

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2007-034 I	COOK & WILL	53	1
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 60D34			

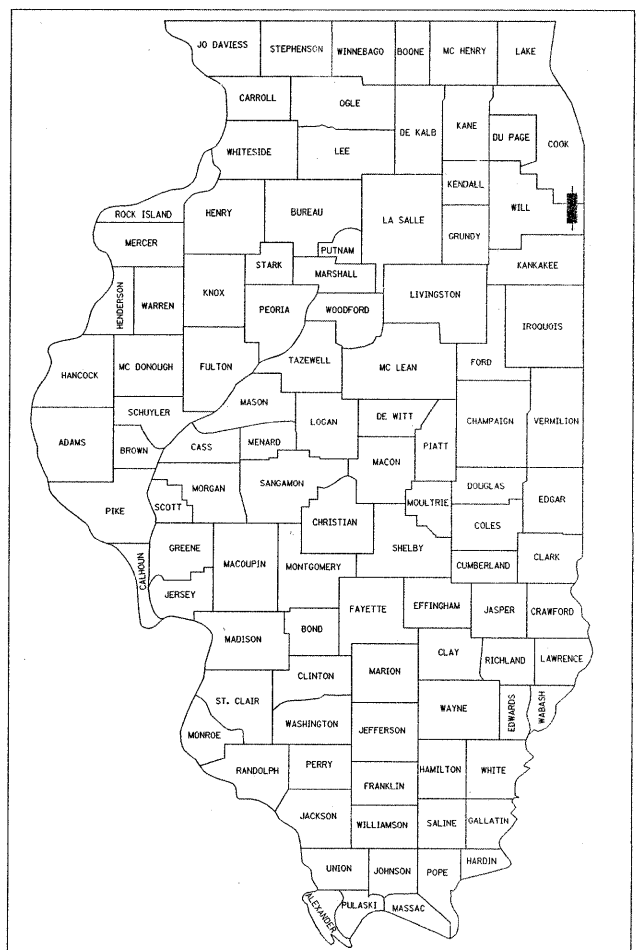
53
+1
54

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS
FAP 332 (IL 394)
SECTION 2007-044 I
ILLINOIS 1 TO SOUTH OF INTERSTATE 80
HIGH TENSION MEDIAN CABLE, GUARDRAIL REPAIRS
SHOULDER RUMBLE STRIPS AND LIGHTING INSTALLATION
PROJECT: ACHSIP-0332 (089)
COOK & WILL COUNTIES
C-91-006-08

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA
 ADT (2005) = 11,200 TO 48,600
 POSTED SPEED LIMIT = 55 MPH

THE PROJECT IS LOCATED IN THE
 VILLAGES OF CRETE, STEGER, SAUK
 VILLAGE, FORD HEIGHTS, LYNWOOD
 AND LANSING



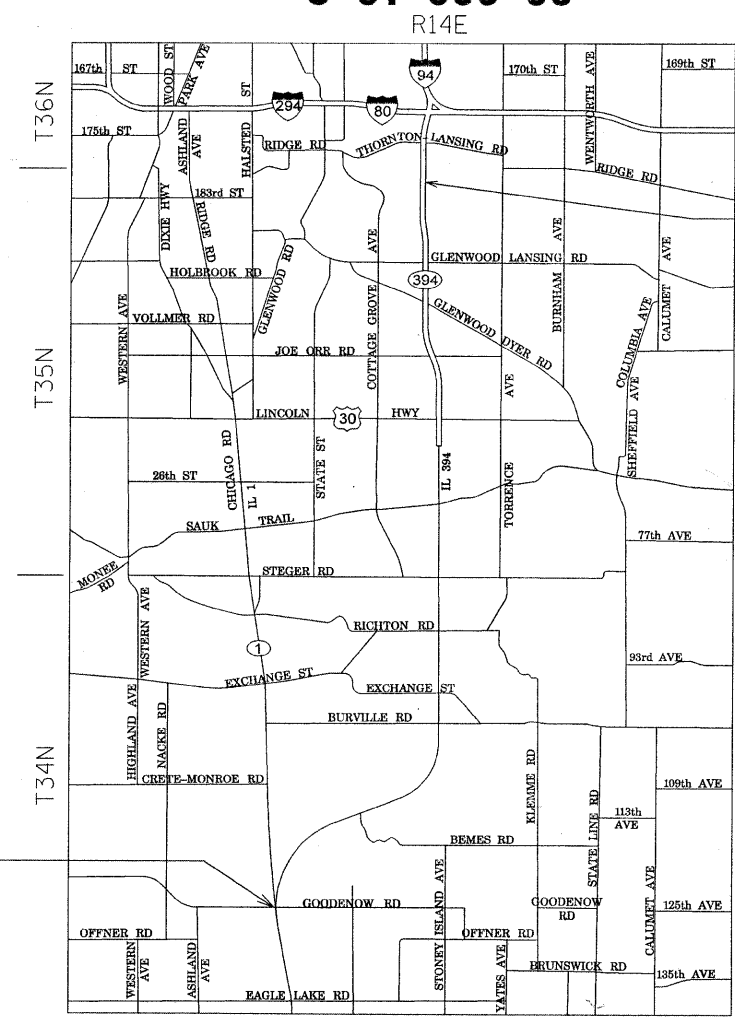
LOCATION OF SECTION INDICATED THIS: - [rectangle] -

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
 ENGINEERS & SCIENTISTS
 8501 W. Higgins Road; Suite 280
 Chicago, Illinois 60631
 (773) 399-0112

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED Dec. 20 20 07
Diane O'Keefe/cj
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
February 4, 20 08
Eric E. Harn/RD
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT
February 1, 20 08
Christine M. Reed/RD
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

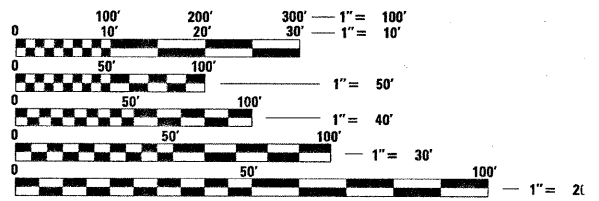
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OF THE STATE OF ILLINOIS



PROJEC ENDS
 STATION .773 + 0.0

Peter M. Johnston
 12-19-07
 PETER M. JOHNSTON
 062-047647
 REGISTERED
 PROFESSIONAL
 ENGINEER
 OF
 ILLINOIS
 Exp 11-30-09

PROJECT BEGINS
 STATION 1985 + 00



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
 ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
 CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
 ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

PROJECT ENGINEER: PETER JOHNSTON P.E. (773) 399-1112
 PROJECT MANAGER: KEN ENG, P.E. (847) 701-1247

CONTRACT NO. 60D34

THORNTON, BLOOM & CRETE TOWNSHIPS
 NOT TO SCALE
 GROSS AND NET LENGTH OF PROJECT: 68,800 FT (13.03 MILES)

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	SCHEDULE OF QUANTITIES
5	TYPICAL SECTIONS
6-30	EXISTING AND PROPOSED ROADWAY PLAN
31	LIGHTING SYMBOLS, ABBREVIATIONS, GENERAL NOTES, AND BILL OF MATERIALS
32-40	LIGHTING PLAN
41-45	LIGHTING CONTROLLER PLANS
46-52	LIGHTING DETAILS
53	TRAFFIC CONTROL FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES

STATE STANDARDS

STD. NO.	DESCRIPTION
630001-07	STEEL PLATE BEAM GUARDRAIL
631011-04	TRAFFIC BARRIER TERMINAL TYPE 2
642001	SHOULDER RUMBLE STRIPS
701101-01	OFF-RD OPERATIONS, MULTILANE, LESS THAN 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701400-02	APPROACH TO LANE CLOSURE, FREEWAY/ EXPRESSWAY
701406-04	LANE CLOSURE, FREEWAY/ EXPRESSWAY, DAY OPERATIONS ONLY
701901	TRAFFIC CONTROL DEVICES

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. THE CONTRACTOR SHALL CALL STATE ELECTRICAL CONTRACTOR AT (773) 287-7600 TO LOCATE STATE OWNED FACILITIES.
5. THE CONTRACTOR SHALL WORK IN THE DIRECTION OF TRAFFIC.
6. THE CONTRACTOR WILL NOT BE ALLOWED TO STORE MATERIALS OVERNIGHT IN THE MEDIAN
7. FINAL LOCATIONS OF THE HIGH TENSION CABLE MEDIAN BARRIER TERMINAL SHALL BE DETERMINED BY THE ENGINEER.



GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

FILE NAME = #FILE#	USER NAME = .USER.	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 10.0000' / IN.	DRAWN - EAD	REVISED -					332	2007-044 I	WILL & COOK	53	2
	PLOT DATE = 1/4/2008	CHECKED - PJ	REVISED -					CONTRACT NO. 60D34				
	DATE - 12/10/2007	REVISED -	SCALE: N.T.S.					SHEET NO. 2 OF 53 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

SUMMARY OF QUANTITIES

PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	URBAN		90% FED. / 10% STATE		
				ROADWAY SFTY-2A WILL CO	ROADWAY SFTY-2A COOK CO	MEDIAN BARRIER SFTY-4A WILL CO	MEDIAN BARRIER SFTY-4A COOK CO	LIGHTING Y030-1E WILL CO
NP 25000750	MOWING	ACRE	14			7	7	
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	38	38				
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3	2	1			
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	16	12	4			
63200310	GUARDRAIL REMOVAL	FOOT	875	663	212			
64200105	SHOULDER RUMBLE STRIP	FOOT	45,100	45,100				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	1	1	1	1	2
67100100	MOBILIZATION	L SUM	1	0.1	0.1	0.2	0.2	0.4
80400100	ELECTRIC SERVICE INSTALLATION	EACH	5					5
80400200	ELECTRICAL UTILITY SERVICE INSTALLATION	L SUM	1					1
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	1,320					1,320
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	490					490
X8160395	UNIT DUCT, WITH 3-1/2" NO. 2 1/2" NO. 4 GROUND, 600V (EPR-TYPE RHW), 1 1/2" DIA., POLYETHYLENE AND	FOOT	41,584					41,584
81701385	ELECTRIC CABLE IN CONDUIT, 600V, (EPR-TYPE USE) 3-1/2" 350 MCM	FOOT	525					525
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	42,074					42,074
82102310	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT	EACH	164					164
82102400	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	21					21
X8250080	LIGHTING CONTROLLER, RADIO CONTROL, DUPLEX CONSOLE TYPE	EACH	5					5
83050810	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM	EACH	185					185
83600400	POLE FOUNDATION, METAL	EACH	185					185
83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE	EACH	185					185
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	5					5
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	5					5
84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	5					5
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	159	26	27	27	26	53
X0323574	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	6					6
X0325606	HIGH TENSION CABLE MEDIAN BARRIER DEMONSTRATION	EACH	1			0.5	0.5	
X0325589	HIGH TENSION CABLE MEDIAN BARRIER	FOOT	58,650			30,375	28,275	
X0325590	HIGH TENSION CABLE MEDIAN BARRIER TERMINAL	EACH	40			16	24	
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1			0.5	0.5	
X8170100	ELECTRIC CABLE IN CONDUIT, REMOVE ALL CONDUCTORS	FOOT	1,020					1,020
XX006937	GROUND ROD, 5/8" X 10 FT. DIA.	EACH	200					200
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.1	0.1	0.2	0.2	0.4

NP = Non-participating



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FILE NAME =	USER NAME = .USER.	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED - PJ	REVISED -					CONTRACT NO. 60D34					
		DATE - 12/10/2007	REVISED -					ILLINOIS FED. AID PROJECT					
				SCALE: N.T.S.	SHEET NO. 3 OF 28 SHEETS	STA.	TO STA.						

1/10/2008

SCHEDULE OF QUANTITIES

HIGH TENSION CABLE MEDIAN BARRIER		
STATION		TOTAL LENGTH (FT.)
FROM	TO	
1989+50	2014+00	2,450
2016+50	2039+00	2,250
2046+00	2099+00	5,300
2102+00	2120+00	1,800
2125+00	2214+00	8,900
2218+50	2240+00	2,150
2248+00	2291+00	4,300
2302+00	2334+25	3,225
2348+00	2398+00	5,000
2411+50	2441+50	3,000
2452+00	2455+50	350
2458+50	2473+00	1,450
2475+50	2491+50	1,600
2493+00	2527+00	3,400
2529+50	2559+50	3,000
2560+75	2573+50	1,275
2576+00	2588+50	1,250
2590+00	2607+50	1,750
2610+00	2638+50	2,850
2639+50	2673+00	3,350
TOTAL		58,650

HIGH TENSION CABLE MEDIAN TERMINAL		
STATION	OFFSET	UNIT (EACH)
1989+50	RT	1
2014+00	RT	1
2016+50	RT	1
2039+00	RT	1
2046+00	RT	1
2099+00	RT	1
2102+00	RT	1
2120+00	RT	1
2125+00	RT	1
2214+00	RT	1
2218+50	RT	1
2240+00	RT	1
2248+00	LT	1
2291+00	LT	1
2302+00	RT	1
2334+25	RT	1
2348+00	LT	1
2398+00	LT	1
2411+50	LT	1
2441+50	LT	1
2452+00	RT	1
2455+50	RT	1
2458+50	RT	1
2473+00	RT	1
2475+50	LT	1
2491+50	LT	1
2493+00	LT	1
2527+00	LT	1
2529+50	RT	1
2559+50	RT	1
2560+75	RT	1
2573+50	RT	1
2576+00	RT	1
2588+50	RT	1
2590+00	RT	1
2607+50	RT	1
2610+00	LT	1
2638+50	LT	1
2639+50	RT	1
2673+00	RT	1
TOTAL		40

GUARDRAIL IMPROVEMENTS						
STATION			TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL TYPE 2	STEEL PLATE BEAM GUARDRAIL	GUARDRAIL REMOVAL
FROM	TO	OFFSET	EACH	EACH	FEET	FEET
1986+90	1987+40	12 RT	1			50
1987+05	1987+55	54 RT	1			50
1989+55	1990+05	54 LT	1			50
2009+60	2010+10	54 RT	1			50
2011+90	2012+03	54 RT		1		12.5
2036+40	2036+90	54 RT	1			50
2057+40	2057+90	54 RT	1			50
2088+50	2089+00	54 RT	1			50
2099+50	2099+88	54 RT			37.5	37.5
2163+30	2163+80	54 RT	1			50
2219+70	2220+20	54 RT	1			50
2223+90	2224+40	54 LT	1			50
2233+50	2233+63	54 RT		1		12.5
2257+70	2258+20	54 RT	1			50
2333+80	2334+30	54 RT	1			50
2352+80	2354+30	54 RT	1			50
2367+80	2367+93	54 RT		1		12.5
2441+50	2442+00	54 RT	1			50
2454+90	2555+40	54 RT	1			50
2499+00	2499+50	54 LT	1			50
TOTALS			16	3	38	875

SHOULDER RUMBLE STRIPS					
STATION		45 FT LEFT	19 FT LEFT	19 FT RIGHT	45 FT RIGHT
FROM	TO	FEET	FEET	FEET	FEET
2209+80	2216+40				660
2209+80	2213+90			410	
2210+30	2216+10		580		
2210+30	2216+10	580			
2217+80	2242+70				2,490
2217+80	2240+00			2,220	
2218+10	2242+70		2,460		
2218+10	2242+70	2,460			
2244+50	2289+70				4,520
2244+50	2291+20			4,670	
2247+20	2295+20		4,800		
2244+50	2295+20	5,070			
2297+80	2335+70				3,790
2297+80	2335+70			3,790	
2302+00	2335+70		3,370		
2303+40	2335+70	3,230			
TOTAL		45,100			

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		CHECKED - PJ	REVISED -
		DATE - 12/10/2007	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

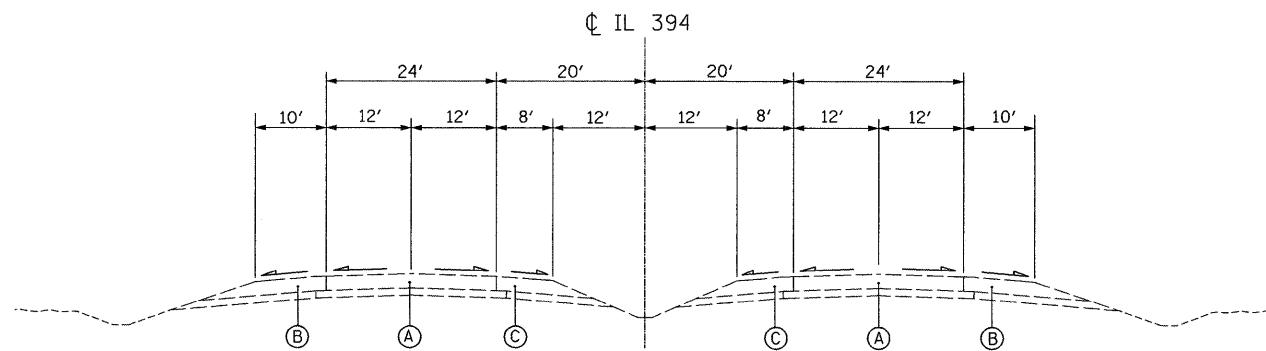
SCHEDULE OF QUANTITIES

SCALE: N.T.S. SHEET NO. 4 OF 28 SHEETS STA. TO STA.



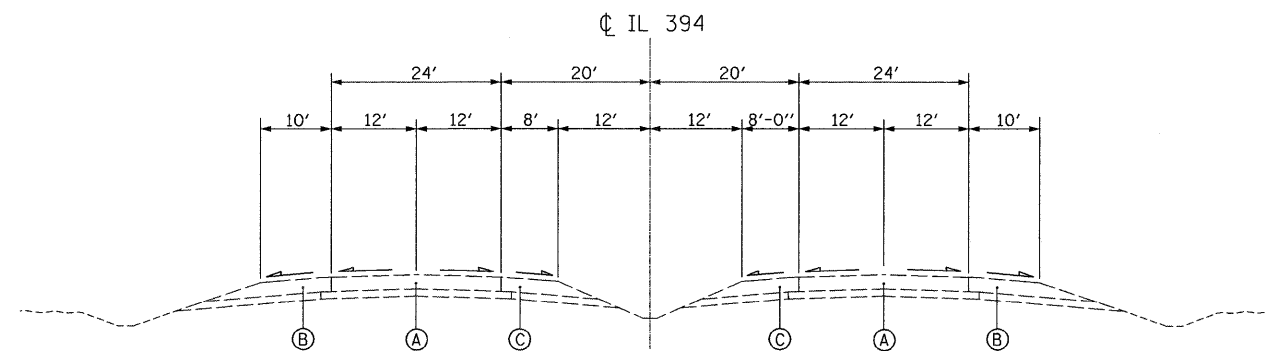
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2007-044 I	WILL & COOK	53	4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D34	



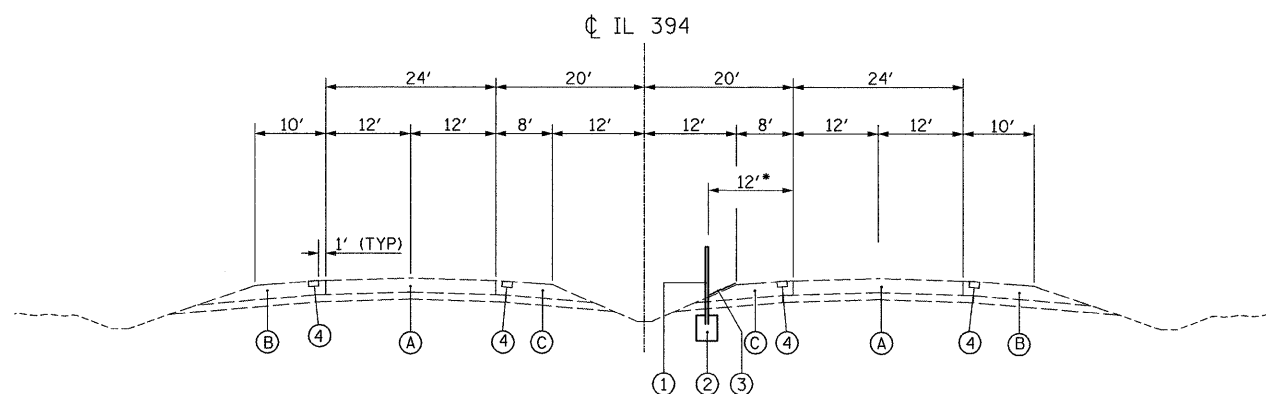
EXISTING IL 394 TYPICAL SECTION

STA. 1990+50 TO STA. 2240+00
 STA. 2302+00 TO STA. 2334+25
 STA. 2452+00 TO STA. 2473+00
 STA. 2529+50 TO STA. 2607+50
 STA. 2639+50 TO STA. 2673+00



EXISTING IL 394 TYPICAL SECTION

STA. 2248+00 TO STA. 2291+00
 STA. 2411+50 TO STA. 2441+50
 STA. 2475+50 TO STA. 2491+50
 STA. 2493+00 TO STA. 2527+00
 STA. 2610+00 TO STA. 2638+50



PROPOSED IL 394 TYPICAL SECTION

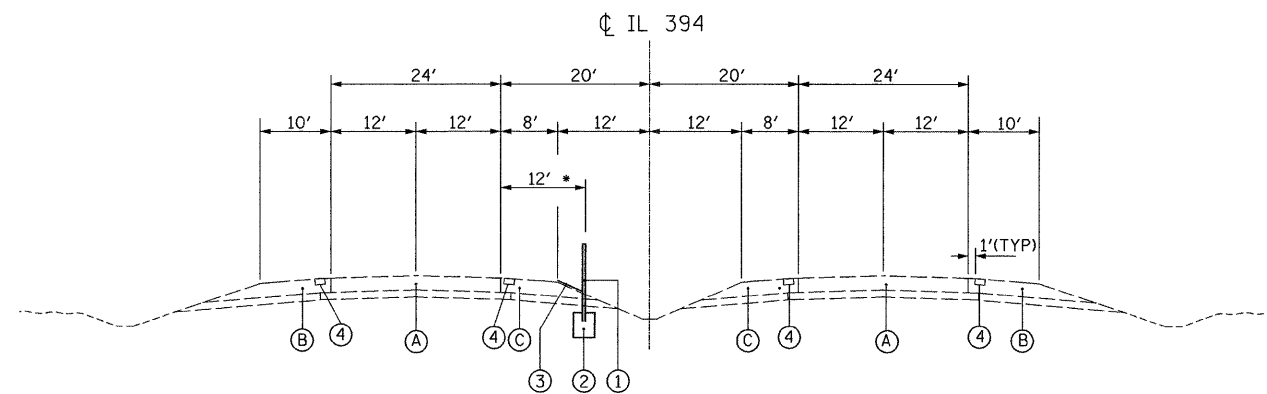
STA. 1990+50 TO STA. 2014+00
 STA. 2016+50 TO STA. 2039+00
 STA. 2046+00 TO STA. 2099+00
 STA. 2012+00 TO STA. 2120+00
 STA. 2125+00 TO STA. 2214+00
 STA. 2218+50 TO STA. 2240+00
 STA. 2302+00 TO STA. 2334+25
 STA. 2452+00 TO STA. 2455+50
 STA. 2458+50 TO STA. 2473+00
 STA. 2529+50 TO STA. 2559+50
 STA. 2560+75 TO STA. 2573+50
 STA. 2576+00 TO STA. 2588+50
 STA. 2590+00 TO STA. 2607+50
 STA. 2639+50 TO STA. 2673+00

EXISTING CONDITIONS:

- Ⓐ TRAVELED WAY
- Ⓑ RIGHT SHOULDER
- Ⓒ LEFT SHOULDER

PROPOSED IMPROVEMENTS:

- ① HIGH TENSION CABLE MEDIAN BARRIER
- ② CONCRETE FOUNDATION- INCLUDED IN THE COST OF THE APPLICABLE HIGH TENSION CABLE MEDIAN BARRIER
- ③ PROPOSED MOWING, (10' WIDE)
- ④ SHOULDER RUMBLE STRIP



PROPOSED IL 394 TYPICAL SECTION

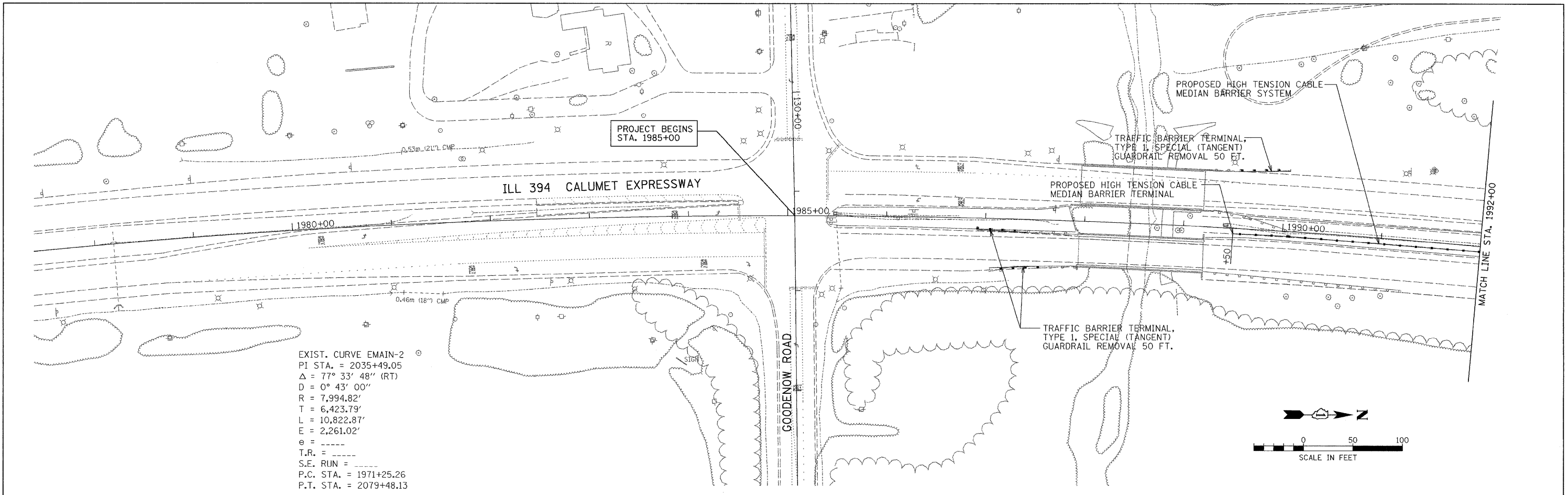
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 STA. 2475+50 TO STA. 2491+50
 STA. 2493+00 TO STA. 2527+00
 STA. 2610+00 TO STA. 2638+50

* 10' OFFSET
 FROM STA. 2061+00 TO 2083+00
 FROM STA. 2348+00 TO 2398+00

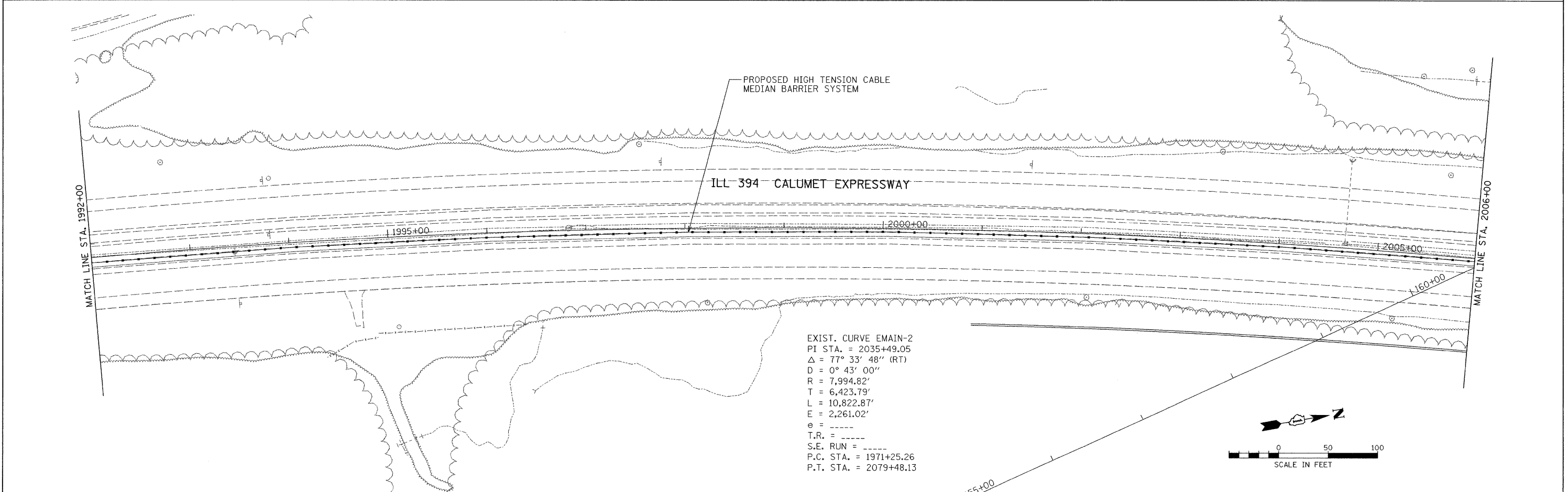
ALL FOUNDATIONS SHOULD BE 42" DEEP AS A MINIMUM

FINAL OFFSET LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER

FILE NAME =	USER NAME = .USER.	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - EAD	REVISED -					332	2007-044 I	WILL & COOK	53	5
		CHECKED - PJ	REVISED -		SCALE: N.T.S.	SHEET NO. 5 OF 28 SHEETS	STA.	TO STA.	CONTRACT NO. 60D34			
		DATE - 12/10/2007	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



EXIST. CURVE EMAIN-2
 PI STA. = 2035+49.05
 $\Delta = 77^\circ 33' 48''$ (RT)
 $D = 0^\circ 43' 00''$
 $R = 7,994.82'$
 $T = 6,423.79'$
 $L = 10,822.87'$
 $E = 2,261.02'$
 $e = \text{---}$
 T.R. = ---
 S.E. RUN = ---
 P.C. STA. = 1971+25.26
 P.T. STA. = 2079+48.13

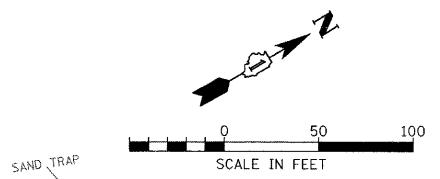
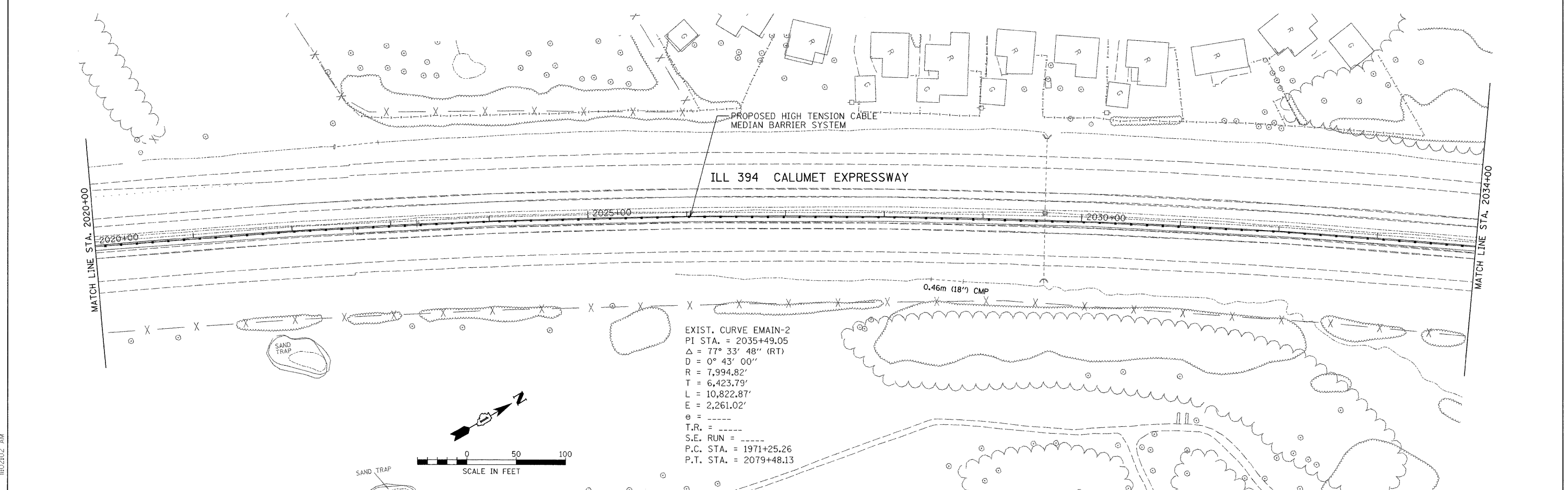
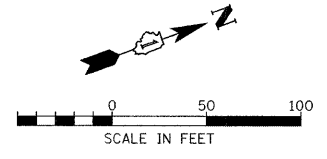
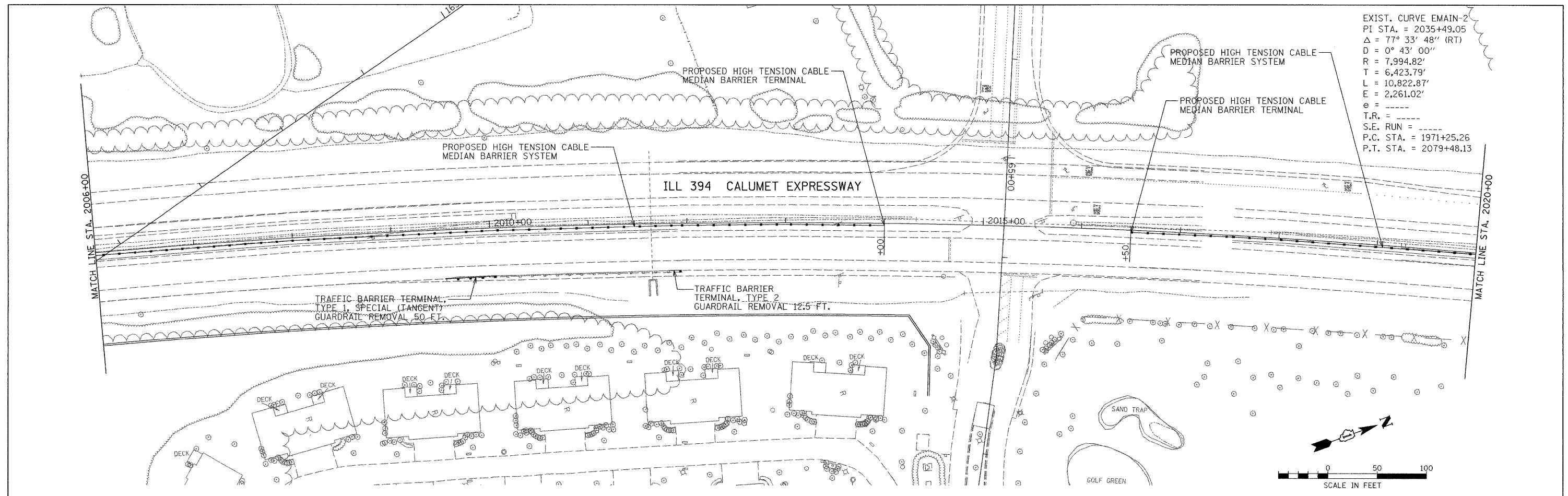


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FILE NAME =	USER NAME = .USER.	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING AND PROPOSED ROADWAY PLAN			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN -	REVISED -					332	2007-044 I	WILL & COOK	53	6
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	REVISED -		SCALE: 1" = 50'			CONTRACT NO. 60D34				
PLOT DATE = 1/2/2008	DATE -	REVISED -	REVISED -		SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

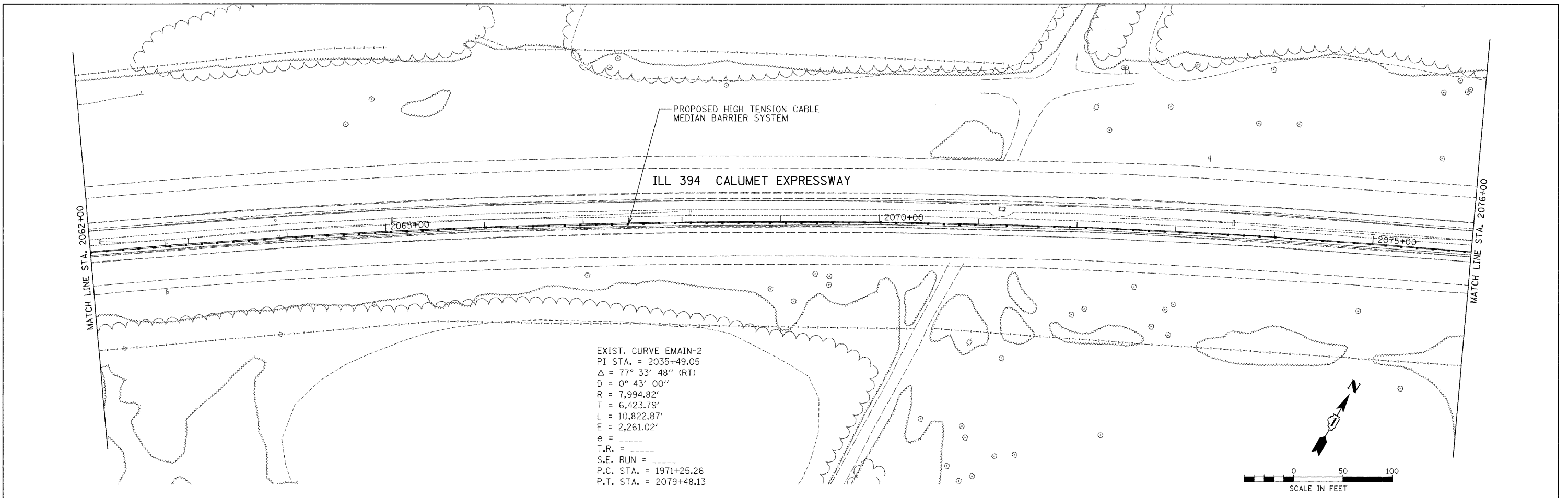
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 $e = \text{-----}$
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 P.C. STA. = 1971+25.26
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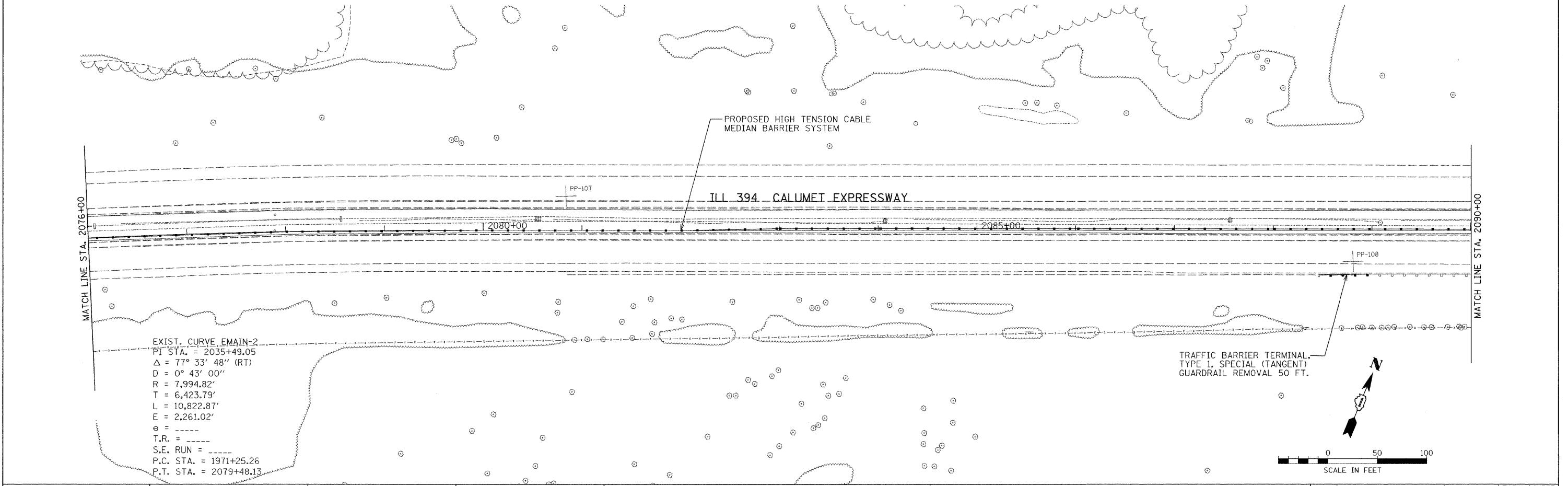
EXIST. CURVE EMAIN-2
 PI STA. = 2035+49.05
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 $E = 2,261.02'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. \text{ RUN} = \text{-----}$
 P.C. STA. = 1971+25.26
 P.T. STA. = 2079+48.13

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PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	SCALE: 1" = 50'					SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 60D34				
PLOT DATE = 1/2/2008	DATE -	REVISED -	ILLINOIS FED. AID PROJECT											



EXIST. CURVE EMAIN-2
 PI STA. = 2035+49.05
 $\Delta = 77^\circ 33' 48''$ (RT)
 $D = 0^\circ 43' 00''$
 $R = 7,994.82'$
 $T = 6,423.79'$
 $L = 10,822.87'$
 $E = 2,261.02'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA. = 1971+25.26
 P.T. STA. = 2079+48.13

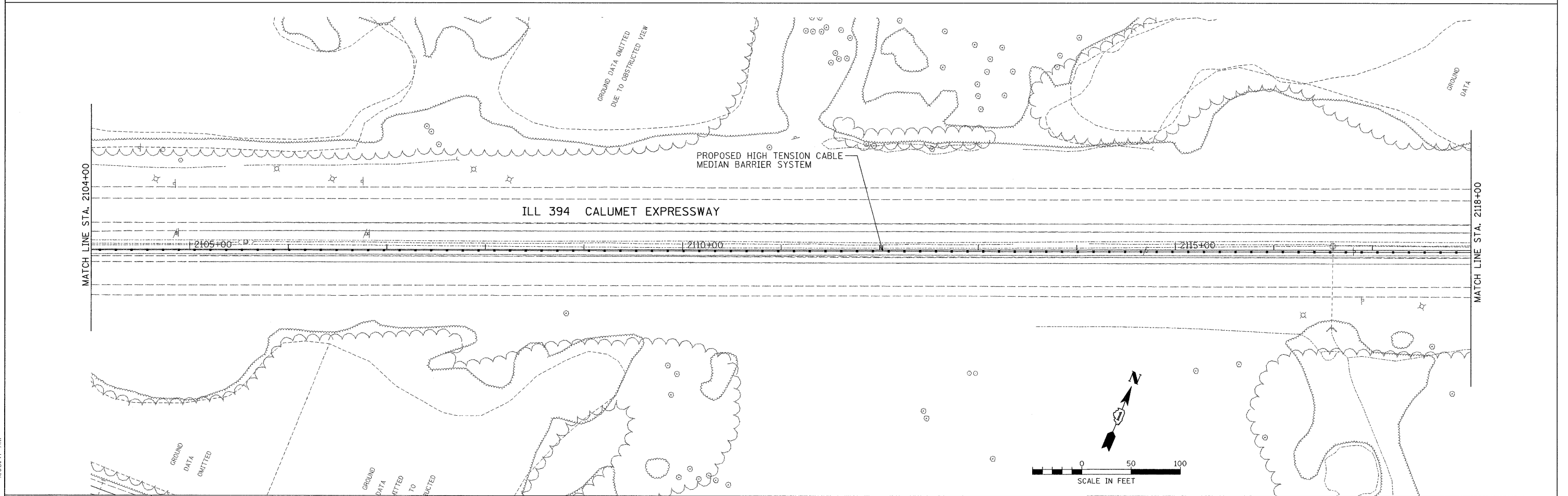
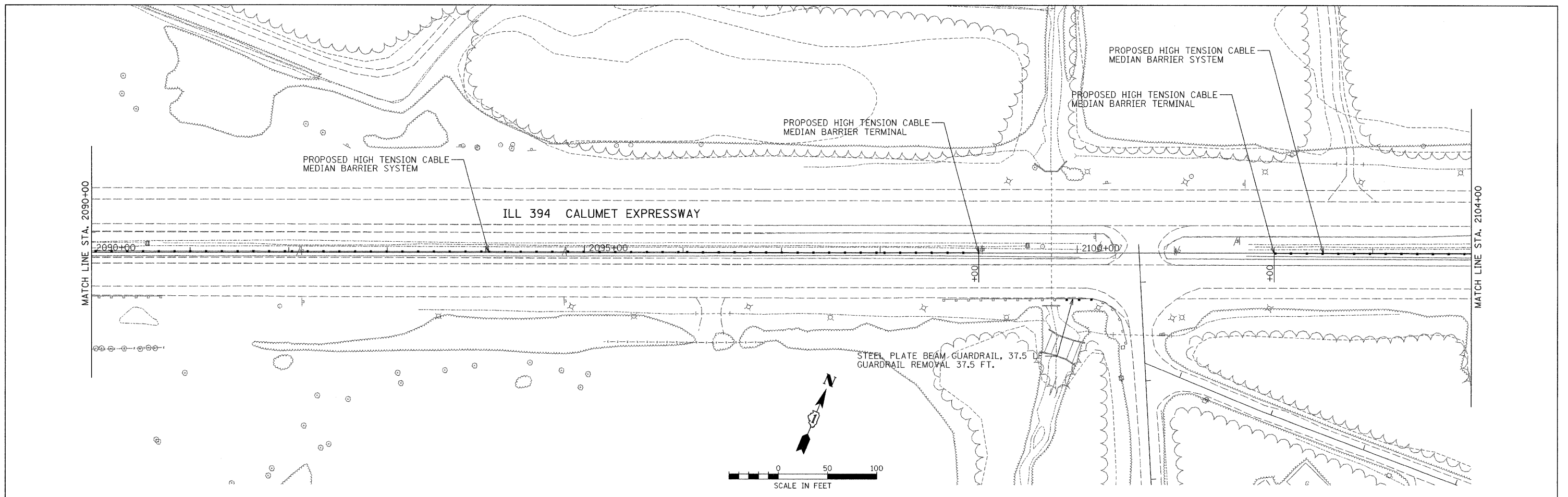


EXIST. CURVE EMAIN-2
 PI STA. = 2035+49.05
 $\Delta = 77^\circ 33' 48''$ (RT)
 $D = 0^\circ 43' 00''$
 $R = 7,994.82'$
 $T = 6,423.79'$
 $L = 10,822.87'$
 $E = 2,261.02'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA. = 1971+25.26
 P.T. STA. = 2079+48.13

TRAFFIC BARRIER TERMINAL,
 TYPE 1, SPECIAL (TANGENT),
 GUARDRAIL REMOVAL 50 FT.

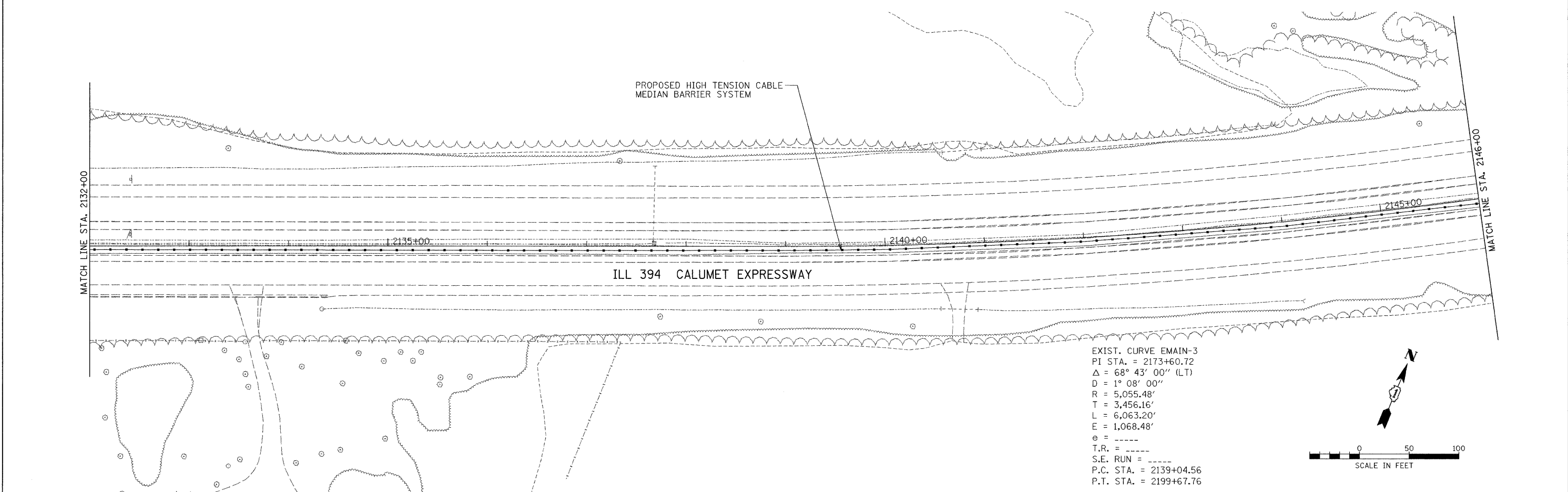
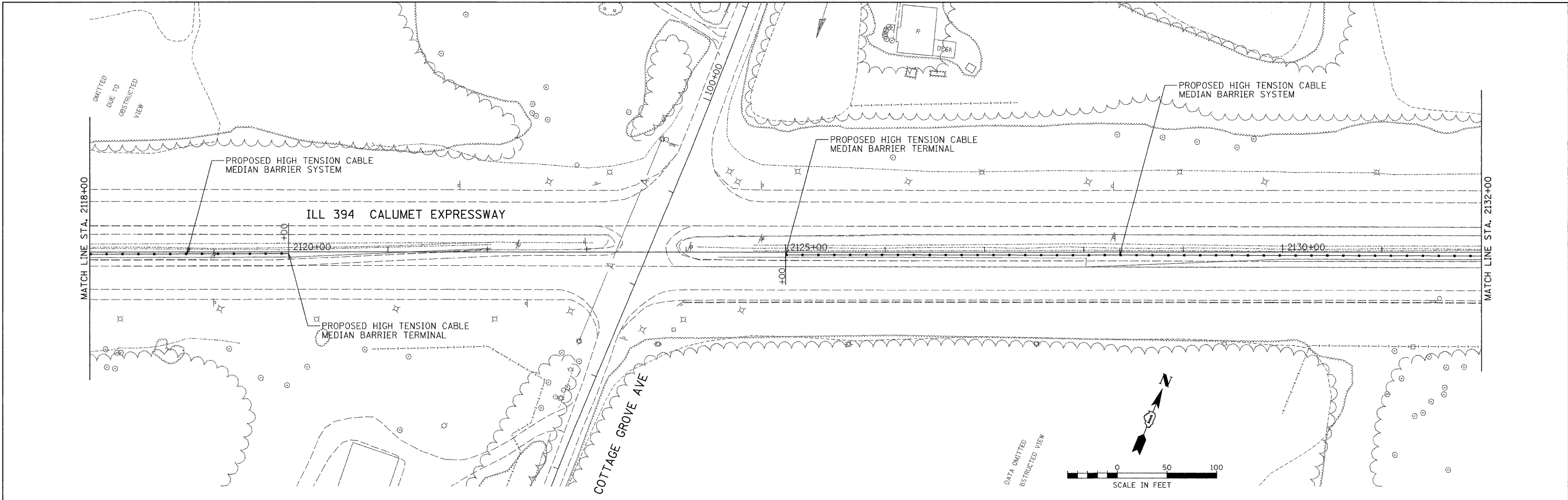
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PLOT DATE = 1/2/2008		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
					SCALE: 1" = 50'	SHEET NO.	OF SHEETS	STA.	TO STA.			



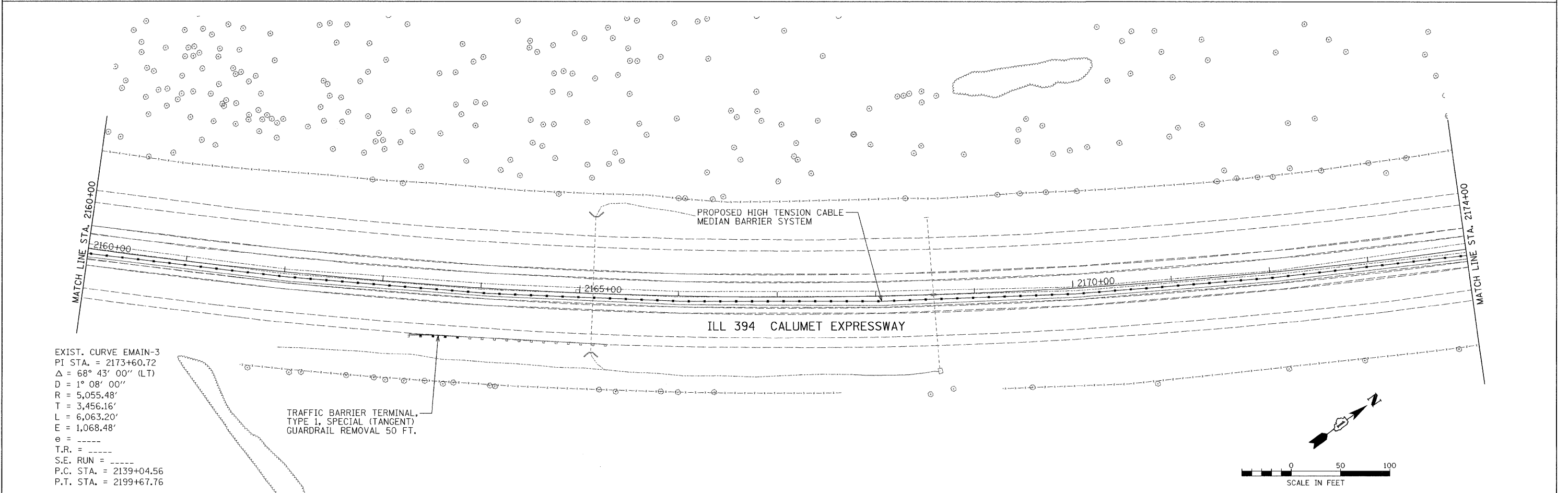
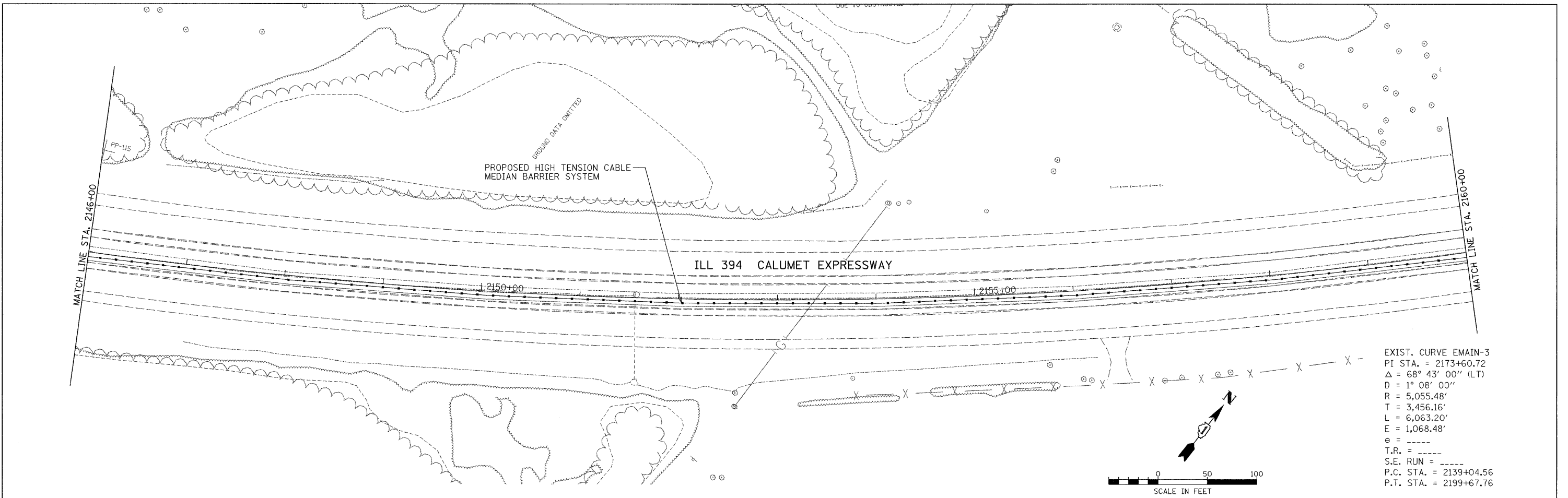
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		DATE -	REVISED -									



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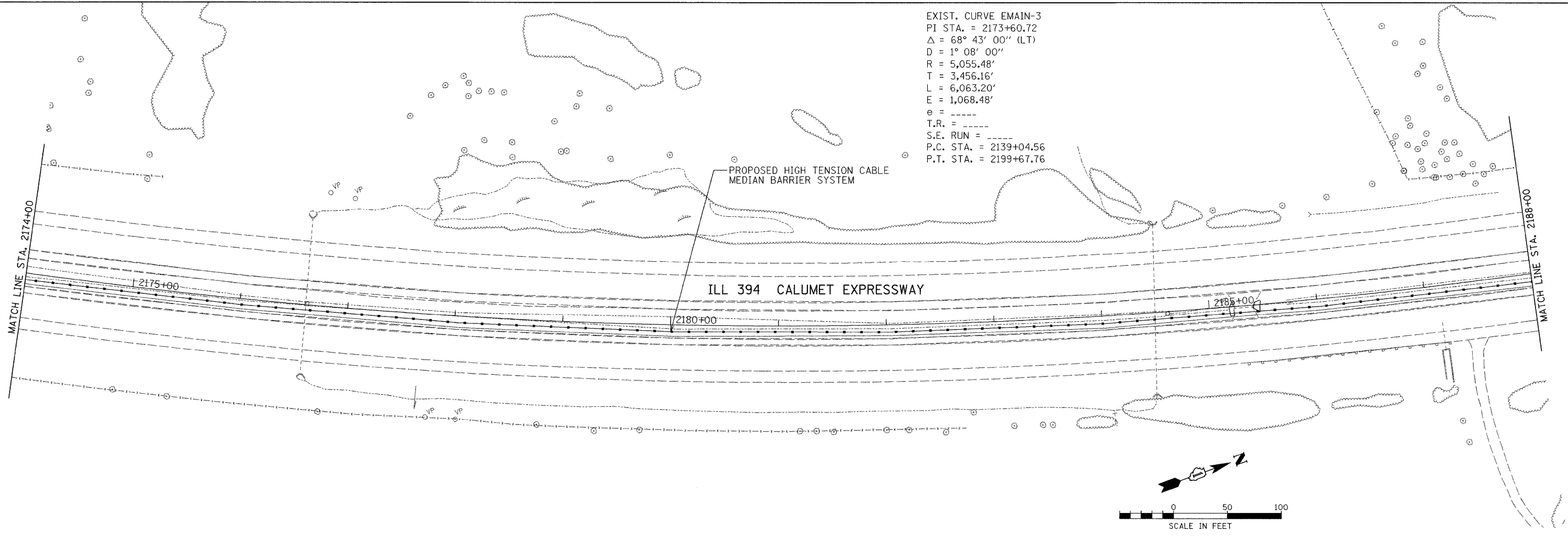
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PLOT DATE = 1/2/2008		DATE -	REVISED -		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT					



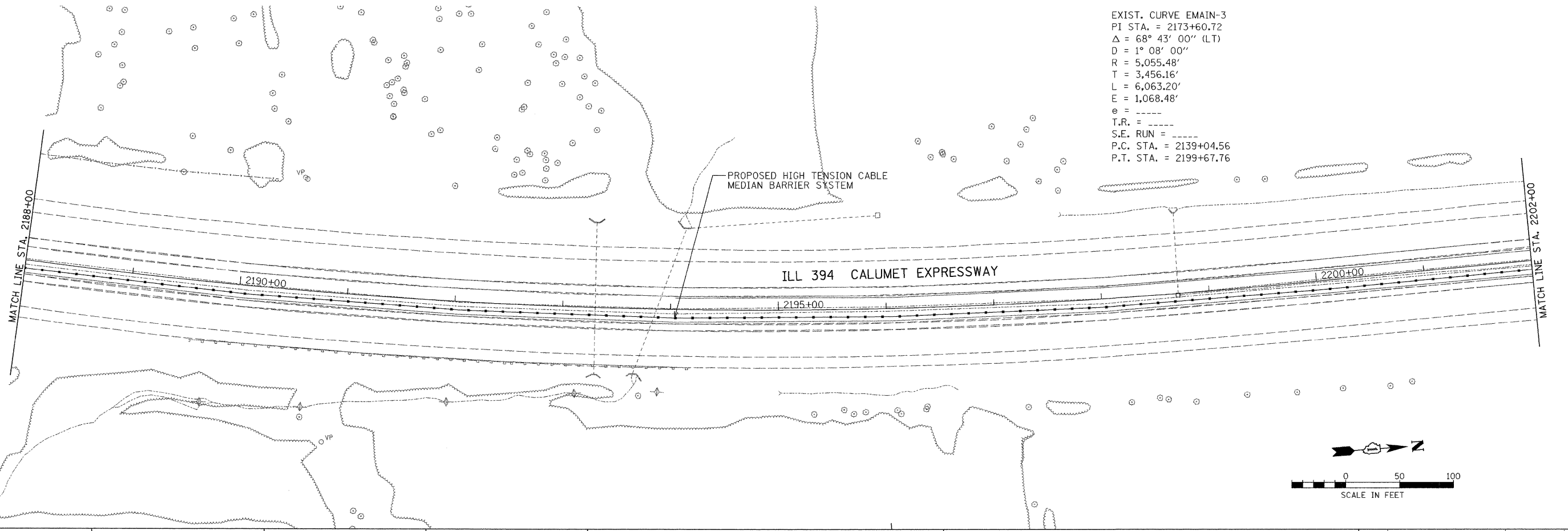
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PLOT SCALE = 50.0000' / IN.								332	2007-044 I	WILL & COOK	53	12
PLOT DATE = 1/2/2008					SCALE: 1" = 50'	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 60D34	
					FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT			

EXIST. CURVE EMAIN-3
 PI STA. = 2173+60.72
 $\Delta = 68^\circ 43' 00''$ (LT)
 D = $1^\circ 08' 00''$
 R = 5,055.48'
 T = 3,456.16'
 L = 6,063.20'
 E = 1,068.48'
 e = ----
 T.R. = ----
 S.E. RUN = ----
 P.C. STA. = 2139+04.56
 P.T. STA. = 2199+67.76

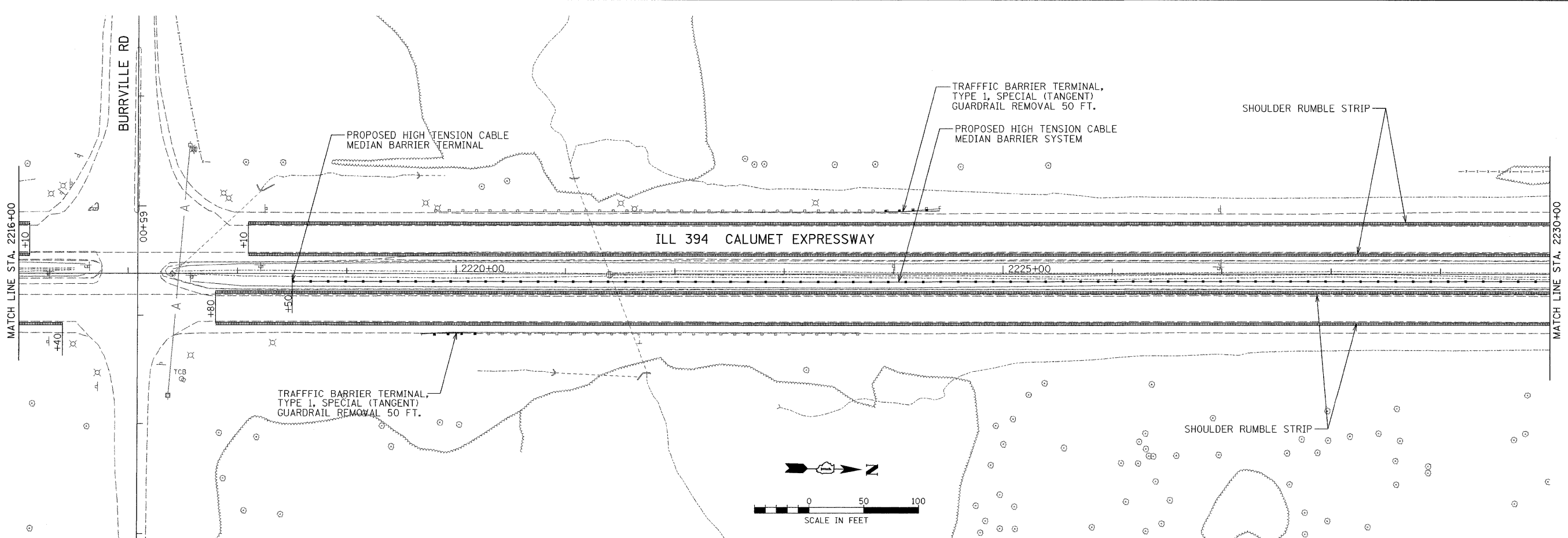
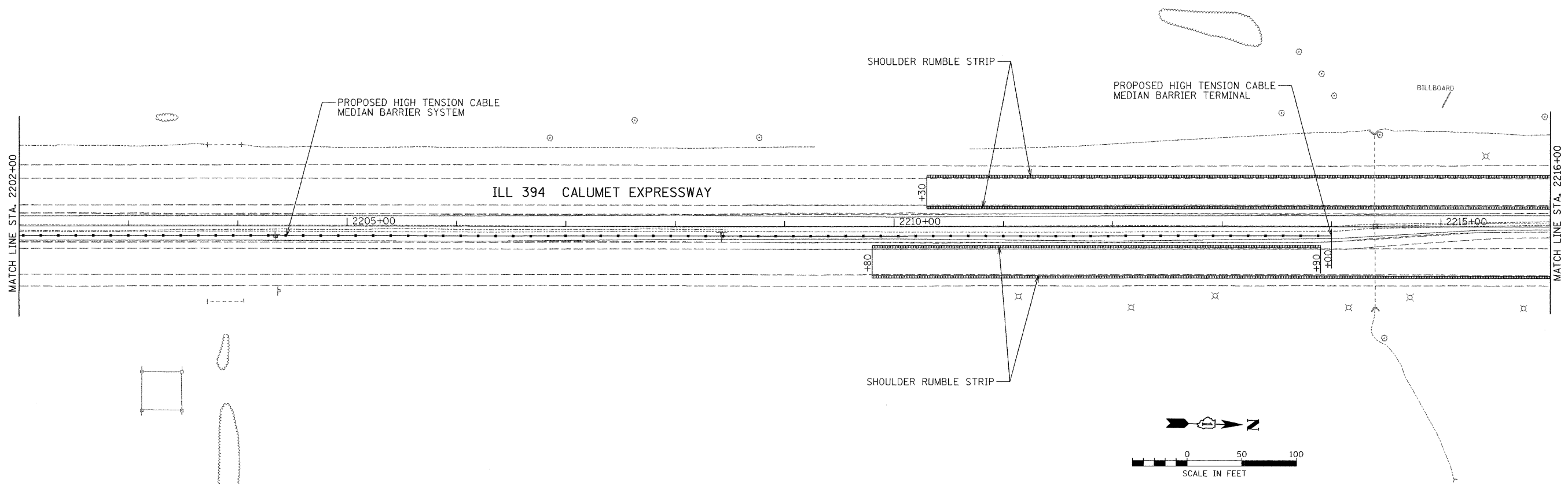


EXIST. CURVE EMAIN-3
 PI STA. = 2173+60.72
 $\Delta = 68^\circ 43' 00''$ (LT)
 D = $1^\circ 08' 00''$
 R = 5,055.48'
 T = 3,456.16'
 L = 6,063.20'
 E = 1,068.48'
 e = ----
 T.R. = ----
 S.E. RUN = ----
 P.C. STA. = 2139+04.56
 P.T. STA. = 2199+67.76



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PLOT DATE = 1/2/2008		CHECKED -	REVISED -		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT						
		DATE -	REVISED -									



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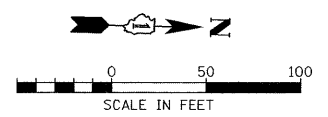
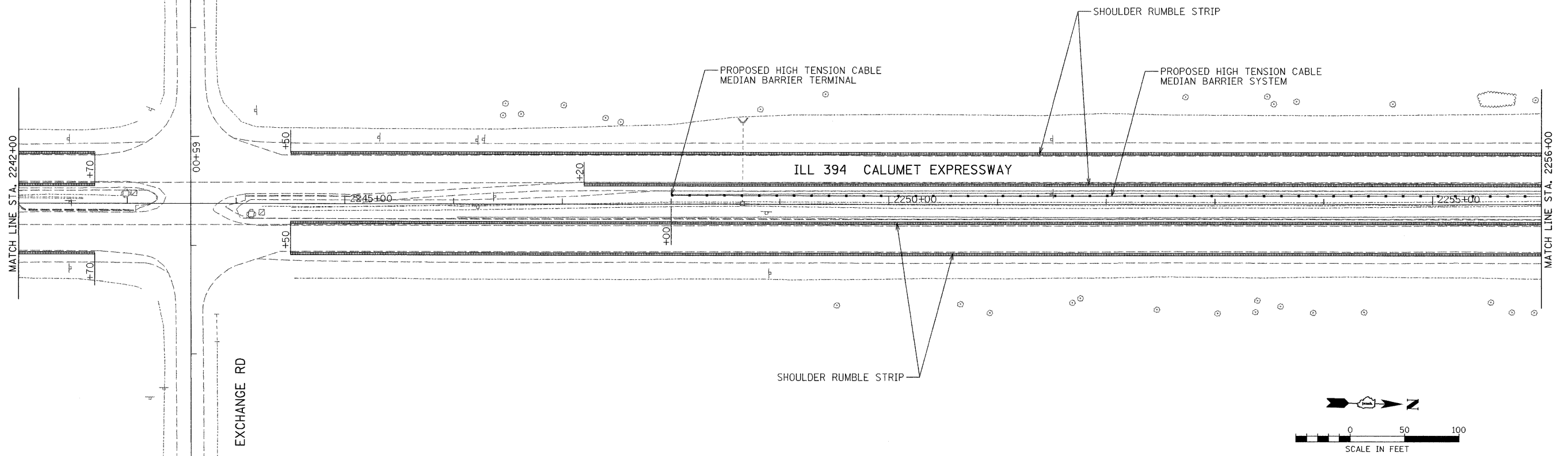
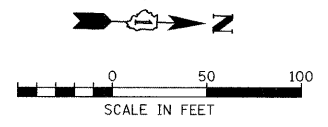
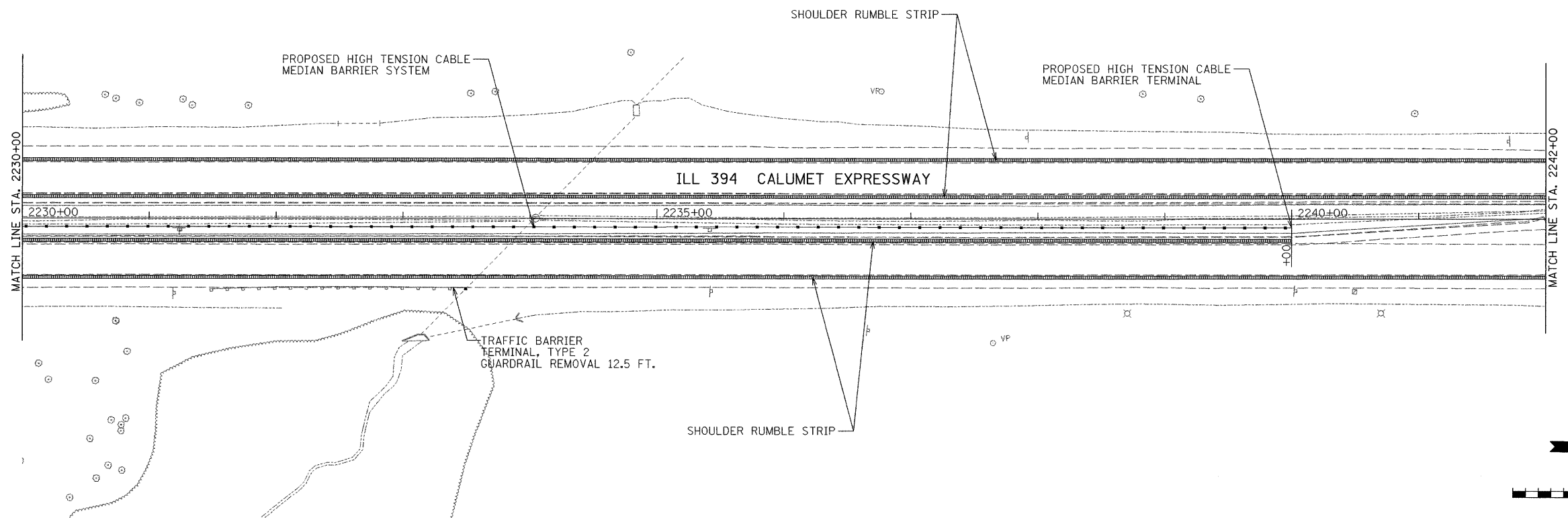
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DATE -	REVISED -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY PLAN			
SCALE: 1" = 50'	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 14
CONTRACT NO. 60D34				
ILLINOIS FED. AID PROJECT				



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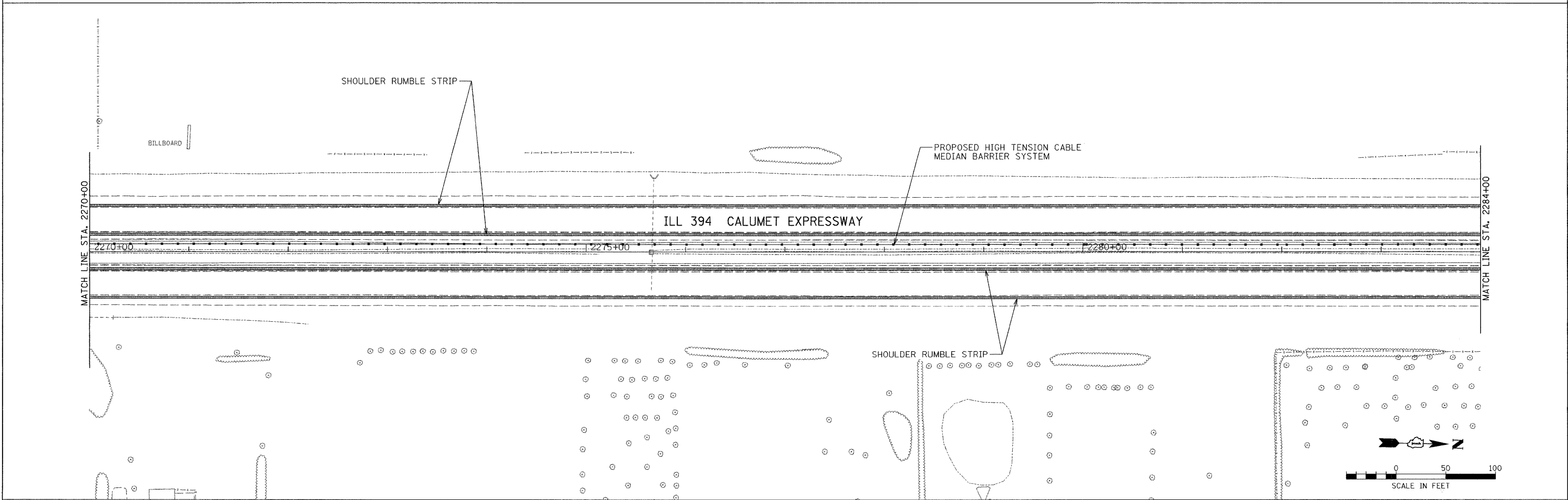
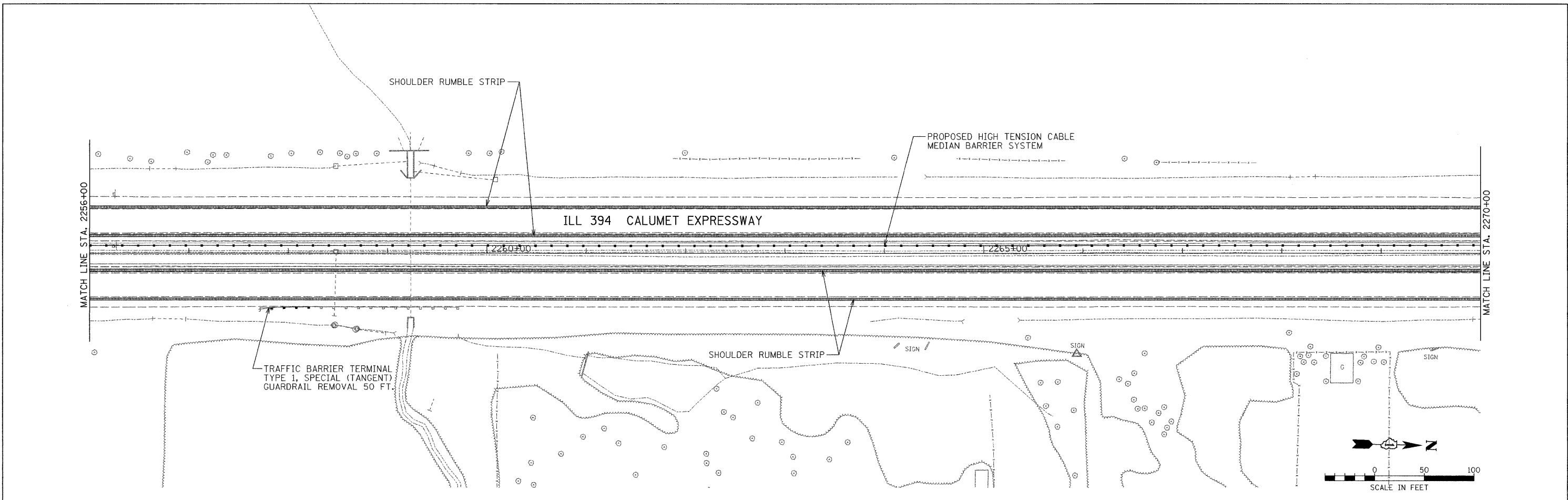
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PLOT DATE = 1/2/2008			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY PLAN

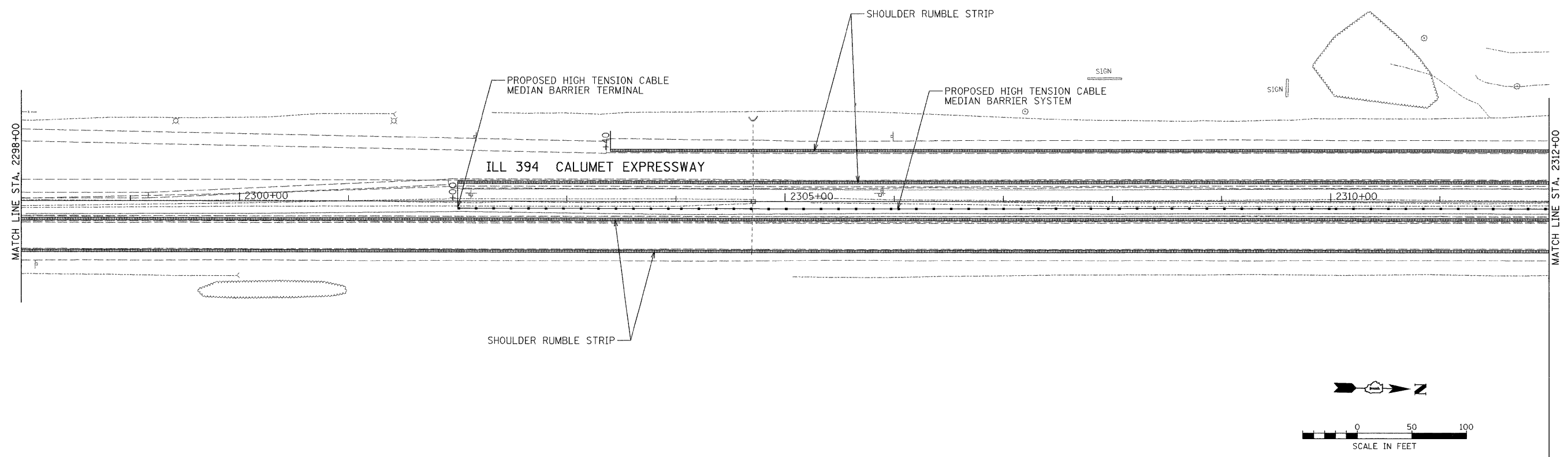
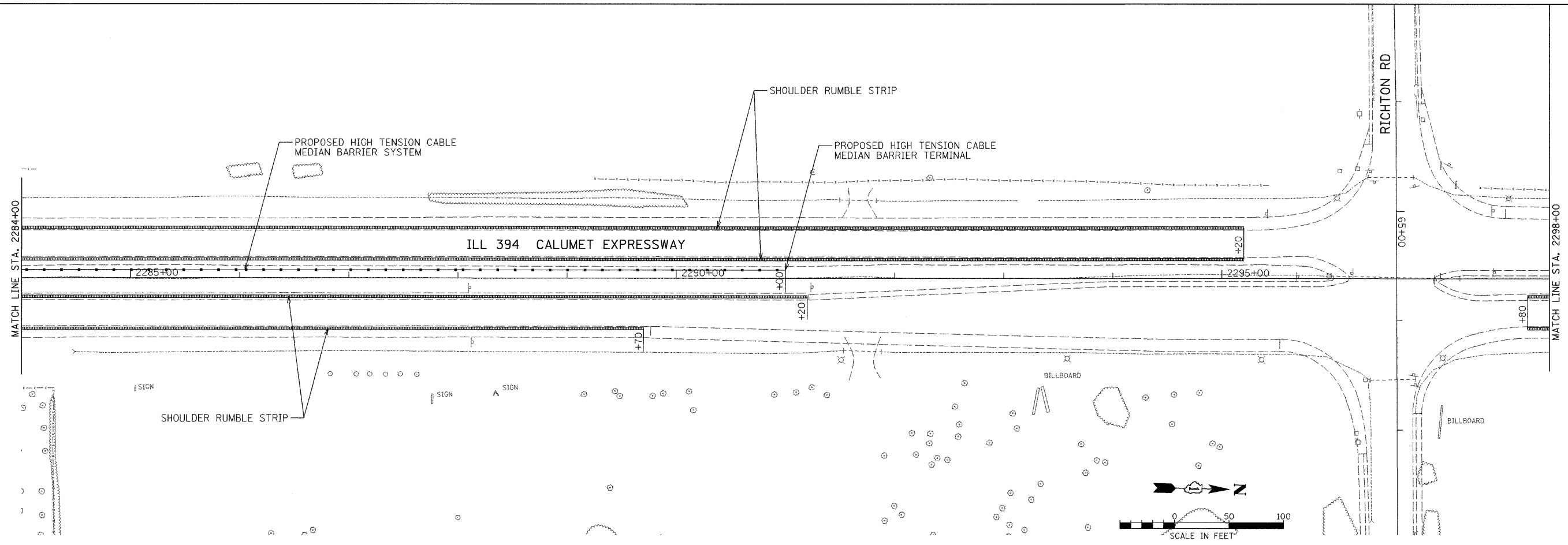
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F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 15
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 60D34				



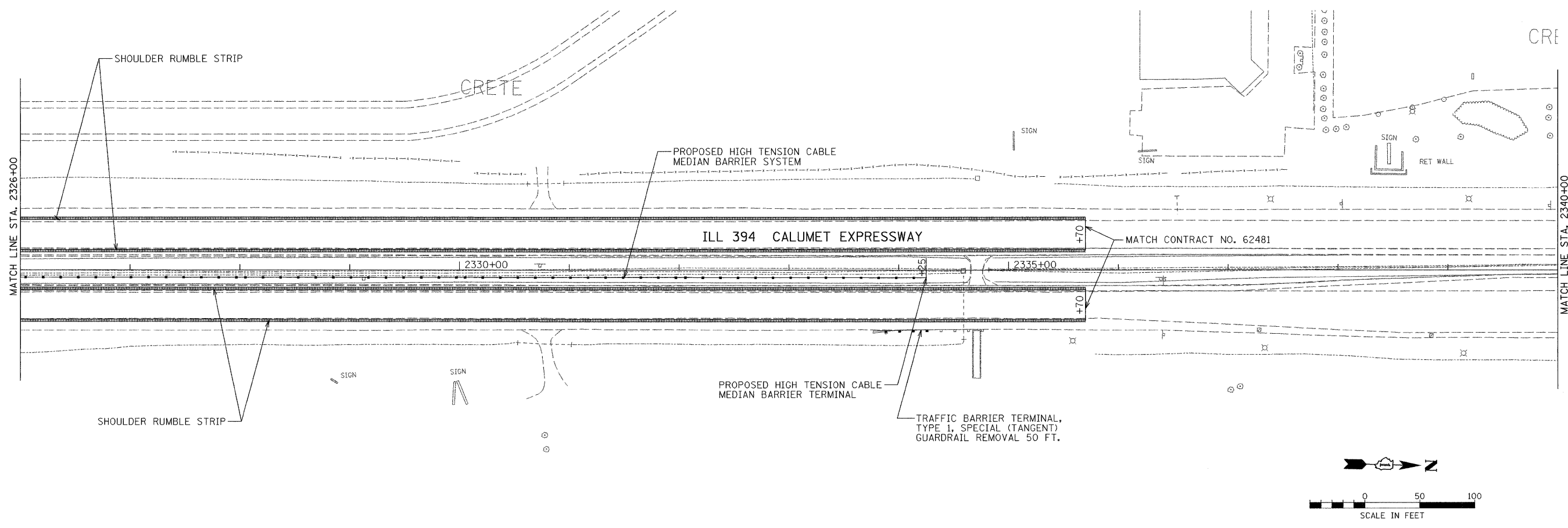
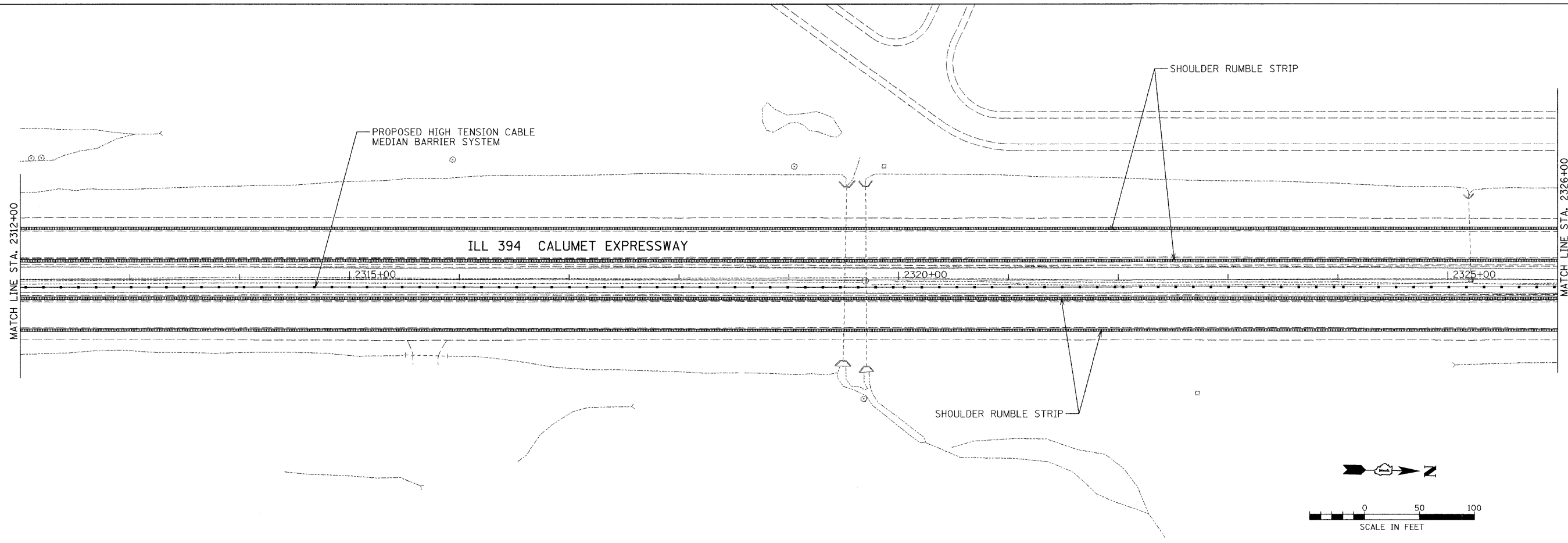
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					SCALE: 1" = 50'	SHEET NO.	OF	SHEETS	STA.	TO STA.	



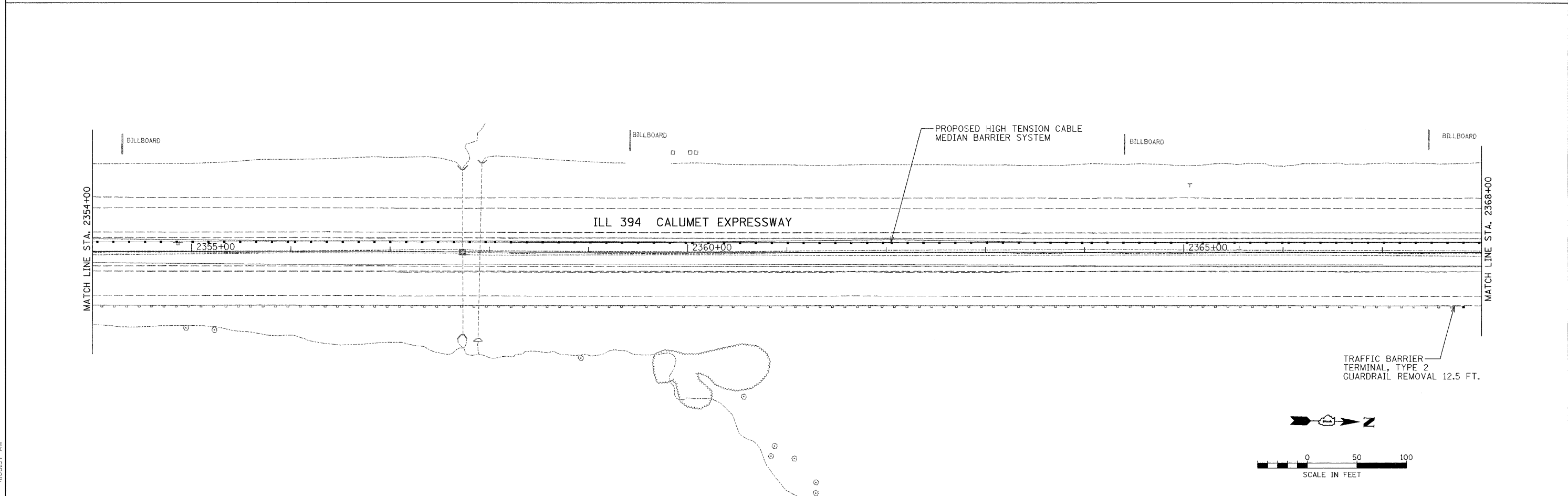
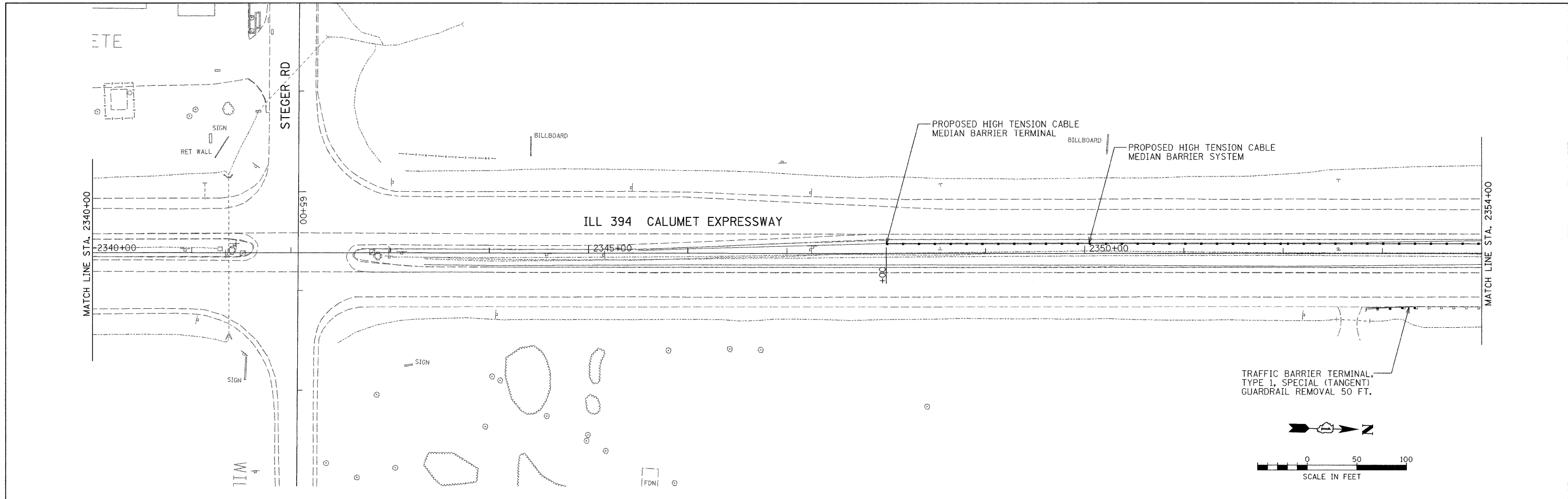
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DATE -												



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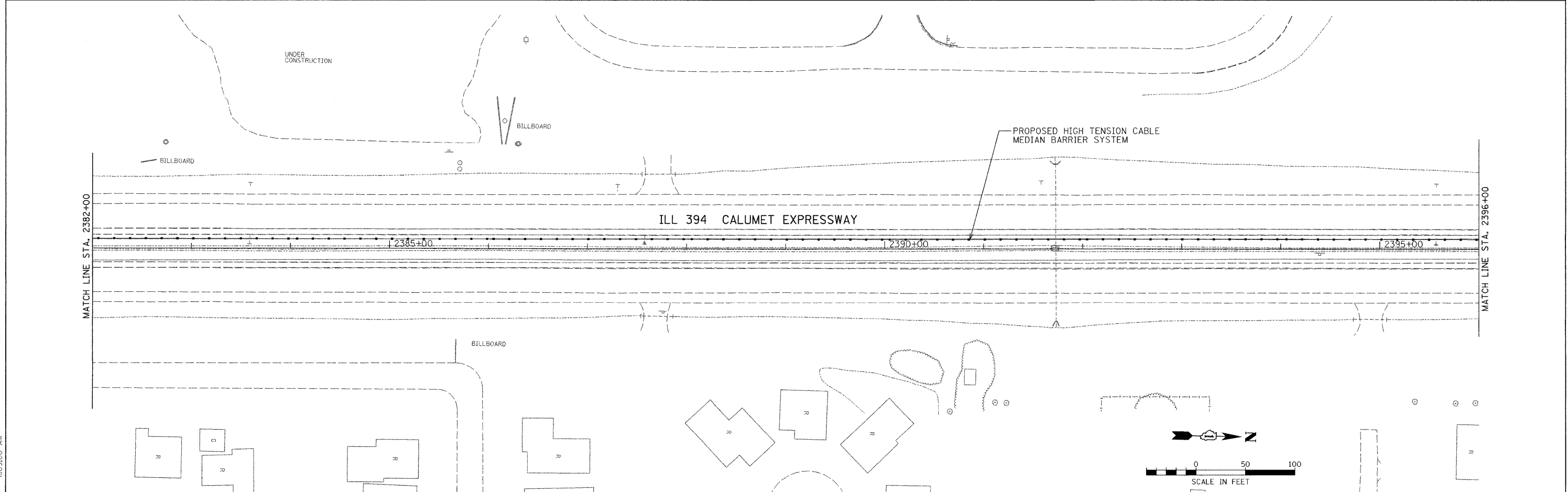
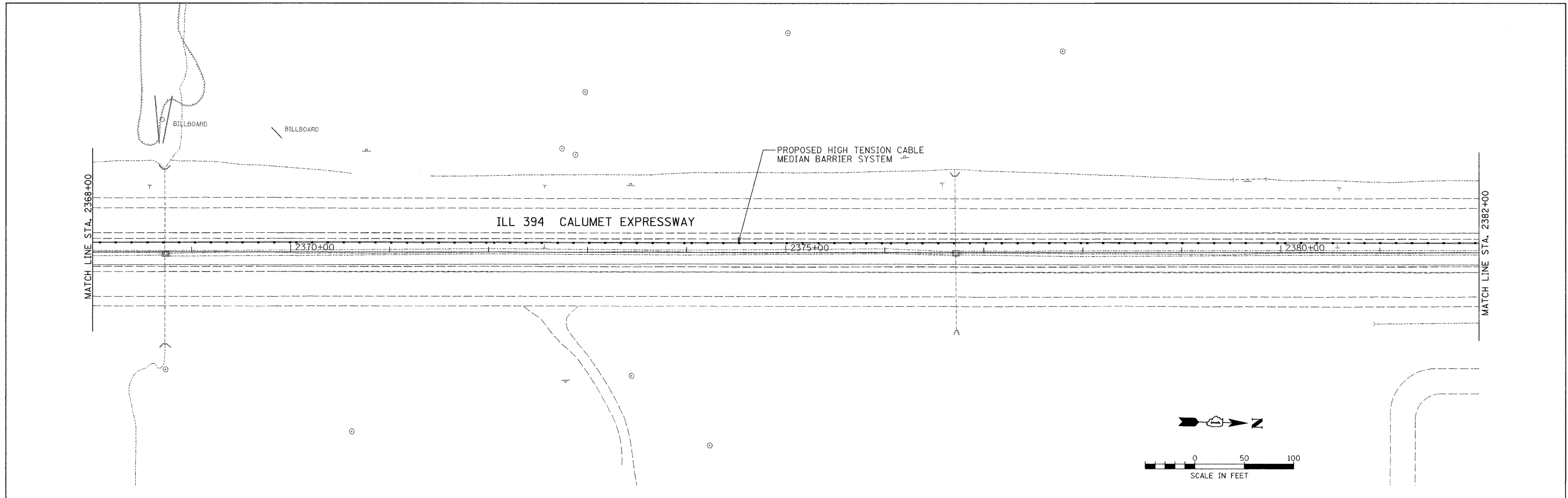
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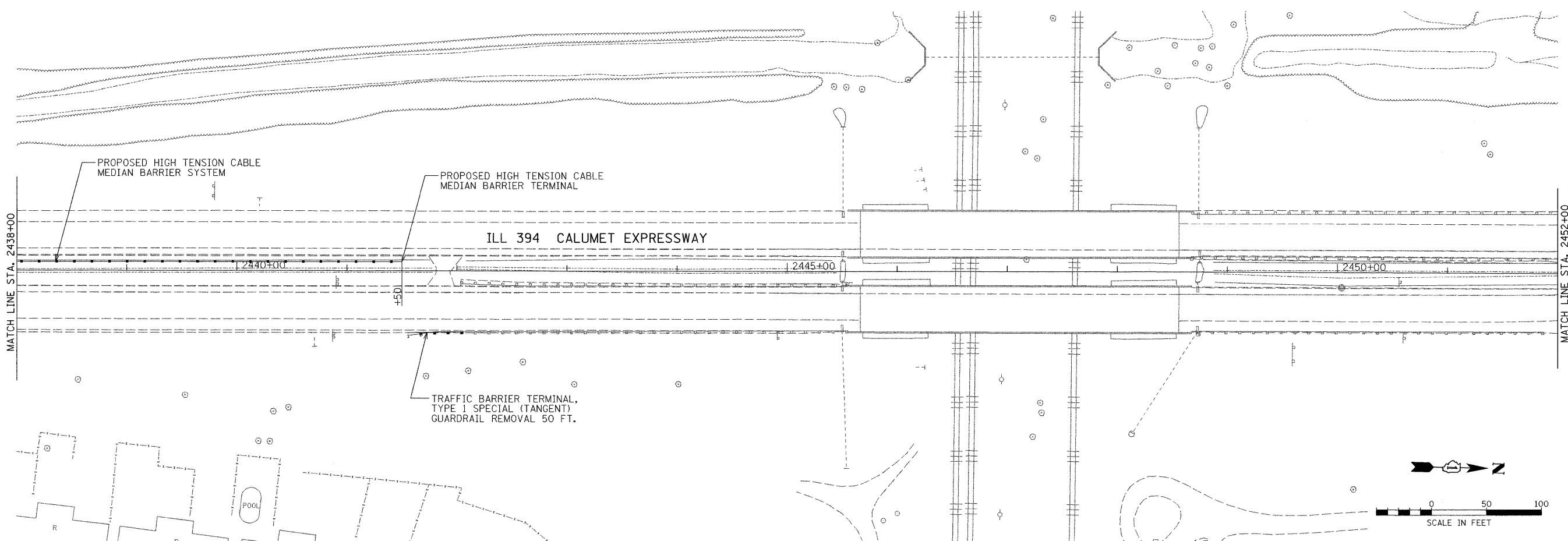
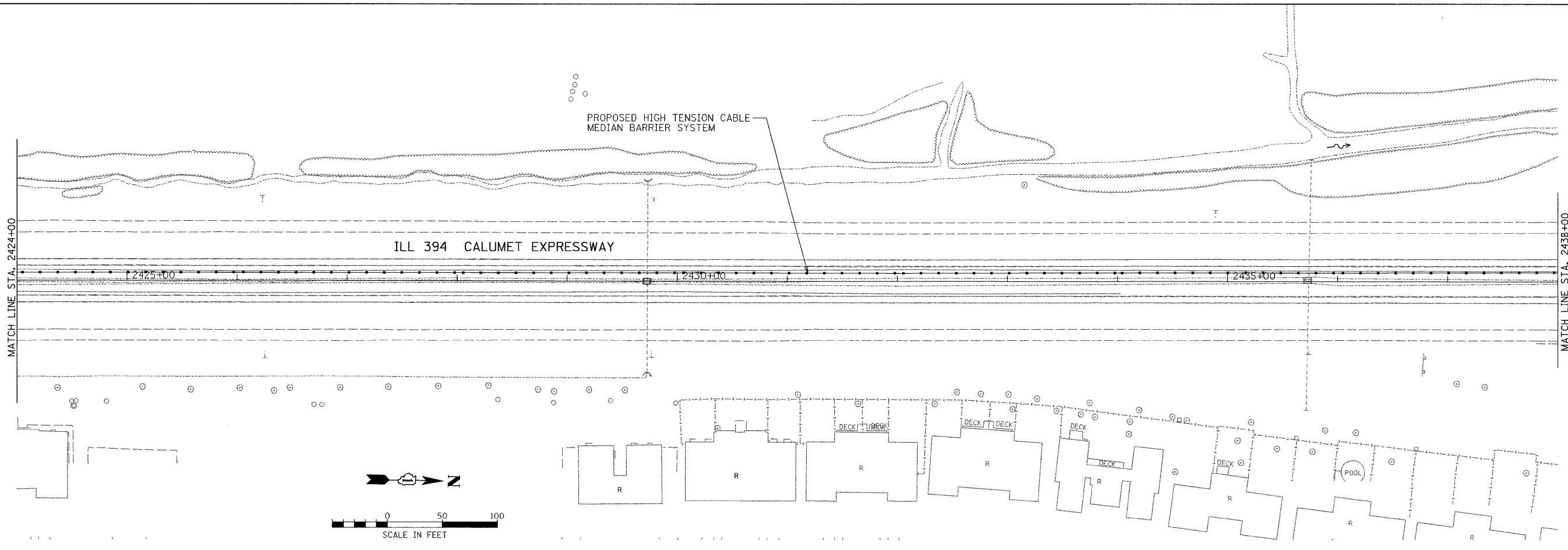
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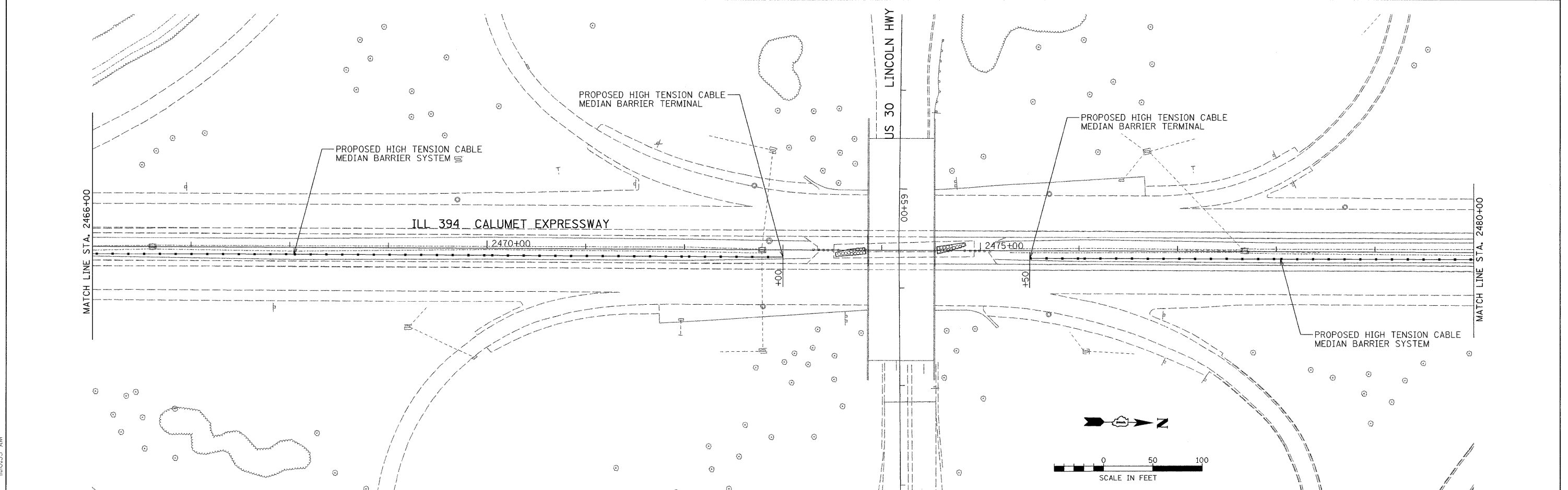
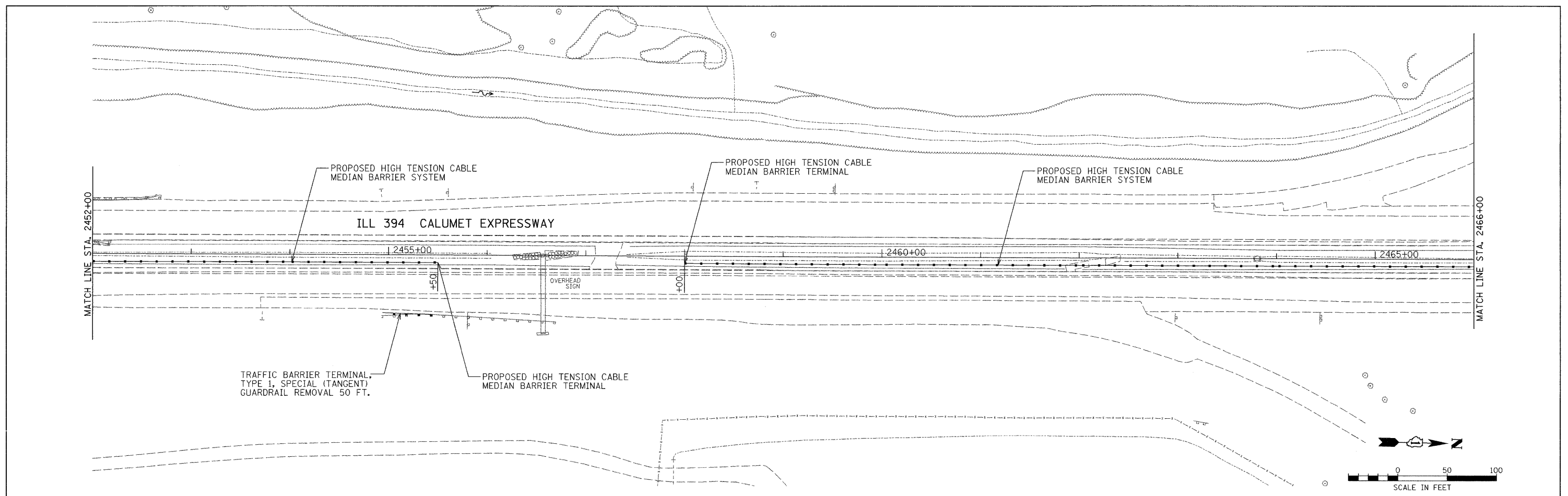
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

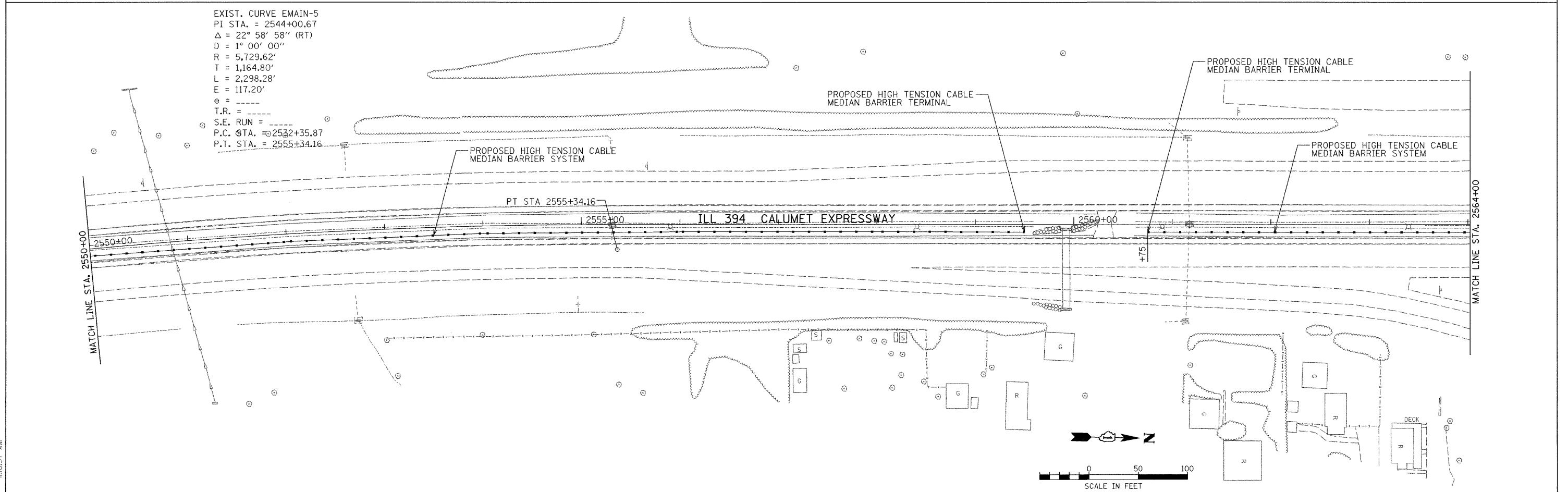
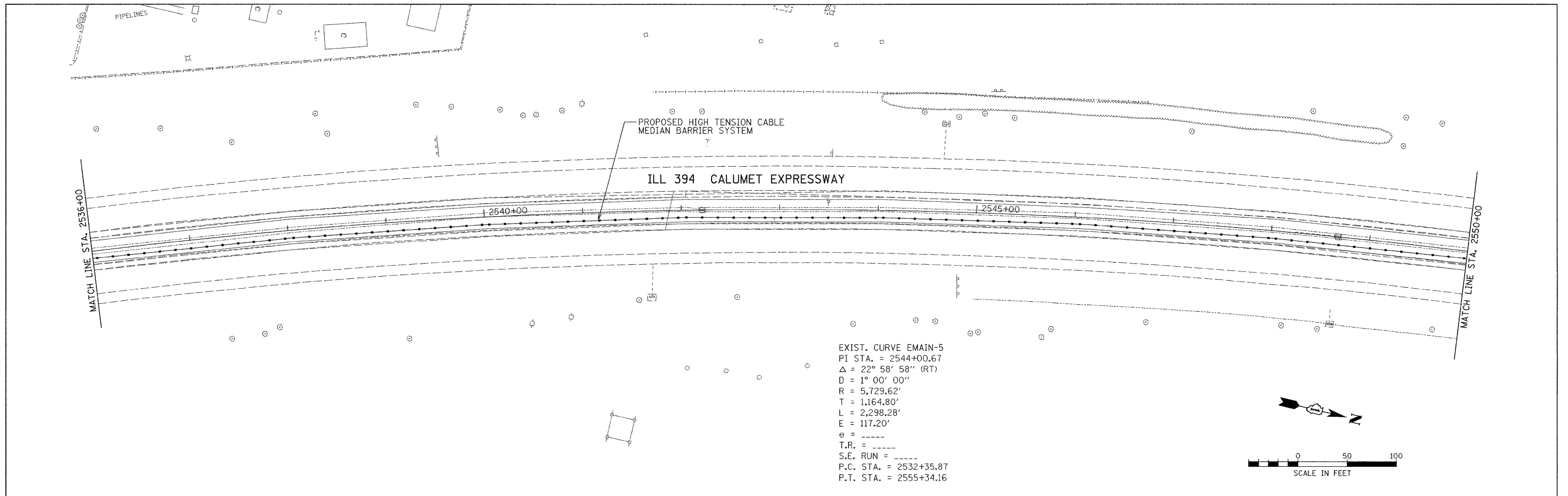
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2007-044 I	WILL & COOK	53	22
CONTRACT NO. 60D34				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



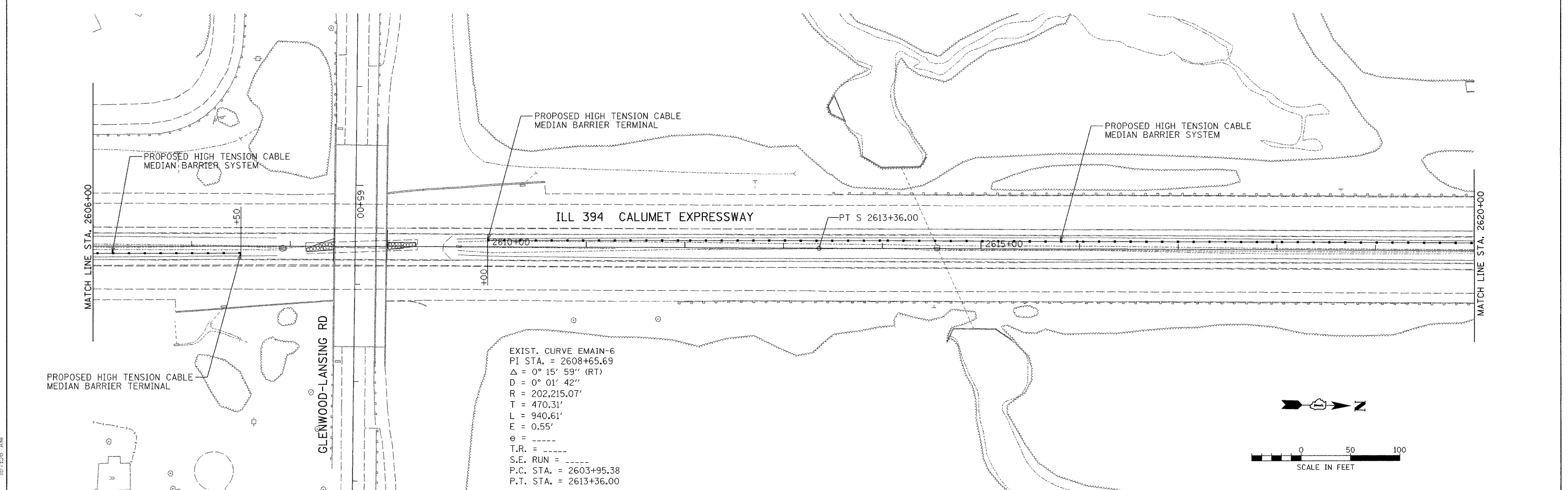
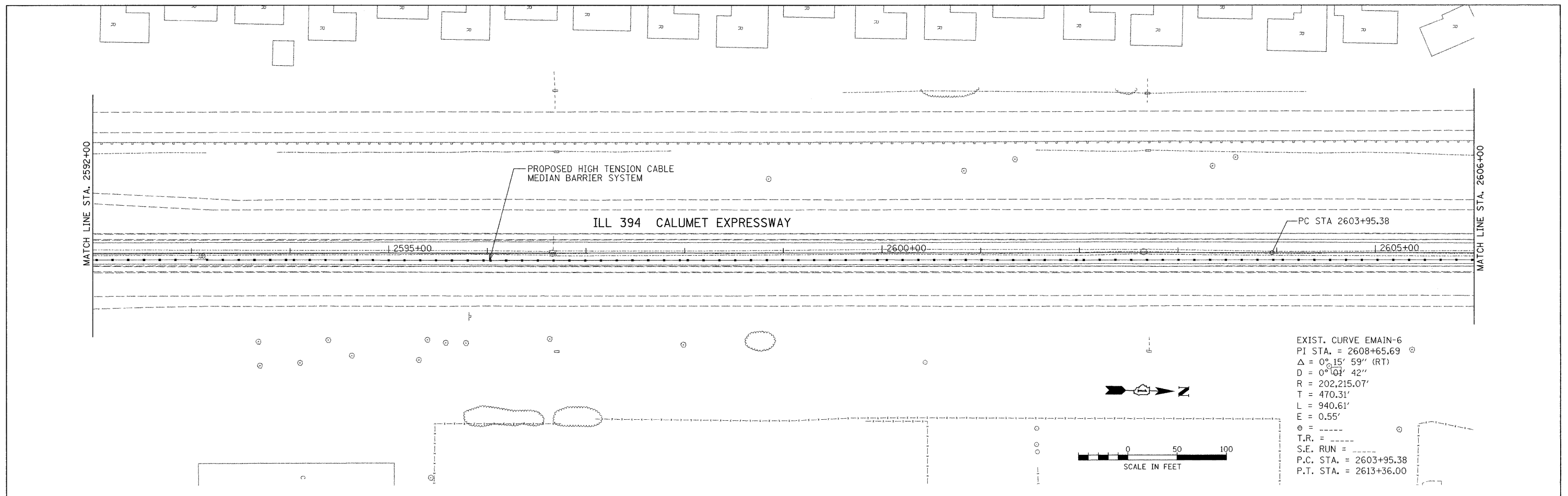
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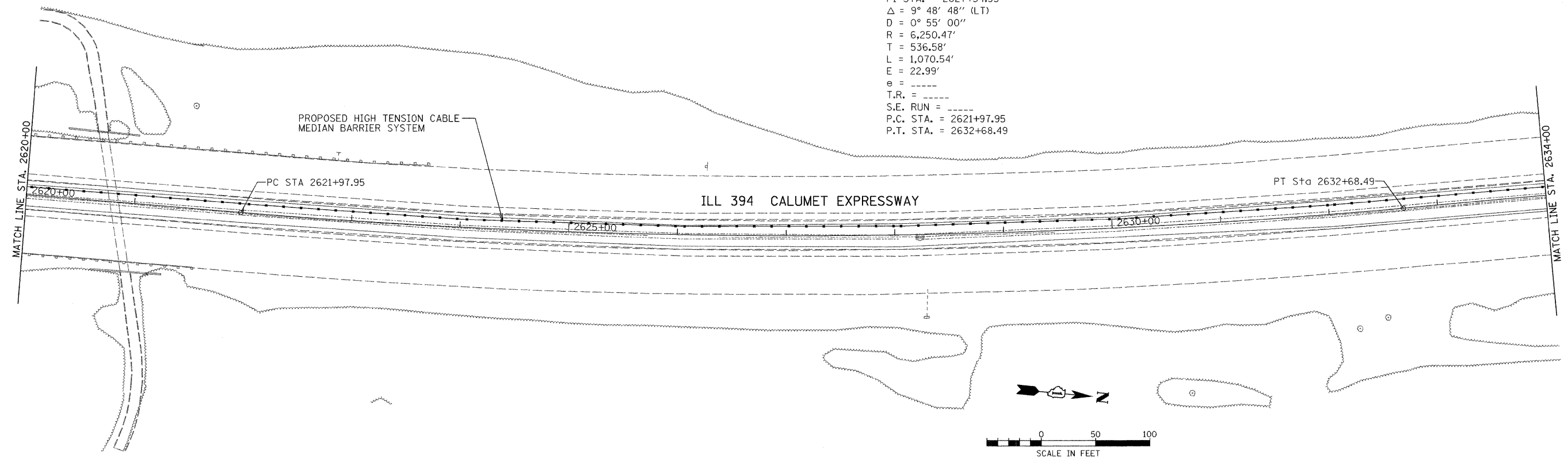
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PLOT DATE = 1/2/2008		DATE -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



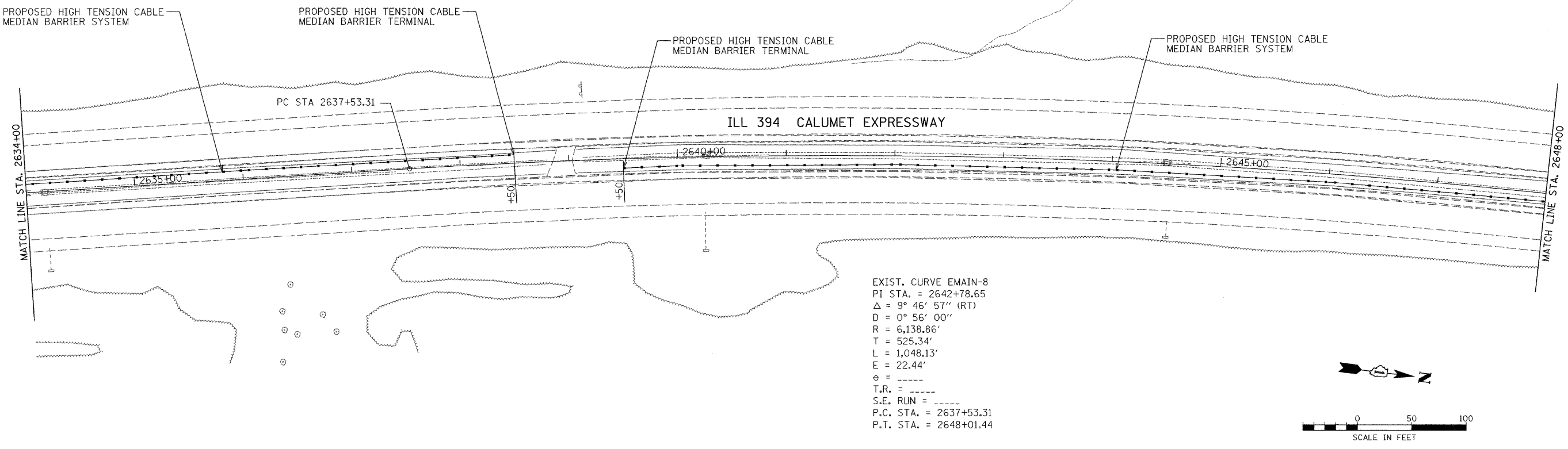
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PLOT DATE = 1/2/2008		DATE -	REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

EXIST. CURVE EMAIN-7
 PI STA. = 2627+34.53
 $\Delta = 9^\circ 48' 48''$ (LT)
 $D = 0^\circ 55' 00''$
 $R = 6,250.47'$
 $T = 536.58'$
 $L = 1,070.54'$
 $E = 22.99'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA. = 2621+97.95
 P.T. STA. = 2632+68.49

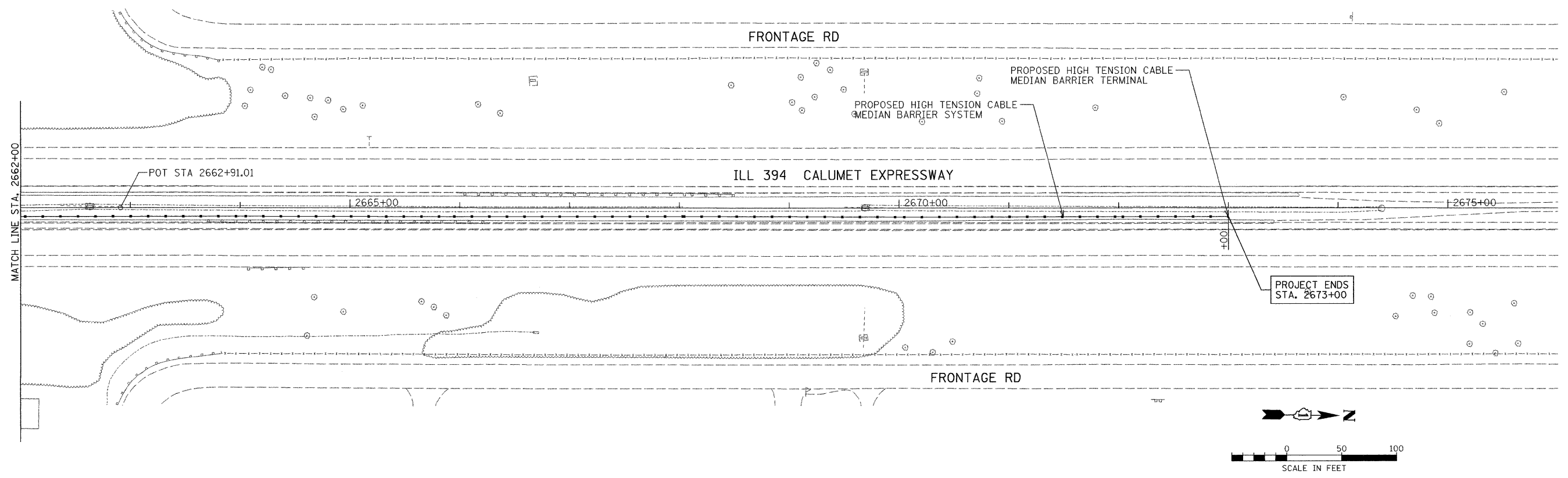
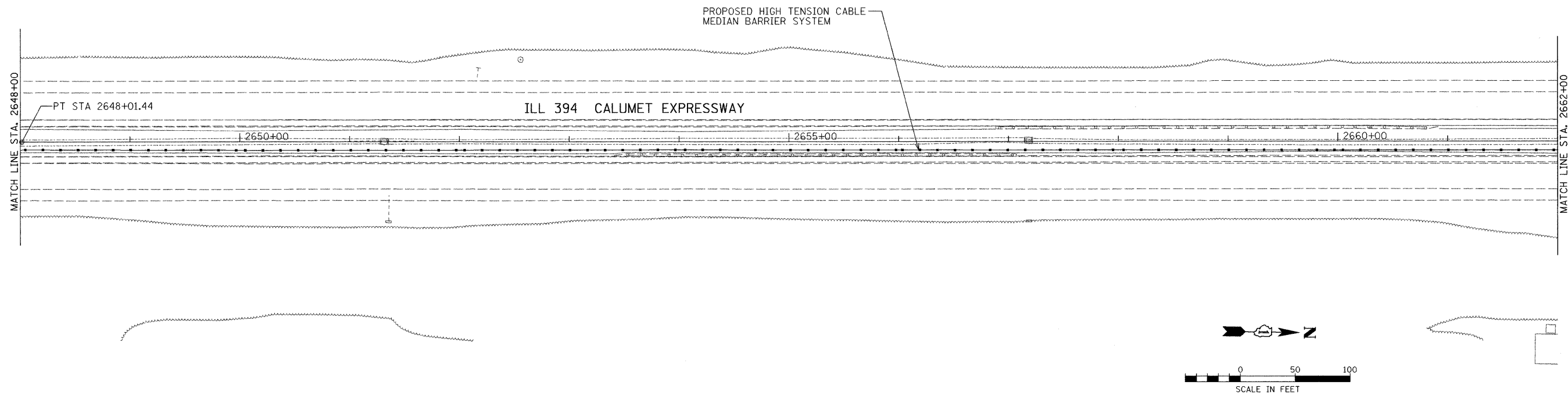


EXIST. CURVE EMAIN-8
 PI STA. = 2642+78.65
 $\Delta = 9^\circ 46' 57''$ (RT)
 $D = 0^\circ 56' 00''$
 $R = 6,138.86'$
 $T = 525.34'$
 $L = 1,048.13'$
 $E = 22.44'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA. = 2637+53.31
 P.T. STA. = 2648+01.44



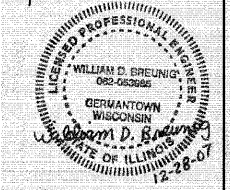
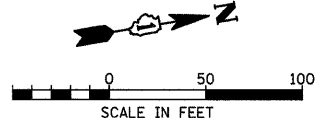
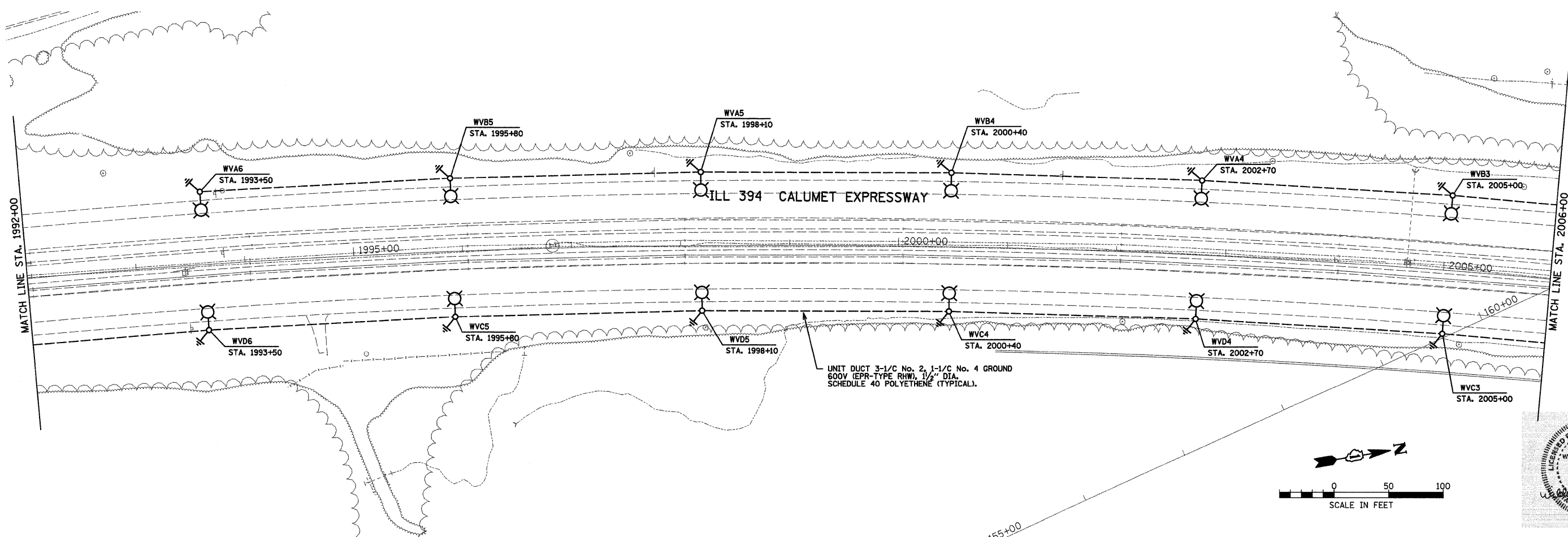
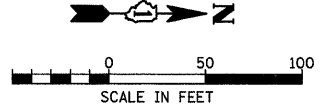
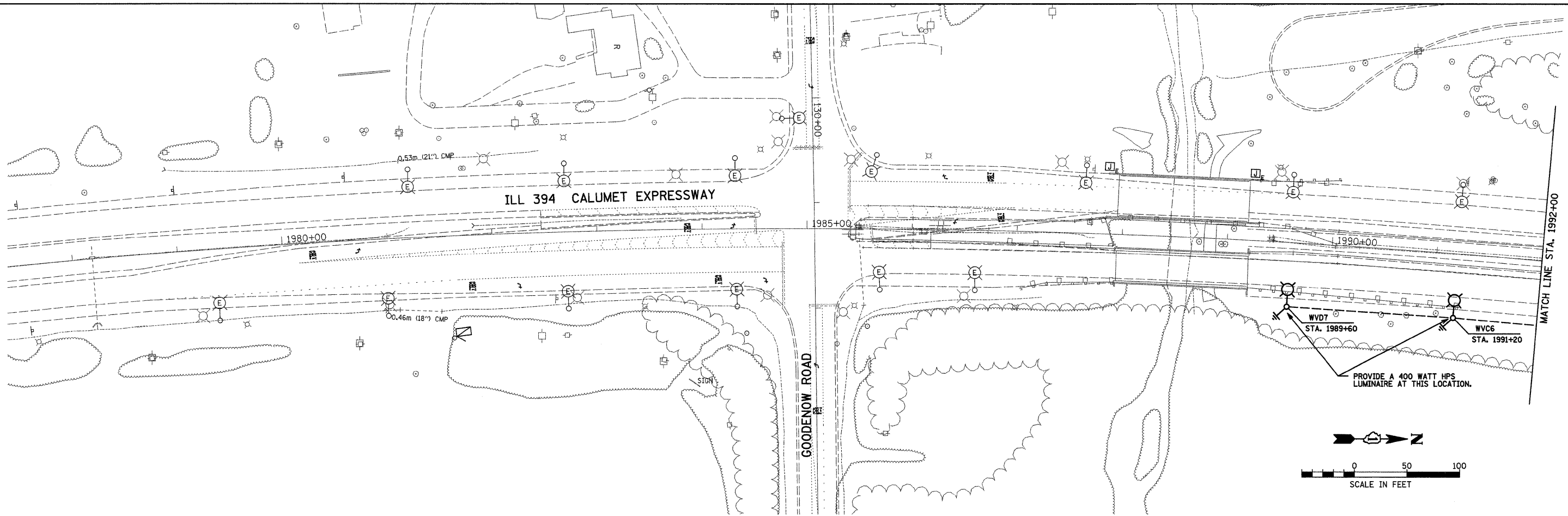
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#FILEL*		DRAWN -	REVISED -					332	2007-044 I	WILL & COOK	53	29
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PLOT DATE = 1/2/2008	DATE -	REVISED -	REVISED -		CONTRACT NO. 60D34							



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	PLOT DATE = 1/2/2008	DATE -	REVISED -													



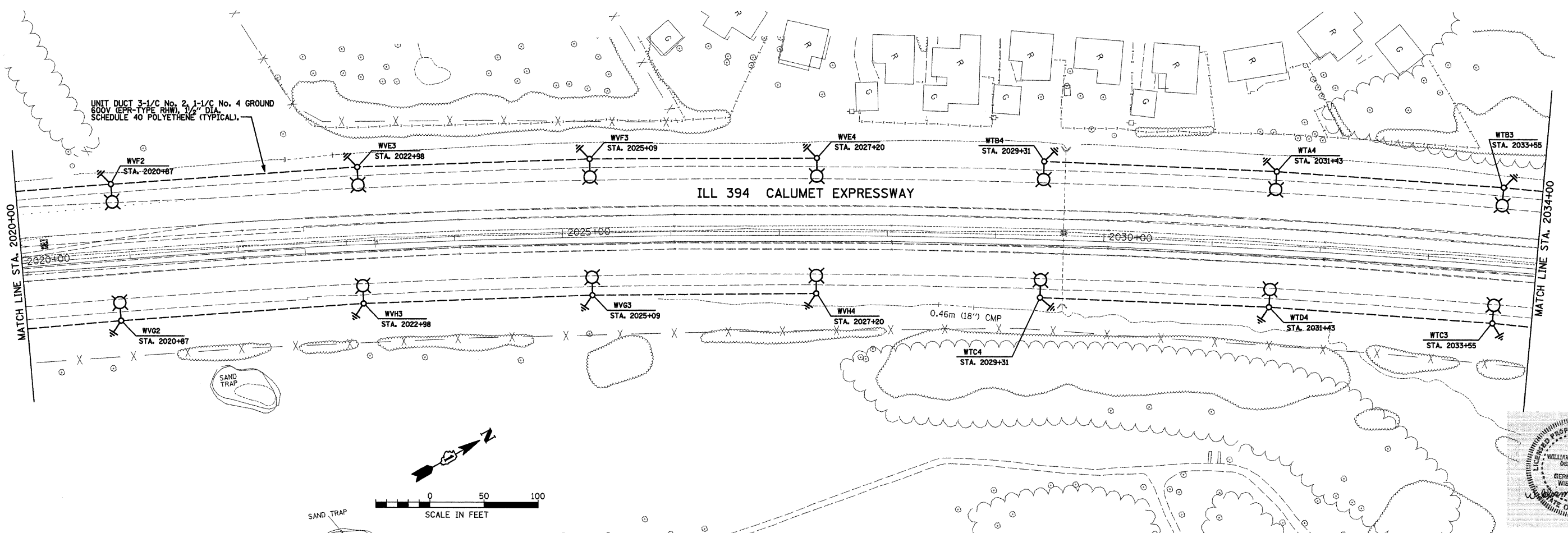
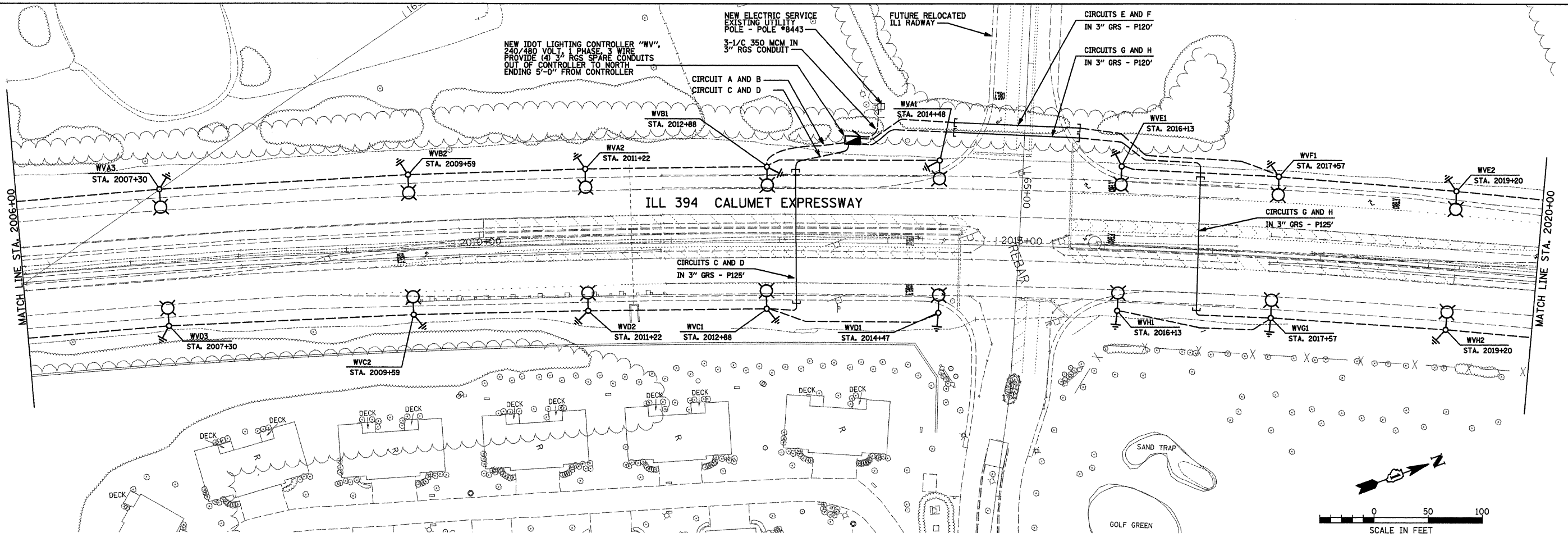
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD		F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	E2 SHEET NO. 32
SCALE: 1" = 50'	SHEET NO. 2 OF 22 SHEETS	STA.	TO STA. 2006+00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60D34



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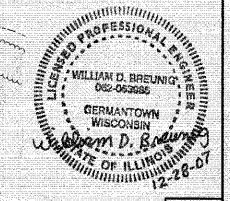
GRAFF ANHALT SCHLOEMER
 and Associates Inc.
 One Honey Creek Corporate Center
 120 South 84th Street, Suite 401
 Milwaukee, WI 53224-1470
 TEL: 414-228-1000
 FAX: 414-228-1003
 Web Site: www.gasol.com

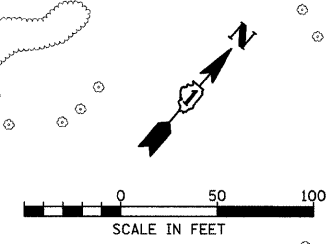
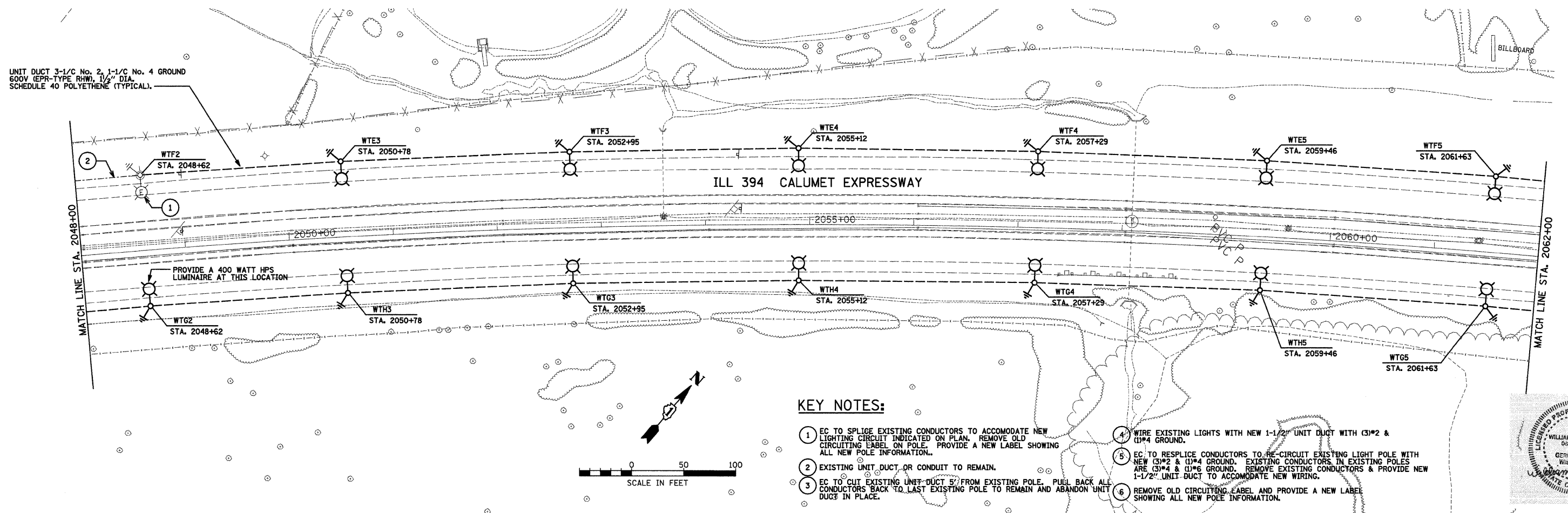
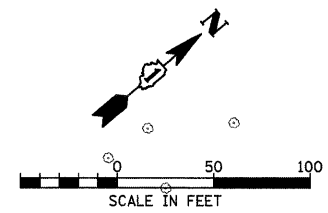
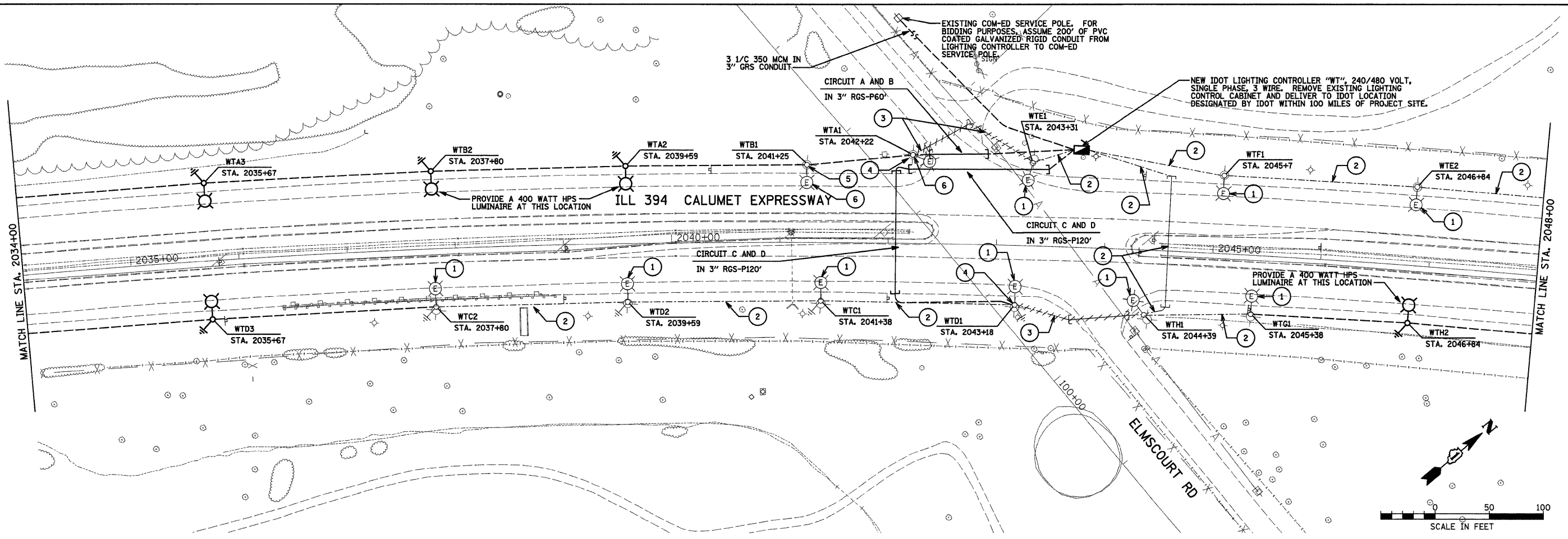
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD LIGHTING PLAN	
SCALE: 1" = 50'	SHEET NO. 3 OF 22 SHEETS
STA. 2006+00 TO STA. 2034+00	

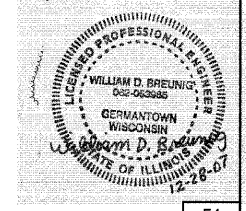
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CONTRACT NO. 60D34			E3	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				





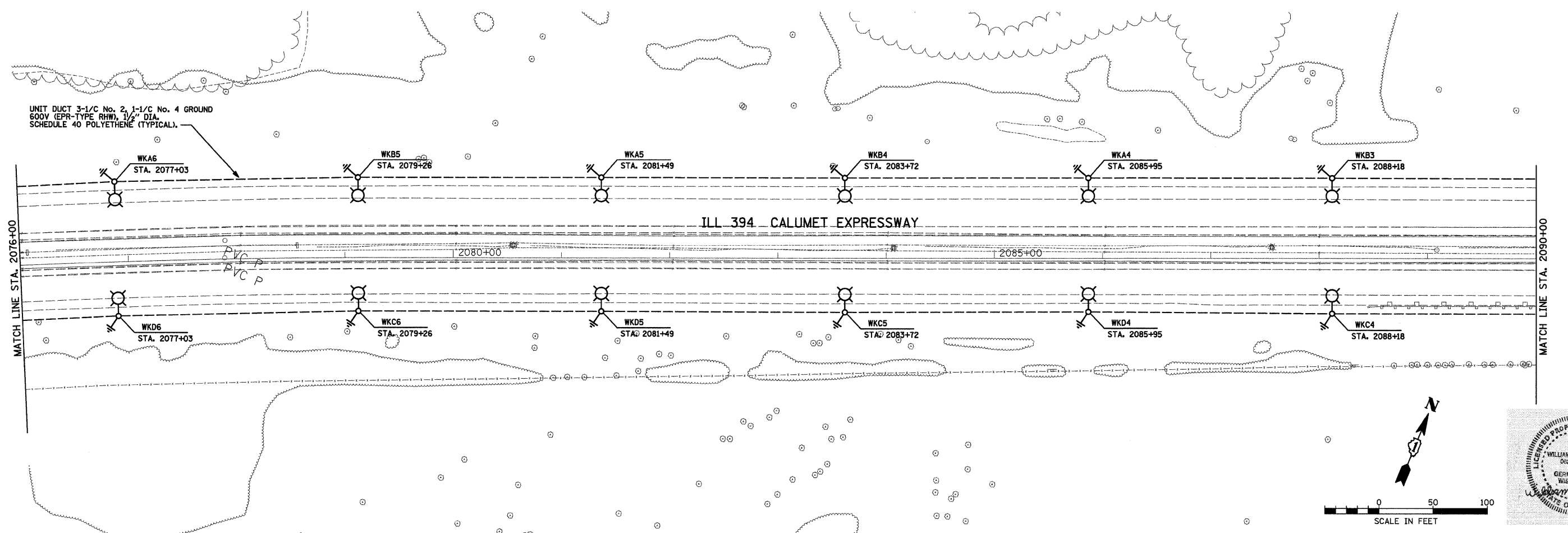
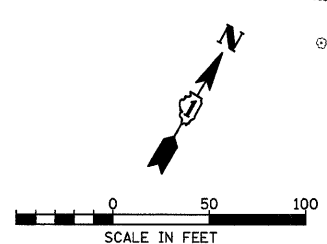
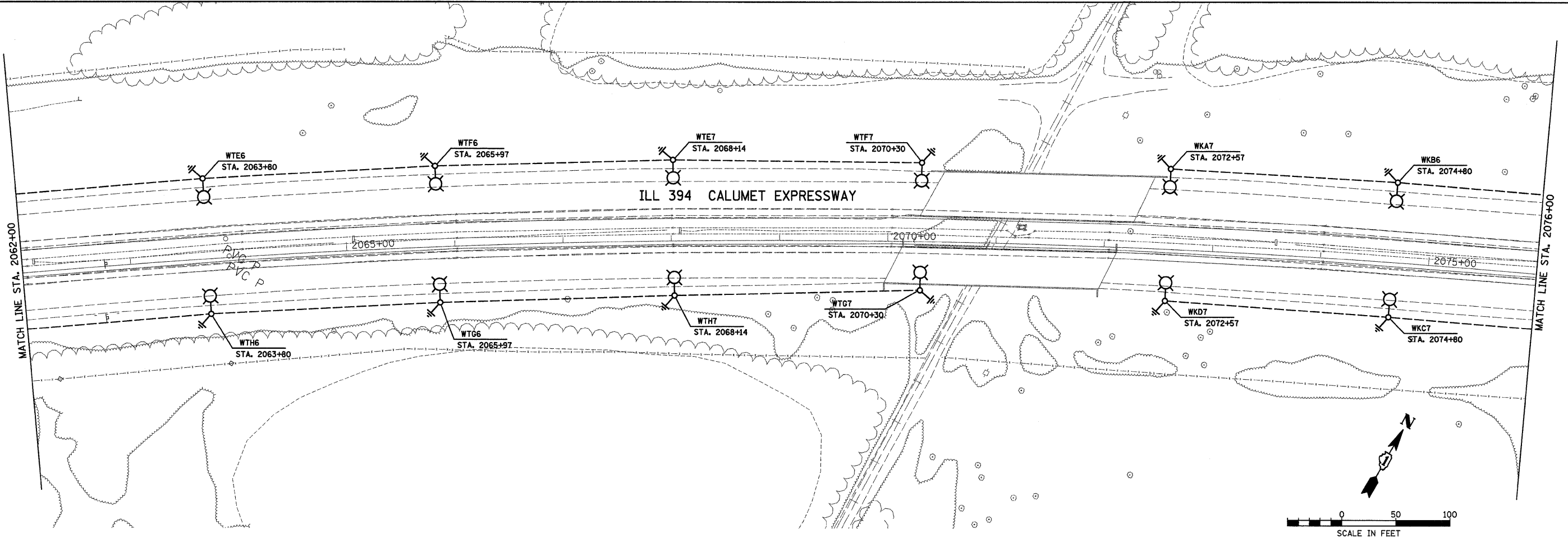
KEY NOTES:

- 1 EC TO SPLICE EXISTING CONDUCTORS TO ACCOMMODATE NEW LIGHTING CIRCUIT INDICATED ON PLAN. REMOVE OLD CIRCUITING LABEL ON POLE. PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.
- 2 EXISTING UNIT DUCT OR CONDUIT TO REMAIN.
- 3 EC TO CUT EXISTING UNIT DUCT 5' FROM EXISTING POLE. PULL BACK ALL CONDUCTORS BACK TO LAST EXISTING POLE TO REMAIN AND ABANDON UNIT DUCT IN PLACE.
- 4 WIRE EXISTING LIGHTS WITH NEW 1-1/2" UNIT DUCT WITH (3)*2 & (1)*4 GROUND.
- 5 EC TO RESPLICE CONDUCTORS TO RE-CIRCUIT EXISTING LIGHT POLE WITH NEW (3)*2 & (1)*4 GROUND. EXISTING CONDUCTORS IN EXISTING POLES ARE (3)*4 & (1)*6 GROUND. REMOVE EXISTING CONDUCTORS & PROVIDE NEW 1-1/2" UNIT DUCT TO ACCOMMODATE NEW WIRING.
- 6 REMOVE OLD CIRCUITING LABEL AND PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.

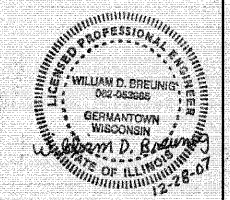
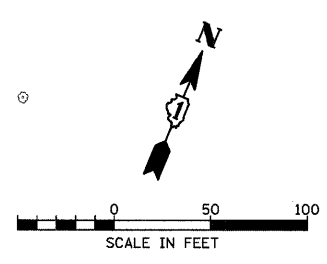


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<p>One Honey Creek Corporate Center 125 South 84th Street, Suite 401 Milwaukee, WI 53214-1470 Tel: 414-761-1000 Fax: 262-0037 Web Site: www.grafisch.com</p>	USER NAME = #USER#	DESIGNED - BDB/CMP	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD LIGHTING PLAN</p>	F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 34	E4
	PLOT SCALE = #SCALE#	CHECKED - BDB	REVISED -			SCALE: 1" = 50'	SHEET NO. 4 OF 22 SHEETS	STA. 2034+00 TO STA. 2062+00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	CONTRACT NO. 60D34	
	PLOT DATE = 12/28/2007	DATE - 12-31-07	REVISED -								

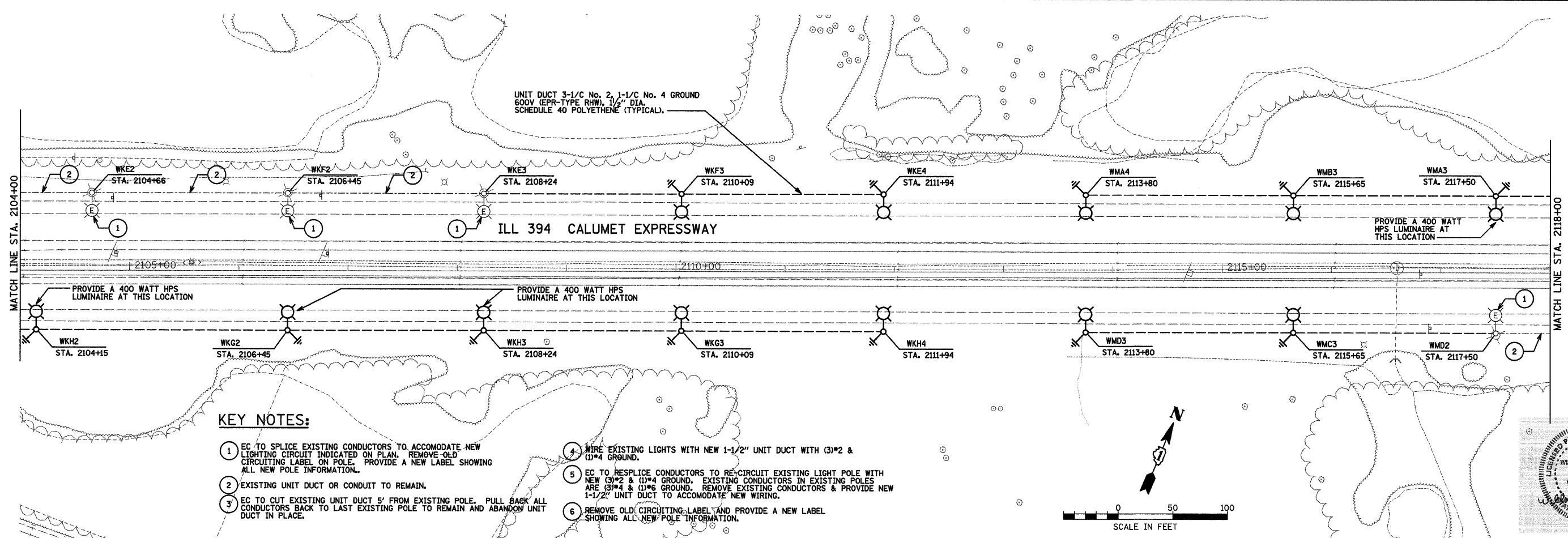
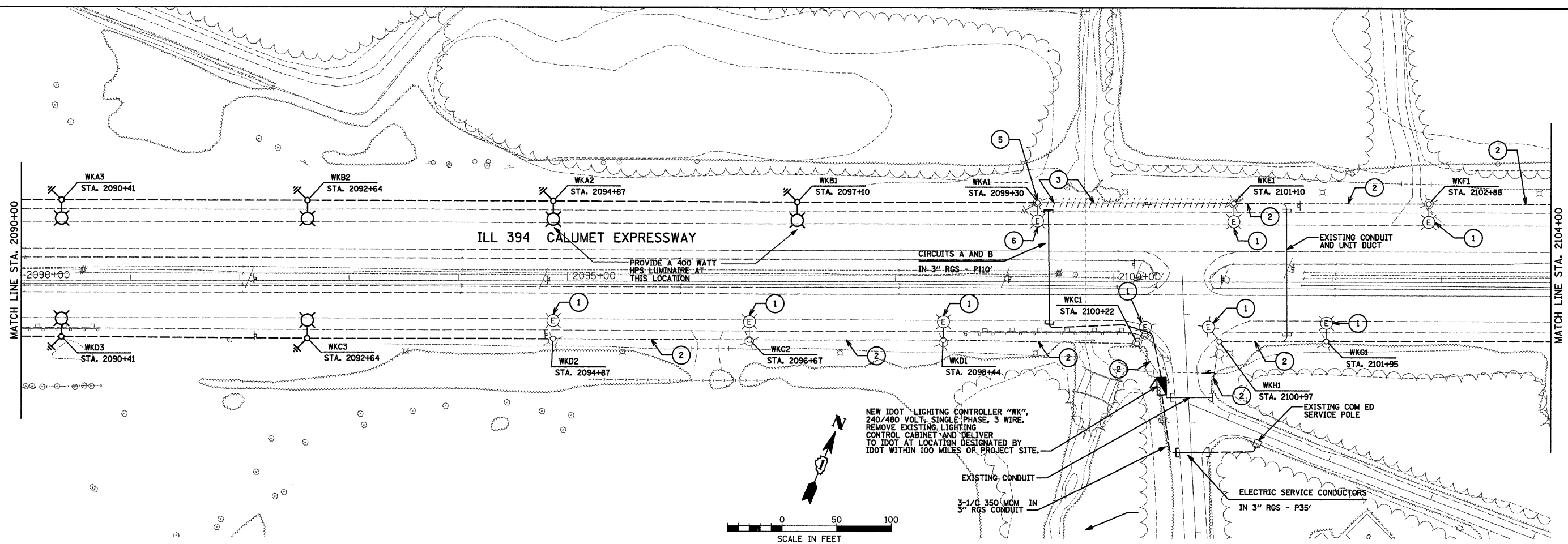


UNIT DUCT 3-1/C No. 2, 1-1/C No. 4 GROUND
600V (EPR-TYPE RHW), 1/2" DIA.
SCHEDULE 40 POLYETHENE (TYPICAL).



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	USER NAME = #USER#	DESIGNED - BDB/CMP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD LIGHTING PLAN	F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 35	
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	PLOT DATE = 12/28/2007	DATE - 12-31-07	REVISED -			CONTRACT NO. GOD34		E5			



KEY NOTES:

- 1 EC TO SPLICE EXISTING CONDUCTORS TO ACCOMMODATE NEW LIGHTING CIRCUIT INDICATED ON PLAN. REMOVE OLD CIRCUITING LABEL ON POLE. PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.
- 2 EXISTING UNIT DUCT OR CONDUIT TO REMAIN.
- 3 EC TO CUT EXISTING UNIT DUCT 5' FROM EXISTING POLE. PULL BACK ALL CONDUCTORS BACK TO LAST EXISTING POLE TO REMAIN AND ABANDON UNIT DUCT IN PLACE.
- 4 WIRE EXISTING LIGHTS WITH NEW 1-1/2" UNIT DUCT WITH (3)*2 & (1)*4 GROUND.
- 5 EC TO RESPLICE CONDUCTORS TO RE-CIRCUIT EXISTING LIGHT POLE WITH NEW (3)*2 & (1)*4 GROUND. EXISTING CONDUCTORS IN EXISTING POLES ARE (3)*4 & (1)*6 GROUND. REMOVE EXISTING CONDUCTORS & PROVIDE NEW 1-1/2" UNIT DUCT TO ACCOMMODATE NEW WIRING.
- 6 REMOVE OLD CIRCUITING LABEL AND PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING PLAN**

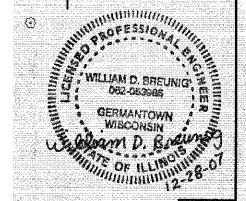
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D34	

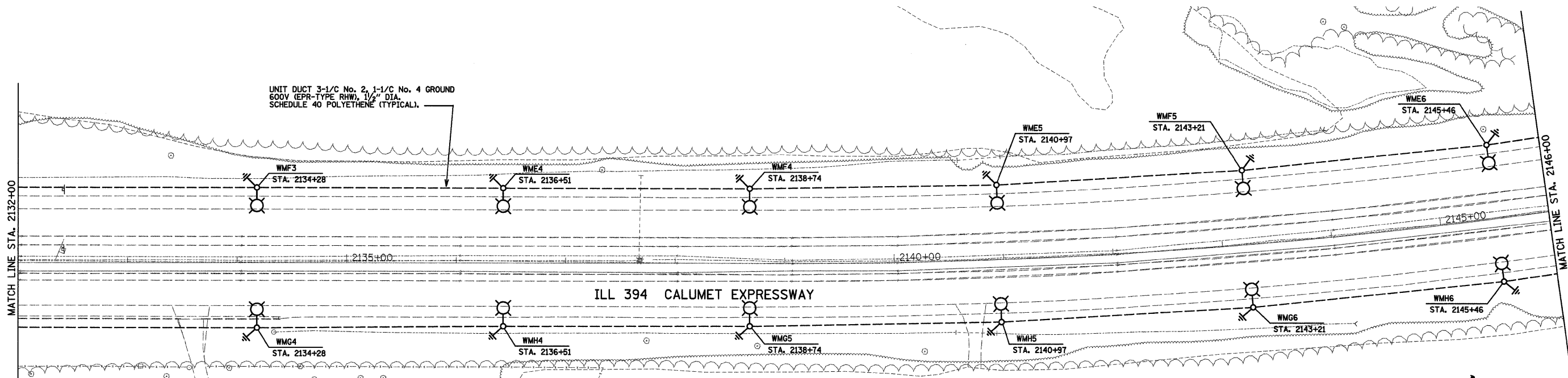
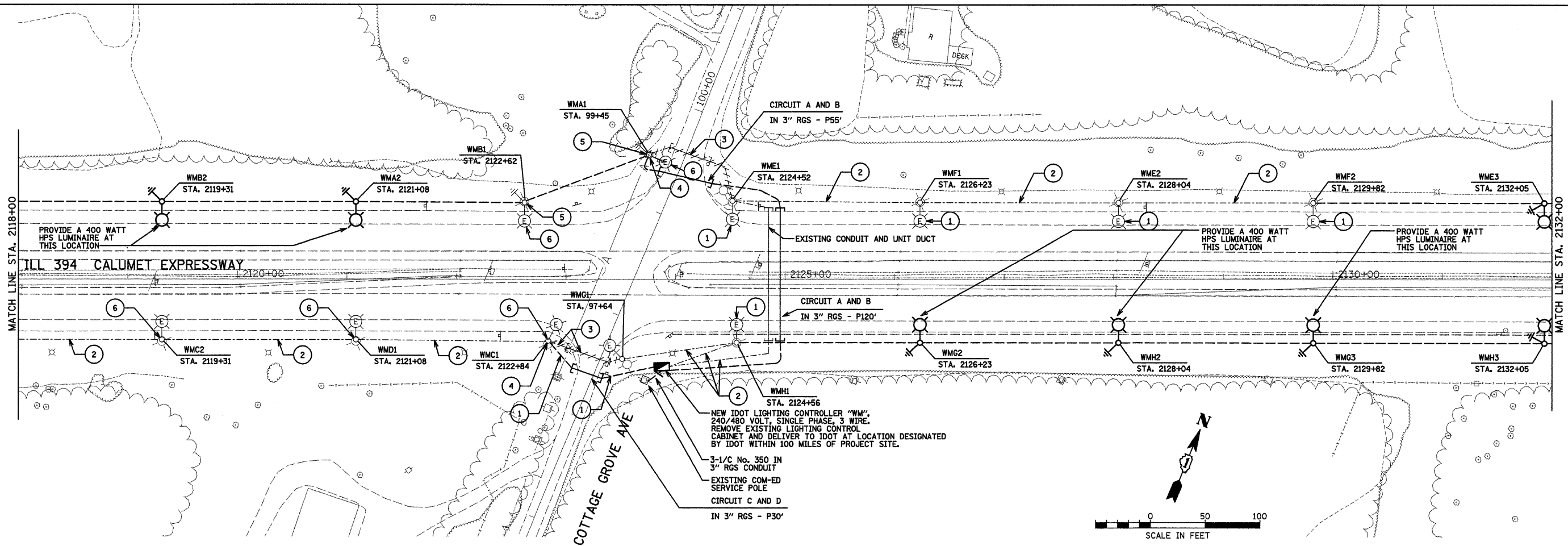
GRANT ANHALT SCHLOEMER
and Associates Inc.
One Honey Creek Corporate Center
125 South Ben Street, Suite 401
Wilmington, WI 53140
414 251-1300
414 251-1300
Web Site: www.gasol.com

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SCALE: 1" = 50' SHEET NO. 6 OF 22 SHEETS STA. 2090+00 TO STA. 2118+00

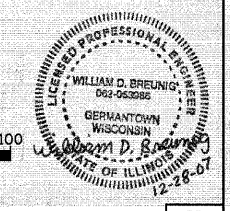
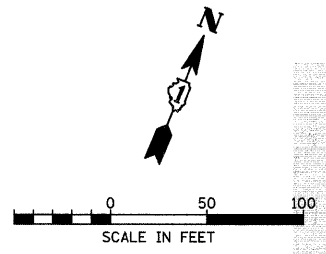
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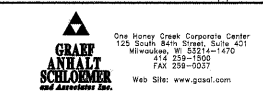


KEY NOTES:

- ① EC TO SPLICE EXISTING CONDUCTORS TO ACCOMMODATE NEW LIGHTING CIRCUIT INDICATED ON PLAN. REMOVE OLD CIRCUITING LABEL ON POLE. PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.
- ② EXISTING UNIT DUCT OR CONDUIT TO REMAIN.
- ③ EC TO CUT EXISTING UNIT DUCT 5' FROM EXISTING POLE. PULL BACK ALL CONDUCTORS BACK TO LAST EXISTING POLE TO REMAIN AND ABANDON UNIT DUCT IN PLACE.
- ④ WIRE EXISTING LIGHTS WITH NEW 1-1/2" UNIT DUCT WITH (3)*2 & (1)*4 GROUND.
- ⑤ EC TO RESPLICE CONDUCTORS TO RE-CIRCUIT EXISTING LIGHT POLE WITH NEW (3)*2 & (1)*4 GROUND. EXISTING CONDUCTORS IN EXISTING POLES ARE (3)*4 & (1)*6 GROUND. REMOVE EXISTING CONDUCTORS & PROVIDE NEW 1-1/2" UNIT DUCT TO ACCOMMODATE NEW WIRING.
- ⑥ REMOVE OLD CIRCUITING LABEL AND PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.



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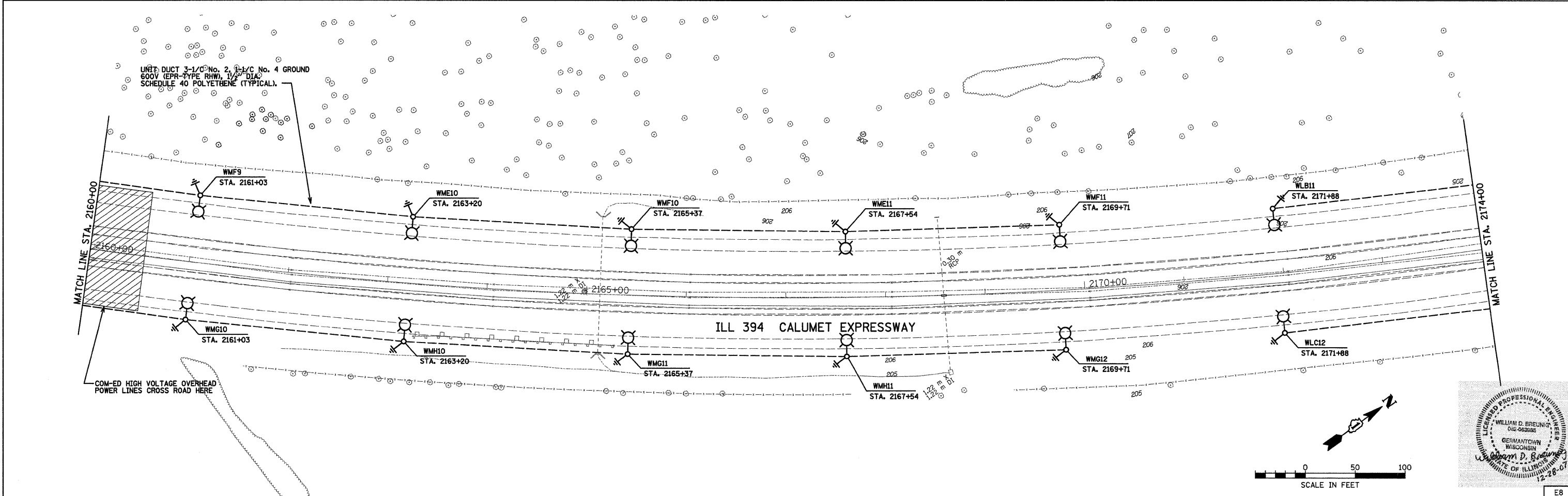
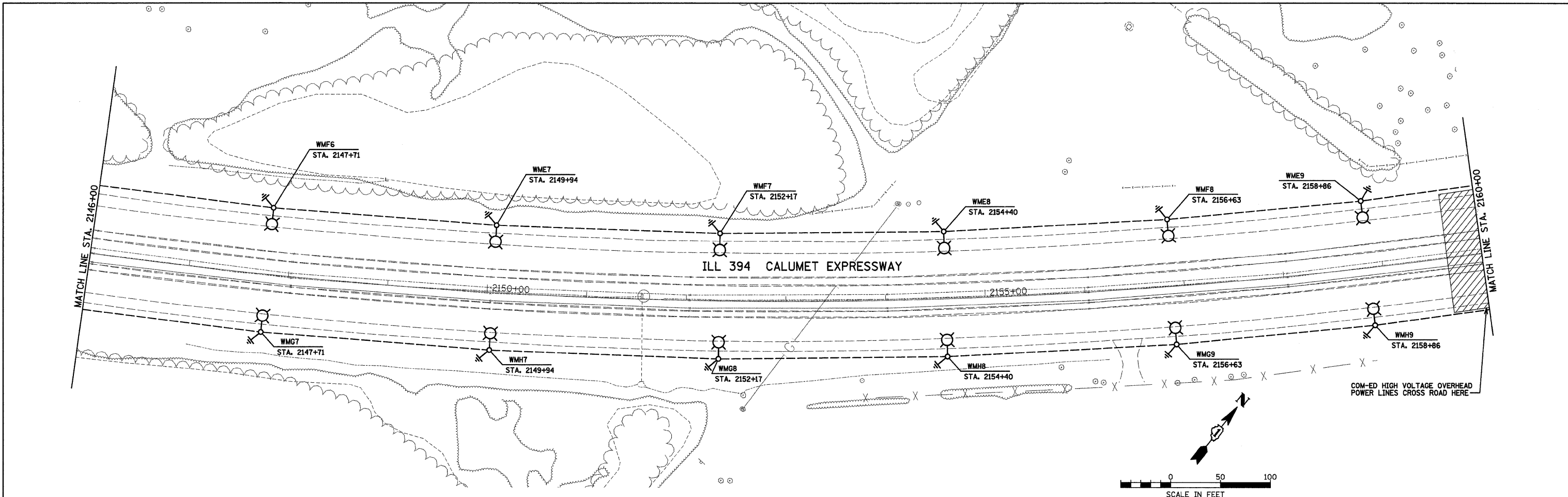


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	DATE - 12-31-07	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD LIGHTING PLAN	
SCALE: 1" = 50'	SHEET NO. 7 OF 22 SHEETS
STA. 2118+00 TO STA. 2146+00	

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 37
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 60D34		E7



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GRANT ANHALT SCHLOEMER
 and Associates Inc.
 One Honey Creek Corporate Center
 120 South 84th Street, Suite 401
 Milwaukee, WI 53214-1470
 414.229.1500
 FAX 414.229.0837
 Web Site: www.gasai.com

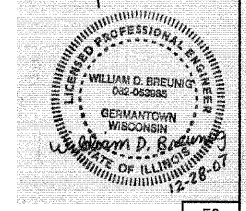
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

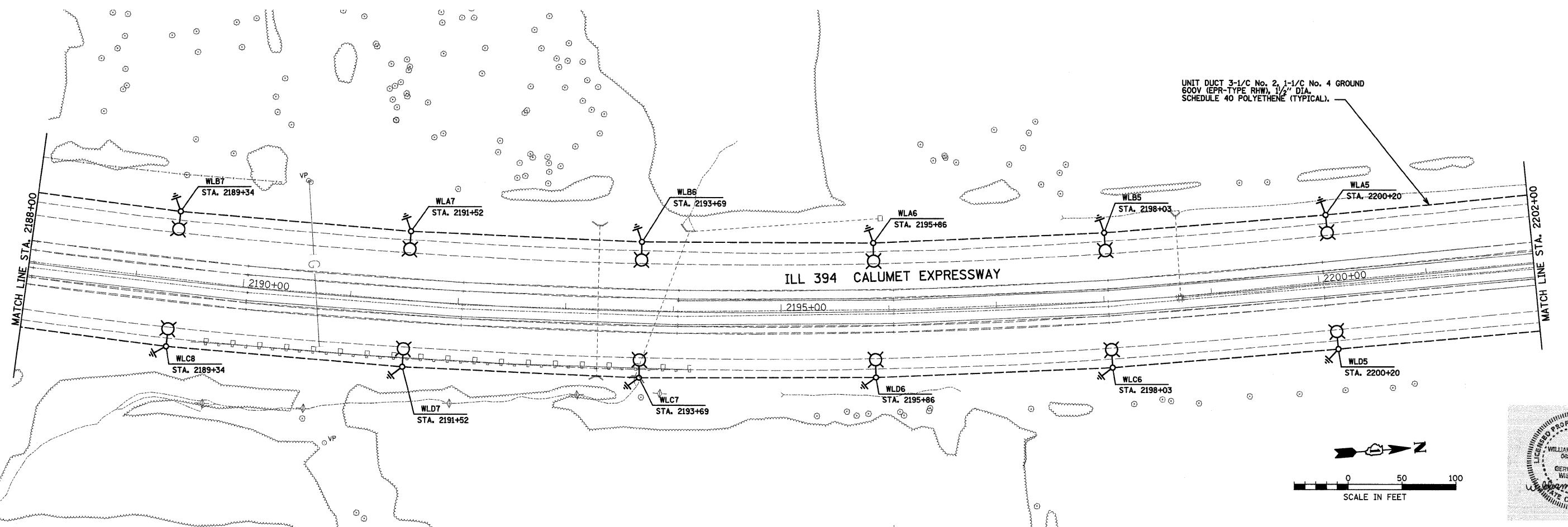
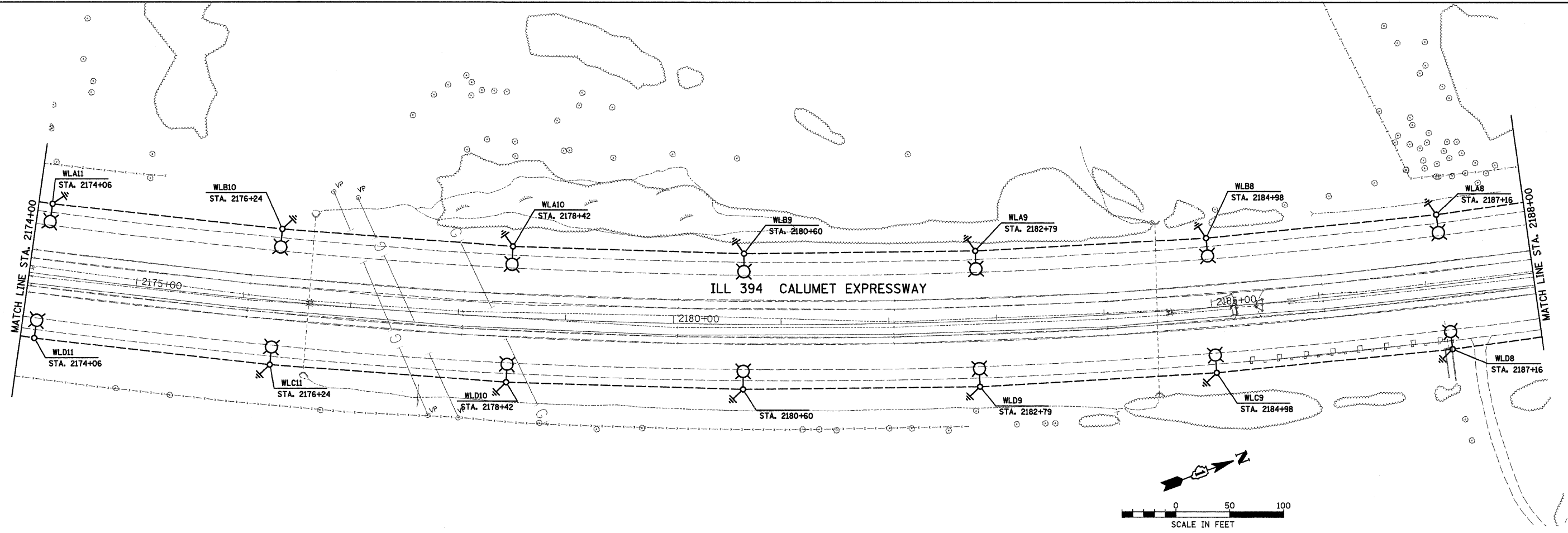
ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING PLAN

SCALE: 1" = 50' SHEET NO. 8 OF 22 SHEETS STA. 2146+00 TO STA. 2174+00

F.A.P. RTE. 332	SECTION 2007-044 1	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 38
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 60D34		



E8



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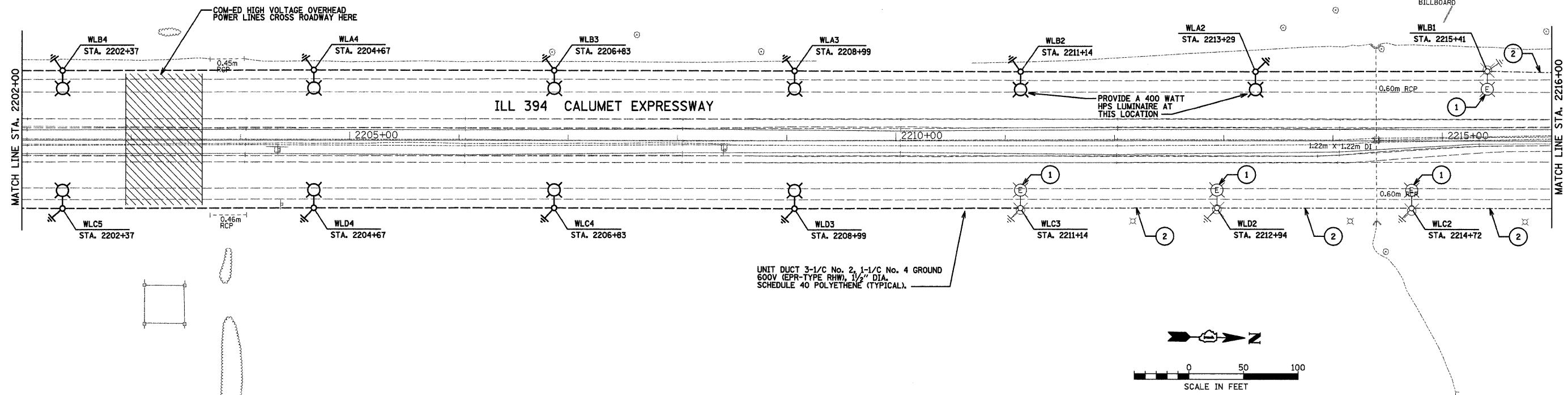
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

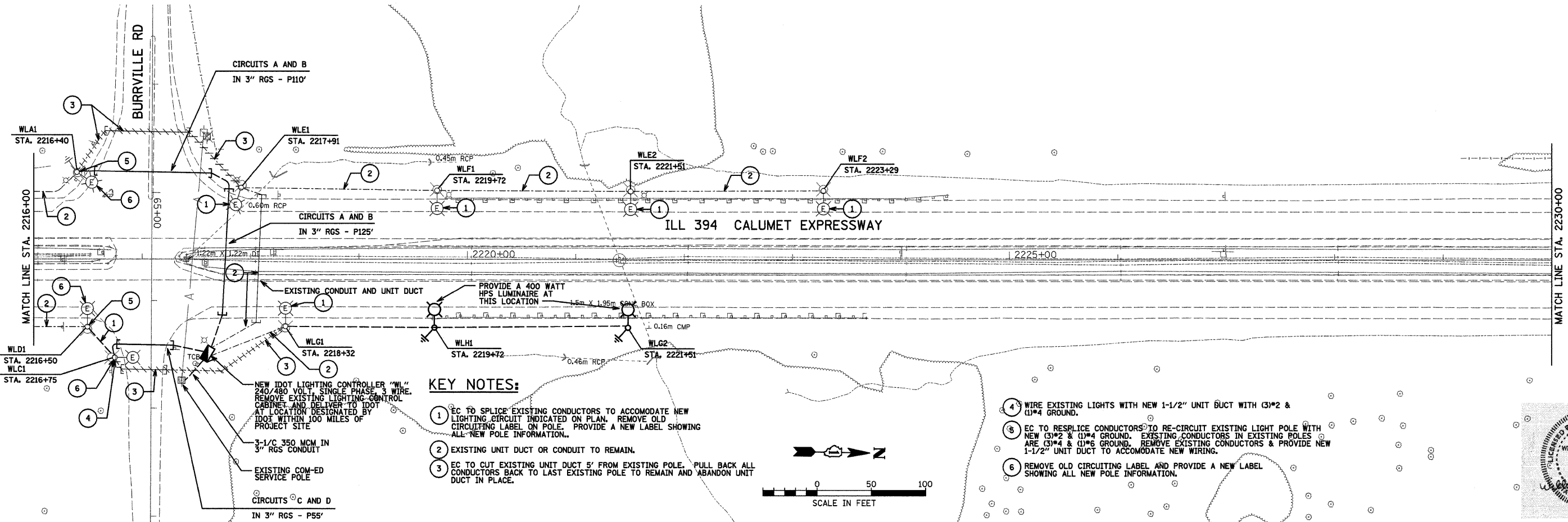
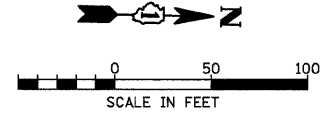
ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD		
LIGHTING PLAN		
SCALE: 1" = 50'	SHEET NO. 9 OF 22 SHEETS	STA. 2174+00 TO STA. 2202+00

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 39
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D34	

E9



UNIT DUCT 3-1/2" No. 2, 1-1/2" No. 4 GROUND
600V (EPR-TYPE RHW), 1/2" DIA.
SCHEDULE 40 POLYETHENE (TYPICAL).



- KEY NOTES:**
- EC TO SPLICE EXISTING CONDUCTORS TO ACCOMMODATE NEW LIGHTING CIRCUIT INDICATED ON PLAN. REMOVE OLD CIRCUITING LABEL ON POLE. PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.
 - EXISTING UNIT DUCT OR CONDUIT TO REMAIN.
 - EC TO CUT EXISTING UNIT DUCT 5' FROM EXISTING POLE. PULL BACK ALL CONDUCTORS BACK TO LAST EXISTING POLE TO REMAIN AND ABANDON UNIT DUCT IN PLACE.

- WIRE EXISTING LIGHTS WITH NEW 1-1/2" UNIT DUCT WITH (3)*2 & (1)*4 GROUND.
- EC TO RESPLICE CONDUCTORS TO RE-CIRCUIT EXISTING LIGHT POLE WITH NEW (3)*2 & (1)*4 GROUND. EXISTING CONDUCTORS IN EXISTING POLES ARE (3)*4 & (1)*6 GROUND. REMOVE EXISTING CONDUCTORS & PROVIDE NEW 1-1/2" UNIT DUCT TO ACCOMMODATE NEW WIRING.
- REMOVE OLD CIRCUITING LABEL AND PROVIDE A NEW LABEL SHOWING ALL NEW POLE INFORMATION.



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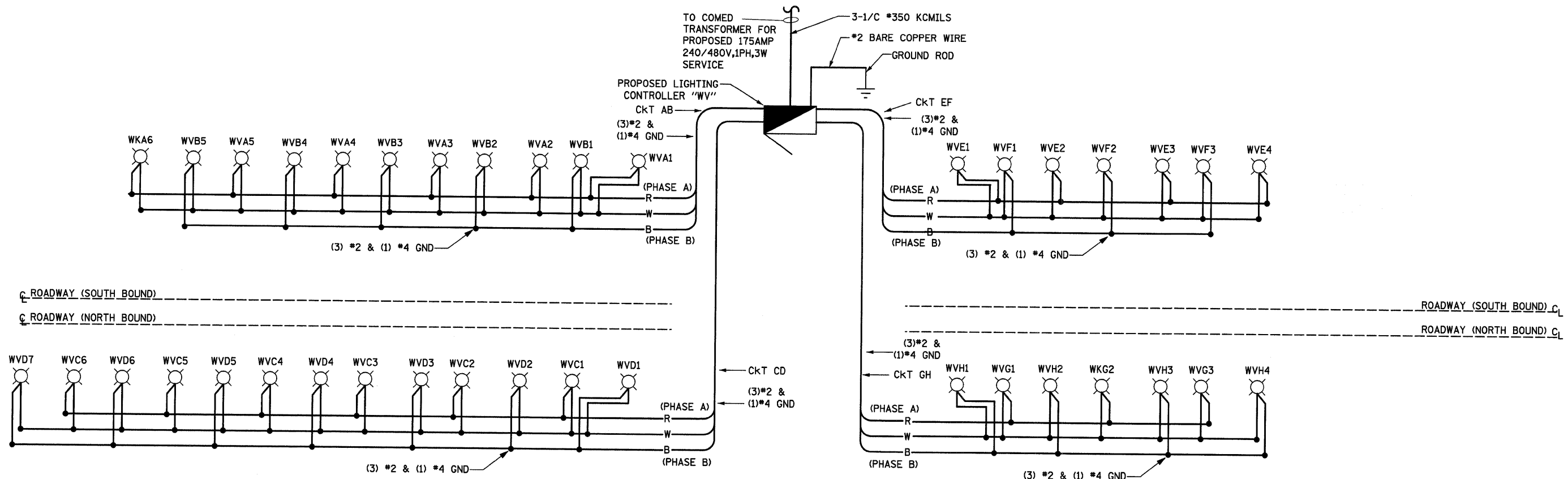
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	DATE - 12-31-07	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ILL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING PLAN**

SCALE: 1" = 50' SHEET NO. 10 OF 22 SHEETS STA. 2202+00 TO STA. 2230+00

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 40	E10
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 60D34			



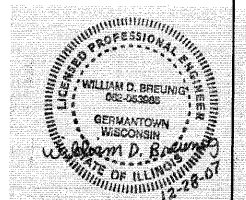
LOAD TABULATION FOR LIGHTING CONTROLLER "WV" @ RELOCATED IL 1 NEW SERVICE

CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(6) NEW FIXT @ 1.53A	9.18 (11.64)		70A, 1 POLE
B	(5) NEW FIXT @ 1.53A		7.65 (9.70)	70A, 1 POLE
C	(6) NEW FIXT @ 1.53A	9.18 (11.64)		70A, 1 POLE
D	(7) NEW FIXT @ 1.53A		10.71 (13.58)	70A, 1 POLE
E	(4) NEW FIXT @ 1.53A	6.12 (7.76)		70A, 1 POLE
F	(3) NEW FIXT @ 1.53A		4.59 (5.82)	70A, 1 POLE
G	(3) NEW FIXT @ 1.53A	4.59 (5.82)		70A, 1 POLE
H	(4) NEW FIXT @ 1.53A		10.71 (13.58)	70A, 1 POLE
TOTAL CONNECTED LOAD @ 240V, 1 PH.		29.07A (36.86A)	33.66A (42.68A)	
TOTAL CONNECTED LOAD @ 240V, 1 PH.		7.0KVA (8.8KVA)	8.4KVA (10.7KVA)	
TOTAL CONNECTED LOAD @ 480V, 1 PH.		32.08A (40.63A)		

NOTE: AMPERAGE IN PARENTHESIS REPRESENT FUTURE LUMINARIES WITH A 400W HPS LAMPS.

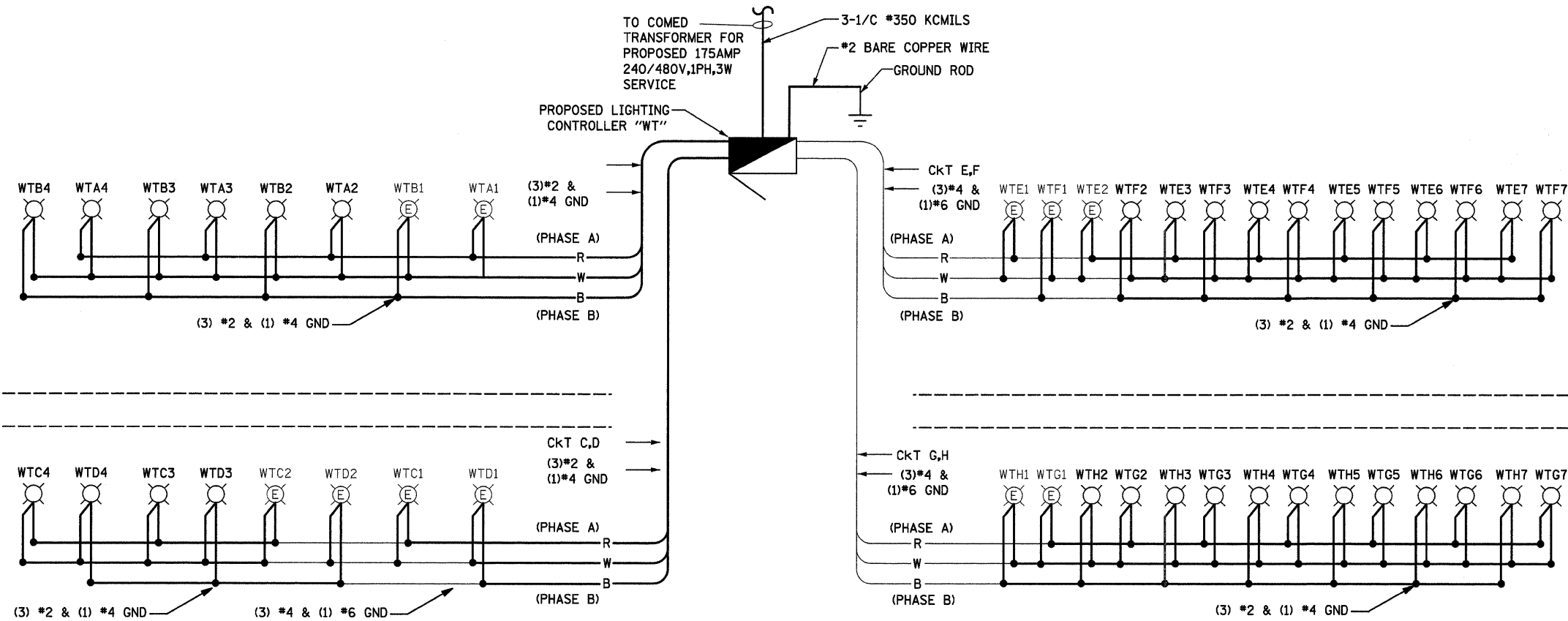
- LEGEND**
- PROPOSED 310W HPS LUMINAIRE
 - EXISTING 400W HPS LUMINAIRE
 - PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
 - B** BLACK PHASE CONDUCTOR
 - W** WHITE NEUTRAL CONDUCTOR
 - R** RED PHASE CONDUCTOR
 - G** GREEN GROUND CONDUCTOR

NOTE:
1. SEE TRAFFIC PLANS FOR STATIONS.



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	PLOT SCALE = #SCALE#	CHECKED - BDB	REVISED -			SCALE: 1" = 50'	SHEET NO. 11 OF 22 SHEETS	STA. TO STA.	CONTRACT NO. 60D34			
	PLOT DATE = 12/28/2007	DATE - 12-31-07	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						



ROADWAY (SOUTH BOUND)
ROADWAY (NORTH BOUND)

ROADWAY (SOUTH BOUND) C_L
ROADWAY (NORTH BOUND) C_L

CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(2) FIXT @ 1.94A, (2) NEW FIXT @ 1.53A	6.94 (7.76)		70A, 1 POLE
B	(2) FIXT @ 1.94A, (2) NEW FIXT @ 1.53A		6.94 (7.76)	70A, 1 POLE
C	(2) EX FIXT @ 1.94A, (2) NEW FIXT @ 1.53A	6.94 (7.76)		70A, 1 POLE
D	(2) EX FIXT @ 1.94A, (2) NEW FIXT @ 1.53A		6.94 (7.76)	70A, 1 POLE
E	(2) EX FIXT @ 1.94A, (5) NEW FIXT @ 1.53A	11.53 (13.58)		70A, 1 POLE
F	(2) EX FIXT @ 1.94A, (5) NEW FIXT @ 1.53A		11.53 (13.58)	70A, 1 POLE
G	(2) FIXT @ 1.94A, (5) NEW FIXT @ 1.53A	11.53 (13.58)		70A, 1 POLE
H	(2) FIXT @ 1.94A, (5) NEW FIXT @ 1.53A		11.53 (13.58)	70A, 1 POLE
TOTAL CONNECTED LOAD @ 240V, 1 PH.		36.94A (42.68A)	36.94A (42.68A)	
TOTAL CONNECTED LOAD @ 240V, 1 PH.		8.9KVA (10.2KVA)	8.9KVA (10.2KVA)	
TOTAL CONNECTED LOAD @ 480V, 1 PH.		37A (42.50A)		

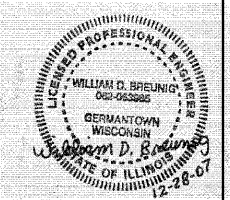
NOTE: AMPERAGE IN PARENTHESIS REPRESENT FUTURE LUMINARIES WITH A 400W HPS LAMPS.

LEGEND

- PROPOSED 310W HPS LUMINAIRE
- PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
- B BLACK PHASE CONDUCTOR
- W WHITE NEUTRAL CONDUCTOR
- R RED PHASE CONDUCTOR
- G GREEN GROUND CONDUCTOR

NOTE:

1. SEE TRAFFIC PLANS FOR STATIONS.



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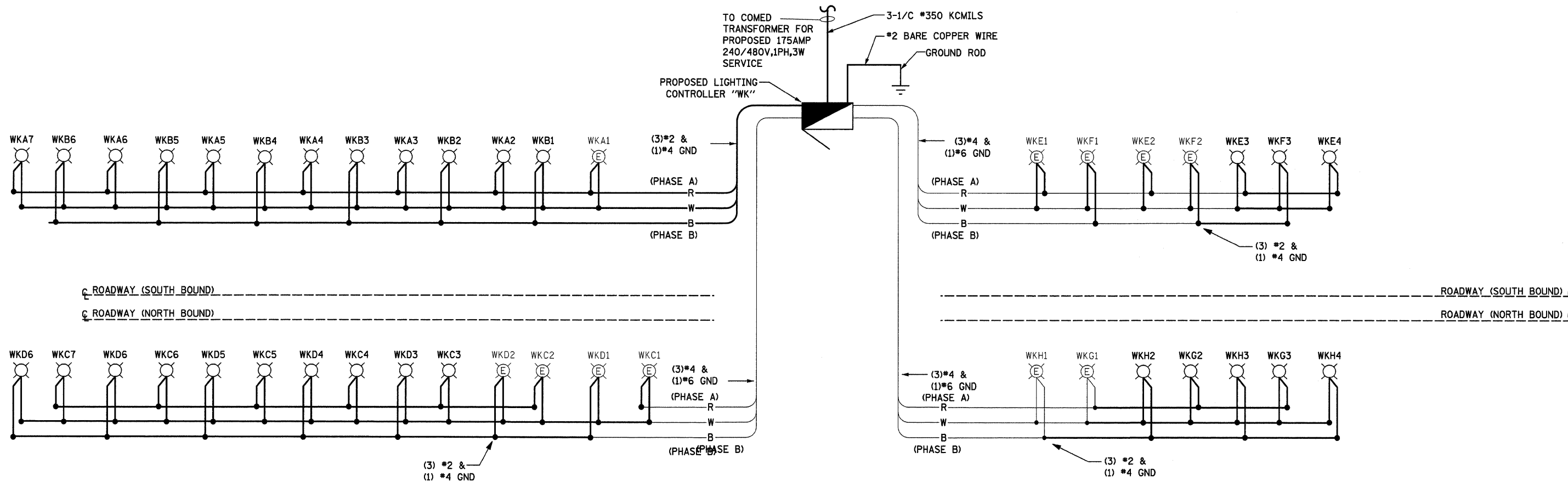
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING CONTROLLER AT ELMSCOURT ROAD - ONE-LINE DIAGRAM

SCALE: 1" = 50' SHEET NO. 12 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 42
CONTRACT NO. 60D34			E12	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



LOAD TABULATION FOR LIGHTING CONTROLLER "WK" BEMES ROAD

CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(2) FIXT @ 1.94A, (5) NEW FIXT @ 1.53A	11.53 (13.58)		70A, 1 POLE
B	(1) EX FIXT @ 1.94A, (6) NEW FIXT @ 1.53A		9.59 (9.18)	70A, 1 POLE
C	(2) EX FIXT @ 1.94A, (5) NEW FIXT @ 1.53A	11.53 (13.58)		70A, 1 POLE
D	(2) EX FIXT @ 1.94A, (5) NEW FIXT @ 1.53A		11.53 (13.58)	70A, 1 POLE
E	(3) EX FIXT @ 1.94A, (1) NEW FIXT @ 1.53A	7.35 (7.76)		70A, 1 POLE
F	(2) EX FIXT @ 1.94A, (1) NEW FIXT @ 1.53A		5.41 (5.82)	70A, 1 POLE
G	(2) FIXT @ 1.94A, (1) NEW FIXT @ 1.53A	5.41 (7.76)		70A, 1 POLE
H	(3) FIXT @ 1.94A, (1) NEW FIXT @ 1.53A		7.35 (7.76)	70A, 1 POLE
TOTAL CONNECTED LOAD @ 240V, 1 PH.		35.82A (42.68A)	33.88A (36.34A)	
TOTAL CONNECTED LOAD @ 240V, 1 PH.		8.6KVA (10.2KVA)	8.13KVA (8.7KVA)	
TOTAL CONNECTED LOAD @ 480V, 1 PH.		34.9A (39.38A)		

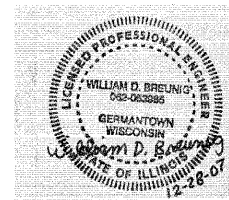
NOTE: AMPERAGE IN PARENTHESIS REPRESENT FUTURE LUMINARIES WITH A 400W HPS LAMPS.

LEGEND

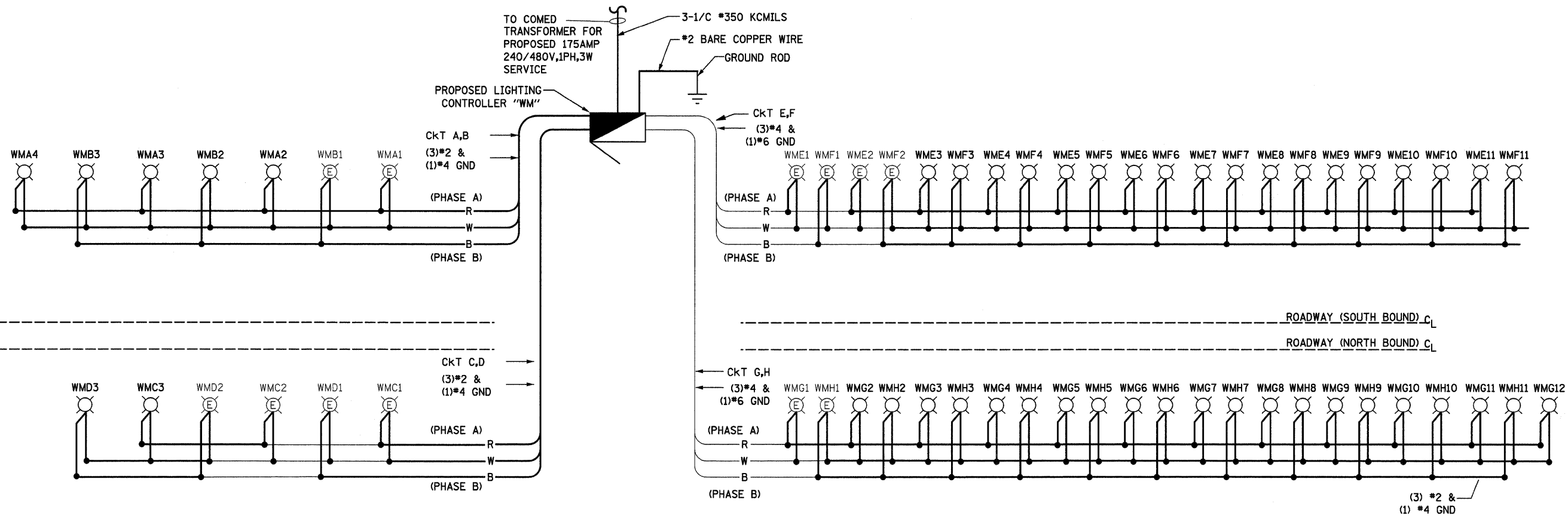
- PROPOSED 310W HPS LUMINAIRE
- PROPOSED 310W HPS LUMINAIRE
- PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
- B BLACK PHASE CONDUCTOR
- W WHITE NEUTRAL CONDUCTOR
- R RED PHASE CONDUCTOR
- G GREEN GROUND CONDUCTOR

NOTE:

- 1. SEE TRAFFIC PLANS FOR STATIONS.



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CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(3) FIXT @ 1.94A, (1) NEW FIXT @ 1.53A	7.35 (7.76)		70A, 1 POLE
B	(2) EX FIXT @ 1.94A, (1) NEW FIXT @ 1.53A		5.41 (5.82)	70A, 1 POLE
C	(2) EX FIXT @ 1.94A, (1) NEW FIXT @ 1.53A	5.41 (5.82)		70A, 1 POLE
D	(2) EX FIXT @ 1.94A, (1) NEW FIXT @ 1.53A		5.41 (5.82)	70A, 1 POLE
E	(2) EX FIXT @ 1.94A, (9) NEW FIXT @ 1.53A	16.83 (21.34)		70A, 1 POLE
F	(2) EX FIXT @ 1.94A, (9) NEW FIXT @ 1.53A		16.83 (21.34)	70A, 1 POLE
G	(3) FIXT @ 1.94A, (9) NEW FIXT @ 1.53A	19.59 (23.28)		70A, 1 POLE
H	(2) FIXT @ 1.94A, (9) NEW FIXT @ 1.53A		17.65 (21.34)	70A, 1 POLE

TOTAL CONNECTED LOAD @ 240V, 1 PH.	49.18A (58.20A)	45.3A (54.32A)
TOTAL CONNECTED LOAD @ 240V, 1 PH.	11.8KVA (14KVA)	10.9KVA (13KVA)
TOTAL CONNECTED LOAD @ 480V, 1 PH.	47.29A (56.25A)	

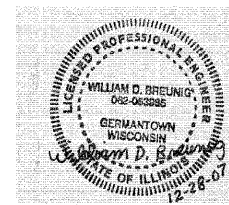
NOTE: AMPERAGE IN PARENTHESIS REPRESENT FUTURE LUMINARIES WITH A HPS 400W LAMPS.

LEGEND

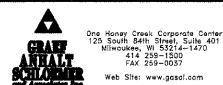
- PROPOSED 310W HPS LUMINAIRE
- EXISTING 400W HPS LUMINAIRE
- PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
- B BLACK PHASE CONDUCTOR
- W WHITE NEUTRAL CONDUCTOR
- R RED PHASE CONDUCTOR
- G GREEN GROUND CONDUCTOR

NOTE:

1. SEE TRAFFIC PLANS FOR STATIONS.



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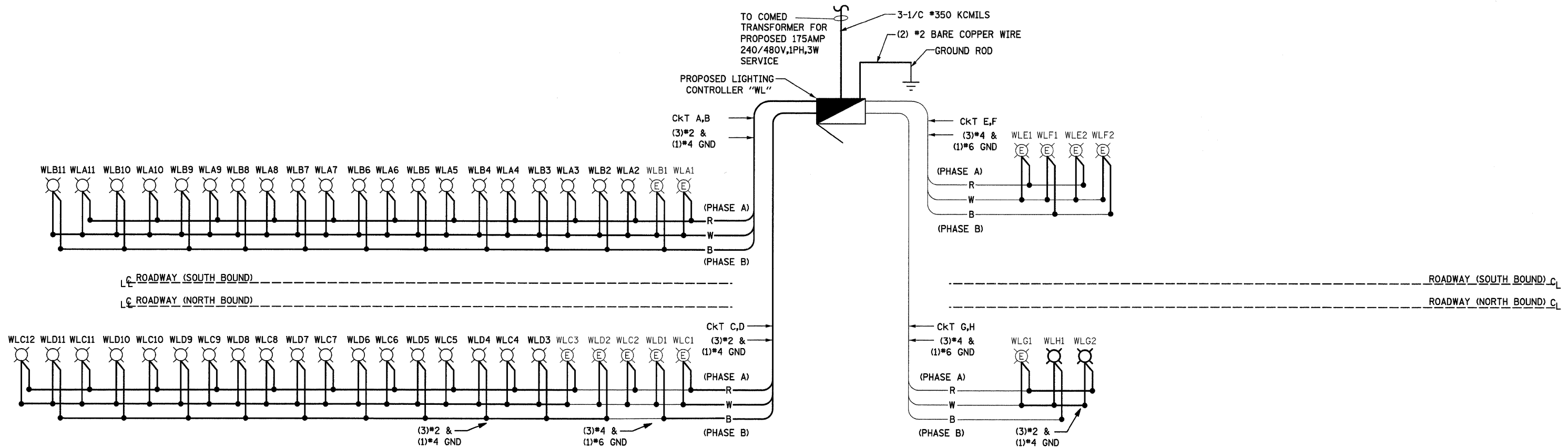
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING CONTROLLER AT COTTAGE GROVE AVENUE - ONE-LINE DIAGRAM**

SCALE: 1" = 50' SHEET NO. 14 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 44
CONTRACT NO. 60D34			E14	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



LOAD TABULATION FOR LIGHTING CONTROLLER "WL" BURNSVILLE

CIRCUIT	DESCRIPTION	PHASE A (RED) AMPS	PHASE B (BLACK) AMPS	BREAKER SIZE AMPS
A	(2) FIXT @ 1.94A,(9) NEW FIXT @ 1.53A	17.65 (21.34)		70A, 1 POLE
B	(2) FIXT @ 1.94A,(9) NEW FIXT @ 1.53A		17.65 (21.34)	70A, 1 POLE
C	(3) EX FIXT @ 1.94A,(9) NEW FIXT @ 1.53A	19.59 (23.28)		70A, 1 POLE
D	(2) EX FIXT @ 1.94A,(9) NEW FIXT @ 1.53A		17.65 (21.34)	70A, 1 POLE
E	(2) EX FIXT @ 1.94A	3.88 (3.88)		70A, 1 POLE
F	(2) EX FIXT @ 1.94A		3.88 (3.88)	70A, 1 POLE
G	(2) FIXT @ 1.94A	3.88 (3.88)		70A, 1 POLE
H	(1) NEW FIXT @ 1.94A		1.94 (1.94)	70A, 1 POLE
TOTAL CONNECTED LOAD @ 240V, 1 PH.		45A (52.38A)	41.12A (48.50A)	
TOTAL CONNECTED LOAD @ 240V, 1 PH.		10.8KVA (12.6KVA)	9.9KVA (11.6KVA)	
TOTAL CONNECTED LOAD @ 480V, 1 PH.		43A (50.42A)		

NOTE: AMPERAGE IN PARENTHESIS REPRESENT FUTURE LUMINAIRES WITH A 400W HPS LAMPS.

LEGEND

- PROPOSED 310W HPS LUMINAIRE
- EXISTING 400W HPS LUMINAIRE
- PROPOSED LIGHTING CONTROLLER, SINGLE TYPE
- B BLACK PHASE CONDUCTOR
- W WHITE NEUTRAL CONDUCTOR
- R RED PHASE CONDUCTOR
- G GREEN GROUND CONDUCTOR

NOTE:

1. SEE TRAFFIC PLANS FOR STATIONS.



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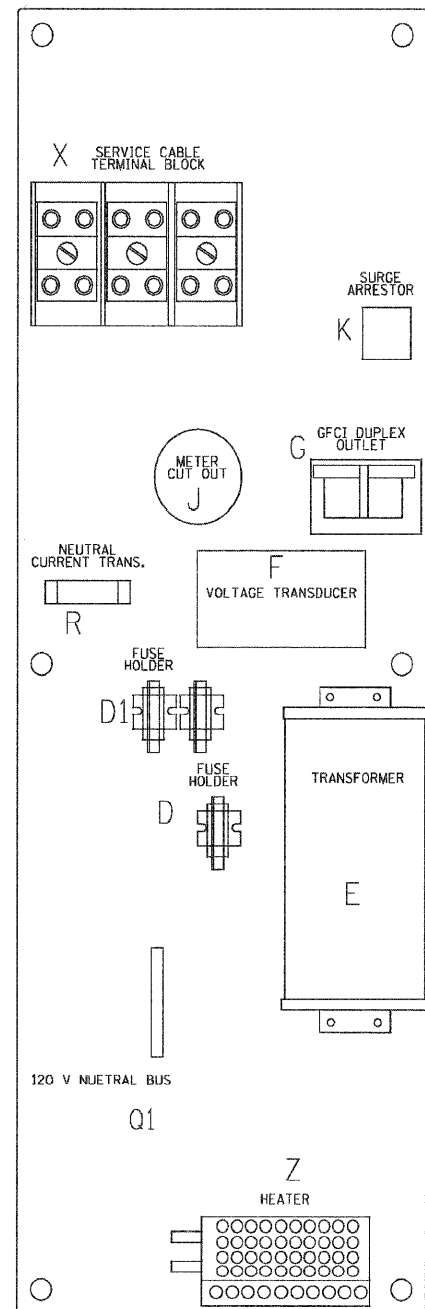
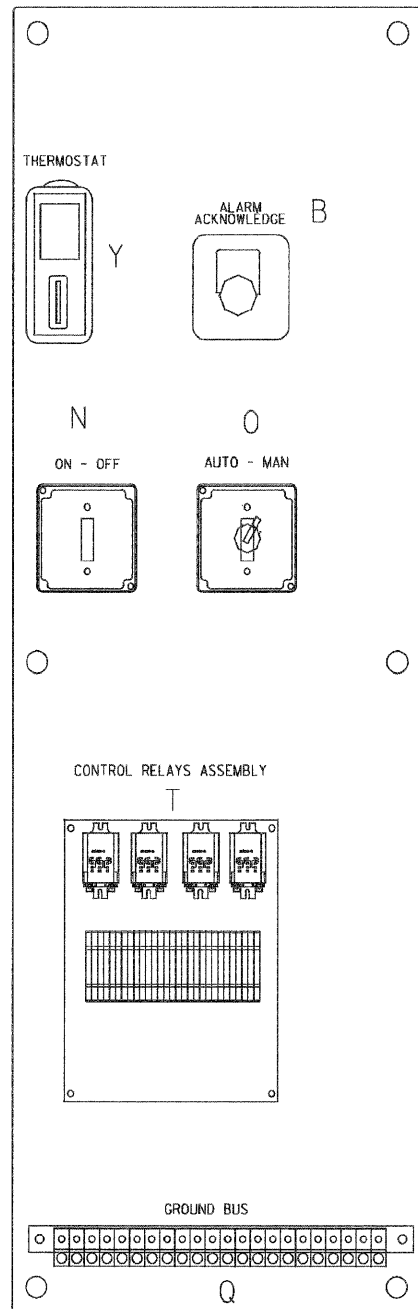
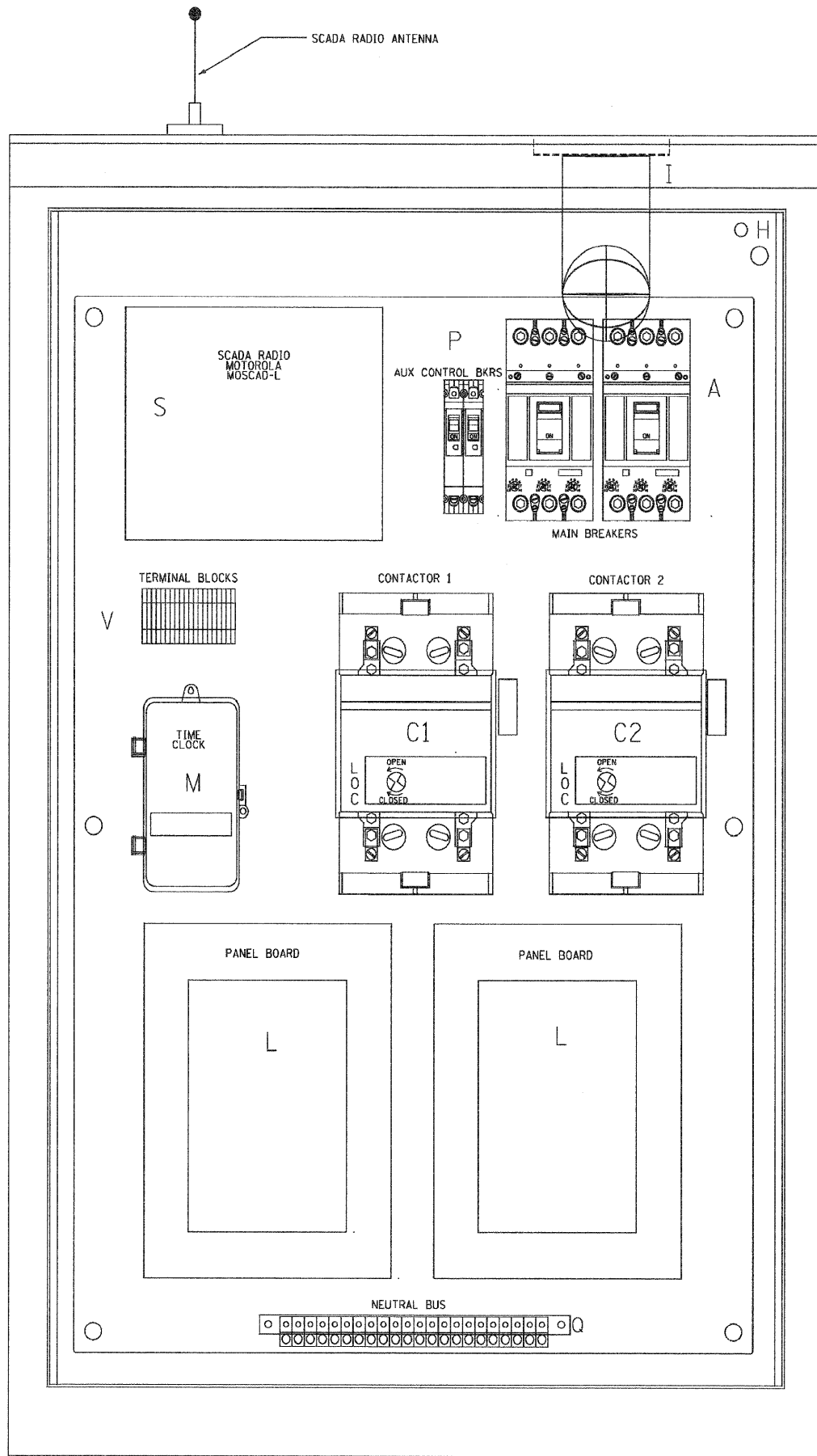
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING CONTROLLER AT BURRVILLE ROAD - ONE-LINE DIAGRAM

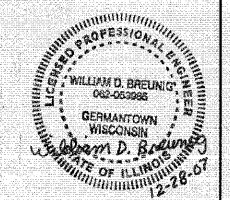
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F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 45
CONTRACT NO. 60D34			E15	
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		



BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2*	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-15 FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK-1/2 FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVERED TERMINALS
G	1	15 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 900IKS11BH13, 2 POSITION SWITCH IN 900IKY1 ENCLOSURE OR APPROVED EQUAL
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 #6 AND 8 #12 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA MOSCAD-L RADIO, 240 V
T*	1	CONTROL RELAY ASSEMBLY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4) . QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X*	1	620 AMP SL.PICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH CLEAR PLEXIGLASS SHEET



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GRANT ANHALT SCHLOEMER
 and Associates, Inc.
 One Honey Creek Corporate Center
 125 South 54th Street, Suite 401
 Milwaukee, WI 53214-1479
 414 258-1025
 FAX 258-0037
 Web Site: www.gasol.com

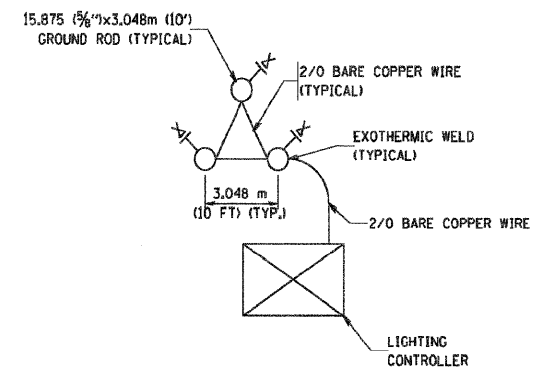
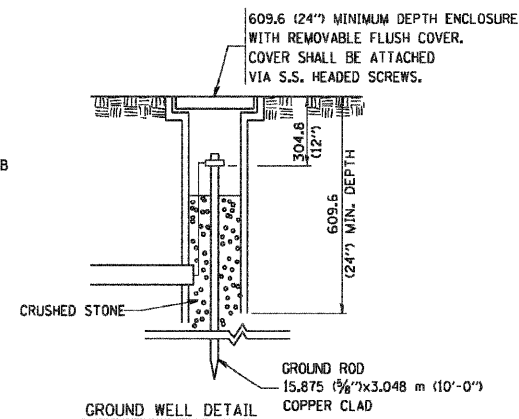
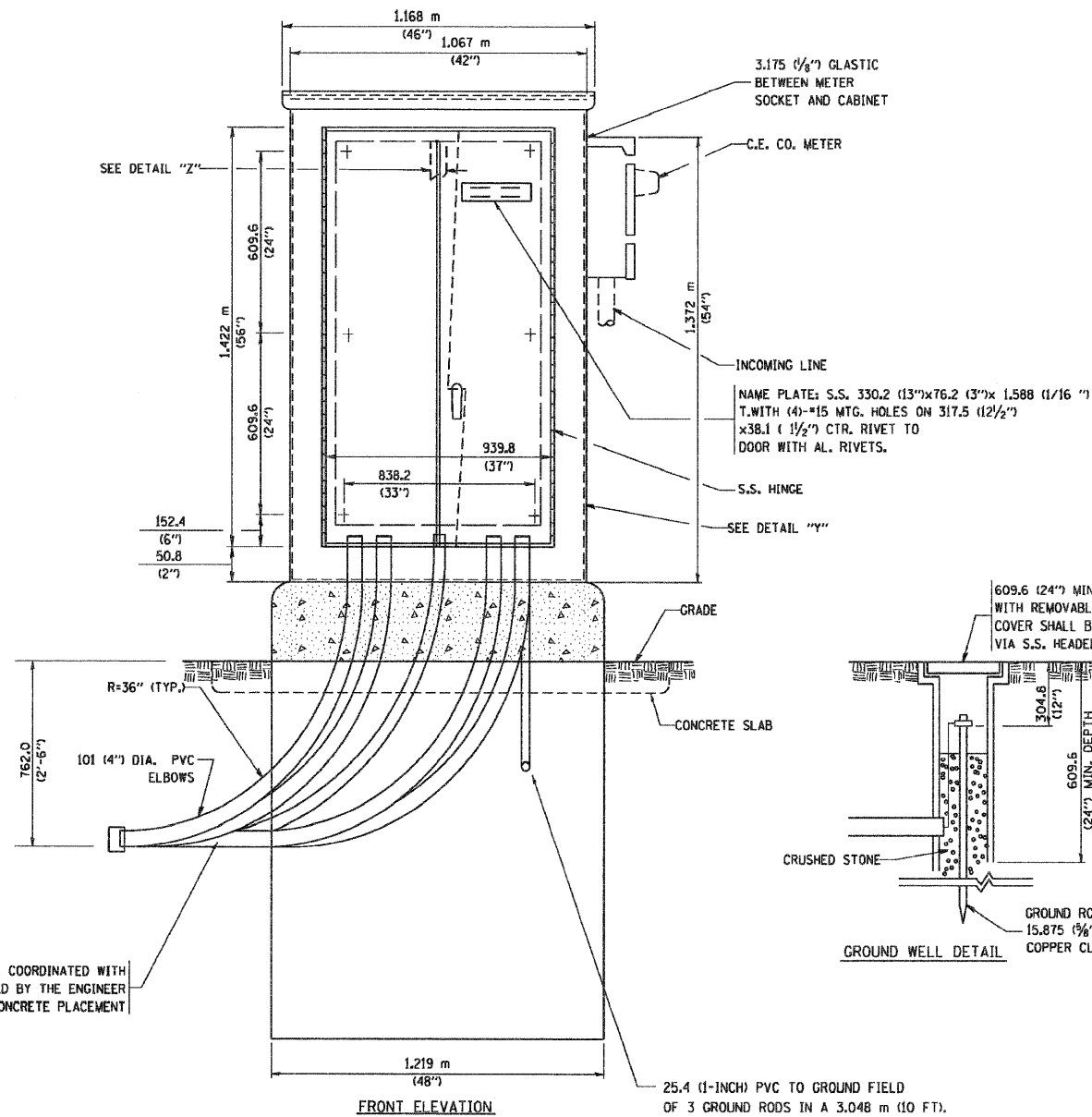
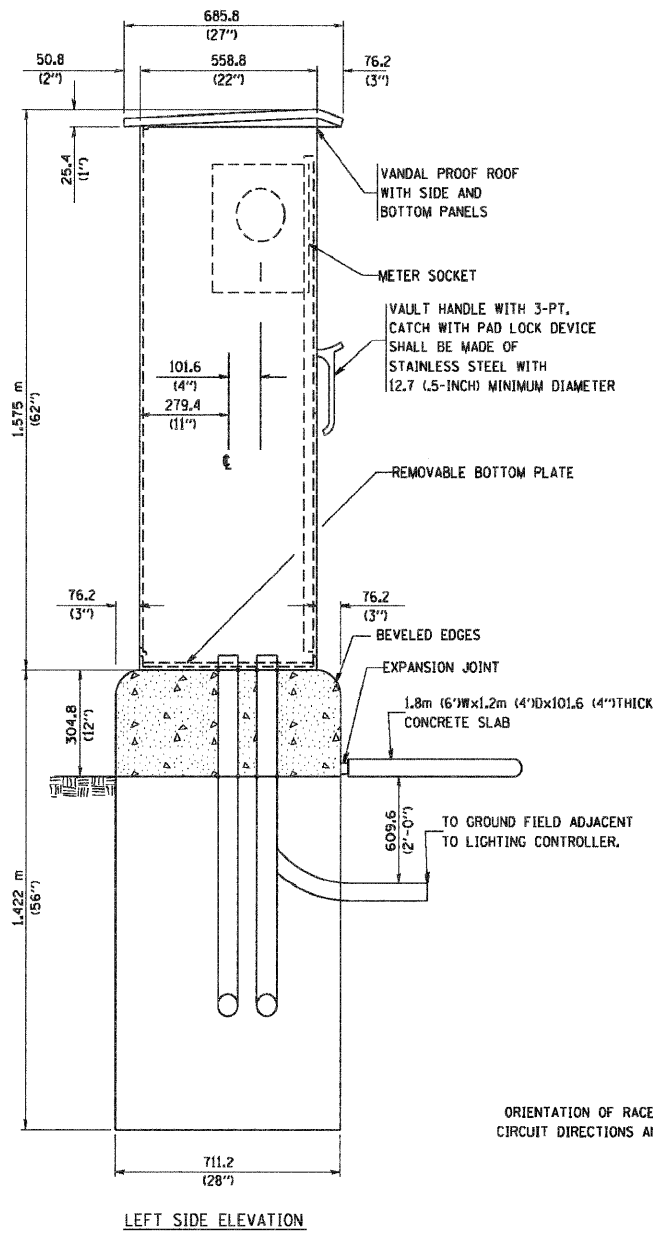
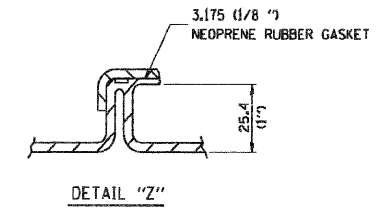
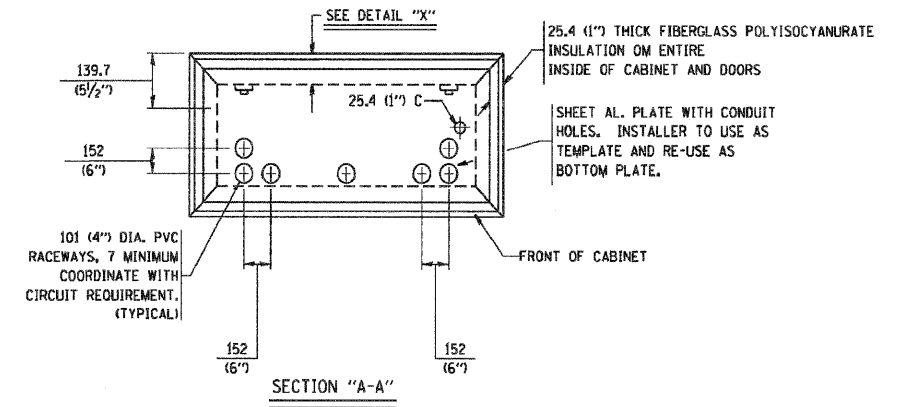
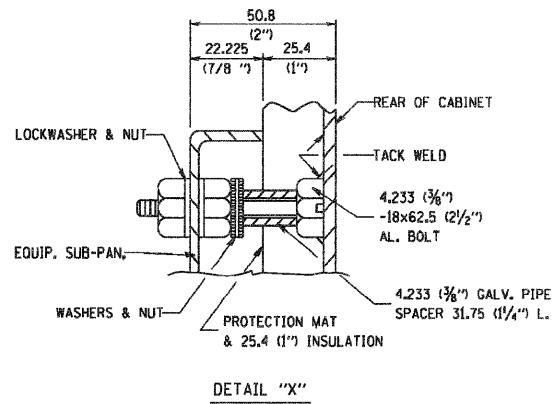
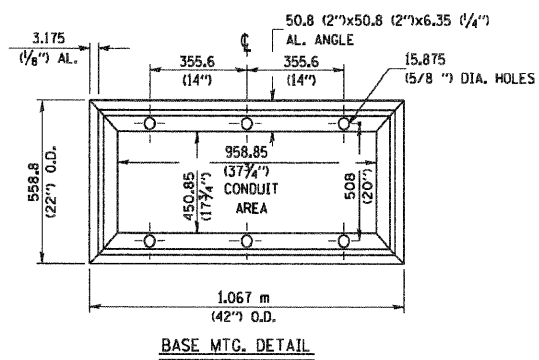
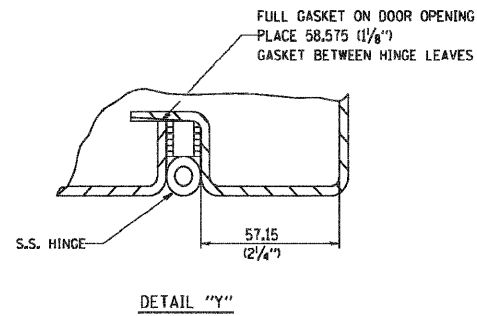
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING DETAILS - IDOT BE-205

SCALE: 1" = 50' SHEET NO. 16 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 46
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D34	



ORIENTATION OF RACEWAYS SHALL BE COORDINATED WITH CIRCUIT DIRECTIONS AND BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT

25.4 (1-INCH) PVC TO GROUND FIELD OF 3 GROUND RODS IN A 3.048 m (10 FT). TRIANGLE CONNECTED VIA BARE COPPER WIRE. VERIFY EXACT LOCATION OF GROUND FIELD WITH THE ENGINEER. NO GROUND WELL SHALL BE PLACED IN CONCRETE PAD IN FRONT OF CONTROLLER.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING DETAILS - IDOT BE-205

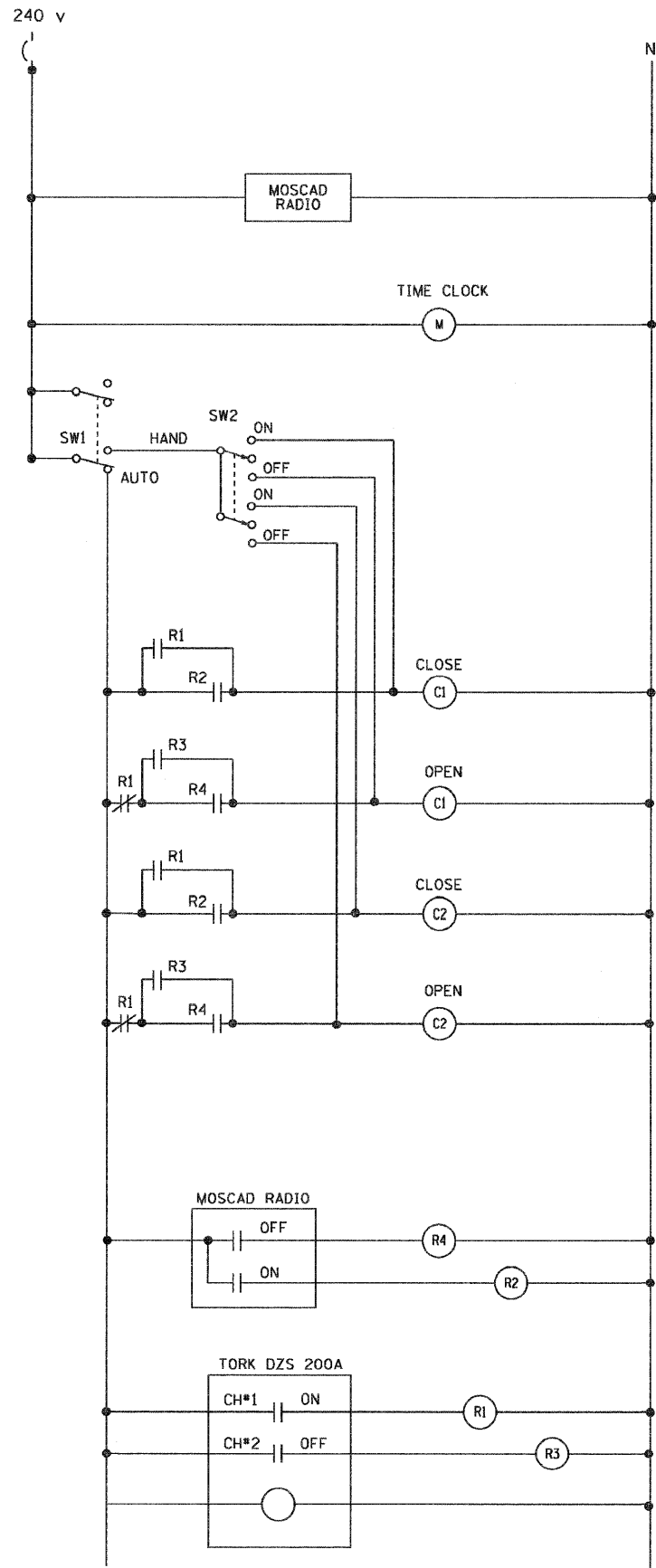
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F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 47
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D34	



NOTES

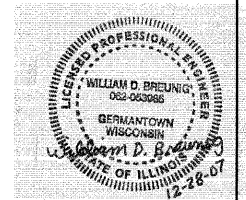
- CABINET SHALL BE FABRICATED FROM 3.175 (0.125-INCH) SHEET ALUMINUM * 3003H14, FORMED AND ARC WELDED.
- ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- NAME PLATE SHALL HAVE ENGRAVED 19.05 (0.75-INCH) HIGH LETTERS FILLED IN BLACK; "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
- ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
- CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
- THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
- METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
- CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 3.175 (0.125-INCH) THICK GLASTIC INSULATION BACK PANEL.
- ALL DEVICES SHALL BE FRONT REMOVABLE.
- TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
- SET LATITUDE TO 42 DEGREES. SET CH.1 TO 25 MINUTES AFTER ASTRONOMICAL SUNSET, 40 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +20 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH A SIGNAL LENGTH OF 7 SECONDS.)
- BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
- ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
- ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE
- ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW.
- ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
 R - RED Y - YELLOW
 B - BLACK W - WHITE
 BL - BLUE G - GREEN
 G - GREY
- MOSCAD I/O WIRING SHALL BE:
 DIGITAL INPUT (DI) WIRING SHALL BE #16 MTW PURPLE
 ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.
 AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE INDICATED.
- SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
- A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



CONTROL CIRCUIT LADDER LOGIC DIAGRAM

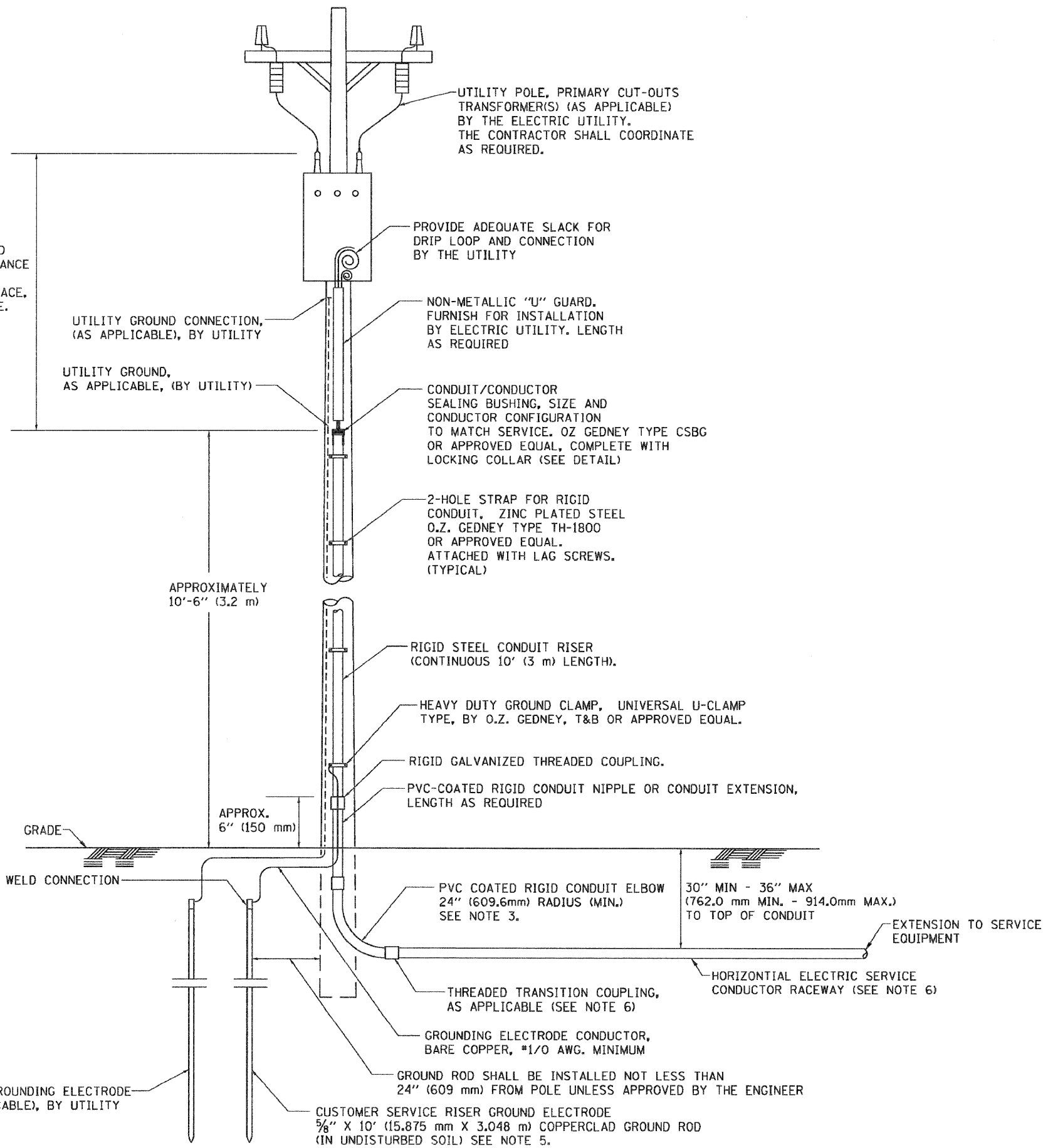
MOSCAD I/O ASSIGNMENTS		
TERM	MOSCAD DESTINATION	DESCRIPTION OF INPUT
1	Analog Input 1 (+)	CABINET NEUTRAL CURRENT
2	Analog Input 1 (-)	CABINET NEUTRAL CURRENT
3	Analog Input 2 (+)	CABINET SERVICE VOLTAGE
4	Analog Input 2 (-)	CABINET SERVICE VOLTAGE
5	P. Ground	GROUND
6	Digital Input 1	ALARM KNOWLEDGE
7	Digital Input 2	DOOR OPEN
8	Digital Input 3	MAINS BREAKER OPEN
9	Digital Input 4	CONTACTOR 1 OPEN
10	Digital Input 5	CONTACTOR 2 OPEN
11	Digital Input 6	CABINET IN NON-AUTO
12	Digital Input 7	BACK-UP CLOCK OFF CALL
13	Digital Input 8	BACK-UP CLOCK ON CALL
14	D1 Common	COMMON
15	K1 NO	LIGHTS ON CALL
16	K1 C	K1 COMMON
17	K2 NO	LIGHTS OFF CALL
18	K2 C	K2 COMMON
19	24 v+	24+vDC
20	24 v-	24-vDC

All analog inputs will be 4-20 mA only. Digital output relays will be Electrically energized and momentarily held
 Mixed I/O module model number V436



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ASCERTAIN AND ASSURE CLEARANCE FROM UTILITY SECONDARY SPACE, AS APPLICABLE.

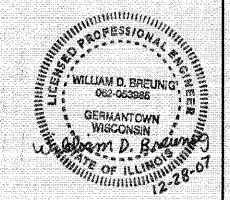
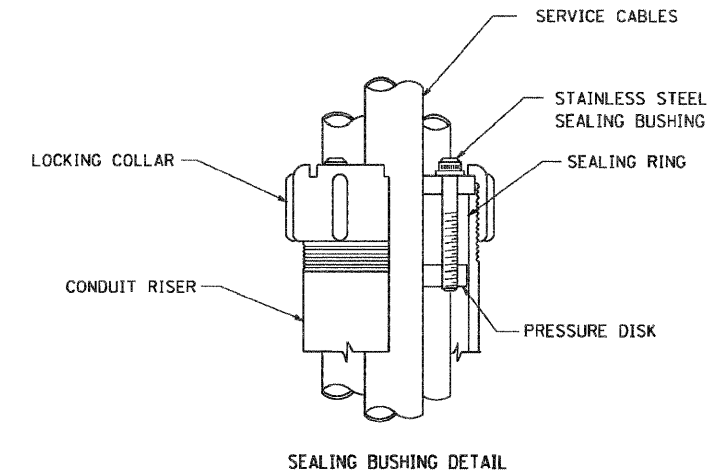


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

NOTES

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



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GRAFF ANHALT SCHLÖRMER
 One Honey Creek Corporate Center
 120 South Bark Road, Suite 401
 Milwaukee, WI 53214-1470
 414.239.1500
 FAX 239-2037
 Web Site: www.gesf.com

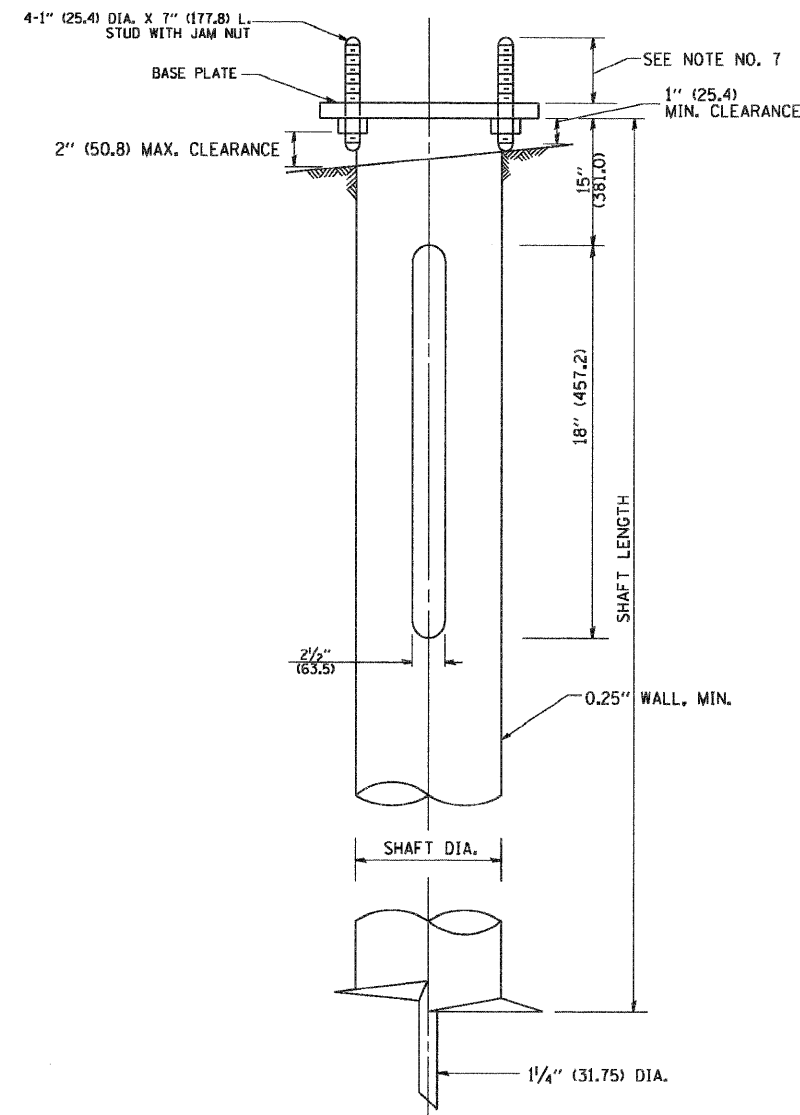
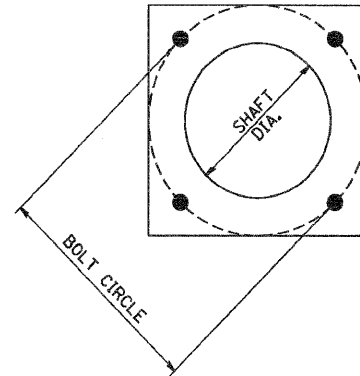
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
 LIGHTING DETAILS - IDOT BE-220**

SCALE: 1" = 50' SHEET NO. 19 OF 22 SHEETS STA. TO STA.

F.A.P RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 49
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 60D34	



NOTES:

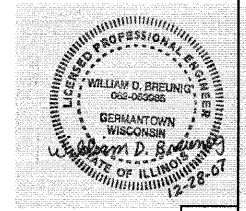
1. ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
3. ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
4. THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
5. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
7. ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
8. METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
9. THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
10. THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ($\pm 1^\circ$) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC (± 0.188) TO THE SHAFT AXIS.
11. THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC (± 0.125) AND IN LINE ($\pm 2^\circ$).
12. THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.

HELIX FOUNDATION SIZE

POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
31 FT.-35 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
36 FT.-40FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
41 FT.-45 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1 1/4"

METAL HELIX FOUNDATION MATERIALS

ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)



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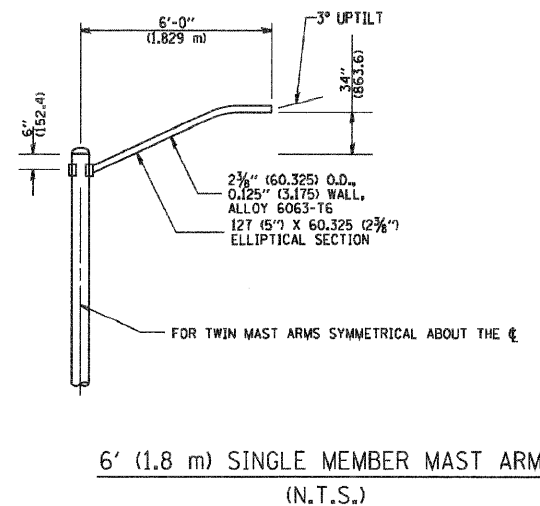
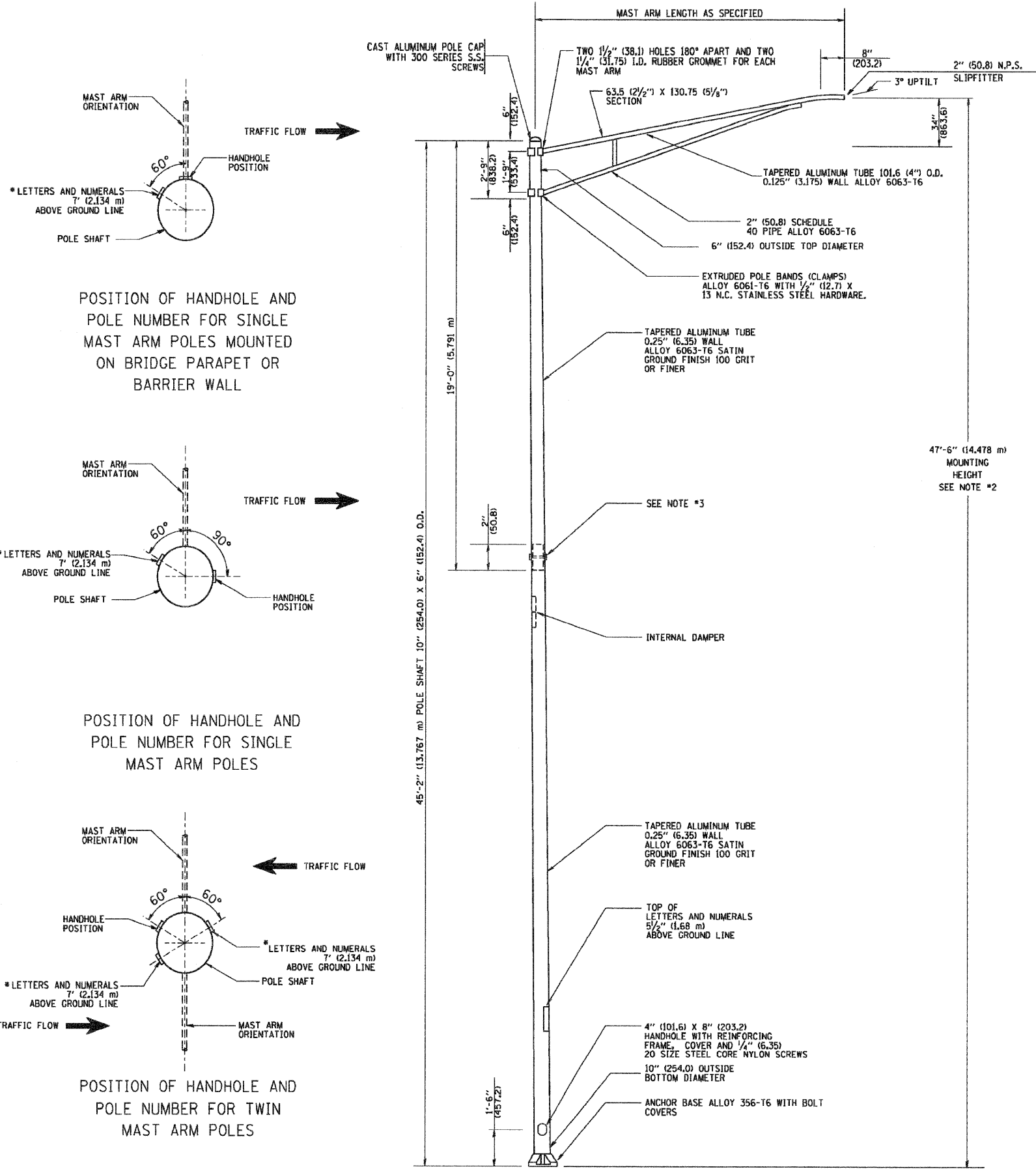
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING DETAILS - IDOT BE-305**

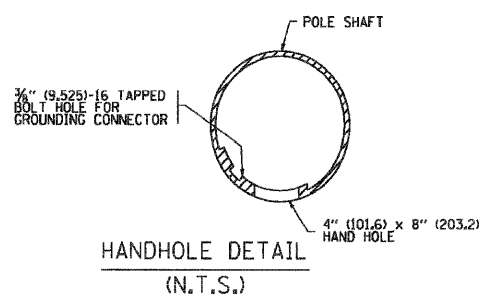
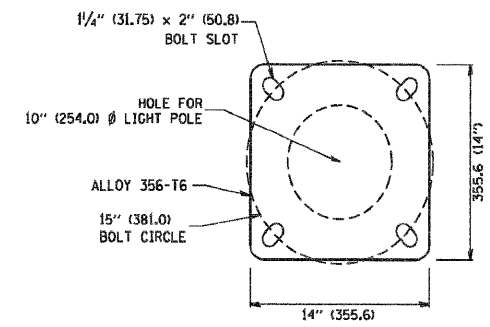
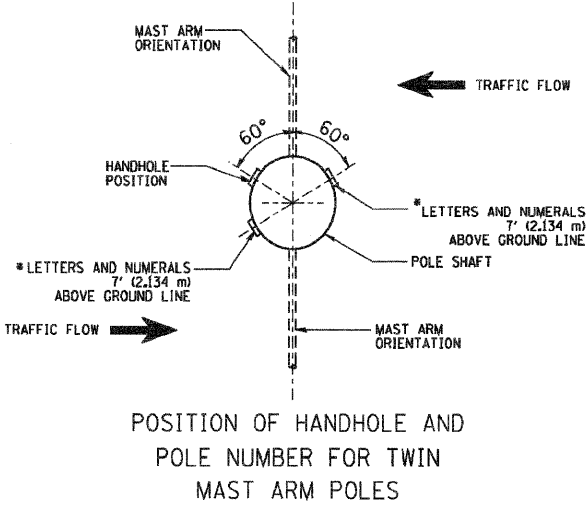
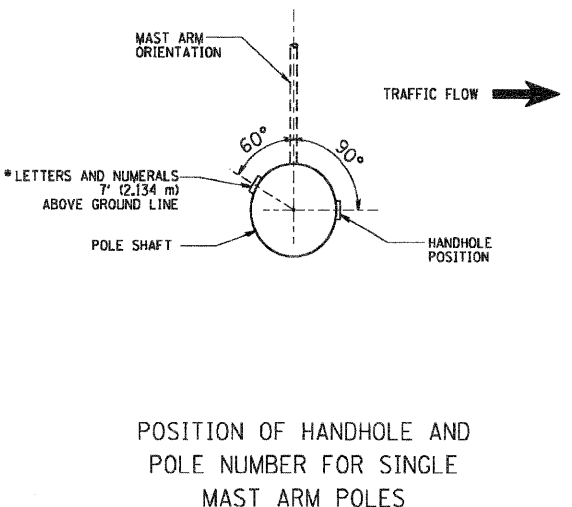
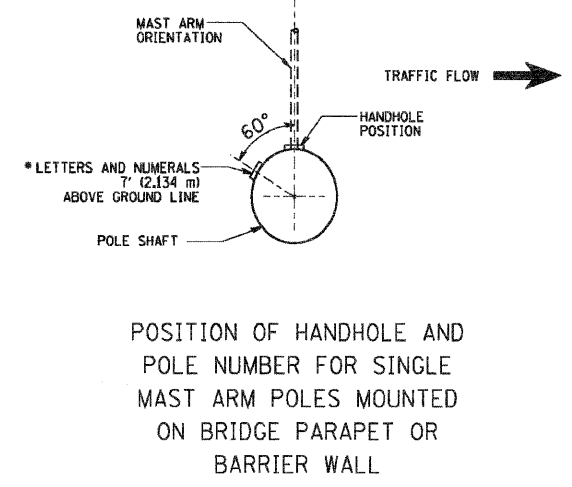
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F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 50
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		CONTRACT NO. 60D34		

E20



- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 4. THE LIGHT POLE WILL MEET ASHTO DESIGN CRITERIA AS SPECIFIED.
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING DETAILS - IDOT BE-400

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	2007-044 I	WILL & COOK	53	51
FED. ROAD DIST. NO.			CONTRACT NO. 60D34	
ILLINOIS			FED. AID PROJECT	



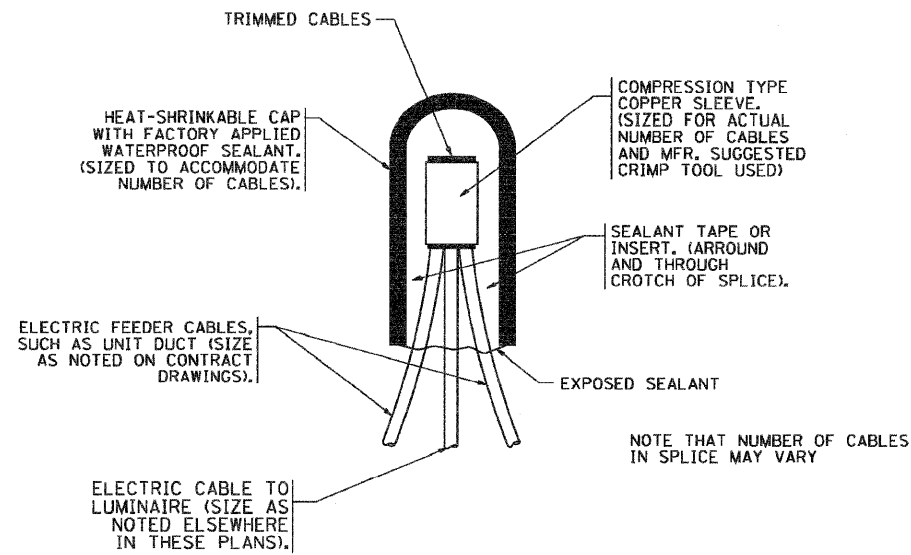
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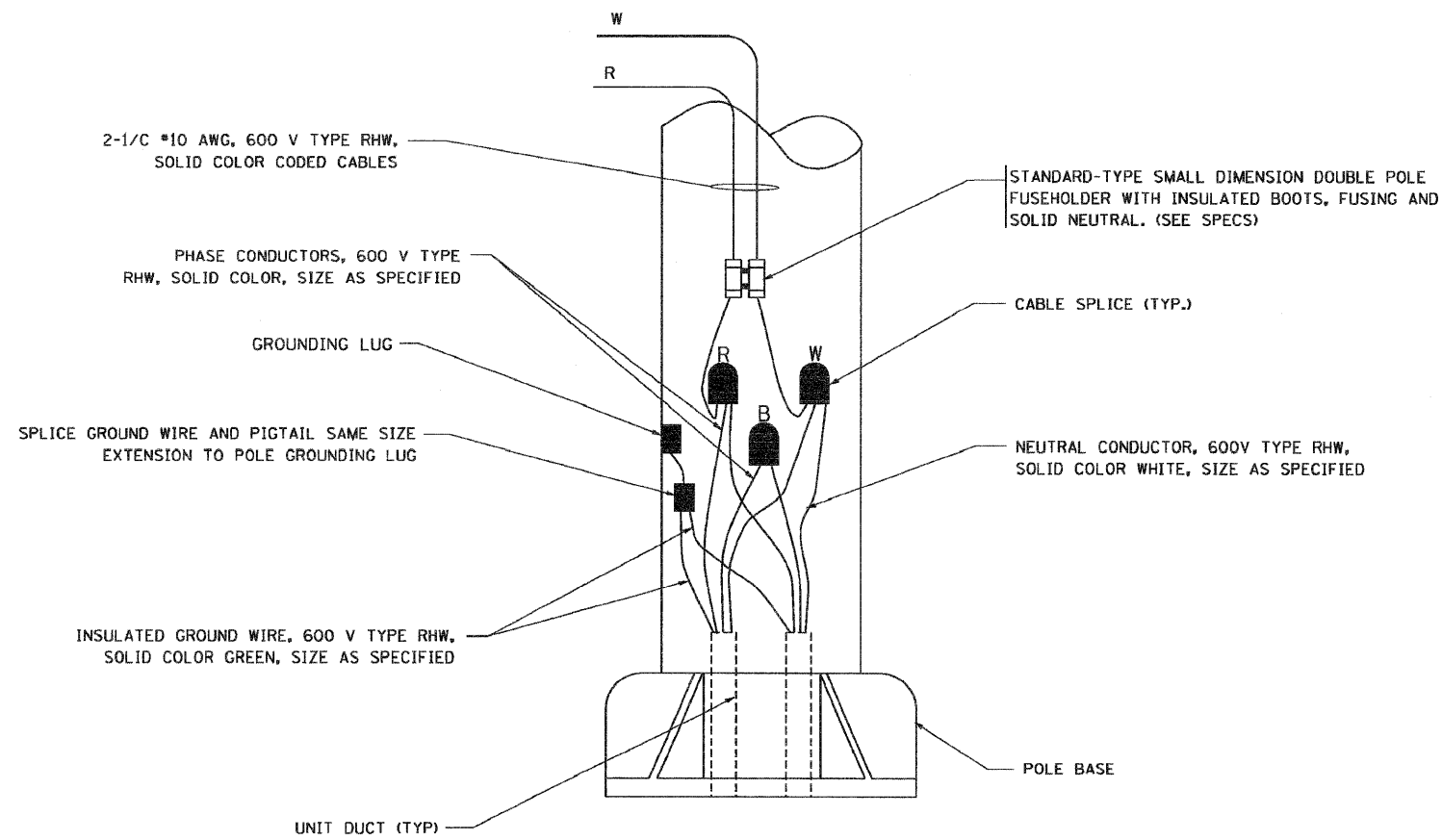
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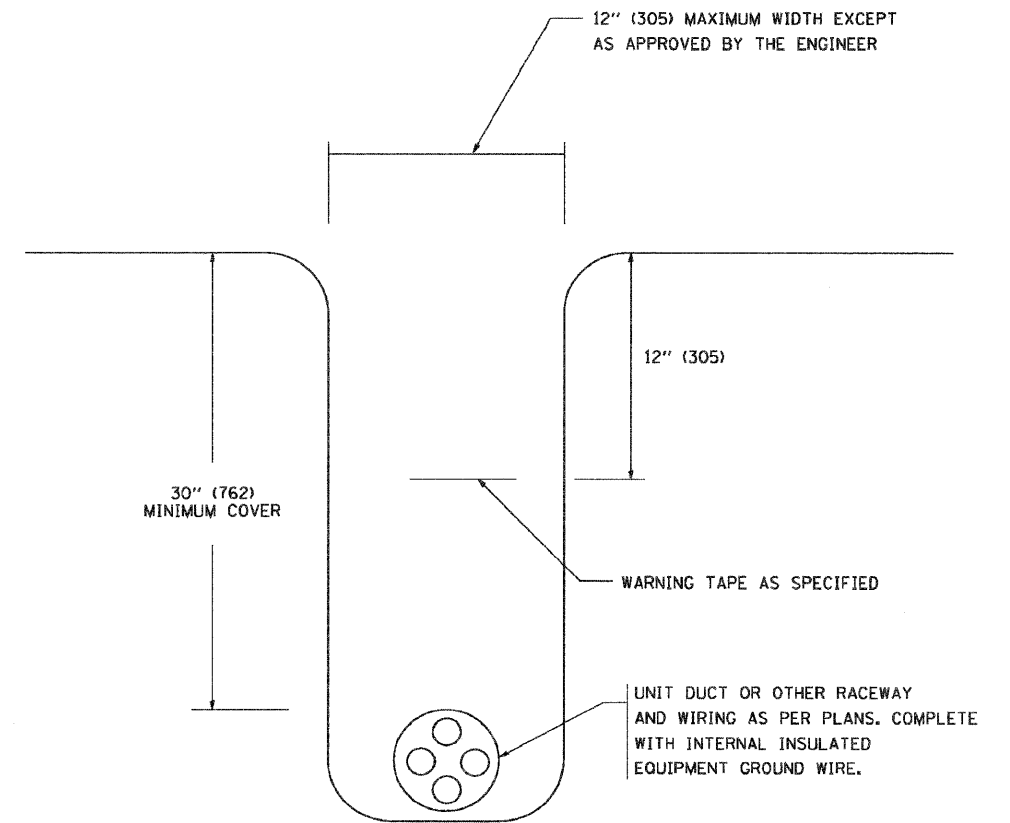
E21



TYPICAL SPLICE DETAIL
N.T.S.



POLE WIRING DETAIL
N.T.S.



TYPICAL WIRING IN TRENCH DETAIL
N.T.S.



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 394 SAFETY IMPROVEMENTS - GOODNOW ROAD TO BURRVILLE ROAD
LIGHTING DETAILS - IDOT BE-702**

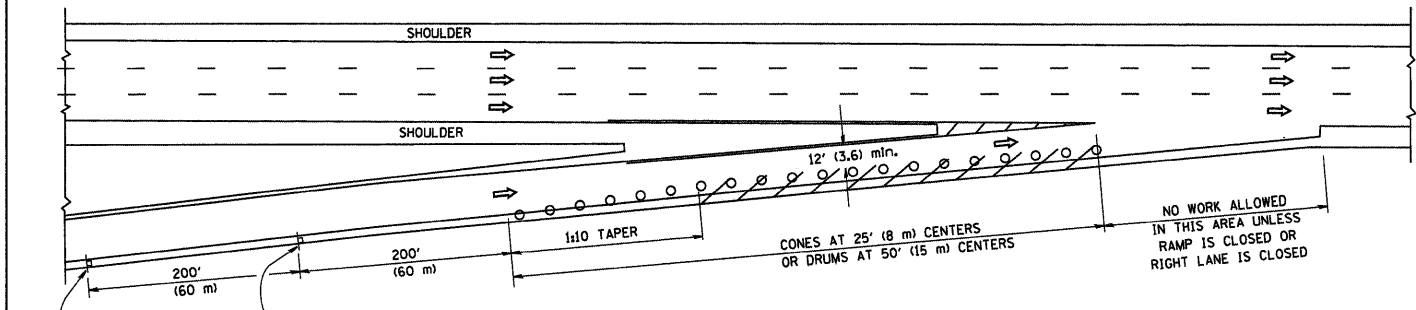
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F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILL & COOK	TOTAL SHEETS 53	SHEET NO. 52	E22
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 60D34		

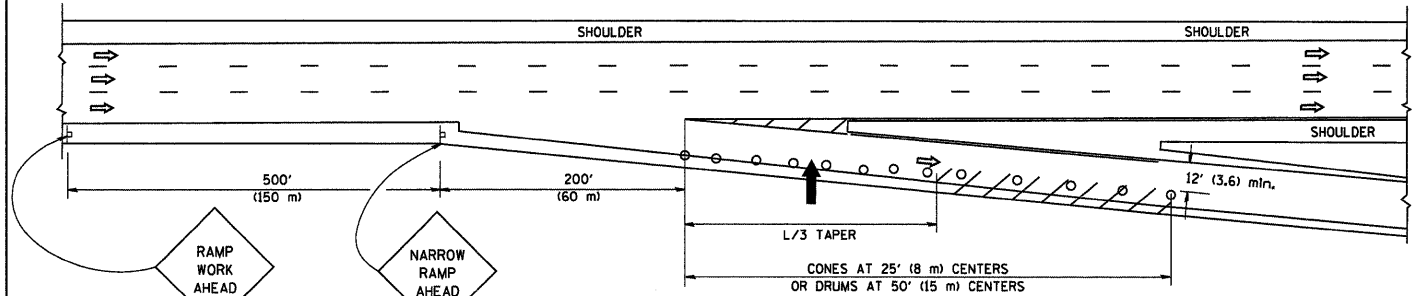
PARTIAL RAMP CLOSURE DETAILS

SHOULDER CLOSURE DETAILS

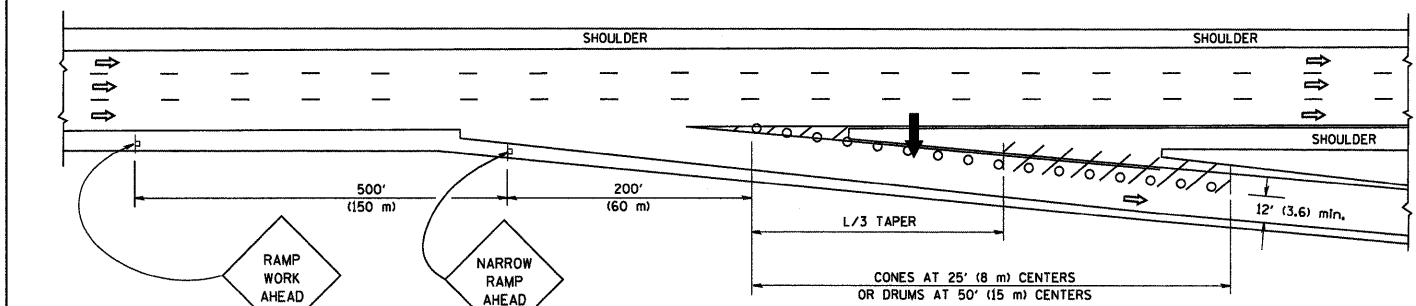
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
292	2007-044 I	WILL #800K	53	53
STA. TO STA.		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.				



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

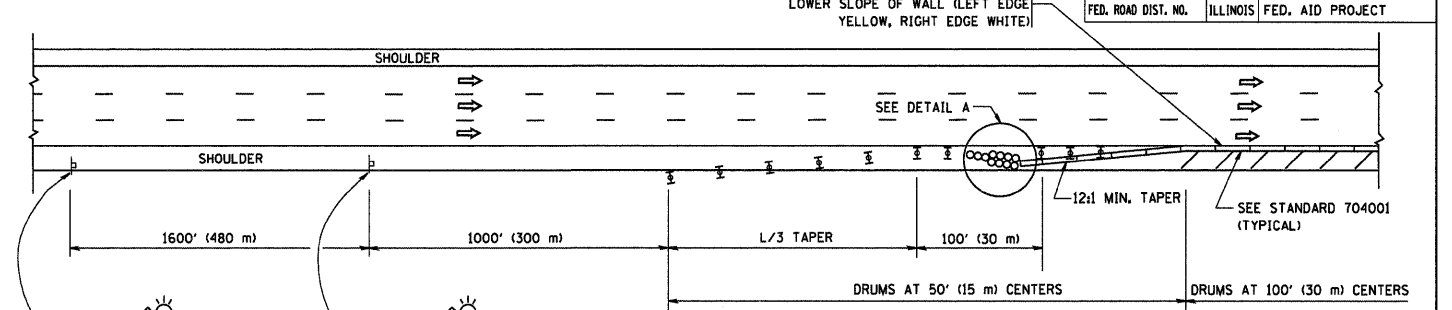
SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

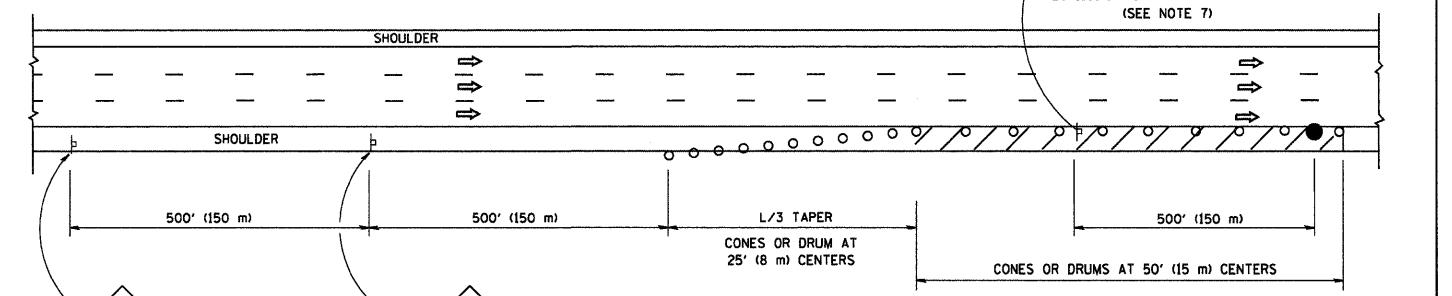
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

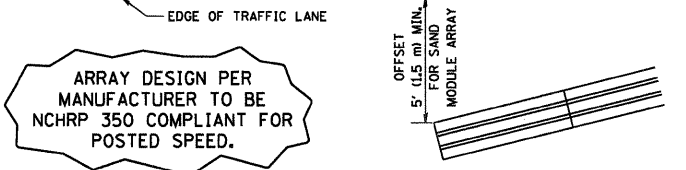
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L = 0.65(W)(S)$ $L = (W)(S)$
	W = WIDTH OF OFFSET IN FEET (METERS)
	S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE



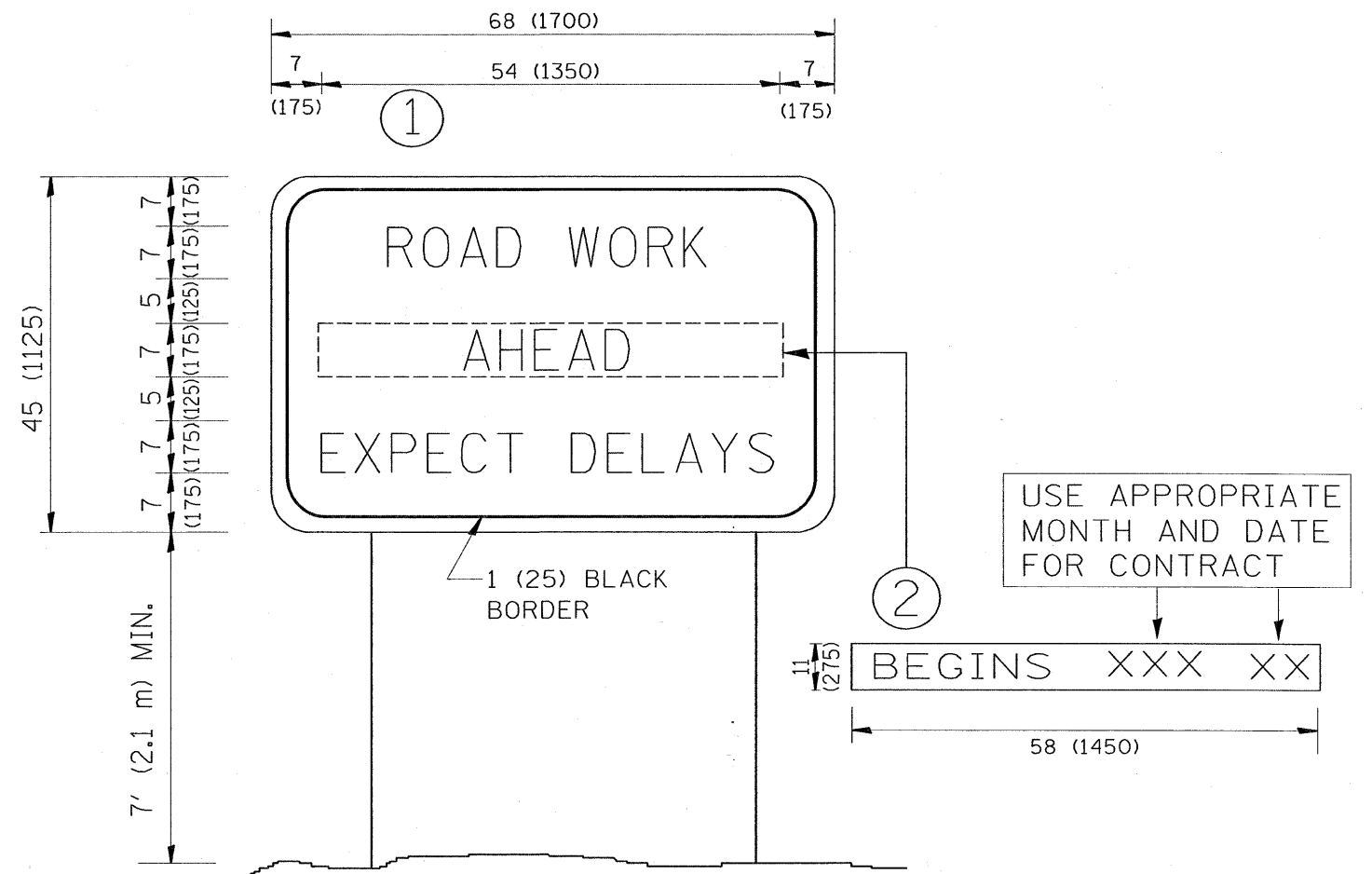
DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

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

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL DETAILS
 FOR FREEWAY
 SHOULDER CLOSURES
 PARTIAL RAMP CLOSURES**
 DESIGNED BY: DWS
 DRAWN BY:
 CHECKED BY:
 TC-17

PLOT DATE = 3/7/2007
 FILE NAME = K:\databases\1517.dgn
 USER NAME = bboard
 USER NAME = bboard



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

FILE NAME = W:\distatd\22x34\te22.dgn	USER NAME = gaglianobt	DESIGNED - DRAWN -	REVISED - R. MIRS 09-15-97 REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN			F.A.P. RTE. 332	SECTION 2007-044 I	COUNTY WILLIAMSBURG	TOTAL SHEETS 53	SHEET NO. 53A
PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	TC-22		CONTRACT NO. 6034	
PLOT DATE = 1/4/2008	DATE -				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							