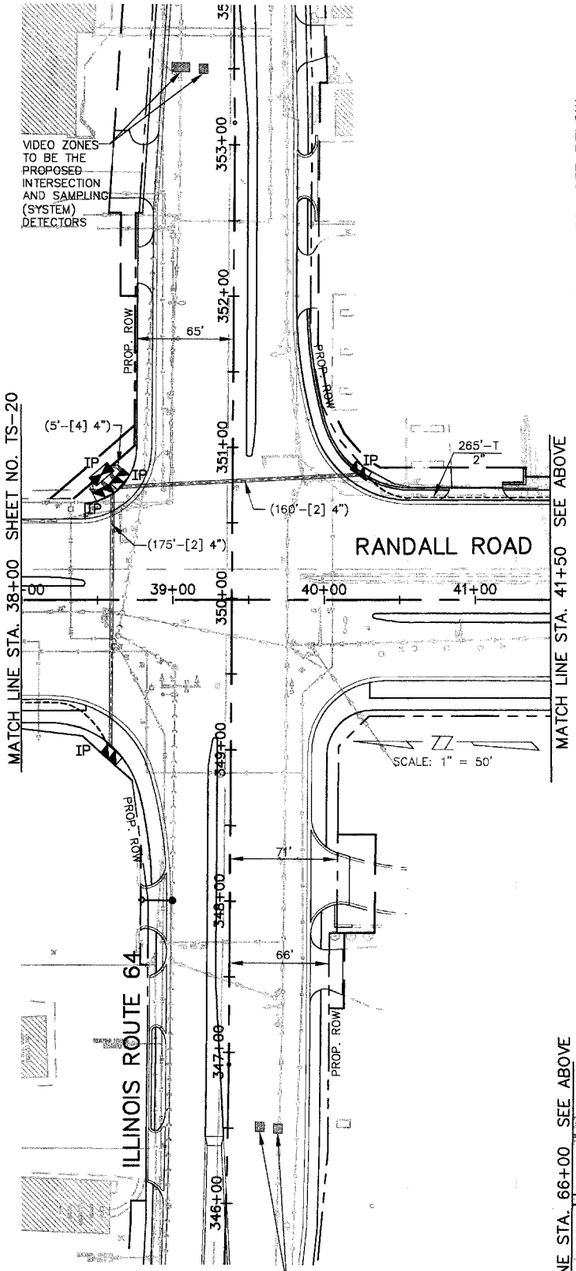
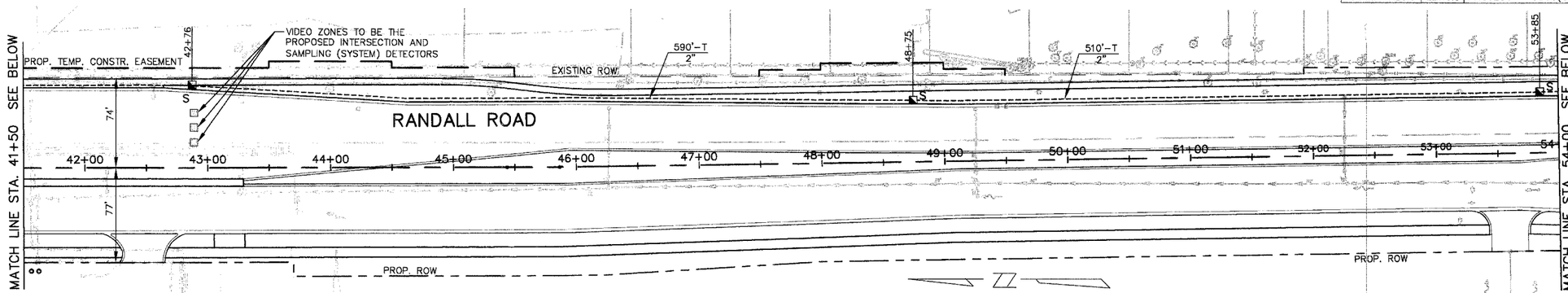
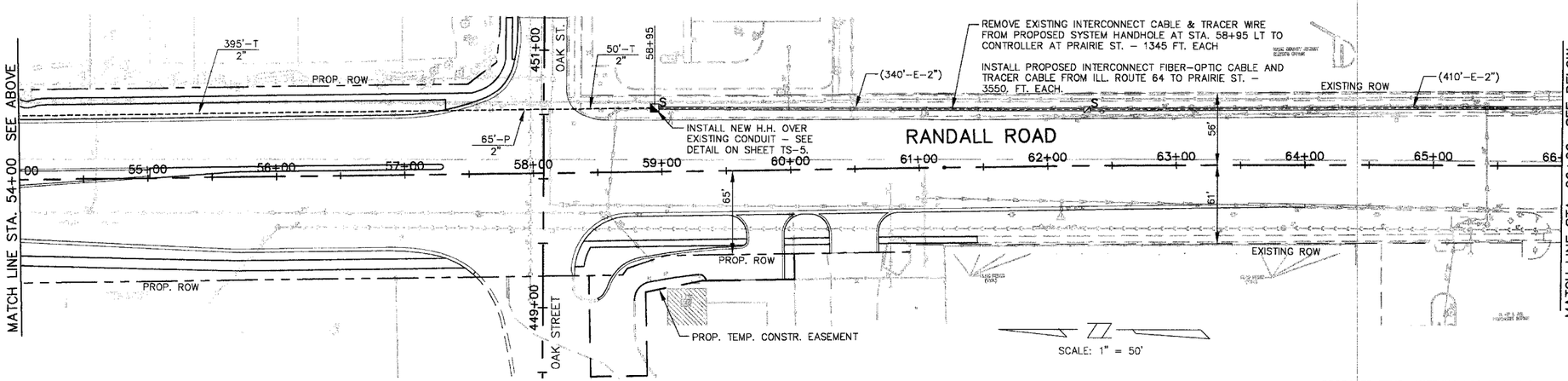
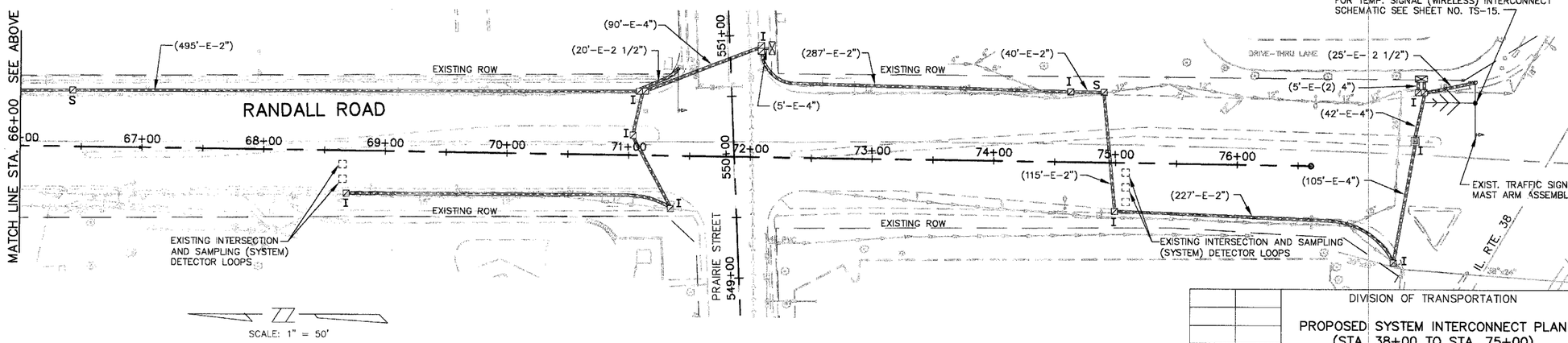
February 04, 2005 11:59:01 a.m.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
PROPOSED SYSTEM INTERCONNECT PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		









NOTE:
FOR INTERCONNECT PLAN LEGEND SEE SHEET NO. TS-20.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

PROPOSED SYSTEM INTERCONNECT PLAN (STA. 38+00 TO STA. 75+00)

SHEET 2 OF 3

RANDALL ROAD

SCALE: 1" = 50'
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

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February 04, 2005 11:59:01 a.m.

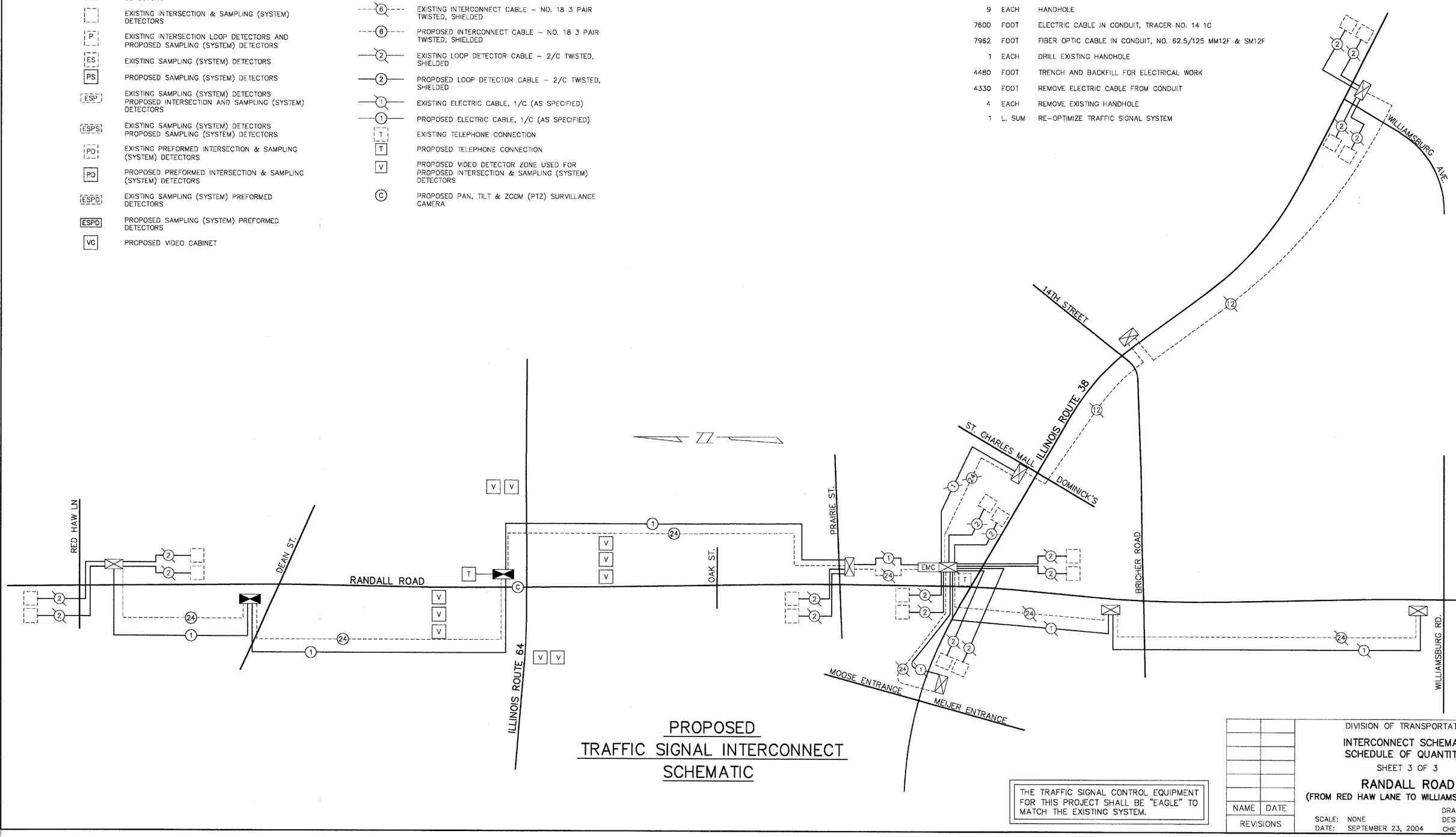
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH N
336	99-00243-00-PV CONTRACT NO. 83752	KANE	268	1
INTERCONNECT SCHEMATIC				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

INTERCONNECT SCHEMATIC LEGEND

- PROPOSED INTERSECTION CONTROLLER
- EXISTING INTERSECTION CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
- MMC — MASTER MASTER CONTROLLER
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- P — EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
- PS — PROPOSED SAMPLING (SYSTEM) DETECTORS
- ESP — EXISTING SAMPLING (SYSTEM) DETECTORS PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS
- ESPS — EXISTING SAMPLING (SYSTEM) DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS
- PD — EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PD — PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- ESPD — EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS
- ESPD — PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS
- VC — PROPOSED VIDEO CABINET
- (24) — EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
- (24) — PROPOSED FIBER OPTIC CABLE IN CONUIT, NO. 62.5 / 125, MM12F SM12F
- (12) — EXISTING INTERCONNECT CABLE – NO. 62.5/125 12F FIBER OPTIC CABLE
- (12) — PROPOSED INTERCONNECT CABLE – NO. 62.5/125 12F FIBER OPTIC CABLE
- (6) — EXISTING INTERCONNECT CABLE – NO. 18 3 PAIR TWISTED, SHIELDED
- (6) — PROPOSED INTERCONNECT CABLE – NO. 18 3 PAIR TWISTED, SHIELDED
- (2) — EXISTING LOOP DETECTOR CABLE – 2/C TWISTED, SHIELDED
- (2) — PROPOSED LOOP DETECTOR CABLE – 2/C TWISTED, SHIELDED
- (1) — EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)
- (1) — PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- T — EXISTING TELEPHONE CONNECTION
- T — PROPOSED TELEPHONE CONNECTION
- V — PROPOSED VIDEO DETECTOR ZONE USED FOR PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- (C) — PROPOSED PAN, TILT & ZOOM (PTZ) SURVILLANCE CAMERA

TRAFFIC SIGNAL INTERCONNECT SCHEDULE OF QUANTITIES

4480	FOOT	CONDUIT IN TRENCH, 2" DIA., GLVANIZED STEEL
65	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
30	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
9	EACH	HANDHOLE
7600	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
7962	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F
1	EACH	DRILL EXISTING HANDHOLE
4480	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
4330	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
4	EACH	REMOVE EXISTING HANDHOLE
1	L. SUM	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM



PROPOSED TRAFFIC SIGNAL INTERCONNECT SCHEMATIC

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING SYSTEM.

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

INTERCONNECT SCHEMATIC SCHEDULE OF QUANTITIES

SHEET 3 OF 3

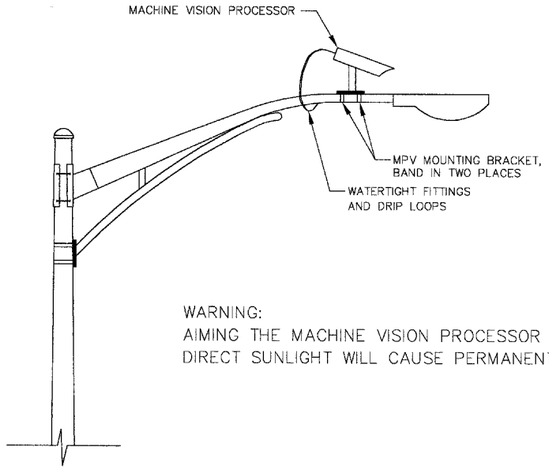
RANDALL ROAD

(FROM RED HAW LANE TO WILLIAMSBURG ROAD)

SCALE: NONE
DATE: SEPTEMBER 23, 2004

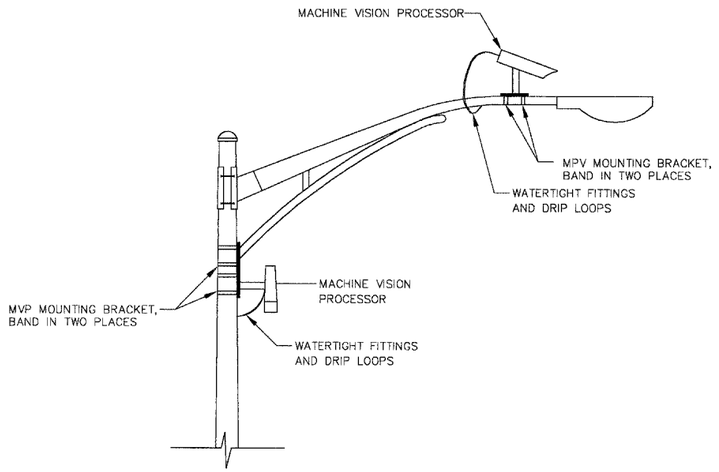
DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	NO.
336	99-00243-00-PV CONTRACT NO. 83752	KANE	268	1
VIDEO DETECTION DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

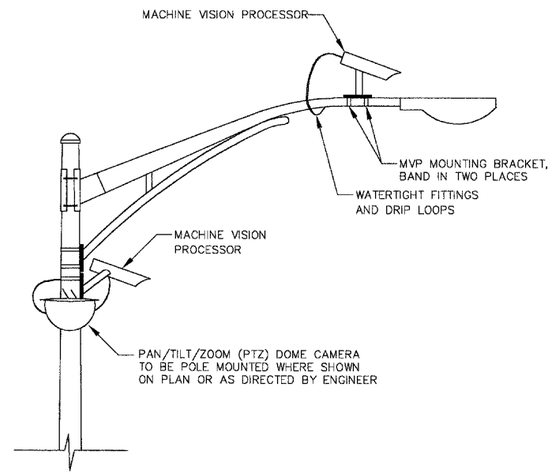


WARNING:
AIMING THE MACHINE VISION PROCESSOR AT DIRECT SUNLIGHT WILL CAUSE PERMANENT DAMAGE.

TYPICAL
SINGLE MACHINE VISION PROCESSOR MOUNTING DETAIL
(NOT TO SCALE)

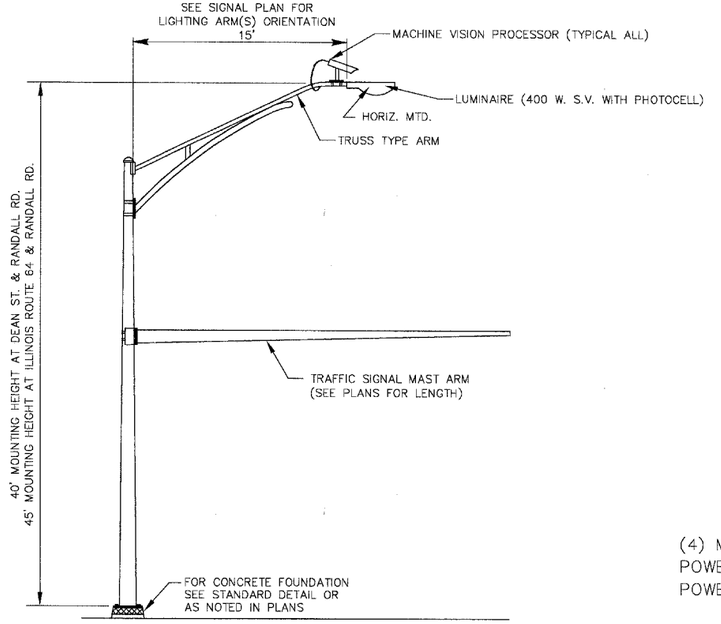


TYPICAL
DUAL MACHINE VISION PROCESSORS MOUNTING DETAILS
(NOT TO SCALE)

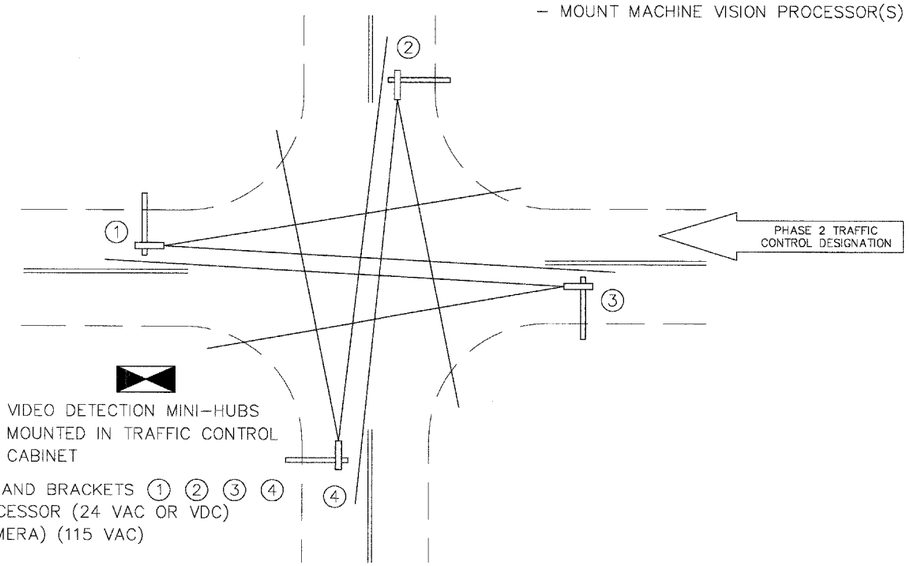


TYPICAL
MULTIPLE MACHINE VISION PROCESSORS MOUNTING DETAILS
(NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
- SECURE MVP MOUNTING BRACKET(S) AS HIGH AS POSSIBLE.
- AIM MVP BRACKET(S) TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
- MOUNT MACHINE VISION PROCESSOR(S) DOWN AT 30 DEGREE ANGLE.



COMBINATION MAST ARM ASSEMBLY DETAIL
(NOT TO SCALE)



VIDEO DETECTION MINI-HUBS MOUNTED IN TRAFFIC CONTROL CABINET

(4) MACHINE VISION PROCESSOR ASSEMBLIES AND BRACKETS (1) (2) (3) (4)
POWER CABLE TO EACH MACHINE VISION PROCESSOR (24 VAC OR VDC)
POWER CABLE TO PAN/TILT/ZOOM (DOME CAMERA) (115 VAC)

TYPICAL VIDEO VEHICLE DETECTION SYSTEM
(NOT TO SCALE)

NAME	DATE
REVISIONS	

DIVISION OF TRANSPORTATION

TYPICAL VIDEO DETECTION LAYOUT AND MOUNTING DETAILS

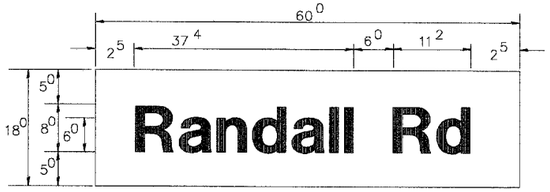
RANDALL RD.

SCALE: NONE
DATE: SEPTEMBER 23, 2004

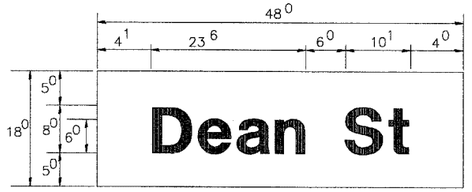
DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
STREET NAME SIGNS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

PANEL SIGN DESIGN TYPE 1



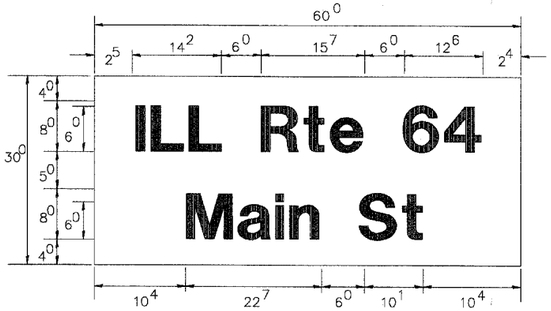
7.5 Sq. Ft. each
4 Required
Design Series D



6.0 Sq. Ft. each
2 Required
Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2



12.5 Sq. Ft. each
2 Required
Design Series D

GENERAL NOTES

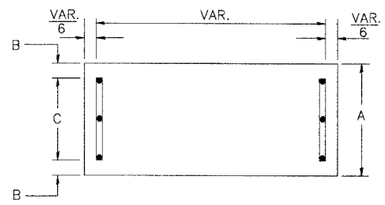
1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
4. ALL BORDERS SHALL BE 3/4 " WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * A.K.T. CORPORATION, SCHAUMBURG, IL
   - * TUCKER COMPANY, INC., WAUWATOSA, WI
   - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - * WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:

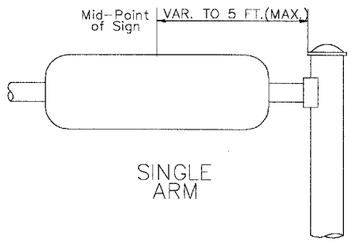
SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4 " x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

SUPPORTING CHANNELS

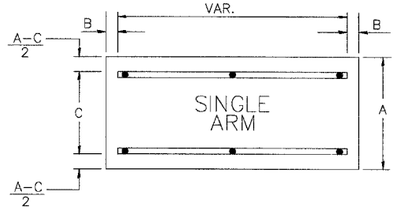


A	B	C
18"	2"	14"

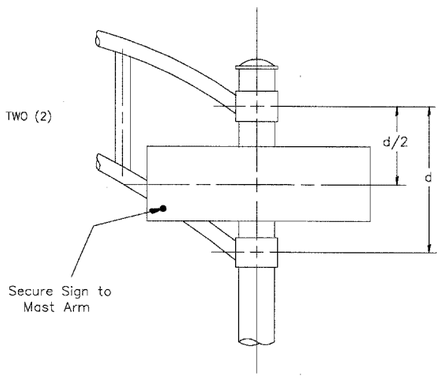


SINGLE ARM

SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM
Shall be used. See Note #5.

Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1 2	1 4	1 4	1 5	1 2	1 4	0 6	1 0	1 1	1 4	0 6	1 0	1 1	1 2	1 2	1 4
B	1 4	1 5	2 0	2 1	1 4	1 5	1 1	1 2	1 4	1 5	1 2	1 4	1 2	1 4	1 6	1 7
C E G	1 4	1 5	2 0	2 1	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 4	1 5	1 4	1 5
D O Q R	1 4	1 5	2 0	2 1	1 4	1 5	0 6	1 0	1 2	1 4	1 2	1 4	1 4	1 5	1 4	1 5
F	0 5	0 6	1 4	1 5	0 6	1 0	0 5	0 6	0 6	1 0	0 6	1 0	0 6	1 0	1 1	1 2
H I M N	2 0	2 1	2 2	2 4	2 0	2 1	1 4	1 5	1 6	1 7	1 6	1 7	2 0	2 1	2 0	2 1
J U	2 0	2 1	2 0	2 1	1 6	1 7	1 4	1 5	1 6	1 7	1 6	1 7	1 6	1 7	2 0	2 1
K L	1 1	1 2	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
P	1 2	1 4	1 4	1 5	1 2	1 4	0 5	0 6	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
S	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
T	1 1	1 2	1 6	1 7	0 6	1 0	0 6	1 0	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
V	0 6	1 0	1 4	1 5	1 1	1 2	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
Y	0 5	0 6	1 4	1 5	0 6	1 0	0 5	0 6	0 5	0 7	0 5	0 6	0 6	1 0	1 1	1 2
Z	1 6	1 7	2 2	2 4	1 6	1 7	1 2	1 4	1 6	1 7	1 6	1 7	1 6	1 7	2 0	2 1

Lower Case To Lower Case
Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j l m n q u	1 6	1 7	2 2	2 4	1 6	1 7	1 2	1 4	1 4	1 5	1 4	1 5	1 6	1 7	1 6	1 7
b f k o p s	1 2	1 4	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
c e	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
r	0 6	1 0	1 2	1 4	0 6	1 0	0 3	0 3	0 5	0 6	0 5	0 6	0 6	1 0	0 6	1 0
t z	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
v y	1 1	1 2	1 4	1 5	1 1	1 2	0 5	0 6	0 6	1 0	0 6	1 0	1 1	1 2	1 1	1 2
w	1 1	1 2	1 4	1 5	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
x	1 2	1 4	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4

Number To Number
Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1 6	1 7	1 6	1 7	1 4	1 5	1 2	1 4	1 4	1 5	1 4	1 5	1 6	1 7	1 2	1 4	1 6	1 7	1 6	1 7
1	2 0	2 1	2 0	2 1	2 0	2 1	1 6	1 7	1 4	1 5	2 0	2 1	2 0	2 1	1 4	1 5	2 0	2 1	2 0	2 1
2 3 4	1 4	1 5	1 4	1 5	1 4	1 5	1 2	1 4	1 2	1 4	1 4	1 5	1 4	1 5	1 1	1 2	1 6	1 7	1 4	1 5
5	1 4	1 5	1 4	1 5	1 4	1 5	1 1	1 2	1 1	1 2	1 4	1 5	1 4	1 5	1 1	1 2	1 4	1 5	1 4	1 5
6	1 6	1 7	1 4	1 5	1 4	1 5	1 2	1 5	1 2	1 4	1 4	1 5	1 4	1 5	1 1	1 2	1 4	1 5	1 4	1 5
7	1 2	1 4	1 2	1 4	1 4	1 5	1 2	1 5	0 5	0 6	1 2	1 4	1 4	1 5	1 1	1 2	1 4	1 5	1 2	1 4
8	1 6	1 7	1 6	1 7	1 4	1 5	1 2	1 5	1 2	1 4	1 4	1 5	1 6	1 7	1 2	1 4	1 6	1 7	1 4	1 5

EXAMPLE, 2(3) DENOTES 3/8"

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	D	8 INCH UPPER CASE LETTERS SERIES C	D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	D
A	3 6	5 0	5 0	6 5	a	3 5	4 2
B	3 2	4 0	4 3	5 3	b	3 5	4 2
C	3 2	4 0	4 3	5 3	c	3 5	4 1
D	3 2	4 0	4 3	5 3	d	3 5	4 2
E	3 0	3 5	4 0	4 7	e	3 5	4 2
F	3 0	3 5	4 0	4 7	f	2 3	2 6
G	3 2	4 0	4 3	5 3	g	3 5	4 2
H	3 2	4 0	4 3	5 3	h	3 5	4 2
I	0 7	0 7	1 1	1 2	i	1 1	1 1
J	3 0	3 6	4 0	5 0	j	2 0	2 2
K	3 2	4 1	4 3	5 4	k	3 5	4 2
L	3 0	3 5	4 0	4 7	l	1 1	1 1
M	3 7	4 5	5 1	6 1	m	6 0	7 0
N	3 2	4 0	4 3	5 3	n	3 5	4 2
O	3 4	4 2	4 5	5 5	o	3 6	4 3
P	3 2	4 0	4 3	5 3	p	3 5	4 2
Q	3 4	4 2	4 5	5 5	q	3 5	4 2
R	3 2	4 0	4 3	5 3	r	2 6	3 2
S	3 2	4 0	4 3	5 3	s	3 6	4 2
T	3 0	3 5	4 0	4 7	t	2 7	3 2
U	3 2	4 0	4 3	5 3	u	3 5	4 2
V	3 5	4 4	4 7	6 0	v	4 2	4 7
W	4 4	5 2	6 0	7 0	w	5 5	6 4
X	3 4	4 0	4 5	5 3	x	4 4	5 1
Y	3 6	5 0	5 0	6 6	y	4 6	5 3
Z	3 2	4 0	4 3	5 3	z	3 6	4 3

NUMBER	6 INCH SERIES C	D	8 INCH SERIES C	D
1	1 2	1 4	1 5	2 0
2	3 2	4 0	4 3	5 3
3	3 2	4 0	4 3	5 3
4	3 5	4 3	4 7	5 7
5	3 2	4 0	4 3	5 3
6	3 2	4 0	4 3	5 3
7	3 2	4 0	4 3	5 3
8	3 2	4 0	4 3	5 3
9	3 2	4 0	4 3	5 3
0	3 4	4 2	4 5	5 5

REVISIONS NAME	DATE
D.A.Z./D.A.G.	11/90
	6/98
CADD	10/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS

RANDALL ROAD

SCALE: NONE
DATE: 11-18-02

DRAWN BY: RD
DESIGNED BY: JH
CHECKED BY: DA

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
LIGHTING PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

SEE BICYCLE UNDERPASS PLANS, SHEETS 152 TO 160 FOR UNDERPASS LIGHTING PLANS.

150' 1 1/2" G.S. T
2 #6 1/C SERVICE
1 #6 1/C GROUND

226' 1 1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

120' 1 1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

96' 1 1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

231' 1 1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

STA. 13+75
41.58' LT

STA. 15+95
37.58' LT

STA. 251+00
36.21' LT

STA. 253+25
30.24' LT

STA. 253+25
22.24' RT

274' 1-1/2" G.S. P-100', T-174'
2 #4 1/C 1-A
1 #6 1/C GROUND

93' 1-1/2" G.S. P
2 #4 1/C 1-A
1 #6 1/C GROUND

84' 1-1/2" G.S. P
2 #4 1/C 1-A
1 #6 1/C GROUND

STA. 19+00
55.00' LT

161' 1 1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

156' 1-1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND

STA. 20+50
55.00' LT

NOTE:
THE CONDUIT PUSHED UNDER THE RAILROAD TRACKS SHALL HAVE A MINIMUM OF 5 FEET OF COVER.

116' 4" G.S. P
2 #4 1/C 1-C
1 #6 1/C GROUND
2 #4 1/C 1-D
1 #6 1/C GROUND

STA. 22+25
42.00' LT

26' 1-1/2" G.S. T
2 #4 1/C 1-A
1 #6 1/C GROUND
2 #10 1/C PHOTOCELL

60' 2" G.S. T
2 #0 1/C SERVICE
1 #2 1/C NEUTRAL

STA. 22+05
38.91' LT

36' 1 1/2" G.S. T
2 #4 1/C 1-C
1 #6 1/C GROUND

STA. 23+35
38.00' LT

STA. 23+65
37.58' LT

211' 1 1/2" G.S. T
2 #4 1/C 1-C
1 #6 1/C GROUND

RANDALL ROAD

STA. 11+50
38.58' RT

231' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 13+75
44.25' RT

226' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 15+95
49.93' RT

103' 1 1/2" G.S. P
2 #4 1/C 1-B
1 #6 1/C GROUND

178' 1 1/2" G.S. P-100', T-78'
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 247+50
30.00' LT

STA. 247+50
35.18' RT

96' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

71' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 249+10
42.00' RT

86' 1-1/2" G.S. P
2 #4 1/C 1-B
1 #6 1/C GROUND

166' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 19+00
37.58' RT

STA. 20+50
37.58' RT

156' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

161' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 22+05
37.58' LT

83' 1-1/2" G.S. P
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 23+65
37.58' RT

211' 1 1/2" G.S. T
2 #4 1/C 1-D
1 #6 1/C GROUND

86' 1-1/2" G.S. P
2 #4 1/C 1-D
1 #6 1/C GROUND

DEAN STREET

256' 1-1/2" G.S. T
2 #4 1/C 1-B
1 #6 1/C GROUND

STA. 245+00
23.18' RT

SCALE: 1" = 50'
0 50' 100'

NOTE:
SERVICE LOCATIONS ARE SHOWN TO EXISTING POWER POLES. LOCATIONS MAY CHANGE DUE TO RELOCATION OR MODIFICATION OF THE EXISTING POLES. COORDINATION WITH THE ST. CHARLES ELECTRIC UTILITY WILL BE REQUIRED PRIOR TO INSTALLATION.

LEGEND

- PROPOSED LIGHT STANDARD WITH 310 WATT LUMINAIRE
- 400 — PROPOSED COMBINATION MAST ARM ASSEMBY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 — PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO LIGHTING MAST ARMS WITH 400 WATT LUMINAIRES
- PROPOSED LIGHTING CONTROLLER
- PROPOSED HANDHOLE
- GROUND ROD
- PROPOSED GFCI FESTOON OUTLET
- 32' 1-1/2" G.S. T / 2 #4 1/C 1-A / 1 #6 1/C GROUND — GALVANIZED STEEL CONDUIT IN TRENCH (T), IN COMMON TRENCH (CT), EMBEDDED (EM), OR PUSHED (P) OF THE SIZE SPECIFIED WITH THE NUMBER AND SIZE OF CABLES SPECIFIED. CONDUIT LENGTHS INCLUDE 3 FEET OF VERTICAL CONDUIT AT EACH LIGHT STANDARD.
- EXISTING LIGHT STANDARD
- EXISTING LIGHT STANDARD TO BE REMOVED

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

STREET LIGHTING PLAN

STATION 11+00 TO 25+50

RANDALL ROAD

SCALE: AS SHOWN
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

February 04, 2005 12:03:50 p.m.
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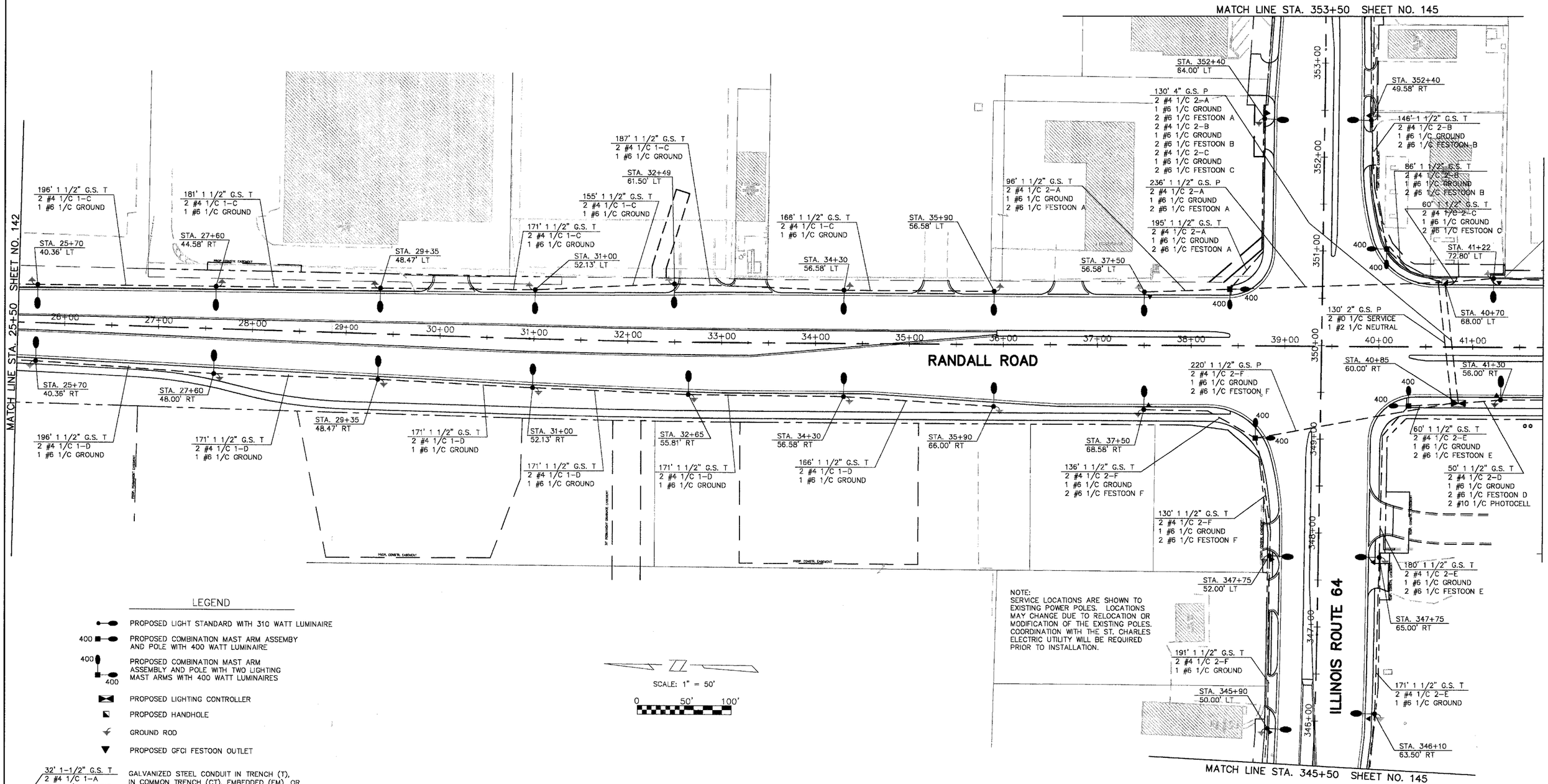
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
LIGHTING PLAN			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(6	



LEGEND

- PROPOSED LIGHT STANDARD WITH 310 WATT LUMINAIRE
- 400 — PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 — PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO LIGHTING MAST ARMS WITH 400 WATT LUMINAIRES
- PROPOSED LIGHTING CONTROLLER
- PROPOSED HANDHOLE
- GROUND ROD
- PROPOSED GFCI FESTOON OUTLET
- 32' 1-1/2" G.S. T / 2 #4 1/C 1-A / 1 #6 1/C GROUND — GALVANIZED STEEL CONDUIT IN TRENCH (T), IN COMMON TRENCH (CT), EMBEDDED (EM), OR PUSHED (P) OF THE SIZE SPECIFIED WITH THE NUMBER AND SIZE OF CABLES SPECIFIED. CONDUIT LENGTHS INCLUDE 3 FEET OF VERTICAL CONDUIT AT EACH LIGHT STANDARD.
- EXISTING LIGHT STANDARD
- EXISTING LIGHT STANDARD TO BE REMOVED

SCALE: 1" = 50'

0 50' 100'

NOTE:
SERVICE LOCATIONS ARE SHOWN TO EXISTING POWER POLES. LOCATIONS MAY CHANGE DUE TO RELOCATION OR MODIFICATION OF THE EXISTING POLES. COORDINATION WITH THE ST. CHARLES ELECTRIC UTILITY WILL BE REQUIRED PRIOR TO INSTALLATION.

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

STREET LIGHTING PLAN

STATION 25+50 TO 41+75

RANDALL ROAD

SCALE: AS SHOWN
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

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February 04, 2005 12:05:12 p.m.
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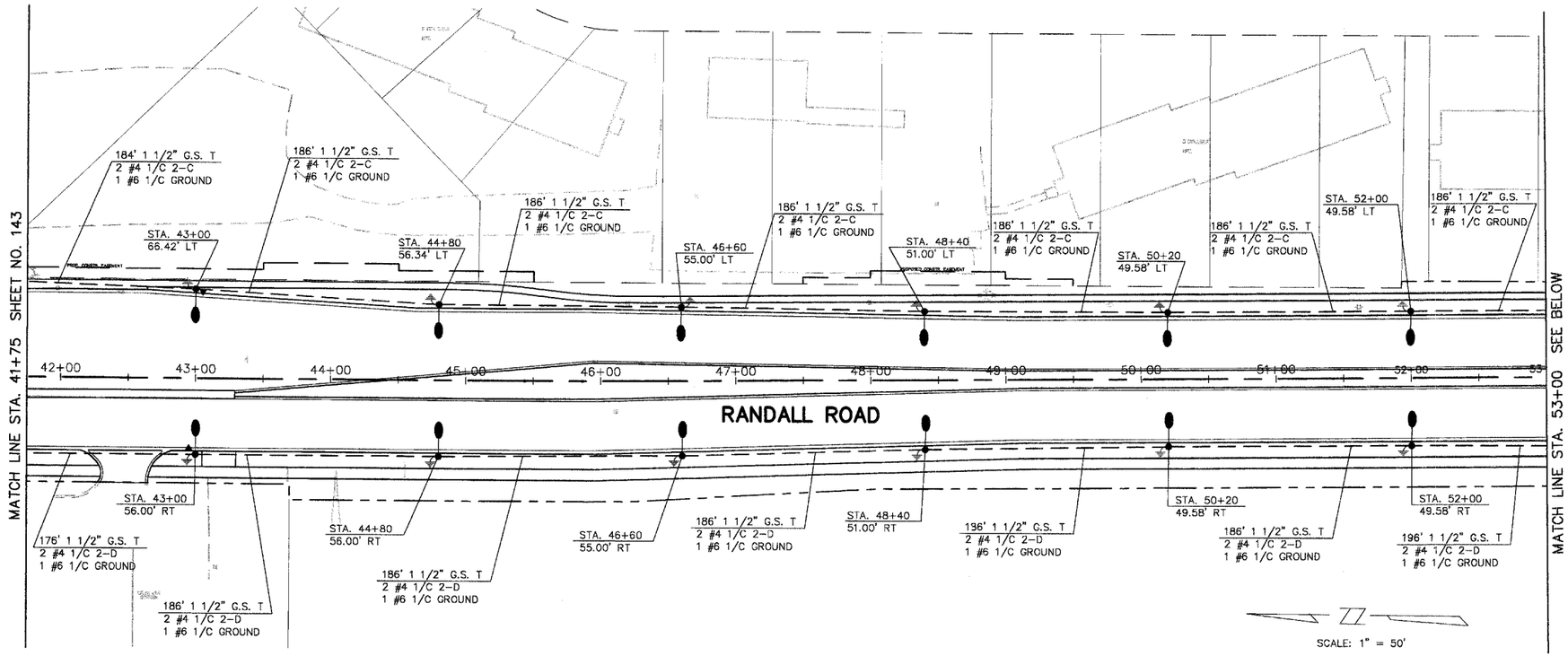
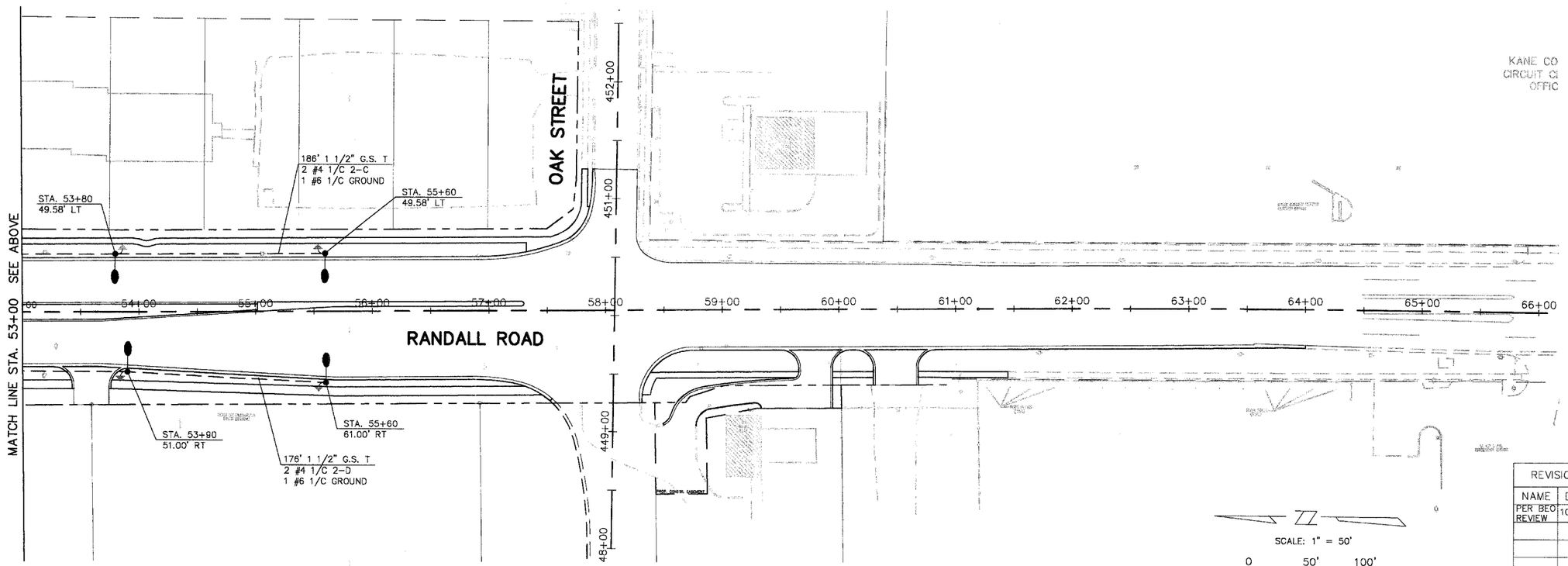
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
LIGHTING PLAN				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



LEGEND

- PROPOSED LIGHT STANDARD WITH 310 WATT LUMINAIR
- 400 — PROPOSED COMBINATION MAST ARM ASSEMBY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 — PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO LIGHTING MAST ARMS WITH 400 WATT LUMINAIRES
- PROPOSED LIGHTING CONTROLLER
- PROPOSED HANDHOLE
- GROUND ROD
- PROPOSED GFCI FESTOON OUTLET
- 32' 1-1/2" G.S. T / 2 #4 1/C 1-A / 1 #6 1/C GROUND — GALVANIZED STEEL CONDUIT IN TRENCH (T), IN COMMON TRENCH (CT), EMBEDDED (EM), OR PUSHED (P) OF THE SIZE SPECIFIED WITH THE NUMBER AND SIZE OF CABLES SPECIFIED. CONDUIT LENGTHS INCLUDE 3 FEET OF VERTICAL CONDUIT AT EACH LIGHT STANDARD.
- EXISTING LIGHT STANDARD
- EXISTING LIGHT STANDARD TO BE REMOVED



REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04

STREET LIGHTING PLAN

STATION 41+75 TO 57+00

RANDALL ROAD

SCALE: AS SHOWN
DATE: 5-26-04

DRAWN BY: JMH
CHECKED BY: DAY

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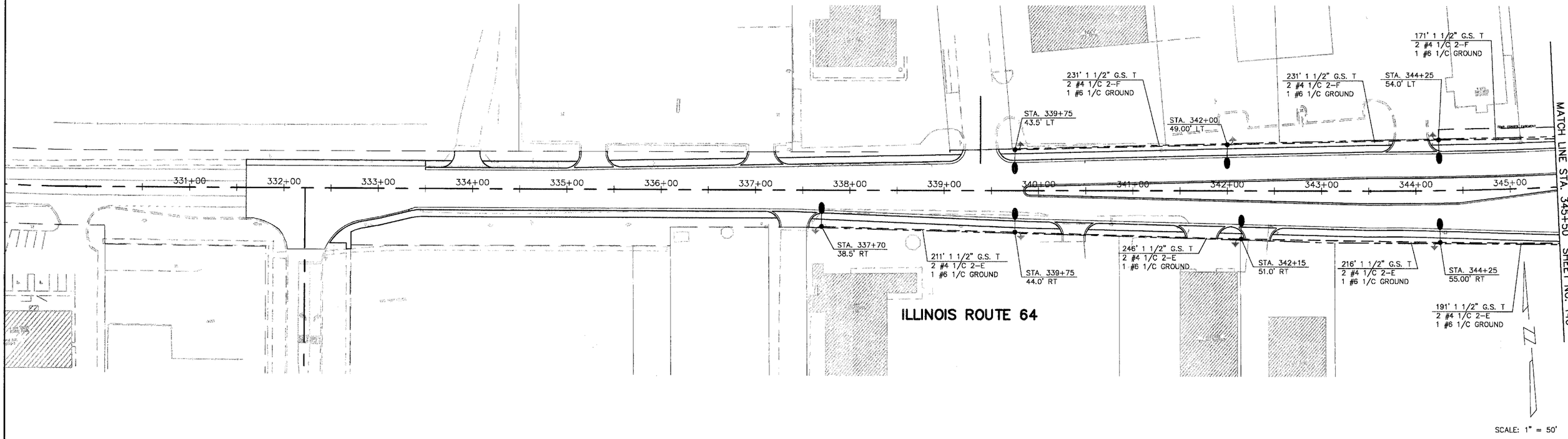
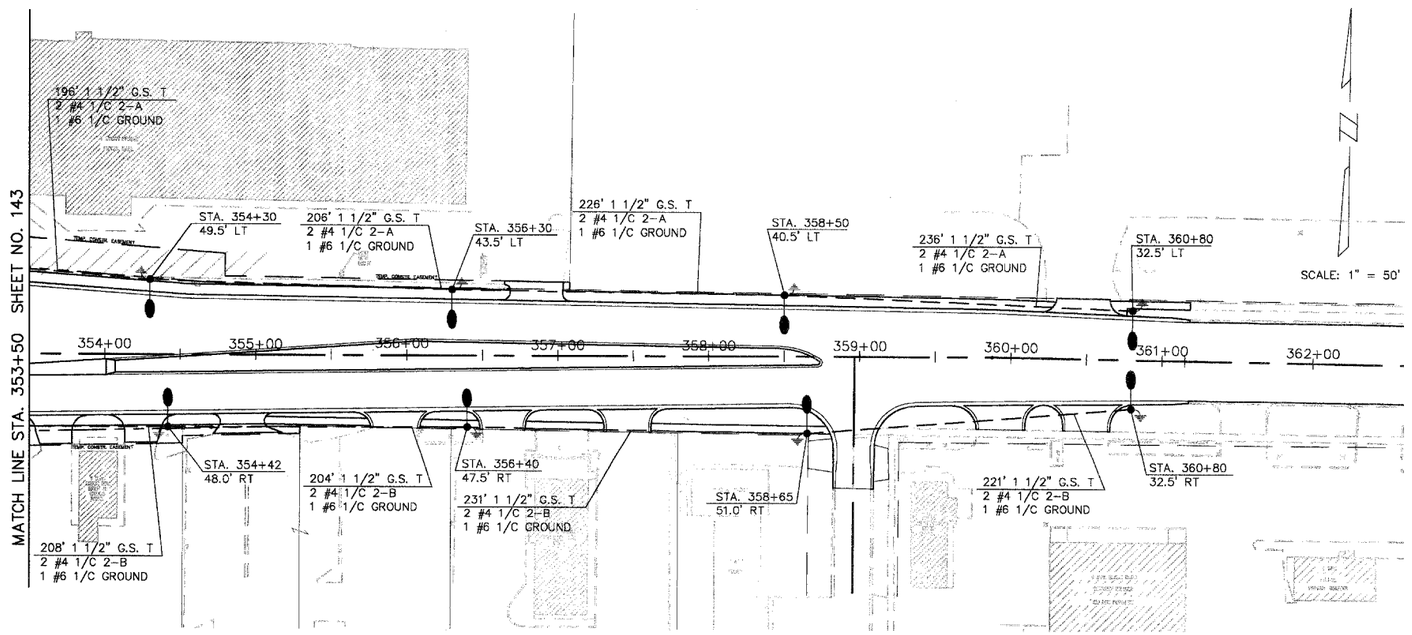
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
LIGHTING PLAN			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



SCALE: 1" = 50'

0 50' 1



LEGEND

- PROPOSED LIGHT STANDARD WITH 310 WATT LUMINAIRE
- 400 PROPOSED COMBINATION MAST ARM ASSEMBY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 PROPOSED COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO LIGHTING MAST ARMS WITH 400 WATT LUMINAIRES
- PROPOSED LIGHTING CONTROLLER
- PROPOSED HANDHOLE
- GROUND ROD
- PROPOSED GFCI FESTOON OUTLET
- 32' 1-1/2" G.S. T / 2 #4 1/C 1-A / 1 #6 1/C GROUND — GALVANIZED STEEL CONDUIT IN TRENCH (T), IN COMMON TRENCH (CT), EMBEDDED (EM), OR PUSHED (P) OF THE SIZE SPECIFIED WITH THE NUMBER AND SIZE OF CABLES SPECIFIED. CONDUIT LENGTHS INCLUDE 3 FEET OF VERTICAL CONDUIT AT EACH LIGHT STANDARD.
- EXISTING LIGHT STANDARD
- EXISTING LIGHT STANDARD TO BE REMOVED

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04

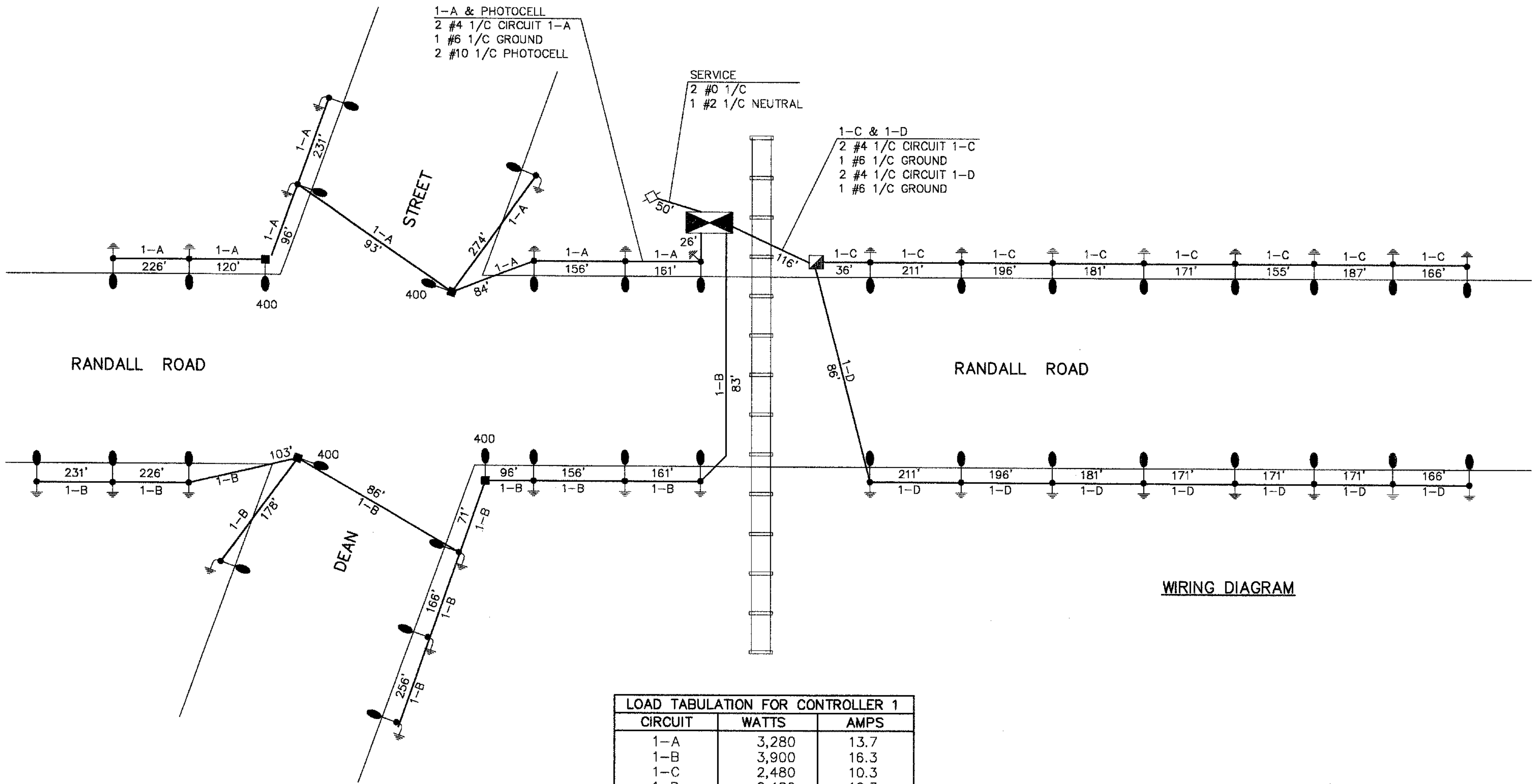
STREET LIGHTING PLAN

STATION 330+00 TO 360+00

MAIN STREET (ILLINOIS ROUTE 64)

SCALE: AS SHOWN
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHEET NO.
336	CONTRACT NO. 83782	KANE	268	146
LIGHTING DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

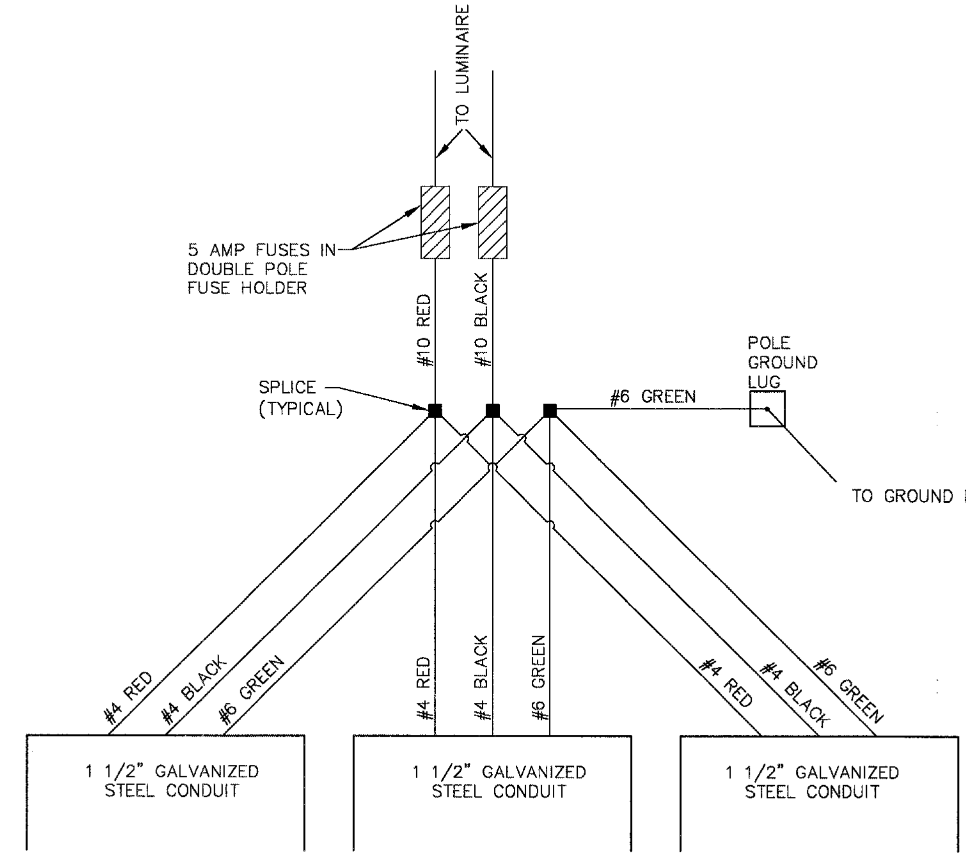


WIRING DIAGRAM

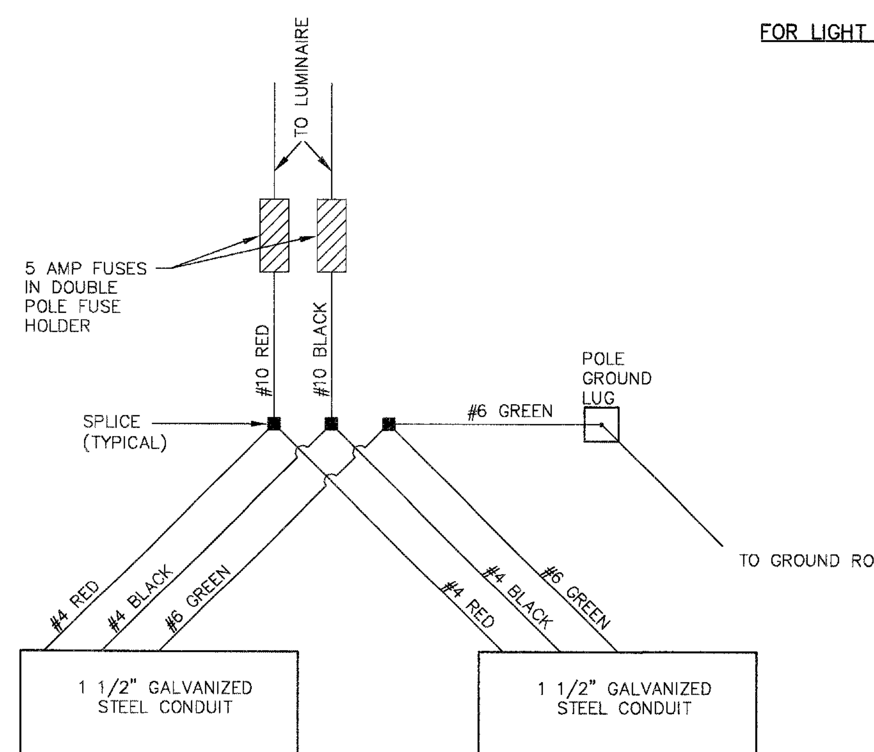
LOAD TABULATION FOR CONTROLLER 1		
CIRCUIT	WATTS	AMPS
1-A	3,280	13.7
1-B	3,900	16.3
1-C	2,480	10.3
1-D	2,480	10.3
TOTAL	12,140	50.6

LEGEND

- LIGHT STANDARD WITH 310W LUMINAIRE
- GROUND ROD
- 400 — COMBINATION MAST ARM ASSEMBLY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 — COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO MAST ARMS AND 400W LUMINAIRES
- LIGHTING CONTROLLER
- HANDHOLE
- PROPOSED FESTOON OUTLET
- 2-B / 215' — GALVANIZED STEEL CONDUIT FOR THE CIRCUIT SPECIFIED.
  EACH CONDUIT CONTAINS:
  2 #4 1/C STREET LIGHTS
  1 #6 1/C GROUND
  UNLESS OTHERWISE SHOWN
- POWER POLE



POLE WIRING DETAIL
FOR LIGHT STANDARDS AND COMBINATION MAST ARM ASSEMBLIES
AND POLES WITH THREE CONDUITS



POLE WIRING DETAIL
FOR LIGHT STANDARDS AND COMBINATION MAST ARM ASSEMBLIES
AND POLES WITH TWO CONDUITS

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

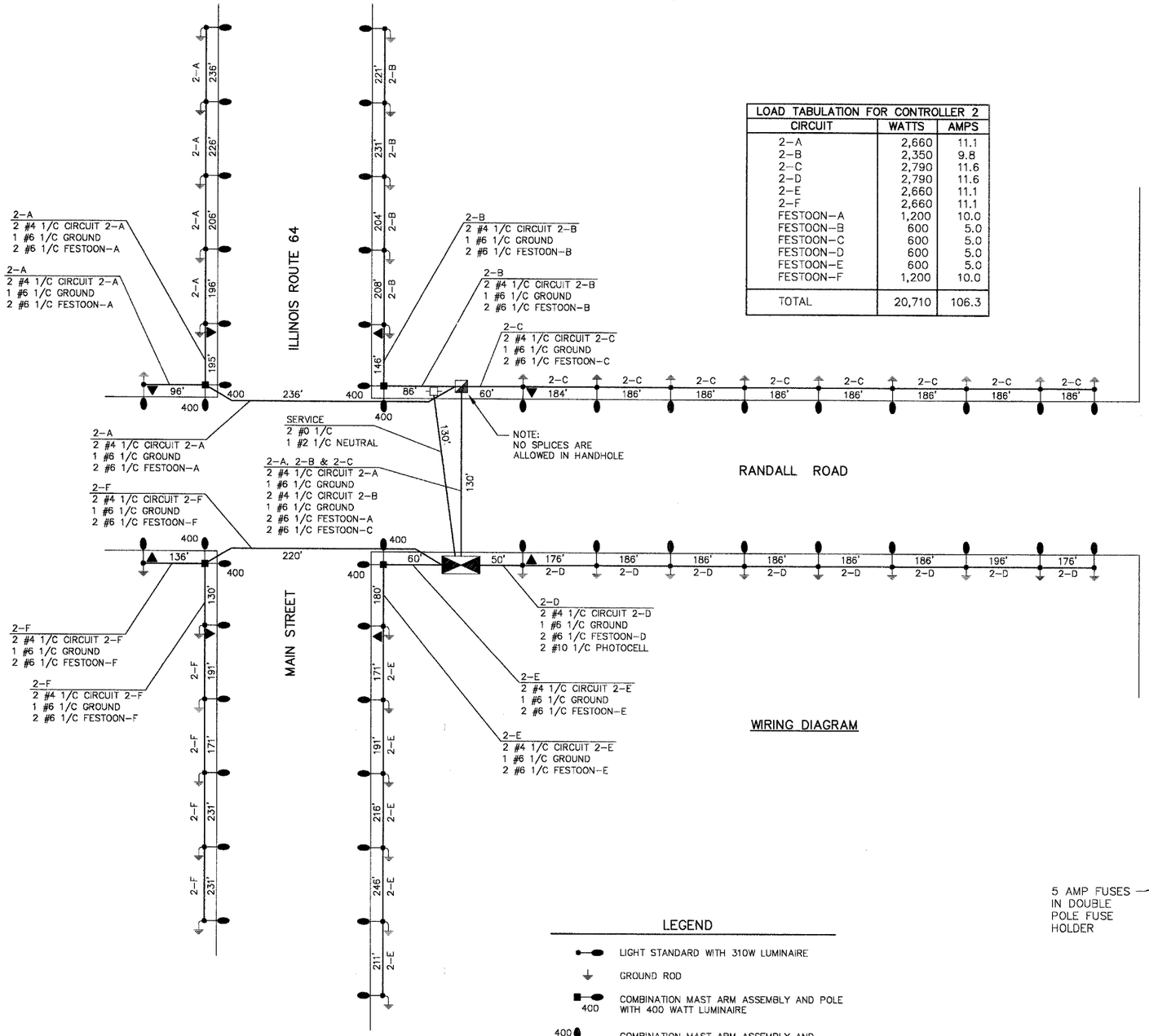
STREET LIGHTING DETAILS

CONTROLLER 1 AND POLE WIRING DIAGRAMS

RANDALL ROAD

SCALE: NONE DRAWN BY: JMH
DATE: 5-26-04 CHECKED BY: DAY

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	CONTRACT NO. 83782	KANE	268	147
LIGHTING DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

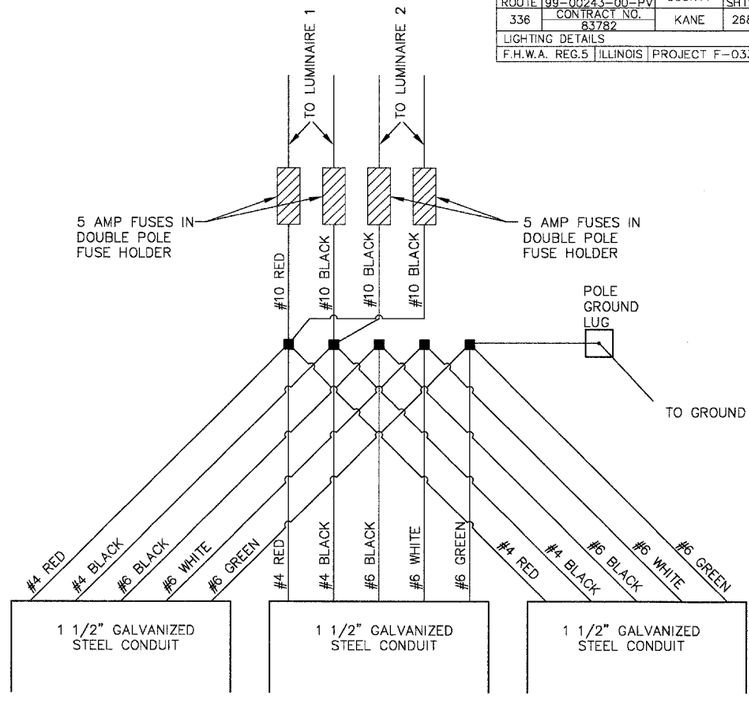


WIRING DIAGRAM

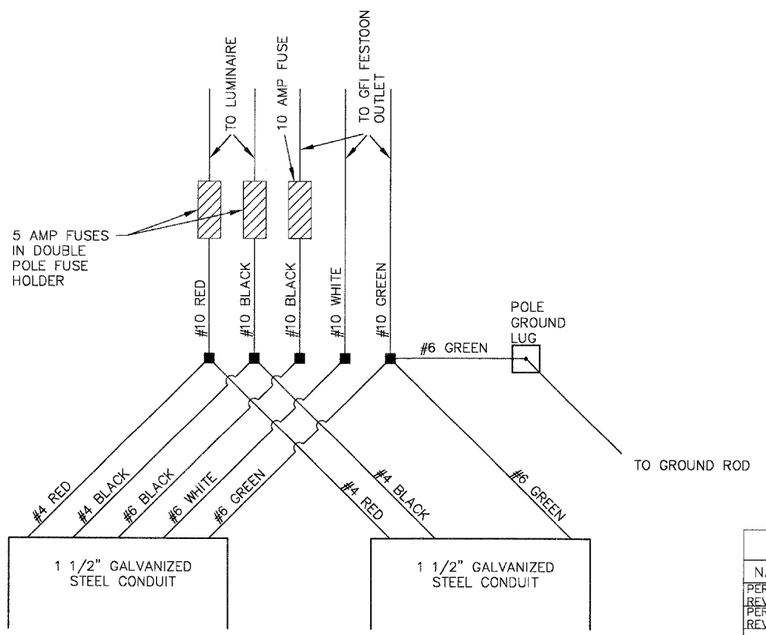
LOAD TABULATION FOR CONTROLLER 2		
CIRCUIT	WATTS	AMPS
2-A	2,660	11.1
2-B	2,350	9.8
2-C	2,790	11.6
2-D	2,790	11.6
2-E	2,660	11.1
2-F	2,660	11.1
FESTOON-A	1,200	10.0
FESTOON-B	600	5.0
FESTOON-C	600	5.0
FESTOON-D	600	5.0
FESTOON-E	600	5.0
FESTOON-F	1,200	10.0
TOTAL	20,710	106.3

LEGEND

- LIGHT STANDARD WITH 310W LUMINAIRE
- GROUND ROD
- 400 — COMBINATION MAST ARM ASSEMBLY AND POLE WITH 400 WATT LUMINAIRE
- 400 / 400 — COMBINATION MAST ARM ASSEMBLY AND POLE WITH TWO MAST ARMS AND 400W LUMINAIRES
- LIGHTING CONTROLLER
- HANDHOLE
- PROPOSED FESTOON OUTLET
- 2-B / 215' — GALVANIZED STEEL CONDUIT FOR THE CIRCUIT SPECIFIED. EACH CONDUIT CONTAINS: 2 #4 1/C STREET LIGHTS, 1 #6 1/C GROUND UNLESS OTHERWISE SHOWN
- POWER POLE



POLE WIRING DETAIL
FOR COMBINATION MAST ARM ASSEMBLIES AND POLES WITH TWO LUMINAIRE ARMS



POLE WIRING DETAIL
FOR LIGHT STANDARDS WITH FESTOON OUTLETS

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

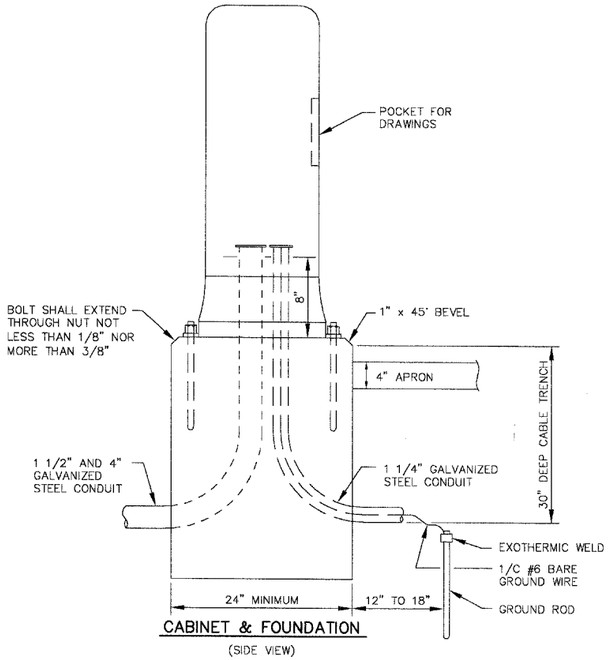
STREET LIGHTING DETAILS

CONTROLLER 2 AND POLE WIRING DIAGRAMS

RANDALL ROAD

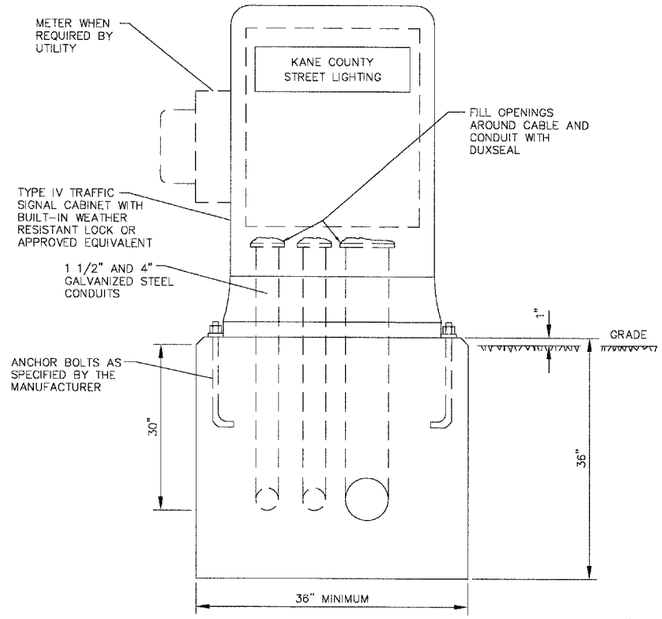
SCALE: NONE
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-0043-00-PV CONTRACT NO. 83782	KANE	268	148
CONTROL INSTALLATION, SPECIAL DETAIL				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

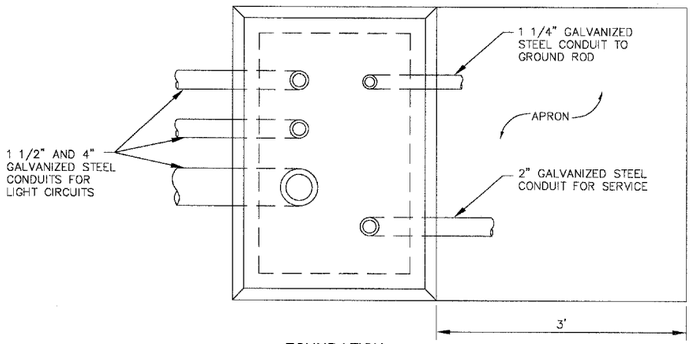


CABINET & FOUNDATION
(SIDE VIEW)

NOTE: CONCRETE FOUNDATION SHALL CONFORM TO STANDARD 878001 FOR TYPE D FOUNDATION.



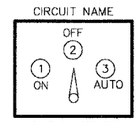
CABINET & FOUNDATION
(FRONT VIEW)



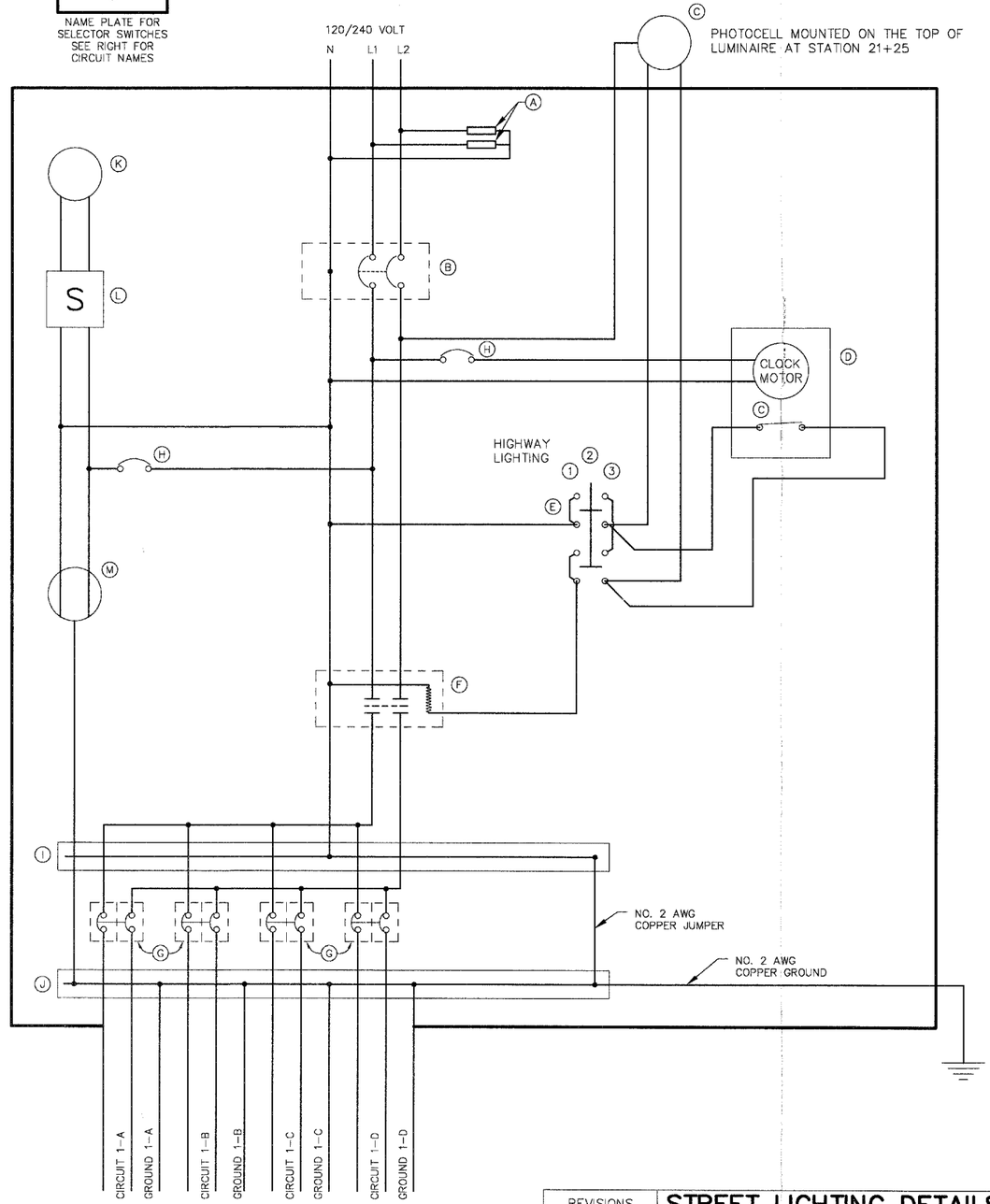
FOUNDATION
(TOP VIEW)

ITEMS

- (A) LIGHTNING ARRESTERS
- (B) MAIN CIRCUIT BREAKER – MOLDED CASE, THERMAL MAGNETIC, 2-POLE, 600V. A.C., 100 AMP FRAME, 225A. NON-INTERCHANGABLE TRIP, BOLT-ON TYPE, INTERRUPTING CAPACITY OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPERES AT 480V.
- (C) PHOTOCELL
- (D) SINGLE CHANNEL ASTRONOMICAL CLOCK
- (E) SELECTOR SWITCH
- (F) CONTROL CONTACTOR; 100 AMP. TWO POLE
- (G) BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2-POLE, 240V. BOLT-IN TYPE 30A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPERES AT 240V.
- (H) CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 120V., BOLT-ON TYPE, 20A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (I) NEUTRAL BUS BAR
- (J) GROUND BUS BAR
- (K) CABINET LIGHT, 60 WATT INCANDESCENT
- (L) CABINET LIGHT SWITCH
- (M) GFCI DUPLEX OUTLET



NAME PLATE FOR SELECTOR SWITCHES SEE RIGHT FOR CIRCUIT NAMES



REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

STREET LIGHTING DETAILS

CONTROL INSTALLATION, SPECIAL CONTROLLER 1

RANDALL ROAD

SCALE: NONE
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	149
CONTROL INSTALLATION, SPECIAL DETAIL				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

CIRCUIT NAME

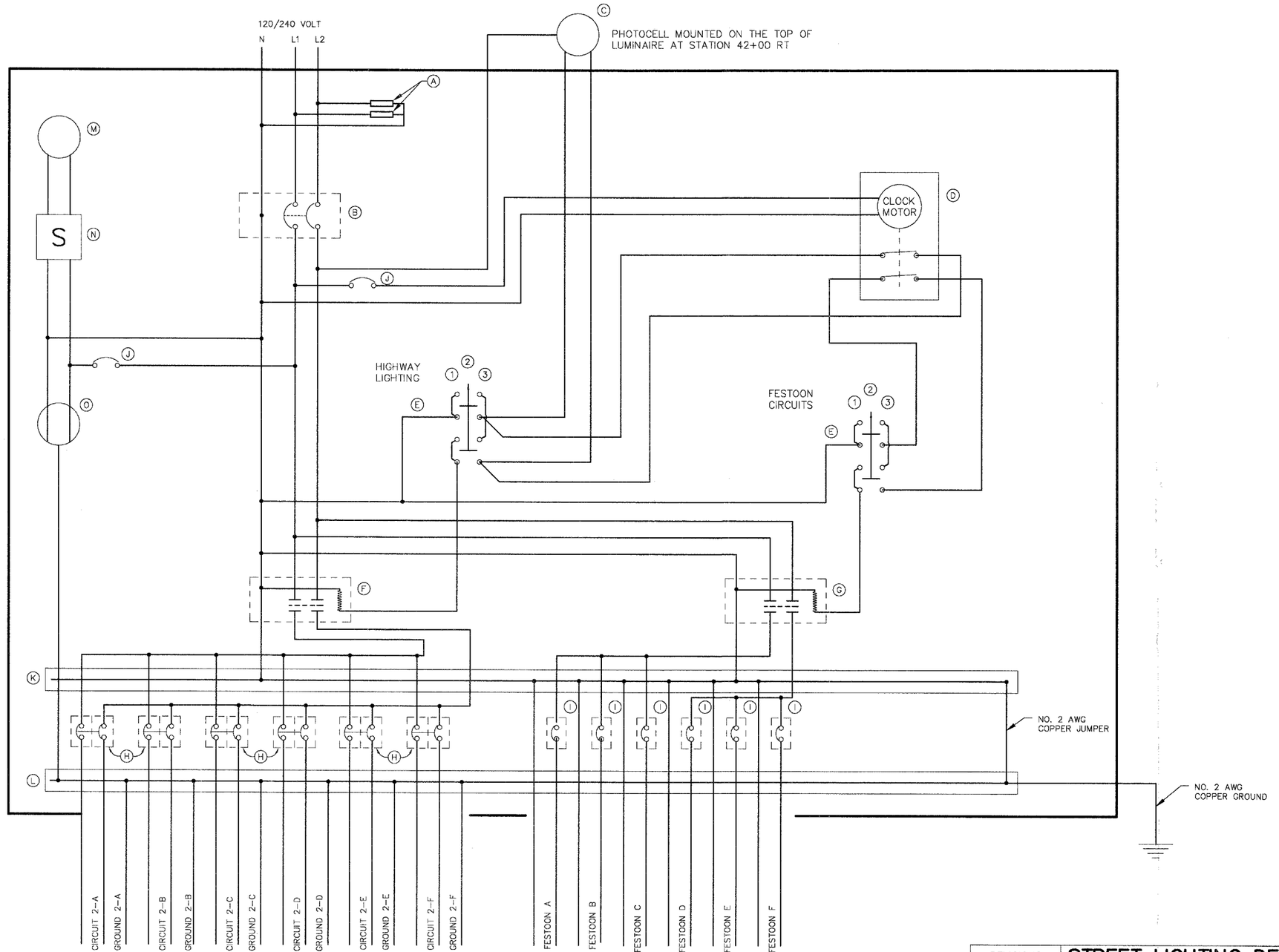
OFF (2)
(1) ON
(3) AUTO

NAME PLATE FOR SELECTOR SWITCHES SEE RIGHT FOR CIRCUIT NAMES

ITEMS

- (A) LIGHTNING ARRESTERS
- (B) MAIN CIRCUIT BREAKER – MOLDED CASE, THERMAL MAGNETIC, 2–POLE, 600V. A.C., 150 AMP FRAME, 150A. NON–INTERCHANGABLE TRIP, BOLT–ON TYPE, INTERRUPTING CAPACITY OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPERES AT 480V.
- (C) PHOTOCELL
- (D) TWO CHANNEL ASTRONOMICAL CLOCK
- (E) SELECTOR SWITCH
- (F) CONTROL CONTACTOR; 100 AMP, TWO POLE
- (G) CONTROL CONTACTOR; 60 AMP, TWO POLE
- (H) BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2–POLE, 240V. BOLT–IN TYPE 20A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPERES AT 240V.
- (I) BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1–POLE, 120V., BOLT–ON TYPE, 20A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (J) CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1–POLE, 120V., BOLT–ON TYPE, 20A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (K) NEUTRAL BUS BAR
- (L) GROUND BUS BAR
- (M) CABINET LIGHT, 60 WATT INCANDESCENT
- (N) CABINET LIGHT SWITCH
- (O) GFCI DUPLEX OUTLET

SEE CONTROLLER 1 DETAIL FOR CABINET AND FOUNDATION DETAILS



REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

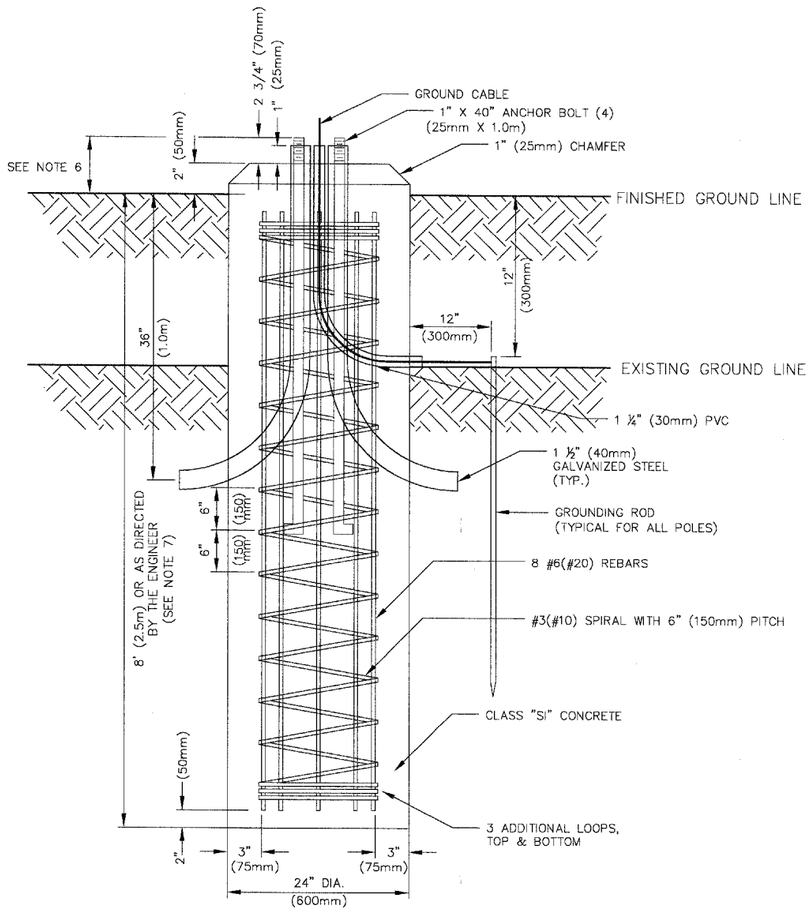
STREET LIGHTING DETAILS

CONTROL INSTALLATION, SPECIAL CONTROLLER 2

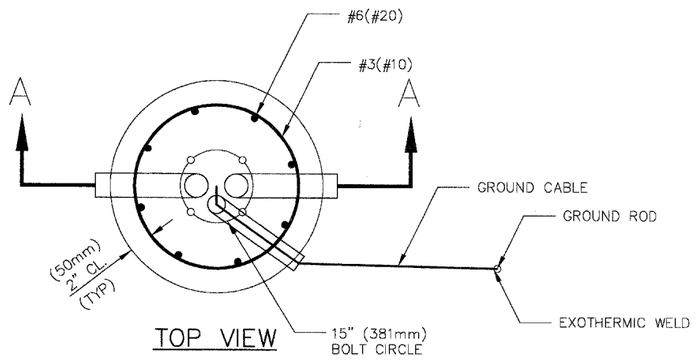
RANDALL ROAD

SCALE: NONE
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	150
LIGHTING DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008		



SECTION A-A
N.T.S.



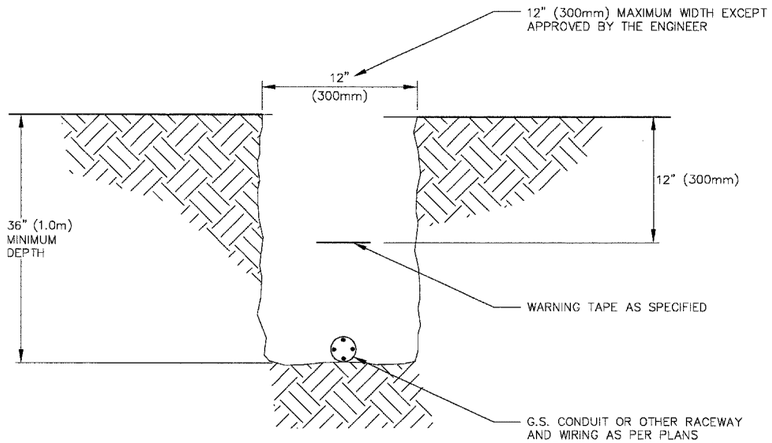
TOP VIEW

LIGHT POLE FOUNDATION DETAIL
N.T.S.

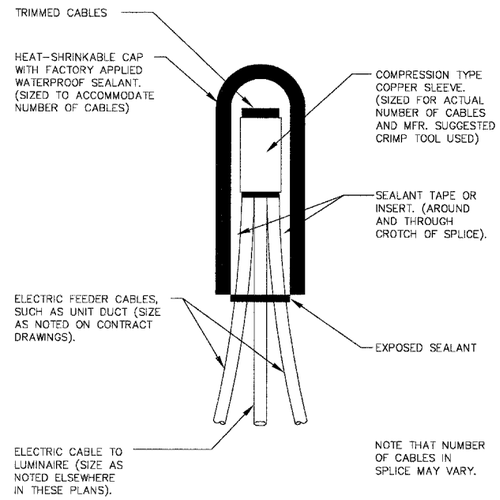
1. MINIMUM UNCONFINED COMPRESSIVE STRENGTH FOR COHESIVE SOILS Q_u = 0.8 TONS PER SQ. FT. MINIMUM STANDARD PENETRATION TEST VALUE FOR GRANULAR SOILS N = 10 BLOWS PER FOOT.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 3500 PSI AT THE END OF 28 DAYS.
3. ALL REINFORCEMENT SHALL BE EPOXY COATED WITH A MINIMUM YIELD POINT OF 60000 PSI.
4. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN FORMS.
5. EXCAVATION FOR THE POLE FOUNDATION SHALL BE WITH AN AUGER 24 INCHES (600mm) IN DIAMETER.
6. WHEN INSTALLED WITHIN THE CLEAR ZONE, THE FOUNDATION, WITH ANCHOR RODS AND BREAKAWAY DEVICE INCLUDED, SHALL NOT PROTRUDE MORE THAN 4 INCHES (100mm) ABOVE THE FINISHED GRADE.
7. THE FOLLOWING FOUNDATIONS MAY BE PLACED WITHIN THE LIMITS OF THE TRENCH BACKFILL THAT WAS PLACED FOR THE INSTALLATION OF STORM SEWER, WATER MAIN OR OTHER UTILITIES. THIS MAY REQUIRE THE USE OF A FORM TO PREVENT THE TRENCH BACKFILL MATERIAL FROM ENTERING THE EXCAVATION. IN ADDITON, DUE TO THE DEPTHS OF SOME UTILITIES, DEPTHS BEYOND THE NOMINAL 8 FEET SHOWN MAY BE NEEDED AT SOME LOCATIONS. THE EXCAVATIONS FOR THESE LOCATIONS SHALL BE INSPECTED BY THE ENGINEER PRIOR TO INSTALLING THE REINFORCING BARS. THE ENGINEER SHALL DETERMINE IF ADDITIONAL FOUNDATION DEPTH IS REQUIRED DUE TO SOIL CONDITIONS ACCORDING TO THE FOUNDATION DEPTH TABLE BELOW. A QUANTITY OF 240 FEET OF ADDITIONAL LIGHT POLE FOUNDATION, 24" DIAMETER HAS BEEN INCLUDED. A QUANTITY OF 36 FEET OF LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET HAS BEEN INCLUDED IN THE EVENT THAT A STANDARD FOUNDATION CAN NOT BE USED.

RANDALL ROAD		MAIN STREET (ILL. ROUTE 64)
11+50 RT	37+50 RT	337+70 RT
27+60 RT	37+50 LT	339+75 RT
29+35 RT	41+30 RT	342+15 RT
29+35 LT	43+00 RT	344+25 RT
31+00 RT	44+80 RT	346+10 RT
31+00 LT	46+60 RT	347+75 RT
32+65 RT	48+40 RT	354+30 LT
32+49 LT	50+20 RT	354+42 RT
34+30 RT	53+90 RT	356+40 RT
34+30 LT	55+60 RT	
35+90 RT		
35+90 LT		

LIGHT POLE FOUNDATION DEPTH TABLE	
	DESIGN DEPTH OF FOUNDATION
SOIL CONDITIONS	SINGLE ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	3.96M (13'-0")
MEDIUM CLAY Qu = 0.75 TON/SQ. FT.	2.09M (9'-6")
STIFF CLAY Qu = 1.50 TON/SQ. FT.	2.13M (7'-0")
LOOSE SAND ø = 34°	2.74M (9'-0")
MEDIUM SAND ø = 37.5°	2.52M (8'-3")
DENSE SAND ø = 40°	2.36M (7'-9")



TYPICAL CONDUIT IN TRENCH DETAIL
N.T.S.



SPLICING ELECTRIC CABLES BASIC MATERIALS AND METHODS
N.T.S.

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

STREET LIGHTING DETAILS

LIGHT POLE FOUNDATION
CONDUIT IN TRENCH
CABLE SPLICE

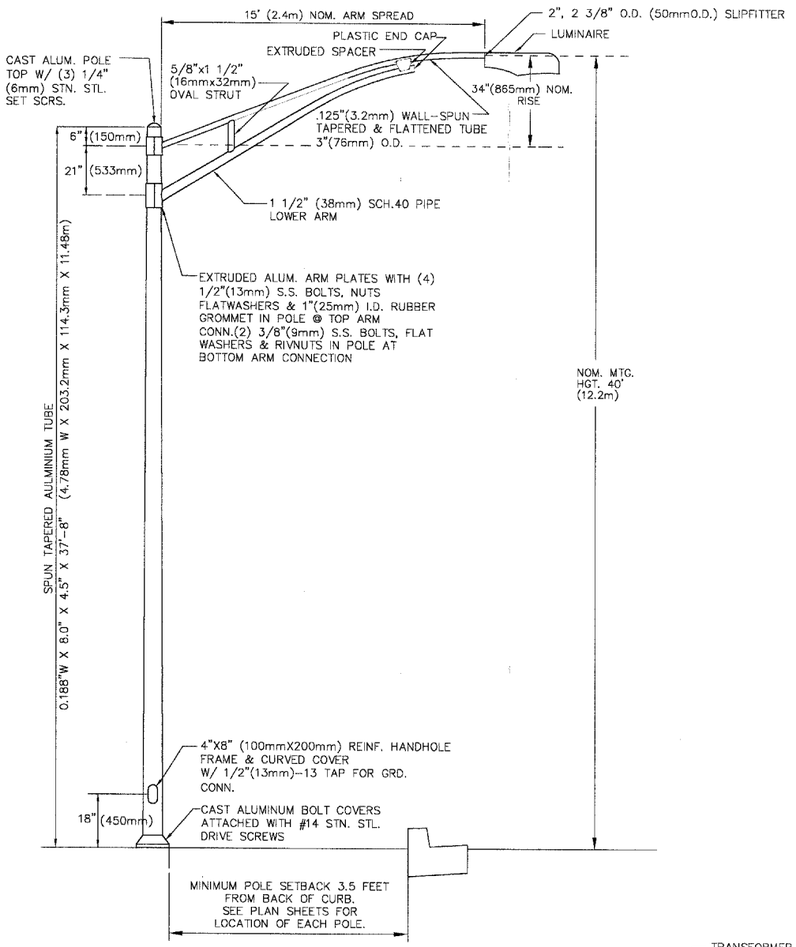
RANDALL ROAD

SCALE: NONE
DATE: 5-26-04
DRAWN BY: JMH
CHECKED BY: DAY

D:\LIZ\2005\181_PHASE1\DWG\LIGHTING DETAILS.DWG
February 04, 2005 12:15:56 p.m.

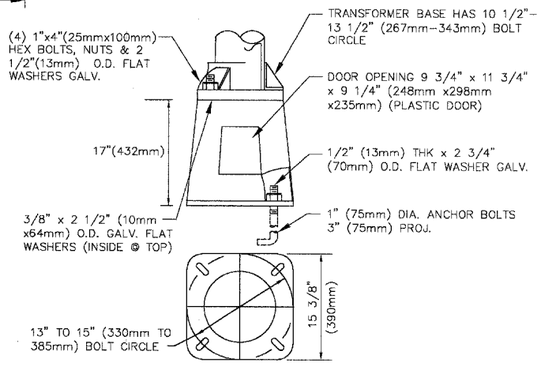
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
LIGHT STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

LIGHT POLE, ALUMINUM, 40 FT. MOUNTING HEIGHT, 15 FT. MAST ARM



GENERAL DESIGN CRITERIA:

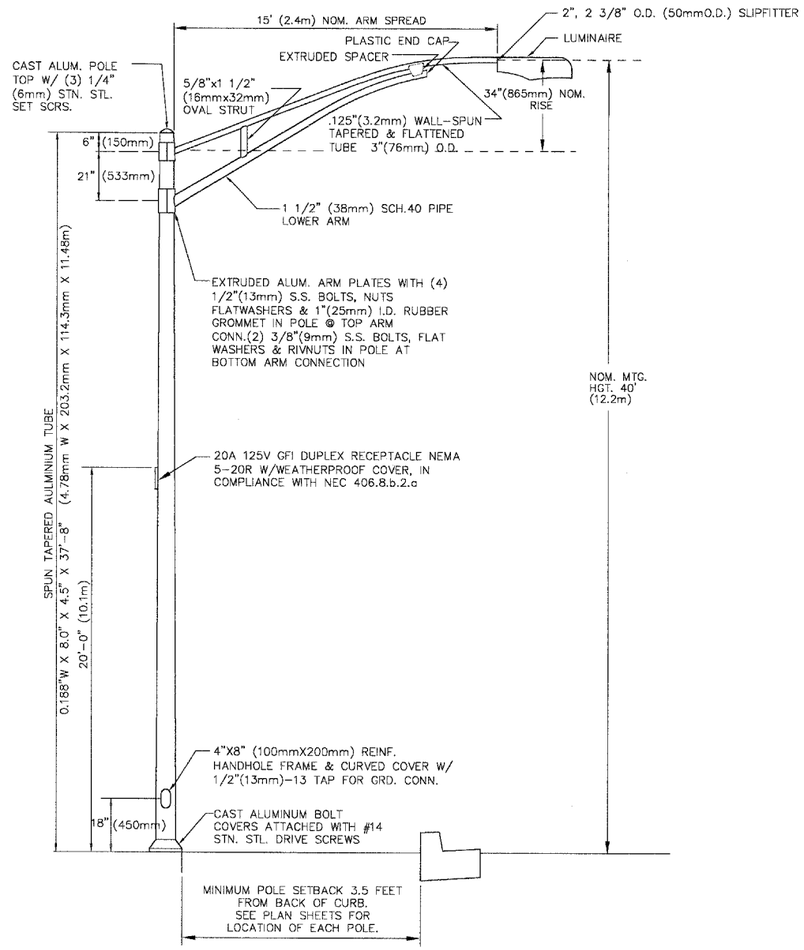
1. POLES & ARMS HEAT TREATED TO - T6 TEMPER AFTER WELDING.
2. POLES TO BE PAPER WRAPPED C/W RIP CORD FOR EASY REMOVAL.
3. FINISH: POLES AND ARMS - POWDERCOAT DARK BRONZE
4. DESIGNED IN ACCORDANCE WITH 1985 AASHTO FOR 80 M.P.H. WIND ZONE



TRANSFORMER BASE DETAIL

MATERIAL SPECIFICATIONS	
POLE & ARM TUBES	ASTM-B429 (6063-T6) OR B241
EXTRUSIONS	ASTM-B308 (6063-T6)
CAST H.H. FRAME & BASE	ASTM-B108 (356-T6)
CAST - TOP & BOLT COVERS	43,319 OR 356 ALLOY
SMALL HARDWARE	AISI-300 SERIES (STN.STL.)
ANCHOR BOLTS	ASTM-A36 M55

LIGHT POLE, ALUMINUM, 40 FT. MOUNTING HEIGHT, 15 FT. MAST ARM WITH FESTOON OUTLET



GENERAL DESIGN CRITERIA:

1. POLES & ARMS HEAT TREATED TO - T6 TEMPER AFTER WELDING.
2. POLES TO BE PAPER WRAPPED C/W RIP CORD FOR EASY REMOVAL.
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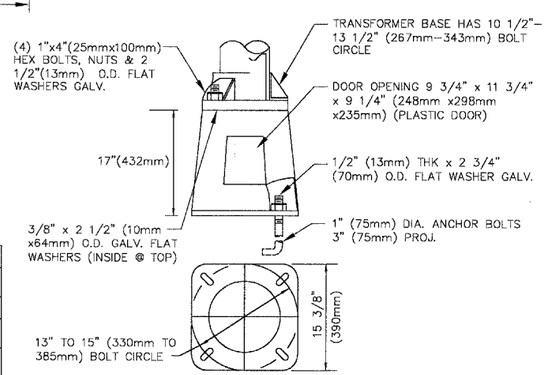

TRANSFORMER BASE DETAIL

MATERIAL SPECIFICATIONS	
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EXTRUSIONS	ASTM-B308 (6063-T6)
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CAST - TOP & BOLT COVERS	43,319 OR 356 ALLOY
SMALL HARDWARE	AISI-300 SERIES (STN.STL.)
ANCHOR BOLTS	ASTM-A36 M55

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

STREET LIGHTING DETAILS

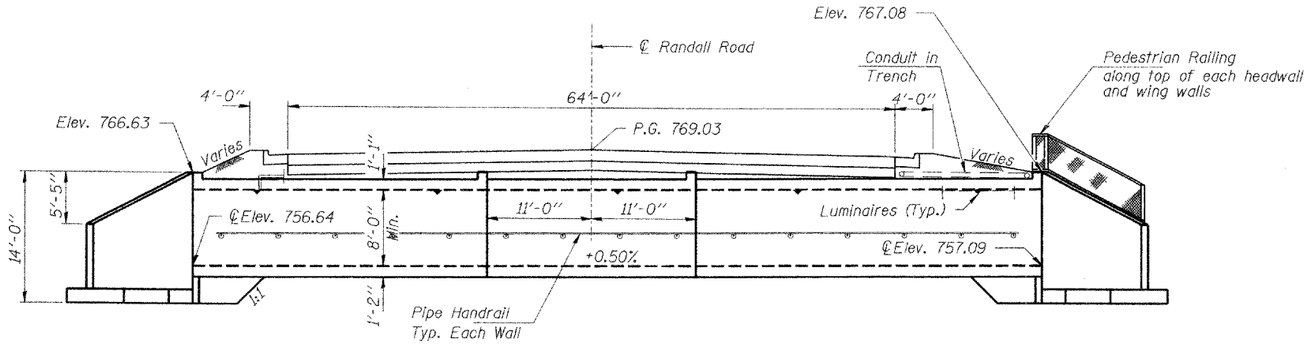
LIGHT STANDARDS

RANDALL ROAD

SCALE: NONE
DATE: 5-26-04

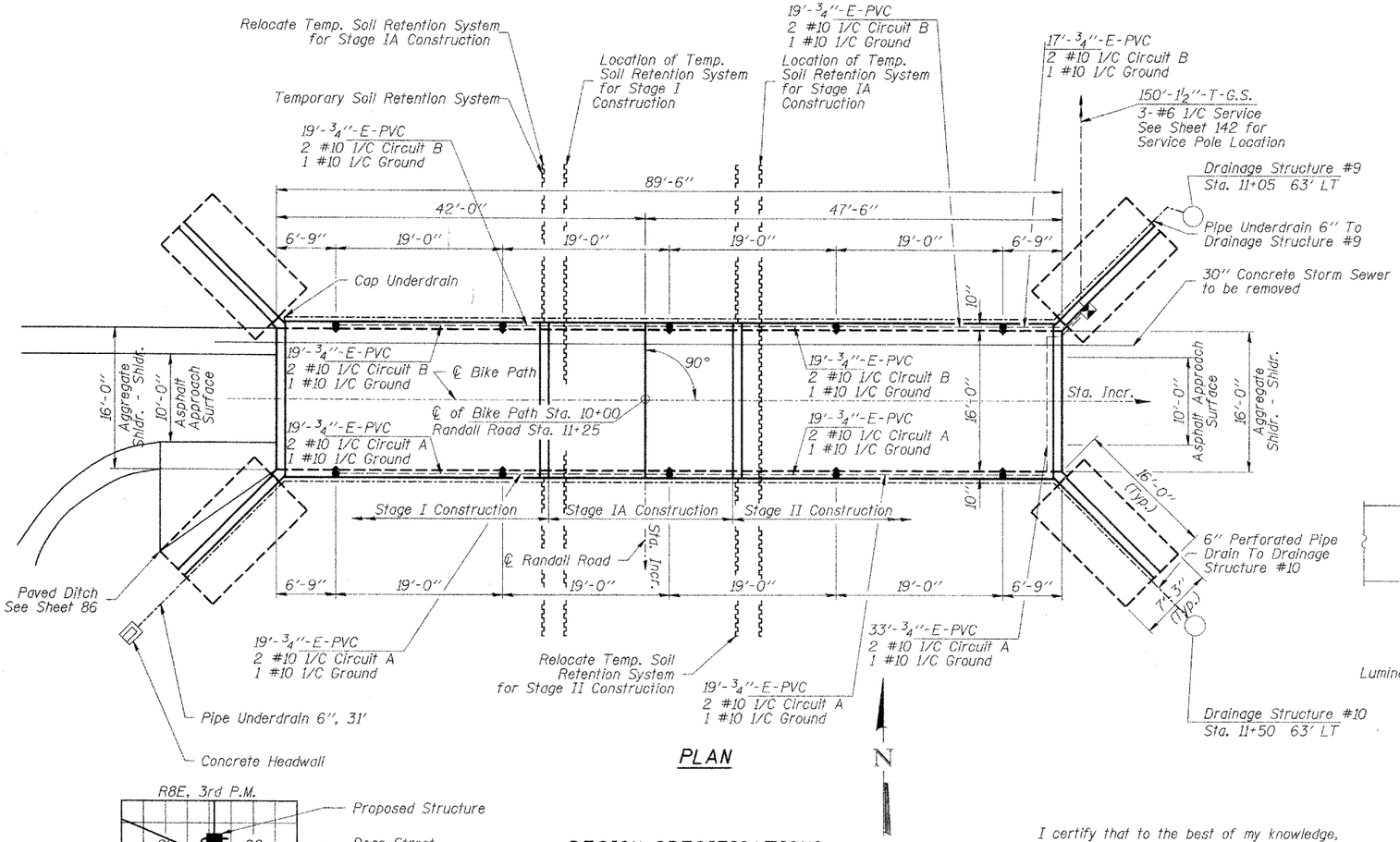
DRAWN BY: JMH
CHECKED BY: DAY

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	152
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

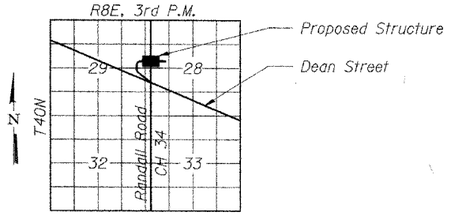


ELEVATION

See Sheet 3 of 9 for Stage Construction Details



PLAN



LOCATION SKETCH

DESIGN SPECIFICATIONS

2002 AASHTO

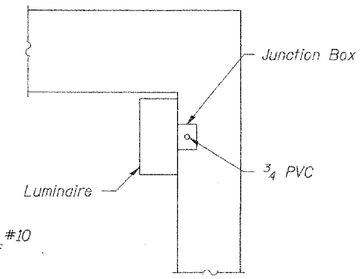
LOADING HS 20-44

Allow 50 psf. for future wearing surface

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Sheet Piles)



SECTION A-A

NOTES

Class SI Concrete shall be used throughout.

Nonmetallic water seal used in the wingwall joints shall extend from the top of the footing to within 6" of the top of the headwall.

Exposed edges shall be beveled ¾".

For backfilling and embankment, see Standard Specifications.

Reinforcement bars shall conform to the requirements of AASHTO M-31. M-322 Grade 60.

Boring logs are included in the special provisions.

The bottom floor shall receive a broomed finish. (Cost included with Concrete Box Culverts.)

All construction joints shall be bonded.

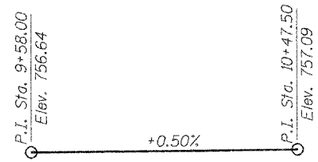
Protective coating to be placed on all interior faces of culvert, exposed and top surface of all wingwalls, exposed face and top of both head walls.

LEGEND

- ● Polyester Junction Box, Embedded in Structure
- ▲ Luminaire, 70 Watt HPS, 120 Volt
- ⋈ Controller

23'-¾"-E-PVC
2 #10 1/C Circuit A
1 #10 1/C Ground

Conduit-Length, Size, Type of Installation
A - Attached to Structure
T - in Trench
E - Embedded in Structure
And Material Specified with Cables as Specified.



PROFILE GRADE

℄ ℄Bike Path

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Box Culverts	Cu. Yds.	254.0
Reinforcement Bars, Epoxy Coated	Lbs.	35,680
Pedestrian Railing	Foot	97
Pipe Handrail	Foot	170
Temporary Soil Retention System	Sq Ft	1,422
Electric Cable in Conduit, 600V (XLP-Type Use) 1/C No. 10	Foot	696
Electric Cable in Conduit, 600V (XLP-Type Use) 1/C No. 6	Foot	450
Trench and Backfill for Electrical Work	Foot	150
Conduit in Trench, 1½"ϕ Galvanized Steel	Foot	150
Conduit Embedded in Structure, ¾"ϕ PVC	Foot	202
Underpass Control Installation, Special	Each	1
Electric Service Installation	Each	1
Ground Rod	Each	1
Junction Box, Polyester, Embedded in Structure, 4"x4"x3"	Each	10
Underpass Luminaire, 70 Watt High Pressure Sodium Vapor	Each	10
Porous Granular Backfill, Special	Ton	3,675
Geocomposite Wall Drain	Sq Yd	265
Clear Protective Coating for Concrete	Sq Ft	4,835
Bar Splicers	Each	298
Geotechnical Fabric for Ground Stabilization	Sq Yd	96
Pipe Underdrains 6"	Foot	253
Concrete Headwall For Pipe Drains	Each	1

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

FEB 07 2005

ILLINOIS STRUCTURAL NO. 5011

LICENSED STRUCTURAL ENGINEER
JEFFREY L. BANE
081-005011
STATE OF ILLINOIS

Expires 11-30-06

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-0181-1
Date: 6-09-04
DESIGNED: P.S.L. | CHECKED: J.L.B. | DRAWN: D.S.S.

GENERAL PLAN AND ELEVATION

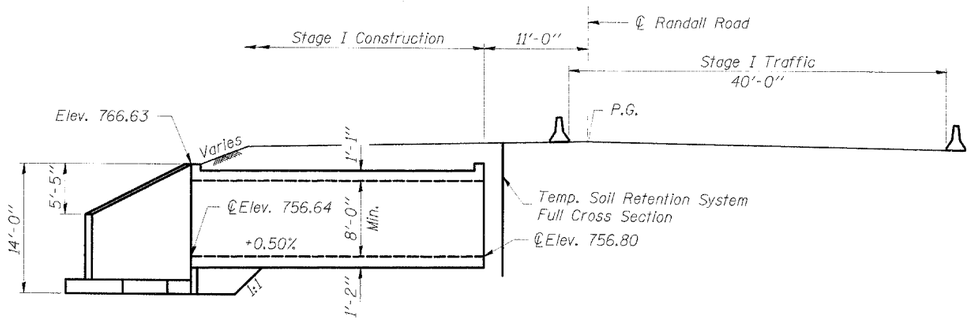
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

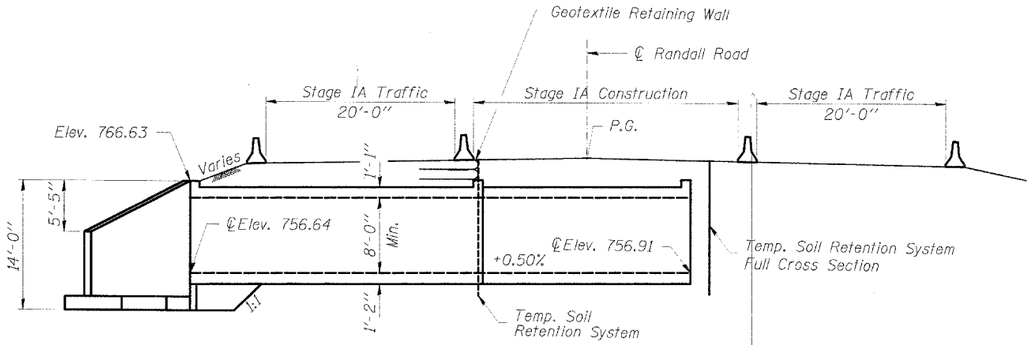
KANE COUNTY

STATION 11+25

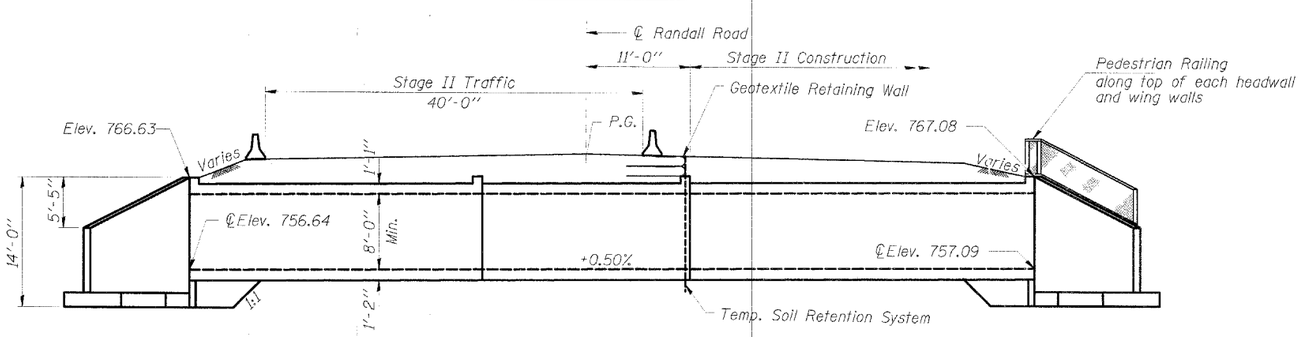
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	153
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5 ILLINOIS	PROJECT F-0336(008)			



STAGE I CONSTRUCTION



STAGE IA CONSTRUCTION



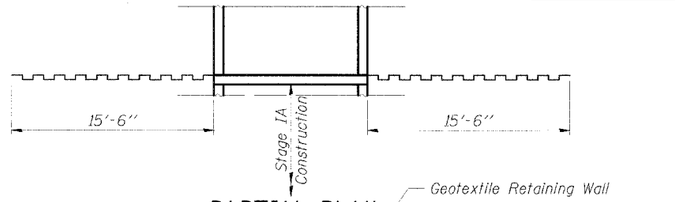
STAGE II CONSTRUCTION

Note:

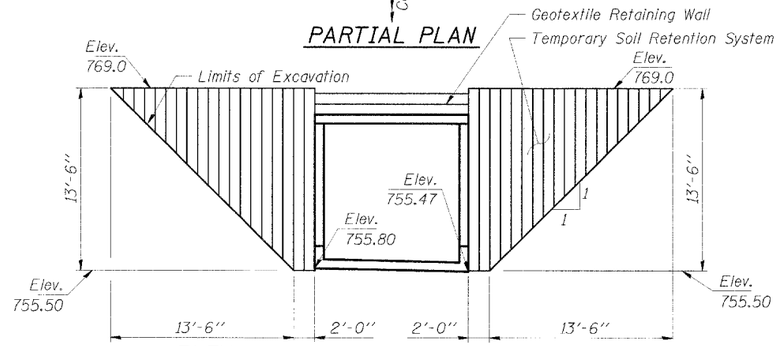
"A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer."

Note:

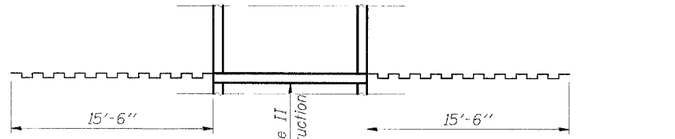
Boulders were encountered at Elev. 758.2 at Boring #1



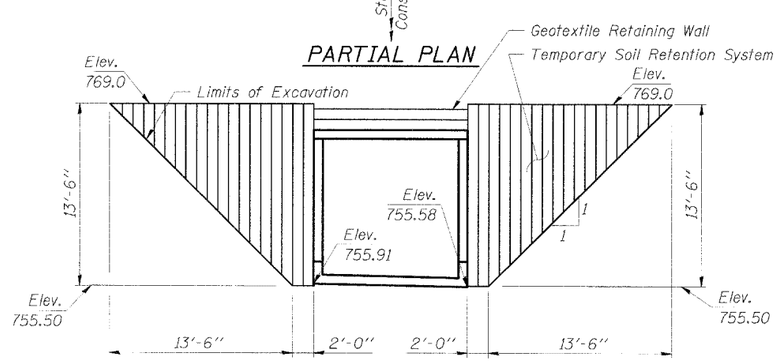
PARTIAL PLAN



ELEV. ELEV. TEMPORARY SOIL RETENTION SYSTEM DETAILS FOR STAGE IA REMOVAL & CONST.



PARTIAL PLAN



ELEV. ELEV. TEMPORARY SOIL RETENTION SYSTEM DETAILS FOR STAGE II REMOVAL & CONST.

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DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-0181-1
Date: 6-09-04
DESIGNED: P.S.L. | CHECKED: J.L.B. | DRAWN: D.S.S.

STAGING

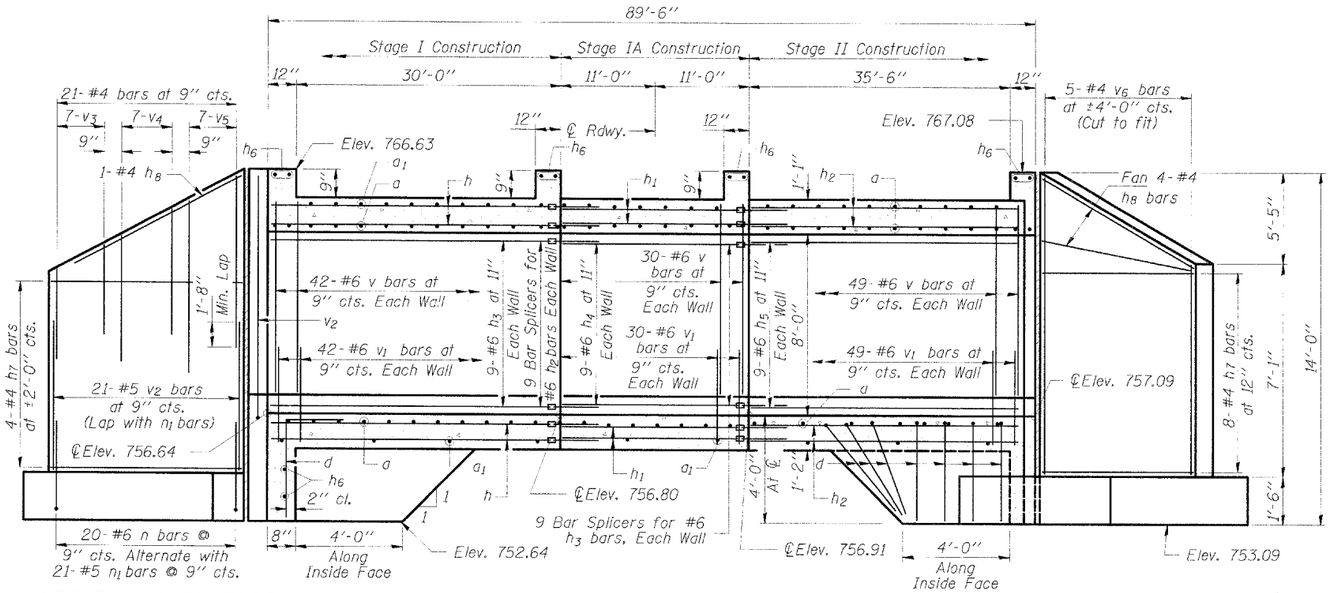
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

KANE COUNTY

STATION 11+25

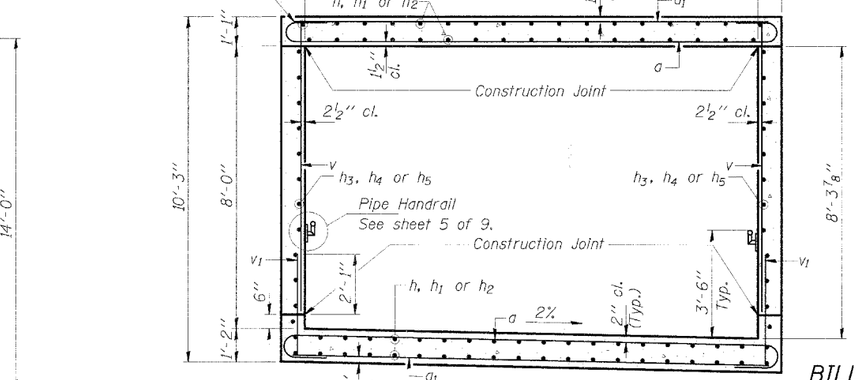
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	154
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



REINF. - BACK FACE

LONGITUDINAL SECTION
(Looking North)

REINF. - FRONT FACE

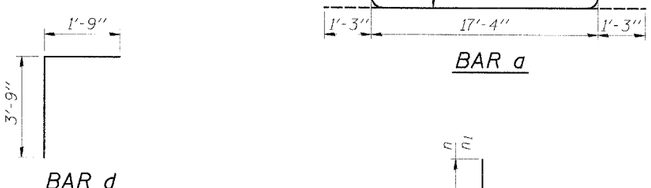


SECTION THRU BARREL
(Looking East)

BILL OF MATERIAL

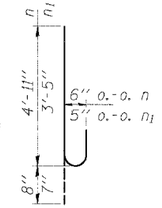
Bar	No.	Size	Length	Shape
a	242	#9	19'-10"	
a1	94	#4	17'-0"	
d	62	#4	5'-6"	
h	74	#5	30'-10"	
h1	74	#5	21'-8"	
h2	74	#5	36'-2"	
h3	18	#6	30'-10"	
h4	18	#6	21'-8"	
h5	18	#6	36'-2"	
h6	12	#6	17'-4"	
h7	48	#4	14'-10"	
h8	20	#4	15'-9"	
n	80	#6	5'-7"	
n1	84	#5	4'-0"	
t	184	#4	7'-0"	
v	242	#6	8'-3"	
v1	242	#6	3'-11"	
v2	84	#5	6'-6"	
v3	28	#4	2'-6"	
v4	28	#4	5'-0"	
v5	28	#4	7'-3"	
v6	20	#4	12'-3"	
v7	8	#4	13'-6"	
w	48	#5	14'-11"	
Concrete Box Culverts		Cu. Yds.	254.0	
Clear Protective Coating For Concrete		Sq Ft	4,835	
Reinforcement Bars, Epoxy Coated		Lbs.	35,680	
Porous Granular Backfill, Special		Ton	3,675	
Geocomposite Wall Drain		Sq Yd	265	
Bar Splicers		Each	298	
Pipe Underdrain 6"		Foot	253	
Concrete Headwalls For Pipe Drains		Ea.	1	

Note: All reinforcement bars shall be epoxy coated.

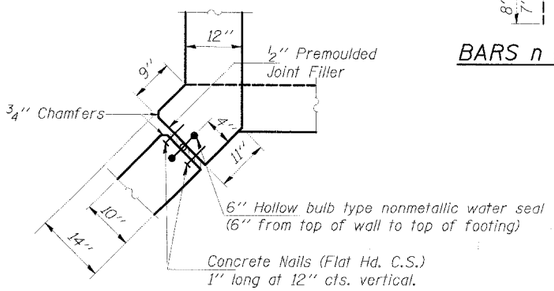


BAR a

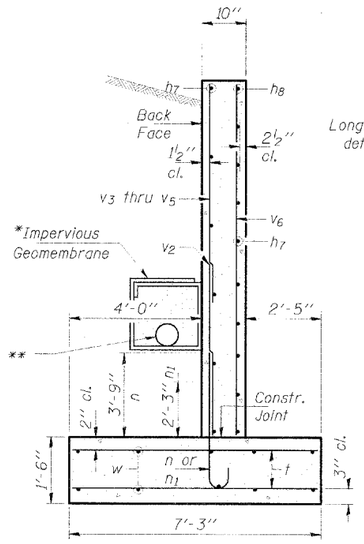
BAR d



BARS n and n1



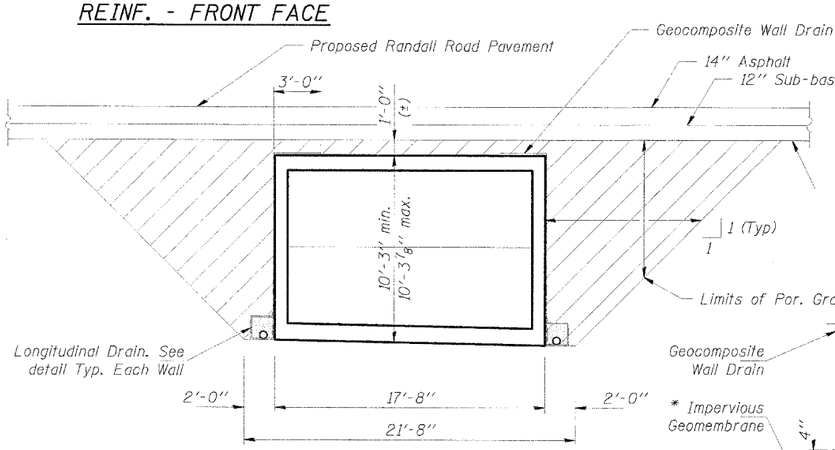
CORNER DETAIL



SECTION B-B

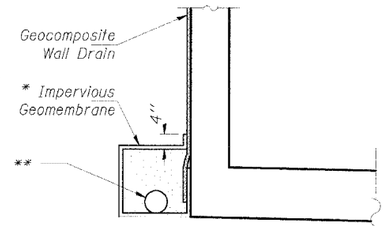
* Cost included with Geocomposite Wall Drain.

Max. Soil Pressure under footing = 2850 psf.

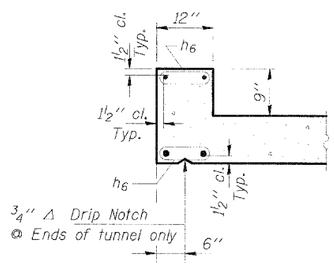


TUNNEL BACKFILL DETAIL

Construct backfill ±54' wide across Randall Road and Taper at 1:1 slope.



LONGITUDINAL DRAIN



SECTION THRU HEADWALL

* Cost included with Geocomposite Wall Drain.
** Pipe Underdrain 6" according to section 601 of the Standard Specifications encased in 18" of CA-5 or CA-7 course aggregate. Aggregate is to be incidental to Pipe Underdrains. Pipes shall drain into concrete headwalls or directly into drainage structure see sheet 1 of 9 (Article 601.05 of the Std. Specifications).

MIN. BAR LAPS
#5 Bars = 1'-8"
#6 Bars = 2'-0"

HLR
Account Number 03-05-0181-1
Date: 6-03-04
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618-790-4637
DESIGNED: P.S.L. CHECKED: J.W.R. DRAWN: D.S.S.

TUNNEL DETAILS I

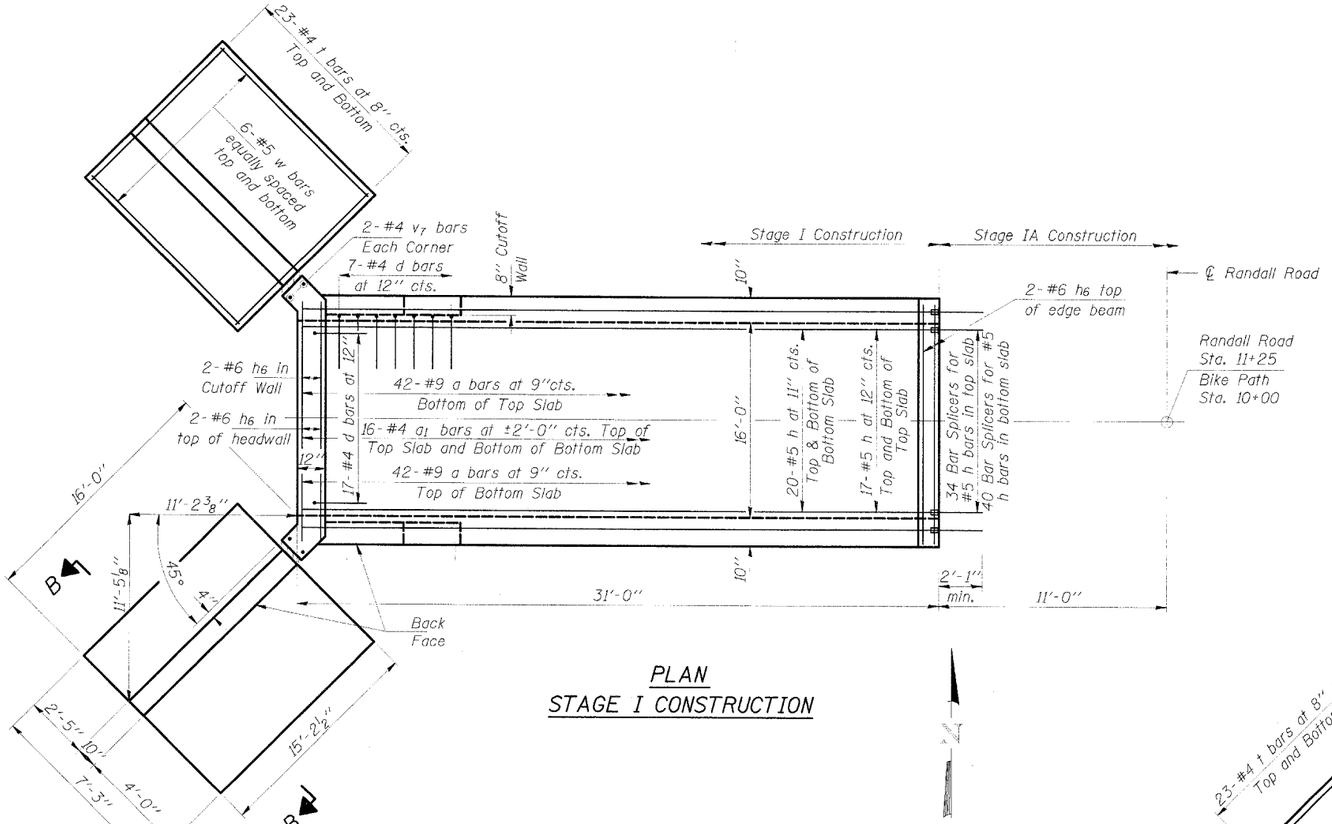
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

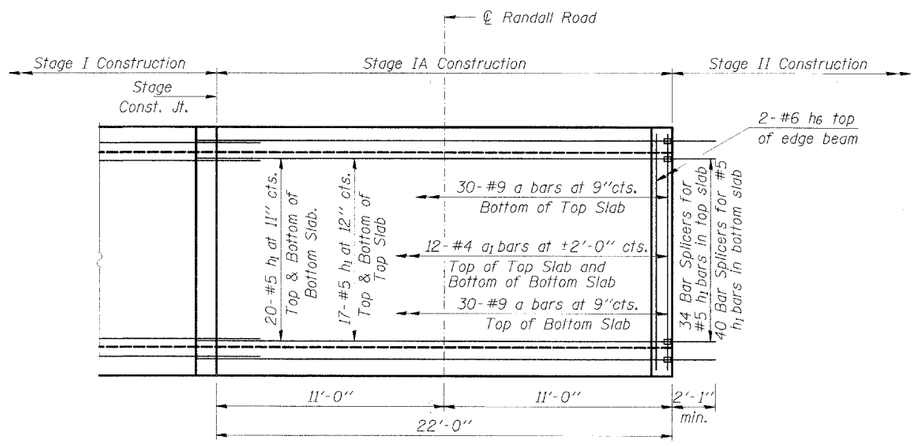
KANE COUNTY

STATION 11+25

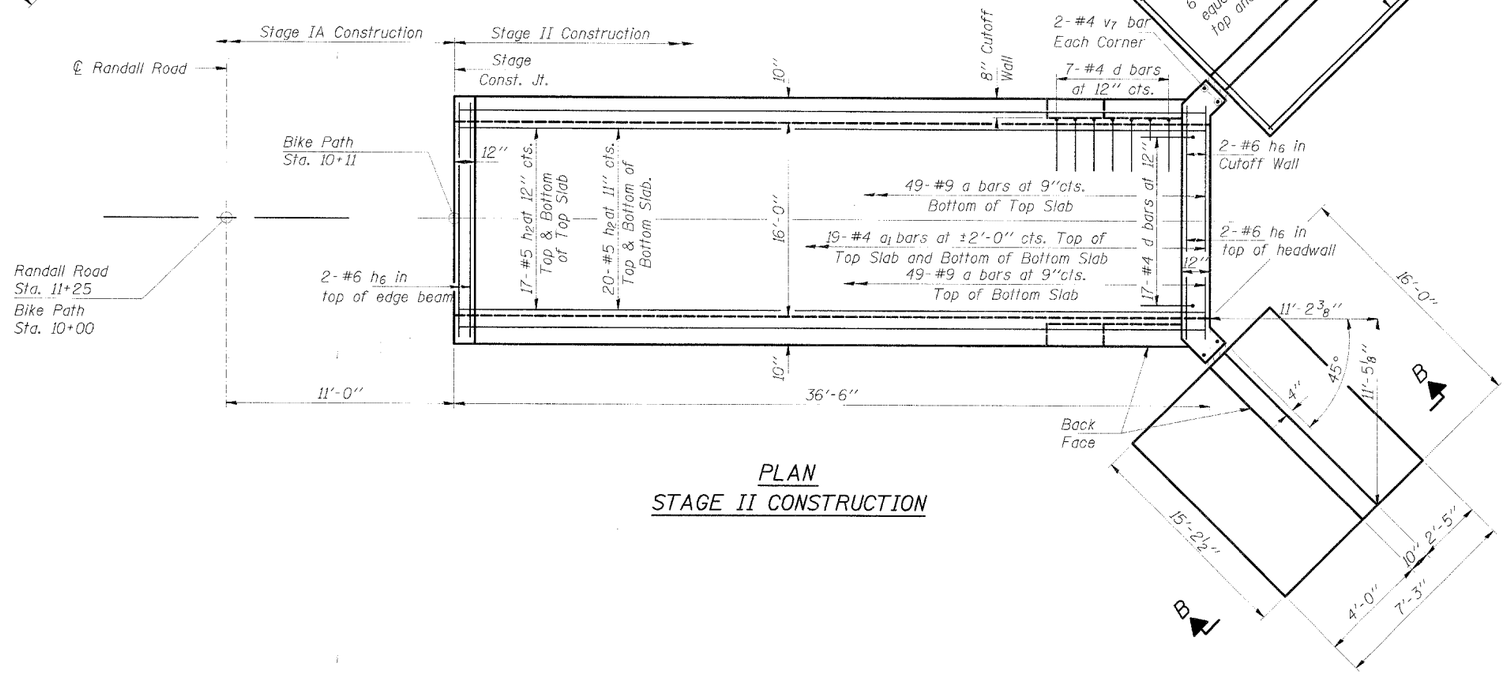
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	155
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



PLAN
STAGE I CONSTRUCTION



PLAN
STAGE IA CONSTRUCTION



PLAN
STAGE II CONSTRUCTION

MIN. BAR LAPS

#5 Bars = 1'-8"
#6 Bars = 2'-0"

Note: All reinforcement bars shall be epoxy coated.
Bars indicated thus, 2 x 4-#5 etc. indicates 2 lines of bars with 4 lengths per line.
See Sheet 3 of 9 for Section B-B.

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DuQuoin, Illinois 62832
618-790-4637

Account Number 03-05-0181-1
Date: 5-09-04
DESIGNED: P.S. CHECKED: J.L.B. DRAWN: D.S.S.

TUNNEL DETAILS II

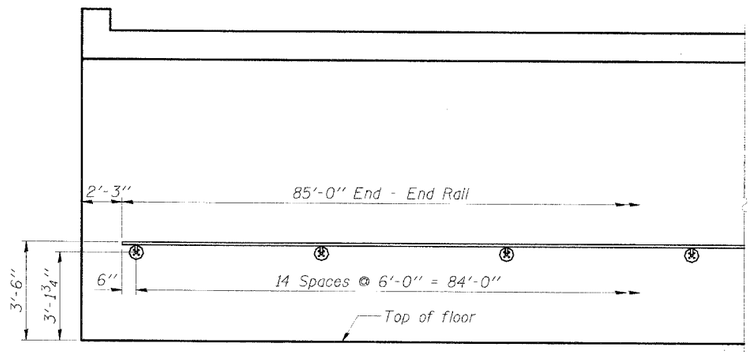
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

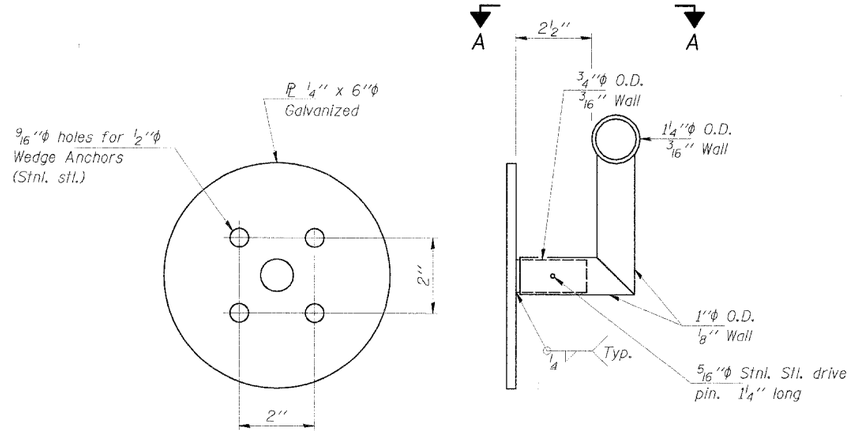
KANE COUNTY

STATION 11+25

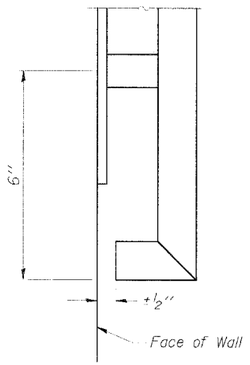
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	156
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



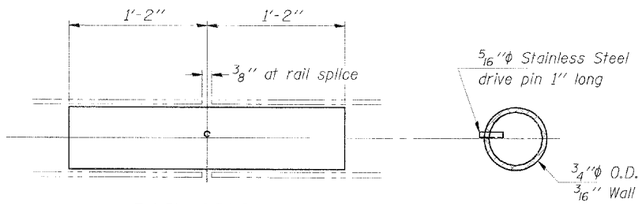
PARTIAL LONG. SECTION



PIPE HANDRAIL DETAILS



SECTION A-A



RAIL SPLICE

NOTES

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for PIPE HANDRAIL.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

All joints in rail shall be spliced per detail.

All plates shall conform to the requirements of AASHTO M-270 Grade 36.

All plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385.

½"ϕ wedge anchors shall be stainless steel and shall have a minimum working shear level of 4,000 pounds and a working pullout load of 2,000 pounds.

BILL OF MATERIAL

Item	Unit	Quantity
Pipe Handrail	Foot	170

HLR
Account Number 03-05-0181-1
Date: 8-09-04
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
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TUNNEL DETAILS III

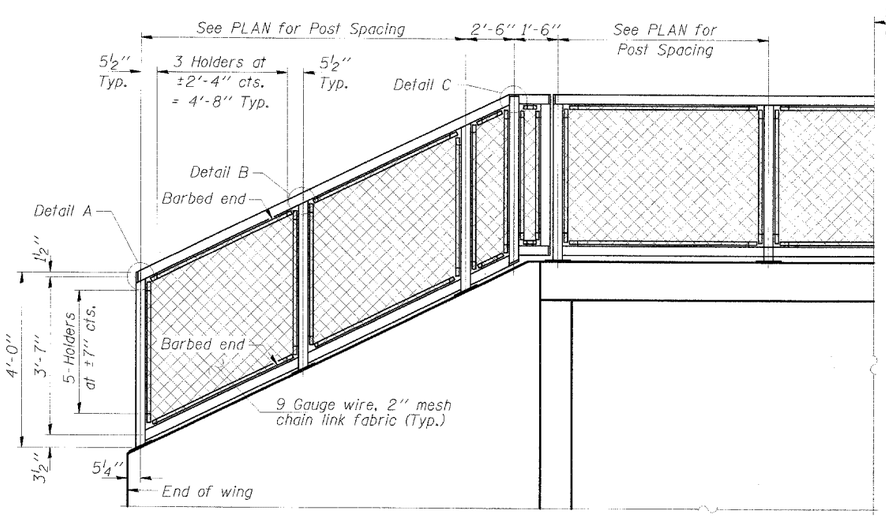
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

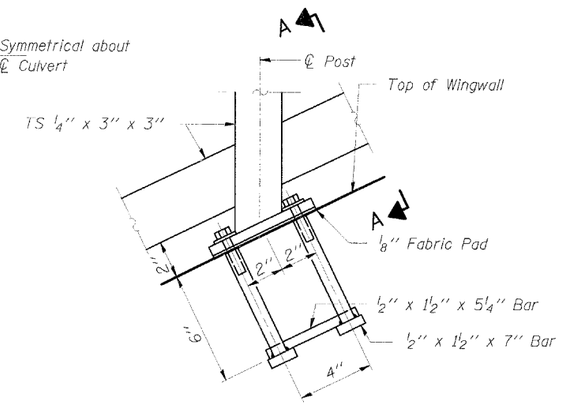
KANE COUNTY

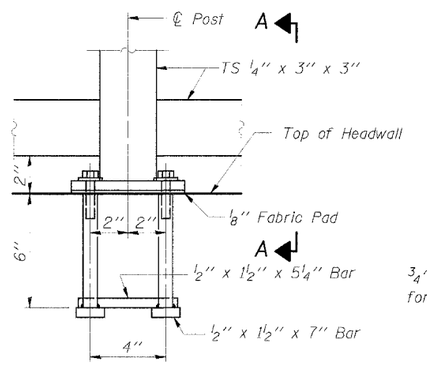
STATION 11+25

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	157
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008		

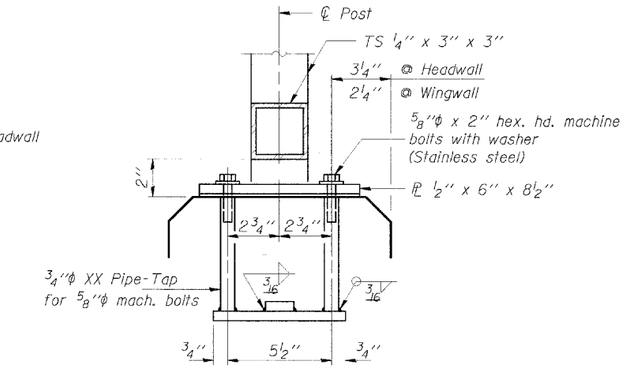


ELEVATION

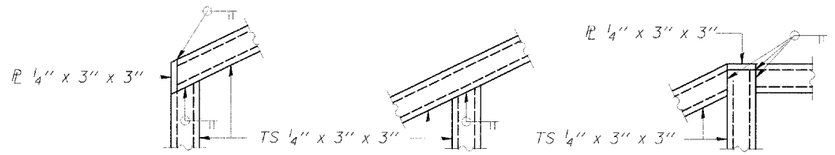




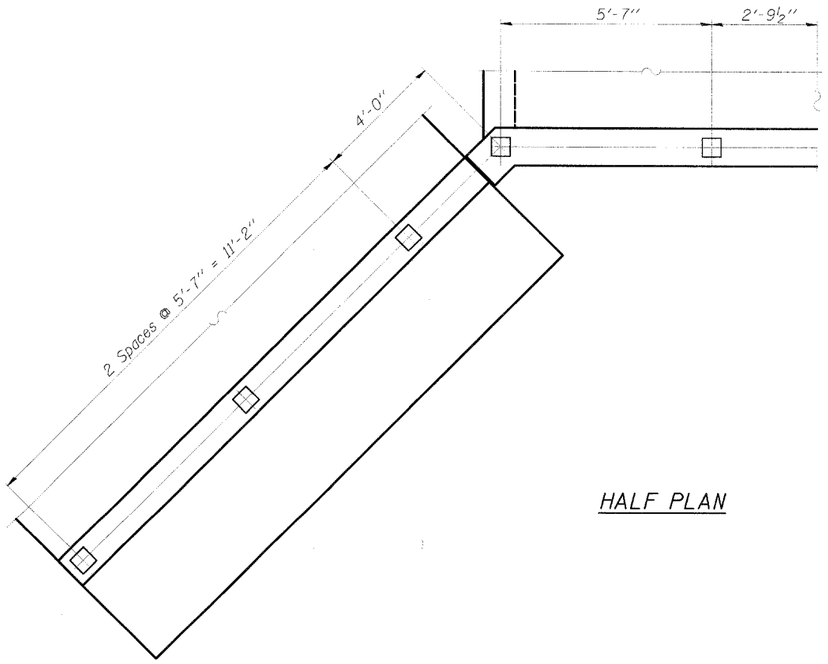
ANCHOR BOLT DETAILS



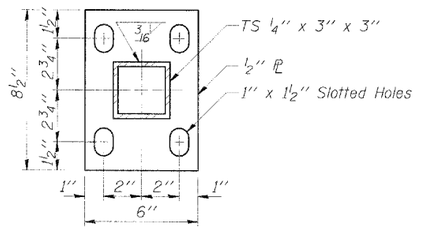
VIEW A-A



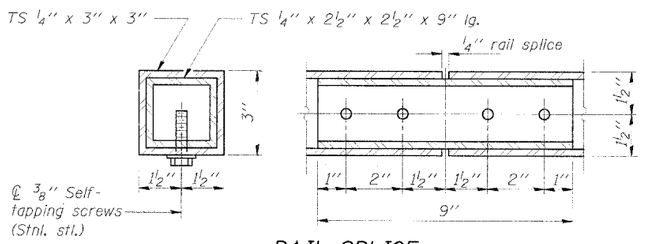
DETAIL A DETAIL B DETAIL C



HALF PLAN



BASE ℄



RAIL SPLICE

NOTES

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Pedestrian Railing.

The 9 gauge fabric ties shall be in accordance with Article 1006.27(d) of the Standard Specifications.

Installation of the chain link fabric shall be in accordance with Section 664 of the Standard Specifications.

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

Stretcher bars shall be used at all four sides of each panel.

The chain link fabric shall conform to the requirements of Article 706.27(a)(1)(a) or (b) or (c) of the Standard Specifications.

All joints in rail shall be spliced per detail.

All posts, railing, splices, anchor devices, and plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. All bolts, nuts and washers shall be galvanized in accordance with AASHTO M-232.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

BILL OF MATERIAL

Item	Unit	Quantity
Pedestrian Railing	Foot	97

HLR
Account Number 03-05-0181-1
Date: 6-03-04
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
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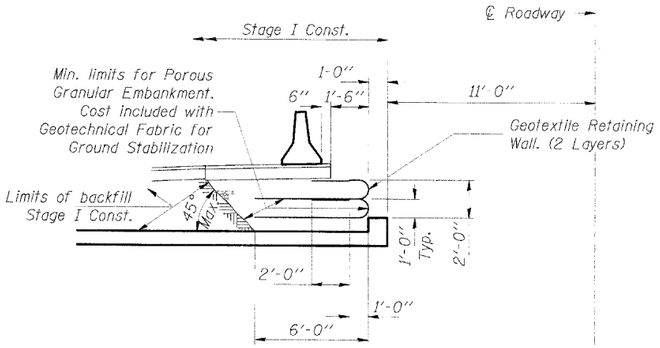
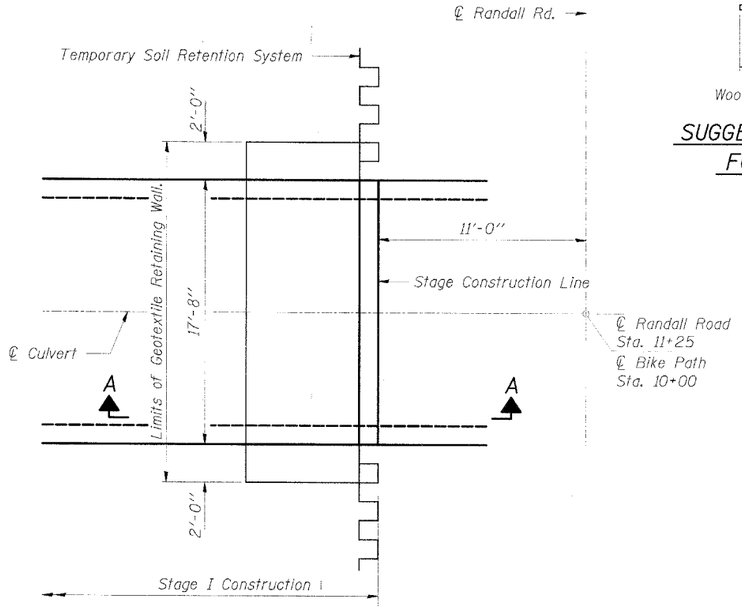
DESIGNED: P.S.L. CHECKED: J.S. DRAWN: D.S.S.

PEDESTRIAN RAILING
SECTION 99-00243-00-PV
BIKE PATH UNDER RANDALL ROAD
KANE COUNTY
STATION 11+25

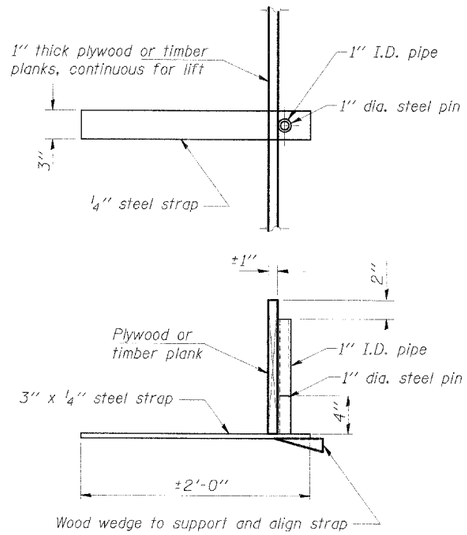
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	158
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008		



SECTION A-A

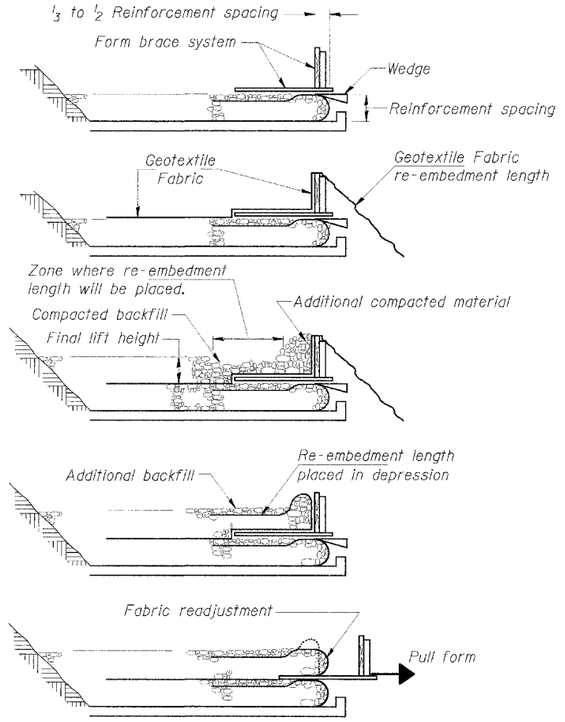


PLAN



SUGGESTED GEOTEXTILE TEMPORARY FORM BRACE SYSTEM DETAIL

Note:
This is a suggested detail, the Contractor is responsible for the design of the form brace system to be used.



1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of 1/3 to 1/2 the reinforcement spacing.
2. Position fabric so that the required re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.
3. Compact backfill material in lifts to final lift height, create (±3") depression in zone where re-embedment length will be located and place additional height of compacted material against form brace.
4. Fold fabric re-embedment length back over form brace into zone where depression was made in backfill and place additional compacted backfill, (±3") to embed fabric and bring to final lift height.
5. Pull form brace outward allowing fabric face to slightly readjust to form tight round face and level with plan reinforcement spacing.

GEOTEXTILE WALL CONSTRUCTION PROCEDURE

Note: The geotextile fabric shall meet the requirements of Section 210 of the Standard Specifications.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	96

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217-546-3400
P. O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-0181-1
Date: 6-09-04
DESIGNED: P.S.L. CHECKED: W.B. DRAWN: D.S.S.

GEOTEXTILE RETAINING WALL

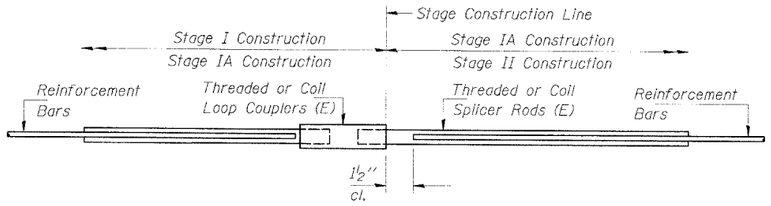
SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

KANE COUNTY

STATION 11+25

F.A. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHEET NO.
336	STATE SECTION 83782	KANE	268	151
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG. 5 ILLINOIS	PROJECT F-0336(008)			



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#5	34	Top of Top slab
#5	40	Top of Bottom Slab
#5	40	Bottom of Bottom Slab
#5	34	Bottom of Top Slab
#6	36	Side Walls

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

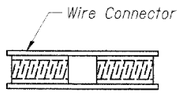
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
		Strength Requirements	
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

ROLLED THREAD DOWEL BAR

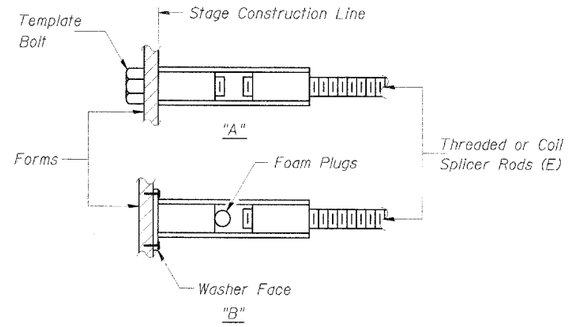
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

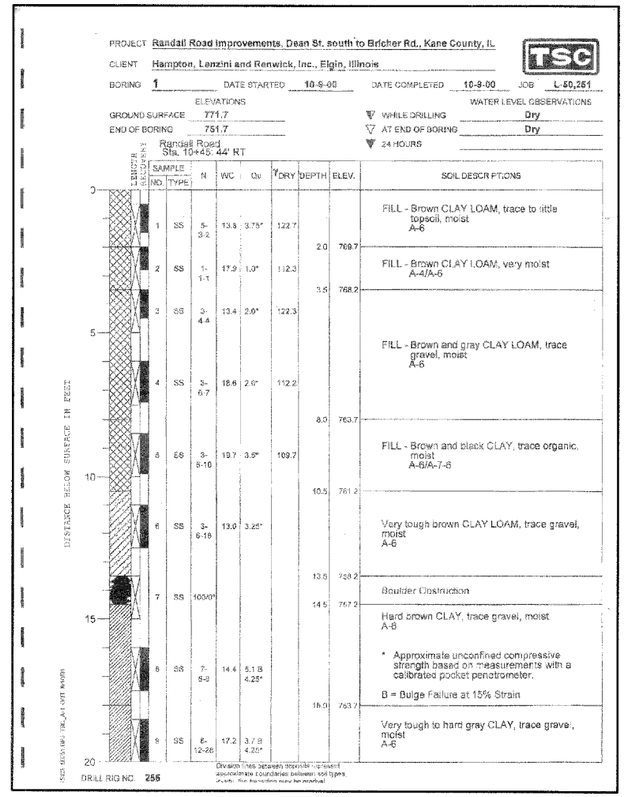


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



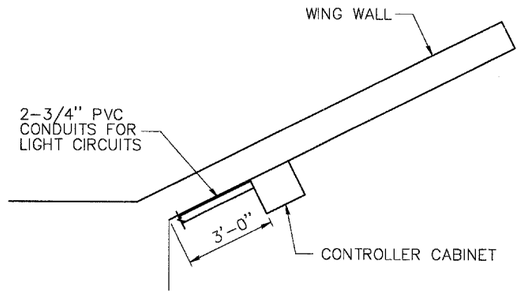
BORING LOG #1

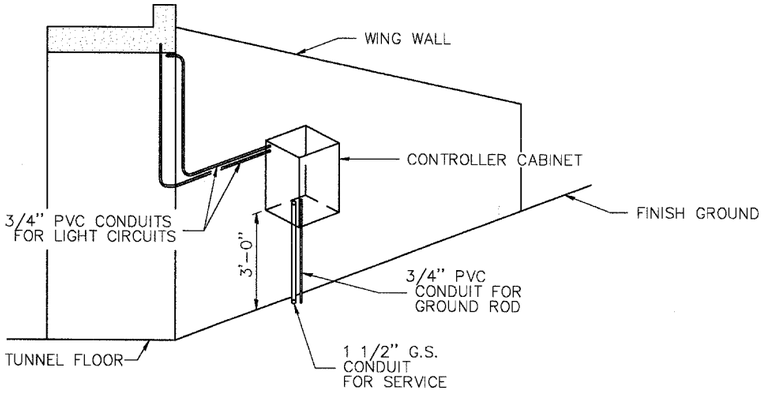
HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
8015 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-0181-1
Date: 6-09-04
DESIGNED: P.S.L. CHECKED: J.L.B. DRAWN: D.S.S.

BAR SPLICER (COUPLER) DETAILS / BORING LOG

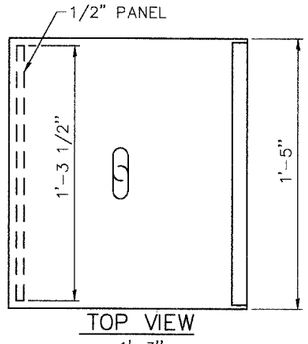
SECTION 99-00243-00-PV
BIKE PATH UNDER RANDALL ROAD
KANE COUNTY
STATION 11+25

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
RANDALL ROAD BIKE UNDERPASS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

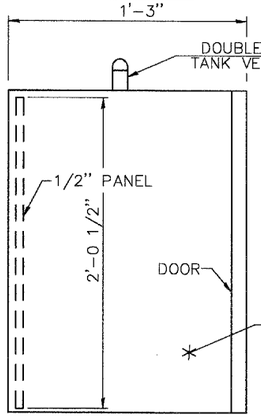




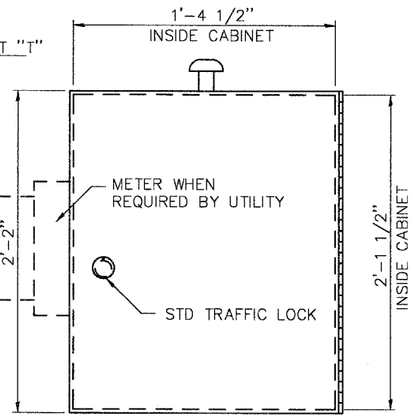
CONTROL INSTALLATION, SPECIAL-MOUNTING DETAIL



TOP VIEW



SIDE VIEW

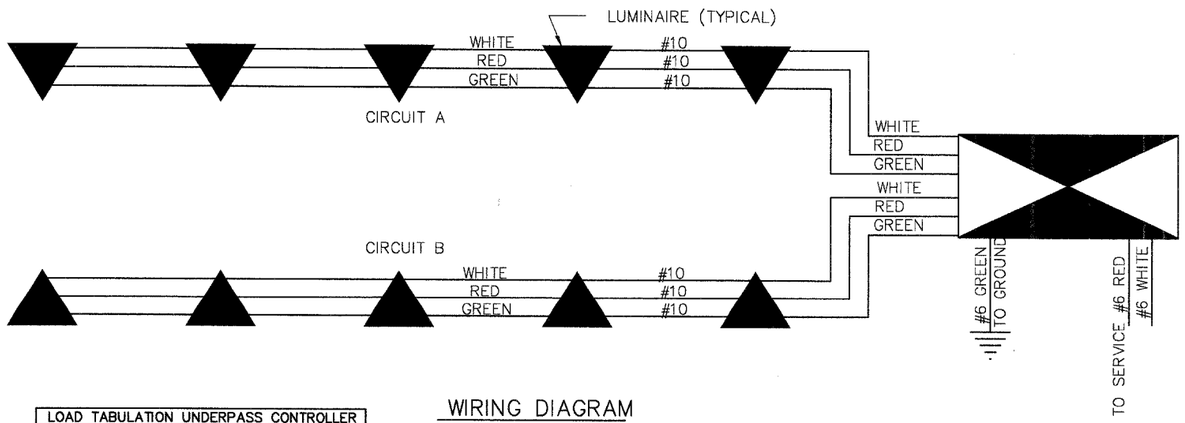


FRONT VIEW
(DOOR VIEW)

CABINET DETAILS

UNDERPASS CONTROL INSTALLATION, SPECIAL

1. MATERIAL- 1/8" THICK 5052 ALLOY, SHEET ALUMINUM.
2. ALL WELDS ARE CONTINUOUS.
3. THIS UNIT IS CONSTRUCTED TO NEMA TYPE 3R STANDARDS.
4. DOOR AND LOCK - DOOR HAS A 14 GA. (.075) STAINLESS STEEL CONTINUOUS HINGE. CLOSED CELL NEOPRENE GASKET AROUND THE ENTIRE DOOR FOR WATER INTEGRITY. A STANDARD TRAFFIC SIGNAL TYPE LOCK, RAIN AND ICE (WEATHER) RESISTANT FURNISHED WITH TWO KEYS PROVIDED.
5. VENTILATION - DOUBLE OUTLET "T" TANK VENT.
6. INNER PANEL MOUNTING CHANNEL ON BACKWALL.
7. ALL INTERIOR AND EXTERIOR SURFACES OF THE CABINET SHALL HAVE A POLISHED ALUMINUM FINISH.

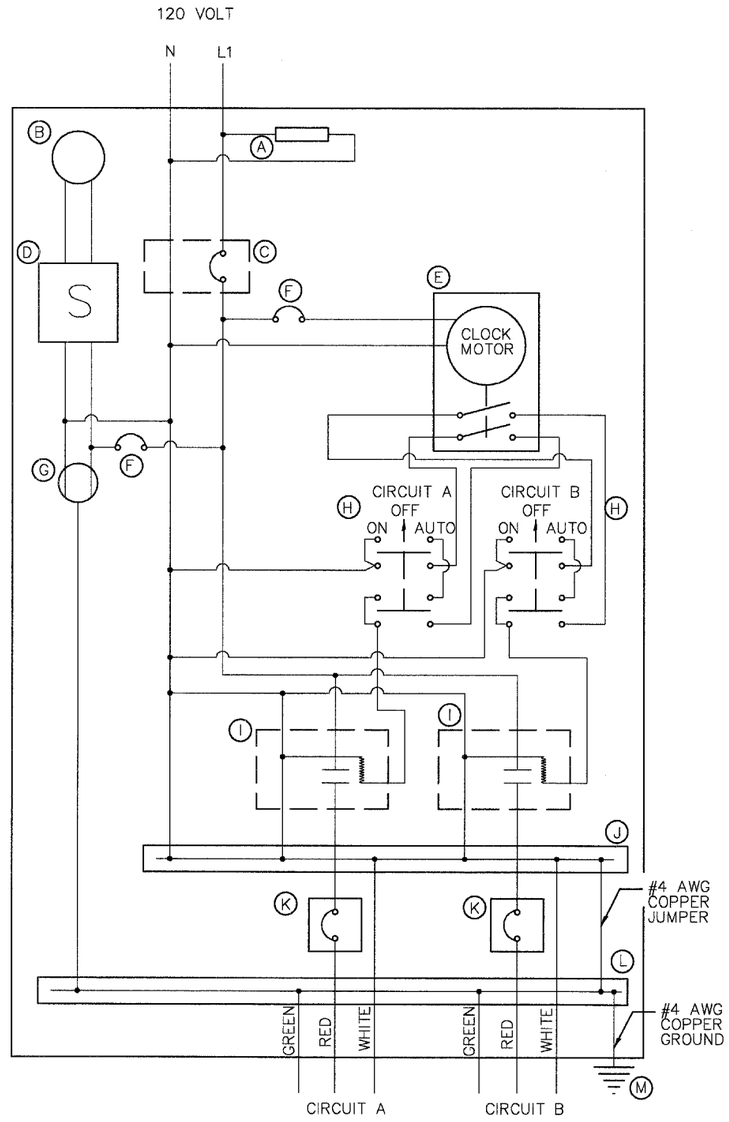


WIRING DIAGRAM

LOAD TABULATION UNDERPASS CONTROLLER		
CIRCUIT	WATTS	AMPS
A	350	2.9
B	350	2.9
TOTAL	700	5.8

ITEMS

- (A) LIGHTNING ARRESTERS
- (B) CABINET LIGHT, 60W INCANDESCENT
- (C) MAIN CIRCUIT BREAKER - MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 120V., BOLT-ON TYPE, 30 AMP WITH AN INTERRUPTING CAPACITY OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (D) CABINET LIGHT SWITCH
- (E) TWO CHANNEL ASTRONOMICAL CLOCK
- (F) CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 120V. BOLT-ON TYPE 10A. WITH AN INTERRUPTING RATING OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (G) DUPLEX RECEPTACLE
- (H) SELECTOR SWITCHES - ON/OFF/AUTOMATIC
- (I) CONTROL CONTACTORS
- (J) NEUTRAL BUS BAR
- (K) BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 120V., BOLT-ON TYPE, 104 WITH AN INTERRUPTING RATING OF NOT LESS THAN 10,000 RMS SYMMETRICAL AMPERES AT 120V.
- (L) GROUND BUS BAR
- (M) GROUND ROD



NOTE: TO PROVIDE THE REQUIRED LIGHTING LEVELS, ONE CIRCUIT SHALL BE SET TO "ON" AND THE OTHER CIRCUIT SET TO "AUTO" WITH THE ASTRONOMICAL CLOCK PROGRAMMED TO TURN ON AT SUNRISE AND OFF AT SUNSET. THE SWITCHES CAN BE REVERSED PERIODICALLY TO PROLONG LAMP LIFE.

REVISIONS	
NAME	DATE
PER BEO REVIEW	10-7-04
PER BEO REVIEW	12-29-04

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil Engineers
Structural Engineers
Land Surveyors
Account Number 03-05-0181-I
Date: 6-09-04
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400

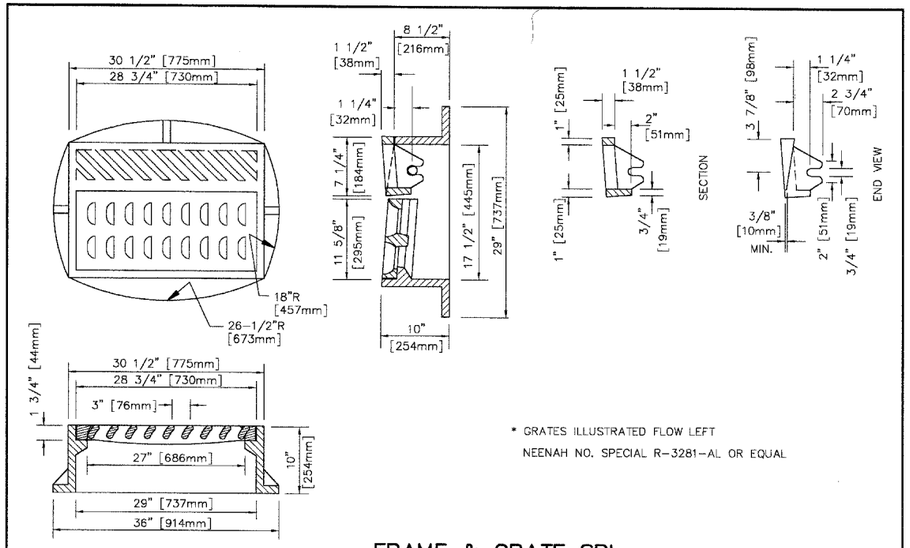
BIKE PATH UNDERPASS LIGHTING DETAILS

SECTION 99-00243-00-PV

BIKE PATH UNDER RANDALL ROAD

KANE COUNTY

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
SPECIAL DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

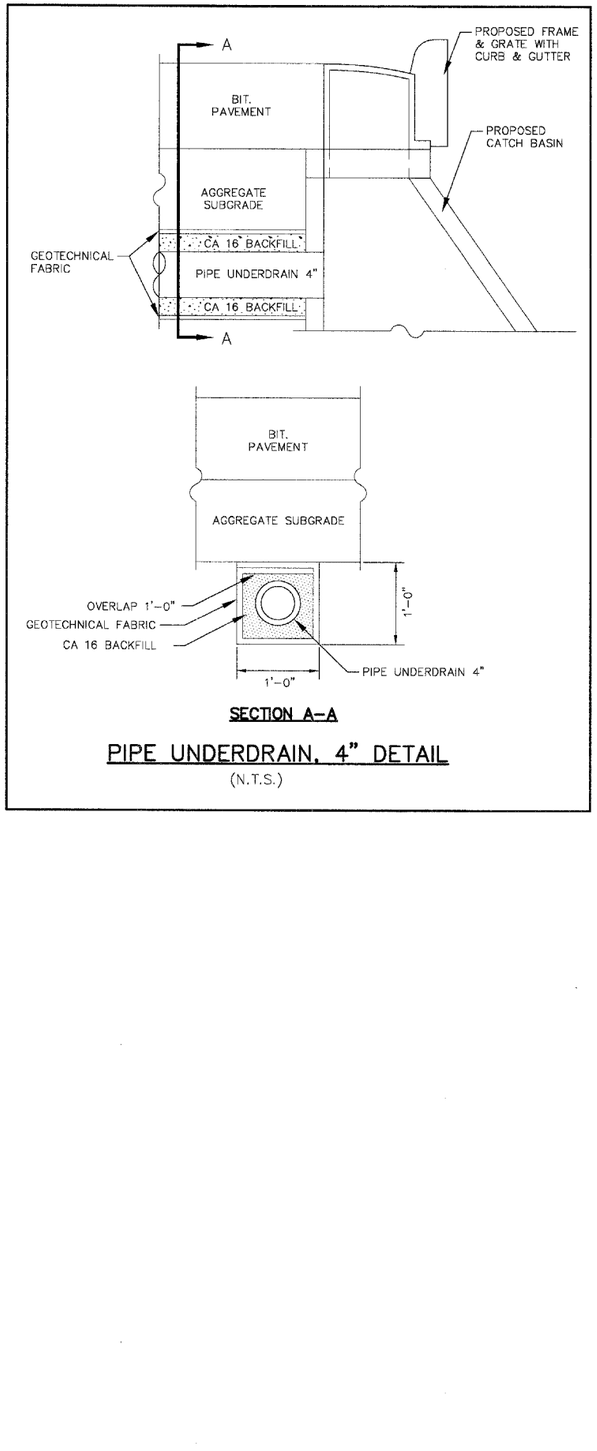


* GRATES ILLUSTRATED FLOW LEFT

NEENAH NO. SPECIAL R-3281-AL OR EQUAL

FRAME & GRATE SPL

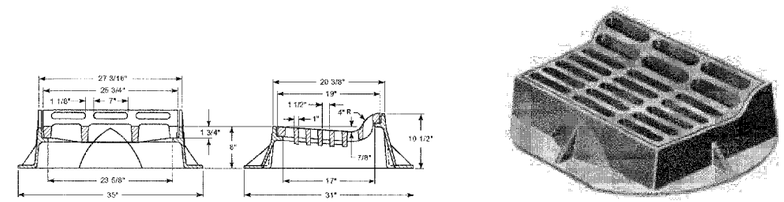
(N.T.S.)



SECTION A-A

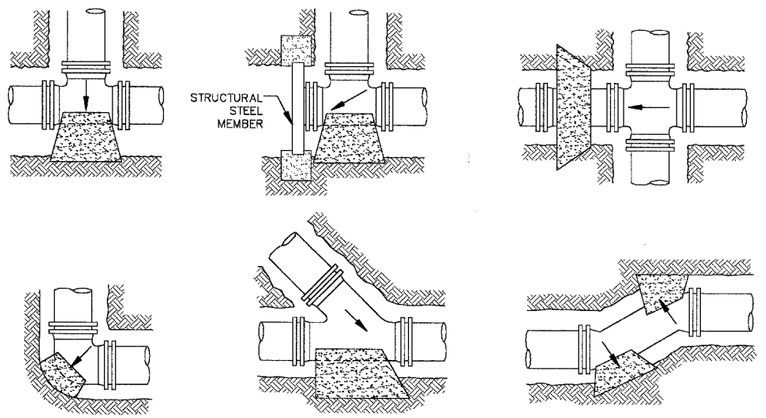
PIPE UNDERDRAIN, 4" DETAIL

(N.T.S.)



FRAME & GRATE SPL 1

(N.T.S.)



BEARING AREA IN SQ. FT. [SQ. METERS]					
PIPE SIZE	TEE/PLUG	90°	45°	22 1/2°	11 1/4°
6"	4"	2"	1"	1"	1"
8"	6"	4"	3"	1"	1"
10"	7"	5"	3"	2"	1"
12"	8"	6"	4"	3"	2"
14"	12"	9"	6"	4"	3"
16"	15"	12"	7"	5"	3"
18"	18"	15"	9"	5"	4"
24"	40"	30"	15"	10"	5"

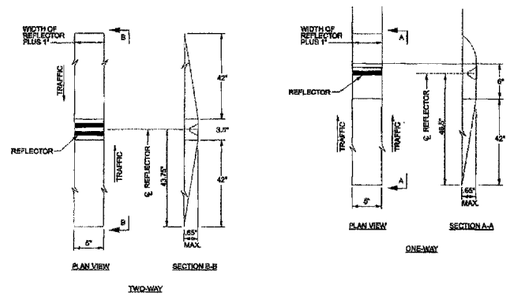
ALL BLOCKING SHALL BE POURED CONCRETE AGAINST UNDISTURBED EARTH.

ALL BENDS OR ELBOWS GREATER THAN 11-1/4° SHALL HAVE THRUST BLOCKING

ALTERNATIVELY, "MEGA-LUG" JOINT RESTRAINTS CAN BE USED WITH APPROVAL OF THE ENGINEER.

THRUST BLOCK INSTALLATION

(N.T.S.)



GENERAL NOTES:

1. Installation shall conform to IDOT Highway Standard 781001-02 (or latest) for marker placement.
2. IDOT Standard 781001-02 shall be modified to reflect recessed pavement markers instead of raised pavement markers.

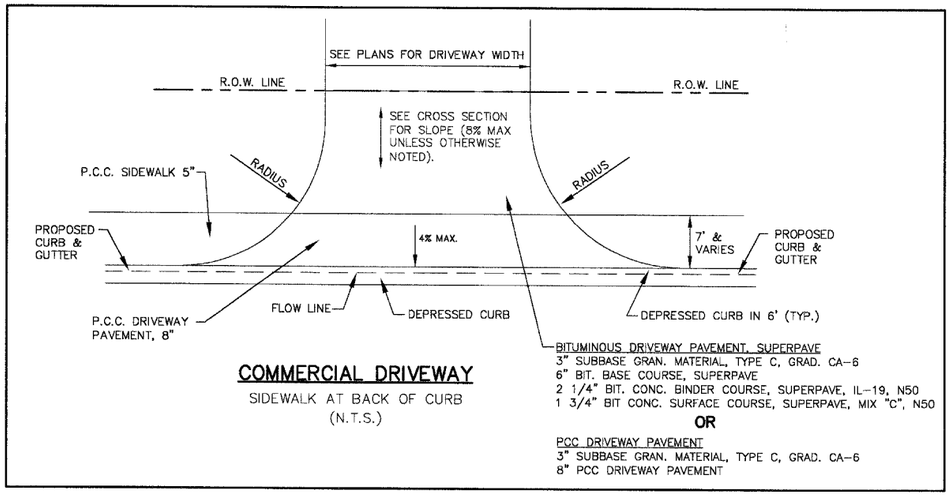
RECESSED REFLECTIVE PAVEMENT MARKERS

INSTALLATION NOTES:

1. Saw cut to dimensions shown.
2. Sawcut areas to be dry and free of material that adversely affects the adhesive bond.
3. Install the reflector with an approved two-component epoxy adhesive. Epoxy should not obscure or block the lens.
4. Install top of reflector ½ to ¾ inch below the pavement surface.

TYPICAL RECESSED REFLECTIVE PAVEMENT MARKERS	
STANDARD	KC-781001-03

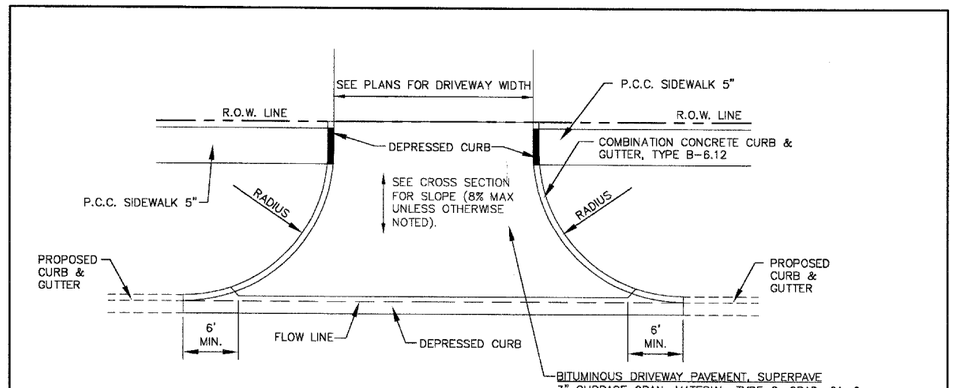
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
SPECIAL DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



COMMERCIAL DRIVEWAY

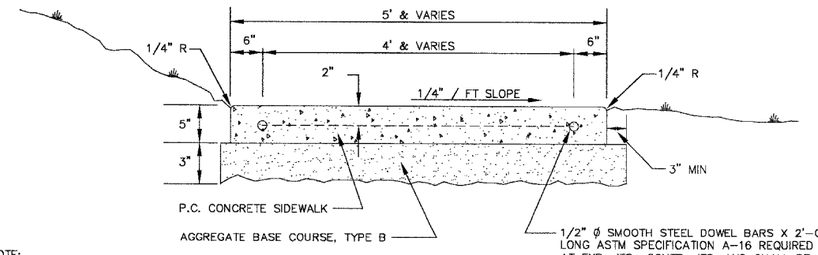
SIDEWALK AT BACK OF CURB

(N.T.S.)



COMMERCIAL DRIVEWAY

(N.T.S.)

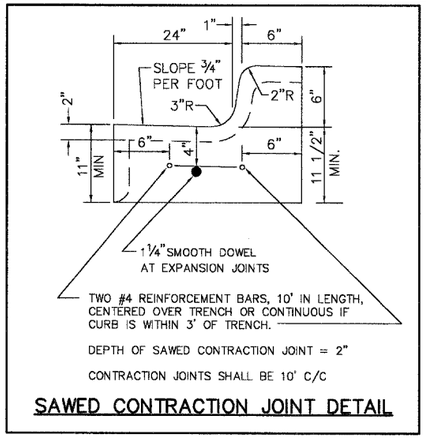


NOTE:
AT ALL LOCATIONS WHERE THE SIDEWALK ABUTTS CURB & GUTTER SECTIONS, THE SIDEWALK SHALL BE POURED FULL CURB & GUTTER DEPTH FOR A MINIMUM 12" WIDTH.

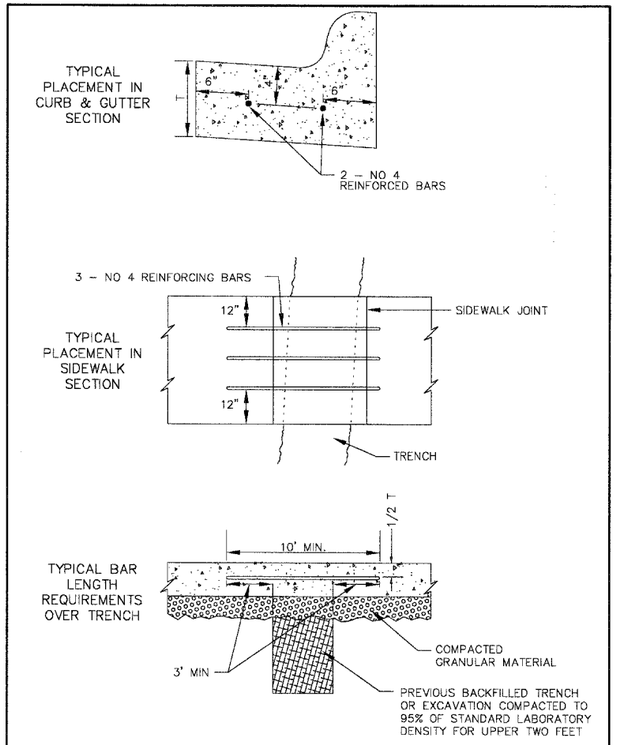
THE CONTRACT UNIT PRICE FOR P.C. CONC. SIDEWALK, 5" SHALL INCLUDE THE DOWEL BARS, EXPANSION AND CONTRACTION JOINTS, DUMMY JOINTS ANC BASE MATERIAL AS SPECIFIED.

TYPICAL SECTION SIDEWALK DETAIL

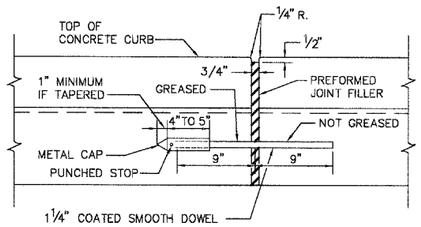
P.C. CONCRETE SIDEWALKS



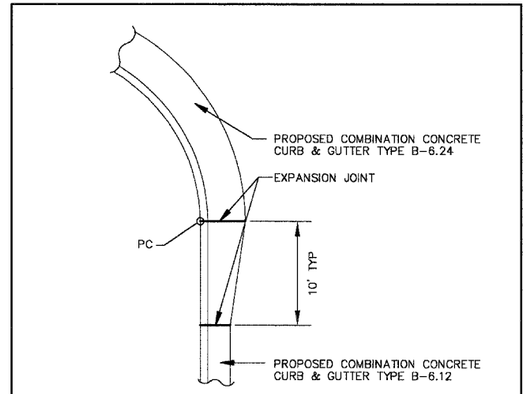
SAWED CONTRACTION JOINT DETAIL



REINFORCING CURB & GUTTER OR SIDEWALK INSTALLED OVER TRENCH

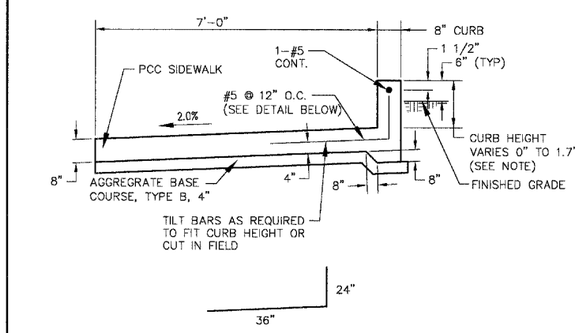


CURB EXPANSION JOINT DETAIL



CURB AND GUTTER TRANSITION DETAIL

(N.T.S.)



NOTE: TAPER CURB HEIGHT FROM 0" TO 1.7' WITHIN 8.5' TRANSITION (5:1 SLOPE)

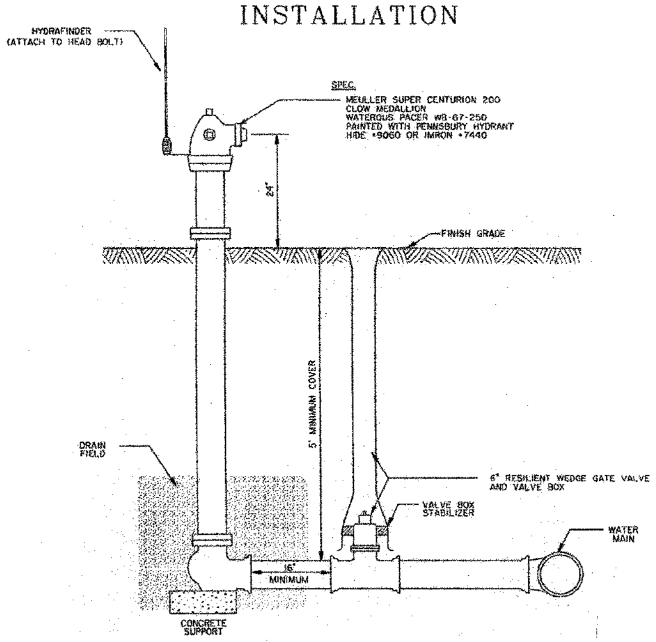
PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH SPECIAL DETAIL

(N.T.S.)

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHEET NO.
336	CONTRACT NO. 83782	KANE	268	16
SPECIAL DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

STD. DRW. NO.
DATE : 1-11-01

TYPICAL HYDRANT INSTALLATION



NOTES:

1.) THE NOZZELS SHALL NOT BE CLOSER THAN 2 FEET FROM BACK OF CURB OR SIDEWALK.

2.) ALL JOINTS FROM THE HYDRANT TO THE MAIN SHALL BE RESTRAINED WITH MEGA-LUG OR UNI-FLANGE RESTRAINING DEVICE OR APPROVED EQUAL IN ACCORDANCE WITH THE CITY CODE OR TIE THE AUXILIARY VALVE TO THE TEE AND THE HYDRANT TO THE AUXILIARY VALVE WITH MINIMUM ¾" STAINLESS STEEL RODS, NUTS AND WASHERS

3.) ALL BELOW GRADE FACTORY INSTALLED BOLTS SHALL BE STAINLESS STEEL GRADE 304

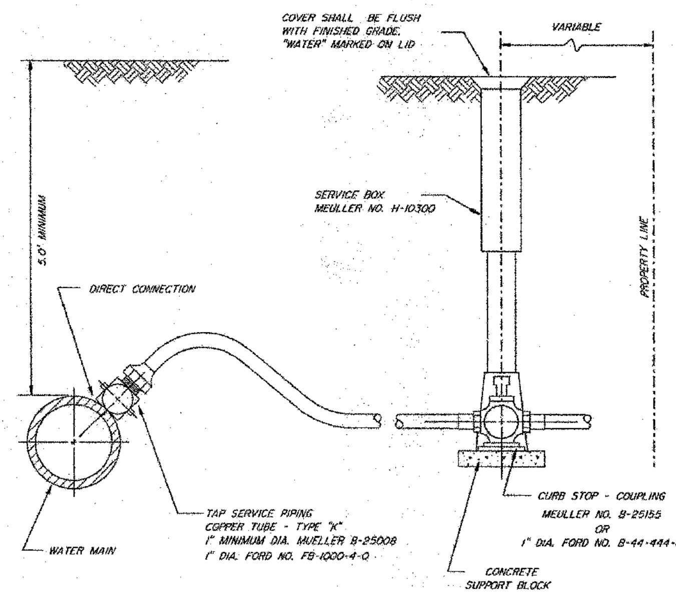
4.) HYDRANTS MAY ONLY HAVE ONE (1) EXTENSION KIT.

CITY OF ST. CHARLES

FILE: IDTL\HYDRANTS.DTL

STD. DRW. NO. 16.44.070.H
DATE : 03-09-1999

SERVICE TAP AND CONNECTION



NOTES:

1.) EVERY WATER SERVICE LINE FROM THE CORPORATION TO THE CURB STOP SHALL BE INSPECTED BY THE WATER DIVISION FOREMAN OR HIS DESIGNEE. ALL INSPECTIONS SHALL BE OPEN TRENCH. CONTRACTORS REQUESTING SERVICE LINE INSPECTIONS SHALL CONTACT THE WATER DIVISION 48 HOURS PRIOR TO REQUESTED INSPECTION TIME.

CITY OF ST. CHARLES

FILE: IDTL\WATER\SERVTAP.DTL

STD. DRW. NO. 16.44.070.04
DATE : 04-21-1999

WATER MAIN RESTRAINT

Minimum Restrained Lenghts (in feet) back from both sides of fitting

Fitting type/nominal size		4"	6"	8"	10"	12"	16"
90 Degree Bend		17	25	32	38	45	59
45 Degree Bend		7	10	13	16	19	24
22.5 Degree Bend		3	5	6	8	9	12
11.25 Degree Bend		2	2	3	4	4	6
Dead End		39	55	73	87	103	134
Top Side Vertical Offset * (45 Degree)		16	23	30	36	43	55
Bottom Side Vertical Offset * (45 Degree)		4	6	8	10	11	15
Tee Run X Branch **	6" by	1	17				
Tee Run X Branch **	8" by	1	5	34			
Tee Run X Branch **	10" by	1	1	24	49		
Tee Run X Branch **	12" by	1	1	15	41	65	
Tee Run X Branch **	16" by	1	1	1	26	52	95
Reducer ***	6" by	28					
Reducer ***	8" by	52	30				
Reducer ***	10" by	71	54	29			
Reducer ***	12" by	90	75	55	51		
Reducer ***	16" by	125	115	97	94	54	

* Vertical offset with MINIMUM 10' of solid pipe between upper and lower bend.

** Tee with MINIMUM 10' solid pipe on both sides of run. Number indicates length of branch to be restrained.

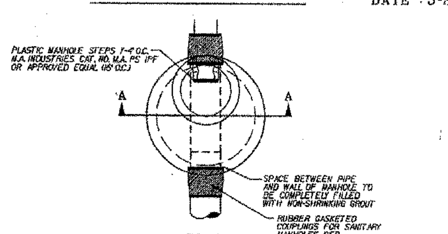
*** Length back from Large Eng of Reducer.

CITY OF ST. CHARLES

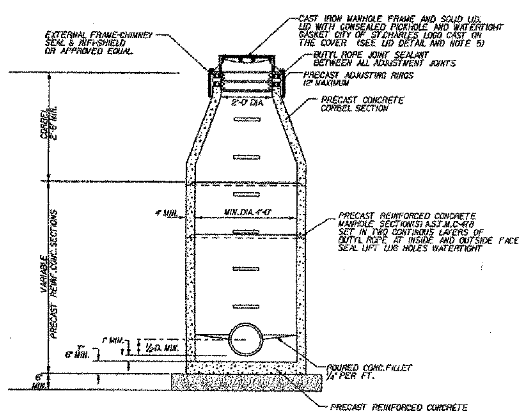
FILE: IDTL\WATER\RESTRAIT.DTL

SANITARY MANHOLE

STD. DRW. NO. 16.44.060.J
DATE : 5-2-02



PLAN

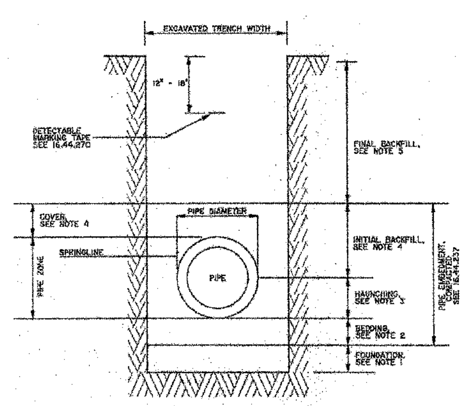


SECTION A-A

1. PROVIDE CA-6 COMPACTED OR CA-7 AGGREGATE BACKFILL AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
2. CONCRETE FILLETS SHALL BE MADE WITH ADDITIONAL MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RINGS (OR TOP OF STRUCTURE)
3. INSTALL MANHOLE IN ACCORDANCE WITH ASTM C891.
4. MORTAR SHALL NOT BE USED TO DRESS UP INTERIOR JOINTS.
5. NEENAH FOUNDRY C.CAT.# R-1712-B, E. JORDAN IRON WORKS CO. CAT.# 1051-3 (EXTRA HEAVY DUTY COVER OR APPROVED EQUAL IN PAVED AREAS IN OTHER AREAS USE R-1772-B (NEENAH), 1022-1 (MED. COVER) (E. JORDAN), IN NON-PAVED AREAS SET FRAME IN BUTYL ROPE.
6. WHEN MANHOLE IS 12' OR LESS, T = 6" WHEN MANHOLE DEPTH IS OVER 12', T = 10"

CITY OF ST. CHARLES

SANITARY SEWER TRENCH CROSS-SECTION



NOTES:

1.) FOUNDATION IS REQUIRED WHEN DEEMED NECESSARY BY THE ENGINEER.

2.) BEDDING SHALL CONFIRM TO IDOT GRADATION CA-7 OR CA-11 IN ACCORDANCE WITH ASTM 2321 CLASS I. THICKNESS SHALL BE EQUAL TO ¼ OF PIPE DIAMETER BUT SHALL NOT BE LESS THAN 4" IN EARTH EXCAVATION AND 6" IN ROCK EXCAVATION. COMPACTED.

3.) HAUNCHING SHALL BE IDOT CA-7 OR CA-11 IN ACCORDANCE WITH ASTW 2321 CLASS I, COMPACTED.

4.) INITIAL BACKFILL SHALL BE IDOT CA-6 OR CA-11 IN ACCORDANCE WITH ASTM 2321 CLASS I COMPACTED TO A MINIMUM COVER OF 12".

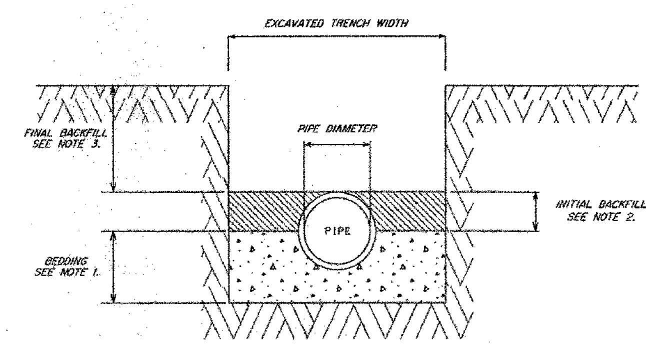
5.) FINAL BACKFILL UNDER HARDSURFACED AREAS SHALL BE IDOT FA-2 (AG-LIME IS NOT PERMITTED) COMPACTED IN 8"-9" LIFTS TO 95% MODIFIED PROCTOR DENSITY PER ASTM D-15557.

CITY OF ST. CHARLES

file: IDTL\SANITARY\TRENCHX.DTL

WATER MAIN TRENCH CROSS-SECTION

(TYPE FIVE LAYING CONDITION PER ANSI/AWWA C600 / A21.50 SECTION 3.3.7)



NOTES:

1.) BEDDING SHALL CONSIST OF COMPACTED GRANNULAR MATERIAL FA-2 FROM A MINIMUM 4 INCHES BELOW THE PIPE TO THE CENTERLINE OF THE PIPE. BEDDING SHALL BE COMPACTED TO A MINIMUM OF 90% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-2049.

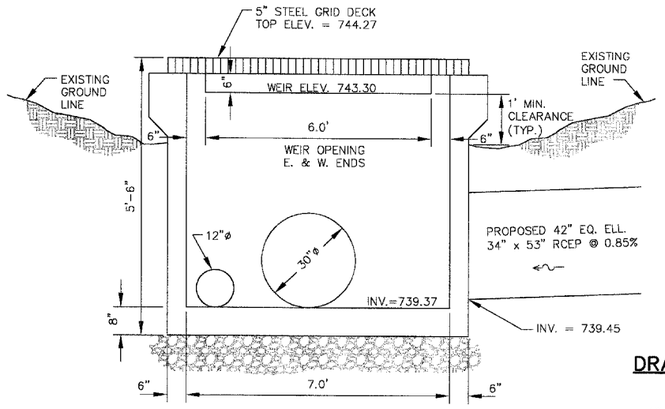
2.) INITIAL BACKFILL SHALL BE COMPACTED GRANNULAR MATERIAL (CA-6 OR FA-6) WHEN THE PIPE TRENCH LIES UNDER OR WITHIN TWO FEET OF A CURB OR HARDSURFACED AREA. SELECT EXCAVATED MATERIAL MAY BE USED WHEN THE PIPE TRENCH IS NOT UNDER OR WITHIN TWO FEET OF A CURB OR HARDSURFACED AREA. INITIAL BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-2049.

3.) FINAL BACKFILL UNDER HARDSURFACED AREAS OF WHERE THE TRENCH LIES WITHIN TWO FEET OF CURB OR HARDSURFACED AREA SHALL BE IDOT FA-2 (AG-LIME IS NOT PERMITTED) COMPACTED. MINIMUM DEPTH OF FIVE (5) FEET.

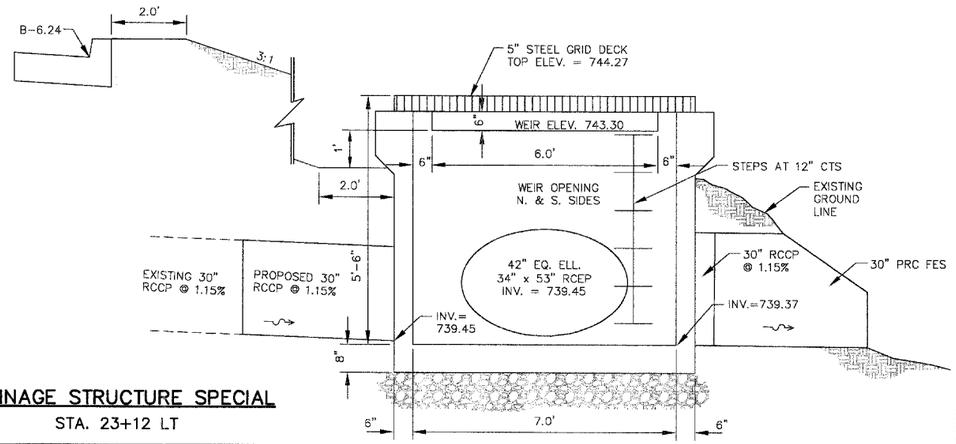
CITY OF ST. CHARLES

FILE: IDTL\WATER\TRENCHX.DTL

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV	KANE	268	1
	STATE SECTION 83782			
SPECIAL DETAILS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



FRONT ELEVATION
LOOKING EAST

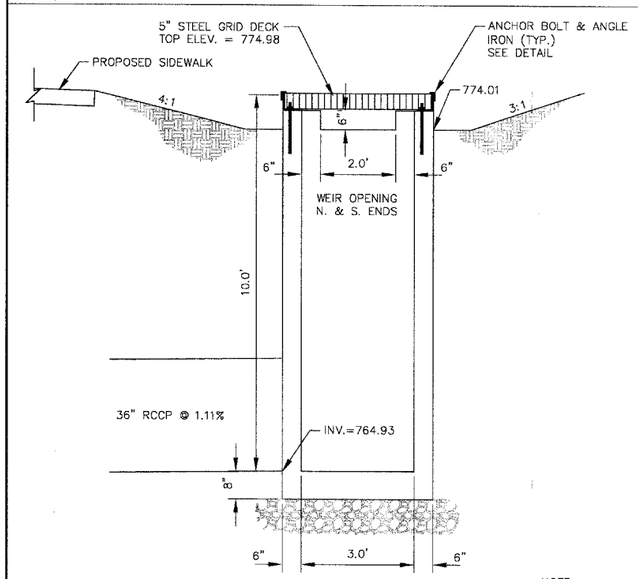


SIDE ELEVATION

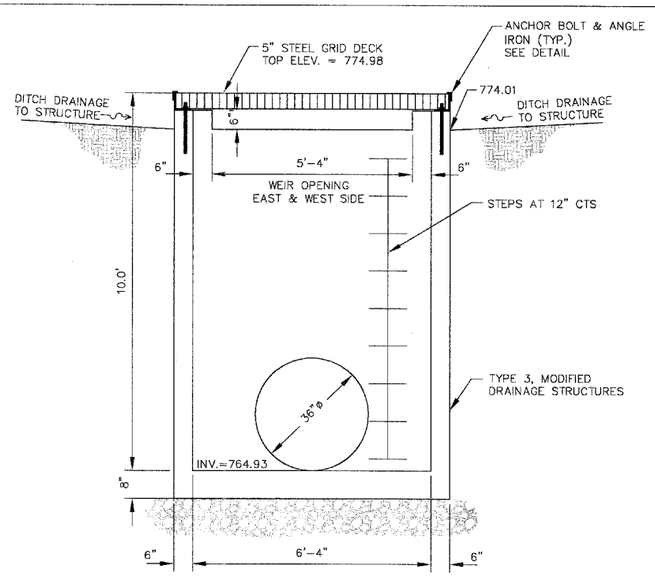
DRAINAGE STRUCTURE SPECIAL

STA. 23+12 LT

SEE STRUCTURAL DETAIL SHEETS FOR FURTHER DETAIL (3 SHEETS)



FRONT ELEVATION

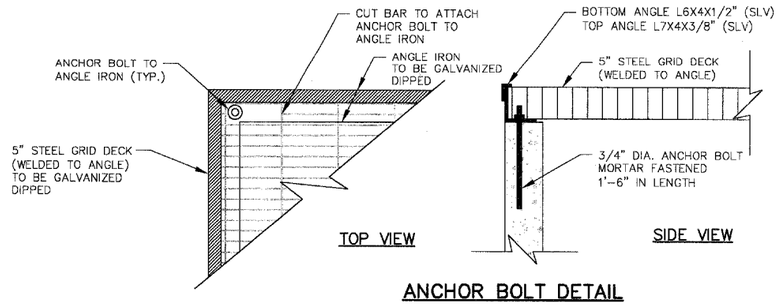


SIDE ELEVATION

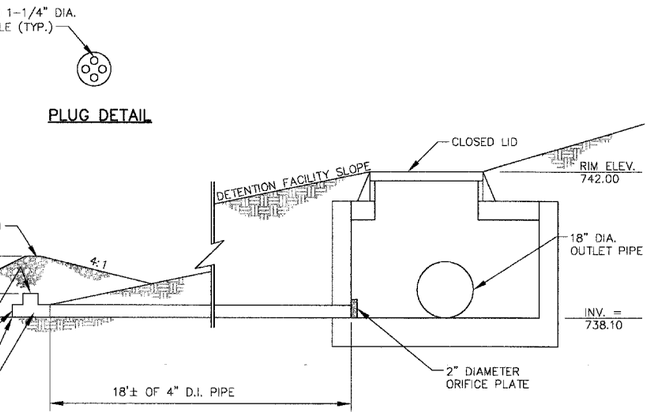
NOTE:
REINFORCEMENT AND STEPS PER IDOT STANDARD 602101

DRAINAGE STRUCTURE, TYPE 3 (MODIFIED)

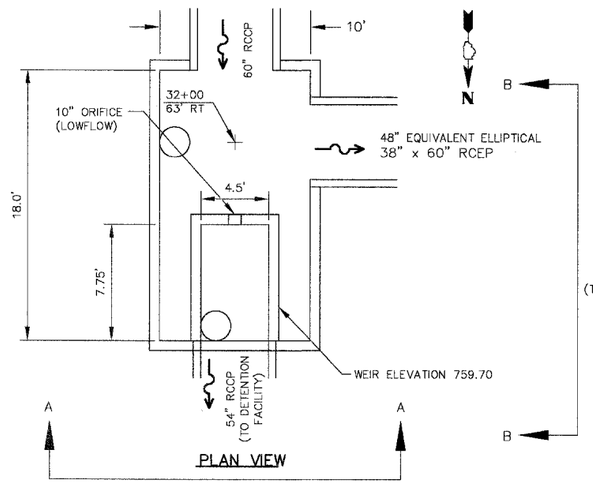
STA. 44+40 RT

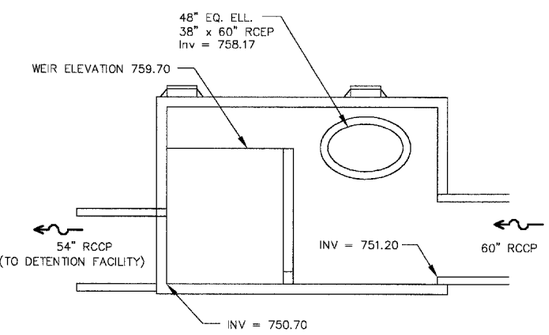


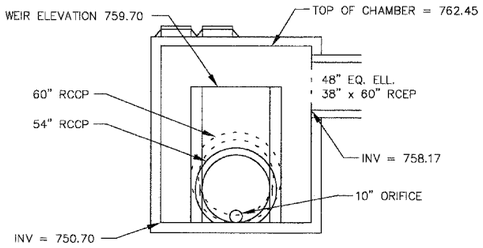
ANCHOR BOLT DETAIL



PERFORATED RISER DETAIL







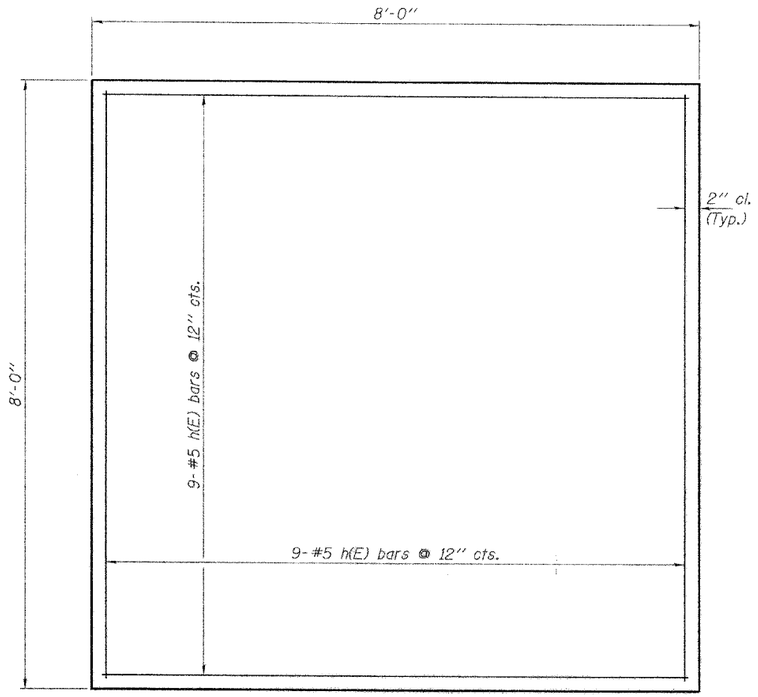
SPLIT FLOW JUNCTION STRUCTURE

STA. 32+00 RT.

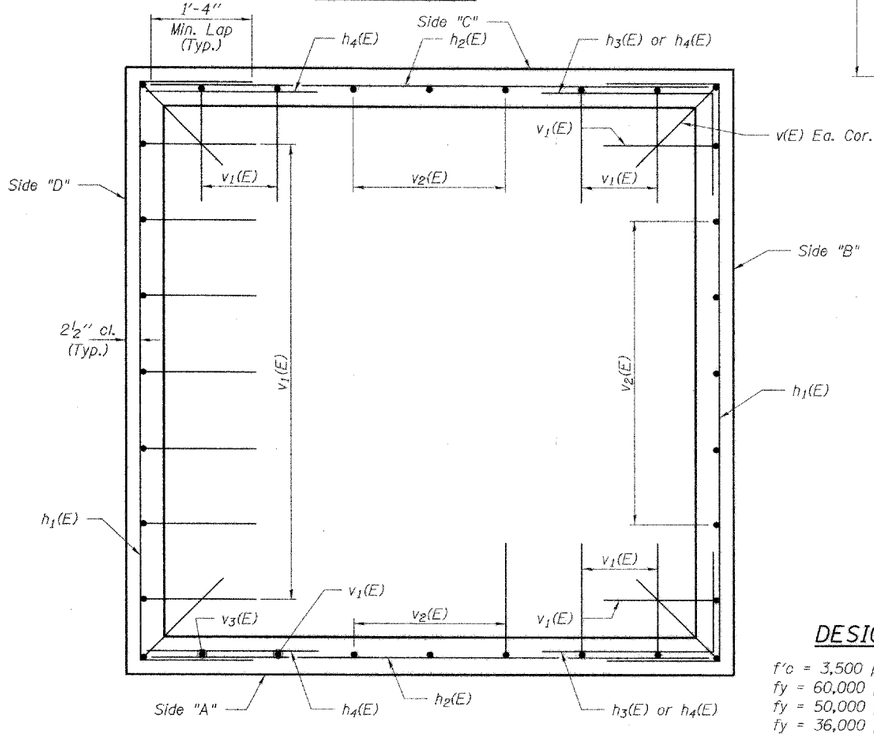
SEE STRUCTURAL DETAIL SHEETS FOR FURTHER DETAIL (3 SHEETS)

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	165
SPECIAL DETAIL				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008)		

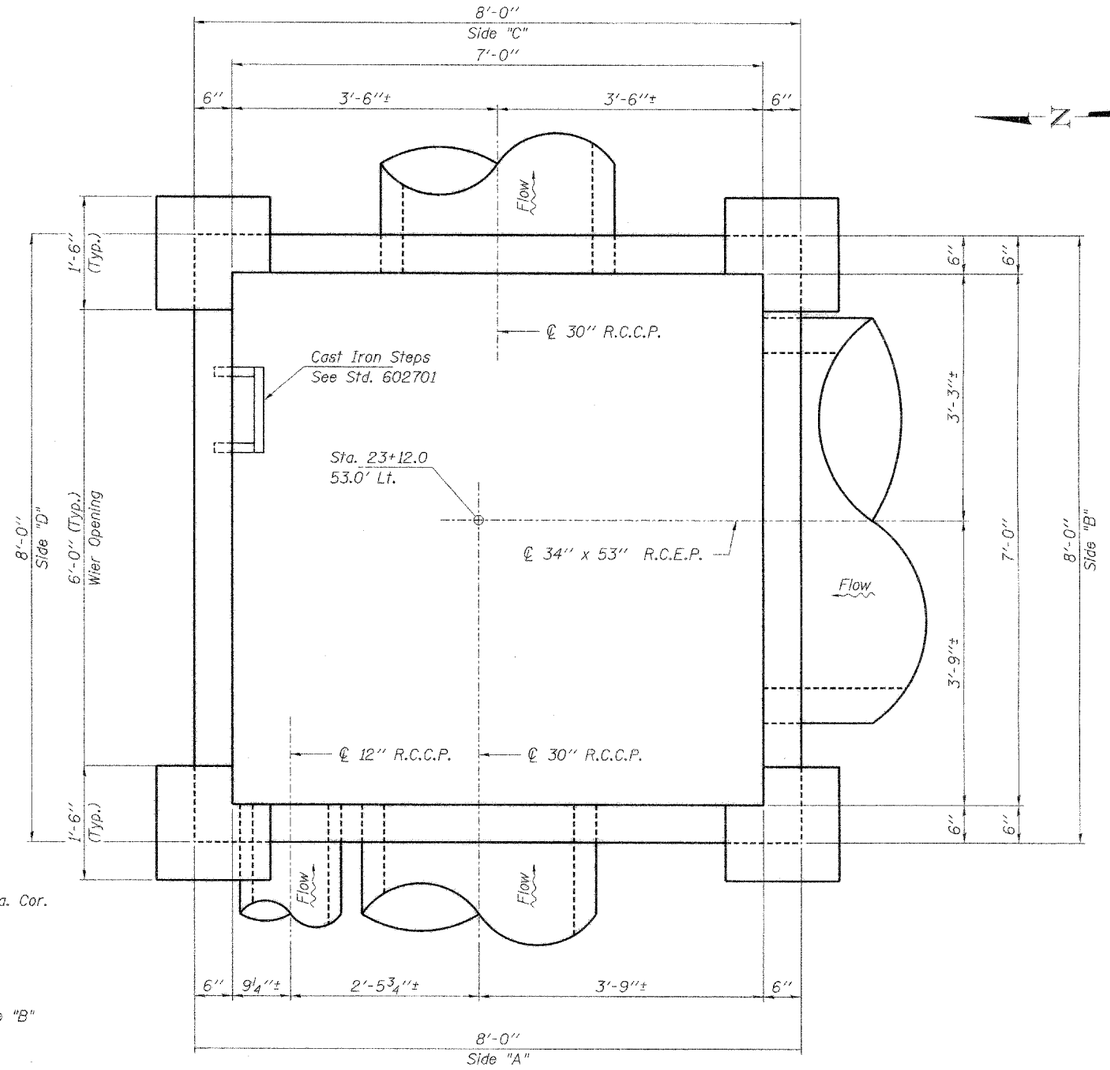
Sheet 1 of 3



BOTTOM SLAB



TYPICAL WALL SECTION



TOP PLAN

GENERAL NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
All reinforcement bars shall be epoxy coated.
Reinforcement Bars that interfere with concrete pipes shall be bent or cut off to provide adequate clearance, as approved by the Engineer.
Anchor Bolts shall be A307.
Class SI concrete shall be used throughout.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement Bars)
fy = 50,000 psi (WT Section)
fy = 36,000 psi (L Section)
Max. Soil Pressure under footing = 0.9 ksf
Loading HS 20-44

Steven W. Megginson 1-11-05
ILLINOIS STRUCTURAL NO. 6064

STEVEN W. MEGGINSON 6064 LICENSED STRUCTURAL ENGINEER OF SPRINGFIELD ILLINOIS
Expires 11-30-06

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
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217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637

Account Number 03-05-0181-1
Date: 01-11-05
DESIGNED: S.M.S. | CHECKED: S.W.M. | DRAWN: D.B.

DRAINAGE STRUCTURE SPECIAL

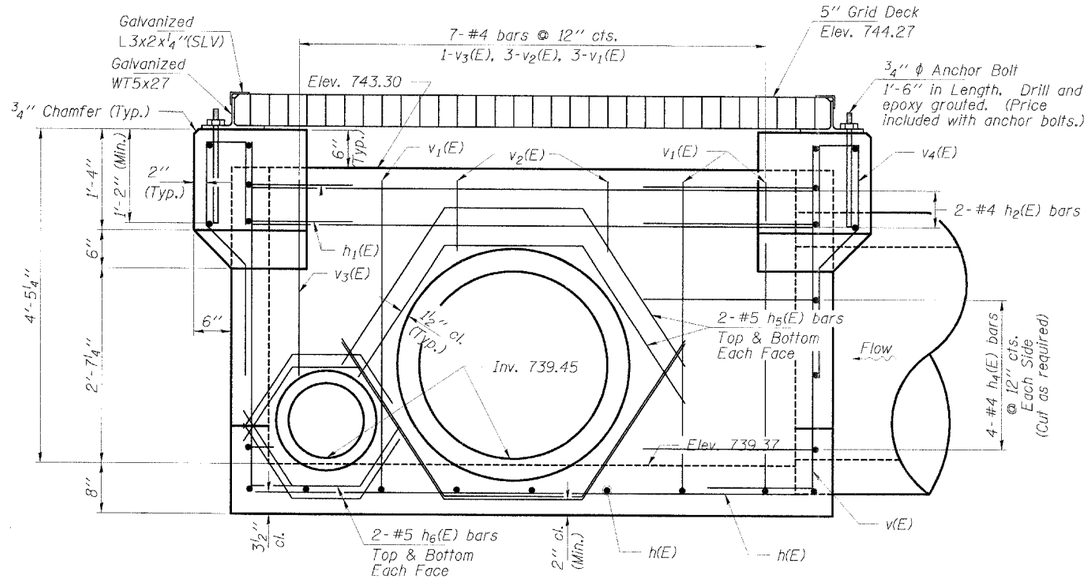
SECTION 99-00243-00-PV

RANDALL ROAD

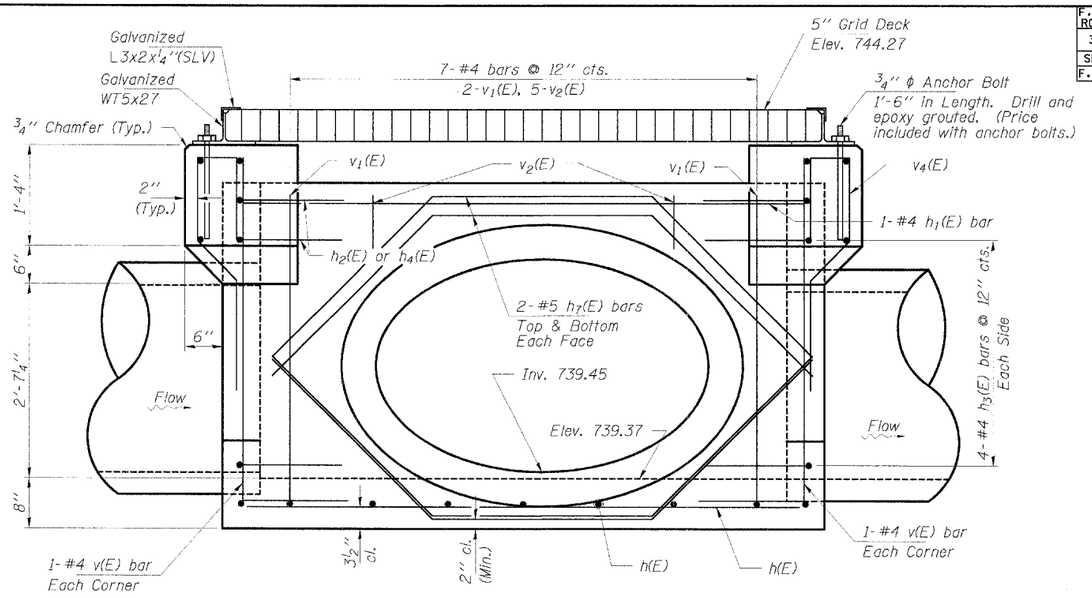
KANE COUNTY

STATION 23+12

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	166
SPECIAL DETAIL				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



SIDE "A"



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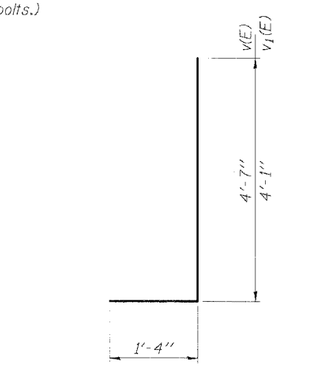
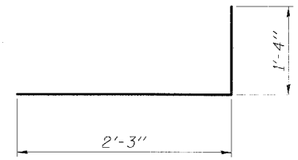
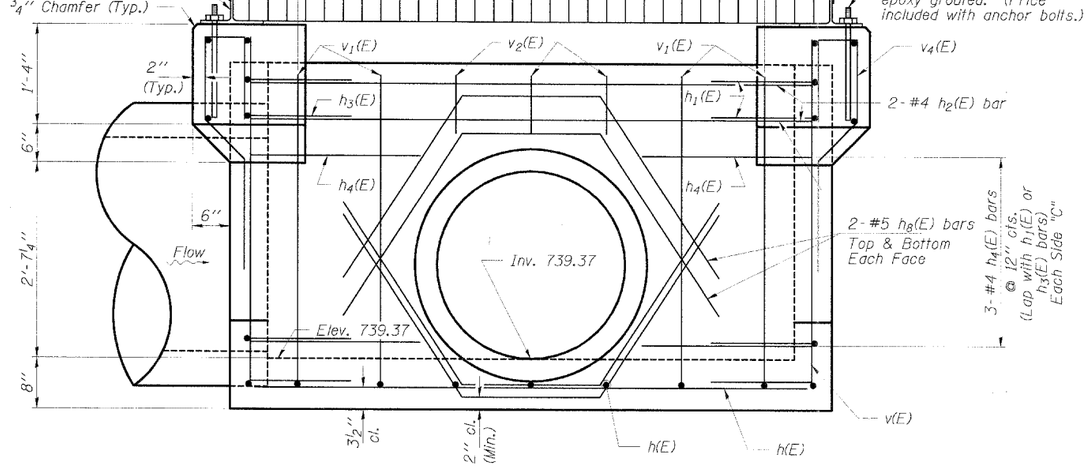


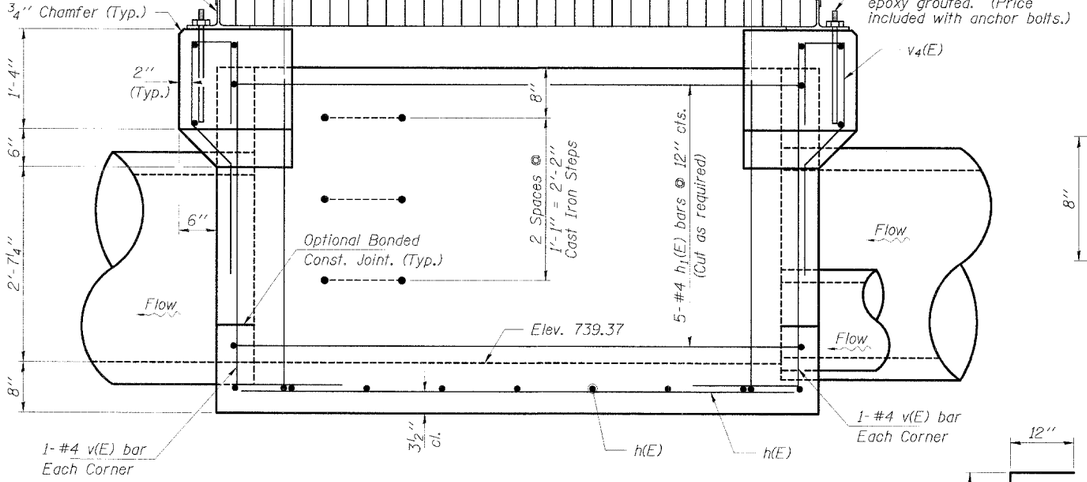
v(E) & v1(E) BARS



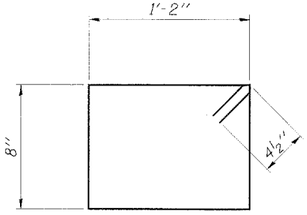
h3(E) BARS



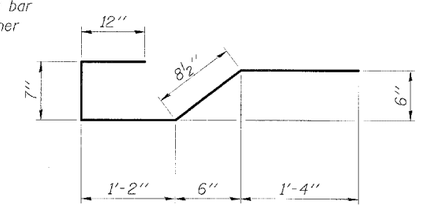
SIDE "C"



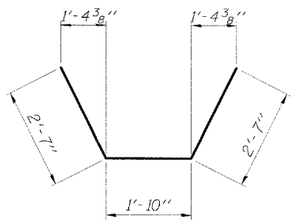
SIDE "D"



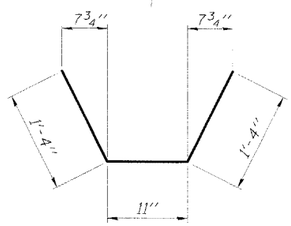
s(E) BAR



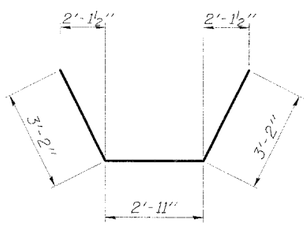
v4(E) BAR



h5(E) BAR



h6(E) BAR



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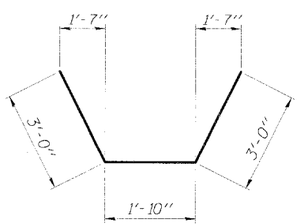

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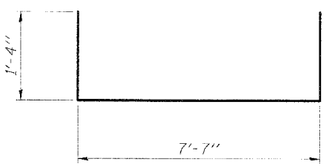

h1(E) BAR

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217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-01B1-1
Date: 01-11-05
DESIGNED: S.M.S. | CHECKED: S.W.V. | DRAWN: D.H.

DRAINAGE STRUCTURE SPECIAL

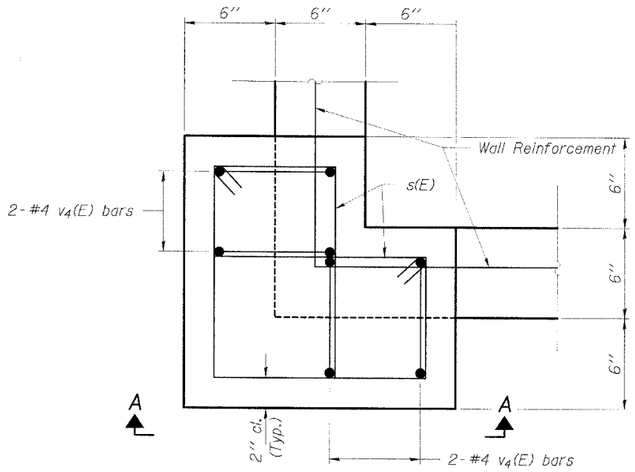
SECTION 99-00243-00-PV

RANDALL ROAD

KANE COUNTY

STATION 23+12

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	167
SPECIAL DETAIL				
F.H.W.A. REG. 5 ILLINOIS	PROJECT F-0336(008)			



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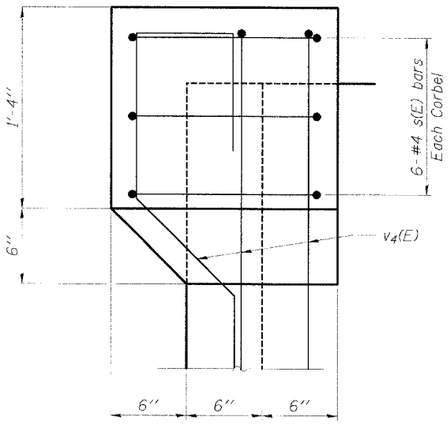
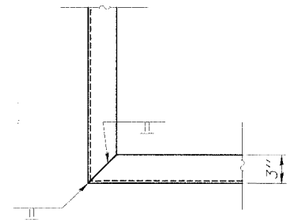
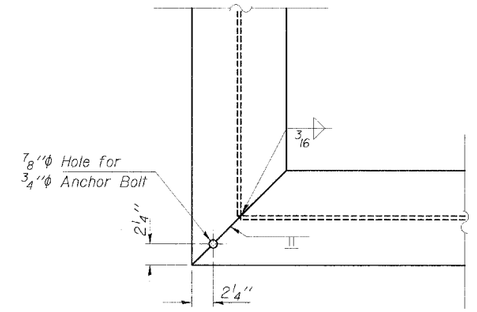


SECTION A-A

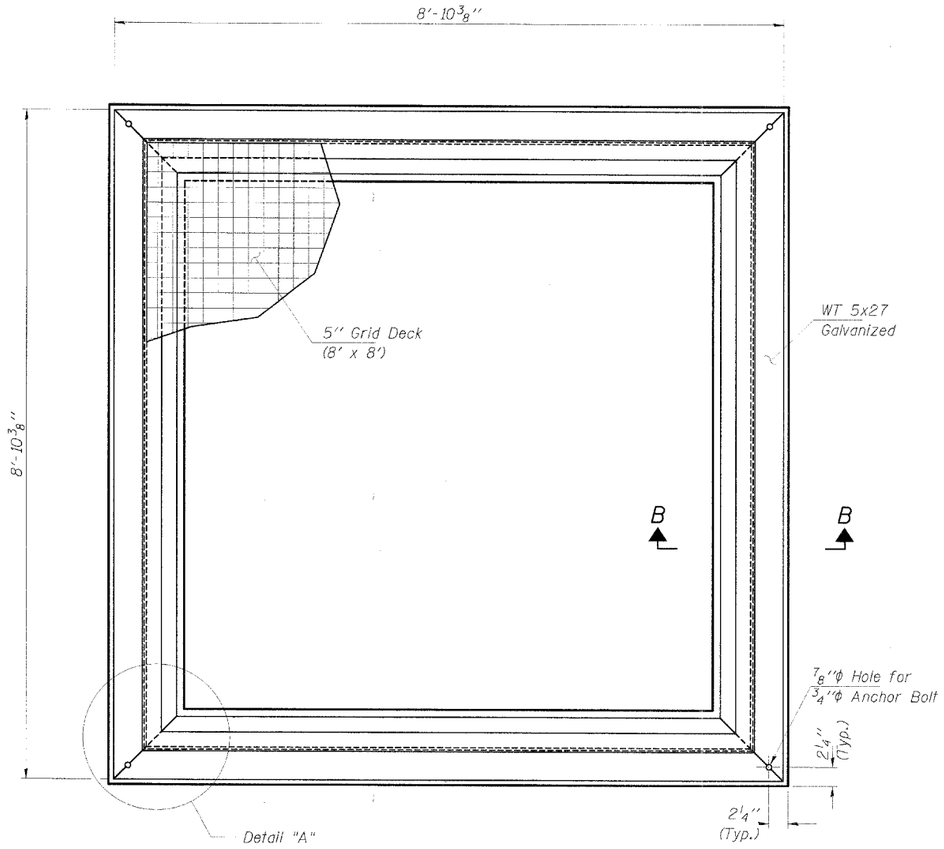


L 3 x 2 x 1/4

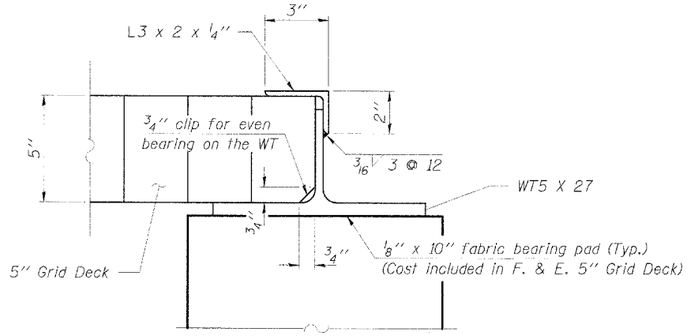


WT 5 x 27

DETAIL "A"



GRID DECK ASSEMBLY



SECTION B-B

Notes:

Cost of the WT, angle, anchor bolts, and fabric bearing pad, shall be included in the price of the "F. & E. 5" Grid Deck".

The grid deck shall conform to the requirements of A.S.T.M. A-709 Grade 50 material. The section shall have a minimum section modulus of 4.2 in^3/ft (top and 5.2 in^3/ft (bottom).

Steel Angles shall conform to the requirements of A.A.S.H.T.O. designation M-270 Grade 36. WT shall conform to requirements of A.A.S.H.T.O. Designation M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. designation M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. designation M-232.

All WT sections, grid deck, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-385 and A.A.S.H.T.O. M-111. Galvanized members shall not be painted.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

MIN. BAR LAP

#4 = 1'-4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	18	#5	7'-8"	
h_1(E)	6	#4	10'-3"	
h_2(E)	4	#4	7'-7"	
h_3(E)	8	#4	3"-7"	
h_4(E)	14	#4	2'-3"	
h_5(E)	8	#5	7'-0"	
h_6(E)	8	#5	3'-7"	
h_7(E)	8	#5	9'-3"	
h_8(E)	8	#5	7'-10"	
s(E)	24	#4	4'-5"	
v(E)	4	#4	5'-11"	
v_1(E)	16	#4	5'-5"	
v_2(E)	11	#4	9"	
v_3(E)	1	#4	2'-6"	
v_4(E)	16	#4	4'-10"	
Concrete Structures			Cu. Yd.	3.6
Reinf. Bars, Epoxy Coated			Pounds	680
Furnishing & Erecting 5" Grid Deck			Sq. Ft.	64
Cast Iron Steps			Each	3

HLR
Account Number 03-05-0181-1
Date: 04-05
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
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P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.B.

DRAINAGE STRUCTURE SPECIAL

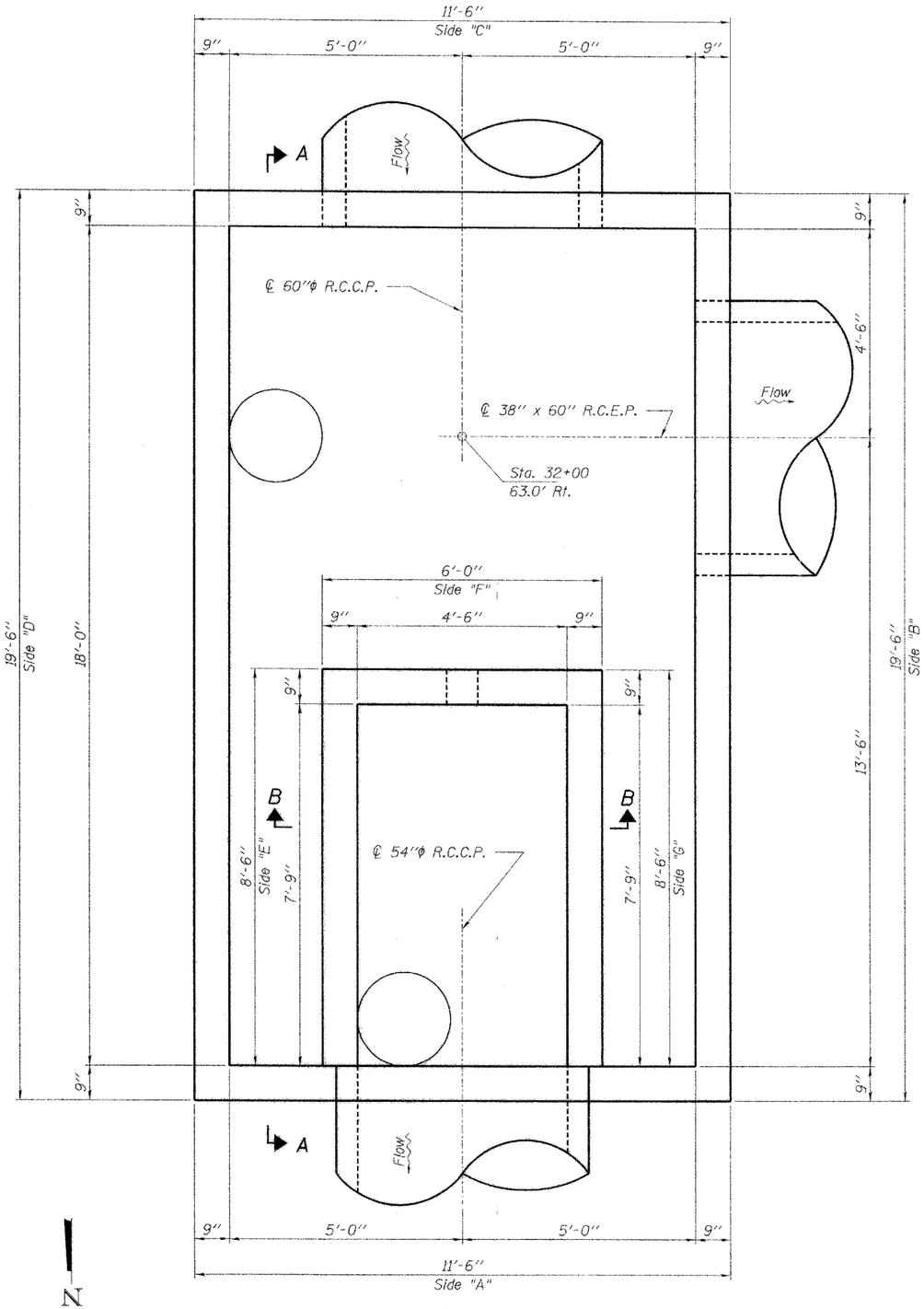
SECTION 99-00243-00-PV

RANDALL ROAD

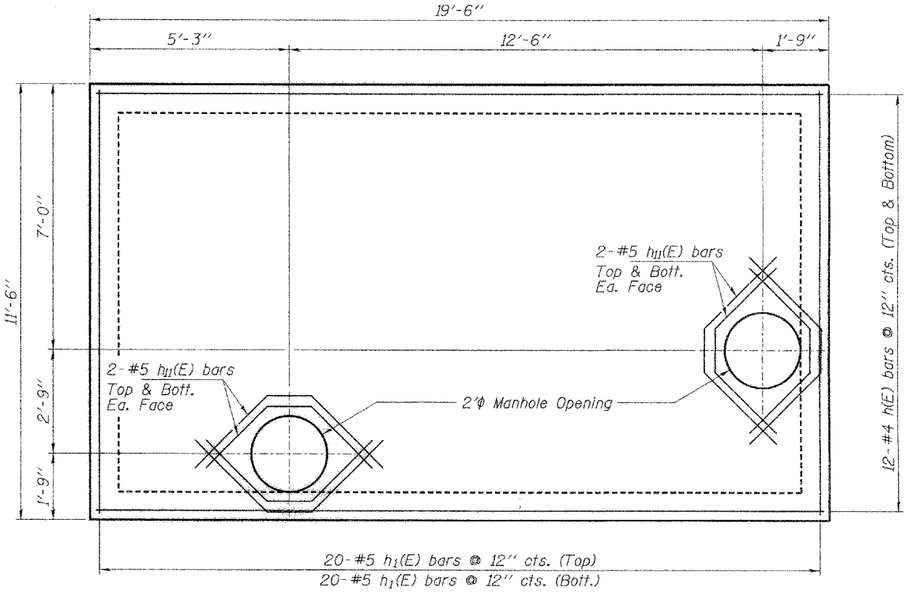
KANE COUNTY

STATION 23+12

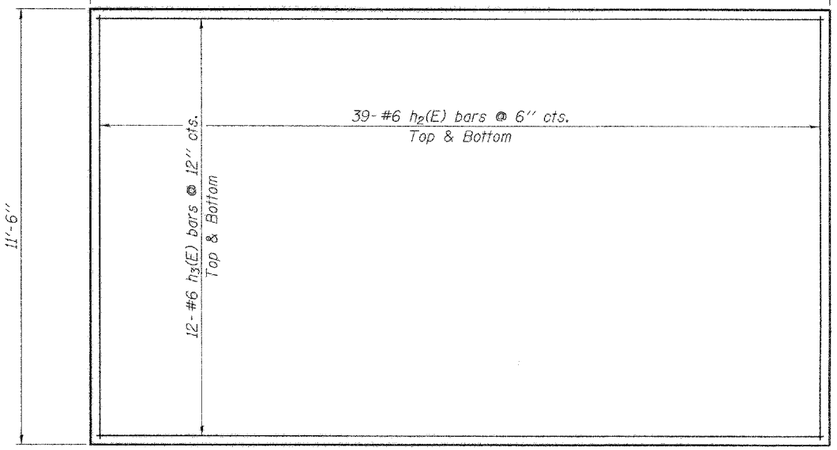
F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 93782	KANE	268	168
SPECIAL DETAIL				
F.H.W.A. REG.5 ILLINOIS	PROJECT F-0336(008)			



PLAN



TOP SLAB



BOTTOM SLAB

GENERAL NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

All reinforcement bars shall be epoxy coated.

Reinforcement Bars that interfere with concrete pipes shall be bent or cut off to provide adequate clearance, as approved by the Engineer.

Class SI Concrete shall be used throughout.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement Bars)
Max. Soil Pressure under footing = 1.5 ksf
Loading HS 20-44

Steven W. Meggenson 1-11-05
ILLINOIS STRUCTURAL NO. 6064

STEVEN W. MEGGINSON 6064 LICENSED STRUCTURAL ENGINEER OF SPRINGFIELD ILLINOIS

Expires 11-30-06

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Civil & Structural Engineers
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Springfield, Illinois 62704
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Account Number 03-05-0181-1
Date: 01-11-05

DESIGNED: S.M.S. | CHECKED: S.W.M. | DRAWN: D.B.

SPLIT FLOW JUNCTION STRUCTURE

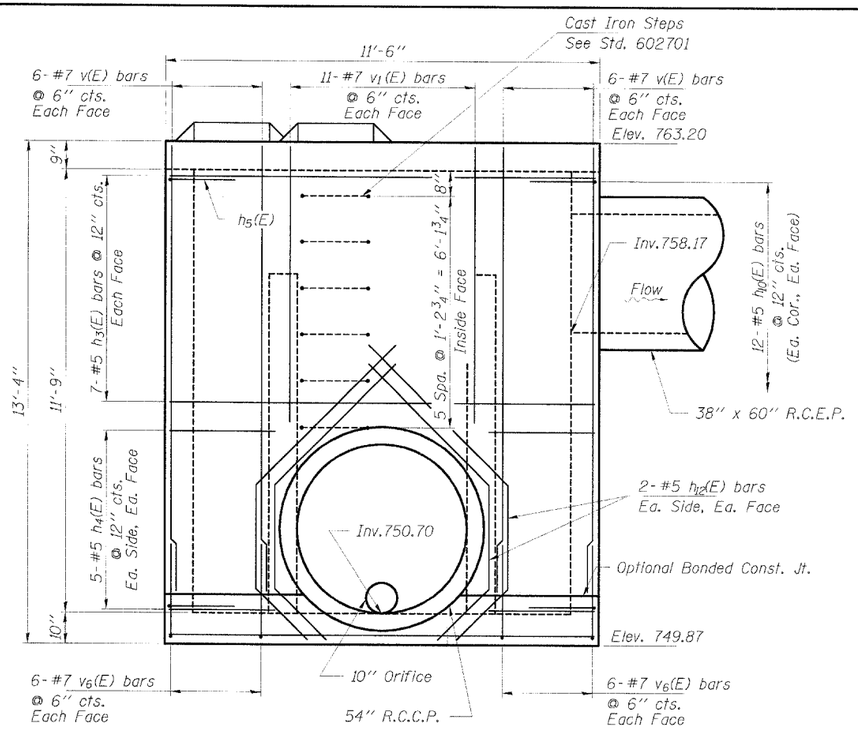
SECTION 99-00243-00-PV

RANDALL ROAD

KANE COUNTY

STATION 32+00

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	169
SPECIAL DETAIL				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



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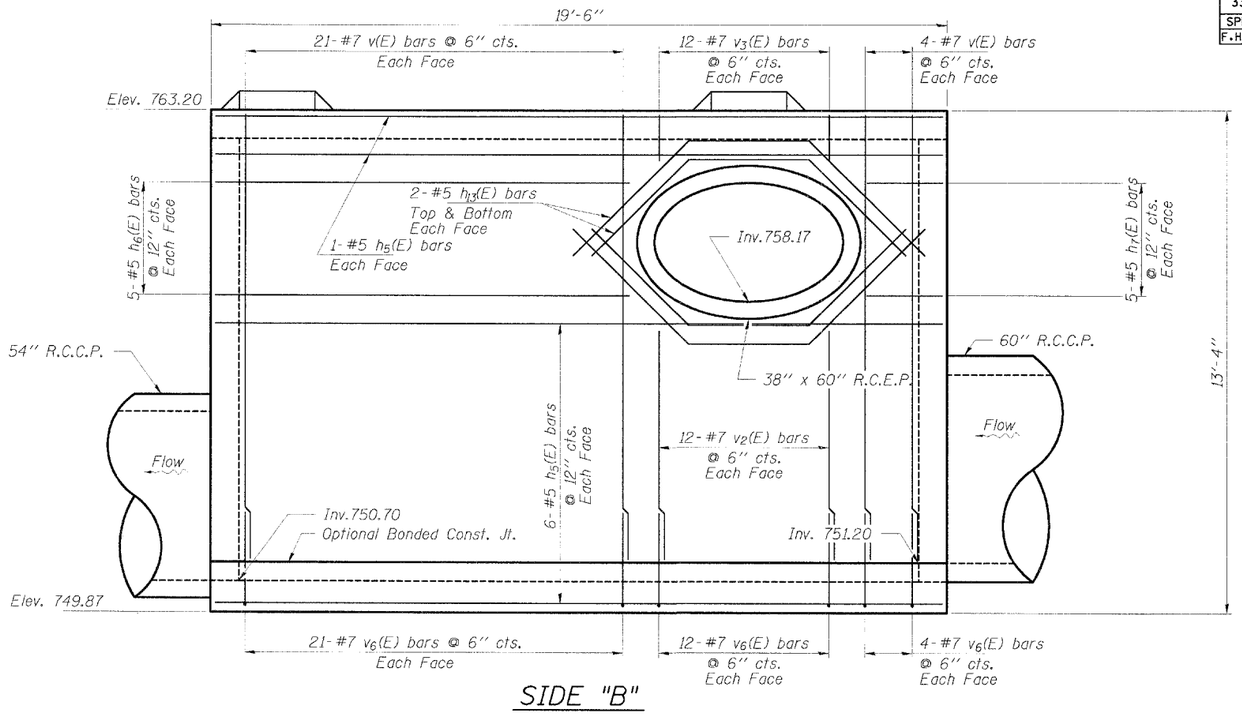

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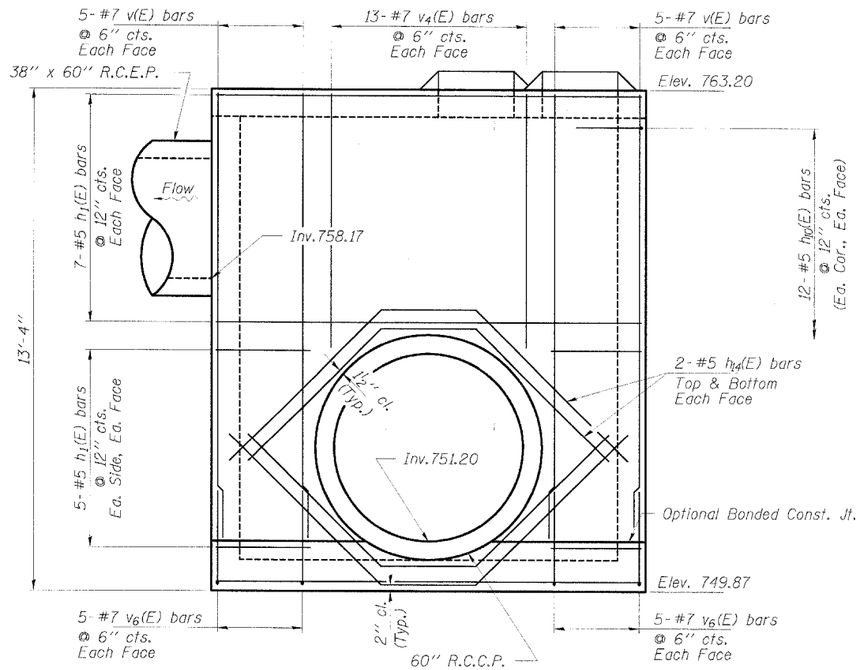

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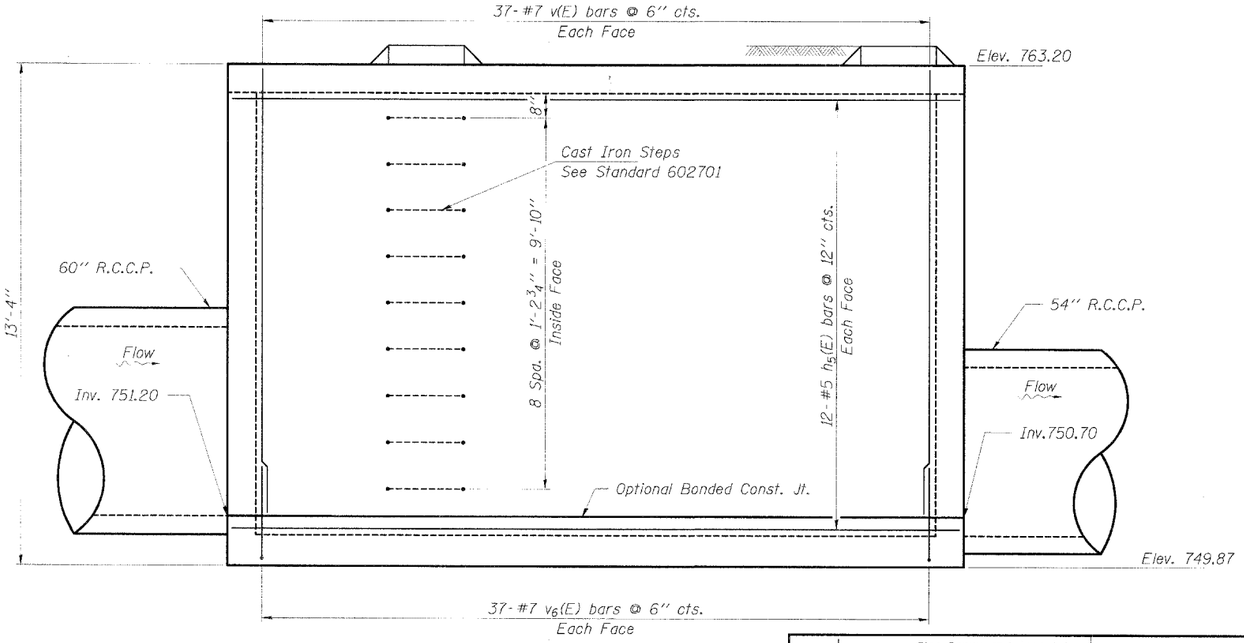


SIDE "D"

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 03-05-0181-1
Date: 0 - -05
DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.B.

SPLIT FLOW JUNCTION STRUCTURE

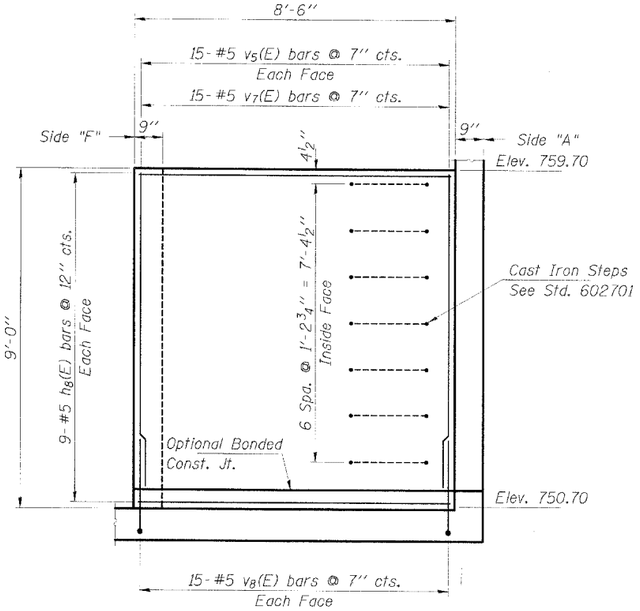
SECTION 99-00243-00-PV

RANDALL ROAD

KANE COUNTY

STATION 32+00

F.A. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
336	99-00243-00-PV STATE SECTION 83782	KANE	268	170
SPECIAL DETAIL				
F.H.W.A. REG. 5	ILLINOIS	PROJECT F-0336(008)		



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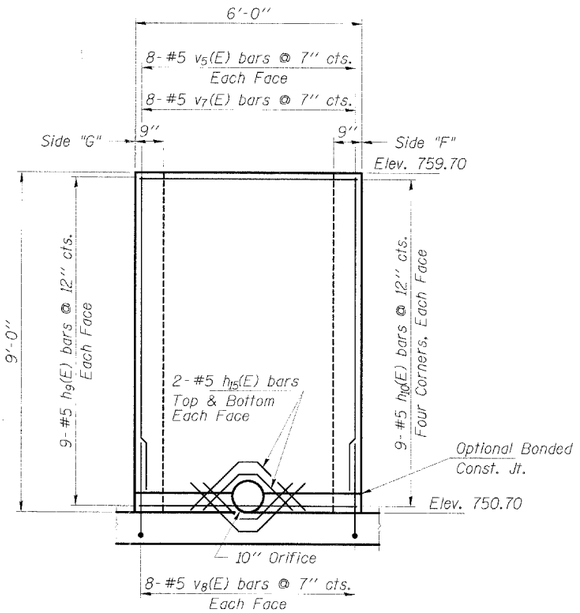

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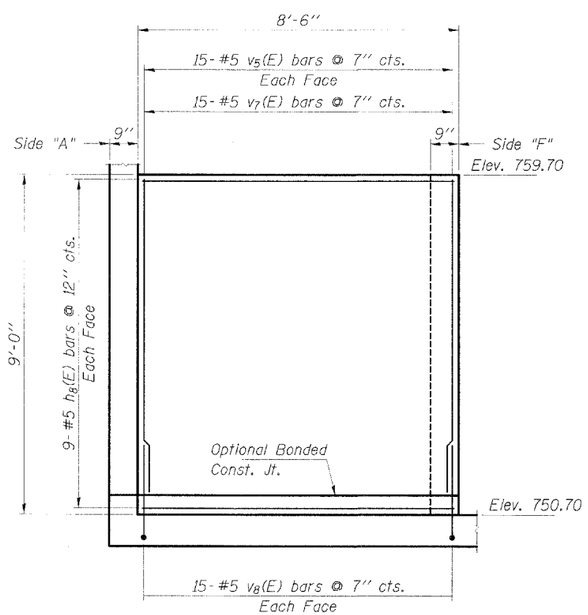

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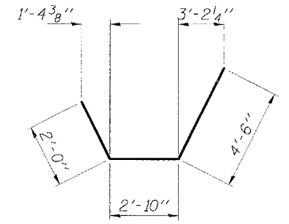
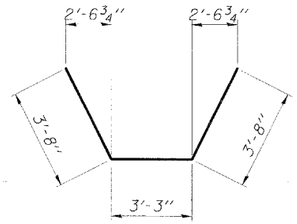
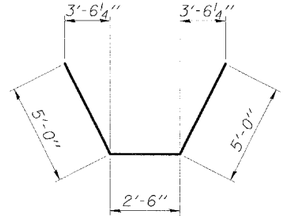


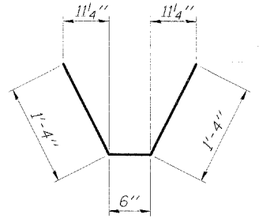
h_{12}(E) BAR



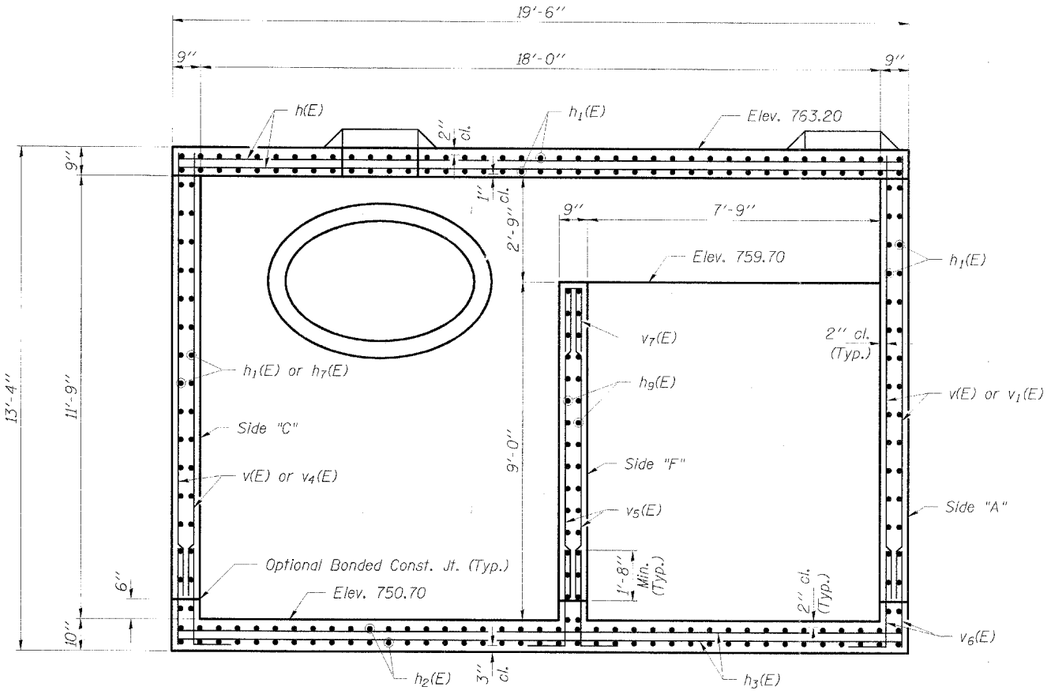
h_{13}(E) BAR



h_{14}(E) BAR



h_{15}(E) BAR



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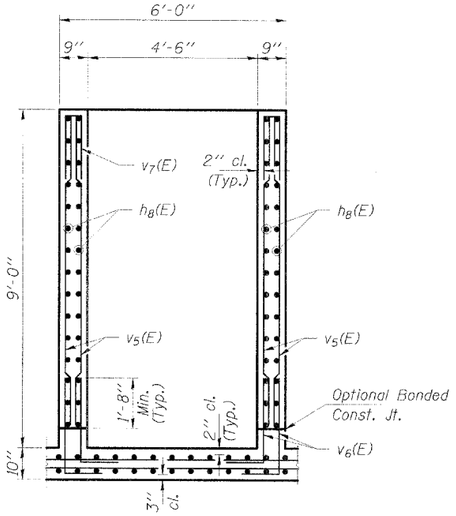

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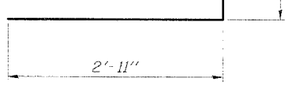
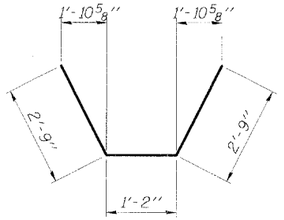
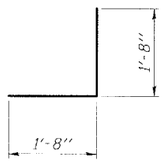


v_6(E) & v_8(E) BARS



h_{11}(E) BAR

v_7(E) BARS



h_{10}(E) BARS

MIN. BAR LAP
#5 = 1'-8"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	24	#4	19'-2"	
h_1(E)	68	#5	11'-2"	
h_2(E)	78	#6	19'-2"	
h_3(E)	24	#6	11'-2"	
h_4(E)	20	#5	2'-9"	
h_5(E)	38	#5	19'-2"	
h_6(E)	10	#5	10'-6"	
h_7(E)	30	#5	2'-6"	
h_8(E)	36	#5	8'-2"	
h_9(E)	18	#5	5'-8"	
h_{10}(E)	168	#5	3'-4"	
h_{11}(E)	16	#5	6'-8"	
h_{12}(E)	8	#5	9'-4"	
h_{13}(E)	8	#5	10'-7"	
h_{14}(E)	8	#5	12'-6"	
h_{15}(E)	8	#5	3'-2"	
v(E)	168	#7	11'-4"	
v_1(E)	22	#7	8'-3"	
v_2(E)	24	#7	7'-6"	
v_3(E)	24	#7	1'-3"	
v_4(E)	26	#7	6'-9"	
v_5(E)	76	#5	8'-4"	
v_6(E)	192	#7	4'-7"	
v_7(E)	38	#5	3'-9"	
v_8(E)	76	#5	4'-7"	
Concrete Structures			Cu. Yd.	35.6
Reinf. Bars, Epoxy Coated			Pounds	14,100
Cast Iron Steps			Each	22

HLR
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801 S. Durkin Drive
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P.O. Box 1036
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Account Number 03-05-0181-1
Date: 0 - -05
DESIGNED: S.M.S. CHECKED: S.W.M. DRAWN: D.B.

SPLIT FLOW JUNCTION STRUCTURE

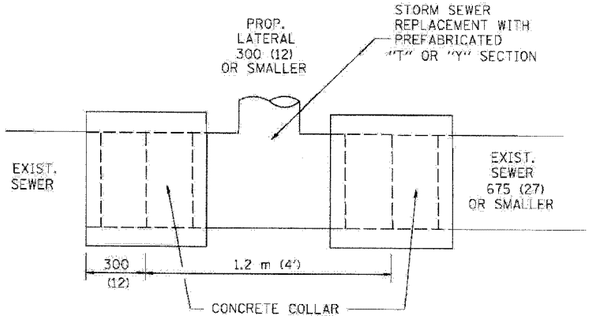
SECTION 99-00243-00-PV

RANDALL ROAD

KANE COUNTY

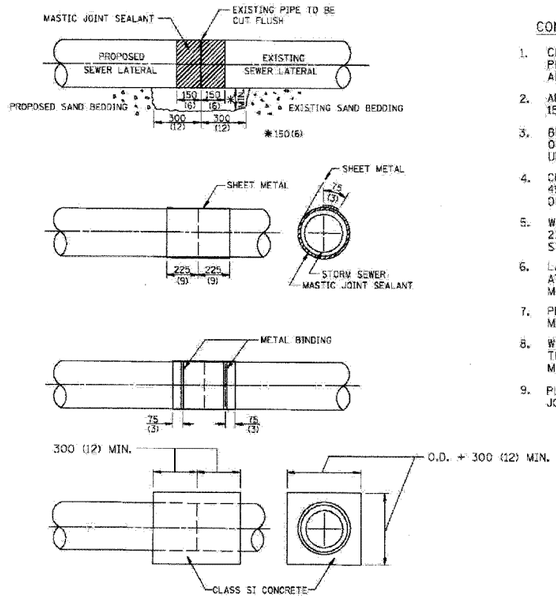
STATION 32+00

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER

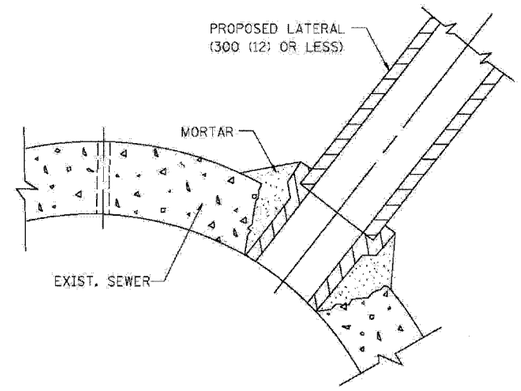


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 150 (6) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 300 x 150 (12 x 6) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 450 (18) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 75 (3) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 225 (9) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 75 (3) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

I THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER SEE DETAIL "A" AND "B".

B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

SCALE: NONE

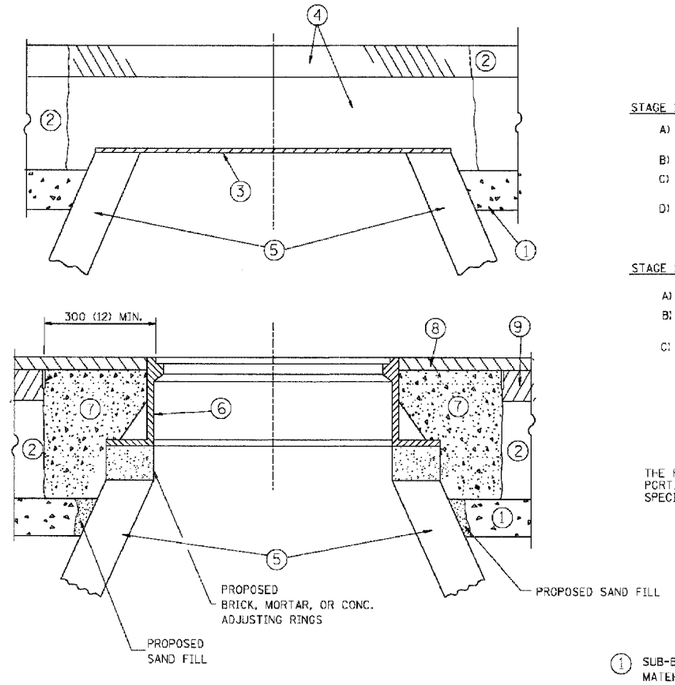
DRAWN BY: CADD

DATE: 10/18/2002

CHECKED BY:

BD500-01 (BD-7)

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
DISTRICT 1 STANDARDS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 300 (12) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 900 (36) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 40 (1½) THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE BITUMINOUS MATERIAL AND CRUSHED STONE.

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

1. SUB-BASE GRANULAR MATERIAL
2. EXISTING PAVEMENT
3. 900 (36) DIAMETER METAL PLATE
4. PROPOSED CRUSHED STONE AND BITUMINOUS MATERIAL
5. EXISTING STRUCTURE
6. FRAME AND LID (SEE NOTES)
7. CLASS SI CONCRETE, BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL
8. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE
9. PROPOSED BITUMINOUS CONCRETE BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: FRAMES AND LIDS TO BE ADJUSTED, SPECIAL
EACH

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

REVISIONS	
NAME	DATE
R. SHAH	10/25/94
R. SHAH	01/30/95
R. SHAH	03/10/95
A. ABBAS	03/21/97
R. WIEDEMAN	05/14/04

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT
WITH MILLING

SCALE: NONE
DATE: 05/17/2004

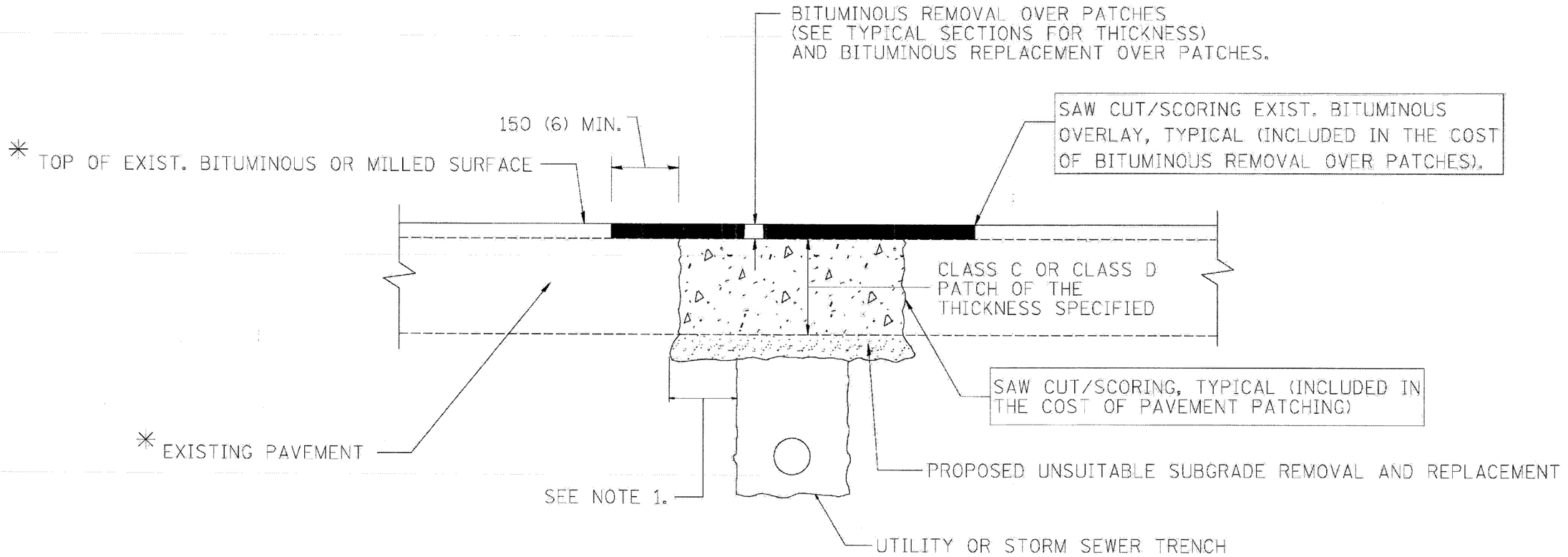
DRAWN BY
CHECKED BY

BD600-03 (BD-

PREVIOUS DATE 05/17/

05/17/2004
K:\d1ststa\bd08.dgn
VP-BDB

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS.

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 300 (12) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE SPECIAL PROVISION "PATCHING WITH BITUMINOUS OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION

1. REMOVE THE EXISTING BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE FULL DEPTH PATCHES
3. REPLACE BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

REVISIONS		REVISIONS	
NAME	DATE	NAME	DATE
R. SHAH	10/25/94	ART ABBAS	04/27/98
R. SHAH	01/14/95		
R. SHAH	03/23/95		
R. SHAH	04/24/95		
A. HOUSEH	03/15/96		
A. ABBAS	03/21/97		
A. ABBAS	01/20/98		

ILLINOIS DEPARTMENT OF TRANSPORTATION

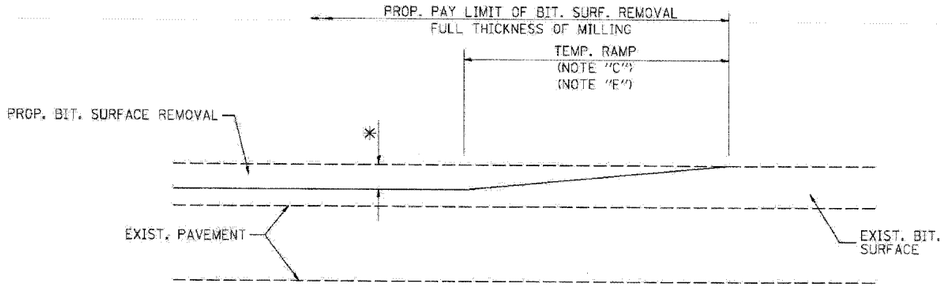
PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT

SCALE: NONE
DATE 10/18/2002
DRAWN BY
CHECKED BY

BD400-04 (BD-22)

November 10, 2004 12:24:46 a.m.
D:\102\03050181_PHASE1\plot\DISTRICT_1_(80-32).DWG

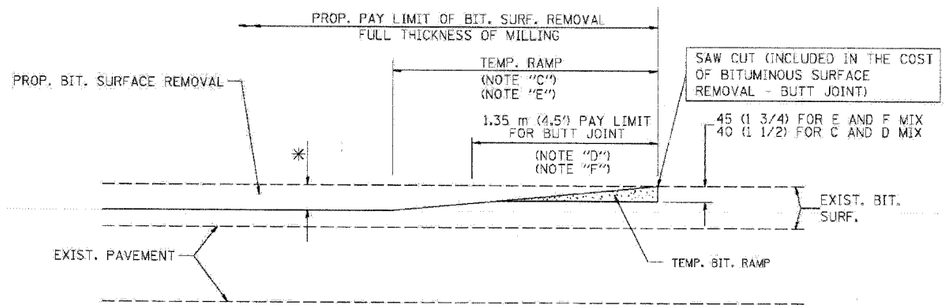
F.A.P. ROUTE	CONTRACT NO.	COUNTY	TOTAL SHTS	SH N
336	99-00243-00-PV STATE SECTION 83782	KANE	268	1
DISTRICT 1 STANDARDS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 1

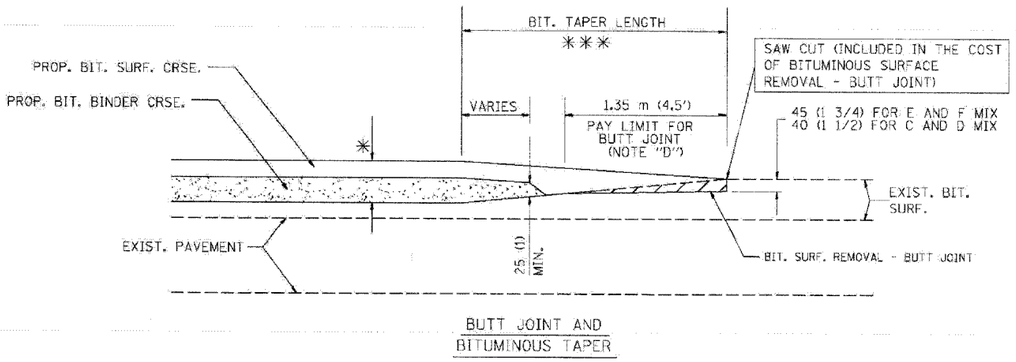


BITUMINOUS CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

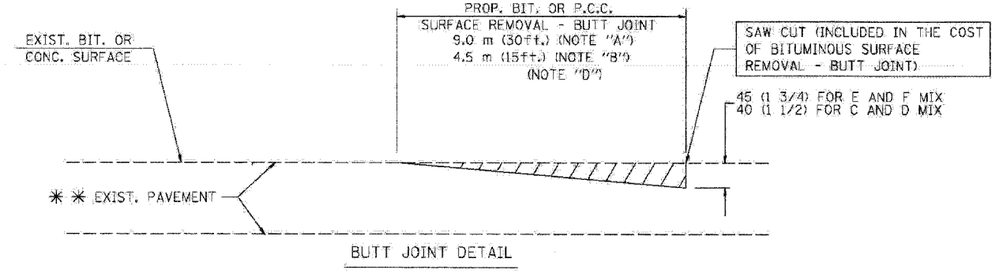
OPTION 2

TYPICAL TEMPORARY RAMP

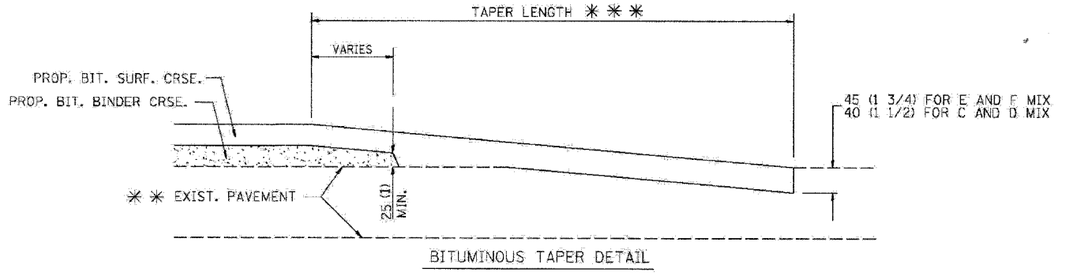


BUTT JOINT AND BITUMINOUS TAPER

TYPICAL BUTT JOINT AND BITUMINOUS TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER FOR RESURFACING ONLY

* * PC CONCRETE, BITUMINOUS OR BITUMINOUS RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING BITUMINOUS SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 FT.) PER INCH OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".

G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

* * * 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A")
3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD.) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND BITUMINOUS TAPER DETAILS

SCALE: NONE

DRAWN BY

DATE PLOTTED:10/18/2002

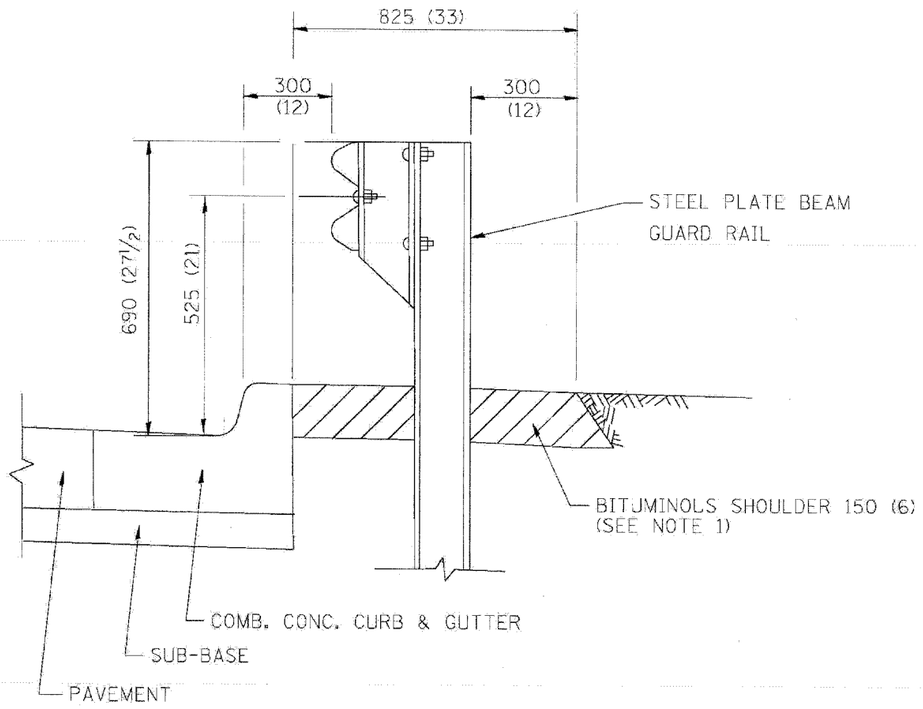
CHECKED BY

BD400-05 (VI-BD32)

DATE-TIME
DGN-SPEC
VI-BD32

November 19, 2024 11:53:46 a.m.
D:_D1\030501 81_PHASE1\DWG\DISTRICT_1_(BD-34).DWG

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
DISTRICT 1 STANDARDS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



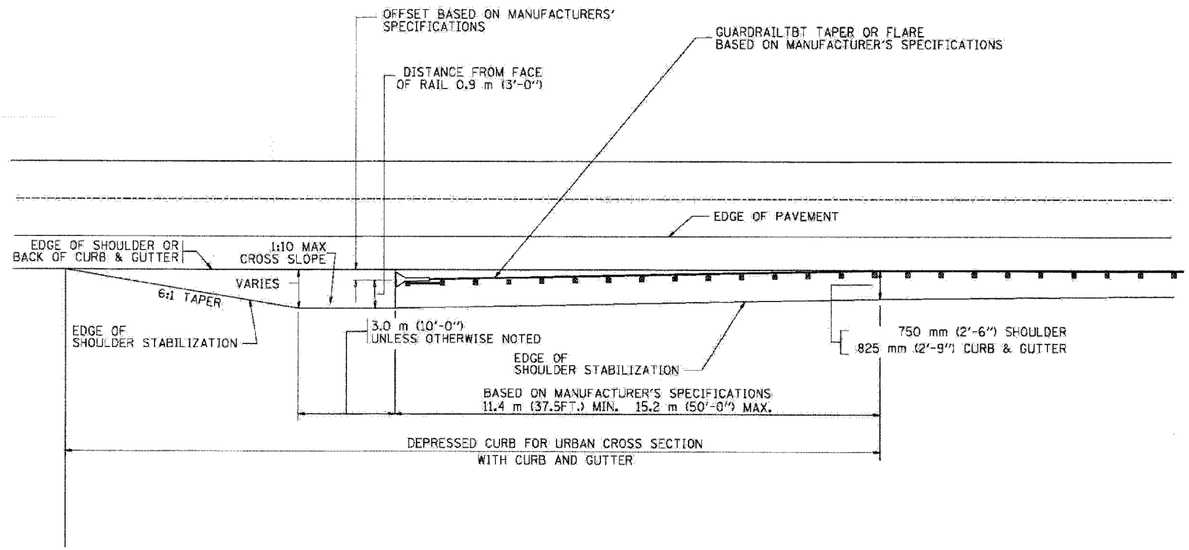
NOTES:
1. THE BITUMINOUS SHOULDER SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL
2. GUARD RAIL MAY BE PLACED AT THE BACK OF CURB WHEN DIRECTED BY THE ENGINEER.

BASIS OF PAYMENT: BITUMINOUS SHOULDER 150 (6) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER m^2 (sq. yd.) AS "BITUMINOUS SHOULDER 150 (6)."

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER

[FOR ROADWAY SPEED 60 kmh (35 MPH) TO 70 kmh (45 MPH)]



STABILIZATION AT TBT TY. 1 SPL.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	09-22-90
M. DE YONG	07-14-92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	02/23/95
A. ABBAS	03/21/97
E. GOMEZ	08/28/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER

STABILIZATION AT TBT TY 1 SPL.

SCALE: NONE DRAWN BY JIs

DATE 10/18/2002 CHECKED BY

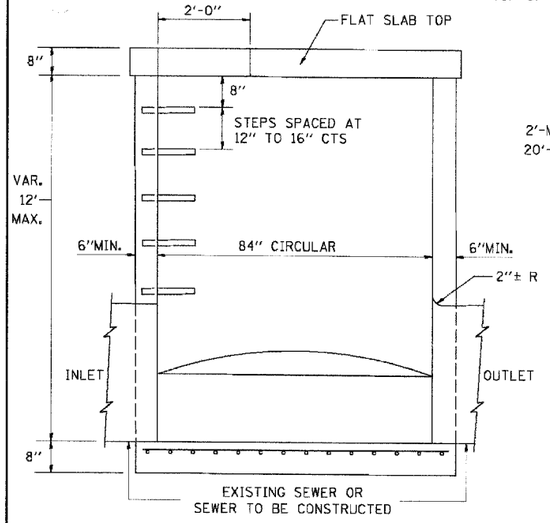
BD600-10 (BD 34)

REVISION DATE: 08/28/

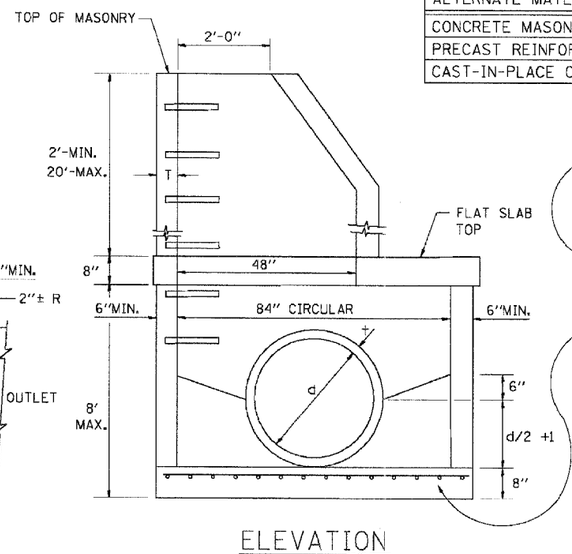
DATE-TIME
DGN-SPEC
VHBD34

ALTERNATE MATERIALS FOR RISERS	T (MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



ELEVATION



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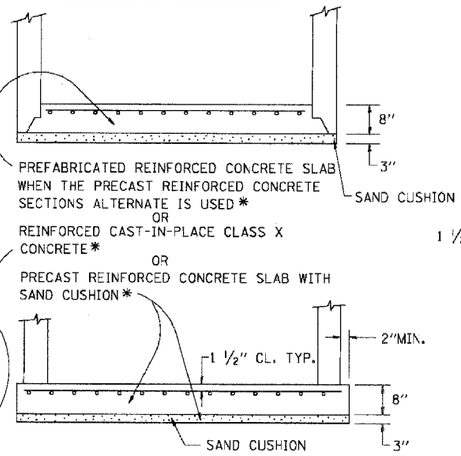
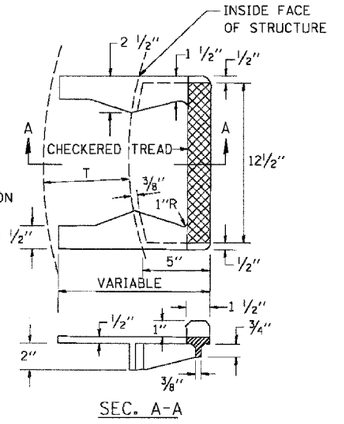




CAST IRON STEPS

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE(3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN(10') OR LESS.

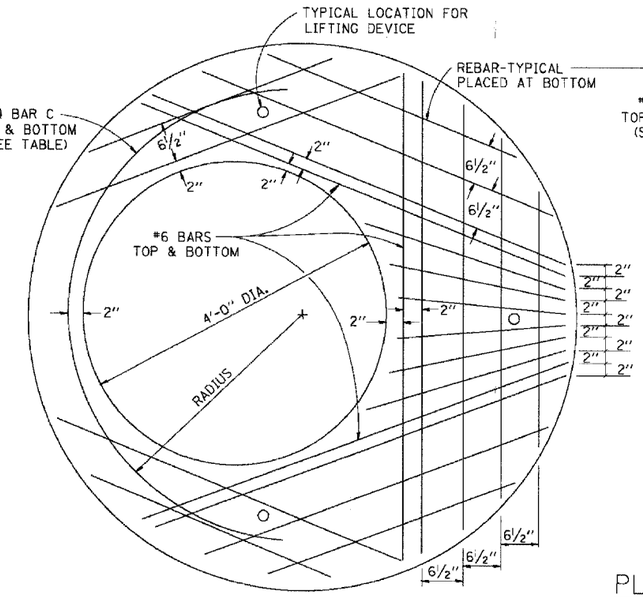
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

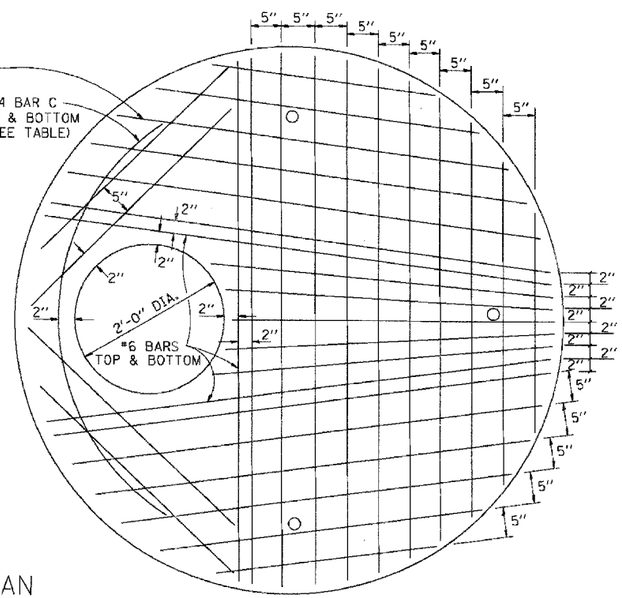
PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

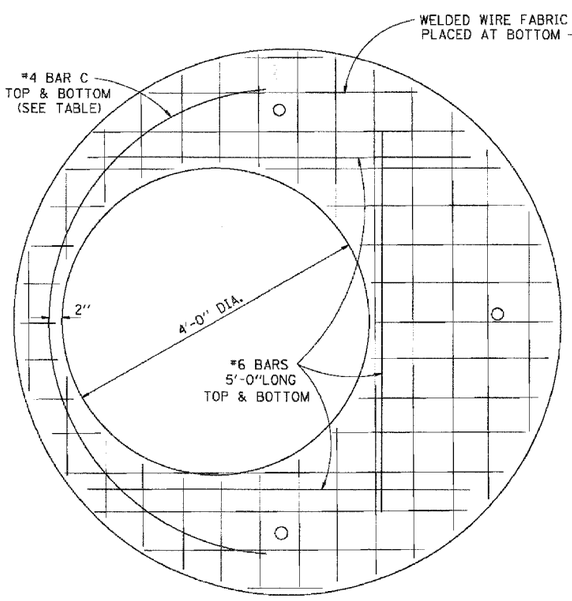
LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.

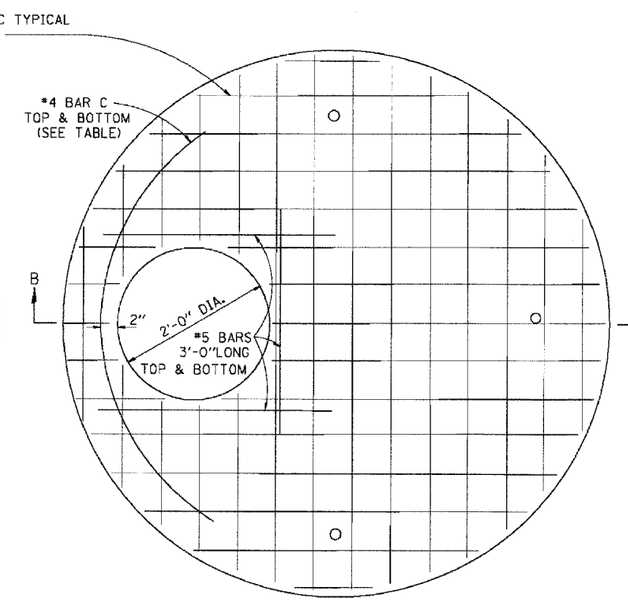




PLAN

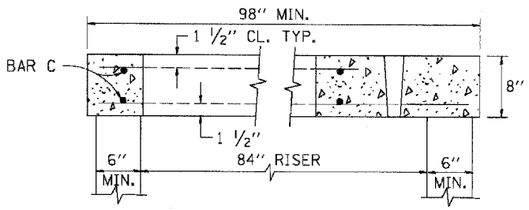
SHOWING REBAR REINFORCEMENT





PLAN

SHOWING WELDED WIRE FABRIC REINFORCEMENT



SECTION B-B

TABLE

DIAMETER OF OPENING	REINFORCEMENT "A S" WWF OR EACH DIRECTION	BAR SIZE	BAR C SIZE	BAR C LENGTH	BAR C RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"

NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHOLE TYPE A
7 FOOT DIAMETER

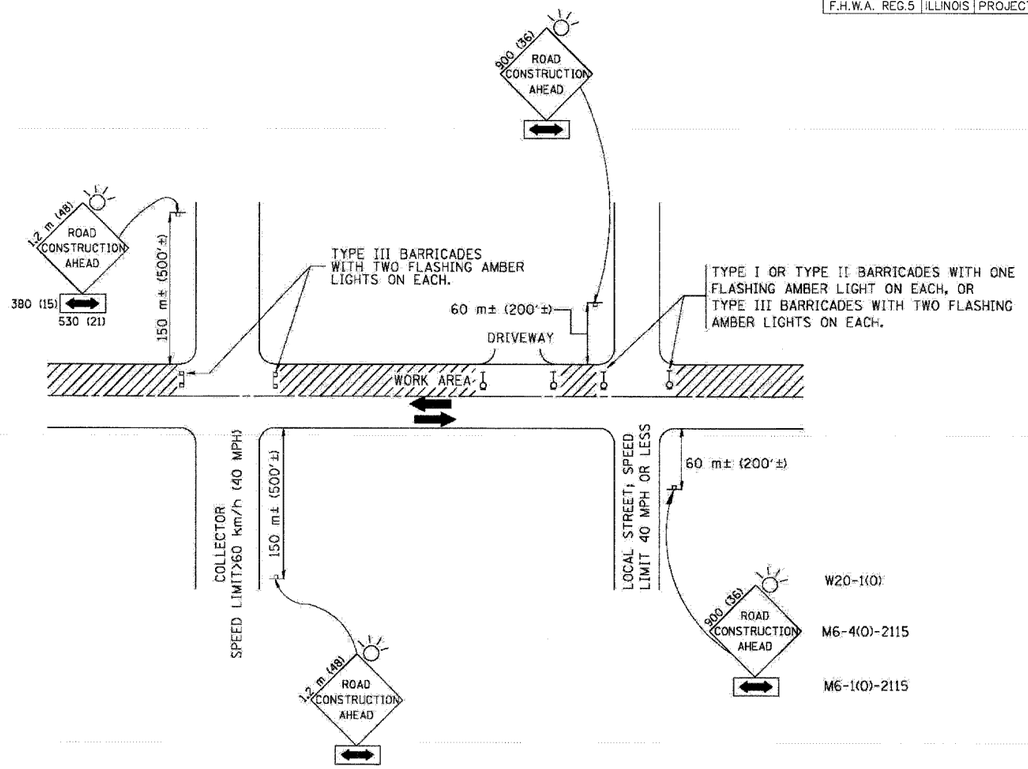
SCALE: VERT.
HORIZ.
DATE 10/18/2002

DRAWN BY
CHECKED BY

BD600-11 (BD-3

DATE-TIME
DGN-SPEC
VI-BD37

F.A.P. ROUTE	COUNTY SECTION 98-00243-00-PV	COUNTY	TOTAL SHTS.
336	CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(	



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

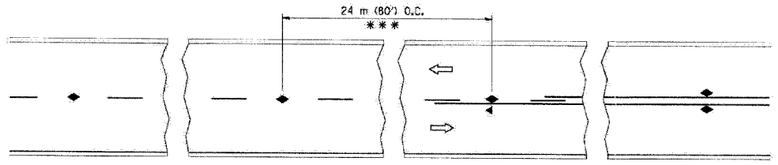
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: VERT.
HORIZ.
DATE 10/18/2002

DRAWN BY
CHECKED BY

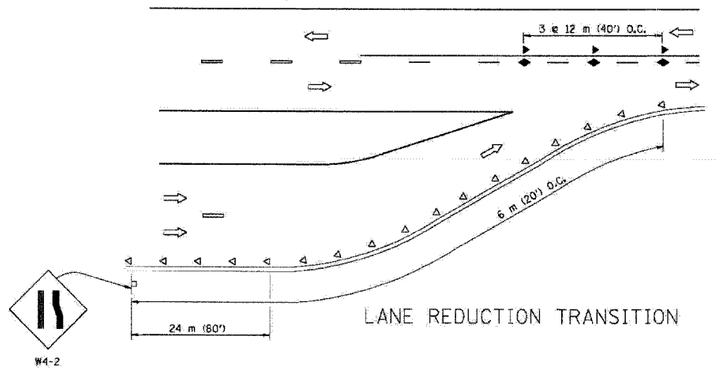
TC-10

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	N
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
DISTRICT 1 STANDARDS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

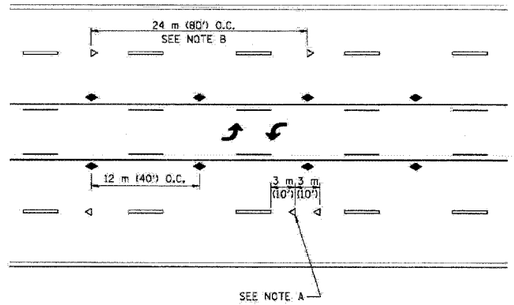


*** REDUCE TO 12 m (40') O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 70 km/h (45 M.P.H.) OR LESS.

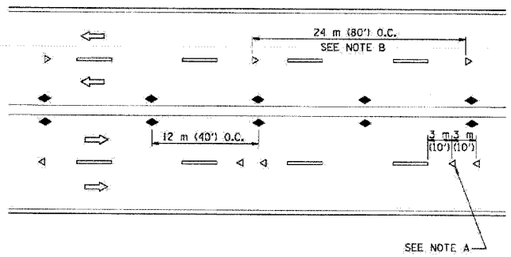
TWO-LANE/TWO-WAY



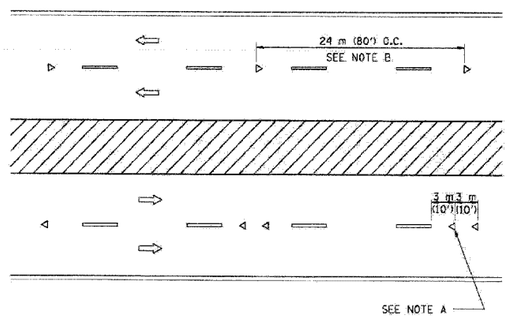
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 50 TO 75 (2 TO 3) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 150 m (500') IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

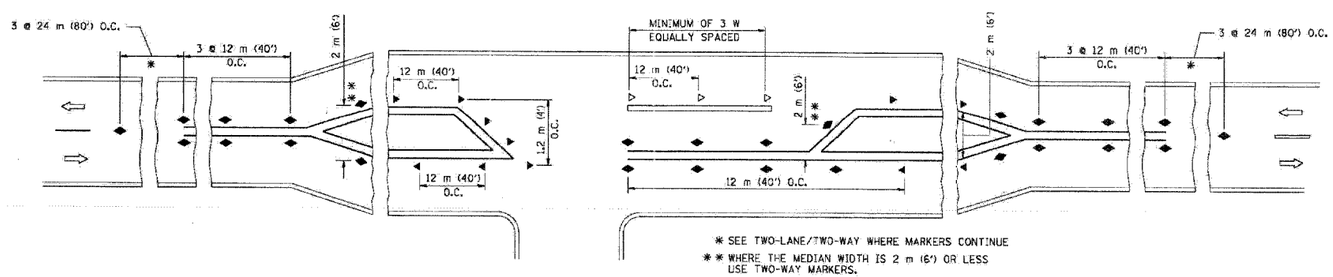
LANE MARKER NOTES

B. REDUCE TO 12 m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 20 km/h (10 M.P.H.) LOWER THAN POSTED SPEEDS.

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 2 m (6') OR LESS USE TWO-WAY MARKERS.

LEFT TURN

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS
(SNOW-PLOW RESISTANT)

SCALE: NONE
DATE: 10/18/2002

DRAWN BY CADD
CHECKED BY
TC-11

DATE-TIME
DGN-SPEC
VHTCH

REVISION DATE: 01/06/

November 14, 2004 11:07:30 a.m.
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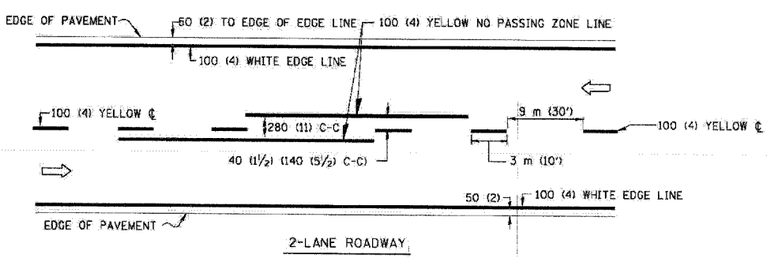
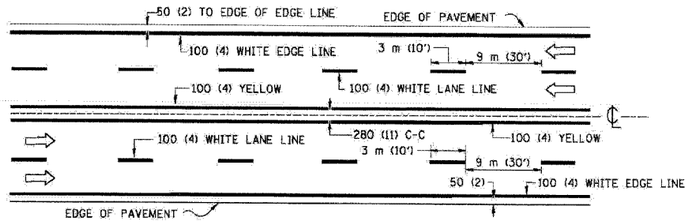
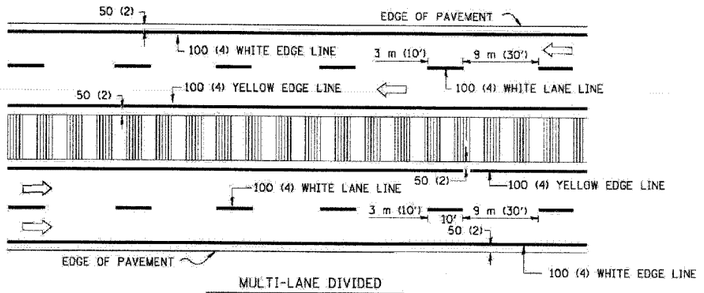
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



2-LANE ROADWAY



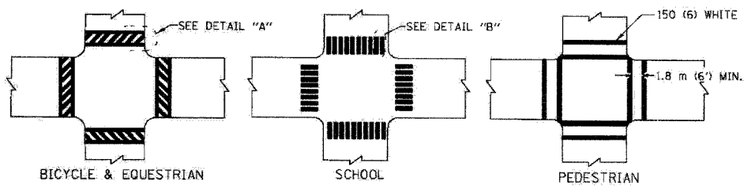
MULTI-LANE UNDIVIDED

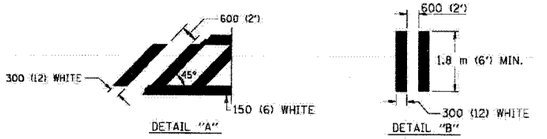


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

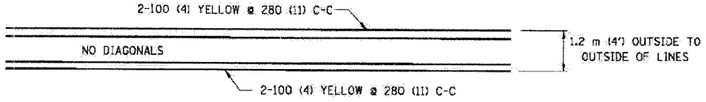
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

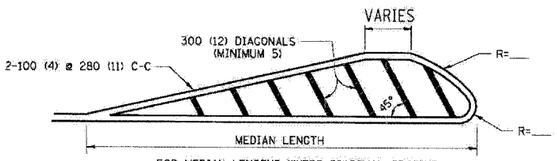




TYPICAL CROSSWALK MARKING



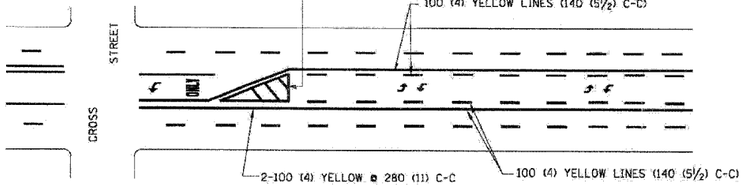
1.2 m (4') WIDE MEDIANS ONLY



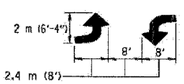
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 15 m (50') C-C (LESS THAN 50 km/h (30 MPH))
25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH))
45 m (150') C-C (MORE THAN 70 km/h (45 MPH))

MEDIANS OVER 1.2 m (4') WIDE

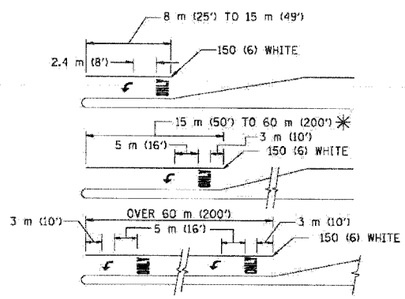


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

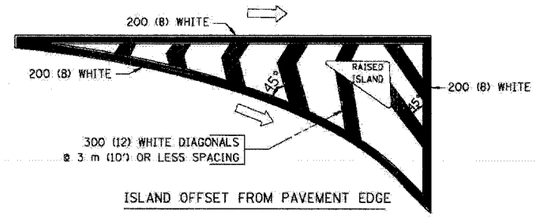


FULL SIZE LETTERS 2.4 m (8') AND ARROWS SHALL BE USED.
↰ AREA = 1.5 m^2 (15.6 SQ. FT.) **ONLY** AREA = 1.9 m^2 (20.8 SQ. FT.)

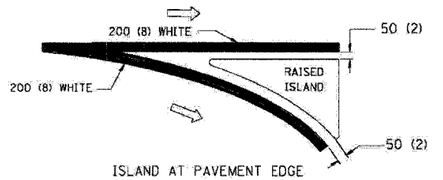
✳ TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 ⊘ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 ⊘ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5½) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ⊘ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5½) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ⊘ 150 (6) 300 (12) ⊘ 45° 300 (12) ⊘ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ⊘ 100 (4) WITH 300 (12) DIAGONALS ⊘ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS ⊘ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33 m^2 (3.6 SQ. FT.) EACH "X"=5.0 m^2 (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) ⊘ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

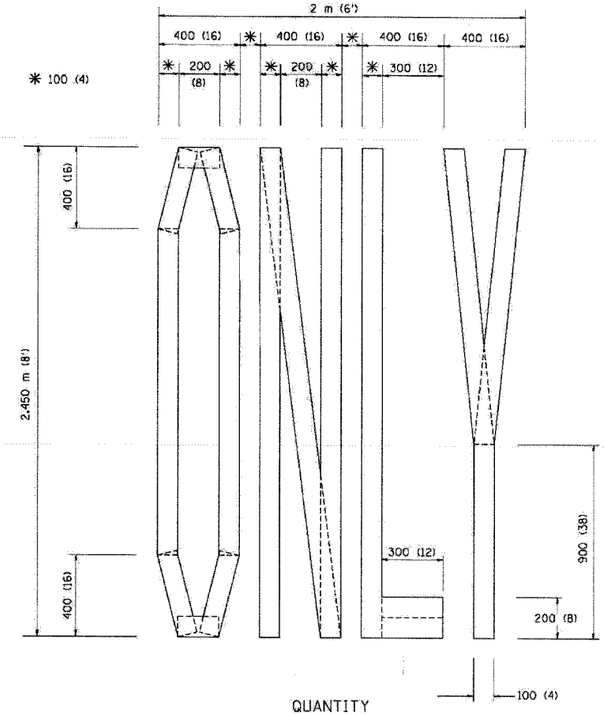
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

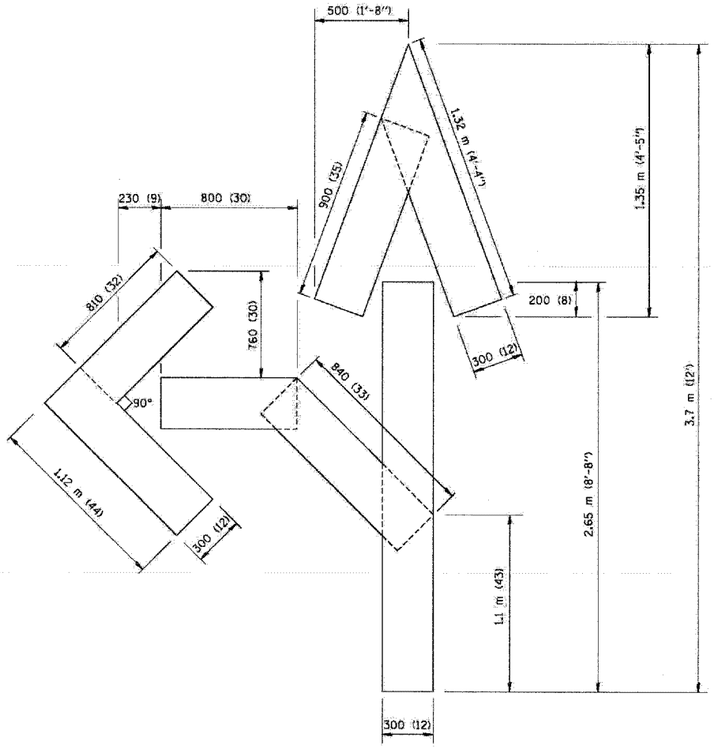
SCALE: NONE
DRAWN BY CADD
DATE 10/18/2002
CHECKED BY
TC-13

DATE-TIME
DGN SPEC

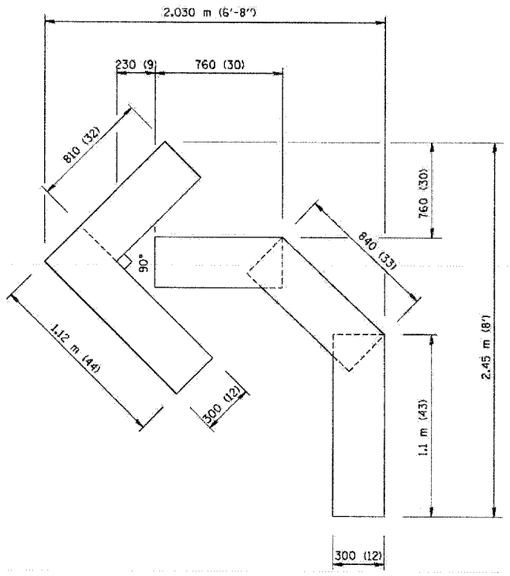
F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
DISTRICT 1 STANDARDS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



QUANTITY
100 (4) LINE = 19.7 m (64.1 ft.)
1.97 sq. m (21.1 sq. ft.)



QUANTITY
100 (4) LINE = 25.3 m (82.5 ft.)
2.53 sq. m (27.5 sq. ft.)



QUANTITY
100 (4) LINE = 13.9 m (45.5 ft.)
1.39 sq. m (15.2 sq. ft.)

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. COMEZ	08/28/00

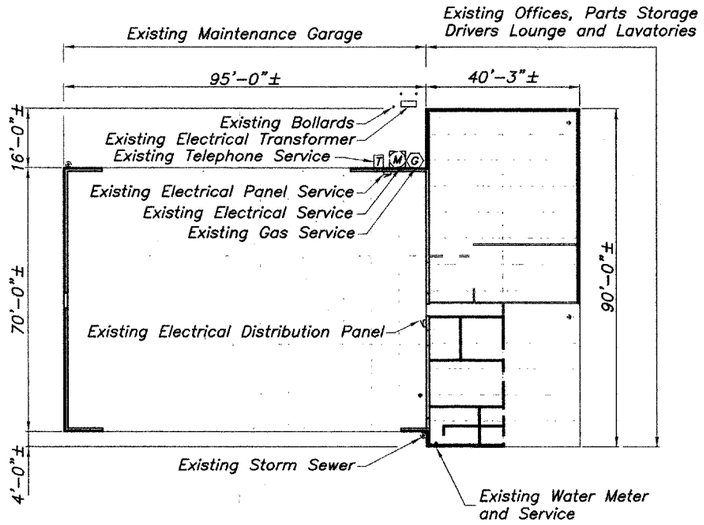
ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE
DRAWN BY CADD
DATE 10/18/2002
CHECKED BY TC-16

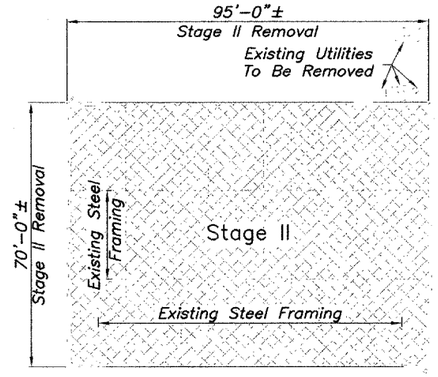
F.A. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SH NO.
336	STATE SECTION 83782	KANE	268	1
STAGED REMOVAL BUILDING 205				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(008		

*Building 205 Sheet 1 of



EXISTING BUILDING 205 – PLAN VIEW

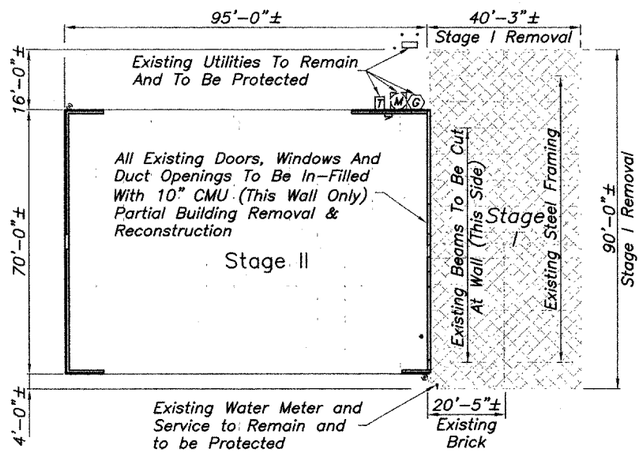
0 50' 100'
1"= 20'



STAGE II REMOVAL

Building Removal #2

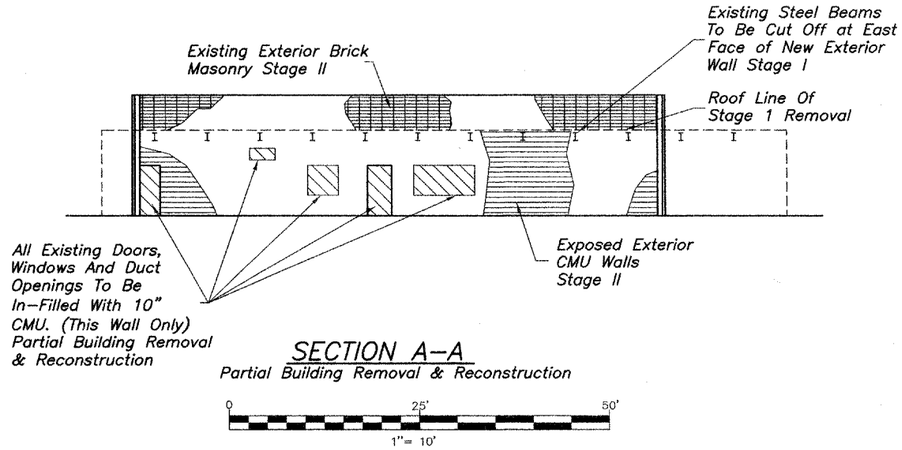
0 50' 100'
1"= 20'



STAGE I REMOVAL

Partial Building Removal & Reconstruction

0 50' 100'
1"= 20'



SECTION A–A

Partial Building Removal & Reconstruction

0 25' 50'
1"= 10'

LEGEND

Area Of Removal

Area Of In-Fill

NOTES

See Special Provision Building Removal – Case IV (No Asbestos) (BDE)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Partial Building Removal & Reconstruction	L Sum	1
Building Removal #2	L Sum	1

WARNING
CALL JULIE TOLL FREE 1-800-892-0123
CALL BEFORE YOU DIG

FEB 09 2005
ILLINOIS STRUCTURAL NO. 5011

LICENSED STRUCTURAL ENGINEER
JEFFREY L. BANE
081-005011
STATE OF ILLINOIS
Expires 11-30-06

Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637

Account Number 03-05-0181i
DATE: 01/05/05
DESIGNED: J.L.B. CHECKED: J.L.B. DRAWN: P.J.L.

STAGED REMOVAL BUILDING 205

SECTION 99-00243-00-PV

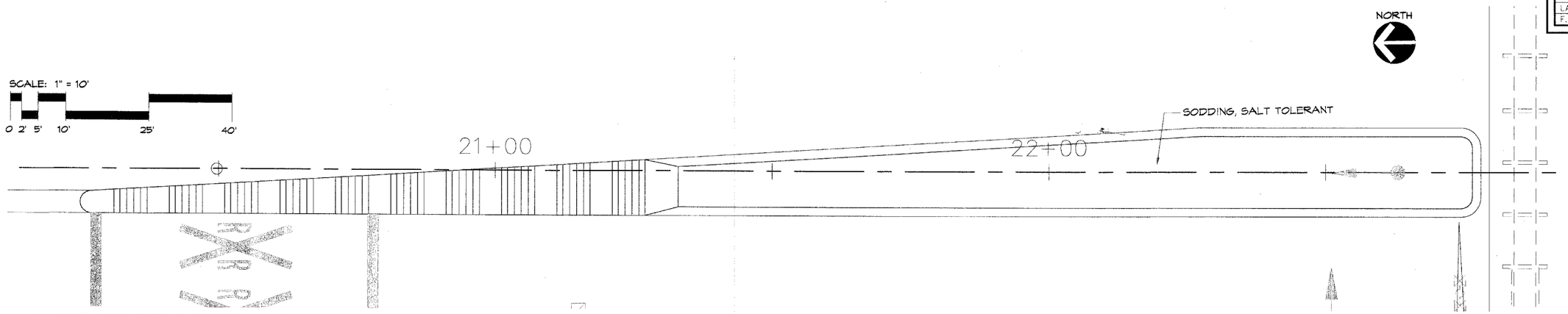
PARTIAL / RECONSTRUCTION / FINAL BUILDING REMOVA

205 N. RANDALL ROAD

KANE COUNTY

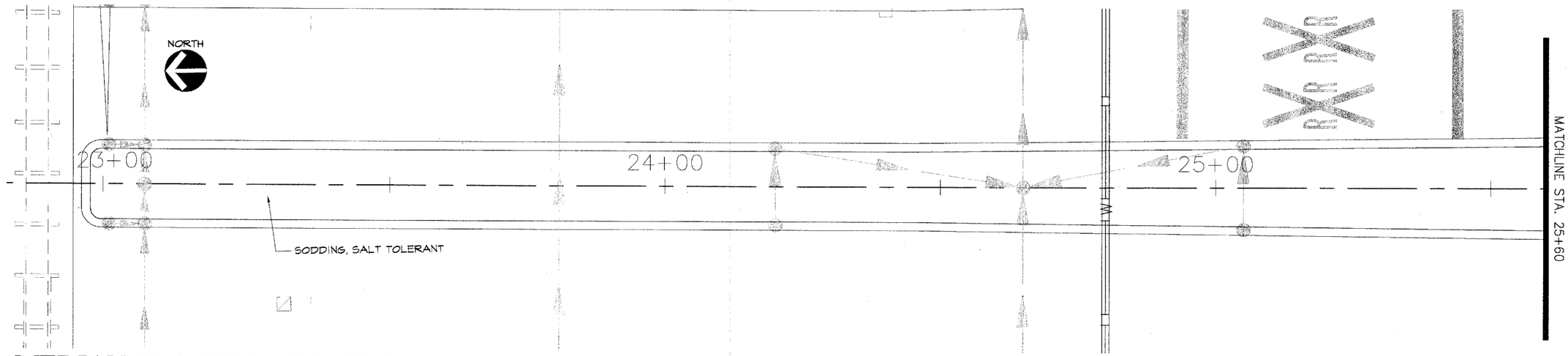
G:\DWG\P\03050181\BLDS BARN.dwg 02/09/05 06:52 pam

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHE NO
336	CONTRACT NO. 83782	KANE	268	18
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



MEDIAN PLANTER SEGMENT MP-1.01

SCALE: 1" = 10'-0"



MEDIAN PLANTER SEGMENT MP-2.01

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

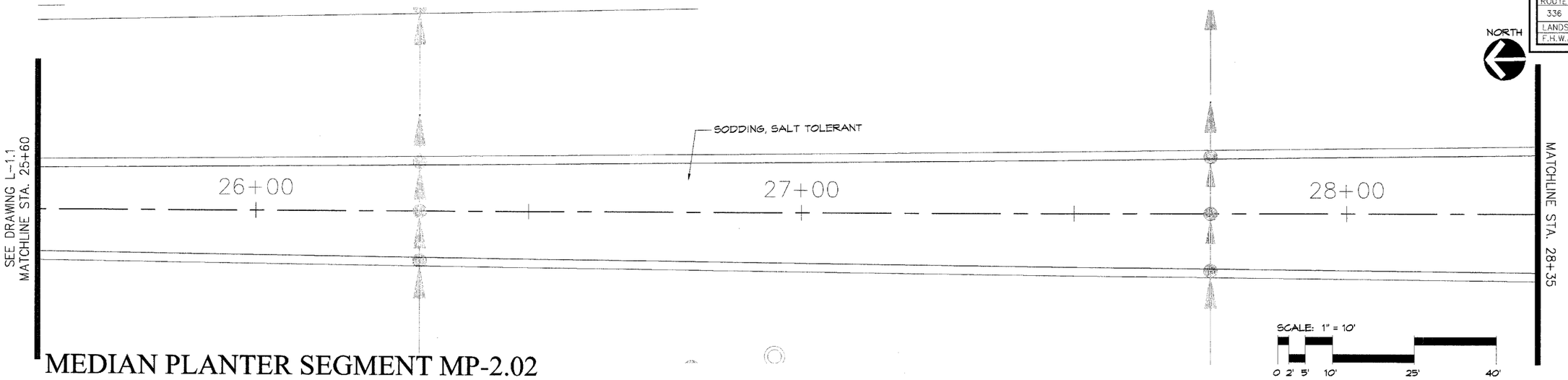
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-medians.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE MEDIAN PLANTERS

Drawing	Sheet
L-1.1	182

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
LANDSCAPING PLANS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



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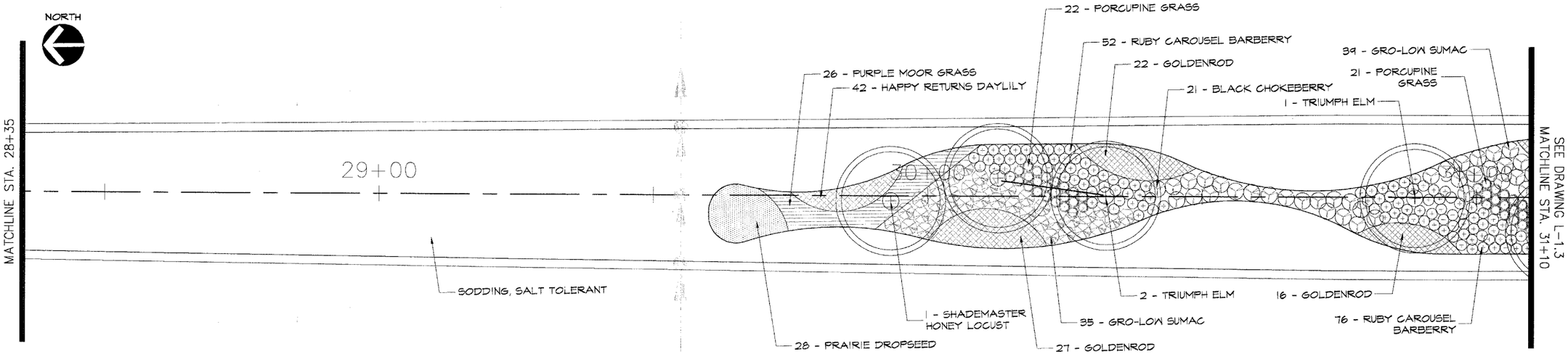

MEDIAN PLANTER SEGMENT MP-2.03

SCALE: 1" = 10'-0"

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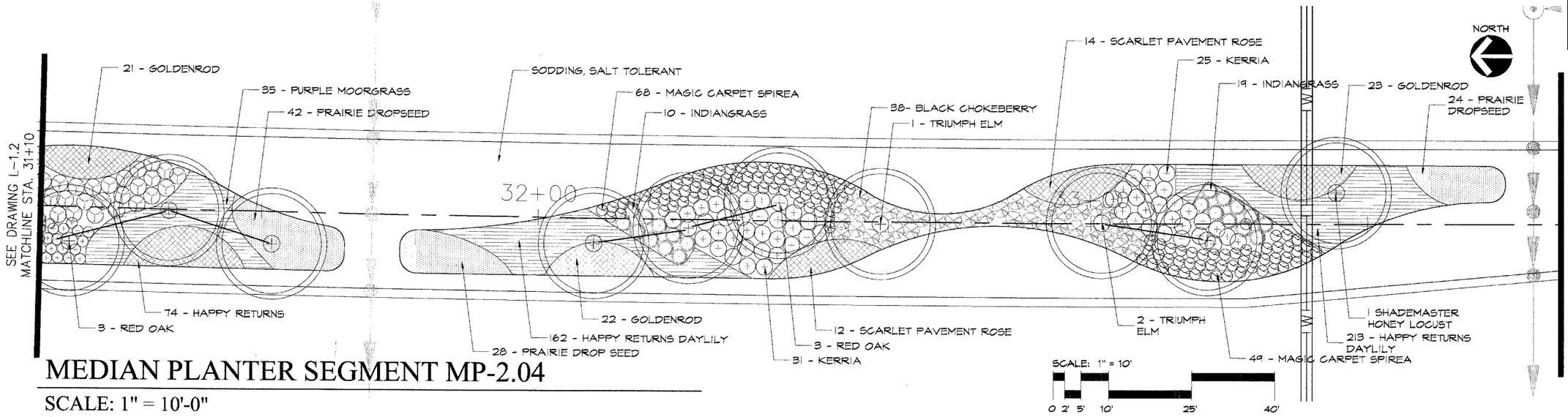
RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-medians.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE MEDIAN PLANTERS

Drawing	Sheet
L-1.2	183



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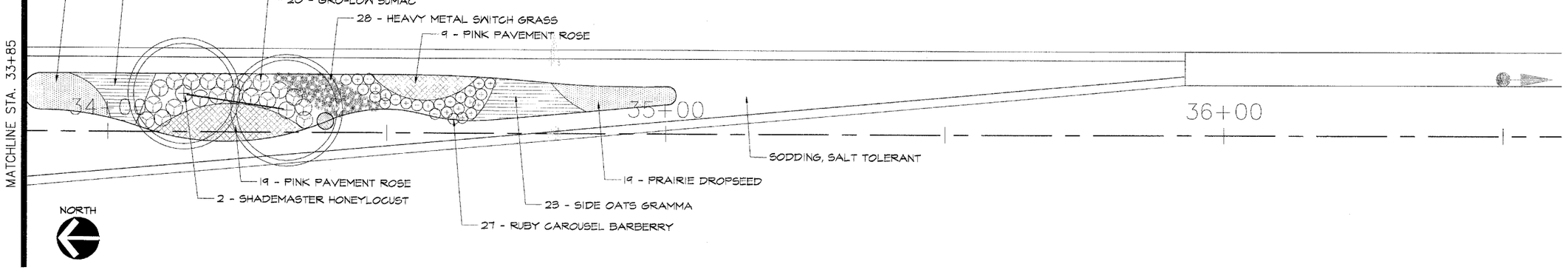

MEDIAN PLANTER SEGMENT MP-2.05

SCALE: 1" = 10'-0"

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.
336	CONTRACT NO. 83782	KANE	268
LANDSCAPING PLANS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	

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RANDALL ROAD MEDIANS

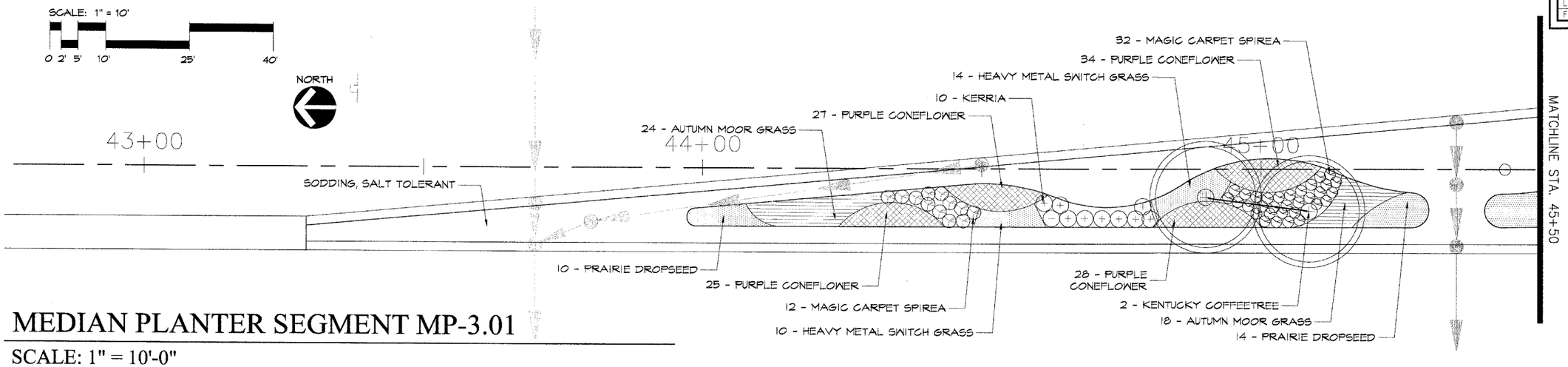
City of St. Charles
St. Charles, Illinois

HBL Submittal: Dec. 23, 2004
HBL Project No.: 04-001.01
CADD File: *h-medians.dwg*
Drawn By: J.E
Approved By: J.E
Revisions:

LANDSCAPE MEDIAN PLANTERS

Drawing L-1.3
Sheet 184

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83752	KANE	268	185
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



MEDIAN PLANTER SEGMENT MP-3.01

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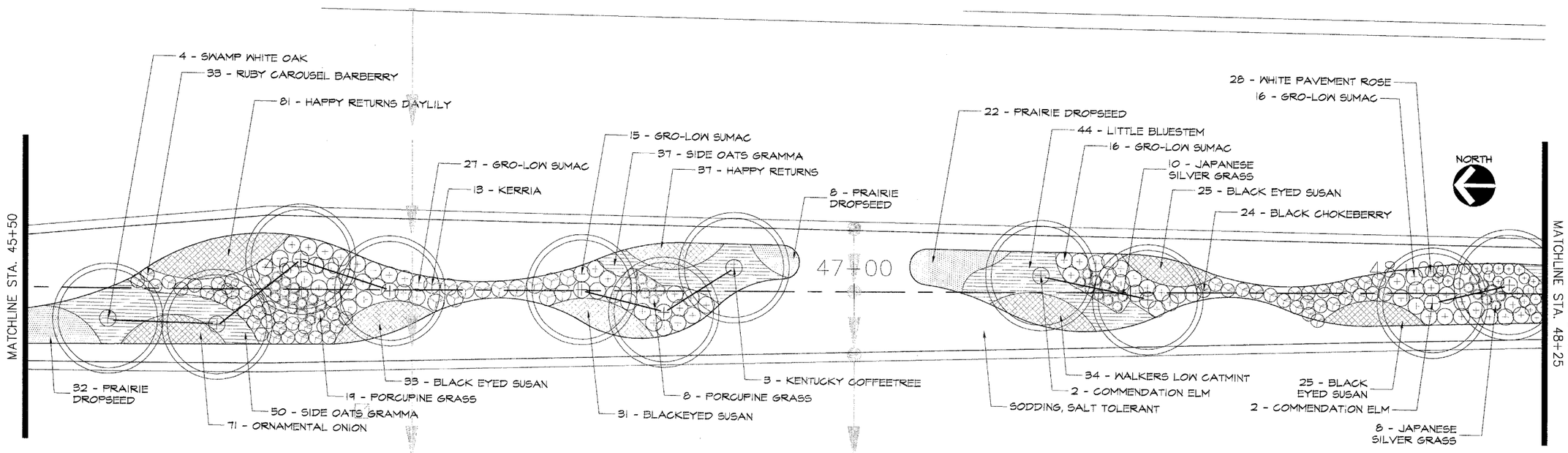

MEDIAN PLANTER SEGMENT MP-3.02

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
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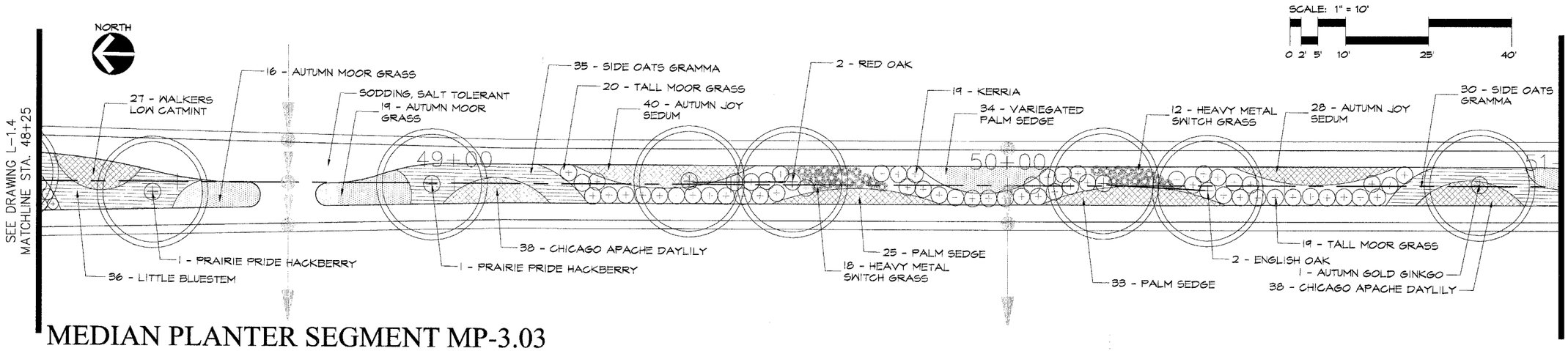
Approved By:	J.E
Revisions:	

LANDSCAPE MEDIAN PLANTERS

Drawing	Sheet
L-1.4	185

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHT. NO.
336	CONTRACT NO. 83782	KANE	268	186
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



MEDIAN PLANTER SEGMENT MP-3.03

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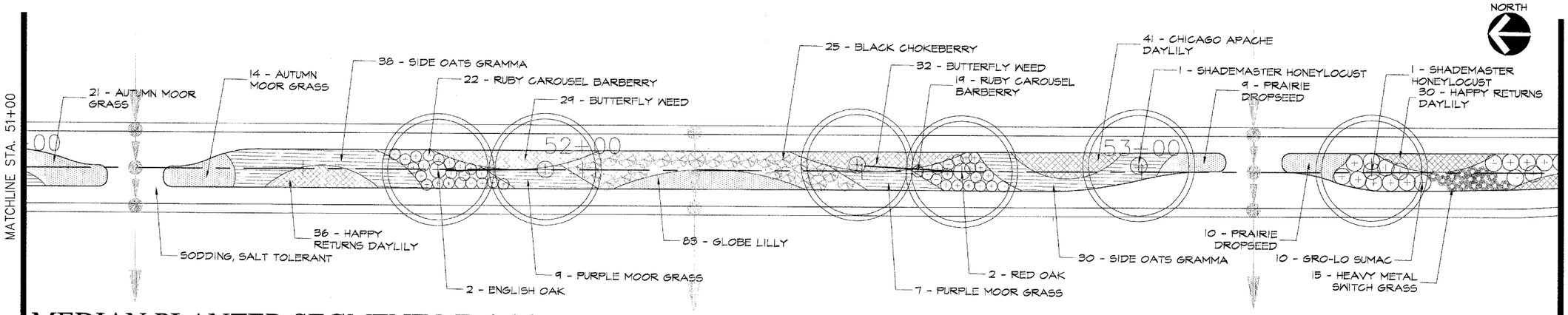

MEDIAN PLANTER SEGMENT MP-3.04

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

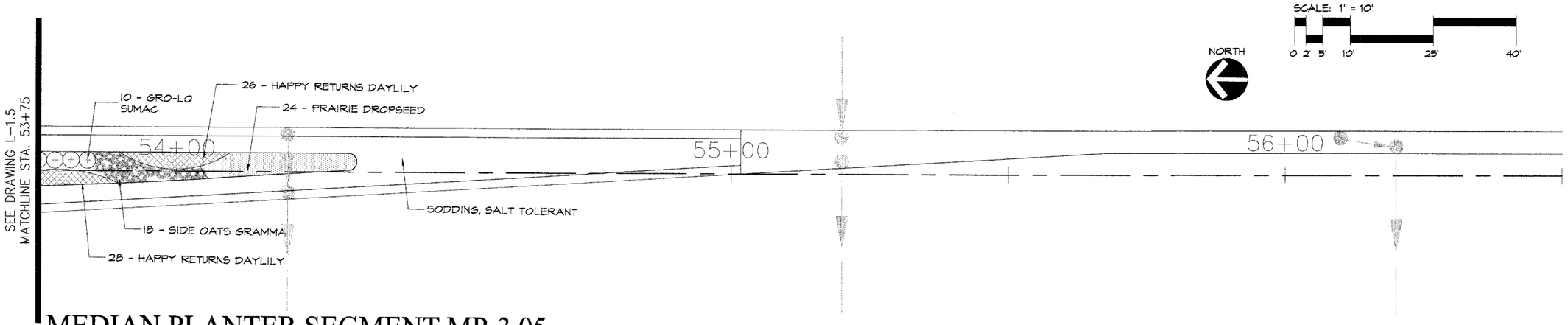
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04.001.01
CADD File:	*h-medians.dwg*
Drawn By:	J.E.
Approved By:	J.E.
Revisions:	

LANDSCAPE MEDIAN PLANTERS

Drawing	Sheet
L-1.5	186

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SHE NO
336	CONTRACT NO. 83782	KANE	268	18
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



MEDIAN PLANTER SEGMENT MP-3.05

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

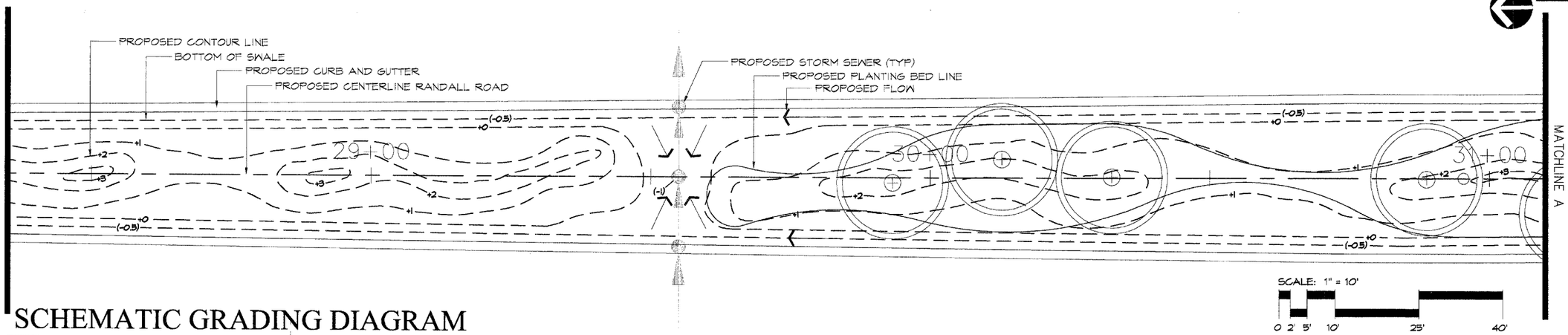
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-medians.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE MEDIAN PLANTERS

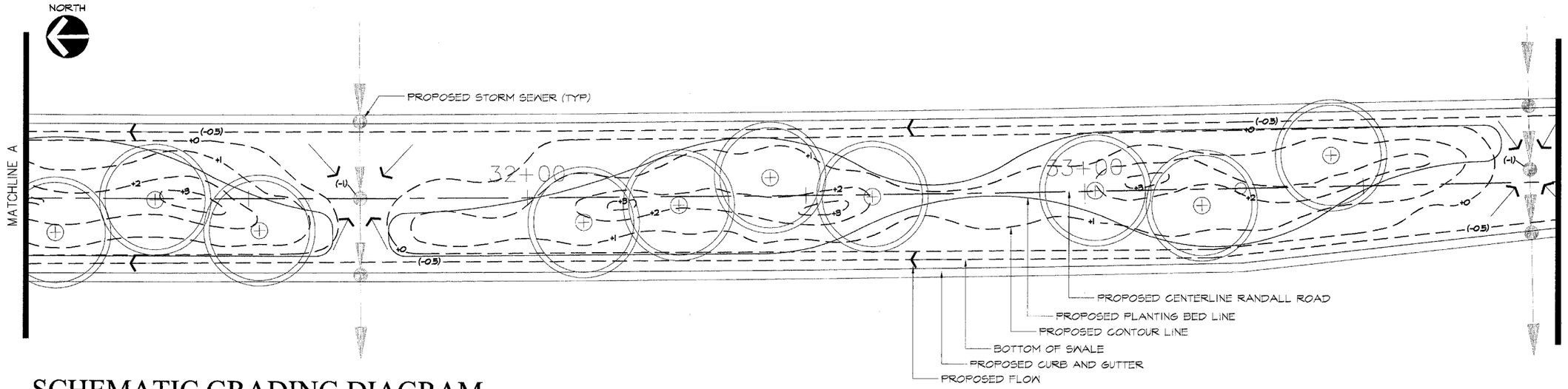
Drawing	Sheet
L-1.6	187

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	188
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



SCHEMATIC GRADING DIAGRAM

SCALE: 1" = 10'-0"



SCHEMATIC GRADING DIAGRAM

SCALE: 1" = 10'-0"

GENERAL LANDSCAPE MEDIAN GRADING NOTES:

1. GRADING CONTOURS INDICATED ARE SCHEMATIC AND INTENDED TO IMPLY THE GENERAL BERMING OF THE MEDIAN LANDSCAPE PLANTER. SCHEMATIC BERMING SHALL BE TYPICAL FOR ALL MEDIAN LANDSCAPE PLANTERS.
2. GRADING CONTOURS INDICATED ARE BASED ON THE FINAL CROSS SECTION TOP OF CURB ELEVATION BEING ZERO.
3. A 36" WIDE SOD SWALE IS ANTICIPATED DIRECTLY ADJACENT TO THE BACK OF CURB. THE SWALE IS INTENDED TO CARRY WATER TO THE NEARBY MEDIAN CATCH BASINS INDICATED. THE BOTTOM OF SWALE SHALL HAVE AN APPROXIMATE DEPTH OF 6" BELOW THE TOP OF CURB ELEVATION.

HAYDEN BULIN LARSON

HAYDEN BULIN LARSON
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Chicago, Illinois 60610
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RANDALL ROAD MEDIANS

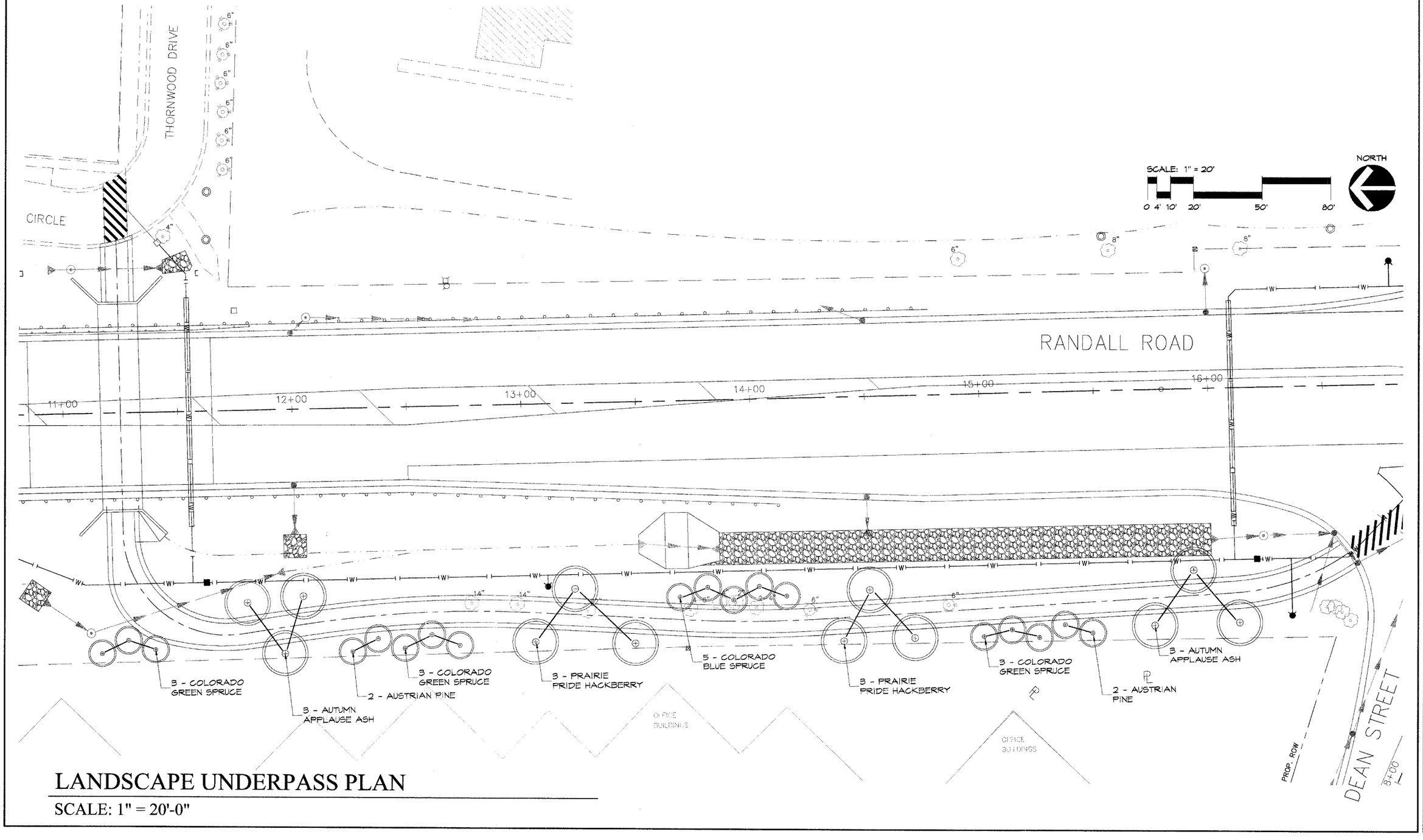
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-grading.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE MEDIAN PLAN

Drawing	Sheet
L-1.7	188

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	189
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



LANDSCAPE UNDERPASS PLAN

SCALE: 1" = 20'-0"

HAYDEN BULIN LARSON

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RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

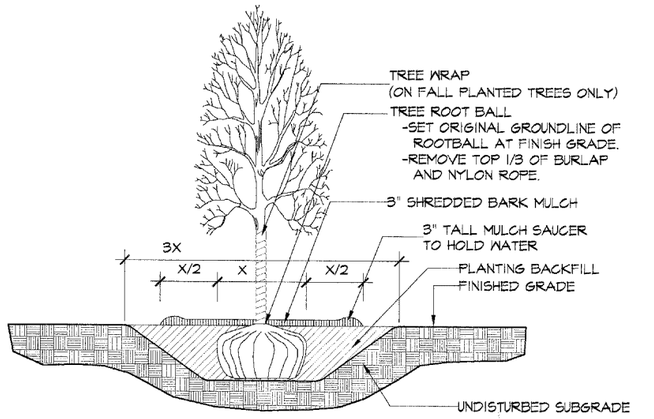
HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-keyplan.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE UNDERPASS PLAN

Randall Rd. Sta. 11+00 to Sta. 16+50

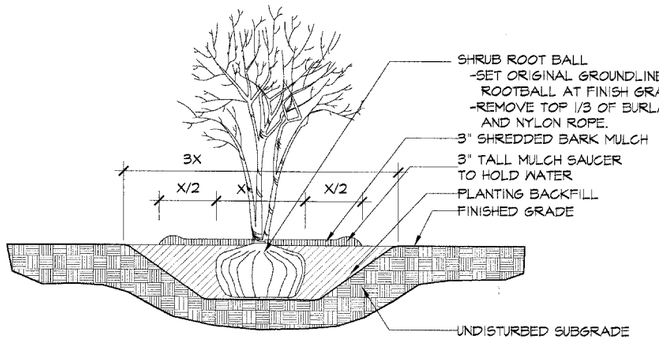
Drawing	Sheet
L-1.8	189

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SH
336	CONTRACT NO. 83782	KANE	268	
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



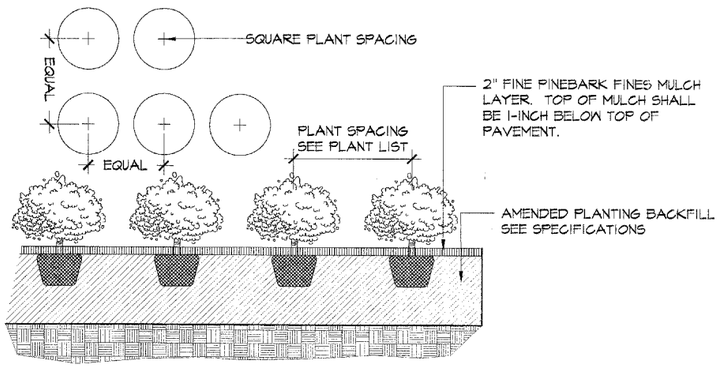
1 SHADE TREE PLANTING DETAIL

No Scale



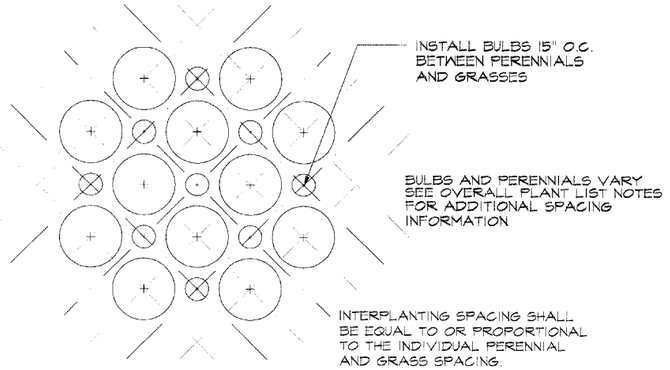
2 SHRUB PLANTING DETAIL

No Scale



3 PERENNIAL / GROUNDCOVER PLANTING DETAIL

No Scale



4 INTERPLANTING DETAIL

No Scale

General Landscape Notes

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED UTILITIES INCLUDING ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)
2. ALL STATIONS INDICATED ON PLANS ARE FROM THE PROPOSED RANDALL ROAD LAYOUT UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT ABUTTING PROPERTY, UTILITIES PEDESTRIANS, AND VEHICULAR TRAFFIC.
4. THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST OR ACROSS THE FLOW OF TRAFFIC. THESE VEHICLES SHALL ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL NOT BE HAZARDOUS TO OR INTERFERE WITH NORMAL TRAFFIC AND SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES ARE NOT PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER.
5. ALL TEMPORARY REGULATORY, WARNING AND GUIDE SIGNS WITHIN THE PROPOSED IMPROVEMENT SHALL BE RELOCATED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO CROSS STREETS AND ENTRANCES AT ALL TIMES. TEMPORARY SINGLE LANE CLOSURES ARE PERMISSABLE WITH ENGINEER APPROVAL ONLY. TRAFFIC STAGING PLAN SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY UNDERGROUND OR ABOVE GROUND UTILITIES WITHIN THE PROJECT LIMITS WHETHER OR NOT THE UTILITIES ARE SHOWN ON THE PLANS. ANY UTILITY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.
8. THE CONTRACTOR SHALL MAINTAIN PROPER AND ADEQUATE SURFACE DRAINAGE FOR THE ENTIRE LIMITS OF CONSTRUCTION THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
9. THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES BY METHODS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY TO PREVENT SETTLEMENT, DISPLACEMENT OR CHANGE TO THE UTILITIES. THE PROTECTION OF THE UTILITIES AS SPECIFIED HEREIN WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
10. THE ENGINEER SHALL DETERMINE THE LIMITS OF ALL ITEMS TO BE REMOVED OR REPLACED AND FINAL QUANTITIES SHALL BE DETERMINED FROM FIELD MEASUREMENTS OF ACTUAL WORK AS DESIGNATED BY THE ENGINEER.
11. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION. THE SCHEDULE SHALL INCLUDE THE PERIODS OF TIME IN WHICH THE WORK ITEMS ARE TO BE COMPLETED. ALL WORK BEGUN DURING A CONSTRUCTION SEASON MUST BE COMPLETED PRIOR TO THE END OF THAT SEASON.
12. THE LOCATION OF ALL PLANT MATERIAL SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER IN FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIAL. INDIVIDUAL TREES SHALL BE STAKED WITH IDENTITIES WRITTEN ON STAKES. SHRUB AND PERENNIAL BEDS SHALL BE OUTLINED WITH STAKES AND PAINTED LINES.
13. THE CONTRACTOR SHALL DISCUSS STAGING AREA OPTIONS WITH ENGINEER PRIOR TO CONSTRUCTION.
14. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION. THE COSTS SHALL BE CONSIDERED INCIDETAL TO THE CONTRACT.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPLACEMENT OF ANY BENCH MONUMENT DAMAGED OR DESTROYED DURING CONSTRUCTION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING ITEMS NOT SCHEDULED TO BE ADJUSTED, RELOCATED, OR REMOVED INCLUDING CURBS, FENCES, PAVEMENTS, UTILITIES, AND EXISTING VEGETATION INTENDED TO REMAIN. ANY ITEMS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.
17. THE LANDSCAPE CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER DISCIPLINES OF WORK AS DESCRIBED ON THE DRAWINGS AND AS OUTLINED IN THE SPECIFICATIONS AND PRIMARILY WITH THE IRRIGATION SUBCONTRACTOR.

Schedule of Plant Material

Botanical name	Common name	Size	Spacing	TOTAL
SHADE TREES				
Celtis occidentalis 'Prairie Pride'	Prairie Pride Hackberry	3" cal.	as shown	8
Fraxinus americana 'Autumn Applause'	Autumn Applause White Ash	3" cal.	as shown	6
Ginkgo biloba 'Autumn Gold'	Autumn Gold Maidenhair Tree	3" cal.	as shown	1
Gleditsia triacanthos var. inermis 'Shademaster'	Shademaster Honeylocust	3" cal.	as shown	6
Gymnocladus dioica	Kentucky Coffeetree	3" cal.	as shown	5
Quercus bicolor	Swamp White Oak	3" cal.	as shown	4
Quercus robur	English Oak	3" cal.	as shown	4
Quercus rubra	Red Oak	3" cal.	as shown	10
Ulmus x 'Morton Glossy'	Triumph Elm	3" cal.	as shown	6
Ulmus x 'Morton Stalnart'	Commendation Elm	3" cal.	as shown	4
EVERGREEN TREES				
Pinus nigra	Austrian Pine	6' ht	as shown	4
Picea pungens	Colorado Green Spruce	6' ht	as shown	9
Picea pungens 'Glauca'	Colorado Blue Spruce	6' ht	as shown	5
SHRUBS				
Aronia melanocarpa 'Morton'	Iroquois Beauty Black Chokeberry	30" ht.	36" o.c.	108
Berberis thunbergii 'Ballone'	Ruby Carousel Barberry	24" ht.	24" o.c.	229
Kerria japonica	Japanese Kerria	30" ht.	36" o.c.	98
Nepeta x faassenii 'Walkers Low'	Walkers Low Catmint	24" ht.	18" o.c.	61
Rhus aromatica 'Gro-Low'	Gro-Low Sumac	18" ht.	36" o.c.	188
Rosa rugosa 'Foxi Pavement'	Pink Rugosa Rose	18" ht.	30" o.c.	28
Rosa rugosa 'Scarlet Pavement'	Scarlet Rugosa Rose	18" ht.	30" o.c.	26
Rosa rugosa 'Snow Pavement'	White Rugosa Rose	18" ht.	30" o.c.	28
Spirea x bumalda 'Magic Carpet'	Magic Carpet Spirea	24" ht.	24" o.c.	161
PERENNIALS				
Allium schoenoprasum 'Forescate'	Ornamental Onion	1 gal.	12" o.c.	71
Allium tanguticum 'Summer Beauty'	Globe Lilly	1 gal.	12" o.c.	83
Asclepias tuberosa	Butterfly weed	1 gal.	18" o.c.	61
Echinacea pallida	Purple Coneflower	1 gal.	18" o.c.	114
Hemerocallis 'Chicago Apache'	Chicago Apache Daylily	1 gal.	15" o.c.	117
Hemerocallis 'Happy Returns'	Happy Returns Daylily	1 gal.	15" o.c.	729
Rudbeckia hirta	Black-eyed Susan	1 gal.	18" o.c.	114
Sedum 'Autumn Joy'	Autumn Joy Sedum	1 gal.	18" o.c.	68
Solidago nemoralis	Goldenrod	1 gal.	24" o.c.	131
GRASSES				
Bouteloua curtipendula	Side Oats Gramma	1 gal.	24" o.c.	279
Carex muskingumensis	Palm Sedge	1 gal.	18" o.c.	58
Carex muskingumensis 'Oehme'	Variegated Palm Sedge	1 gal.	18" o.c.	34
Miscanthus sinensis 'Graziella'	Japanese Silver Grass	1 gal.	36" o.c.	18
Miscanthus sinensis 'Strictus'	Porcupine Grass	1 gal.	36" o.c.	70
Molinia arundinacea 'Transparent'	Tall Moor Grass	1 gal.	36" o.c.	39
Molinia caerulea 'Moorhexe'	Purple Moor Grass	1 gal.	30" o.c.	77
Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass	1 gal.	24" o.c.	97
Schizachyrium scoparium	Little Bluestem	1 gal.	24" o.c.	80
Sesleria autumnalis	Autumn Moor Grass	1 gal.	24" o.c.	112
Sorghastrum nutans	Indian Grass	1 gal.	36" o.c.	29
Sporobulus heterolepis	Prairie Dropseed	1 gal.	30" o.c.	291
VINES AND BULBS				
Narcissus spp.	* Mixed Daffodils	14+ cm	*** 15" o.c.	3,760

* Daffodil Mix shall contain an equal blending of a minimum of 3 varieties of 12" to 18" Ht. White and Yellow Daffodils.
*** Daffodil Mix planting locations shall be obtained from the Landscape Architect prior to any planting.

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RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	h-details.dwg
Drawn By:	J.E
Approved By:	J.E
Revisions:	

LANDSCAPE DETAILS AND GENERAL NOTES

Drawing	Sheet
L-1.9	190

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	191
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

SCALE: 1" = 10'

0 2' 5' 10' 25' 40'

NORTH

LP:745.2

746 ← APPROX. ROADWAY PROPOSED GRADE LINE ELEVATION (IN FEET)

21+00 22+00

MEDIAN PLANTER SEGMENT MP-1.01

SCALE: 1" = 10'-0"

NORTH

746 ← APPROX. ROADWAY PROPOSED GRADE LINE ELEVATION (IN FEET)

23+00 24+00 25+00

SEE DRAWING L-2.2
MATCHLINE STA. 25+60

MEDIAN PLANTER SEGMENT MP-2.01

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

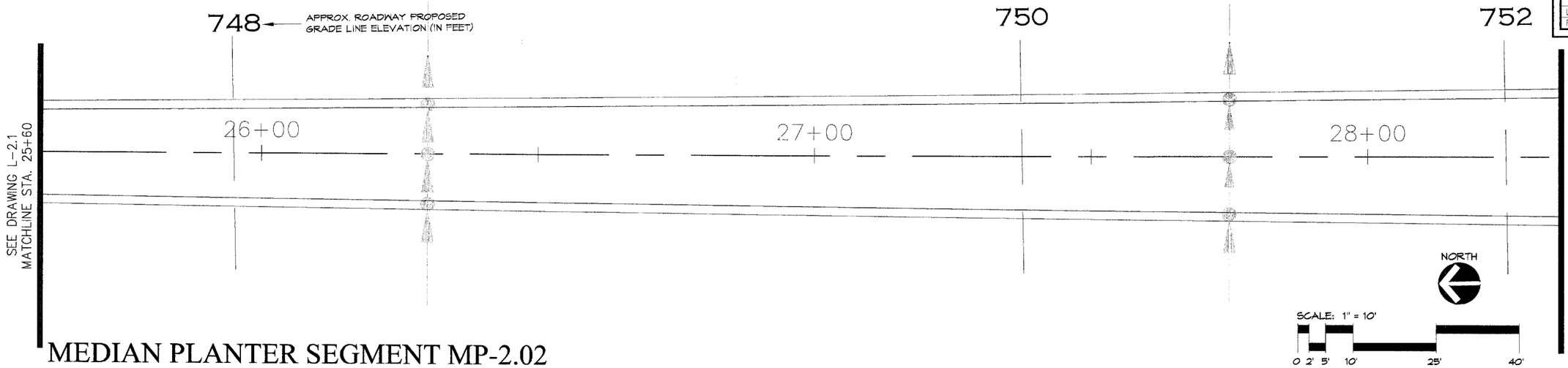
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-irrigation.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

IRRIGATION PLANS

Drawing	Sheet
L-2.1	191

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
LANDSCAPING PLANS			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0	



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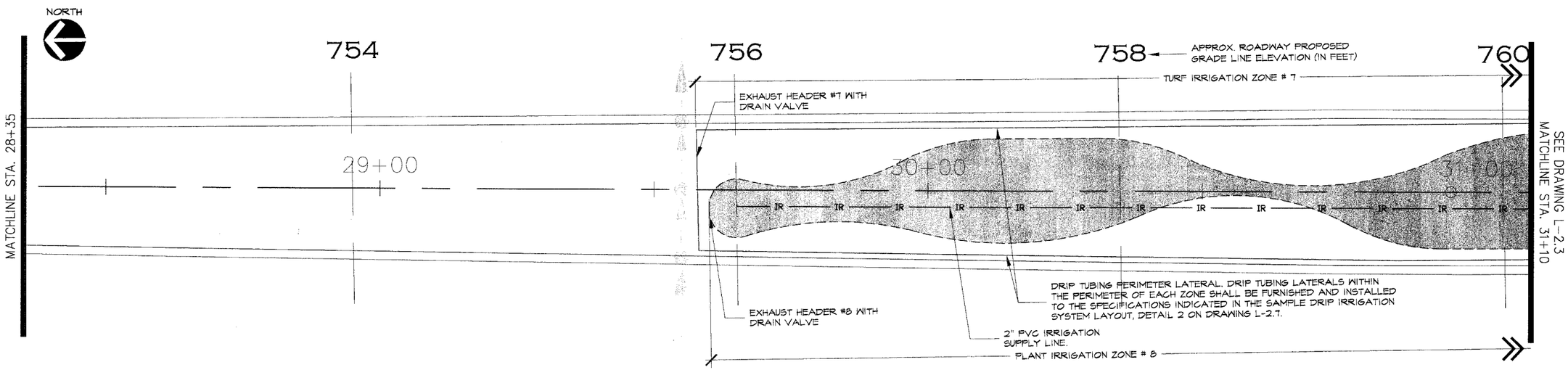

MEDIAN PLANTER SEGMENT MP-2.03

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
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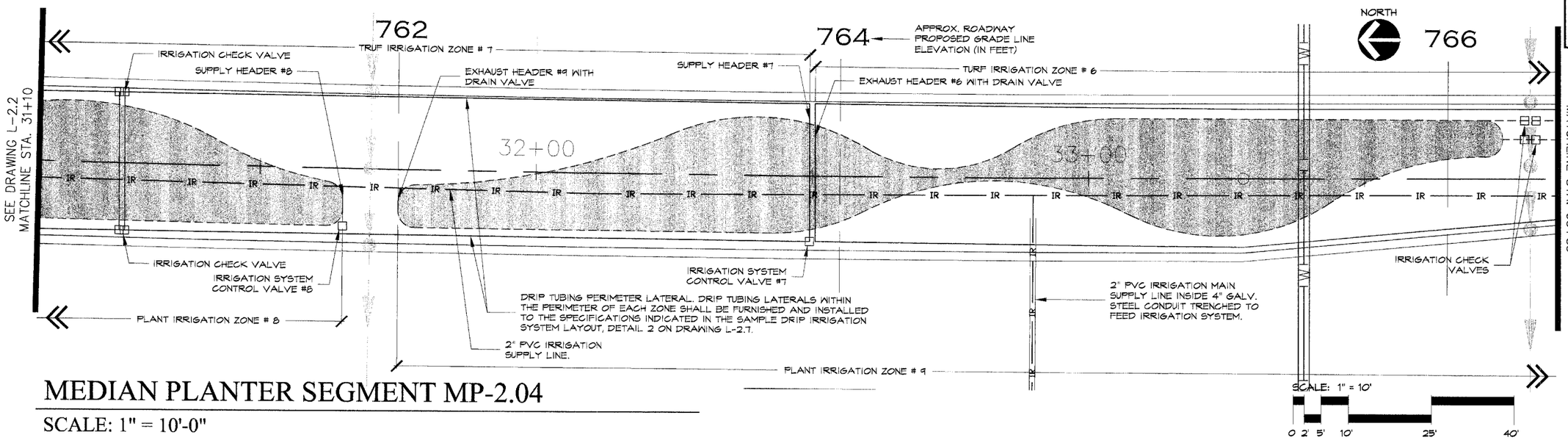
CADD File:	*h-irrigation.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

IRRIGATION PLANS

Drawing	Sheet
L-2.2	192



MEDIAN PLANTER SEGMENT MP-2.04

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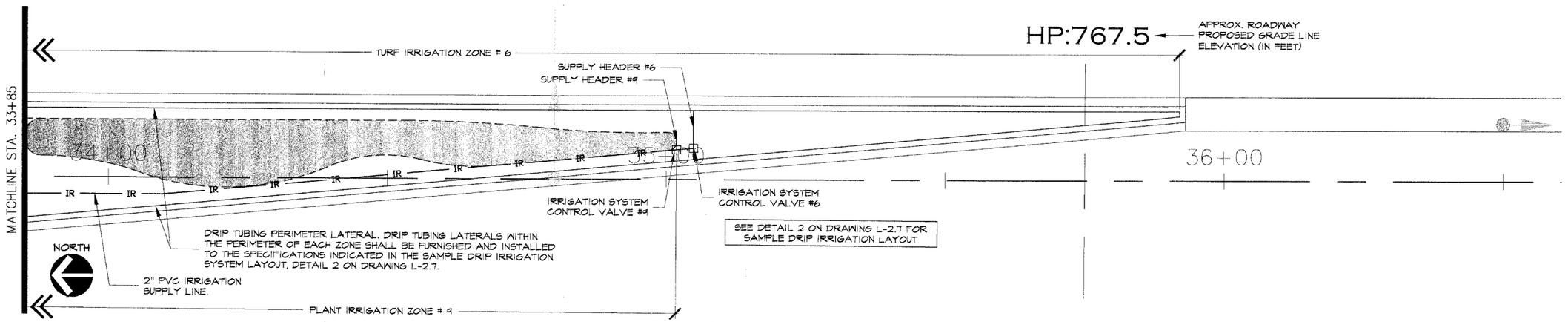

MEDIAN PLANTER SEGMENT MP-2.05

SCALE: 1" = 10'-0"

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHEET NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	193
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		

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RANDALL ROAD MEDIANS

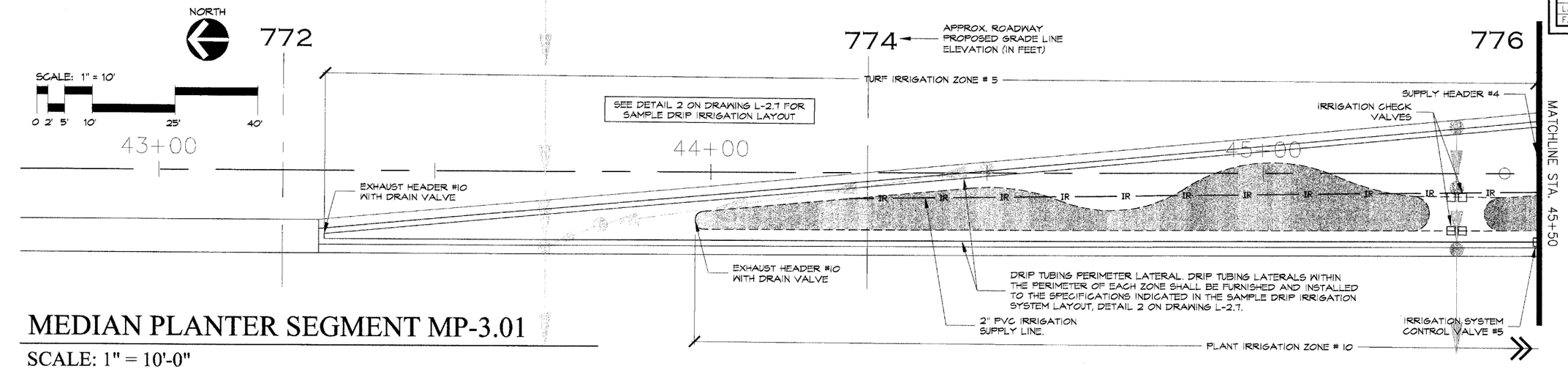
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	*h-irrigation.dwg*
Drawn By:	J.E
Approved By:	J.E
Revisions:	

IRRIGATION PLANS

Drawing	Sheet
L-2.3	193

F.A.P. ROUTE	COUNTY SECTION 99-00243-00-PV	COUNTY	TOTAL SHTS.	SH
336	CONTRACT NO. 83782	KANE	268	1
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



MEDIAN PLANTER SEGMENT MP-3.01

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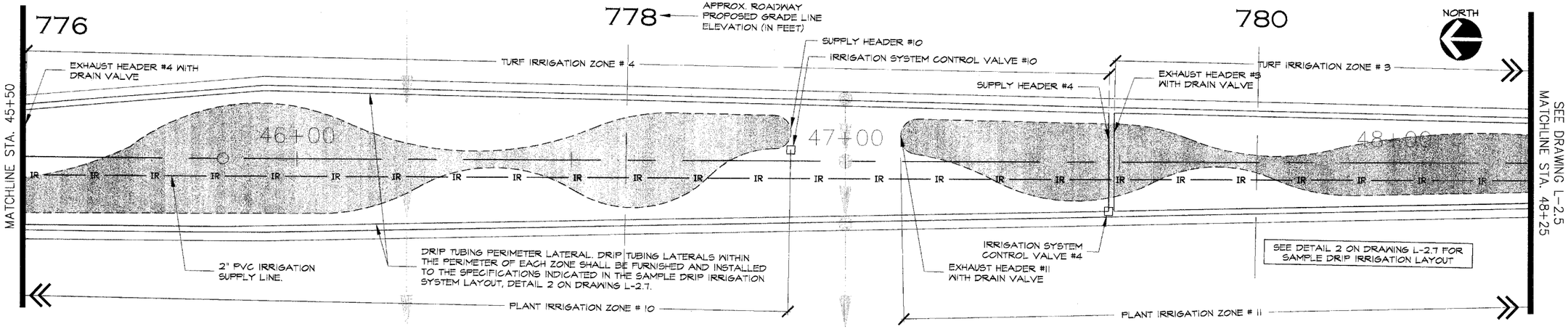

MEDIAN PLANTER SEGMENT MP-3.02

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

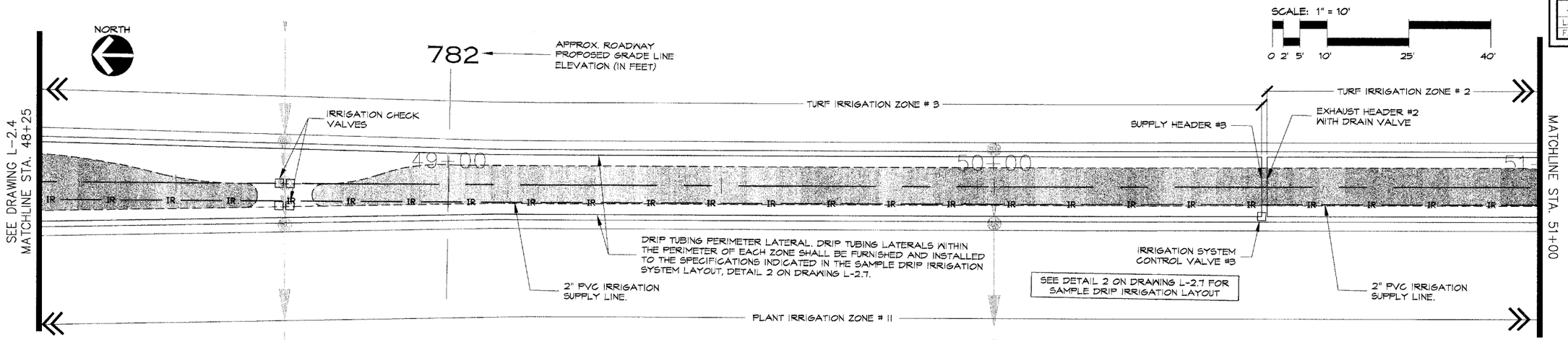
City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04.001.01
CADD File:	h-irrigation.dwg
Drawn By:	J.E
Approved By:	J.E
Revisions:	

IRRIGATION PLANS

Drawing	Sheet
L-2.4	194

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH N
336	99-00243-00-PV CONTRACT NO. 85752	KANE	268	1
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		



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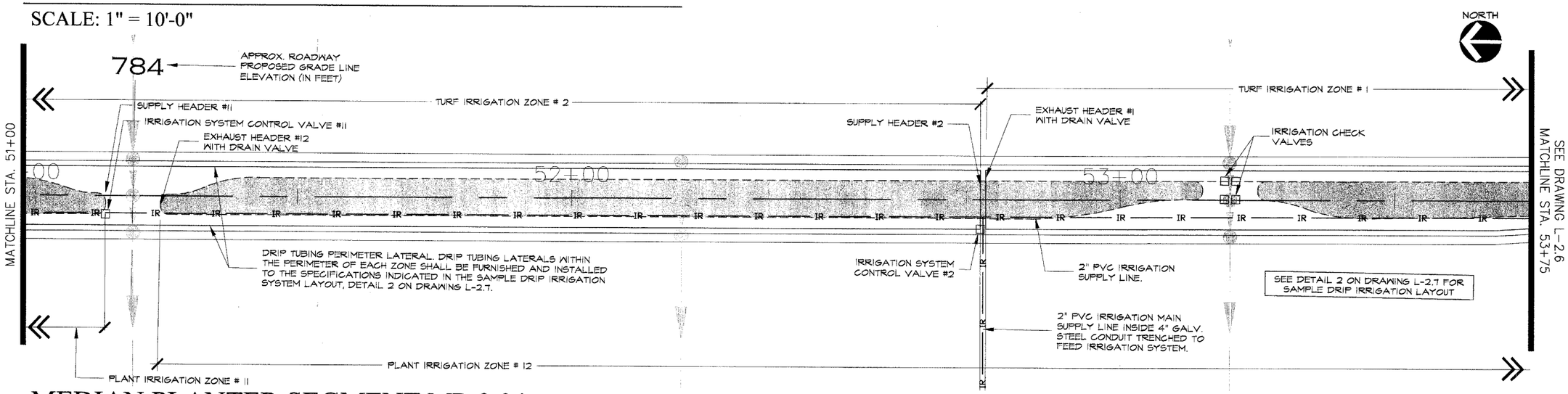

MEDIAN PLANTER SEGMENT MP-3.04

SCALE: 1" = 10'-0"

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RANDALL ROAD MEDIANS

City of St. Charles
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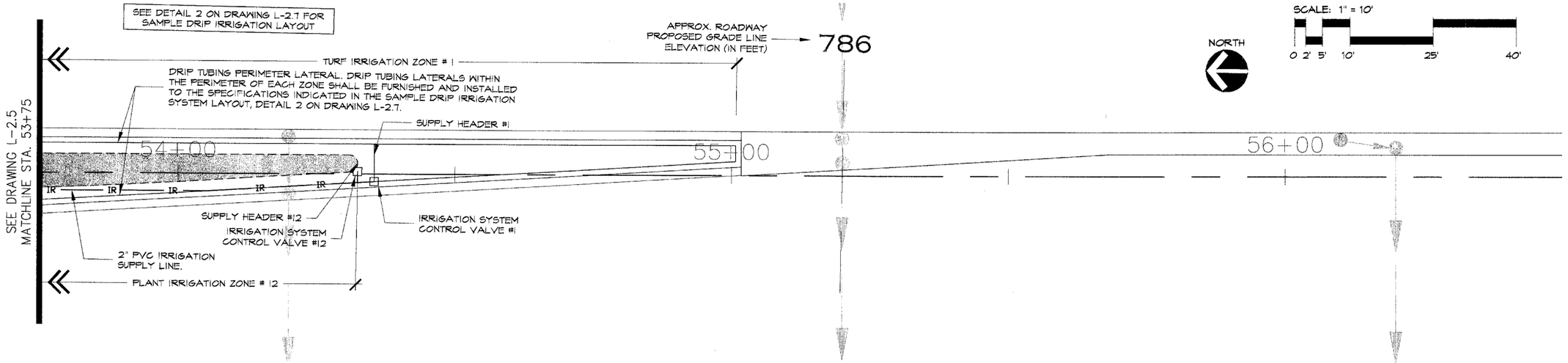
Revisions:	

IRRIGATION PLANS

Drawing	Sheet
L-2.5	195



MEDIAN PLANTER SEGMENT MP-3.05

SCALE: 1" = 10'-0"

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SH NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	1
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(0		

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RANDALL ROAD MEDIANS

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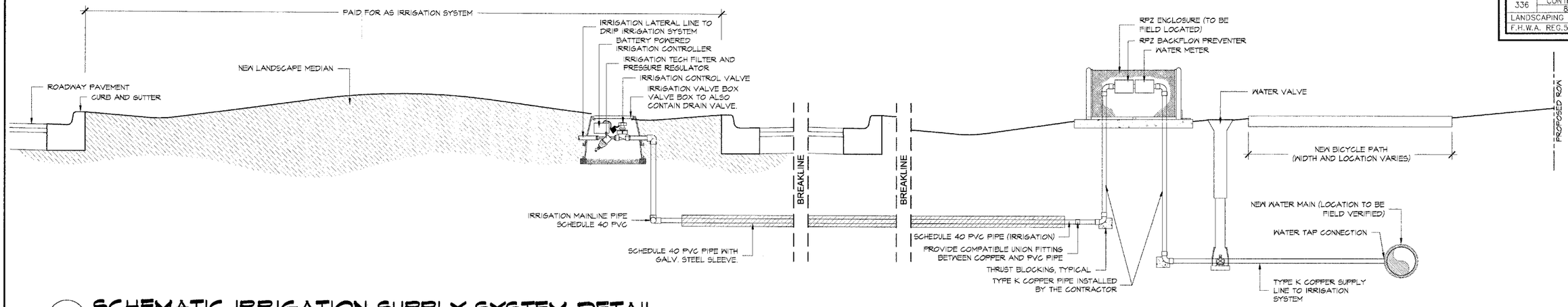
Revisions:	

IRRIGATION PLANS

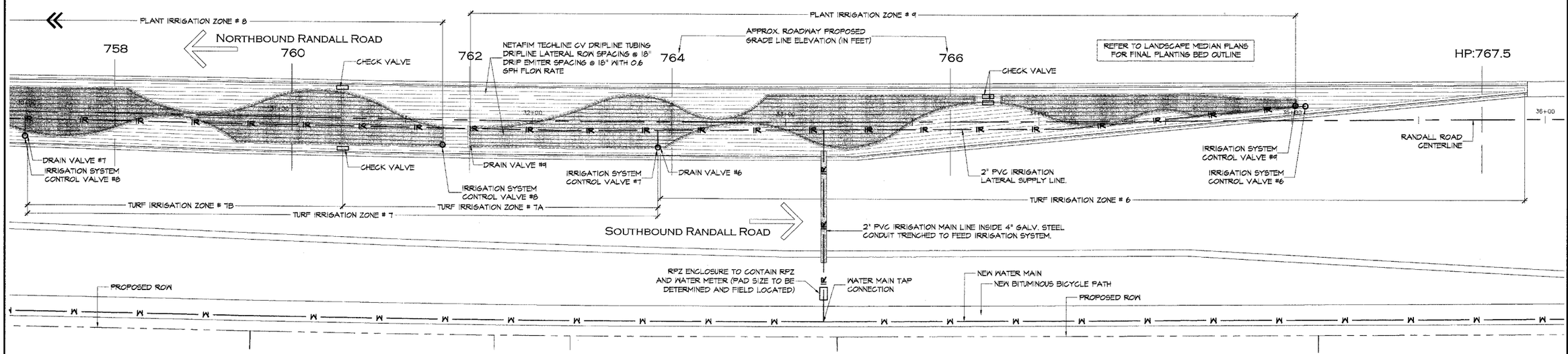
Drawing	Sheet
L-2.6	196

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268	197
LANDSCAPING PLANS				
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336(00		



1 SCHEMATIC IRRIGATION SUPPLY SYSTEM DETAIL

No Scale



2 SCHEMATIC DRIP IRRIGATION LAYOUT

Scale: 1" = 10'-0"

General Irrigation Notes

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL JULIE, AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED UTILITIES INCLUDING ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)
2. ALL STATIONS INDICATED ON PLANS ARE FROM THE PROPOSED RANDALL ROAD LAYOUT UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY UNDERGROUND OR ABOVE GROUND UTILITIES WITHIN THE PROJECT LIMITS WHETHER OR NOT THE UTILITIES ARE SHOWN ON THE PLANS. ANY UTILITY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.
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5. THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES BY METHODS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL BRACE AND SUPPORT THE UTILITIES PROPERLYTO PREVENT SETTLEMENT, DISPLACEMENT OR CHANGE TO THE UTILITIES. THE PROTECTION OF THE UTILITIES AS SPECIFIED HEREIN WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
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8. THE CONTRACTOR SHALL COORDINATE WATER MAIN CONNECTIONS WITH THE CITY OF ST. CHARLES PUBLIC WORKS PRIOR TO THE BEGINNING OF CONSTRUCTION.
9. ALL GENERAL NOTES LISTED ON DRAWINGS AND WITHIN SPECIFICATIONS FOR THIS PROJECT ALSO APPLY.
10. IRRIGATION ITEMS SHOWN ARE DIAGRAMMATIC AND SHALL BE ADJUSTED BY THE CONTRACTOR TO ACCOMMODATE EXISTING AND PROPOSED CONDITIONS.
11. LANDSCAPE PLANT MATERIAL IS NOT SHOWN ON IRRIGATION PLANS. CONTRACTOR SHALL COORDINATE IRRIGATION PLANS WITH THE LANDSCAPE MEDIAN PLANS AND MAKE ADJUSTMENTS TO IRRIGATION ITEMS WHERE NEEDED TO ACCOMMODATE PROPOSED LANDSCAPE PLANTINGS.
12. IRRIGATION QUICK COUPLERS SHALL BE SPACED ON 100 FOOT CENTERS THROUGHOUT THE ENTIRE TURF IRRIGATION ZONE.
13. THE IRRIGATION CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER DISCIPLINES OF WORK AS DESCRIBED ON THE DRAWINGS AND AS OUTLINED IN THE SPECIFICATIONS AND PRIMARILY WITH THE LANDSCAPE SUBCONTRACTOR.

HAYDEN BULIN LARSON

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RANDALL ROAD MEDIANS

City of St. Charles
St. Charles, Illinois

HBL Submittal:	Dec. 23, 2004
HBL Project No.:	04-001.01
CADD File:	h-details.dwg
Drawn By:	J.E
Approved By:	J.E
Revisions:	

IRRIGATION DETAILS

Drawing	Sheet
L-2.7	197

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268
CROSS SECTION STA. 0+00 TO STA. 1+50			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-0336	

1+50

EXISTING ROW

826.10

1+00

827.18

0+50

0+00

RANDALL ROAD

SCALE:
1" = 5' HORIZ.
1" = 2' VERT.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV	KANE	268
	CONTRACT NO. 83782		
CROSS SECTION STA. 2+00 TO STA. 3+00			
F.H.W.A. REG.5	ILLINOIS	PROJECT F-033(6	

3+00

EXISTING ROW

821.42

2+50

EXISTING ROW

823.32

2+00

EXISTING ROW

824.84

RANDALL ROAD

SCALE:
1" = 5' HORIZ.
1" = 2' VERT.

F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV CONTRACT NO. 83782	KANE	268

CROSS SECTION STA. 3+50 TO STA. 4+50

F.H.W.A. REG.5 | ILLINOIS | PROJECT F-0336