



SW 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

SE 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

NW 1/4 OF SEC. 9, T. 35 N., R. 7 E. OF THE 3RD P.M.

NE 1/4 OF SEC. 9, T. 35 N., R. 7 E. OF THE 3RD P.M.

CENTER SECTION 4  
BRASS DISK (FOUND)  
MON. REC. 200900004198  
STA 6556+91.18, 76.84' LT

NW CORNER SECTION 9  
IRON PIPE (FOUND)  
MON. REC. 200900004200

N 1/4 CORNER SECTION 9  
BRASS DISK (FOUND)  
MON. REC. 907010  
STA 6530+42.99, 75.73' LT

CORNER TO CORNER  
N 88°14'18" E 2662.62'

NE CORNER SECTION 9  
SURVEY SPIKE (FOUND)  
MON. REC. 200900004197  
P.O.C. 3VC0068, 3VC0069TE

CENTER SECTION 9  
BRASS DISK (FOUND)  
MON. REC. 9700011  
STA 6503+90.26, 71.16' LT

PARCEL NO. 3VC0068  
HELEN NADEN LIVING TRUST  
FOR AREAS, SEE SHEET NO. 24

LINE LEGEND 3VC0068		
1	S 69°24'53" E	100.26'
2	N 88°12'44" E	150.00'
3	S 86°07'40" E	100.49'
4	S 01°47'16" E	34.25'
5	S 88°14'18" W	80.94'
6	S 01°45'42" E	45.87'
7	S 88°12'44" W	169.04'
8	S 61°18'30" W	103.67'

PROPERTY MONUMENTS FOUND  
1299+89.55, 35.07' LT, IRON PIN  
1299+89.68, 34.74' RT, IRON PIN  
1303+69.04, 0.94' LT, MAG NAIL  
1303+69.06, 34.08' RT, IRON PIPE  
1307+66.04, 0.61' LT, IRON PIN  
1307+66.05, 34.33' RT, IRON PIPE

PARCEL NO. 3VC0069  
KATHRYN J. PENN, TRUSTEE  
TOTAL HOLDING = 3.510 AC. ±  
TEMPORARY EASEMENT = 0.056 AC. ± (2424 S.F.)  
TE PURPOSE = ENTRANCE CONSTRUCTION,  
GRADING AND SHAPING

LINE LEGEND 3VC0069TE		
9	S 01°47'16" E	35.70'
10	S 01°47'16" E	5.06'
11	S 88°12'44" W	60.00'
12	S 01°47'16" E	25.00'
13	S 88°12'44" W	50.00'
14	N 01°47'16" W	25.00'
15	S 88°12'44" W	120.96'
16	N 01°45'42" W	5.10'
17	N 88°13'19" E	230.95'

STATE OF ILLINOIS )  
COUNTY OF MORGAN ) S.S.

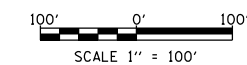
I, TIMOTHY C. QUIGG, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED IL RTE 47 WAS MADE BY ME OR UNDER MY DIRECTION AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS 19th DAY OF MARCH 2013 A.D.

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3063  
TIMOTHY C. QUIGG

HUTCHISON ENGINEERING, INC.  
1801 W. LAFAYETTE AVE.  
P.O. BOX 820  
JACKSONVILLE, IL 62651

NOTE: GRID DISTANCES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83) 2007 ADJ ALL AREAS BASED ON GROUND DISTANCES GRID TO GROUND FACTOR = 1.00004933 GROUND TO GRID FACTOR = 0.99995067



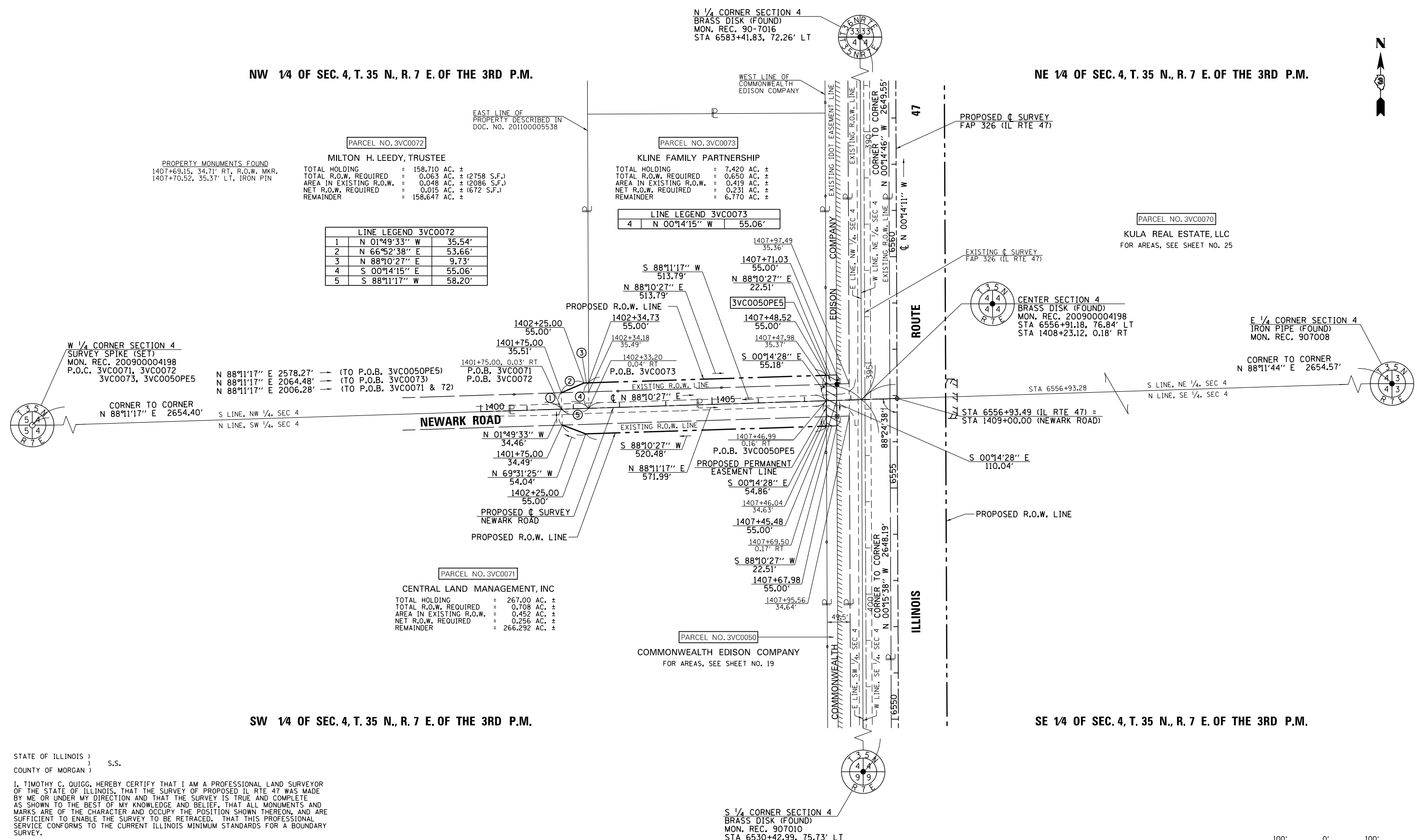
FILE NAME c:\pwork\pwork\mtdot\duncanbd\0409210\0303808-sh-IL47-rw-plan\34-Plattville Rd.dgn	USER NAME = duncanbd	DESIGNED -	REVISED REV n/c 69 10/24/13 mkb	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLANS		F.A.P. RTE. 326	SECTION (109, 110IR-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 301	
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED			PROJECT IL RTE 47	JOB NO. R-93-003-08	STA. 1300+00.00 TO STA. 1309+50.00	CONTRACT NO. 66B84				
PLOT DATE = 8/7/2014	DATE -	REVISED			SCALE: 1" = 100'	SHEET NO. 34 OF 36 SHEETS	STA. 1300+00.00 TO STA. 1309+50.00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NW 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

NE 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

SW 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

SE 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.



PARCEL NO. 3VC0072

MILTON H. LEEDY, TRUSTEE

PROPERTY MONUMENTS FOUND  
1407+69.15, 34.71' RT, R.O.W. MKR.  
1407+70.52, 35.37' LT, IRON PIN

TOTAL HOLDING = 158.710 AC. ±  
TOTAL R.O.W. REQUIRED = 0.063 AC. ± (2758 S.F.)  
AREA IN EXISTING R.O.W. = 0.048 AC. ± (2086 S.F.)  
NET R.O.W. REQUIRED = 0.015 AC. ± (672 S.F.)  
REMAINDER = 158.647 AC. ±

LINE LEGEND 3VC0072		
1	N 01°49'33" W	35.54'
2	N 66°52'38" E	53.66'
3	N 88°10'27" E	9.73'
4	S 00°14'15" E	55.06'
5	S 88°11'17" W	58.20'

PARCEL NO. 3VC0073

KLINE FAMILY PARTNERSHIP

TOTAL HOLDING = 7.420 AC. ±  
TOTAL R.O.W. REQUIRED = 0.650 AC. ±  
AREA IN EXISTING R.O.W. = 0.419 AC. ±  
NET R.O.W. REQUIRED = 0.231 AC. ±  
REMAINDER = 6.770 AC. ±

LINE LEGEND 3VC0073		
4	N 00°14'15" W	55.06'

PARCEL NO. 3VC0070

KULA REAL ESTATE, LLC  
FOR AREAS, SEE SHEET NO. 25

PARCEL NO. 3VC0071

CENTRAL LAND MANAGEMENT, INC

TOTAL HOLDING = 267.00 AC. ±  
TOTAL R.O.W. REQUIRED = 0.708 AC. ±  
AREA IN EXISTING R.O.W. = 0.452 AC. ±  
NET R.O.W. REQUIRED = 0.256 AC. ±  
REMAINDER = 266.292 AC. ±

PARCEL NO. 3VC0050

COMMONWEALTH EDISON COMPANY

FOR AREAS, SEE SHEET NO. 19

STATE OF ILLINOIS )  
COUNTY OF MORGAN ) S.S.

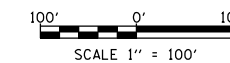
I, TIMOTHY C. QUIGG, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED IL RTE 47 WAS MADE BY ME OR UNDER MY DIRECTION AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS 17th DAY OF DECEMBER 2012 A.D.

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3063  
TIMOTHY C. QUIGG

HUTCHISON ENGINEERING, INC.  
1801 W. LAFAYETTE AVE.  
P.O. BOX 820  
JACKSONVILLE, IL 62651  
ILLINOIS PROFESSIONAL DESIGN  
FIRM NO. 184-000825

NOTE: GRID DISTANCES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83) 2007 ADJ ALL AREAS BASED ON GROUND DISTANCES GRID TO GROUND FACTOR = 1.00004933 GROUND TO GRID FACTOR = 0.99995067



FILE NAME c:\pwork\pwork\mtdot\duncanbd\0409210\0303808-sh-t-IL47-rxp\lan35-Newark Rd.dgn	USER NAME = duncanbd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RIGHT OF WAY PLANS		F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 302
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -	REVISED -		PROJECT SCALE: 1" = 100'	JOB NO. R-93-003-08	IL RTE 47	CONTRACT NO. 66B84			
PLOT DATE = 8/7/2014	DATE -	REVISED -	REVISED -		SHEET NO. 35 OF 36 SHEETS	STA. 1401+75.00 TO STA. 1409+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



SW 1/4 OF SEC. 33, T. 36 N., R. 7 E. OF THE 3RD P.M.

SE 1/4 OF SEC. 33, T. 36 N., R. 7 E. OF THE 3RD P.M.

LINE LEGEND 3VC0050PE6

A-V	S 88°06'25" W	58.35'
V-W	R=44,531.13', L=48.75', C=48.75' CHORD BRG=S 01°04'25" E	
W-S	S 88°07'53" W	22.50'
S-R	R=44,508.63', L=48.74', C=48.74' CHORD BRG=N 01°04'23" W	
R-U	N 88°06'25" E	3.00'
U-T	R=44,511.63', L=51.27', C=51.27' CHORD BRG=N 01°08'15" W	
T-X	N 88°07'53" E	19.50'
X-V	R=44,531.13', L=51.26', C=51.26' CHORD BRG=S 01°08'16" E	

LINE LEGEND 3VC0074TE1

A-B	S 88°06'25" W	105.61'
B-N	R=44,483.88', L=35.24', C=35.24' CHORD BRG=S 01°04'53" E	
N-C	R=44,483.88', L=13.49', C=13.49' CHORD BRG=S 01°03'00" E	
C-D	S 88°07'53" W	371.43'
D-E	N 01°52'07" W	13.33'
E-N	N 88°06'25" E	371.63'

LINE LEGEND 3VC0074TE2

A-J	S 88°06'25" W	102.61'
J-K	R=44,486.88', L=34.77', C=34.77' CHORD BRG=N 01°07'35" W	
K-L	S 88°06'25" W	65.56'
L-M	N 01°52'07" W	16.54'
M-I	N 88°07'53" E	65.77'
I-K	R=44,486.88', L=16.51', C=16.51' CHORD BRG=S 01°09'34" E	

LINE LEGEND 3VC0075

A-U	S 88°06'25" W	77.85'
U-R	S 88°06'25" W	3.00'
R-S	R=44,508.63', L=48.74', C=48.74' CHORD BRG=S 01°04'23" E	
S-C	S 88°07'53" W	24.75'
C-B	R=44,483.88', L=48.73', C=48.73' CHORD BRG=N 01°04'22" W	
B-J	N 88°06'25" E	3.00'
J-I	R=44,486.88', L=51.28', C=51.28' CHORD BRG=N 01°08'14" W	
I-T	N 88°07'53" E	24.75'
T-U	R=44,511.63', L=51.27', C=51.27' CHORD BRG=S 01°08'15" E	

LINE LEGEND 3VC0076-TR-1

A-G	S 88°06'25" W	295.64'
G-F	S 88°06'25" W	332.07'
F-P	N 01°52'07" W	34.76'
P-Q	N 69°37'37" E	52.73'
Q-H	N 88°07'53" E	282.59'
H-G	S 01°17'52" E	51.36'

PARCEL NO. 3VC0076  
JOHN E. STEWART  
LIVING TRUST, et al  
FOR AREAS, SEE SHEET NO. 27

PARCEL NO. 3VC0075  
FOX & ILLINOIS UNION  
RAILWAY COMPANY  
TOTAL HOLDING = 0.680 AC. ±  
TOTAL R.O.W. REQUIRED = 0.057 AC. ± (2475 S.F.)  
AREA IN EXISTING R.O.W. = 0.040 AC. ± (1733 S.F.)  
NET R.O.W. REQUIRED = 0.017 AC. ± (742 S.F.)  
REMAINDER = 0.623 AC. ±

PROPERTY MONUMENTS FOUND  
1507+68.68, 36.76' RT, IRON PIN  
1507+70.43, 33.78' LT, IRON PIN  
1508+88.31, 31.69' RT, IRON PIN  
1508+89.76, 28.60' LT, IRON PIN

PARCEL NO. 3VC0050  
COMMONWEALTH EDISON COMPANY  
FOR AREAS, SEE SHEET NO. 19

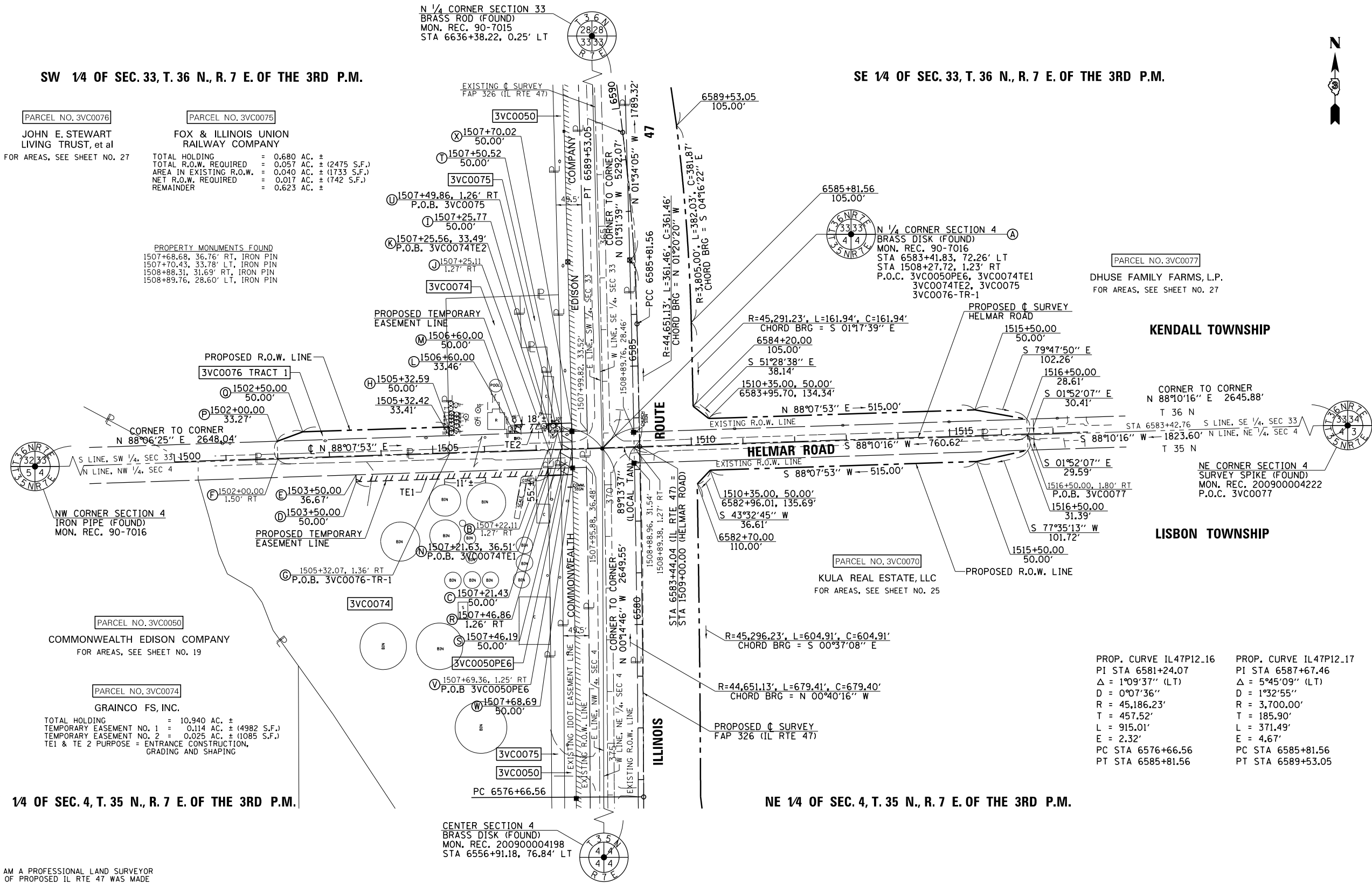
PARCEL NO. 3VC0050  
COMMONWEALTH EDISON COMPANY  
FOR AREAS, SEE SHEET NO. 19

PARCEL NO. 3VC0074  
GRAINCO FS, INC.

TOTAL HOLDING = 10,940 AC. ±  
TEMPORARY EASEMENT NO. 1 = 0.114 AC. ± (4982 S.F.)  
TEMPORARY EASEMENT NO. 2 = 0.025 AC. ± (1085 S.F.)  
TE1 & TE2 PURPOSE = ENTRANCE CONSTRUCTION,  
GRADING AND SHAPING

NW 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.

NE 1/4 OF SEC. 4, T. 35 N., R. 7 E. OF THE 3RD P.M.



STATE OF ILLINOIS )  
COUNTY OF MORGAN ) S.S.

I, TIMOTHY C. QUIGG, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF PROPOSED IL RTE 47 WAS MADE BY ME OR UNDER MY DIRECTION AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATED THIS 19th DAY OF MARCH 2013 A.D.

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3063  
TIMOTHY C. QUIGG

CENTER SECTION 4  
BRASS DISK (FOUND)  
MON. REC. 200900004198  
STA 6556+91.18, 76.84' LT

PARCEL NO. 3VC0077  
DHUSE FAMILY FARMS, L.P.  
FOR AREAS, SEE SHEET NO. 27

KENDALL TOWNSHIP

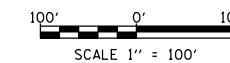
CORNER TO CORNER  
N 88°10'16" E 2645.88'  
T 36 N  
STA 6583+42.76 S LINE, SE 1/4, SEC 33  
N 182.36° N LINE, NE 1/4, SEC 4  
T 35 N

LISBON TOWNSHIP

NE CORNER SECTION 4  
SURVEY SPIKE (FOUND)  
MON. REC. 200900004222  
P.O.C. 3VC0077

PROP. CURVE IL47P12.16  
PI STA 6581+24.07  
Δ = 1°09'37" (LT)  
D = 0°07'36"  
R = 45,186.23'  
T = 457.52'  
L = 915.01'  
E = 2.32'  
PC STA 6576+66.56  
PT STA 6585+81.56

PROP. CURVE IL47P12.17  
PI STA 6587+67.46  
Δ = 5°45'09" (LT)  
D = 1°32'55"  
R = 3,700.00'  
T = 185.90'  
L = 371.49'  
E = 4.67'  
PC STA 6585+81.56  
PT STA 6589+53.05



HUTCHISON ENGINEERING, INC.  
1801 W. LAFAYETTE AVE.  
P.O. BOX 820  
JACKSONVILLE, IL 62651  
ILLINOIS PROFESSIONAL DESIGN  
FIRM NO. 184-000825

NOTE: GRID DISTANCES AND BEARINGS SHOWN HEREON ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83) 2007 ADJ ALL AREAS BASED ON GROUND DISTANCES GRID TO GROUND FACTOR = 1.00004933 GROUND TO GRID FACTOR = 0.99995067

FILE NAME	USER NAME = duncanbd	DESIGNED -	REVISED - 3/19/2013
es:\pwork\pwork\tduncanbd\0409210\0303808-sh-t-IL47-rxp\lan36-Helmar Rd.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

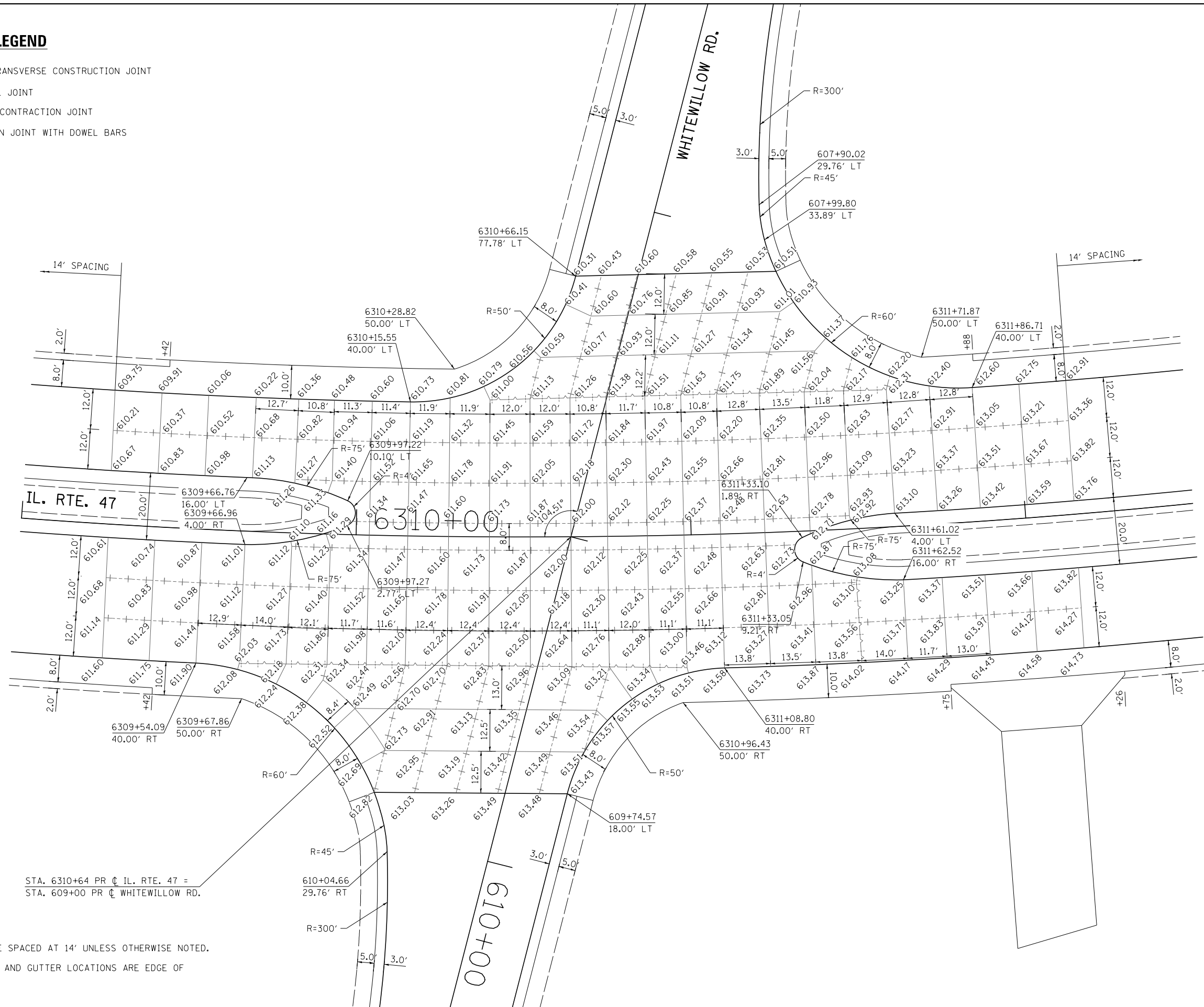
RIGHT OF WAY PLANS

PROJECT	JOB NO. R-93-003-08
SHEET NO. 36 OF 36 SHEETS	STA. 1502+00.00 TO STA. 1516+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110IR-1)	KENDALL	619	303
IL RTE 47		CONTRACT NO. 66B84		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

**JOINT LEGEND**

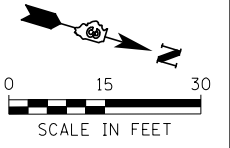
-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS



STA. 6310+64 PR  $\oslash$  IL. RTE. 47 =  
 STA. 609+00 PR  $\oslash$  WHITEWILLOW RD.





**NOTES:**

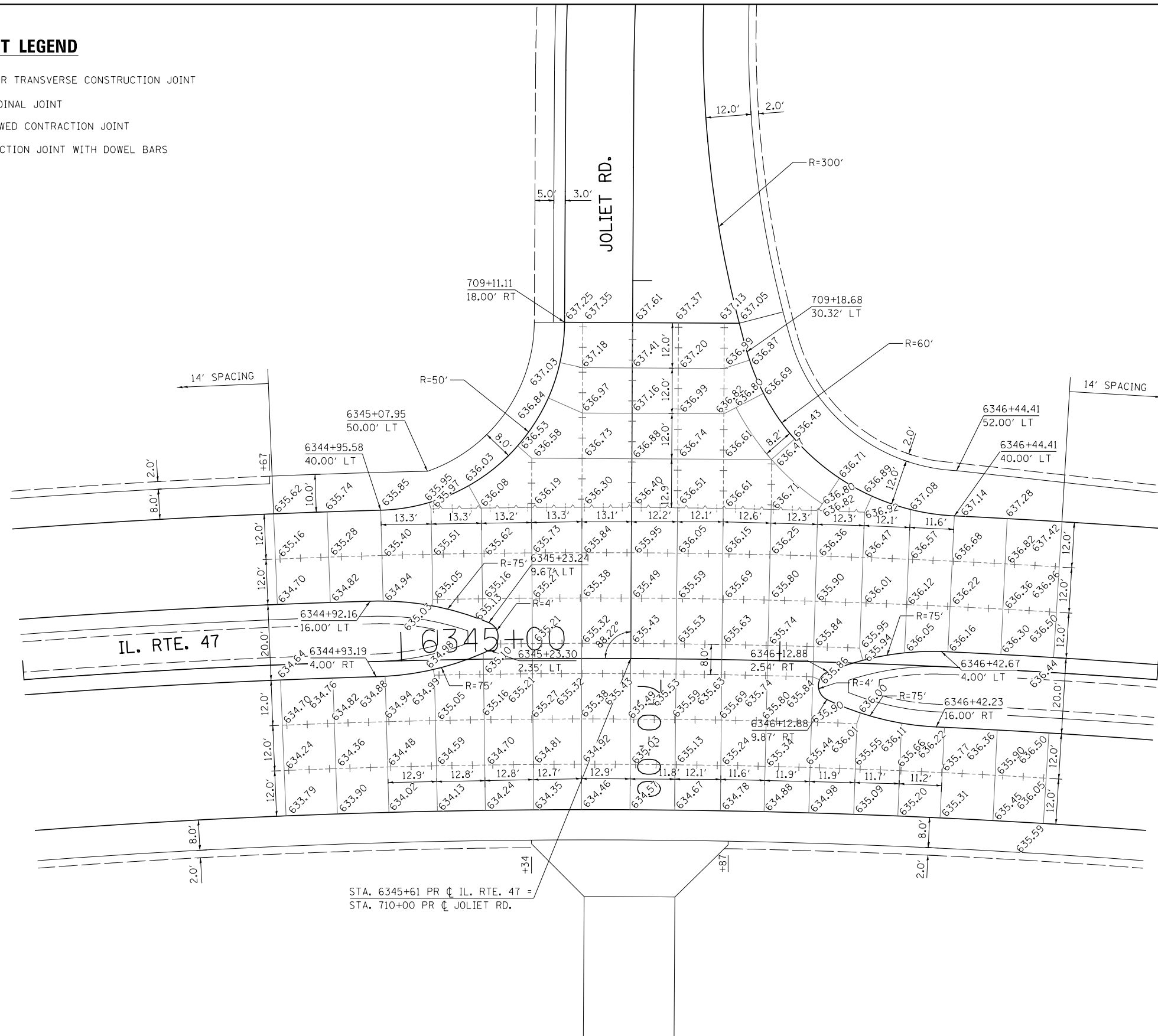
1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME = V:\3195\66884 (North Section)\CADD Sheets\3195\66884-shd-joint-01.dgn	USER NAME = bdecreane	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RTE. 47 &amp; WHITEWILLOW RD. INTERSECTION DETAIL AND JOINTING PLAN</b>			F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 304
*MODELNAME*	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -		SCALE: 1"=15'	SHEET NO. 1 OF 10 SHEETS	STA. 6309+00 TO STA. 6312+50	CONTRACT NO. 66884				
	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -		ILLINOIS FED. AID PROJECT							

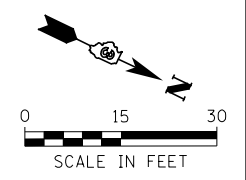
**JOINT LEGEND**

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS







STA. 6345+61 PR  $\phi$  IL. RTE. 47 =  
 STA. 710+00 PR  $\phi$  JOLIET RD.

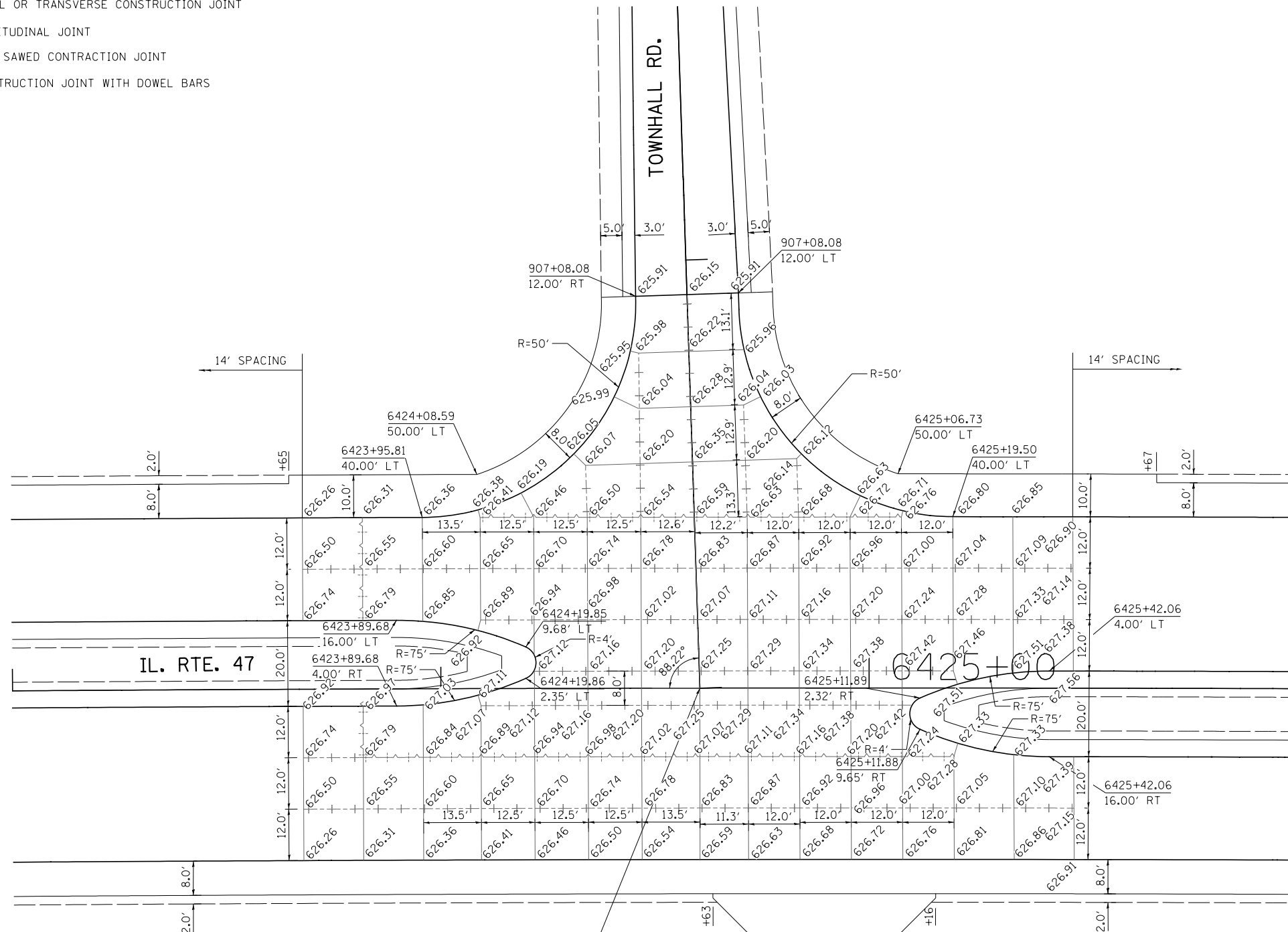
- NOTES:
- ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
  - ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME = V:\3195\66884 (North Section)\CADD Sheets\0366884-sh1-joint-02.dgn	USER NAME = bdecreene	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RTE. 47 &amp; JOLIET RD. INTERSECTION DETAIL AND JOINTING PLAN</b>			F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 305
	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -		SCALE: 1"=15'	SHEET NO. 2 OF 10 SHEETS	STA. 6344+00 TO STA. 6347+00	CONTRACT NO. 66884				
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -				ILLINOIS FED. AID PROJECT					

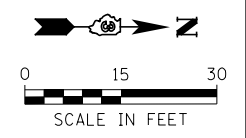
### JOINT LEGEND

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS



STA. 6424+60 PR C IL. RTE. 47 =  
STA. 908+00 PR C TOWNHALL RD.

- NOTES:
1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
  2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



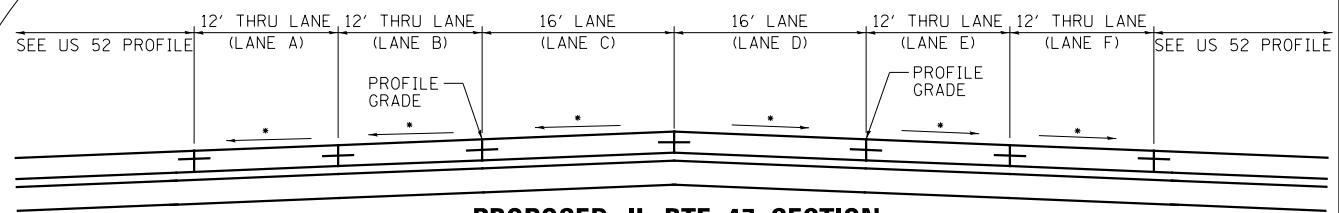
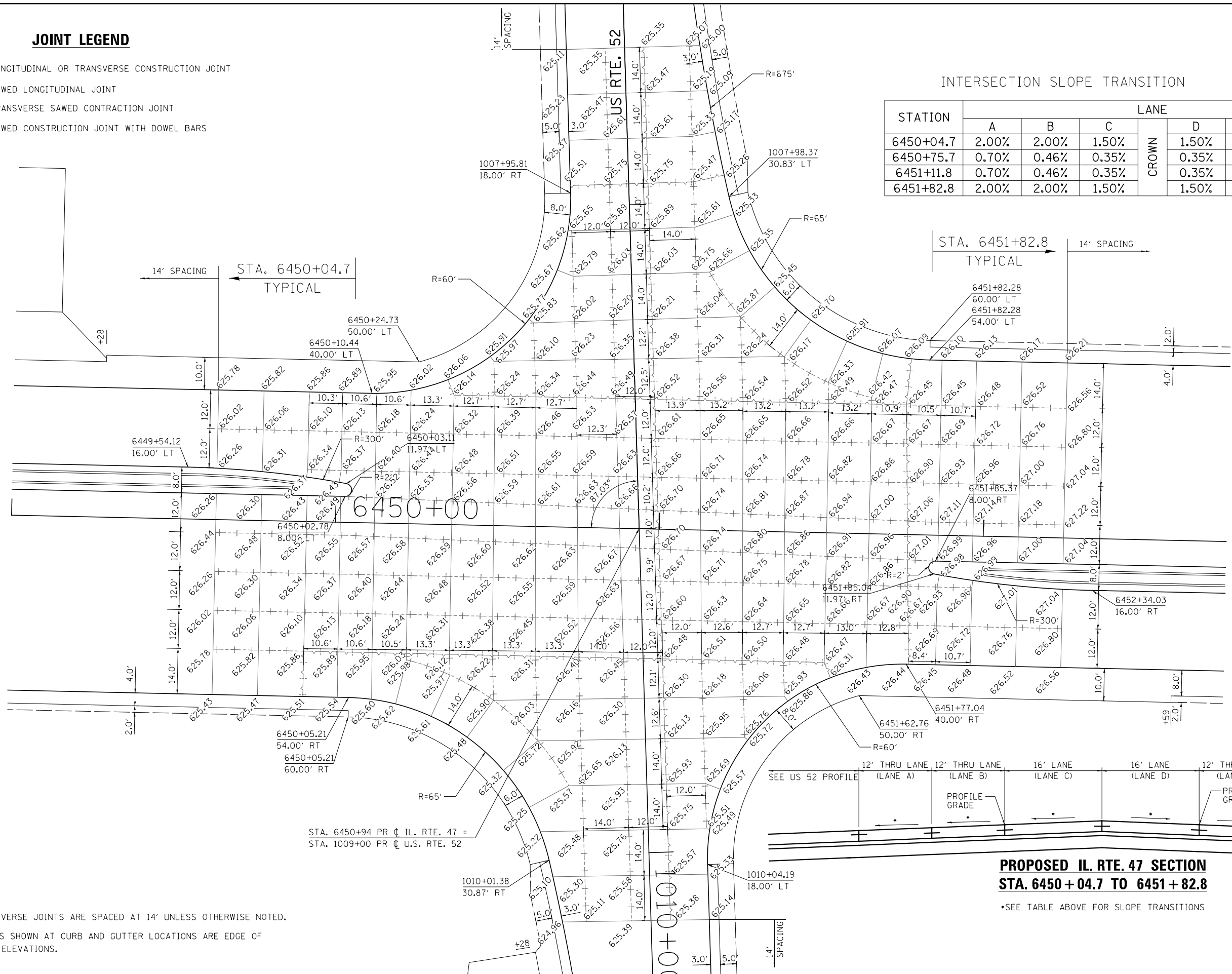
FILE NAME =	USER NAME = bdecreene	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RTE. 47 &amp; TOWNHALL RD. INTERSECTION DETAIL AND JOINTING PLAN</b>	F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 306		
V:\3195\66884 (North Section)\CADD Sheets\0366884-sh-joint-03.dgn	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -			SCALE: 1"=15'	SHEET NO. 3 OF 10 SHEETS	STA. 6423+00	TO STA. 6426+00	CONTRACT NO. 66884		
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -			ILLINOIS FED. AID PROJECT						

**JOINT LEGEND**

- LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
- SAWED LONGITUDINAL JOINT
- TRANSVERSE SAWED CONTRACTION JOINT
- SAWED CONSTRUCTION JOINT WITH DOWEL BARS

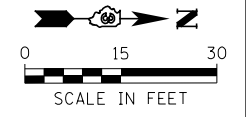
**INTERSECTION SLOPE TRANSITION**

STATION	LANE					
	A	B	C	D	E	F
6450+04.7	2.00%	2.00%	1.50%	1.50%	2.00%	2.00%
6450+75.7	0.70%	0.46%	0.35%	0.35%	0.59%	1.00%
6451+11.8	0.70%	0.46%	0.35%	0.35%	0.59%	1.00%
6451+82.8	2.00%	2.00%	1.50%	1.50%	2.00%	2.00%



**PROPOSED IL. RTE. 47 SECTION  
STA. 6450 + 04.7 TO 6451 + 82.8**





•SEE TABLE ABOVE FOR SLOPE TRANSITIONS

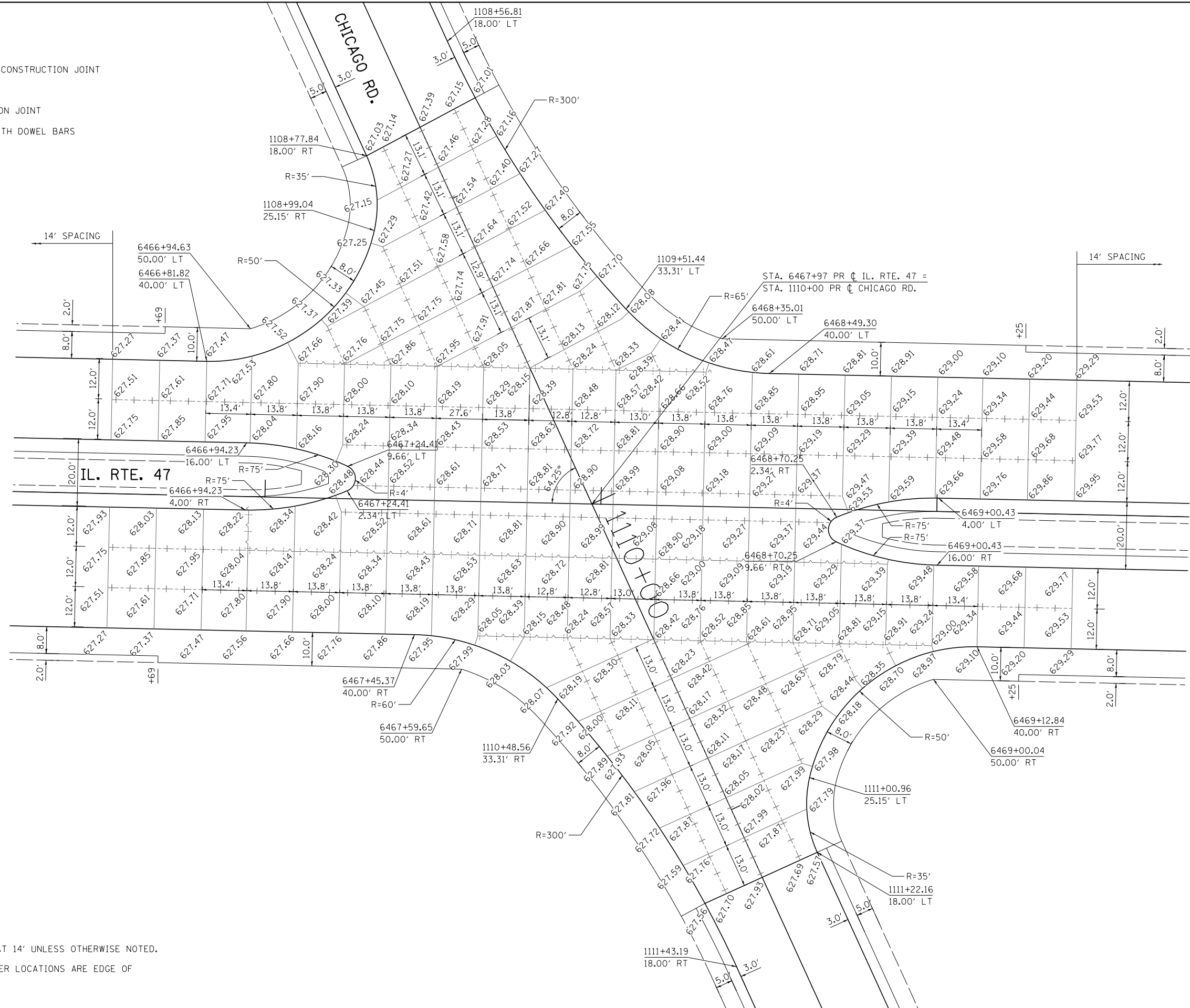


- NOTES:
- ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
  - ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.

FILE NAME = V:\3195\66884 (North Section)\CADD Sheets\0366884-sh1-joint-04.dgn	USER NAME = bdecreane	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RTE. 47 &amp; U.S. RTE. 52 INTERSECTION DETAIL AND JOINTING PLAN</b>	F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 307		
PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISIED -	REVISIED -			SCALE: 1"=15'	SHEET NO. 4 OF 10 SHEETS	STA. 6449+00	TO STA. 6452+75	CONTRACT NO. 66884		
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISIED -			ILLINOIS FED. AID PROJECT						

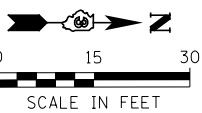
**JOINT LEGEND**

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS



**NOTES:**

1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME =	USER NAME = bdecreane	DESIGNED - RC	REVISED -
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	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**





**IL. RTE. 47 & CHICAGO RD.  
INTERSECTION DETAIL AND JOINTING PLAN**

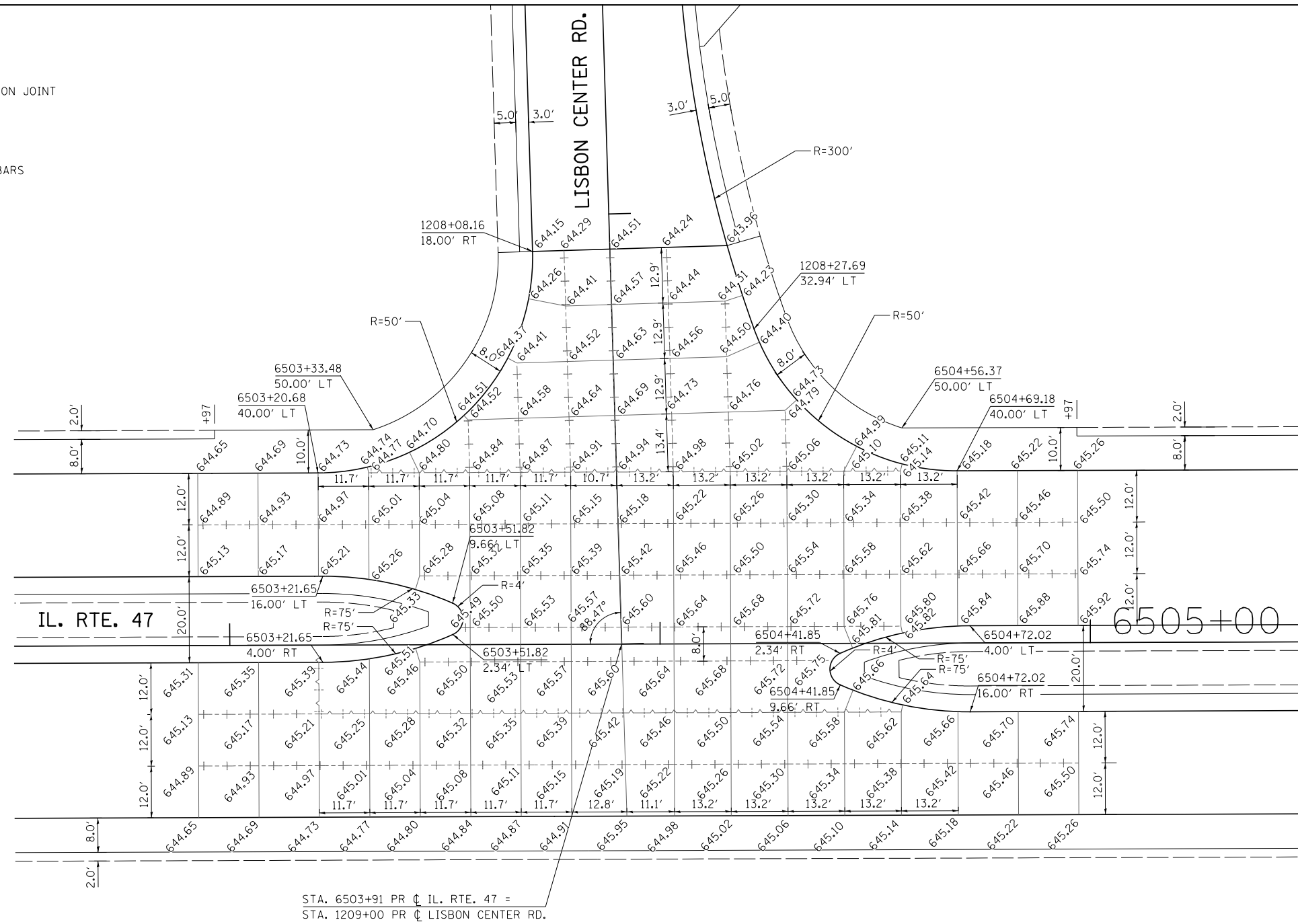
SCALE: 1"=15'      SHEET NO. 5 OF 10 SHEETS      STA. 6466+25 TO STA. 6469+75

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	308
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



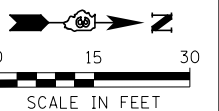
**JOINT LEGEND**

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS







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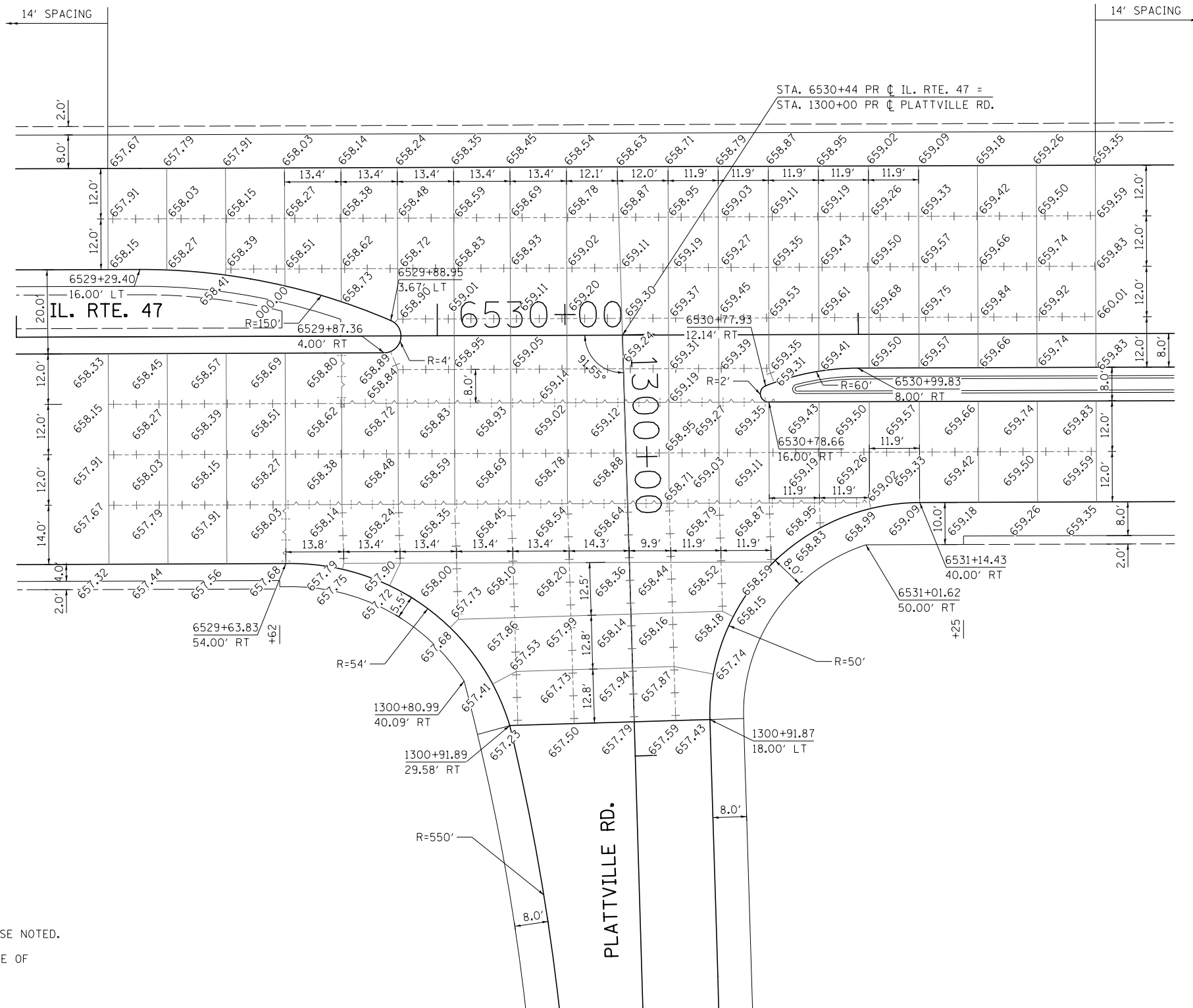
1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



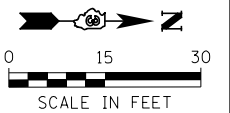
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V:\3195\66884 (North Section)\CADD Sheets\ND366884-shr-joint-06.dgn		DRAWN - RC	REVISED -			326	(109, 110)R-1	KENDALL	619	309	
PLOT SCALE = 30.0000' / in.		CHECKED - ST	REVISED -			CONTRACT NO. 66884					
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -			SCALE: 1"=15'	SHEET NO. 6 OF 10 SHEETS	STA. 6502+50	TO STA. 6505+50	ILLINOIS FED. AID PROJECT	

**JOINT LEGEND**

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS



- NOTES:
1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
  2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME =	USER NAME = bdecreane	DESIGNED - RC	REVISED -
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*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -





**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

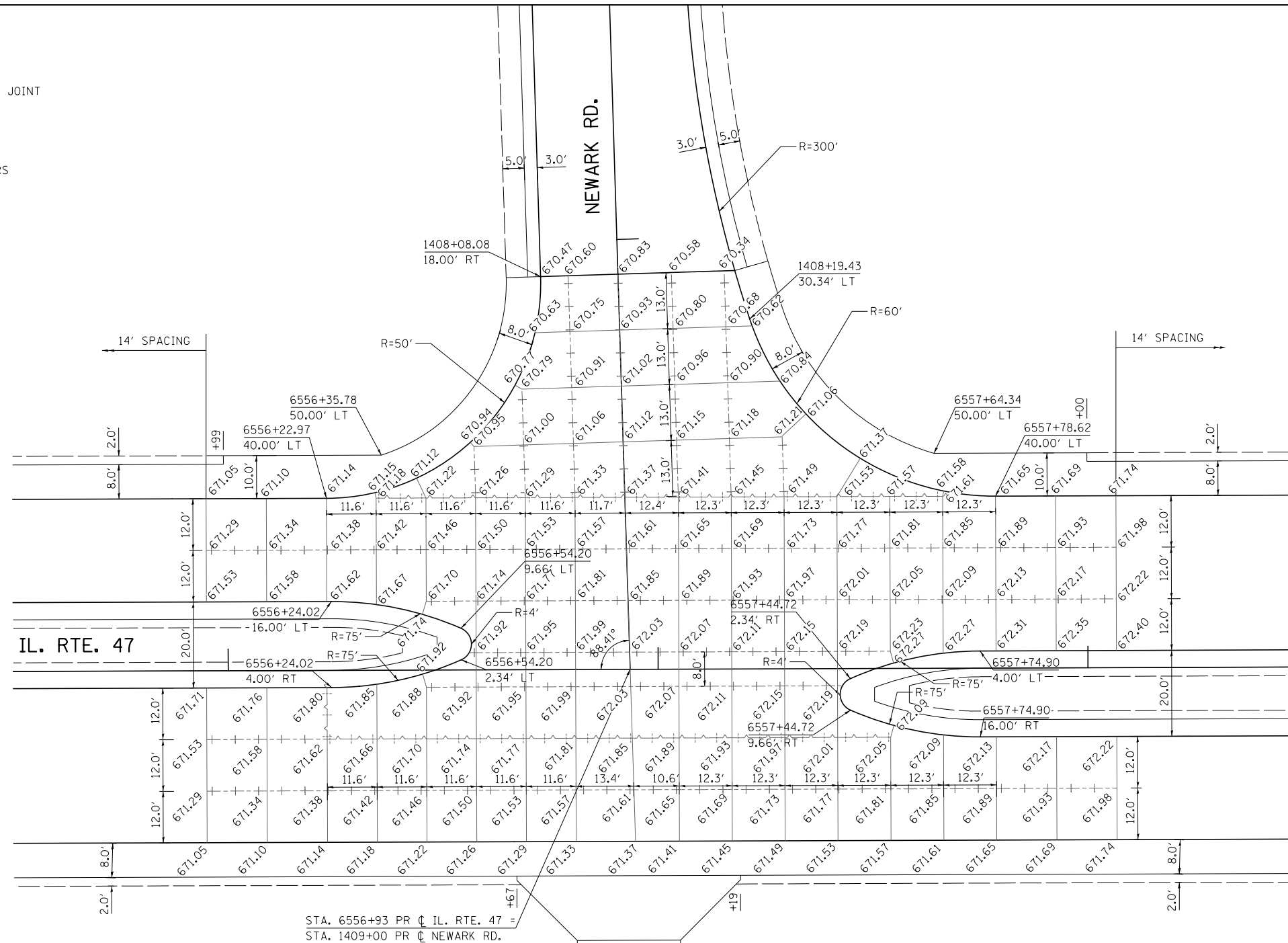
**IL. RTE. 47 & PLATVILLE RD.  
INTERSECTION DETAIL AND JOINTING PLAN**

SCALE: 1"=15' SHEET NO. 7 OF 10 SHEETS STA. 6529+00 TO STA. 6531+75

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	310
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

**JOINT LEGEND**

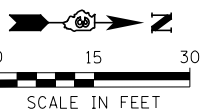
-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS



STA. 6556+93 PR  $\phi$  IL. RTE. 47  
 STA. 1409+00 PR  $\phi$  NEWARK RD.





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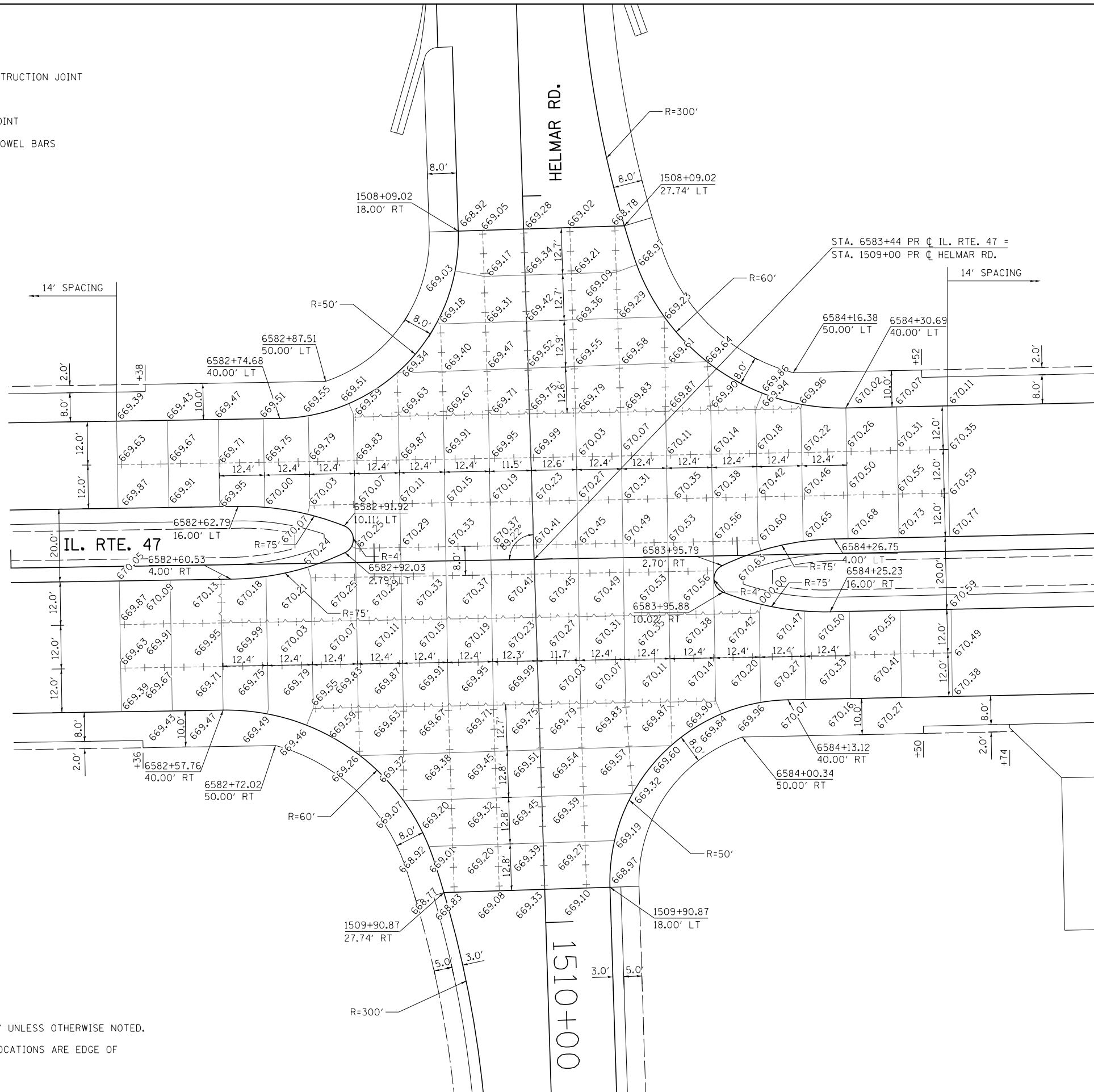
1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME = V:\3195\66884 (North Section)\CADD Sheets\ND366884-sh1-joint-08.dgn	USER NAME = bdecreene	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RTE. 47 &amp; NEWARK RD. INTERSECTION DETAIL AND JOINTING PLAN</b>			F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 311
*MODELNAME*	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -		SCALE: 1"=15'	SHEET NO. 8 OF 10 SHEETS	STA. 6555+50 TO STA. 6558+50	CONTRACT NO. 66884				
	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -		ILLINOIS FED. AID PROJECT							

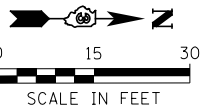
**JOINT LEGEND**

-  LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT
-  SAWED LONGITUDINAL JOINT
-  TRANSVERSE SAWED CONTRACTION JOINT
-  SAWED CONSTRUCTION JOINT WITH DOWEL BARS

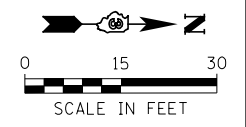
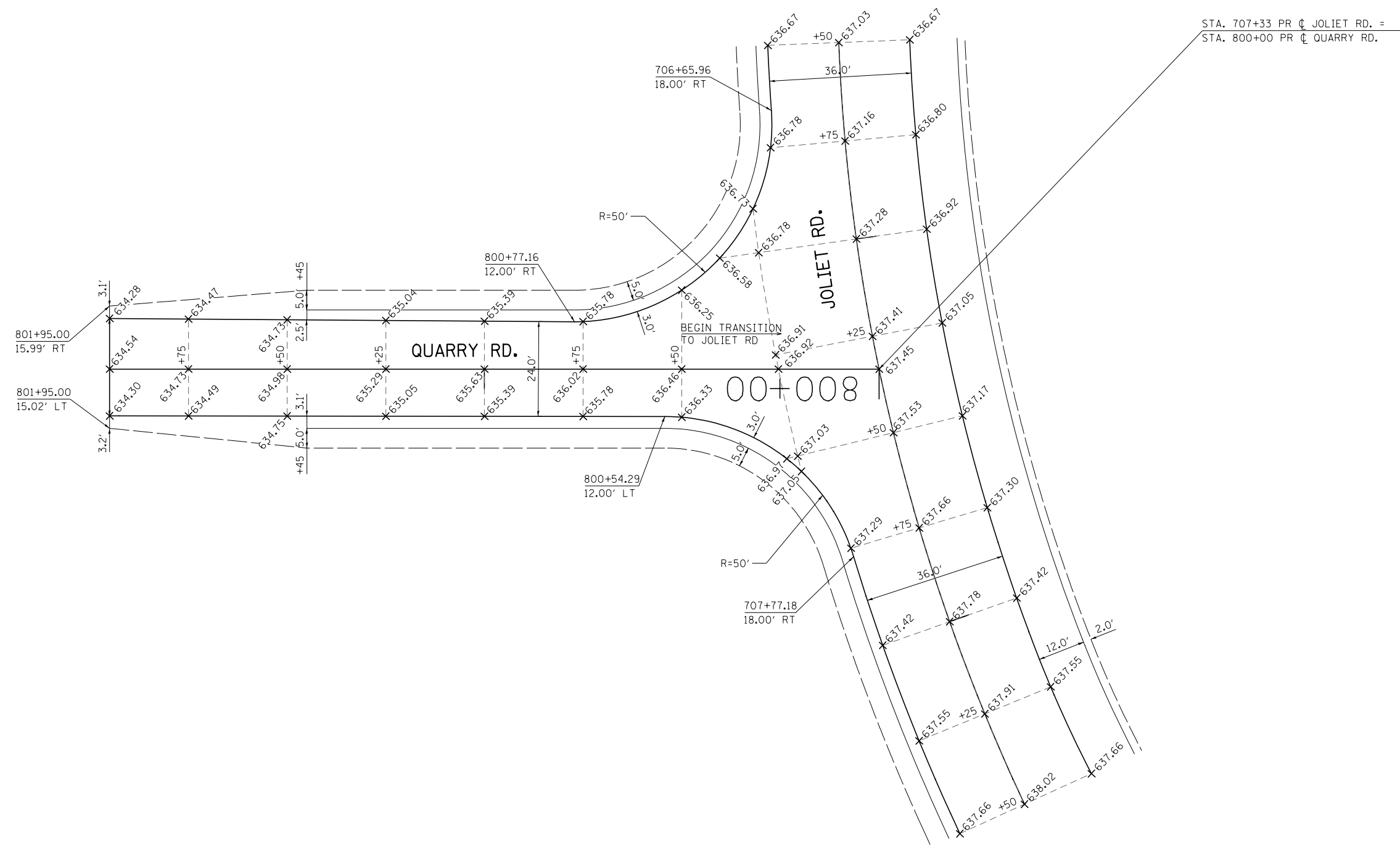


**NOTES:**

1. ALL TRANSVERSE JOINTS ARE SPACED AT 14' UNLESS OTHERWISE NOTED.
2. ELEVATIONS SHOWN AT CURB AND GUTTER LOCATIONS ARE EDGE OF PAVEMENT ELEVATIONS.



FILE NAME =	USER NAME = bdecreane	DESIGNED - RC	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL RTE. 47 &amp; HELMAR RD. INTERSECTION DETAIL AND JOINTING PLAN</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
V:\3195\66884 (North Section)\CADD Sheets\ND366884-shd-joint-09.dgn						326	(109, 110R-1)	KENDALL	619	312	
PLOT SCALE = 30.0000' / in.						CONTRACT NO. 66884					
*MODELNAME*						ILLINOIS FED. AID PROJECT					
PLOT DATE = 7/14/2014		DATE - 7/01/2014	REVISED -	SCALE: 1"=15'		SHEET NO. 9 OF 10 SHEETS		STA. 6582+00 TO STA. 6585+00			



FILE NAME =	USER NAME = bdecreene	DESIGNED - RC	REVISED -
V:\3195\66884 (North Section)\CADD Sheets\ND366884-sh1-joint-10.dgn		DRAWN - RC	REVISED -
	PLOT SCALE = 30.0000' / in.	CHECKED - ST	REVISED -
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**JOLIET RD. & QUARRY RD.  
INTERSECTION DETAIL**

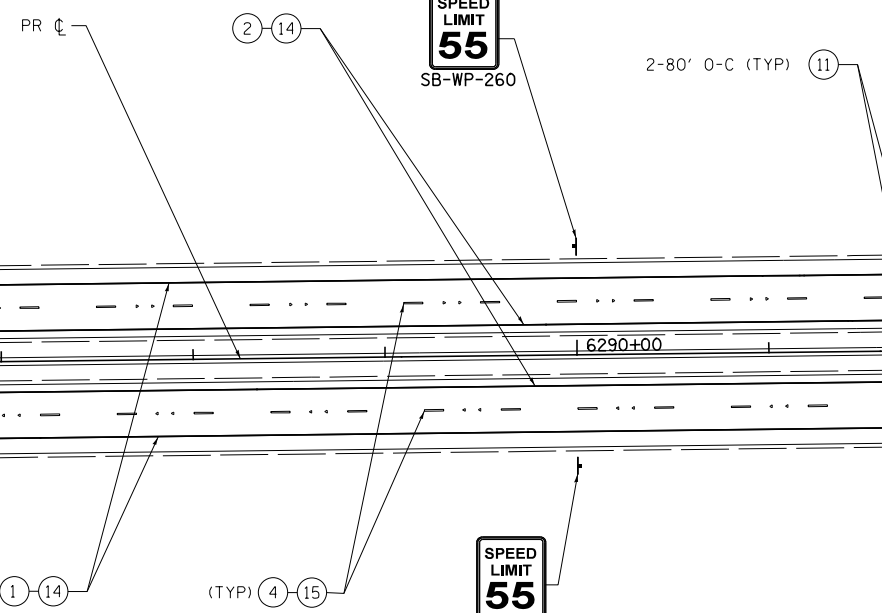
SCALE: 1"=15'      SHEET NO. 10 OF 10 SHEETS      STA. 706+50.00 TO STA. 708+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	313
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



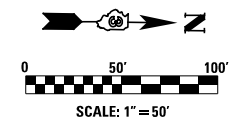
MATCH LINE STA. 6282+00

MATCH LINE STA. 6297+00



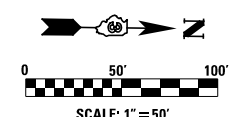
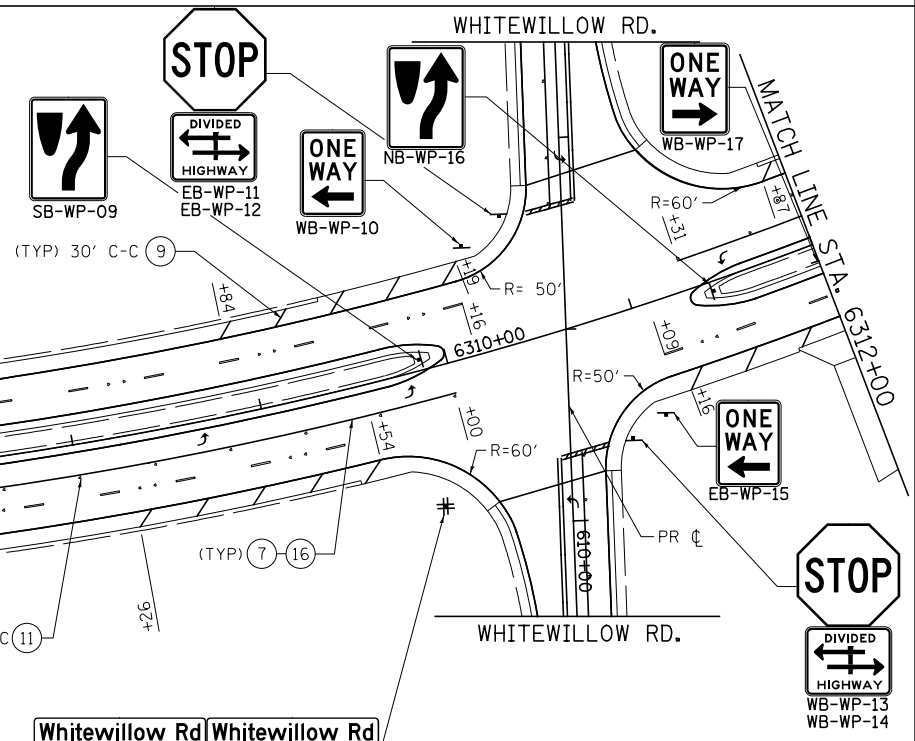
**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



MATCH LINE STA. 6297+00

MATCH LINE STA. 6312+00



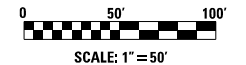
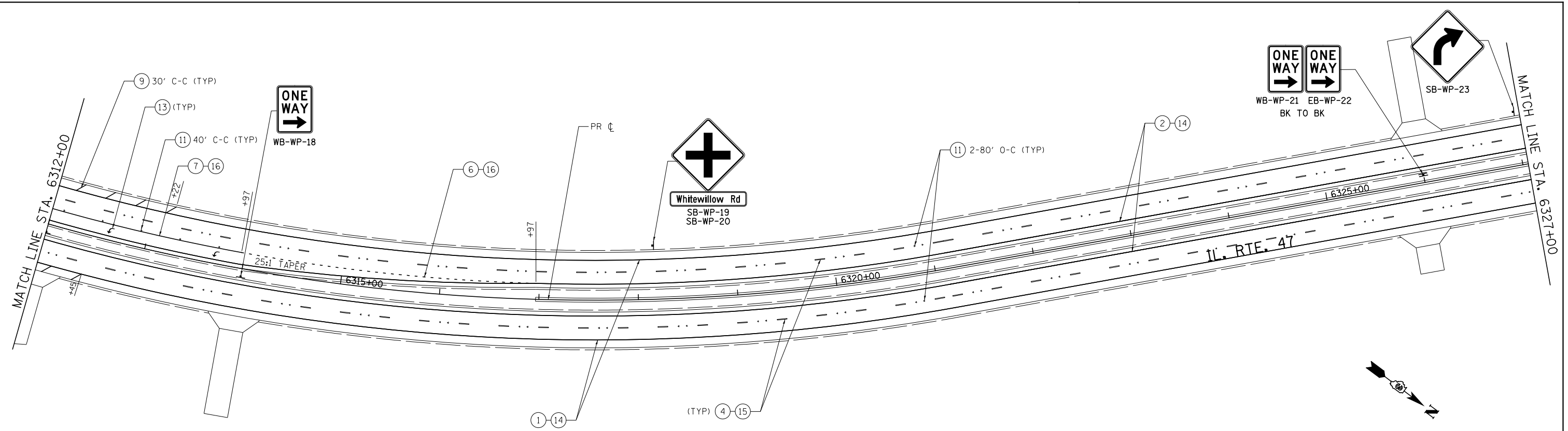
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SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

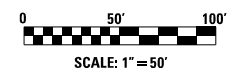
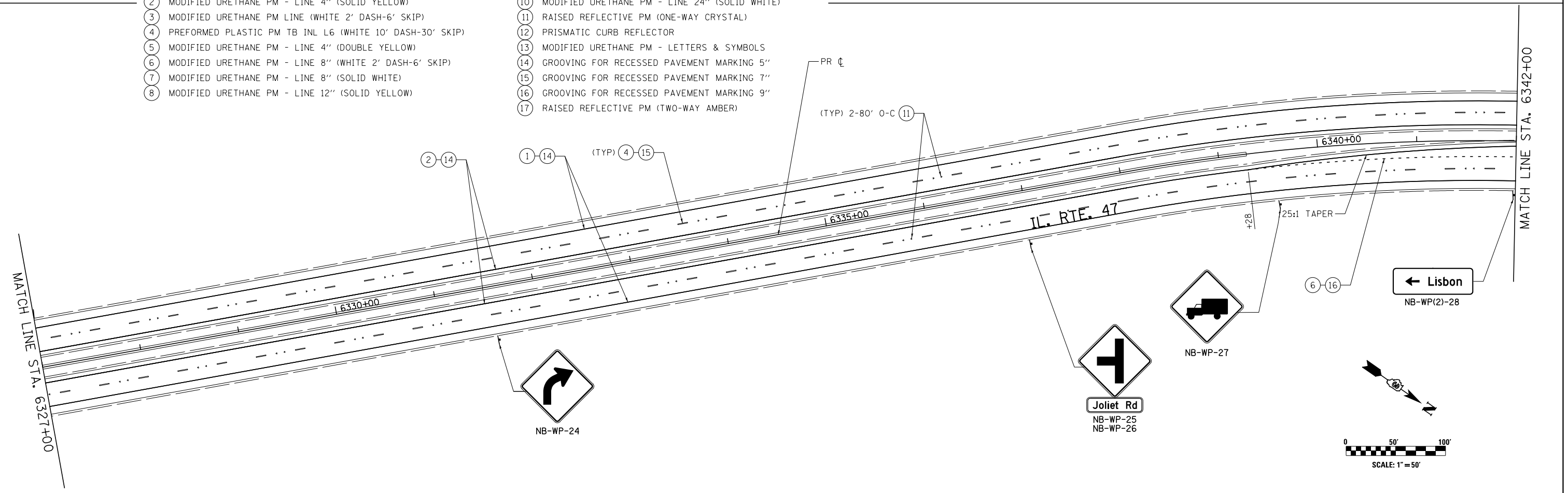
SCALE: 1"=50' SHEET NO. 2 OF 20 SHEETS STA. 6282+00 TO STA. 6312+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	315
CONTRACT NO. 66884			ILLINOIS FED. AID PROJECT	



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



FILE NAME =	USER NAME = bdecreene	DESIGNED - SL	REVISED -
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	PLOT SCALE = 100.0000' / 1"	CHECKED - ST	REVISED -
SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

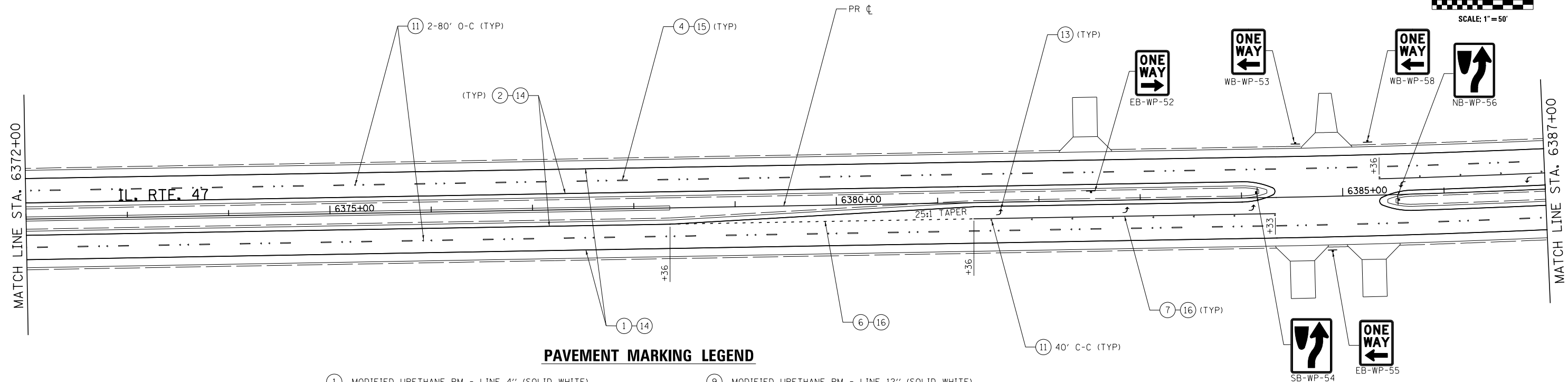
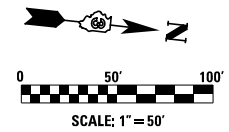
**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

SCALE: 1"=50' SHEET NO. 3 OF 20 SHEETS STA. 6312+00 TO STA. 6342+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	316
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

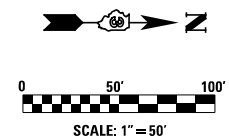
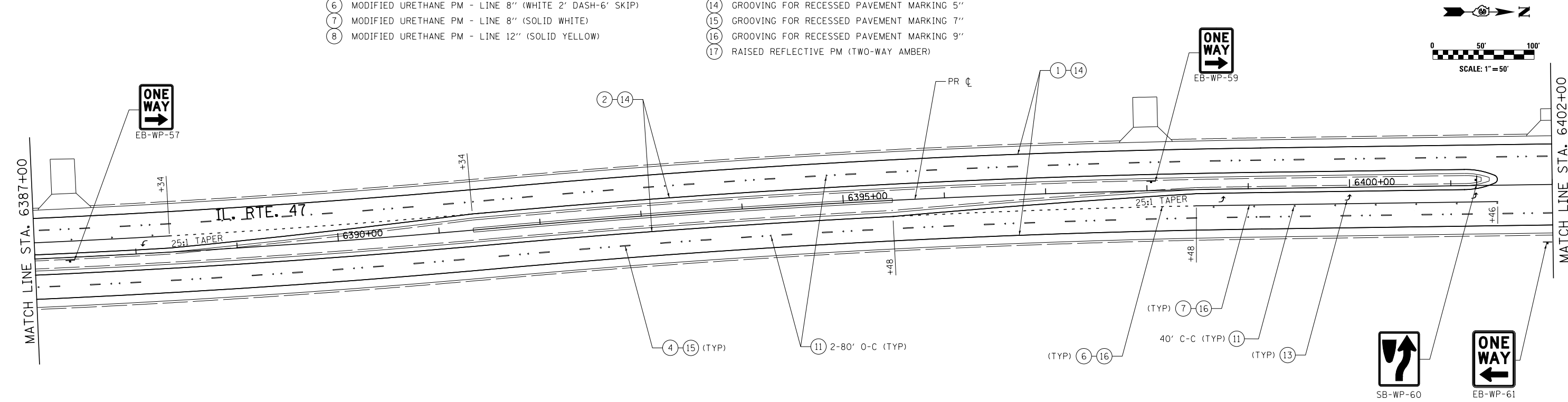






**PAVEMENT MARKING LEGEND**

- |  |  |
|--|--|
| (1) MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | (9) MODIFIED URETHANE PM - LINE 12" (SOLID WHITE)  |
| (2) MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | (10) MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| (3) MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | (11) RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| (4) PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | (12) PRISMATIC CURB REFLECTOR                      |
| (5) MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | (13) MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| (6) MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | (14) GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| (7) MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | (15) GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| (8) MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | (16) GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | (17) RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



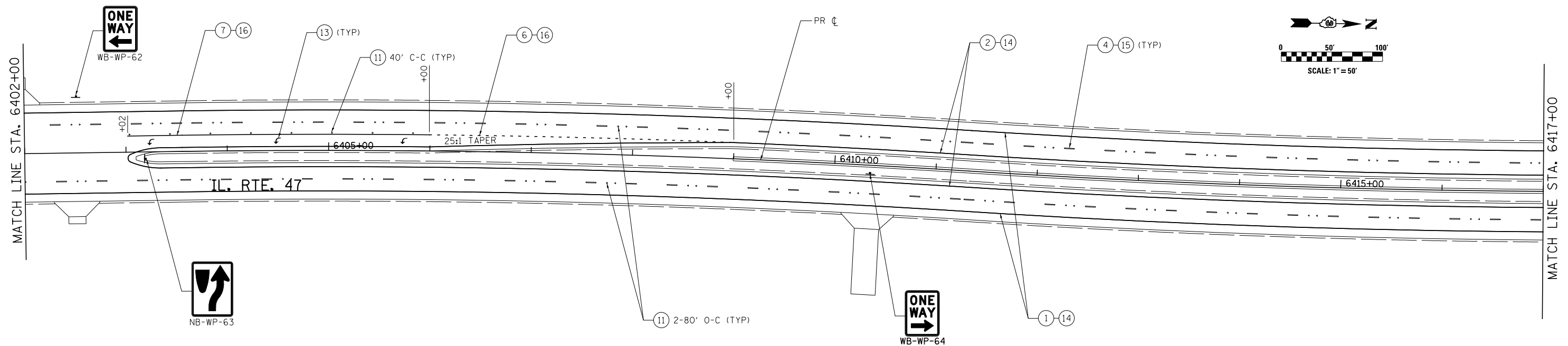
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SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

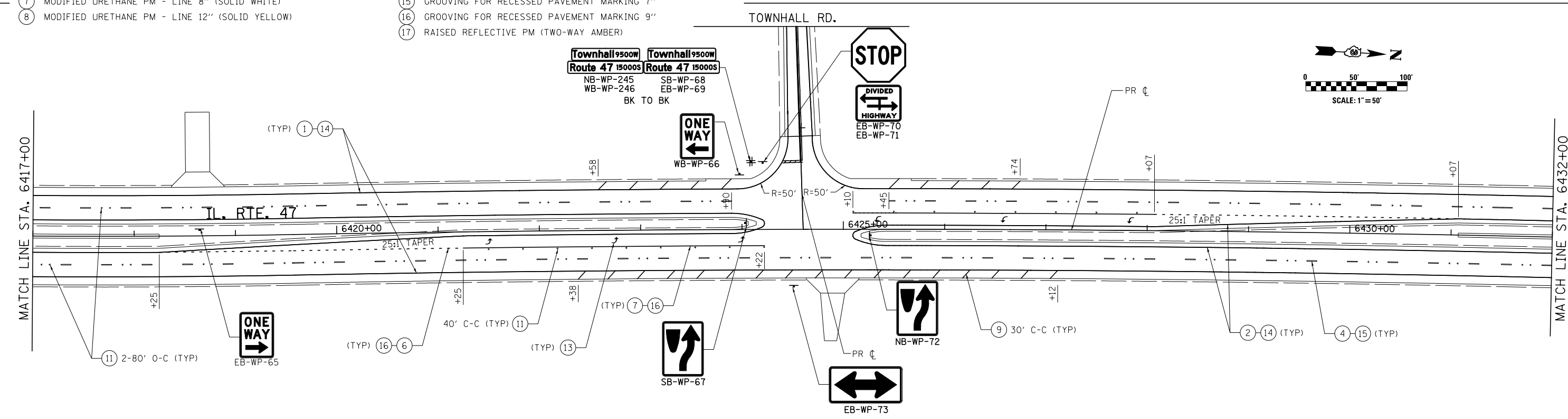
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	318
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

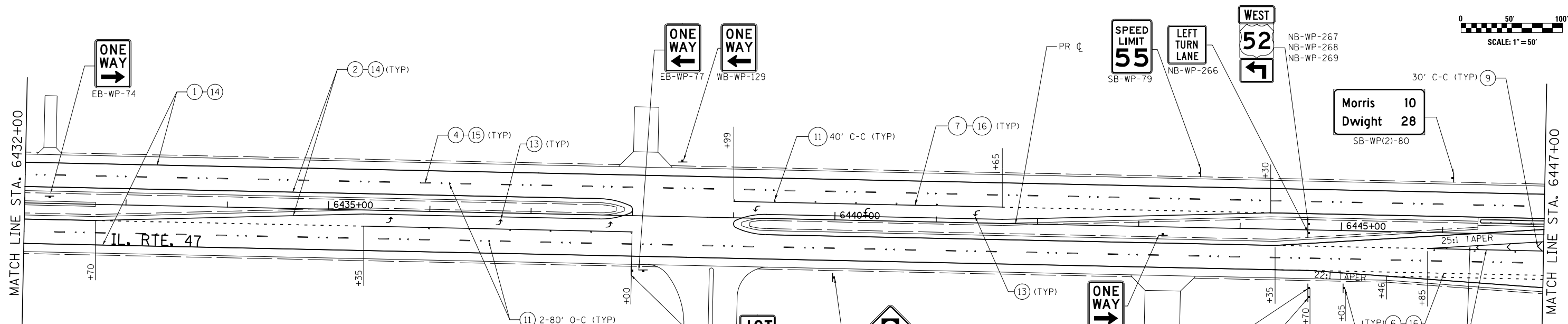
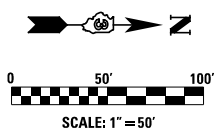


**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |

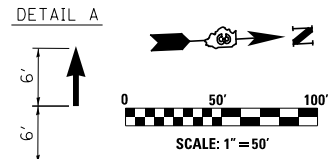
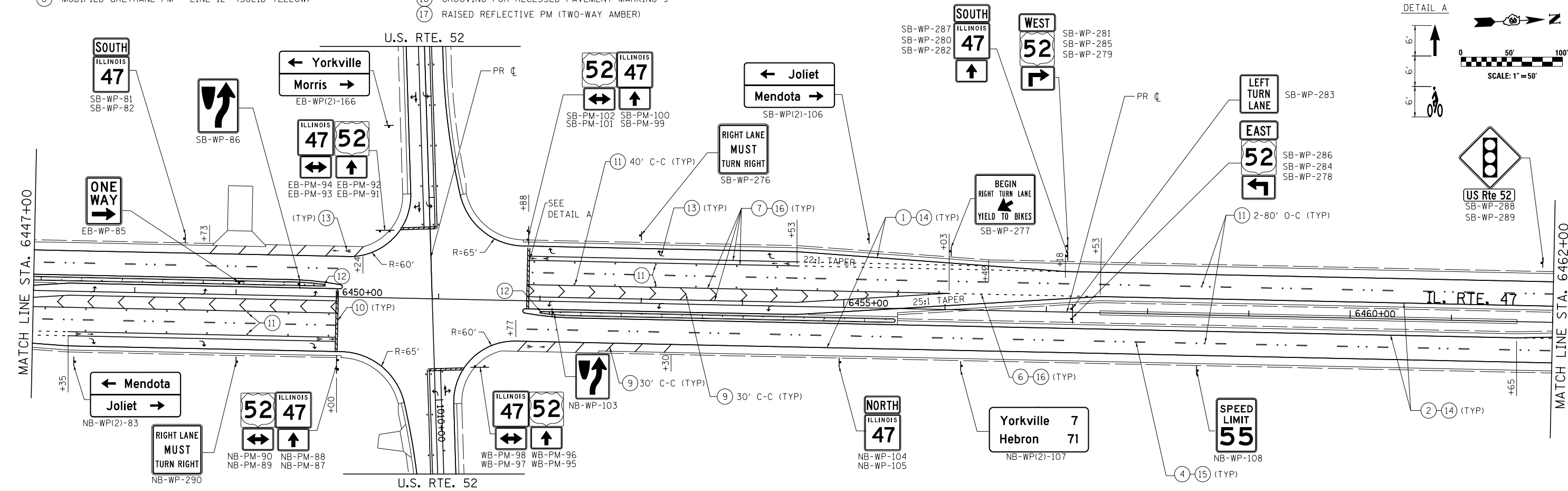


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SHT_DOUBLE PLAN	PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -		SCALE: 1"=50'	SHEET NO. 6 OF 20 SHEETS	STA. 6402+00 TO STA. 6432+00	CONTRACT NO. 66884		ILLINOIS FED. AID PROJECT		
	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -									

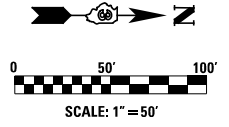
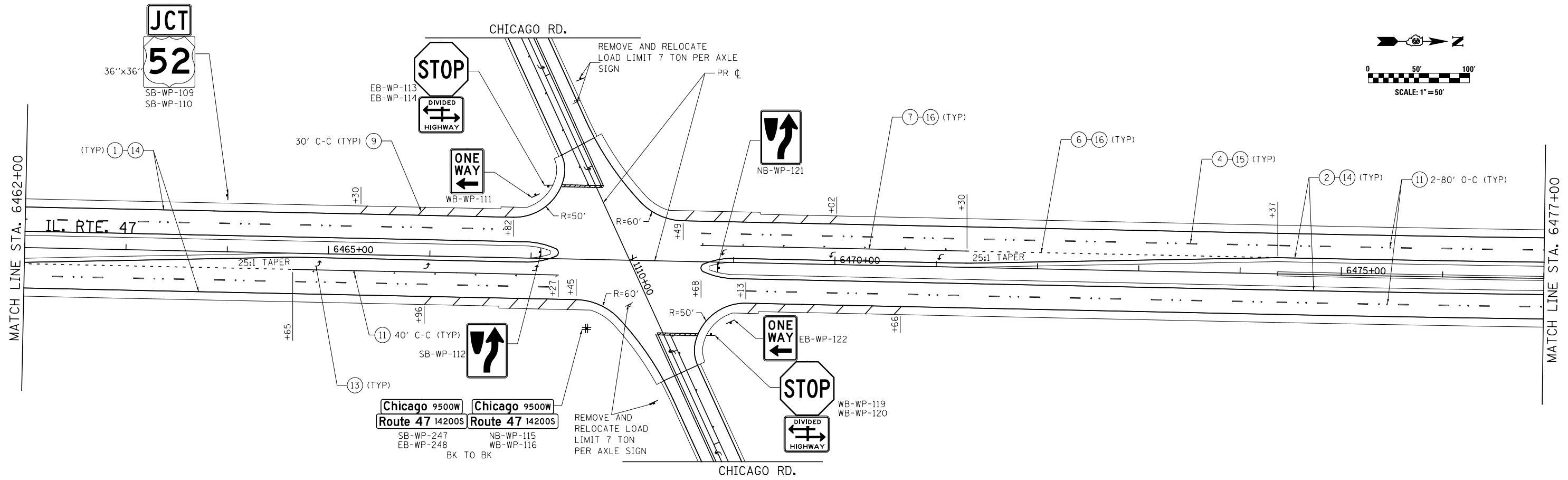


**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |

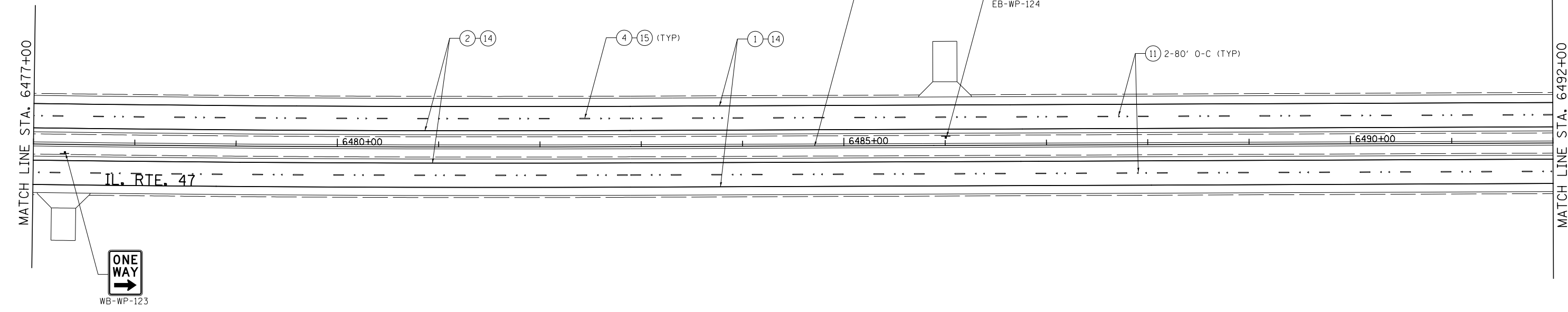
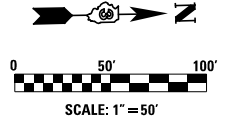


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	PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -		SCALE: 1"=50'	SHEET NO. 7 OF 20 SHEETS	STA. 6432+00 TO STA. 6462+00	CONTRACT NO. 66884		ILLINOIS FED. AID PROJECT		
SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -									



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



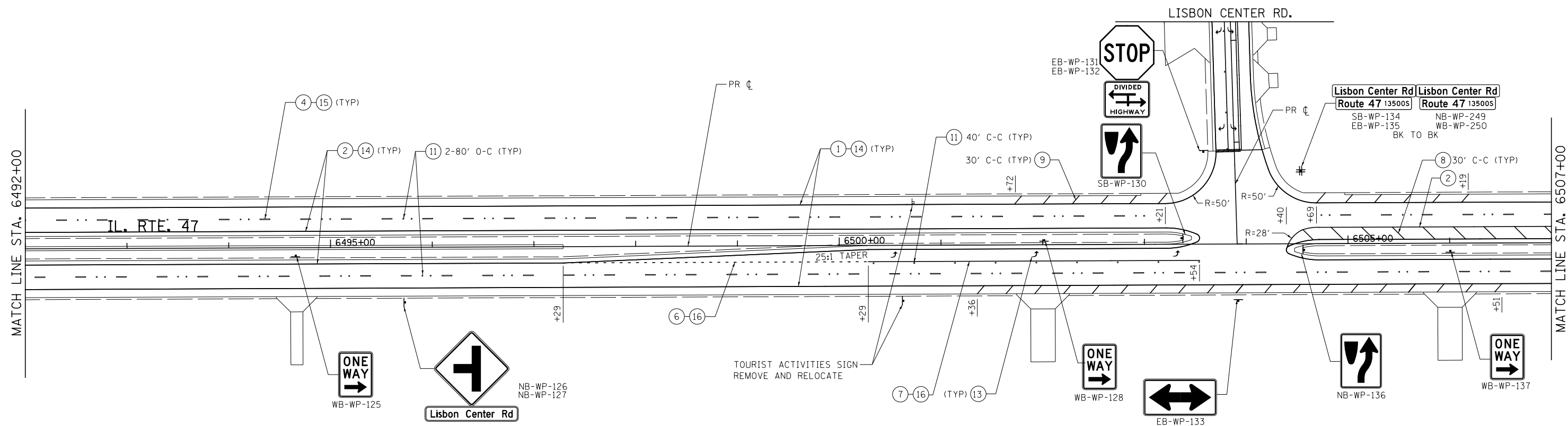
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SHT.DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

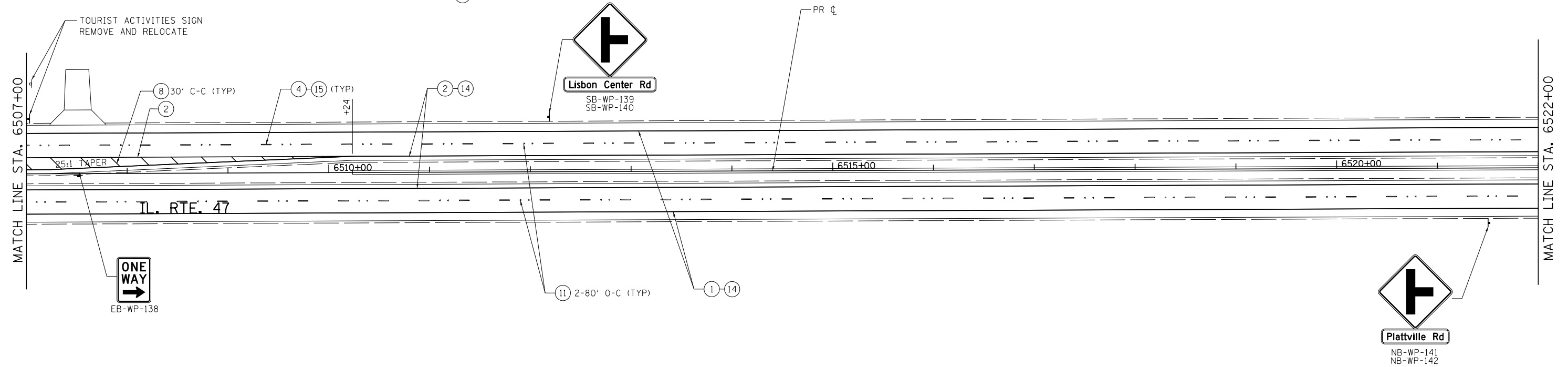
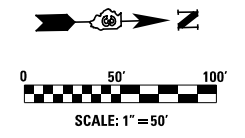
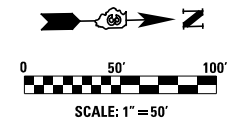
SCALE: 1"=50' SHEET NO. 8 OF 20 SHEETS STA. 6462+00 TO STA. 6492+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	321
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



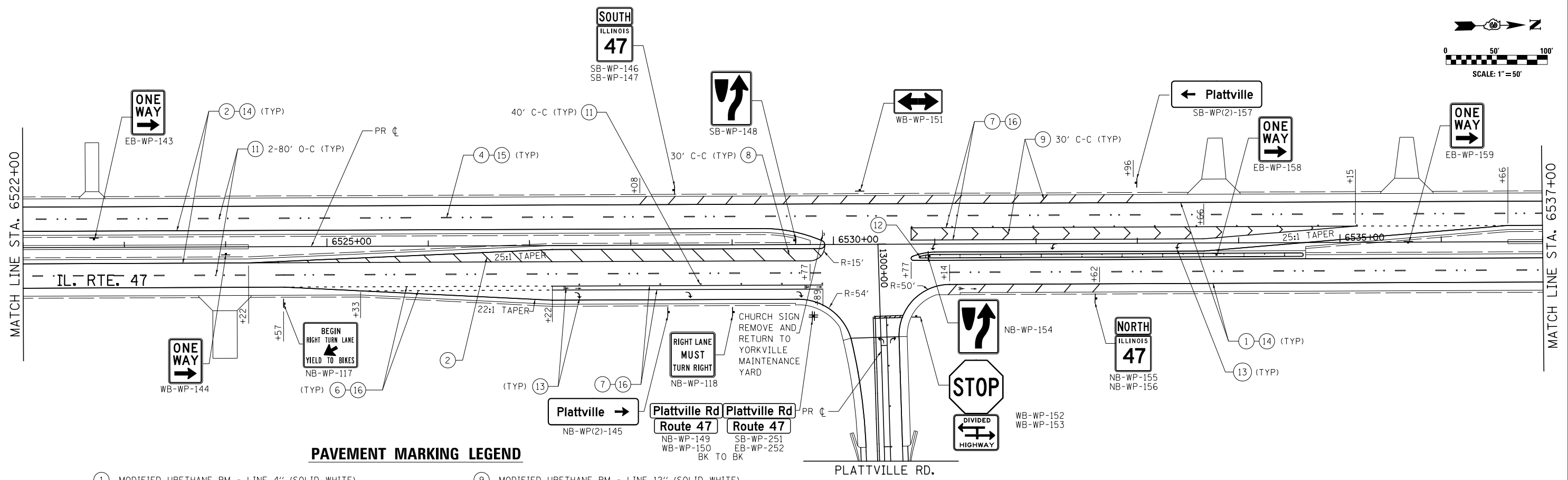
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SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

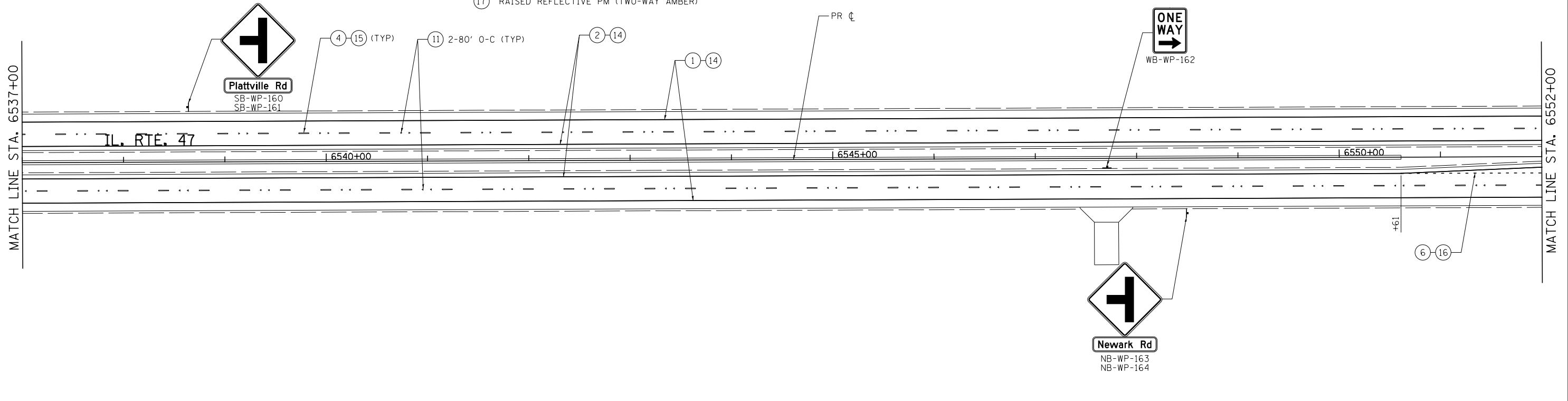
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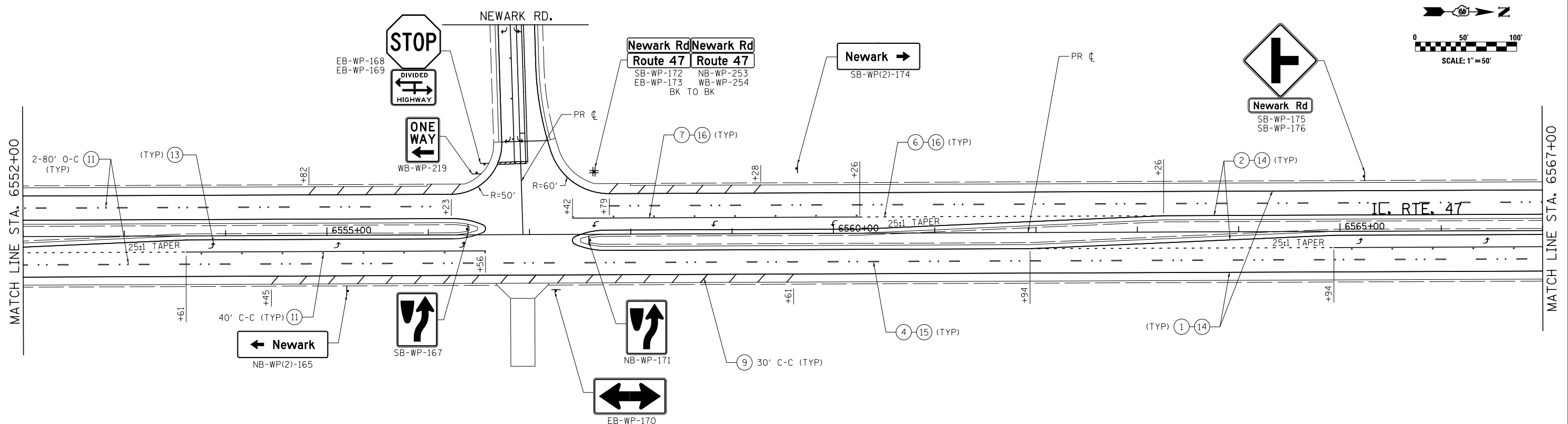
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	322
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



**PAVEMENT MARKING LEGEND**

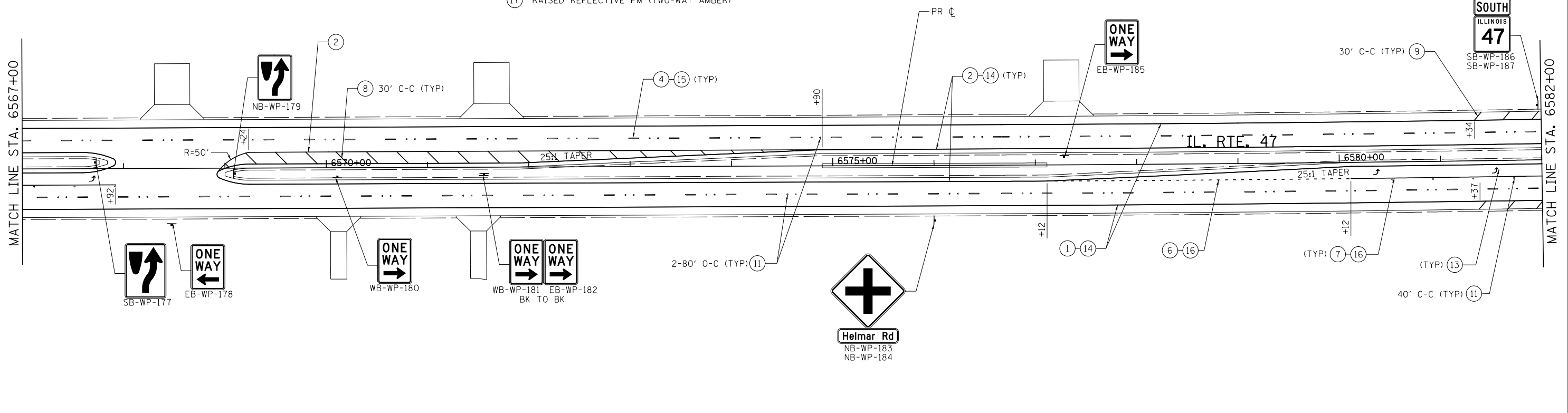
- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |





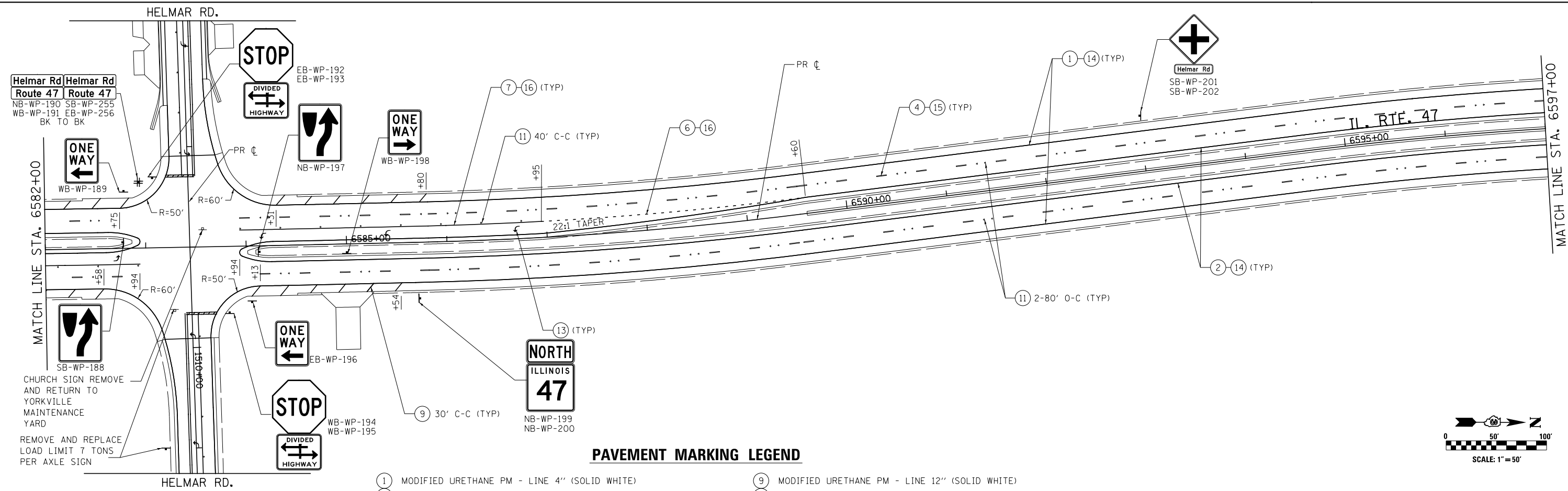
**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



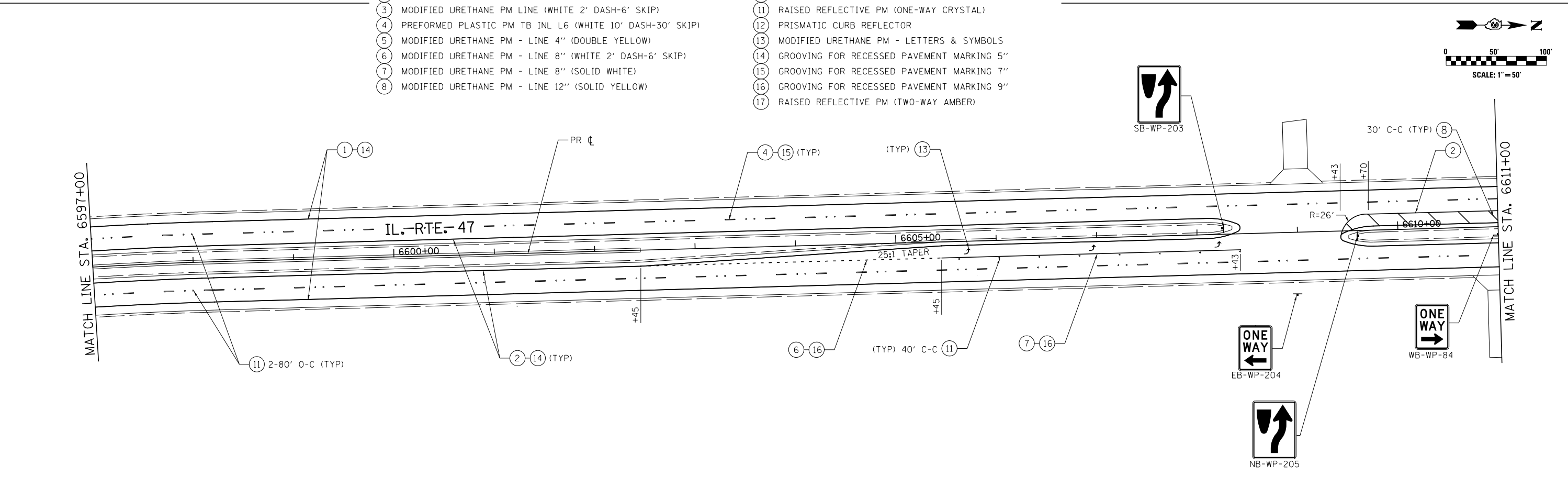
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PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISIED -	REVISIED -			CONTRACT NO. 66884				
PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISIED -	REVISIED -			SCALE: 1"=50'				
SHT_DOUBLE PLAN						SHEET NO. 11 OF 20 SHEETS				





**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



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SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL. RTE. 47  
PAVEMENT MARKING AND SIGNING PLANS**

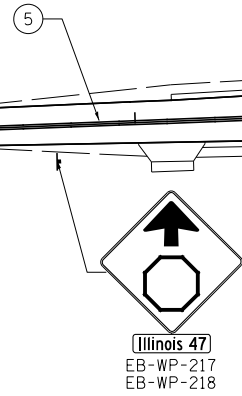
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	325
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



IMPROVEMENT BEGINS  
STA. 601+17

1600+00  
WHITEWILLOW RD.



40' C-C (TYP) (11)

(7)

(TYP) (13)

+70

(1)

PR

REMOVE AND RELOCATE  
LOAD LIMIT 7 TON  
PER AXLE SIGN

STOP

DIVIDED  
HIGHWAY  
EB-WP-11  
EB-WP-12

ONE WAY  
WB-WP-10

ONE WAY  
SB-WP-09

IL. RTE. 47

ONE WAY

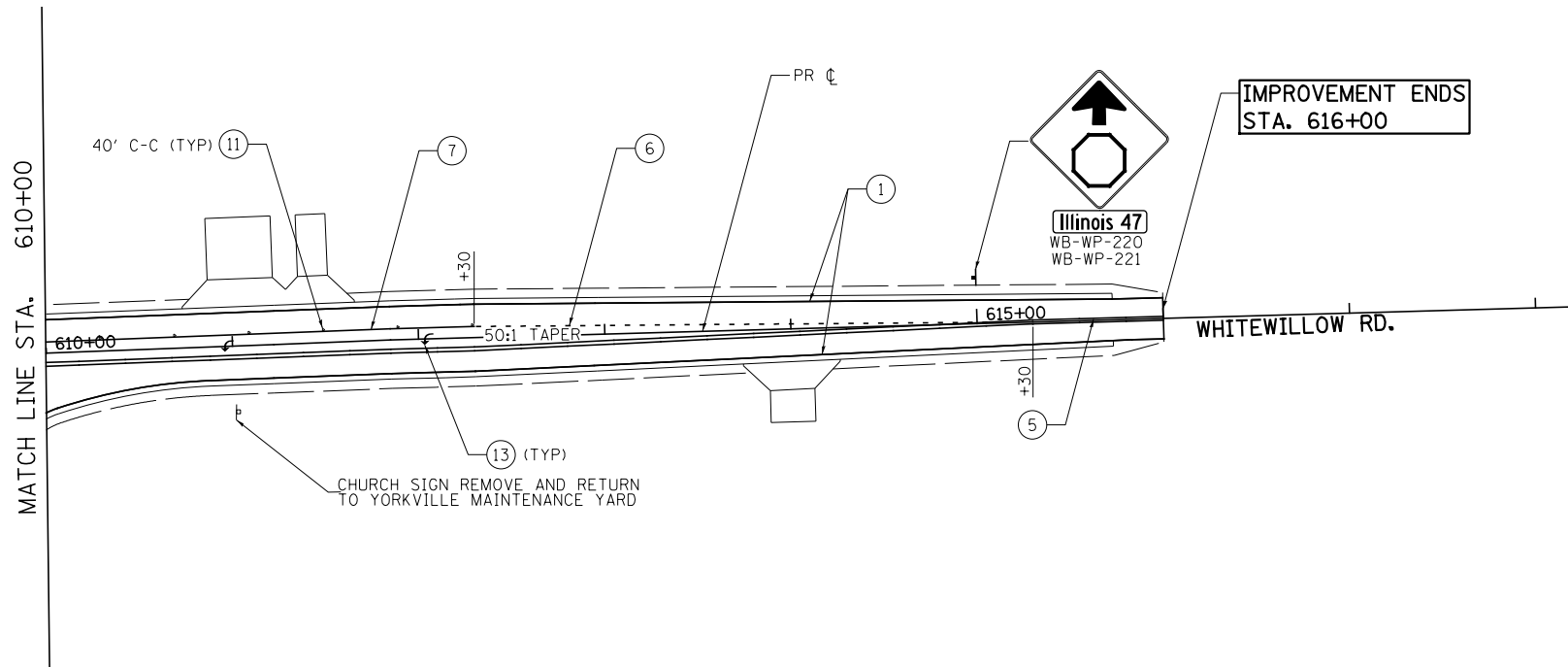
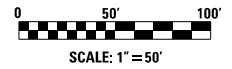
STOP  
DIVIDED  
HIGHWAY  
WB-WP-13  
WB-WP-14

Whitewillow Rd Whitewillow Rd  
Route 47 Route 47  
NB-WP-07 SB-WP-241  
WB-WP-08 EB-WP-242  
BK TO BK

MATCH LINE STA. 610+00

**PAVEMENT MARKING LEGEND**

- |  |  |
|--|--|
| (1) MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | (9) MODIFIED URETHANE PM - LINE 12" (SOLID WHITE)  |
| (2) MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | (10) MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| (3) MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | (11) RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| (4) PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | (12) PRISMATIC CURB REFLECTOR                      |
| (5) MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | (13) MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| (6) MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | (14) GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| (7) MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | (15) GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| (8) MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | (16) GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | (17) RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



IMPROVEMENT ENDS  
STA. 616+00

Illinois 47  
WB-WP-220  
WB-WP-221

(5)

(1)

PR

PR

+30

(11)

(7)

(6)

40' C-C (TYP) (11)

50:1 TAPER

610+00

615+00

616+00

WHITEWILLOW RD.

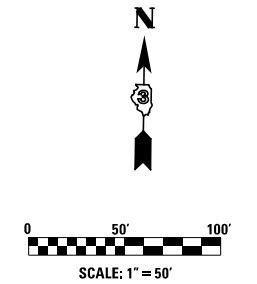
MATCH LINE STA. 610+00

CHURCH SIGN REMOVE AND RETURN  
TO YORKVILLE MAINTENANCE YARD

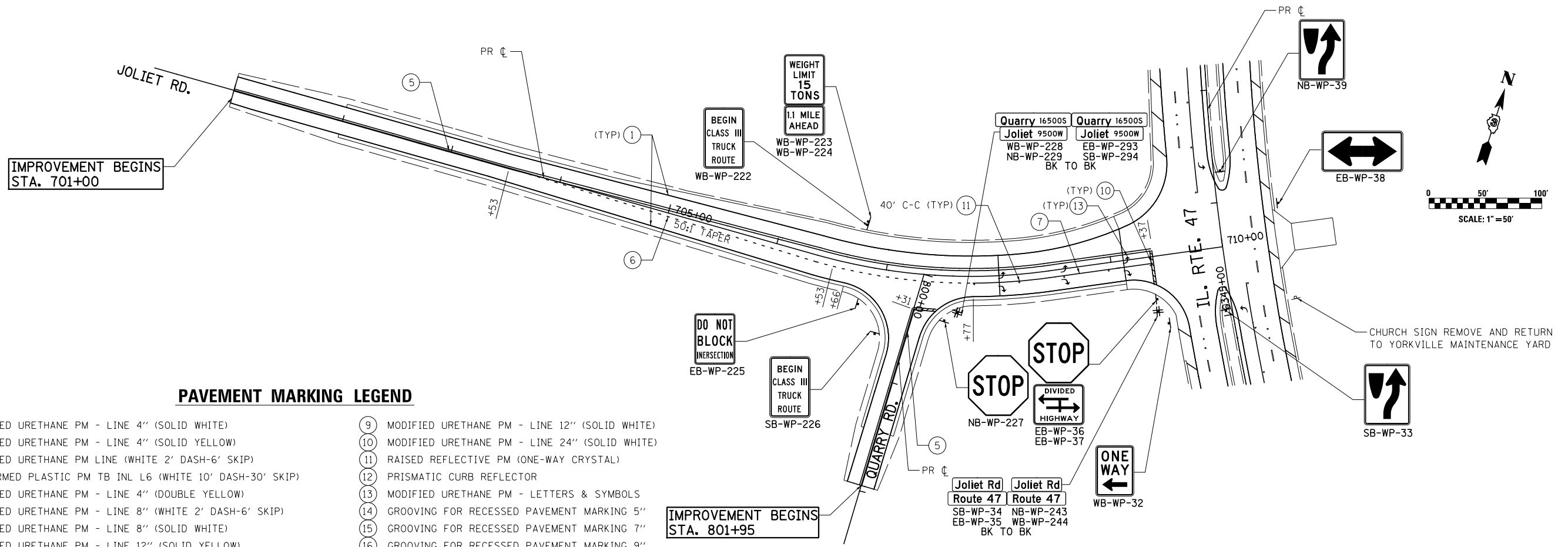
(13) (TYP)

+30

(5)

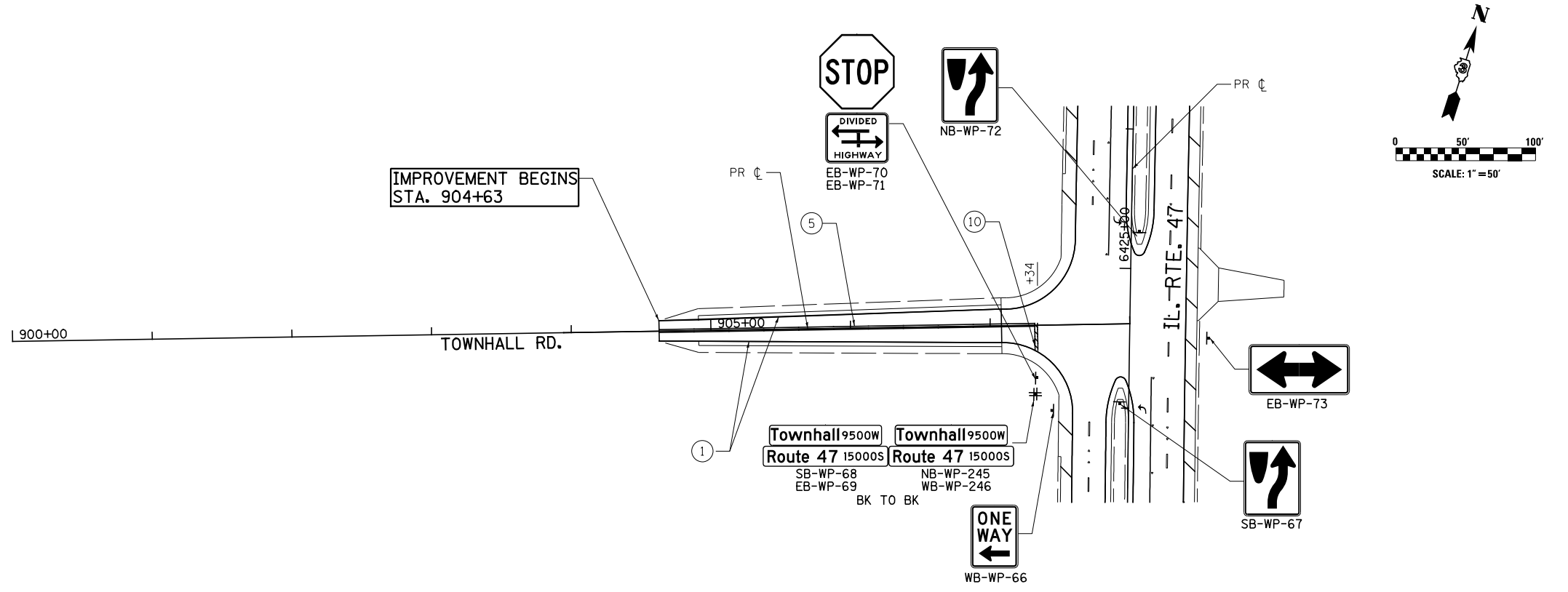


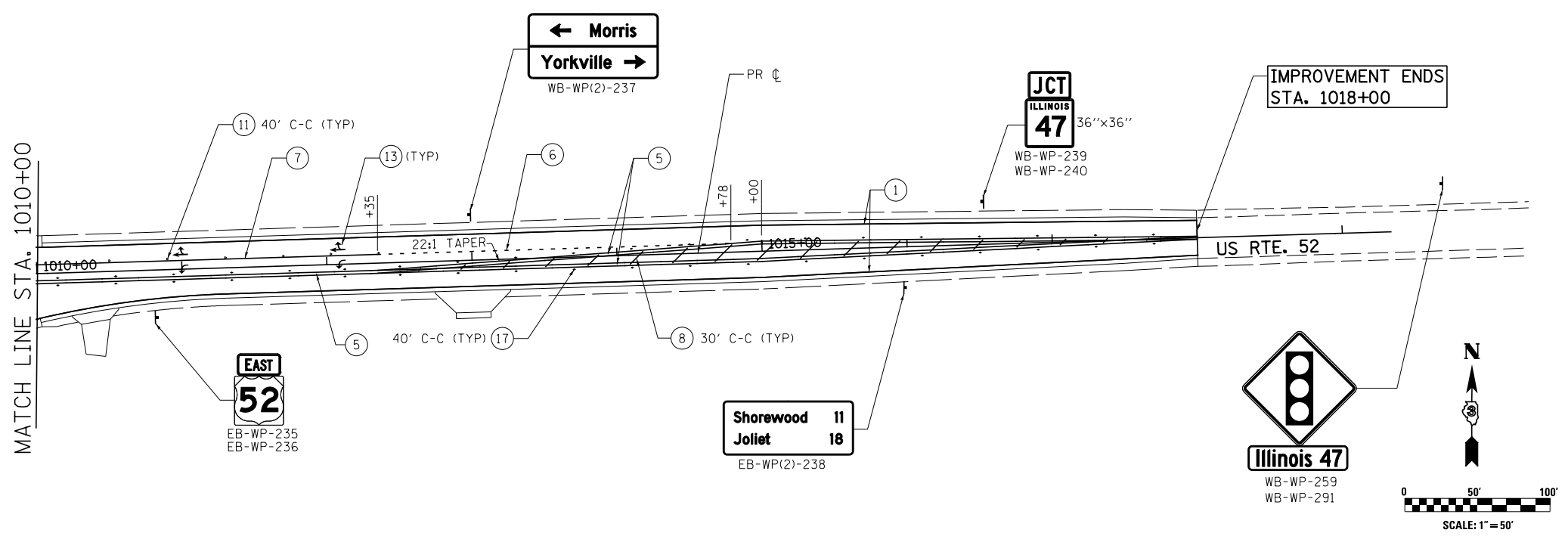
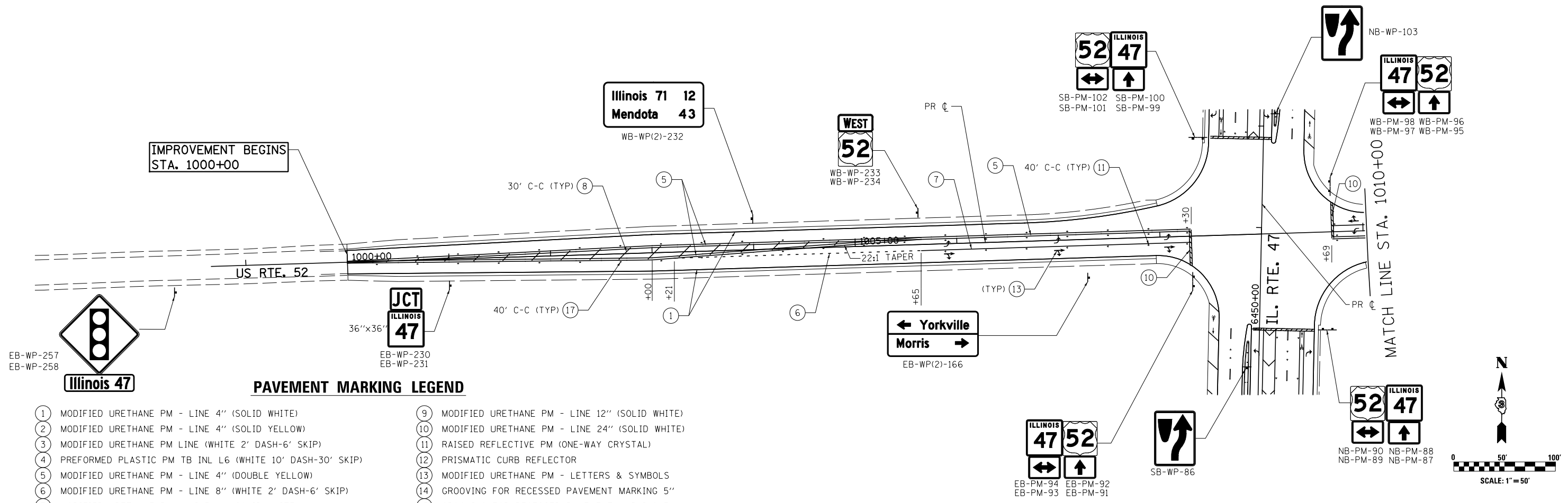
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	PLOT SCALE = 100.0000' / 1" = 100'	CHECKED - ST	REVISED -			326	(109, 110)R-1	KENDALL	619	327
SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -	SCALE: 1"=50'	SHEET NO. 14 OF 20 SHEETS	STA. 601+16.66 TO STA. 618+26	CONTRACT NO. 66884		ILLINOIS FED. AID PROJECT	



**PAVEMENT MARKING LEGEND**

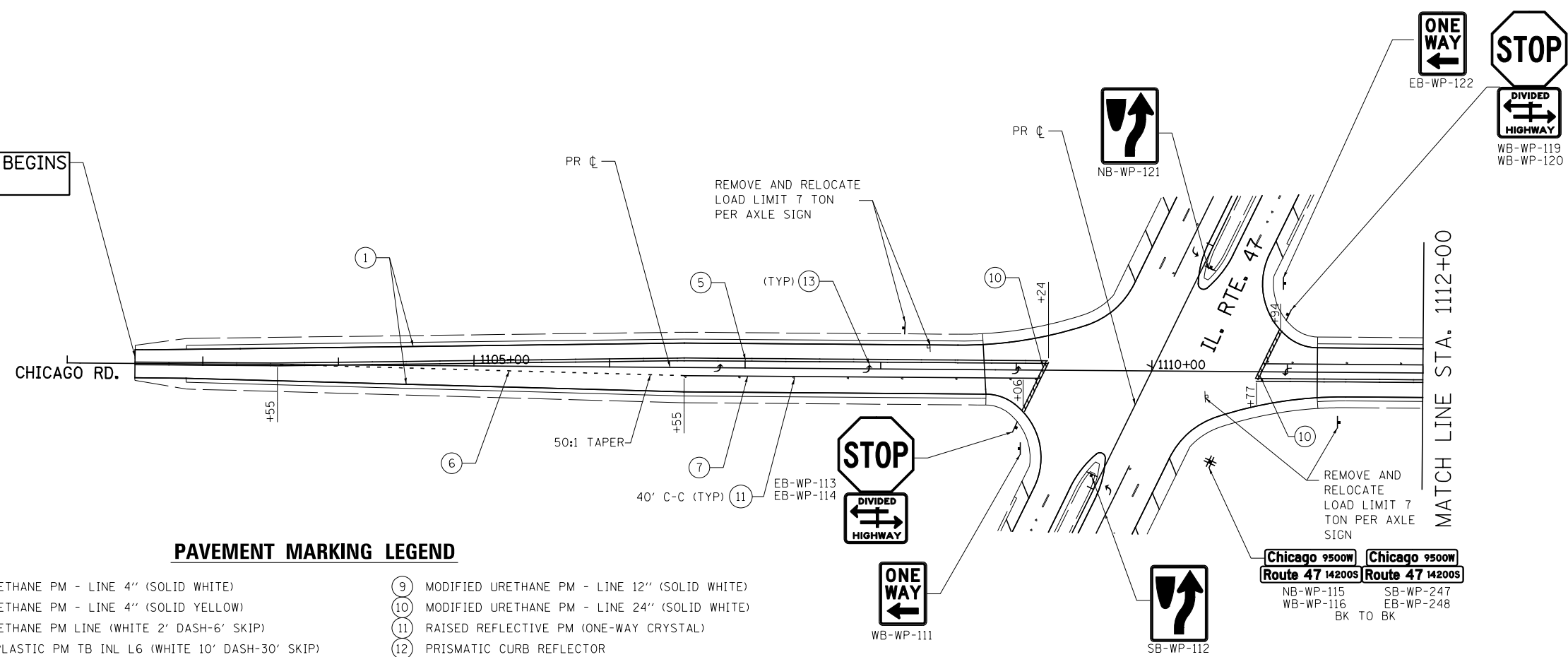
- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |





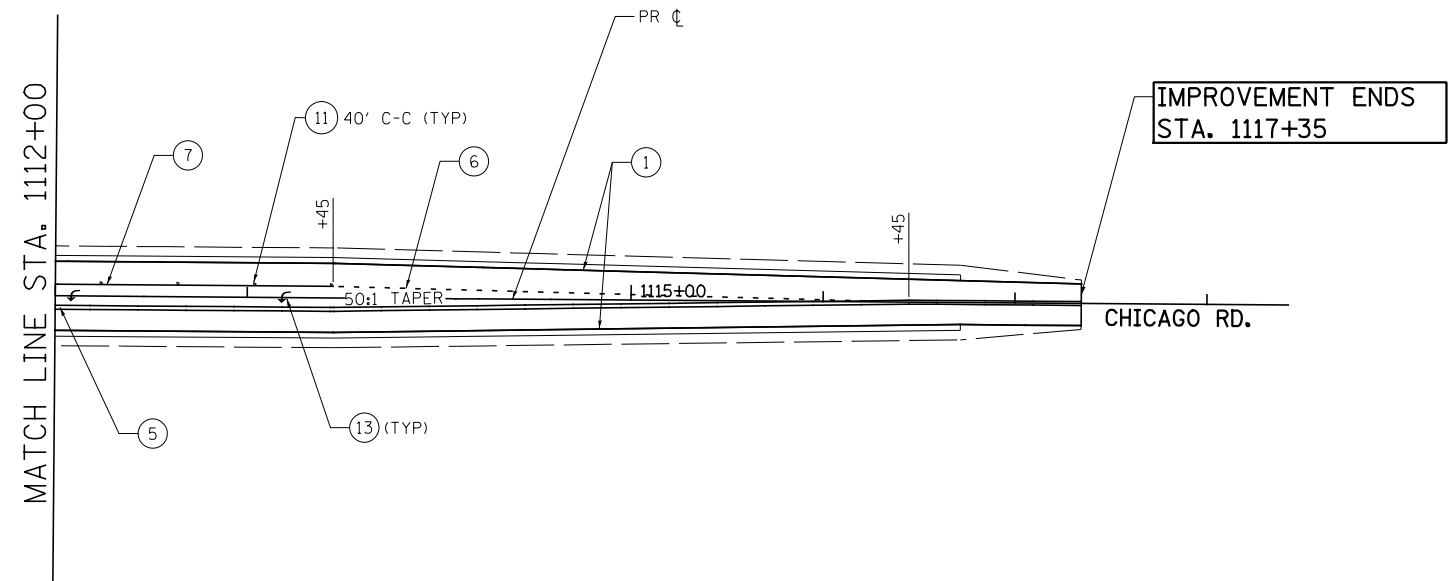
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V:\3195\66884 (North Section)\CADD Sheets\0366884-shr-pmk-16.dgn		DRAWN - SL	REVISED -		SCALE: 1"=50'	SHEET NO. 16 OF 20 SHEETS	STA. 998+66 TO STA. 1019+33	326	(109, 110R-1)	KENDALL	619	329
SHT_DOUBLE PLAN	PLOT SCALE = 100.0000' / in.	CHECKED - ST	REVISED -					CONTRACT NO. 66884				
	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -					ILLINOIS FED. AID PROJECT				

IMPROVEMENT BEGINS  
STA. 1102+50



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



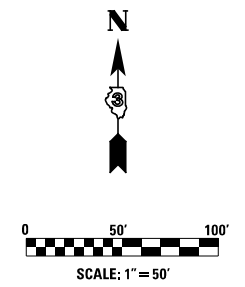
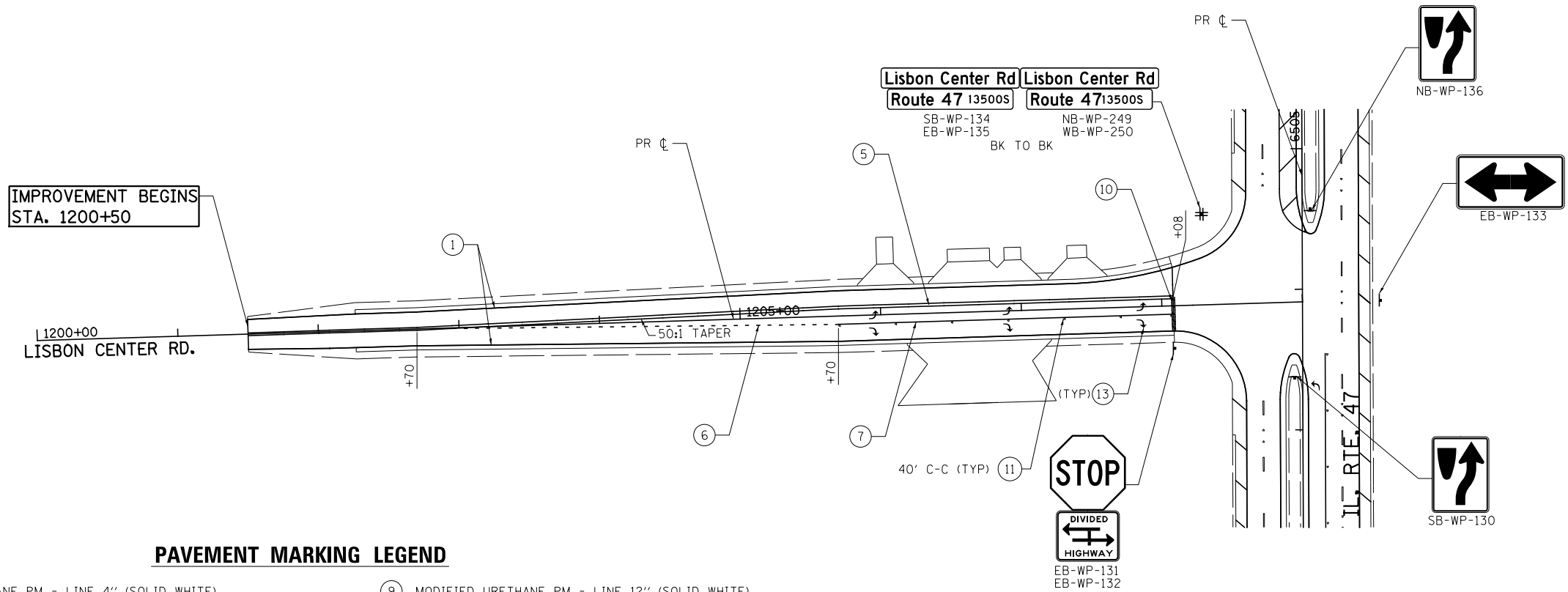
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SHT_DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CHICAGO RD.  
PAVEMENT MARKING AND SIGNING PLANS**

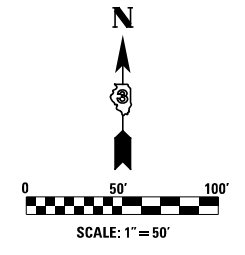
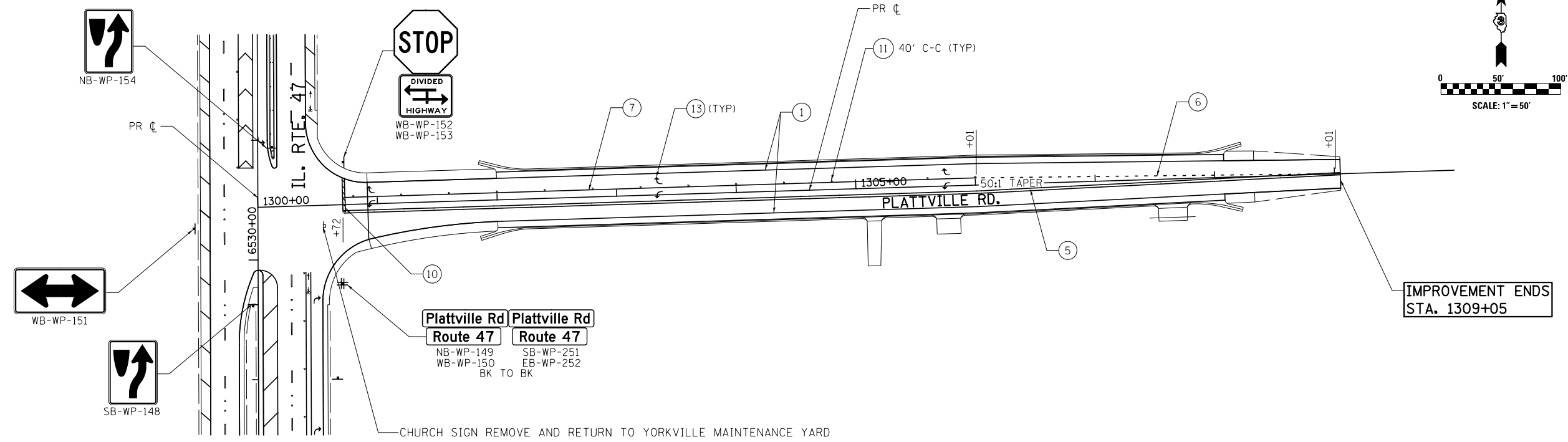
SCALE: 1"=50' SHEET NO. 17 OF 20 SHEETS STA. 1102+00 TO STA. 1118+42

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	330
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

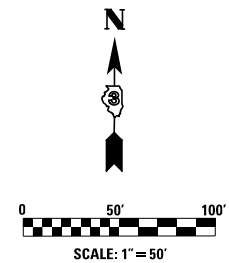
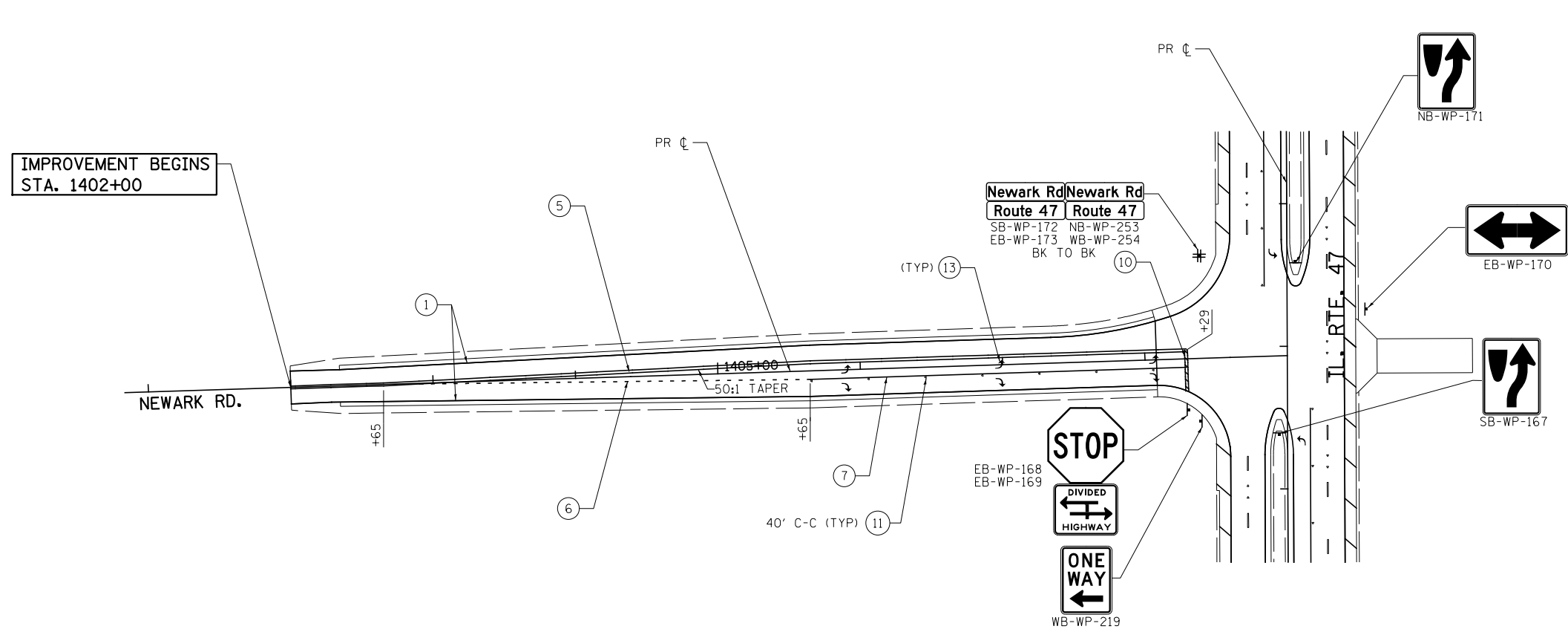
**LISBON CENTER RD. & PLATTVILLE RD.  
PAVEMENT MARKING AND SIGNING PLANS**

SCALE: 1"=50' SHEET NO. 18 OF 20 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	331
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



FILE NAME =	USER NAME = bdecreene	DESIGNED - SL	REVISED -
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SHT.DOUBLE PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

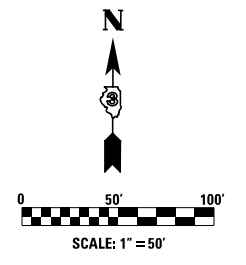
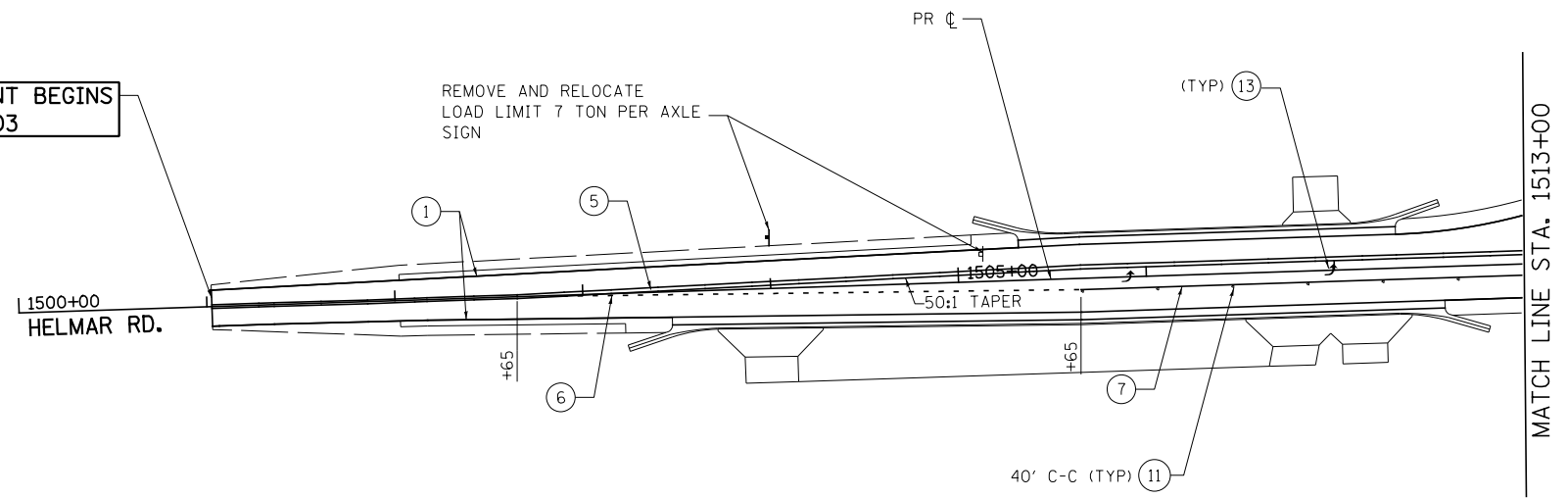
**NEWARK RD  
PAVEMENT MARKING AND SIGNING PLANS**

SCALE: 1"=50' SHEET NO. 19 OF 20 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	332
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

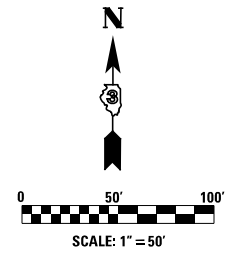
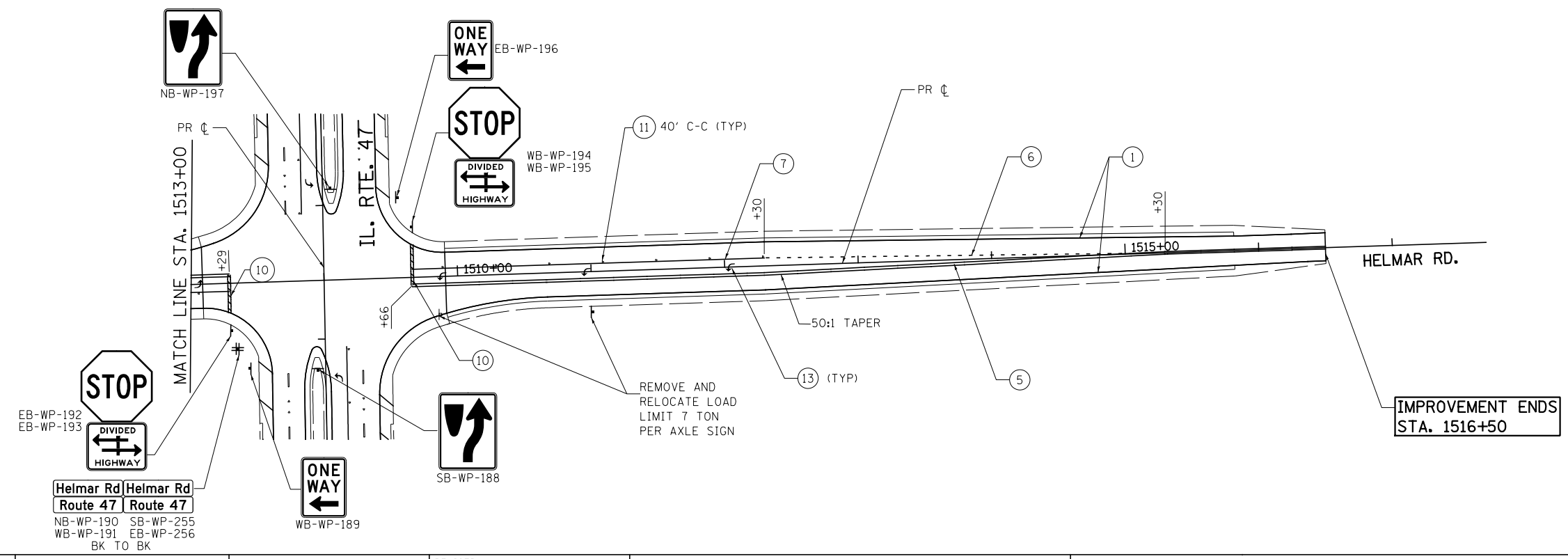


IMPROVEMENT BEGINS  
STA. 1501+03



**PAVEMENT MARKING LEGEND**

- |  |   |
|--|---|
| ① MODIFIED URETHANE PM - LINE 4" (SOLID WHITE)             | ⑨ MODIFIED URETHANE PM - LINE 12" (SOLID WHITE) |
| ② MODIFIED URETHANE PM - LINE 4" (SOLID YELLOW)            | ⑩ MODIFIED URETHANE PM - LINE 24" (SOLID WHITE) |
| ③ MODIFIED URETHANE PM LINE (WHITE 2' DASH-6' SKIP)        | ⑪ RAISED REFLECTIVE PM (ONE-WAY CRYSTAL)        |
| ④ PREFORMED PLASTIC PM TB INL L6 (WHITE 10' DASH-30' SKIP) | ⑫ PRISMATIC CURB REFLECTOR                      |
| ⑤ MODIFIED URETHANE PM - LINE 4" (DOUBLE YELLOW)           | ⑬ MODIFIED URETHANE PM - LETTERS & SYMBOLS      |
| ⑥ MODIFIED URETHANE PM - LINE 8" (WHITE 2' DASH-6' SKIP)   | ⑭ GROOVING FOR RECESSED PAVEMENT MARKING 5"     |
| ⑦ MODIFIED URETHANE PM - LINE 8" (SOLID WHITE)             | ⑮ GROOVING FOR RECESSED PAVEMENT MARKING 7"     |
| ⑧ MODIFIED URETHANE PM - LINE 12" (SOLID YELLOW)           | ⑯ GROOVING FOR RECESSED PAVEMENT MARKING 9"     |
|  | ⑰ RAISED REFLECTIVE PM (TWO-WAY AMBER)          |



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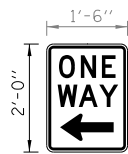
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HELMAR RD.  
PAVEMENT MARKING AND SIGNING PLANS**

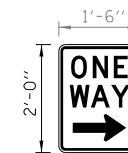
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	333
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

NAME		STATION		NAME		STATION		NAME		STATION		NAME		STATION		NAME		STATION																	
WB-WP-228		707+64		SB-WP-34		6345+13		NB-WP-229		707+64		NB-WP-115		1110+43		WB-WP-08		6309+80		WB-WP-254		6557+64		EB-WP-135		6504+54		WB-WP-116		1110+43		EB-WP-69		6424+09	
EB-WP-293		707+64		NB-WP-243		6345+13		SB-WP-294		707+64		SB-WP-247		1110+43		EB-WP-242		6309+80		WB-WP-191		6582+94		WB-WP-250		6504+54		EB-WP-248		1110+43		WB-WP-246		6424+09	
																EB-WP-35		6345+13		EB-WP-256		6582+94													
																WB-WP-244		6345+13																	
																WB-WP-150		6529+80																	
																EB-WP-252		6529+80																	
																EB-WP-173		6557+64																	

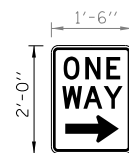


R6-2L

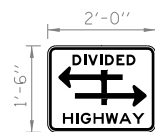


R6-2R

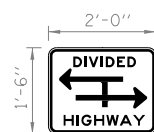
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WB-WP-10	6310+22	EB-WP-61	6401+95	WB-WP-219	6556+48	WB-WP-213	6623+72	EB-WP-265	6270+00	EB-WP-22	6326+00	WB-WP-64	6410+35	WB-WP-125	6494+66	EB-WP-159	6535+67
EB-WP-15	6311+00	WB-WP-62	6402+51	EB-WP-178	6568+47	EB-WP-214	6624+36	WB-WP-01	6271+48	WB-WP-29	6343+00	EB-WP-65	6418+65	WB-WP-128	6502+01	WB-WP-162	6547+71
WB-WP-32	6345+02	WB-WP-66	6423+98	WB-WP-189	6582+79			EB-WP-02	6284+28	WB-WP-46	6354+00	EB-WP-74	6432+24	WB-WP-137	6506+00	WB-WP-180	6570+11
WB-WP-48	6356+11	EB-WP-77	6438+12	EB-WP-196	6584+05			WB-WP-03	6284+28	WB-WP-51	6371+72	WB-WP-78	6443+24	EB-WP-138	6507+51	WB-WP-181	6571+56
WB-WP-53	6384+54	WB-WP-129	6438+49	EB-WP-204	6608+99			WB-WP-17	6312+00	EB-WP-52	6382+51	EB-WP-85	6449+03	EB-WP-143	6522+70	EB-WP-182	6571+56
EB-WP-55	6384+89	WB-WP-111	6467+03	WB-WP-211	6620+67			WB-WP-18	6314+00	EB-WP-57	6387+35	WB-WP-123	6477+31	WB-WP-144	6524+00	EB-WP-185	6577+28
WB-WP-58	6385+26	EB-WP-122	6468+98	WB-WP-212	6622+37			WB-WP-21	6326+00	EB-WP-59	6398+04	EB-WP-124	6486+01	EB-WP-158	6533+78	WB-WP-198	6585+00



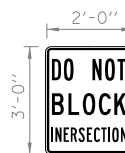
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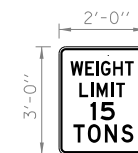
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R6-3a



R10-7



R12-1



R12-1103

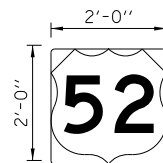


M1-1100

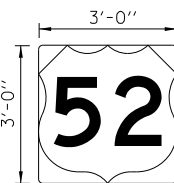


M1-1100

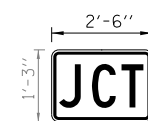
NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION
WB-WP-84	6611+00	EB-WP-12	608+40	EB-WP-37	709+36	EB-WP-225	706+81	WB-WP-223	706+75	WB-WP-224	706+75	SB-WP-31	6342+47	SB-WP-280	6457+19	NB-WP-231	1001+01
		WB-WP-14	609+58	EB-WP-71	907+33							NB-WP-42	6349+62	SB-WP-147	6528+42	WB-WP-240	1016+52
		EB-WP-114	1109+00	EB-WP-132	1208+08							NB-WP-271	6444+69	NB-WP-156	6532+59		
		WB-WP-120	1111+00	WB-WP-153	1300+72							SB-WP-82	6448+48	SB-WP-187	6581+96		
		EB-WP-193	1508+30	EB-WP-169	1408+30							NB-PM-88	6450+01	NB-WP-200	6585+72		
		WB-WP-195	1509+66									SB-PM-100	6451+87	EB-PM-94	1008+31		
												NB-WP-105	6454+98	WB-PM-98	1009+69		



M1-4



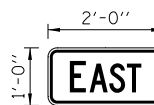
M1-4



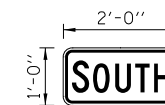
M2-1



M3-1



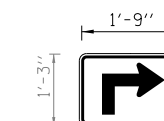
M3-2



M3-3



M3-4



M5-1R

NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION	NAME	STATION
NB-WP-274	6444+69	EB-PM-92	1008+31	NB-WP-76	6438+01	NB-WP-75	6438+01	NB-WP-41	6349+62	NB-WP-273	6444+69	SB-WP-30	6342+97	NB-WP-267	6444+68	NB-WP-275	6444+69
NB-WP-268	6444+68	WB-PM-96	1009+69	SB-WP-110	6463+99	SB-WP-109	6463+98	NB-WP-270	6444+69	SB-WP-286	6457+25	SB-WP-81	6448+48	SB-WP-281	6457+19	SB-WP-279	6457+19
NB-PM-90	6450+01	EB-WP-236	1010+82			EB-WP-230	1001+01	NB-WP-104	6454+98	EB-WP-235	1010+82	SB-WP-287	6457+19	WB-WP-233	1005+62		
SB-PM-102	6451+87					WB-WP-239	1016+52	NB-WP-155	6532+59			SB-WP-146	6528+42				
SB-WP-285	6457+19							NB-WP-199	6585+72			SB-WP-186	6581+96				
SB-WP-284	6457+25																
WB-WP-234	1005+62																

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		CHECKED - ST	REVISED -
SHT.PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL. RTE. 47  
SIGNING DETAILS

SCALE: N/A SHEET NO. 2 OF 17 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	335
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

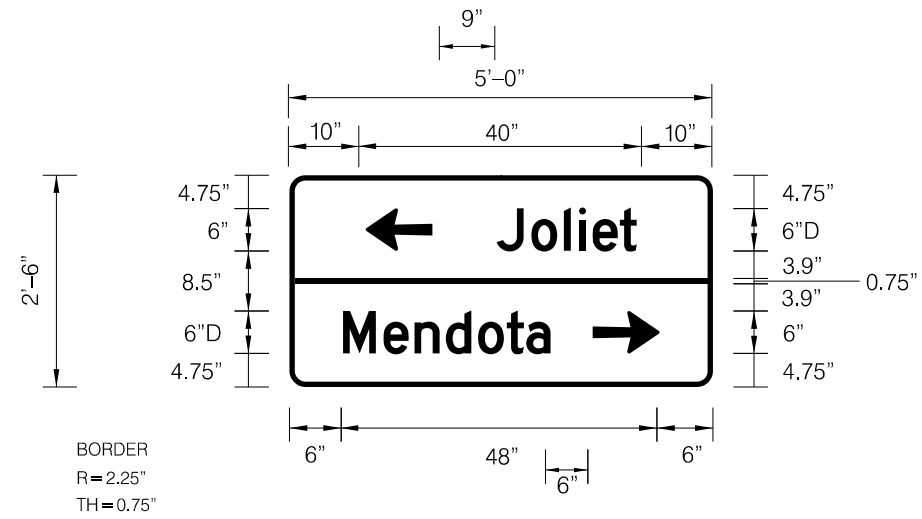








SIGN DETAIL  
1:50



BORDER  
R=2.25"  
TH=0.75"

Panel Style: guide\_sign\_distance.ssi  
M.U.T.C.D.: 2009 Edition

Letter locations are panel edge to lower left corner

SIGN NUMBER	SB-WP(2)-106
WIDTH x HGHT.	5'-0" x 2'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	2.25"
MOUNTING	Ground, STA. 6455 + 23
BACKGROUND	TYPE: Reflective COLOR: Green
LEGEND/BORDER	TYPE: Reflective COLOR: White / White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	10.8	14.4	6	9
AR_Type D	270	43.0	4.8	6	9

LETTER POSITIONS (X)

LENGTH SERIES / SIZE

Letter	X	Y	Length	Series / Size
J	28.6	14.4	19.9	D 2000
o	33.5	14.4	6/4.4	
l	38.1	14.4		
i	40.3	14.4		
e	42.2	14.4		
t	46.1	14.4		
M	6.8	4.8	29.4	D 2000
e	12.5	4.8		
n	16.9	4.8		
d	21.4	4.8		
o	25.9	4.8		
t	30.0	4.8		
a	32.8	4.8		

FILE NAME =	USER NAME = bdecreene	DESIGNED - SL	REVISED -
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SHT.PLAN	PLOT DATE = 7/14/2014	DATE - 7/01/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL RTE. 47  
SIGNING DETAILS

SCALE: 1"=50' SHEET NO. 7 OF 17 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	340
CONTRACT NO. 66884				
ILLINOIS FED. AID PROJECT				

























TRAFFIC SIGNAL GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT THE DISTRICT 3 TRAFFIC SIGNAL SECTION A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.
2. THE TRAFFIC SIGNAL SECTION AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNITS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.
4. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
5. ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE.
6. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
7. A 1/4" DIAMETER CONTINUOUS RODENT RESISTANT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER. THIS COST SHALL BE INCLUDED IN THE COST OF CONDUIT PAY ITEM.
8. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. THIS COST SHALL BE INCLUDED IN THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
9. ALL CONDUIT IN TRENCH SHALL BE PVC. ALL CONDUIT PUSHED MAY BE PVC OR GALVANIZED STEEL. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
10. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT A GREATER THAN 2' MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
11. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
12. ALL THREADS OF BOLTS USED IN THE ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
13. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED, CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
14. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
15. THE CONTROLLER CABINET SHALL BE PLACED SO THAT A TECHNICIAN MAY SEE THE INTERSECTION OVER THE TOP OF THE CABINET WHILE WATCHING THE COMPONENTS IN THE CABINET.
16. THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CHORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
17. THE CONTRACTOR SHALL PROVIDE A SELF-ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
19. THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN THE ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.
20. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL BE EQUIPPED WITH ALPHA GUARD MONITORS.
21. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 OF THE STANDARD SPECIFICATIONS.
22. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION.
23. THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
24. THE MAST ARM FOUNDATIONS SHALL BE LOCATED A MINIMUM 6' FROM THE FACE OF THE CURB OR A MINIMUM OF 18' FROM THE EDGE OF PAVEMENT TO THE FACE OF THE FOUNDATION WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IN CURB AREA, GET MORE THAN 6' IF POSSIBLE IF THE SIGNAL HEAD STILL LINES UP IN THE CENTER OF LANE.
25. ONE WEEK PRIOR TO SIGNAL TURN-ON FOR ALL DIRECTIONS, THE CHANGEABLE MESSAGE SIGNS SHOULD READ "NEW SIGNAL AHEAD / TURN ON DATE" FOR THREE WEEKS. AFTER THE SIGNALS ARE TURNED ON THE MESSAGE SIGN SHOULD READ "NEW SIGNAL AHEAD / BE PREPARED TO STOP".
26. ALL MAST ARM MOUNTED SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE RED INDICATIONS ARE LEVEL WITH EACH OTHER.
27. ALL SIGNAL HEAD BACKPLATES SHALL BE POLYCARBONATE, LOUVERED FORMED BACKPLATES.
28. ALL SIGNAL HEADS SHALL HAVE POLYCARBONATE BLACK HOUSING AND BLACK BACKPLATES.

FILE NAME =	USER NAME = bdecreene	DESIGNED - RC	 <b>LIN ENGINEERING, LTD.</b> Consulting Engineers Westmont, Illinois	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>			<b>IL. RTE. 47 AT U.S. RTE. 52</b> <b>TRAFFIC SIGNAL GENERAL NOTES</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\3195\66884 (North Section)\CADD Sheets\ND366884-sh-t-ts-00.dgn		DRAWN - RC					326	(109, 110R-1	KENDALL	619	351			
\$MODELNAME\$	PLOT SCALE = 40.0000' / in.	CHECKED - ST		SCALE: N/A			SHEET NO. 1 OF 13 SHEETS	STA. N/A	TO STA. N/A	CONTRACT NO. 66884				
	PLOT DATE = 7/14/2014	DATE - 7/01/2014	ILLINOIS FED. AID PROJECT											

**TRAFFIC SIGNAL LEGEND**

- CONTROLLER
- DOUBLE HANDHOLE
- HANDHOLE
- SERVICE INSTALLATION
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD
- SIGNAL POST
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- ATS ATTACHED TO STRUCTURE

**SCHEDULE OF POLE/MAST ARM ASSEMBLIES**

LOCATION	LENGTH	
A	68.0'	S. COMB. MAA. & POLE
B	16.0'	SIGNAL POST
C	64.0'	S. COMB. MAA. & POLE
D	16.0'	SIGNAL POST
E	68.0'	S. COMB. MAA. & POLE
F	16.0'	SIGNAL POST
G	64.0'	S. COMB. MAA. & POLE
H	16.0'	SIGNAL POST

**SCHEDULE OF SIGNAL HEAD QUANTITIES**

LOCATION	ITEM	UNIT	QUANTITY
2, 3, 8, 12, 13, 18	SH, 1F, 3S, MAM	EACH	6
1, 4, 7, 11, 14, 17	SH, 1F, 5S, MAM	EACH	6
5, 9, 10, 15, 19, 20	SH, 1F, 5S, BM	EACH	6
6, 16	SH, 1F, 3S, BM	EACH	2

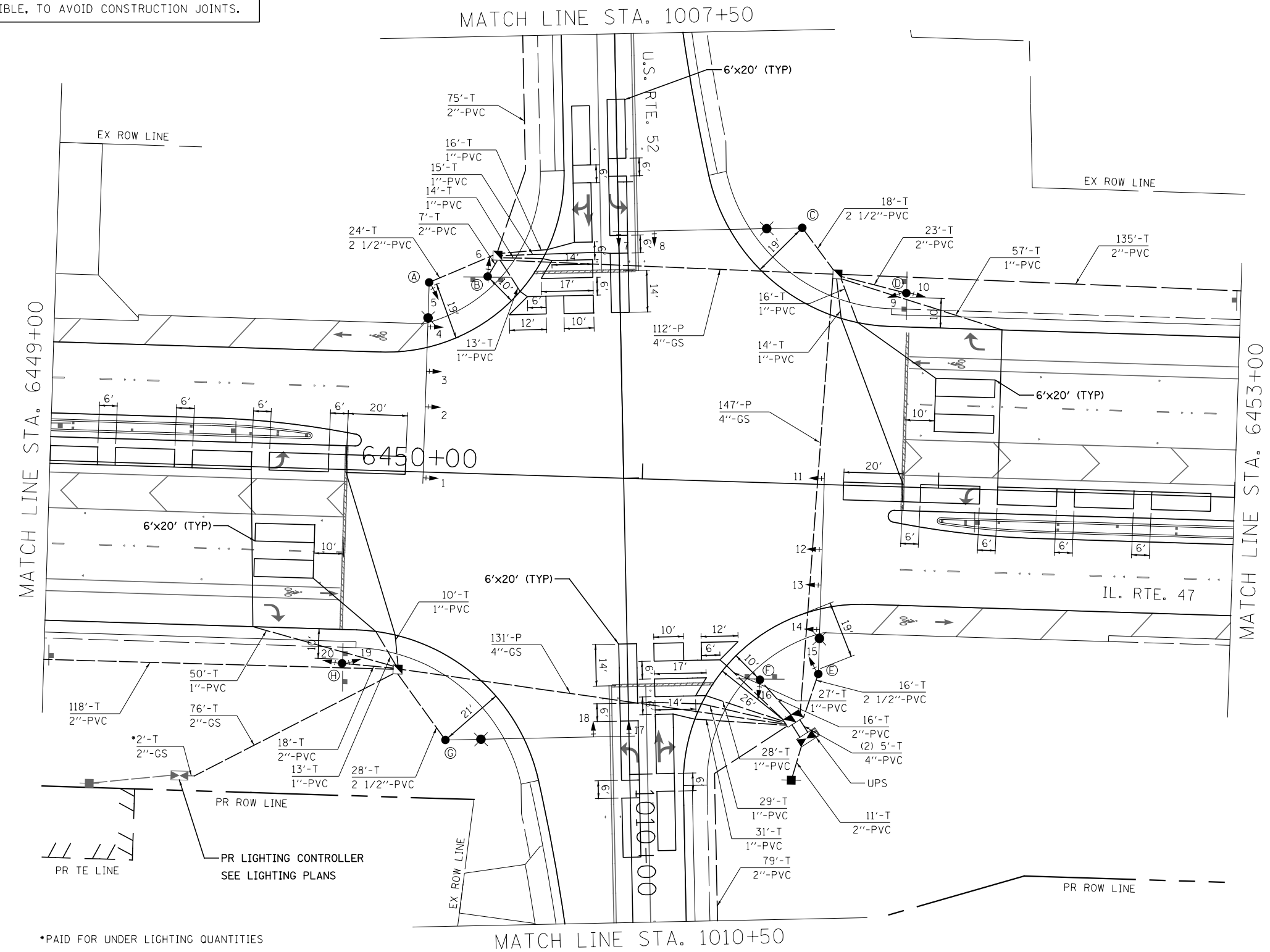
MAST ARM AND POST LOCATIONS		
LETTER	STATION	OFFSET
A	6450+26	64.0' LT
B	6450+46	66.6' LT
C	6451+51	86.4' LT
D	6451+87	65.4' LT
E	6451+61	64.0' RT
F	6451+42	66.6' RT
G	6450+36	90.2' RT
H	6450+01	65.4' RT

NOTE: LOCATIONS OF TRAFFIC SIGNAL POSTS AND MAST ARM ASSEMBLIES MAY BE CHANGED IN THE FIELD AS NECESSARY TO AVOID UTILITIES. THE NEW LOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND APPROVED BY THE DISTRICT TRAFFIC SIGNAL SECTION TO ENSURE THE NEW LOCATIONS MEET OPERATIONAL OFFSET/CLEAR ZONE REQUIREMENTS AND MAINTAIN PROPER POSITION OF SIGNAL HEADS IN RELATION TO THE TRAVELED LANES.

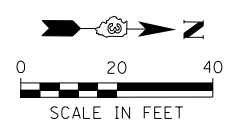
NOTE: REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

ALL LIGHTING CABLES WILL BE CONNECTED TO THE PROPOSED LIGHTING CONTROLLER. SEE LIGHTING PLANS.












NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.



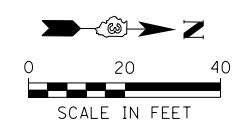
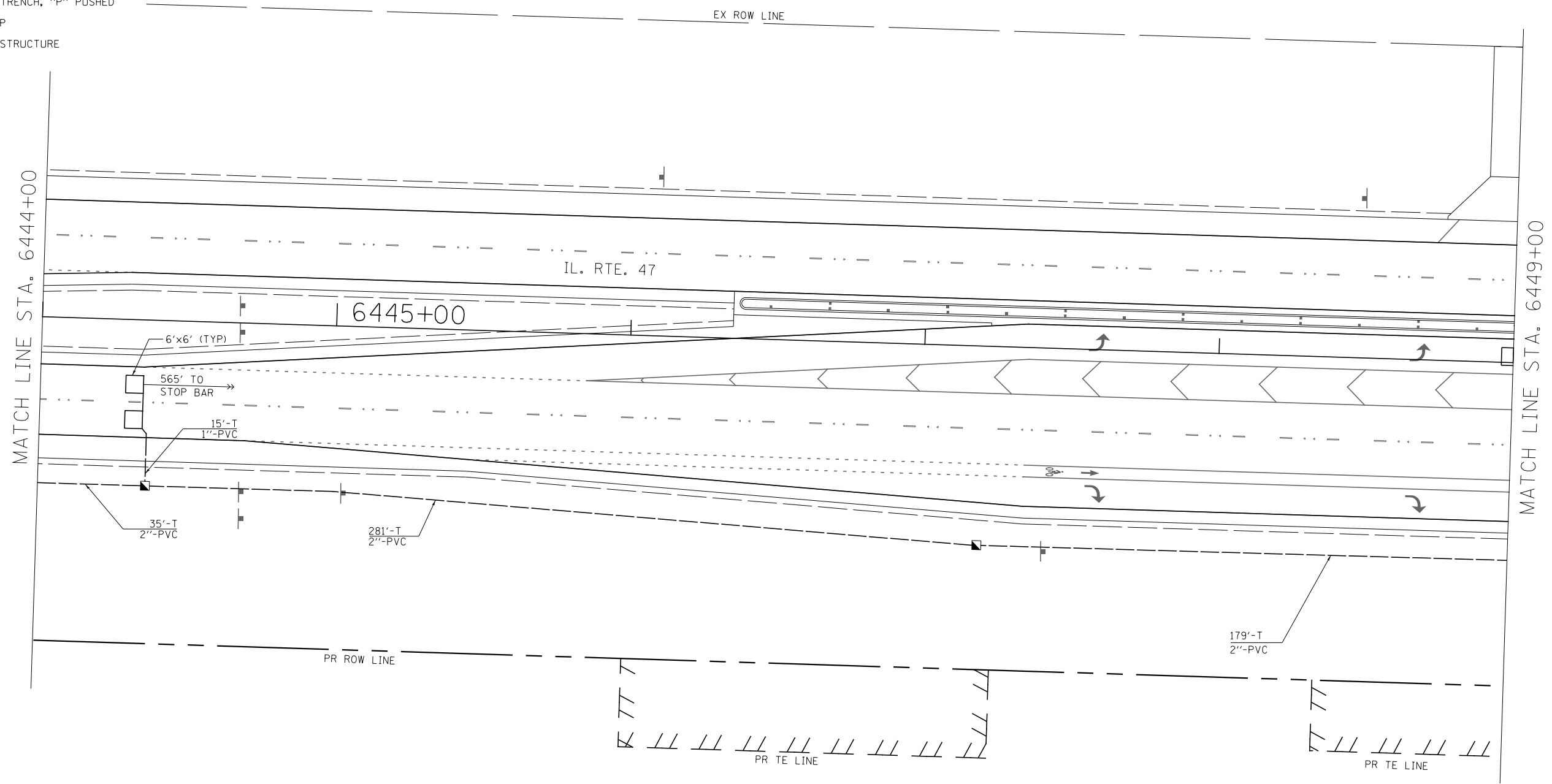
\*PAID FOR UNDER LIGHTING QUANTITIES




**TRAFFIC SIGNAL LEGEND**












-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
-  SIGNAL HEAD
-  SIGNAL POST
-  COMBINATION MAST ARM ASSEMBLY AND POLE,  
STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE

NOTE:  
REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

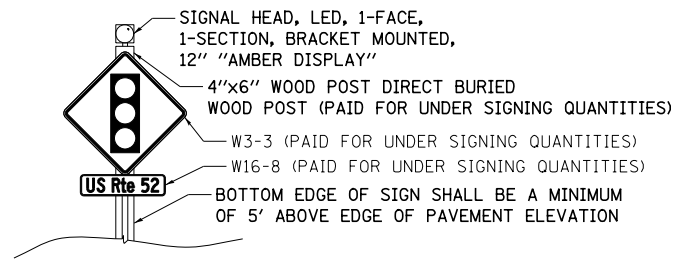


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*MODELNAME*	PLOT SCALE = 40.0000' / in.	CHECKED - ST			SCALE: 1"=20'    SHEET NO. 3 OF 13 SHEETS    STA. 6444+00 TO STA. 6449+00			CONTRACT NO. 66884			ILLINOIS FED. AID PROJECT	
	PLOT DATE = 7/14/2014	DATE = 7/01/2014										

**TRAFFIC SIGNAL LEGEND**

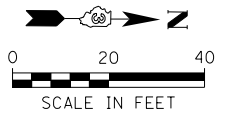
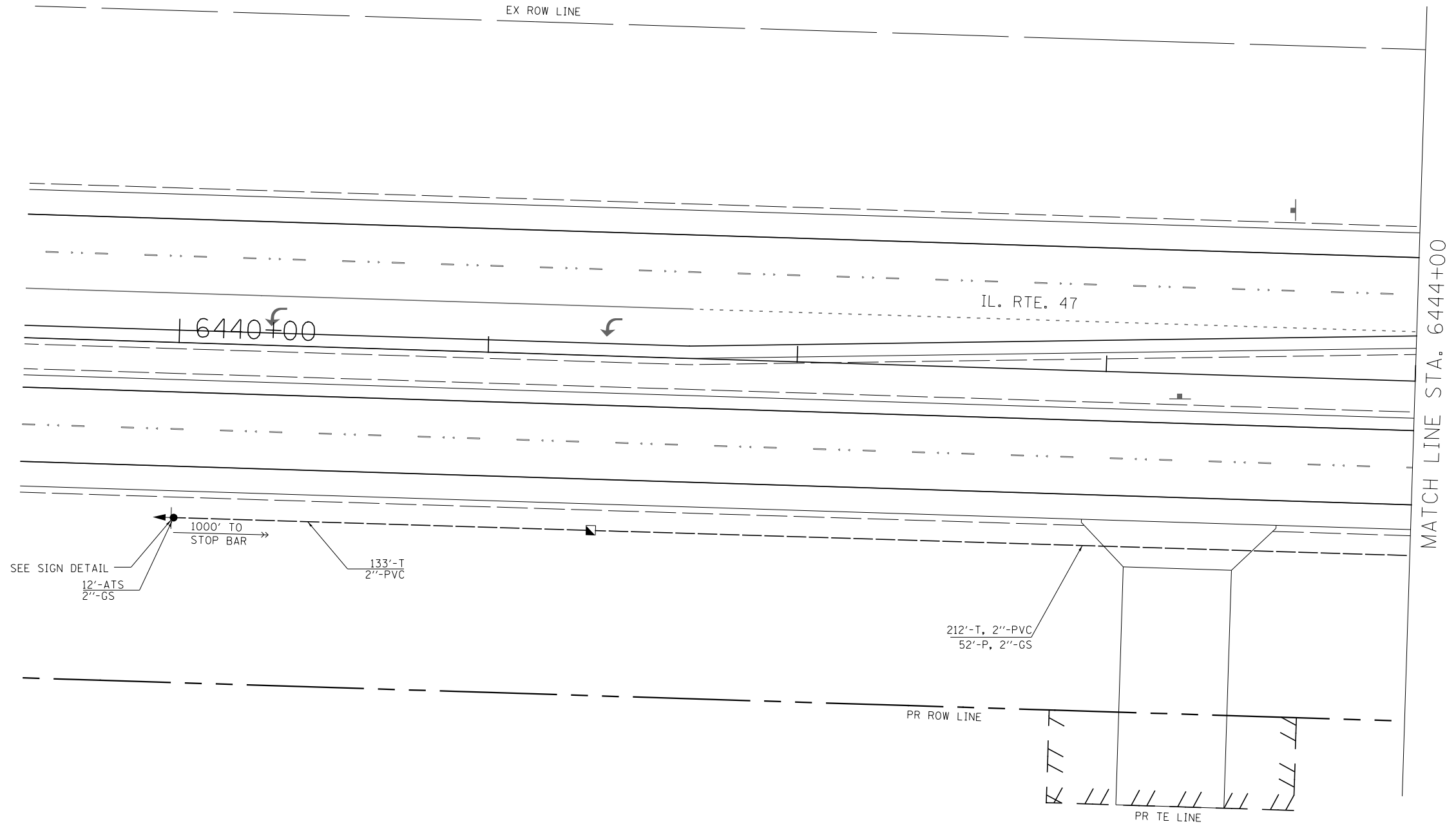
-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
-  SIGNAL HEAD
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-  COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE


**SIGN DETAIL**














NOTE:  
 REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

FOR CONDUIT GOING TO THE SIGNAL HEAD MOUNTED ON THE SIGN POST, 12 FEET OF CONDUIT ATTACHED TO STRUCTURE HAS BEEN INCLUDED FOR THE PORTION ATTACHED TO THE SIGN POST. THE CONDUIT ADAPTER FROM THE GROUND CONDUIT TO THE ATTACHED CONDUIT IS INCIDENTAL TO THE CONDUIT PAY ITEM.

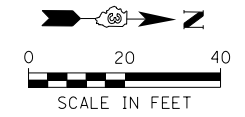
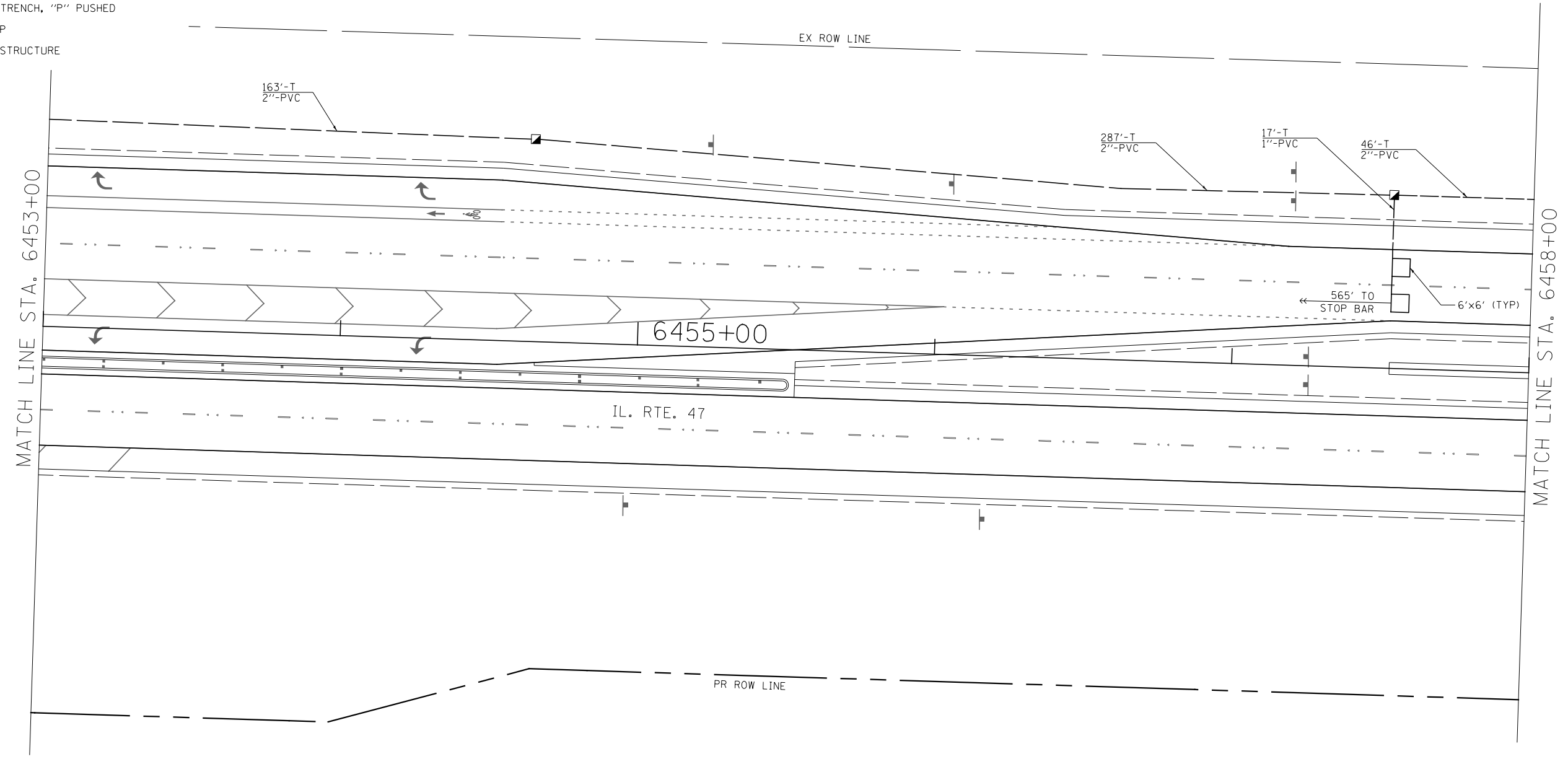


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*MODELNAME*	PLOT SCALE = 40.0000' / in.	CHECKED - ST				SCALE: 1"=20'	SHEET NO. 4 OF 13 SHEETS	STA. 6439+50 TO STA. 6444+00	CONTRACT NO. 66884		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 7/14/2014	DATE - 7/01/2014										

**TRAFFIC SIGNAL LEGEND**












-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
-  SIGNAL HEAD
-  SIGNAL POST
-  COMBINATION MAST ARM ASSEMBLY AND POLE,  
STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE

NOTE:  
REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

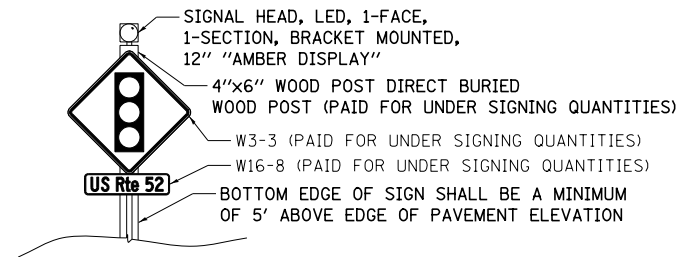


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	PLOT DATE = 7/14/2014	DATE - 7/01/2014			SCALE: 1"=20'	SHEET NO. 5 OF 13 SHEETS	STA. 6453+00 TO STA. 6458+00					

**TRAFFIC SIGNAL LEGEND**

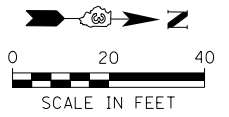
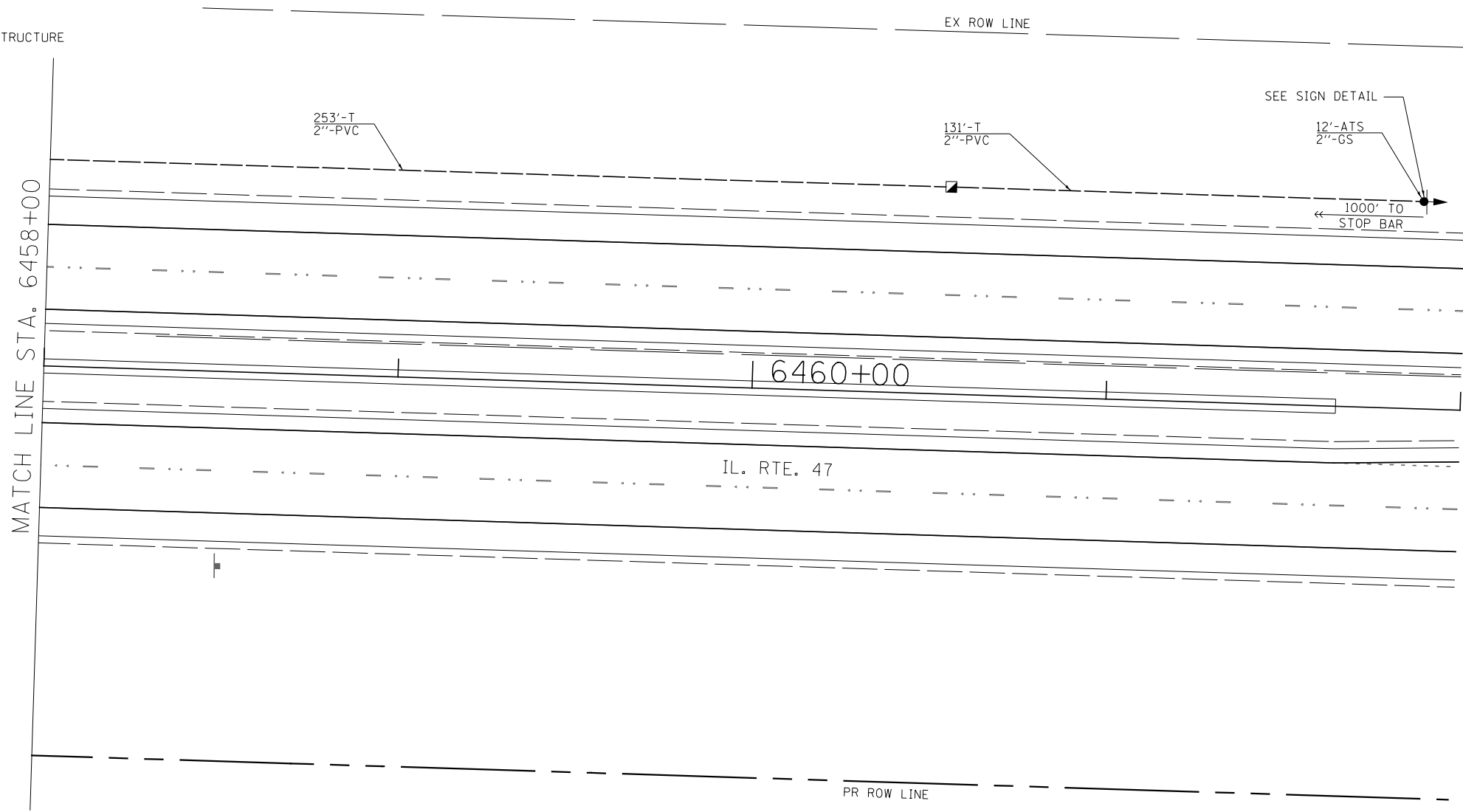
-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
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STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE


SIGN DETAIL



NOTE:  
REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE  
CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED  
BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL  
GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE  
U-TURNS.

FOR CONDUIT GOING TO THE SIGNAL HEAD MOUNTED ON THE SIGN  
POST, 12 FEET OF CONDUIT ATTACHED TO STRUCTURE HAS BEEN  
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CONDUIT ADAPTER FROM THE GROUND CONDUIT TO THE ATTACHED  
CONDUIT IS INCIDENTAL TO THE CONDUIT PAY ITEM.



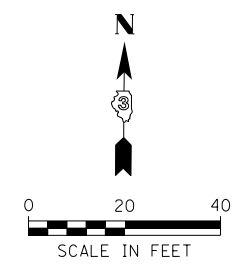
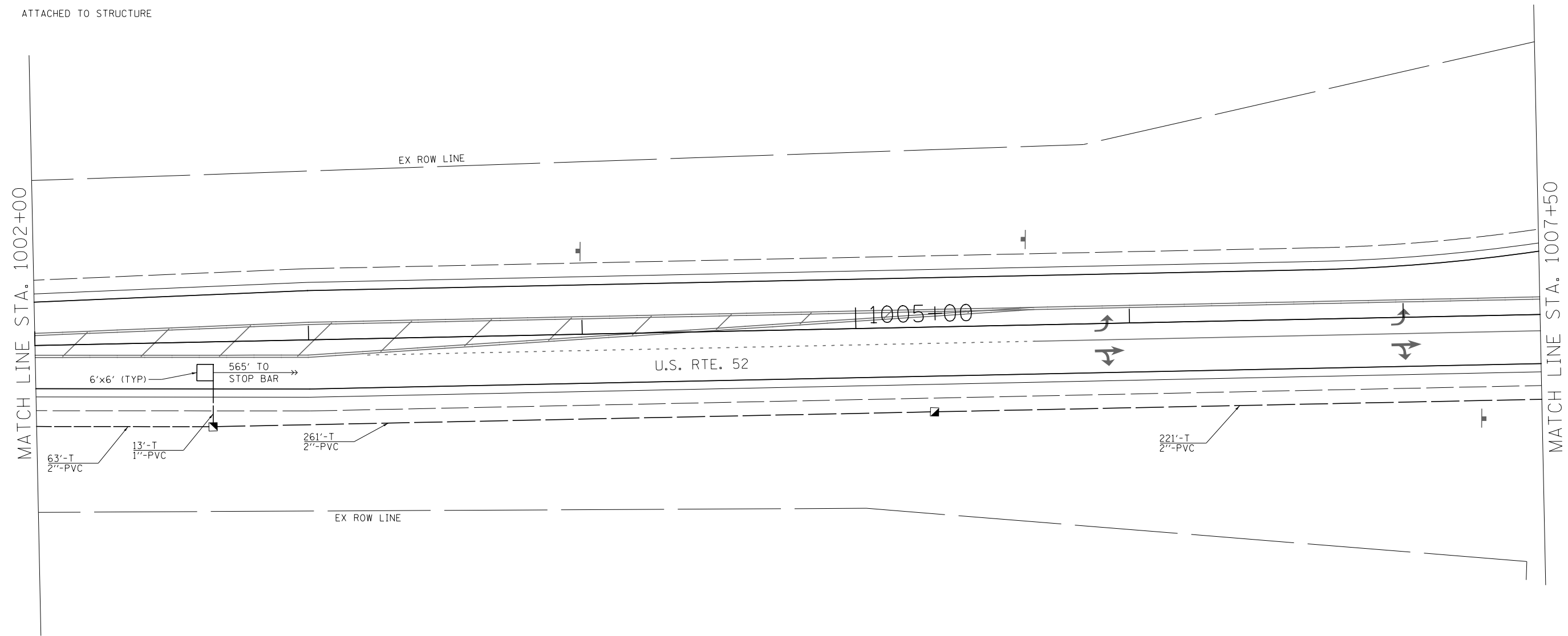
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	PLOT SCALE = 40.0000' / in.	CHECKED - ST			SCALE: 1"=20'	SHEET NO. 6 OF 13 SHEETS	STA. 6458+00 TO STA. 6462+00	326	(109, 110R-1)	KENDALL	619	356
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014					CONTRACT NO. 66884					
											ILLINOIS FED. AID PROJECT	



**TRAFFIC SIGNAL LEGEND**












- ☒ CONTROLLER
- ☑ DOUBLE HANDHOLE
- ◻ HANDHOLE
- SERVICE INSTALLATION
- +▶ SIGNAL HEAD WITH BACKPLATE
- ▶ SIGNAL HEAD
- SIGNAL POST
- x COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- ◻ DETECTOR LOOP
- ATS ATTACHED TO STRUCTURE

NOTE:  
 REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

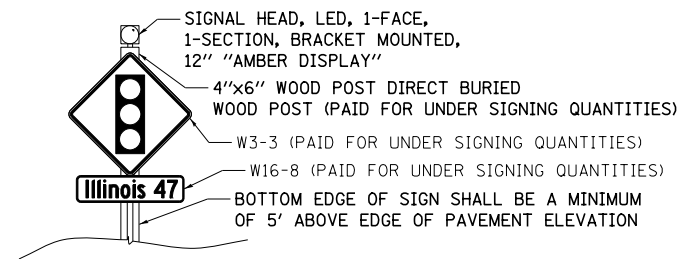


FILE NAME = V:\3195\66884 (North Section)\CAOD Sheets\ND366884-sh-t-ts-06.dgn	USER NAME = bdecreene	DESIGNED - RC	<b>LIN ENGINEERING, LTD.</b> Consulting Engineers Westmont, Illinois	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>U.S. RTE. 52</b> <b>PROPOSED TRAFFIC SIGNAL INSTALLATION</b>			F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 357	
Plot Scale = 40.0000' / in.	Plot Date = 7/14/2014	Checked - ST			DATE - 7/01/2014	SCALE: 1"=20'	SHEET NO. 7 OF 13 SHEETS	STA. 1002+00 TO STA. 1007+50	CONTRACT NO. 66B84		ILLINOIS FED. AID PROJECT		
#MODELNAME#													

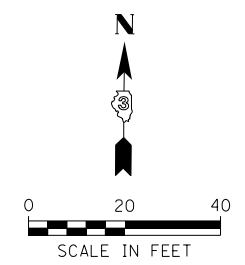
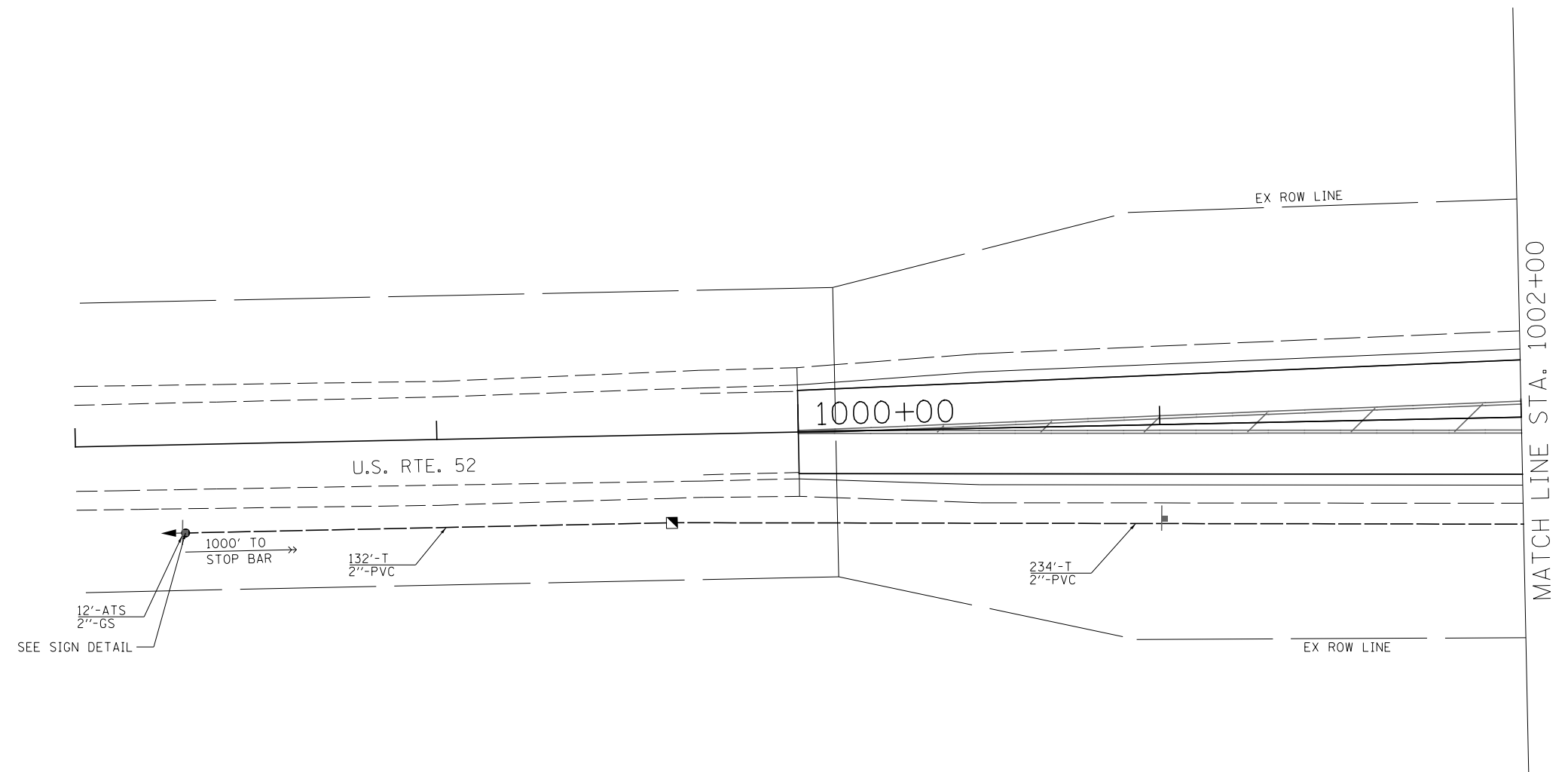
**TRAFFIC SIGNAL LEGEND**


-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
-  SIGNAL HEAD
-  SIGNAL POST
-  COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE

SIGN DETAIL














NOTE:  
 REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.  
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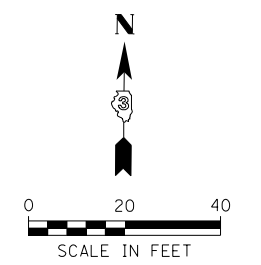
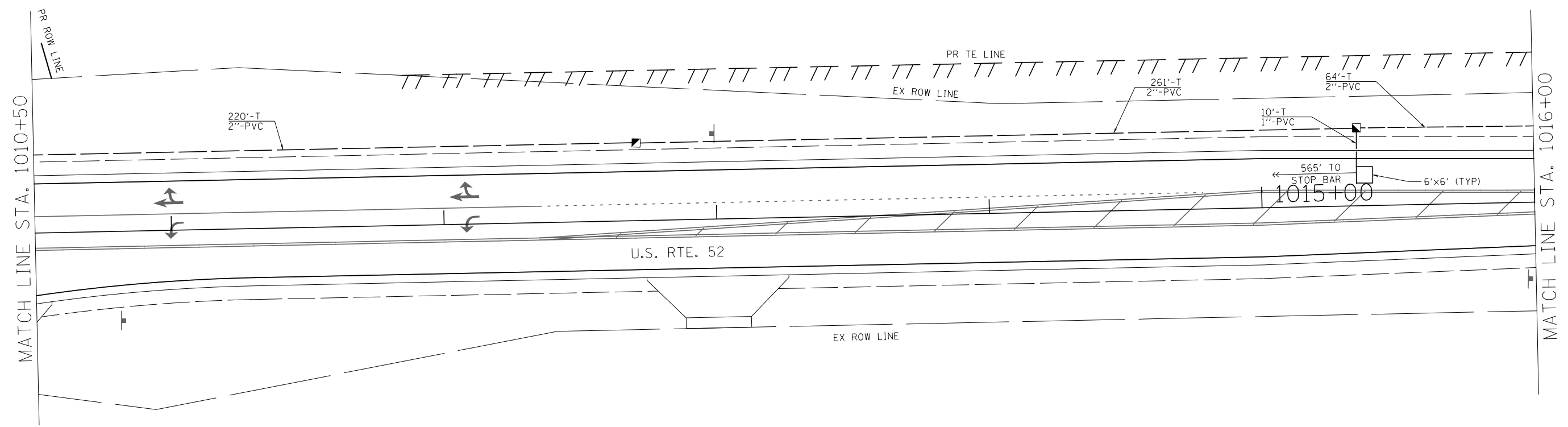
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V:\3195\66884 (North Section)\CADD Sheets\ND366884-shd-ts-07.dgn	DRAWN - RC	CHECKED - ST			326	(109, 110R-1)	KENDALL	619	358			
PLOT SCALE = 40.0000' / in.	DATE - 7/01/2014				CONTRACT NO. 66884			ILLINOIS FED. AID PROJECT				


SCALE: 1"=20'      SHEET NO. 8 OF 13 SHEETS      STA. 998+00 TO STA. 1002+00

**TRAFFIC SIGNAL LEGEND**

-  CONTROLLER
-  DOUBLE HANDHOLE
-  HANDHOLE
-  SERVICE INSTALLATION
-  SIGNAL HEAD WITH BACKPLATE
-  SIGNAL HEAD
-  SIGNAL POST
-  COMBINATION MAST ARM ASSEMBLY AND POLE,  
STEEL WITH LUMINAIRE, 400 WATT
-  CONDUIT: "T" TRENCH, "P" PUSHED
-  DETECTOR LOOP
-  ATS ATTACHED TO STRUCTURE

NOTE:  
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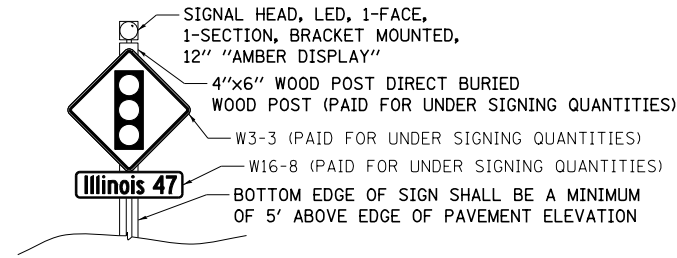


FILE NAME =	USER NAME = bdecreene	DESIGNED - RC	 <b>LIN ENGINEERING, LTD.</b> Consulting Engineers Westmont, Illinois	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>U.S. RTE. 52</b> <b>PROPOSED TRAFFIC SIGNAL INSTALLATION</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\3195\66884 (North Section)\CADD Sheets\ND366884-sh1-ts-08.dgn	PLOT SCALE = 40.0000' / in.	CHECKED - ST			326	(109, 110R-1)	KENDALL	619	359			
*MODELNAME*	PLOT DATE = 7/14/2014	DATE - 7/01/2014			CONTRACT NO. 66884			ILLINOIS FED. AID PROJECT				
				SCALE: 1"=20'	SHEET NO. 9 OF 13 SHEETS	STA. 1010+50 TO STA. 1016+00						

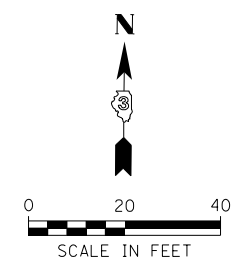
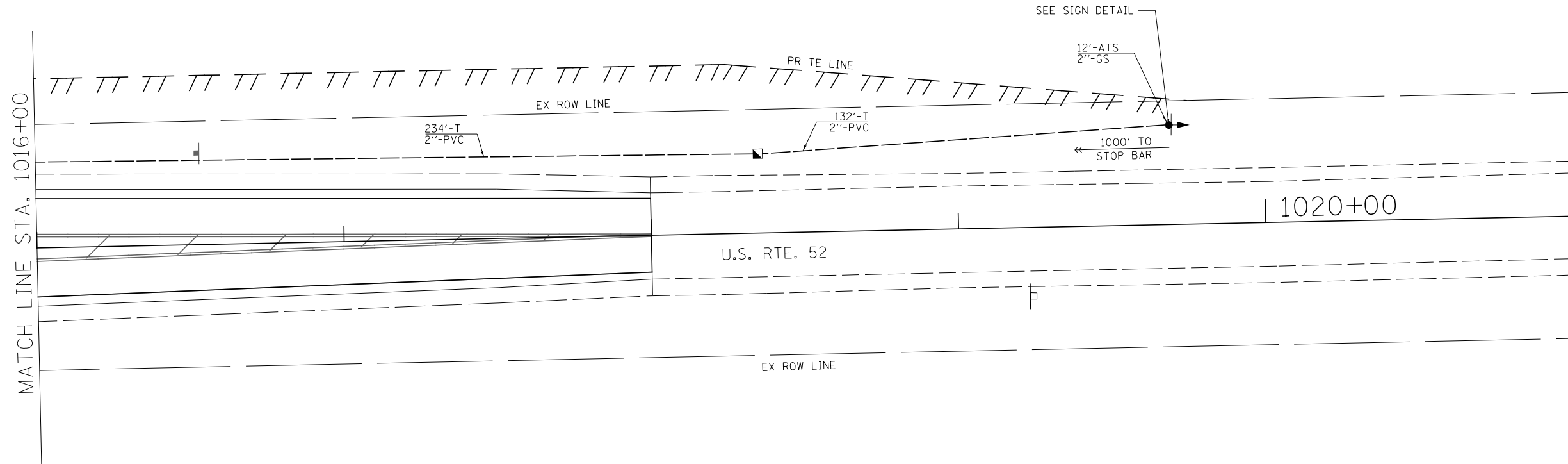
**TRAFFIC SIGNAL LEGEND**

- ☒ CONTROLLER
- ☒ DOUBLE HANDHOLE
- ☒ HANDHOLE
- SERVICE INSTALLATION
- +▶ SIGNAL HEAD WITH BACKPLATE
- ▶ SIGNAL HEAD
- SIGNAL POST
- x COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE, 400 WATT
- CONDUIT: "T" TRENCH, "P" PUSHED
- DETECTOR LOOP
- ATS ATTACHED TO STRUCTURE

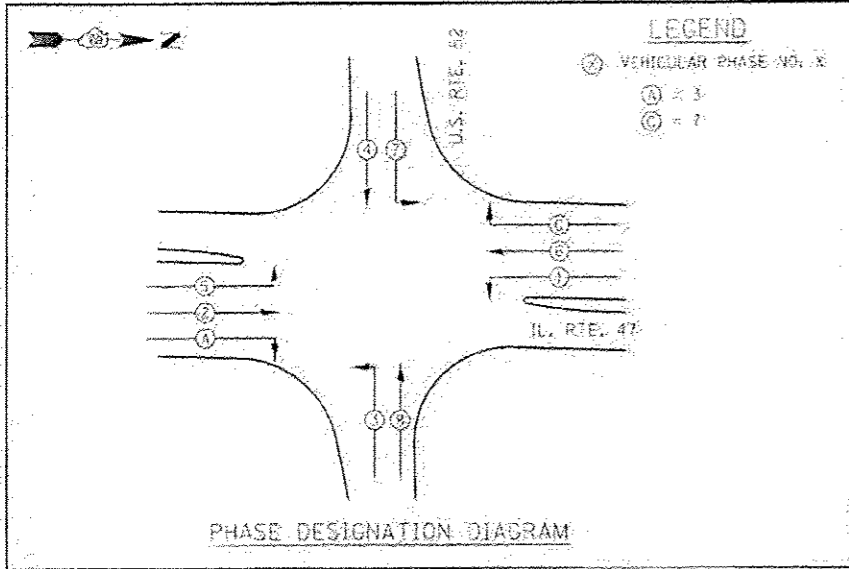
**SIGN DETAIL**



**NOTE:**  
 REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.  
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FILE NAME = V:\3195\66884 (North Section)\CADD Sheets\0366884-sh-t-ts-09.dgn	USER NAME = bdecreene	DESIGNED - RC	<b>LIN ENGINEERING, LTD.</b> Consulting Engineers Westmont, Illinois	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>U.S. RTE. 52</b> <b>PROPOSED TRAFFIC SIGNAL INSTALLATION</b>			F.A.P. RTE. 326	SECTION (109, 110R-1)	COUNTY KENDALL	TOTAL SHEETS 619	SHEET NO. 360
*MODELNAME*	PLOT SCALE = 40.0000' / in.	CHECKED - ST			SCALE: 1"=20'    SHEET NO. 10 OF 13 SHEETS    STA. 1016+00 TO STA. 1021+00			CONTRACT NO. 66884				
	PLOT DATE = 7/14/2014	DATE - 7/01/2014			ILLINOIS FED. AID PROJECT							



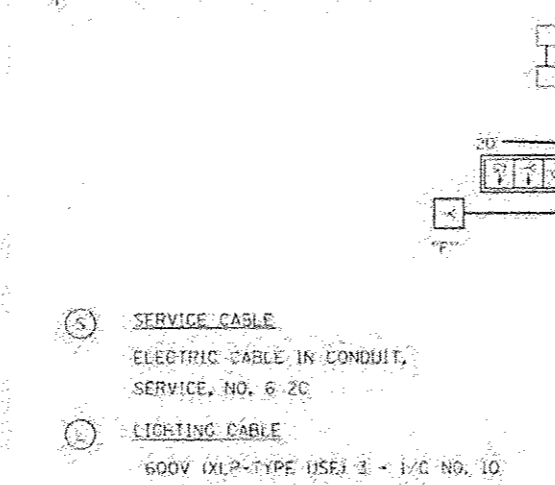
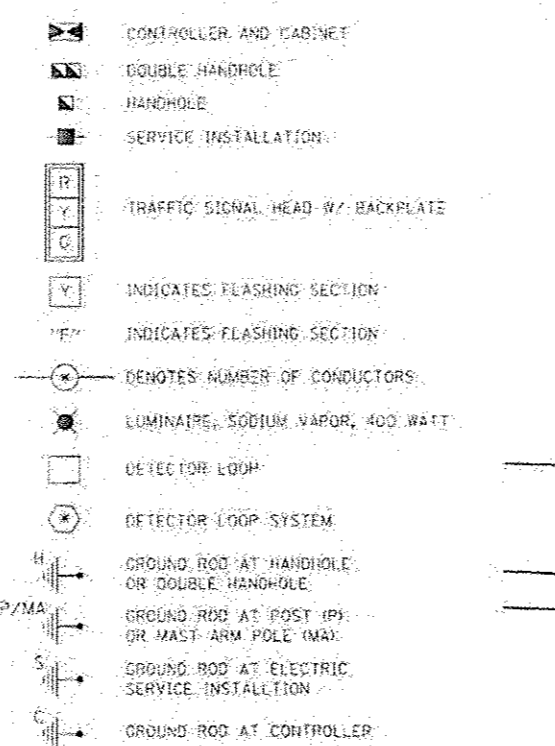
**LEGEND**  
 ○ VEHICULAR PHASE NO. X  
 A = 3  
 C = 7

PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
SIGN PANEL - TYPE 1	50 FT	36.5
SIGN PANEL - TYPE 2	50 FT	21
SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	52
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	390
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	398
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	4024
UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	86
UNDERGROUND CONDUIT, PVC, 4" DIA.	FOOT	10
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	48
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	15
DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/2" NO. 10	FOOT	4503
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400-WATT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	4774
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1938
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2709
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1-PAIR	FOOT	5622
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	14
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	4403
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 64 FT.	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 68 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	12
CONCRETE FOUNDATION, TYPE C	FOOT	3
CONCRETE FOUNDATION, TYPE F, 42-INCH DIAMETER	FOOT	92
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 1-SECTION, POST MOUNTED	EACH	1
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	6
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	20
INDUCTIVE LOOP DETECTOR	EACH	18
DETECTOR LOOP, TYPE I	FOOT	2090
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1

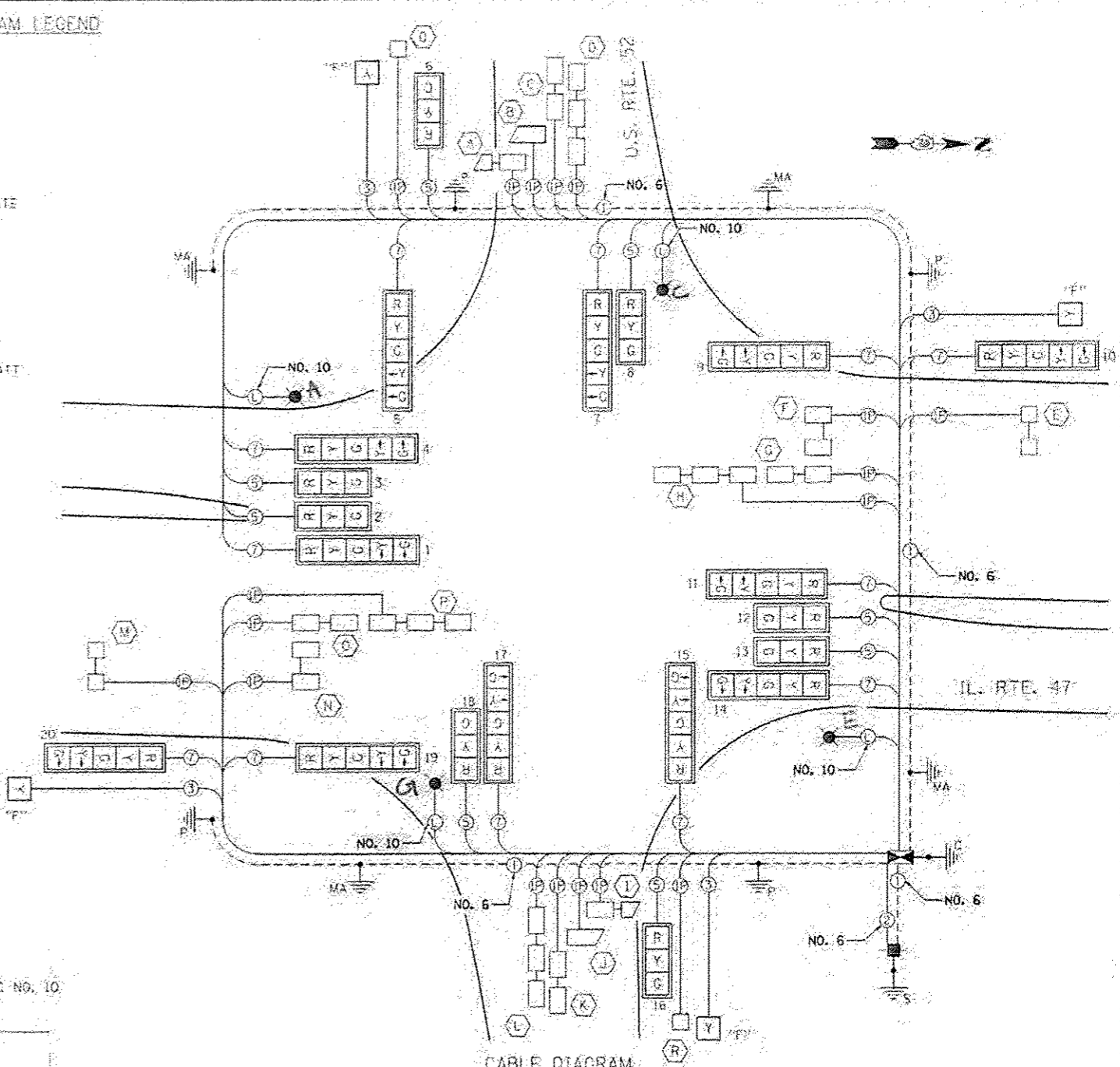
PROPOSED CABLE DIAGRAM LEGEND



LIGHTING CIRCUIT DIAGRAM

AGENCY RESPONSIBLE FOR ENERGY CHARGES:  
 ILLINOIS DEPARTMENT OF TRANSPORTATION

CONTRACTOR PAYS ALL ENERGY CHARGES  
 UNTIL PROJECT IS ACCEPTED.



CABLE DIAGRAM

A 120 VOLT 20 AMP CIRCUIT BREAKER SHALL BE INSTALLED INSIDE THE TRAFFIC SIGNAL CONTROLLER CONNECTED TO THE MAIN BREAKER, TO SERVE THE ROADWAY LIGHTING, PER SECTION 1068.01 (e)(3) OF THE STANDARD SPECIFICATIONS. THE CIRCUIT BREAKER SHALL BE CLEARLY LABELED FOR LIGHTING ACCORDING TO ARTICLE 1068.01(f) OF THE STANDARD SPECIFICATIONS. THE PHOTOCELL SHALL BE MOUNTED TO THE EXTERIOR OF THE TRAFFIC SIGNAL CONTROLLER CABINET, PER SECTION 1068.01(e)(2). THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTROLLER PAY ITEM.

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NOTE: LIGHTING CABLES WILL BE CONNECTED TO THE PROPOSED LIGHTING CONTROLLER. SEE LIGHTING PLANS.

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

ELECTRICAL LOAD CHART

IL. RTE. 47

INDICATION	NUMBER	WATTAGE EACH	BURN TIME (%)
RED	12	10	60
YELLOW	12	17	5
GREEN	12	11	35
YELLOW ARROW	8	6	5
GREEN ARROW	8	5	10
YELLOW FLASHER	2	17	50

U.S. RTE. 52

RED	8	10	70
YELLOW	8	17	5
GREEN	8	11	10
YELLOW ARROW	4	6	5
GREEN ARROW	4	5	10
YELLOW FLASHER	2	17	50

TRAFFIC SIGNAL CABINET

ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
INDUCTIVE LOOP DETECTOR UNINTERRUPTABLE	18	1.5	100
POWER SUPPLY	1	50	100

HIGHWAY LIGHTING

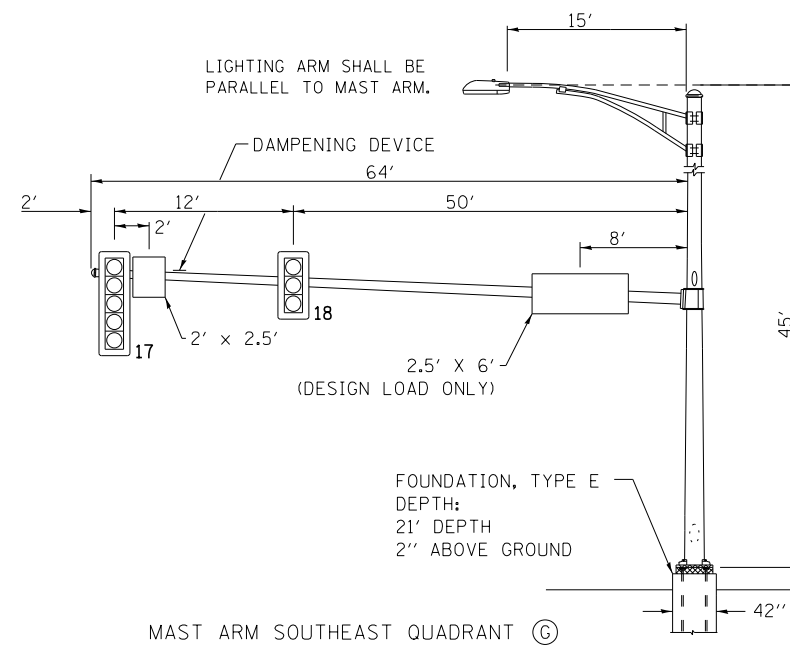
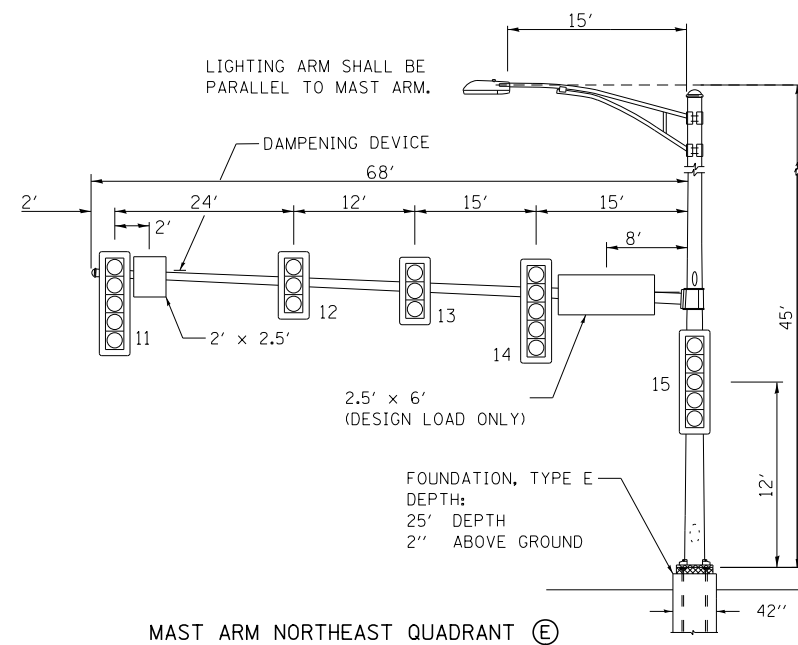
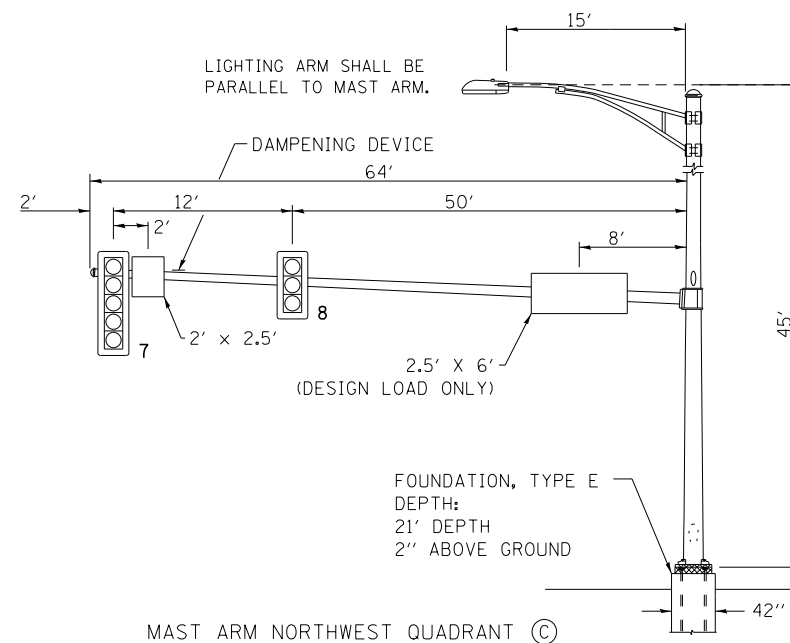
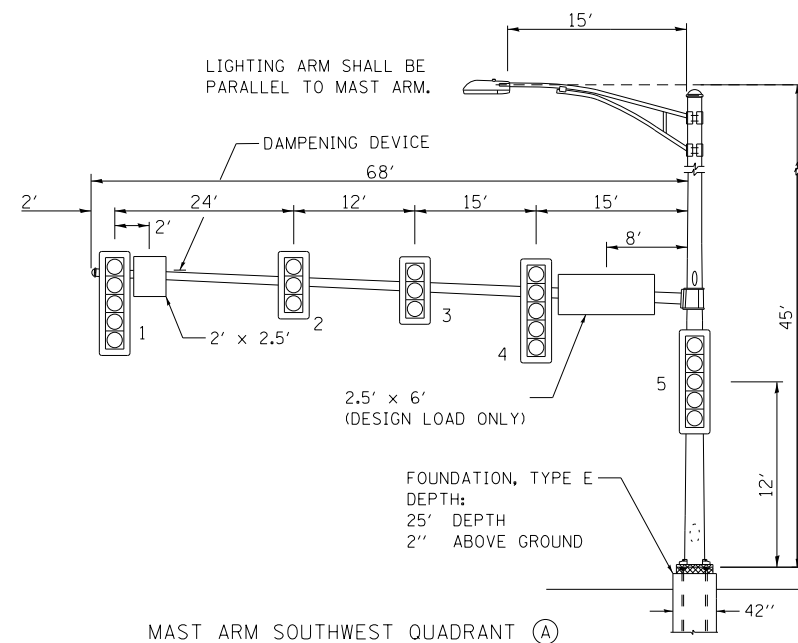
ITEM	NUMBER	WATTAGE EACH	BURN TIME (%)
CONTROLLER	1	6	100
LUMINAIRE	4	400	45

DETECTOR LOOP INDUCTANCE CHART

DETECTOR LOOP SYSTEM	TURNS PER LOOP	INDUCTANCE READING (MICROHENRIES)	FREQUENCY (HERTZ)	J PIN STATUS
A	5	537	26320	OFF
B	4	284	36192	OFF
C	4	589	25131	OFF
D	4	848	20945	OFF
E	6	678	23424	OFF
F	4	562	25728	ON
G	4	562	25728	OFF
H	4	831	21158	OFF
I	5	481	27810	OFF
J	4	227	40482	OFF
K	4	532	26443	OFF
L	4	791	21686	OFF
M	6	673	23511	ON
N	4	558	25820	ON
O	4	557	25843	OFF
P	4	826	21222	OFF
Q	6	698	23086	OFF
R	6	637	24166	OFF

NOTES:

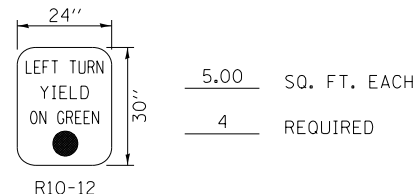
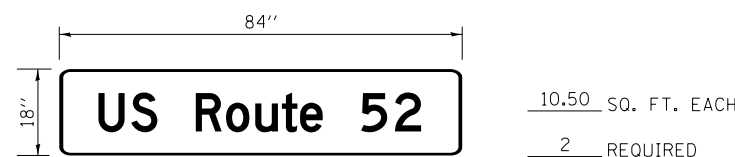
- WORD "GRADE" IS TO BE INTERPRETED AS TOP OF CURB. TOP OF FOUNDATION SHALL NOT BE EXPOSED MORE THAN 4" ABOVE THE SURROUNDING GROUND.
- ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
- FOUNDATION SHOULD BE 2" ABOVE GROUND OR 1" ABOVE CENTERLINE OF ROADWAY, WHICHEVER IS HIGHER.



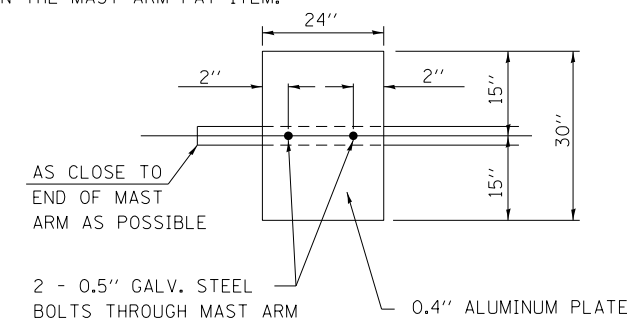
STREET SIGN DETAIL

THESE STREET NAME SIGNS SHALL BE PLACED ON THE MAST ARMS PARALLEL TO THE RESPECTIVE ROUTE AS DIRECTED BY THE ENGINEER.

- STREET NAME SIGNS:
- TYPE ZZ SHEETING REQUIRED
  - WHITE/GREEN BACKGROUND
  - 3/4 in BORDER
  - 8 in SERIES D LETTERS



NOTE: DAMPENING DEVICE SHALL CONSIST OF A 24" X 30" TYPE 1, UNPAINTED ALUMINUM SIGN STOCK MOUNTED HORIZONTALLY ON TOP OF MAST ARM WITH THE 30" LENGTH PERPENDICULAR TO THE ARM. COST OF THE DAMPENING DEVICE IS INCLUDED IN THE MAST ARM PAY ITEM.



DAMPENING PLATE DETAIL (TOP VIEW) INCLUDED IN COST OF MAST ARM

REDUCE THE NUMBER OF LEAD-IN CABLES TO REDUCE CUTS IN THE CONCRETE PAVEMENT. PLACE ACCORDING TO PLAN OR AS DIRECTED BY THE ENGINEER. RED TIME FOR LEFT TURNS ON IL. RTE. 47 SHALL GET THE REQUIRED MUTCD RED TIME + ONE SECOND TO ACCOMMODATE U-TURNS.

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ALL LIGHTING CABLES WILL BE CONNECTED TO THE PROPOSED LIGHTING CONTROLLER. SEE LIGHTING PLANS.

NOTIFY THE TRAFFIC SIGNAL SECTION AT (815) 434-8506 72 HOURS IN ADVANCE TO REDESIGN THE DETECTOR LOOPS, IF POSSIBLE, TO AVOID CONSTRUCTION JOINTS.

FILE NAME =	USER NAME = bdecreane	DESIGNED - RC
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	PLOT SCALE = 40.0000' / in.	CHECKED - ST
#MODELNAME#	PLOT DATE = 7/14/2014	DATE - 7/01/2014



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION










IL. RTE. 47 AT U.S. RTE. 52  
MAST ARM LOADING DIAGRAM, ELECTRICAL LOAD CHART & SIGN DETAILS

SCALE: N/A SHEET NO. 12 OF 13 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	362
				CONTRACT NO. 66B84
ILLINOIS FED. AID PROJECT				

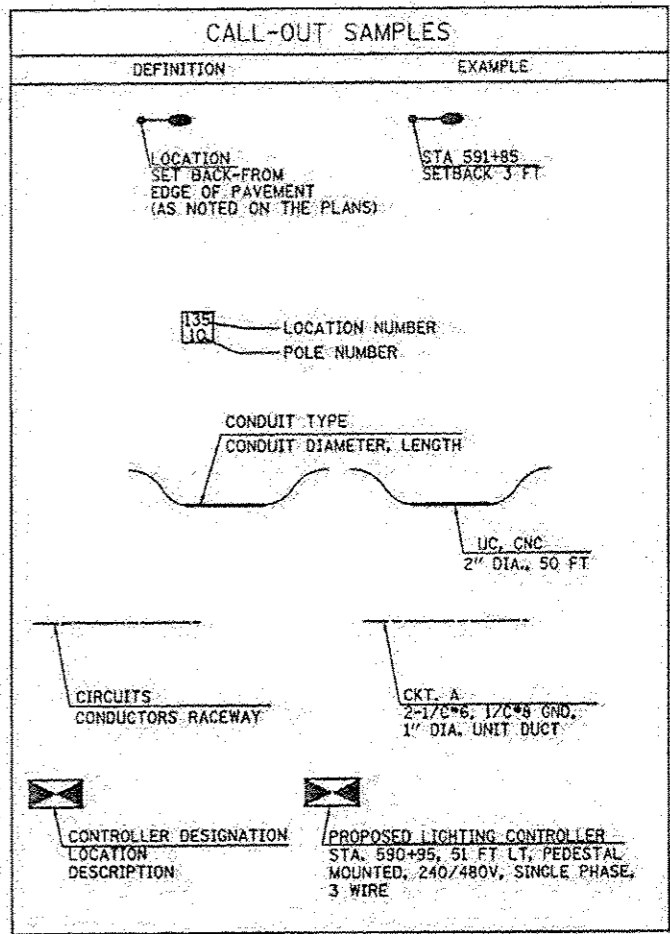


**LIGHTING LEGEND**

-  PROPOSED LIGHTING UNIT  
50' M.H., 12' M.A., WITH 400W HPS LUMINAIRE, ABOVE PHASE TO PHASE, MC III (UNLESS OTHERWISE NOTED), 480V BALLAST
-  LIGHTING UNIT COMBINATION TRAFFIC SIGNAL POLE  
45' M.H., 15' M.A., WITH 400W HPS LUMINAIRE, ~~240V~~ <sup>120V</sup> PHASE TO PHASE, MC III (BY OTHERS, REFER TO TRAFFIC SIGNAL PLANS)
-  UNDERGROUND RIGID GALVANIZED STEEL CONDUIT (RGSC)  
SIZE AND LENGTH AS INDICATED
-  UNDERGROUND CONDUIT COILABLE NONMETALLIC CONDUIT, SIZE AND LENGTH AS INDICATED
-  UNIT DUCT, AS SPECIFIED IN PLANS
-  EXISTING CABLE AND CONDUIT TO REMAIN IN PLACE
-  EXISTING OVERHEAD UTILITY POWER LINE
-  PROPOSED LIGHTING CONTROLLER PEDESTAL MOUNTED, 240/480V, SINGLE PHASE, 3 WIRE
-  PROPOSED ELECTRIC UTILITY SERVICE POLE

**GENERAL NOTES:**

1. SETBACKS ARE MEASURED FROM EDGE OF OF PAVEMENT TO CENTER OF POLE.
2. ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.
3. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
4. THE PROPOSED LIGHT POLES SHALL BE LOCATED AS NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. LIGHT POLE FOUNDATIONS SHALL BE INSTALLED PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET THE HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS. AFTER UNIT DUCT IS INSTALLED, FOUNDATIONS SHALL BE FILLED WITH FINE AGGREGATE ACCORDING TO ARTICLE 836.03. WASHERS USED TO INSTALL THE POLE SHALL BE LARGE ENOUGH TO FULLY COVER THE SLOTTED HOLES IN THE POLE BASE PLATE.
5. CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM UTILITY LINES. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE UNDERGROUND CONDUIT AND UNIT DUCT PAY ITEMS.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL A CONCRETE WORK PAD IN FRONT OF THE LIGHTING CONTROLLER PER SECTION 825 OF THE STANDARD SPECIFICATIONS.
8. INSTALL HORIZONTAL MOUNT LUMINAIRES PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY AS REQUIRED BY ARTICLE 821.04 OF THE STANDARD SPECIFICATIONS.
9. UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA. SHALL BE SCHEDULE 80 AS NOTED IN THE PLANS.
10. REFER TO TRAFFIC SIGNAL PLANS FOR COMBINATION LIGHTING UNITS WIRING.
11. STAINLESS STEEL SCREEN INSTALLED AROUND BREAKAWAY COUPLINGS OR ANCHOR RODS AND NUTS SHALL BE ACCORDING TO ART. 1070.04(Q)(2)(c) OF THE STANDARD SPECIFICATIONS EXCEPT THE MINIMUM WIRE DIAMETER SHALL BE AWG. NO. 16 (1.6mm).
12. ANY CHARGE BY THE UTILITY COMPANY TO PROVIDE ELECTRICAL SERVICE AND/OR ELECTRICAL SERVICE CONNECTION TO THE SERVICE INSTALLATION WILL BE PAID FOR ACCORDING TO ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.



**SCHEDULE OF QUANTITIES**

CODE NO.	ITEM	UNIT	QUANTITY
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	50
81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	145
81028770	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 3" DIA.	FOOT	230
81603040	UNIT DUCT, 600V, 2-1/2" NO. 6, 1/2" NO. 8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	4545
81702150	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/2" NO. 2	FOOT	150
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	16
82500340	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480VOLT, 60AMP	EACH	1
83010500	LIGHT POLE, ALUMINUM, 50 FT. M.H., 12 FT. MAST ARM	EACH	16
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	112
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	16

**HIGHWAY STANDARDS**

- 830001-01 LIGHT POLE ALUMINUM MAST ARM
- 836001-02 LIGHT POLE FOUNDATION
- 825016-02 LIGHTING CONTROLLER PEDESTAL MOUNTED, 480V
- 838001 BREAKAWAY DEVICES
- 821101 LUMINAIRE WIRING DIAGRAM

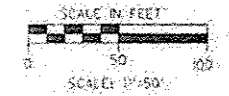
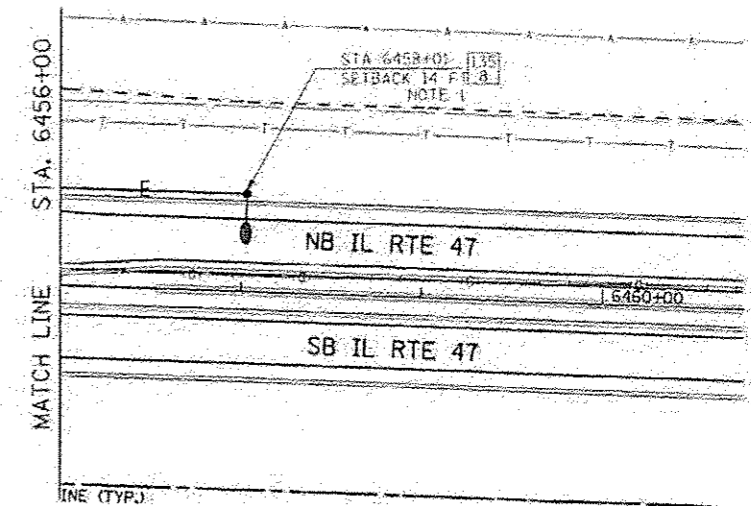
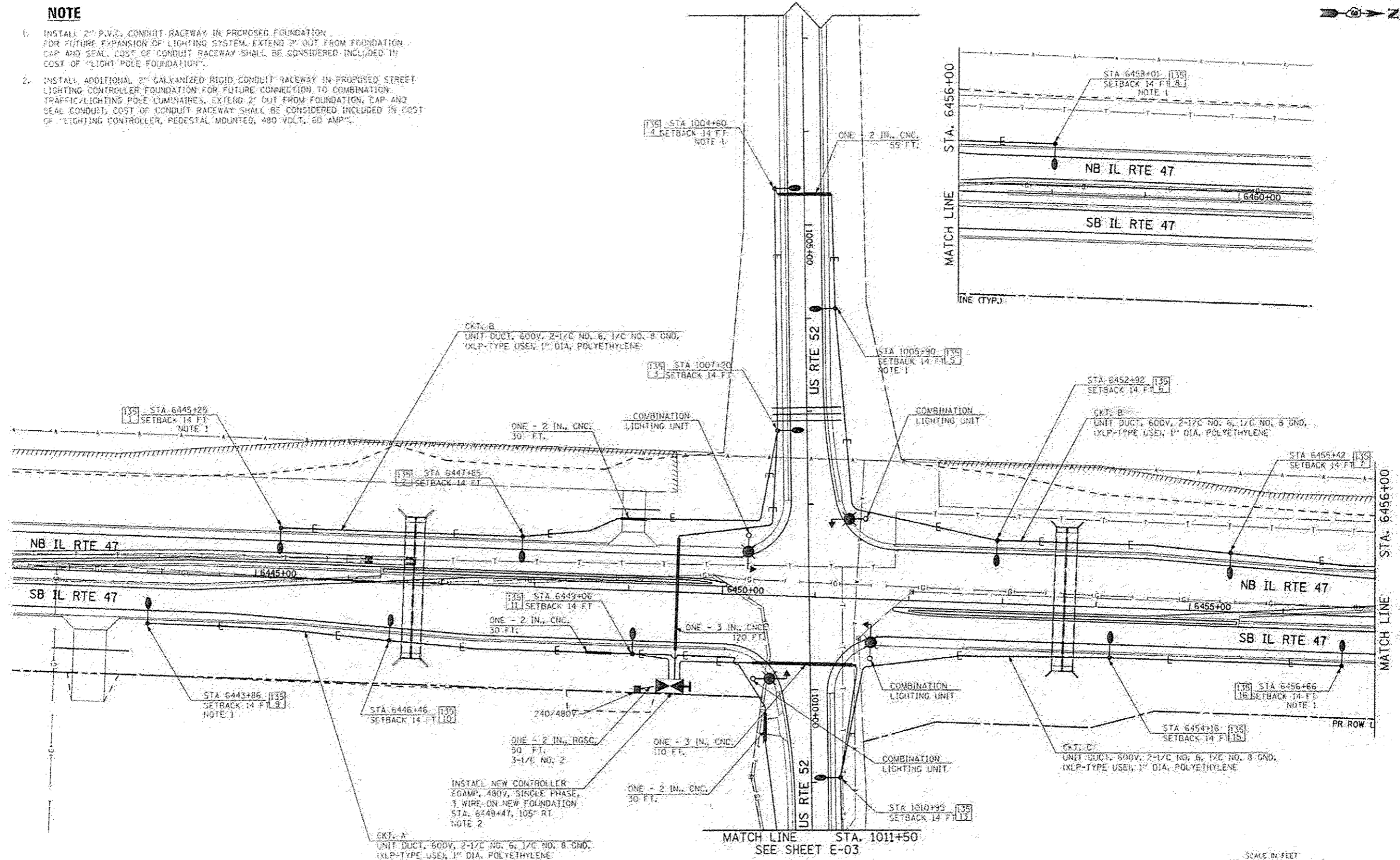
**ABBREVIATIONS**

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
D.A.	DAVIT ARM
DIA.	DIAMETER
EX	EXISTING
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
FT	FEET OR FOOT
FND MET	FOUNDATION METAL
FU	FUSE
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
LP	LIGHT POLE
M	METER
M.A.	MAST ARM
M.H.	MOUNTING HEIGHT
NO.	NUMBER
PR	PROPOSED
RGSC	RIGID GALVANIZED STEEL CONDUIT
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
UC	UNDERGROUND CONDUIT
UD	UNIT DUCT
WP	WOOD POLE
XFMR	TRANSFORMER



**NOTE**

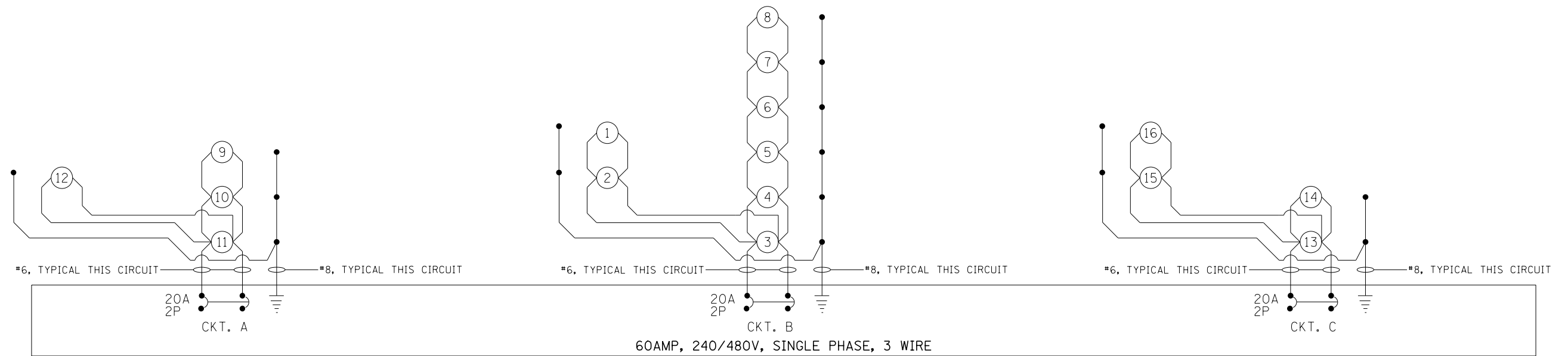
1. INSTALL 2" P.V.C. CONDUIT RACEWAY IN PROPOSED FOUNDATION FOR FUTURE EXPANSION OF LIGHTING SYSTEM. EXTEND 2' OUT FROM FOUNDATION. CAP AND SEAL. COST OF CONDUIT RACEWAY SHALL BE CONSIDERED INCLUDED IN COST OF "LIGHT POLE FOUNDATION".
2. INSTALL ADDITIONAL 2" GALVANIZED RIGID CONDUIT RACEWAY IN PROPOSED STREET LIGHTING CONTROLLER FOUNDATION FOR FUTURE CONNECTION TO COMBINATION TRAFFIC/LIGHTING POLE LUMINAIRES. EXTEND 2' OUT FROM FOUNDATION. CAP AND SEAL CONDUIT. COST OF CONDUIT RACEWAY SHALL BE CONSIDERED INCLUDED IN COST OF "LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480 VOLT, 60 AMP".



FILE NAME: \\V:\305166804\North\Geospatial\CAD\Sheet\2014\66884-lighting-2.dgn	USER NAME: jbidartene	DESIGNED: BG	<b>EJM ENGINEERING, INC.</b> 411 South Wells Street, Suite 1000 Chicago, Illinois 60607	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ILLINOIS ROUTE 47 AT US 52</b> <b>LIGHTING PLAN</b>	FLAT: 1109, 1109R, 1109R & BR-1	COUNTY: GRUNDY	TOTAL SHEETS: 619	SHEET NO.: 365		
PLT SCALE: 1/8" = 1'-0"	CHECKED: VR	DATE: 7/01/2014				SCALE: 1" = 50'	SHEET: 2 OF 4 SHEETS	CONTRACT NO. 66884	PRELIMINARY UNDESIGNED - NO PROJECT		
PLT DATE: 7/14/2014	DATE: 7/01/2014										

E-02





**WIRING DIAGRAM**

NOTES

1. ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

○ 400W PROPOSED LUMINAIRE

FILE NAME =	USER NAME = bdecreene	DESIGNED - BG
V:\3195\66884 (North Section)\CADD Sheets\ND366884-shd-light 4.dgn		DRAWN - BG
	PLOT SCALE = 100.0000' / in.	CHECKED - MR
	PLOT DATE = 7/14/2014	DATE - 7/01/2014



**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 47 AT US 52  
SCHEMATIC WIRING DIAGRAM**

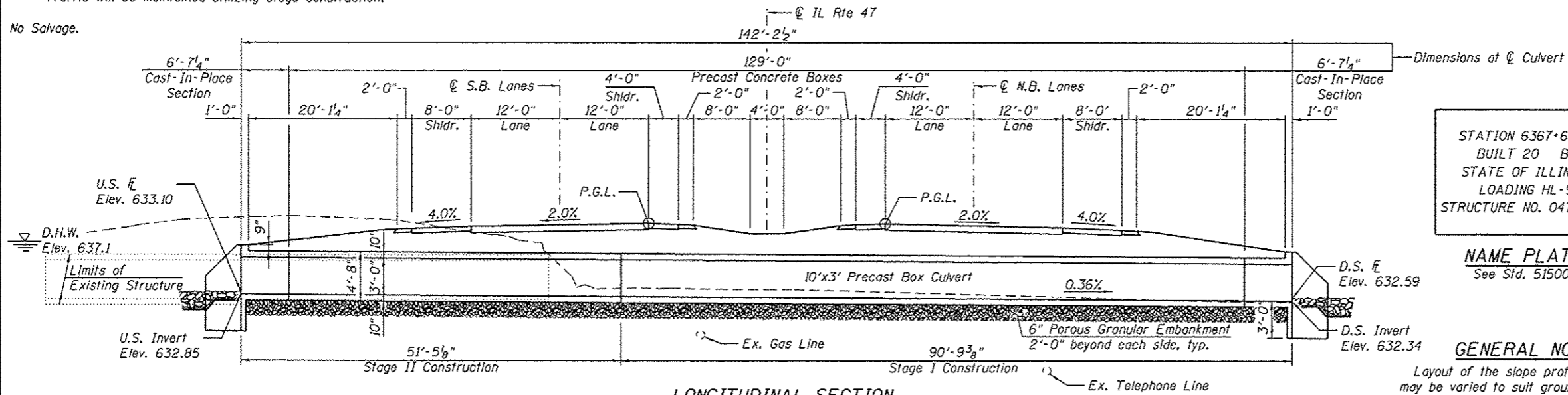
SCALE: N/A	SHEET 4 OF 4 SHEETS	STA. N/A TO STA. N/A
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R, 110BR & BR-1)	GRUNDY	619	367
PRELIMINARY			ILLINOIS FED. AID PROJECT	
<b>CONTRACT NO. 66884</b>				

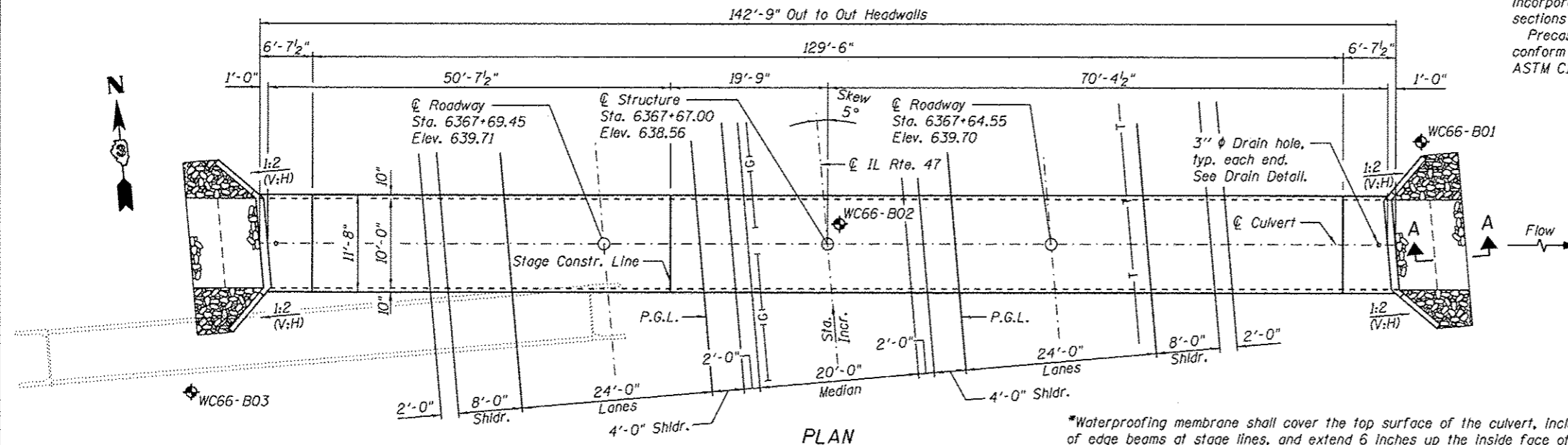
Benchmark: B.M. 7015. Found cut "+" northwest corner of westerly end of box culvert 2290' north of Joliet Road, Elevation 637.52.

Existing Structure: The existing structure consists of a single 6'x4' concrete box culvert with concrete wingwalls. The culvert is approximately 85'-9" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.



**LONGITUDINAL SECTION**  
(Dimensions of Rt L's to  $\odot$  Roadway, unless noted otherwise)  
(Looking North)



**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	42
Stone Riprap, Class A4	Sq. Yd.	30
Filter Fabric	Sq. Yd.	30
Removal of Existing Structures No. 2	Each	1
Reinforcement Bars	Pound	3120
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	18.5
Precast Concrete Box Culvert 10'x3'	Foot	129.5
*Membrane Waterproofing for Culverts	Sq. Yd.	216

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	629.85	629.34

**WATERWAY INFORMATION**

Drainage Area = 0.25 sq mi      Exist. Low Grade Elev. 638.10  
Prop. Low Grade Elev. 639.18

Flood Yr.	Freq.	Q C.F.S.	Opening Sq. Ft.	Nat. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
10	88	24	30	636.9	637.1	0.0	2.1	636.9	637.1
Design	50	179	24	30	637.1	2.1	0.0	639.2	637.1
Base	100	237	24	30	637.1	2.3	0.8	639.4	637.9
Overtopping	-	180	24	30	637.1	2.1	0.0	639.2	637.1
Max. Calc.	500	403	24	30	637.4	2.3	2.9	639.7	640.3

10 year velocity through Existing Structure = 3.7 fps  
10 year velocity through Proposed Structure = 2.9 fps

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
4. Soil Borings

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

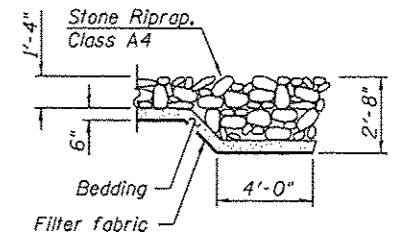
STATION 6367+67.00  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2562

**NAME PLATE**

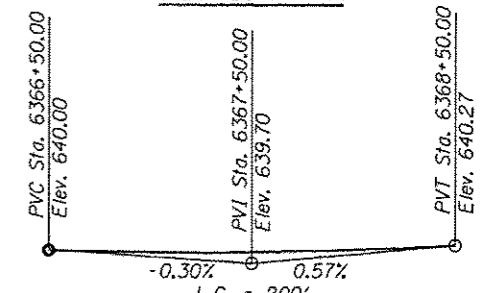
See Std. 515001

**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 4. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



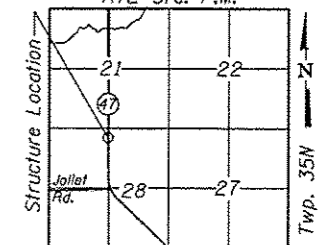
**SECTION A-A**



**PROFILE GRADE**

(Along IL Rte. 47 P.G.)

RTE-3rd. P.M.



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

IL. RTE. 47 OVER  
DRAINAGE DITCH  
F.A.P. RTE. 326  
SEC-(109, 110)R-1  
KENDALL COUNTY

STATION 6367+67.00  
STRUCTURE NO. 047-2562



Vincent P. Tabor 7/14/2014  
Date

Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

REVISION	USER NAME	DESIGNED	CHECKED	DRAWN	CHECKED
-		PSS	VPT	AJF	VPT



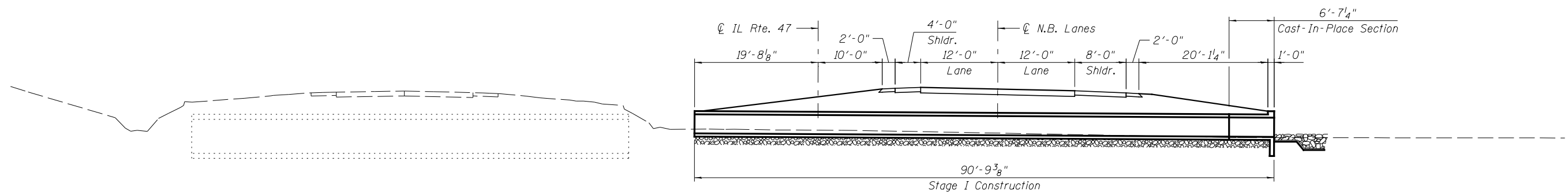
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 047-2562

SHEET NO. 1 OF 4 SHEETS

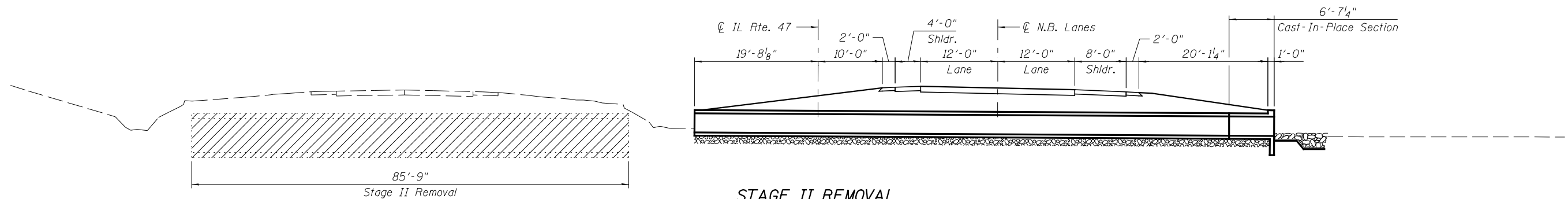
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	109, 110R-1	KENDALL	619	368

CONTRACT NO. 66884  
ILLINOIS FED. AID PROJECT



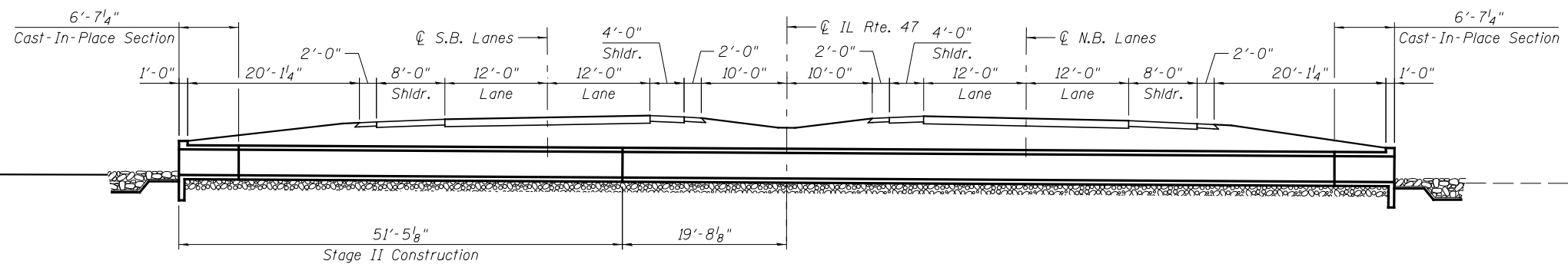
**STAGE I CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II REMOVAL**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 047-2562**

SHEET NO. 2 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	369
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				



**Wang Engineering**  
wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC66-B01**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 632.61 ft  
North: 1755725.46 ft  
East: 956862.23 ft  
Station: 6367+74.71  
Offset: 80.28 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
628.6	Stiff, dark brown SILTY CLAY	4	1	P	4	1.50	25		628.6								
627.1	Dense, brown SILTY LOAM with rock fragments --WEATHERED BEDROCK-- --AUGER REFUSAL--	9	2	NP	17		16		627.1								
	Boring terminated at 5.50 ft																

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-13-2009	Complete Drilling	08-13-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

**Wang Engineering**  
wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC66-B02**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 633.59 ft  
North: 1755719.43 ft  
East: 956812.28 ft  
Station: 6367+69.01  
Offset: 0.26 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
628.6	Very stiff, dark brown SILTY CLAY, little gravel	7	1	P	4	3.00	10		628.6								
628.6	Very dense, brown CLAYEY LOAM with rock fragments --WEATHERED BEDROCK--	8	2	NP	9		29		628.6								
628.6	Weak, very poor reddish brown weathered DOLOSTONE RECOVERY = 100% RQD = 0%	5	3	C	50/4				628.6								
	Boring terminated at 10.00 ft																

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-13-2009	Complete Drilling	08-13-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

**Wang Engineering**  
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Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC66-B03**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 638.70 ft  
North: 1755865.18 ft  
East: 956729.14 ft  
Station: 6367+47.27  
Offset: 83.33 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample Type	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
638.4	4-inch thick, CRUSHED STONE --SHOULDER--								638.4								
636.2	Stiff, brown CLAY LOAM --FILL--	2	1	P	2	1.25	16		636.2								
636.2	Stiff, dark brown SILTY CLAY --BURIED TOPSOIL--	2	2	NP	3		32		636.2								
634.7	Very stiff, brown and gray SILTY CLAY	3	3	P	4	1.75			634.7								
632.7	--AUGER REFUSAL--	4	4						632.7								
	Boring terminated at 9.00 ft																

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-14-2009	Complete Drilling	08-14-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

REVISION	USER NAME	DESIGNED	PSS
REVISION	FILE NAME	CHECKED	VPT
REVISION	PLOT SCALE	DRAWN	AJF
REVISION	PLOT DATE	CHECKED	VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 047-2562

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	371
CONTRACT NO. 66B84				

SHEET NO. 4 OF 4 SHEETS

ILLINOIS FED. AID PROJECT

Benchmark: B.M. 7010. Found cut "+" north end of westerly headwall on box culvert 830' south of Townhall Road, Elevation 622.03.

Existing Structure: The existing structure consists of a double 11'x7' precast concrete box culvert with concrete wingwalls. The culvert is approximately 61'-10" in length with a 10 degree left ahead skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
4. Soil Borings

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

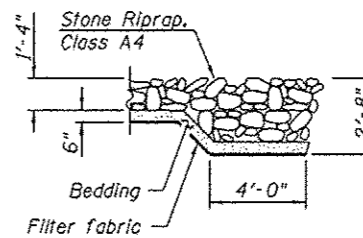
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

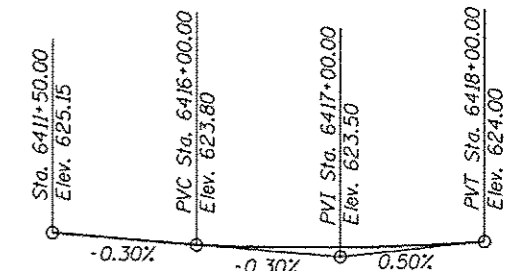
$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 4. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



**SECTION A-A**



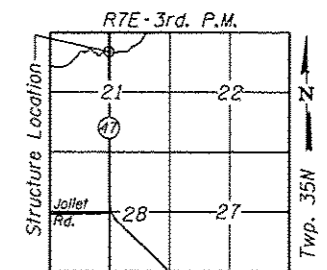
**PROFILE GRADE**

(Along IL Rte. 47 P.G.)

STATION 6415+96.00  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2033

**NAME PLATE**

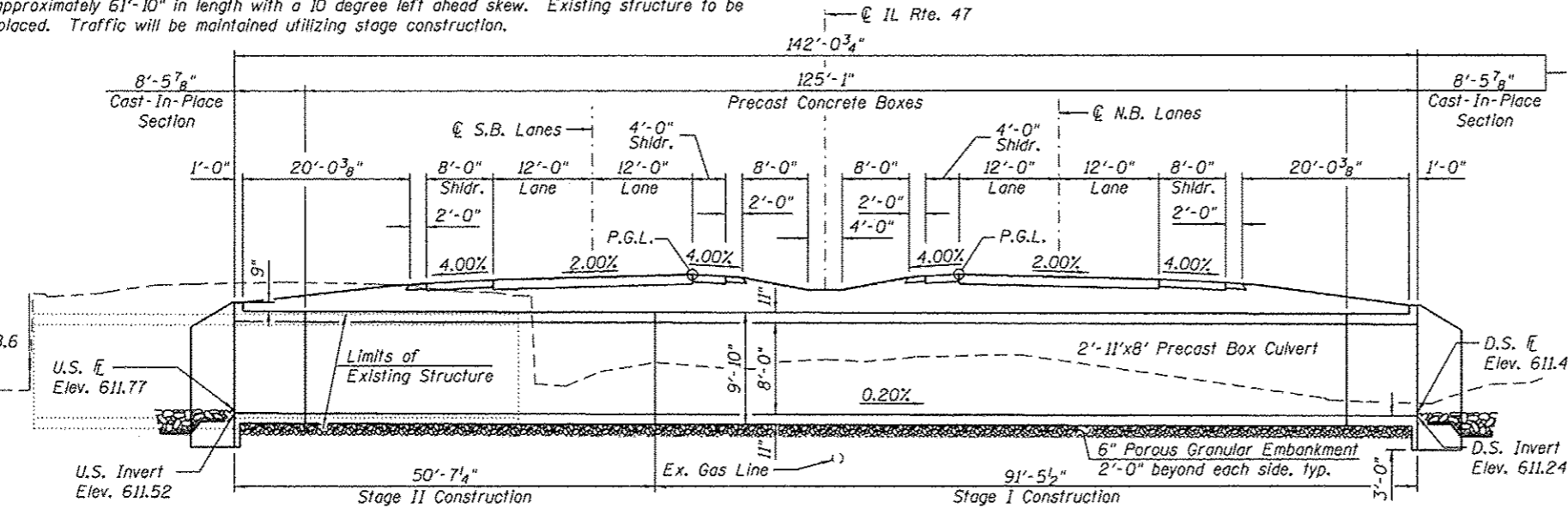
See Std. 515001



**LOCATION SKETCH**

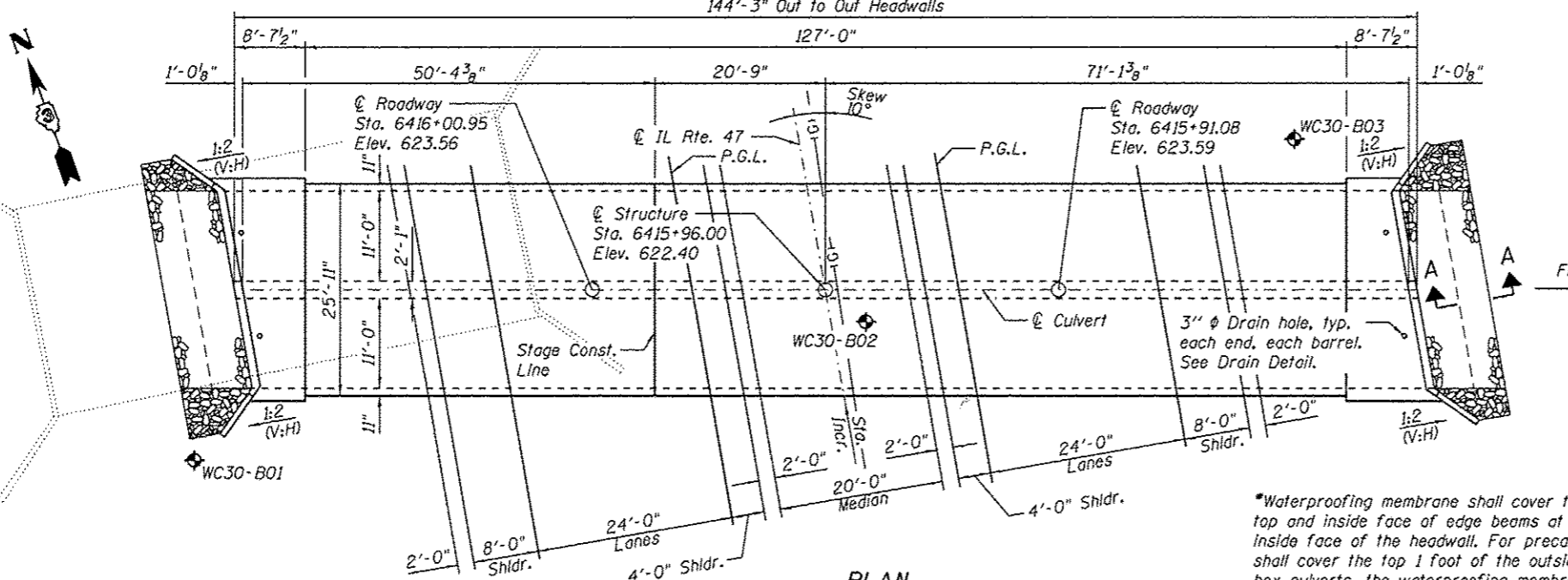
**GENERAL PLAN & ELEVATION**

**IL. RTE. 47 OVER**  
**WEST AUX. SABLE CREEK**  
**F.A.P. RTE. 326**  
**SEC-(109, 110)R-1**  
**KENDALL COUNTY**  
**STATION 6415+96.00**  
**STRUCTURE NO. 047-2033**



**LONGITUDINAL SECTION**

(Dimensions at Rt L's to @ Roadway, unless noted otherwise) (Looking North)



**PLAN**

\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

**TOTAL BILL OF MATERIAL**

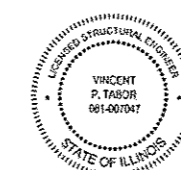
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	80
Stone Riprap, Class A4	Sq. Yd.	108
Filter Fabric	Sq. Yd.	108
Removal of Existing Structures No. 3	Each	1
Reinforcement Bars	Pound	16120
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	91.4
Precast Concrete Box Culvert 11'x8'	Foot	254.0
*Membrane Waterproofing for Culverts	Sq. Yd.	446

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	608.52	608.24

**CURVE DATA**

Prop. Curve IL47P12-J3  
P.I. Sta. = 6415+45.53  
 $\Delta = 4^{\circ}43'23''$  (Lt.)  
 $D = 0^{\circ}34'23''$   
 $T = 412.39'$   
 $L = 824.31'$   
 $R = 10,000.00'$   
 $E = 8.50'$   
 $e = N.C.$   
P.C. Sta. = 6411+33.14  
P.T. Sta. = 6419+57.45



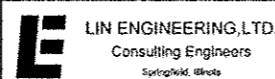
Vincent P. Tabor 7/14/2014  
Date  
Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

**WATERWAY INFORMATION**

Flood		Freq. Yr.	Q	Opening Sq. Ft.	Not. H.W.E.	Head - Ft.	Headwater El.
		C.F.S.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design		10	510	112 139	618.1 618.4	0.3 0.1	618.4 618.2
Base		50	765	123 150	618.6 619.4	0.8 0.6	619.4 619.2
Overtopping		100	868	127 154	618.8 619.8	1.0 0.8	619.8 619.6
Max. Calc.		500	1113	134 154	619.1 620.8	1.7 1.5	620.8 620.6

10 year velocity through Existing Structure = 4.6 fps  
10 year velocity through Proposed Structure = 3.7 fps

REVISION	USER NAME	DESIGNED	CHECKED
REVISION	FILE NAME	CHECKED	VPT
REVISION	PLOT SCALE	DRAWN	AJF
REVISION	PLOT DATE	CHECKED	VPT



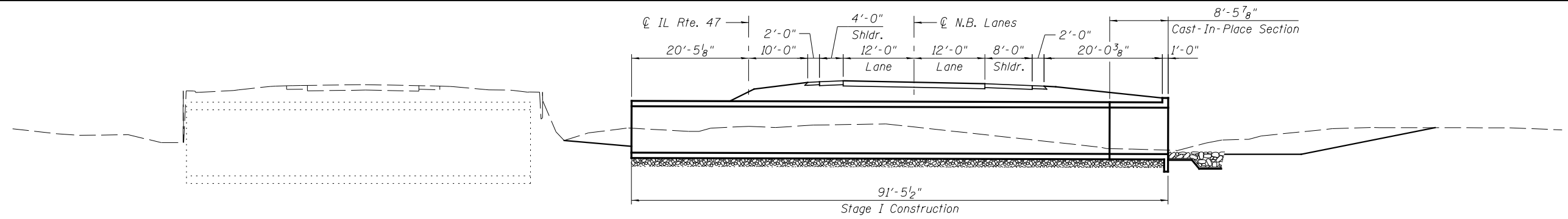
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 047-2033

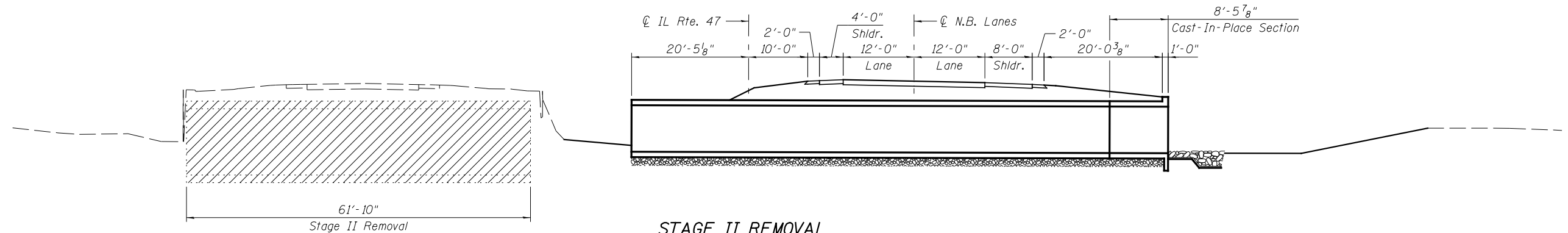
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	372

CONTRACT NO. 66B84  
ILLINOIS FED. AID PROJECT

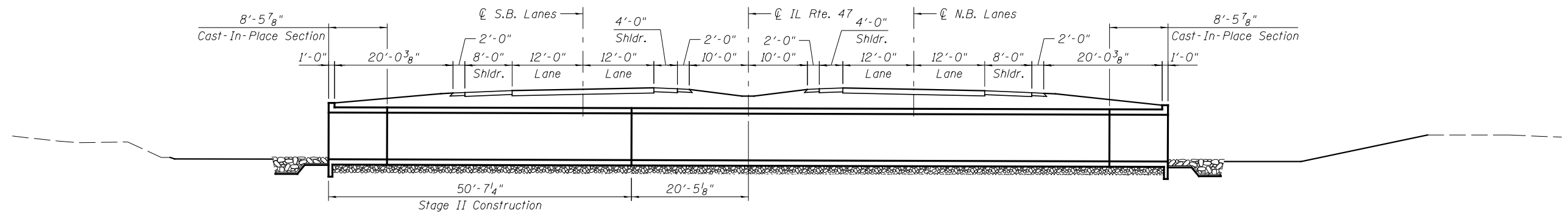




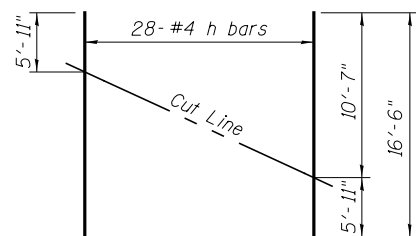
**STAGE I CONSTRUCTION**  
 (Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II REMOVAL**  
 (Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II CONSTRUCTION**  
 (Dimensions at Rt. L's to Roadway. Looking North.)



**FIELD CUTTING DIAGRAM #1**

Order h bars full length. Cut as shown and use remainder of bars in opposite end.

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



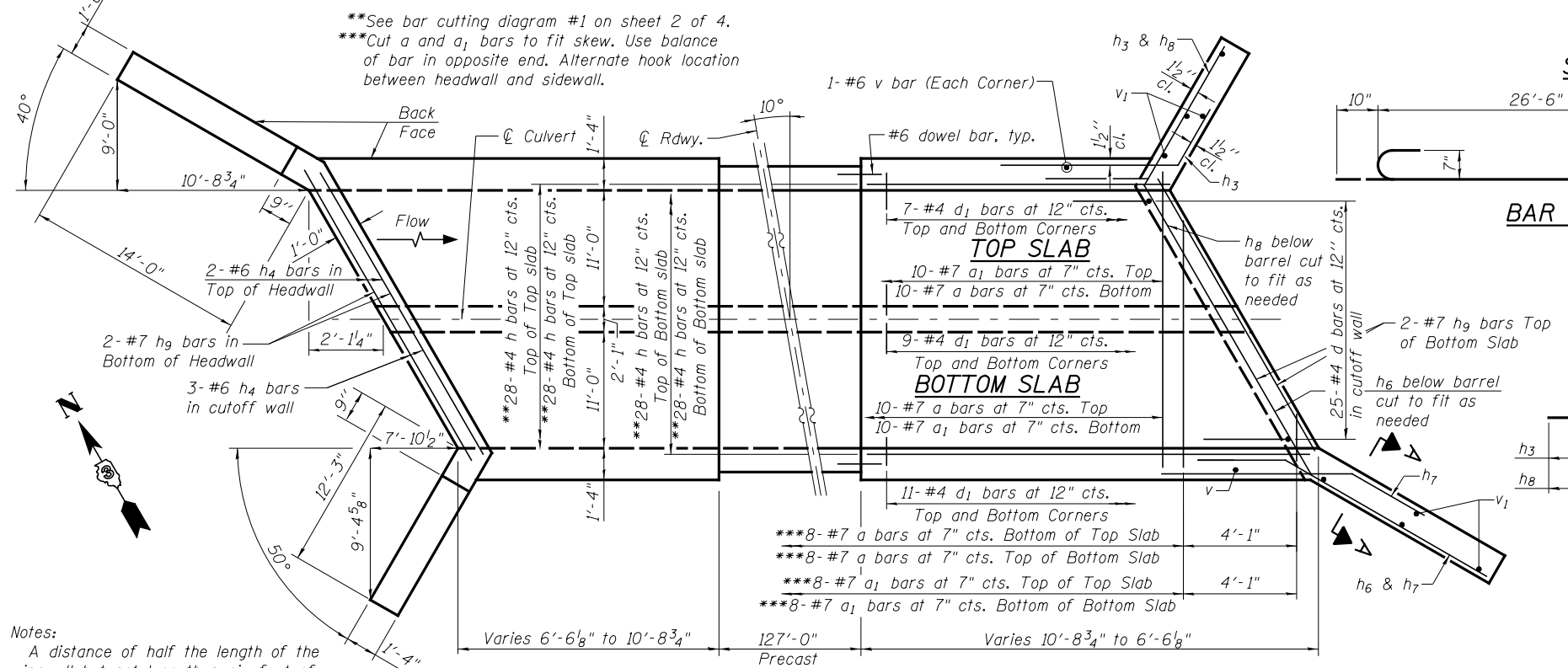
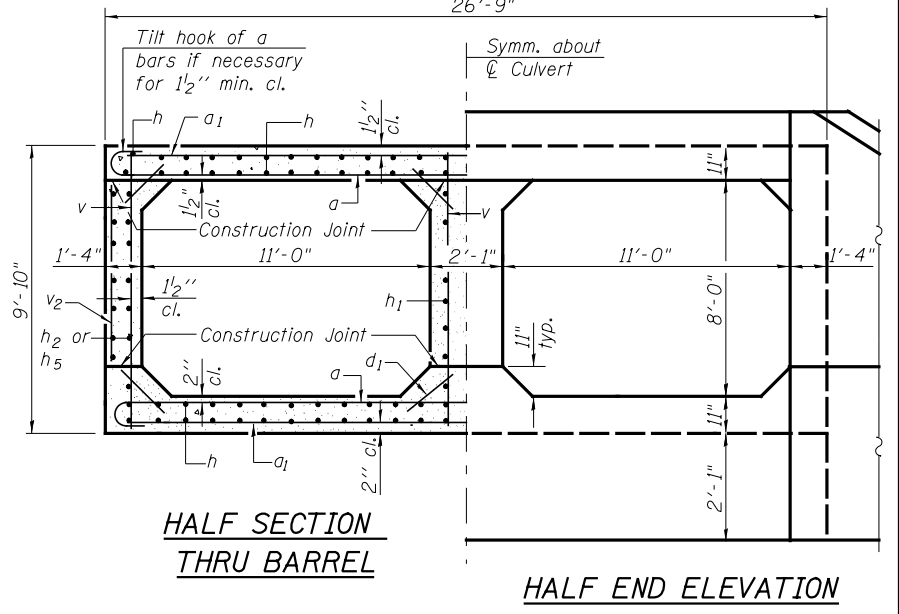
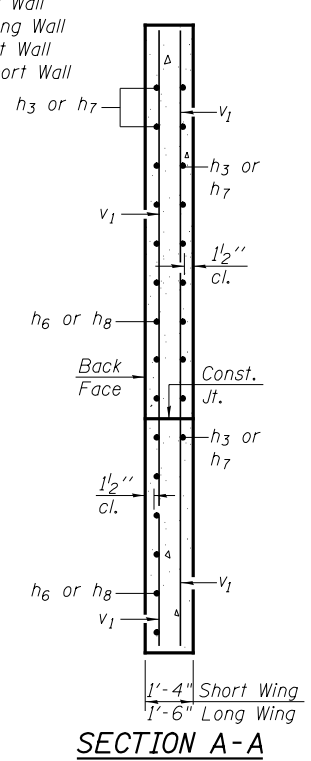
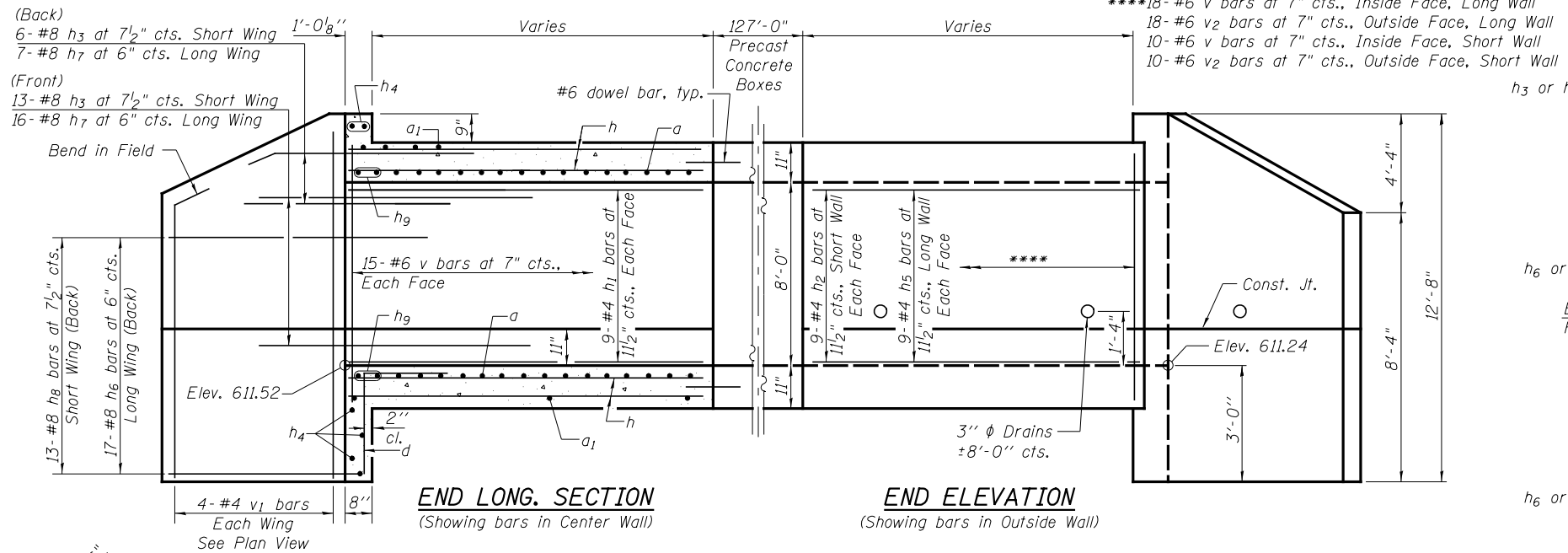
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 047-2033**

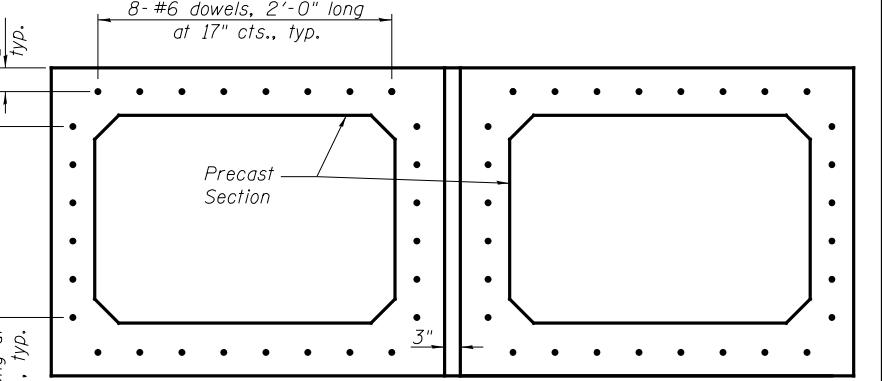
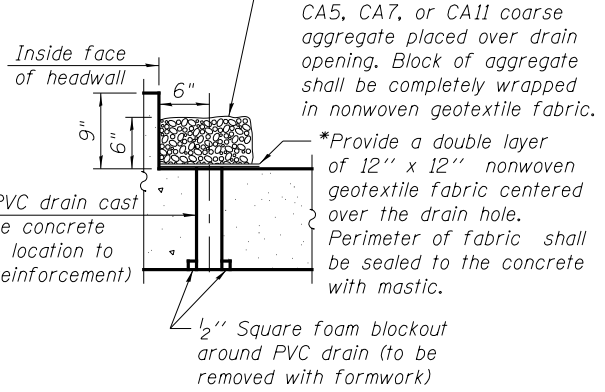
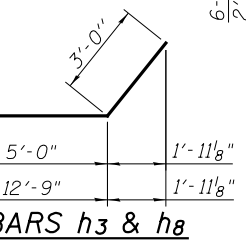
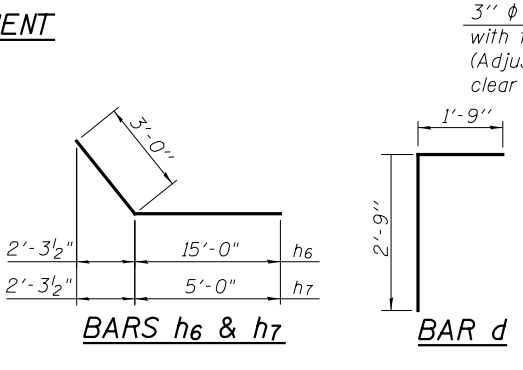
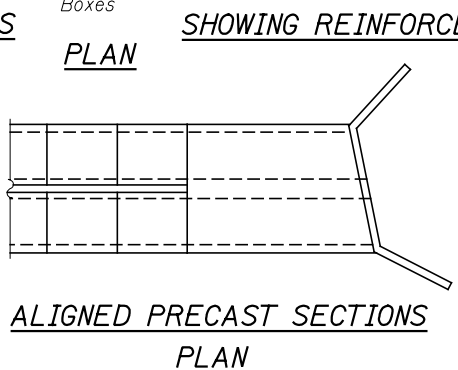
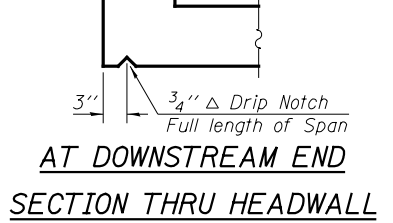
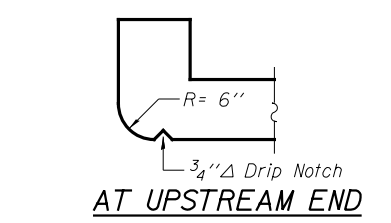
SHEET NO. 2 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	373
CONTRACT NO. 66B84				

ILLINOIS FED. AID PROJECT



Notes:  
 A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
 Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.



\*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	56	#7	28'-2"	U
a1	56	#7	26'-6"	—
d	50	#4	4'-6"	┘
d1	144	#4	1'-2"	—
h	112	#4	16'-6"	—
h1	36	#4	8'-2"	—
h2	36	#4	6'-1"	—
h3	38	#8	8'-0"	—
h4	10	#6	26'-5"	—
h5	36	#4	10'-5"	—
h6	34	#8	18'-0"	—
h7	46	#8	8'-0"	—
h8	26	#8	15'-9"	—
h9	8	#7	26'-8"	—
v	120	#6	9'-6"	—
v1	16	#4	12'-4"	—
v2	56	#6	6'-9"	—
Concrete Box Culverts			Cu. Yd.	91.4
Reinforcement Bars			Pound	16120

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT

**E** LIN ENGINEERING, LTD.  
 Consulting Engineers  
 Springfield, Illinois

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS  
 STRUCTURE NO. 047-2033  
 SHEET NO. 3 OF 4 SHEETS

F.A.P. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	374
				CONTRACT NO. 66B84
ILLINOIS FED. AID PROJECT				

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Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC30-B01** Page 1 of 1

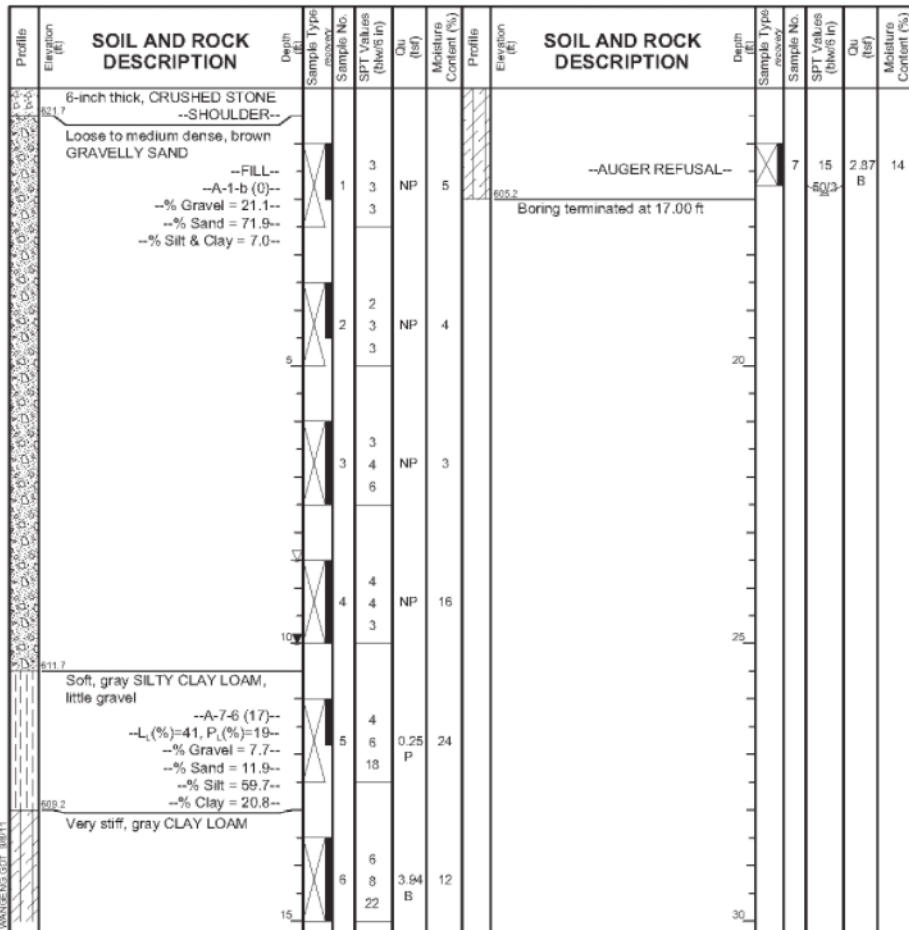
WEI Job No.: 790-36-01

Client: **TransSystems Corporation**

Project: **Illinois Route 47, Section IL 47B**

Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 622.19 ft  
North: 1760538.56 ft  
East: 956650.00 ft  
Station: 6415+91.63  
Offset: 88.42 LT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-20-2009	Completes Drilling	08-20-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...
While Drilling	8.50 ft	At Completion of Drilling	10.00 ft
Time After Drilling	NA	Depth to Water	NA

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**BORING LOG WC30-B02** Page 1 of 1

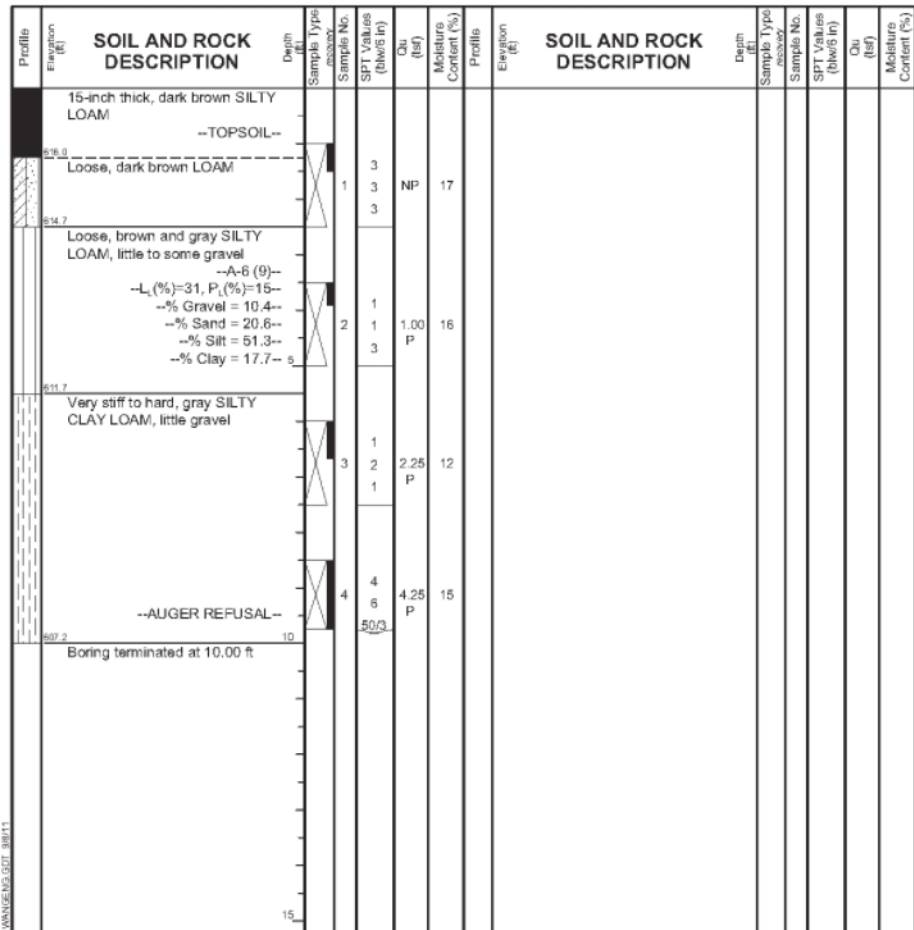
WEI Job No.: 790-36-01

Client: **TransSystems Corporation**

Project: **Illinois Route 47, Section IL 47B**

Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 617.20 ft  
North: 1760530.80 ft  
East: 956742.02 ft  
Station: 6415+95.38  
Offset: 3.70 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-20-2009	Completes Drilling	08-20-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

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1145 N Main Street  
Lombard, IL 60148  
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**BORING LOG WC30-B03** Page 1 of 1

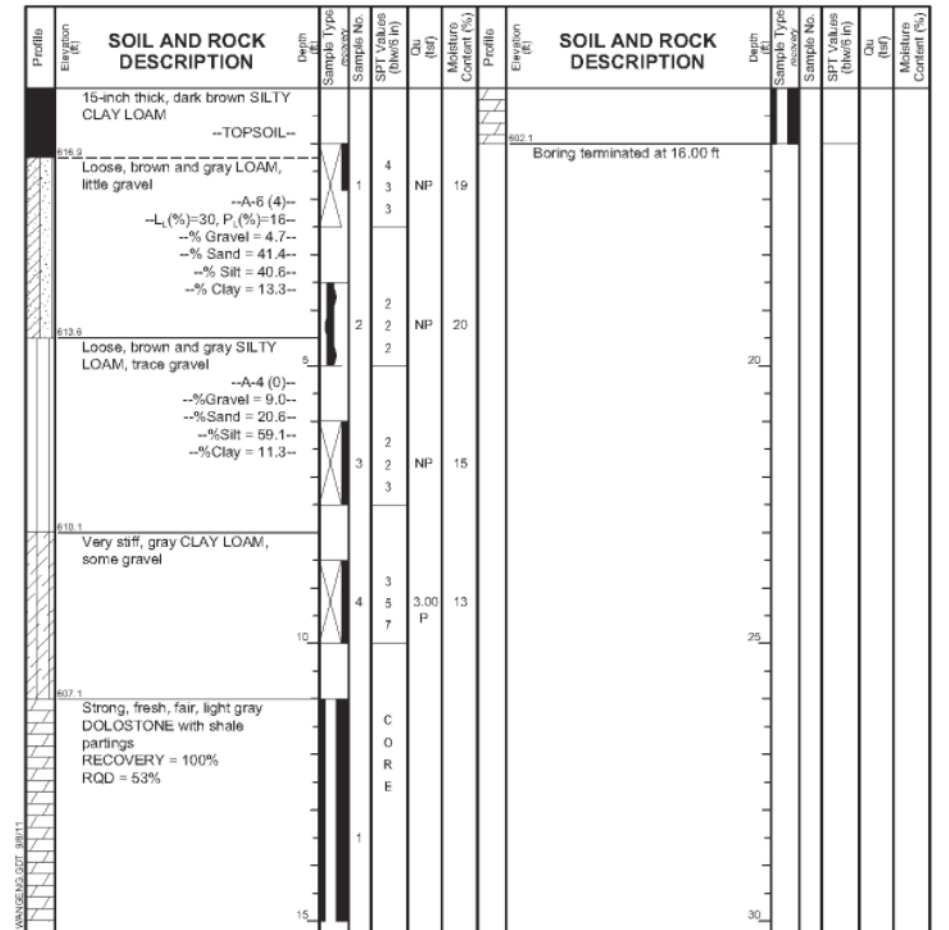
WEI Job No.: 790-36-01

Client: **TransSystems Corporation**

Project: **Illinois Route 47, Section IL 47B**

Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 618.10 ft  
North: 1760504.18 ft  
East: 956798.20 ft  
Station: 6415+59.96  
Offset: 60.40 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	08-20-2009	Completes Drilling	08-20-2009
Drilling Contractor	WTS	Drill Rig	D 120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 047-2033

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	375
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				

Benchmark: B.M. 7009. Found cut "+" north end of westerly headwall on box culvert 290' north of US Route 52, Elevation 624.56.

Existing Structure: The existing structure consists of a double 9'x7' concrete box culvert with concrete wingwalls. The culvert is approximately 84'-7" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
4. Soil Borings

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**  
Allow 50#/sq. ft. for future wearing surface.

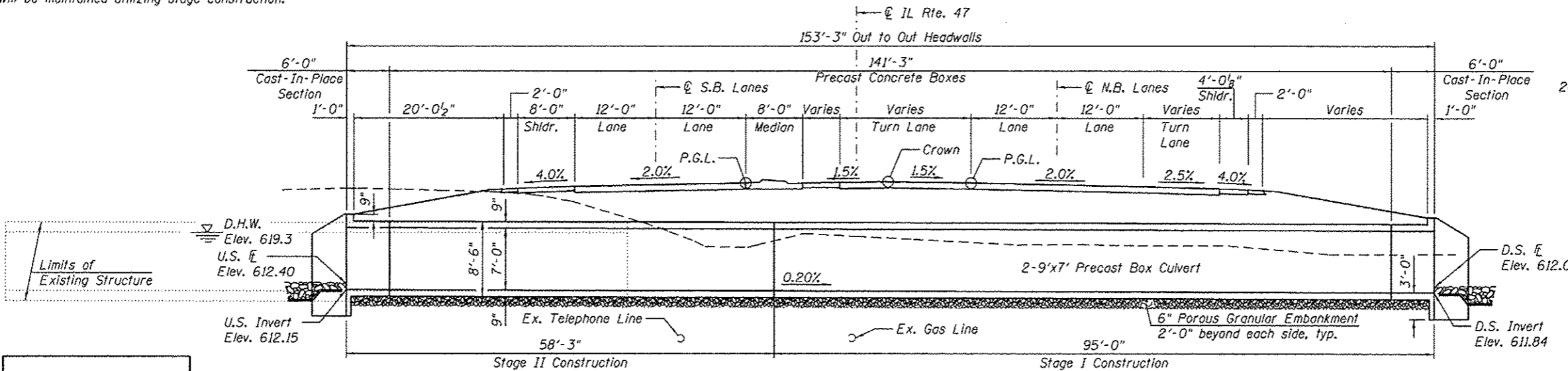
**DESIGN STRESSES**

**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST UNITS**  
f'c = 5,000 psi  
fy = 60,000 psi (Reinforcement)  
fy = 65,000 psi (Welded Wire Fabric)

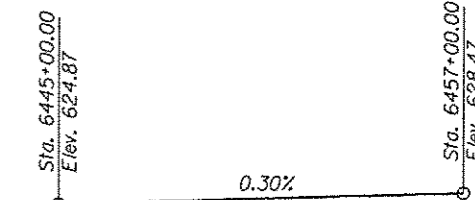
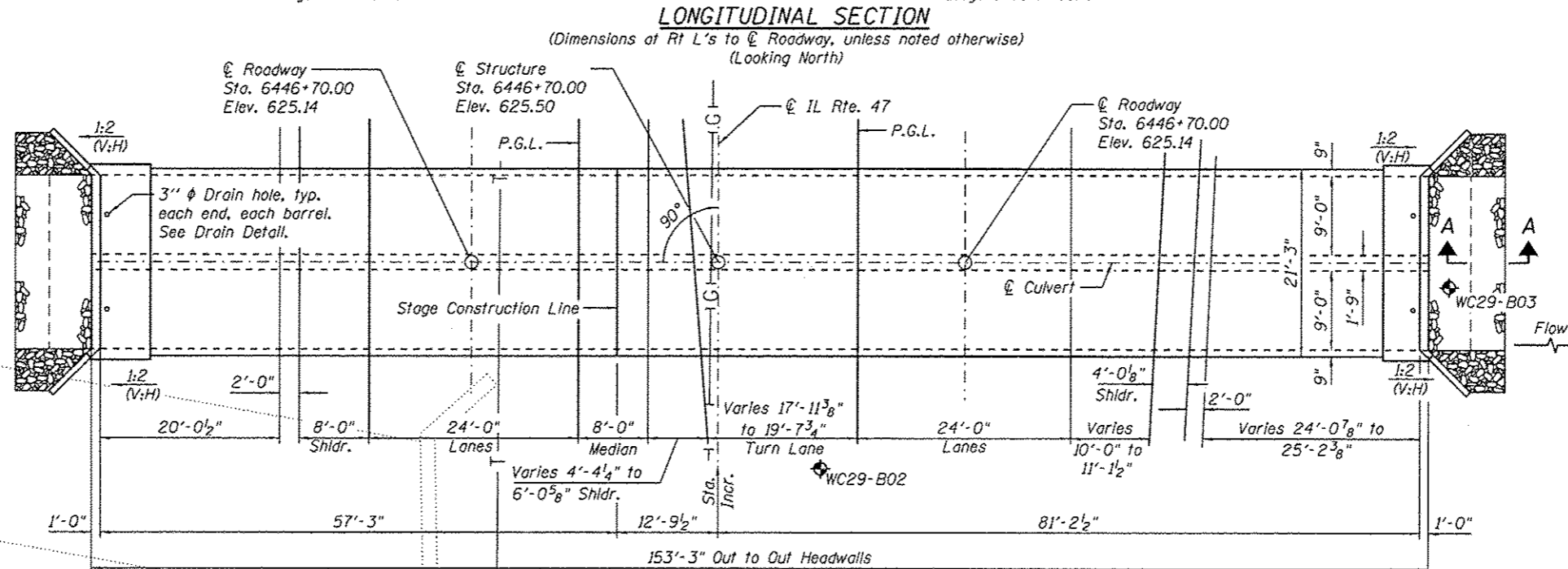
**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 4. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.

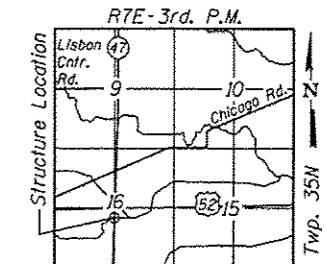


STATION 6446+70.00  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2022

**NAME PLATE**  
See Std. 515001



**PROFILE GRADE**  
(Along IL Rte 47 P.G.)



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

**IL. RTE. 47 OVER**

**LISBON CREEK**

**F.A.P. RTE. 326**

**SEC. (109, 110)R-1**

**KENDALL COUNTY**

**STATION 6446+70.00**

**STRUCTURE NO. 047-2022**

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	609.15	608.84

**WATERWAY INFORMATION**

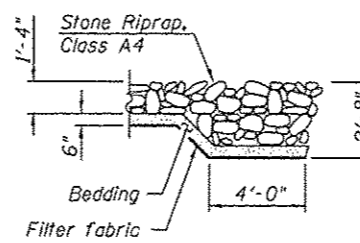
Flood		Q		Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.	
Freq. Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
10	501	116	115	618.8	0.3	0.3	619.1	619.1	
Design	50	751	122	124	619.3	0.9	0.9	620.2	
Base	100	852	122	126	619.5	1.2	1.2	620.7	
Overtopping	-	-	-	-	-	-	-	-	
Max. Calc.	500	1092	122	126	619.8	2.1	2.0	621.9	

10 year velocity through Existing Structure = 4.3 fps  
10 year velocity through Proposed Structure = 4.4 fps

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	72
Stone Riprap, Class A4	Sq. Yd.	83
Filter Fabric	Sq. Yd.	83
Removal of Existing Structures No. 4	Each	1
Reinforcement Bars	Pound	9510
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	54.2
Precast Concrete Box Culvert 9'x7'	Foot	282.5
Membrane Waterproofing for Culverts	Sq. Yd.	395

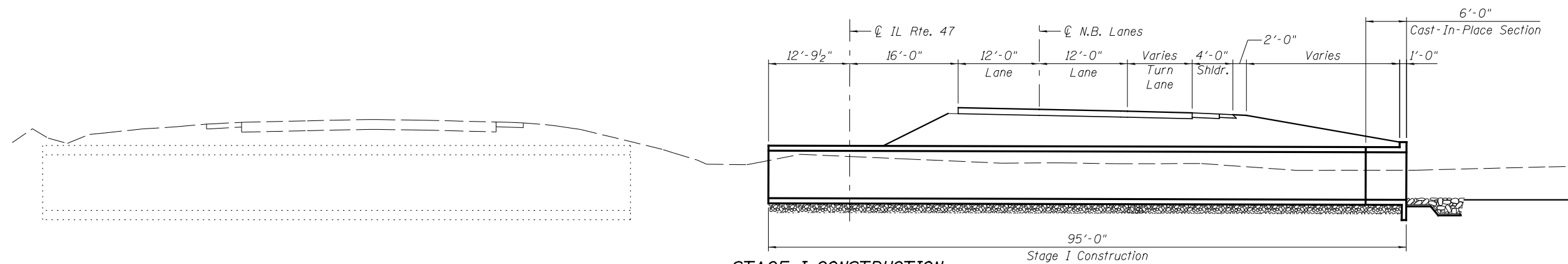
\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.



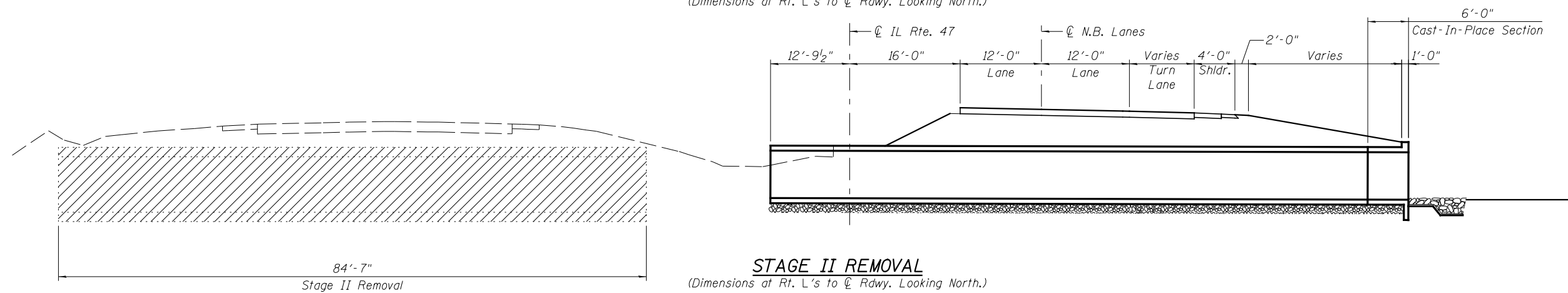
**SECTION A-A**



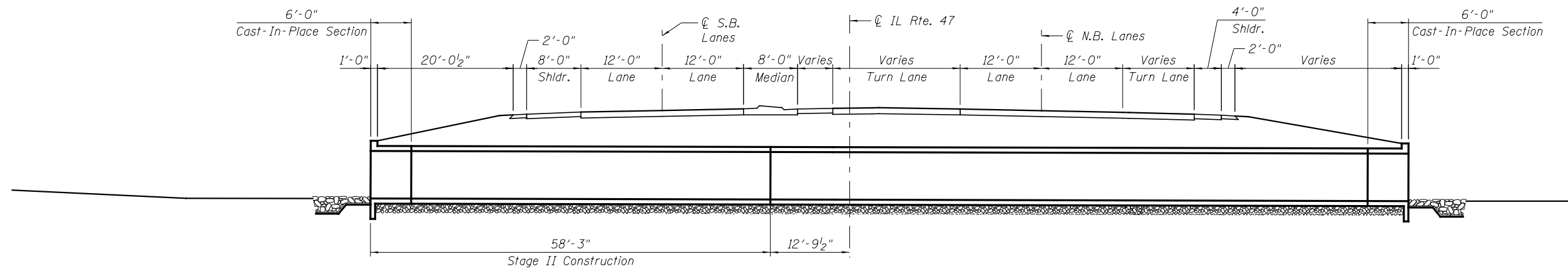
Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014  
Date 7/14/2014



**STAGE I CONSTRUCTION**  
 (Dimensions at Rt. L's to  $\bar{C}$  Rdwy. Looking North.)



**STAGE II REMOVAL**  
 (Dimensions at Rt. L's to  $\bar{C}$  Rdwy. Looking North.)



**STAGE II CONSTRUCTION**  
 (Dimensions at Rt. L's to  $\bar{C}$  Rdwy. Looking North.)

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT

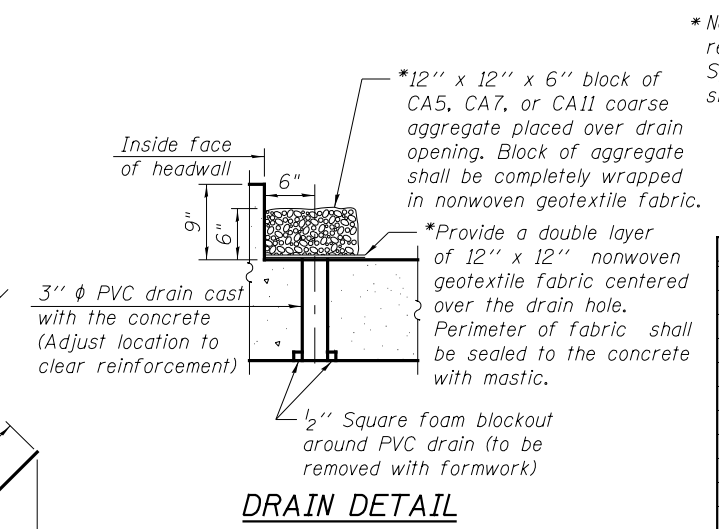
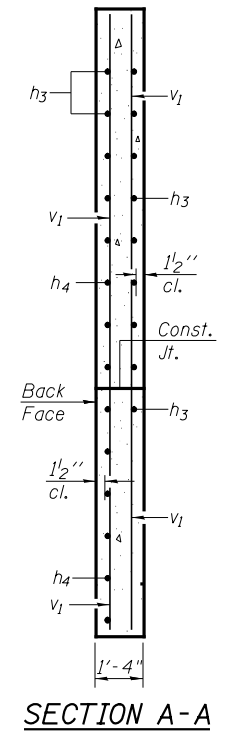
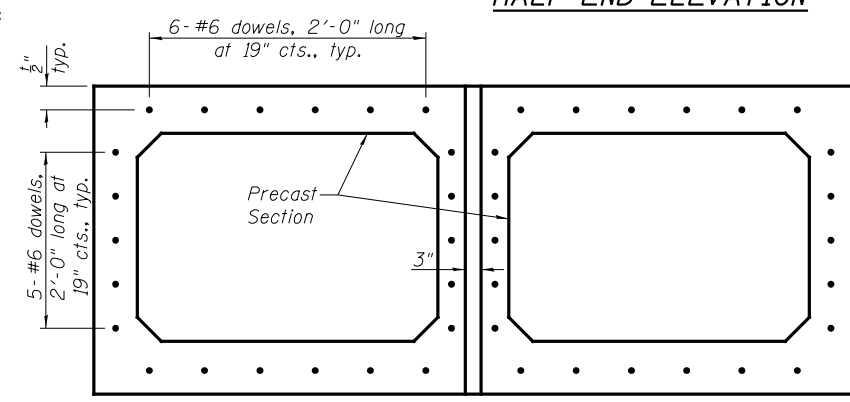
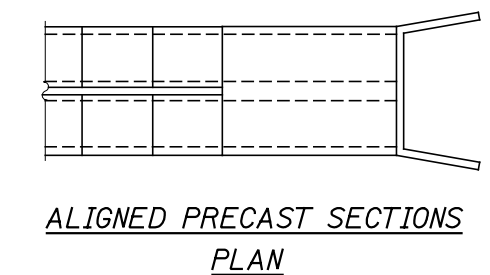
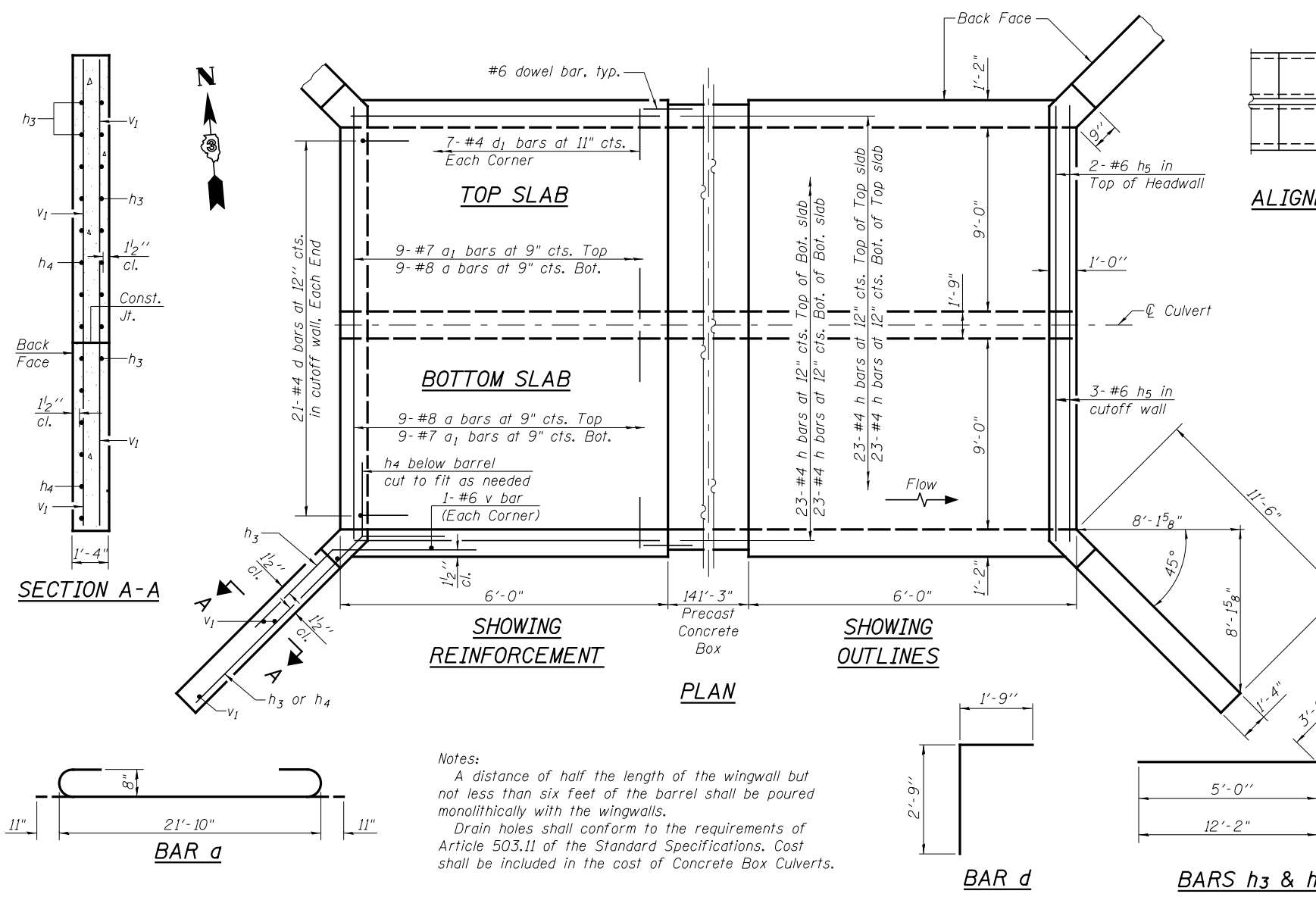
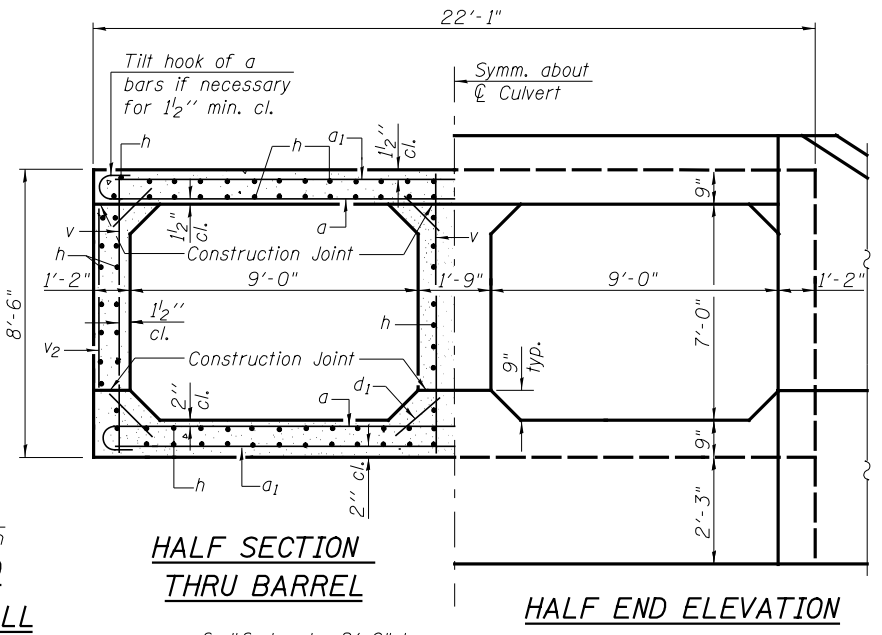
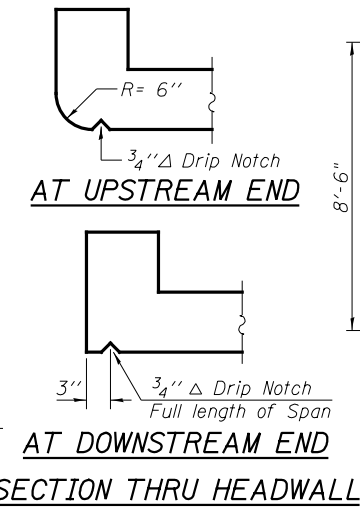
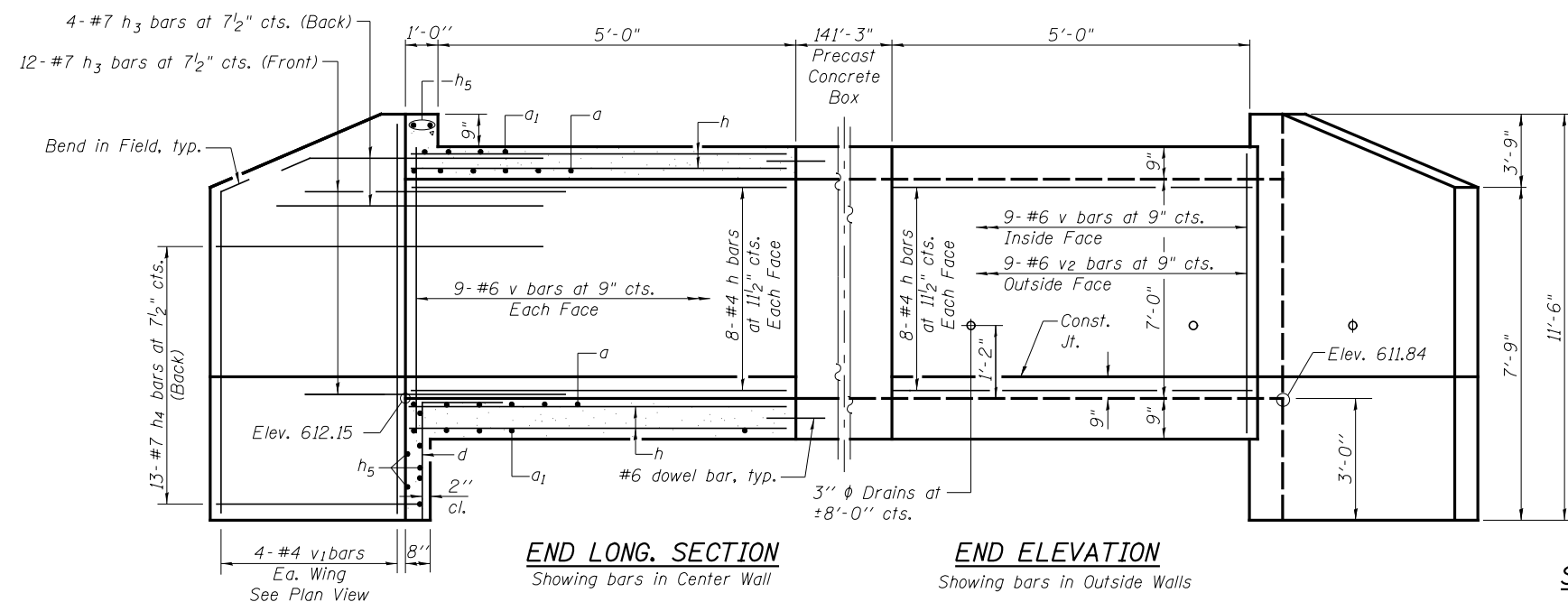


**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 047-2022**

SHEET NO. 2 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	377
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				

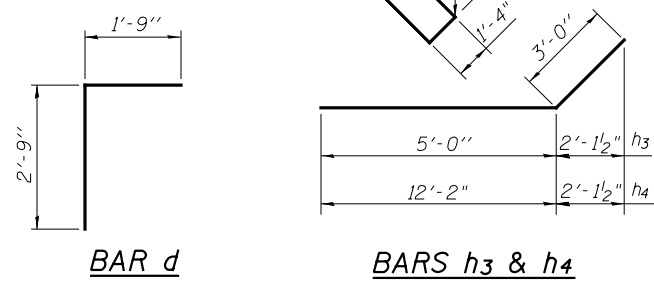
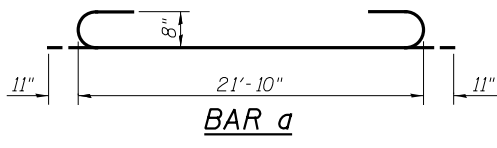


\*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a	36	#8	23'-8"	C	
a1	36	#7	21'-10"	—	
d	42	#4	4'-6"	Γ	
d1	112	#4	1'-2"	—	
h	280	#4	5'-8"	—	
h3	64	#7	8'-0"	—	
h4	52	#7	15'-2"	—	
h5	10	#6	21'-6"	—	
v	76	#6	8'-2"	—	
v1	16	#4	11'-2"	—	
v2	36	#6	5'-11"	—	
Concrete Box Culverts				Cu. Yd.	54.2
Reinforcement Bars				Pound	9510

Notes:  
 A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
 Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.



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Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC29-B01**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 623.28 ft  
North: 1763566.00 ft  
East: 956699.44 ft  
Station: 6446+20.30  
Offset: 69.03 LT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
622.2	13-inch thick, ASPHALT --PAVEMENT--							622.2	Medium stiff, gray CLAY LOAM, little gravel						
	Loose to medium dense, light brown fine to medium SAND, little gravel --FILL--	1 11 11		8 11						4 8 5			0.98 B	21	
		2 2 7		2 2 7						2 3 4			0.82 B	17	
		3 7 10		3 7 10						1 3 5			1.72 B	17	
		4 4 5		4 4 5						3 4 7			5.56 B	19	
611.8	Very stiff, brown to gray CLAY	5 4 6		3 4 6		3.61 B				5 8 12			5.74 B	20	
		6 3 7		6 3 7		2.54 B				12 36 54			NP	17	

**GENERAL NOTES**  
Begin Drilling: 12-11-2009  
Completes Drilling: 12-11-2009  
Drilling Contractor: WTS  
Drill Rig: B-57 TMR  
Driller: K&J  
Logger: B. Wilson  
Checked by: C. Marin  
Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion...

**WATER LEVEL DATA**  
While Drilling: 8.50 ft  
At Completion of Drilling: WASHED  
Time After Drilling: NA  
Depth to Water: NA

Boring terminated at 30.00 ft

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Lombard, IL 60148  
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Fax: 630 953-9938

**BORING LOG WC29-B02**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 618.69 ft  
North: 1763563.72 ft  
East: 956734.02 ft  
Station: 6446+18.99  
Offset: 15.81 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
622.2	6-inch thick, dark brown CLAY LOAM --TOPSOIL--							622.2	Medium stiff, gray CLAY, little gravel						
	Medium stiff to very stiff, brown and gray SILTY CLAY LOAM, little gravel	1 4 4		1 4 4		0.75 P				3 4 5			2.54 B	16	
		2 2 3		2 2 3		1.25 P				2 4 6			2.87 B	17	
		3 3 5		3 3 5		1.72 B				3 7 11			4.59 B	19	
		4 4 7		4 4 7		2.87 B				19 31 41			NP	14	
		5 5 7		5 5 7		2.13 B				13 10 8			1.72 B	15	
		6 4 6		6 4 6		NP				3 6 10			2.71 B	12	

**GENERAL NOTES**  
Begin Drilling: 01-20-2010  
Completes Drilling: 01-20-2010  
Drilling Contractor: WTS  
Drill Rig: D 50 ATV  
Driller: K&J  
Logger: H. Suhail  
Checked by: C. Marin  
Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion...

**WATER LEVEL DATA**  
While Drilling: DRY  
At Completion of Drilling: DRY  
Time After Drilling: NA  
Depth to Water: NA

Boring terminated at 30.00 ft

**Wang Engineering**  
wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC29-B03**  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 618.83 ft  
North: 1763612.17 ft  
East: 956851.70 ft  
Station: 6446+68.84  
Offset: 82.25 RT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Moisture Content (%)
618.1	9-inch thick, dark brown CLAY LOAM --TOPSOIL--							618.1	Medium stiff, brown and gray SILTY CLAY						
		1 2 2		1 2 2		0.50 P				1 2 6			4.19 B	19	
		2 2 3		2 2 3		1.80 B				2 3 5			1.80 B	19	
		3 4 7		3 4 7		3.28 B				2 5 9			3.44 B	19	
		4 5 7		4 5 7		2.30 B				17 33 44			NP	13	
		5 6 8		5 6 8		4.10 B				9 11 10			2.30 P	12	
		6 4 5		6 4 5		2.13 B				5 12 20			NP	16	

**GENERAL NOTES**  
Begin Drilling: 01-20-2010  
Completes Drilling: 01-20-2010  
Drilling Contractor: WTS  
Drill Rig: D 50 ATV  
Driller: K&J  
Logger: H. Suhail  
Checked by: C. Marin  
Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion...

**WATER LEVEL DATA**  
While Drilling: 8.00 ft  
At Completion of Drilling: DRY  
Time After Drilling: NA  
Depth to Water: NA

Boring terminated at 30.00 ft

REVISION	USER NAME	DESIGNED	PSS
REVISION	FILE NAME	CHECKED	VPT
REVISION	PLOT SCALE	DRAWN	AJF
REVISION	PLOT DATE	CHECKED	VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 047-2022

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	379
CONTRACT NO. 66B84				

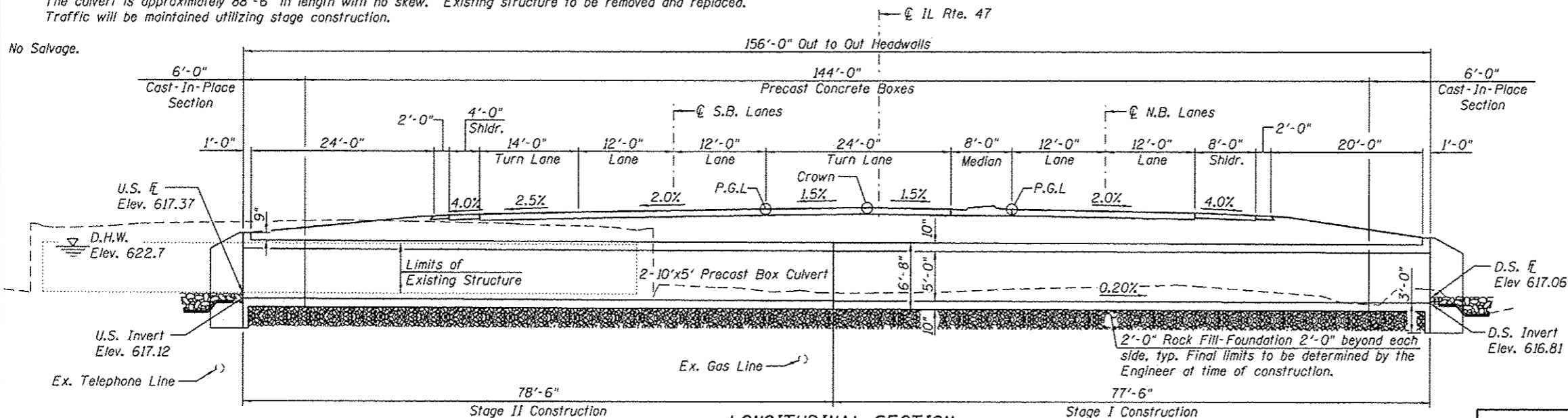
SHEET NO. 4 OF 4 SHEETS

ILLINOIS FED. AID PROJECT

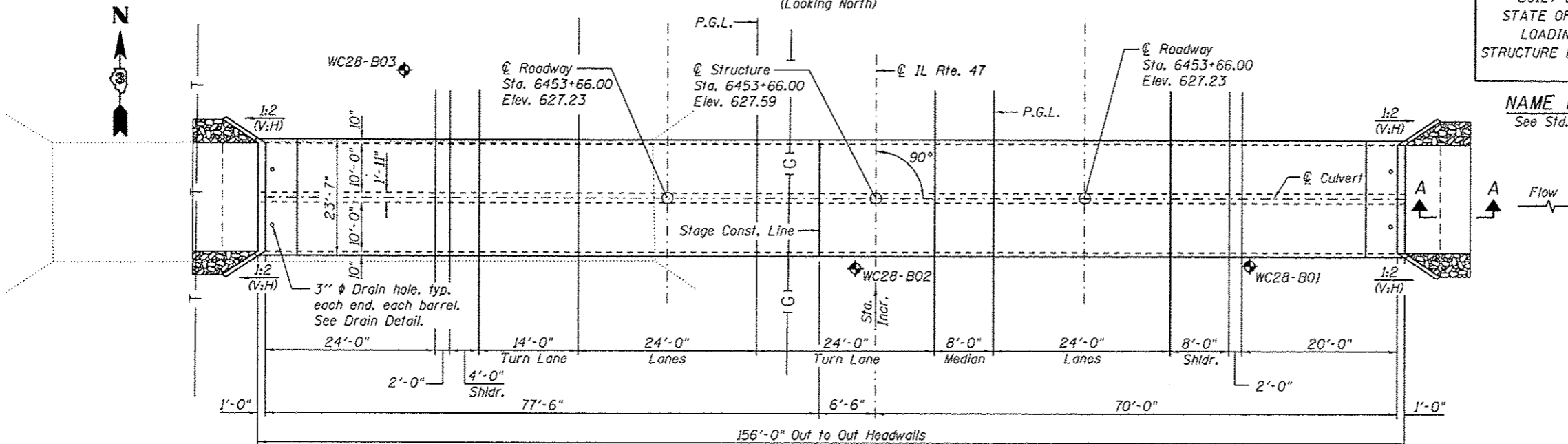
Benchmark: B.M. 7009. Found cut "x" north end of westerly headwall on box culvert 290' north of US Route 52. Elevation = 624.56.

Existing Structure: The existing structure consists of a double 10'x5' precast concrete box culvert with concrete wingwalls. The culvert is approximately 88'-6" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.



**LONGITUDINAL SECTION**  
(Dimensions at Rt. L's to  $\varnothing$  Roadway, unless noted otherwise)  
(Looking North)



**PLAN**

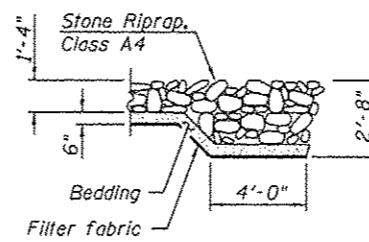
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Rock Fill-Foundation	Ton	598
Stone Riprap, Class A4	Sq. Yd.	68
Filter Fabric	Sq. Yd.	68
Removal of Existing Structures No. 5	Each	1
Reinforcement Bars	Pound	8240
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	39.2
Precast Concrete Box Culvert 10'x5'	Foot	288.0
*Membrane Waterproofing for Culverts	Sq. Yd.	442

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	614.12	613.81

\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.



**SECTION A-A**



Vincent P. Tabor 7/14/2014  
Date

Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
4. Soil Borings

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

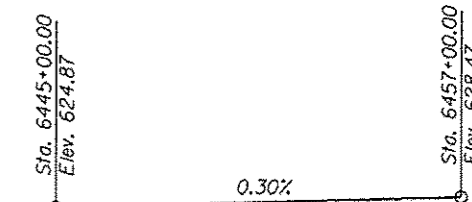
$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 4. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.

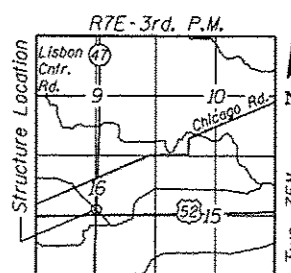
STATION 6453+66.00  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2030

**NAME PLATE**  
See Std. 515001



**PROFILE GRADE**

(Along IL Rte. 47 P.G.)



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

IL. RTE. 47 OVER

DRAINAGE DITCH

F.A.P. RTE. 326

SEC-(109,110)R-1

KENDALL COUNTY

STATION 6453+66.00

STRUCTURE NO. 047-2030

REVISION	USER NAME	DESIGNED	FILE NAME	CHECKED	PLOT SCALE	DRAWN	PLOT DATE	CHECKED
REVISD -		PSS		VPT		AJF		VPT
REVISD -								
REVISD -								

**ENGINEERING**  
LIN ENGINEERING LTD.  
Consulting Engineers  
Springfield, Illinois

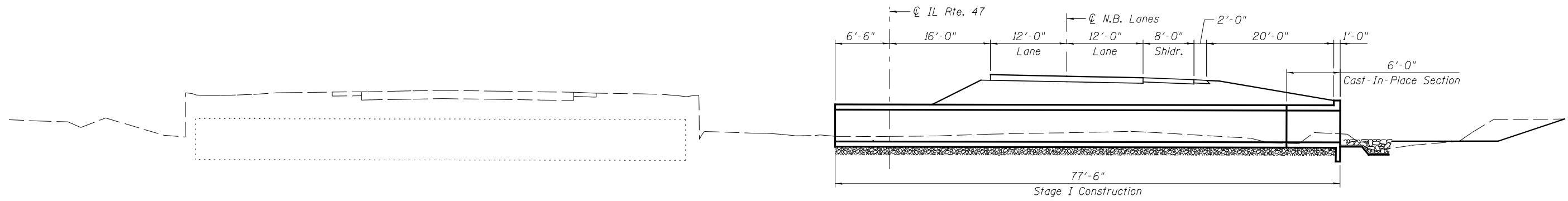
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 047-2030

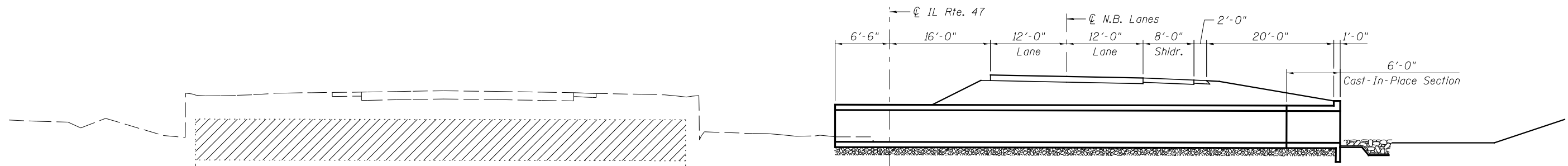
SHEET NO. 1 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	380
				CONTRACT NO. 66884
ILLINOIS FED. AID PROJECT				

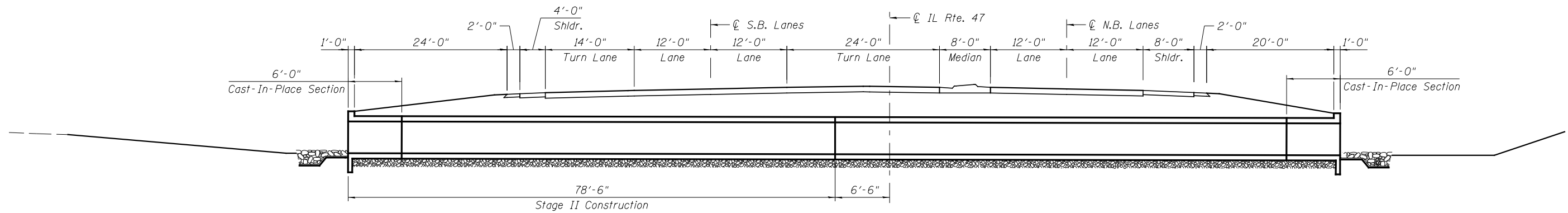




**STAGE I CONSTRUCTION**  
 (Dimensions at Rt. L's to  $\varnothing$  Rdwy. Looking North.)



**STAGE II REMOVAL**  
 (Dimensions at Rt. L's to  $\varnothing$  Rdwy. Looking North.)



**STAGE II CONSTRUCTION**  
 (Dimensions at Rt. L's to  $\varnothing$  Rdwy. Looking North.)

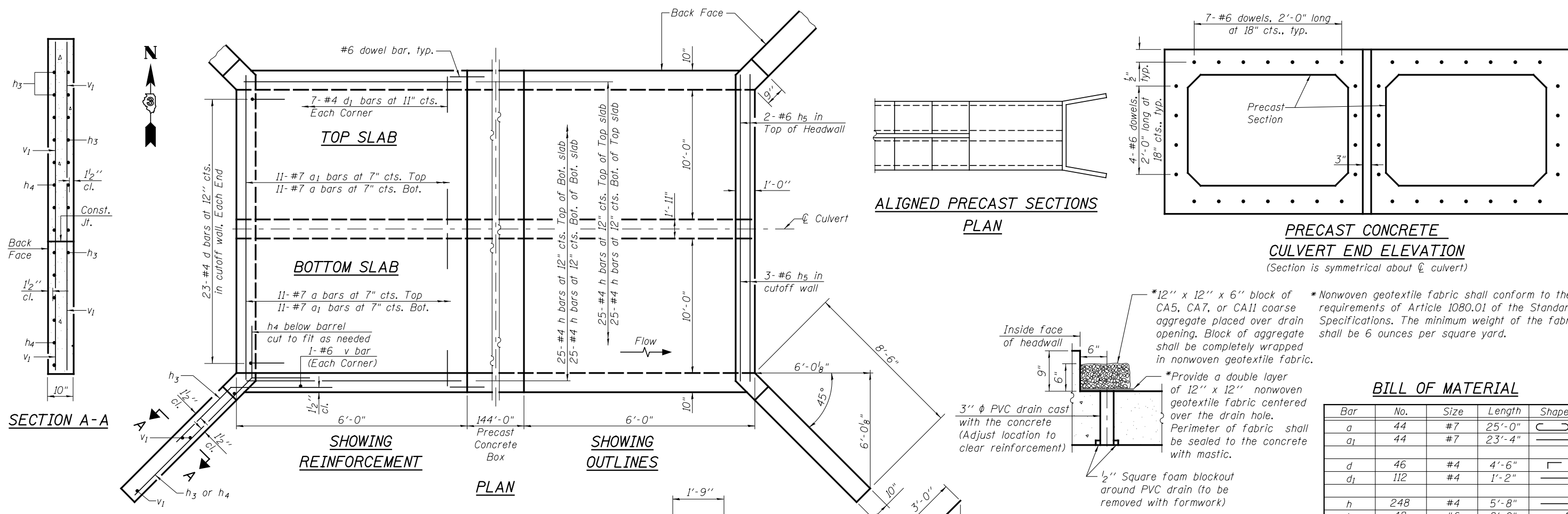
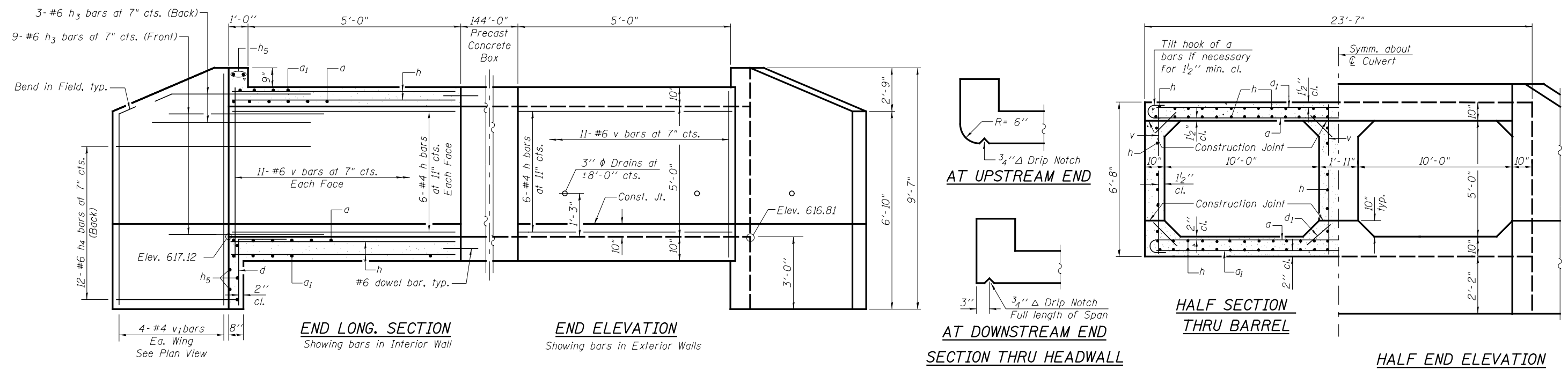
REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



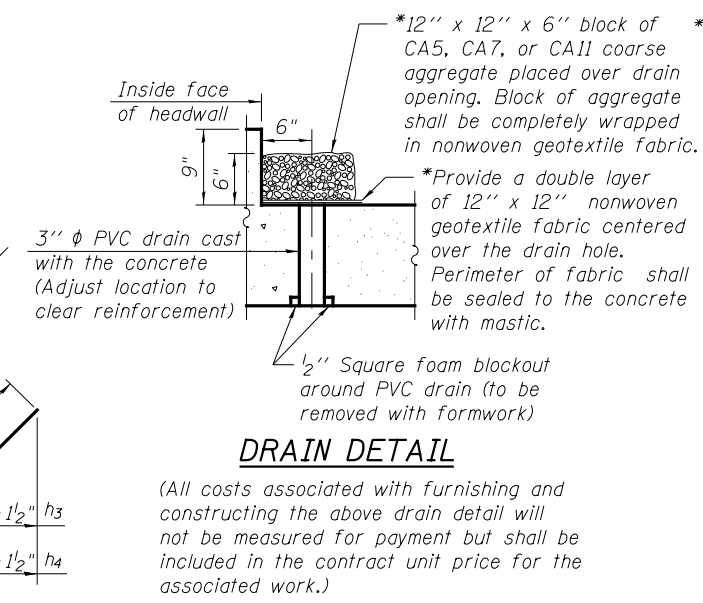
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 047-2030**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	381
CONTRACT NO. 66B84				



**Notes:**  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.



\*12" x 12" x 6" block of CA5, CA7, or CA11 coarse aggregate placed over drain opening. Block of aggregate shall be completely wrapped in nonwoven geotextile fabric.  
\*Provide a double layer of 12" x 12" nonwoven geotextile fabric centered over the drain hole. Perimeter of fabric shall be sealed to the concrete with mastic.  
\*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a	44	#7	25'-0"	C	
a <sub>1</sub>	44	#7	23'-4"	—	
d	46	#4	4'-6"	L	
d <sub>1</sub>	112	#4	1'-2"	—	
h	248	#4	5'-8"	—	
h <sub>3</sub>	48	#6	8'-0"	—	
h <sub>4</sub>	48	#6	11'-8"	—	
h <sub>5</sub>	10	#6	22'-3"	—	
v	92	#6	6'-4"	—	
v <sub>1</sub>	16	#4	9'-3"	—	
Concrete Box Culverts				Cu. Yd.	39.2
Reinforcement Bars				Pound	8240

**Wang Engineering**  
wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC28-B01** Page 1 of 1

WEI Job No.: 790-36-01

Datum: NGVD  
Elevation: 619.32 ft  
North: 1764297.39 ft  
East: 956858.95 ft  
Station: 6453+54.07  
Offset: 75.15 RT

Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
619.5	10-inch thick, dark brown SILTY LOAM --TOPSOIL-- Very loose, brown SILTY LOAM	1	1	1	NP	23		603.8	Very stiff, gray SILTY LOAM to SILTY CLAY LOAM	7	7	7	2.87	14	
615.9	Stiff, brown and gray SILTY CLAY, little gravel	2	3	5	1.50	18		601.3	Very stiff to hard, gray SILTY CLAY --A-6 (23)-- --L <sub>c</sub> (%)=39, P <sub>c</sub> (%)=17-- --% Gravel = 0.0-- --% Sand = 0.5-- --% Silt = 50.9-- --% Clay = 48.6--	6	6	6	3.20	21	
612.3	Medium dense to dense, gray SILT	3	5	6	NP	20		598.6	Dense to very dense, gray SILTY LOAM, some gravel and boulders	8	8	11	4.51	19	
	--A-4 (0)-- --% Gravel = 0.0-- --% Sand = 0.5-- --% Silt = 95.1-- --% Clay = 4.4--	4	18	20	NP	20		595.6	Dense to very dense, gray SILT, little gravel	10	10	12	NP	10	
		6	11	14	NP	15		593.8	Dense to very dense, gray SILT	11	11	15	NP	9	

**GENERAL NOTES**

Boring terminated at 30.00 ft

**WATER LEVEL DATA**

Begin Drilling 09-09-2009 Completes Drilling 09-09-2009 While Drilling  DRY

Drilling Contractor WTS Drill Rig D 120 ATV At Completion of Drilling  WASHED

Driller K&J Logger B. Wilson Checked by C. Marin Time After Drilling NA

Drilling Method 3.25 IDA HSA; Boring backfilled upon completion... Depth to Water  NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering**  
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1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC28-B02** Page 1 of 1

WEI Job No.: 790-36-01

Datum: NGVD  
Elevation: 621.35 ft  
North: 1764285.39 ft  
East: 956779.03 ft  
Station: 6453+40.40  
Offset: 4.48 LT

Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
620.4	12-inch thick, GRAVELLY SILT --FILL--	1	3	3	1.00	35		605.9	Very stiff to hard, gray SILTY CLAY LOAM, trace gravel	7	7	17	4.55	15	
618.9	Stiff, dark brown CLAY LOAM, trace gravel --BURIED TOPSOIL--	1	3	3	1.00	35		601.3	Very stiff to hard, gray SILTY CLAY --A-6 (18)-- --L <sub>c</sub> (%)=38, P <sub>c</sub> (%)=14-- --% Gravel=2.8-- --% Sand=16.3-- --% Silt=59.5-- --% Clay=21.5--	2	2	2	23		
615.9	Soft to stiff, brown and gray SILTY CLAY LOAM, little gravel	3	2	2	NP	23		598.4	Hard, gray CLAY	4	4	4	1.89	21	
		5	11	18	NP	20		595.9	Dense to very dense, gray SILT	10	10	12	NP	10	
		6	11	14	NP	15		593.8	Dense to very dense, gray SILT	11	11	15	NP	9	

**GENERAL NOTES**

Boring terminated at 30.00 ft

**WATER LEVEL DATA**

Begin Drilling 09-09-2009 Completes Drilling 09-09-2009 While Drilling  DRY

Drilling Contractor WTS Drill Rig D 120 ATV At Completion of Drilling  DRY

Driller K&J Logger B. Wilson Checked by C. Marin Time After Drilling NA

Drilling Method 3.25 IDA HSA; Boring backfilled upon completion... Depth to Water  NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering**  
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1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC28-B03** Page 1 of 1

WEI Job No.: 790-36-01

Datum: NGVD  
Elevation: 624.89 ft  
North: 1764330.81 ft  
East: 956715.60 ft  
Station: 6453+84.27  
Offset: 68.42 LT

Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
624.8	14-inch thick, ASPHALT --PAVEMENT--	1	9	9	NP	3		608.4	Dense to very dense, gray SILT	7	7	17	NP	15	
620.7	Loose to medium dense, brown, fine to coarse GRAVELLY SAND --FILL--	1	9	9	NP	3		601.3	Very stiff to hard, gray CLAY to SILTY CLAY	7	7	17	NP	15	
618.4	Medium stiff, brown and gray LOAM, little gravel --FILL-- --A-6 (10)-- --L <sub>c</sub> (%)=35, P <sub>c</sub> (%)=14-- --% Gravel=6.1-- --% Sand=30.4-- --% Silt=45.5-- --% Clay=18.1--	3	1	2	0.75	21		598.4	Very stiff to hard, gray CLAY to SILTY CLAY	3	3	3	2.87	22	
615.1	Soft, brown and gray SILTY LOAM --A-4 (6)-- --L <sub>c</sub> (%)=26, P <sub>c</sub> (%)=18-- --% Gravel=2.2-- --% Sand=8.6-- --% Silt=75.8-- --% Clay=13.3--	4	2	2	2.00	17		595.6	Dense to very dense, gray SILT	10	10	12	NP	10	
611.9	Very stiff, brown to gray SILTY CLAY	6	4	4	2.38	21		593.8	Very dense, gray SILT	11	11	15	NP	9	

**GENERAL NOTES**

Boring terminated at 30.00 ft

**WATER LEVEL DATA**

Begin Drilling 12-11-2009 Completes Drilling 12-11-2009 While Drilling  DRY

Drilling Contractor WTS Drill Rig B-57 TMR At Completion of Drilling  DRY

Driller K&J Logger B. Wilson Checked by C. Marin Time After Drilling NA

Drilling Method 3.25 IDA HSA; Boring backfilled upon completion... Depth to Water  NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Benchmark: B.M. 7008. Found cut "+" north end of easterly headwall on box culvert 1385' south of Lisbon Center Road, Elevation 635.44.

Existing Structure: The existing structure consists of a double 7'x6' concrete box culvert with concrete wingwalls. The culvert is approximately 60'-0" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
- 4-5. Soil Borings

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

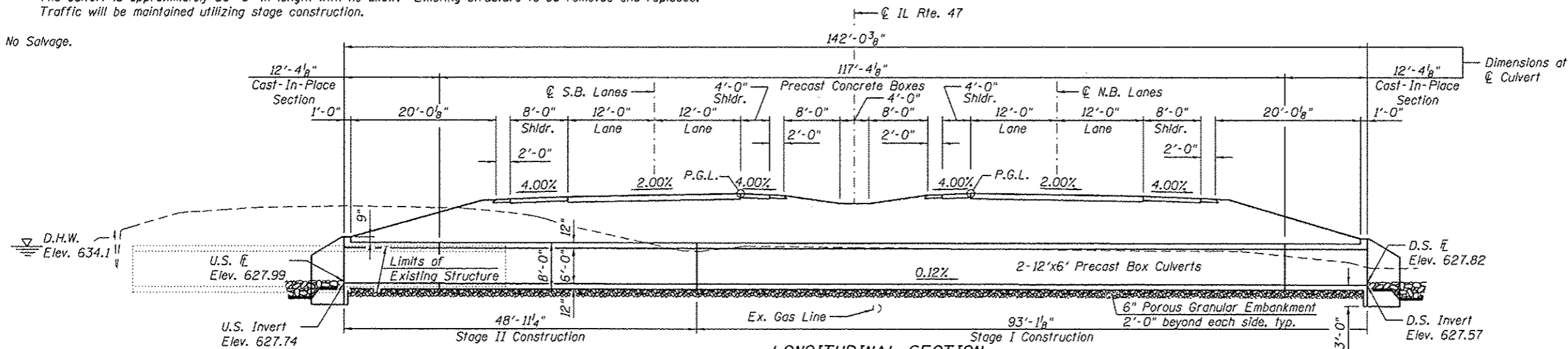
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

**GENERAL NOTES**

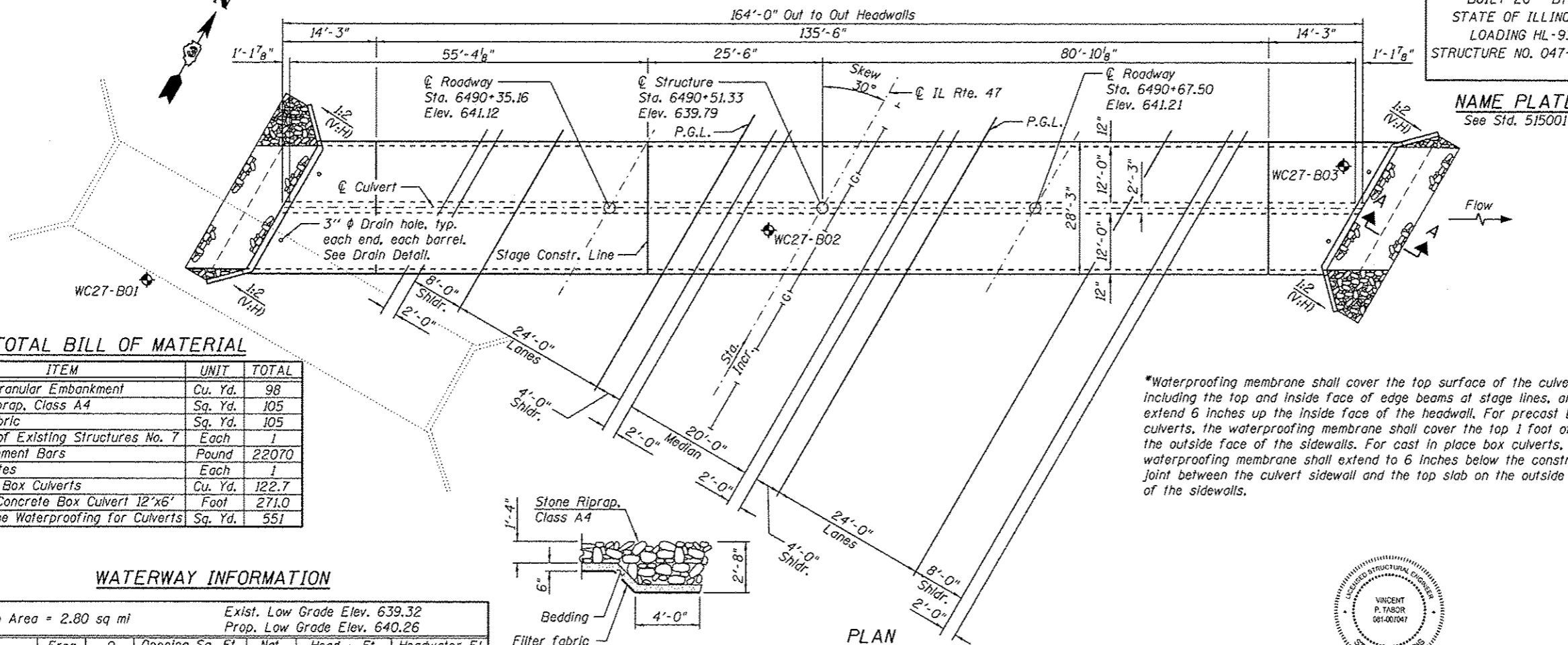
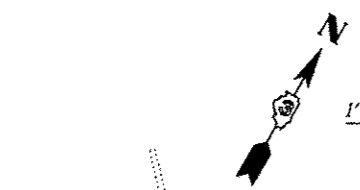
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 5. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



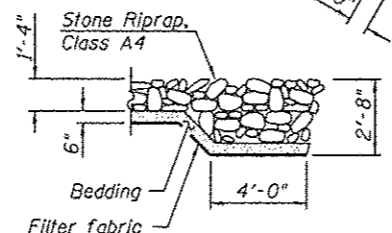
**LONGITUDINAL SECTION**  
 (Dimensions at Rt L's to C Roadway, unless noted otherwise)  
 (Looking North)

STATION 6490+51.33  
 BUILT 20 BY  
 STATE OF ILLINOIS  
 LOADING HL-93  
 STRUCTURE NO. 047-2032

**NAME PLATE**  
 See Std. 515001



**PLAN**

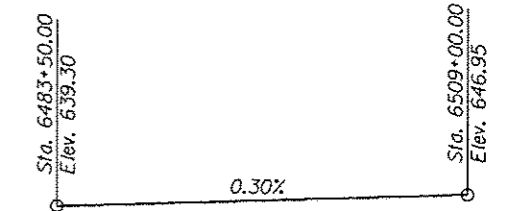


**SECTION A-A**

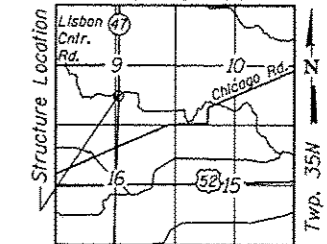
\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

**PROFILE GRADE**

(Along IL Rte. 47 P.G.)



**R7E-3rd. P.M.**



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

**IL RTE. 47 OVER  
 DRAINAGE DITCH  
 F.A.P. RTE. 326  
 SEC-(109, 110)R-1  
 KENDALL COUNTY  
 STATION 6490+51.33  
 STRUCTURE NO. 047-2032**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	98
Stone Riprap, Class A4	Sq. Yd.	105
Filter Fabric	Sq. Yd.	105
Removal of Existing Structures No. 7	Each	1
Reinforcement Bars	Pound	22070
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	122.7
Precast Concrete Box Culvert 12'x6'	Foot	271.0
Membrane Waterproofing for Culverts	Sq. Yd.	551

**WATERWAY INFORMATION**

Flood		Q		Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.	
Freq. Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
10	335	84	118	633.9	0.2	0.0	634.1	633.9	
Design	504	84	120	634.1	0.6	0.1	634.7	634.2	
Base	572	84	120	634.3	1.1	0.5	635.4	634.8	
Overlapping	-	-	-	-	-	-	-	-	
Max. Calc.	500	734	84	120	634.5	1.9	1.0	636.4	

10 year velocity through Existing Structure = 4.0 fps  
 10 year velocity through Proposed Structure = 2.8 fps

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	624.74	624.57

Vincent P. Tabor 7/14/2014  
 Vincent P. Tabor  
 Licensed Structural Engineer  
 State of Illinois No. 081-007047  
 Expires 11/30/2014

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REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



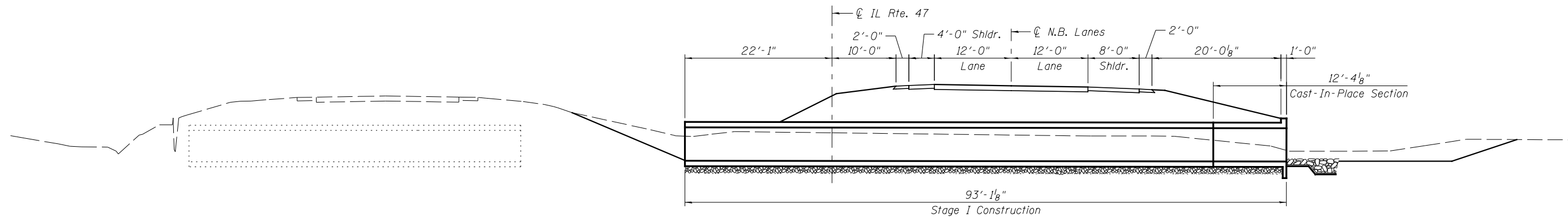
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION  
 STRUCTURE NO. 047-2032**

SHEET NO. 1 OF 5 SHEETS

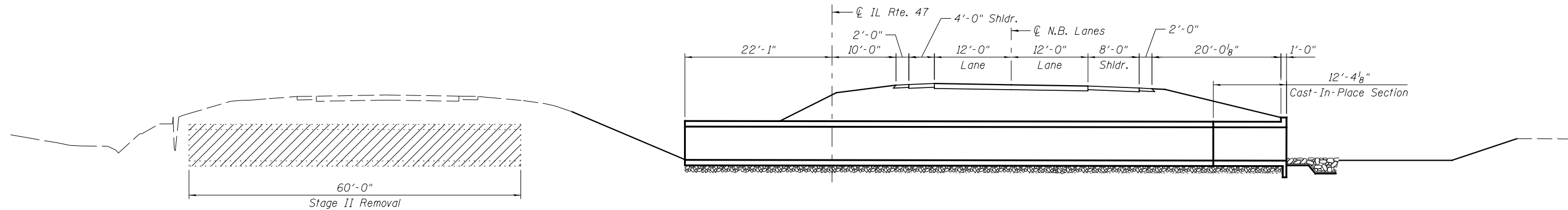
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	384

CONTRACT NO. 66884  
 ILLINOIS FED. AID PROJECT



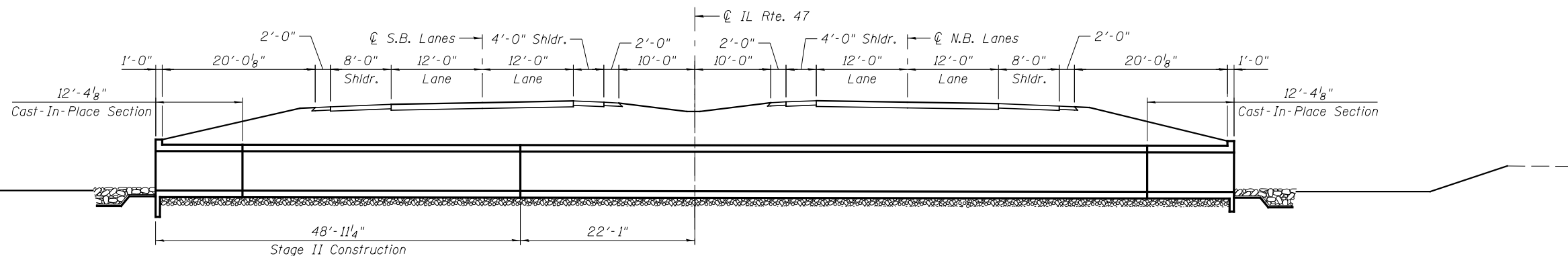
**STAGE I CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



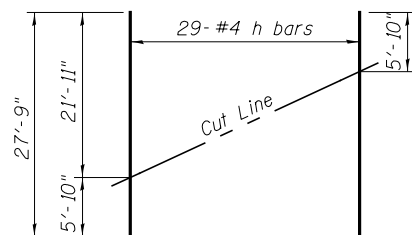
**STAGE II REMOVAL**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



**FIELD CUTTING DIAGRAM #1**

Order h bars full length. Cut as shown and use remainder of bars in opposite end.

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



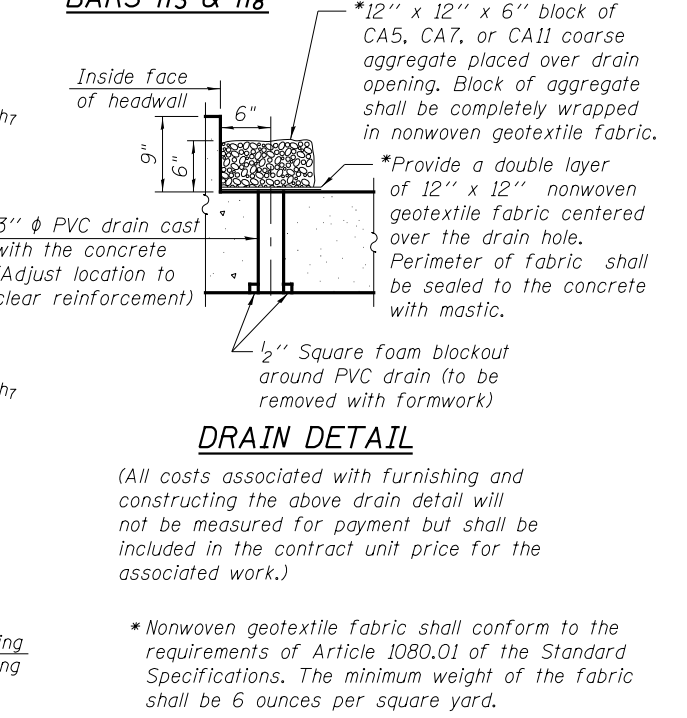
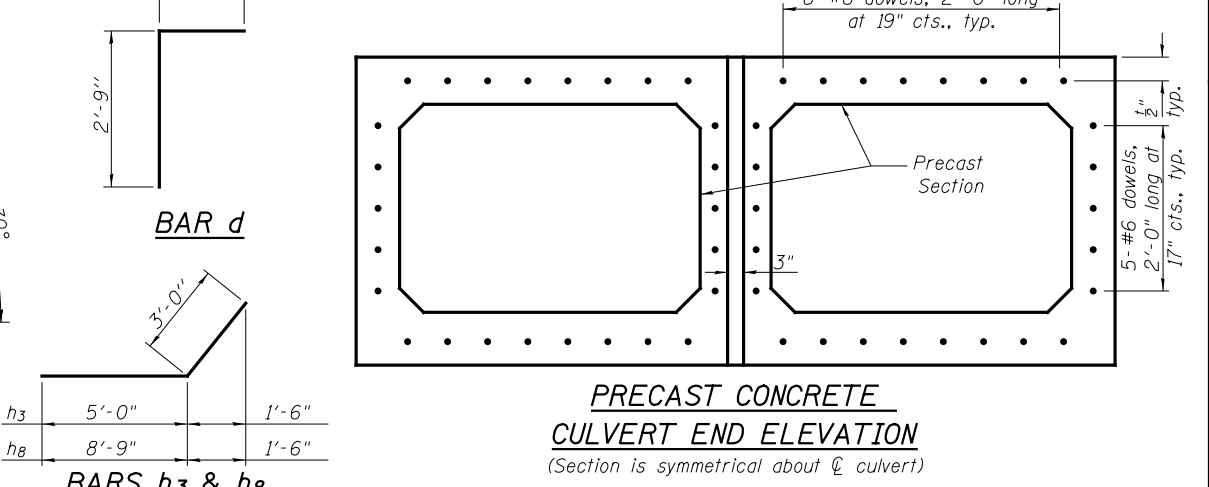
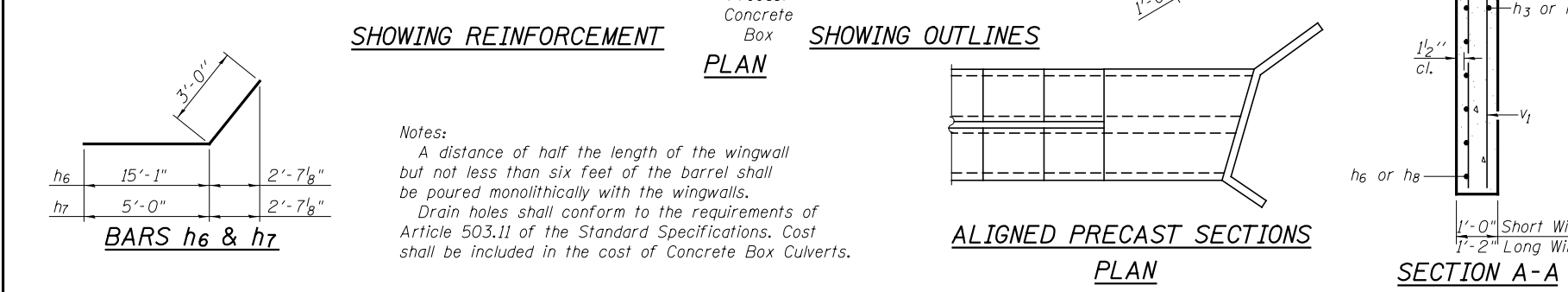
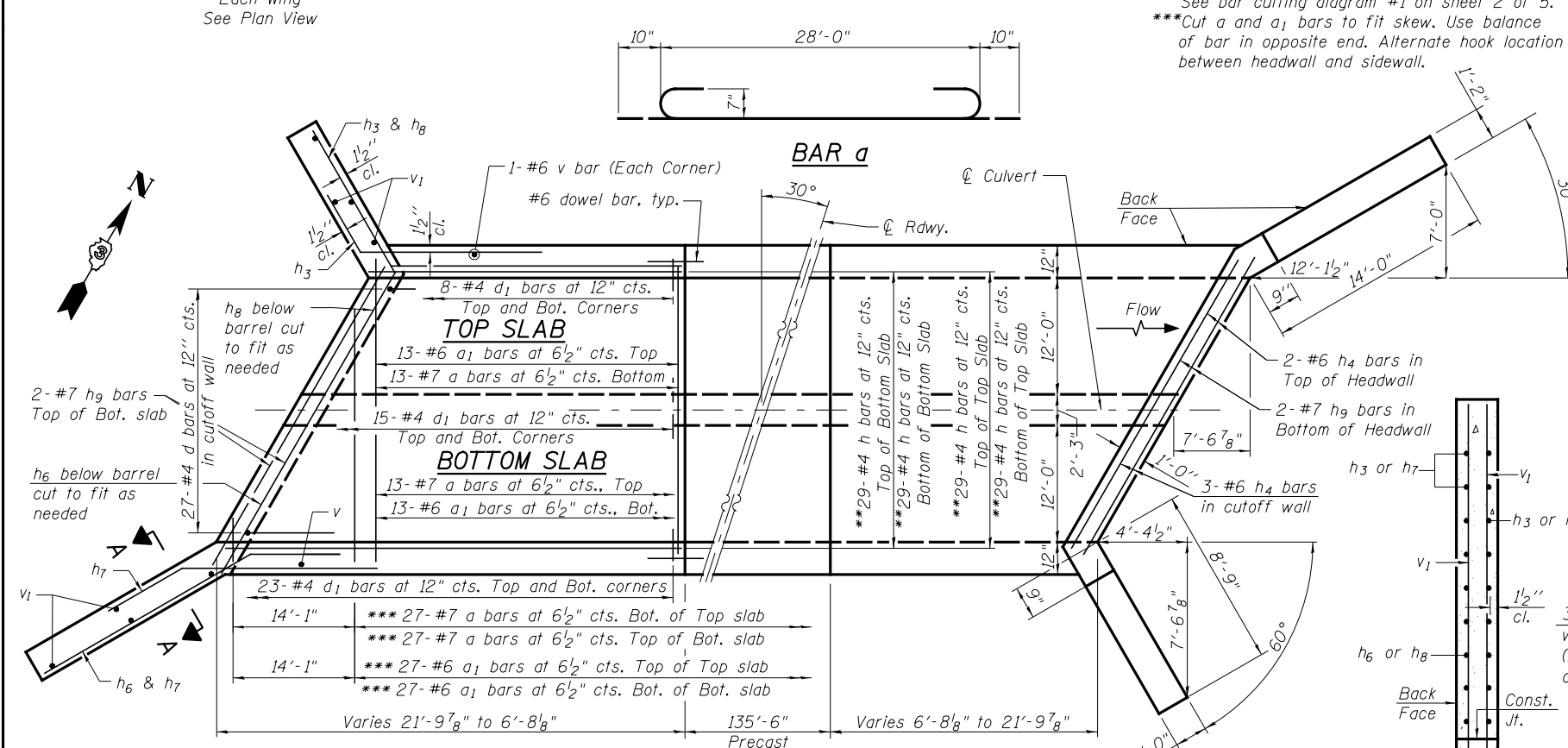
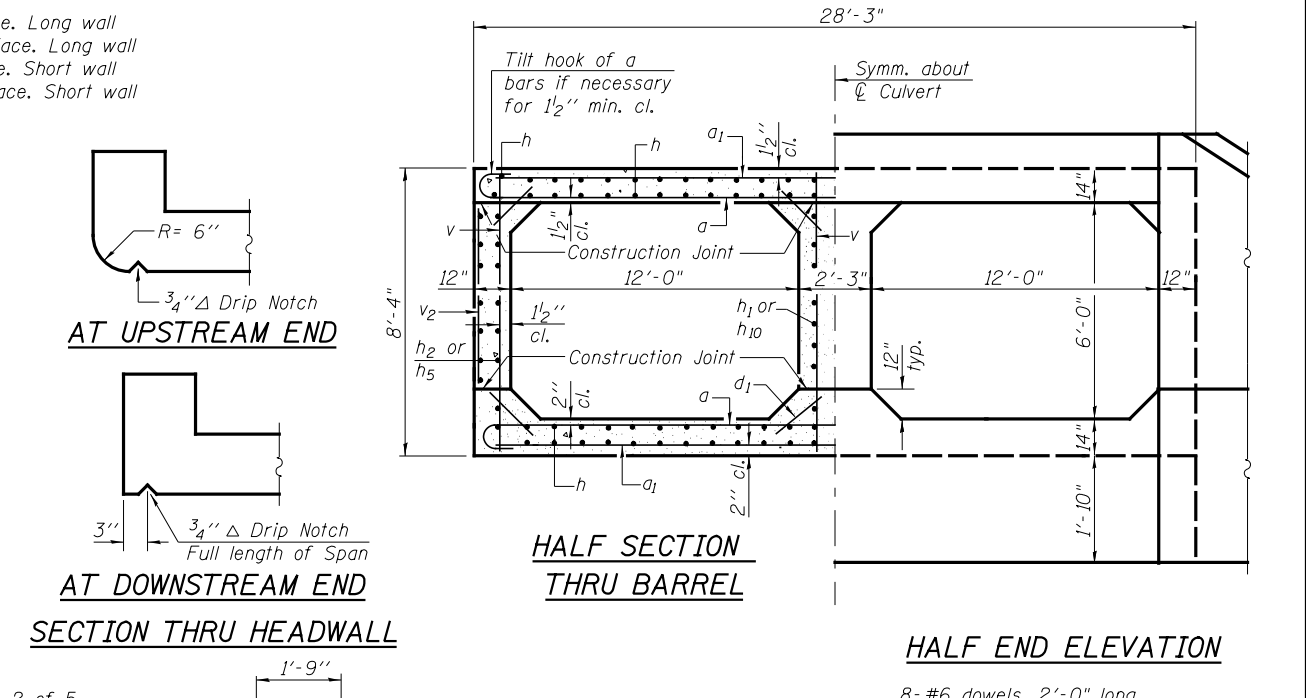
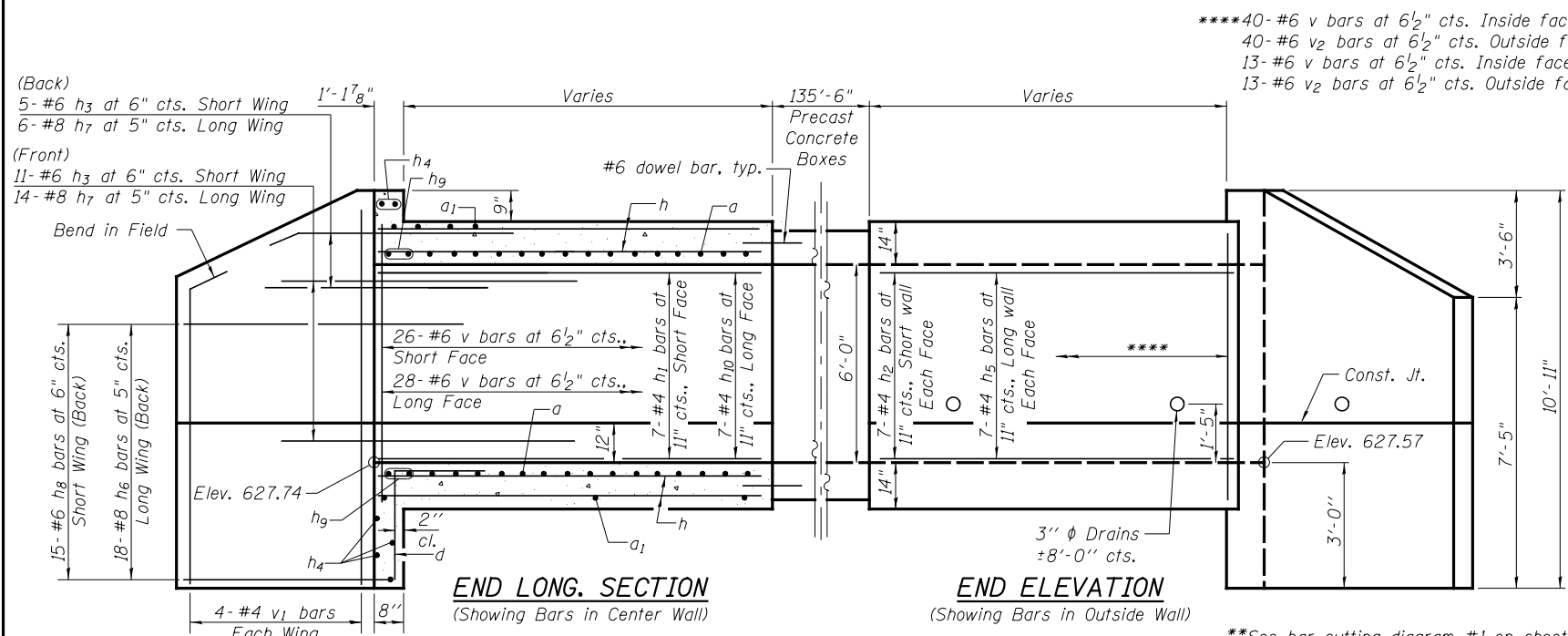
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 047-2032**

SHEET NO. 2 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	385
CONTRACT NO. 66B84				

ILLINOIS FED. AID PROJECT



**BILL OF MATERIAL**

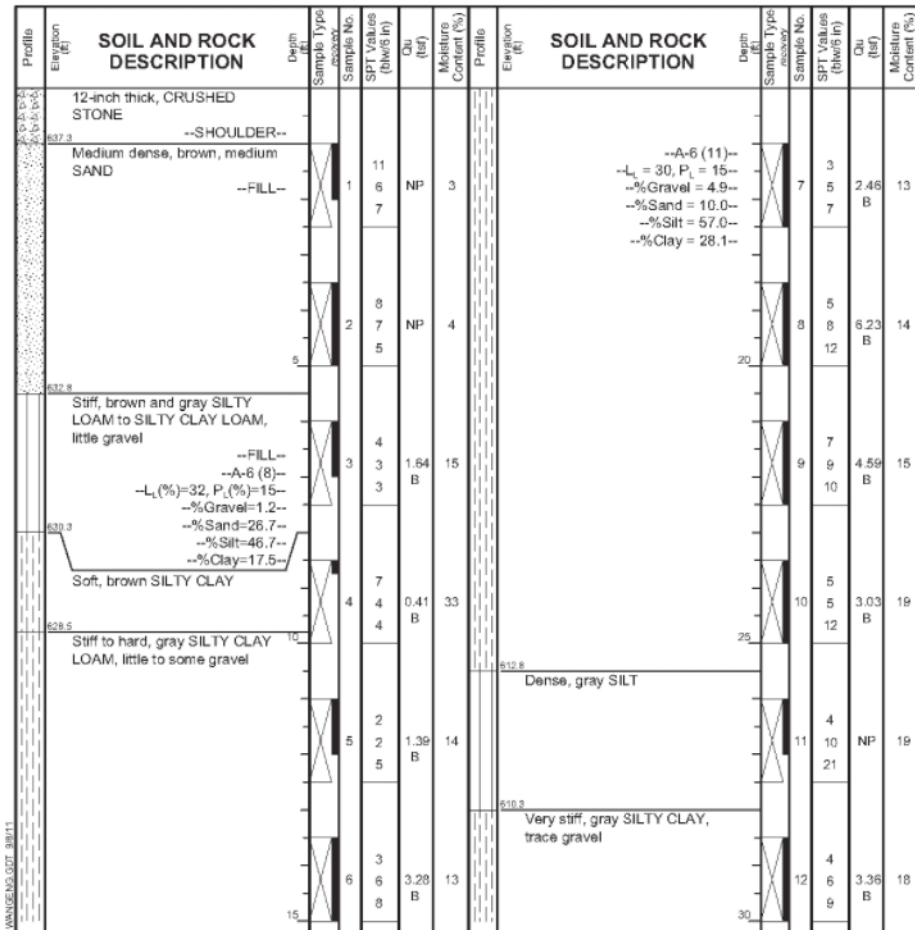
Bar	No.	Size	Length	Shape
a	106	#7	29'-8"	U
a <sub>1</sub>	106	#6	28'-0"	U
d	54	#4	4'-6"	L
d <sub>1</sub>	244	#4	1'-4"	L
h	116	#4	27'-9"	—
h <sub>1</sub>	14	#4	13'-4"	—
h <sub>2</sub>	28	#4	6'-4"	—
h <sub>3</sub>	32	#6	8'-0"	—
h <sub>4</sub>	10	#6	31'-6"	—
h <sub>5</sub>	28	#4	21'-7"	—
h <sub>6</sub>	36	#8	18'-1"	—
h <sub>7</sub>	40	#8	8'-0"	—
h <sub>8</sub>	30	#6	11'-9"	—
h <sub>9</sub>	8	#7	32'-2"	—
h <sub>10</sub>	14	#4	14'-5"	—
v	218	#6	7'-8"	—
v <sub>1</sub>	16	#4	10'-7"	—
v <sub>2</sub>	106	#6	4'-8"	—
Concrete Box Culverts			Cu. Yd.	122.7
Reinforcement Bars			Pound	22070

**Wang Engineering**  
 wangeng@wangeng.com  
 1145 N Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG WC27-B01**  
 WEI Job No.: 790-36-01  
 Client: **TranSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 638.25 ft  
 North: 1767922.05 ft  
 East: 956741.24 ft  
 Station: 6489+77.99  
 Offset: 90.34 LT

Page 1 of 2



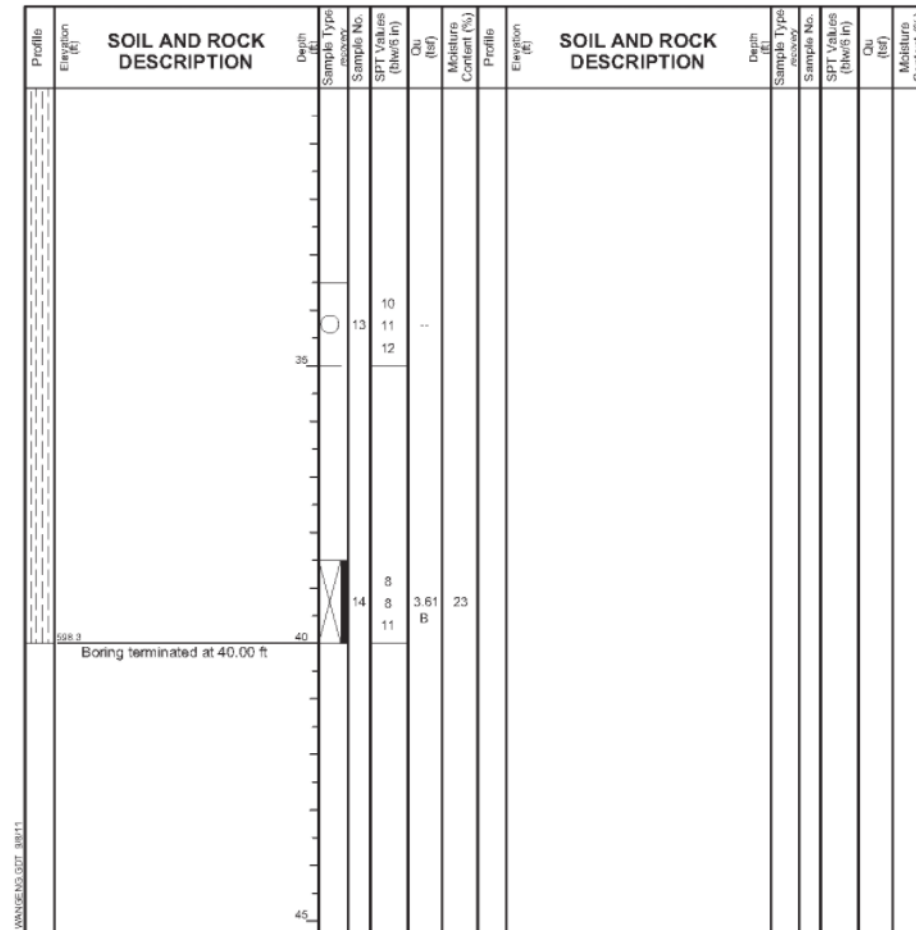
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	09-14-2009	Complete Drilling	09-14-2009	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	D 120 ATV	At Completion of Drilling	DRY		
Driller	K&J	Logger	B. Wilson	Checked by	C. Marin		
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...			Time After Drilling	NA		
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

**Wang Engineering**  
 wangeng@wangeng.com  
 1145 N Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG WC27-B01**  
 WEI Job No.: 790-36-01  
 Client: **TranSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 638.25 ft  
 North: 1767922.05 ft  
 East: 956741.24 ft  
 Station: 6489+77.99  
 Offset: 90.34 LT

Page 2 of 2



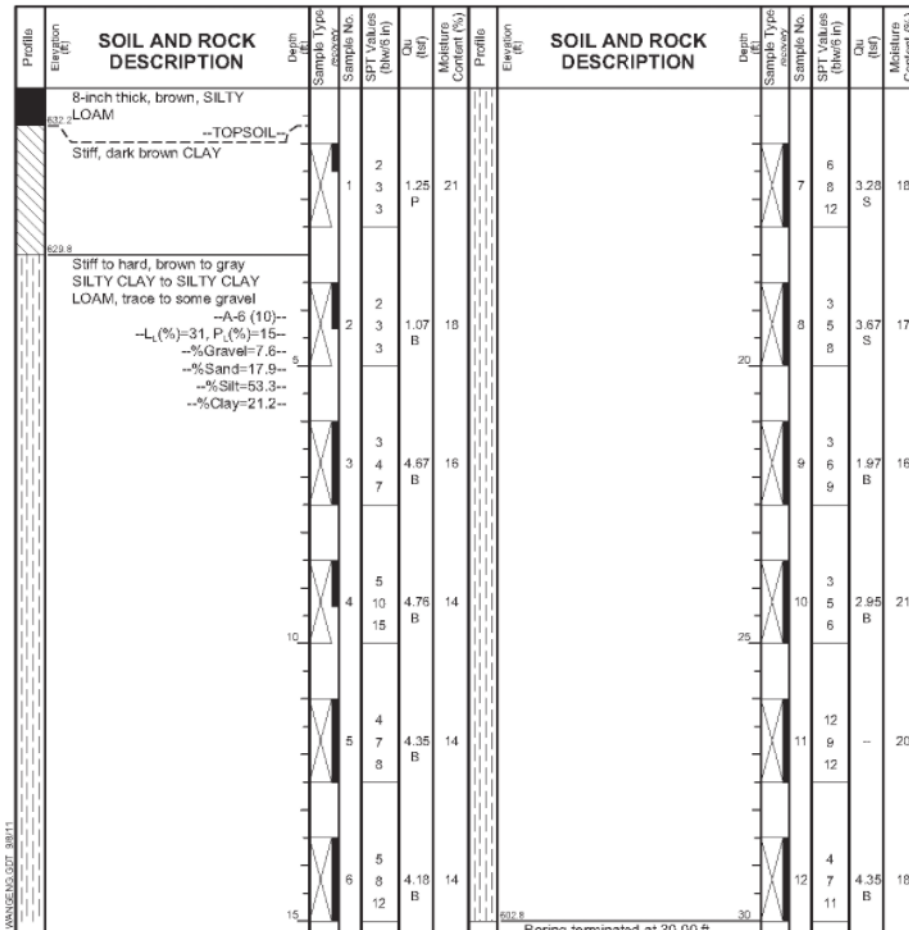
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	09-14-2009	Complete Drilling	09-14-2009	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	D 120 ATV	At Completion of Drilling	DRY		
Driller	K&J	Logger	B. Wilson	Checked by	C. Marin		
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...			Time After Drilling	NA		
				Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

REVISED -	USER NAME =	DESIGNED - PSS	<b>LIN ENGINEERING, LTD.</b> Consulting Engineers Springfield, Illinois	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>SOIL BORINGS</b> <b>STRUCTURE NO. 047-2032</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -	FILE NAME =	CHECKED - VPT				326	(109, 110R-1)	KENDALL	619	387
REVISED -	PLOT SCALE =	DRAWN - AJF				CONTRACT NO. 66B84				
REVISED -	PLOT DATE =	CHECKED - VPT				SHEET NO. 4 OF 5 SHEETS				
ILLINOIS FED. AID PROJECT										

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wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC27-B02**  
WEI Job No.: 790-36-01  
Client: **TranSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 632.82 ft  
North: 1767962.81 ft  
East: 656625.85 ft  
Station: 6490+48.44  
Offset: 5.35 LT



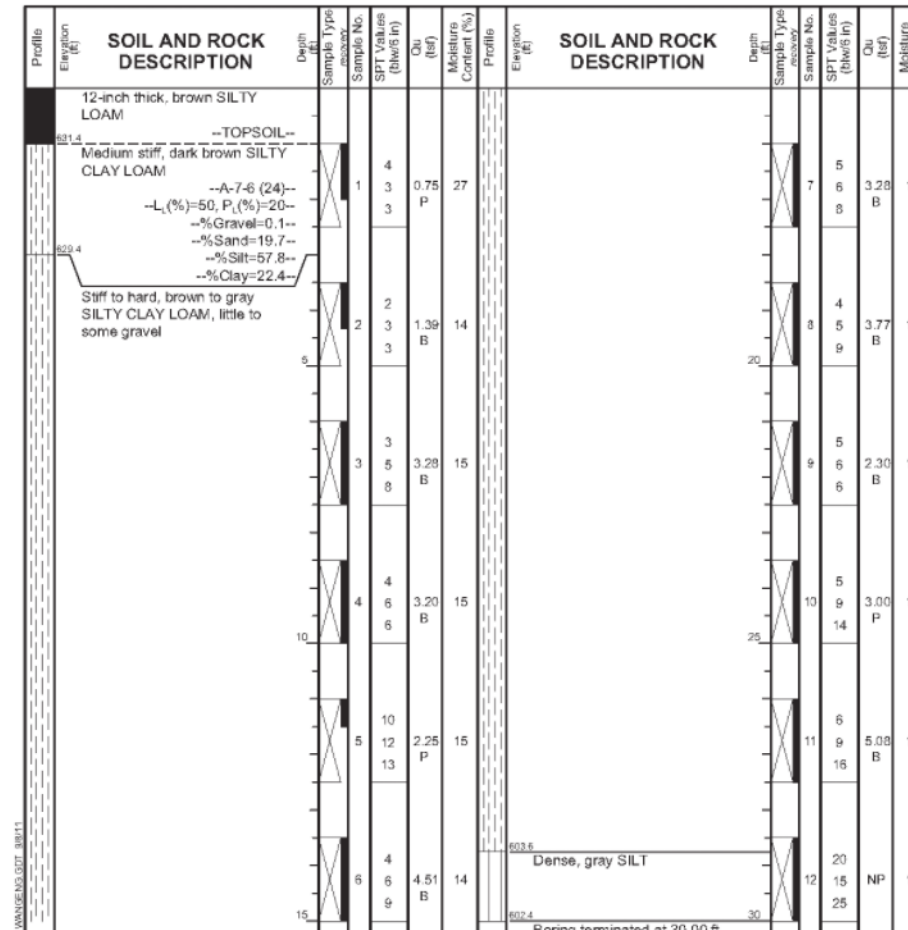
**GENERAL NOTES**  
Begin Drilling: 09-11-2009  
Drilling Contractor: WTS  
Driller: K&J  
Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion...

**WATER LEVEL DATA**  
Complete Drilling: 09-11-2009  
Drill Rig: D 120 ATV  
Logger: B. Wilson  
Checked by: C. Marin  
While Drilling: DRY  
At Completion of Drilling: DRY  
Time After Drilling: NA  
Depth to Water: NA

**Wang Engineering**  
wangeng@wangeng.com  
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Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG WC27-B03**  
WEI Job No.: 790-36-01  
Client: **TranSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 632.36 ft  
North: 1768070.65 ft  
East: 656911.71 ft  
Station: 6491+25.28  
Offset: 80.76 RT



**GENERAL NOTES**  
Begin Drilling: 09-11-2009  
Drilling Contractor: WTS  
Driller: K&J  
Drilling Method: 3.25 IDA HSA; Boring backfilled upon completion...

**WATER LEVEL DATA**  
Complete Drilling: 09-11-2009  
Drill Rig: D 120 ATV  
Logger: B. Wilson  
Checked by: C. Marin  
While Drilling: DRY  
At Completion of Drilling: DRY  
Time After Drilling: NA  
Depth to Water: NA

REVISION	USER NAME	DESIGNED	PSS
REVISION	FILE NAME	CHECKED	VPT
REVISION	PLOT SCALE	DRAWN	AUF
REVISION	PLOT DATE	CHECKED	VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 047-2032

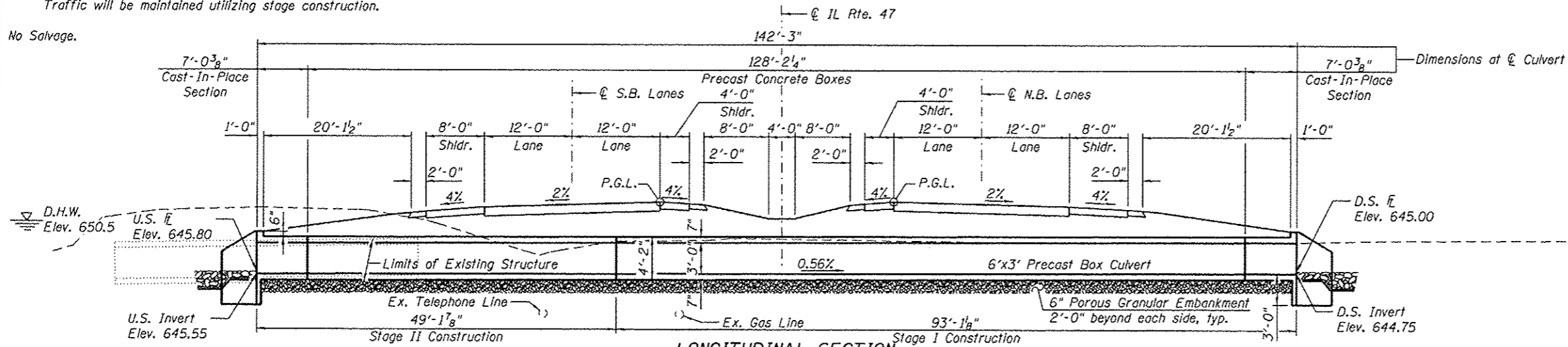
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	388
CONTRACT NO. 66B84				



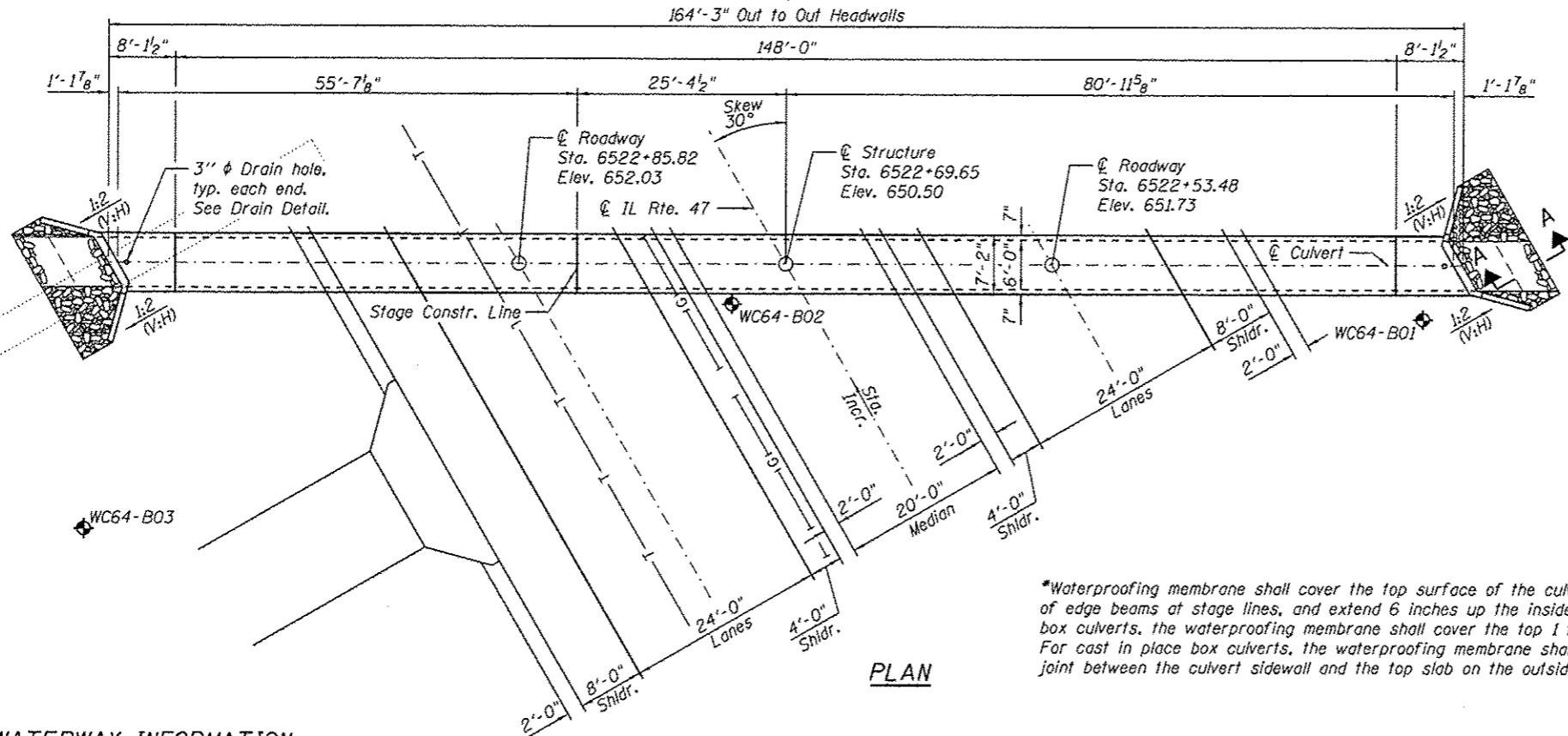
Benchmark: B.M. 1762. Vertical control disk in top of concrete monument. Stamped M 20 reset 1989. Northeast quadrant of the intersection of Route 47 and Plattville Road, 70' east of Route 47, 33' north of Plattville Road, Elevation 658.56.

Existing Structure: The existing structure consists of a single 2'x2' concrete box culvert with concrete wingwalls. The culvert is approximately 55'-2" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.



**LONGITUDINAL SECTION**  
(Dimensions at Rt L's to  $\bar{C}$  Roadway, unless noted otherwise)  
(Looking North)

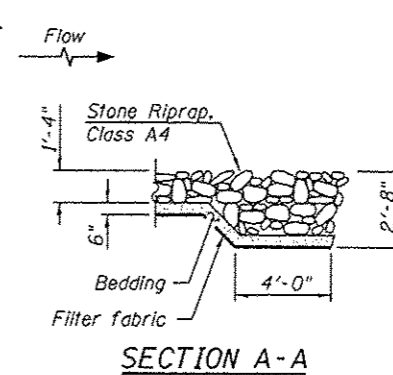


**PLAN**

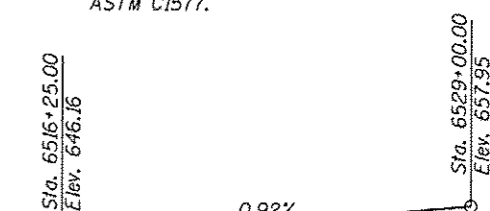
\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

STATION 6522+69.65  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2566

**NAME PLATE**  
See Std. 515001

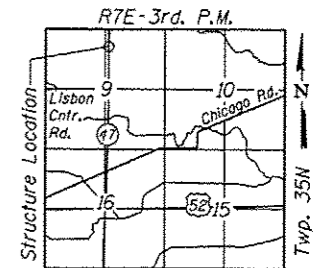


**SECTION A-A**



**PROFILE GRADE**

(Along IL Rte. 47 P.G.)



**LOCATION SKETCH**

**WATERWAY INFORMATION**

Drainage Area = 0.45 sq mi		Exist. Low Grade Elev. 651.41		Prop. Low Grade Elev. 651.45		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Not. H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	10	76	4 16	650.2 1.8	0.0	652.0 649.3
Base	50	140	4 18	650.5 1.7	0.0	652.2 650.2
Overtopping	100	183	4 18	650.6 1.6	0.5	652.2 651.2
Max. Calc.	209	209	4 18	-	-	651.5
	500	311	4 18	650.9 1.6	1.3	652.5 652.2

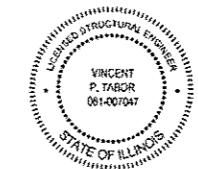
10 year velocity through Existing Structure = 9.1 fps  
10 year velocity through Proposed Structure = 4.8 fps

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	34
Stone Riprap, Class A4	Sq. Yd.	23
Filter Fabric	Sq. Yd.	23
Removal of Existing Structures No. 8	Each	1
Reinforcement Bars	Pound	2010
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	12.5
Precast Concrete Box Culvert 6'x3'	Foot	148.0
*Membrane Waterproofing for Culverts	Sq. Yd.	167

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	642.55	641.75



Vincent P. Tabor 7/14/2014  
Date

Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

**GENERAL PLAN & ELEVATION**

IL. RTE. 47 OVER  
DRAINAGE DITCH  
F.A.P. RTE. 326  
SEC. (109, 110)R-1  
KENDALL COUNTY  
STATION 6522+69.65  
STRUCTURE NO. 047-2566

REVISION	USER NAME	DESIGNED
REVISION	FILE NAME	CHECKED
REVISION	PLOT SCALE	DRAWN
REVISION	PLOT DATE	CHECKED

**LE** LIN ENGINEERING, LTD.  
Consulting Engineers  
Springfield, Illinois

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 047-2566

SHEET NO. 1 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	389

ILLINOIS FED. AID PROJECT  
CONTRACT NO. 66B84

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
- 4-5. Soil Borings

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

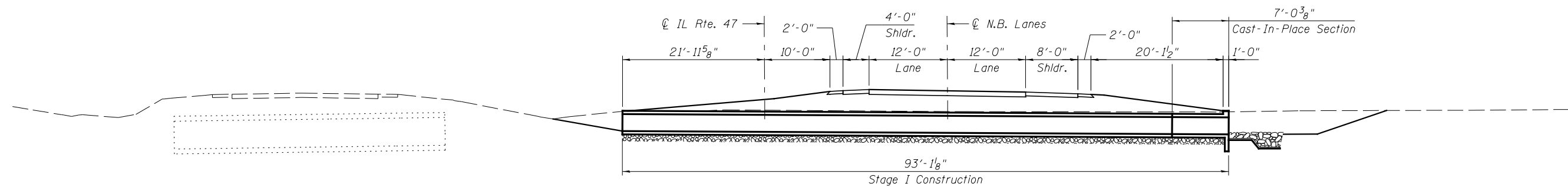
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST UNITS**

$f'_c = 5,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 65,000$  psi (Welded Wire Fabric)

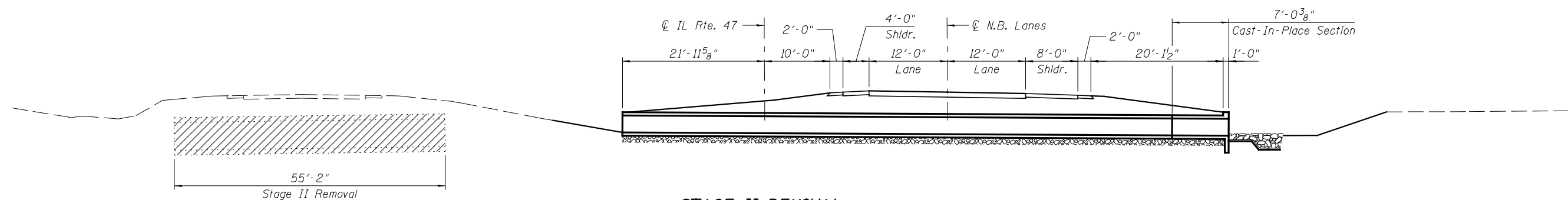
**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 5. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



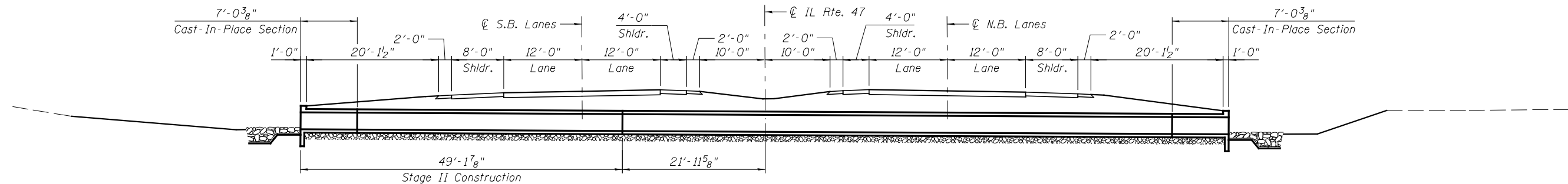
**STAGE I CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II REMOVAL**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT

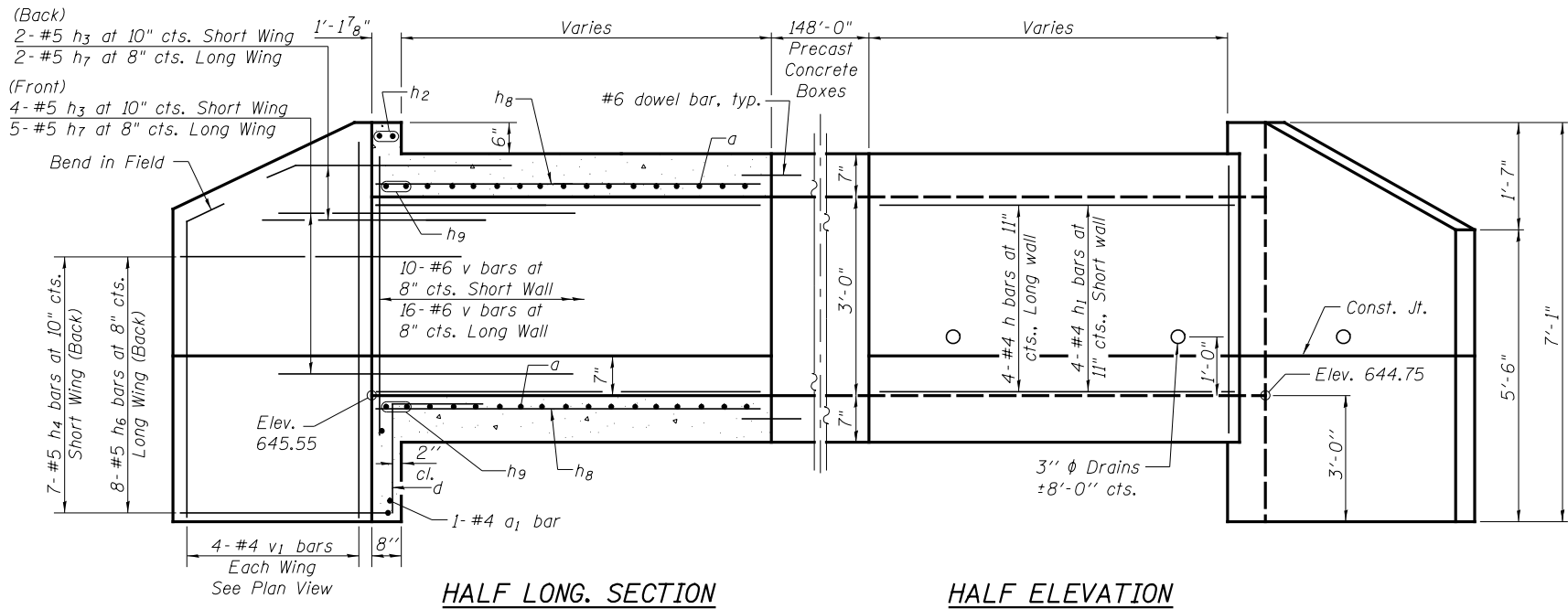


**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 047-2566**

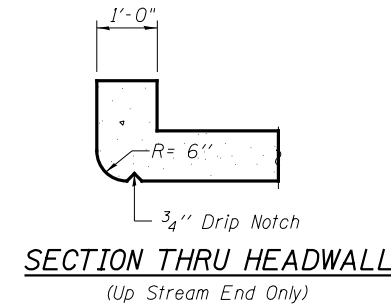
SHEET NO. 2 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	390
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				

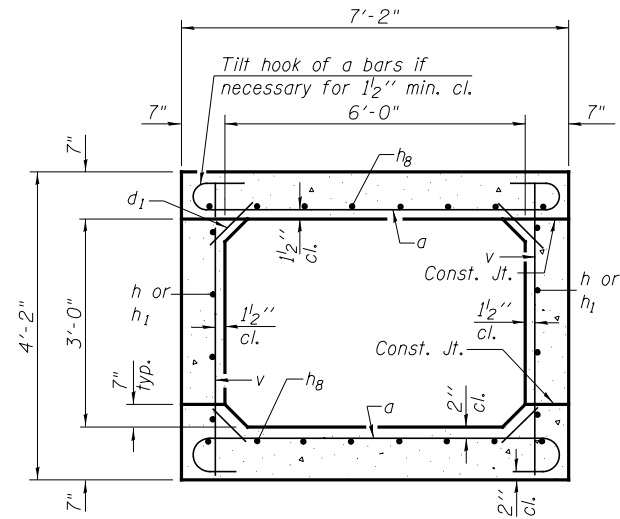


HALF LONG. SECTION

HALF ELEVATION

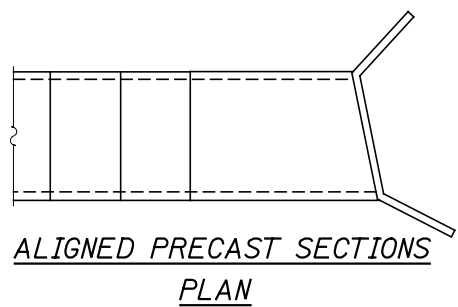


SECTION THRU HEADWALL  
(Up Stream End Only)

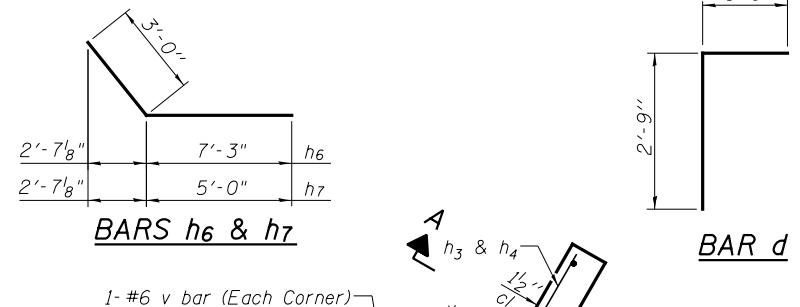


SECTION THRU BARREL

\*Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

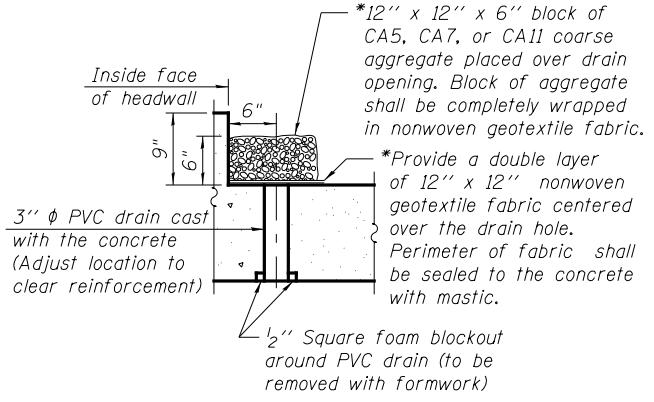


ALIGNED PRECAST SECTIONS  
PLAN



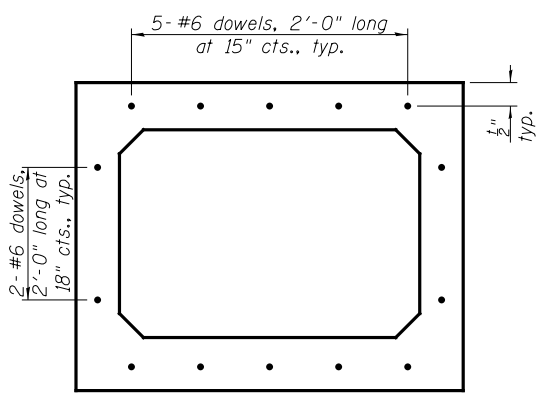
BARS h6 & h7

BAR d

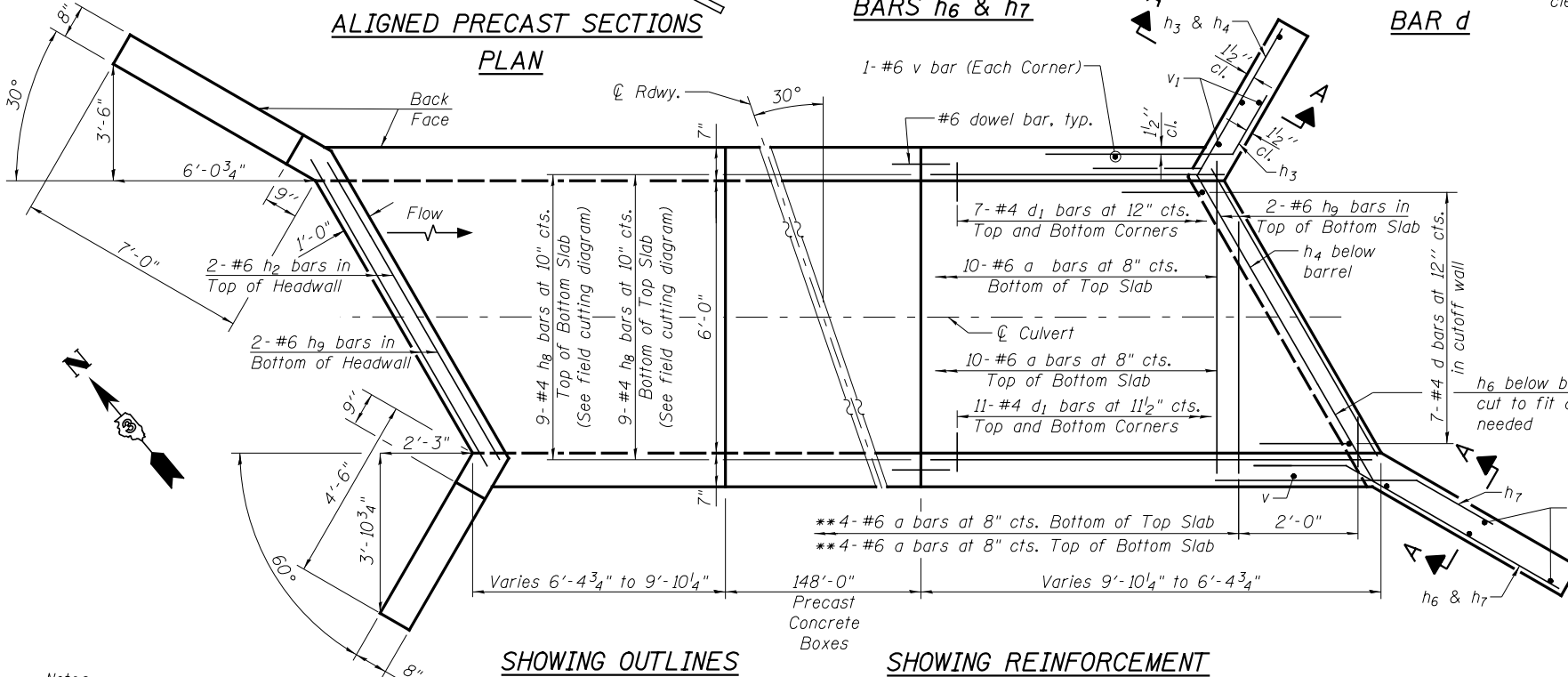


DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

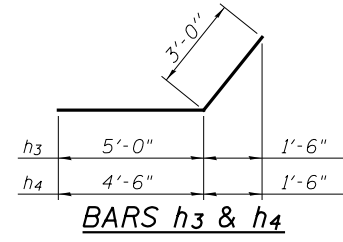


PRECAST CONCRETE  
CULVERT END ELEVATION  
(Section is symmetrical about centerline of culvert)

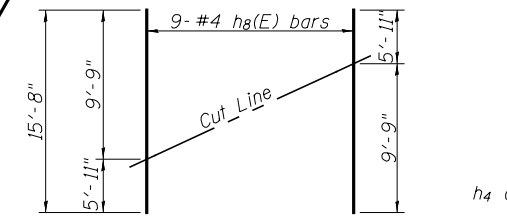


SHOWING OUTLINES  
PLAN

SHOWING REINFORCEMENT  
PLAN

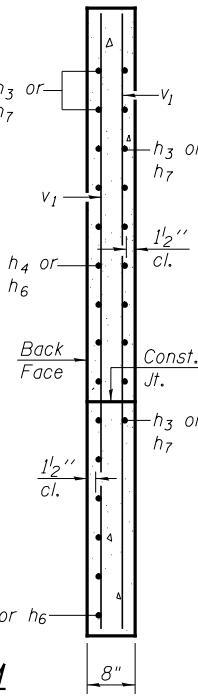


BARS h3 & h4



BAR h8(E) FIELD CUTTING DIAGRAM

Order h8(E) bars full length. Cut as shown and use remainder of bars in opposite end.



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	48	#6	8'-3"	U
a1	2	#4	6'-8"	—
d	14	#4	4'-6"	L
d1	72	#4	1'-2"	—
h	8	#4	9'-8"	—
h1	8	#4	6'-0"	—
h2	4	#6	6'-9"	—
h3	12	#5	8'-0"	—
h4	14	#5	7'-6"	—
h6	16	#5	10'-3"	—
h7	14	#5	8'-0"	—
h8	18	#4	15'-8"	—
h9	8	#6	7'-11"	—
v	56	#6	3'-10"	—
v1	16	#4	6'-9"	—
Concrete Box Culverts			Cu. Yd.	12.5
Reinforcement Bars			Pound	2010

Notes:  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.

\*\*a bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert. Alternate location of hook between sidewall and headwall.

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS  
STRUCTURE NO. 047-2566

SHEET NO. 3 OF 5 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	391
CONTRACT NO. 66B84			ILLINOIS FED. AID PROJECT	

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 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG WC64-B01**  
 WEI Job No.: 790-36-01  
 Client: **TransSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 647.39 ft  
 North: 1771 166.65 ft  
 East: 956888.72 ft  
 Station: 6522+21.95  
 Offset: 70.54 RT

**Wang Engineering**  
 wangeng@wangeng.com  
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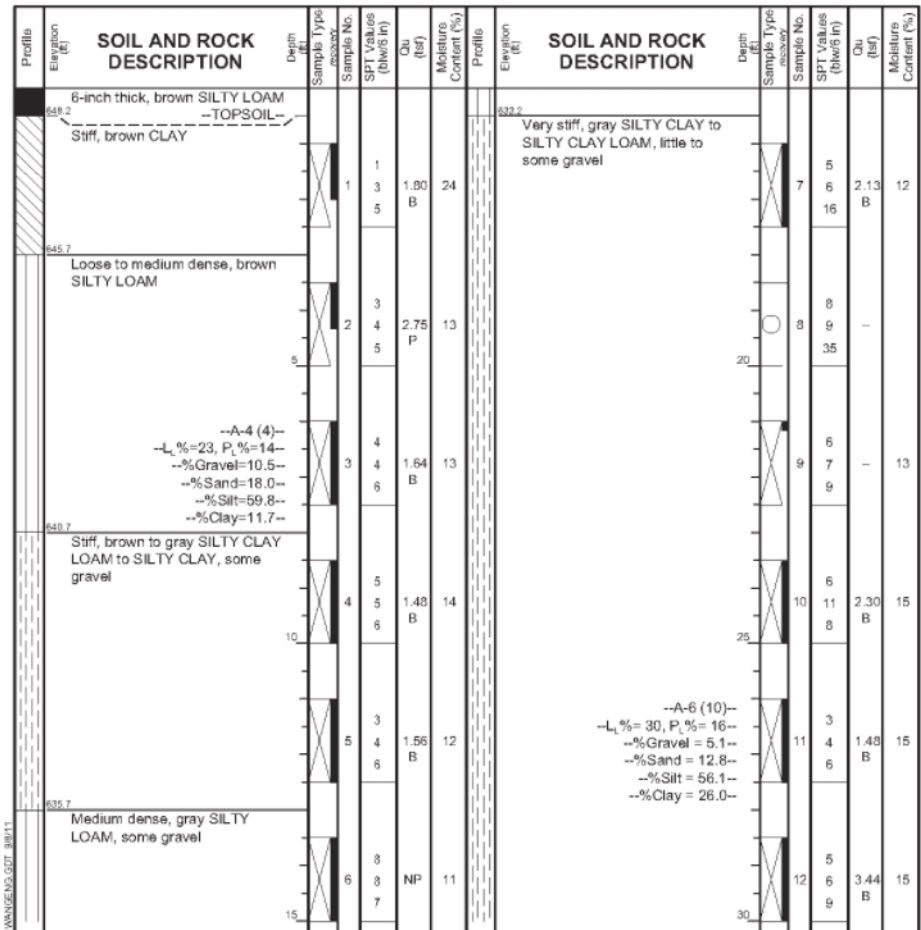
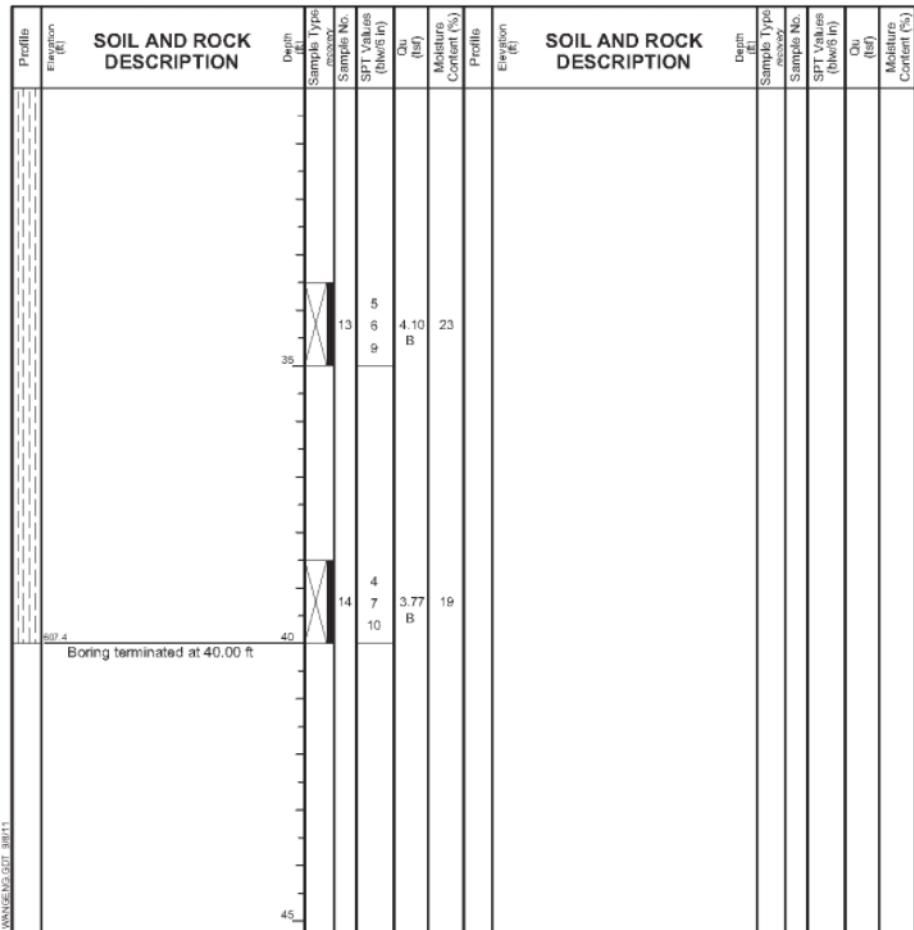
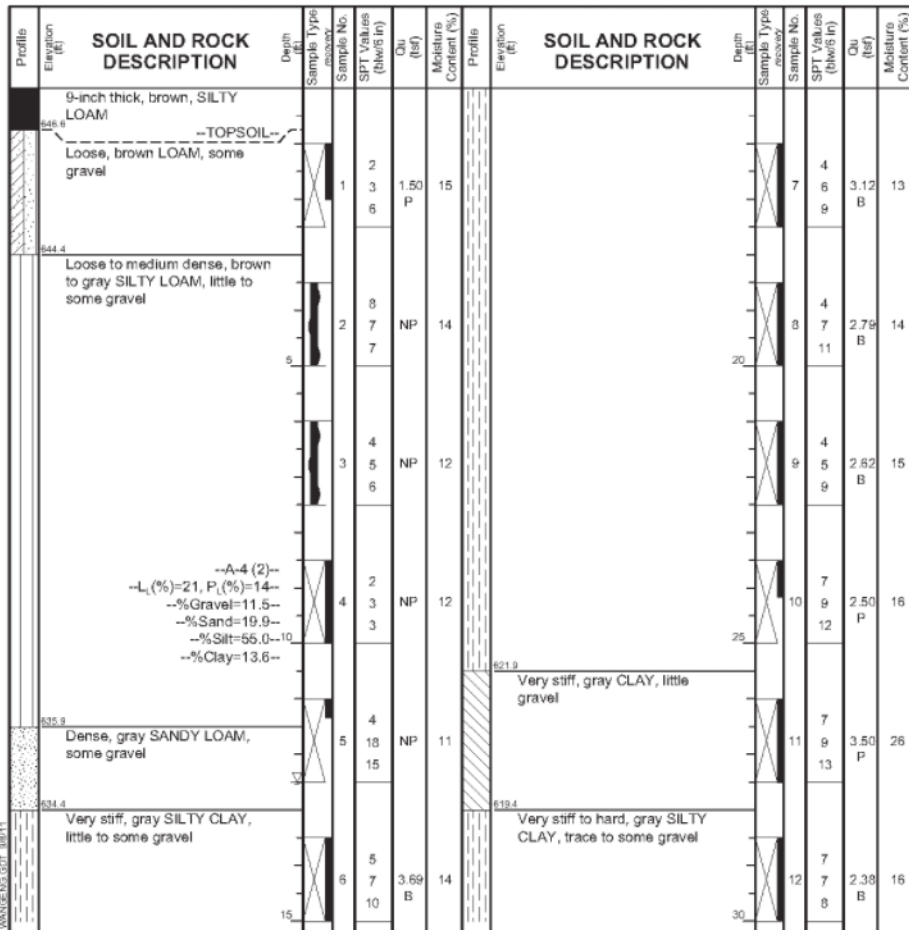
**BORING LOG WC64-B01**  
 WEI Job No.: 790-36-01  
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 Project: **Illinois Route 47, Section IL 47B**  
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Datum: NGVD  
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 Fax: 630 953-9938

**BORING LOG WC64-B02**  
 WEI Job No.: 790-36-01  
 Client: **TransSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 648.73 ft  
 North: 1771 209.14 ft  
 East: 956810.03 ft  
 Station: 6522+63.77  
 Offset: 7.99 LT



**GENERAL NOTES**

Begin Drilling **09-15-2009** Completes Drilling **09-15-2009**

Drilling Contractor **WTS** Drill Rig **D 120 ATV**

Driller **K&J** Logger **B. Wilson** Checked by **C. Marin**

Drilling Method **.325 IDA HSA; Boring backfilled upon completion...**

**WATER LEVEL DATA**

While Drilling  **12.50 ft**

At Completion of Drilling  **DRY**

Time After Drilling **NA**

Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**GENERAL NOTES**

Begin Drilling **09-15-2009** Completes Drilling **09-15-2009**

Drilling Contractor **WTS** Drill Rig **D 120 ATV**

Driller **K&J** Logger **B. Wilson** Checked by **C. Marin**

Drilling Method **.325 IDA HSA; Boring backfilled upon completion...**

**WATER LEVEL DATA**

While Drilling  **12.50 ft**

At Completion of Drilling  **DRY**

Time After Drilling **NA**

Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**GENERAL NOTES**

Begin Drilling **09-15-2009** Completes Drilling **09-15-2009**

Drilling Contractor **WTS** Drill Rig **D 120 ATV**

Driller **K&J** Logger **B. Wilson** Checked by **C. Marin**

Drilling Method **.325 IDA HSA; Boring backfilled upon completion...**

**WATER LEVEL DATA**

While Drilling  **DRY**

At Completion of Drilling  **DRY**

Time After Drilling **NA**

Depth to Water  **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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**BORING LOG WC64-B02** Page 2 of 2  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 648.73 ft  
North: 1771208.14 ft  
East: 956810.03 ft  
Station: 6522+63.77  
Offset: 7.99 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
616.7	Dense, gray SILTY LOAM	10		10			NP	14							
613.7	Boring terminated at 35.00 ft	35		13											
		39		19											
		40		22											
		45													

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	09-15-2009	Complets Drilling	09-15-2009
Drilling Contractor	WTS	Drill Rig	D-120 ATV
Driller	K&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

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**BORING LOG WC64-B03** Page 1 of 2  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 651.87 ft  
North: 1771265.96 ft  
East: 956755.51 ft  
Station: 6523+21.86  
Offset: 62.24 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
651.2	8-inch thick, ASPHALT --PAVEMENT--														
650.4	10-inch thick, CONCRETE --PAVEMENT--														
648.9	6-inch thick, CRUSHED STONE --BASE COURSE--														
647.4	Stiff, black SILTY CLAY --BURIED TOPSOIL--														
		2		2											
		3		3		1.50	P	30							
		4		4											
		5		5											
	Medium stiff, black to gray SILTY CLAY														
		2		2											
		3		3		0.82	B	33							
		4		4											
	--A-7-6 (36)-- --L%=54, P%=18-- --%Gravel=0.2-- --%Sand=7.3-- --%Silt=62.0-- --%Clay=30.5--														
		3		3											
		2		2		1.64	B	16							
		3		3											
		10		10											
		11		11											
		12		12											
		13		13											
		14		14											
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		37		37											
		38		38											
		39		39											
		40		40											
		41		41											
		42		42											
		43		43											
		44		44											
		45		45											

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-09-2010	Complets Drilling	03-09-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	P&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

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**BORING LOG WC64-B03** Page 2 of 2  
WEI Job No.: 790-36-01  
Client: **TransSystems Corporation**  
Project: **Illinois Route 47, Section IL 47B**  
Location: **Mainline, Kendall Co.**

Datum: NGVD  
Elevation: 651.87 ft  
North: 1771265.96 ft  
East: 956755.51 ft  
Station: 6523+21.86  
Offset: 62.24 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr Cont. (%)
611.9	Boring terminated at 40.00 ft	40													
		41													
		42													
		43													
		44													
		45													

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-09-2010	Complets Drilling	03-09-2010
Drilling Contractor	WTS	Drill Rig	B-57 TMR
Driller	P&J	Logger	B. Wilson
Checked by	C. Marin	Drilling Method	3.25 IDA HSA; Boring backfilled upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

REVISION	USER NAME	DESIGNED	PSS
REVISION	FILE NAME	CHECKED	VPT
REVISION	PLOT SCALE	DRAWN	AJF
REVISION	PLOT DATE	CHECKED	VPT



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS  
STRUCTURE NO. 047-2566

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	393
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				

Benchmark: B.M. 7005. Found cut "+" north end of westerly headwall on box culvert 1000' south of Helmar Road, Elevation 661.53.

Existing Structure: The existing structure consists of a double 8'x6' concrete box culvert with concrete wingwalls. The culvert is approximately 74'-6" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.

\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. General Data
3. Culvert Details
- 4-5. Soil Borings

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

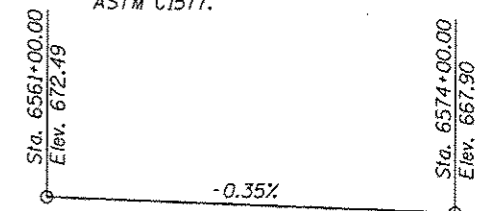
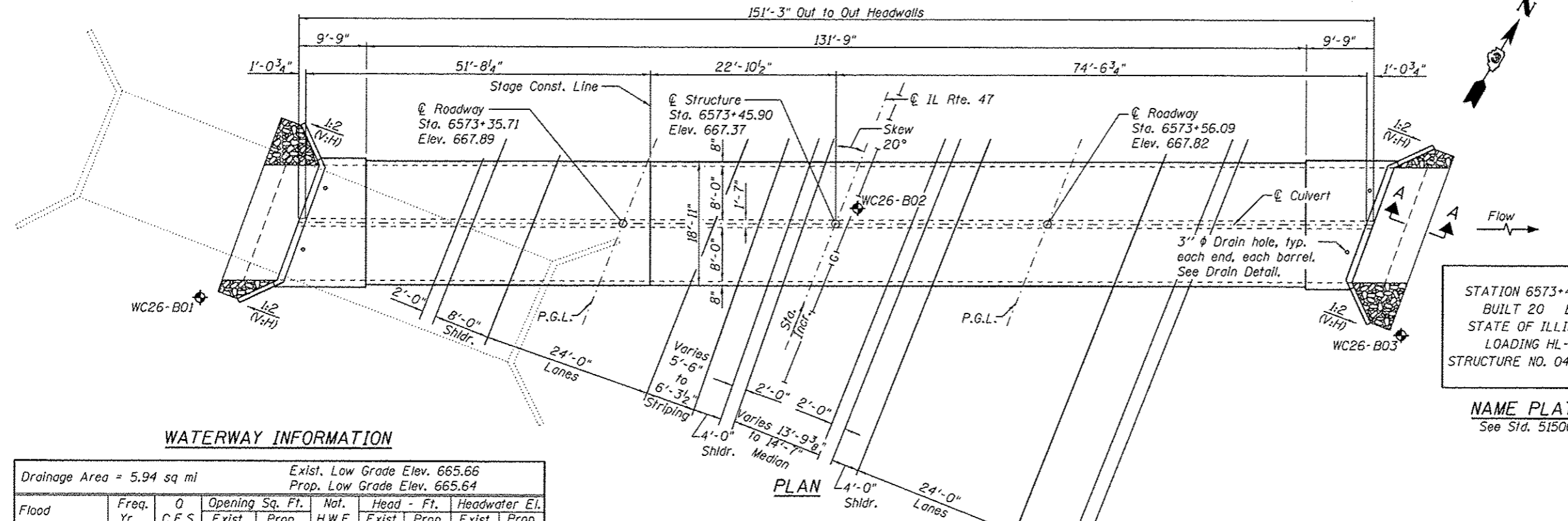
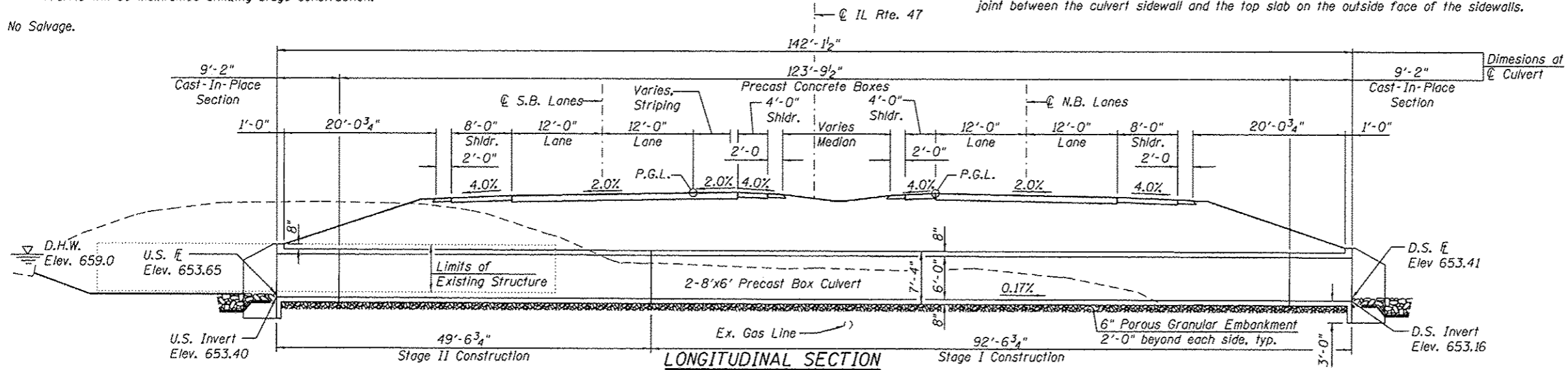
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST UNITS**

f'c = 5,000 psi  
fy = 60,000 psi (Reinforcement)  
fy = 65,000 psi (Welded Wire Fabric)

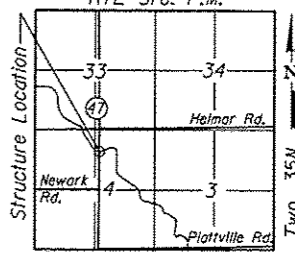
**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 5. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



**PROFILE GRADE**

(Along IL Rte. 47 P.G.)  
RTE-3rd. P.M.



**LOCATION SKETCH**

**WATERWAY INFORMATION**

Drainage Area = 5.94 sq mi		Exist. Low Grade Elev. 665.66		Prop. Low Grade Elev. 665.64		
Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater E.I.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
10	552	74	77	658.5	1.0	659.5
Design	50	778	82	659.0	2.2	661.2
Base	100	880	86	659.2	2.6	661.7
Overtopping	-	-	-	-	-	-
Max. Calc.	500	1123	92	659.6	4.3	663.5

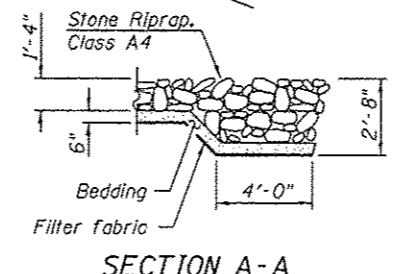
10 year velocity through Existing Structure = 7.4 fps  
10 year velocity through Proposed Structure = 7.2 fps

**DESIGN SCOUR ELEVATION TABLE**

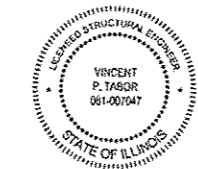
Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	650.40	650.16

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	64
Stone Riprap, Class A4	Sq. Yd.	70
Filter Fabric	Sq. Yd.	70
Removal of Existing Structures No.10	Each	1
Reinforcement Bars	Pound	11660
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	50.9
Precast Concrete Box Culvert 8'x6'	Foot	263.5
*Membrane Waterproofing For Culverts	Sq. Yd.	351



**SECTION A-A**



Vincent P. Tabor 7/14/2014  
Date

Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

STATION 6573+45.90  
BUILT 20 BY  
STATE OF ILLINOIS  
LOADING HL-93  
STRUCTURE NO. 047-2564

**NAME PLATE**  
See Std. 515001

**GENERAL PLAN & ELEVATION**

IL. RTE. 47 OVER

DRAINAGE DITCH

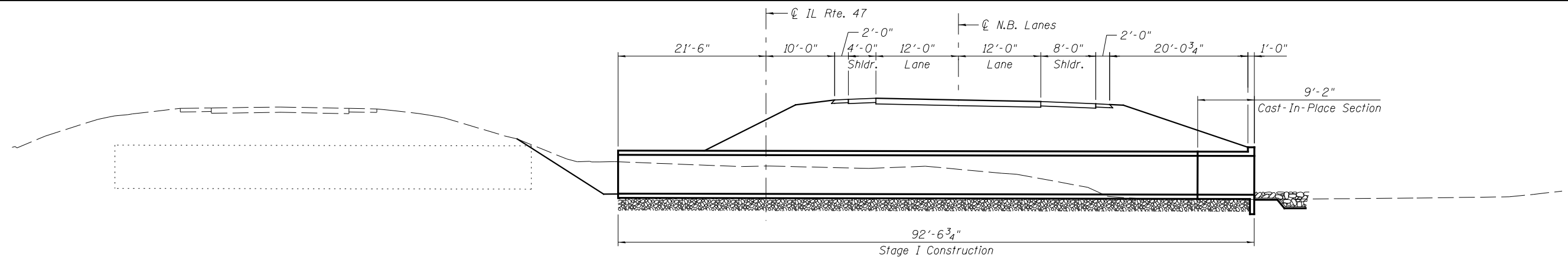
F.A.P. RTE. 326

SEC-(109, 110)R-1

KENDALL COUNTY

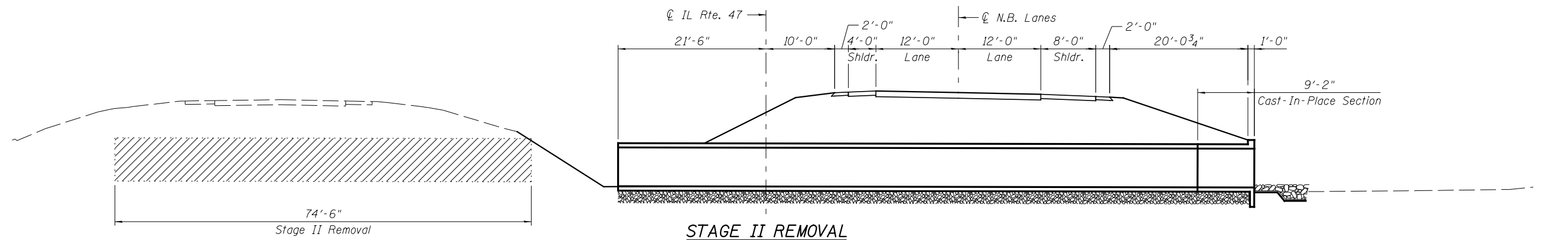
STATION 6573+45.90

STRUCTURE NO. 047-2564



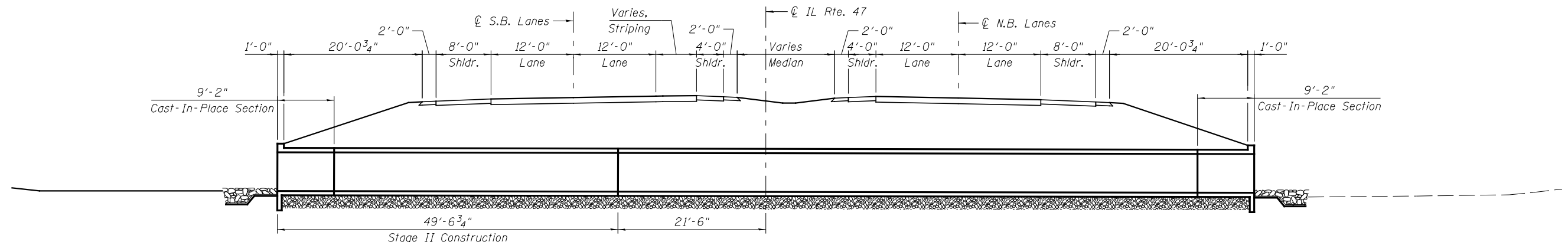
**STAGE I CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



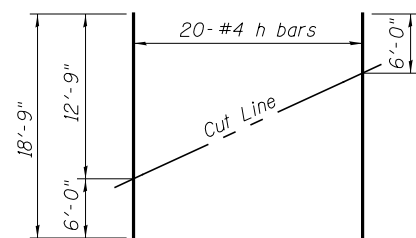
**STAGE II REMOVAL**

(Dimensions at Rt. L's to Roadway. Looking North.)



**STAGE II CONSTRUCTION**

(Dimensions at Rt. L's to Roadway. Looking North.)



**FIELD CUTTING DIAGRAM #1**

Order h bars full length. Cut as shown and use remainder of bars in opposite end.

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



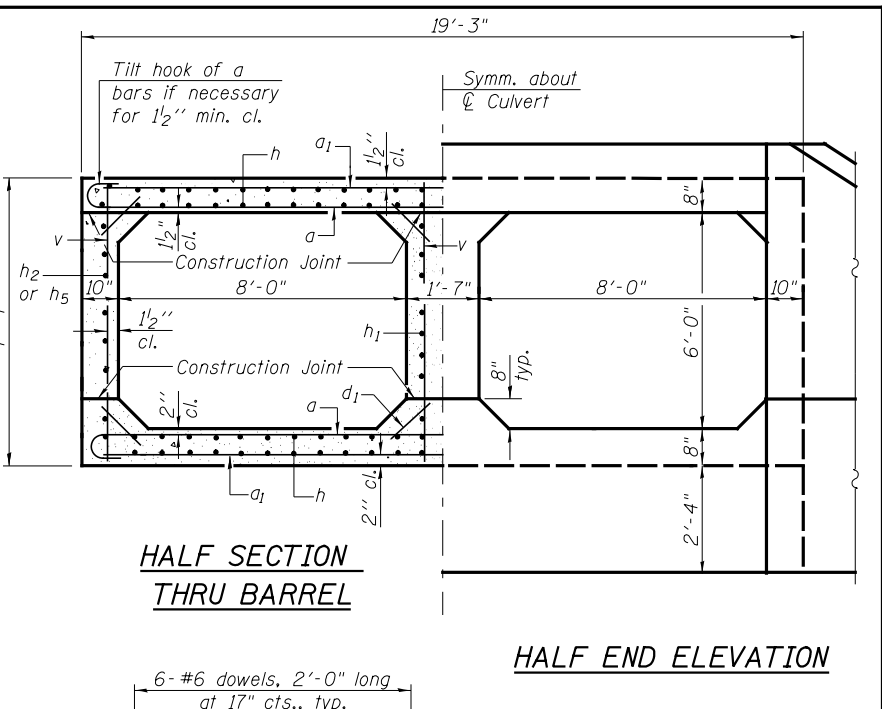
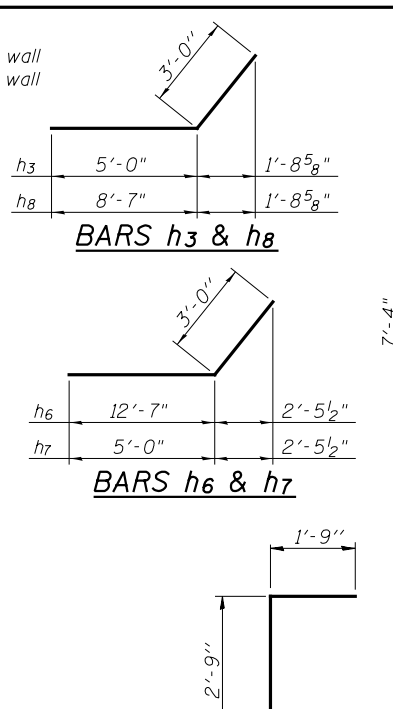
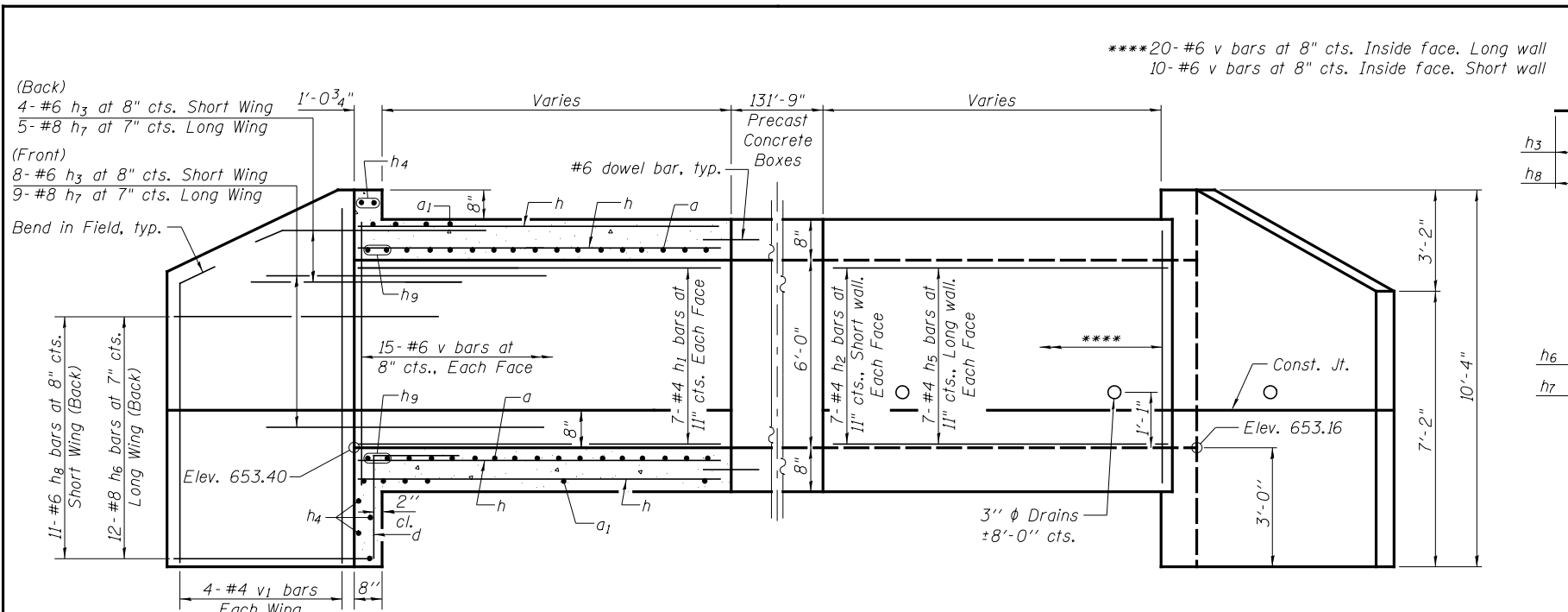
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
STRUCTURE NO. 047-2564**

SHEET NO. 2 OF 5 SHEETS

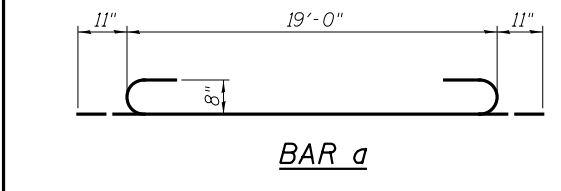
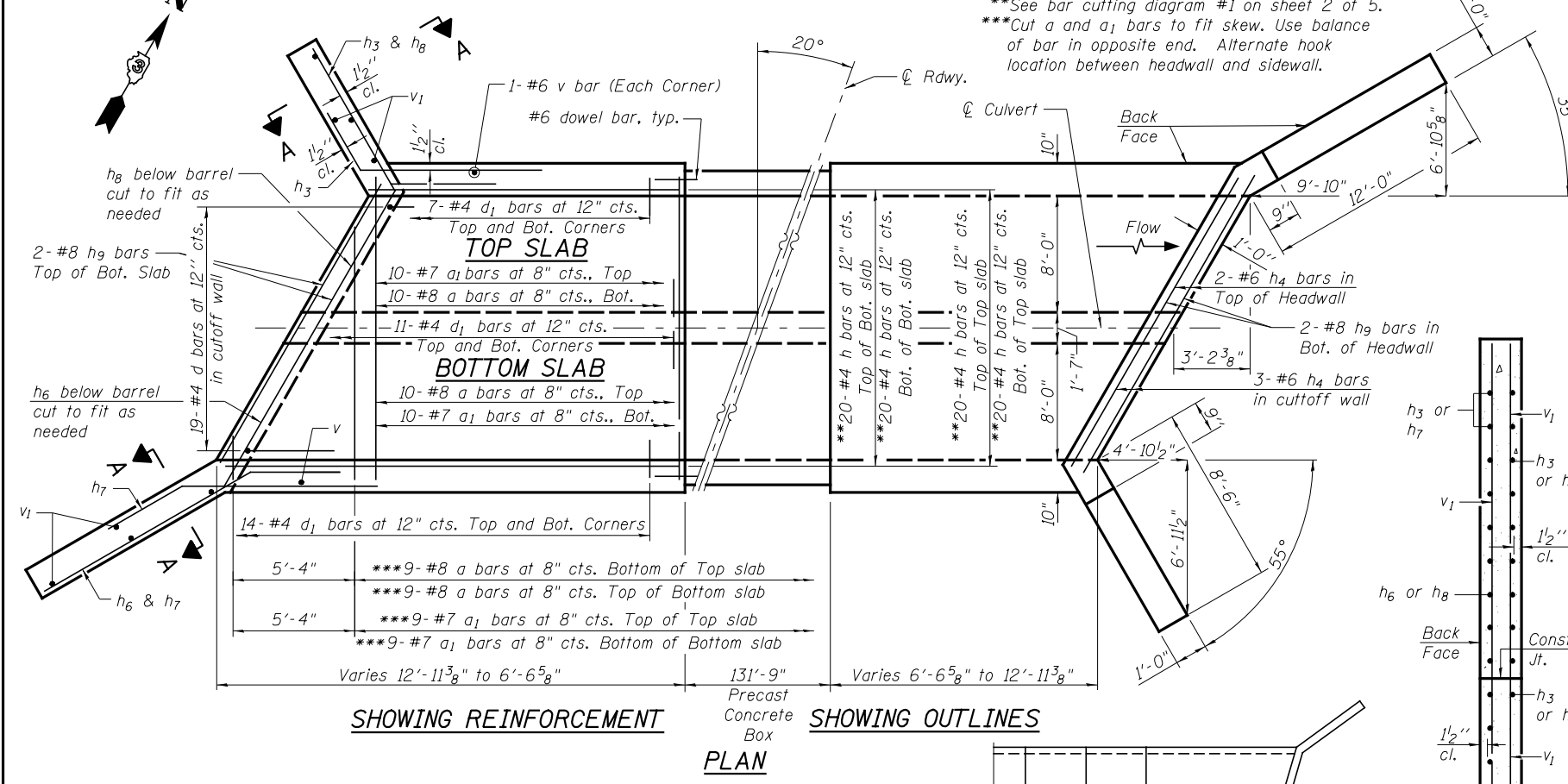
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	395
CONTRACT NO. 66B84				

ILLINOIS FED. AID PROJECT

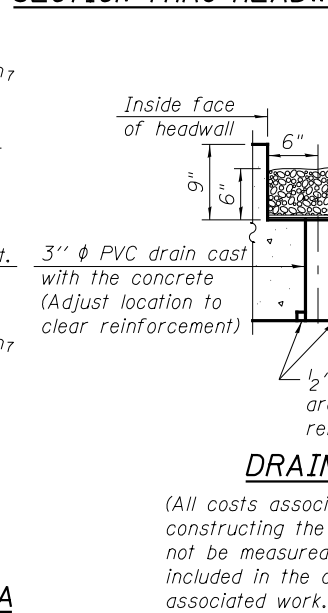
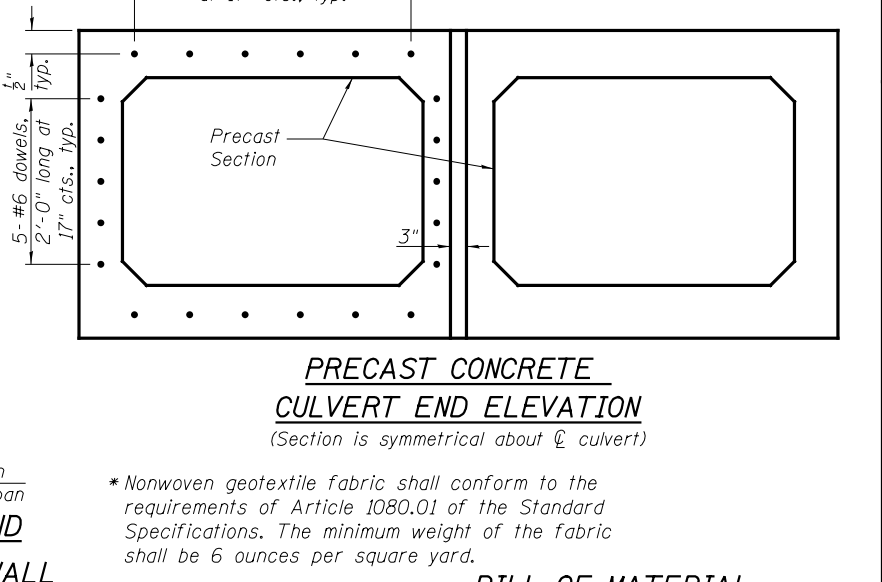
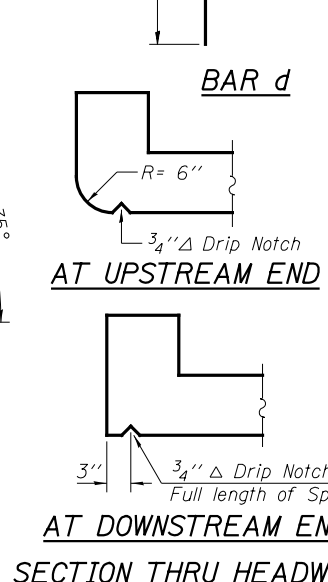
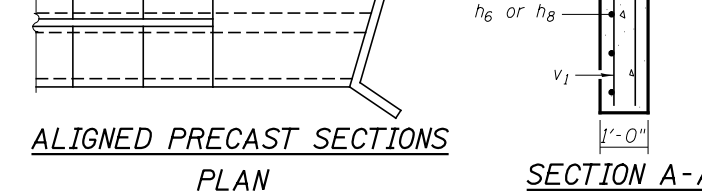


**END LONG SECTION**  
(Showing Bars in Center Wall)

**END ELEVATION**  
(Showing Bars in Outside Walls)



**Notes:**  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	58	#8	20'-10"	[C]
a1	58	#7	19'-0"	—
d	38	#4	4'-6"	[L]
d1	172	#4	1'-2"	—
h	80	#4	18'-9"	—
h1	28	#4	9'-3"	—
h2	28	#4	6'-1"	—
h3	24	#6	8'-0"	—
h4	10	#6	19'-6"	—
h5	28	#4	12'-8"	—
h6	24	#8	15'-7"	—
h7	28	#8	8'-0"	—
h8	22	#6	11'-7"	—
h9	8	#8	20'-1"	—
v	124	#6	7'-0"	—
v1	16	#4	10'-0"	—
Concrete Box Culverts			Cu. Yd.	50.9
Reinforcement Bars			Pound	11660

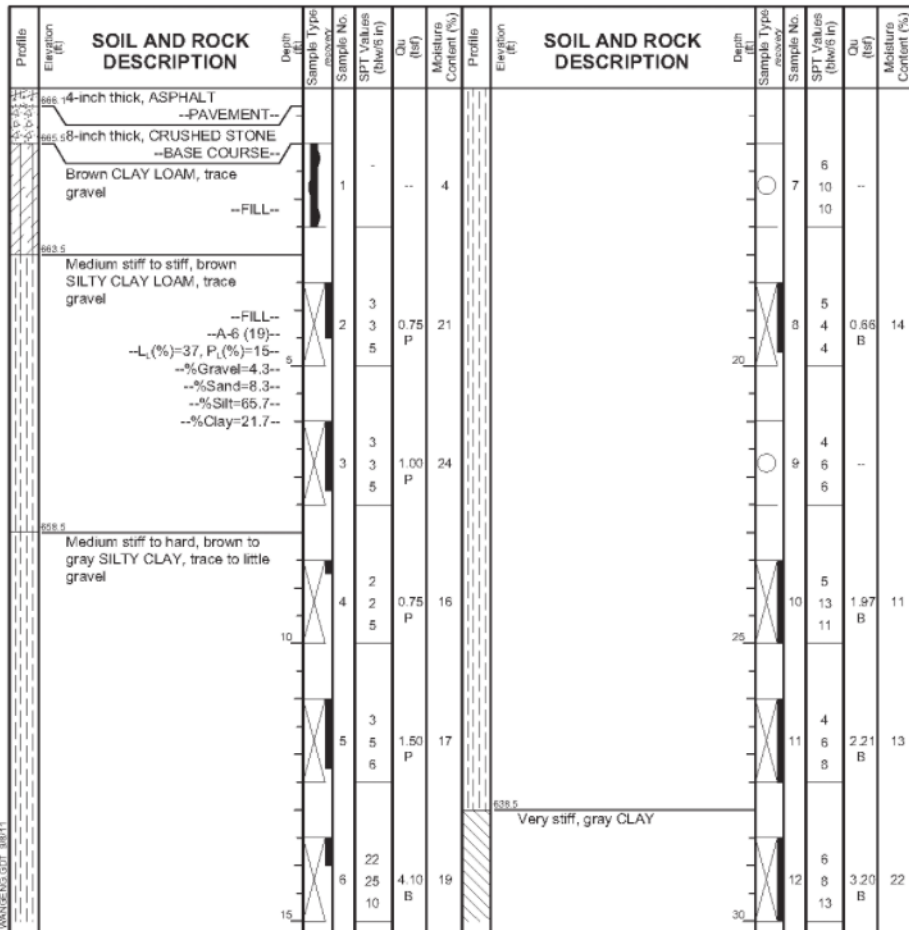


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**BORING LOG WC26-B01** Page 1 of 2

WEI Job No.: 790-36-01  
 Client: TransSystems Corporation  
 Project: Illinois Route 47, Section IL 47B  
 Location: Mainline, Kendall Co.

Datum: NGVD  
 Elevation: 656.47 ft  
 North: 1776240.02 ft  
 East: 956712.42 ft  
 Station: 6572+96.05  
 Offset: 84.81 LT



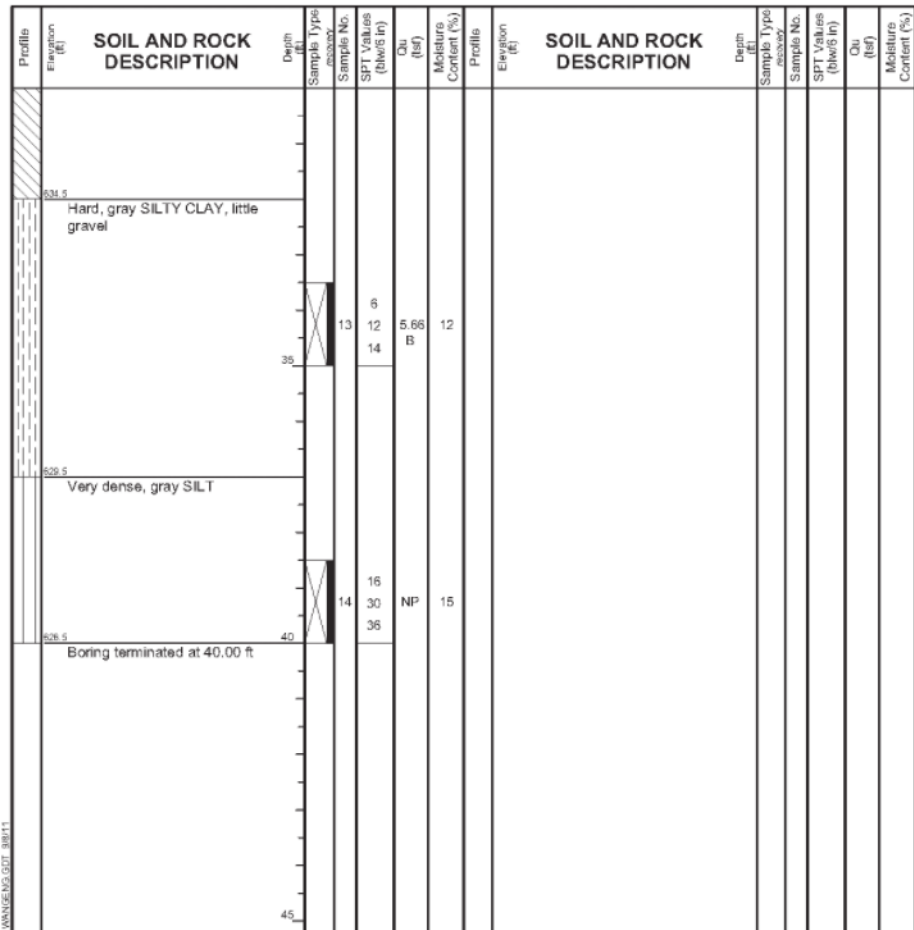
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-12-2010	While Drilling	DRY
Drilling Contractor	WTS	At Completion of Drilling	DRY
Driller	P&J	Time After Drilling	NA
Logger	B. Wilson	Depth to Water	NA
Checked by	C. Marin	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
Drilling Method	2.25 SSA; Boring backfilled upon completion		

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**BORING LOG WC26-B01** Page 2 of 2

WEI Job No.: 790-36-01  
 Client: TransSystems Corporation  
 Project: Illinois Route 47, Section IL 47B  
 Location: Mainline, Kendall Co.

Datum: NGVD  
 Elevation: 656.47 ft  
 North: 1776240.02 ft  
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 Station: 6572+96.05  
 Offset: 84.81 LT



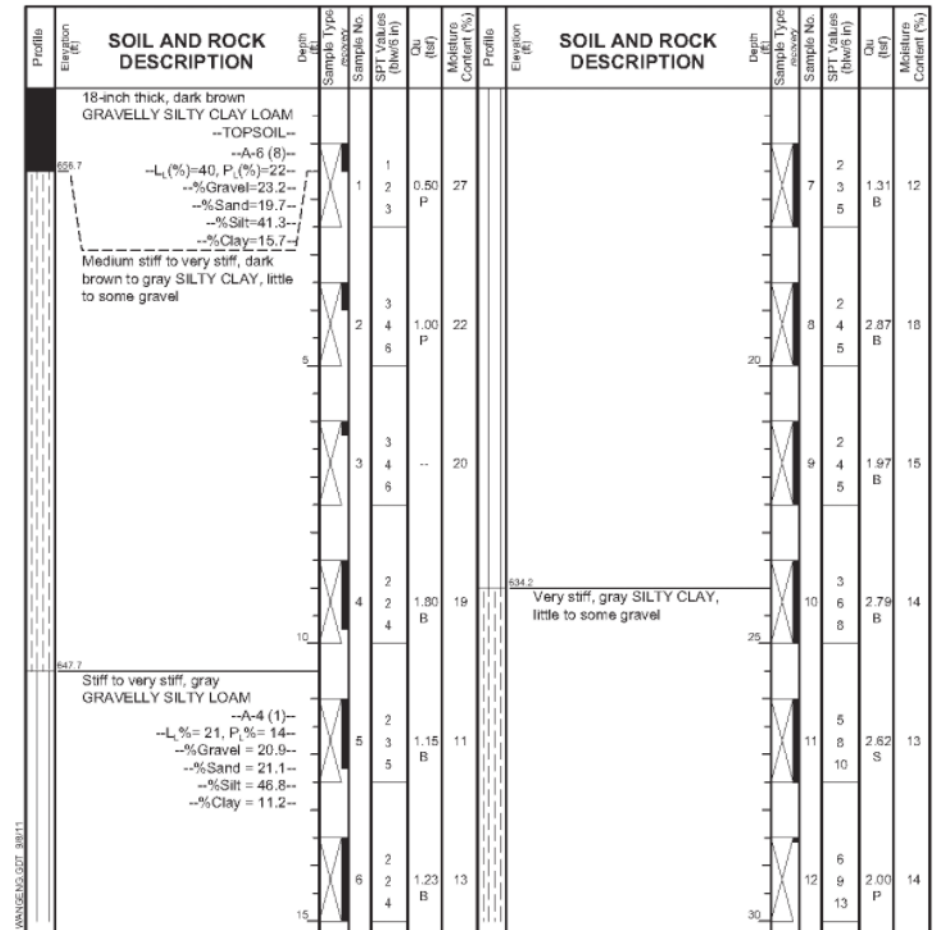
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-12-2010	While Drilling	DRY
Drilling Contractor	WTS	At Completion of Drilling	DRY
Driller	P&J	Time After Drilling	NA
Logger	B. Wilson	Depth to Water	NA
Checked by	C. Marin	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
Drilling Method	2.25 SSA; Boring backfilled upon completion		

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 1145 N Main Street  
 Lombard, IL 60148  
 Telephone: 630 953-9928  
 Fax: 630 953-9938

**BORING LOG WC26-B02** Page 1 of 2

WEI Job No.: 790-36-01  
 Client: TransSystems Corporation  
 Project: Illinois Route 47, Section IL 47B  
 Location: Mainline, Kendall Co.

Datum: NGVD  
 Elevation: 650.16 ft  
 North: 1776290.21 ft  
 East: 956798.14 ft  
 Station: 6573+53.89  
 Offset: 1.15 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-26-2010	While Drilling	34.50 ft
Drilling Contractor	WTS	At Completion of Drilling	35.00 ft
Driller	K&J	Time After Drilling	NA
Logger	H. Suhail	Depth to Water	NA
Checked by	C. Marin	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion		

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**BORING LOG WC26-B02** Page 2 of 2

WEI Job No.: 790-36-01  
 Client: **TransSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 659.16 ft  
 North: 1778299.21 ft  
 East: 956796.14 ft  
 Station: 6573+53.89  
 Offset: 1.15 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
658.4	Dense, gray, fine SAND	1	1							2	2				
		3	3							4	4				
		5	5							7	7				
		8	8							10	10				
		13	13							16	16				
		17	17							19	19				
		21	21							23	23				
621.4	Very dense, gray SILT	25	25							27	27				
		29	29							31	31				
		33	33							35	35				
		37	37							39	39				
		41	41							43	43				
		45	45							47	47				

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling	01-26-2010	Completes Drilling	01-26-2010
Drilling Contractor	WTS	Drill Rig	D 50 ATV
Driller	K&J	Logger	H. Suhail
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...	Depth to Water	NA

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**BORING LOG WC26-B03** Page 1 of 2

WEI Job No.: 790-36-01  
 Client: **TransSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 657.73 ft  
 North: 1778343.38 ft  
 East: 956876.67 ft  
 Station: 6573+98.71  
 Offset: 79.86 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
	18-inch thick, dark brown CLAY --TOPSOIL--	1	1							2	2				
		3	3							4	4				
		5	5							7	7				
		9	9							11	11				
		13	13							15	15				
		17	17							19	19				
		21	21							23	23				
		25	25							27	27				
		29	29							31	31				
		33	33							35	35				
		37	37							39	39				
		41	41							43	43				
		45	45							47	47				

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling	01-26-2010	Completes Drilling	01-26-2010
Drilling Contractor	WTS	Drill Rig	D 50 ATV
Driller	K&F	Logger	H. Suhail
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...	Depth to Water	NA

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**BORING LOG WC26-B03** Page 2 of 2

WEI Job No.: 790-36-01  
 Client: **TransSystems Corporation**  
 Project: **Illinois Route 47, Section IL 47B**  
 Location: **Mainline, Kendall Co.**

Datum: NGVD  
 Elevation: 657.73 ft  
 North: 1778343.38 ft  
 East: 956876.67 ft  
 Station: 6573+98.71  
 Offset: 79.86 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/in)	Qu (tsf)	Mohr (tsf)	Moisture Content (%)
		5	5							8	8				
		9	9							11	11				
		13	13							15	15				
		17	17							19	19				
		21	21							23	23				
		25	25							27	27				
		29	29							31	31				
		33	33							35	35				
		37	37							39	39				
		41	41							43	43				
		45	45							47	47				

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling	01-26-2010	Completes Drilling	01-26-2010
Drilling Contractor	WTS	Drill Rig	D 50 ATV
Driller	K&F	Logger	H. Suhail
Checked by	C. Marin	Time After Drilling	NA
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion...	Depth to Water	NA

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT



**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SOIL BORINGS  
 STRUCTURE NO. 047-2564**

SHEET NO. 5 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	398
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				

Benchmark: B.M. 7008, Found cut "\*" north end of easterly headwall on box culvert 1385' south of Lisbon Center Road, Elevation 635.44.

Existing Structure: None. Traffic to be detoured during construction.

**INDEX OF SHEETS**

1. General Plan & Elevation
2. Culvert Details
3. Soil Borings

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

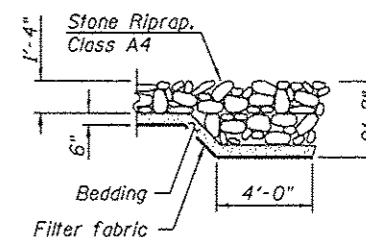
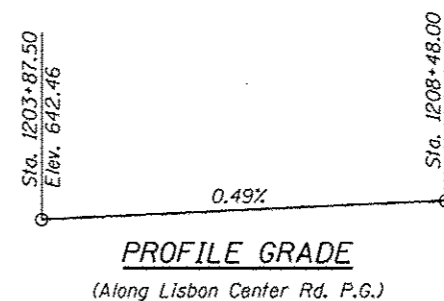
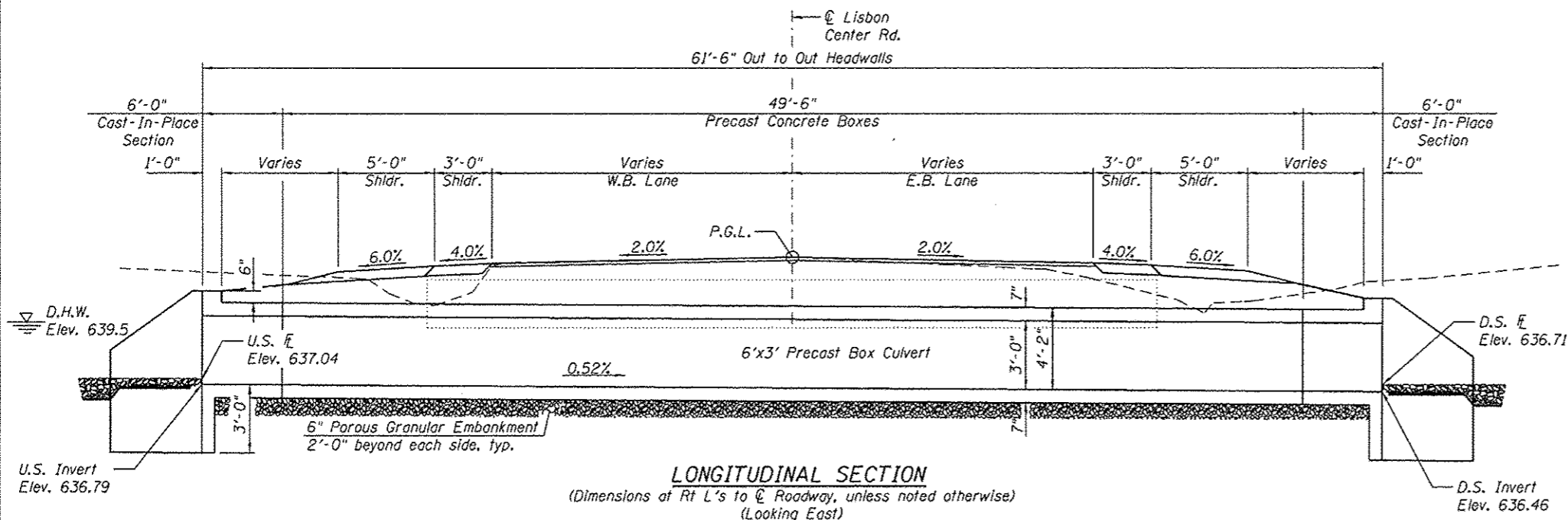
**LOADING HL-93**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

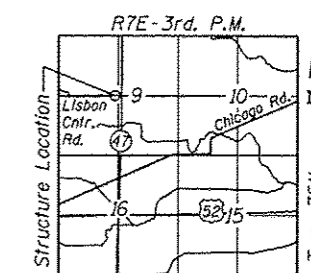
- FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)
- PRECAST UNITS**  
f'c = 5,000 psi  
fy = 60,000 psi (Reinforcement)  
fy = 65,000 psi (Welded Wire Fabric)

**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 2 of 3. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.



**SECTION A-A**



**GENERAL PLAN & ELEVATION**  
**LISBON CENTER RD. OVER**  
**DRAINAGE DITCH**  
**F.A.P. RTE. 326**  
**SEC-(109, 110)R-1**  
**KENDALL COUNTY**  
**STATION 1204+50.00**  
**WATER CROSSING 149A**

\*Waterproofing membrane shall cover the top surface of the culvert, including the top and inside face of edge beams at stage lines, and extend 6 inches up the inside face of the headwall. For precast box culverts, the waterproofing membrane shall cover the top 1 foot of the outside face of the sidewalls. For cast in place box culverts, the waterproofing membrane shall extend to 6 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	13
Stone Riprap, Class A4	Sq. Yd.	20
Filter Fabric	Sq. Yd.	20
Reinforcement Bars	Pound	1590
Concrete Box Culverts	Cu. Yd.	9.9
Precast Concrete Box Culvert 6'x3'	Foot	49.5
*Membrane Waterproofing for Culverts	Sq. Yd.	62

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	633.79	633.46

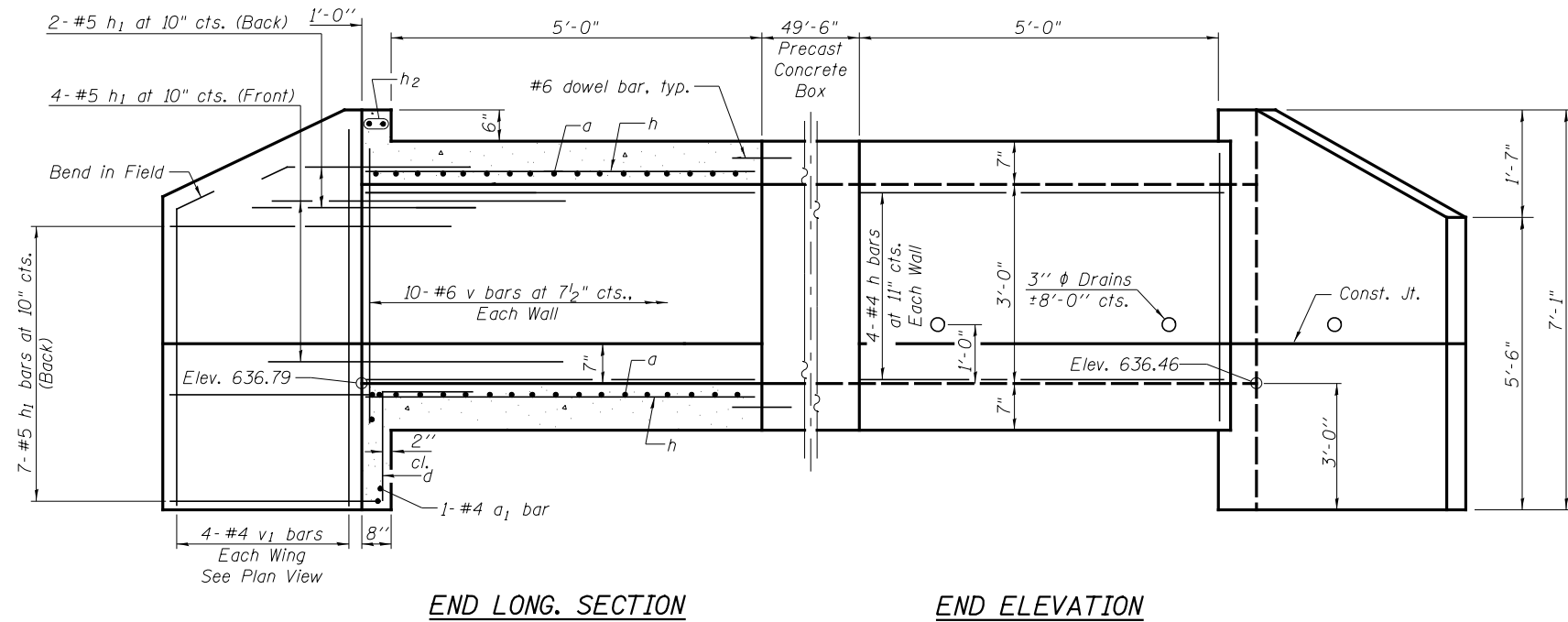
**WATERWAY INFORMATION**

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		NAT. H.W.E.		Head - Ft.		Headwater E.I.	
			Exist.	Prop.	H.W.E.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Drainage Area = 0.136 sq mi										
Exist. Low Grade Elev. 641.52										
Prop. Low Grade Elev. 642.05										
Design	50	92	4.9	14.1	642.2	639.5	0.3	1.0	642.5	640.5
Base	100	121	4.9	16.1	642.3	639.8	0.3	1.9	642.6	641.7
Overtopping	-	132	4.9	17.0	642.4	640.1	-	2.0	-	642.1
Max. Calc.	500	206	4.9	20.5	642.5	640.6	0.5	2.2	643.0	642.8

10 year velocity through Existing Structure = 9.4 fps  
10 year velocity through Proposed Structure = 4.5 fps

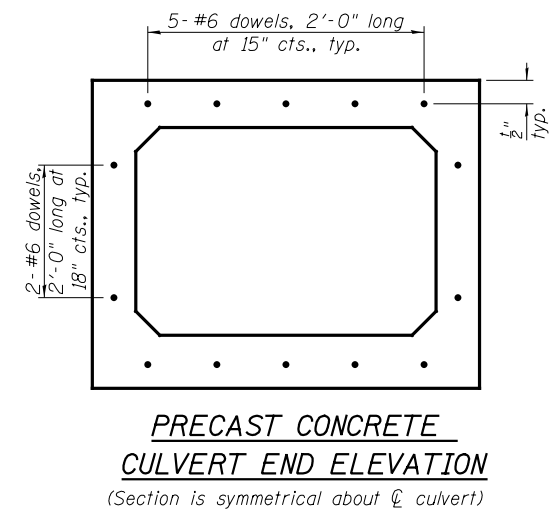


Vincent P. Tabor 7/14/2014  
Date  
Vincent P. Tabor  
Licensed Structural Engineer  
State of Illinois No. 081-007047  
Expires 11/30/2014

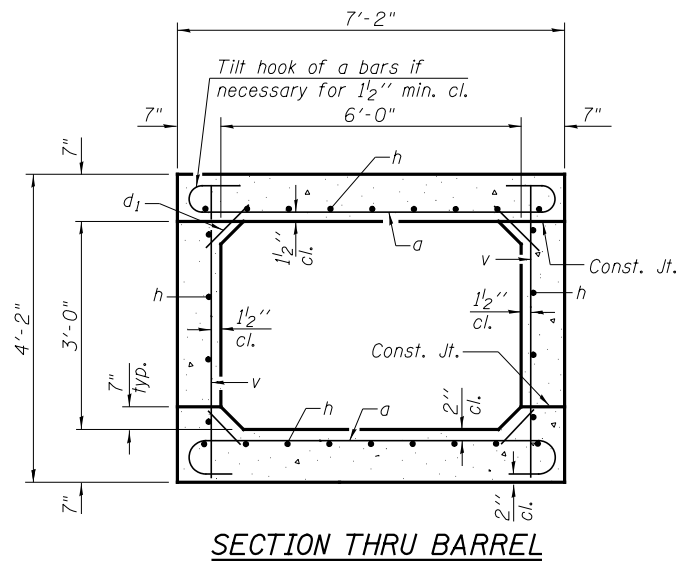


**END LONG. SECTION**

**END ELEVATION**

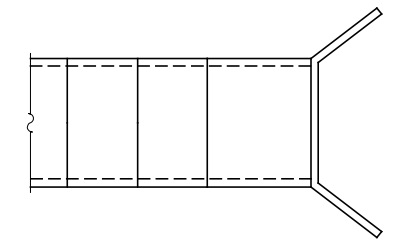


**PRECAST CONCRETE CULVERT END ELEVATION**  
(Section is symmetrical about  $\bar{C}$  culvert)

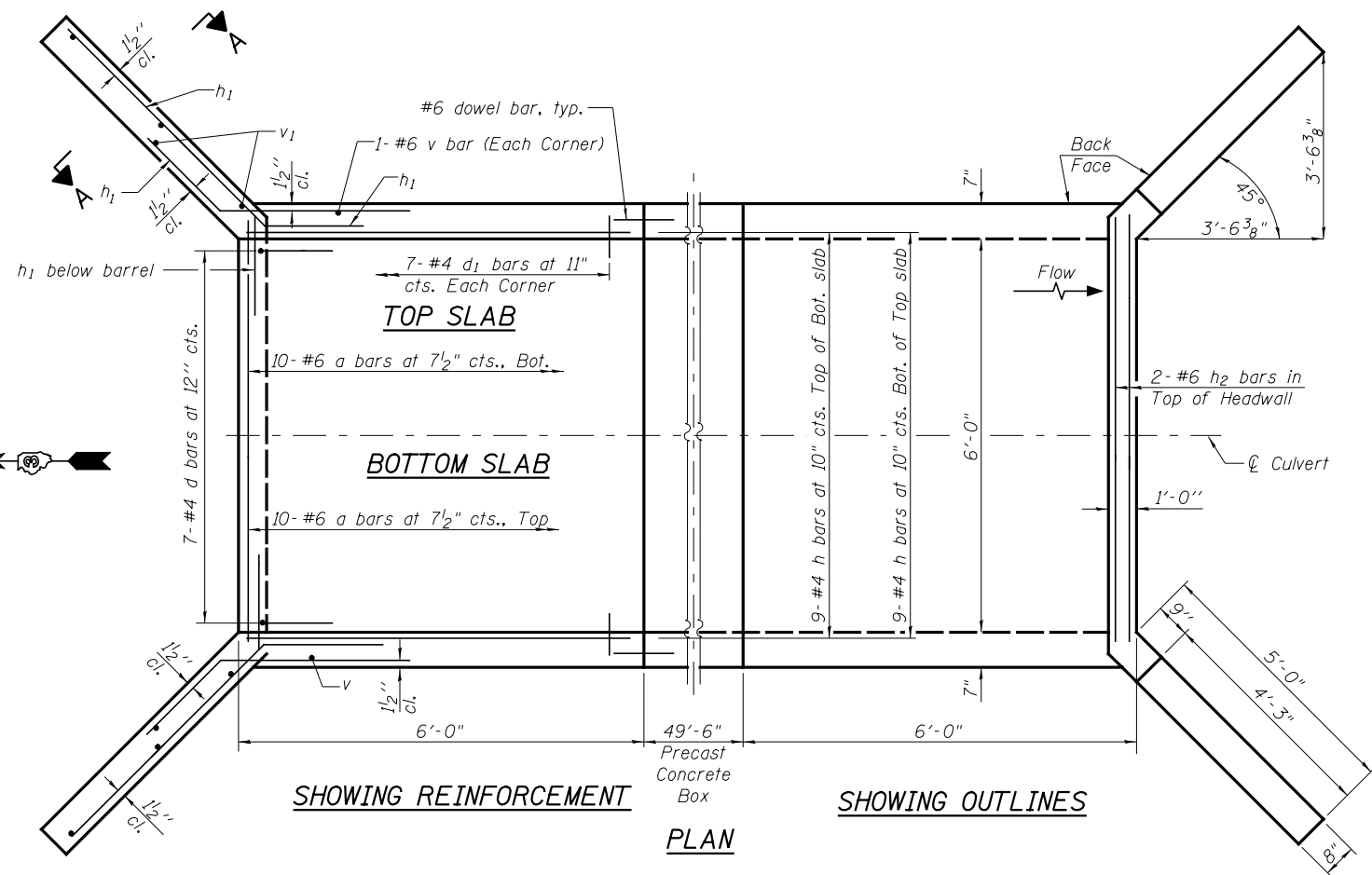


**SECTION THRU BARREL**

\* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



**ALIGNED PRECAST SECTIONS PLAN**



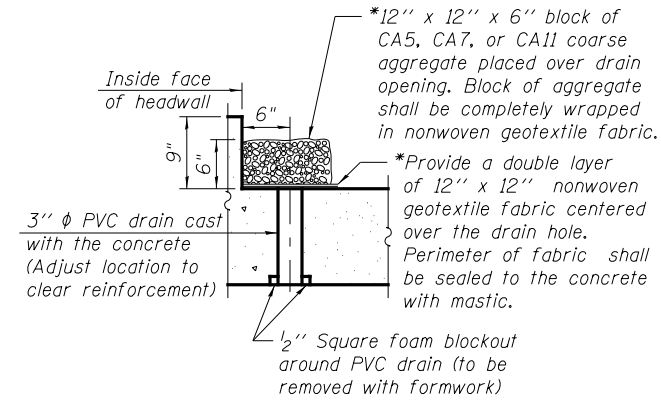
**TOP SLAB**

**BOTTOM SLAB**

**SHOWING REINFORCEMENT**

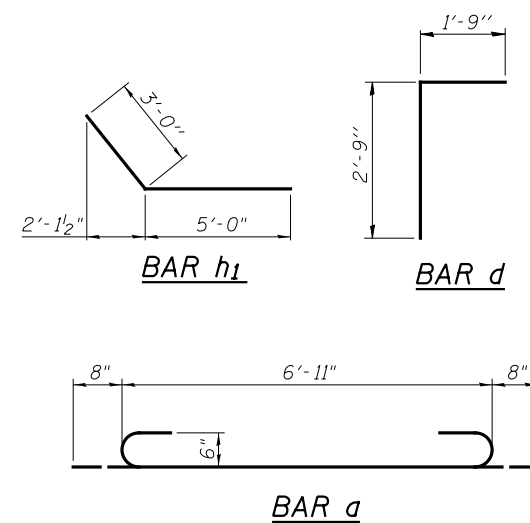
**SHOWING OUTLINES**

**PLAN**



**DRAIN DETAIL**

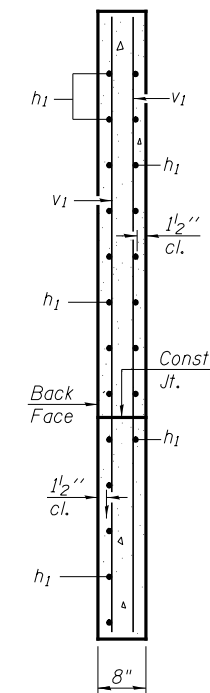
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



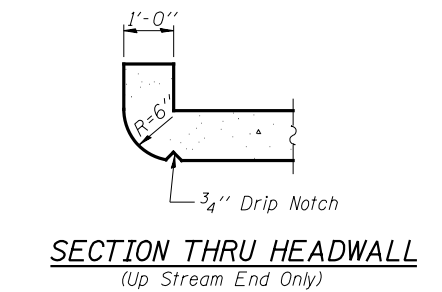
**BAR h<sub>1</sub>**

**BAR d**

**BAR a**



**SECTION A-A**



**SECTION THRU HEADWALL**  
(Up Stream End Only)

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	40	#6	8'-3"	
a <sub>1</sub>	2	#4	5'-10"	—
d	14	#4	4'-6"	
d <sub>1</sub>	56	#4	1'-2"	—
h	52	#4	5'-8"	—
h <sub>1</sub>	52	#5	8'-0"	—
h <sub>2</sub>	4	#6	5'-10"	—
v	44	#6	3'-10"	—
v <sub>1</sub>	16	#4	6'-9"	—
Concrete Box Culverts			Cu. Yd.	9.9
Reinforcement Bars			Pound	1590

Notes:  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications. Cost shall be included in the cost of Concrete Box Culverts.

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT

**E** LIN ENGINEERING, LTD.  
Consulting Engineers  
Springfield, Illinois

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS  
WATER CROSSING 149A

SHEET NO. 2 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110R-1)	KENDALL	619	400
CONTRACT NO. 66B84				
ILLINOIS FED. AID PROJECT				