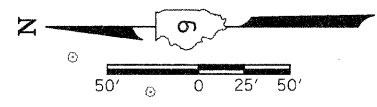


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	103

STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

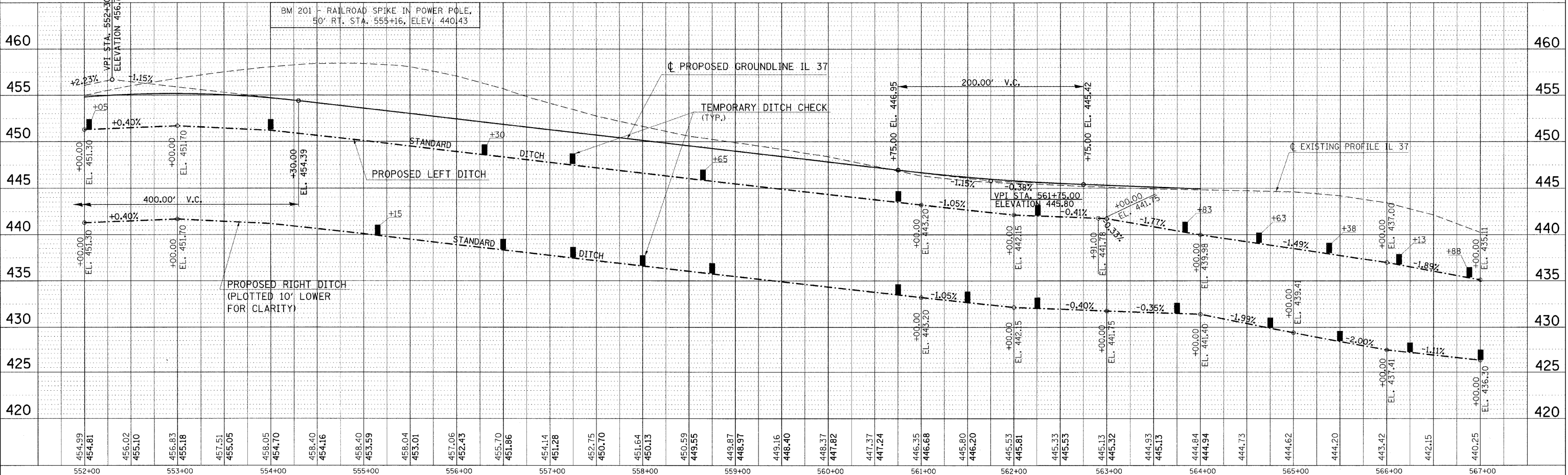
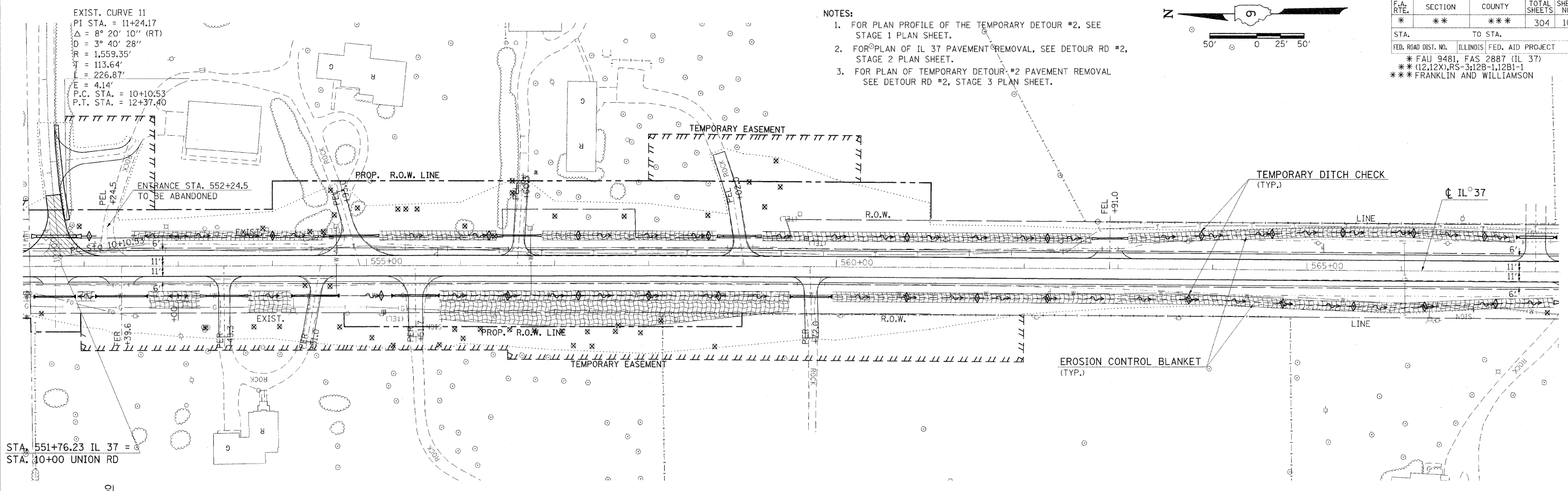
* FAU 9481, FAS 2887 (IL 37)
 ** (12.12X)RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON



- NOTES:
- FOR PLAN PROFILE OF THE TEMPORARY DETOUR #2, SEE STAGE 1 PLAN SHEET.
 - FOR PLAN OF IL 37 PAVEMENT REMOVAL, SEE DETOUR RD #2, STAGE 2 PLAN SHEET.
 - FOR PLAN OF TEMPORARY DETOUR #2 PAVEMENT REMOVAL SEE DETOUR RD #2, STAGE 3 PLAN SHEET.

EXIST. CURVE 11
 P.I. STA. = 11+24.17
 $\Delta = 8^\circ 20' 10''$ (RT)
 $D = 3^\circ 40' 28''$
 $R = 1,559.35'$
 $L = 113.64'$
 $E = 226.87'$
 $F = 4.14'$
 P.C. STA. = 10+10.53
 P.T. STA. = 12+37.40

NO.	DATE	BY



PLOT DATE = 12/7/2009
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EROSION CONTROL STA. 552+00 TO STA. 567+00

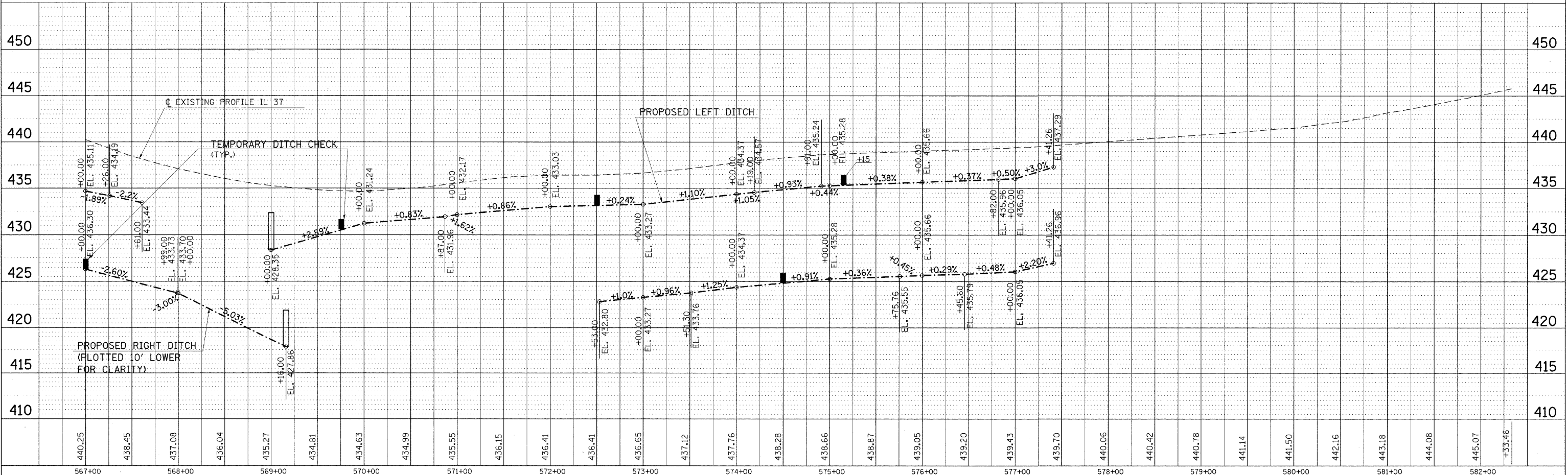
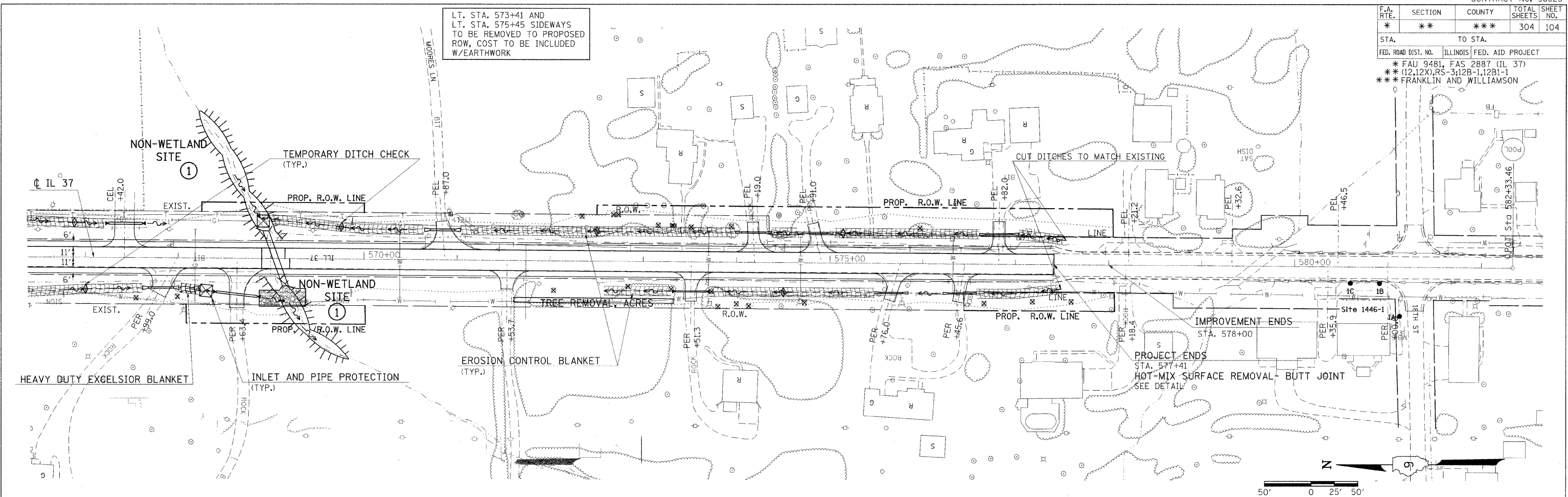
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	104

STA.	TO STA.
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
* FAU 9481, FAS 2887 (IL 37)	
** (12,12X), RS-3; 12B-1, 12B1-1	
*** FRANKLIN AND WILLIAMSON	

LT. STA. 573+41 AND
LT. STA. 575+45 SIDWAYS
TO BE REMOVED TO PROPOSED
ROW, COST TO BE INCLUDED
W/EARTHWORK

DATE	BY

NO.	DESCRIPTION
1	PLAN
2	SECTION
3	PROFILES
4	CONSTRUCTION
5	AS-BUILT



PLOT DATE = 12/7/2009
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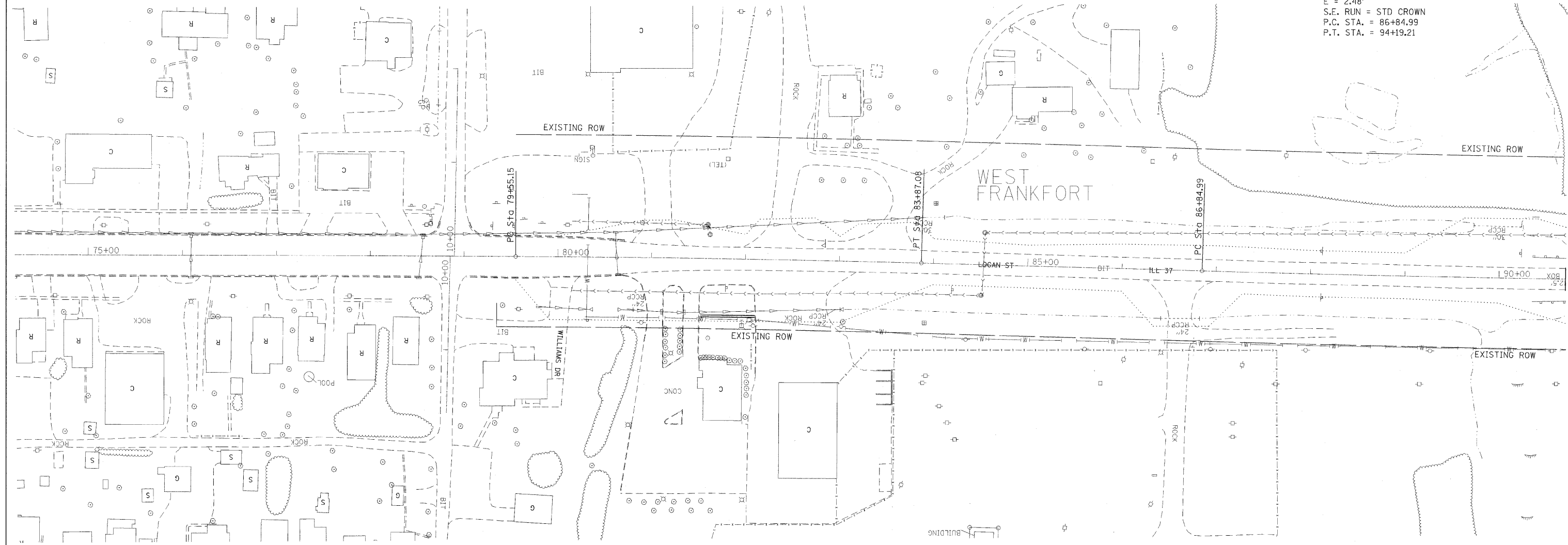
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	107

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STA. TO STA.
* FAU 9481, FAS 2887 (IL 37)
** (12,12X),RS-3;12B-1,12B1-1
*** FRANKLIN AND WILLIAMSON

EXIST. CURVE 3
PI STA. = 81+71.12
 $\Delta = 1^\circ 28' 44''$ (RT)
D = 0° 20' 33"
R = 16,733.17'
T = 215.98'
L = 431.93'
E = 1.39'
S.E. RUN = STD CROWN
P.C. STA. = 79+55.15
P.T. STA. = 83+87.08

EXIST. CURVE 4
PI STA. = 90+52.12
 $\Delta = 1^\circ 32' 42''$ (LT)
D = 0° 12' 38"
R = 27,226.27'
T = 367.13'
L = 734.21'
E = 2.48'
S.E. RUN = STD CROWN
P.C. STA. = 86+84.99
P.T. STA. = 94+19.21



RIGHT OF WAY PLANS
ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 75+00 TO STA 90+00
SCALE 1 : 50
SHEET NO. 1 OF 8

PLOT DATE = 12/7/2009
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	108

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

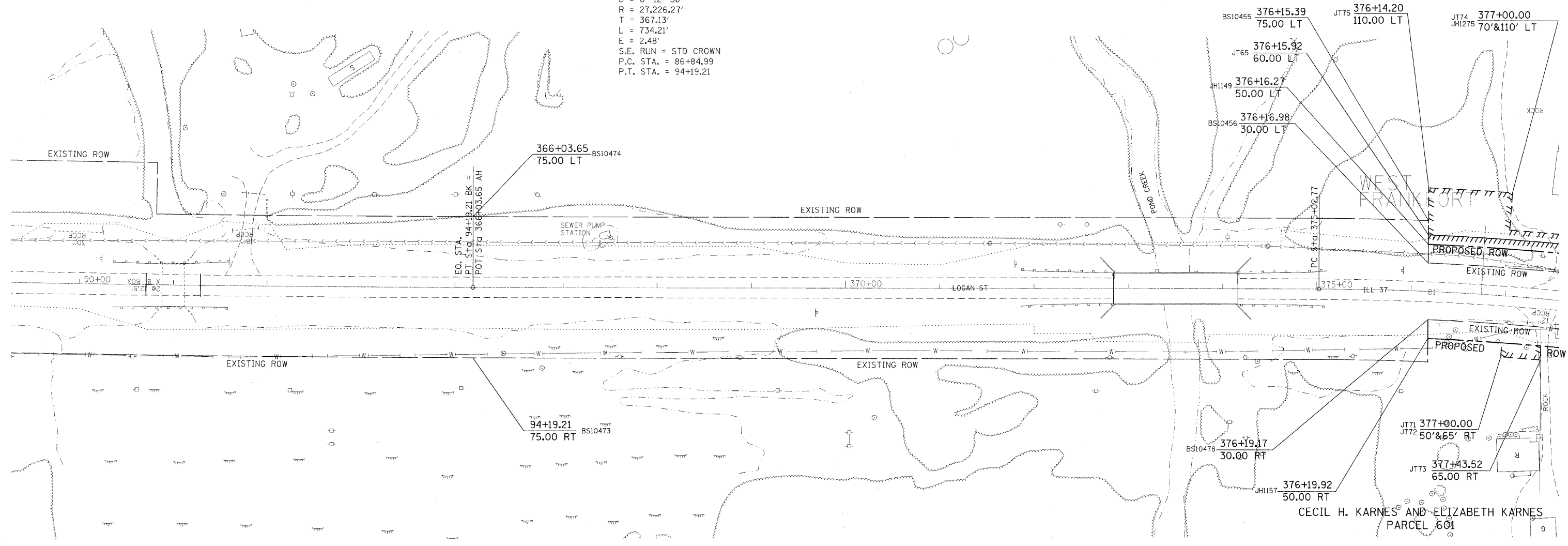
STA. TO STA.
* FAU 9481, FAS 2887 (IL 37)
** (12,12X),RS-3;12B-1,12B1-1
*** FRANKLIN AND WILLIAMSON



PARCEL NO.	NAME	ROW	TE	PE
601	CECIL H. KARNES AND ELIZABETH KARNES K AND E TECHNICAL, INC.	0.055 ±	0.014 ±	
696		0.285 ±	0.159 ±	0.076 ±

EXIST. CURVE 4
PI STA. = 90+52.12
Δ = 1° 32' 42" (LT)
D = 0° 12' 38"
R = 27,226.27'
T = 367.13'
L = 734.21'
E = 2.48'
S.E. RUN = STD CROWN
P.C. STA. = 86+84.99
P.T. STA. = 94+19.21

K and E TECHNICAL, INC.
PARCEL 696



POINT COORDINATES

PT JT65	X	811608.63	Y	443796.63
PT JT71	X	811498.91	Y	443804.44
PT JT72	X	811483.95	Y	443805.51
PT JT73	X	811480.60	Y	443763.11
PT JT74	X	811658.50	Y	443793.08
PT JT75	X	811663.49	Y	443882.06
PT JH1148	X	811598.66	Y	443797.34
PT JH1149	X	811603.45	Y	443882.41
PT JH1157	X	811503.38	Y	443882.98
PT JH1275	X	811618.61	Y	443795.92
PT BS10455	X	811628.47	Y	443882.26
PT BS10456	X	811583.44	Y	443882.52
PT BS10473	X	811482.53	Y	444897.20
PT BS10474	X	811632.53	Y	444896.94
PT BS10478	X	811523.40	Y	443882.86

RIGHT OF WAY PLANS

ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 90+00 TO STA 377+00
SCALE 1 : 50
SHEET NO. 2 OF 8

PLOT DATE = 12/7/2009
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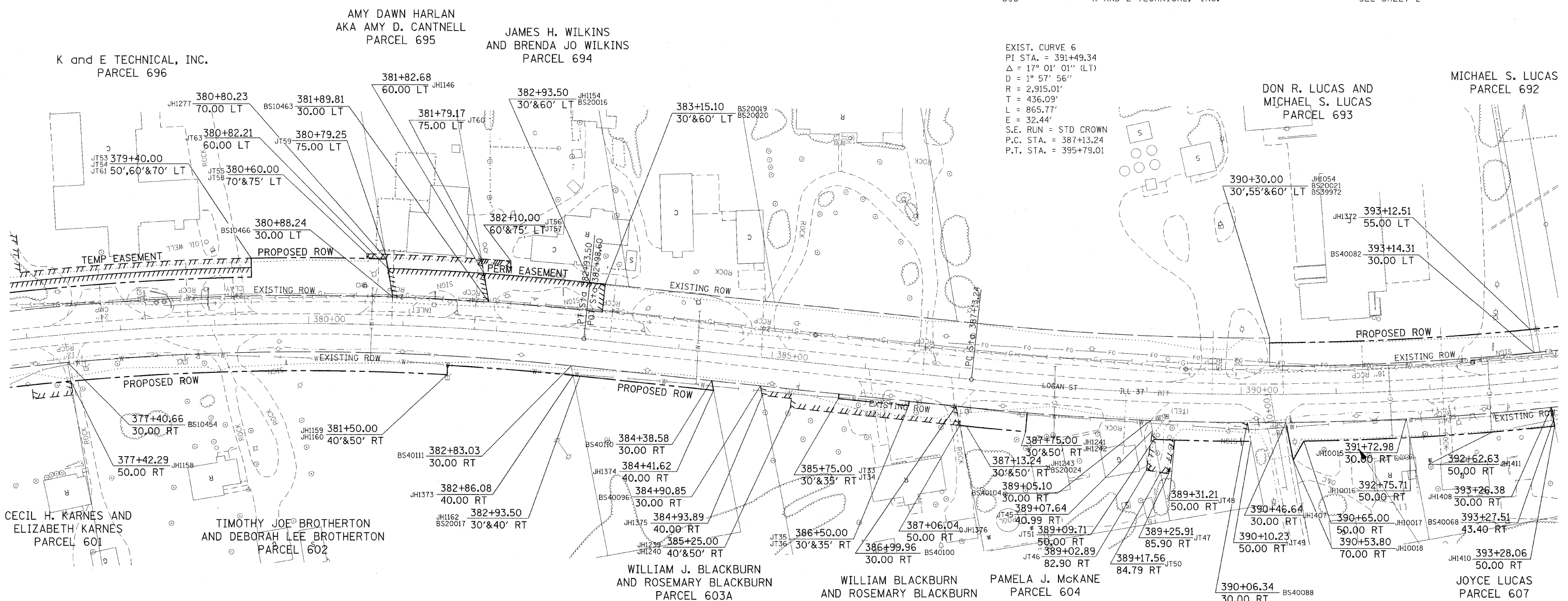
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXIST. CURVE 5
PI STA. = 379+00.70
Δ = 15° 55' 09" (RT)
D = 2° 00' 48"
R = 2,845.96'
T = 397.93'
L = 790.73'
E = 27.68'
S.E. RUN = 0.0375 FT/FT
BRIDGE SE TRANSITION STA 374+30.25
TO STA 375+80.25
P.C. STA. = 375+02.77
P.T. STA. = 382+93.50
SOUTH P.T. = SE TRANSITION, MATCH THE EXISTING

PARCEL NO.	NAME	ROW	TE	PE
601	CECIL H. KARNES AND ELIZABETH KARNES	SEE SHEET 2		
602	TIMOTHY JOE AND DEBORAH LEE BROTHERTON	0.215 ±	0.000	
603A	WILLIAM J. BLACKBURN AND ROSEMARY BLACKBURN	0.035 ±	0.000	
603B	WILLIAM BLACKBURN AND ROSEMARY BLACKBURN	0.009 ±	0.080	
604	PAMELA J. McKANE	0.033 ±	0.007 ±	
605A	TIMOTHY BLACKBURN AND VICKIE BLACKBURN	0.047 ±	0.012 ±	
606	NORMAN E. WYANT	0.062 ±	0.000	
607	JOYCE LUCAS	0.071 ±	0.000	
692	MICHAEL S. LUCAS	0.119 ±	0.000	
693	DON R. LUCAS AND MICHAEL S. LUCAS	0.160 ±	0.000	
694	JAMES H. WILKINS AND BRENDA JO WILKINS	0.000	0.010 ±	0.086 ±
695	AMY DAWN HARLAN AKA AMY D. CANTNELL	0.071 ±	0.035 ±	
696	K AND E TECHNICAL, INC.	SEE SHEET 2		

EXIST. CURVE 6
PI STA. = 391+49.34
Δ = 17° 01' 01" (LT)
D = 1° 57' 56"
R = 2,915.01'
T = 436.09'
L = 865.77'
E = 32.44'
S.E. RUN = STD CROWN
P.C. STA. = 387+13.24
P.T. STA. = 395+79.01



POINT COORDINATES

PT JT33	X	811340.34	Y	442960.16
PT JT34	X	811335.53	Y	442961.54
PT JT35	X	811314.83	Y	442889.45
PT JT36	X	811319.64	Y	442888.07
PT JT45	X	811243.58	Y	442639.17
PT JT46	X	811203.65	Y	442652.80
PT JT47	X	811195.77	Y	442630.27
PT JT48	X	811229.80	Y	442617.62
PT JT49	X	811214.52	Y	442538.72
PT JT50	X	811198.62	Y	442638.44
PT JT51	X	811234.33	Y	442639.02
PT JT53	X	811571.07	Y	443554.76
PT JT54	X	811590.83	Y	443551.66
PT JT55	X	811569.25	Y	443430.63
PT JT56	X	811539.97	Y	443279.56
PT JT57	X	811525.44	Y	443283.27
PT JT58	X	811574.15	Y	443429.65
PT JT59	X	811570.18	Y	443410.30
PT JT60	X	811547.65	Y	443310.26
PT JT61	X	811580.95	Y	443553.21
PT JT63	X	811554.91	Y	443410.38
PT JH1054	X	811314.50	Y	442501.05
PT JH1146	X	811532.22	Y	443310.34
PT JH1154	X	811503.12	Y	443200.99
PT JH1158	X	811495.65	Y	443763.02
PT JH1159	X	811432.86	Y	443367.77
PT JH1160	X	811442.60	Y	443365.50
PT JH1162	X	811407.00	Y	443228.59
PT JH1239	X	811344.52	Y	443010.98
PT JH1240	X	811334.91	Y	443013.74
PT JH1241	X	811266.27	Y	442772.25
PT JH1242	X	811285.61	Y	442767.14
PT JH1243	X	811282.96	Y	442832.81
PT JH1277	X	811565.11	Y	443410.33
PT JH1372	X	811280.65	Y	442226.06
PT JH1373	X	811409.01	Y	443235.62
PT JH1374	X	811367.54	Y	443091.12
PT JH1375	X	811353.11	Y	443040.88
PT JH1376	X	811284.95	Y	442839.73
PT JH1407	X	811227.93	Y	442498.93
PT JH1408	X	811194.89	Y	442218.36
PT JH1410	X	811174.82	Y	442218.04
PT JH1411	X	811180.13	Y	442284.38
PT JH10015	X	811209.67	Y	442372.62
PT JH10016	X	811189.48	Y	442372.29
PT JH10017	X	811205.19	Y	442483.79
PT JH10018	X	811187.28	Y	442498.27
PT BS10454	X	811515.72	Y	443762.91
PT BS10463	X	811501.36	Y	443310.49
PT BS10466	X	811524.29	Y	443410.52
PT BS20016	X	811474.29	Y	443209.27
PT BS20017	X	811416.61	Y	443225.83
PT BS20019	X	811469.73	Y	443193.41
PT BS20020	X	811498.57	Y	443185.13
PT BS20021	X	811289.87	Y	442505.30
PT BS20024	X	811302.18	Y	442827.29
PT BS39972	X	811319.43	Y	442500.20
PT BS40068	X	811181.44	Y	442218.14
PT BS40082	X	811255.59	Y	442226.13
PT BS40088	X	811234.90	Y	442539.05
PT BS40096	X	811363.56	Y	443041.05
PT BS40100	X	811305.85	Y	442840.06
PT BS40104	X	811254.86	Y	442639.35
PT BS40110	X	811377.99	Y	443091.29
PT BS40111	X	811419.45	Y	443235.78

RIGHT OF WAY PLANS
ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 377+00 TO STA 393+00
SCALE 1 : 50
SHEET NO. 3 OF 8

PLT DATE = 12/7/2009
PLT SCALE = 50.0000
USER NAME = hns

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	110

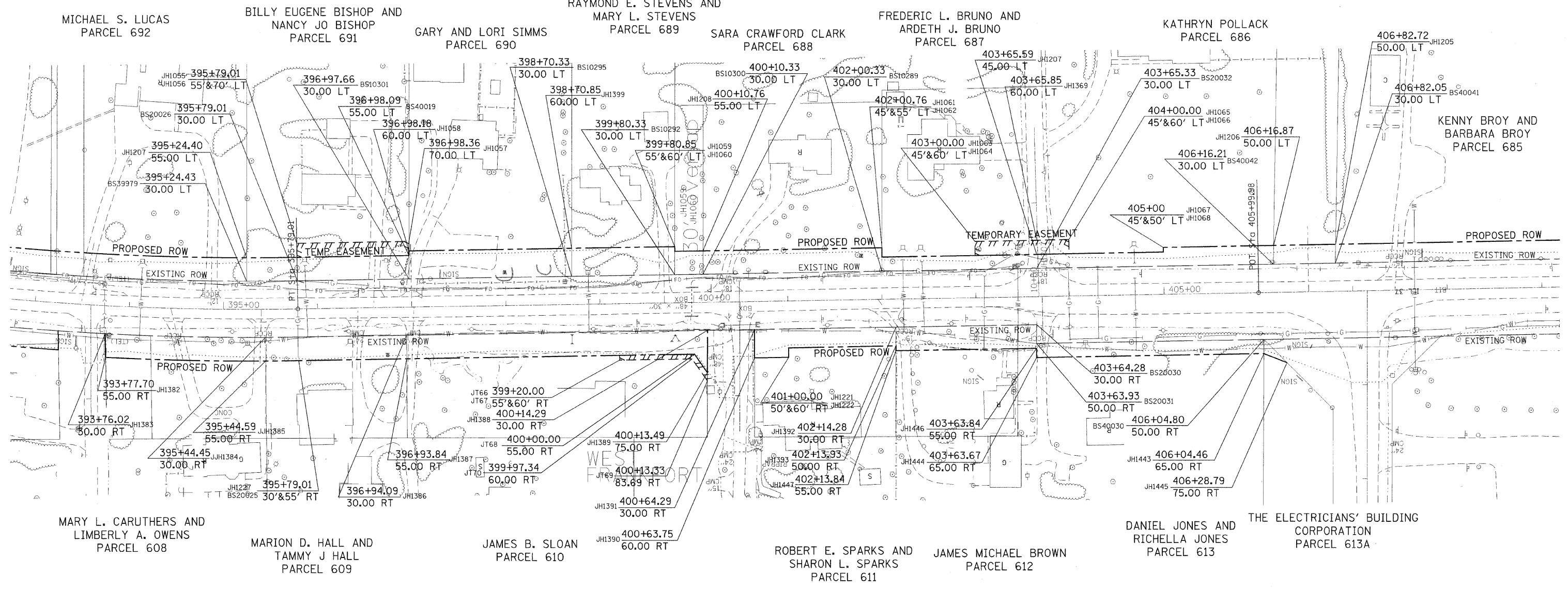
STA. TO STA.
 * FAU 9481, FAS 2887 (IL 37)
 ** (12,12X),RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



PARCEL NO.	NAME	ROW	TE
608	MARY L. CARUTHERS AND KIMBERLY A. OWENS	0.098 ±	0.000
609	MARION D. HALL AND TAMMY J. HALL	0.086 ±	0.000
610	JAMES B. SLOAN	0.187 ±	0.012 ±
611	ROBERT E. SPARKS AND SHARON L. SPARKS	0.077 ±	0.000
612	JAMES MICHAEL BROWN	0.086 ±	0.000
613	DANIEL JONES AND RICHELLE JONES	0.083 ±	0.000
613A	THE ELECTRICIANS' BUILDING CORPORATION	0.004 ±	0.000

PARCEL NO.	NAME	ROW	TE
692	MICHAEL S. LUCAS	SEE SHEET 3	
691	BILLY EUGENE BISHOP AND NANCY JO BISHOP	0.099 ±	0.041 ±
690	GARY AND LORI SIMMS	0.119 ±	0.000
689	TAMMY OVERTURF, RAYMOND AND MARY STEVENS	0.093 ±	0.000
688	SARA CRAWFORD CLARK	0.126 ±	0.000
687	FREDERIC L. BRUNO AND ARDETH J. BRUNO	0.057 ±	0.023 ±
686	KATHRYN POLLACK	0.130 ±	0.012 ±
685	KENNY BROY AND BARBARA BROY	0.124 ±	0.000



POINT COORDINATES

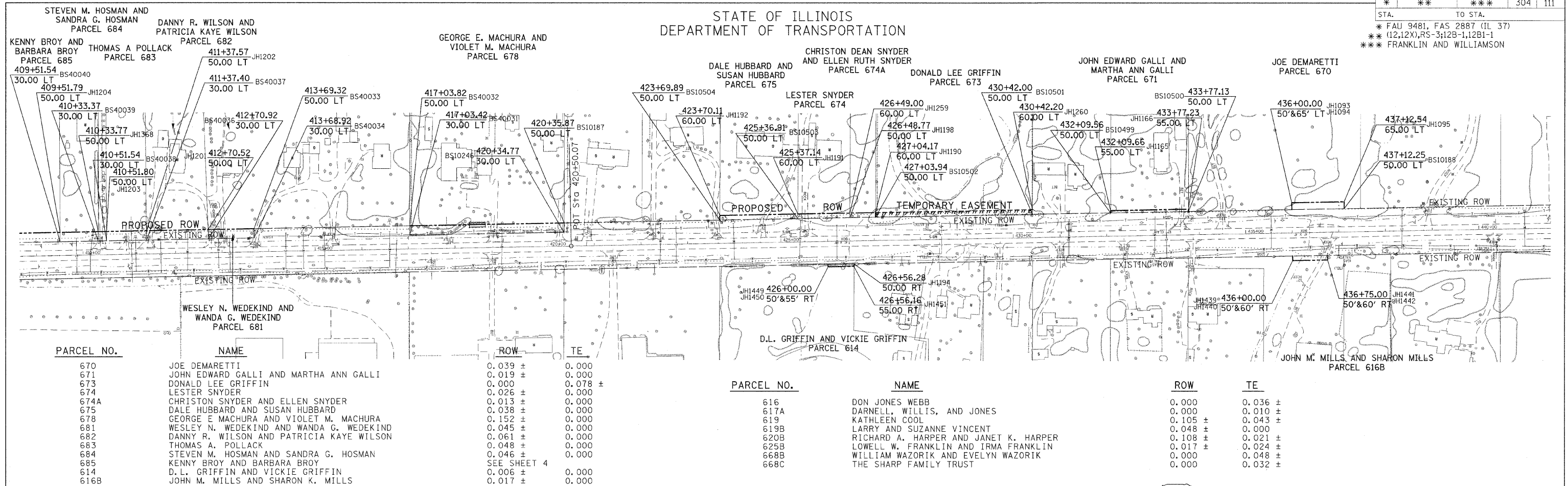
PT JH1055	X	811273.26	Y	441964.78	PT JH1227	X	811163.28	Y	441962.86	PT BS10226	X	811138.90	Y	440800.80
PT JH1056	X	811288.26	Y	441965.04	PT JH1369	X	811291.95	Y	441178.14	PT BS10289	X	811259.08	Y	441343.12
PT JH1057	X	811290.33	Y	441845.71	PT JH1382	X	811166.79	Y	442167.91	PT BS10292	X	811255.25	Y	441563.09
PT JH1058	X	811280.33	Y	441845.71	PT JH1383	X	811191.84	Y	442168.31	PT BS10295	X	811253.34	Y	441673.07
PT JH1059	X	811285.25	Y	441563.08	PT JH1384	X	811187.87	Y	441998.21	PT BS10300	X	811255.78	Y	441533.09
PT JH1060	X	811280.25	Y	441563.08	PT JH1385	X	811162.87	Y	441997.93	PT BS10301	X	811250.33	Y	441845.51
PT JH1061	X	811284.08	Y	441343.12	PT JH1386	X	811190.27	Y	441848.23	PT BS20025	X	811188.27	Y	441963.30
PT JH1062	X	811274.08	Y	441343.12	PT JH1387	X	811165.27	Y	441848.05	PT BS20026	X	811248.27	Y	441964.34
PT JH1063	X	811275.81	Y	441243.72	PT JH1388	X	811195.85	Y	441528.09	PT BS20030	X	811201.94	Y	441178.15
PT JH1064	X	811290.81	Y	441243.99	PT JH1389	X	811150.84	Y	441528.10	PT BS20031	X	811181.94	Y	441178.15
PT JH1065	X	811292.55	Y	441144.00	PT JH1390	X	811166.72	Y	441478.11	PT BS20032	X	811261.95	Y	441178.14
PT JH1066	X	811277.55	Y	441143.74	PT JH1391	X	811196.72	Y	441478.10	PT BS39979	X	811247.83	Y	442018.36
PT JH1067	X	811279.30	Y	441043.75	PT JH1392	X	811199.33	Y	441328.12	PT BS40019	X	811250.33	Y	441845.71
PT JH1068	X	811284.30	Y	441043.84	PT JH1393	X	811179.33	Y	441328.13	PT BS40030	X	811186.14	Y	440937.24
PT JH1205	X	811287.61	Y	440861.23	PT JH1399	X	811283.34	Y	441673.07	PT BS40041	X	811267.60	Y	440861.53
PT JH1206	X	811286.35	Y	440927.07	PT JH1444	X	811166.94	Y	441178.15	PT BS40042	X	811266.34	Y	440927.55
PT JH1207	X	811276.95	Y	441178.14	PT JH1443	X	811171.14	Y	440937.29					
PT JH1208	X	811280.78	Y	441533.09	PT JH1445	X	811161.61	Y	440912.77					
PT JH1209	X	811272.83	Y	442018.36	PT JH1446	X	811176.94	Y	441178.15					
PT JH1221	X	811177.35	Y	441442.04	PT JH1447	X	811174.33	Y	441328.13					
PT JH1222	X	811167.35	Y	441441.87	PT JH1448	X	811190.34	Y	440717.08					

RIGHT OF WAY PLANS

ROUTE FAU 9481, FAS 2887 (IL 37)
 SECTION (12,12X),RS-3;12B-1,12B1-1
 PROJECT D904003
 COUNTY FRANKLIN AND WILLIAMSON
 JOB NO.
 STA 393+00 TO STA 409+00
 SCALE 1 : 50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	111

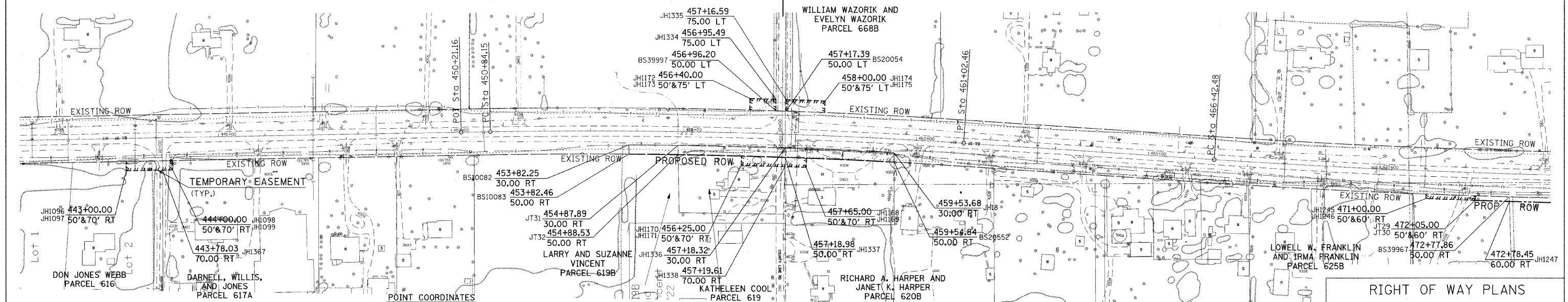
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Franklin Co. Williamson Co.

EXIST. CURVE 7
PI STA. = 455+93.61 L = 1,018.31'
Δ = 4° 50' 14" (RT) E = 10.75'
D = 0° 28' 30" S.E. RUN = STD CROWN
R = 12,061.27' P.C. STA. = 450+84.15
T = 509.46' P.T. STA. = 461+02.46

EXIST. CURVE 8
PI STA. = 471+88.12 L = 1,090.92'
Δ = 3° 36' 24" (LT) E = 8.59'
D = 0° 19' 50" S.E. RUN = STD CROWN
R = 17,330.91' P.C. STA. = 466+42.48
T = 545.64' P.T. STA. = 477+33.40



RIGHT OF WAY PLANS
ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 409+00 TO STA 473+00
SCALE 1 : 100
SHEET NO. 5 OF 8

PLOT DATE = 12/7/2003
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	112

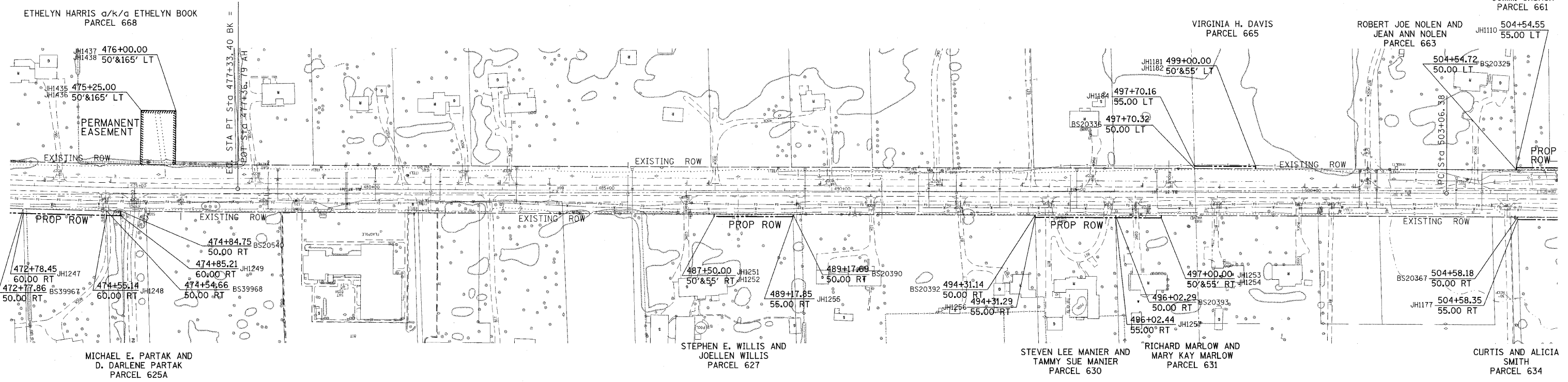
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STA. TO STA.
* FAU 9481, FAS 2887 (IL 37)
** (12,12X),RS-3;12B-1,12B1-1
*** FRANKLIN AND WILLIAMSON



PARCEL NO.	NAME	ROW	TE	PE
625A	MICHAEL E. PARTAK AND D. DARLENE PARTAK	0.048 ±	0.000	
627	STEPHEN E. WILLIS AND JOELLEN WILLIS	0.019 ±	0.000	
630	STEVEN LEE MANIER AND TAMMY SUE MANIER	0.020 ±	0.000	
631	RICHARD MARLOW AND MARY KAY MARLOW	0.011 ±	0.000	
634	CURTIS AND ALICIA SMITH	0.038 ±	0.000	
661	CORNERSTONE COMM. CHURCH	0.079 ±	0.022 ±	
665	VIRGINIA H. DAVIS	0.015 ±	0.000	
668	ETHELYN HARRIS a/k/a ETHELYN BOOK	0.000	0.000	0.197 ±

EXIST. CURVE 8
PI STA. = 471+88.12 L = 1,090.92'
Δ = 3° 36' 24" (LT) E = 8.59'
D = 0° 19' 50" S.E. RUN = STD CROWN
R = 17,330.91' P.C. STA. = 466+42.48
T = 545.64' P.T. STA. = 477+33.40



POINT COORDINATES

PT JH1177	X	811158.57	Y	431091.73
PT JH1181	X	811265.48	Y	431649.61
PT JH1182	X	811270.48	Y	431649.59
PT JH1184	X	811270.87	Y	431779.43
PT JH1248	X	811165.18	Y	434092.35
PT JH1249	X	811164.62	Y	434062.18
PT JH1251	X	811168.99	Y	432799.91
PT JH1252	X	811163.99	Y	432799.92
PT JH1253	X	811161.09	Y	431849.93
PT JH1254	X	811166.09	Y	431849.91
PT JH1255	X	811163.48	Y	432632.08
PT JH1256	X	811161.91	Y	432118.63
PT JH1257	X	811161.39	Y	431947.49
PT JH1331	X	811268.58	Y	431094.90
PT JH1435	X	811273.96	Y	434020.60
PT JH1436	X	811388.95	Y	434018.86
PT JH1437	X	811387.99	Y	433944.58
PT JH1438	X	811273.00	Y	433945.82
PT BS20325	X	811263.59	Y	431094.76
PT BS20336	X	811265.88	Y	431779.29
PT BS20367	X	811163.57	Y	431091.87
PT BS20390	X	811168.48	Y	432632.21
PT BS20392	X	811166.91	Y	432118.77
PT BS20393	X	811166.39	Y	431947.63
PT BS20540	X	811174.60	Y	434060.47
PT BS39968	X	811175.18	Y	434092.64

RIGHT OF WAY PLANS

ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 473+00 TO STA 505+00
SCALE 1 : 100

PLOT DATE = 12/7/2009
PLOT SCALE = 1/8" = 100'
USER NAME = hsdson

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	113

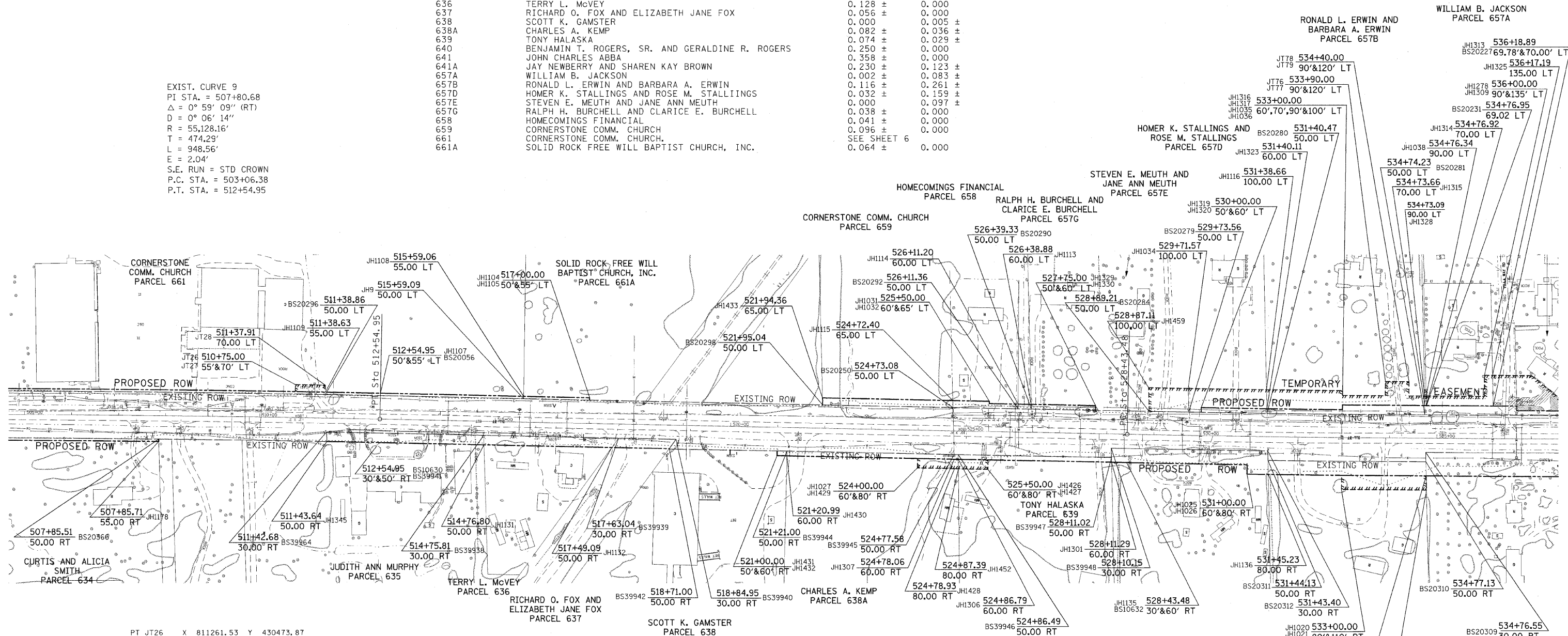
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STA. TO STA.
* FAU 9481, FAS 2887 (IL 37)
** (12.12X),RS-3;12B-1,12B1-1
*** FRANKLIN AND WILLIAMSON

PARCEL NO.	NAME	ROW	TE
634	CURTIS AND ALICIA SMITH	SEE SHEET 6	
635	JUDITH ANN MURPHY	0.153 ±	0.000
636	TERRY L. McVEY	0.128 ±	0.000
637	RICHARD O. FOX AND ELIZABETH JANE FOX	0.056 ±	0.000
638	SCOTT K. GAMSTER	0.000	0.005 ±
638A	CHARLES A. KEMP	0.082 ±	0.036 ±
639	TONY HALASKA	0.074 ±	0.029 ±
640	BENJAMIN T. ROGERS, SR. AND GERALDINE R. ROGERS	0.250 ±	0.000
641	JOHN CHARLES ABBA	0.358 ±	0.000
641A	JAY NEWBERRY AND SHAREN KAY BROWN	0.230 ±	0.123 ±
657A	WILLIAM B. JACKSON	0.002 ±	0.083 ±
657B	RONALD L. ERWIN AND BARBARA A. ERWIN	0.116 ±	0.261 ±
657D	HOMER K. STALLINGS AND ROSE M. STALLINGS	0.032 ±	0.159 ±
657E	STEVEN E. MEUTH AND JANE ANN MEUTH	0.000	0.097 ±
657G	RALPH H. BURCHELL AND CLARICE E. BURCHELL	0.038 ±	0.000
658	HOMECOMINGS FINANCIAL	0.041 ±	0.000
659	CORNERSTONE COMM. CHURCH	0.096 ±	0.000
661	CORNERSTONE COMM. CHURCH	SEE SHEET 6	
661A	SOLID ROCK FREE WILL BAPTIST CHURCH, INC.	0.064 ±	0.000

EXIST. CURVE 9
PI STA. = 507+80.68
Δ = 0° 59' 09" (RT)
D = 0° 06' 14"
R = 55,128.16'
T = 474.29'
L = 948.56'
E = 2.04'
S.E. RUN = STD CROWN
P.C. STA. = 503+06.38
P.T. STA. = 512+54.95



POINT COORDINATES

PT JT26	X	811261.53	Y	430473.87
PT JT27	X	811276.52	Y	430473.62
PT JT28	X	811275.42	Y	430410.64
PT JT76	X	811252.86	Y	428159.37
PT JT77	X	811282.86	Y	428159.09
PT JT78	X	811282.41	Y	428109.21
PT JT79	X	811252.41	Y	428109.46

PT JH9	X	811247.01	Y	429989.80
PT JH1018	X	811084.11	Y	428072.86
PT JH1019	X	811052.10	Y	428072.23
PT JH1020	X	811053.81	Y	428251.46
PT JH1021	X	811083.81	Y	428251.13
PT JH1025	X	811088.09	Y	428551.57
PT JH1026	X	811108.08	Y	428551.22
PT JH1027	X	811120.00	Y	429148.29
PT JH1031	X	811241.93	Y	428998.79
PT JH1032	X	811236.94	Y	428998.89
PT JH1034	X	811268.51	Y	428576.84
PT JH1035	X	811263.80	Y	428249.09
PT JH1036	X	811253.80	Y	428249.21
PT JH1038	X	811290.86	Y	427849.79
PT JH1104	X	811249.16	Y	429848.82
PT JH1105	X	811244.16	Y	429848.92
PT JH1107	X	811258.17	Y	430293.78
PT JH1108	X	811252.01	Y	429989.72
PT JH1109	X	811260.40	Y	430410.19
PT JH1113	X	811235.13	Y	428910.03
PT JH1114	X	811235.69	Y	428937.70
PT JH1115	X	811243.51	Y	429076.37

PT JH1116	X	811265.87	Y	428410.10
PT JH1131	X	811148.70	Y	430074.09
PT JH1132	X	811143.18	Y	429701.86
PT JH1135	X	811085.79	Y	428406.13
PT JH1136	X	811085.79	Y	428406.13
PT JH1178	X	811155.70	Y	430764.71
PT JH1278	X	811251.30	Y	427949.75
PT JH1301	X	811111.67	Y	428740.08
PT JH1306	X	811118.24	Y	429064.51
PT JH1307	X	811218.42	Y	429073.24
PT JH1309	X	811296.30	Y	427949.51
PT JH1313	X	811231.20	Y	427930.99
PT JH1314	X	811232.11	Y	428072.76
PT JH1315	X	811232.14	Y	428076.02
PT JH1316	X	811233.80	Y	428249.43
PT JH1317	X	811223.80	Y	428249.55
PT JH1319	X	811228.06	Y	428549.16
PT JH1325	X	811218.07	Y	428549.33
PT JH1323	X	811225.85	Y	428409.23
PT JH1325	X	811296.23	Y	427932.37
PT JH1328	X	811252.14	Y	428076.44
PT JH1329	X	811222.38	Y	428774.14
PT JH1330	X	811232.38	Y	428773.94
PT JH1345	X	811155.33	Y	430407.09

PT JH1426	X	811116.96	Y	429001.32
PT JH1427	X	811096.96	Y	429001.72
PT JH1428	X	811098.40	Y	429072.78
PT JH1429	X	811100.00	Y	429151.69
PT JH1430	X	811125.65	Y	429430.24
PT JH1431	X	811126.08	Y	429451.23
PT JH1432	X	811136.07	Y	429451.02
PT JH1433	X	811249.14	Y	429354.35
PT JH1452	X	811249.23	Y	429064.32
PT JH1459	X	811270.12	Y	428661.12

PT BS20284	X	811220.09	Y	428660.00
PT BS20290	X	811225.13	Y	428909.78
PT BS20292	X	811225.69	Y	428937.75
PT BS20296	X	811255.40	Y	430410.04
PT BS20298	X	811234.13	Y	429353.98
PT BS20309	X	811132.13	Y	428073.92
PT BS20310	X	811112.12	Y	428073.49
PT BS20311	X	811115.79	Y	428406.80
PT BS20312	X	811135.80	Y	428407.24
PT BS20366	X	811160.70	Y	430764.86
PT BS39938	X	811162.71	Y	430074.68
PT BS39939	X	811162.89	Y	429787.51
PT BS39940	X	811160.42	Y	429665.63
PT BS39941	X	811153.19	Y	430295.90
PT BS39942	X	811140.71	Y	429679.98
PT BS39944	X	811135.65	Y	429430.03
PT BS39945	X	811128.42	Y	429073.52
PT BS39946	X	811128.24	Y	429064.61
PT BS39947	X	811121.67	Y	428740.15
PT BS39948	X	811141.68	Y	428740.62
PT BS39964	X	811175.35	Y	430407.68

BENJAMIN T. ROGERS, SR. AND GERALDINE R. ROGERS PARCEL 640

EXIST. CURVE 10
PI STA. = 533+90.32
Δ = 1° 13' 56" (LT)
D = 0° 06' 46"
R = 50,852.82'
T = 546.84'
L = 1,093.63'
E = 2.94'
S.E. RUN = STD CROWN
P.C. STA. = 528+43.48
P.T. STA. = 539+37.11

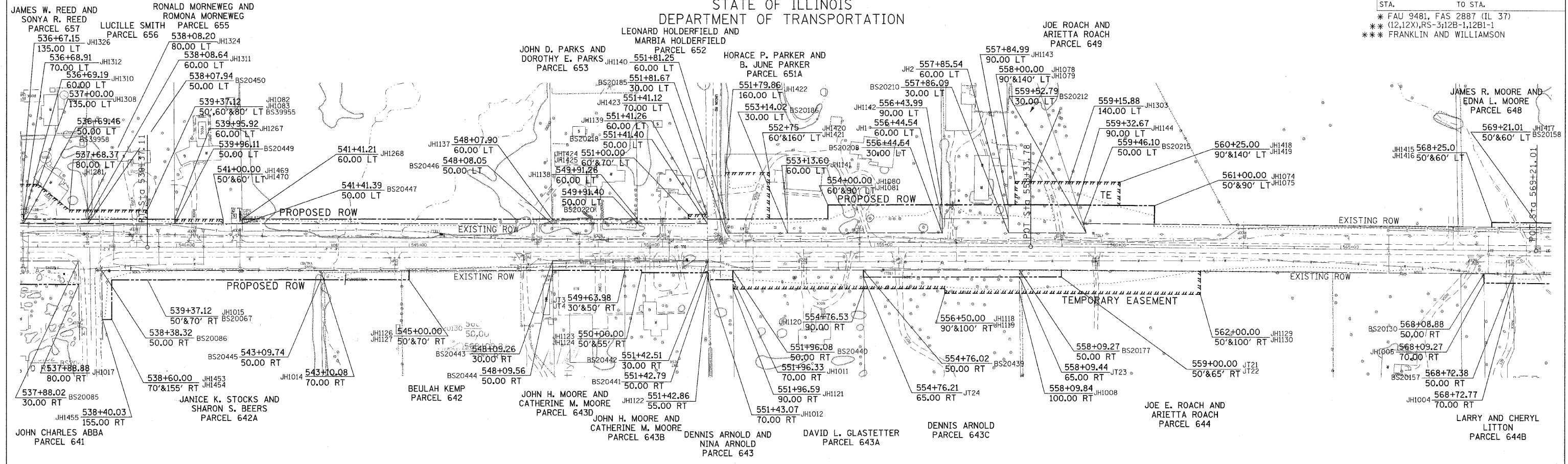
RIGHT OF WAY PLANS

ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12.12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 505+00 TO STA 537+00
SCALE 1 : 100

PLOT DATE = 2/17/2010
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PLOT SCALE = 1/4"=100'-0" / IN.
USER NAME =

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	**	304	114

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



POINT COORDINATES

PT JH1268	X	811220.86	Y	427409.10
PT JH1280	X	811270.86	Y	427849.86
PT JH1303	X	811302.37	Y	425633.34
PT JH1308	X	811295.86	Y	427849.77
PT JH1310	X	811220.98	Y	427880.81
PT JH1311	X	811220.61	Y	427741.52
PT JH1312	X	811230.98	Y	427881.04
PT JH1324	X	811240.61	Y	427741.94
PT JH1326	X	811296.01	Y	427882.53
PT JH1413	X	811204.43	Y	424549.90
PT JH1414	X	811214.43	Y	424549.83
PT JH1415	X	811215.71	Y	424724.82
PT JH1416	X	811205.71	Y	424724.90
PT JH1417	X	811215.01	Y	424628.82
PT JH1418	X	811251.57	Y	425524.58
PT JH1419	X	811301.57	Y	425524.22
PT JH1420	X	811222.28	Y	426275.31
PT JH1421	X	811322.28	Y	426275.44
PT JH1422	X	811322.16	Y	426370.58
PT JH1423	X	811232.11	Y	426409.20
PT JH1424	X	811232.06	Y	426450.32
PT JH1425	X	811222.06	Y	426450.31
PT JH1453	X	811090.57	Y	427690.25
PT JH1454	X	811005.57	Y	427690.28
PT JH1455	X	811005.58	Y	427710.31
PT JH1469	X	811210.81	Y	427450.30
PT JH1470	X	811220.81	Y	427450.31
PT JH1075	X	811251.02	Y	425449.58
PT JH1078	X	811302.93	Y	425750.41
PT JH1079	X	811252.93	Y	425750.35
PT JH1080	X	811252.43	Y	426150.35
PT JH1081	X	811222.43	Y	426150.31
PT JH1082	X	811220.61	Y	427613.19
PT JH1083	X	811240.61	Y	427613.21
PT JH1118	X	811062.74	Y	425900.11
PT JH1119	X	811072.74	Y	425900.12
PT JH1120	X	811072.52	Y	426073.59
PT JH1121	X	811072.17	Y	426353.54
PT JH1122	X	811107.11	Y	426407.31
PT JH1123	X	811106.93	Y	426550.17
PT JH1124	X	811111.93	Y	426550.17
PT JH1126	X	811111.31	Y	427050.17
PT JH1127	X	811091.31	Y	427050.15
PT JH1129	X	811110.29	Y	425350.61
PT JH1130	X	811060.29	Y	425350.98
PT JH1137	X	811221.69	Y	426742.41
PT JH1138	X	811221.92	Y	426559.55
PT JH1139	X	811222.11	Y	426409.05
PT JH1140	X	811222.16	Y	426369.06
PT JH1141	X	811222.32	Y	426236.71
PT JH1142	X	811252.74	Y	425906.36
PT JH1143	X	811252.91	Y	425765.36
PT JH1144	X	811252.25	Y	425616.91
PT JH1267	X	811220.68	Y	427554.39
PT JT3	X	811131.89	Y	426586.23
PT JT4	X	811111.89	Y	426586.19
PT JT21	X	811112.49	Y	425650.60
PT JT22	X	811097.49	Y	425650.71
PT JT23	X	811097.94	Y	425740.72
PT JT24	X	811097.53	Y	426073.94
PT JH1	X	811222.74	Y	425905.77
PT JH2	X	811222.91	Y	425764.77
PT JH1003	X	811084.42	Y	424548.87
PT JH1004	X	811085.37	Y	424678.01
PT JH1005	X	811085.83	Y	424741.50
PT JH1008	X	811062.94	Y	425740.27
PT JH1011	X	811092.18	Y	426353.81
PT JH1012	X	811092.12	Y	426407.08
PT JH1014	X	811091.08	Y	427240.07
PT JH1015	X	811090.61	Y	427613.03
PT JH1017	X	811080.64	Y	427761.49
PT JH1041	X	811098.52	Y	423744.02
PT JH1042	X	811208.54	Y	423746.04
PT JH1043	X	811212.60	Y	424299.84
PT JH1044	X	811202.60	Y	424299.91
PT JH1050	X	811210.06	Y	423954.02
PT JH1051	X	811211.25	Y	424116.00
PT JH1074	X	811211.02	Y	425449.88

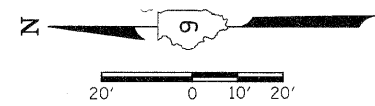
PARCEL NO.	NAME	ROW	TE
641	JOHN CHARLES ABBA	SEE SHEET 7	
642	BEULAH KEMP	0.087 ±	0.000
642A	JANICE K. STOCKS AND SHARON S. BEERS	0.257 ±	0.000
643	DENNIS ARNOLD AND NINA ARNOLD	0.024 ±	0.000
643A	DAVID L. GLASTETTER	0.000	0.257 ±
643B	JOHN H. MOORE AND CATHERINE M. MOORE	0.098 ±	0.000
643C	DENNIS ARNOLD	0.115 ±	0.228 ±
643D	JOHN H. MOORE AND CATHERINE M. MOORE	0.071 ±	0.000
644	JOE E. ROACH AND ARIETTA ROACH	0.031 ±	0.417 ±
644B	LARRY AND CHERYL LITTON	0.088 ±	0.000
644D	JOHN LYNNELL ZANOTTI AND PATTI JO ZANOTTI	0.074 ±	0.000
645	MARK W. SMITH AND SUSAN E. SMITH	0.143 ±	0.000
646	GERALD L. HENSON AND NANCY F. HENSON	0.112 ±	0.000
647	PAUL K. BLISS AND CAROLYN K. BLISS	0.042 ±	0.000
648	JAMES R. MOORE AND EDNA L. MOORE	0.040 ±	0.000
649	JOE ROACH AND ARIETTA ROACH	0.462 ±	0.259 ±
651A	HORACE P. PARKER AND B. JUNE PARKER	0.487 ±	0.217 ±
652	LEONARD HOLDERFIELD AND MARBIA HOLDERFIELD	0.034 ±	0.009 ±
653	JOHN D. PARKS AND DOROTHY E. PARKS	0.195 ±	0.000
655	RONALD MORNEWEG AND ROMONA MORNEWEG	0.000	0.024 ±
656	LUCILLE SMITH	0.043 ±	0.059 ±
657	JAMES W. REED AND SONYA R. REED	0.032 ±	0.148 ±

RIGHT OF WAY PLANS

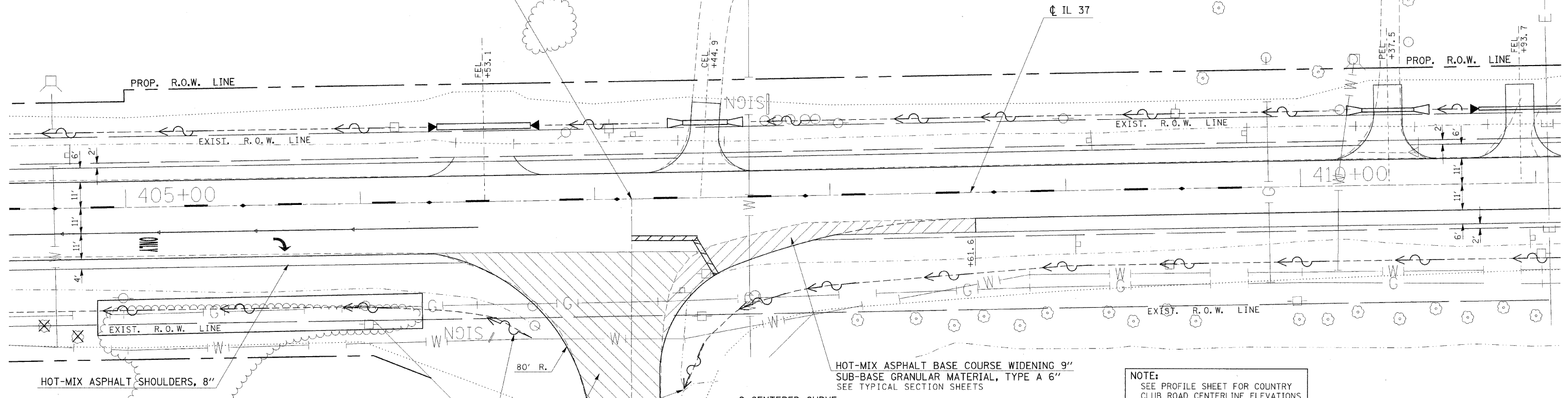
ROUTE FAU 9481, FAS 2887 (IL 37)
SECTION (12,12X),RS-3;12B-1,12B1-1
PROJECT D904003
COUNTY FRANKLIN AND WILLIAMSON
JOB NO.
STA 537+00 TO STA 580+00
SCALE 1 : 100

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PLOTTER =

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	115
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAU 9481, FAS 2887 (IL 37)				
** (12.12X), RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				



STA. 10+00 COUNTRY CLUB ROAD =
STA. 407+15.63 IL 37



NOTE:
SEE PROFILE SHEET FOR COUNTRY CLUB ROAD CENTERLINE ELEVATIONS

STATIONING ALONG IL 37	OFFSET TO E.P. FEET	EDGE OF PAV'T. ELEV. FEET	STATIONING ALONG COUNTRY CLUB ROAD	OFFSET TO E.P. FEET	DISTANCE ALONG RADIUS FEET
			RT. 9 +25.12	12.00	
			RT. 9 +35.05	13.00	10
			RT. 9 +44.59	15.95	10
			RT. 9 +53.35	20.73	10
RT. 407+35.51	47.02		RT. 9 +60.99	27.16	10
RT. 407+42.08	39.50		RT. 9 +67.19	34.98	10
RT. 407+50.01	33.44		RT. 9 +71.72	43.88	10
RT. 407+58.99	29.07		RT. 9 +75.16	53.27	10
RT. 407+68.44	25.81		RT. 9 +78.28	62.77	10
RT. 407+78.00	22.87		RT. 9 +81.08	72.37	10
RT. 407+87.65	20.24		RT. 9 +83.55	82.06	10
RT. 407+97.38	17.94				10
RT. 408+07.18	15.97				10
RT. 408+17.04	14.32				10
RT. 408+26.96	13.00				10
RT. 408+36.91	12.01				10
RT. 408+46.89	11.36				10
RT. 408+56.88	11.04				4.67

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
HOT-MIX ASPHALT SURFACE COURSE, MIX C, N90 1 1/2" MIN AND VAR. DEPTH
REMOVE EXIST. SURFACE TO 1 1/2" BELOW FINAL GRADE FROM EDGE OF PAVEMENT TO 95' FROM CL OF IL 37
SEE TYPICAL SECTION SHEETS

GRADE IL 37 DITCH TO MATCH EXISTING COUNTRY CLUB ROAD DITCH, TO BE AS DIRECTED BY THE ENGINEER.

2 CENTERED CURVE
50' - 300'
15' OFFSET

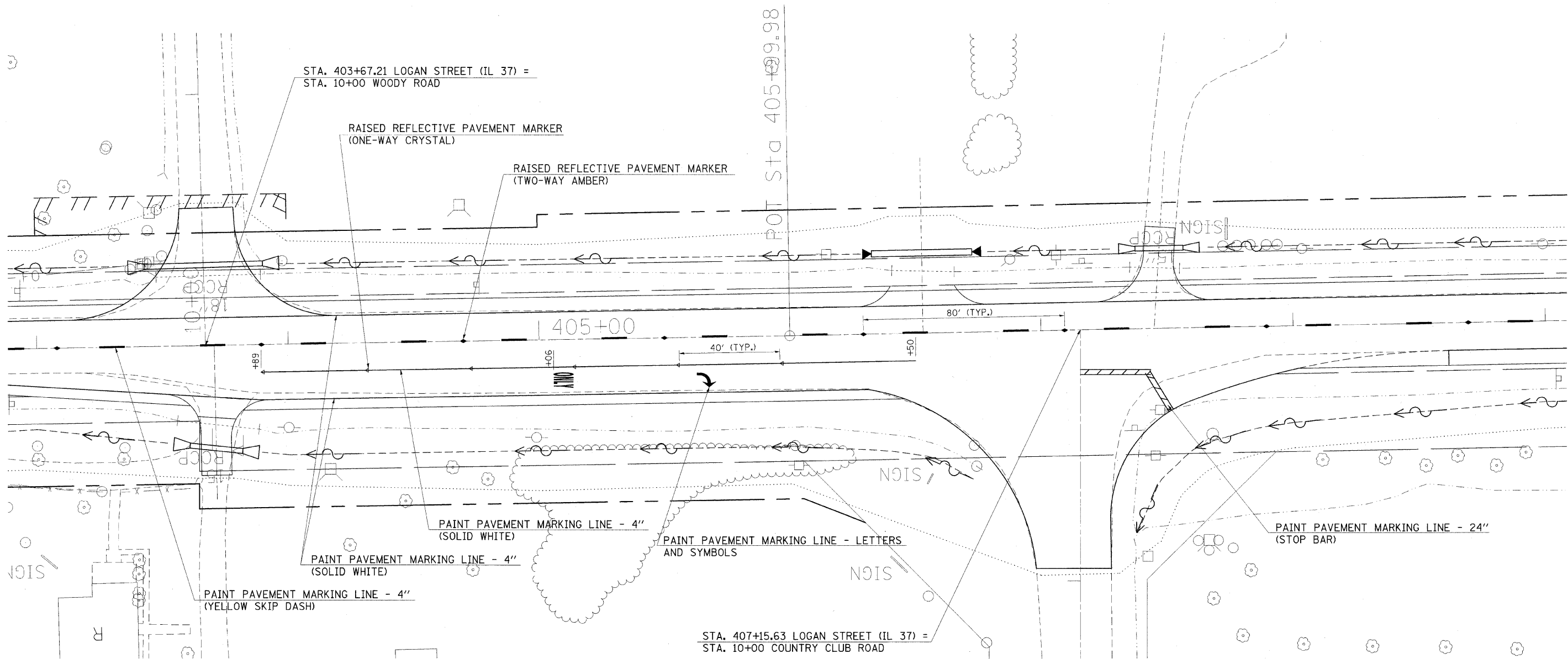
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GEOMETRICS
COUNTRY CLUB ROAD

SCALE: VERT. 20
HORIZ. 1" = 40'
DATE
DRAWN BY CNH
CHECKED BY

PLOT DATE = 12/7/2009
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USER NAME = headn

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	116
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X).RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				



PLOT DATE = 12/7/2009
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS:

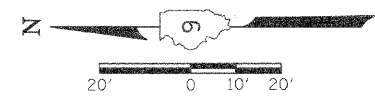
STRIPING AT COUNTRY CLUB ROAD INTERSECTION

SCALE: VERT. 20 SCALE
HORIZ. SCALE

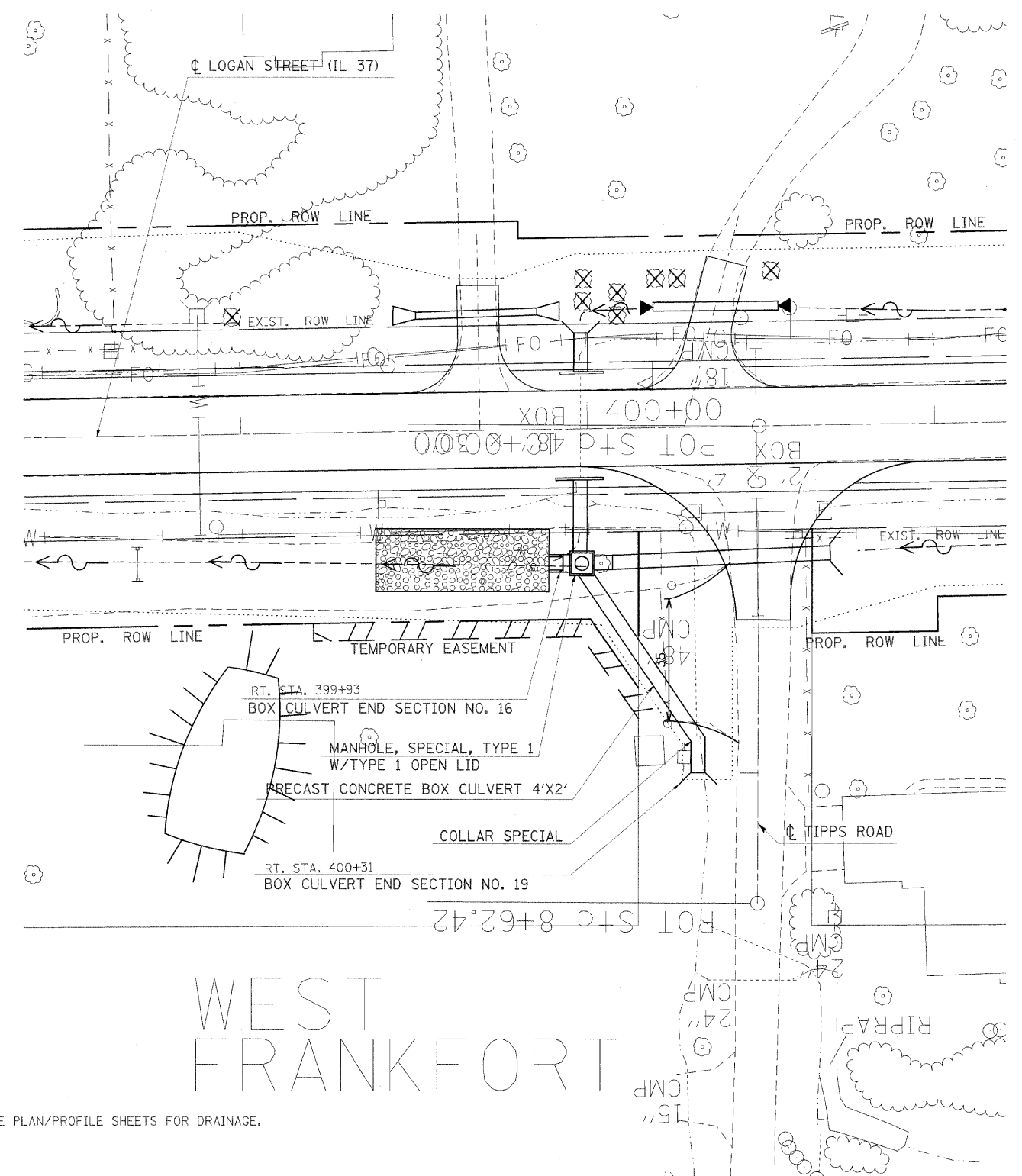
DATE _____ DRAWN BY _____
CHECKED BY _____

STRIPING AT COUNTRY CLUB ROAD INTERSECTION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	117
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* FAU 9481, FAS 2887 (IL 37)				
** (12X)RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				



ENTRANCE RT. STA. 400+00 (TIPPS ROAD)

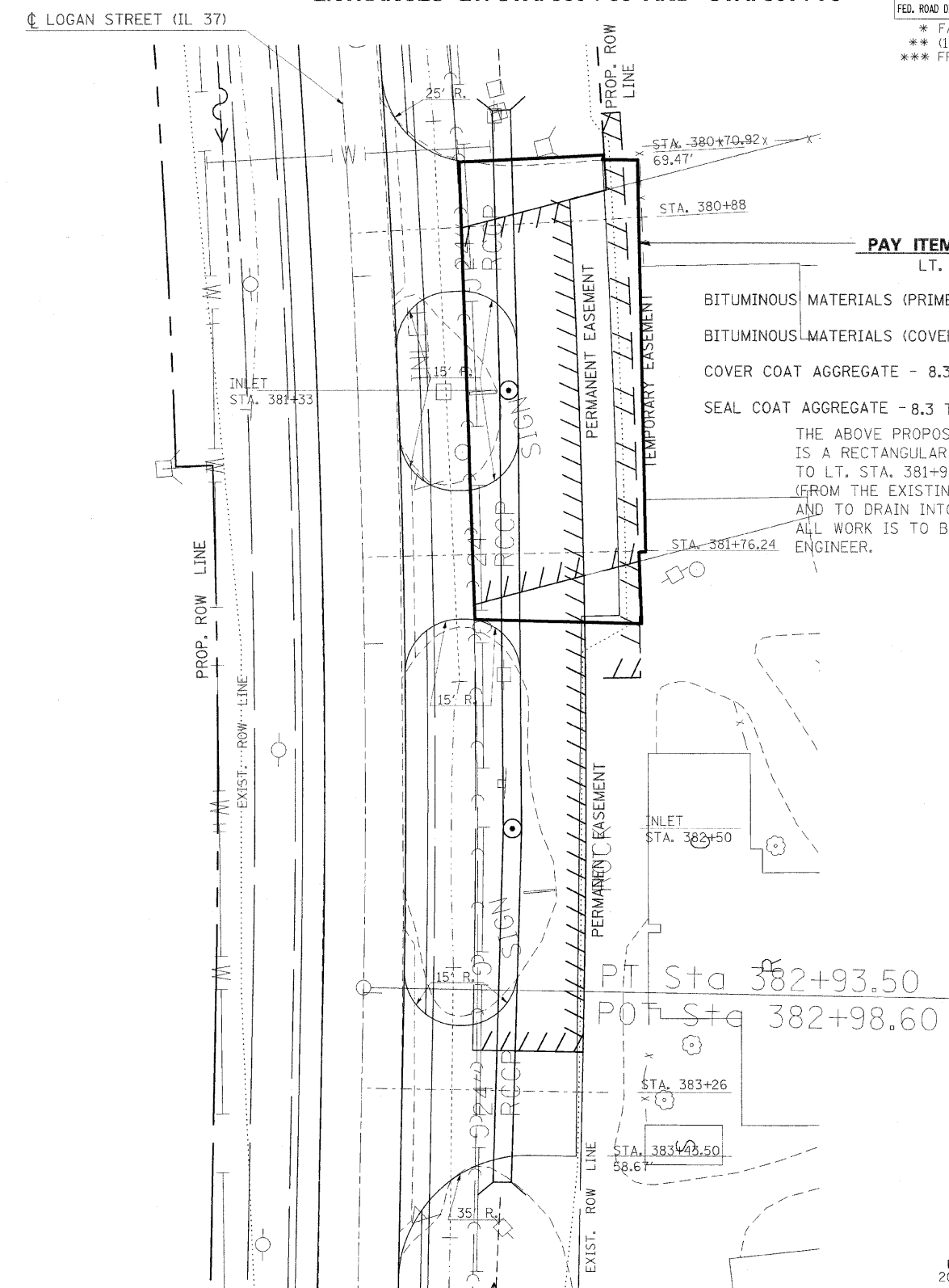


WEST FRANKFORT

SEE PLAN/PROFILE SHEETS FOR DRAINAGE.

PLOT DATE = 01/17/2019
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 PLOT SCALE = 20.00000 / IN.
 USER NAME = barneing

ENTRANCES LT. STA. 380+88 AND STA. 381+76



PAY ITEMS FOR THIS AREA

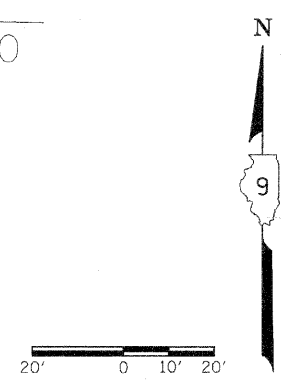
- LT. STA. 380+88
- BITUMINOUS MATERIALS (PRIME COAT) - 213 GALLONS
 - BITUMINOUS MATERIALS (COVER AND SEAL COATS) - 426 GALLONS
 - COVER COAT AGGREGATE - 8.3 TONS
 - SEAL COAT AGGREGATE - 8.3 TONS
- THE ABOVE PROPOSED SURFACE TREATMENT IS A RECTANGULAR AREA LT. STA. 380+70 TO LT. STA. 381+94, APPROXIMATELY 48' WIDE (FROM THE EXISTING R.O.W. TO THE BUILDING, AND TO DRAIN INTO THE PROPOSED INLET. ALL WORK IS TO BE AS DIRECTED BY THE ENGINEER.

SEE PLAN/PROFILE SHEETS FOR DRAINAGE.

REVISIONS	
NAME	DATE

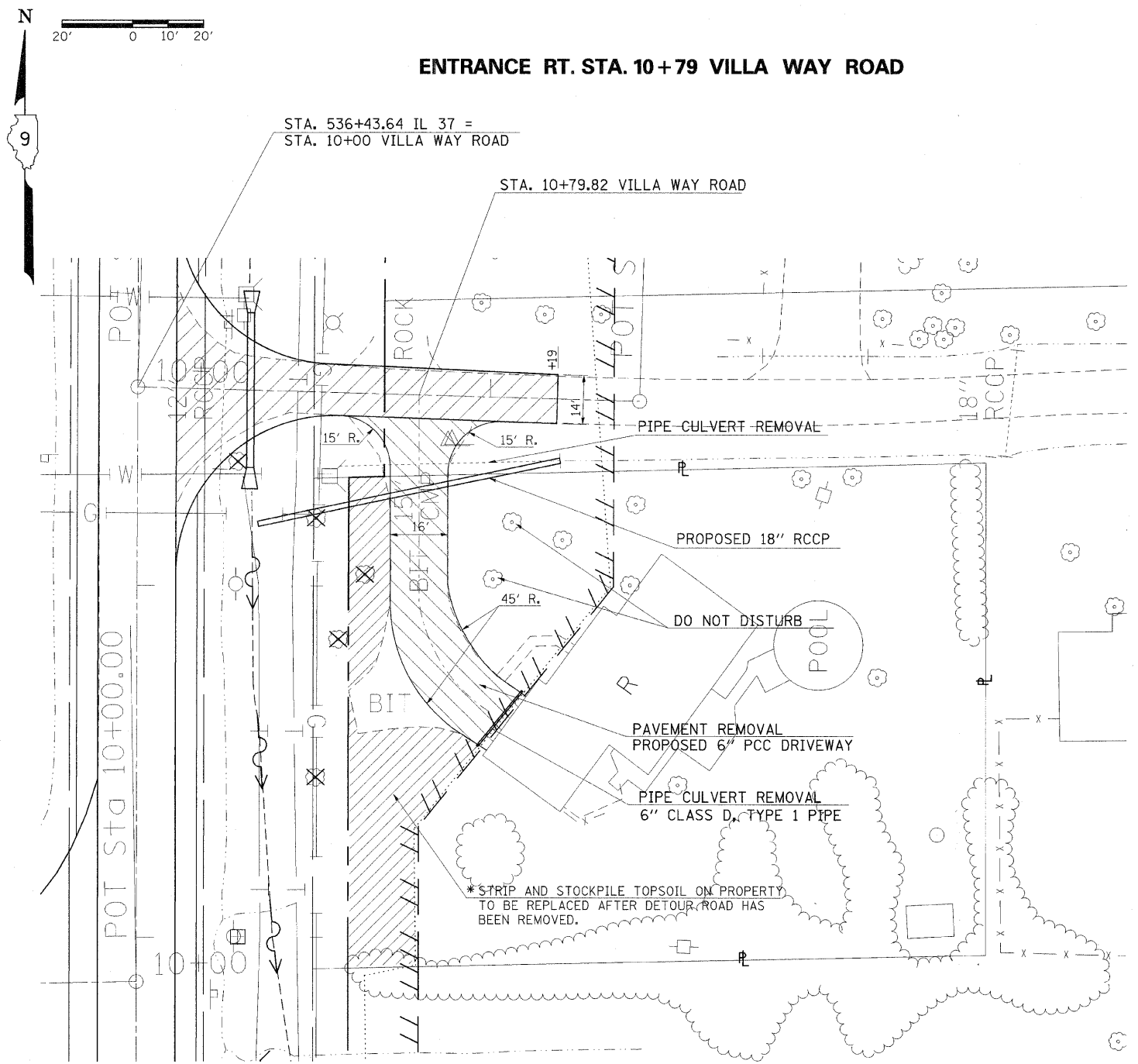
ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
ENTRANCES

SCALE: VERT. 20 SCALE
 HORIZ. DATE
 DRAWN BY
 CHECKED BY



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	118
STA. TO STA.				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X),RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

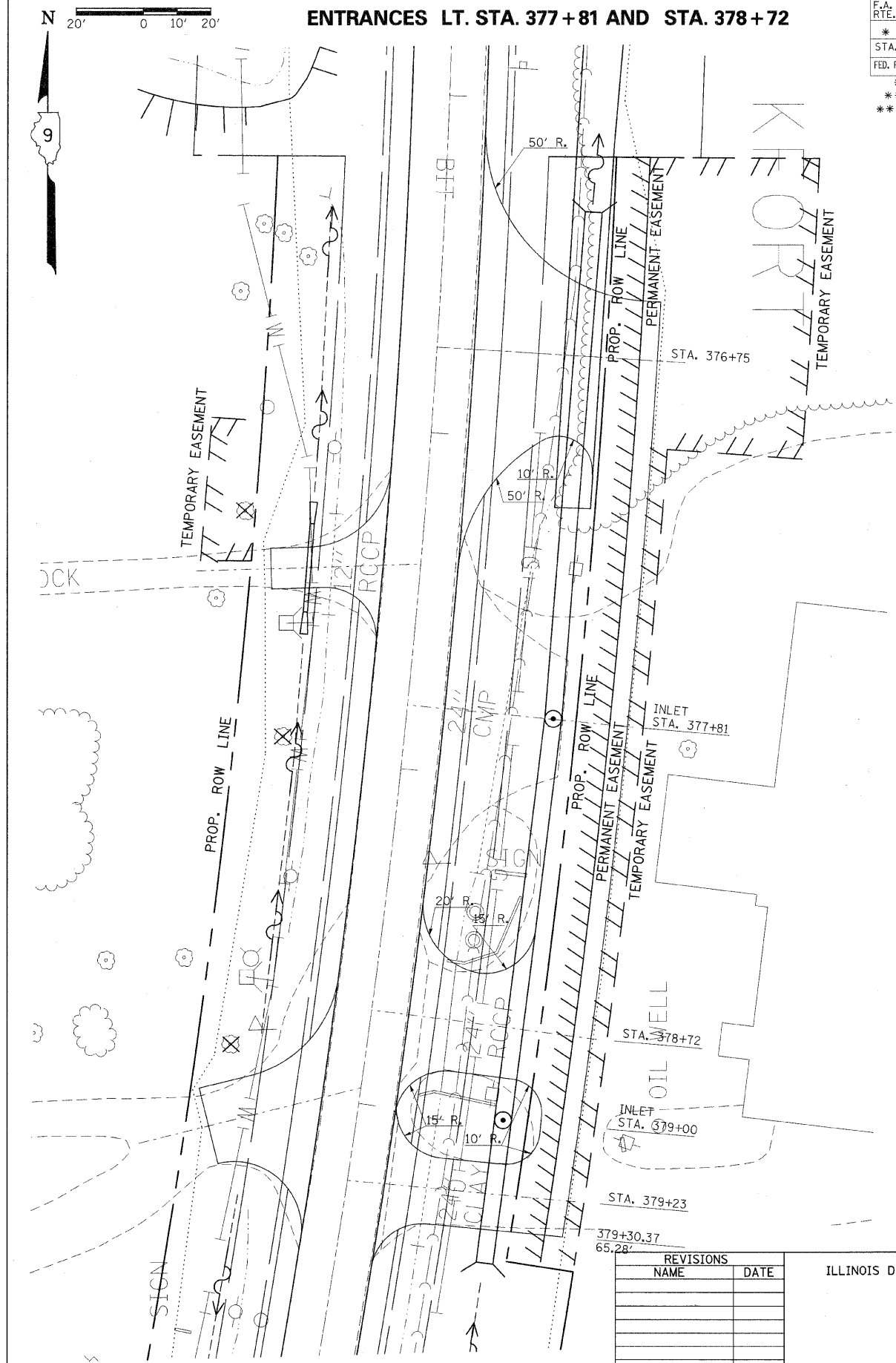
ENTRANCE RT. STA. 10+79 VILLA WAY ROAD



REMOVE ALL BITUMINOUS PAVEMENT.
 RESEED ALL AREA BEHIND PROPOSED ROW TO TEMP. EASEMENT.
 * THE LAYOUT OF DRIVEWAY, STOCKPILING AND REPLACEMENT OF TOPSOIL IS NOT TO IMPACT EXISTING DRAINAGE AND IS TO BE COORDINATED WITH THE RESIDENT ENGINEER AND PROPERTY OWNER.
 SLOPE OF DRIVEWAY SHALL BE 2.8% FROM EDGE OF PAVEMENT TO GARAGE.

PLOT DATE = 12/7/2003
 PLOT SCALE = 20.0000' / IN.
 USER NAME = headen

ENTRANCES LT. STA. 377+81 AND STA. 378+72



SEE PLAN/PROFILE SHEETS FOR DRAINAGE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
ENTRANCES

SCALE: VERT. 20 SCALE
 HORIZ. 20 SCALE
 DATE
 DRAWN BY
 CHECKED BY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark #215: Square cut in center of headwall on existing structure, Sta. 91+00 @ 22.5' LT, Elev. 394.112

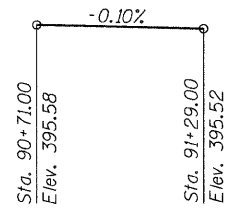
Existing Structure: S.N. 028-2003 was built in 1922 under S.B.I. Route 37, Section 12A, and widened in 1960 under F.A. Route 37, Section 12-2RS. The structure is a 2-barrel 12'x8' cast in place reinforced concrete box culvert with cantilever L-type wingwalls with zero skew. The barrel length is 45'-10" and the width is 26'-6". Structure is to be completely replaced with a 2-barrel 12'x9' reinforced concrete box culvert. Traffic to be maintained utilizing stage construction.

No Salvage.

Precast culvert alternate is not allowed.

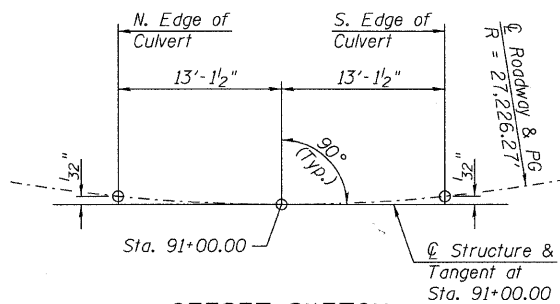
CURVE DATA

$\Delta = 1^\circ 32' 42''$ (LT)
 $D = 0^\circ 12' 38''$
 $T = 367.13'$
 $L = 734.21'$
 $E = 2.48'$
 $R = 27,226.27'$
 $S.E. = \text{None}$
 $P.C. = \text{Sta. } 86+84.99$
 $P.T. = \text{Sta. } 94+19.21$
 $P.I. = \text{Sta. } 90+52.12$



PROFILE GRADE

(Along CL IL Rt. 37)



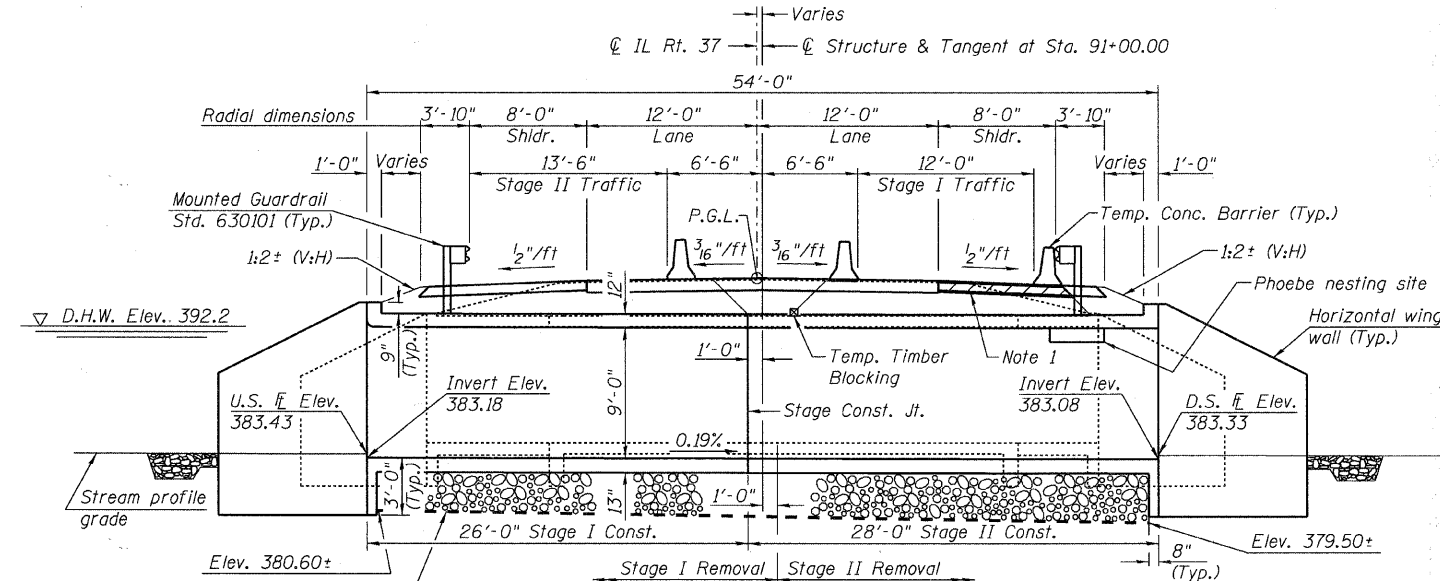
OFFSET SKETCH

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	380.18	380.08

DESIGNED	AMS
CHECKED	JMH
DRAWN	AEC
CHECKED	JMH

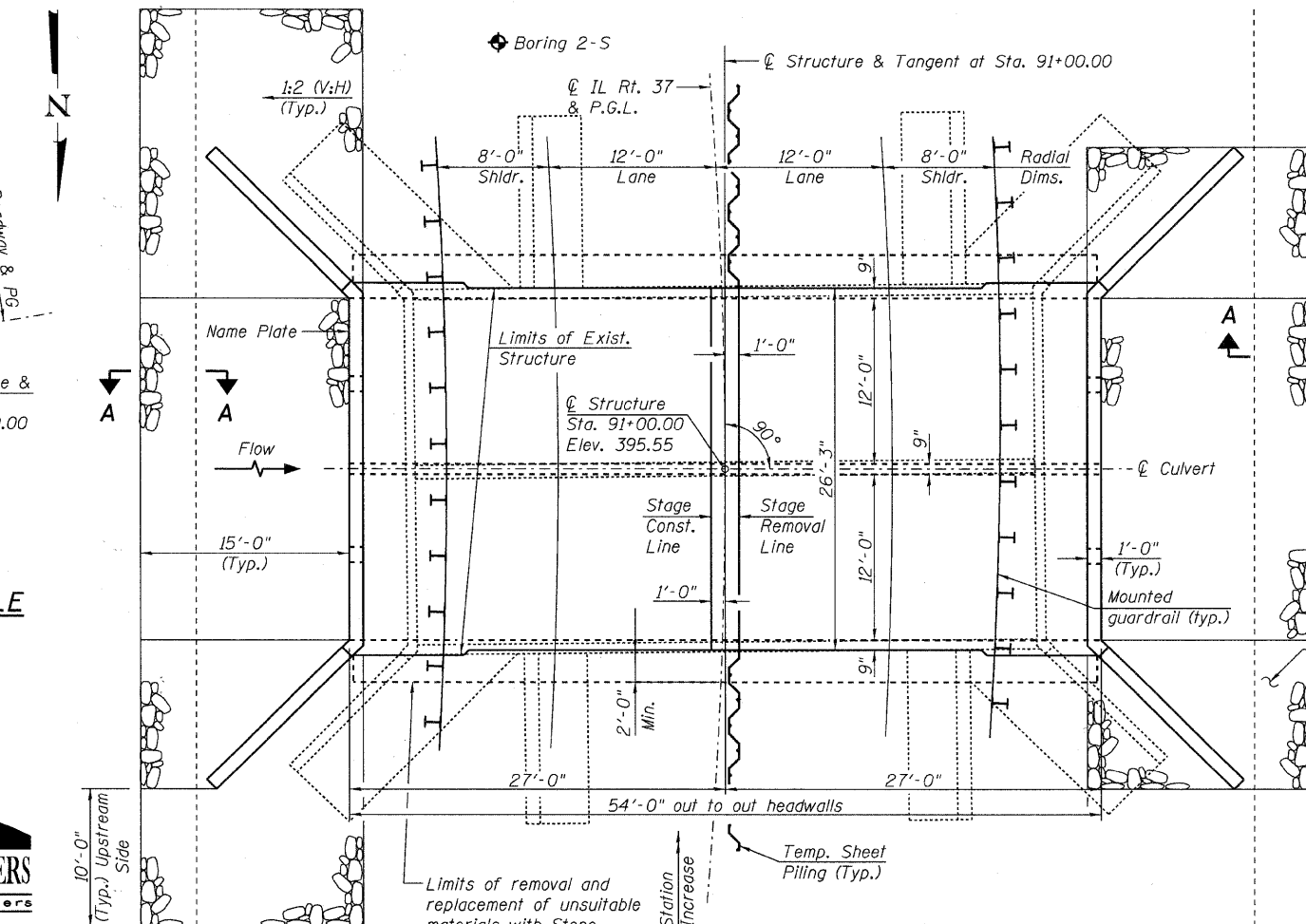
09/25/09



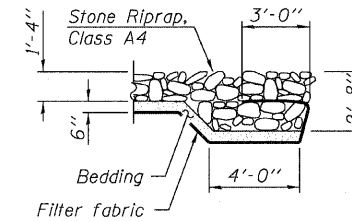
LONGITUDINAL SECTION

(Dimensions at Rt. L's to local tangent, unless otherwise noted) (Looking South)

Note 1: Hatched area indicates bituminous widening prior to Stage I Traffic.



PLAN



SECTION A-A

INDEX OF SHEETS

- 1 General Plan
- 2 General Structure Data
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier For Stage Construction
- 5 Culvert Details
- 6 Bar Splicer Assembly Details
- 7-8 Boring Logs

STATION 91+00.00
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.U. RT. 9481 SEC. 12B-1
 LOADING HS20-44
 STRUCTURE NO. 028-2017

NAME PLATE

See Std. 515001

**** WATERWAY INFORMATION**

		Exist. Low Grade Elev. 394.01 @ Sta. 368+00		Prop. Low Grade Elev. 394.11 @ Sta. 368+00						
Drainage Area = 33 sq. mi.		Q C.F.S.		Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		
Flood	Freq. Yr.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	Main Structure	2266	2348	533.5	677.1	391.3	0.8	0.4	392.1	391.7
	Overflow	894	812	164.2	188.9					
	Total	3160	3160	697.7	866.0					
Base	Main Structure	3406	3443	639.7	800.6	392.2	1.0	0.5	393.2	392.7
	Overflow	1124	1087	185.8	210.5					
	Total	4530	4530	825.5	1011.1					
Over-topping	Main Structure	3939	3985	687.0	856.0	392.6	1.2	0.6	393.8	393.2
	Overflow	1161	1115	192.0	216.0					
	Total	5100	5100	879.0	1072.0					
Over-topping	Main Structure	5204	5236	769.9	953.8	393.3	1.3	0.8	394.6	394.1
	Overflow	1216	1184	192.0	216.0					
	Total	6420	6420	961.9	1169.8					

Existing 10 yr. velocity = 4.3 ft/s Proposed 10 yr. velocity = 3.5 ft/s

**Main structure is SN 028-0078, Overflow structure is SN 028-2017

LOADING HS20-44

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

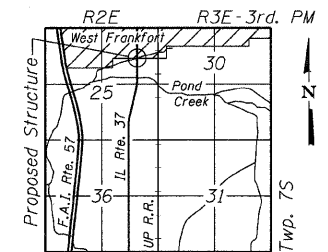
DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

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



LOCATION SKETCH



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TSS)
 ENGINEER OF BRIDGES AND STRUCTURES

David W. Petermeier, 9/25/09
 DAVID W. PETERMEIER
 EDWARDSVILLE, ILLINOIS
 ILLINOIS LICENSED STRUCTURAL
 ENGINEER NO. 081-005642
 EXPIRES NOV. 30, 2010

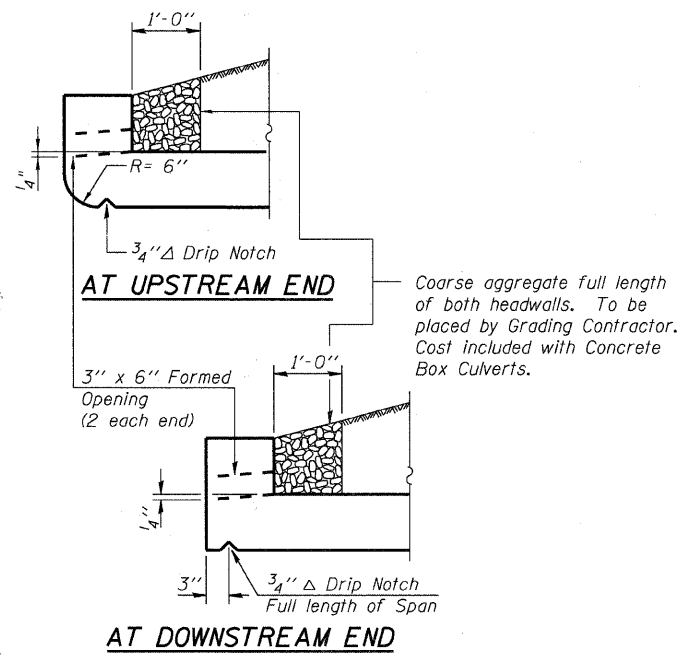
GENERAL PLAN
ILLINOIS ROUTE 37
OVER TRIBUTARY TO POND CREEK
F.A.U. ROUTE 9481 SEC. 12B-1
FRANKLIN COUNTY
STATION 91+00.00
SN 028-2017

SHEET NO. /	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8 SHEETS	9481	12B-1	FRANKLIN	304	119
SN 028-2017			CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

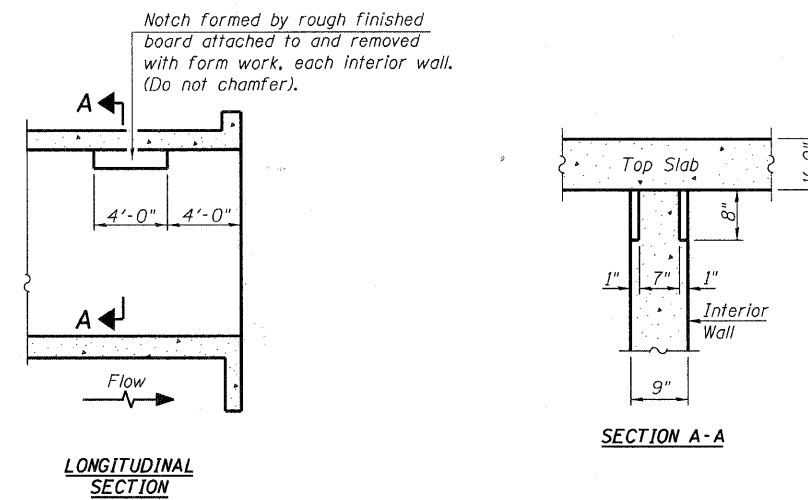
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Removal and replacement of weak soils with Stone Riprap Class A1 may be required beneath the culvert. The Engineer will determine the required depth following excavation to plan grade.
All construction joints shall be bonded.
Precast culvert alternate is not allowed.



DRAIN DETAIL

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	118
Stone Riprap, Class A4	Sq. Yd.	189
Stone Riprap, Class A1	Ton	223
Filter Fabric	Sq. Yd.	189
Removal of Existing Structures No. 2	Each	1
Reinforcement Bars, Epoxy Coated	Pound	34,150
Bar Splicers	Each	165
Temporary Sheet Piling	Sq. Ft.	1,721
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	191.1
Steel Plate Beam Guardrail, Attached to Structures	Foot	50



**PHOEBE NESTING
SITE DETAILS**
(Downstream End Only)

GENERAL STRUCTURE DATA
SN 028-2017

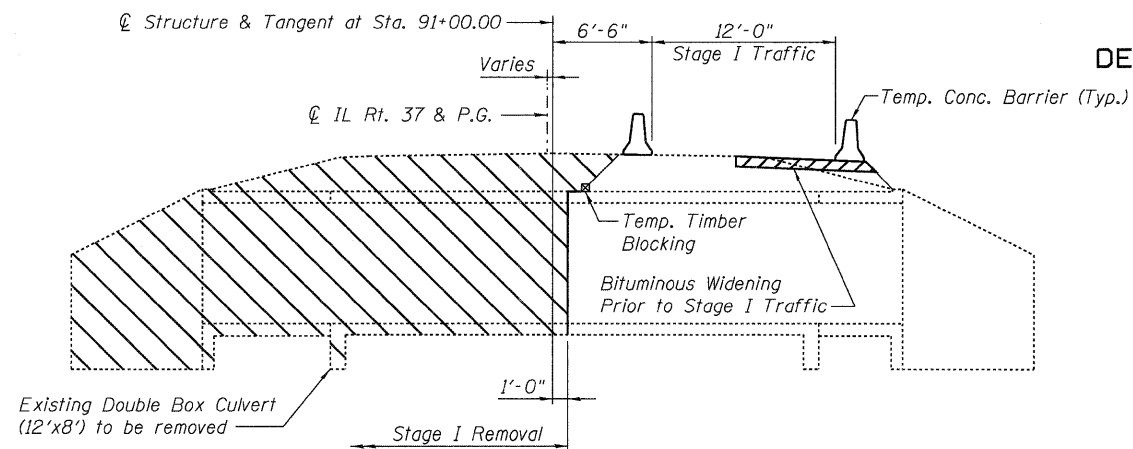
DESIGNED	AMS
CHECKED	JMH
DRAWN	AEC
CHECKED	JMH

09/25/09

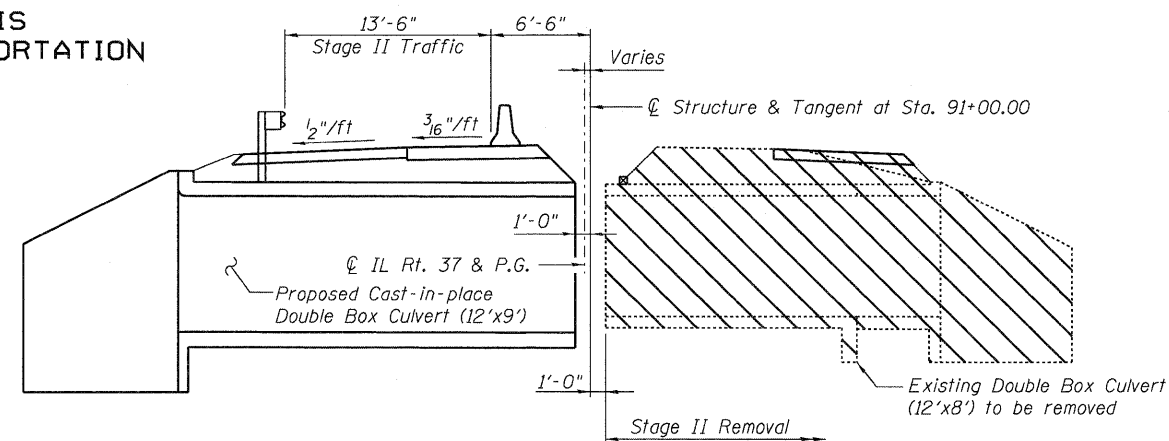


SHEET NO. 2	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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8 SHEETS	SN 028-2017		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

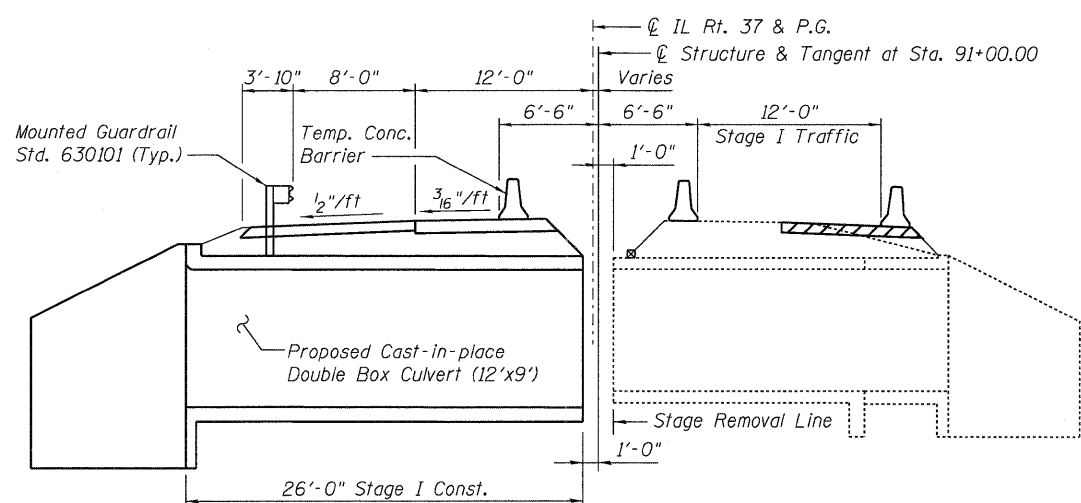
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



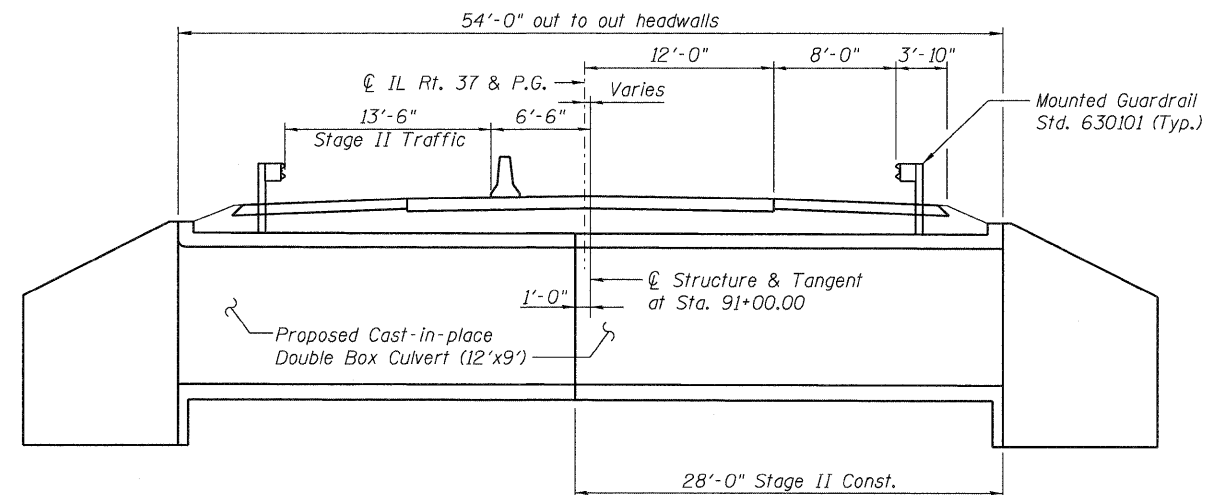
STAGE I REMOVAL
(Looking upstation)



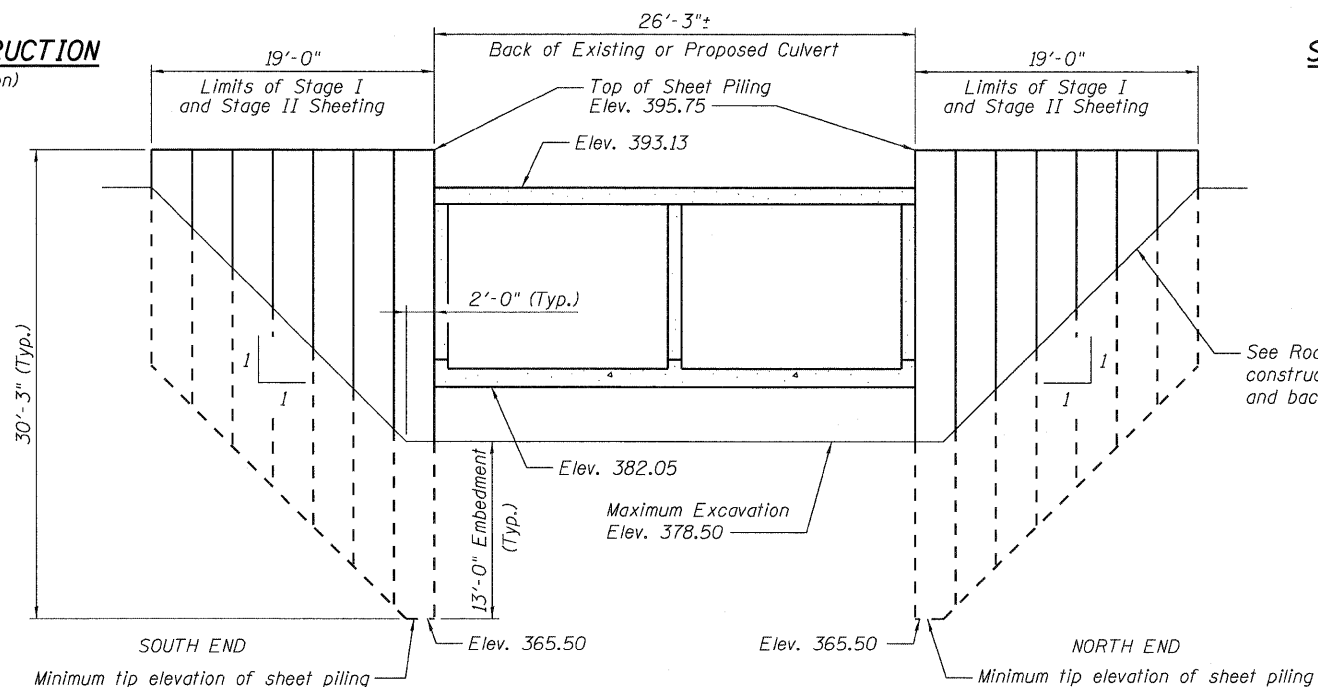
STAGE II REMOVAL
(Looking upstation)



STAGE I CONSTRUCTION
(Looking upstation)



STAGE II CONSTRUCTION
(Looking upstation)



TEMPORARY SHEET PILING DETAILS

Notes:
For details of Temporary Concrete Barrier see Sheet No. 4 of 8.
For quantity of Temporary Concrete Barrier see Roadway Plans.
Hatched areas indicate areas of removal to be paid for as Removal of Existing Structures No. 2.

BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	1,721

STAGE CONSTRUCTION DETAILS
SN 028-2017

DESIGNED	AMS
CHECKED	JMH
DRAWN	AEC
CHECKED	JMH



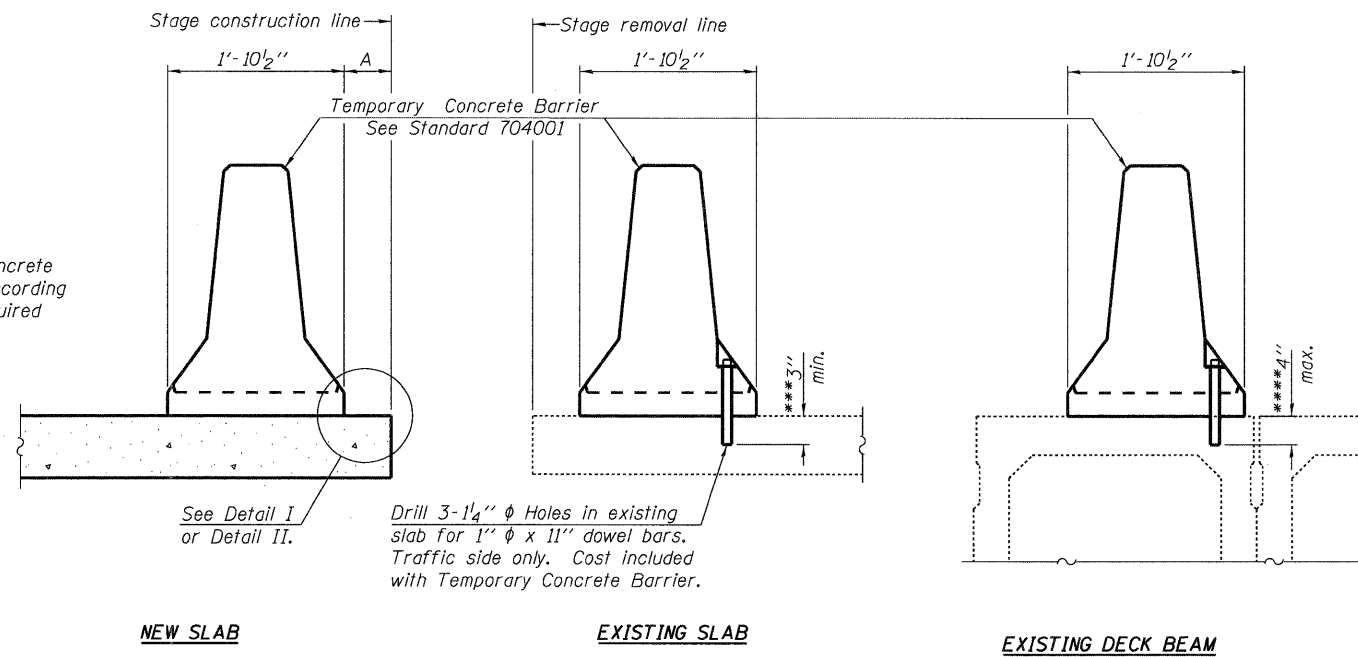
09/25/09

Notes:
Minimum Section Modulus of temporary sheet piling shall be 29.3 in³ per foot of wall.
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

SHEET NO. 3 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B-1	FRANKLIN	304	121
	SN 028-2017			CONTRACT NO. 98823	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

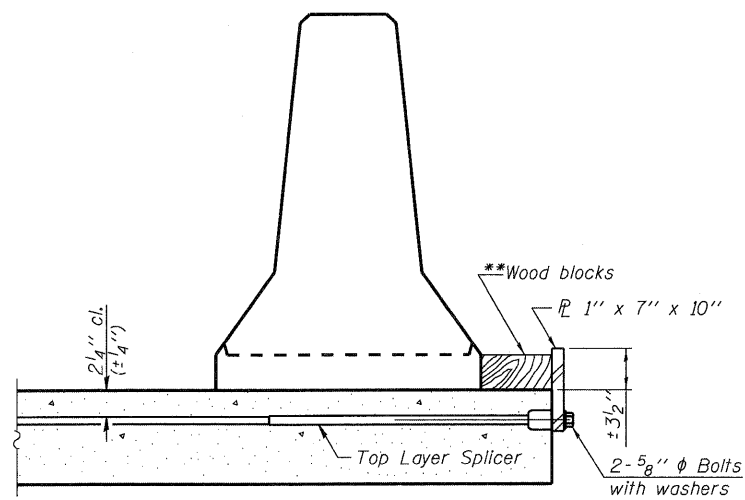
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

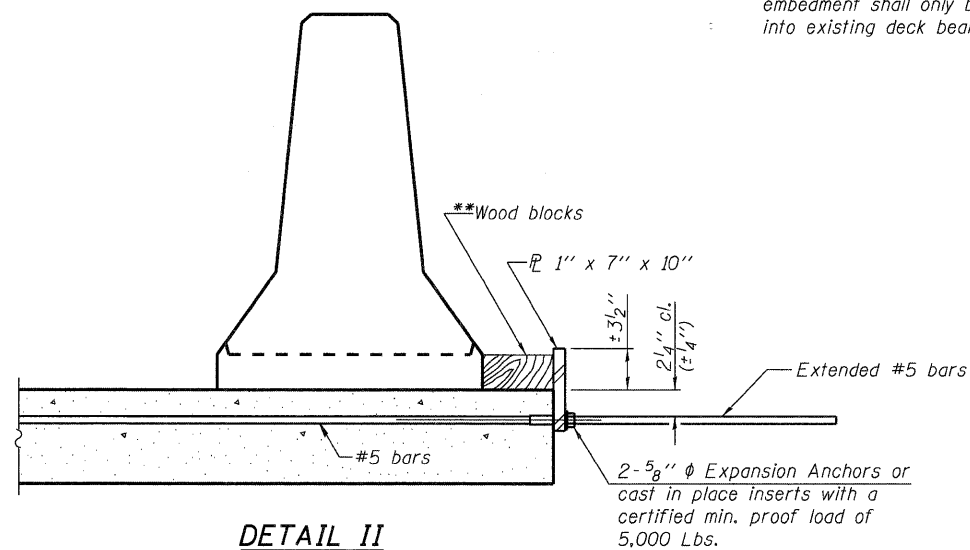
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

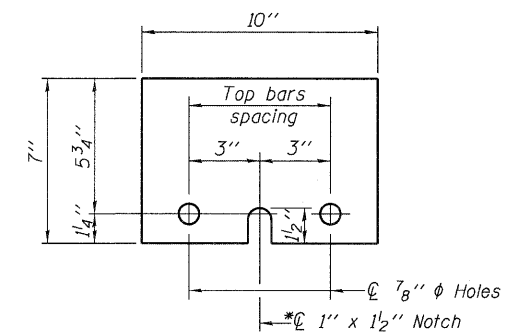
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{P} 1" x 7" x 10"

* Required only with Detail II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

DESIGNED	AMS
CHECKED	JMH
DRAWN	PRC
CHECKED	AMS



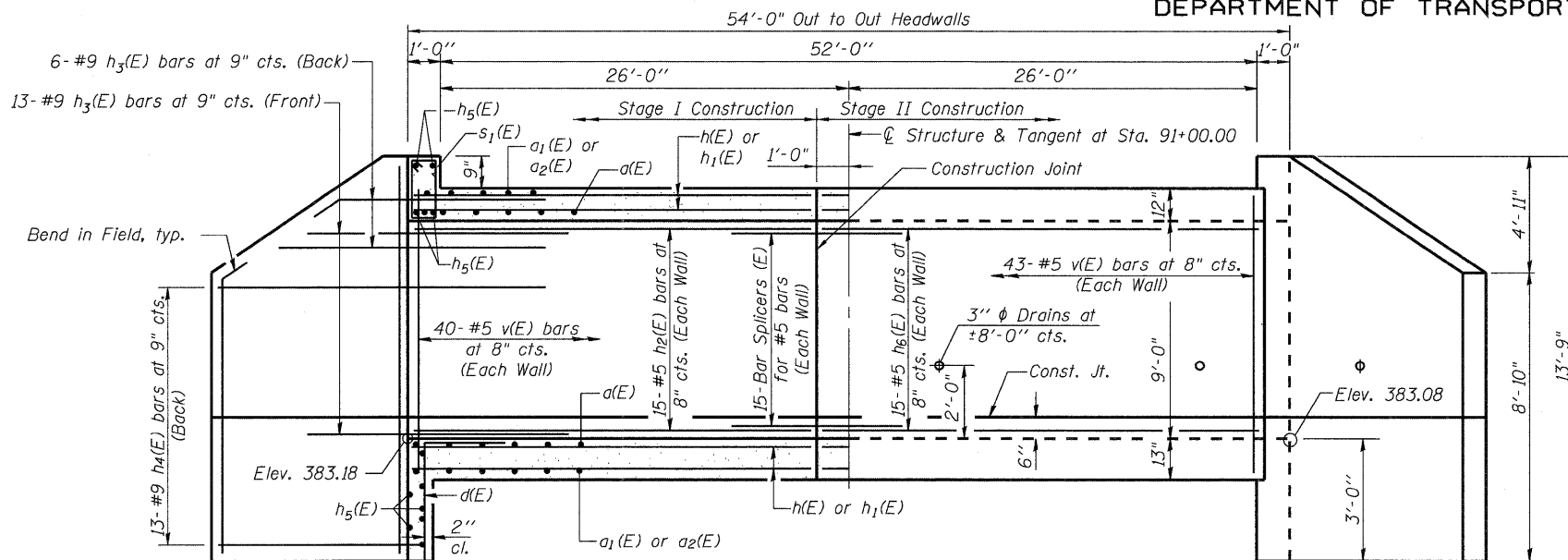
R-27

10-1-08

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
SN 028-2017**

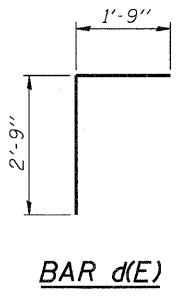
SHEET NO. 4 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B-1	FRANKLIN	304	122
	SN 028-2017		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

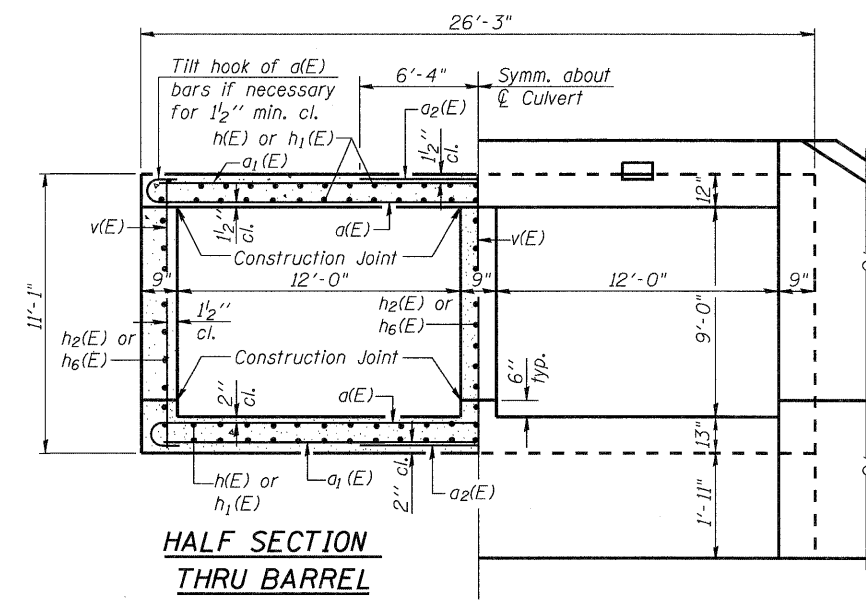


HALF LONG. SECTION

HALF ELEVATION

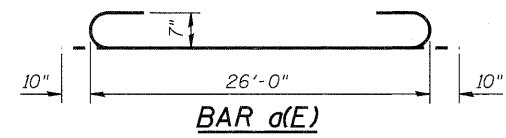


BAR d(E)

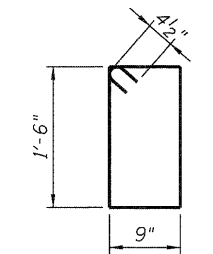


HALF SECTION
THRU BARREL

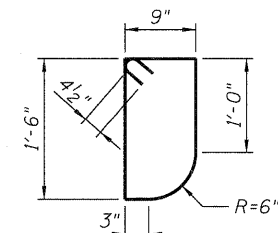
HALF END ELEVATION



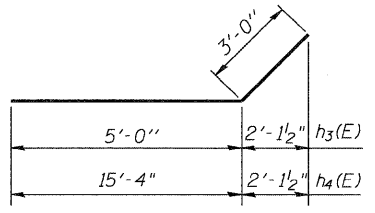
BAR a(E)



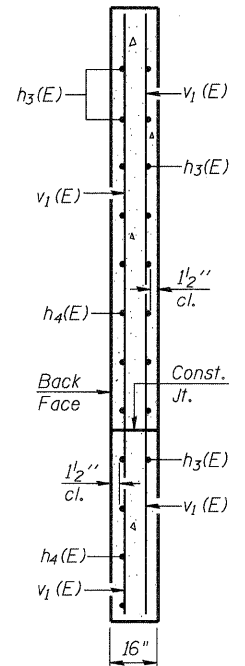
BARS s1(E)



BARS s2(E)



BARS h3(E) & h4(E)



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	146	#7	27'-8"	U
a1(E)	96	#7	26'-0"	—
a2(E)	92	#7	12'-8"	—
d(E)	52	#4	4'-6"	L
h(E)	120	#5	25'-8"	—
h1(E)	120	#5	27'-9"	—
h2(E)	45	#5	25'-8"	—
h3(E)	76	#9	8'-0"	—
h4(E)	52	#9	18'-4"	—
h5(E)	14	#6	26'-10"	—
h6(E)	45	#5	27'-9"	—
v(E)	253	#5	10'-10"	—
v1(E)	16	#4	13'-6"	—
s1(E)	26	#4	5'-3"	U
s2(E)	26	#4	5'-1"	U
Concrete Box Culverts			Cu. Yd.	191.1
Reinforcement Bars, Epoxy Coated			Pound	34,150

CULVERT DETAILS
SN 028-2017

DESIGNED	AMS
CHECKED	JMH
DRAWN	AEC
CHECKED	JMH

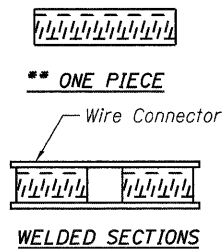
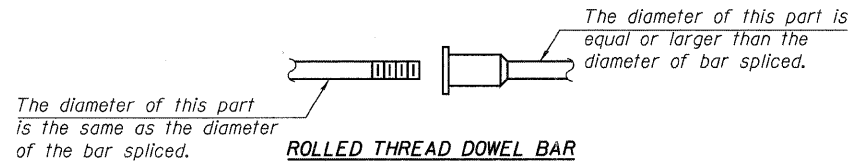


Notes:
A distance of 7'-3" of the barrel, half the length of the wingwall, shall be poured monolithically with each wingwall.

SHEET NO. 5 8 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B-1	FRANKLIN	304	123
	SN 028-2017		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

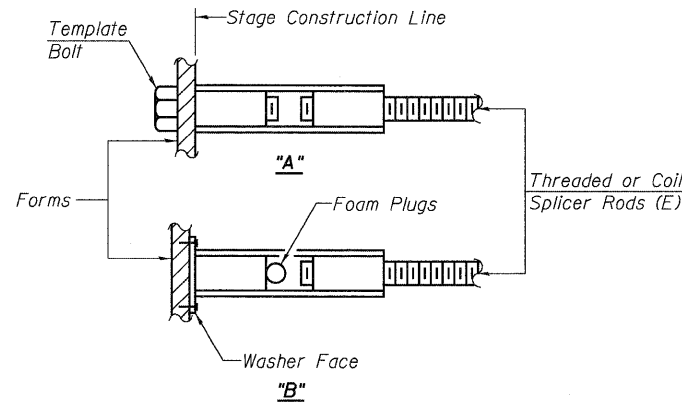
09/25/09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

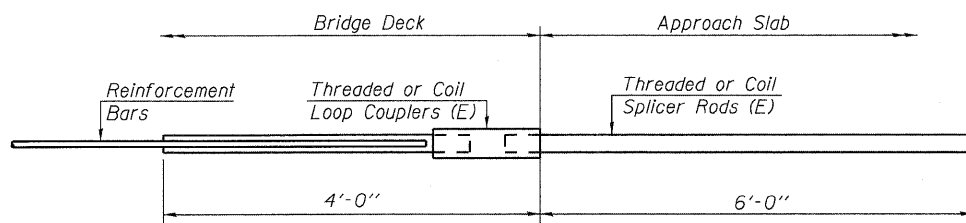
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

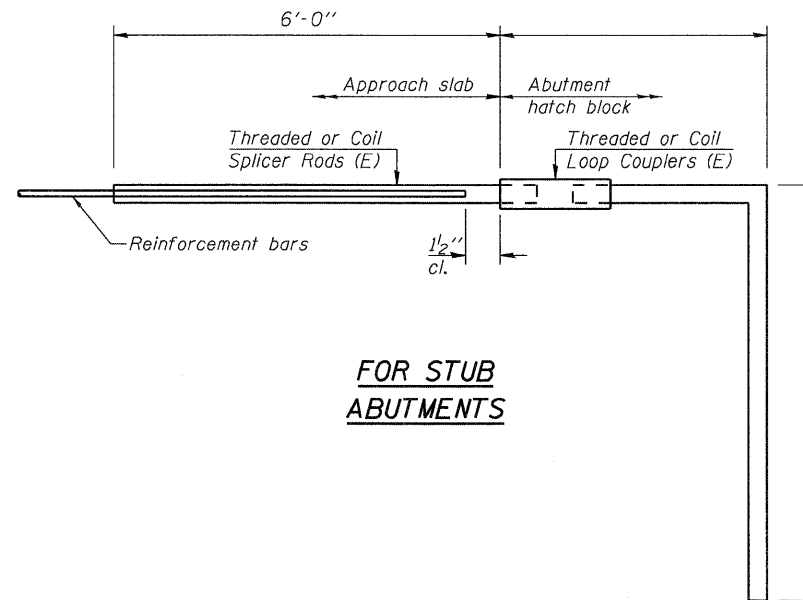
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_s$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



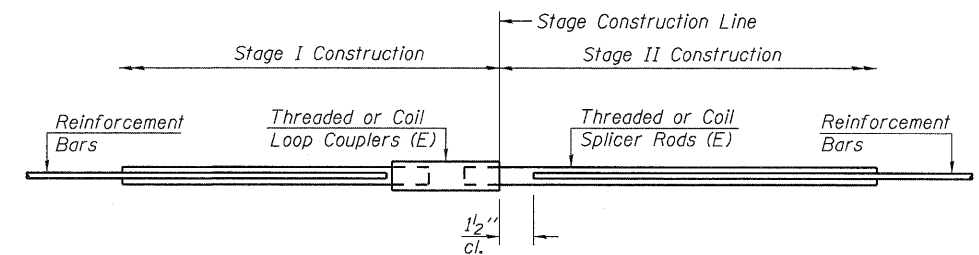
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



STANDARD

Bar Size	No. Assemblies Required	Location
#5	60	Top Slab
#5	60	Bottom Slab
#5	45	Walls

**BAR SPLICER ASSEMBLY DETAILS
SN 028-2017**

DESIGNED AMS
CHECKED JMH
DRAWN PRC
CHECKED AMS



BSD-1

10-1-08

SHEET NO. 6 8 SHEETS	F.A.U. RTE. 9481	SECTION 12B-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 124
	SN 028-2017		CONTRACT NO. 98823		
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Boring Log
Sheet 1 of 2

Illinois 37 Over Stream South of W. Frankfort
Route: ILL 37 Structure Number: 028-2003 Date: 10/07/2002
Bored By: Bryan Keller
Section: Checked By: Rob Graeff
County: Franklin Location: SCL W Frankfort

Boring No 1-S Station 90+60 Offset 17' W CL Ground Surface 394.0 Ft	D E P T H	B L O W	Qu tsf	W%	Surf Wat Elev: 386.0 Ground Water Elevation when Drilling 364.5 At Completion At: Hrs:	D E P T H	B L O W	Qu tsf	W%
Crushed Aggregate and Cinders							2	2.2B	23
392.0					367.0		4		
Very stiff, moist, brown, Silty Clay A-6		1	3.0P	21	Medium, very moist, brown, Silty Clay A-6		1	0.8B	24
389.5		1			364.5		1		
Medium, very moist, brown, Silty Clay Loam A-6	5.0	WH	0.7S	23	Very soft, very moist, brown, Silty Clay Loam A-6	30.0	1	0.2B	25
387.0		1			362.0		1		
Soft, moist, brown, Silty Clay Loam A-6		WH	0.4P	24	Very loose, wet, brown, fine Silty Sand 86% Sand 9% Silt 5% Clay		WR		22
384.5		1			359.5		WR		
Medium, very moist, grey, Clay to Silty Clay A7-6	10.0	WH	0.7S	34	Medium, wet, brown, fine Sand with a Coal Layer	35.0	1		
		WH					3		
		1					11		
		WH			357.0		7		
		WH	0.7B	32	Medium, wet, brown to tan, fine Sand		7		
		WH					5		
379.5									
Stiff, moist, brown, Silty Clay A7-6	15.0	1	1.7B	26		40.0	10		
		2					17		
		3					12		
377.0									
Stiff, moist, brown mottled grey, Silty Clay A-6		1	1.3S	26					
		2							
		2							
374.5					349.5				
Stiff, moist, grey mottled brown, Clay A7-6	20.0	1	1.9S	26	Very stiff, moist, grey, Clay A7-6 with a Sand Layer	45.0	4	2.1B	31
		2					1		
		4					4		
372.0									
Very stiff, moist, brown mottled grey, Silty Clay A7-6		2	3.3B	23					
		3							
		4							
					344.5				
						50.0	2		
	25.0	2							

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 2
Date: 10/07/2002

Route: ILL 37
Section:
County: Franklin

Boring No: 1-S
Station: 90+60
Offset: 17' W CL
Ground Surface: 394.0 Ft

Boring No: 1-S Station: 90+60 Offset: 17' W CL Ground Surface: 394.0 Ft	D E P T H	B L O W	Qu tsf	W%	Soil Description	D E P T H	B L O W	Qu tsf	W%
Very stiff, moist, grey, Clay A7-6			5	3.9S	26				
			8						
339.5									
Hard, moist, grey, Clay A7-6	55.0	3	4.1B	17					
		7							
		16							
334.5									
Very stiff, moist, grey, Silty Clay A-6	60.0	2	2.7S	18					
		6							
		9							
329.5									
Medium, moist, grey, Clay Loam A-6	65.0	3	0.9B	24					
		6							
		5							
324.5									
Hard, dry, grey, Clay Shale	70.0	100/2"							
324.0									
Bottom of hole = 70.0 ft.									
Free water observed at 29.5 ft									
Elevation referenced to center of Existing Structure; Assumed Elevation = 100.0 ft									
	75.0								

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

DESIGNED AMS
CHECKED JMH
DRAWN PRC
CHECKED AMS

09/25/09



BORING LOGS
SN 028-2017

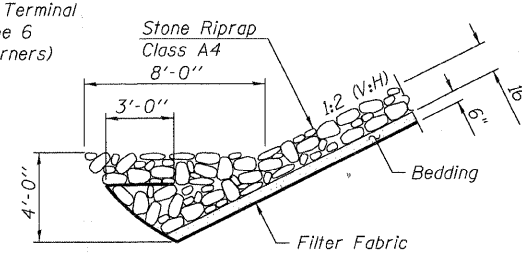
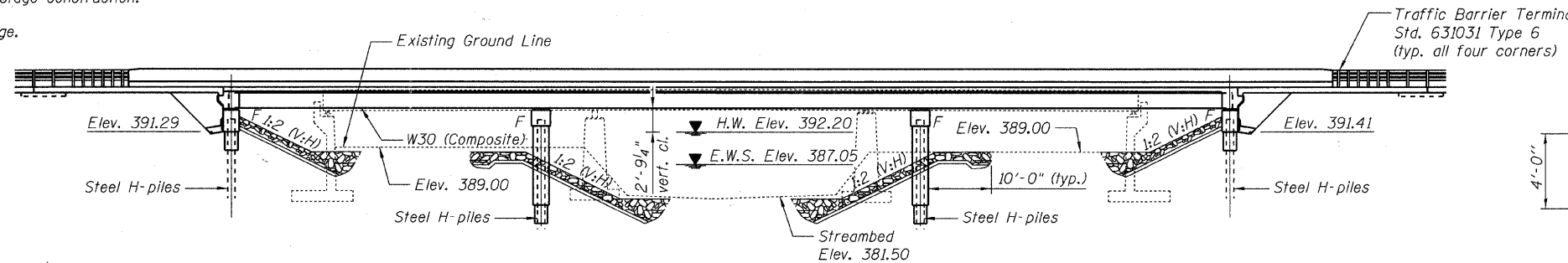
SHEET NO. 7	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8 SHEETS	9481	12B-1	FRANKLIN	304	125
		SN 028-2017	CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

Bench Mark: #214 Square cut on the top of the N.E. wingwall Sta. 372+85 @ 15.0 feet left, Elevation: 399.066

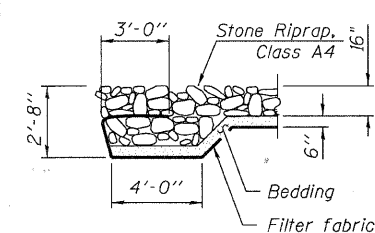
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structure: S.N. 028-0035 was originally built in 1921 (Section 12) and widened/reconstructed in 1951 (Section 12B-Y). The existing structure is a three-span T-beam bridge on closed abutments and solid wall piers. The structure is 131'-0" back-to-back of abutments with an out-to-out width of 34'-1". The existing structure is to be removed and replaced. Traffic is to be maintained utilizing stage construction.

No Salvage.



SECTION B-B



SECTION A-A

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Structure Data
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier For Stage Construction
- 5-8 Top of Slab Elevations
- 9 Top of N. Approach Slab Elevations
- 10 Top of S. Approach Slab Elevations
- 11 Superstructure
- 12 Superstructure Details
- 13 Diaphragm Details
- 14-15 Bridge Approach Slab Details
- 16 Framing Plan and Design Data
- 17 Beam Details
- 18 Bearing Details
- 19 North Abutment Details
- 20 South Abutment Details
- 21 Pier 1 Details
- 22 Pier 2 Details
- 23 Miscellaneous Pier Details
- 24 Steel H-Pile Details
- 25 Bar Splicer Assembly Details
- 26-29 Boring Logs

CURVE DATA

P.I. Sta. = 379+00.70
 $\Delta = 15^\circ 55' 09''$ (RT)
 $D = 2^\circ 00' 48''$
 $R = 2,845.96'$
 $T = 397.93'$
 $L = 790.73'$
 $E = 27.68'$
 S.E. TRANS. =
 NORMAL CROWN AT STA. 374+30.25
 2.0% AT P.C. STA. 375+02.77
 P.C. Sta. = 375+02.77
 P.T. Sta. = 382+93.50

LOADING HL-93

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

DESIGN SPECIFICATIONS

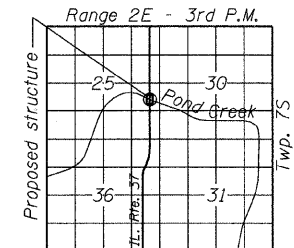
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 36,000$ psi (M270 Grade 36 structural steel)
 $f_y = 50,000$ psi (M270 Grade 50 structural steel)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.251 g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.691 g
 Soil Site Class = C



LOCATION SKETCH

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

Signature of David W. Petermeier, Licensed Structural Engineer of Illinois.



Signature and date of David W. Petermeier: 9/25/09

DAVID W. PETERMEIER
 EDWARDSVILLE, ILLINOIS
 ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-005642
 EXPIRES NOV. 30, 2010

GENERAL PLAN AND ELEVATION
ILLINOIS ROUTE 37 OVER POND CREEK

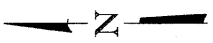
F.A.U. ROUTE 9481 SEC. 12B1-1

FRANKLIN COUNTY

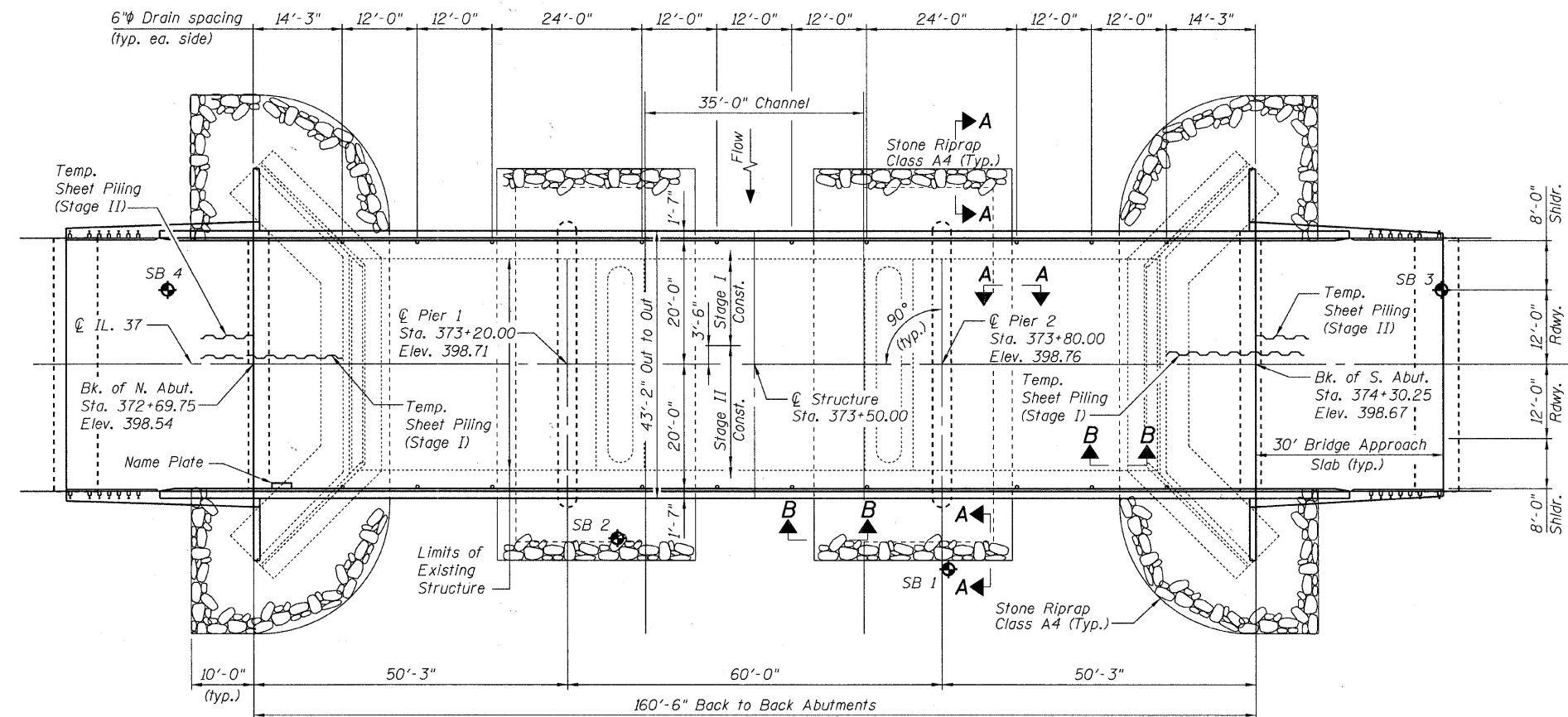
STATION 373+50.00

SN 028-0078

SHEET NO. 1 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 127
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



ELEVATION



DESIGN SCOUR ELEVATION TABLE

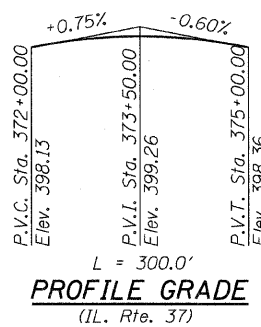
Design Scour Elevation (feet)	N. Abut.	Pier 1	Pier 2	S. Abut.
	388.22	373.78	374.30	388.35

PLAN

WATERWAY INFORMATION

Drainage Area = 33.00 sq. mi. Existing Low Grade Elev. 394.01 @ Sta. 368+00 Proposed Low Grade Elev. 394.11 @ Sta. 368+00

Flood	Freq. Yr.	Q. C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Main Structure Overflow	10	2266	2348	533.5	677.1	391.3	0.8	0.4	392.1	391.7
		894	812	164.2	188.9					
Total	10	3160	3160	697.7	866.0	391.3	0.8	0.4	392.1	391.7
		3406	3443	639.7	800.6					
Design Main Structure Overflow	50	1124	1087	185.8	210.5	392.2	1.0	0.5	393.2	392.7
		4530	4530	825.5	1011.1					
Total	50	3939	3985	687.0	856.0	392.2	1.0	0.5	393.2	392.7
		5100	5100	879.0	1072.0					
Base Main Structure Overflow	100	1161	1115	192.0	216.0	392.6	1.2	0.6	393.8	393.2
		5100	5100	879.0	1072.0					
Total	100	3939	3985	687.0	856.0	392.6	1.2	0.6	393.8	393.2
		5204	5236	769.9	953.8					
Overtopping Main Structure Overflow	500	1216	1184	192.0	216.0	393.3	1.3	0.8	394.6	394.1
		6420	6420	961.9	1169.8					



PROFILE GRADE
(IL. Rte. 37)

STATION 373+50.00
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.U. RT. 9481 SEC. 12B1-1
 LOADING HL93
 STRUCTURE NO. 028-0078

NAME PLATE

See Std. 515001

DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM

09/25/09



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{15}{16}$ in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 126,540 lbs. of Grade 50 and 8,880 lbs. of Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted.

The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5 G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".

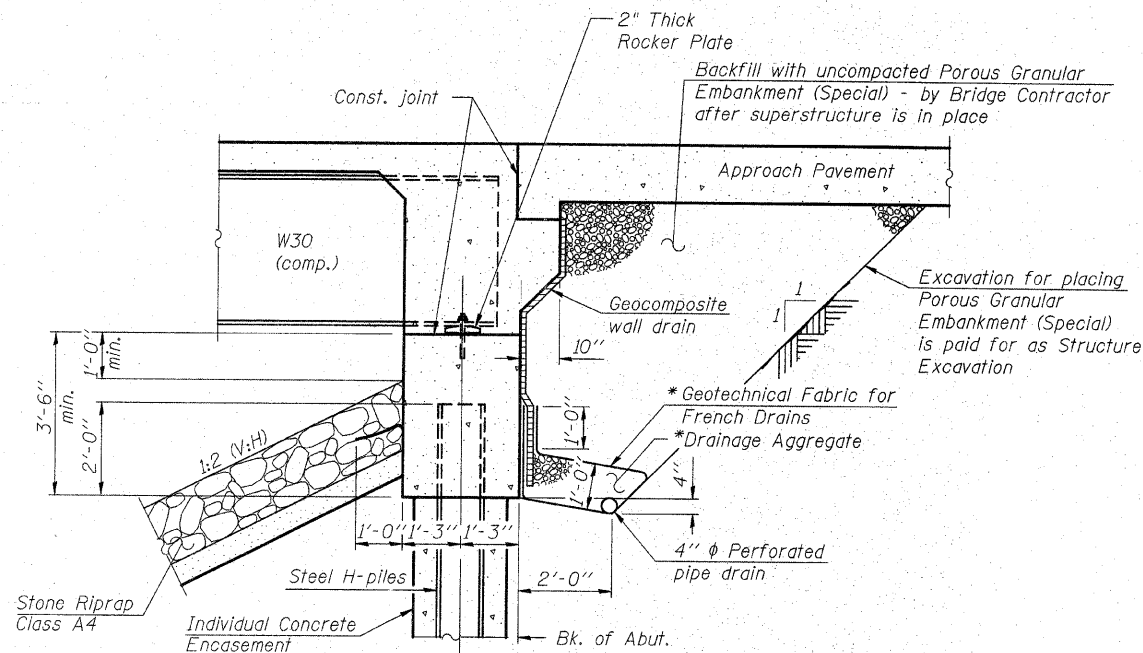
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		100	100
Stone Riprap, Class A4	Sq. Yd.		862	862
Filter Fabric	Sq. Yd.		862	862
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		664	664
Floor Drains	Each	20		20
Concrete Structures	Cu. Yd.		181.1	181.1
Concrete Superstructure	Cu. Yd.	374.2		374.2
Bridge Deck Grooving	Sq. Yd.	934		934
Concrete Encasement	Cu. Yd.		19.6	19.6
Protective Coat	Sq. Yd.	1,147	26	1,173
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4,158		4,158
Reinforcement Bars, Epoxy Coated	Pound	84,120	18,500	102,620
Bar Splicers	Each	728	156	884
Furnishing Steel Piles HP14x89	Foot		1,789	1,789
Driving Piles	Foot		1,789	1,789
Test Pile Steel HP14x89	Each		3	3
Temporary Sheet Piling	Sq. Ft.		1,128	1,128
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		56	56
Geocomposite Wall Drain	Sq. Yd.		77	77
Pipe Underdrains for Structures 4"	Foot		144	144
Mechanical Splice	Each		60	60
Underwater Structure				
Excavation Protection, Location 1	Each		1	1
Underwater Structure				
Excavation Protection, Location 2	Each		1	1



SECTION THRU INTEGRAL ABUTMENT

* Included in the cost of Pipe Underdrains for Structures 4".

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110).

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

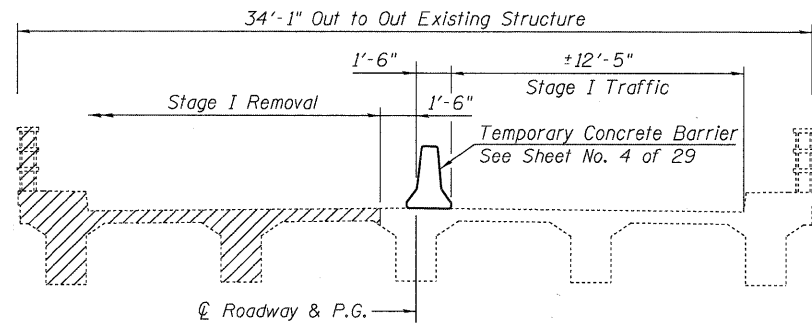
10/06/09



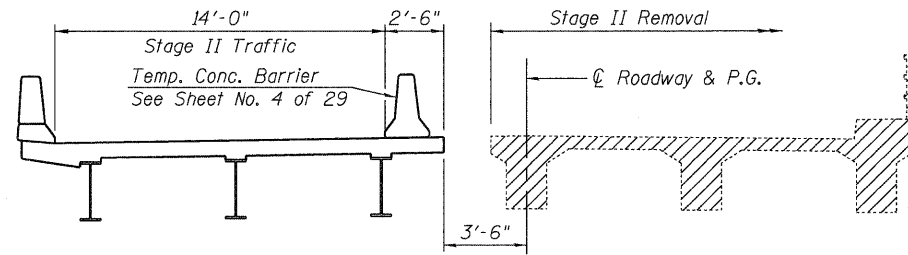
GENERAL STRUCTURE DATA
SN 028-0078

SHEET NO. 2 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	128
SN 028-0078			CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. A.D PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

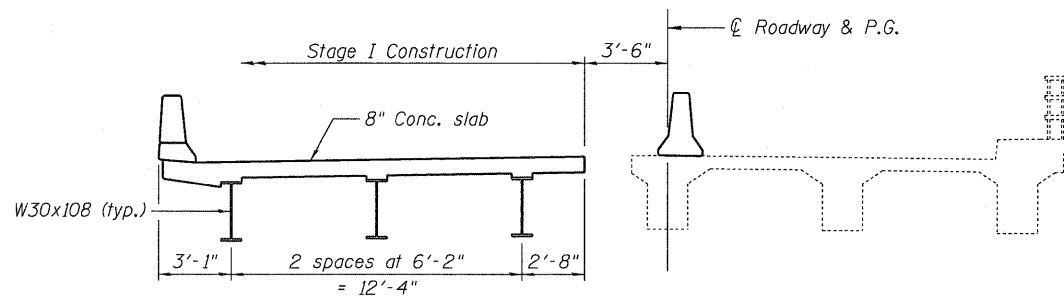


STAGE I REMOVAL
(Looking upstation)

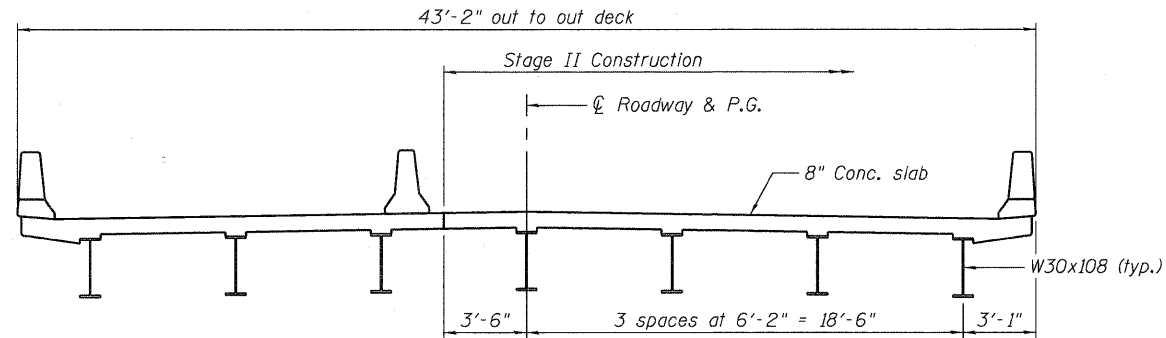


STAGE II REMOVAL
(Looking upstation)

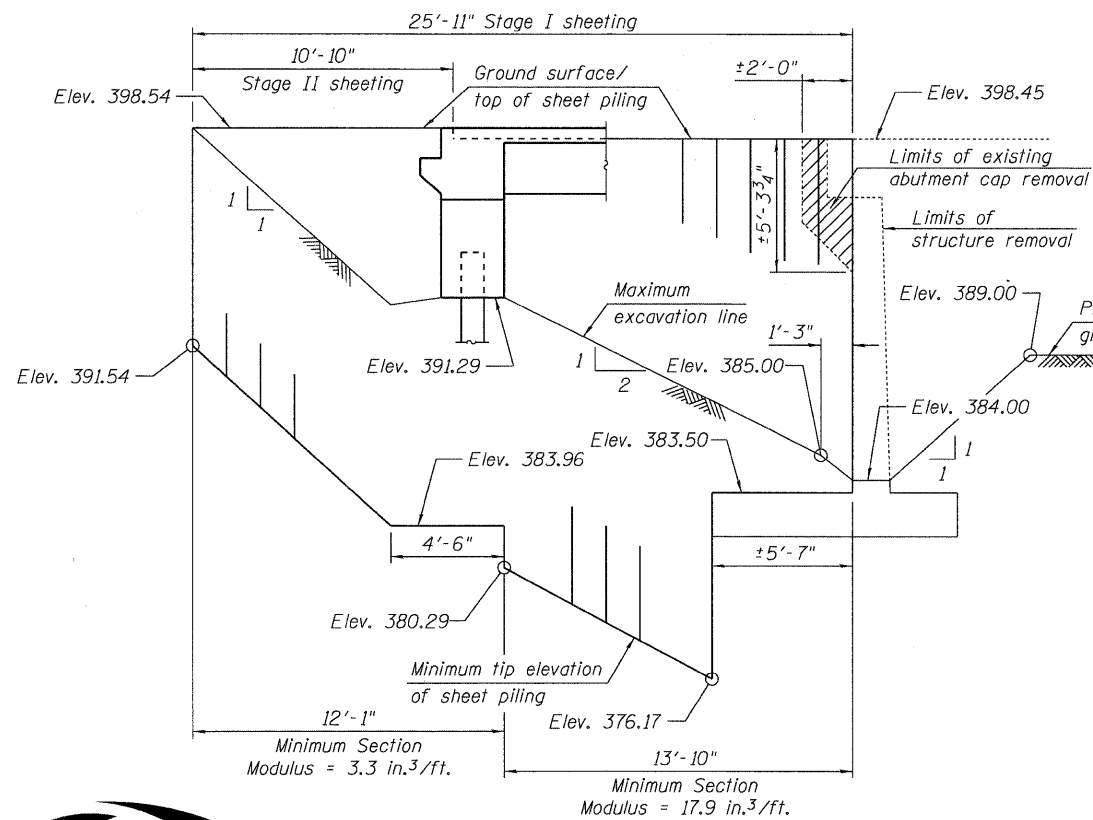
Notes:
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. The sheet pile connection to the existing abutment cap will require removal of a portion of the abutment cap. Sequence of construction and connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.



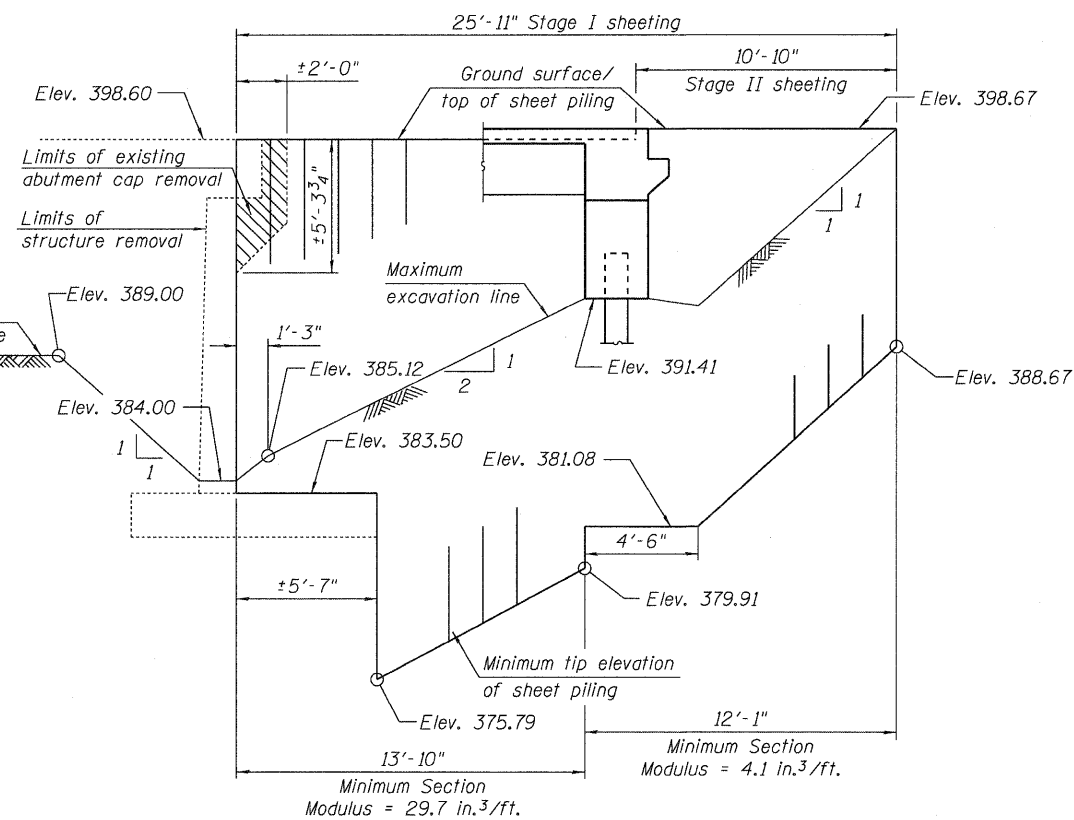
STAGE I CONSTRUCTION
(Looking upstation)



STAGE II CONSTRUCTION
(Looking upstation)



TEMPORARY SHEET PILING
(at North Abutment)



TEMPORARY SHEET PILING
(at South Abutment)

BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	1128

STAGE CONSTRUCTION DETAILS
SN 028-0078

DESIGNED	AMS
CHECKED	JMH
DRAWN	AEC
CHECKED	AMS

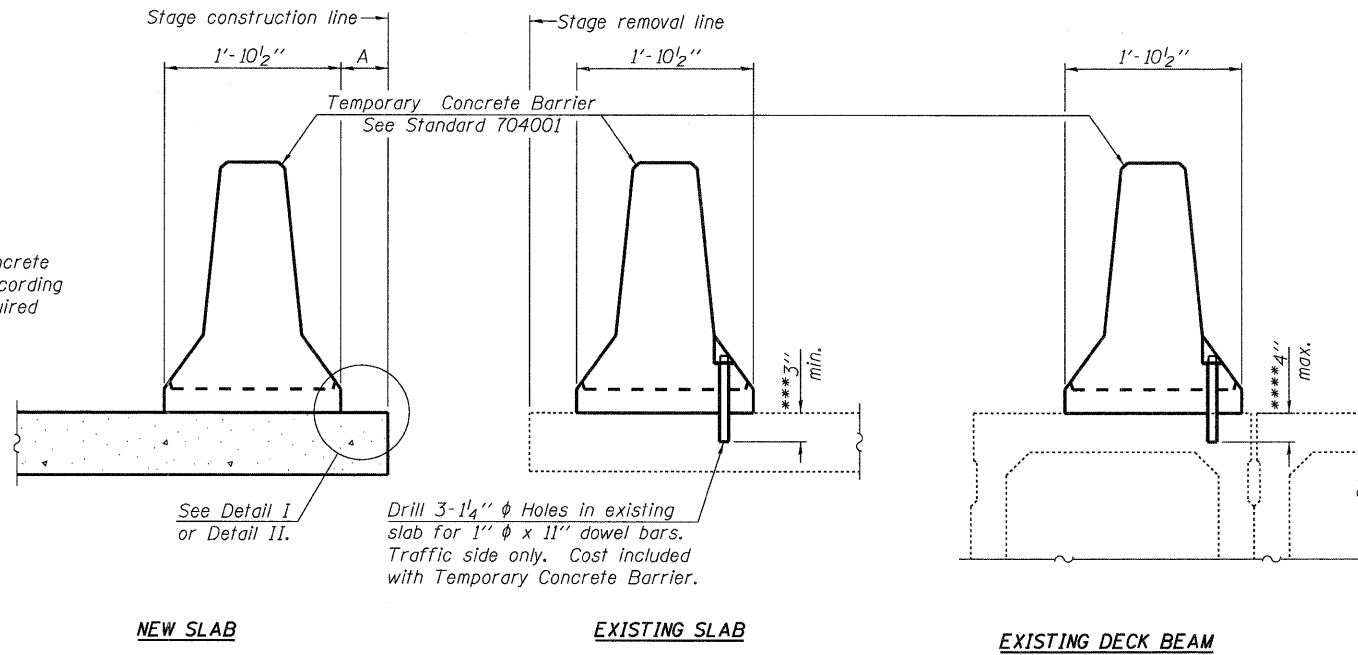


09/25/09

SHEET NO. 3 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	129
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

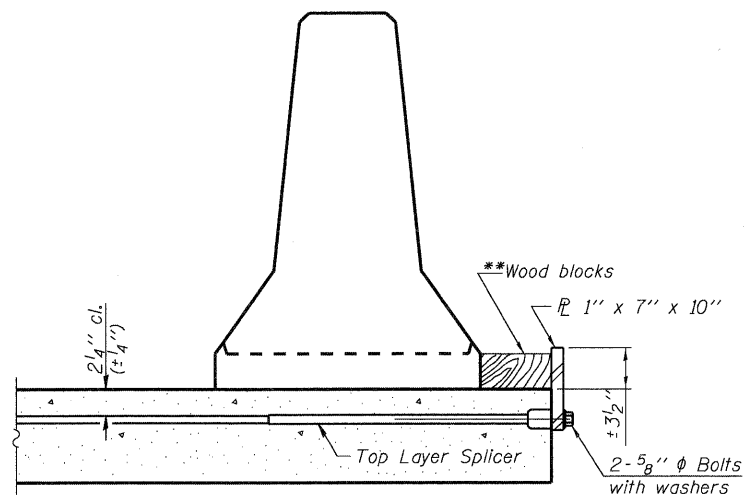
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

See Roadway Plans for quantity of Temporary Concrete Barrier.

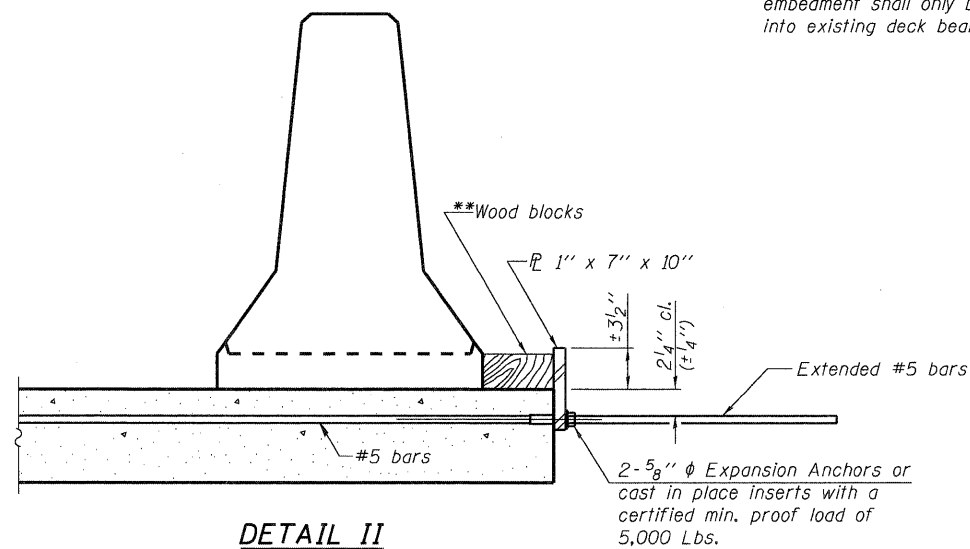
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

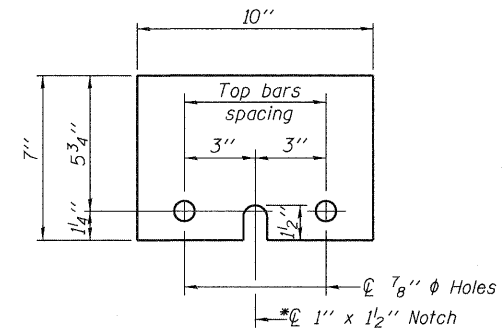
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
SN 028-0078**

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

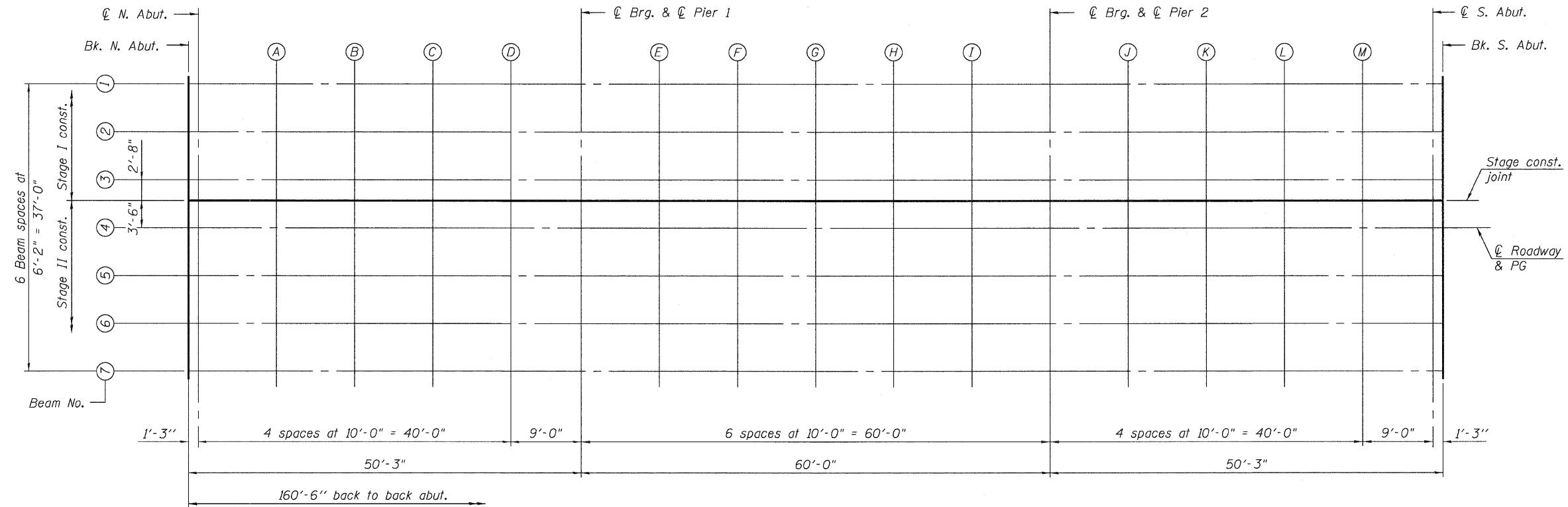


R-27

10-1-08

SHEET NO. 4 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	130
		SN 028-0078	CONTRACT NO. 98823		
		FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

TOP OF SLAB ELEVATIONS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

09/25/09



SHEET NO. 5	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	131
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	-18.50	398.22	398.22
☉ North Abut.	372+71.00	-18.50	398.23	398.23
A	372+81.00	-18.50	398.27	398.29
B	372+91.00	-18.50	398.30	398.34
C	373+01.00	-18.50	398.34	398.36
D	373+11.00	-18.50	398.36	398.37
☉ Brg. Pier 1	373+20.00	-18.50	398.38	398.38
E	373+30.00	-18.50	398.40	398.41
F	373+40.00	-18.50	398.42	398.44
G	373+50.00	-18.50	398.43	398.47
H	373+60.00	-18.50	398.44	398.46
I	373+70.00	-18.50	398.44	398.45
☉ Brg. Pier 2	373+80.00	-18.50	398.43	398.43
J	373+90.00	-18.50	398.43	398.44
K	374+00.00	-18.50	398.41	398.44
L	374+10.00	-18.50	398.40	398.43
M	374+20.00	-18.50	398.37	398.39
☉ South Abut.	374+29.00	-18.50	398.35	398.35
Bk. South Abut.	374+30.25	-18.50	398.35	398.35

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	-12.33	398.35	398.35
☉ North Abut.	372+71.00	-12.33	398.36	398.36
A	372+81.00	-12.33	398.40	398.42
B	372+91.00	-12.33	398.43	398.46
C	373+01.00	-12.33	398.46	398.49
D	373+11.00	-12.33	398.49	398.50
☉ Brg. Pier 1	373+20.00	-12.33	398.51	398.51
E	373+30.00	-12.33	398.53	398.54
F	373+40.00	-12.33	398.55	398.57
G	373+50.00	-12.33	398.56	398.60
H	373+60.00	-12.33	398.57	398.59
I	373+70.00	-12.33	398.57	398.58
☉ Brg. Pier 2	373+80.00	-12.33	398.56	398.56
J	373+90.00	-12.33	398.55	398.56
K	374+00.00	-12.33	398.54	398.57
L	374+10.00	-12.33	398.52	398.56
M	374+20.00	-12.33	398.50	398.52
☉ South Abut.	374+29.00	-12.33	398.48	398.48
Bk. South Abut.	374+30.25	-12.33	398.48	398.48

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	-6.17	398.45	398.45
☉ North Abut.	372+71.00	-6.17	398.45	398.45
A	372+81.00	-6.17	398.49	398.52
B	372+91.00	-6.17	398.53	398.56
C	373+01.00	-6.17	398.56	398.59
D	373+11.00	-6.17	398.59	398.60
☉ Brg. Pier 1	373+20.00	-6.17	398.61	398.61
E	373+30.00	-6.17	398.63	398.64
F	373+40.00	-6.17	398.64	398.67
G	373+50.00	-6.17	398.66	398.69
H	373+60.00	-6.17	398.66	398.69
I	373+70.00	-6.17	398.66	398.67
☉ Brg. Pier 2	373+80.00	-6.17	398.66	398.66
J	373+90.00	-6.17	398.65	398.66
K	374+00.00	-6.17	398.64	398.67
L	374+10.00	-6.17	398.62	398.65
M	374+20.00	-6.17	398.60	398.62
☉ South Abut.	374+29.00	-6.17	398.58	398.58
Bk. South Abut.	374+30.25	-6.17	398.57	398.57

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

09/25/09



TOP OF SLAB ELEVATIONS
SN 028-0078

SHEET NO. 6	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	132
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	-3.50	398.49	398.49
☉ North Abut.	372+71.00	-3.50	398.49	398.49
A	372+81.00	-3.50	398.54	398.56
B	372+91.00	-3.50	398.57	398.60
C	373+01.00	-3.50	398.60	398.63
D	373+11.00	-3.50	398.63	398.64
☉ Brg. Pier 1	373+20.00	-3.50	398.65	398.65
E	373+30.00	-3.50	398.67	398.68
F	373+40.00	-3.50	398.68	398.71
G	373+50.00	-3.50	398.70	398.74
H	373+60.00	-3.50	398.70	398.73
I	373+70.00	-3.50	398.71	398.72
☉ Brg. Pier 2	373+80.00	-3.50	398.70	398.70
J	373+90.00	-3.50	398.69	398.70
K	374+00.00	-3.50	398.68	398.71
L	374+10.00	-3.50	398.66	398.70
M	374+20.00	-3.50	398.64	398.66
☉ South Abut.	374+29.00	-3.50	398.62	398.62
Bk. South Abut.	374+30.25	-3.50	398.61	398.61

☉ ROADWAY, P.G. & BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	0.00	398.54	398.54
☉ North Abut.	372+71.00	0.00	398.55	398.55
A	372+81.00	0.00	398.59	398.61
B	372+91.00	0.00	398.63	398.66
C	373+01.00	0.00	398.66	398.68
D	373+11.00	0.00	398.69	398.69
☉ Brg. Pier 1	373+20.00	0.00	398.71	398.71
E	373+30.00	0.00	398.73	398.74
F	373+40.00	0.00	398.74	398.77
G	373+50.00	0.00	398.75	398.79
H	373+60.00	0.00	398.76	398.79
I	373+70.00	0.00	398.76	398.77
☉ Brg. Pier 2	373+80.00	0.00	398.76	398.76
J	373+90.00	0.00	398.75	398.76
K	374+00.00	0.00	398.74	398.76
L	374+10.00	0.00	398.72	398.75
M	374+20.00	0.00	398.70	398.72
☉ South Abut.	374+29.00	0.00	398.67	398.67
Bk. South Abut.	374+30.25	0.00	398.67	398.67

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	6.17	398.45	398.45
☉ North Abut.	372+71.00	6.17	398.45	398.45
A	372+81.00	6.17	398.49	398.52
B	372+91.00	6.17	398.53	398.56
C	373+01.00	6.17	398.56	398.59
D	373+11.00	6.17	398.59	398.60
☉ Brg. Pier 1	373+20.00	6.17	398.61	398.61
E	373+30.00	6.17	398.63	398.64
F	373+40.00	6.17	398.64	398.67
G	373+50.00	6.17	398.66	398.69
H	373+60.00	6.17	398.66	398.69
I	373+70.00	6.17	398.66	398.67
☉ Brg. Pier 2	373+80.00	6.17	398.66	398.66
J	373+90.00	6.17	398.65	398.66
K	374+00.00	6.17	398.64	398.67
L	374+10.00	6.17	398.62	398.65
M	374+20.00	6.17	398.60	398.62
☉ South Abut.	374+29.00	6.17	398.58	398.58
Bk. South Abut.	374+30.25	6.17	398.57	398.57

TOP OF SLAB ELEVATIONS
SN 028-0078

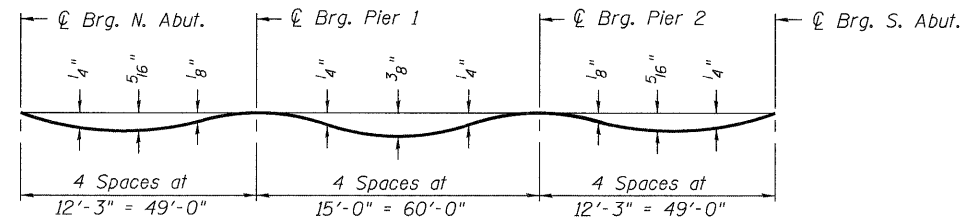
DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



09/25/09

SHEET NO. 7	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	133
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

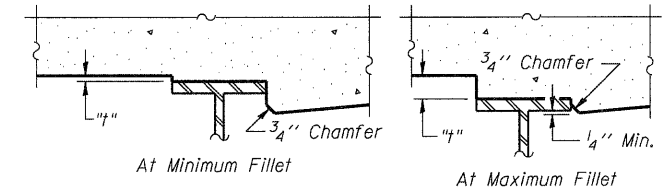


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet Nos. 6 thru 8 of 29.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on Sheet No. 5 of 29. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" shown on Sheet Nos. 6 thru 8 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	12.33	398.35	398.35
┆ North Abut.	372+71.00	12.33	398.36	398.36
A	372+81.00	12.33	398.40	398.42
B	372+91.00	12.33	398.43	398.46
C	373+01.00	12.33	398.46	398.49
D	373+11.00	12.33	398.49	398.50
┆ Brg. Pier 1	373+20.00	12.33	398.51	398.51
E	373+30.00	12.33	398.53	398.54
F	373+40.00	12.33	398.55	398.57
G	373+50.00	12.33	398.56	398.60
H	373+60.00	12.33	398.57	398.59
I	373+70.00	12.33	398.57	398.58
┆ Brg. Pier 2	373+80.00	12.33	398.56	398.56
J	373+90.00	12.33	398.55	398.56
K	374+00.00	12.33	398.54	398.57
L	374+10.00	12.33	398.52	398.56
M	374+20.00	12.33	398.50	398.52
┆ South Abut.	374+29.00	12.33	398.48	398.48
Bk. South Abut.	374+30.25	12.33	398.48	398.48

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	372+69.75	18.50	398.22	398.22
┆ North Abut.	372+71.00	18.50	398.23	398.23
A	372+81.00	18.50	398.27	398.29
B	372+91.00	18.50	398.30	398.34
C	373+01.00	18.50	398.34	398.36
D	373+11.00	18.50	398.36	398.37
┆ Brg. Pier 1	373+20.00	18.50	398.38	398.38
E	373+30.00	18.50	398.40	398.41
F	373+40.00	18.50	398.42	398.44
G	373+50.00	18.50	398.43	398.47
H	373+60.00	18.50	398.44	398.46
I	373+70.00	18.50	398.44	398.45
┆ Brg. Pier 2	373+80.00	18.50	398.43	398.43
J	373+90.00	18.50	398.43	398.44
K	374+00.00	18.50	398.41	398.44
L	374+10.00	18.50	398.40	398.43
M	374+20.00	18.50	398.37	398.39
┆ South Abut.	374+29.00	18.50	398.35	398.35
Bk. South Abut.	374+30.25	18.50	398.35	398.35

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

09/25/09



**TOP OF SLAB ELEVATIONS
SN 028-0078**

SHEET NO. 8	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	134
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	-20.00	398.04
A	372+49.75	-20.00	398.09
B	372+59.75	-20.00	398.14
Bk. North Abut.	372+69.75	-20.00	398.19

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	-12.00	398.21
A	372+49.75	-12.00	398.26
B	372+59.75	-12.00	398.31
Bk. North Abut.	372+69.75	-12.00	398.36

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	-3.50	398.34
A	372+49.75	-3.50	398.39
B	372+59.75	-3.50	398.44
Bk. North Abut.	372+69.75	-3.50	398.49

☉ ROADWAY & P.G.

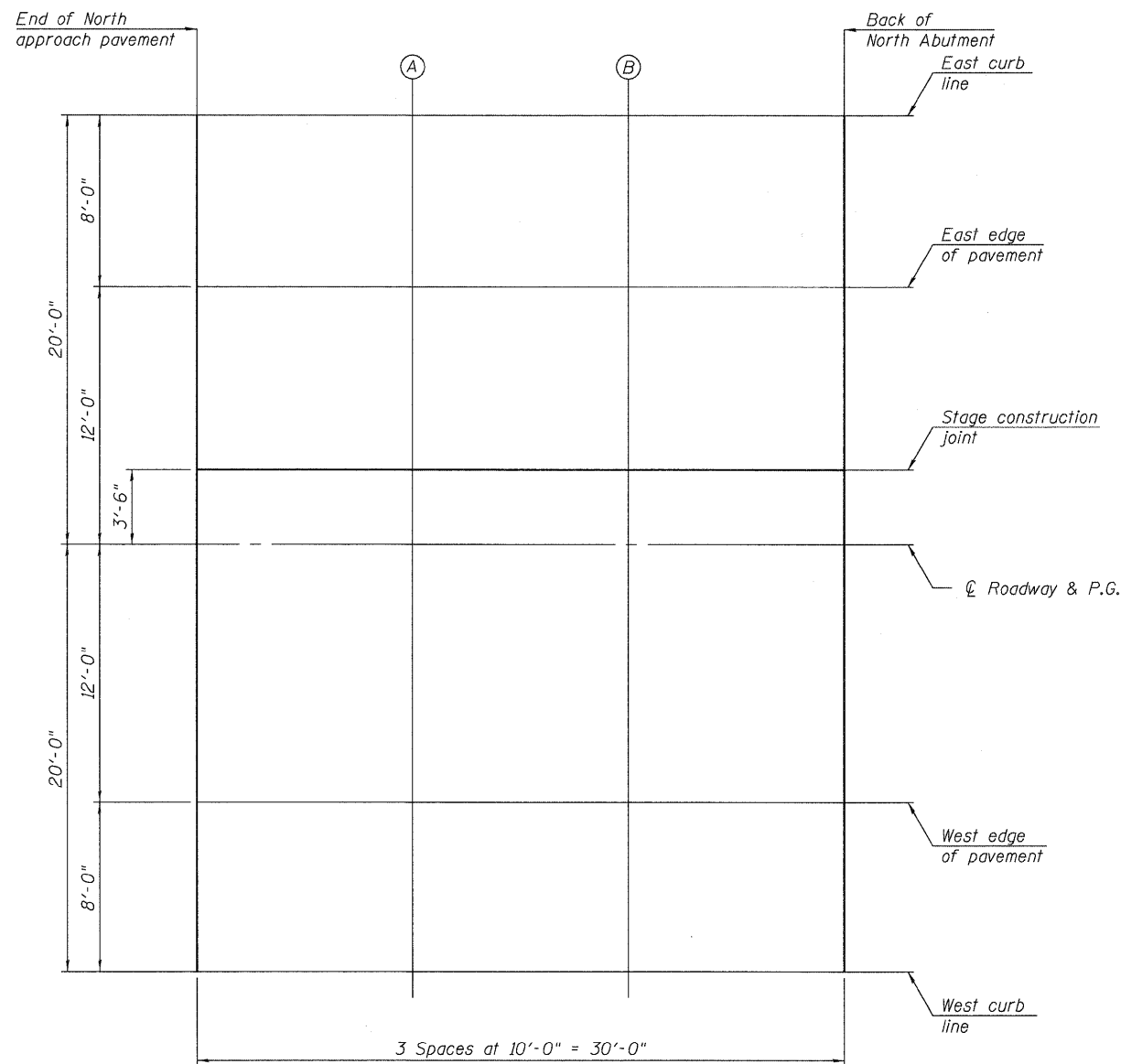
Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	0.00	398.39
A	372+49.75	0.00	398.45
B	372+59.75	0.00	398.50
Bk. North Abut.	372+69.75	0.00	398.54

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	12.00	398.21
A	372+49.75	12.00	398.26
B	372+59.75	12.00	398.31
Bk. North Abut.	372+69.75	12.00	398.36

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End North Appr. Pav't.	372+39.75	20.00	398.04
A	372+49.75	20.00	398.09
B	372+59.75	20.00	398.14
Bk. North Abut.	372+69.75	20.00	398.19



PLAN

TOP OF NORTH APPROACH
SLAB ELEVATIONS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



09/25/09

SHEET NO. 9	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	135
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	-20.00	398.32
A	374+40.25	-20.00	398.35
B	374+50.25	-20.00	398.37
End South Appr. Pav't.	374+60.25	-20.00	398.39

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	-12.00	398.48
A	374+40.25	-12.00	398.51
B	374+50.25	-12.00	398.53
End South Appr. Pav't.	374+60.25	-12.00	398.55

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	-3.50	398.61
A	374+40.25	-3.50	398.60
B	374+50.25	-3.50	398.58
End South Appr. Pav't.	374+60.25	-3.50	398.56

☉ ROADWAY & P.G.

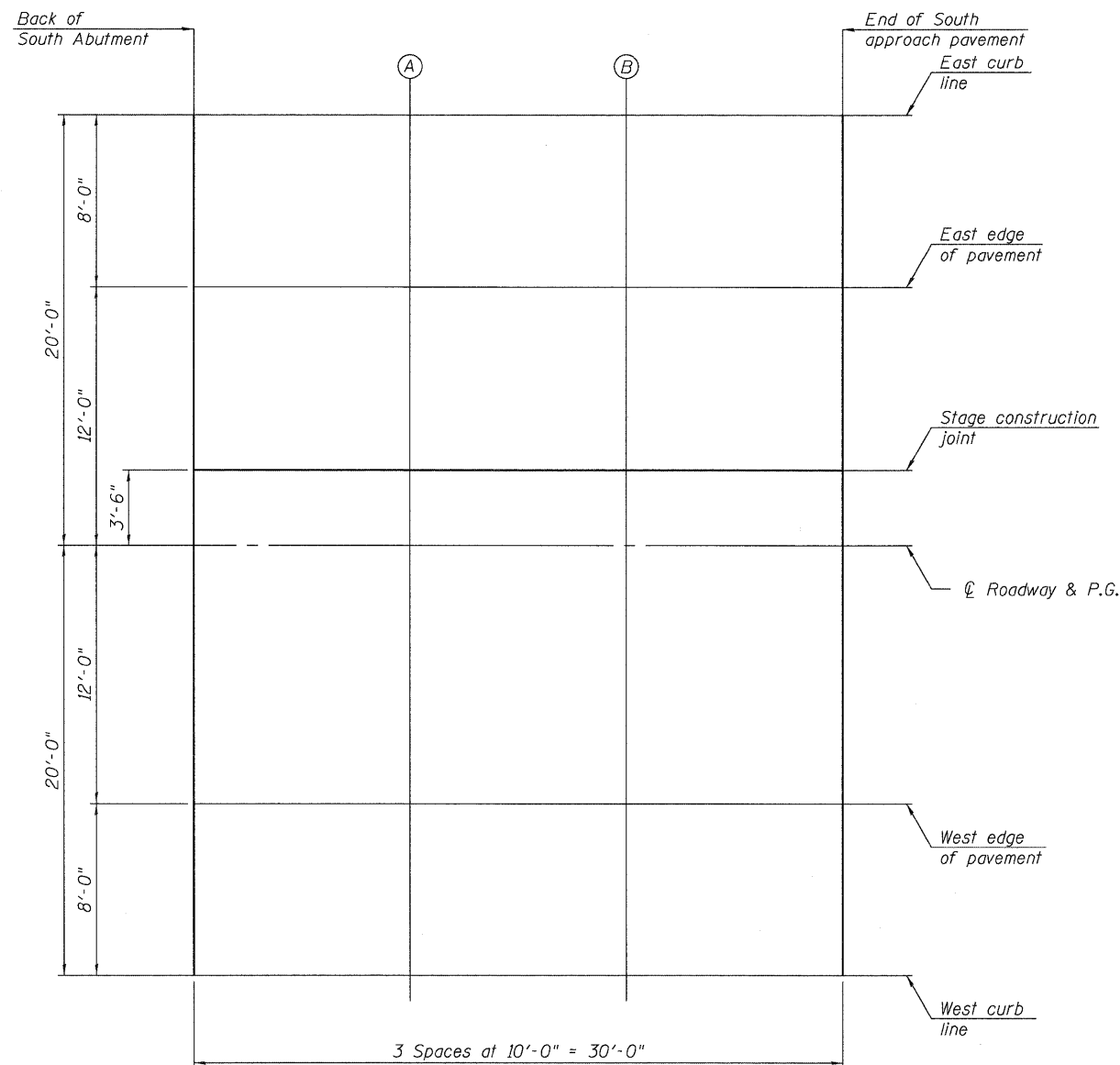
Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	0.00	398.67
A	374+40.25	0.00	398.64
B	374+50.25	0.00	398.60
End South Appr. Pav't.	374+60.25	0.00	398.56

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	12.00	398.48
A	374+40.25	12.00	398.44
B	374+50.25	12.00	398.40
End South Appr. Pav't.	374+60.25	12.00	398.35

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. South Abut.	374+30.25	20.00	398.32
A	374+40.25	20.00	398.28
B	374+50.25	20.00	398.24
End South Appr. Pav't.	374+60.25	20.00	398.19



PLAN

TOP OF SOUTH APPROACH
SLAB ELEVATIONS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

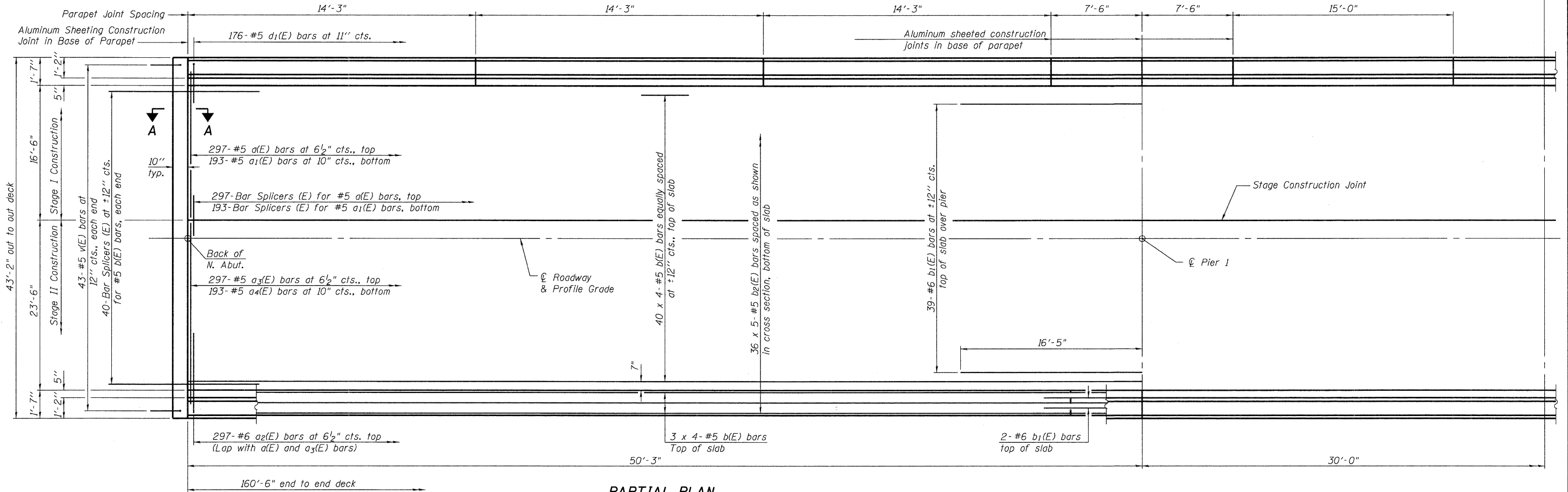


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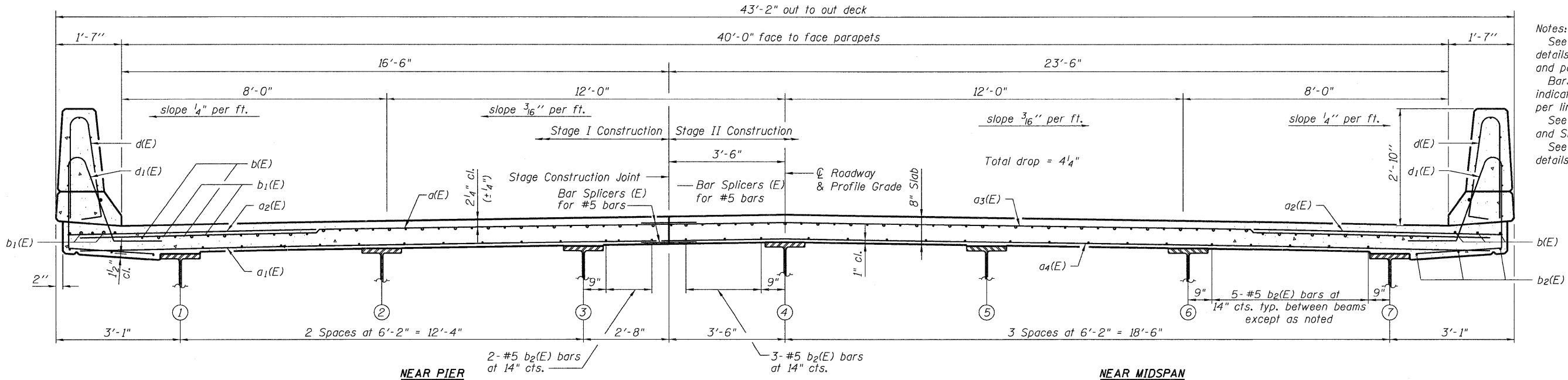
SHEET NO. 10	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29 SHEETS	9481	12B1-1	FRANKLIN	304	136
		SN 028-0078	CONTRACT NO. 98823		
		FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Symmetrical
about \bar{C} Span 2



PARTIAL PLAN



CROSS SECTION
(Looking South)

Notes:
See Sheet 12 of 29 for superstructure details, Superstructure Bill of Material, and parapet reinforcement.
Bars indicated thus 36 x 5- #5 etc. indicates 36 lines of bars with 5 lengths per line.
See Sheet 1 of 29 for drain locations and Sheet 12 of 29 for drain details.
See Sheet 13 of 29 for Section A-A details.

MINIMUM BAR LAP
(Slab)
#5 Bar = 1'-8"

SUPERSTRUCTURE
SN 028-0078

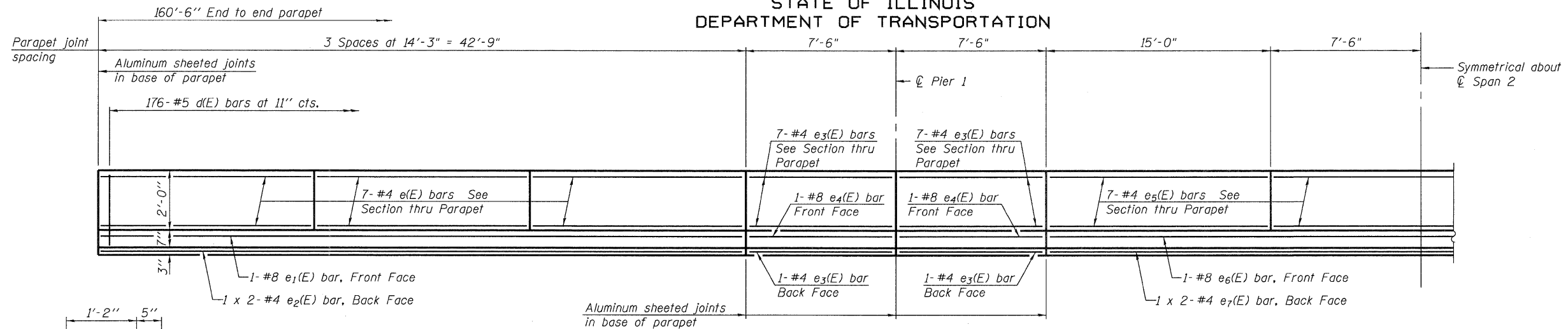
DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



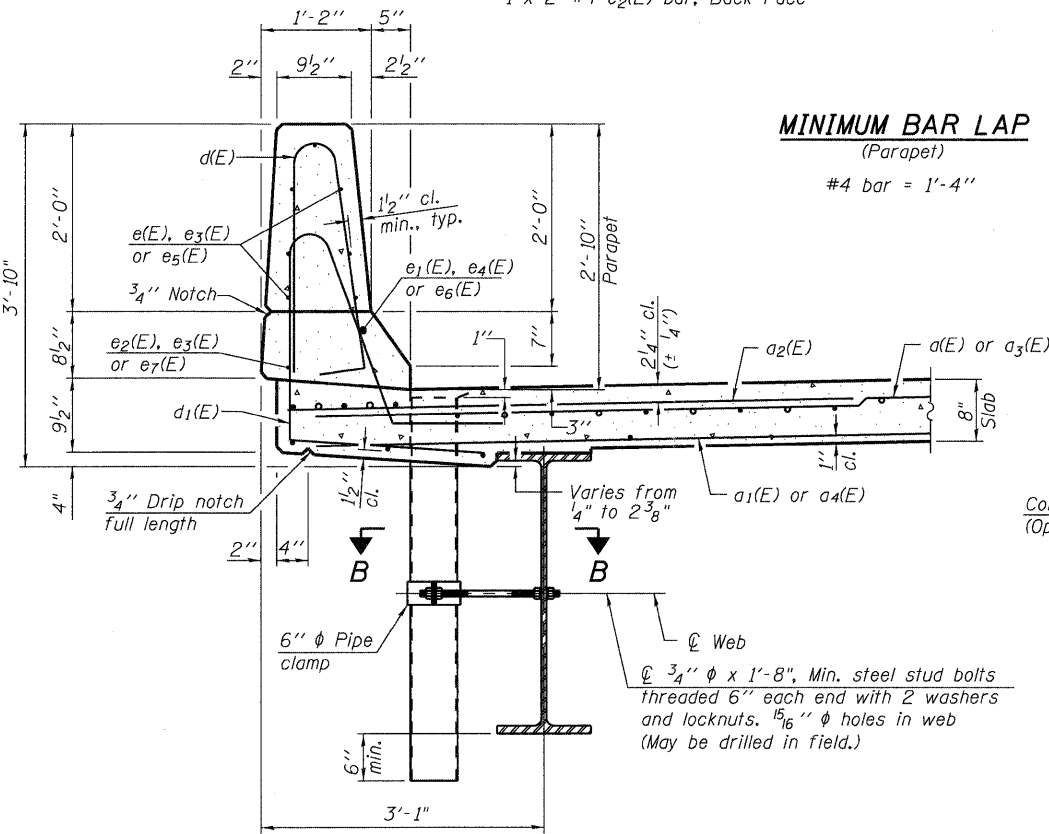
09/25/09

SHEET NO. 11 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 137
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

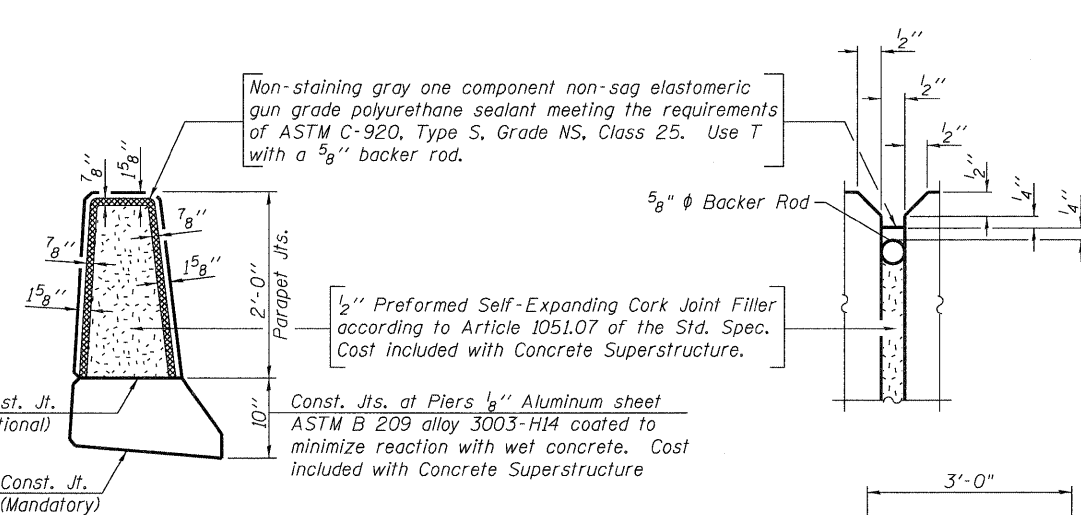
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET

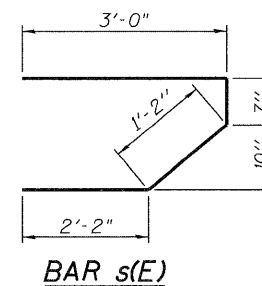


SECTION THRU PARAPET

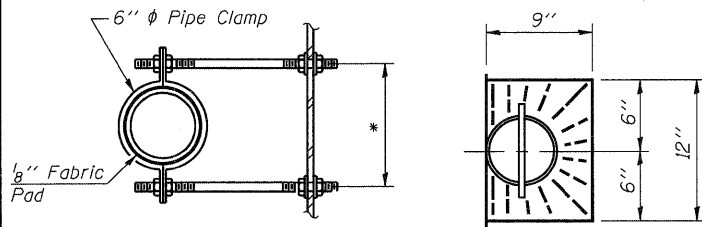


PARAPET JOINT DETAILS

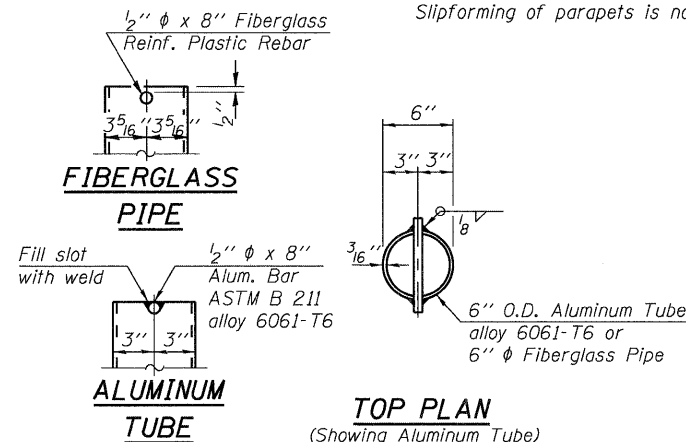
Notes:
All edges of concrete structures shall have a standard 3/4" chamfer, except as noted.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SPI prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The clamping device and inserts shall be galvanized according to AASHTO M 232.
Slipforming of parapets is not allowed.



BAR s(E)

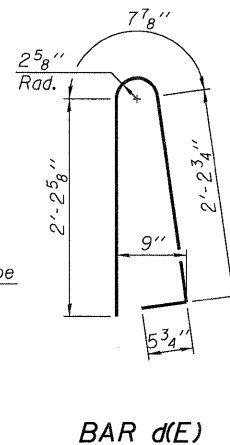


SECTION B-B
*Dimension as required by Pipe Clamp

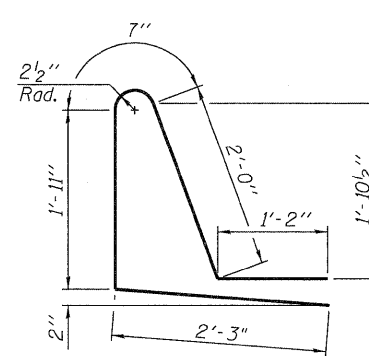


FIBERGLASS PIPE
ALUMINUM TUBE

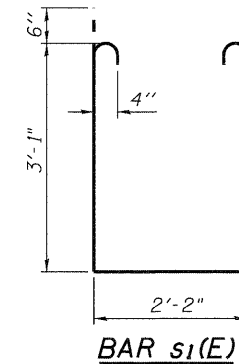
TOP PLAN
(Showing Aluminum Tube)



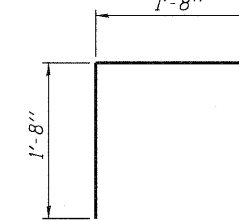
BAR d(E)



BAR d1(E)



BAR s1(E)



BAR v(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	297	#5	17'-7"	—
a1(E)	193	#5	17'-4"	—
a2(E)	594	#6	6'-0"	—
a3(E)	297	#5	24'-8"	—
a4(E)	193	#5	24'-5"	—
b(E)	184	#5	41'-4"	—
b1(E)	86	#6	32'-10"	—
b2(E)	180	#5	33'-5"	—
d(E)	352	#5	5'-7"	┘
d1(E)	352	#5	7'-11"	┘
e(E)	84	#4	14'-0"	—
e1(E)	4	#8	42'-6"	—
e2(E)	8	#4	21'-11"	—
e3(E)	64	#4	7'-3"	—
e4(E)	8	#8	7'-3"	—
e5(E)	42	#4	14'-9"	—
e6(E)	2	#8	44'-9"	—
e7(E)	4	#4	23'-1"	—
m(E)	10	#6	17'-9"	—
m1(E)	12	#6	7'-10"	—
m2(E)	10	#6	5'-10"	—
m3(E)	4	#6	2'-9"	—
m4(E)	2	#6	2'-3"	—
m5(E)	2	#6	3'-3"	—
m6(E)	10	#6	24'-10"	—
m7(E)	16	#6	8'-4"	—
s(E)	84	#5	6'-11"	┘
s1(E)	72	#4	9'-4"	┘
v(E)	86	#5	3'-4"	┘
Reinforcement Bars, Epoxy Coated		Pound	55,250	
Concrete Superstructure		Cu. Yd.	243.5	
Bridge Deck Grooving		Sq. Yd.	678	
Protective Coat		Sq. Yd.	847	

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

Note:
For details of bar splicers, see sheet 25 of 29.

SUPERSTRUCTURE DETAILS
SN 028-0078

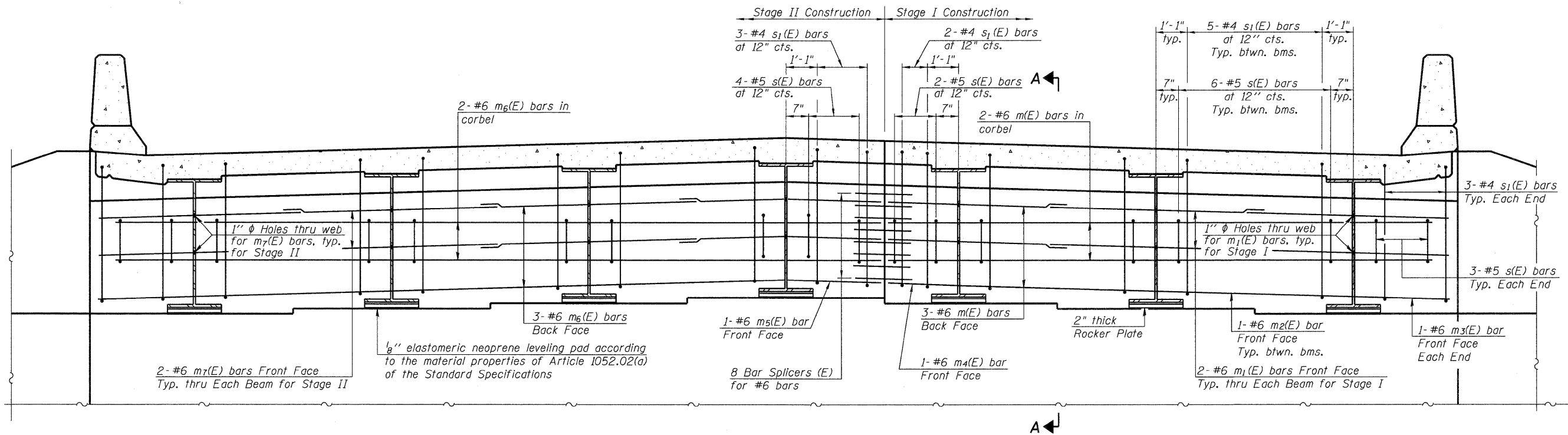
DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



09/25/09

SHEET NO. 12 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 138
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

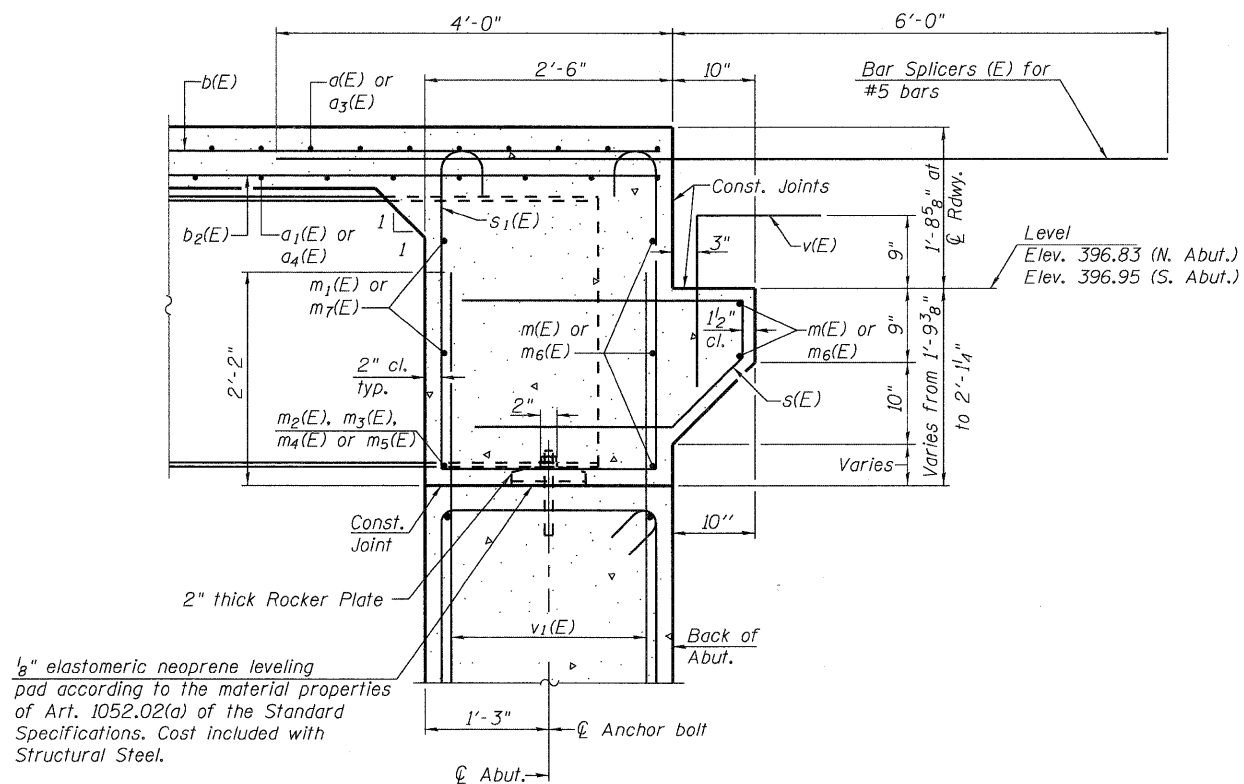
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DIAPHRAGM ELEVATION AT ABUTMENT
(North Abutment Shown, Looking North. South Abutment Similar.)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 29.
Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 29.
For details of bar v(E), see sheets 11 and 12 of 29.
For details of bars s(E) & s₁(E), see sheet 12 of 29.
The s(E) and s₁(E) bars shall be placed parallel to the beams.
For details of bar v₁(E), see sheets 19 and 20 of 29.

MIN. BAR LAP
(Diaphragm)
#6 bar = 2'-9"



SECTION A-A

DIAPHRAGM DETAILS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

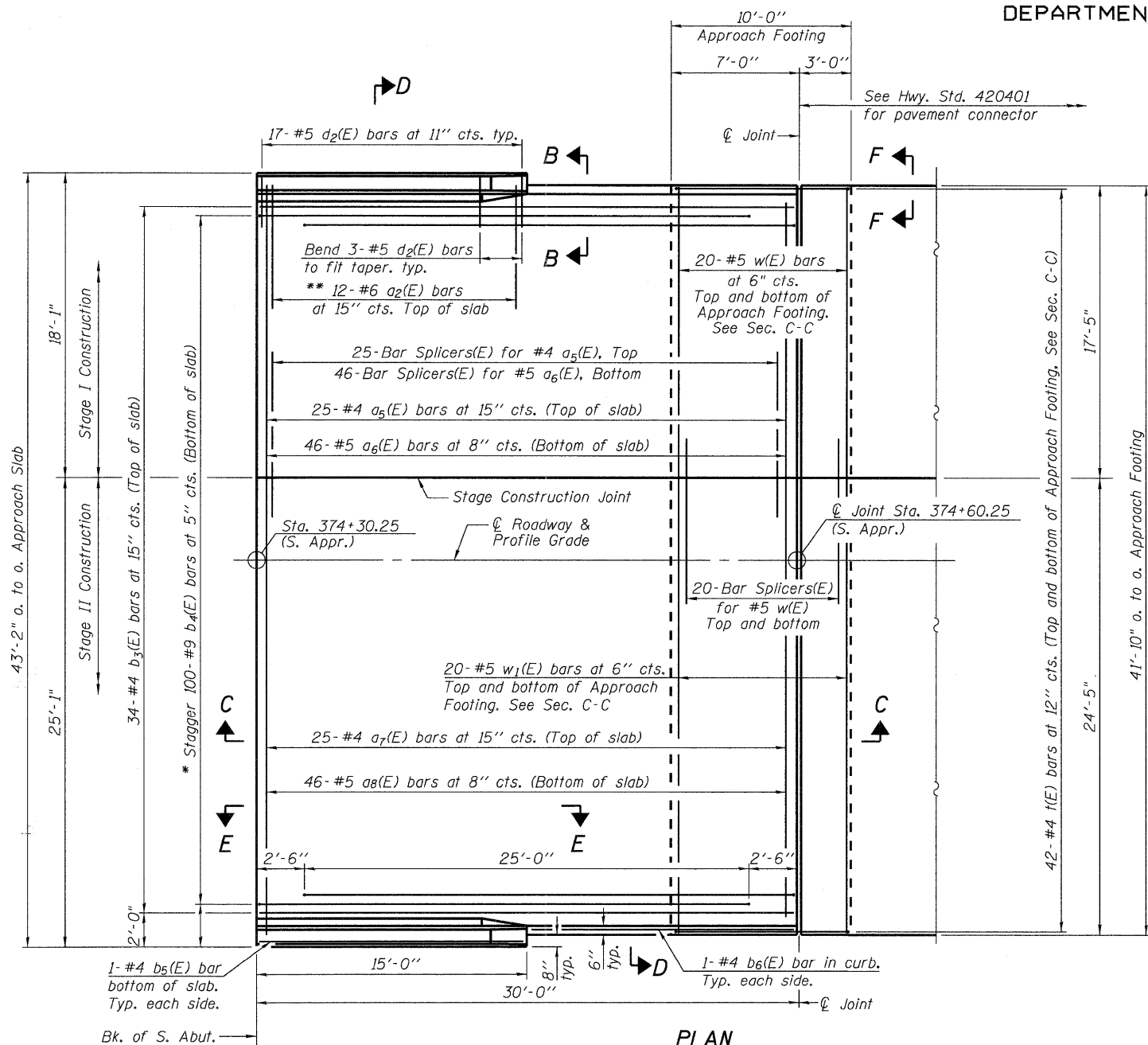


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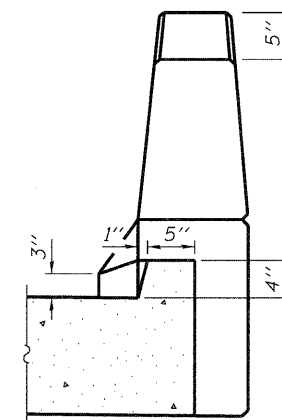
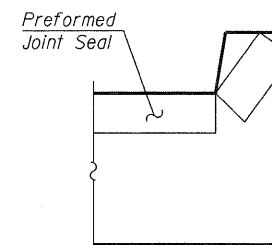
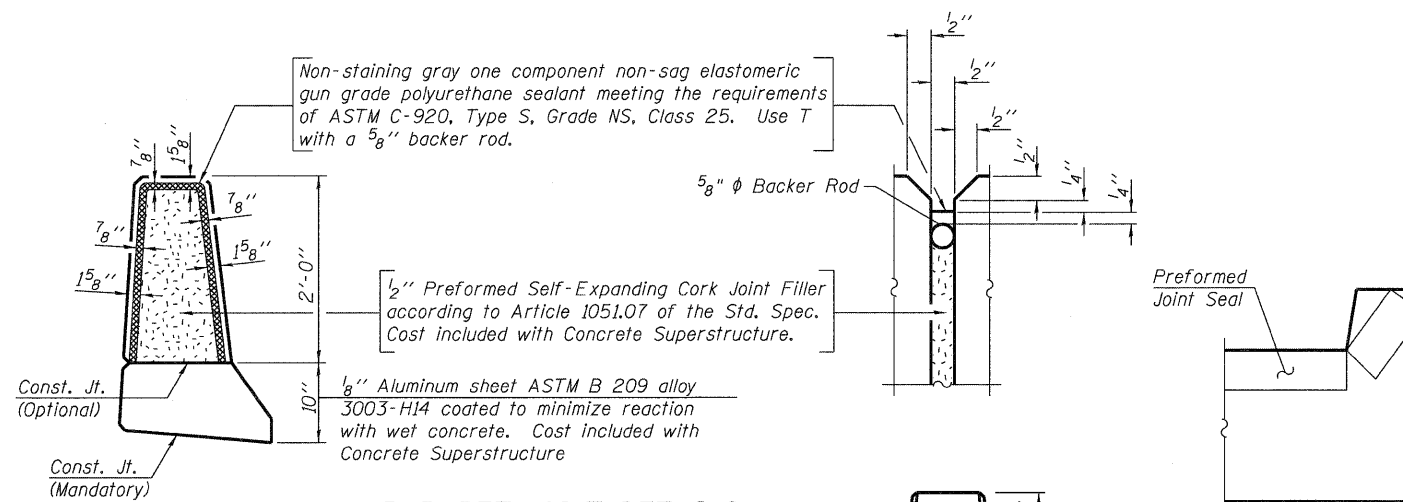
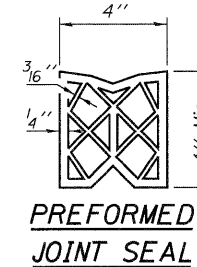
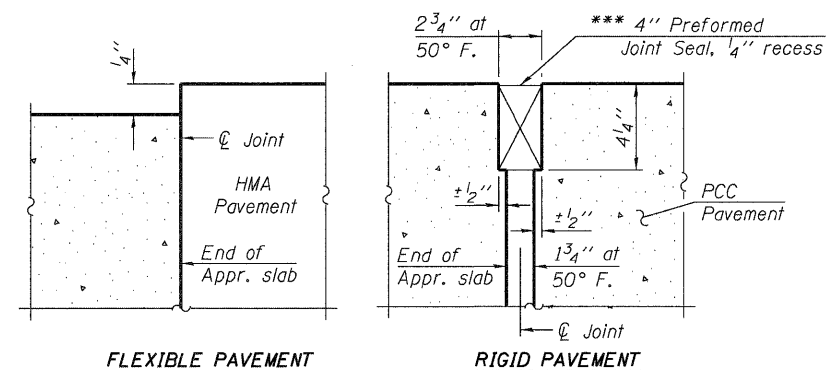
SHEET NO. 13 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 139
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

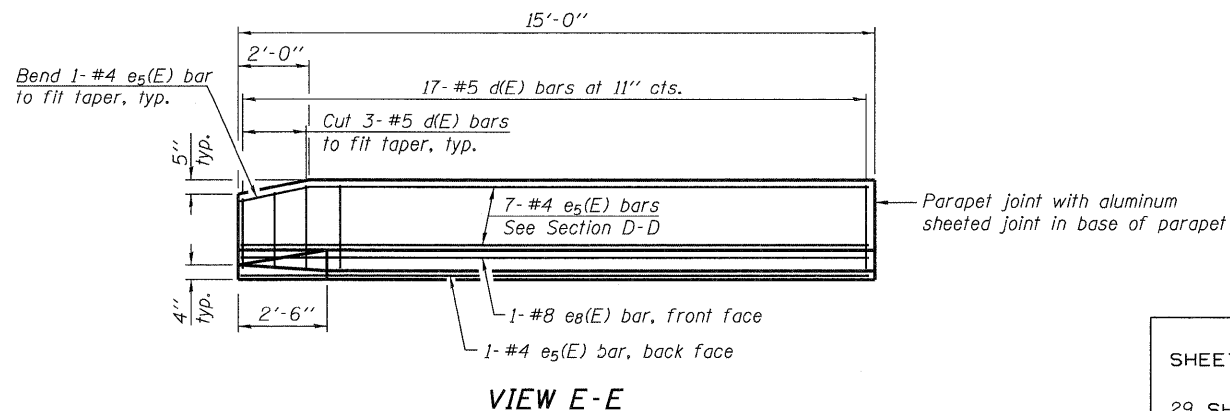
*** Cost included with Concrete Superstructure.



* Tilt #9 b4(E) bars as required to maintain clearance.
** Alternate with a5(E) and a7(E) bars, typ. ea. parapet.



Notes:
See Sheet 15 of 29 for Sections C-C and D-D.
a5(E), a6(E), and w(E) bar spacings measured parallel to $\bar{\bar{C}}$ Rdwy.
Slipforming of parapets is not allowed.



DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM



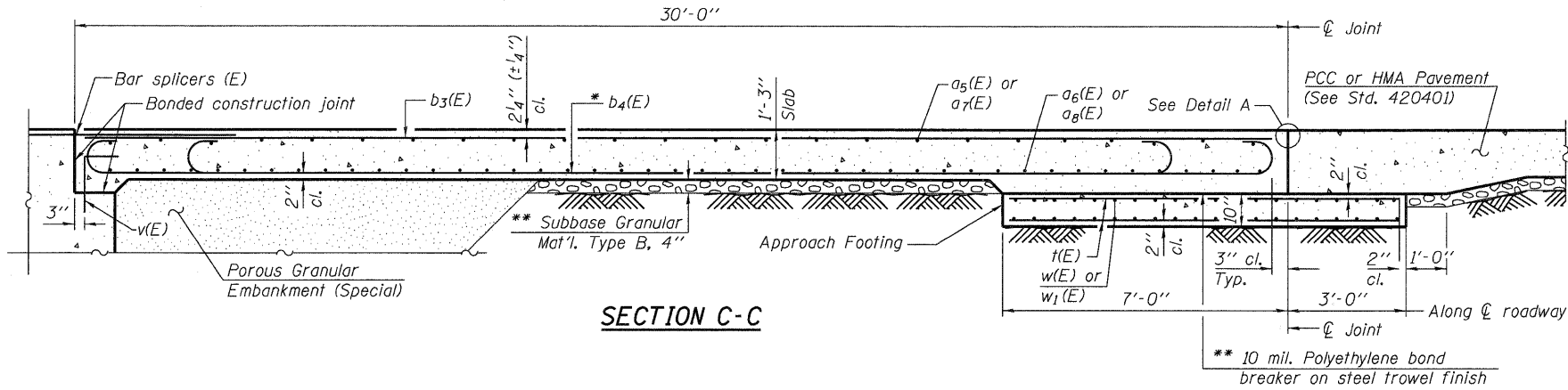
09/25/09

BRIDGE APPROACH SLAB DETAILS
SN 028-0078

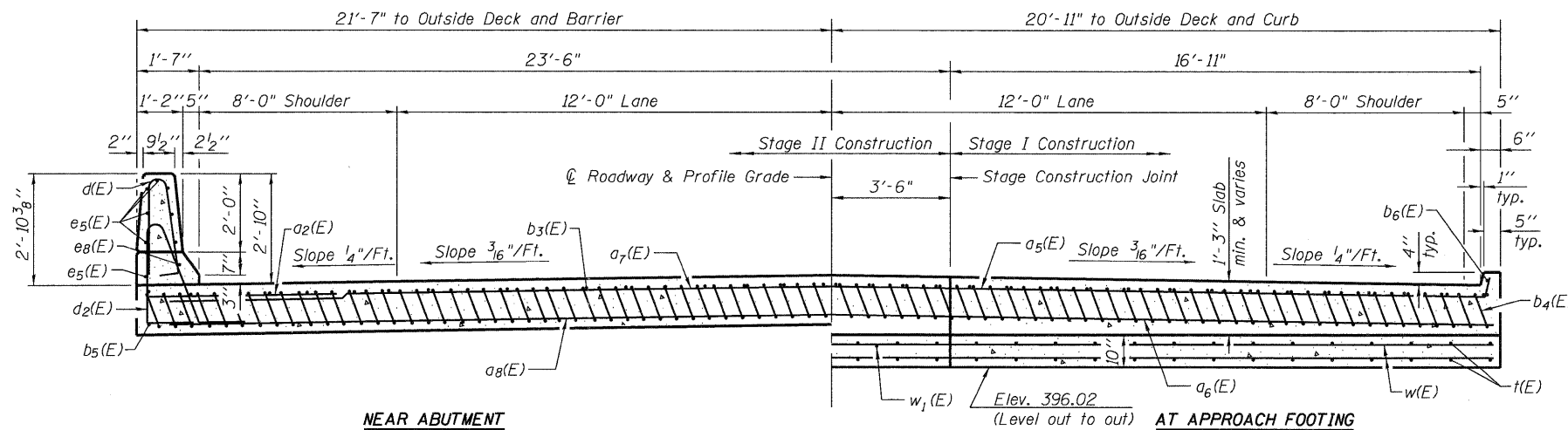
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	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

* Tilt #9 b₄(E) bars as required to maintain clearance.
 ** Cost included with Concrete Superstructure.

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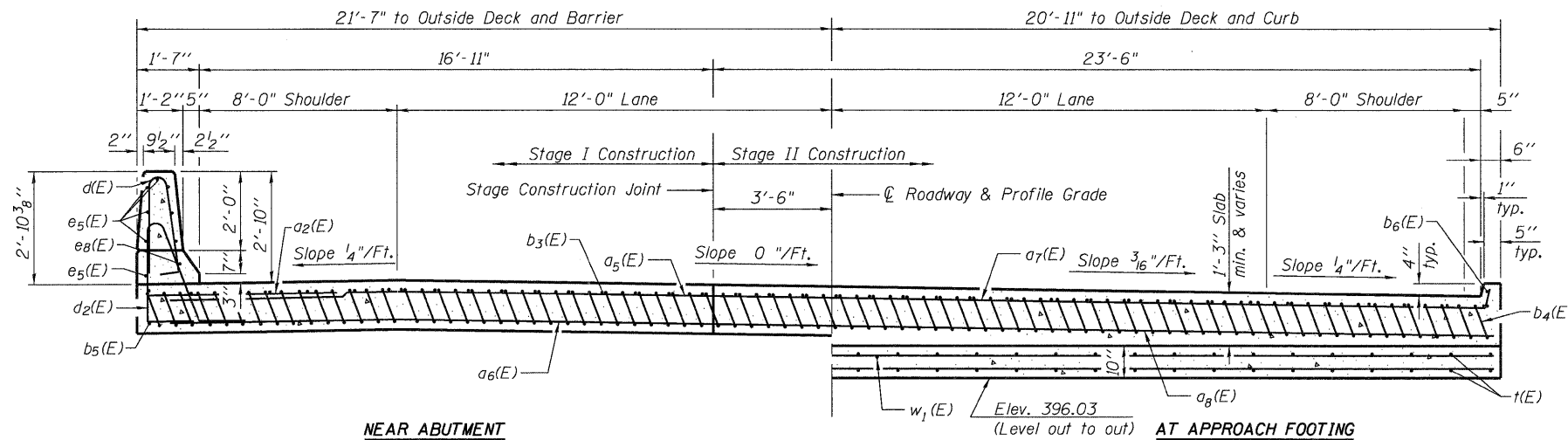


SECTION C-C



SECTION D-D - NORTH ABUTMENT

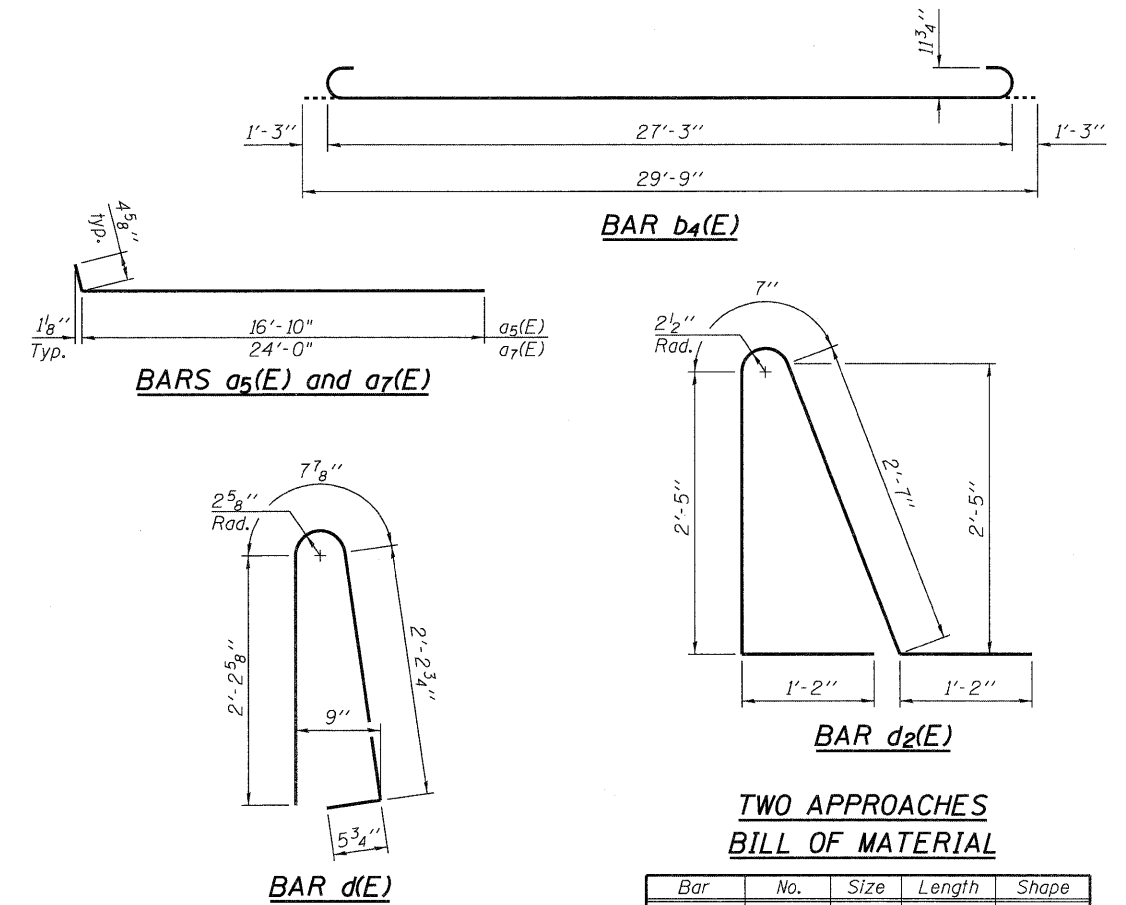
(Looking North)
 (See Plan for dimensions not shown)



SECTION D-D - SOUTH ABUTMENT

(Looking South)
 (See Plan for dimensions not shown)

Note:
 Cross slope varies along length of south bridge approach slab. Cross slope transitions from bridge cross slope at south abutment to dimensions shown in Section D-D at Sta. 374+60.25.



TWO APPROACHES
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₂ (E)	48	#6	6'-0"	—
a ₅ (E)	50	#4	17'-3"	—
a ₆ (E)	92	#5	17'-0"	—
a ₇ (E)	50	#4	24'-5"	—
a ₈ (E)	92	#5	24'-2"	—
b ₃ (E)	68	#4	29'-8"	—
b ₄ (E)	200	#9	29'-9"	—
b ₅ (E)	4	#4	14'-9"	—
b ₆ (E)	4	#4	14'-9"	—
d(E)	68	#5	5'-7"	U
d ₂ (E)	68	#5	7'-11"	U
e ₅ (E)	32	#4	14'-9"	—
e ₈ (E)	4	#8	14'-9"	—
t(E)	168	#4	9'-8"	—
w(E)	80	#5	17'-0"	—
w ₁ (E)	80	#5	24'-2"	—
Concrete Superstructure		Cu. Yd.	130.7	
Concrete Structures		Cu. Yd.	25.7	
Bridge Deck Grooving		Sq. Yd.	256	
Protective Coat		Sq. Yd.	300	
Reinforcement Bars, Epoxy Coated		Pound	33,390	

Notes:
 See Sheet 14 of 29 for Detail A.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see Sheets 11, 12 and 13 of 29.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 For bar splicer details, see Sheet 25 of 29.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see Sheet 2 of 29.

BRIDGE APPROACH SLAB DETAILS
 SN 028-0078

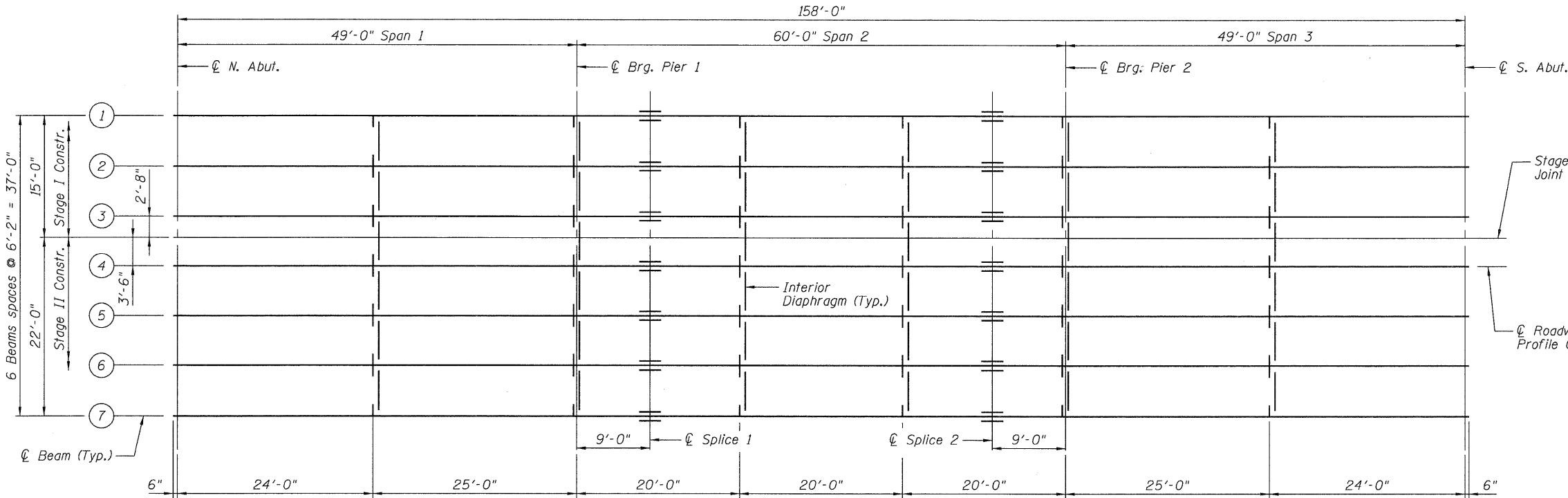
DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM



09/25/09

SHEET NO. 15 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 141
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Note:
For Beam Elevation, Field Splice and Interior Diaphragm Details, See Sheet No. 17 of 29.
For Details of Diaphragms at the Abutments, see Sheet No. 13 of 29.

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f (Total-Strength I, and Service II) due to non-composite dead loads (in. and in.).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f (Total-Strength I, and Service II) due to short-term composite live loads (in. and in.).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- Z : Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in.³).
- $DC1$: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- $DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_k + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
- $\phi_r M_n$: $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$
- $\phi_r M_{nc}$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- f_s (Service II): Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi). $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_k + IM$
- V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in ⁴)	4,470	4,470	4,470
$I_c(n)$	(in ⁴)	12,856	-	12,856
$I_c(3n)$	(in ⁴)	9,389	-	9,389
S_s	(in ³)	299	299	299
$S_c(n)$	(in ³)	461	-	461
$S_c(3n)$	(in ³)	414	-	414
Z	(in ³)	-	-	-
$DC1$	(k/')	0.763	0.763	0.763
M_{DC1}	(k)	129.0	228.4	114.9
$DC2$	(k/')	0.129	0.129	0.129
M_{DC2}	(k)	21.7	38.5	19.4
DW	(k/')	0.309	0.309	0.309
M_{DW}	(k)	52.2	92.4	46.5
$M_k + IM$	(k)	446.5	388.0	447.7
M_u (Strength I)	(k)	1048.1	1151.2	1021.1
* $\phi_r M_n, \phi_r M_{nc}$	(k)	2368.0	1176.1	2368.0
f_s DC1	(ksi)	5.177	9.167	4.611
f_s DC2	(ksi)	0.629	1.545	0.562
f_s DW	(ksi)	1.513	3.708	1.348
f_s 1.3($M_k + IM$)	(ksi)	15.109	20.243	15.150
f_s (Service II)	(ksi)	22.428	34.663	21.671
V_r	(k)	20.4	-	16.7

* Compact sections

INTERIOR GIRDER REACTION TABLE			
	N. Abut. or S. Abut.	Pier 1 or Pier 2	
R_{DC1}	(k)	14.0	46.2
R_{DC2}	(k)	2.4	7.8
R_{DW}	(k)	5.7	18.7
$R_k + IM$	(k)	58.5	88.7
R_{Total}	(k)	80.6	161.4

FRAMING PLAN AND DESIGN DATA
SN 028-0078

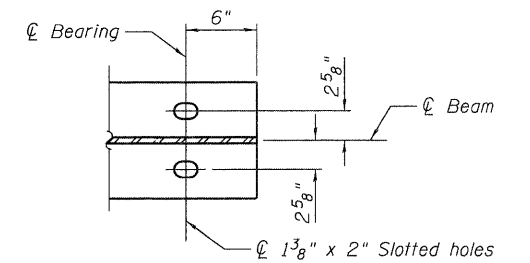
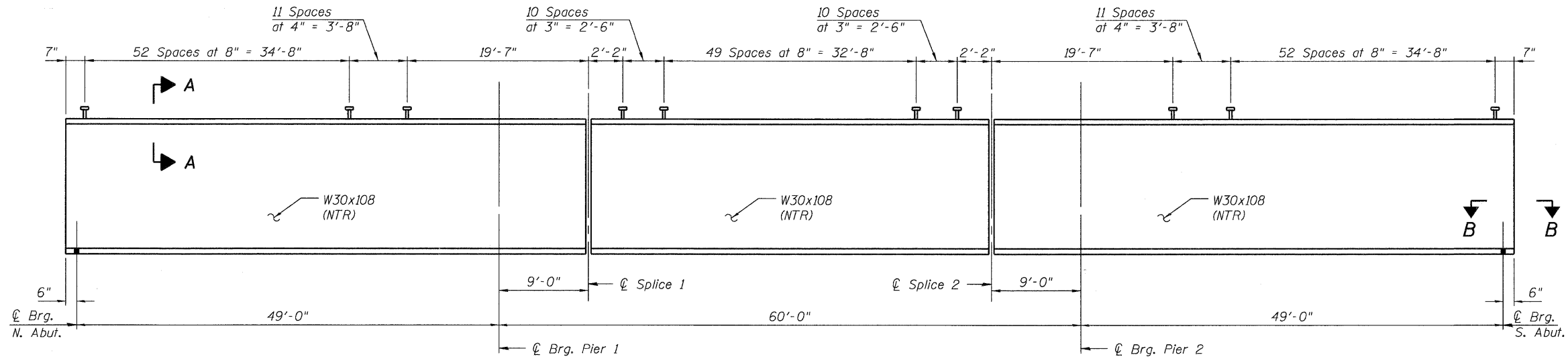
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CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



09/25/09

SHEET NO. 16	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	142
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



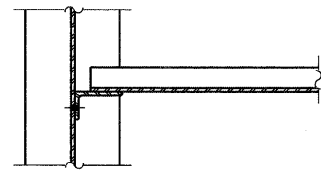
SECTION B-B
(S. Abut. end shown
N. Abut. end similar)

***TOP OF BEAM ELEVATIONS**

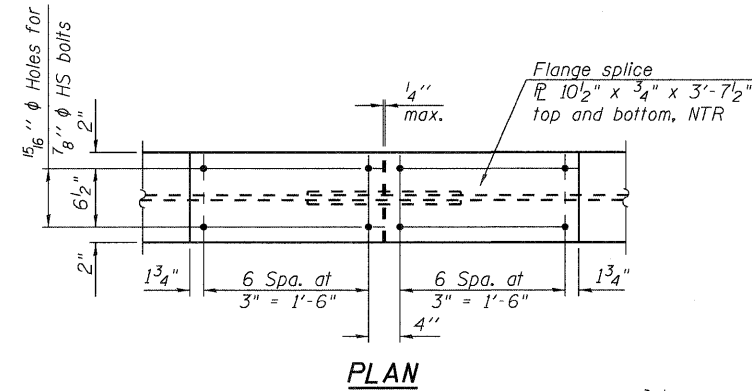
Location	Gdr. #1	Gdr. #2	Gdr. #3	Gdr. #4	Gdr. #5	Gdr. #6	Gdr. #7
℄ Brg. at North Abut.	397.46	397.58	397.68	397.78	397.68	397.58	397.46
℄ Brg. at Pier 1	397.49	397.62	397.72	397.82	397.72	397.62	397.49
℄ Splice 1	397.50	397.63	397.73	397.82	397.73	397.63	397.50
℄ Splice 2	397.53	397.66	397.76	397.86	397.76	397.66	397.53
℄ Brg. at Pier 2	397.54	397.67	397.77	397.86	397.77	397.67	397.54
℄ Brg. at South Abut.	397.58	397.71	397.81	397.90	397.81	397.71	397.58

* For fabrication only

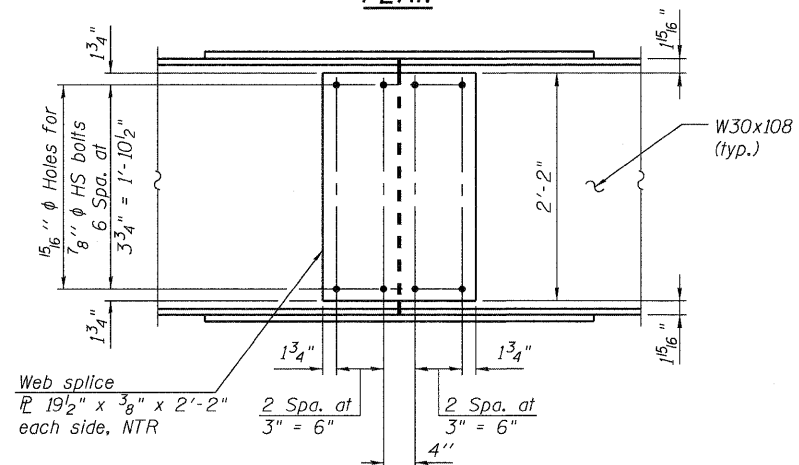
BEAM ELEVATION
(7 Required)



SECTION C-C



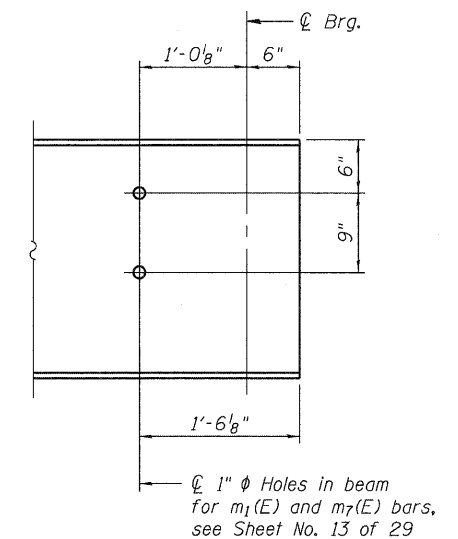
PLAN



ELEVATION

SPLICE DETAIL
(14 Required)

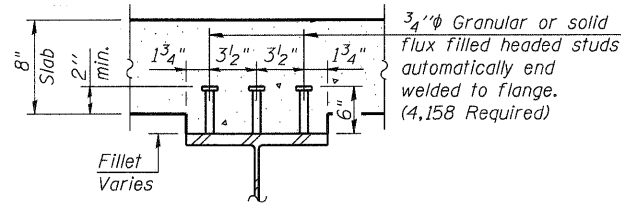
Note:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



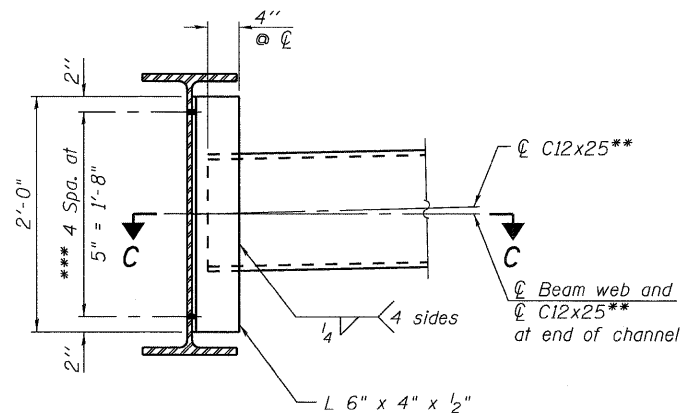
END OF GIRDER ELEVATION

(S. Abut. end shown
N. Abut. end similar)

Note:
Beams and splice plates shall be AASHTO M270 Grade 50.
Diaphragms and diaphragm connection angles shall be AASHTO M270 Grade 36.



SECTION A-A



INTERIOR DIAPHRAGM

(36 Required)

Notes:
Two hardened washers required for each set of oversized holes with one washer on each side of the connection.
See the Framing Plan on Sheet No. 16 of 29 for locations of interior diaphragms.
** C12x30 can be used as an alternate channel size. Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.
*** 3/4" diameter HS bolts, 15/16" diameter holes

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

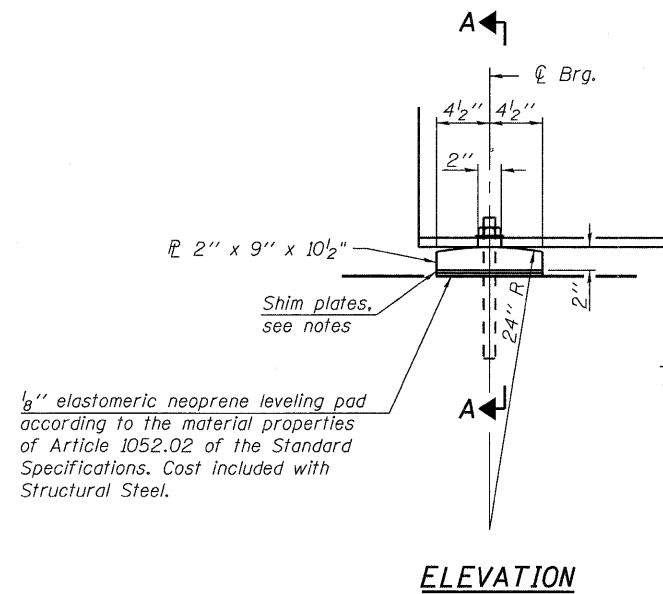
09/25/09



BEAM DETAILS
SN 028-0078

SHEET NO. 17	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	143
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
	FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

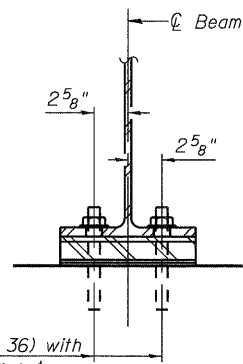


ELEVATION

1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

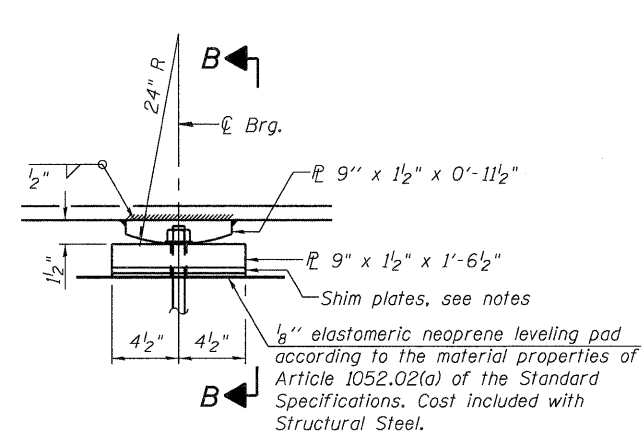
Shim plates, see notes

1" ϕ x 12" anchor bolts (Grade 36) with 2 1/4" x 2 1/4" x 5/16" PL washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" ϕ holes in bearing plate.



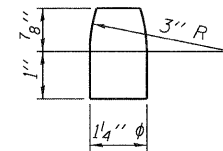
SECTION A-A

FIXED BEARING AT ABUTMENT
(14 Required)

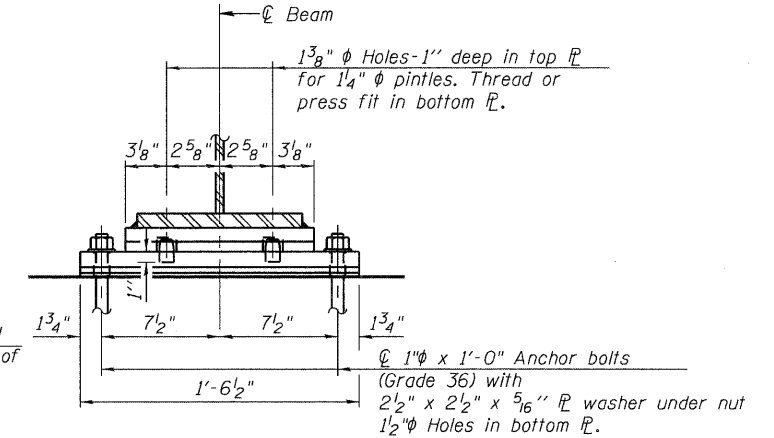


ELEVATION AT PIER

FIXED BEARING AT PIER
(14 Required)



PINTLE
(28 Required)



SECTION B-B

Notes:

Bearing plates and pintles shall be AASHTO M270 Grade 50.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified, ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolt sizes and grades shown constitute a structural fuse.

Substitution of higher anchor bolt diameters and/or grades will not be allowed.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	56

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM

09/25/09

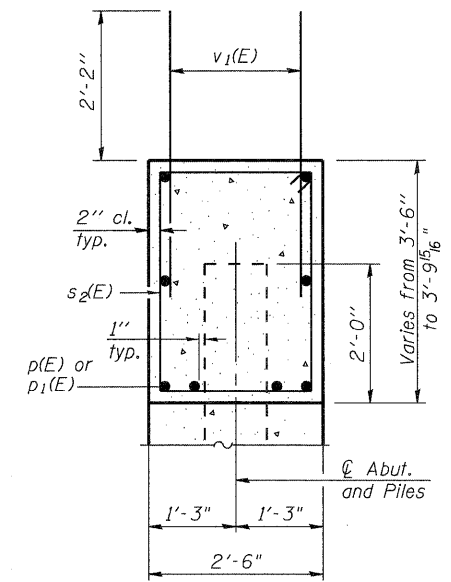
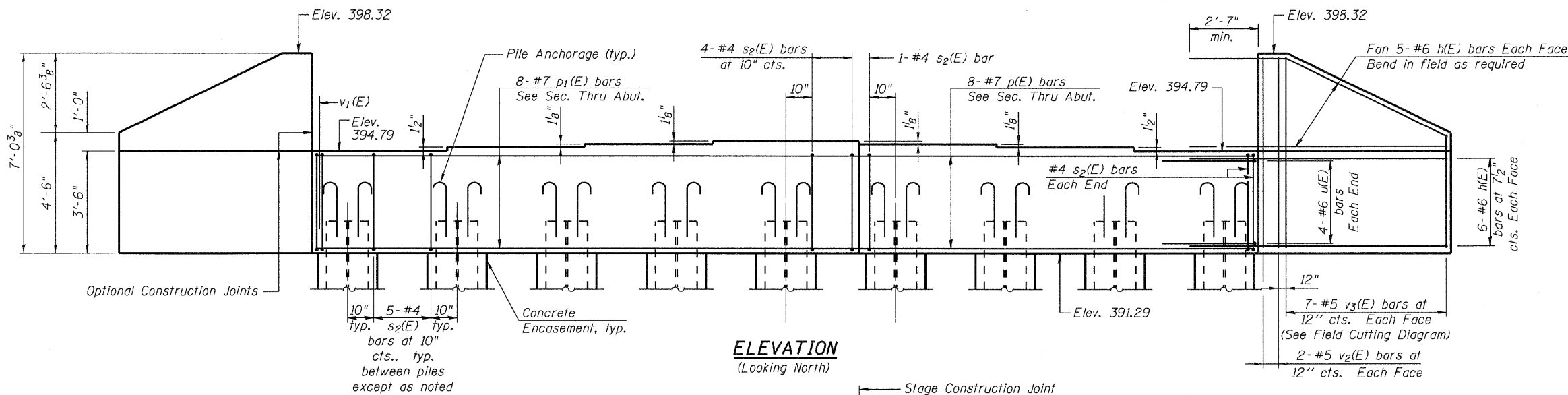


BEARING DETAILS
SN 028-0078

SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29 SHEETS	9481	12B1-1	FRANKLIN	304	144
SN 028-0078			CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.

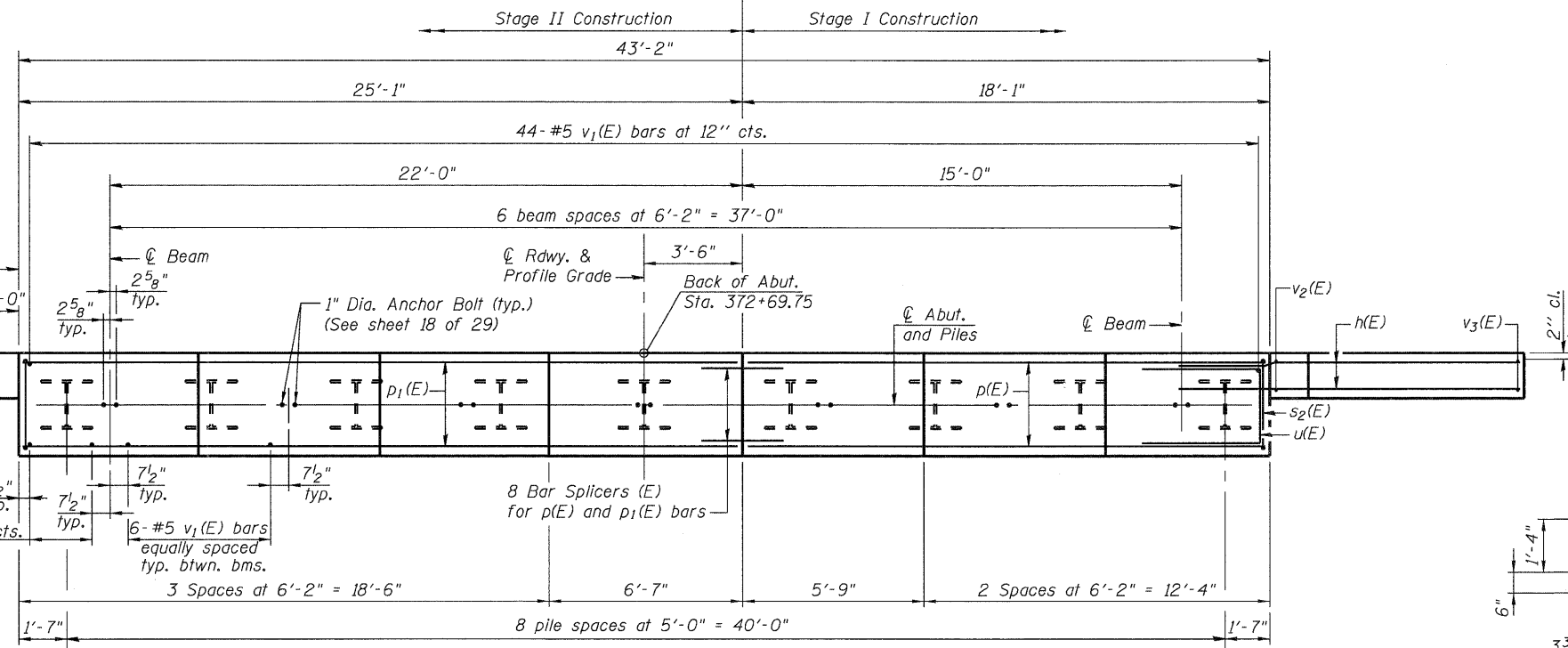


SEC. THRU ABUT.

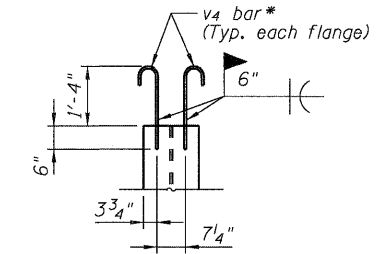
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#6	11'-0"	—
p(E)	8	#7	17'-8"	—
p1(E)	8	#7	24'-9"	—
s2(E)	44	#4	11'-5"	□
u(E)	8	#6	7'-3"	—
v1(E)	86	#5	4'-4"	—
v2(E)	8	#5	6'-8"	—
v3(E)	14	#5	10'-10"	—
v4	36	#5	2'-5"	—
Structure Excavation		Cu. Yd.	179	
Concrete Structures		Cu. Yd.	18.3	
Protective Coat		Sq. Yd.	13	
Concrete Encasement		Cu. Yd.	4.9	
Reinforcement Bars, Epoxy Coated		Pound	2,450	
Furnishing Steel Piles HP14x89		Foot	472	
Driving Piles		Foot	472	
Test Steel Pile HP14x89		Each	1	

For details of Bar Splicers, see sheet 25 of 29.
For details of piles and Concrete Encasement, see sheet 24 of 29.

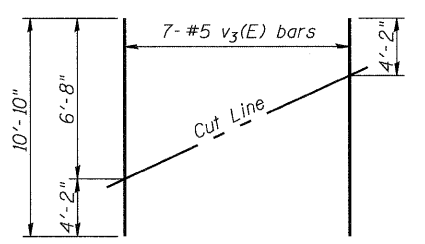


PLAN



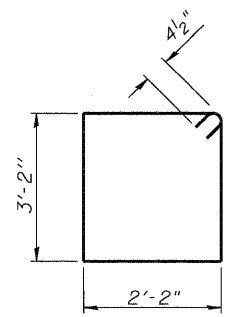
PILE ANCHORAGE

* Cost of v4 bars is included with Furnishing Steel Piles HP14x89.

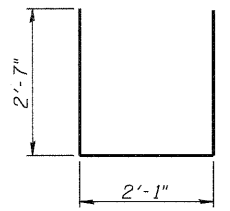


FIELD CUTTING DIAGRAM

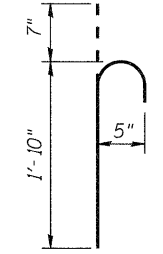
Order v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



BAR v4*

PILE DATA

Type: Steel HP14x89
Nominal Required Bearing: 705 Kips
Factored Resistance Available: 353 Kips
Est. Length: 59 ft
No. Production Piles: 8
No. Test Piles: 1

DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM



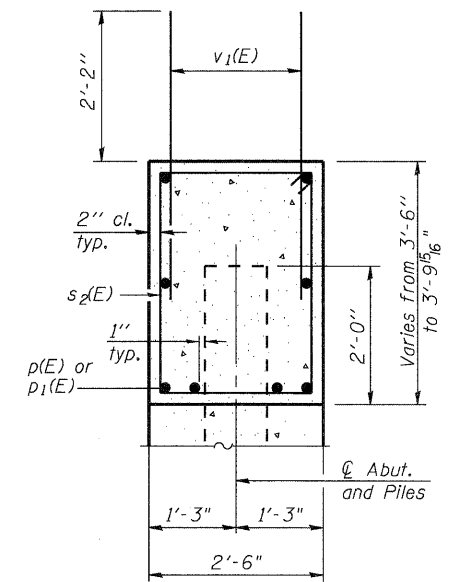
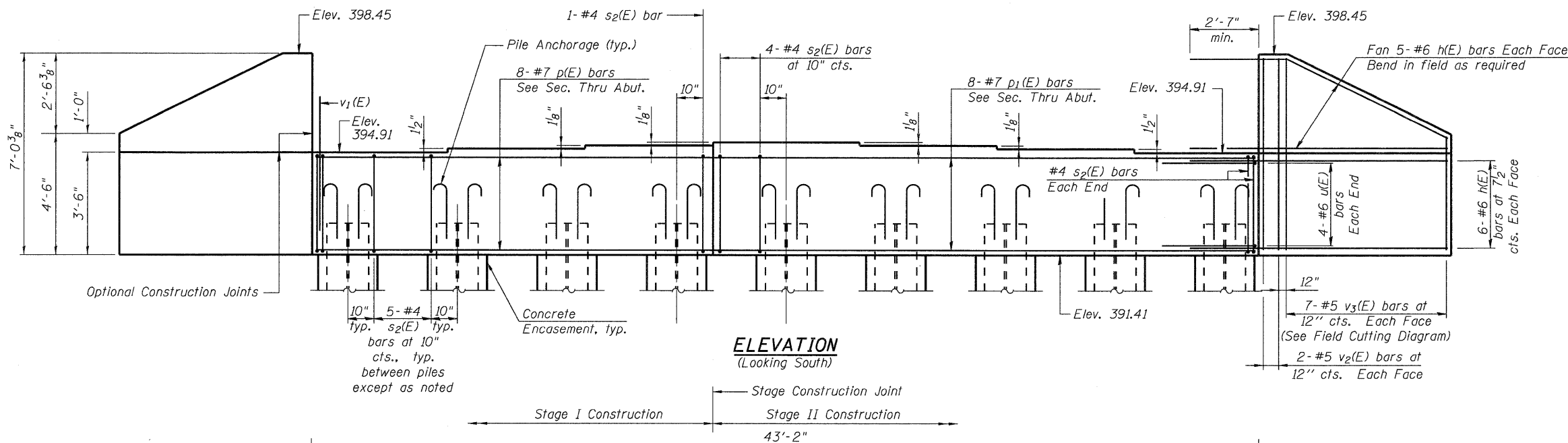
NORTH ABUTMENT DETAILS
SN 028-0078

SHEET NO. 19 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	145
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

09/25/09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.

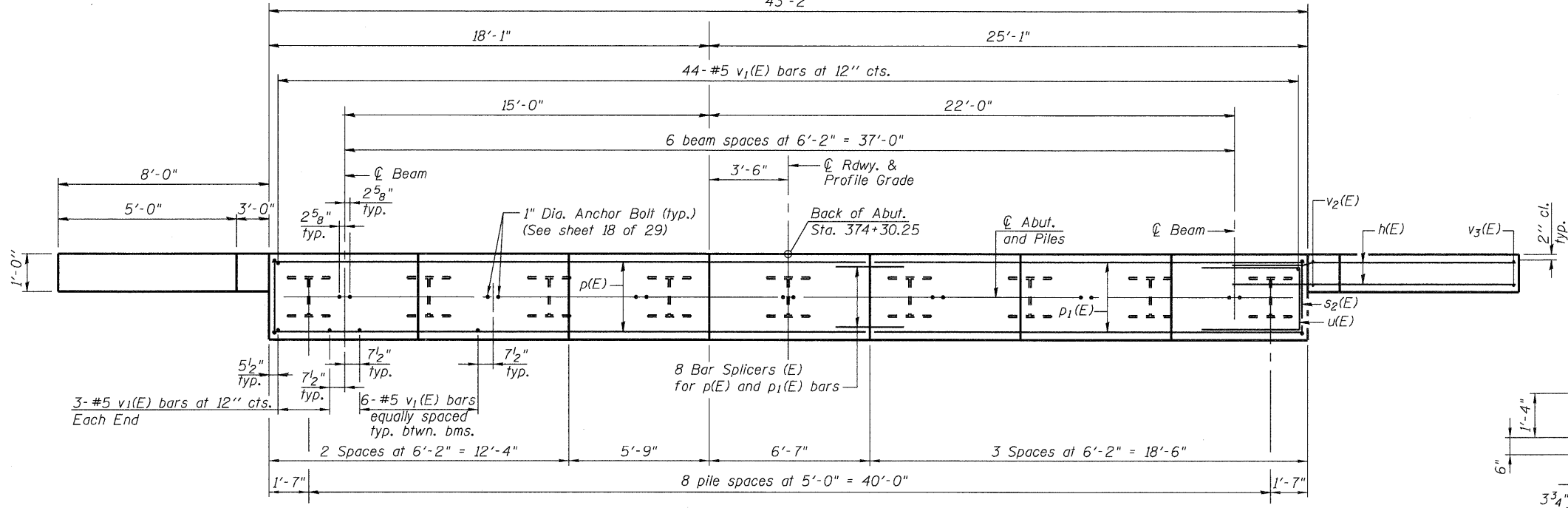


SEC. THRU ABUT.

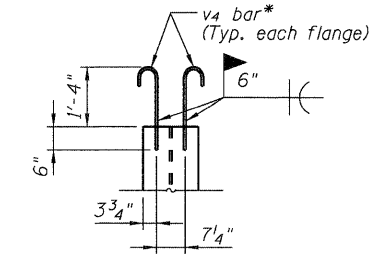
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#6	11'-0"	—
p(E)	8	#7	17'-8"	—
p1(E)	8	#7	24'-9"	—
s2(E)	44	#4	11'-5"	□
u(E)	8	#6	7'-3"	—
v1(E)	86	#5	4'-4"	—
v2(E)	8	#5	6'-8"	—
v3(E)	14	#5	10'-10"	—
v4	36	#5	2'-5"	—
Structure Excavation		Cu. Yd.	180	
Concrete Structures		Cu. Yd.	18.3	
Protective Coat		Sq. Yd.	13	
Concrete Encasement		Cu. Yd.	4.9	
Reinforcement Bars, Epoxy Coated		Pound	2,450	
Furnishing Steel Piles HP14x89		Foot	416	
Driving Piles		Foot	416	
Test Steel Pile HP14x89		Each	1	

For details of Bar Splicers, see sheet 25 of 29.
For details of piles and Concrete Encasement, see sheet 24 of 29.



PLAN



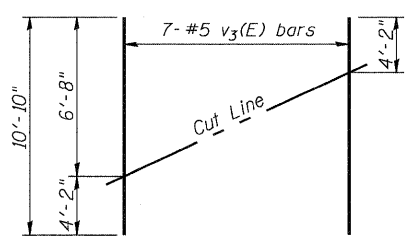
PILE ANCHORAGE

* Cost of v4 bars is included with Furnishing Steel Piles HP14x89.

PILE DATA

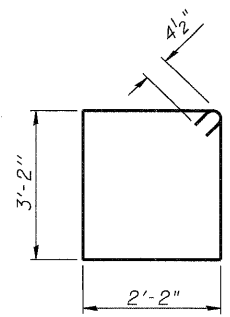
Type: Steel HP14x89
Nominal Required Bearing: 705 Kips
Factored Resistance Available: 353 Kips
Est. Length: 52 ft
No. Production Piles: 8
No. Test Piles: 1

DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM

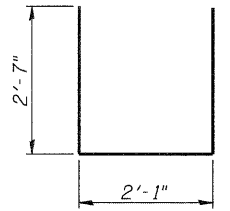


FIELD CUTTING DIAGRAM

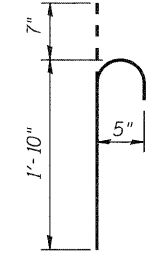
Order v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



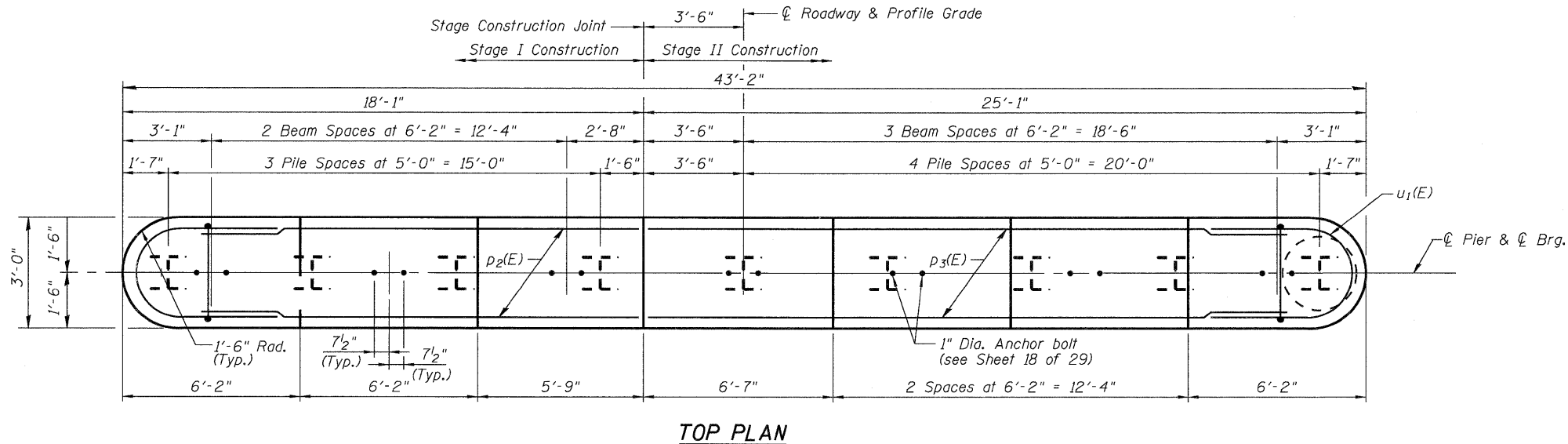
BAR v4*

SOUTH ABUTMENT DETAILS
SN 028-0078

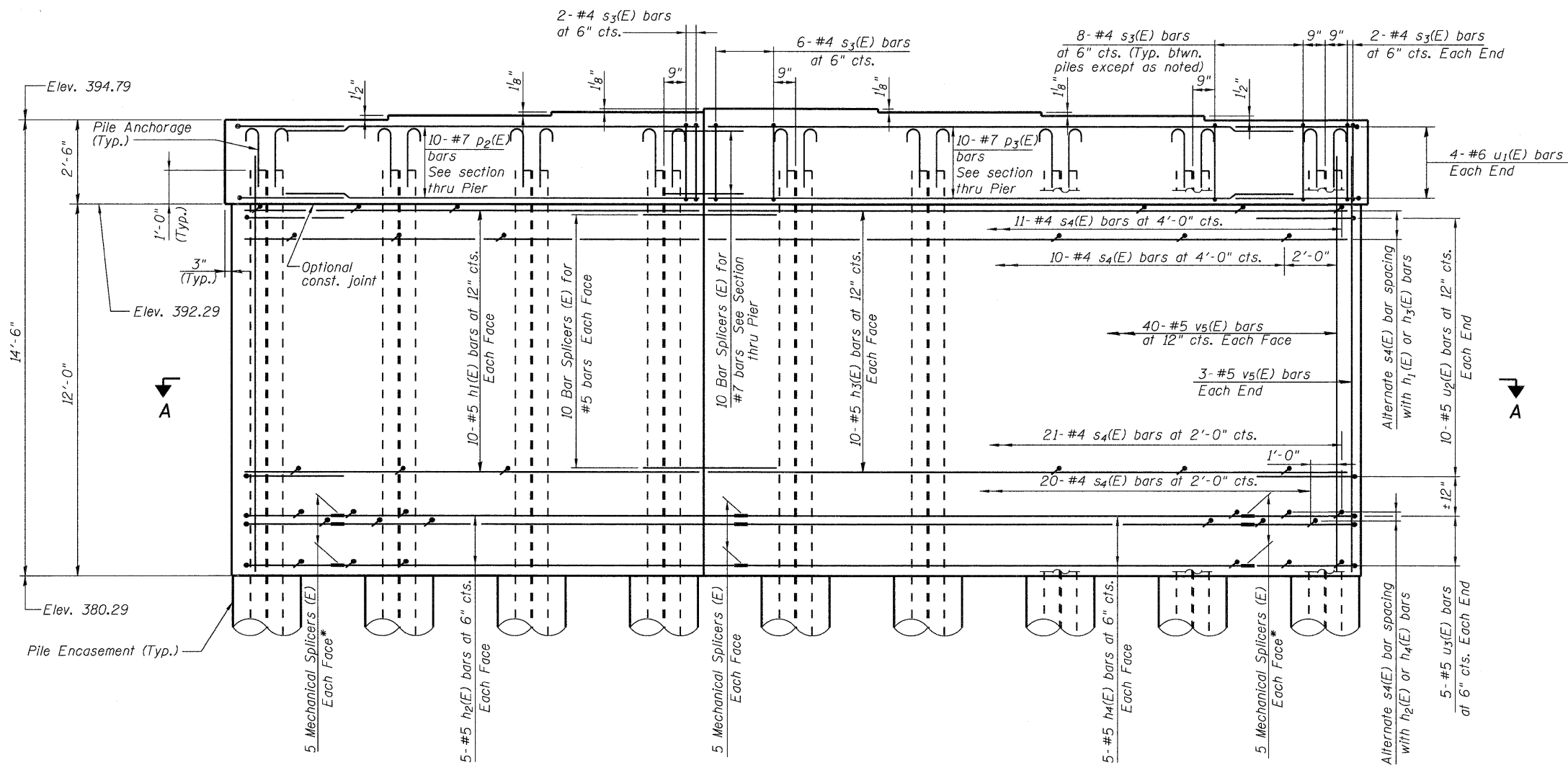
SHEET NO. 20 29 SHEETS	F.A.U. RTE. 9481	SECTION 12B1-1	COUNTY FRANKLIN	TOTAL SHEETS 304	SHEET NO. 146
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP PLAN



ELEVATION
(Looking South)

PILE DATA

Type: Steel HP14x89
Nominal Required Bearing: 705 Kips
Factored Resistance Available: 308 Kips
Est. Length: 53 ft
No. Production Piles: 9
No. Test Piles: 0

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	20	#5	16'-4"	—
h ₂ (E)	10	#5	14'-10"	—
h ₃ (E)	20	#5	23'-6"	—
h ₄ (E)	10	#5	20'-11"	—
p ₂ (E)	10	#7	16'-4"	—
p ₃ (E)	10	#7	23'-6"	—
s ₃ (E)	68	#4	10'-5"	□
s ₄ (E)	208	#4	2'-11"	┌
u ₁ (E)	8	#6	9'-3"	U
u ₂ (E)	20	#5	9'-4"	U
u ₃ (E)	10	#5	7'-8"	U
v ₄	36	#5	2'-5"	┌
v ₅ (E)	86	#5	14'-0"	—
Structure Excavation			Cu. Yd.	151
Concrete Structures			Cu. Yd.	59.4
Concrete Encasement			Cu. Yd.	4.9
Reinforcement Bars, Epoxy Coated			Pound	4,540
Furnishing Steel Piles HP14x89			Foot	477
Driving Piles			Foot	477
Mechanical Splice			Each	30
Underwater Structure Excavation Protection - Location 2			Each	1

Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
For sections thru the pier, see sheet 23 of 29.
For details of piles, see sheet 24 of 29.
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to the elevation of 1'-0" above the water line at the time of construction.
For details of bar splicers, see sheet 25 of 29.
For mechanical splice details, see the Special Provisions.

PIER 2 DETAILS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM

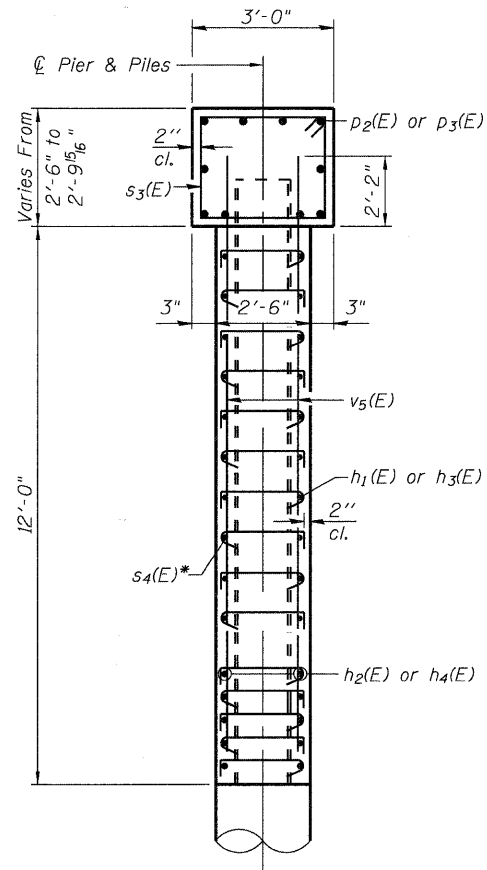


09/25/09

* The Contractor has the option to use a mechanical splice or shop welded splice per AWS D1.4.
** See pile anchorage detail on sheet 23 of 29. Cost of v₄ bars is included with Furnishing Steel Piles HP14x89.

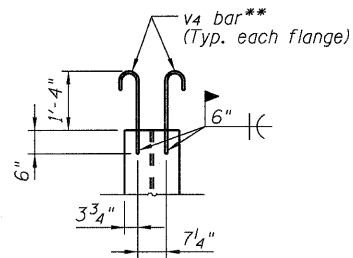
SHEET NO. 22 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	148
SN 028-0078			CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

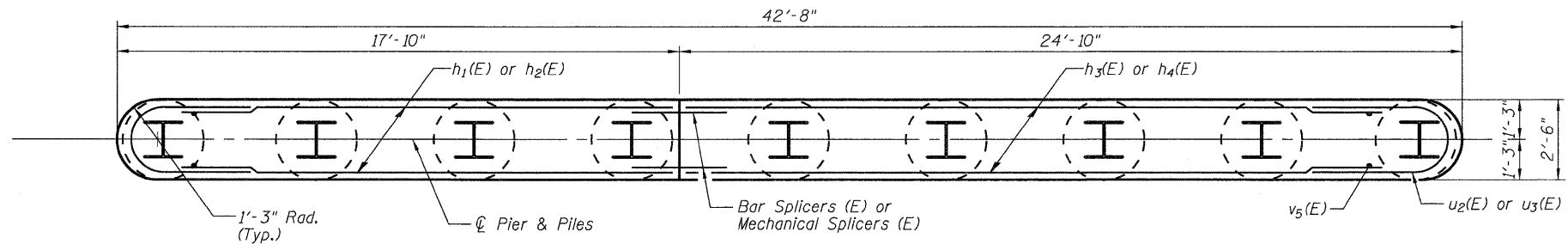


SECTION THRU PIER

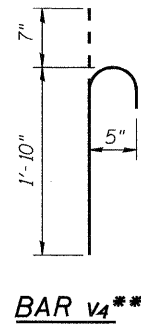
* Alternate the 90 degree hooked ends of s₄(E) bars between rows.



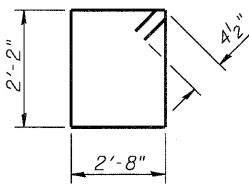
PILE ANCHORAGE



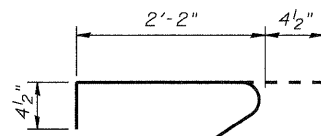
SECTION A-A



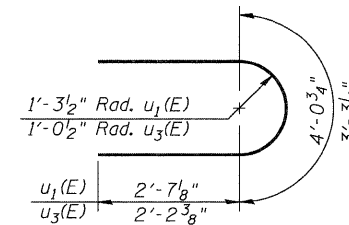
BAR v₄**



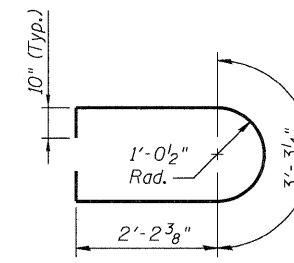
BAR s₃(E)



BAR s₄(E)



BARS u₁(E) & u₃(E)



BAR u₂(E)

DESIGNED	RLM
CHECKED	AMS
DRAWN	AEC
CHECKED	RLM

09/25/09

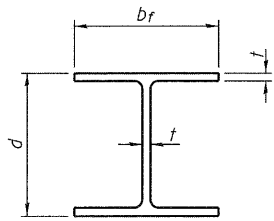


** Cost of v₄ bars included with Furnishing Steel Piles HP14x89.

MISCELLANEOUS PIER DETAILS
SN 028-0078

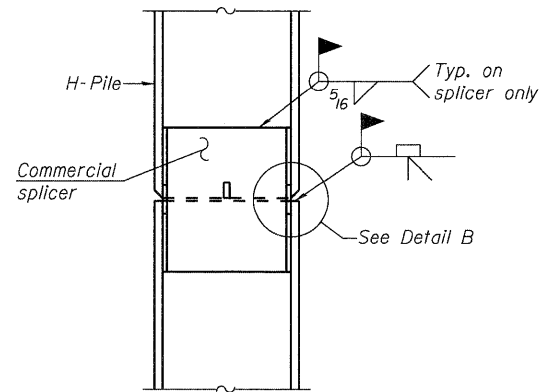
SHEET NO. 23	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	149
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

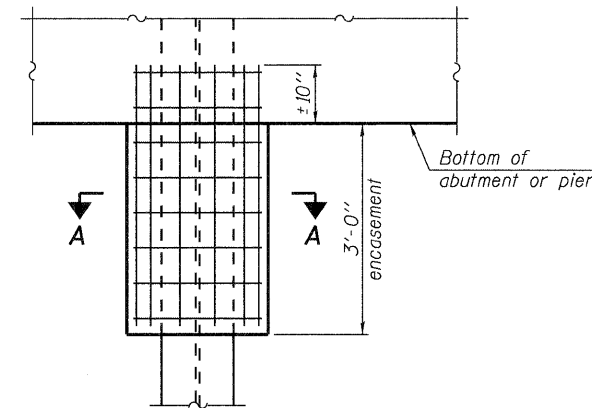


STEEL PILE TABLE

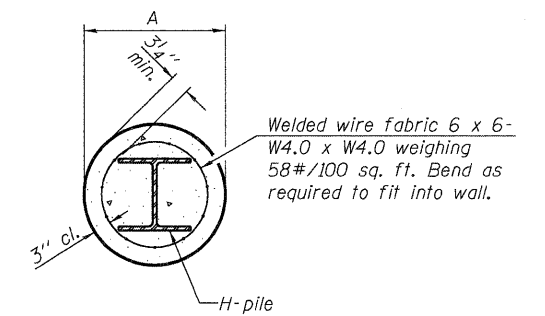
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION



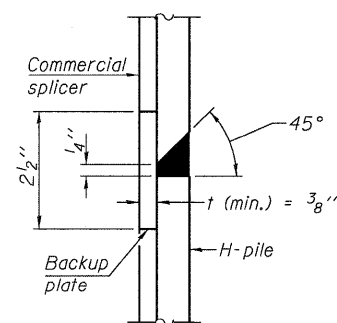
ELEVATION



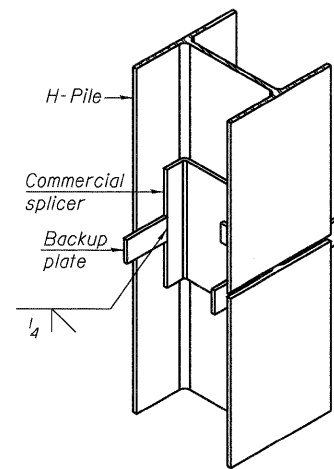
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

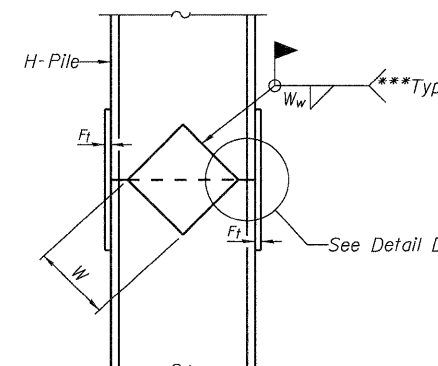
PILE ENCASEMENT



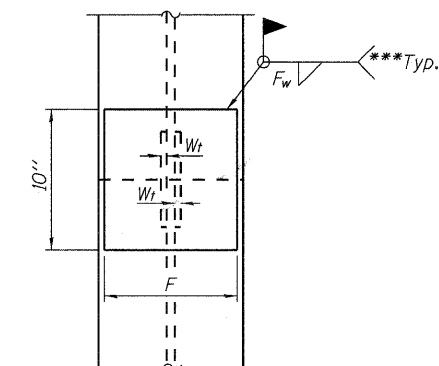
DETAIL "B"



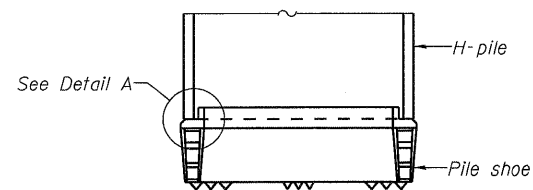
ISOMETRIC VIEW



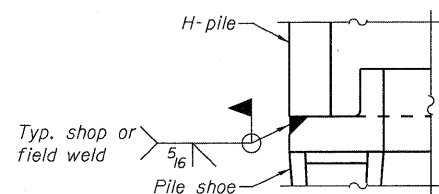
ELEVATION



END VIEW

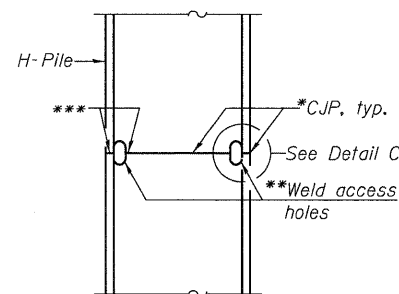


ELEVATION

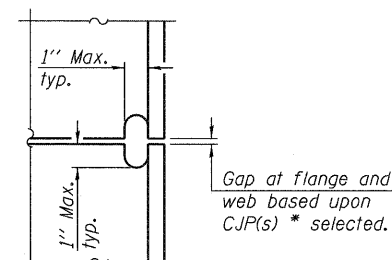


DETAIL A

H-PILE SHOE ATTACHMENT

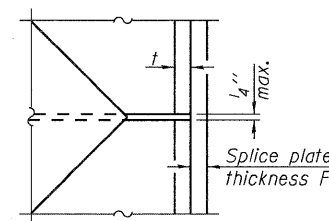


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

STEEL H-PILE DETAILS
SN 028-0078

DESIGNED	RLM
CHECKED	AMS
DRAWN	PRC
CHECKED	RLM



F-HP

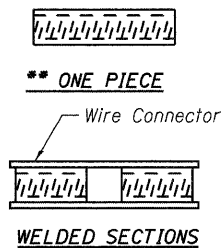
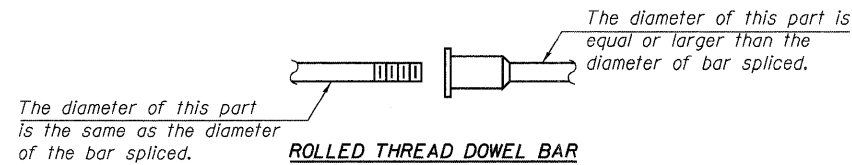
10-1-08

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

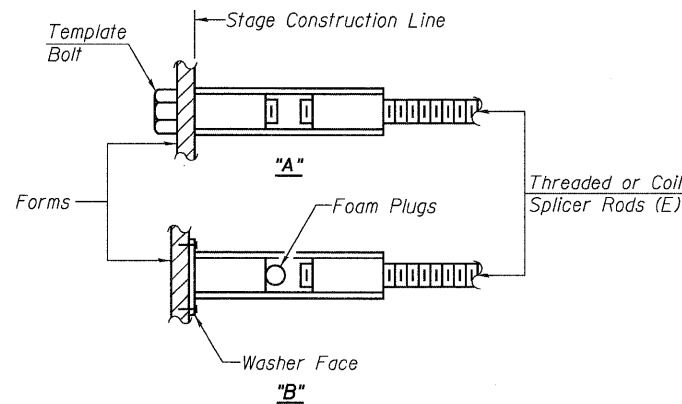
SHEET NO. 24	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	150
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
	FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

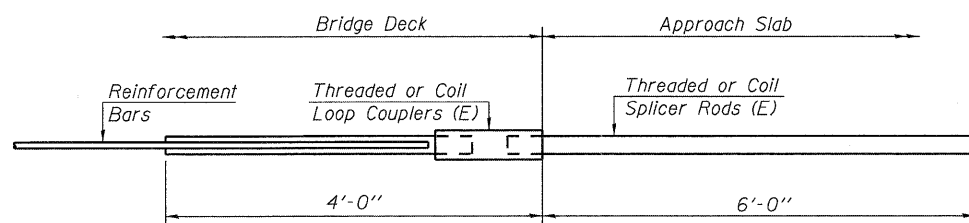
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

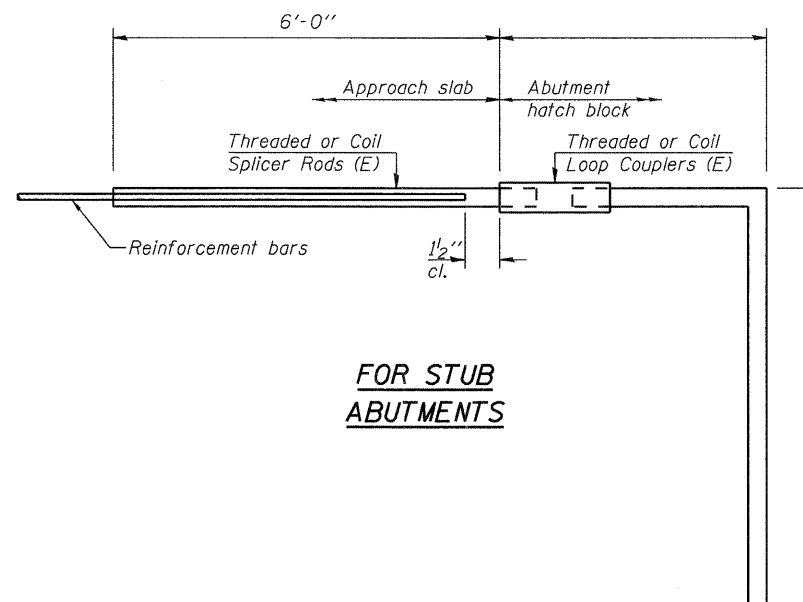
- ① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_l$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times fy \times A_l$
- Where fy = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



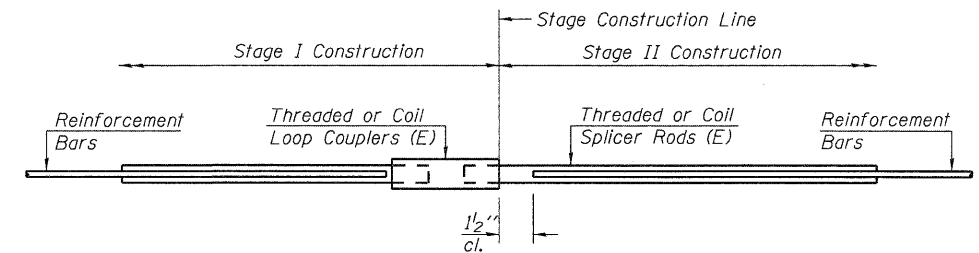
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 80



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



STANDARD

Bar Size	No. Assemblies Required	Location
#5	490	Slab
#6	8	N. Abut. Diaphragm
#6	8	S. Abut. Diaphragm
#4	25	N. Approach Slab
#5	46	N. Approach Slab
#5	40	N. Approach Footing
#4	25	S. Approach Slab
#5	46	S. Approach Slab
#5	40	S. Approach Footing
#7	8	N. Abutment
#7	8	S. Abutment
#7	10	Pier 1 Cap
#5	20	Pier 1 Wall
#7	10	Pier 2 Cap
#5	20	Pier 2 Wall

BAR SPLICER ASSEMBLY DETAILS
SN 028-0078

DESIGNED RLM
CHECKED AMS
DRAWN AEC
CHECKED RLM



BSD-1

10-1-08

SHEET NO. 25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	151
29 SHEETS	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

District Nine Materials

IL 37 Over Pond Creek Boring Log
Sheet 1 of 2
Date: 10/01/2002

Route: ILL 37 Structure Number: 028-0035 Bored By: Bryan Keller
Section: 12-B-Y Checked By: Rob Graeff
County: Franklin Location: S of SCL W Frankfort

Boring No: 3-S
Station: 374+60
Offset: 12' Lt CL
Ground Surface: 399.5 Ft

DEPTH	BL	Qu	W%	DESCRIPTION	DEPTH	BL	Qu	W%
H	W	tsf			H	W	tsf	
				Surf Wat Elev: 383.2				
				Ground Water Elevation				
				when Drilling 367.5				
				At Completion				
				At: Hrs:				
397.5				Crushed Aggregate and Cinders	372.5	1	2.4B	22
						2		
				Stiff, moist to very moist, brown, Silty Clay A-6		1		
						3	2.1B	20
						4		
5.0	1			Stiff, moist to very moist, grey mottled brown, Clay to Silty Clay A7-6 with Sand Seams	370.0	1		
	3	1.5P	21			2	1.5B	19
	5					3		
392.5				Medium, very moist, brown mottled grey, Silty Clay Loam A-6		1		
	1	0.9B	26			2	1.6S	24
	2					2		
390.0				Soft, very moist, grey, Silty Clay A-6	365.0	1		
	10.0	WH				7	2.5S	15
		0.4B	29			12		
	1							
387.5				Medium, very moist, grey, Silty Clay A7-6	362.5	1		
		WH				4	31.0S	19
	1	0.6B	32			5		
	1							
385.0				Soft, very moist, grey, Clay to Silty Clay A7-6	360.0	3		
	15.0	WH				4	1.1S	37
		0.3B	31			5		
	1							
382.5				Very stiff, moist, brown, Clay to Silty Clay A7-6		1		
						3	2.1B	27
						3		
380.0				Very stiff, moist, grey mottled brown, Clay A7-6	355.0	1		
	20.0					4	2.7B	21
		2.2B	23			6		
						1		
						2	2.1S	24
						3		
375.0					350.0			
	25.0	1				50.0	1	

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 2
Date: 10/01/2002

Route: ILL 37
Section: 12-B-Y
County: Franklin

Boring No: 3-S
Station: 374+60
Offset: 12' Lt CL
Ground Surface: 399.5 Ft

DEPTH	BL	Qu	W%	DESCRIPTION	DEPTH	BL	Qu	W%
H	W	tsf			H	W	tsf	
				Soft, very moist, grey, Silt Loam A-4 with Sand Layers				
						2	0.4S	22
						2		
345.0				Hard, dry, grey, Weathered Clay Shale	80.0	9		
						13		
						26		
342.5				Hard, dry, grey, Clay Shale	342.0	100/6"		
				Bottom of hole = 57.5 ft.				
				Free water observed at 32.0 ft				
				Elevation referenced to Back of South Abutment Cr. Elevation = 399.5 ft.	60.0			85.0
				To convert "N" values to "N60" values multiply by 1.25.				
					65.0			90.0
					70.0			95.0
					75.0			100.0

N-Std Pentr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

DESIGNED RLM
CHECKED AMS
DRAWN PRC
CHECKED RLM
09/25/09



BORING LOGS
SN 028-0078

SHEET NO. 28 29 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9481	12B1-1	FRANKLIN	304	154
	SN 028-0078		CONTRACT NO. 98823		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	157
STA.		TO STA.		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	

DETAIL OF PRECAST CONCRETE BOX CULVERT SECTION

(WITH COVER 2 FEET OR GREATER -
AASHTO DESIGNATION M259)
DESIGN LOADING: HS-20-44

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

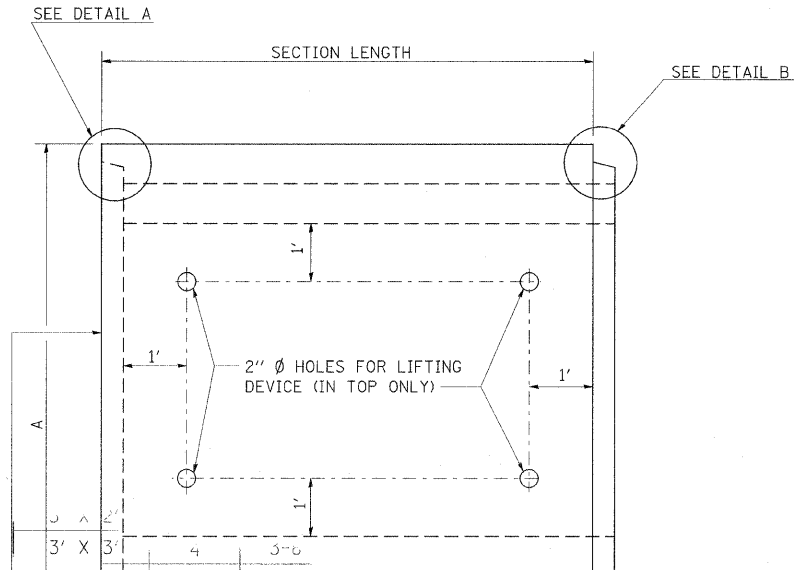
THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE BOX SECTIONS ARE IN PLACE.

THE TERMS AS1, AS2, & AS3 DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M259. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO M55-81.

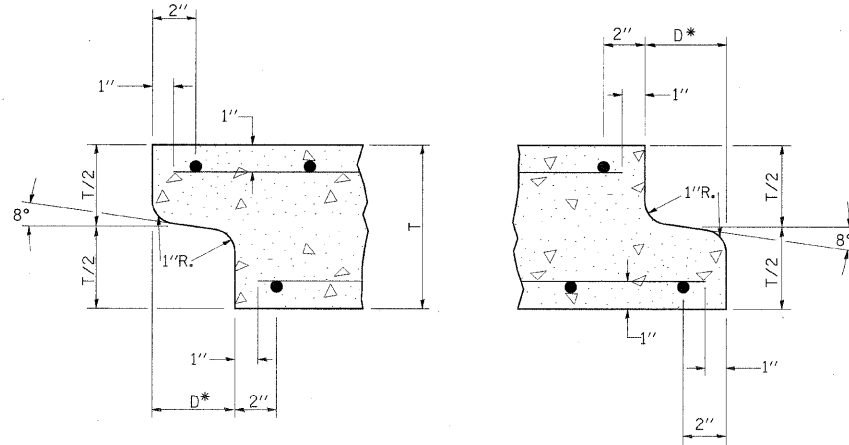
DRAINAGE OPENINGS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 503.11 OF THE STANDARD SPECIFICATIONS. LOCATION AND SPACING OF THE OPENINGS SHALL BE SHOWN ON THE SHOP DRAWINGS.

* FAU 9481, FAS 2887 (IL 37)
** (12,12X),RS-3;12B-1,12B1-1
*** FRANKLIN AND WILLIAMSON



PLAN

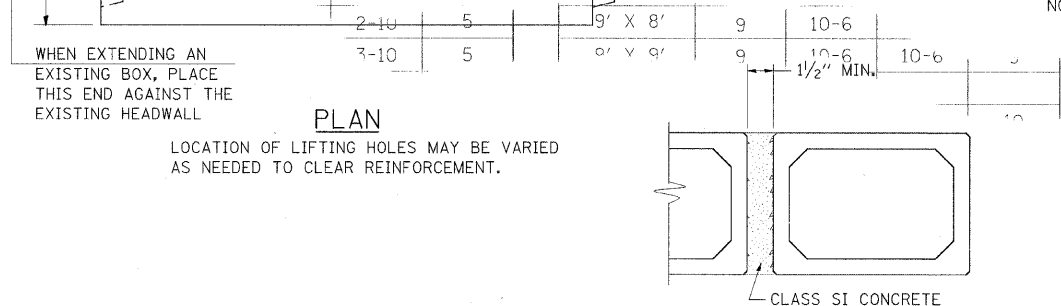
LOCATION OF LIFTING HOLES MAY BE VARIED AS NEEDED TO CLEAR REINFORCEMENT.



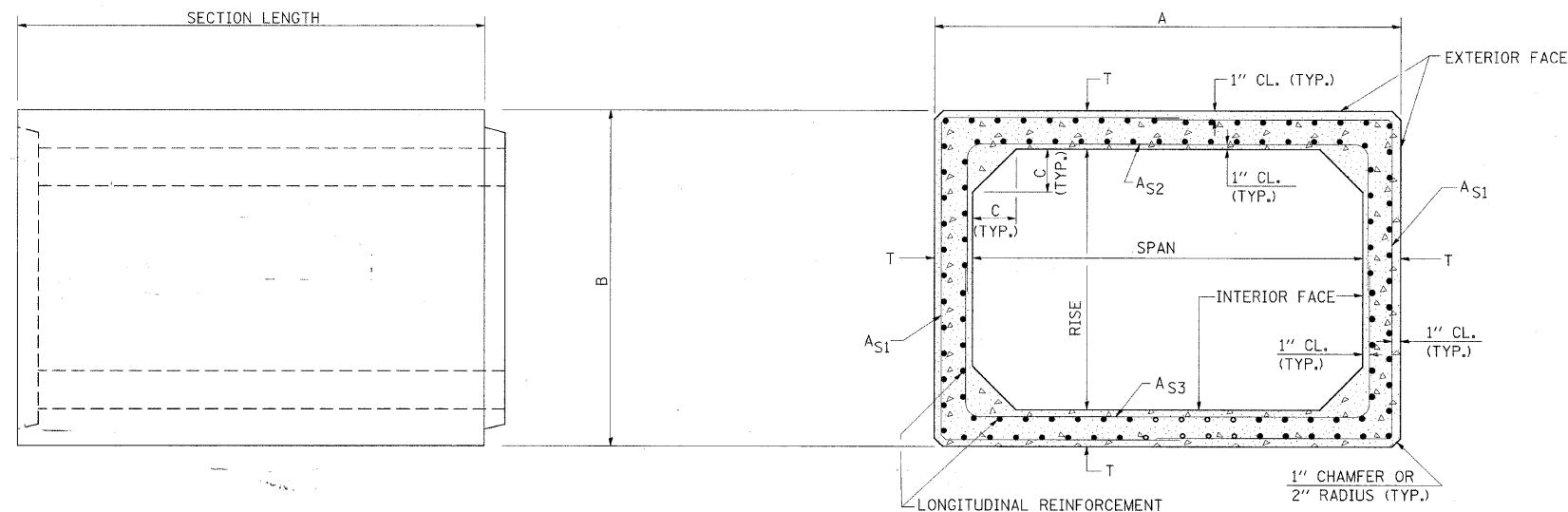
DETAIL A
(TYP. INLET END)

DETAIL B
(TYP. OUTLET END)

NOTE: INLET AND OUTLET ENDS SHALL BE COMPATIBLE.
* THE D DIMENSION SHALL CONFORM TO THE MANUFACTURER'S STANDARDS.



MULTIPLE UNIT PLACEMENT



ELEVATION

CROSS SECTION

DIMENSIONS

SPAN X RISE	T (INCHES)	A (FT.-IN.)	B (FT.-IN.)	C (INCHES)
2' X 2'	4	2-8	2-8	4
3' X 2'	4	3-8	2-8	4
3' X 3'	4	3-8	3-8	4
4' X 2'	5	4-10	2-10	5
4' X 3'	5	4-10	3-10	5
4' X 4'	5	4-10	4-10	5
5' X 2'	6	6-0	3-0	6
5' X 3'	6	6-0	4-0	6
5' X 4'	6	6-0	5-0	6
5' X 5'	6	6-0	6-0	6
6' X 2'	7	7-2	3-2	7
6' X 3'	7	7-2	4-2	7
6' X 4'	7	7-2	5-2	7
6' X 5'	7	7-2	6-2	7
6' X 6'	7	7-2	7-2	7
7' X 4'	8	8-4	5-4	8
7' X 5'	8	8-4	6-4	8
7' X 6'	8	8-4	7-4	8
7' X 7'	8	8-4	8-4	8
8' X 4'	8	9-4	5-4	8
8' X 5'	8	9-4	6-4	8
8' X 6'	8	9-4	7-4	8
8' X 7'	8	9-4	8-4	8
8' X 8'	8	9-4	9-4	8

SPAN X RISE	T (INCHES)	A (FT.-IN.)	B (FT.-IN.)	C (INCHES)
9' X 5'	9	10-6	6-6	9
9' X 6'	9	10-6	7-6	9
9' X 7'	9	10-6	8-6	9
9' X 8'	9	10-6	9-6	9
9' X 9'	9	10-6	10-6	9
10' X 5'	10	11-8	6-8	10
10' X 6'	10	11-8	7-8	10
10' X 7'	10	11-8	8-8	10
10' X 8'	10	11-8	9-8	10
10' X 9'	10	11-8	10-8	10
10' X 10'	10	11-8	11-8	10
11' X 4'	11	12-10	5-10	11
11' X 6'	11	12-10	7-10	11
11' X 8'	11	12-10	9-10	11
11' X 10'	11	12-10	11-10	11
11' X 11'	11	12-10	12-10	11
12' X 4'	12	14-0	6-0	12
12' X 6'	12	14-0	8-0	12
12' X 8'	12	14-0	10-0	12
12' X 10'	12	14-0	12-0	12
12' X 12'	12	14-0	14-0	12

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAIL:
PRECAST CONCRETE BOX CULVERT SECTION
(WITH COVER 2 FEET OR GRATER)

SCALE: VERT. NO SCALE
HORIZ. DATE
DRAWN BY CNH
CHECKED BY

STD. 9-48

REVISIONS	
DATE	DESCRIPTION
9-7-89	DRAWN
3-27-90	REVISED
8-16-94	REVISED
01-10-07	REVISED
5-6-08	RESIZED

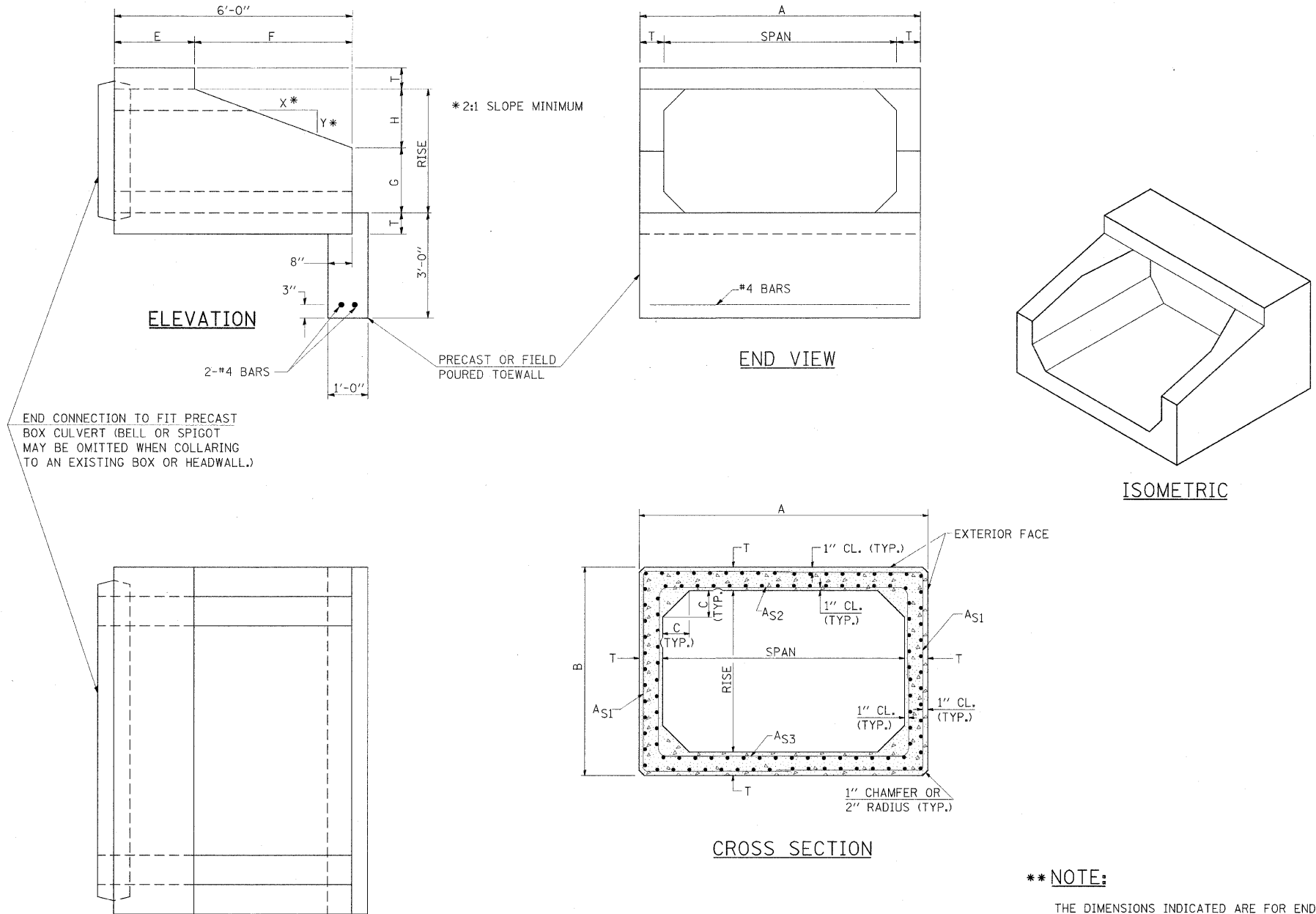
PLOT DATE = 12/7/2009
 PLOT SCALE = 98.2000 / IN.
 USER NAME = hnsden

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	158
STA.		TO STA.		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12.12X)RS-3;12B-1.12B1-1				
*** FRANKLIN AND WILLIAMSON				

DIMENSIONS **

SPAN X RISE	T (INCHES)	A (FT.-IN.)	B (FT.-IN.)	C (INCHES)	E (FT.-IN.)	F (FT.-IN.)	G (FT.-IN.)	H (FT.-IN.)	SLOPE (X:Y)
2' X 2'	4	2-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 2'	4	3-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 3'	4	3-8	3-8	4	2-0	4-0	1-8	1-4	3:1
4' X 2'	5	4-10	2-10	5	3-0	3-0	1-0	1-0	3:1
4' X 3'	5	4-10	3-10	5	2-0	4-0	1-8	1-4	3:1
4' X 4'	5	4-10	4-10	5	2-0	4-0	2-0	2-0	2:1
5' X 2'	6	6-0	3-0	6	3-0	3-0	1-0	1-0	3:1
5' X 3'	6	6-0	4-0	6	2-0	4-0	1-8	1-4	3:1
5' X 4'	6	6-0	5-0	6	2-0	4-0	2-0	2-0	2:1
5' X 5'	6	6-0	6-0	6					
6' X 2'	7	7-2	3-2	7	3-0	3-0	1-0	1-0	3:1
6' X 3'	7	7-2	4-2	7	2-0	4-0	1-8	1-4	3:1
6' X 4'	7	7-2	5-2	7	2-0	4-0	2-0	2-0	2:1
6' X 5'	7	7-2	6-2	7	2-0	4-0	3-0	2-0	2:1
6' X 6'	7	7-2	7-2	7	2-0	4-0	4-0	2-0	2:1
7' X 4'	8	8-4	5-4	8	2-0	4-0	2-0	2-0	2:1
7' X 5'	8	8-4	6-4	8					
7' X 6'	8	8-4	7-4	8					
7' X 7'	8	8-4	8-4	8					
8' X 4'	8	9-4	5-4	8	2-0	4-0	2-0	2-0	2:1
8' X 5'	8	9-4	6-4	8					
8' X 6'	8	9-4	7-4	8					
8' X 7'	8	9-4	8-4	8					
8' X 8'	8	9-4	9-4	8					
9' X 5'	9	10-6	6-6	9					
9' X 6'	9	10-6	7-6	9					
9' X 7'	9	10-6	8-6	9					
9' X 8'	9	10-6	9-6	9					
9' X 9'	9	10-6	10-6	9					
10' X 4'	10	11-8	4-10	10					
10' X 5'	10	11-8	6-8	10					
10' X 6'	10	11-8	7-8	10					
10' X 7'	10	11-8	8-8	10					
10' X 8'	10	11-8	9-8	10					
10' X 9'	10	11-8	10-8	10					
10' X 10'	10	11-8	11-8	10					
11' X 4'	11	12-10	5-10	11					
11' X 6'	11	12-10	7-10	11					
11' X 8'	11	12-10	9-10	11					
11' X 10'	11	12-10	11-10	11					
11' X 11'	11	12-10	12-10	11					
12' X 4'	12	14-0	6-0	12					
12' X 6'	12	14-0	8-0	12					
12' X 8'	12	14-0	10-0	12					
12' X 10'	12	14-0	12-0	12					
12' X 12'	12	14-0	14-0	12					

DETAIL OF PRECAST CONCRETE BOX CULVERT END SECTION



END CONNECTION TO FIT PRECAST BOX CULVERT (BELL OR SPIGOT MAY BE OMITTED WHEN COLLARING TO AN EXISTING BOX OR HEADWALL.)

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS AS1, AS2, & AS3 DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M259. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO M55-81.

NOTE:

THE DIMENSIONS INDICATED ARE FOR END SECTIONS THAT ARE TO BE USED WITH PRECAST BOX CULVERT SECTIONS DESIGNED FOR 2' OR MORE OF FILL. THE DIMENSIONS MUST BE MODIFIED FOR THE END SECTION TO BE COMPATIBLE WITH PRECAST CULVERT SECTIONS DESIGNED FOR LESS THAN 2' OF FILL.

REVISIONS	
DATE	DESCRIPTION
9-8-89	DRAWN
3-27-90	REVISED
6-14-94	REVISED
8-16-94	REVISED
01-10-07	REVISED

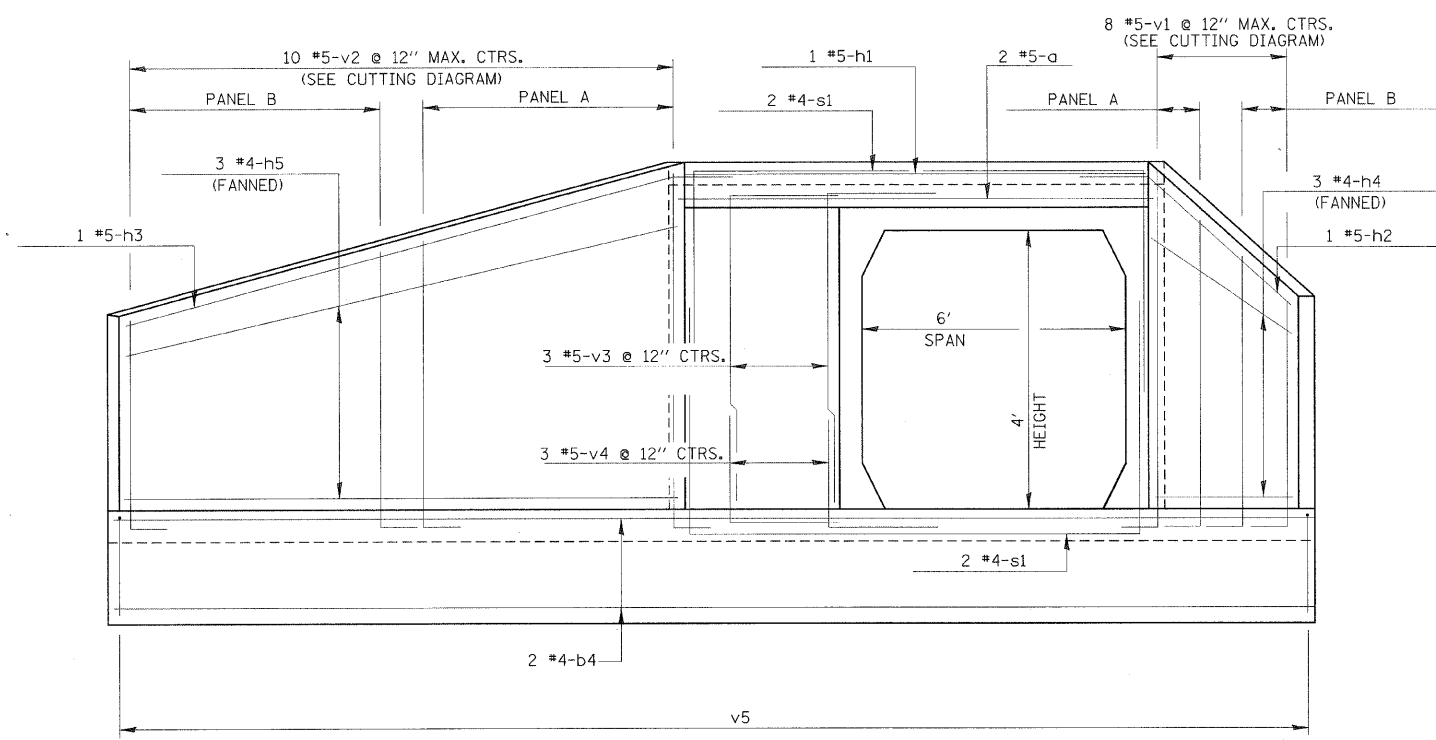
MODIFIED STD. 9-50

REVISIONS	
NAME	DATE

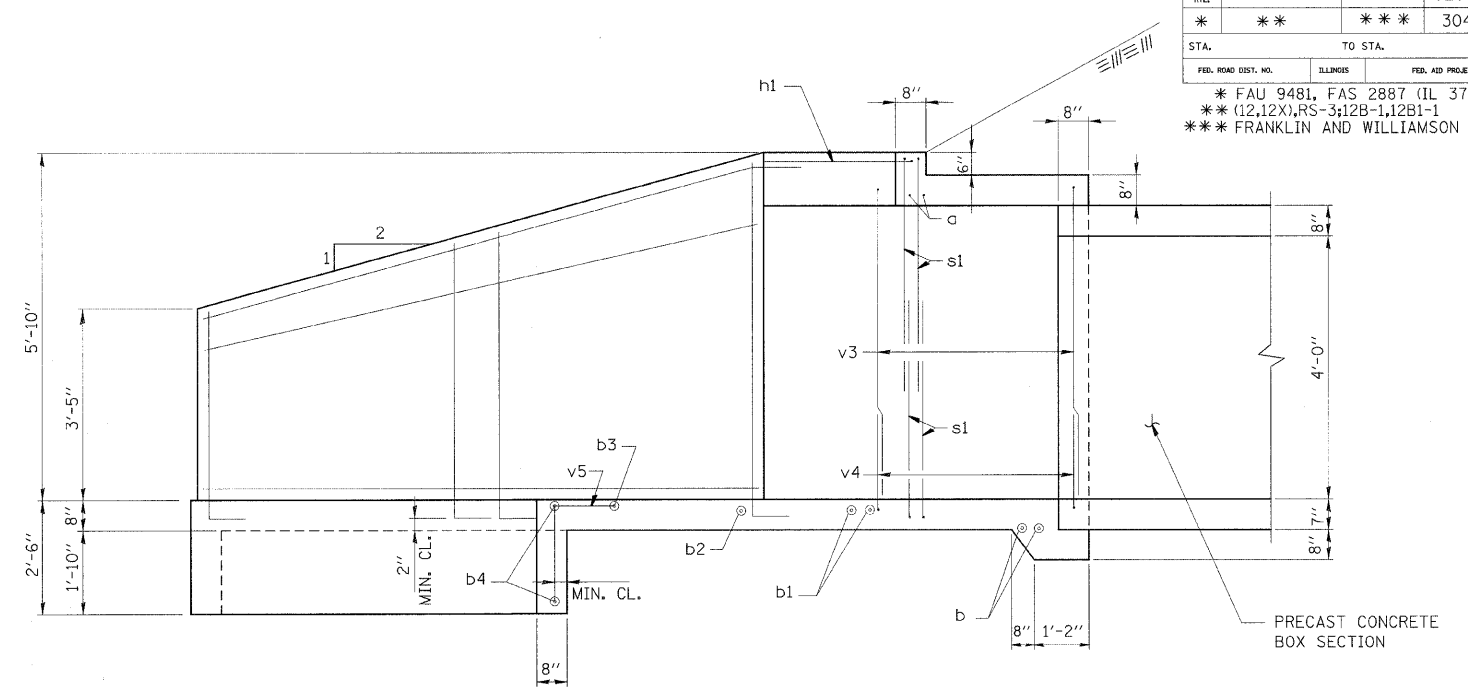
ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAIL:
PRECAST CONCRETE BOX CULVERT END SECTION

SCALE: VERT. NO SCALE
 DATE: DRAWN BY: CHECKED BY:

F. A. SITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	*	*	304	158A
STA. TO STA.		FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS		
* FAU 9481, FAS 2887 (IL 37) ** (12,12X),RS-3:12B-1,12B1-1 *** FRANKLIN AND WILLIAMSON				



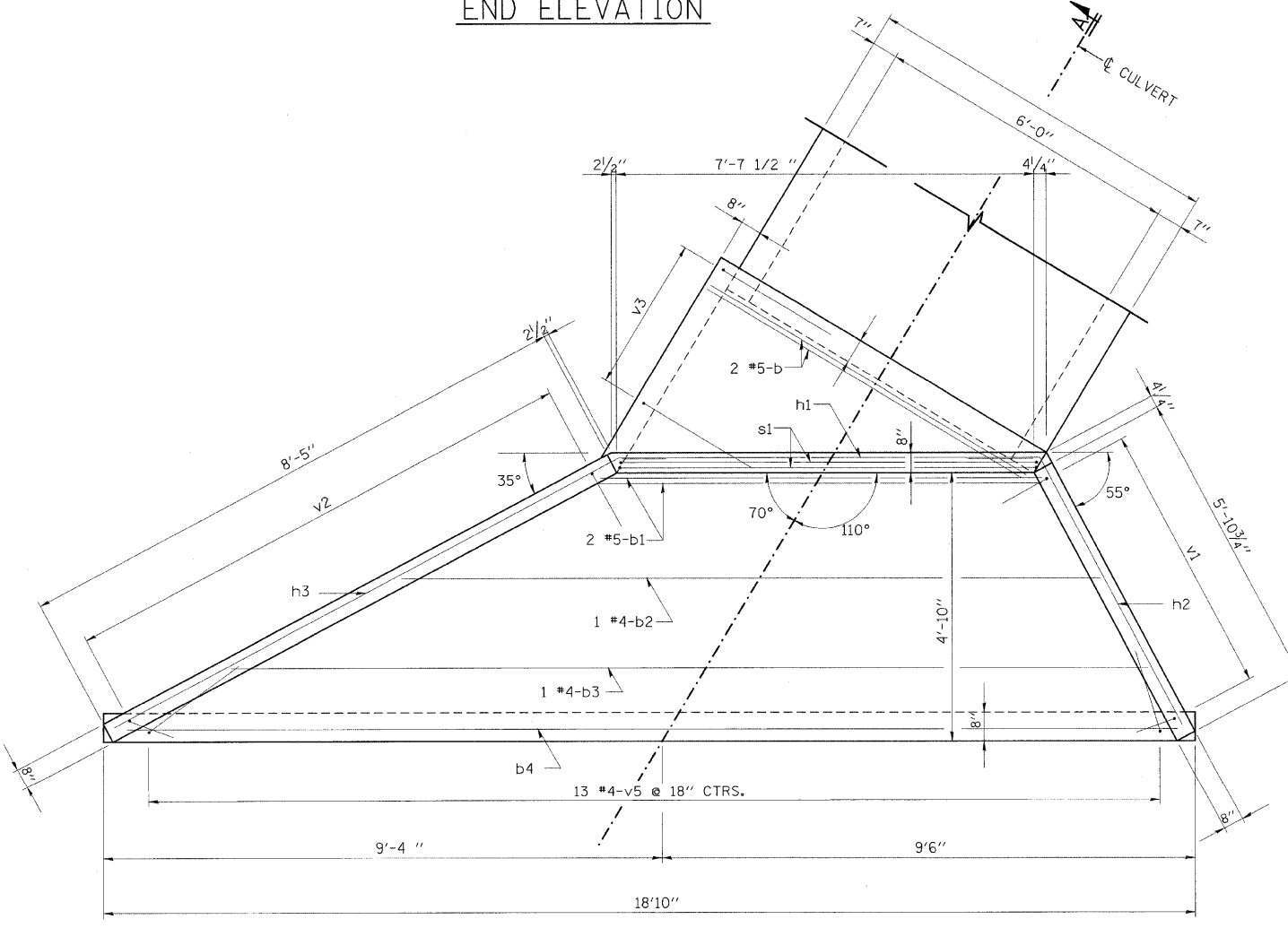
END ELEVATION



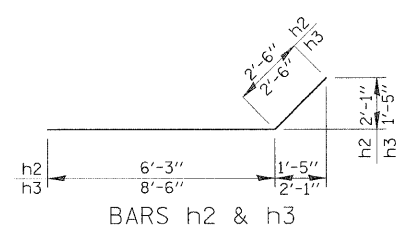
SECTION A-A

BILL OF MATERIAL

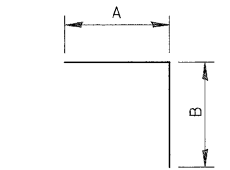
BAR	SIZE	NO.	LENGTH	SHAPE
a	#5	2	7'- 11"	
b	#5	2	7'- 4"	
b1	#5	2	9'- 4"	
b2	#4	1	12'- 6"	
b3	#4	1	15'- 9"	
b4	#4	2	18'- 4"	
b5				
h1	#5	1	7'-11"	
h2	#5	1	8'-10"	
h3	#5	1	11'- 2"	
h4	#4	3	5'-10"	
h5	#4	3	8'- 4"	
v1	#5	4	13'- 8"	
v2	#5	5	13'- 8"	
v3	#5	3	9'- 11"	
v4	#5	3	7'- 3"	
v5	#4	13	4'- 3"	
s1	#4	4	16'- 2"	
CLASS SI CONC. HDWL.			CU. YDS.	6.56
REINF. BARS			LBS.	420



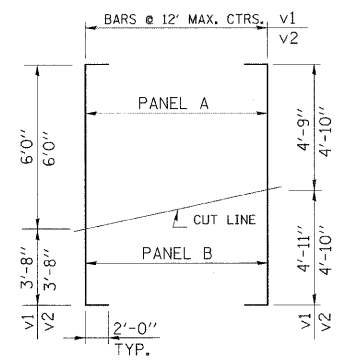
PLAN



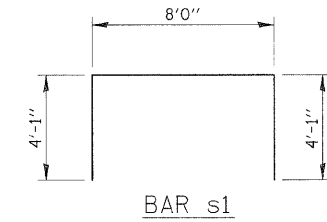
BARS h2 & h3



BAR	A	B
v3	4'-9"	5'-2"
v4	4'-9"	2'-6"
v5	2'-1"	2'-2"



CUTTING DIAGRAM BARS v1 & v2



BAR s1

NOTES:

CLASS X CONCRETE SHALL BE USED THROUGHOUT.
EXPOSED EDGES SHALL BE BEVELED 3/4".
REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, M-53, GRADE 60.

NOTES:

TABLE FOR ONE (1) HEADWALL ONLY.
BAR DIMENSIONS ARE OUT TO OUT.
THICKNESS WITH 0' TO 2' OF COVER
THICKNESS WITH 0' TO 2' OF COVER

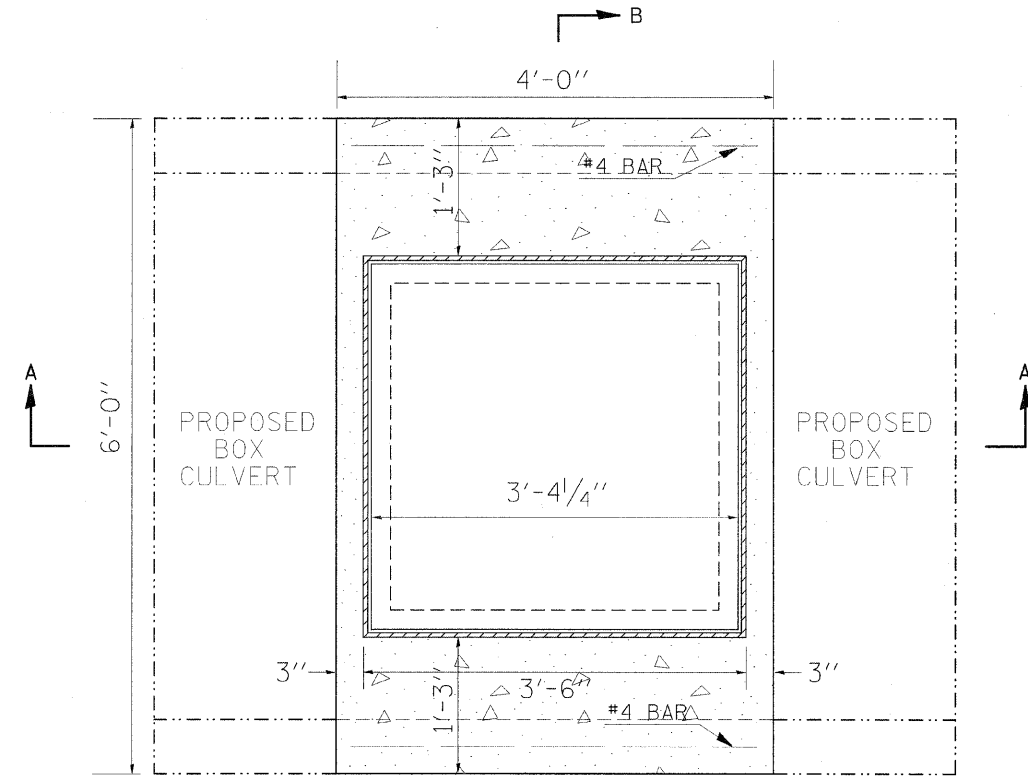
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CAST-IN-PLACE HEADWALLS
STATION 569+00
6' X 4' BOX @ 20° SKEW

PLOT DATE = 2/5/2010
FILE NAME = c:\p\work\p\m\DOT\HEADWALL\43858\43858.dgn
PLOT SCALE = 28.0000 / 1"
USER NAME = henden

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	159
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12.12X)RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

DETAIL OF INLET BOX SPECIAL WITH GRATE AND FRAME, TYPE 542546



GENERAL NOTES

FOR DETAILS OF GRATING AND FRAME, SEE HWY STD. 542546

CLASS SI CONCRETE SHALL BE USED THROUGHOUT. EXPOSED CONCRETE EDGES SHALL BE BEVELED 3/4".

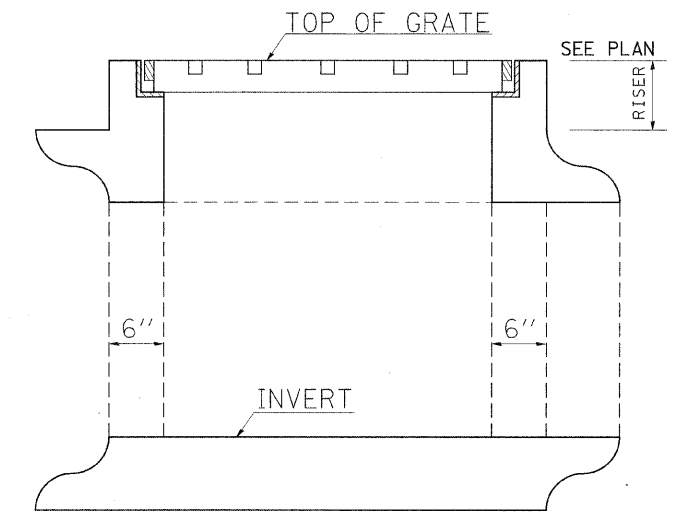
THE INLET BOX MAY BE PRECAST OR MAY BE CAST IN PLACE. IF PRECAST, SHOP PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 504 OF THE STANDARD SPECIFICATIONS.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR **FLUSH INLET BOX FOR MEDIAN, STANDARD 542546, SPECIAL** WHICH WILL INCLUDE THE COST FOR FRAME AND GRATE, TYPE 542546 AND FURNISHING ALL MATERIALS AND CONSTRUCTING THE WORK IN PLACE IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN.

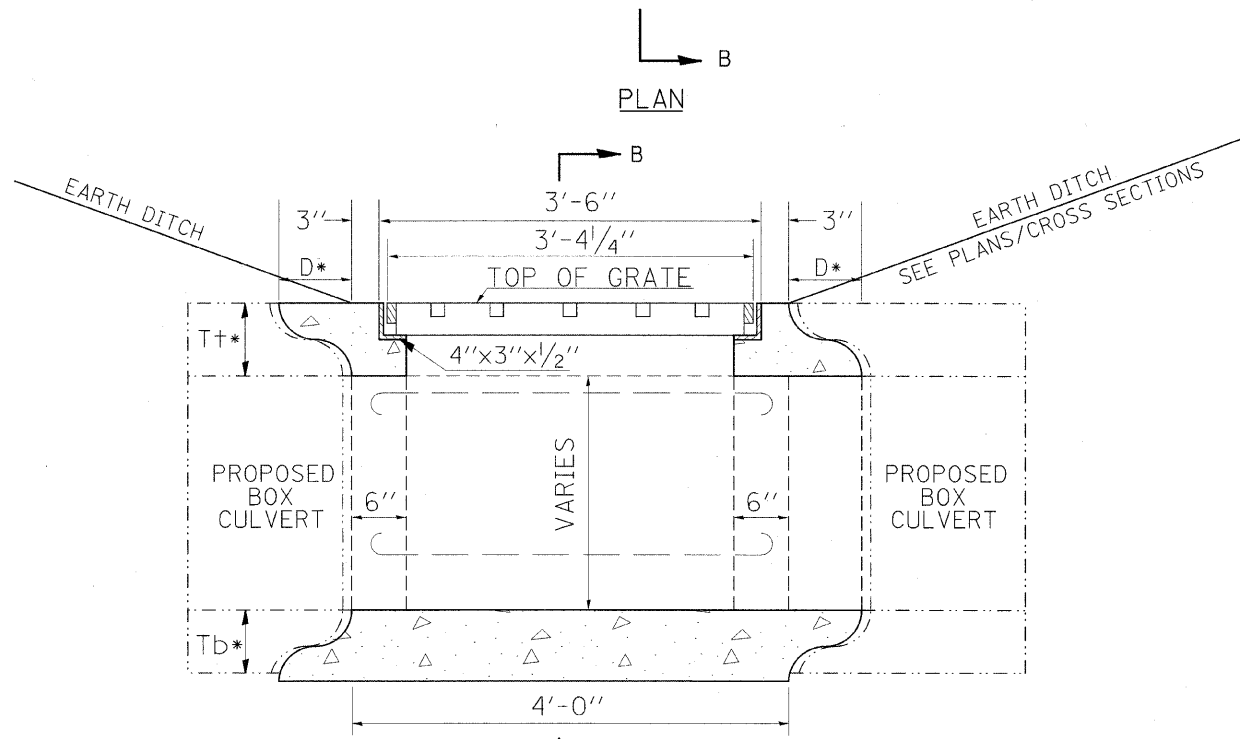
MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS

THE SIDE AND TOP JOINTS BETWEEN THE PRECAST BOX SECTION AND THE INLET BOX SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS

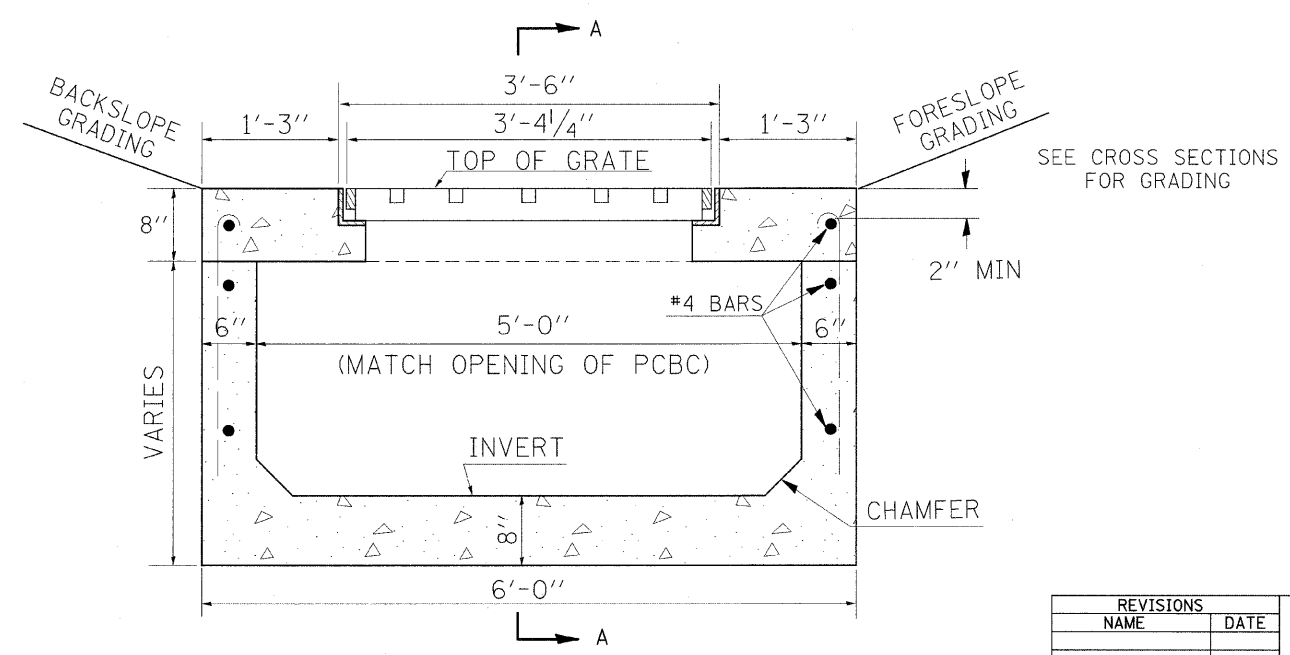
THE FLOW LINE CHAMFER OR RADIUS IS TO MATCH THE MANUFACTURERS STANDARDS OF THE PRECAST CONCRETE BOX CULVERT.



LT STA 377+81
LT STA 381+33
(SEE DETAIL BELOW FOR OTHER NOTES AND DIMENSIONS)



* THE "D", "T+", AND "Tb" DIMENSIONS SHALL CONFORM TO THE MANUFACTURERS STANDARDS FOR THE PROPOSED PRECAST BOX CULVERT USED.



TO BE USED AT:
LT STA 377+81 INLET IN TOP OF BOX SECTION
LT STA 381+33 (SEE UPPER RIGHT FOR INLET RISER DETAIL)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS:
INLET BOX SPECIAL WITH GRATE AND FRAME, TYPE 542546

SCALE: VERT. NO SCALE
HORIZ. NO SCALE

DATE: _____ DRAWN BY: _____
CHECKED BY: _____

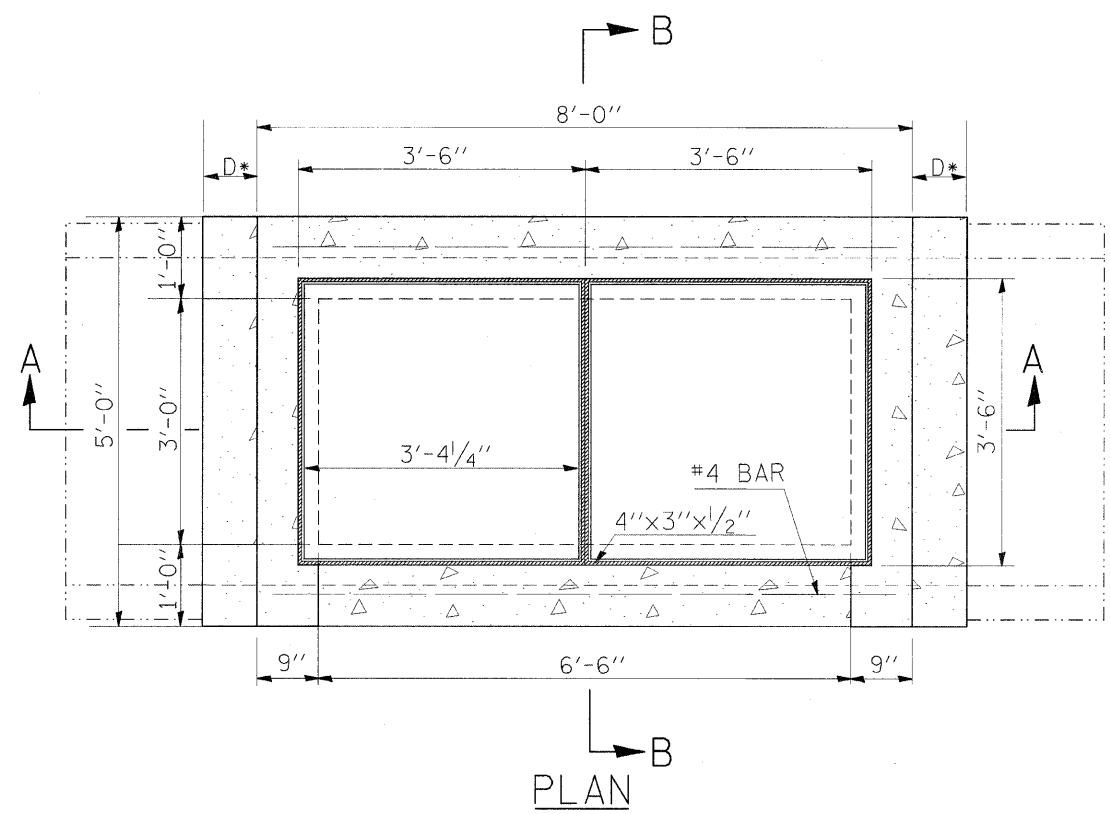
PLOT DATE = 12/7/2009
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 USER = hndc
 USER NAME = hndc

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	160

STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

* FAU 9481, FAS 2887 (IL 37)
 ** (12.12X),RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

DETAIL OF INLET SPECIAL 542546 DOUBLE



GENERAL NOTES

FOR DETAILS OF GRATING AND FRAME, SEE HWY STD. 542546.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
 EXPOSED CONCRETE EDGES SHALL BE BEVELED 3/4".

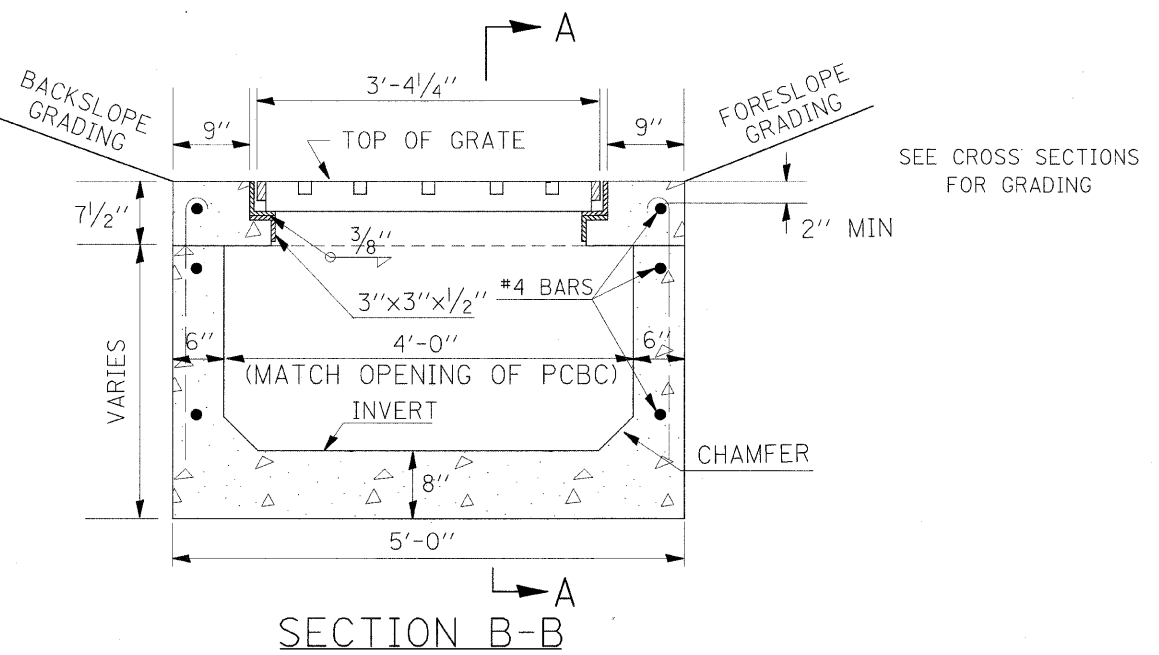
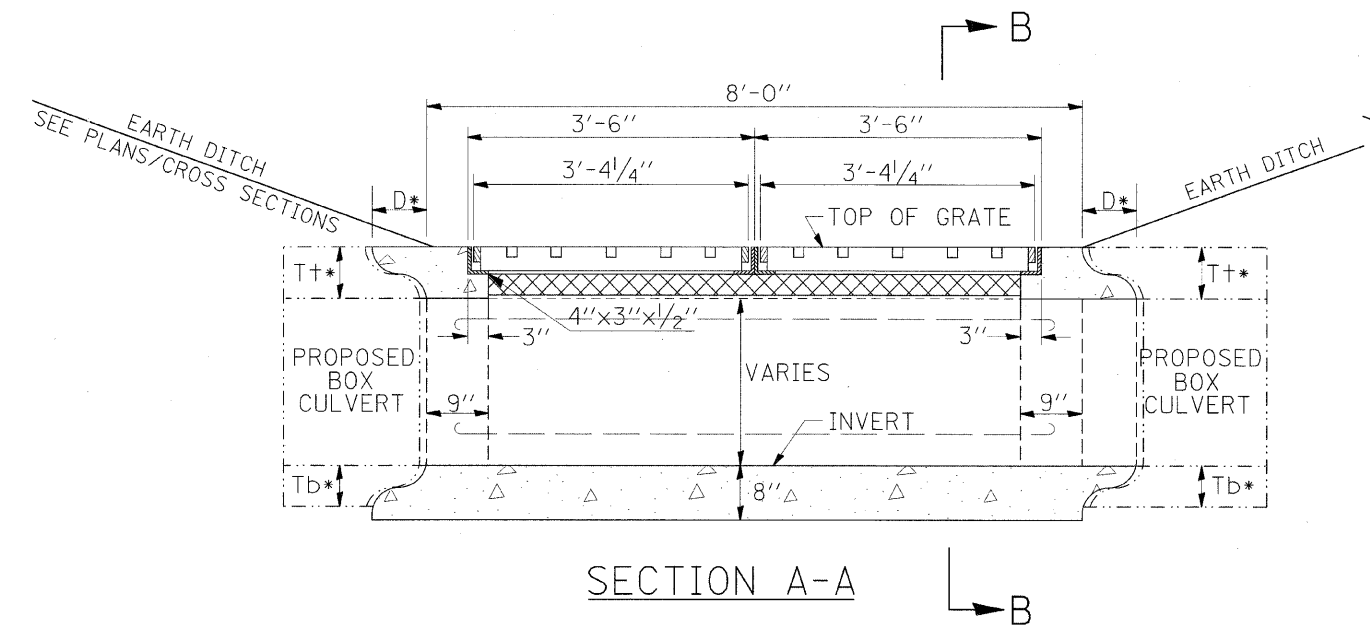
THE INLET BOX MAY BE PRECAST OR MAY BE CAST IN PLACE.
 IF PRECAST, SHOP PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 504 OF THE STANDARD SPECIFICATIONS.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR **FLUSH INLET BOX FOR MEDIAN, STANDARD 542546, SPECIAL** WHICH WILL INCLUDE THE COST FOR FRAME AND GRATE, TYPE 542546 DOUBLE AND FURNISHING ALL MATERIALS AND CONSTRUCTING THE WORK IN PLACE IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS

THE SIDE AND TOP JOINTS BETWEEN THE PRECAST BOX SECTION AND THE INLET BOX SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS

THE FLOW LINE CHAMFER OR RADIUS IS TO MATCH THE MANUFACTURERS STANDARDS OF THE PRECAST CONCRETE BOX CULVERT.



* THE "D", "T+", AND "Tb" DIMENSIONS SHALL CONFORM TO THE MANUFACTURERS STANDARDS FOR THE PROPOSED PRECAST BOX CULVERT USED.

TO BE USED AT:
 LT STA 389+98
 LT STA 391+00

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
INLET SPECIAL
542546 DOUBLE

SCALE: VERT. NO SCALE
 HORIZ. NO SCALE

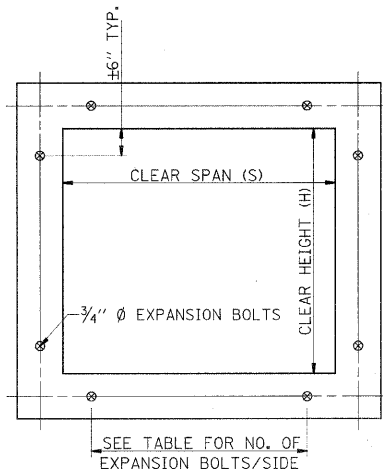
DATE: DRAWN BY: CHECKED BY:

PLOT DATE = 12/7/2009
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 PLOT NO = 1
 USER NAME = hudson

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	162
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* FAU 9481, FAS 2887 (IL 37)
 ** (12.12X)RS-3:12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

EXPANSION BOLTS REQUIRED FOR CULVERT EXTENSIONS



EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND 3/4" Ø HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.

MINIMUM CERTIFIED PROOF LOAD=7,500 LBS.

BOLTS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR EXPANSION BOLTS, 3/4 INCH.

H OR S	NO. EXPANSION BOLTS REQ'D/SIDE			
	EXTENSION < 15'		EXTENSION > 15'	
	NO.	SPACING	NO.	SPACING
2.0	*	*	*	*
2.5	2	18"	2	18"
3.0	2	24"	2	24"
4.0	3	18"	3	18"
5.0	4	16"	3	24"
6.0	5	15"	4	20"
7.0	5	18"	4	24"
8.0	6	17"	5	21"
9.0	6	19"	5	24"
10.0	7	18"	6	21"
11.0	8	17"	6	24"
12.0	8	19"	7	22"

* NOTE: USE MINIMUM OF 1 EXPANSION BOLT AT EACH CORNER.

EXAMPLE:

6' X 4' BOX CULVERT TO BE EXTENDED 18' AT ONE END ONLY.
 FROM TABLE FIND
 6' SIDE REQUIRES (4)-3/4" Ø EXPANSION BOLTS AT 20" CENTERS
 4' SIDE REQUIRES (3)-3/4" Ø EXPANSION BOLTS AT 18" CENTERS
 TOTAL NO. REQUIRED
 (4+3)2 = (14)-3/4" Ø EXPAN. BOLTS

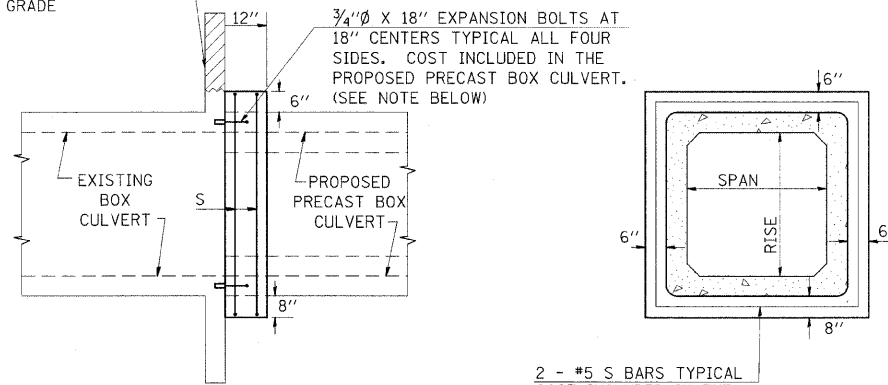
CROSS SECTION THRU BARREL

FOR ANCHOR BOLT REQUIREMENTS, SEE ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS.



DETAILS OF CONCRETE COLLAR FOR PRECAST BOX CULVERT

REMOVE PORTION OF EXISTING HEADWALL DOWN TO 12" BELOW FINISHED GRADE



3/4" Ø X 18" EXPANSION BOLTS AT 18" CENTERS TYPICAL ALL FOUR SIDES. COST INCLUDED IN THE PROPOSED PRECAST BOX CULVERT. (SEE NOTE BELOW)

2 - #5 S BARS TYPICAL COST INCLUDED IN THE PROPOSED PRECAST BOX CULVERT.

TABULATION
(FOR INFORMATION PURPOSES ONLY)

SPAN X RISE	CLASS SI CONC. CU. YD. (EST.)
2' X 2'	0.26
3' X 2'	0.30
3' X 3'	0.34
4' X 2'	0.36
4' X 3'	0.39
4' X 4'	0.43
5' X 2'	0.41
5' X 3'	0.45
5' X 4'	0.49
6' X 2'	0.47
6' X 3'	0.51
6' X 4'	0.54
10' X 4'	0.76

THE CONCRETE COLLAR SHALL BE CONSIDERED INCLUDED IN PRECAST CONCRETE BOX CULVERT, WHICH PRICE SHALL INCLUDE THE REMOVAL OF SUCH PORTIONS OF THE EXISTING HEADWALLS AS MAY BE REQUIRED. CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

NOTE: ANCHOR BOLTS, MEETING THE REQUIREMENTS OF ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS, SHALL EXTEND A MINIMUM OF 9 INCHES INTO THE NEW CONCRETE. EXPANSION SHIELDS SHALL PROVIDE A MINIMUM CERTIFIED PROOF LOAD OF 4080 POUNDS.

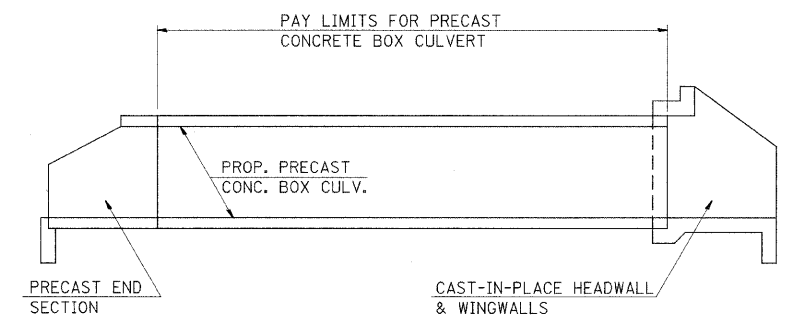
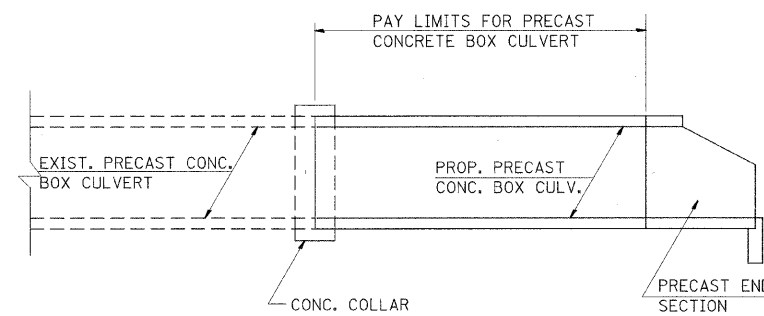
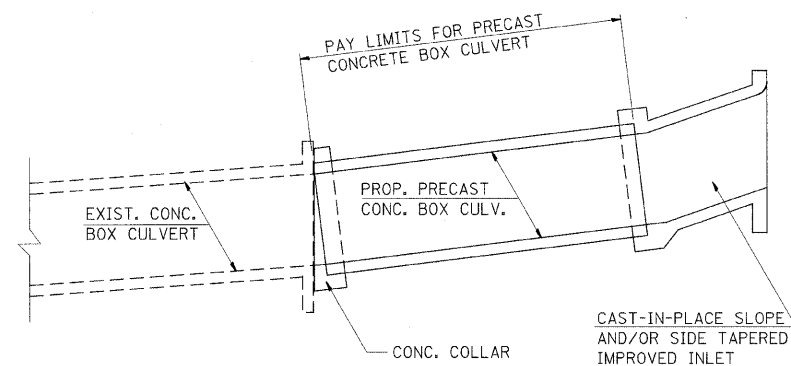
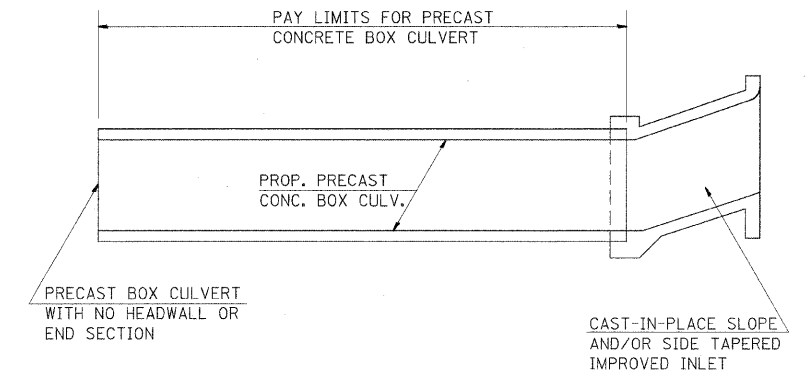
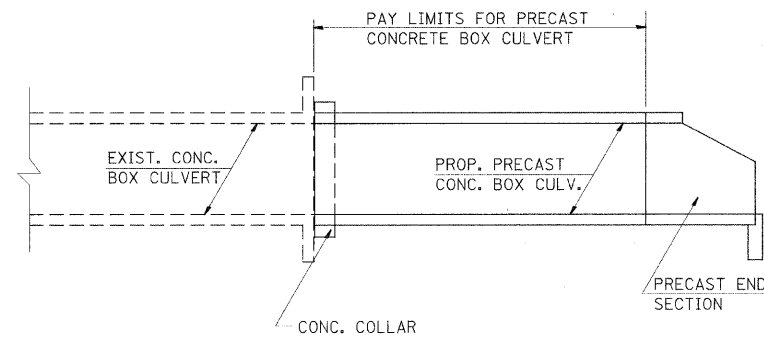
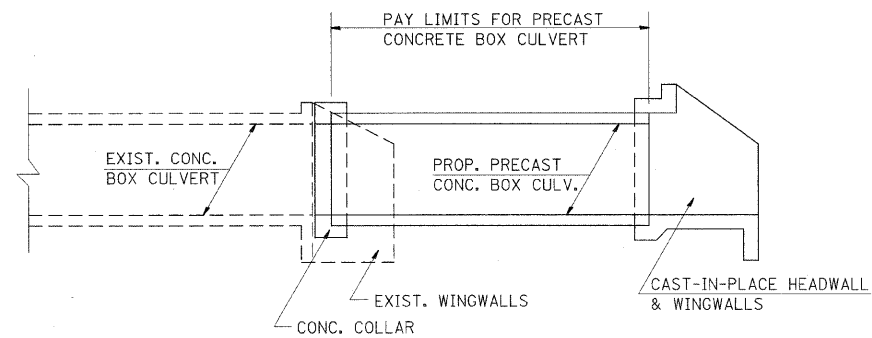


ILLINOIS DEPARTMENT OF TRANSPORTATION	
DETAILS:	
EXPANSION BOLTS REQUIRED FOR CULVERT EXTENSIONS; CONCRETE COLLAR FOR PRECAST BOX CULVERT;	
SCALE: VERT. NO SCALE HORIZ. DATE	
DRAWN BY CHECKED BY	

PLOT DATE = 12/7/2009
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 USER NAME = j...
 USER NAME = j...

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	163
STA.		TO STA.		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X),RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

PAYMENT LIMITS FOR PRECAST CONCRETE BOX CULVERTS



CULVERT EXTENSIONS

NEW CULVERTS

NOTES

WHEN PRECAST CONCRETE BOX CULVERTS ARE SPECIFIED ON THE PLANS, THEY WILL BE MEASURED BY THE FOOT. THE OVERALL LENGTH SHALL BE MEASURED OUT-TO-OUT OF THE PRECAST SEGMENTS ALONG THE CENTERLINE OF THE CULVERT. THE BOX CULVERT END SECTIONS WILL BE MEASURED AS EACH. CAST-IN-PLACE COLLARS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE PRECAST CONCRETE BOX CULVERT. SEE ARTICLE 540.08 OF THE STANDARD SPECIFICATIONS ADOPTED JANUARY 1, 2007.

THE TERM "BOX CULVERT END SECTION" AS USED HEREIN SHALL BE DEFINED AS EITHER PRECAST END SECTIONS OR CAST-IN-PLACE HEADWALLS AND WINGWALLS CONSTRUCTED AS SHOWN IN THE PLANS.

THROUGHOUT THESE PLANS, QUANTITIES SHOWN FOR CLASS SI CONCRETE AND REBARS TO BE USED IN COLLARS, HEADWALLS, WING WALLS, OR IMPROVED INLETS FOR PRECAST CONCRETE BOX CULVERTS ARE PROVIDED FOR INFORMATION AND BIDDING ONLY, AND SHALL NOT BE PAID FOR SEPARATELY.

REVISIONS	
DRAWN	8-14-90
REVISED	7-19-91
REVISED	3-11-92
REVISED	12-9-92
REVISED	8-16-94

STD 9-81

REVISIONS	
NAME	DATE

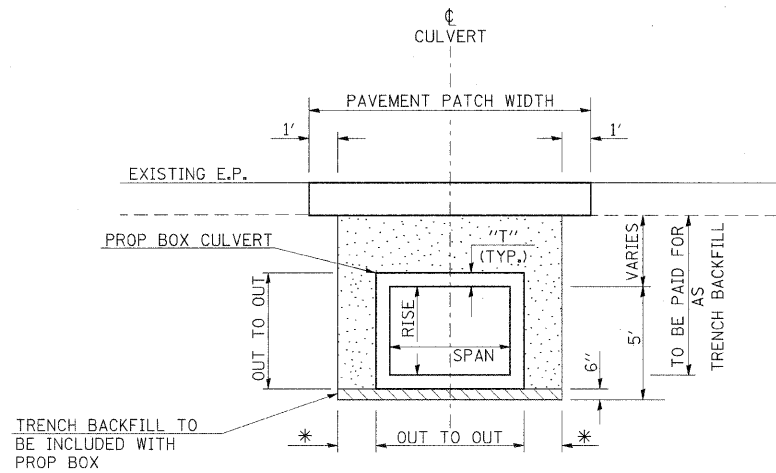
ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAIL:
PAYMENT LIMITS FOR PRECAST CONCRETE BOX CULVERTS

SCALE: VERT. NO SCALE
HORIZ. NO SCALE
DATE

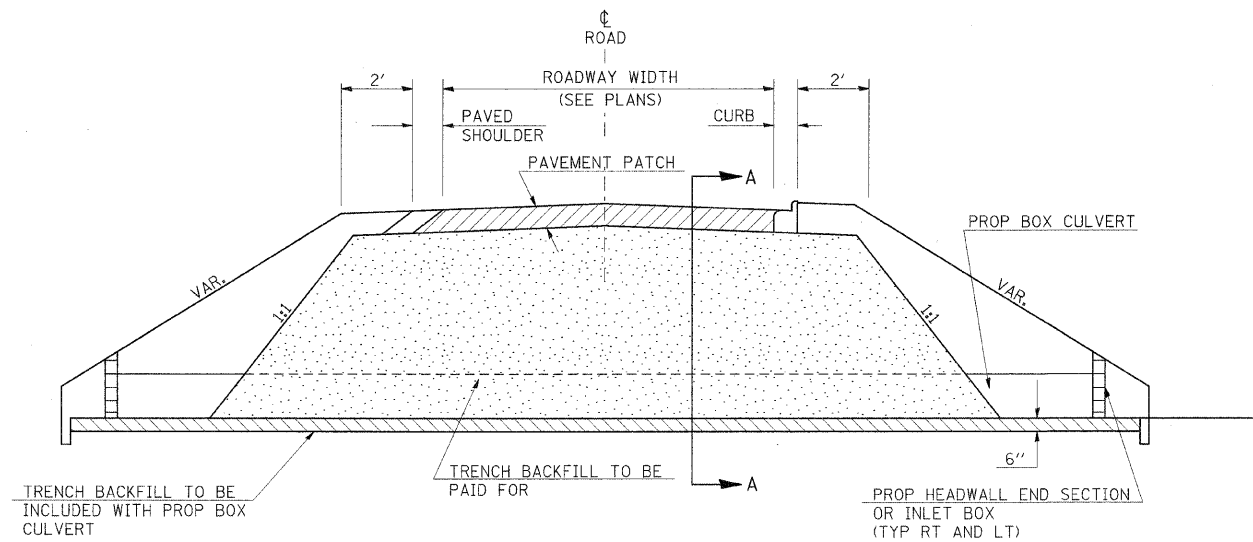
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CHECKED BY

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	164

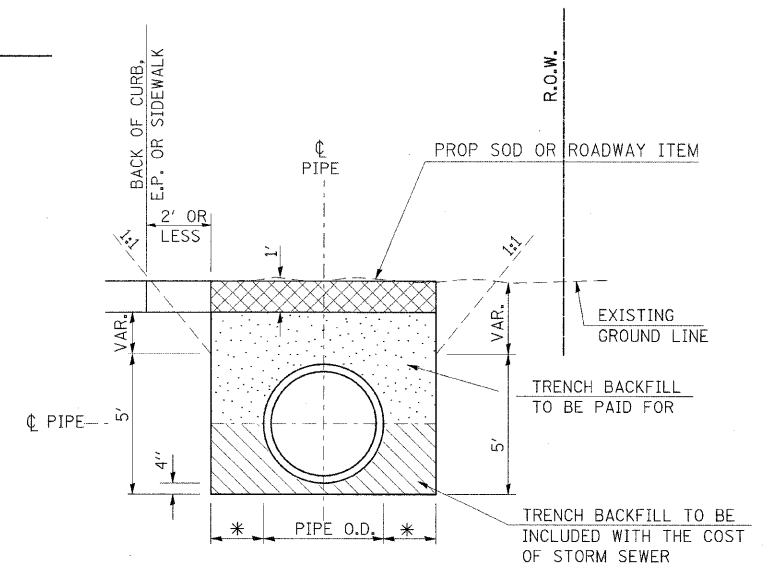
STA. TO STA.
 FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT
 * FAU 9481, FAS 2887 (IL 37)
 ** (12,12X),RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON



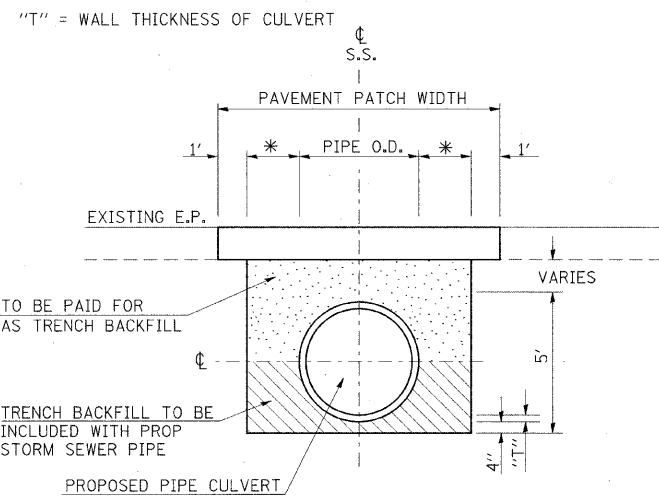
SECTION A-A: PROPOSED BOX CROSSING EXISTING ROAD
 TRENCH DEPTH GREATER THAN 5'
 SHORING REQUIRED



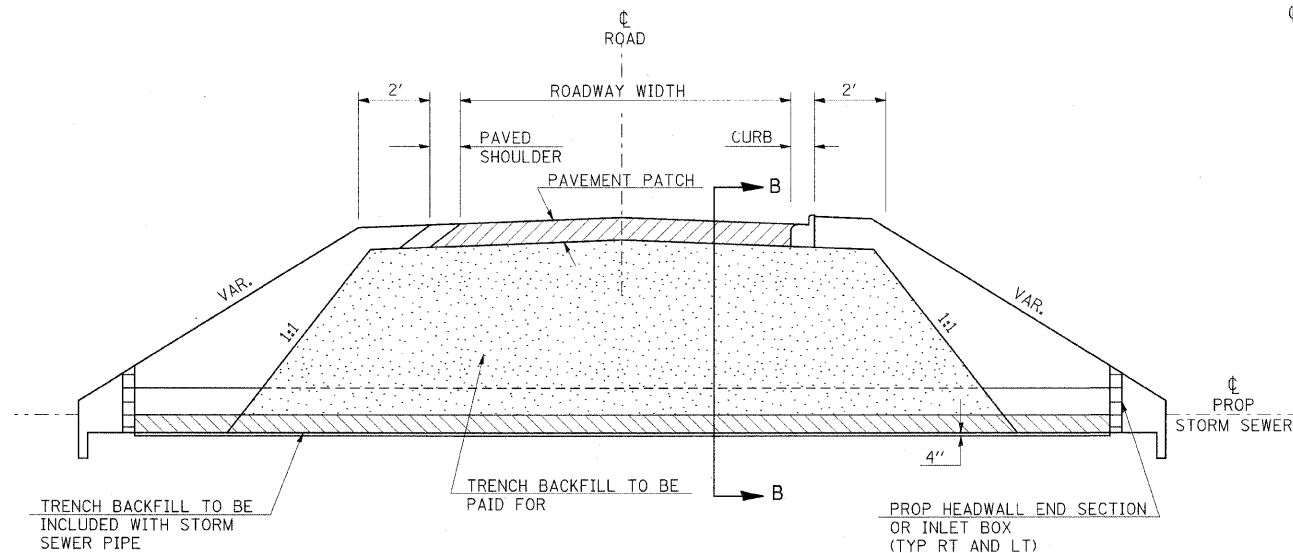
PROFILE SECTION THRU BOX CULVERT ACROSS ROADWAY



SECTION OF TRENCHES NEAR EDGE OF PAVEMENT



SECTION B-B: PROPOSED STORM SEWER CROSSES EXISTING ROAD
 TRENCH DEPTH GREATER THAN 5'
 SHORING REQUIRED



PROFILE SECTION THRU STORM SEWER ACROSS ROADWAY

NOTES:

THE CONSTRUCTION REQUIREMENTS OF THE TRENCHES FOR STORM SEWER SHALL BE IN ACCORDANCE WITH ARTICLE 550.04 AND 550.07 OF THE STANDARD SPECIFICATIONS.
 TRENCH BACKFILL WILL BE MEASURED AND PAID FOR AS SPECIFIED IN ARTICLES 208.03 AND 208.04 OF THE STANDARD SPECIFICATIONS.

* 9" + PIPE OD + 9" WHEN TRENCH DEPTH ≤ 5'.
 18" + PIPE OD + 18" WHEN TRENCH DEPTH > 5'.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DETAILS:
 TRENCH BACKFILL**

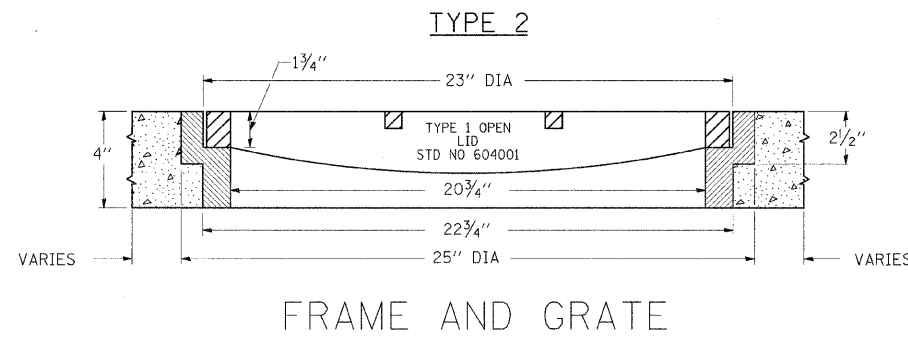
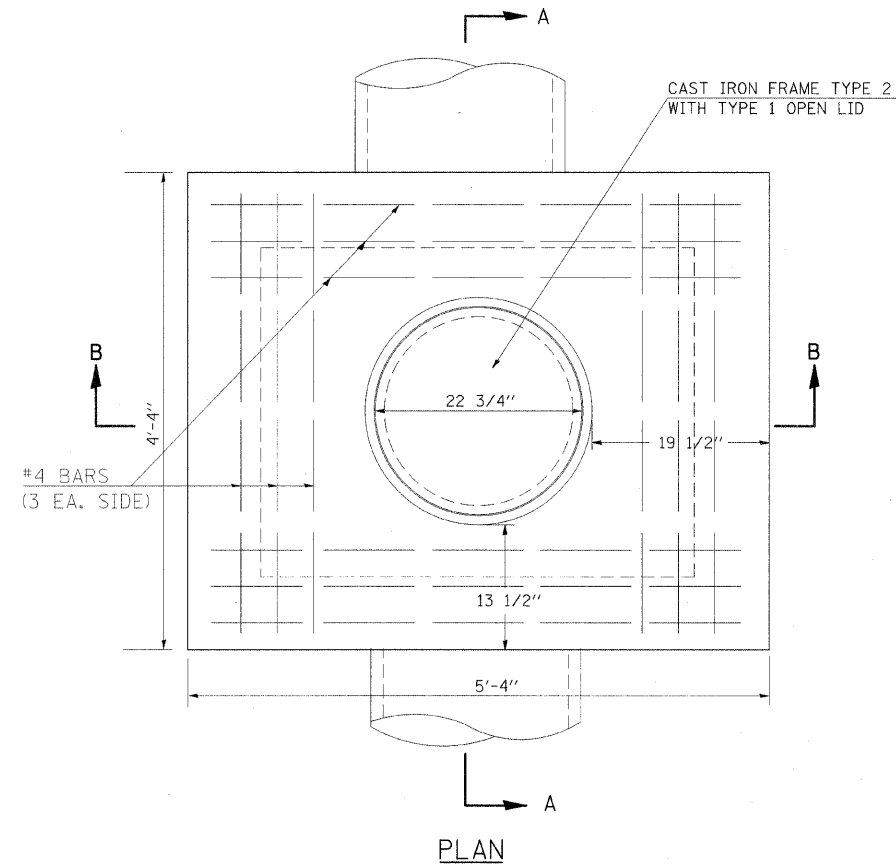
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 HORIZ. DATE

DRAWN BY
 CHECKED BY

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	166
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* FAU 9481, FAS 2887 (IL 37)
 ** (12.12X)RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

DETAIL OF INLET BOX SPECIAL WITH TYPE 2 FRAME; TYPE 1 OPEN LID



GENERAL NOTES

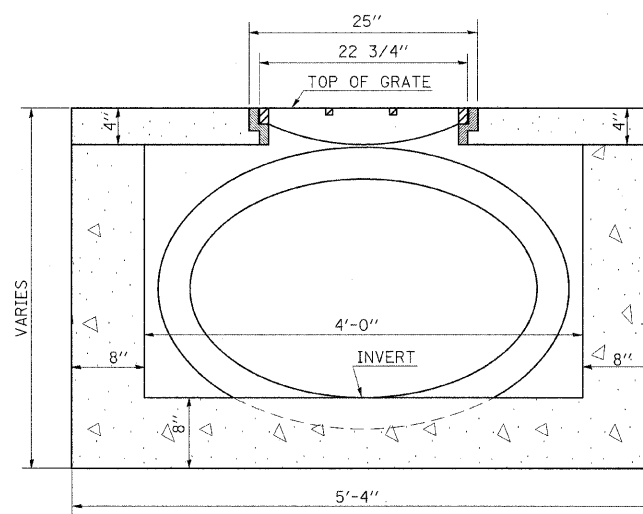
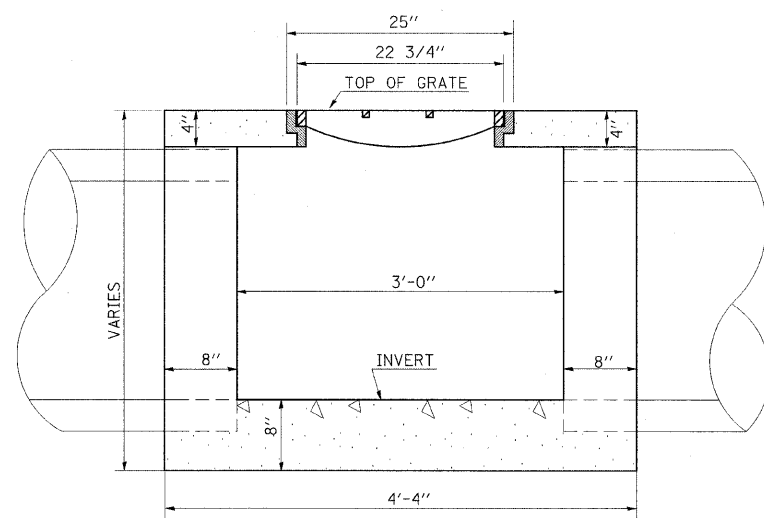
THE FRAMES MAY BE MADE OF EITHER GRAY IRON CONFORMING TO THE STANDARD SPECIFICATIONS OR DUCTILE IRON CONFORMING TO THE SPECIFICATIONS FOR DUCTILE IRON CASTING, A.S.T.M. DESIGNATION: A536, GRADE 60-45-10.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

THE INLET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR **INLET BOX SPECIAL**, WHICH PRICE SHALL INCLUDE THE COST OF THE CAST IRON FRAME, TYPE 2, WITH TYPE 1 OPEN LID AND FURNISHING ALL MATERIAL AND FOR CONSTRUCTING THE WORK IN PLACE.

THE INLET MAY BE PRECAST OR MAY BE CAST IN PLACE.

THE LID MAY BE CAST SEPARATELY OR MONOLITHICALLY WITH THE UPPER SECTION OF THE INLET.



TO BE USED AT:
 LT STA 396+80

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS:
INLET BOX SPECIAL WITH
TYPE 2 FRAME;
TYPE 1 OPEN LID

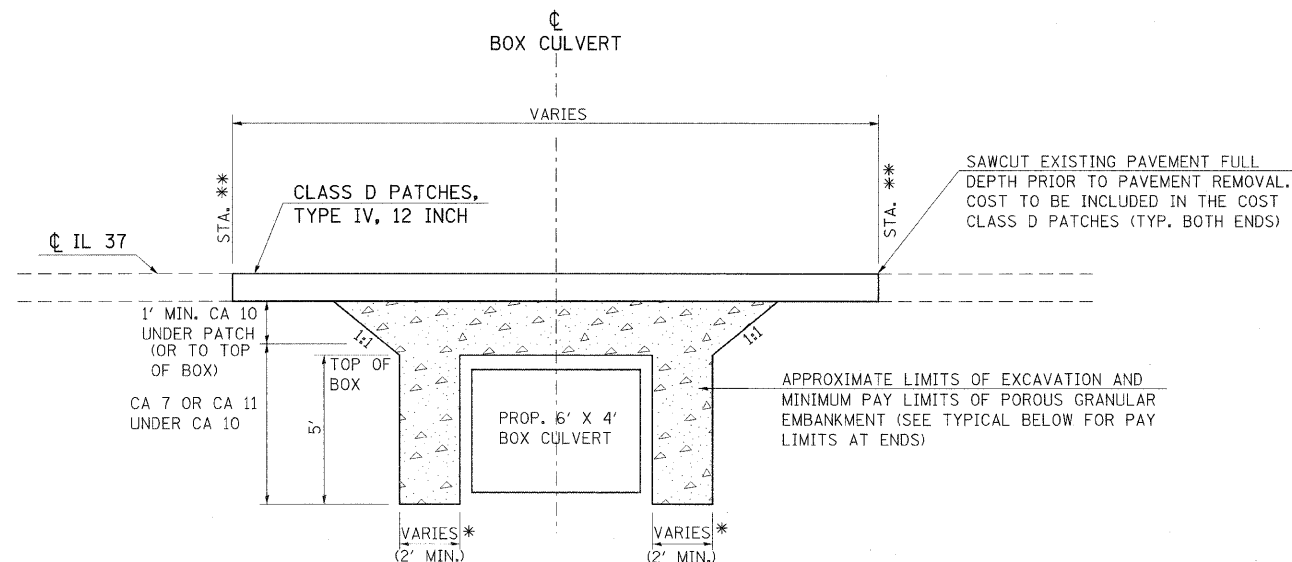
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 HORIZ. NO SCALE

DRAWN BY
 CHECKED BY

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	167
STA.		TO STA.		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X),RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

POROUS GRANULAR EMBANKMENT AT 6'x4' BOX CULVERT

PROPOSED SN 100-7125

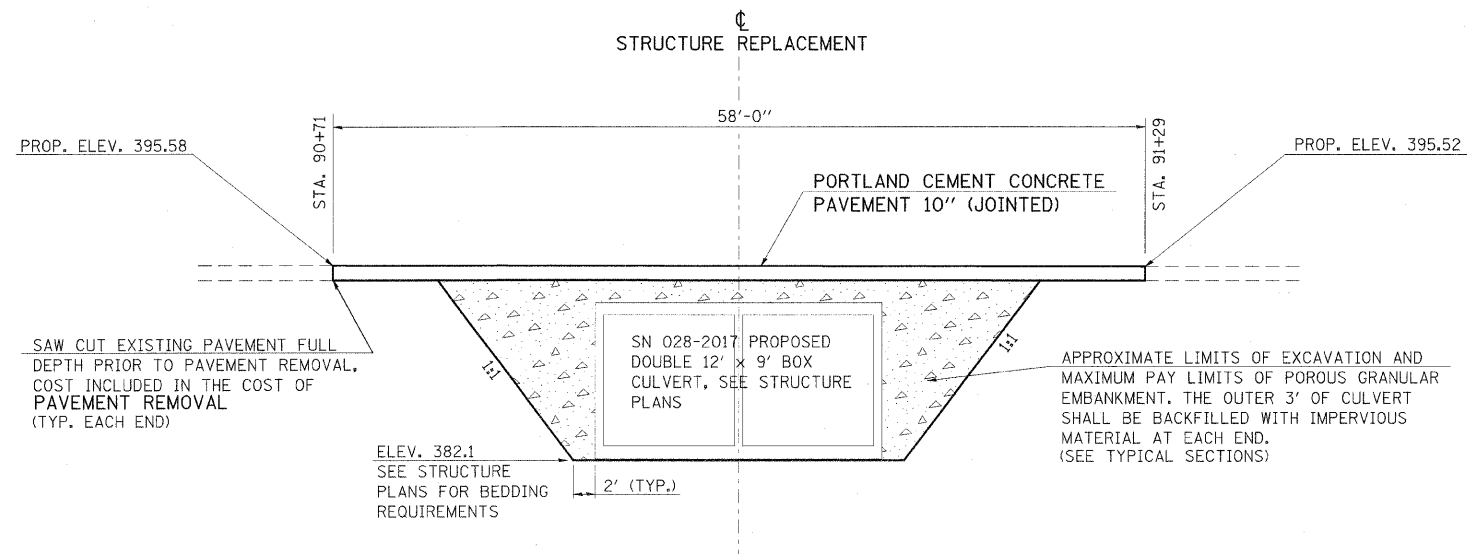


* VARIES DUE TO MATERIAL NEEDED TO FILL IN EXCAVATION FOR STRUCTURE REMOVAL

TO BE USED:
STA. 569+05

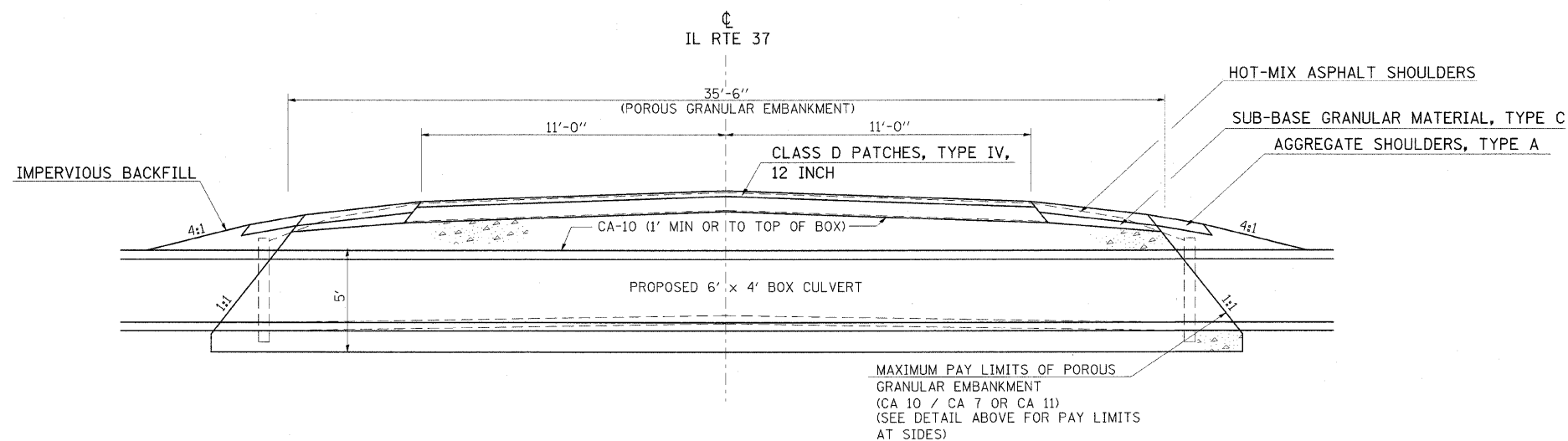
** SB STA. 568+90 TO STA. 569+20
NB STA. 568+90 TO STA. 569+15

POROUS GRANULAR EMBANKMENT SECTION AT STRUCTURE REPLACEMENT STA. 91+00



POROUS GRANULAR EMBANKMENT TYPICAL

STA. 569+05 SKEWED 20°
PROPOSED SN 100-7125



NOTE:
SEE TYPICAL SECTION FOR PROPOSED ROADWAY IMPROVEMENT WITHIN THE LIMITS OF THIS REPAIR.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
POROUS GRANULAR EMBANKMENT AT 6'x4' BOX CULVERT;
POROUS GRANULAR EMBANKMENT SECTION AT STRUCTURE REPLACEMENT STA. 91+00;
POROUS GRANULAR EMBANKMENT TYPICAL

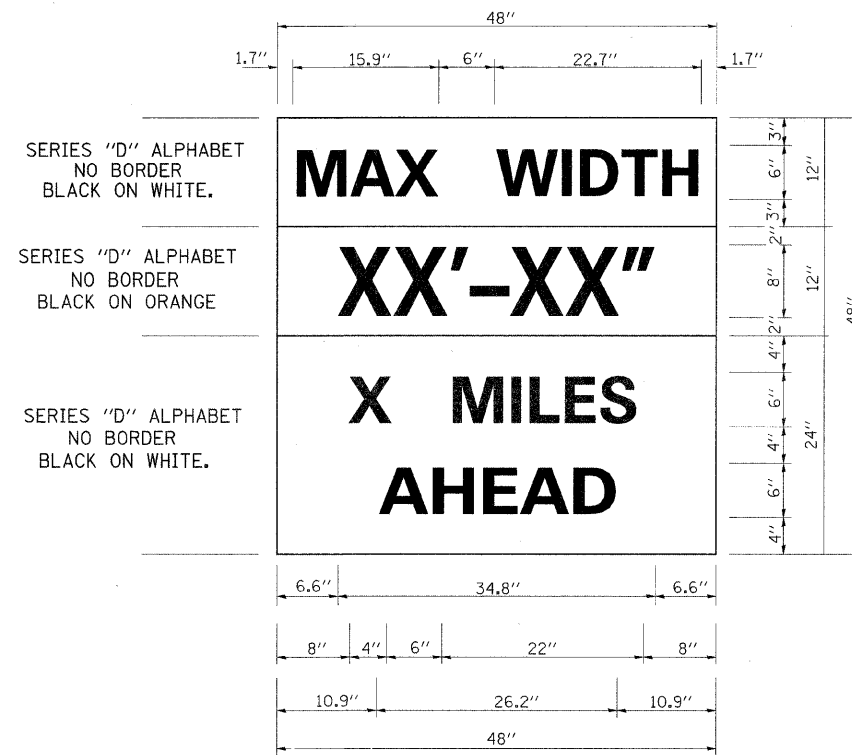
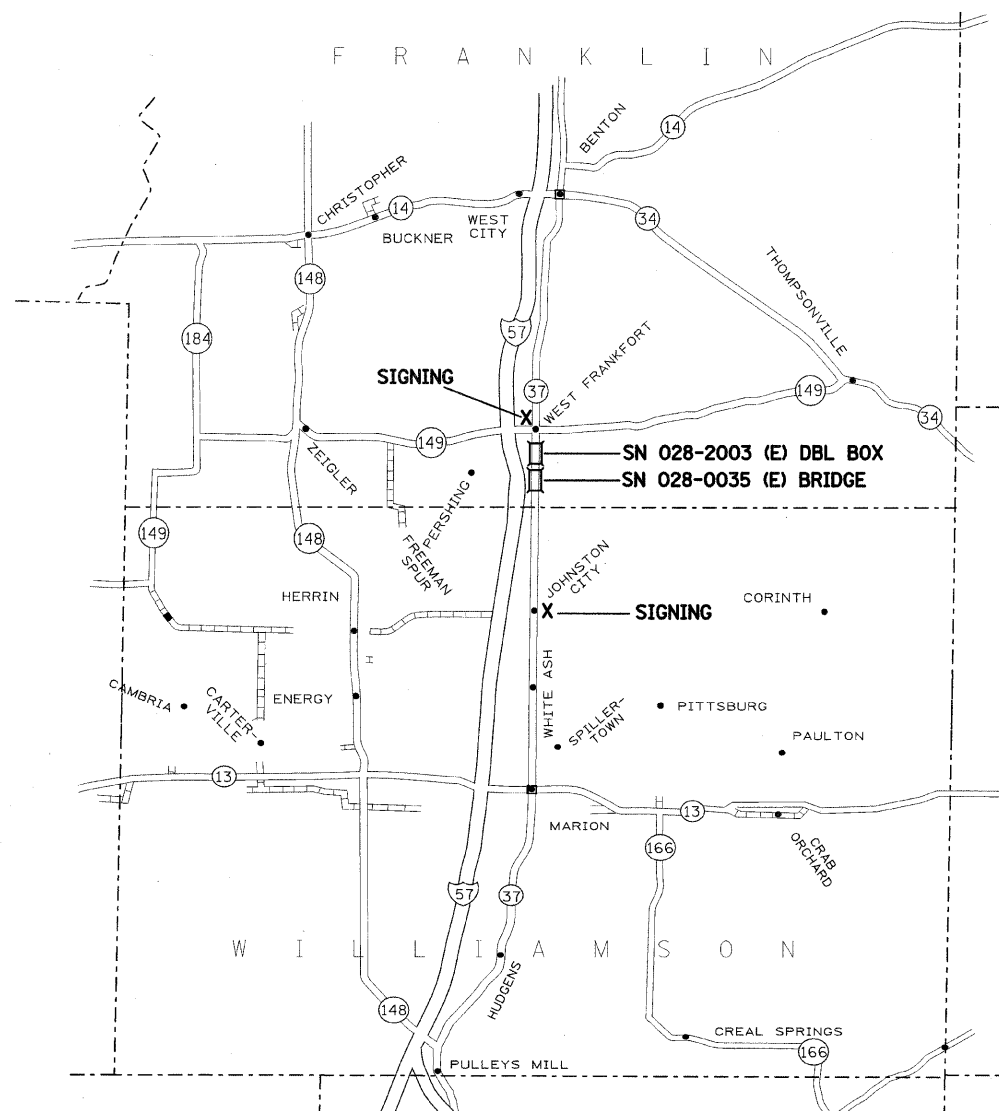
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HORIZ. DATE
DRAWN BY CNH
CHECKED BY

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	169
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* FAU 9481, FAS 2887 (IL 37)
 ** (12,12X)RS-3:12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON



SIGNING FOR LANE WIDTH RESTRICTION



RESTRICTION SIGN

(ALL MEASUREMENTS ARE IN INCHES)

W12-1103

THE "X MILES" AND LOCATION AS DIRECTED BY THE ENGINEER.

NOTES

1. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE POSTS AND SIGNS AT THE LOCATIONS SHOWN AND AS DIRECTED BY THE RESIDENT ENGR./TECH. ALL SIGNS SHALL BE POST MOUNTED.
2. THE CONTRACTOR SHALL GIVE I.D.O.T. BUREAU OF OPERATIONS, PERMITS SECTION, TWO WEEKS NOTICE BEFORE IMPLEMENTING ANY LANE WIDTH RESTRICTIONS.
3. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETOUR ROAD CLOSURE SIGNING

SCALE: VERT. NO SCALE
 HORIZ. DATE

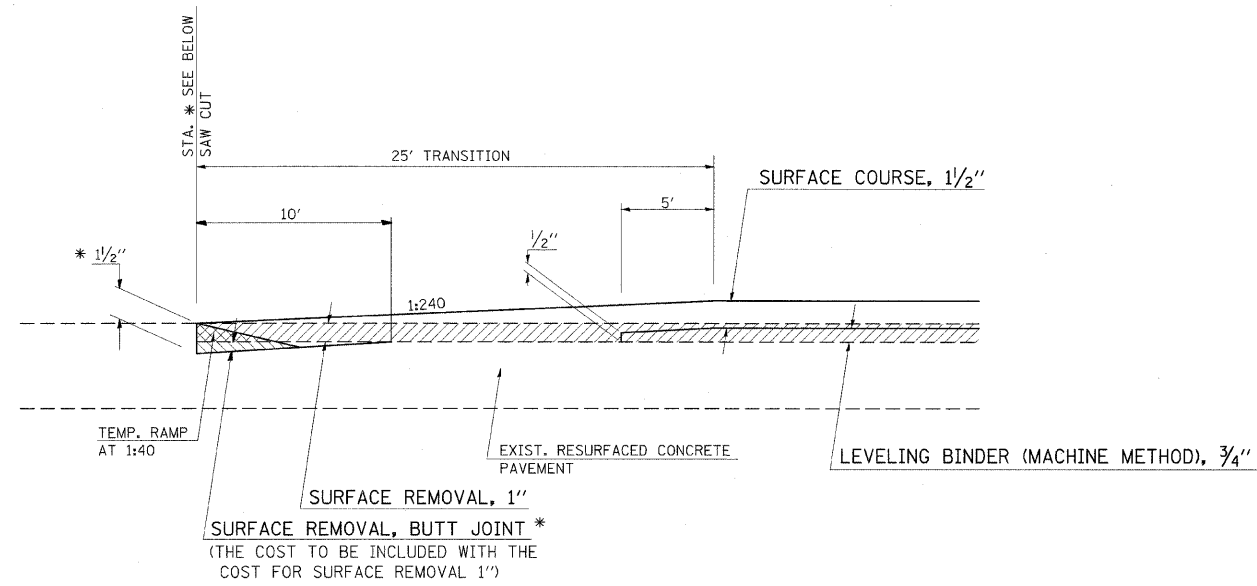
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 CHECKED BY

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	171

STA.	TO STA.
FED. ROAD DIST. NO. -	ILLINOIS FED. AID PROJECT

* FAU 9481, FAS 2887 (IL 37)
 ** (12,12X),RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

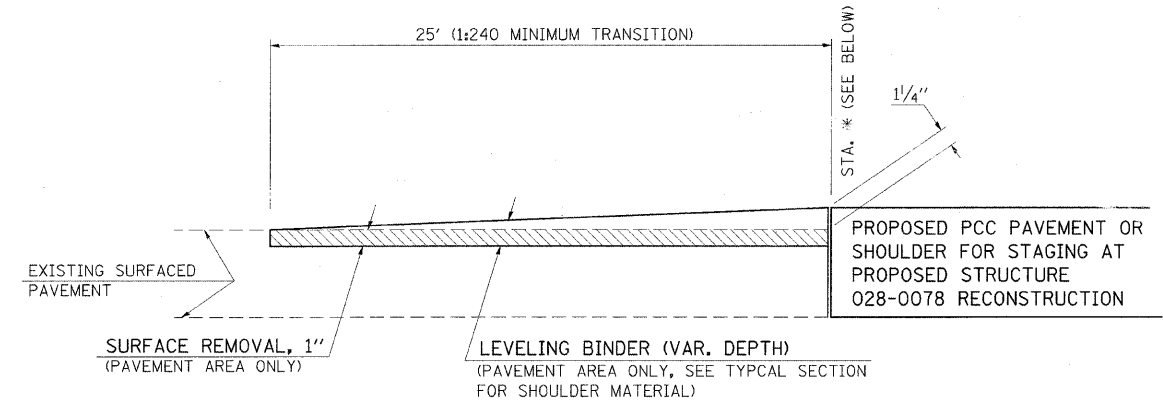
BUTT JOINT



*** TO BE USED:**
 FAU 9481 FAS 2887
 * STA. 79+75 * STA. 577+41
 STA. 90+71
 STA. 91+29

SHOULDER AND PAVEMENT THICKNESS TRANSITION AT PROPOSED BRIDGE

(STAGE 1 AND 2 CONSTRUCTION)

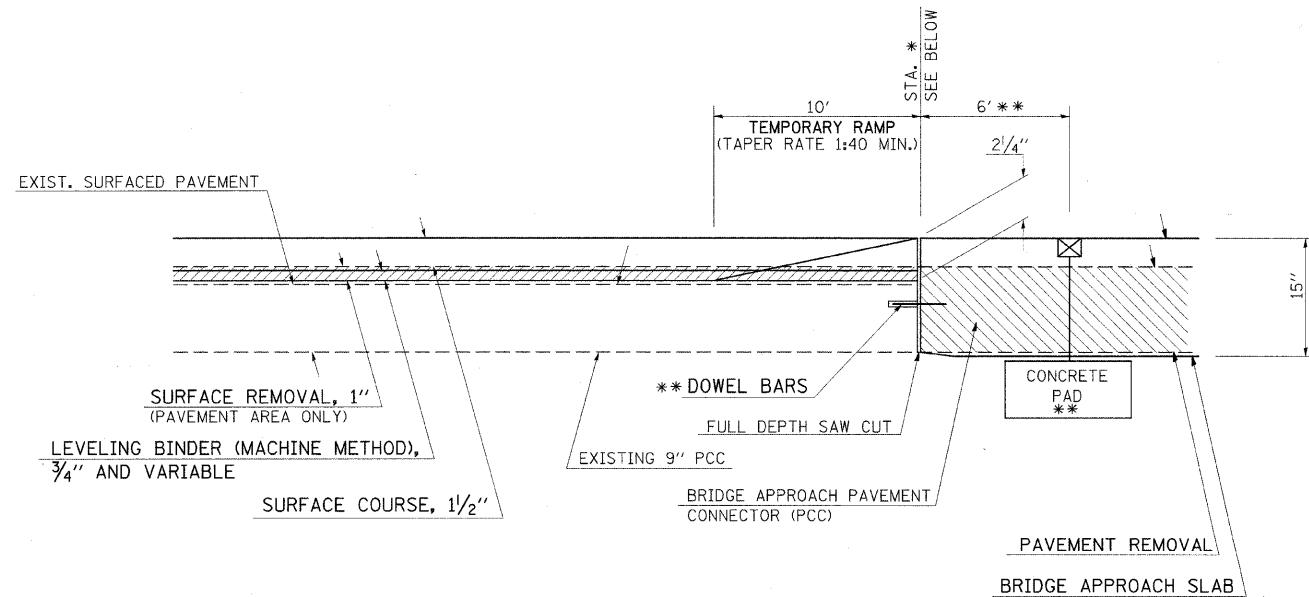


*** TO BE USED:**
 (BOTH LANES)
 STA. 372+34
 STA. 374+66

BUTT JOINTS AT PROPOSED BRIDGE

(PAVEMENT RESURFACING STAGE)

***SEE STANDARD 420401



*** TO BE USED:**
 STA. 372+34
 STA. 374+66

NOTE:
 THE CONTRACTOR SHALL MAINTAIN A UNIFORM 1/2" SURFACE COURSE THICKNESS TO THE APPROACH PAVEMENT. THE ENGINEER MAY REQUIRE THE SURFACE REMOVAL TO BE VARIABLE DEPTH. THE COST FOR THIS WILL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST PER SQ. YD. FOR HMA SURFACE REMOVAL, 1".

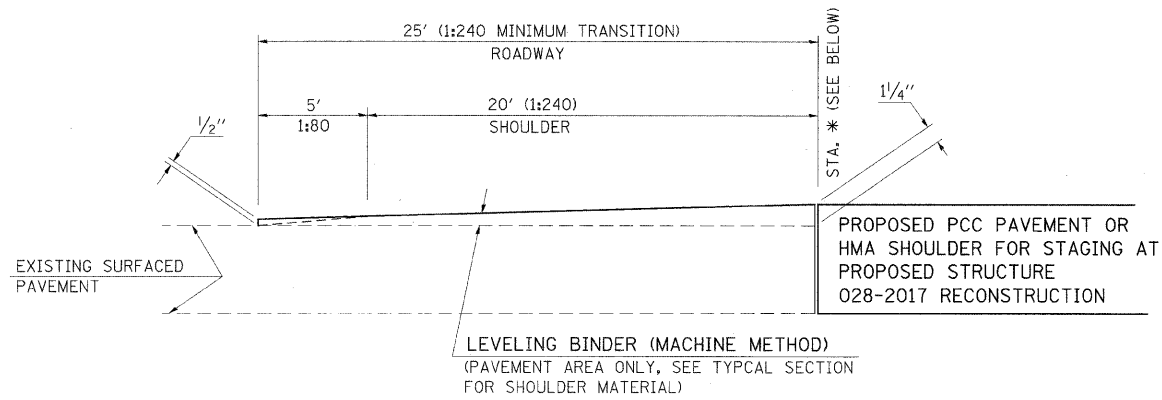
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
BUTT JOINTS; THICKNESS TRANSITIONS
 SCALE: VERT. NO SCALE
 HORIZ. NO SCALE
 DATE
 DRAWN BY CNH
 CHECKED BY

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	172

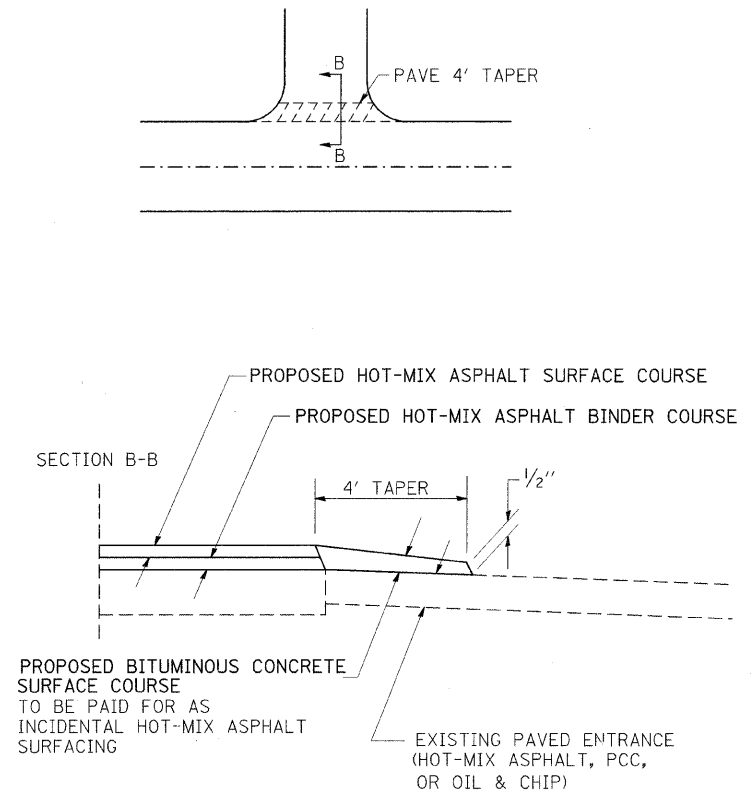
STA. TO STA.
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT
 * FAU 9481, FAS 2887 (IL 37)
 ** (12,12X),RS-3;12B-1,12B1-1
 *** FRANKLIN AND WILLIAMSON

SHOULDER AND PAVEMENT THICKNESS TRANSITION AT PROPOSED DOUBLE BOX (STAGE 1 AND 2 CONSTRUCTION)



*** TO BE USED:**
 (BOTH LANES)
 STA. 90+71
 STA. 91+29

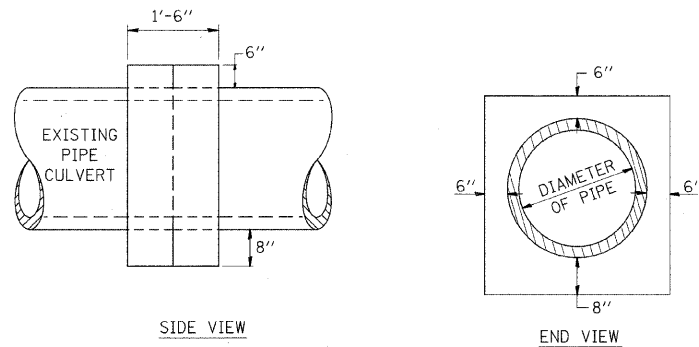
DETAIL OF HOT-MIX ASPHALT, PCC, OR OIL AND CHIP PRIVATE OR COMMERCIAL ENTRANCE



PREPARATION OF EXISTING SURFACE AND ANY EXCAVATION FOR ENTRANCES SHALL BE IN ACCORDANCE WITH ARTICLE 406.19 OF THE STANDARD SPECIFICATIONS.

TO BE USED:
 RT. STA. 80+06
 RT. STA. 81+02
 RT. STA. 81+43
 RT. STA. 82+48

DETAILS OF CONCRETE COLLAR PIPE TO PIPE



TABULATION

DIAMETER OF PIPE	CL. SI CONC. CU. YDS. EST.
12"	0.24
15"	0.29
18"	0.32
24"	0.44
30"	0.56
36"	0.66
42"	0.80
48"	0.93
54"	1.07
60"	1.22
72"	1.55

THE CONCRETE COLLAR SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR **CONCRETE COLLAR**, AS SHOWN ON THE PLANS, WHICH PRICE SHALL INCLUDE THE REMOVAL OF SUCH PORTIONS THE EXISTING HEADWALLS AS MAY BE REQUIRED.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

REVISIONS

DRAWN	7-13-90
REVISED	8-22-94

STD. 9-79

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
THICKNESS TRANSITION AT DOUBLE BOX;
CONCRETE COLLAR (PIPE TO PIPE);
SEEDING AND MULCHING;
HMA, PCC OR OIL AND CHIP PRIVATE
OR COMMERCIAL ENTRANCE

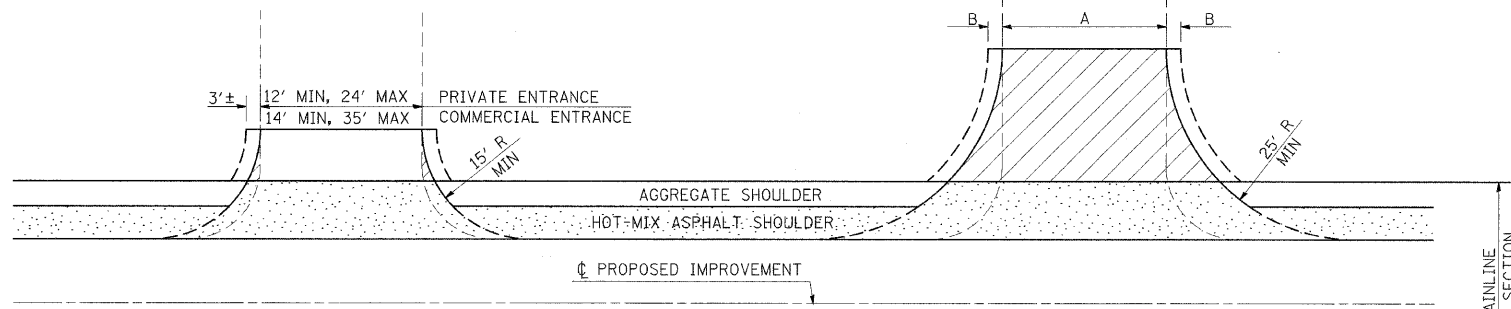
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 HORIZ. DATE

DRAWN BY CNH
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F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
*	**	***	304	173
STA.		TO STA.		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X),RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

RURAL SIDE APPROACH DETAILS

PRIVATE AND COMMERCIAL ENTRANCES

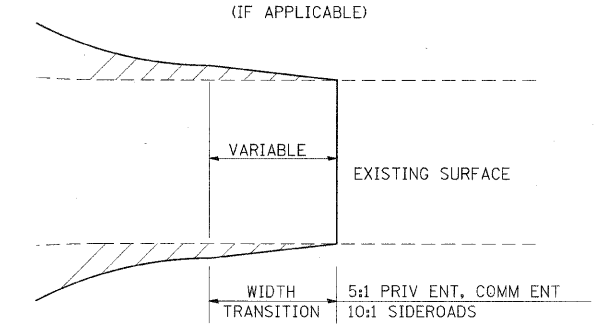


SIDEROADS

SIDEROAD DIMENSIONS (MIN.)

ADT	A (FT)	B (FT)
0 TO 250	18'	2'
250 TO 400	20'	2'
GREATER THAN 400	22'	4'

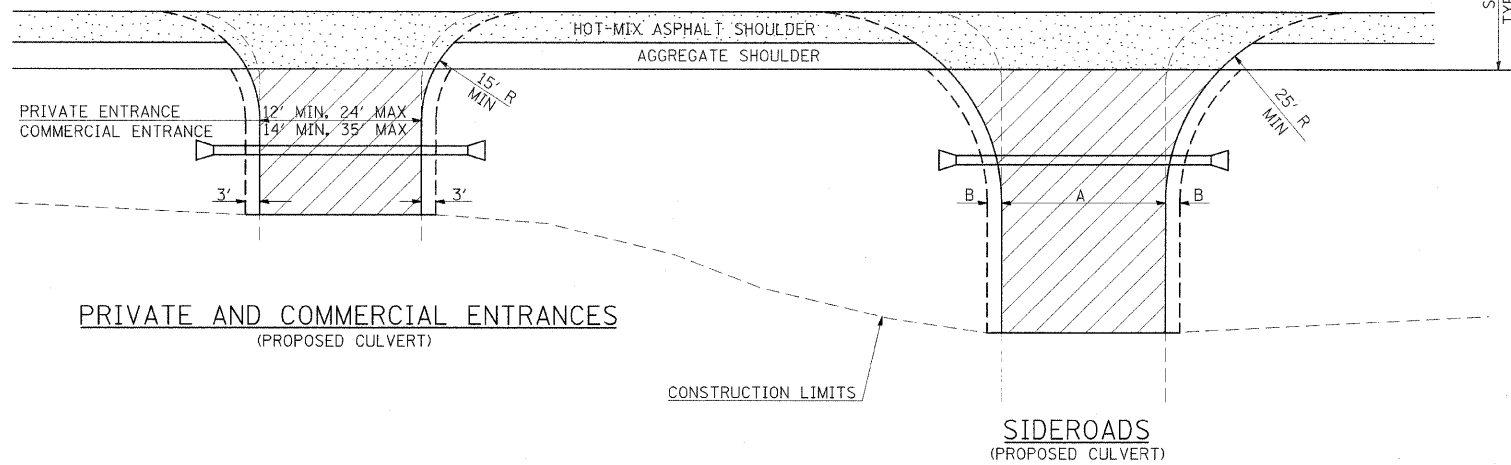
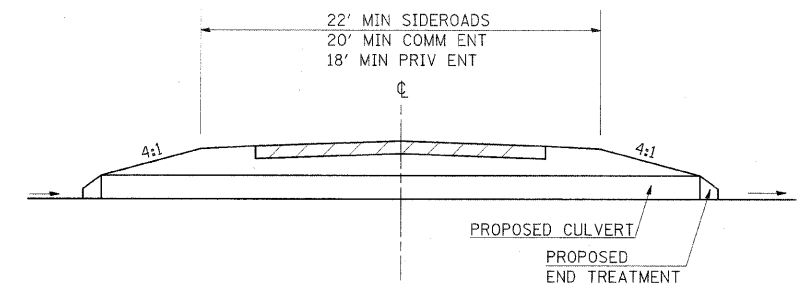
WIDTH TRANSITION DETAIL TO EXISTING



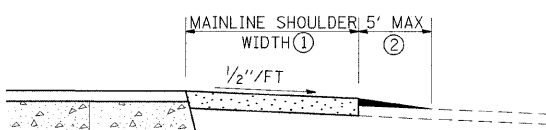
FIELD ENTRANCE TREATMENT

CONSTRUCT MAINLINE HOT-MIX ASPHALT AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.
IF A PIPE IS REQUIRED, PROVIDE A 22' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

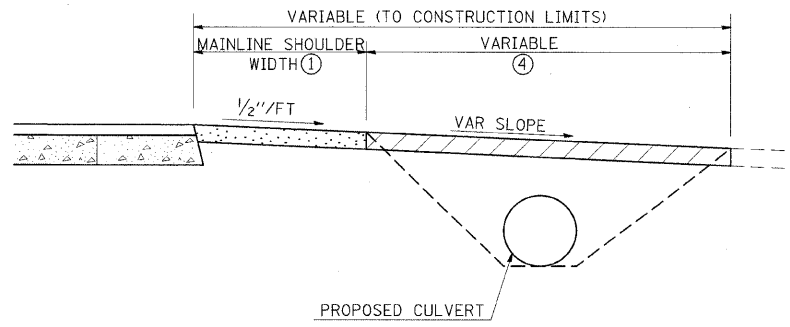
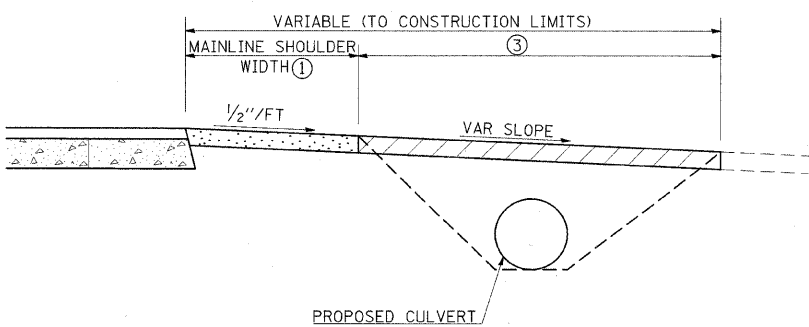
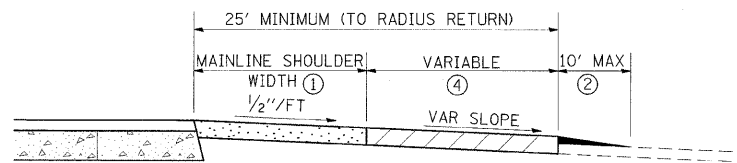
DETAIL FOR CALCULATING CULVERT LENGTH



PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



LEGEND

- CONSTRUCT HOT-MIX ASPHALT SHOULDER "FULL SHOULDER WIDTH" THROUGH ENTRANCE/INTERSECTION UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- IF REQUIRED, AGGREGATE TAPER FOR EXISTING GRAVEL SURFACE; HOT-MIX ASPHALT TAPER FOR EXISTING HIGHER TYPE SURFACES.
- 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" HOT-MIX ASPHALT RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING HOT-MIX ASPHALT SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- 3" MINIMUM INCIDENTAL HOT-MIX ASPHALT RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

GENERAL NOTES

- ENTRANCE LOCATIONS ARE TO COMPLY WITH IDOT'S POLICY "ACCESS TO STATE HIGHWAYS".
- IN GENERAL, RELOCATED PRIVATE ENTRANCES ARE TO HAVE A 16' WIDE SURFACE WITH 3' WIDE SHOULDERS (22' WIDE EMBANKMENT).
- SEE PLANS FOR PROPOSED PROFILE GRADES AT ENTRANCES/SIDEROADS. THE DESIRABLE MAXIMUM PROFILE GRADE FOR ENTRANCES ARE 12% FOR PE; 10% FOR CE.
- ENTRANCE PIPE CULVERTS ARE TO BE A MINIMUM 15" DIAMETER AND NORMALLY REPLACED IN KIND; SIDEROAD PIPE CULVERTS ARE GENERALLY TO BE CONCRETE (18" MINIMUM DIAMETER).
- THE INTERSECTION RADII OF SIDEROADS CONSTRUCTED TO FULL POLICY STANDARDS SHOULD COMPLY WITH THAT NOTED IN THE BUREAU OF LOCAL ROADS MANUAL (CHAPTER 33).

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL: RURAL SIDE APPROACH

SCALE: VERT. NO SCALE
HORIZ. DATE
DRAWN BY
CHECKED BY

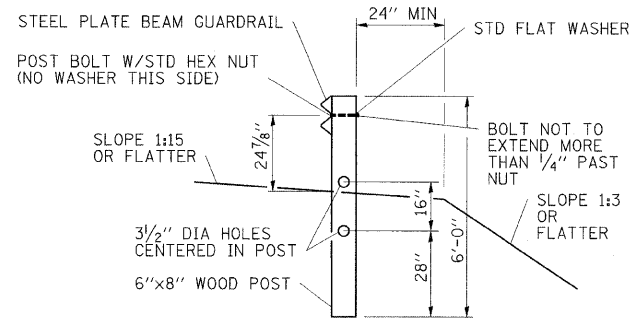
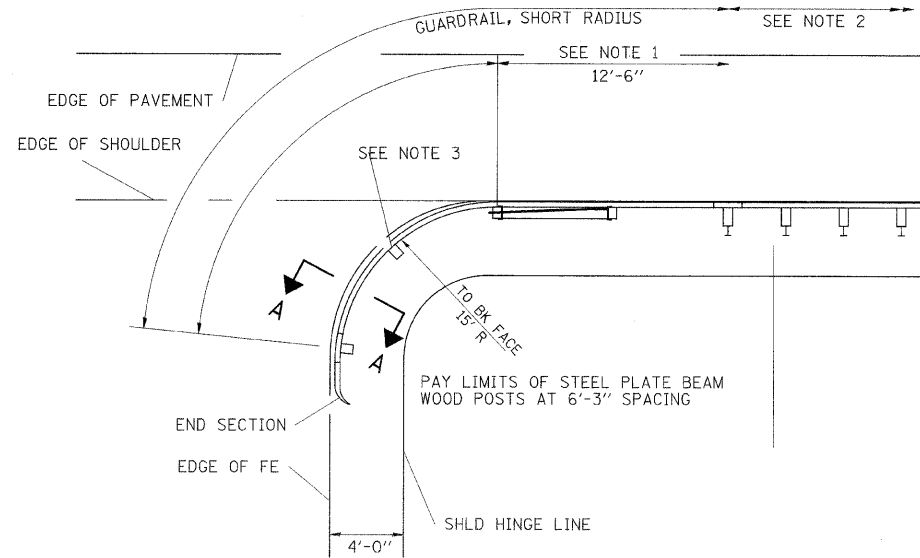
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DATE	DESCRIPTION
3-15-91	DRAWN
10-02-91	REVISED
5-15-92	REVISED
1-20-00	REVISED
01-11-07	REVISED

MODIFIED STD. 9-83

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	174
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X),RS-3;12B-1,12B1-1				
*** FRANKLIN AND WILLIAMSON				

SHORT RADIUS GUARDRAIL DETAILS

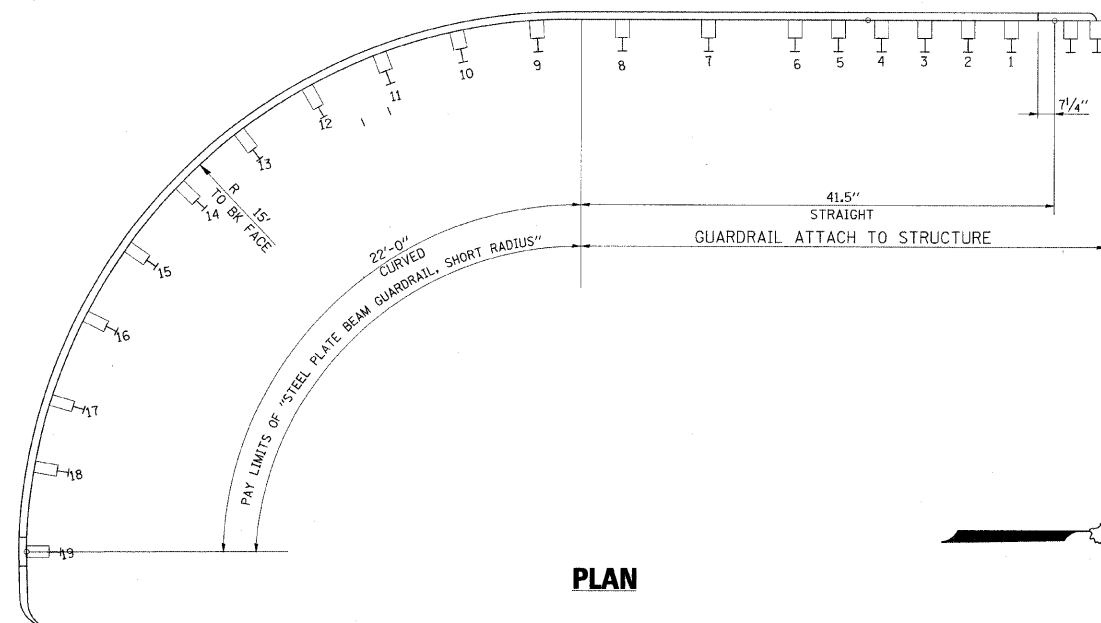
PLAN



SECTION A-A

NOTES

1. CONSTRUCT ACCORDING TO STANDARD 631011 FOR TRAFFIC BARRIER TERMINAL TYPE 6A, EXCEPT DELETE END SECTION AND SPLICE INTO RADIUS GUARDRAIL.
2. STEEL PLATE BEAM GUARDRAIL TYPE A, TYPE B, OR TRAFFIC BARRIER TERMINAL AS SPECIFIED.
3. THE RAIL IS NOT BOLTED TO THE POST LOCATED AT THE MIDPOINT OF THE CURVE.

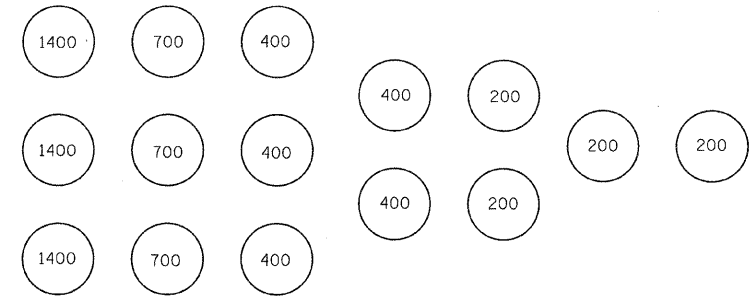


PLAN



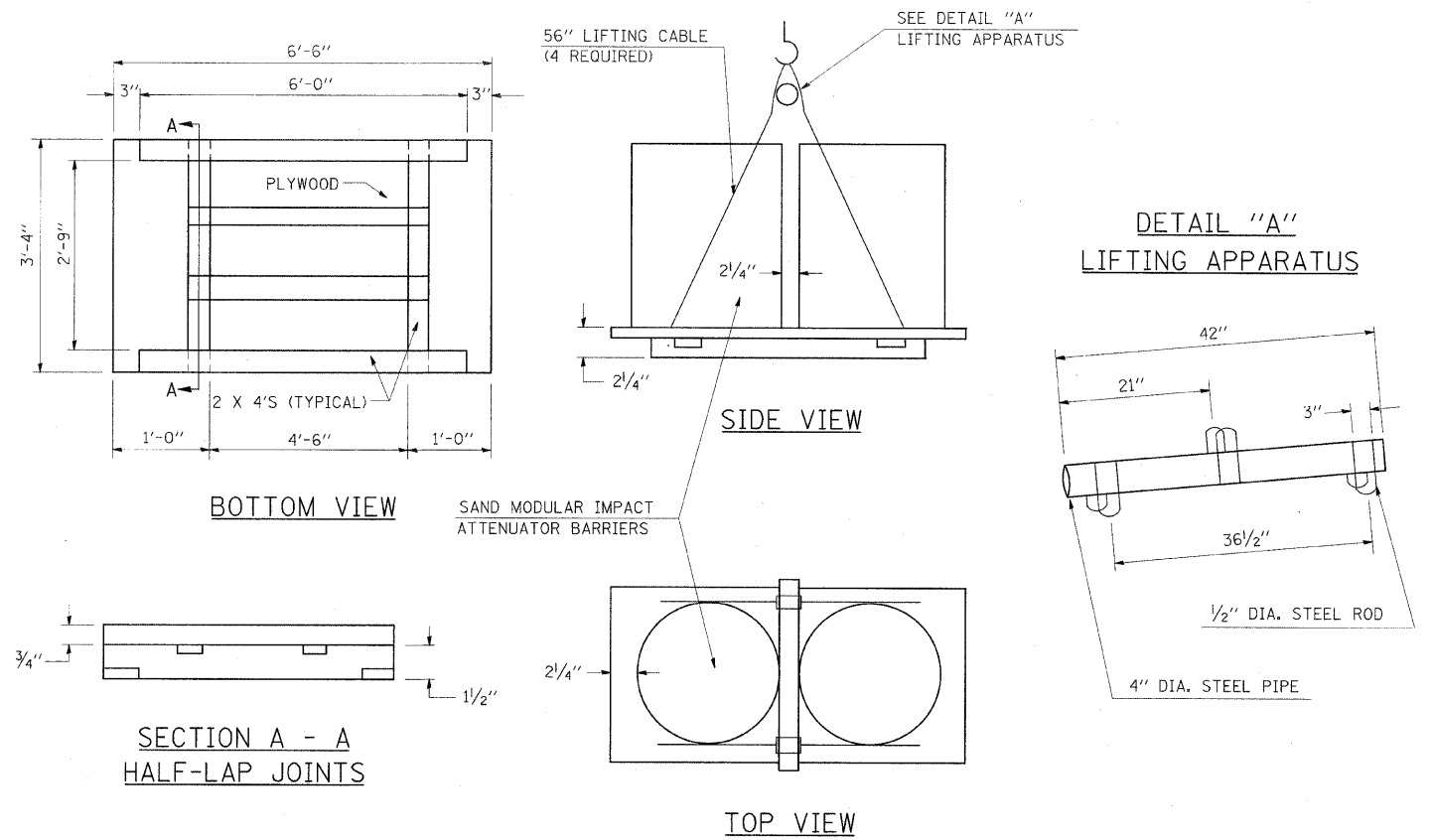
SAND MODULE IMPACT ATTENUATOR SYSTEM

(POUNDS)



NOTE:

THIS LAYOUT WAS DESIGNED TO STOP VEHICLES WEIGHING 4500 LBS. OR LESS. IT WILL NOT STOP TRUCKS.



BOTTOM VIEW

SIDE VIEW

DETAIL "A"
LIFTING APPARATUS

SECTION A - A
HALF-LAP JOINTS

TOP VIEW

SUGGESTED PALLET DESIGN FOR CONSTRUCTION SITES

THE DESIGN OF THE PALLET AND LIFTING APPARATUS IS SUGGESTED ONLY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ASSURING THE DEVICE IS STRUCTURALLY ADEQUATE. OTHER DESIGNS MAY BE USED WITH THE APPROVAL OF THE ENGINEER. MAXIMUM PALLET HEIGHT 2/4 INCHES.

REVISIONS	
DRAWN	1-25-93
REVISED	
REVISED	
REVISED	

STD. 9-94

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAILS:
SHORT RADIUS GUARDRAIL;
SAND MODULE IMPACT ATTENUATOR SYSTEM

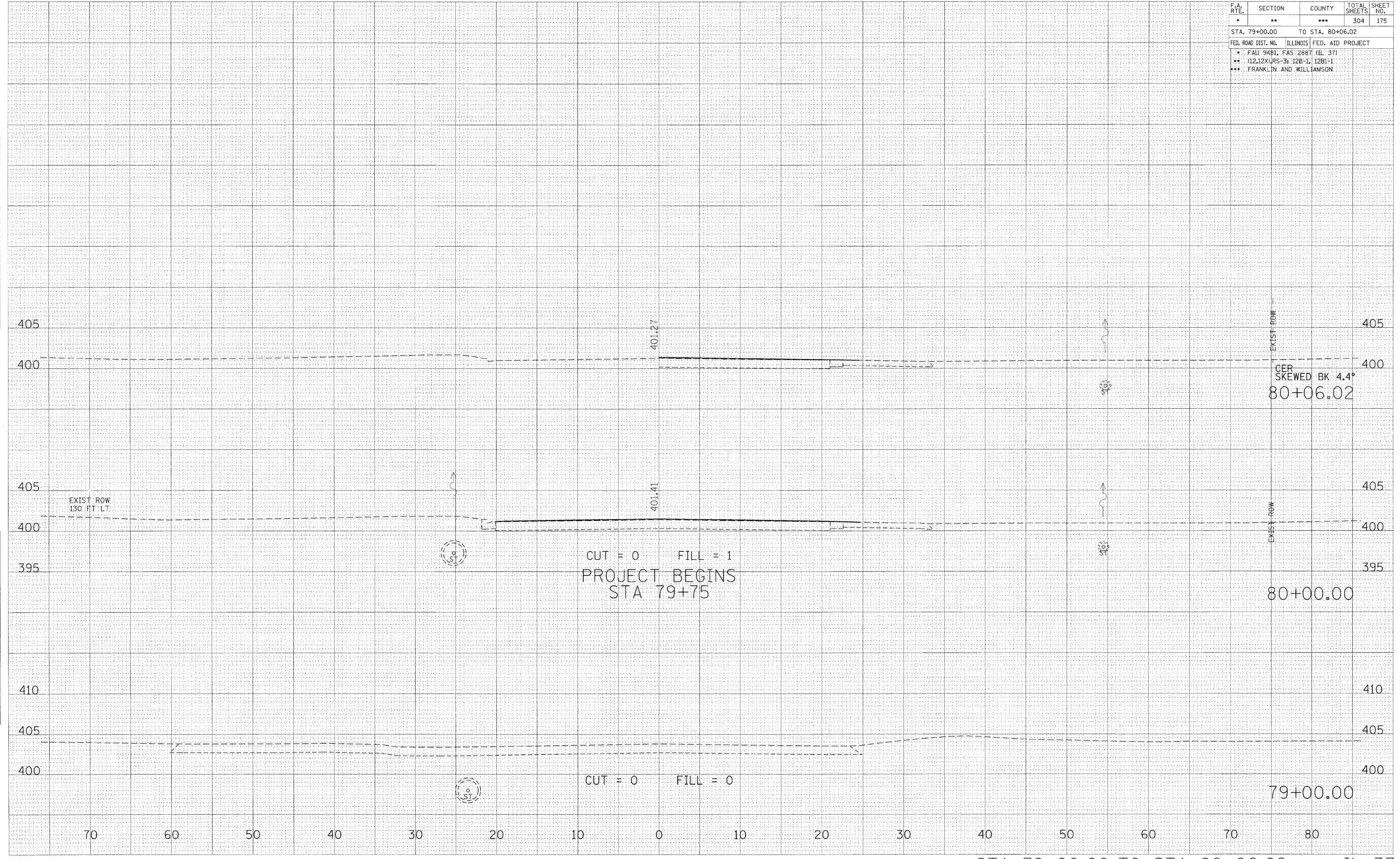
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CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	175
STA. 79+00.00 TO STA. 80+06.02				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*	FALL 94B1, FAS 2887 (IL 37)			
**	(12.12X)RS-3; 12B-1, 12B1-1			
***	FRANKLIN AND WILLIAMSON			

FINAL SURVEY	BY	DATE
SURVEYED		
NOTE BOOK		
TEMPLATE		
AREAS		
AREAS CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
NOTE BOOK		
TEMPLATE		
AREAS		
AREAS CHECKED		
NO.		

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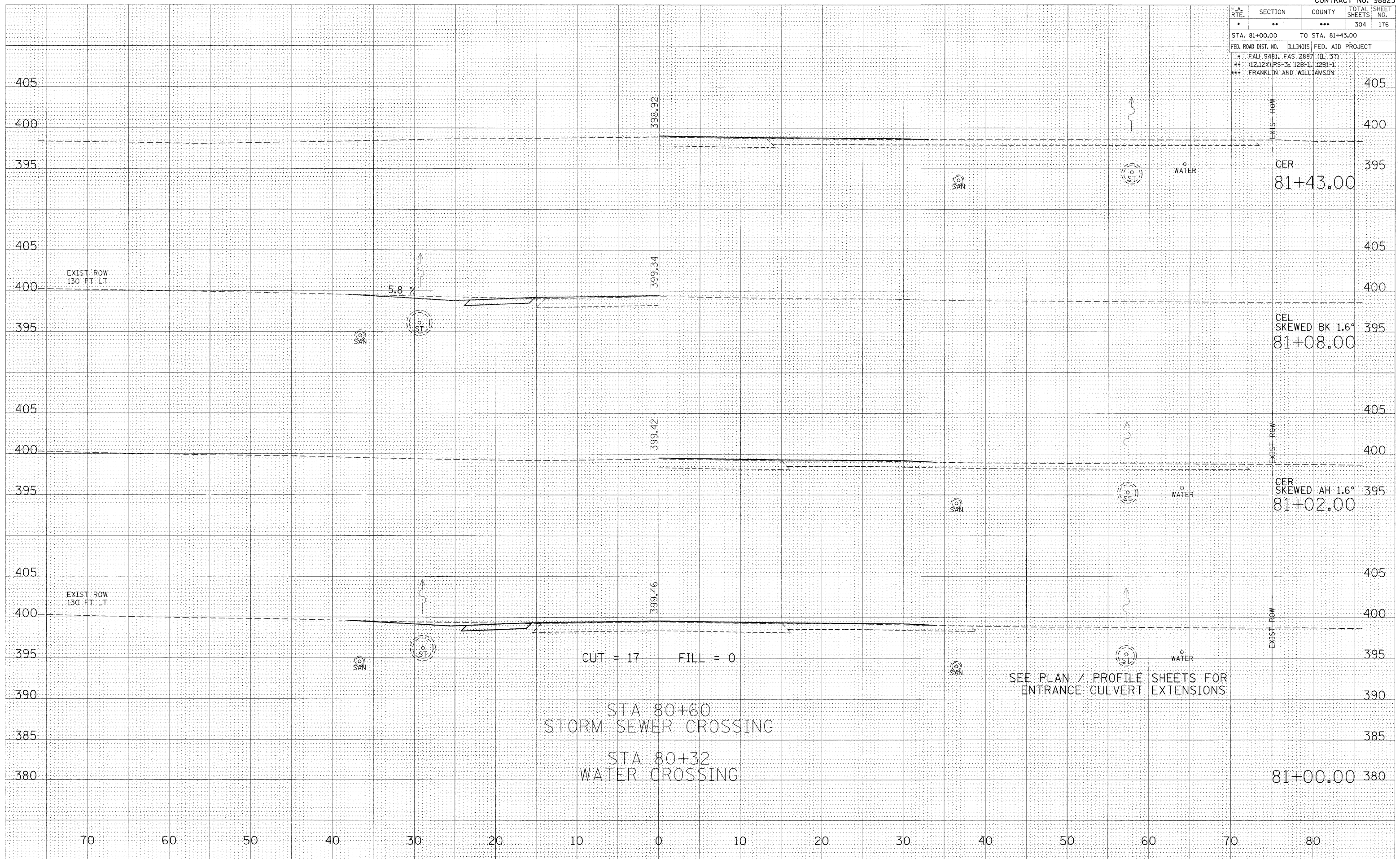


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	176
STA. 81+00.00 TO STA. 81+43.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAU 9481, FAS 2887 (IL 37)				
** (12)X1RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

BY	DATE

BY	DATE

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 USER NAME = jpf@ch2d



STA 80+60
 STORM SEWER CROSSING
 STA 80+32
 WATER CROSSING

SEE PLAN / PROFILE SHEETS FOR ENTRANCE CULVERT EXTENSIONS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	180
STA. 88+00.00 TO STA. 90+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAU 94B1, FAS 2887 (IL 37)				
** (12.12X)RS-3, 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

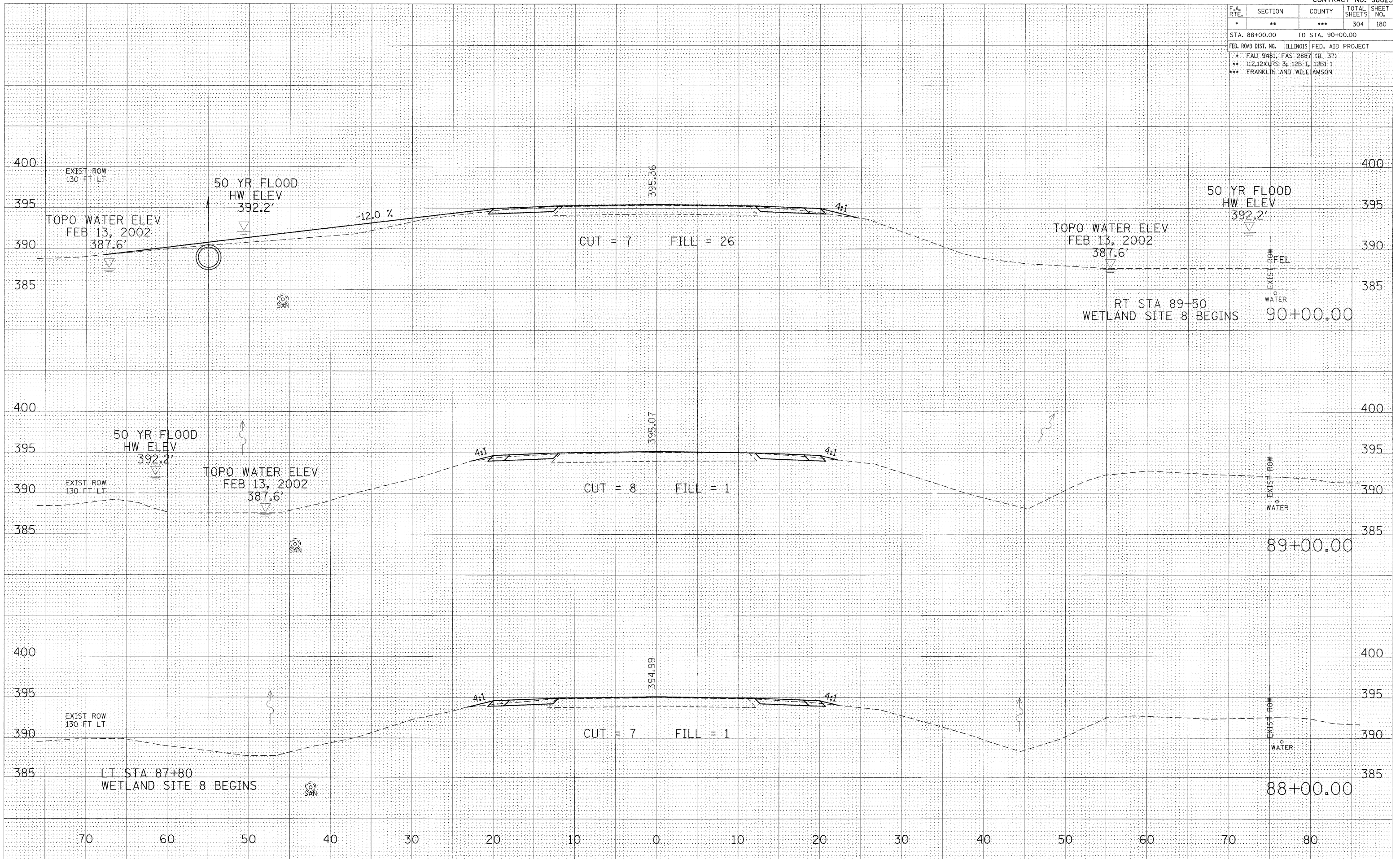
BY	DATE

NO.	AREAS CHECKED

BY	DATE

NO.	AREAS CHECKED

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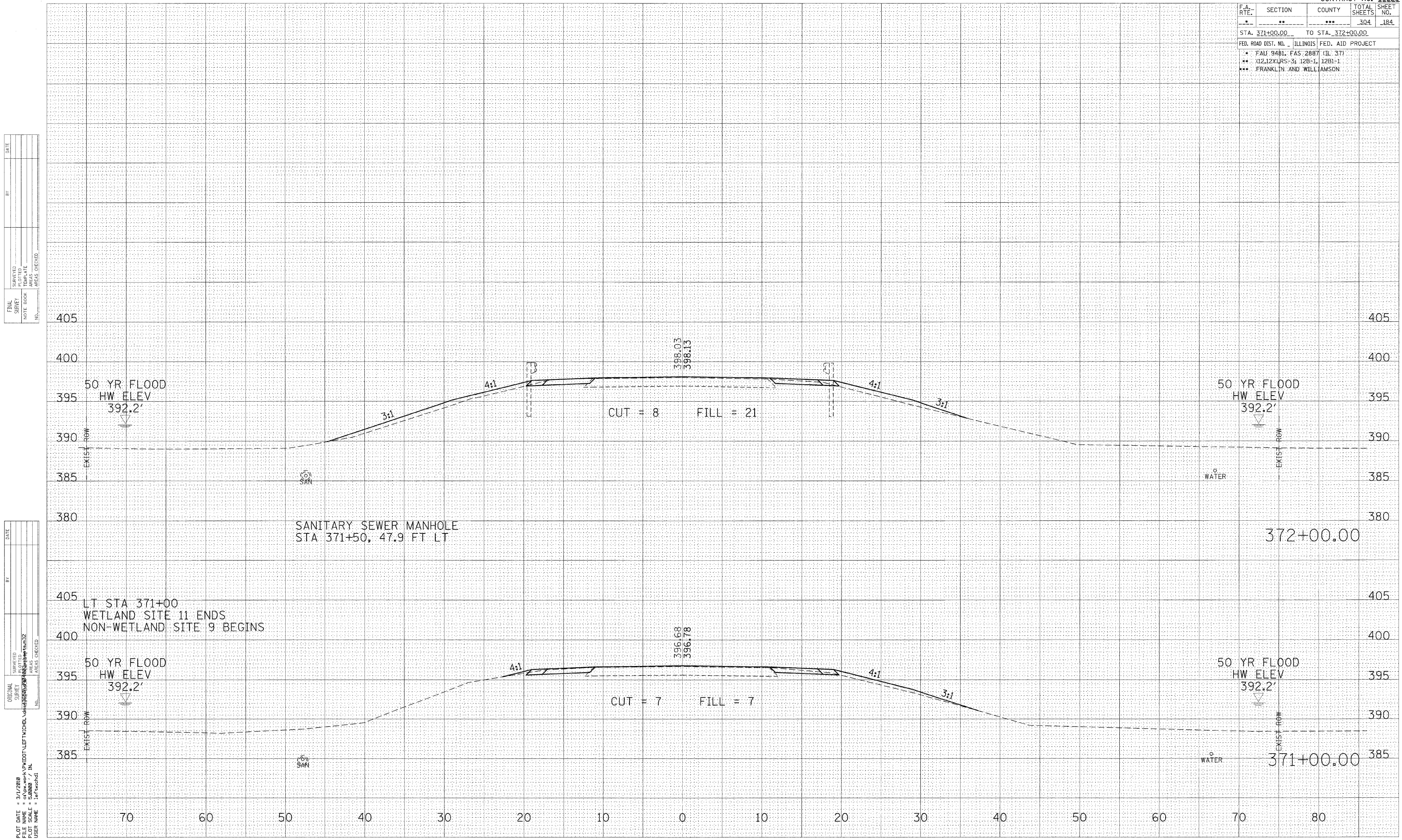


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	184
STA. 371+00.00 TO STA. 372+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X)RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

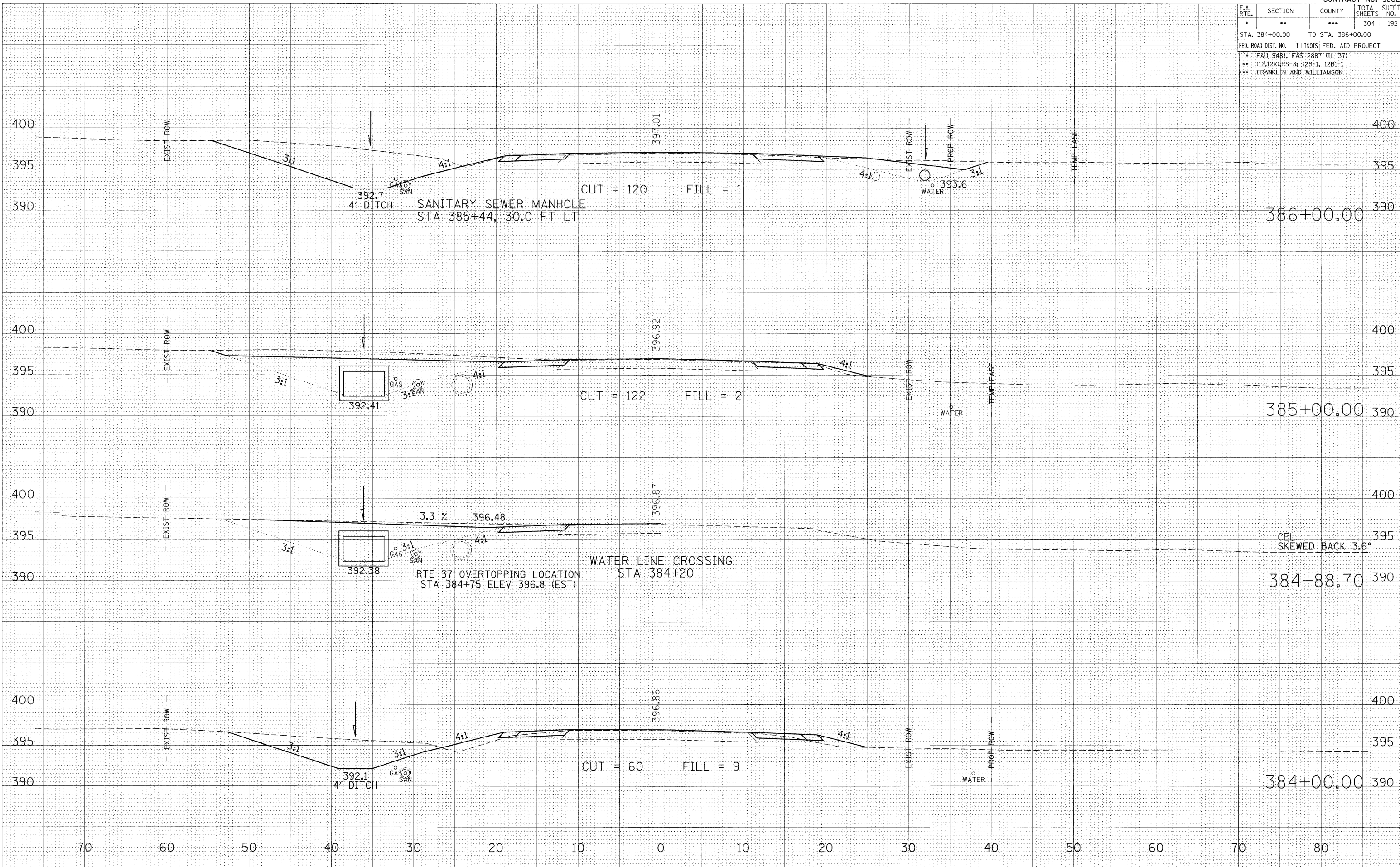
DATE	BY

DATE	BY

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	192
STA. 384+00.00		TO STA. 386+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* FAU 9481, FAS 2887 (IL 37)				
** (12,12X)RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				



FINAL SURVEY	BY	DATE
CHECKED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
CHECKED		
PLOTTED		
TEMPLATE		
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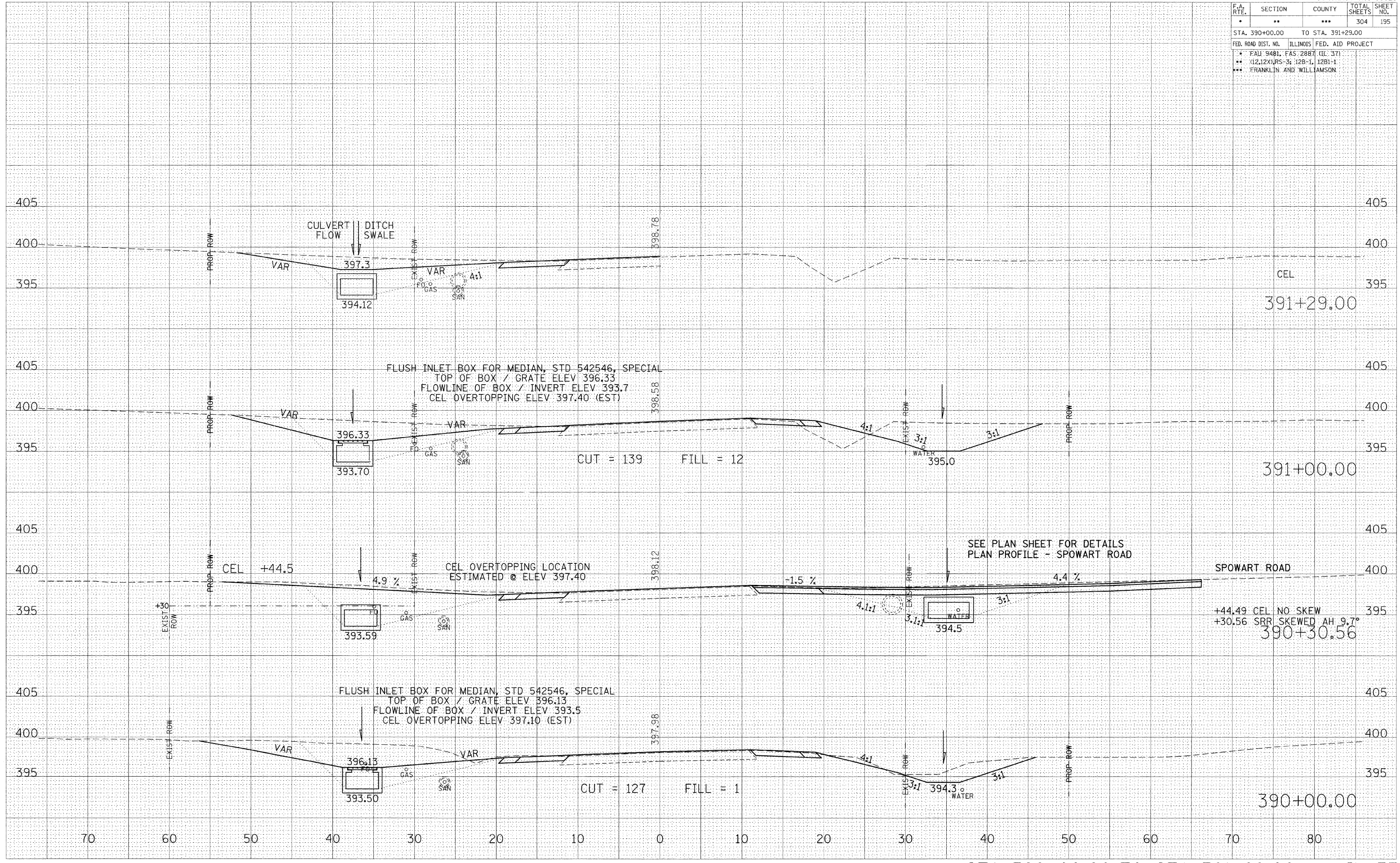
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	195
STA. 390+00.00 TO STA. 391+29.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAJ 9481, FAS 2887 (IL 37)				
** (12,12X)RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	FLIPPED	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NO.	FLIPPED	
	AREAS CHECKED	

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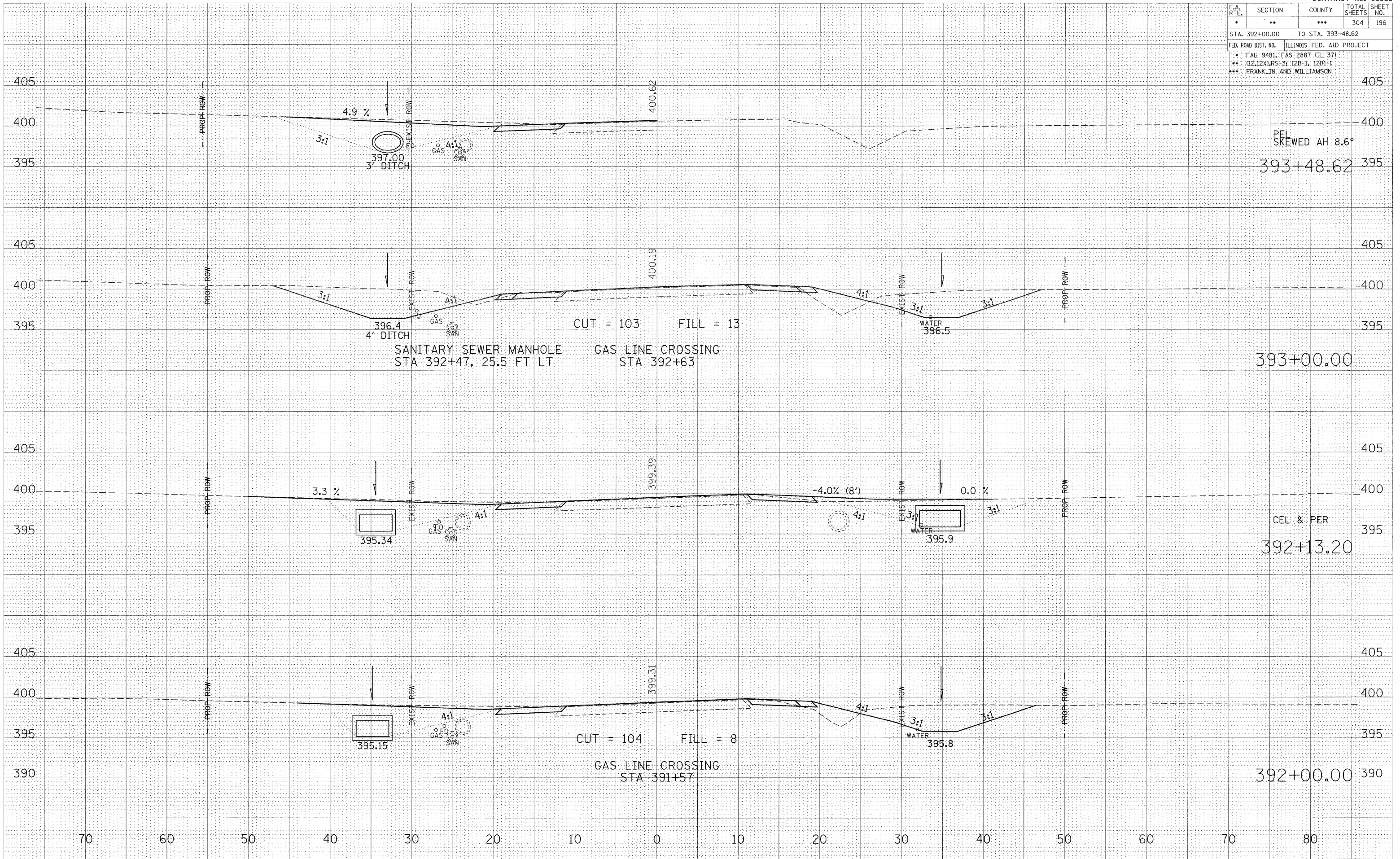


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	196
STA. 392+00.00 TO STA. 393+48.62				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAU 9481, FAS 2887 (IL 37)				
** (12.12X)RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	304	200
STA. 399+00.00 TO STA. 399+97.99				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAU 94B1, FAS 2887 (IL 37)				
** (12.12X)RS-3; 12B-1, 12B1-1				
*** FRANKLIN AND WILLIAMSON				

FINAL SURVEYED	BY	DATE
NO. 1		
NO. 2		
NO. 3		
NO. 4		
NO. 5		
NO. 6		
NO. 7		
NO. 8		
NO. 9		
NO. 10		

ORIGINAL SURVEYED	BY	DATE
NO. 1		
NO. 2		
NO. 3		
NO. 4		
NO. 5		
NO. 6		
NO. 7		
NO. 8		
NO. 9		
NO. 10		

PLOT DATE = 12/7/2009
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