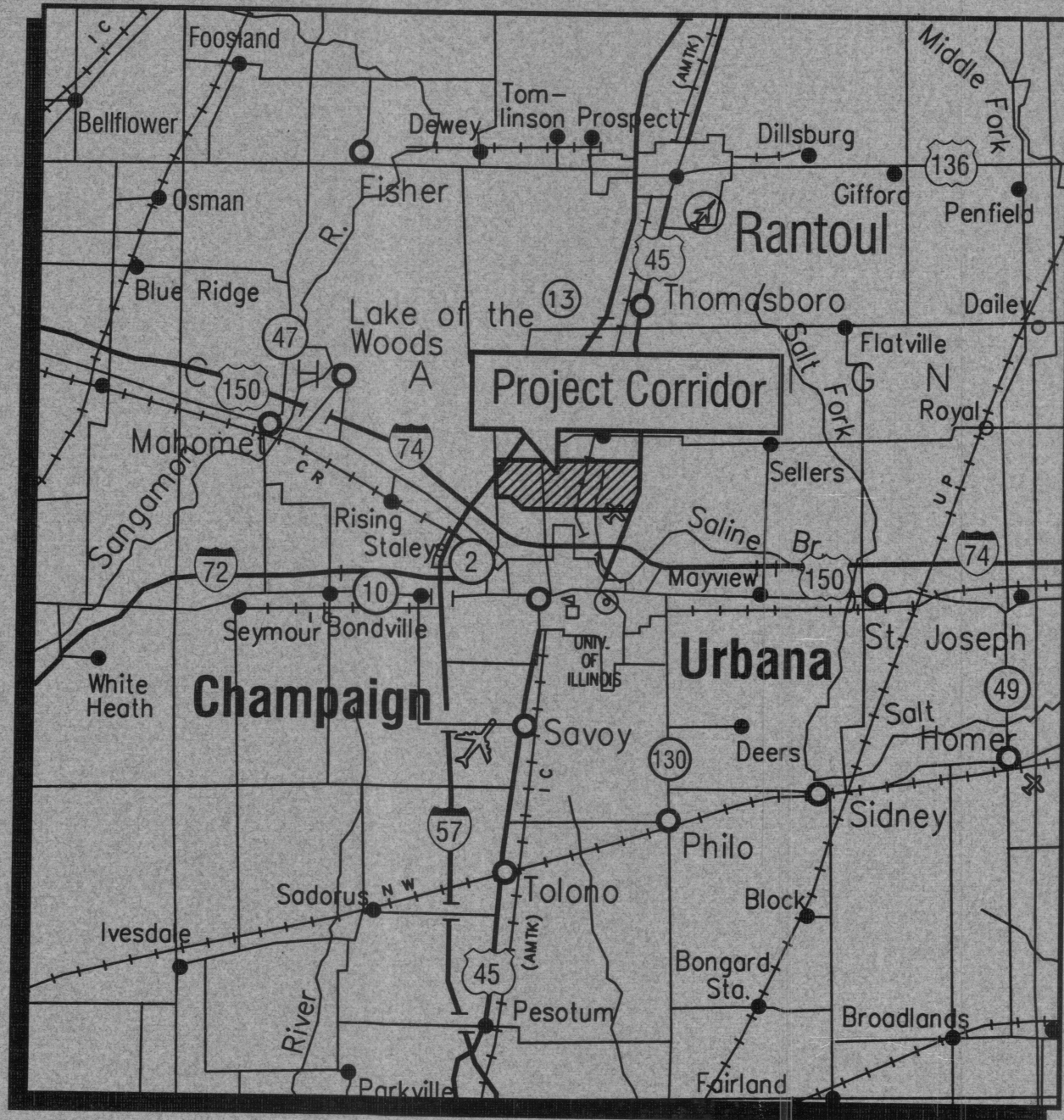


OLYMPIAN DRIVE LOCATION STUDY
CHAMPAIGN COUNTY
ILLINOIS



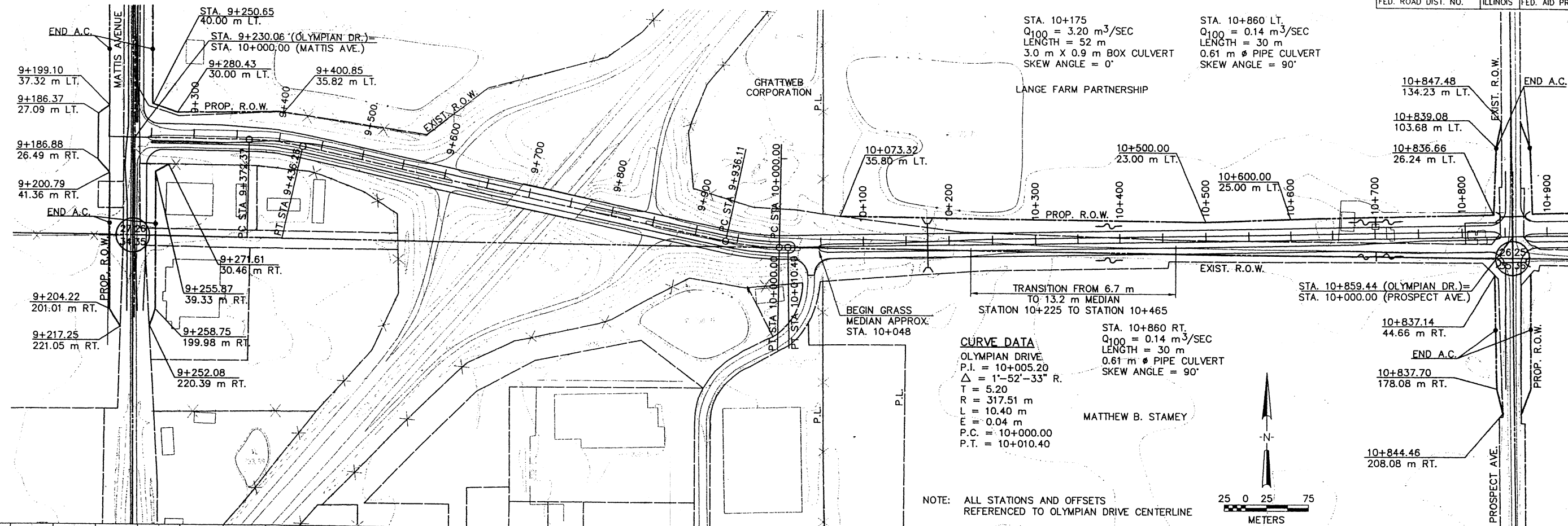
PREPARED FOR
CHAMPAIGN COUNTY
MARCH 1997

PREPARED BY



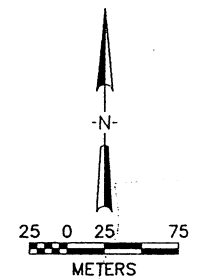
Location/Design Report Volume 2
Design Study Plans

RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHAMPAIGN		
STA. 10+000	TO STA. 10+950			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

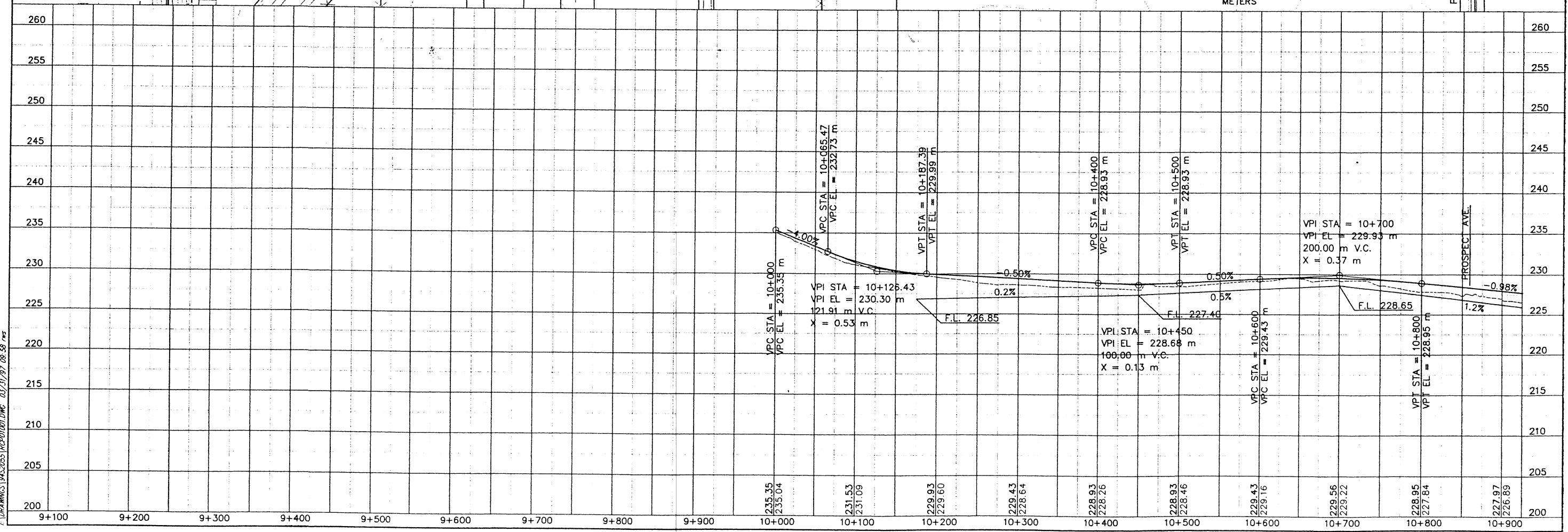


CURVE DATA
 OLYMPIAN DRIVE
 P.I. = 10+005.20
 $\Delta = 1^{\circ}-52'-33''$ R.
 T = 5.20
 R = 317.51 m
 L = 10.40 m
 E = 0.04 m
 P.C. = 10+000.00
 P.T. = 10+010.40

STA. 10+860 RT.
 $Q_{100} = 0.14 \text{ m}^3/\text{SEC}$
 LENGTH = 30 m
 0.61 m ϕ PIPE CULVERT
 SKEW ANGLE = 90°

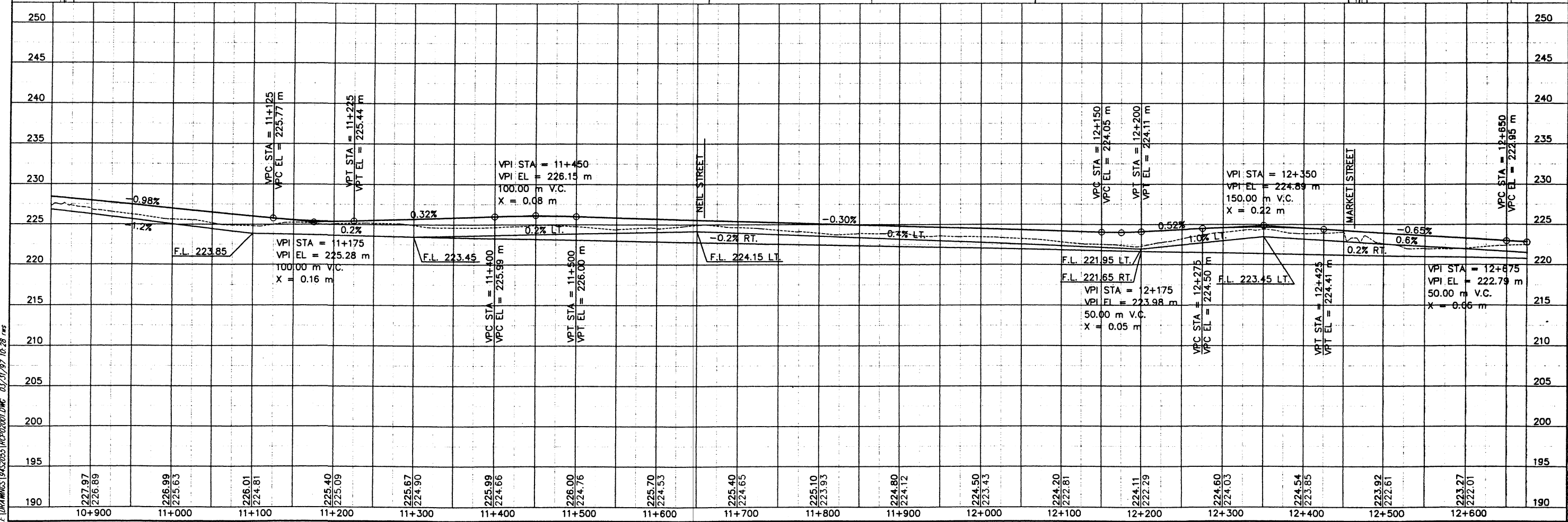
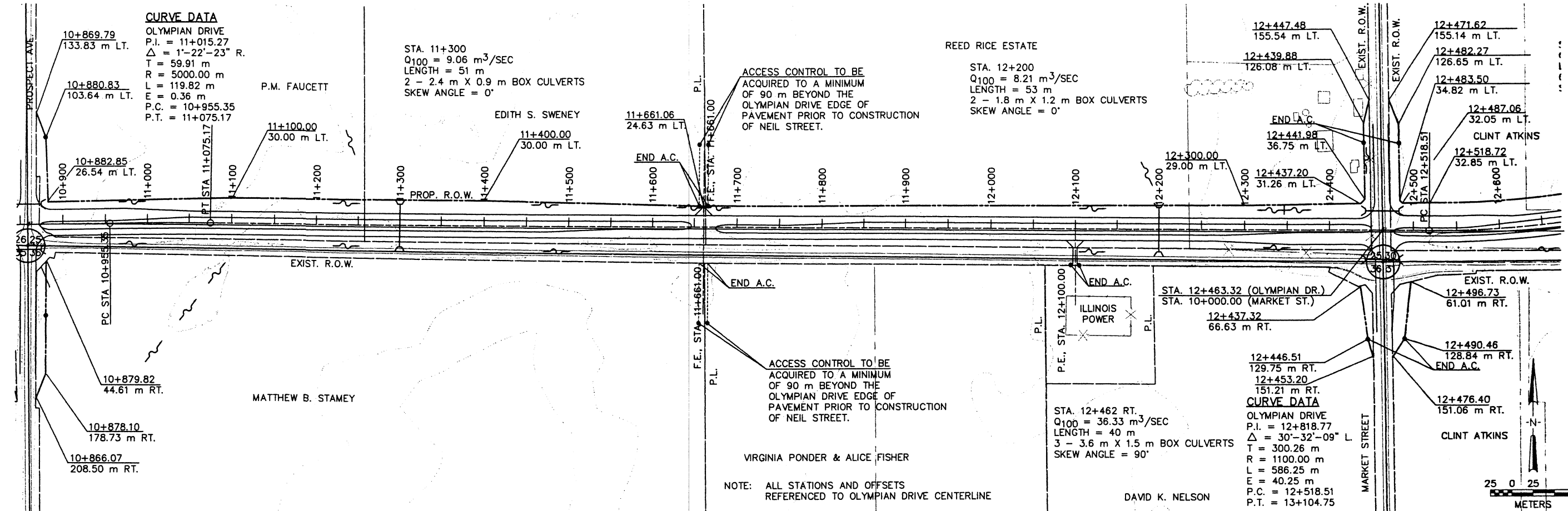


NOTE: ALL STATIONS AND OFFSETS REFERENCED TO OLYMPIAN DRIVE CENTERLINE



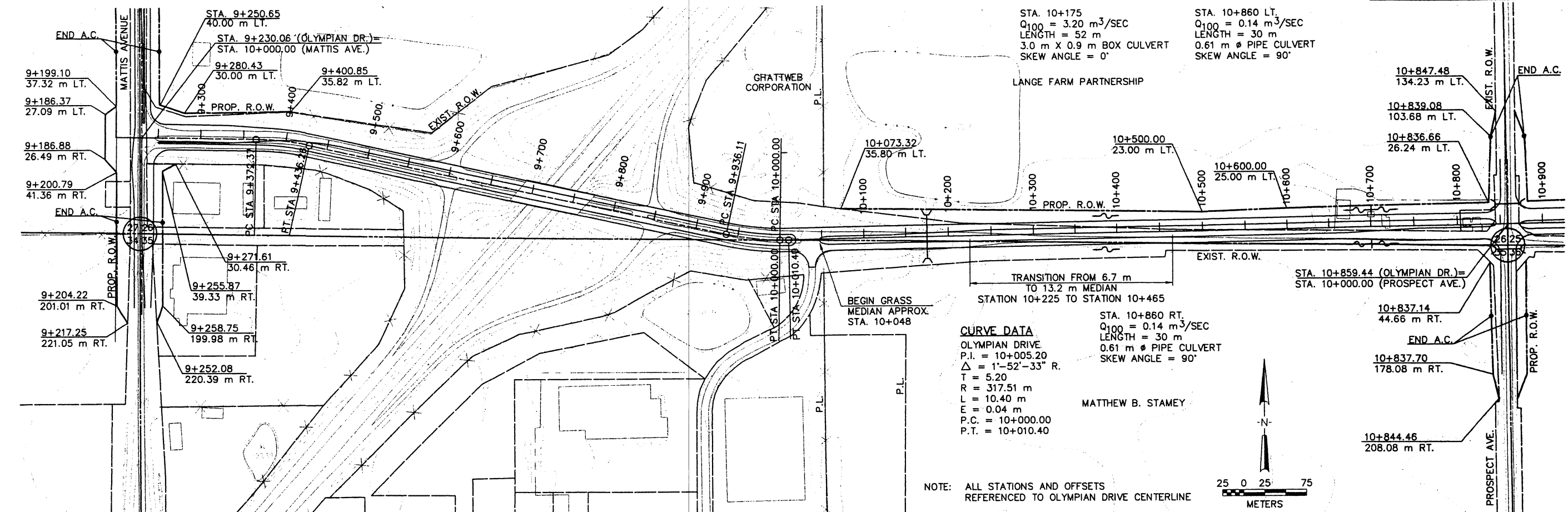
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RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
95-00366-00-ES	CHAMPAIGN			
STA. 10+850		TO STA. 12+670		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



A:\DRAWINGS\19452005\19452005.DWG 03/31/07 10:28 AM

RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHAMPAIGN		
STA. 10+000		TO STA. 10+950		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT



STA. 10+175
 $Q_{100} = 3.20 \text{ m}^3/\text{SEC}$
 LENGTH = 52 m
 3.0 m X 0.9 m BOX CULVERT
 SKEW ANGLE = 0°

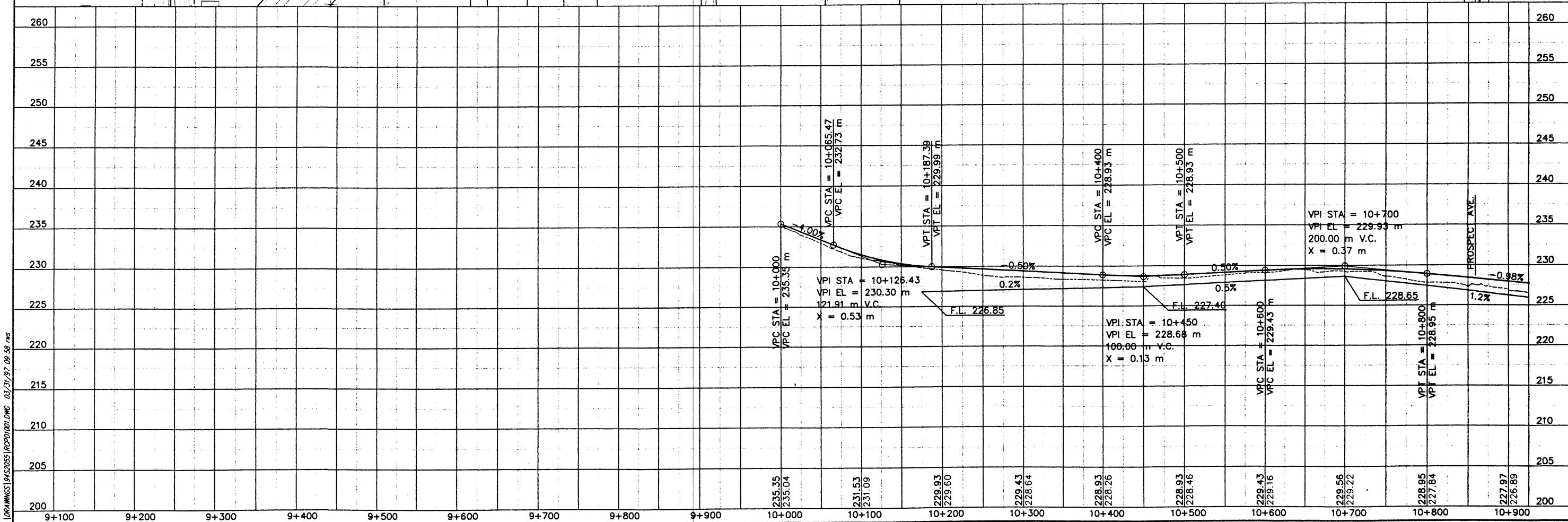
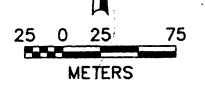
STA. 10+860 LT.
 $Q_{100} = 0.14 \text{ m}^3/\text{SEC}$
 LENGTH = 30 m
 0.61 m ϕ PIPE CULVERT
 SKEW ANGLE = 90°

CURVE DATA
 OLYMPIAN DRIVE
 P.I. = 10+005.20
 $\Delta = 1^\circ-52'-33'' \text{ R.}$
 T = 5.20
 R = 317.51 m
 L = 10.40 m
 E = 0.04 m
 P.C. = 10+000.00
 P.T. = 10+010.40

STA. 10+860 RT.
 $Q_{100} = 0.14 \text{ m}^3/\text{SEC}$
 LENGTH = 30 m
 0.61 m ϕ PIPE CULVERT
 SKEW ANGLE = 90°

MATTHEW B. STAMEY

NOTE: ALL STATIONS AND OFFSETS REFERENCED TO OLYMPIAN DRIVE CENTERLINE



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NO.	SECTION	COUNTY	TOTAL SHEETS
95-00366-00-ES	CHAMPAIGN		
STA. 12+600	TO STA. 14+450		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

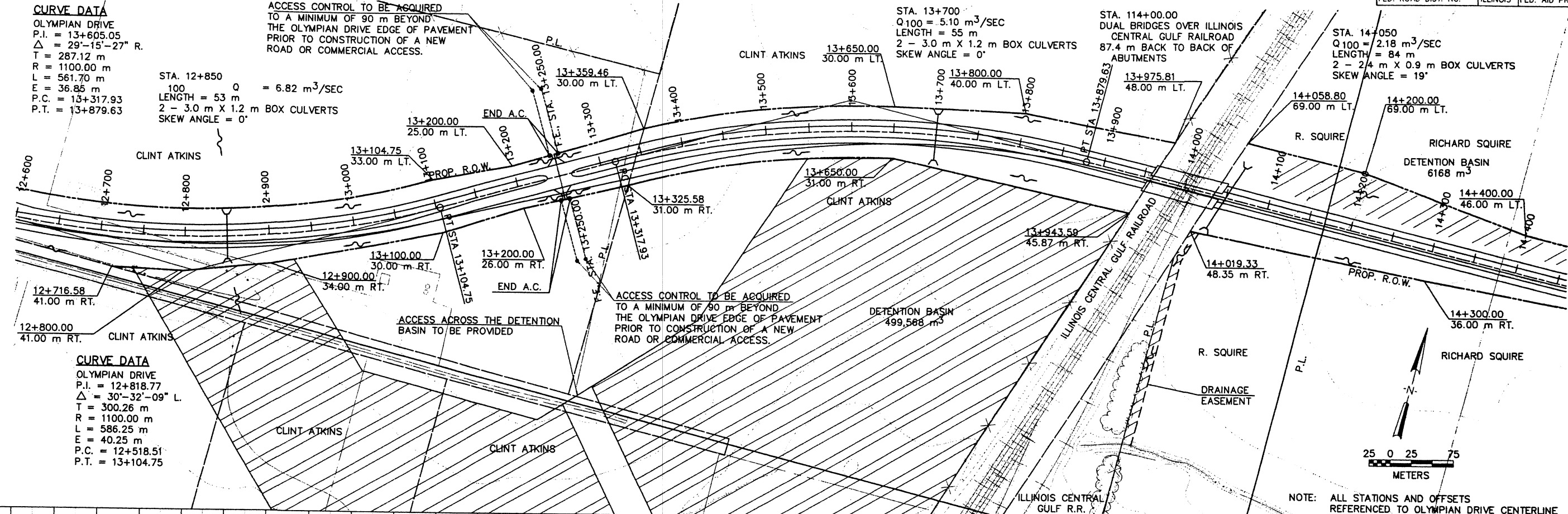
CURVE DATA
 OLYMPIAN DRIVE
 P.I. = 13+605.05
 $\Delta = 29^{\circ}-15'-27''$ R.
 T = 287.12 m
 R = 1100.00 m
 L = 561.70 m
 E = 36.85 m
 P.C. = 13+317.93
 P.T. = 13+879.63

STA. 12+850
 Q = 6.82 m³/SEC
 LENGTH = 53 m
 2 - 3.0 m X 1.2 m BOX CULVERTS
 SKEW ANGLE = 0'

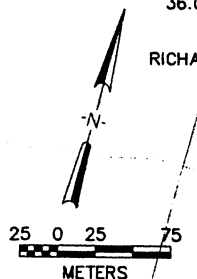
STA. 13+700
 Q₁₀₀ = 5.10 m³/SEC
 LENGTH = 55 m
 2 - 3.0 m X 1.2 m BOX CULVERTS
 SKEW ANGLE = 0'

STA. 114+00.00
 DUAL BRIDGES OVER ILLINOIS
 CENTRAL GULF RAILROAD
 87.4 m BACK TO BACK OF
 ABUTMENTS

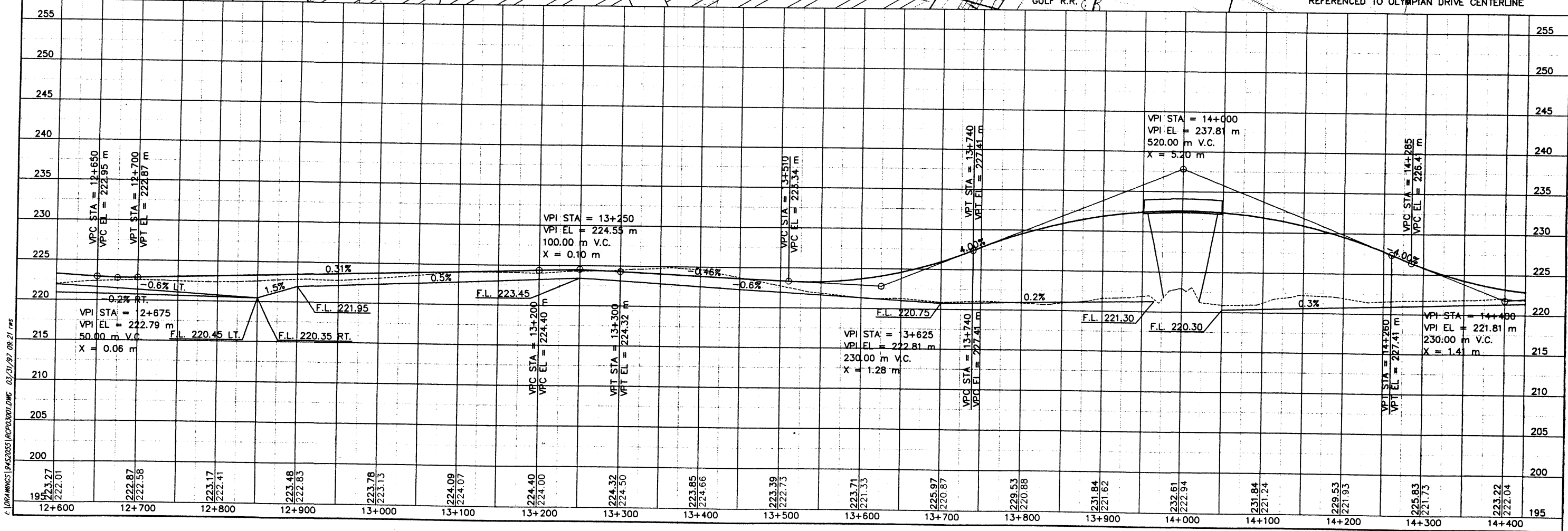
STA. 14+050
 Q₁₀₀ = 2.18 m³/SEC
 LENGTH = 84 m
 2 - 2.4 m X 0.9 m BOX CULVERTS
 SKEW ANGLE = 19'



CURVE DATA
 OLYMPIAN DRIVE
 P.I. = 12+818.77
 $\Delta = 30^{\circ}-32'-09''$ L.
 T = 300.26 m
 R = 1100.00 m
 L = 586.25 m
 E = 40.25 m
 P.C. = 12+518.51
 P.T. = 13+104.75



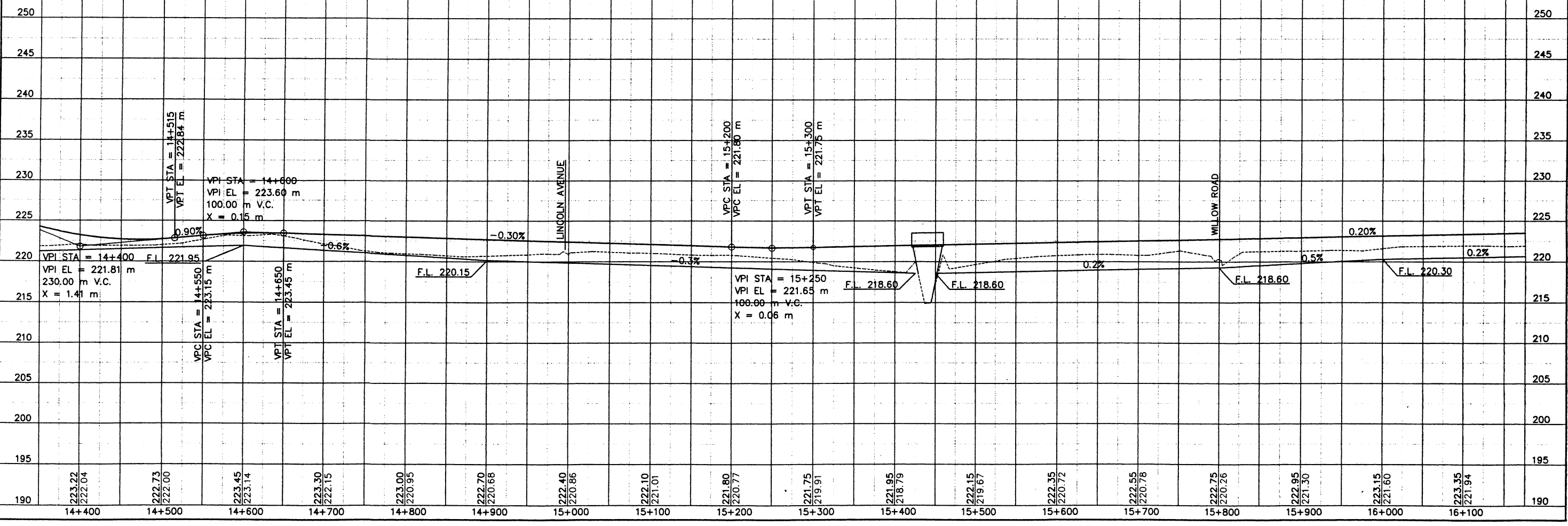
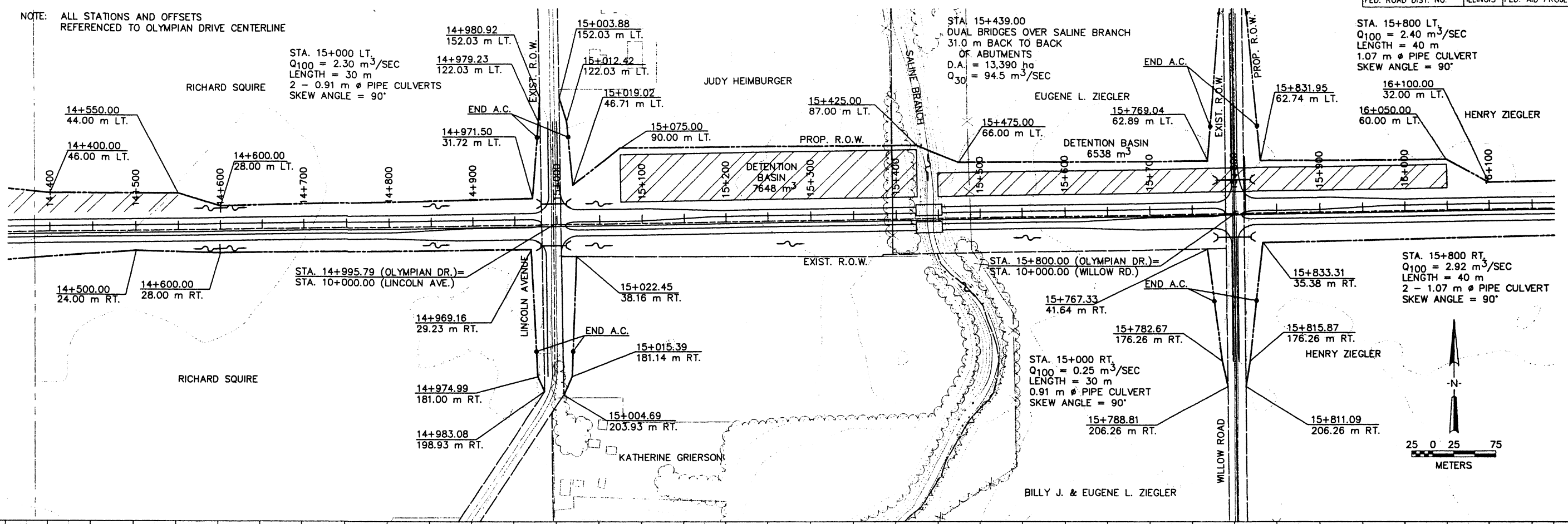
NOTE: ALL STATIONS AND OFFSETS REFERENCED TO OLYMPIAN DRIVE CENTERLINE



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RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	95-00366-00-ES	CHAMPAIGN		
STA. 14+350 TO STA. 16+175				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

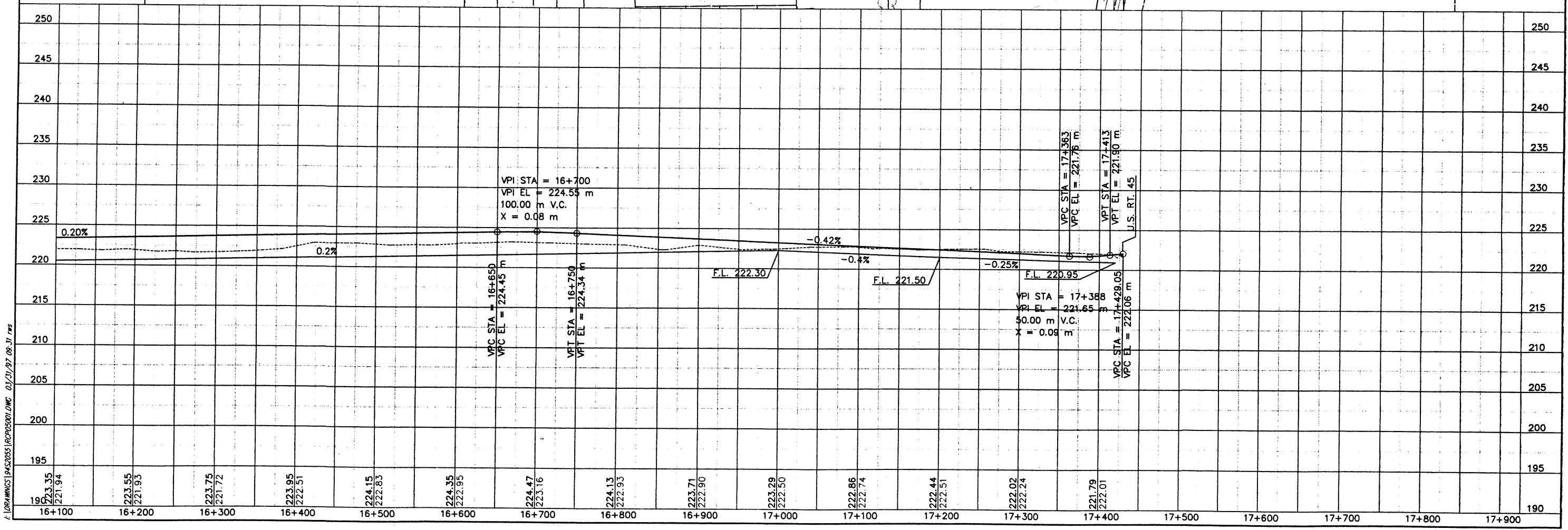
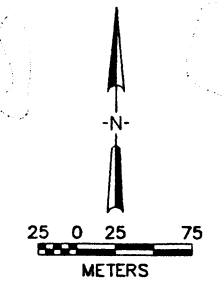
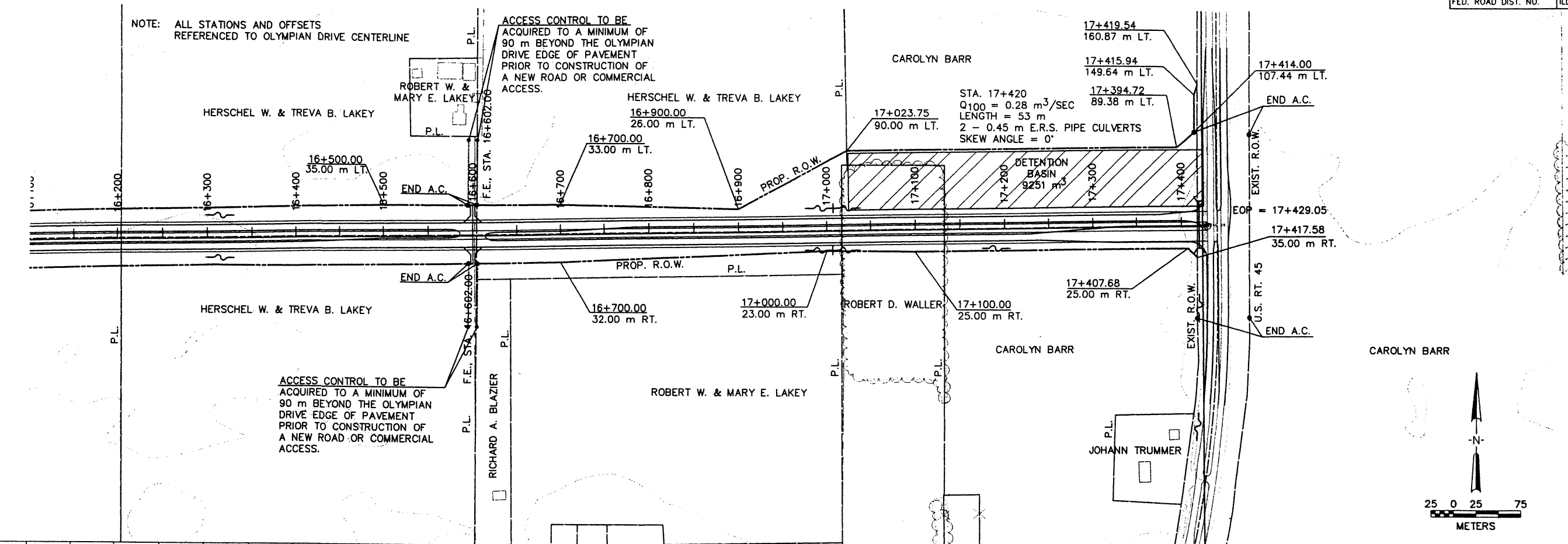
NOTE: ALL STATIONS AND OFFSETS REFERENCED TO OLYMPIAN DRIVE CENTERLINE



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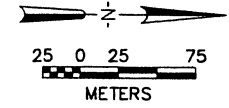
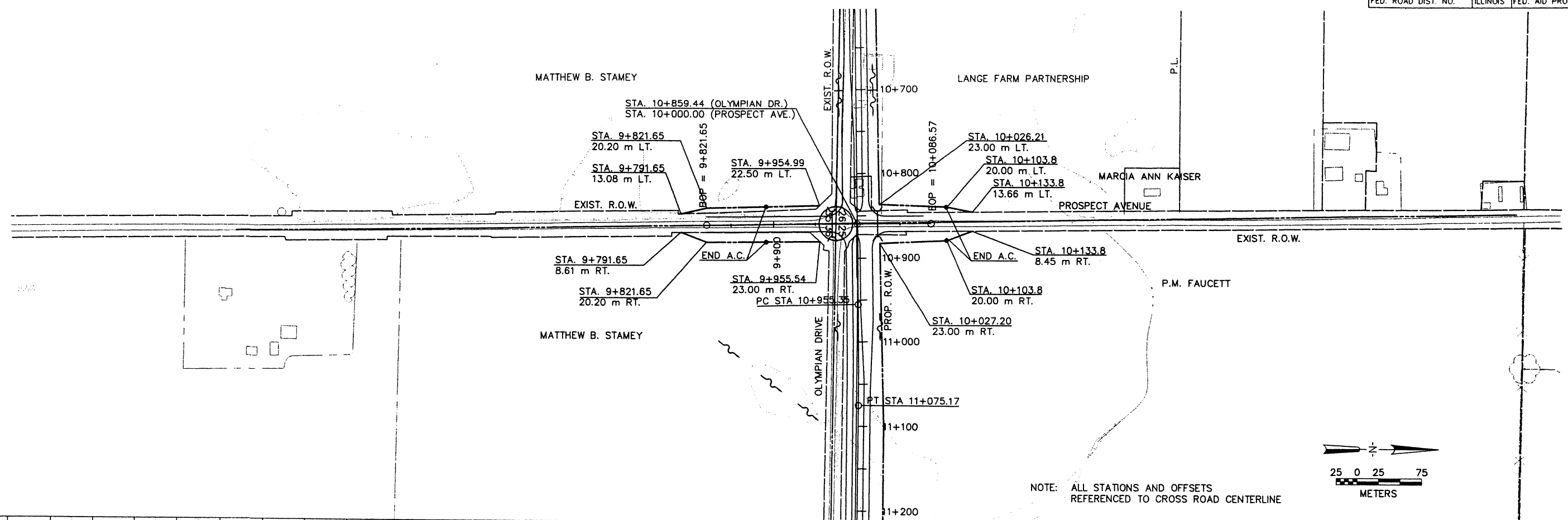
RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	95-00366-00-ES	CHAMPAIGN		
STA. 16+100	TO STA. 17+429			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTE: ALL STATIONS AND OFFSETS REFERENCED TO OLYMPIAN DRIVE CENTERLINE

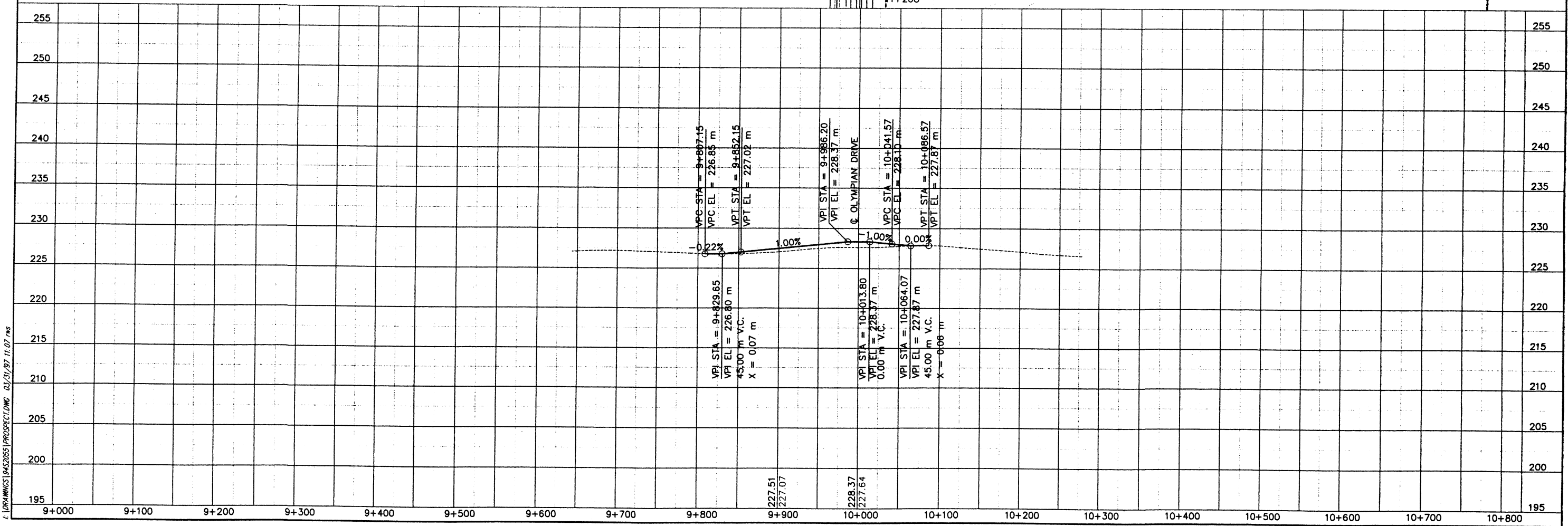


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RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	95-00366-00-ES	CHAMPAIGN		
STA. 9+822		TO STA. 10+076		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

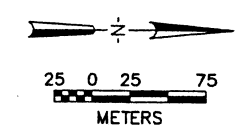
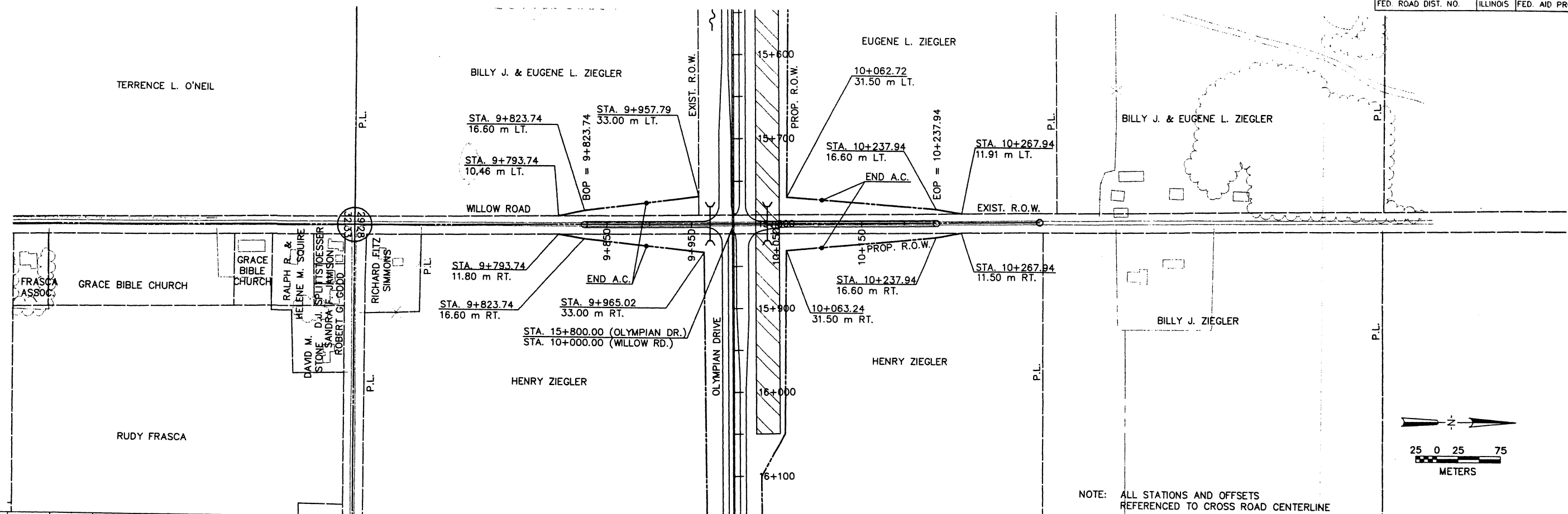


NOTE: ALL STATIONS AND OFFSETS REFERENCED TO CROSS ROAD CENTERLINE

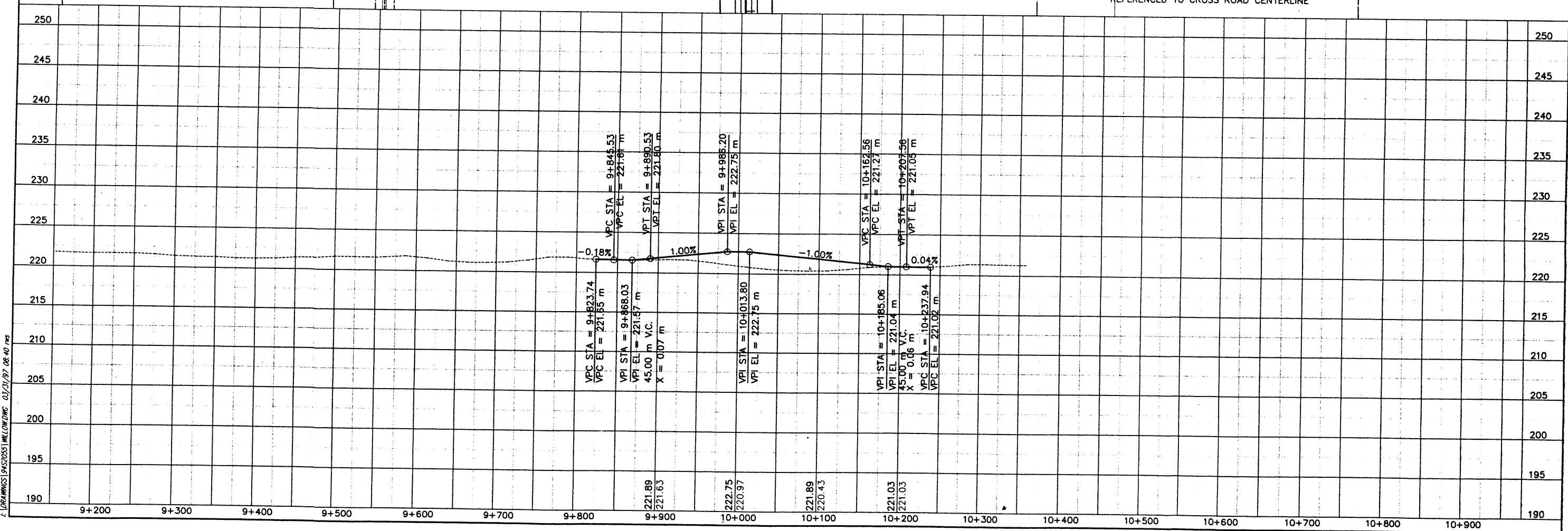


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RTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	95-00366-00-ES	CHAMPAIGN		
STA.	9+824	TO STA.	10+238	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

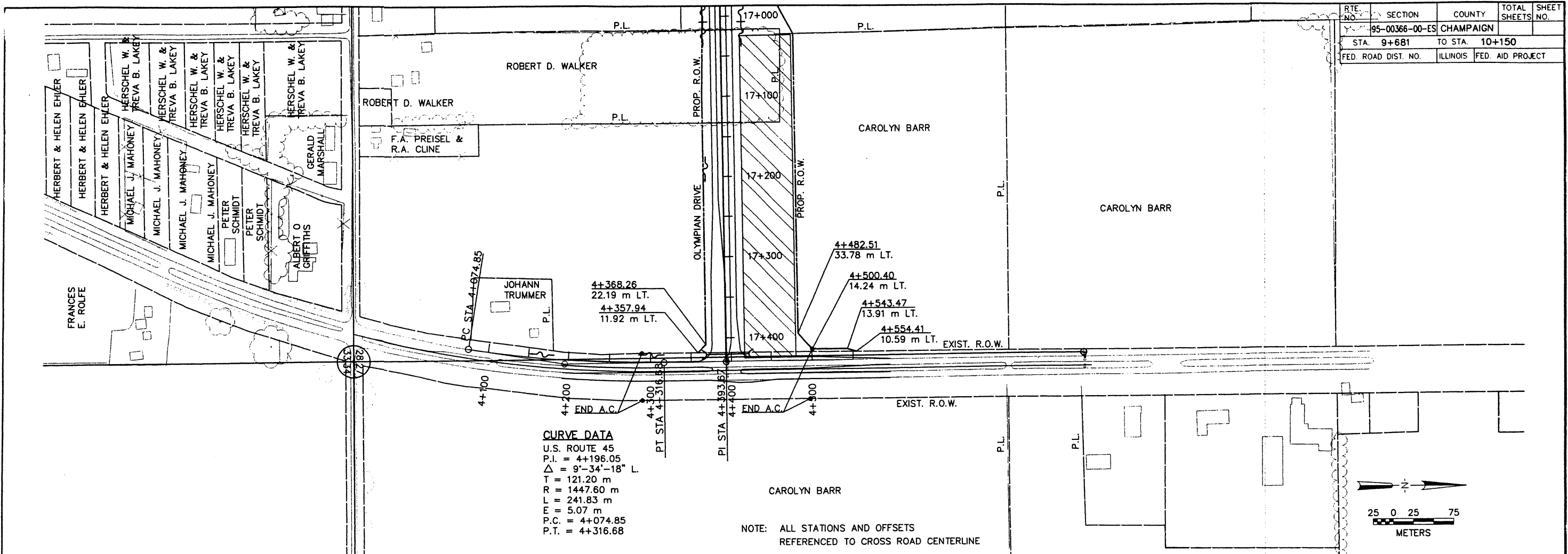


NOTE: ALL STATIONS AND OFFSETS REFERENCED TO CROSS ROAD CENTERLINE



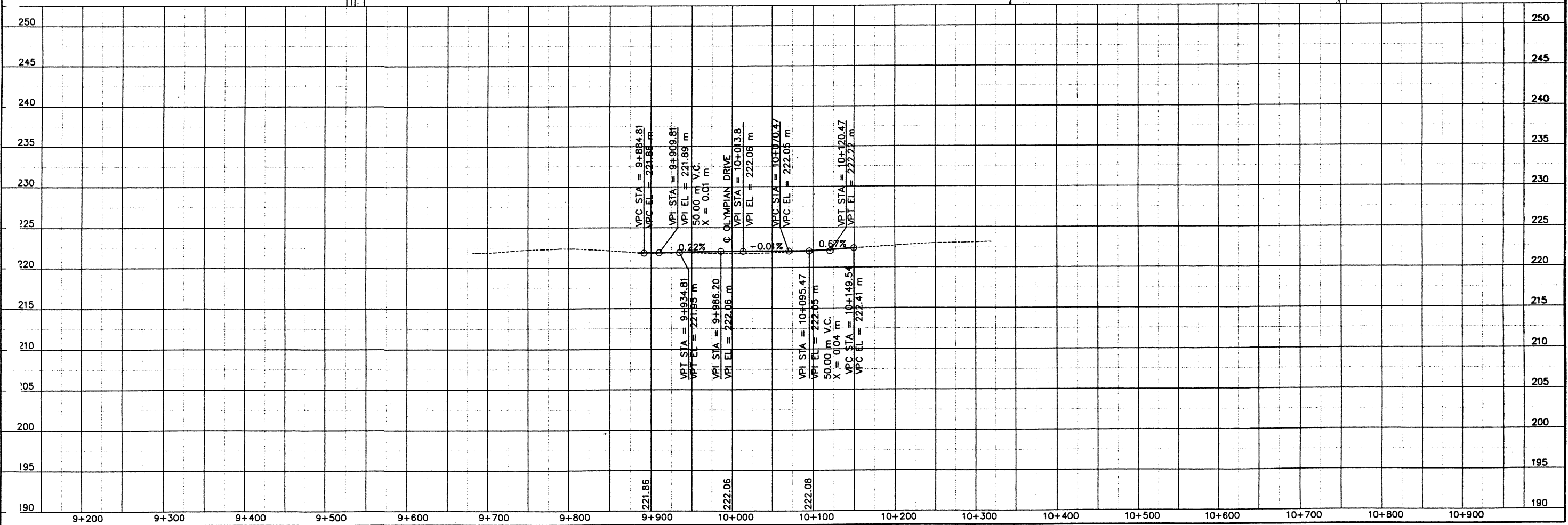
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RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
95-00366-00-ES	CHAMPAIGN			
STA. 9+681	TO STA. 10+150			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CURVE DATA
 U.S. ROUTE 45
 P.I. = 4+196.05
 $\Delta = 9^{\circ}-34'-18''$ L
 T = 121.20 m
 R = 1447.60 m
 L = 241.83 m
 E = 5.07 m
 P.C. = 4+074.85
 P.T. = 4+316.68

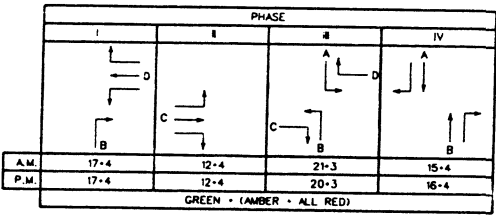
NOTE: ALL STATIONS AND OFFSETS REFERENCED TO CROSS ROAD CENTERLINE



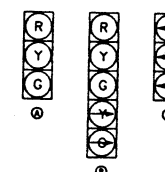
A. LAMBERTSON 1/25/2008 10:00 AM 001/21/07 001-03 785

**INTERSECTION
DESIGN
STUDIES**

CAPACITY DESIGN STUDY											
PHASE	AREA		OTHER		PEAK HOUR FACTOR		0.93				
80	SEC. CYCLE		AVERAGE INTERSECTION DELAY A.M. 18.2 SEC.		PROGRAM USED SIG/CNEMA V10		P.M. 18.4 SEC.		INTERSECTION LEVEL		A.M. C
SIGNAL TYPE	ACTUATED										P.M. C
APPROACH	A	B	C	D							
BUS STOP CONDITION	--	--	--	--							
PARKING MANEUVER/HR	--	--	--	--							
PEDESTRIANS	--	--	--	--							
ARRIVAL TYPE	3	3	3	3							
LANE UTILIZATION FACTOR	1.00	1.05	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.05	1.00
BASE SATURATION FLOW	1900		1900		1900		1900		1900		1900
D-DISTANCE	60m		60m		60m		60m		60m		60m
LANE GROUP	L	TR	L	T	R	L	T	R	L	T	R
LANE WIDTHS	3.6m	283.6m	3.6m	283.6m	3.6m	3.6m	283.6m	3.6m	283.6m	283.6m	3.6m
GREEN TIME (SECONDS)	A.M. 21	15	21	15	36	12	37	17	17	38	
P.M. 20	16		20	16	37	12	36	17	17	37	
LANE GROUP DELAY (SECONDS)	A.M. 24.5	20.7	15.3	19.0	11.3	19.0	19.0	8.1	19.7	16.4	7.7
P.M. 23.8	22.1		16.4	18.9	10.6	20.9	21.9	9.6	20.4	18.1	8.4
V/C RATIO	A.M. 0.78	0.63	0.19	0.45	0.56	0.12	0.10	0.08	0.82	0.11	0.08
P.M. 0.76	0.73		0.31	0.51	0.53	0.45	0.61	0.32	0.67	0.47	0.15
LEVEL OF SERVICE	A.M. C	C	C	C	B	C	C	B	C	C	B
P.M. C	C		C	C	B	C	C	B	C	C	B
2018 30TH MAX. HOUR TRAFFIC	A.M. 305	375	75	275	355	30	50	50	400	75	50
1998 8TH MAX. HOURLY TRAFFIC	A.M. 280	460	120	330	345	110	295	205	430	325	95
	P.M. 223		88			0					61
	P.M. 179		165			0					74



TRAFFIC SIGNAL HEAD LEGEND

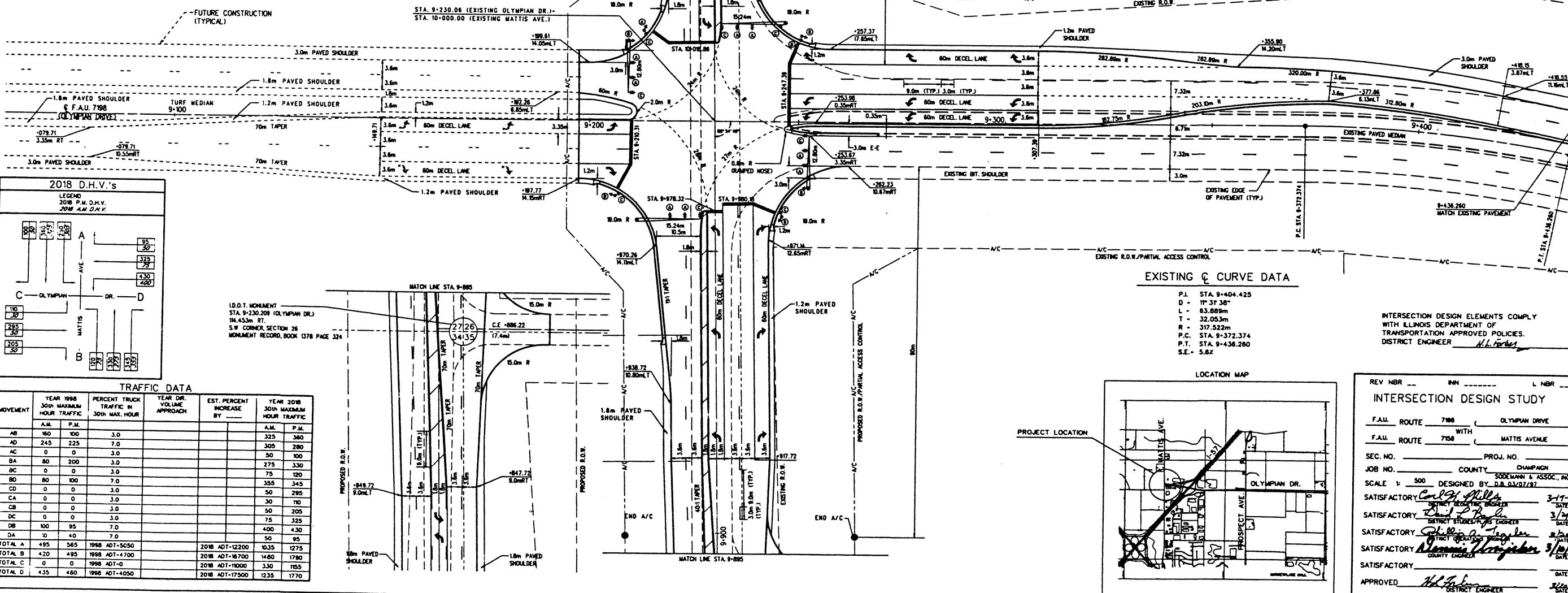


ELEMENTS CONTROLLING DESIGN

- DESIGN DESIGNATION: F.A.U. 7198 (OLYMPIAN DRIVE) MINOR ARTERIAL 17,500 ADT (2018) WITH F.A.U. 7158 (MATTIS AVE.) MINOR ARTERIAL 16,700 ADT (2018)
- F.A.U. 7198 (OLYMPIAN DR.) IS THE PREFERENCE ROUTE.
- ANTICIPATED YEAR OF CONSTRUCTION 1998
- TRAFFIC CONTROL TO BE TRAFFIC SIGNALS, SYSTEMS WARRANT NO. 7 IS MET.
- WB-20 DESIGN VEHICLE
- DESIGN SPEED: 80 km/hr ON OLYMPIAN DR.; 80 km/hr ON MATTIS AVE. POSTED SPEED: 70 km/hr ON OLYMPIAN DR.; 70 km/hr ON MATTIS AVE.
- OLYMPIAN DRIVE WILL BE OPEN FROM MATTIS AVENUE TO US-45 IN 2018. IN 1998 THE SYSTEM WILL OPEN WITH NO NEW DEVELOPMENT.

GENERAL NOTES

- PROFILES ARE NOT PROVIDED, SINCE APPROACH GRADES ARE 1% OR LESS.
- TYPE B-15.60 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT WHERE SHOWN.
- TYPE M-10.60 CURB AND GUTTER TO BE USED ON MEDIAN.
- ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE NOTED.
- ENTRANCES SHALL CONFORM TO THE POLICY ON "ACCESS TO STATE HIGHWAYS".
- ENTRANCES AND R.O.W. SUBJECT TO REVISION DURING PREPARATION OF FINAL PLANS.
- THE AERIAL MAPPING USED FOR THIS PROJECT HAS A HORIZONTAL ACCURACY SUCH THAT NOT MORE THAN TEN PERCENT OF THE WELL-DEFINED POINTS TESTED SHALL HAVE AN ERROR IN EXCESS OF 1/15.75cm (1/40"). THIS TRANSLATES TO AN ACCURACY OF 1.6m (5.2') FOR MAPPING AT A SCALE OF 1:2500. POINTS LOCATED IN THE FIELD DURING THE COURSE OF THIS STUDY BY STANDARD SURVEYING METHODS WERE FOUND TO BE WELL WITHIN THIS ACCURACY.
- ANY SIGNIFICANT CHANGE TO THE INTERSECTION DESIGN STUDY WILL BE CAUSE FOR RESUBMITTAL TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR APPROVAL.



2018 D.H.V.'s

LEGEND
2018 P.M. D.H.V.
2018 A.M. D.H.V.

OLYMPIAN	DR.	MATTIS	DR.
305	375	165	179
280	460	88	61
205	223	179	74

TRAFFIC DATA

MOVEMENT	YEAR 1998		PERCENT TRUCK TRAFFIC IN HOUR MAX. HOUR	YEAR DR. VOLUME APPROACH	EST. PERCENT INCREASE BY	YEAR 2018	
	30th MAXIMUM HOUR TRAFFIC	30th MAX. HOUR				30th MAXIMUM HOUR TRAFFIC	30th MAX. HOUR
AB	360	100	3.0			325	360
AD	245	225	7.0			305	280
BA	0	200	3.0			50	100
BC	0	0	3.0			275	330
BD	80	100	7.0			75	120
CD	0	0	3.0			355	345
CA	0	0	3.0			50	295
CB	0	0	3.0			30	110
DC	0	0	3.0			50	205
DB	100	95	7.0			400	430
DA	30	40	7.0			50	95
TOTAL A	495	565	1998 ADT-5050		2018 ADT-12200	1035	1278
TOTAL B	420	495	1998 ADT-4700		2018 ADT-16700	1480	1780
TOTAL C	0	0	1998 ADT-0		2018 ADT-1000	330	155
TOTAL D	435	460	1998 ADT-4050		2018 ADT-17500	1235	1770

EXISTING C CURVE DATA

P.I.	STA. 9+404.425
D	11° 31' 38"
L	63.889m
T	32.053m
R	317.822m
P.C.	STA. 9+372.374
P.T.	STA. 9+436.280
S.E.	5.6%

INTERSECTION DESIGN ELEMENTS COMPLY WITH ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED POLICIES.
DISTRICT ENGINEER *ALL*

REV NBR --- BNN --- L NBR ---

INTERSECTION DESIGN STUDY

F.A.U. ROUTE 7198 (OLYMPIAN DRIVE) WITH F.A.U. ROUTE 7158 (MATTIS AVENUE)

SEC. NO. --- PROJ. NO. ---
JOB NO. --- COUNTY CHAMPAIGN
SCALE 1" = 500' DESIGNED BY D.B. 03/07/87

SATISFACTORY *Carol Miller* 3/17/87
DISTRICT ENGINEER

SATISFACTORY *David P. Taylor* 3/20/87
DISTRICT ENGINEER

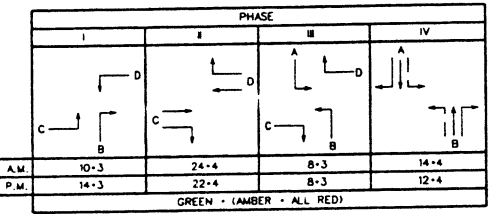
SATISFACTORY *John R. ...* 3/20/87
COUNTY ENGINEER

SATISFACTORY *...* 3/20/87
DATE

APPROVED *...* 3/20/87
DISTRICT ENGINEER

CADD FILE NAME MATTIS.DGN SHEET 1 OF 1

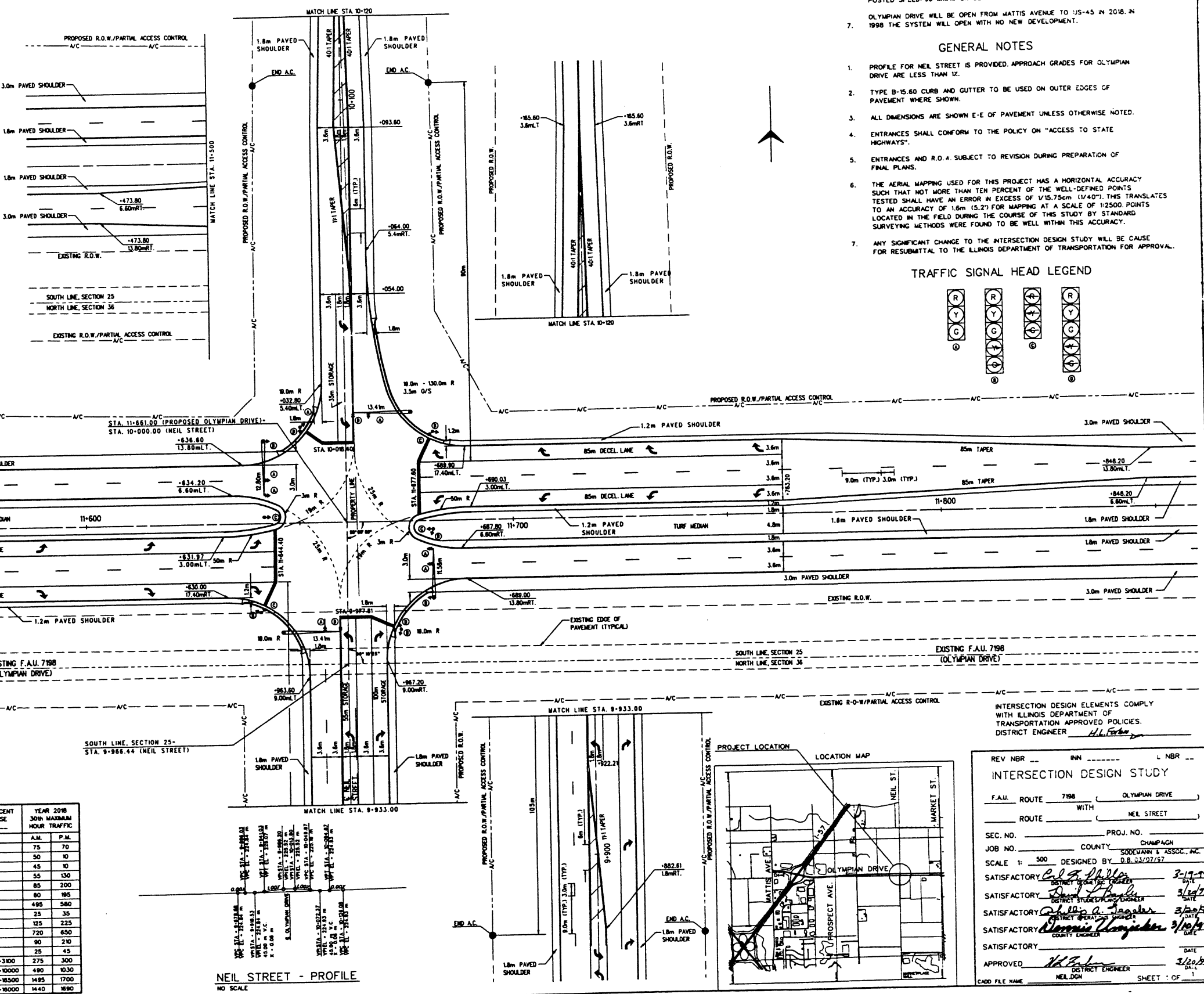
CAPACITY DESIGN STUDY												
4 PHASE	AREA		OTHER		PEAK HOUR FACTOR		0.93		AVERAGE INTERSECTION DELAY A.M. 12.6 SEC		INTERSECTION LEVEL A.M. B.	
	70	SEC. CYCLE	PROGRAM USED MCM/CMEMA-3.01		P.M. 13.8 SEC.		OF SERVICE		P.M. B.			
APPROACH	A	B	C	D								
BUS STOP CONDITION												
PARKING MANEUVER/HR												
PEDESTRIANS												
ARRIVAL TYPE	3	3	3	3								
LANE UTILIZATION FACTOR	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.00	1.05	1.00	1.00	1.00
BASE SATURATION FLOW	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
D-DISTANCE	35m		55m		40m		85m		85m		85m	
LANE GROUP	L	R	L	R	L	R	L	R	L	R	L	R
LANE WIDTHS	3.6m	3.6m	3.6m	3.6m	3.6m	3.6m	293.6m	3.6m	3.6m	293.6m	3.6m	3.6m
GREEN TIME (SECONDS)	A.M. 8-14	14	B 14	14	28	10	24	36	10	24	36	
LANE GROUP DELAY (SECONDS)	A.M. 9.7	15.9	10.0	15.0	8.9	17.5	11.8	6.2	19.2	13.6	5.7	
V/C RATIO	A.M. 0.11	0.37	0.23	0.45	0.33	0.12	0.46	0.17	0.44	0.67	0.03	
LEVEL OF SERVICE	A.M. B	C	B	B	B	C	B	B	C	B	B	B
2018 30TH MAX. HOURLY TRAFFIC	A.M. 50	120	85	55	60	25	495	125	90	720	25	
1998 8TH MAX. HOURLY TRAFFIC	P.M. 10	80	200	130	195	35	500	225	210	650	45	



2018 D.H.V.'s

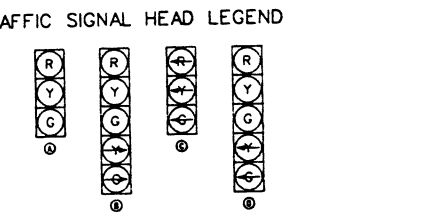
LEGEND
2018 P.M. D.H.V.
2018 A.M. D.H.V.

MOVEMENT	YEAR 1998 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR	YEAR 2018 30TH MAXIMUM HOUR TRAFFIC		EST. PERCENT INCREASE BY	YEAR 2018 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.		A.M.	P.M.		A.M.	P.M.
AB	0	0	3.0		75	70		
AD	0	0	3.0		50	10		
AC	0	0	3.0		45	10		
BA	0	0	3.0		55	130		
BC	0	0	5.0		85	200		
BD	0	0	5.0		80	195		
CD	35	45	6.0		495	580		
CA	0	0	3.0		25	35		
CB	0	0	5.0		125	225		
DC	25	80	6.0		80	650		
DB	0	0	5.0		80	210		
DA	0	0	3.0		25	45		
TOTAL A	0	0	1998 ADT=0		2018 ADT=3100	275	300	
TOTAL B	0	0	1998 ADT=0		2018 ADT=10000	490	1030	
TOTAL C	60	125	1998 ADT=1050		2018 ADT=16500	1495	1700	
TOTAL D	60	125	1998 ADT=1050		2018 ADT=16000	1440	1690	

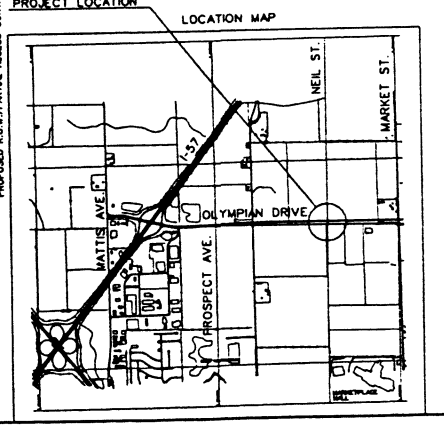


- ### ELEMENTS CONTROLLING DESIGN
- DESIGN DESIGNATION: F.A.U. 7198 (OLYMPIAN DRIVE) MINOR ARTERIAL 6,500 ADT (2018) WITH (NEIL STREET) COLLECTOR 10,000 ADT (2018)
 - F.A.U. 7198 (OLYMPIAN DRIVE) IS THE PREFERENCE ROUTE.
 - ANTICIPATED YEAR OF CONSTRUCTION 1998
 - TRAFFIC CONTROL TO BE TRAFFIC SIGNALS, SYSTEMS WARRANT NO. 7 IS M.T.
 - WB-20 DESIGN VEHICLE
 - DESIGN SPEED: 100 km/h ON OLYMPIAN DR.; 80 km/h ON NEIL STREET
POSTED SPEED: 90 km/h ON OLYMPIAN DR.; 50 km/h ON NEIL STREET
 - OLYMPIAN DRIVE WILL BE OPEN FROM HATTIS AVENUE TO US-45 IN 2018. IN 1998 THE SYSTEM WILL OPEN WITH NO NEW DEVELOPMENT.

- ### GENERAL NOTES
- PROFILE FOR NEIL STREET IS PROVIDED. APPROACH GRADES FOR OLYMPIAN DRIVE ARE LESS THAN 1%.
 - TYPE B-15.60 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT WHERE SHOWN.
 - ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ENTRANCES SHALL CONFORM TO THE POLICY ON "ACCESS TO STATE HIGHWAYS".
 - ENTRANCES AND R.O.W. SUBJECT TO REVISION DURING PREPARATION OF FINAL PLANS.
 - THE AERIAL MAPPING USED FOR THIS PROJECT HAS A HORIZONTAL ACCURACY SUCH THAT NOT MORE THAN TEN PERCENT OF THE WELL-DEFINED POINTS TESTED SHALL HAVE AN ERROR IN EXCESS OF 1/16" (1/40'). THIS TRANSLATES TO AN ACCURACY OF 1.6m (5.2') FOR MAPPING AT A SCALE OF 1:2500. POINTS LOCATED IN THE FIELD DURING THE COURSE OF THIS STUDY BY STANDARD SURVEYING METHODS WERE FOUND TO BE WELL WITHIN THIS ACCURACY.
 - ANY SIGNIFICANT CHANGE TO THE INTERSECTION DESIGN STUDY WILL BE CAUSE FOR RESUBMITTAL TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR APPROVAL.



INTERSECTION DESIGN ELEMENTS COMPLY WITH ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED POLICIES.
DISTRICT ENGINEER *H.L. Fisher*



REV NBR ... INN ... L NBR ...

INTERSECTION DESIGN STUDY

F.A.U. ROUTE 7198 (OLYMPIAN DRIVE)
ROUTE WITH NEIL STREET

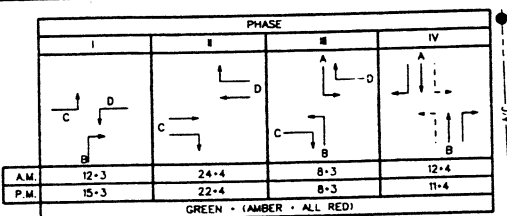
SEC. NO. ... PROJ. NO. CHAMPAIGN
JOB NO. ... COUNTY SOUTHERN & ASSOC., INC.
SCALE 1" = 500' DESIGNED BY D.B. 3/27/97

SATISFACTORY *[Signature]* DATE 3/17/97
SATISFACTORY *[Signature]* DATE 3/17/97
SATISFACTORY *[Signature]* DATE 3/17/97
SATISFACTORY *[Signature]* DATE 3/17/97

APPROVED *[Signature]* DATE 3/17/97
DISTRICT ENGINEER

CADD FILE NAME: NEIL.DGN SHEET 1 OF 1

CAPACITY DESIGN STUDY											
AREA	OTHER	PEAK HOUR FACTOR		0.93							
70	SEC. CYCLE	AVERAGE INTERSECTION DELAY A.M. 13.4 SEC		INTERSECTION LEVEL A.M. B.							
SIGNAL TYPE	ACTUATED	PROGRAM USE HQM/CNEMA-3.0L P.M. 15.6 SEC		OF SERVICE P.M. C.							
APPROACH	A	B	C	D							
BUS STOP CONDITION	--	--	--	--	--						
PARKING MANUEVER/HR.	--	--	--	--	--						
PEDESTRIANS	--	--	--	--	--						
ARRIVAL TYPE	3	3	3	3							
LANE UTILIZATION FACTOR	1.00	1.05	1.00	1.00	1.00						
BASE SATURATION FLOW	1900	1900	1900	1900	1900						
D-DISTANCE	35m	35m	65m	85m	85m						
LANE GROUP	L TR	L T R	L T R	L T R	L T R						
LANE WIDTHS	3.6m 283.6m	3.6m 283.6m 3.6m 283.6m 3.6m 283.6m	3.6m 283.6m 3.6m 283.6m 3.6m 283.6m	3.6m 283.6m 3.6m 283.6m 3.6m 283.6m	3.6m 283.6m 3.6m 283.6m 3.6m 283.6m						
GREEN TIME (SECONDS)	A.M. 12 12	B 12 12 28	C 12 24 36	D 12 24 36							
ARRIVAL TYPE	P.M. 8 11 11	B 11 11 30	C 15 22 34	D 15 22 34							
LANE GROUP DELAY (SECONDS)	A.M. 11.5 17.9	10.7 16.1 7.8 16.4	12.7 5.9 20.4 12.8 5.9	12.8 5.9							
ARRIVAL TYPE	P.M. 12.0 18.8	11.6 22.8 8.1 15.2	14.3 6.7 22.0 16.3 7.3	16.3 7.3							
V/C RATIO	A.M. 0.37 0.55	0.38 0.21 0.22 0.14 0.64 0.07 0.68 0.65 0.09	0.30 0.77 0.28 0.22 0.65 0.11 0.72 0.77 0.28	0.37 0.58							
ARRIVAL TYPE	P.M. 0.37 0.58	0.30 0.77 0.28 0.22 0.65 0.11 0.72 0.77 0.28	0.37 0.58								
LEVEL OF SERVICE	A.M. B C	B C B C B B C C B	B B C C B B C C B	B C B							
ARRIVAL TYPE	P.M. C	B C B C B B C C B	B B C C B B C C B	B C B							
2018 30TH MAX. HOUR TRAFFIC	A.M. 145 300	50 120 140 35 715 55 175 735 70	50 120 140 35 715 55 175 735 70	145 300							
ARRIVAL TYPE	P.M. 95 285	80 395 280 70 640 75 230 760 190	80 395 280 70 640 75 230 760 190	95 285							
1998 8TH MAX. HOURLY TRAFFIC	A.M. 124	96 193 72 154	96 193 72 154	124							
ARRIVAL TYPE	P.M. 85	193 72 154	193 72 154	85							

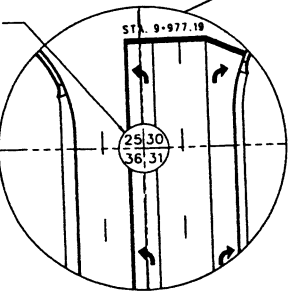
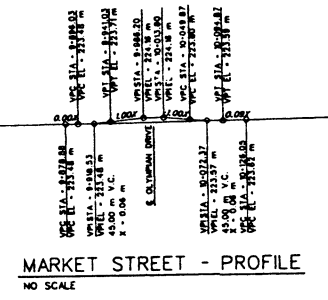
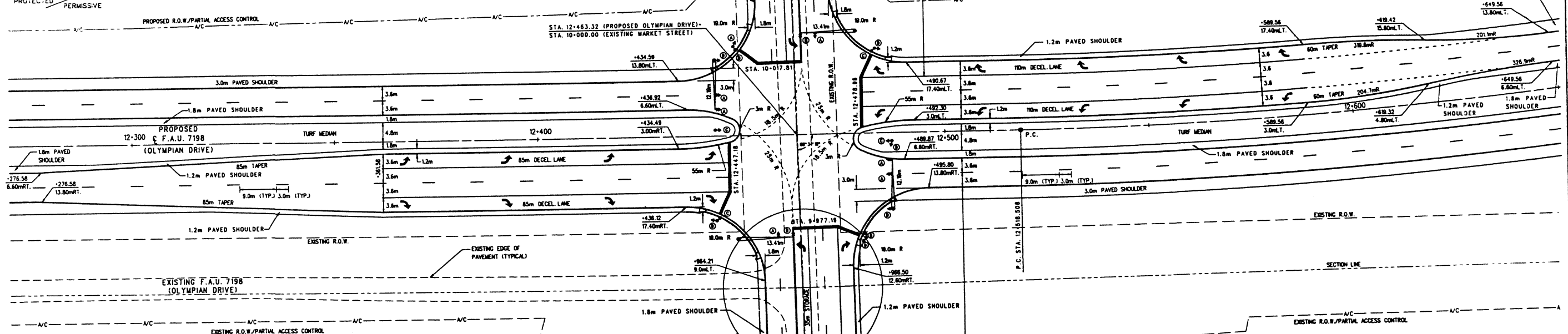


ELEMENTS CONTROLLING DESIGN

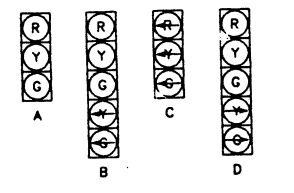
- DESIGN DESIGNATION F.A.U. 7198 (OLYMPIAN DRIVE) MINOR ARTERIAL 22,000 ADT (2018) WITH (MARKET STREET) MINOR ARTERIAL 12,800 ADT (2018)
- F.A.U. 7198 (OLYMPIAN DRIVE) IS THE PREFERENCE ROUTE.
- ANTICIPATED YEAR OF CONSTRUCTION 1998
- TRAFFIC CONTROL TO BE TRAFFIC SIGNALS, SYSTEMS WARRANT NO. 7 IS MET.
- WB-20 DESIGN VEHICLE
- DESIGN SPEED: 90 km/hr ON OLYMPIAN DR., 60 km/hr ON MARKET STREET POSTED SPEED: 90 km/hr ON OLYMPIAN DR., 60 km/hr ON MARKET STREET
- OLYMPIAN DRIVE WILL BE OPEN FROM MATTIS AVENUE TO US-45 IN 2018. IN 1998 THE SYSTEM WILL OPEN WITH NO NEW DEVELOPMENT.

GENERAL NOTES

- PROFILE FOR MARKET STREET IS PROVIDED. APPROACH GRADES FOR OLYMPIAN DRIVE ARE LESS THAN 1%.
- TYPE B-15.60 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT WHERE SHOWN.
- ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE NOTED.
- ENTRANCES SHALL CONFORM TO THE POLICY ON "ACCESS TO STATE HIGHWAYS".
- ENTRANCES AND R.O.W. SUBJECT TO REVISION DURING PREPARATION OF FINAL PLANS.
- THE AERIAL MAPPING USED FOR THIS PROJECT HAS A HORIZONTAL ACCURACY SUCH THAT NOT MORE THAN TEN PERCENT OF THE WELL-DEFINED POINTS TESTED SHALL HAVE AN ERROR IN EXCESS OF 1/15.75cm (1/40"). THIS TRANSLATES TO AN ACCURACY OF 1.6m (5.2') FOR MAPPING AT A SCALE OF 1:2500. POINTS LOCATED IN THE FIELD DURING THE COURSE OF THIS STUDY BY STANDARD SURVEYING METHODS WERE FOUND TO BE WELL WITHIN THIS ACCURACY.
- ANY SIGNIFICANT CHANGE TO THE INTERSECTION DESIGN STUDY WILL BE CAUSE FOR RESUBMITTAL TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR APPROVAL.



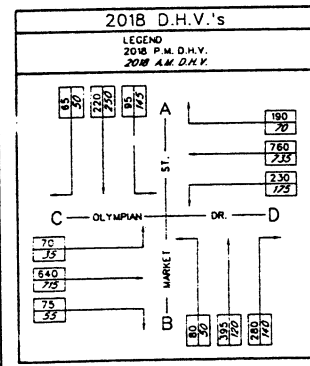
TRAFFIC SIGNAL HEAD LEGEND



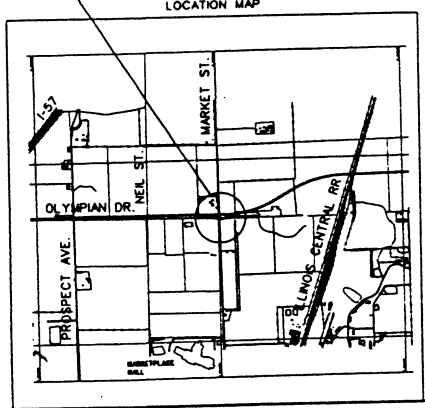
PROPOSED CURVE DATA

P.I.	STA. 12+818.772
Δ	30° 32' 09" L
T	300.264m
R	100.000m
L	586.246m
E	40.245m
P.C.	STA. 12+518.508
P.T.	STA. 13+104.754
S.E.	42

INTERSECTION DESIGN ELEMENTS COMPLY WITH ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED POLICIES. DISTRICT ENGINEER H.L. Fisher



MOVEMENT	YEAR 1998 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR	YEAR DR. VOLUME APPROACH	EST. PERCENT INCREASE BY	YEAR 2018 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.				A.M.	P.M.
AB	155	85	3.0			250	220
AD	45	40	3.0			145	95
AC	25	30	3.0			50	65
BA	80	260	3.0			120	395
BC	25	40	5.0			50	80
BD	70	50	5.0			140	280
CD	205	55	6.0			715	840
CA	15	35	3.0			35	70
CB	30	40	5.0			55	75
DC	105	130	6.0			735	760
DB	90	100	5.0			175	230
DA	25	50	3.0			70	180
TOTAL A	345	500		1998 ADT-4950		2018 ADT-10400	870 1035
TOTAL B	450	575		1998 ADT-5400		2018 ADT-12800	790 1280
TOTAL C	405	330		1998 ADT-4000		2018 ADT-16000	1840 1890
TOTAL D	540	425		1998 ADT-5100		2018 ADT-22000	1980 2185



REV NBR ___ INN ___ L NBR ___

INTERSECTION DESIGN STUDY

F.A.U. ROUTE 7198 (OLYMPIAN DRIVE) WITH MARKET STREET

SEC. NO. ___ PROJ. NO. CHAMPAIGN COUNTY SUDANARY ASSOC., INC.

JOB NO. 500 DESIGNED BY D.B. 01/07/97

SATISFACTORY [Signature] DATE 3-19-97

SATISFACTORY [Signature] DATE 3-20-97

SATISFACTORY [Signature] DATE 3-20-97

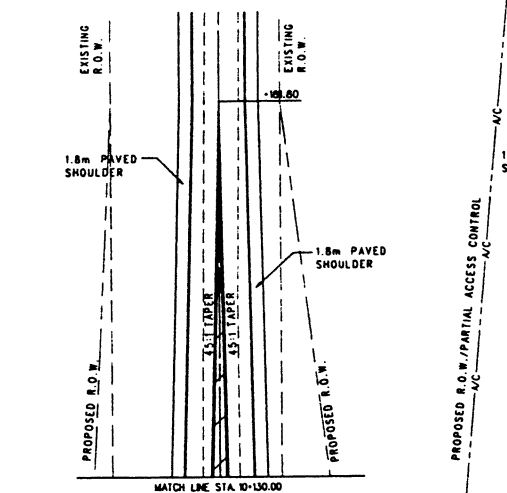
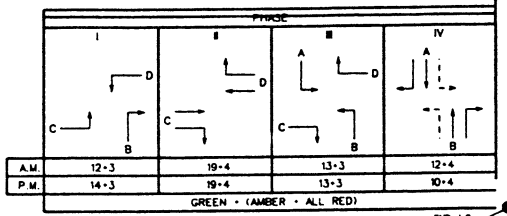
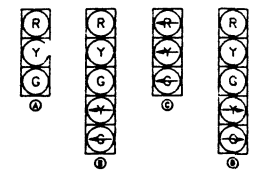
SATISFACTORY [Signature] DATE 3/14/97

APPROVED [Signature] DATE 3/14/97

CADD FILE NAME MARKET.DGN SHEET 1 OF

CAPACITY DESIGN STUDY										
PHASE	AREA	OTHER	PEAK HOUR FACTOR		INTERSECTION LEVEL		A.M. B.		P.M. C.	
70			0.93		A.M. B.		A.M. B.		P.M. C.	
SIGNAL TYPE		PROGRAM USED		AVERAGE INTERSECTION DELAY		A.M. B.		P.M. C.		
PERMISSIVE		HDM/CHENA 3.01		P.M. 17.6 SEC.		P.M. 17.6 SEC.		P.M. C.		
APPROACH	A	B	C	D						
BUS STOP CONDITION										
PARKING MANUEVER/HR										
PEDESTRIANS										
ARRIVAL TYPE	3	3	3	3						
LANE UTILIZATION FACTOR	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00	
BASE SATURATION FLOW	1900	1900	1900	1900	1900	1900	1900	1900	1900	
D-DISTANCE	45m	80m	39m	85m	85m	85m	85m	85m	85m	
LANE GROUP	L TR	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R	
LANE WIDTHS	3.6m	3.6m	3.6m	3.6m	3.6m	3.6m	3.6m	3.6m	3.6m	
GREEN TIME (SECONDS)	A.M. 12	12	12	28	12	19	36	12	19	36
LANE GROUP DELAY (SECONDS)	A.M. 8.2	20.4	18.7	15.9	8.0	16.6	14.5	7.9	18.5	16.3
V/C RATIO	A.M. 0.01	0.64	0.82	0.14	0.27	0.18	0.53	0.49	0.48	0.70
LEVEL OF SERVICE	A.M. B	C	C	C	B	C	B	C	C	B
2018 30TH MAX. HOUR TRAFFIC	A.M. 5	175	325	40	170	45	455	350	120	585
1998 8TH MAX. HOURLY TRAFFIC	P.M. 5	80	400	90	150	80	700	370	230	655
1998 8TH MAX. HOURLY TRAFFIC	A.M. 25		41		176		105		105	
	P.M. 14		63		80		143		143	

TRAFFIC SIGNAL HEAD LEGEND

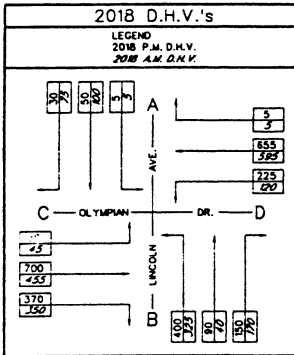
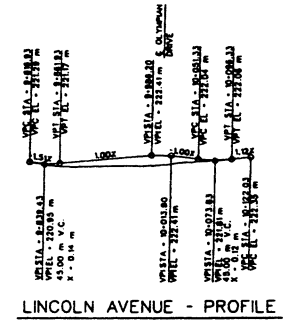
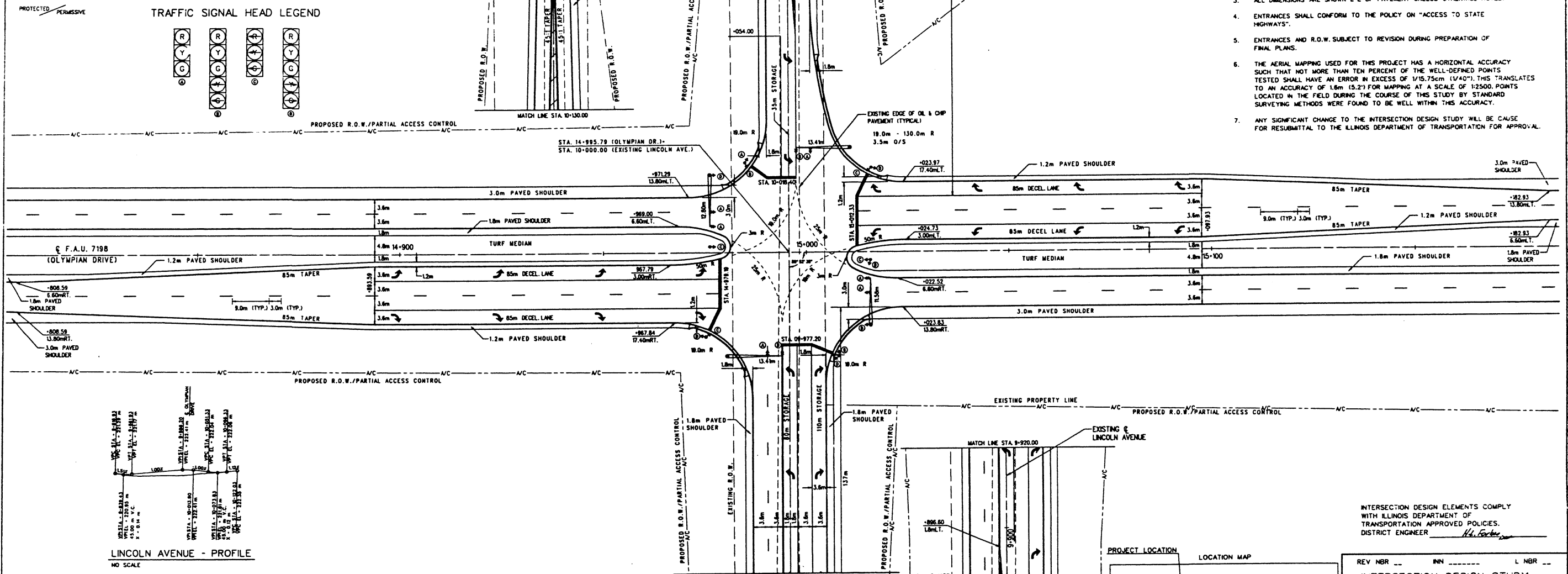


ELEMENTS CONTROLLING DESIGN

- DESIGN DESIGNATION: F.A.U. 7198 (OLYMPIAN DRIVE) MINOR ARTERIAL 27,500 ADT (2018) WITH (LINCOLN AVENUE) COLLECTOR (N) & MINOR ARTERIAL (S) 13,500 ADT (2018)
- F.A.U. 7198 (OLYMPIAN DR.) IS THE PREFERENCE ROUTE.
- ANTICIPATED YEAR OF CONSTRUCTION 1998
- TRAFFIC CONTROL TO BE TRAFFIC SIGNALS SYSTEMS WARRANT NO. 7.5 MET.
- WB-20 DESIGN VEHICLE
- DESIGN SPEED: 100 km/hr ON OLYMPIAN DR., 70 km/hr ON LINCOLN AVENUE POSTED SPEED: 90 km/hr ON OLYMPIAN DR., 60 km/hr ON LINCOLN AVENUE
- OLYMPIAN DRIVE WILL BE OPEN FROM MATTIS AVENUE TO US-45 IN 2018. IN 1998 THE SYSTEM WILL OPEN WITH NO NEW DEVELOPMENT.

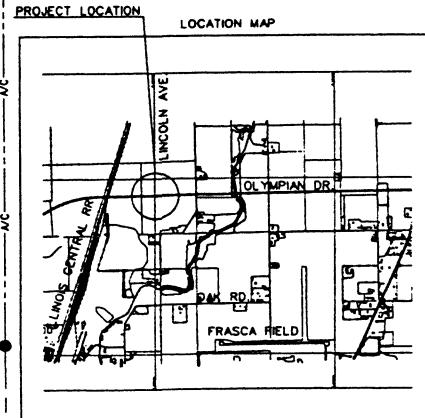
GENERAL NOTES

- PROFILE FOR LINCOLN AVENUE IS PROVIDED. APPROACH GRADES FOR OLYMPIAN DRIVE ARE LESS THAN 1%.
- TYPE B-15.60 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT WHERE SHOWN.
- ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE NOTED.
- ENTRANCES SHALL CONFORM TO THE POLICY ON "ACCESS TO STATE HIGHWAYS".
- ENTRANCES AND R.O.W. SUBJECT TO REVISION DURING PREPARATION OF FINAL PLANS.
- THE AERIAL MAPPING USED FOR THIS PROJECT HAS A HORIZONTAL ACCURACY SUCH THAT NOT MORE THAN TEN PERCENT OF THE WELL-DEFINED POINTS TESTED SHALL HAVE AN ERROR IN EXCESS OF 1/15.75cm (1/40"). THIS TRANSLATES TO AN ACCURACY OF 1.6m (5.2') FOR MAPPING AT A SCALE OF 1:2500. POINTS LOCATED IN THE FIELD DURING THE COURSE OF THIS STUDY BY STANDARD SURVEYING METHODS WERE FOUND TO BE WELL WITHIN THIS ACCURACY.
- ANY SIGNIFICANT CHANGE TO THE INTERSECTION DESIGN STUDY WILL BE CAUSE FOR RESUBMITAL TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR APPROVAL.



MOVEMENT	YEAR 1998 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR	YEAR DIR. VOLUME APPROACH	EST. PERCENT INCREASE BY	YEAR 2018 30TH MAXIMUM HOUR TRAFFIC		
	A.M.	P.M.				A.M.	P.M.	
AB	20	10	3.0			100	50	
AD	5	5	3.0			5	5	
AC	20	5	3.0			75	30	
BA	5	25	3.0			40	90	
BC	45	55	5.0			325	400	
BD	25	35	5.0			170	150	
CB	285	60	8.0			455	700	
CA	5	25	3.0			45	80	
CB	50	60	5.0			350	370	
DC	155	215	6.0			585	655	
DB	30	40	5.0			120	225	
DA	5	5	3.0			5	5	
TOTAL A	60	80	1998 ADT-500			2018 ADT-2800	270	280
TOTAL B	175	225	1998 ADT-2000			2018 ADT-13600	1105	1285
TOTAL C	540	425	1998 ADT-5100			2018 ADT-22500	1845	2235
TOTAL D	485	360	1998 ADT-4000			2018 ADT-18400	1350	1740

INTERSECTION DESIGN ELEMENTS COMPLY WITH ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED POLICIES. DISTRICT ENGINEER *H. Forster*



REV NBR -- INN -- L NBR --

INTERSECTION DESIGN STUDY

F.A.U. ROUTE 7198 (OLYMPIAN DRIVE) WITH ROUTE (LINCOLN AVENUE)

SEC. NO. PROJ. NO. COUNTY CHAMPAIGN

JOB NO. COUNTY SOLESMAN & ASSOC., INC. DESIGNED BY D.B. 03/07/97

SCALE 1:500

SATISFACTORY *Robert D. Hillier* 3-19-97 DATE

SATISFACTORY *Robert D. Hillier* 3-20-97 DATE

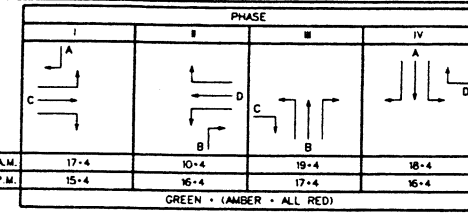
SATISFACTORY *Robert D. Hillier* 3-20-97 DATE

SATISFACTORY *Robert D. Hillier* 3-10-97 DATE

APPROVED *H. Forster* DATE 3/10/97

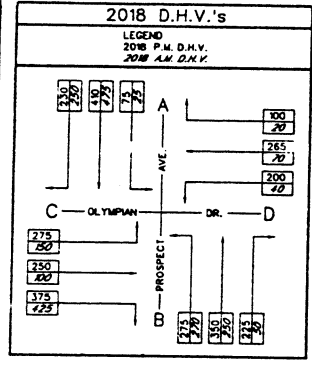
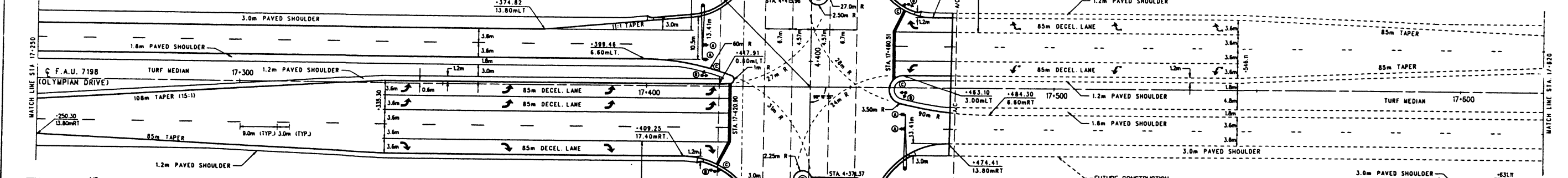
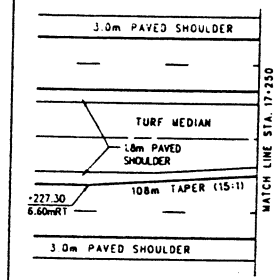
CADD FILE NAME LINCOLN.DGN SHEET 1 OF 1

CAPACITY DESIGN STUDY												
PHASE	AREA		OTHER		PEAK HOUR FACTOR		INTERSECTION LEVEL		A.M. / B.P.M.		C.	
80	SEC. CYCLE		AVERAGE INTERSECTION DELAY		14.9 SEC.		PROGRAM USED		HCM/CNEMA 3.01		P.M. 16.3 SEC.	
SIGNAL TYPE ACTUATED												
APPROACH	A	B	C	D								
BUS STOP CONDITION	...	...	...	...				
PARKING MANUEVER/HR	...	...	...	...				
PEDESTRIANS	...	...	...	...				
ARRIVAL TYPE	3	3	3	3								
LANE UTILIZATION FACTOR	1.00	1.05	1.00	1.03	1.00	1.03	1.05	1.00	1.05	1.00	1.05	1.00
BASE SATURATION FLOW	85m	1900	85m	1900	85m	1900	85m	1900	85m	1900	85m	1900
D-DISTANCE	85m	85m	85m	85m	85m	85m	85m	85m	85m	85m	85m	85m
LANE GROUP	L	T	R	L	T	R	L	T	R	L	T	R
LANE WIDTHS	3.6m	283.6m	3.6m	283.6m	3.6m	283.6m	3.6m	283.6m	3.6m	283.6m	3.6m	283.6m
GREEN TIME (SECONDS)	A.M.	16	16	35	17	17	37	15	15	32	16	32
LANE GROUP DELAY (SECONDS)	A.M.	15.8	19.8	8.2	17.8	18.6	9.2	18.9	16.5	10.1	20.3	18.2
V/C RATIO	A.M.	0.07	0.67	0.33	0.37	0.33	0.08	0.23	0.15	0.80	0.20	0.17
LEVEL OF SERVICE	A.M.	C	C	B	C	C	B	C	C	B	C	B
2018 30TH MAX. HOUR TRAFFIC	A.M.	25	475	250	270	250	50	150	100	425	40	10
1998 8TH MAX. HOURLY TRAFFIC	A.M.	75	410	230	275	350	225	275	250	375	200	265
	P.M.		303		190		165		138		0	0
	P.M.		182		248		138		0		0	0



- ### ELEMENTS CONTROLLING DESIGN
- DESIGN DESIGNATION: F.A.P. 800 (U.S. ROUTE 45) OTHER PRINCIPAL ARTERIAL 17,000 ADT (2018) WITH F.A.U. 7198 (OLYMPIAN DRIVE) MINOR ARTERIAL 17,300 ADT (2018)
 - F.A.P. 800 (U.S. ROUTE 45) IS THE PREFERENCE ROUTE.
 - ANTICIPATED YEAR OF CONSTRUCTION 1998
 - TRAFFIC CONTROL TO BE TRAFFIC SIGNALS, SYSTEMS WARRANT NO. 7 IS MET.
 - WB-20 DESIGN VEHICLE
 - DESIGN SPEED: 100 km/hr ON U.S. ROUTE 45; 100 km/hr ON OLYMPIAN DR. POSTED SPEED: 90 km/hr ON U.S. ROUTE 45; 90 km/hr ON OLYMPIAN DRIVE
 - OLYMPIAN DRIVE WILL BE OPEN FROM MATTS AVENUE TO US-45 IN 2018. IN 1998 THE SYSTEM WILL OPEN WITH NO NEW DEVELOPMENT.
 - THE CAPACITY DESIGN STUDY DATA INDICATES DUAL LEFT TURN LANES ARE REQUIRED FOR THE SOUTH APPROACH (B). THE PROPOSED DESIGN IS CONSISTENT WITH THIS FUTURE IMPROVEMENT WHICH SHALL BE IMPLEMENTED BY THE ILLINOIS D.D.T. AT SUCH TIME THAT CONSTRUCTION IS WARRANTED AND PROJECT FUNDING IS MADE AVAILABLE.

- ### GENERAL NOTES
- PROFILES ARE NOT PROVIDED, SINCE APPROACH GRADES ARE 1% OR LESS.
 - TYPE B-15.60 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT WHERE SHOWN.
 - ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ENTRANCES SHALL CONFORM TO THE POLICY ON "ACCESS TO STATE HIGHWAYS".
 - ENTRANCES AND R.O.W. SUBJECT TO REVISION DURING PREPARATION OF FINAL PLANS.
 - THE AERIAL MAPPING USED FOR THIS PROJECT HAS A HORIZONTAL ACCURACY SUCH THAT NOT MORE THAN TEN PERCENT OF THE WELL-DEFINED POINTS TESTED SHALL HAVE AN ERROR IN EXCESS OF 1/16.25m (1/40'). THIS TRANSLATES TO AN ACCURACY OF 1.6m (5.2') FOR MAPPING AT A SCALE OF 1:2500. POINTS LOCATED IN THE FIELD DURING THE COURSE OF THIS STUDY BY STANDARD SURVEYING METHODS WERE FOUND TO BE WELL WITHIN THIS ACCURACY.
 - ANY SIGNIFICANT CHANGE TO THE INTERSECTION DESIGN STUDY WILL BE CAUSE FOR RESUBMITTAL TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION FOR APPROVAL.

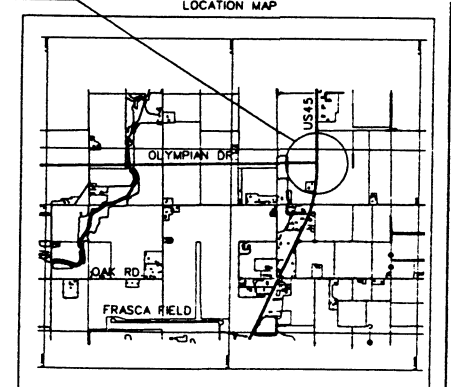


EXISTING U.S. ROUTE 45 @ CURVE DATA

P.L.	STA. 4+002.23
A.	257.04'
T.	321.78m
R.	1447.48m
L.	633.27m
E.	35.34m
P.C.	3+660.45
P.T.	4+313.72
S.E.	1.25%

TRAFFIC DATA

MOVEMENT	YEAR 1998 30th MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN HOUR	YEAR 2018 30th MAXIMUM HOUR TRAFFIC		EST. PERCENT INCREASE BY
	A.M.	P.M.		A.M.	P.M.	
AB	400	250	6.0	475	410	
AD	0	0	3.0	25	75	
AC	150	80	5.0	250	230	
BA	150	420	6.0	250	350	
BC	50	30	5.0	270	275	
BD	0	0	3.0	90	225	
CD	0	0	5.0	100	250	
CA	50	100	5.0	150	275	
CB	250	150	5.0	425	375	
DC	0	0	3.0	70	265	
DB	0	0	3.0	40	200	
DA	0	0	3.0	20	100	
TOTAL A	750	850	1998 ADT-8100	2018 ADT-14100	1170	1440
TOTAL B	850	850	1998 ADT-8400	2018 ADT-17000	1510	1835
TOTAL C	500	380	1998 ADT-4000	2018 ADT-17900	1265	1870
TOTAL D	0	0	1998 ADT-0	2018 ADT-10000	305	1115



INTERSECTION DESIGN STUDY

REV NBR: 001 INN: 000000 L NBR: 000000

F.A.P. ROUTE: 800 WITH: U.S. ROUTE 45

F.A.U. ROUTE: 7198 WITH: OLYMPIAN DRIVE

SEC. NO.: 500 PROJ. NO.: 000000

JOB NO.: 000000 COUNTY: CHAMPAIGN

SCALE: 1" = 300' DESIGNED BY: J.B. DAVIDSON DATE: 3/19/97

SATISFACTORY: [Signature] DATE: 3/20/97

SATISFACTORY: [Signature] DATE: 3/20/97

SATISFACTORY: [Signature] DATE: 3/20/97

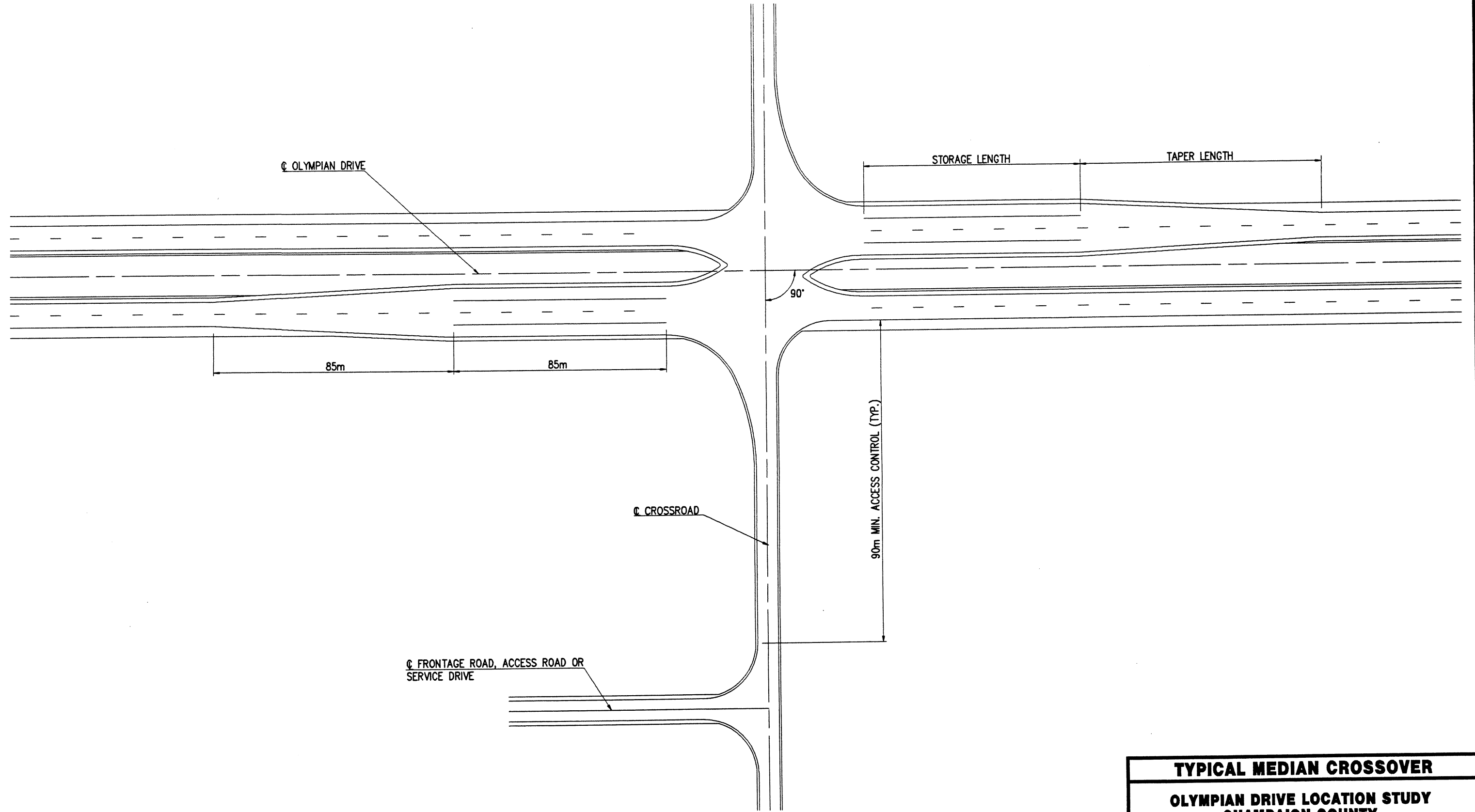
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APPROVED: [Signature] DATE: 3/20/97

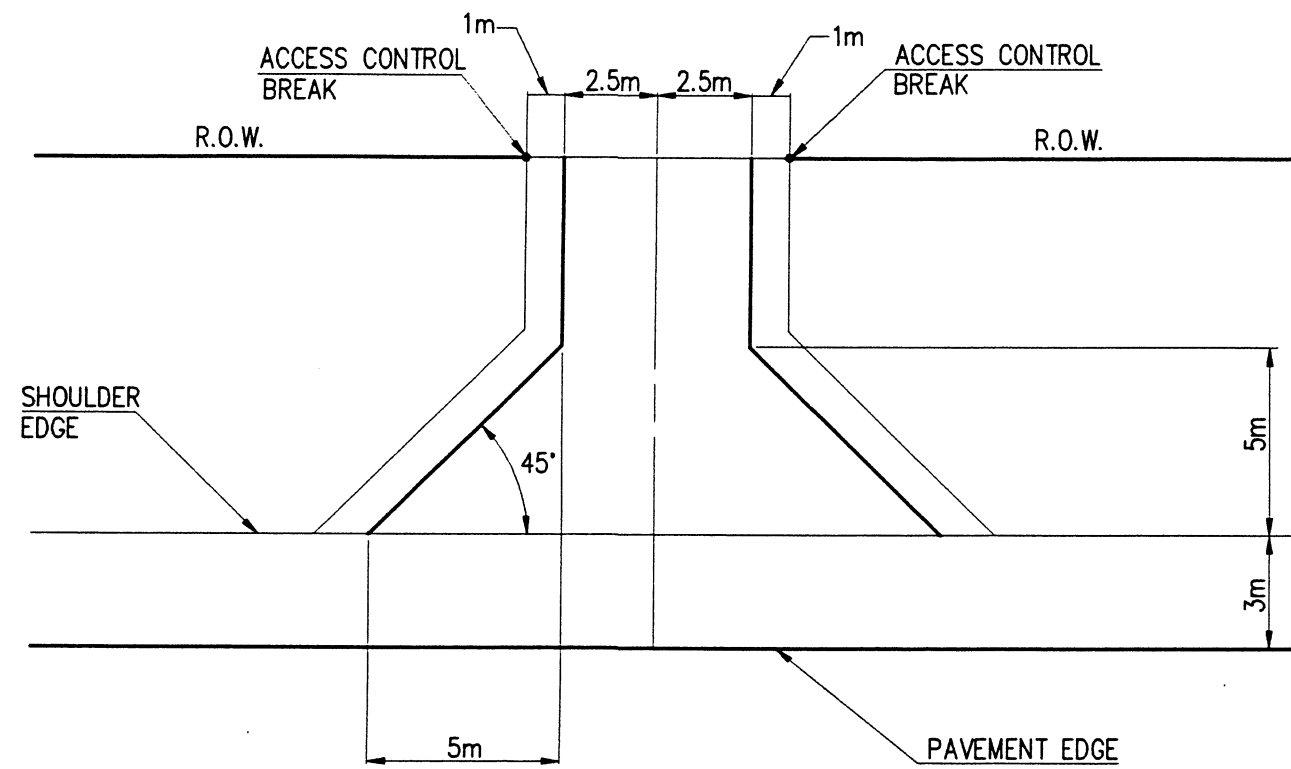
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DETAILS

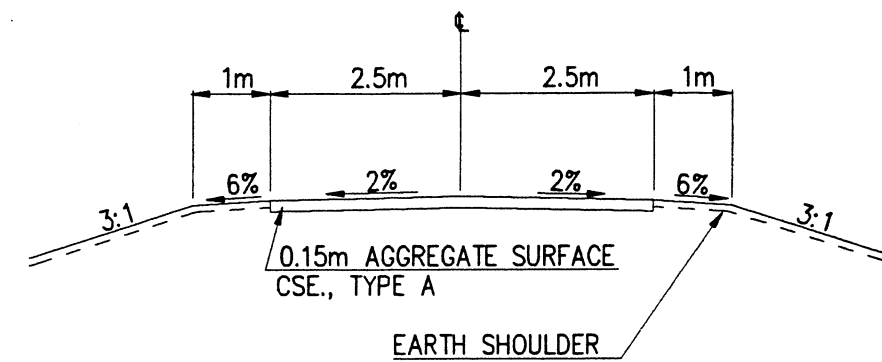
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TYPICAL MEDIAN CROSSOVER
OLYMPIAN DRIVE LOCATION STUDY CHAMPAIGN COUNTY ILLINOIS
HEI NO. 94S2055



FIELD ENTRANCE DETAIL



TYPICAL SECTION
FIELD ENTRANCE

TYPICAL FIELD ENTRANCE

**OLYMPIAN DRIVE LOCATION STUDY
CHAMPAIGN COUNTY
ILLINOIS**

HEI NO. 94S2055