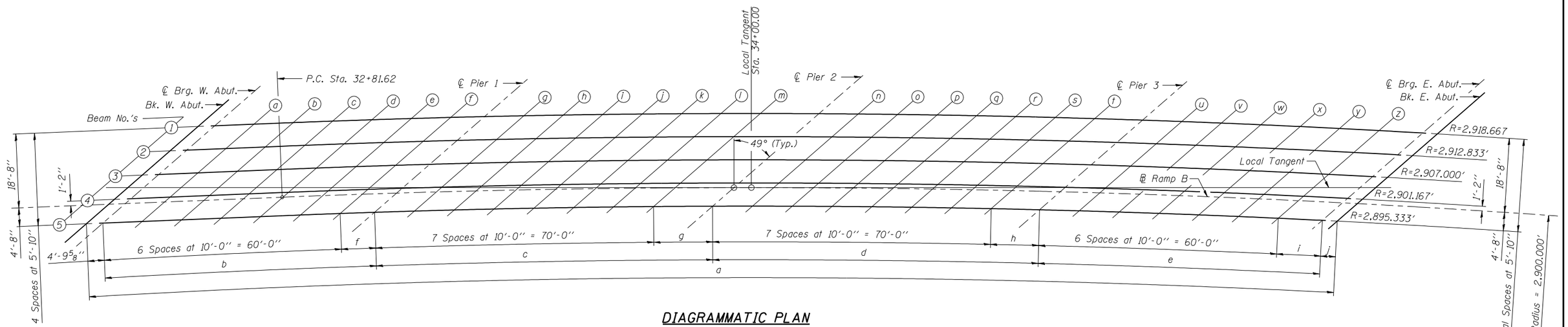
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	301
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 04
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

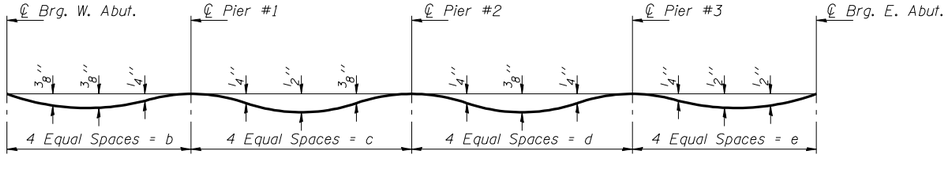


DIAGRAMMATIC PLAN

DIAGRAMMATIC PLAN - LAYOUT DIMENSIONS

(Measured Along Centerline of Beam)

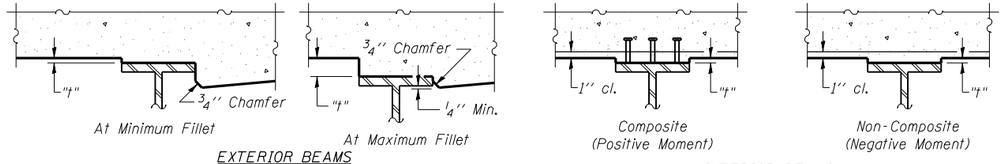
Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
a	313'-11 15/16"	314'-8 13/16"	315'-5 5/8"	316'-2 5/16"	316'-10 13/16"
b	68'-1 5/8"	68'-3 3/8"	68'-4 7/8"	68'-6 1/8"	68'-7 1/8"
c	84'-4 1/8"	84'-6 7/8"	84'-9 3/4"	85'-0 5/8"	85'-3 1/2"
d	81'-7 7/8"	81'-10 5/16"	82'-0 3/4"	82'-3 3/16"	82'-5 3/4"
e	70'-9 3/16"	70'-11 1/16"	71'-0 15/16"	71'-2 15/16"	71'-4 7/8"
f	8'-1 5/8"	8'-3 3/8"	8'-4 7/8"	8'-6 1/8"	8'-7 1/8"
g	14'-4 1/8"	14'-6 7/8"	14'-9 3/4"	15'-0 5/8"	15'-3 1/2"
h	11'-7 7/8"	11'-10 5/16"	12'-0 3/4"	12'-3 3/16"	12'-5 3/4"
i	10'-9 3/16"	10'-11 1/16"	11'-0 15/16"	11'-2 15/16"	11'-4 7/8"
j	4'-3 1/2"	4'-3 9/16"	4'-3 11/16"	4'-3 13/16"	4'-3 15/16"



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 5 of 22.



EXTERIOR BEAMS

INTERIOR BEAMS

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 this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 5 of 22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

Corporate License Number 184-001-084

TOP OF SLAB ELEVATIONS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+60.51	-18.67	631.68	631.68
℄ Brg. W. Abut.	32+65.31	-18.67	631.76	631.76
a	32+75.31	-18.67	631.91	631.93
b	32+85.29	-18.67	632.07	632.10
c	32+95.22	-18.67	632.22	632.25
d	33+05.16	-18.67	632.37	632.40
e	33+15.09	-18.67	632.51	632.53
f	33+25.03	-18.67	632.62	632.63
℄ Pier 1	33+33.12	-18.67	632.71	632.71
g	33+43.05	-18.67	632.81	632.82
h	33+52.99	-18.67	632.91	632.93
i	33+62.92	-18.67	633.00	633.03
j	33+72.86	-18.67	633.09	633.13
k	33+82.80	-18.67	633.17	633.21
l	33+92.73	-18.67	633.24	633.27
m	34+02.67	-18.67	633.32	633.33
℄ Pier 2	34+16.92	-18.67	633.41	633.41
n	34+26.85	-18.67	633.47	633.48
o	34+36.79	-18.67	633.52	633.54
p	34+46.73	-18.67	633.57	633.59
q	34+56.66	-18.67	633.61	633.64
r	34+66.60	-18.67	633.65	633.68
s	34+76.53	-18.67	633.68	633.70
t	34+86.47	-18.67	633.71	633.72
℄ Pier 3	34+98.05	-18.67	633.73	633.73
u	35+07.99	-18.67	633.75	633.76
v	35+17.92	-18.67	633.76	633.79
w	35+27.86	-18.67	633.77	633.80
x	35+37.80	-18.67	633.77	633.81
y	35+47.73	-18.67	633.76	633.80
z	35+57.67	-18.67	633.75	633.77
℄ Brg. E. Abut.	35+68.37	-18.67	633.73	633.73
Bk. E. Abut.	35+72.63	-18.67	633.73	633.73

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+53.22	-12.83	631.41	631.41
℄ Brg. W. Abut.	32+58.02	-12.83	631.48	631.48
a	32+68.02	-12.83	631.62	631.64
b	32+78.02	-12.83	631.77	631.80
c	32+87.99	-12.83	631.91	631.94
d	32+97.95	-12.83	632.05	632.08
e	33+07.90	-12.83	632.20	632.21
f	33+17.86	-12.83	632.32	632.33
℄ Pier 1	33+26.10	-12.83	632.41	632.41
g	33+36.06	-12.83	632.52	632.53
h	33+46.02	-12.83	632.62	632.64
i	33+55.97	-12.83	632.71	632.75
j	33+65.93	-12.83	632.80	632.85
k	33+75.88	-12.83	632.89	632.93
l	33+85.84	-12.83	632.97	633.00
m	33+95.80	-12.83	633.05	633.06
℄ Pier 2	34+10.31	-12.83	633.15	633.15
n	34+20.26	-12.83	633.21	633.22
o	34+30.22	-12.83	633.26	633.28
p	34+40.17	-12.83	633.32	633.34
q	34+50.13	-12.83	633.36	633.39
r	34+60.09	-12.83	633.40	633.43
s	34+70.04	-12.83	633.44	633.46
t	34+80.00	-12.83	633.47	633.48
℄ Pier 3	34+91.80	-12.83	633.50	633.50
u	35+01.76	-12.83	633.52	633.53
v	35+11.72	-12.83	633.53	633.56
w	35+21.67	-12.83	633.54	633.58
x	35+31.63	-12.83	633.54	633.59
y	35+41.58	-12.83	633.54	633.58
z	35+51.54	-12.83	633.54	633.56
℄ Brg. E. Abut.	35+62.41	-12.83	633.52	633.52
Bk. E. Abut.	35+66.69	-12.83	633.52	633.52

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+45.92	-7.00	631.16	631.16
℄ Brg. W. Abut.	32+50.73	-7.00	631.22	631.22
a	32+60.73	-7.00	631.36	631.37
b	32+70.73	-7.00	631.49	631.52
c	32+80.73	-7.00	631.62	631.65
d	32+90.70	-7.00	631.75	631.78
e	33+00.68	-7.00	631.88	631.90
f	33+10.66	-7.00	632.01	632.02
℄ Pier 1	33+19.05	-7.00	632.11	632.11
g	33+29.02	-7.00	632.22	632.23
h	33+39.00	-7.00	632.33	632.35
i	33+48.97	-7.00	632.43	632.46
j	33+58.95	-7.00	632.52	632.56
k	33+68.92	-7.00	632.61	632.65
l	33+78.90	-7.00	632.69	632.72
m	33+88.88	-7.00	632.77	632.79
℄ Pier 2	34+03.65	-7.00	632.88	632.88
n	34+13.63	-7.00	632.94	632.95
o	34+23.60	-7.00	633.01	633.02
p	34+33.58	-7.00	633.06	633.09
q	34+43.56	-7.00	633.11	633.14
r	34+53.53	-7.00	633.16	633.18
s	34+63.51	-7.00	633.19	633.21
t	34+73.48	-7.00	633.23	633.24
℄ Pier 3	34+85.52	-7.00	633.26	633.26
u	34+95.49	-7.00	633.29	633.30
v	35+05.47	-7.00	633.30	633.33
w	35+15.44	-7.00	633.31	633.35
x	35+25.42	-7.00	633.32	633.36
y	35+35.39	-7.00	633.32	633.36
z	35+45.37	-7.00	633.32	633.34
℄ Brg. E. Abut.	35+56.43	-7.00	633.31	633.31
Bk. E. Abut.	35+60.72	-7.00	633.30	633.30

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	302
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 05
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

Note:
Offset measured from ℄ Ramp B

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+38.63	-1.17	630.93	630.93
℄ Brg. W. Abut.	32+43.44	-1.17	630.98	630.98
a	32+53.44	-1.17	631.10	631.12
b	32+63.44	-1.17	631.22	631.25
c	32+73.44	-1.17	631.34	631.38
d	32+83.43	-1.17	631.46	631.49
e	32+93.43	-1.17	631.58	631.60
f	33+03.43	-1.17	631.71	631.71
℄ Pier 1	33+11.94	-1.17	631.81	631.81
g	33+21.93	-1.17	631.92	631.93
h	33+31.93	-1.17	632.03	632.05
i	33+41.92	-1.17	632.13	632.17
j	33+51.92	-1.17	632.23	632.28
k	33+61.92	-1.17	632.33	632.36
l	33+71.91	-1.17	632.41	632.44
m	33+81.91	-1.17	632.50	632.51
℄ Pier 2	33+96.95	-1.17	632.61	632.61
n	34+06.95	-1.17	632.68	632.69
o	34+16.94	-1.17	632.74	632.76
p	34+26.94	-1.17	632.80	632.83
q	34+36.94	-1.17	632.86	632.89
r	34+46.93	-1.17	632.90	632.93
s	34+56.93	-1.17	632.95	632.97
t	34+66.92	-1.17	632.99	633.00
℄ Pier 3	34+79.19	-1.17	633.02	633.02
u	34+89.18	-1.17	633.05	633.06
v	34+99.18	-1.17	633.07	633.10
w	35+09.17	-1.17	633.09	633.12
x	35+19.17	-1.17	633.10	633.14
y	35+29.17	-1.17	633.10	633.14
z	35+39.16	-1.17	633.10	633.12
℄ Brg. E. Abut.	35+50.40	-1.17	633.09	633.09
Bk. E. Abut.	35+54.72	-1.17	633.09	633.09

℄ RAMP B & P.G. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+37.17	0.00	630.88	630.88
℄ Brg. W. Abut.	32+41.98	0.00	630.94	630.94
a	32+51.98	0.00	631.06	631.07
b	32+61.98	0.00	631.17	631.20
c	32+71.98	0.00	631.29	631.32
d	32+81.98	0.00	631.41	631.44
e	32+91.98	0.00	631.53	631.54
f	33+01.98	0.00	631.65	631.65
℄ Pier 1	33+10.51	0.00	631.75	631.75
g	33+20.51	0.00	631.86	631.87
h	33+30.51	0.00	631.97	632.00
i	33+40.51	0.00	632.08	632.11
j	33+50.51	0.00	632.17	632.22
k	33+60.51	0.00	632.27	632.31
l	33+70.51	0.00	632.36	632.39
m	33+80.51	0.00	632.44	632.46
℄ Pier 2	33+95.61	0.00	632.56	632.56
n	34+05.61	0.00	632.63	632.64
o	34+15.61	0.00	632.69	632.71
p	34+25.61	0.00	632.75	632.78
q	34+35.61	0.00	632.81	632.84
r	34+45.61	0.00	632.85	632.88
s	34+55.61	0.00	632.90	632.92
t	34+65.61	0.00	632.94	632.95
℄ Pier 3	34+77.92	0.00	632.98	632.98
u	34+87.92	0.00	633.00	633.02
v	34+97.92	0.00	633.02	633.05
w	35+07.92	0.00	633.04	633.08
x	35+17.92	0.00	633.05	633.09
y	35+27.92	0.00	633.06	633.10
z	35+37.92	0.00	633.06	633.08
℄ Brg. E. Abut.	35+49.19	0.00	633.05	633.05
Bk. E. Abut.	35+53.51	0.00	633.05	633.05

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	32+31.34	4.67	630.71	630.71
℄ Brg. W. Abut.	32+36.14	4.67	630.76	630.76
a	32+46.14	4.67	630.87	630.89
b	32+56.14	4.67	630.98	631.01
c	32+66.14	4.67	631.09	631.12
d	32+76.14	4.67	631.19	631.22
e	32+86.15	4.67	631.30	631.32
f	32+96.17	4.67	631.41	631.42
℄ Pier 1	33+04.78	4.67	631.51	631.51
g	33+14.79	4.67	631.62	631.63
h	33+24.81	4.67	631.73	631.76
i	33+34.82	4.67	631.84	631.87
j	33+44.84	4.67	631.94	631.99
k	33+54.86	4.67	632.04	632.08
l	33+64.87	4.67	632.13	632.16
m	33+74.89	4.67	632.22	632.24
℄ Pier 2	33+90.21	4.67	632.34	632.34
n	34+00.22	4.67	632.41	632.42
o	34+10.24	4.67	632.48	632.50
p	34+20.26	4.67	632.54	632.57
q	34+30.27	4.67	632.60	632.63
r	34+40.29	4.67	632.65	632.68
s	34+50.30	4.67	632.70	632.72
t	34+60.32	4.67	632.74	632.75
℄ Pier 3	34+72.82	4.67	632.78	632.78
u	34+82.83	4.67	632.81	632.82
v	34+92.85	4.67	632.84	632.86
w	35+02.87	4.67	632.86	632.89
x	35+12.88	4.67	632.87	632.91
y	35+22.90	4.67	632.88	632.92
z	35+32.91	4.67	632.88	632.90
℄ Brg. E. Abut.	35+44.34	4.67	632.88	632.88
Bk. E. Abut.	35+48.67	4.67	632.87	632.87

Corporate License Number 184-001-084

TOP OF SLAB ELEVATIONS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

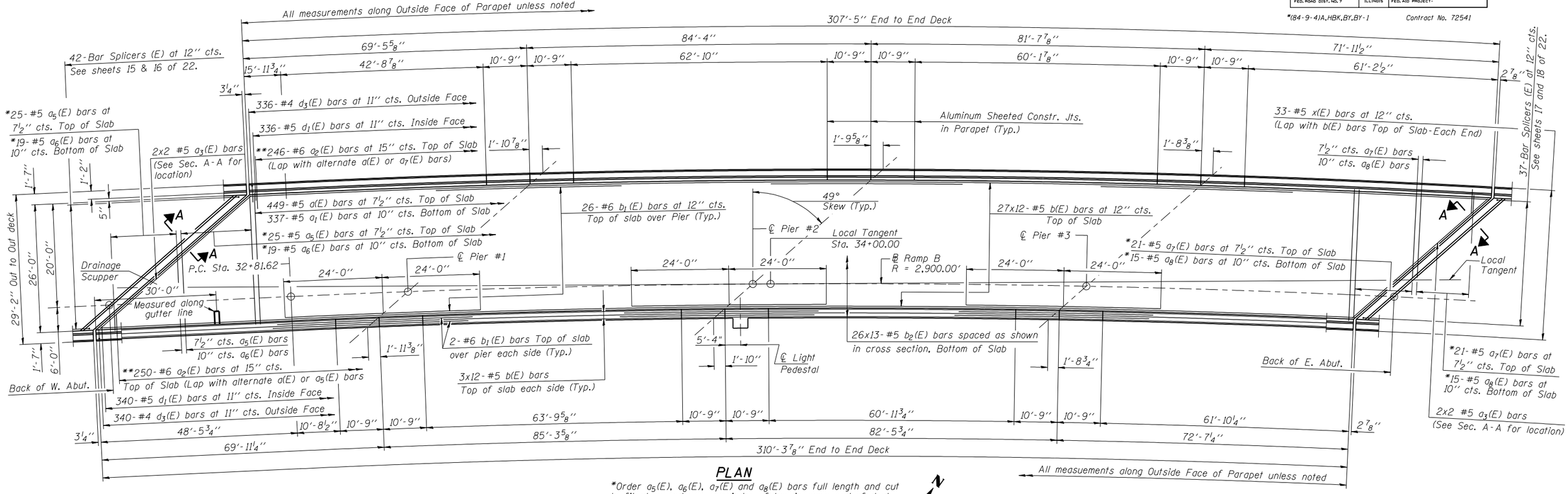
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	303
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

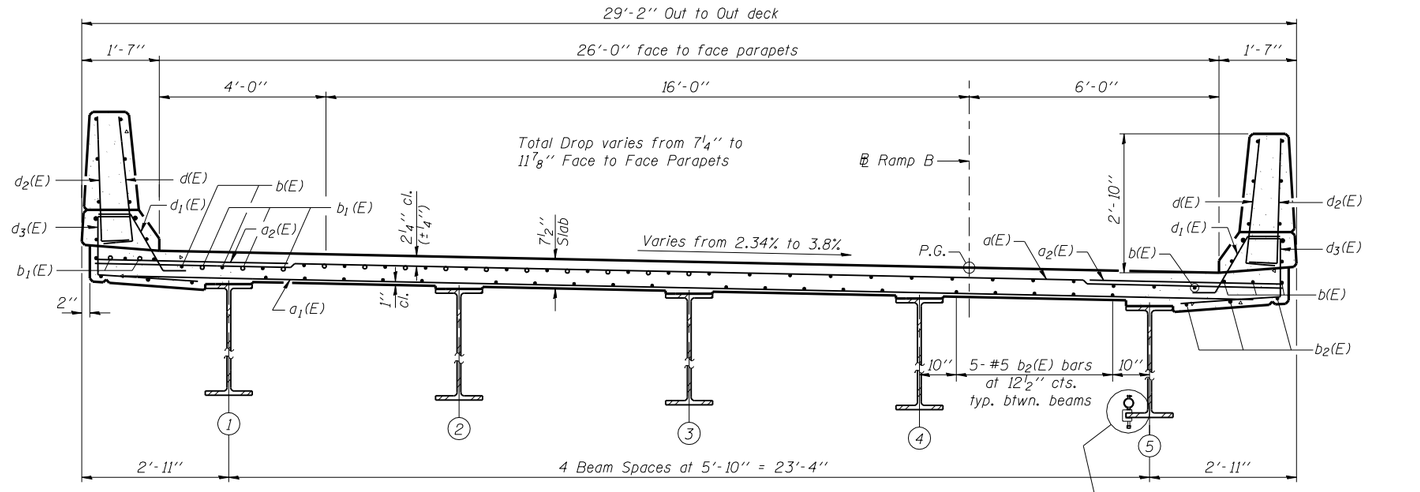
SHEET NO. 06
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



PLAN

*Order $a_5(E)$, $a_6(E)$, $a_7(E)$ and $a_8(E)$ bars full length and cut to fit skew and use remainder of bar in same end of deck.
** Trim bar if required in skewed portion of deck.



NEAR PIER — NEAR MIDSPAN

CROSS SECTION

(Looking East)
(Horizontal dimensions are measured radial to ℄ Ramp B)

Flange Clamp and Conduit Hanger for 2"ϕ Standard Weight Galvanized Steel Conduit. See Electrical Plans for Details.

MIN. BAR LAPS

#5 Bar - 2'-2"
#6 Bar - 2'-7"

Notes:
See Sheet 08 of 22 for superstructure details, Bill of Material & Section A-A.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.
See Sheet 07 of 22 for parapet reinforcement.
See Bar Splicer (Coupler) Details, Sheet 20 of 22.
Transverse bars shall be placed radially. Longitudinal bars shall be placed along curve.

Corporate License Number 184-001-084

SUPERSTRUCTURE
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

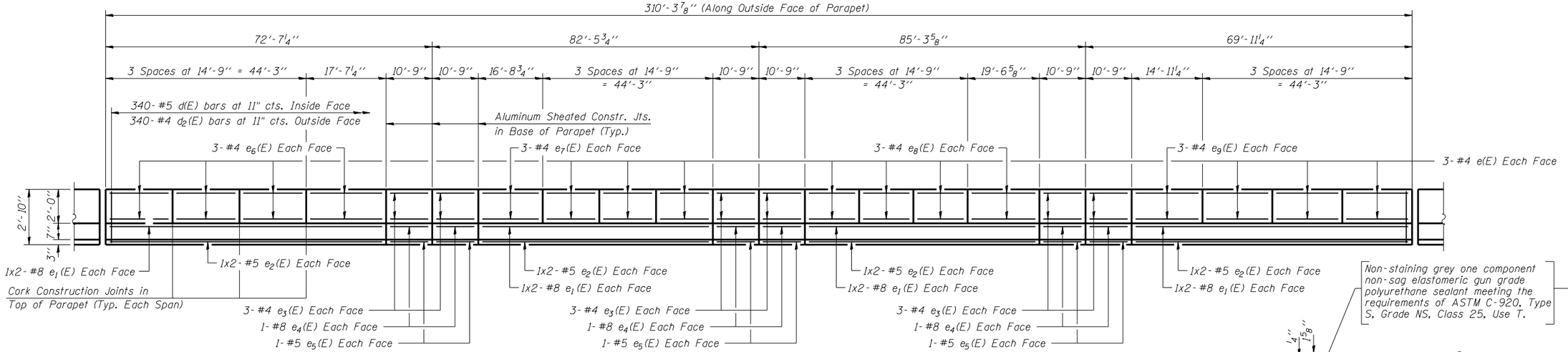
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

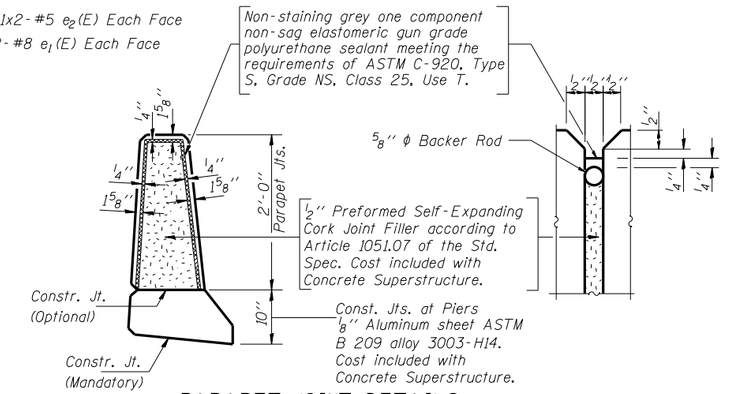
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	304
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 07
22 SHEETS

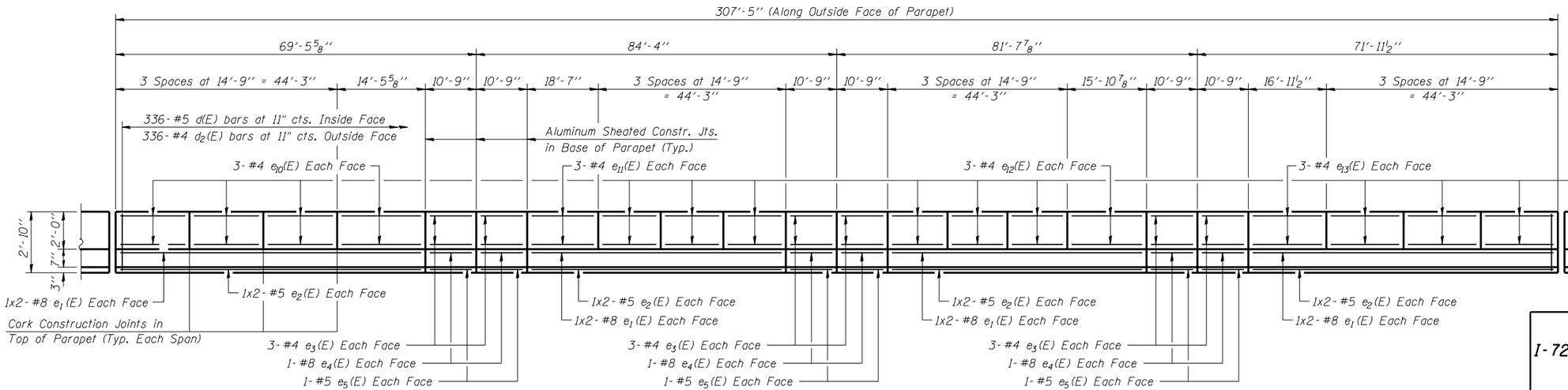
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



INSIDE ELEVATION OF SOUTH PARAPET



PARAPET JOINT DETAILS



INSIDE ELEVATION OF NORTH PARAPET

MIN. BAR LAPS

#5 Bar - 2'-2"
#8 Bar - 4'-6"

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.
See sheet 08 of 22 for superstructure details and bill of material.

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

SUPERSTRUCTURE DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

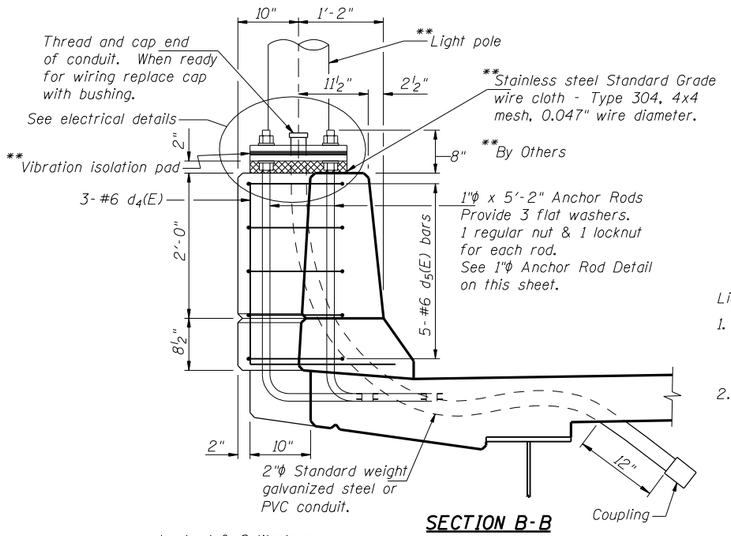
JOB* 96S2002B

DATE: 11/16/05

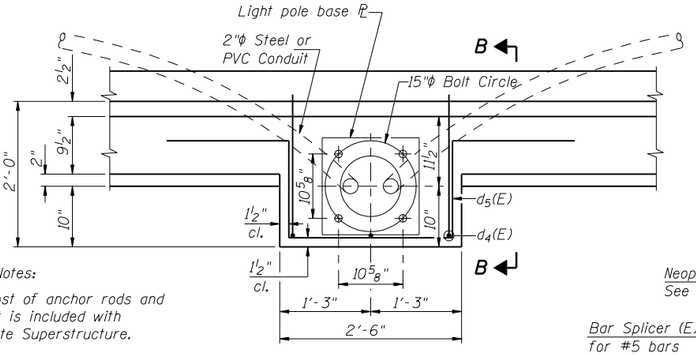
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	305
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 08
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



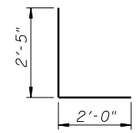
SECTION B-B



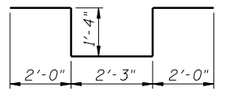
PLAN

Lighting Notes:

1. The cost of anchor rods and conduit is included with Concrete Superstructure.
2. The Contractor shall verify the bolt circle with the light pole supplier.



BAR d4(E)



BAR d5(E)

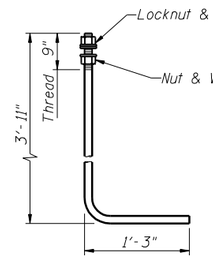
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	449	#5	28'-6"	——
a_1(E)	337	#5	27'-9"	——
a_2(E)	496	#6	4'-6"	——
a_3(E)	8	#5	22'-0"	——
a_4(E)	8	#5	1'-6"	——
a_5(E)	25	#5	28'-11"	——
a_6(E)	19	#5	28'-5"	——
a_7(E)	21	#5	28'-7"	——
a_8(E)	15	#5	29'-7"	——
b(E)	396	#5	28'-0"	——
b_1(E)	90	#6	48'-0"	——
b_2(E)	338	#5	26'-0"	——
d(E)	676	#5	3'-0"	⌐
d_1(E)	676	#5	2'-5"	⌐
d_2(E)	676	#4	3'-0"	⌐
d_3(E)	676	#4	3'-10"	⌐
d_4(E)	3	#6	4'-5"	⌐
d_5(E)	5	#6	8'-11"	⌐
e(E)	144	#4	14'-6"	——
e_1(E)	32	#8	34'-0"	——
e_2(E)	32	#5	32'-10"	——
e_3(E)	72	#4	10'-6"	——
e_4(E)	24	#8	10'-6"	——
e_5(E)	24	#5	10'-6"	——
e_6(E)	6	#4	17'-4"	——
e_7(E)	6	#4	16'-5"	——
e_8(E)	6	#4	19'-3"	——
e_9(E)	6	#4	14'-8"	——
e_{10}(E)	6	#4	14'-2"	——
e_{11}(E)	6	#4	18'-4"	——
e_{12}(E)	6	#4	15'-7"	——
e_{13}(E)	6	#4	16'-8"	——
x(E)	66	#5	4'-1"	⌐
Concrete Superstructure		Cu. Yds.	296.8	
Reinforcement Bars (Epoxy Coated)		Lbs.	70910	

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Cut longitudinal reinforcement to clear drainage scuppers.

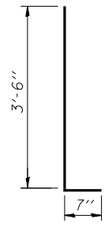
MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#8 Bar - 4'-6"



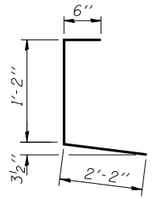
1"ϕ ANCHOR ROD
(ASTM F 1554 Grade 105)

LIGHT PEDESTAL DETAILS

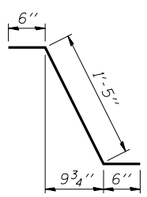


BARS x(E)

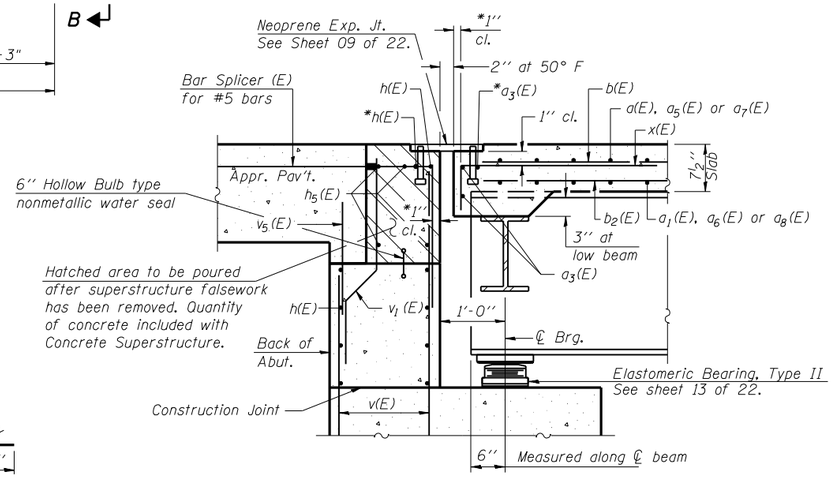
BARS d(E) & d_2(E)



BAR d_3(E)

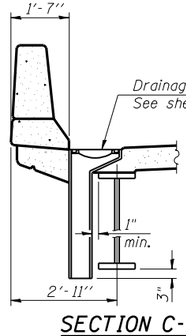


BAR d_1(E)

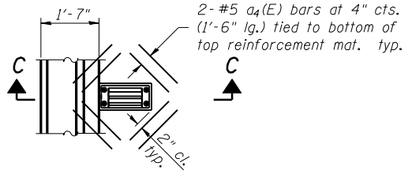


SECTION A-A
(At Rt. <'s to Bk. Abutment)

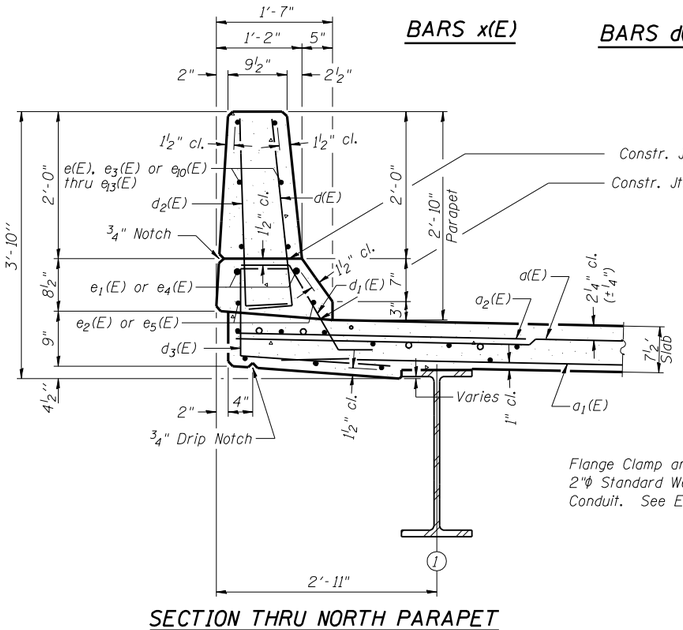
* Place a_3(E) and h(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-⅛"). Anchor bolts should be tied to a_3(E) and h(E) bars.



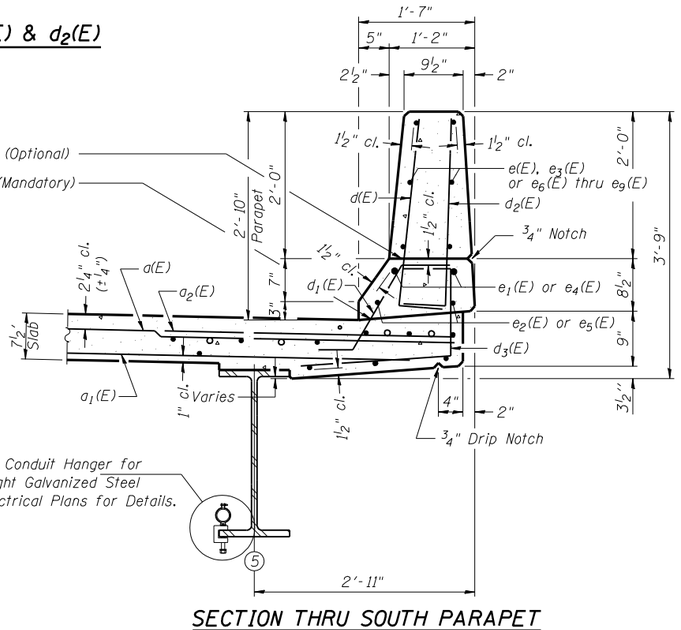
SECTION C-C



PLAN



SECTION THRU NORTH PARAPET
(Looking East Upstation)



SECTION THRU SOUTH PARAPET
(Looking East Upstation)

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$
12/16/2006

SUPERSTRUCTURE DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	306
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 09
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	$1\frac{1}{2}$" Min.
$2\frac{1}{2}$"	$2\frac{1}{2}$"	$1\frac{3}{4}$" Min.
4"	3"	$2\frac{1}{2}$" Min.

INSTALLATION NOTES

(1) Install continuous seal in roadway, parapet, curb, and sidewalk.

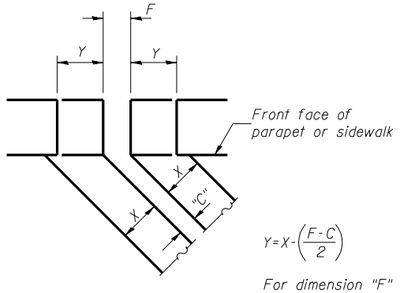
(2) Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

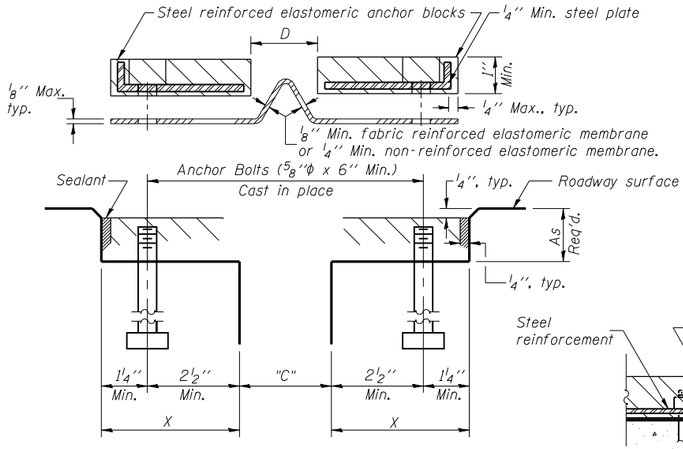
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of $1\frac{1}{2}$" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



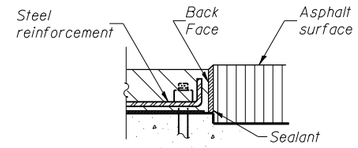
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheet 6 of 22.

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

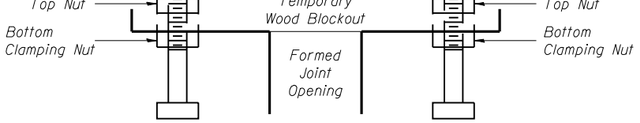
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

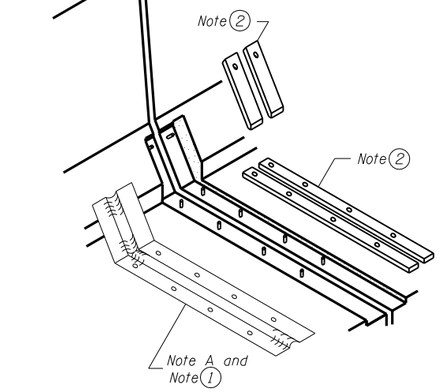
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



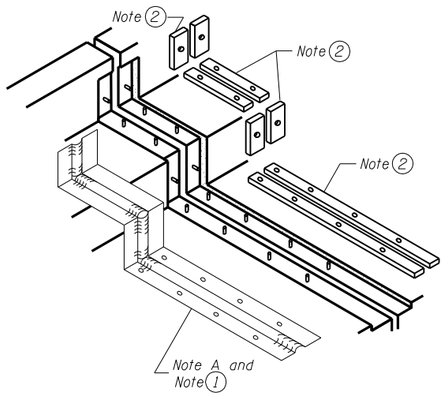
Note: Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

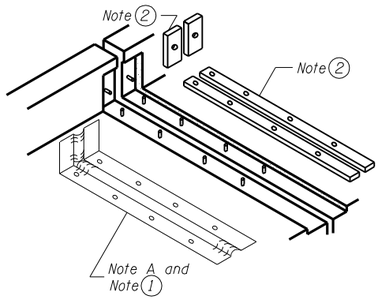
RECOMMENDED BLOCKOUT DETAIL



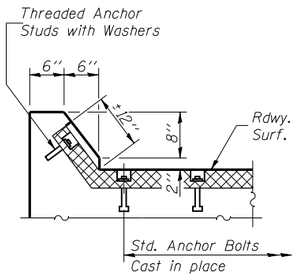
AT PARAPET



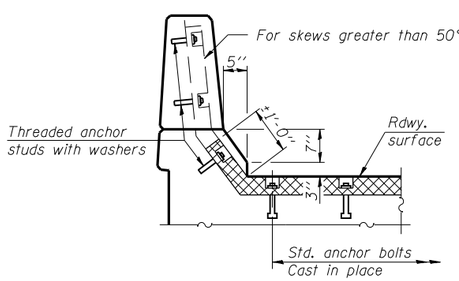
AT SIDEWALK OR MEDIAN



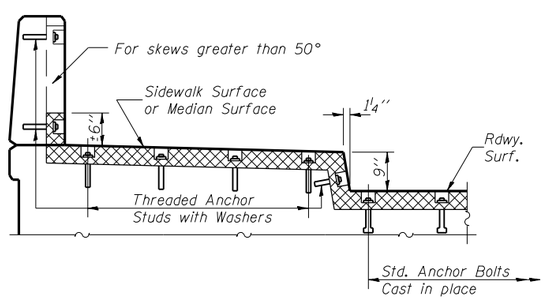
AT WALL



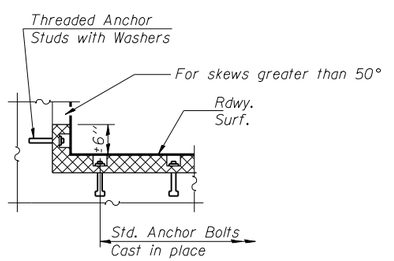
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN



AT WALL

TYPICAL END TREATMENTS

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

$FILE$
12/16/2006

EJ-CS 9-01-03

Corporate License Number 184-001-084

NEOPRENE EXPANSION JOINT DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

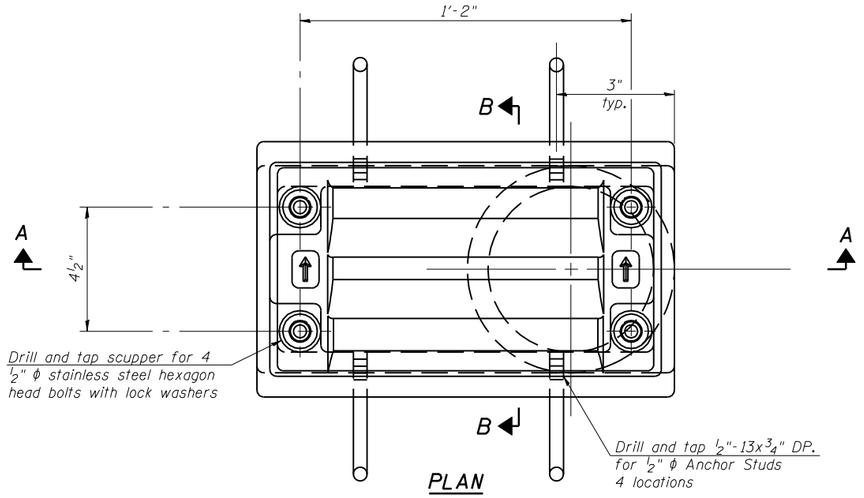
JOB* 96S2002B

DATE: 11/16/05

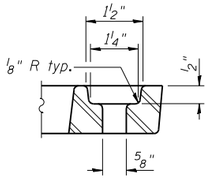
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	307
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
22 SHEETS

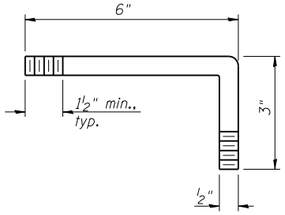
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



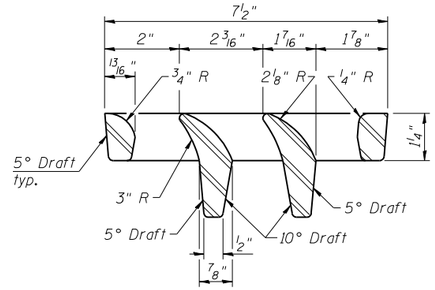
PLAN



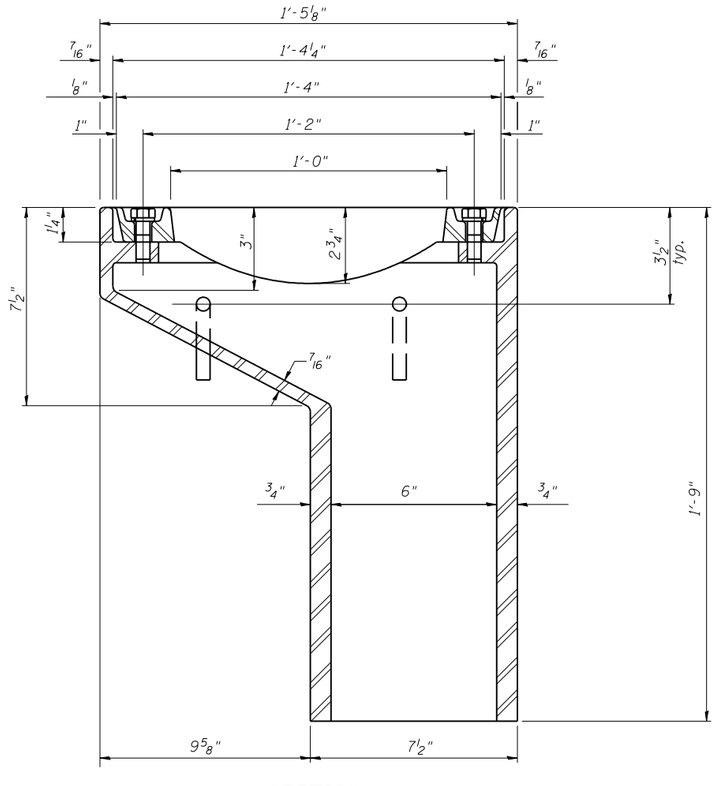
BOLT HOLE DETAIL



ANCHOR STUD DETAIL

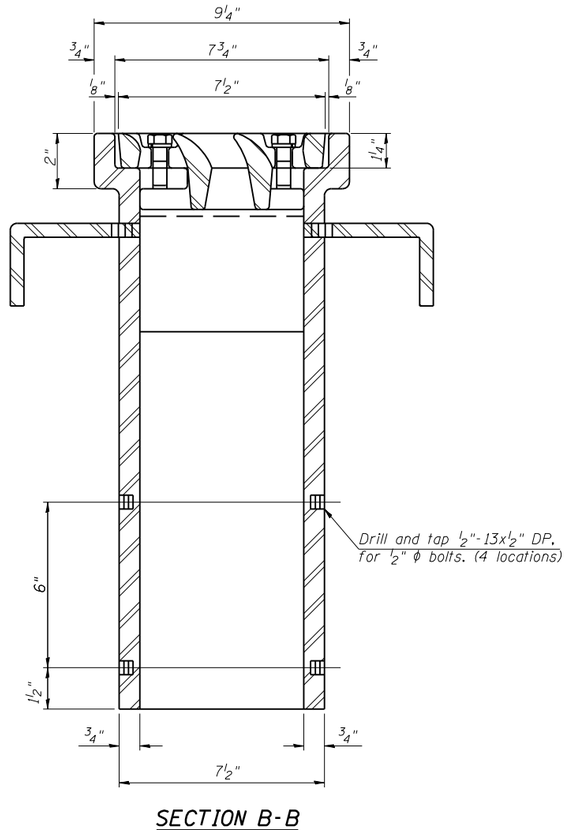


VANE GRATE DETAIL



SECTION A-A

See sheet 06 of 22 for scupper location relative to parapet.



SECTION B-B

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	1

Corporate License Number 184-001-084

DRAINAGE SCUPPER, DS-11
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

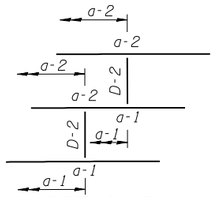
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	308
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
22 SHEETS

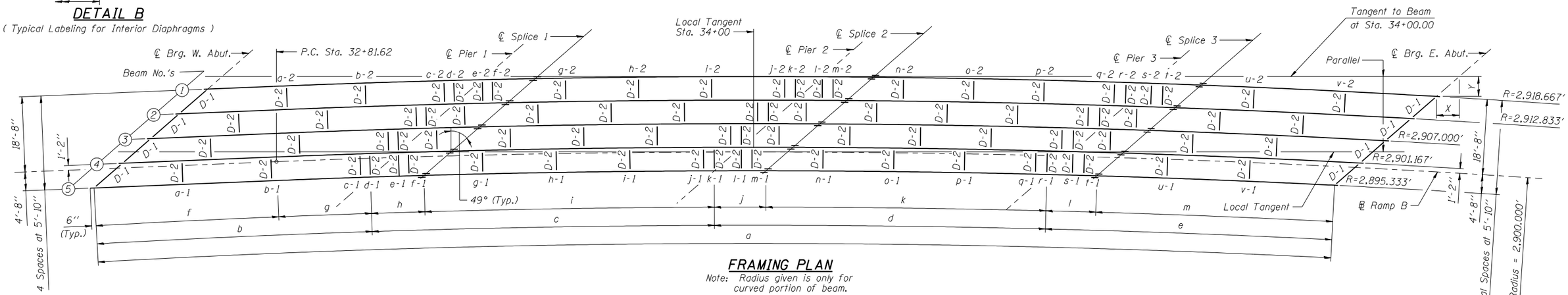
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



DETAIL B

(Typical Labeling for Interior Diaphragms)

Note: See Detail B for typical labeling for Interior Diaphragms.



FRAMING PLAN

Note: Radius given is only for curved portion of beam.

DIAPHRAGM LOCATIONS

(Measured Along Centerline of Beam from ℄ Bearing West Abutment)

Beam #	a-1	a-2	b-1	b-2	c-1	c-2	d-1	d-2	e-1	e-2	f-1	f-2	g-1	g-2
1	-	19'-6 1/2"	-	39'-0 7/8"	-	58'-7 3/8"	-	61'-1"	-	68'-1 5/8"	-	70'-7 3/8"	-	88'-9"
2	26'-9 7/8"	14'-8 3/8"	46'-3 7/8"	36'-8 1/2"	65'-9 7/8"	58'-8 3/4"	68'-3 3/8"	61'-2 1/4"	75'-3 7/8"	-	77'-9 5/8"	70'-9 1/8"	95'-10 3/4"	88'-11 3/8"
3	21'-11 3/4"	14'-8 3/4"	43'-11 5/8"	36'-9 1/4"	65'-11 3/8"	58'-10 1/8"	68'-4 7/8"	61'-3 3/8"	-	-	77'-11 3/8"	70'-10 3/8"	96'-1 1/4"	89'-1 3/8"
4	22'-0 1/4"	14'-9 1/4"	44'-0 5/8"	36'-9 7/8"	66'-0 7/8"	58'-11 1/8"	68'-6 1/8"	61'-4 1/8"	-	68'-6 1/8"	78'-0 7/8"	70'-11 3/8"	96'-3 3/8"	89'-3 1/8"
5	22'-0 3/4"	-	44'-1 3/8"	-	66'-2 1/8"	-	68'-7 1/8"	-	75'-8 7/8"	-	78'-2 1/8"	-	96'-5 3/8"	-

Beam #	h-1	h-2	i-1	i-2	j-1	j-2	k-1	k-2	l-1	l-2	m-1	m-2	n-1	n-2
1	-	106'-10 5/8"	-	125'-0 1/4"	-	143'-1 7/8"	-	145'-9 7/8"	-	152'-5 3/4"	-	155'-1 7/8"	-	172'-7 3/8"
2	114'-0"	107'-1 5/8"	132'-1 1/8"	125'-3 7/8"	150'-2 3/8"	143'-6 1/8"	152'-10 1/4"	146'-2"	159'-5 7/8"	-	162'-2 1/8"	155'-6 3/8"	179'-7 1/8"	173'-0 1/2"
3	114'-3 1/8"	107'-4 1/4"	132'-4 7/8"	125'-7 1/4"	150'-6 3/4"	143'-10 1/4"	153'-2 5/8"	146'-6"	-	-	162'-6 3/4"	155'-10 1/2"	180'-0 3/8"	173'-4 1/8"
4	114'-6"	107'-6 3/4"	132'-8 1/2"	125'-10 1/2"	150'-11"	144'-2 1/8"	153'-6 3/4"	146'-9 3/4"	-	153'-6 3/4"	162'-11"	156'-2 1/2"	180'-5 1/4"	173'-9 3/4"
5	114'-8 5/8"	-	132'-11 7/8"	-	151'-3 1/8"	-	153'-10 5/8"	-	160'-7 3/8"	-	163'-3 1/8"	-	180'-10"	-

Beam #	o-1	o-2	p-1	p-2	q-1	q-2	r-1	r-2	s-1	s-2	t-1	t-2	u-1	u-2	v-1	v-2
1	-	190'-1"	-	207'-6 1/2"	-	225'-0"	-	227'-10 1/8"	-	234'-1 5/8"	-	237'-0"	-	259'-7 5/8"	-	282'-3 1/4"
2	197'-0 1/4"	190'-6 1/2"	214'-5 3/8"	208'-0 1/2"	231'-10 1/2"	225'-6 5/8"	234'-8 9/16"	228'-4 3/4"	240'-11 7/8"	-	243'-10 1/8"	237'-6 7/8"	266'-5 1/4"	258'-3 1/8"	289'-0 3/8"	278'-11 1/4"
3	197'-6"	190'-11 7/8"	214'-11 5/8"	208'-6 5/8"	232'-5 1/4"	226'-1 1/4"	235'-3 3/8"	228'-11 1/4"	-	-	244'-5 1/4"	238'-1 1/2"	265'-1"	258'-10 1/4"	285'-8 5/8"	279'-7 1/8"
4	197'-11 1/2"	191'-5"	215'-5 3/4"	209'-0 3/8"	233'-0"	226'-7 5/8"	235'-9 15/16"	229'-5 1/2"	-	235'-9 15/16"	245'-0"	238'-8"	265'-8 1/4"	259'-5 3/8"	286'-4 5/8"	280'-2 3/4"
5	198'-4 7/8"	-	215'-11 3/4"	-	233'-6 5/8"	-	236'-4 3/8"	-	242'-8 5/8"	-	245'-6 5/8"	-	266'-3 1/2"	-	287'-0 3/8"	-

BEAM DIMENSIONS

(Measured Along Centerline of Beam)

Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
a	304'-10 13/16"	305'-7 5/8"	306'-4 5/16"	307'-0 7/8"	307'-9 1/4"
b	68'-1 5/8"	68'-3 3/8"	68'-4 7/8"	68'-6 1/8"	68'-7 1/8"
c	84'-4 1/8"	84'-6 7/8"	84'-9 3/4"	85'-0 5/8"	85'-3 1/2"
d	81'-7 7/8"	81'-10 5/16"	82'-0 3/4"	82'-3 3/16"	82'-5 3/4"
e	70'-9 3/16"	70'-11 1/16"	71'-0 15/16"	71'-2 15/16"	71'-4 7/8"
f	16'-3 11/16"	23'-7 3/16"	30'-10 11/16"	38'-2 3/16"	45'-5 11/16"
g	51'-9 15/16"	44'-8 3/16"	37'-6 3/16"	30'-3 15/16"	23'-1 7/16"
h	13'-1 5/8"	13'-2"	13'-2 1/2"	13'-3"	13'-3 1/2"
i	71'-2 1/2"	71'-4 7/8"	71'-7 1/4"	71'-9 5/8"	72'-0"
j	12'-11 1/4"	12'-11 11/16"	13'-0 1/8"	13'-0 1/2"	13'-1"
k	68'-8 5/8"	68'-10 5/8"	69'-0 5/8"	69'-2 11/16"	69'-4 3/4"
l	12'-9 3/16"	12'-9 9/16"	12'-9 15/16"	12'-10 5/16"	12'-10 5/8"
m	58'-0"	58'-1 1/2"	58'-3"	58'-4 5/8"	58'-6 1/4"

BEAM LAYOUT DIMENSIONS

(Measured from Beam Local Tangent to Centerline of Beam)

Beam #	℄ Brg. W. Abut.		℄ Pier No. 1		℄ Splice No. 1		℄ Pier No. 2		℄ Splice No. 2		℄ Pier No. 3		℄ Splice No. 3		℄ Brg. E. Abut.	
	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'
1	3'-6 3/4"	3'-1 3/16"	0'-10 11/16"	0'-9 5/16"	6 15/16"	6 1/16"	0'-0 11/16"	0'-0 5/8"	2 1/8"	1 7/8"	1'-11"	1'-8"	2'-5 3/8"	2'-1 1/2"	5'-7 7/8"	4'-11"
2	3'-10 13/16"	3'-4 11/16"	1'-1 1/16"	0'-11 3/8"	8 13/16"	7 11/16"	0'-0 1/4"	0'-0 1/4"	1 5/16"	1 1/8"	1'-8 1/8"	1'-5 1/2"	2'-2 1/8"	1'-10 11/16"	5'-3 1/16"	4'-6 13/16"
3	4'-2 13/16"	3'-8 3/16"	1'-3 5/8"	1'-1 9/16"	10 15/16"	9 1/2"	0'-0 1/16"	0'-0"	0 11/16"	0 9/16"	1'-5 7/16"	1'-3 3/16"	1'-11 1/16"	1'-8 1/16"	4'-10 3/8"	4'-2 3/4"
4	4'-6 7/8"	3'-11 11/16"	1'-6 7/16"	1'-4 1/16"	1'-1 5/16"	11 9/16"	0'-0"	0'-0"	0 1/4"	0 3/16"	1'-2 15/16"	1'-1"	1'-8 3/16"	1'-5 9/16"	4'-5 7/8"	3'-10 13/16"
5	4'-10 15/16"	4'-3 3/16"	1'-9 9/16"	1'-6 3/4"	1'-3 15/16"	1'-1 7/8"	0'-0 1/4"	0'-0 3/16"	0'-0"	0'-0"	1'-0 5/8"	0'-10 15/16"	1'-5 7/16"	1'-3 3/16"	4'-1 1/2"	3'-7"

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

STRUCTURAL STEEL FRAMING PLAN
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

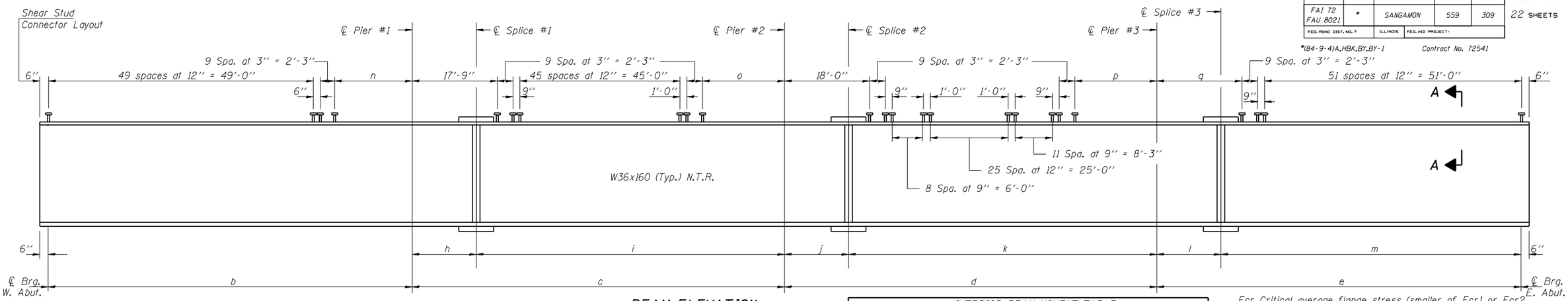
DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	309
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
22 SHEETS

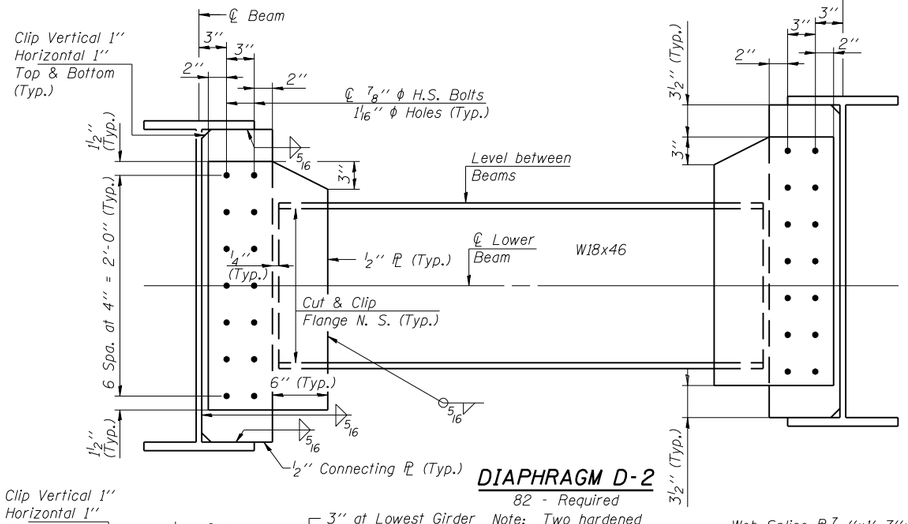
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

Shear Stud Connector Layout



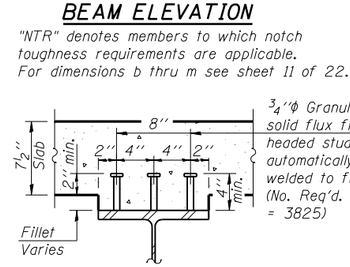
BEAM ELEVATION

"NTR" denotes members to which notch toughness requirements are applicable.
For dimensions b thru m see sheet 11 of 22.

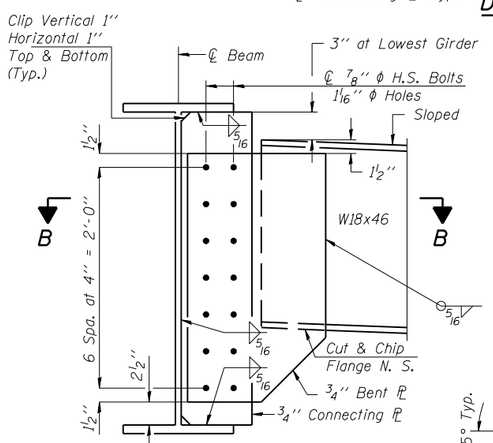


DIAPHRAGM D-2
82 - Required

Note: Two hardened washers shall be required over all over sized holes. Horizontal dimensions at Rt. <'s to ℄ beam.

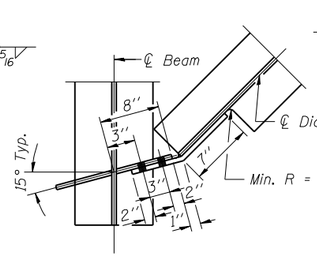


SECTION A-A

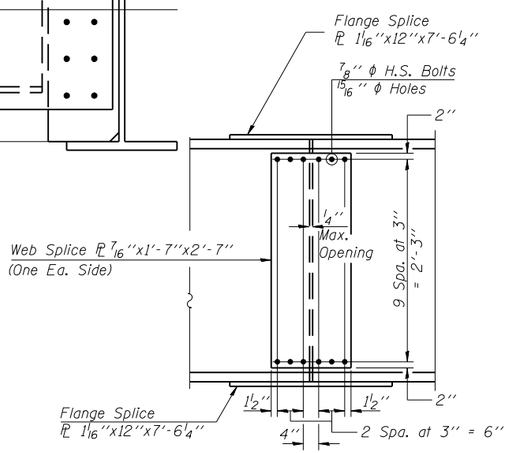


DIAPHRAGM D-1
8 - Required

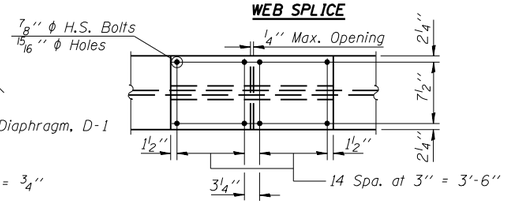
Note: Two hardened washers shall be required over all oversized holes.



SECTION B-B



WEB SPLICE



TOP & BOTTOM FLANGE SPLICE

FIELD SPLICE DETAIL

H.S. Bolts shall conform to AASHTO M-164 Specifications (ASTM A325)

INTERIOR BEAM MOMENT TABLE					
		0.4 Sp. 1 or 0.6 Sp. 4	Pier #1 or #3	0.5 Sp. 2 or Sp. 3	Pier #2
Is	(in⁴)	9750	9750	9750	9750
Ic (n)	(in⁴)	22342	-	22342	-
Ic (3n)	(in⁴)	16351	-	16351	-
Ss	(in³)	542	542	542	542
Sc (n)	(in³)	743	-	743	-
Sc (3n)	(in³)	671	-	671	-
St	(in³)	22.5	22.5	22.5	22.5
D℄	(k/ft.)	0.74	1.21	0.74	1.21
M℄	('k)	273	668	233	664
s℄	(k/ft.)	0.47	-	0.47	-
Ms℄	('k)	179	-	164	-
ML	('k)	415	378	395	390
M (Imp)	('k)	104	76	99	78
5/3[ML+M(Imp)]	('k)	865	757	823	778
Ma	('k)	1712	1853	1586	1875
MbL	('k)	0.25	0.14	0.17	0.14
fs℄ non-comp	(k.s.i.)	6.0	14.8	5.2	14.7
fs℄ (comp)	(k.s.i.)	3.2	-	2.9	-
fs 5/3[ML+M(Imp)]	(k.s.i.)	14.0	16.8	13.3	17.2
fL	(k.s.i.)	0.1	0.1	0.1	0.1
fs (Overload)	(k.s.i.)	23.2	31.6	21.5	31.9
fs (Total)	(k.s.i.)	30.2	41.1	28.0	41.5
Fcr (Overload)	(k.s.i.)	47.5	47.5	47.5	47.5
VR	(k)	54.9	-	57.2	-
Fcr	(k.s.i.)	50.0	50.0	50.0	50.0

INTERIOR BEAM REACTION TABLE				
		E.&W. Abut.	Piers #1 & #3	Pier #2
R℄	(k)	33.4	103.7	103.5
RL	(k)	39.3	61.8	61.7
Imp.	(k)	11.8	18.5	18.5
R (Total)	(k)	84.5	184.0	183.7

Fcr Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and Fy for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

Fcr (Overload) Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

M℄ Moment due to dead loads on non-composite section.

Ms℄ Moment due to dead loads on composite section.

ML Moment due to live load on non-composite or composite section.

M (Imp) Moment due to live load impact on non-composite or composite section.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5/3(ML + M(Imp))].

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5/3(ML + M(Imp)).

fs (Total) is the sum of the stresses due to 1.3[M℄ + Ms℄ + 5/3(ML + M(Imp))].

Sb_t is the section modulus for one flange for lateral flange bending.

Mb_t is the lateral bending moment for flange (factored).

f_t is the calculated normal stress at the edge of flange due to lateral bending (factored).

ML and RL include the effects of centrifugal force and superelevation.

BEAM DIMENSIONS

(Measured Along Centerline of Beam)

Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
n	16'-4 5/8''	16'-6 3/8''	16'-7 7/8''	16'-9 1/8''	16'-10 1/8''
o	15'-4 1/8''	15'-6 7/8''	15'-9 3/4''	16'-0 5/8''	16'-3 1/2''
p	16'-4 7/8''	16'-7 5/16''	16'-9 3/4''	17'-0 3/16''	17'-2 3/4''
q	16'-9 3/16''	16'-11 1/16''	17'-0 15/16''	17'-2 15/16''	17'-4 7/8''

Corporate License Number 184-001-084

*TOP OF BEAM ELEVATIONS

Location \ Beam	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
℄ Brg. W. Abut.	631.07	630.80	630.54	630.30	630.08
℄ Pier #1	631.91	631.62	631.33	631.04	630.75
℄ Splice #1	632.07	631.78	631.48	631.18	630.88
℄ Pier #2	632.61	632.35	632.08	631.81	631.54
℄ Splice #2	632.71	632.45	632.19	631.93	631.66
℄ Pier #3	632.94	632.70	632.47	632.23	631.99
℄ Splice #3	632.98	632.75	632.52	632.28	632.05
℄ Brg. E. Abut.	633.05	632.84	632.62	632.41	632.19

* For Fabrication only.

STRUCTURAL STEEL DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

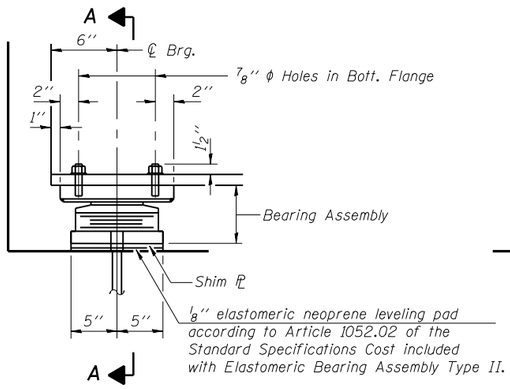
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

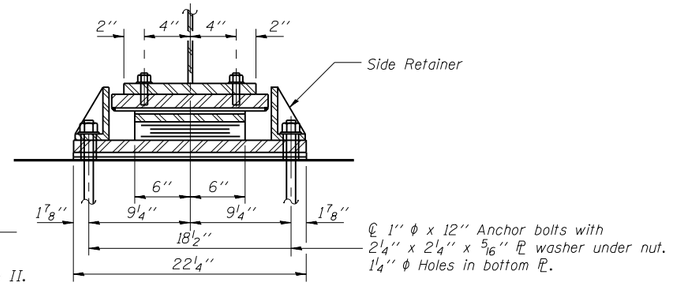
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	310
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

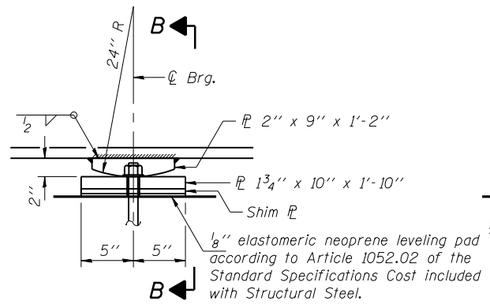


ELEVATION AT ABUT.

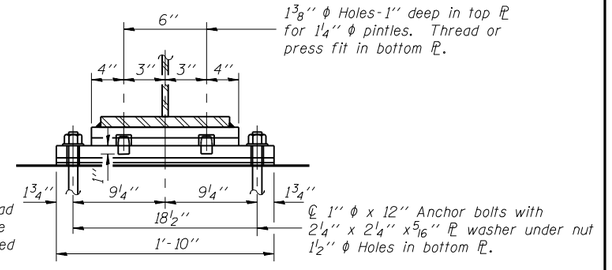


SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.



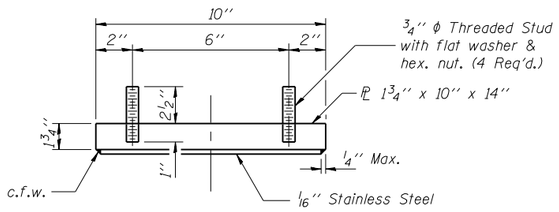
ELEVATION AT PIER



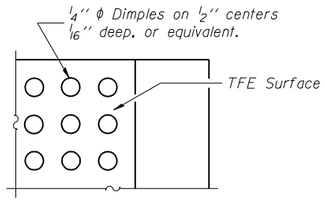
SECTION B-B

FIXED BEARING
No. Required = 15

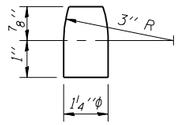
Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 14 of 22 for Anchor Bolt installation.



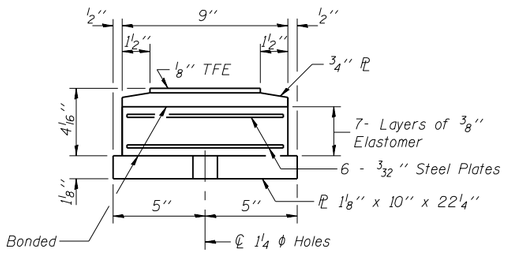
TOP BEARING ASSEMBLY



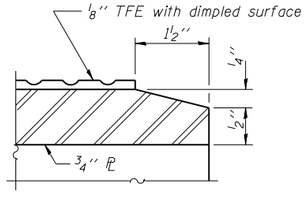
PLAN-TFE SURFACE



PINTLE



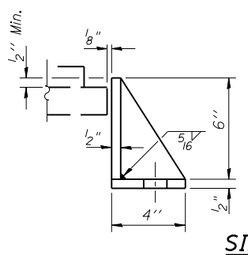
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

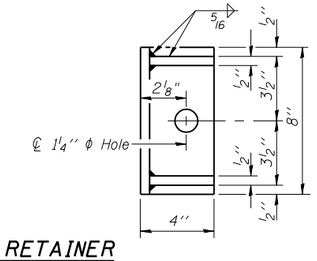
Note: The 1/8'' TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

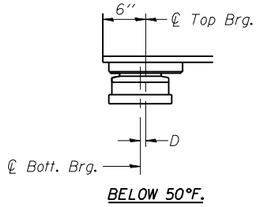
Bonding of 1/8'' TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



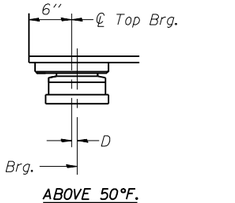
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.





BELOW 50°F.
(Move bott. brg. away from fixed brg.)



ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.
D=1/8'' per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10

Corporate License Number 184-001-084

ELASTOMERIC BEARING DETAILS, TYPE II
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

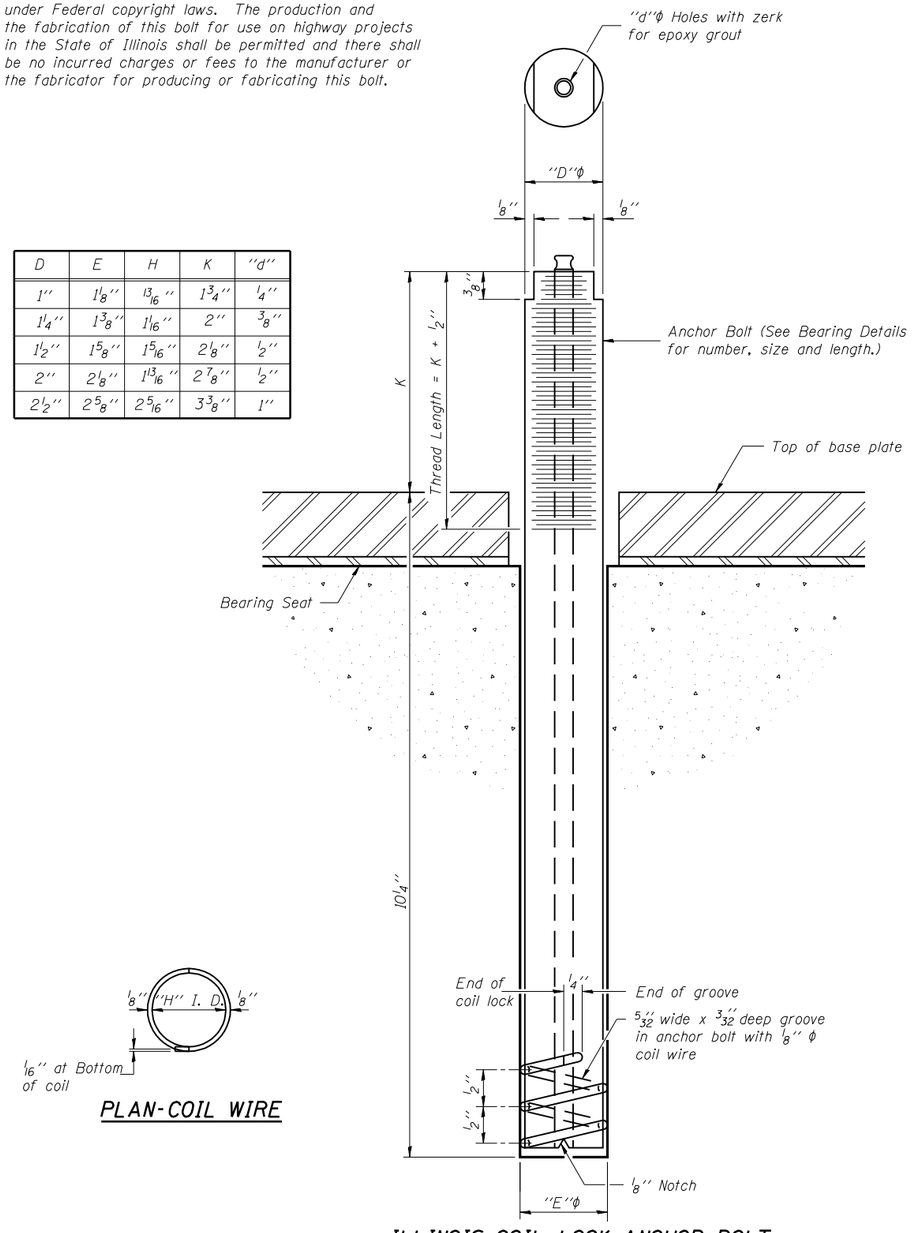
DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

I-2-E2 9-1-03

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Piers	A307
Abutments	A307

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel Bridge No. 3.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	311
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

Corporate License Number 184-001-084

ANCHOR BOLT ASSEMBLY DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

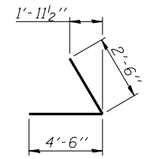
JOB* 96S2002B

DATE: 11/16/05

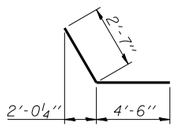
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	312
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
22 SHEETS

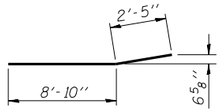
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



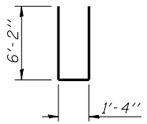
BAR $h_1(E)$



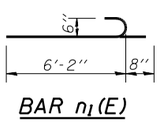
BAR $h_2(E)$



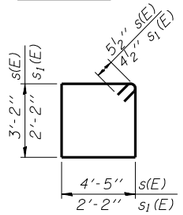
BAR $h_4(E)$



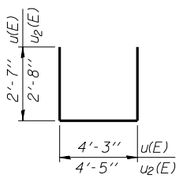
BAR n(E)



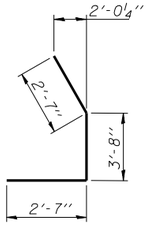
BAR $n_1(E)$



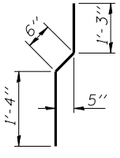
BARS s(E) & $s_1(E)$



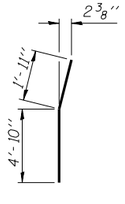
BARS u(E) & $u_2(E)$



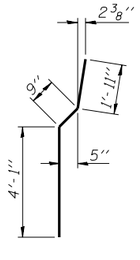
BAR $u_1(E)$



BAR $v_1(E)$

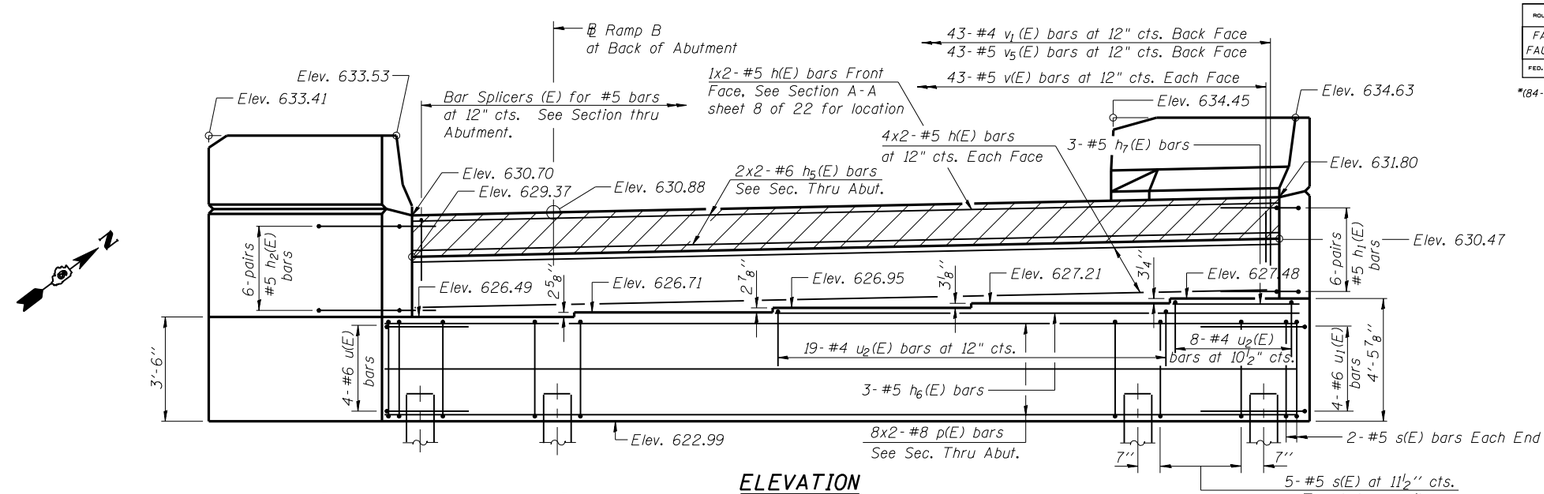


BAR $v_3(E)$

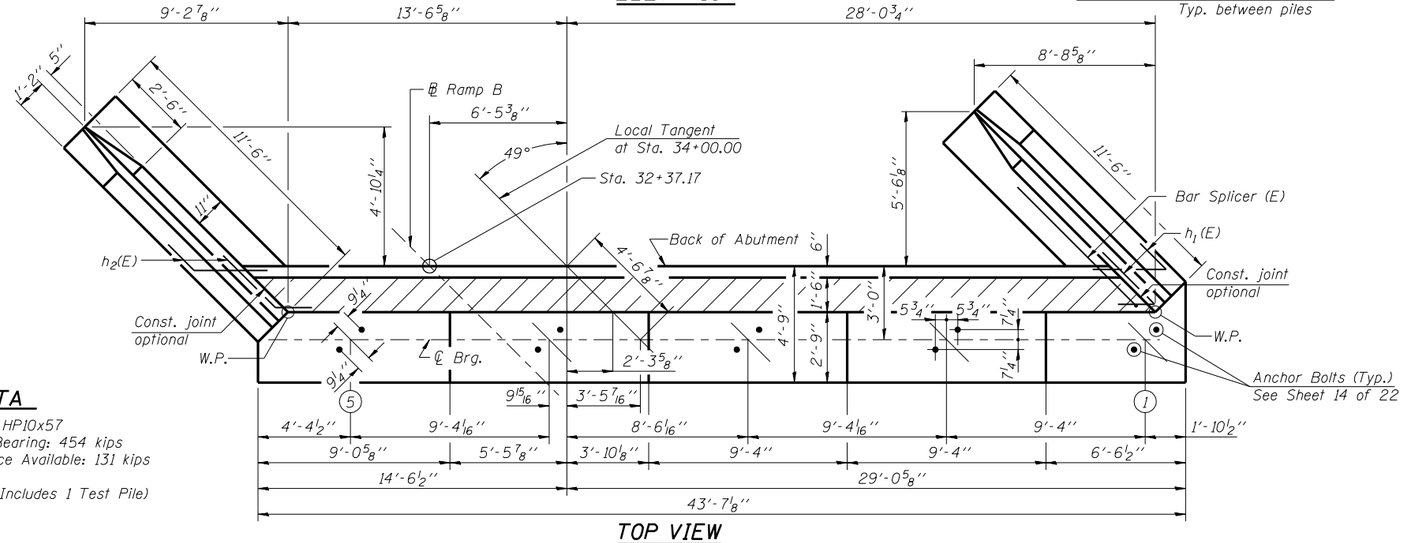


BAR $v_4(E)$

BAR $p_2(E)$



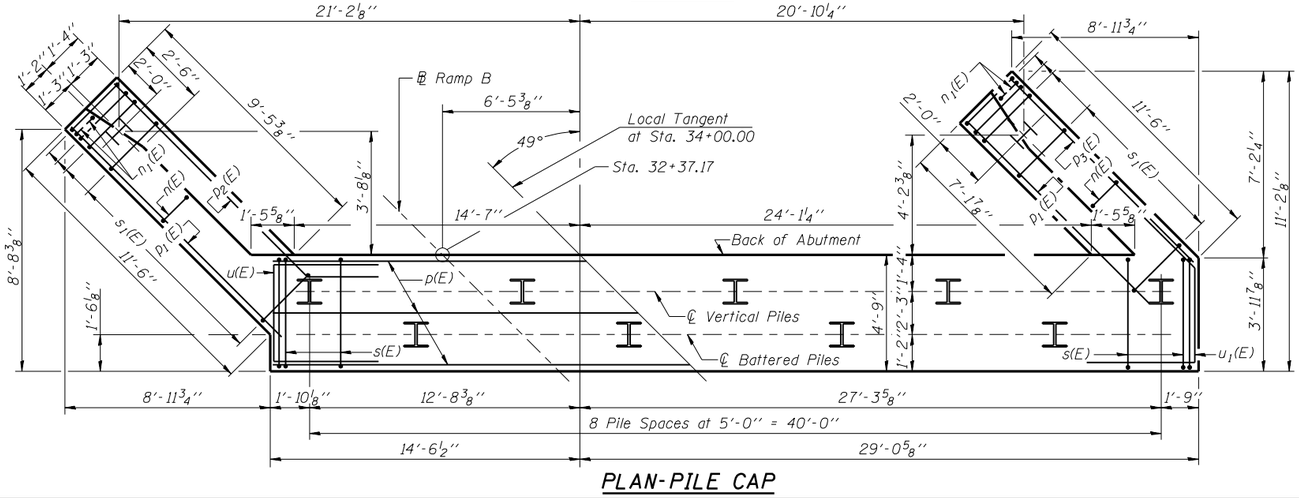
ELEVATION



TOP VIEW

PILE DATA

Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 131 kips
Est. Length: 49'
No. Required: 11 (Includes 1 Test Pile)



TOP VIEW

ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	18	#5	19'-9"	
$h_1(E)$	12	#5	7'-0"	
$h_2(E)$	12	#5	7'-1"	
$h_3(E)$	25	#4	11'-3"	
$h_4(E)$	17	#4	11'-3"	
$h_5(E)$	8	#6	21'-10"	
$h_6(E)$	3	#5	24'-10"	
$h_7(E)$	3	#5	6'-2"	
n(E)	20	#6	13'-8"	
$n_1(E)$	12	#6	6'-10"	
p(E)	16	#8	24'-0"	
$p_1(E)$	6	#7	13'-0"	
$p_2(E)$	3	#7	13'-0"	
$p_3(E)$	3	#7	11'-4"	
s(E)	44	#5	16'-1"	
$s_1(E)$	24	#4	9'-5"	
u(E)	4	#6	9'-5"	
$u_1(E)$	4	#6	8'-10"	
$u_2(E)$	27	#4	9'-9"	
v(E)	86	#5	6'-0"	
$v_1(E)$	43	#4	3'-1"	
$v_2(E)$	24	#6	6'-9"	
$v_3(E)$	6	#6	6'-9"	
$v_4(E)$	20	#6	6'-9"	
$v_5(E)$	43	#5	2'-10"	
Structure Excavation		Cu. Yd.	136	
Concrete Structures		Cu. Yd.	53.9	
Reinforcement Bars, Epoxy Coated		Pound	5520	
Furnishing Steel Piles HP10x57		Foot	490	
Driving Piles		Foot	490	
Test Piles Steel HP10x57		Each	1	

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
For details of Bar Splicers, see sheet 20 of 22.
Conduit is embedded in the South Wing. For details see Conduit Details sheet in the Roadway Plans

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"
#8 Bar - 4'-6"

Corporate License Number 184-001-084

WEST ABUTMENT
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

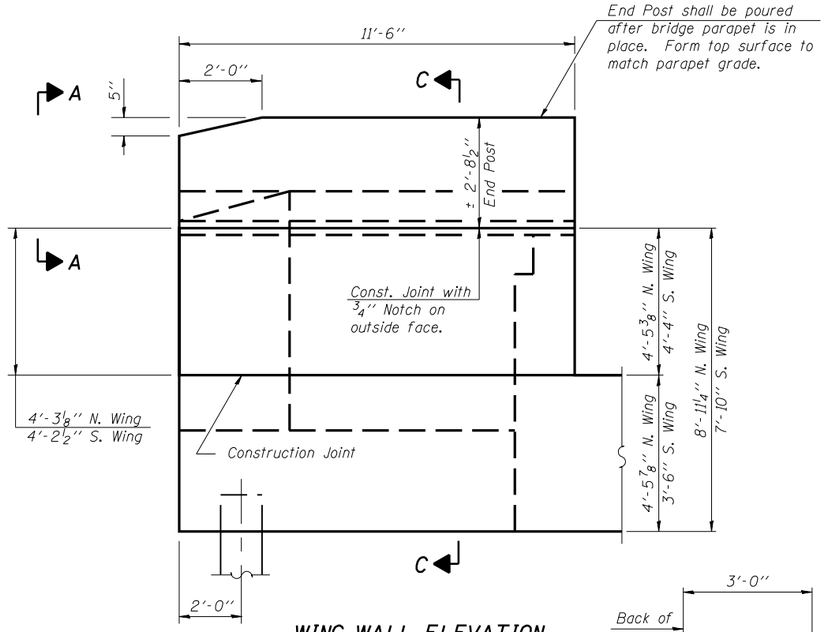
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

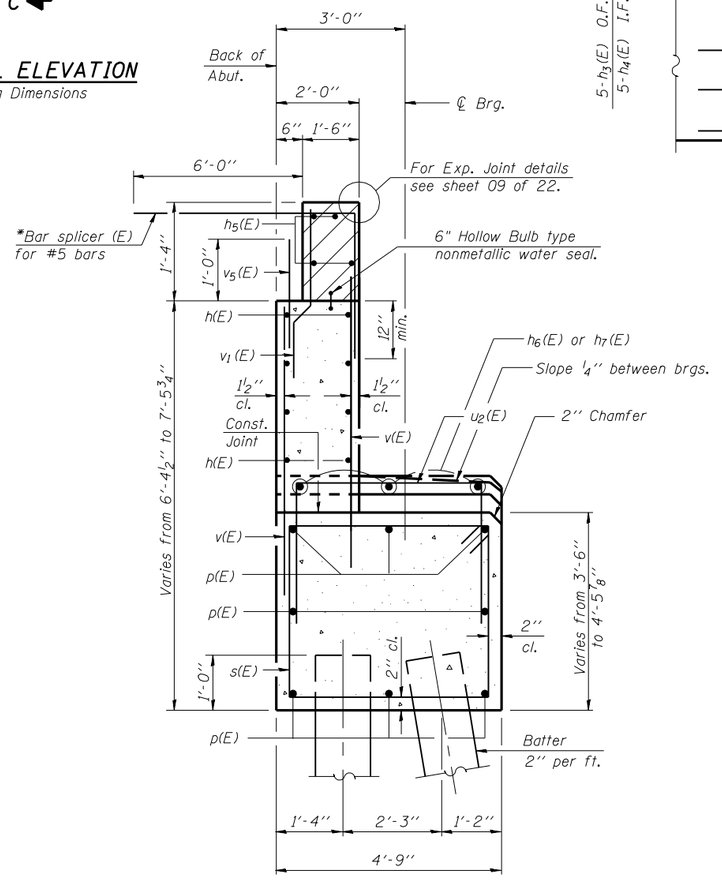
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	313
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
22 SHEETS

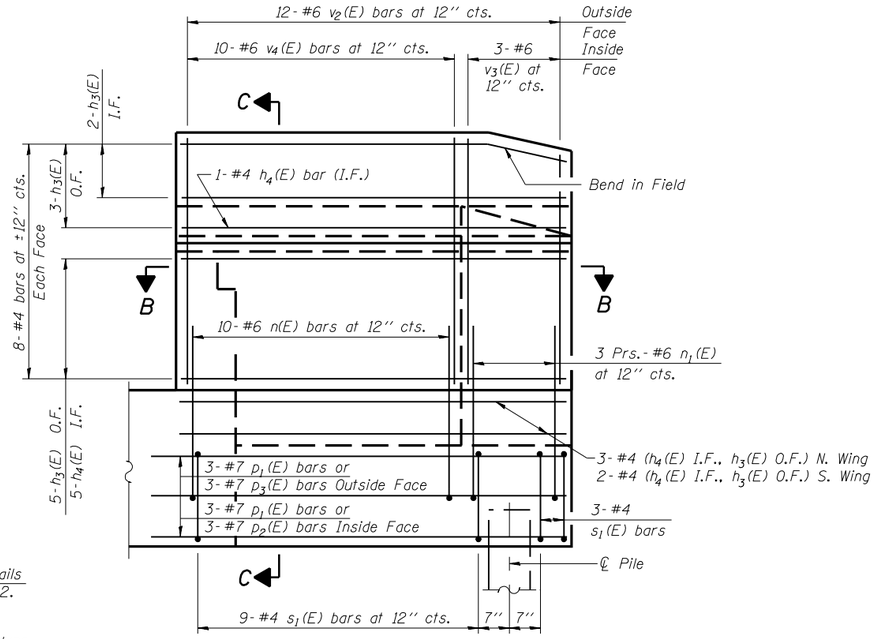
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



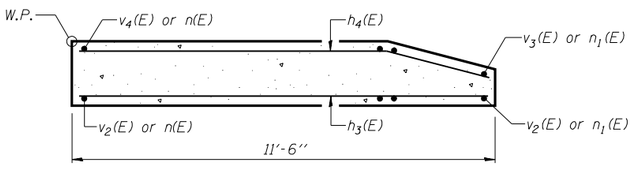
WING WALL ELEVATION
Showing Dimensions



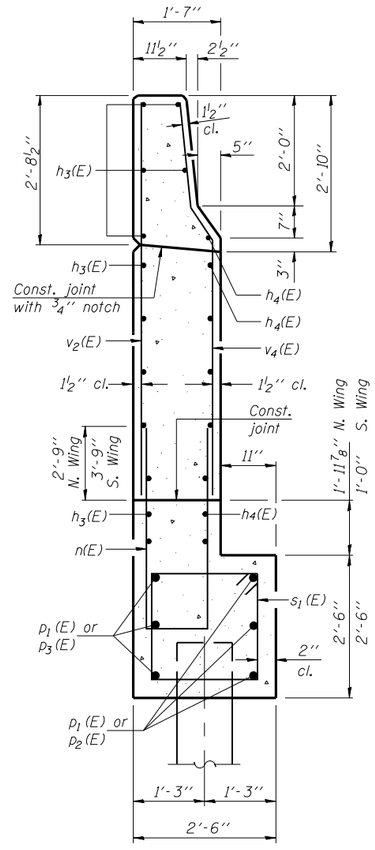
SEC. THRU ABUT.
*Alternate with #4 v(E) bars
Place parallel to the beams



WING WALL ELEVATION
Showing Reinforcement



SEC. B-B



SECTION C-C

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 22.
Conduit is embedded in the South Wing. For details, see Conduit Details sheet in the Roadway Plans.

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"
#8 Bar - 4'-6"

Corporate License Number 184-001-084

WEST ABUTMENT DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	314
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

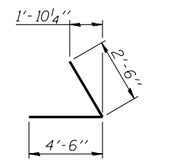
ANCHOR BOLT LAYOUT DIMENSIONS

Beam No.	A	B
1	$6\frac{7}{16}''$	$6\frac{5}{8}''$
2	$6\frac{7}{16}''$	$6\frac{5}{8}''$
3	$6\frac{7}{16}''$	$6\frac{5}{8}''$
4	$6\frac{7}{16}''$	$6\frac{11}{16}''$
5	$6\frac{7}{16}''$	$6\frac{11}{16}''$

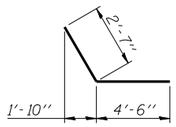
ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	18	#5	19'-9''	
h_3(E)	25	#4	11'-3''	
h_4(E)	17	#4	11'-3''	
h_5(E)	8	#6	21'-10''	
h_8(E)	12	#5	7'-0''	
h_9(E)	12	#5	7'-1''	
h_{10}(E)	3	#5	24'-8''	
h_{11}(E)	3	#5	8'-0''	
n(E)	20	#6	13'-4''	
n_1(E)	12	#6	6'-10''	
p(E)	16	#8	24'-0''	
p_1(E)	6	#7	13'-0''	
p_3(E)	3	#7	11'-4''	
p_4(E)	3	#7	13'-1''	
s(E)	43	#5	16'-1''	
s_1(E)	26	#4	9'-5''	
u(E)	4	#6	9'-5''	
u_2(E)	26	#4	9'-9''	
u_3(E)	4	#6	8'-9''	
v(E)	76	#5	6'-0''	
v_1(E)	38	#4	3'-1''	
v_2(E)	24	#6	6'-9''	
v_3(E)	6	#6	6'-9''	
v_4(E)	20	#6	6'-9''	
v_5(E)	38	#5	2'-10''	
Structure Excavation		Cu. Yd.	128	
Concrete Structures		Cu. Yd.	50.1	
Reinforcement Bars, Epoxy Coated		Pound	5420	
Furnishing Steel Piles HP10x57		Foot	450	
Driving Piles		Foot	450	
Test Piles Steel HP10x57		Each	1	

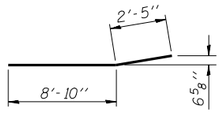
Notes:
Reinforcement bars designated (E) shall be epoxy coated.
For details of Bar Splicers, see sheet 20 of 22.
Conduit is embedded in the South Wing. For details see Conduit Details sheet in the Roadway Plans
Corporate License Number 184-001-084



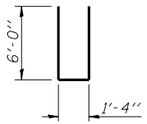
BAR h_8(E)



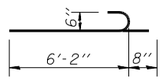
BAR h_9(E)



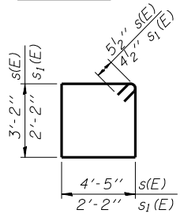
BAR h_4(E)



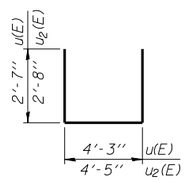
BAR n(E)



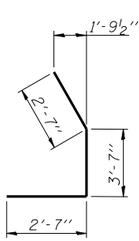
BAR n_1(E)



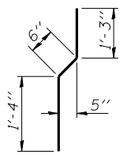
BARS s(E) & s_1(E)



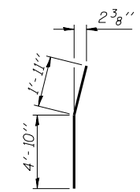
BARS u(E) & u_2(E)



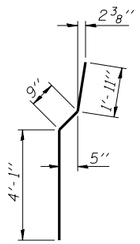
BAR u_3(E)



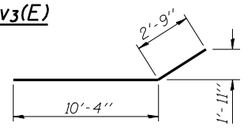
BAR v_1(E)



BAR v_3(E)



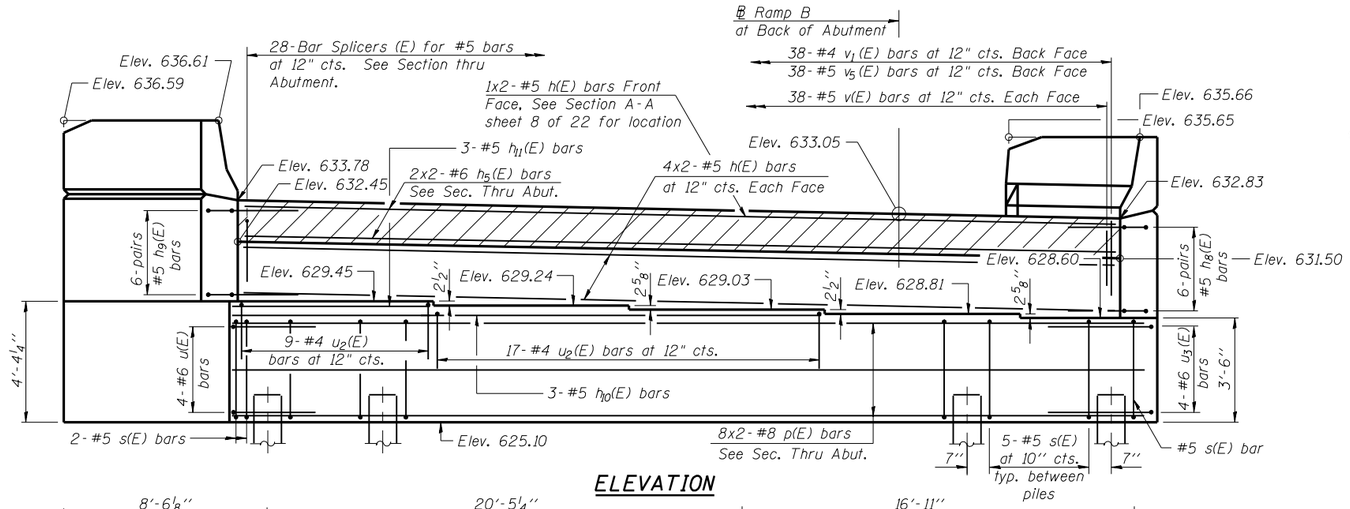
BAR v_4(E)



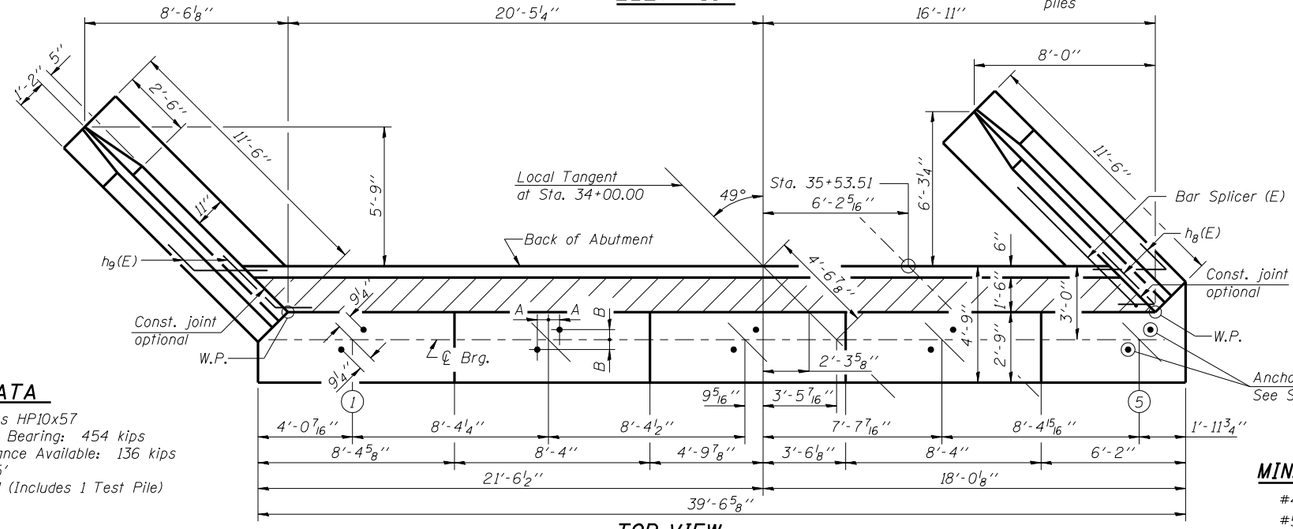
BAR p_4(E)

PILE DATA

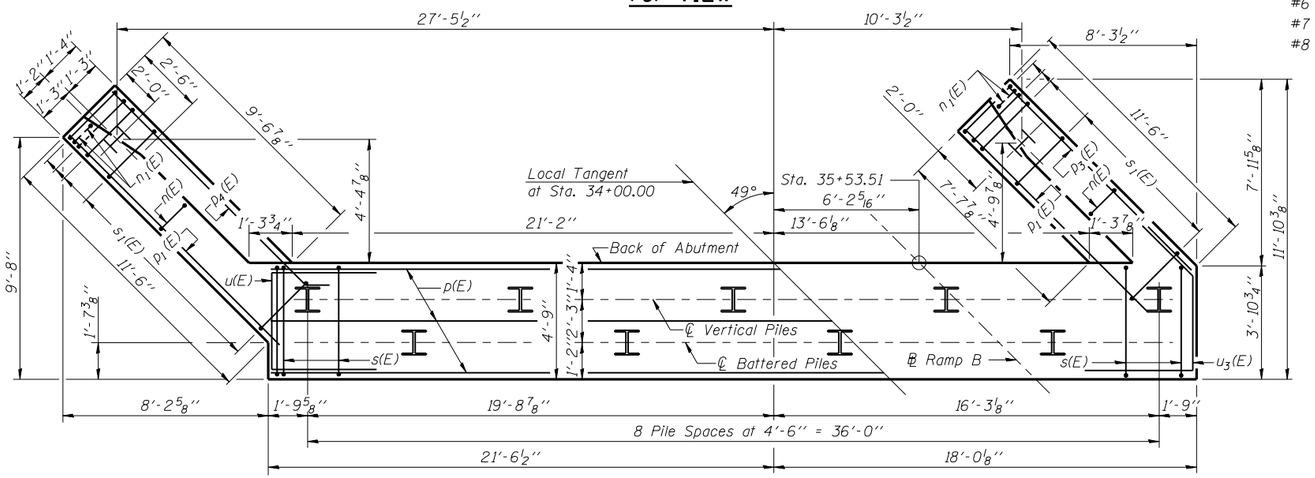
Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 136 kips
Est. Length: 45'
No. Required: 11 (Includes 1 Test Pile)



ELEVATION



TOP VIEW



PLAN-PILE CAP

MIN. BAR LAPS

#4 Bar - 1'-8''
#5 Bar - 2'-2''
#6 Bar - 2'-7''
#7 Bar - 3'-5''
#8 Bar - 4'-6''

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2005

EAST ABUTMENT
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

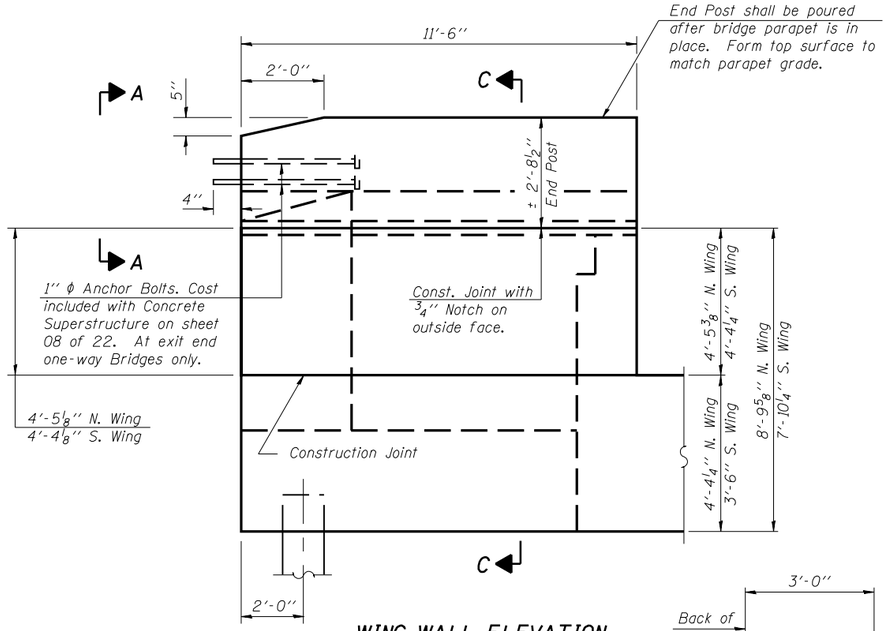
JOB* 96S2002B

DATE: 11/16/05

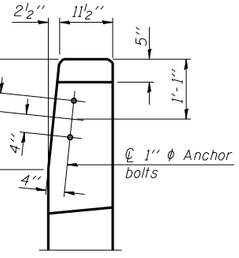
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	315
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
22 SHEETS

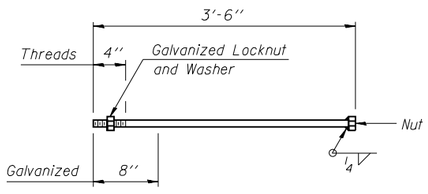
*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



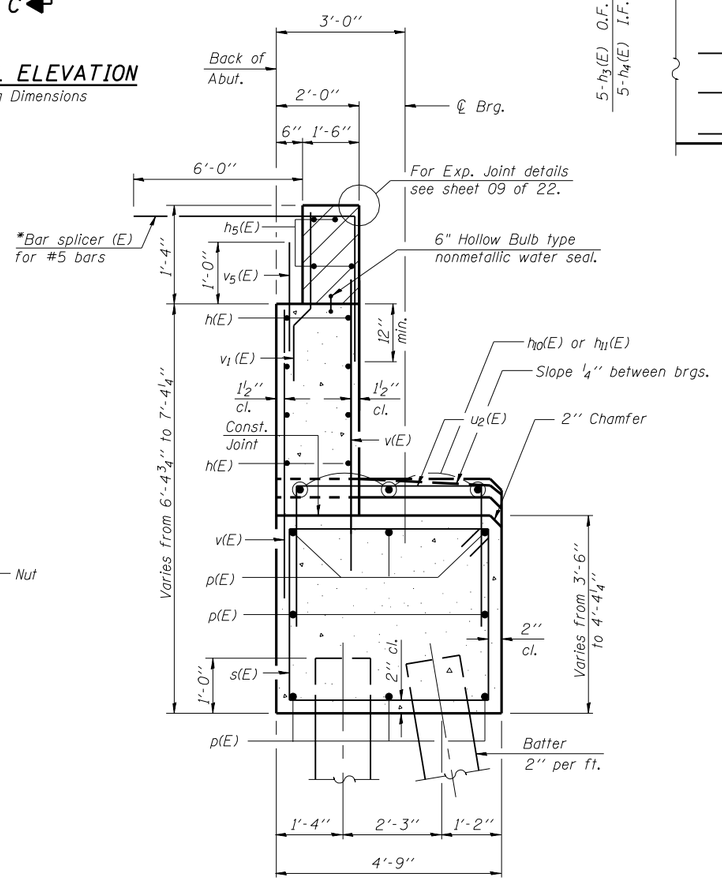
WING WALL ELEVATION
Showing Dimensions



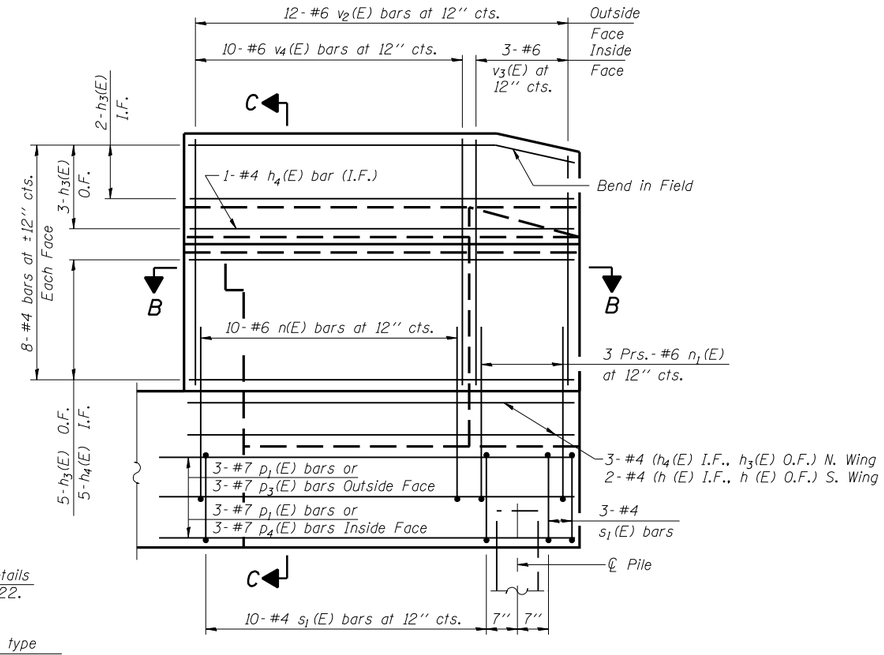
VIEW A-A



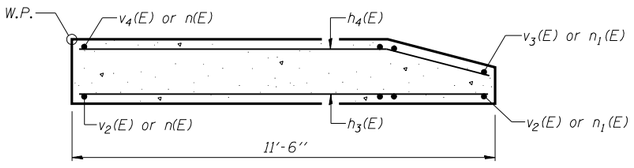
1" ϕ ANCHOR BOLT



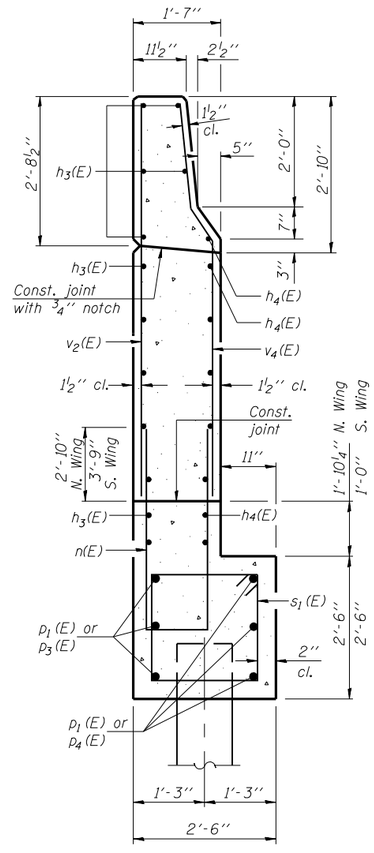
SEC. THRU ABUT.
*Alternate with #4 v(E) bars
Place parallel to the beams



WING WALL ELEVATION
Showing Reinforcement



SEC. B-B



SECTION C-C

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 22.
Conduit is embedded in the South Wing. For details, see Conduit Details sheet in the Roadway Plans.

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"
#8 Bar - 4'-6"

Corporate License Number 184-001-084

EAST ABUTMENT DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/21/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

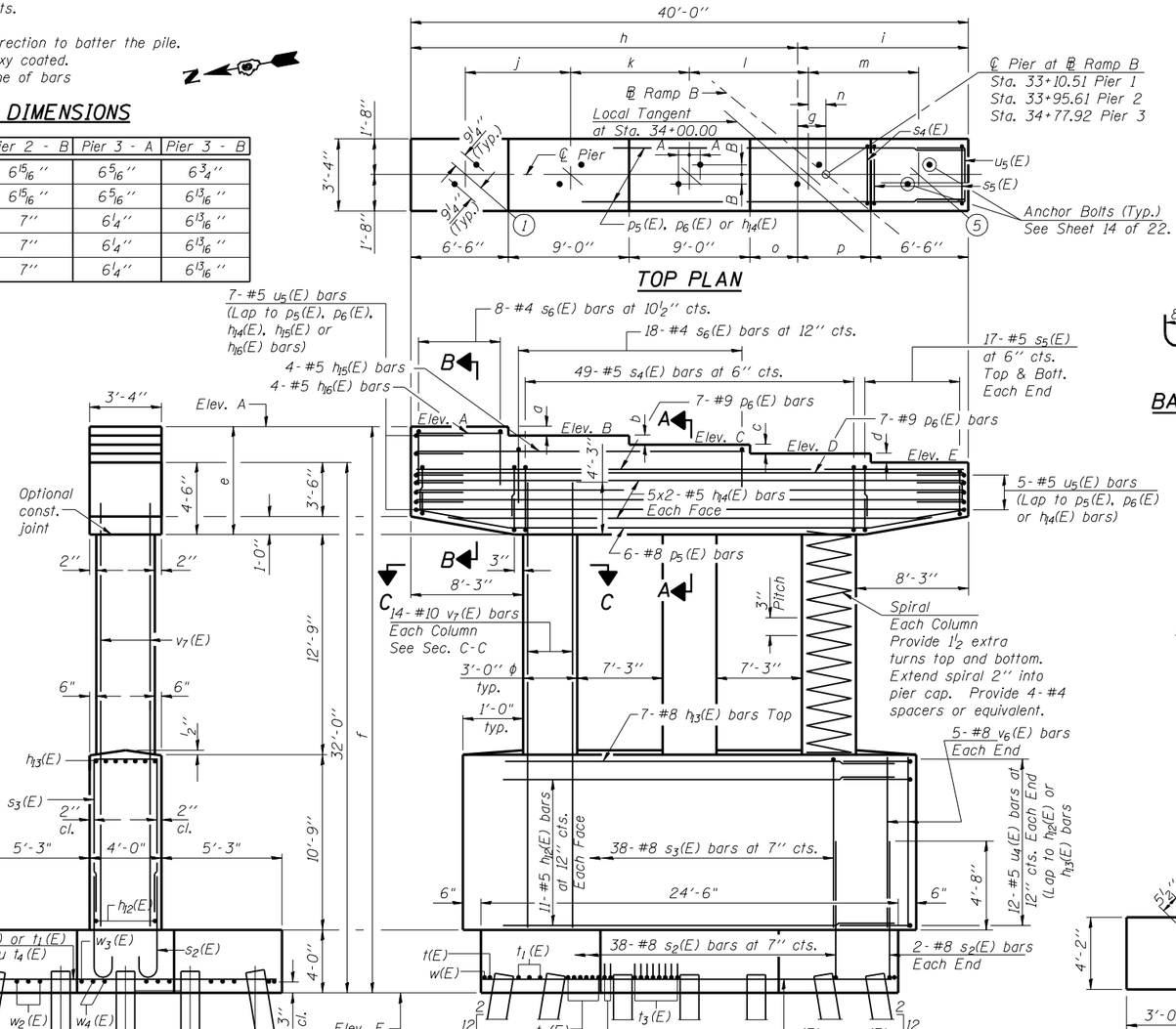
Notes: Space Reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
B indicates battered pile and arrow indicates direction to batter the pile.
Reinforcement Bars designated (E) shall be epoxy coated.
Bars indicated thus 5x2-#5 etc. indicates 5 line of bars with 2 lengths per line.

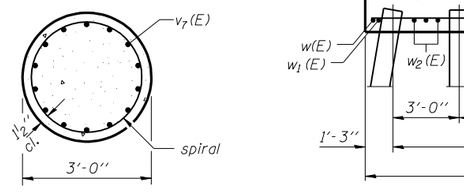
ANCHOR BOLT LAYOUT DIMENSIONS

Beam No.	Pier 1 - A	Pier 1 - B	Pier 2 - A	Pier 2 - B	Pier 3 - A	Pier 3 - B
1	5 7/8"	7 1/8"	6 1/8"	6 15/16"	6 5/16"	6 3/4"
2	5 7/8"	7 1/8"	6 1/16"	6 15/16"	6 5/16"	6 13/16"
3	5 7/8"	7 1/8"	6 1/16"	7"	6 1/4"	6 13/16"
4	5 7/8"	7 3/16"	6 1/16"	7"	6 1/4"	6 13/16"
5	5 13/16"	7 3/16"	6 1/16"	7"	6 1/4"	6 13/16"

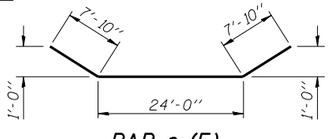
DIMENSIONS

Description	Pier #1	Pier #2	Pier #3
Elev. A	628.58	629.29	629.61
Elev. B	628.30	629.02	629.38
Elev. C	628.01	628.76	629.14
Elev. D	627.72	628.49	628.90
Elev. E	627.43	628.22	628.66
Elev. F	595.43	596.22	596.66
a	3 3/8"	3 1/4"	2 3/4"
b	3 1/2"	3 1/4"	2 7/8"
c	3 1/2"	3 1/4"	2 7/8"
d	3 1/2"	3 1/8"	2 7/8"
e	5'-7 7/8"	5'-6 7/8"	5'-5 3/8"
f	33'-1 7/8"	33'-0 7/8"	32'-11 3/8"
g	2'-1 1/4"	0'-0 1/16"	1'-7 1/8"
h	28'-10 5/8"	30'-7 3/8"	28'-8 3/8"
i	11'-1 3/8"	9'-4 5/8"	11'-3 5/8"
j	9'-1 13/16"	8'-10 1/8"	8'-6 7/8"
k	9'-2 1/8"	8'-10 3/8"	8'-7 1/8"
l	9'-2 7/16"	8'-10 11/16"	8'-7 3/8"
m	9'-2 3/4"	8'-11"	8'-7 5/8"
n	1'-10 1/8"	1'-9 3/8"	1'-8 11/16"
o	4'-4 5/8"	6'-1 3/8"	4'-2 3/8"
p	4'-7 3/8"	2'-10 5/8"	4'-9 5/8"
q	21'-1 5/8"	22'-10 3/8"	20'-11 3/8"
r	3'-4 3/8"	1'-7 5/8"	3'-6 5/8"





SEC. C-C



BAR p5(E)

PILE DATA

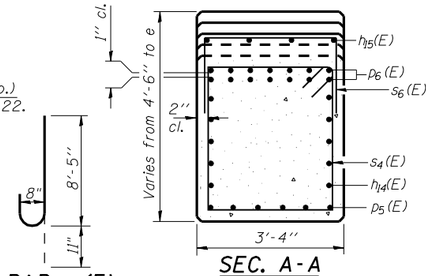
Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 131 kips (Pier #1 & #3)
151 kips (Pier #2)
Est. Length: 21' Pier #1, 20' Pier #2 and 19' Pier #3
No. Required: 15 per pier (Includes 1 Test Pile per pier)

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

$FILE$
12/16/2006

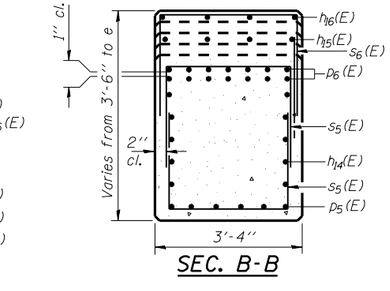
MIN. BAR LAPS

#4 Spirals - 2'-0"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#8 Bar - 4'-6"
#10 Bar - 7'-3"

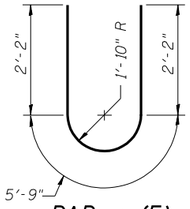


BAR s2(E)

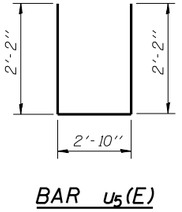
SEC. A-A



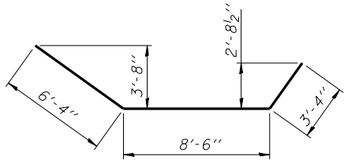
SEC. B-B



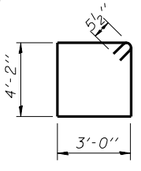
BAR u4(E)



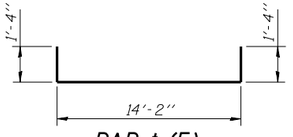
BAR u5(E)



BAR w(E)



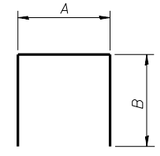
BAR s4(E)



BAR t3(E)

A & B DIMENSIONS

Bar	A	B
s3(E)	3'-8"	10'-5"
s5(E)	3'-0"	3'-2"
s6(E)	3'-0"	2'-11"



BARS s3(E), s5(E), & s6(E)

BILL OF MATERIAL PIERS 1-3

Bar	No.	Size	Length	Shape
h12(E)	66	#5	21'-6"	
h13(E)	21	#8	21'-6"	
h14(E)	60	#5	21'-0"	
h15(E)	12	#5	24'-2"	
h16(E)	12	#5	6'-4"	
p5(E)	18	#8	39'-8"	
p6(E)	42	#9	39'-8"	
s2(E)	240	#8	9'-4"	
s3(E)	114	#8	24'-6"	
s4(E)	147	#5	15'-3"	
s5(E)	204	#5	9'-4"	
s6(E)	78	#4	8'-10"	
** sp(E)	9	#4	12'-11"	
t(E)	6	#8	5'-0"	
t1(E)	9	#8	16'-0"	
t2(E)	18	#8	24'-10"	
t3(E)	60	#8	16'-10"	
u4(E)	72	#5	10'-1"	
u5(E)	36	#5	7'-2"	
v6(E)	30	#8	10'-5"	
v7(E)	126	#10	27'-9"	
w(E)	12	#5	18'-2"	
w1(E)	6	#5	11'-9"	
w2(E)	9	#5	35'-3"	
w3(E)	6	#5	23'-6"	
w4(E)	12	#5	24'-2"	
Structure Excavation		Cu. Yd.	346.3	
Concrete Structures		Cu. Yd.	55270	
Reinforcement Bars, Epoxy Coated		Pound	55280	
Furnishing Steel Piles HP10x57		Foot	840	
Driving Piles		Foot	840	
Test Piles Steel HP10x57		Each	3	

** Length shown is height of spiral.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	316
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541

SHEET NO. 19
22 SHEETS

Corporate License Number 184-001-084

PIERS 1-3
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

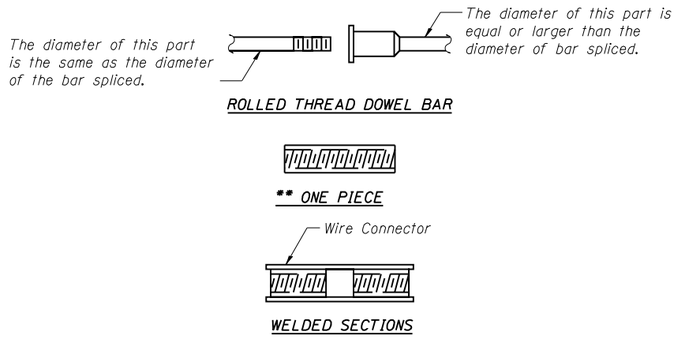
JOB# 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	317
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

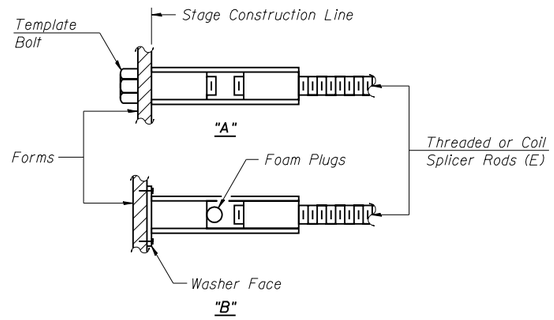
SHEET NO. 20
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No. 72541



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.

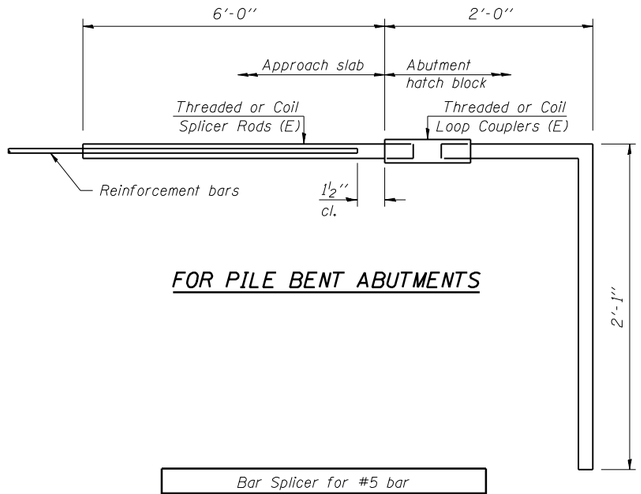
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

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

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 79

Corporate License Number 184-001-084

BAR SPLICER ASSEMBLY DETAILS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	318
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 21
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1   Contract No. 72541

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1   Date 4/18/03

ROUTE FAI 72/FAU 8021   DESCRIPTION Ramp B Over UPRR   LOGGED BY M. Tappan

SECTION (84-9-4) HBK, BY, BY-1 /02-00382-02-PV   LOCATION NE 1/4, SEC. 20, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon   DRILLING METHOD HSA   HAMMER TYPE 140# Auto

STRUCT. NO. 084-0514
Station 33+93.86

BORING NO. RB-6 W. Abut
Station 31+93
Offset 53.00ft Left
Ground Surface Elev. 600.7 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 591.7 ft
Upon Completion 585.7 ft
After 5 D Hrs. 592.7 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Tan and Light Gray Moist SILT Ref Classification RC-7-3					
			1		
			2	0.7	26
		-5	2	B	
			1		
			1	0.5	27
			2	B	
	592.70				
Brown and Gray Moist SILTY CLAY LOAM Ref Classification RC-7-5 Free Water			0		
			1	0.5	25
		-10	1	B	
			0		
V. Moist			1	0.3	28
			1	B	
	586.70		0		
Brown and Gray Moist Weathered CLAY (Till) Ref Classification RC-7-6			1	0.6	28
		-15	2	B	
			0		
Light Blue Gray Moist CLAY (Till)			2	0.8	23
			3	B	
	582.70				
Olive Brown and Blue Gray Very Weathered Clayey SHALE w/ Sandy SHALE Seams			2		
			5		19
		-20	9		
Olive Brown and Blue Gray Very Weathered Clayey SHALE w/ Sandy SHALE Seams (continued)					
			9		
Gray Dry Fissile Micaceous Clayey SHALE			25		10
	575.70	-25	49		
		-30			
		-35			
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORING D96-536-02 MACARTHUR EXTENSION.GPJ D6TEMPLT.GDT 9/28/04
Latitude Longitude

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1   Date 8/19/04

ROUTE FAI 72/FAU 8021   DESCRIPTION Ramp B Over UPRR   LOGGED BY M. Tappan

SECTION (84-9-4) HBK, BY, BY-1 /02-00382-02-PV   LOCATION NE 1/4, SEC. 20, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon   DRILLING METHOD HSA   HAMMER TYPE 140# Auto

STRUCT. NO. 084-0514
Station 33+93.86

BORING NO. RB-7A Pier
Station 32+82
Offset 8.00ft Right
Ground Surface Elev. 604.8 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 585.8 ft
Upon Completion Dry ft
After ____ Hrs. Plugged ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey and Brown Moist SILTY CLAY (Fill)					
			1		
w/Cinders			3	1.7	22
		-5	3	B	
	599.30				
Grey and Brown Moist SILTY CLAY			1		
			2	1.8	26
			4	B	
	596.30				
Tan and Grey V. Moist SILT			1		
			1	0.5	26
		-10	3	B	
			1		
Moist			1	1.3	25
			3	B	
	591.80				
Brown and Grey V. Moist SILTY CLAY LOAM			1		
			2	0.4	25
		-15	1	B	
	589.30				
Brown and Grey Moist SILTY CLAY			0		
			1	0.6	27
			1	B	
	586.80				
Brown and Grey Moist Weathered SILTY CLAY (Till)			1		
Free Water			2	10	26
		-20	1	B	
Brown and Grey Moist Weathered SILTY CLAY (Till) (continued)			1		
			3	1.1	18
	582.30		3	B	
SHALE					
			1		
Olive Brown and Grey Moist V. Weathered Micaceous Clayey SHALE			4		16
		-25	14		
			8		
Grey Dry Fissile Clayey SHALE			42		9
		-30	52 /5"		
			12		
			70		8
	569.80	-35	30 /1"		
Boring Completed					
Refer Station to Power Pole and Existing Barrier Wall – See Diagram on Field Log					
Refer Elevation to BM # 374, RR Spike in Power Pole = 604.6					
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORING D96-536-02 MACARTHUR EXTENSION.GPJ D6TEMPLT.GDT 9/28/04
Latitude Longitude

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1   Date 4/10/03

ROUTE FAI 72/FAU 8021   DESCRIPTION Ramp B Over UPRR   LOGGED BY M. Tappan

SECTION (84-9-4) HBK, BY, BY-1 /02-00382-02-PV   LOCATION NE 1/4, SEC. 21, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon   DRILLING METHOD HSA   HAMMER TYPE 140# Auto

STRUCT. NO. 084-0514
Station 33+93.86

BORING NO. RB-9 Pier
Station 34+54
Offset 58.00ft Left
Ground Surface Elev. 604.6 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 590.6 ft
Upon Completion Dry ft
After ____ Hrs. Plugged ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown and Gray Moist SILTY CLAY Fill w/Light Brown Medium SAND Fill					
			1		
			2	0.9	25
		-5	3	B	
	598.10		0		
Brown and Gray Moist SILTY CLAY Fill			2	0.7	23
			2	B	
	596.60				
Brown Moist Medium Clean SAND			0		
			1		
		-10	2		
			0		
Brown Medium To Coarse Clean SAND			0		
			1		
	590.60		0		
Brown and Gray Moist SILTY CLAY LOAM Ref Classification RC-7-4 Free Water			0	0.4	26
		-15	0	B	
	589.10		weight of hammer		
Brown and Gray Moist Weathered SILTY CLAY LOAM Ref Classification RC-7-5			0	0.5	26
			1	B	
	586.60		1		
Brown and Gray Moist Weathered CLAY (Till) Ref Classification RC-7-6			0		
			1	0.7	27
		-20	2	B	
Brown and Gray Moist Weathered CLAY (Till) Ref Classification RC-7-6 (continued)			0		
			1	0.5	25
			3	B	
	581.60				
Brown and Gray Moist V. Weathered Clayey SHALE			1		
			5		23
		-25	8		
			11		
Gray Dry Fissile Clayey SHALE			61		9
		-30	39 /1"		
			12		
	570.10		100		8
Boring Completed		-35	/5"		
Revised Station 09/15/04					
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORING D96-536-02 MACARTHUR EXTENSION.GPJ D6TEMPLT.GDT 9/28/04
Latitude Longitude

$FILE$
12/16/2006

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

Corporate License Number 184-001-084

BORINGS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB# 96S2002B
DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8021	*	SANGAMON	559	319
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
22 SHEETS

*(84-9-4)A,HBK,BY,BY-1   Contract No. 72541

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1

Date 5/19/03

ROUTE FAI 72/FAU 8021 DESCRIPTION Ramp B over UPRR LOGGED BY M. Tappan

SECTION (84-9-4)HBK,BY,BY-1 LOCATION NW 1/4, SEC. 21, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-0514
Station 33+95.61

BORING NO. RB-10 E. Abut
Station 35+45
Offset 28.00ft Left
Ground Surface Elev. 602.3 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 590.8 ft
Upon Completion 586.3 ft
After 96 Hrs. 599.3 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Tan and Light Grey V. Moist SILT			0		
			1	0.5	28
		-5	2	B	
			0		
Moist			2	0.8	33
			2	B	
	594.30				
Brown and Grey V. Moist SILTY CLAY			0		
			1	0.4	26
		-10	2	B	
			0		
Free Water			1	0.5	26
			2	B	
	589.30				
Brown and Grey Moist SILTY CLAY (Till)			1		
			2	0.9	27
		-15	2	B	
	586.80				
Blue Grey Moist CLAY LOAM (Till)			1		
			3	1.2	16
			3	B	
	584.30				
Light Blue Grey V. Poorly Indurated Medium Grained SANDSTONE			5		
			15		
		-20	85		
Light Blue Grey V. Poorly Indurated Medium Grained SANDSTONE (continued)			/4"		
			13		
w/Interbedded Clayey SHALE Seams	577.80		100		11
		-25	/3"		
Boring Completed					
Updated Station 09/15/04					
		-30			
		-35			
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

SOIL BORING MACARTHUR EXTENSION STATE STRUCTURES.GPJ D6TEMPLT.GDT 9/28/04
Latitude Longitude

Corporate License Number 184-001-084

BORINGS
I-72/MACARTHUR BLVD. RAMP B OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 33+95.61
STRUCTURE NUMBER 084-0514

HANSON

JOB# 96S2002B
DATE: 11/16/05

$FILE$
12/16/2006

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	320
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

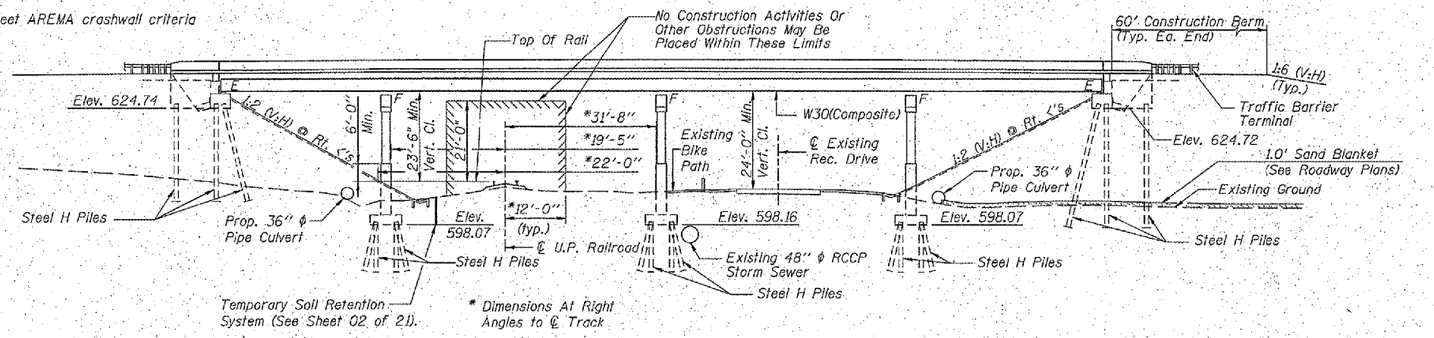
SHEET NO. 01
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

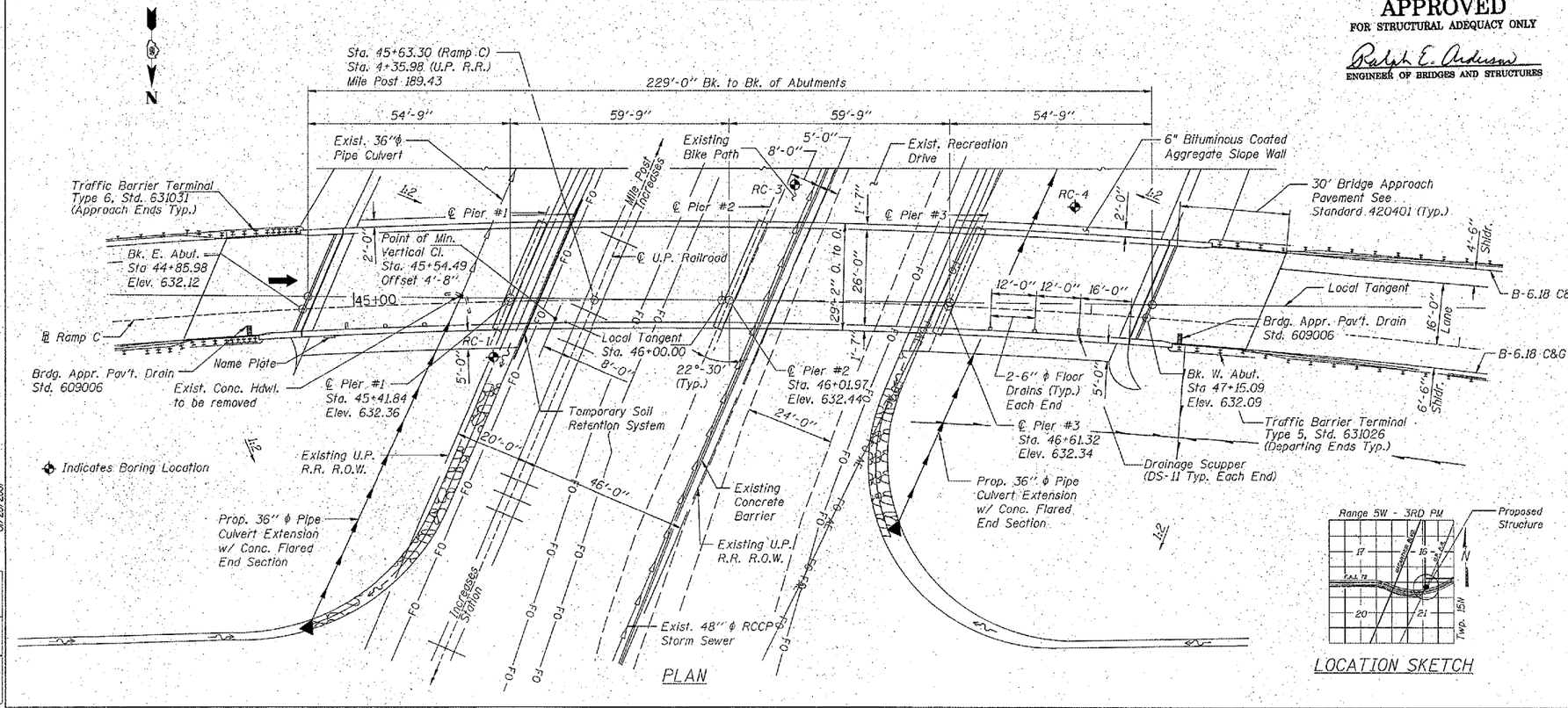
Bench Marks:
IDOT BM #15 Chiseled square at the southeast quadrant of the intersection of West Grand Avenue and Hazel Dell Road. Benchmark is located 33 feet south of the centerline of Hazel Dell Road on a headwall of a concrete pipe culvert. NAVD88 El. 602.47
IDOT BM #80 Chiseled cross on the center bolt of the east leg of an iron sign truss over the eastbound lane of Interstate 72. Benchmark is located 1.62 miles east of Il Route 4. NAVD88 El. 601.28
IDOT BM #0150 Disk in monument vault on survey calibration baseline. Benchmark is located 13 feet north of the centerline of Hazel Dell Road and 0.5 miles west of the intersection of Hazel Dell Road and West Grand Avenue. NAVD88 El. 600.47
IDOT BM #374 Railroad spike in power pole west of a bike path and southeast of Recreation Drive. Benchmark is located 0.81 miles south of the intersection of West Grand Avenue and Hazel Dell Road. NAVD88 El. 604.61

Existing Structure: None

Note: Piers designed to meet AREMA crashwall criteria



ELEVATION



PLAN

LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

CURVE DATA
(Curve Ramp_C1)

P.I. STA= 46+29.22
Δ= 34° 38' 10" (Rt.)
D= 03° 01' 55"
R= 1,889.69'
T= 589.23'
L= 1,142.35'
E= 89.73'
P.C. STA= 40+40.00
P.T. STA= 51+82.35
e= 5.23%

DESIGN SPECIFICATIONS
AASHTO 2002
AASHTO 2003 Curved Girder Spec.

LOADING HS20-44
Allow 50 psf for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 2.0

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M270 Grade 50)

JAMES W. [illegible] 6375 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS
SIGNATURE:
DATE SIGNED: 1-20-07
LISC. EXP. DATE: 11-30-08

Corporate License Number 184-001-084

GENERAL PLAN AND ELEVATION
I-72/MACARTHUR BLVD., RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB# 96S2002B
DATE 11/16/05

LAYOUT	MNW	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNW	02/24/05

A:\96JOBS\96s2002B\Struct\GSW 084-0516.dgn
01/20/2007

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	321
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 02
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$'' ϕ, open holes $\frac{15}{16}$'' ϕ, unless otherwise noted.

Calculated weight of Structural Steel: AASHTO M 270 Grade 50 = 165090 lbs.

Field welding of construction accessories will not be permitted to beams.

Anchor bolts shall be set before bolting diaphragms over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

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

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$'' adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The Contractor shall drive one test pile in a permanent location at each substructure as directed by the Engineer before ordering the remainder of piles.

Concrete Sealer shall be applied to the seat area of the Abutments.

All Construction joints shall be bonded.

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. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".

No deck drains will be permitted in the span over tracks or within 10' of crossarms of a railroad pole line.

An unconfined compressive strength of 1.5 tons is required during placement of embankment material.

The piles at the abuments shall be driven through 18'' ϕ pre-cored holes extending to Elev. 600.5 at the E. Abut. and 600.7 at the W. Abut. or to the present ground elevation or whichever occurs first. The annular spacing around the pile shall then be backfilled with dry loose sand. The cost of complying with these requirements shall be included with driving steel piles.

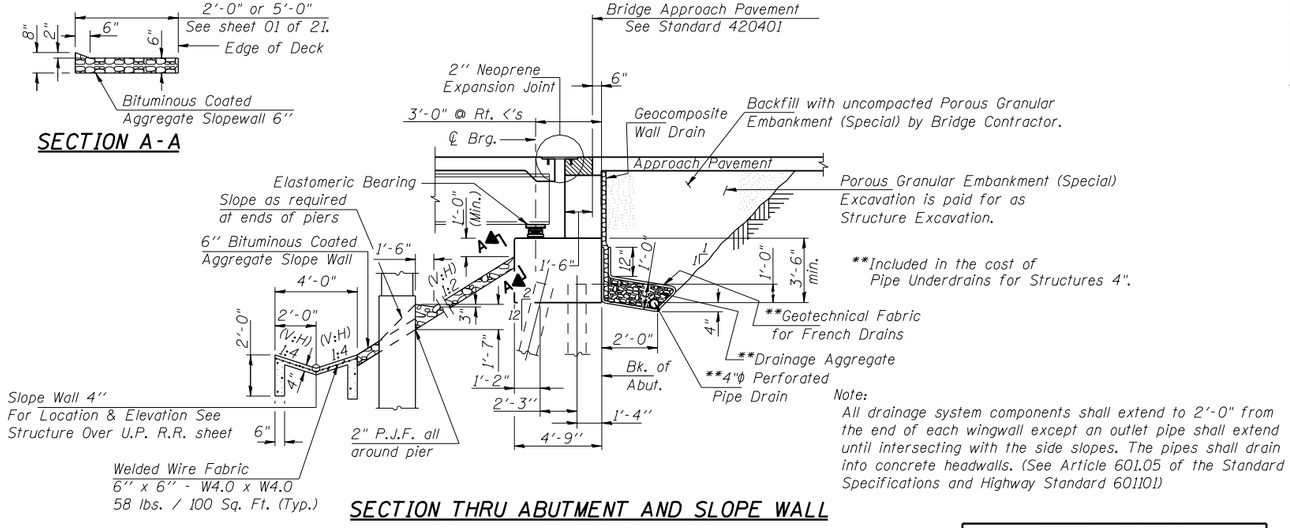
Drains shall be located clear of all diaphragms.

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

The Steel H-piles shall be according to AASHTO M270 Grade 50.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

SECTION A-A



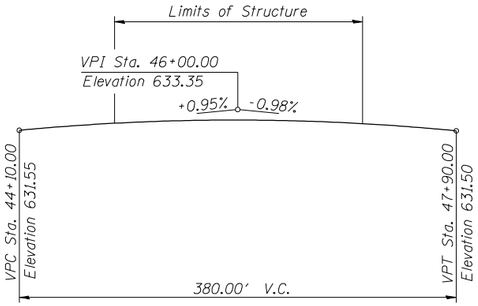
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

SECTION THRU ABUTMENT AND SLOPE WALL
(Dimensions at Rt. <'s to Bk. of Abutment)

INDEX OF SHEETS

STATION 46+01.97
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. 72 SEC. (84-9-4)A,HBK,BY,BY1
LOADING HS20-44
STR. NO. 084-0516

NAME PLATE
See Std. 515001



PROFILE GRADE
(Along Ramp C)

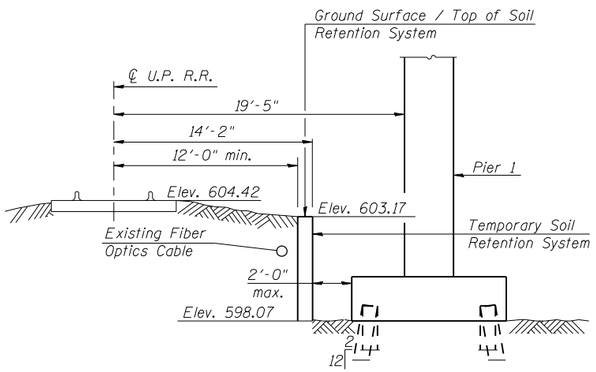
West Rail		East Rail	
Station	Elevation	Station	Elevation
0+00.00	605.31	0+00.03	605.33
0+67.95	605.32	0+67.76	605.35
1+83.47	605.26	1+83.48	605.25
2+80.82	605.24	2+80.71	605.24
3+81.80	605.12	3+81.74	605.13
4+81.65	605.26	4+81.69	605.24
5+78.38	605.39	5+78.51	605.36

EXISTING TOP OF RAIL ELEVATIONS UP R.R.

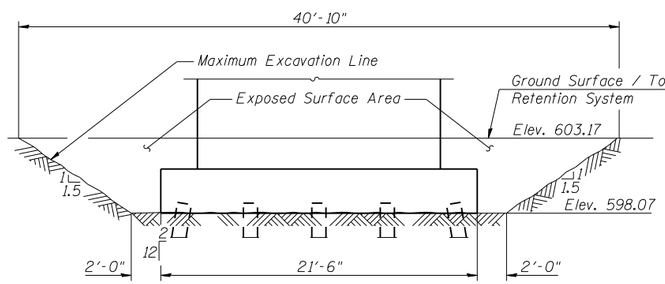
Note:
The elevations of the existing top-of-rail profile shall be verified before beginning construction. All discrepencies shall be brought to the attention of the Chief Engineer Bridges and Structures.

TOTAL BILL OF MATERIAL

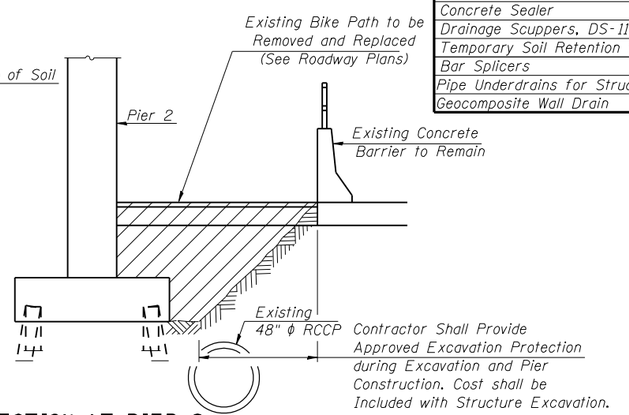
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	94	94
Structure Excavation	Cu. Yd.	-	399	399
Floor Drains	Each	4	-	4
Neoprene Expansion Joint 2"	Foot	60.5	-	60.5
Concrete Structures	Cu. Yd.	-	307.1	307.1
Concrete Superstructure	Cu. Yd.	214.4	-	214.4
Bridge Deck Grooving	Sq. Yd.	595	-	595
Protective Coat	Sq. Yd.	856	-	856
Elastomeric Bearing Assembly, Type II	Each	10	-	10
Furnishing and Erecting Structural Steel Bridge No. 4	L. Sum	1	-	1
Stud Shear Connectors	Each	3690	-	3690
Reinforcement Bars, Epoxy Coated	Pound	51660	44700	96360
Slope Wall 4''	Sq. Yd.	-	36	36
Bituminous Coated Aggregate Slopewall 6"	Sq. Yd.	-	464	464
Furnishing Steel Piles HP10x57	Foot	-	1475	1475
Driving Piles	Foot	-	1475	1475
Test Pile Steel HP10x57	Each	-	5	5
Name Plates	Each	1	-	1
Concrete Sealer	Sq. Ft.	-	177	177
Drainage Scuppers, DS-11	Each	2	-	2
Temporary Soil Retention System	Sq. Ft.	-	169	169
Bar Splicers	Each	-	57	57
Pipe Underdrains for Structures 4"	Foot	-	79	79
Geocomposite Wall Drain	Sq. Yd.	-	45	45



SECTION AT PIER 1
Distances shown perpendicular to ℄ U.P. R.R.



ELEVATION AT PIER 1
Slopes and distances shown along alignment of sheeting and pier.



SECTION AT PIER 2

TEMPORARY SOIL RETENTION SYSTEM DETAILS

LAYOUT	MNM	06/21/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

GENERAL NOTES & BILL OF MATERIAL
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

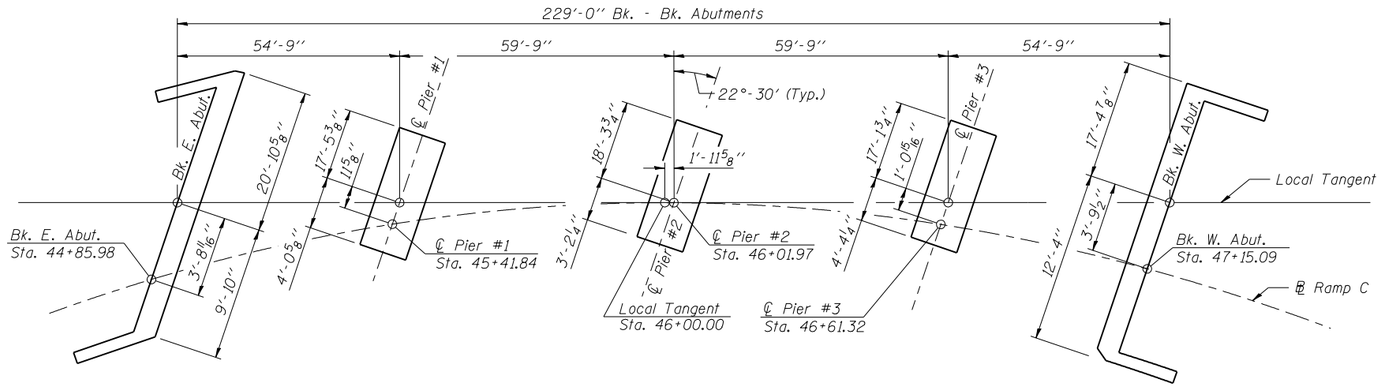
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	322
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

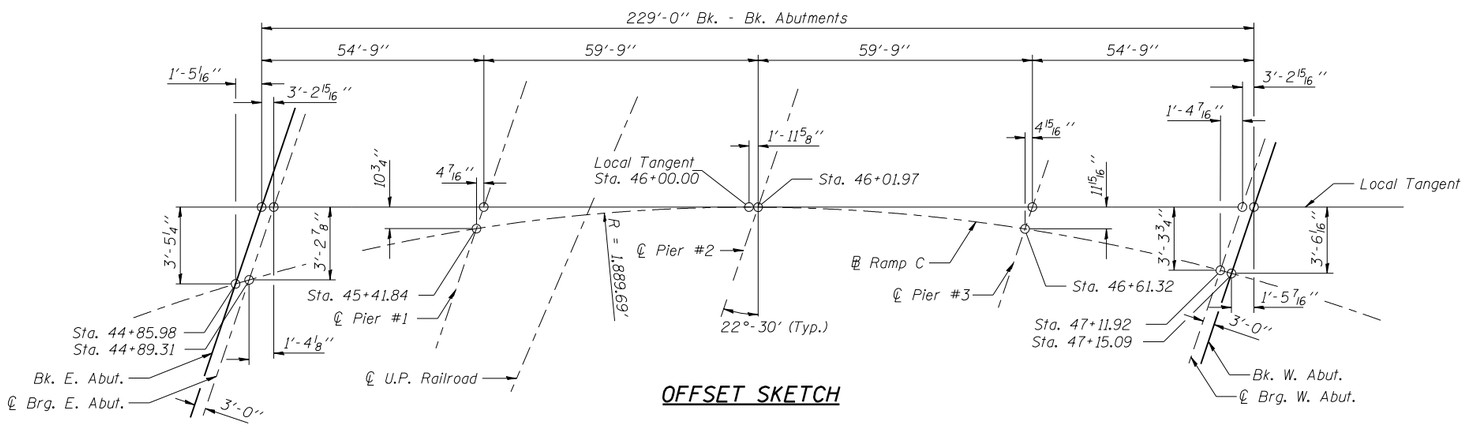
SHEET NO. 03
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



FOOTING LAYOUT

N



OFFSET SKETCH

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

FOOTING LAYOUT
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

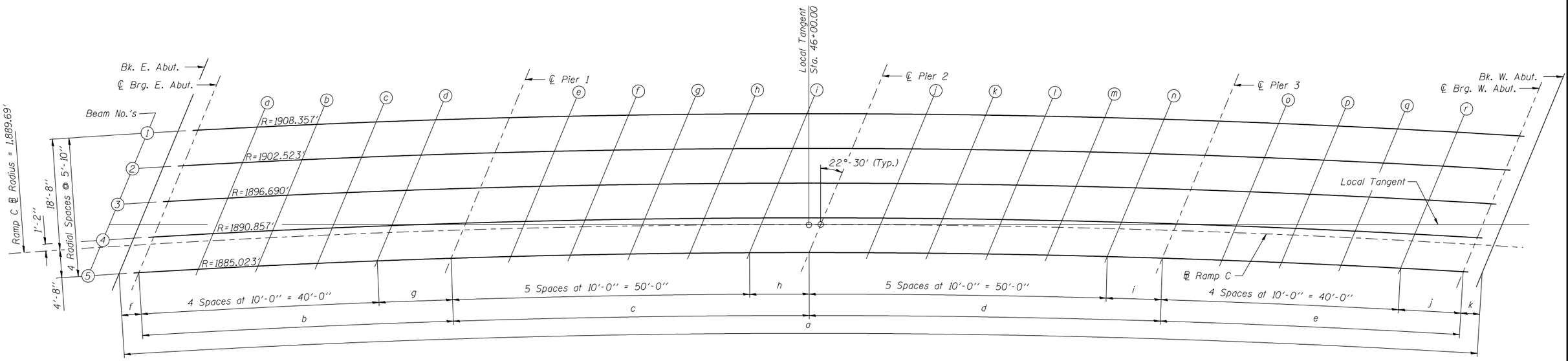
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	323
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 04
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

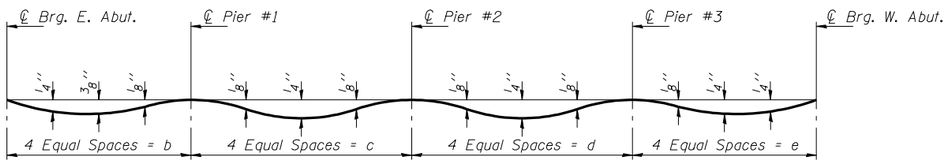


DIAGRAMMATIC PLAN

DIAGRAMMATIC PLAN - LAYOUT DIMENSIONS

(Measured Along Centerline of Beam)

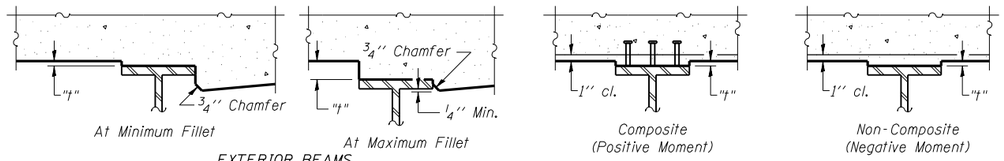
Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
a	228'-8 3/4"	228'-10 1/8"	228'-11 5/8"	229'-1"	229'-2 5/8"
b	52'-5"	52'-5 7/16"	52'-5 13/16"	52'-6 1/4"	52'-6 11/16"
c	60'-0 1/4"	60'-0 5/8"	60'-1 1/16"	60'-1 7/16"	60'-1 7/8"
d	59'-3 1/8"	59'-3 7/16"	59'-3 13/16"	59'-4 1/8"	59'-4 1/2"
e	50'-6 3/8"	50'-6 5/8"	50'-6 7/8"	50'-7 1/8"	50'-7 3/8"
f	3'-3 15/16"	3'-3 15/16"	3'-4"	3'-4"	3'-4 1/16"
g	12'-5"	12'-5 7/16"	12'-5 13/16"	12'-6 1/4"	12'-6 11/16"
h	10'-0 1/4"	10'-0 5/8"	10'-1 1/16"	10'-1 7/16"	10'-1 7/8"
i	9'-3 1/8"	9'-3 7/16"	9'-3 13/16"	9'-4 1/8"	9'-4 1/2"
j	10'-6 3/8"	10'-6 5/8"	10'-6 7/8"	10'-7 1/8"	10'-7 3/8"
k	3'-2 1/16"	3'-2 1/16"	3'-2 1/16"	3'-2 1/16"	3'-2 1/8"



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 5 of 21.



EXTERIOR BEAMS INTERIOR BEAMS

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 this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 5 of 21, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

TOP OF SLAB ELEVATIONS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	324
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 05
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+94.97	-18.67	633.15	633.15
℄ Brg. E. Abut.	44+98.26	-18.67	633.17	633.17
a	45+08.16	-18.67	633.21	633.23
b	45+18.06	-18.67	633.26	633.28
c	45+27.97	-18.67	633.29	633.32
d	45+37.87	-18.67	633.33	633.34
℄ Pier 1	45+50.16	-18.67	633.36	633.36
e	45+60.07	-18.67	633.38	633.39
f	45+69.97	-18.67	633.40	633.41
g	45+79.87	-18.67	633.41	633.43
h	45+89.77	-18.67	633.41	633.43
i	45+99.68	-18.67	633.42	633.42
℄ Pier 2	46+09.60	-18.67	633.41	633.41
j	46+19.50	-18.67	633.40	633.41
k	46+29.40	-18.67	633.39	633.40
l	46+39.31	-18.67	633.37	633.39
m	46+49.21	-18.67	633.35	633.36
n	46+59.11	-18.67	633.32	633.32
℄ Pier 3	46+68.28	-18.67	633.29	633.29
o	46+78.18	-18.67	633.25	633.26
p	46+88.08	-18.67	633.20	633.22
q	46+97.99	-18.67	633.16	633.18
r	47+07.89	-18.67	633.10	633.12
℄ Brg. W. Brg	47+18.32	-18.67	633.04	633.04
Bk. W. Abut.	47+21.46	-18.67	633.02	633.02

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+92.18	-12.83	632.83	632.83
℄ Brg. E. Abut.	44+95.48	-12.83	632.85	632.85
a	45+05.42	-12.83	632.90	632.91
b	45+15.35	-12.83	632.94	632.97
c	45+25.28	-12.83	632.98	633.00
d	45+35.21	-12.83	633.01	633.03
℄ Pier 1	45+47.58	-12.83	633.05	633.05
e	45+57.51	-12.83	633.07	633.08
f	45+67.45	-12.83	633.09	633.10
g	45+77.38	-12.83	633.10	633.12
h	45+87.31	-12.83	633.11	633.12
i	45+97.25	-12.83	633.11	633.12
℄ Pier 2	46+07.23	-12.83	633.11	633.11
j	46+17.16	-12.83	633.10	633.11
k	46+27.10	-12.83	633.09	633.10
l	46+37.03	-12.83	633.07	633.09
m	46+46.96	-12.83	633.05	633.06
n	46+56.90	-12.83	633.02	633.03
℄ Pier 3	46+66.12	-12.83	632.99	632.99
o	46+76.05	-12.83	632.95	632.96
p	46+85.98	-12.83	632.91	632.93
q	46+95.92	-12.83	632.86	632.88
r	47+05.85	-12.83	632.81	632.82
℄ Brg. W. Brg	47+16.33	-12.83	632.75	632.75
Bk. W. Abut.	47+19.48	-12.83	632.73	632.73

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+89.37	-7.00	632.51	632.51
℄ Brg. E. Abut.	44+92.69	-7.00	632.53	632.53
a	45+02.65	-7.00	632.58	632.60
b	45+12.61	-7.00	632.62	632.65
c	45+22.58	-7.00	632.66	632.69
d	45+32.54	-7.00	632.70	632.71
℄ Pier 1	45+44.98	-7.00	632.74	632.74
e	45+54.95	-7.00	632.76	632.77
f	45+64.91	-7.00	632.78	632.79
g	45+74.87	-7.00	632.79	632.81
h	45+84.83	-7.00	632.80	632.82
i	45+94.80	-7.00	632.80	632.81
℄ Pier 2	46+04.85	-7.00	632.80	632.80
j	46+14.81	-7.00	632.80	632.80
k	46+24.78	-7.00	632.79	632.80
l	46+34.74	-7.00	632.77	632.79
m	46+44.70	-7.00	632.75	632.76
n	46+54.66	-7.00	632.72	632.73
℄ Pier 3	46+63.95	-7.00	632.69	632.69
o	46+73.91	-7.00	632.66	632.66
p	46+83.87	-7.00	632.61	632.63
q	46+93.84	-7.00	632.57	632.59
r	47+03.80	-7.00	632.52	632.53
℄ Brg. W. Brg	47+14.34	-7.00	632.46	632.46
Bk. W. Abut.	47+17.49	-7.00	632.44	632.44

Note:
Offset measured from ℄ Ramp C

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+86.55	-1.17	632.19	632.19
℄ Brg. E. Abut.	44+89.88	-1.17	632.21	632.21
a	44+99.87	-1.17	632.26	632.28
b	45+09.86	-1.17	632.31	632.33
c	45+19.86	-1.17	632.35	632.37
d	45+29.85	-1.17	632.39	632.40
℄ Pier 1	45+42.37	-1.17	632.42	632.42
e	45+52.36	-1.17	632.45	632.46
f	45+62.35	-1.17	632.47	632.48
g	45+72.35	-1.17	632.48	632.50
h	45+82.34	-1.17	632.49	632.51
i	45+92.33	-1.17	632.50	632.51
℄ Pier 2	46+02.45	-1.17	632.50	632.50
j	46+12.45	-1.17	632.49	632.50
k	46+22.44	-1.17	632.48	632.50
l	46+32.43	-1.17	632.47	632.49
m	46+42.43	-1.17	632.45	632.46
n	46+52.42	-1.17	632.42	632.43
℄ Pier 3	46+61.76	-1.17	632.39	632.39
o	46+71.75	-1.17	632.36	632.37
p	46+81.75	-1.17	632.32	632.34
q	46+91.74	-1.17	632.27	632.29
r	47+01.73	-1.17	632.22	632.24
℄ Brg. W. Brg	47+12.32	-1.17	632.16	632.16
Bk. W. Abut.	47+15.49	-1.17	632.14	632.14

℄ RAMP C & P.G. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+85.98	0.00	632.13	632.13
℄ Brg. E. Abut.	44+89.31	0.00	632.14	632.14
a	44+99.31	0.00	632.20	632.21
b	45+09.31	0.00	632.24	632.27
c	45+19.31	0.00	632.29	632.31
d	45+29.31	0.00	632.32	632.34
℄ Pier 1	45+41.84	0.00	632.36	632.36
e	45+51.84	0.00	632.39	632.39
f	45+61.84	0.00	632.41	632.42
g	45+71.84	0.00	632.42	632.44
h	45+81.84	0.00	632.43	632.45
i	45+91.84	0.00	632.44	632.45
℄ Pier 2	46+01.97	0.00	632.44	632.44
j	46+11.97	0.00	632.43	632.44
k	46+21.97	0.00	632.42	632.44
l	46+31.97	0.00	632.41	632.43
m	46+41.97	0.00	632.39	632.40
n	46+51.97	0.00	632.36	632.37
℄ Pier 3	46+61.32	0.00	632.33	632.33
o	46+71.32	0.00	632.30	632.31
p	46+81.32	0.00	632.26	632.28
q	46+91.32	0.00	632.21	632.23
r	47+01.32	0.00	632.16	632.18
℄ Brg. W. Brg	47+11.92	0.00	632.10	632.10
Bk. W. Abut.	47+15.09	0.00	632.09	632.09

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. E. Abut.	44+83.70	4.67	631.87	631.87
℄ Brg. E. Abut.	44+87.04	4.67	631.89	631.89
a	44+97.07	4.67	631.94	631.96
b	45+07.09	4.67	631.99	632.01
c	45+17.12	4.67	632.03	632.06
d	45+27.14	4.67	632.07	632.08
℄ Pier 1	45+39.73	4.67	632.11	632.11
e	45+49.76	4.67	632.14	632.14
f	45+59.78	4.67	632.16	632.17
g	45+69.81	4.67	632.18	632.20
h	45+79.83	4.67	632.19	632.20
i	45+89.86	4.67	632.19	632.20
℄ Pier 2	46+00.04	4.67	632.19	632.19
j	46+10.06	4.67	632.19	632.20
k	46+20.09	4.67	632.18	632.19
l	46+30.11	4.67	632.17	632.19
m	46+40.14	4.67	632.15	632.16
n	46+50.16	4.67	632.12	632.13
℄ Pier 3	46+59.56	4.67	632.10	632.10
o	46+69.58	4.67	632.06	632.07
p	46+79.61	4.67	632.02	632.04
q	46+89.63	4.67	631.98	632.00
r	46+99.66	4.67	631.93	631.94
℄ Brg. W. Brg	47+10.30	4.67	631.87	631.87
Bk. W. Abut.	47+13.48	4.67	631.85	631.85

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

TOP OF SLAB ELEVATIONS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

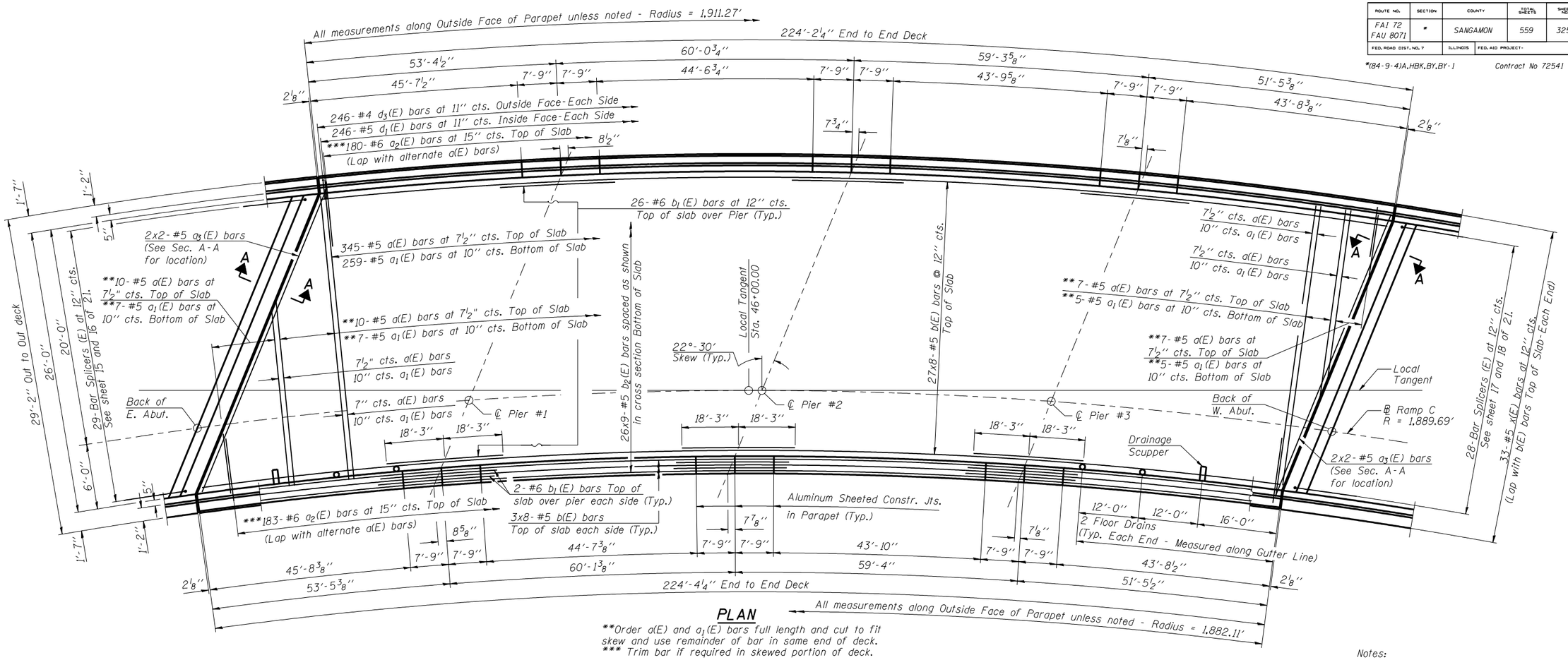
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	325
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

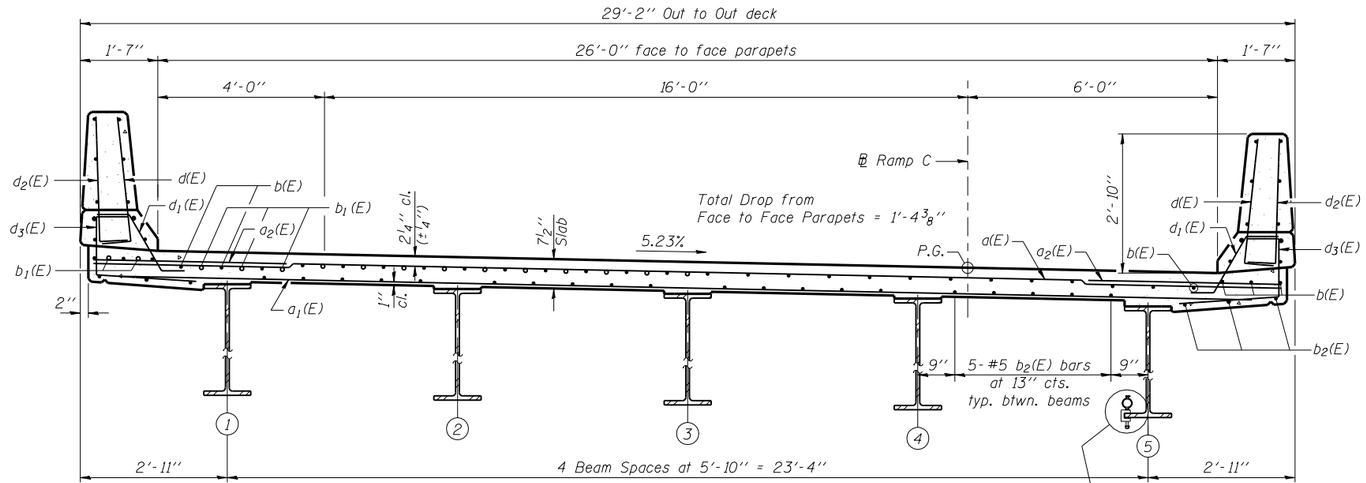
SHEET NO. 06
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



PLAN

**Order a(E) and a_1(E) bars full length and cut to fit skew and use remainder of bar in same end of deck.
*** Trim bar if required in skewed portion of deck.



NEAR PIER

CROSS SECTION

(Looking West)
(Horizontal dimensions are measured radial to ℄ Ramp C)

NEAR MIDSPAN

Flange Clamp and Conduit Hanger for 2"ϕ Standard Weight Galvanized Steel Conduit. See Electrical Plans for Details.

N

Notes:
See Sheet 08 of 21 for superstructure details, Bill of Material & Section A-A.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.
See Sheet 07 of 21 for parapet reinforcement.
See Bar Splicer (Coupler) Details, Sheet 20 of 21.
Transverse bars shall be placed radially.
Longitudinal bars shall be placed along curve.

MIN. BAR LAPS

#5 Bar - 2'-2"
#6 Bar - 2'-7"

Corporate License Number 184-001-084

SUPERSTRUCTURE
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

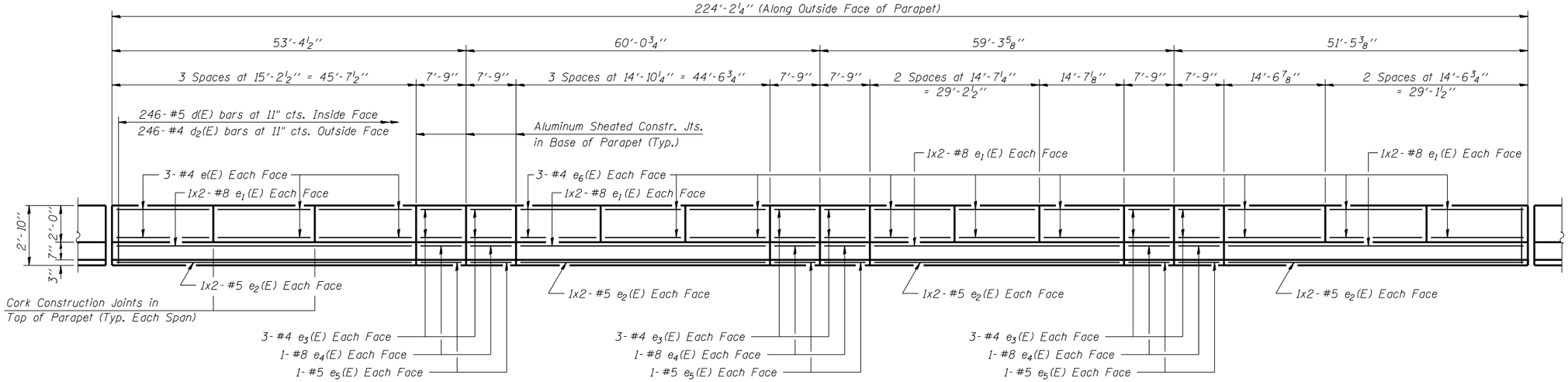
$FILE$
12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	326
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

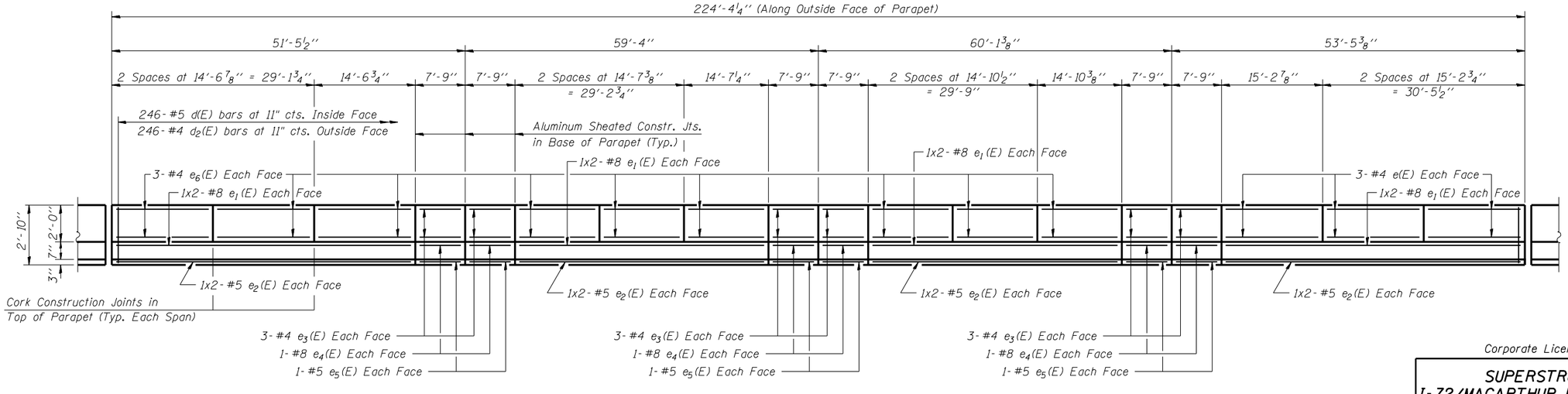
SHEET NO. 07
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

Notes: Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.
See sheet 08 of 21 for Superstructure Details and Bill of Material.



INSIDE ELEVATION OF SOUTH PARAPET



INSIDE ELEVATION OF NORTH PARAPET

MIN. BAR LAPS

#5 Bar - 2'-2"
#8 Bar - 4'-6"

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

Corporate License Number 184-001-084

SUPERSTRUCTURE DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

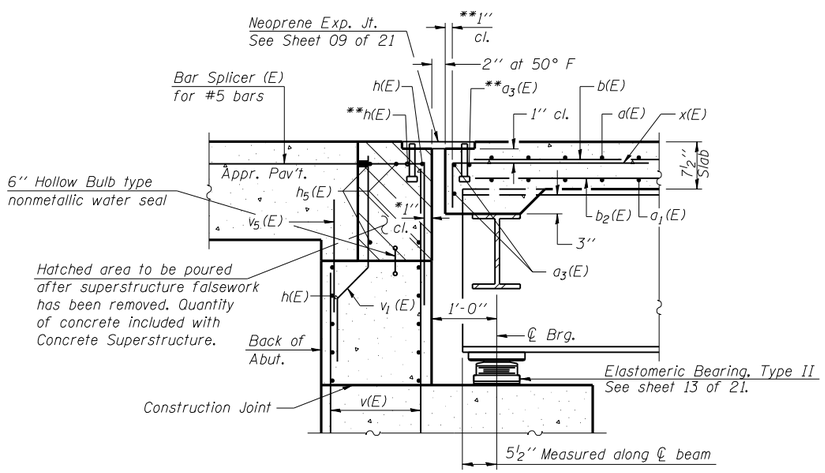
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	327
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 08
21 SHEETS

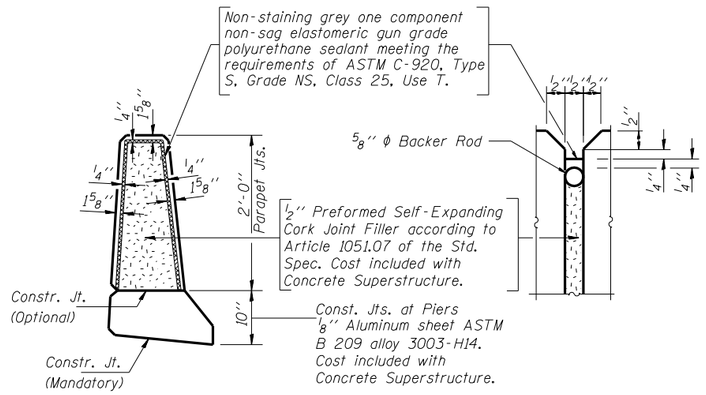
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



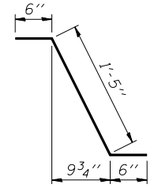
SECTION A-A

(At Rt. <'s to Bk. Abutment)

** Place $a_3(E)$ and h(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-⅛"). Anchor bolts should be tied to $a_3(E)$ and h(E) bars.



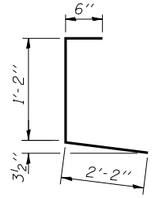
PARAPET JOINT DETAILS



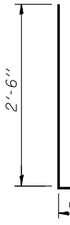
BAR $d_1(E)$

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	362	#5	28'-6"	——
$a_1(E)$	271	#5	27'-9"	——
$a_2(E)$	363	#6	4'-6"	——
$a_3(E)$	8	#5	15'-9"	——
$a_4(E)$	16	#5	1'-6"	——
b(E)	264	#5	30'-0"	——
$b_1(E)$	90	#6	36'-6"	——
$b_2(E)$	234	#5	27'-0"	——
d(E)	492	#5	3'-0"	⌟
$d_1(E)$	492	#5	2'-5"	⌟
$d_2(E)$	492	#4	3'-0"	⌟
$d_3(E)$	492	#4	3'-10"	⌞
e(E)	36	#4	14'-11"	——
$e_1(E)$	32	#8	25'-0"	——
$e_2(E)$	32	#5	23'-9"	——
$e_3(E)$	72	#4	7'-6"	——
$e_4(E)$	24	#8	7'-6"	——
$e_5(E)$	24	#5	7'-6"	——
$e_6(E)$	108	#4	14'-4"	——
x(E)	66	#5	4'-1"	⌟
Concrete Superstructure		Cu. Yds.	214.4	
Reinforcement Bars (Epoxy Coated)		Lbs.	51660	



BAR $d_3(E)$



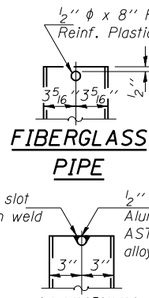
BARS d(E) & $d_2(E)$

BARS x(E)

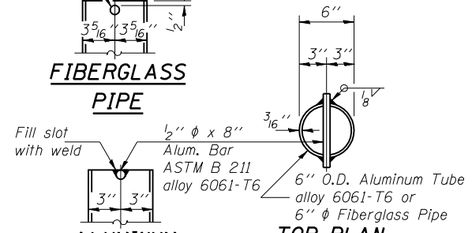
Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Cut longitudinal reinforcement to clear drainage scuppers.

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#8 Bar - 4'-6"



FIBERGLASS PIPE

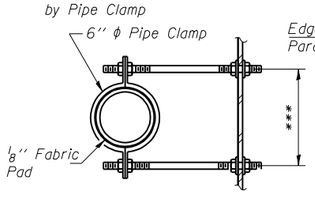


ALUMINUM TUBE

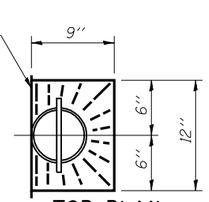
TOP PLAN

(Showing Aluminum Tube)

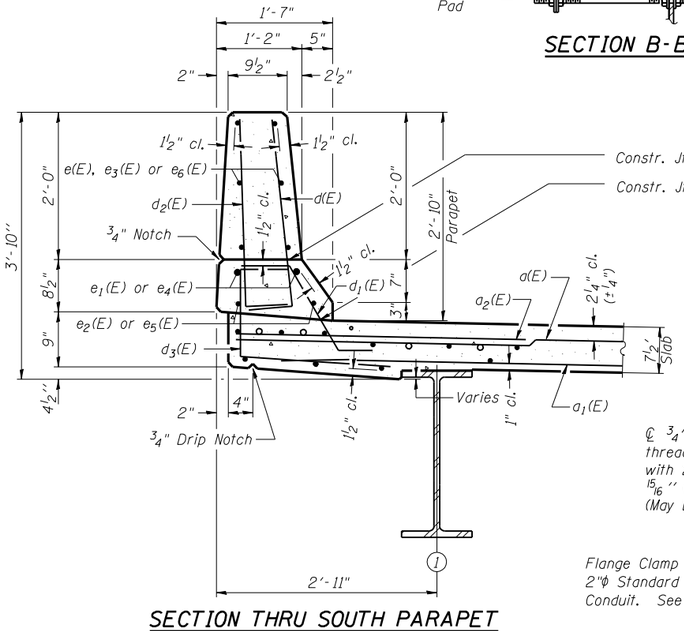
*** Dimension as required by Pipe Clamp



SECTION B-B

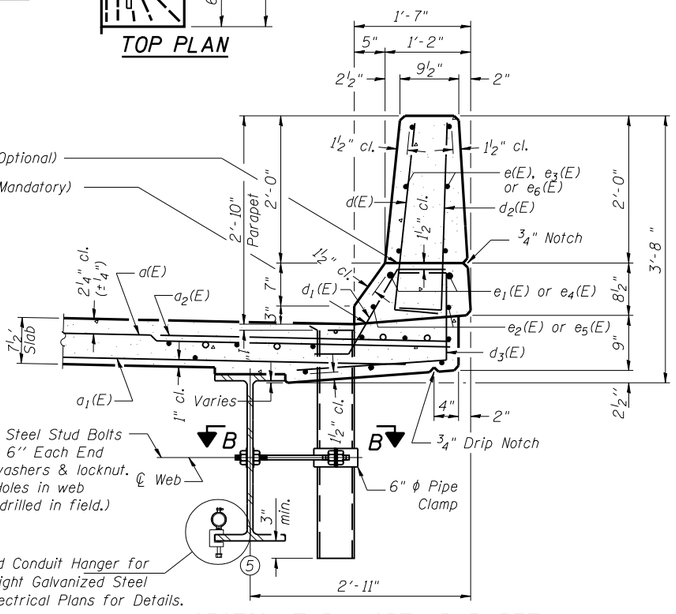


TOP PLAN



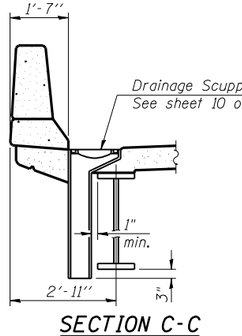
SECTION THRU SOUTH PARAPET

(Looking West Upstation)

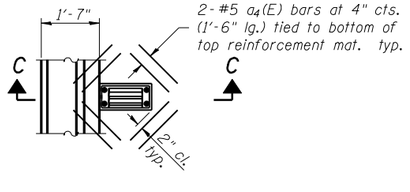


SECTION THRU NORTH PARAPET

(Looking West Upstation)



SECTION C-C



PLAN

Corporate License Number 184-001-084

SUPERSTRUCTURE DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	328
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 09
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

Joint Size	"C" at 50°F	"D" at 50°F
2″	2″	$1\frac{1}{2}$″ Min.
$2\frac{1}{2}$″	$2\frac{1}{2}$″	$1\frac{3}{4}$″ Min.
4″	3″	$2\frac{1}{2}$″ Min.

INSTALLATION NOTES

(1) Install continuous seal in roadway, parapet, curb, and sidewalk.

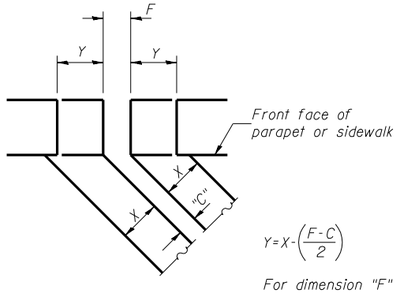
(2) Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12″ centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

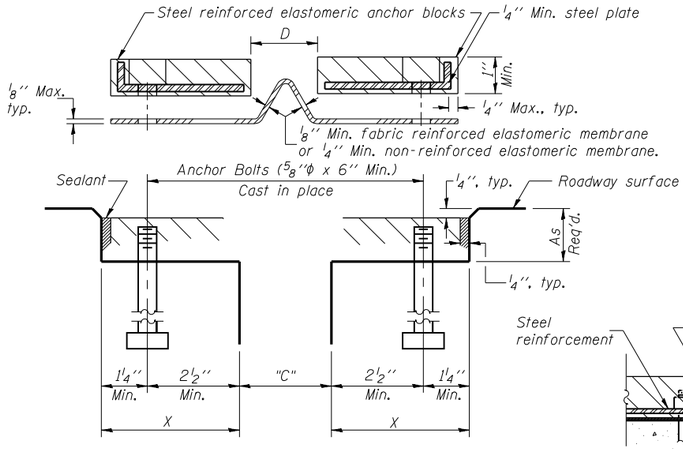
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of $1\frac{1}{2}$″ from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12″ cts.



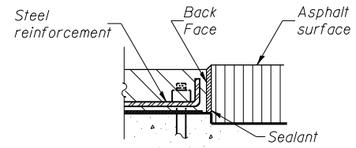
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheet 06 of 21.

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

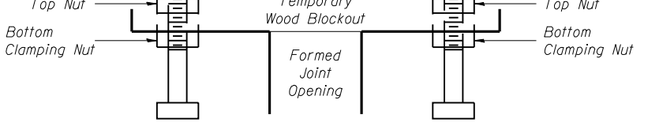
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

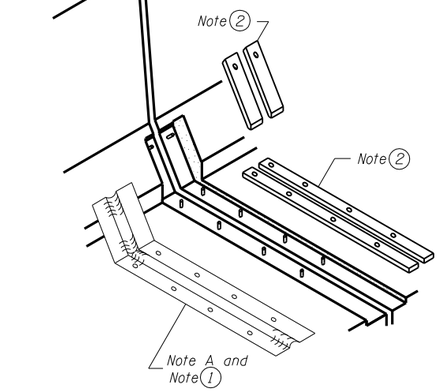
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



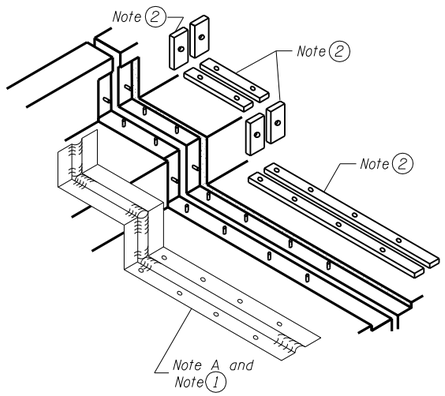
Note: Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

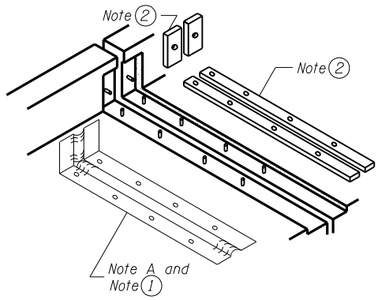
RECOMMENDED BLOCKOUT DETAIL



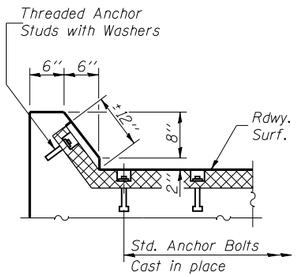
AT PARAPET



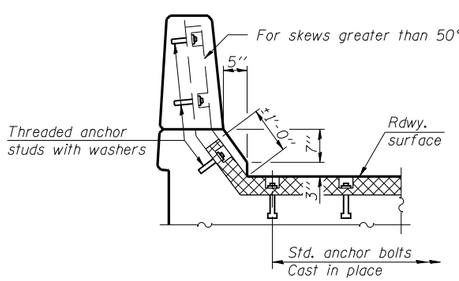
AT SIDEWALK OR MEDIAN



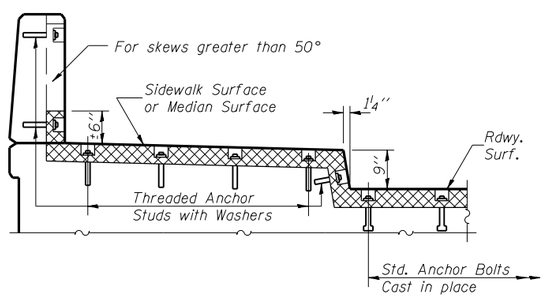
AT WALL



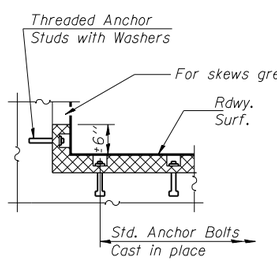
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN



AT WALL

TYPICAL END TREATMENTS

Corporate License Number 184-001-084

NEOPRENE EXPANSION JOINT DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

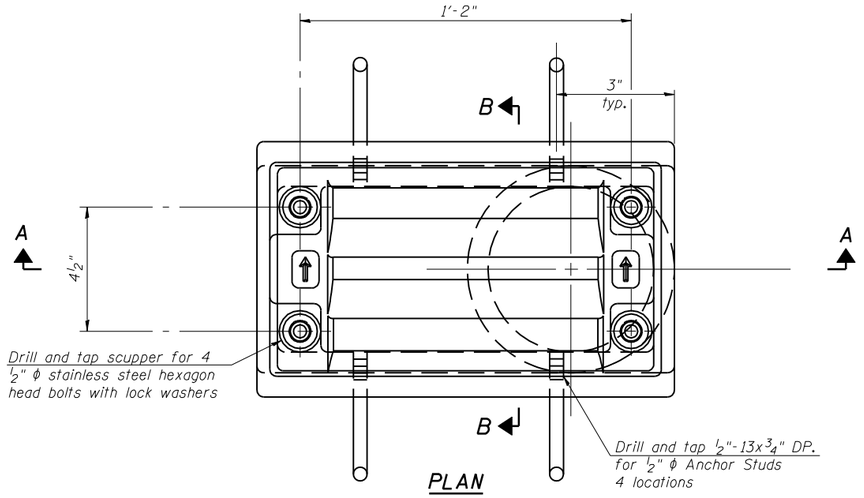
$FILE$ 12/16/2006

EJ-CS 9-01-03

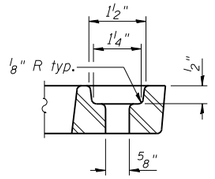
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	329
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
21 SHEETS

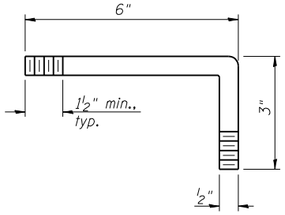
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



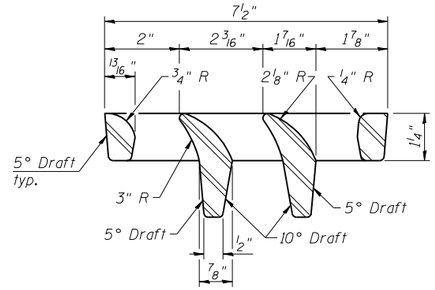
PLAN



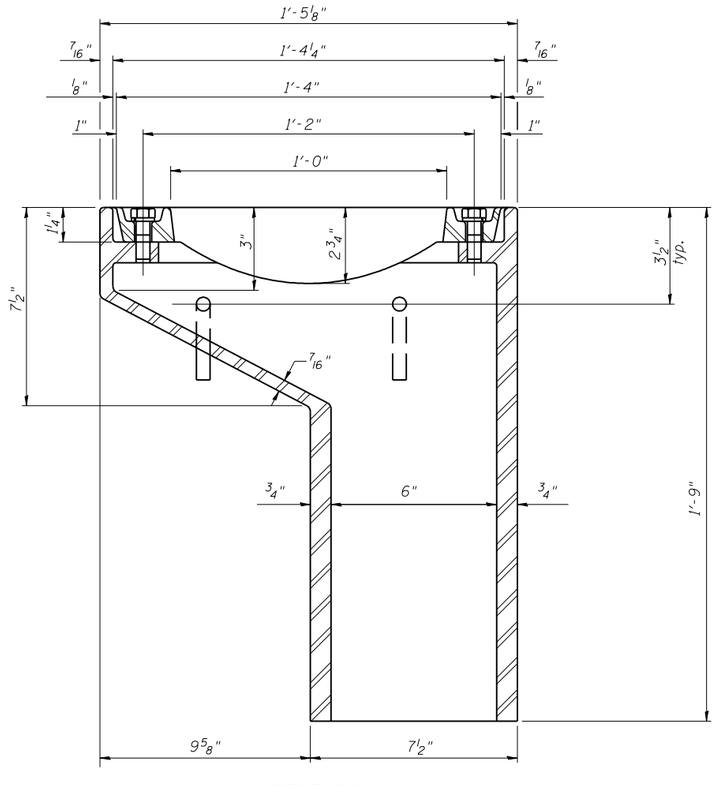
BOLT HOLE DETAIL



ANCHOR STUD DETAIL

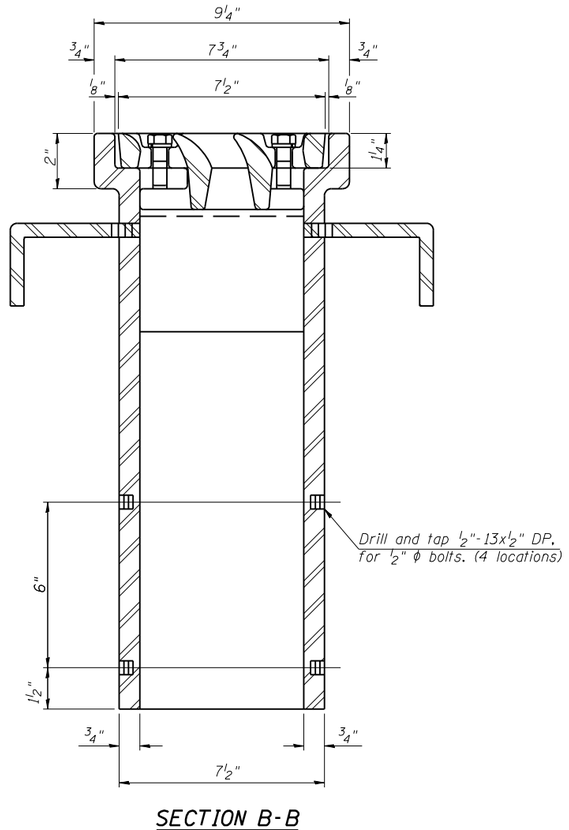


VANE GRATE DETAIL



SECTION A-A

See sheet 06 of 21 for scupper location relative to parapet.



SECTION B-B

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

DRAINAGE SCUPPER, DS-11
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

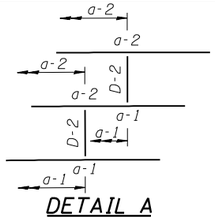
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	330
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
21 SHEETS

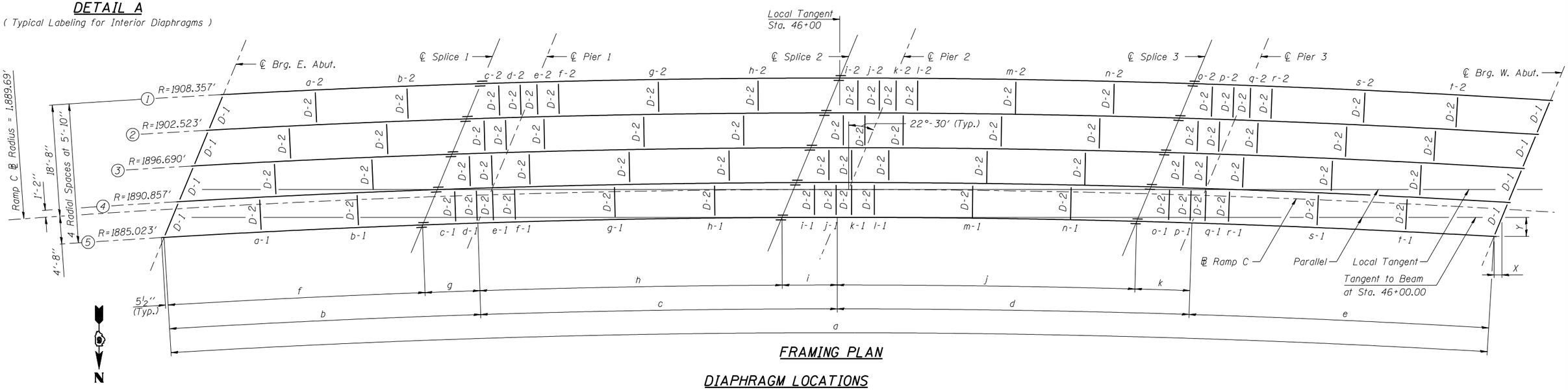
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



DETAIL A

(Typical Labeling for Interior Diaphragms)

Notes:
See Detail A for typical labeling for Interior Diapraghms.



FRAMING PLAN

DIAPHRAGM LOCATIONS

(Measured Along Centerline of Beam from ℄ Bearing East Abutment)

Beam #	a-1	a-2	b-1	b-2	c-1	c-2	d-1	d-2	e-1	e-2	f-1	f-2	g-1	g-2	h-1	h-2	i-1	i-2	j-1	j-2
1	-	15'-4½"	-	30'-9"	-	46'-1⅜"	-	49'-9¾"	-	52'-5"	-	56'-1⅜"	-	72'-9⅞"	-	89'-6⅜"	-	106'-2⅞"	-	110'-0⅝"
2	18'-1⅜"	13'-6"	33'-5⅜"	29'-9¾"	48'-9¼"	46'-1½"	52'-5⅞"	49'-10"	55'-0⅝"	-	58'-8⅞"	56'-1⅞"	75'-4¾"	72'-10½"	92'-0⅝"	89'-7"	108'-8½"	106'-3½"	112'-6⅛"	110'-1¼"
3	16'-3⅛"	13'-6"	32'-6⅜"	29'-10"	48'-9½"	46'-1⅞"	52'-5⅜"	49'-10⅜"	-	-	58'-9½"	56'-2¼"	75'-5⅜"	72'-11"	92'-1⅜"	89'-7⅝"	108'-9¼"	106'-4¼"	112'-6⅞"	110'-2"
4	16'-3⅜"	13'-6⅛"	32'-6⅝"	29'-10¼"	48'-10"	46'-2¼"	52'-6¼"	49'-10⅝"	-	52'-6¼"	58'-10"	56'-2⅝"	75'-6"	72'-11½"	92'-2⅛"	89'-8¼"	108'-10⅛"	106'-5⅛"	112'-7⅛"	110'-2¾"
5	16'-3½"	-	32'-7"	-	48'-10½"	-	52'-6⅛"	-	55'-2¼"	-	58'-10½"	-	75'-6⅝"	-	92'-2⅞"	-	108'-11"	-	112'-8⅝"	-

Beam #	k-1	k-2	l-1	l-2	m-1	m-2	n-1	n-2	o-1	o-2	p-1	p-2	q-1	q-2	r-1	r-2	s-1	s-2	t-1	t-2
1	-	112'-5¼"	-	116'-2⅞"	-	132'-8⅜"	-	149'-1⅞"	-	165'-7¼"	-	169'-6¼"	-	171'-8⅜"	-	175'-7¼"	-	191'-1¾"	-	206'-8¼"
2	114'-10⅝"	-	118'-8¼"	116'-3⅞"	135'-1"	132'-9⅜"	151'-5⅞"	149'-2¾"	167'-10¾"	165'-8¼"	171'-9½"	169'-7¼"	173'-11⅝"	-	177'-10⅜"	175'-8⅝"	193'-4¼"	190'-7⅛"	208'-10¼"	205'-5½"
3	-	-	118'-9¼"	116'-4⅝"	135'-2⅛"	132'-10¼"	151'-6⅞"	149'-3¾"	167'-11¾"	165'-9⅜"	171'-10⅛"	169'-8⅜"	-	-	177'-11¾"	175'-9¾"	192'-9¾"	190'-8¼"	207'-7⅝"	205'-6¾"
4	-	112'-7⅛"	118'-10⅛"	116'-5⅜"	135'-3⅛"	132'-11⅛"	151'-8"	149'-4¾"	168'-1"	165'-10½"	171'-11⅛"	169'-9⅜"	-	171'-11⅛"	178'-1"	175'-10⅞"	192'-11"	190'-9½"	207'-9"	205'-8⅛"
5	115'-1½"	-	118'-11"	-	135'-4⅛"	-	151'-9⅛"	-	168'-2¼"	-	172'-1⅛"	-	174'-3⅜"	-	178'-2¼"	-	193'-0¼"	-	207'-10⅜"	-

BEAM LAYOUT DIMENSIONS

(Measured from Beam Local Tangent to Centerline of Beam)

Beam #	℄ Brg. E. Abut.		℄ Splice No. 1		℄ Pier No. 1		℄ Splice No. 2		℄ Pier No. 2		℄ Splice No. 3		℄ Pier No. 3		℄ Brg. W. Abut.	
	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'	'X'	'Y'
1	1'-1¾"	2'-9³⁄₁₆"	0'-4⅝"	0'-11⅛"	0'-3⅝"	0'-7¹⁵⁄₁₆"	0'-0"	0'-0"	0'-0⅛"	0'-0⅝"	0'-4⅝"	0'-11³⁄₁₆"	0'-6³⁄₁₆"	1'-2¹⁵⁄₁₆"	1'-6⁹⁄₁₆"	3'-8⅞"
2	1'-2⁷⁄₁₆"	2'-10¹⁵⁄₁₆"	0'-5"	1'-0⅛"	0'-3⅝"	0'-8¹³⁄₁₆"	0'-0"	0'-0"	0'-0¹⁄₁₆"	0'-0³⁄₁₆"	0'-4⁵⁄₁₆"	0'-10⅜"	0'-5¹³⁄₁₆"	1'-2"	1'-5¹⁵⁄₁₆"	3'-7¼"
3	1'-3³⁄₁₆"	3'-0¹¹⁄₁₆"	0'-5⅞"	1'-1⅛"	0'-4"	0'-9⅝"	0'-0"	0'-0¹⁄₁₆"	0'-0"	0'-0¹⁄₁₆"	0'-3¹⁵⁄₁₆"	0'-9⅞"	0'-5⅜"	1'-1"	1'-5¼"	3'-5⅝"
4	1'-3¹⁵⁄₁₆"	3'-2½"	0'-5⅞"	1'-2³⁄₁₆"	0'-4⅜"	0'-10⅜"	0'-0¹⁄₁₆"	0'-0⅛"	0'-0"	0'-0"	0'-3⅝"	0'-8¾"	0'-5"	1'-0⅛"	1'-4⅝"	3'-4¹⁄₁₆"
5	1'-4¾"	3'-4⅜"	0'-6⅜"	1'-3⅝"	0'-4¾"	0'-11½"	0'-0⅛"	0'-0¼"	0'-0"	0'-0"	0'-3⅝"	0'-8"	0'-4⅝"	0'-11¼"	1'-3¹⁵⁄₁₆"	3'-2½"

BEAM DIMENSIONS

(Measured Along Centerline of Beam)

Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
a	222'-2¾"	222'-4⅛"	222'-5⅜"	222'-6¹⁵⁄₁₆"	222'-8⁷⁄₁₆"
b	52'-5"	52'-5⁷⁄₁₆"	52'-5¹³⁄₁₆"	52'-6¼"	52'-6¹¹⁄₁₆"
c	60'-0¼"	60'-0⅝"	60'-1⅛"	60'-1⁷⁄₁₆"	60'-1⅞"
d	59'-3⅛"	59'-3⁷⁄₁₆"	59'-3¹³⁄₁₆"	59'-4⅛"	59'-4½"
e	50'-6⅜"	50'-6⅝"	50'-6⅞"	50'-7⅛"	50'-7⅜"
f	43'-2⁵⁄₁₆"	43'-2⅝"	43'-3"	43'-3⁵⁄₁₆"	43'-3¹¹⁄₁₆"
g	9'-2¹¹⁄₁₆"	9'-2¹³⁄₁₆"	9'-2¹³⁄₁₆"	9'-2¹⁵⁄₁₆"	9'-3"
h	50'-9½"	50'-9¹³⁄₁₆"	50'-10³⁄₁₆"	50'-10⁹⁄₁₆"	50'-10⅞"
i	9'-2¾"	9'-2¹³⁄₁₆"	9'-2⅞"	9'-2⅞"	9'-3"
j	50'-0⅝"	50'-0⅝"	50'-0⅞"	50'-1³⁄₁₆"	50'-1½"
k	9'-2¹³⁄₁₆"	9'-2¹³⁄₁₆"	9'-2¹⁵⁄₁₆"	9'-2¹⁵⁄₁₆"	9'-3"

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

STRUCTURAL STEEL FRAMING PLAN
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

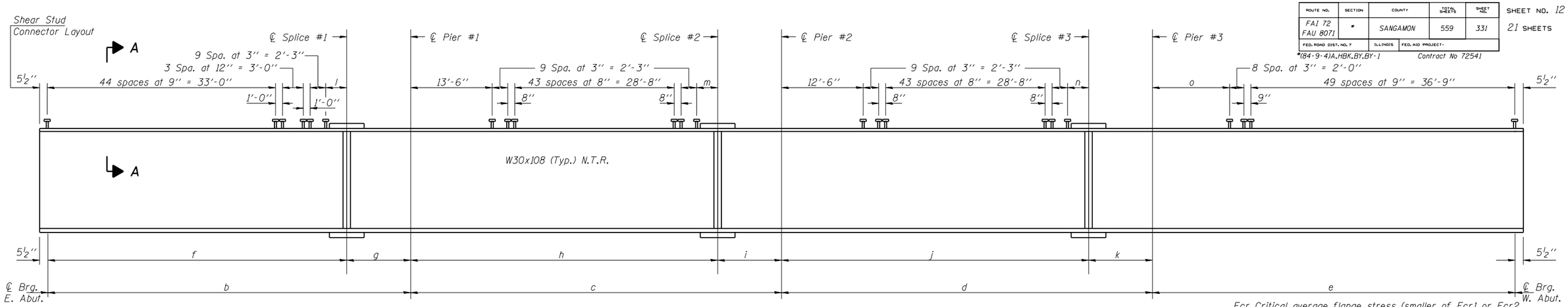
JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	331
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

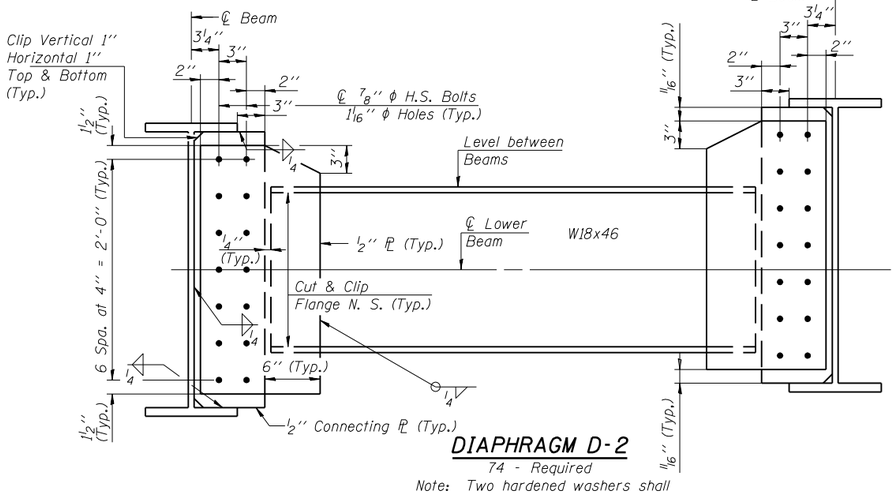
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

SHEET NO. 12
21 SHEETS



BEAM ELEVATION

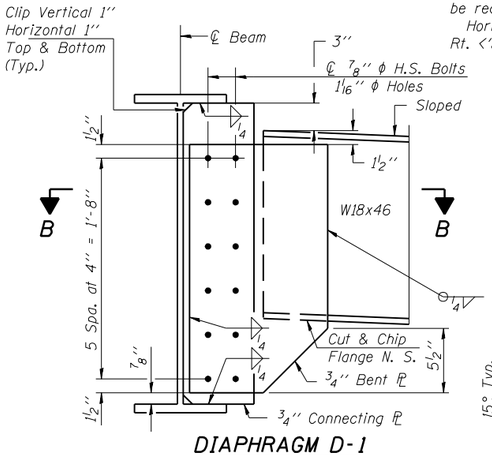
"NTR" denotes members to which notch toughness requirements are applicable.
For dimensions b thru k see sheet 11 of 21.



DIAPHRAGM D-2

74 - Required

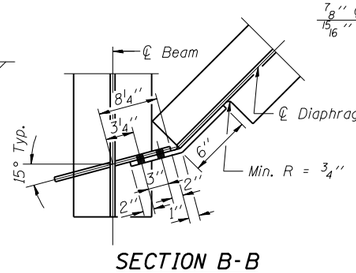
Note: Two hardened washers shall be required over all oversized holes. Horizontal dimensions at Rt. <'s to ℄ beam.



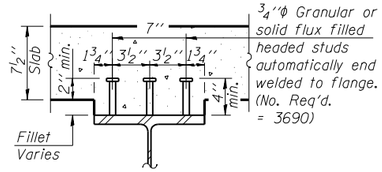
DIAPHRAGM D-1

8 - Required

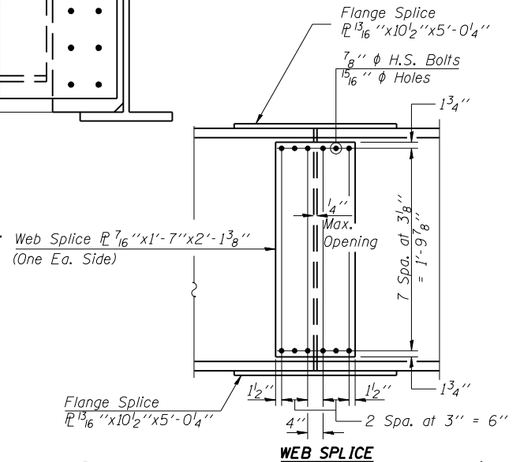
Note: Two hardened washers shall be required over all oversized holes.



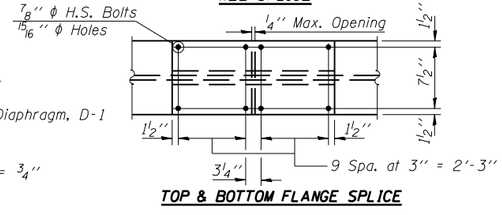
SECTION B-B



SECTION A-A



WEB SPLICE



TOP & BOTTOM FLANGE SPLICE

FIELD SPLICE DETAIL

H.S. Bolts shall conform to AASHTO M-164 Specifications (ASTM A325)

INTERIOR BEAM MOMENT TABLE

		0.4 Sp. 1 or 0.6 Sp. 4	Pier #1 or #3	0.5 Sp. 2 or Sp. 3	Pier #2
Is	(in⁴)	4470	4470	4470	4470
Ic (n)	(in⁴)	11899	-	11899	-
Ic (3n)	(in⁴)	8759	-	8759	-
Ss	(in³)	299	299	299	299
Sc (n)	(in³)	441	-	441	-
Sc (3n)	(in³)	398	-	398	-
St	(in³)	13.9	13.9	13.9	13.9
℄	(k/ft.)	0.70	1.17	0.70	1.17
M℄	('k)	138	354	101	322
s℄	(k/ft.)	0.47	-	0.47	-
Ms℄	('k)	101	-	84	-
M℔	('k)	289	245	274	245
M (Imp)	('k)	72	49	68	49
5/3[M℔+M(Imp)]	('k)	602	490	570	490
Ma	('k)	1096	1097	983	1056
Mbt	('k)	3.0	0.0	3.3	0.0
fs℄ non-comp	(k.s.i.)	5.5	14.2	4.1	12.9
fs℄ (comp)	(k.s.i.)	3.0	-	2.5	-
fs 5/3[M℔+M(Imp)]	(k.s.i.)	16.4	19.7	15.5	19.7
ft	(k.s.i.)	2.6	0.0	2.8	0.0
fs (Overload)	(k.s.i.)	24.9	33.9	22.1	32.6
fs (Total)	(k.s.i.)	32.4	44.1	28.7	42.4
Fcr (Overload)	(k.s.i.)	47.5	47.5	47.5	47.5
VR	(k)	55.3	-	54.0	-
Fcr	(k.s.i.)	49.1	50.0	49.0	50.0

INTERIOR BEAM REACTION TABLE

		E.&W. Abut.	Piers #1 & #3	Pier #2
R℄	(k)	23.9	73.5	69.0
R℔	(k)	36.7	47.7	47.2
Imp.	(k)	11.0	14.3	14.2
R (Total)	(k)	71.6	135.5	130.4

Fcr Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and Fy for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

Fcr (Overload) Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

M℄ Moment due to dead loads on non-composite section.

Ms℄ Moment due to dead loads on composite section.

M℔ Moment due to live load on non-composite or composite section.

M (Imp) Moment due to live load impact on non-composite or composite section.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5/3(M℔ + M(Imp))].

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5/3(M℔ + M(Imp)).

fs (Total) is the sum of the stresses due to 1.3[M℄ + Ms℄ + 5/3(M℔ + M(Imp))].

Sbt is the section modulus for one flange for lateral flange bending.

Mbt is the lateral bending moment for flange (factored).

ft is the calculated normal stress at the edge of flange due to lateral bending (factored).

M℔ and R℔ include the effects of centrifugal force and superelevation.

BEAM DIMENSIONS

(Measured Along Centerline of Beam)

Line No.	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
l	2'-11 5/16''	2'-11 5/8''	3'-0''	3'-0 5/16''	3'-0 11/16''
m	2'-9½''	2'-9 13/16''	2'-10 3/16''	2'-10 9/16''	2'-10⅞''
n	3'-0 5/16''	3'-0 5/8''	3'-0⅞''	3'-1 3/16''	3'-1½''
o	11'-0 3/8''	11'-0 5/8''	11'-0⅞''	11'-1⅛''	11'-1 3/8''

Corporate License Number 184-001-084

**TOP OF BEAM ELEVATIONS

Location \ Beam	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
℄ Brg. E. Abut.	632.48	632.16	631.84	631.52	531.20
℄ Splice #1	632.58	632.27	631.95	631.64	631.32
℄ Pier #1	632.59	632.28	631.97	631.65	631.34
℄ Splice #2	632.66	632.35	632.05	631.74	631.44
℄ Pier #2	632.64	632.34	632.03	631.73	631.43
℄ Splice #3	632.56	632.26	631.96	631.66	631.37
℄ Pier #3	632.53	632.23	631.93	631.63	631.34
℄ Brg. W. Abut.	632.35	632.06	631.77	631.47	631.18

** For Fabrication only.

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$
12/16/2006

STRUCTURAL STEEL DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

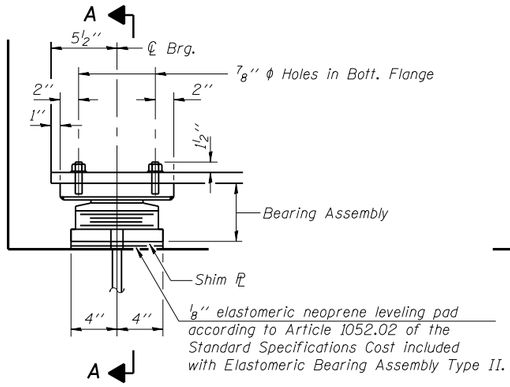
JOB* 96S2002B

DATE: 11/16/05

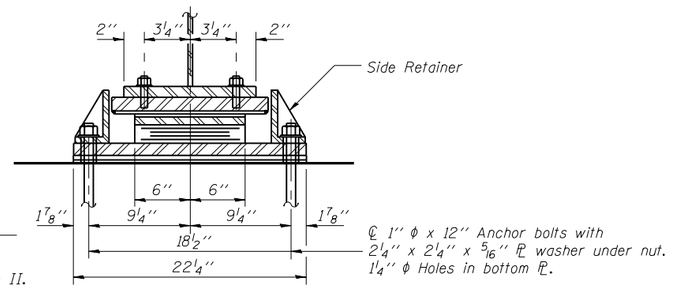
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	332
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

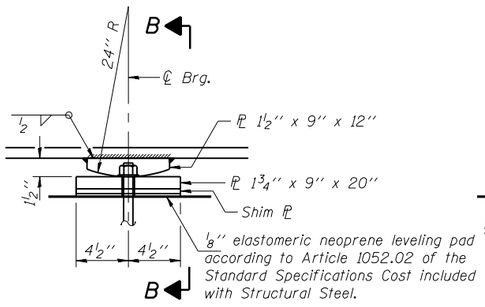


ELEVATION AT ABUT.

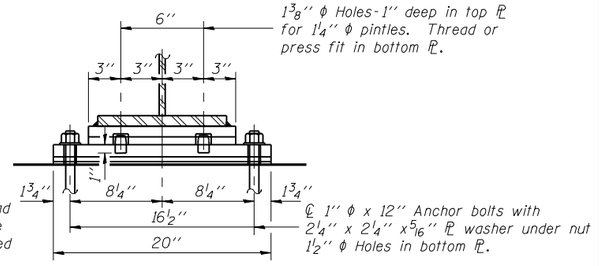


SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.



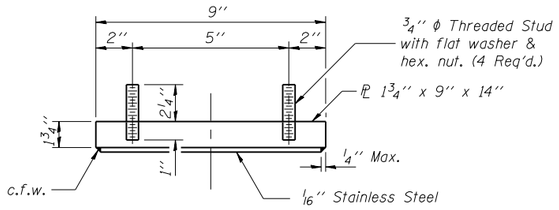
ELEVATION AT PIER



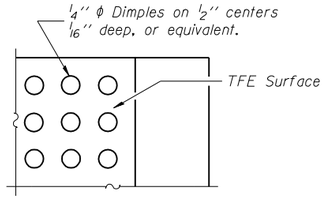
SECTION B-B

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 14 of 21 for Anchor Bolt installation.

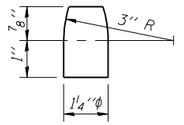
FIXED BEARING
No. Required = 15



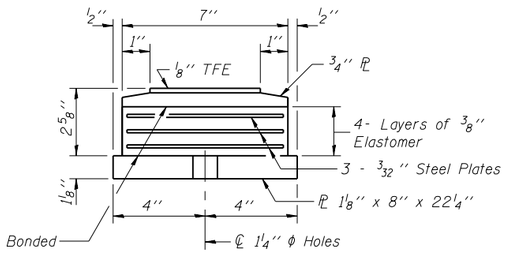
TOP BEARING ASSEMBLY



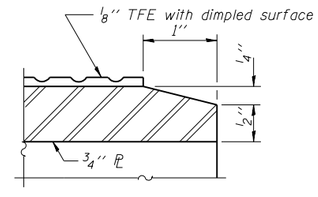
PLAN-TFE SURFACE



PINTLE



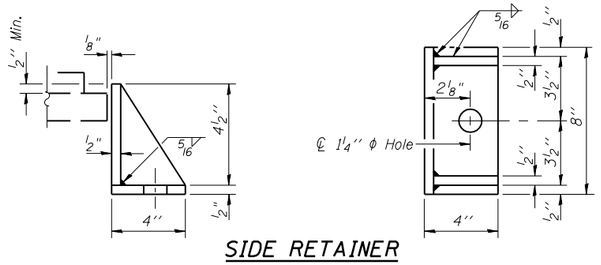
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

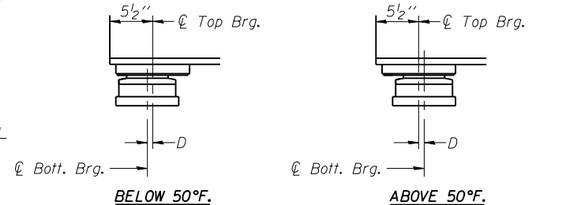
Note: The ⅛'' TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛'' TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛'' per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10

Corporate License Number 184-001-084

ELASTOMERIC BEARING DETAILS, TYPE II
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

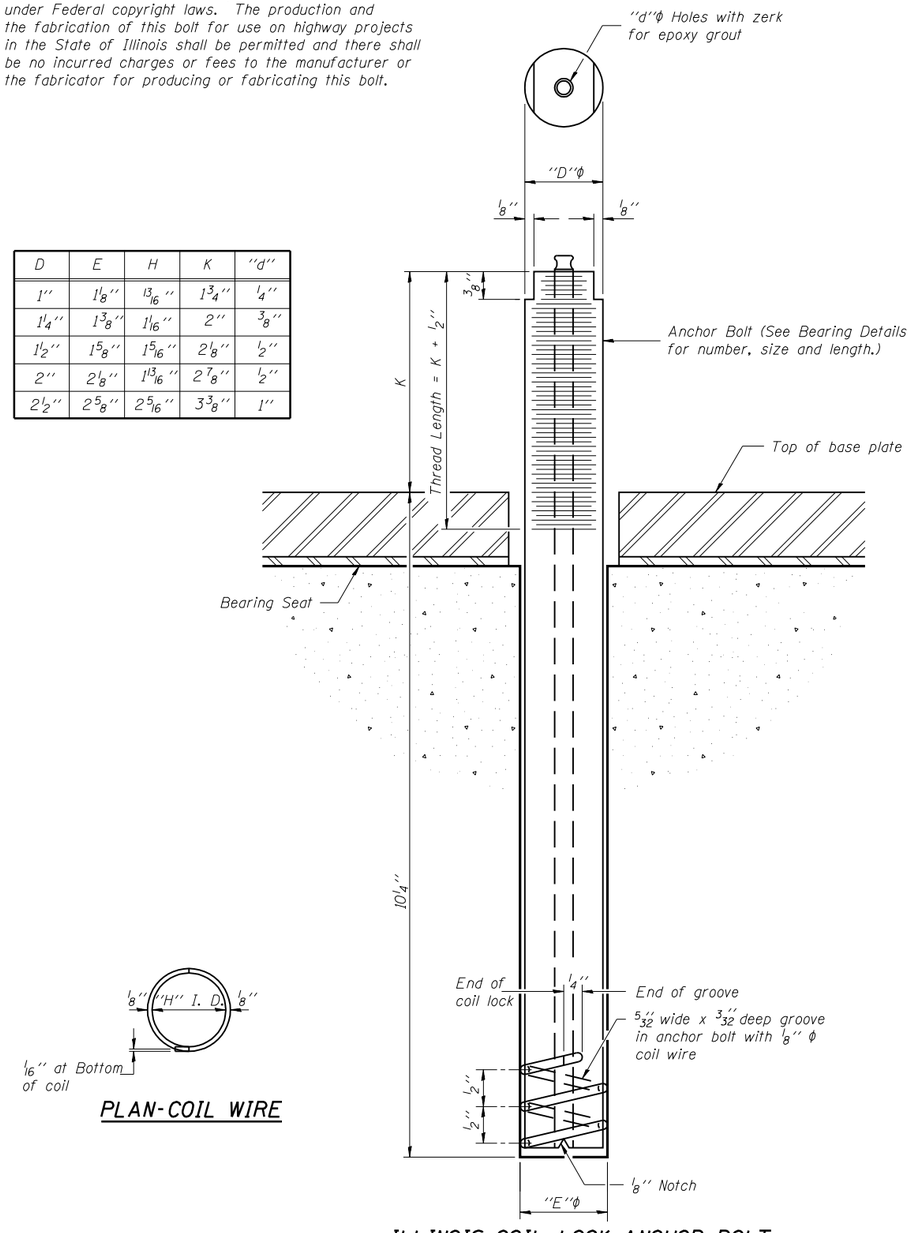
DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

I-2-E2 9-1-03

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Piers	A307
Abutments	A307

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel Bridge No. 4.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	333
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

Corporate License Number 184-001-084

ANCHOR BOLT ASSEMBLY DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	334
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

ANCHOR BOLT LAYOUT DIMENSIONS

Beam No.	A	B
1	$8\frac{5}{16}''$	4''
2	$8\frac{5}{16}''$	4''
3	$8\frac{5}{16}''$	4''
4	$8\frac{5}{16}''$	$4\frac{1}{16}''$
5	$8\frac{5}{16}''$	$4\frac{1}{16}''$

ABUTMENT BILL OF MATERIAL

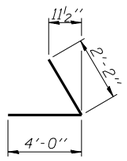
Bar	No.	Size	Length	Shape
h(E)	14	#5	15'-6''	
h_1(E)	10	#5	6'-2''	
h_2(E)	10	#5	6'-2''	
h_3(E)	25	#4	11'-3''	
h_4(E)	17	#4	11'-3''	
h_5(E)	8	#6	15'-7''	
h_6(E)	3	#5	17'-9''	
h_7(E)	3	#5	4'-9''	
n(E)	10	#6	14'-4''	
n_1(E)	6	#6	7'-2''	
n_4(E)	10	#6	11'-6''	
n_5(E)	6	#6	5'-9''	
p(E)	16	#7	17'-0''	
p_1(E)	3	#7	13'-0''	
p_2(E)	3	#7	13'-0''	
p_3(E)	3	#7	12'-0''	
p_4(E)	3	#7	11'-4''	
s(E)	33	#5	16'-1''	
s_1(E)	24	#4	9'-5''	
u(E)	4	#6	10'-0''	
u_1(E)	4	#6	8'-4''	
u_2(E)	20	#4	10'-5''	
v(E)	60	#5	5'-4''	
v_1(E)	30	#4	3'-1''	
v_2(E)	24	#6	6'-1''	
v_3(E)	6	#6	6'-1''	
v_4(E)	20	#6	6'-3''	
v_5(E)	30	#5	2'-10''	
Structure Excavation		Cu. Yd.		101
Concrete Structures		Cu. Yd.		41.6
Reinforcement Bars, Epoxy Coated		Pound		4190
Furnishing Steel Piles HP10x57		Foot		384
Driving Piles		Foot		384
Test Piles Steel HP10x57		Each		1

MIN. BAR LAPS

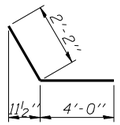
#4 Bar - 1'-8''
#5 Bar - 2'-2''
#6 Bar - 2'-7''
#7 Bar - 3'-5''

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
For details of Bar Splicers, see sheet 20 of 21.
Conduit is embedded in the North Wing. For details see Conduit Details sheet in the Roadway Plans.
Corporate License Number 184-001-084

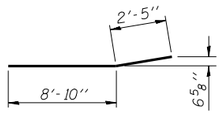
BAR h_1(E)



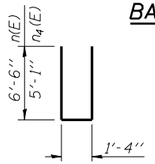
BAR h_2(E)



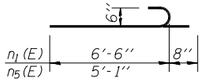
BAR h_4(E)



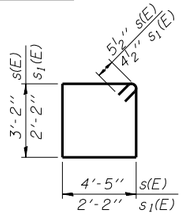
BARS n(E) & n_4(E)



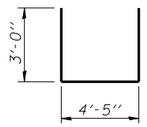
BARS n_1(E) & n_5(E)



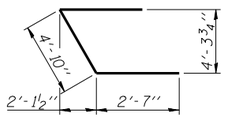
BARS s(E) & s_1(E)



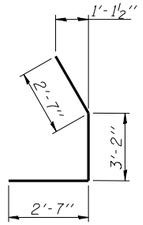
BAR u_2(E)



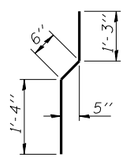
BAR u(E)



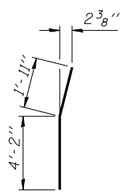
BAR u_1(E)



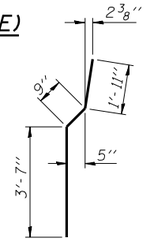
BAR v_1(E)



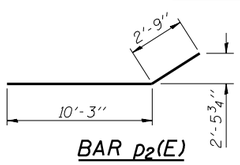
BAR v_3(E)



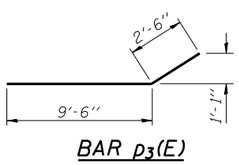
BAR v_4(E)



BAR p_2(E)

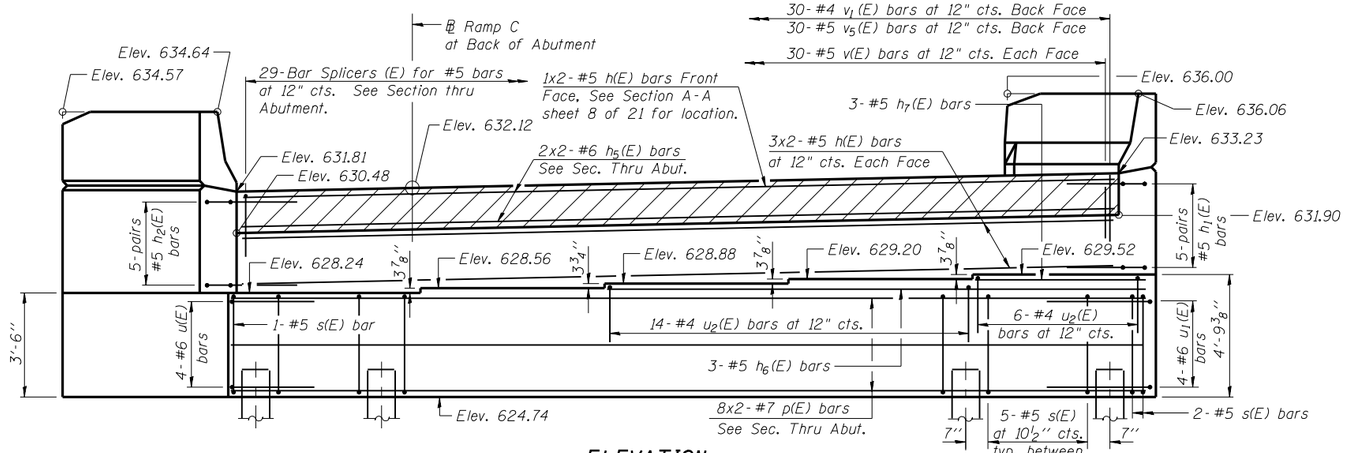


BAR p_3(E)

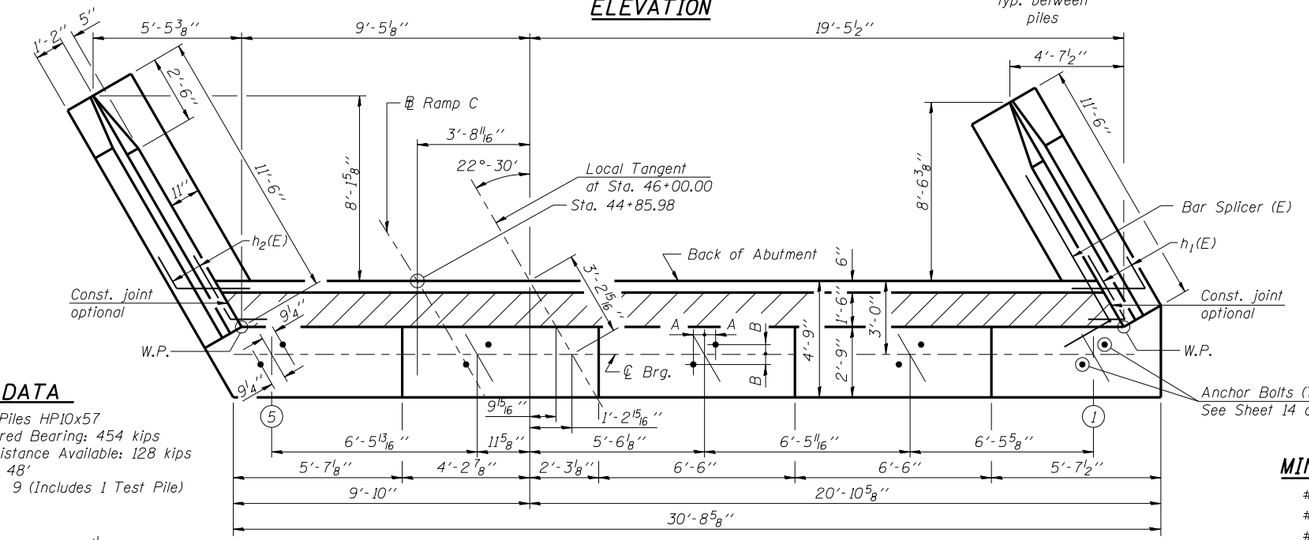


PILE DATA

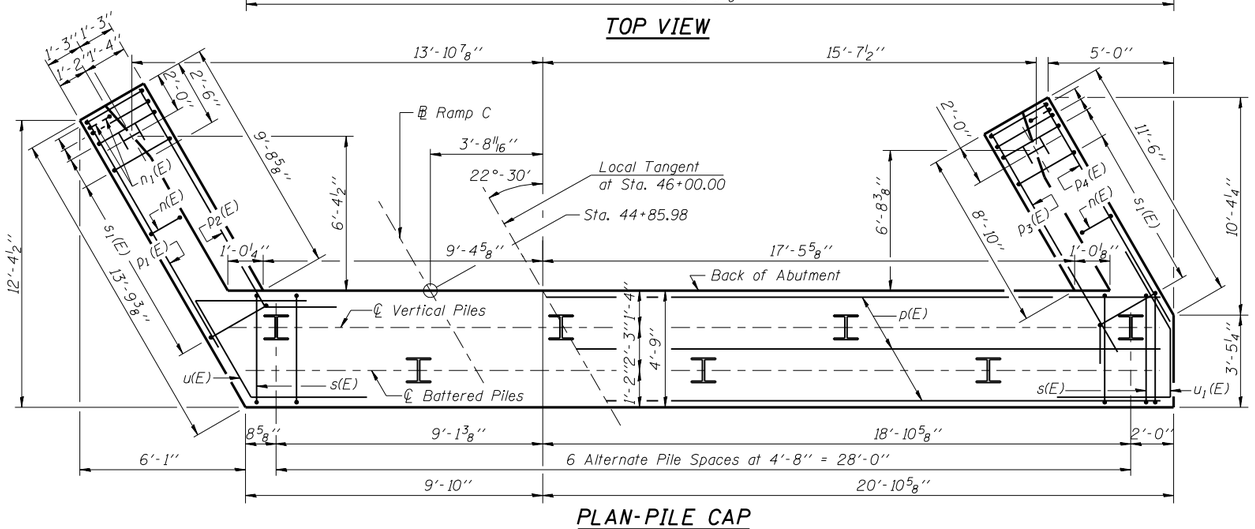
Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 128 kips
Est. Length: 48'
No. Required: 9 (Includes 1 Test Pile)



ELEVATION



TOP VIEW



PLAN-PILE CAP

EAST ABUTMENT
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

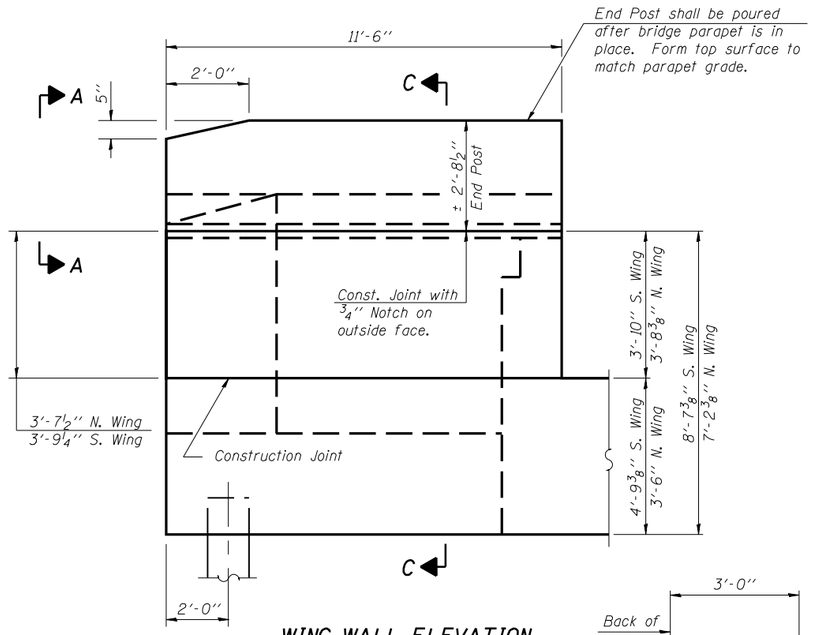
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JMM	02/24/05

$FILE$ 12/16/2006

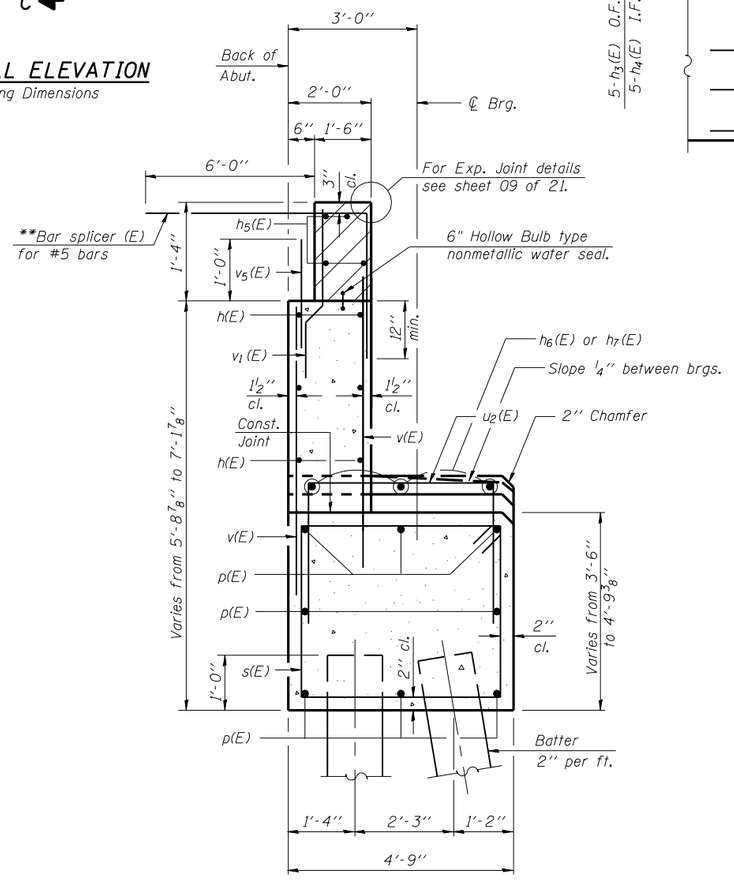
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	335
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
21 SHEETS

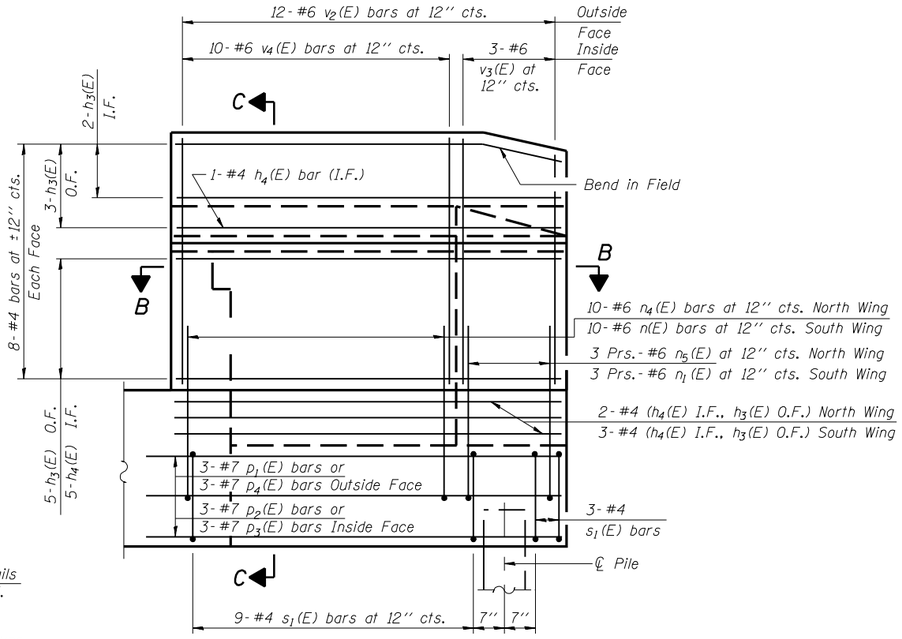
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



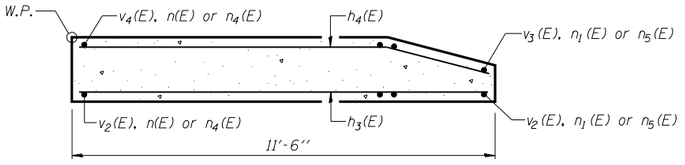
WING WALL ELEVATION
Showing Dimensions



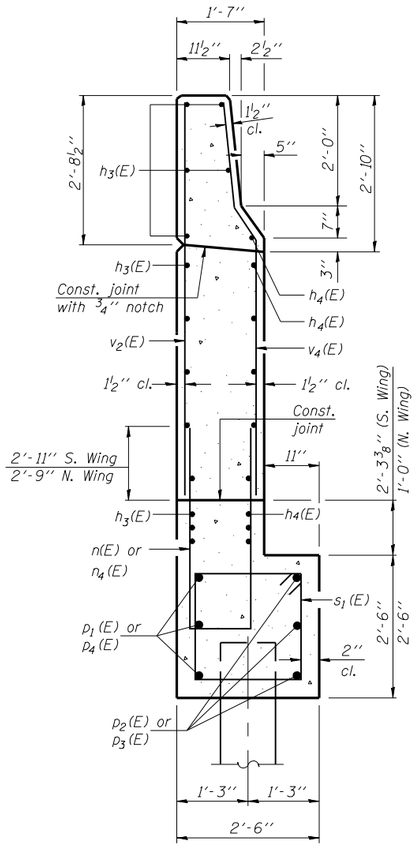
SEC. THRU ABUT.
**Alternate with #4 v(E) bars
Place parallel to the beams



WING WALL ELEVATION
Showing Reinforcement



SEC. B-B



SECTION C-C

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 21.
Conduit is embedded in the North Wing. For details, see Conduit Details sheet in the Roadway Plans.

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"

Corporate License Number 184-001-084

EAST ABUTMENT DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	336
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

ANCHOR BOLT LAYOUT DIMENSIONS

Beam No.	A	B
1	8 3/4"	3"
2	8 3/4"	3"
3	8 3/4"	3"
4	8 3/4"	3"
5	8 3/4"	3 1/16"

ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	14	#5	15'-6"	
h_3(E)	25	#4	11'-3"	
h_4(E)	17	#4	11'-3"	
h_5(E)	8	#6	15'-7"	
h_6(E)	3	#5	17'-7"	
h_8(E)	10	#5	6'-2"	
h_9(E)	10	#5	6'-2"	
h_{10}(E)	3	#5	5'-3"	
n(E)	10	#6	14'-4"	
n_1(E)	6	#6	7'-2"	
n_4(E)	10	#6	11'-6"	
n_5(E)	6	#6	5'-9"	
p(E)	16	#7	17'-0"	
p_1(E)	9	#7	13'-0"	
p_4(E)	3	#7	11'-4"	
s(E)	31	#5	16'-1"	
s_1(E)	24	#4	9'-5"	
u_2(E)	19	#4	10'-5"	
u_3(E)	4	#6	9'-9"	
u_4(E)	4	#6	8'-2"	
v(E)	58	#5	5'-4"	
v_1(E)	29	#4	3'-1"	
v_2(E)	24	#6	6'-1"	
v_3(E)	6	#6	6'-1"	
v_4(E)	20	#6	6'-3"	
v_5(E)	29	#5	2'-10"	
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	40.1	
Reinforcement Bars, Epoxy Coated		Pound	4140	
Furnishing Steel Piles HP10x57		Foot	416	
Driving Piles		Foot	416	
Test Piles Steel HP10x57		Each	1	

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
For details of Bar Splicers, see sheet 20 of 21.
Conduit is embedded in the North Wing. For details see Conduit Details sheet in the Roadway Plans.

Corporate License Number 184-001-084

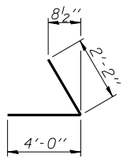
MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"

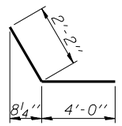
PILE DATA

Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 135 kips
Est. Length: 52'
No. Required: 9 (Includes 1 Test Pile)

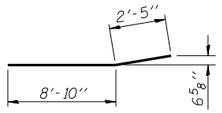
BAR h_8(E)



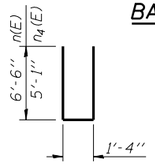
BAR h_9(E)



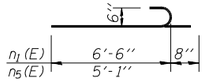
BAR h_4(E)



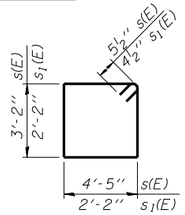
BARS n(E) & n_4(E)



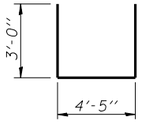
BARS n_1(E) & n_5(E)



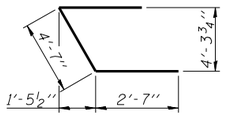
BARS s(E) & s_1(E)



BAR u_2(E)



BAR u_3(E)



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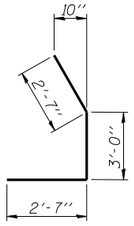
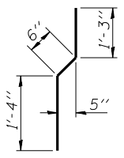
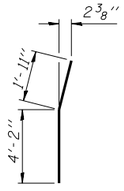


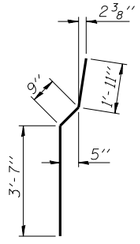
BAR v_1(E)

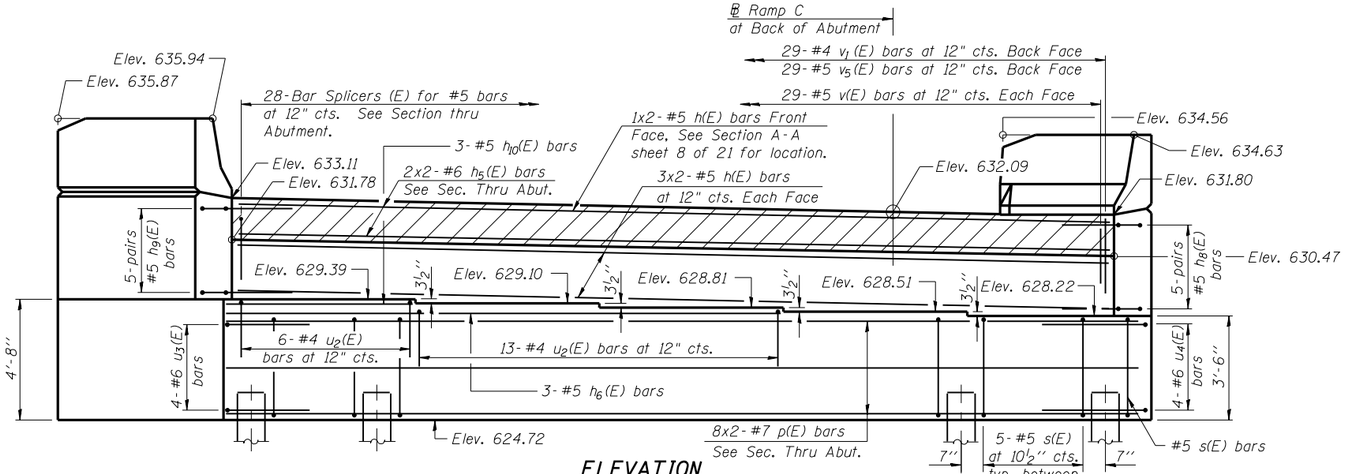


BAR v_3(E)

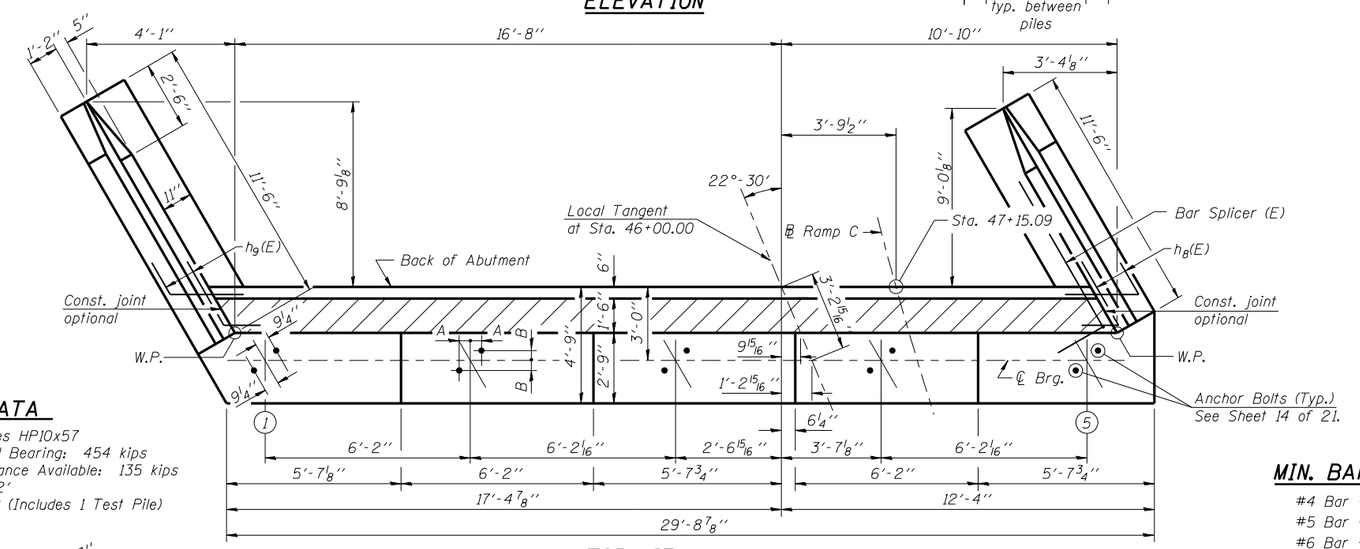


BAR v_4(E)

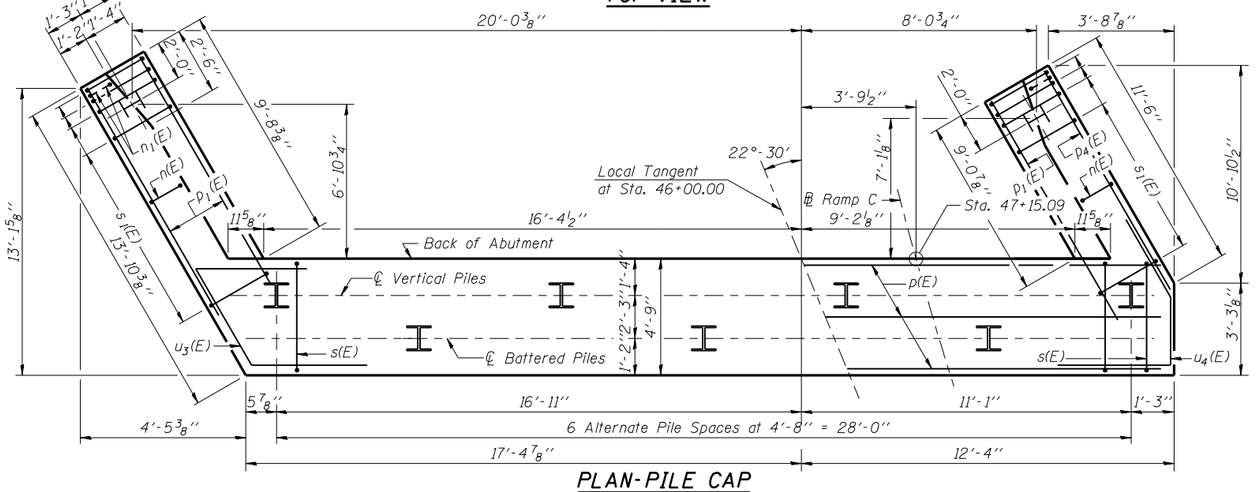




ELEVATION



TOP VIEW



PLAN-PILE CAP

WEST ABUTMENT
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE* 11/16/05

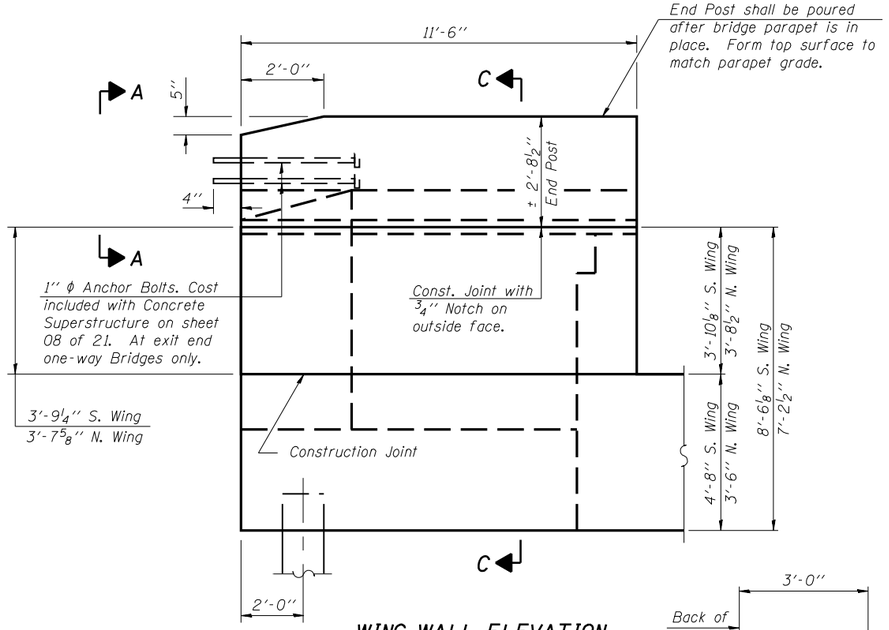
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

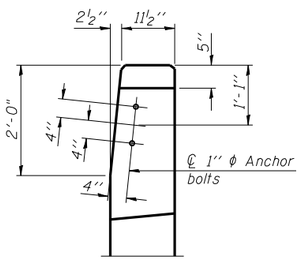
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	337
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
21 SHEETS

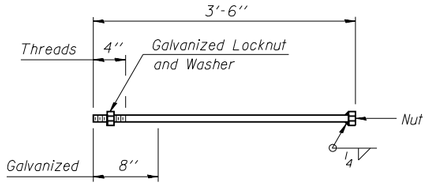
*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



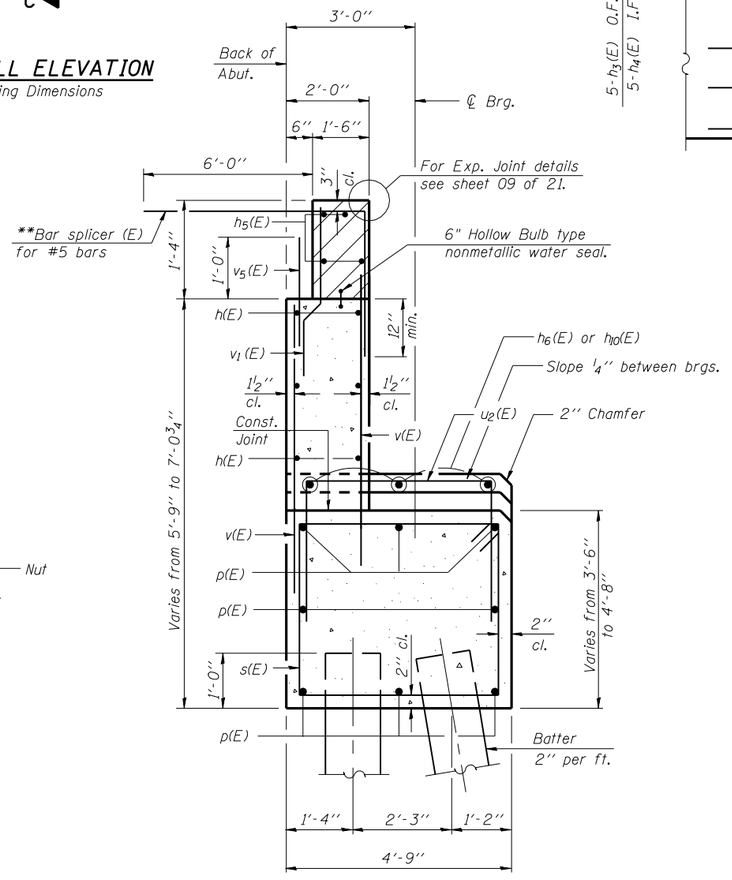
WING WALL ELEVATION
Showing Dimensions



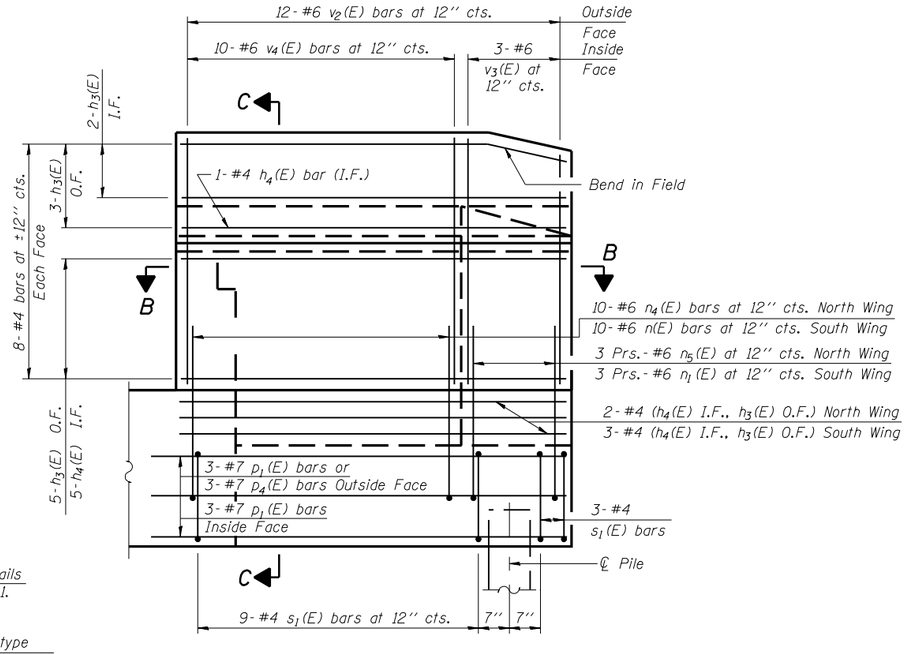
VIEW A-A



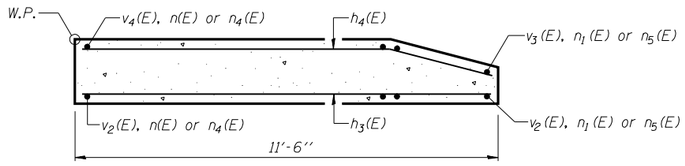
1" ϕ ANCHOR BOLT



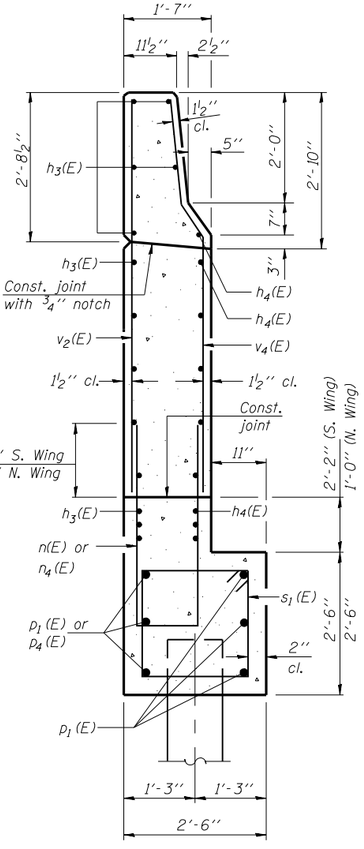
SEC. THRU ABUT.
**Alternate with #4 v(E) bars
Place parallel to the beams



WING WALL ELEVATION
Showing Reinforcement



SEC. B-B



SECTION C-C

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 08 of 21.
Conduit is embedded in the North Wing. For details, see Conduit Details sheet in the Roadway plans.

MIN. BAR LAPS

#4 Bar - 1'-8"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#7 Bar - 3'-5"

Corporate License Number 184-001-084

WEST ABUTMENT DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

LAYOUT	MNM	06/21/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

Notes: Space Reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
B indicates battered pile and arrow indicates direction to batter the pile.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	338
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

PILE DATA

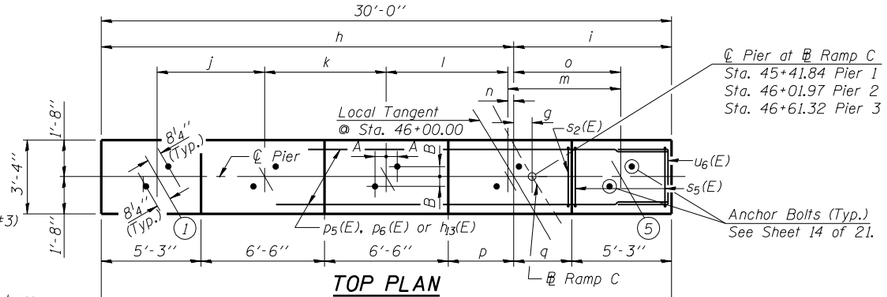
Type: Steel Piles HP10x57
Nominal Required Bearing: 454 kips
Allowable Resistance Available: 130 kips (Pier #1)
151 kips (Pier #2), 128 kips (Pier #3)
Est. Length: 25'
No. Required: 10 per pier (Includes 1 Test Pile per pier)

MIN. BAR LAPS

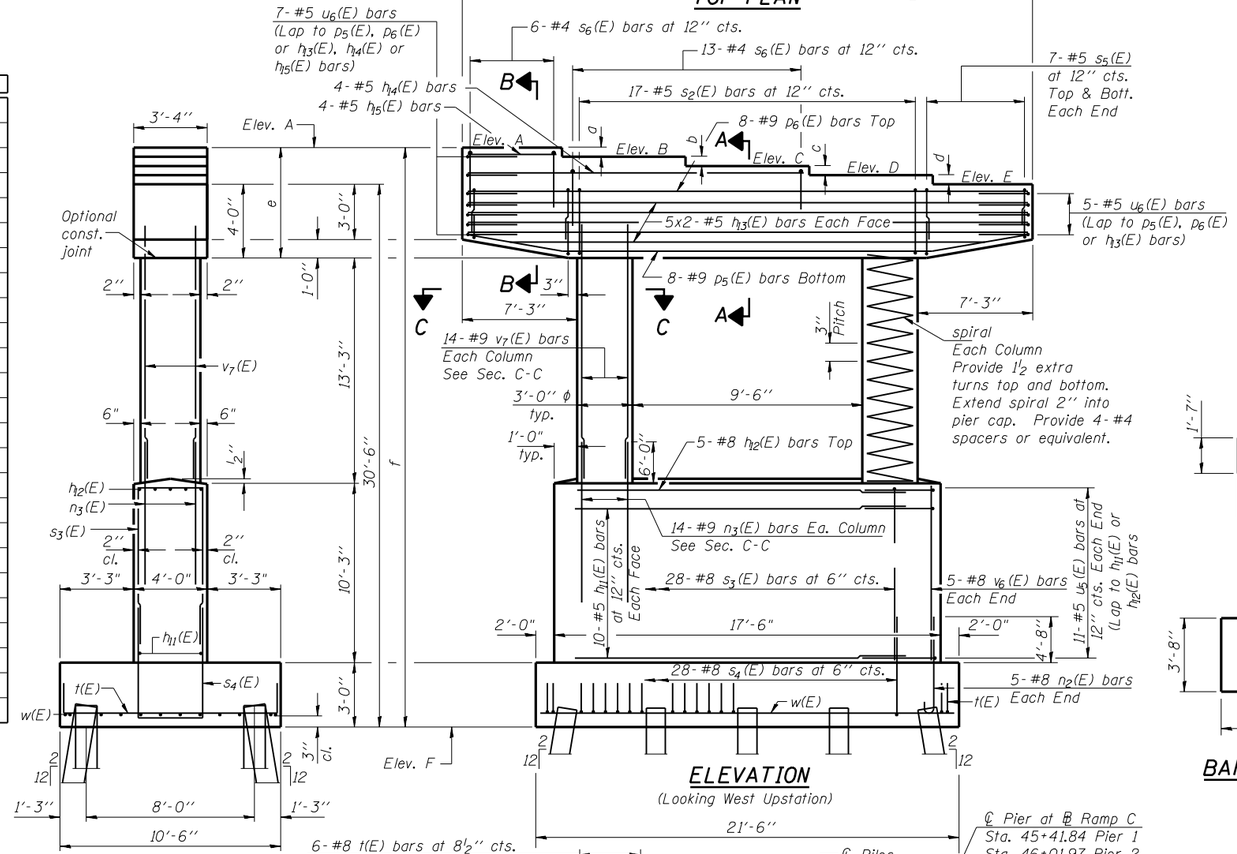
#4 Spirals - 2'-0"
#5 Bar - 2'-2"
#6 Bar - 2'-7"
#8 Bar - 4'-6"
#9 Bar - 5'-9"

DIMENSIONS

Description	Pier #1	Pier #2	Pier #3
Elev. A	629.82	629.88	629.76
Elev. B	629.51	629.57	629.46
Elev. C	629.20	629.27	629.17
Elev. D	628.89	628.96	628.87
Elev. E	628.57	628.66	628.57
Elev. F	598.07	598.16	598.07
a	3 3/4"	3 3/4"	3 1/2"
b	3 5/8"	3 5/8"	3 1/2"
c	3 3/4"	3 5/8"	3 5/8"
d	3 7/8"	3 5/8"	3 5/8"
e	5'-3"	5'-2 5/8"	5'-2 1/4"
f	31'-9"	31'-8 5/8"	31'-8 1/4"
g	11 5/8"	0'-0"	1'-0 15/16"
h	21'-8 3/8"	22'-6 3/4"	21'-4 3/4"
i	8'-3 5/8"	7'-5 1/4"	8'-7 1/4"
j	6'-4 5/8"	6'-3 5/8"	6'-2 11/16"
k	6'-4 11/16"	6'-3 11/16"	6'-2 3/4"
l	6'-4 3/4"	6'-3 11/16"	6'-2 3/4"
m	6'-4 13/16"	6'-3 3/4"	6'-2 13/16"
n	3 3/4"	1'-3 1/8"	0'-2 1/16"
o	6'-1 1/16"	5'-0 5/8"	6'-0 3/4"
p	3'-5 3/8"	4'-3 3/4"	3'-1 3/4"
q	3'-0 5/8"	2'-2 1/4"	3'-4 1/4"
r	17'-5 3/8"	18'-3 3/4"	17'-1 3/4"
s	4'-0 5/8"	3'-2 1/4"	4'-4 1/4"



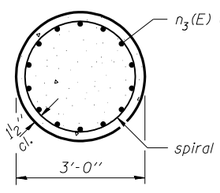
TOP PLAN



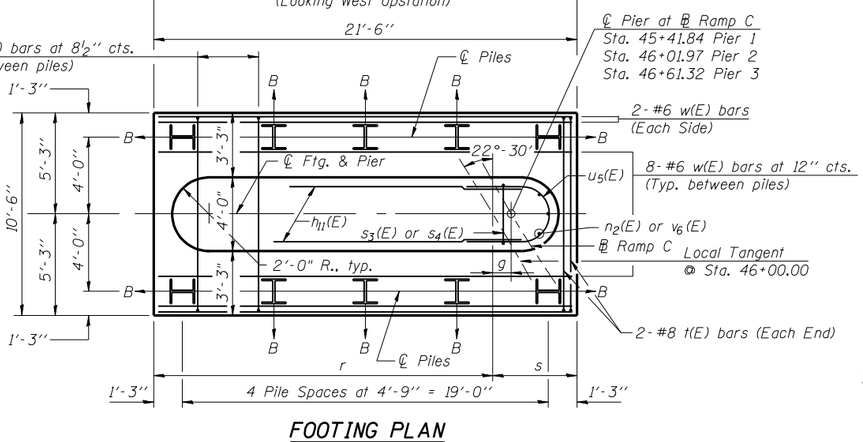
ELEVATION

(Looking West Upstation)

END VIEW



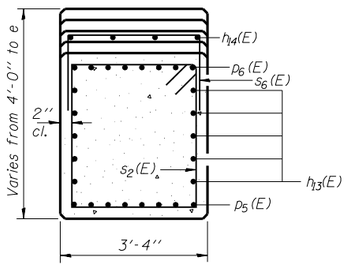
SEC. C-C



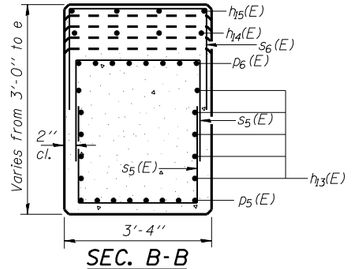
FOOTING PLAN

ANCHOR BOLT LAYOUT DIMENSIONS

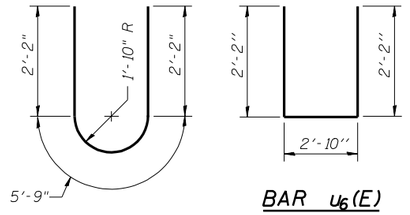
Beam No.	Pier 1 - A	Pier 1 - B	Pier 2 - A	Pier 2 - B	Pier 3 - A	Pier 3 - B
1	7 9/16"	3 3/8"	7 5/8"	3 1/8"	7 3/4"	2 7/8"
2	7 1/2"	3 3/8"	7 5/8"	3 1/8"	7 3/4"	2 7/8"
3	7 1/2"	3 3/8"	7 5/8"	3 1/8"	7 3/4"	2 7/8"
4	7 1/2"	3 3/8"	7 5/8"	3 1/8"	7 3/4"	2 15/16"
5	7 1/2"	3 3/8"	7 5/8"	3 3/16"	7 11/16"	2 15/16"



SEC. A-A

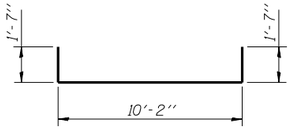


SEC. B-B

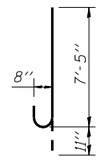


BAR u5(E)

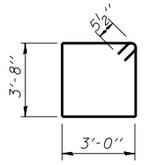
BAR u6(E)



BAR t(E)



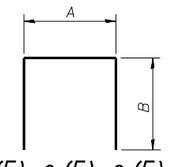
BAR n2(E)



BAR s2(E)

A & B DIMENSIONS

Bar	A	B
s3(E)	3'-8"	9'-11"
s4(E)	3'-8"	7'-5"
s5(E)	3'-0"	2'-11"
s6(E)	3'-0"	2'-11"



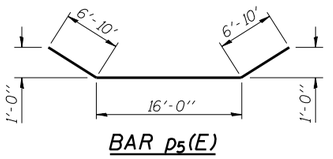
BARS s3(E), s4(E), s5(E) & s6(E)

BILL OF MATERIAL PIERS 1-3

Bar	No.	Size	Length	Shape
h11(E)	60	#5	13'-6"	
h12(E)	15	#8	13'-6"	
h13(E)	60	#5	16'-0"	
h14(E)	12	#5	17'-11"	
h15(E)	12	#5	4'-11"	
n2(E)	30	#8	8'-4"	
n3(E)	84	#9	12'-3"	
p5(E)	24	#9	29'-8"	
p6(E)	24	#9	29'-8"	
s2(E)	51	#5	14'-3"	
s3(E)	84	#8	23'-6"	
s4(E)	84	#8	18'-6"	
s5(E)	84	#5	8'-10"	
s6(E)	57	#4	8'-10"	
** sp(E)	6	#4	13'-5"	
t(E)	84	#9	13'-4"	
u5(E)	66	#5	10'-1"	
u6(E)	36	#5	7'-2"	
v6(E)	30	#8	9'-11"	
v7(E)	84	#9	16'-9"	
w(E)	36	#6	21'-2"	
Structure Excavation		Cu. Yd.	203	
Concrete Structures		Cu. Yd.	225.4	
Reinforcement Bars, Epoxy Coated		Pound	36370	
Furnishing Steel Piles HP10x57		Foot	675	
Driving Piles		Foot	675	
Test Piles Steel HP10x57		Each	3	

Reinforcement Bars designated (E) shall be epoxy coated.
** Length shown is height of spiral.

Corporate License Number 184-001-084



BAR p5(E)

PIERS 1-3
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

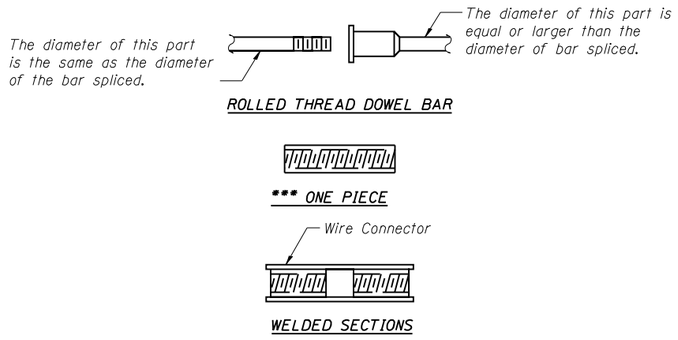
LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$ 12/16/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	339
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

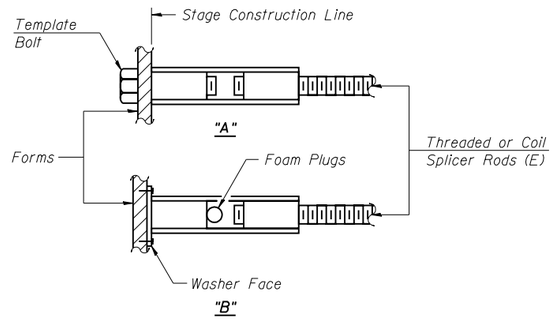
SHEET NO. 20
21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541



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.

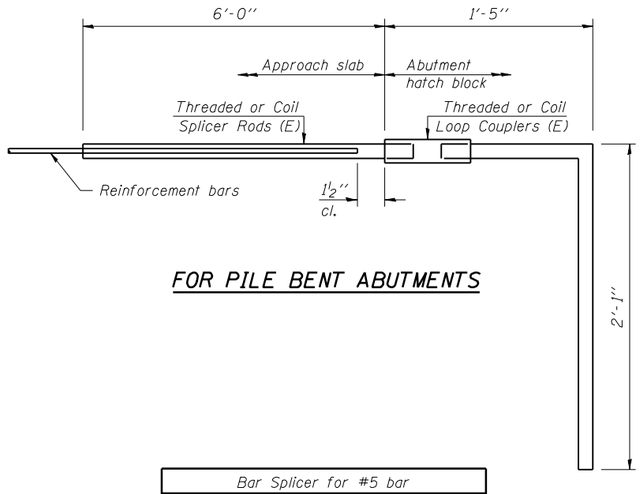
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

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

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
** = 28 day concrete

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



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 57

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JNM	02/24/05

$FILE$ 12/16/2006

Corporate License Number 184-001-084

BAR SPLICER ASSEMBLY DETAILS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72 FAU 8071	*	SANGAMON	559	340
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 21

21 SHEETS

*(84-9-4)A,HBK,BY,BY-1 Contract No 72541

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1

Date 5/19/03

ROUTE FAI 72/FAU 8021 DESCRIPTION Ramp C over UPRR LOGGED BY M. Tappan

SECTION (84-9-4)HBK,BY,BY-1 LOCATION NE 1/4, SEC. 21, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-0516
Station 46+02

BORING NO. RC-1 E. Abut
Station 45+40
Offset 15.0Ft Right
Ground Surface Elev. 600.5 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽First Encounter No Encounter ft
Upon Completion 592.5 ft
▼After 96 Hrs. 599.5 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
V. Dark Grey V. Moist SILTY CLAY Ref Classification RC-7-1 ▼			
	0		
	1	0.4	39
595.50 -5	1	B	
Tan and Light Grey Moist SILT Ref Classification RC-7-3			
	1		
	2	0.7	28
592.50	2	B	
Brown and Grey Moist SILTY CLAY LOAM Ref Classification RC-7-5	0		
	1	0.9	24
-10	2	B	
	0		
	1	0.4	26
587.50	1	B	
Brown and Grey Moist Weathered CLAY (Till) Ref Classification RC-7-6	0		
	1	1.0	26
-15	2	B	
585.00			
Light Blue Grey Moist SILTY CLAY LOAM (Till) Ref Classification RC-7-7	1		
	3	1.4	21
	4	B	
581.50	1		
Brown and Blue Grey Moist Shaley CLAY	4	1.7	21
-20	5	B	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
Brown and Blue Grey Moist Shaley CLAY (continued)			
578.00			
Dark Grey Moist Clayey SHALE	7		
	27		14
-25	73 /5"		
	100 /5"		14
-30			
Updated Station 9/15/04			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name: S:\SOILS\CONT FILES\SANGAMON\MACARTHUR EXTENSION STATE STRUCTURES.GPJ Data Template: DEFAULT.GDT Date Printed: 11/4/05
Latitude Longitude Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1

Date 4/1/03

ROUTE FAI 72/FAU 8021 DESCRIPTION Ramp C over UPRR LOGGED BY M. Tappan

SECTION (84-9-4)HBK,BY,BY-1 LOCATION NE 1/4, SEC. 20, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-0516
Station 46+02

BORING NO. RC-3 W. Pier
Station 46+19
Offset 32.00ft Left
Ground Surface Elev. 604.1 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter 587.6 ft
Upon Completion 593.1 ft
After ____ Hrs. Flagged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
Grey and Brown Moist SILTY CLAY (Fill)			
	2		
	3	0.8	16
-5	4	B	
598.60			
Brown and Grey Moist SILTY CLAY Ref Classification RC-7-1	1		
	2	1.0	29
	4	B	
596.10			
Tan and Light Grey Moist SILT Ref Classification RC-7-3	1		
	1	0.7	26
-10	3	B	
	1		
	3	0.7	27
591.10	3	B	
Brown and Grey Moist SILTY CLAY LOAM Ref Classification RC-7-5	0		
	2	0.5	27
-15	2	B	
	1		
Free Water	1	0.6	26
586.10	3	B	
Light Blue Grey Moist Weathered CLAY (Till) Ref Classification RC-7-6	1		
	2	1.0	27
-20	2	B	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
Light Blue Grey Moist Weathered CLAY (Till) Ref Classification RC-7-6 (continued)	0		
	1	0.5	32
581.10	2	B	
Brown and Grey Moist Weathered Clayey SHALE	1		
	4		16
-25	9		
	17		9
-30	83 /6"		
Grey Dry Finis Clayey SHALE			
569.00	100 /6"		8
-35			
Updated Station 9/15/04			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

BOR. BORING MACARTHUR EXTENSION STATE STRUCTURES.GPJ DEFAULT.GDT 9/9/04
Latitude Longitude

Illinois Department of Transportation
Division of Highways
IDOT DISTRICT 6

SOIL BORING LOG

Page 1 of 1

Date 4/1/03

ROUTE FAI 72/FAU 8021 DESCRIPTION Ramp C over UPRR LOGGED BY M. Tappan

SECTION (84-9-4)HBK,BY,BY-1 LOCATION NE 1/4, SEC. 20, TWP. 15 N, RNG. 5 W, 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

STRUCT. NO. 084-0516
Station 46+02

BORING NO. RC-4 W. Abut
Station 46+94
Offset 29.00ft Left
Ground Surface Elev. 600.7 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter No Encounter ft
Upon Completion 598.7 ft
After 72 Hrs. 596.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
Tan and Light Grey Moist SILTY CLAY LOAM Ref Classification RC-7-2			
	0		
	1	0.4	28
596.30 -5	1	B	
Tan and Light Grey Moist SILT Ref Classification RC-7-3	1		
	2	1.3	25
592.70	2	B	
Brown and Grey Moist SILTY CLAY LOAM Ref Classification RC-7-5	0		
	1	0.5	25
-10	2	B	
	0		
	1	0.4	26
587.70	2	B	
Brown and Grey Moist Weathered CLAY (Till) Ref Classification RC-7-6	0		
	1	0.7	28
-15	3	B	
	0		
Light Blue Grey	2	0.7	21
	3	B	
581.70	1		
Brown and Grey Moist Shaley CLAY	4	1.8	21
-20	8	S-14	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST T (%)
Brown and Grey Moist Shaley CLAY (continued)			
578.70	2		
Grey and Olive Brown Moist Weathered Clayey SHALE	5		19
-25	12		
	19		
Grey Dry Finis Clayey SHALE	100		12
-30	/6"		
	20		
569.90	100 /4"		9
-35			
Updated Station 9/15/04			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

BOR. BORING MACARTHUR EXTENSION STATE STRUCTURES.GPJ DEFAULT.GDT 9/9/04
Latitude Longitude

LAYOUT	MNM	06/27/03
DRAWN	DAP	01/04/05
REVIEWED	JWM	02/24/05

$FILE$
12/16/2006

Corporate License Number 184-001-084

BORINGS
I-72/MACARTHUR BLVD. RAMP C OVER UPRR
SECTION (84-9-4)A,HBK,BY,BY-1
SANGAMON COUNTY
STATION 46+01.97
STRUCTURE NUMBER 084-0516

HANSON

JOB* 96S2002B

DATE: 11/16/05

Bench Marks:
IDOT BM #15 Chiseled square at the southeast quadrant of the intersection of West Grand Avenue and Hazel Dell Road. Benchmark is located 33 feet south of the centerline of Hazel Dell Road on a headwall of a concrete pipe culvert. NAVD88 El. 602.47
IDOT BM #80 Chiseled cross on the center bolt of the east leg of an iron sign truss over the eastbound lane of Interstate 72. Benchmark is located 1.62 miles east of Il Route 4. NAVD88 El. 601.28
IDOT BM #0150 Disk in monument vault on survey calibration baseline. Benchmark is located 13 feet north of the centerline of Hazel Dell Road and 0.5 miles west of the intersection of Hazel Dell Road and West Grand Avenue. NAVD88 El. 600.47
IDOT BM #374 Railroad spike in power pole west of a bike path and southeast of Recreation Drive. Benchmark is located 0.81 miles south of the intersection of West Grand Avenue and Hazel Dell Road. NAVD88 El. 604.61

Existing Structure: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

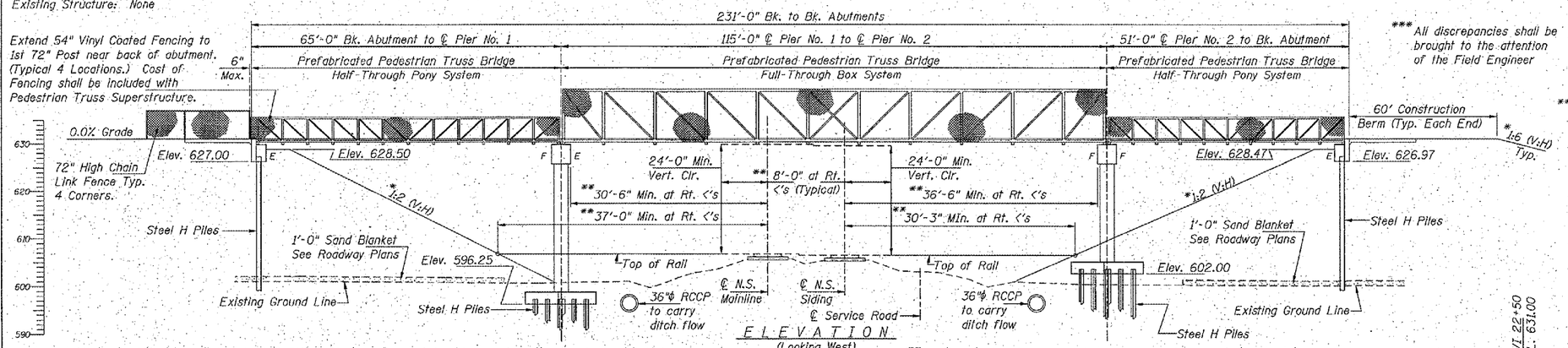
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	341
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 1
4 SHEETS
*02-00382-02-PV
CONTRACT NO. 72541

N.S. MAINLINE TRACK		N.S. SIDING TRACK	
SOUTH RAIL		SOUTH RAIL	
Station	Elevation	Station	Elevation
15+93.46	606.68	15+94.35	606.35
16+96.15	606.68	16+96.73	606.35
18+00.00	606.68	18+00.91	606.33
19+01.43	606.67	19+01.98	606.34
20+03.68	606.68	20+04.56	606.34
21+06.63	606.66	21+07.44	606.34

***EXISTING TOP OF RAIL ELEVATIONS

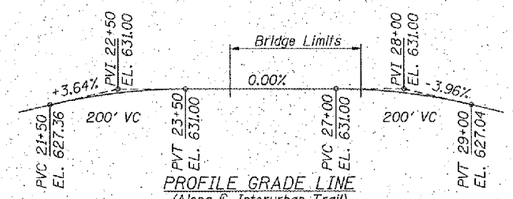
***All discrepancies shall be brought to the attention of the Field Engineer



*Embankment Slopes are an extension of the 1:2 (V:H) slopes of SN 084-0512

ALIGNMENT REFERENCES
MacArthur to Interurban

Interurban Trail Point	MacArthur Blvd. Station	MacArthur Blvd. Offset
P.T. 23+89.51	799+03.42	77.903' Rt.
P.O.T. 25+95.52	801+09.36	73.266' Rt.
P.C. 28+86.31	804+00.08	66.721' Rt.



PROFILE GRADE LINE
(Along ℄ Interurban Trail)

Note:
P.G.L. does not follow camber of truss.
See Truss Camber Diagram on Sheet 2 of 4.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph C. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

LEE W. MOY
43761
REGISTERED STRUCTURAL ENGINEER OF ILLINOIS
SIGNATURE:
DATE SIGNED: 12-26-07
LISC. EXP. DATE: 11-30-08

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 2.0

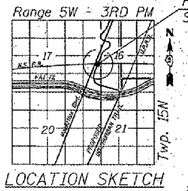
DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinf.)
PREFABRICATED UNITS
See Guide Bridge Special Provisions "Pedestrian Truss Superstructure"

◆Indicates Boring Location (For Boring Data See SN 084-0512 Borings)

PLAN

DESIGN SPECIFICATIONS
1997 AASHTO Guide Specifications for design of Pedestrian Bridges

LOADING
Uniform Live Load = 65 p.s.f (Primary Members)
Uniform Live Load = 85 p.s.f. (Secondary Members)
Vehicle Load = H-5 Truck



LOCATION SKETCH

GENERAL PLAN & ELEVATION
INTERURBAN TRAIL OVER N.S. R.R.
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 26+02.50
STRUCTURE NO. 084-7008

HANSON

JOB NO. 96S2002b
DATE 03/08/06

LAYOUT	M.M.W.	10/21/05
DRAWN	Proj	10/21/05
REVIEWED	M.M.W.	10/24/05

01/25/2007
I:\96JOBS\96s2002b\Struct\SN 084-7008.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	342
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*02-00382-02-PV

SHEET NO. 2
4 SHEETS
CONTRACT NO. 72541

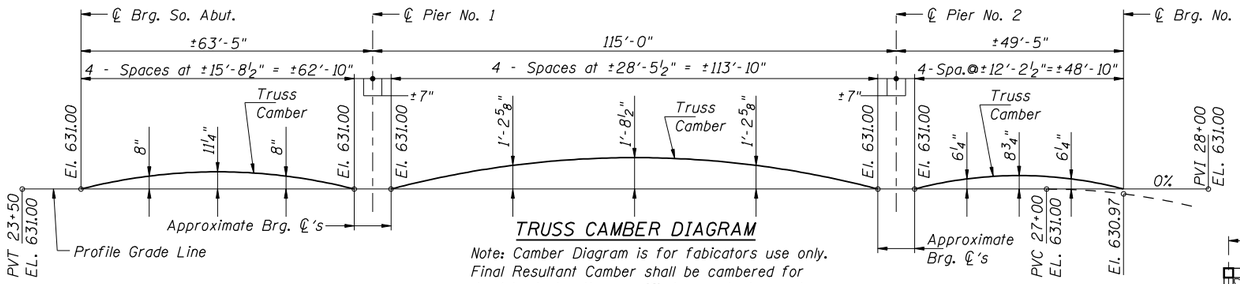
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
2. The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
3. An unconfined compressive strength of 1.5 tons is required during placement of embankment material.
4. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
5. The piles at the abutments shall be driven through 18"ϕ pre-cored holes extending down to Elev. 601.00 at the S. Abut. and 600.00 at the N. Abut. or to the present ground elevation whichever occurs first. The annular space around the pile shall then be backfilled with dry loose sand. The cost of complying with these requirements shall be included with driving steel piles.
6. The Contractor shall drive four HP10x42 test piles in permanent locations, one at each abutment, and one at each pier, as directed by the Engineer before ordering the remainder of piles.
7. All Construction joints shall be bonded.
8. No deck drains will be permitted in the span over the tracks or within 10' of cross arm of railroad pole line.
9. The Prefabricated Pedestrian Truss shall not be painted.
10. See final plans for adjacent structure, Structure Number 084-0512, for boring data information for the folowing borings: MAS 12, MAS 14, MAS 16 and MAS 18.
11. Concrete Sealer shall be applied to the seat area of the abutment caps and pier caps.
12. The Steel H-piles shall be according to AASHTO M270 Grade 50.
13. The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

INTERURBAN TRAIL
BUILT 20-- BY
CITY of SPRINGFIELD
SECTION 02-00382-02-PV
STATION 26+02.50
STR. NO. 084-7008
LOADING H-5 TRUCK

NAME PLATE

See Std. 515001



TRUSS CAMBER DIAGRAM

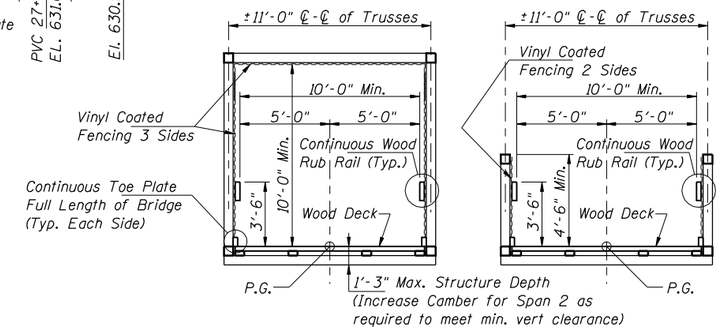
Note: Camber Diagram is for fabicators use only. Final Resultant Camber shall be cambered for dead laod plus the specified amount shown above.

BRIDGE REACTIONS

	*TRUSS REACTIONS (+)=Downward (-)=Upward								
	Span 1			Span 2			Span 3		
	P (Lbs)	H (Lbs)	L (Lbs)	P (Lbs)	H (Lbs)	L (Lbs)	P (Lbs)	H (Lbs)	L (Lbs)
Dead Load	5000	-	-	16000	-	-	4000	-	-
Uniform Live Load	13815	-	-	24440	-	-	10840	-	-
Vehicle Load	5000	-	-	5000	-	-	5000	-	-
Wind Uplift 20psf	-5200	-	-	-9490	-	-	-4080	-	-
Wind	±1985	6295	-	±10830	19725	-	±1505	4940	-
Thermal	-	-	1750	-	-	2400	-	-	1400

P - Vertical Load at Each Bearing (4 per Span)
H - Horizontal Load at Each Substructure (2 per Span)
L - Longitudinal Load at Each Bearing (4 per Span)

* Hanson Professional Services Inc. design includes substructure elements only. Abutment and Pier design and details are based on assumed typical reactions and dimensions. Contractor shall verify that final design and details are compatible with the selected superstructure prior to construction. The Contractor shall employ a Structural Engineer licensed in the State of Illinois to provide alternate abutment and pier designs as required.



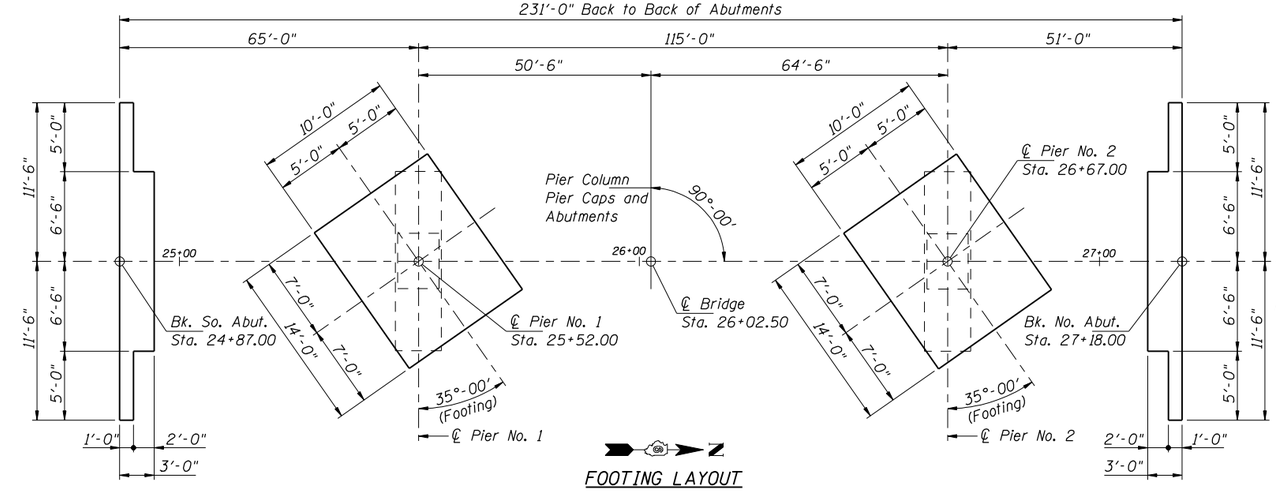
CROSS SECTION THROUGH BOX TRUSS

CROSS SECTION THROUGH PONY TRUSS

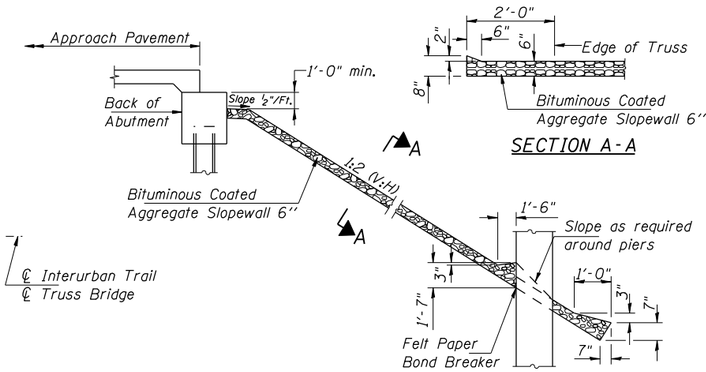
Note: For P.G. Elevations, See Truss Camber Diagram.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	-	151.5	151.5
Concrete Structures	Cu. Yd.	-	68.3	68.3
Pedestrian Truss Superstructure	Sq. Ft.	2290	-	2290
Reinforcement Bars, Epoxy Coated	Pound	-	13520	13520
Bituminous Coated Aggregate Slopewall, 6 Inch	Sq. Yd.	-	245.0	245.0
Furnishing Steel Piles HP 10x42	Foot	-	865	865
Driving Piles	Foot	-	865	865
Test Pile Steel HP 10x42	Each	-	4	4
Name Plates	Each	1	-	1
Concrete Sealer	Sq. Ft.	-	159	159



FOOTING LAYOUT



SECTION A-A

SECTION THRU SLOPEWALL

(Dim. at Rt. ℄'s to Bk. of Abut. on SN 084-0512)

INDEX of SHEETS

GENERAL NOTES and BILL of MATERIAL
INTERURBAN TRAIL OVER N.S. R.R.
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 26+02.50
STRUCTURE NO. 084-7008

HANSON

JOB NO. 96S2002b
DATE 03/08/06

LAYOUT	M.N.M.	10/21/05
DRAWN	Rod	10/21/05
REVIEWED	M.N.M.	10/24/05

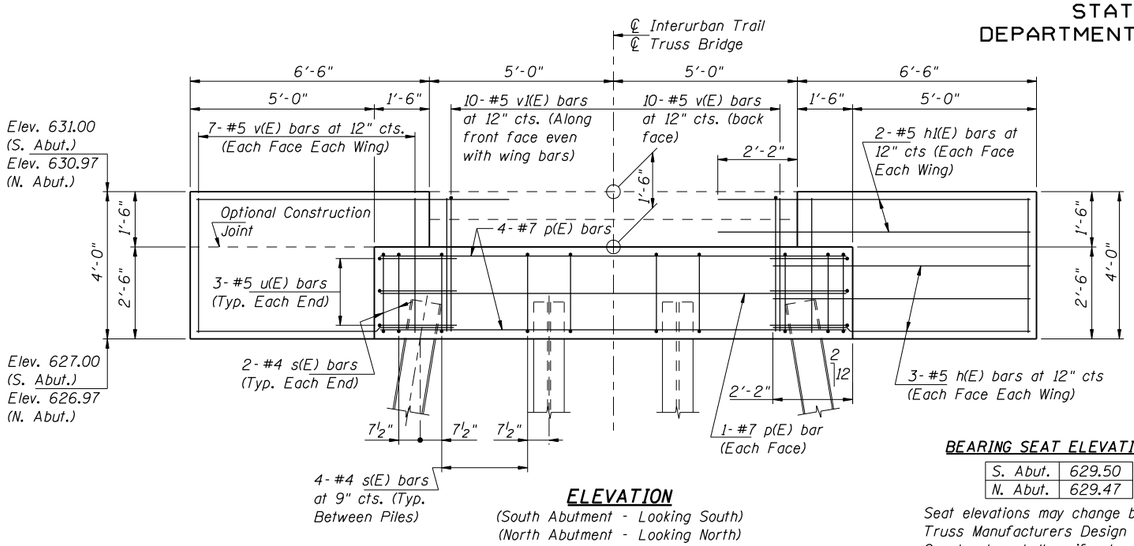
12/16/2006
$FILE$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	343
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*02-00382-02-PV

SHEET NO. 3
4 SHEETS
CONTRACT NO. 72541



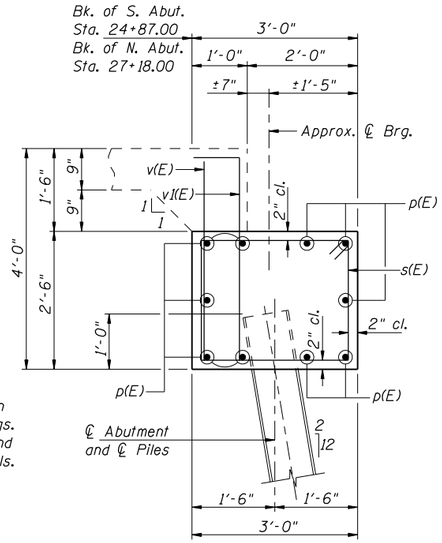
ELEVATION

(South Abutment - Looking South)
(North Abutment - Looking North)

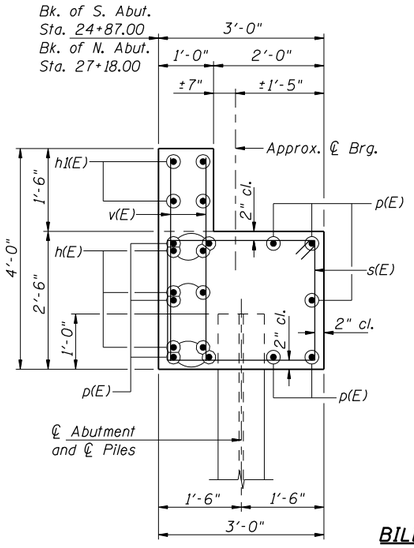
BEARING SEAT ELEVATIONS

S. Abut.	629.50
N. Abut.	629.47

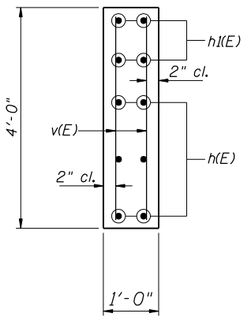
Seat elevations may change based on Truss Manufacturers Design Drawings. Conctractor shall verify elevations and dimensions prior to ordering materials.



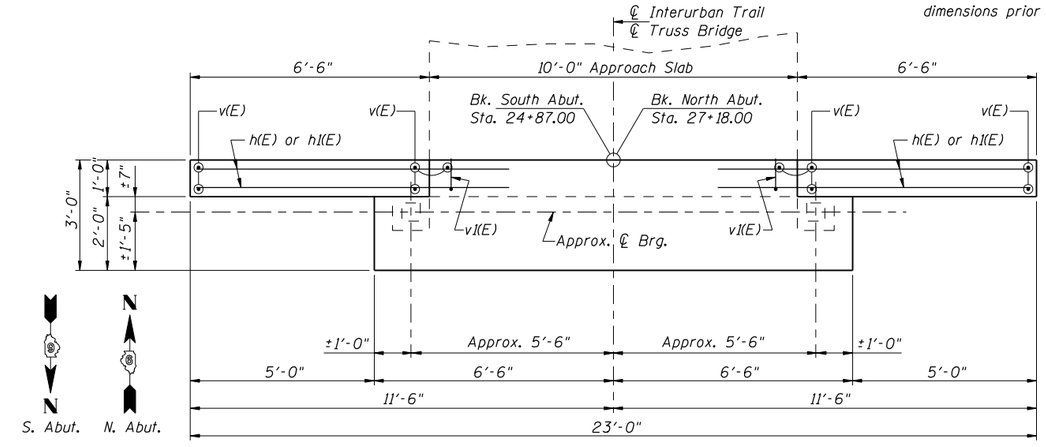
SECTION A-A



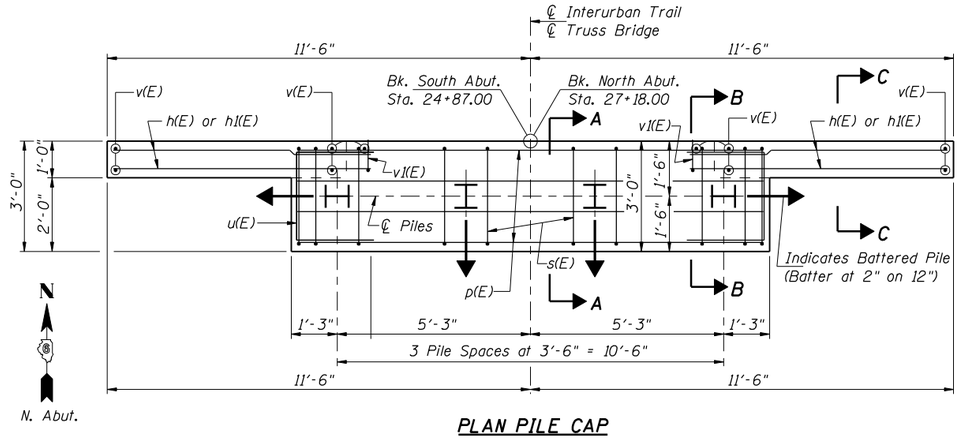
SECTION B-B



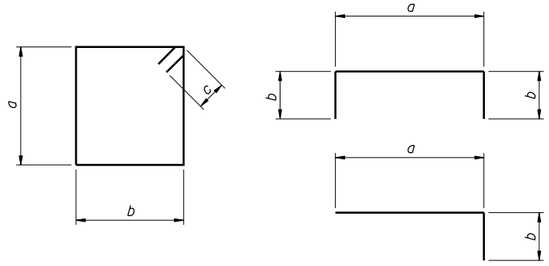
SECTION C-C



TOP VIEW



PLAN PILE CAP



BAR BEND TABLE

Bar	a	b	c	Shape
s(E)	2'-2"	2'-8"	0'-4½"	
u(E)	2'-7"	2'-2"	-	
v1(E)	3'-8"	0'-10"	-	

BILL OF MATERIAL (2 ABUTMENTS)

Bar	Number	Size	Length	Shape
h(E)	24	#5	7'-0"	
h1(E)	16	#5	8'-6"	
p(E)	20	#7	12'-8"	
s(E)	32	#4	10'-5"	
u(E)	12	#5	6'-11"	
v(E)	76	#5	3'-8"	
v1(E)	20	#5	4'-6"	
Structure Excavation			Cu. Yds.	33.8
Concrete Structures			Cu. Yds.	10.6
Reinforcement Bars, Epoxy Coated			Lbs.	1530
Furnishing Steel Piles HP10x42			Foot	375
Driving Piles			Foot	375
Test Piles Steel HP10x42			Each	2

Note:
Reinforcement bars designated (E) shall be epoxy coated.
For approach slab details See Roadway Plans.
Anchor bolt design and locations are per Truss Manufacturer. The Contractor shall place top cap reinforcement to miss anchor bolt locations.

PILE DATA

Pile Type:	HP10x42
Nominal Required Bearing:	335 kips
Allowable Resistance Available:	97 kips (S. Abut.)
	95 kips (N. Abut.)
Estimated Length:	63 Feet (S. Abut.)
	62 Feet (N. Abut.)
Number Required:	4 (Per Abutment Including 1 Test Pile)
Test Piles:	1 required at each abutment

NORTH & SOUTH ABUTMENT DETAILS
INTERURBAN TRAIL OVER N.S. R.R.
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 26+02.50
STRUCTURE NO. 084-7008

HANSON

JOB NO. 96S2002b
DATE 03/08/06

12/16/2006
$FILE$

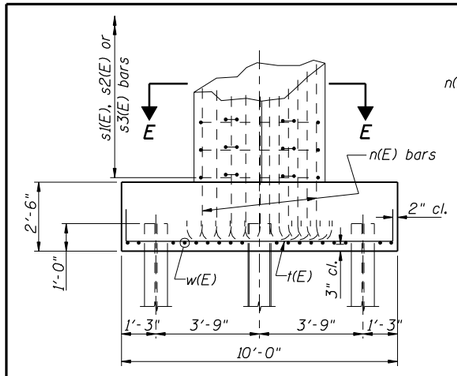
LAYOUT	M.N.M.	10/21/05
DRAWN	Rod	10/21/05
REVIEWED	M.N.M.	10/24/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

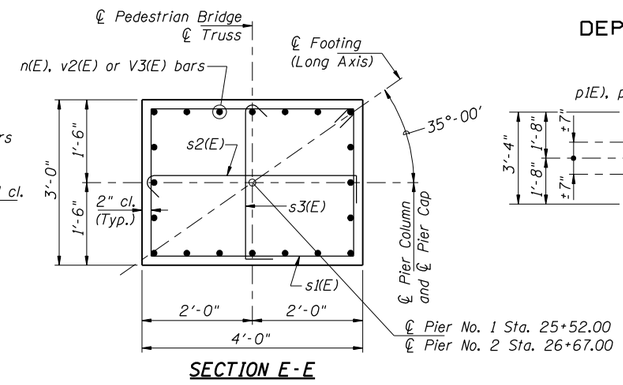
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	344
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*02-00382-02-PV

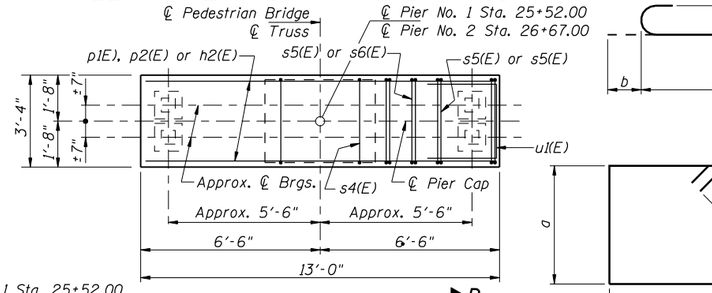
SHEET NO. 4
4 SHEETS
CONTRACT NO. 72541



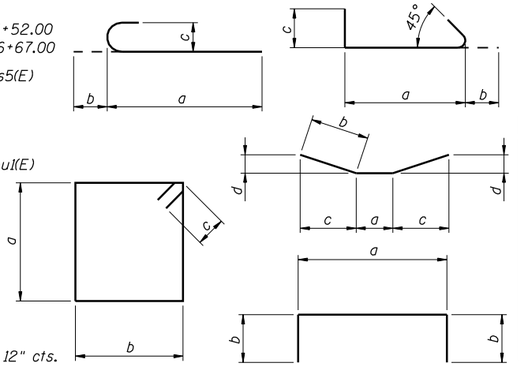
SECTION C-C



SECTION E-E

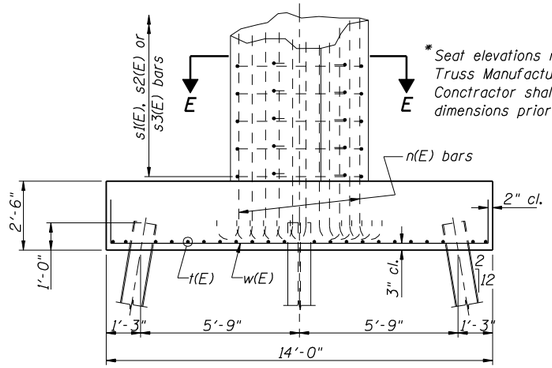


PLAN - PIER CAP



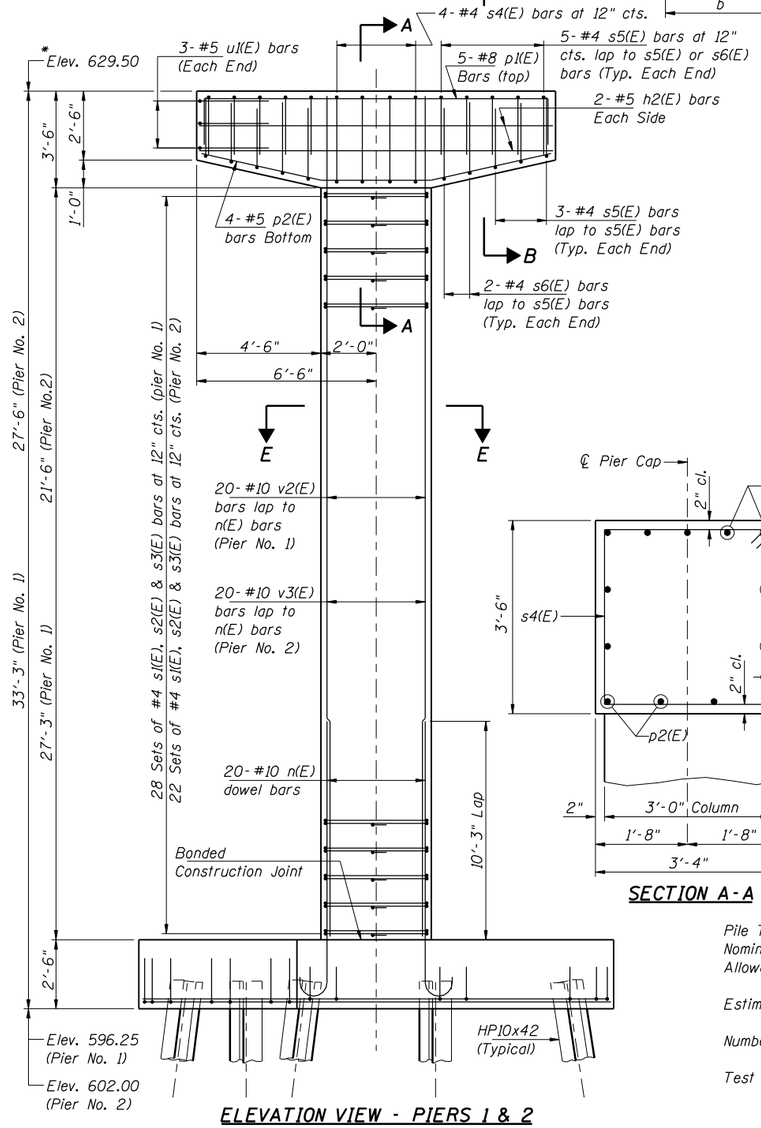
BAR BEND TABLE

Bar	a	b	c	d	Shape
n(E)	12'-4"	1'-5"	1'-1¼"	-	
p1(E)	12'-8"	1'-4"	-	-	
p2(E)	4'-0"	4'-5½"	4'-4¼"	0'-11⅝"	
s1(E)	2'-8"	3'-8"	0'-4½"	-	
s2(E)	3'-8"	0'-4½"	0'-8½"	-	
s3(E)	2'-8"	0'-4½"	0'-8½"	-	
s4(E)	3'-2"	3'-0"	0'-4½"	-	
s5(E)	3'-0"	2'-1"	-	-	
s6(E)	3'-0"	2'-4"	-	-	
t(E)	9'-8"	1'-2"	-	-	
u1(E)	2'-11"	2'-2"	-	-	
w(E)	13'-8"	1'-7"	-	-	



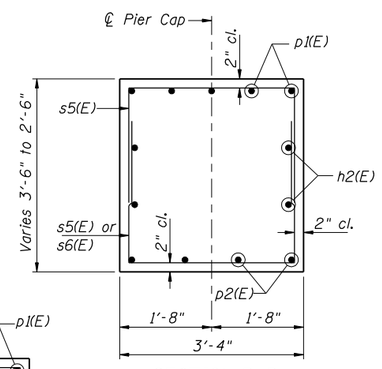
SECTION D-D

*Seat elevations may change based on Truss Manufacturers Design Drawings. Conctractor shall verify elevations and dimensions prior to ordering materials.

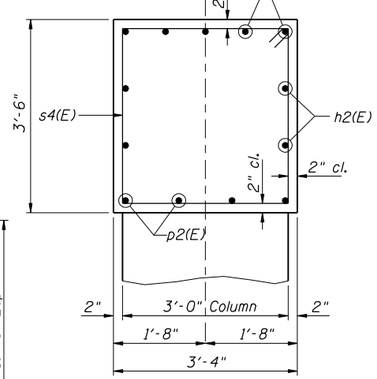


ELEVATION VIEW - PIERS 1 & 2

(Looking North)



SECTION B-B



SECTION A-A

MINIMUM BAR LAPS

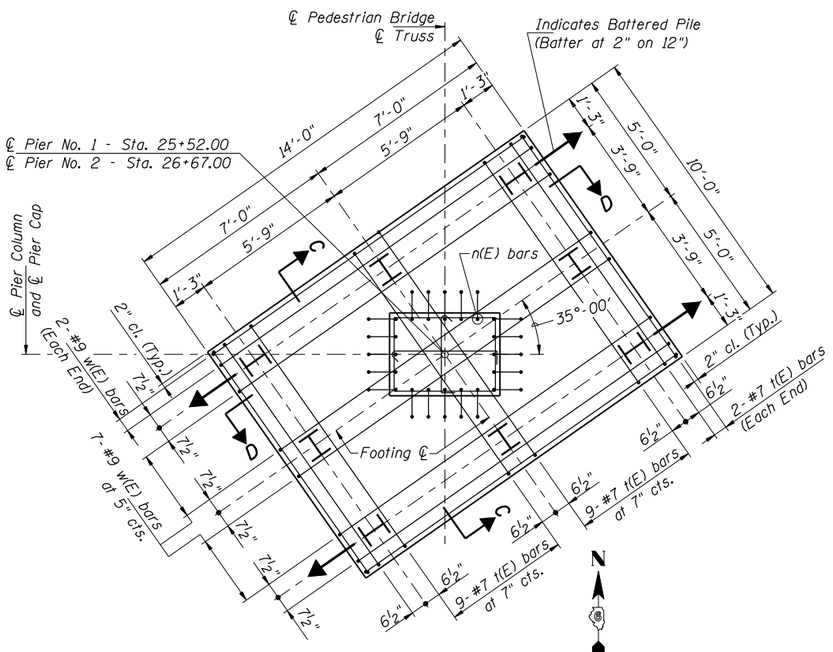
#4 - 1'-8"

BILL OF MATERIAL (2 PIERS)

Bar	Number	Size	Length	Shape
h2(E)	8	#5	12'-8"	
n(E)	40	#10	13'-9"	
p1(E)	10	#8	15'-4"	
p2(E)	8	#5	12'-11"	
s1(E)	50	#4	13'-5"	
s2(E)	50	#4	4'-9"	
s3(E)	50	#4	3'-9"	
s4(E)	8	#4	13'-1"	
s5(E)	32	#4	7'-2"	
s6(E)	8	#4	7'-8"	
t(E)	44	#7	12'-0"	
u1(E)	12	#5	7'-3"	
v2(E)	20	#10	30'-7"	
v3(E)	20	#10	24'-10"	
w(E)	36	#9	16'-10"	

Structure Excavation	Cu. Yds.	117.7
Concrete Structures	Cu. Yds.	57.7
Reinforcement Bars, Epoxy Coated	Lbs.	11990
Furnishing Steel Piles HP10x42	Foot	490
Driving Piles	Foot	490
Test Piles Steel HP10x42	Each	2

Note:
Reinforcement bars designated (E) shall be epoxy coated.
Anchor bolt design and locations are per Truss Manufacturer. The Contractor shall place top cap reinforcement to miss anchor bolt locations.



FOOTING PLAN - PIERS 1 & 2

PILE DATA

Pile Type:	HP10x42
Nominal Required Bearing:	335 kips
Allowable Resistance Available:	94 kips (Pier #1) 95 kips (Pier #2)
Estimated Length:	32 Feet (Pier #1) 38 Feet (Pier #2)
Number Required:	8 (Per Pier Including 1 Test Pile)
Test Piles:	1 required at each pier

PIER DETAILS
INTERURBAN TRAIL OVER N.S. R.R.
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 26+02.50
STRUCTURE NO. 084-7008

HANSON

JOB NO. 96S2002b
DATE 03/08/06

LAYOUT	M.N.M.	10/21/05
DRAWN	Rod	10/21/05
REVIEWED	M.N.M.	10/24/05

12/16/2006
$FILE$

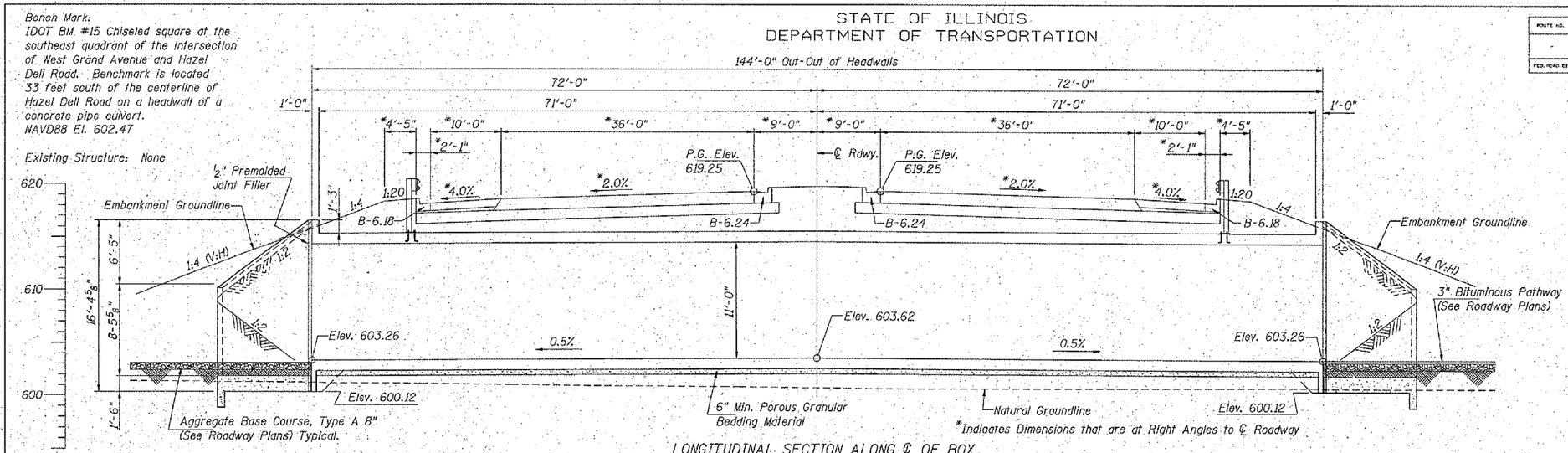
Bench Mark:
IDOT BM. #15 Chiseled square at the southeast quadrant of the intersection of West Grand Avenue and Hazel Dell Road. Benchmark is located 33 feet south of the centerline of Hazel Dell Road on a headwall of a concrete pipe culvert.
NAVD88 El. 602.47

Existing Structure: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

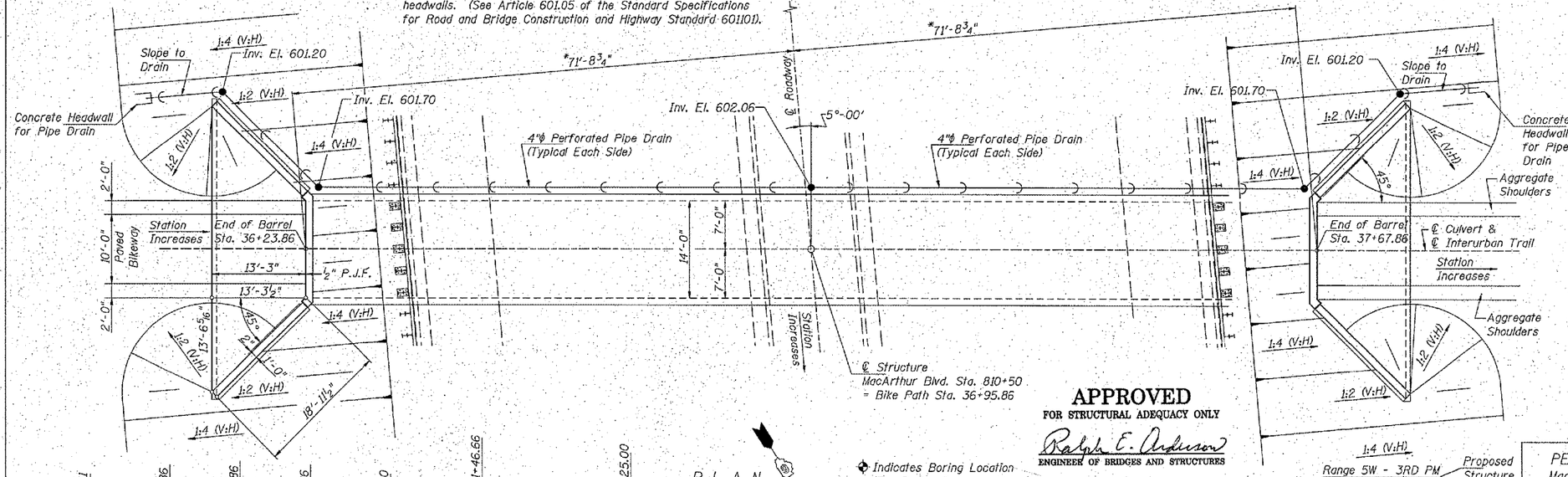
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	345
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

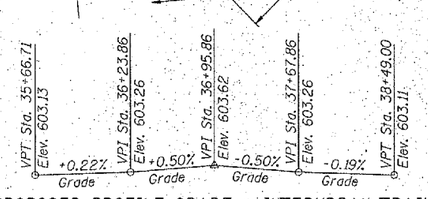
SHEET NO. 1
3 SHEETS
*02-00382-02-PV
CONTRACT NO. 72541



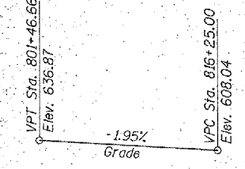
LONGITUDINAL SECTION ALONG ℄ OF BOX
Dimensions are along ℄ of culvert unless otherwise noted.

Note:
The drainage system components shall extend until intersecting with the side slopes. These Pipes shall drain onto concrete headwalls. (See Article 601.05 of the Standard Specifications for Road and Bridge Construction and Highway Standard 601101).





PROPOSED PROFILE GRADE - INTERURBAN TRAIL



PROPOSED PROFILE GRADE MacARTHUR BLVD.

PLAN

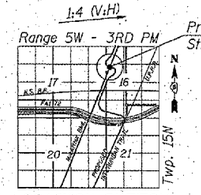
◈ Indicates Boring Location
(For Boring Data see Volume 1, Grading Plans, Boring Sheets)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DESIGN SPECIFICATIONS
AASHTO 2002
LOADING HS20-44
Allow 50 p.s.f. for future wearing surface

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinf.)

INDEX of SHEETS



LOCATION SKETCH

GENERAL NOTES

Construct Roadway Embankment to Elevation 616.00 Minimum and allow a 7 month settling period prior to constructing Pedestrian Underpass.

The Top and Sides of the Box Culvert & Back Face of Wingwalls and Headwalls shall be waterproofed according to article 503.18 of the Standard Specifications for Road and Bridge construction.

Reinforcement Bars shall conform to the requirements of AASHTO M-31 or M-322, Grade 60 for deformed bars.

Nonmetallic Water Seal, Waterproofing, Concrete Nails and 1/2" Premolded Joint Filler shall be included with the cost for 'Concrete Box Culverts'.

Backfill around Box Culvert and Wing Walls with a minimum of 1'-0" of Porous Granular Embankment (Special). Structure Excavation material containing Coal Combustion Byproduct (CCB) may be used for Embankment in those areas shown as CCB. CCB backfill or Embankment shall not be placed within 1'-0" of Cast-in-place Concrete Structures. See Roadway Plans.

Place soil and aggregate base course on top of apron slab prior to backfilling behind wingwalls.

Bars indicated thus 12 x 4 - #5 etc. Indicates 12 lines of bars with 4 lengths per line.

All construction joints shall be bonded.

Precast Alternative will not be allowed.

The top of the bottom slab shall be given a final finish by brushing except the surface shall not be divided by grooves. See Article 424.06 of the Illinois Department of Transporatation, Standard Specifications for Road and Bridge Construction. Cost shall be included with "Concrete Box Culverts".

JAMES W. MOFF
4376
REGISTERED STRUCTURAL ENGINEER
OF ILLINOIS
SIGNATURE:
DATE SIGNED: 1-26-07
LISC. EXP. DATE: 11-30-08

Corporate License Number 184-001-084

PEDESTRIAN UNDERPASS - G.P. & E.
MacARTHUR BLVD. over INTERURBAN TRAIL
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 810+50.00
STRUCTURE NO. 084-7009

HANSON

JOB NO. 96S2002b
DATE 11/16/06

LAYOUT	MHW	12/28/06
DRAWN	Rad	12/28/06
REVIEWED	JHW	/ /

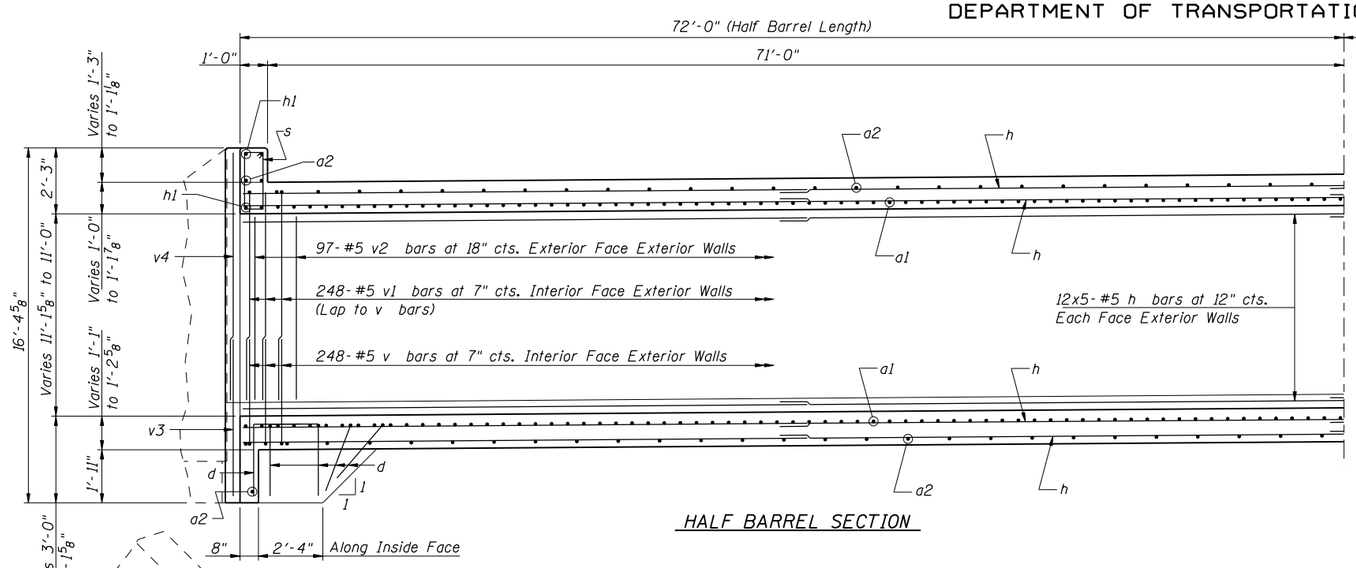
01/26/2007
N:\96JOBS\96s2002b\Struct\SW 084-7009.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

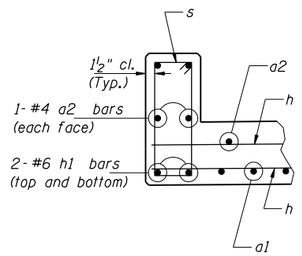
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	346
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*02-00382-02-PV

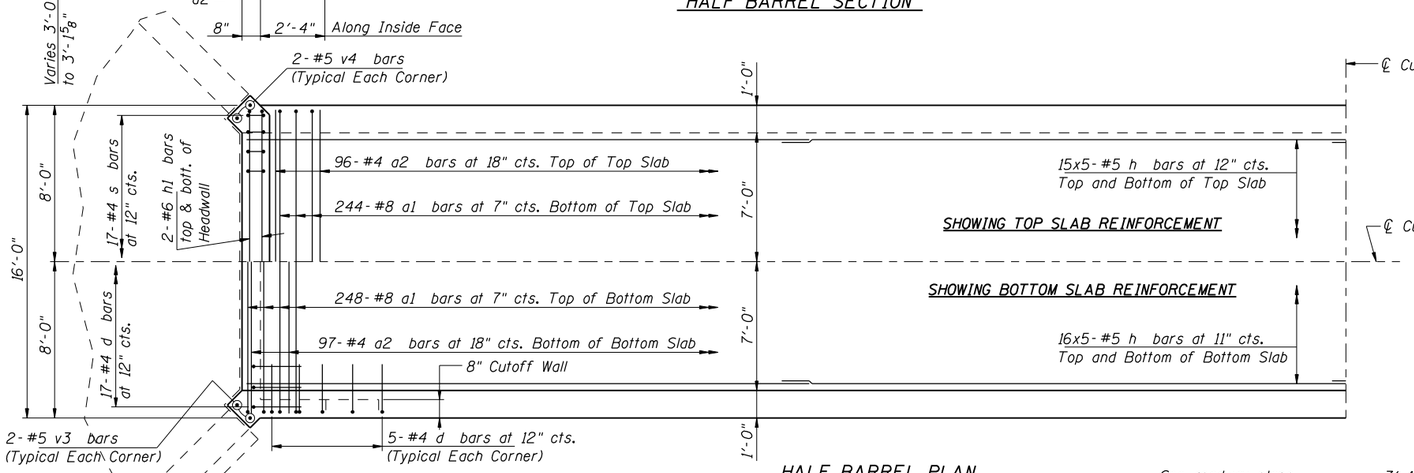
SHEET NO. 2
3 SHEETS
CONTRACT NO. 72541



HALF BARREL SECTION

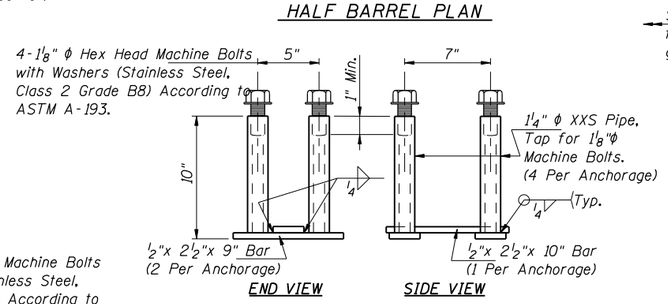


SECTION THRU HEADWALL



HALF BARREL PLAN

TYPICAL SECTION thru GUARDRAIL

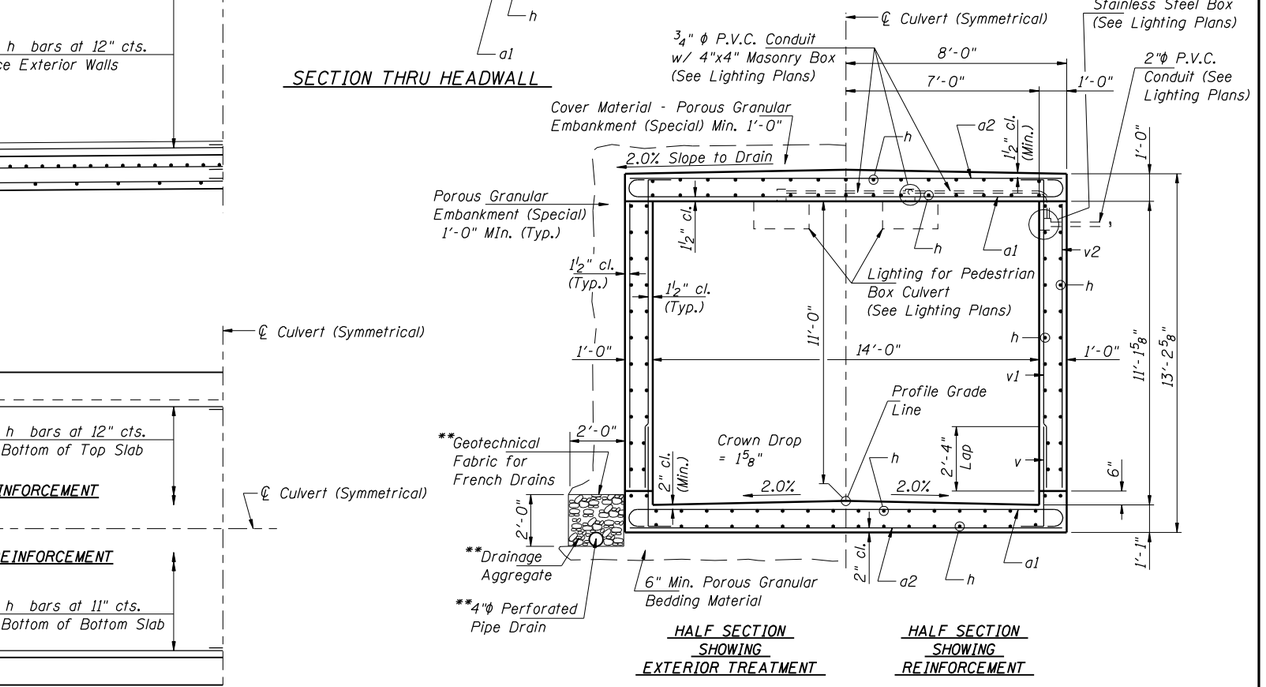


ANCHORAGE ASSEMBLY
(10 Required)

In lieu of the cast-in-place anchorage assembly shown, the Contractor has the option of drilling and epoxy grouting 1" ϕ anchor rods. Embedment shall be according to the manufactures specifications.

Cost of cast-in-place anchorage assemblies shall be included in the cost of Steel Plate Beam Guardrail, Attached to Structure.

Pipe shall conform to the requirements of ASTM designation A53, Grade B. Steel shapes and plates shall conform to the requirements of AASHTO M270, Grade 36.

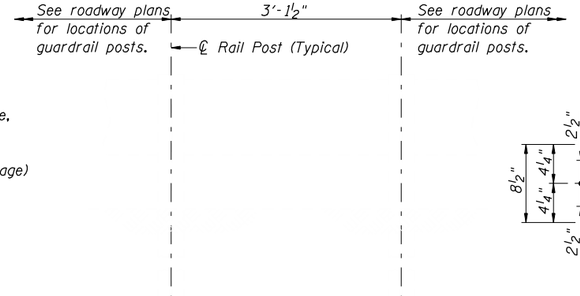


HALF SECTION SHOWING EXTERIOR TREATMENT

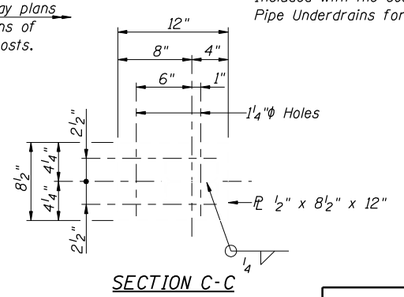
HALF SECTION SHOWING REINFORCEMENT

TYPICAL SECTION THRU BOX CULVERT

**Included with the cost for Pipe Underdrains for Structures 4"



PARTIAL ELEVATION VIEW



SECTION C-C

MINIMUM BAR LAPS
#5 Bar - 2'-2"

PEDESTRIAN UNDERPASS - BARREL DETAILS
MacARTHUR BLVD. over INTERURBAN TRAIL
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 810+50.00
STRUCTURE NO. 084-7009

HANSON

JOB NO. 96S2002b
DATE 11/16/06

LAYOUT	MNM	03/28/06
DRAWN	Rad	03/28/06
REVIEWED	JWM	/ /

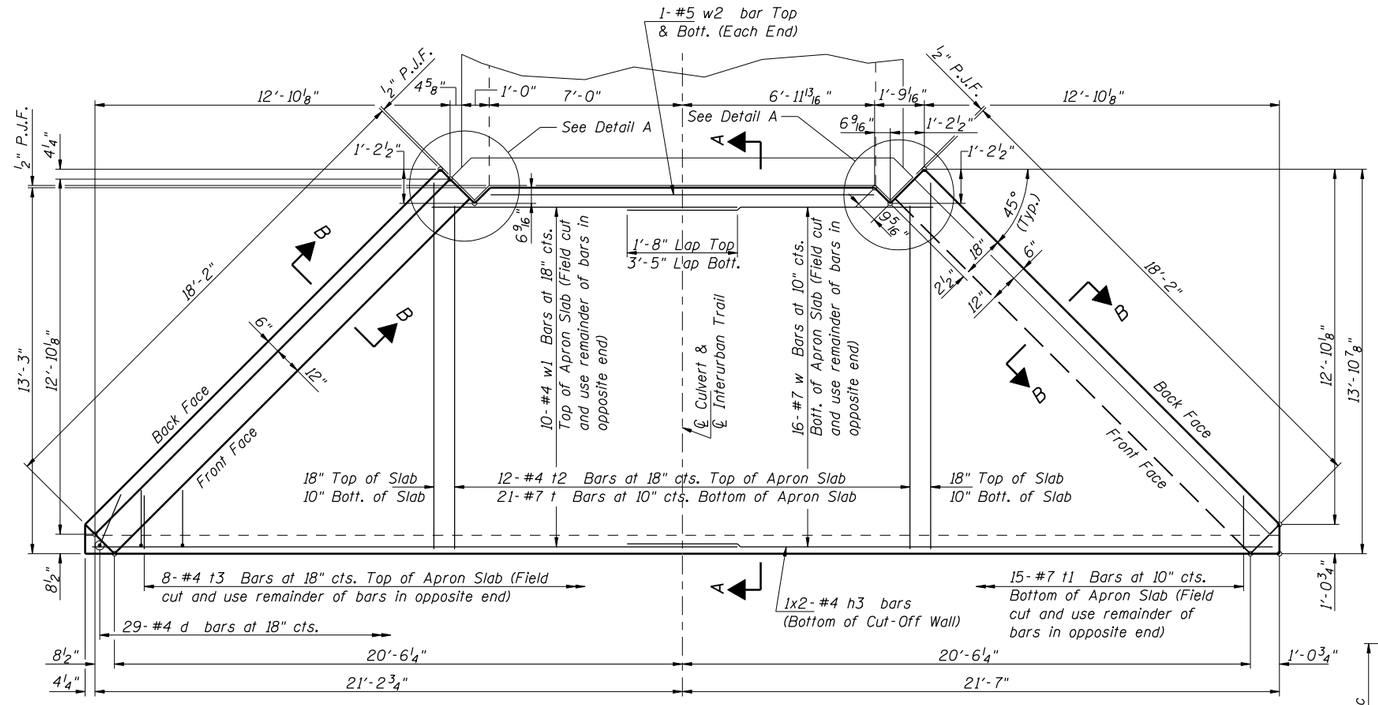
12/16/2006
$FILE$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	SANGAMON	559	347
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

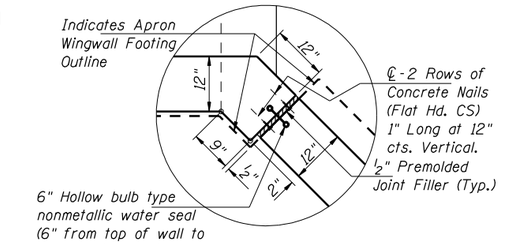
*02-00382-02-PV

SHEET NO. 3
3 SHEETS
CONTRACT NO. 72541

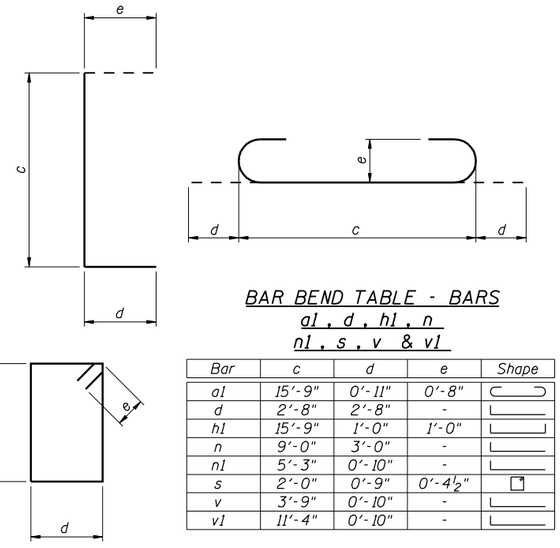


Showing Top of Wingwall — Showing Base of Wingwall

PLAN - APRON / WINGWALL FOOTING



HEADWALL DETAIL 'A'

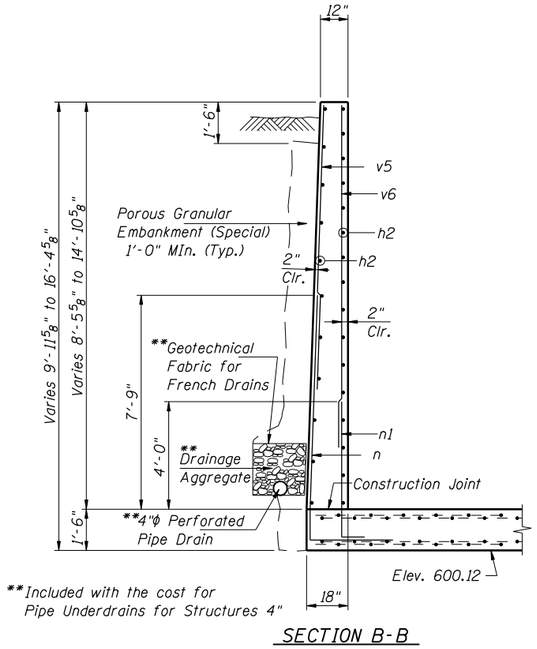


BAR BEND TABLE - BARS
a1 , d , h1 , n
n1 , s , v & v1

Bar	c	d	e	Shape
a1	15'-9"	0'-11"	0'-8"	
d	2'-8"	2'-8"	-	
h1	15'-9"	1'-0"	1'-0"	
n	9'-0"	3'-0"	-	
n1	5'-3"	0'-10"	-	
s	2'-0"	0'-9"	0'-4½"	
v	3'-9"	0'-10"	-	
v1	11'-4"	0'-10"	-	

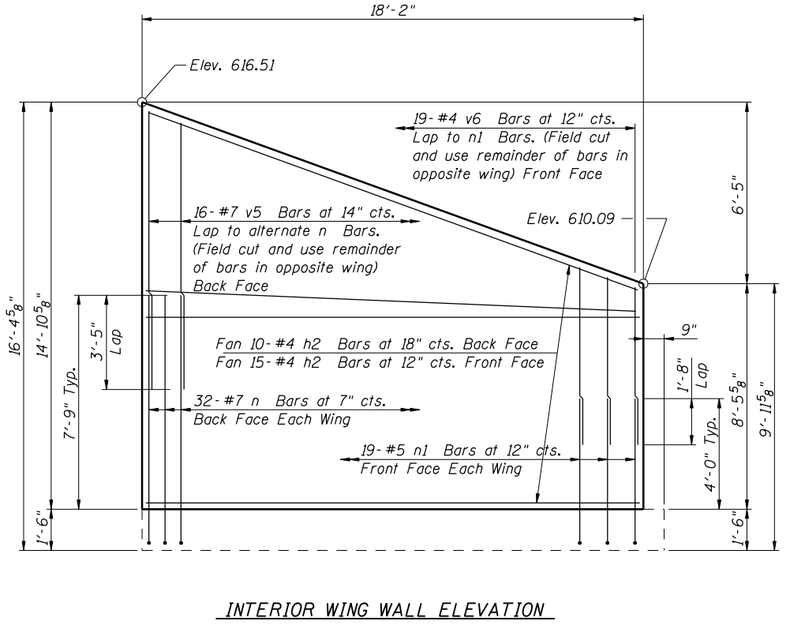
BILL of MATERIAL

Bar	Number	Size	Length	Shape
a1	492	#8	17'-7"	
a2	199	#4	15'-9"	
d	112	#4	5'-4"	
h	550	#5	30'-6"	
h1	8	#6	17'-9"	
h2	100	#4	17'-10"	
h3	4	#4	22'-3"	
n	128	#7	12'-0"	
n1	76	#5	6'-1"	
s	34	#4	6'-3"	
t	42	#7	12'-11"	
t1	30	#7	13'-6"	
t2	24	#4	12'-11"	
t3	16	#4	13'-6"	
v	496	#5	4'-7"	
v1	496	#5	12'-2"	
v2	194	#5	10'-6"	
v3	8	#5	5'-7"	
v4	8	#5	12'-9"	
v5	32	#7	14'-6"	
v6	38	#4	18'-3"	
w	32	#7	34'-0"	
w1	20	#4	32'-2"	
w2	4	#5	14'-0"	
Pipe Underdrains for Structures 4"			Foot	441
Concrete Box Culverts			Cu. Yd.	402.3
Reinforcement Bars			Lbs.	65670
Porous Granular Embankment, Special			Cu. Yd.	298

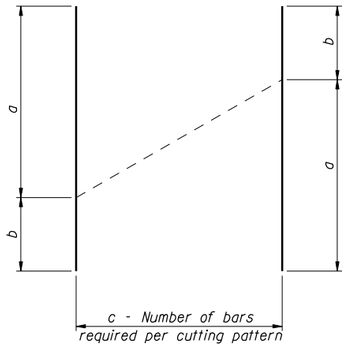


**Included with the cost for Pipe Underdrains for Structures 4"

SECTION B-B

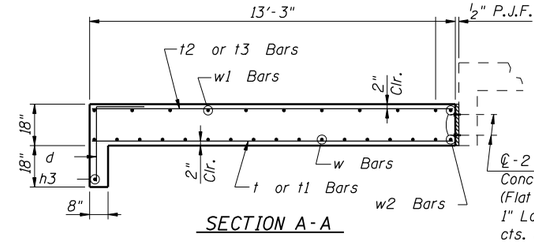


INTERIOR WING WALL ELEVATION



BARS t1 , t3 , v5 , v6 , w & w1

Bar	a	b	c
t1	12'-2"	1'-4"	15
t3	11'-7"	1'-11"	8
v5	10'-4"	4'-2"	16
v6	12'-3"	6'-0"	19
w	23'-2"	10'-10"	16
w1	22'-3"	9'-11"	10



SECTION A-A

MINIMUM BAR LAPS

#4 Bars - 1'-8"
#7 Bars - 3'-5"

Corporate License Number 184-001-084

PEDESTRIAN UNDERPASS - WINGWALL DETAILS
MacARTHUR BLVD. over INTERURBAN TRAIL
SECTION 02-00382-02-PV
SANGAMON COUNTY
STATION 810+50.00
STRUCTURE NO. 084-7009

HANSON

JOB NO. 96S2002b
DATE 11/16/06

LAYOUT	MWM	03/28/06
DRAWN	Rad	03/28/06
REVIEWED	JWM	/ /

12/16/2006
$FILE$

CONTRACT # 72541

FAU 8071	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72	*	SANGAMON	559	348

(84-9-4)A,HBK,BY,BY-1 * 02-00382-02-PV

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GRADING & STRUCTURES
PROPOSED HIGHWAY PLANS

F.A.U. ROUTE 8071 (MACARTHUR BLVD) AND F.A. I. ROUTE 72 (I–72)
SECTION (84–9–4)A,HBK,BY,BY–1 AND SECTION 02–00382–02–PV

SANGAMON COUNTY
C–96–523–04

VOLUME III
CROSS SECTIONS

HANSON

12/16/2005

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	349
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRANSFERRED
	AREAS
	AREAS CHECKED

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

610 605 600 595

℄ MACARTHUR BLVD

0.00,600.26

53.64,599.19 53.64,599.19

-2.00 % -2.00 %

4:1 4:1 4:1 4:1

℄ ℄

A.C. / R.O.W. A.C. / R.O.W.

595.40 595.40

772+00.00

CUT	38	SQ.FT.
FILL	398	SQ.FT.
CCB_FILL	0	SQ.FT.

TOPSOIL_CUT	124	SQ.FT.
TOPSOIL_FILL	7	SQ.FT.
SAND_BLANKET	0	SQ.FT.

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TRANSFERRED
	AREAS
	AREAS CHECKED

610 605 600 595

℄ MACARTHUR BLVD

0.00,599.75

53.64,598.67 53.64,598.67

-2.00 % -2.00 %

4:1 4:1 4:1 4:1

℄ ℄

PR. R.O.W. PR. R.O.W.

595.00 595.00

771+00.00

CUT	42	SQ.FT.
FILL	376	SQ.FT.
CCB_FILL	0	SQ.FT.

TOPSOIL_CUT	122	SQ.FT.
TOPSOIL_FILL	6	SQ.FT.
SAND_BLANKET	0	SQ.FT.

770+00.00

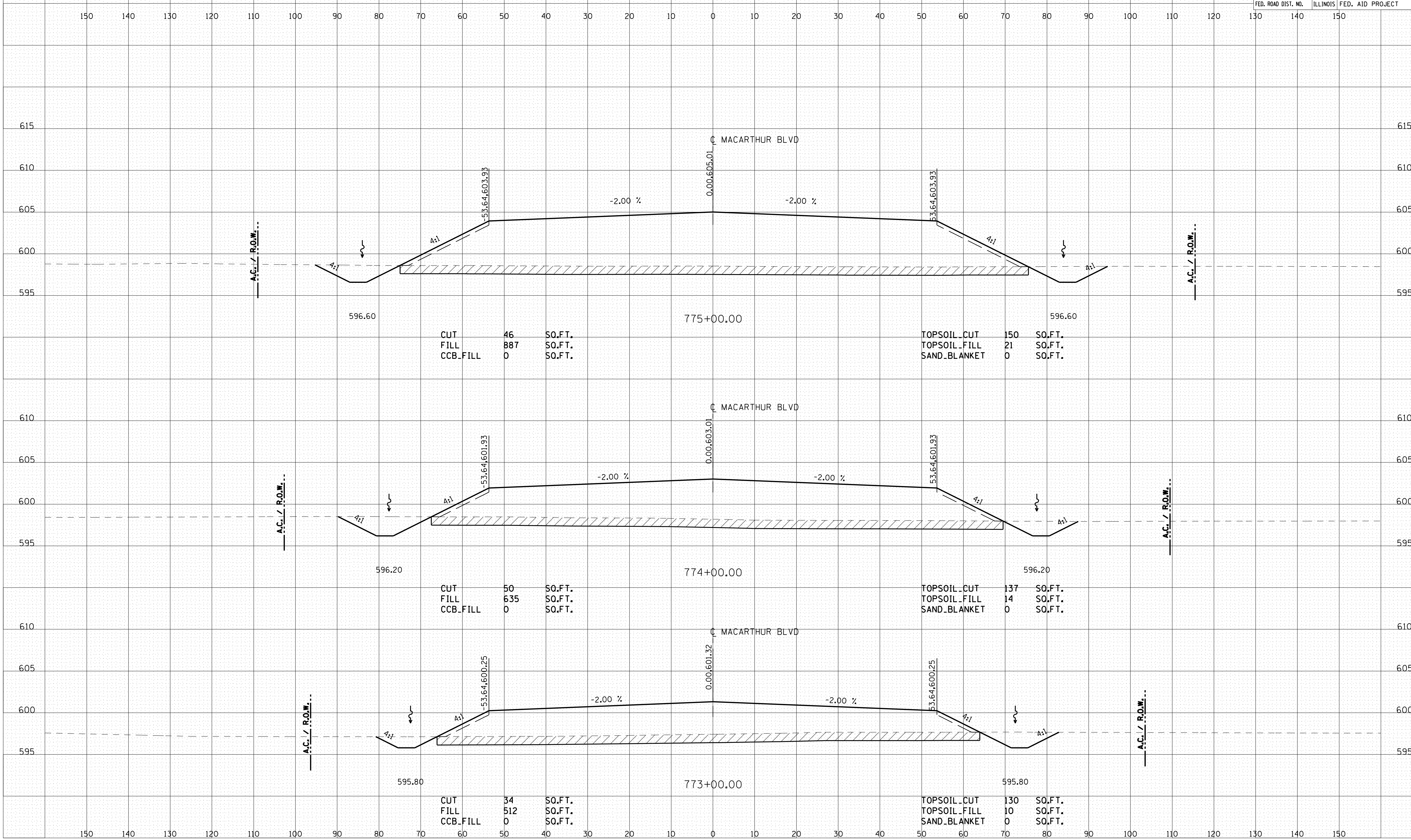
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

MACARTHUR BLVD-1

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	350
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



MACARTHUR BLVD-2

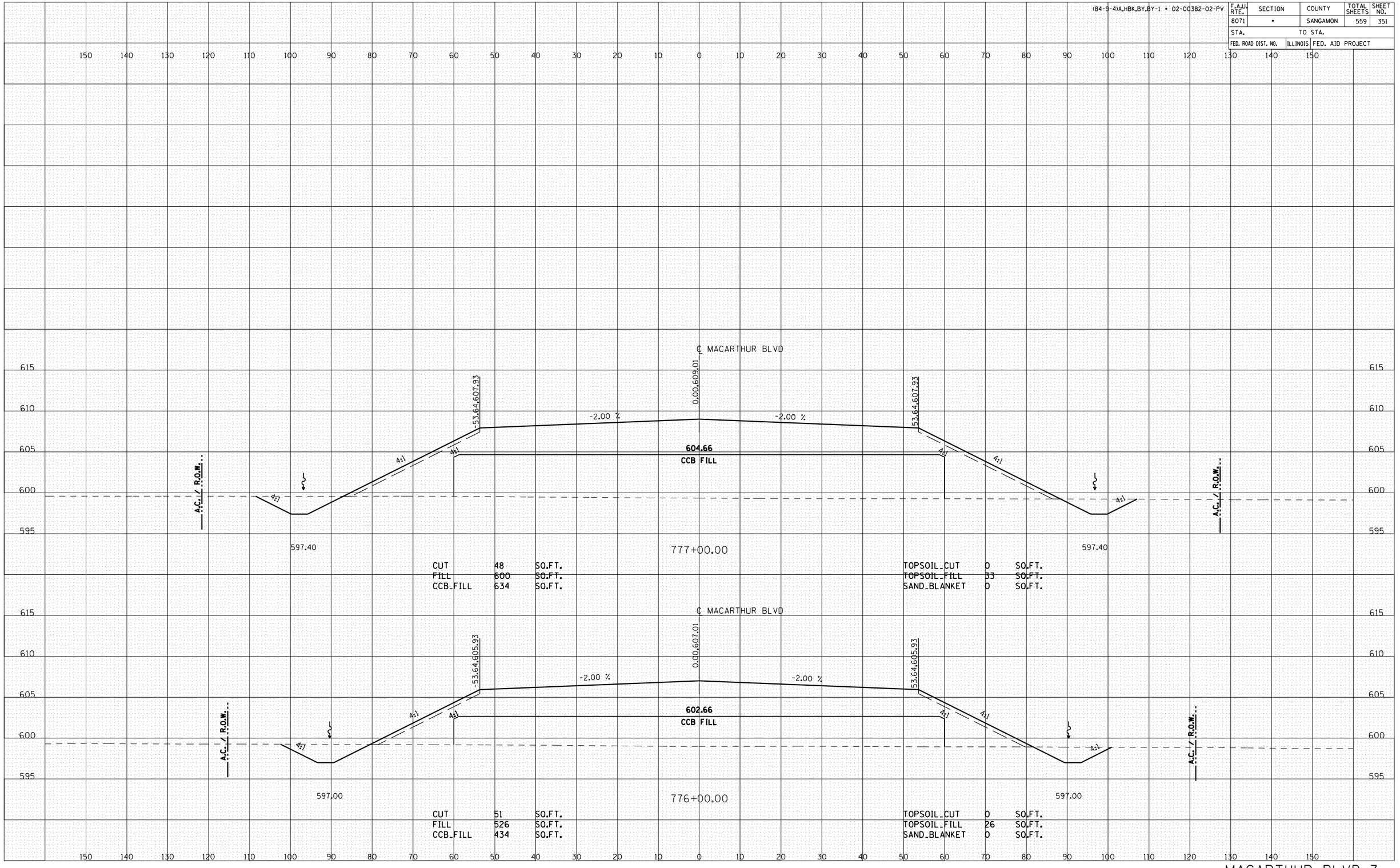
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	351
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TRACED — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TRACED — AREAS — AREAS CHECKED



MACARTHUR BLVD-3

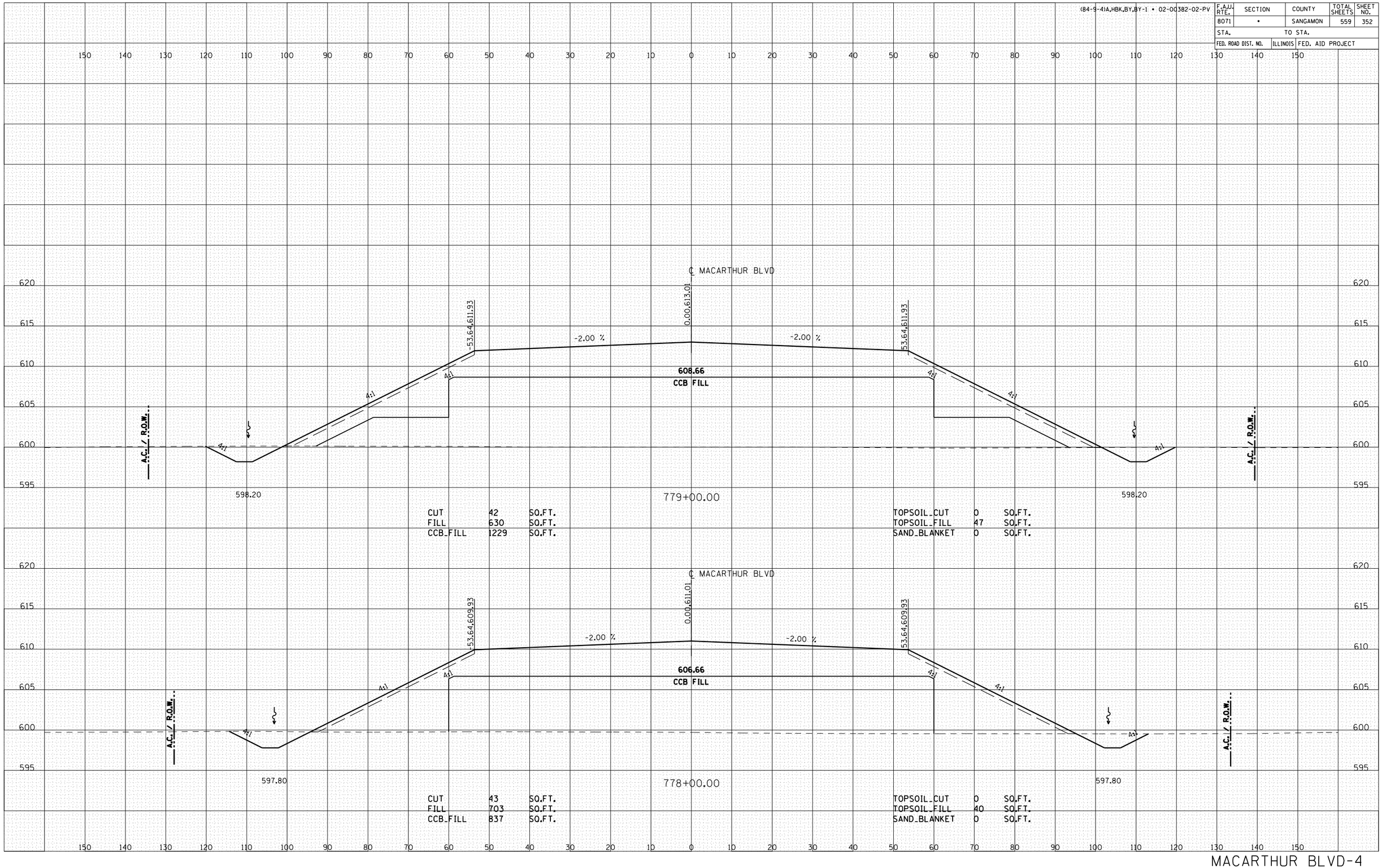
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	352
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED



CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	353
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED

℄ MACARTHUR BLVD

0.00,617.01

-53.64,615.93

53.64,615.93

-2.00 %

-2.00 %

612.66
CCB FILL

4:1

A.C. / R.O.W.

599.00

781+00.00

CUT	32	SQ.FT.
FILL	671	SQ.FT.
CCB_FILL	1910	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	60	SQ.FT.
SAND_BLANKET	0	SQ.FT.

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED

℄ MACARTHUR BLVD

0.00,615.01

-53.64,613.93

53.64,613.93

-2.00 %

-2.00 %

610.66
CCB FILL

4:1

A.C. / R.O.W.

598.60

780+00.00

CUT	34	SQ.FT.
FILL	651	SQ.FT.
CCB_FILL	1562	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	54	SQ.FT.
SAND_BLANKET	0	SQ.FT.

MACARTHUR BLVD-5

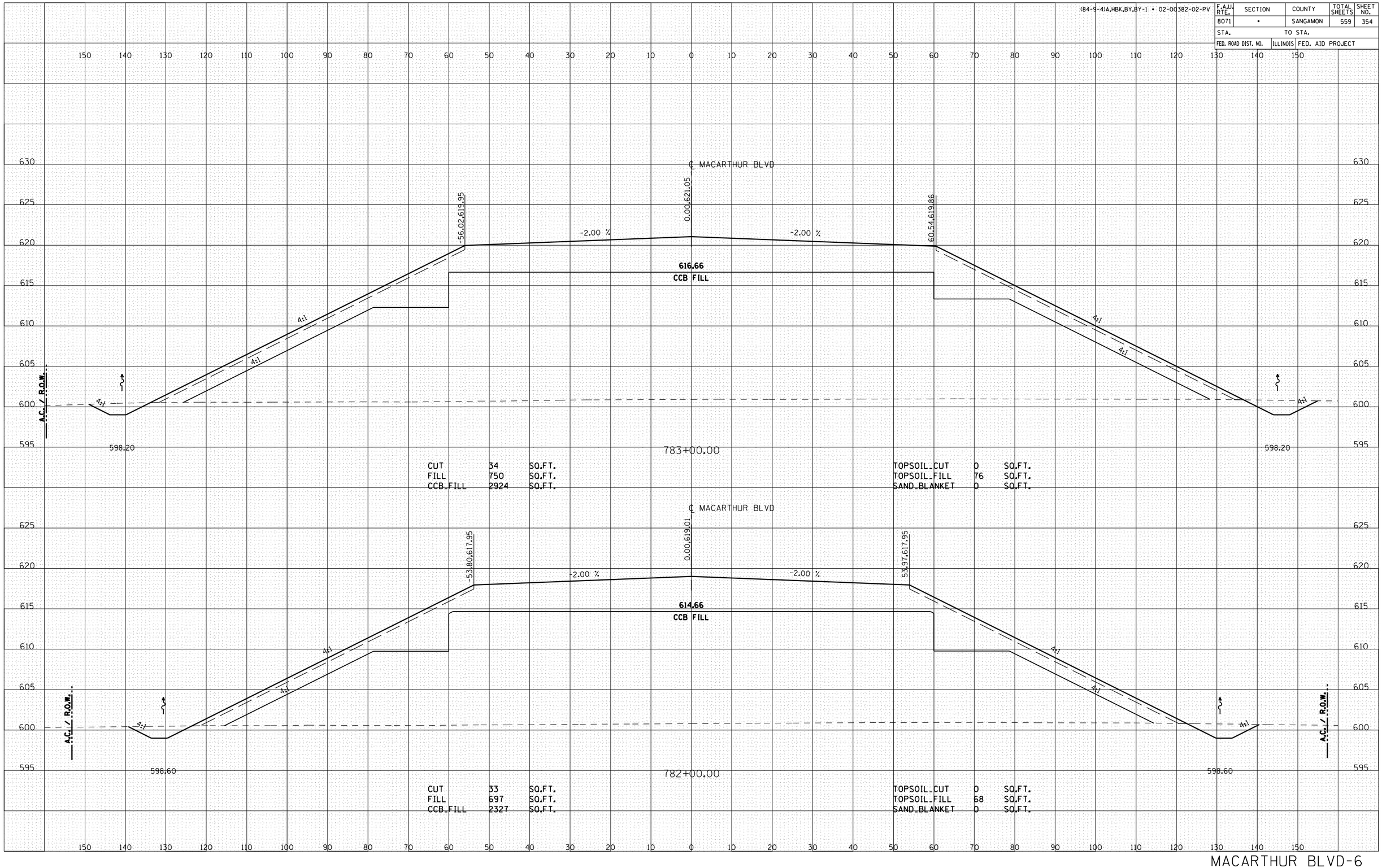
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	354
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRANSFERRED — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRANSFERRED — AREAS — AREAS CHECKED — BY — DATE



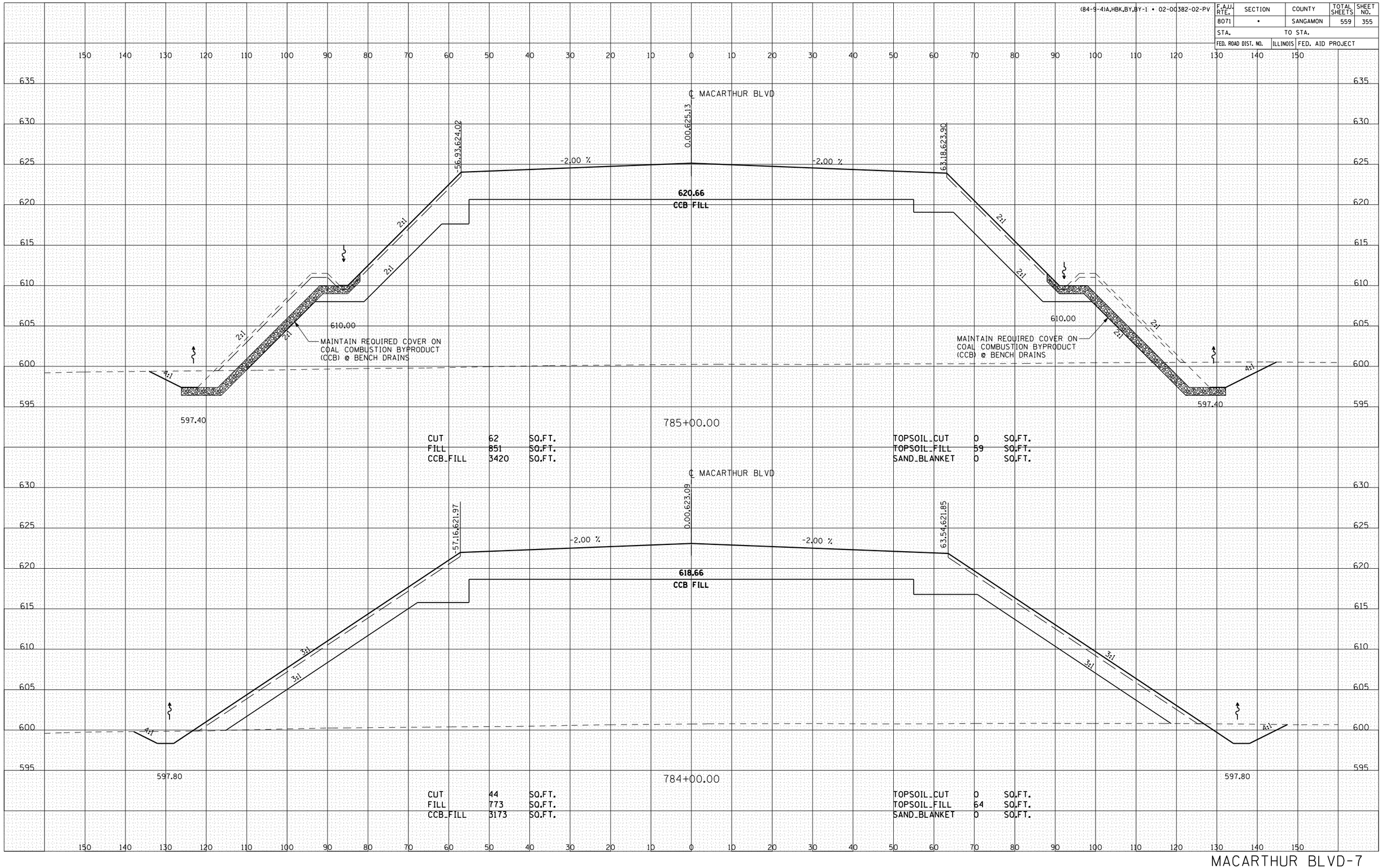
MACARTHUR BLVD-6

CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	355
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — CHECKED — AREAS — AREAS CHECKED — BY — DATE



ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — CHECKED — AREAS — AREAS CHECKED — BY — DATE

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	356
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
BY
DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

635 630 625 620 615 610 605 600 595

℄ MACARTHUR BLVD

0.00,626.65

58.59,625.48

64.83,625.35

-2.00 %

-2.00 %

622.13
CCB FILL

2:1

2:1

2:1

2:1

2:1

2:1

4:1

4:1

610.43

610.43

597.10

597.10

785+73.80

CUT	48	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	893	SQ.FT.	TOPSOIL_FILL	63	SQ.FT.
CCB_FILL	3876	SQ.FT.	SAND_BLANKET	0	SQ.FT.

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

MACARTHUR BLVD-8

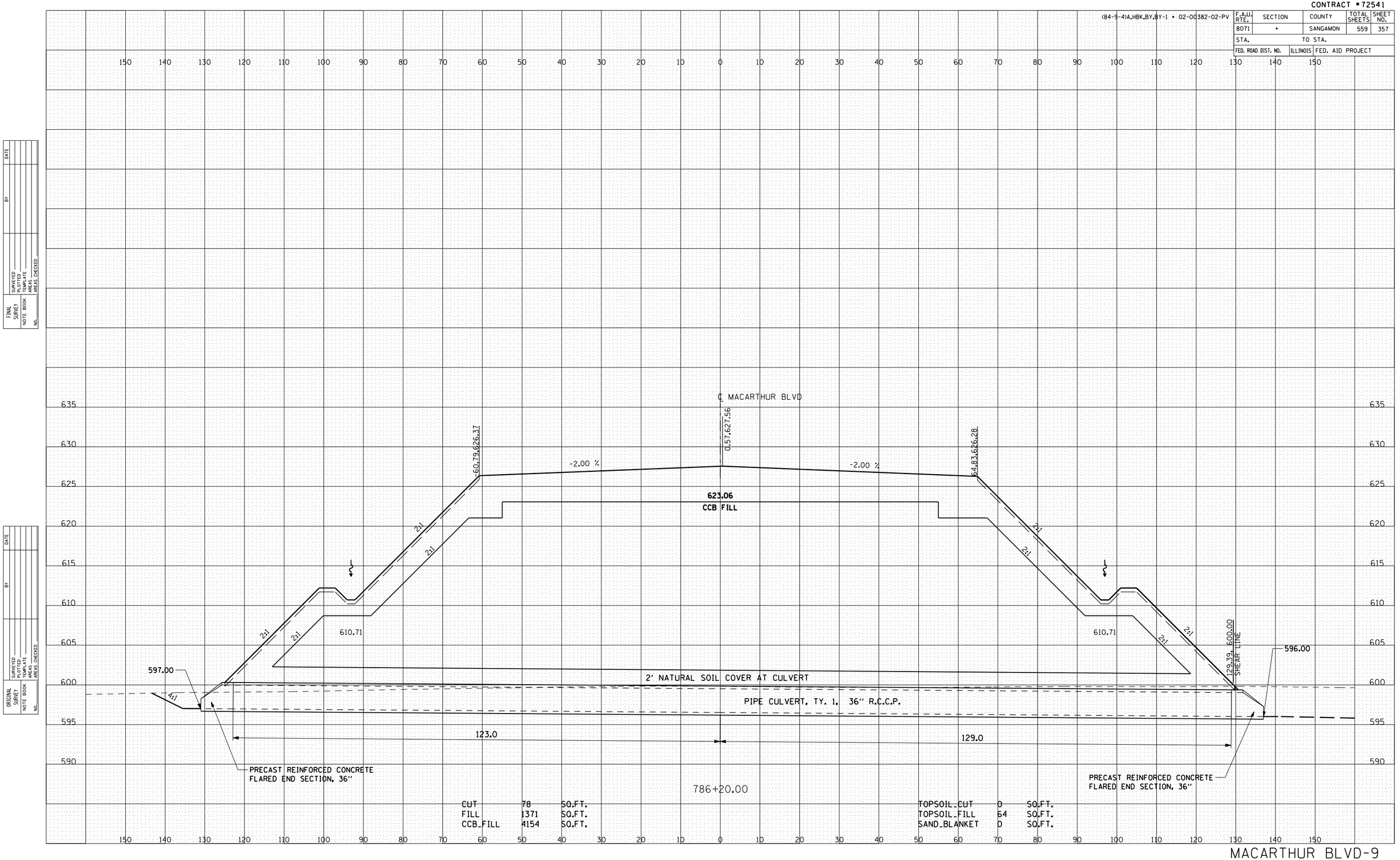
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	357
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE



CUT	78	SQ.FT.
FILL	1371	SQ.FT.
CCB_FILL	4154	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	64	SQ.FT.
SAND_BLANKET	0	SQ.FT.

MACARTHUR BLVD-9

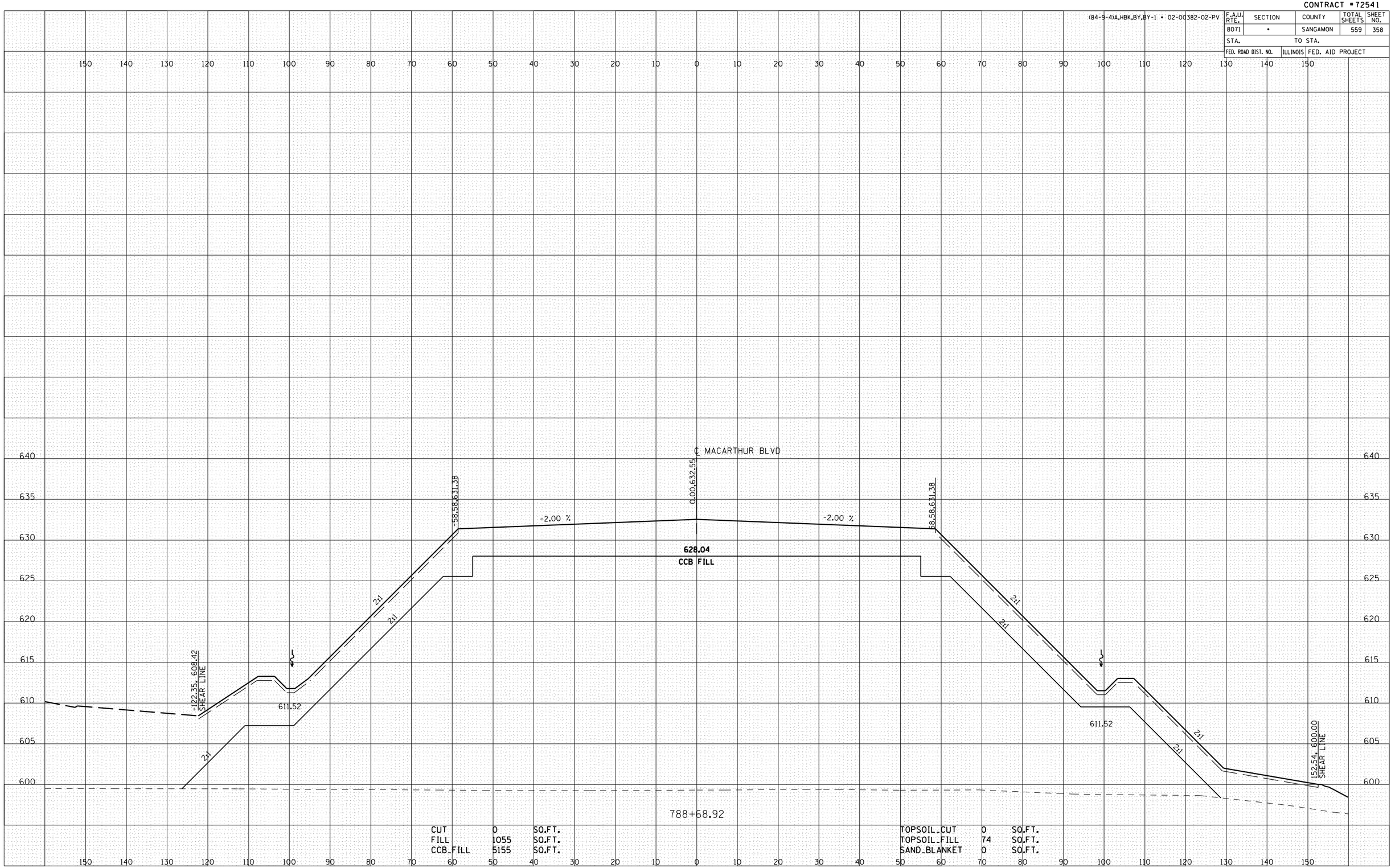
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	358
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
BY
DATE



CUT	0	SQ.FT.
FILL	1055	SQ.FT.
CCB_FILL	5155	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	74	SQ.FT.
SAND_BLANKET	0	SQ.FT.

MACARTHUR BLVD-10

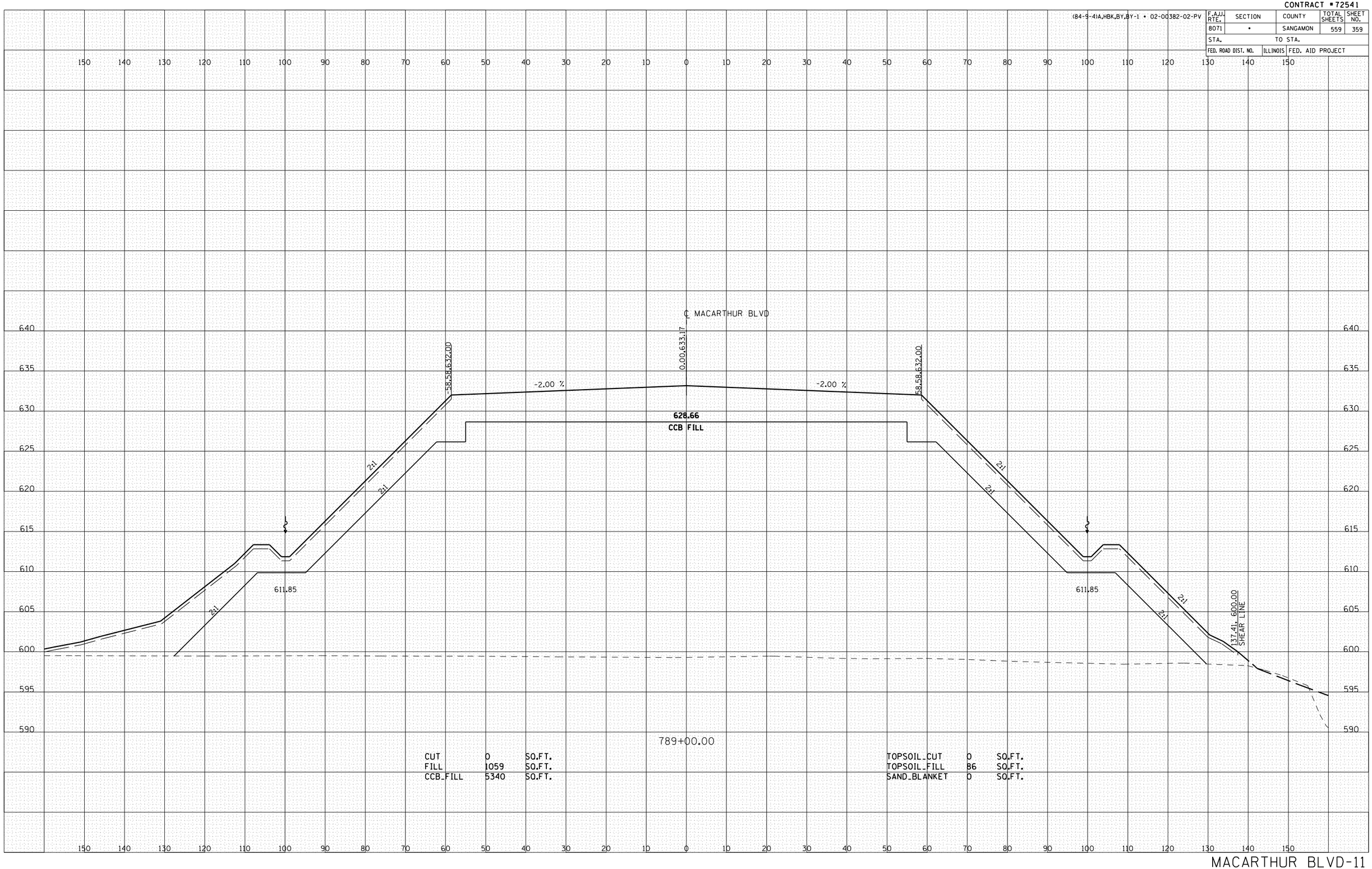
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	359
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE



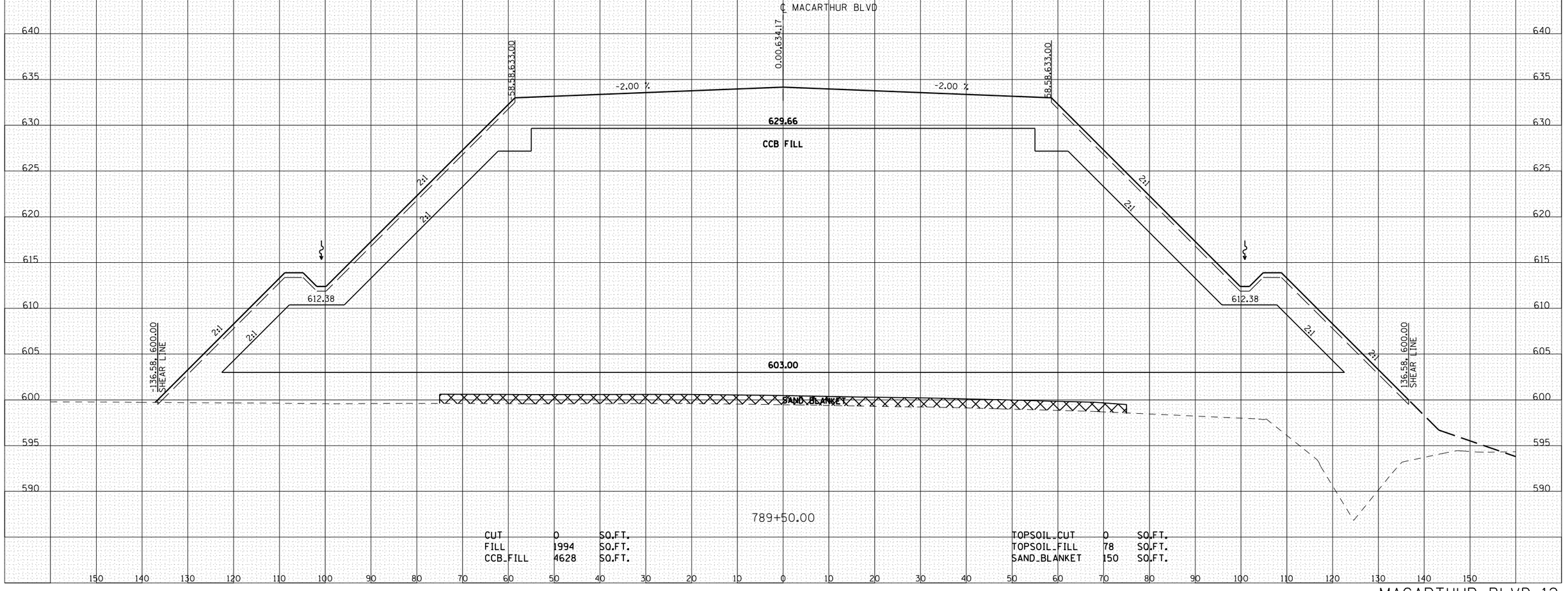
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	360
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED



CUT	0	SQ.FT.
FILL	1994	SQ.FT.
CCB_FILL	4628	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	78	SQ.FT.
SAND_BLANKET	150	SQ.FT.

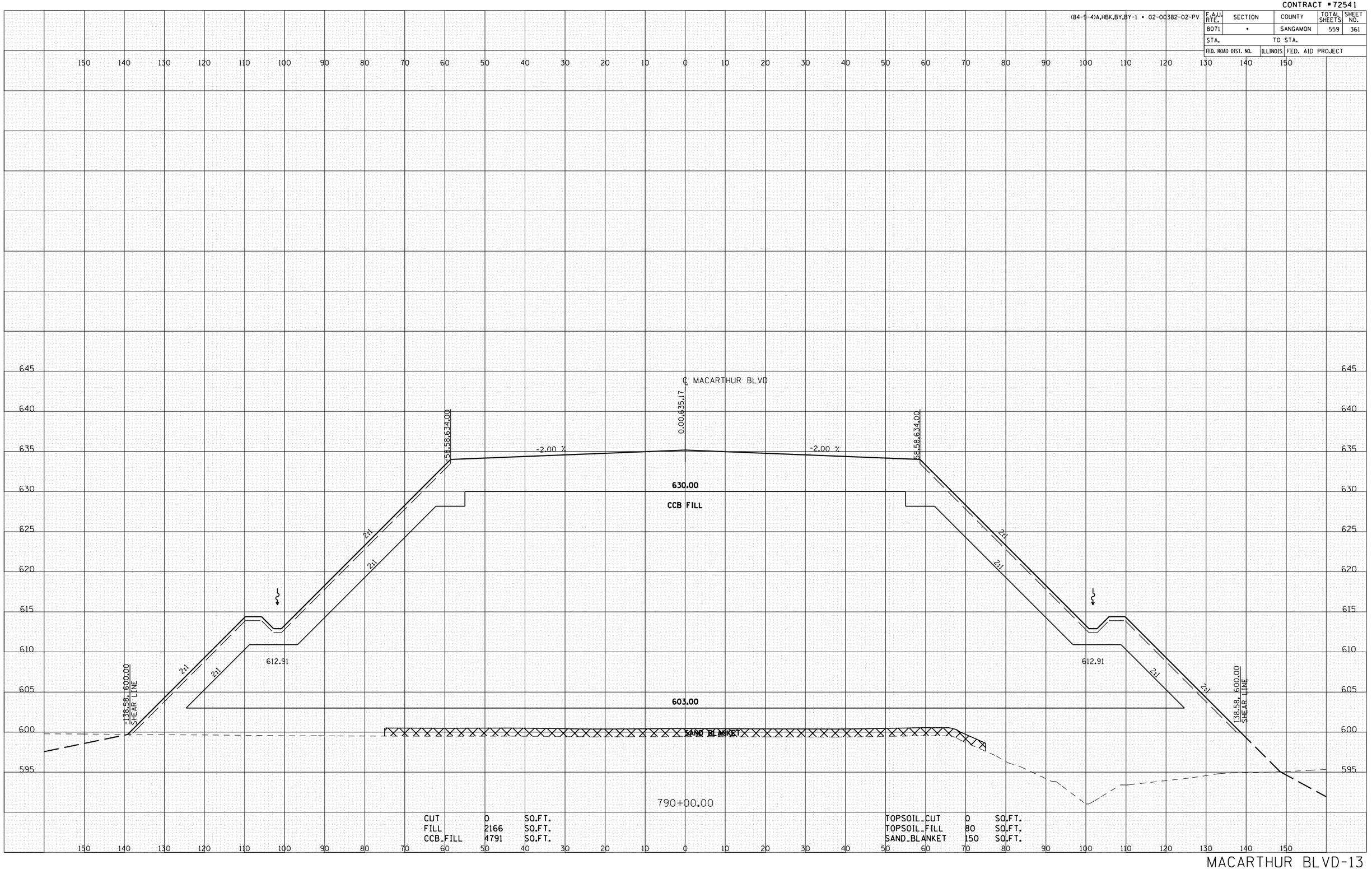
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	361
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE



CUT	0	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	2166	SQ.FT.	TOPSOIL_FILL	80	SQ.FT.
CCB_FILL	4791	SQ.FT.	SAND_BLANKET	150	SQ.FT.

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	362
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER AREAS — AREAS CHECKED — BY — DATE

592.00

MATCHLINE

163.0

PRECAST REINFORCED CONCRETE
FLARED END SECTION, 60"

℄ MACARTHUR BLVD

0.00,635.57

58.58,634.40

-2.00 %

-2.00 %

630.00

CCB FILL

2:1

613.12

610.00

139.38, 600.00
SHEAR LINE

SAND BLANKET

PIPE CULVERT, 60" R.C.C.P. (SPECIAL)

591.00

163.0

146.0

790+20.00

PRECAST REINFORCED CONCRETE
FLARED END SECTION, 60"

MACARTHUR BLVD-14

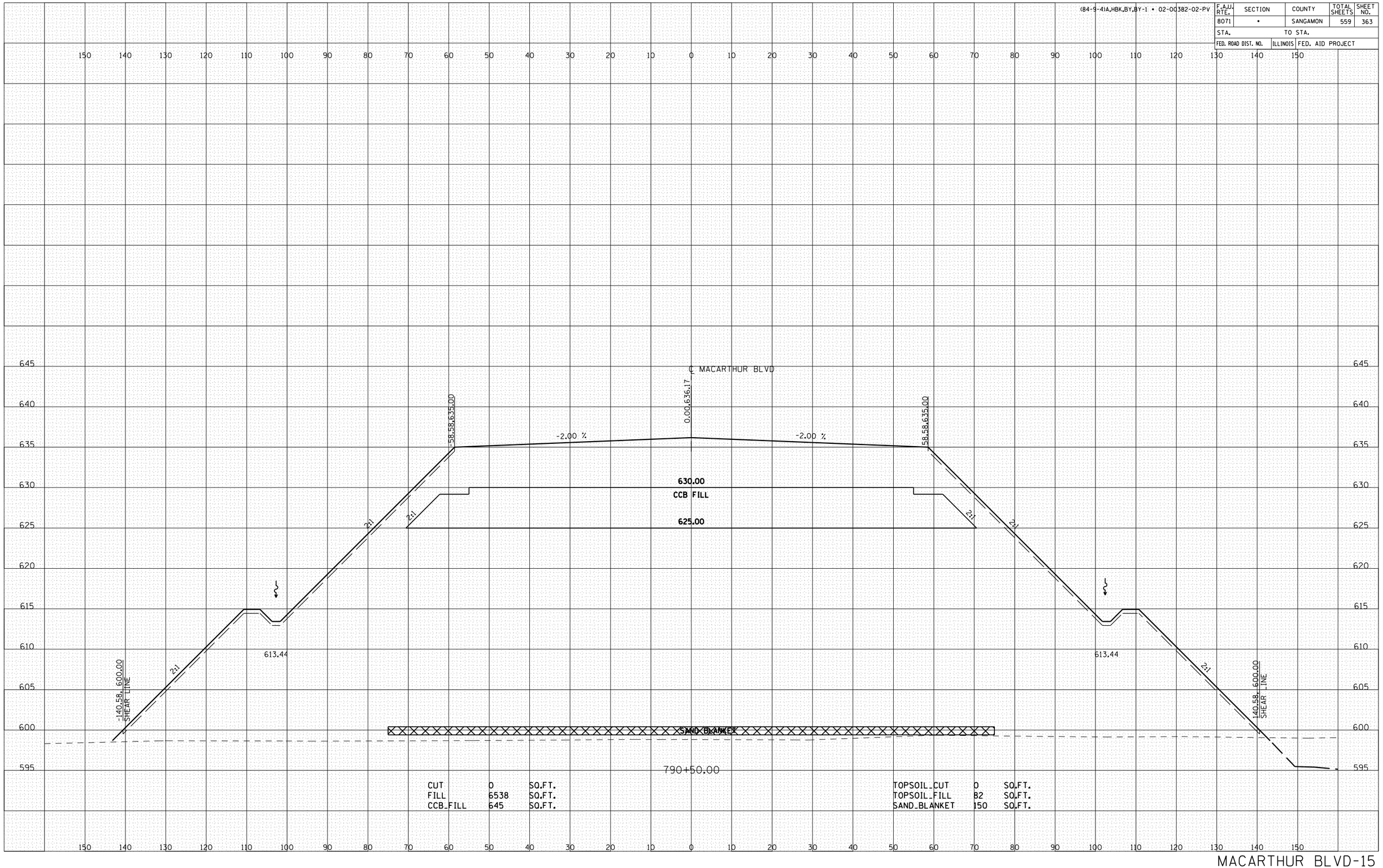
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	363
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE



CUT	0	SQ.FT.
FILL	6538	SQ.FT.
CCB_FILL	645	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	82	SQ.FT.
SAND_BLANKET	150	SQ.FT.

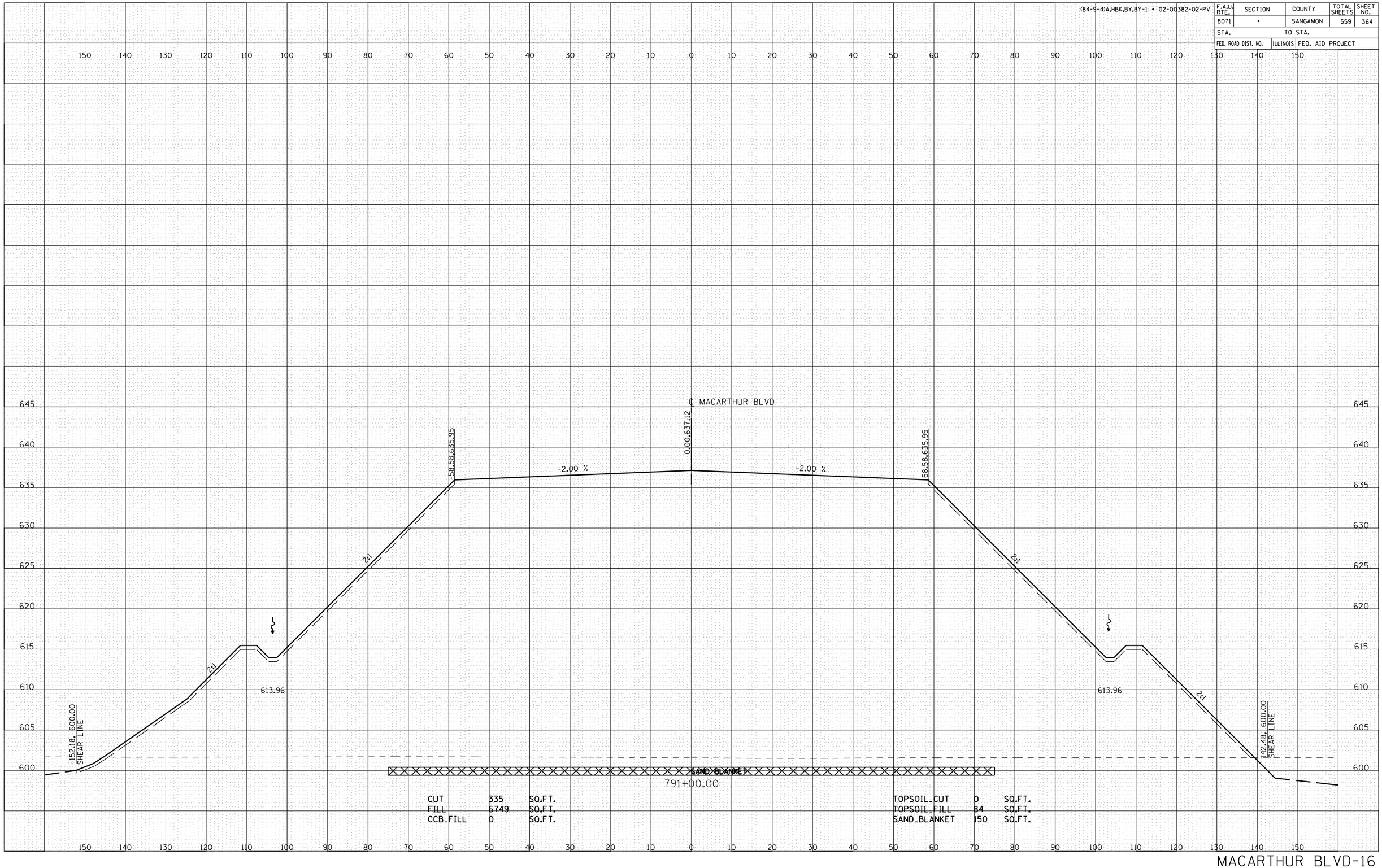
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	364
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE



CUT	335	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	6749	SQ.FT.	TOPSOIL_FILL	84	SQ.FT.
CCB_FILL	0	SQ.FT.	SAND_BLANKET	150	SQ.FT.

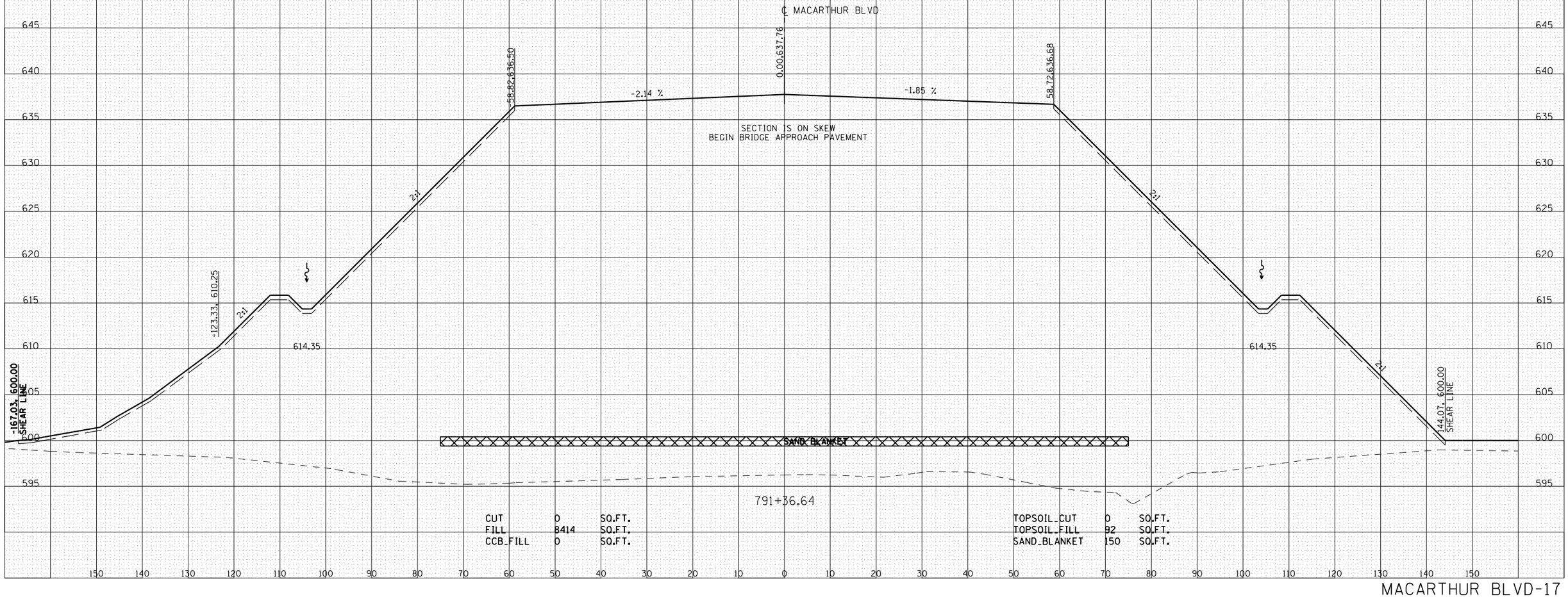
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	365
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE



CUT	0	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	8414	SQ.FT.	TOPSOIL_FILL	92	SQ.FT.
CCB_FILL	0	SQ.FT.	SAND_BLANKET	150	SQ.FT.

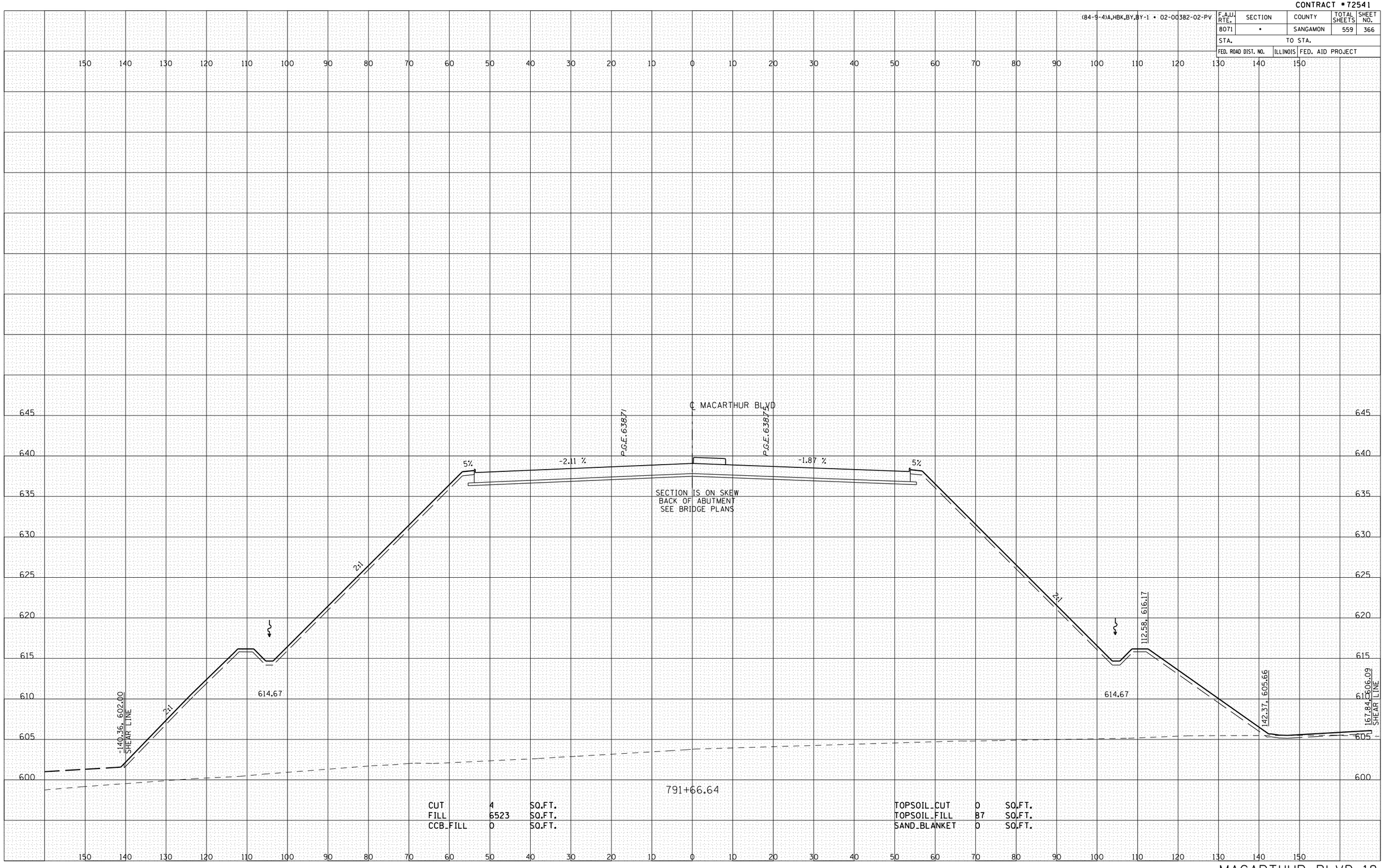
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	366
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED
BY
DATE



791+66.64

CUT	4	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	6523	SQ.FT.	TOPSOIL_FILL	87	SQ.FT.
CCB_FILL	0	SQ.FT.	SAND_BLANKET	0	SQ.FT.

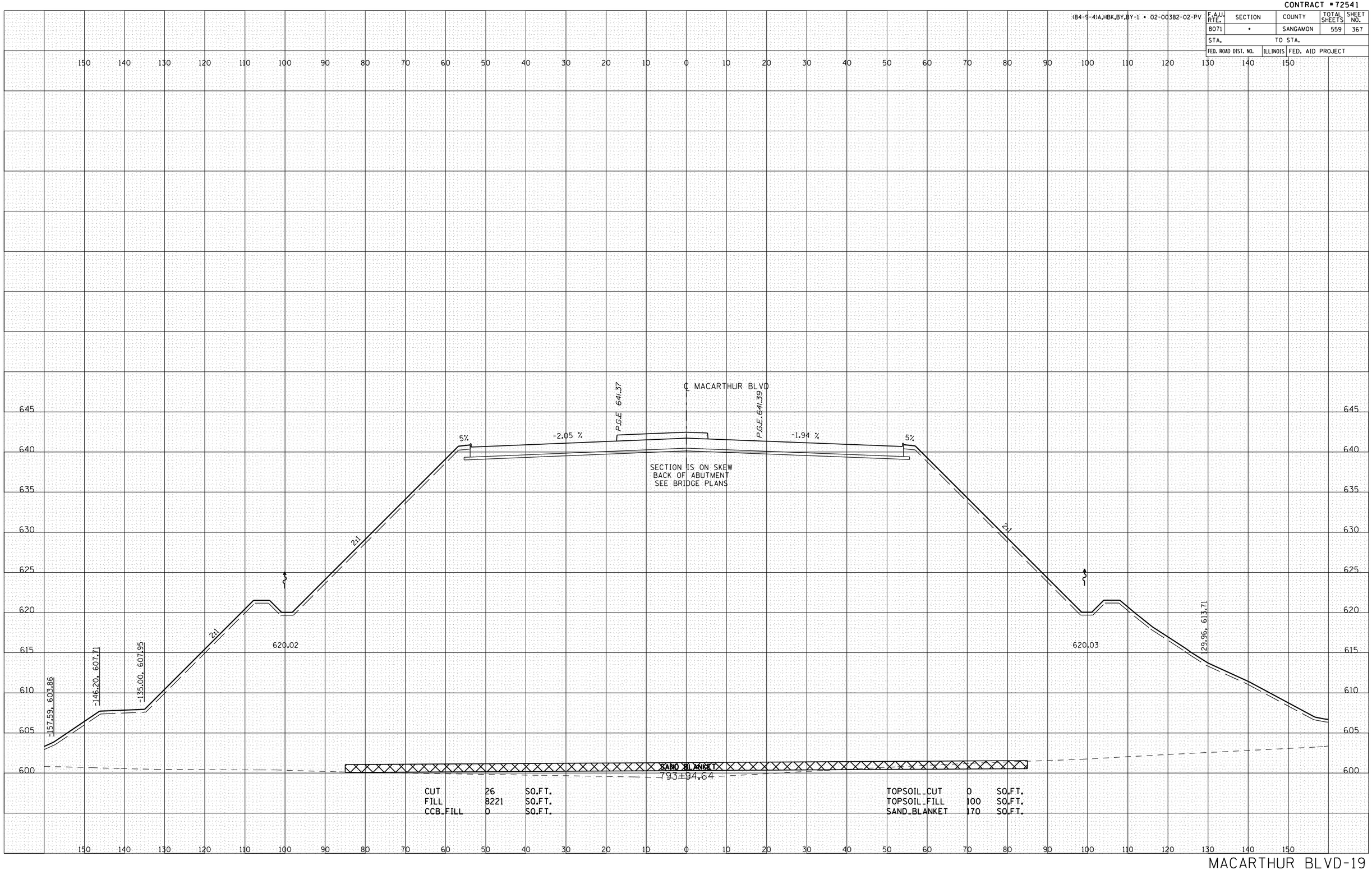
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	367
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — DRAWN AT — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — DRAWN AT — AREAS — AREAS CHECKED — BY — DATE



CUT	26	SQ.FT.
FILL	8221	SQ.FT.
CCB_FILL	0	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	100	SQ.FT.
SAND_BLANKET	170	SQ.FT.

CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	368
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
PLOTTED		
PLANIMETE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
PLOTTED		
PLANIMETE		
AREAS		
AREAS CHECKED		

MATCHLINE

160.51 600.00 SHEAR LINE

598.50

MATCHLINE

℄ MACARTHUR BLVD

641.05

-2.05 %

PGE 641.55

1.55 %

641.74

1.44 %

PGE 641.56

-1.94 %

641.10

5%

SECTION IS ON SKEW THROUGH BRIDGE APPROACH PAVEMENT

2:1

2:1

619.88

619.88

2:1

2:1

3:2:1

EX ROW

MATCHLINE

155.68, 600.00 SHEAR LINE

143.68, 603.46

MATCHLINE

SAND BLANKET

PIPE CULVERT, TY. 1, 36" R.C.C.P. 302 L.F.

598.00

PRECAST REINFORCED CONCRETE FLARED END SECTION, 36"

PRECAST REINFORCED CONCRETE FLARED END SECTION, 36"

794+20.00

MACARTHUR BLVD-20

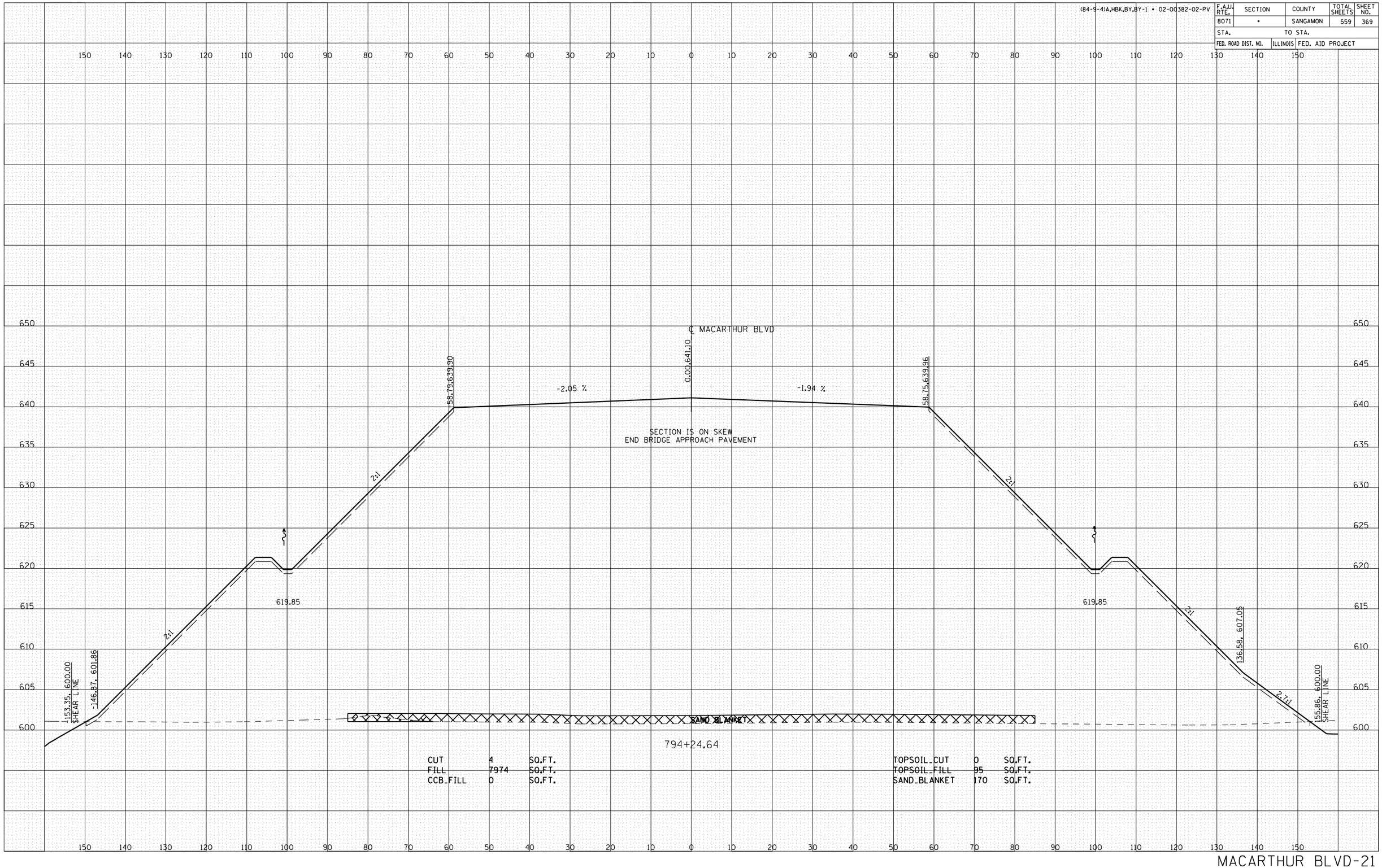
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	369
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	PLANIMETER		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	PLANIMETER		
	AREAS		
NO.	AREAS CHECKED		



CUT	4	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	7974	SQ.FT.	TOPSOIL_FILL	95	SQ.FT.
CCB_FILL	0	SQ.FT.	SAND_BLANKET	170	SQ.FT.

MACARTHUR BLVD-21

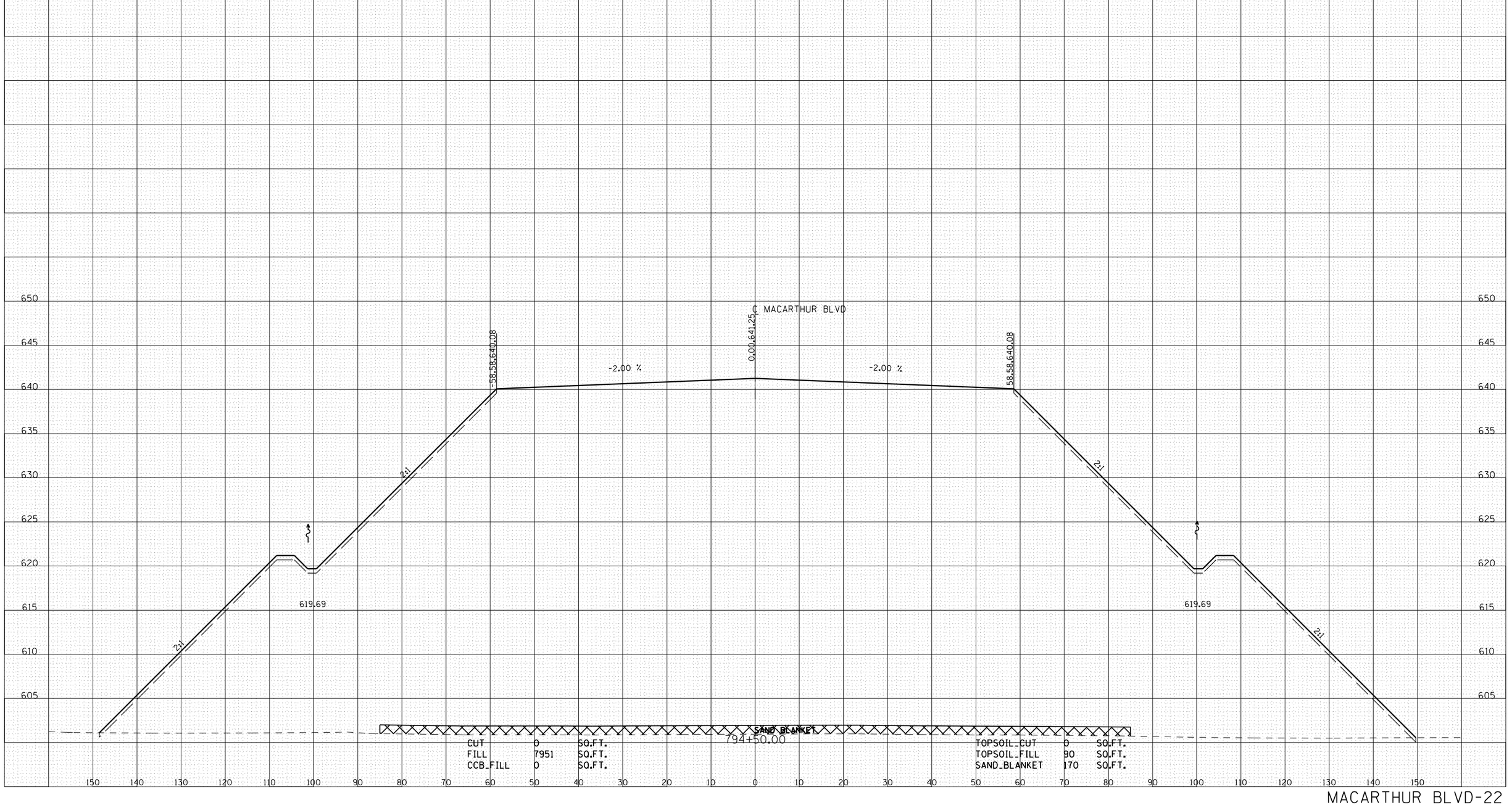
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	370
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TRANSFERRED		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TRANSFERRED		
	AREAS		
NO.	AREAS CHECKED		



MACARTHUR BLVD-22

CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	371
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSMITTAL
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSMITTAL
AREAS
AREAS CHECKED
BY
DATE

℄ MACARTHUR BLVD

0.00,641.48

-2.00 %

-2.00 %

58.58,640.31

58.58,640.31

632.00

CCB FILL

627.00

2:1

2:1

2:1

2:1

2:1

619.38

619.38

SAND BLANKET

795+00.00

CUT	0	SQ.FT.
FILL	7951	SQ.FT.
CCB_FILL	722	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	90	SQ.FT.
SAND_BLANKET	170	SQ.FT.

MACARTHUR BLVD-23

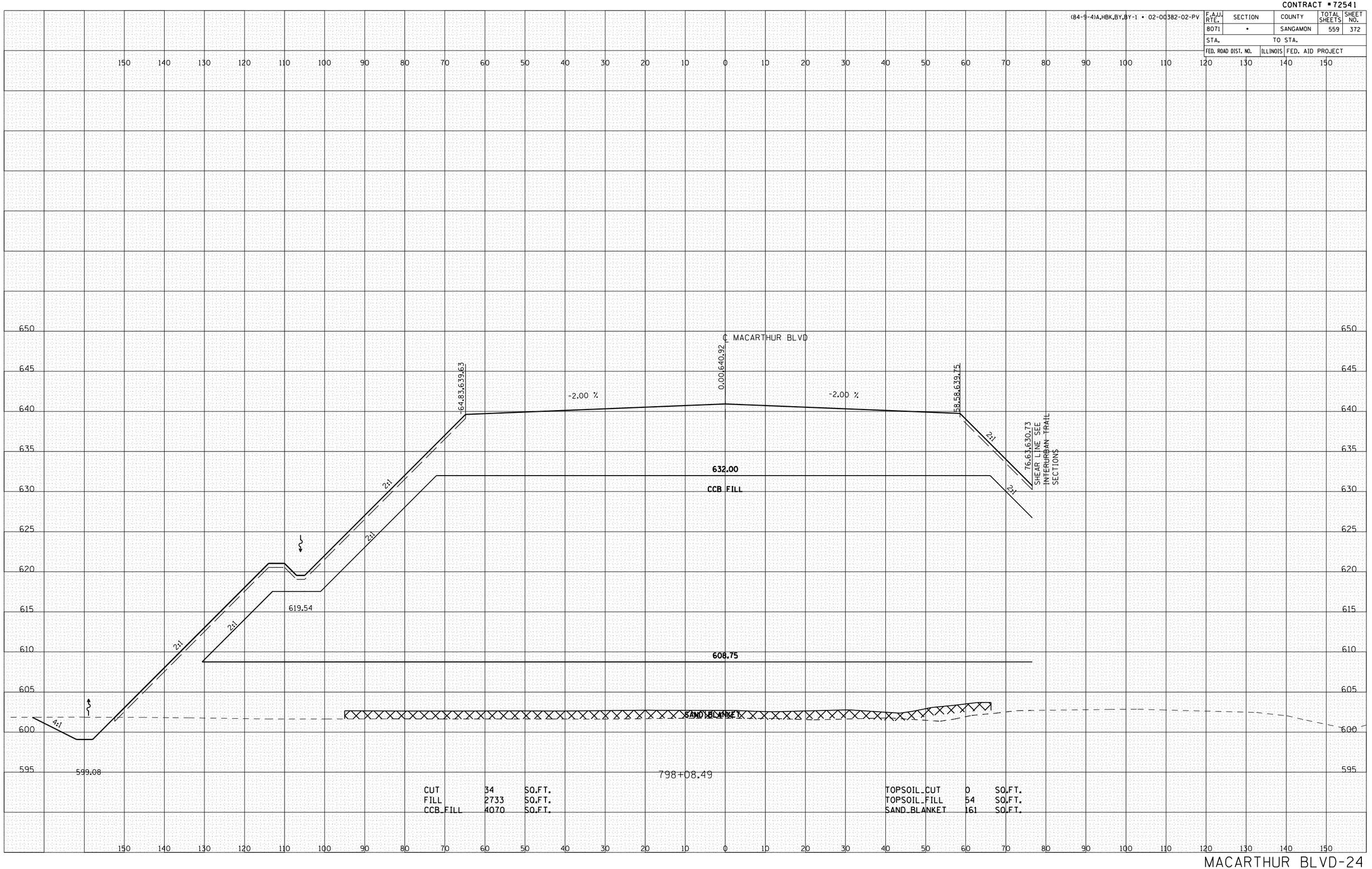
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	372
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — DRAWN — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — DRAWN — AREAS — AREAS CHECKED — BY — DATE



MACARTHUR BLVD-24

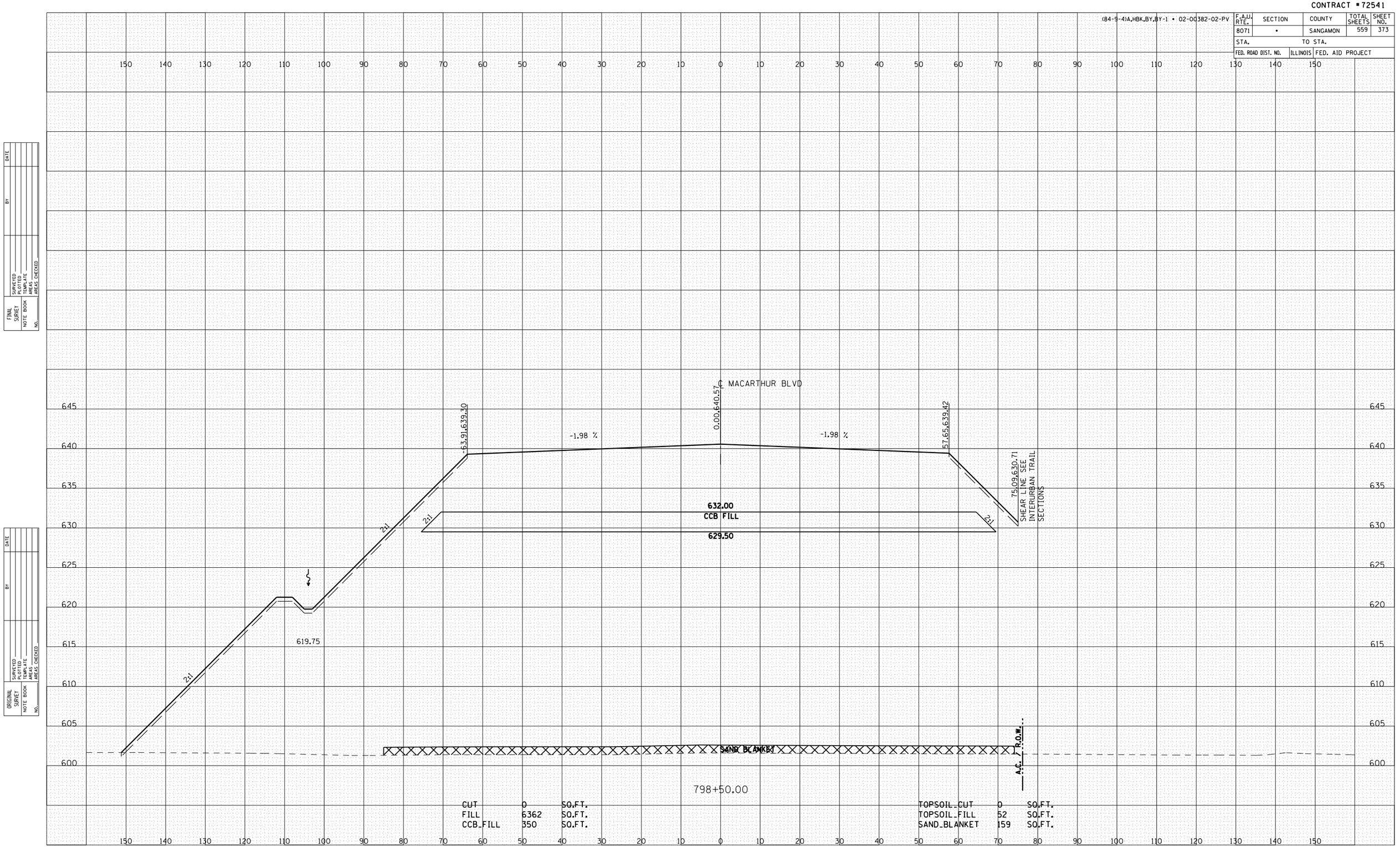
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	373
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — CHECKED — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — CHECKED — AREAS — AREAS CHECKED — BY — DATE



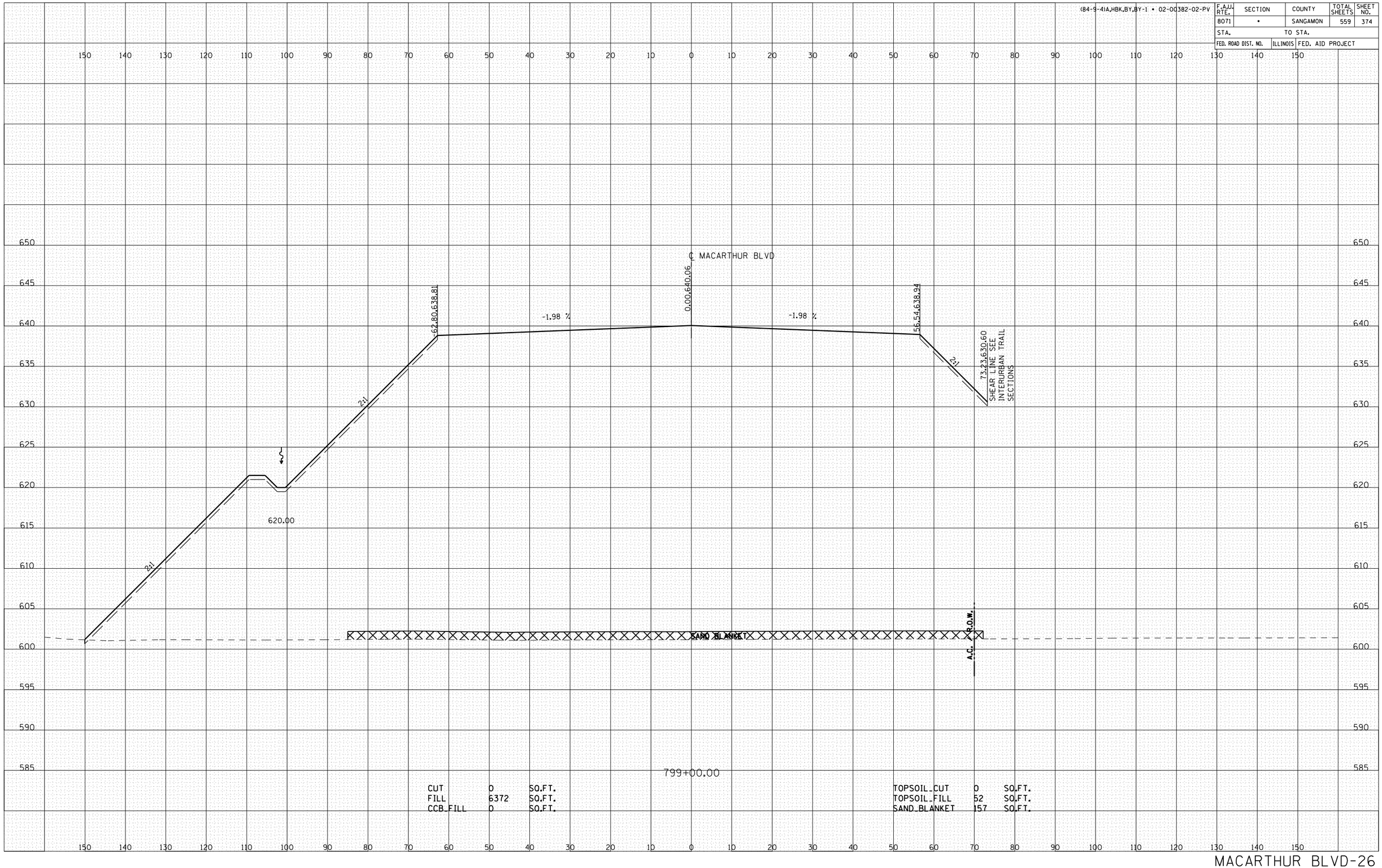
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	374
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.
BY
DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED



CUT	0	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	6372	SQ.FT.	TOPSOIL_FILL	52	SQ.FT.
CCB_FILL	0	SQ.FT.	SAND_BLANKET	157	SQ.FT.

MACARTHUR BLVD-26

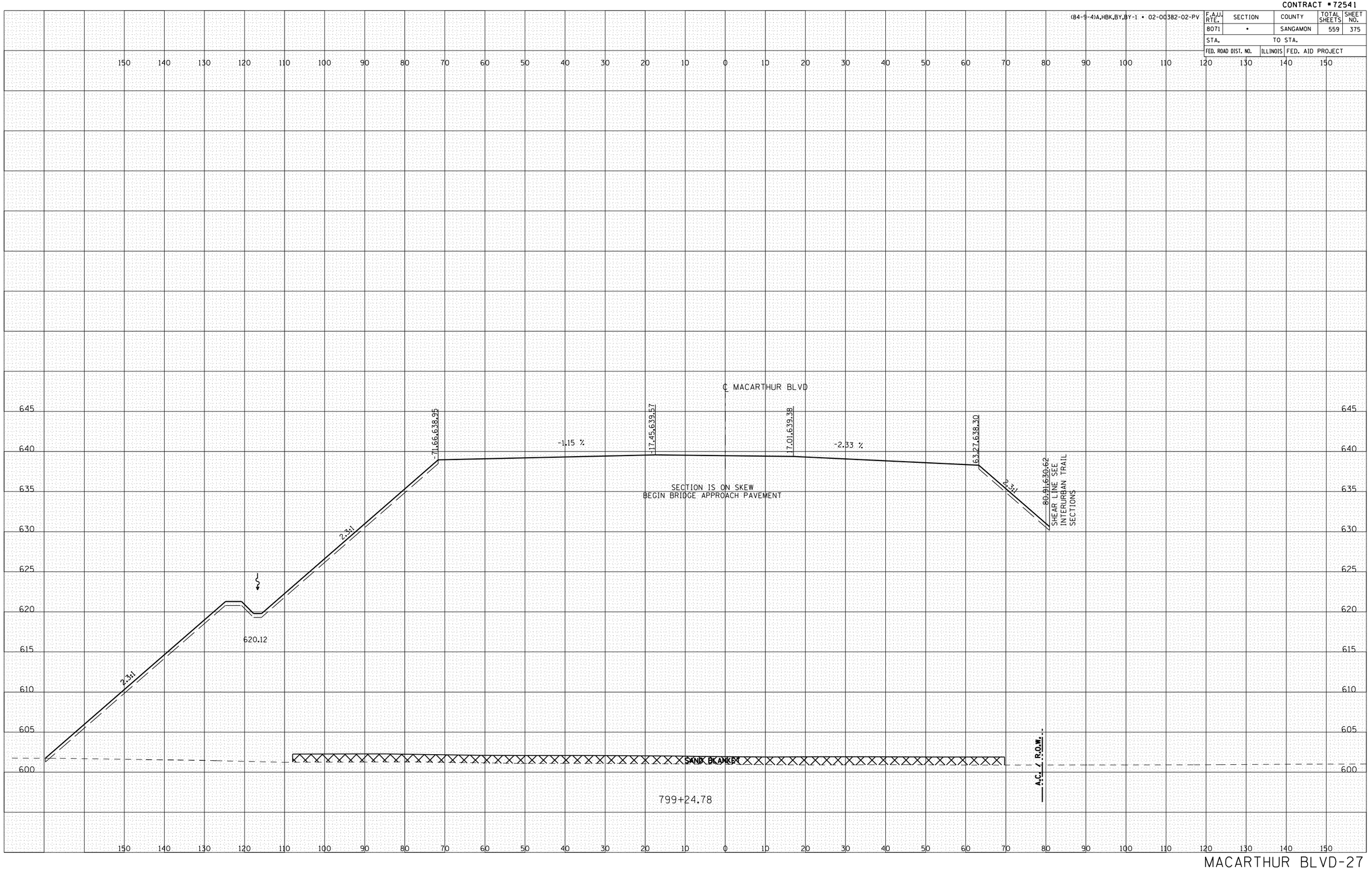
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	375
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE



MACARTHUR BLVD-27

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	376
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

℄ MACARTHUR BLVD

645
640
635
630
625
620
615
610
605
600

5%
-1.09 %
-2.39 %
5%
2:1
2:1
2:1
620.27
SECTION IS ON SKEW
BACK OF ABUTMENT
SEE BRIDGE PLANS
79,63,630.64
SHEAR LINE SEE
INTERURBAN TRAIL
SECTIONS
SAND BLANKET
A.C. / R.O.W.
799+54.78

MACARTHUR BLVD-28

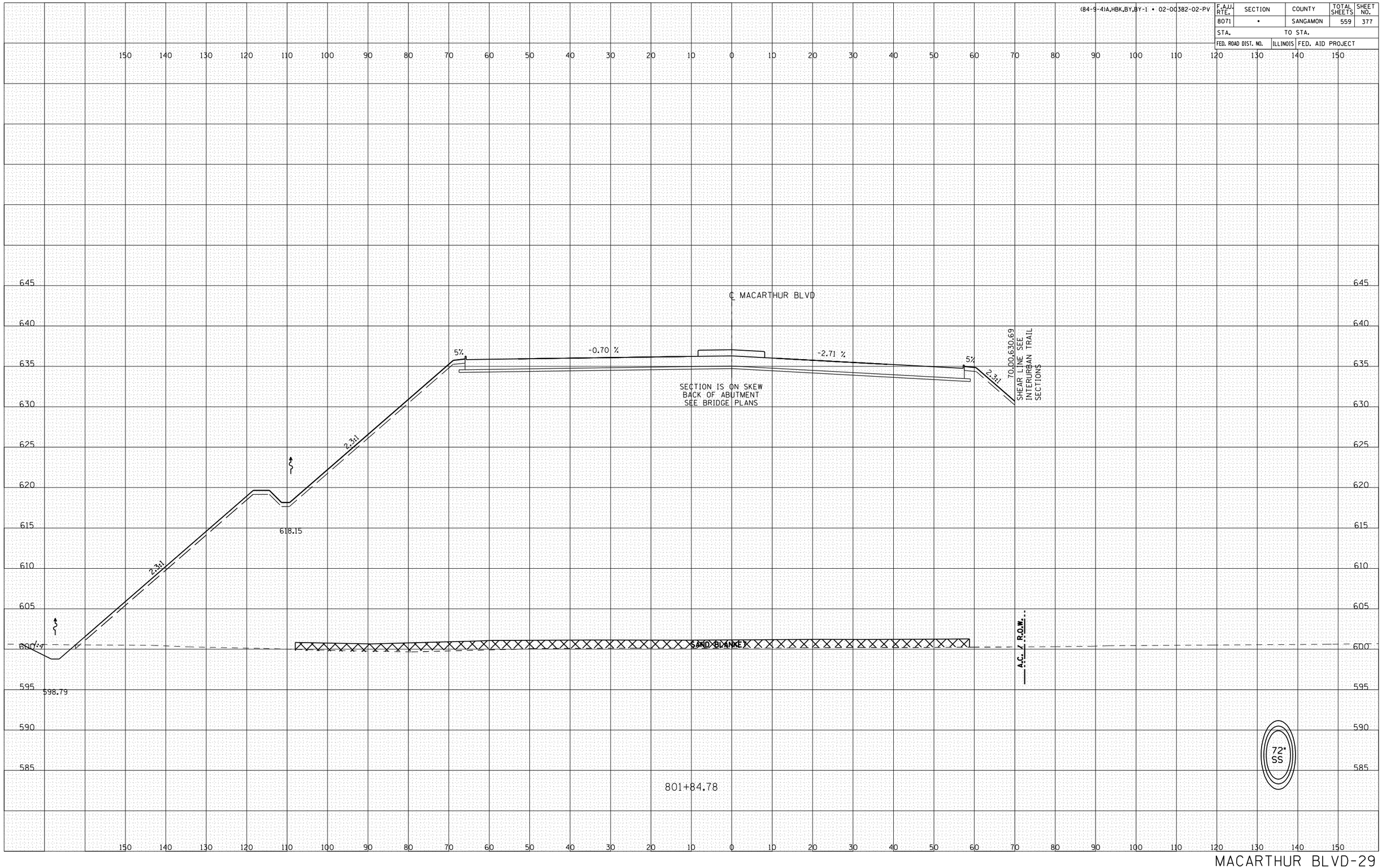
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	377
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



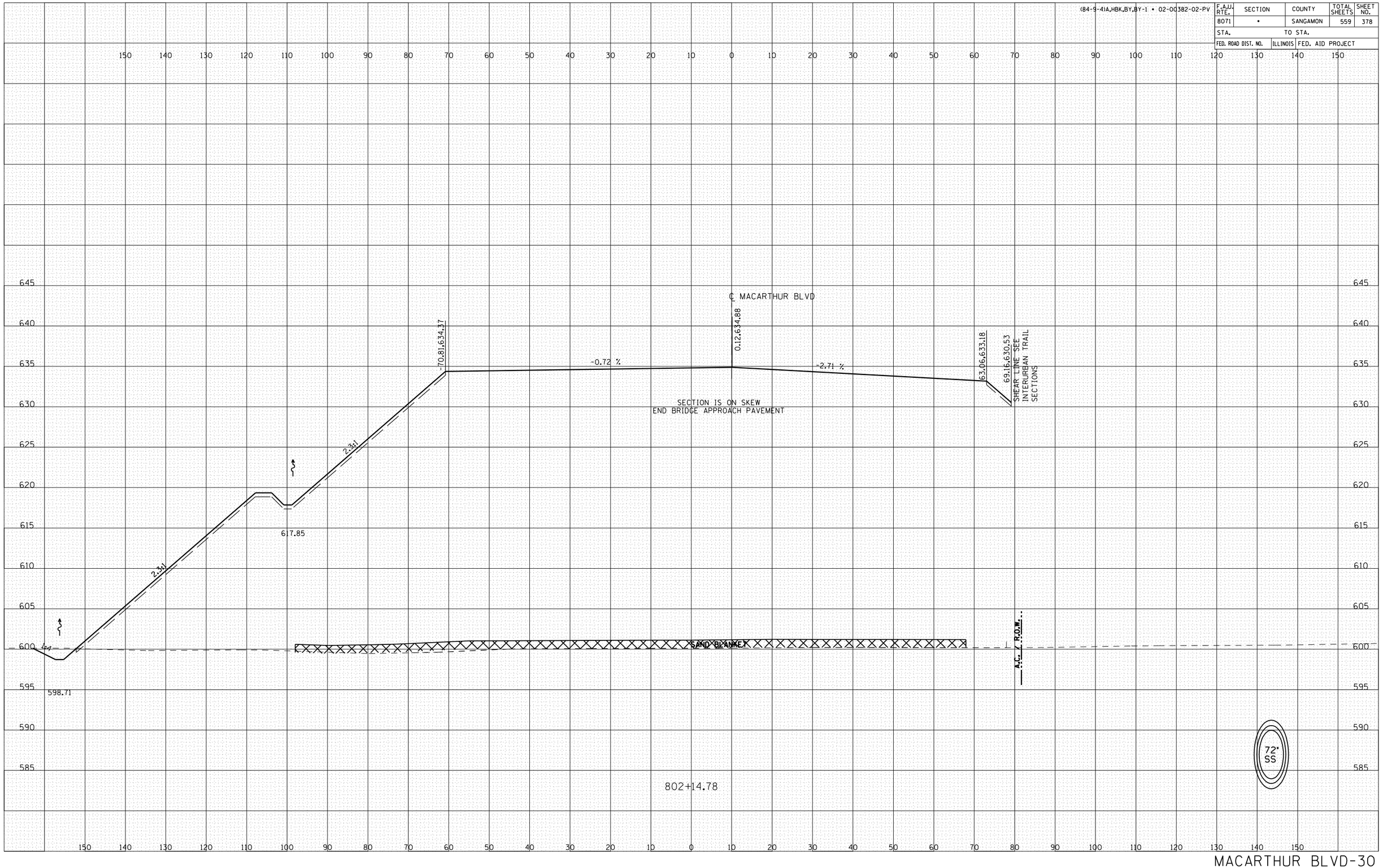
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	378
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



MACARTHUR BLVD-30

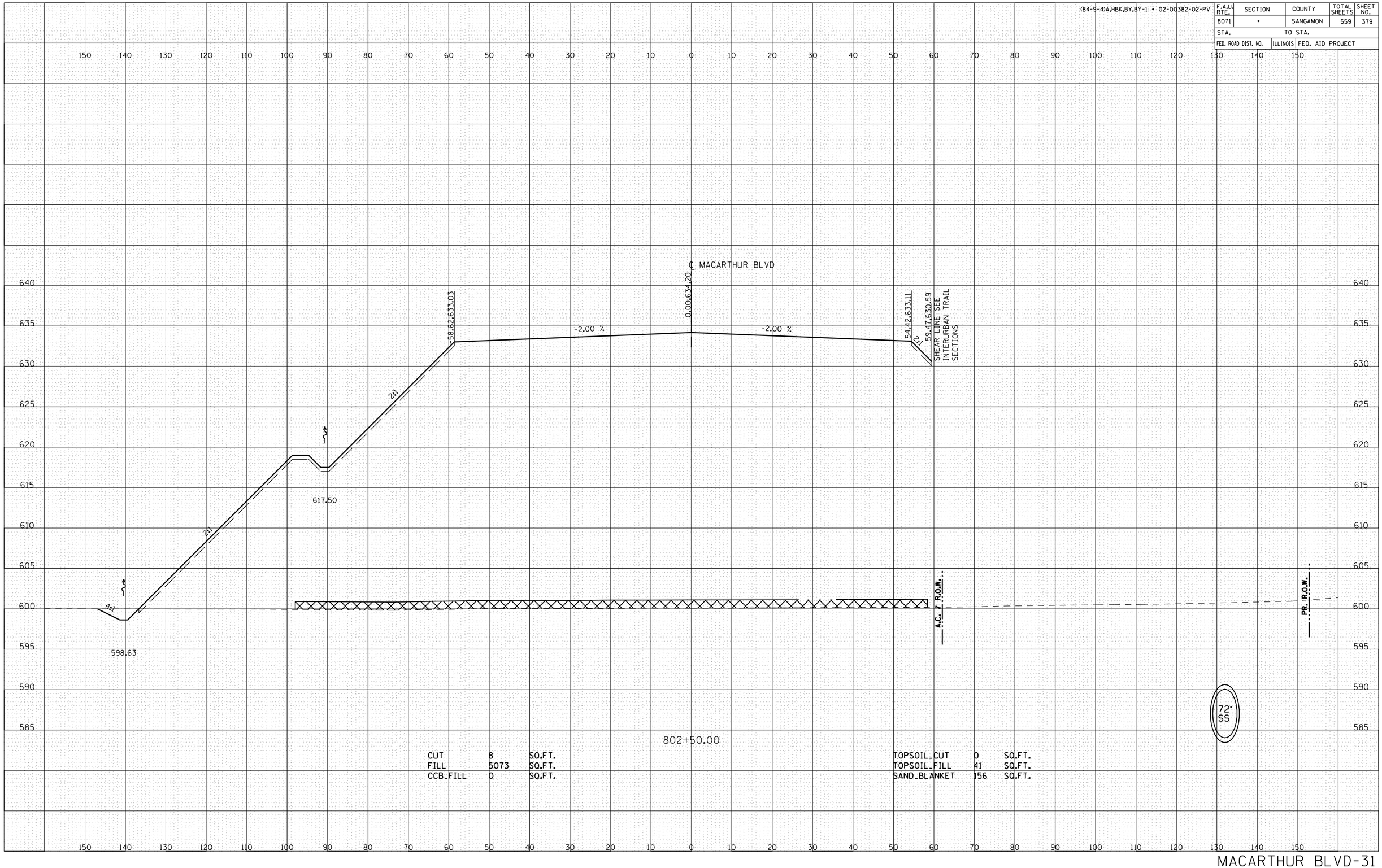
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	379
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
HANDLE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
HANDLE				
AREAS				
AREAS CHECKED				



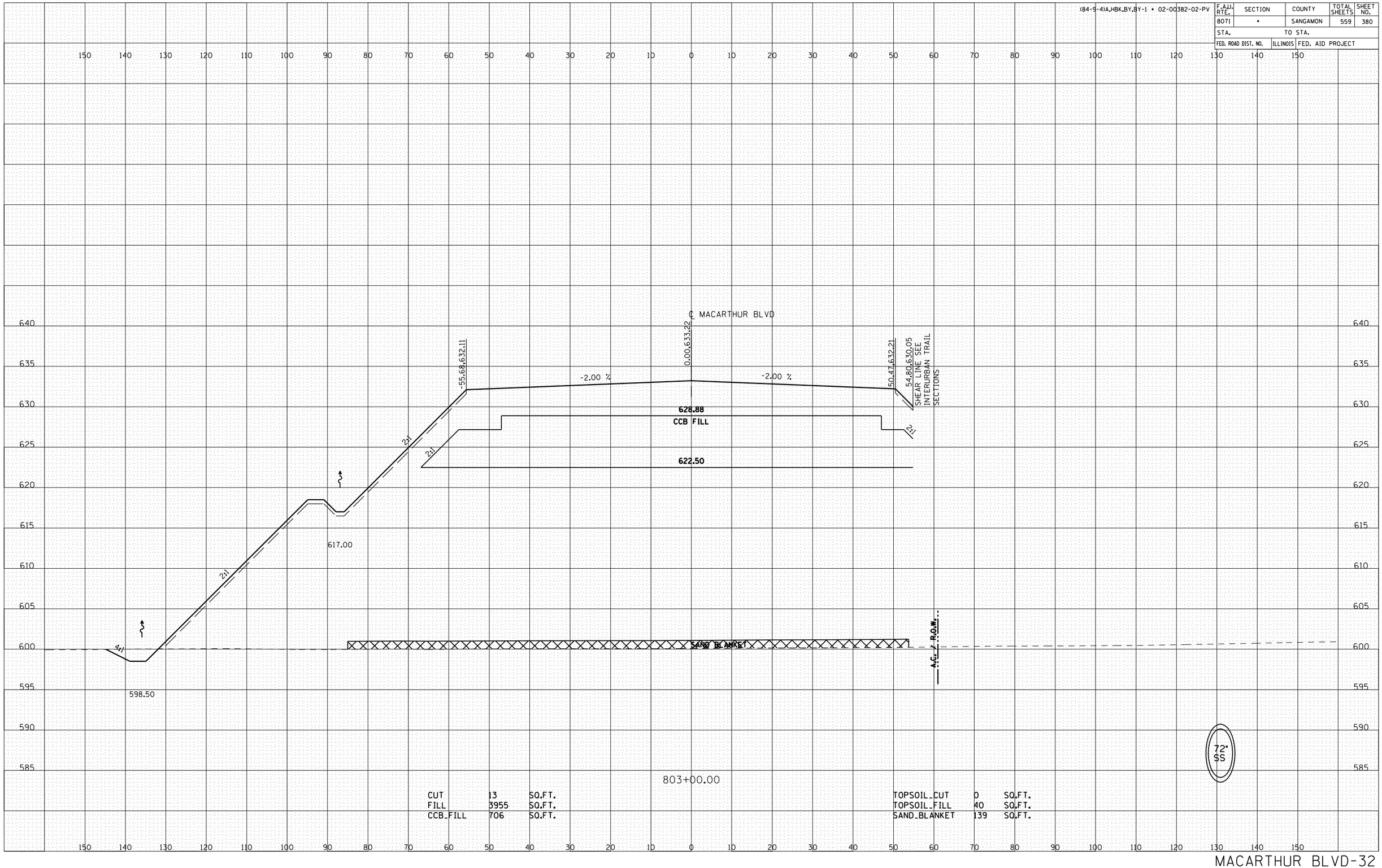
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.AJJ. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	380
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
PLANIMETER
AREAS
AREAS CHECKED



CUT	13	SQ.FT.
FILL	3955	SQ.FT.
CCB_FILL	706	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	40	SQ.FT.
SAND_BLANKET	139	SQ.FT.

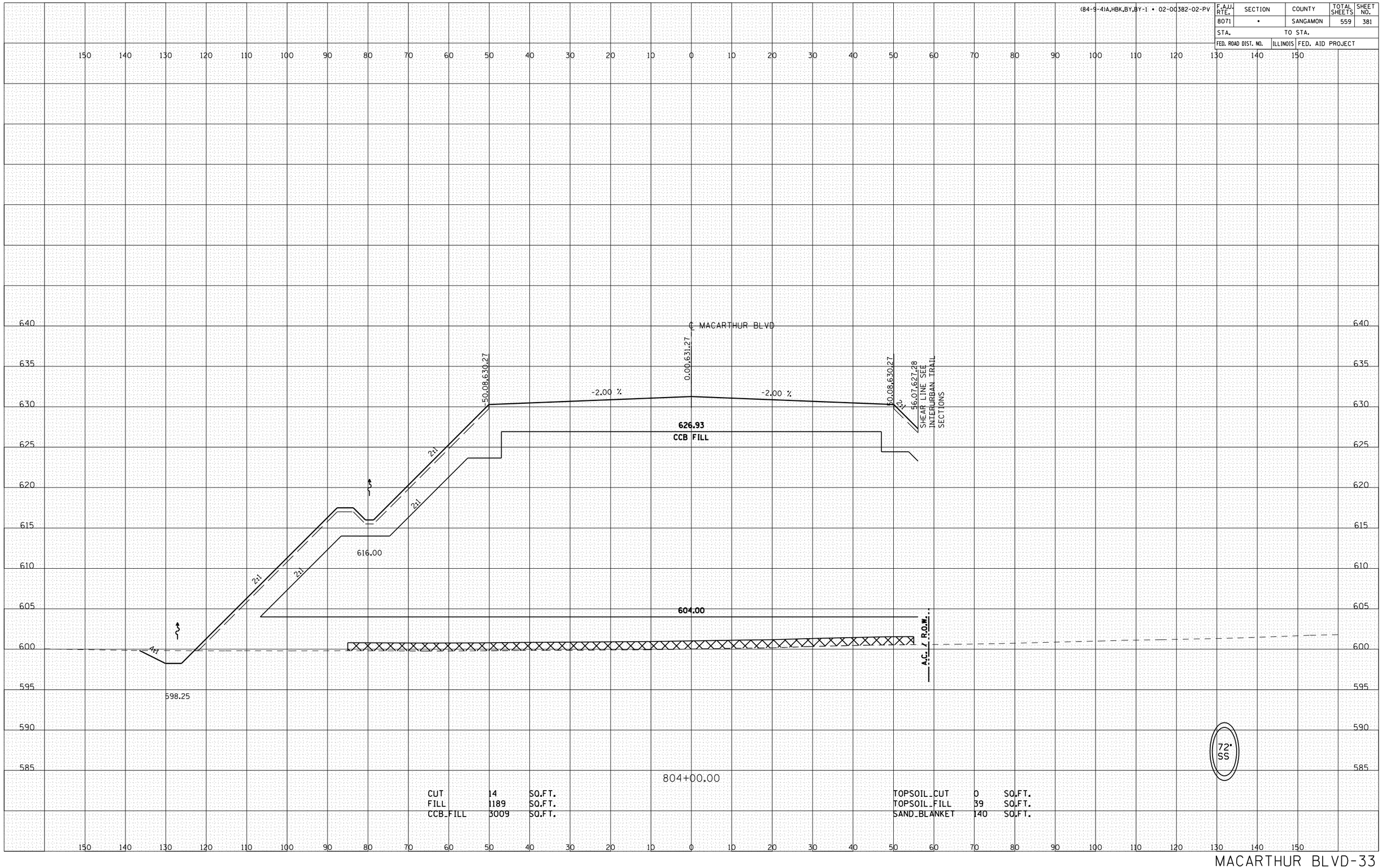
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	381
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	HANDLE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	HANDLE
	AREAS
	AREAS CHECKED



CUT	14	SQ.FT.
FILL	1189	SQ.FT.
CCB_FILL	3009	SQ.FT.

TOPSOIL_CUT	0	SQ.FT.
TOPSOIL_FILL	39	SQ.FT.
SAND_BLANKET	140	SQ.FT.

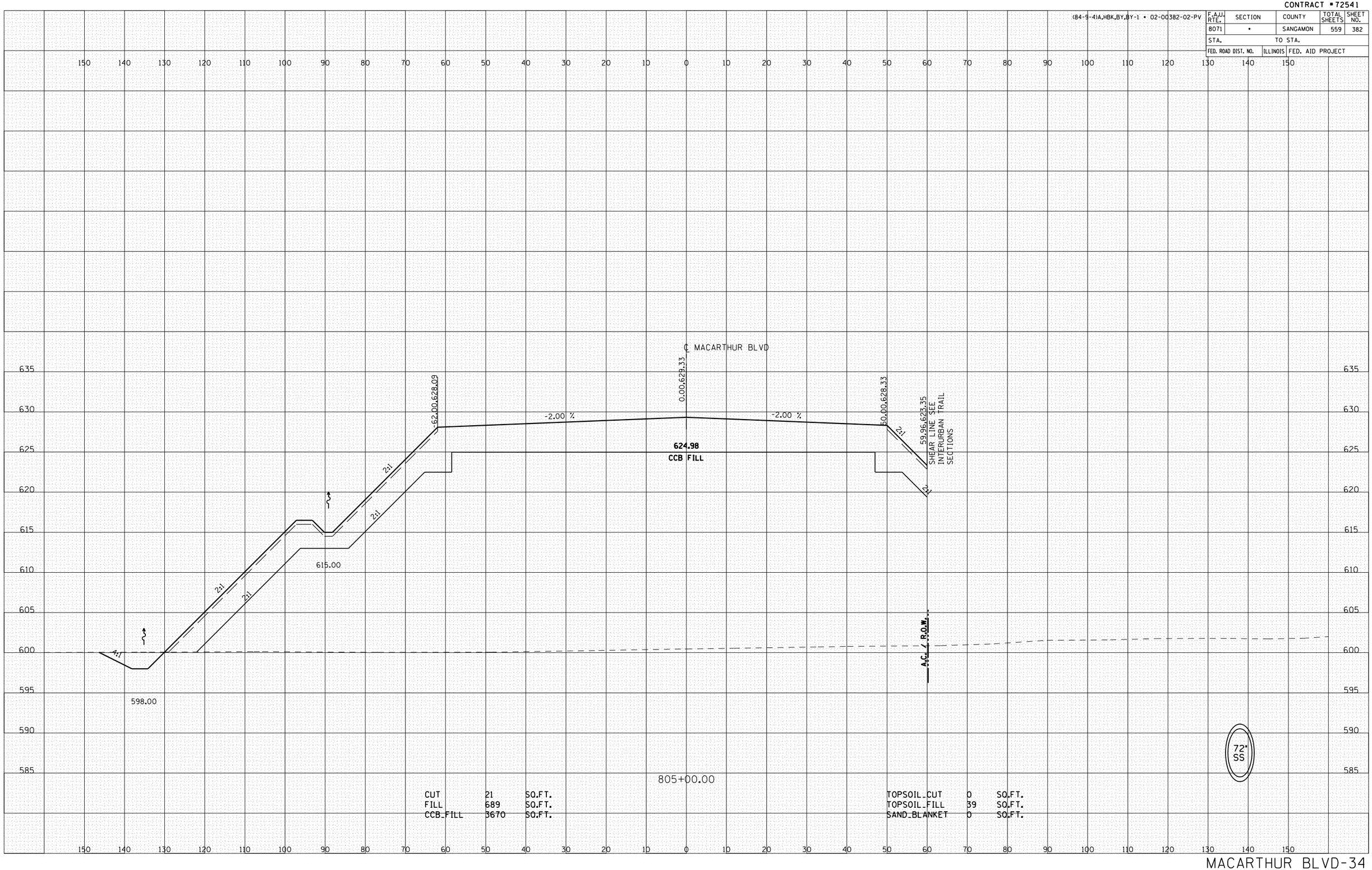
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	382
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE



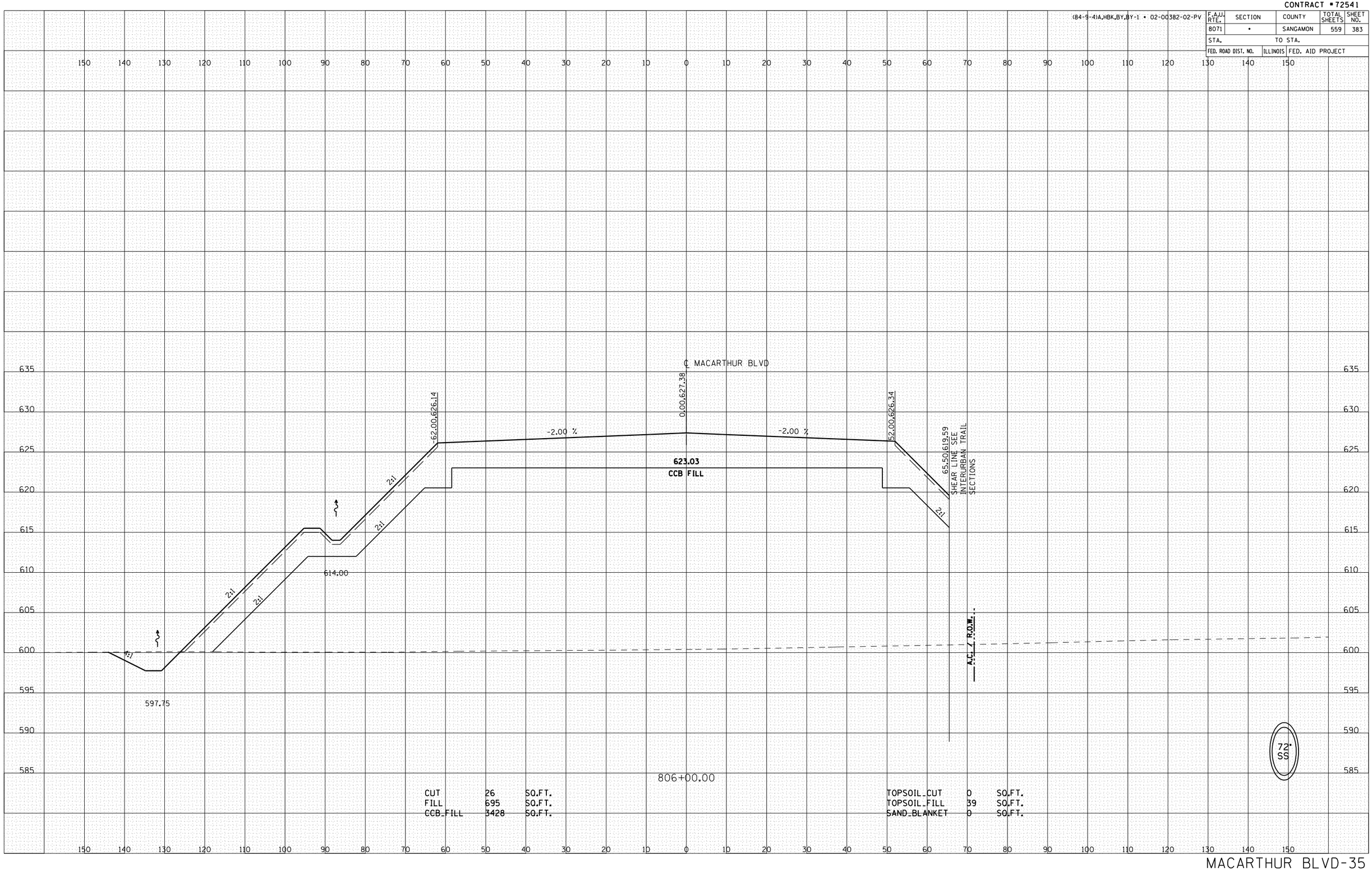
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	383
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED



MACARTHUR BLVD-35

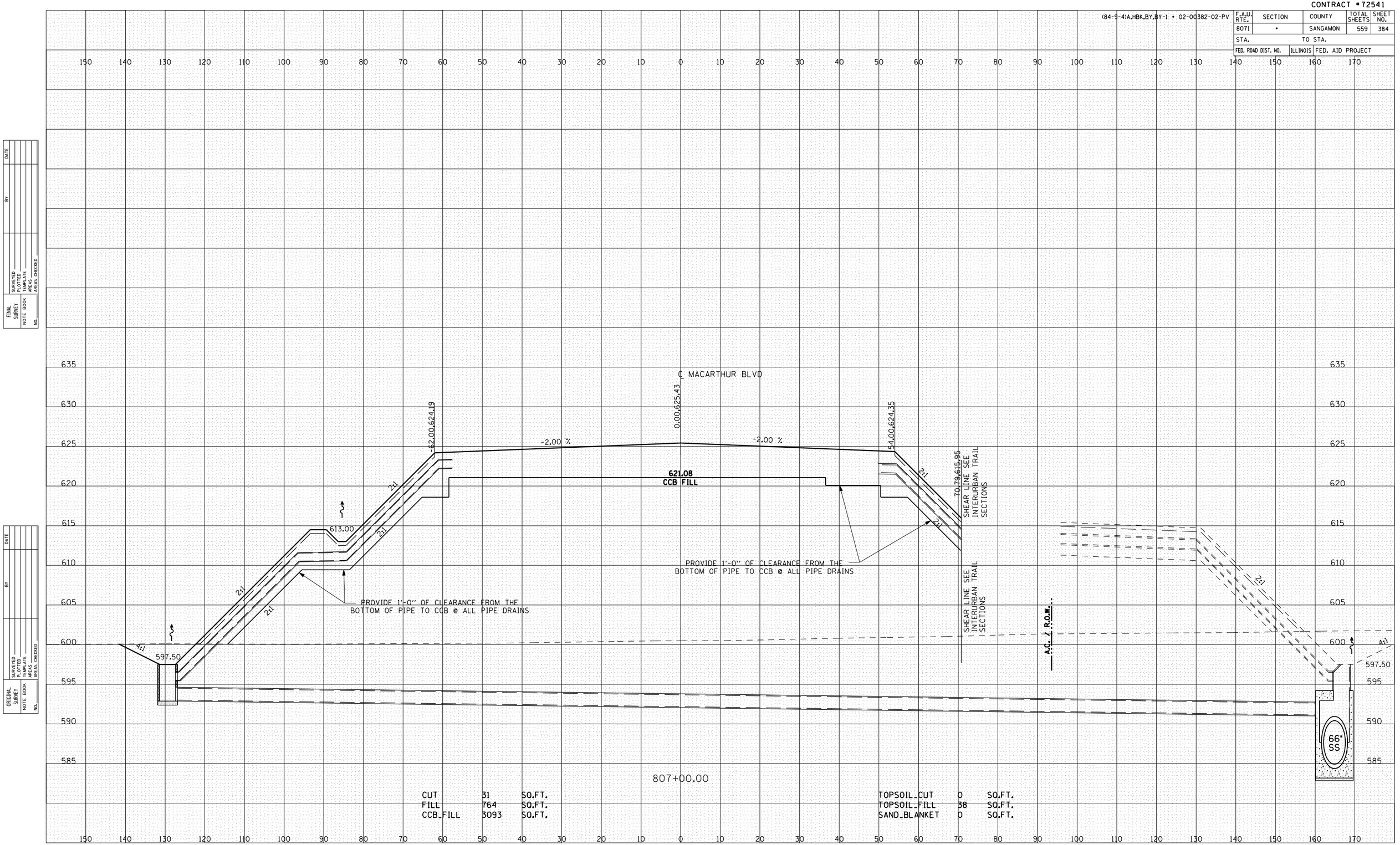
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	384
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TABULATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TABULATE
AREAS
AREAS CHECKED
BY
DATE



CUT	31	SQ.FT.	TOPSOIL_CUT	0	SQ.FT.
FILL	764	SQ.FT.	TOPSOIL_FILL	58	SQ.FT.
CCB_FILL	3093	SQ.FT.	SAND_BLANKET	0	SQ.FT.

MACARTHUR BLVD-36

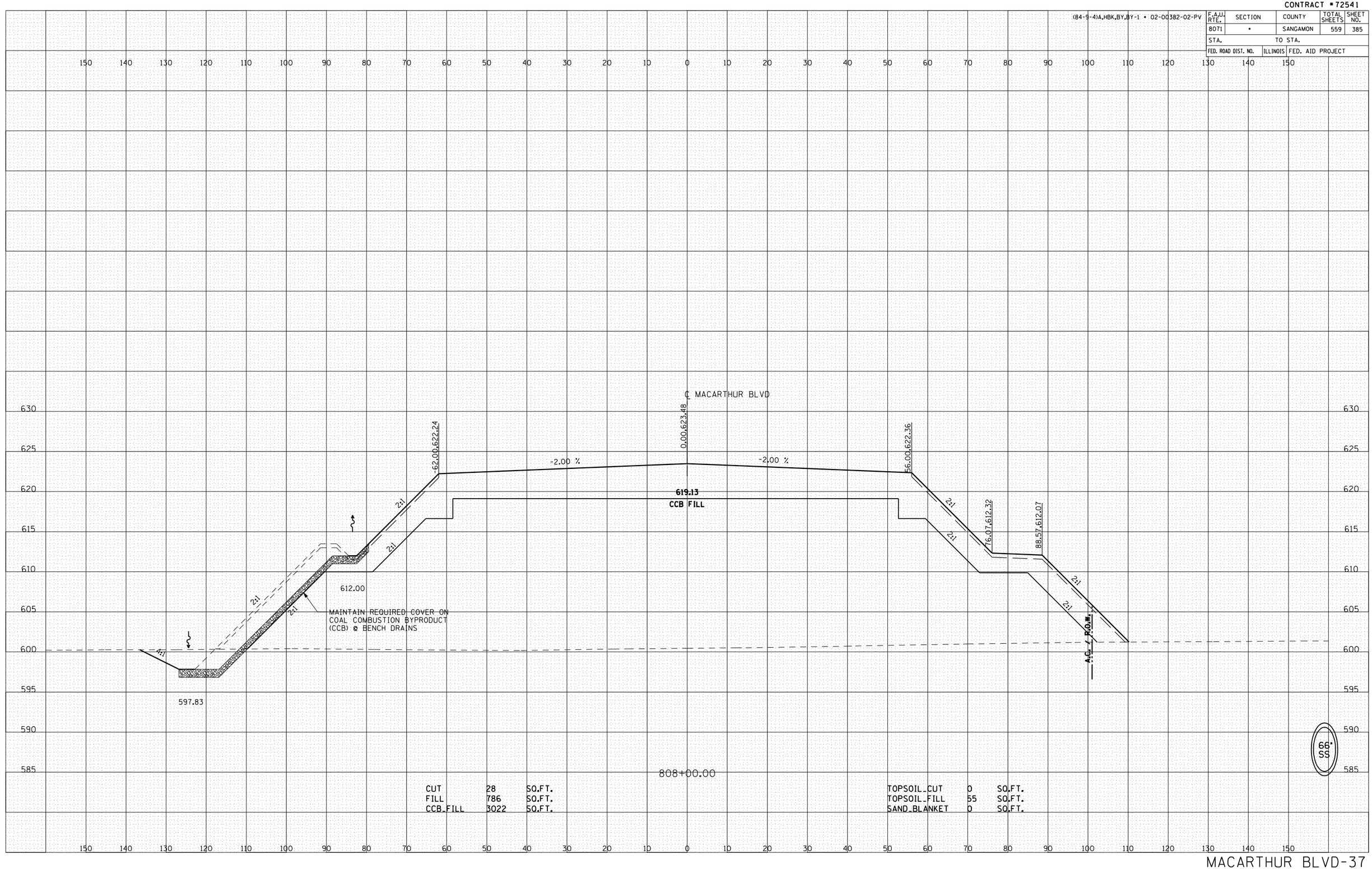
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	385
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRANSFERRED — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRANSFERRED — AREAS — AREAS CHECKED — BY — DATE



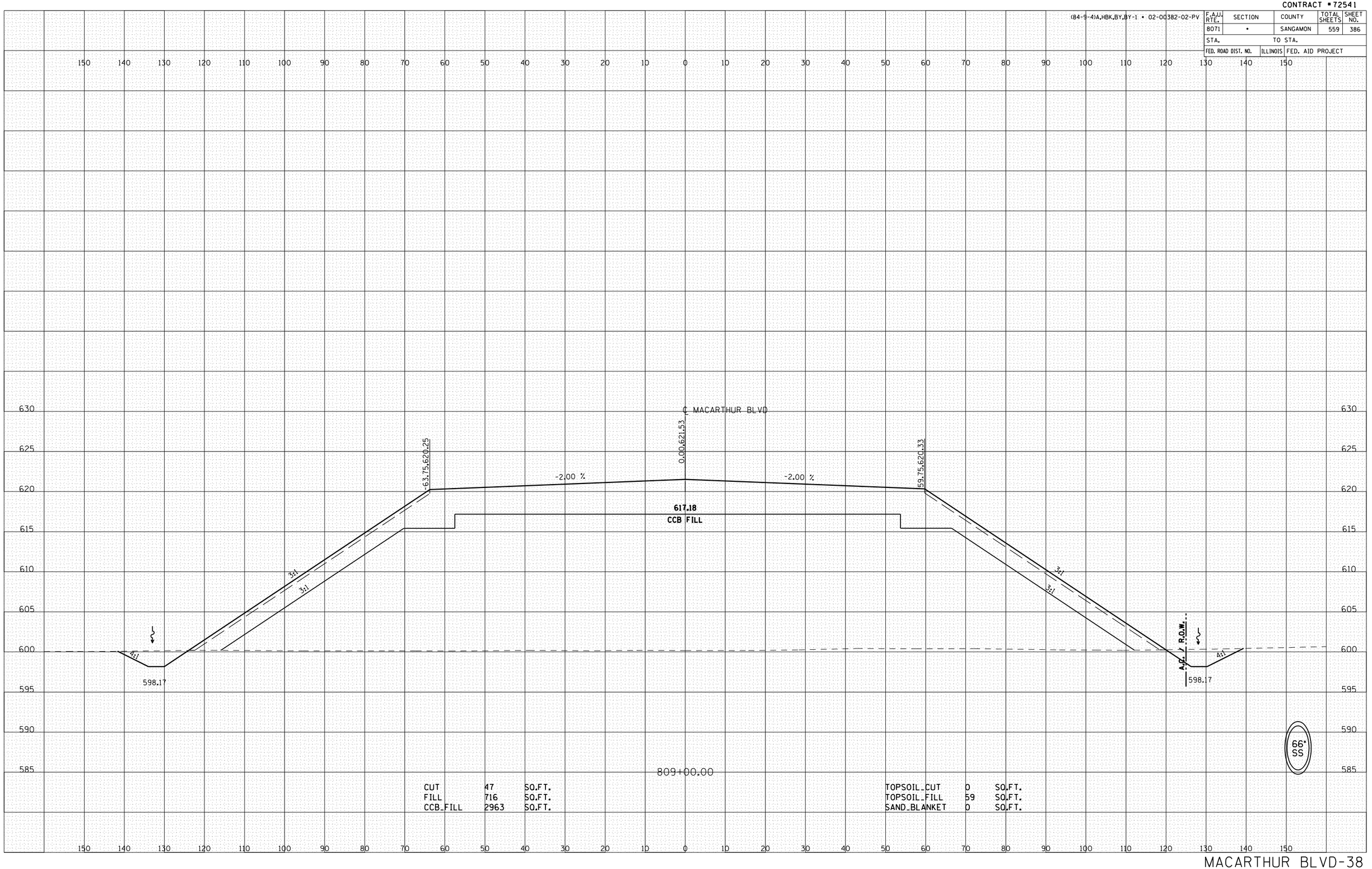
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	386
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRANSFERRED
AREAS
AREAS CHECKED
BY
DATE



MACARTHUR BLVD-38

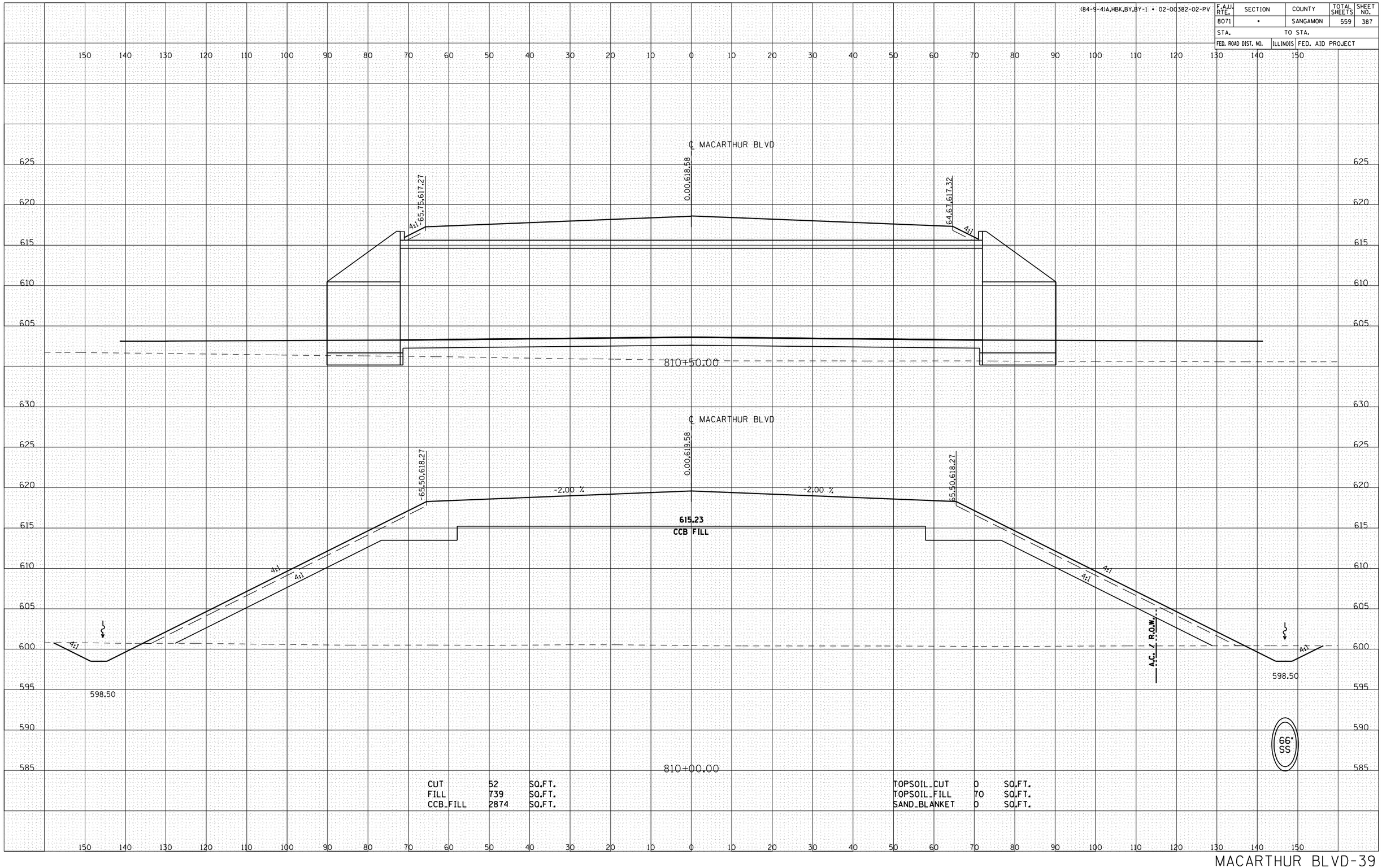
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	387
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER — AREAS — AREAS CHECKED — BY — DATE

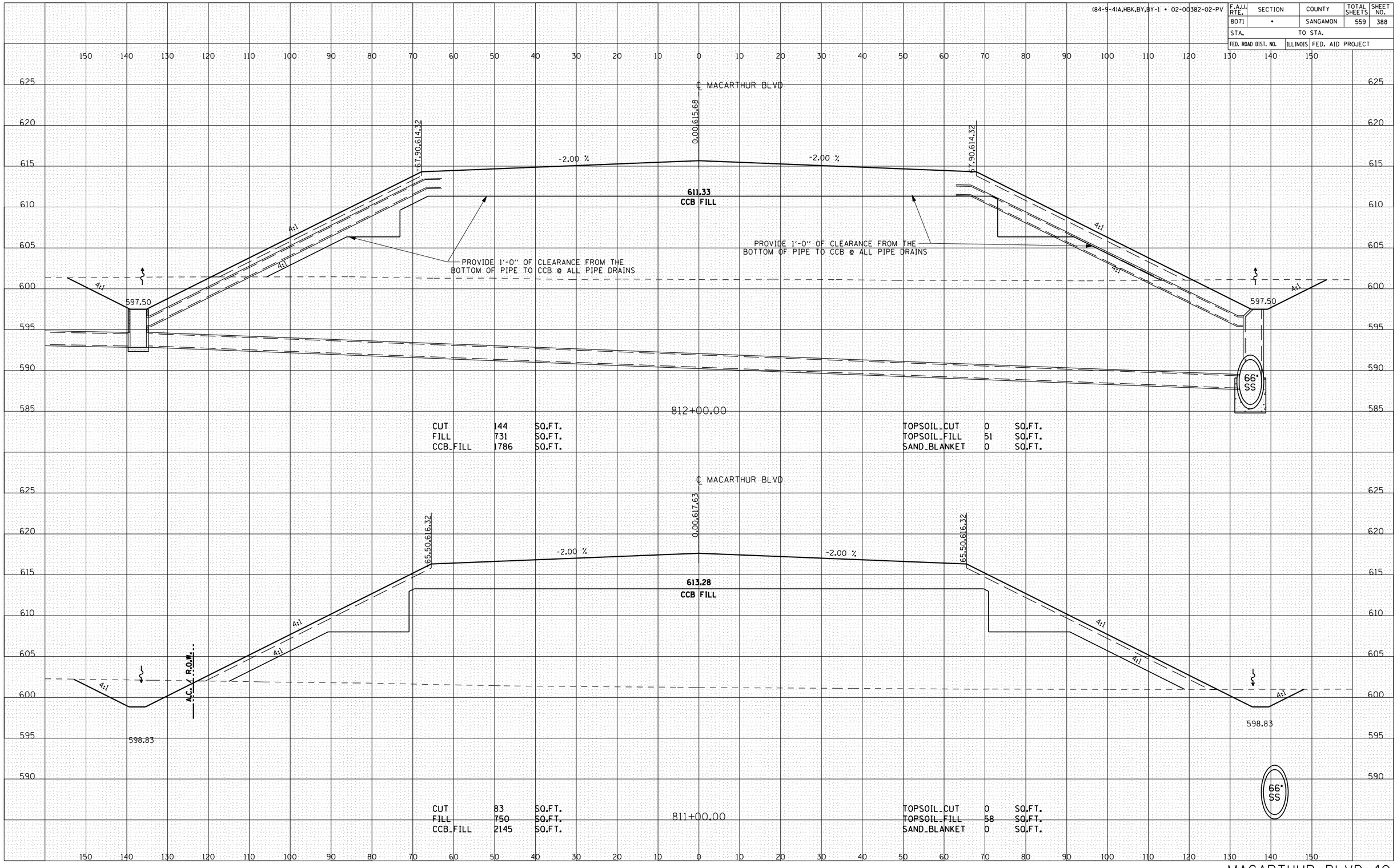


CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	388
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER AREAS — AREAS CHECKED — BY — DATE



ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — PLANIMETER AREAS — AREAS CHECKED — BY — DATE

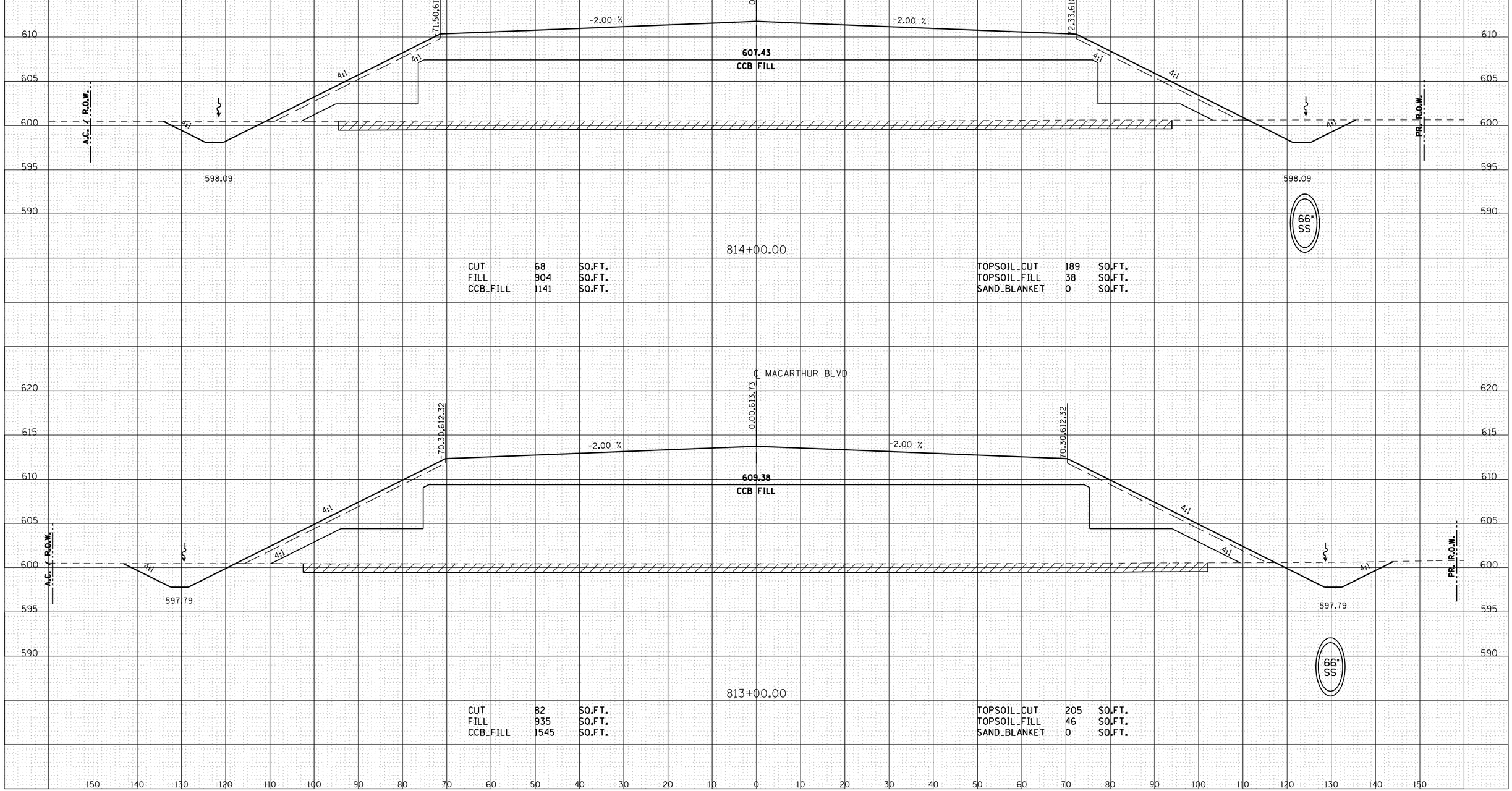
MACARTHUR BLVD-40

CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	389
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRIANGULATE — AREAS — AREAS CHECKED — BY — DATE



ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TRIANGULATE — AREAS — AREAS CHECKED — BY — DATE

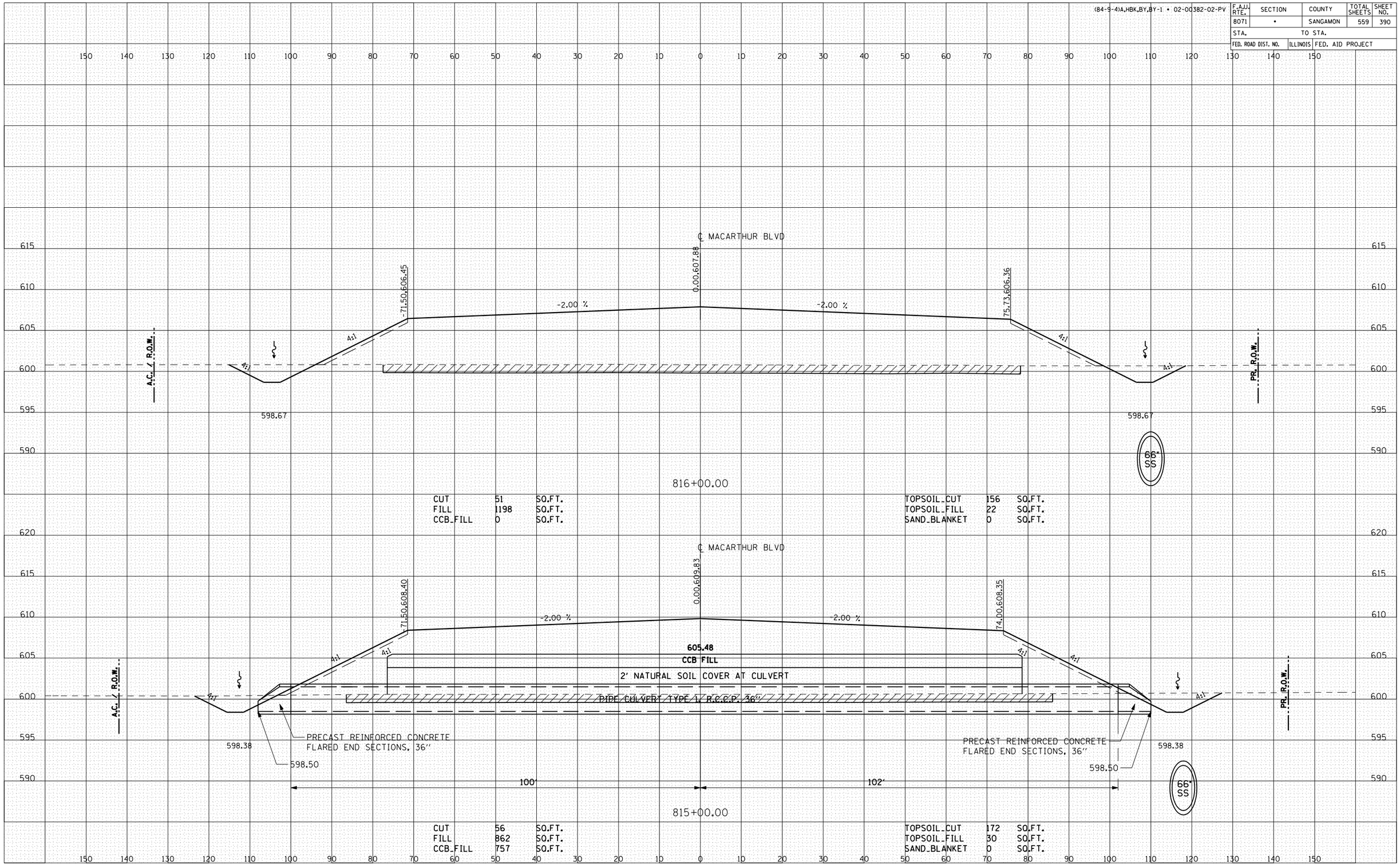
CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	390
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — MANUALLY — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — MANUALLY — AREAS — AREAS CHECKED — BY — DATE

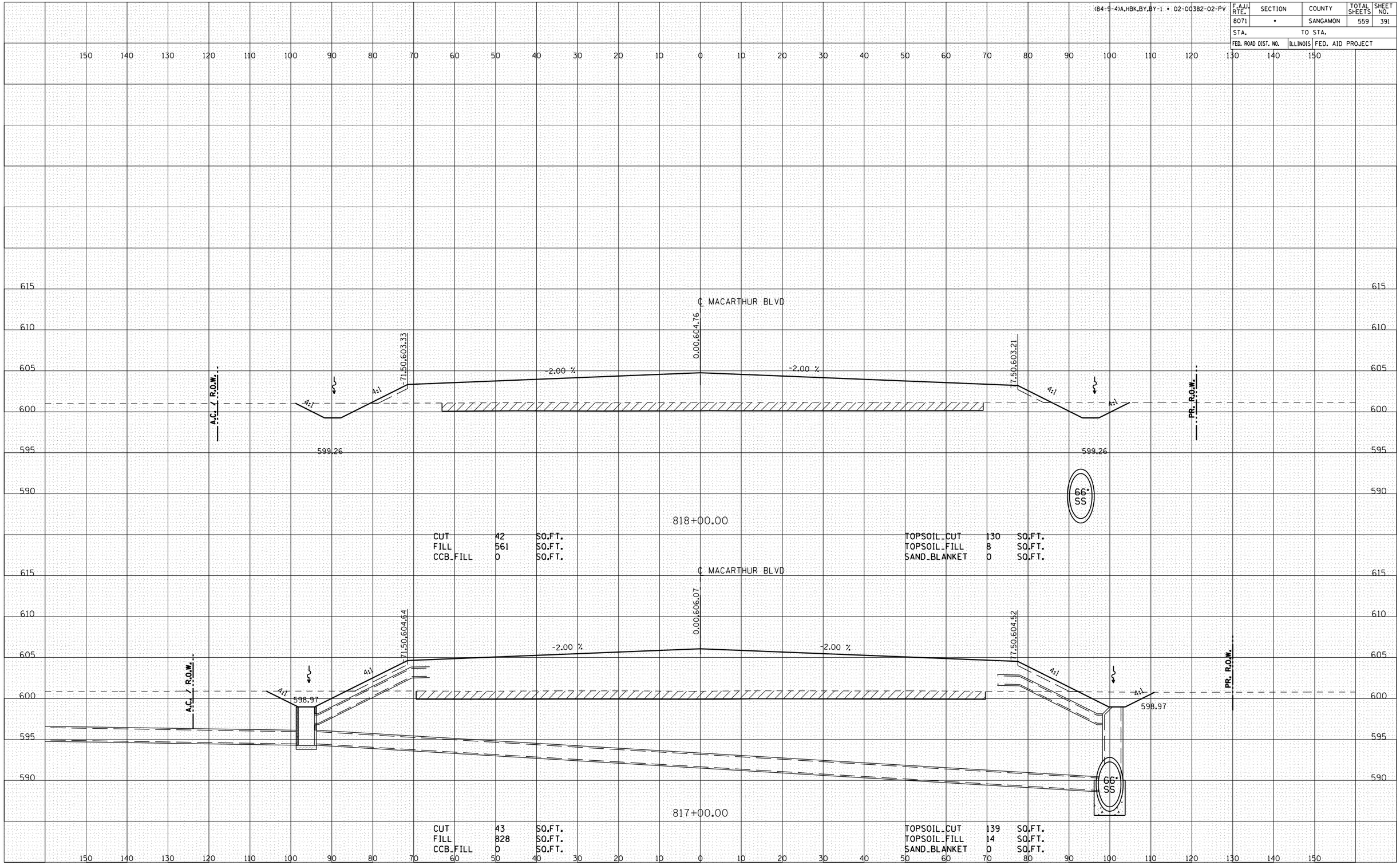


CONTRACT # 72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	391
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		
TYPE SIZE		
AREAS		DATE
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		
TYPE SIZE		
AREAS		DATE
AREAS CHECKED		

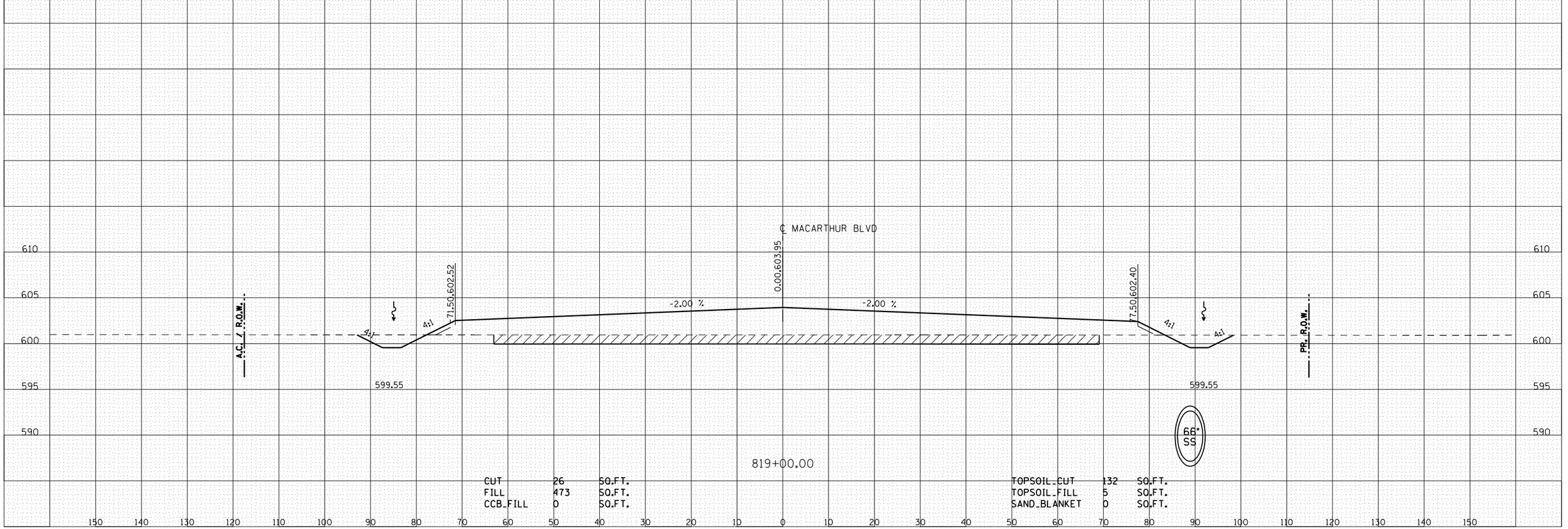
CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	392
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPED
AREAS
AREAS CHECKED
BY
DATE



CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	393
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	PLANIMETER AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	PLANIMETER AREAS	
	AREAS CHECKED	

MACARTHUR BLVD-45

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	394
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	395
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	396
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
	SURVEYED	
	PLOTTED	
NOTE BOOK	HUMPHREY	
	AREAS	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
	SURVEYED	
	PLOTTED	
NOTE BOOK	HUMPHREY	
	AREAS	
NO.	AREAS CHECKED	

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	397
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

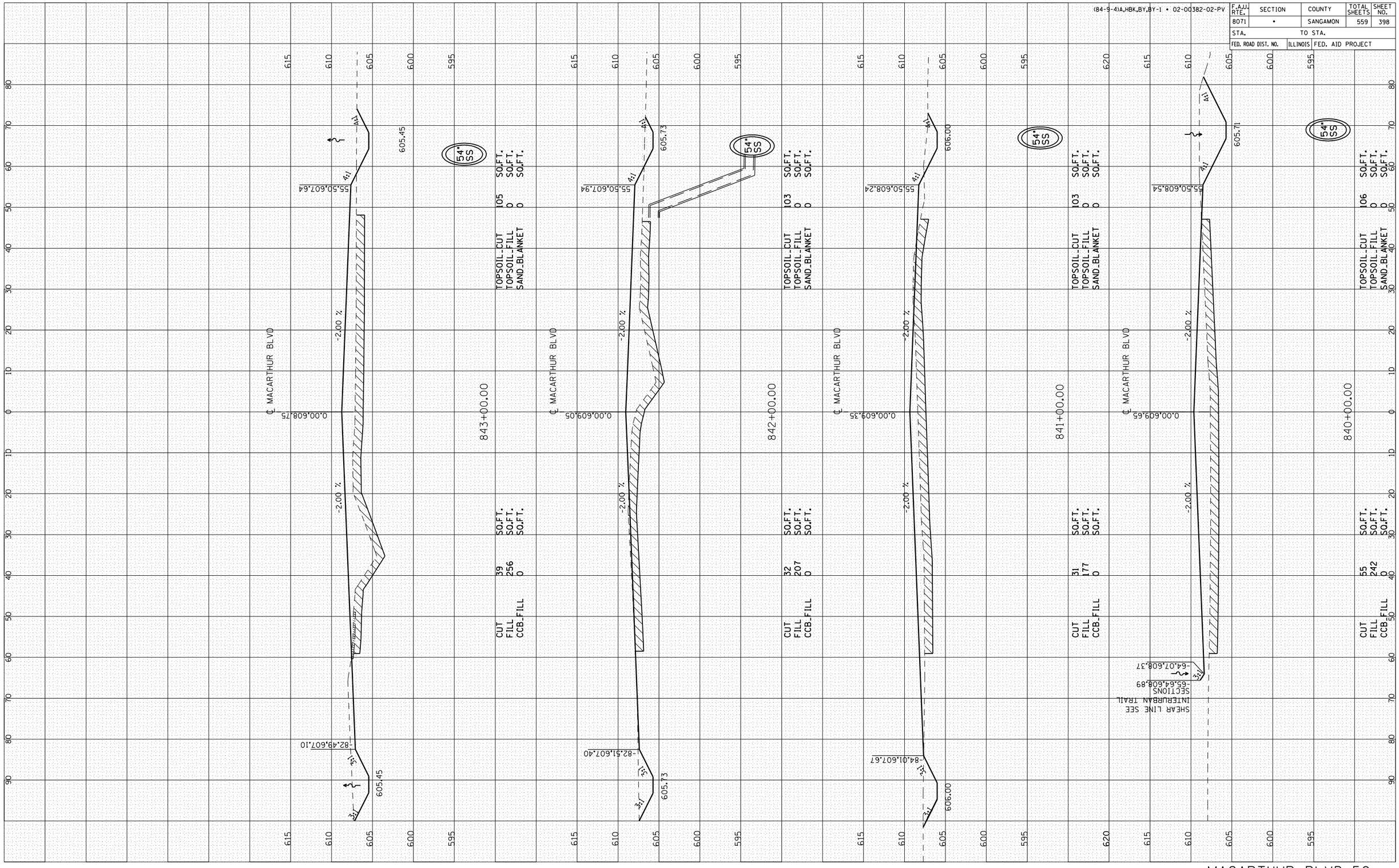
CONTRACT #72541

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	398
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	PLANIMETER AREAS	
	AREAS CHECKED	

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	PLANIMETER AREAS	
	AREAS CHECKED	



MACARTHUR BLVD-50

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	399
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
PLANIMETER AREAS		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
PLANIMETER AREAS		
NO.	AREAS CHECKED	

CONTRACT #72541

(84-9-4)A,HBK,BY,BY-1 • 02-00382-02-PV

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8071	•	SANGAMON	559	400
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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