INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 & Pier 2	0.5 Sp. 2
I_s	(in^4)	4,080	4,080	4,080
$I_c(n)$	(in^4)	12,762	12,762	12,762
$I_c(3n)$	(in^4)	9,366	9,366	9,366
$I_c(cr)$	(in^4)	———	5,940	———
S_s	(in^3)	299	299	299
$S_c(n)$	(in^3)	477	———	477
$S_c(3n)$	(in^3)	429	———	429
$S_c(cr)$	(in^3)	———	300	———
S_x	(in^3)	———	———	———
DC1	(k/')	0.803	0.803	0.803
M_{DC1}	('k)	57	159	106
DC2	(k/')	0.175	0.175	0.175
M_{DC2}	('k)	13	37	24
DW	(k/')	0.284	0.284	0.284
M_{DW}	('k)	21	59	39
LLDF		0.563	0.534	0.512
M_{L+IM}	('k)	301	288	330
f_f (Strength I)	(ksi)	———	———	———
$M_u + \frac{1}{3} f_f S_x$	('k)	646	838	799
$\phi_f M_n$	('k)	2,528	1,884	2,528
f_s DC1	(ksi)	2.29	6.38	4.25
f_s DC2	(ksi)	0.36	1.48	0.67
f_s DW	(ksi)	0.59	2.36	1.09
f_s (L+IM)	(ksi)	7.57	11.51	8.30
f_f (Service II)	(ksi)	0.0	0.0	0.0
$f_s + f_f/2$ (Service II)	(ksi)	13.08	25.18	16.81
Service II Resistance	(ksi)	47.5	47.5	47.5
$f_s + f_f/3$ (Strength I)	(ksi)	17.24	32.70	21.97
$\phi_f F_n$	(ksi)	———	———	———
V_f	(k)	31.4	36.1	31.1

GIRDER REACTION TABLE			
		Abut.	Pier
LLDF		0.665	0.665
OCF		–	–
R_{DC1}	(k)	10.2	38.5
R_{DC2}	(k)	2.2	8.8
R_{DW}	(k)	3.5	14.2
R_L	(k)	40.7	66.8
R_{Im}	(k)	11.1	14.7
R_{Total} (Strength I)(Impact)	(k)	111.4	223.1
R_{Total} (Strength I)(No Impact)	(k)	92.0	197.3

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange ($in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u : Strength I load combination of factored design moments (kip-ft.). $1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{L+IM}$

f_f : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).

$\phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

$f_s + f_f/2$ (Service II): Sum of stresses as computed below (ksi).
f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L + IM) + $f_f/2$

Service II Resistance: Composite ($0.95R_hF_{yf}$) or noncomposite ($0.80R_hF_{yf}$) stress capacity according to Article 6.10.4.2 (ksi).

$f_s + f_f/3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (L + IM) + $f_f/3$

$\phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).

V_f : Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1} : Un-factored reaction due to non-composite dead load (kip).

R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

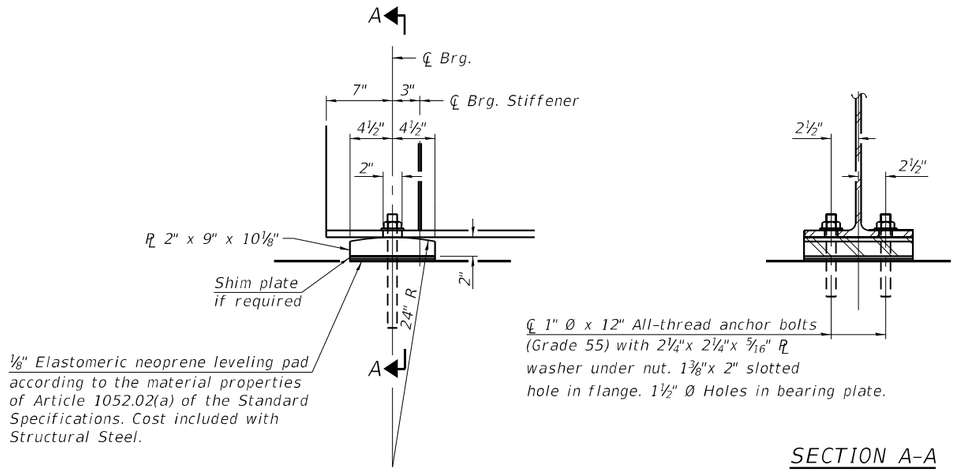
R_L : Un-factored live load reaction (kip).

R_{IM} : Un-factored dynamic load allowance (impact) (kip).

R_{Total} (Strength I)(Impact): Strength I load combination of factored design reactions (kip).
$1.25\,(R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75\,(R_L + R_{IM})$

R_{Total} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
$1.25\,(R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75\,(R_L)$

Note:
M_L and R_L include the effects of centrifugal force and superelevation.



SECTION A-A

ELEVATION AT ABUTMENT

FIXED BEARING AT ABUTMENT

(26 Required)

Notes:

Anchor bolts shall be according to Article 521.06 of the Standard Specifications.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

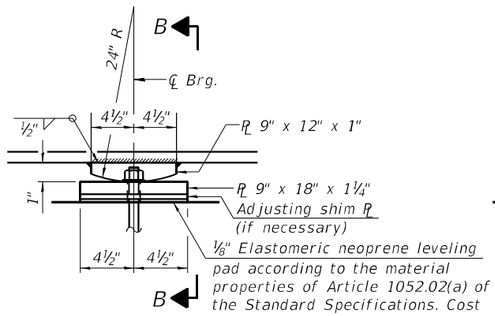
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

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

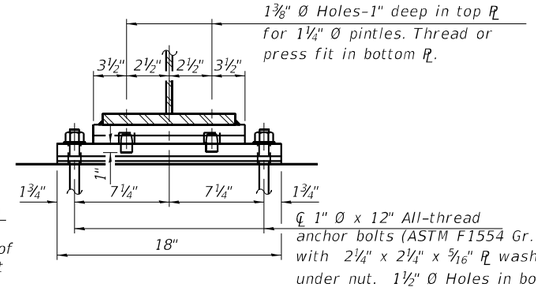
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolts sizes and grades shown at the pier constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

The structural steal bearing and fill plates shall conform to the requirement of AASHTO M270 Grade 50.



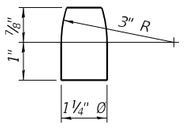
ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER

(26 Required)



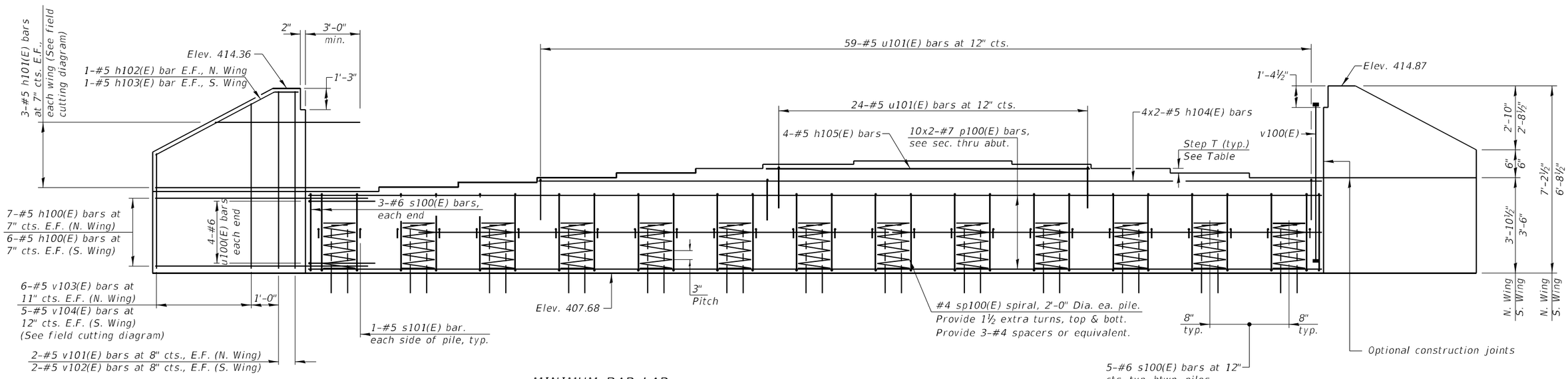
PINTLE

Notes:

Beam 5 shall have one - 18"x12"x¼" thick shim plate for the bearing at each pier. Cost included with Furnishing and Erecting Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	104

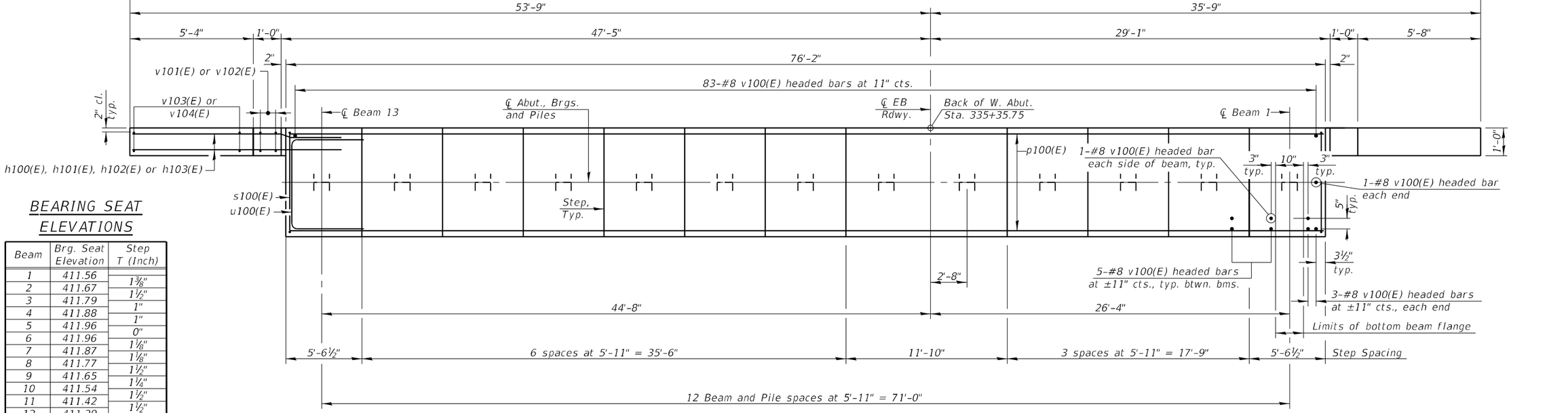


MINIMUM BAR LAP

#4 Bar = 2'-11"
#7 Bar = 5'-0"

ELEVATION

(Looking West)



PLAN

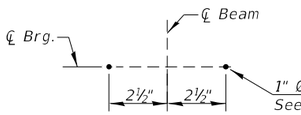
BEARING SEAT ELEVATIONS

Beam	Brg. Seat Elevation	Step T (Inch)
1	411.56	
2	411.67	1⅜"
3	411.79	1½"
4	411.88	1"
5	411.96	1"
6	411.96	0"
7	411.87	1⅛"
8	411.77	1⅛"
9	411.65	1½"
10	411.54	1¼"
11	411.42	1½"
12	411.29	1½"
13	411.18	1⅜"

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 27 of 30.
Bars indicated thus 10x2 - #7 etc. indicates 10 lines of bars with 2 lengths per line.

PILE DATA

Type: HP 14x89 with Pile Shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 387 kips
Est. Length: 67 feet
No. Production Piles: 12
No. Test Piles: 1



ANCHOR BOLT LAYOUT

ADJUSTMENT SHIM PLATE THICKNESS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12	Beam 13
Thickness	none	none	none	none	⅛"	none	none	none	none	none	none	none	none

MODEL: Default
FILE NAME: Z:\0 V and K Jobs\652 - Civil Design Inc\6521 - CDI - PTB 200-38 IL 13 Structures and Erosion Control\CADD\Structural\SN 100-0108\100-0108-78373-0xx-W Abut.dgn
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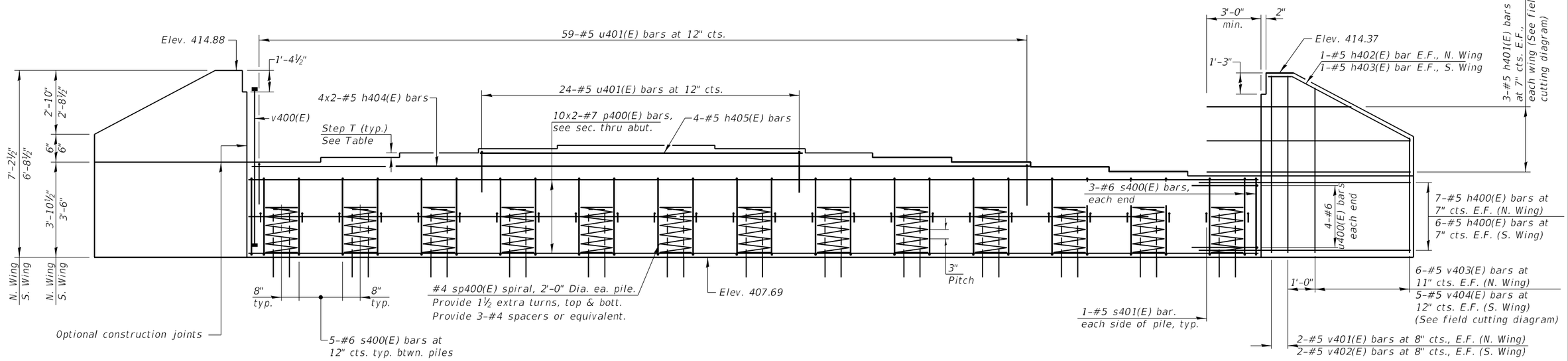
VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =		DESIGNED - DJC	REVISED -
		CHECKED - DHC	REVISED -
PLOT SCALE =		DRAWN - DJC	REVISED -
PLOT DATE = FEBRUARY 14th, 2025		CHECKED - DHC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

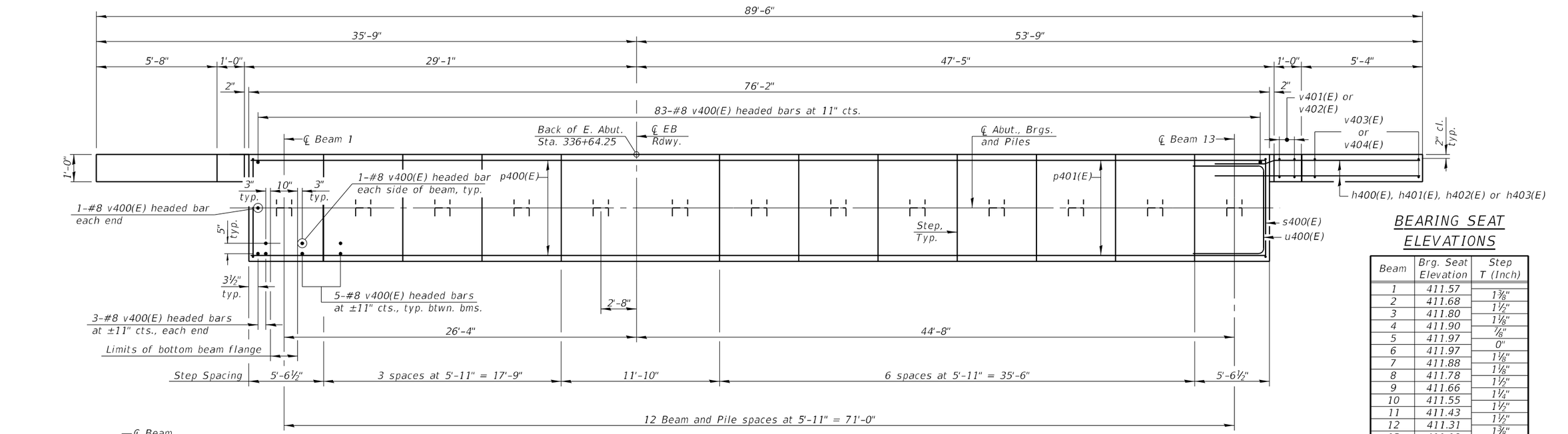
WEST ABUTMENT
STRUCTURE NO. 100 - 0108 (E.B.)
SHEET 21 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	303
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



ELEVATION
(Looking East)

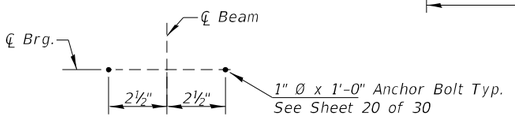
MINIMUM BAR LAP
#4 Bar = 2'-11"
#7 Bar = 5'-0"



PLAN

BEARING SEAT ELEVATIONS

Beam	Brg. Seat Elevation	Step T (Inch)
1	411.57	
2	411.68	1⅜"
3	411.80	1½"
4	411.90	1⅛"
5	411.97	⅞"
6	411.97	0"
7	411.88	1⅛"
8	411.78	1⅛"
9	411.66	1½"
10	411.55	1¼"
11	411.43	1½"
12	411.31	1½"
13	411.19	1⅜"



ANCHOR BOLT LAYOUT

ADJUSTMENT SHIM PLATE THICKNESS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12	Beam 13
Thickness	none	none	none	none	⅛"	none	none	none	none	none	none	none	none

PILE DATA

Type: HP 14x89 with Pile Shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 387 kips
Est. Length: 57 feet
No. Production Piles: 12
No. Test Piles: 1

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 27 of 30.
Bars indicated thus 10x2 - #7 etc. indicates 10 lines of bars with 2 lengths per line.

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =	DESIGNED - DJC	REVISED -	
	CHECKED - DHC	REVISED -	
PLOT SCALE =	DRAWN - DJC	REVISED -	
PLOT DATE = FEBRUARY 14th, 2025	CHECKED - DHC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 100 - 0108 (E.B.)
SHEET 22 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	304
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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WEST ABUTMENT BILL OF MATERIAL

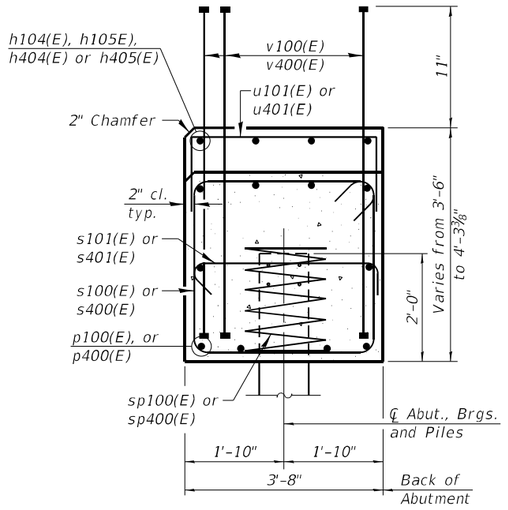
Bar	No.	Size	Length	Shape
h100(E)	26	#5	9'-8"	
h101(E)	6	#5	17'-6"	
h102(E)	2	#5	6'-11"	
h103(E)	2	#5	6'-8"	
h104(E)	8	#5	30'-8"	
h105(E)	4	#5	23'-4"	
p100(E)	20	#7	40'-7"	
s100(E)	66	#6	14'-4"	
s101(E)	26	#5	4'-4"	
* sp100(E)	13	#4	2'-0"	
u100(E)	8	#6	11'-10"	
u101(E)	83	#5	7'-4"	
v100(E)	177	#8	5'-3"	
v101(E)	4	#5	6'-10"	
v102(E)	4	#5	6'-4"	
v103(E)	6	#5	10'-7"	
v104(E)	5	#5	9'-10"	
Structure Excavation		Cu. Yd.	256	
Concrete Structures		Cu. Yd.	43.9	
Reinforcement Bars, Epoxy Coated		Pound	8050	
Furnishing Steel Piles HP14X89		Foot	804	
Driving Piles		Foot	804	
Test Pile Steel HP14X89		Each	1	
Pile Shoes		Each	13	
Granular Backfill for Structures		Cu. Yd.	128	
Geocomposite Wall Drain		Sq. Yd.	61	
Pipe Underdrains for Structures		Foot	125	

* Length is height of spiral.

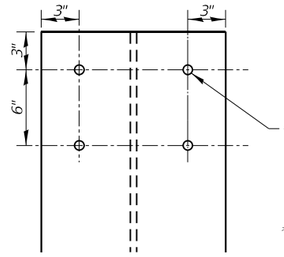
EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h400(E)	26	#5	9'-8"	
h401(E)	6	#5	17'-6"	
h402(E)	2	#5	6'-11"	
h403(E)	2	#5	6'-8"	
h404(E)	8	#5	30'-8"	
h405(E)	4	#5	23'-4"	
p400(E)	20	#7	40'-7"	
s400(E)	66	#6	14'-4"	
s401(E)	26	#5	4'-4"	
* sp400(E)	13	#4	2'-0"	
u400(E)	8	#6	11'-10"	
u401(E)	83	#5	7'-4"	
v400(E)	177	#8	5'-3"	
v401(E)	4	#5	6'-10"	
v402(E)	4	#5	6'-4"	
v403(E)	6	#5	10'-7"	
v404(E)	5	#5	9'-10"	
Structure Excavation		Cu. Yd.	256	
Concrete Structures		Cu. Yd.	43.9	
Reinforcement Bars, Epoxy Coated		Pound	8050	
Furnishing Steel Piles HP14X89		Foot	684	
Driving Piles		Foot	684	
Test Pile Steel HP14X89		Each	1	
Pile Shoes		Each	13	
Granular Backfill for Structures		Cu. Yd.	129	
Geocomposite Wall Drain		Sq. Yd.	61	
Pipe Underdrains for Structures		Foot	125	

* Length is height of spiral.

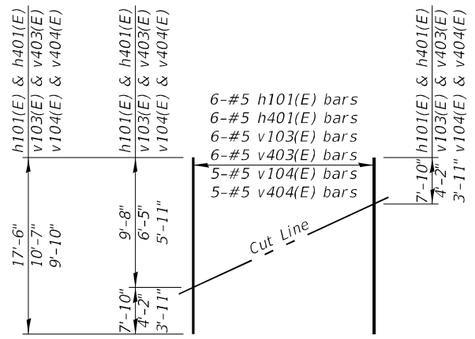


SEC. THRU ABUT.



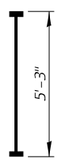
** Cost included in Furnishing Piles.

DETAIL A
Pile Studs

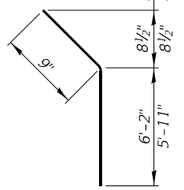


FIELD CUTTING DIAGRAM

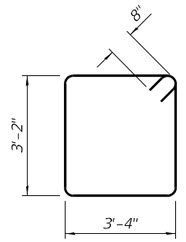
Order h101(E), h401(E), v103(E), v104(E), v403(E) and v404(E) full length. Cut as shown and use remainder of bars in opposite face.



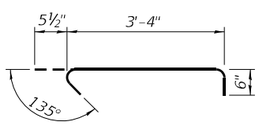
BARS v100(E) & V400(E)
(Headed 708-#8 bar Terminators)



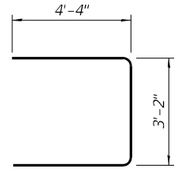
BARS h102(E) & h103(E)
BARS h402(E) & h403(E)



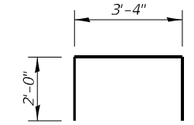
BARS s100(E) & s400(E)



BARS s101(E) & s401(E)

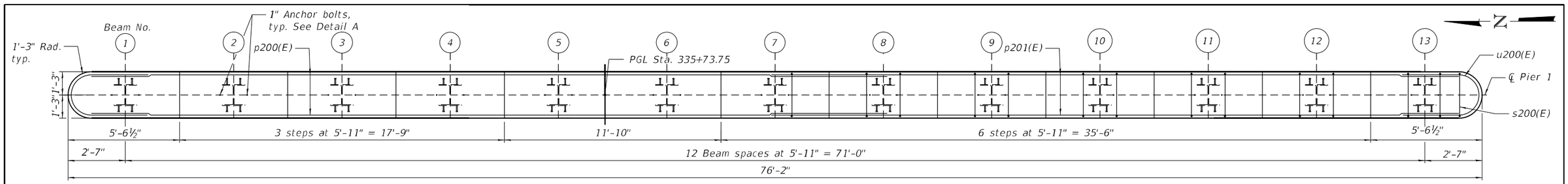


BARS u100(E) & u400(E)

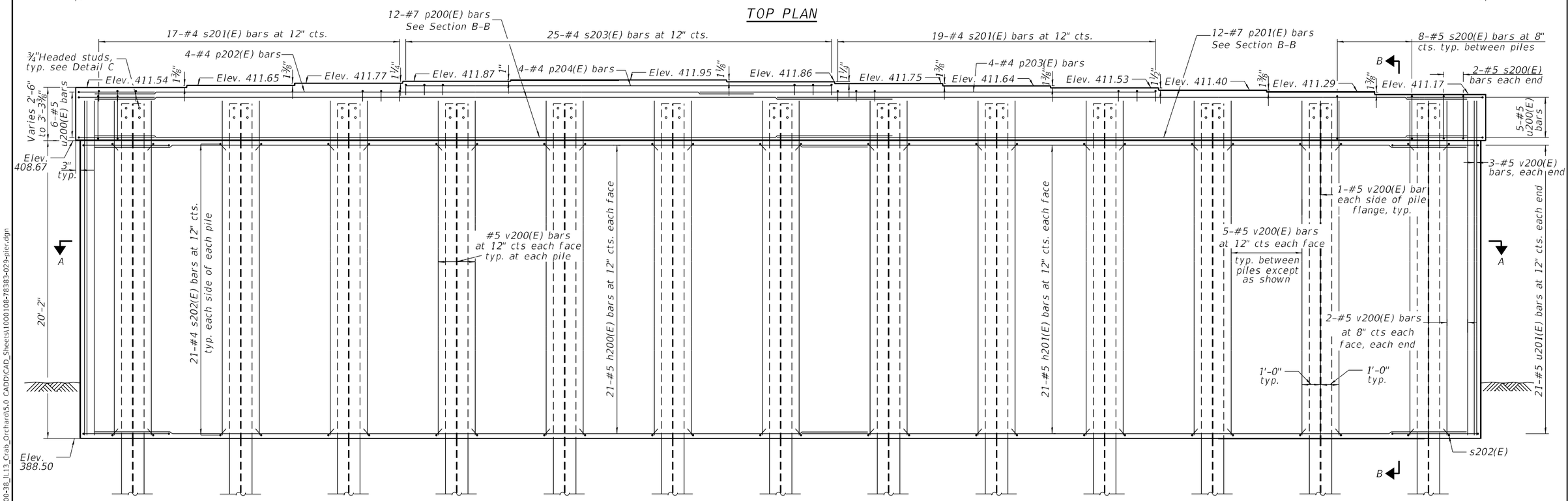


BARS u101(E) & u401(E)

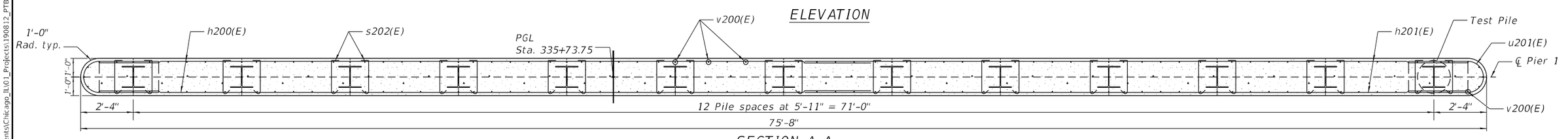
Note: Bar terminators paid for separately.
See Total Bill of Material



TOP PLAN



ELEVATION



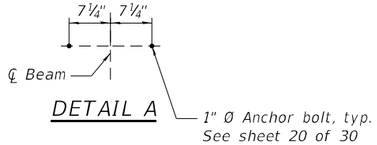
SECTION A-A

PILE DATA

Type: Steel HP14x89 with pile shoes
Nominal Required Bearing: 656 kips
Factored Resistance Available: 347 kips
Est. Length: 69'
No. Req'd: 12
Test Pile: 1

MINIMUM LAP LENGTH

#4 bar = 2'-11"
#5 bar = 3'-7"
#7 bar = 6'-3"



DETAIL A

Notes:
Pour steps monolithically with cap.
See sheet 26 of 30 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 27 of 30.
For Section B-B, see sheet 26 of 30.

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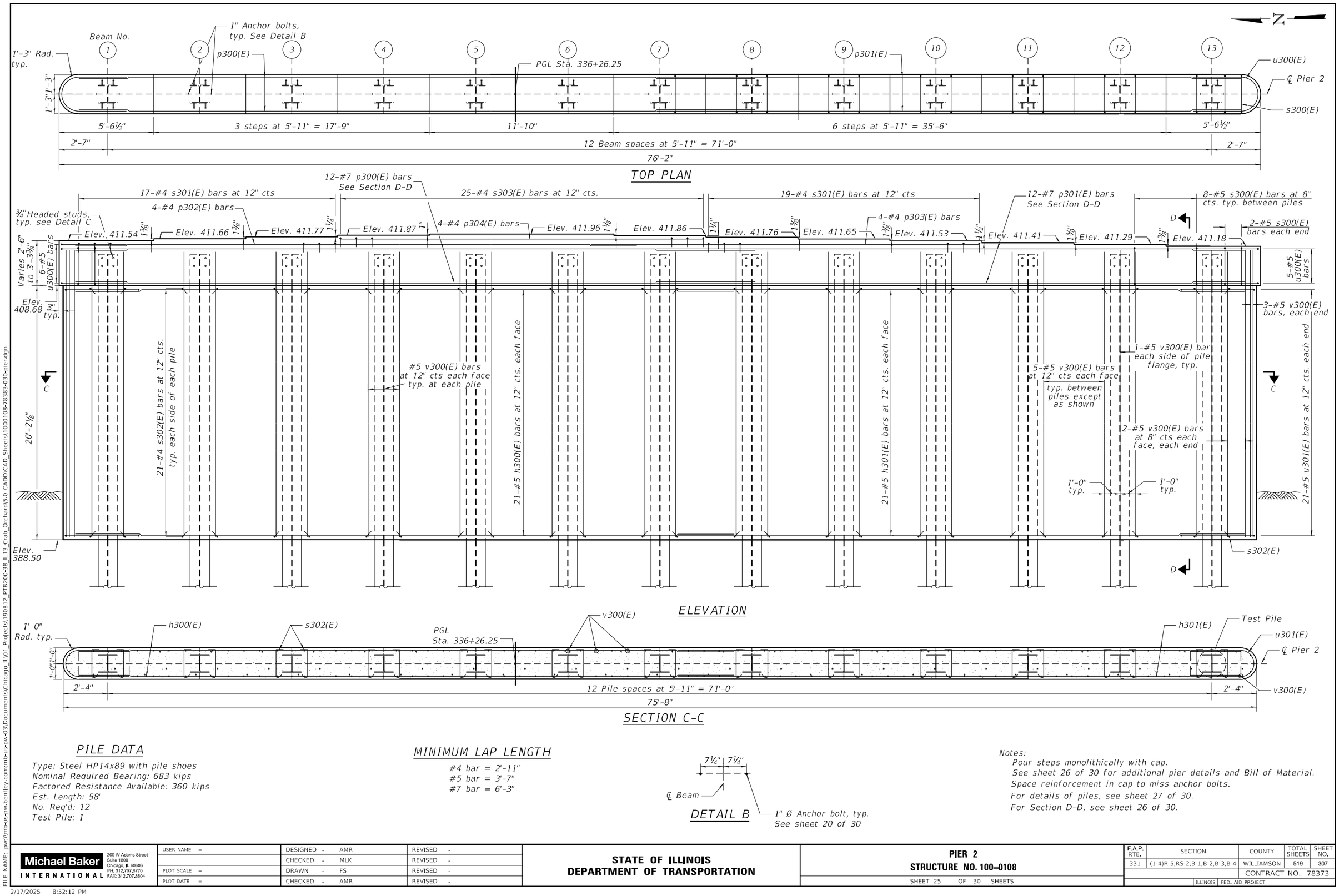
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	CHECKED - MLK	REVISED -
PLOT SCALE =	DRAWN - FS	REVISED -
PLOT DATE =	CHECKED - AMR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 100-0108
SHEET 24 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	306
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

MODEL: Sheet
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PILE DATA

Type: Steel HP14x89 with pile shoes
Nominal Required Bearing: 683 kips
Factored Resistance Available: 360 kips
Est. Length: 58'
No. Req'd: 12
Test Pile: 1

MINIMUM LAP LENGTH

#4 bar = 2'-11"
#5 bar = 3'-7"
#7 bar = 6'-3"

DETAIL B

Notes:
Pour steps monolithically with cap.
See sheet 26 of 30 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 27 of 30.
For Section D-D, see sheet 26 of 30.

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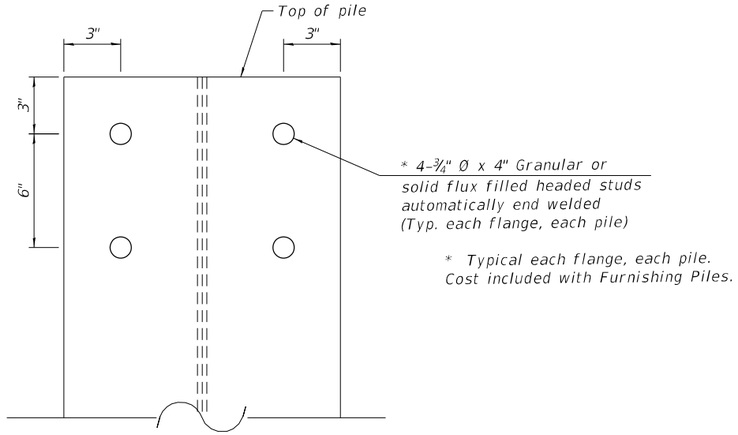
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	CHECKED - MLK	REVISED -	
PLOT SCALE =	DRAWN - FS	REVISED -	
PLOT DATE =	CHECKED - AMR	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

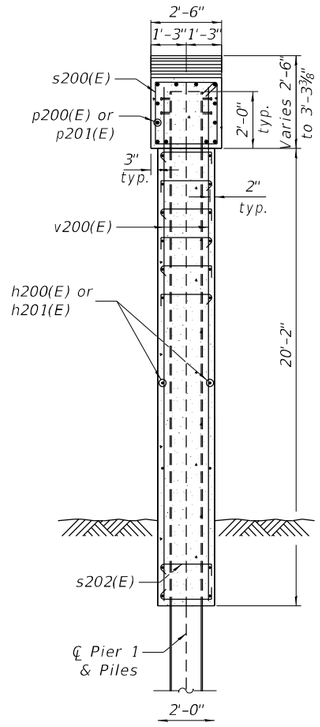
PIER 2
STRUCTURE NO. 100-0108
SHEET 25 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	307
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

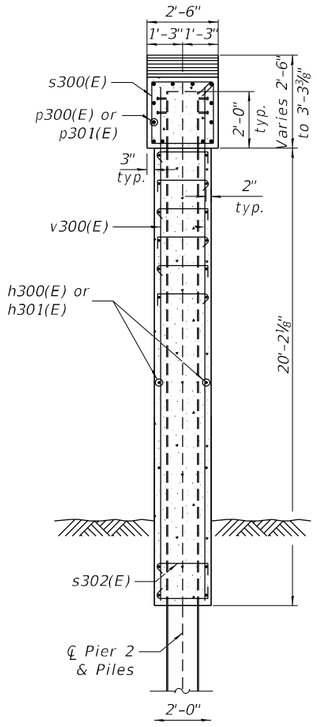
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DETAIL C



SECTION B-B



SECTION D-D

PIER 1

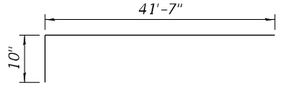
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h200(E)	42	#5	42'-5"	
h201(E)	42	#5	36'-6"	
p200(E)	12	#7	42'-11"	
p201(E)	12	#7	37'-0"	
p202(E)	4	#4	35'-4"	
p203(E)	4	#4	25'-0"	
p204(E)	4	#4	23'-4"	
s200(E)	100	#5	9'-7"	
s201(E)	36	#4	3'-10"	
s202(E)	546	#4	2'-6"	
s203(E)	25	#4	4'-5"	
u200(E)	11	#5	9'-5"	
u201(E)	42	#5	10'-4"	
v200(E)	160	#5	22'-2"	
Cofferdam Excavation			Cu Yd	341
Cofferdam (Type 2) (Location - 1)			Each	1
Concrete Structures			Cu Yd	133.3
Seal Coat Concrete			Cu Yd	140
Reinforcement Bars, Epoxy Coated			Pound	11,980
Furnishing Steel Piles HP14X89			Foot	828
Driving Piles			Foot	828
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	13

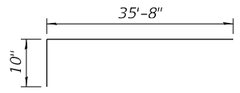
PIER 2

BILL OF MATERIAL

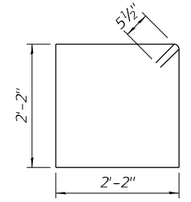
Bar	No.	Size	Length	Shape
h300(E)	42	#5	42'-5"	
h301(E)	42	#5	36'-6"	
p300(E)	12	#7	42'-11"	
p301(E)	12	#7	37'-0"	
p302(E)	4	#4	35'-4"	
p303(E)	4	#4	25'-0"	
p304(E)	4	#4	23'-4"	
s300(E)	100	#5	9'-7"	
s301(E)	36	#4	3'-10"	
s302(E)	546	#4	2'-6"	
s303(E)	25	#4	4'-5"	
u300(E)	11	#5	9'-5"	
u301(E)	42	#5	10'-4"	
v300(E)	160	#5	22'-2"	
Cofferdam Excavation			Cu Yd	341
Cofferdam (Type 2) (Location - 2)			Each	1
Concrete Structures			Cu Yd	133.3
Seal Coat Concrete			Cu Yd	140
Reinforcement Bars, Epoxy Coated			Pound	11,980
Furnishing Steel Piles HP14X89			Foot	696
Driving Piles			Foot	696
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	13



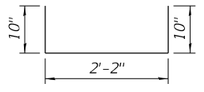
BAR h200(E)
BAR h300(E)



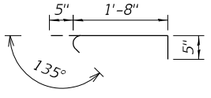
BAR h201(E)
BAR h301(E)



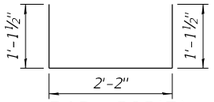
BAR s200(E)
BAR s300(E)



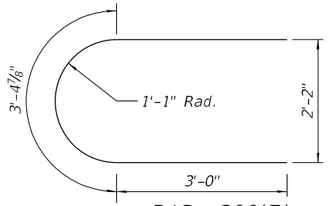
BAR s201(E)
BAR s301(E)



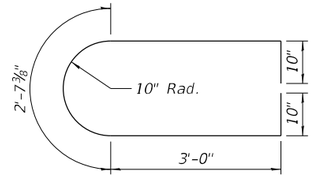
BAR s202(E)
BAR s302(E)



BAR s203(E)
BAR s303(E)



BAR u200(E)
BAR u300(E)



BAR u201(E)
BAR u301(E)

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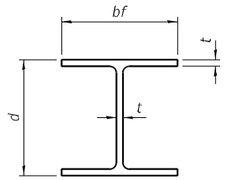
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PLOT DATE =	CHECKED - AMR	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
STRUCTURE NO. 100-0108
SHEET 26 OF 30 SHEETS

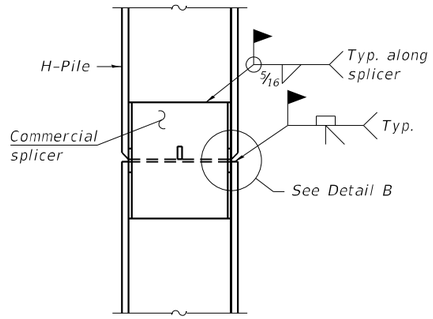
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	308
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

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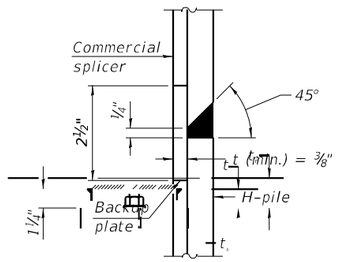


STEEL PILE TABLE

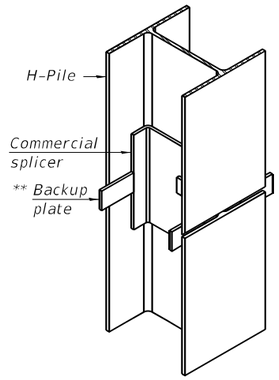
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17¾"	17⅞"	⅞"	36"
x135	17½"	17¾"	¾"	36"
HP 16x183	16½"	16½"	1⅛"	36"
x162	16¼"	16⅛"	1"	36"
x141	16	16	⅞"	36"
x121	15¾"	15⅞"	¾"	36"
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅜"	14⅜"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



ELEVATION

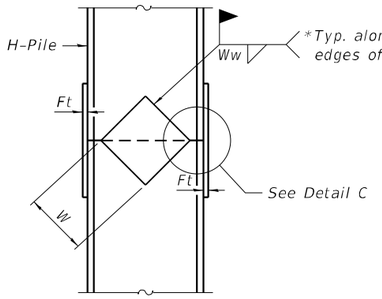


DETAIL B

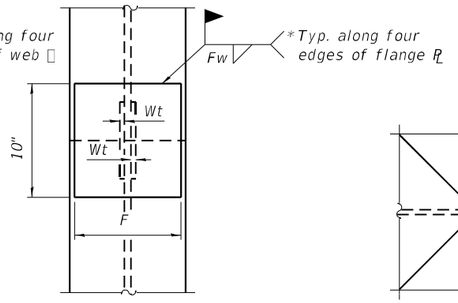


ISOMETRIC VIEW

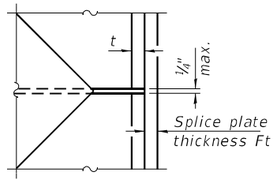
WELDED COMMERCIAL SPLICE



ELEVATION



END VIEW

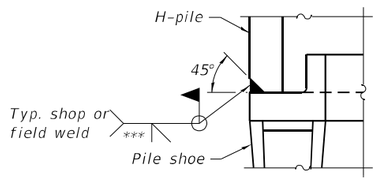


DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15½"	1½"	1"	9½"	⅞"	¾"
x157	15¼"	1¼"	1"	9½"	⅞"	¾"
x135	15¼"	1¼"	1"	9½"	⅞"	¾"
HP 16x183	13¾"	1½"	1"	8¼"	⅞"	¾"
x162	13½"	1½"	1"	8¼"	¾"	⅝"
x141	13½"	1¼"	⅞"	8¼"	¾"	⅝"
x121	13½"	1¼"	⅞"	8¼"	¾"	⅝"
HP 14x117	12½"	1¼"	⅞"	7¾"	⅝"	½"
x102	12½"	1"	¾"	7¾"	⅝"	½"
x89	12½"	⅞"	11/16"	7¾"	⅝"	½"
x73	12½"	¾"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	1"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	¾"	½"	6½"	½"	⅜"
x53	10"	¾"	½"	6½"	½"	⅜"
HP 10x57	8"	⅞"	9/16"	5¼"	½"	⅜"
x42	8"	¾"	9/16"	5¼"	½"	⅜"
HP 8x36	6¾"	⅝"	7/16"	4"	½"	⅜"

WELDED PLATE FIELD SPLICE

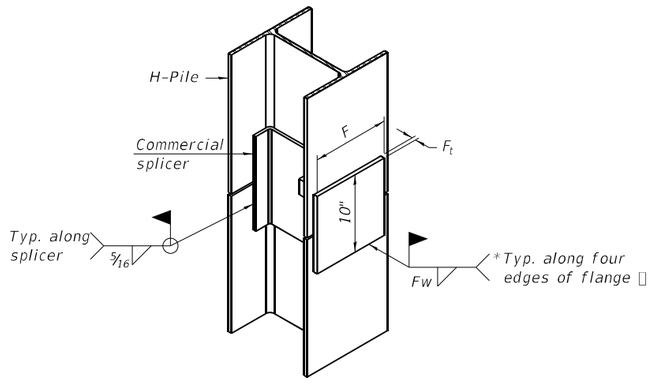
ELEVATION



DETAIL A

SHOE ATTACHMENT

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



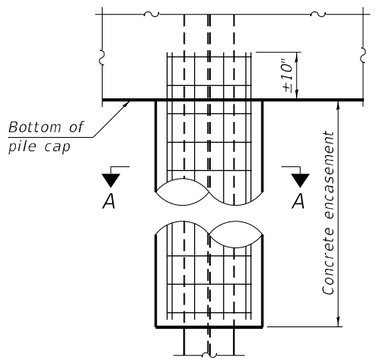
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

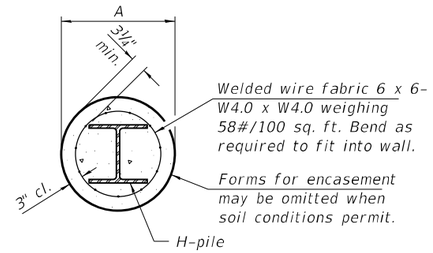
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION



SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

(when specified)

F-HP

10-27-2023

CIVIL DESIGN, INC. WBE / DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME =	DESIGNED – JAG	REVISED –
		CHECKED – JGS	REVISED –
	PLOT SCALE =	DRAWN – JAG	REVISED –
	PLOT DATE =	CHECKED – JGS	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 100-0108
SHEET 27 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	309
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: C:\Users\jschreckenberg\Downloads\100-0108-78373-027-HP Pile Details.dgn

2/19/2025 2:10:49 PM

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Latitude 37 44 42.01 Longitude -89 07 21.01 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 8/5/14

ROUTE IL 13 EB (FAP 331) **DESCRIPTION** IL 13 EB over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION 5-3B-4 **LOCATION** 1.6 mi E. of Jackson Co. (near W. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0020
Station 336+00

BORING NO. 2-S
Station 335+27
Offset 15.0ft Rt of EB CL
Ground Surface Elev. 414.9 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 403.9 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Material Description
				HMA Pavement over Crushed Aggregate
-5				
407.40				ROCK FILL (Crusher Run or Rip-Rap)
-10				
-15				
-20				
390.40				ROCK FILL (Crusher Run or Rip-Rap) *(continued)*
-25	WOH			M. Stiff Grey, V. Moist SILTY CLAY to SILTY CLAY LOAM
	WOH	0.6	26	
	1	B		
387.90				93% Fines <#200, LL 36, PI 18 (Estimated based on visual ID and historical database)
	WOH			Soft Grey, V. Moist SILTY CLAY to SILTY CLAY LOAM
	WOH	0.4	28	
386.40	2	B		
-30				93% Fines <#200, LL 36, PI 18 (Estimated based on visual ID and historical database)
	3			Stiff Brown and mottled Grey, Moist to V. Moist CLAY to SILTY CLAY
	4	1.1	26	
	4	B		
382.90				
	WOH			Soft Grey and Brown, V. Moist SILTY CLAY
	WOH	0.3	30	
	WOH	B		96% Fines <#200, LL 44, PI 23 (Estimated based on visual ID and historical database)
380.40				
-35	WOH			M. Stiff Grey and mottled Brown, Moist to V. Moist SILTY CLAY to SILTY CLAY LOAM
	1	1.0	26	
	1	B		
377.90				
	WOH			Soft Grey and mottled Brown, V. Moist SILTY CLAY to CLAY
	WOH	0.4	27	
	WOH	B		93% Fines <#200, LL 48, PI 26 (Estimated based on visual ID and historical database)
375.40				
-40	1			

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:\MATERIALS GEOTECHNICAL UNIT\GINT\PROJECTS\PROJECTS FILE\WILLIAMSON\STRUCTURES\100-0020 IL EB OVER CRAB ORCHARD LAKE\100-0020 IL 13 EB OVER CRAB ORCHARD LAKE 2020.GPJ Data Template DSTEMPLT.GDT Date Printed 5/6/21
Latitude 37 44 42.01 Longitude -89 37 21.01 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 8/5/14

ROUTE IL 13 EB (FAP 331) **DESCRIPTION** IL 13 EB over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION 5-3B-4 **LOCATION** 1.6 mi E. of Jackson Co. (near W. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0020
Station 336+00

BORING NO. 2-S
Station 335+27
Offset 15.0ft Rt of EB CL
Ground Surface Elev. 414.9 ft

Surface Water Elev. 405.2 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 403.9 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Material Description
	2	1.9	26	Stiff Grey and mottled Brown, Moist CLAY *(continued)*
	4	B		
-45	WOH			
	WOH	1.3	28	
	1	B		
365.40				
-50	WOH			Soft Grey, V. Moist CLAY
	WOH	0.4	31	
	WOH	B		
360.40				
-55	WOH			M. Sfiff Grey, V. Moist CLAY
	WOH	0.7	33	
	WOH	B		
355.40				
-60	WOH			
350.40				Soft to M. Stiff Grey, V. Moist CLAY *(continued)*
-65	WOH	0.5	25	
	WOH	B		
	2			Stiff Grey and Black, Moist CLAY to Weathered CLAY SHALE with COAL and some GRAVEL
	6	1.5	21	
	10	E		
347.90				
	100/8"			Hard Grey, Dry CLAY SHALE
345.30				
-70	100/1"			Hard Grey, Dry CLAY SHALE
				Borehole continued with rock coring.
-75				Bottom of hole at 79.6 feet Ground Surface Elevation referenced to BM at NW corner SN 100-0020; Elev. 416.70 Hammer Efficiency: 75% To convert "N" values to "N60", multiply by 1.25 Drilled by: R. Moberly
-80				

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)

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CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
	CHECKED – JGS	REVISED –	
PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - W. ABUT.
STRUCTURE NO. 100-0108
SHEET 28 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	310
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
District 9

ROCK CORE LOG

Date 8/5/14

ROUTE IL 13 EB (FAP 331) **DESCRIPTION** IL 13 EB over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION 5-3B-4 **LOCATION** 1.6 mi E. of Jackson Co. (near W. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **CORING METHOD** Conventional rotary with water

STRUCT. NO. 100-0020
Station 336+00

BORING NO. 2-S
Station 335+27
Offset 15.0ft Rt of EB CL
Ground Surface Elev. 414.9 ft

CORING BARREL TYPE & SIZE NV3 5FT NWJ
Core Diameter 1.78 in
Top of Rock Elev. 347.90 ft
Begin Core Elev. 345.30 ft

		DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
V. Dense Grey, Dry SANDSTONE with CLAY seams	345.30	-70	1	89	17		
V. Dense Grey, Dry SANDSTONE	340.30	-75	2	100	72		382 269.2 291 316.2
	335.30	-80					
Bottom of hole @ 79.6 ft Ground Surface Elevation referenced to BM at NW corner SN 100-0020; Elev. 416.70 Drilled by: R. Moberly		-85					

Color pictures of the cores Yes, attached
Cores will be stored for examination until 5 Years after Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 100-0020 IL 13 EB OVER CRAB ORCHARD LAKE 2020.GP_ D6TEMPLT.GDT 5/6/21

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LICENSE #184.003222

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PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - W. ABUT.
STRUCTURE NO. 100-0108
SHEET 29 OF 30 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	311
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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Latitude 37 44 41.73 Longitude -89 07 19.08 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 8/6/14

ROUTE IL 13 EB (FAP 331) **DESCRIPTION** IL 13 EB over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION 5-3B-4 **LOCATION** 1.6 mi E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0020
Station 336+00

BORING NO. 1-S
Station 336+71
Offset 15.0ft Rt of EB CL
Ground Surface Elev. 414.9 ft

Surface Water Elev. 405.2 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 403.8 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
				HMA Pavement over Crushed Aggregate
-5				406.90
				ROCK FILL (Crusher Run or Rip-Rap)
-10				▽
-15				390.40
-20				Soft to M. Stiff Grey, V. Moist SILTY CLAY to SILTY CLAY LOAM
-25	WOH			
	WOH	0.5	28	
	WOH	B		
				93% Fines <#200, LL 36, PI 18 (Estimated based on visual ID and historical database)
	WOH			
	WOH	0.3	28	
	WOH	B		
				385.90
-30				Stiff Brown and mottled Grey, Moist SILTY CLAY to CLAY
	1			
	2	1.9	23	
	3	B		
				383.40
				M. Stiff Brown, V. Moist CLAY LOAM to SILTY CLAY LOAM
	1			
	2	0.8	21	
	3	S		
				380.90
-35				Stiff Brown and mottled Grey, Moist CLAY
	1			
	2	1.9	26	
	4	B		
				378.40
				Stiff Grey and mottled Brown. Moist CLAY
	1			
	2	1.9	41	
	4	S		
-40	1			

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)

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Latitude 37 44 41.73 Longitude -89 07 19.08 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 8/6/14

ROUTE IL 13 EB (FAP 331) **DESCRIPTION** IL 13 EB over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION 5-3B-4 **LOCATION** 1.6 mi E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0020
Station 336+00

BORING NO. 1-S
Station 336+71
Offset 15.0ft Rt of EB CL
Ground Surface Elev. 414.9 ft

Surface Water Elev. 405.2 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 403.8 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
				Stiff Grey and mottled Brown, Moist CLAY *(continued)*
	2	1.9	39	
	3	B		
-45	1			
	1	1.2	48	
	2	B		
-50	1			
	1	1.1	25	
	2	B		
				360.40
-55	1			Stiff Grey and mottled Brown, Moist CLAY with broken SANDSTONE GRAVEL
	3	1.2	23	
	5	B		
				355.90
-60	100/0.5"			V. Dense Grey, Dry SANDSTONE
				Bottom of hole at 59.1 feet
-65				
				Ground Surface Elevation referenced to BM at NW corner SN 100-0020; Elev. 416.70
-70				Hammer Efficiency: 75% To convert "N" values to "N60", multiply by 1.25
				Note: Augers kicked out of plumb preventing use of the core barrel. Sandstone too hard to auger without overtightening drill rods, therefore unable to confirm solid formation of sandstone.
-75				Drilled by: R. Moberly
-80				

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)

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		CHECKED – JGS	REVISED –	
	PLOT SCALE =	DRAWN – JAG	REVISED –	
	PLOT DATE =	CHECKED – JGS	REVISED –	

BORING LOGS - E. ABUT.
STRUCTURE NO. 100-0108
SHEET 30 OF 30 SHEETS

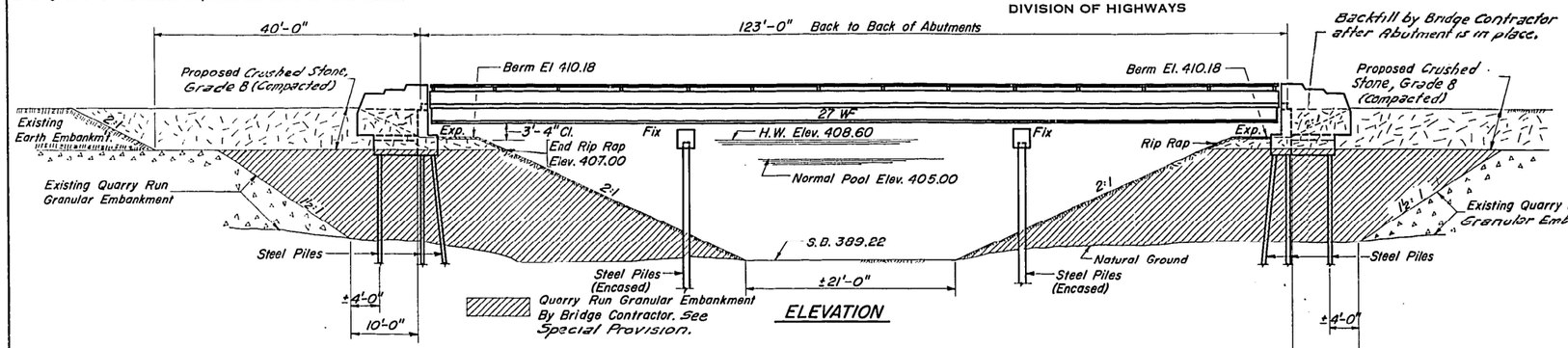
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	312
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

B.M. □ Cut in S.E. Courner N. Hub Guard of Existing Bridge
86' Lt. Sta. 336+62 El 415.60
Existing Structure to remain in place and serve as W.B. Lanes.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

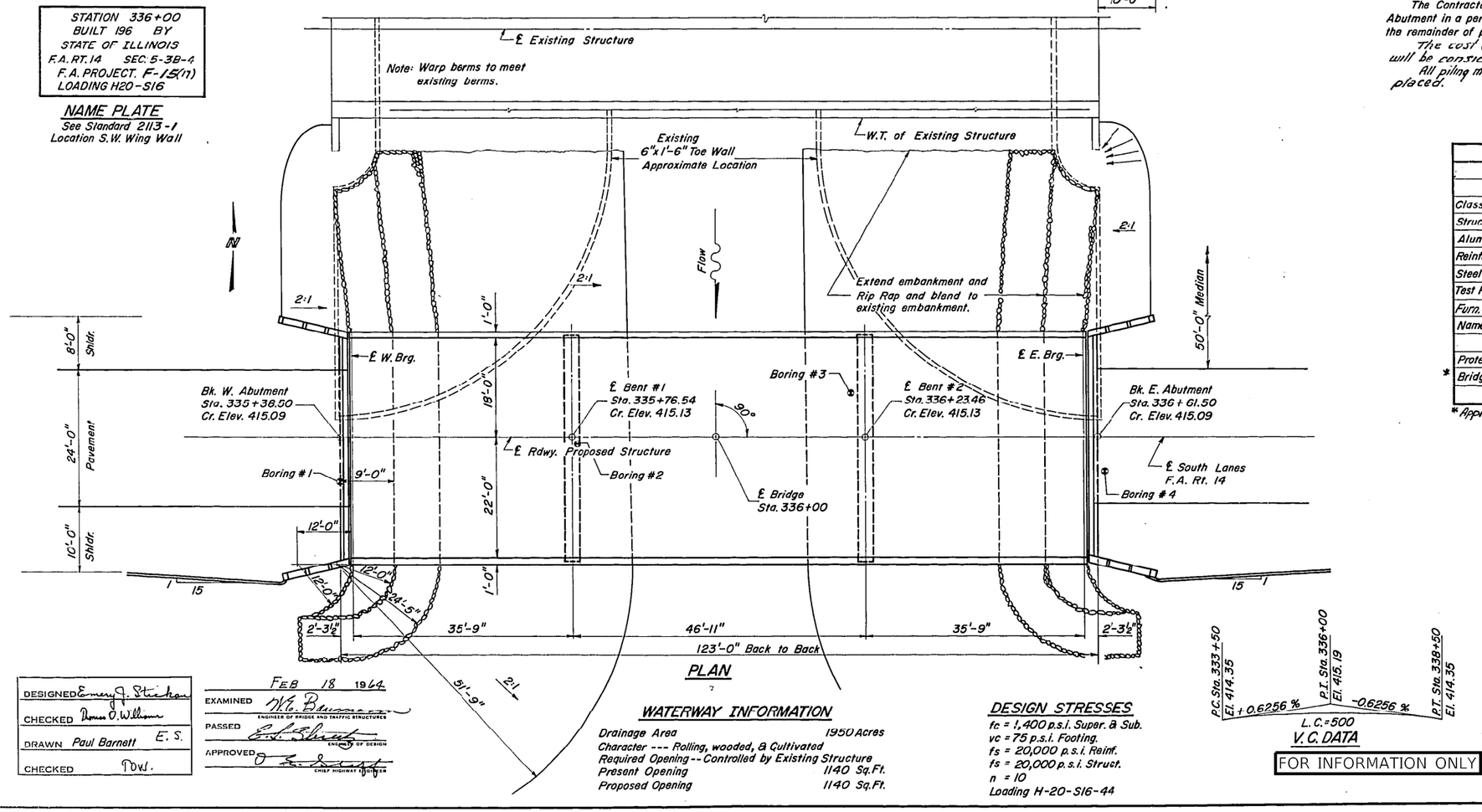
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F.A.R.T. 14	5-3B-4	WILLIAMSON	18	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	F-15(17)	

SHEET NO. 1
8 SHEETS



STATION 336+00
BUILT 196 BY
STATE OF ILLINOIS
F.A. RT. 14 SEC. 5-3B-4
F.A. PROJECT. F-15(17)
LOADING H20-S16

NAME PLATE
See Standard 2113-1
Location S.W. Wing Wall



PLAN

DESIGNED	Emery J. Stichan	
CHECKED	James O. Williams	
DRAWN	Paul Barnett	E. S.
CHECKED	Dow.	

FEB 18 1964

EXAMINED _____ ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED _____ ENGINEER OF DESIGN
APPROVED _____ CHIEF HIGHWAY ENGINEER

WATERWAY INFORMATION

Drainage Area 1950 Acres
Character --- Rolling, wooded, & Cultivated
Required Opening -- Controlled by Existing Structure
Present Opening 1140 Sq.Ft.
Proposed Opening 1140 Sq.Ft.

DESIGN STRESSES

fc = 1,400 p.s.i. Super. & Sub.
vc = 75 p.s.i. Footing.
fs = 20,000 p.s.i. Reinf.
fs = 20,000 p.s.i. Struct.
n = 10
Loading H-20-S16-44

V.C. DATA

FOR INFORMATION ONLY

GENERAL NOTES

Class X Concrete shall be used throughout.

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite, and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Layout of Embankment varied to suit ground conditions in the field as directed by the Engineer.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

Rivets ¾"ϕ, Open Holes 1⅛"ϕ, unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

All Structural Steel shall conform to A.S.T.M. Specifications (A-36).

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor Studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Estimated Weight = 2196 lbs.

Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive one Steel Test Pile (10BP-42), at the West Abutment in a permanent location as directed by the Engineer before ordering the remainder of piles.

The cost of driving any piling through the existing slope wall will be considered incidental to the Contract.

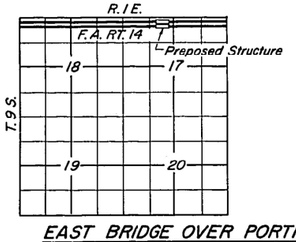
All piling must be driven before the granular embankment is placed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
Class X Concrete	Cu.Yds.	135.6	101.4	237.0
Structural Steel	l.bs.	105,130		105,130
Aluminum Handrail	Lin. Ft.	240		240
Reinforcement Bars	Lbs.	32,590	7450	40,040
Steel Piles (10BP-42)	Lin. Ft.		1860	1860
Test Piles Steel(10BP-42)	Each		1	1
Furn. & Filling Metal Shells	Lin. Ft.		252	252
Name Plates	Each	1		1
Protective Coat	Sq.Yds.	650		650
* Bridge Seat Sealant	Lump Sum		1	1

*Applied at Abutments only.

LOCATION SKETCH



EAST BRIDGE OVER PORTION OF CRAB ORCHARD LAKE
PROJECT F-15(17)
GENERAL PLAN AND ELEVATION
F.A. RT. 14 SEC. 5-3B-4
WILLIAMSON COUNTY
STA. 336+00

MODEL: Default
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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

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		CHECKED - JGS	REVISED -	
PLOT SCALE =		DRAWN - JAG	REVISED -	
PLOT DATE =		CHECKED - JGS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EX. STRUCTURE - GPE
STRUCTURE NO. 100-0108

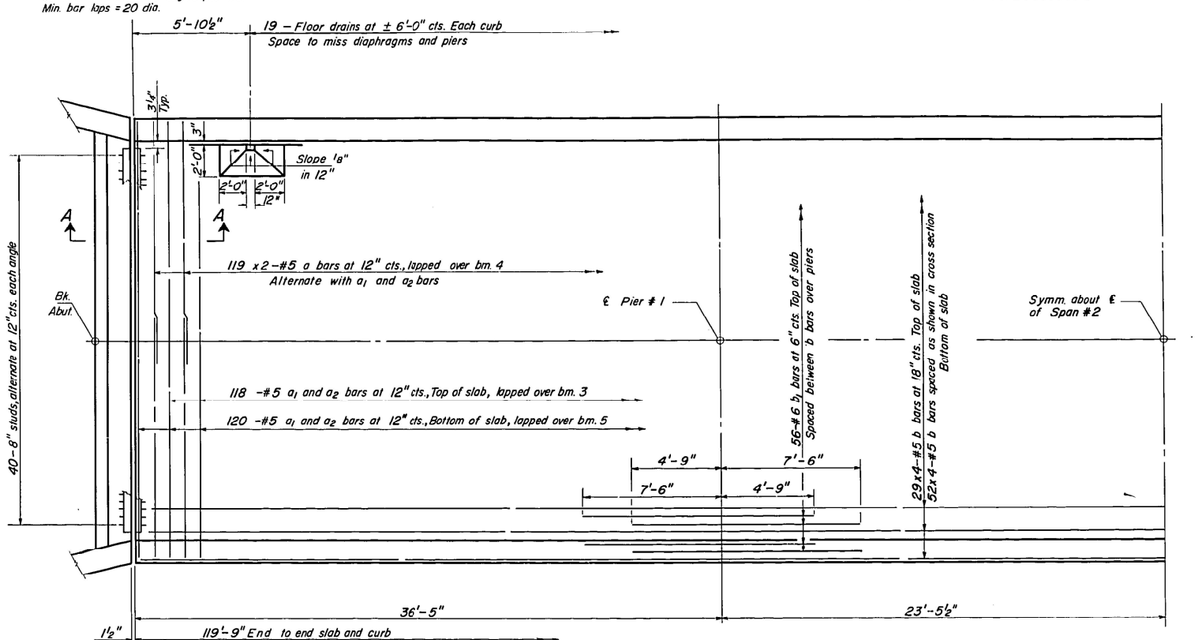
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	313
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Bundled F.A. 14	5-38-4	WILLIAMSON	18	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

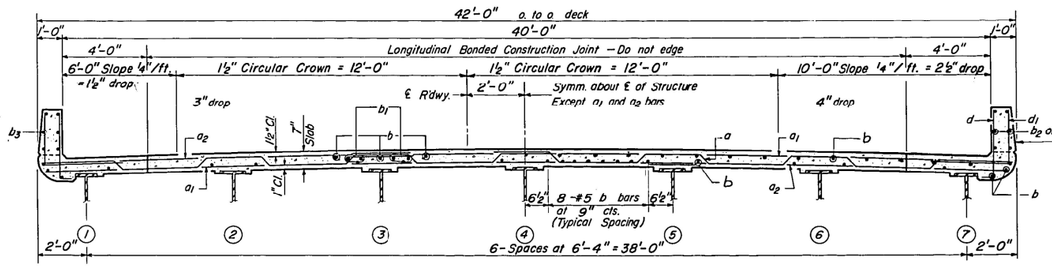
SHEET NO. 3
8 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 20 dia.

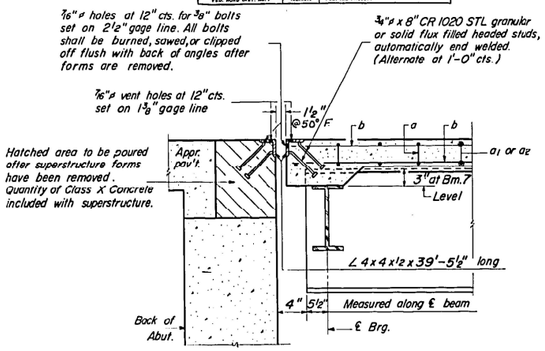


HALF PLAN



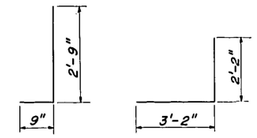
NEAR PIERS — NEAR MIDSPAN

CROSS SECTION



BAR a

SECTION A-A

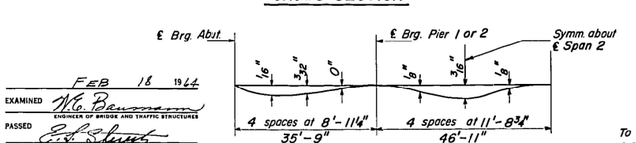


BAR d — BAR d1

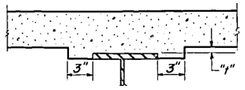
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	238	#5	23'-3"	
a1	238	#5	27'-6"	
a2	238	#5	14'-9"	
b	324	#5	30'-9"	
b1	112	#6	12'-3"	
b2	48	#5	15'-1"	
b3	48	#5	5'-6"	
b4	24	#5	17'-6"	
d	294	#5	3'-6"	
d1	240	#5	5'-4"	
Class X Concrete			Cu. Yd.	135.6
Reinforcement Bars			Lbs.	32,590
Structural Steel			Lbs.	102,130 *

* Weight of bearing assemblies with lead plates and anchor bolts are included as structural steel.
Est. Weight = 6762 Lbs.

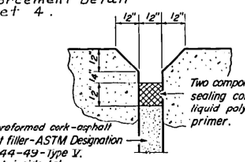


DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet # 5 .

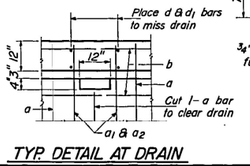


STANDARD FILLET DETAIL

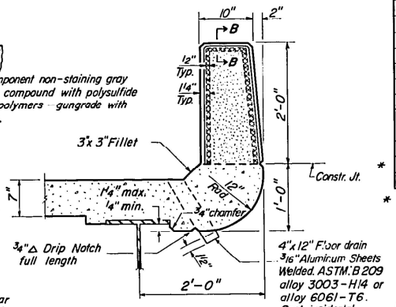
To determine "I": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5 . These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 5 , minus slab thickness, equals the fillet heights "I" above top of beams.



SECTION B-B



TYP. DETAIL AT DRAIN



PARAPET DETAIL

SUPERSTRUCTURE

F.A. RT. 14 SEC. 5-38-4
WILLIAMSON COUNTY
STA. 336+00

DESIGNED	Emily J. Stichan
CHECKED	Thom O. William
	Paul G. Barnett
DRAWN	E. S. D. L. Beemer
CHECKED	Paul.

FEB 18 1964

EXAMINED W. A. Bauman — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E. E. Shurtz — ENGINEER OF DESIGN
APPROVED O. K. Scott — CHIEF HIGHWAY ENGINEER

I-7-0 11-15-62

FOR INFORMATION ONLY

MODEL: Default
FILE NAME: C:\Users\schreckenberg\Downloads\108 100-0108-78373-032-Existing Structure_Superstructure.dgn

2/12/2025 5:21:16 PM

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –
	CHECKED – JGS	REVISED –
PLOT SCALE =	DRAWN – JAG	REVISED –
PLOT DATE =	CHECKED – JGS	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EX. STRUCTURE - SUPERSTRUCTURE
STRUCTURE NO. 100-0108

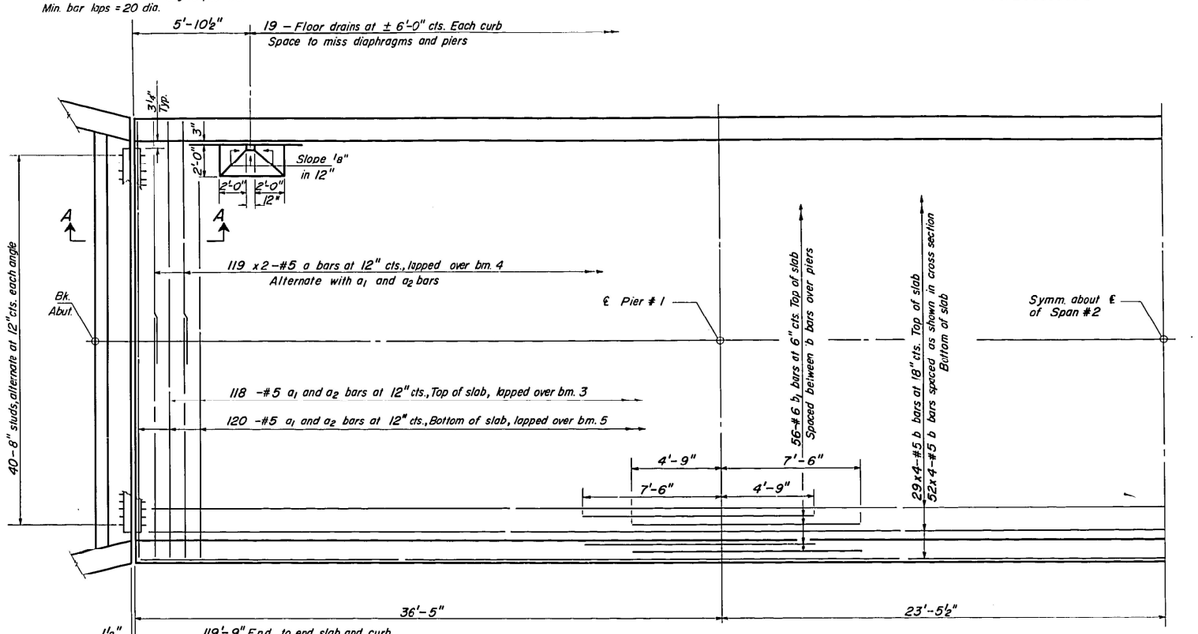
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5, RS-2, B-1, B-2, B-3, B-4	WILLIAMSON	519	314
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Bridge F.A. 14	5-38-4	WILLIAMSON	18	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

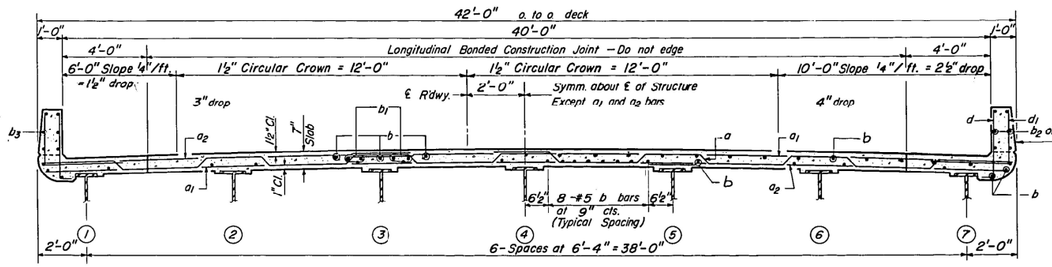
SHEET NO. 3
8 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 20 dia.

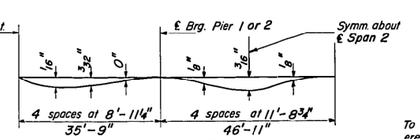


HALF PLAN

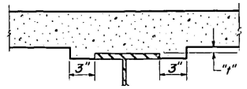


NEAR PIERS NEAR MIDSPAN

CROSS SECTION

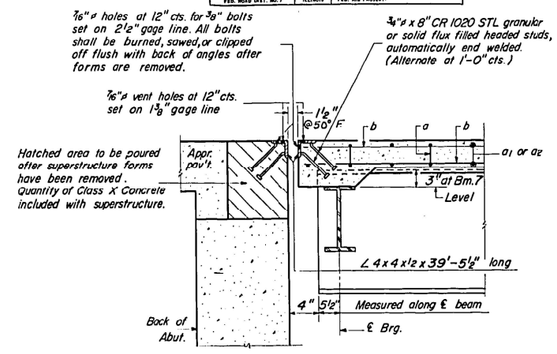


DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet # 5 .

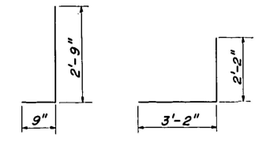


STANDARD FILLET DETAIL

To determine "I": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5 . These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 5 , minus slab thickness, equals the fillet heights "I" above top of beams.



SECTION A-A

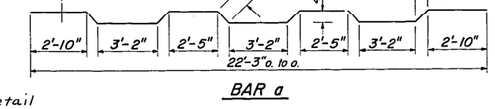


BAR d BAR d1

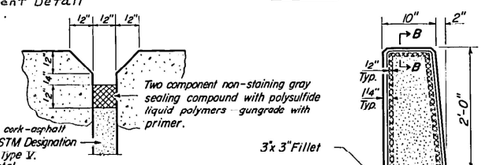
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	238	#5	23'-3"	
a1	238	#5	27'-6"	
a2	238	#5	14'-9"	
b	324	#5	30'-9"	
b1	112	#6	12'-3"	
b2	48	#5	15'-1"	
b3	48	#5	5'-6"	
b4	24	#5	17'-6"	
d	294	#5	3'-6"	
d1	240	#5	5'-4"	
Class X Concrete			Cu. Yd.	135.6
Reinforcement Bars			Lbs.	32,590
Structural Steel			Lbs.	105,130

* Weight of bearing assemblies with lead plates and anchor bolts are included as structural steel.
Est. Weight = 6762 Lbs.

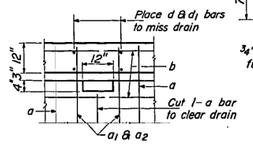


BAR a

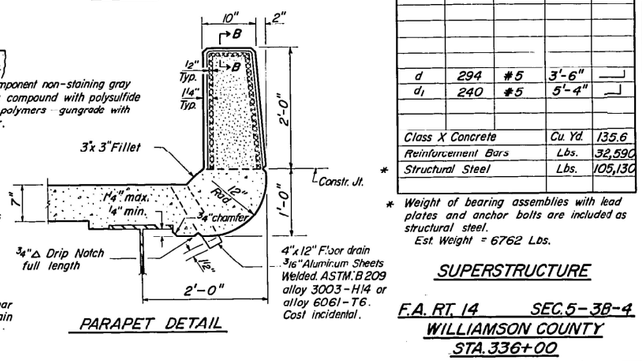


½"ø preformed cork-asphalt joint filler-ASTM Designation D544-49-type V. Cost incidental.

SECTION B-B



TYP. DETAIL AT DRAIN



PARAPET DETAIL

SUPERSTRUCTURE

F.A. RT. 14 SEC. 5-38-4
WILLIAMSON COUNTY
STA. 336+00

DESIGNED	Emily J. Stichan
CHECKED	Thom O. Williams
	Paul G. Barnett
DRAWN	E. S. D. L. Beemer
CHECKED	Paul.

EXAMINED FEB 18 1964
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

I-7-0 11-15-62

FOR INFORMATION ONLY

MODEL: Default
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2/13/2025 7:33:54 AM

CDI CIVIL DESIGN, INC. WBE | DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME =	DESIGNED – JAG	REVISED –	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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	PLOT DATE =	CHECKED – JGS	REVISED –	

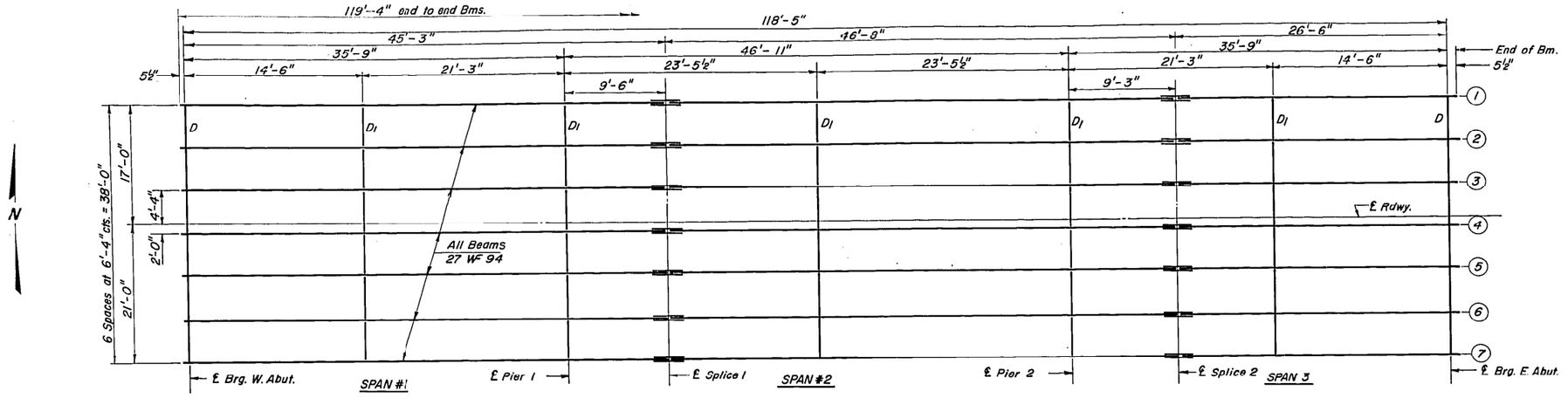
EX. STRUCTURE - SUPERSTRUCTURE DETAILS
STRUCTURE NO. 100-0108

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5, RS-2, B-1, B-2, B-3, B-4	WILLIAMSON	519	315
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

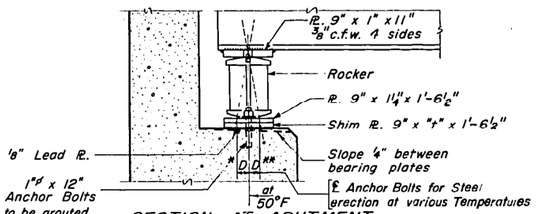
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. 14	5-3B-4	WILLIAMSON	18	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
8 SHEETS

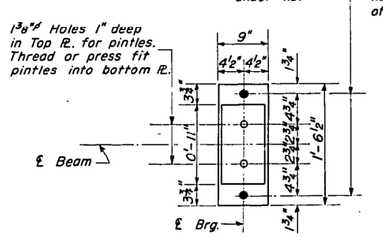


FRAMING PLAN

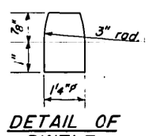


SECTION AT ABUTMENT

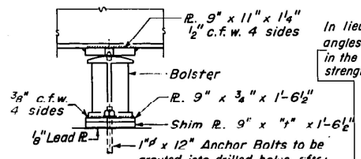
*D=⅛"/100 ft. of exp. for every 15° below the normal temp. of 50°F.
D**=⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°F.



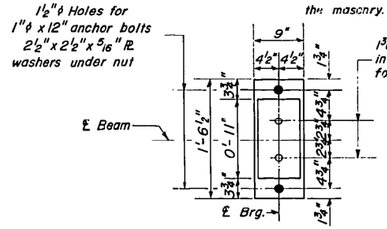
PLAN



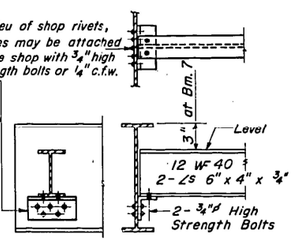
DETAIL OF PINTLE



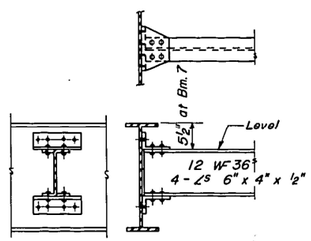
PIERS 1&2



PLAN



DIAPHRAGM D
12 - Required



DIAPHRAGM D1
30-Required

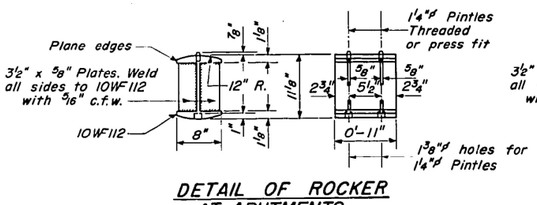
ELEVATION TOP OF WF

BEAM	1	2	3	4	5	6	7
Full Length	414.26	414.39	414.47	414.49	414.43	414.31	414.18

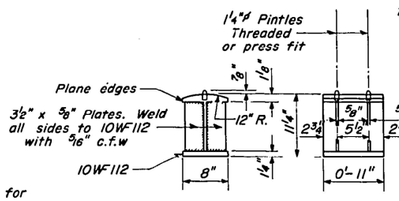
Beams shall be fabricated on a level line.

TABLE OF "t" DIMENSIONS

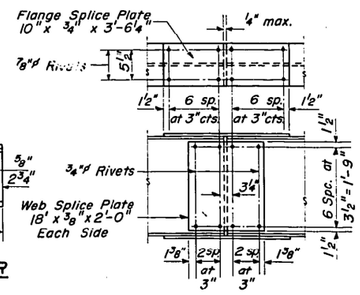
BEAM	1,5,6,&7	2	3	4
All Bearings	0"	½"	½"	¾"



DETAIL OF ROCKER AT ABUTMENTS



DETAIL OF BOLSTER AT PIERS 1&2



DETAIL OF SPLICE

DESIGNED	Emery J. Stickan	EXAMINED	FEB 18 1964
CHECKED	Thomas O. Williams	PASSED	W. Baumann, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	P.G. Barnett E.S.	APPROVED	E. J. Schmitz, ENGINEER OF DESIGN
DRAWN	W. A. Sausaman Jr.		E. E. Scott, CHIEF HIGHWAY ENGINEER
CHECKED	T.O.W.		

I-2 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

FOR INFORMATION ONLY

STRUCTURAL STEEL

F.A. RT. 14 SEC. 5-3B-4
WILLIAMSON COUNTY
STA. 336+00

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CIVIL DESIGN, INC. WBE / DBE — EFFINGHAM, IL LICENSE #184.003222	USER NAME =	DESIGNED – JAG	REVISED –
		CHECKED – JGS	REVISED –
	PLOT SCALE =	DRAWN – JAG	REVISED –
	PLOT DATE =	CHECKED – JGS	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

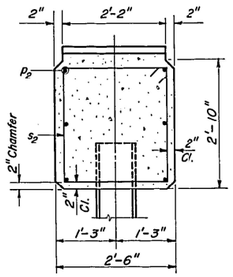
EX. STRUCTURE - FRAMING PLAN
STRUCTURE NO. 100-0108

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	316
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

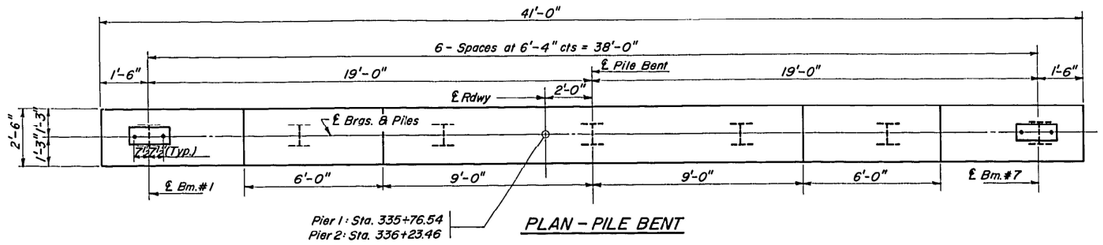
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 14	538-4	WILLIAMSON	18	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
8 SHEETS

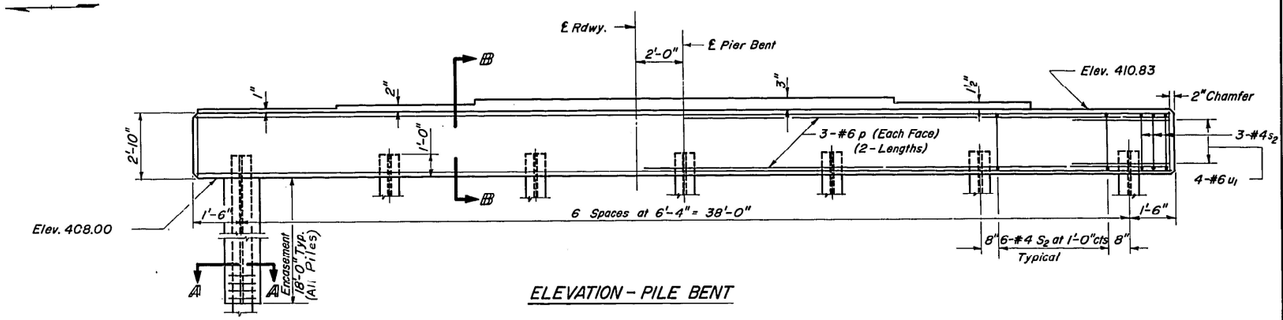


SECTION B-B

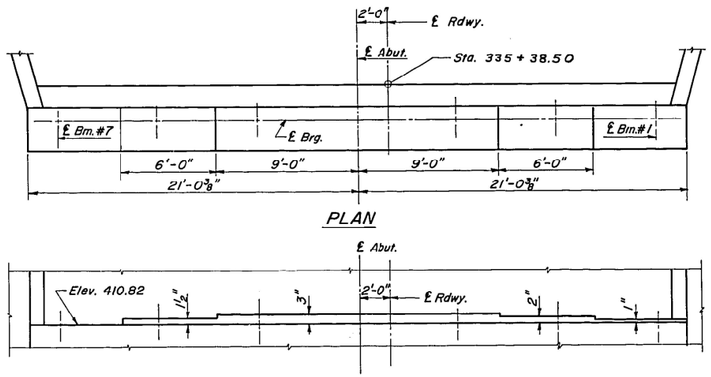


PLAN - PILE BENT

N

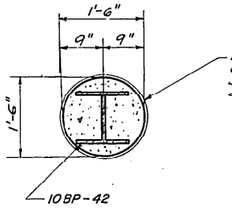


ELEVATION - PILE BENT



PLAN

ELEVATION
West Abutment Bearing Seat
(Looking West)

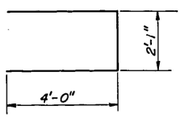


SECTION A-A

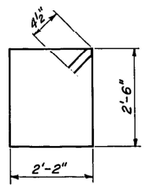
PILE DATA
(2 Bents)
Type: Steel (10 BP-42)
Capacity: Drive to Refusal
Est. Length: 60'
No. Reqd.: 14

TWO PILE BENTS
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
p_2	24	#6	21'-0"	——
s_2	84	#4	10'-1"	
u_1	16	#6	10'-1"	
Class X Concrete			Cu. Yds.	22.6
Reinforcement Bars			Lbs.	1570
Steel Piles 10 BP-42			Lin. Ft.	840
Furn. & Filling Metal Shells			Lin. Ft.	252



BAR u_1



BAR s_2

DESIGNED	Emery J. Stricker	
CHECKED	Thos. O. Williams	
DRAWN	Paul Barnett	E.S.
CHECKED	T.O.W.	

FEB 18 1964
EXAMINED W. E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E. A. Ruddy — ENGINEER OF DESIGN
APPROVED T. H. Boyd — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

PIERS - PILE BENTS
& WEST ABUTMENT STEPS

F.A. RT. 14 SEC. 5-3B-4
WILLIAMSON COUNTY
STA. 336+00

MODEL: Default
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CDI — CIVIL DESIGN, INC. WBE | DBE — EFFINGHAM, IL LICENSE #184.003222

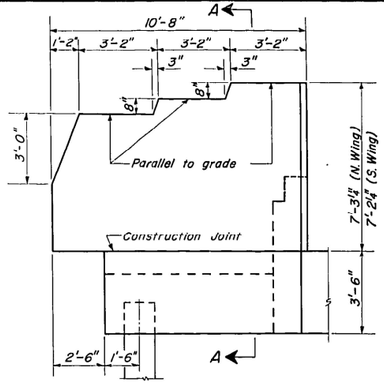
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		CHECKED – JGS	REVISED –		
PLOT SCALE =		DRAWN – JAG	REVISED –		
PLOT DATE =		CHECKED – JGS	REVISED –		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	317
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

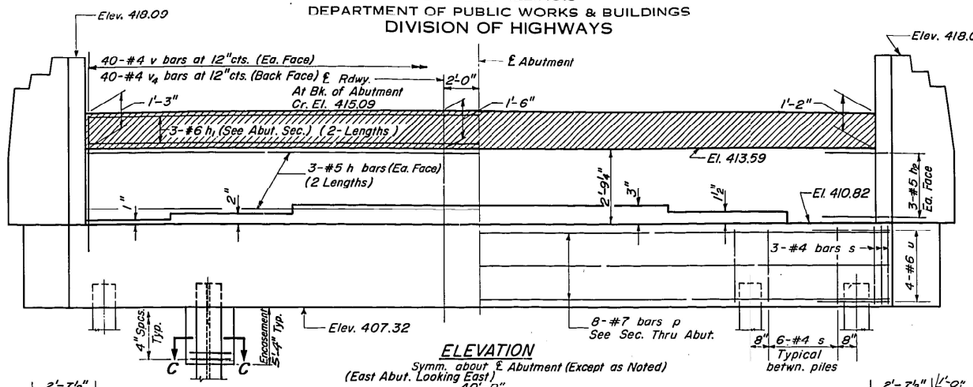
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 14	538-4	WILLIAMSON	18	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

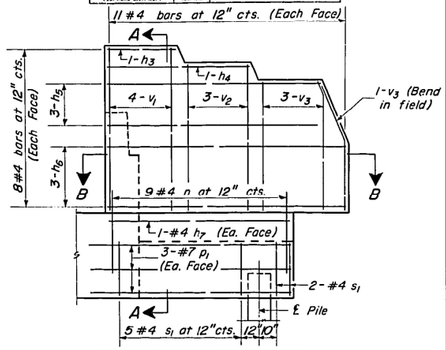
SHEET NO. 7
8 SHEETS



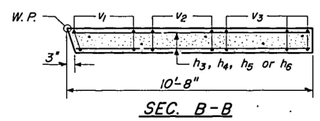
WING WALL ELEVATION
Dimensions



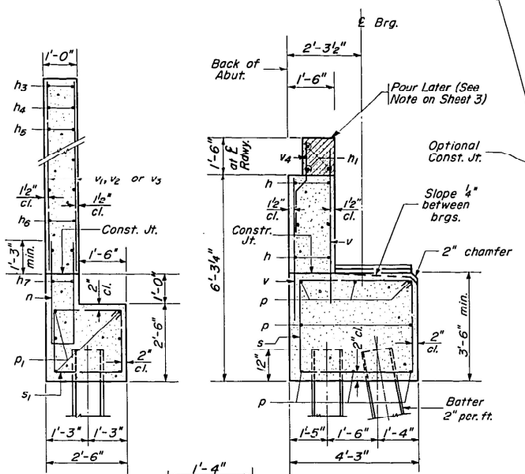
ELEVATION
Symm. about ℄ Abutment (Except as Noted)
(East Abut. Looking East)



WING WALL ELEVATION
Reinforcement

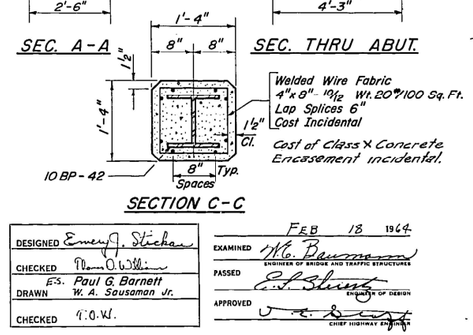


SEC. B-B



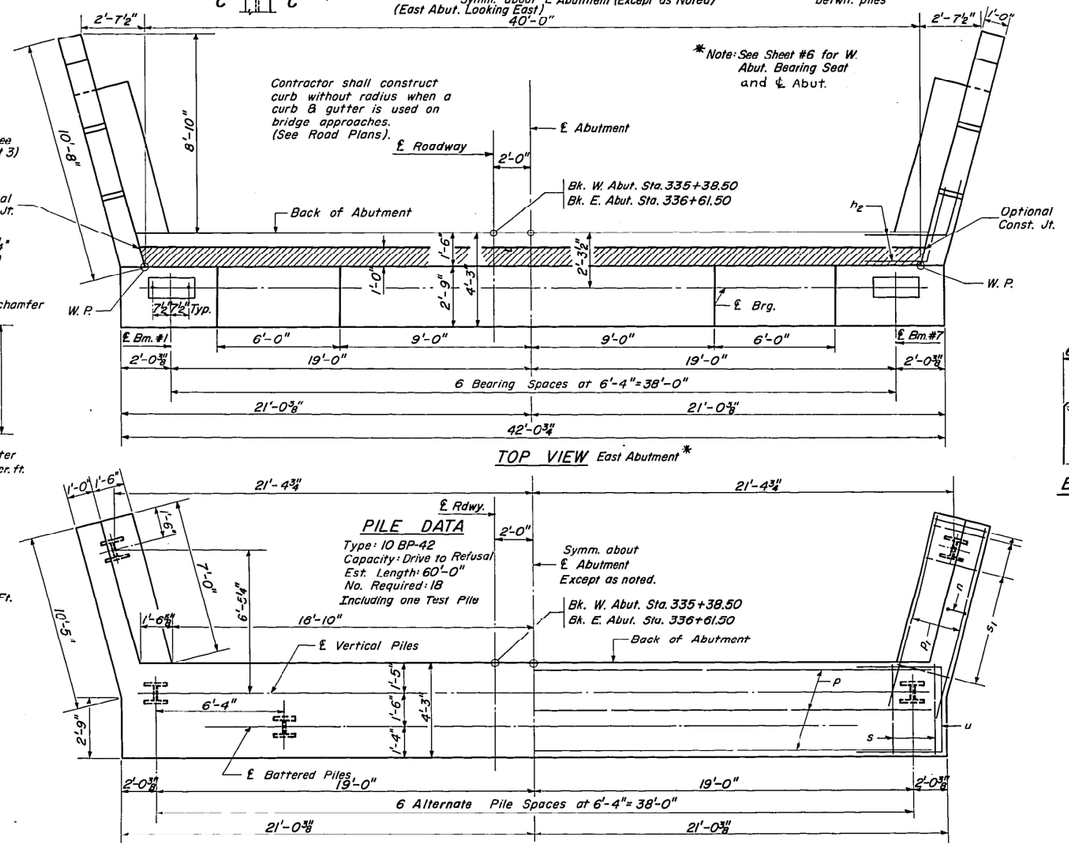
SEC. A-A

SEC. THRU ABUT.



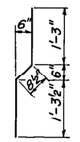
SECTION C-C

DESIGNED	Emery J. Stuchen	FEB 18 1964
CHECKED	Mem O. Williams	EXAMINED W. C. Bauman, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	Es. Paul G. Barnett, W. A. Sausaman Jr.	PASSED E. P. Shurtz, ENGINEER OF DESIGN
CHECKED	T.O.W.	APPROVED T. E. Bascott, CHIEF HIGHWAY ENGINEER

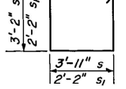


TOP VIEW East Abutment*

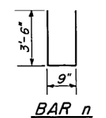
PLAN - PILE CAP East Abutment*



BAR v_4



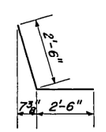
BAR s & s_1



BAR n



BAR u



BAR h_2

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	24	#5	21'-0"	——
h_1	12	#6	21'-0"	——
h_2	24	#5	5'-0"	⌞
h_3	8	#4	2'-9"	——
h_4	8	#4	6'-0"	——
h_5	24	#4	9'-0"	——
h_6	24	#4	10'-3"	——
h_7	8	#4	10'-6"	——
n	36	#4	7'-9"	⊔
p	16	#7	41'-6"	——
p_1	24	#7	11'-0"	——
s	84	#4	14'-11"	□
s_1	28	#4	9'-5"	□
u	16	#6	11'-0"	⊐
v	160	#4	5'-0"	——
v_1	32	#4	7'-0"	——
v_2	24	#4	6'-3"	——
v_3	32	#4	5'-8"	——
v_4	80	#4	3'-3"	——
Class X Concrete			Cu. Yds.	78.8
Reinforcement Bars			Lbs.	5880
Steel Piles 10 BP-42			Lin. Ft.	1020
Test Piles (Steel)			Ea.	1

ABUTMENTS

F.A. RT. 14 SEC. 5-3B-4
WILLIAMSON COUNTY
STA. 336+00

A-8 7-18-62 Rev. 11-27-62

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Number 14	5-3B-4	WILLIAMSON	18	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
8 SHEETS

COUNTY Williamson
Boring No. 1
Station 335+38
Offset 7 ft. Rt.
Surface Water El. 405.0
Groundwater El. at Completion —
After — Hours —

Elevation		N	Qu t/s.f.	w (%)
Ground Surface	391.2			
Stiff moist gray silt loam A-4(8)				
	387.7	9	2.0P	82
Stiff moist gray mottled brown to brown silty clay loam A-4(8) to A-6(9)	-5			
		12	1.0P	23
		9	1.0B	34
	382.2			
Medium moist brown mottled gray and black silty clay A-6(10-11)	-10	4	0.5B	26
		4	0.5B	27
	377.2			
Stiff moist gray mottled brown and black clay A-7-6(15)	-15	7	2.0B	27
	374.7			
Medium to stiff moist to very moist gray to gray mottled brown clay A-6(12)		8	0.4B	34
	-20	7	1.4B	25

Elevation		N	Qu t/s.f.	w (%)
See previous column		9	1.3B	31
	366.2	—	—	—
Medium moist gray clay A7-6(15-18)		8	1.0B	39
	364.7			
Medium moist gray clay A-6(11-12)		6	0.4B	30
	361.7			
Stiff wet gray clay A7-6(14-15)	-30	6	0.5B	32
	358.2	8	1.0P	36
Medium wet gray clay loam A-4(5)		—	—	24
	356.2	—	—	22
Soft very moist gray clay A7-6(13-14)	-35	6	0.5B	30
	354.7			
Medium moist gray silty clay A-6(9-10)		7	0.6B	25
	352.2			
Hard moist gray mottled brown clay loam A-4(8)	-40	32	4.0P	20
	348.7			
Soft to medium dry gray clay shale.		56	—	—
	346.0	—	—	—

COUNTY Williamson
Boring No. 1
Station 335+38
Offset 7 ft. Rt.

Elevation		N	Qu t/s.f.	w (%)
	40			
See previous sheet		32	4.0P	20
	348.7			
Soft to medium dry gray clay shale		56	—	—
	346.0		Cored 81% Recovery	
Medium gray medium grained sandstone with thin shale seams	345.5			
Bottom of hole = 45.7 feet				
Washing procedure was used in drilling entire hole.	-50			
Location: N.W Cor. NE¼,NW¼,Sec 17 T5S, R1E,3rd P.M.				

COUNTY Williamson
Boring No. 2
Station 335+77
Offset 1 ft. Rt.
Surface Water El. 405.0
Groundwater El. at Completion —
After — Hours —

Elevation		N	Qu t/s.f.	w (%)
Ground Surface	390.0			
Stiff wet to moist gray mottled brown silty clay loam A-6(9)				
	385.7	10	2.0P	24
Medium moist gray mottled brown silty clay A-6(11)	-5			
	383.2	6	0.6B	23
Medium moist gray mottled brown silty clay loam A-6(9)				
		9	0.6B	23
	379.7			
Stiff to very stiff moist gray mottled brown and black clay A7-6(17)+	-15	8	1.3B	24
		12	1.9B	27
		10	1.2S	36
		9	0.8S	40
	-20			
		7	1.2B	43

Elevation		N	Qu t/s.f.	w (%)
See previous column		8	No Recove	
	365.7			
Soft to medium moist to very moist gray mottled brown to gray clay A-6(12) to A7-6(13)	-25	5	0.6B	36
		5	0.6B	28
	-30			
		7	0.3B	33
	356.7			
Medium very moist gray clay A7-6(14-15)	-35	8	0.5P	28
	353.7			
Medium very moist gray clay loam A-4(7)		5	0.7P	17
	351.7			
Soft very moist gray silty clay A-6(10-11)	-40	6	0.3B	32
	349.7			
Hard very moist gray poorly graded coarse gravel with clay binder.	348.2	100	Blows 5"	22
Bottom of hole = 41.8 feet				
Washing procedure used in drilling entire hole.				
*Refusal of chopping bit at 41.8 feet	-45			

COUNTY Williamson
Boring No. 3
Station 336+21
Offset 9 ft. Lt.
Surface Water El. 405.0
Groundwater El. at Completion —
After — Hours —

Elevation		N	Qu t/s.f.	w (%)
Ground Surface	393.0			
Soft wet brown to gray silty clay A-6(9-10)				
	387.7	3	No Recovery	
Stiff moist gray mottled brown silty clay loam A-6(8-9)	-5			
	385.2	5	2.0P	—
Medium to stiff moist gray mottled brown silty clay A-6(9-10)	-10	11	0.8B	22
	380.2	7	1.1B	23
Very stiff gray mottled brown and black clay A7-6(17+)	-15	9	2.0B	22
		12	2.0B	22
	-20			
		12	1.0S	41

Elevation		N	Qu t/s.f.	w (%)
see previous column	370.2	8	1.4B	36
	-25	9	1.2B	41
Stiff moist brown to gray to dark gray clay A7-6(15)				
		8	1.0B	37
	-30			
		7	No Recover	
	360.2	8	1.0B	34
	-35			
Medium gray mottled brown clay A7-6(12-13)		5	0.7B	35
	355.2	11	0.9B	36
Medium moist gray clay A7-6(15)	-40			
	352.7	7	0.8B	25
Medium moist gray silty clay A-6(12)				
		15	1.0B	23
	348.7			
see next sheet	-45			

COUNTY Williamson
Boring No. 4
Station 336+62
Offset 7 ft. Rt.
Surface Water El. 405.0
Groundwater El. at Completion —
After — Hours —

Elevation		N	Qu t/s.f.	w (%)
Ground Surface	390.9			
Medium wet gr. Silt Loam A-4(8)				
	386.9	2	1.0P	31
Stiff to medium moist gr. mot. br. Silty Clay Loam,A-6(8)	-5	9	1.1B	21
		8	0.8B	24
	381.9			
Medium moist gr. mot. br. Silty Clay A-6(9-10)	-10	7	0.4B	28
	380.4			
Very stiff moist gr. mot. br. and bk. clay, A-7-6(17+)		13	1.8B	34
	-15	9	1.8B	38
	372.9	8	1.5S	43
Stiff moist gr. mot. br. and bk. to dark gr. clay, A-7-6(15+)	-20	8	1.1B	38

Elevation		N	Qu t/s.f.	w (%)
see previous column		9	1.4B	47
	-25	10	1.1B	34
	362.9			
Medium moist gr. clay, A--6(12-13)		7	0.8B	28
	-30			
		4	0.5B	30
		5	0.8B	28
	-35	6	0.8B	27
	351.2			
Soft gr. Sandy Shale	-40	100	Blows in	
	350.0	8	inches	
Medium gr. fine grained sandstone with thin laminations of black sandy shale			Cored 89% Recovery	
	-45			

COUNTY Williamson
Boring No. 4
Station 336+62
Offset 7 ft. Rt.

Elevation		N	Qu t/s.f.	w (%)
	40			
see previous sheet				
	350.0			
Medium gr. fine grained sandstone with thin laminations of black sandy shale			Cored 89% Recovery	
	345.5			
Bottom of hole = 45.4 feet				
Washing procedure used in drilling the entire hole.				

COUNTY Williamson
Boring No. 3
Station 336+21
Offset 9 ft. Lt.

Elevation		N	Qu t/s.f.	w (%)
	40			
see previous sheet	352.7	7	0.8B	25
Medium moist gray silty clay A-6(12)				
		15	1.0B	23
	348.7			
Soft gray clay shale	347.7	43	100 in Blows 8"	
Medium gray fine grained sandstone	347.5	100	Blows in 2"	
Bottom of hole = 45.5 feet				
Washing procedure was used in drilling entire hole.	-50			

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge failure; S – Shear failure; E – Estimated Value; P – Penetrometer Value

DESIGNED	Emery J. Stichan	
CHECKED	T.C. Williams	
DRAWN	E.S.	
CHECKED	T.C.W.	
EXAMINED		FEB 18 1964
PASSED		
APPROVED		

BORINGS
F.A. Rt. 14 SEC. 5-3B-4
WILLIAMSON CO.
STA. 336+00

FOR INFORMATION ONLY

MODEL: Default
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2/13/2025 7:34:53 AM

CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
	CHECKED – JGS	REVISED –	
PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EX. STRUCTURE - BORINGS
STRUCTURE NO. 100-0108

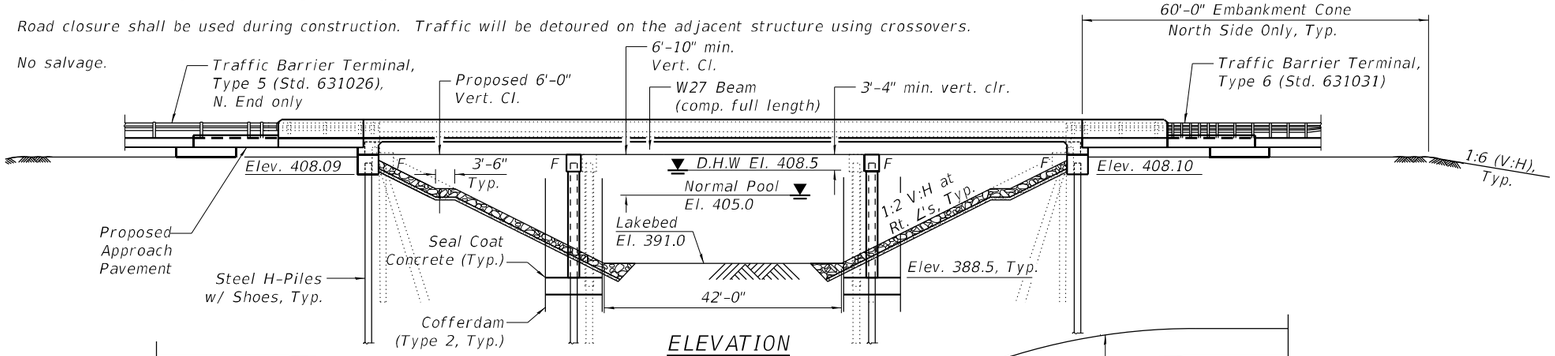
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	319
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

Bench Mark: Sq. cut in N.W. corner W. wall of S.N. 100-0020.

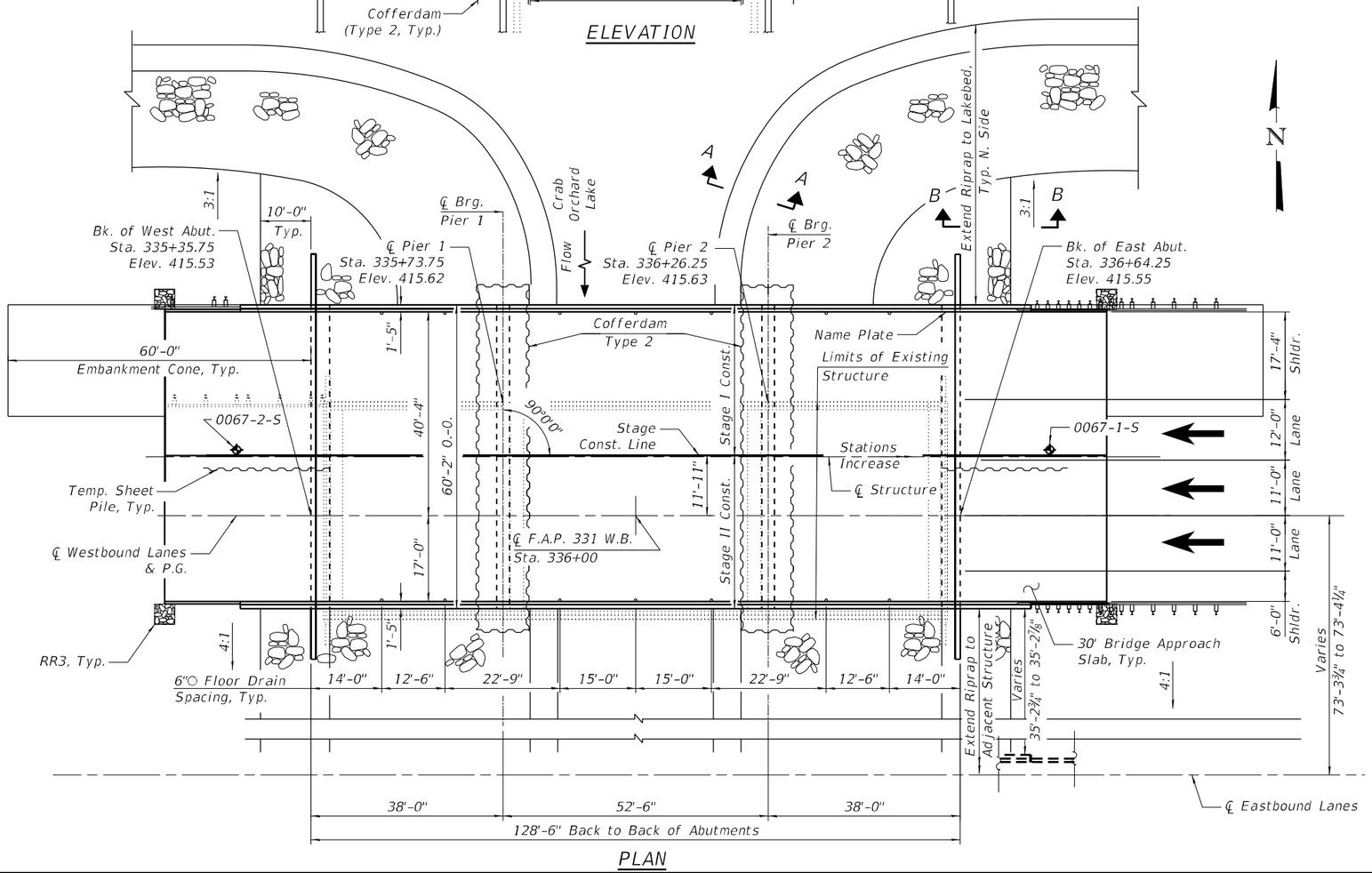
Existing Structure: S.N. 100-0067 was originally constructed in 1939 under F.A. Proj. 15, Section 5-B1 and 5-A1. An extensive reconstruction was built in 1989 under F.A. Route 410, Section (5B-1)DR-1. This reconstruction included an entirely new superstructure, abutments, and pier caps. The structure is a three span (36'-1", 47'-0", 36'-1") continuous wide flange bridge with seven beam lines on pile bent abutments. The structure is 123'-6" from bk. to bk. abutments on a zero degree skew. The clear width is 40'-0" between face to face of parapets and the overall out to out width of the bridge is 43'-2". The composite superstructure consists of seven beam lines of W24x55 for spans one and three, and W24x62 for span two, on 6'-4" centers. The reinforced concrete deck thickness is 7 1/2". The bridge deck is on a normal crown. The abutments are pile bent abutments on H-piles driven to refusal. The wingwalls are typical 12" thick dog ear wing walls. Each pier is comprised of 6 original precast concrete piles, two new H-piles encased in concrete driven to refusal, and new pier caps installed in 1989. There is a fiber optics utility that runs through the backwalls on the abutments and spans the entire length of the bridge on hangers.

Road closure shall be used during construction. Traffic will be detoured on the adjacent structure using crossovers.

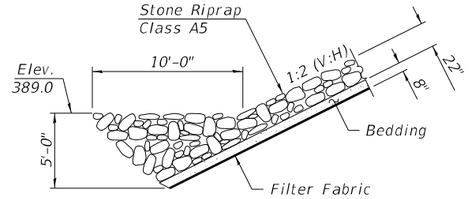
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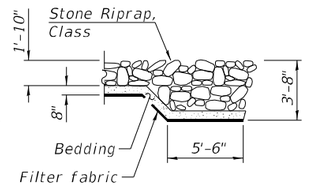
ELEVATION



PLAN



SECTION A-A



SECTION B-B

LOADING HL-93

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

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition.

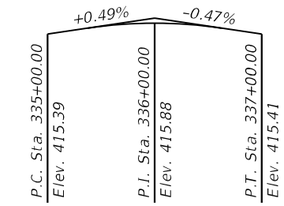
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
All new structural steel to be galvanized.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.359 g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.864 g
Soil Site Class = D



PROFILE GRADE

Along ℄ Westbound Lanes

Notes:

Up to a ¼" to be ground off deck and approach slabs. The Profile Grade shows the final grade after grinding.

See Roadway Plans for rip rap quantities and pay items.

STATE OF ILLINOIS
JOHANN F. AAKRE
081-006828
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

EXPIRES: 11/30/2026
DATE: 02/21/2025

Sheets 22 thru 24 of 28.

STATE OF ILLINOIS
DEWEY H. COULTAS
81-4539
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

EXPIRES: 11/30/2026
DATE: 02/21/2025

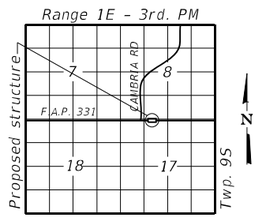
Sheets 19 thru 21 of 28.

LICENSED STRUCTURAL ENGINEER
JASON G. SCHRECKENBERG
081.006845
STATE OF ILLINOIS

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

EXPIRES: 11/30/2026
DATE: 02/21/2025

Sheets 1 thru 18 and 25 thru 28 of 28.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL 13 W.B. OVER CRAB ORCHARD LAKE
F.A.P. RT. 331 - SEC. 1-4(B-4)
WILLIAMSON COUNTY
STATION 336+00.00
STRUCTURE NO. 100-0109

CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

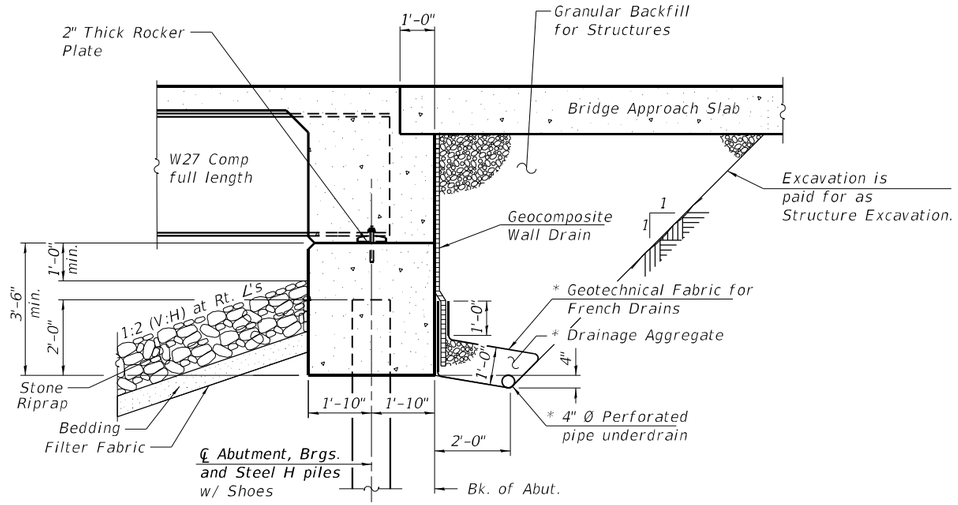
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	CHECKED - JGS	REVISED -	
PLOT SCALE =	DRAWN - JAG	REVISED -	
PLOT DATE =	CHECKED - JGS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 100-0109
SHEET 1 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	320
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

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3/11/2025 6:44:35 AM



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

All drainage system components shall extend 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).

WATERWAY INFORMATION

Drainage Area = 3.2 Sq. mi. Low Grade Elev. 414.6 @ Sta. 333+50

Flood	Freq. Yr.	Q C.F.S.	Opening Ft²		Nat.	Head - Ft.		Headwater El.	
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Ten-Year	10	731	968	1,075	407.5	0.0	0.0	407.5	407.5
Design	50	1,164	1,065	1,182	408.5	0.0	0.0	408.5	408.5
Base	100	1,356	1,106	1,227	408.9	0.0	0.0	408.9	408.9
Scour Check	200	1,541	1,147	1,271	409.3	0.0	0.0	409.3	409.3
Max. Calc.	500	1,853	1,221	1,351	410.0	0.0	0.0	410.0	410.0

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				
	W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100	408.1	386.4	386.4	408.1	5
Q200	408.1	386.3	386.3	408.1	
Design	408.1	386.4	386.4	408.1	
Check	408.1	386.3	386.3	408.1	

STATION 336+00.00
BUILT 202X BY
STATE OF ILLINOIS
SEC. 1-4(B-3)
F.A.S. RT. 331
LOADING HL-93
STR. NO. 100-0109

NAME PLATE

See Std. 515001

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes & Details
3. Substructure Layout
4. Top of Slab Elevations Layout
5-6. Top of Slab Elevations
7-8. Top of Approach Slab Elevations
9. Superstructure Plan
10-11. Superstructure Details
12. Diaphragm Details
13-14. Bridge Approach Slab Details
15. Structural Steel
16-17. Structural Steel Details
18. Bearing Details
19. West Abutment
20. East Abutment
21. Abutment Details
22. Pier 1
23. Pier 2
24. Pier Details
25. HP Pile Details
26.-28. Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 4	Each	-	-	1
Structure Excavation	Cu. Yd.	-	347	347
Cofferdam Excavation	Cu. Yd.	-	572	572
Cofferdam (Type 2) (Location-7)	Each	-	1	1
Cofferdam (Type 2) (Location-8)	Each	-	1	1
Floor Drains	Each	14	-	14
Concrete Structures	Cu. Yd.	-	319.4	319.4
Concrete Superstructure	Cu. Yd.	235.2	-	235.2
Seal Coat Concrete	Cu. Yd.	-	226	226
Protective Coat	Sq. Yd.	1,370	-	1,370
Concrete Superstructure (Approach Slab)	Cu. Yd.	172.8	-	172.8
Furnishing and Erecting Structural Steel	L. Sum	0.25	-	0.25
Stud Shear Connectors	Each	6,450	-	6,450
Reinforcement Bars, Epoxy Coated	Pound	124,210	39,570	163,780
Furnishing Steel Piles HP 14 x 89	Foot	-	2,259	2,259
Driving Piles	Foot	-	2,259	2,259
Test Pile Steel HP 14 x 89	Each	-	4	4
Pile Shoes	Each	-	40	40
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	80	-	80
Granular Backfill for Structures	Cu. Yd.	-	215	215
Geocomposite Wall Drain	Sq. Yd.	-	90	90
Pipe Underdrains for Structures 4"	Foot	-	220	220
Bar Terminator	Each	326	584	910
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	705	-	705
Diamond Grinding (Bridge Section)	Sq. Yd.	1,105	-	1,105

GENERAL NOTES

Fasteners shall be ASTM F3125 Grade A325 Type 1. Fasteners shall be hot dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel." Bolts $\frac{7}{8}$ in. diameter, holes $\frac{15}{16}$ in. diameter, unless otherwise noted.

Calculated weight of Structural Steel = 165,030 lbs. (AASHTO M270 Grade 50)
18,930 lbs. (AASHTO M270 Grade 36)

All structural Steel shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".

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

Reinforcement bars designated (E) shall be epoxy coated.

The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.

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

All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

The Seal Coat design thickness is based on the Cofferdam Design Water Elevation (CDWE) shown. Final cofferdam design, details and seal coat thickness shall be submitted to the Engineer for approval. The CDWE is equal to the Estimated Water Surface Elevation (EWSE) plus three feet.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with presence of lead on this project.

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

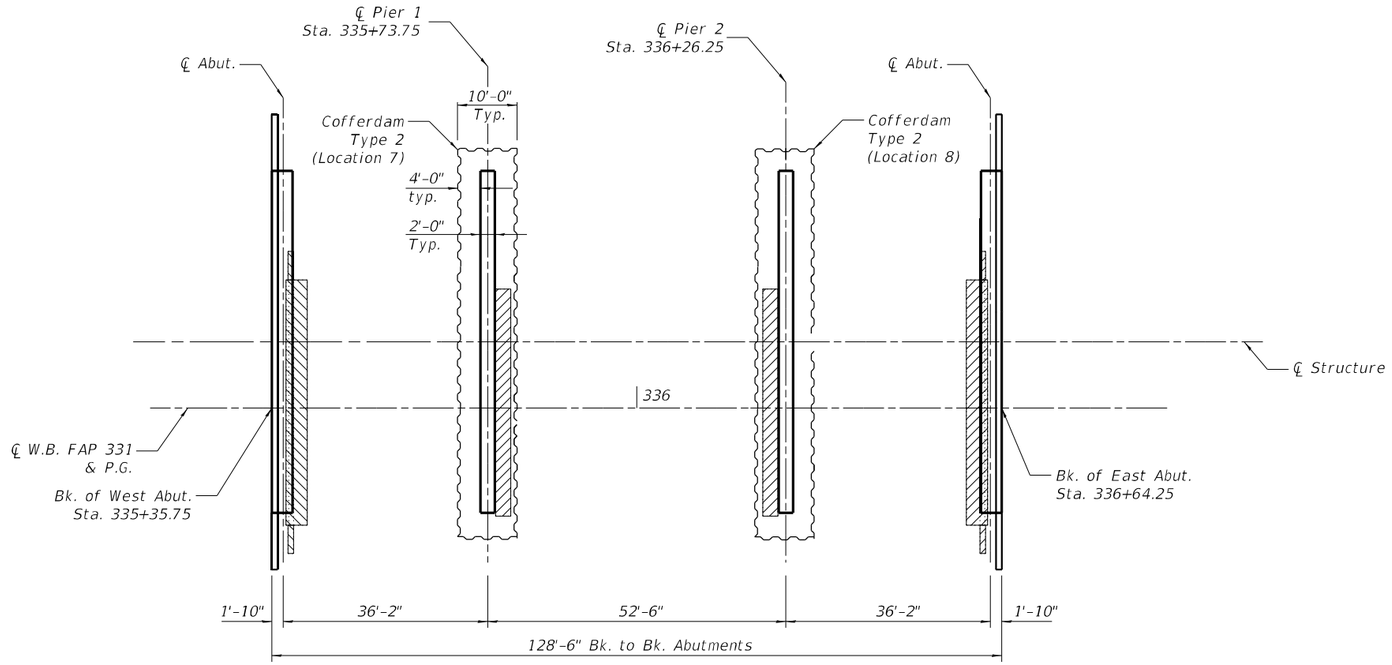
The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Slipforming of the parapets is not allowed.

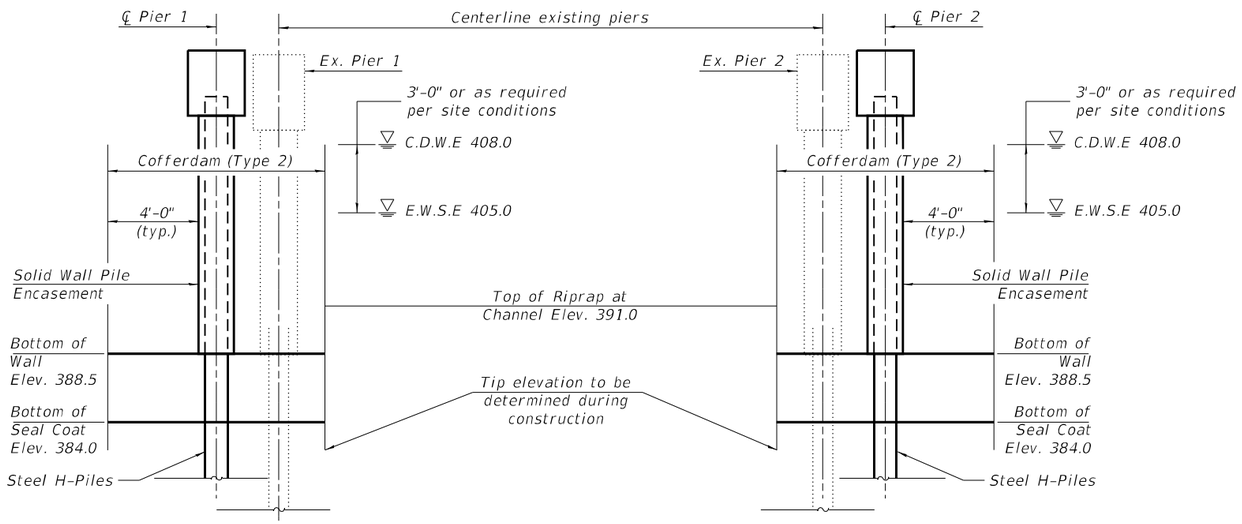
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Notes:

Pier and Cofferdam (Type 2) dimensions are typical at all proposed pier locations.



SUBSTRUCTURE LAYOUT



Section thru Pier 1

Section thru Pier 2

COFFERDAM DETAILS

(Horiz. dim. @ Rt. ∠'s)

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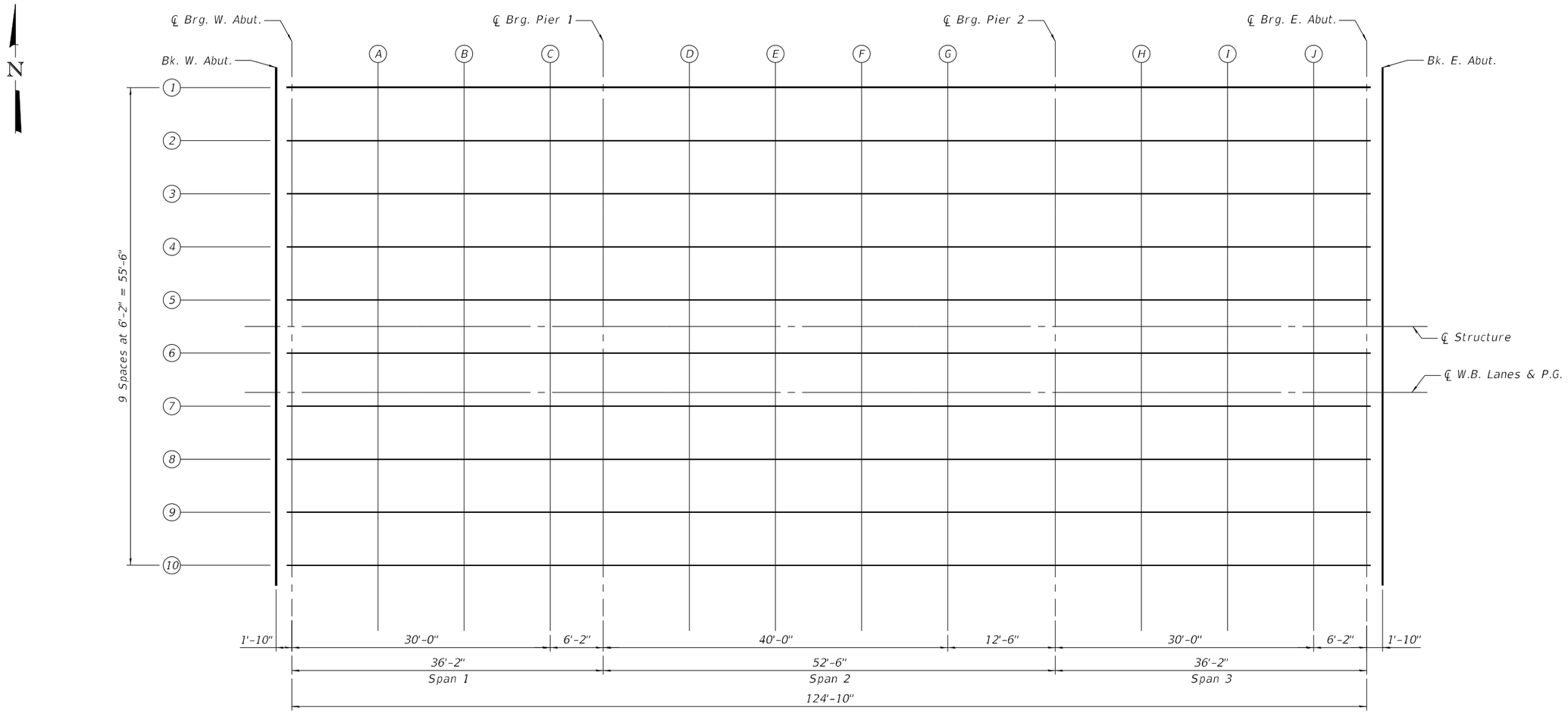
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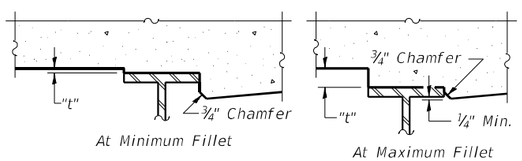
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE LAYOUT
STRUCTURE NO. 100-0109
SHEET 3 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	322
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



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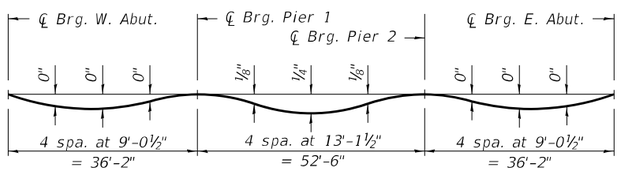


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown below, minus the initial slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown above. For grinding the deck, see Special Provisions.

See sheets 5 & 6 of 28 for Top of Slab Elevations.

FILLET HEIGHTS



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 and grinding as shown above.

See sheets 5 & 6 of 28 for Top of Slab Elevations.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-39.42	414.80	414.82
℄ Brg. W. Abut.	335+37.58	-39.42	414.81	414.83
A	335+47.58	-39.42	414.84	414.86
B	335+57.58	-39.42	414.86	414.88
C	336+67.58	-39.42	414.88	414.90
℄ Brg. Pier 1	335+73.75	-39.42	414.89	414.91
D	335+83.75	-39.42	414.90	414.93
E	335+93.75	-39.42	414.91	414.95
F	336+03.75	-39.42	414.91	414.95
G	336+13.75	-39.42	414.90	414.94
℄ Brg. Pier 2	336+26.25	-39.42	414.89	414.91
H	336+36.25	-39.42	414.88	414.90
I	336+46.25	-39.42	414.86	414.88
J	336+56.25	-39.42	414.84	414.86
℄ Brg. E. Abut.	336+62.42	-39.42	414.82	414.84
Bk. of E. Abut.	336+64.25	-39.42	414.81	414.83

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-33.25	414.92	414.94
℄ Brg. W. Abut.	335+37.58	-33.25	414.93	414.95
A	335+47.58	-33.25	414.96	414.98
B	335+57.58	-33.25	414.98	415.01
C	336+67.58	-33.25	415.00	415.02
℄ Brg. Pier 1	335+73.75	-33.25	415.01	415.03
D	335+83.75	-33.25	415.02	415.05
E	335+93.75	-33.25	415.03	415.07
F	336+03.75	-33.25	415.03	415.07
G	336+13.75	-33.25	415.03	415.06
℄ Brg. Pier 2	336+26.25	-33.25	415.02	415.04
H	336+36.25	-33.25	415.00	415.02
I	336+46.25	-33.25	414.98	415.01
J	336+56.25	-33.25	414.96	414.98
℄ Brg. E. Abut.	336+62.42	-33.25	414.94	414.96
Bk. of E. Abut.	336+64.25	-33.25	414.94	414.96

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-27.08	415.05	415.07
℄ Brg. W. Abut.	335+37.58	-27.08	415.05	415.07
A	335+47.58	-27.08	415.08	415.11
B	335+57.58	-27.08	415.11	415.13
C	336+67.58	-27.08	415.12	415.15
℄ Brg. Pier 1	335+73.75	-27.08	415.13	415.16
D	335+83.75	-27.08	415.15	415.18
E	335+93.75	-27.08	415.15	415.19
F	336+03.75	-27.08	415.15	415.20
G	336+13.75	-27.08	415.15	415.18
℄ Brg. Pier 2	336+26.25	-27.08	415.14	415.16
H	336+36.25	-27.08	414.13	415.15
I	336+46.25	-27.08	415.11	415.13
J	336+56.25	-27.08	414.08	415.11
℄ Brg. E. Abut.	336+62.42	-27.08	415.07	415.09
Bk. of E. Abut.	336+64.25	-27.08	415.06	415.08

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-20.92	415.17	415.19
℄ Brg. W. Abut.	335+37.58	-20.92	415.18	415.20
A	335+47.58	-20.92	415.21	415.23
B	335+57.58	-20.92	415.23	415.25
C	336+67.58	-20.92	415.25	415.27
℄ Brg. Pier 1	335+73.75	-20.92	415.26	415.28
D	335+83.75	-20.92	415.27	415.30
E	335+93.75	-20.92	415.28	415.32
F	336+03.75	-20.92	415.28	415.32
G	336+13.75	-20.92	415.27	415.31
℄ Brg. Pier 2	336+26.25	-20.92	415.26	415.28
H	336+36.25	-20.92	415.25	415.27
I	336+46.25	-20.92	415.23	415.26
J	336+56.25	-20.92	415.21	415.23
℄ Brg. E. Abut.	336+62.42	-20.92	415.19	415.22
Bk. of E. Abut.	336+64.25	-20.92	415.18	415.20

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-14.75	415.29	415.31
℄ Brg. W. Abut.	335+37.58	-14.75	415.30	415.32
A	335+47.58	-14.75	415.33	415.35
B	335+57.58	-14.75	415.35	415.38
C	336+67.58	-14.75	415.37	415.39
℄ Brg. Pier 1	335+73.75	-14.75	415.38	415.40
D	335+83.75	-14.75	415.39	415.42
E	335+93.75	-14.75	415.40	415.44
F	336+03.75	-14.75	415.40	415.44
G	336+13.75	-14.75	415.40	415.43
℄ Brg. Pier 2	336+26.25	-14.75	415.39	415.41
H	336+36.25	-14.75	415.37	415.39
I	336+46.25	-14.75	415.35	415.38
J	336+56.25	-14.75	415.33	415.35
℄ Brg. E. Abut.	336+62.42	-14.75	415.31	415.33
Bk. of E. Abut.	336+64.25	-14.75	415.31	415.33

℄ STRUCTURE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-11.67	415.35	415.37
℄ Brg. W. Abut.	335+37.58	-11.67	415.36	415.38
A	335+47.58	-11.67	415.39	415.41
B	335+57.58	-11.67	415.41	415.44
C	336+67.58	-11.67	415.43	415.45
℄ Brg. Pier 1	335+73.75	-11.67	415.44	415.46
D	335+83.75	-11.67	415.46	415.48
E	335+93.75	-11.67	415.46	415.50
F	336+03.75	-11.67	415.46	415.50
G	336+13.75	-11.67	415.46	415.49
℄ Brg. Pier 2	336+26.25	-11.67	415.45	415.47
H	336+36.25	-11.67	415.43	415.46
I	336+46.25	-11.67	415.40	415.44
J	336+56.25	-11.67	415.39	415.41
℄ Brg. E. Abut.	336+62.42	-11.67	415.37	415.39
Bk. of E. Abut.	336+64.25	-11.67	415.37	415.39

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-8.58	415.41	415.43
℄ Brg. W. Abut.	335+37.58	-8.58	415.41	415.43
A	335+47.58	-8.58	415.44	415.47
B	335+57.58	-8.58	415.46	415.49
C	336+67.58	-8.58	415.48	415.50
℄ Brg. Pier 1	335+73.75	-8.58	415.49	415.51
D	335+83.75	-8.58	415.50	415.53
E	335+93.75	-8.58	415.51	415.55
F	336+03.75	-8.58	415.51	415.55
G	336+13.75	-8.58	415.51	415.54
℄ Brg. Pier 2	336+26.25	-8.58	415.50	415.52
H	336+36.25	-8.58	415.48	415.51
I	336+46.25	-8.58	415.46	415.49
J	336+56.25	-8.58	415.44	415.47
℄ Brg. E. Abut.	336+62.42	-8.58	415.42	415.44
Bk. of E. Abut.	336+64.25	-8.58	415.42	415.44

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 100-0109
SHEET 5 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	324
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	-2.42	415.50	415.52
℄ Brg. W. Abut.	335+37.58	-2.42	415.50	415.52
A	335+47.58	-2.42	415.53	415.56
B	335+57.58	-2.42	415.56	415.58
C	336+67.58	-2.42	415.58	415.60
℄ Brg. Pier 1	335+73.75	-2.42	415.58	415.61
D	335+83.75	-2.42	415.60	415.63
E	335+93.75	-2.42	415.60	415.64
F	336+03.75	-2.42	415.60	415.65
G	336+13.75	-2.42	415.60	415.63
℄ Brg. Pier 2	336+26.25	-2.42	415.59	415.61
H	336+36.25	-2.42	415.58	415.60
I	336+46.25	-2.42	415.56	415.58
J	336+56.25	-2.42	415.53	415.56
℄ Brg. E. Abut.	336+62.42	-2.42	415.52	415.54
Bk. of E. Abut.	336+64.25	-2.42	415.51	415.53

℄ W.B. LANES & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	0.00	415.53	415.56
℄ Brg. W. Abut.	335+37.58	0.00	415.54	415.56
A	335+47.58	0.00	415.57	415.59
B	335+57.58	0.00	415.59	415.62
C	336+67.58	0.00	415.61	415.63
℄ Brg. Pier 1	335+73.75	0.00	415.62	415.64
D	335+83.75	0.00	415.63	415.66
E	335+93.75	0.00	415.64	415.68
F	336+03.75	0.00	415.64	415.68
G	336+13.75	0.00	415.64	415.67
℄ Brg. Pier 2	336+26.25	0.00	415.63	415.65
H	336+36.25	0.00	415.61	415.63
I	336+46.25	0.00	415.59	415.62
J	336+56.25	0.00	415.57	415.59
℄ Brg. E. Abut.	336+62.42	0.00	415.55	415.57
Bk. of E. Abut.	336+64.25	0.00	415.55	415.57

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	3.75	415.48	415.50
℄ Brg. W. Abut.	335+37.58	3.75	415.48	415.50
A	335+47.58	3.75	415.51	415.54
B	335+57.58	3.75	415.54	415.56
C	336+67.58	3.75	415.56	415.58
℄ Brg. Pier 1	335+73.75	3.75	415.56	415.59
D	335+83.75	3.75	415.58	415.61
E	335+93.75	3.75	415.58	415.62
F	336+03.75	3.75	415.58	415.63
G	336+13.75	3.75	415.58	415.61
℄ Brg. Pier 2	336+26.25	3.75	415.57	415.59
H	336+36.25	3.75	415.56	415.58
I	336+46.25	3.75	415.54	415.56
J	336+56.25	3.75	415.51	415.54
℄ Brg. E. Abut.	336+62.42	3.75	415.50	415.52
Bk. of E. Abut.	336+64.25	3.75	415.49	415.51

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	9.92	415.39	415.41
℄ Brg. W. Abut.	335+37.58	9.92	415.39	415.41
A	335+47.58	9.92	415.42	415.45
B	335+57.58	9.92	415.44	415.47
C	336+67.58	9.92	415.46	415.48
℄ Brg. Pier 1	335+73.75	9.92	415.47	415.49
D	335+83.75	9.92	415.48	415.51
E	335+93.75	9.92	415.49	415.53
F	336+03.75	9.92	415.49	415.53
G	336+13.75	9.92	415.49	415.52
℄ Brg. Pier 2	336+26.25	9.92	415.48	415.50
H	336+36.25	9.92	415.46	415.49
I	336+46.25	9.92	415.44	415.47
J	336+56.25	9.92	415.42	415.45
℄ Brg. E. Abut.	336+62.42	9.92	415.40	415.42
Bk. of E. Abut.	336+64.25	9.92	415.40	415.42

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of W. Abut.	335+35.75	16.08	415.27	415.29
℄ Brg. W. Abut.	335+37.58	16.08	415.27	415.29
A	335+47.58	16.08	415.30	415.33
B	335+57.58	16.08	415.33	415.35
C	336+67.58	16.08	415.34	415.37
℄ Brg. Pier 1	335+73.75	16.08	415.35	415.38
D	335+83.75	16.08	415.37	415.40
E	335+93.75	16.08	415.37	415.41
F	336+03.75	16.08	415.37	415.42
G	336+13.75	16.08	415.37	415.40
℄ Brg. Pier 2	336+26.25	16.08	415.36	415.38
H	336+36.25	16.08	415.35	415.37
I	336+46.25	16.08	415.33	415.35
J	336+56.25	16.08	415.30	415.33
℄ Brg. E. Abut.	336+62.42	16.08	415.29	415.31
Bk. of E. Abut.	336+64.25	16.08	415.28	415.30

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 100-0109
SHEET 6 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	325
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

NORTH EDGE OF SHOULDER

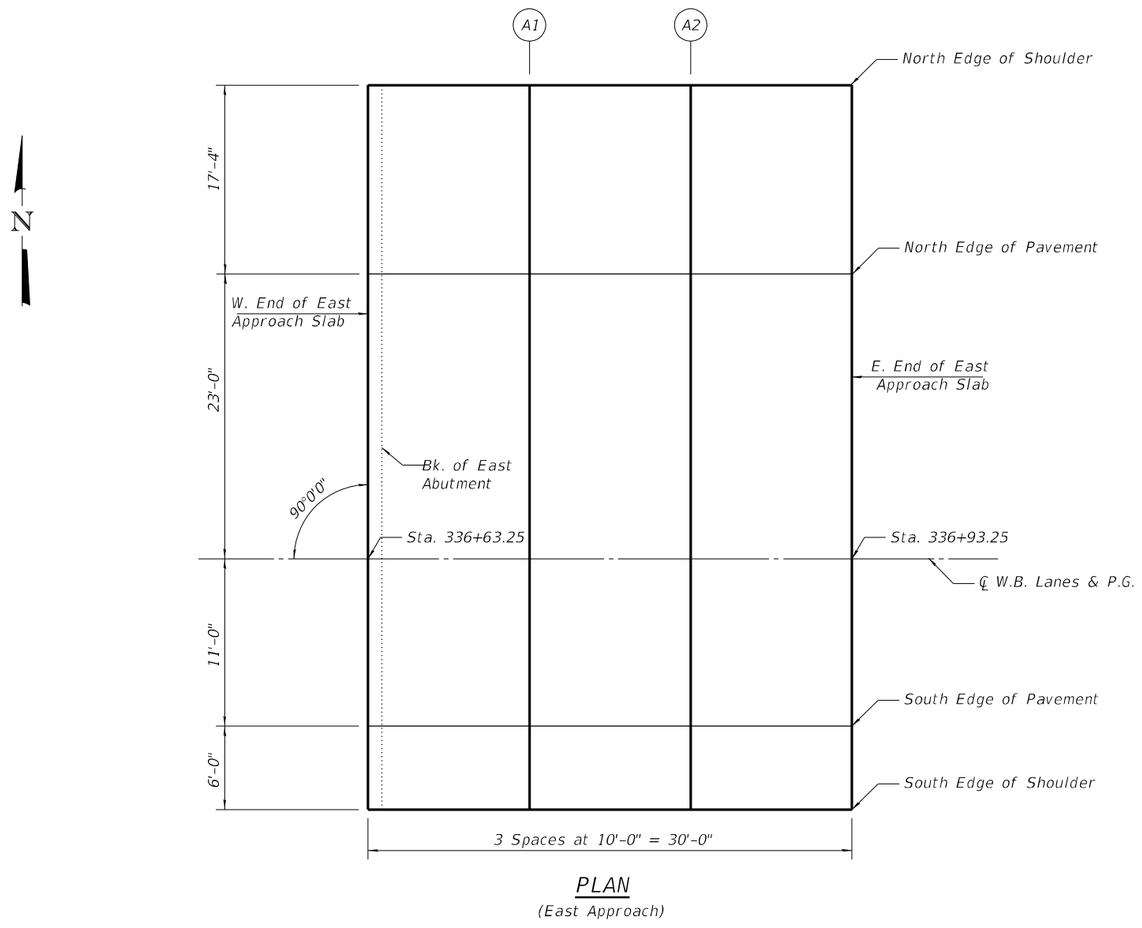
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	336+63.25	-40.33	414.80	414.82
A1	336+73.25	-40.33	414.77	414.79
A2	336+83.25	-40.33	414.73	414.75
E. End West Appr. Slab	336+93.25	-40.33	414.69	414.71

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	336+63.25	-23.00	415.15	415.17
A1	336+73.25	-23.00	415.11	415.13
A2	336+83.25	-23.00	415.08	415.10
E. End West Appr. Slab	336+93.25	-23.00	415.04	415.06

℄ W.B. LANES & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	336+63.25	0.00	415.55	415.57
A1	336+73.25	0.00	415.52	415.54
A2	336+83.25	0.00	415.48	415.50
E. End West Appr. Slab	336+93.25	0.00	415.44	415.46



PLAN
(East Approach)

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	336+63.25	11.00	415.39	415.41
A1	336+73.25	11.00	415.35	415.37
A2	336+83.25	11.00	415.32	415.34
E. End West Appr. Slab	336+93.25	11.00	415.28	415.30

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	336+63.25	17.00	415.27	415.29
A1	336+73.25	17.00	415.23	415.25
A2	336+83.25	17.00	415.20	415.22
E. End West Appr. Slab	336+93.25	17.00	415.16	415.18

E-AS1

2-17-2017

CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED - JAG	REVISED -	
	CHECKED - JGS	REVISED -	
PLOT SCALE =	DRAWN - JAG	REVISED -	
PLOT DATE =	CHECKED - JGS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 100-0109
SHEET 7 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	326
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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NORTH EDGE OF SHOULDER

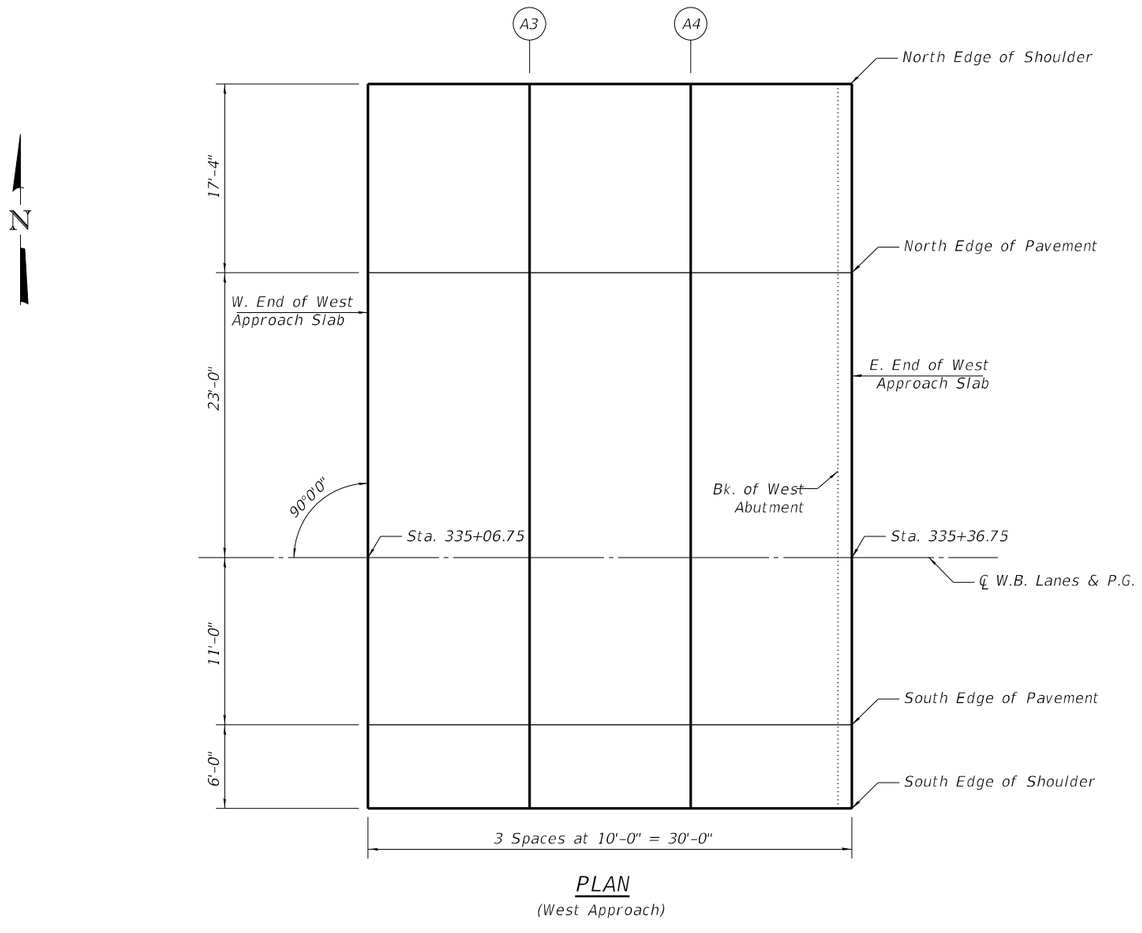
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	335+06.75	-40.33	414.67	414.69
A3	335+16.75	-40.33	414.71	414.73
A4	335+26.75	-40.33	414.75	414.77
E. End West Appr. Slab	335+36.75	-40.33	414.79	414.81

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	335+06.75	-23.00	415.02	415.04
A3	335+16.75	-23.00	415.06	415.08
A4	335+26.75	-23.00	415.10	415.12
E. End West Appr. Slab	335+36.75	-23.00	415.13	415.15

℄ W.B. LANES & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	335+06.75	0.00	415.42	415.44
A3	335+16.75	0.00	415.47	415.49
A4	335+26.75	0.00	415.50	415.52
E. End West Appr. Slab	335+36.75	0.00	415.54	415.56



PLAN
(West Approach)

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	335+06.75	11.00	415.26	415.28
A3	335+16.75	11.00	415.30	415.32
A4	335+26.75	11.00	415.34	415.36
E. End West Appr. Slab	335+36.75	11.00	415.37	415.39

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appro. Slab	335+06.75	17.00	415.14	415.16
A3	335+16.75	17.00	415.18	415.20
A4	335+26.75	17.00	415.22	415.24
E. End West Appr. Slab	335+36.75	17.00	415.25	415.27

E-AS1

2-17-2017

CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED - JAG	REVISED -
	CHECKED - JGS	REVISED -
PLOT SCALE =	DRAWN - JAG	REVISED -
PLOT DATE =	CHECKED - JGS	REVISED -

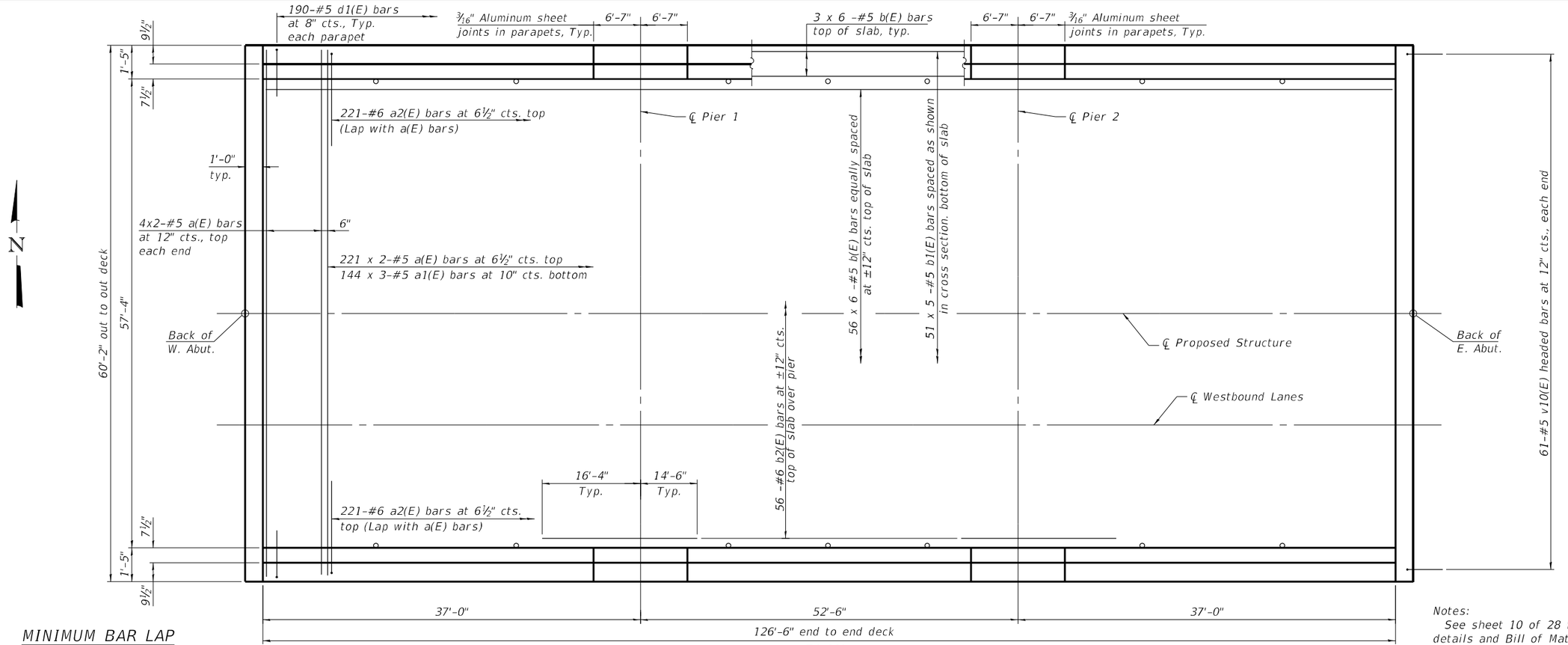
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 100-0109
SHEET 8 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	327
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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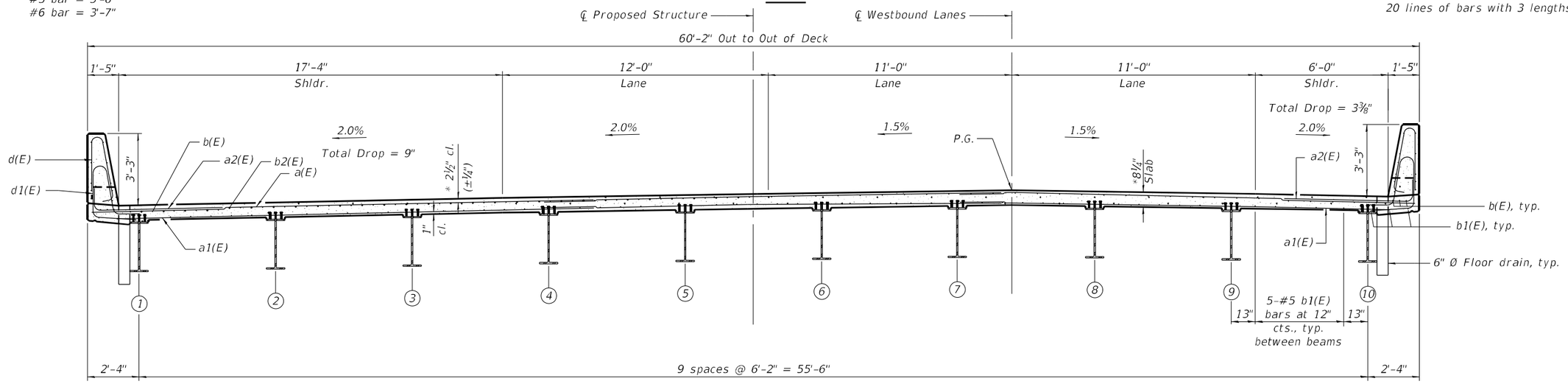


PLAN

MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 3'-7"

Notes:
See sheet 10 of 28 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



NEAR PIER — NEAR MIDSPAN

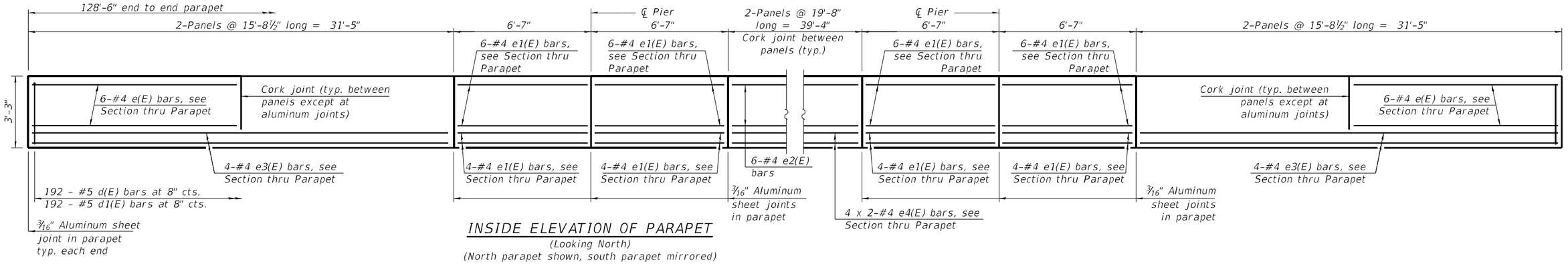
CROSS SECTION

(Looking East)
* Prior to grinding

CIVIL DESIGN, INC. WBE / DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME =	DESIGNED – JAG	REVISED –	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN STRUCTURE NO. 100-0109 SHEET 9 OF 28 SHEETS
		CHECKED – JGS	REVISED –		
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	PLOT DATE =	CHECKED – JGS	REVISED –		

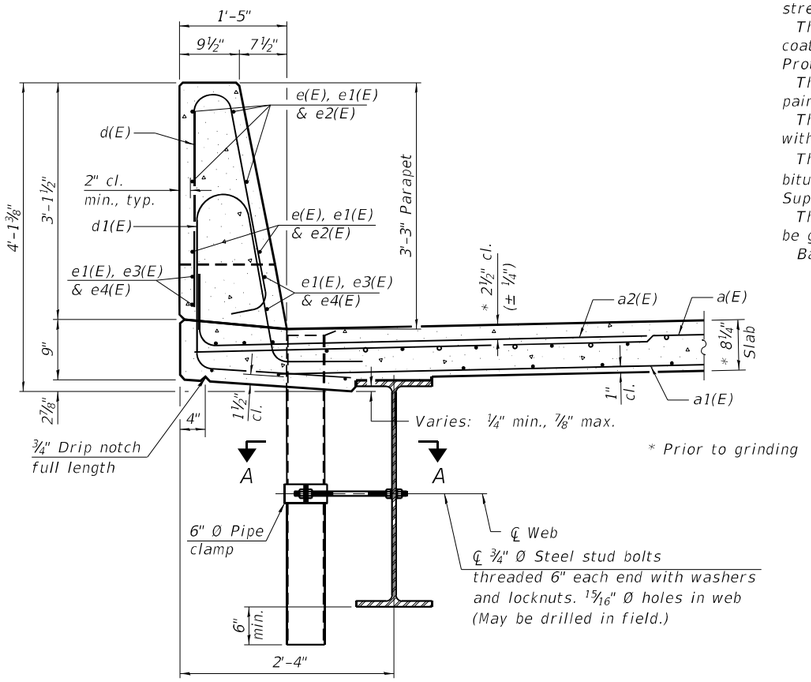
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	328
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

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INSIDE ELEVATION OF PARAPET

(Looking North)
(North parapet shown, south parapet mirrored)



SECTION THRU PARAPET

Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

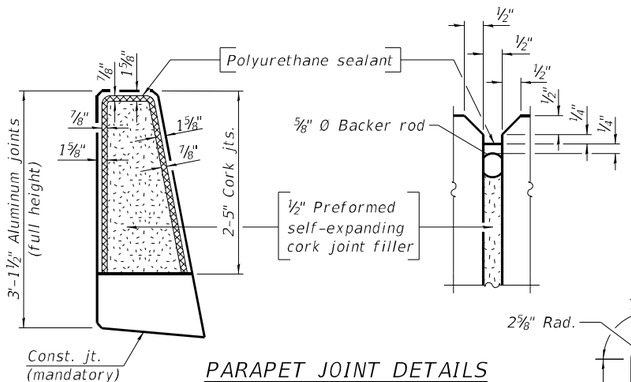
The top portion of aluminum floor drains shall be coated with 5 mils of either bitumen paint or epoxy paint to minimize reaction with wet concrete.

The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.

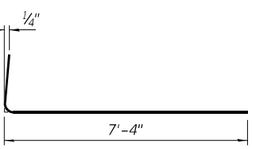
The 3/16" Min. aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated with 5 mils of either bitument paint or epoxy paint to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

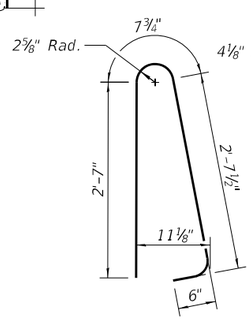
Bar terminators paid for separately. See Total Bill of Material.



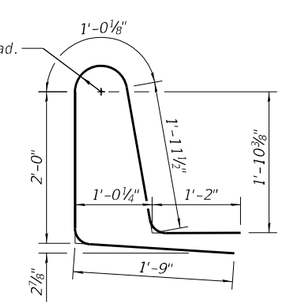
PARAPET JOINT DETAILS



BAR a2(E)



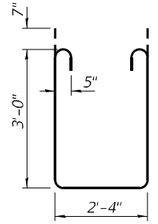
BAR d(E)



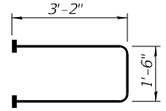
BAR d1(E)

MINIMUM BAR LAP

#4 bar = 2'-5"

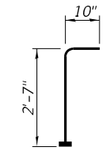


BAR s11(E)



BAR s10(E)

(Headed. 204-#5 Bar terminators)



BAR v10(E)

(Headed. 122-#5 Bar terminators)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	458	#5	31'-8"	
a1(E)	432	#5	22'-3"	
a2(E)	442	#6	8'-4"	
b(E)	372	#5	24'-0"	
b1(E)	255	#5	28'-10"	
b2(E)	112	#6	30'-10"	
d(E)	380	#5	6'-5"	
d1(E)	380	#5	7'-11"	
e(E)	48	#4	14'-10"	
e1(E)	80	#4	6'-3"	
e2(E)	24	#4	19'-4"	
e3(E)	16	#4	30'-1"	
e4(E)	16	#4	22'-0"	
m10(E)	12	#6	31'-11"	
m11(E)	54	#6	5'-9"	
m12(E)	12	#6	2'-0"	
s10(E)	102	#5	7'-10"	
s11(E)	102	#5	9'-6"	
v10(E)	122	#5	3'-5"	
Concrete Superstructure			Cu. Yd.	227.4
Reinforcement Bars, Epoxy Coated			Pound	61,880

MODEL: Default
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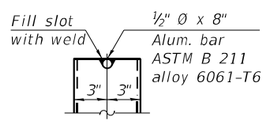
CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

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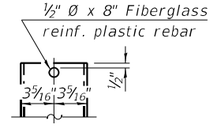
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS 1
STRUCTURE NO. 100-0109
SHEET 10 OF 28 SHEETS

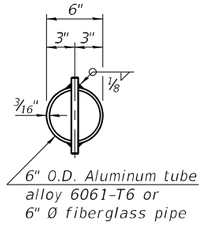
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	329
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			



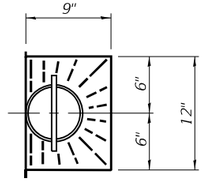
ALUMINUM TUBE



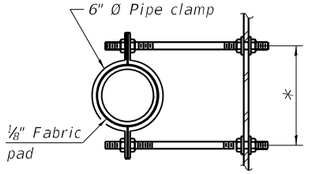
FIBERGLASS PIPE



TOP PLAN
(Showing aluminum tube)



TOP PLAN



SECTION A-A
*Dimension as required by pipe clamp

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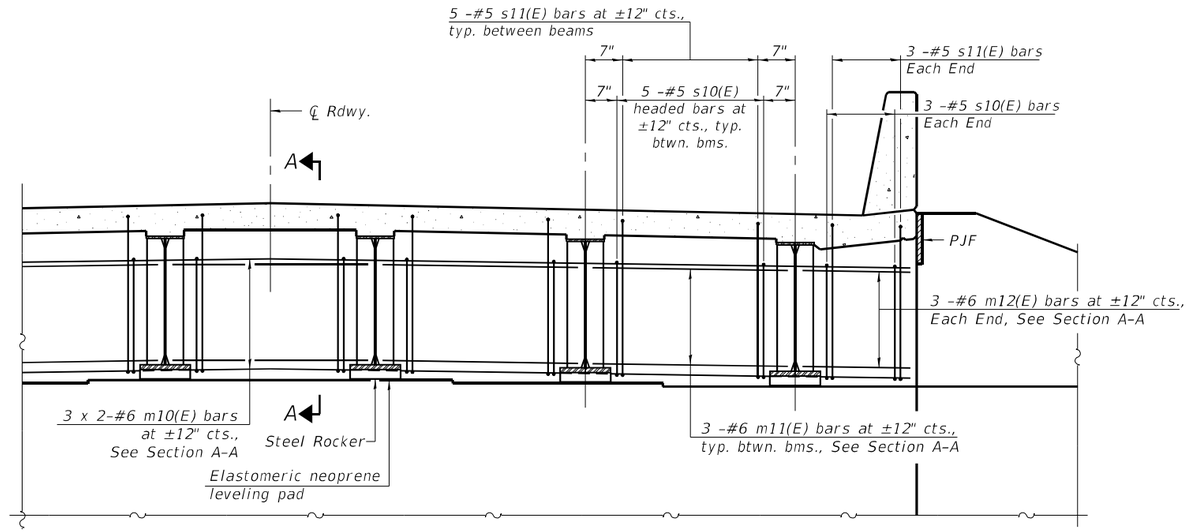
CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
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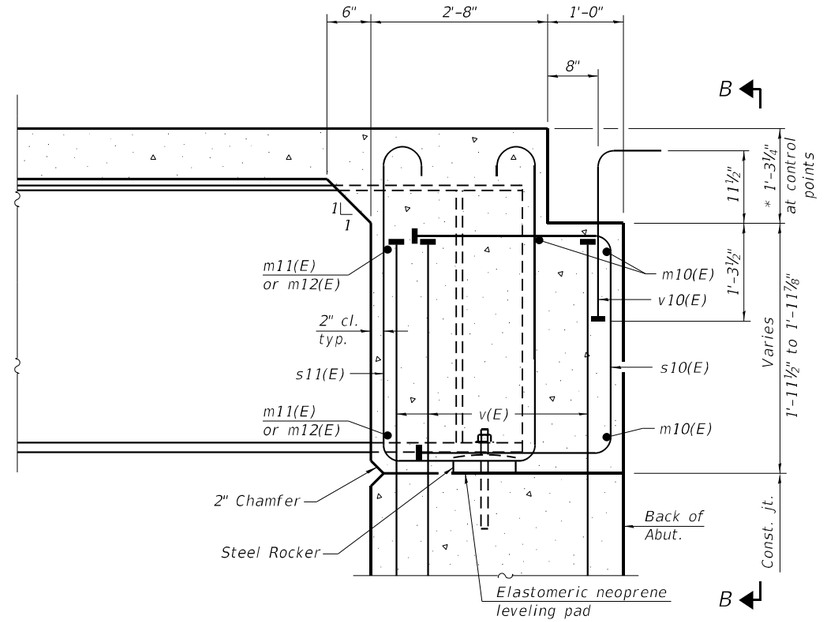
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS 2
STRUCTURE NO. 100-0109
SHEET 11 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	330
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

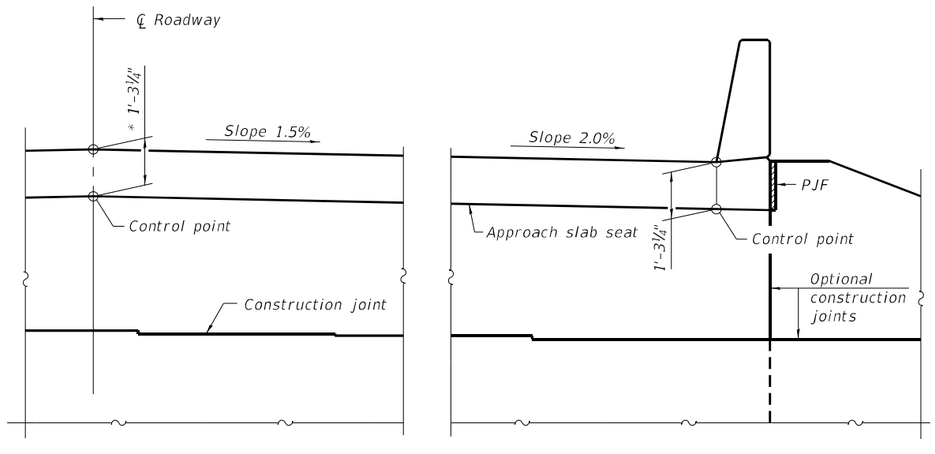


DIAPHRAGM AT ABUTMENT



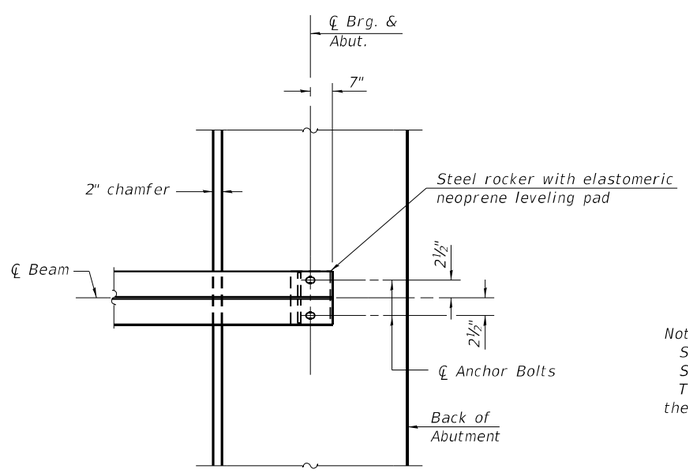
SECTION A-A

* Prior to grinding



VIEW B-B

* Prior to grinding



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

See sheet 10 of 28 for superstructure details and Bill of Material.

See sheet 13 of 28 for PJF details.

The approach slab seat shall have a constant slope determined from the control points shown.

DIA-SB-0 2-1-2023

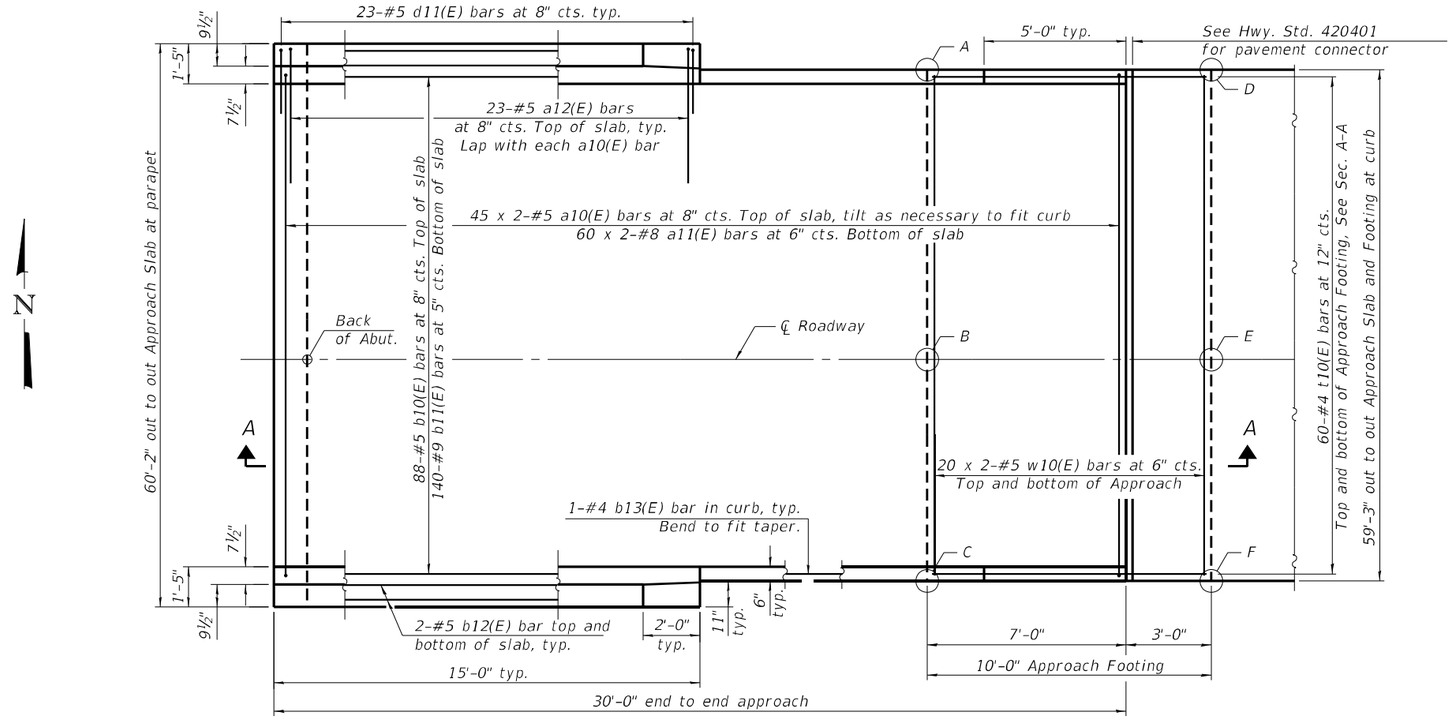
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 100-0109
SHEET 12 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	331
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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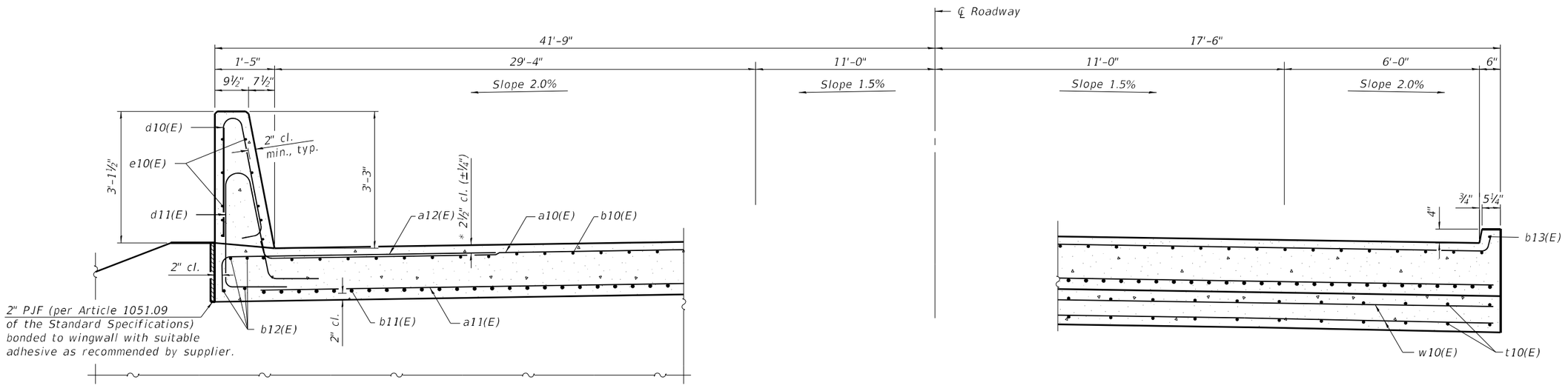


PLAN

(East approach slab shown; West approach slab similar by 180° rotation)

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

East Approach			West Approach		
Point/ Location	Top	Bottom	Point/ Location	Top	Bottom
A - NW	413.47	412.64	A - NW	413.51	412.68
B - WCL	414.22	413.39	B - WCL	414.26	413.43
C - SW	413.94	413.11	C - SW	413.98	413.15
D - NE	413.43	412.60	D - NE	413.55	412.72
E - ECL	414.18	413.34	E - ECL	414.30	413.46
F - SE	413.89	413.06	F - SE	414.01	413.18



NEAR ABUTMENT

**Prior to grinding*

CROSS SECTION

(Looking East)

AT APPROACH FOOTING

BAIA-CIP-39CS-0 2-1-2023

(Sheet 1 of 2)

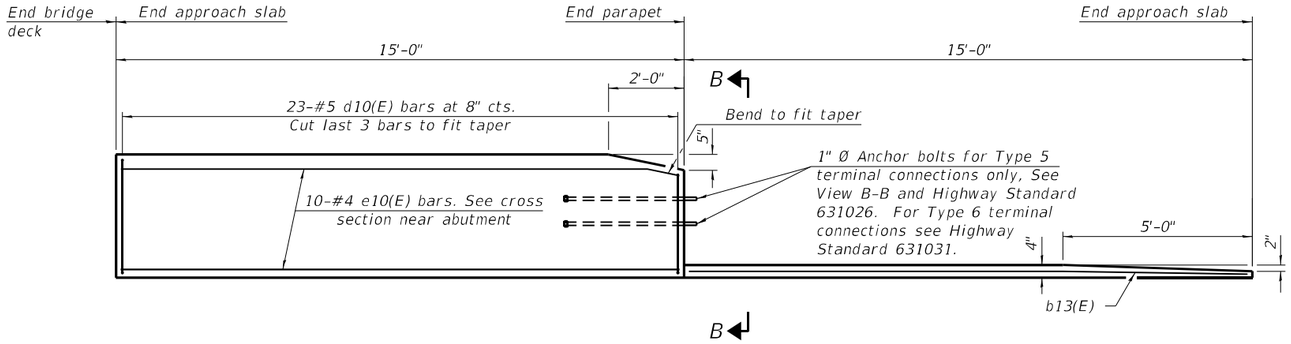
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STATE OF ILLINOIS
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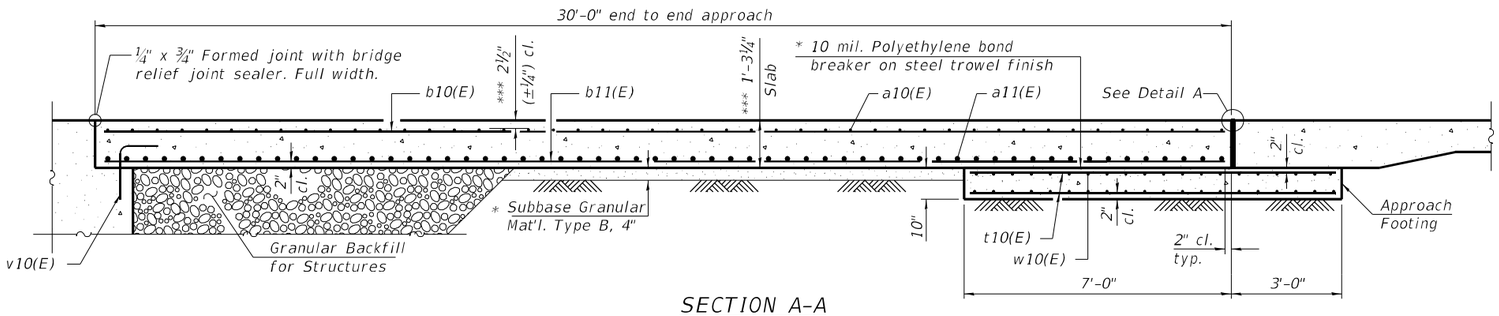
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 100-0109
SHEET 13 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	332
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

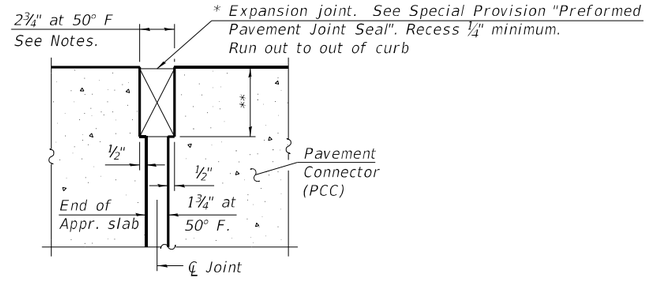
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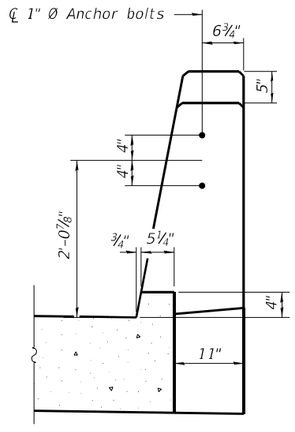
INSIDE ELEVATION OF PARAPET AND CURB



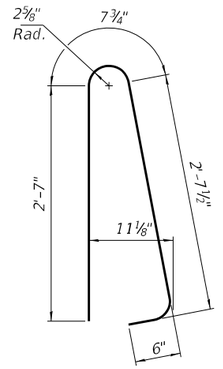
SECTION A-A



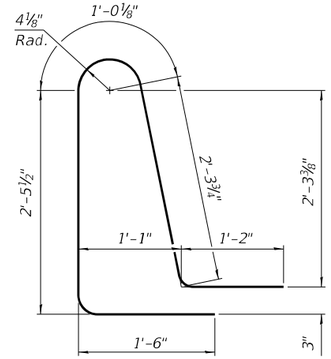
DETAIL A



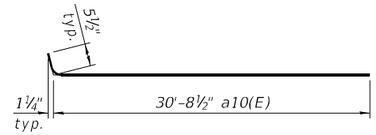
VIEW B-B



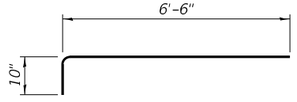
BAR d10(E)



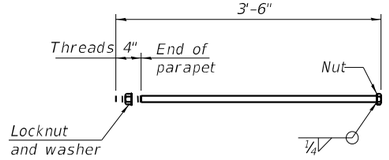
BAR d11(E)



BAR a10(E)



BAR a12(E)



*1" Ø ANCHOR BOLT

(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Superstructure.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 28.

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	180	#5	31'-2"	
a11(E)	240	#8	31'-2"	
a12(E)	92	#5	7'-4"	
b10(E)	176	#5	29'-8"	
b11(E)	280	#9	29'-8"	
b12(E)	16	#5	14'-8"	
b13(E)	4	#4	14'-8"	
d10(E)	92	#5	6'-5"	
d11(E)	92	#5	8'-6"	
e10(E)	40	#4	14'-8"	
t10(E)	240	#4	9'-8"	
w10(E)	160	#5	31'-9"	
Concrete Superstructure			Cu. Yd.	7.8
Concrete Superstructure (Approach Slab)			Cu. Yd.	172.8
Concrete Structures			Cu. Yd.	36.6
Reinforcement Bars, Epoxy Coated			Pound	69,170

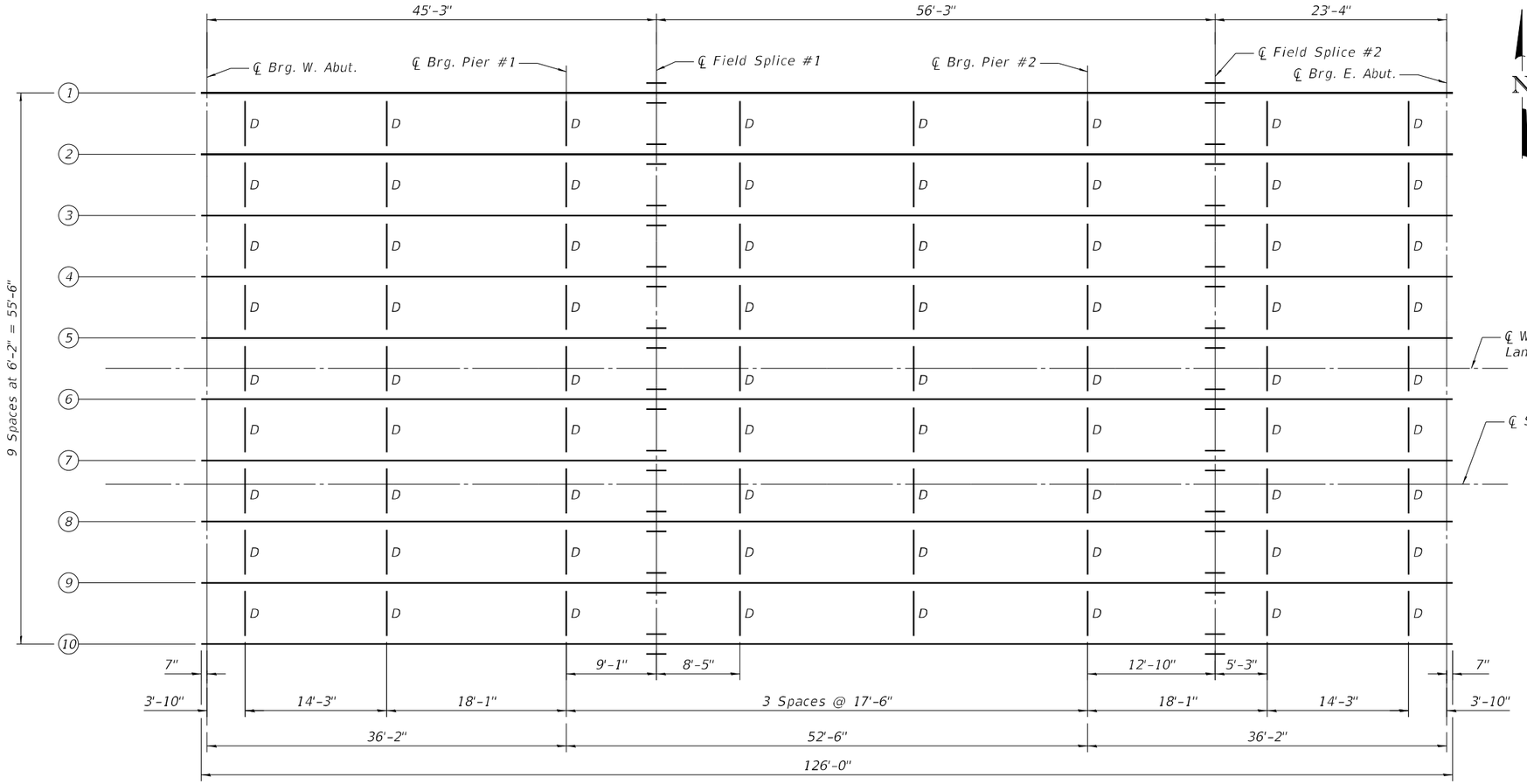
* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

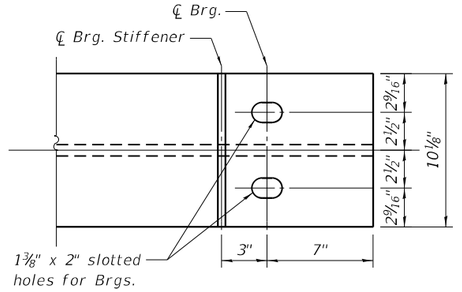
*** Prior to grinding

BAIA-CIP-39CS-0 2-1-2023

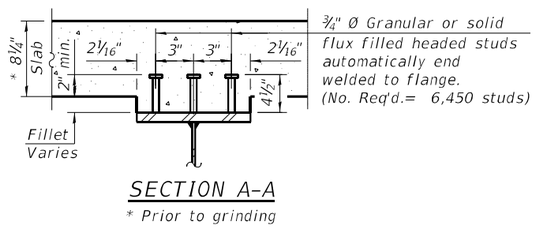
(Sheet 2 of 2)



FRAMING PLAN



END OF BEAM DETAIL



SECTION A-A

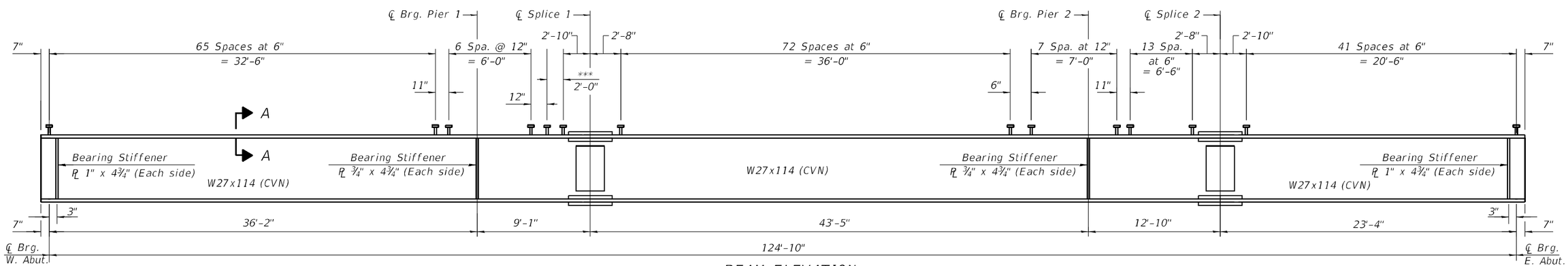
* Prior to grinding

Notes:

All splice plates and bearing stiffeners shall be ASTM M270, Grade 50.

Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



BEAM ELEVATION

*** 4 Spaces @ 6"

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 100-0109
SHEET 15 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	334
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

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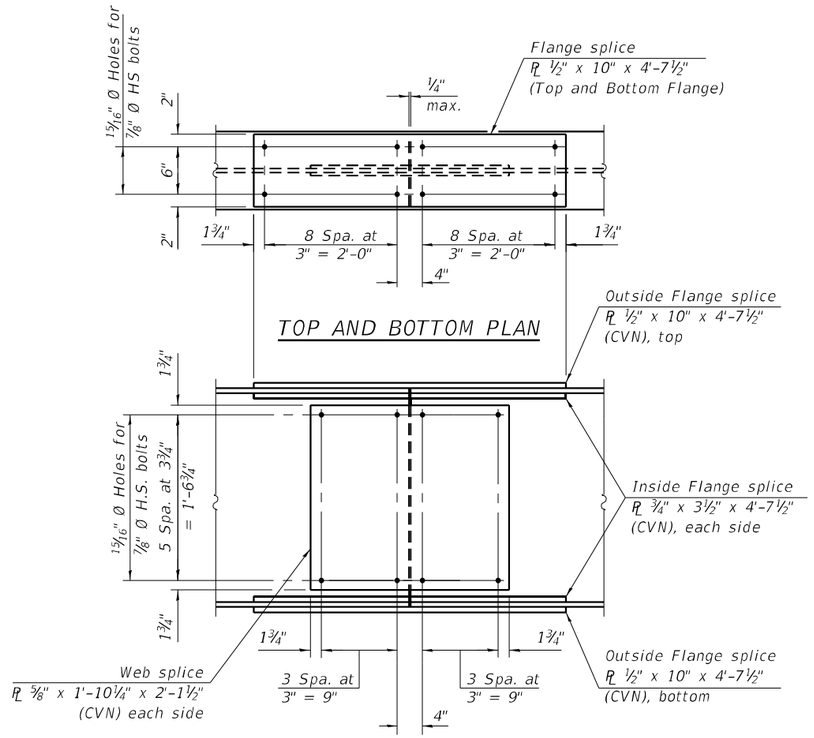
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TOP OF WEB ELEVATIONS (FOR FABRICATION ONLY)

Location / Beam	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 9	Girder 10
℄ Brg. W. Abut.	414.04	414.16	414.29	414.41	414.53	414.64	414.73	414.71	414.62	414.50
℄ Brg. Pier 1	414.15	414.25	414.37	414.49	414.62	414.72	414.81	414.79	414.70	414.58
℄ Splice #1	414.12	414.25	414.37	414.49	414.62	414.72	414.81	414.79	414.70	414.58
℄ Brg. Pier 2	414.13	414.25	414.37	414.50	414.62	414.73	414.82	414.80	414.71	414.59
℄ Splice #2	414.10	414.22	414.35	414.47	414.59	414.70	414.79	414.77	414.68	414.56
℄ Brg. E. Abut.	414.05	414.18	414.30	414.42	414.55	414.65	414.75	414.73	414.63	414.52

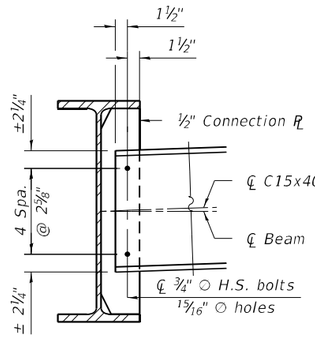
Notes:
Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition. Alternate channels, if utilized, shall be provided at no additional cost to the Department.

Two hardened washers required for each set of oversized holes.

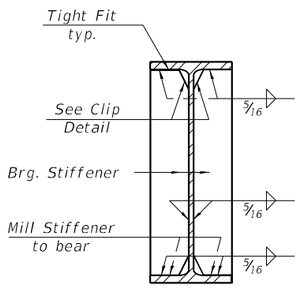


ELEVATION

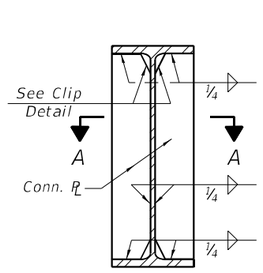
SPLICE DETAIL
(24 Required)



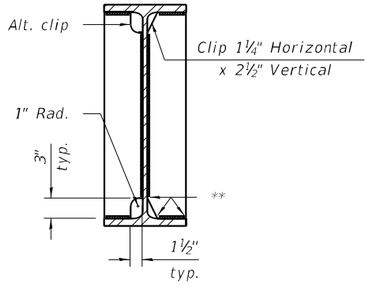
DIAPHRAGM D
(96 Required)



BEARING STIFFENER DETAIL

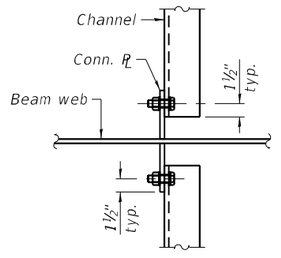


CONNECTION PLATE DETAIL

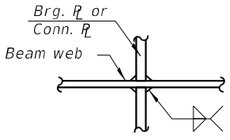


WELD LIMITS AND CLIP DETAILS

** Stop welds ¼" (±⅛") from edges as shown. Typical.



SECTION A-A



WEB WELD DETAIL

Symmetrical 2 span

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 2	Pier 1 & Pier 2	0.5 Sp. 2
I_s	(in^4)	4,080	4,080	4,080
$I_c(n)$	(in^4)	12,883	12,883	12,883
$I_c(3n)$	(in^4)	9,492	9,492	9,492
$I_c(cr)$	(in^4)	———	6,007	———
S_s	(in^3)	299	299	299
$S_c(n)$	(in^3)	479	———	479
$S_c(3n)$	(in^3)	431	———	431
$S_c(cr)$	(in^3)	———	305	———
S_x	(in^3)	———	———	———
DC1	(k/')	0.831	0.831	0.831
M_{DC1}	('k)	59	165	110
DC2	(k/')	0.175	0.175	0.175
M_{DC2}	('k)	13	37	24
DW	(k/')	0.287	0.287	0.287
M_{DW}	('k)	21	60	39
LLDF		0.580	0.550	0.526
M_{L+IM}	('k)	310	296	339
f_l (Strength I)	(ksi)	———	———	———
$M_u + {}^1/_3 f_l S_x$	('k)	664	861	819
$\phi_f M_n$	('k)	2,560	1,893	2,560
f_s DC1	(ksi)	2.37	6.62	4.41
f_s DC2	(ksi)	0.36	1.45	0.67
f_s DW	(ksi)	0.58	2.36	1.09
f_s ($_L$+IM)	(ksi)	7.77	11.63	8.50
f_l (Service II)	(ksi)	0.0	0.0	0.0
$f_s + {}^{f_l}/_2$ (Service II)	(ksi)	13.42	25.55	17.22
Service II Resistance	(ksi)	47.5	47.5	47.5
$f_s + {}^{f_l}/_3$ (Strength I)	(ksi)	17.89	33.99	22.86
$\phi_f F_n$	(ksi)	———	———	———
V_f	(k)	31.9	36.7	31.6

GIRDER REACTION TABLE			
		Abut.	Pier
LLDF		0.683	0.683
OCF		–	–
R_{DC1}	(k)	10.6	39.8
R_{DC2}	(k)	2.2	8.8
R_{DW}	(k)	3.5	14.4
R_L	(k)	41.8	68.7
R_{Im}	(k)	11.4	15.1
R_{Total} (Strength I)(Impact)	(k)	114.4	229.0
R_{Total} (Strength I)(No Impact)	(k)	94.4	202.6

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange ($in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u : Strength I load combination of factored design moments (kip-ft.). $1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

f_l : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).

$\phi_f M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s ($_L$ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

$f_s + f_l/2$ (Service II): Sum of stresses as computed below (ksi).
f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s ($_L$ + IM) + $f_l/2$

Service II Resistance: Composite ($0.95R_hF_{yf}$) or noncomposite ($0.80R_hF_{yf}$) stress capacity according to Article 6.10.4.2 (ksi).

$f_s + f_l/3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s ($_L$ + IM) + $f_l/3$

$\phi_f F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).

V_f : Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1} : Un-factored reaction due to non-composite dead load (kip).

R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

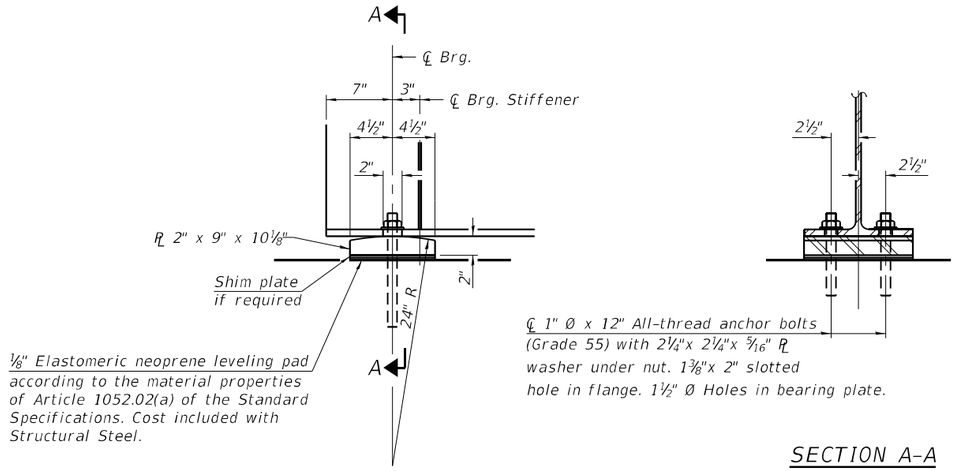
R_L : Un-factored live load reaction (kip).

R_{IM} : Un-factored dynamic load allowance (impact) (kip).

R_{Total} (Strength I)(Impact): Strength I load combination of factored design reactions (kip).
$1.25\ (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75\ (R_L + R_{IM})$

R_{Total} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
$1.25\ (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75\ (R_L)$

Note:
M_L and R_L include the effects of centrifugal force and superelevation.



SECTION A-A

ELEVATION AT ABUTMENT

FIXED BEARING AT ABUTMENT

(20 Required)

Notes:

Anchor bolts shall be according to Article 521.06 of the Standard Specifications.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

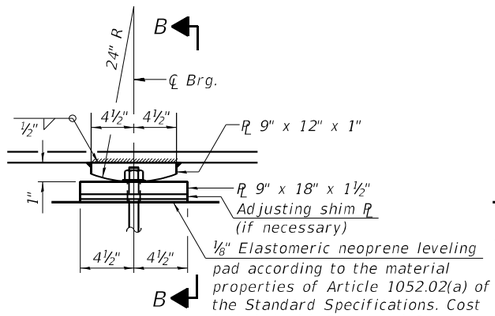
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

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

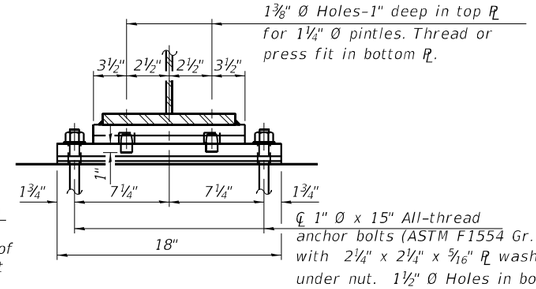
Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolts sizes and grades shown at the pier constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

The structural steal bearing and fill plates shall conform to the requirement of AASHTO M270 Grade 50.



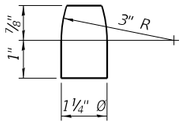
ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER

(20 Required)



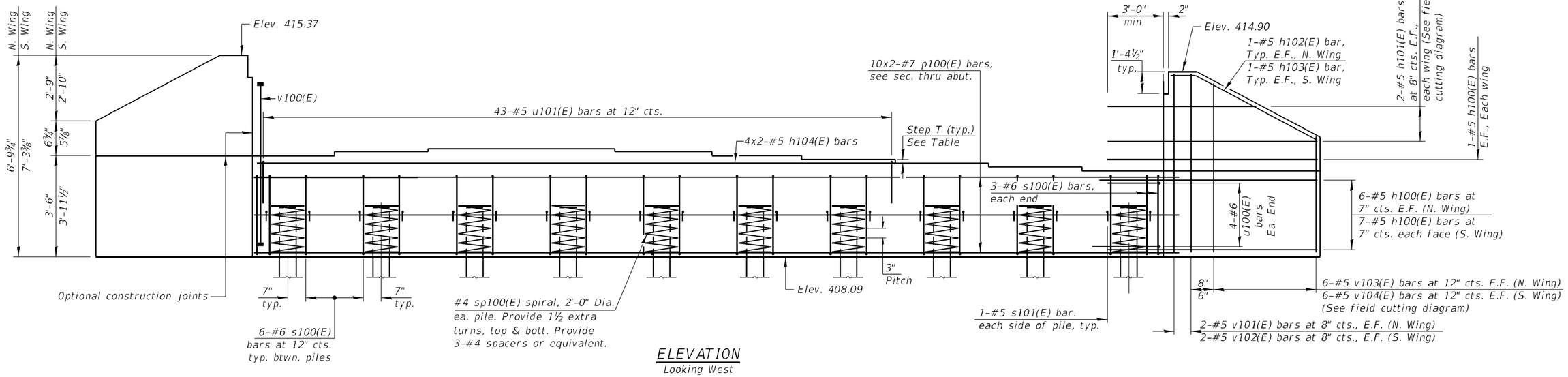
PINTLE

Notes:

Beam 7 shall have one - 9"x18"x3/16" thick shim plate for the bearing at each pier. Cost included with Furnishing and Erecting Structural Steel.

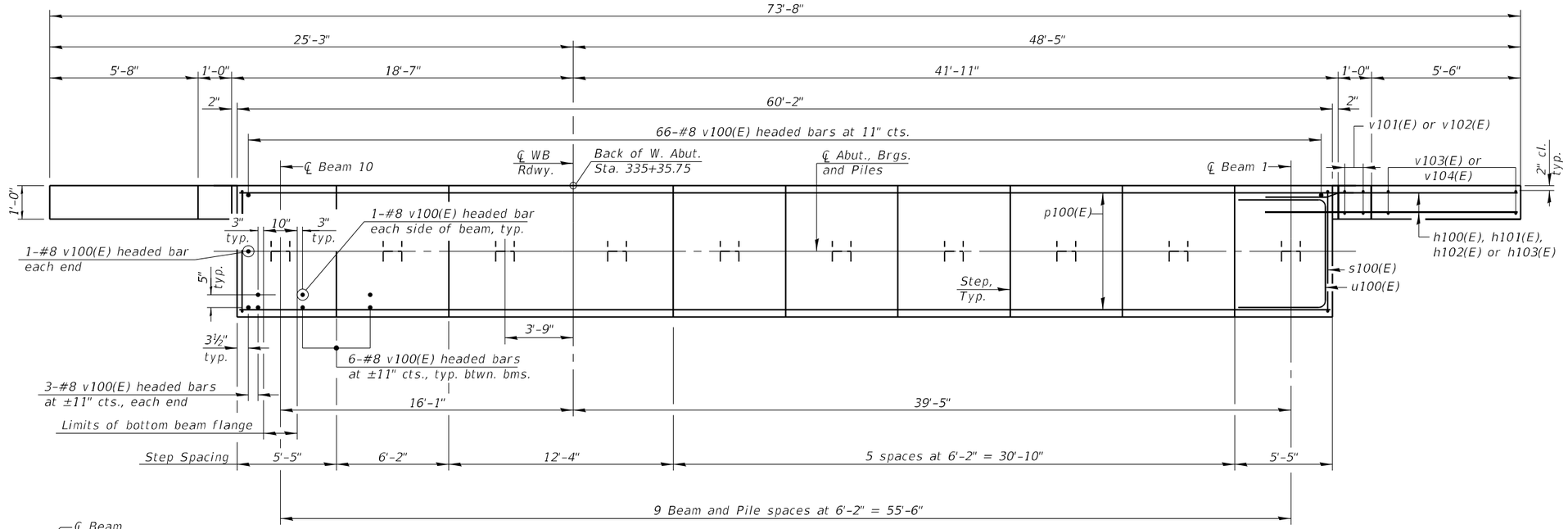
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	80

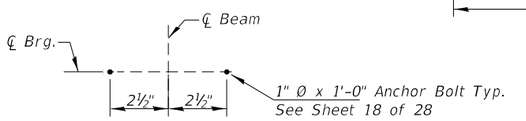


ELEVATION
Looking West

N



PLAN



ANCHOR BOLT LAYOUT

PILE DATA

Type: HP 14x89 with Pile Shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 387 kips
Est. Length: 61 feet
No. Production Piles: 9
No. Test Piles: 1

BEARING SEAT ELEVATIONS

Beam	Brg. Seat Elevation	Step T (Inch)
1	411.59	
2	411.71	1⅜"
3	411.84	1⅝"
4	411.96	1⅜"
5	412.08	1½"
6	412.19	1¼"
7	412.26	⅞"
8	412.26	0
9	412.17	1⅛"
10	412.05	1⅜"

ADJUSTMENT SHIM PLATE THICKNESS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 4	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10
Thickness	none	none	none	none	none	none	¼"	none	none	none

MINIMUM BAR LAP

#4 Bar = 2'-11"
#7 Bar = 5'-0"

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 25 of 28.
Bars indicated thus 10x2 - #7 etc. indicates 10 lines of bars with 2 lengths per line.

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

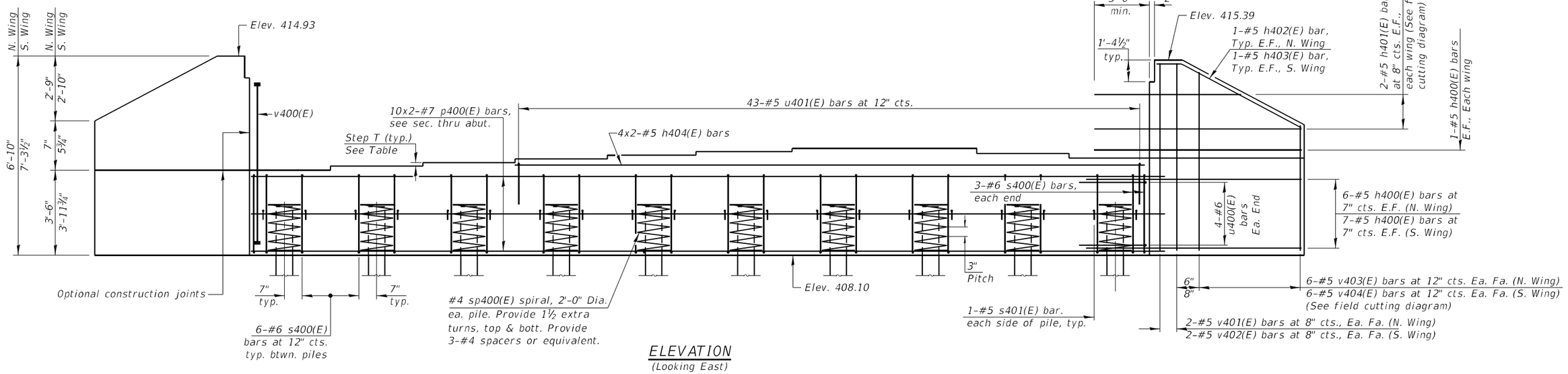
USER NAME =	DESIGNED - VVR	REVISED -
	CHECKED - DHC	REVISED -
PLOT SCALE =	DRAWN - VVR	REVISED -
PLOT DATE = FEBRUARY 14th, 2025	CHECKED - DHC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 100 - 0109 (W.B.)
SHEET 19 OF 28 SHEETS

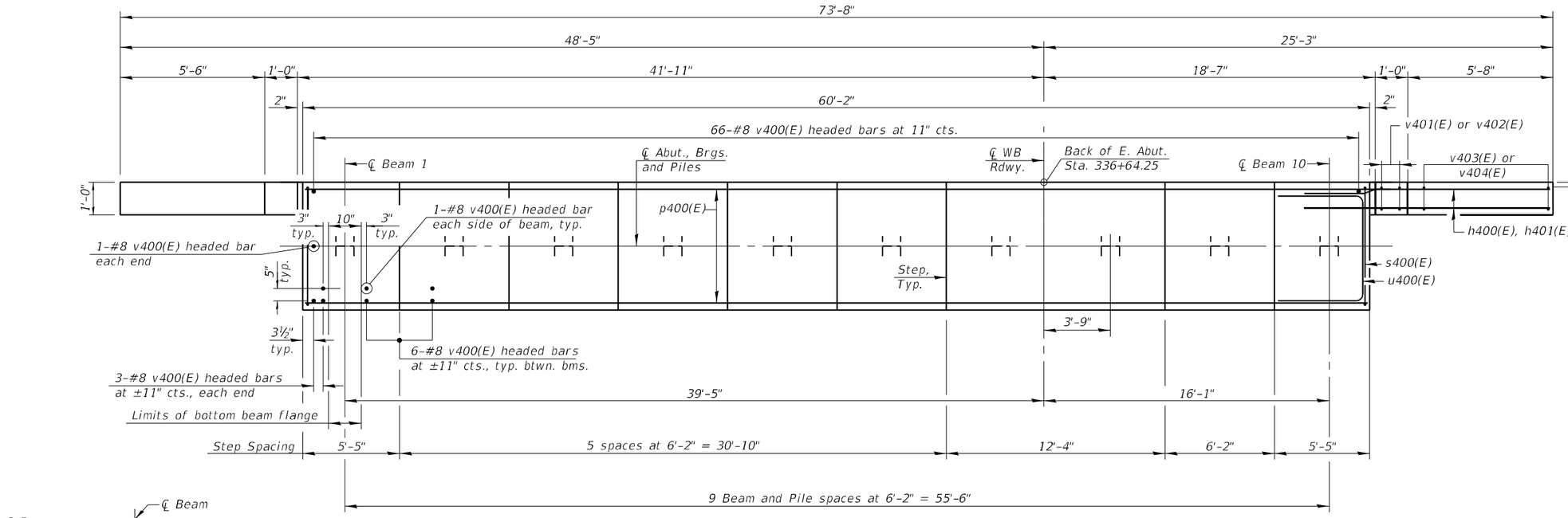
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)IR-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	338
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: Z:\0 V and K Jobs\652 - Civil Design Inc\6521 - CDI - PTB 200-38 IL 13 Structures and Erosion Control\CADD\Structural\SN 100-0109 WB\100-0109-78373-0xx-W Abut .dgn
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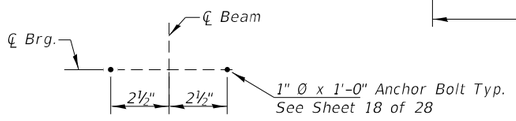


ELEVATION
(Looking East)

N



PLAN



ANCHOR BOLT LAYOUT

PILE DATA

Type: HP 14x89 with Pile Shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 387 kips
Est. Length: 63 feet
No. Production Piles: 9
No. Test Piles: 1

BEARING SEAT ELEVATIONS

Beam	Brg. Seat Elevation	Step T (Inch)
1	411.60	
2	411.73	1½"
3	411.85	1½"
4	411.97	1⅜"
5	412.10	1⅜"
6	412.20	1⅛"
7	412.28	1"
8	412.28	0
9	412.18	1⅛"
10	412.07	1⅜"

ADJUSTMENT SHIM PLATE THICKNESS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 4	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10
Thickness	none	none	none	none	none	none	¼"	none	none	none

MINIMUM BAR LAP

#4 Bar = 2'-11"
#7 Bar = 5'-0"

Notes:
Pour steps monolithically with cap.
For details of piles see sheet 25 of 28.
Bars indicated thus 10x2 - #7 etc. indicates 10 lines of bars with 2 lengths per line.

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

USER NAME =	DESIGNED - VVR	REVISED -
	CHECKED - DHC	REVISED -
PLOT SCALE =	DRAWN - VVR	REVISED -
PLOT DATE = FEBRUARY 14th, 2025	CHECKED - DHC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 100 - 0109 (W.B.)

SHEET 20 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	339
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

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WEST ABUTMENT BILL OF MATERIAL

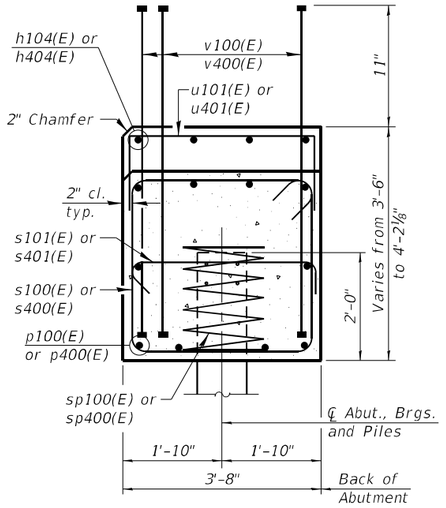
Bar	No.	Size	Length	Shape
h100(E)	30	#5	9'-8"	
h101(E)	4	#5	15'-8"	
h102(E)	2	#5	6'-9"	
h103(E)	2	#5	6'-11"	
h104(E)	8	#5	22'-6"	
p100(E)	20	#7	32'-5"	
s100(E)	60	#6	14'-4"	
s101(E)	20	#5	4'-4"	
* sp100(E)	10	#4	2'-0"	
u100(E)	8	#6	11'-10"	
u101(E)	43	#5	7'-4"	
v100(E)	146	#8	5'-3"	
v101(E)	4	#5	6'-5"	
v102(E)	4	#5	6'-11"	
v103(E)	6	#5	10'-0"	
v104(E)	6	#5	11'-0"	
Structure Excavation		Cu. Yd.	173	
Concrete Structures		Cu. Yd.	35.0	
Reinforcement Bars, Epoxy Coated		Pound	6510	
Furnishing Steel Piles HP14X89		Foot	549	
Driving Piles		Foot	549	
Test Pile Steel HP14X89		Each	1	
Pile Shoes		Each	10	
Granular Backfill for Structures		Cu. Yd.	107	
Geocomposite Wall Drain		Sq. Yd.	45	
Pipe Underdrains for Structures		Foot	110	

* Length is height of spiral.

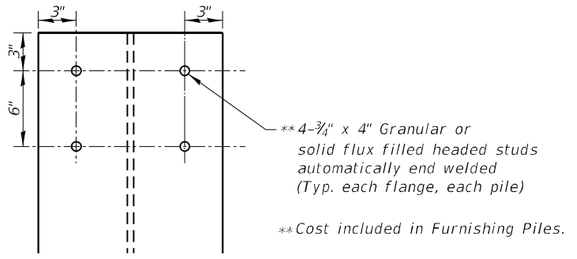
EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h400(E)	30	#5	9'-8"	
h401(E)	4	#5	15'-8"	
h402(E)	2	#5	6'-9"	
h403(E)	2	#5	6'-11"	
h404(E)	8	#5	22'-6"	
p400(E)	20	#7	32'-5"	
s400(E)	60	#6	14'-4"	
s401(E)	20	#5	4'-4"	
* sp400(E)	10	#4	2'-0"	
u400(E)	8	#6	11'-10"	
u401(E)	43	#5	7'-4"	
v400(E)	146	#8	5'-3"	
v401(E)	4	#5	6'-5"	
v402(E)	4	#5	6'-11"	
v403(E)	6	#5	10'-0"	
v404(E)	6	#5	11'-0"	
Structure Excavation		Cu. Yd.	174	
Concrete Structures		Cu. Yd.	35.0	
Reinforcement Bars, Epoxy Coated		Pound	6510	
Furnishing Steel Piles HP14X89		Foot	567	
Driving Piles		Foot	567	
Test Pile Steel HP14X89		Each	1	
Pile Shoes		Each	10	
Granular Backfill for Structures		Cu. Yd.	108	
Geocomposite Wall Drain		Sq. Yd.	45	
Pipe Underdrains for Structures		Foot	110	

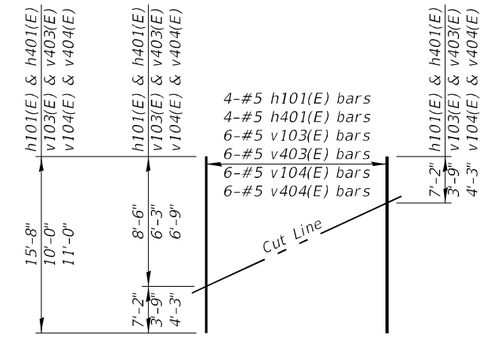
* Length is height of spiral.



SEC. THRU ABUT.

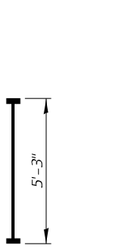


DETAIL A
Pile Studs

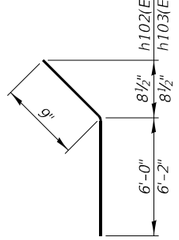


FIELD CUTTING DIAGRAM

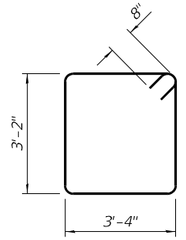
Order h101(E), h401(E), v103(E), v104(E), v403(E) and v404(E) full length. Cut as shown and use remainder of bars in opposite face.



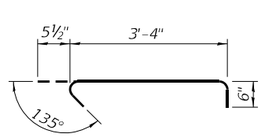
BARS v100(E) & V400(E)
(Headed. 772-#8 Bar terminators)



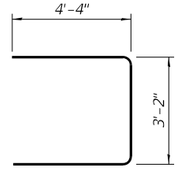
BARS h102(E) & h103(E)
BARS h402(E) & h403(E)



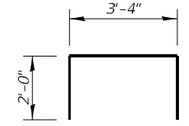
BARS s100(E) & s400(E)



BARS s101(E) & s401(E)



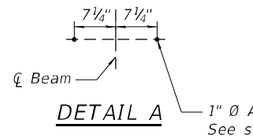
BARS u100(E) & u400(E)



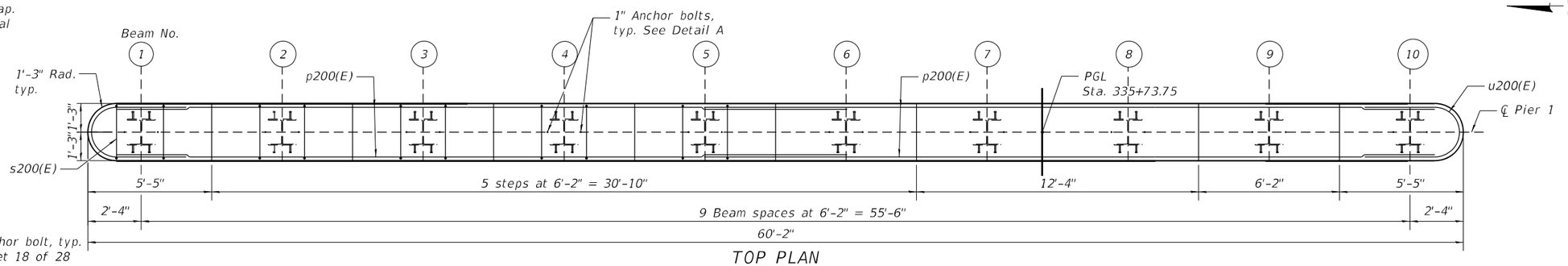
BARS u101(E) & u401(E)

Note: Bar terminators paid for separately.
See Total Bill of Material

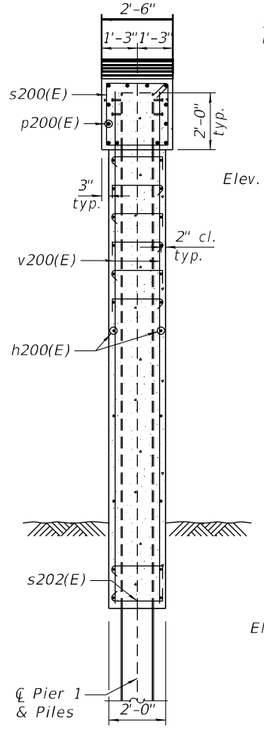
Notes:
Pour steps monolithically with cap.
See sheet 24 of 28 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 25 of 28.
Bars indicated thus 21 x 2 – #5 etc. indicates 21 lines of bars with 2 lengths per line.



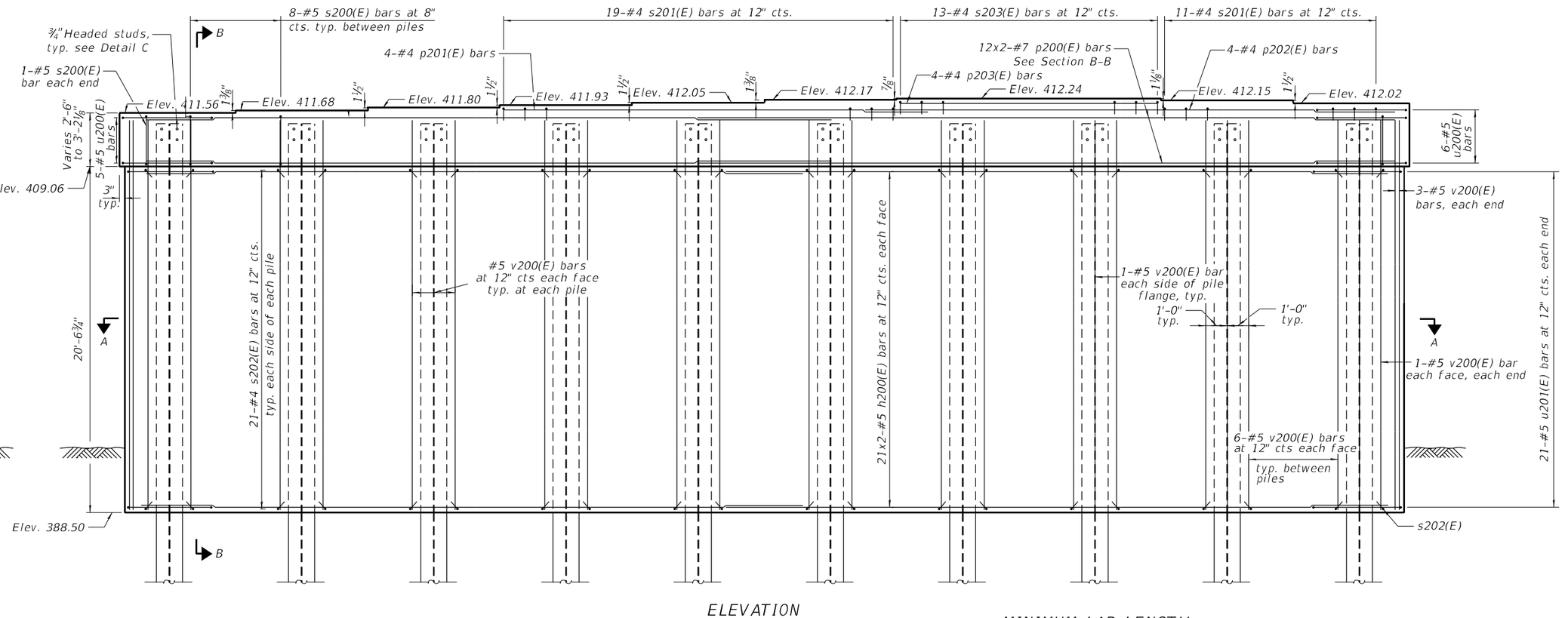
DETAIL A



TOP PLAN



SECTION B-B



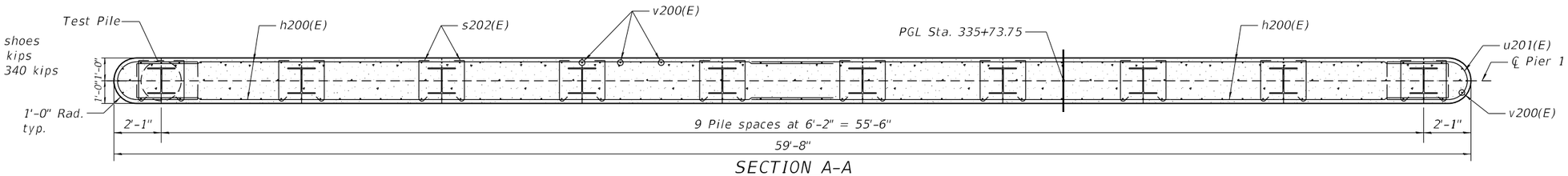
ELEVATION

MINIMUM LAP LENGTH

#4 bar = 2'-11"
#5 bar = 3'-7"
#7 bar = 6'-3"

PILE DATA

Type: Steel HP14x89 with pile shoes
Nominal Required Bearing: 651 kips
Factored Resistance Available: 340 kips
Est. Length: 62'
No. Req'd: 9
Test Pile: 1



SECTION A-A

Michael Baker INTERNATIONAL
200 W Adams Street
Suite 1800
Chicago, IL 60606
PH: 312.707.8770
FAX: 312.707.8804

USER NAME =	DESIGNED - AMR	REVISED -
	CHECKED - MLK	REVISED -
PLOT SCALE =	DRAWN - FS	REVISED -
PLOT DATE =	CHECKED - AMR	REVISED -

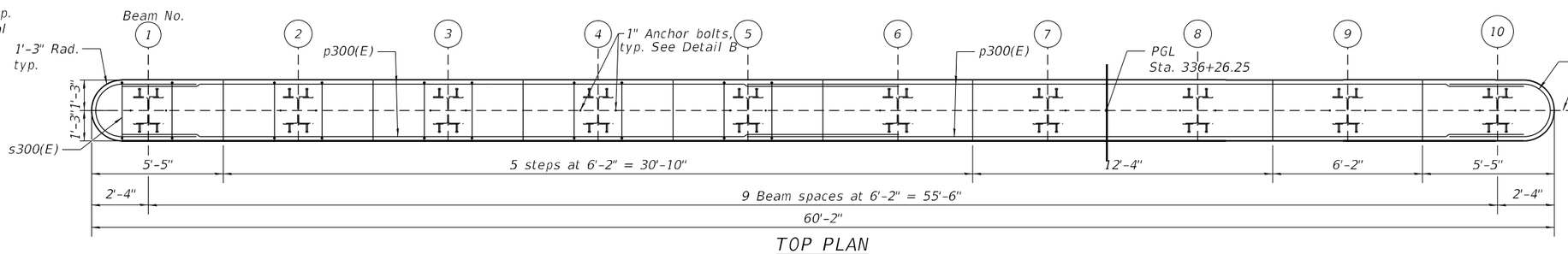
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 100-0109
SHEET 22 OF 28 SHEETS

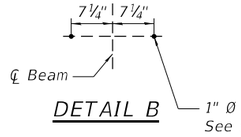
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	341
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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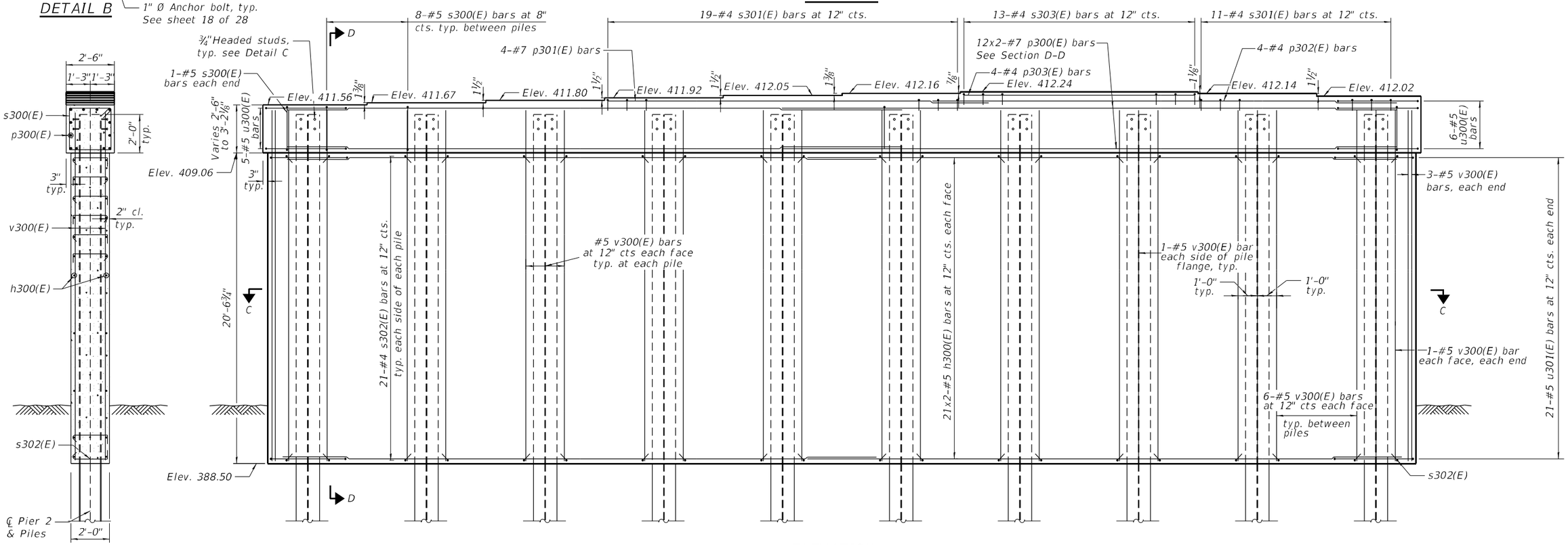
Notes:
Pour steps monolithically with cap.
See sheet 24 of 28 for additional pier details and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
For details of piles, see sheet 25 of 28.
Bars indicated thus 21x2-#5 etc. indicates 21 lines of bars with 2 lengths per line.



TOP PLAN



DETAIL B



SECTION D-D

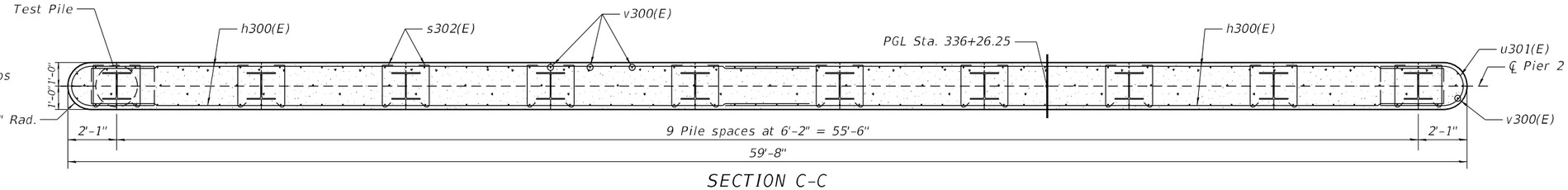
ELEVATION

MINIMUM LAP LENGTH

#4 bar = 2'-11"
#5 bar = 3'-7"
#7 bar = 6'-3"

PILE DATA

Type: Steel HP14x89 with piles shoes
Nominal Required Bearing: 687 kips
Factored Resistance Available: 357 kips
Est. Length: 65'
No. Req'd: 9
Test Pile: 1



SECTION C-C

Michael Baker INTERNATIONAL
200 W Adams Street
Suite 1800
Chicago, IL 60606
PH: 312.707.8770
FAX: 312.707.8804

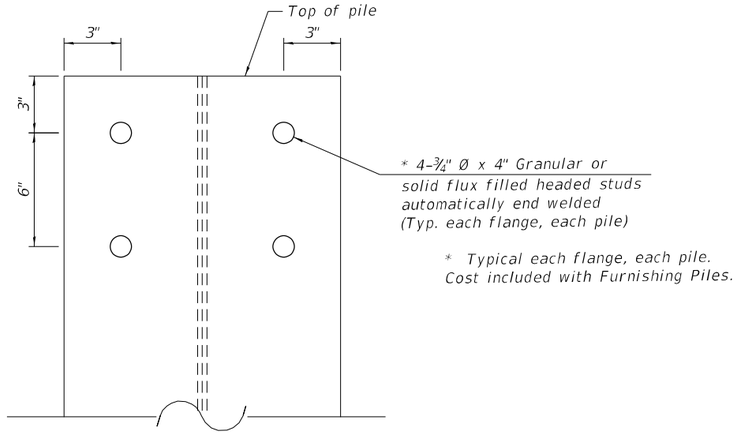
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	CHECKED - MLK	REVISED -
PLOT SCALE =	DRAWN - FS	REVISED -
PLOT DATE =	CHECKED - AMR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
STRUCTURE NO. 100-0109
SHEET 23 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	342
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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DETAIL C

PIER 1

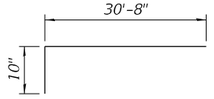
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h200(E)	84	#5	31'-6"	
p200(E)	24	#7	32'-0"	
p201(E)	4	#4	19'-10"	
p202(E)	4	#4	24'-2"	
p203(E)	4	#4	12'-0"	
s200(E)	74	#5	9'-7"	
s201(E)	30	#4	3'-9"	
s202(E)	420	#4	2'-6"	
s203(E)	13	#4	4'-4"	
u200(E)	11	#5	9'-5"	
u201(E)	42	#5	10'-4"	
v200(E)	138	#5	22'-7"	
Cofferdam Excavation			Cu Yd	286
Cofferdam (Type 2) (Location - 1)			Each	1
Concrete Structures			Cu Yd	106.4
Seal Coat Concrete			Cu Yd	113
Reinforcement Bars, Epoxy Coated			Pound	9,850
Furnishing Steel Piles HP14X89			Foot	558
Driving Piles			Foot	558
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	10

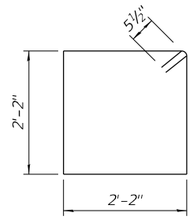
PIER 2

BILL OF MATERIAL

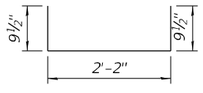
Bar	No.	Size	Length	Shape
h300(E)	84	#5	31'-6"	
p300(E)	24	#7	32'-0"	
p301(E)	4	#4	19'-10"	
p302(E)	4	#4	24'-2"	
p303(E)	4	#4	12'-0"	
s300(E)	74	#5	9'-7"	
s301(E)	30	#4	3'-9"	
s302(E)	420	#4	2'-6"	
s303(E)	13	#4	4'-4"	
u300(E)	11	#5	9'-5"	
u301(E)	42	#5	10'-4"	
v300(E)	138	#5	22'-7"	
Cofferdam Excavation			Cu Yd	286
Cofferdam (Type 2) (Location - 2)			Each	1
Concrete Structures			Cu Yd	106.4
Seal Coat Concrete			Cu Yd	113
Reinforcement Bars, Epoxy Coated			Pound	9,850
Furnishing Steel Piles HP14X89			Foot	585
Driving Piles			Foot	585
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	10



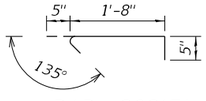
BAR h200(E)
BAR h300(E)



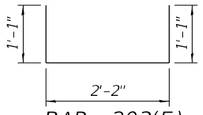
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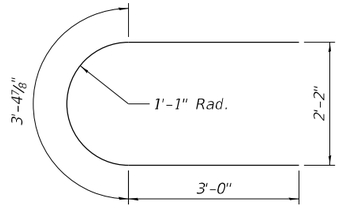
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BAR s301(E)



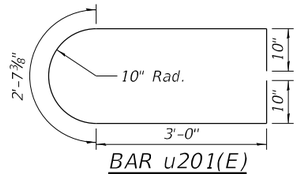
BAR s202(E)
BAR s302(E)



BAR s203(E)
BAR s303(E)



BAR u200(E)
BAR u300(E)



BAR u201(E)
BAR u301(E)

Michael Baker INTERNATIONAL
200 W Adams Street
Suite 1800
Chicago, IL 60606
PH: 312.707.8770
FAX: 312.707.8804

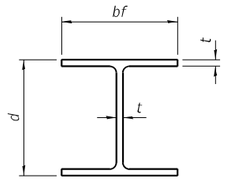
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	CHECKED - MLK	REVISED -	
PLOT SCALE =	DRAWN - FS	REVISED -	
PLOT DATE =	CHECKED - AMR	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
STRUCTURE NO. 100-0109
SHEET 24 OF 28 SHEETS

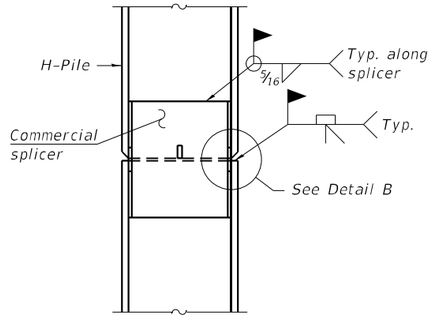
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		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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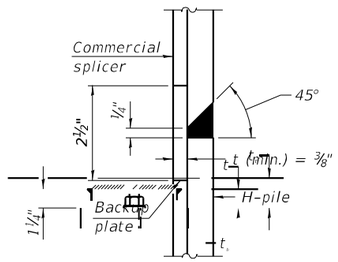


STEEL PILE TABLE

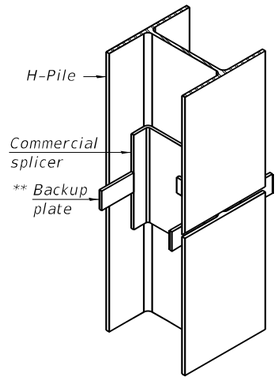
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 18x181	18	18	1	36"
x157	17¾"	17⅞"	⅞"	36"
x135	17½"	17¾"	¾"	36"
HP 16x183	16½"	16½"	1⅛"	36"
x162	16¼"	16⅛"	1"	36"
x141	16	16	⅞"	36"
x121	15¾"	15⅞"	¾"	36"
HP 14x117	14¼"	14⅞"	13/16"	30"
x102	14"	14¾"	11/16"	30"
x89	13⅞"	14¾"	⅝"	30"
x73	13⅜"	14⅜"	½"	30"
HP 12x84	12¼"	12¼"	11/16"	24"
x74	12⅛"	12¼"	⅝"	24"
x63	12"	12⅛"	½"	24"
x53	11¾"	12"	7/16"	24"
HP 10x57	10"	10¼"	9/16"	24"
x42	9¾"	10⅛"	7/16"	24"
HP 8x36	8"	8⅛"	7/16"	18"



ELEVATION

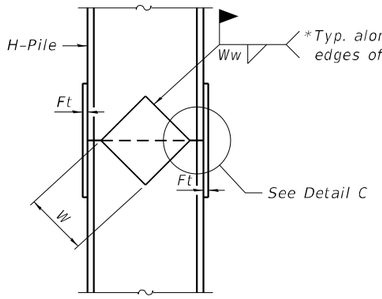


DETAIL B

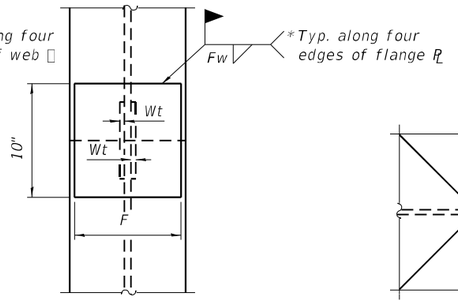


ISOMETRIC VIEW

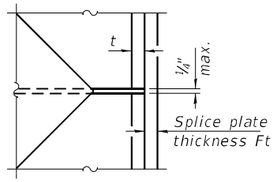
WELDED COMMERCIAL SPLICE



ELEVATION



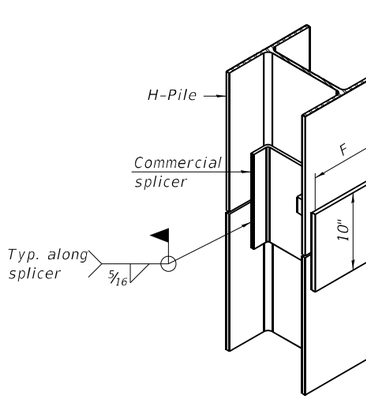
END VIEW



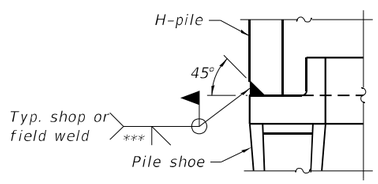
DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 18x181	15½"	1½"	1"	9½"	⅞"	¾"
x157	15¼"	1¼"	1"	9½"	⅞"	¾"
x135	15¼"	1¼"	1"	9½"	⅞"	¾"
HP 16x183	13¾"	1½"	1"	8¼"	⅞"	¾"
x162	13½"	1½"	1"	8¼"	¾"	⅝"
x141	13½"	1¼"	⅞"	8¼"	¾"	⅝"
x121	13½"	1¼"	⅞"	8¼"	¾"	⅝"
HP 14x117	12½"	1¼"	⅞"	7¾"	⅝"	½"
x102	12½"	1"	¾"	7¾"	⅝"	½"
x89	12½"	⅞"	11/16"	7¾"	⅝"	½"
x73	12½"	¾"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	1"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	¾"	½"	6½"	½"	⅜"
x53	10"	¾"	½"	6½"	½"	⅜"
HP 10x57	8"	⅞"	9/16"	5¼"	½"	⅜"
x42	8"	¾"	9/16"	5¼"	½"	⅜"
HP 8x36	6¾"	⅝"	7/16"	4"	½"	⅜"

WELDED PLATE FIELD SPLICE



ELEVATION



DETAIL A

SHOE ATTACHMENT

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

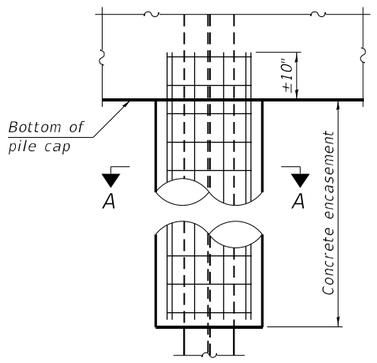
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

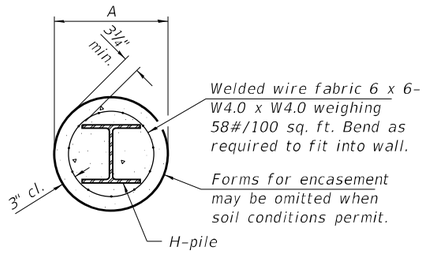
* Interrupt welds ¼" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



ELEVATION



SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

(when specified)

F-HP

10-27-2023

CIVIL DESIGN, INC. WBE / DBE EFFINGHAM, IL LICENSE #184.003222	USER NAME =	DESIGNED – JAG	REVISED –
		CHECKED – JGS	REVISED –
	PLOT SCALE =	DRAWN – JAG	REVISED –
	PLOT DATE =	CHECKED – JGS	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 100-0109
SHEET 25 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	344
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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2/13/2025 10:18:54 AM

Illinois Department of Transportation
Division of Highways
District 9

ROCK CORE LOG

Date 6/16/14

ROUTE FAP 331 (IL 13 WB) **DESCRIPTION** IL 13 WB Over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION (5B-1)DR-1 **LOCATION** 1.6 mi. E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **CORING METHOD** Conventional rotary with water

STRUCT. NO. 100-0067
Station 336+00

BORING NO. 1-S
Station 336+82
Offset 13.0ft Lt of WB CL
Ground Surface Elev. 415.3 ft

CORING BARREL TYPE & SIZE NV3 5FT NWJ
Core Diameter 1.78 in
Top of Rock Elev. 348.80 ft
Begin Core Elev. 348.70 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
V. Dense Grey, Dry SANDSTONE		1	88	63		299.1
	-70					355.7
V. Dense Grey, Dry SANDSTONE with some CLAY layers		2	100	60		301.7
	-75					291.2
	338.70					240.1
	-80					
Bottom of hole @ 76.6 ft Ground Surface Elevation referenced to BM at NW corner of SN 100-0020; Elev. 416.7 Drilled by: R. Moberly	-85					

Color pictures of the cores Yes, attached
Cores will be stored for examination until 5 Years after Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run

BBS, form 138 (Rev. 8-99)

ROCK CORE 100-0067 IL 13 WB OVER CRAB ORCHARD LAKE.GPJ DOTEMPLT.GDT 5/11/21

MODEL: Default
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2/14/2025 10:09:55 AM

CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
	CHECKED – JGS	REVISED –	
PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - W. ABUT.
STRUCTURE NO. 100-0109
SHEET 26 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	345
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

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Latitude 37 44 42.72 Longitude -89 07 19.05 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/16/14

ROUTE FAP 331 (IL 13 WB) **DESCRIPTION** IL 13 WB Over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION (5B-1)DR-1 **LOCATION** 1.6 mi. E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0067
Station 336+00

BORING NO. 1-S
Station 336+82
Offset 13.0ft Lt of WB CL
Ground Surface Elev. 415.3 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 383.3 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Material
				HMA Pavement over crushed Aggregate
413.80				
	1			V. Stiff Brown, Moist SILTY CLAY
	3 4	2.3 B	19	
410.80				
-5	1			V. Stiff Brown and Grey, Moist CLAY to SILTY CLAY
	2 4	2.1 B	19	
408.30				
	WOH			M. Stiff Brown, Moist to V. Moist CLAY to SILTY CLAY
	1 WOH	0.6 B	23	
405.80				
-10	1			Stiff Brown and Grey, Moist CLAY to SILTY CLAY
	2 4	1.9 B	22	
	1			
	3 3	1.6 B	20	
-15	1			
	2 3	1.9 B	21	
	1			
	2 3	1.4 B	22	
395.80				
-20	1			
	2 3	1.2 B	20	Stiff Brown and Grey, Moist to V. Moist CLAY to SILTY CLAY *(continued)*
	1			
	2 2	1.5 B	23	
390.30				
-25	1			Stiff Grey, Moist to V. Moist SILTY LOAM to SILTY CLAY LOAM
	4 4	1.2 S	21	
				90% Fines <#200, LL 32, PI 10 (Estimated based on visual ID and historical database)
388.30				
	WOH			Soft to M. Stiff Grey and Brown, V. Moist SILTY CLAY LOAM
	WOH 2	0.5 B	26	
				91% Fines <#200, LL 37, PI 14 (Estimated based on visual ID and historical database)
385.80				
-30	1			Stiff Grey and mottled Brown, Moist SILTY CLAY LOAM
	3 3	1.2 B	23	
				91% Fines <#200, LL 37, PI 14 (Estimated based on visual ID and historical database)
383.30				
	WOH			Soft Grey and Brown, V. Moist to Wet CLAY
	1 WOH	0.3 B	28	
				92% Fines <#200, LL 50, PI 29 (Estimated based on visual ID and historical database)
-35	WOH			
	1 WOH	0.3 B	29	
378.30				
	1			Stiff Grey and Brown, Moist to V. Moist CLAY
	2 2	1.6 B	27	
-40	1			

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:\MATERIALS GEOTECHNICAL UNIT\GINT\PROJECTS\PROJECTS FILE\WILLIAMSON\STRUCTURES\100-0067 IL 13 WB OVER CRAB ORCHARD LAKE\100-0067 IL 13 WB OVER CRAB ORCHARD LAKE.GPJ Data Template D6TEMPLT.GDT Date Printed 5/11/21
Latitude 37 44 42.72 Longitude -89 07 19.05 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/16/14

ROUTE FAP 331 (IL 13 WB) **DESCRIPTION** IL 13 WB Over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION (5B-1)DR-1 **LOCATION** 1.6 mi. E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0067
Station 336+00

BORING NO. 1-S
Station 336+82
Offset 13.0ft Lt of WB CL
Ground Surface Elev. 415.3 ft

Surface Water Elev. 405.2 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 383.3 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Material
	2 2	1.9 B	28	Stiff Grey and Brown, Moist to V. Moist CLAY *(continued)*
-45	WOH			
	1 2	1.6 S	49	
365.30				
-50	1			Soft to M. Stiff Grey, V. Moist CLAY
	WOH 1	0.5 B	32	
-55	WOH			
	1 WOH	0.6 B	31	
	1 WOH	0.5 B	24	Soft to M. Stiff Grey, V. Moist CLAY *(continued)*
350.80				
-65	1			Stiff Grey, Moist CLAY to SANDY CLAY
	2 2	1.6 B	20	
348.80				
	100/1"			V. Dense Grey, Dry SANDSTONE
				(Borehole continued with rock coring.)
				Bottom of hole @ 76.6 ft
-70				Ground surface elevation referenced to benchmark at NW corner of SN 100-0020; Elev. 416.70
				Hammer efficiency: 75% To convert "N" values to "N60", multiply by 1.25
-75				Drilled by: R. Moberly
-80				

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)

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CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –
	CHECKED – JGS	REVISED –
PLOT SCALE =	DRAWN – JAG	REVISED –
PLOT DATE =	CHECKED – JGS	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS - E. ABUT.
STRUCTURE NO. 100-0109
SHEET 27 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	346
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/16/14

ROUTE FAP 331 (IL 13 WB) **DESCRIPTION** IL 13 WB Over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION (5B-1)DR-1 **LOCATION** 1.6 mi. E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0067
Station 336+00

BORING NO. 2-S
Station 335+21
Offset 13.0ft Lt of WB CL
Ground Surface Elev. 415.2 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 385.7 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
				HMA Pavement over crushed Aggregate
413.70				
	1			V. Stiff Brown and Grey, Moist CLAY to SILTY CLAY
	1	2.3	19	
	2	B		
-5	1			
	2	2.1	20	
	3	B		
408.20				
	1			Stiff Brown and Grey, Moist CLAY
	2	1.4	22	
	2	B		
-10	1			
	2	1.9	21	
	2	B		
	1			
	2	1.6	22	
	2	B		
-15	1			
	2	1.5	21	
	2	B		
	1			
	2	1.9	23	
	2	B		
-20	1			

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
	2	1.5	22	Stiff Brown and Grey, Moist CLAY *(continued)*
	2	B		
393.20				
	1			Stiff Grey, Moist to V. Moist SILTY LOAM to SILTY CLAY LOAM
	2	1.1	23	
	2	S		90% Fines<#200, LL 32, PI 10 (Estimated based on visual ID and historical database)
390.20 -25	1			
	1	0.8	23	M. Stiff Grey, Moist to V. Moist SILTY LOAM to SILTY CLAY LOAM
	2	B		
388.20				90% Fines<#200, LL 32, PI 10 (Estimated based on visual ID and historical database)
	WOH			
	1	0.5	25	Soft to M. Stiff Grey, V. Moist SILTY CLAY LOAM
	WOH	B		
385.70				91% Fines<#200, LL 37, PI 14 (Estimated based on visual ID and historical database)
-30	1			
	3	1.0	23	M. Stiff Grey and mottled Brown, Moist to V. Moist SILTY CLAY LOAM
	3	S		
383.20				91% Fines<#200, LL 37, PI 14 (Estimated based on visual ID and historical database)
	WOH			
	1	0.3	30	Soft Brown and Grey, V. Moist CLAY to SILTY CLAY
	WOH	B		
380.70				95% Fines<#200, LL 44, PI 24 (Estimated based on visual ID and historical database)
-35	1			
	2	1.0	26	M. Stiff Brown and Grey, Moist to V. Moist SILTY CLAY to SILTY CLAY LOAM
	3	B		
378.20				94% Fines<#200, LL 39, PI 18 (Estimated based on visual ID and historical database)
	WOH			
	1	0.3	29	Soft Grey and mottled Brown, V. Moist CLAY
	WOH	B		
375.70 -40	WOH			

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:\MATERIALS GEOTECHNICAL UNIT\GINT\PROJECTS\PROJECTS FILE\WILLIAMSON\STRUCTURES\100-0067 IL 13 WB OVER CRAB ORCHARD LAKE\100-0067 IL 13 WB OVER CRAB ORCHARD LAKE.GPJ Data Template D6TEMPLT.GDT Date Printed 5/11/21
Latitude 37 44 42.72 Longitude -89 07 21.11 Datum NAD83 Job Number

Illinois Department of Transportation
Division of Highways
District 9

SOIL BORING LOG

Date 6/16/14

ROUTE FAP 331 (IL 13 WB) **DESCRIPTION** IL 13 WB Over Crab Orchard Lake **LOGGED BY** L. Estel

SECTION (5B-1)DR-1 **LOCATION** 1.6 mi. E. of Jackson Co. (near E. Abut.), **SEC.** 17, **TWP.** 9S, **RNG.** 1E, **PM**

COUNTY Williamson **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto SPT 140 lbs

STRUCT. NO. 100-0067
Station 336+00

BORING NO. 2-S
Station 335+21
Offset 13.0ft Lt of WB CL
Ground Surface Elev. 415.2 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 385.7 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
	1	0.8	27	91% Fines<#200, LL 50, PI 29 (Estimated based on visual ID and historical database)
	2	B		
				M. Stiff Grey and mottled Brown, V. Moist SILTY CLAY
				96% Fines<#200, LL 44, PI 23 (Estimated based on visual ID and historical database) *(continued)*
370.70				
-45	1			Stiff Grey and mottled Brown, Moist CLAY
	2	1.5	27	
	2	B		
365.70				
-50	1			M. Stiff Grey, Moist to V. Moist CLAY with ORGANICS and some SAND
	1	1.0	29	
	2	B		
-55	WOH			
	1	0.8	35	
	WOH	B		
355.70				
-60	1			

DEPTH (ft)	BLOWS	UCS Qu (tsf)	MOIST (%)	Description
	2	0.6	25	M. Stiff Grey, V. Moist CLAY with broken SANDSTONE and COAL *(continued)*
	2	B		
352.20				
	100/1"			V. Dense Grey, Dry SANDSTONE
-65				
-70				
				Bottom of hole @ 63.1 ft
				Ground Surface Elevation referenced to BM at NW corner of SN 100-0020; Elev. 416.7
				Hammer Efficiency 75% To convert "N" values to "N60", multiply by 1.25
				Drilled by: R. Moberly
-75				
-80				

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)

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CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS - W. ABUT. STRUCTURE NO. 100-0109
	CHECKED – JGS	REVISED –		
PLOT SCALE =	DRAWN – JAG	REVISED –		SHEET 28 OF 28 SHEETS
PLOT DATE =	CHECKED – JGS	REVISED –		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	347
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

Bench Mark: "□" cut in center Drop Inlet Box, 36 Ft. Rt. Sta. 351+50; Elev. 411.79

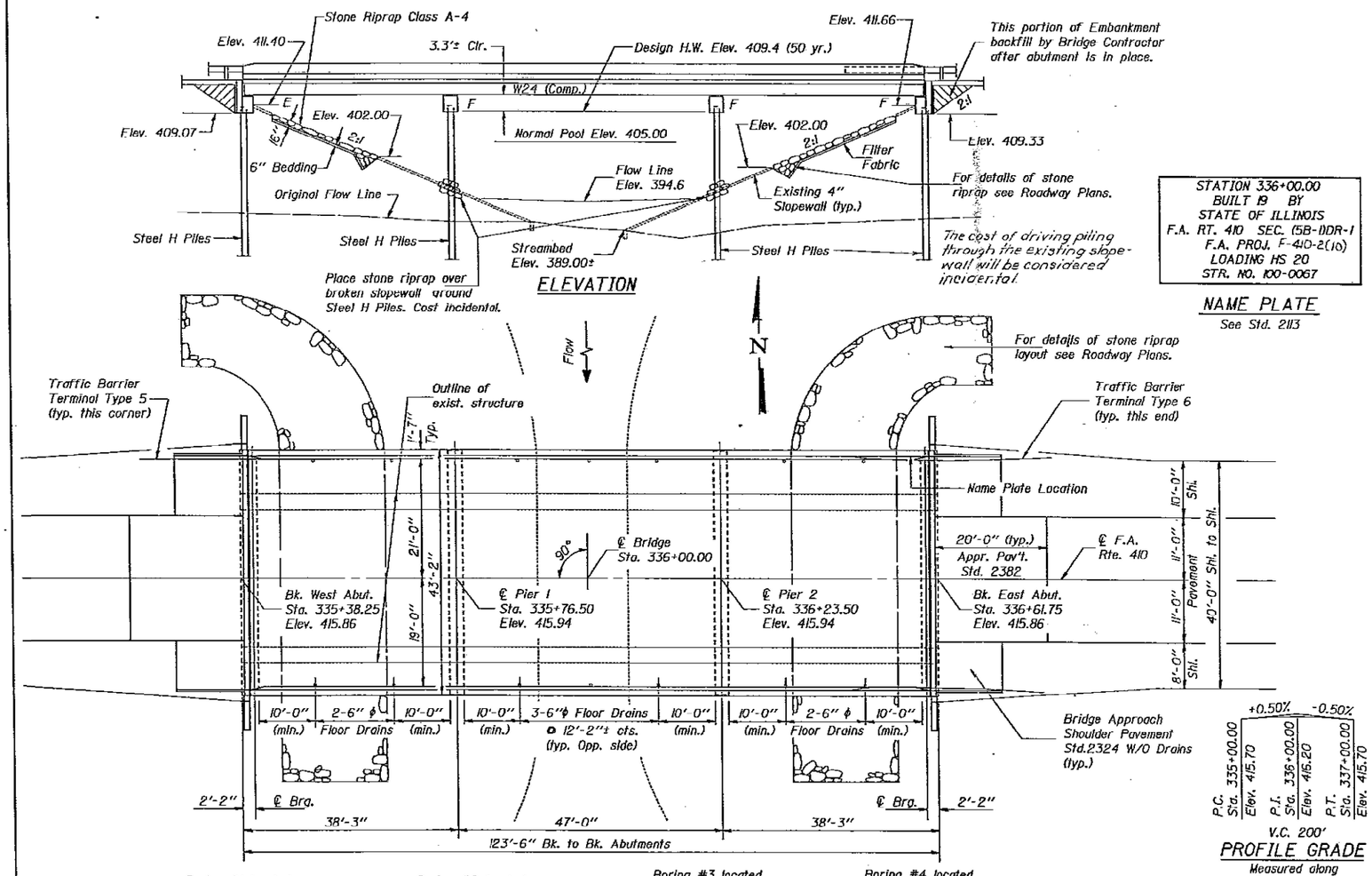
Existing Structure: Built in 1939 as S.B.I. Rte. 13, Sec. 5B-1 is a 123'-6" bk. to bk. three span bridge. The existing concrete deck has an out to out width of 31'-8" and is supported on 6 continuous steel WF 24 beams. The existing superstructure is supported by 4 pile bents. The existing substructure caps and superstructure shall be removed completely. A new superstructure and new abutments and pier caps shall be constructed which will require additional piles at piers and all new piles at abutments. Traffic shall be detoured. No salvage. Structure No. 100-0021.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 410	*	WILLIAMSON	42	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1a
13 SHEETS

* (5B-1)DR-1



Boring #1 located ±80' right of ℄ Bridge at Sta. 335+38.00

Boring #2 located ±74' right of ℄ Bridge at Sta. 335+77.00

Boring #3 located ±64' right of ℄ Bridge at Sta. 336+21.00

Boring #4 located ±80' right of ℄ Bridge at Sta. 336+62.00

PLAN

PROFILE GRADE
Measured along ℄ of roadway

STATION 336+00.00
BUILT IN BY
STATE OF ILLINOIS
F.A. RT. 410 SEC. (5B-1)DR-1
F.A. PROJ. F-410-2(10)
LOADING HS 20
STR. NO. 100-0067

NAME PLATE
See Std. 2113

GENERAL NOTES

See Proposal for boring data.

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 = 52,720 lbs. (M 223 Grade 50), 20,320 lbs. (M 183)

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise noted.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

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.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Layout of stone riprap may be varied in the field to suit ground conditions as directed by the Engineer.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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, in a permanent location, one steel HP10 x 42 test pile at Pier 1 as directed by the Engineer before ordering the remainder of piles.

Tightening and inspection of all high strength bolt connections shall conform to the requirements of the latest Issue of the Specification for Structural Joints using ASTM A325 (M164) or A490 (M253) bolts for slip-critical connections. Except tightening method using the calibrated wrench is not allowed.

For cantilever forming brackets, see Special Provisions.

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
*	Removal of Existing Structures	Each			1
	Structure Excavation	Cu. Yd.		(86)	(86)
	Floor Drains	Each	14		14
	Preformed Joint Seal ($1\frac{3}{4}$")	Lin. Ft.	43		43
	Preformed Joint Seal (4")	Lin. Ft.	43		43
	Protective Coat	Sq. Yd.	98		98
	Elastomeric Bearing Assembly, Type II	Each	7		7
	Class X Concrete	Cu. Yd.		(81.5)	(81.5)
	Class X Concrete Superstructure	Cu. Yd.	153.0		153.0
	Structural Steel	Lump Sum	1		1
	Stud Shear Connectors	Each	2436		2436
	Reinforcement Bars	Pound		(8240)	(8240)
	Reinforcement Bars, Epoxy Coated	Pound	35,930		35,930
	Steel Piles HP10 x 42	Lin. Ft.		(1081)	(1081)
	Test Pile Steel HP10 x 42	Each		1	1
	Name Plates	Each	1		1
	Stone Riprap Class A-4	Sq. Yd.			577
**	Slopewall Removal	Sq. Yd.			446
	Filter Fabric For Use With Riprap	Sq. Yd.			577

* Existing piles shall remain in place undamaged at piers.
** See Roadway Plans.

WATERWAY INFORMATION

Drainage Area = 2.5 sq. mi. Low Grade Elev. 413.08 ℄ Sta. 330+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	980	1074	1074	409.4	0	0	409.4	409.4
Base	100	1130	1085	1085	409.5	0	0	409.5	409.5
Overtopping									
Max. Calc.	500	1470	1139	1139	410.0	0	0	410.0	410.0

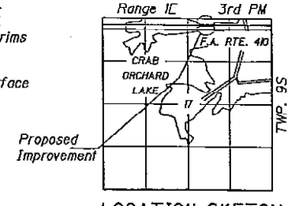
DESIGNED M.A.P.
CHECKED Shayla Ali (SA)
DRAWN JRS Jas
CHECKED M.A.P.

June 15 1988
EXAMINED Engineer of Bridge Design
PASSED James T. Kaufmann Engineer of Bridges and Structures
APPROVED Director of Highways

DESIGN SPECIFICATIONS
1983 AASHTO & 1984, 1985 & 1986 Interims

LOADING HS20-44
Allow 25#/sq. ft. for future wearing surface

DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M223 Grade 50)



LOCATION SKETCH

(REVISED - 11/10/88 - M.P.T.)
GENERAL PLAN
ILL. RTE. 13 WEST BD. LANES
OVER CRAB ORCHARD LAKE
F.A. ROUTE 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00
STRUCTURE NO. 100-0067

FOR INFORMATION ONLY

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CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL LICENSE #184.003222

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PLOT SCALE =	DRAWN - JAG	REVISED -	
PLOT DATE =	CHECKED - JGS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EX. STRUCTURE - GPE
STRUCTURE NO. 100-0109

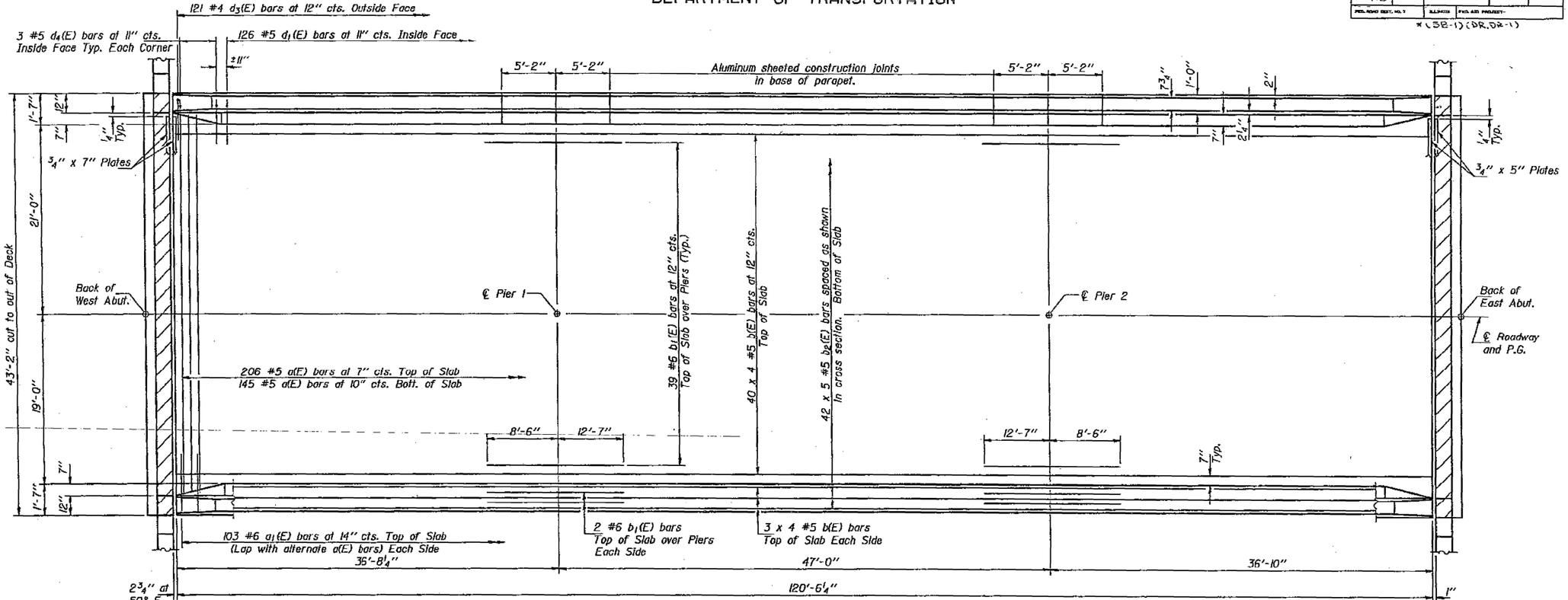
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	348
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. RTE. 410	*	WILLIAMSON	42	33
PROJ. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

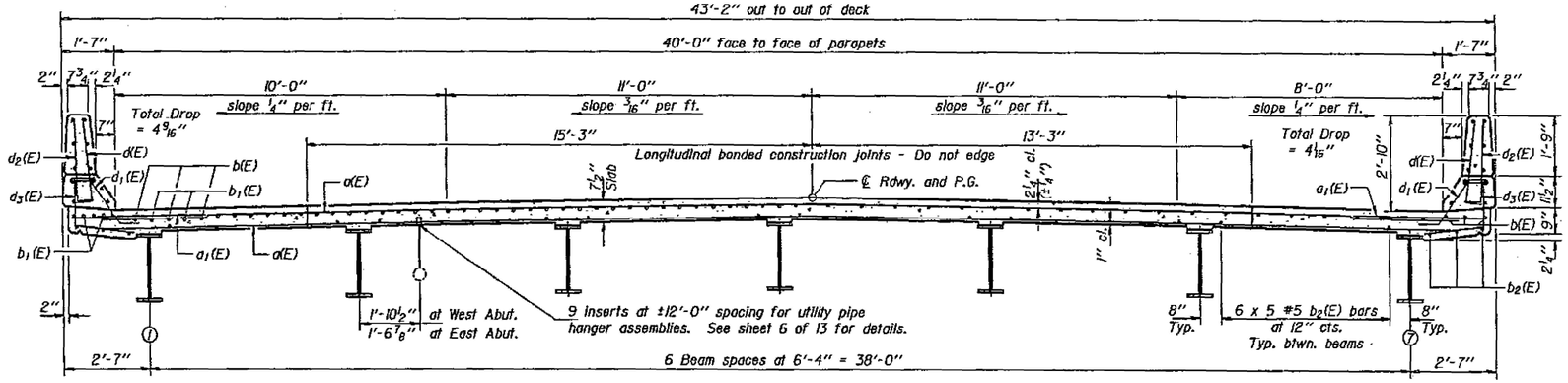
SHEET NO. 4
13 SHEETS

*(5B-1)(DR,DR-1)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



NEAR PIER — CROSS SECTION (Looking East) — NEAR MIDSPAN

Notes: See sheet 5 and 6 of 13 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 42 x 5 #5 etc. indicates 42 lines of bars with 5 lengths per line.

MIN. BAR LAPS

#5 bars = 1'-8"

DESIGNED	Mst P. Thomas	June 15 1988
CHECKED	Shayla Ali (S.D.)	EXAMINED Engineer of Bridge Design
DRAWN	Joe Sutherland	PASSED James T. Ryburn, Engineer of Bridges and Structures
CHECKED	MPT	APPROVED Director of Highways

FOR INFORMATION ONLY

SUPERSTRUCTURE
F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

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		CHECKED – JGS	REVISED –	
	PLOT SCALE =	DRAWN – JAG	REVISED –	
	PLOT DATE =	CHECKED – JGS	REVISED –	

EX. STRUCTURE - SUPERSTRUCTURE
STRUCTURE NO. 100-0109

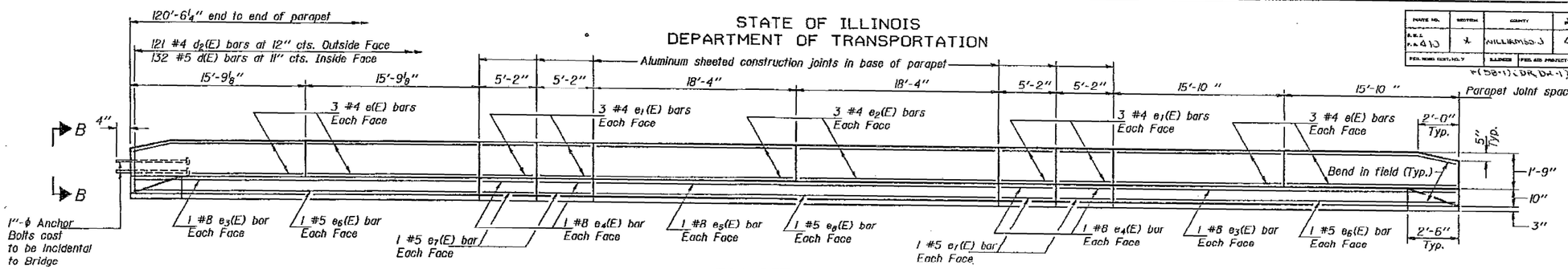
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	349
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. P.A.410	*	WILLIAMSON	42	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

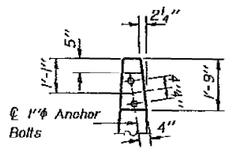
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13 SHEETS

F-(58-1)(DR,D2-1)

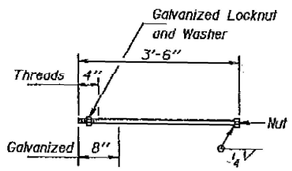


PARAPET ELEVATION

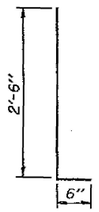
North Parapet Looking North
South Parapet Looking North



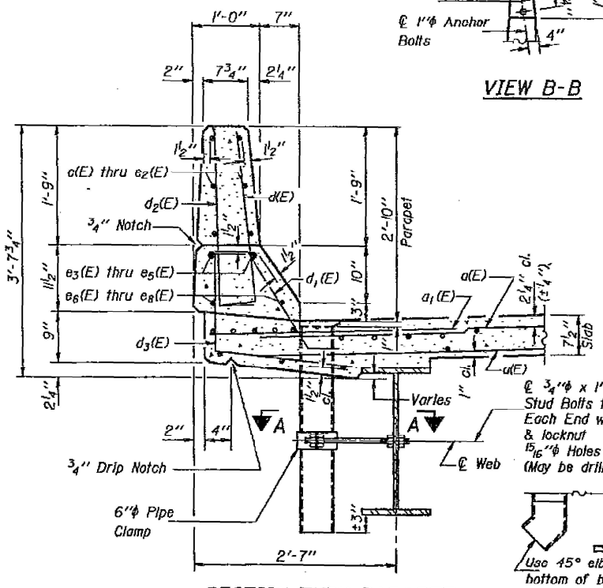
VIEW B-B



1" ϕ ANCHOR BOLT

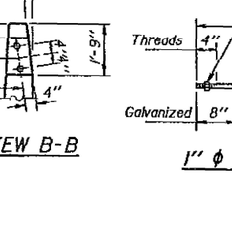


BARS d(E) & d2(E)

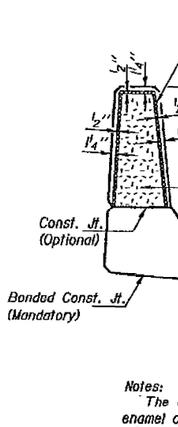


SECTION THRU PARAPET

Drain details are typ. for all spans except as shown in Detail "A".
For drain locations see sheet 1 of 13.

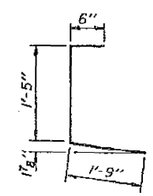


DETAIL "A"

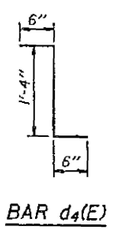


PARAPET JOINT DETAILS

BAR d1(E)

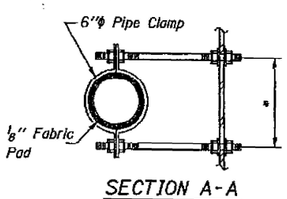


BAR d3(E)

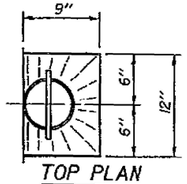


BAR d4(E)

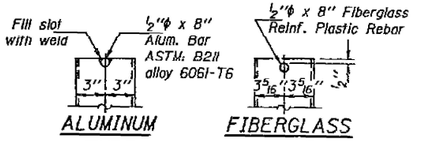
* Dimension as required by Pipe Clamp



SECTION A-A

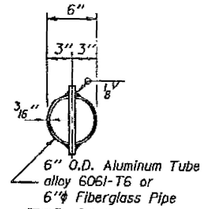


TOP PLAN



ALUMINUM TUBE

FIBERGLASS PIPE



TOP PLAN

(Showing Aluminum Tube)

Notes:
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel coat painting specified for Structural Steel. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structural Painting Council's Spec. SSPC-SP1 and SSPC-Paint 27 prior to painting. Fiberglass to have prewash as per MIL-P-15328 prior to painting.
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

FOR INFORMATION ONLY

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	351	#5	41'-2"	
a1(E)	206	#6	4'-0"	
b(E)	184	#5	31'-4"	
b1(E)	86	#6	21'-1"	
b2(E)	210	#5	25'-5"	
d(E)	264	#5	3'-0"	L
d1(E)	252	#5	2'-7"	
d2(E)	242	#4	3'-0"	L
d3(E)	242	#4	3'-8"	L
d4(E)	12	#5	2'-4"	L
e(E)	48	#4	15'-6"	
e1(E)	48	#4	4'-11"	
e2(E)	24	#4	18'-1"	
e3(E)	8	#8	31'-4"	
e4(E)	16	#8	4'-11"	
e5(E)	4	#8	36'-5"	
e6(E)	8	#5	31'-4"	
e7(E)	16	#5	4'-11"	
e8(E)	4	#5	36'-5"	
Class X Concrete Superstructure		Cu. Yd.	153.0	
Reinforcement Bars Epoxy Coated		Pound	35,930	

Reinforcement bars designated (E) shall be epoxy coated.

SUPERSTRUCTURE DETAILS

F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

DESIGNED Mark P. Trapp
CHECKED Shayla Ali (S.A.)
DRAWN Joe Sutherland
CHECKED MPT

June 15 1988
EXAMINED Raj D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

S-1-D 12-31-87

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CIVIL DESIGN, INC. WBE | DBE
EFFINGHAM, IL LICENSE #184.003222

USER NAME =	DESIGNED - JAG	REVISED -
	CHECKED - JGS	REVISED -
PLOT SCALE =	DRAWN - JAG	REVISED -
PLOT DATE =	CHECKED - JGS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EX. STRUCTURE - SUPERSTRUCTURE DETAILS
STRUCTURE NO. 100-0109

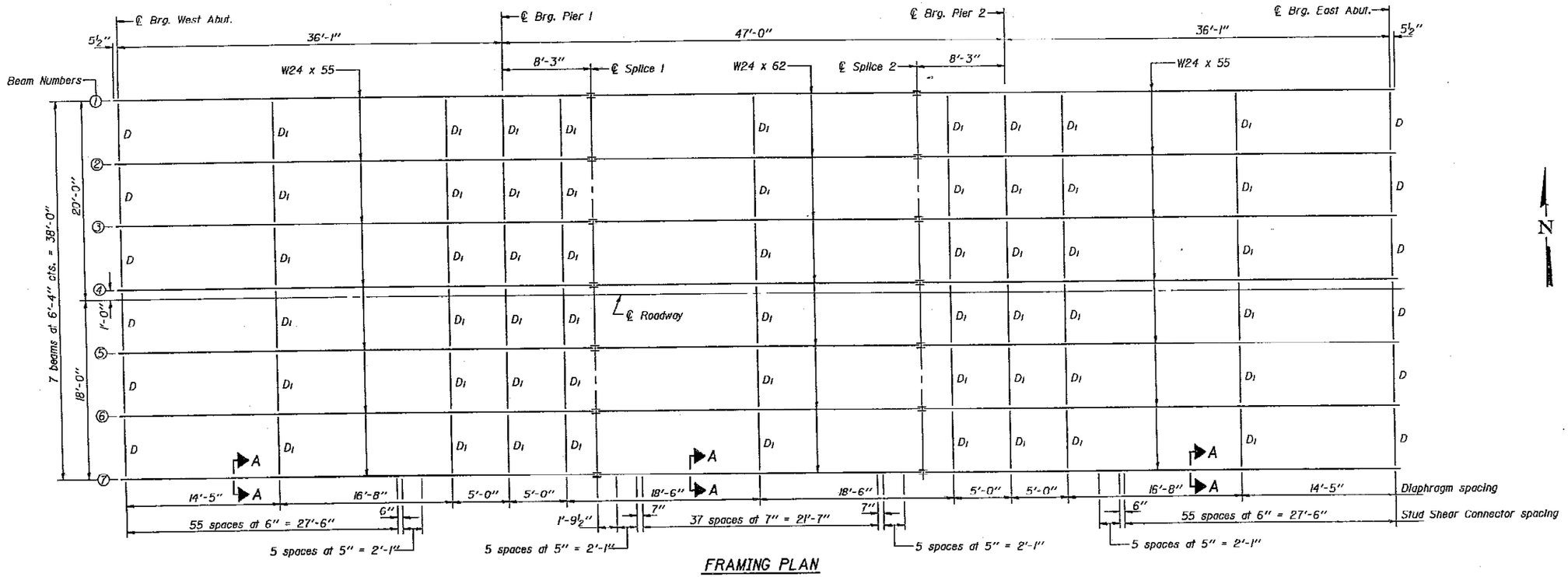
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	350
		CONTRACT NO. 78373		
	ILLINOIS FED. AID PROJECT			

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 410	*	WILLIAMSON	42	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
13 SHEETS

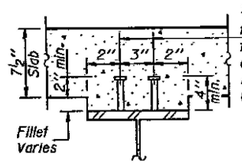
*(5B-1)(DR,DZ-1)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Notes: All beams shall be AASHTO M 223, Grade 50 and shall meet Notch Toughness Requirements.
For details of diaphragms and splices see sheet 8 of 13.



¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (2436 Req'd.)

SECTION A-A

DESIGNED	Mark Petrunich
CHECKED	Shayla Ali (SJ)
DRAWN	Joe Sutherland
CHECKED	MP

June 15 1986

EXAMINED Raj D. Kaspar — ENGINEER OF BRIDGE DESIGN

PASSED James T. Rayburn — ENGINEER OF BRIDGES AND STRUCTURES

APPROVED — DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

STRUCTURAL STEEL DETAILS
F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

MODEL: Default
FILE NAME: C:\Users\schreckenberg\Downloads\109 100-0109-78373-032-Existing Structure_Framing.dgn
2/13/2025 10:27:55 AM

CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

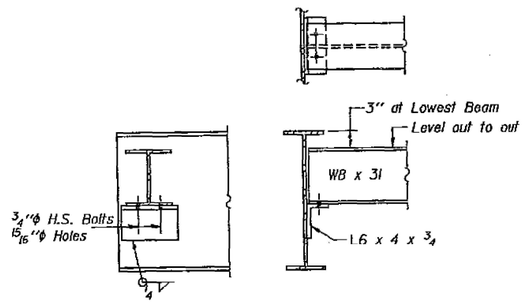
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		CHECKED – JGS	REVISED –		
PLOT SCALE =		DRAWN – JAG	REVISED –		
PLOT DATE =		CHECKED – JGS	REVISED –		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	351
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

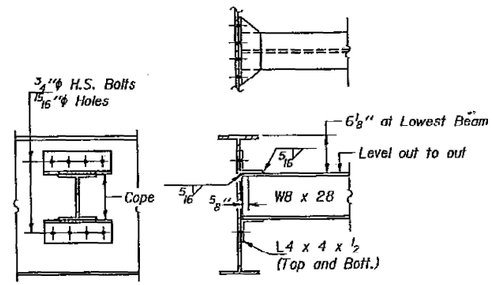
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 410	*	WILLIAMSON	42	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

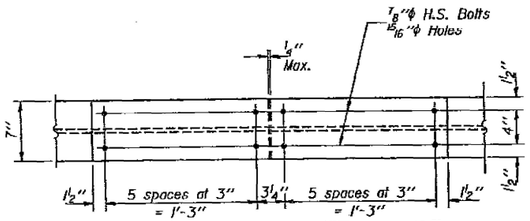
SHEET NO. 8
13 SHEETS
*(5B-1)(DR,DR-1)



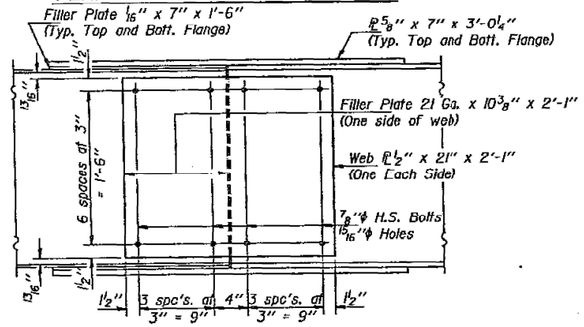
DIAPHRAGM D
(12 Required)



DIAPHRAGM D1
(54 Required)



PLAN OF TOP AND BOTT. FLANGE



WEB ELEVATION
Splice 1 looking North
Splice 2 looking South

Notes: Two hardened washers shall be required over all bolt holes in diaphragms.
All splice plate material except filler plate shall meet Notch Toughness Requirements.
All splice plate material shall be AASHTO M 223, Grade 50.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. #1 or 0.6 Sp. #3	Pier 1 or Pier 2	.5 Sp. 2
Is	(in4)	1350	1350	1550
Ic	(in4)	4963		5520
Ss	(in3)	114	114	131
Sc	(in3)	202		226
ℓ	(K/ft.)	.682	.942	.687
MP	('K)	59	151	71
sP	(K/ft.)	.26		.26
MsP	('K)	28		40
ML	('K)	188	98	243
M (Imp)	('K)	57	28	73
5/3(ML+I)	('K)	408	212	527
Ma	('K)	644	412	829
Mu	('K)			1392
fsP non-comp	(k.s.i.)	6.2	15.9	6.5
fsP (comp)	(k.s.i.)	1.7		2.1
fs 5/3 (L+I)	(k.s.i.)	24.2	22.3	28
fs (Overload)	(k.s.i.)	32.1	38.2	36.6
fs (Total)	(k.s.i.)		49.7	
VR	(K)	42		46

INTERIOR BEAM REACTION TABLE			
		Abuts.	Pier 1 or Pier 2
RP	(K)	12.8	43.4
RL	(K)	29.6	36.9
Imp.	(K)	8.9	11.1
R (Total)	(K)	51.3	91.4

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

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).

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

Ma (Applied Moment)=1.3[MP + MsP + 5/3(ML + I)].

Mu is the Full Plastic Moment Capacity for Compact, Braced section.

fs (Overload) is the sum of the stresses due to MP + MsP + 5/3(ML + I).

fs (Total) (Non compact section) is the sum of the stresses due to 1.3[MP + MsP + 5/3(ML + I)].

MP is moment due to dead loads on noncomposite section.

MsP is moment due to dead loads on composite section.

ML is moment due to live load on noncomposite or composite section.

I is live load impact.

* TOP OF FLANGE ELEVATIONS

	Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
	℄ Brg. West and East Abut's.	414.84	414.97	415.08	415.18	415.11	415.01	414.88
	℄ Brg. Pier 1 and Pier 2	414.84	414.97	415.08	415.18	415.11	415.01	414.88
**	℄ Splice 1 and 2	414.84	414.97	415.08	415.18	415.11	415.01	414.88

* For fabrication purposes only.
** Elevations are for W24 x 62.

DESIGNED	Mark P. Tirmon
CHECKED	Shayla Ali (CDI)
DRAWN	Joe Sutherland
CHECKED	MPT

June 15 1988

EXAMINED Siraj O. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED James T. Kirkham
ENGINEER OF BRIDGE AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

STRUCTURAL STEEL DETAILS
F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

MODEL: Default
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2/14/2025 10:24:41 AM

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
	CHECKED – JGS	REVISED –	
PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

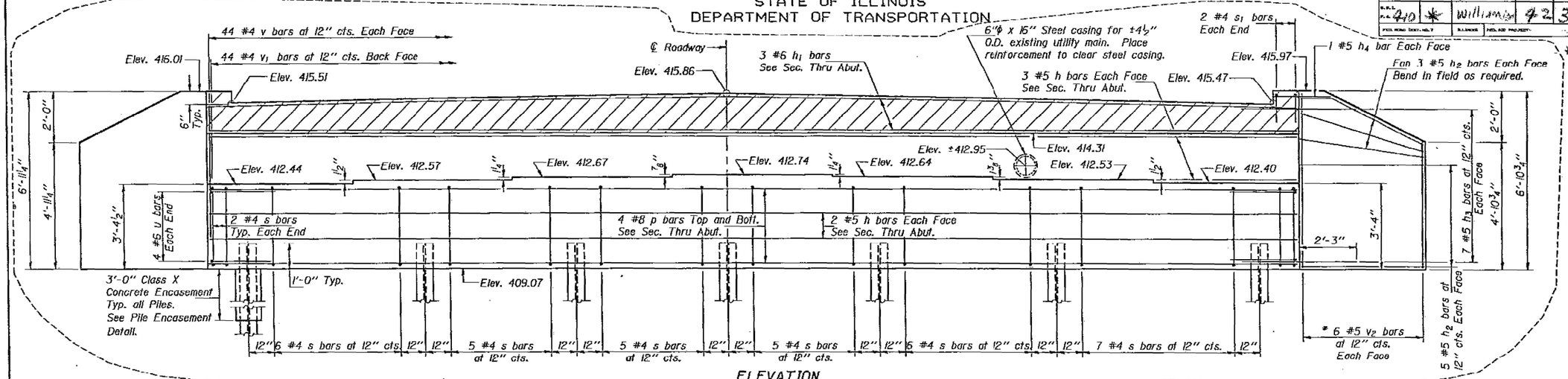
EX. STRUCTURE - FRAMING DETAILS
STRUCTURE NO. 100-0109

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	352
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

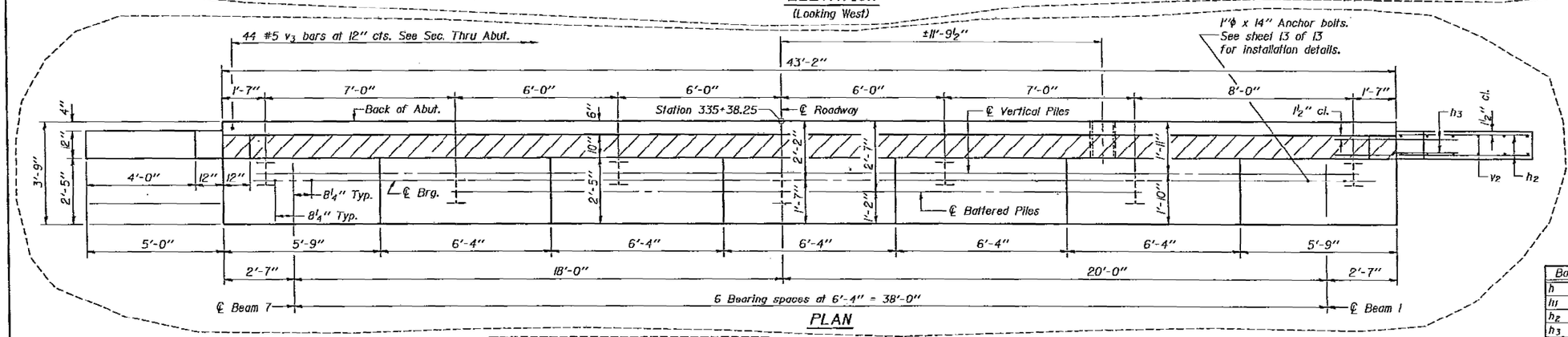
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 410	*	Williamson	42	39
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

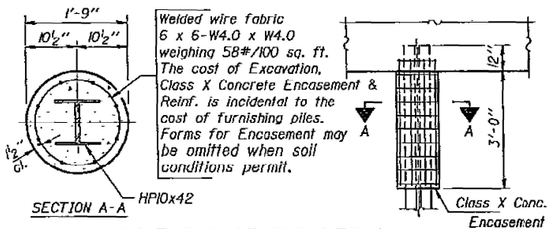
SHEET NO. 100
13 SHEETS
*(5B-1)DDR-1



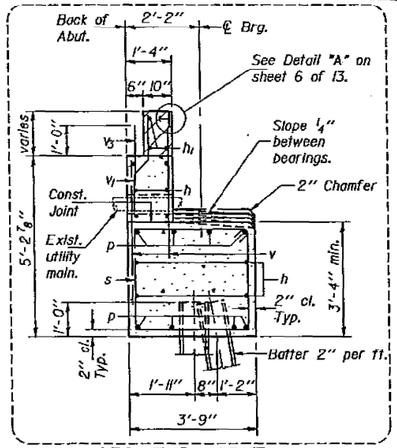
ELEVATION
(Looking West)



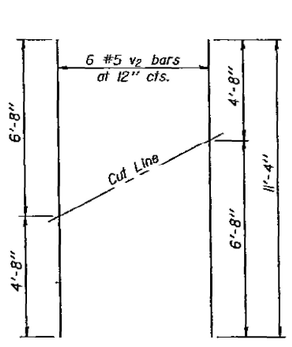
PLAN



PILE ENCASEMENT DETAIL

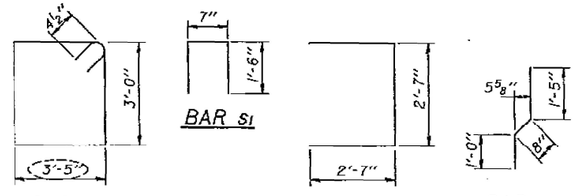


SEC. THRU ABUT.



* FIELD CUTTING DIAGRAM

Order v2 bars full length. Cut to fit as shown and use remainder of bars in other face of wings.



Notes: Hatched area to be poured after superstructure is in place and form work is removed. Concrete in hatched area shall be billed with superstructure as "Class X Concrete Superstructure".
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All exposed edges shall have a ¾" chamfer except as noted.
Cost of steel casing shall be incidental to Class X Concrete.
Existing timber piles shall be cut off flush with bottom of new cap.

FOR INFORMATION ONLY

PILE DATA

Type:	Steel HP10x42
Capacity:	Drive to Refusal
Est. Length:	64'
No. Required:	(7)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	10	#5	42'-11"	
h1	3	#6	42'-11"	
h2	32	#5	4'-9"	
h3	28	#5	4'-6"	
h4	4	#5	1'-9"	
p	8	#8	42'-11"	
s	(38)	#4	(13'-7")	
s1	4	#4	3'-7"	
u	8	#6	7'-9"	
v	88	#4	4'-4"	
v1	44	#4	3'-1"	
v2	12	#5	11'-4"	
v3	44	#5	2'-0"	
Class X Concrete			Cu. Yd.	(27.0)
Reinforcement Bars			Pound	(2880)
Steel Piles HP10x42			Lin. Ft.	(448)

DESIGNED	Mark P. Thomas
CHECKED	Shayla Ali (S.I)
DRAWN	Joe Sutherland
CHECKED	MPT

June 15 1988

EXAMINED Greg J. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED James T. Kaylor ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

(REVISED - 11/10/88 - M.P.T.)

WEST ABUTMENT
F.A. RT. 410 SEC. (5B-1)DDR-1
WILLIAMSON COUNTY
STATION 336+00.00

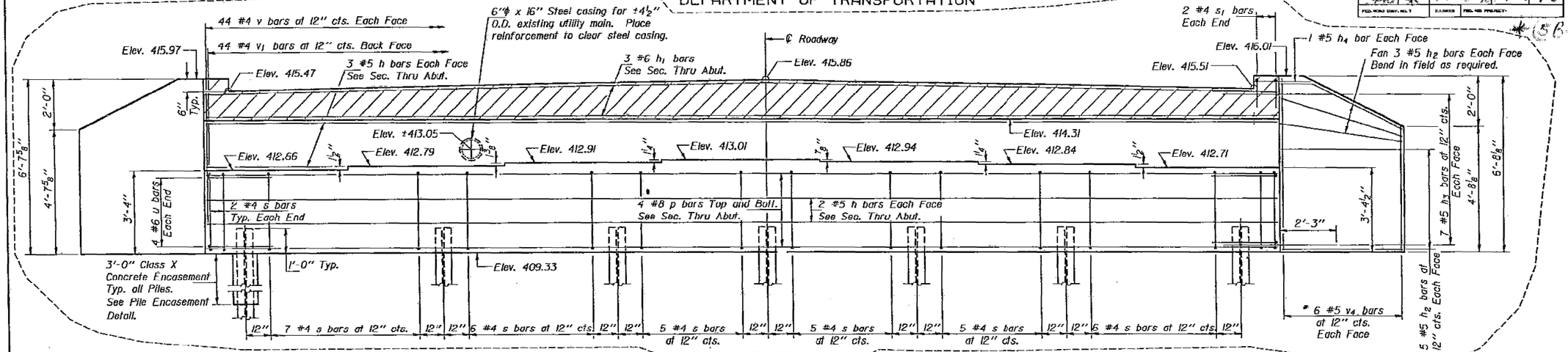
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

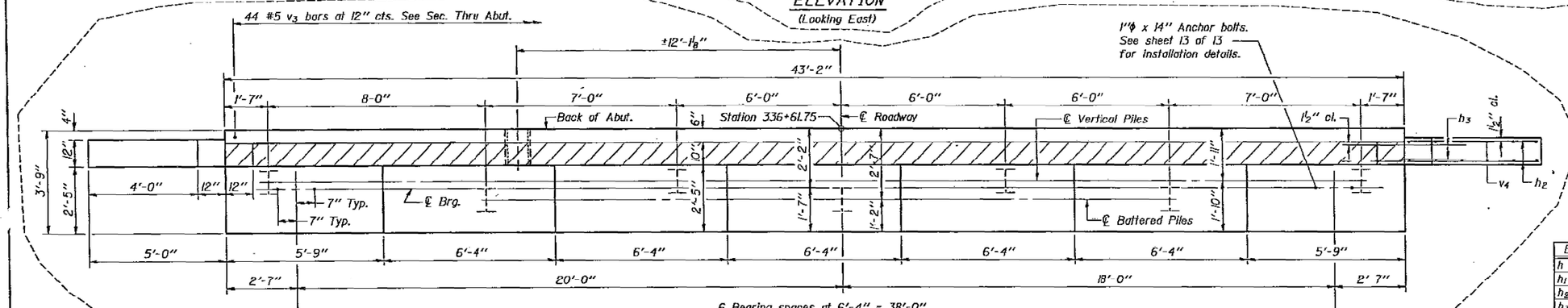
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	Williamson	42	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 40 OF 13 SHEETS

(5B-1)DR-1



ELEVATION
(Looking East)



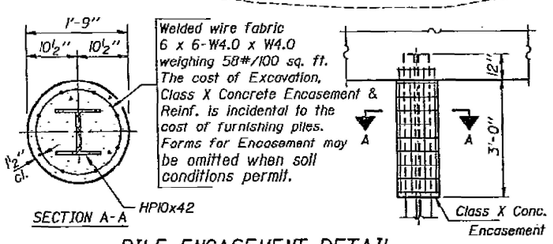
PLAN

PILE DATA

Type: Steel HP10x42
Capacity: Drive to Refusal
Est. Length: 63'
No. Required: (7)

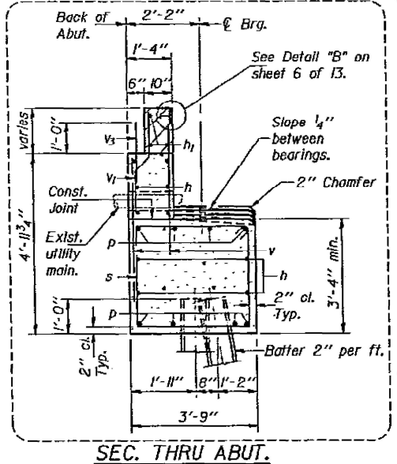
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	10	#5	42'-11"	
h1	3	#6	42'-11"	
h2	32	#5	4'-9"	
h3	28	#5	4'-6"	
h4	4	#5	1'-9"	
p	8	#8	42'-11"	
s	(38)	#4	(13'-7")	
s1	4	#4	3'-7"	
u	8	#6	7'-9"	
v	88	#4	4'-4"	
v1	44	#4	3'-1"	
v3	44	#5	2'-0"	
v4	12	#5	10'-10"	
Class X Concrete			Cu. Yd.	(26.3)
Reinforcement Bars			Pound	(2880)
Steel Piles HP10x42			Lin. Ft.	(441)

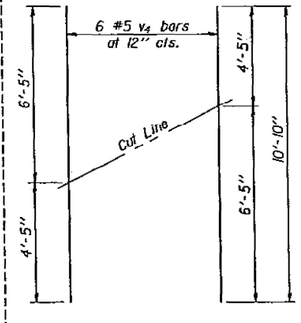


SECTION A-A

PILE ENCASEMENT DETAIL

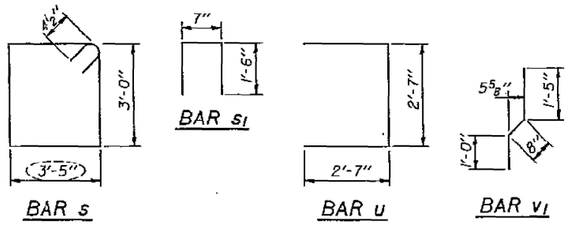


SEC. THRU ABUT.



* FIELD CUTTING DIAGRAM

Order v4 bars full length. Cut to fit as shown and use remainder of bars in other face of wings.



Notes: Hatched area to be poured after superstructure is in place and form work is removed. Concrete in hatched area shall be billed with superstructure as "Class X Concrete Superstructure".
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All exposed edges shall have a ¾" chamfer except as noted.
Cost of steel casing shall be incidental to Class X Concrete.
(Existing timber piles shall be cut off flush with bottom of new cap.)

FOR INFORMATION ONLY

DESIGNED	Mark P. Thomas	June 15 1988
CHECKED	Shayla Ali (SJD)	EXAMINED Engineer of Bridge Design
DRAWN	Joe Sutherland	PASSED Engineer of Bridges and Structures
CHECKED	MPT	APPROVED Director of Highways

(REVISED - 11/10/88 - M.P.T.)

EAST ABUTMENT
F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

MODEL: Default
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2/13/2025 10:30:56 AM

CIVIL DESIGN, INC. WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME =	DESIGNED – JAG	REVISED –	
	CHECKED – JGS	REVISED –	
PLOT SCALE =	DRAWN – JAG	REVISED –	
PLOT DATE =	CHECKED – JGS	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

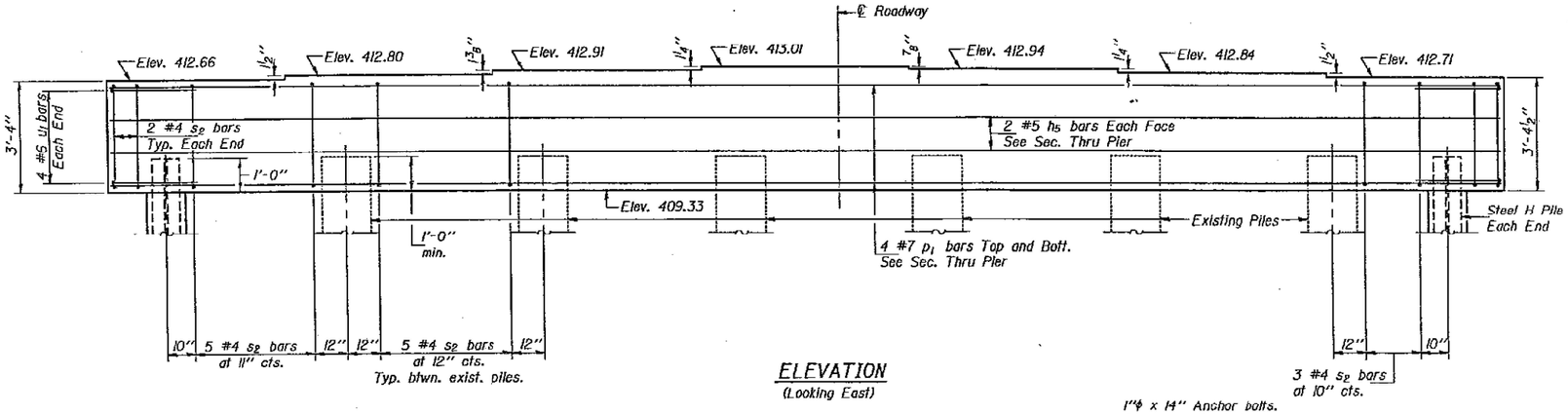
EX. STRUCTURE - SUBSTRUCTURE DETAILS 2
STRUCTURE NO. 100-0109

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	354
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

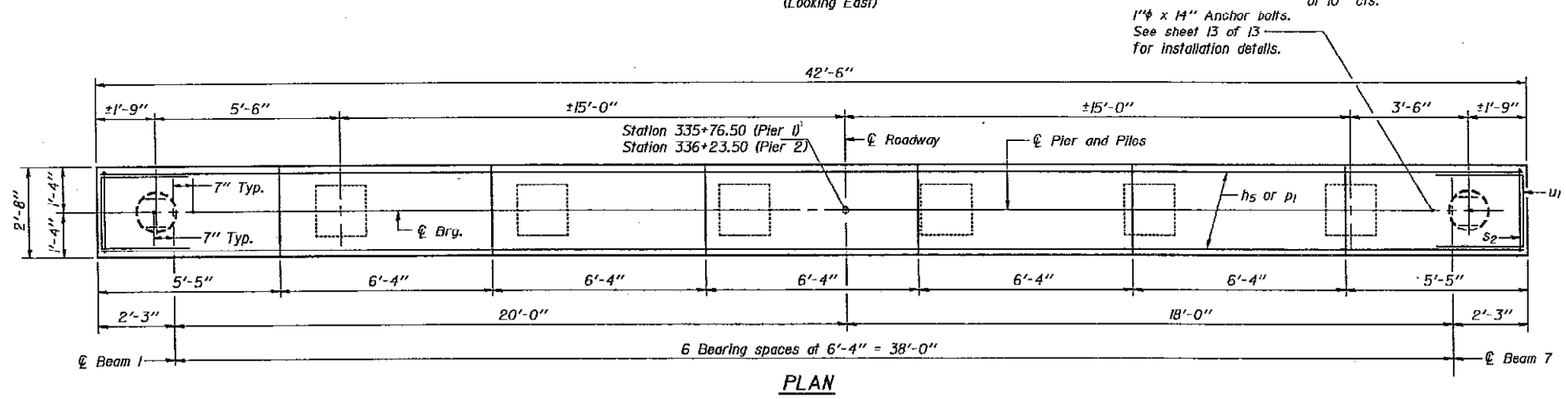
Notes: Space reinforcement in cap to miss anchor bolts.
All edges shall have standard $\frac{3}{4}$" chamfers except as noted.
Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

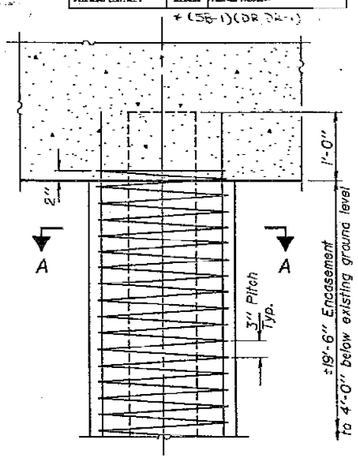
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 410	*	WILLIAMSON	42	41
FED. ROAD CONT. NO. 7	ILLINOIS	FED. AID PROJECT-		13 SHEETS



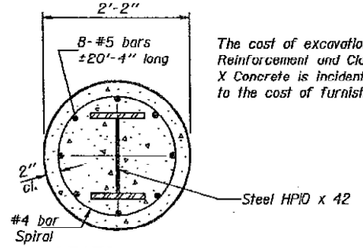
ELEVATION
(Looking East)



PLAN

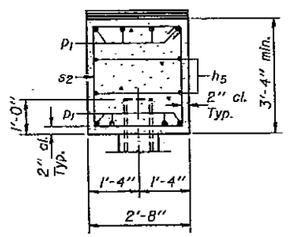


DETAIL OF PROTECTION FOR STEEL H PILES

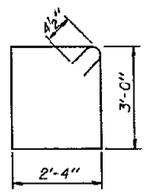


The cost of excavation, Reinforcement and Class X Concrete is incidental to the cost of furnishing piles.

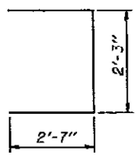
SECTION A-A



SEC. THRU PIERS



BAR s_2



BAR u_1

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_5	4	#5	42'-3"	
p_1	8	#7	42'-3"	
s_2	37	#4	11'-5"	
u_1	8	#6	7'-5"	
Class X Concrete			Cu. Yd.	14.1
Reinforcement Bars			Pound	1240
Steel Piles HP10 x 42			Lin. Ft.	64
Test Pile Steel HP10 x 42			Each	1

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_5	4	#5	42'-3"	
p_1	8	#7	42'-3"	
s_2	37	#4	11'-5"	
u_1	8	#6	7'-5"	
Class X Concrete			Cu. Yd.	14.1
Reinforcement Bars			Pound	1240
Steel Piles HP10 x 42			Lin. Ft.	128

PILE DATA FOR PIER 1

Type: Steel HP10 x 42
Capacity: Drive to Refusal
Est. Length: 64'
No. Required: 1 Plus 1 test pile.

PILE DATA FOR PIER 2

Type: Steel HP10 x 42
Capacity: Drive to Refusal
Est. Length: 64'
No. Required: 2

DESIGNED	Mark P. Turner
CHECKED	Shayla Ali (for JJ)
DRAWN	Joe Sutherland
CHECKED	MPT

June 15 1988

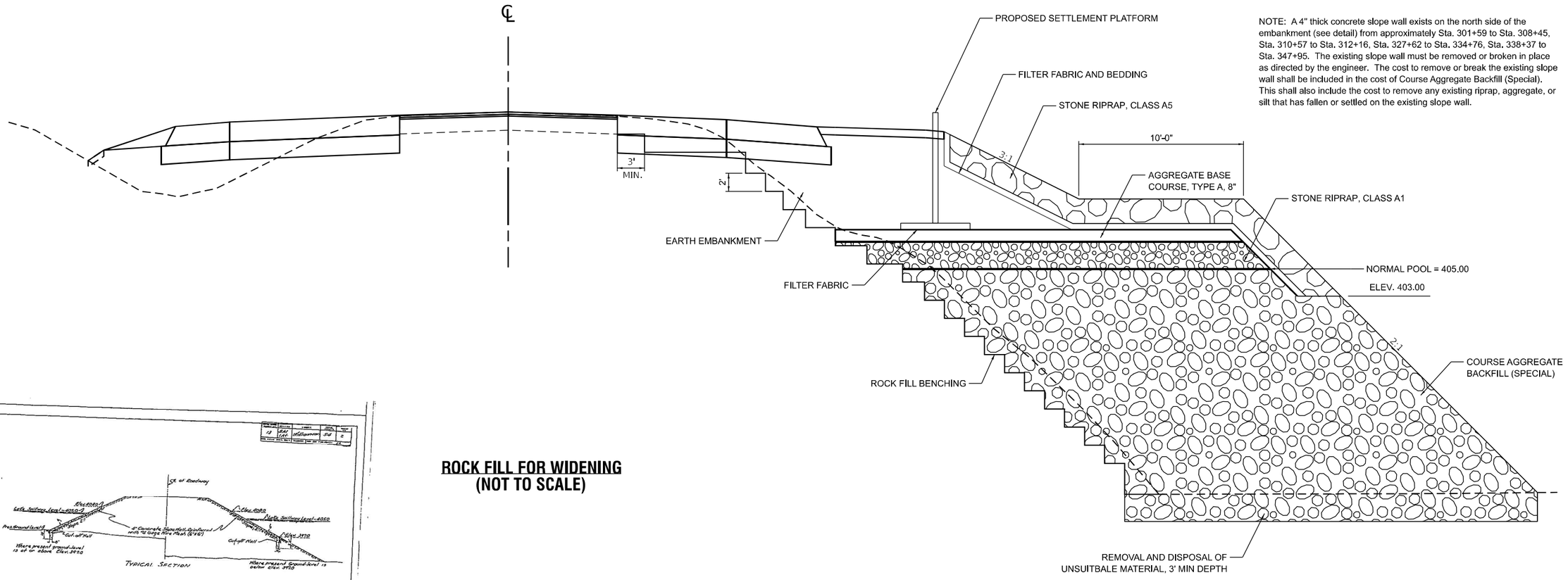
EXAMINED Greg J. Kasper
ENGINEER OF BRIDGE DESIGN

PASSED James T. Rayburn
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

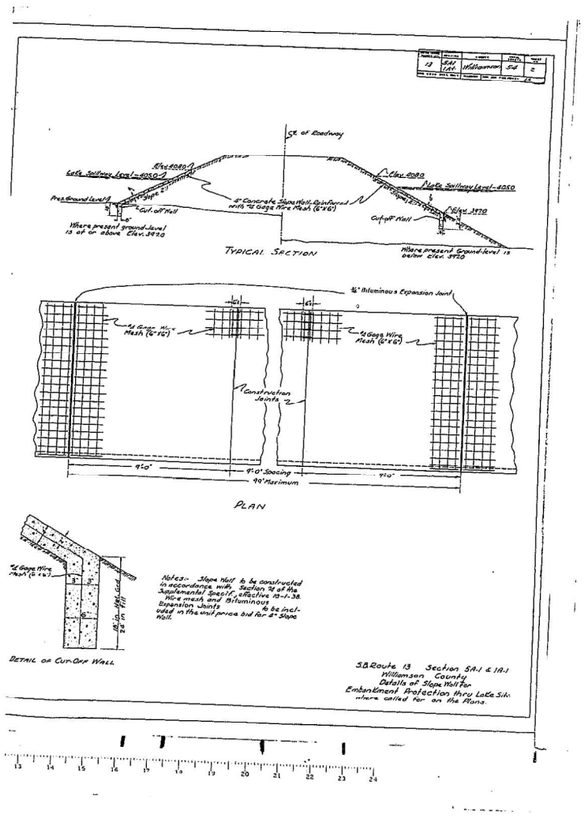
PIERS 1 AND 2
F.A. RT. 410 SEC. (5B-1)DR-1
WILLIAMSON COUNTY
STATION 336+00.00

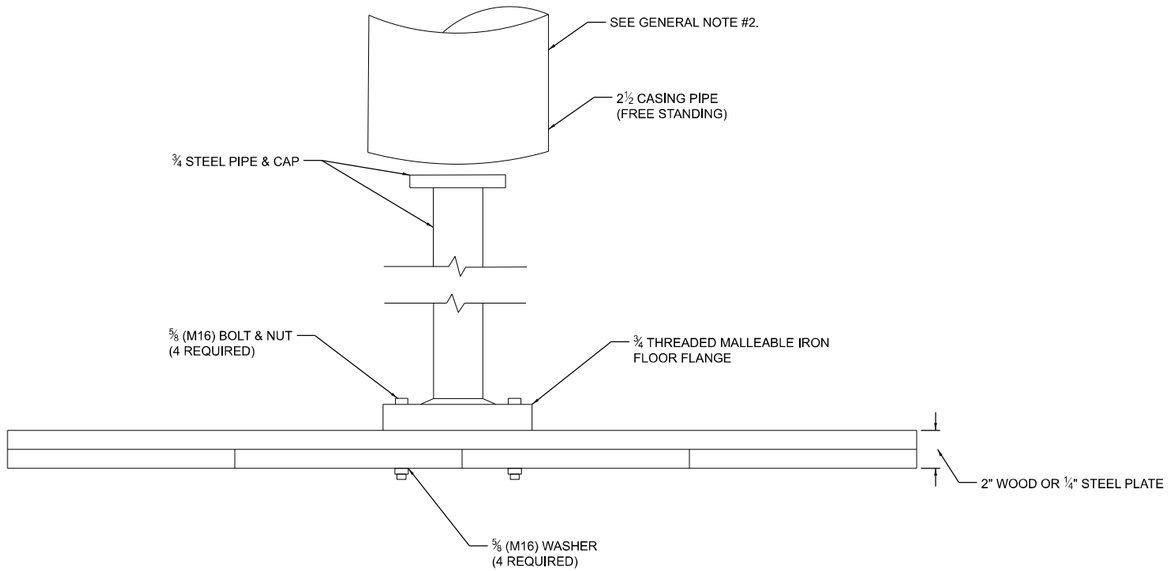
FOR INFORMATION ONLY

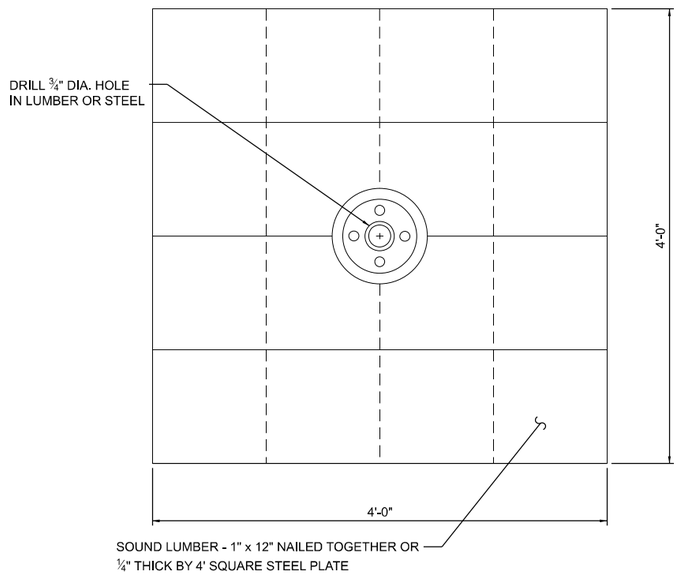


NOTE: A 4" thick concrete slope wall exists on the north side of the embankment (see detail) from approximately Sta. 301+59 to Sta. 308+45, Sta. 310+57 to Sta. 312+16, Sta. 327+62 to Sta. 334+76, Sta. 338+37 to Sta. 347+95. The existing slope wall must be removed or broken in place as directed by the engineer. The cost to remove or break the existing slope wall shall be included in the cost of Course Aggregate Backfill (Special). This shall also include the cost to remove any existing riprap, aggregate, or silt that has fallen or settled on the existing slope wall.

ROCK FILL FOR WIDENING
(NOT TO SCALE)







GENERAL NOTES

1. SETTLEMENT PLATFORM SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ARTICLE 204.06 OF THE STANDARD SPECIFICATIONS
2. DO NOT INSTALL CASING PIPE UNTIL AFTER ONE SECTION OF ¾" HAS BEEN COVERED WITH EARTH. THE CASING PIPE SHALL NOT REST THE ON PLATFORM

MODEL: Settlement Platform [Sheet]
FILE NAME: P:\SXXX\50XX\51XX\5000 - IDOT PTB 200-038 D9 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D9783737-dlt_SettlementPlatform.dgn

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

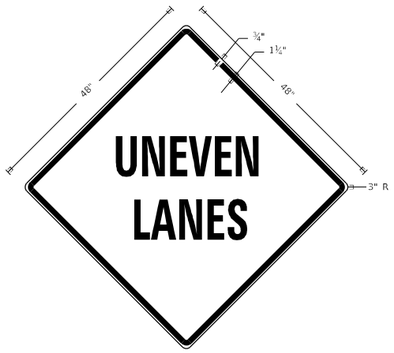
SETTLEMENT PLATFORM DETAIL

SCALE:1 1/2"=1'-0" | SHEET 1 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2, B-1,B-2,B-3,B-4	WILLIAMSON	519	357
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

UNEVEN LANES SIGN

W8-11 (48" x 48")



COLORS:

LEGEND AND BORDER - BLACK NON-REFLECTORIZED
BACKGROUND - ORANGE REFLECTORIZED

NOTE: PRIOR TO ALLOWING TRAFFIC ON ANY PORTION OF THE ROADWAY THAT HAS BEEN COLDMILLED OR BEFORE RESURFACING OPERATIONS BEGIN, THE CONTRACTOR SHALL HAVE ERECTED "UNEVEN PAVEMENT" SIGNS THAT CONFORM TO THE ABOVE DETAILS. A MINIMUM OF ONE SIGN AT EACH END OF THE IMPROVEMENT WILL BE REQUIRED. THE CONTRACTOR SHALL MAINTAIN THE "UNEVEN PAVEMENT" SIGNS UNTIL THE RESURFACING OPERATIONS ARE COMPLETED.

IF AT ANY TIME THE SIGNS ARE IN PLACE BUT NOT APPLICABLE, THEY SHALL BE TURNED FROM THE VIEW OF MOTORISTS OR COVERED AS DIRECTED BY THE ENGINEER.

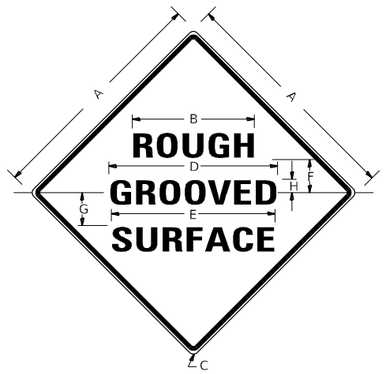
THE COST OF FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE REQUIRED SIGNS SHALL BE INCLUDED IN THE CONTRACT.

REVISIONS

DRAWN	2-15-89
REVISED	4-06-93
REDSIGNED	7-23-04
RESIZED	5-08-08
REVIEWED	5-17-13
REVISED	10-21-21

STD. 9-41

ILLINOIS STANDARD



COLORS:

LEGEND AND BORDER- BLACK NON-REFLECTORIZED
BACKGROUND- ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
48X48	48.0	24.1	3.0	34.0	33.0	6.0	13.0	3.5

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD.
	1	2	3			
48X48	7C	7C	7C	0.8	1.2	B4-48D

ALL DIMENSIONS IN INCHES

NOTES:

PRIOR TO ALLOWING TRAFFIC ON ANY PORTION OF THE ROADWAY THAT HAS BEEN COLDMILLED, THE CONTRACTOR SHALL HAVE ERECTED "ROUGH GROOVED SURFACE" SIGNS THAT CONFORM TO THE ABOVE DETAILS. A MINIMUM OF ONE SIGN AT EACH END OF THE IMPROVEMENT WILL BE REQUIRED. THE CONTRACTOR SHALL MAINTAIN THE "ROUGH GROOVED SURFACE" SIGNS UNTIL THE COLDMILLED SURFACE IS COVERED WITH LEVELING BINDER OR SURFACE COURSE.

IF AT ANY TIME THE SIGNS ARE IN PLACE BUT NOT APPLICABLE, THEY SHALL BE TURNED FROM THE VIEW OF MOTORISTS OR COVERED AS DIRECTED BY THE ENGINEER.

THE COST OF FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE REQUIRED SIGNS SHALL BE INCLUDED IN THE CONTRACT.

REVISIONS

REDRAWN	2-15-89
REVISED	4-6-93
REVISED	3-27-08
REVIEWED	5-17-13
REVISED	10-21-21

STD. 9-39

MODEL: UNEVEN_LN ROUGH GROOVED SURFACE [Sheet]
FILE NAME: P:\SXXX50XX-21XX\5000 - IDOT PTB 200-038 D9 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D9783733-sht_District 9 Details.dgn

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/11/2024	DATE -	REVISED -	

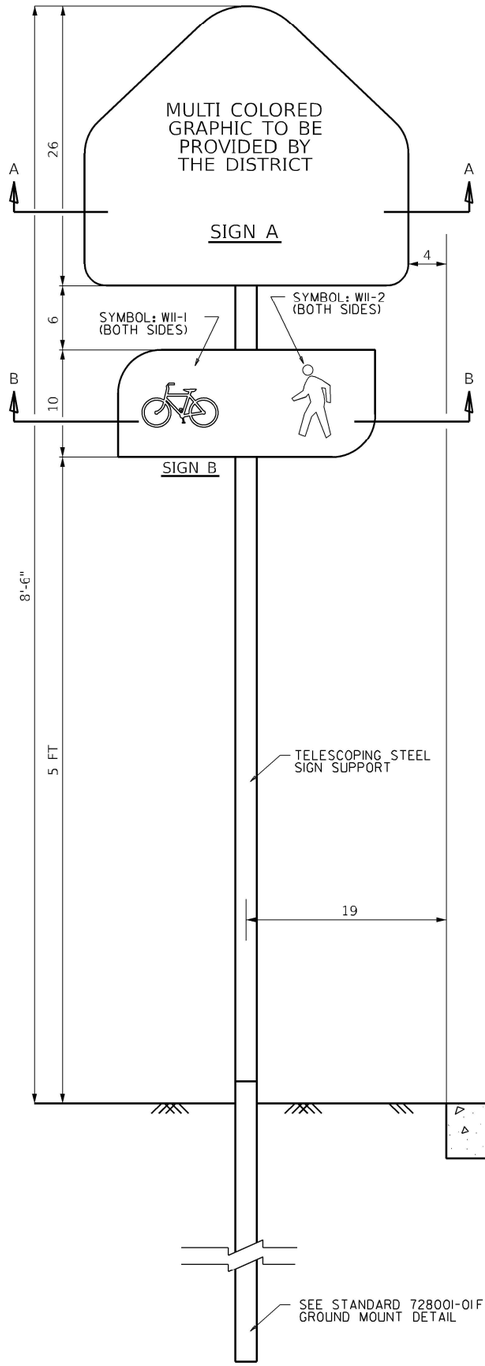
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

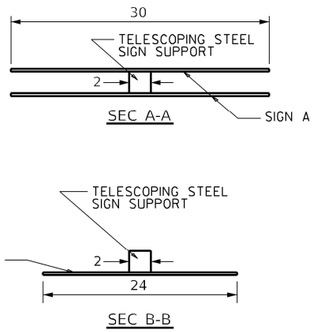
DETAIL SHEETS: UNEVEN LANE AND ROUGH GROOVED SURFACE

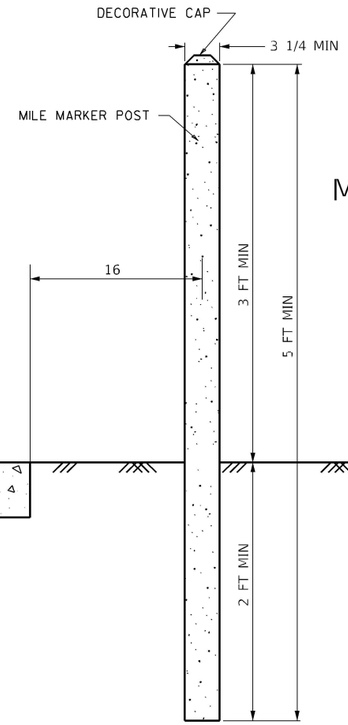
SCALE: | SHEET 1 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	358
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

MULTI–USE PATH SIGNING DETAILS



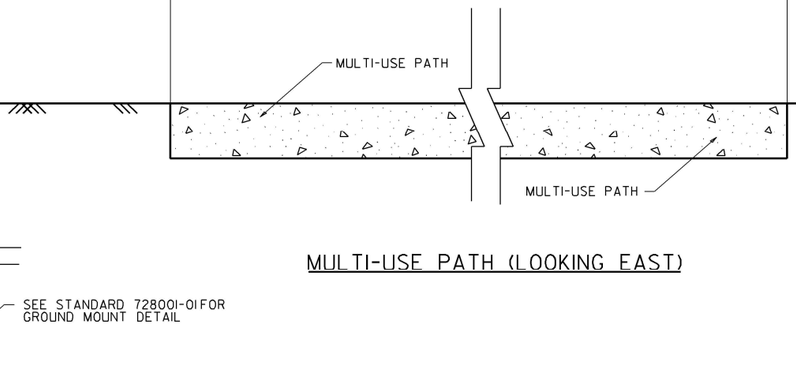




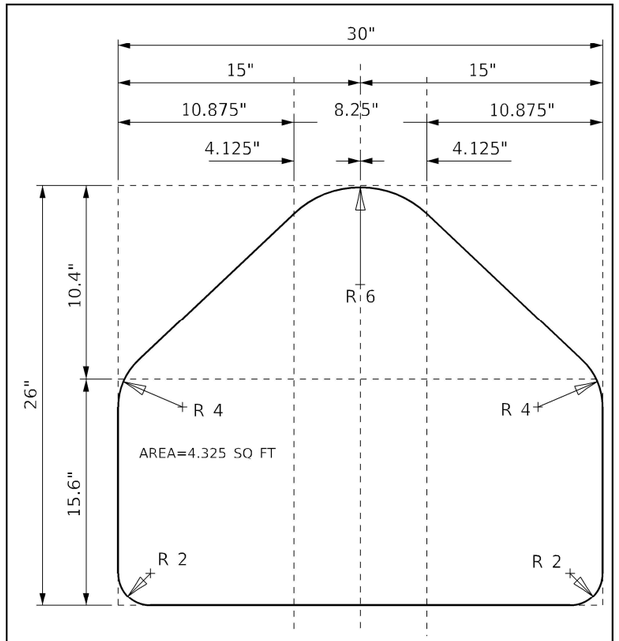
MILE	MILE
3	3.5

MILE MARKER POST ENGRAVING

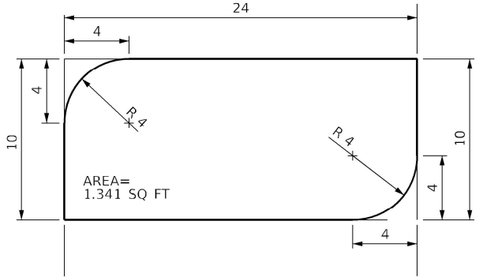
(ENGRAVING ON ALL FOUR SIDES)



MULTI-USE PATH (LOOKING EAST)



SIGN PANEL - TYPE 1 (SPECIAL)



SIGN B

SIGN PANEL - TYPE 1 (SPECIAL) DOUBLE SIDED

NOTES:

ALL DIMENSIONS ARE IN INCHES UNLESS SHOWN OTHERWISE

SIGN B SHALL BE PANTONE 294U (BLUE) WITH WHITE SYMBOLS

MODEL: multi use path signing [Sheet]
FILE NAME: P:\SXXX\50XX\51XX\5000 - IDOT PTB 200-038 09 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D97837-sht_District 9 Details.dgn

CIVIL DESIGN, INC. WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 12/11/2024	DATE -	REVISED -	

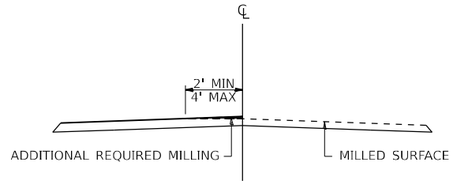
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MULTI-USE PATH SIGNING

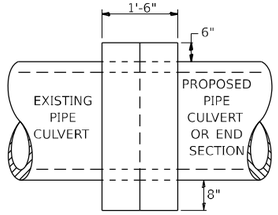
SCALE: | SHEET 1 OF 1 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	359
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

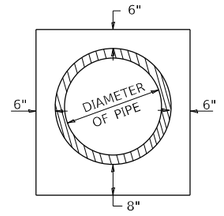
HMA SURFACE REMOVAL AT DROP OFF DETAIL



CONCRETE COLLAR
PIPE TO PIPE



SIDE VIEW



END VIEW

TABULATION

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

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

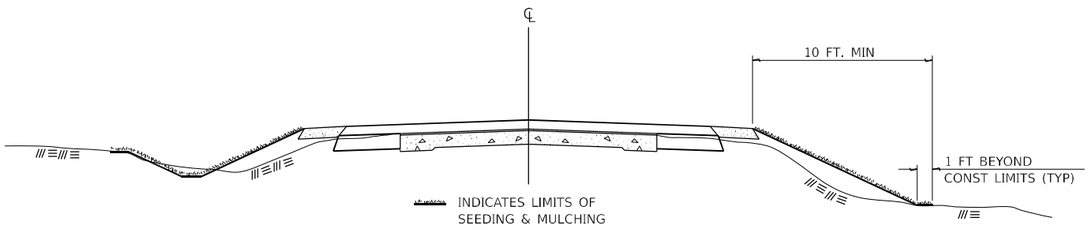
CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

REVISIONS

DRAWN	7-13-90
REVISED	8-22-94
REVISED	3-26-08
REVISED	5-17-13
REVISED	10-21-21

STD. 9-79

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

ON DETOUR ROADS, SLOPES SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ANY GIVEN STAGE GRADING. TEMPORARY SEEDING SHALL BE CLASS 7.

FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDED AREAS.
LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDING.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR ROAD AND BRIDGE CONSTRUCTION.

SECTIONS 250 AND 251 SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS

REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08
REVISED	5-16-13
REVISED	10-21-21

STD. 9-12

MODEL: Detail Sheet 1 [Sheet]
FILE NAME: P:\5XX\05XX\51XX\5000 - IDOT PTB 200-038 D9 IL 13 Crab Orchard Bridges\2B-Trans\CAD\Project Drawings\D9783733-eth_District 9 Details.dgn

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/1/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

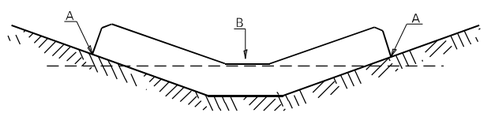
DETAIL SHEET

SCALE: 1"=50' | SHEET 1 OF 4 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	360
		CONTRACT NO.78373		
	ILLINOIS	FED. AID PROJECT		

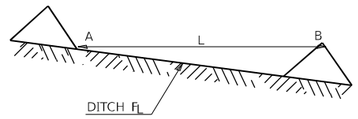
TEMPORARY DITCH CHECKS

PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

SPACING BETWEEN TEMPORARY DITCH CHECKS



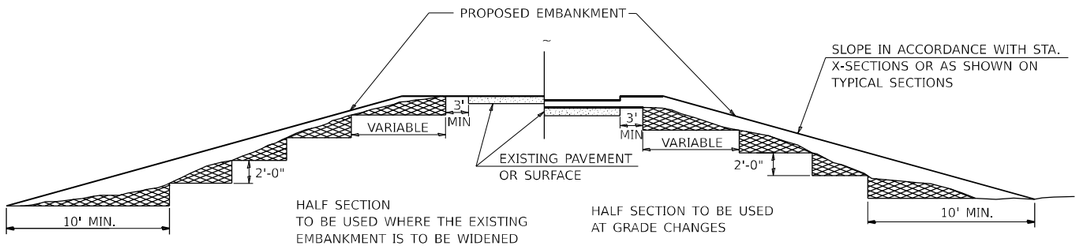
L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

B = THE LOW POINT IN CENTER OF CHECK

REVISIONS	
DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10
REVIEWED	5-17-13
REVISED	10-21-21

STD. 9-108

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



HALF SECTION TO BE USED WHERE THE EXISTING EMBANKMENT IS TO BE WIDENED

HALF SECTION TO BE USED AT GRADE CHANGES

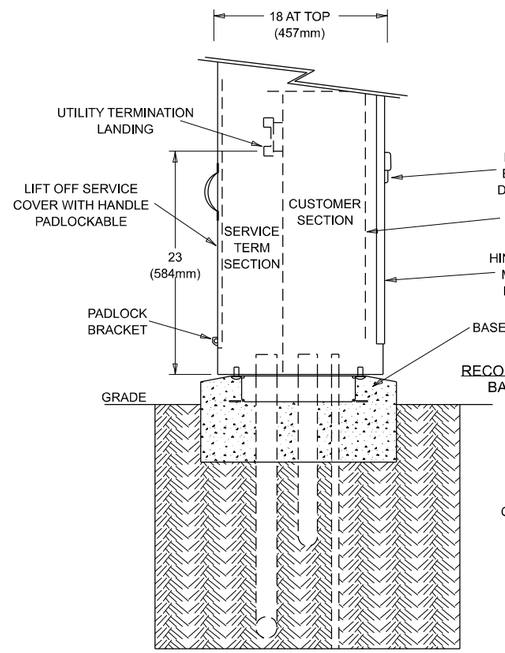
STEPS SHALL BE CUT IN THE EXISTING SLOPE IN ACCORDANCE WITH ART. 205.03 EXCEPT THAT THE REQUIREMENT THAT STEPS SHALL BE CUT INTO THE EXISTING SLOPE BEFORE THE CONTRUCTION OF THE EXISTING EMBANKMENT IS STARTED SHALL NOT APPLY. MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08
REVIEWED	5-17-13
REVISED	4-22-21
REVISED	10-21-21

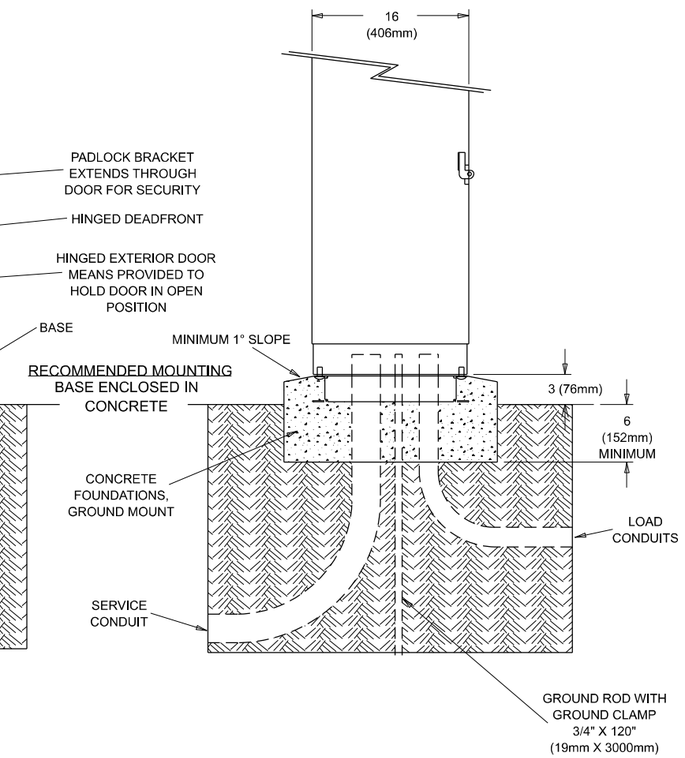
STD. 9-16

CABINET FOR SERVICE INSTALLATION GROUND MOUNT AND CONCRETE FOUNDATIONS, GROUND MOUNT

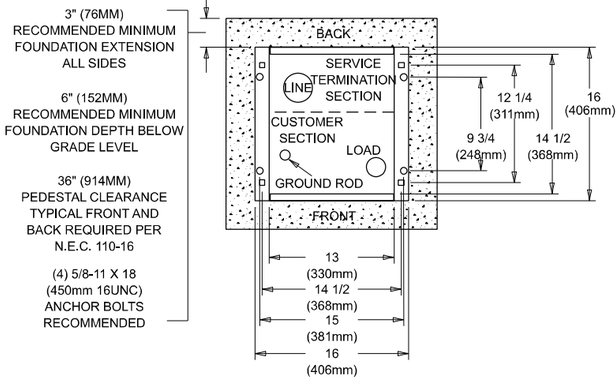
SIDE VIEW



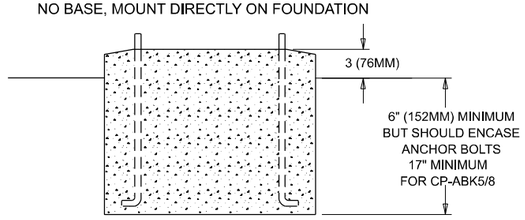
FRONT VIEW



MOUNTING BASE DETAIL
(TOP VIEW)



OPTIONAL MOUNTING
NO BASE, MOUNT DIRECTLY ON FOUNDATION



○ PEDESTAL MOUNTING HOLES
□ ANCHOR BOLT MOUNTING HOLES

DRAWN	03-02-22
REVISED	05-27-22
REVISED	
REVISED	

STD. 9-27

MODEL: Detail Sheet 2 [Sheet]
FILE NAME: P:\XX\050XX-51\XX5000 - IDOT PTB 200-038 D9 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D9783734.dgn, District 9 Details.dgn

CIVIL DESIGN, INC. WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/1/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

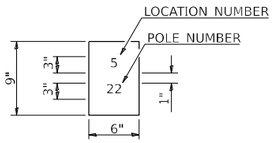
SCALE: 1"=50' | SHEET 2 OF 4 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	361
		CONTRACT NO.78373		
		ILLINOIS FED. AID PROJECT		

POLE STANDARDS

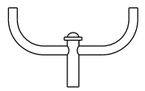
"INSTALL AND ORIENT ARM BRACKET OVER POLE TENON AND FIRMLY HAND TIGHTEN THE TWO SET SCREWS. USE THIRD HOLE IN ARM BRACKET AS A GUIDE TO DRILL A 21/64 DIAMETER HOLE THROUGH TENON. INSTALL AND TIGHTEN SELF-TAPPING SCREW. TIGHTEN SET SCREWS AN ADDITIONAL ¼ TO ⅜ TURN WITH HEX KEY (NOT PROVIDED). INSTALL LOCKNUTS ON SET SCREWS IF THREADED PROJECTION ALLOWS."

POLE SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR 80 MPH WIND LOADING AND 90 LB, 4.0 SQ. FT E.P.A. LUMINAIRE.

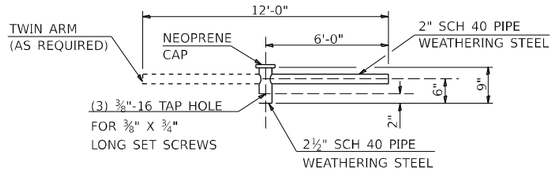


THE CONTRACTOR SHALL FURNISH AND INSTALL A LIGHT POLE IDENTIFICATION OF EACH NEW LIGHT POLE, AS SHOWN ABOVE, INCIDENTAL TO THE RESPECTIVE LIGHT POLE PAY ITEM IN ACCORDANCE WITH ART. 1069.06

THE LIGHT POLE IDENTIFICATION SHALL BE APPLIED TO SIGN BASE MATERIAL AS SPECIFIED IN ART. 1069.06, APPROXIMATELY 7" ABOVE THE ADJACENT PAVEMENT GRADE VISIBLE TO APPROACHING TRAFFIC IN ACCORDANCE WITH HIGHWAY STANDARD 720001.



☐ **TWIN TENON**

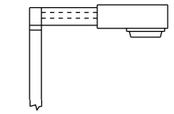


☐ **TENON MOUNT BRACKET ARM**

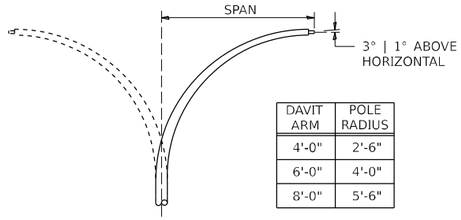
NOTE: SINGLE OR TWIN ARM ASSEMBLY SHALL BE TILTED 3° ABOVE HORIZONTAL.



☐ **TENON**



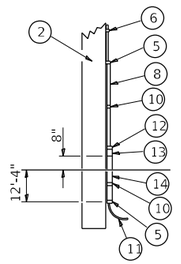
☐ **SHORT BRACKET**



DAVIT ARM	POLE RADIUS
4'-0"	2'-6"
6'-0"	4'-0"
8'-0"	5'-6"

☐ **DAVIT ARM** (AND OR)

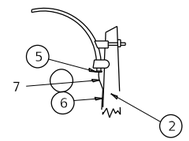
☐ **DAVIT ARM–TWIN**



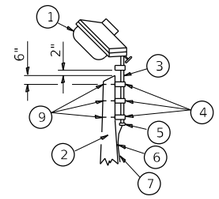
DETAILS FOR UNDERGROUND DISTRIBUTION IF REQUIRED

POLE LENGTH	DEPTH IN GROUND
65'-0"	12'-0"
60'-0"	10'-0"
55'-0"	9'-0"
50'-0"	8'-0"
45'-0"	7'-0"
40'-0"	6'-6"
35'-0"	6'-0"
30'-0"	5'-6"

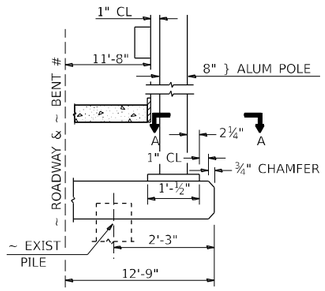
☐ **POLE, WOOD**



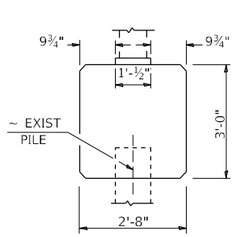
☐ **MAST ARM**



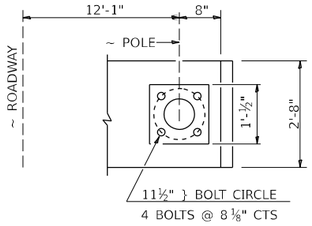
☐ **TENON**



BENT #
(LOOKING)

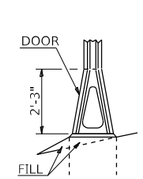


☐ **BRIDGE PIER MOUNT**

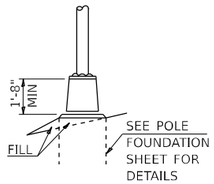


SECTION A–A

1. LUMINAIRE
2. WOOD POLE, CLASS 3 OR BETTER
3. 2½" GALV. STEEL CONDUIT
4. SINGLE OFFSET POLE BAND
5. CONDUIT BUSHING
6. CABLE CLAMPS ON 2' CENTERS
7. 2/C #12 TYPE USE CABLE
8. 1" GALV. STEEL CONDUIT 10' IN LENGTH
9. ⅝" ∅ HOT DIPPED GALVANIZED BOLT WITH FLAT WASHER & LOCKNUT (3 REQ'D)
10. CONDUIT CLAMPS ON 3' CENTERS
11. UNIT DUCT
12. THREADED REDUCER
13. "C" CONDULET, THREADED
14. 1½" GALV. STEEL CONDUIT FOR 1 UNIT DUCT OR 3" GALV. STEEL CONDUIT FOR 2 OR 3 UNIT DUCTS.

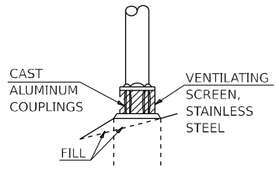


☐ **STAINLESS STEEL FLAIR BASE**

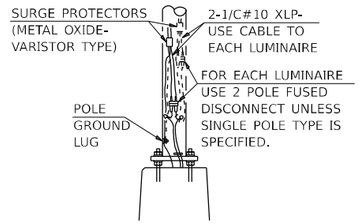


☐ **TRANSFORMER BASE**

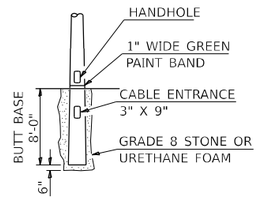
☐ **FRANGIBLE**



☐ **BREAKAWAY COUPLING**



☐ **ANCHOR**



☐ **BUTT BASE**

REVISIONS

DRAWN	2-9-01
REVISED	4-14-02
RESIZED	5-6-08
REVIEWED	5-17-13
REVISED	10-21-21

STD. 9-115

MODEL: Detail Sheet 3 [Sheet]
FILE NAME: P:\5XXX\50XX\51XX\5000 - IDOT PTB 208-038 D9 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D7978373-sht-District 9 Details.dgn

CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

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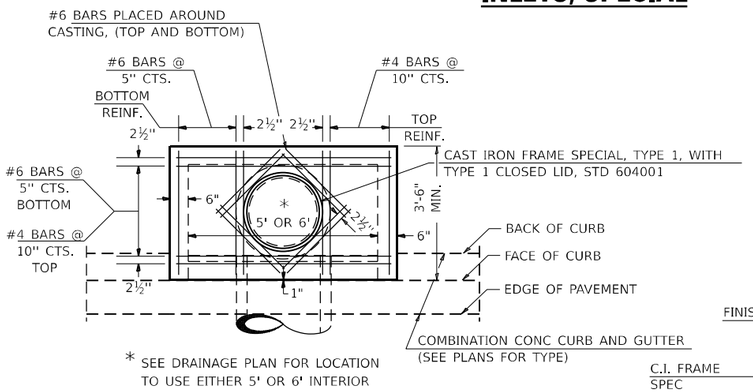
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

SCALE: 1"=50' | SHEET 3 OF 4 SHEETS | STA. ___+__.__ | TO STA. ___+__.__

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	362
		CONTRACT NO.78373		
		ILLINOIS FED. AID PROJECT		

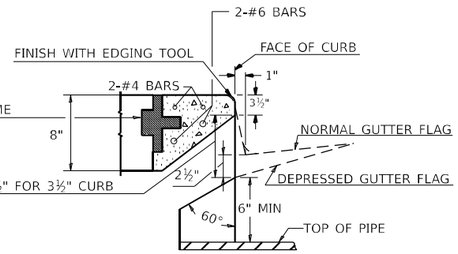
INLETS, SPECIAL



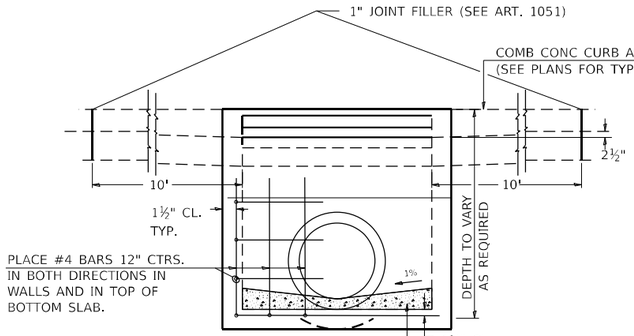
PLAN

"D" TABLE

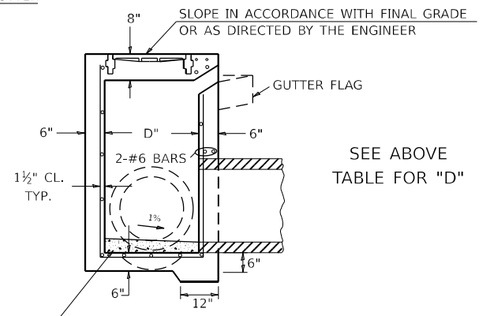
DESIGN	PIPE DIA	"D"
A	18"&LESS	2'-6"
B	21"&24"	3'-0"
C	27"&30"	3'-7"
D	33"&36"	4'-2"
E	42"	4'-9"
F	48"	5'-0"
G	54"	6'-1"



SECTION AT WEIR



ELEVATION



SEE ABOVE TABLE FOR "D"

SECTION

NOTES:

PROVIDE 1½" CLEARANCE TYP. ALL REINFORCEMENT UNLESS OTHERWISE SPECIFIED.

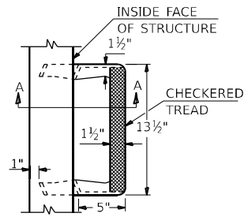
GUTTER FLOWLINE AT INLET 2½" BELOW NORMAL GUTTER FLOWLINE. CONSTRUCT TRANSITION IN FLOWLINE IN 10 FEET EACH SIDE OF INLET. PIPES TO BE CONNECTED TO INLET AS SHOWN ON STORM SEWER LAYOUT.

INLETS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL, WHICH PRICE SHALL INCLUDE THE CAST IRON FRAME, SPECIAL, TYPE 1 WITH TYPE 1 CLOSED LID, THE REINFORCEMENT BARS, METAL STEPS AND JOINT FILLER.

IF THE INLET IS NOT CAST IN PLACE THEN THE INLET SHALL BE PRODUCED ACCORDING SECTIONS 602 AND 1042.

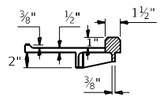
** STEPS WILL BE REQUIRED AT 12" SPACING WHEN INLET IS OVER 4' DEEP. SEE ARTICLE 602.08 AND DETAILS

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14

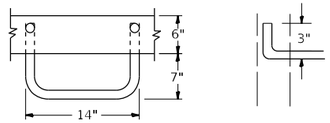


** CAST IRON STEPS

TREAD DIMENSION DETAILS SEE HWY STD 602701



SEC. A-A



** GALVANIZED IRON STEPS

1" ROUND GALVANIZED IRON STEPS 12"O.C. (OPTIONAL STEPS)

STD. 9-1

REVISIONS

REDRAWN	2-15-89	REVISED	3-26-08
REVISED	8-15-94	REVISED	4-10-13
REVISED	1-19-99	REVISED	10-21-21
REVISED	5-6-04	REVISED	

MODEL: Detail Sheet 4 [Sheet]
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CIVIL DESIGN, INC. WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

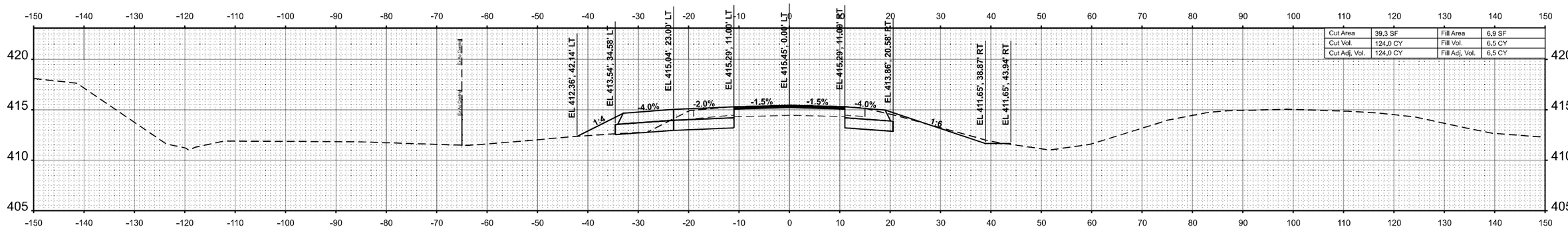
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PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

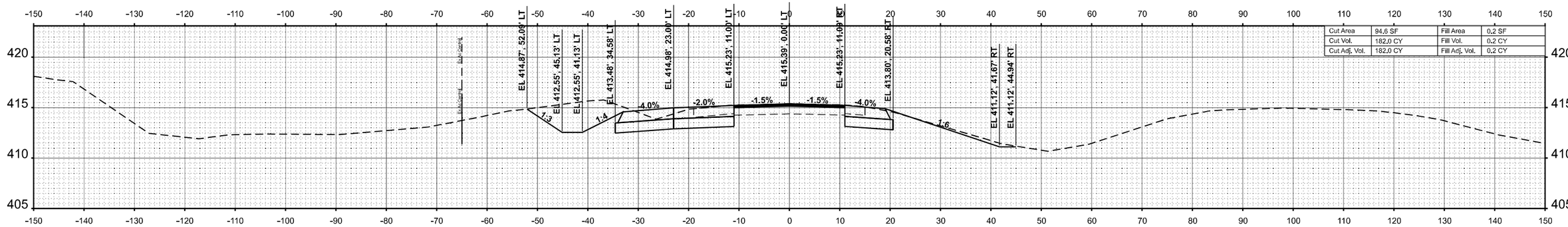
DETAIL SHEET

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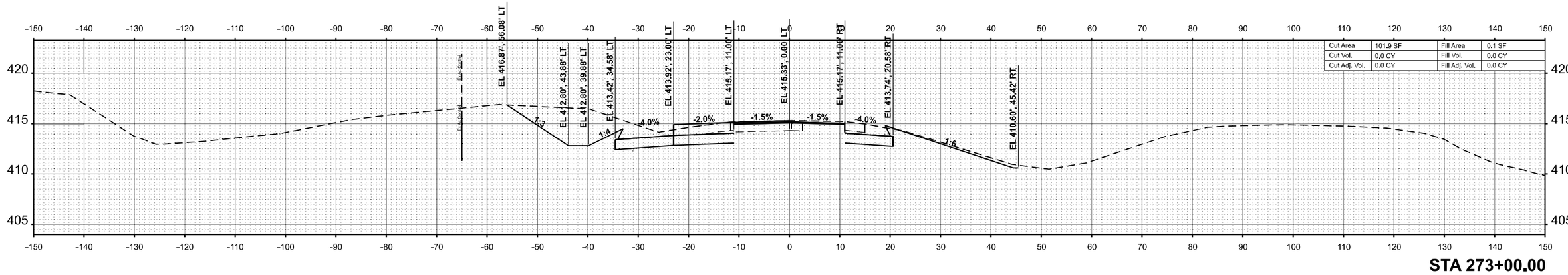
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	363
		CONTRACT NO.78373		
		ILLINOIS	FED. AID PROJECT	



STA 274+00.00



STA 273+50.00



STA 273+00.00

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

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

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EFFINGHAM, IL
LICENSE # 184.003222

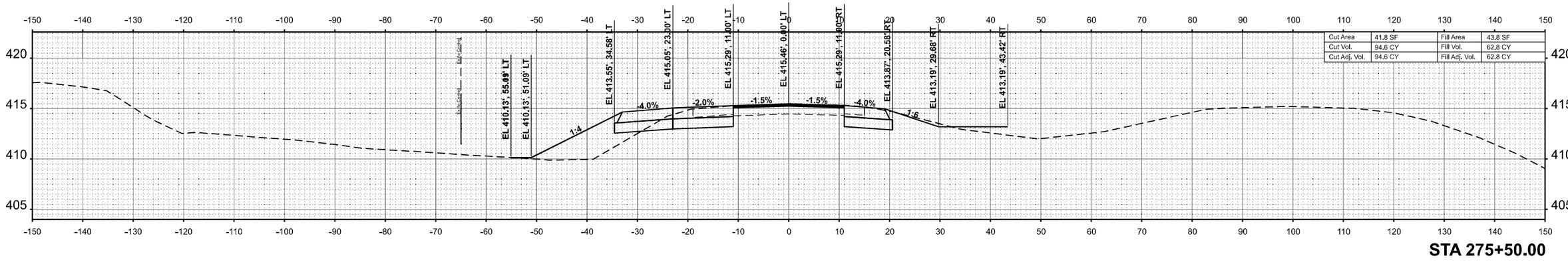
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

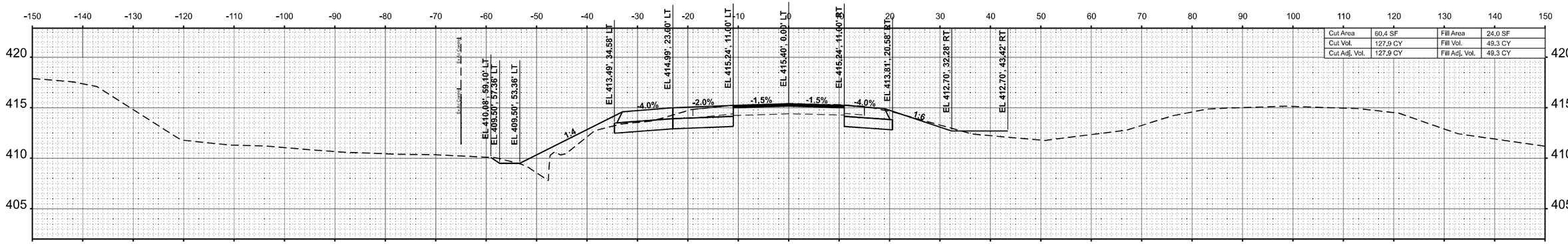
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		ILLINOIS	FED. AID PROJECT	



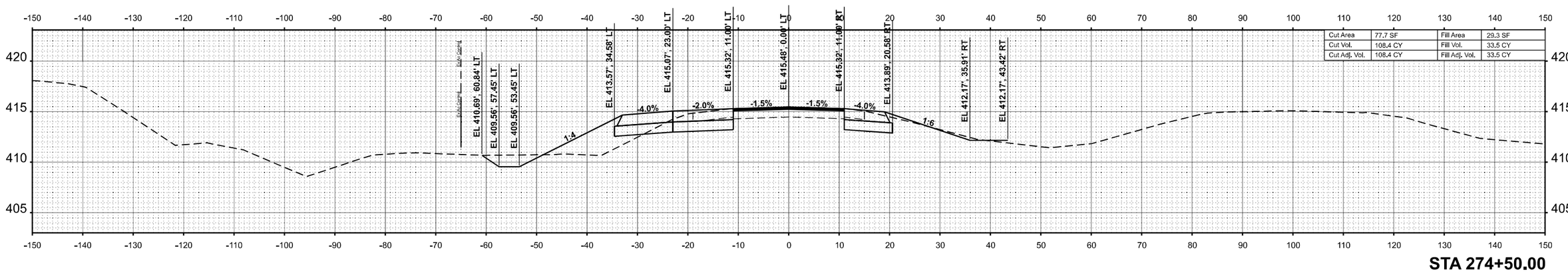
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Cut Vol.	94.6 CY	Fill Vol.	62.8 CY
Cut Adj. Vol.	94.6 CY	Fill Adj. Vol.	62.8 CY

STA 275+50.00



Cut Area	60.4 SF	Fill Area	24.0 SF
Cut Vol.	127.9 CY	Fill Vol.	49.3 CY
Cut Adj. Vol.	127.9 CY	Fill Adj. Vol.	49.3 CY

STA 275+00.00



Cut Area	77.7 SF	Fill Area	29.3 SF
Cut Vol.	108.4 CY	Fill Vol.	33.5 CY
Cut Adj. Vol.	108.4 CY	Fill Adj. Vol.	33.5 CY

STA 274+50.00

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK		
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ORIGINAL SURVEY	BY	DATE
SURVEYED		
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AREAS CHECKED		
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WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

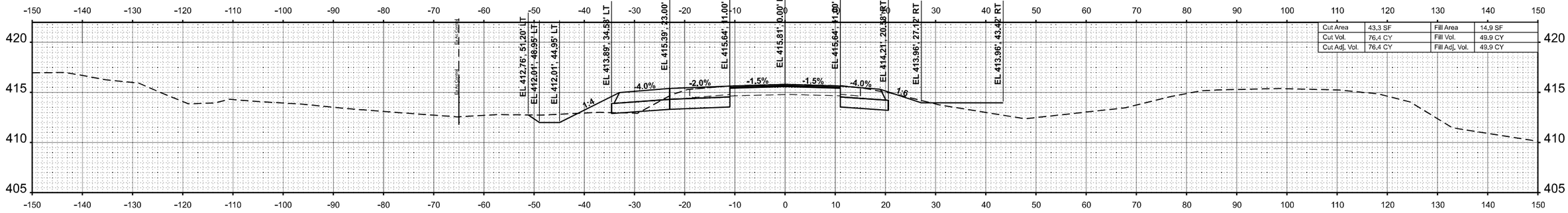
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PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

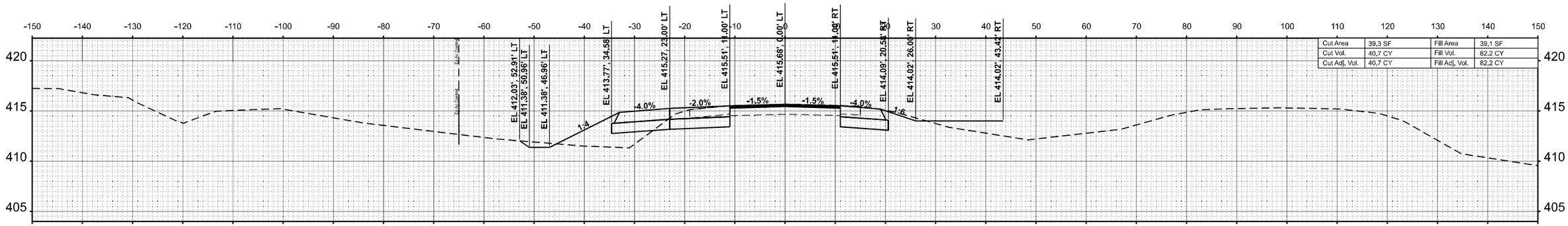
CROSS SECTIONS
IL 13 WB

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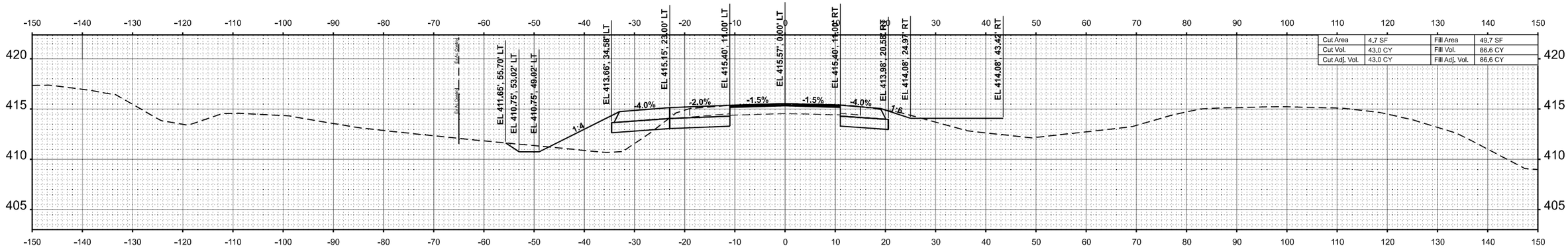
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		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 277+00.00



STA 276+50.00



STA 276+00.00

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

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

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LICENSE #184.003222

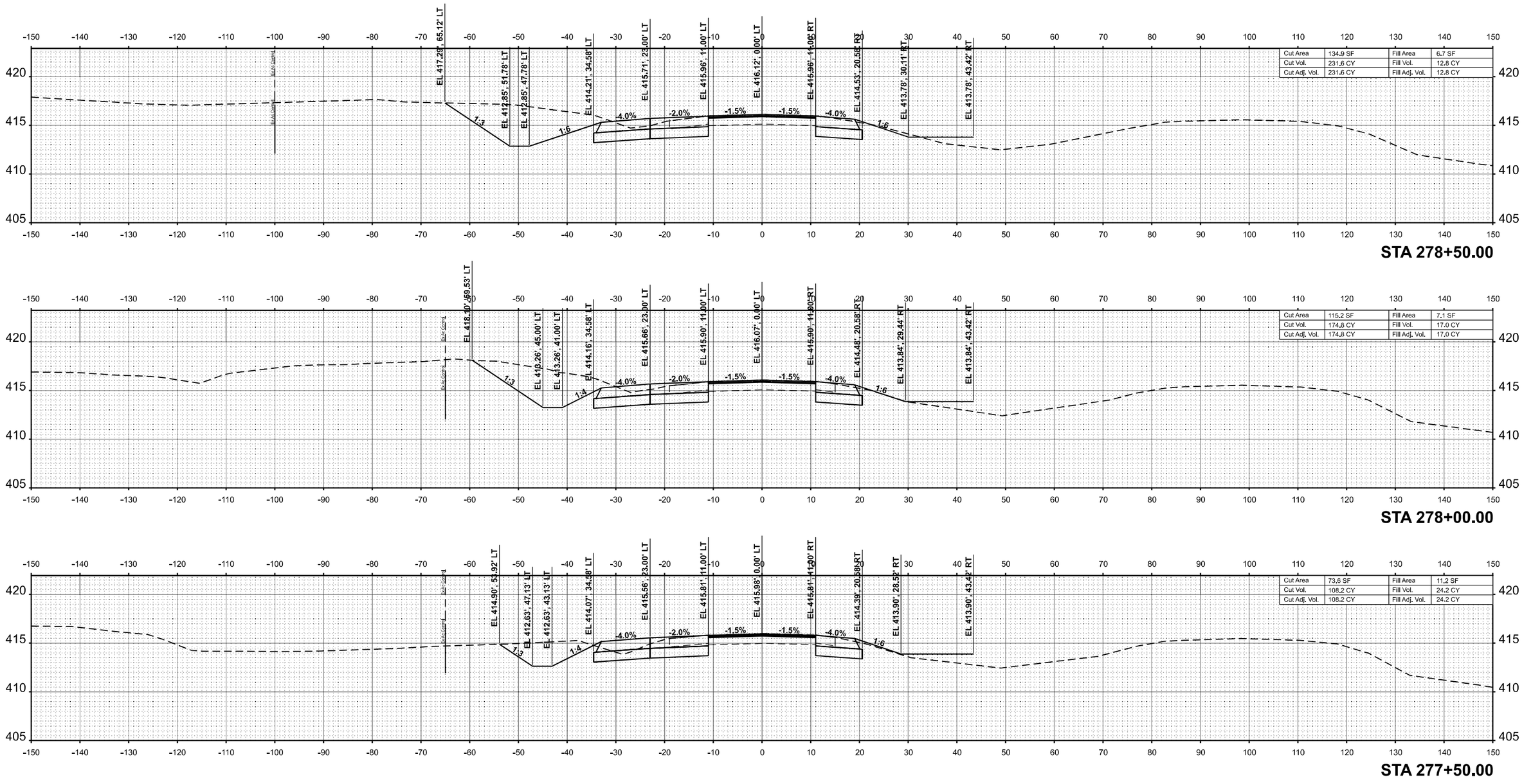
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 3 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		ILLINOIS	FED. AID PROJECT	



STA 278+50.00

STA 278+00.00

STA 277+50.00

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

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

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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -
PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 4 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	367
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



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

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

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CIVIL DESIGN, INC.
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EFFINGHAM, IL
LICENSE # 184.003222

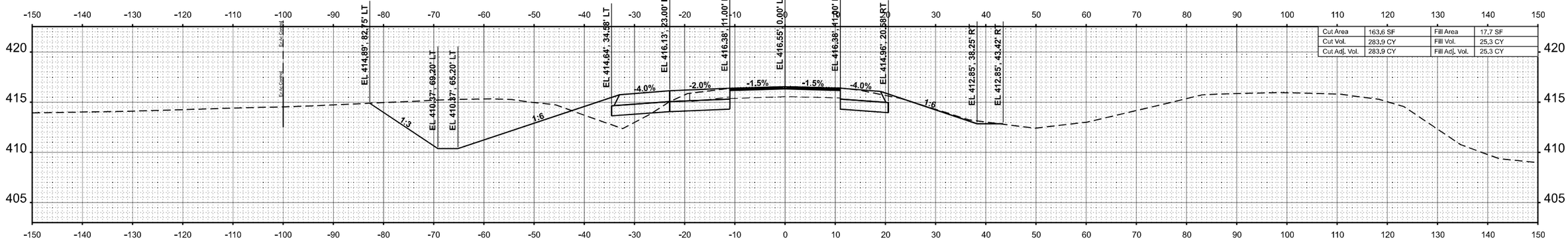
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

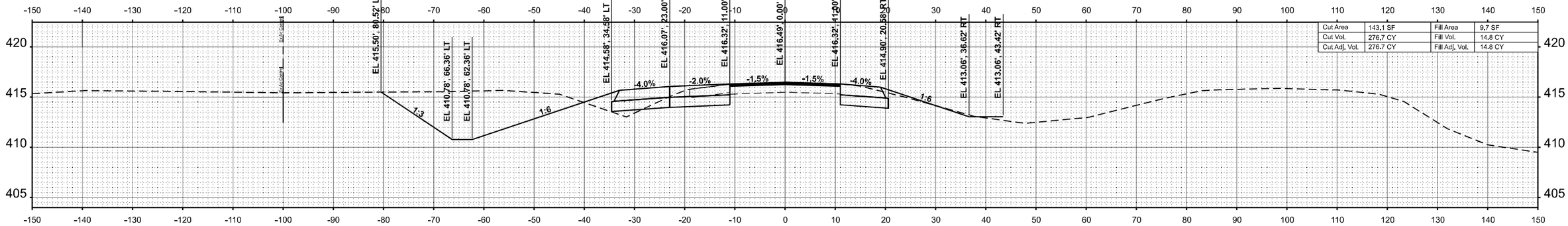
CROSS SECTIONS
IL 13 WB

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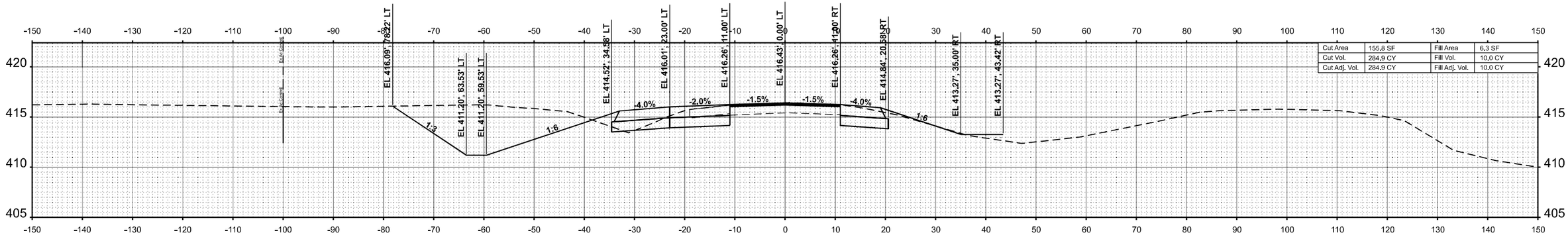
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	368
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 281+50.00



STA 281+00.00



STA 280+50.00

FINAL SURVEY / ORIGINAL SURVEY

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	

NOTE BOOK
NO.

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CIVIL DESIGN, INC.
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EFFINGHAM, IL
LICENSE #184.003222

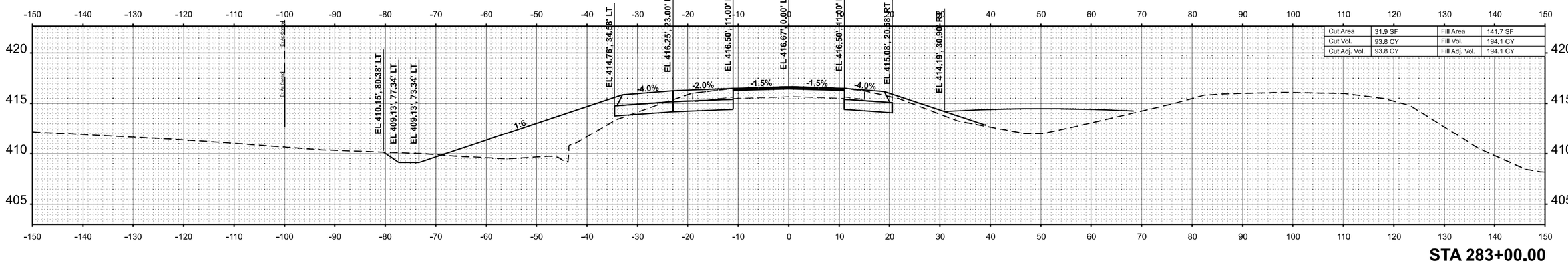
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

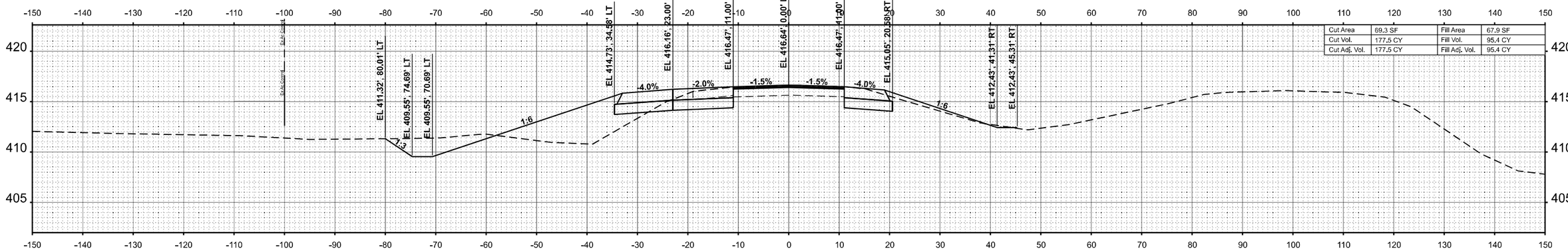
CROSS SECTIONS
IL 13 WB

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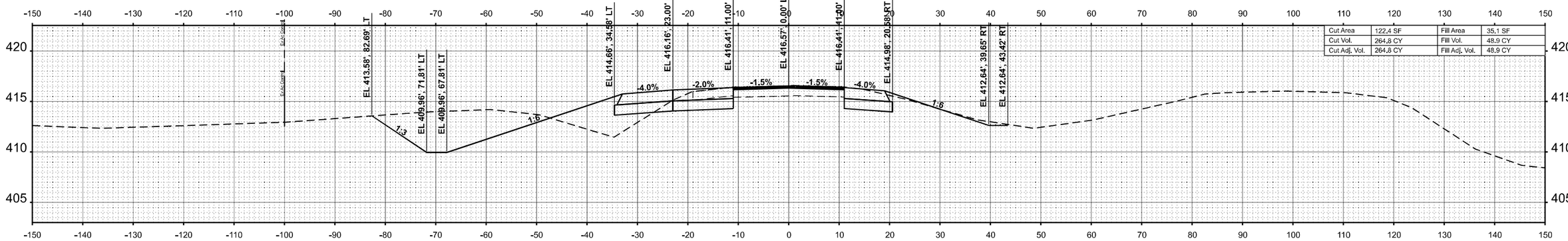
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	369
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 283+00.00



STA 282+50.00



STA 282+00.00

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

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

MODEL: 13WB_4 - 282+00.00 R2 [Sheet]
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CIVIL DESIGN, INC.
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LICENSE #184.003222

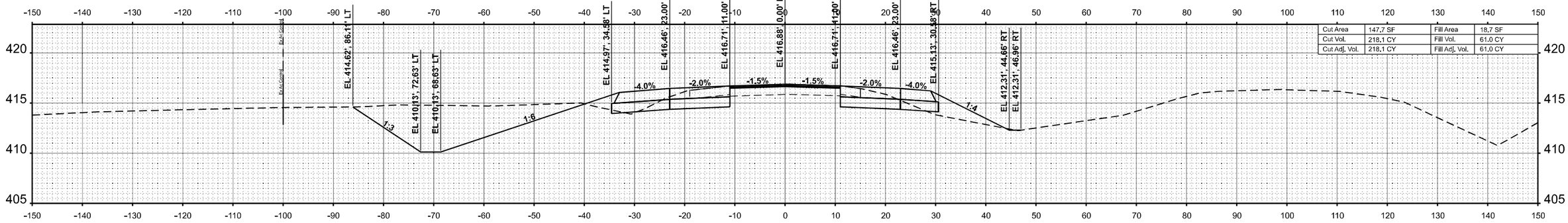
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

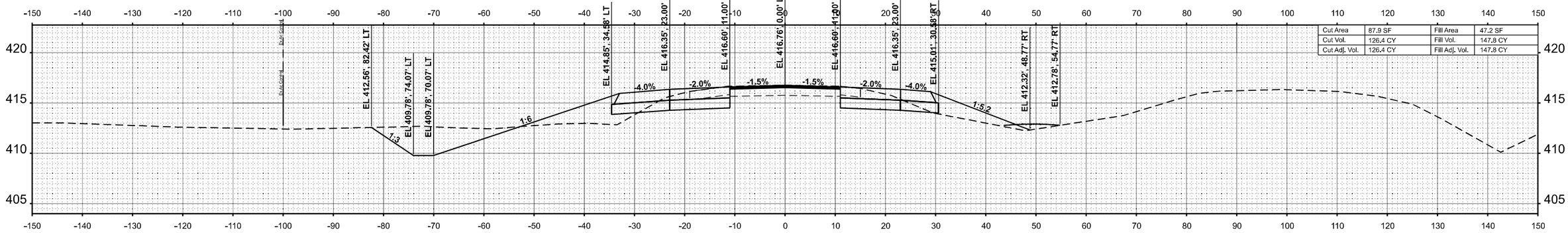
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 7 OF 76 SHEETS | STA. | TO STA.

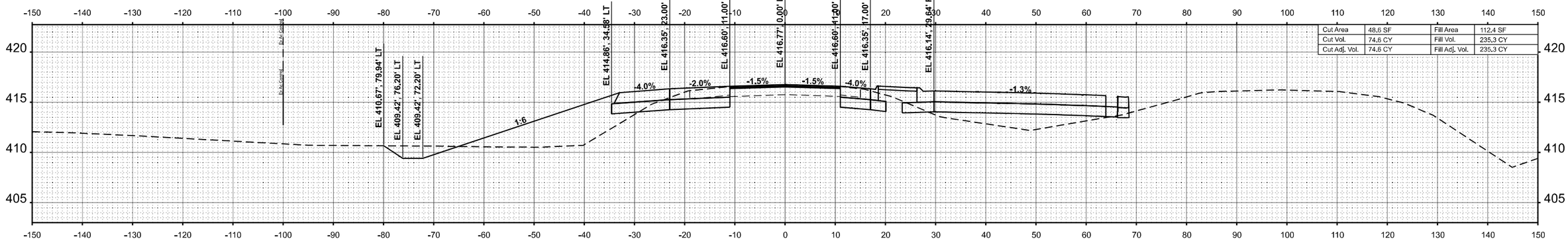
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	370
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 284+50.00



STA 284+00.00



STA 283+50.00

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

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

MODEL: 13WB_4 - 283+50.00 R2 [Sheet]
FILE NAME: P:\5XX\560\X-51\XX\5000 - IDOT PTB 200+/038 D9 IL 13 Orab Orchard Bridges\28-Trans\CAD-Project Drawings\D978373-ORB-XSec-Westbound.dgn

CIVIL DESIGN, INC.
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EFFINGHAM, IL
LICENSE #184.003222

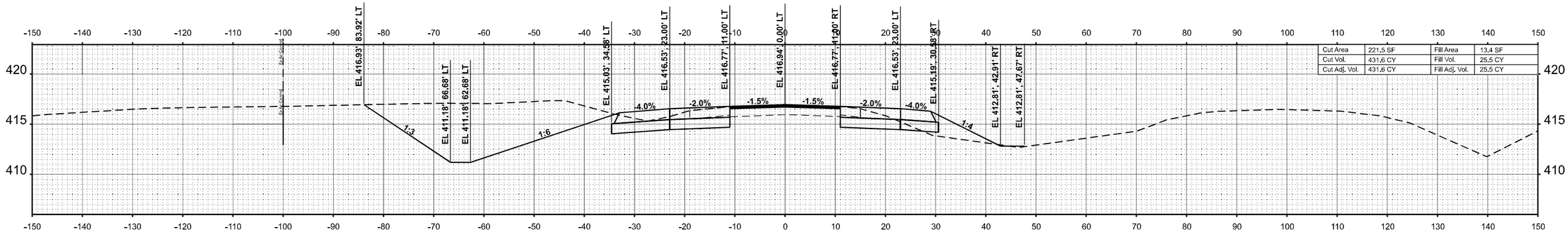
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

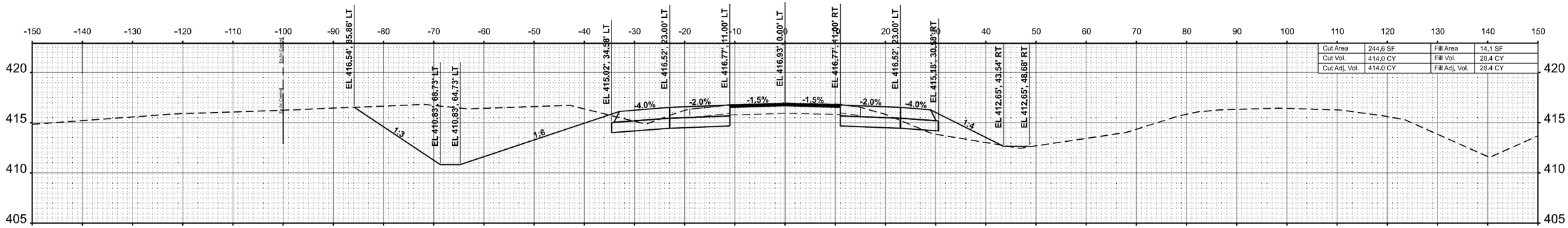
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 8 OF 76 SHEETS | STA. | TO STA.

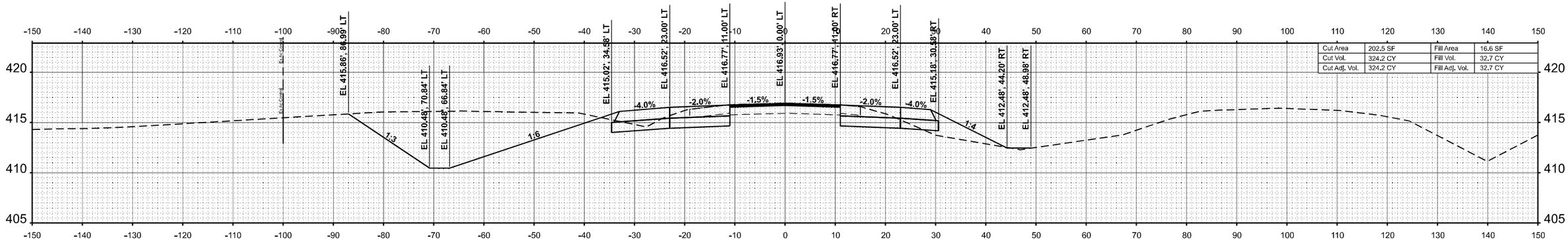
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	371
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 286+00.00



STA 285+50.00



STA 285+00.00

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

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

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CIVIL DESIGN, INC.
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LICENSE #184.003222

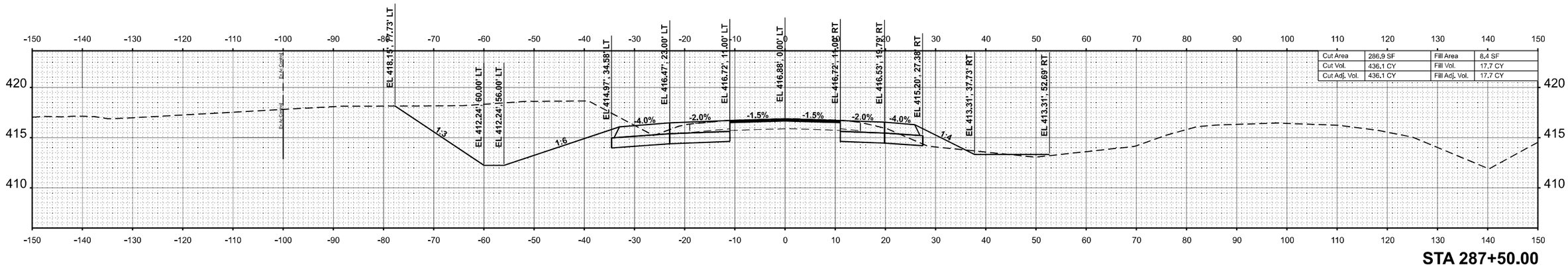
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

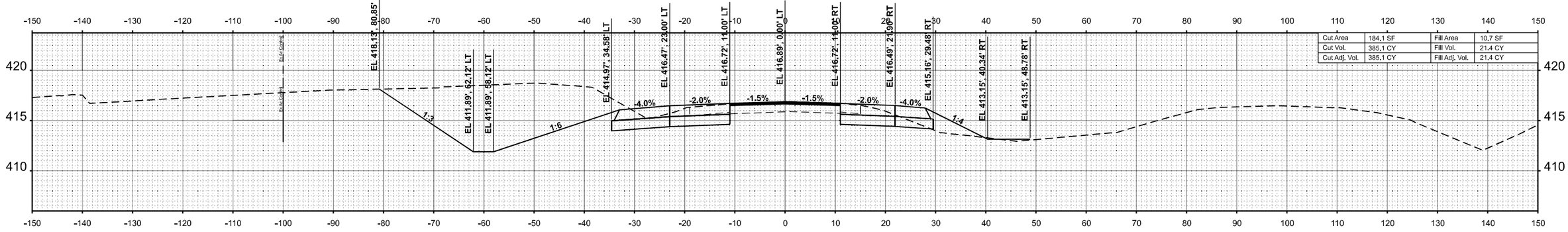
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 9 OF 76 SHEETS | STA. | TO STA.

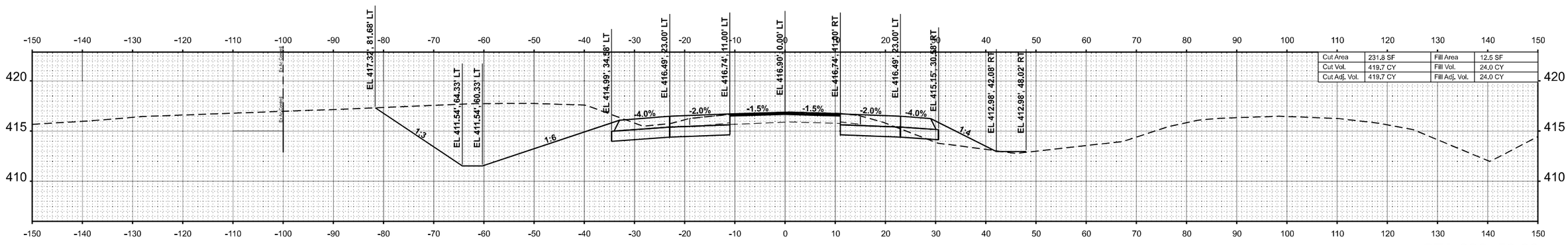
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	372
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 287+50.00



STA 287+00.00



STA 286+50.00

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

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

MODEL: 13WB_4 - 286+50.00 R2 [Sheet]
FILE NAME: P:\5XX\50X\X-61XX\5000 - IDOT PTB 200+338 D9 IL 13 Crab Orchard Bridges\28-Trans\CAD\Project Drawings\D978373-CRD-XSec-Westbound.dgn

CIVIL DESIGN, INC.
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LICENSE #184.003222

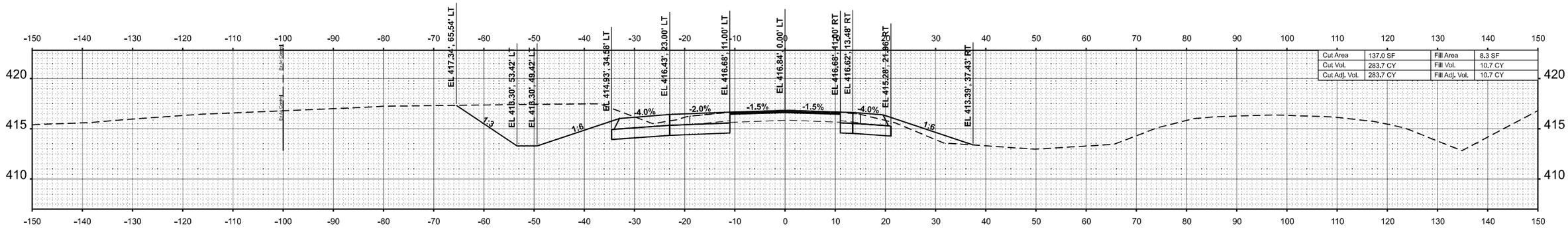
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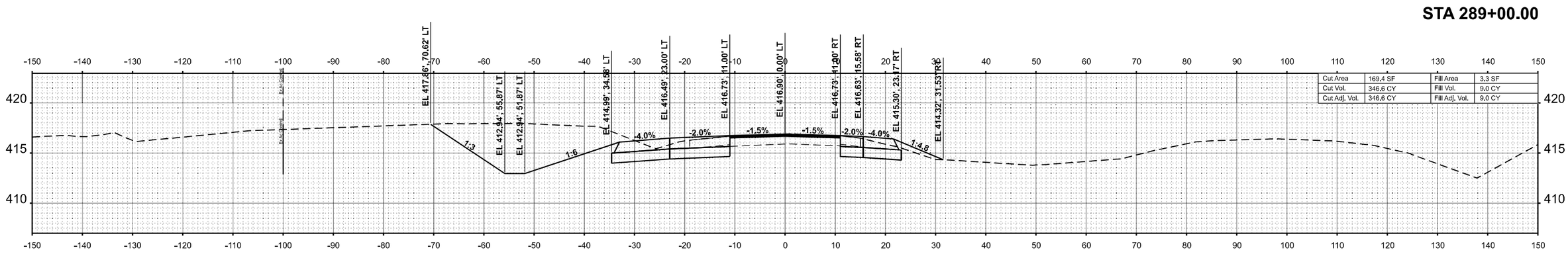
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

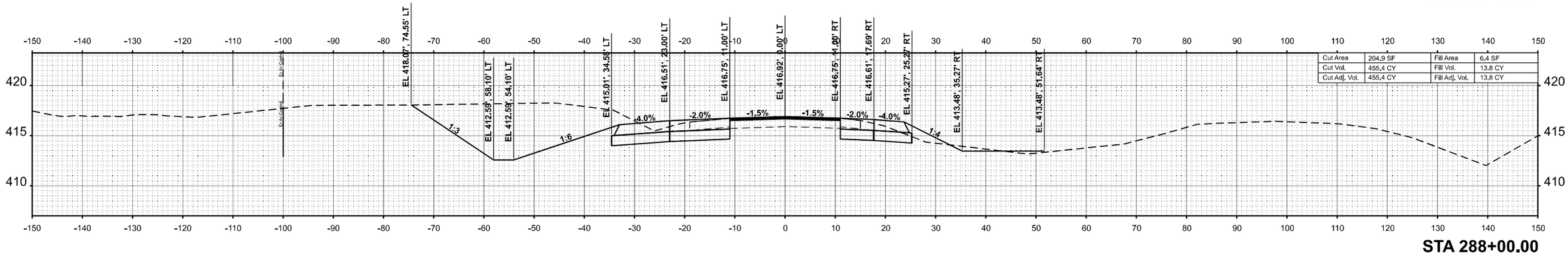
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 10 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	373
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	







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PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 12/11/2024	DATE -	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

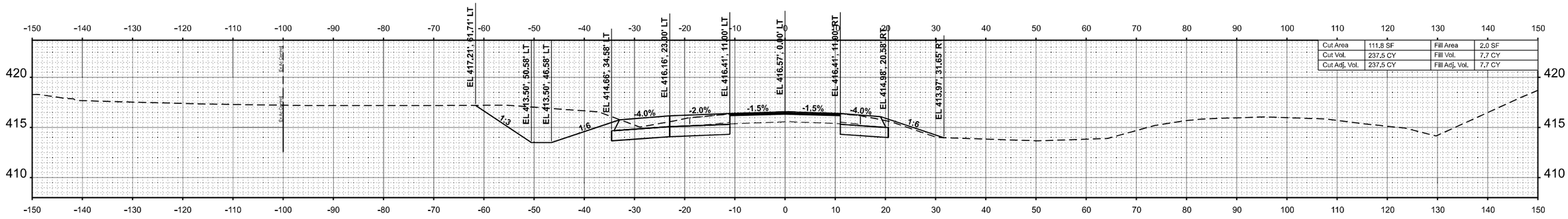
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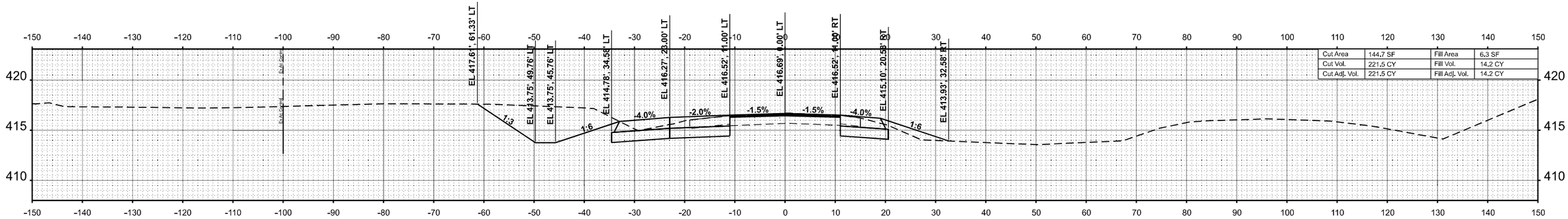
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	374
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

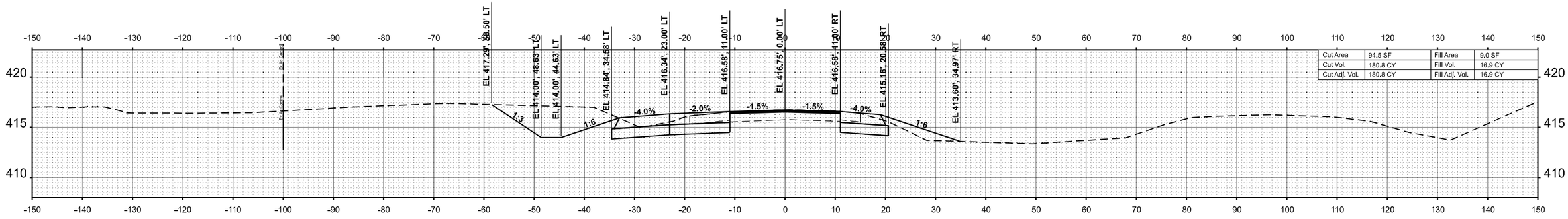
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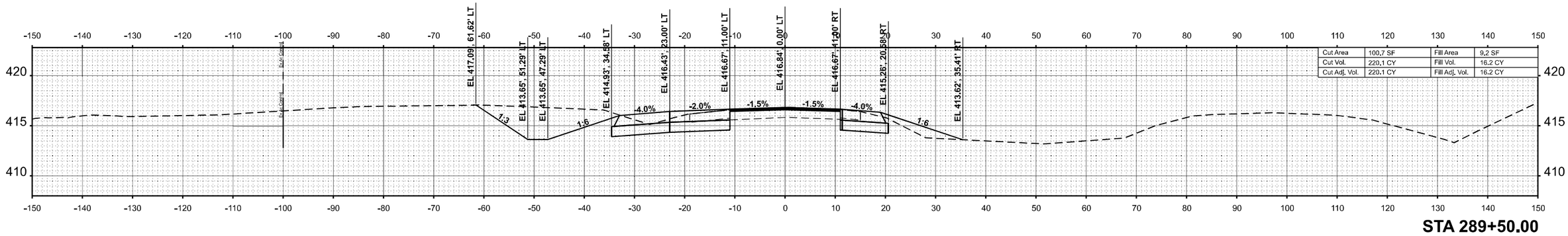
ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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FILE NAME: P:\5XX\150\XX\51\XX\5000 - IDOT PTB 200-038 D9 IL 13 Crab Orchard Bridges\02e-Trans\CAD\Project Drawings\D078373-ORD-XSSec-Westbound.dgn









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

MODEL: 13WB_4 - 289+50.00 R2 [Sheet]
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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

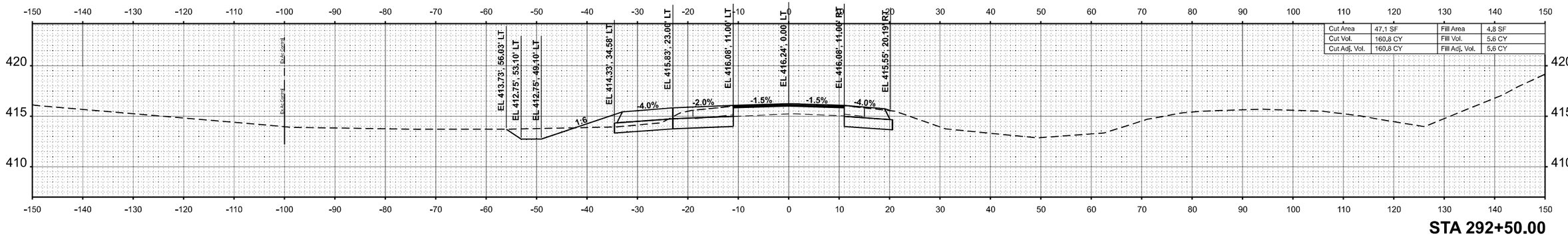
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

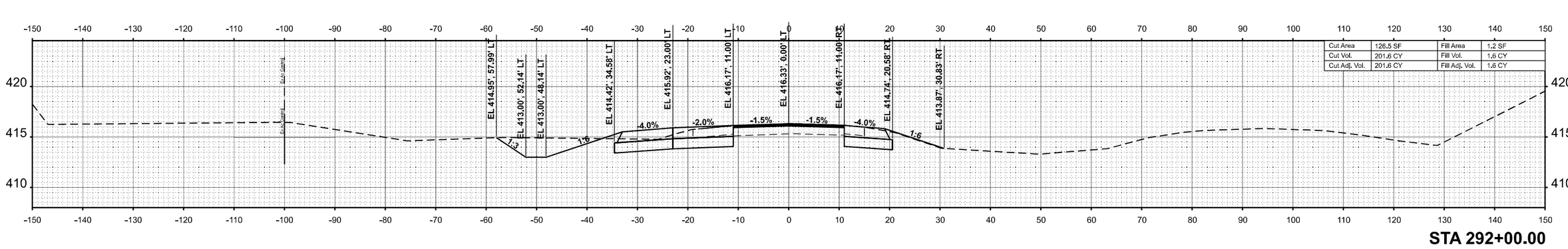
CROSS SECTIONS
IL 13 WB

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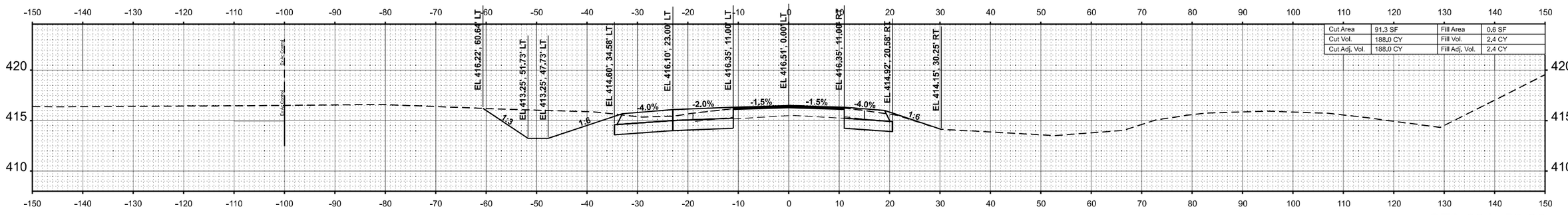
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	375
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 292+50.00



STA 292+00.00



STA 291+50.00

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

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

MODEL: 13WB_4 - 291+50.00 R2 [Sheet]
FILE NAME: P:\5XX\50XX\5XX\XX\5000 - IDOT PTB 200+\338 D0 IL 13 Crab Orchard Bridges\02e-Trans\CAD\Project Drawings\D078373-ORD-XSec-Westbound.dgn

CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

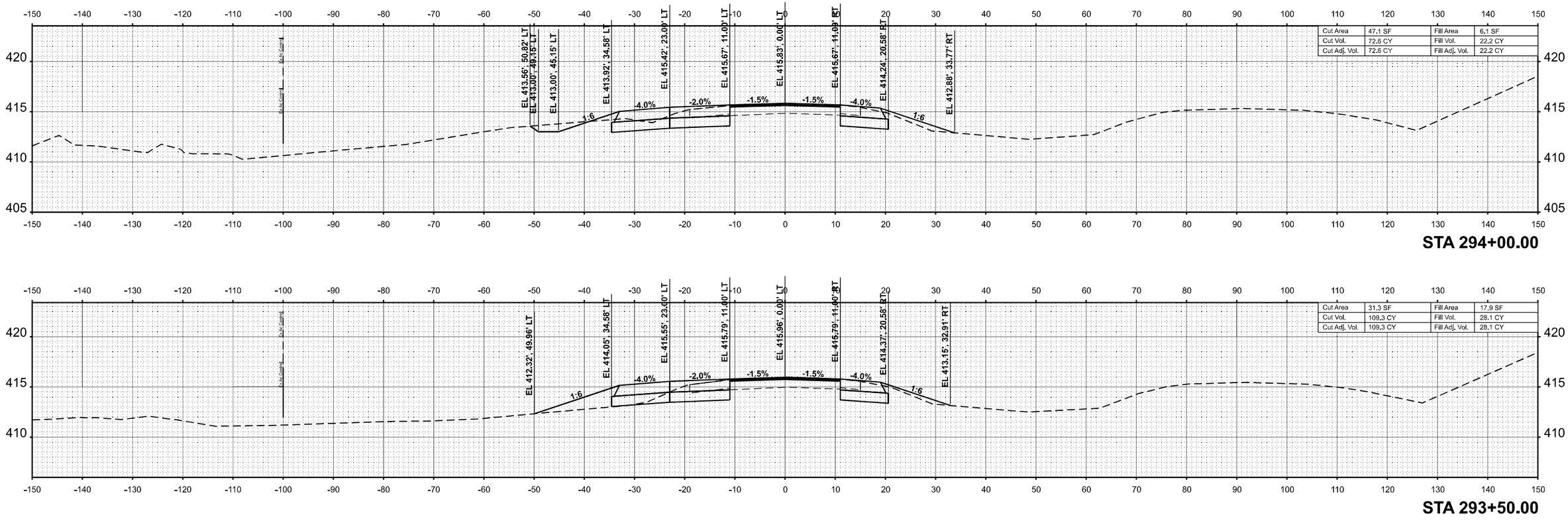
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

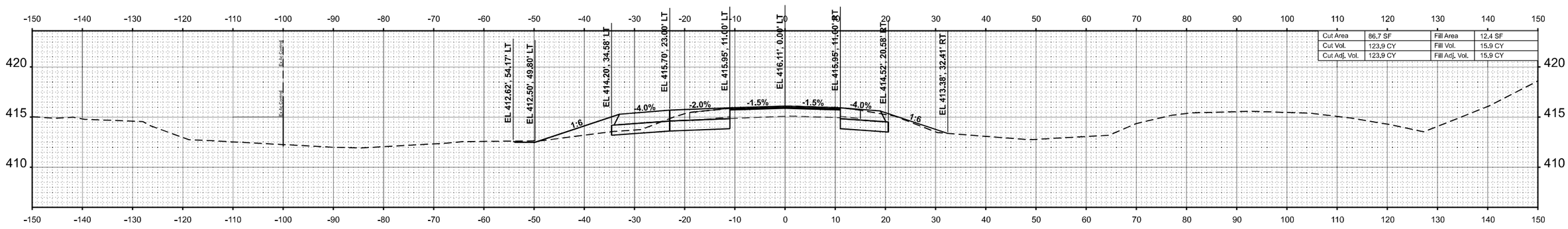
SCALE: 1"=10' | SHEET 13 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	376
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 294+00.00

STA 293+50.00



STA 293+00.00

FINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

ORIGINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

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CIVIL DESIGN, INC.
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LICENSE #184.003222

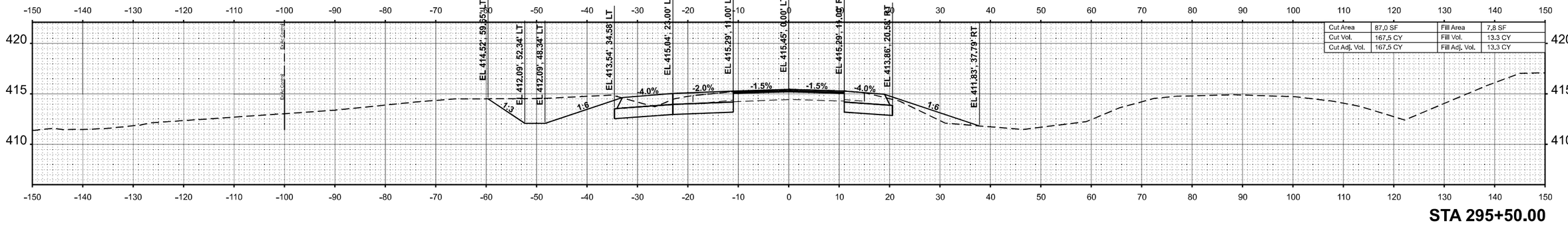
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

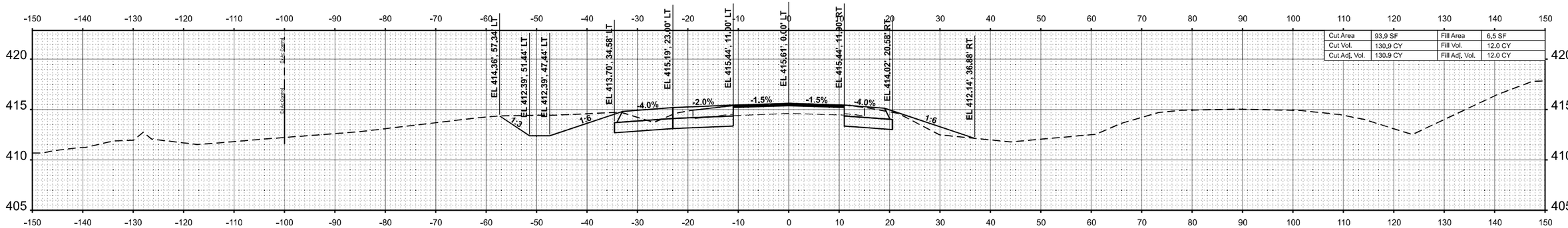
CROSS SECTIONS
IL 13 WB

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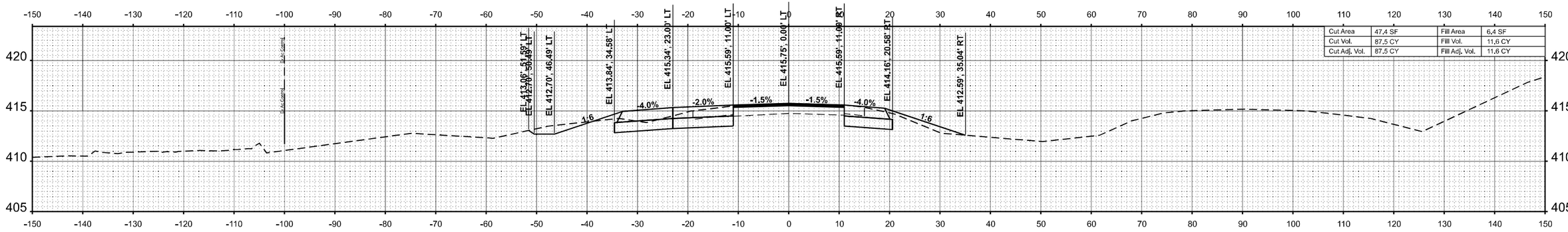
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		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 295+50.00



STA 295+00.00



STA 294+50.00

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PLOT DATE = 12/11/2024	DATE -	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

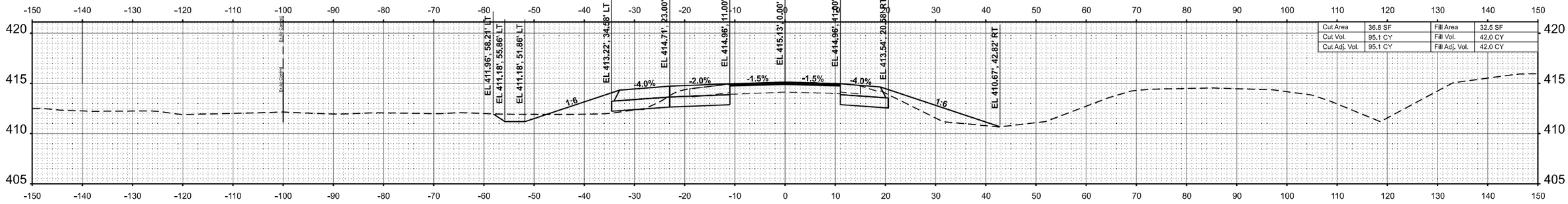
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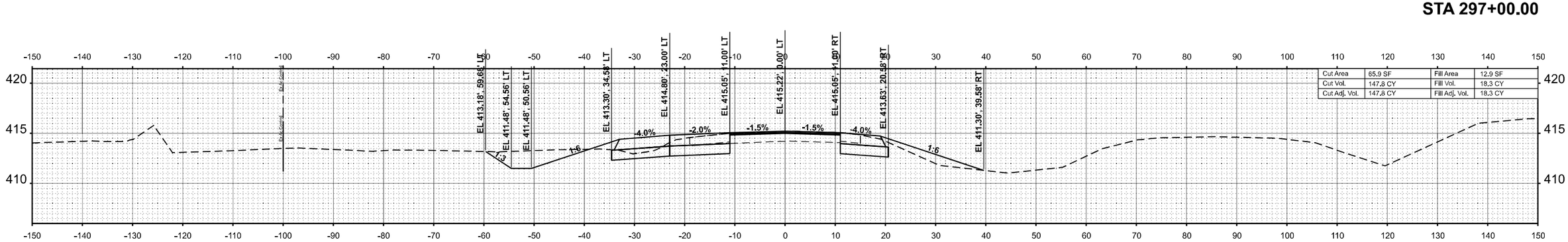
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		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

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

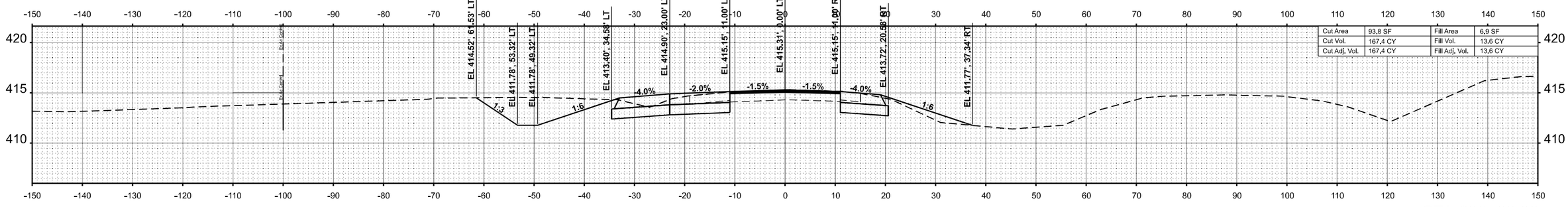
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STA 297+00.00



STA 296+50.00



STA 296+00.00

FINAL SURVEY	NO.	NOTE BOOK	PAGE NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NO.	NOTE BOOK	PAGE NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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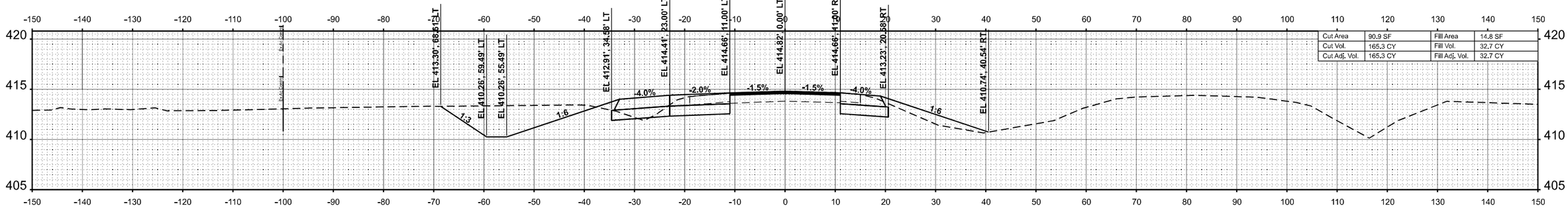
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

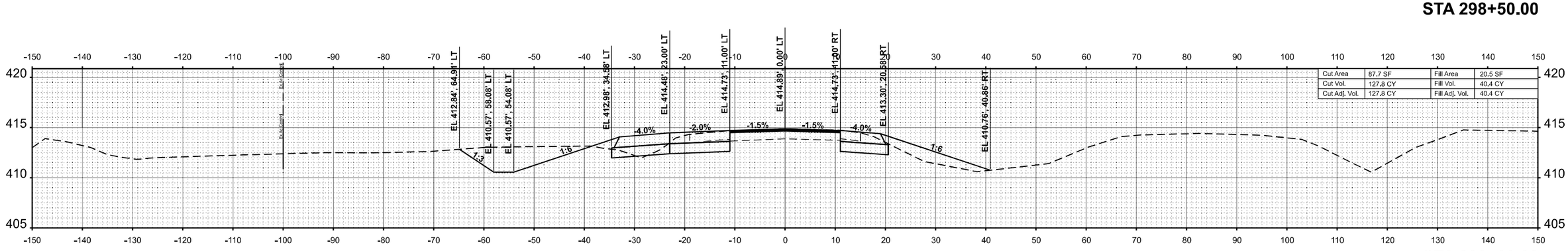
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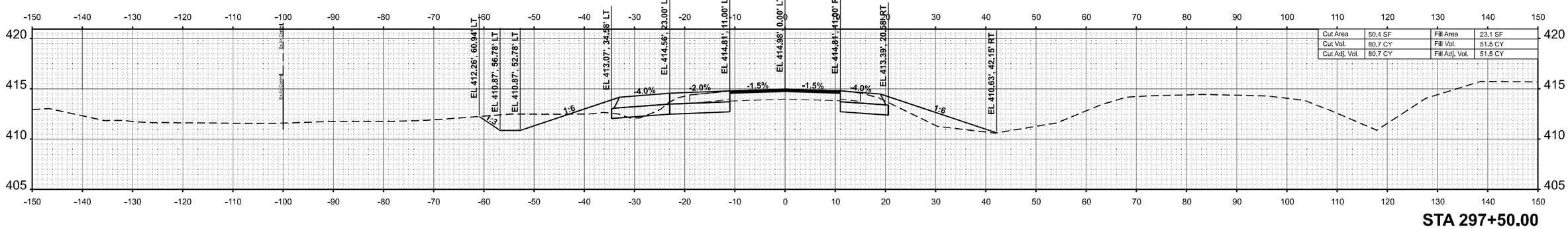
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		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 298+50.00



STA 298+00.00



STA 297+50.00

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

ORIGINAL SURVEY	BY	DATE
SURVEYED		
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LICENSE #184.003222

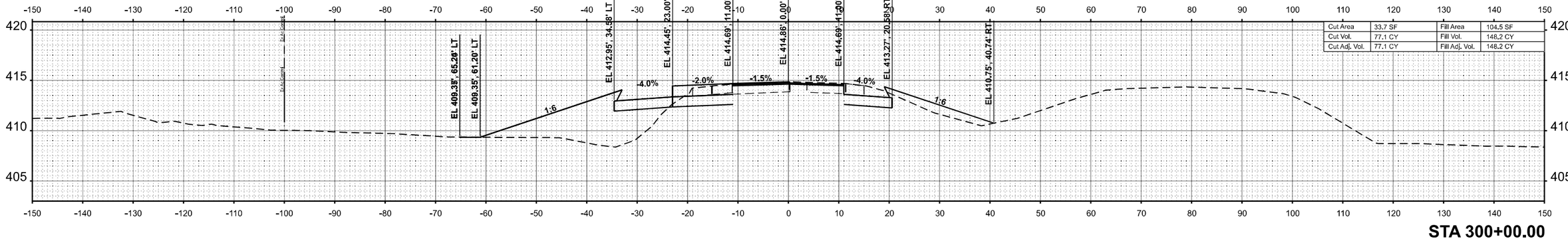
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

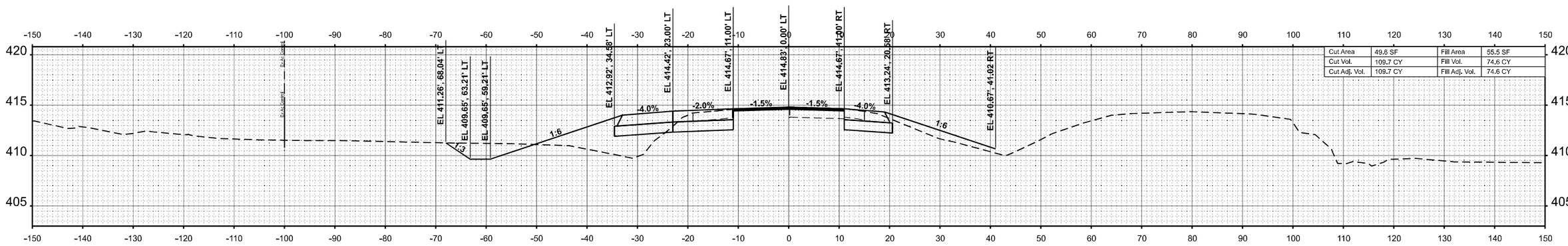
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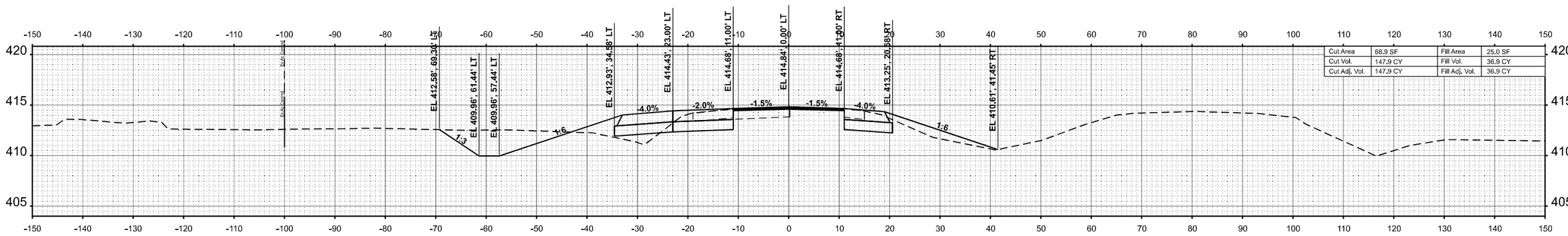
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	380
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 300+00.00



STA 299+50.00



STA 299+00.00

FINAL SURVEY / ORIGINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
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NOTE BOOK
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LICENSE #184.003222

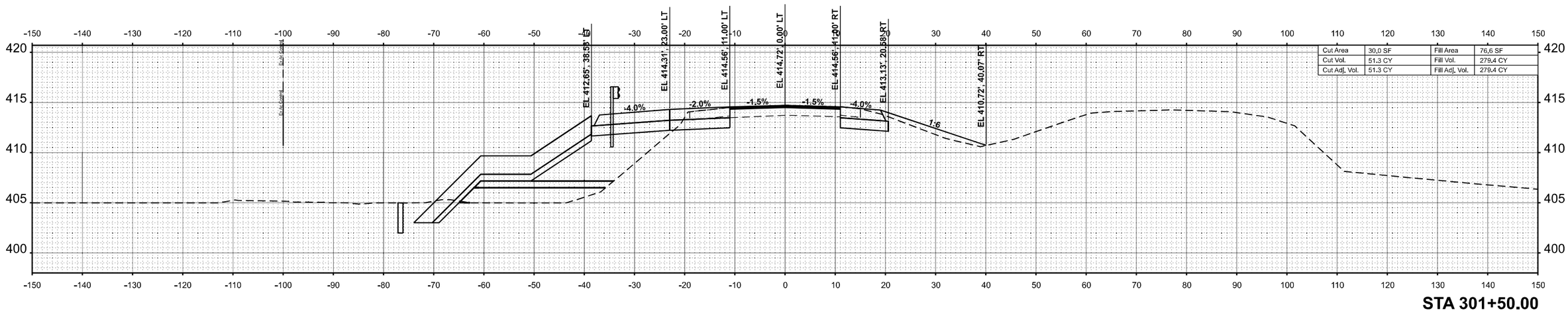
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

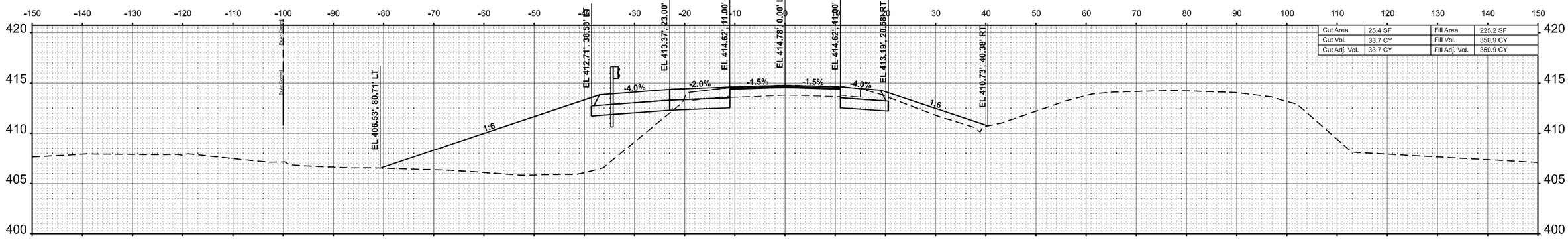
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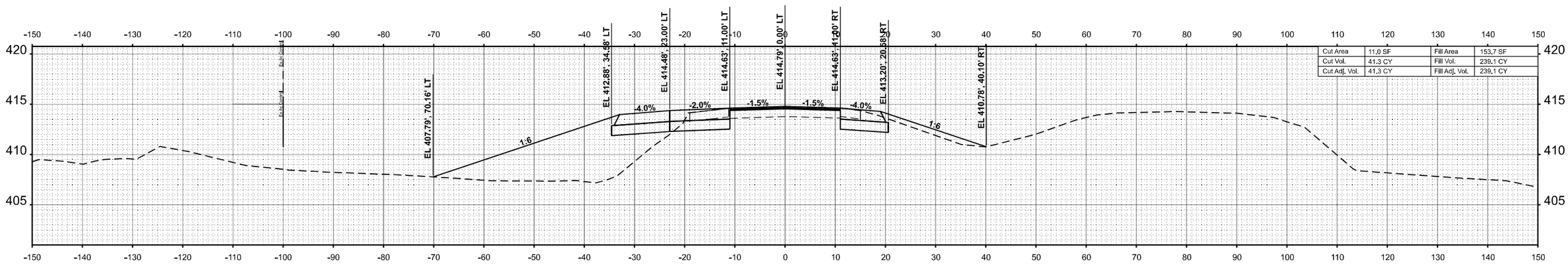
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		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 301+50.00



STA 301+00.00



STA 300+50.00

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

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

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LICENSE #184.003222

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

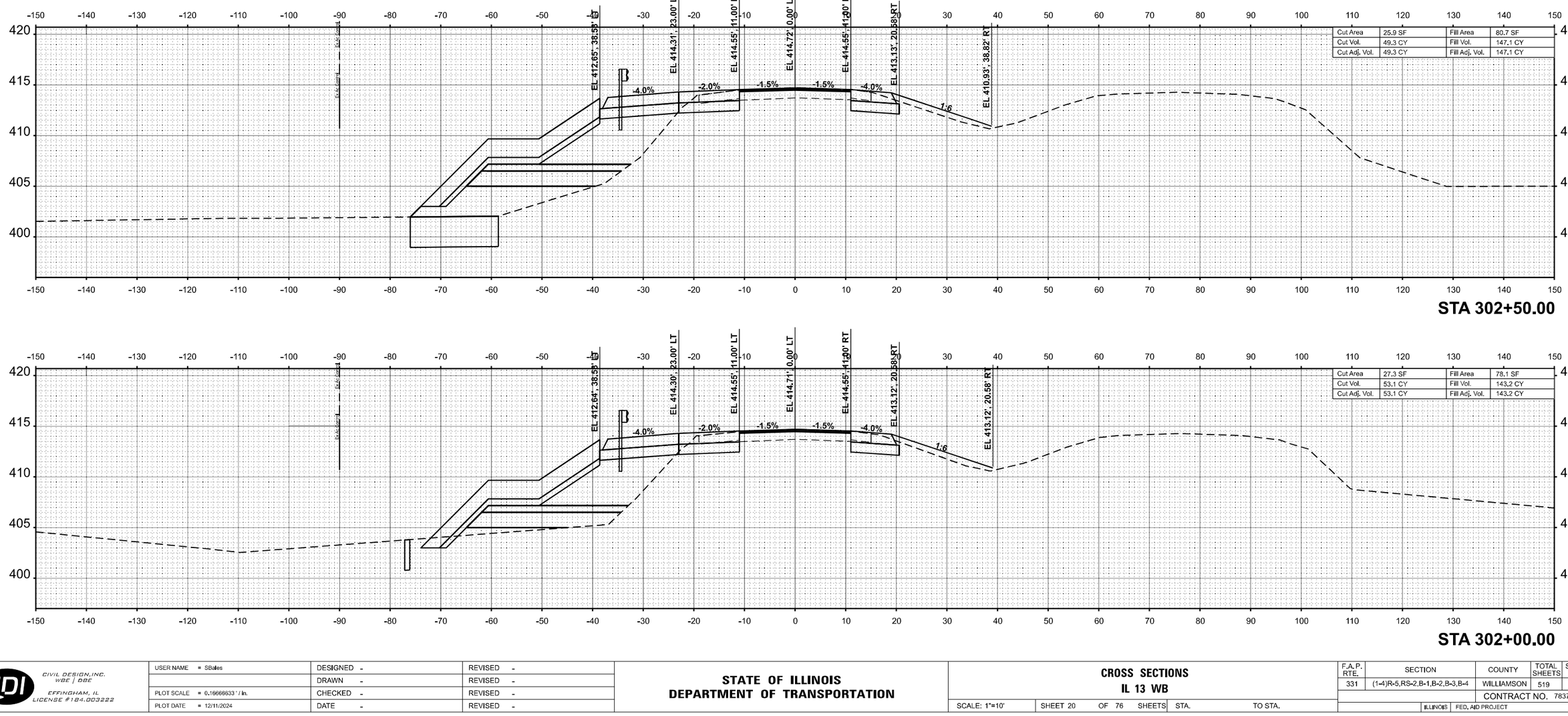
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IL 13 WB

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		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
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TEMPLATE		
AREAS		
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
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TEMPLATE		
AREAS		
AREAS CHECKED		

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LICENSE #184.003222

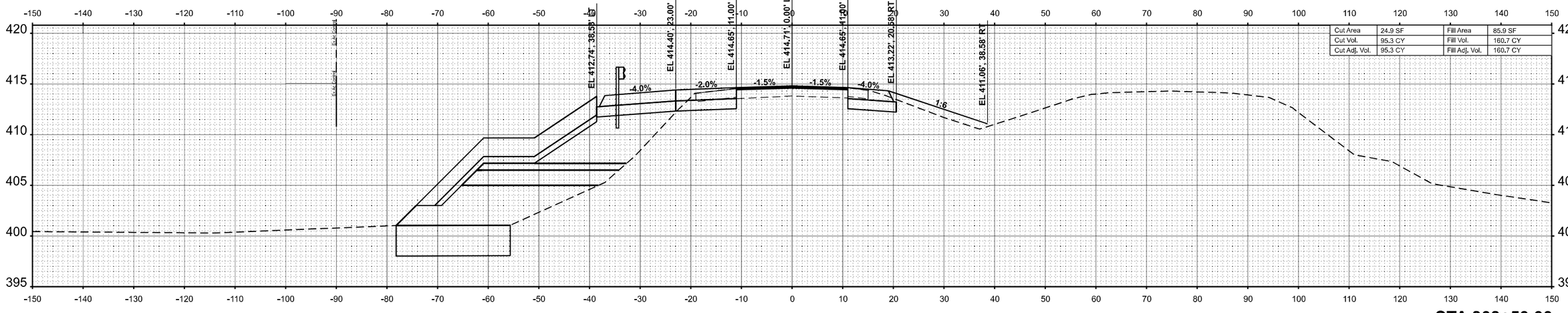
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

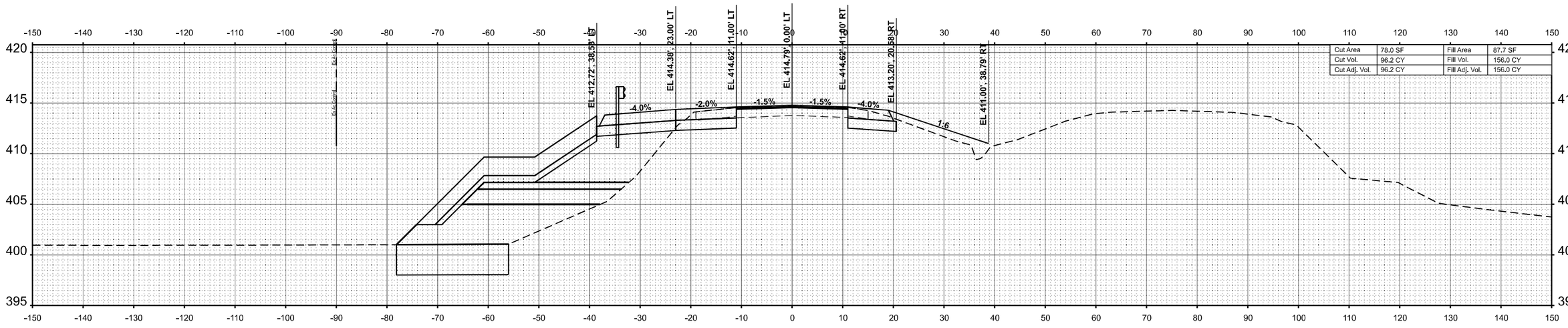
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IL 13 WB

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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	383
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 303+50.00



STA 303+00.00

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

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

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CIVIL DESIGN, INC.
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LICENSE #184.003222

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

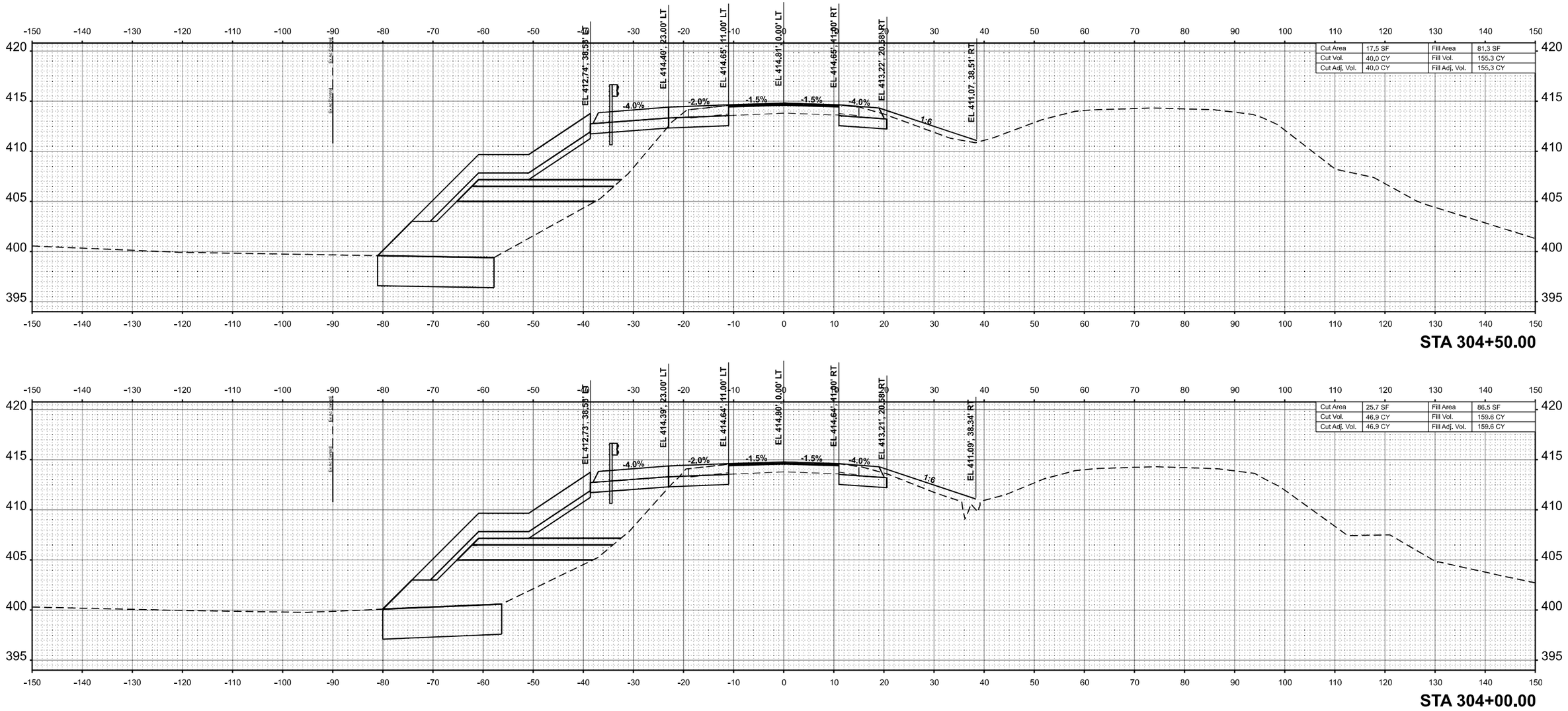
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IL 13 WB

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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	384
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
ORIGINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

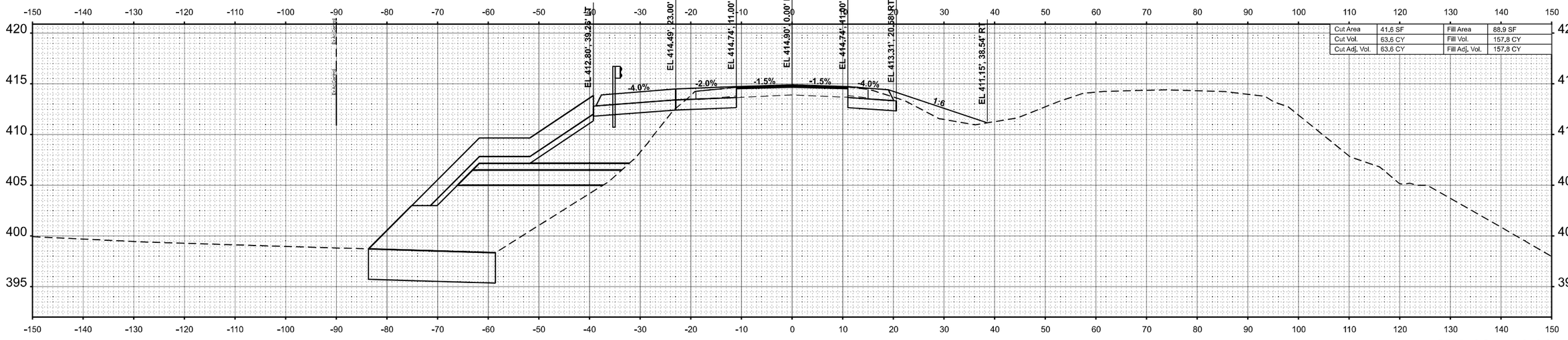
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

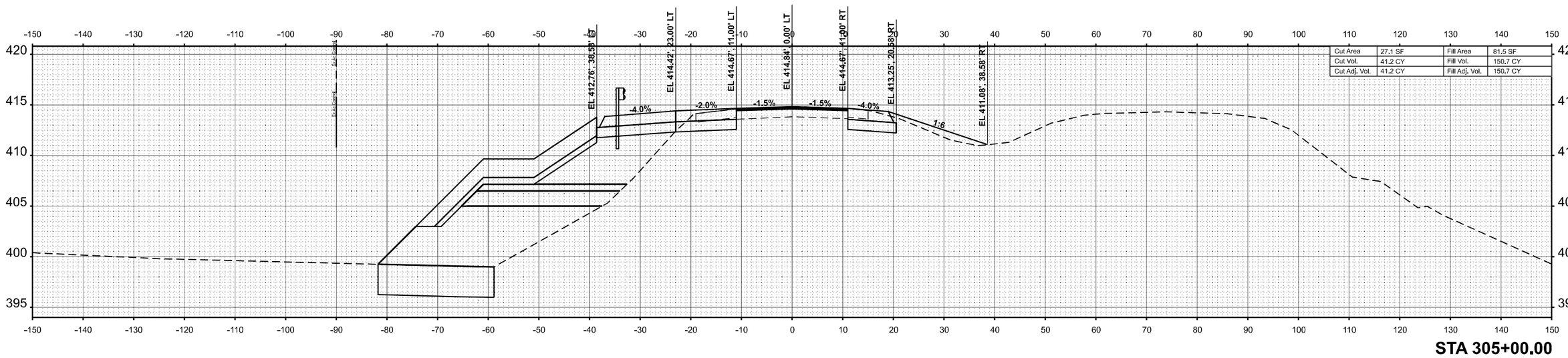
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IL 13 WB

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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	385
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 305+50.00



STA 305+00.00

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

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

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WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

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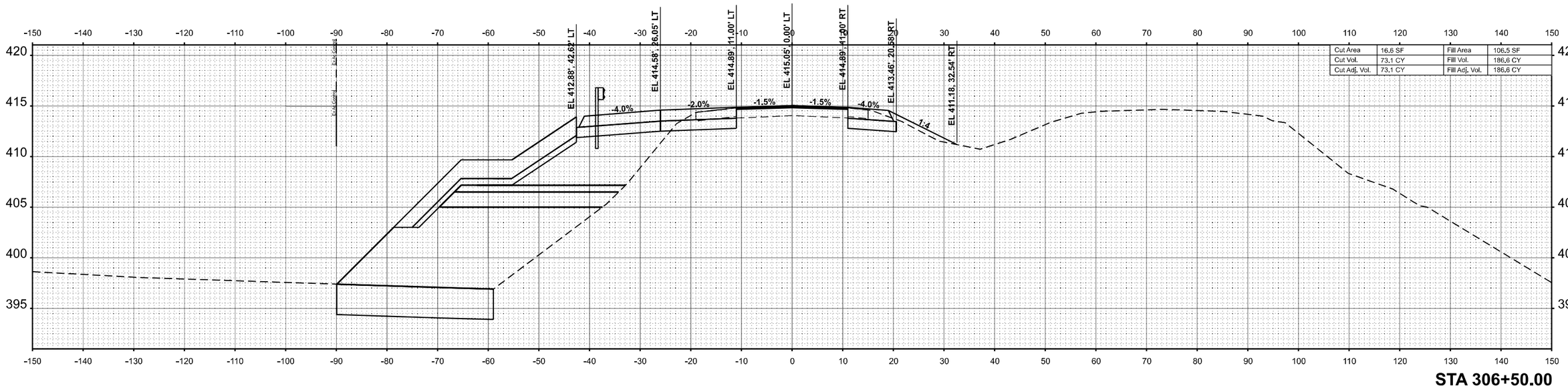
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

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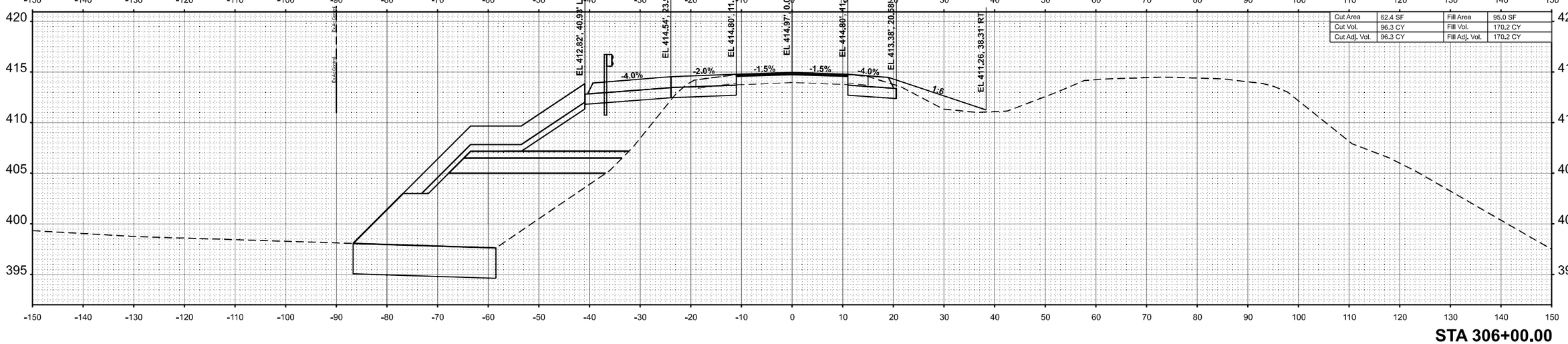
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

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



STA 306+50.00

ORIGINAL SURVEY	NOTE BOOK	SURVEYED	BY
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STA 306+00.00

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CIVIL DESIGN, INC.
WBE / DBE
EFFINGHAM, IL
LICENSE #184.003222

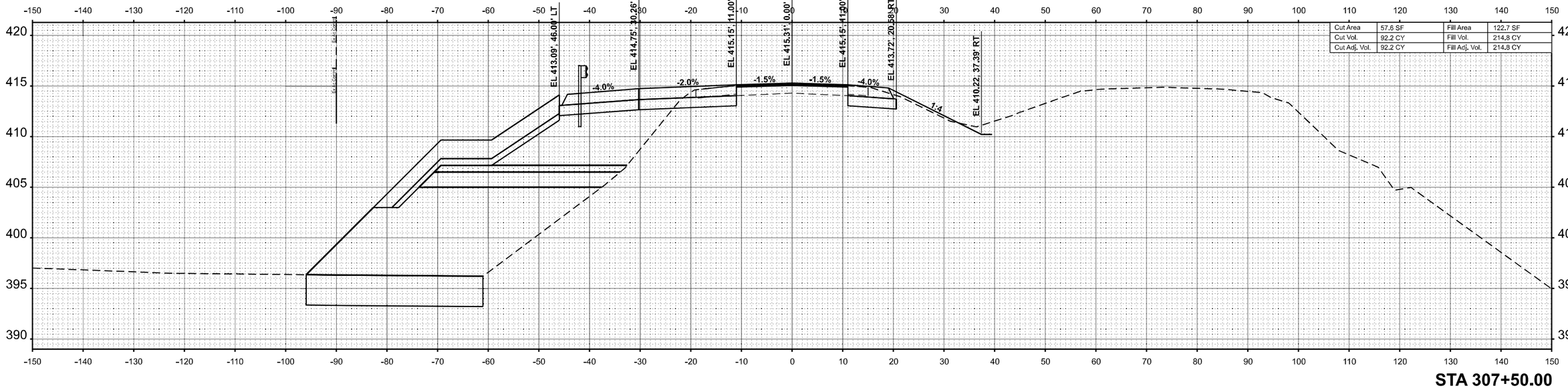
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

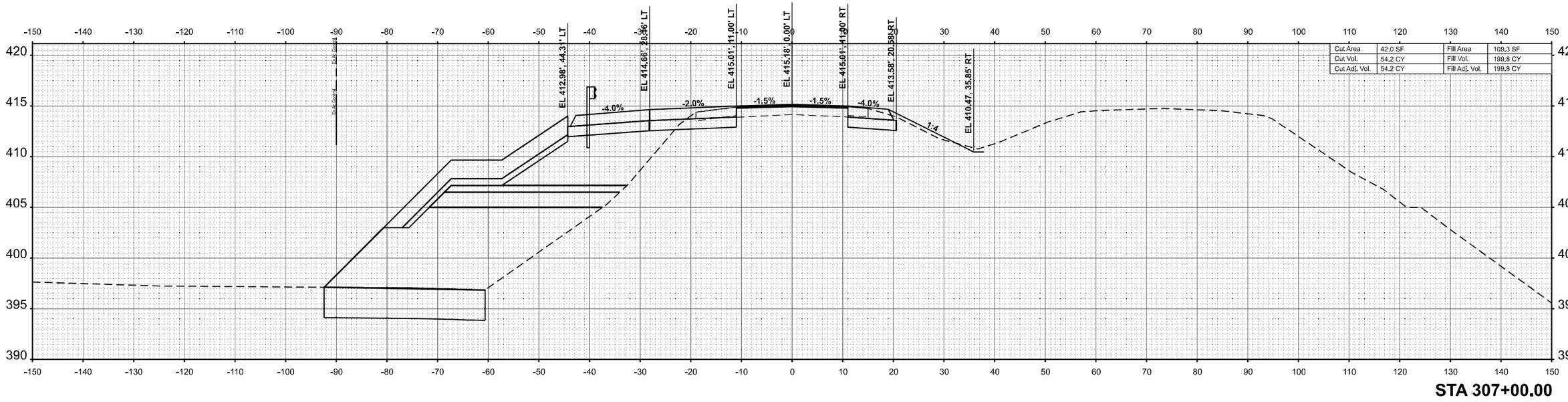
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IL 13 WB

SCALE: 1"=10' | SHEET 24 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	387
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 307+50.00



STA 307+00.00

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

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

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CIVIL DESIGN, INC.
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EFFINGHAM, IL
LICENSE #184.003222

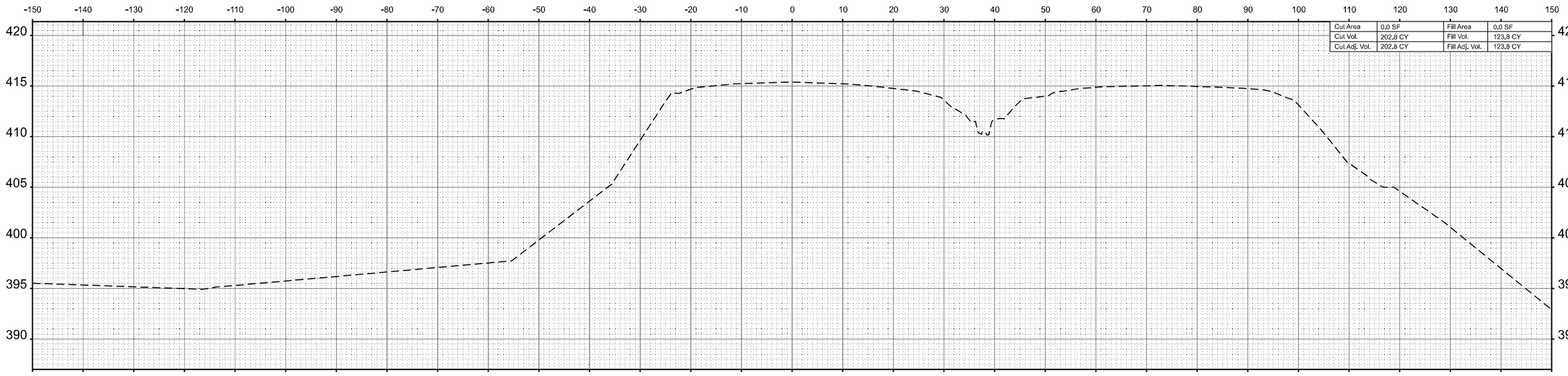
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	DRAWN -	REVISED -	
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PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

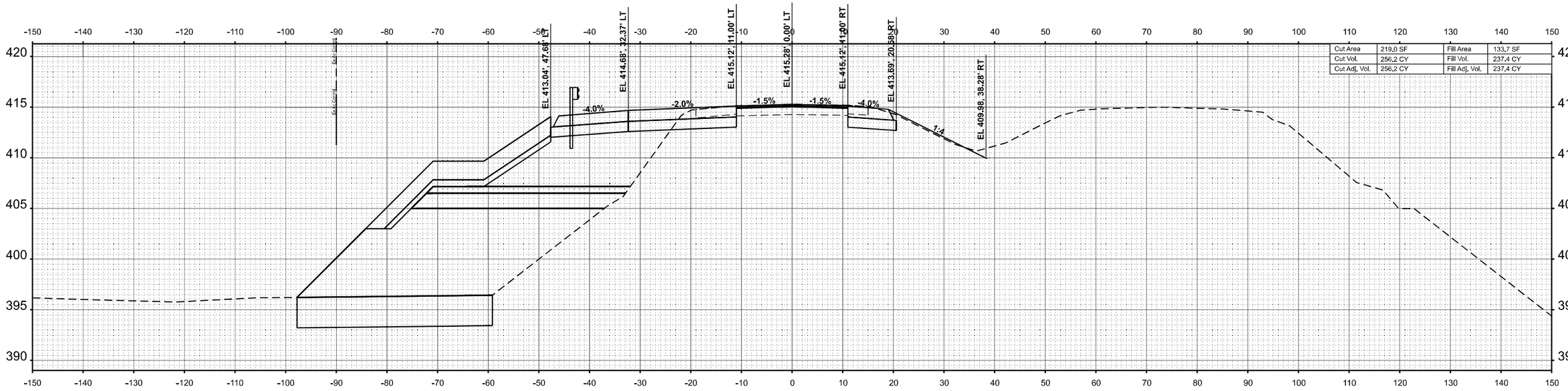
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 25 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	388
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 308+50.00



STA 308+00.00

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
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PLOT DATE = 12/11/2024	DATE -	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

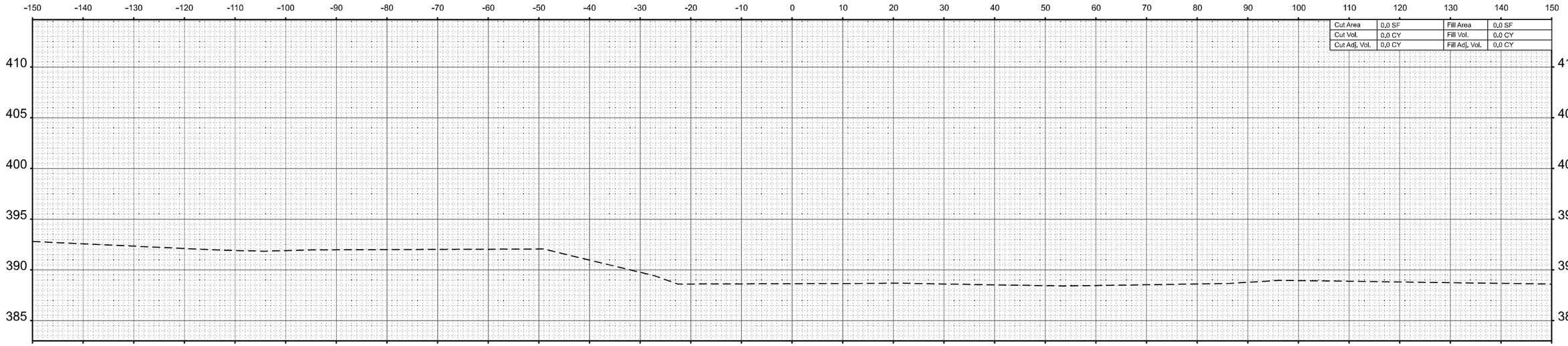
SCALE: 1"=10' | SHEET 26 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	389
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

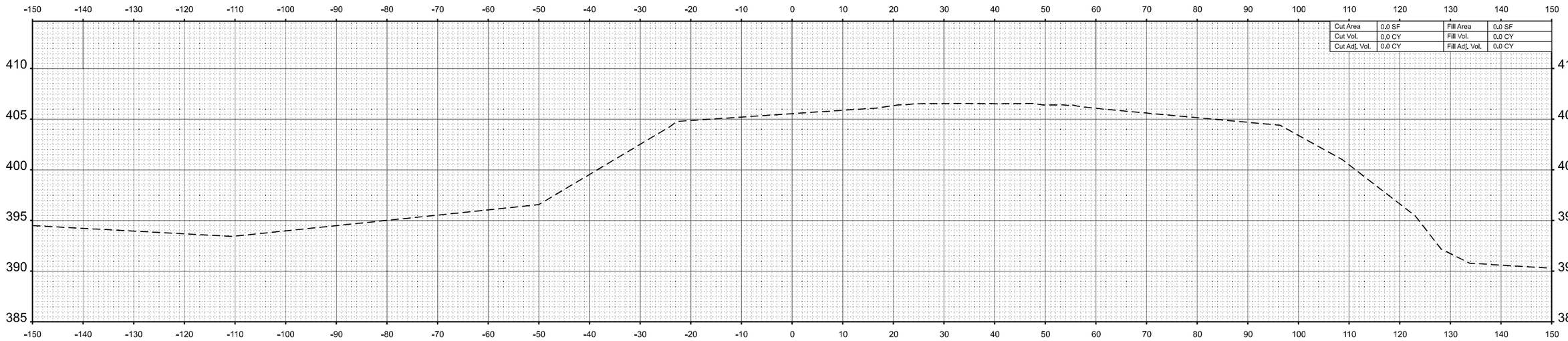
FINAL SURVEY / ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

MODEL: 13WB_4 - 308+00.00 R2 (Sheet)
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FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	



STA 309+50.00



STA 309+00.00

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

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EFFINGHAM, IL
LICENSE # 184.003222

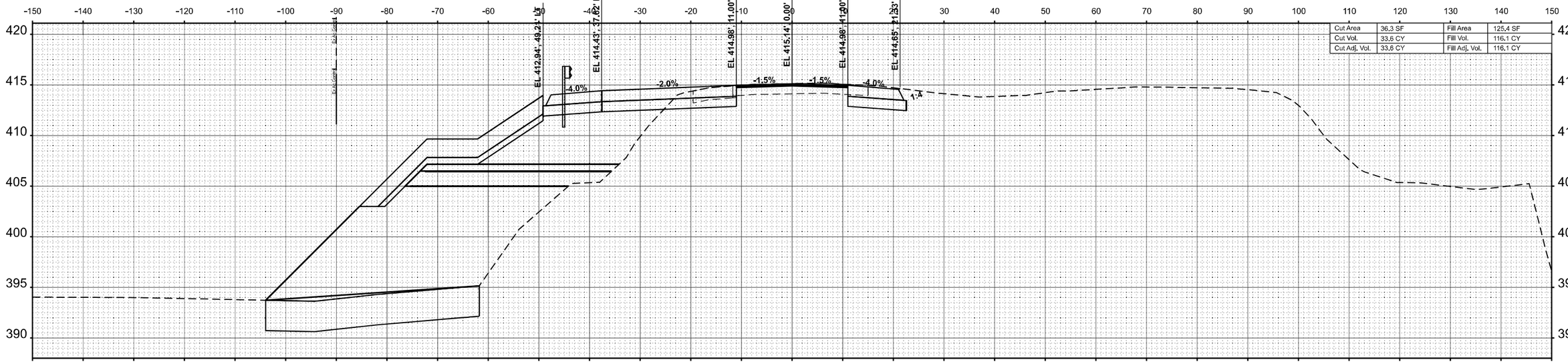
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

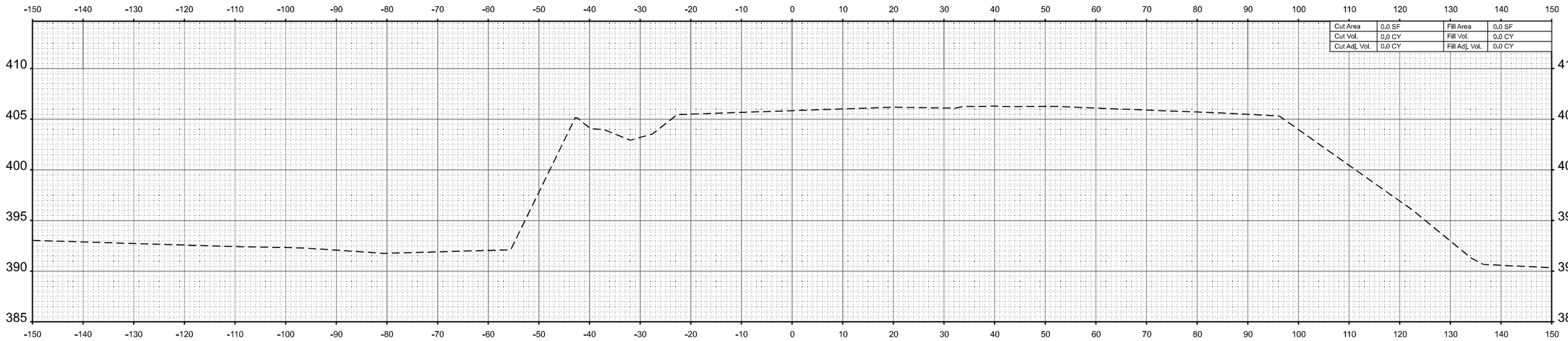
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 27 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	390
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 310+50.00



STA 310+00.00

FINAL SURVEY / ORIGINAL SURVEY

NO.	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

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LICENSE #184.003222

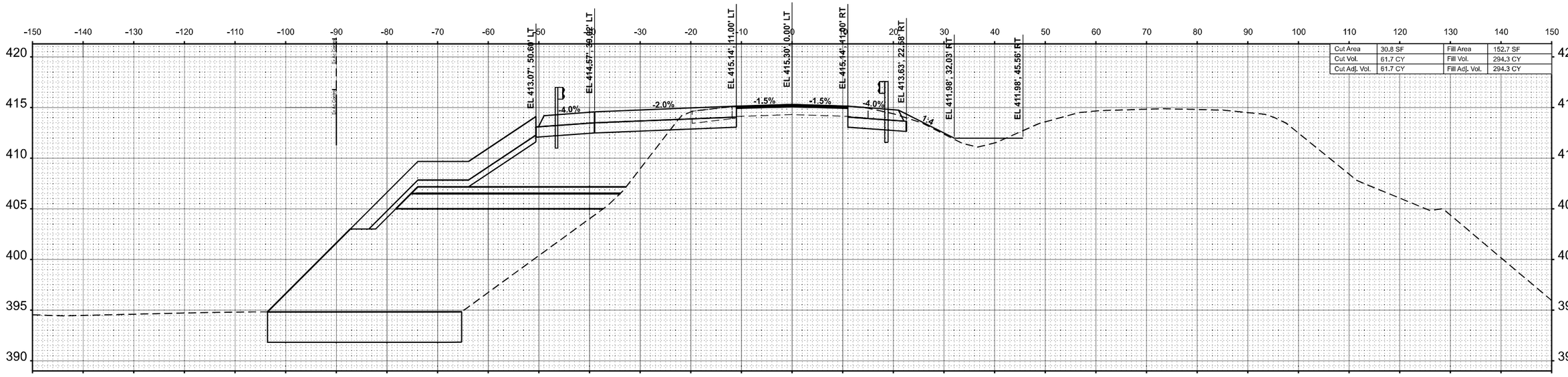
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	DRAWN -	REVISED -
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

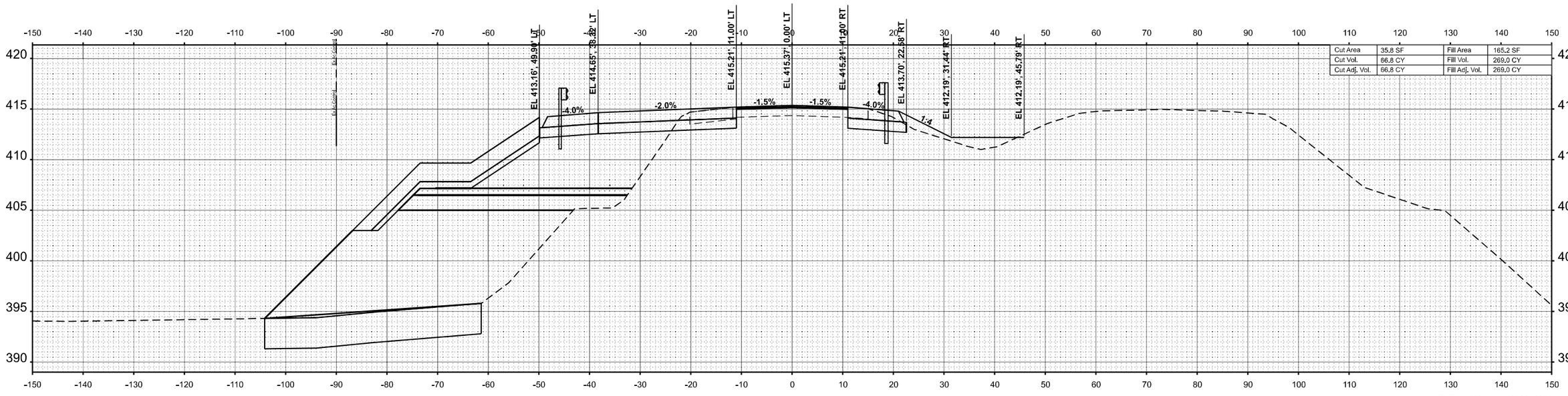
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 28 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	391
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 311+50.00



STA 311+00.00

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

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

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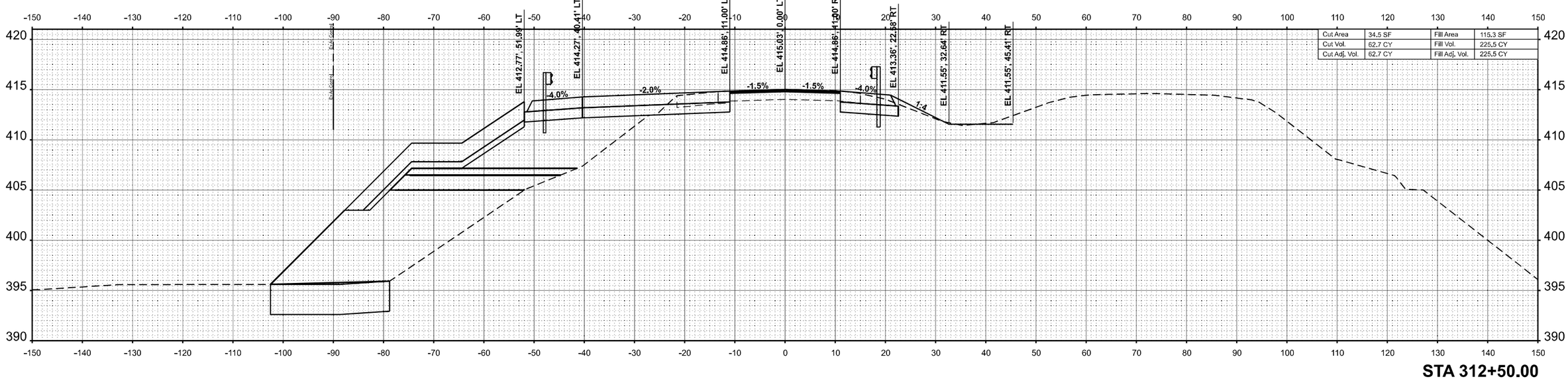
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

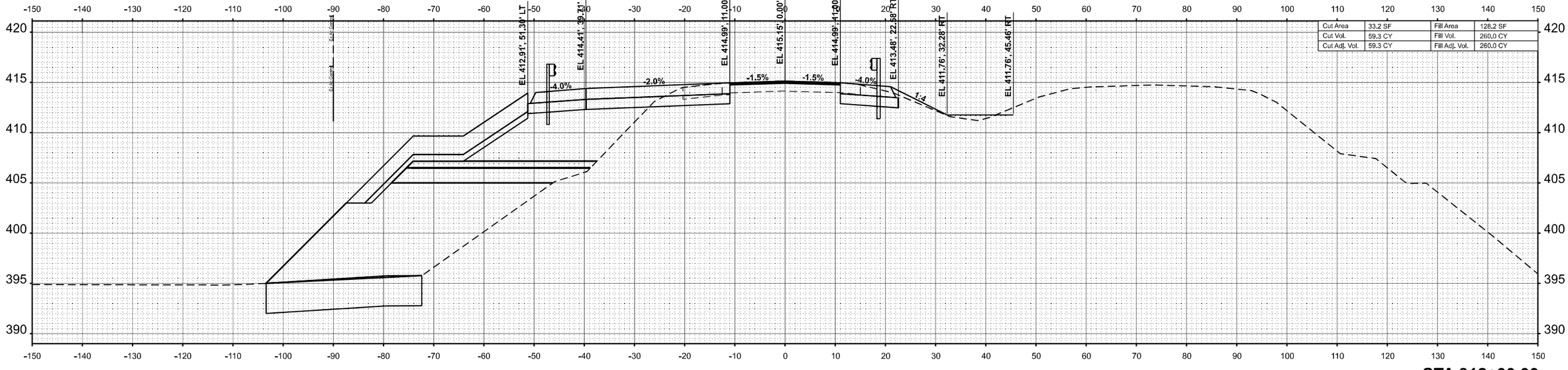
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 29 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	392
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 312+50.00



STA 312+00.00

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

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

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LICENSE #184.003222

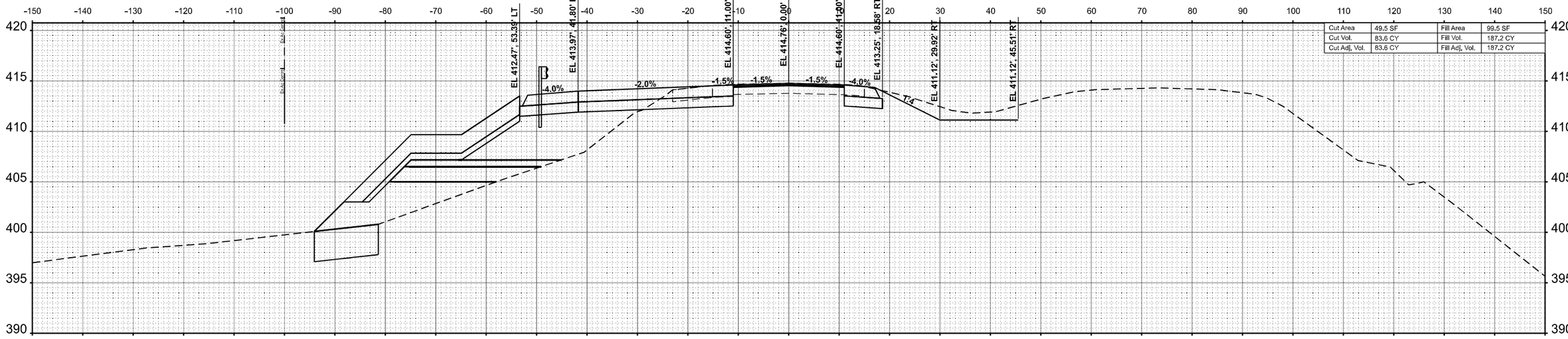
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

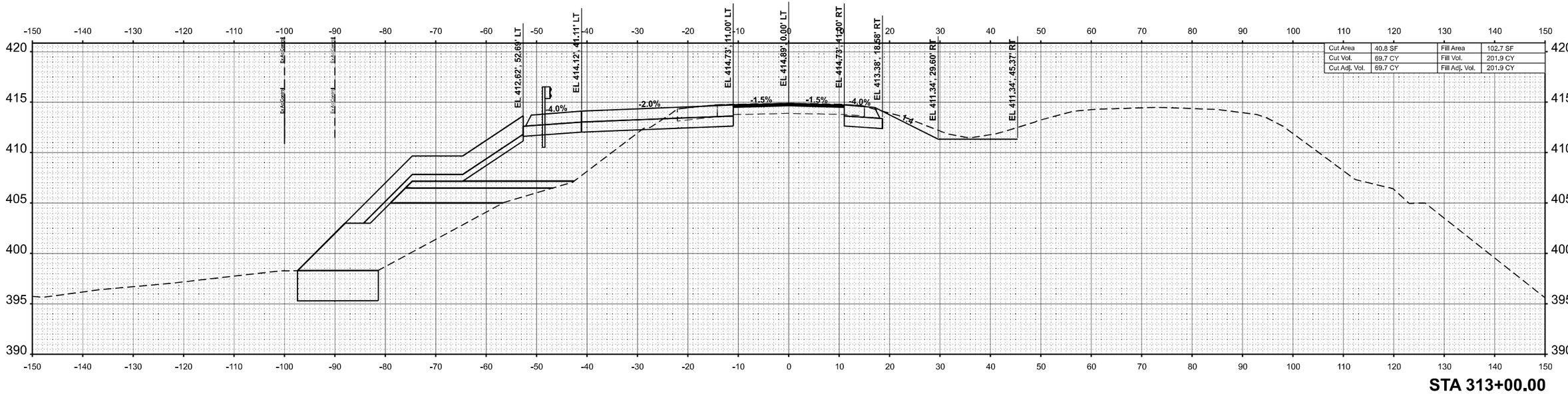
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 30 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	393
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 313+50.00



STA 313+00.00

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

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

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EFFINGHAM, IL
LICENSE #184.003222

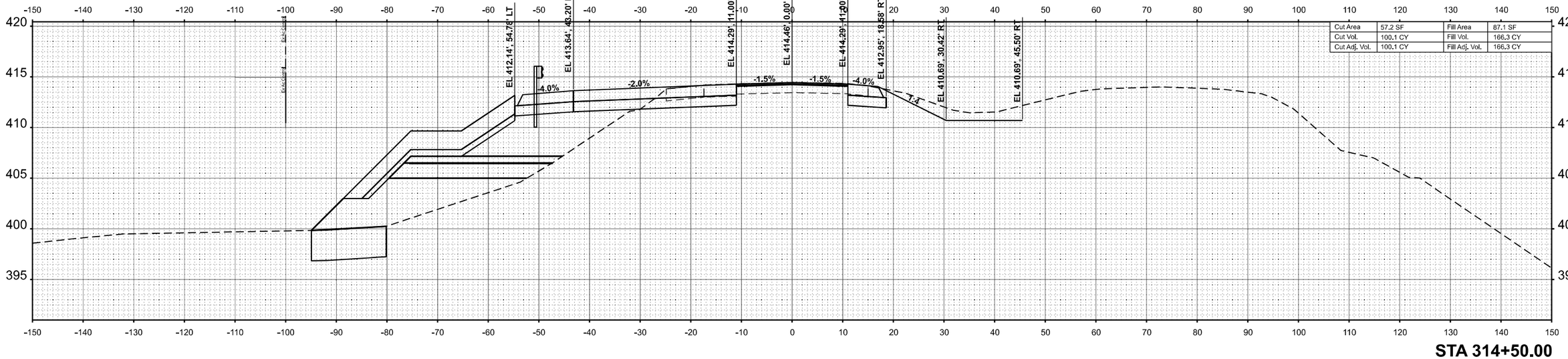
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PLOT DATE = 12/11/2024	DATE -	REVISED -

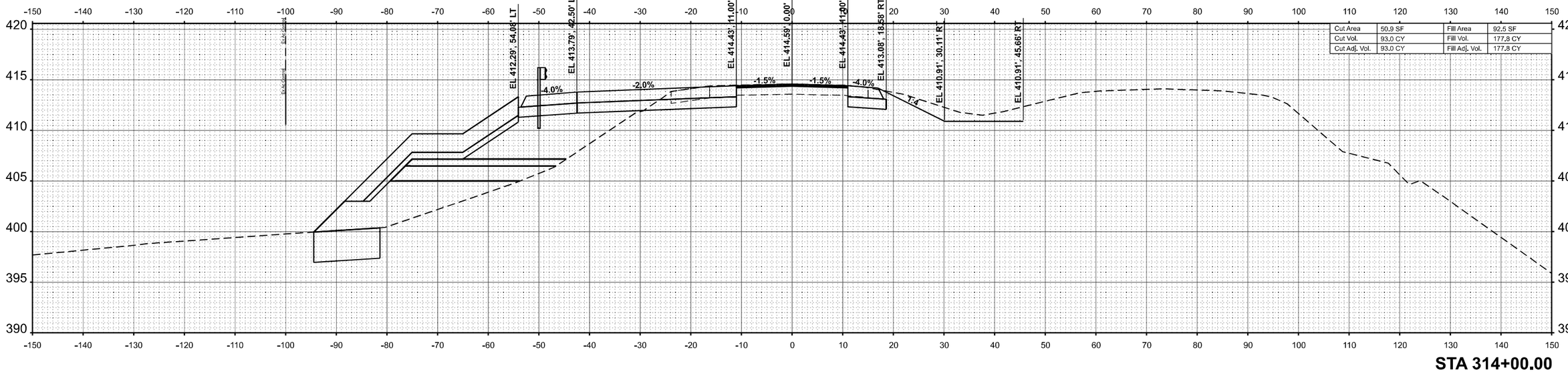
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 31 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	394
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		





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

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

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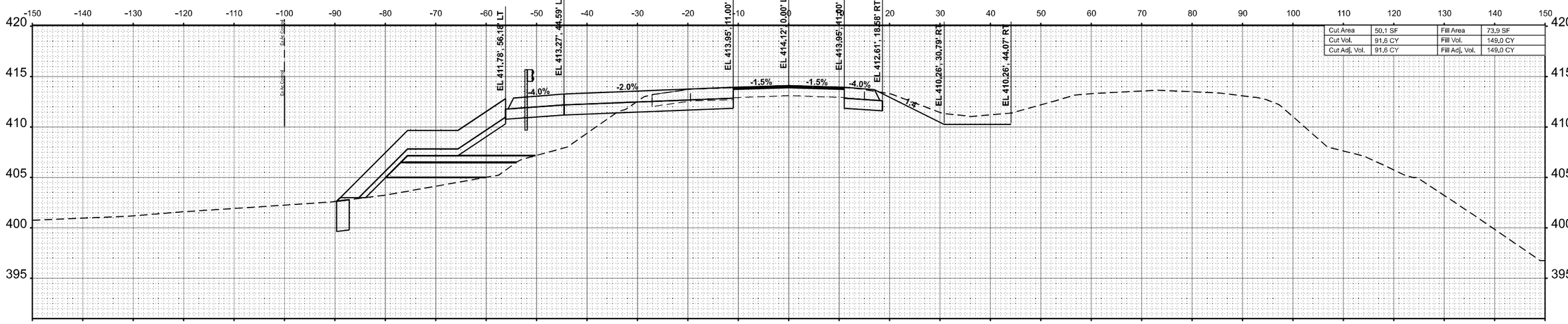
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PLOT DATE = 12/11/2024	DATE -	REVISED -

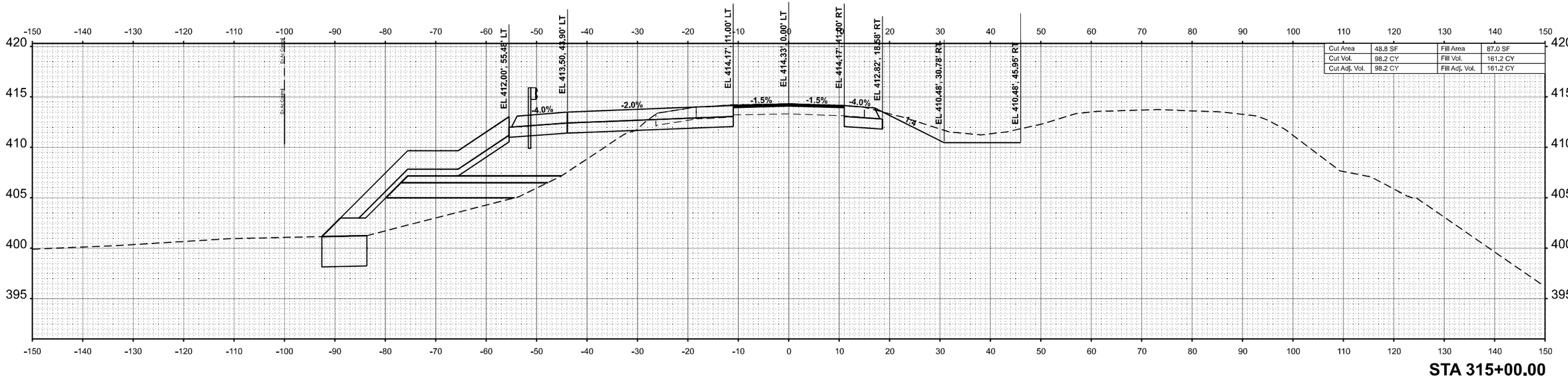
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 32 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	395
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	





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

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

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LICENSE #184.003222

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PLOT DATE = 12/11/2024	DATE -	REVISED -	

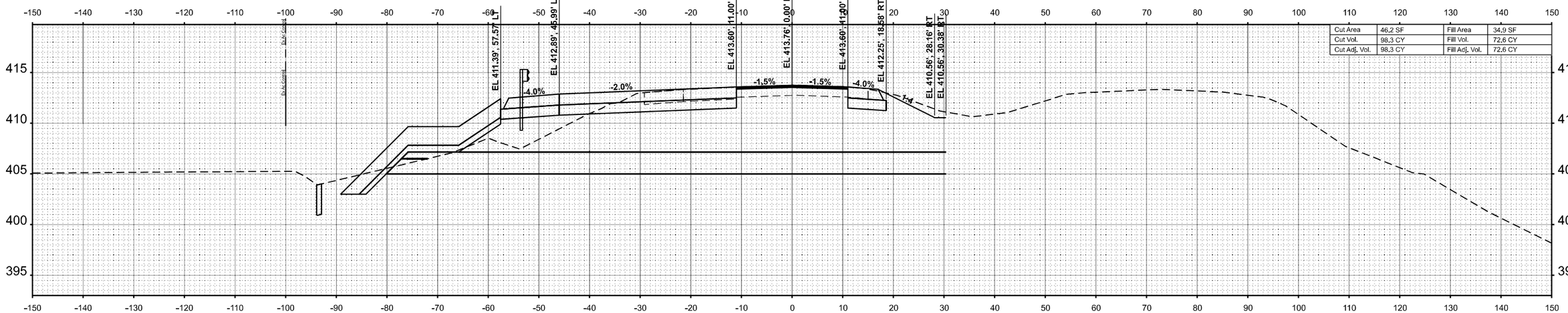
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

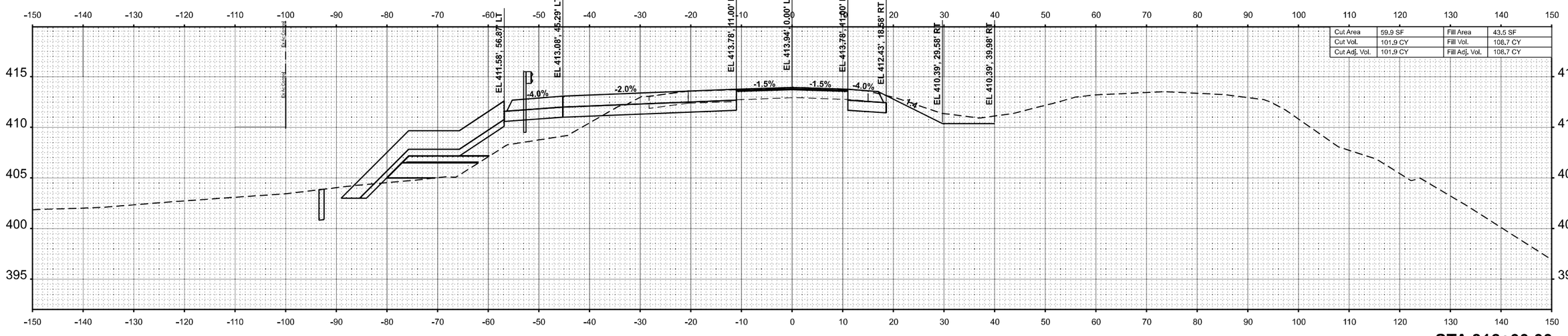
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	396
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	

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



STA 316+50.00



STA 316+00.00

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

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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

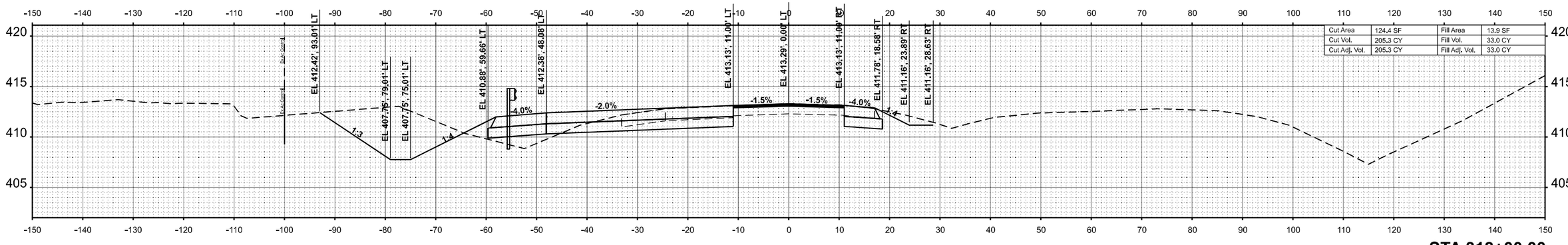
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

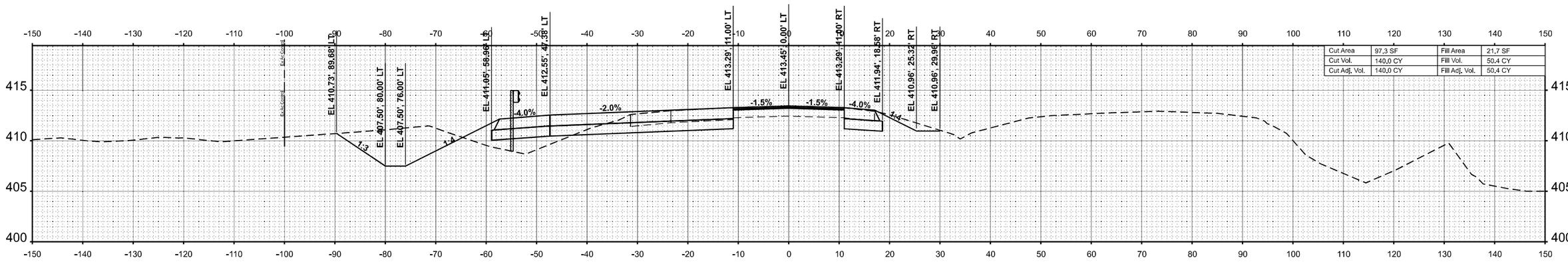
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 34 OF 76 SHEETS | STA. | TO STA.

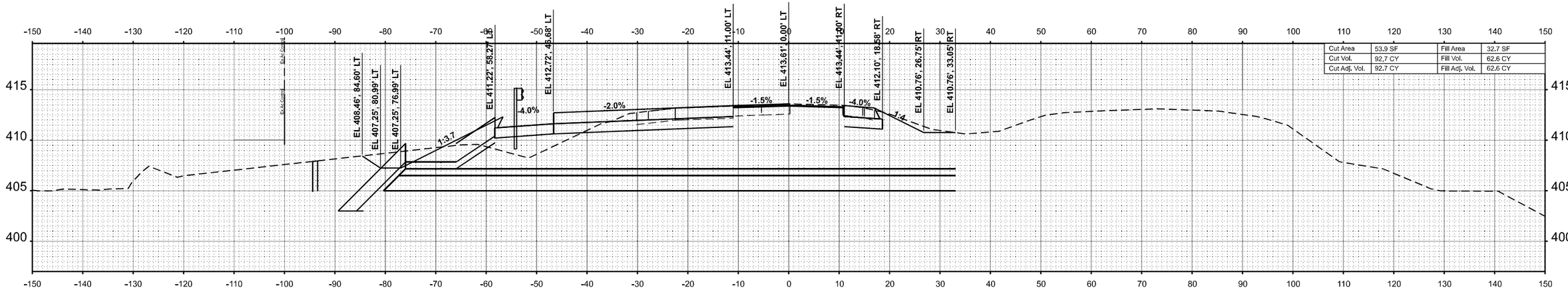
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	397
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 318+00.00



STA 317+50.00



STA 317+00.00

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

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

MODEL: 13WB_4 - 317+00.00 R2 (Sheet)
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EFFINGHAM, IL
LICENSE #184.003222

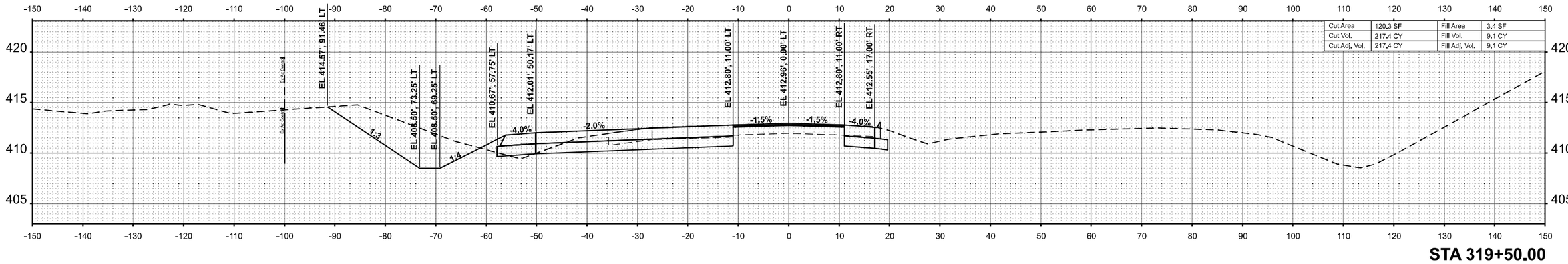
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PLOT DATE = 12/11/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

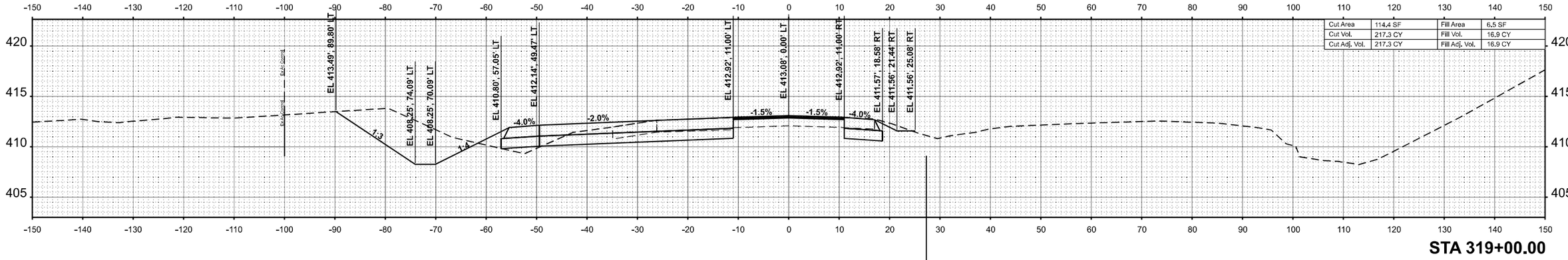
CROSS SECTIONS
IL 13 WB

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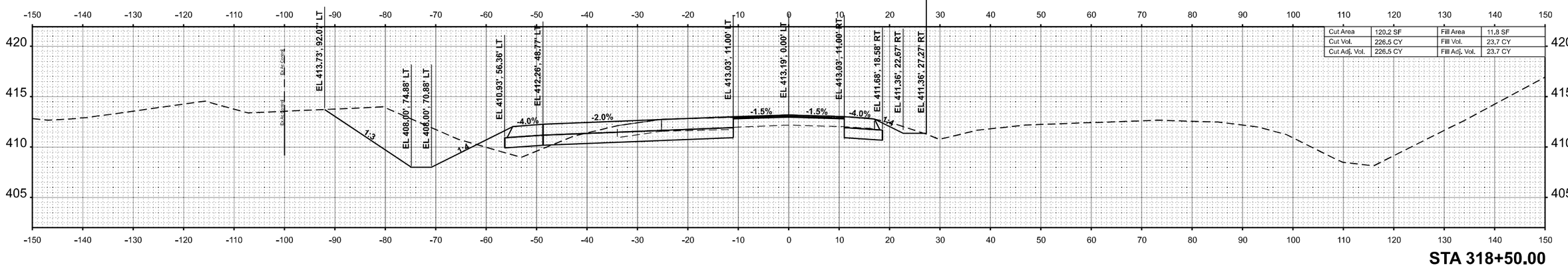
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331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	398
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		



STA 319+50.00



STA 319+00.00



STA 318+50.00

FINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

ORIGINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

MODEL: 13WB_4 - 318+50.00 R2 (Sheet)
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CIVIL DESIGN, INC.
WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

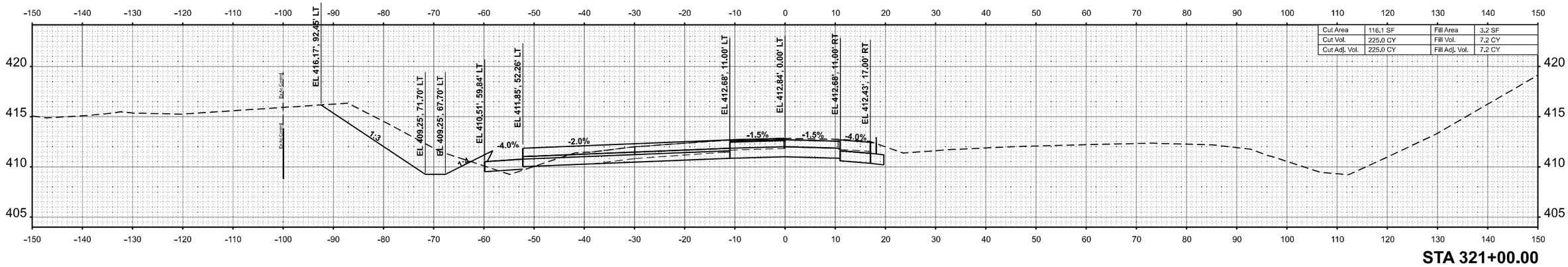
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PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

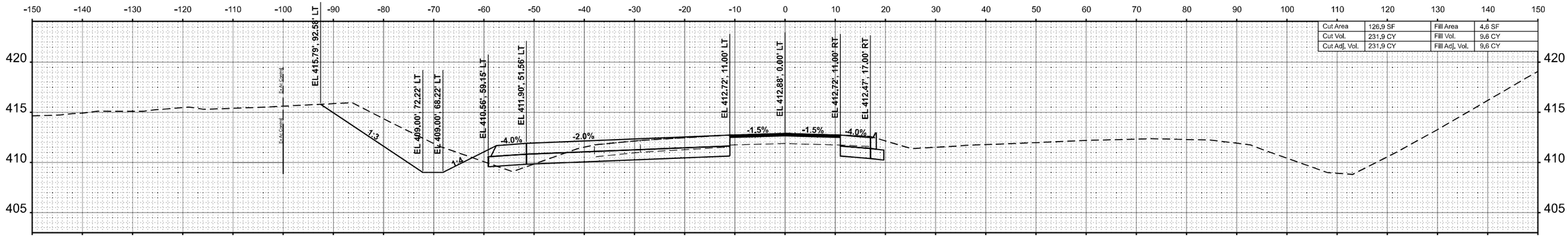
CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 36 OF 76 SHEETS | STA. | TO STA.

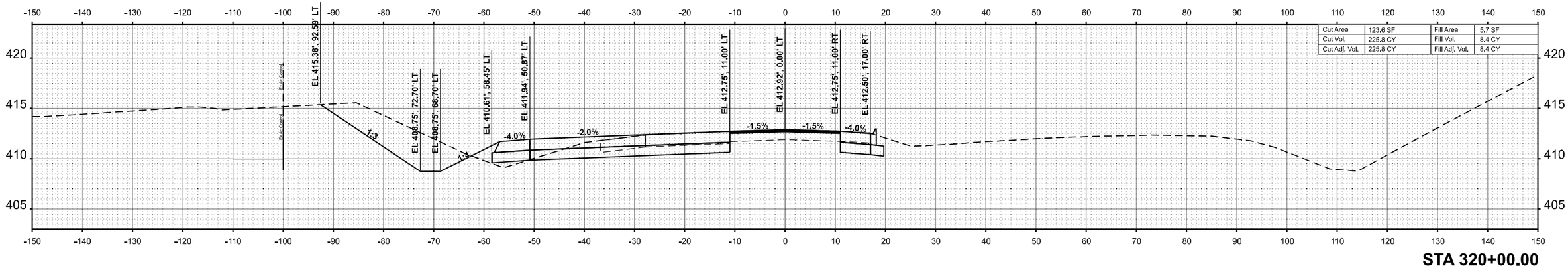
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	399
		CONTRACT NO. 78373		
		ILLINOIS	FED. AID PROJECT	



STA 321+00.00



STA 320+50.00



STA 320+00.00

FINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

ORIGINAL SURVEY

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK
NO.

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WBE | DBE
EFFINGHAM, IL
LICENSE #184.003222

USER NAME = SBales	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 12/11/2024	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 13 WB

SCALE: 1"=10' | SHEET 37 OF 76 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1-4)R-5,RS-2,B-1,B-2,B-3,B-4	WILLIAMSON	519	400
		CONTRACT NO. 78373		
	ILLINOIS	FED. AID PROJECT		