

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	301
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #63074

BKBR-11

Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 9/7/04
Date Completed 9/7/04

ROUTE DESCRIPTION Dunham Rd. Path Under Stearns Rd.
SECT. STRUCT. NO. 045-3173 DRILLED BY TSC I-60,393
COUNTY Kane LOCATION E. of North End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	DEPTH	LOG	TESTS	DESCRIPTION	DEPTH	LOG	TESTS
BKBR-11	38+48	46.00ft RT	743.06 ft	DEPTH	LOG	TESTS		DEPTH	LOG	TESTS
				742.25			FILL - Black clayey Topsoil			
				740.05			FILL - Brown and black CLAY, moist A-6			
				737.55			Medium dense brown SAND and GRAVEL, moist A-1			
				725.05			Medium dense brown and gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a			
				715.05			Medium dense GRAVEL, little sand, occasional Cobbles, saturated A-1-a			
				709.05			Very stiff gray CLAY, trace gravel, moist A-6			
				707.55			Hard gray CLAY, trace gravel, moist A-6			
				701.05			Medium stiff gray CLAY, very moist A-6			
				700.05			($Q_p = 0.75 \text{ tsf}$)			
				695.05			Medium stiff to soft gray CLAY LOAM, trace gravel, very moist A-4			
				693.05			Very dense gray Cobbles and Boulders (rock fragments recovered), trace clay, saturated A-1-a			

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 9/7/04
Date Completed 9/7/04

STRUCTURE NO. 045-3173
ROUTE DESCRIPTION Dunham Rd. Path Under Stearns Rd.
SECT. STRUCT. NO. 045-3173 DRILLED BY TSC I-60,393
COUNTY Kane LOCATION E. of South End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	DEPTH	LOG	TESTS	DESCRIPTION	DEPTH	LOG	TESTS
BKBR-11	38+48	46.00ft RT	743.06 ft	DEPTH	LOG	TESTS		DEPTH	LOG	TESTS
				683.05			Very dense SAND and GRAVEL with Cobbles and Boulders (rock fragments recovered), saturated A-1-a			
				680.55			Probable Dolomite Rock Surface (hard drilling)			
				680.55			Auger Refusal at 62.5'			
				680.55			Mobile B-57 Arco ATV Rig (#159) CME Automatic Hammer			
				680.55			Rotary Wash Drill			

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

BKBR-12

Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 8/31/04
Date Completed 8/31/04

ROUTE DESCRIPTION Dunham Rd. Path Under Stearns Rd.
SECT. STRUCT. NO. 045-3173 DRILLED BY TSC I-60,393
COUNTY Kane LOCATION E. of South End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	DEPTH	LOG	TESTS	DESCRIPTION	DEPTH	LOG	TESTS
BKBR-12	37+27	44.00ft RT	734.5 ft	DEPTH	LOG	TESTS		DEPTH	LOG	TESTS
				728.5			Black CLAY LOAM (topsoil), moist A-4			
				717.51			Soft brown CLAY LOAM, trace organic, very moist A-4/A-6			
				714.01			Loose brown clayey SAND, very moist A-2-4			
				710.01			Soft brown CLAY LOAM, trace organic, very moist A-2			
				707.51			Medium dense brown clayey SAND and GRAVEL, very moist A-2-4			
				705.01			Dense brown SAND and GRAVEL, occasional Cobbles, damp A-1-a			
				702.51			Very stiff to stiff brown CLAY, moist A-6			
				700.51			Stiff gray CLAY, trace gravel, moist to very moist A-6			
				700.51			Stiff gray CLAY, trace gravel, moist to very moist A-6			
				700.51			Stiff gray SILTY LOAM, trace gravel, very moist A-4			
				698.51			Medium dense gray SANDY LOAM, very moist A-2-4			
				696.51			Very stiff dark brown and black CLAY, moist A-6/A-7-6			
				693.51			Dense clayey SAND and GRAVEL, wet A-1-a			

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 8/31/04
Date Completed 8/31/04

STRUCTURE NO. 045-3173
ROUTE DESCRIPTION Dunham Rd. Path Under Stearns Rd.
SECT. STRUCT. NO. 045-3173 DRILLED BY TSC I-60,393
COUNTY Kane LOCATION E. of South End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	DEPTH	LOG	TESTS	DESCRIPTION	DEPTH	LOG	TESTS
BKBR-12	37+27	44.00ft RT	734.5 ft	DEPTH	LOG	TESTS		DEPTH	LOG	TESTS
				693.51			Dense clayey SAND and GRAVEL, wet A-1-a			
				684.51			Probable Fractured Rock Surface, Hard Drilling			
				684.51			Auger Refusal at 62.0'			
				684.51			Mobile B-57 Arco ATV Rig (#159) CME Automatic Hammer			
				684.51			3.25" (83 mm) ID HSA			

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

Note:
1. Boring Locations off Mixed Used Path along Dunham
BKBR-11 Sta. 916+79, 46.00' Rt.
BKBR-12 Sta. 915+58, 44.00' Rt.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOGS
MULTI-USE PATH UNDER
IL 25/STEARNS ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 916+09.93
STRUCTURE NO. 045-3173

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3/30/2009

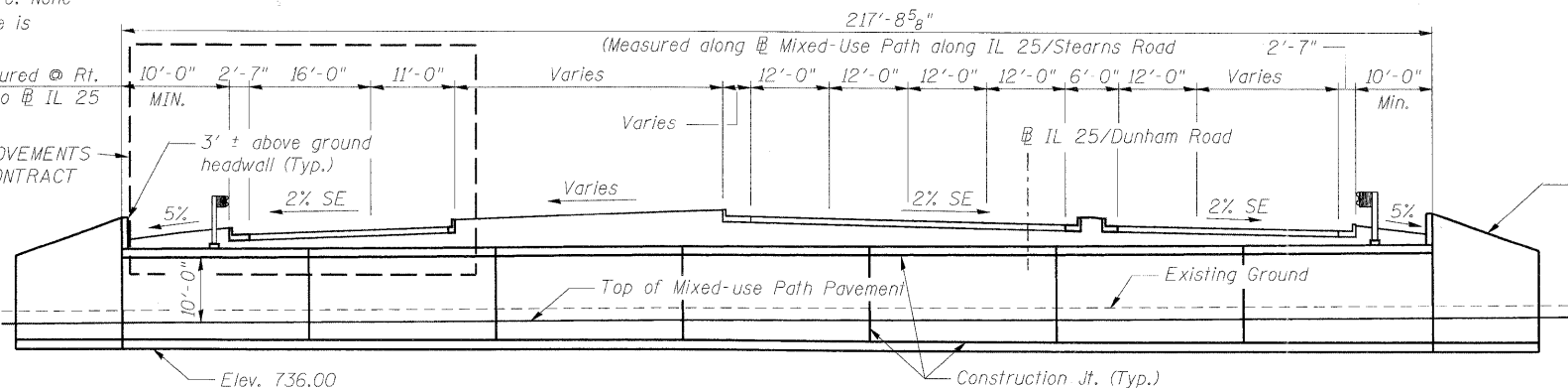
Benchmark BM-24:
 "Aluminum Disk" set in concrete, 0.50+ mile east of Stearns Road and
 Dunham Road at the south side of Stearns Road. Elev. 762.678
 Existing Structure: None
 Precast alternate is
 not allowed.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	302

Contract # 63074

ROADWAY IMPROVEMENTS
 NOT IN THIS CONTRACT



ELEVATION

LOADING HS-20
 Allow 50#/sq. ft. for future wearing surface.

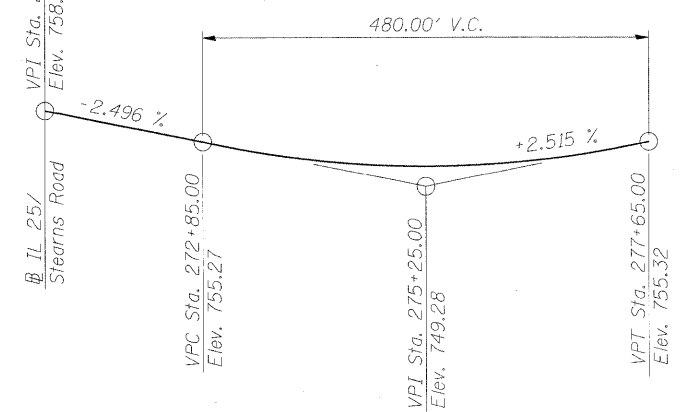
DESIGN SPECIFICATIONS
 AASHTO Standard Specifications for Highway Bridges, 17th edition

DESIGN STRESSES

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

MAXIMUM APPLIED BEARING PRESSURE
 3,000 psf

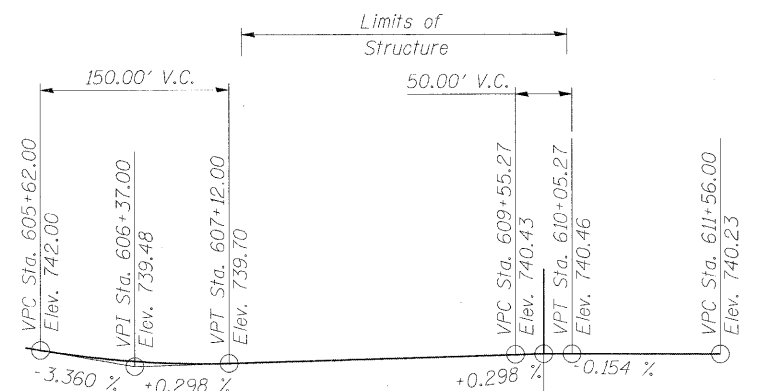
SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.037 g
 Site Coefficient (S) = 1.0



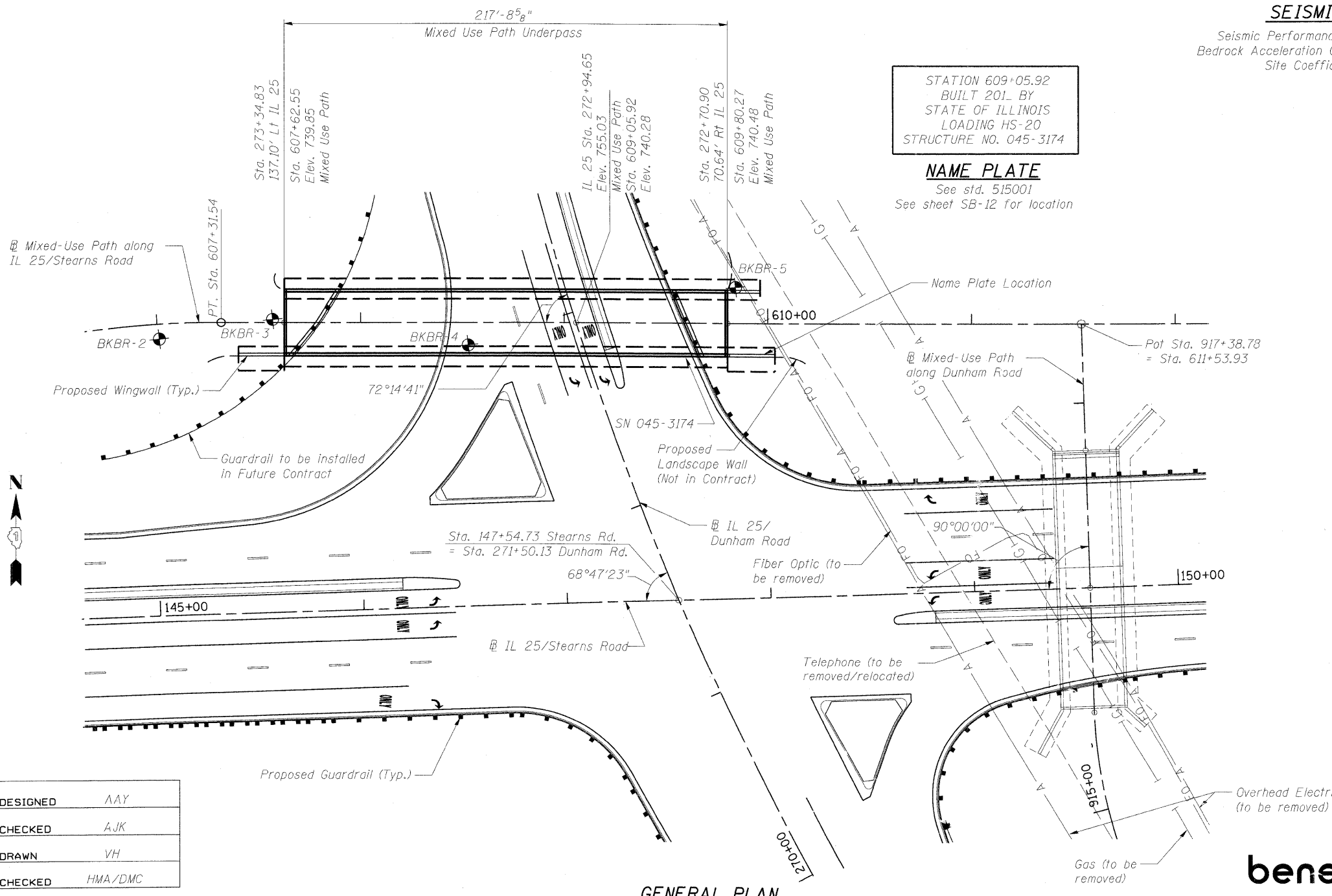
PROFILE GRADE
 (IL 25/Dunham Road)

STATION 609+05.92
 BUILT 2011 BY
 STATE OF ILLINOIS
 LOADING HS-20
 STRUCTURE NO. 045-3174

NAME PLATE
 See std. 515001
 See sheet SB-12 for location



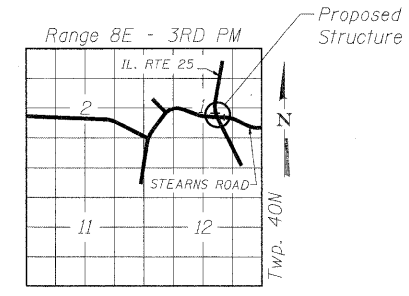
PROFILE GRADE
 Mixed Use Path along IL 25/Stearns Road (under IL 25/Dunham)



GENERAL PLAN

Diane M. Campione
 STATE OF ILLINOIS
 DIANE M. CAMPIONE
 81-4827
 CHICAGO, ILL.
 LICENSED STRUCTURAL ENGINEER
 EXPIRATION DATE: 11-30-2010
 DATE: MARCH 31, 2009

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
 Engineer of Bridges and Structures



LOCATION SKETCH

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450
 Job # 3944

**GENERAL PLAN AND ELEVATION
 MIXED-USE PATH UNDER
 IL 25/DUNHAM ROAD
 F.A.P. 360 - SEC. 06-00214-15-BR
 KANE COUNTY
 STATION 609+05.92
 STRUCTURE NO. 045-3174**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	303
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET SB- 2
OF 14 SHEETS

Contract # 63071

TOTAL BILL OF MATERIAL

PAY ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.		1,885	1,885
Structure Excavation	Cu. Yd.		2,768	2,768
Concrete Structures	Cu. Yd.		1,297.9	1,297.9
* Form Liner Textured Surface (Special)	Sq. Ft.		4,852	4,852
* Reinforcement Bars, Epoxy Coated	Pound		247,210	247,210
Name Plates	Each		1	1
Geocomposite Wall Drain	Sq. Yd.		732	732
* Pipe Underdrains for Structures 4"	Foot		534	534
* Graffiti Removal (Special)	Sq. Yd.		726	726
* Anti-Graffiti Coating	Sq. Ft.		5,211	5,211
* Street Railing (Special)	Foot		128	128
* Architectural Lettering	L. Sum		0.5	0.5

* See Special Provisions

INDEX OF DRAWINGS

SB - 1 of 14	General Plan and Elevation
SB - 2 of 14	General Notes, Index of Sheets and Total Bill of Material
SB - 3 of 14	Foundation Plan and Reinforcement
SB - 4 of 14	Top Slab Reinforcement
SB - 5 of 14	Plan and Elevation North Wall
SB - 6 of 14	Plan and Elevation South Wall
SB - 7 of 14	Wall Reinforcement
SB - 8 of 14	Wingwall Details 1 of 2
SB - 9 of 14	Wingwall Details 2 of 2
SB - 10 of 14	Drainage Details
SB - 11 of 14	Rail Details
SB - 12 of 14	Architectural Treatment
SB - 13 of 14	Soil Boring Log 1 of 2
SB - 14 of 14	Soil Boring Log 2 of 2

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60. See Special Provision.
- Reinforcement bars designated (E) shall be epoxy coated.
- All exposed concrete edges shall have a $\frac{3}{4}$ " x 45 deg. Chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.
- Reinforcement bending details shall be in accordance with the latest Manual of Standard Practice for Detailing Reinforced Concrete Structures, ACI 315.
- Reinforcement bar bending dimensions are out to out.
- Cover from face of concrete to face of reinforcement bars shall be 3 inches for surfaces cast against earth and 2 inches for all other surfaces unless otherwise shown.
- The cost of Water Seals and PJF is included in the cost of Concrete Structures unless noted otherwise.
- Backfill shall be placed simultaneously against both side walls of the structure. The maximum differential in fill height on either side shall be two feet.
- Reinforcement bar lap splices shall be Class C. Top bars so placed that more than 12 inches of concrete is cast below the reinforcement shall be lapped for 1.4 x basic lap. Reinforcement bar splices shall be in accordance with the following table unless shown otherwise on the drawing.

Bar Size	Basic Lap	1.4 Basic Lap
#4	1'-8"	2'-5"
#5	2'-2"	3'-0"
#6	2'-7"	3'-7"
#7	3'-5"	4'-10"
#8	4'-6"	6'-4"
#9	5'-9"	8'-1"
#10	7'-3"	10'-3"
#11	9'-0"	12'-7"

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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Job # 3944

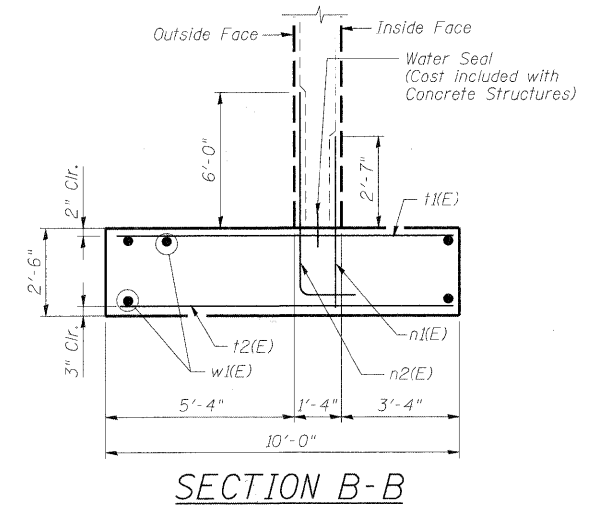
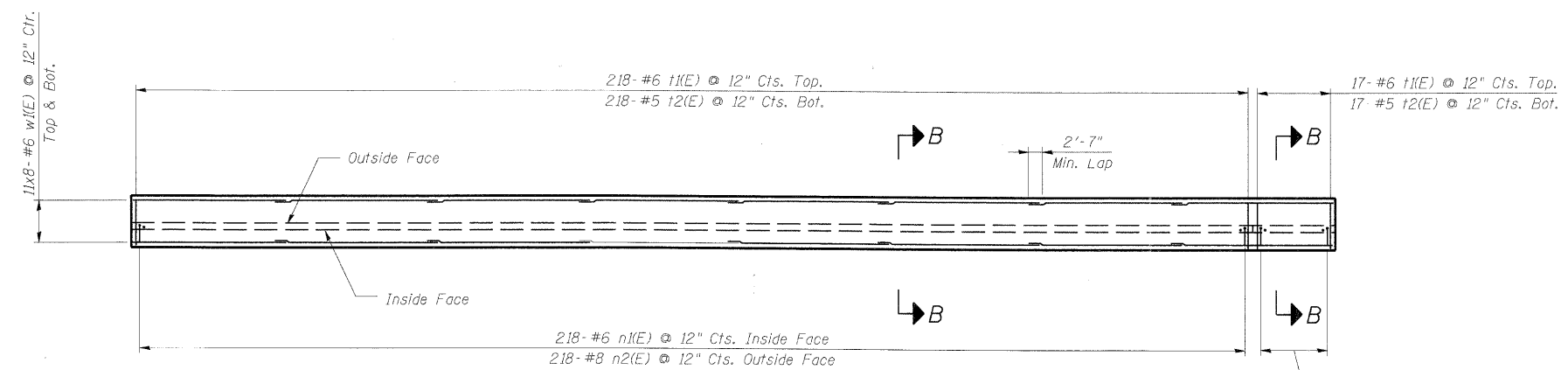
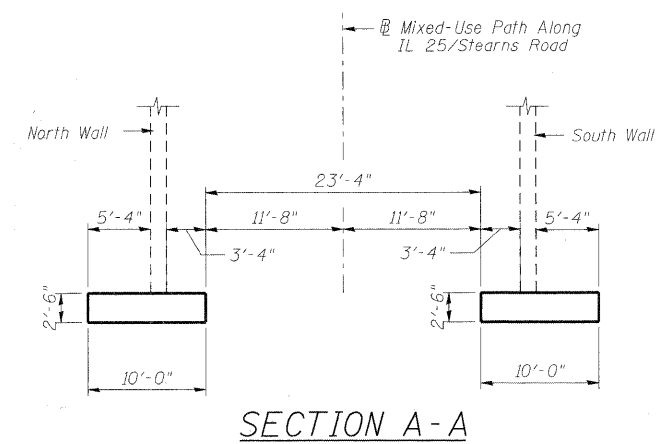
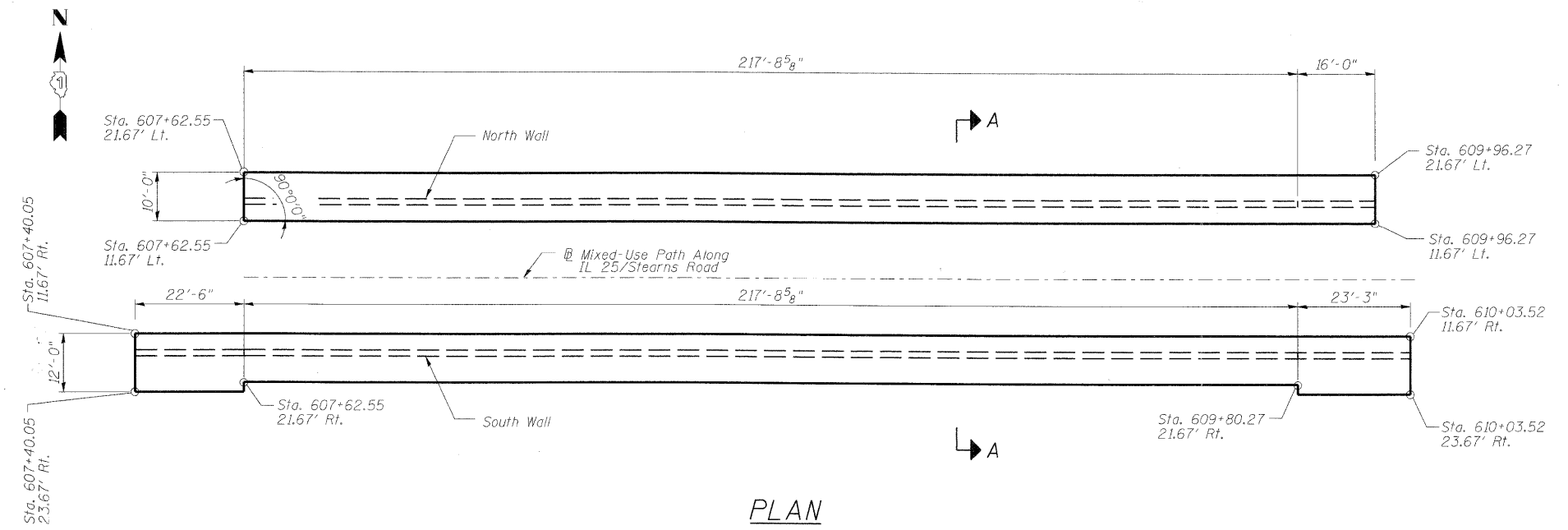
GENERAL NOTES, INDEX OF SHEETS
AND TOTAL BILL OF MATERIAL
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	304
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

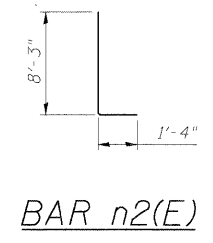
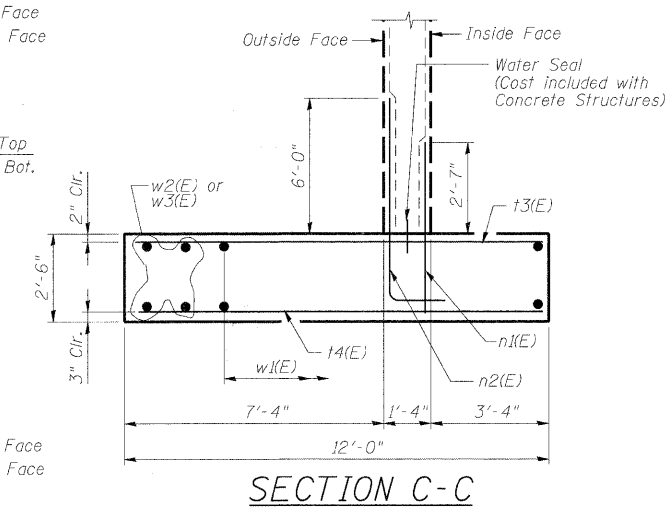
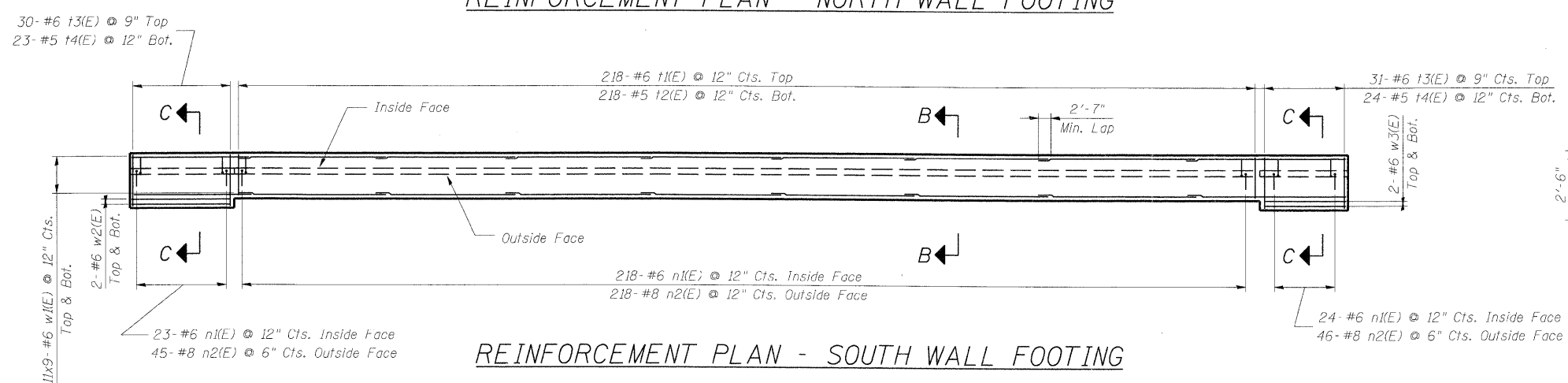
Contract # 63074

SHEET SB- 3
OF 14 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n1(E)	499	#6	4'-10"	—
n2(E)	543	#8	9'-7"	—
11(E)	453	#6	9'-8"	—
12(E)	453	#5	9'-8"	—
13(E)	61	#6	11'-8"	—
14(E)	47	#5	11'-8"	—
w1(E)	374	#6	31'-6"	—
w2(E)	4	#6	22'-2"	—
w3(E)	4	#6	22'-11"	—
Concrete Structures			Cu. Yd.	468.9
Reinforcement Bars, Epoxy Coated			Pound	48,270



DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

- NOTES:
- Stations and offsets are measured with respect to Mixed-Use Path along IL 25/ Stearns Road
 - Bars indicated thus 13x8-#6 etc. indicates 13 lines of bars with 8 lengths per line.
 - Maximum Applied Bearing Pressure is 3000 psf.
 - 1" Conduit through footing at east end. See Lighting Plans.

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312-565-0450
Job # 3944

FOUNDATION PLAN AND REINFORCEMENT
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

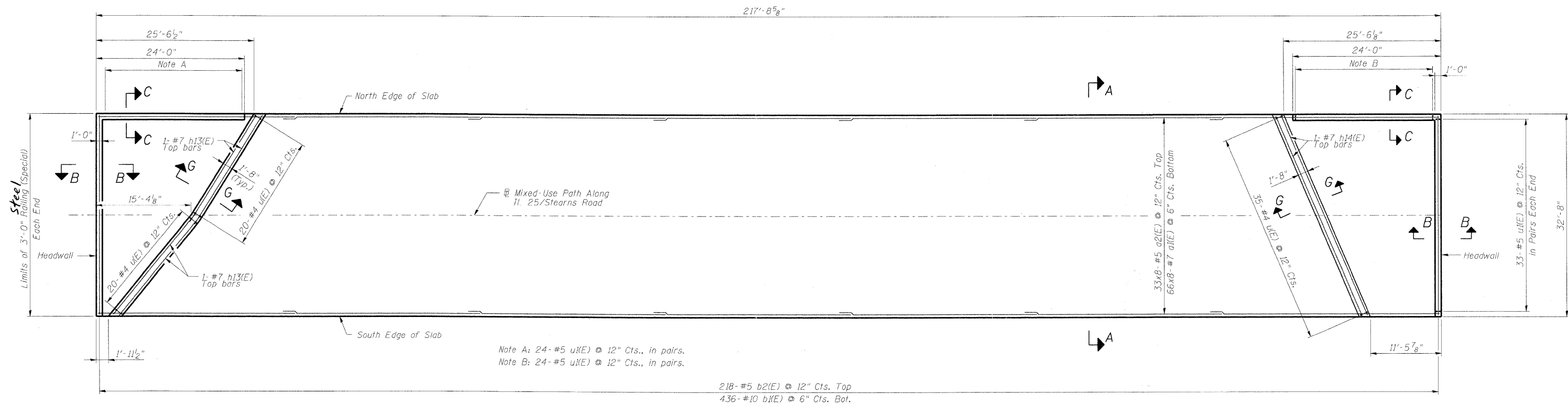
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	305
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

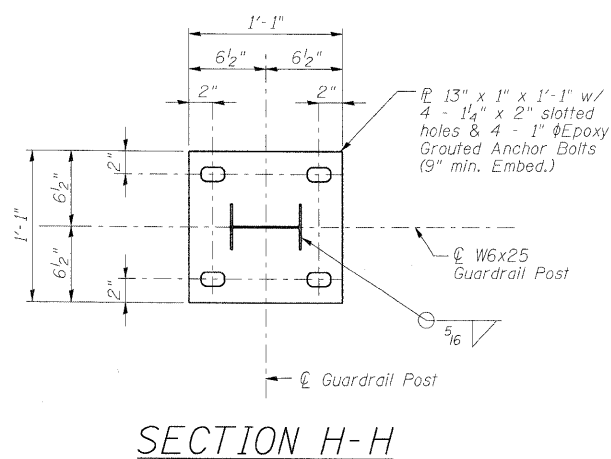
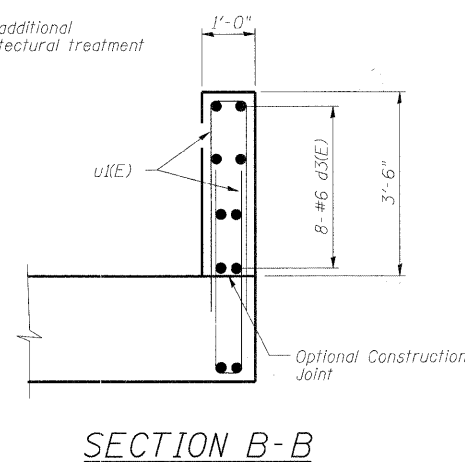
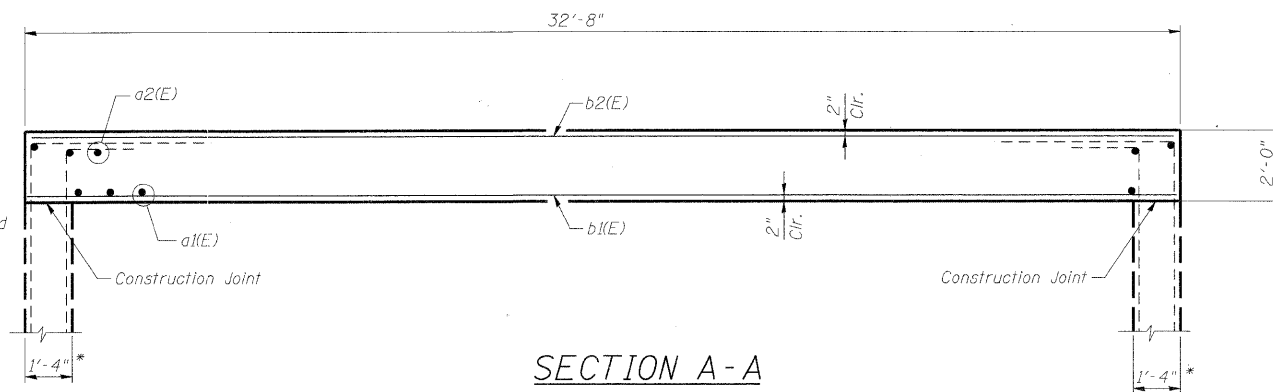
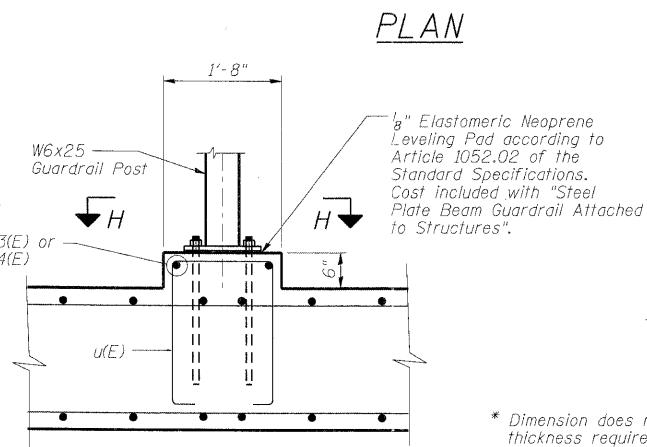
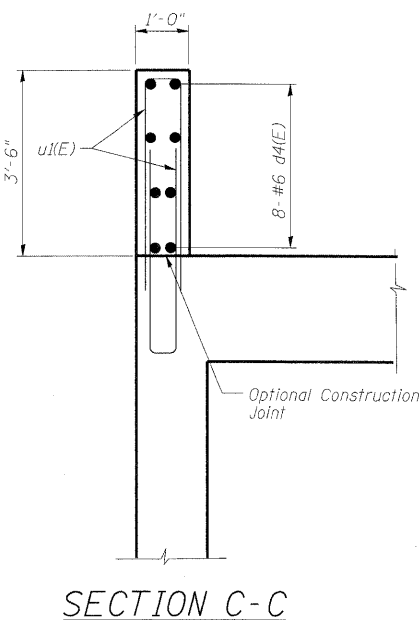
Contract # 63074

SHEET SB- 4
OF 14 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	528	#7	30'-3"	—
a2(E)	264	#5	29'-3"	—
b1(E)	436	#10	32'-4"	—
b2(E)	218	#5	32'-4"	—
d3(E)	16	#6	32'-4"	—
d4(E)	16	#6	26'-8"	—
h13(E)	4	#7	20'-6"	—
h14(E)	2	#7	35'-0"	—
u(E)	75	#4	6'-4"	□
u1(E)	228	#5	8'-8"	□
Concrete Structures		Cu. Yd.	541.3	
Reinforcement Bars, Epoxy Coated		Pound	112,830	



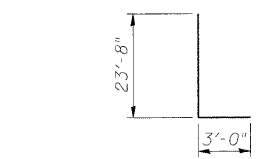
* Dimension does not include additional thickness required for architectural treatment

NOTES:

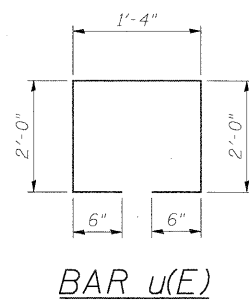
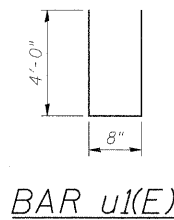
- Bars indicated thus 34x8-#5 etc. indicates 34 lines of bars with 8 lengths per line.

TOP SLAB REINFORCEMENT
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

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312-565-0450
Job # 3944



DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

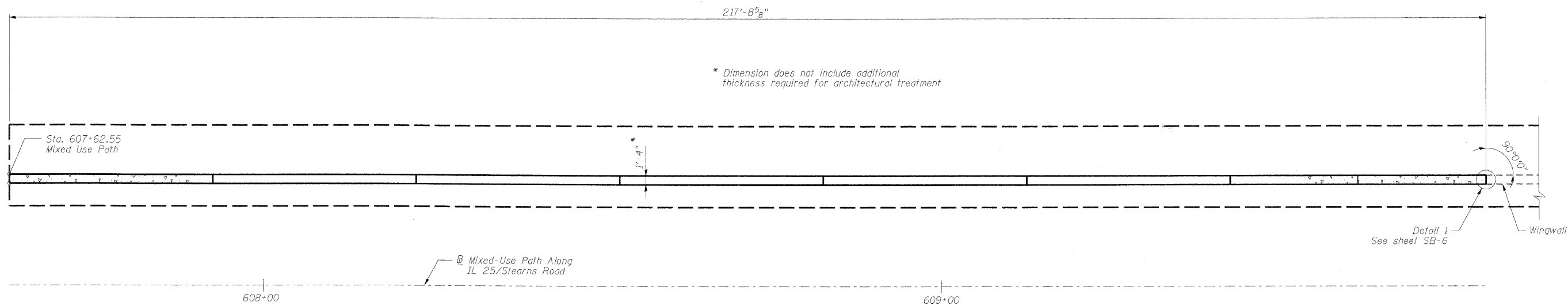


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
-	-	KANE	545	306
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET SB- 5
OF 14 SHEETS

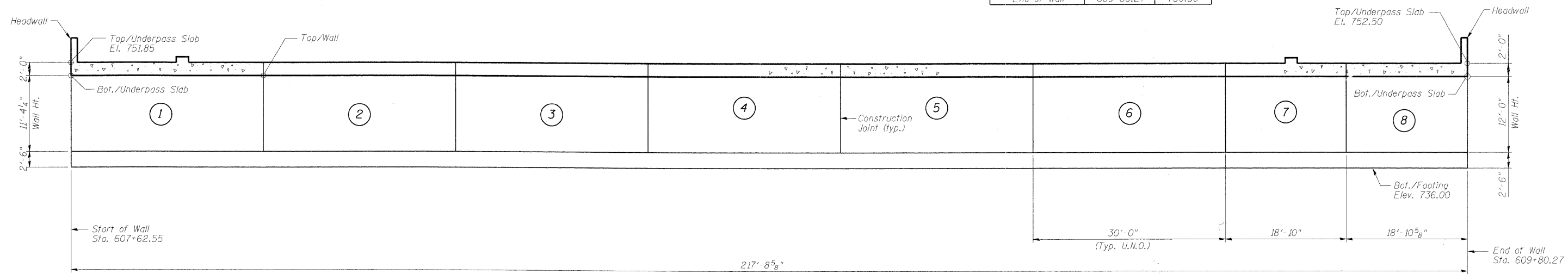
Contract # 63074



PLAN

TOP/WALL ELEVATIONS

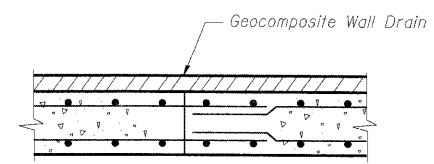
Location Between	Station	Elevation
Start of Wall	607+62.55	749.85
Panels 1 & 2	607+92.55	749.94
Panels 2 & 3	608+22.55	750.03
Panels 3 & 4	608+52.55	750.12
Panels 4 & 5	608+82.55	750.21
Panels 5 & 6	609+12.55	750.30
Panels 6 & 7	609+42.55	750.39
Panels 7 & 8	609+61.38	750.44
End of Wall	609+80.27	750.50



ELEVATION

NOTES:

- Stations and offsets are measured with respect to \mathbb{M} Mixed-Use Path along IL 25/Stearns Road
- For wall reinforcement see sheet SB-7.
- U.N.O. denotes unless noted otherwise.



CONSTRUCTION JOINT
(Typical at all Constr. Jts.)

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

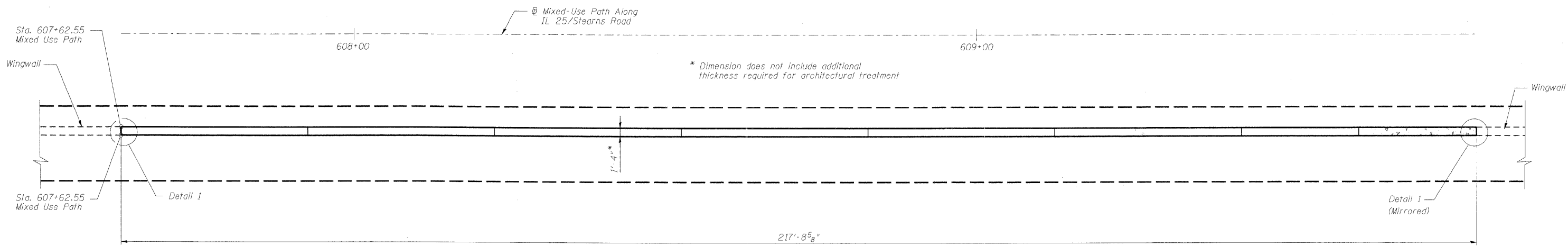
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Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

PLAN & ELEVATION NORTH WALL
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

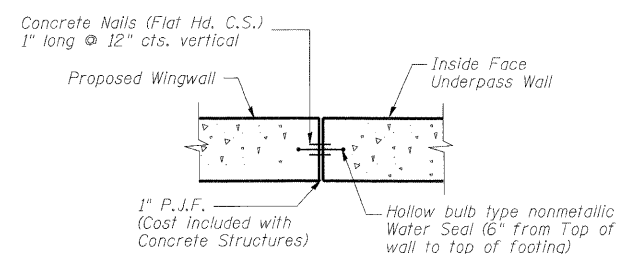
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SB- 6 OF 14 SHEETS
-	-	KANE	545	307	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 63074



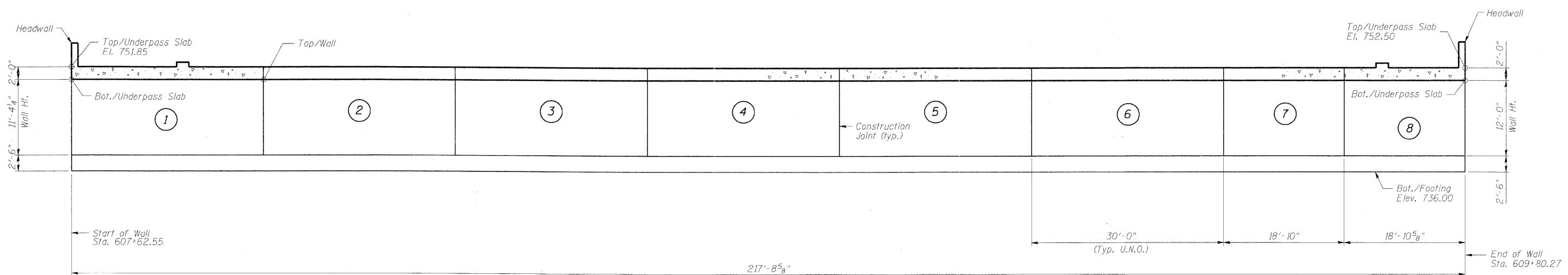
PLAN



DETAIL 1

TOP/WALL ELEVATIONS

Location Between	Station	Elevation
Start of Wall	607+62.55	749.85
Panels 1 & 2	607+92.55	749.94
Panels 2 & 3	608+22.55	750.03
Panels 3 & 4	608+52.55	750.12
Panels 4 & 5	608+82.55	750.21
Panels 5 & 6	609+12.55	750.30
Panels 6 & 7	609+42.55	750.39
Panels 7 & 8	609+61.38	750.44
End of Wall	609+80.27	750.50



ELEVATION

- NOTES:
- Stations and offsets are measured with respect to @ Mixed-Use Path along IL 25/Stearns Road
 - For wall reinforcement see sheet SB-7.
 - For Construction Joint detail see sheet SB-5.
 - U.N.O. denotes unless noted otherwise.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

PLAN & ELEVATION SOUTH WALL
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

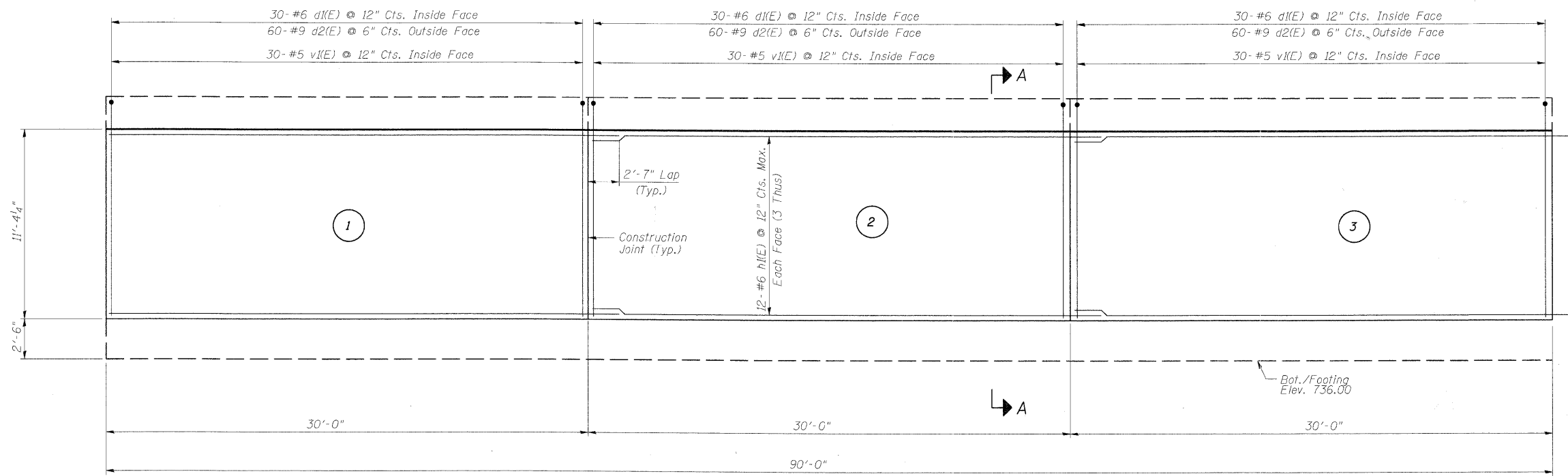
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
-	-	KANE	545	328
FED. ROAD DIST. NO. /	ILLINOIS	FED. AID PROJECT-		

SHEET SB- 7
OF 14 SHEETS

Contract # 63074



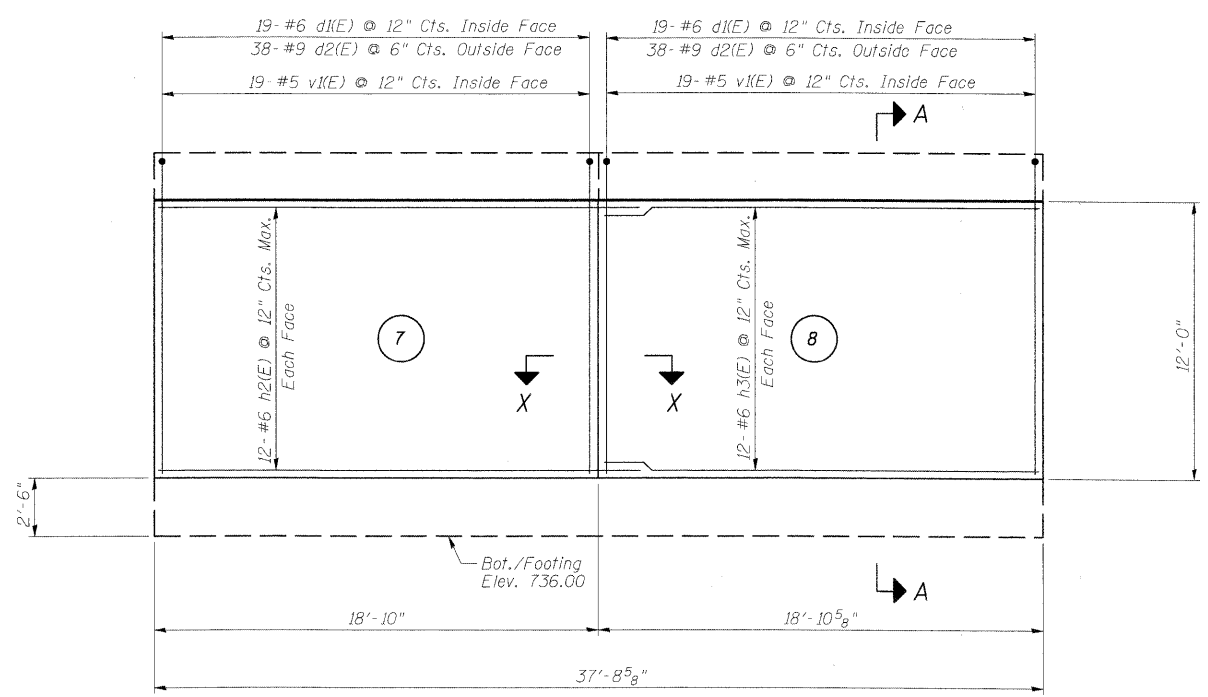
NORTH WALL ELEVATION

(South Wall Elevation Similar)
(Panels 1 thru 3, Panels 4 thru 6 similar)

BILL OF MATERIAL

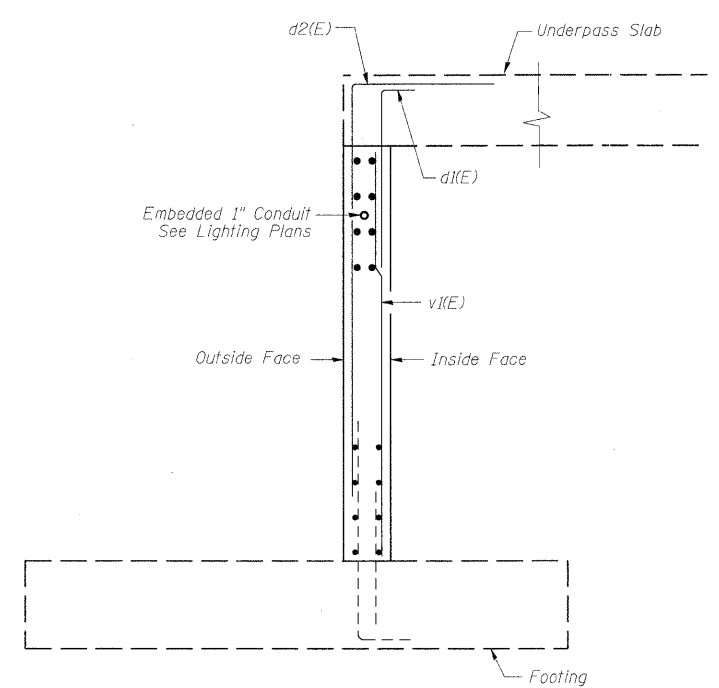
Bar	No.	Size	Length	Shape
d1(E)	436	#6	7'-0"	┌
d2(E)	872	#9	18'-6"	┌
h1(E)	288	#6	32'-7"	—
h2(E)	48	#6	21'-5"	—
h3(E)	48	#6	18'-7"	—
v1(E)	436	#5	11'-0"	—
Concrete Structures	Cu. Yd.	251.1		
Reinforcement Bars, Epoxy Coated	Pound	81,420		

* Totals shown are for the north and south walls.

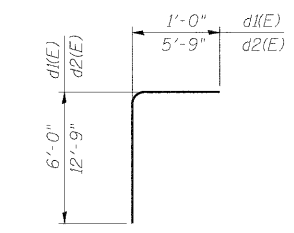


NORTH WALL ELEVATION

(South Wall Elevation Similar)
(Panels 7 and 8)



SECTION A-A



BARS d1(E) & d2(E)

Notes:

1. Stations and offsets are measured with respect to the Mixed-Use Path along IL 25/Stearns Road.
2. (1) Denotes panel number.
3. For Section X-X see sheets SB-5 and SB-6.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

benesch
alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

**WALL REINFORCEMENT
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174**

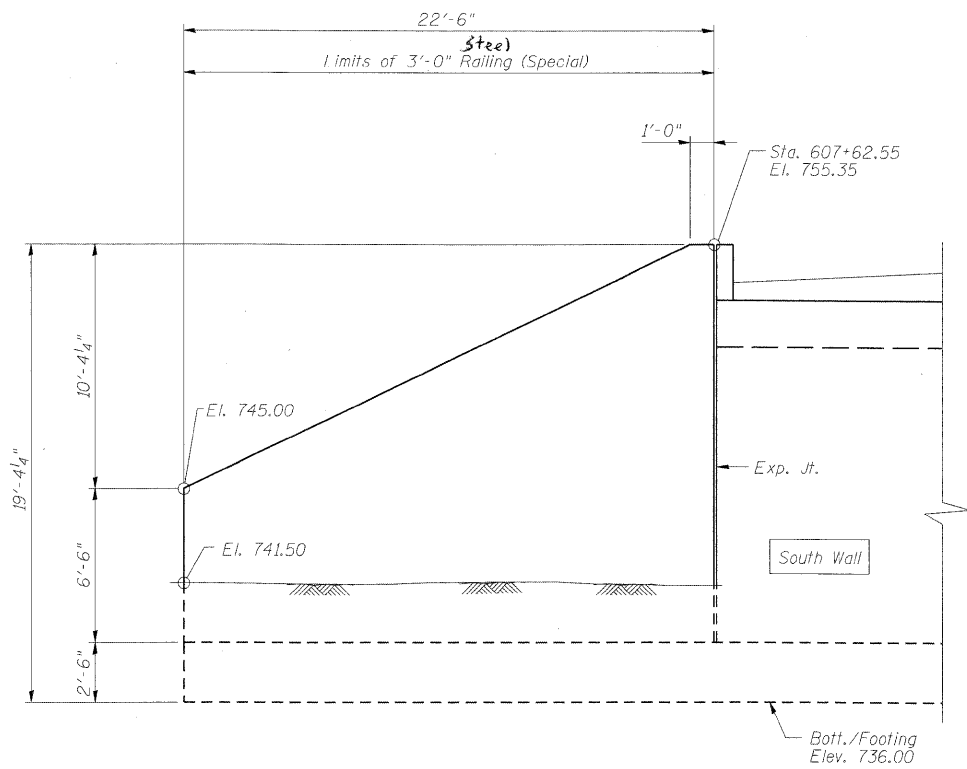
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	309

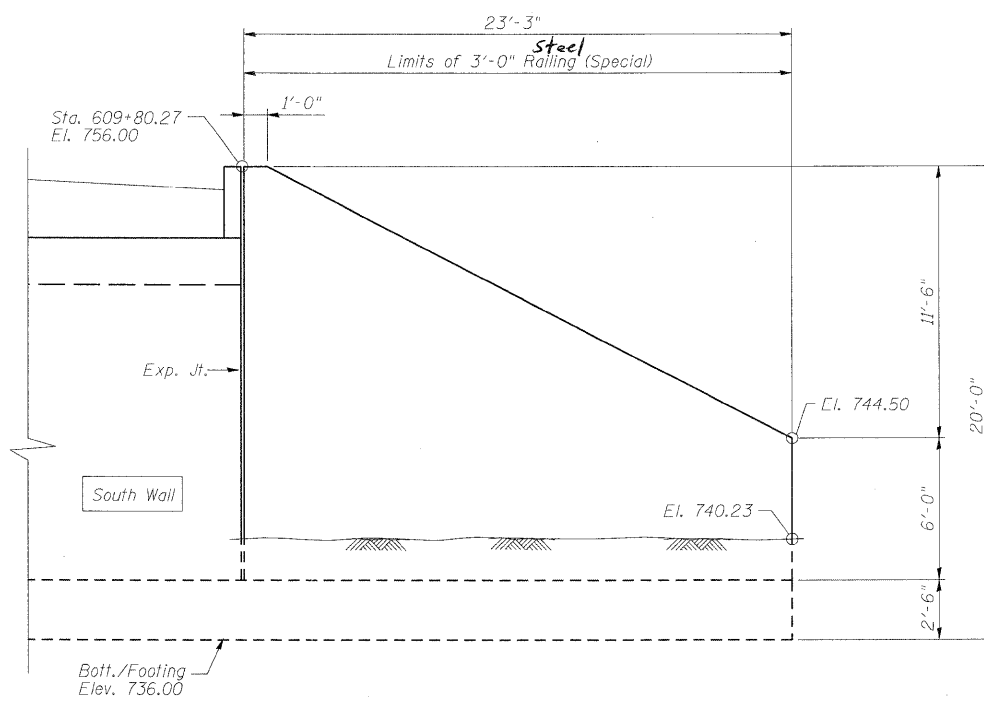
SHEET SB- 8
OF 14 SHEETS

Contract # 63074



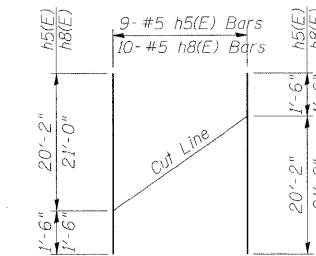
WINGWALL ELEVATION

(South West End)
Looking North



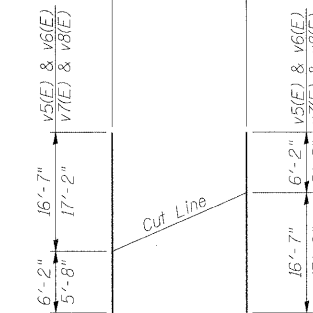
WINGWALL ELEVATION

(South East End)
Looking North

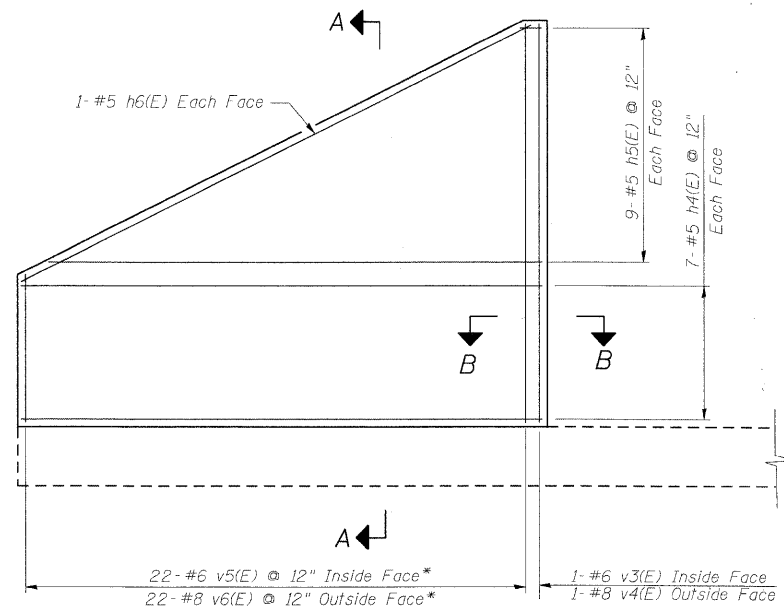


BARS h5(E) & h8(E)

11-#6 v5(E) & 11-#8 v6(E)
11-#6 v7(E) & 11-#8 v8(E)

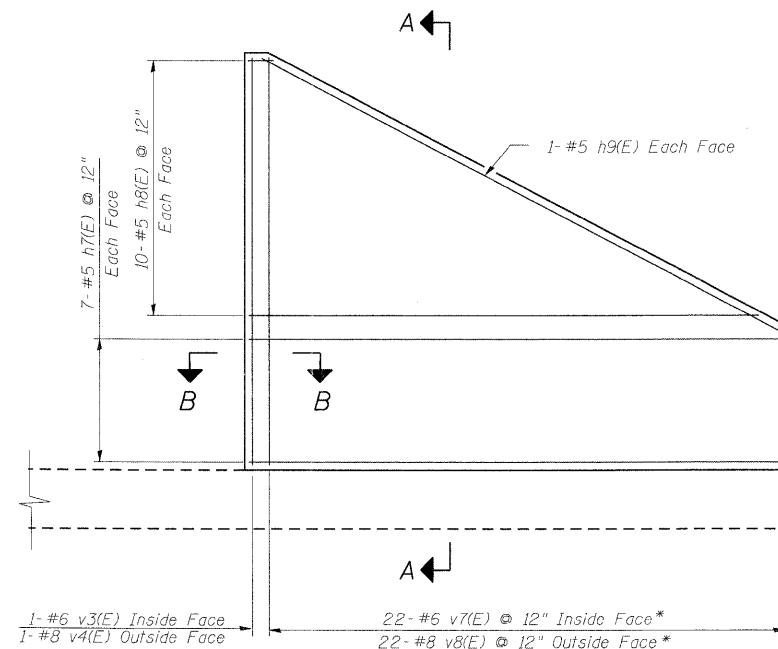


BARS v5(E), v6(E), v7(E) & v8(E)



REINFORCEMENT ELEVATION

(South West End)



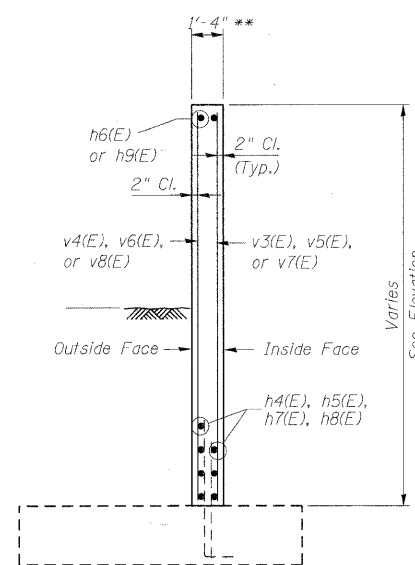
REINFORCEMENT ELEVATION

(South East End)

* See cutting diagram

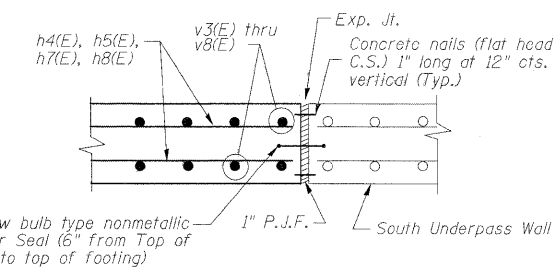
NOTES:

1. For Wingwall Footing layout see sheet SB-3.
2. For Wingwall Bill of Materials see sheet SB-9.
3. Form liner architectural treatment to be applied to Inside face of wingwalls



SECTION A-A

** Dimension does not include additional thickness required for architectural treatment



SECTION B-B

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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Chicago, Illinois 60601
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Job # 3944

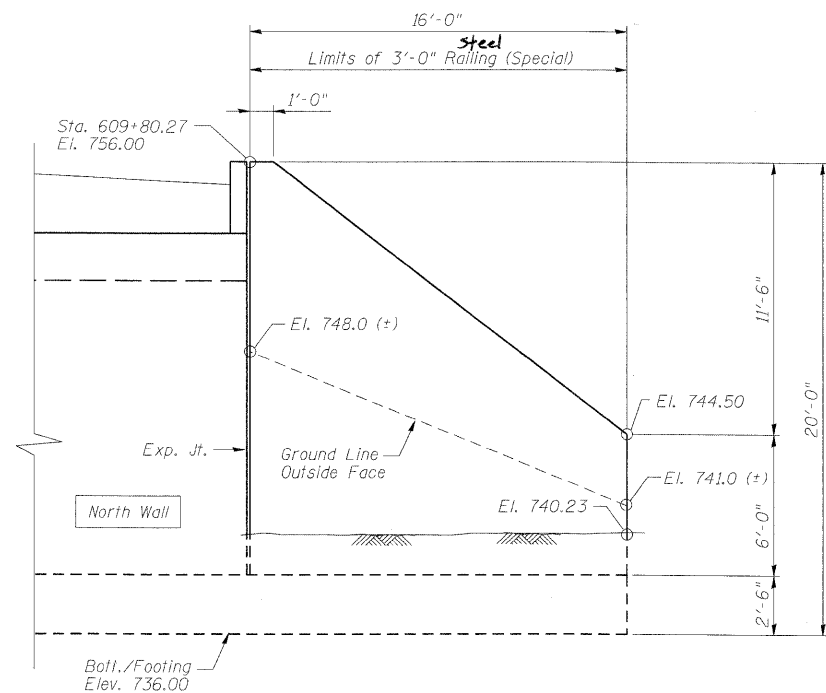
WINGWALL DETAILS 1 OF 2
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	310
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

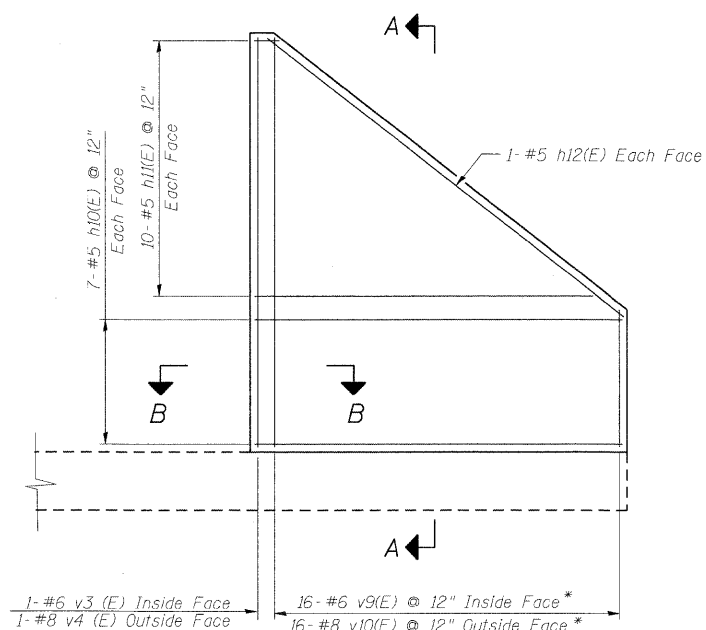
Contract # 63074

SHEET SB- 9
OF 14 SHEETS



WINGWALL ELEVATION

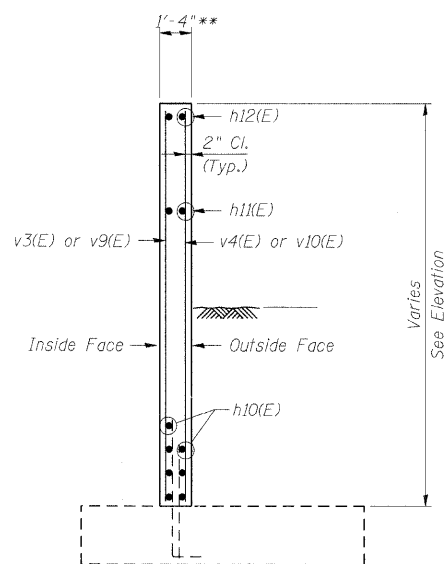
(North East End)
Looking North



REINFORCEMENT ELEVATION

(North East End)

* See cutting diagram

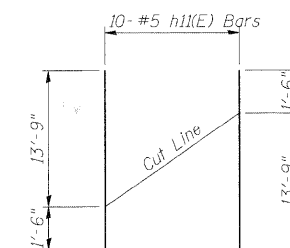


SECTION A-A

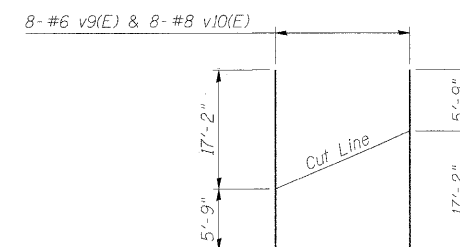
** Dimension does not include additional thickness required for architectural treatment

NOTES:

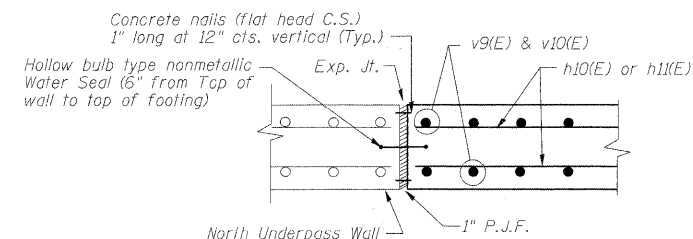
1. For Wingwall Footing layout see sheet SB-3.
2. Form liner architectural treatment to be applied to Inside face of wingwalls



BARS h11(E)



BARS v9(E) & v10(E)



SECTION B-B

BILL OF MATERIAL

(Wingwalls)

Bar	No.	Size	Length	Shape	
h4(E)	14	#5	22'-1"	—	
h5(E)	9	#5	21'-8"	—	
h6(E)	2	#5	23'-0"	—	
h7(E)	14	#5	22'-10"	—	
h8(E)	10	#5	22'-6"	—	
h9(E)	2	#5	24'-0"	—	
h10(E)	14	#5	15'-8"	—	
h11(E)	10	#5	15'-3"	—	
h12(E)	2	#5	18'-0"	—	
v3(E)	3	#6	16'-7"	—	
v4(E)	3	#8	16'-7"	—	
v5(E)	11	#6	22'-9"	—	
v6(E)	11	#8	22'-9"	—	
v7(E)	11	#6	22'-10"	—	
v8(E)	11	#8	22'-10"	—	
v9(E)	8	#6	22'-11"	—	
v10(E)	8	#8	22'-11"	—	
Concrete Structures				Cu. Yd.	36.6
Reinforcement Bars, Epoxy Coated				Pound	4,690

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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Job # 3944

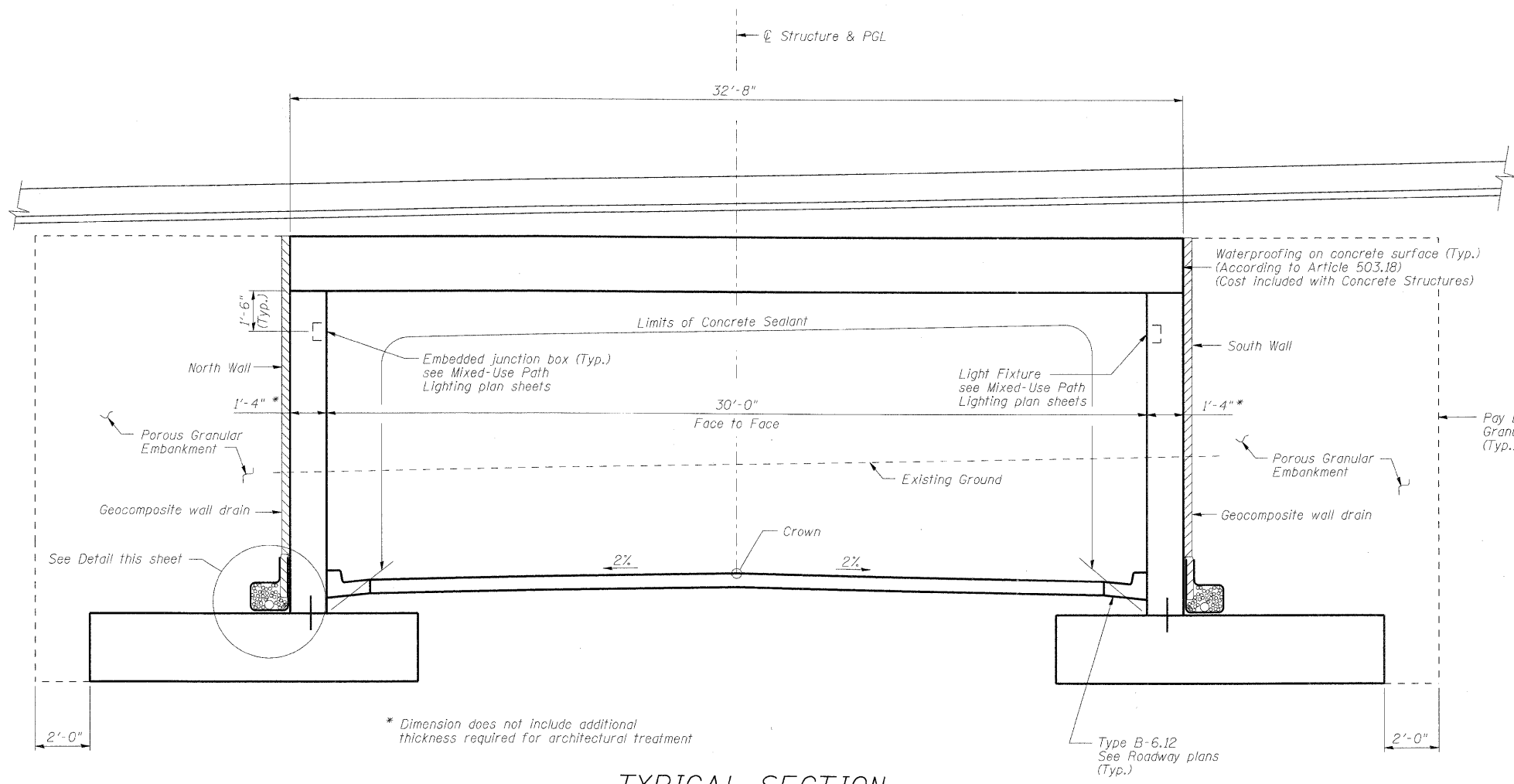
WINGWALL DETAILS 2 OF 2
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	311
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

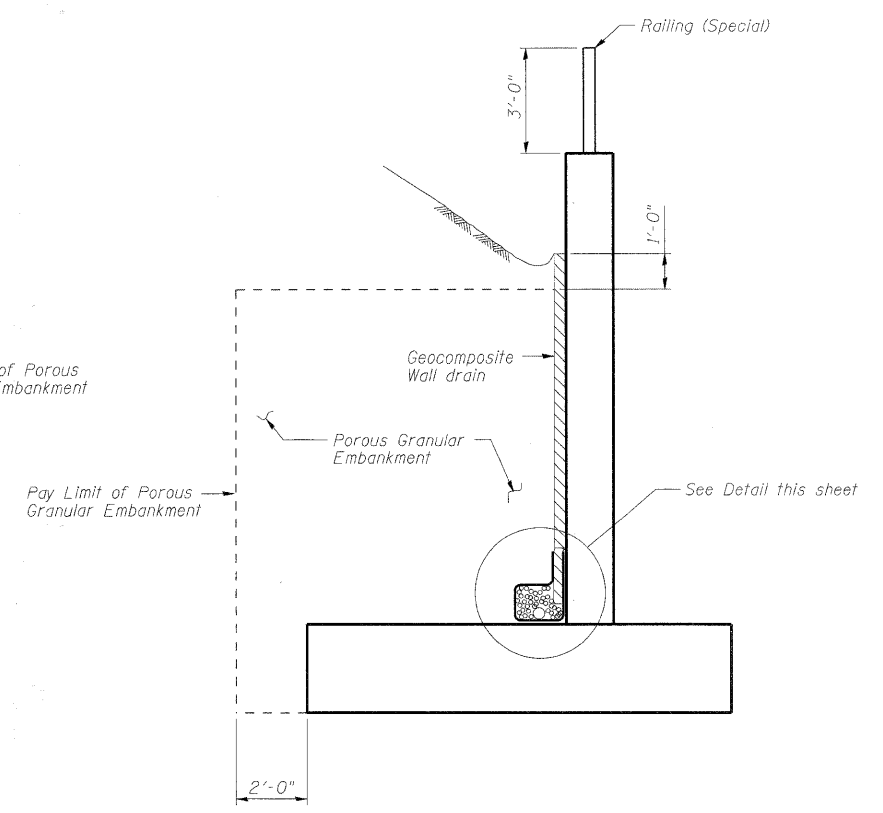
SHEET SB- 10
OF 14 SHEETS

Contract # 63074



* Dimension does not include additional thickness required for architectural treatment

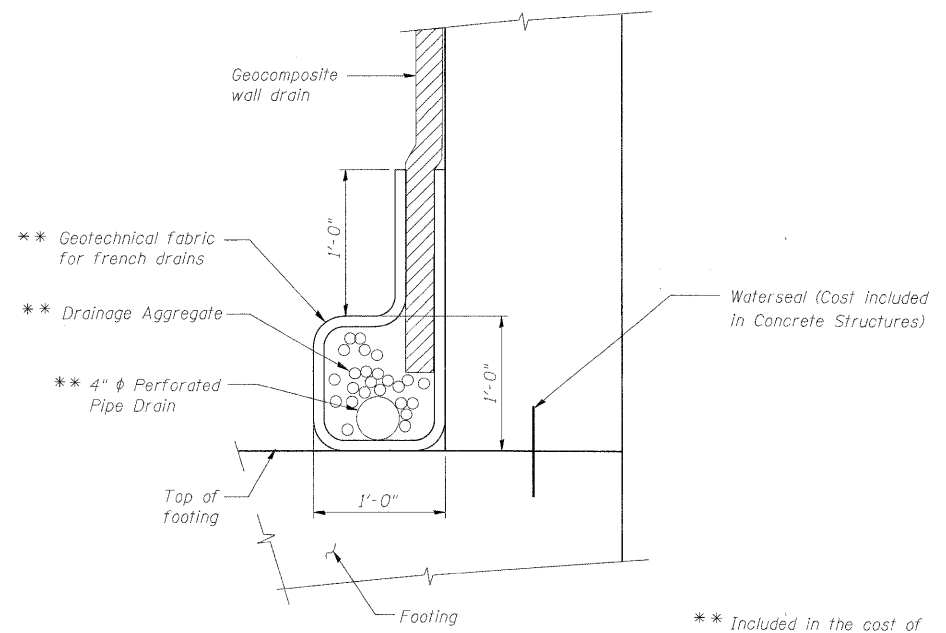
TYPICAL SECTION



TYPICAL WINGWALL SECTION

BILL OF MATERIAL

Item	Unit	Total
Geocomposite Wall Drain	Sa. Yd.	732
Porous Granular Embankment	Cu. Yd.	1,885
Pipe Underdrains for Structures 4"	Foot	534



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

PIPE UNDERDRAIN DETAIL

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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Chicago, Illinois 60601
312-565-0450
Job # 3944

**DRAINAGE DETAILS
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174**

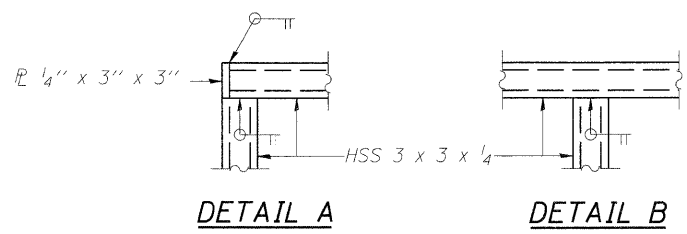
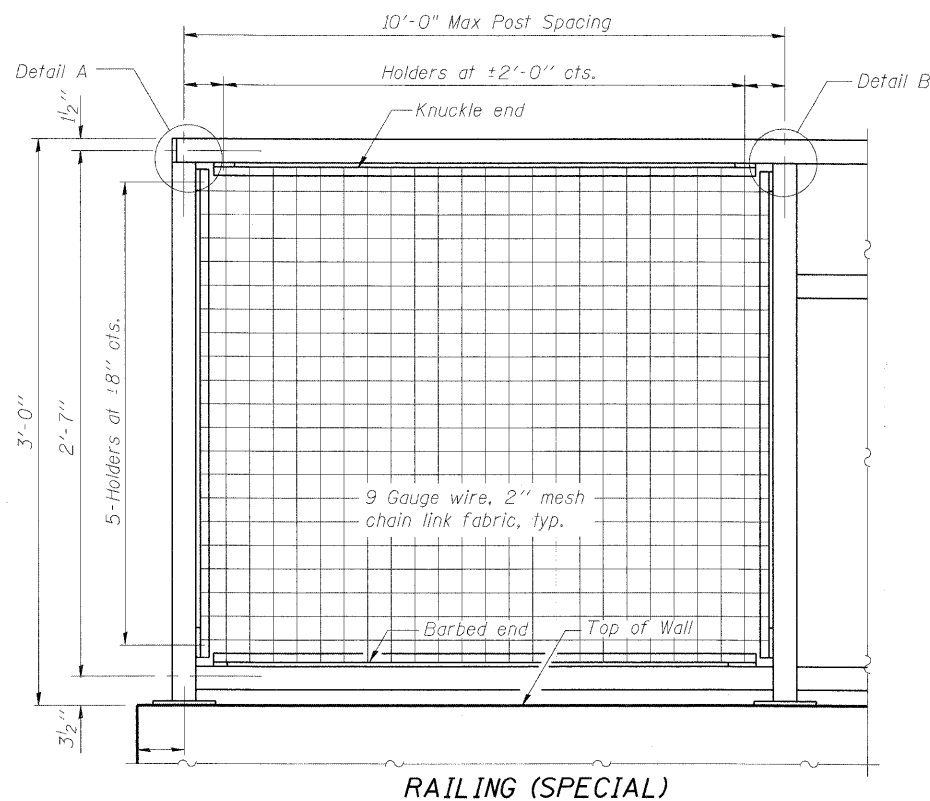
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

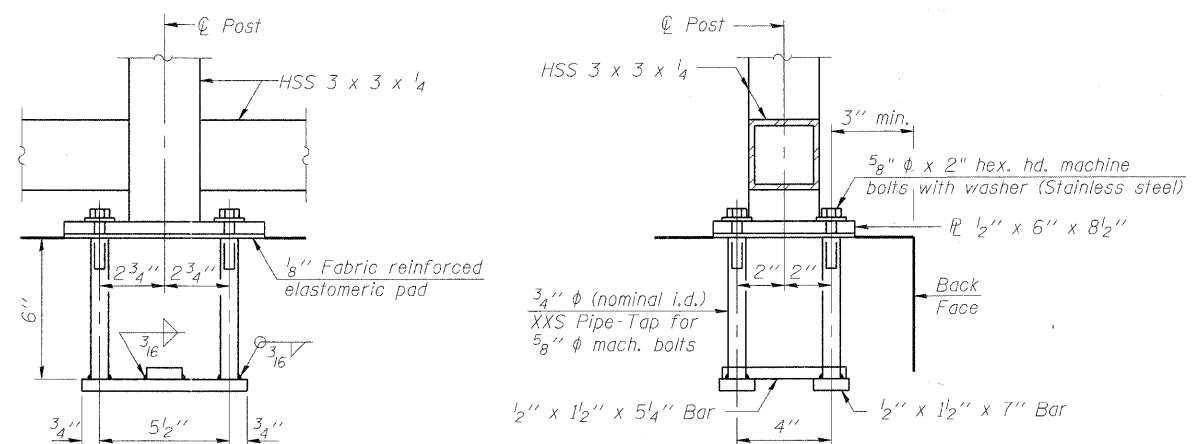
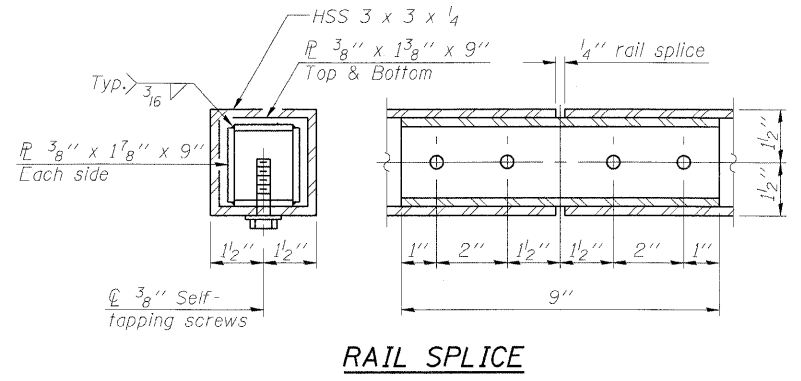
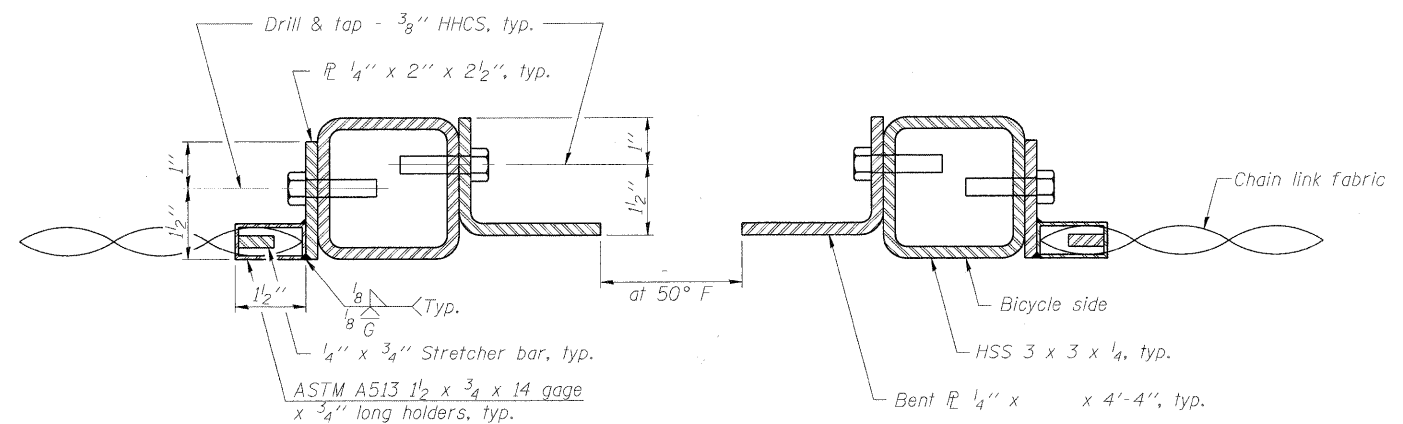
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	645	312
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

SHEET SB- 11
OF 14 SHEETS



All post, railing, splices, anchor devices, and bent plates shall be painted. See Special Provisions.



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

Modify anchorage assembly or base plates as required to mount on both the headwall and wingwalls. Posts on wingwalls shall be vertical.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Special)	Foot	128

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-585-0450
Job # 3944

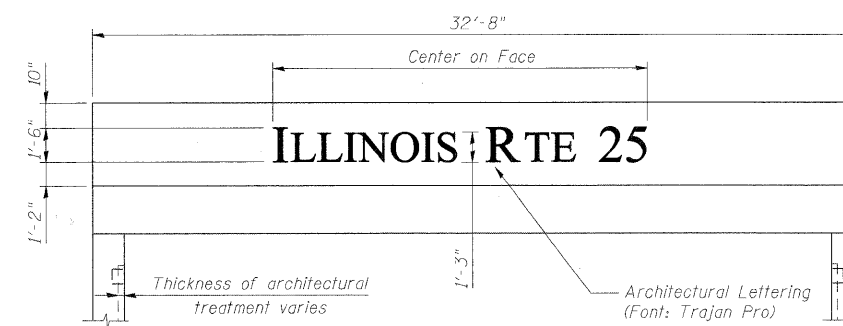
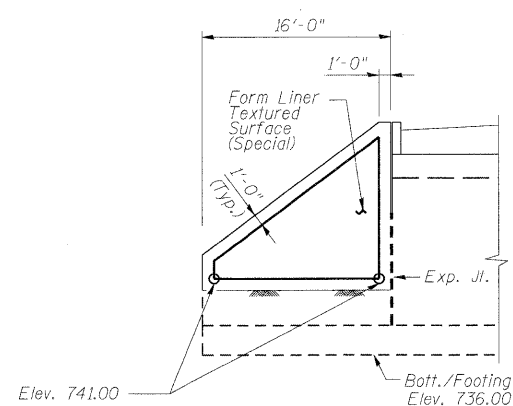
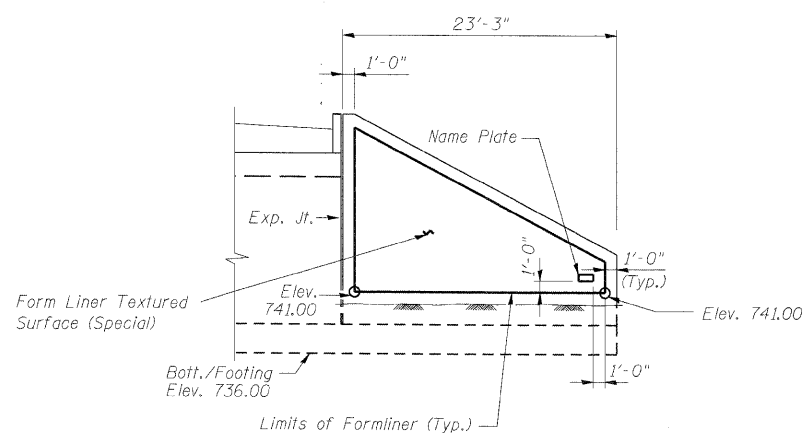
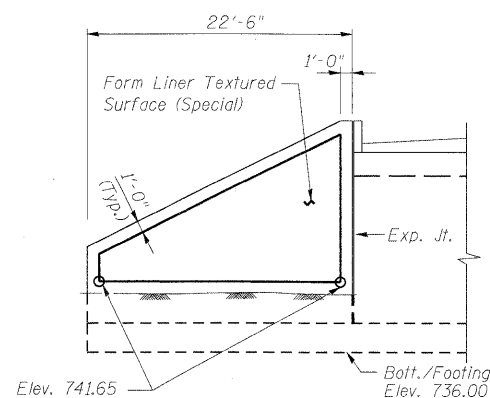
RAIL DETAILS
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

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3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	313
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET SB- 12
OF 14 SHEETS
Contract # 63074



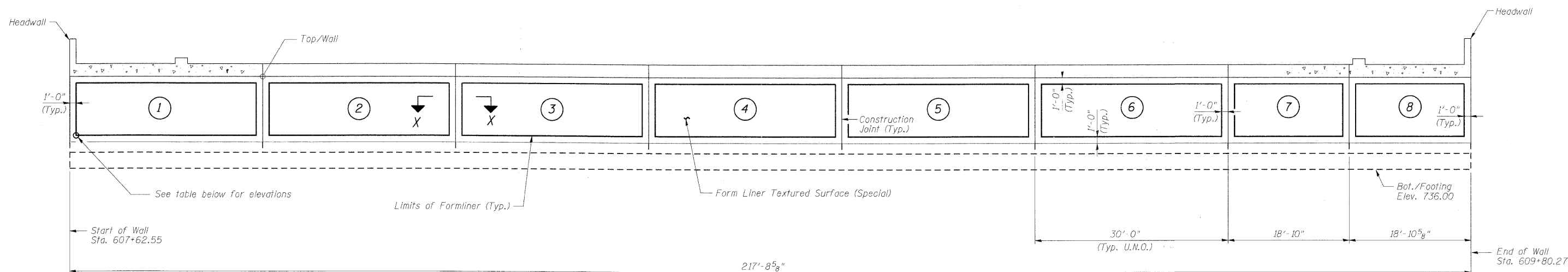
SOUTH WEST WINGWALL ELEVATION

SOUTH EAST WINGWALL ELEVATION

NORTH EAST WINGWALL ELEVATION

HEADWALL ELEVATION

(Typical Each End)



BILL OF MATERIAL

Item	Unit	Total
Form Liner Textured Surface (Special)	Sq. Ft.	4,852
Architectural Lettering	L. Sum	0.5
Anti-Graffiti Coating	Sq. Ft.	5,211
Graffiti Removal (Special)	Sq. Yd.	726

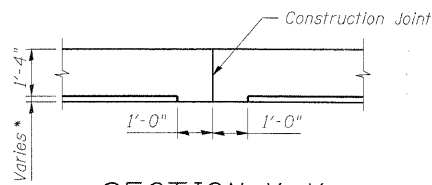
ELEVATION

FORMLINER ELEVATIONS

Location Between	Station	Bottom Elevation
Start of Wall	607+62.55	741.02
Panels 1 & 2	607+92.55	741.11
Panels 2 & 3	608+22.55	741.20
Panels 3 & 4	608+52.55	741.29
Panels 4 & 5	608+82.55	741.38
Panels 5 & 6	609+12.55	741.47
Panels 6 & 7	609+42.55	741.56
Panels 7 & 8	609+61.38	741.61
End of Wall	609+80.27	741.64

NOTES:

- Stations and offsets are measured with respect to the Mixed-Use Path along IL 25/Stearns Road
- U.N.O. denotes unless noted otherwise.



SECTION X-X

* Thickness of Architectural Treatment

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

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Job # 3944

ARCHITECTURAL TREATMENT
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	314
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

BKBR-2

BKBR-3

Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 9/2/04
Date Completed 9/2/04

ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC I-60-393
COUNTY Kane LOCATION West End Underpass S. 1-Cntr., TWP. 40 N., RNG. 8 E.

Boring No. BKBR-2
Station 110+51
Offset 4.00 RT
Surface Elev. 743.07 ft

DEPTH (ft)	DESCRIPTION	TESTS	VALUES
0-75.5	FILL - Gray Crushed Limestone, damp A-1	D, B, L, O, P, T, W, S, Qu, W	11, 14, 18, 17.0
75.5-715.07	Dense gray silty fine SAND, wet A-1-b	D, B, L, O, P, T, W, S, Qu, W	17, 23, 29, 12.8
715.07-737.57	Stiff brown CLAY, trace gravel, moist A-6/A-7-6	D, B, L, O, P, T, W, S, Qu, W	17, 29, 8.0
737.57-711.07	Dense gray fine to medium SAND, trace silt, wet A-1-b	D, B, L, O, P, T, W, S, Qu, W	5, 6, 8, 10.7
711.07-742.57	Dense brown SAND and GRAVEL, occasional Cobbles (rock fragments recovered), damp A-1-a	D, B, L, O, P, T, W, S, Qu, W	5, 6, 8, 10.7
742.57-730.07	Very stiff to hard brown and gray sandy CLAY, trace gravel, moist A-4/A-6	D, B, L, O, P, T, W, S, Qu, W	6, 8, 8, 10.4
730.07-727.57	Very stiff to hard gray SILTY CLAY LOAM, occasional silt seams, moist A-4/A-6	D, B, L, O, P, T, W, S, Qu, W	6, 8, 8, 10.4
727.57-718.07	Very stiff to stiff gray CLAY LOAM, trace gravel, moist A-4/A-6	D, B, L, O, P, T, W, S, Qu, W	6, 8, 8, 10.4
718.07-718.07	Hard to very stiff gray CLAY, trace gravel, moist A-6	D, B, L, O, P, T, W, S, Qu, W	3, 4, 5, No Recovery
718.07-696.07	Hard brown and dark gray CLAY, trace gravel, damp A-6	D, B, L, O, P, T, W, S, Qu, W	55, 50/3, 8.8, 10.3

SPT (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 9/2/04
Date Completed 9/2/04

STRUCTURE NO. 045-3174
ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC I-60-393
COUNTY Kane LOCATION West End Underpass S. 1-Cntr., TWP. 40 N., RNG. 8 E.

Boring No. BKBR-2
Station 110+51
Offset 4.00 RT
Elevation 693.07 ft

DEPTH (ft)	DESCRIPTION	TESTS	VALUES
0-661.07	Hard brown and dark gray CLAY, trace gravel, damp A-6	D, B, L, O, P, T, W, S, Qu, W	11, 14, 18, 17.0
661.07-561.07	Very dense gray SAND, little gravel, wet A-1-b	D, B, L, O, P, T, W, S, Qu, W	47, 50/4, 17.5
561.07-589.07	Very dense Cobbles and Boulders with some clayey sand	D, B, L, O, P, T, W, S, Qu, W	100/5, 10.3
589.07-584.07	Probable Fractured Rock Surface, Hard Drilling	D, B, L, O, P, T, W, S, Qu, W	-
584.07-682.07	Auger Refusal at 61.0'	D, B, L, O, P, T, W, S, Qu, W	-
682.07-562.07	Gus Pech GP-750 Truck Rig (#217) Rope and Cathead Hammer Rotary Wash Drill	D, B, L, O, P, T, W, S, Qu, W	-

SPT (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 9/2/04
Date Completed 9/2/04

ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC I-60-393
COUNTY Kane LOCATION West End Underpass S. 1-Cntr., TWP. 40 N., RNG. 8 E.

Boring No. BKBR-3
Station 111+07
Offset 1.00 LT
Surface Elev. 743.40 ft

DEPTH (ft)	DESCRIPTION	TESTS	VALUES
0-100/6	FILL - Gray Crushed Limestone, damp A-1	D, B, L, O, P, T, W, S, Qu, W	23, 27, 29, 12.3
100/6-715.40	Dense brown and gray SAND, trace gravel, saturated A-1-b	D, B, L, O, P, T, W, S, Qu, W	16, 18, 19, 9.7
715.40-737.90	Stiff to very stiff brown CLAY, moist A-6/A-7-6	D, B, L, O, P, T, W, S, Qu, W	5, 6, 7, 15.5
737.90-711.40	Dense gray clayey SAND, some gravel, moist A-1-b	D, B, L, O, P, T, W, S, Qu, W	17, 20, 24, 4.7
711.40-735.40	Dense brown SAND and GRAVEL, occasional Cobbles (rock fragments recovered), damp A-1-a	D, B, L, O, P, T, W, S, Qu, W	13, 13, 13, 6.4
735.40-732.90	Medium dense brown SAND, trace to little gravel, wet A-1-b	D, B, L, O, P, T, W, S, Qu, W	5, 7, 9, 8.3
732.90-730.40	Medium dense brown SAND and GRAVEL, saturated A-1	D, B, L, O, P, T, W, S, Qu, W	9, 12, 15, 12.1
730.40-701.40	Very stiff gray CLAY, trace gravel, moist A-6	D, B, L, O, P, T, W, S, Qu, W	10, 14, 14, 16.9
701.40-718.40	Very stiff to stiff brown and gray CLAY LOAM, trace gravel, moist A-4/A-6	D, B, L, O, P, T, W, S, Qu, W	8, 11, 10, 18.1
718.40-693.40	Hard gray CLAY, trace gravel, moist A-6	D, B, L, O, P, T, W, S, Qu, W	7, 7, 9, 10.2

SPT (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 9/2/04
Date Completed 9/2/04

STRUCTURE NO. 045-3174
ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC I-60-393
COUNTY Kane LOCATION West End Underpass S. 1-Cntr., TWP. 40 N., RNG. 8 E.

Boring No. BKBR-3
Station 111+07
Offset 1.00 LT
Elevation 693.40 ft

DEPTH (ft)	DESCRIPTION	TESTS	VALUES
0-695.40	Very stiff to hard gray CLAY LOAM, trace gravel, moist A-4/A-6	D, B, L, O, P, T, W, S, Qu, W	8, 12, 20, 10.8
695.40-757.2	Very dense Cobbles and Boulders over Weathered and Fractured Rock, Hard Drilling	D, B, L, O, P, T, W, S, Qu, W	-
757.2-681.40	Auger Refusal at 62.0'	D, B, L, O, P, T, W, S, Qu, W	-
681.40-662.07	Gus Pech GP-750 Truck Rig (#217) Rope and Cathead Hammer Rotary Wash Drill	D, B, L, O, P, T, W, S, Qu, W	-

SPT (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Note:
1. Boring Locations off @ Mixed Use Path along Stearns.
BKBR-2 Sta. 607+01, 4.00' Rt.
BKBR-3 Sta. 607+57, 1.00' Lt.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

benesch
alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 1 OF 2
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

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11/20/29 AM

3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	315
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET SB- 14
OF 14 SHEETS

Contract # 63074

BKBR-4

Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date Started 9/3/04
Date Completed 9/3/04

ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC L-60.393
COUNTY Kane LOCATION Center of Underpass S. 1-Cntr, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	Qu	W	Surface Water Elev.	D	E	B	L	Qu	W
BKBR-4	112+01	9.00Rt	743.44	H	T	W	S	tsf	%	718.4	H	T	W	S	tsf	%
FILL - Crushed Limestone, damp A-1																
			741.44	50	12	10	21	2.1	6.6	Dense gray silty fine SAND, saturated A-3					12	18.3
Very stiff brown CLAY, moist A-6																
			740.44	10	13	16	7.3			Dense gray fine to medium SAND, saturated A-1-b					11	21.8
Medium dense to dense brown SAND and GRAVEL, damp A-1-a																
			735.44	14	20	26	4.8			Medium dense gray silty SAND, saturated A-1					5	17.8
Dense brown and gray SILTY LOAM, occasional silt seams, moist A-4																
			732.84	8	11	15	2.9	12.4		Very stiff gray CLAY LOAM, trace gravel, moist A-6					6	10.4
Very stiff gray CLAY LOAM, trace gravel, moist A-6																
			727.84	10	12	15	2.7	11.7		Stiff gray sandy CLAY, little gravel, moist A-4/A-6					7	10.8
Very stiff gray CLAY, moist A-6																
			720.44	8	10	13	3.1	18.3		Stiff to very stiff brownish-gray CLAY LOAM, trace gravel, moist A-4/A-6					12	10.8
Very stiff gray CLAY, occasional sand seams, moist A-6																
			719.44	8	14	13	3.1	16.1		Hard brownish-gray CLAY, trace gravel, damp A-6					12	10.9

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date Started 9/3/04
Date Completed 9/3/04

STRUCTURE NO. 045-3174
ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC L-60.393
COUNTY Kane LOCATION East End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	Qu	W	Surface Water Elev.	D	E	B	L	Qu	W
BKBR-4	112+01	9.00Rt	893.44	H	T	W	S	tsf	%		H	T	W	S	tsf	%
Hard to very stiff brownish-gray CLAY, trace gravel, damp to moist A-5																
			891.44	7	12	20	3.5	27.9		Very stiff brown and dark gray CLAY, moist to very moist A-7-6					7	27.9
Very dense Cobbles and Boulders, possible fractured rock																
			887.44	5	7	9	5			Probable Fractured Rock, Hard Drilling					5	
Auger Refusal at 60.0'																
Gus Pach GP-750 Truck Rig (#217) Rope and Cathead Hammer Rotary Wash Drill																

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

BKBR-5

Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date Started 9/8/04
Date Completed 9/8/04

ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC L-60.393
COUNTY Kane LOCATION East End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	Qu	W	Surface Water Elev.	D	E	B	L	Qu	W
BKBR-5	113+17	15.00Lt	743.02	H	T	W	S	tsf	%	732.5	H	T	W	S	tsf	%
Black clayey Topsoil																
			741.02	7	9	11	6.4	18.5		Very dense gray fine to medium SAND, saturated A-3					19	15.9
Hard brown CLAY, moist A-6/A-7-6																
			740.02	13	17	18	8.0			Medium dense gray SANDY LOAM, little sand and gravel, moist A-2-4					29	10.6
Dense brown silty SAND and GRAVEL, damp A-1																
			737.52	13	20	27	5.6			Dense to medium dense brown SAND and GRAVEL, damp to moist A-1					8	11.0
Very stiff gray CLAY LOAM, trace gravel, moist A-4																
			732.52	9	11	14	2.3	17.4		Medium dense gray fine to medium SAND, trace gravel, occasional silt seams, saturated A-1-b					4	14.8
Very stiff gray CLAY, trace gravel, moist A-6																
			720.02	8	11	13	2.1	19.2		Very dense GRAVEL with Cobbles and Boulders, saturated A-1-a					100.5	12.6
Hard brownish-gray CLAY LOAM, trace gravel, moist A-5																
			718.02	5	7	11	3.2	18.9		Medium dense gray fine sandy SILT, wet A-2-4/A-4					15	11.3

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date Started 9/8/04
Date Completed 9/8/04

STRUCTURE NO. 045-3174
ROUTE DESCRIPTION IL 25/Stearns Rd. Path Under IL 25
SECT. STRUCT. NO. 045-3174 DRILLED BY TSC L-60.393
COUNTY Kane LOCATION East End Underpass S. 1-SE 1/4, TWP. 40 N., RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	Qu	W	Surface Water Elev.	D	E	B	L	Qu	W
BKBR-5	113+17	15.00Lt	693.02	H	T	W	S	tsf	%		H	T	W	S	tsf	%
Hard brownish-gray CLAY LOAM, trace gravel, moist A-6																
			691.02	14	10	13	1.9	13.1		Stiff to very stiff brownish-gray CLAY LOAM, trace gravel, moist A-4/A-6					7	19.0
Very stiff dark brownish-gray CLAY, trace gravel, moist A-6																
			686.02	7	8	20	0.4	5%		Medium dense to dense brown and gray clayey SAND and GRAVEL, occasional silt seams, occasional Cobbles, wet A-1					50.1	25.0
Probable Dolomite Rock Surface (hard drilling)																
End of Boring at 68.0'																
Gus Pach GP-750 Truck Rig (#217) Rope and Cathead Hammer Rotary Wash Drill																

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Note:
1. Boring Locations off @ Mixed Use Path along Stearns.
BKBR-4 Sta. 608+68, 9.00' Rt.
BKBR-5 Sta. 609+84, 15.00' Lt.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	HMA/DMC

benesch
alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 2 OF 2
MIXED-USE PATH UNDER
IL 25/DUNHAM ROAD
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 609+05.92
STRUCTURE NO. 045-3174

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Benchmark BM-24:
"Aluminum Disk" set in concrete, 0.50± mile east of Stearns Road and Dunham Road at the south side of Stearns Road. Elev. 762.678

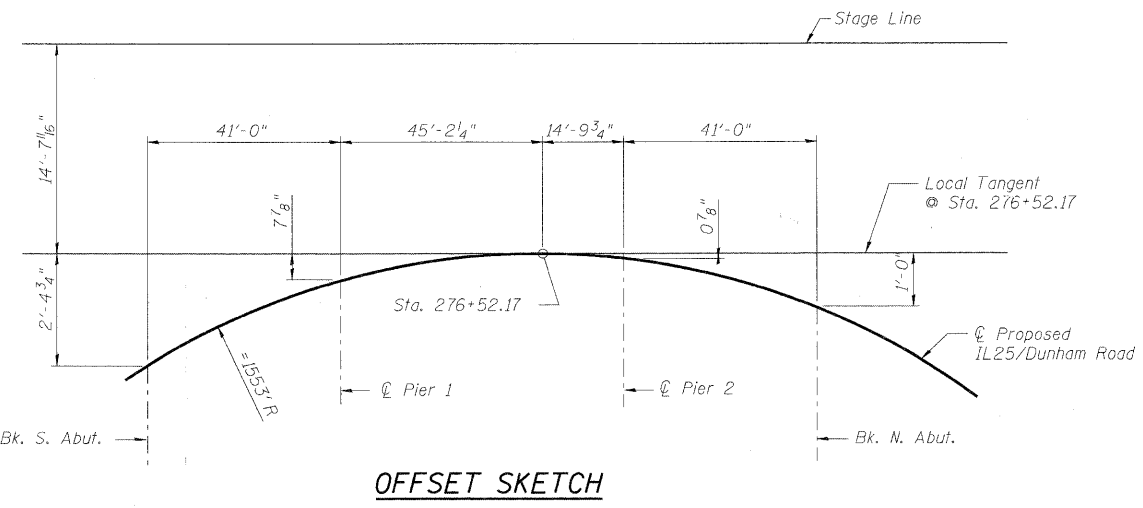
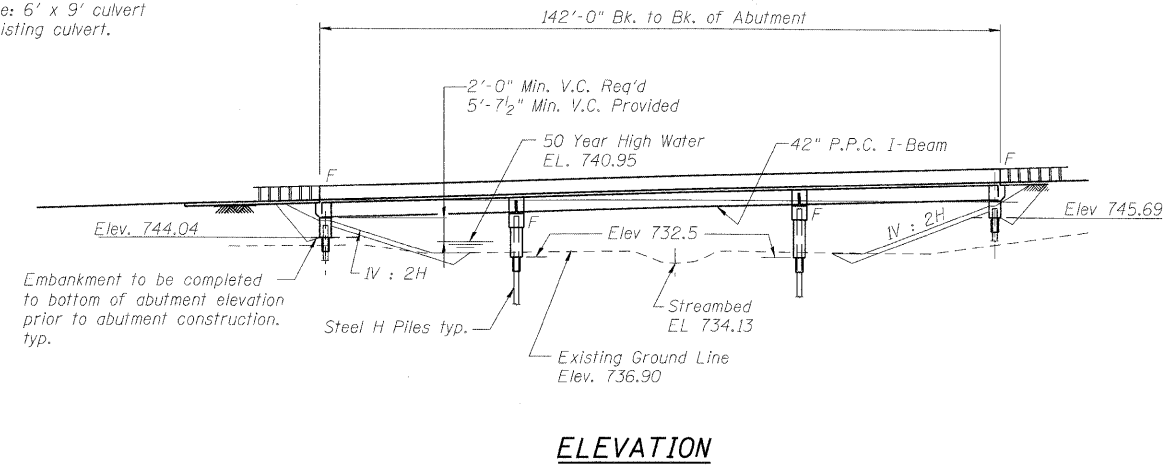
Existing Structure: 6' x 9' culvert
No Salvage of existing culvert.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	316
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SD- 1
OF 34 SHEETS

Contract # 63074



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

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications (4th ed.) with 2008 Interims

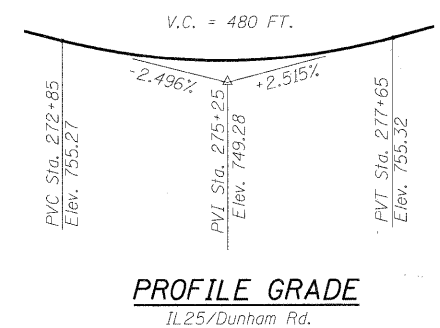
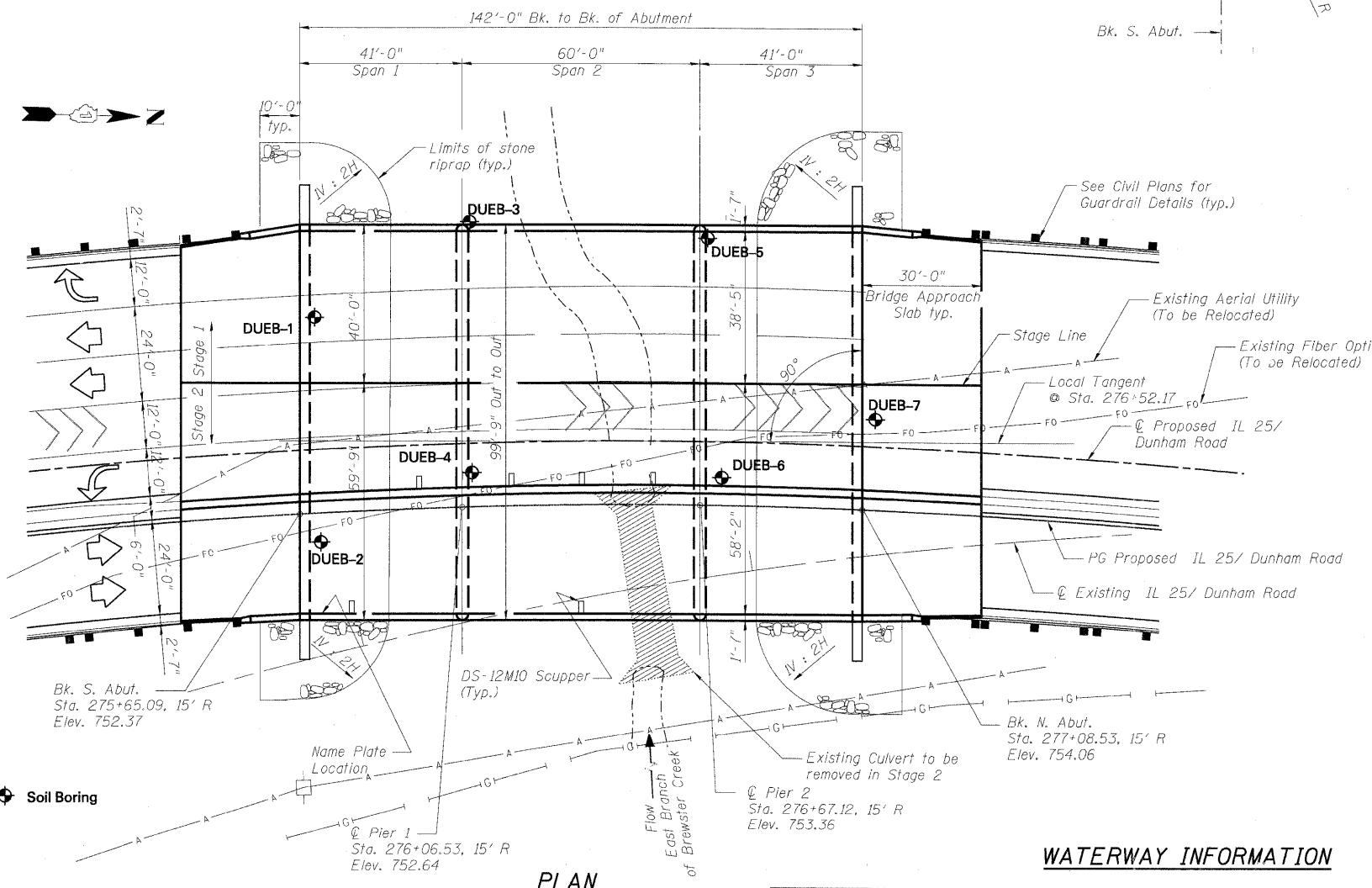
DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f_c = 6,000 psi
f_{ci} = 5,000 psi
f_{pu} = 270,000 psi (1/2" φ low lax. strands)
f_{pbt} = 201,960 psi (1/2" φ low lax. strands)

CURVE DATA @ C PROPOSED IL 25/DUNHAM RD.

PI STA. = 273+80.87
Δ = 39° 29' 05" (RT)
D = 3° 41' 22"
R = 1,553.00'
T = 557.35'
L = 1,070.23'
E = 96.98'
S.E. = 0.02 ' / '
P.C. STA. = 268+23.52
P.T. STA. = 278+93.75



NAME PLATE
See Std. 515001

STATION 276+36.96
F.A.P. 360
SECTION 06-00214-15-BR
BUILT 2011 BY
STATE OF ILLINOIS
LOADING HL93
STRUCTURE NO. 045-2032

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.08 g
Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.14 g
Soil Site Class = D

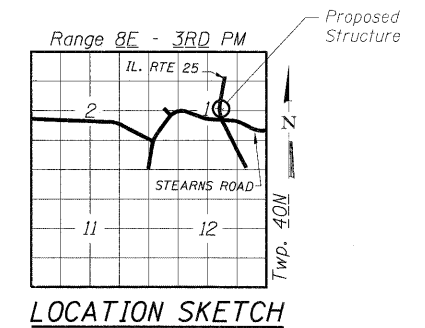
Diane M. Campione

STATE OF ILLINOIS
DIANE M. CAMPIONE
81-4827
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER

EXPIRATION DATE: 11-30-2010
DATE: MARCH 31, 2009

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
Partner of Bridges and Structures



WATERWAY INFORMATION

Drainage Area = 5.463 Sq. mi

Flood	Frequency (Yr.)	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	526	51.2	419.7	740.95	1.68	0.07	742.63	741.02
Base	100	674	51.2	495.1	741.45	1.56	0.13	743.01	741.58
Overtopping	<500** / >500***	157 / >1050	51.2	1367.0	N/A	N/A	N/A	742.00	749.67
Max. Calc.	500*	1050	51.2	619.6	742.42	1.01	0.30	743.43	742.72

* 500-Year flowrate determined from analytical frequency curve-WSEL'S extrapolated
** Overtopping occurs under the 500-Year WSEL under existing conditions
*** Overtopping occurs above the 500-Year WSEL under proposed conditions

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier 1	Pier 2	N. Abut.
	741.04	727.75	727.75	742.69

DESIGNED	AJK
CHECKED	AAY
DRAWN	VH
CHECKED	DMC

benesch
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

GENERAL PLAN AND ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of 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.
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
- All organic and/or other unsuitable materials must be removed from foundation and slab subgrades and backfill areas and then backfilled with an acceptable fill material per IDOT specification, and compacted to 95% of maximum density at optimum moisture content (ASTM D1557).
- Prior to construction, detailing of shop drawing and ordering materials the Contractor shall verify all dimensions and site conditions of the project area.
- All construction joints shall be bonded. No construction joints except those shown on the plans will be allowed unless ordered by the Engineer.
- Reinforcement bar lap splices shall be Class C. Top bars so placed that more than 12 inches of concrete is cast below the reinforcement shall be lapped for 1.4 x basic lap. Reinforcement bar splices shall be in accordance with the following table unless shown otherwise on the drawing.

Bar Size	Basic Lap	1.4 Basic Lap
#4	1'-8"	2'-5"
#5	2'-2"	3'-0"
#6	2'-7"	3'-7"
#7	3'-5"	4'-10"
#8	4'-6"	6'-4"
#9	5'-9"	8'-1"
#11	9'-0"	12'-7"

- Slipforming of the parapets is not allowed.
- For limits of removal of unsuitable materials, see Civil Plans.
- No in-stream work or work that could potentially impact the Fox River can occur between March 1, 2010 and June 7, 2010. In-stream work includes the East Branch of Brewster Creek.
- All disturbed areas and work areas must be isolated from creek flows at all times. The diversion/isolation of the creek flows must be constructed from non-erodible materials. The KDSWCD must be in agreement with overall exact method of diversion/isolation prior to the commencement of construction (Contact KDSWCD 630-584-7961 x3). In accordance with the Special Provisions; Underwater Structure Excavation Protection Location 1 and Location 2 and Removal of Existing Structures, Contractor will submit the required documents for approval.
- No work shall be performed in flowing water and no equipment shall enter Brewster Creek without approval of the KDSWCD or the Army Corps of Engineers. Work in and near the critical areas should be isolated from concentrated flows or stream flow. The stream banks shall be stabilized at the end of each day. Once work in this area begins, priority shall be given to the completion of the work and final stabilization of all disturbed areas.
- See Erosion Control Plans for erosion control and de-watering details.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

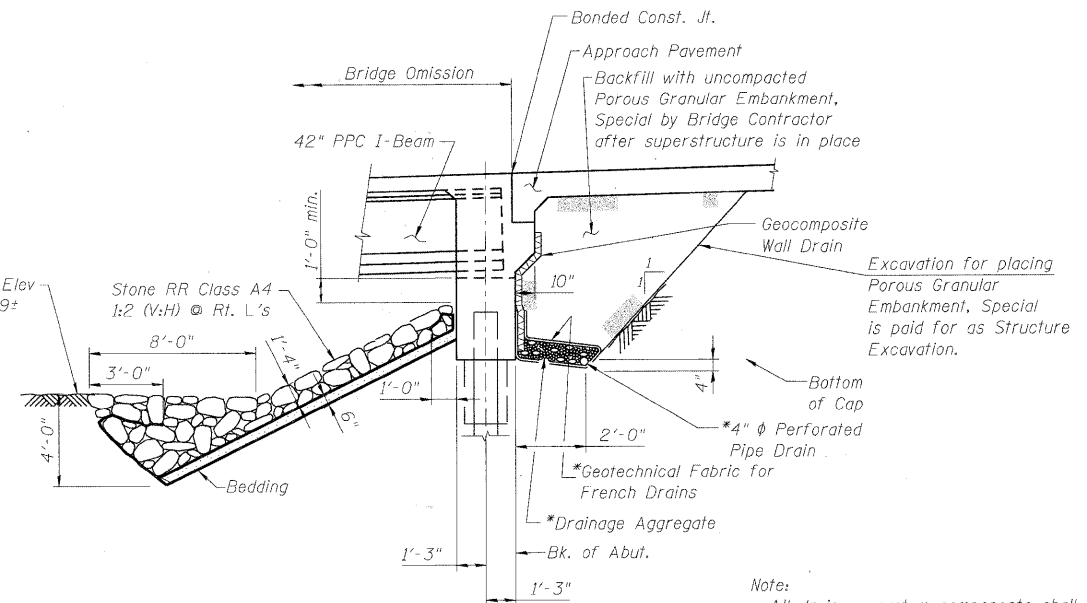
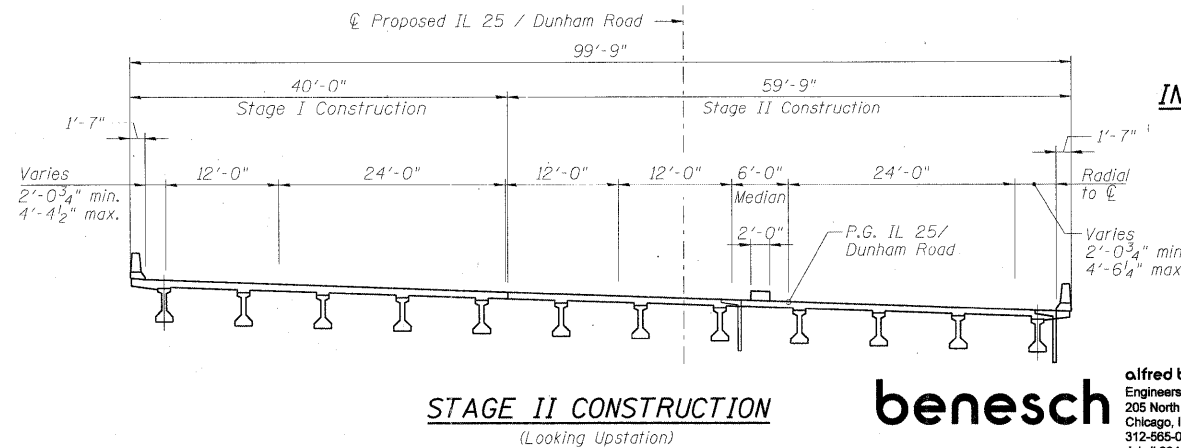
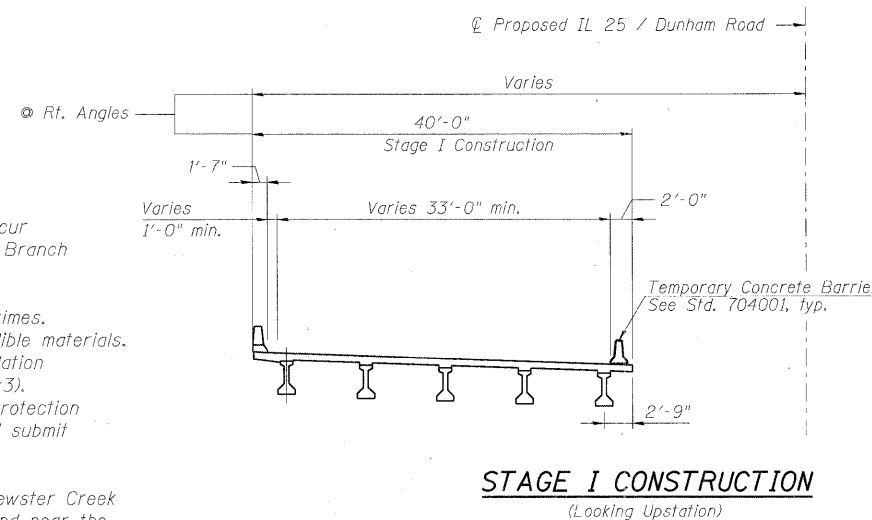
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SD - 19 of 34	42" PPC I-Beam Details
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SD - 24 of 34	Pile Details
SD - 25 of 34	Bar Splicer Assembly Details
SD - 26 of 34	Temporary Barrier for Stage Construction
SD - 27 of 34	Drainage Scupper Details
SD - 28 of 34	Drainage Details
SD - 29 of 34	Bridge Approach Slab Details (1 of 2)
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SD - 32 of 34	Soil Boring Log 2 of 4
SD - 33 of 34	Soil Boring Log 3 of 4
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ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
		KANE	545	317

Contract # 63074

TOTAL BILL OF MATERIAL

ITEM	UNIT	STAGE 1		STAGE 2		TOTAL
		SUPER	SUB	SUPER	SUB	
Porous Granular Embankment, Special	Cu. Yd.		148		176	324
Stone Riprap Class A4	Sq. Yd.		410		541	951
Filter Fabric	Sq. Yd.		410		541	951
Removal of Existing Structures	L. Sum				1	1
Structure Excavation	Cu. Yd.		160		218	378
Concrete Structures	Cu. Yd.		200.3		268.3	468.6
Concrete Superstructure	Cu. Yd.	351.9		513.6		865.5
Bridge Deck Grooving	Sq. Yd.	805		1,213		2,018
Concrete Encasement	Cu. Yd.		11.4		16.8	28.2
Protective Coat	Sq. Yd.	924		1,381		2,305
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42 In.	Foot	695		973		1,668
Reinforcement Bars, Epoxy Coated	Pound	77,920	15,930	105,680	19,930	219,460
Bar Splicers	Each	827	86	116		1,029
Furnishing Steel Piles HPI2x53	Foot		1,872		3,216	5,088
Driving Piles	Foot		1,872		3,216	5,088
Test Pile Steel HPI2x53	Each		4			4
Pile Shoes	Each		32		48	80
Name Plates	Each			1		1
Geocomposite Wall Drain	Sq. Yd.		71		91	162
Pipe Underdrains for Structures 4"	Foot		105		143	248
Temporary Soil Retention System	Sq Ft		148			148
Drainage Scuppers, DS-12M10	Each			6		6
Underwater Structure Excavation Protection - Location 1	Each		1		1	2
Underwater Structure Excavation Protection - Location 2	Each		1		1	2
Drainage System	L. Sum			1		1



SECTION THRU INTEGRAL ABUTMENT

* Included in cost of Pipe Underdrains for Structures.

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

GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
IL 25/DUNHAM ROAD OVER THE EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

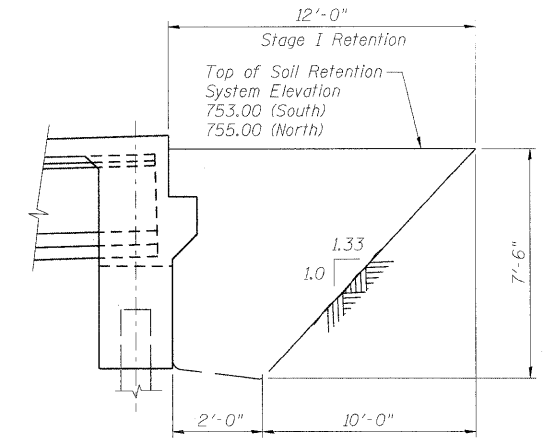
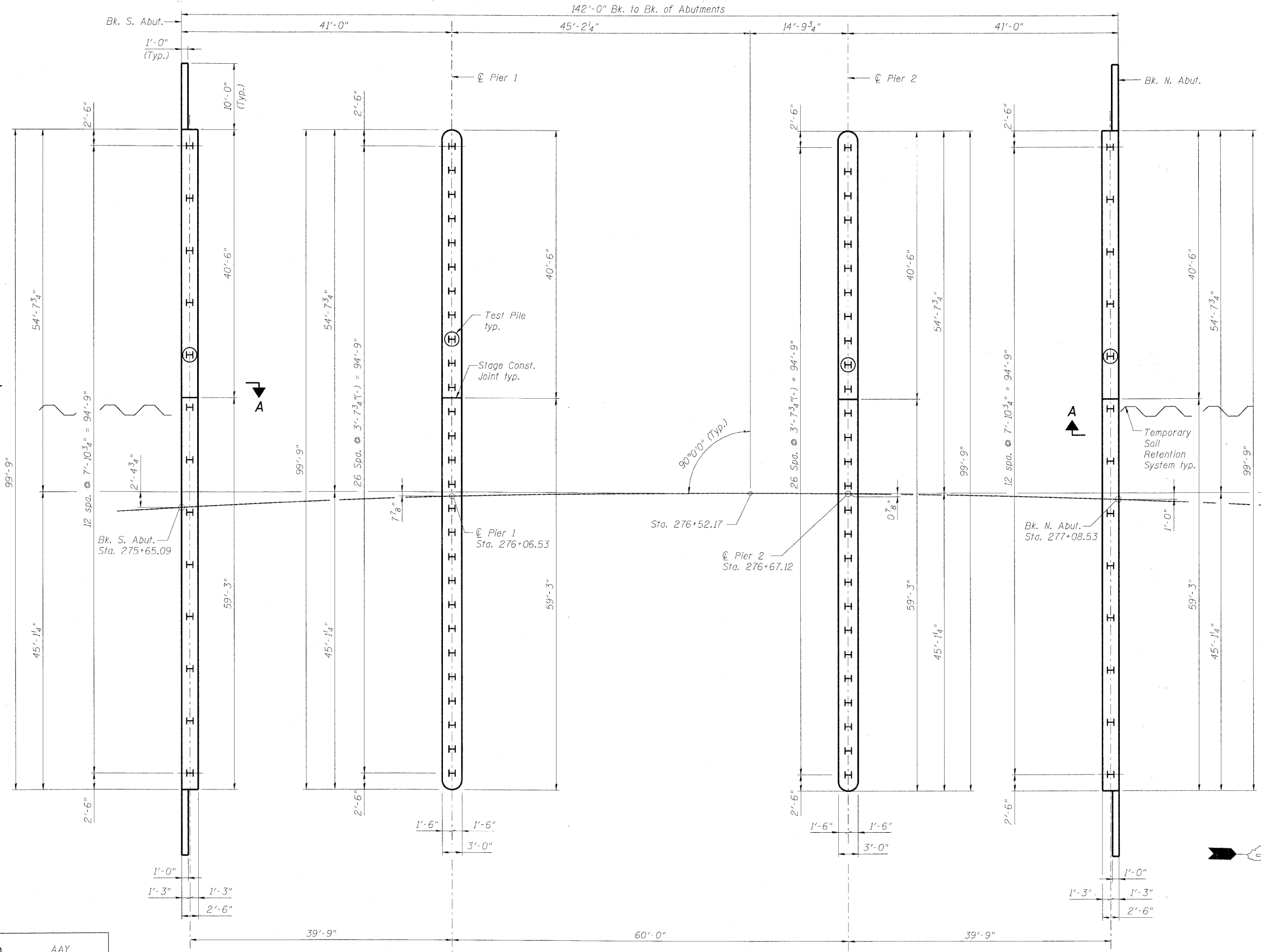
benesch
alfred benesch & company
Engineers - Surveyors - Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	318
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074

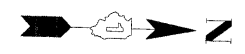
SHEET SD- 3
OF 34 SHEETS



The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

- Notes:
- Excavation protection for Piers 1 and 2 shall be paid for as Underwater Structure Excavation Protection Locations 1 and 2, respectively. See Special Provision.
 - See sheets SD-20 thru SD-23 for abutment and pier details, and pile data.
 - Piles shall be driven through 1'-6" diameter precored holes extending to elevation 739 (S. Abut.) and 737 (N. Abut.) according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

HP12 x 53 Test Pile
 HP12 x 53 Vertical Pile



DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

SOUTH ABUTMENT PILE FOUNDATION PIER 1 PILE FOUNDATION PIER 2 PILE FOUNDATION NORTH ABUTMENT PILE FOUNDATION

FOOTING LAYOUT

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 312-565-0450
 Job # 3944

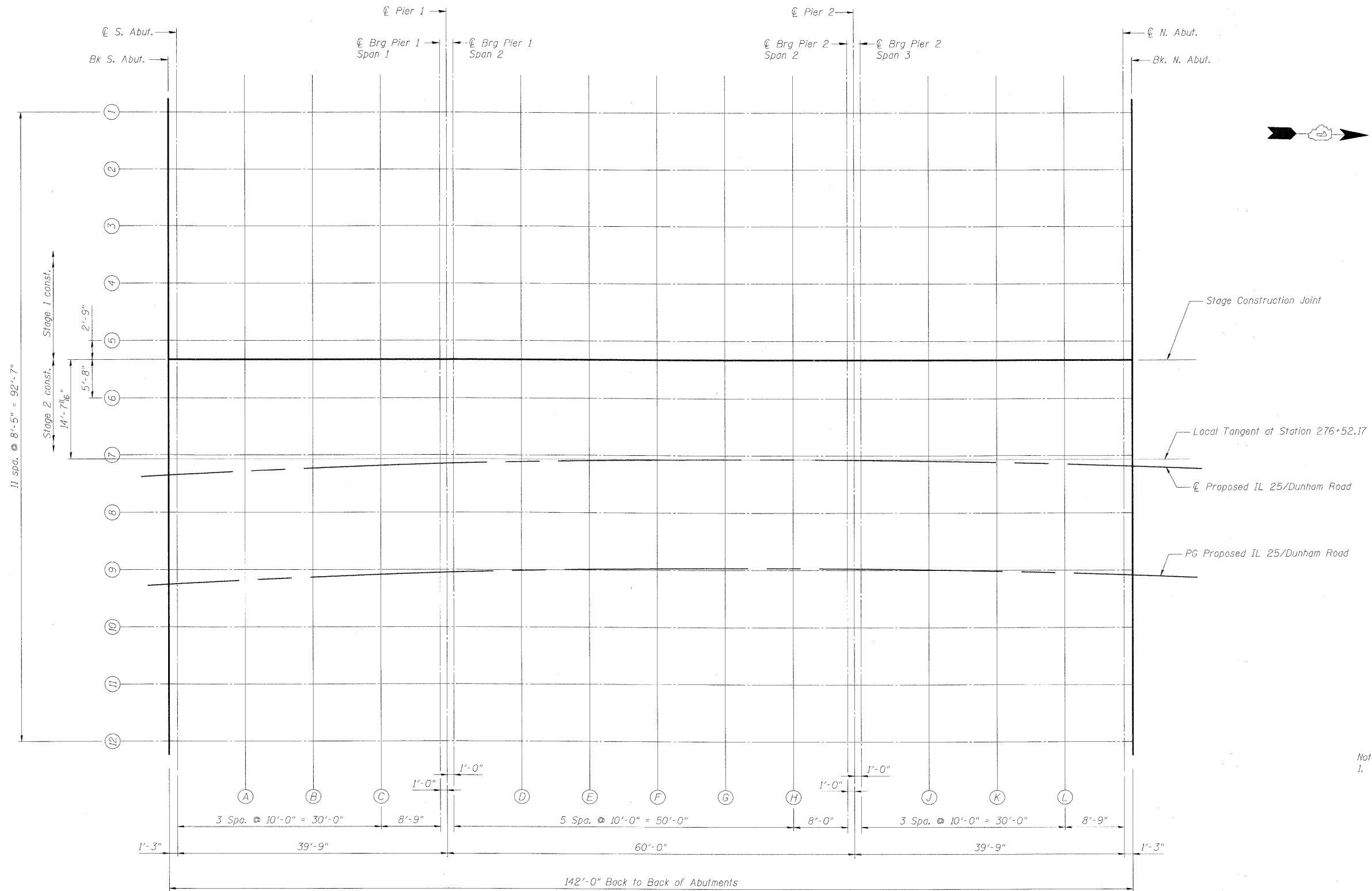
FOUNDATION PLAN
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 4 OF 34 SHEETS
-	-	KANE	545	319	
FED. ROAD DIST. NO. 7	ILL. PROJ. NO.	FED. AID PROJECT			

Contract # 63074



Note:
1. Work this sheet with sheets SD-5 thru SD-7

DESIGNED	AJK
CHECKED	HMA
DRAWN	AYR
CHECKED	DMC

PLAN

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Chicago, Illinois 60601
312-565-0450
Job # 3944

**TOP OF SLAB ELEVATIONS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032**

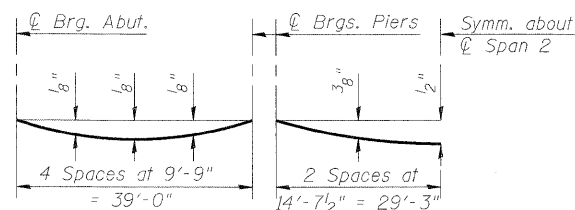
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	320
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

SHEET SD- 5
OF 34 SHEETS

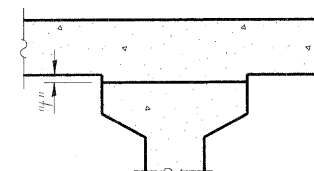


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

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 below.



To determine "f": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "f" above top flanges of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+68.80	-53.37	753.76	753.76
⊙ Brg S. Abut	275+70.00	-53.31	753.76	753.76
A	275+79.66	-52.81	753.80	753.81
B	275+89.33	-52.37	753.86	753.87
C	275+98.99	-52.00	753.92	753.93
⊙ Brg Pier 1 Span 1	276+07.46	-51.72	753.98	753.98
⊙ Brg Pier 1 Span 2	276+09.39	-51.67	754.00	754.00
D	276+19.07	-51.42	754.09	754.11
E	276+28.75	-51.24	754.18	754.22
F	276+38.43	-51.12	754.29	754.33
G	276+48.11	-51.06	754.41	754.45
H	276+57.79	-51.07	754.54	754.56
⊙ Brg Pier 2 Span 2	276+65.53	-51.12	754.65	754.65
⊙ Brg Pier 2 Span 3	276+67.47	-51.14	754.68	754.68
J	276+77.15	-51.27	754.84	754.84
K	276+86.83	-51.46	755.00	755.01
L	276+96.50	-51.71	755.17	755.18
⊙ Brg N. Abut	277+04.97	-51.99	755.33	755.33
Bk N. Abut	277+06.18	-52.03	755.36	755.36

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+68.36	-44.97	753.59	753.59
⊙ Brg S. Abut	275+69.57	-44.90	753.59	753.59
A	275+79.28	-44.40	753.63	753.64
B	275+88.99	-43.96	753.69	753.69
C	275+98.71	-43.59	753.75	753.76
⊙ Brg Pier 1 Span 1	276+07.22	-43.31	753.81	753.81
⊙ Brg Pier 1 Span 2	276+09.17	-43.25	753.83	753.83
D	276+18.89	-43.01	753.92	753.94
E	276+28.62	-42.83	754.01	754.05
F	276+38.35	-42.71	754.12	754.16
G	276+48.09	-42.65	754.24	754.28
H	276+57.82	-42.65	754.37	754.39
⊙ Brg Pier 2 Span 2	276+65.61	-42.70	754.49	754.49
⊙ Brg Pier 2 Span 3	276+67.55	-42.72	754.52	754.52
J	276+77.28	-42.85	754.67	754.68
K	276+87.01	-43.04	754.83	754.84
L	276+96.74	-43.30	755.01	755.01
⊙ Brg N. Abut	277+05.25	-43.58	755.17	755.17
Bk N. Abut	277+06.46	-43.62	755.20	755.20

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+67.92	-36.56	753.42	753.42
⊙ Brg S. Abut	275+69.14	-36.50	753.42	753.42
A	275+78.89	-35.99	753.46	753.47
B	275+88.66	-35.55	753.52	753.52
C	275+98.43	-35.18	753.58	753.58
⊙ Brg Pier 1 Span 1	276+06.98	-34.90	753.64	753.64
⊙ Brg Pier 1 Span 2	276+08.94	-34.84	753.66	753.66
D	276+18.72	-34.59	753.75	753.77
E	276+28.50	-34.41	753.84	753.88
F	276+38.28	-34.29	753.95	754.00
G	276+48.06	-34.23	754.07	754.11
H	276+57.85	-34.24	754.21	754.22
⊙ Brg Pier 2 Span 2	276+65.68	-34.29	754.32	754.32
⊙ Brg Pier 2 Span 3	276+67.63	-34.30	754.35	754.35
J	276+77.42	-34.44	754.50	754.51
K	276+87.20	-34.63	754.67	754.68
L	276+96.97	-34.89	754.84	754.85
⊙ Brg N. Abut	277+05.53	-35.16	755.01	755.01
Bk N. Abut	277+06.75	-35.21	755.03	755.03

Note

- For Deck Elevation Plan see sheet SD-4.
- Stations and Offsets are taken from ⊙ Proposed IL 25/Dunham Road

DESIGNED	AJK
CHECKED	HMA
DRAWN	AJK
CHECKED	DMC

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Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

DECK ELEVATIONS 1 OF 3
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 6 OF 34 SHEETS
-	-	KANE	545	321	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract # 63074

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+67.47	-28.16	753.25	753.25
⊙ Brg S. Abut	275+68.69	-28.09	753.25	753.25
A	275+78.50	-27.59	753.29	753.30
B	275+88.32	-27.14	753.35	753.35
C	275+98.14	-26.77	753.41	753.41
⊙ Brg Pier 1 Span 1	276+06.74	-26.49	753.47	753.47
⊙ Brg Pier 1 Span 2	276+08.71	-26.43	753.49	753.49
D	276+18.54	-26.18	753.58	753.60
E	276+28.37	-25.99	753.67	753.71
F	276+38.21	-25.87	753.78	753.83
G	276+48.04	-25.81	753.91	753.94
H	276+57.88	-25.82	754.04	754.06
⊙ Brg Pier 2 Span 2	276+65.75	-25.87	754.15	754.15
⊙ Brg Pier 2 Span 3	276+67.72	-25.89	754.18	754.18
J	276+77.55	-26.02	754.34	754.34
K	276+87.38	-26.22	754.50	754.51
L	276+97.21	-26.47	754.68	754.69
⊙ Brg N. Abut	277+05.81	-26.75	754.85	754.85
Bk N. Abut	277+07.04	-26.80	754.87	754.87

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+67.01	-19.76	753.08	753.08
⊙ Brg S. Abut	275+68.25	-19.69	753.08	753.08
A	275+78.11	-19.18	753.12	753.13
B	275+87.98	-18.74	753.17	753.18
C	275+97.86	-18.35	753.24	753.24
⊙ Brg Pier 1 Span 1	276+06.50	-18.07	753.30	753.30
⊙ Brg Pier 1 Span 2	276+08.48	-18.01	753.32	753.32
D	276+18.36	-17.76	753.41	753.43
E	276+28.24	-17.58	753.50	753.54
F	276+38.13	-17.46	753.61	753.66
G	276+48.02	-17.40	753.74	753.77
H	276+57.91	-17.40	753.87	753.89
⊙ Brg Pier 2 Span 2	276+65.82	-17.45	753.98	753.98
⊙ Brg Pier 2 Span 3	276+67.80	-17.47	754.01	754.01
J	276+77.69	-17.60	754.17	754.18
K	276+87.57	-17.80	754.34	754.35
L	276+97.45	-18.06	754.52	754.52
⊙ Brg N. Abut	277+06.10	-18.34	754.68	754.68
Bk N. Abut	277+07.34	-18.38	754.71	754.71

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+66.87	-17.01	753.02	753.02
⊙ Brg S. Abut	275+68.10	-16.94	753.03	753.03
A	275+77.98	-16.43	753.07	753.07
B	275+87.87	-15.99	753.12	753.13
C	275+97.76	-15.61	753.18	753.19
⊙ Brg Pier 1 Span 1	276+06.42	-15.32	753.25	753.25
⊙ Brg Pier 1 Span 2	276+08.40	-15.27	753.26	753.26
D	276+18.30	-15.02	753.35	753.37
E	276+28.20	-14.83	753.45	753.49
F	276+38.11	-14.71	753.56	753.60
G	276+48.01	-14.65	753.68	753.72
H	276+57.92	-14.65	753.81	753.83
⊙ Brg Pier 2 Span 2	276+65.85	-14.70	753.93	753.93
⊙ Brg Pier 2 Span 3	276+67.83	-14.72	753.96	753.96
J	276+77.73	-14.86	754.12	754.12
K	276+87.63	-15.05	754.28	754.29
L	276+97.53	-15.31	754.46	754.47
⊙ Brg N. Abut	277+06.19	-15.59	754.63	754.63
Bk N. Abut	277+07.43	-15.64	754.65	754.65

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+66.56	-11.35	752.91	752.91
⊙ Brg S. Abut	275+67.80	-11.28	752.91	752.91
A	275+77.71	-10.77	752.95	752.96
B	275+87.63	-10.33	753.00	753.01
C	275+97.56	-9.94	753.07	753.07
⊙ Brg Pier 1 Span 1	276+06.25	-9.66	753.13	753.13
⊙ Brg Pier 1 Span 2	276+08.24	-9.60	753.15	753.15
D	276+18.18	-9.35	753.24	753.26
E	276+28.12	-9.16	753.34	753.37
F	276+38.06	-9.04	753.45	753.49
G	276+48.00	-8.98	753.57	753.61
H	276+57.94	-8.99	753.70	753.72
⊙ Brg Pier 2 Span 2	276+65.89	-9.04	753.82	753.82
⊙ Brg Pier 2 Span 3	276+67.88	-9.06	753.85	753.85
J	276+77.82	-9.19	754.00	754.01
K	276+87.76	-9.39	754.17	754.18
L	276+97.70	-9.65	754.35	754.36
⊙ Brg N. Abut	277+06.39	-9.93	754.52	754.52
Bk N. Abut	277+07.63	-9.97	754.54	754.54

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+66.09	-2.95	752.74	752.74
⊙ Brg S. Abut	275+67.34	-2.88	752.74	752.74
A	275+77.31	-2.37	752.78	752.79
B	275+87.29	-1.92	752.83	752.84
C	275+97.27	-1.53	752.90	752.90
⊙ Brg Pier 1 Span 1	276+06.00	-1.25	752.96	752.96
⊙ Brg Pier 1 Span 2	276+08.00	-1.19	752.98	752.98
D	276+17.99	-0.94	753.07	753.09
E	276+27.98	-0.75	753.17	753.20
F	276+37.98	-0.62	753.28	753.32
G	276+47.98	-0.57	753.40	753.44
H	276+57.97	-0.57	753.53	753.55
⊙ Brg Pier 2 Span 2	276+65.97	-0.62	753.65	753.65
⊙ Brg Pier 2 Span 3	276+67.97	-0.64	753.68	753.68
J	276+77.96	-0.77	753.84	753.84
K	276+87.96	-0.97	754.01	754.02
L	276+97.94	-1.23	754.19	754.20
⊙ Brg N. Abut	277+06.68	-1.52	754.36	754.36
Bk N. Abut	277+07.93	-1.56	754.38	754.38

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+65.63	5.46	752.57	752.57
⊙ Brg S. Abut	275+66.88	5.52	752.57	752.57
A	275+76.90	6.04	752.61	752.62
B	275+86.93	6.49	752.66	752.67
C	275+96.97	6.88	752.73	752.73
⊙ Brg Pier 1 Span 1	276+05.75	7.17	752.79	752.79
⊙ Brg Pier 1 Span 2	276+07.76	7.23	752.81	752.81
D	276+17.81	7.48	752.90	752.92
E	276+27.85	7.67	753.00	753.03
F	276+37.90	7.79	753.11	753.15
G	276+47.95	7.85	753.23	753.27
H	276+58.00	7.85	753.37	753.39
⊙ Brg Pier 2 Span 2	276+66.04	7.80	753.48	753.48
⊙ Brg Pier 2 Span 3	276+68.05	7.78	753.51	753.51
J	276+78.10	7.64	753.67	753.68
K	276+88.15	7.44	753.84	753.85
L	276+98.19	7.18	754.03	754.03
⊙ Brg N. Abut	277+06.98	6.89	754.19	754.19
Bk N. Abut	277+08.24	6.85	754.22	754.22

- Note
1. For Deck Elevation Plan see sheet SD-4.
2. Stations and Offsets are taken from ⊙
Proposed IL 25/Dunham Road

DESIGNED	AJK
CHECKED	HMA
DRAWN	AJK
CHECKED	DMC

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alfred benesch & company
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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

DECK ELEVATIONS 2 OF 3
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	322
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

SHEET SD- 7
OF 34 SHEETS

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+65.15	13.86	752.40	752.40
☉ Brg S. Abut	275+66.41	13.93	752.40	752.40
A	275+76.49	14.45	752.44	752.45
B	275+86.58	14.90	752.49	752.50
C	275+96.67	15.29	752.56	752.56
☉ Brg Pier 1 Span 1	276+05.50	15.58	752.62	752.62
☉ Brg Pier 1 Span 2	276+07.52	15.64	752.64	752.64
D	276+17.62	15.89	752.73	752.75
E	276+27.72	16.08	752.83	752.86
F	276+37.82	16.21	752.94	752.98
G	276+47.93	16.27	753.06	753.10
H	276+58.04	16.26	753.20	753.22
☉ Brg Pier 2 Span 2	276+66.12	16.21	753.32	753.32
☉ Brg Pier 2 Span 3	276+68.14	16.19	753.35	753.35
J	276+78.25	16.06	753.51	753.51
K	276+88.35	15.86	753.68	753.69
L	276+98.45	15.59	753.86	753.87
☉ Brg N. Abut	277+07.28	15.31	754.03	754.03
Bk N. Abut	277+08.54	15.26	754.06	754.06

PG PROPOSED IL 25/ DUNHAM ROAD

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+65.09	15.00	752.37	752.37
☉ Brg S. Abut	275+66.35	15.00	752.38	752.38
A	275+76.46	15.00	752.43	752.44
B	275+86.57	15.00	752.49	752.50
C	275+96.68	15.00	752.56	752.57
☉ Brg Pier 1 Span 1	276+05.52	15.00	752.63	752.63
☉ Brg Pier 1 Span 2	276+07.54	15.00	752.65	752.65
D	276+17.64	15.00	752.74	752.77
E	276+27.74	15.00	752.85	752.89
F	276+37.84	15.00	752.96	753.01
G	276+47.93	15.00	753.09	753.12
H	276+58.03	15.00	753.22	753.24
☉ Brg Pier 2 Span 2	276+66.11	15.00	753.34	753.34
☉ Brg Pier 2 Span 3	276+68.13	15.00	753.37	753.37
J	276+78.23	15.00	753.53	753.53
K	276+88.33	15.00	753.69	753.70
L	276+98.43	15.00	753.87	753.88
☉ Brg N. Abut	277+07.27	15.00	754.04	754.04
Bk N. Abut	277+08.53	15.00	754.06	754.06

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+64.67	22.26	752.23	752.23
☉ Brg S. Abut	275+65.94	22.33	752.23	752.23
A	275+76.07	22.85	752.27	752.28
B	275+86.21	23.31	752.32	752.33
C	275+96.36	23.70	752.39	752.39
☉ Brg Pier 1 Span 1	276+05.24	23.99	752.45	752.45
☉ Brg Pier 1 Span 2	276+07.27	24.05	752.47	752.47
D	276+17.43	24.31	752.56	752.58
E	276+27.59	24.50	752.66	752.69
F	276+37.75	24.62	752.77	752.81
G	276+47.91	24.68	752.89	752.93
H	276+58.07	24.68	753.03	753.05
☉ Brg Pier 2 Span 2	276+66.20	24.63	753.15	753.15
☉ Brg Pier 2 Span 3	276+68.23	24.61	753.18	753.18
J	276+78.39	24.47	753.34	753.35
K	276+88.55	24.27	753.51	753.52
L	276+98.70	24.00	753.70	753.70
☉ Brg N. Abut	277+07.58	23.72	753.87	753.87
Bk N. Abut	277+08.85	23.67	753.90	753.90

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+64.19	30.67	752.06	752.06
☉ Brg S. Abut	275+65.46	30.74	752.06	752.06
A	275+75.65	31.26	752.10	752.11
B	275+85.85	31.72	752.15	752.16
C	275+96.05	32.11	752.21	752.22
☉ Brg Pier 1 Span 1	276+04.98	32.41	752.28	752.28
☉ Brg Pier 1 Span 2	276+07.02	32.46	752.30	752.30
D	276+17.24	32.72	752.39	752.41
E	276+27.45	32.91	752.49	752.53
F	276+37.67	33.04	752.60	752.64
G	276+47.88	33.10	752.72	752.76
H	276+58.10	33.10	752.86	752.88
☉ Brg Pier 2 Span 2	276+66.27	33.04	752.98	752.98
☉ Brg Pier 2 Span 3	276+68.32	33.03	753.01	753.01
J	276+78.53	32.89	753.17	753.18
K	276+88.75	32.69	753.35	753.36
L	276+98.96	32.42	753.53	753.54
☉ Brg N. Abut	277+07.89	32.13	753.71	753.71
Bk N. Abut	277+09.17	32.08	753.73	753.73

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk S. Abut	275+63.70	39.07	751.89	751.89
☉ Brg S. Abut	275+64.98	39.14	751.89	751.89
A	275+75.23	39.67	751.93	751.94
B	275+85.48	40.13	751.98	751.99
C	275+95.74	40.53	752.04	752.05
☉ Brg Pier 1 Span 1	276+04.72	40.82	752.11	752.11
☉ Brg Pier 1 Span 2	276+06.77	40.88	752.13	752.13
D	276+17.04	41.14	752.22	752.24
E	276+27.31	41.33	752.32	752.36
F	276+37.58	41.46	752.43	752.47
G	276+47.86	41.52	752.56	752.59
H	276+58.13	41.51	752.69	752.71
☉ Brg Pier 2 Span 2	276+66.35	41.46	752.81	752.81
☉ Brg Pier 2 Span 3	276+68.41	41.44	752.85	752.85
J	276+78.68	41.30	753.01	753.01
K	276+88.95	41.10	753.18	753.19
L	276+99.22	40.83	753.37	753.38
☉ Brg N. Abut	277+08.20	40.54	753.55	753.55
Bk N. Abut	277+09.49	40.49	753.57	753.57

Note
1. For Deck Elevation Plan see sheet SD-4.
2. Stations and Offsets are taken from ☉ Proposed IL 25/Dunham Road

DESIGNED	AJK
CHECKED	HMA
DRAWN	AJK
CHECKED	DMC

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Job # 3944

DECK ELEVATIONS 3 OF 3
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

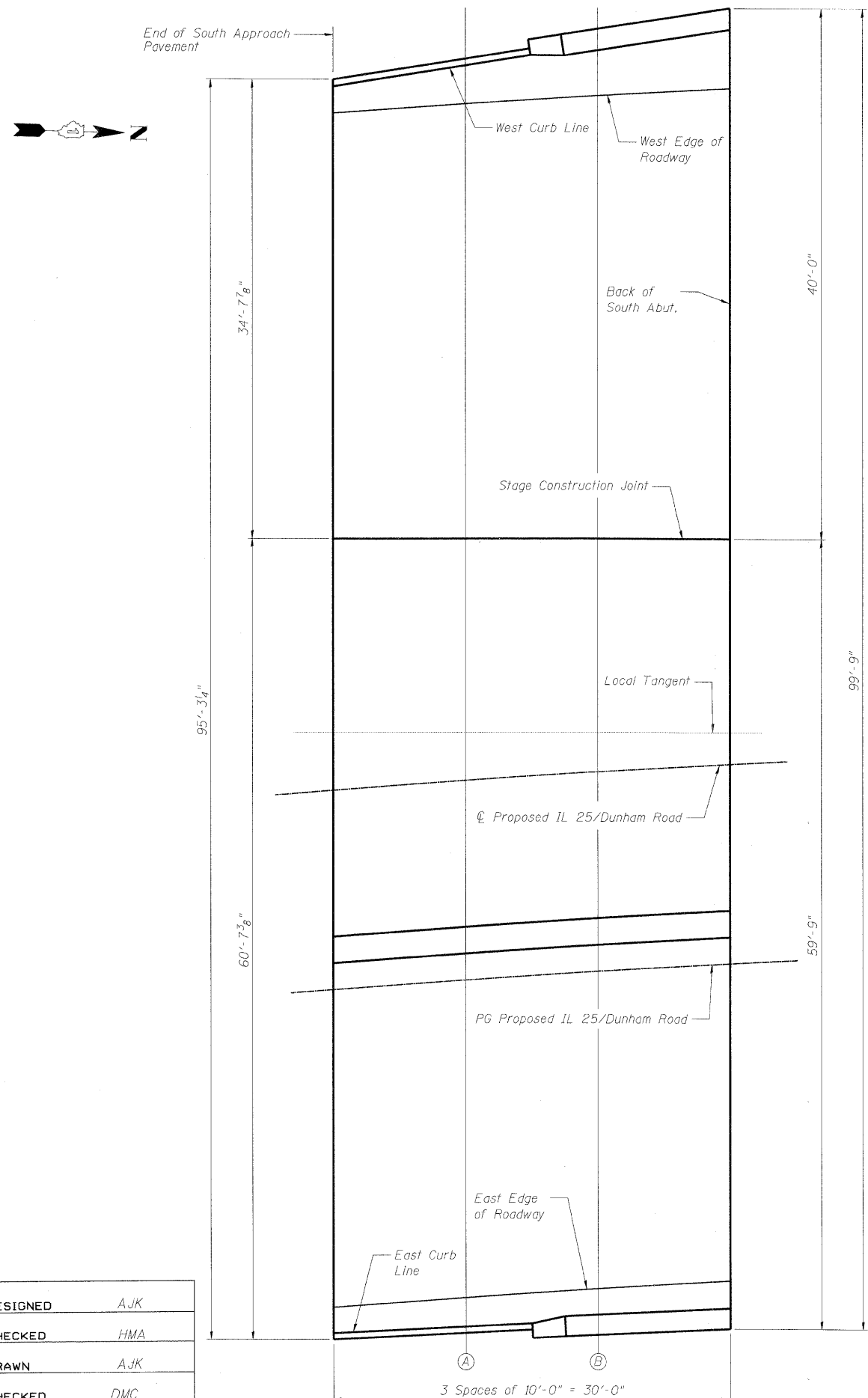
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	323
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SD- 8
OF 34 SHEETS

Contract # 63074



DESIGNED	AJK
CHECKED	HMA
DRAWN	AJK
CHECKED	DMC

PLAN

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+39.71	-53.00	753.66
A	275+49.46	-53.87	753.70
B	275+59.17	-54.37	753.74
Back of South Abutment	275+68.90	-55.37	753.80

PG IL 25/DUNHAM ROAD

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+34.73	15.00	752.29
A	275+44.85	15.00	752.31
B	275+54.97	15.00	752.34
Back of South Abutment	275+65.09	15.00	752.37

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+39.57	-51.00	753.62
A	275+49.28	-51.00	753.64
B	275+58.98	-51.00	753.67
Back of South Abutment	275+68.67	-51.00	753.71

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+32.86	39.00	751.81
A	275+43.15	39.00	751.83
B	275+53.43	39.00	751.85
Back of South Abutment	275+63.71	39.00	751.89

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+37.27	-18.94	752.97
A	275+47.13	-18.24	752.98
B	275+56.99	-17.59	753.00
Back of South Abutment	275+66.87	-17.01	753.02

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End South Approach Pavement	275+32.71	41.00	751.77
A	275+42.99	41.23	751.78
B	275+53.30	40.97	751.81
Back of South Abutment	275+63.59	41.07	751.85

Notes:
1. For approach slab details, see sheets SD-29 and SD-30.

TOP OF SOUTH APPROACH
SLAB ELEVATIONS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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Job # 3944

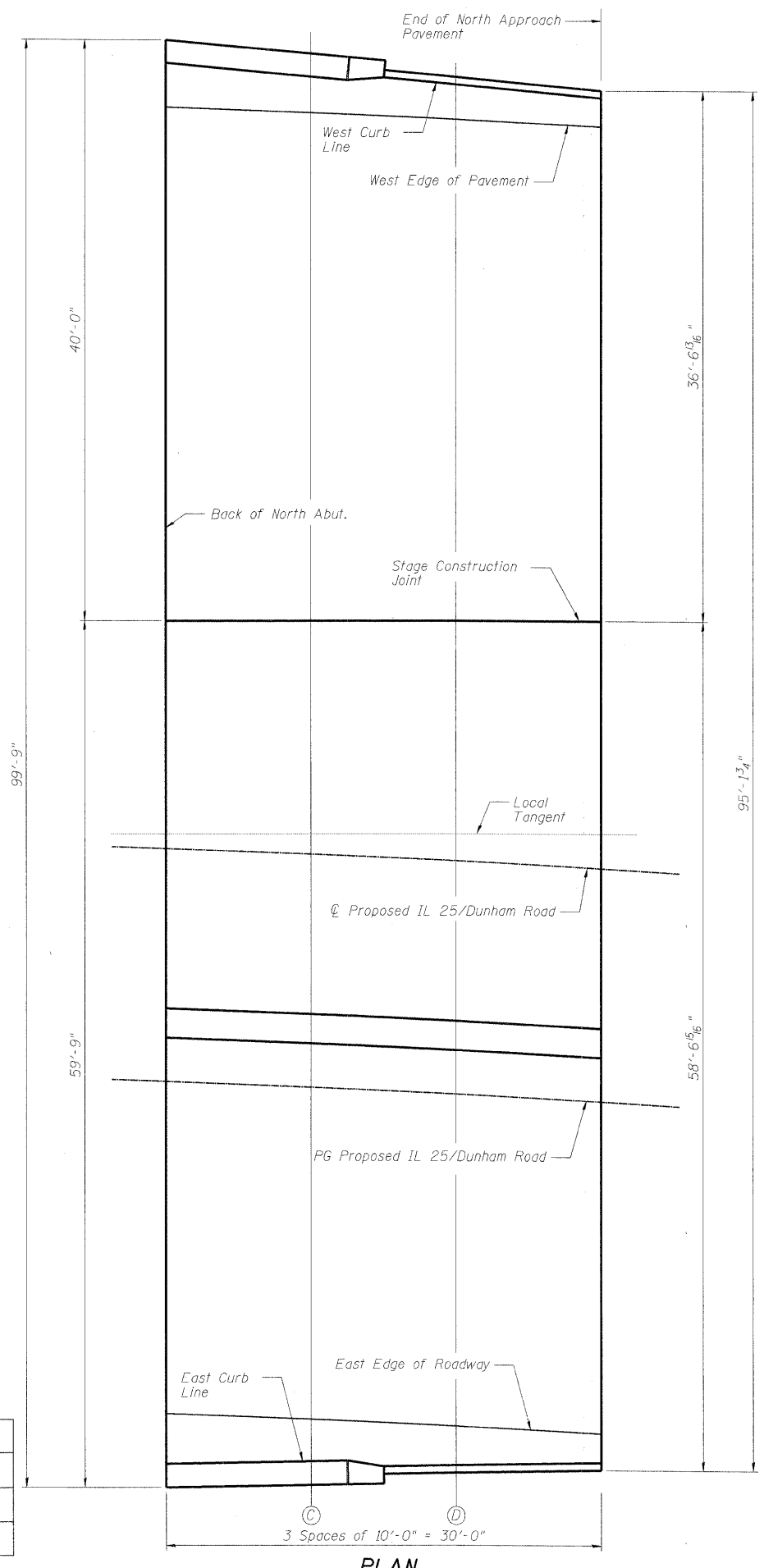
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	324
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

SHEET SD- 9
OF 34 SHEETS



PLAN

DESIGNED	AJK
CHECKED	HMA
DRAWN	AYR
CHECKED	DMC

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+06.11	-54.03	755.40
C	277+15.80	-53.48	755.58
D	277+25.48	-53.42	755.77
End North Approach Pavement	277+35.19	-53.00	755.97

PG IL 25/DUNHAM ROAD

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+08.53	15.00	754.06
C	277+18.64	15.00	754.26
D	277+28.75	15.00	754.47
End North Approach Pavement	277+38.86	15.00	754.69

WEST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+06.21	-51.00	755.34
C	277+15.90	-51.00	755.53
D	277+25.59	-51.00	755.73
End North Approach Pavement	277+35.29	-51.00	755.94

EAST EDGE OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+09.43	39.00	753.60
C	277+19.69	39.00	753.80
D	277+29.96	39.00	754.02
End North Approach Pavement	277+40.24	39.00	754.25

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+07.43	-15.64	754.65
C	277+17.33	-16.02	754.86
D	277+27.21	-16.47	755.07
End North Approach Pavement	277+37.09	-16.99	755.29

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Back of North Abutment	277+09.56	42.49	753.53
C	277+19.83	41.92	753.75
D	277+30.10	41.70	753.97
End North Approach Pavement	277+40.35	41.00	754.21

Notes:
1. For approach slab details, see sheets SD-29 and SD-30.

TOP OF NORTH APPROACH
SLAB ELEVATIONS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

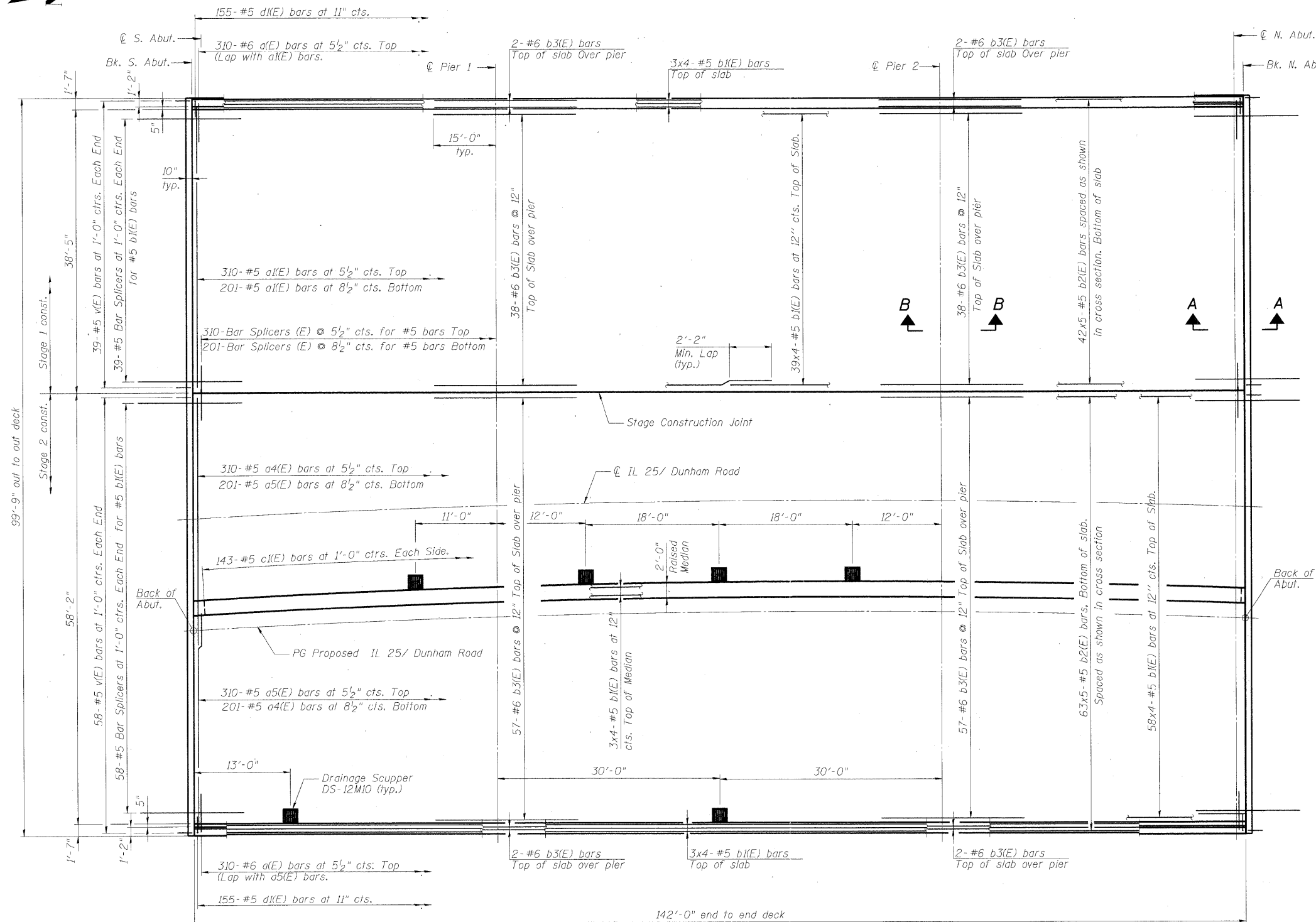
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312-565-0450
Job # 3944

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 10 OF 34 SHEETS
		KANE	545	325	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract # 63074



PLAN

- Notes
1. For cross section and median details, see sheet SD-11.
 2. For Section A-A and B-B see sheet SD-13.
 3. For parapet details see sheet SD-14.
 4. For bill of material see sheet SD-15.
 5. Bars indicated thus 20 x 3-#5 etc. Indicates 20 lines of bars with 3 lengths per line.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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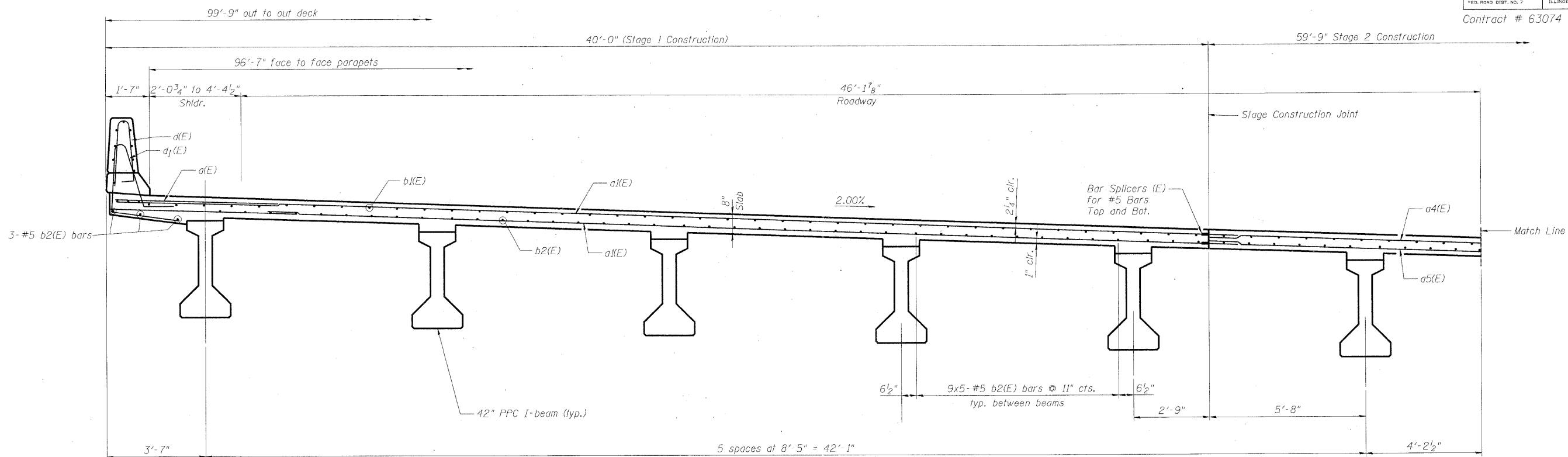
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Job # 3944

DECK REINFORCEMENT PLAN
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

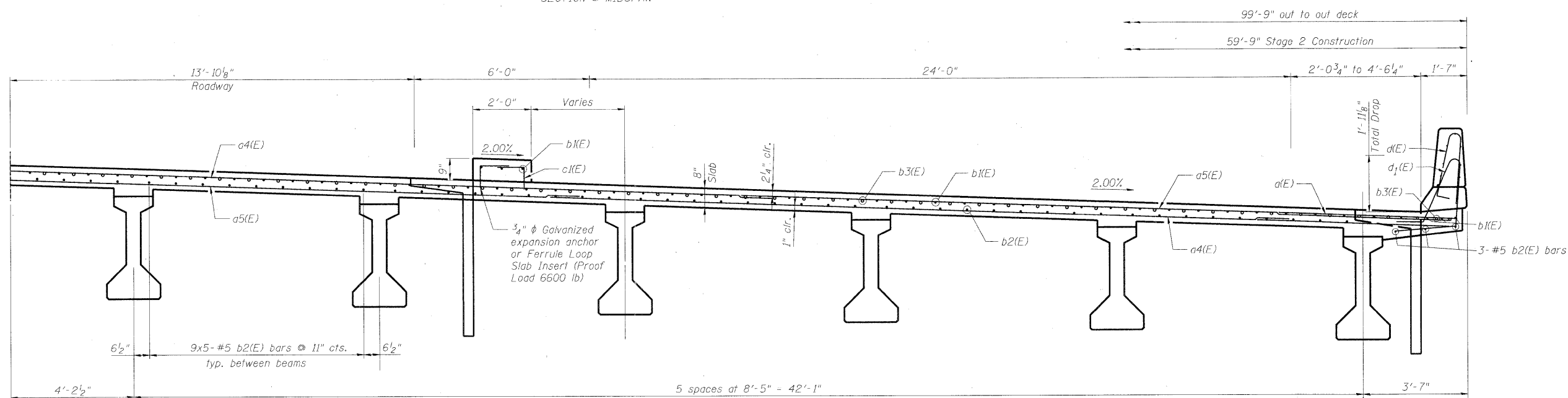
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 11 OF 34 SHEETS
-	-	KANE	545	326	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract # 63074



CROSS SECTION
SECTION @ MIDSPAN



CROSS SECTION
SECTION OVER PIER

Notes:
1. For Deck Plan see sheet SD-10.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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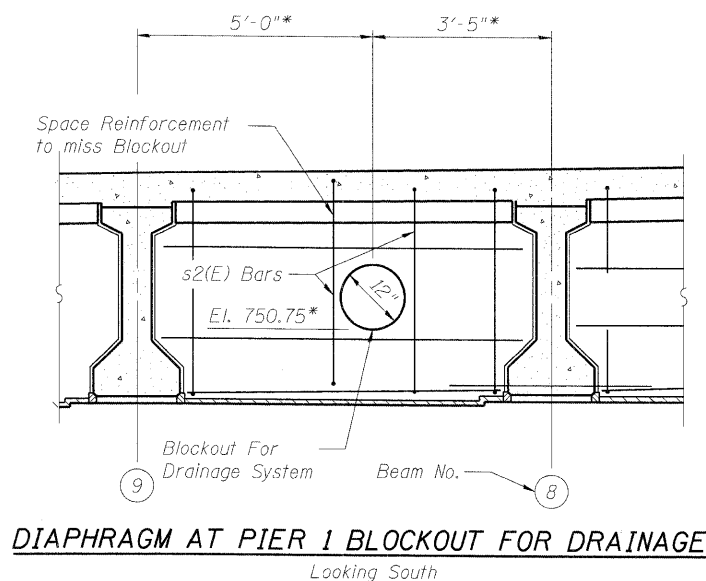
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Job # 3944

DECK CROSS SECTION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	327
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

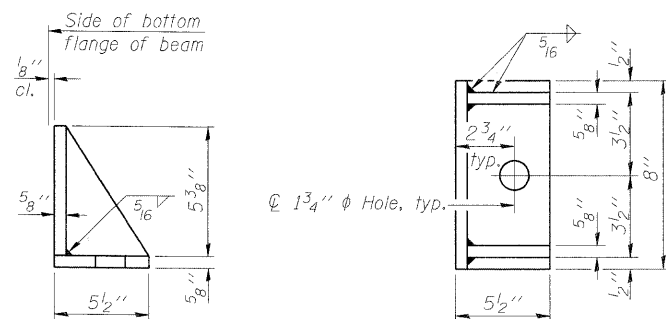


DIAPHRAGM AT PIER 1 BLOCKOUT FOR DRAINAGE
Looking South

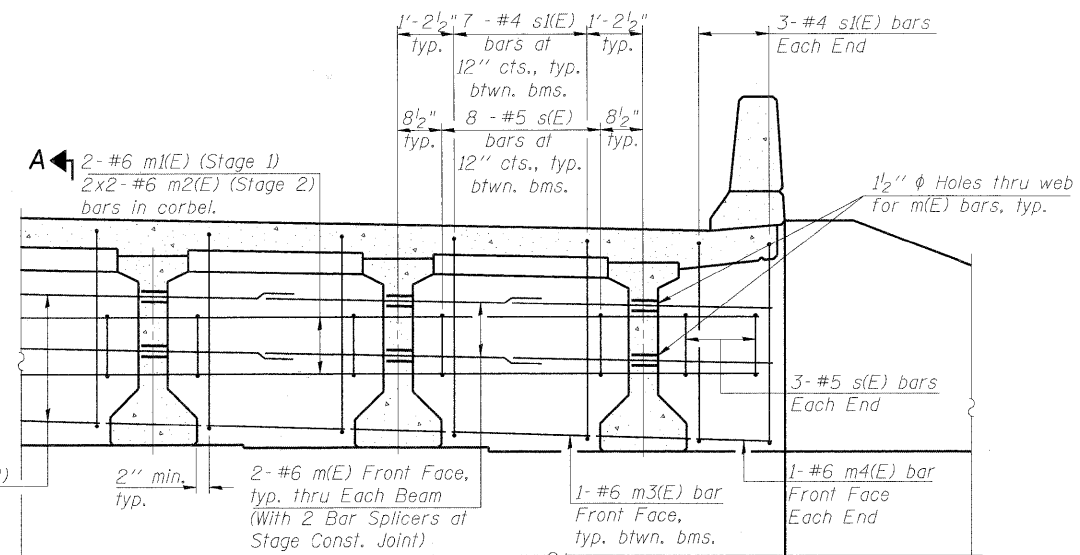
* Elevation and dimensions to be verified by Manufacturer of Drainage System

Notes:

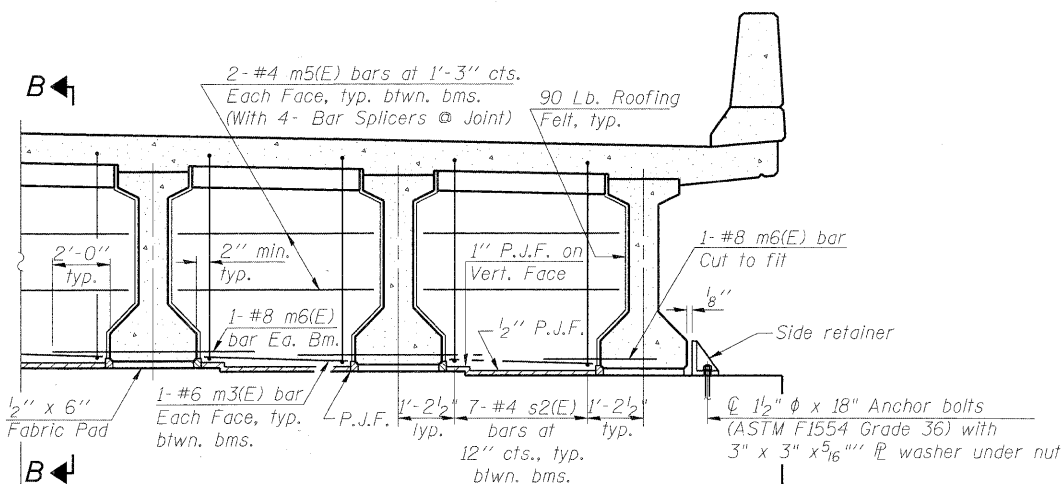
1. Reinforcement bars in diaphragm are billed with superstructure on sheet SD-15.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet SD-15.
3. For details of bars s(E), s1(E) and s2(E) see sheet SD-15.
4. The s(E), s1(E) and s2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
5. See sheet SD-13 for Sections A-A and B-B.
6. Cost of 90 Lb. roofing felt is included with Concrete Superstructure.
7. The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
8. Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.
9. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
10. Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.
11. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
12. Cost of side retainer and anchor bolts shall be included with Concrete Structures.



SIDE RETAINER
(2 required each side of pier)
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.



DIAPHRAGM ELEVATION AT ABUTMENT



DIAPHRAGM AT PIER

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

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

PI-2DI 5-16-08

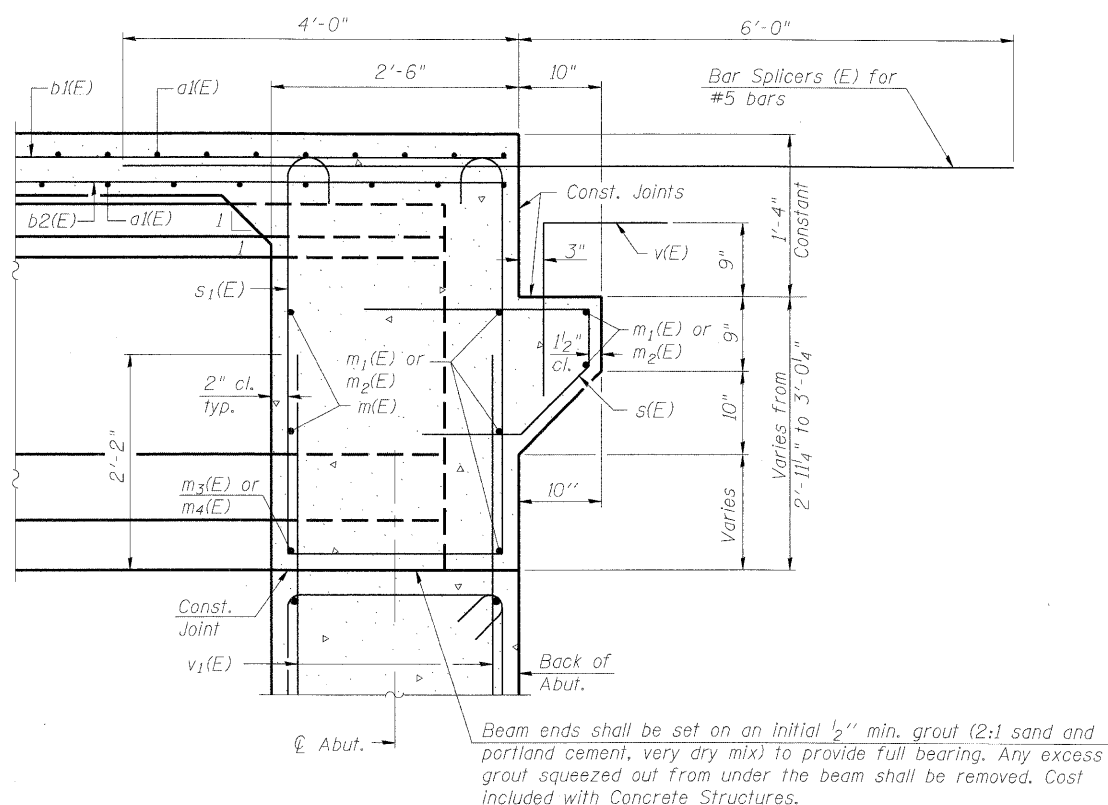
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Job # 3944

DIAPHRAGM ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 13 OF 34 SHEETS
-	-	KANE	545	328	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

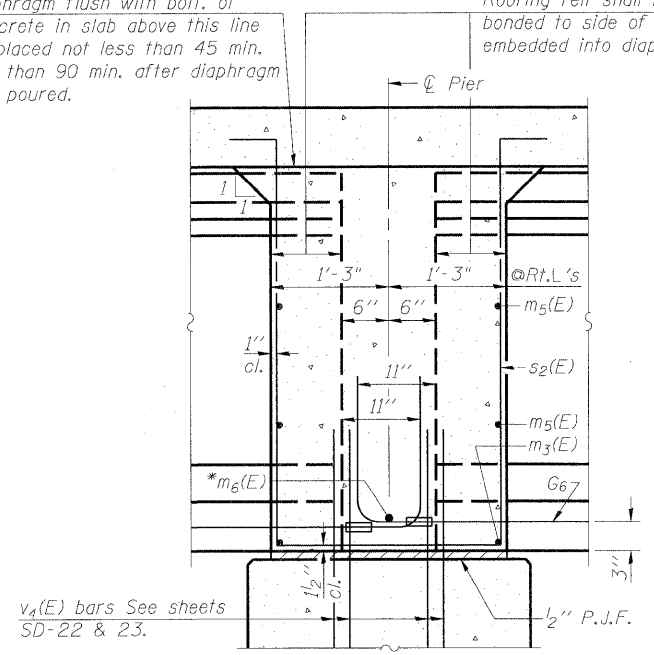
Contract # 63074



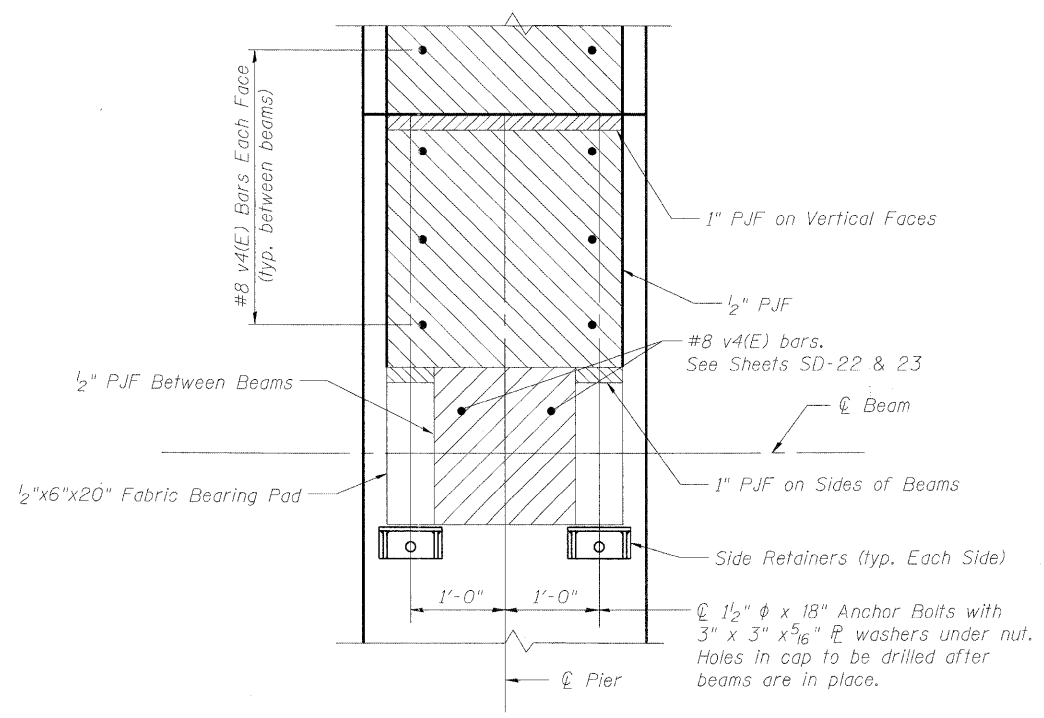
SECTION A-A
Dimensions at right angles to abutment

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

Roofing felt shall be bonded to side of beam embedded into diaphragm.



SECTION B-B
Dimensions along centerline of beam, except as shown.



PLAN AT PIER
(Showing bearing pad and P.J.F. details)

Note:
1. See sheet SD-10 for location of Sections A-A and B-B.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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Job # 3944

DIAPHRAGM SECTIONS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

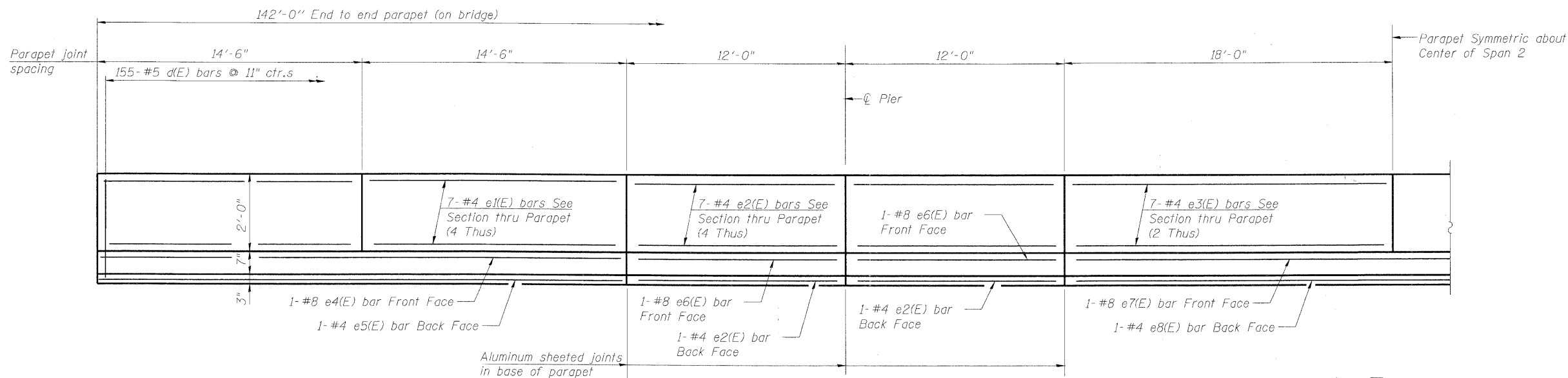
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	329
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

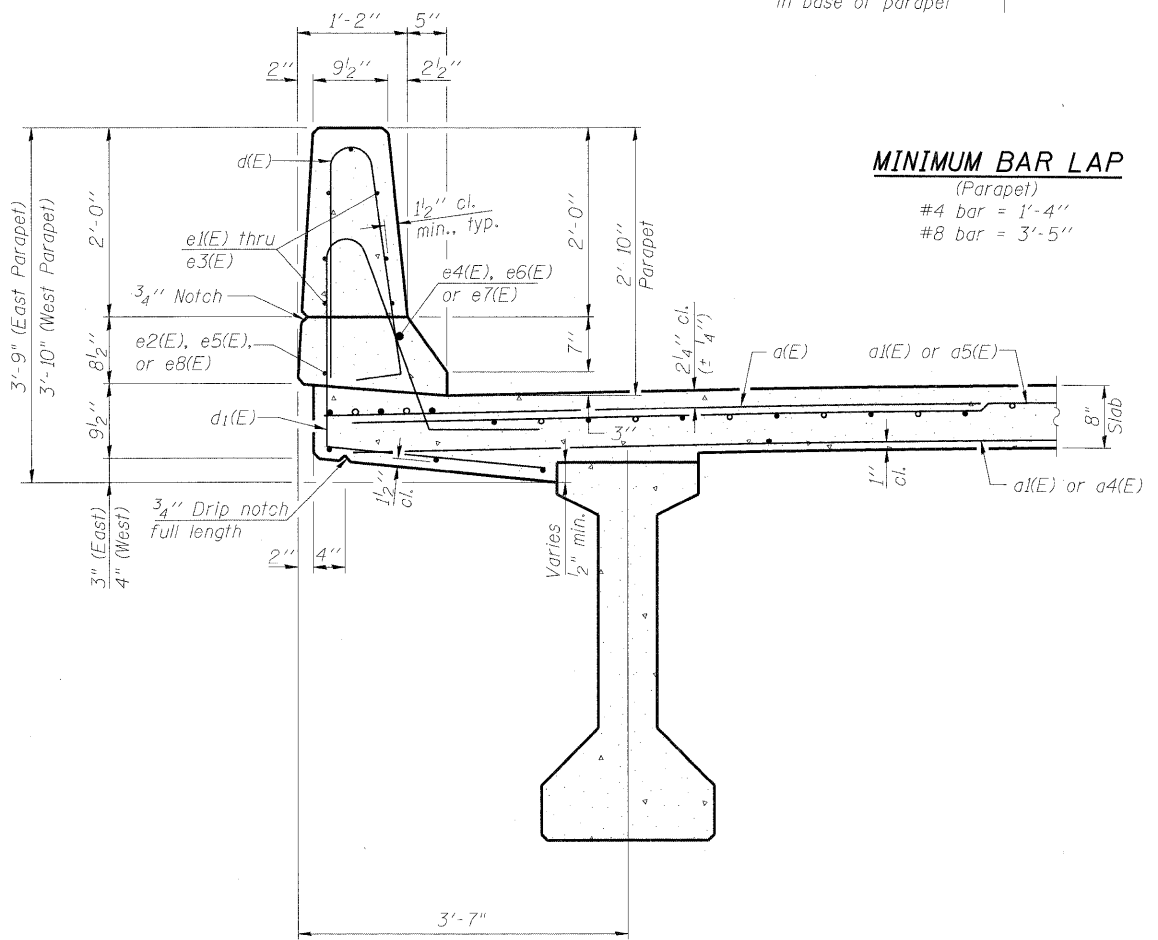
Contract # 63074

SHEET SD- 14
OF 34 SHEETS

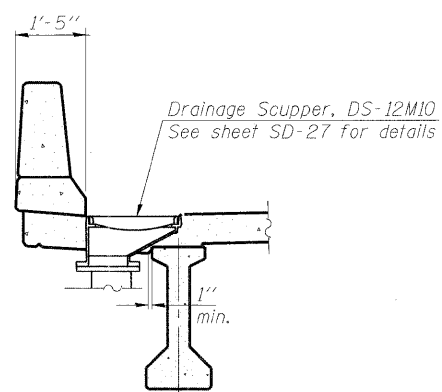


INSIDE ELEVATION OF PARAPET

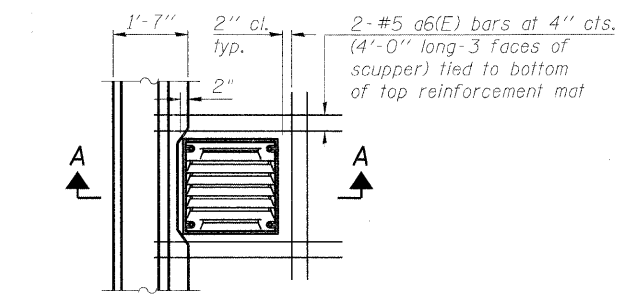
MINIMUM BAR LAP
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



SECTION THRU PARAPET

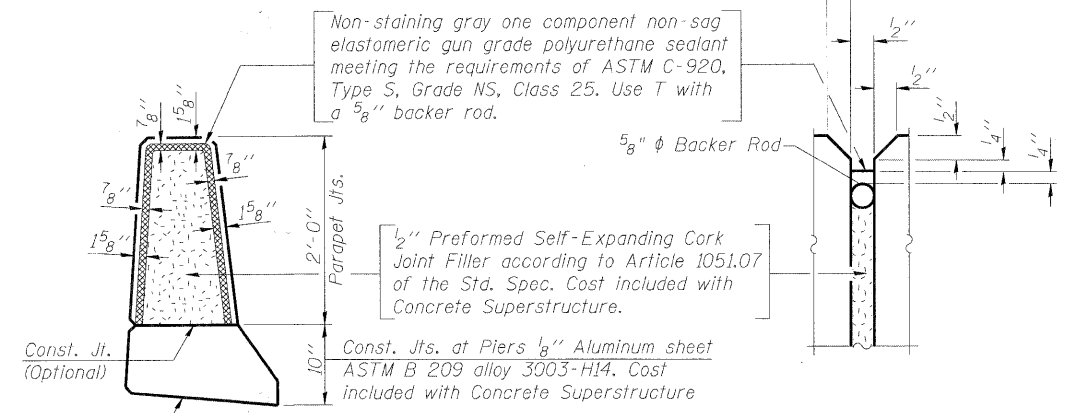


SECTION A-A

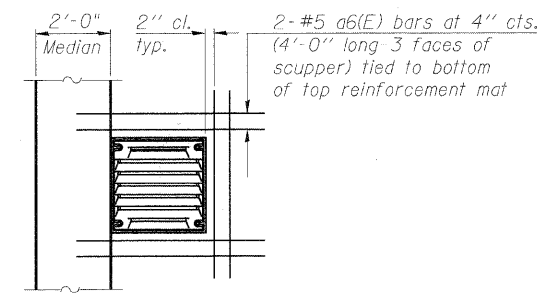


PLAN OF SCUPPER @ PARAPET (4 Thus)

Note:
Cut longitudinal reinforcement to clear drainage scuppers.



PARAPET JOINT DETAILS



PLAN OF SCUPPER @ MEDIAN (2 Thus)

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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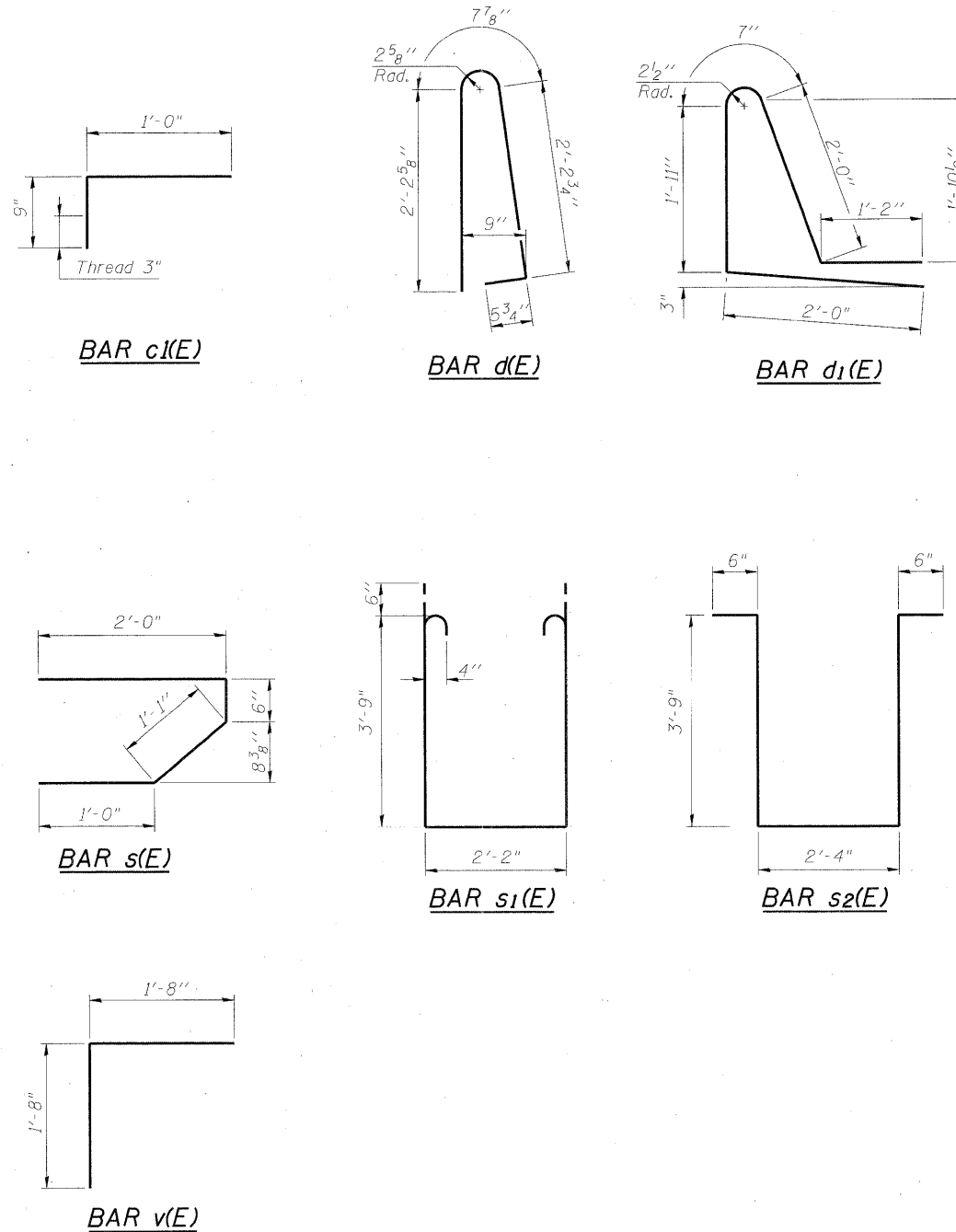
PARAPET ELEVATIONS AND DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 15 OF 34 SHEETS
		KANE	545	332	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 63074



**SUPERSTRUCTURE
BILL OF MATERIAL**

(Stage 1 Construction)

Bar	No.	Size	Length	Shape
a(E)	310	#6	6'-0"	—
a1(E)	511	#5	39'-6"	—
b1(E)	168	#5	37'-0"	—
b2(E)	210	#5	30'-3"	—
b3(E)	80	#6	30'-0"	—
d(E)	155	#5	5'-7"	┘
d1(E)	155	#5	7'-8"	┘
e1(E)	28	#4	14'-0"	—
e2(E)	32	#4	11'-6"	—
e3(E)	14	#4	17'-6"	—
e4(E)	2	#8	28'-6"	—
e5(E)	2	#4	28'-6"	—
e6(E)	4	#8	11'-6"	—
e7(E)	1	#8	35'-6"	—
e8(E)	1	#4	35'-6"	—
m(E)	20	#6	11'-2"	—
m1(E)	8	#6	38'-6"	—
m3(E)	30	#6	6'-3"	—
m4(E)	2	#6	2'-4"	—
m5(E)	40	#4	7'-6"	—
m6(E)	10	#8	6'-0"	—
s(E)	76	#5	4'-7"	┘
s1(E)	68	#4	10'-8"	┘
s2(E)	62	#4	10'-10"	┘
v(E)	78	#5	3'-4"	┘
Reinforcement Bars, Epoxy Coated		Lbs.	46,740	
Concrete Superstructure		Cu. Yds.	214.3	

Bars indicated thus 3 x 4-#5 etc. indicates 3 lines of bars with 4 lengths per line.

**SUPERSTRUCTURE
BILL OF MATERIAL**

(Stage 2 Construction)

Bar	No.	Size	Length	Shape
a(E)	310	#6	6'-0"	—
a4(E)	511	#5	35'-0"	—
a5(E)	511	#5	28'-3"	—
a6(E)	36	#5	4'-0"	—
b1(E)	256	#5	37'-0"	—
b2(E)	315	#5	30'-3"	—
b3(E)	118	#6	30'-0"	—
c1(E)	286	#5	1'-9"	┘
d(E)	155	#5	5'-7"	┘
d1(E)	155	#5	7'-8"	┘
e1(E)	28	#4	14'-0"	—
e2(E)	32	#4	11'-6"	—
e3(E)	14	#4	17'-6"	—
e4(E)	2	#8	28'-6"	—
e5(E)	2	#4	28'-6"	—
e6(E)	4	#8	11'-6"	—
e7(E)	1	#8	35'-6"	—
e8(E)	1	#4	35'-6"	—
m(E)	28	#6	11'-2"	—
m2(E)	16	#6	32'-0"	—
m3(E)	42	#6	6'-3"	—
m4(E)	2	#6	2'-4"	—
m5(E)	56	#4	7'-6"	—
m6(E)	14	#8	6'-0"	—
s(E)	112	#5	4'-7"	┘
s1(E)	100	#4	10'-8"	┘
s2(E)	94	#4	10'-10"	┘
v(E)	116	#5	3'-4"	┘
Reinforcement Bars, Epoxy Coated		Lbs.	70,040	
Concrete Superstructure		Cu. Yds.	321.5	

Bars indicated thus 3 x 4-#5 etc. indicates 3 lines of bars with 4 lengths per line.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

REINFORCEMENT BAR BENDS AND DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

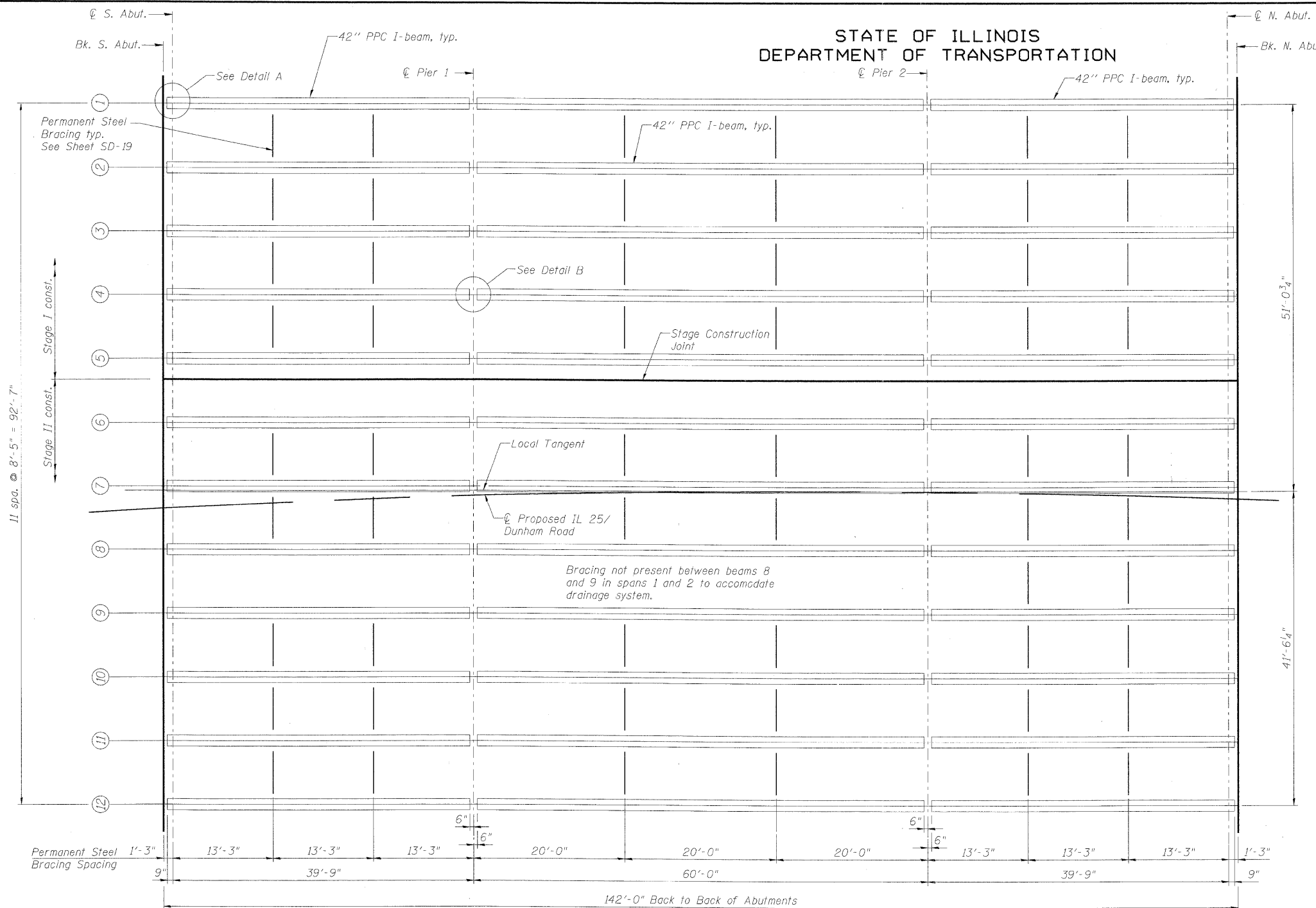
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

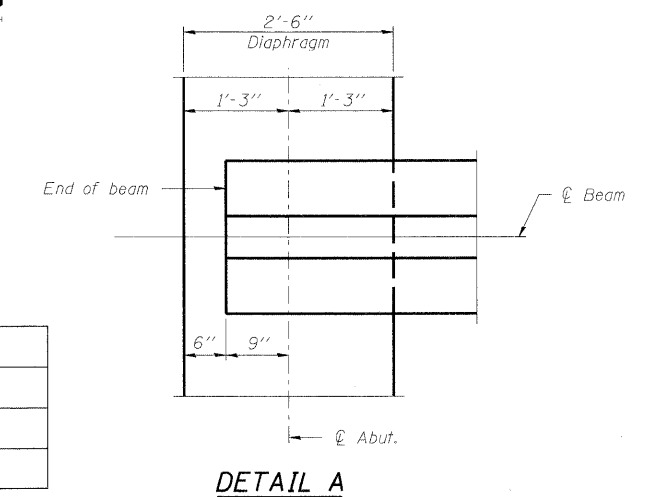
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	331
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SD- 16
OF 34 SHEETS

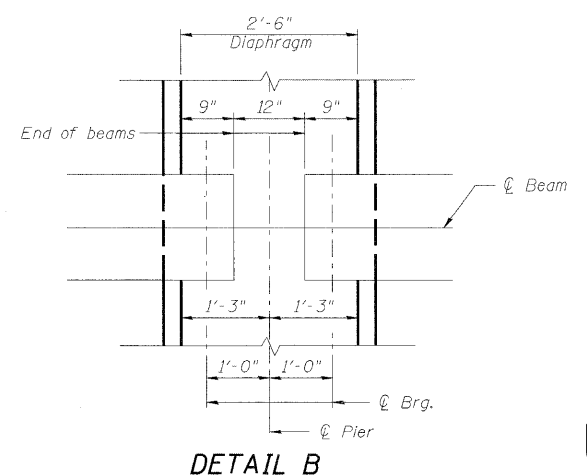
Contract # 63074



PLAN



DETAIL A



DETAIL B

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

	0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
<i>I</i>	90956	-	90956
<i>I'</i>	307250	-	307250
<i>S_b</i>	5153	-	5153
<i>S_b'</i>	9082	-	9082
<i>S_t</i>	3736	-	3736
<i>S_t'</i>	19001	-	19001
<i>DC1</i>	1.33	-	1.33
<i>M_{DC1}</i>	252	-	576
<i>DC2</i>	0.08	0.08	0.08
<i>M_{DC2}</i>	7	-19	14
<i>DW</i>	0.42	0.42	0.42
<i>M_{DW}</i>	38	-104	73
<i>M_{L + Imp}</i>	517	-583	583

	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
<i>R_{DC1}</i>	26.6	26.6	39.4
* <i>R_{DC2}</i>	1.1	2.2	2.2
* <i>R_{DW}</i>	5.6	11.6	11.6
* <i>R_{L + Imp}</i>	64.8	78.7	84.5
<i>R_{Total}</i>	98.1	119.0	137.6

* The total *R_{DC2}*, *R_{DW}* and *R_{L + Imp}* are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

- I*: Non-composite moment of inertia of beam section (in.⁴).
- I'*: Composite moment of inertia of beam section (in.⁴).
- S_b*: Non-composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_b'*: Composite section modulus for the bottom fiber of the prestressed beam (in.³).
- S_t*: Non-composite section modulus for the top fiber of the prestressed beam (in.³).
- S_t'*: Composite section modulus for the top fiber of the prestressed beam (in.³).
- DC1*: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}*: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2*: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}*: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW*: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW}*: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M_{L + Imp}*: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

FRAMING PLAN
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

benesch
 Engineers • Surveyors • Planners
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450
 Job # 3944

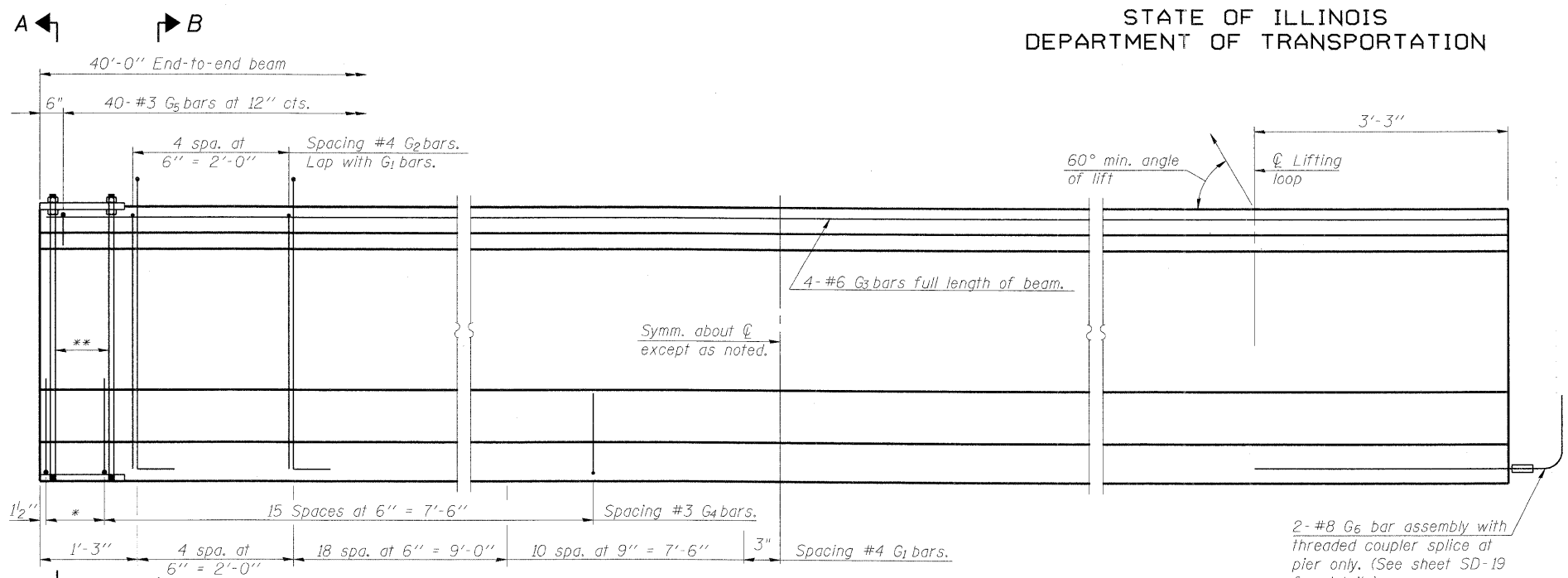
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 3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	332
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SD- 17
OF 34 SHEETS

Contract # 63074

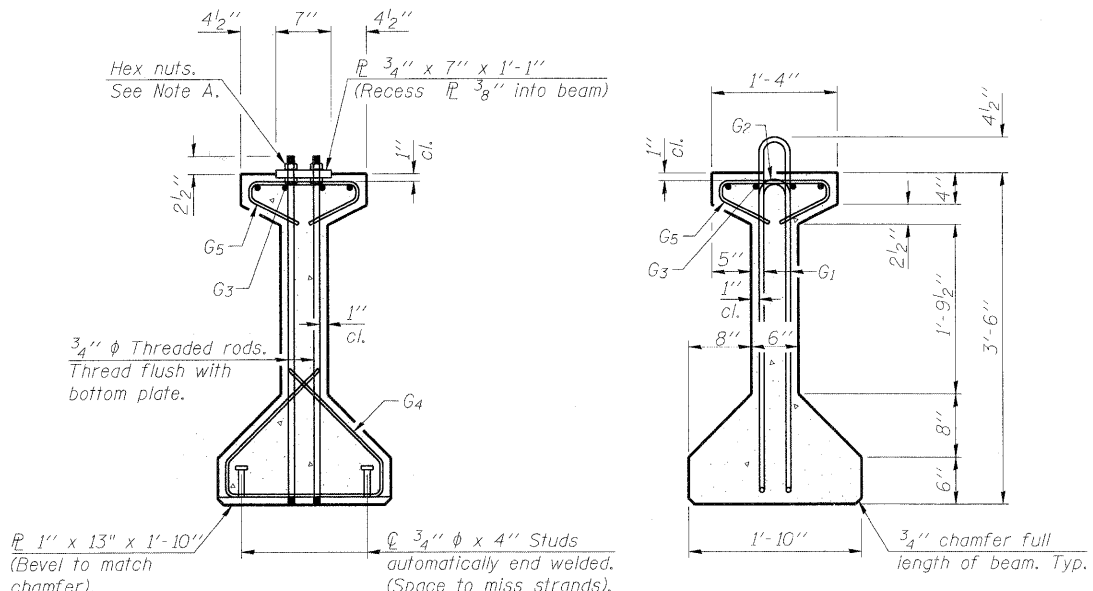


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

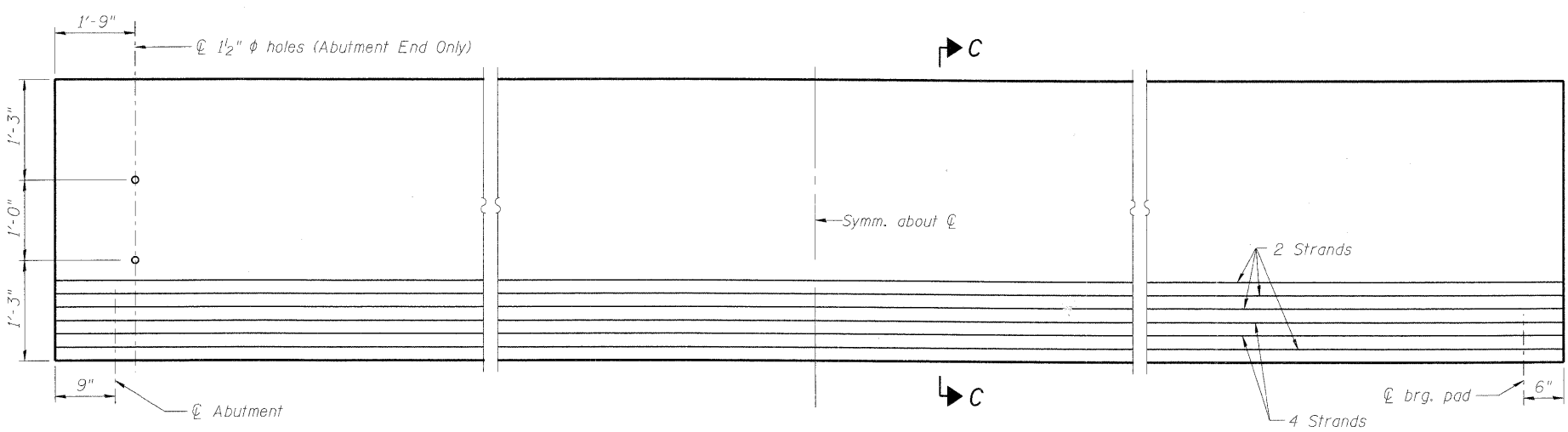
2- #8 G6 bar assembly with threaded coupler splice at pier only. (See sheet SD-19 for details).

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

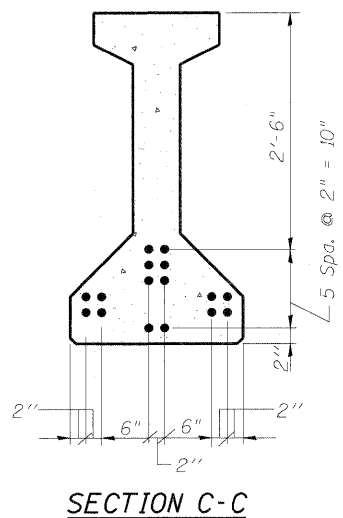


SECTION A-A

SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)
(Span 1 shown, Span 3 opposite hand)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	66	#4	8'-5"	∩ L
G2	10	#4	6'-8"	∩
G3	4	#6	39'-6"	—
G4	38	#3	1'-11"	∩
G5	40	#3	2'-6"	∩
G6	2	#8	6'-6"	U

***For information only

Notes:
1. See sheet SD-19 for additional details and Bill of Material.
2. Required release strength, f'ci, shall be 5,000 psi.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

PI-4-42 5-16-08

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312-585-0450
Job # 3944

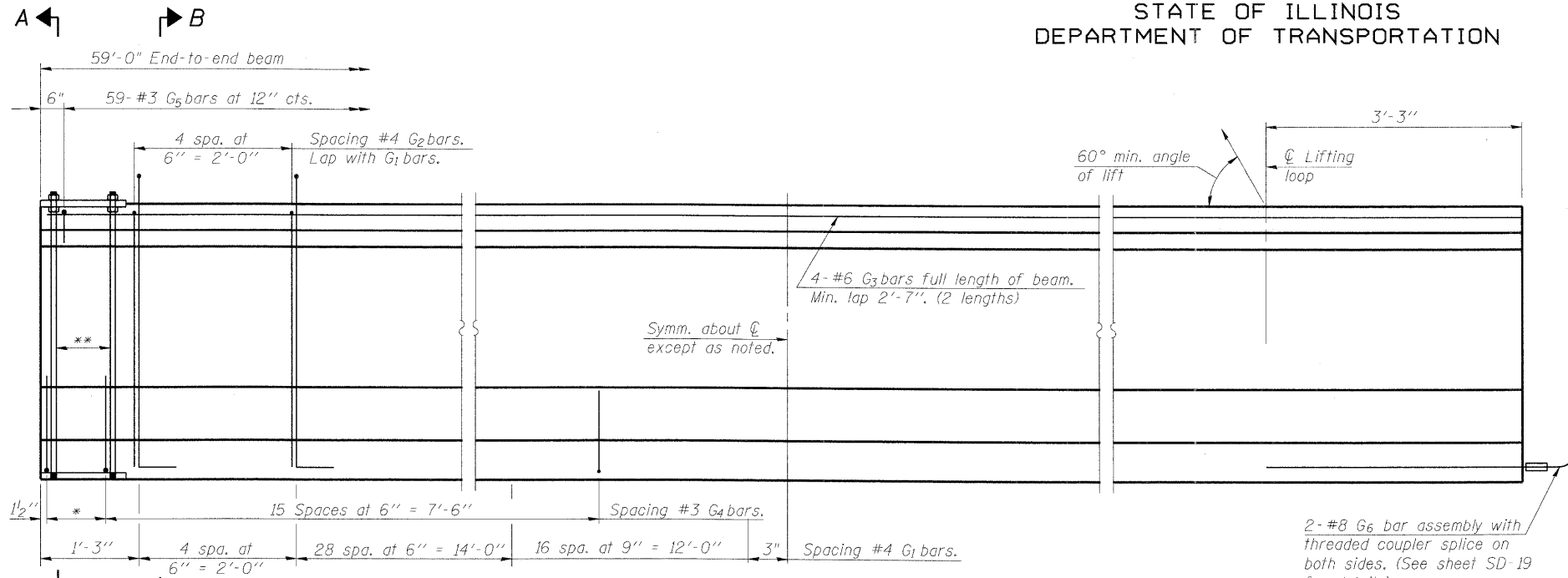
42" PPC I-BEAM ELEVATION - SPANS 1 & 3
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 18 OF 34 SHEETS
-	-	KANE	545	333	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

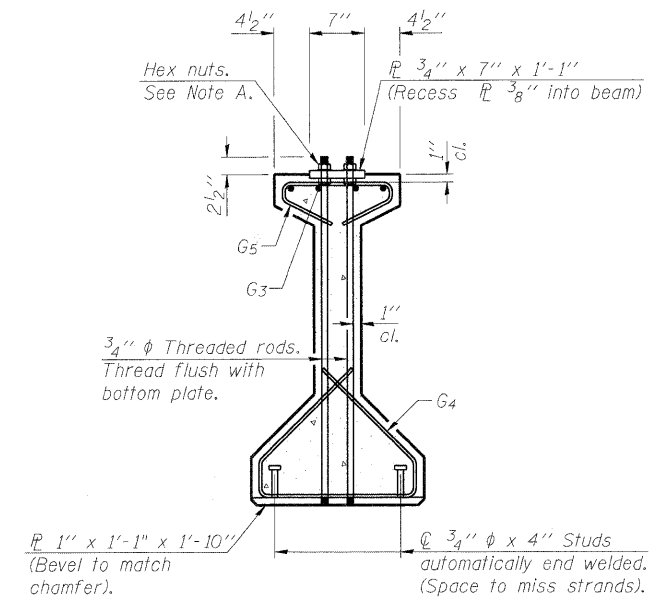
Contract # 63074



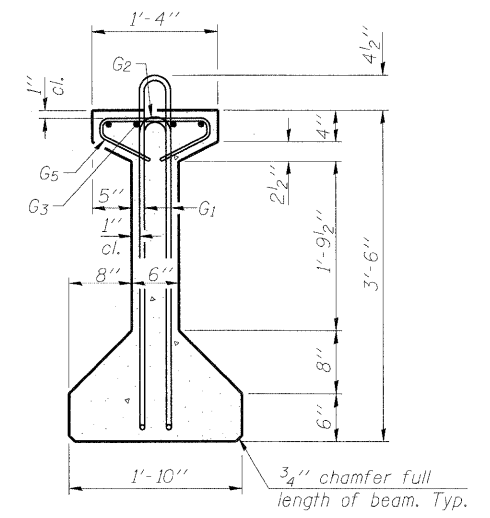
*3 spaces at 3" = 9".
**4-3/4" φ threaded dowel rods at 3" cts., Each Face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

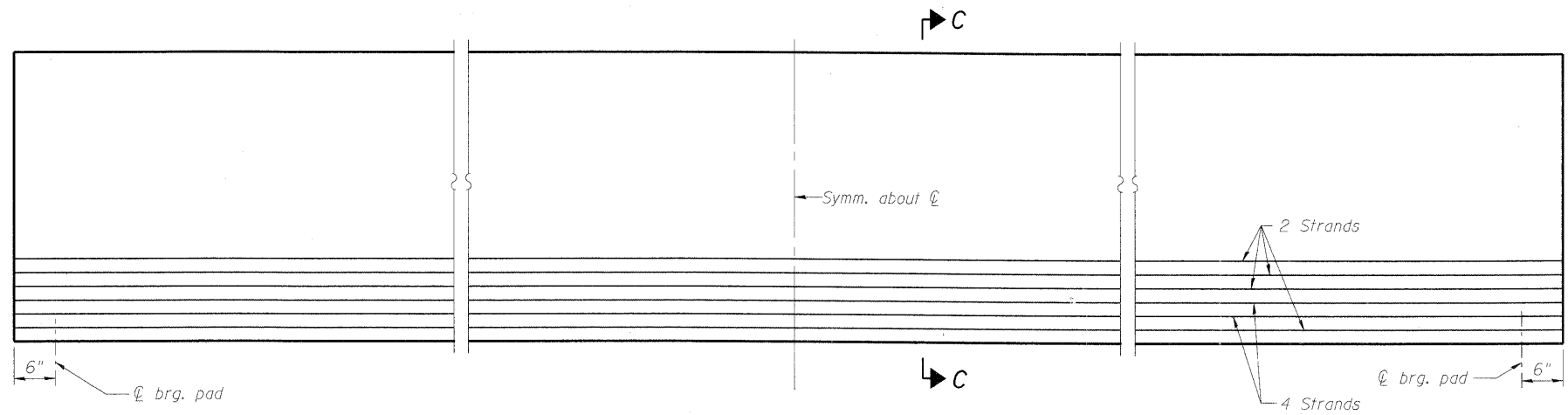
2-#8 G6 bar assembly with threaded coupler splice on both sides. (See sheet SD-19 for details).
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



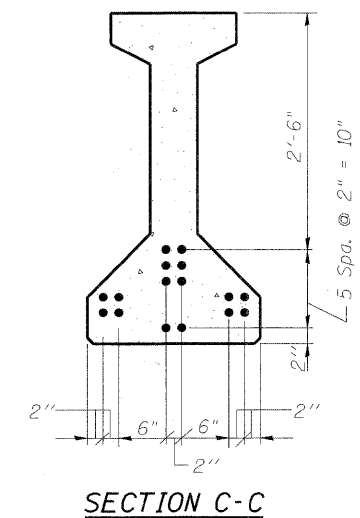
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	98	#4	8'-5"	∩
G2	10	#4	6'-8"	∩
G3	8	#6	30'-9"	—
G4	38	#3	4'-11"	∩
G5	59	#3	2'-6"	∩
G6	4	#8	6'-6"	∩

***For information only

Notes:
1. See sheet SD-19 for additional details and Bill of Material.
2. Required release strength, f'ci, shall be 5,000 psi.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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312-585-0450
Job # 3944

**42" PPC I-BEAM ELEVATION - SPAN 2
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032**

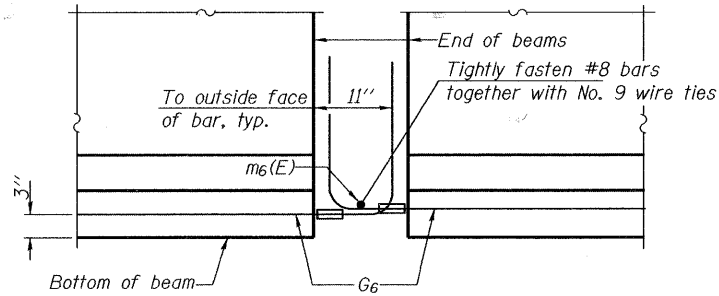
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

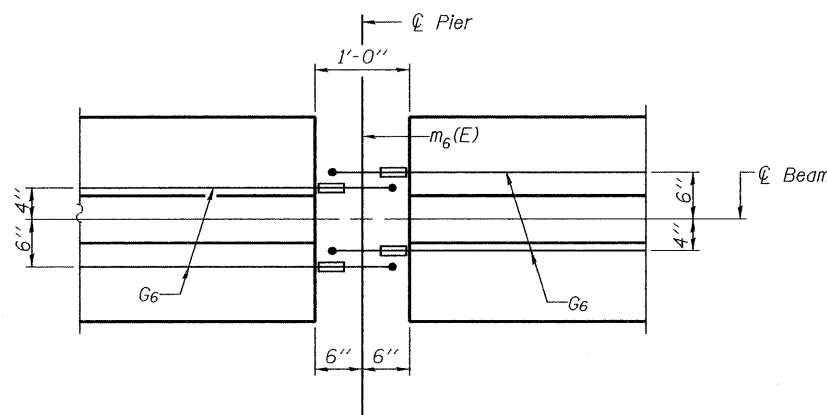
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	334
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET SD-19
OF 34 SHEETS

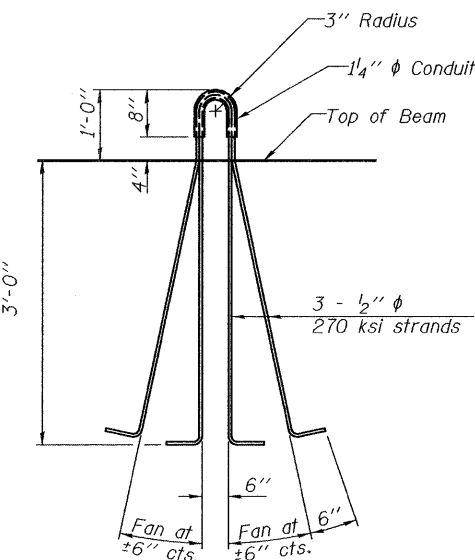
Contract # 63074



ELEVATION OF BEAM AT PIER

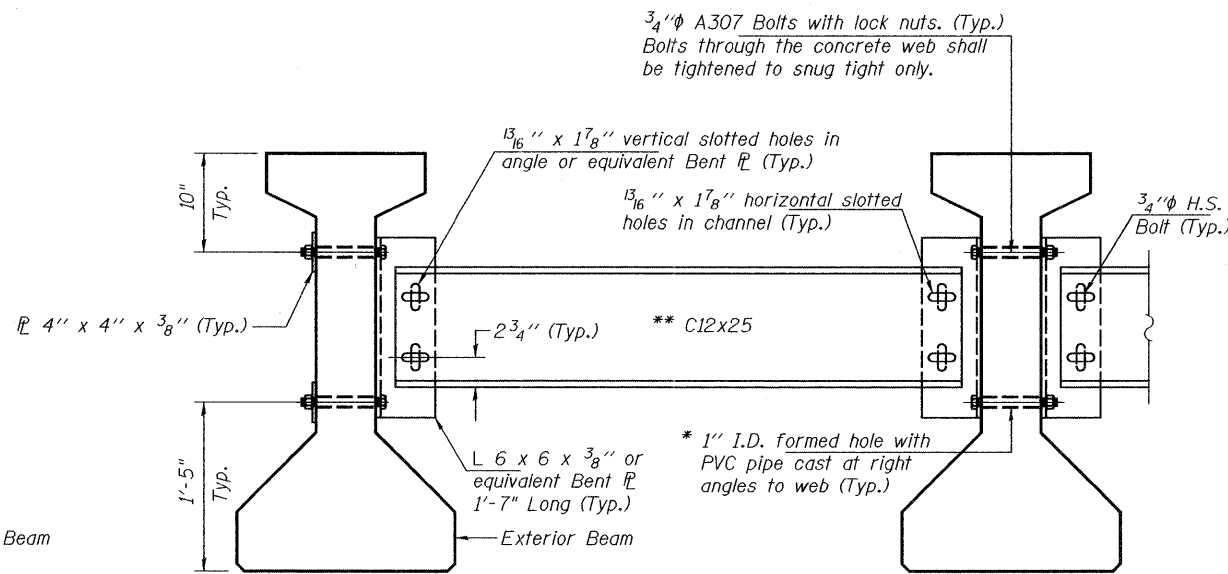


PLAN OF BEAM AT PIER



LIFTING LOOP DETAIL

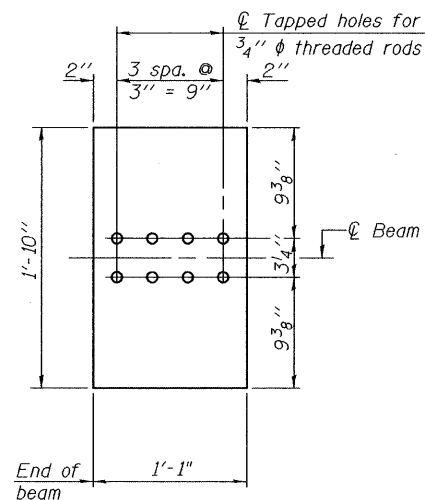
DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC



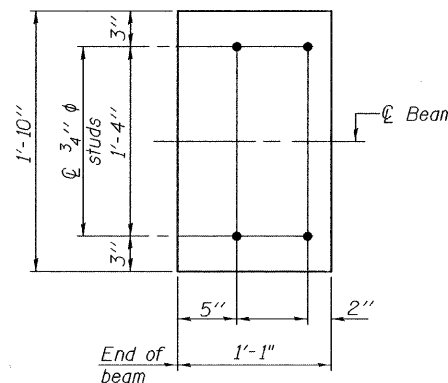
NOTES:

- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes.
- All holes shall be 1 5/16 inch diameter unless otherwise noted.
- 5/16 inch x 3 inch x 3 inch plate washers are required over all slotted holes.
- All bolts shall be galvanized according to AASHTO M232.
- Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
- Cost of permanent bracing shall be included in the cost for Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42 inch
- * Fabricator shall locate to miss strands within permissible tolerances.
- ** Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

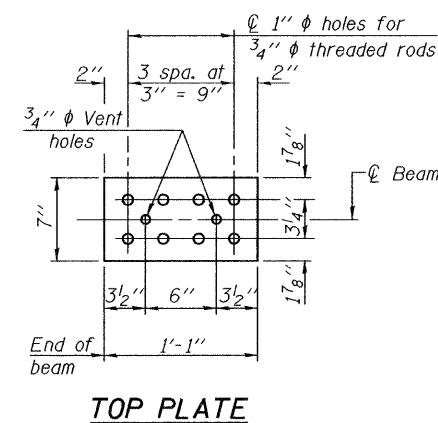
PERMANENT BRACING DETAILS FOR
42" PPC I-BEAMS



BOTTOM PLATE
(Showing threaded rods)



BOTTOM PLATE
(Showing studs)



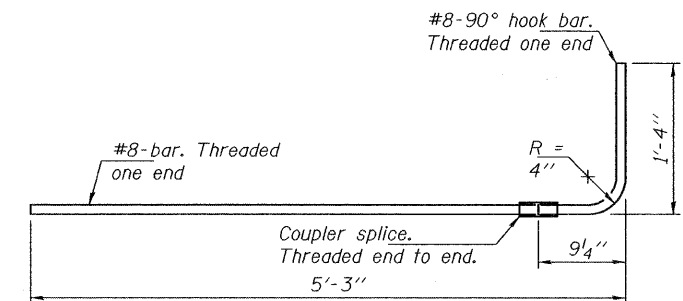
TOP PLATE

BILL OF MATERIAL

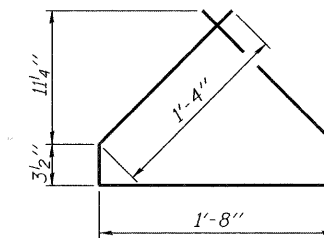
Item	Unit	Stage 1	Stage 2
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Ft.	695	973

NOTES

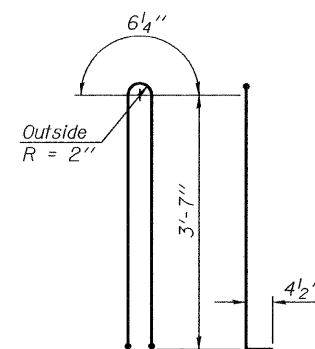
- Inserts for 3/4 inch diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- A minimum 2 1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling.
- Tilt G6 bars when necessary to maintain 1/2 inch clearance.
- The top and bottom plates shall be AASHTO M270 Grade 50.
- The bottom plates and studs shall be galvanized according to AASHTO M111.
- Threaded rods shall be ASTM F 1554 Grade 55.
- The G6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



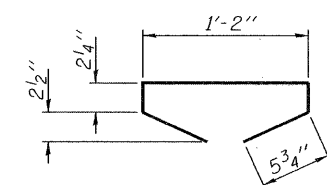
G6 BAR ASSEMBLY



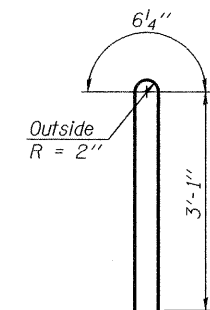
BAR G4



BAR G1



BAR G5



BAR G2

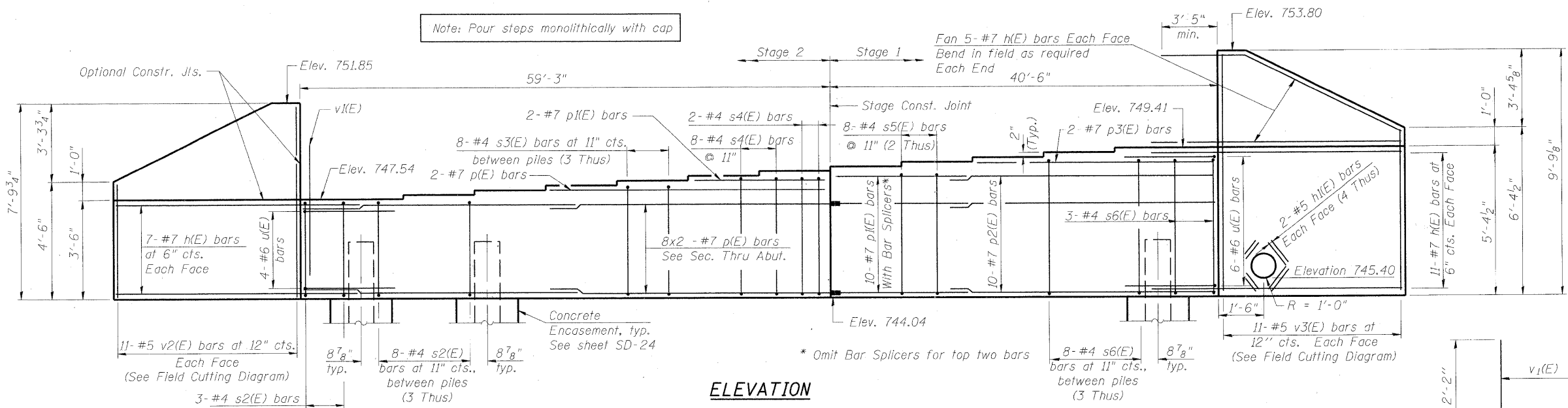
42" PPC I-BEAM DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

alfred benesch & company
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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

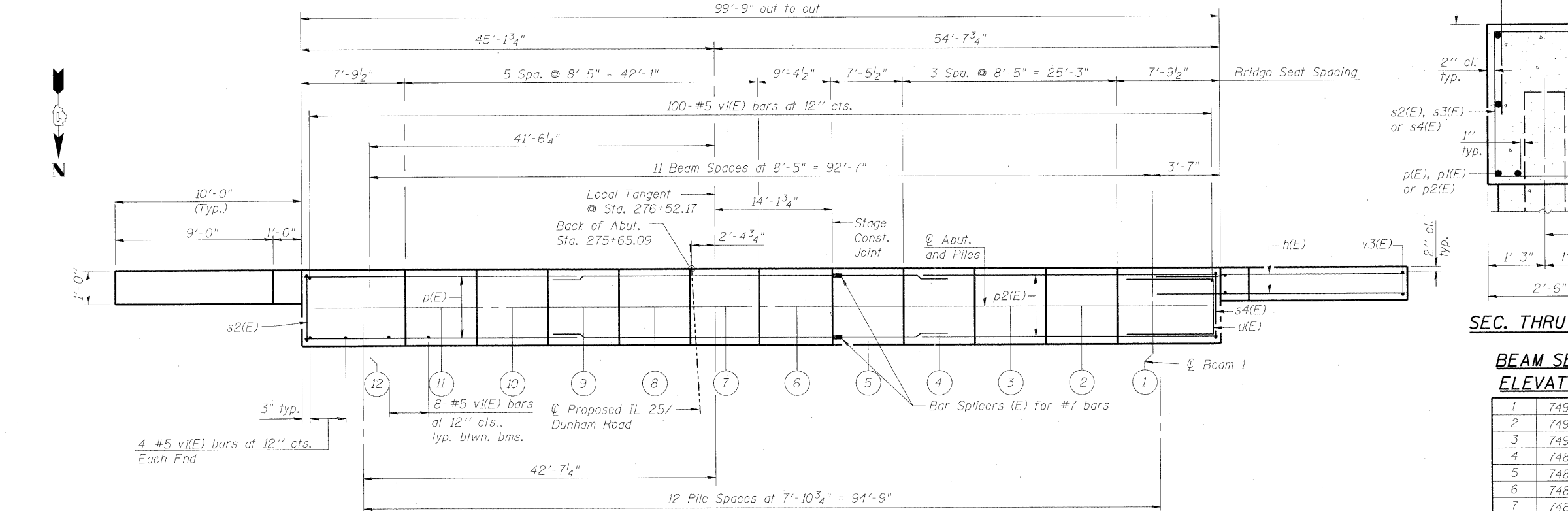
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 20 OF 34 SHEETS
		KANE	545	335	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		Contract # 63074

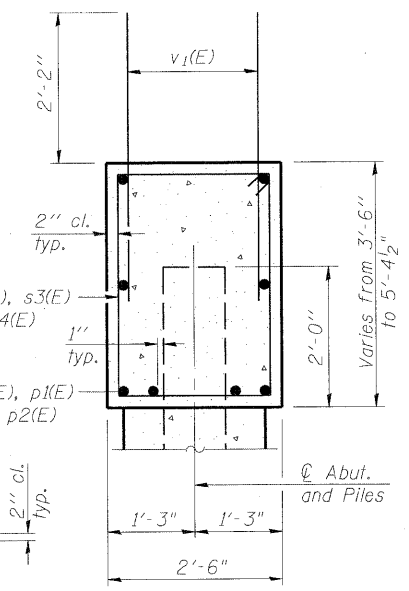
Note: Four steps monolithically with cap



ELEVATION



PLAN



SEC. THRU ABUT.

BEAM SEAT ELEVATION

Beam No.	Elevation
1	749.41
2	749.24
3	749.07
4	748.90
5	748.73
6	748.56
7	748.39
8	748.22
9	748.05
10	747.88
11	747.71
12	747.54

PILE DATA

Type: HP12x53
Nominal Required Bearing: 288 kips
Allowable Resistance Available: 96 kips
Est. Length: 72.0 Feet
No. Production Piles: 12
No. Test Piles: 1
Piles shall be driven through 1'-6" diameter precored holes extending to elevation 739.0 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

BILL OF MATERIAL (Stage 1)

Bar	No.	Size	Length	Shape
h(E)	32	#7	14'-3"	—
h1(E)	16	#5	3'-0"	—
p1(E)	10	#7	16'-6"	—
p2(E)	10	#7	27'-3"	—
p3(E)	2	#7	24'-3"	—
s5(E)	16	#4	13'-9"	□
s6(E)	27	#4	14'-5"	□
u(E)	6	#6	7'-3"	—
v1(E)	80	#5	4'-4"	—
v3(E)	11	#5	15'-3"	—
Concrete Structures	Cu. Yd.		22.0	
Reinforcement Bars, Epoxy Coated	Pound		2,990	
Furnishing Steel Piles, HP12x53	Foot		288	
Driving Piles	Foot		288	
Test Pile Steel, HP12x53	Each		1	
Pile Shoes	Each		5	
Concrete Encasement	Cu. Yd.		1.8	
Bar Splicers	Each		8	

BILL OF MATERIAL (Stage 2)

Bar	No.	Size	Length	Shape
h(E)	24	#7	14'-3"	—
p(E)	18	#7	31'-3"	—
p1(E)	2	#7	16'-6"	—
s2(E)	27	#4	11'-5"	□
s3(E)	24	#4	12'-5"	□
s4(E)	10	#4	13'-1"	□
u(E)	4	#6	7'-3"	—
v1(E)	116	#5	4'-4"	—
v2(E)	11	#5	11'-7"	—
Concrete Structures	Cu. Yd.		24.4	
Reinforcement Bars, Epoxy Coated	Pound		3,110	
Furnishing Steel Piles, HP12x53	Foot		576	
Driving Piles	Foot		576	
Pile Shoes	Each		8	
Concrete Encasement	Cu. Yd.		2.8	

For details of Bar Splicers, see sheet SD-26.
For details of piles and Concrete Encasement, see sheet SD-24.

**SOUTH ABUTMENT-PLAN AND ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032**

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

SECTION AT ABUTMENT

**BARS v2(E) & v3(E)
FIELD CUTTING DIAGRAM**

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

BARS s2(E) Thru s6(E)

BAR u(E)

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alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	336
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SD- 21
OF 34 SHEETS

Contract # 63074

BILL OF MATERIAL

(Stage 1)

Bar	No.	Size	Length	Shape
h(E)	32	#7	14'-3"	
p1(E)	10	#7	16'-6"	
p2(E)	10	#7	27'-3"	
p3(E)	2	#7	24'-3"	
s5(E)	16	#4	13'-9"	
s6(E)	27	#4	14'-5"	
u(E)	6	#6	7'-3"	
v1(E)	80	#5	4'-4"	
v3(E)	11	#5	15'-3"	

Concrete Structures	Cu. Yd.	21.7
Reinforcement Bars, Epoxy Coated	Pound	2,940
Furnishing Steel Piles, HP12x53	Foot	264
Driving Piles	Foot	264
Test Pile Steel, HP12x53	Each	1
Pile Shoes	Each	5
Concrete Encasement	Cu. Yd.	1.8
Bar Splicers	Each	8

BILL OF MATERIAL

(Stage 2)

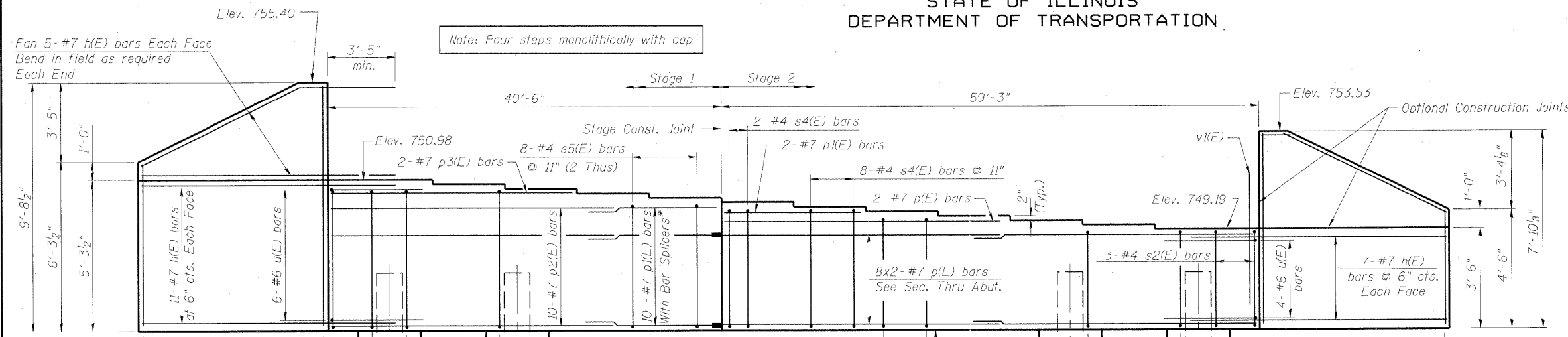
Bar	No.	Size	Length	Shape
h(E)	24	#7	14'-3"	
p(E)	18	#7	31'-3"	
p1(E)	2	#7	16'-6"	
s2(E)	27	#4	11'-5"	
s3(E)	24	#4	12'-5"	
s4(E)	10	#4	13'-1"	
u(E)	4	#6	7'-3"	
v1(E)	116	#5	4'-4"	
v2(E)	11	#5	11'-7"	

Concrete Structures	Cu. Yd.	24.3
Reinforcement Bars, Epoxy Coated	Pound	3,110
Furnishing Steel Piles, HP12x53	Foot	528
Driving Piles	Foot	528
Pile Shoes	Each	8
Concrete Encasement	Cu. Yd.	2.8

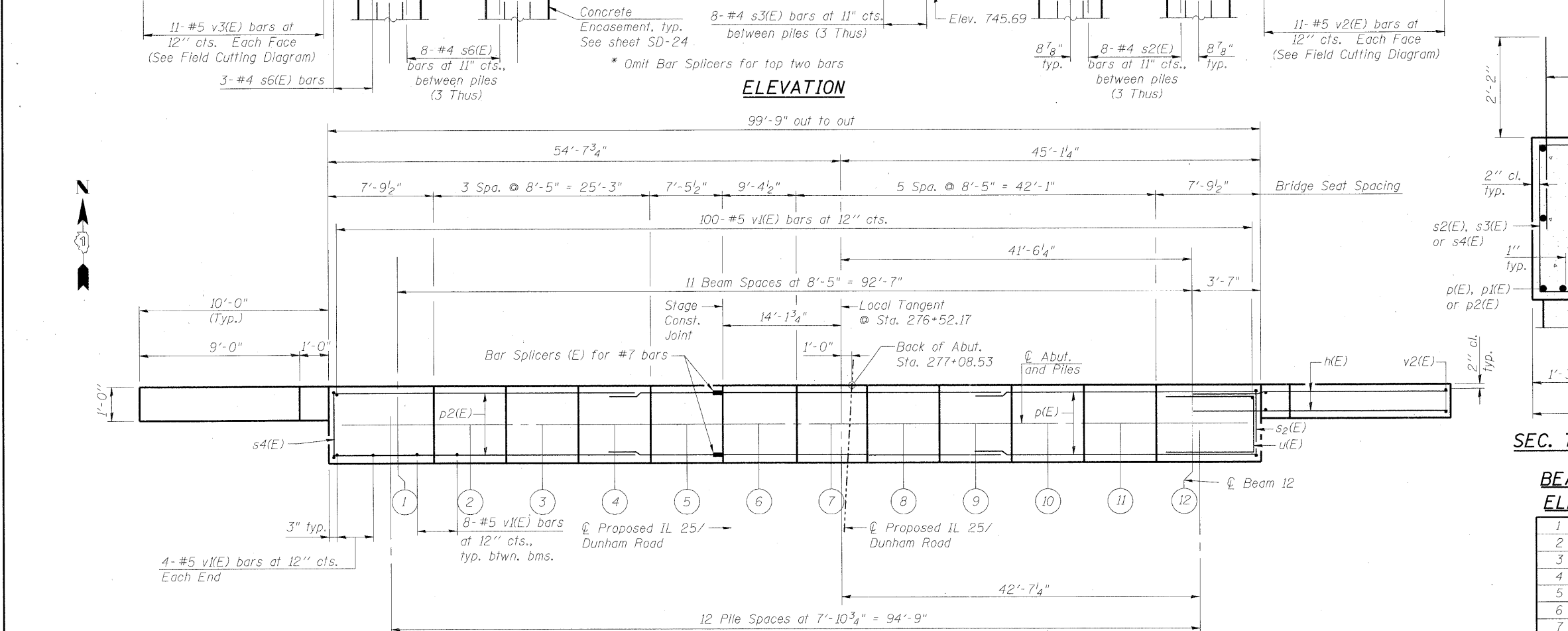
For details of Bar Splicers, see sheet SD-26.
For details of piles and Concrete Encasement, see sheet SD-24.

**NORTH ABUTMENT-PLAN AND ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR**

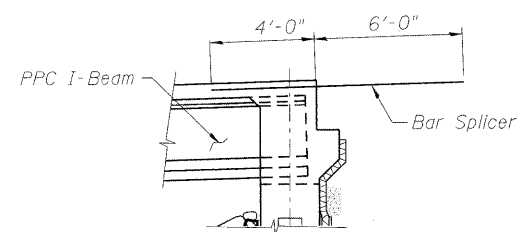
**KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032**



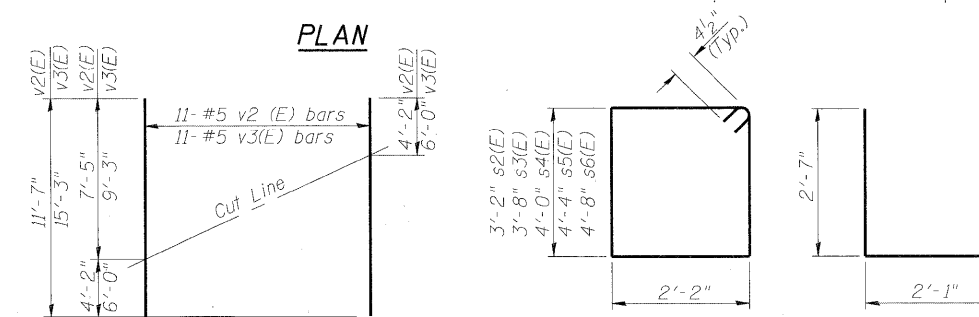
ELEVATION



PLAN



SECTION AT ABUTMENT



**BARS v2(E) & v3(E)
FIELD CUTTING DIAGRAM**

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

BARS s2(E) Thru s6(E) BAR u(E)

**BEAM SEAT
ELEVATION**

	Elevation
1	750.98
2	750.82
3	750.65
4	750.49
5	750.33
6	750.17
7	750.00
8	749.84
9	749.68
10	749.52
11	749.35
12	749.19

PILE DATA

Type: HP12x53
Nominal Required Bearing: 288 kips
Allowable Resistance Available: 96 kips
Est. Length: 66.0 Feet
No. Production Piles: 12
No. Test Piles: 1

Piles shall be driven through 1'-6" diameter precored holes extending to elevation 737.0 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

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Engineers - Surveyors - Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

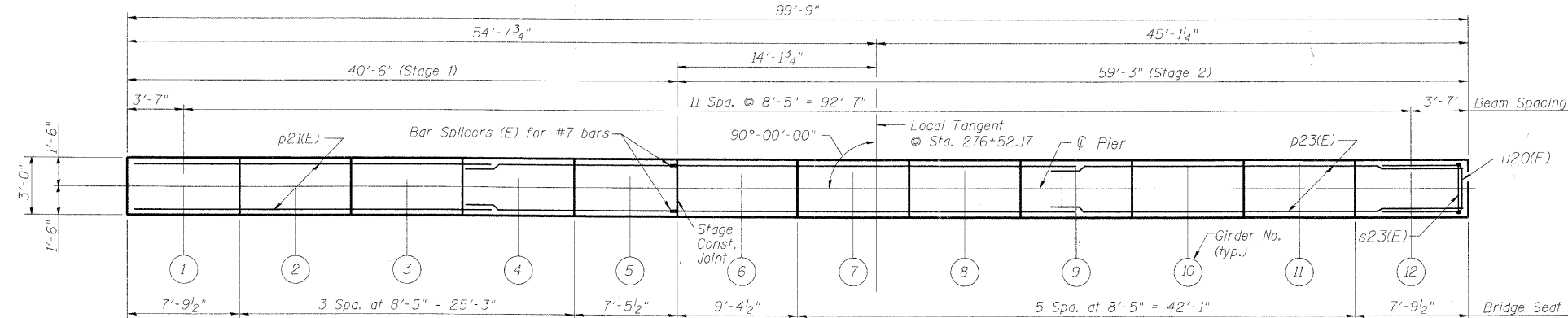
DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

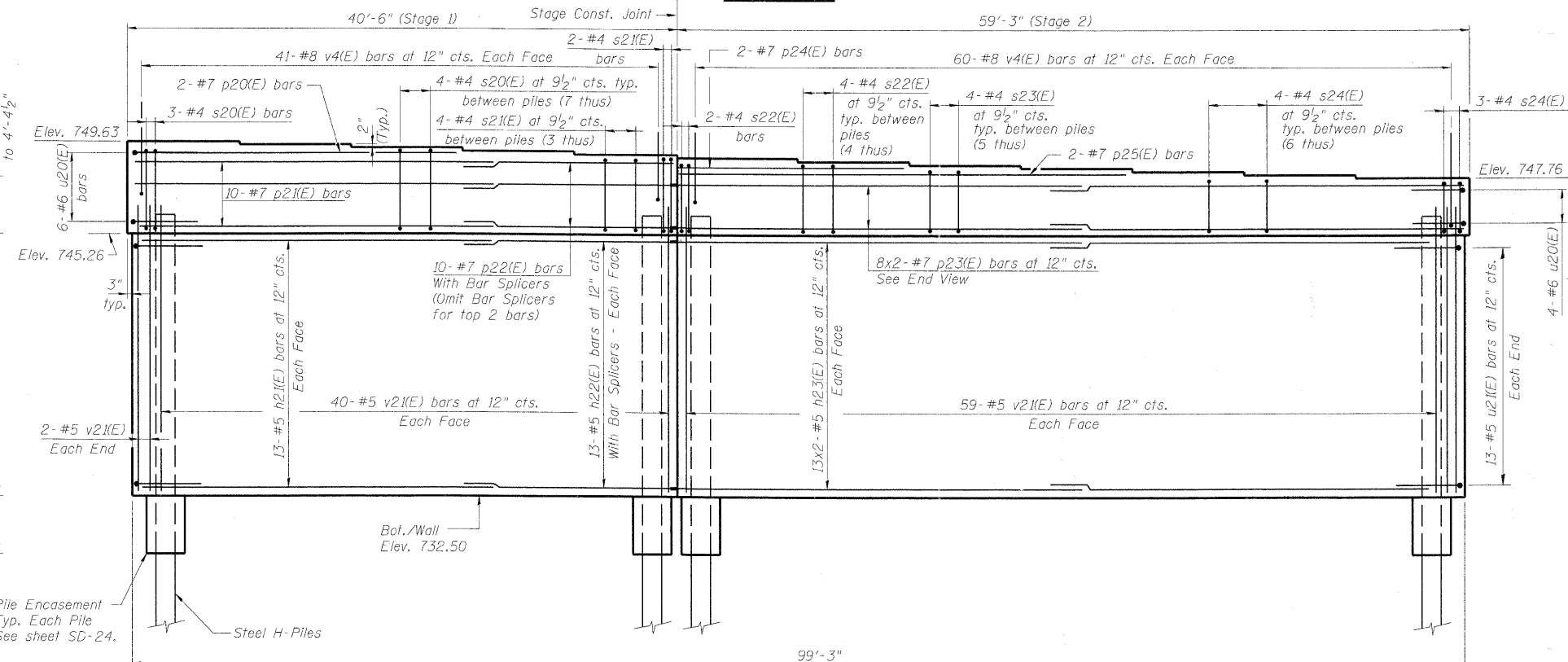
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	337
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

SHEET SD-22
OF 34 SHEETS

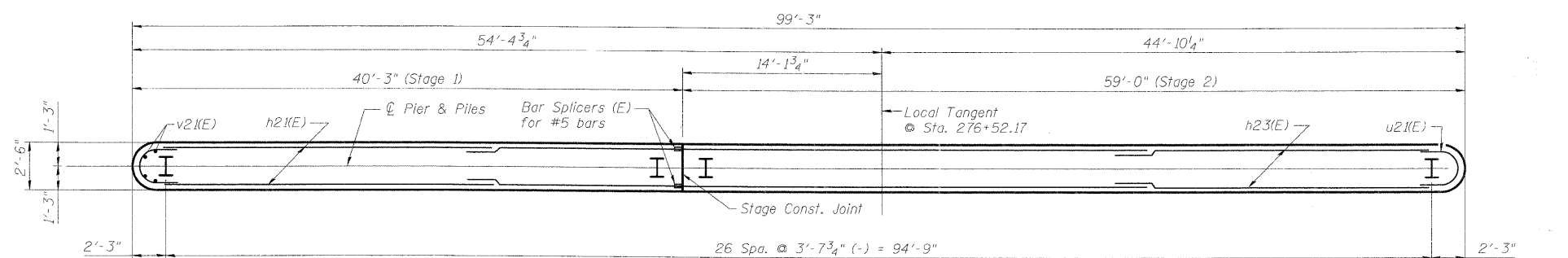
Contract # 63074



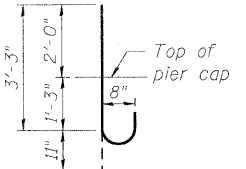
TOP PLAN



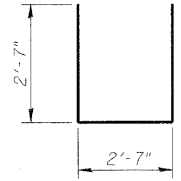
ELEVATION
(Looking North)



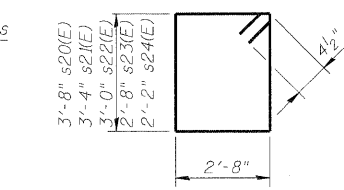
STEM PLAN



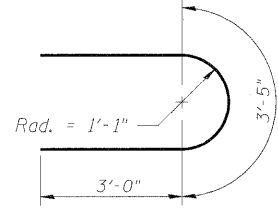
BAR v4(E)



BAR u20(E)



BARS s20(E) Thru s24(E)



BAR u2(E)

BEAM SEAT
ELEVATION

1	749.63
2	749.46
3	749.29
4	749.12
5	748.95
6	748.78
7	748.61
8	748.44
9	748.27
10	748.10
11	747.93
12	747.76

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
(Stage 1)				
h2(E)	26	#5	32'-4"	—
h22(E)	26	#5	10'-0"	—
p20(E)	2	#7	24'-4"	—
p2(E)	10	#7	33'-9"	—
p22(E)	10	#7	10'-0"	—
s20(E)	31	#4	13'-5"	□
s2(E)	14	#4	12'-9"	□
u20(E)	6	#6	7'-9"	U
u2(E)	13	#5	9'-5"	U
v4(E)	82	#8	4'-2"	U
v2(E)	82	#5	14'-9"	—
Structure Excavation				
Cu. Yd.			80	
Concrete Structures				
Cu. Yd.			65.7	
Reinforcement Bars, Epoxy Coated				
Pound			4,920	
Furnishing Steel Piles, HP12x53				
Foot			660	
Driving Piles				
Foot			660	
Test Pile Steel, HP12x53				
Each			1	
Pile Shoes				
Each			11	
Concrete Encasement				
Cu. Yd.			3.9	
Bar Splicers				
Each			34	

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
(Stage 2)				
h23(E)	52	#5	30'-7"	—
p23(E)	16	#7	31'-3"	—
p24(E)	2	#7	17'-5"	—
p25(E)	2	#7	34'-3"	—
s22(E)	18	#4	12'-1"	□
s23(E)	20	#4	11'-5"	□
s24(E)	27	#4	10'-5"	□
u20(E)	4	#6	7'-9"	U
u2(E)	13	#5	9'-5"	U
v4(E)	120	#8	4'-2"	U
v2(E)	120	#5	14'-9"	—
Structure Excavation				
Cu. Yd.			109	
Concrete Structures				
Cu. Yd.			89.6	
Reinforcement Bars, Epoxy Coated				
Pound			6,740	
Furnishing Steel Piles, HP12x53				
Foot			1,056	
Driving Piles				
Foot			1,056	
Pile Shoes				
Each			16	
Concrete Encasement				
Cu. Yd.			5.6	

For details of Bar Splicers, see sheet SD-26.
For details of piles and Concrete Encasement, see sheet SD-24.

PIER 1 PLAN AND ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

- Notes:
1. Space reinforcement in cap to miss anchor bolts.
 2. Pour steps monolithically with cap.
 3. For details of piles, see sheet SD-24.
 4. Excavation protection shall be paid for as Underwater Structure Excavation Location 1. See sheet SD-3 for location. See Special Provisions.
 5. If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed under water into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

benesch
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

PILE DATA
Type: HP12x53
Nominal Required Bearing: 288 kips
Allowable Resistance Available: 96 kips
Est. Length: 66.0 Feet
No. Production Piles: 26
No. Test Piles: 1

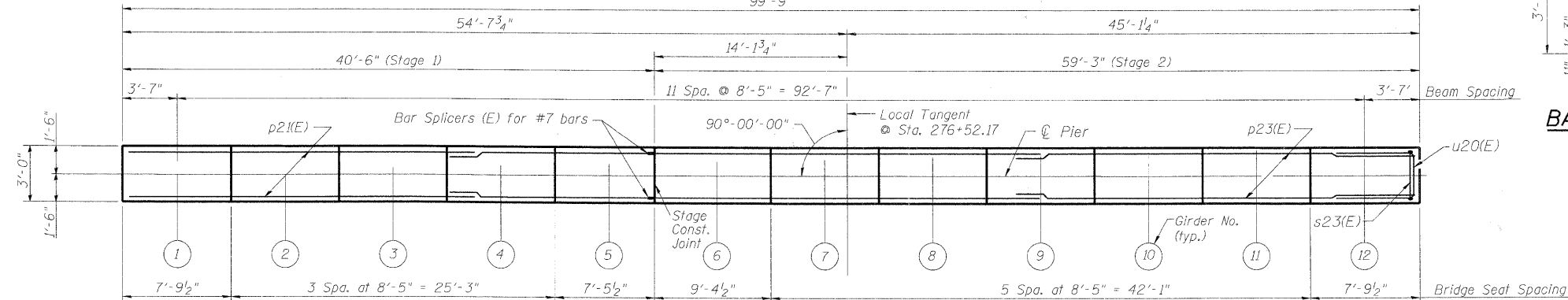
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11/21/02 AM
3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

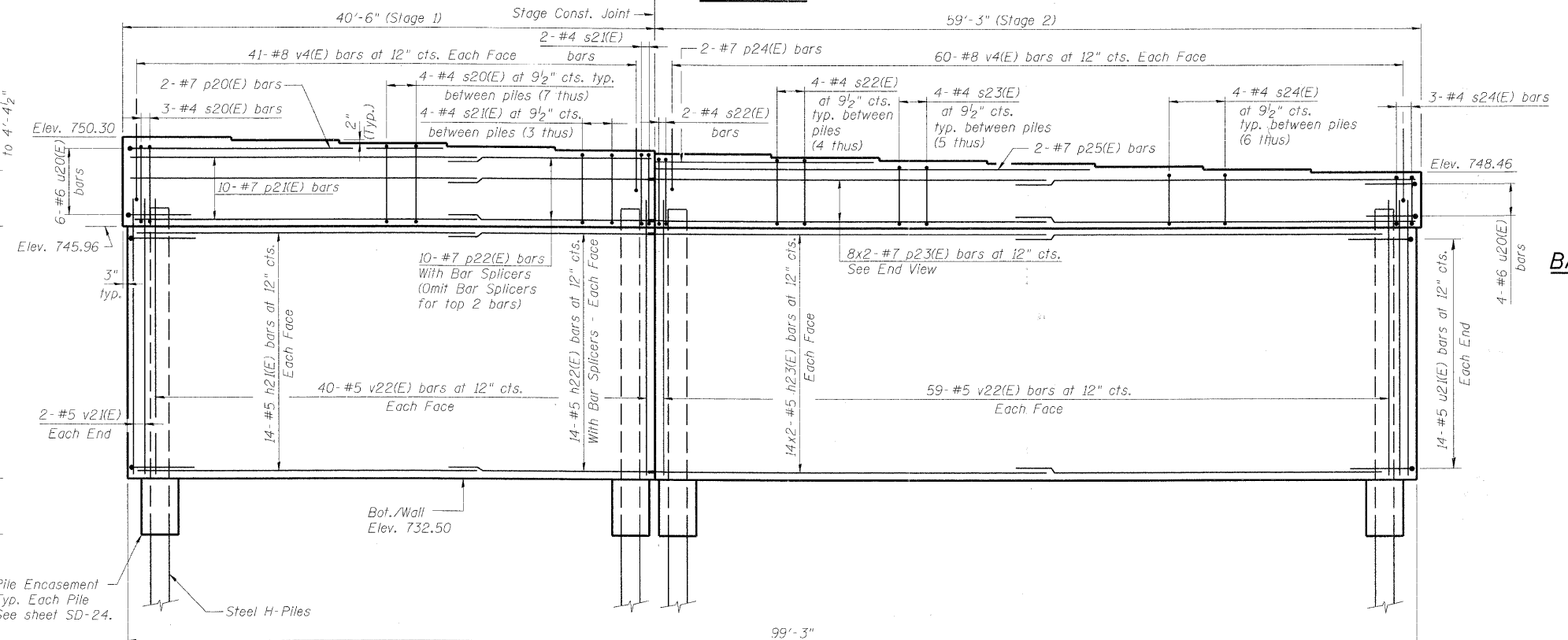
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	338
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SD-23
OF 34 SHEETS

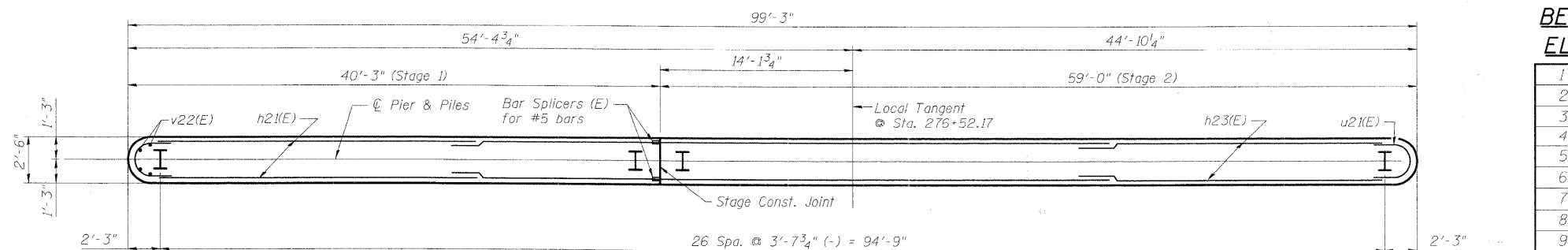
Contract # 63074



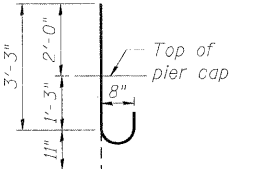
TOP PLAN



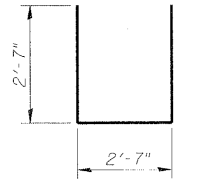
ELEVATION
(Looking North)



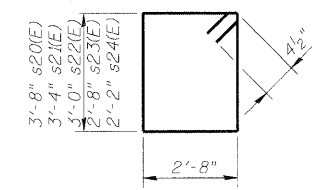
STEM PLAN



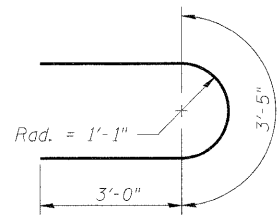
BAR v4(E)



BAR u20(E)



BARS s20(E) Thru s24(E)



BAR u2(E)

BEAM SEAT
ELEVATION

1	750.30
2	750.14
3	749.97
4	749.80
5	749.63
6	749.47
7	749.30
8	749.13
9	748.97
10	748.80
11	748.63
12	748.46

BILL OF MATERIAL
(Stage 1)

Bar	No.	Size	Length	Shape
h21(E)	28	#5	32'-4"	—
h22(E)	28	#5	10'-0"	—
p20(E)	2	#7	24'-4"	—
p21(E)	10	#7	33'-9"	—
p22(E)	10	#7	10'-0"	—
s20(E)	31	#4	13'-5"	□
s21(E)	14	#4	12'-9"	□
u20(E)	6	#6	7'-9"	U
u21(E)	14	#5	9'-5"	U
v4(E)	82	#8	4'-2"	—
v22(E)	82	#5	15'-6"	—
Structure Excavation		Cu. Yd.	80	
Concrete Structures		Cu. Yd.	68.2	
Reinforcement Bars, Epoxy Coated		Pound	5,080	
Furnishing Steel Piles, HP12x53		Foot	660	
Driving Piles		Foot	660	
Test Pile Steel, HP12x53		Each	1	
Pile Shoes		Each	11	
Concrete Encasement		Cu. Yd.	3.9	
Bar Splicers		Each	36	

BILL OF MATERIAL
(Stage 2)

Bar	No.	Size	Length	Shape
h23(E)	56	#5	30'-7"	—
p23(E)	16	#7	31'-3"	—
p24(E)	2	#7	17'-5"	—
p3(E)	2	#7	34'-3"	—
s22(E)	18	#4	12'-1"	□
s23(E)	20	#4	11'-5"	□
s24(E)	27	#4	10'-5"	□
u20(E)	4	#6	7'-9"	U
u21(E)	14	#5	9'-5"	U
v4(E)	120	#8	4'-2"	—
v22(E)	120	#5	15'-6"	—
Structure Excavation		Cu. Yd.	109	
Concrete Structures		Cu. Yd.	93.4	
Reinforcement Bars, Epoxy Coated		Pound	6,970	
Furnishing Steel Piles, HP12x53		Foot	1,056	
Driving Piles		Foot	1,056	
Pile Shoes		Each	16	
Concrete Encasement		Cu. Yd.	5.6	

For details of Bar Splicers, see sheet SD-26.
For details of piles and Concrete Encasement, see sheet SD-24.

PIER 2 PLAN AND ELEVATION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

benesch
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For details of piles, see sheet SD-24.
 - Excavation protection shall be paid for as Underwater Structure Excavation Location 2. See sheet SD-3 for location. See Special Provisions.
 - If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed under water into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

PILE DATA
Type: HP12x53
Nominal Required Bearing: 288 kips
Allowable Resistance Available: 96 kips
Est. Length: 66.0 Feet
No. Production Piles: 26
No. Test Piles: 1

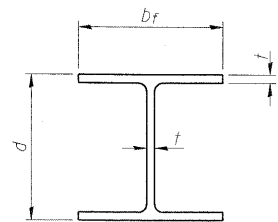
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	339
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

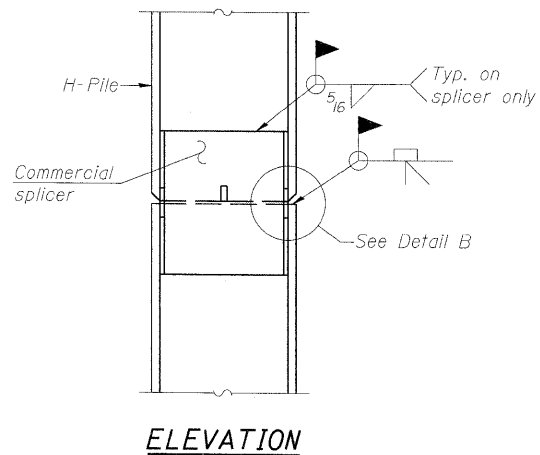
SHEET SD- 24
OF 34 SHEETS

Contract # 63074

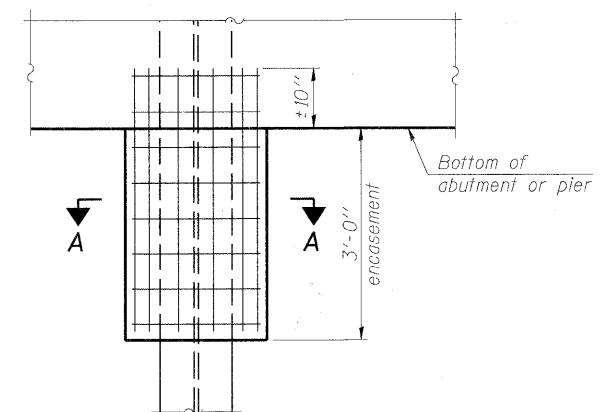


STEEL PILE TABLE

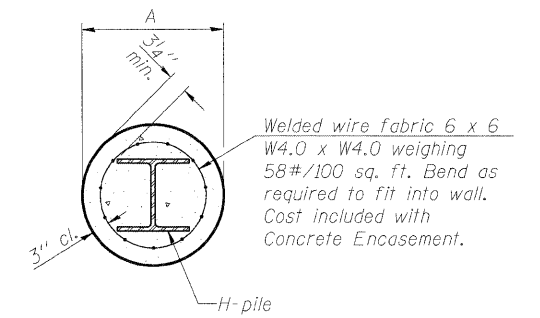
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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



ELEVATION



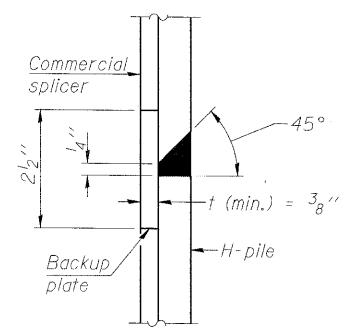
ELEVATION



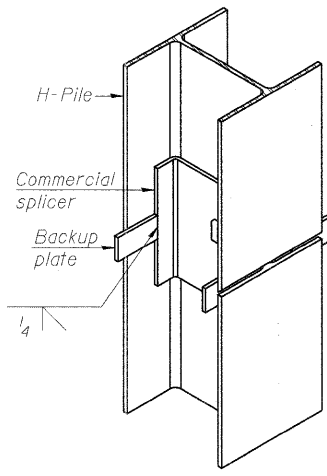
SECTION A-A

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

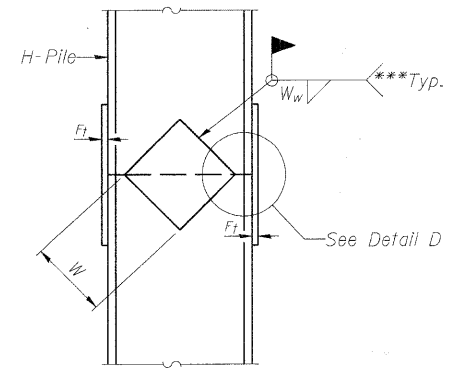
PILE ENCASEMENT



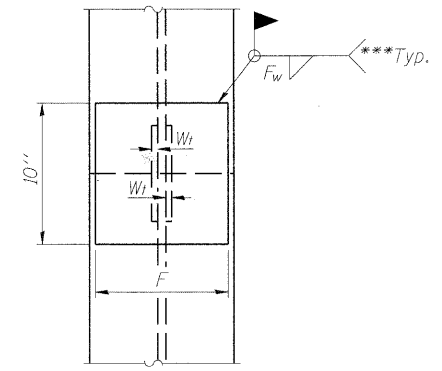
DETAIL "B"



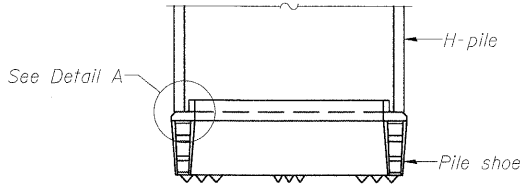
ISOMETRIC VIEW



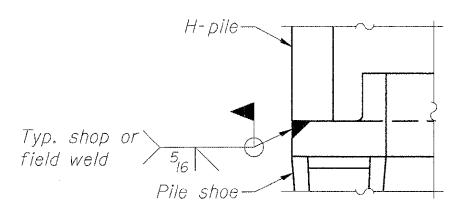
ELEVATION



END VIEW

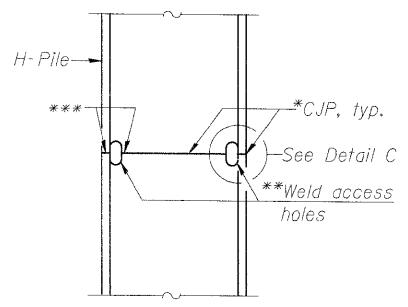


ELEVATION

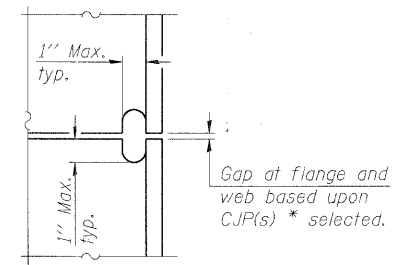


DETAIL A

H-PILE SHOE ATTACHMENT

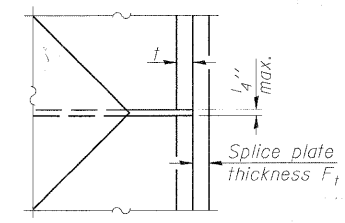


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5 8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5 8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5 8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

F-HP 5-16-08

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

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

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PILE DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	340
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SD- 25
OF 34 SHEETS

Contract # 63074

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

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

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

The diameter of this part is equal or larger than the diameter of bar spliced.

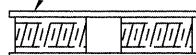
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

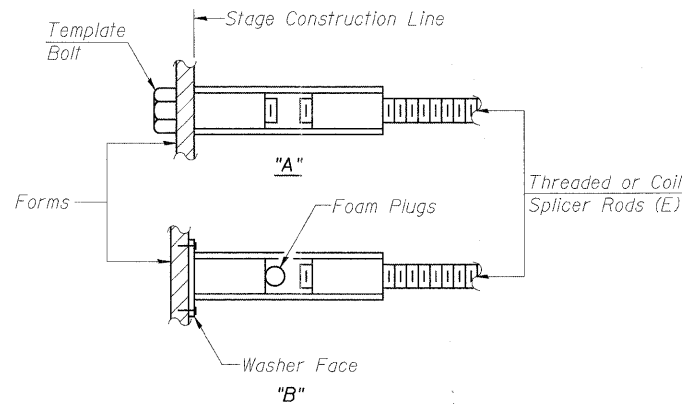
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



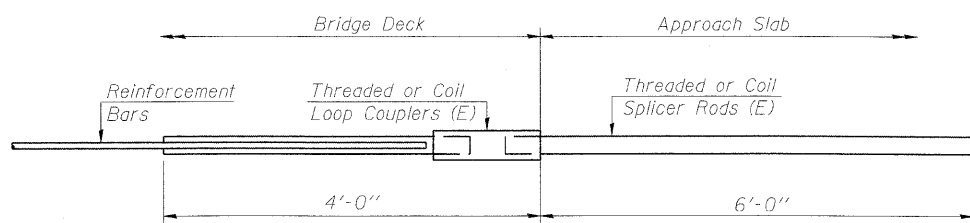
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

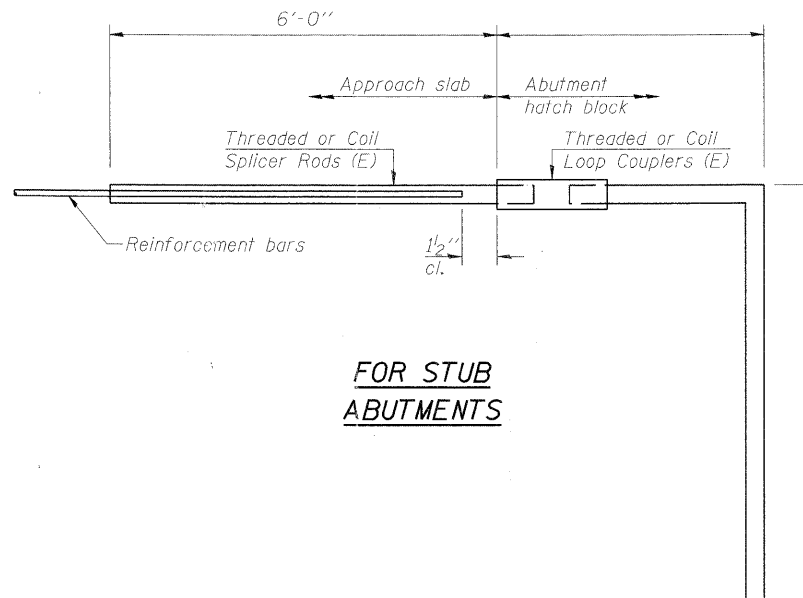
(E) : Indicates epoxy coating.

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



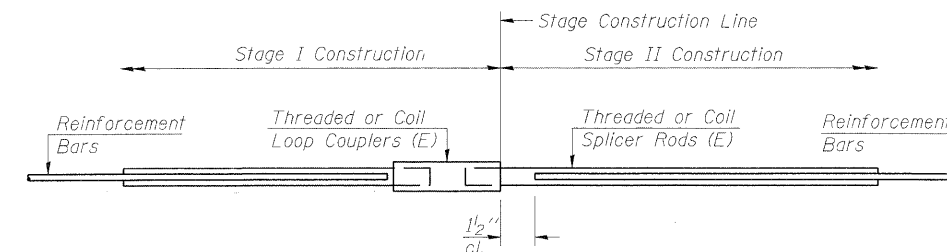
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 194	



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	511	Deck
#4	8	Diaphragms
#6	8	Diaphragms
#4	50	Approaches
#5	172	Approaches
#5	54	Pier Stems
#7	32	Abut/Pier Caps

BAR SPLICER ASSEMBLY DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

BSD-1

10-1-08

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Job # 3944

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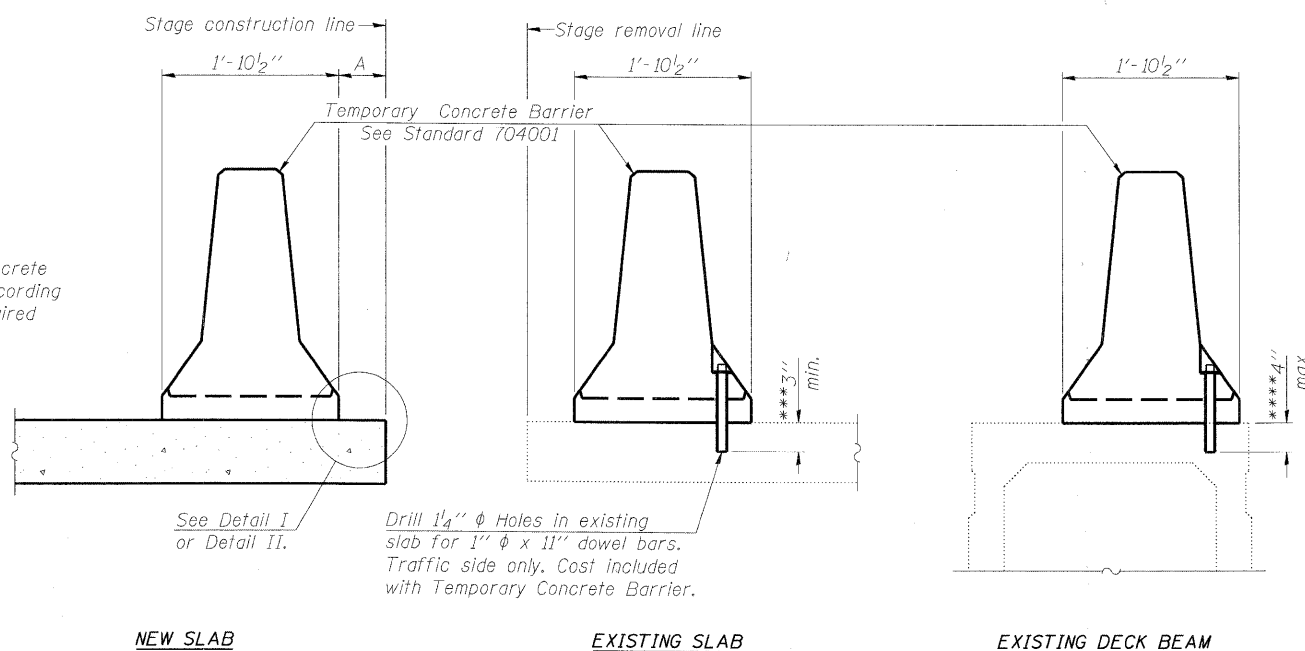
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	341
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SD- 26
OF 34 SHEETS

Contract # 63074

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



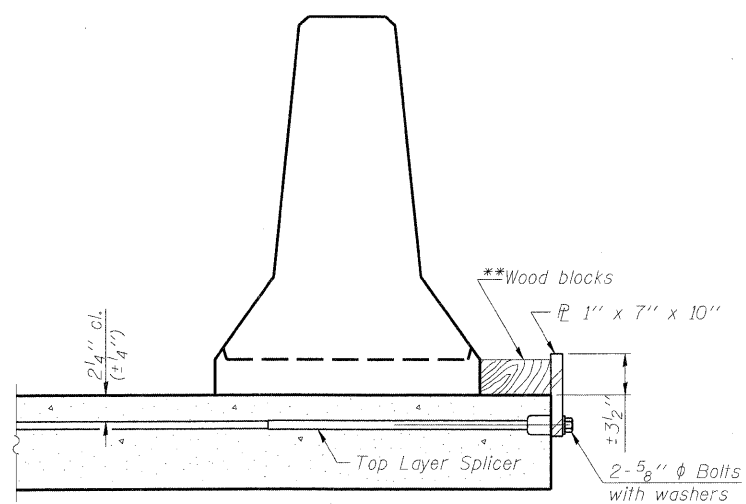
Drill 1/4" ϕ Holes in existing slab for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

NOTES

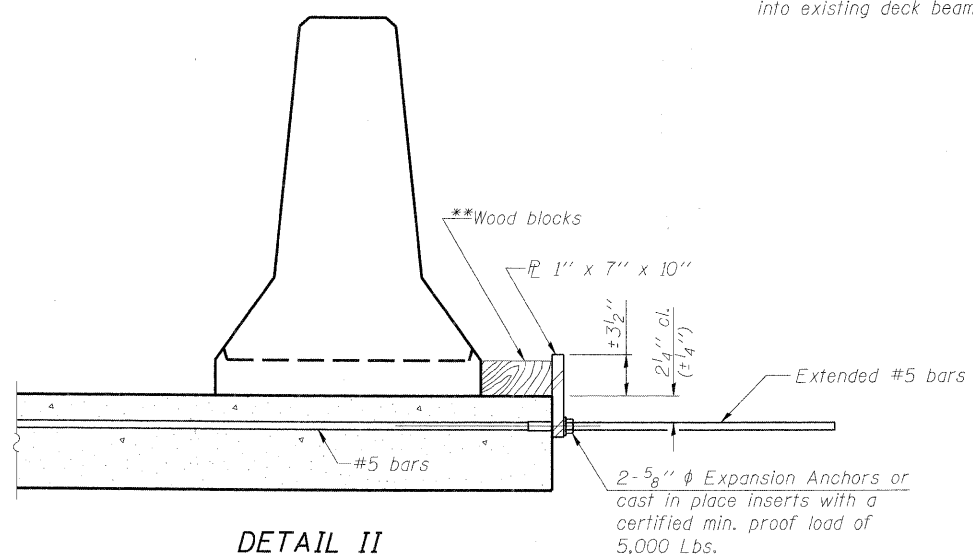
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x 10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

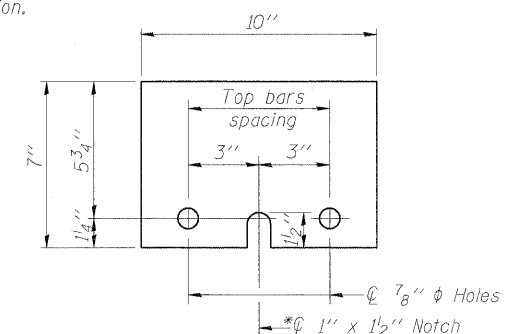
- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ***If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER 1" x 7" x 10"

* Required only with Detail II

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

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

R-27

9-3-07

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**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032**

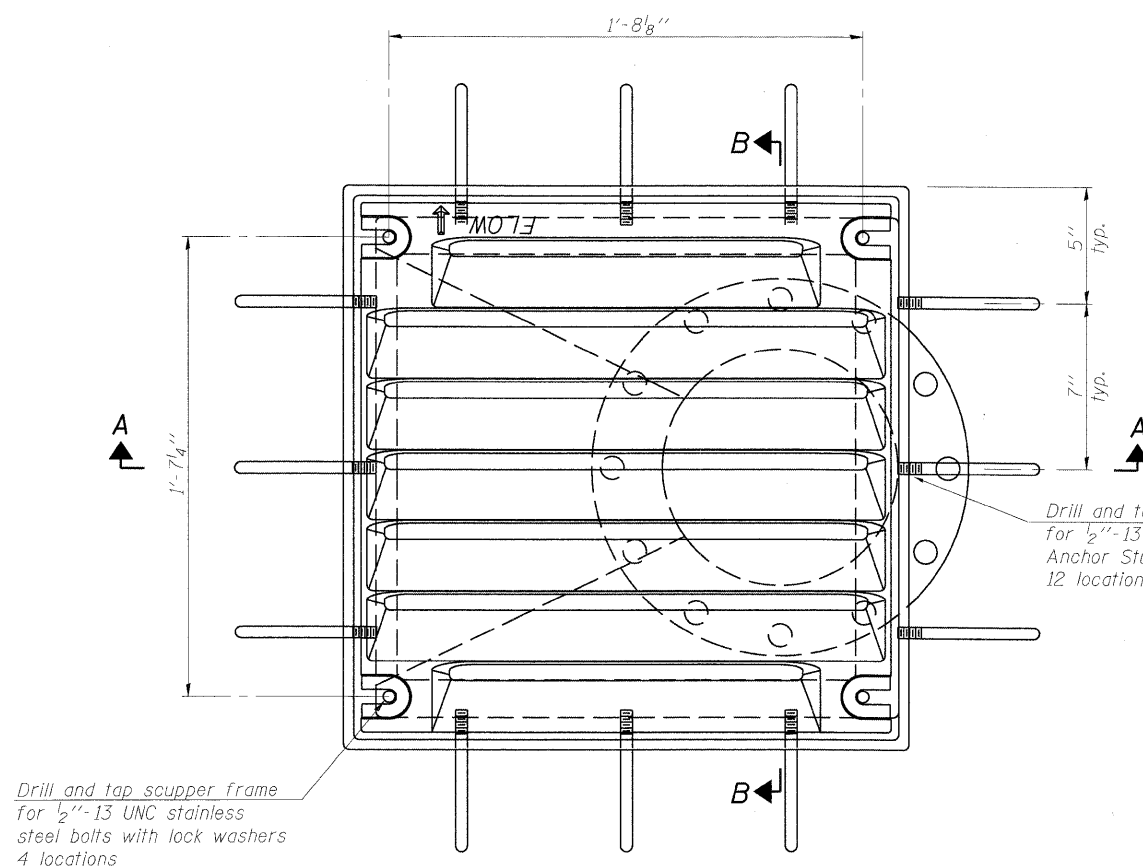
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	342
FED. RD. DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

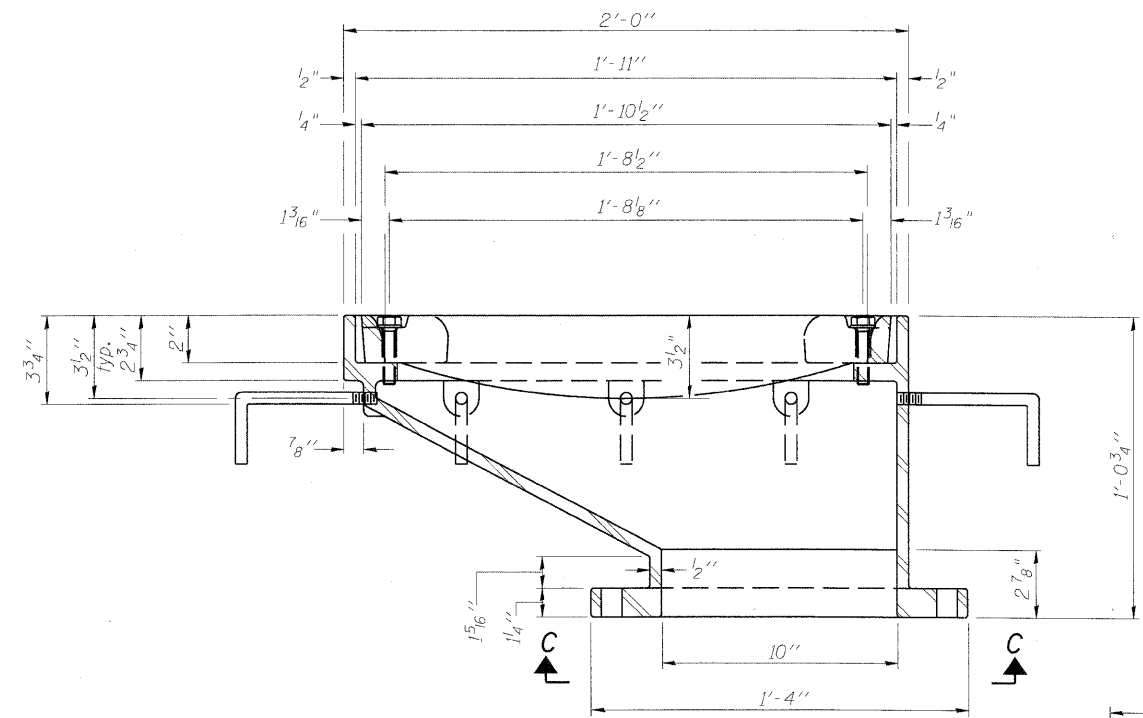
SHEET SD- 27
OF 34 SHEETS



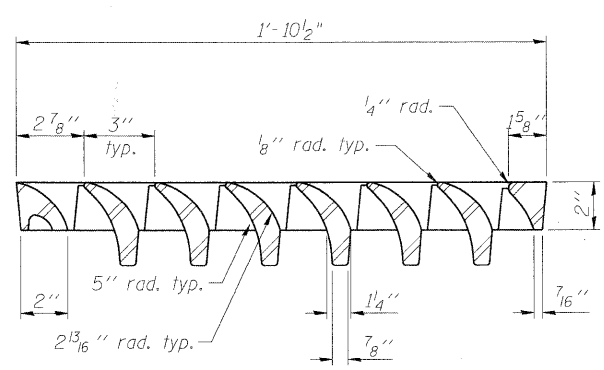
PLAN

Drill and tap scupper frame for 1/2"-13 UNC stainless steel bolts with lock washers 4 locations

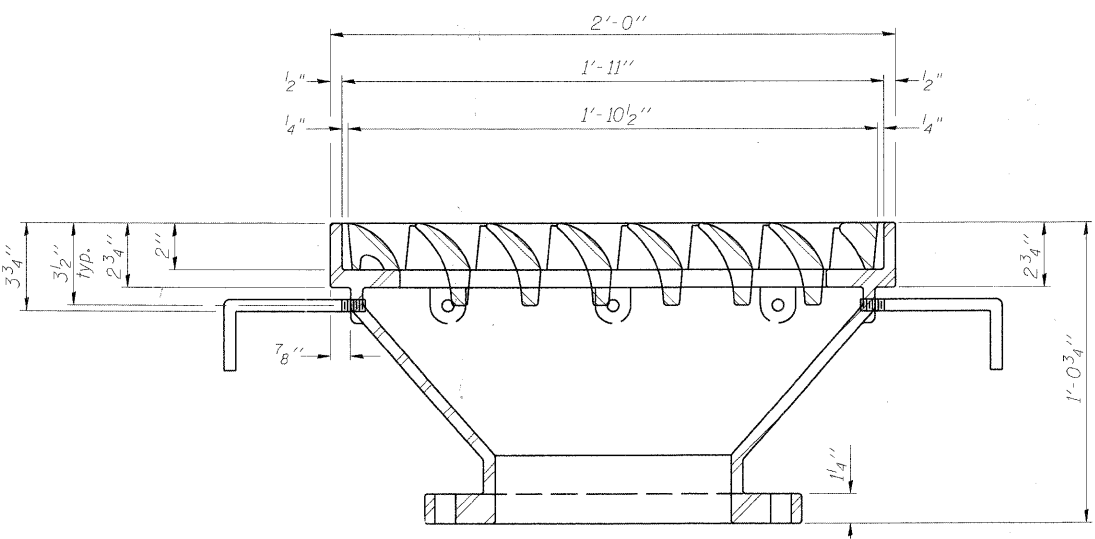
Drill and tap scupper frame for 1/2"-13 UNC threaded Anchor Studs 12 locations



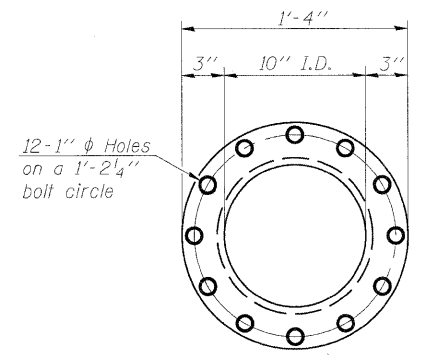
SECTION A-A



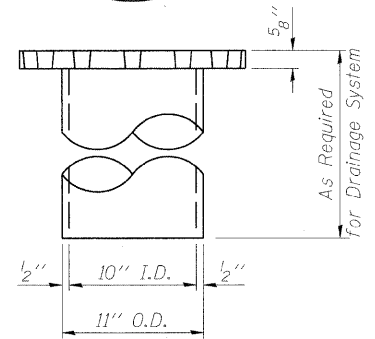
VANE GRATE DETAIL



SECTION B-B



12-1" ϕ Holes on a 1'-2 1/4" bolt circle

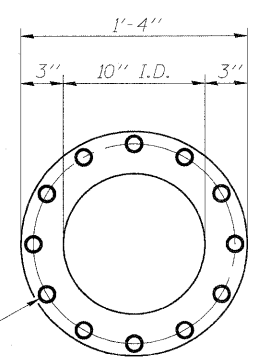


DOWNSPOUT

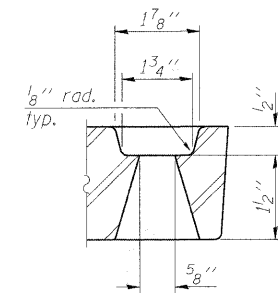
Notes:

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
- Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
- All castings shall conform to the requirements of AASHTO M 306.
- Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
- As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
- Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
- The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
- Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12M10.
- Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

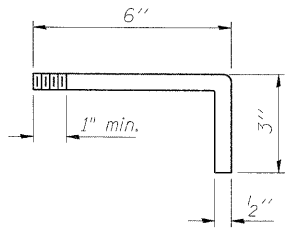
Drill and tap 12 holes for 7/8"-9 UNC bolts on 1'-2 1/4" bolt circle



VIEW C-C



GRATE BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12M10	Each	6

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

DS-12M10 5-16-08

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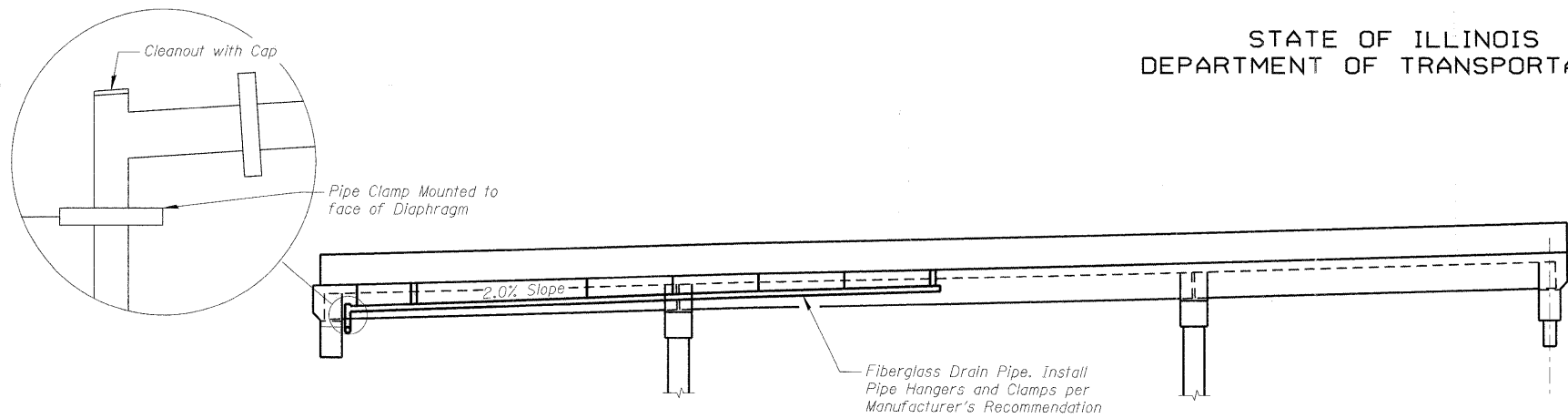
DRAINAGE SCUPPER DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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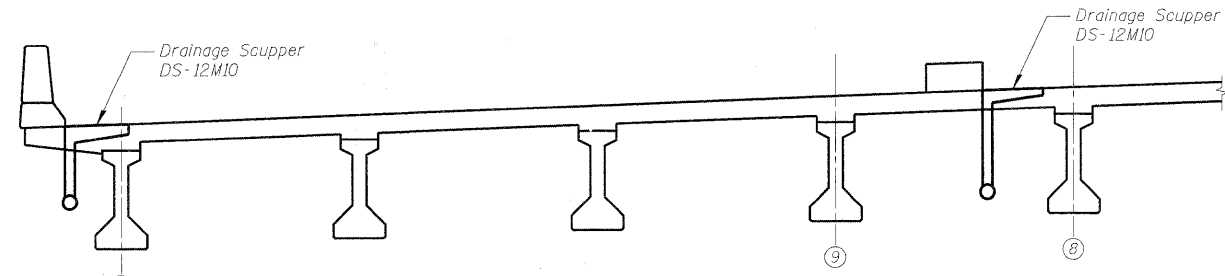
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SD- 28 OF 34 SHEETS
-	-	KANE	545	343	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

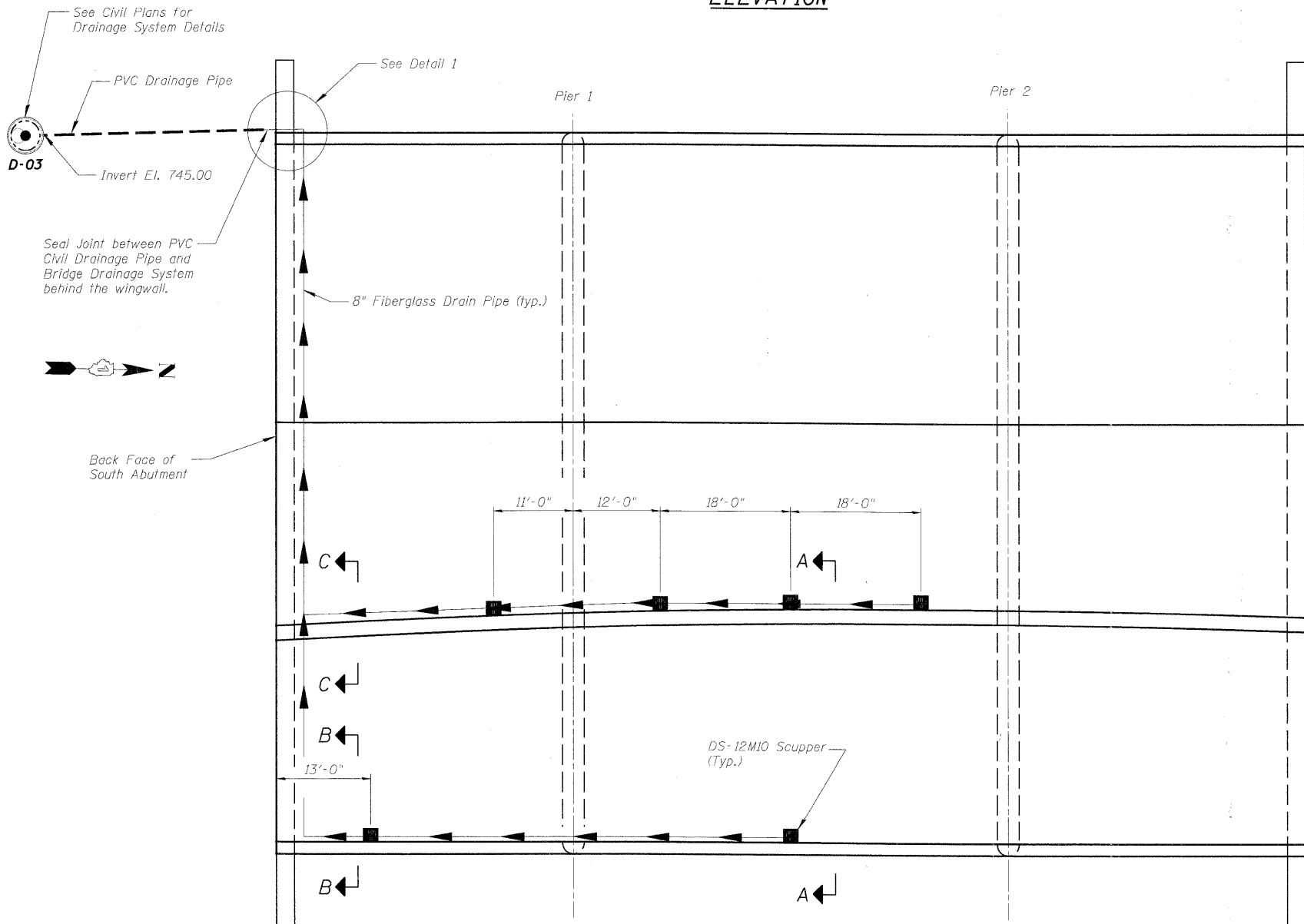
Contract # 63074



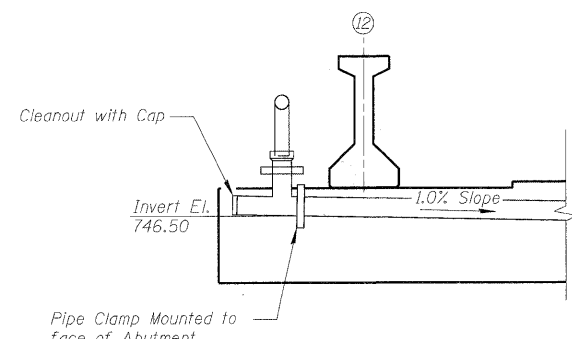
ELEVATION



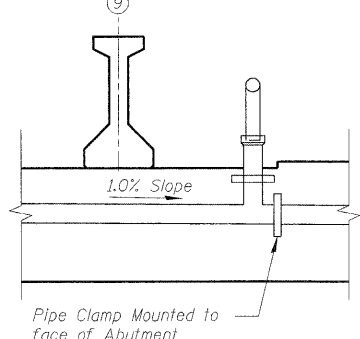
SECTION A-A



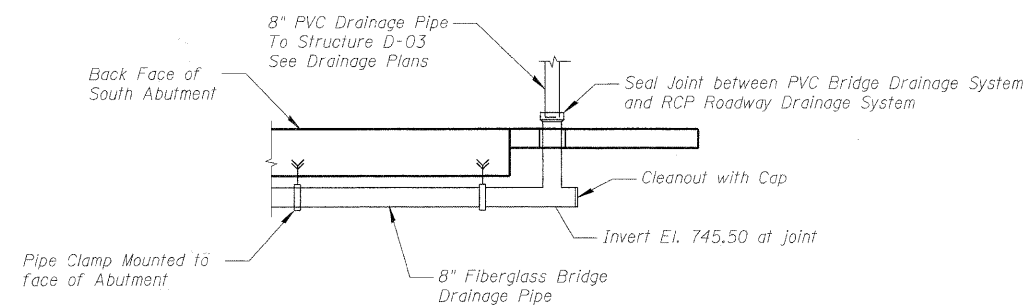
DRAINAGE PLAN



SECTION B-B



SECTION C-C



DETAIL 1

DESIGNED	AJK
CHECKED	AAY
DRAWN	AJK
CHECKED	DMC

- Notes:
1. For drainage scupper details see sheet SD-27
 2. A cleanout and cap shall exist at every 90 degree turn in the drainage system.
 3. All drainage pipe, fittings and installation are included in the Lump Sum Price for "Drainage System."

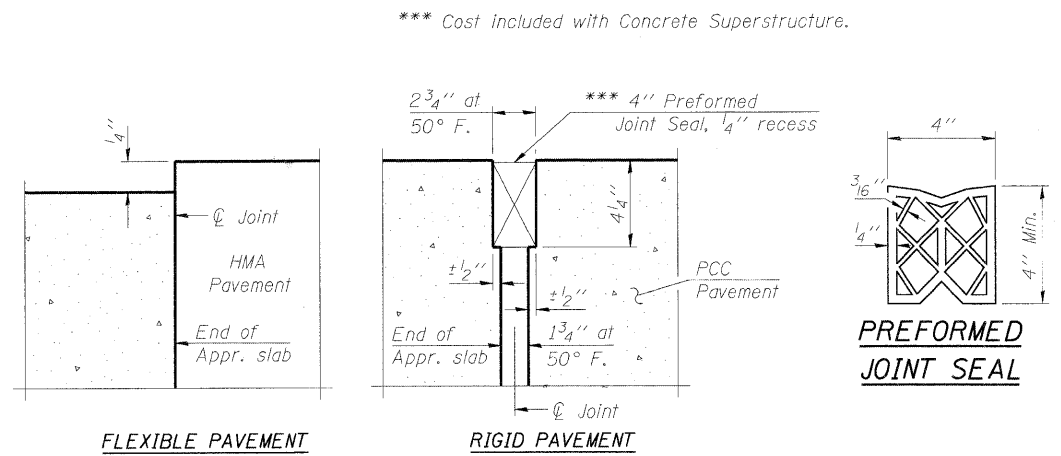
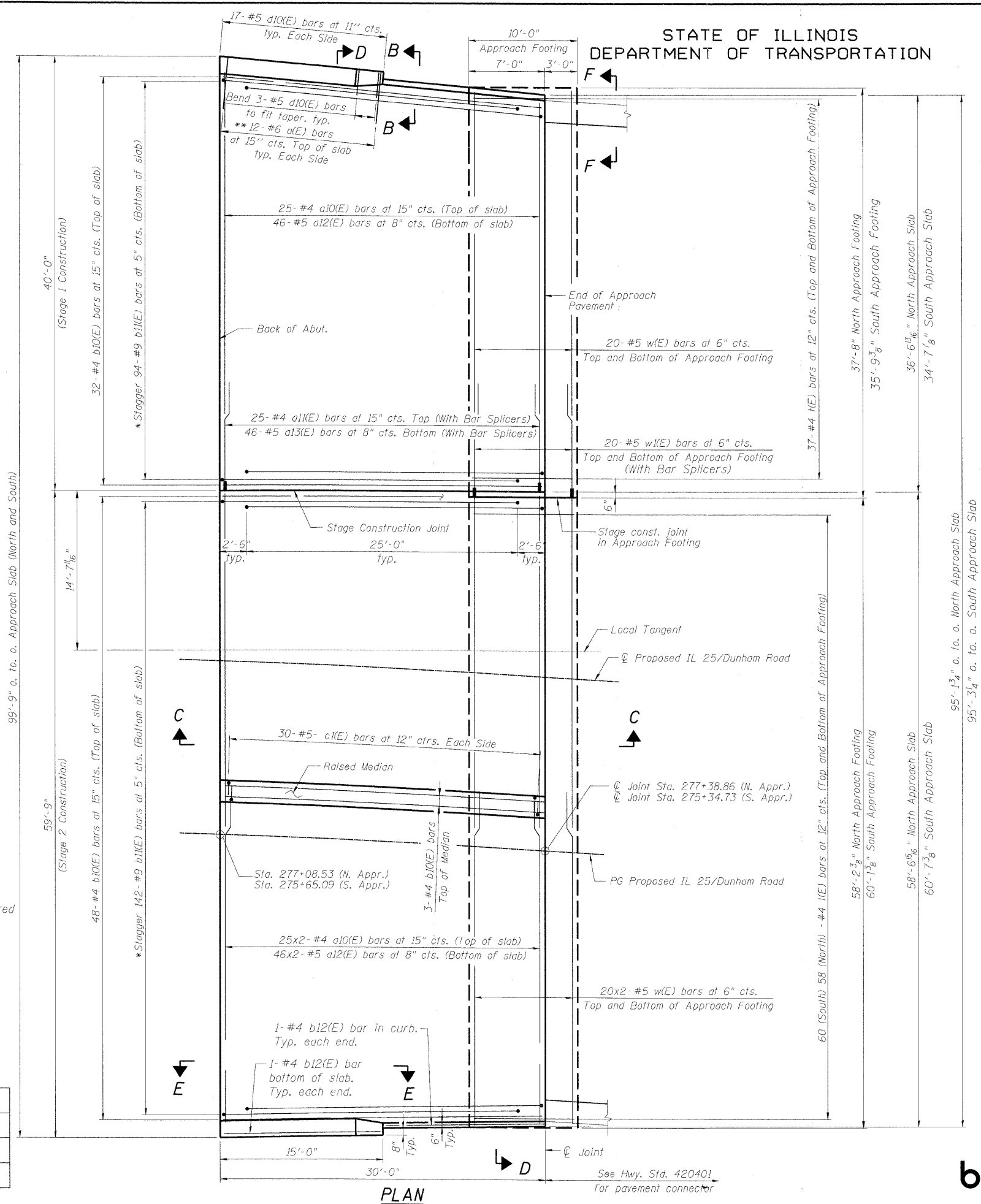
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Job # 3944

DRAINAGE DETAILS
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

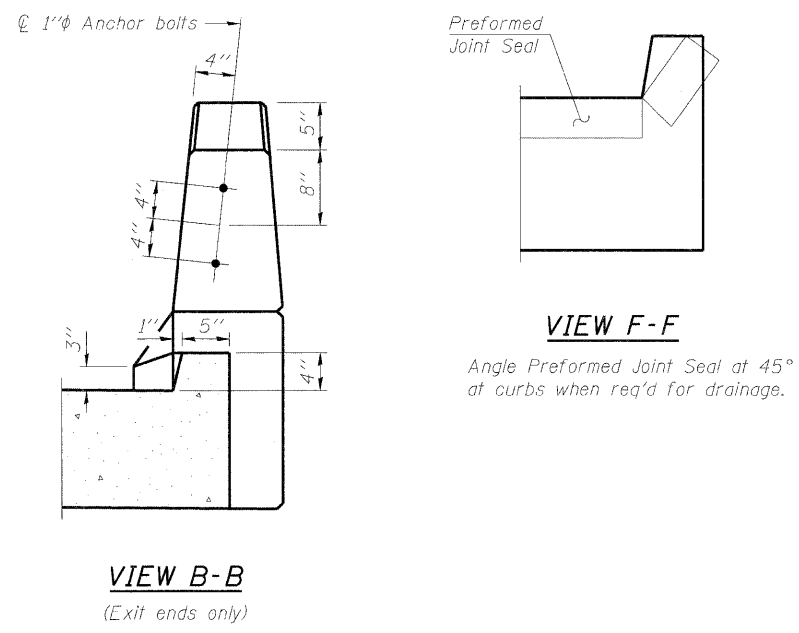
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	344
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract # 63074



DETAIL A



Notes:
1. See sheet SD-30 for Sections C-C & D-D and View E-E.
2. Dimensions shown are for north and south approach slabs unless noted otherwise.

BRIDGE APPROACH SLAB DETAILS (1 OF 2)
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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DESIGNED	AJK
CHECKED	AAY
DRAWN	VH
CHECKED	DMC

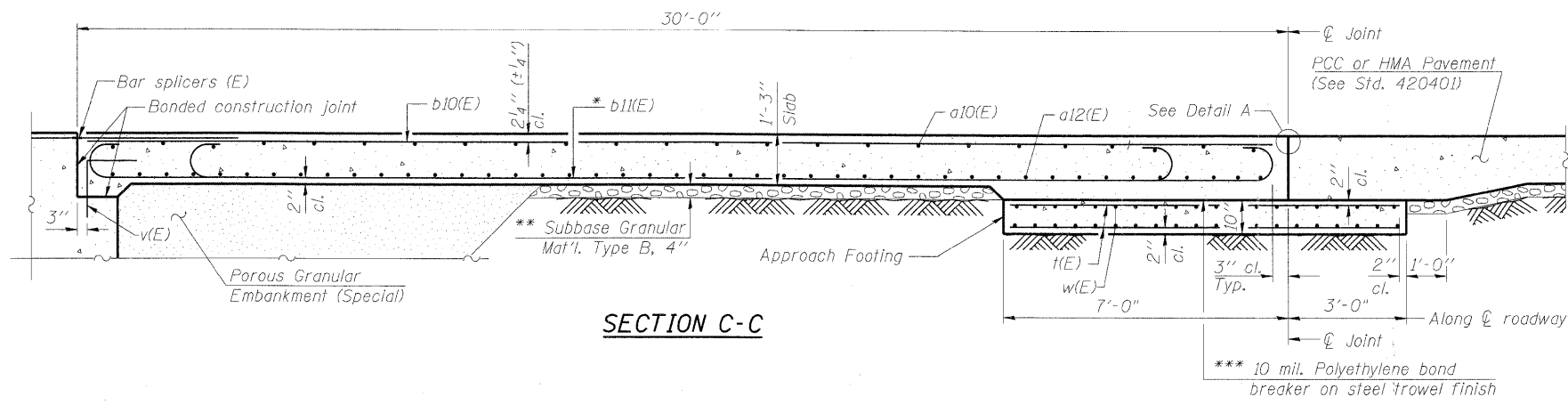
* Tilt #9 b11(E) bars as required to maintain clearance.
** Alternate with a10(E) bars, typ. ea. parapet.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

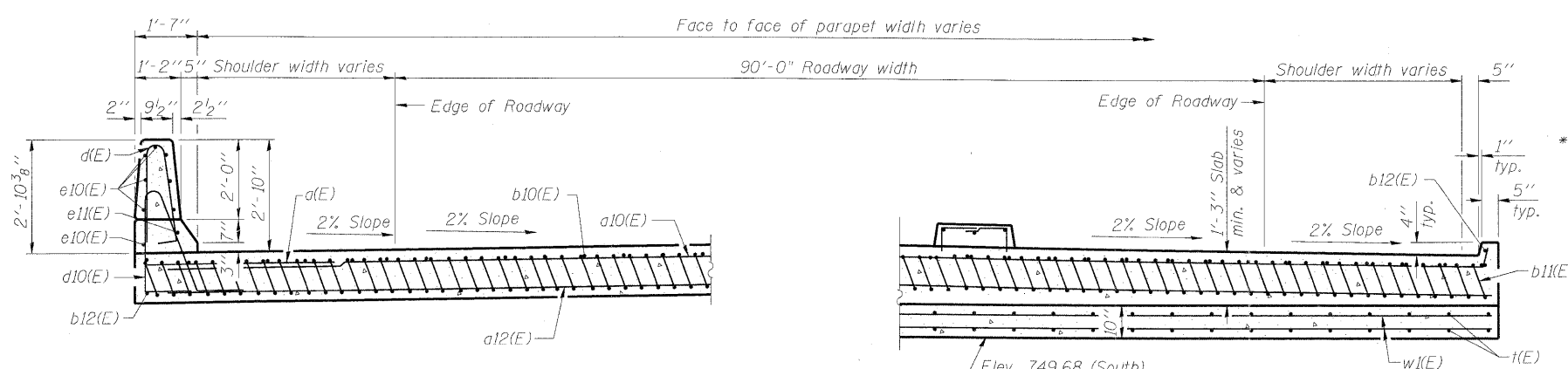
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
-	-	KANE	545	345
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074



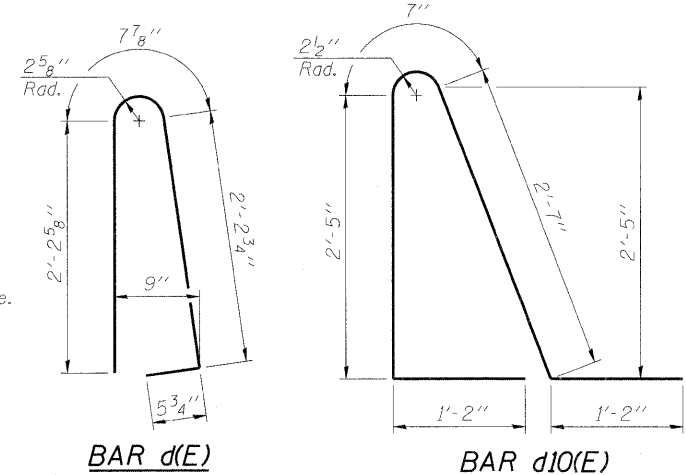
SECTION C-C

- Notes:
1. See sheet SD-29 for Detail A and View B-B.
 2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 3. Approach footing concrete shall be paid for as Concrete Structures.
 4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 5. For v(E) bar details, see sheets SD-13 and SD-15.
 6. The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 7. For bar splicer details, see sheet SD-26.
 8. For Porous Granular Embankment (Special) and drainage treatment details, see sheet SD-2.



SECTION D-D

(See Plan for dimensions not shown)



BAR d(E)

BAR d10(E)

* Tilt #9 b11(E) bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.

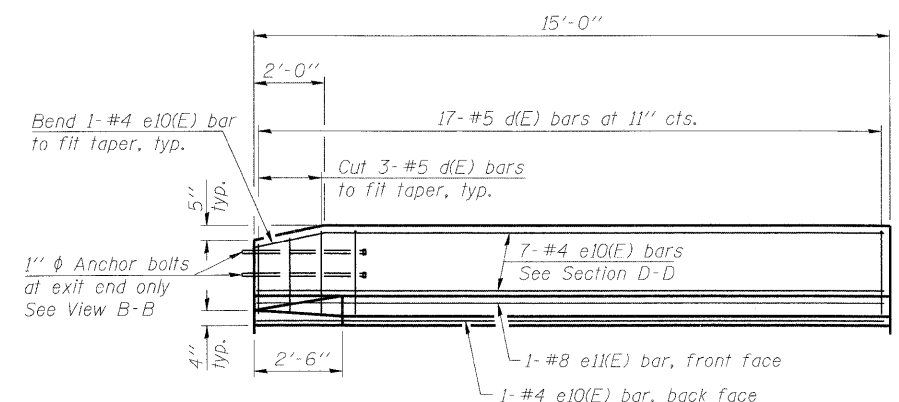
TWO APPROACHES - STAGE 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	24	#6	6'-6"	—
a10(E)	50	#4	32'-0"	—
a11(E)	50	#4	10'-0"	—
a12(E)	92	#5	32'-6"	—
a13(E)	92	#5	10'-0"	—
b10(E)	64	#4	29'-8"	—
b11(E)	188	#9	29'-9"	—
b12(E)	4	#4	14'-8"	—
c1(E)	120	#5	1'-9"	—
d(E)	34	#5	5'-7"	—
d10(E)	34	#5	7'-11"	—
e10(E)	16	#4	14'-8"	—
e11(E)	2	#8	14'-8"	—
h(E)	148	#4	9'-8"	—
w(E)	80	#5	31'-6"	—
w1(E)	80	#5	10'-0"	—
Concrete Superstructure	Cu. Yd.		137.6	
Concrete Structures	Cu. Yd.		22.7	
Bar Splicers	Each		222	
Reinforcement Bars, Epoxy Coated	Pound		31,180	

TWO APPROACHES - STAGE 2
BILL OF MATERIAL

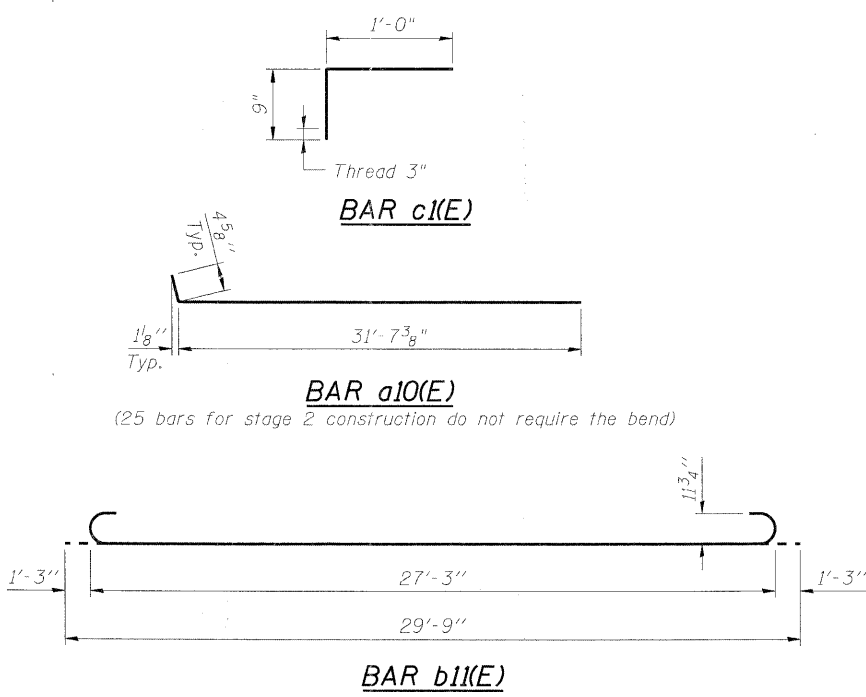
Bar	No.	Size	Length	Shape
a(E)	24	#6	6'-6"	—
a10(E)#	100	#4	32'-0"	—
a12(E)	184	#5	32'-6"	—
b10(E)	102	#4	29'-8"	—
b11(E)	284	#9	29'-9"	—
b12(E)	4	#4	14'-8"	—
c1(E)	120	#5	1'-9"	—
d(E)	34	#5	5'-7"	—
d10(E)	34	#5	7'-11"	—
e10(E)	16	#4	14'-8"	—
e11(E)	2	#8	14'-8"	—
h(E)	236	#4	9'-8"	—
w(E)	160	#5	31'-6"	—
Concrete Superstructure	Cu. Yd.		192.1	
Concrete Structures	Cu. Yd.		36.6	
Reinforcement Bars, Epoxy Coated	Pound		35,640	

25 bars in stage 2 construction do not require the bend.



VIEW E-E

DESIGNED	AJK
CHECKED	AAY
DRAWN	AJK
CHECKED	DMC



BAR c1(E)

BAR a10(E)

BAR b11(E)

BRIDGE APPROACH SLAB DETAILS (2 OF 2)
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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Job # 3944

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	346
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

DUEB-1

DUEB-2

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT. 98-00214-02-BR STRUCT. NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION West End South Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Surface Elev.	D	B	L	W	Qu	W	Surface Water Elev.	D	B	L	W	Qu	W
DUEB-1	275+70	32.00ft LT	735.80	H	T	S	tsf	%	%	730.3	H	T	S	tsf	%	%
Black clayey Topsoil 734.80																
Medium dense gray clayey SILT and SAND, trace gravel, moist A-4 and A-1-b 732.80																
Medium dense gray SAND and GRAVEL, saturated A-1 730.30																
Hard gray CLAY, trace gravel, moist A-6 727.80																
Very stiff gray CLAY, trace gravel, moist A-6 698.80																
Stiff gray CLAY, occasional silt seams, moist A-6 717.80																
Medium dense gray fine to medium SAND, saturated A-3 715.30																
Stiff gray CLAY and SILT layers, very moist A-4/A-6 712.80																
Medium dense gray SAND, little gravel, saturated A-1-b 710.80																

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Surface Elev.	D	B	L	W	Qu	W	Surface Water Elev.	D	B	L	W	Qu	W
DUEB-1	275+70	32.00ft LT	685.80	H	T	S	tsf	%	%	730.3	H	T	S	tsf	%	%
Very dense gray SAND and GRAVEL, occasional Cobbles and Boulders, wet A-1-a 100'2" 9.0																
Auger Refusal at 55.0'																
CME 750 ATV Drill Rig (#276) CME Automatic Hammer 3.25" (83 mm) ID HSA																

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT. 98-00214-02-BR STRUCT. NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION East End South Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	B	L	W	Qu	W	Surface Water Elev.	D	B	L	W	Qu	W
DUEB-2	275+70	25.00ft RT	740.60	H	T	S	tsf	%	%	732.1	H	T	S	tsf	%	%
FILL - Dark brown and black clayey Topsoil 739.50																
FILL - Black and brown SANDY LOAM, some topsoil, moist A-4 737.60																
FILL - Black CLAY LOAM (topsoil), little gravel, moist A-4/A-6 735.10																
FILL - Black CLAY (topsoil), very moist A-7-6 732.50																
Medium dense gray SAND and GRAVEL, saturated A-1-a 730.10																
Stiff to very stiff brown CLAY LOAM, some gravel, moist A-6 727.80																
Very stiff to stiff brownish-gray CLAY, trace gravel, moist A-6 722.80																
(Sample disturbed by large gravel) 722.80																
Very stiff to hard brownish-gray CLAY, trace gravel, moist A-6 717.60																
Medium dense gray SAND trace gravel, saturated A-1-b 715.60																

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Surface Elev.	D	B	L	W	Qu	W	Surface Water Elev.	D	B	L	W	Qu	W
DUEB-2	275+70	25.00ft RT	690.60	H	T	S	tsf	%	%	732.1	H	T	S	tsf	%	%
Dense Gravel and Cobbles, saturated A-1-a 685.60																
Dense brown and gray fine to medium SAND, saturated A-1-b 678.80																
Medium dense brown and gray fine to medium SAND, trace gravel, saturated A-1-b 675.60																
End of Boring at 65.0'																

SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

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SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

benesch
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 1 OF 4
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	347
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074

SHEET SD- 32
OF 34 SHEETS

DUEB-3

DUEB-4

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT 98-00214-02-BR STRUCT NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION West End Pier No. 1 S. 1 - Cntr TWP 40 N, RNG 8 E

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT 98-00214-02-BR STRUCT NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION East End Pier No. 1 S. 1 - Cntr TWP 40 N, RNG 8 E

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	O	W	Qu	W	Surface Water Elev.	D	E	B	L	O	W	Qu	W	
DUEB-3	276+10	55.00ft LT	736.02 ft	T	H	P	S	P	S	tsf	%	725.5	T	H	P	S	P	S	tsf	%	
Black CLAY (topsoil), very moist A-7-6																					
734.02																					
Soft dark brown SANDY LOAM, trace roots, very moist A-2-4																					
733.02																					
Medium dense gray SAND and GRAVEL, trace clay, wet A-1																					
730.52																					
Very stiff gray CLAY, trace gravel, moist A-6																					
723.02																					
Stiff to very stiff gray CLAY, moist A-6 (Qp = 2.0 tsf)																					
720.52																					
Very stiff to hard gray CLAY, trace gravel, moist A-6																					
718.02																					
Stiff gray CLAY, trace gravel, moist A-6																					
715.52																					
Medium dense gray SILT, very moist A-4																					
713.02																					
Medium dense gray SILT, trace sand and clay layers, very moist A-4																					
711.02																					

Boring No.	Station	Offset	Elevation	D	E	B	L	O	W	Qu	W	Surface Water Elev.	D	E	B	L	O	W	Qu	W	
DUEB-3	276+10	55.00ft LT	686.02 ft	T	H	P	S	P	S	tsf	%		T	H	P	S	P	S	tsf	%	
Very dense gray SAND and GRAVEL, occasional Cobbles, wet A-1-a																					
683.02																					
Auger Refusal at 53.0'																					
CME 750 ATV Drill Rig (#275)																					
CME Automatic Hammer																					
3.25" (83 mm) ID HSA																					

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	O	W	Qu	W	Surface Water Elev.	D	E	B	L	O	W	Qu	W	
DUEB-4	276+09	6.00ft RT	736.92 ft	T	H	P	S	P	S	tsf	%	731.4	T	H	P	S	P	S	tsf	%	
FILL - Dark brown and gray CLAY LOAM, some black topsoil, very moist A-7-6																					
734.42																					
Black CLAY LOAM (topsoil), trace gravel, very moist A-7-6																					
731.42																					
Very stiff brown and gray CLAY LOAM, little gravel, moist A-6																					
728.92																					
Stiff to very stiff gray CLAY, trace gravel, moist A-6																					
718.92																					
Loose to medium dense gray fine SAND, saturated A-3																					
713.92																					
Soft gray SILTY CLAY LOAM, occasional silt seams, very moist A-4/A-6																					
711.92																					

Boring No.	Station	Offset	Elevation	D	E	B	L	O	W	Qu	W	Surface Water Elev.	D	E	B	L	O	W	Qu	W	
DUEB-4	276+09	8.00ft RT	686.92 ft	T	H	P	S	P	S	tsf	%		T	H	P	S	P	S	tsf	%	
Very dense gray SAND and GRAVEL, occasional Cobbles and Boulders, wet A-1-a																					
100/5" 12.3																					
(possible fractured and broken rock below 55')																					
678.42																					
Auger Refusal at 58.5'																					
CME 750 ATV Drill Rig (#275)																					
CME Automatic Hammer																					
3.25" (83 mm) ID HSA																					

SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset and Elevations are in Feet

SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset and Elevations are in Feet

SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset and Elevations are in Feet

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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alfred benesch & company
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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 2 OF 4
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET 5D- 33 OF 34 SHEETS
		KANE	545	348	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 63074

DUEB-5

DUEB-6

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 8/11/04
Date Completed 8/11/04
ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT 98-00214-02-BR STRUCT. NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION West End Pier No. 2 S. 1-Cnr. TWP. 40 N. RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	B	L	Qu	W	Surface Water Elev.	D	B	L	Qu	W
DUEB-5	276+69	52.00H LT	736.79 ft	P	O	T	H	S	730.7	P	O	T	H	S
Groundwater Elev. at Completion 734.2														
Very soft black ORGANIC CLAY, very moist to moist A-7-6														
			734.20	1	8		15	47.3						
Medium dense brownish-gray silty SAND, little gravel, trace clay, wet A-1-b														
			731.20	3	8		8							
Dense brown SAND and GRAVEL, saturated A-1-a														
			728.70	7	17		26	10.6						
Hard gray CLAY and CLAY LOAM, trace gravel, moist A-6														
			723.70	8	12	4.5	15	14.8						
Very stiff gray CLAY with sand layers, moist A-6 and A-1-b														
			721.20	6	12	3.7	15	10.7						
Medium dense gray SILT, occasional sand seams, very moist A-4														
			718.70	6	10	1.7	10	13.6						
Medium dense gray silty SAND, trace gravel, saturated A-1-b														
			716.20	5	10		12	21.7						
Medium dense gray clayey SILT, very moist A-4														
			713.70	6	8	1.0	12	19.2						
Medium stiff gray SILTY CLAY LOAM, occasional silt seams, very moist to moist A-4/A-6														
			711.70	3	4	0.9	6	21.1						
SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet														

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 8/11/04
Date Completed 8/11/04
STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	D	B	L	Qu	W
DUEB-5	276+69	52.00H LT	686.70 ft	P	O	T	H	S
Dense to very dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a								
			582.70				100/5"	5.9
Possible fractured bedrock								
			582.20					
Auger Refusal at 54.5'								
CME 850 Track ATV Drill Rig (#127) CME Automatic Hammer 3.25" (83 mm) ID HSA								
SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet								

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 7/16/04
Date Completed 7/16/04
ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT 98-00214-02-BR STRUCT. NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION East End Pier No. 2 S. 1-Cnr. TWP. 40 N. RNG. 8 E.

Boring No.	Station	Offset	Surface Elev.	D	B	L	Qu	W	Surface Water Elev.	D	B	L	Qu	W
DUEB-6	276+72	10.00H RT	739.50 ft	P	O	T	H	S	735.0	P	O	T	H	S
Groundwater Elev. at Completion 711.50														
FILL - Dark brown CLAY, trace organic, moist A-6/A-7-6														
			738.00	2	1		1.5	26.5						
Black sandy ORGANIC CLAY, very moist A-7-6														
			736.50	2				81.2						
(Op = 2.25 tsf)														
			711.50	8	9		0.25	8.0						
Medium dense brown and gray SAND and GRAVEL, occasional Cobbles, trace clay, saturated A-1-a														
			731.50	9	11			9.3						
Medium dense gray silty SAND, trace gravel, trace clay, moist A-1-b														
			731.50	5	7	2.8	15	16.6						
Very stiff gray CLAY, trace gravel, moist A-6														
			762.50	6	8	2.3	10	17.0						
Medium dense gray SAND, little to some gravel, trace clay, wet A-1-b														
			724.00	5	9	2.7	12	18.2						
Medium dense gray SAND, saturated A-1-b														
			723.00	7	7	2.9	10	18.3						
Very stiff gray CLAY, moist A-6														
			721.50	10	10									
Very loose gray SAND, saturated A-1-b														
			719.00	1	1			18.1						
Medium dense gray SAND, trace gravel, saturated A-1-b														
			717.50	8	5			14.3						
Medium dense gray SAND, trace gravel, saturated A-1-b														
			692.50	8	5			19.4						
Medium dense gray SILT, very moist A-4														
			714.50	6	6			19.4						
Loose gray SANDY LOAM, trace gravel, moist A-4														
			719.00	3	4	1.12	5	9.7						
Medium dense gray SAND and GRAVEL, trace clay, wet A-1														
			714.50	5	7			9						
SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet														

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 7/16/04
Date Completed 7/16/04
STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	D	B	L	Qu	W
DUEB-6	276+72	10.00H RT	689.50 ft	P	O	T	H	S
Medium dense gray SAND and GRAVEL, trace clay, wet A-1								
			687.50	4	6	1.3	7	17.7
Very dense SAND and GRAVEL, occasional Cobbles and Boulders, A-1-a								
			684.50	10	10			7.8
Probable fractured Rock, hard drilling								
			681.50					
Dolomite, tan, silty, thin to medium bedded, dense, heavily fractured from 60 to 63 ft.								
			676.50					
Core Run from 58 to 63 feet Recovery = 84% RQD = 17%								
End of Core at 63.0'								
CME 750 ATV Drill Rig (#275) CME Automatic Hammer 3.25" (83 mm) ID HSA								
Rock Core with NX Core Barrel								
SPT (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet								

DESIGNED	AJK
CHECKED	AAY
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CHECKED	DMC

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Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 3 OF 4
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
-	-	KANE	545	349
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074

SHEET 34
OF 34 SHEETS

DUEB-7

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 1 of 2
Date Started 7/15/04
Date Completed 7/15/04

ROUTE F.A.P. 360 DESCRIPTION IL Route 25/Dunham Road over E. Br. Brewster Creek
SECT. 98-00214-02-BR STRUCT. NO. 045-2032 DRILLED BY TSC L-60,393
COUNTY Kane LOCATION North Abutment S 1-Cnr TWP 40 N. RNG. 8 E.

Boring No.	D	B	Surface Water Elev.	D	B
Station	E	L	Groundwater Elev.	E	L
Offset	P	O	when drilling	P	O
	T	W	at Completion	T	W
	H	S	after	H	S
Surface Elev.	Qu	W	Hrs.	Qu	W
	tsf	%		tsf	%
FILL - Black ORGANIC CLAY 736.78	1	P		3	B
FILL - Black CLAY, very moist A-7-6 734.78	1	0.5	29.3	4	1.0
Dark brown and black ORGANIC CLAY, very moist A-7-6 733.28	2	S	55.7	11	B
Gray clayey SAND and GRAVEL, very moist A-1-b 732.28	7	0.3	14.5	9	1.5
Dense brown SAND and GRAVEL, saturated A-1-a 729.78	5	10%	14.5	8	15%
Hard brown CLAY, trace gravel, moist A-6 726.78	10			17	
Hard gray CLAY, trace gravel, moist A-6 719.78	15			20	
Very stiff gray CLAY, trace gravel, moist A-6 717.28	9	S	21.9	7	
Medium dense gray SILT, very moist A-4 714.78	7	6.0	21.9	9	10
Stiff gray SILT and CLAY layers, very moist A-4/A-6 714.78	10	B	19.1	17	18.6
	20	7.1	19.1	20	
	23	15%		26	
	9	B	16.9	11	S
	13	6.1	16.9	17	5.6
	16	15%		20	10%
	10	B	17.2		
	12	4.1	17.2		
	13	15%			
	6	B	19.2		
	9	2.6	19.2		
	15	15%			
	3		20.3		
	4				
	6				
	6	B	18.5		
	5	1.0	18.5		
	7	15%			

SPT. (N) = Sum of last two blow values in sample (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG
Page 2 of 2
Date Started 7/15/04
Date Completed 7/15/04

STRUCTURE NO. 045-2032
ROUTE F.A.P. 360
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	D	B	Surface Water Elev.	D	B
Station	E	L	Groundwater Elev.	E	L
Offset	P	O	when drilling	P	O
	T	W	at Completion	T	W
	H	S	after	H	S
Surface Elev.	Qu	W	Hrs.	Qu	W
	tsf	%		tsf	%
Medium dense gray SAND and GRAVEL, saturated A-1-a 685.78					
Dense gray SAND, trace gravel, saturated A-1-b 683.28				17	
Probable Fractured Rock 682.78				20	
				23	
End of Boring at 55.0'					
CME 750 ATV Drill Rig (#275) CME Automatic Hammer 3.25" (83 mm) ID HSA					

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	DMC

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205 North Michigan Avenue, Suite 2400
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Job # 3944

SOIL BORING LOG 4 OF 4
IL 25/DUNHAM ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 276+36.96
STRUCTURE NO. 045-2032

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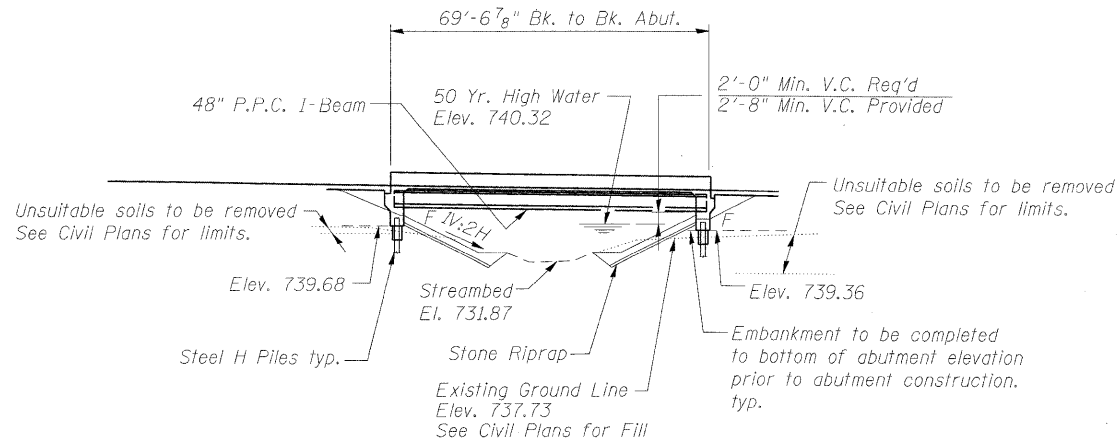
Benchmark BM-24:
 "Aluminum Disk" set in concrete, 0.50± mile east of Stearns Road and
 Dunham Road at the south side of Stearns Road. Elev. 762.678
 No existing structure.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

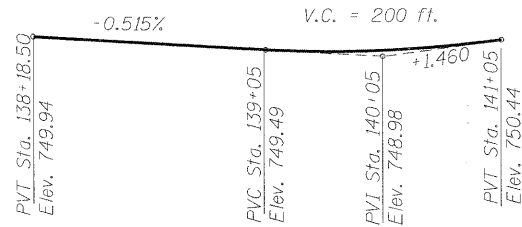
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	350
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SS- 1
 OF 22 SHEETS

Contract # 63074



ELEVATION



PROFILE GRADE
 (WB IL 25/Stearns Rd.)

STATION 138+59.20
 F.A.P. 2503
 SECTION 06-00214-15-BR
 BUILT 2011 BY
 STATE OF ILLINOIS
 LOADING HL-93
 STRUCTURE NO. 045-2035

NAME PLATE
 See std. 515001

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.
DESIGN SPECIFICATIONS
 2007 AASHTO LRFD Bridge Design Specifications (4th ed.)
 with 2008 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f'_{pu} = 270,000$ psi ($1/2$ " ϕ low lax. strands)
 $f_{br} = 201,960$ psi ($1/2$ " ϕ low lax. strands)

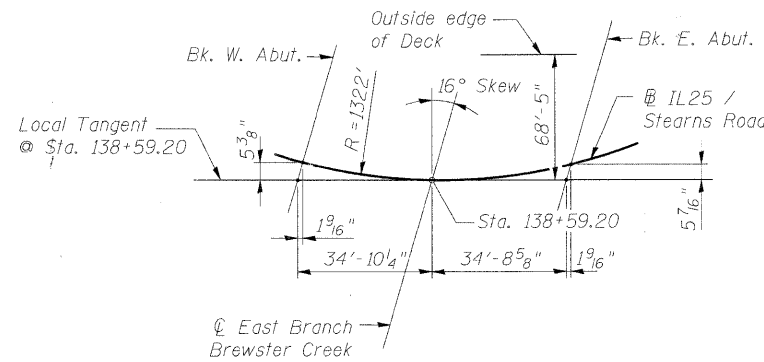
CURVE DATA

Along @ IL Rte 25
 $\Delta = 13^\circ 58' 39"$ (LT)
 $D = 4^\circ 20' 02"$
 $R = 1322.00'$
 $T = 162.06'$
 $L = 322.51'$
 $E = 9.90'$
 $S.E. = 0.035$ ' / ' /

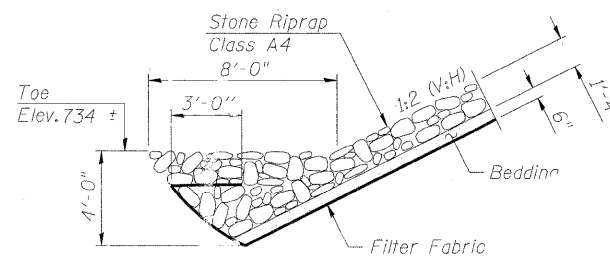
P.C. STA. = 138+18.50
 P.T. STA. = 141+41.01
 P.I. STA. = 139+80.56
 SE Attained Sta. 504+18.73
 to Sta. 506+62.93
 SE Removed Sta. 140+89.21
 to Sta. 143+33.41

SEISMIC DATA

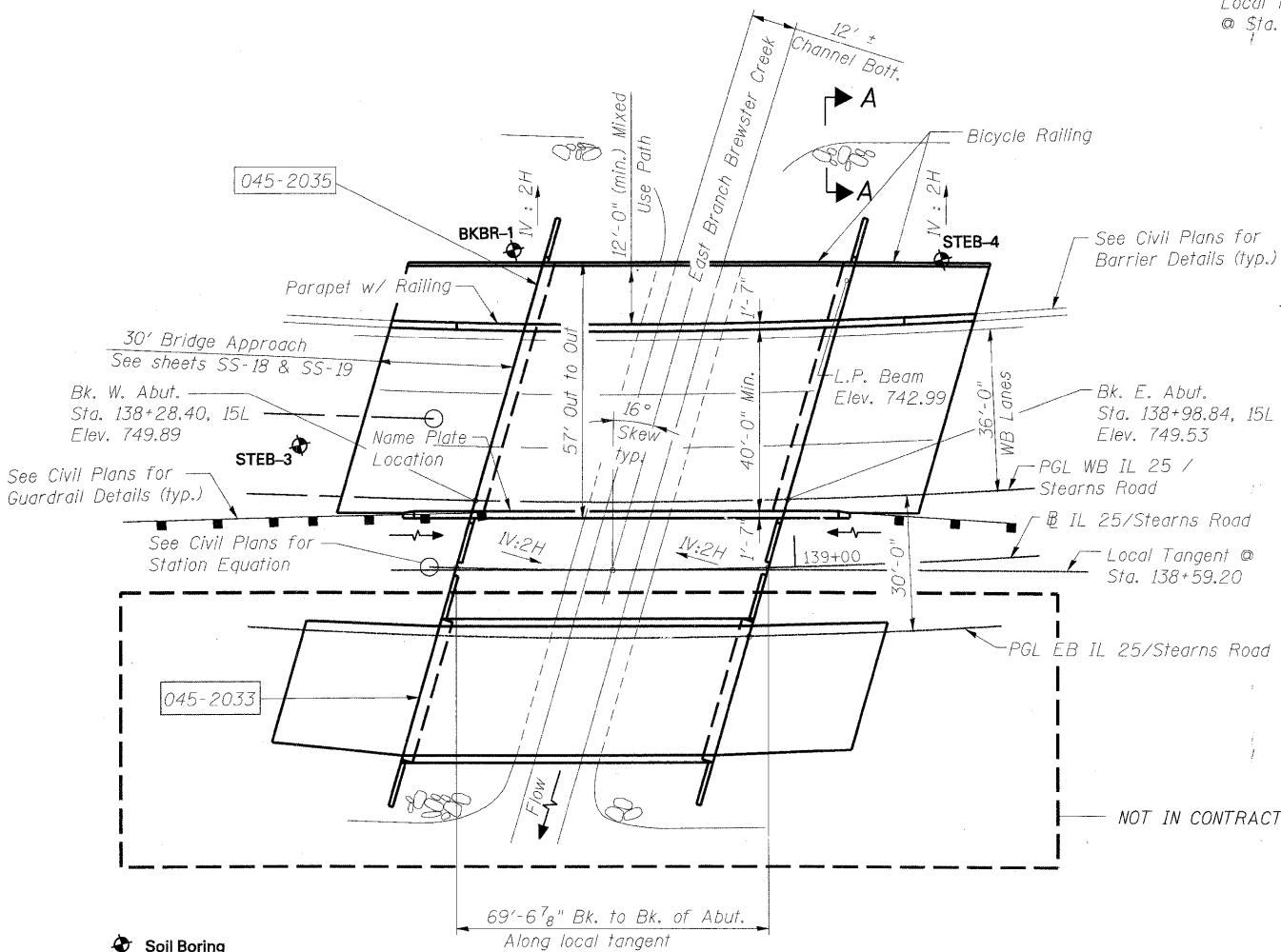
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. ($S_{0.1}$) = 0.08 g
 Design Spectral Acceleration at 0.2 sec. ($S_{0.2}$) = 0.14 g
 Soil Site Class = D



OFFSET SKETCH



SECTION A-A



PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Piers	E. Abut.
	736.68	N/A	736.36

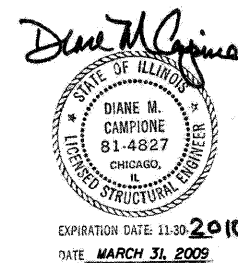
WATERWAY INFORMATION

Drainage Area = 5.497 Sq. mi.

Flood 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	529	N/A	302.8	740.32	N/A	0.04	N/A	740.36
Base	100	678	N/A	331.7	740.65	N/A	0.07	N/A	740.72
Overtopping	>500**	4412	N/A	474.7	N/A	N/A	N/A	N/A	749.00
Max. Calc.	500*	1000	N/A	352.0	741.32	N/A	0.17	N/A	741.49

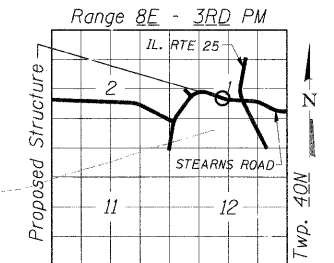
* 500-Year Flowrate determined from analytical frequency curve - WSEL'S Extrapolated
 ** Overtopping occurs above the 500-Year WSEL under proposed conditions

DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
 Engineer of Bridges and Structures



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR

KANE COUNTY

STATION 138+59.20

STRUCTURE NO. 045-2035

benesch
 Engineers • Surveyors • Planners
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450
 Job # 3944

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	351
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SS- 2
OF 22 SHEETS

Contract # 63074

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of 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.
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- All organic and/or other unsuitable materials must be removed from foundation and slab subgrades and backfill areas and then backfilled with an acceptable fill material per IDOT specification, and compacted to 95% of maximum density at optimum moisture content (ASTM D1557).
- Prior to construction, detailing of shop drawing and ordering materials the Contractor shall verify all dimensions and site conditions of the project area.
- Reinforcement bar lap splices shall be Class C. Top bars so placed that more than 12 inches of concrete is cast below the reinforcement shall be lapped for 1.4 x basic lap. Reinforcement bar splices shall be in accordance with the following table unless shown otherwise on the drawing.

Bar Size	Basic Lap	1.4 Basic Lap
#4	1'-8"	2'-5"
#5	2'-2"	3'-0"
#6	2'-7"	3'-7"
#7	3'-5"	4'-10"
#8	4'-6"	6'-4"
#9	5'-9"	8'-1"
#10	7'-3"	10'-3"
#11	9'-0"	12'-7"

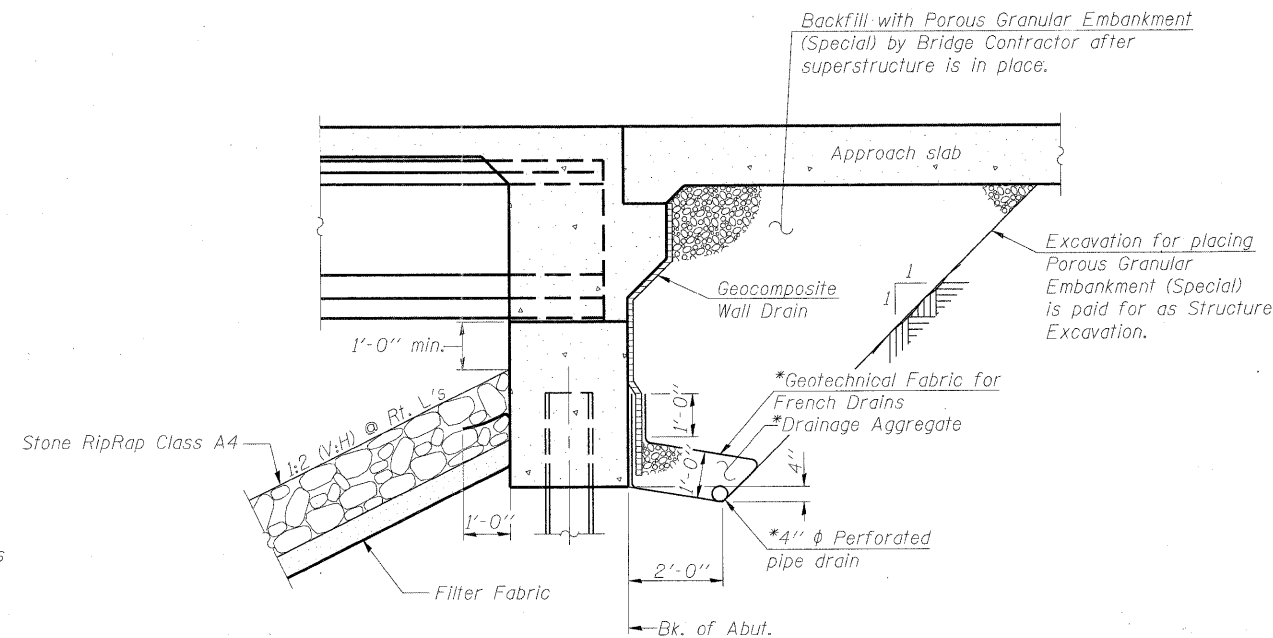
- Slipforming of the parapets is not allowed.
- For limits of removal of unsuitable materials, see Civil Plans.
- No in-stream work or work that could potentially impact the Fox River can occur between March 1, 2010 and June 7, 2010. In-stream work includes the East Branch of Brewster Creek.
- All disturbed areas and work areas must be isolated from creek flows at all times. The diversion/isolation of the creek flows must be constructed from non-erodible materials. The KDSWCD must be in agreement with overall exact method of diversion/isolation prior to the commencement of construction (Contact KDSWCD 630-584-7961 x3).
- No work shall be performed in flowing water and no equipment shall enter Brewster Creek without approval of the KDSWCD or the Army Corps of Engineers. Work in and near the critical areas should be isolated from concentrated flows or stream flow. The stream banks shall be stabilized at the end of each day. Once work in this area begins, priority shall be given to the completion of the work and final stabilization of all disturbed areas.
- See Erosion Control Plans for erosion control and de-watering details.

INDEX OF SHEETS

SS - 1 of 22	General Plan and Elevation
SS - 2 of 22	General Notes, Index of Sheets and Total Bill of Material
SS - 3 of 22	Foundation Layout
SS - 4 of 22	Deck Elevation Plan
SS - 5 of 22	Top of Slab Elevations
SS - 6 of 22	Top of Approach Slab Elevations
SS - 7 of 22	Deck Reinforcement Plan
SS - 8 of 22	Deck Cross Section
SS - 9 of 22	Diaphragm Section and Elevation
SS - 10 of 22	Parapet Elevation and Details
SS - 11 of 22	Framing Plan and Moment Table
SS - 12 of 22	48" PPC I-Beam Elevation
SS - 13 of 22	48" PPC I-Beam Details
SS - 14 of 22	West Abutment - Plan and Elevation
SS - 15 of 22	East Abutment - Plan and Elevation
SS - 16 of 22	Pile Details
SS - 17 of 22	Bar Splicer Assembly Details
SS - 18 of 22	Bridge Approach Slab Details (1 of 2)
SS - 19 of 22	Bridge Approach Slab Details (2 of 2)
SS - 20 of 22	Multi-Use Railing Details
SS - 21 of 22	Soil Boring Log 1 of 2
SS - 22 of 22	Soil Boring Log 2 of 2

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd		213	213
Stone RipRap Class A4	Sq. Yd.		447	447
Filter Fabric	Sq. Yd.		447	447
Concrete Structures	Cu. Yd		94.9	94.9
Concrete Superstructure	Cu. Yd	365.1		365.1
Bridge Deck Grooving	Sq. Yd.	706		706
Concrete Encasement	Cu. Yd		8.4	8.4
Protective Coat	Sq. Yd.	846		846
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 In.	Foot	479		479
Reinforcement Bars, Epoxy Coated	Pound	79,290	9,380	88,670
Bar Splicers	Each	112		112
Bicycle Railing	Foot	130		130
Parapet Railing	Foot	130		130
Furnishing Steel Piles HP12x53	Foot		1,584	1,584
Driving Piles	Foot		1,584	1,584
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		24	24
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		106	106
Pipe Underdrains for Structures 4"	Foot		167	167



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

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

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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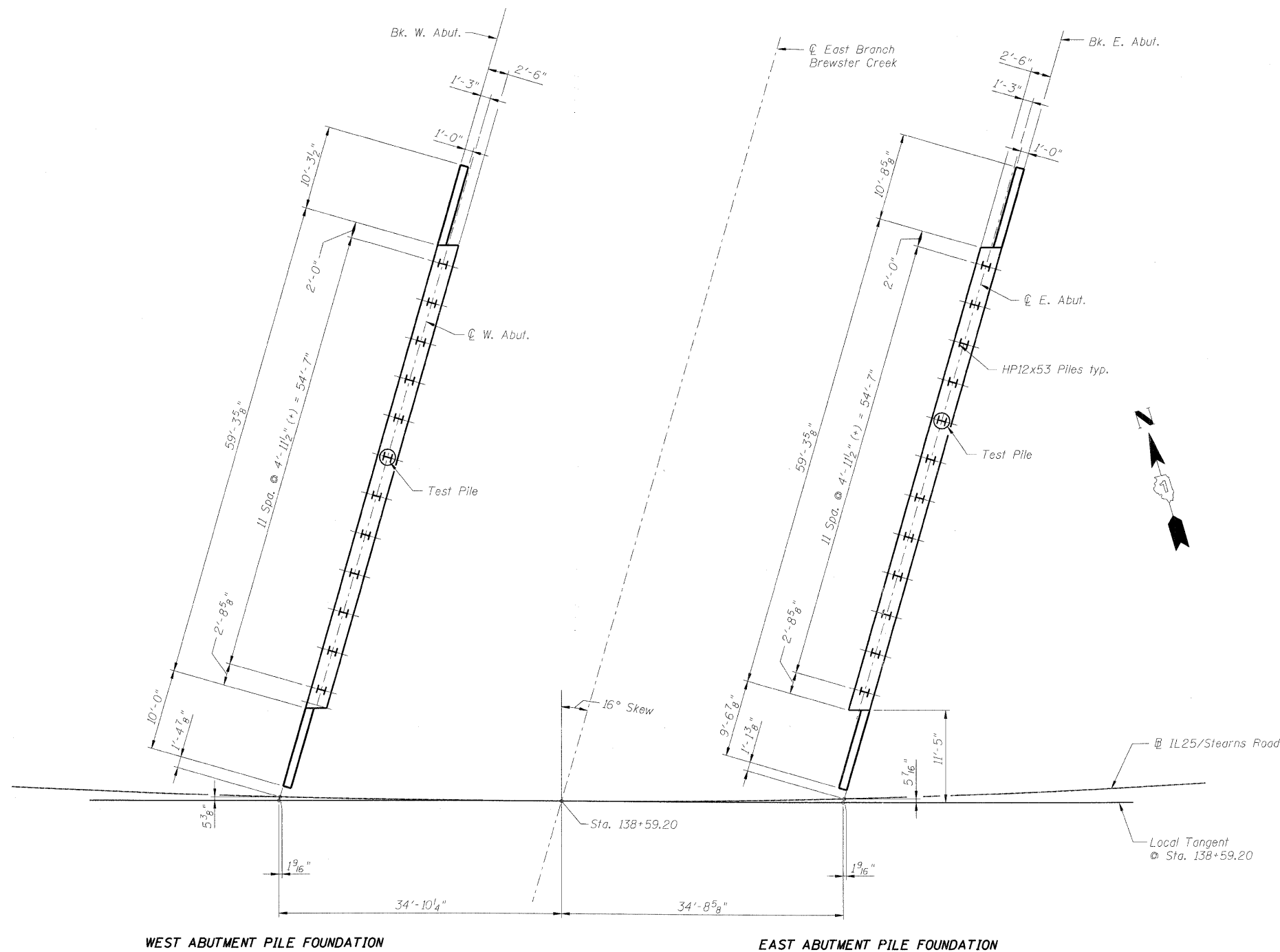
**GENERAL NOTES, INDEX OF SHEETS
AND TOTAL BILL OF MATERIAL
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	352
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074

SHEET SS- 3
OF 22 SHEETS



- Notes:
1. See sheet SS-14 and SS-15 for abutment details and pile data.
 2. Piles shall be driven through 1'-6" diameter precored holes extending to elevation 737.0 (W. Abut) or 733.0 (E. Abut) according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

- ⊕ HP12 x 53 Test Pile
I HP12 x 53 Vertical Pile

DESIGNED	AJK
CHECKED	AAY
DRAWN	VH
CHECKED	HMA/DMC

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Job # 3944

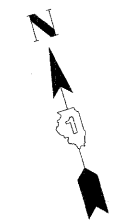
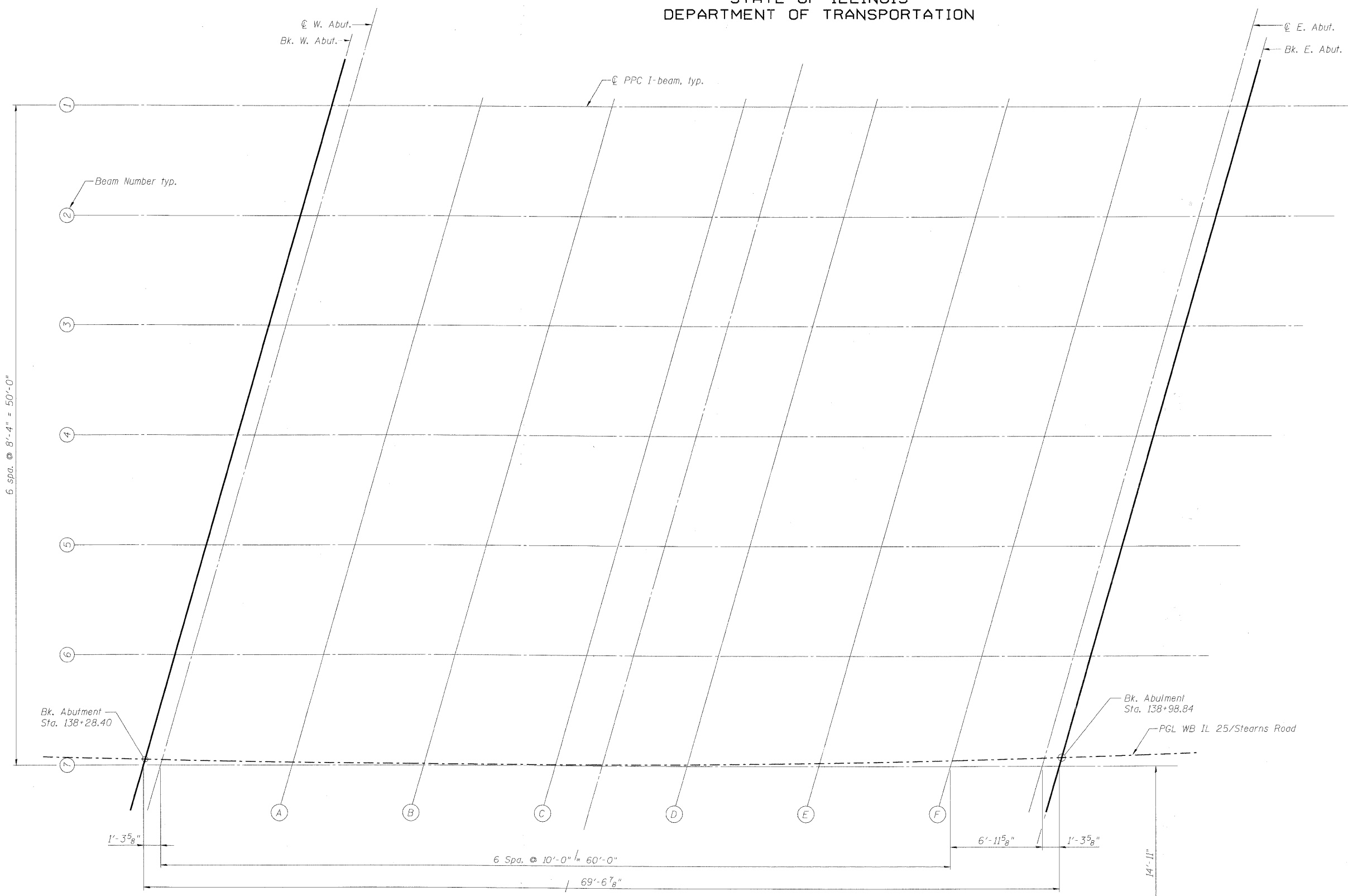
FOUNDATION LAYOUT
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	353
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SS- 4
OF 22 SHEETS

Contract # 63074



Notes:
1. Work this sheet with sheet SS-5.

DESIGNED	AJK
CHECKED	HMA
DRAWN	AYR
CHECKED	HMA/DMC

PLAN

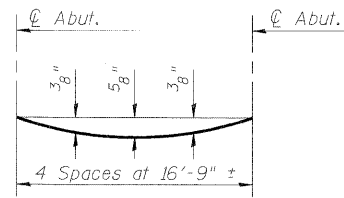
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Chicago, Illinois 60601
312-565-0450
Job # 3944

DECK ELEVATION PLAN
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

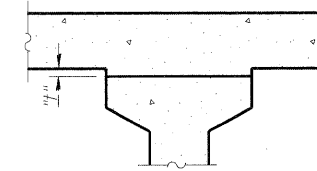
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	354
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete, excluding beams).

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 below.



To determine "f": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "f" above top flanges of beams.

FILLET HEIGHTS

WB PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+28.40	-15.00	749.89	749.89
W. Abut	138+29.70	-15.00	749.88	749.88
A	138+39.77	-15.00	749.83	749.86
B	138+49.85	-15.00	749.78	749.82
C	138+59.96	-15.00	749.73	749.78
D	138+70.08	-15.00	749.67	749.72
E	138+80.23	-15.00	749.62	749.66
F	138+90.41	-15.00	749.57	749.58
E. Abut	138+97.52	-15.00	749.53	749.53
Bk. E. Abut	138+98.84	-15.00	749.53	749.53

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+42.12	-64.81	748.07	748.07
W. Abut	138+43.49	-64.83	748.07	748.07
A	138+54.01	-64.91	748.01	748.04
B	138+64.52	-64.91	747.96	748.00
C	138+75.04	-64.83	747.90	747.96
D	138+85.55	-64.67	747.86	747.90
E	138+96.06	-64.43	747.81	747.85
F	139+06.57	-64.11	747.77	747.78
E. Abut	139+13.89	-63.84	747.74	747.74
Bk. E. Abut	139+15.25	-63.79	747.74	747.74

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+35.07	-39.70	748.99	748.99
W. Abut	138+36.41	-39.73	748.98	748.98
A	138+46.72	-39.86	748.92	748.95
B	138+57.03	-39.92	748.87	748.91
C	138+67.34	-39.89	748.82	748.87
D	138+77.65	-39.79	748.77	748.82
E	138+87.96	-39.61	748.72	748.76
F	138+98.26	-39.36	748.68	748.69
E. Abut	139+05.44	-39.13	748.65	748.65
Bk. E. Abut	139+06.78	-39.09	748.64	748.64

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+39.74	-56.45	748.38	748.38
W. Abut	138+41.10	-56.47	748.37	748.37
A	138+51.54	-56.56	748.32	748.34
B	138+61.99	-56.58	748.26	748.30
C	138+72.44	-56.52	748.21	748.26
D	138+82.88	-56.38	748.16	748.21
E	138+93.32	-56.16	748.11	748.15
F	139+03.76	-55.87	748.07	748.08
E. Abut	139+11.04	-55.61	748.04	748.04
Bk. E. Abut	139+12.39	-55.56	748.04	748.04

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+32.77	-31.33	749.30	749.30
W. Abut	138+34.11	-31.35	749.29	749.29
A	138+44.35	-31.50	749.23	749.26
B	138+54.59	-31.58	749.17	749.22
C	138+64.84	-31.57	749.12	749.17
D	138+75.08	-31.49	749.07	749.12
E	138+85.32	-31.33	749.02	749.06
F	138+95.56	-31.10	748.98	748.99
E. Abut	139+02.70	-30.89	748.95	748.95
Bk. E. Abut	139+04.03	-30.84	748.95	748.95

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+37.39	-48.08	748.68	748.68
W. Abut	138+38.74	-48.10	748.68	748.68
A	138+49.11	-48.21	748.62	748.65
B	138+59.49	-48.25	748.57	748.61
C	138+69.87	-48.21	748.51	748.56
D	138+80.25	-48.09	748.46	748.51
E	138+90.62	-47.89	748.42	748.45
F	139+00.99	-47.61	748.37	748.39
E. Abut	139+08.22	-47.37	748.35	748.35
Bk. E. Abut	139+09.57	-47.33	748.34	748.34

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+30.51	-22.95	749.60	749.60
W. Abut	138+31.84	-22.97	749.59	749.59
A	138+42.01	-23.14	749.53	749.56
B	138+52.19	-23.23	749.48	749.52
C	138+62.37	-23.25	749.43	749.48
D	138+72.55	-23.18	749.38	749.42
E	138+82.72	-23.05	749.33	749.36
F	138+92.90	-22.83	749.28	749.30
E. Abut	138+99.99	-22.63	749.25	749.25
Bk. E. Abut	139+01.31	-22.59	749.25	749.25

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk W. Abut	138+28.28	-14.56	749.90	749.90
W. Abut	138+29.59	-14.59	749.90	749.90
A	138+39.71	-14.78	749.84	749.86
B	138+49.82	-14.88	749.78	749.83
C	138+59.93	-14.92	749.73	749.78
D	138+70.05	-14.87	749.68	749.73
E	138+80.16	-14.75	749.63	749.67
F	138+90.27	-14.56	749.59	749.60
E. Abut	138+97.32	-14.37	749.56	749.56
Bk. E. Abut	138+98.63	-14.34	749.55	749.55

Note
1. For Deck Elevation Plan see sheet SS-4.
2. Stations and offsets taken from IL 25/Stearns Road

DESIGNED	AJK
CHECKED	HMA
DRAWN	AYR
CHECKED	HMA/DMC

benesch
alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

**TOP OF SLAB ELEVATIONS
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

x:\3900s\3944\engineering\documents\IL25-Stearns_over_Brewster_S\NO45-2035(EB)_S\NO45-2035(WB)_Final\0452035-63074-005-dkell.dgn 11/22/09 AM 3/30/2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	355
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SS- 6
OF 22 SHEETS

Contract # 63074

NORTH EDGE OF PAVEMENT

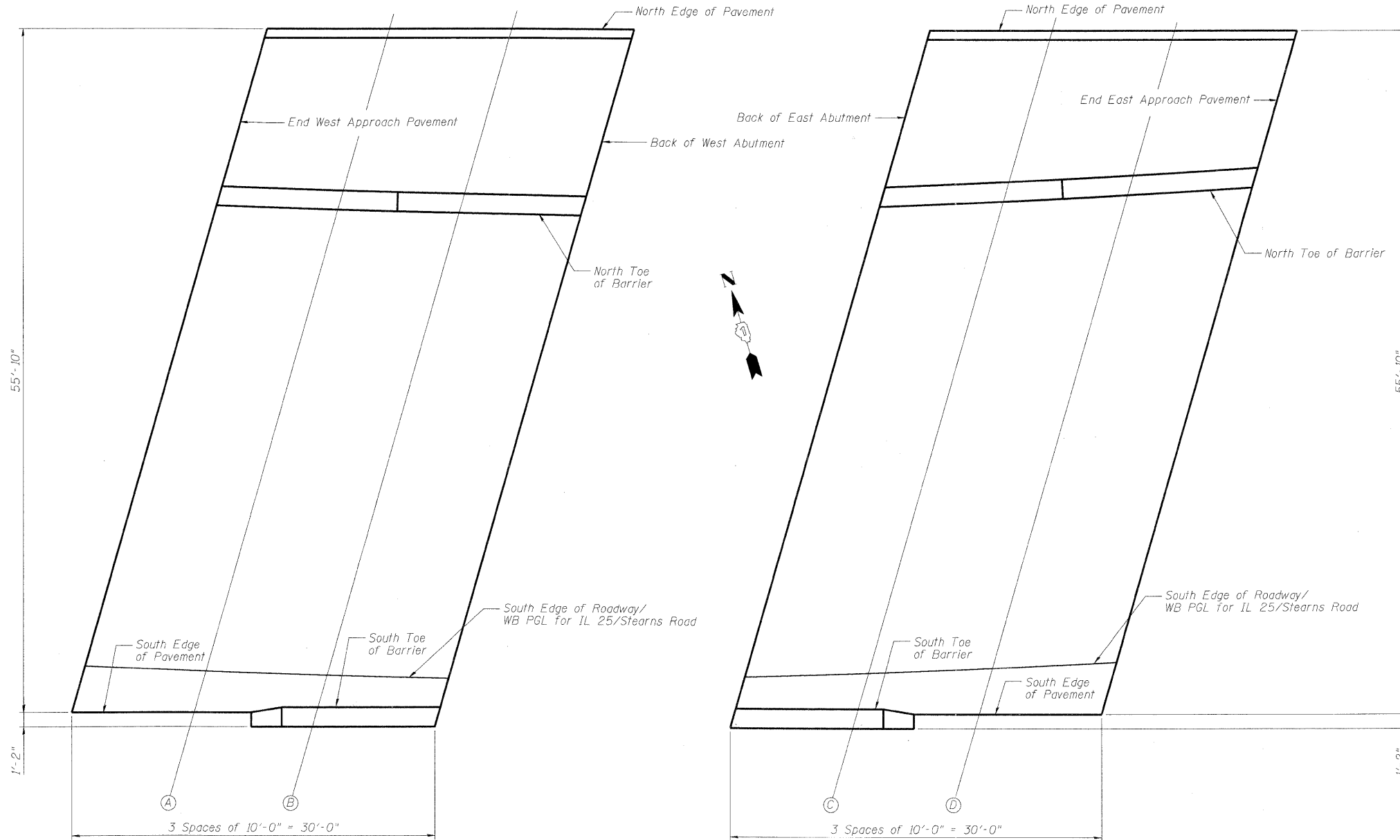
Location	Station	Offset	Theoretical Grade Elevations
End West Approach Pavement	506+70.26	-34.62	748.13
A	138+22.05	-67.92	748.07
B	138+32.59	-68.16	748.01
Back of West Abutment	138+43.13	-68.33	747.95
Back of East Abutment	139+16.47	-67.24	747.61
C	139+26.99	-66.77	747.59
D	139+37.50	-66.22	747.59
End East Approach Pavement	139+48.01	-65.58	747.59

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End West Approach Pavement	506+66.56	-20.04	748.66
A	506+76.46	-20.00	748.61
B	138+28.40	-53.00	748.56
Back of West Abutment	138+38.77	-53.00	748.51
Back of East Abutment	139+11.51	-53.00	748.13
C	139+22.07	-53.00	748.09
D	139+32.66	-53.00	748.06
End East Approach Pavement	139+43.28	-53.00	748.04

SOUTH EDGE OF ROADWAY/WB PGL IL 25/STEARNS ROAD

Location	Station	Offset	Theoretical Grade Elevations
End West Approach Pavement	506+56.94	18.00	750.02
A	506+66.83	18.00	749.99
B	506+76.74	18.00	749.94
Back of West Abutment	138+28.40	-15.00	749.89
Back of East Abutment	138+98.84	-15.00	749.53
C	139+09.06	-15.00	749.47
D	139+19.31	-15.00	749.43
End East Approach Pavement	139+29.58	-15.00	749.40



WEST APPROACH SLAB

EAST APPROACH SLAB

PLAN

DESIGNED	AJK
CHECKED	HMA
DRAWN	AYR
CHECKED	HMA/DMC

SOUTH TOE OF BARRIER/EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End West Approach Pavement	506+55.97	21.68	750.14
A	506+65.97	21.37	750.11
B	506+76.07	20.64	750.04
Back of West Abutment	138+27.77	-12.63	749.98
Back of East Abutment	138+98.02	-12.44	749.62
C	139+08.11	-12.10	749.58
D	139+18.05	-11.29	749.57
End East Approach Pavement	139+28.12	-10.80	749.55

- Note:
1. See Civil Plans for Station equation at 138+18.50.
 2. For approach slab details see sheets SS-18 and SS-19.

TOP OF APPROACH SLAB ELEVATIONS
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

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Job # 3944

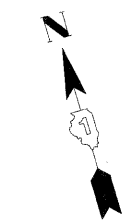
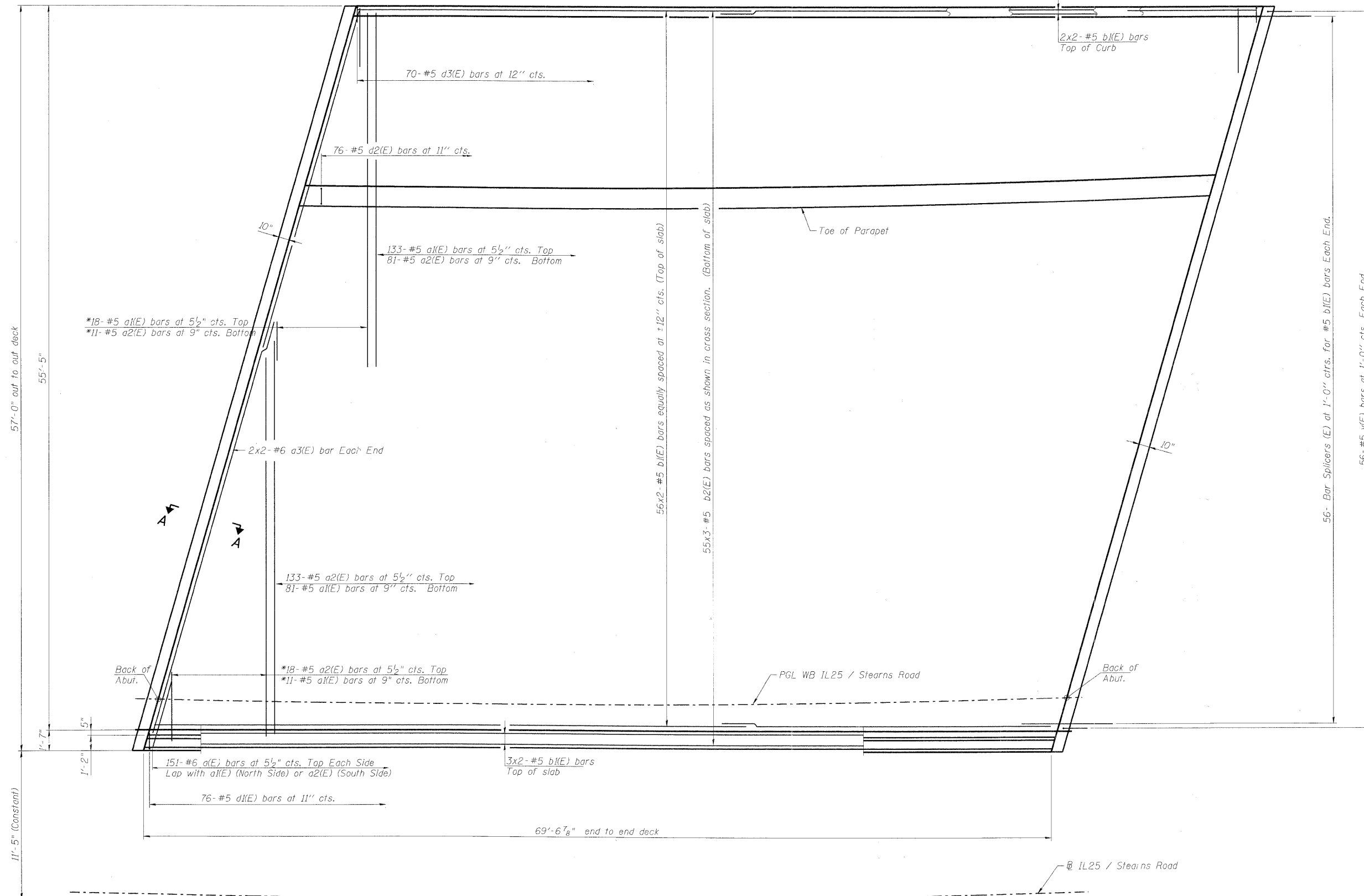
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	356
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SS- 7
OF 22 SHEETS

Contract # 63074



- Notes:
1. See sheet SS-10 for superstructure details and Bill of Material.
 2. For Section A-A and diaphragm details see sheet SS-9.
 3. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 4. See sheet SS-10 for parapet reinforcement.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

* Order a1(E) and a2(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN

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312-565-0450
Job # 3944

DECK REINFORCEMENT PLAN
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

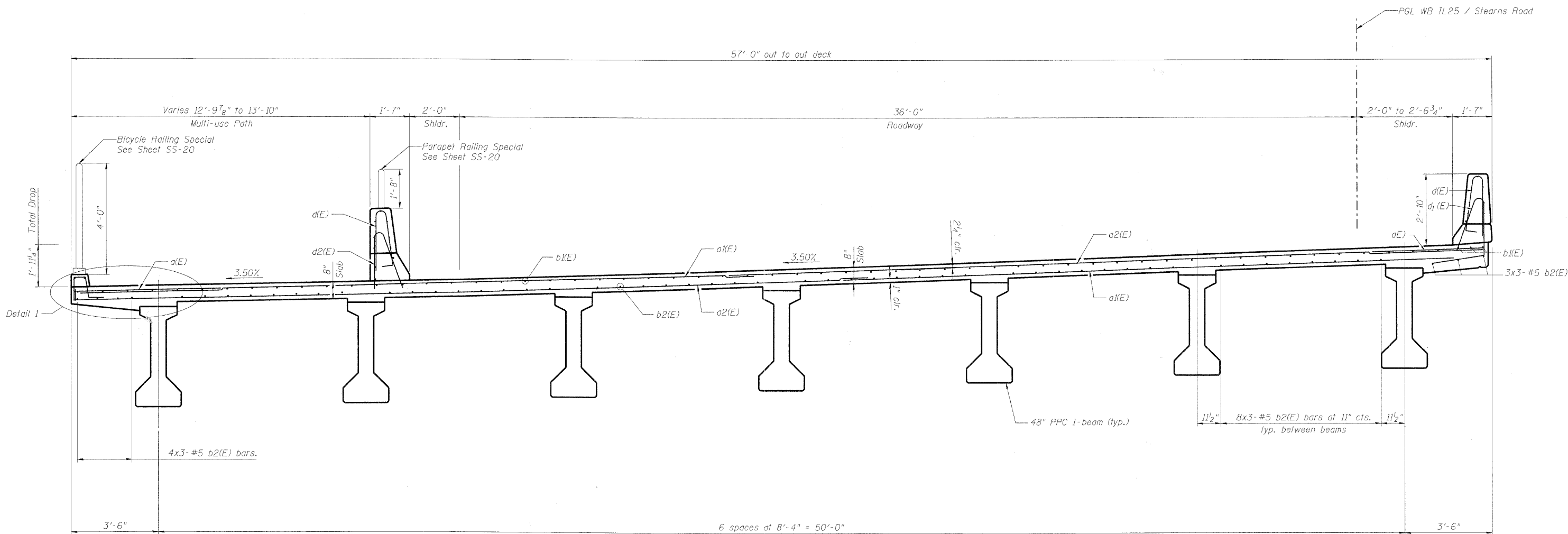
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	357
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

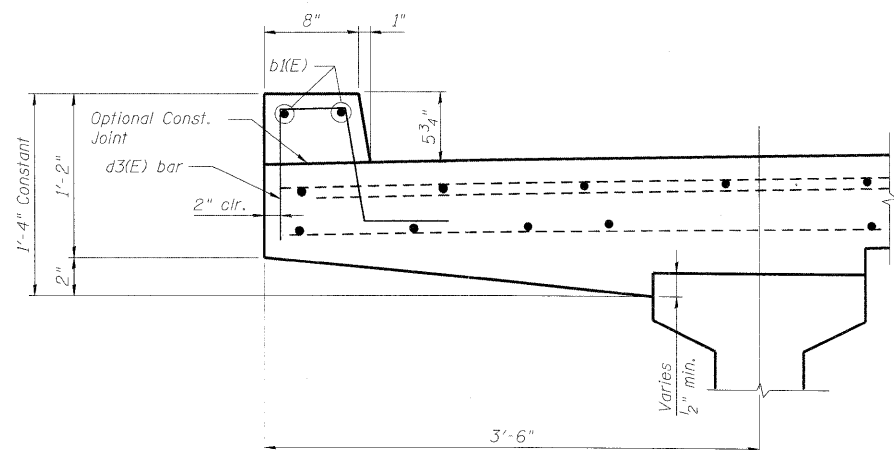
Contract # 63074

SHEET SS- 8
OF 22 SHEETS



DECK CROSS SECTION

NOTES:
1. See Sheet SS-7 for deck plan.



DETAIL 1

DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC

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Job # 3944

DECK CROSS SECTION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

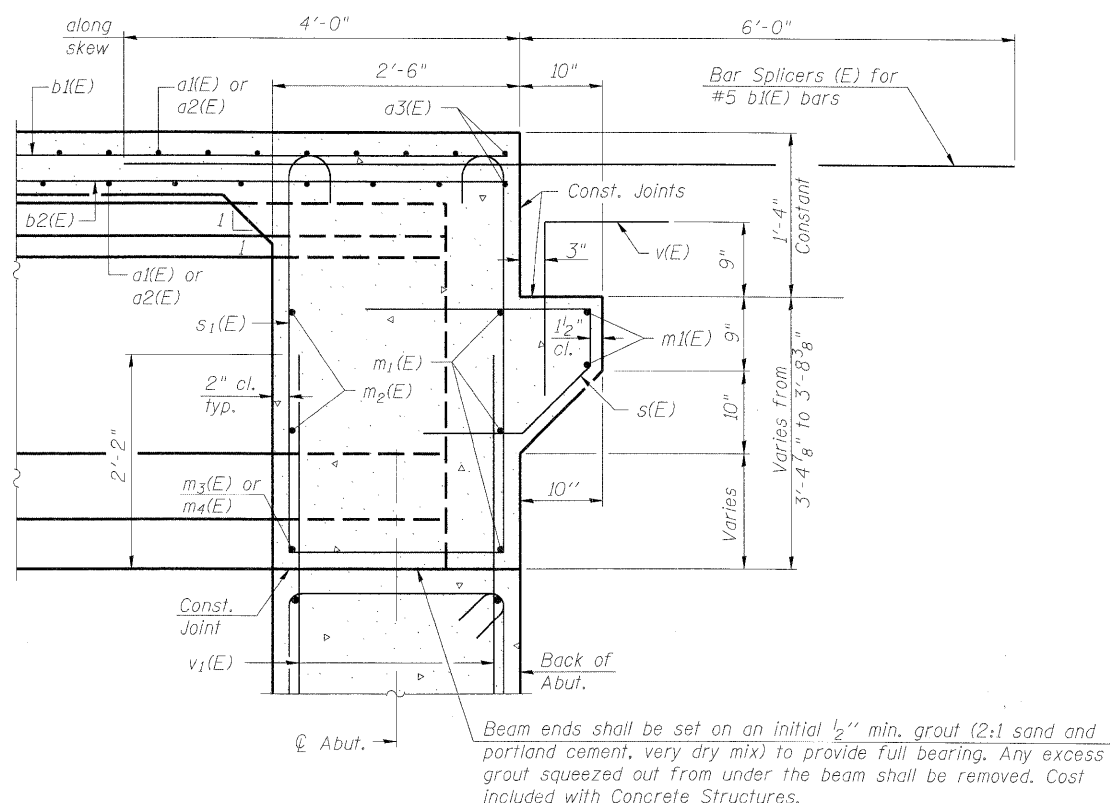
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	358
FED. RD. DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

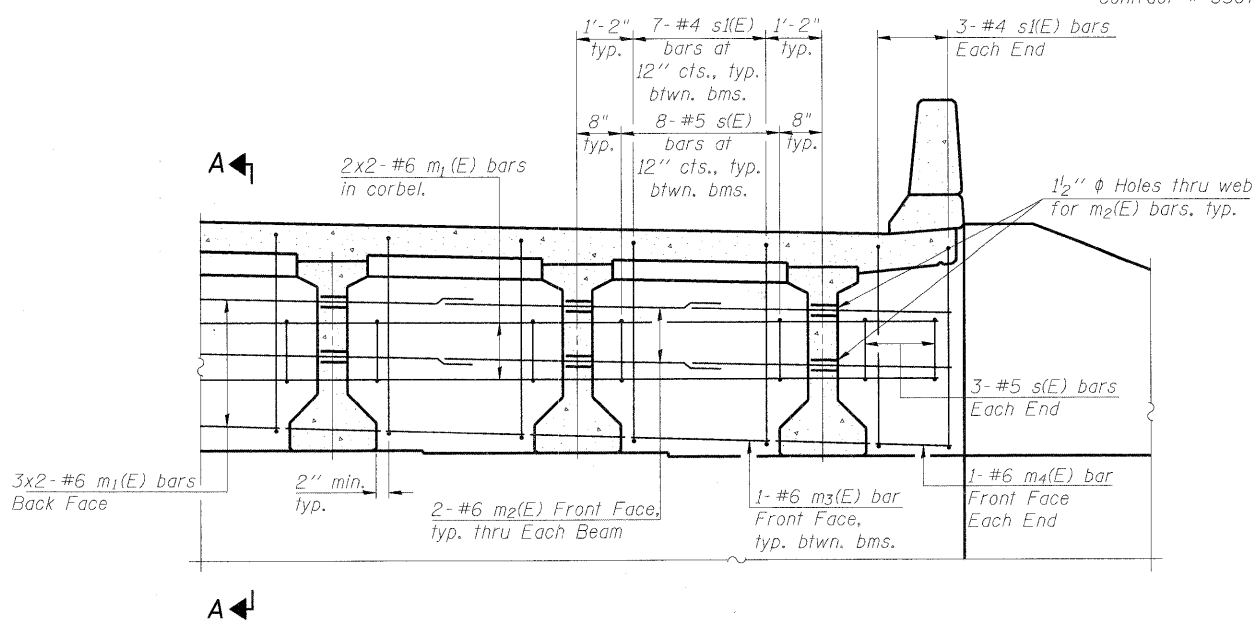
SHEET SS- 9
OF 22 SHEETS

Contract # 63074



SECTION A-A

Dimensions at right angles to abutment, except as shown.



DIAPHRAGM ELEVATION AT ABUTMENT

MIN. BAR LAP

#6 bar = 2'-9"

- Notes:
1. Reinforcement bars in diaphragm are billed with superstructure on sheet SS-10
 2. Concrete in diaphragm is included with Concrete Superstructure on sheet SS-10.
 3. For details of bars s(E) and s1(E) see sheet SS-10
 4. The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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Job # 3944

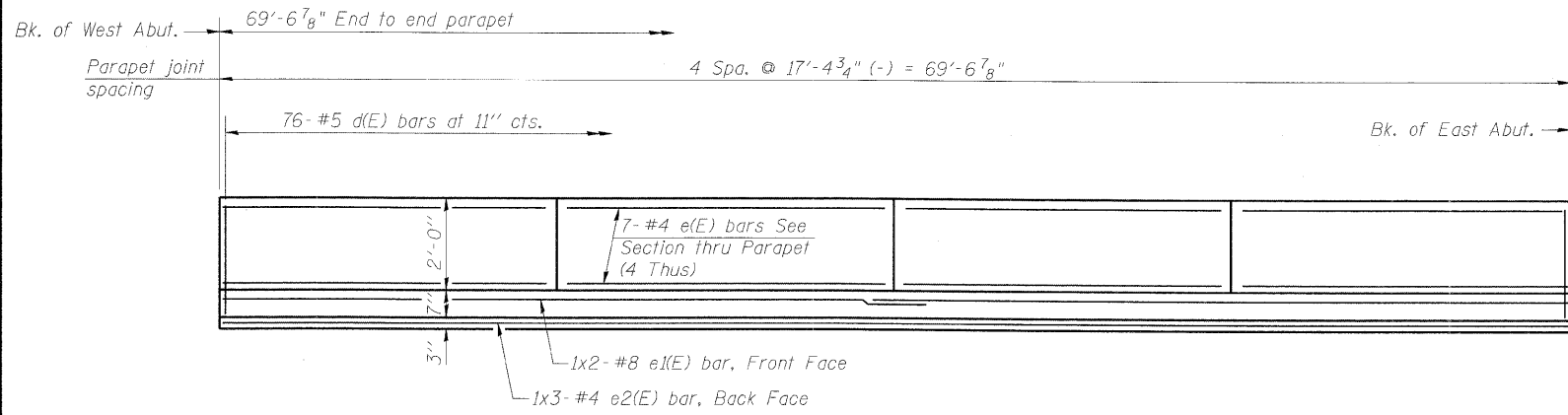
DIAPHRAGM SECTION AND ELEVATION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

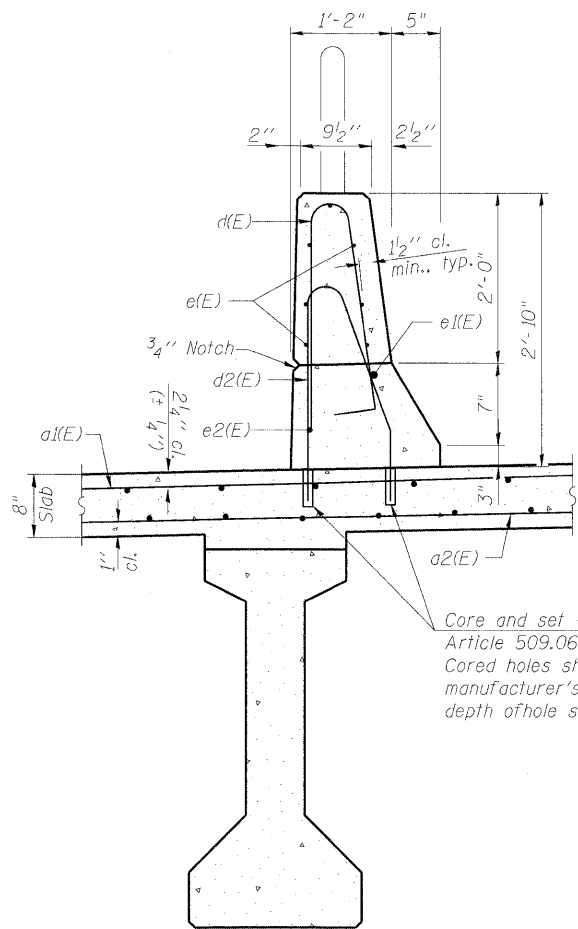
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		KANE	545	359
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET SS- 10
OF 22 SHEETS

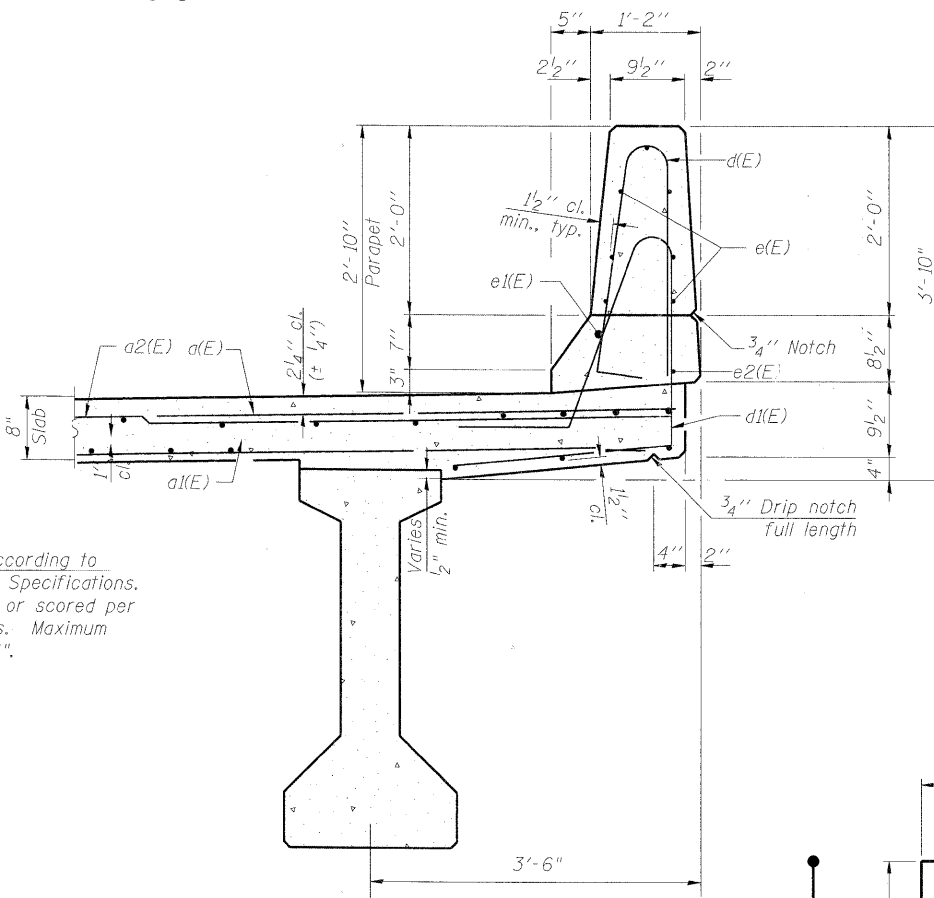


INSIDE ELEVATION OF PARAPET

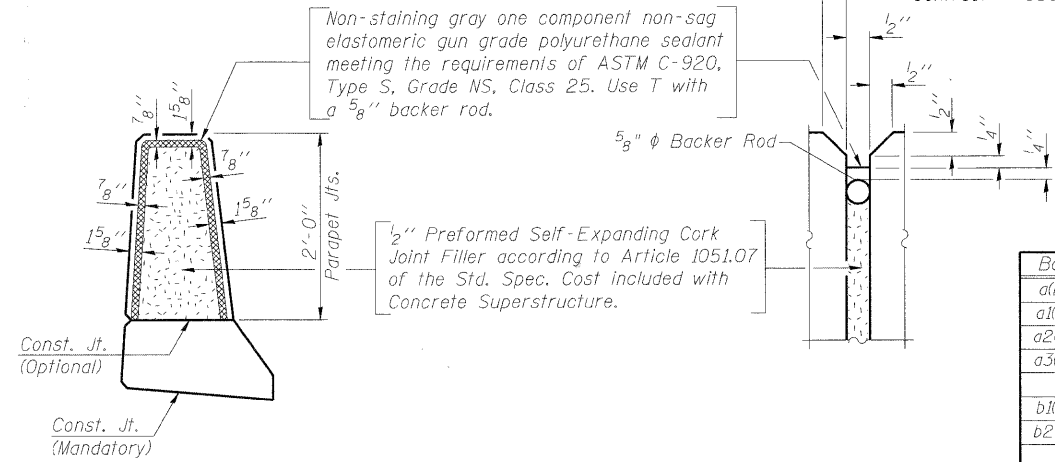
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



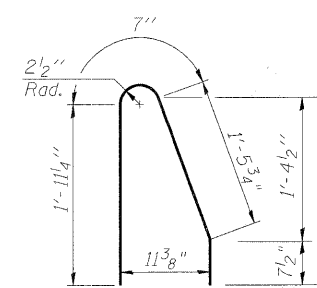
SECTION THRU NORTH PARAPET



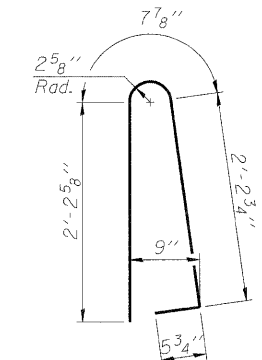
SECTION THRU SOUTH PARAPET



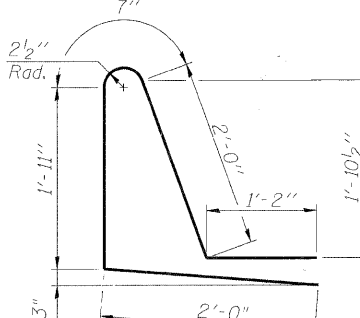
PARAPET JOINT DETAILS



BAR d2(E)

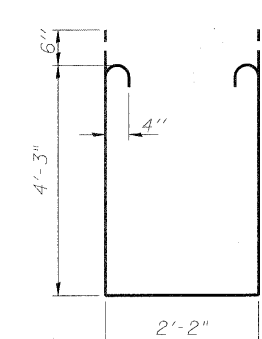


BAR d(E)

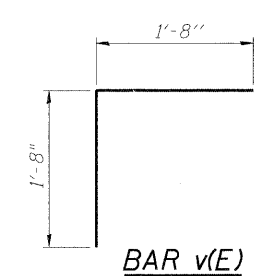


BAR s(E)

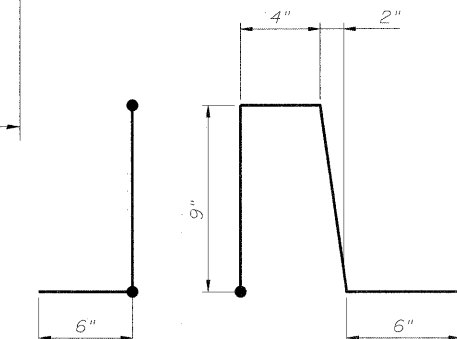
BAR d1(E)



BAR s1(E)



BAR v(E)



BAR d3(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	302	#6	6'-0"	—
a1(E)	243	#5	27'-6"	—
a2(E)	243	#5	32'-0"	—
a3(E)	8	#6	31'-0"	—
b1(E)	122	#5	35'-9"	—
b2(E)	165	#5	24'-6"	—
d(E)	152	#5	5'-7"	—
d1(E)	76	#5	7'-8"	—
d2(E)	76	#5	4'-7 1/2"	—
d3(E)	70	#5	2'-10"	—
e(E)	56	#4	17'-0"	—
e1(E)	4	#8	36'-6"	—
e2(E)	6	#4	24'-0"	—
m1(E)	20	#6	30'-9"	—
m2(E)	28	#6	10'-6"	—
m3(E)	12	#6	6'-9"	—
m4(E)	4	#6	2'-6"	—
s(E)	108	#5	4'-7"	—
s1(E)	96	#4	11'-8"	—
v(E)	112	#5	3'-4"	—
Reinforcement Bars, Epoxy Coated			Lbs.	33,290
Concrete Superstructure			Cu. Yds.	164.8

Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

Note:
1. For conduit attached to structure details, see Traffic Signal Interconnect Plan.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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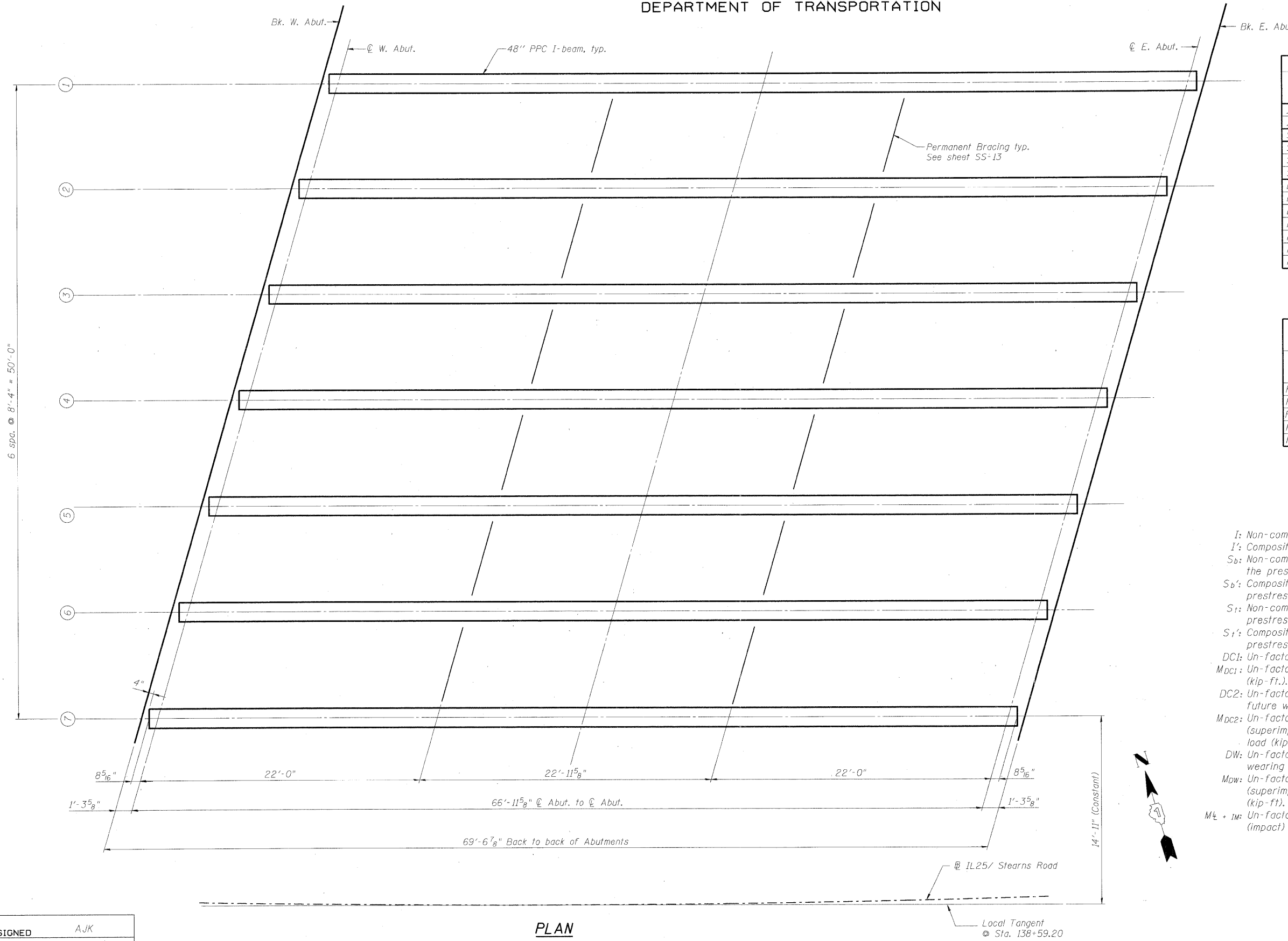
**PARAPET ELEVATION AND DETAILS
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SS- 11 OF 22 SHEETS
-	-	KANE	545	362	
FED. ROAD DIST. NO. 7	ILL. ROUTE	FED. AID PROJECT			

Contract # 63074



0.5 Sp. 2		
I	(in ⁴)	144117
I'	(in ⁴)	429259
S _b	(in ³)	6834
S _b '	(in ³)	11577
S _t	(in ³)	5355
S _t '	(in ³)	22688
DC1	(k/ft)	1.46
M _{DC1}	(k)	821
DC2	(k/ft)	0.13
M _{DC2}	(k)	69
DW	(k/ft)	0.42
M _{DW}	(k)	221
M _{L + Imp}	(k)	1177

Abutments		
R _{DC1}	(k)	49.1
R _{DC2}	(k)	4.4
R _{DW}	(k)	13.2
R _{L + Imp}	(k)	92.1
R _{Total}	(k)	158.8

- I: Non-composite moment of inertia of beam section (in⁴).
- I': Composite moment of inertia of beam section (in⁴).
- S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_b': Composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
- S_t': Composite section modulus for the top fiber of the prestressed beam (in³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M_{L + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

PLAN

benesch

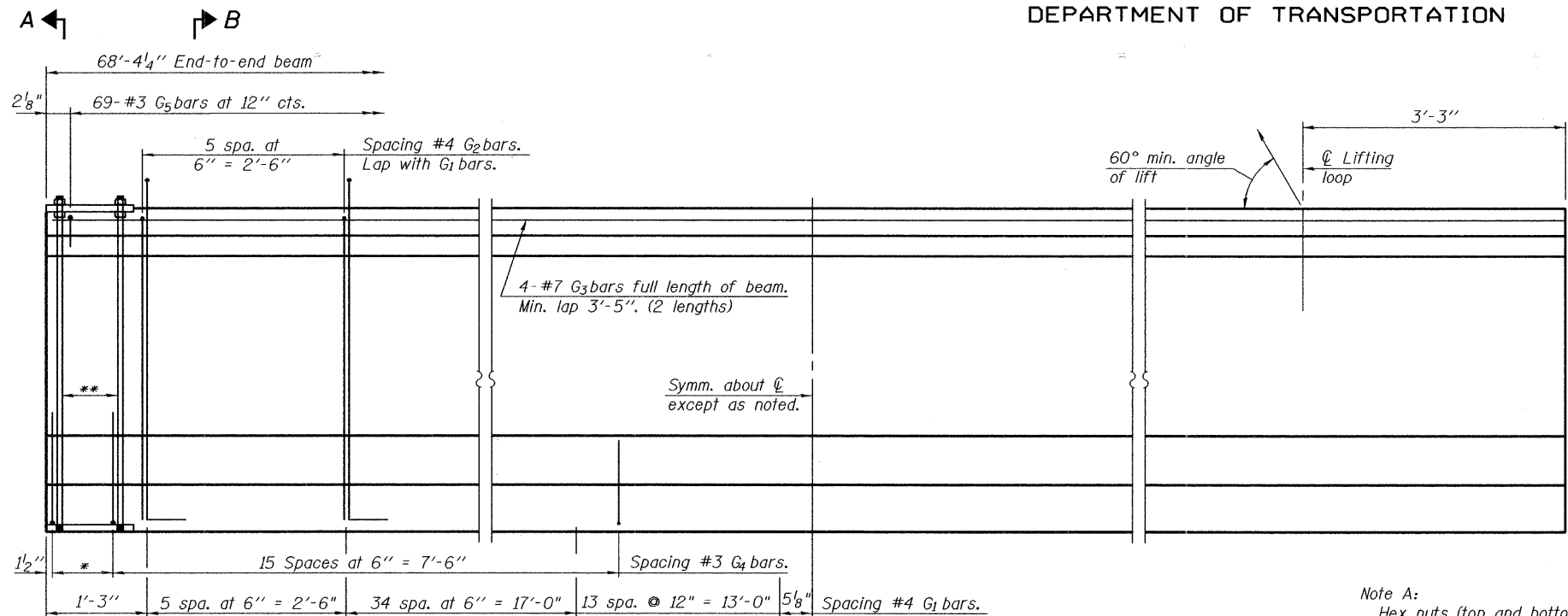
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Chicago, Illinois 60601
312-565-0450
Job # 3944

**FRAMING PLAN AND MOMENT TABLE
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SS- 12 OF 22 SHEETS
-	-	KANE	545	361	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

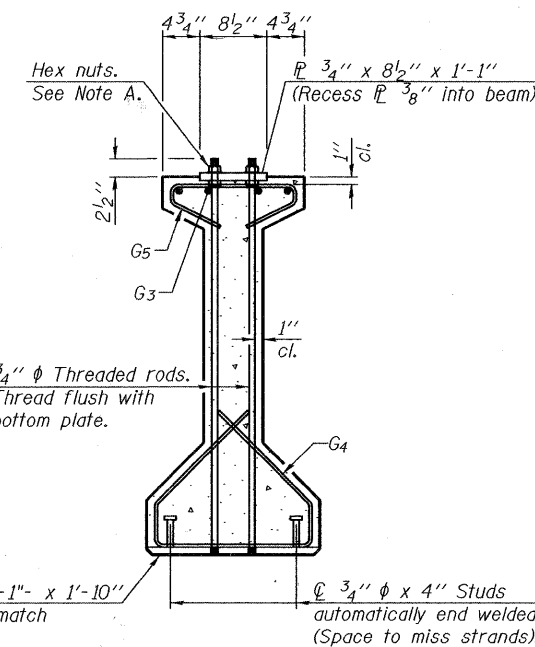
Contract # 63074



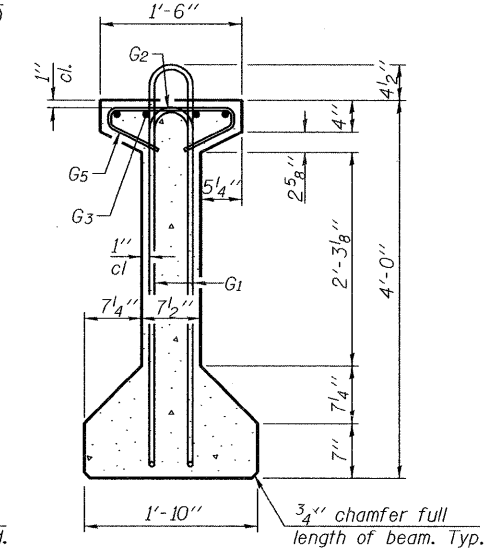
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-3/4" ϕ threaded dowel rods at 3" cts., Each Face.

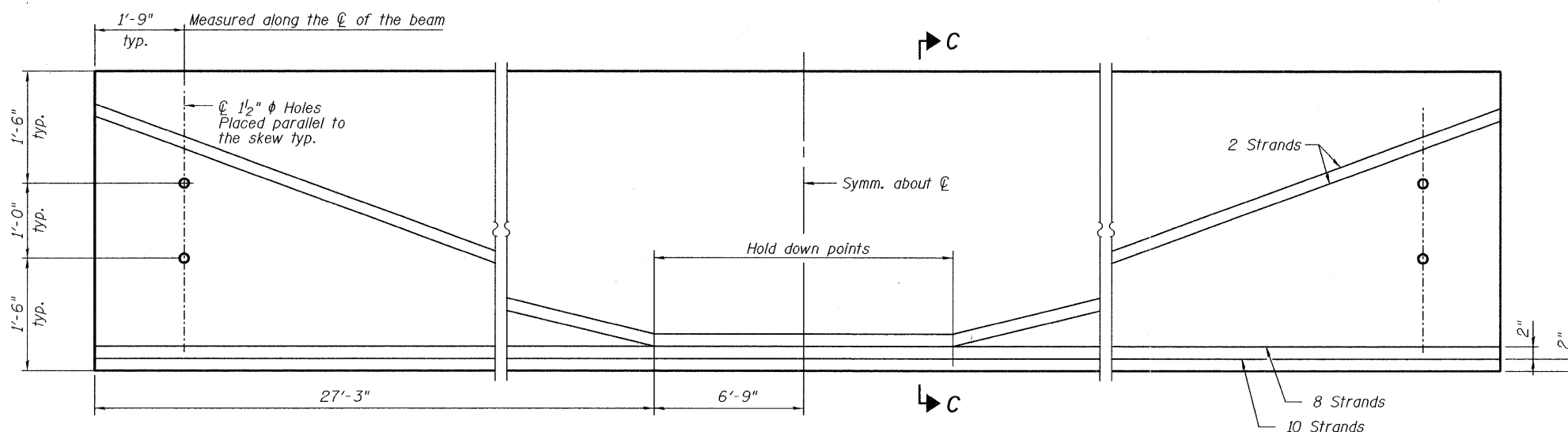
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



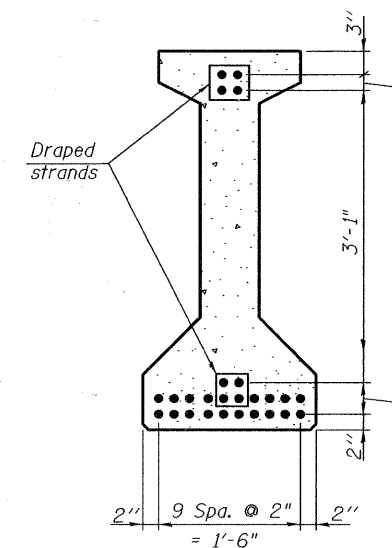
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G ₁	106	#4	9'-6"	⊔
G ₂	12	#4	7'-11"	⊔
G ₃	8	#7	35'-9"	⊔
G ₄	38	#3	5'-3"	⊔
G ₅	69	#3	2'-9"	⊔

***For information only

- Notes:
- See sheet SS-13 for additional details and Bill of Material.
 - Required release strength, f'_{ci} , shall be 5,000 psi.

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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312-565-0450
Job # 3944

**48" PPC I-BEAM ELEVATION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

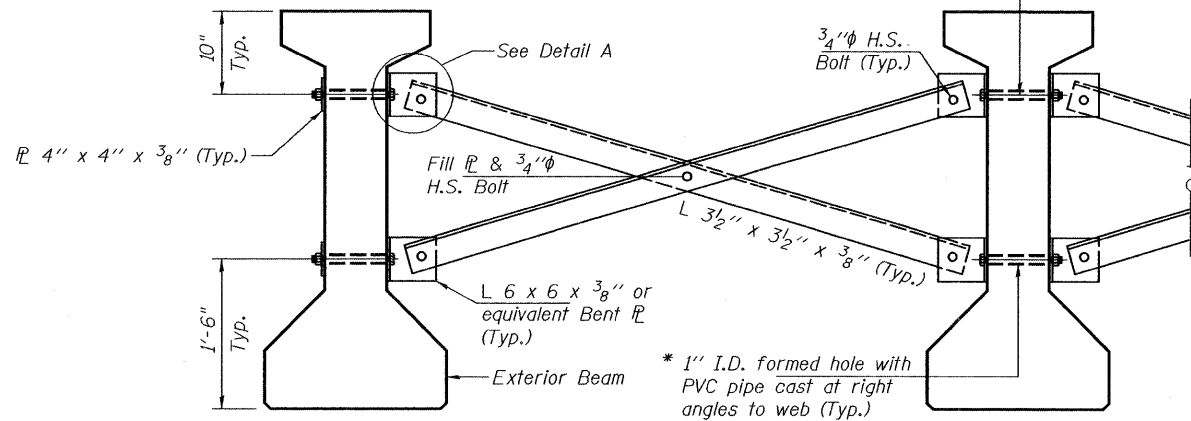
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	362
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

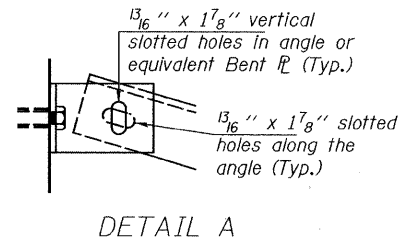
Contract # 63074

* Fabricator shall locate to miss strands within permissible tolerances.

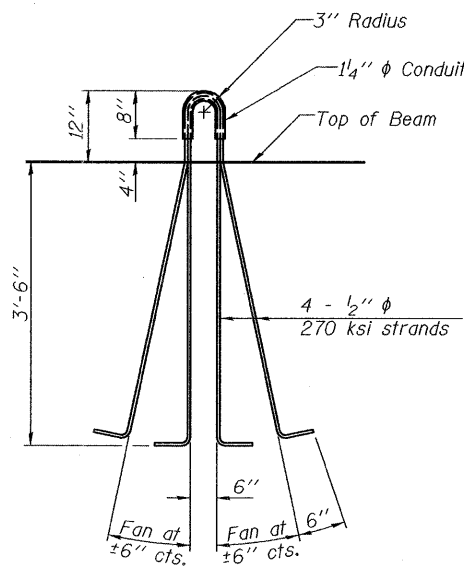
$\frac{3}{4}$ " ϕ A307 Bolts with lock nuts. (Typ.)
Bolts through the concrete web shall be tightened to snug tight only.



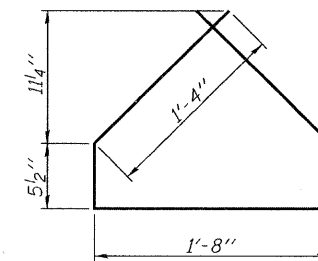
NOTES:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be $\frac{1}{16}$ " ϕ unless otherwise noted.
 $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
Cost of permanent bracing shall be included in the cost for Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"



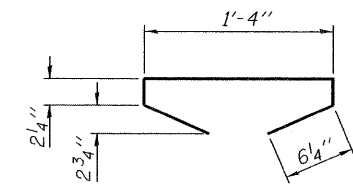
**PERMANENT BRACING DETAILS FOR
48" PPC I-BEAMS**



LIFTING LOOP DETAIL



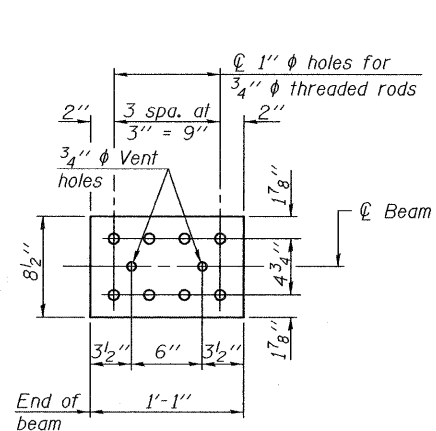
BAR G4



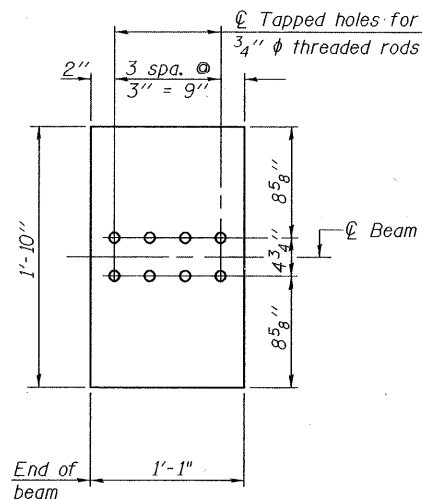
BAR G5

BILL OF MATERIAL

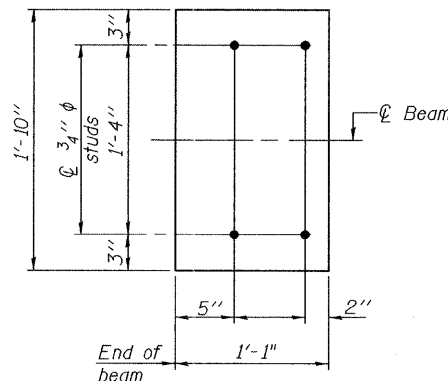
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Ft.	479



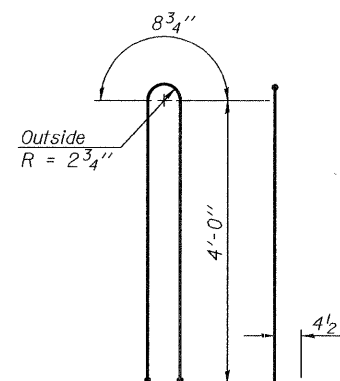
TOP PLATE



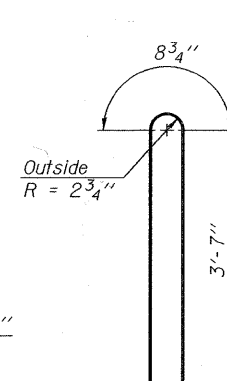
**BOTTOM PLATE
(Showing threaded rods)**



**BOTTOM PLATE
(Showing studs)**



BAR G1



BAR G2

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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312-565-0450
Job # 3944

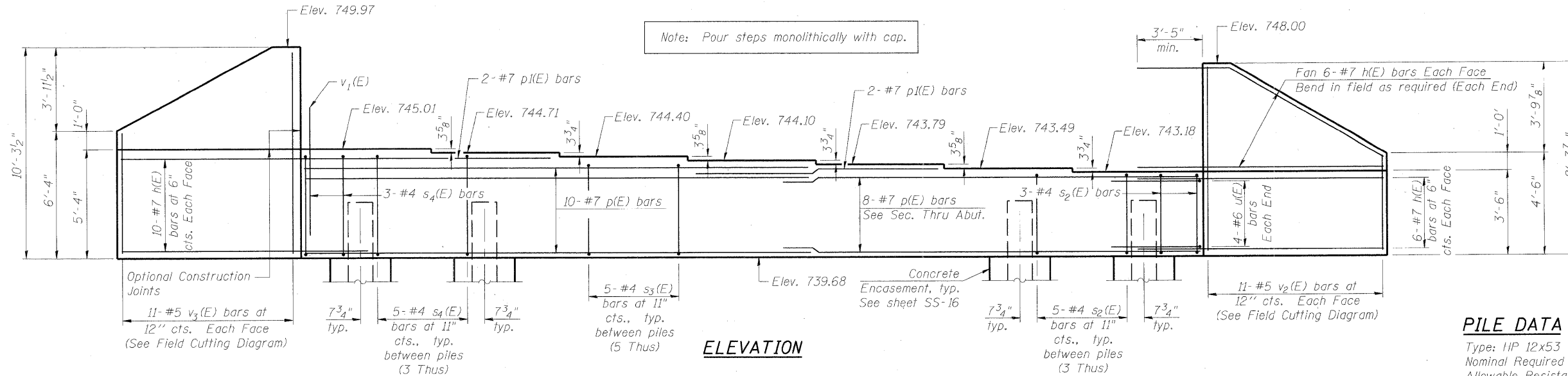
**48" PPC I-BEAM DETAILS
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR**

**KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

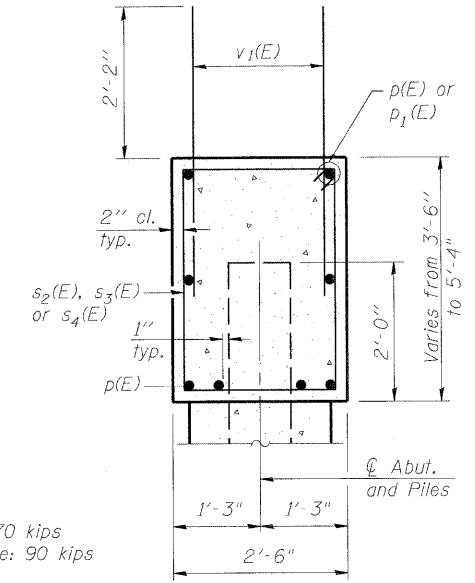
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET SS- 14 OF 22 SHEETS
		KANE	545	363	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 63074



ELEVATION



SECT. THRU ABUT.

PILE DATA

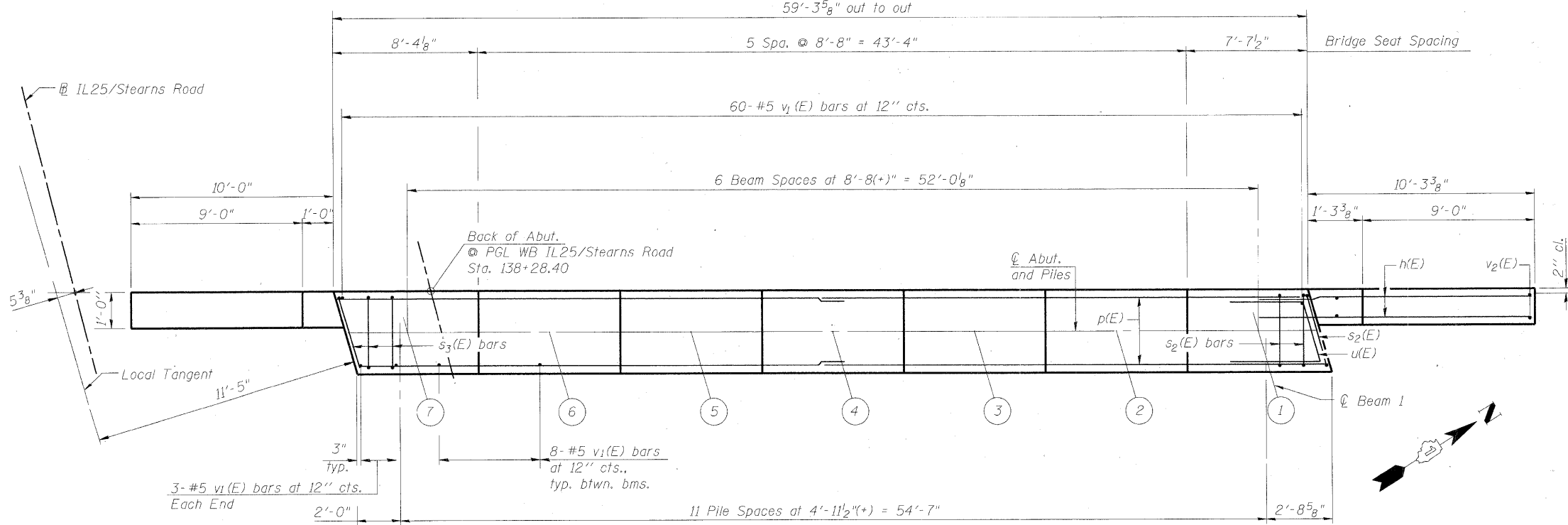
Type: HP 12x53
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Est. Length: 72.0 Feet
No. Production Piles: 11
No. Test Piles: 1

Piles shall be driven through 1'-6" diameter precored holes extending to elevation 737.0 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

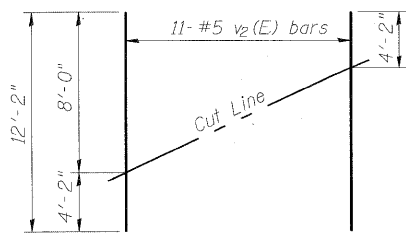
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	56	#7	14'-3"	—
p(E)	18	#7	31'-11"	—
p(E)	4	#7	17'-0"	—
s ₂ (E)	18	#5	11'-7"	□
s ₃ (E)	25	#5	12'-9"	□
s ₄ (E)	18	#5	14'-7"	□
u(E)	8	#6	6'-7"	L
v ₁ (E)	114	#5	4'-1"	—
v ₂ (E)	11	#5	12'-2"	—
v ₃ (E)	11	#5	15'-10"	—
Concrete Structures		Cu. Yd.	30.0	
Reinforcement Bars, Epoxy Coated		Pound	4,690	
Furnishing Steel Piles, HP12x53		Foot	792	
Driving Piles		Foot	792	
Test Pile Steel, HP12x53		Each	1	
Pile Shoes		Each	12	
Concrete Encasement		Cu. Yd.	4.2	

For details of piles and Concrete Encasement, see sheet SS-16.

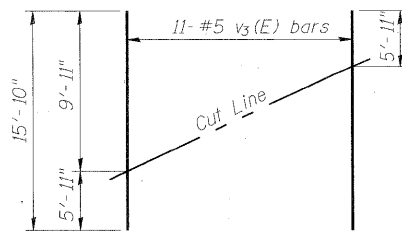


PLAN



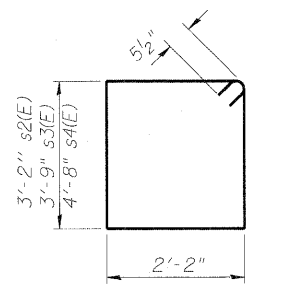
FIELD CUTTING DIAGRAM

Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.

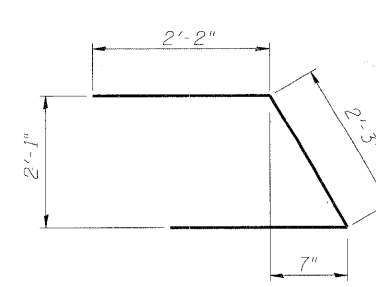


FIELD CUTTING DIAGRAM

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



BARS s₂(E) & s₃(E)



BAR u(E)

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

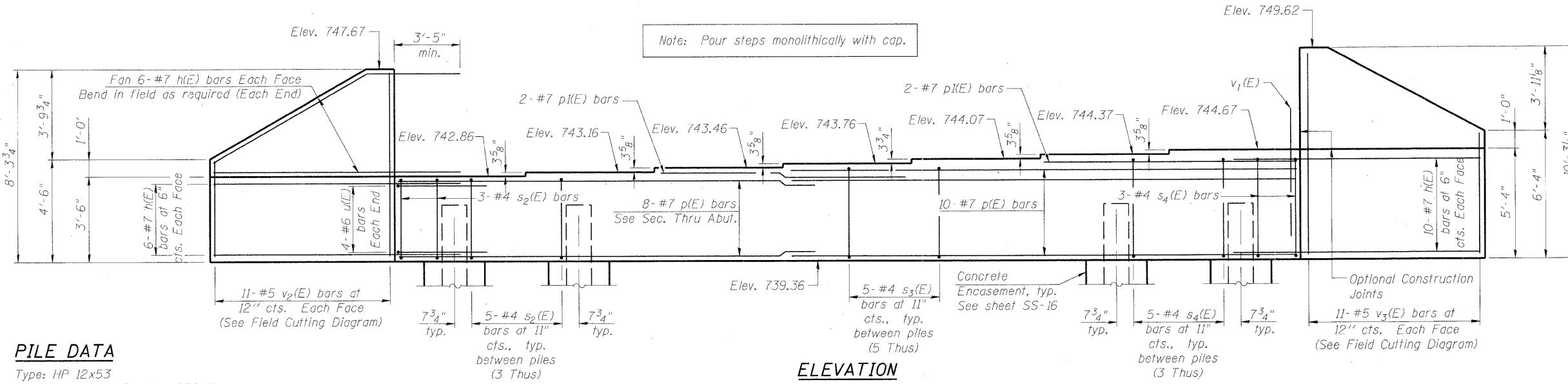
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312-565-0450
Job # 3944

WEST ABUTMENT-PLAN AND ELEVATION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	645	364
SHEET SS- 15 OF 22 SHEETS				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 63074

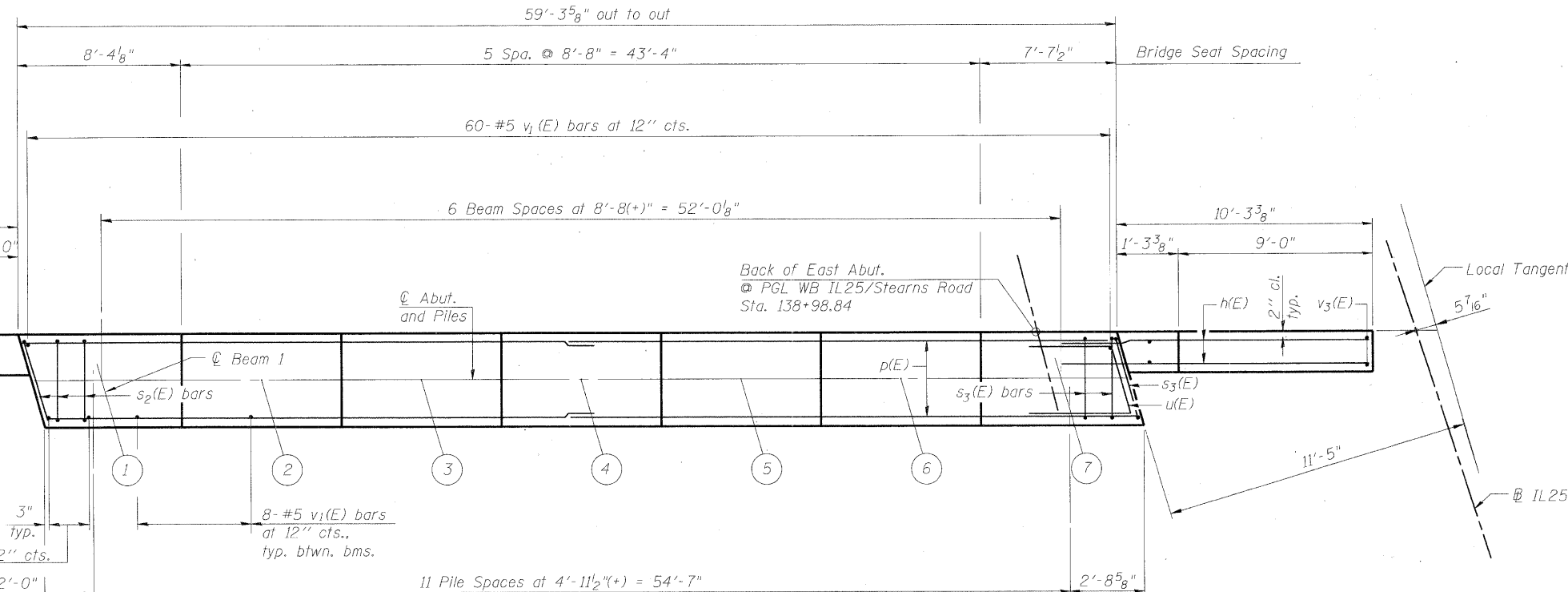


PILE DATA

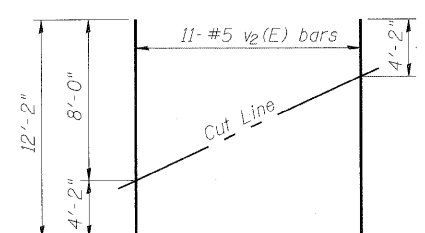
Type: HP 12x53
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Est. Length: 72.0 Feet
No. Production Piles: 11
No. Test Piles: 1

Piles shall be driven through 1'-6" diameter precored holes extending to elevation 733.0 according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

ELEVATION

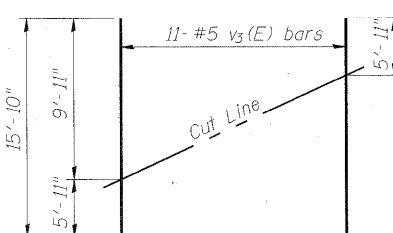


PLAN



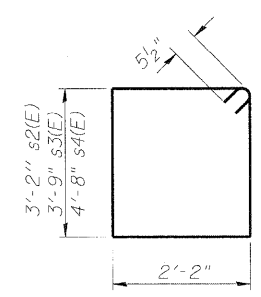
FIELD CUTTING DIAGRAM

Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.

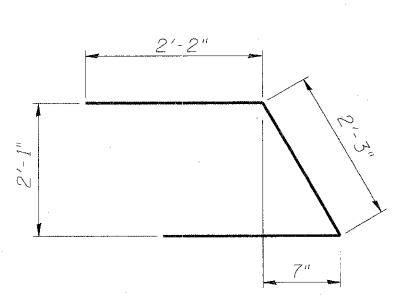


FIELD CUTTING DIAGRAM

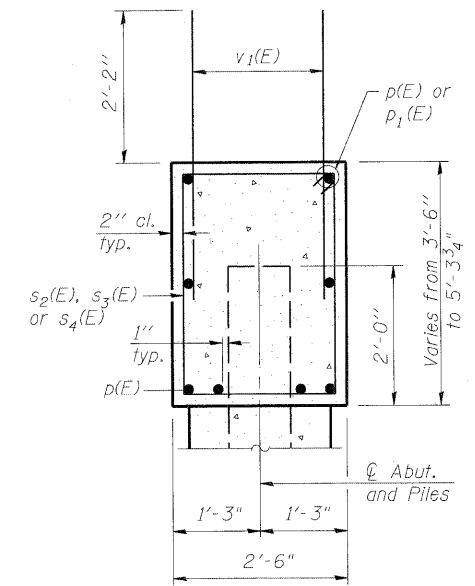
Order v₃(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s₂(E) & s₃(E)



BAR u(E)



SECT. THRU ABUT.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	56	#7	14'-3"	—
p(E)	18	#7	31'-11"	—
p1(E)	4	#7	17'-0"	—
s2(E)	18	#5	11'-7"	□
s3(E)	25	#5	12'-9"	□
s4(E)	18	#5	14'-7"	□
u(E)	8	#6	6'-7"	▤
v1(E)	114	#5	4'-4"	—
v2(E)	11	#5	12'-2"	—
v3(E)	11	#5	15'-10"	—
Concrete Structures	Cu. Yd.	29.9		
Reinforcement Bars, Epoxy Coated	Pound	4,690		
Furnishing Steel Piles, HP12x53	Foot	792		
Driving Piles	Foot	792		
Test Pile Steel, HP12x53	Each	1		
Pile Shoes	Each	12		
Concrete Encasement	Cu. Yd.	4.2		

For details of piles and Concrete Encasement, see sheet SS-16.

DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC

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Job # 3944

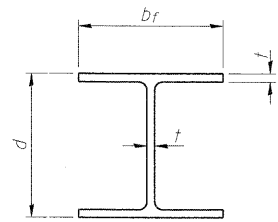
**EAST ABUTMENT-PLAN AND ELEVATION
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	365
ILLINOIS FED. AID PROJECT-				

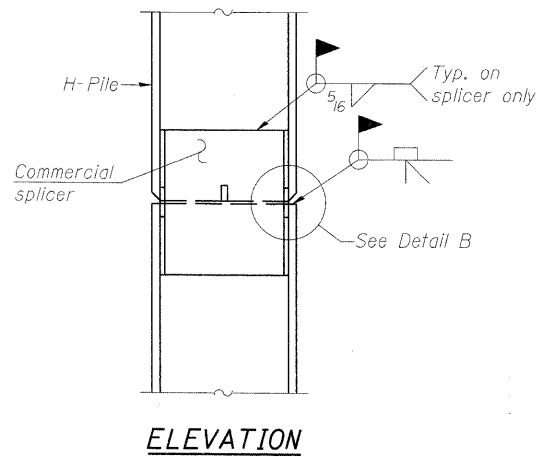
SHEET SS- 16
OF 22 SHEETS

Contract # 63074

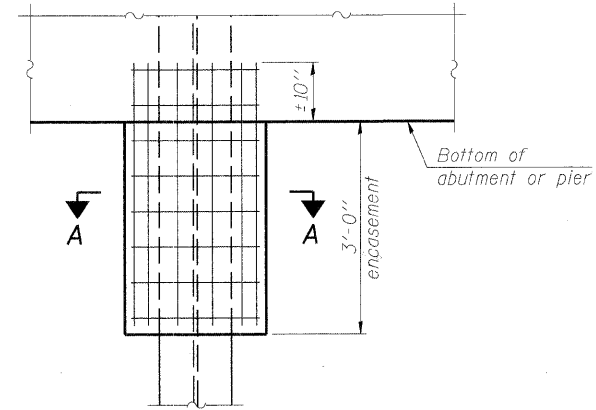


STEEL PILE TABLE

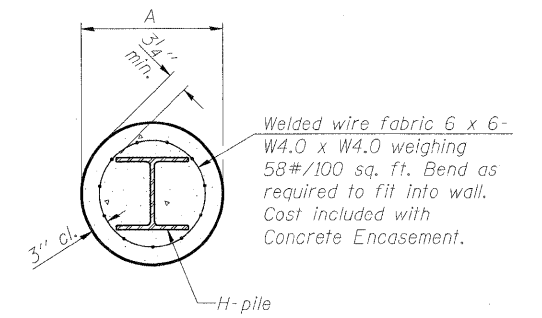
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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



ELEVATION



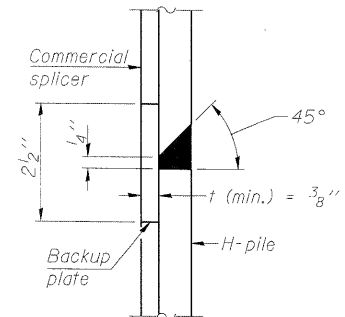
ELEVATION



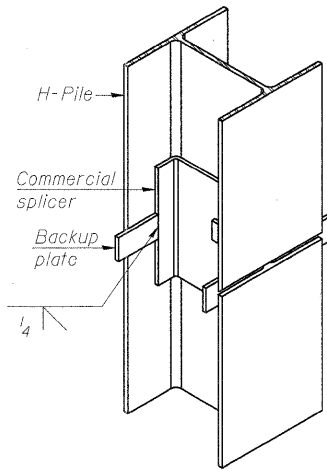
SECTION A-A

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

PILE ENCASEMENT

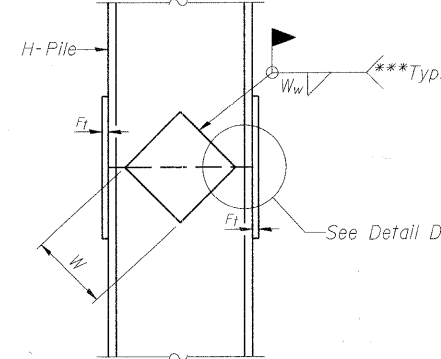


DETAIL "B"

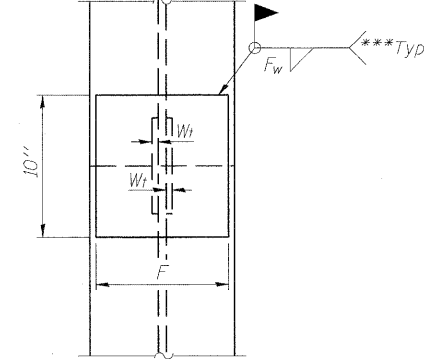


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

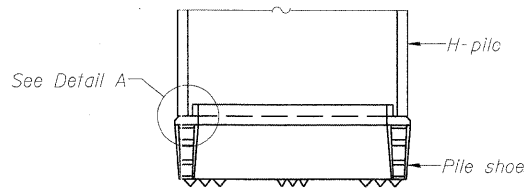


ELEVATION

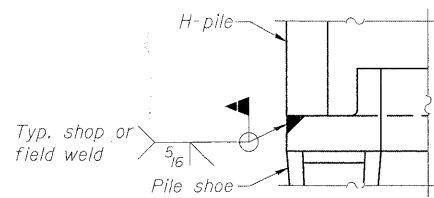


END VIEW

WELDED PLATE FIELD SPLICE

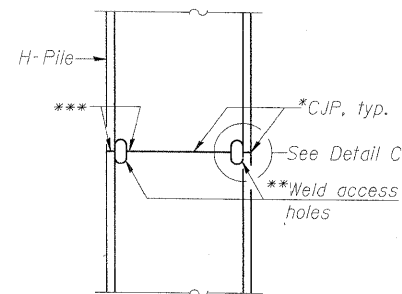


ELEVATION

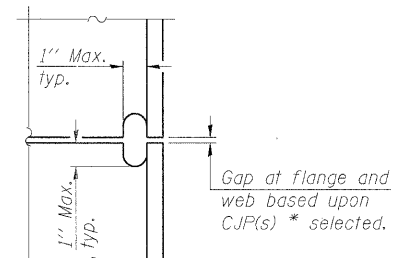


DETAIL A

H-PILE SHOE ATTACHMENT

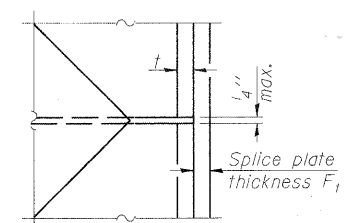


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

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

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

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

PILE DETAILS

IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR

KANE COUNTY

STATION 138+59.20

STRUCTURE NO. 045-2035

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC
F-HP	10-1-08

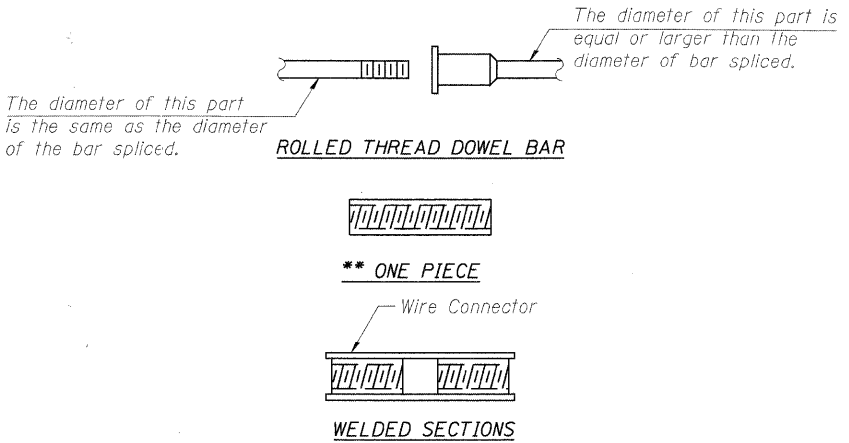
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Chicago, Illinois 60601
312-565-0450
Job # 3944

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	366
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

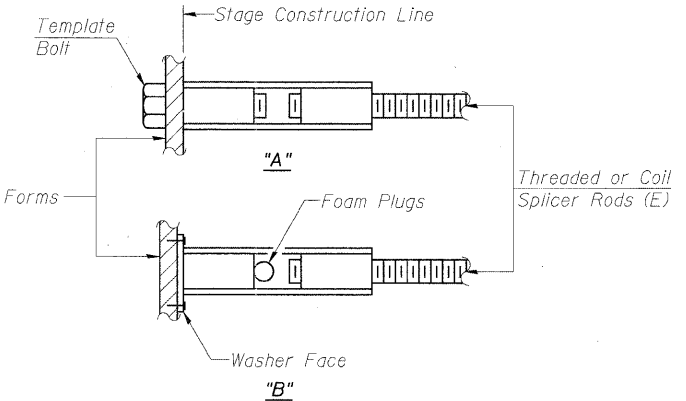
Contract # 63074

SHEET SS- 17
OF 22 SHEETS



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

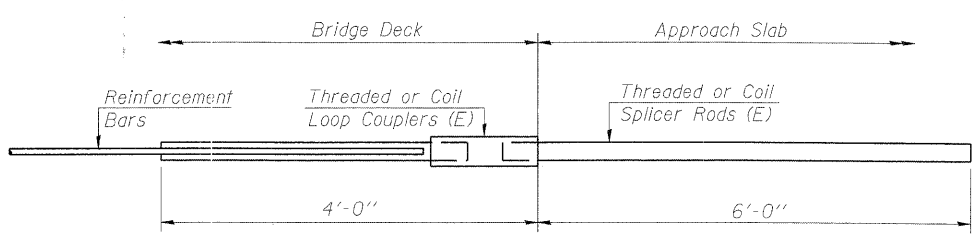
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

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

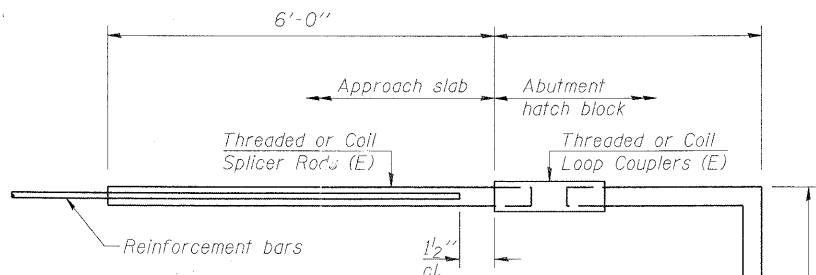
- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



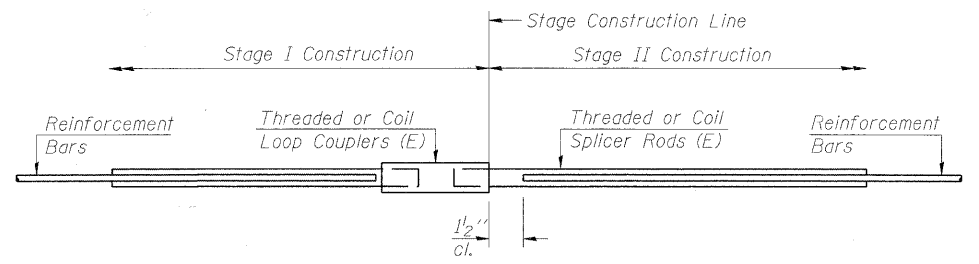
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	112



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

BSD-1 10-1-08

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Job # 3944

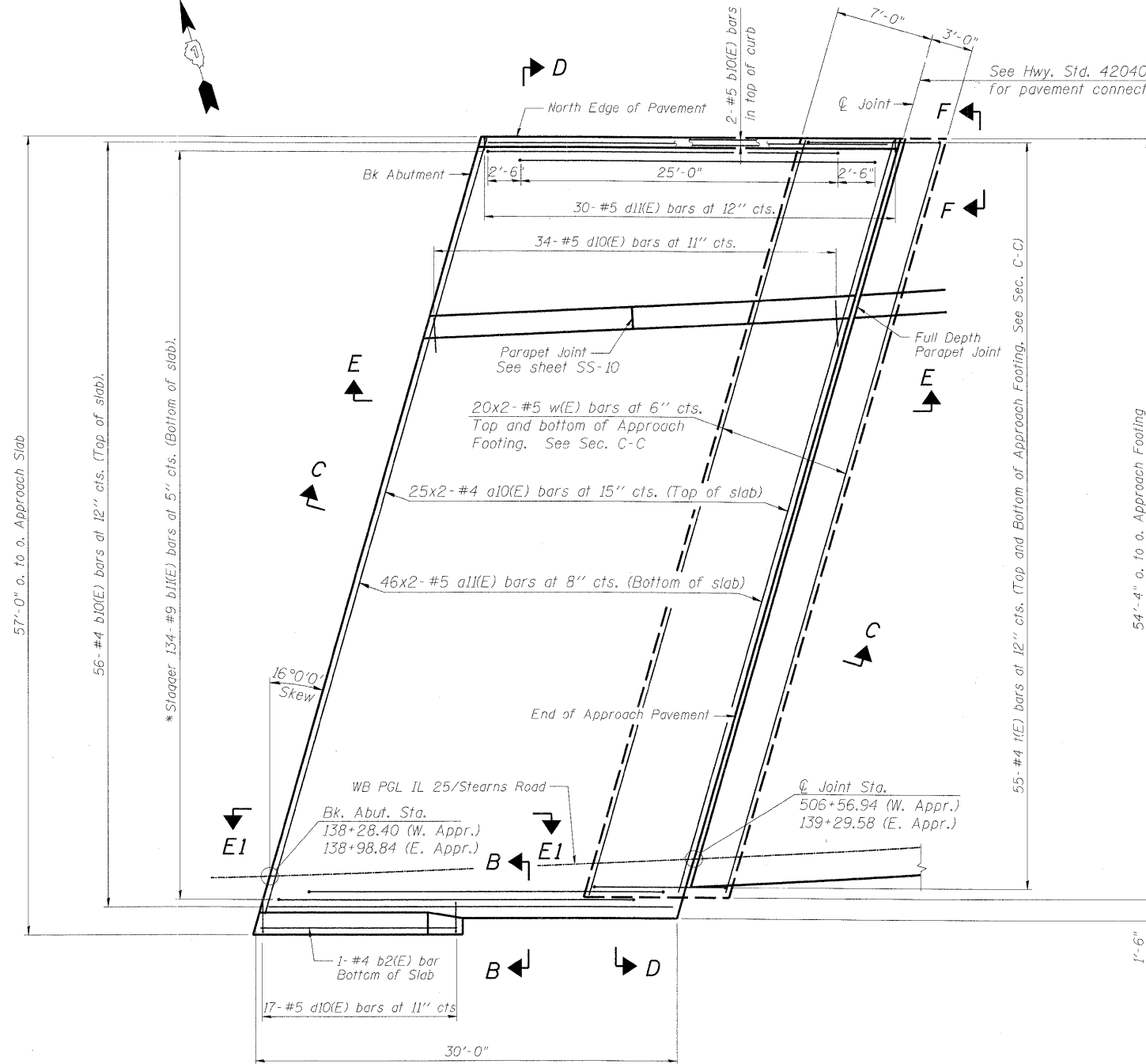
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	367
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract # 63074

SHEET SS- 18
OF 22 SHEETS

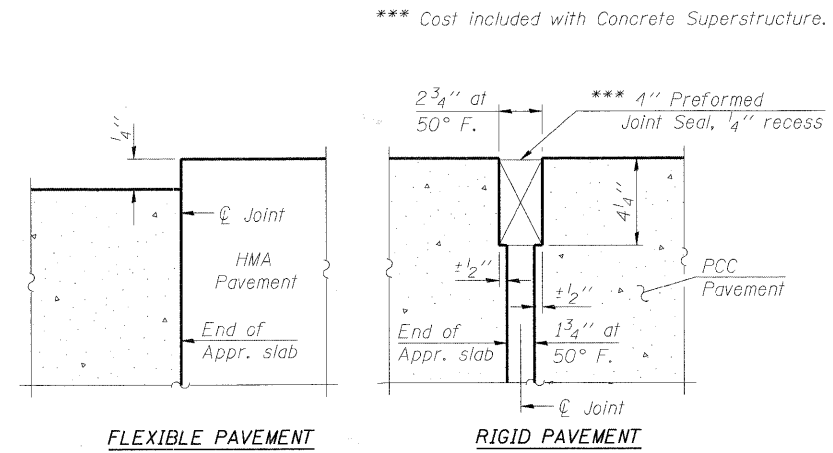


PLAN

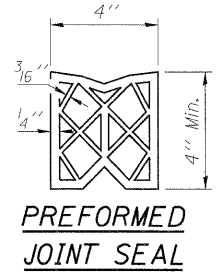
(East Approach Slab shown, West Approach Slab opposite hand except as noted)

* Tilt #9 b10(E) bars as required to maintain clearance.

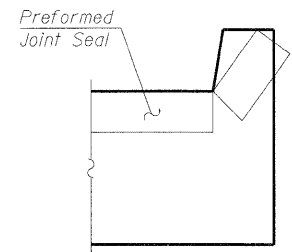
DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC



DETAIL A

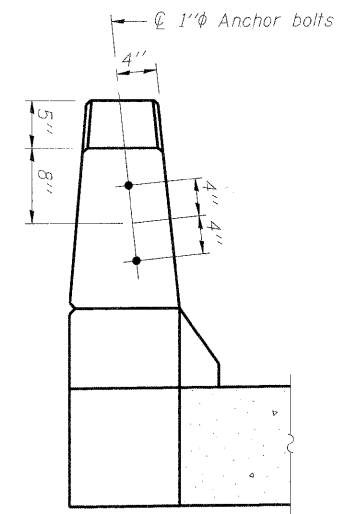


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

- Notes:
- See sheet SS-19 for Sections C-C & D-D and View E-E.
 - a10(E), a11(E) and w(E) bar spacings measured perpendicular to local tangent.
 - Form Approach Footing around proposed drainage structure at East Approach Slab.

BRIDGE APPROACH SLAB DETAILS (1 OF 2)
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

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312-565-0450
Job # 3944

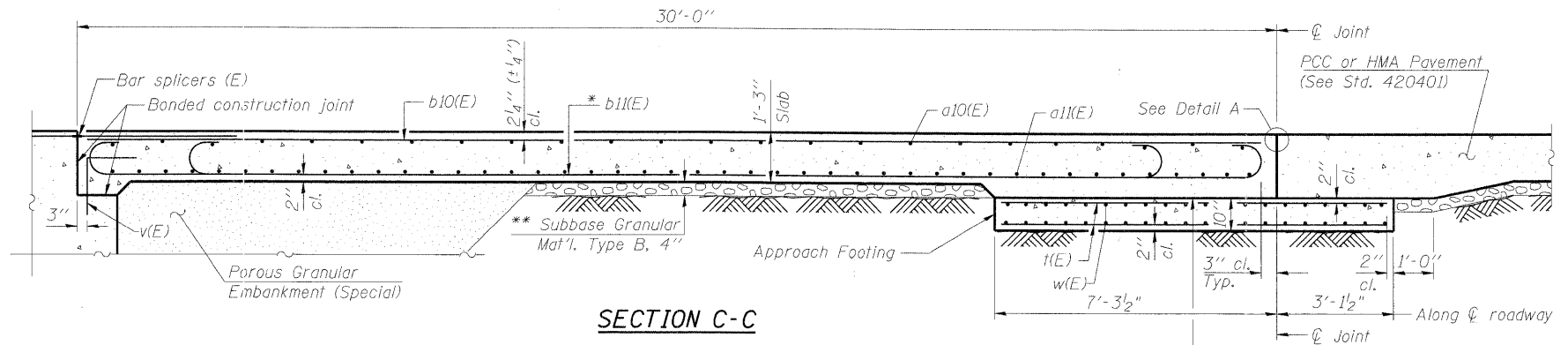
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	368
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

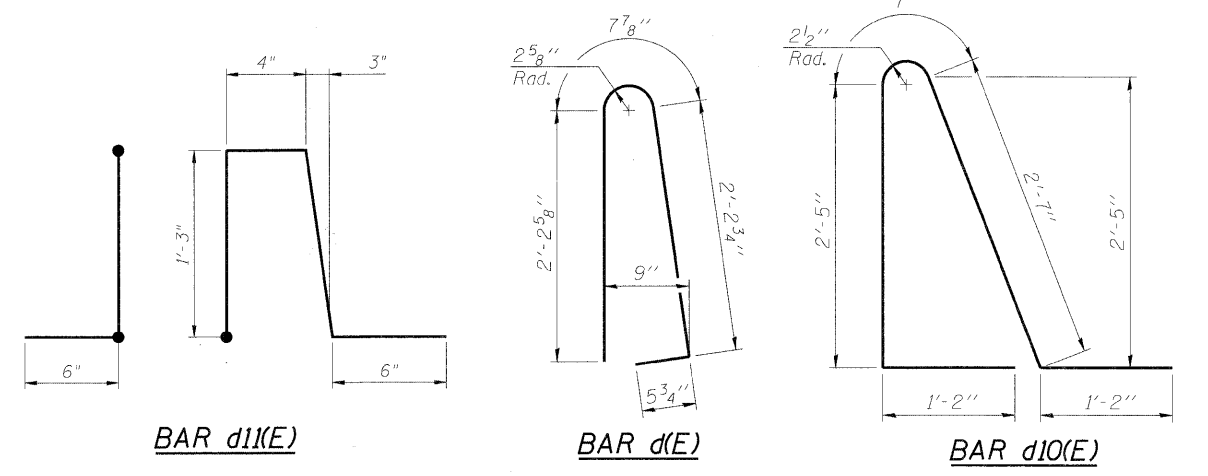
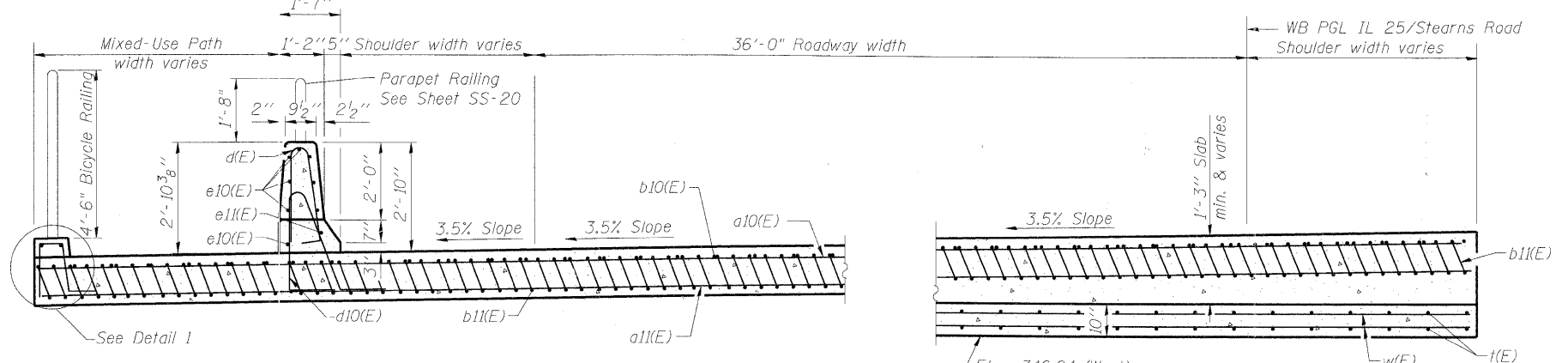
SHEET SS- 19
OF 22 SHEETS

Contract # 63074



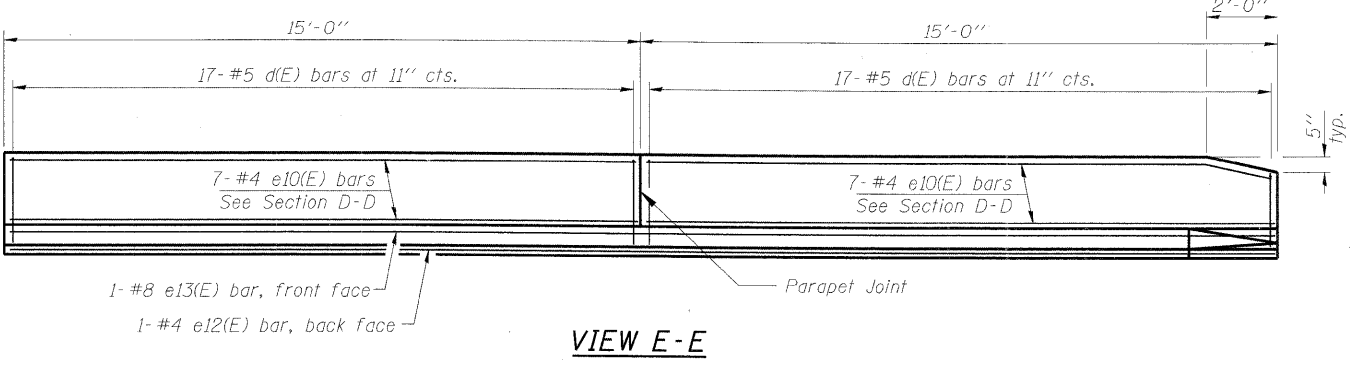
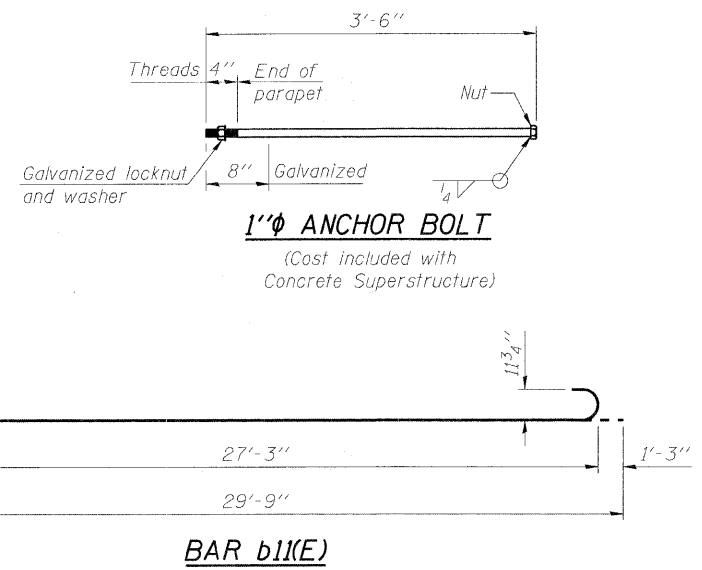
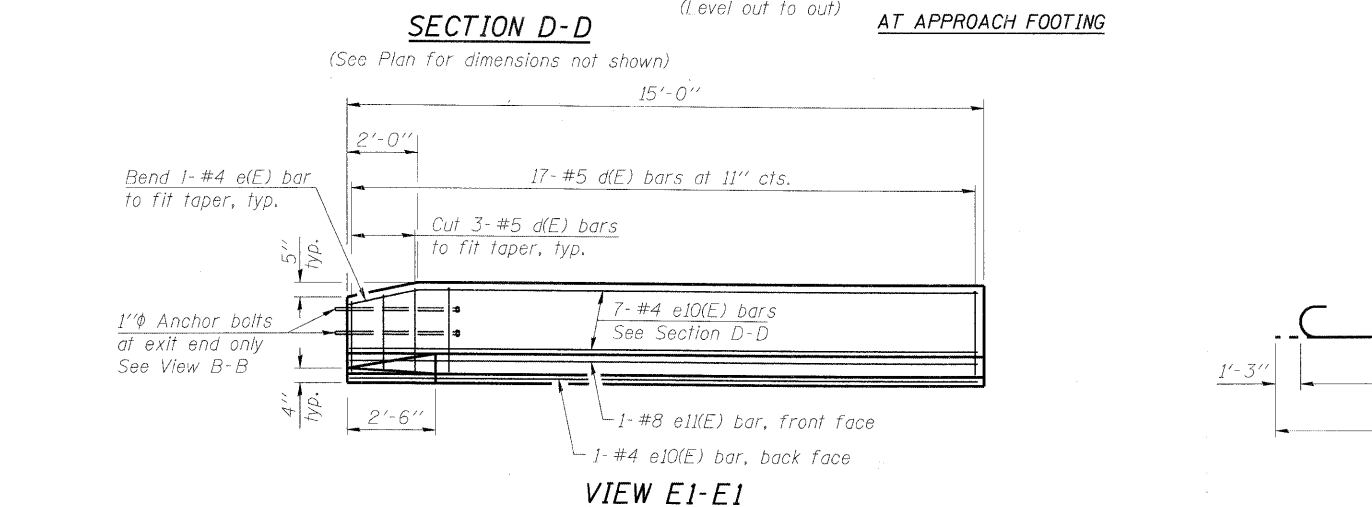
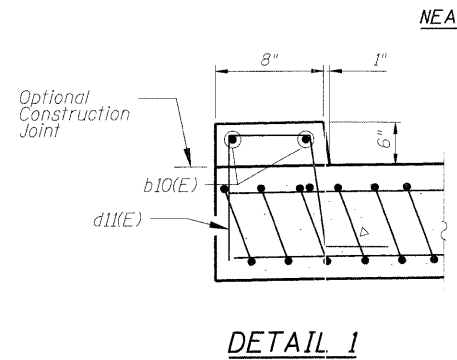
- Notes:
1. See sheet SS-18 for Detail A and View B-B.
 2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 3. Approach footing concrete shall be paid for as Concrete Structures.
 4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 5. For v(E) bar details, see sheet SS-14 and SS-15.
 6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 7. For bar splicer details, see sheet SS-17.
 8. For Porous Granular Embankment (Special) and drainage treatment details, see sheet SS-2.
 9. For Parapet Joint details, see sheet SS-10.

* Tilt #9 b11(E) bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.



TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	100	#4	30'-0"	—
a11(E)	184	#5	30'-3"	—
b10(E)	116	#4	29'-8"	—
b11(E)	268	#9	29'-9"	—
d(E)	102	#5	5'-7"	∧
d10(E)	102	#5	7'-11"	—
d11(E)	60	#5	3'-10"	JL
e10(E)	44	#4	14'-8"	—
e11(E)	2	#8	14'-8"	—
e12(E)	2	#4	29'-8"	—
e13(E)	2	#8	29'-8"	—
1(E)	220	#4	9'-9"	—
w(E)	160	#5	29'-9"	—
Concrete Superstructure		Cu. Yd.	200.3	
Concrete Structures		Cu. Yd.	35.0	
Reinforcement Bars, Epoxy Coated		Pound	46,000	



DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC

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Chicago, Illinois 60601
312-565-0450
Job # 3944

BRIDGE APPROACH SLAB DETAILS (2 OF 2)
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

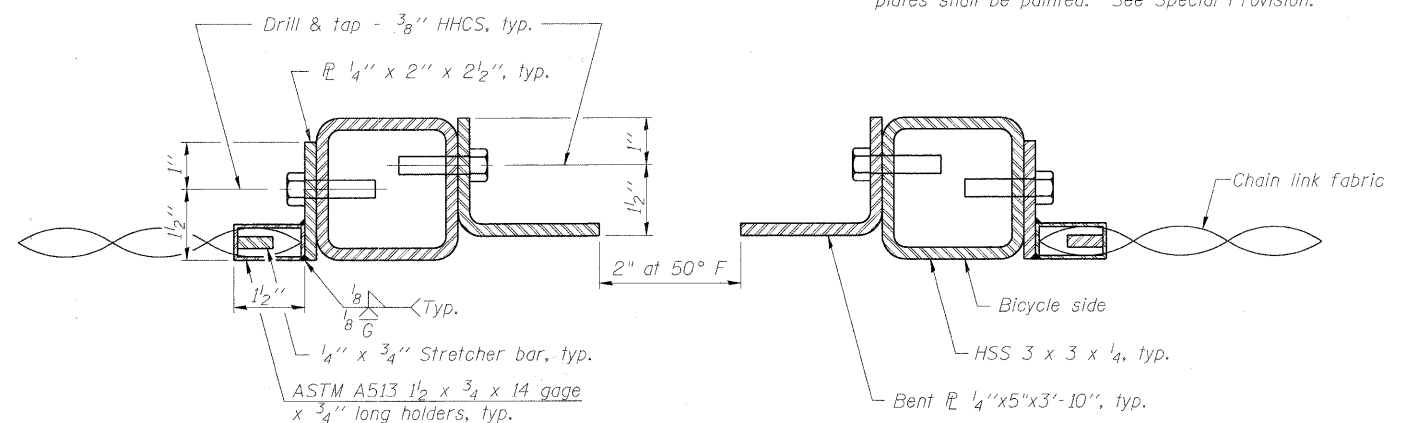
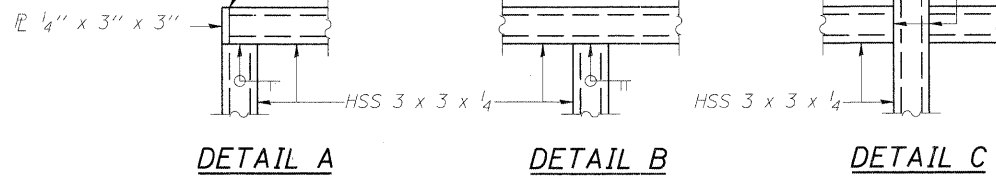
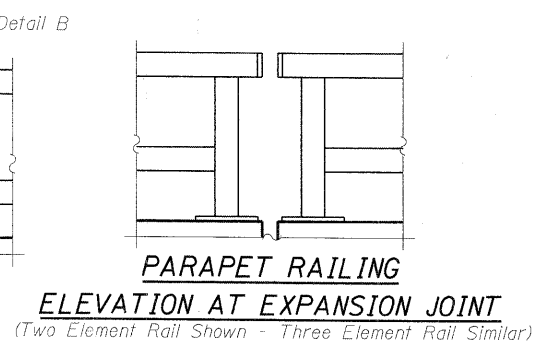
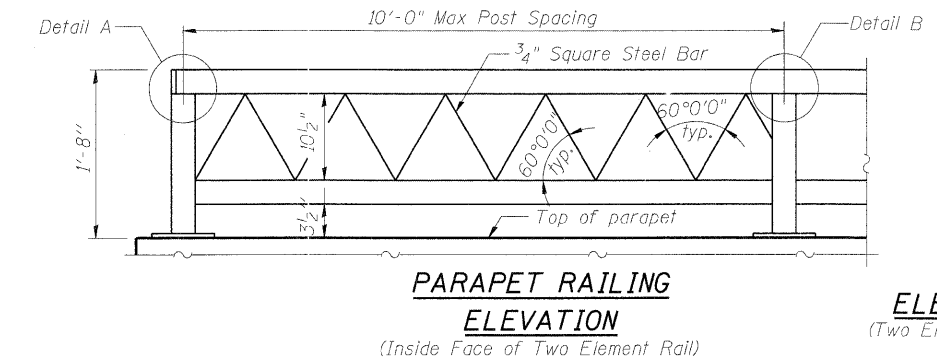
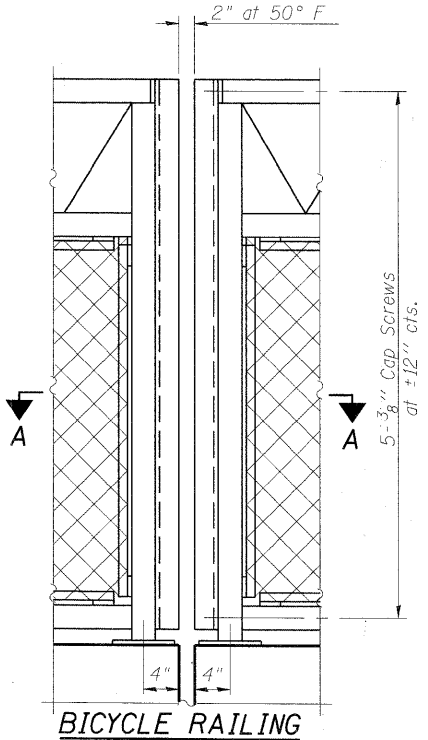
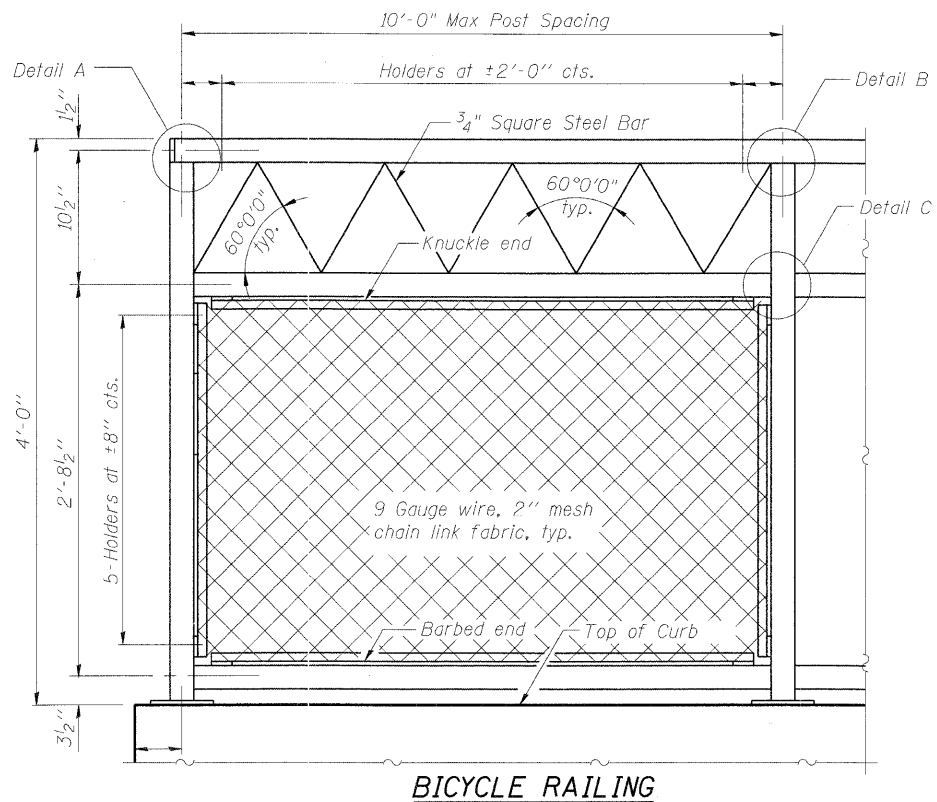
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

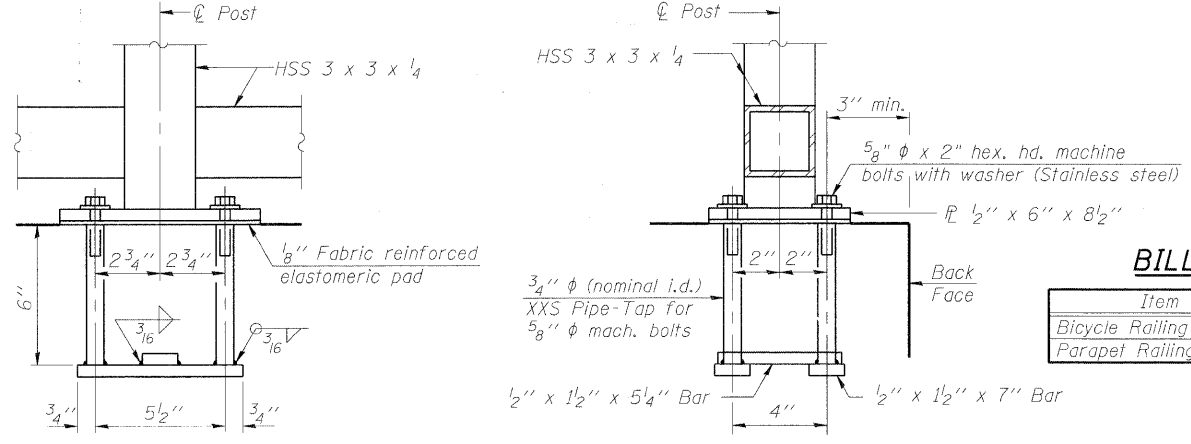
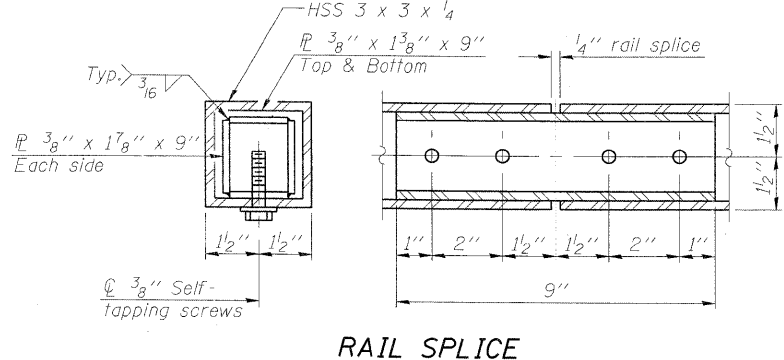
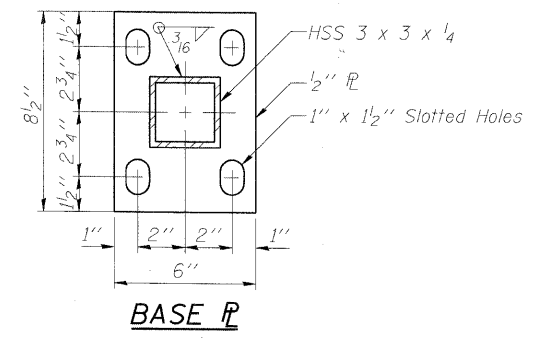
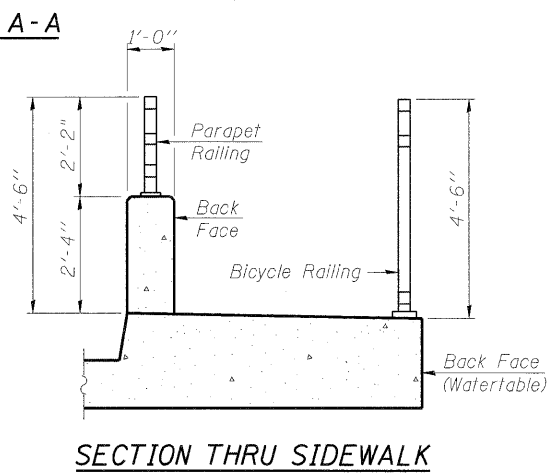
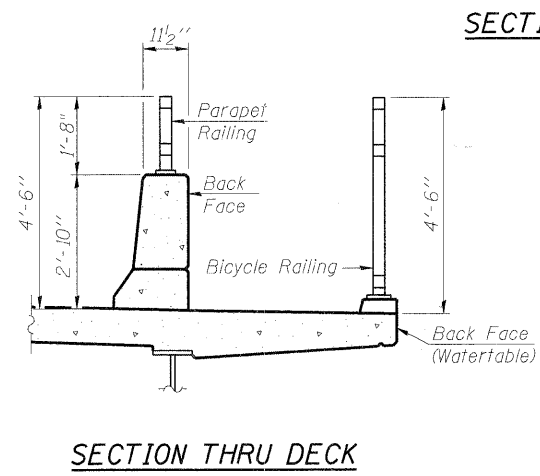
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	369
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

SHEET SS- 20
OF 22 SHEETS

Contract # 63074



All post, railing, splices, anchor devices, and bent plates shall be painted. See Special Provision.



ANCHOR BOLT DETAILS
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" phi anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	130
Parapet Railing	Foot	130

MULTI-USE RAILING DETAILS
IL 25/STEARNS ROAD OVER THE EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

DESIGNED	AJK
CHECKED	AAV
DRAWN	AYR
CHECKED	HMA/DMC

R-29 10-1-08 (10'-0" Maximum Post Spacing)

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312-565-0450
Job # 3944

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	370
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

BKBR-1

STEB-3

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE 98-00214-02-BR DESCRIPTION Mixed-Use Bridge over E. Br. Brewster Creek
Page 1 of 2
Date Started 9/10/04
Date Completed 9/10/04
STRUCTURE NO. DRILLED BY TSC L-60-393
COUNTY Kane LOCATION West Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	B	L	O	W	Qu	W	Surface Water Elev.	D	B	L	O	W	Qu	W
BKBR-1	138+35 BL IL 25/STEARNS	71.00H LT	737.53 ft	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%	when drilling	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%
											731.5							
FILL - Gravel																		
FILL - Brown and black SANDY LOAM, little gravel, moist A-4																		
FILL - Brownish-gray SANDY LOAM, trace gravel, moist A-2-4/A-4																		
Dense gray SAND and GRAVEL, saturated A-1																		
Dense gray SAND and GRAVEL, occasional Cobbles, saturated A-1-a																		
Hard gray CLAY, trace gravel, moist A-6																		
Very stiff gray CLAY, trace gravel, moist A-6																		
Very dense gray fine SAND, wet A-3																		
Very dense GRAVEL, little sand, saturated A-1-a																		

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE 98-00214-02-BR DESCRIPTION Mixed-Use Bridge over E. Br. Brewster Creek
Page 2 of 2
Date Started 9/10/04
Date Completed 9/10/04
STRUCTURE NO. DRILLED BY TSC L-60-393
COUNTY Kane LOCATION West Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	B	L	O	W	Qu	W	Surface Water Elev.	D	B	L	O	W	Qu	W
BKBR-1	138+35 BL IL 25/STEARNS	71.00H LT	687.53 ft	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%	when drilling	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%
Very dense gray GRAVEL, little sand, saturated A-1-a																		
Very dense gray silty fine SAND, wet A-2-4																		
Medium dense gray clayey SAND, little gravel, very moist A-1-b																		
Dense gray fine to medium SAND, trace to little gravel, moist A-1-b																		
Very dense gray fine SAND, wet A-3																		
Probable Dolomite Rock Surface (hard drilling) End of Boring at 74.0'																		

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE F.A.P. 2503 DESCRIPTION IL Route 25/STEARNS Road over E. Br. Brewster Creek
Page 1 of 2
Date Started 6/7/04
Date Completed 6/7/04
STRUCTURE NO. DRILLED BY TSC L-60-393
COUNTY Kane LOCATION North End WB West Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	B	L	O	W	Qu	W	Surface Water Elev.	D	B	L	O	W	Qu	W
STEB-3	137+88	28.00H LT	737.32 ft	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%	when drilling	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%
											728.8 733.3							
FILL - Brown and gray CLAY LOAM, trace topsoil, trace gravel, moist A-6																		
FILL - Dark brown and gray SANDY LOAM, trace gravel, moist A-2-4/A-4																		
Stiff dark gray SANDY LOAM, moist A-2-4																		
Medium dense gray SAND and GRAVEL, saturated A-1																		
Medium dense brown SAND and GRAVEL, saturated A-1																		
Dense to medium dense brown clayey SAND and GRAVEL, moist A-2-4																		
Medium stiff gray SILTY CLAY LOAM, trace gravel, occasional silt seams, moist A-4-A-6																		
Very stiff gray CLAY, trace gravel, moist A-1-b																		
Medium dense gray SAND, trace gravel, trace clay layers, moist A-1-b																		
Medium dense gray sandy SILT, trace gravel, moist A-4																		

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

ROUTE F.A.P. 2503 DESCRIPTION IL Route 25/STEARNS Road over E. Br. Brewster Creek
Page 2 of 2
Date Started 6/7/04
Date Completed 6/7/04
STRUCTURE NO. DRILLED BY TSC L-60-393
COUNTY Kane LOCATION North End WB West Abutment S. 1-Cntr. TWP. 40 N. RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	B	L	O	W	Qu	W	Surface Water Elev.	D	B	L	O	W	Qu	W
STEB-3	137+88	28.00H LT	687.32 ft	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%	when drilling	DEPTH	BULGE	LOAM	SILT	CLAY	TSF	%
Medium dense gray sandy SILT, trace gravel, moist A-4																		
Very dense gray SILT, trace sand, moist A-4																		
Medium dense gray clayey SILT, little sand, moist A-4																		
Medium dense gray SAND, trace gravel, saturated A-1-b																		
Very dense gray SAND, trace gravel, saturated A-1-b																		
Very dense gray SAND and GRAVEL, saturated A-1-a																		

SPT (N) = Sum of last two blow values in sample. (Cu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

SOIL BORING LOG 1 OF 2
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	371
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract # 63074

STEB-4

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date Started 6/7/04
Date Completed 6/7/04

ROUTE F.A.P. 2503 DESCRIPTION IL Route 25/Stearns Road over E. Br. Brewster Creek

SECT. 98-00214-02-BR STRUCT. NO. 045-2033 DRILLED BY TSC L-60,393

COUNTY Kane LOCATION North End WB East Abutment S, 1-Ctr, TWP 40 N, RNG. 8 E

Boring No.	Station	Offset	Surface Elev.	D	E	B	L	Qu	W	Surface Water Elev.	D	E	B	L	Qu	W
STEB-4	139+36	66.60 ft LT	737.22 ft	H	T	S	O	tsf	%		H	T	S	O	tsf	%
FILL - Brown and gray SANDY LOAM, little gravel.																
			736.42			6	S	1.4	11.9							
FILL - Brown and gray CLAY LOAM, some black clay, trace gravel, moist A-4/A-6																
						10	S	1.2	12.0							
Black ORGANIC CLAY, very moist A-7-6																
			731.22			6	B	1.9	66.1							
Medium dense brown SAND and GRAVEL, saturated A-1																
						9	P	8	9.3							
Very stiff to hard gray CLAY, trace gravel, moist A-6																
			724.22			6	B	4.0	14.3							
Very stiff to stiff gray CLAY, trace gravel, moist A-6																
			719.22			6	B	3.7	14.9							
Very stiff to stiff gray CLAY, trace gravel, moist A-6																
						6	S	2.2	19.6							
Very stiff gray CLAY, trace gravel, moist A-6																
			714.22			4	B	1.5	21.6							
Very stiff gray CLAY, trace gravel, moist A-6																
						5	B	3.5	16.0							

SPT: (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date Started 6/7/04
Date Completed 6/7/04

STRUCTURE NO. 045-2033
ROUTE F.A.P. 2503
SECTION 98-00214-02-BR
COUNTY Kane

Boring No.	Station	Offset	Elevation	D	E	B	L	Qu	W
STEB-4	139+36	66.60 ft LT	587.22 ft	H	T	S	O	tsf	%
Medium dense gray SILT, moist A-4									
			685.22			7	B	2.9	19.2
Medium dense gray SAND, trace gravel, saturated A-1-b									
						5	B	6	12.1
Very dense Cobbles and Boulders, (rock fragments recovered)									
			680.22			100/1"			
Very stiff gray SILTY CLAY LOAM, moist A-6									
			675.22			7	B	11.2	
Very dense Boulder or Fractured Rock									
			673.22			22	B	2.9	15%
Auger Refusal at 65.0'									
			672.22			100/0"			
Diedrich D-120 Truck Rig (#282) CME Automatic Hammer 3.25" (83 mm) ID HSA									
						7	S	1.9	11.9
						9	B	5	
						6			
						6			
						13			
						15			

SPT: (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test Stations. Depths, Offset, and Elevations are in Feet

DESIGNED	AJK
CHECKED	AAY
DRAWN	AYR
CHECKED	HMA/DMC

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-6450
Job # 3944

SOIL BORING LOG 2 OF 2
IL 25/STEARNS ROAD OVER THE
EAST BRANCH OF BREWSTER CREEK
F.A.P. 2503 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 138+59.20
STRUCTURE NO. 045-2035

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11/23/28 AM

3/30/2009

Bench Mark: BM-24 - "Aluminum Disk" set in concrete, 0.50± mile east of Stearns Road and Dunham Road at south side of Stearns Road. Elev. 762.68.

Existing Structure: S.N. 045-3021, three span wide I-beam superstructure, 148'-0" back to back abutments and 36'-10" out to out, R.C. deck on a 39 degree skew. The span lengths are 42'-3", 53'-0" and 42'-3" respectively. Concrete pier caps and pile bent abutments supported on CIP concrete piles. Built as Dunham Road over CC&P RR (Formerly ICG RR) in 1934 and rehabilitated in 1979. The existing bridge will be converted into a multi-use bridge for pedestrian and bicycle use.

Salvage: None.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	372
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SC- 1
OF 4 SHEETS

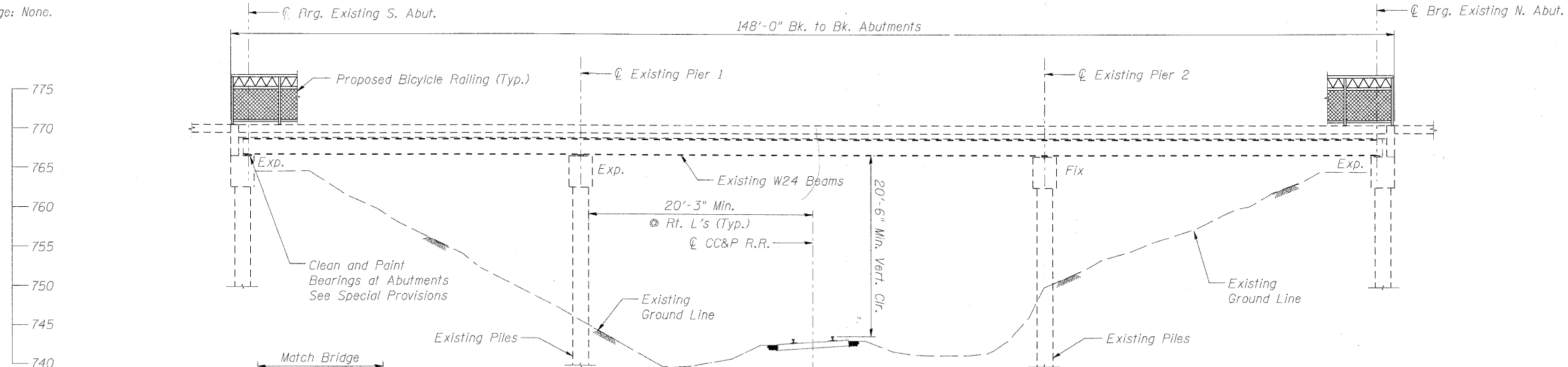
Contract # 63074

LOADING

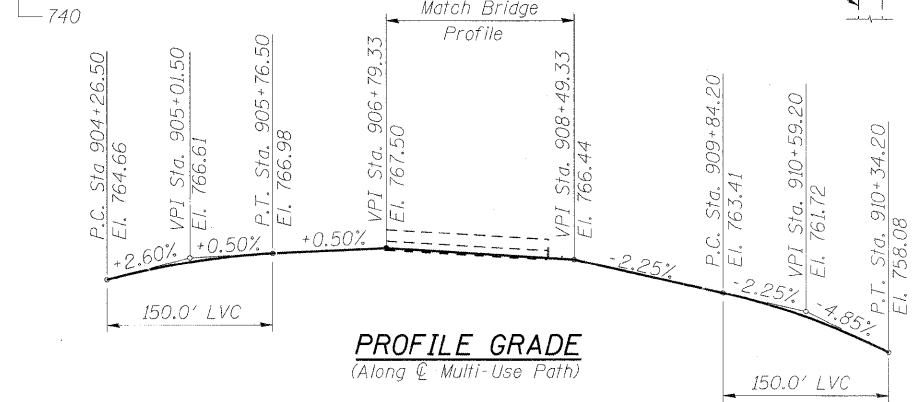
H10 Truck (No Impact)
85 psf Pedestrian Load

DESIGN SPECIFICATIONS

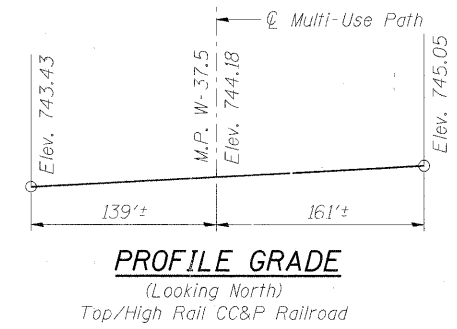
2002 AASHTO Standard Specifications - 17 ed.
1997 AASHTO Guide Specifications for Design of Pedestrian Bridges



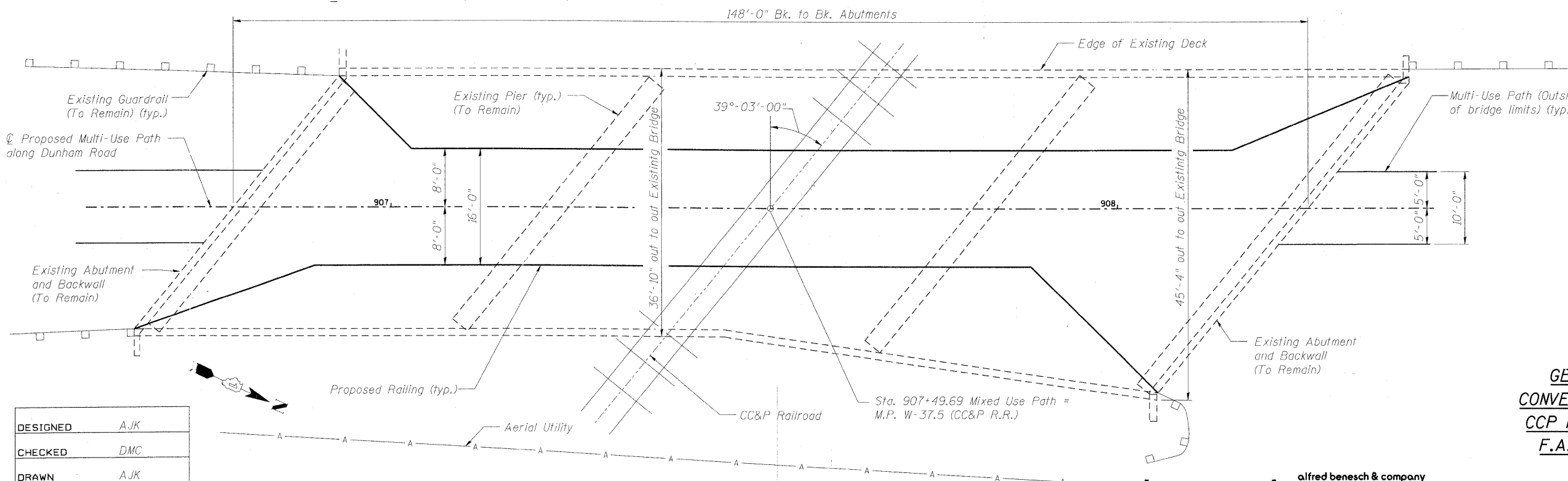
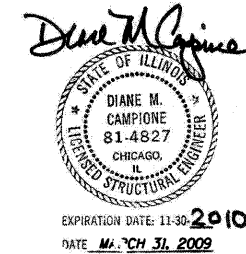
ELEVATION



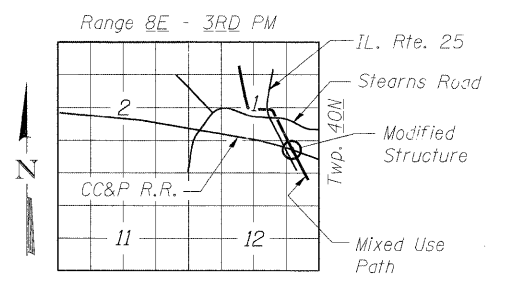
PROFILE GRADE
(Along Multi-Use Path)



PROFILE GRADE
(Looking North)
Top/High Rail CC&P Railroad



PLAN



LOCATION SKETCH

DESIGNED	AJK
CHECKED	DMC
DRAWN	AJK
CHECKED	HMA

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Chicago, Illinois 60601
312-565-0450
Job # 3944

**GENERAL PLAN AND ELEVATION
CONVERSION OF EXISTING DUNHAM OVER
CCP RAILROAD TO MULTI USE BRIDGE
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 907+49.69
STRUCTURE NO. 045-3021**

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	373
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SC- 2
OF 4 SHEETS

Contract # 63074

GENERAL NOTES

- Design of Existing structure was checked against the design specifications as shown above to ensure adequacy as a mixed-use bridge.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be a cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Existing Bearings at the Abutments are to be cleaned and painted in accordance with the Special Provisions. The paint color shall be Interstate Green, Munsell No. 7.5G 4/8.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

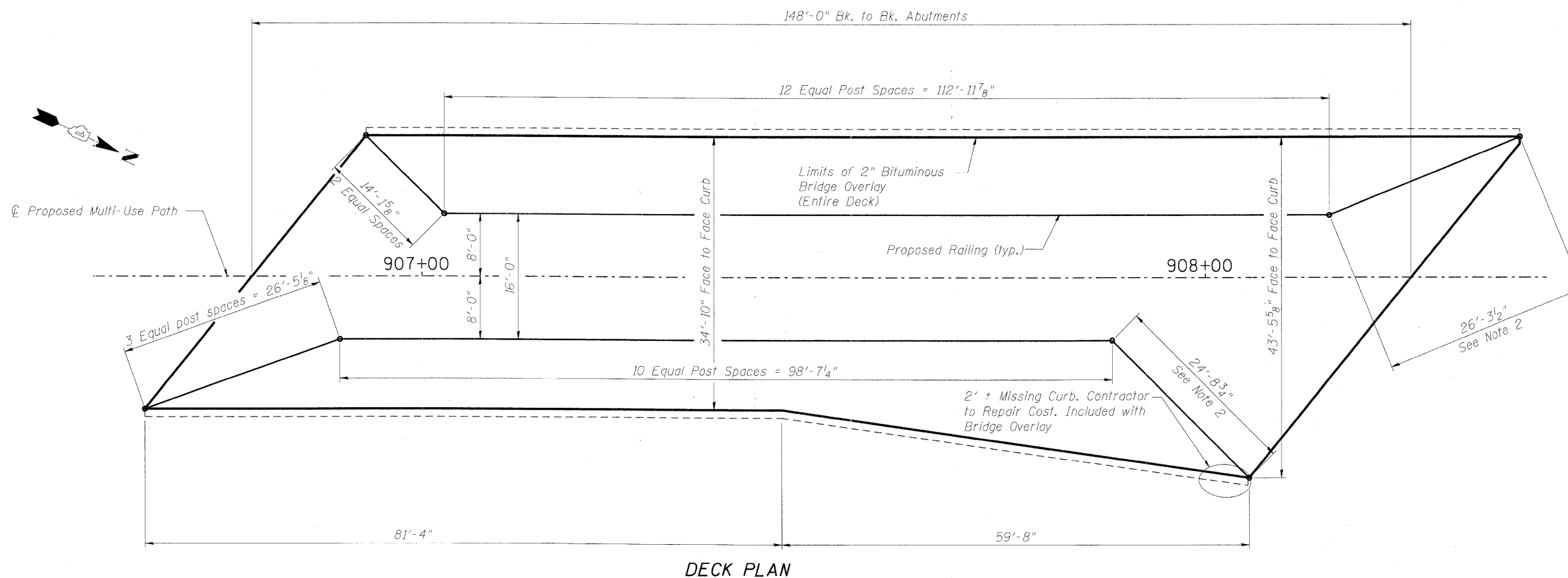
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	69
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	605
*Bicycle Railing	Foot	305
*Cleaning And Painting Bearings	Each	13

* See Special Provision

INDEX OF SHEETS

- SC - 1 of 4 General Plan and Elevation
- SC - 2 of 4 Deck Plan and Bill of Material
- SC - 3 of 4 Deck Cross Sections
- SC - 4 of 4 Multi-Use Path Railing Details



DECK PLAN

Notes:

- For Deck cross sections see sheet SC-3.
- Provide a 4'-0" wide gate in this area for maintenance access. Provide 3 equal spaces for the remaining railing panels.

DESIGNED	AJK
CHECKED	DMC
DRAWN	AJK
CHECKED	HMA

**DECK PLAN AND BILL OF MATERIAL
CONVERSION OF EXISTING DUNHAM OVER
CCP RAILROAD TO MULTI USE BRIDGE
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 907+49.69
STRUCTURE NO. 045-3021**

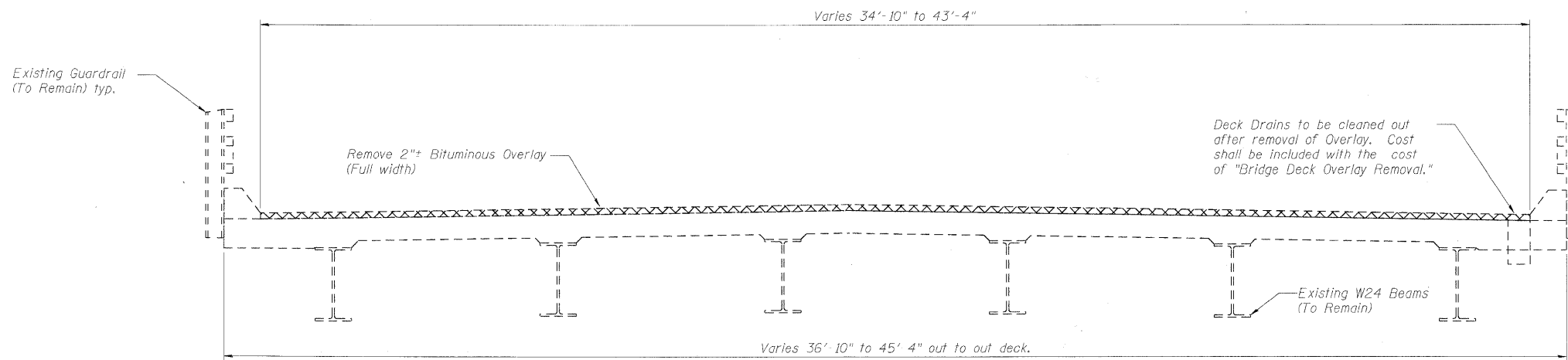
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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3944

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

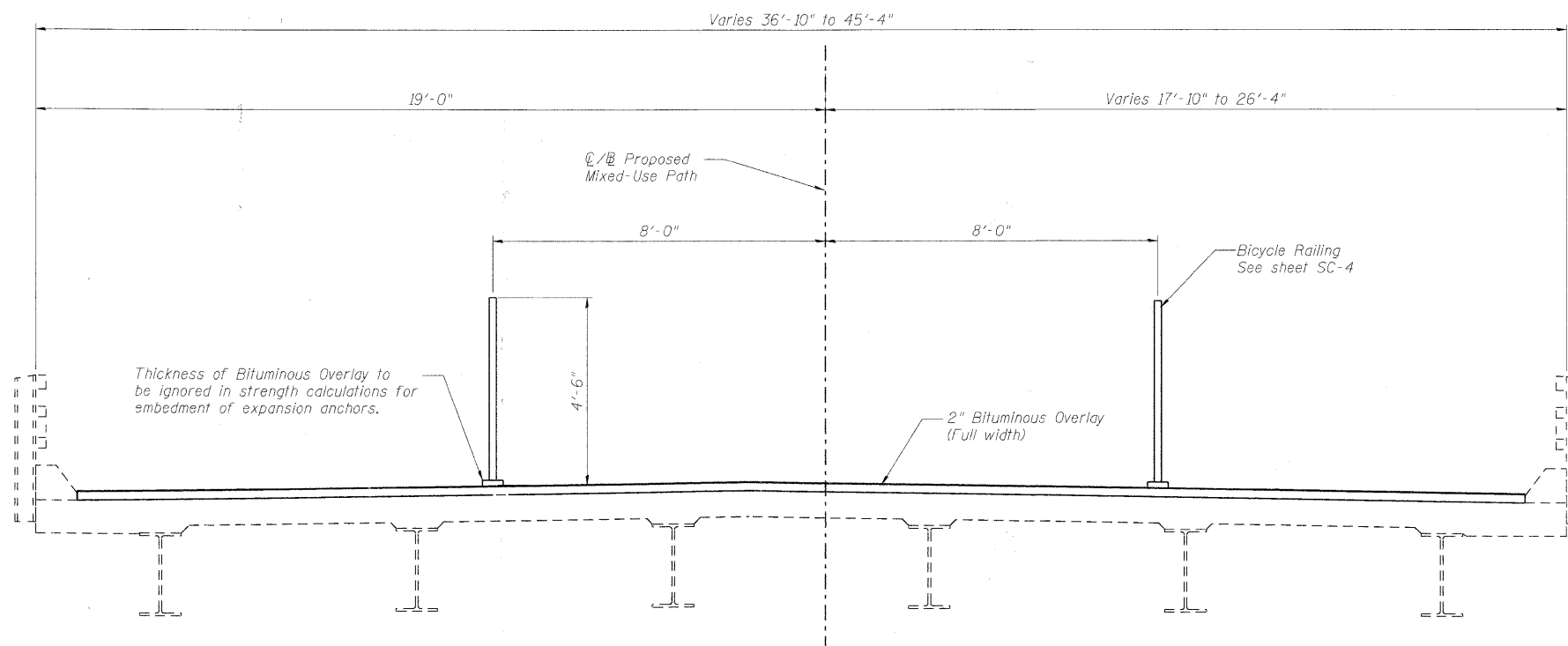
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	374
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SC- 3
OF 4 SHEETS

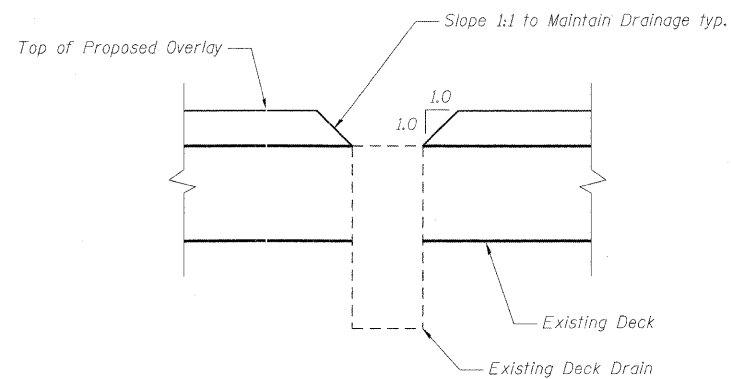
Contract # 63074



EXISTING DECK CROSS SECTION
(Looking North)



PROPOSED DECK CROSS SECTION
(Looking North)



SECTION THROUGH EXISTING DECK DRAIN

Notes:
1. For Deck Plan and Bill of Material see sheet SC-2.

DESIGNED	AJK
CHECKED	DMC
DRAWN	AJK
CHECKED	HMA

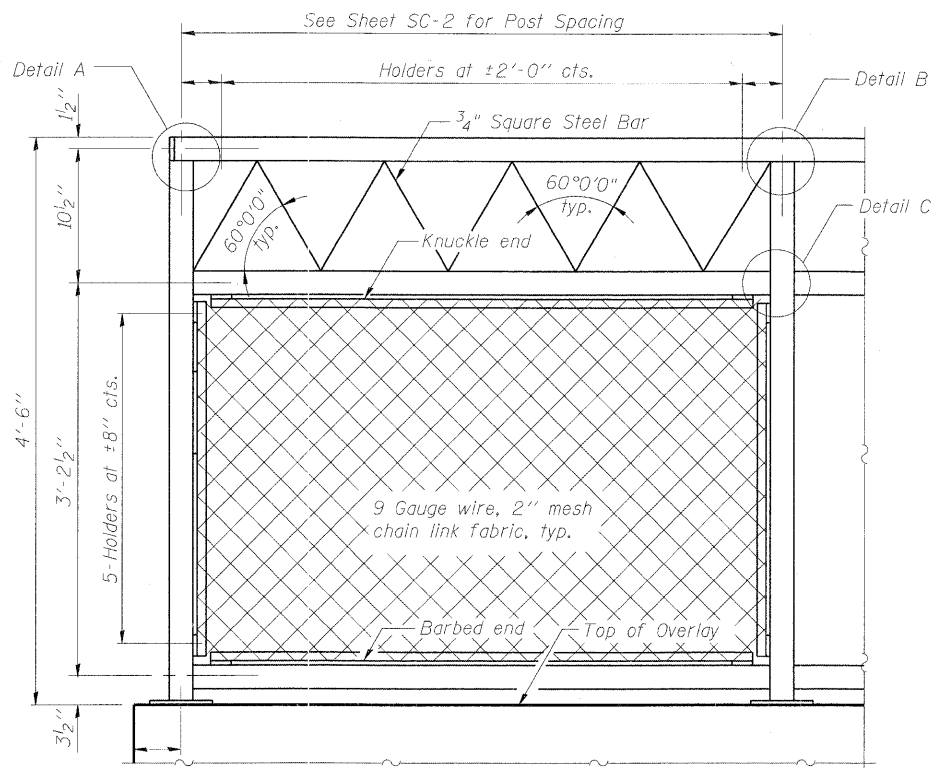
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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job # 3844

DECK CROSS SECTIONS
CONVERSION OF EXISTING DUNHAM OVER
CCP RAILROAD TO MULTI USE BRIDGE
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 907+49.69
STRUCTURE NO. 045-3021

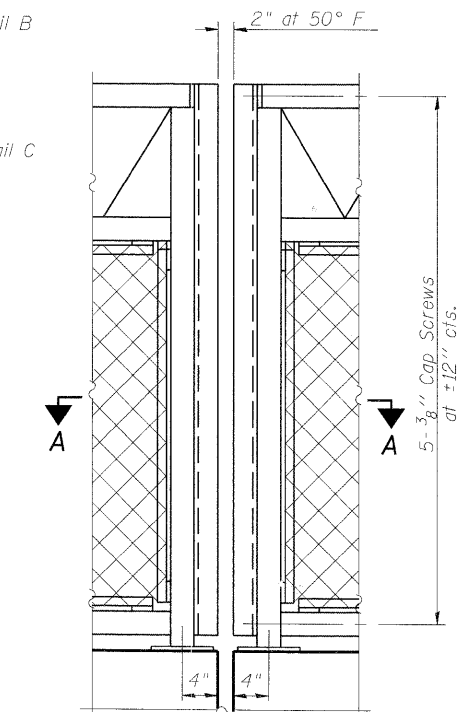
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	KANE	545	375
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET SC- 4
OF 4 SHEETS
Contract # 63074



BICYCLE RAILING ELEVATION



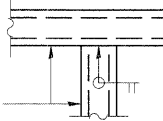
BICYCLE RAILING ELEVATION AT EXPANSION JOINT

ℙ 1/4" x 3" x 3"

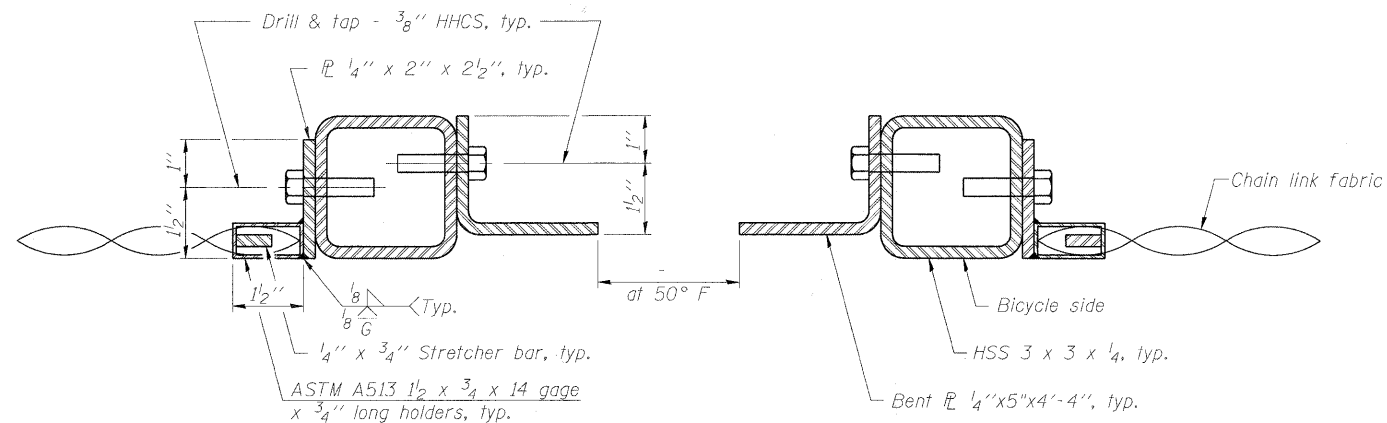
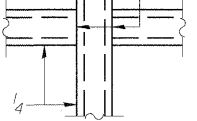
DETAIL A



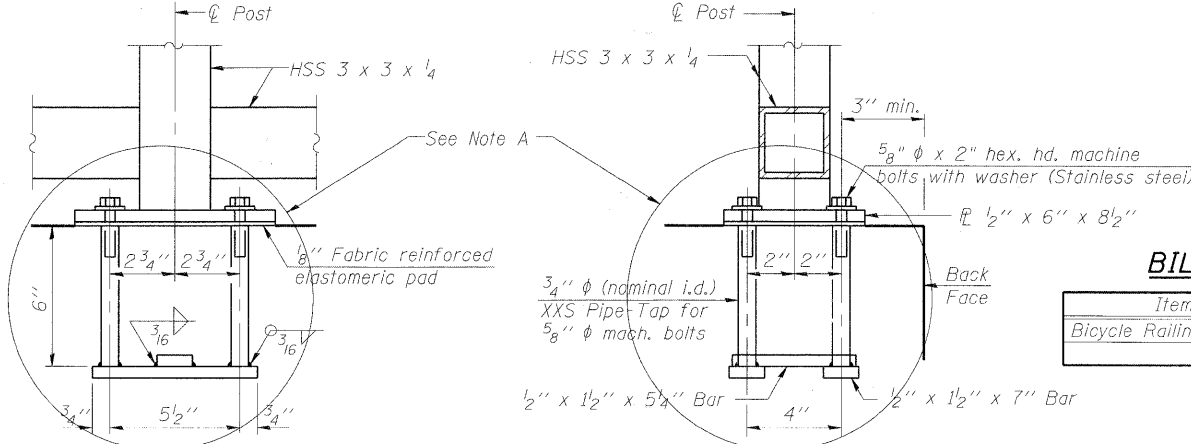
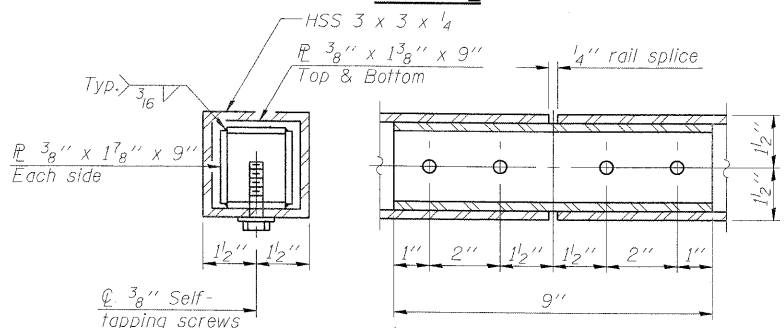
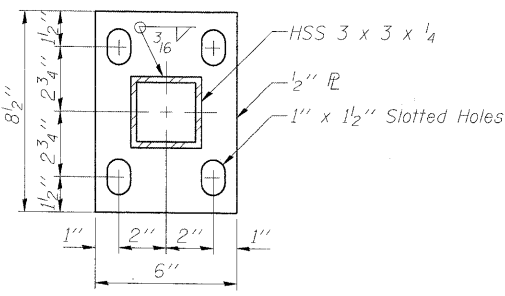
DETAIL B



DETAIL C



All post, railing, splices, anchor devices, and bent plates shall be painted using the (List the appropriate paint system for Structural Steel).



ANCHOR BOLT DETAILS

Note A: Contractor shall drill and set 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

Cost of anchor rods and installation shall be included with Bicycle Railing

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	305

MULTI-USE DETAILS (RAILINGS/PARAPET)
CONVERSION OF EXISTING DUNHAM OVER CCP RAILROAD TO MULTI USE BRIDGE
F.A.P. 360 - SEC. 06-00214-15-BR
KANE COUNTY
STATION 907+49.69
STRUCTURE NO. 045-3021

DESIGNED	AJK
CHECKED	DMC
DRAWN	AJK
CHECKED	HMA

benesch
alfred benesch & company
Engineers • Surveyors • Planners
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-665-0450
Job # 3944

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-15-BR	KANE/DUPAGE		376
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	63074	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
KANE COUNTY DIVISION OF TRANSPORTATION
**PROPOSED
HIGHWAY PLANS
VOLUME 2**

F.A.P 361 ROUTE IL-25 /STEARNS ROAD
DUNHAM ROAD

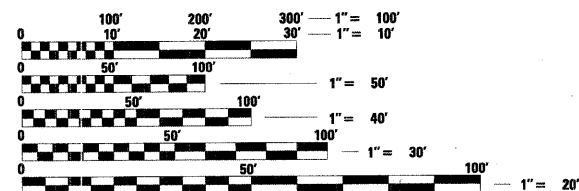
SECTION NO. 06-00214-15-BR
PROJECT NO. HPP-1527 (012)
JOB NO. C-91-246-06
KANE /DUPAGE COUNTY

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR LIST OF STATE STANDARDS, SEE SHEET NO. 3

DESIGN DESIGNATION AND TRAFFIC DATA

2015 ADT	VEHICLES	
IL-25	=	29,000
STEARNS RD	=	26,075
DUNHAM RD	=	29,500
GILBERT RD	=	8,150
DESIGN SPEED	=	45 MPH
FUNCTION CLASSIFICATION: - OTHER PRINCIPAL ARTERIAL (OPA)		

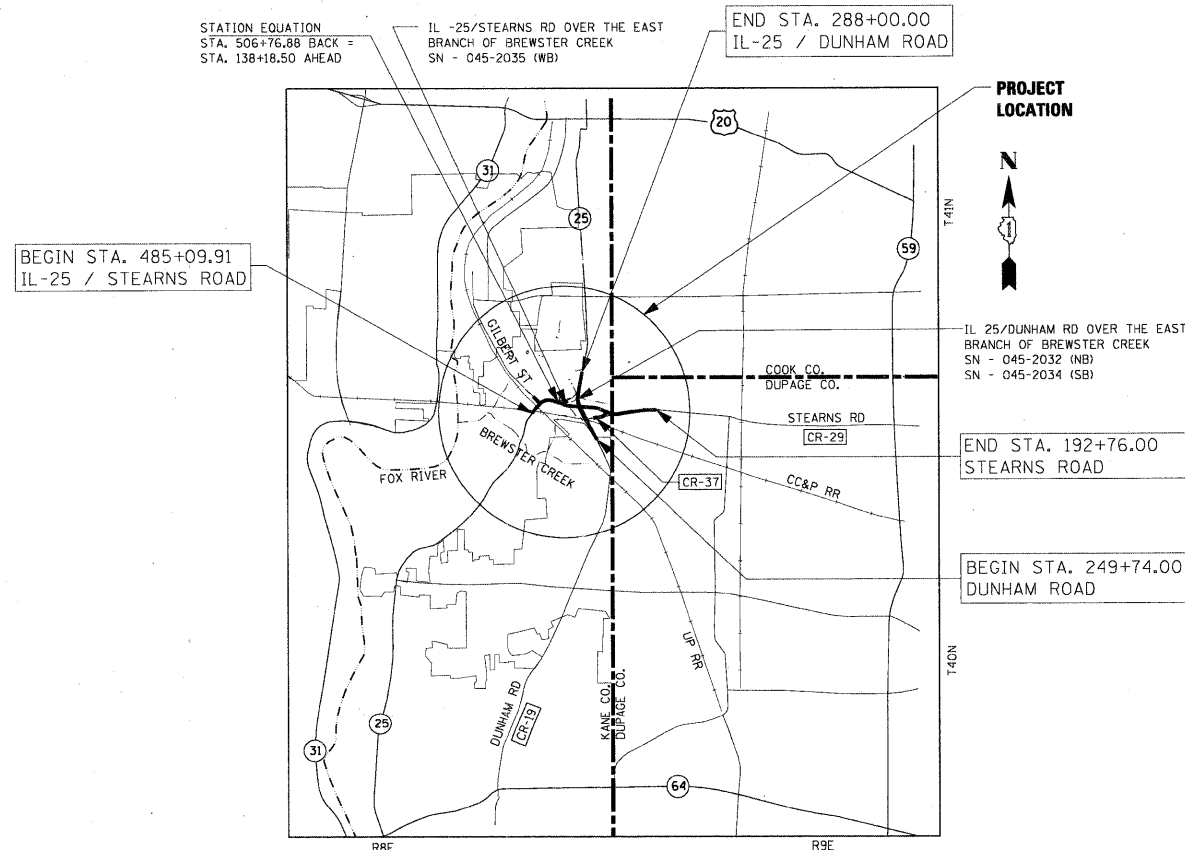
THIS PROJECT IS LOCATED IN
KANE AND DUPAGE COUNTIES,
VILLAGE OF BARTLETT



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

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

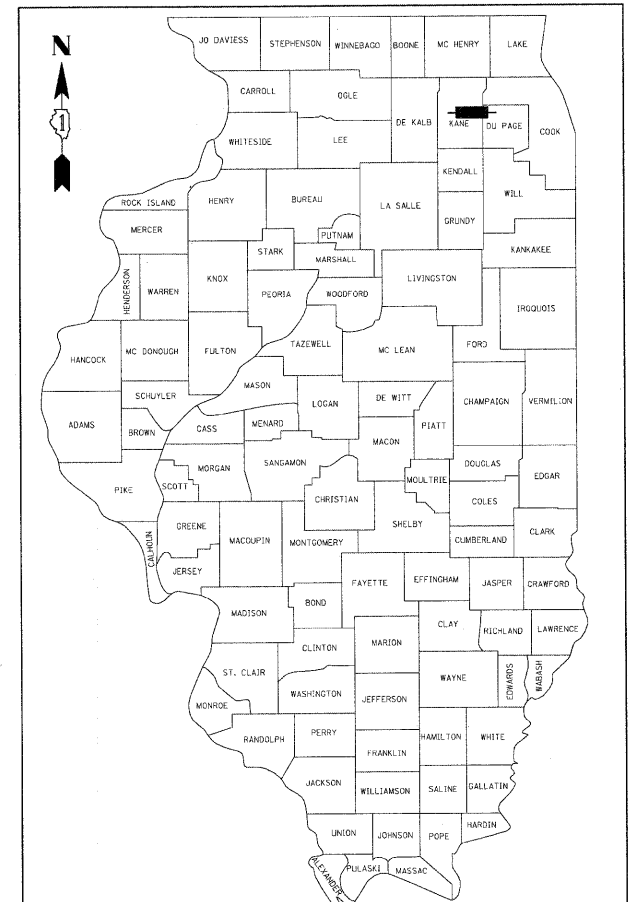
CONTRACT NO. 63074



LOCATION MAP

SCALE: NTS

NET LENGTH OF IMPROVEMENT = 11,693 LINEAR FEET = 2.215 MILES
GROSS LENGTH OF IMPROVEMENT = 11,693 LINEAR FEET = 2.215 MILES



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

**KANE COUNTY
DIVISION OF TRANSPORTATION**

APPROVED _____ 20 _____

COUNTY ENGINEER

**DUPAGE COUNTY
DIVISION OF TRANSPORTATION**

APPROVED _____ 20 _____

COUNTY ENGINEER

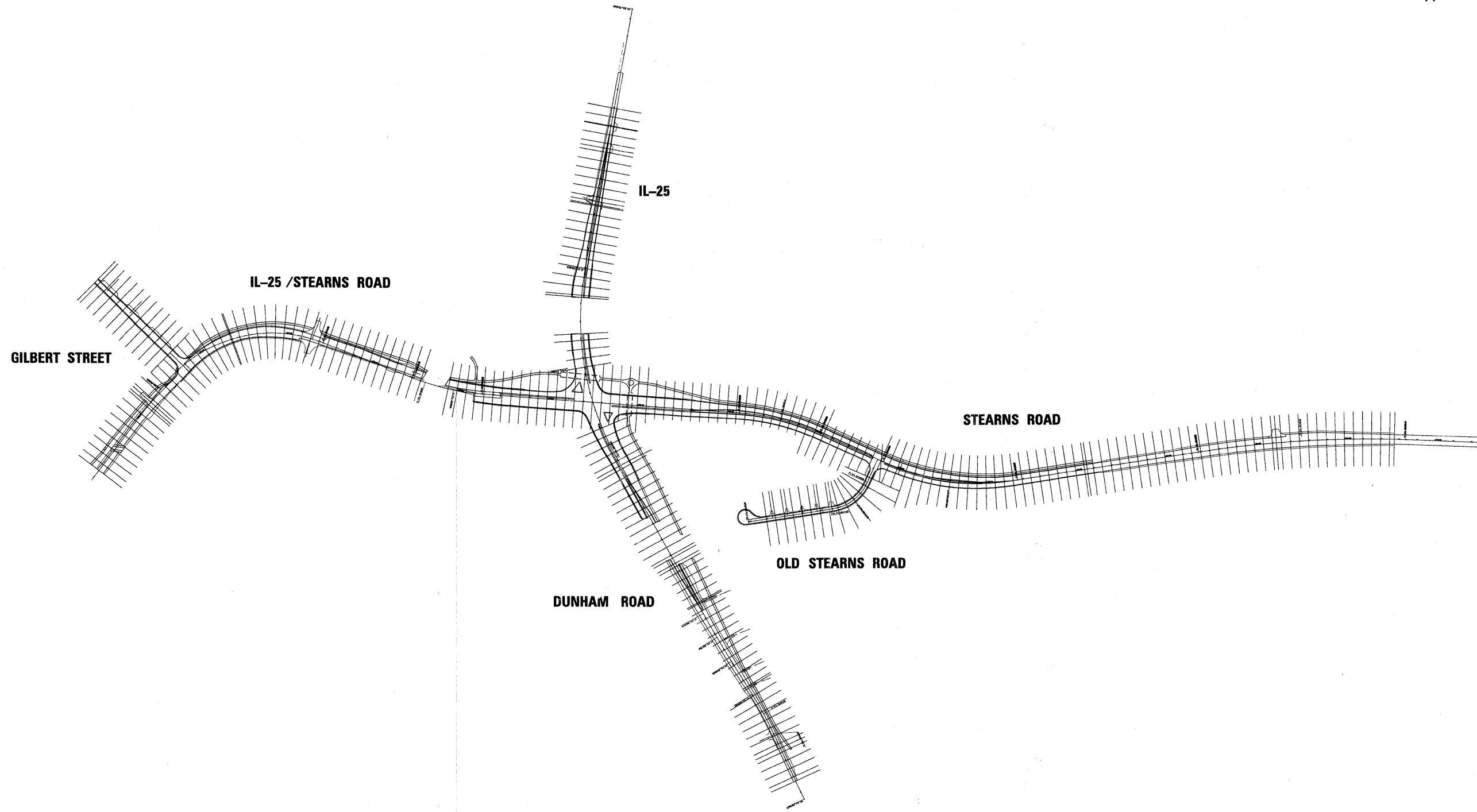
PASSED _____ 20 _____

RELEASED FOR BID BASED ON LIMITED REVIEW _____

DISTRICT ENGINEER OF LOCAL ROADS AND STREETS

DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**



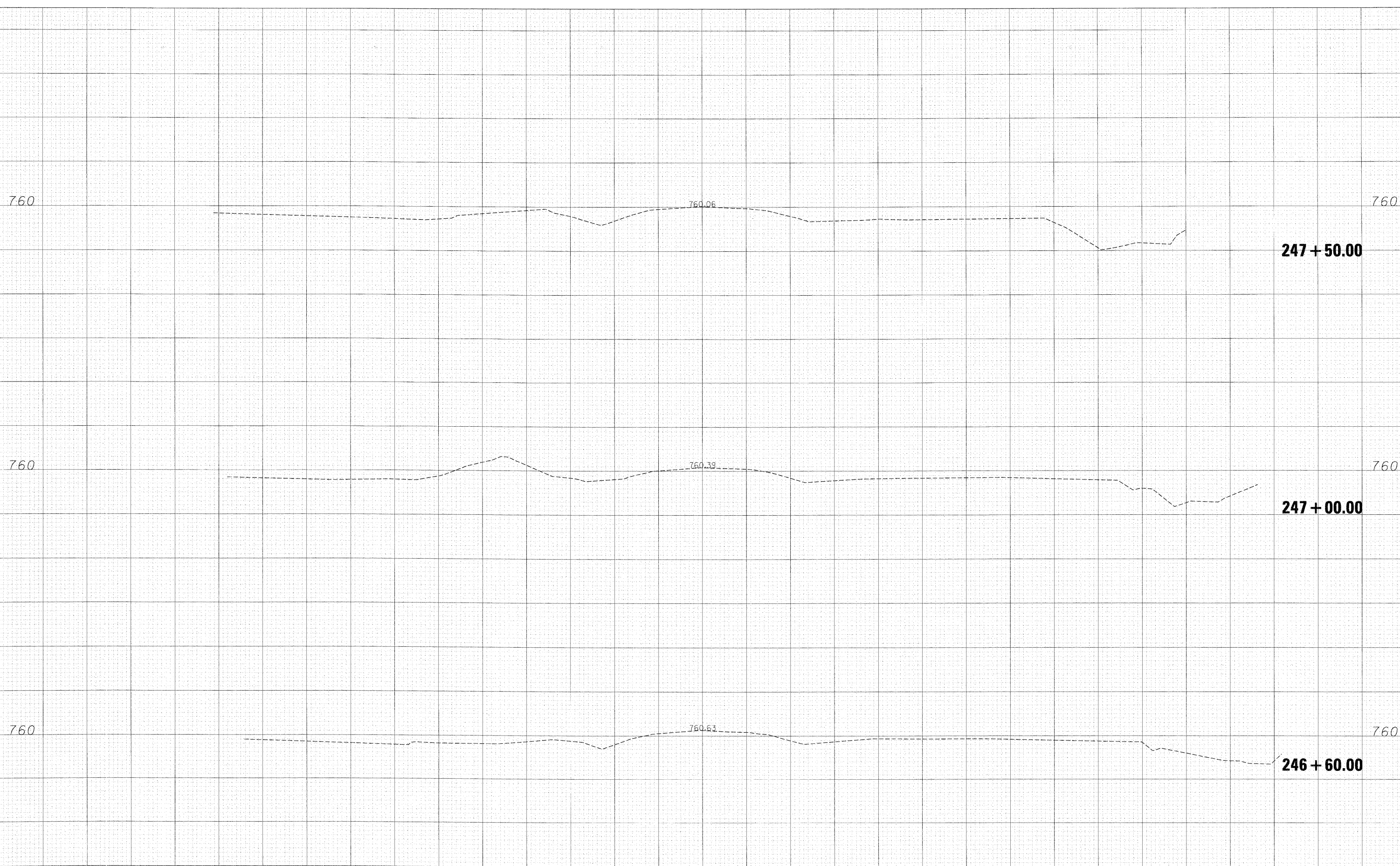
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		PLOT SCALE = 300.0000' / IN.	CHECKED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
		PLOT DATE = 3/30/2009	DATE - 3/31/09			CONTRACT NO. 63074					

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

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

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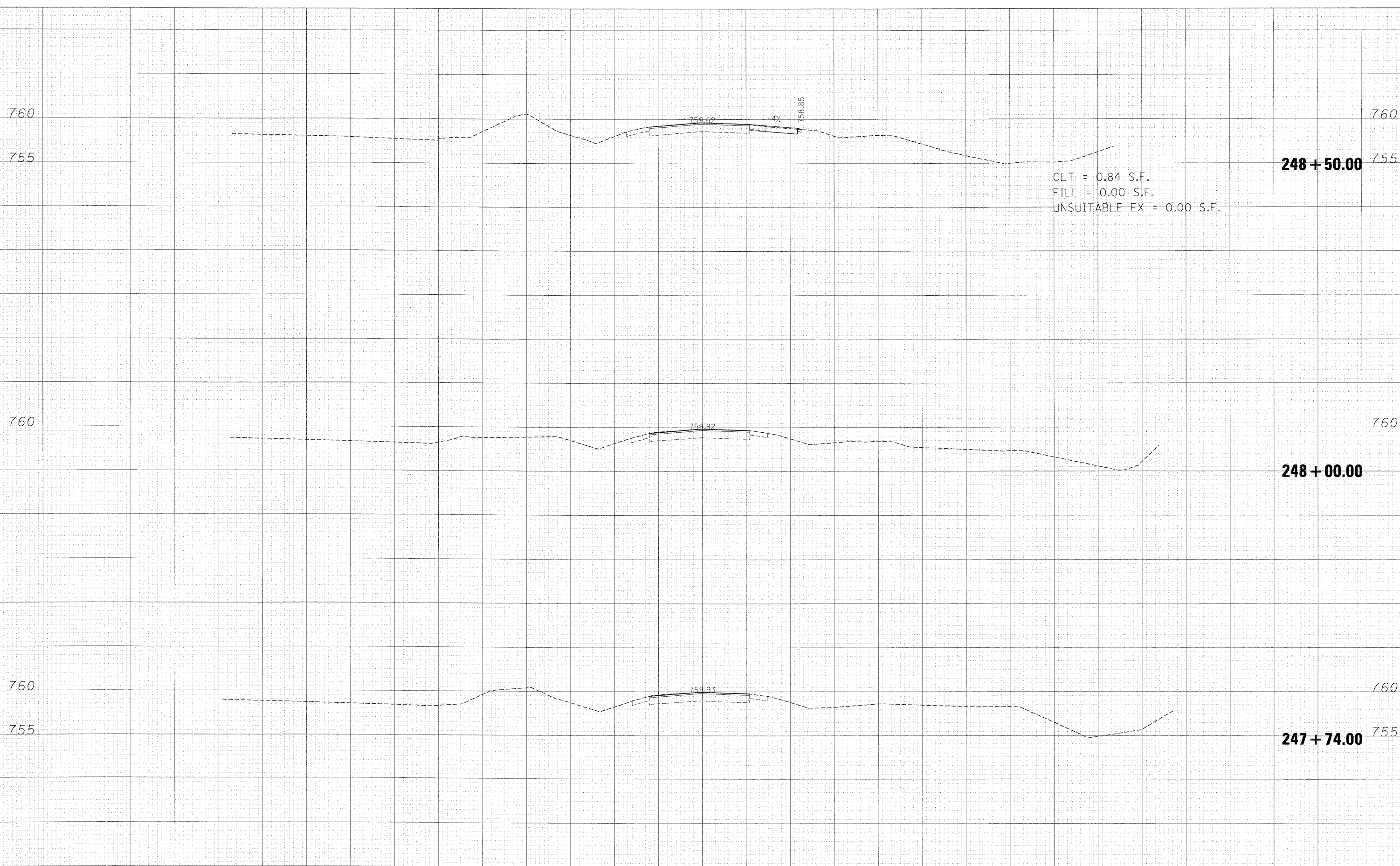


FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
9FILES*		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 246+60.00	TO STA. 247+50.00	361	06-00214-15-BR	KANE/DUPAGE	545	378
		CHECKED - JJT	REVISED -												
		DATE - 3/31/09	REVISED -												
										CONTRACT NO. 63074					
										FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

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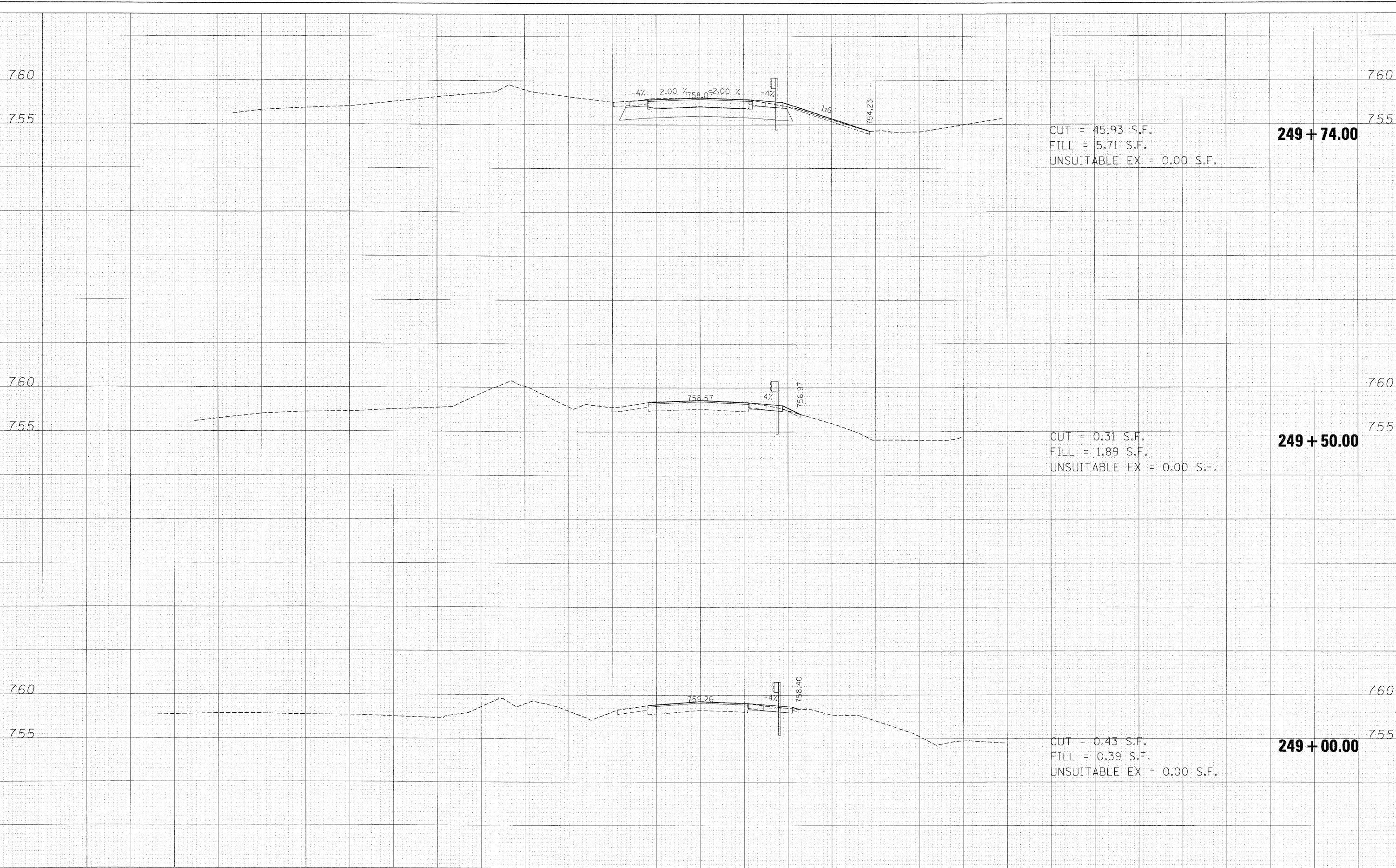


FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILES#		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF SHEETS	361	06-00214-15-BR	KANE/DUPAGE	545	379
		CHECKED - JJT	REVISED -		STA. 247+74.00	TO STA. 248+50.00		CONTRACT NO. 63074				
		DATE - 3/31/09	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							

FINAL SURVEY SURVEYED SURVEY PLOTTED NOTE BOOK AREAS CHECKED

ORIGINAL SURVEY SURVEYED SURVEY PLOTTED NOTE BOOK AREAS CHECKED

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CUT = 45.93 S.F.
 FILL = 5.71 S.F.
 UNSUITABLE EX = 0.00 S.F.

249 + 74.00

CUT = 0.31 S.F.
 FILL = 1.89 S.F.
 UNSUITABLE EX = 0.00 S.F.

249 + 50.00

CUT = 0.43 S.F.
 FILL = 0.39 S.F.
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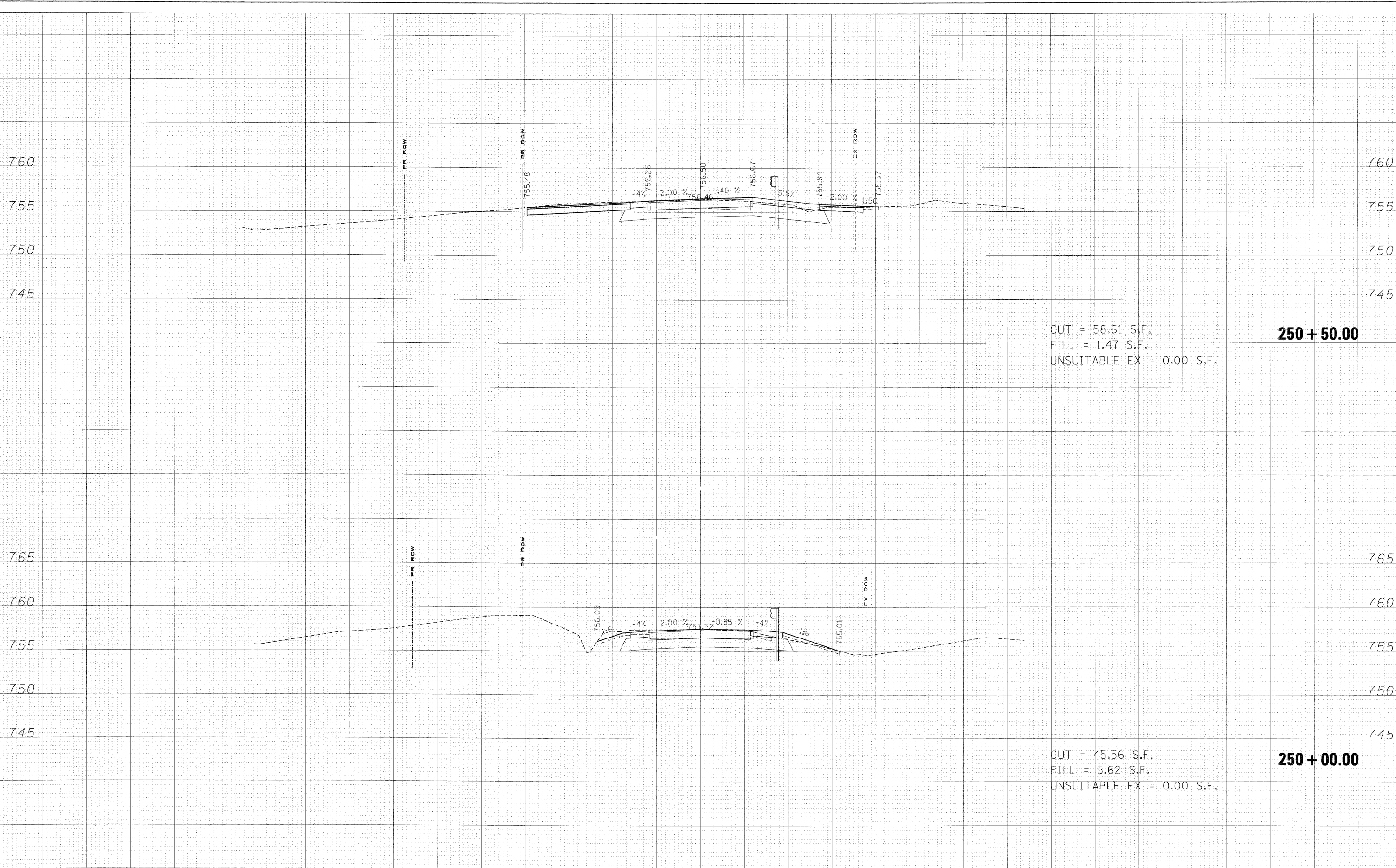
249 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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		DATE - 3/31/09	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

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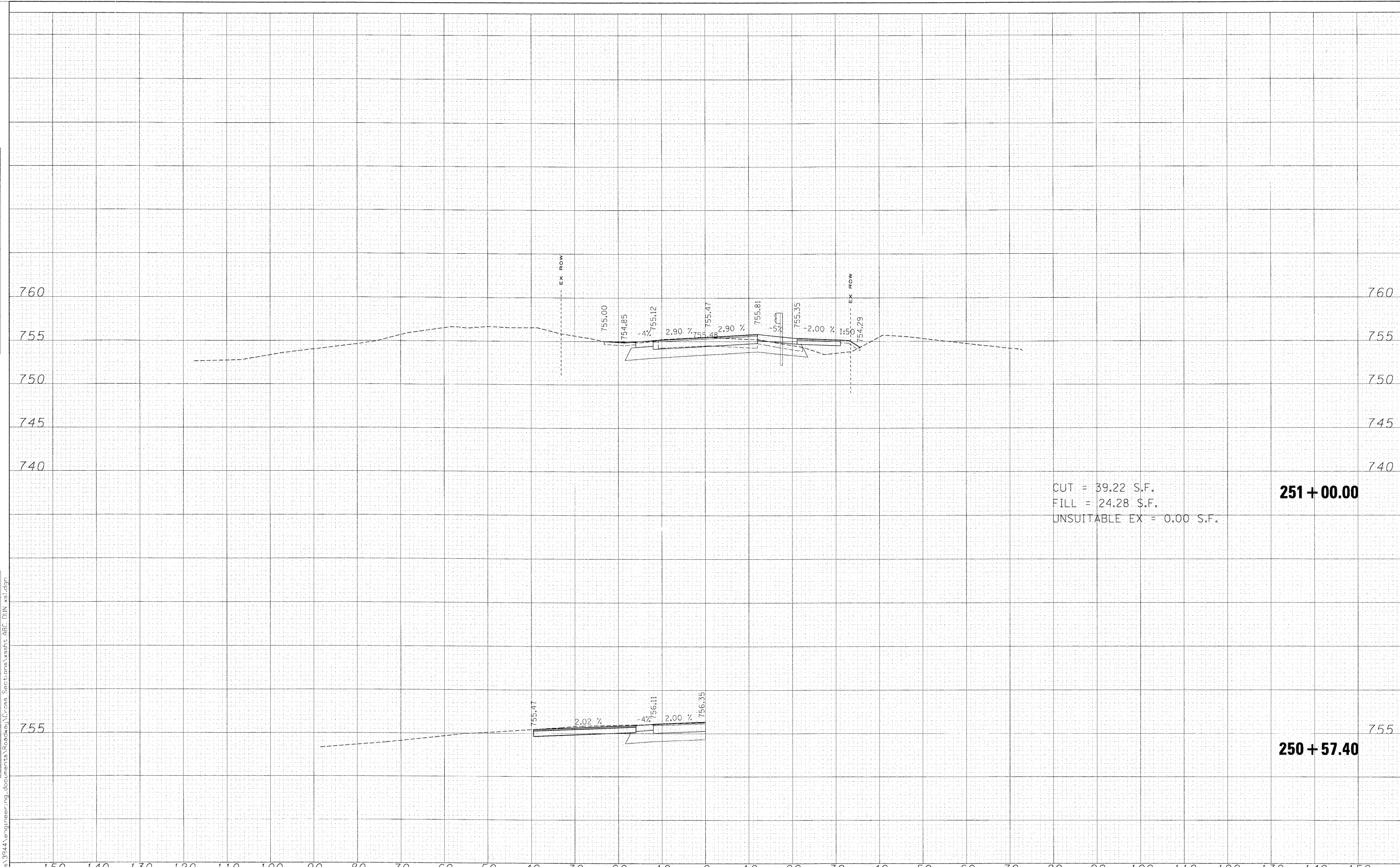
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250 + 50.00

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 UNSUITABLE EX = 0.00 S.F.
250 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DATE - 3/31/09	REVISED -		CONTRACT NO. 63074							

DATE: _____
 ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED
 FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

DATE: _____
 ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED
 FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED



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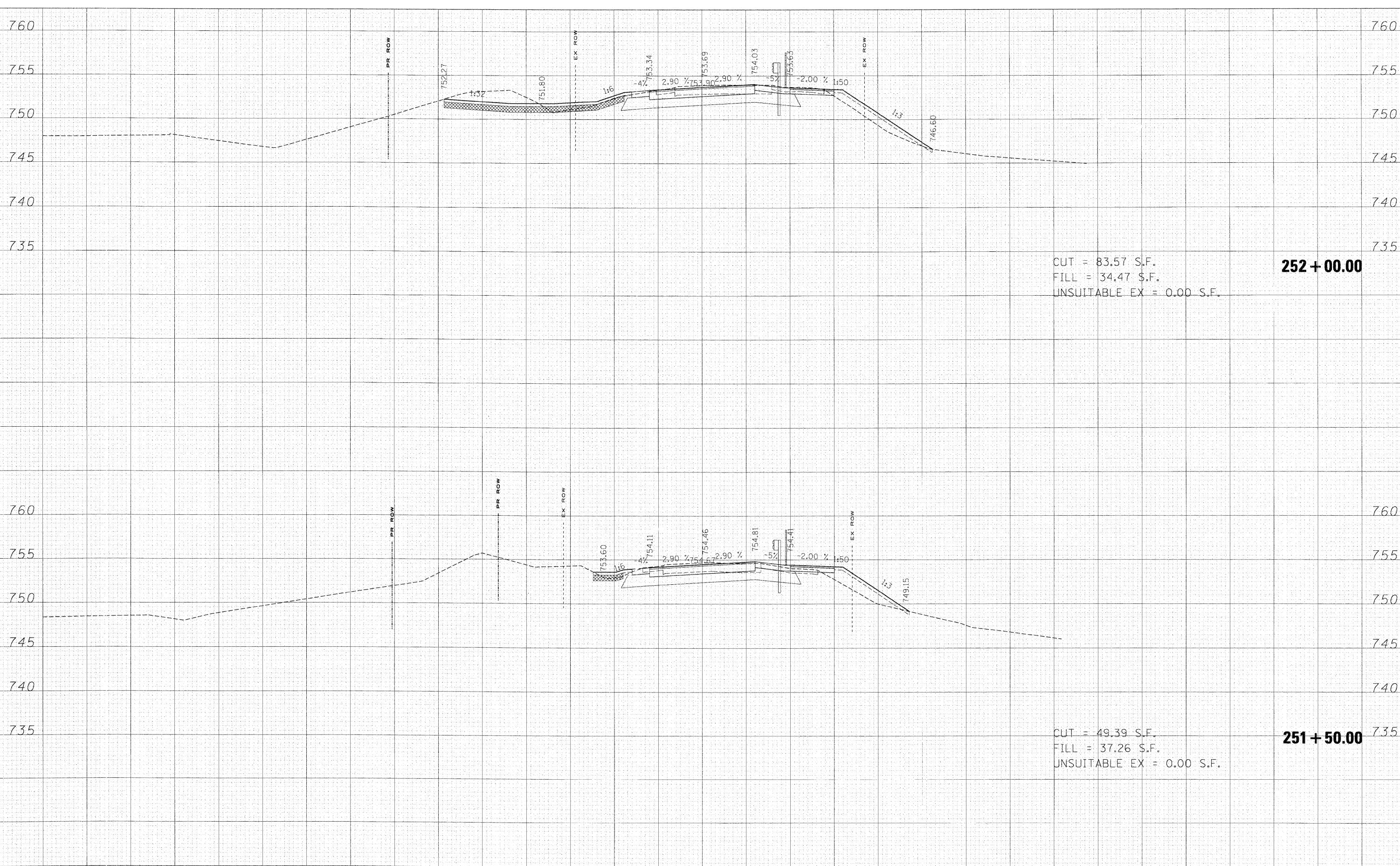
251 + 00.00

250 + 57.40

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DATE - 3/31/09	REVISED -		CONTRACT NO. 63074							

FINAL SURVEY PLOTTED AREAS CHECKED

ORIGINAL SURVEY PLOTTED AREAS CHECKED



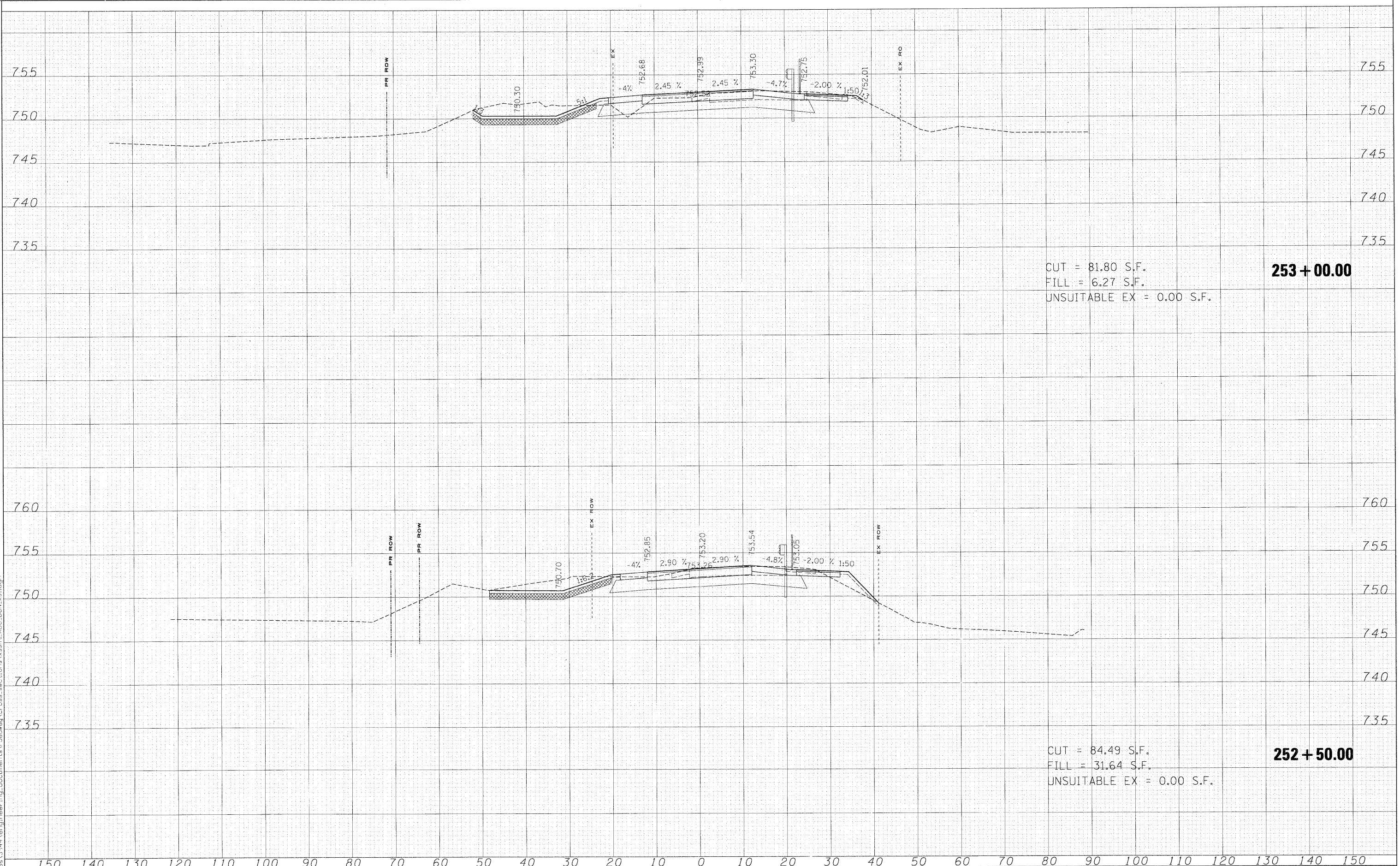
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251 + 50.00

FILE NAME =	USER NAME = #USER#	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DATE - 3/31/09	REVISED -										

FINAL SURVEY SURVEYED PLOTTED TEMPLATE AREAS CHECKED NO. _____

ORIGINAL SURVEY SURVEYED PLOTTED TEMPLATE AREAS CHECKED NO. _____



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253 + 00.00

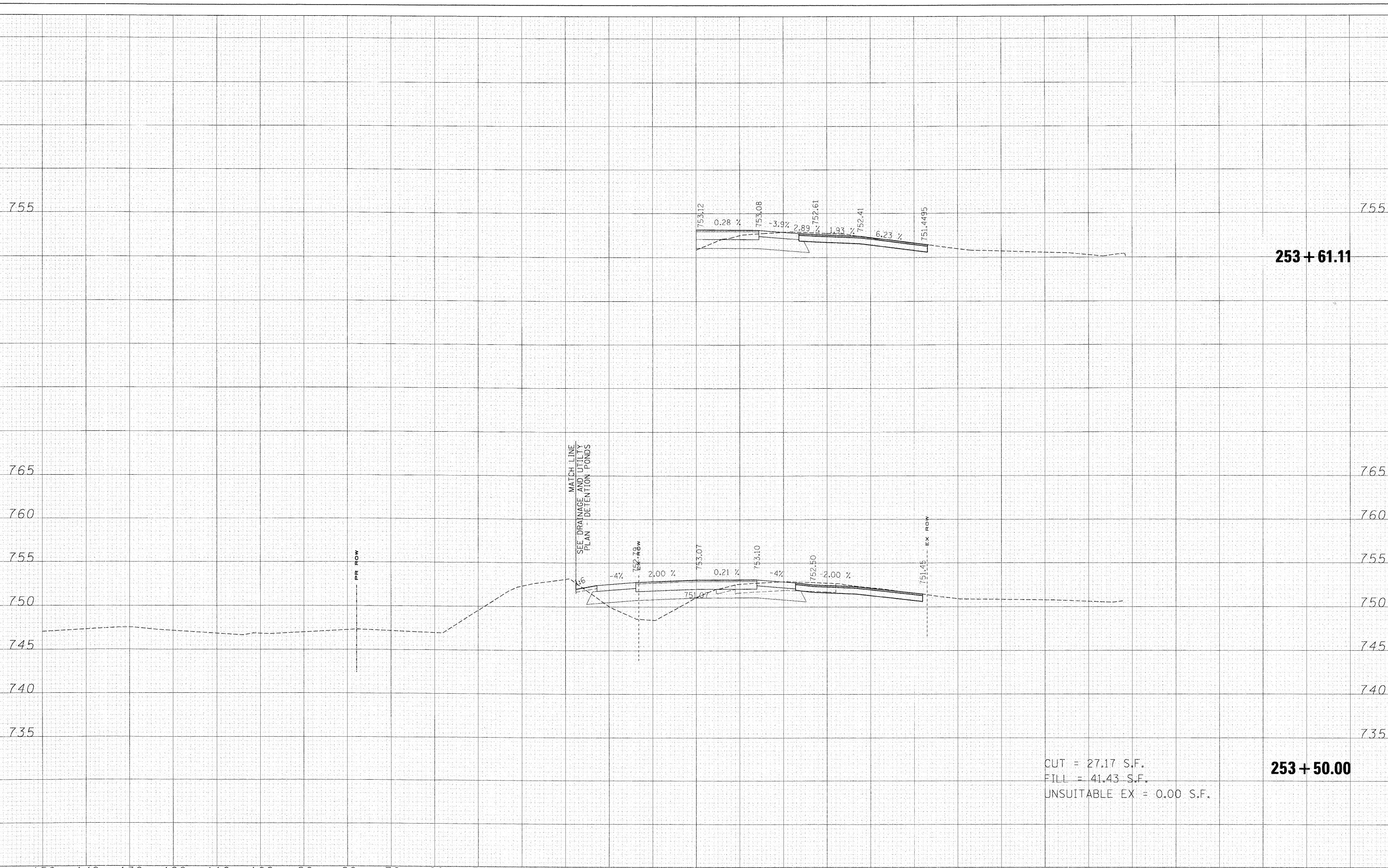
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		DATE - 3/31/09	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						

ORIGINAL SURVEY PLOTTED AREAS CHECKED

TITLE SURVEY PLOTTED AREAS CHECKED

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253 + 50.00

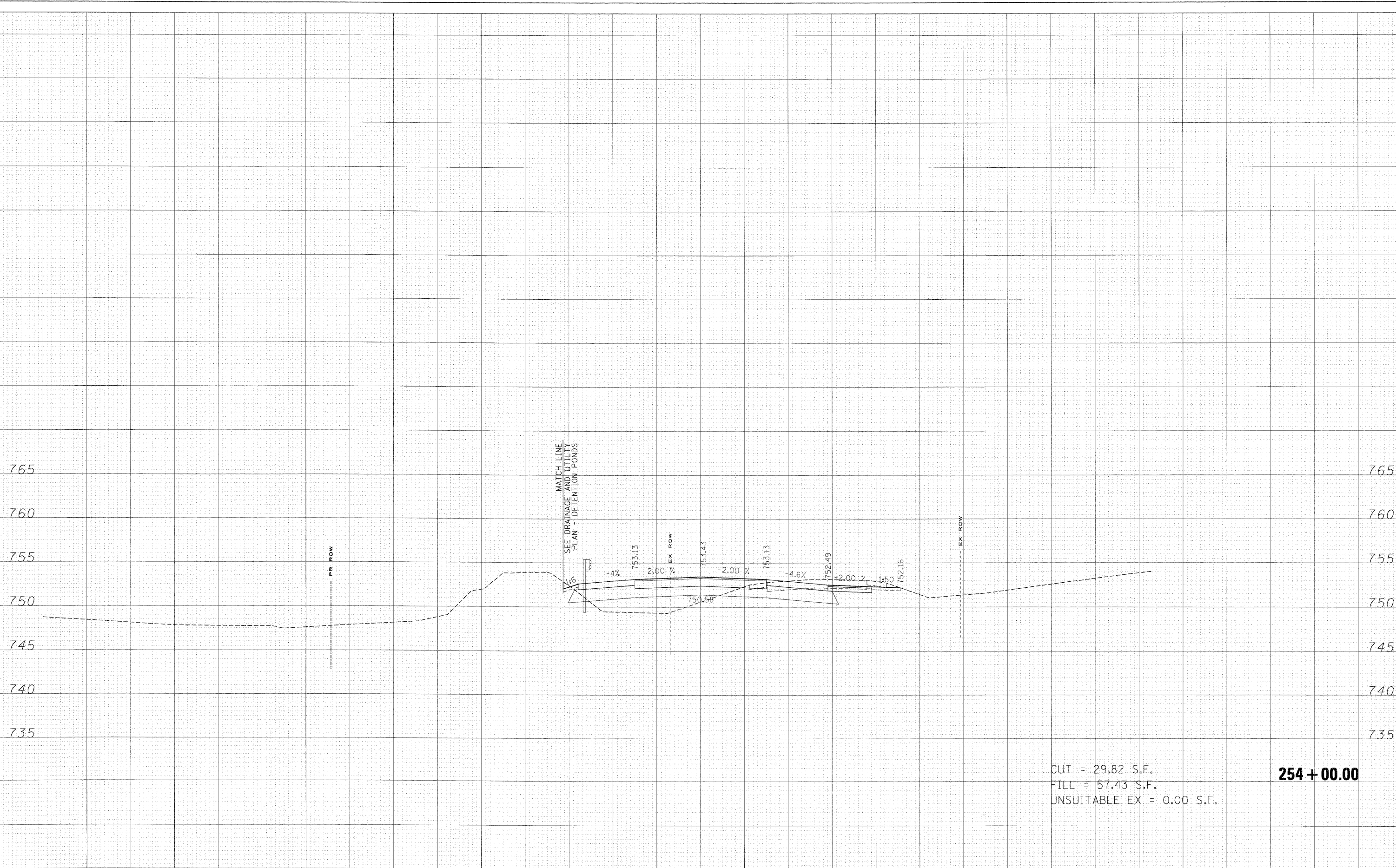
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FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
FILES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 253+50.00 TO STA. 253+61.11	361	06-00214-15-BR	KANE/DUPAGE	545	385
		CHECKED - JJT	REVISED -		CONTRACT NO. 63074									
		DATE - 3/31/09	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT									

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

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

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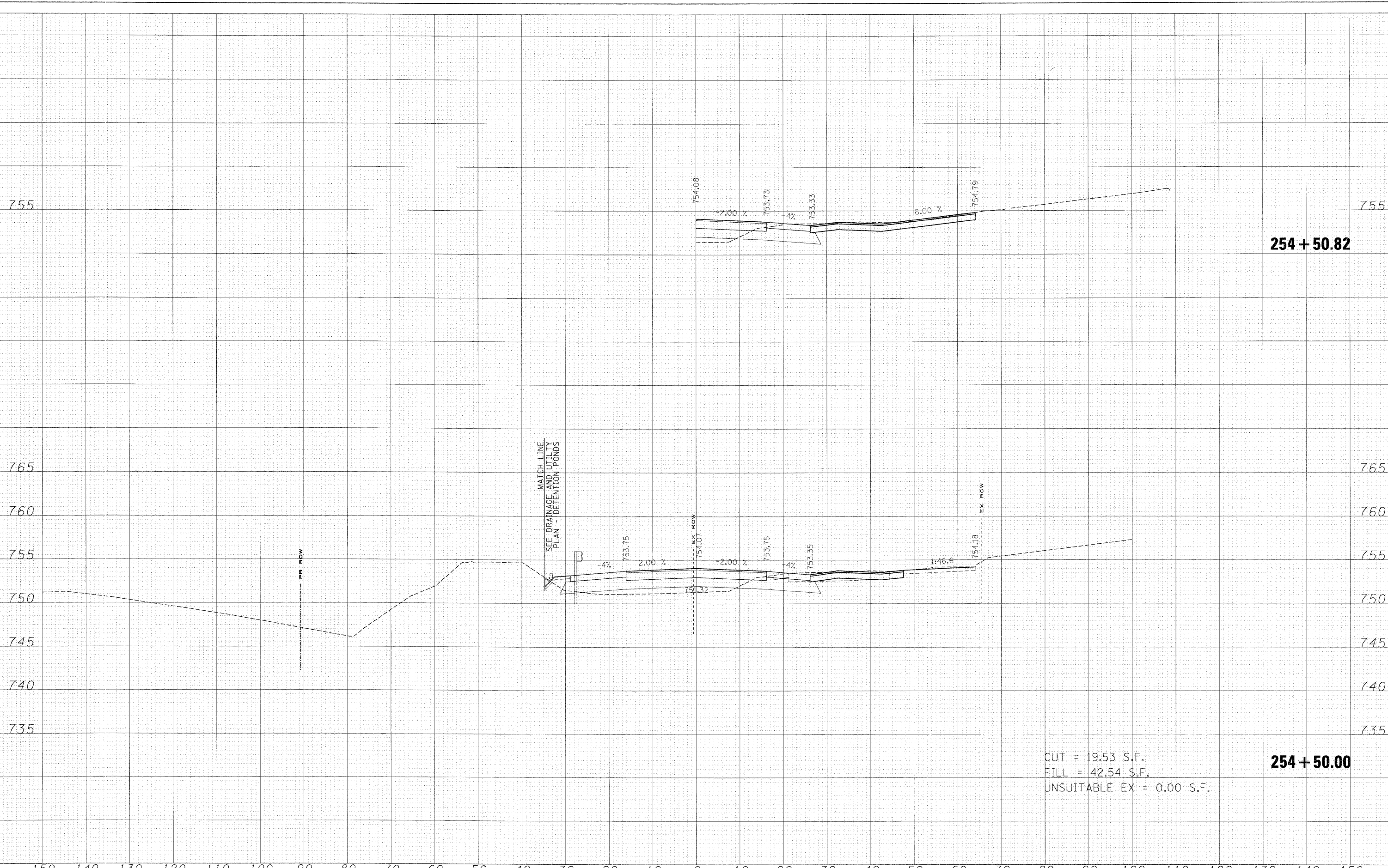
254 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 3/30/2009	DATE - 3/31/09	REVISED -			SCALE: SHEET NO. OF SHEETS STA. 254+00.00 TO STA. 254+00.00 FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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254 + 50.82

254 + 50.00

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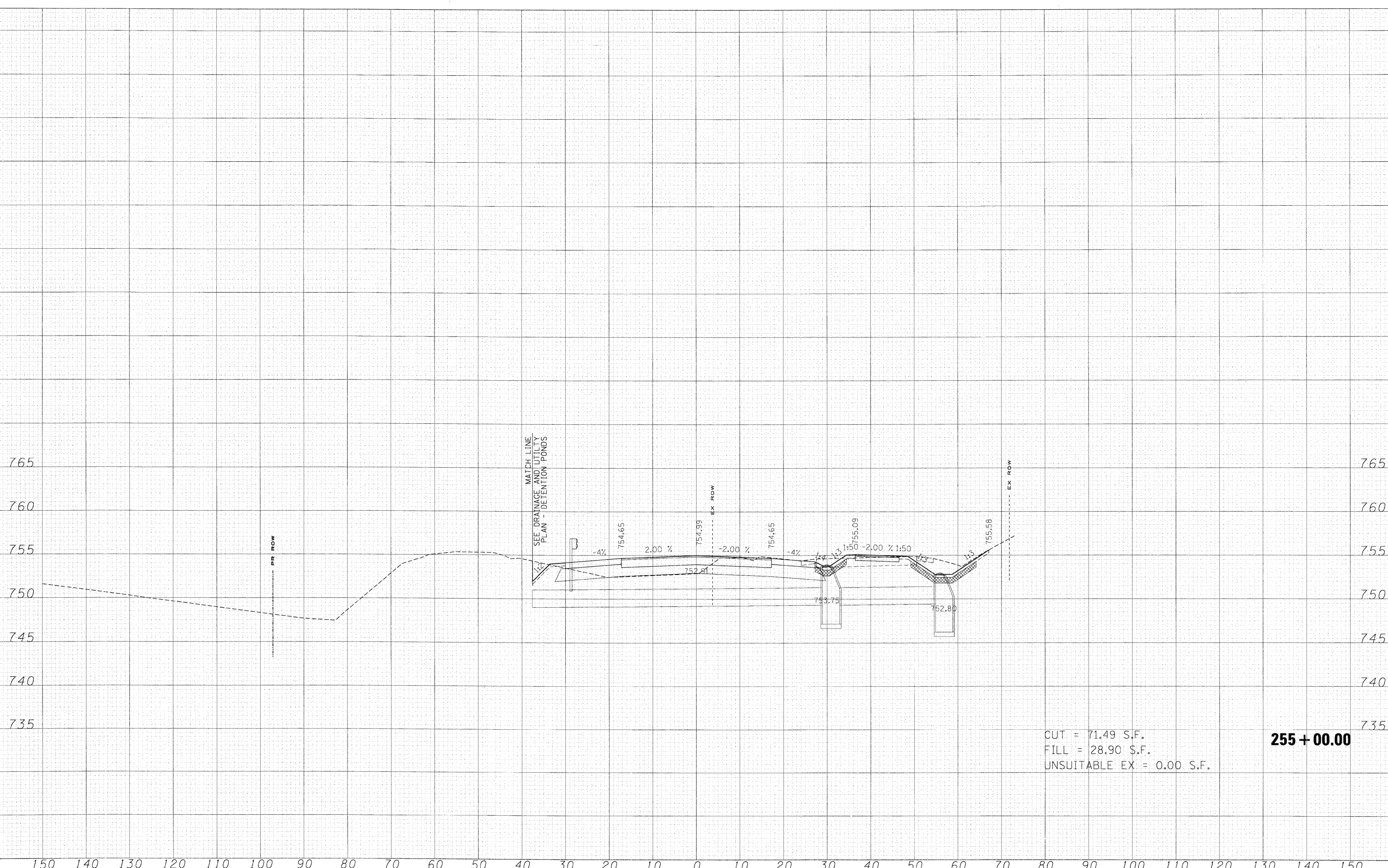
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FILES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA. 254+50.00	TO STA. 254+50.82	361	06-00214-15-BR	KANE/DUPAGE	545	387
		CHECKED - JJT	REVISED -											
		DATE - 3/31/09	REVISED -											

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
		CONTRACT NO. 63074

FINAL SURVEY SURVEYED PLOTTED NOTE BOOK AREAS CHECKED

ORIGINAL SURVEY SURVEYED PLOTTED NOTE BOOK AREAS CHECKED

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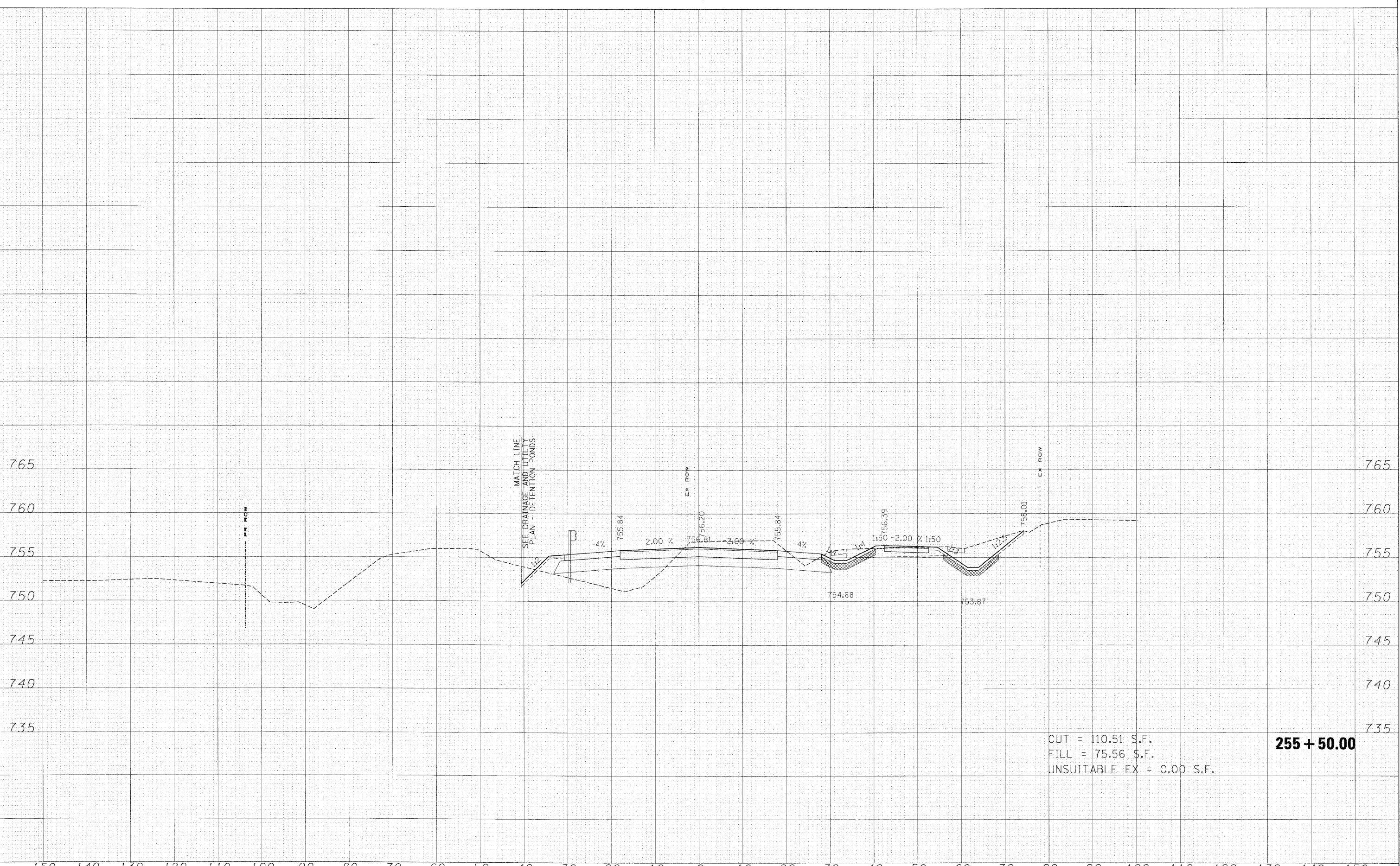
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FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILES		DRAWN - MAC	REVISED		SCALE:	SHEET NO.	OF	SHEETS	STA. 255+00.00	TO STA. 255+00.00	FED. ROAD DIST. NO.	[ILLINOIS] FED. AID PROJECT
		CHECKED - JJT	REVISED -									
		DATE - 3/31/09	REVISED -									

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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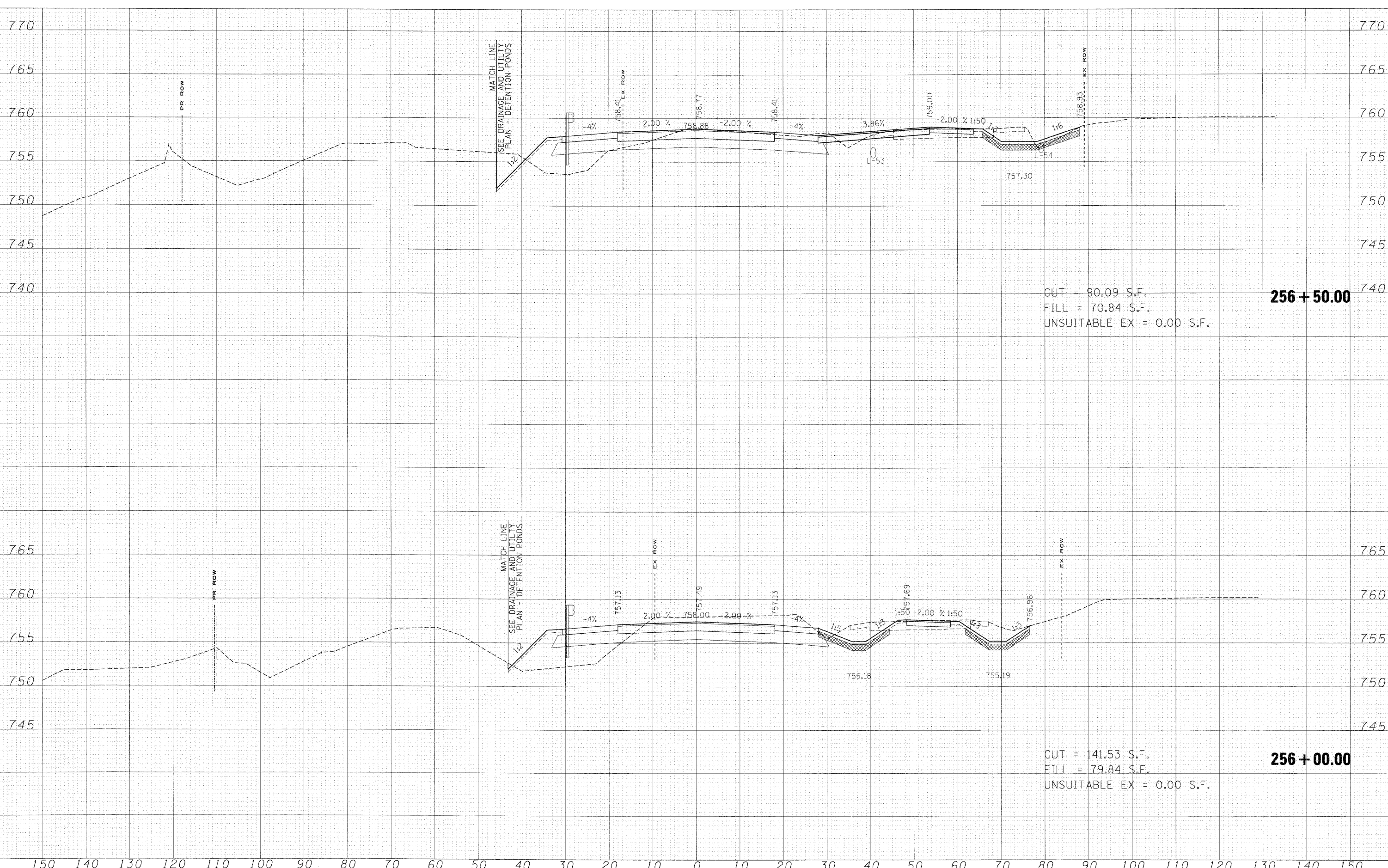
255 + 50.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	361	06-00214-15-BR	KANE/DUPAGE	545	389
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	PLOT DATE = 3/31/2009	DATE - 3/31/09	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT								

FINAL SURVEY SUBMITTED SURVEY PLOTTED TEMPLATE NOTE BOOK AREAS CHECKED NO.

ORIGINAL SURVEY SUBMITTED SURVEY PLOTTED TEMPLATE NOTE BOOK AREAS CHECKED NO.

X:\3900\3944\engineering\documents\roadway\cross-sections\ssht.abc\dun_xsl.dgn



CUT = 90.09 S.F.
 FILL = 70.84 S.F.
 UNSUITABLE EX = 0.00 S.F.
256 + 50.00

CUT = 141.53 S.F.
 FILL = 79.84 S.F.
 UNSUITABLE EX = 0.00 S.F.
256 + 00.00

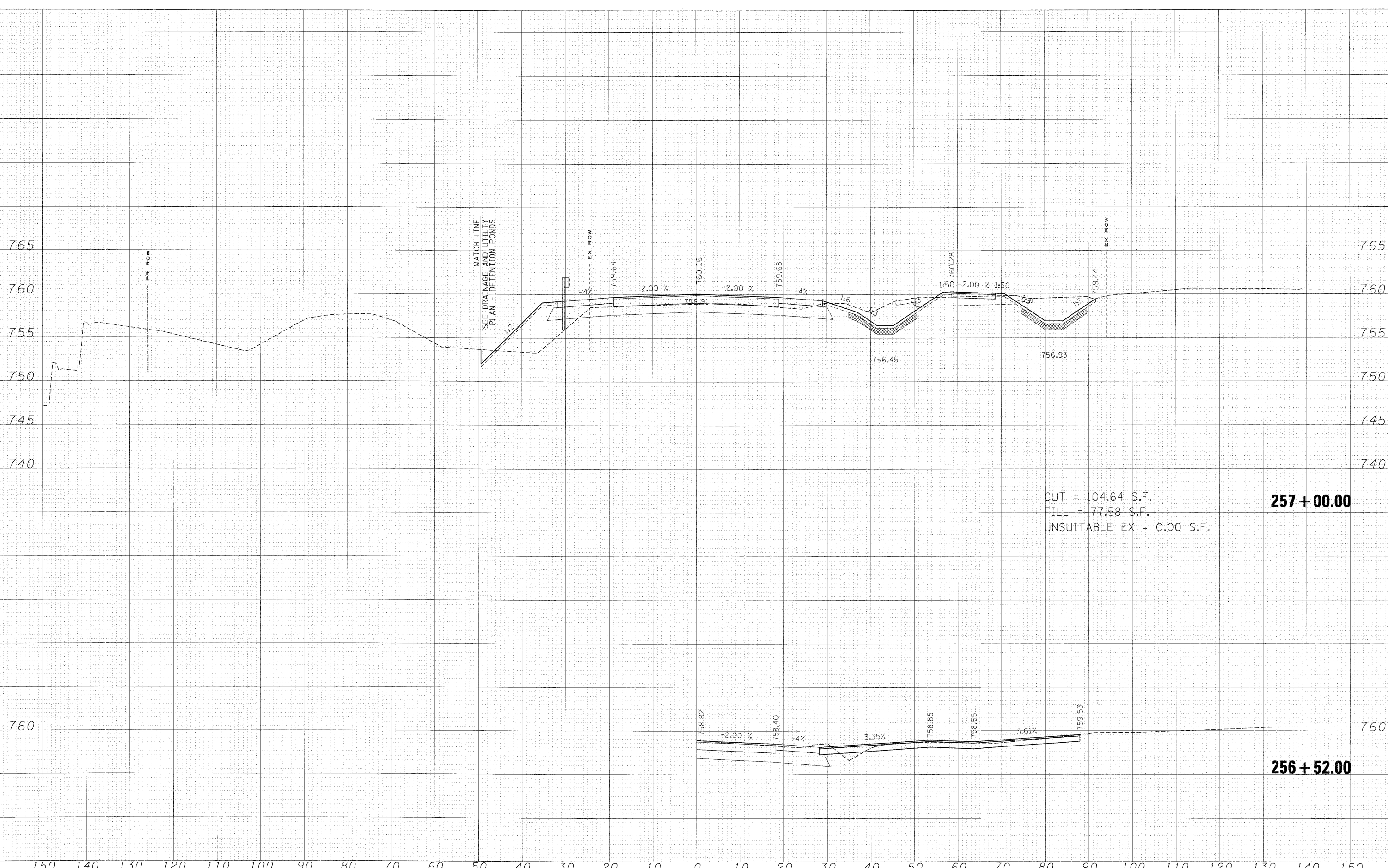
FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
#FILES*		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 256+00.00 TO STA. 256+50.00	361	06-00214-15-BR	KANE/DUPAGE	545	390
		CHECKED - JJT	REVISED -											
		DATE - 3/31/09	REVISED -											

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 63074

FINAL SURVEY PLOTTED TEMPLATE NO. AREAS CHECKED

ORIGINAL SURVEY PLOTTED TEMPLATE NO. AREAS CHECKED

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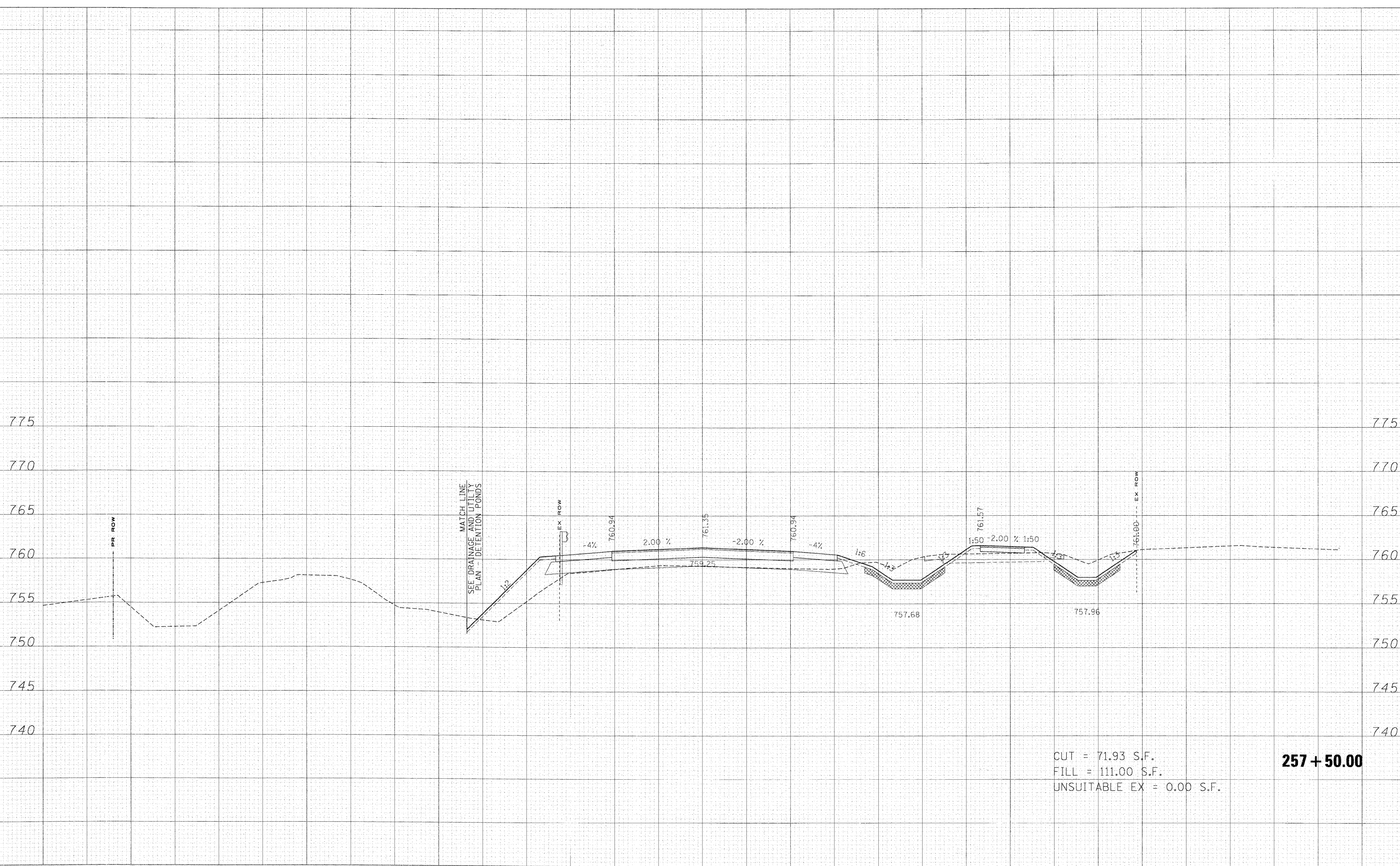


FILE NAME =	USER NAME = #USER#	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 3/30/2009	CHECKED - JJT	REVISED -			CONTRACT NO. 63074		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			
		DATE - 3/31/09	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. 256+52.00 TO STA. 257+00.00			

FINAL SURVEY PLOTTED AREAS CHECKED

ORIGINAL SURVEY PLOTTED AREAS CHECKED

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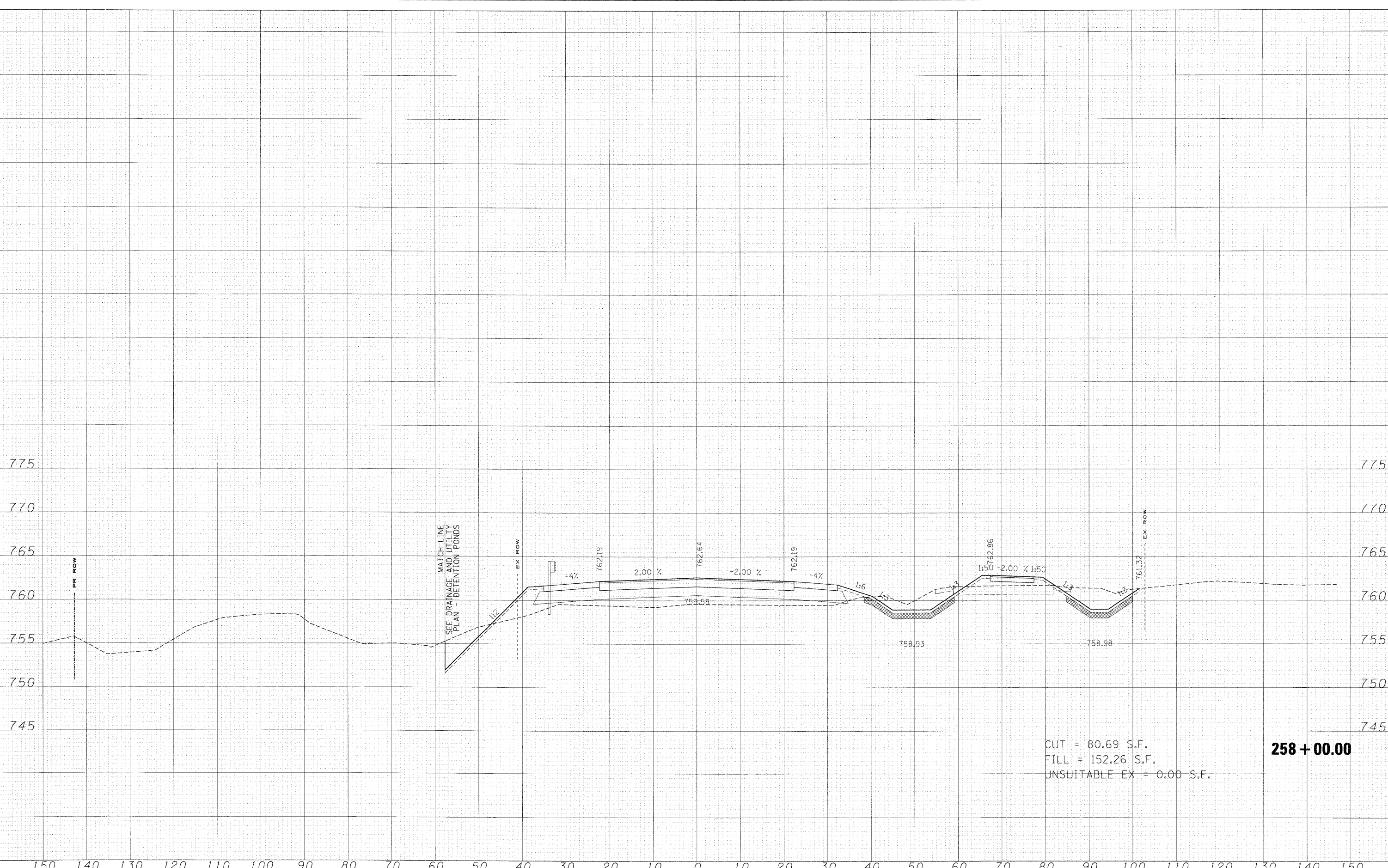


257 + 50.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FILES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 257+50.00 TO STA. 257+50.00	361	06-00214-15-BR	KANE/DUPAGE	545	392
		CHECKED - JJT	REVISED -						CONTRACT NO. 63074			
		DATE - 3/31/09	REVISED -					FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINL SURVEYED PLOTTED AREAS CHECKED
 SURVEY NOTE BOOK NO.

ORIGINAL SURVEY PLOTTED AREAS CHECKED
 SURVEY NOTE BOOK NO.



CUT = 80.69 S.F.
 FILL = 152.26 S.F.
 UNSUITABLE EX = 0.00 S.F.

258 + 00.00

FILE NAME =
 #FILES#

USER NAME = #USER#
 PLO SCALE = 10.0000' / IN.
 PLO DATE = 3/30/2009

DESIGNED - MAC
 DRAWN - MAC
 CHECKED - JJT
 DATE - 3/31/09

REVISED -
 REVISED -
 REVISED -
 REVISED -

**KANE COUNTY
DIVISION OF TRANSPORTATION**

DUNHAM ROAD CROSS SECTIONS

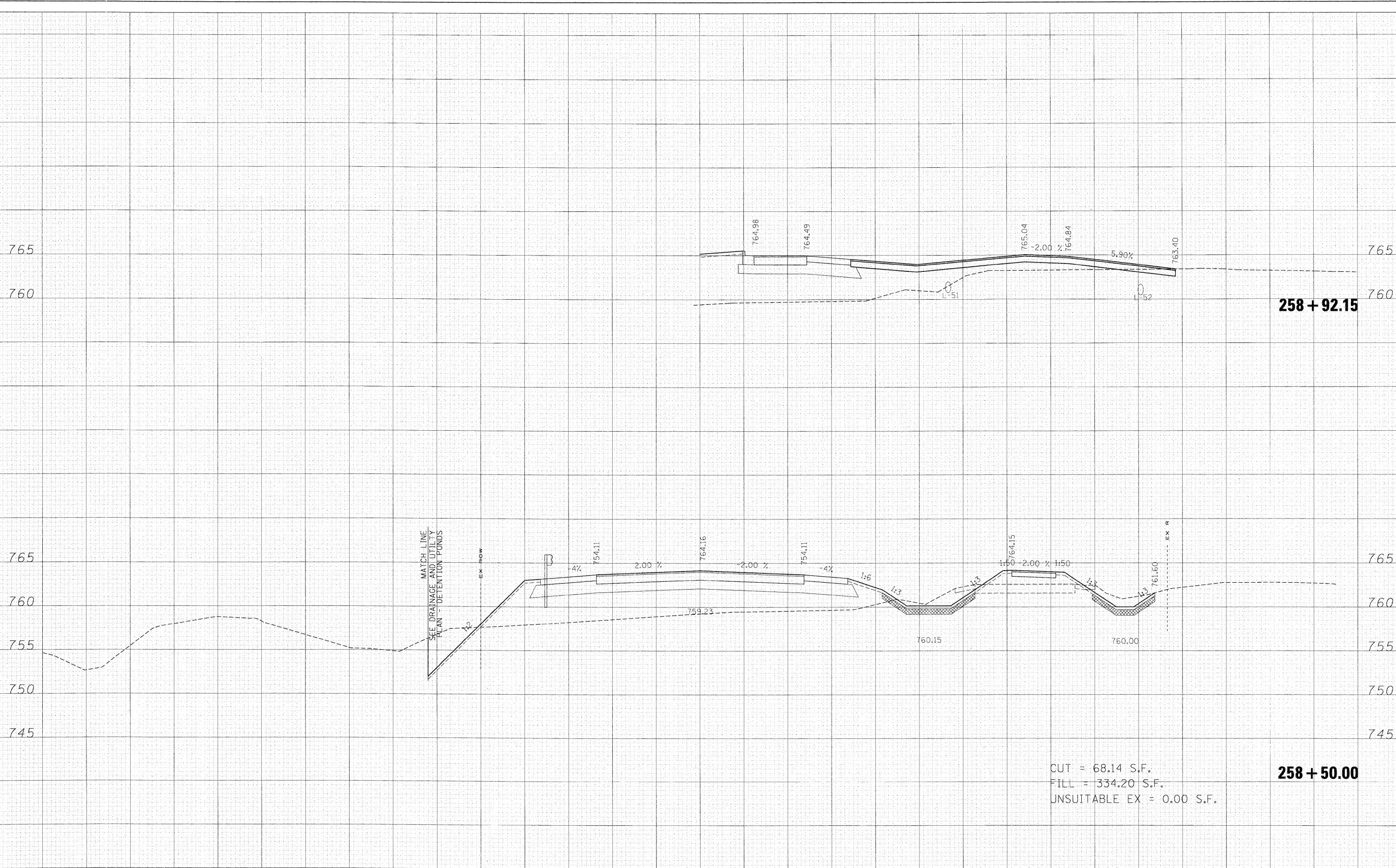
SCALE: SHEET NO. OF SHEETS STA. 258+00.00 TO STA. 258+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
361	06-00214-15-BR	KANE/DUPAGE	545	393
CONTRACT NO. 63074			ILLINOIS FED. AID PROJECT	

DATE	
TIME	
SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

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

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258 + 92.15

258 + 50.00

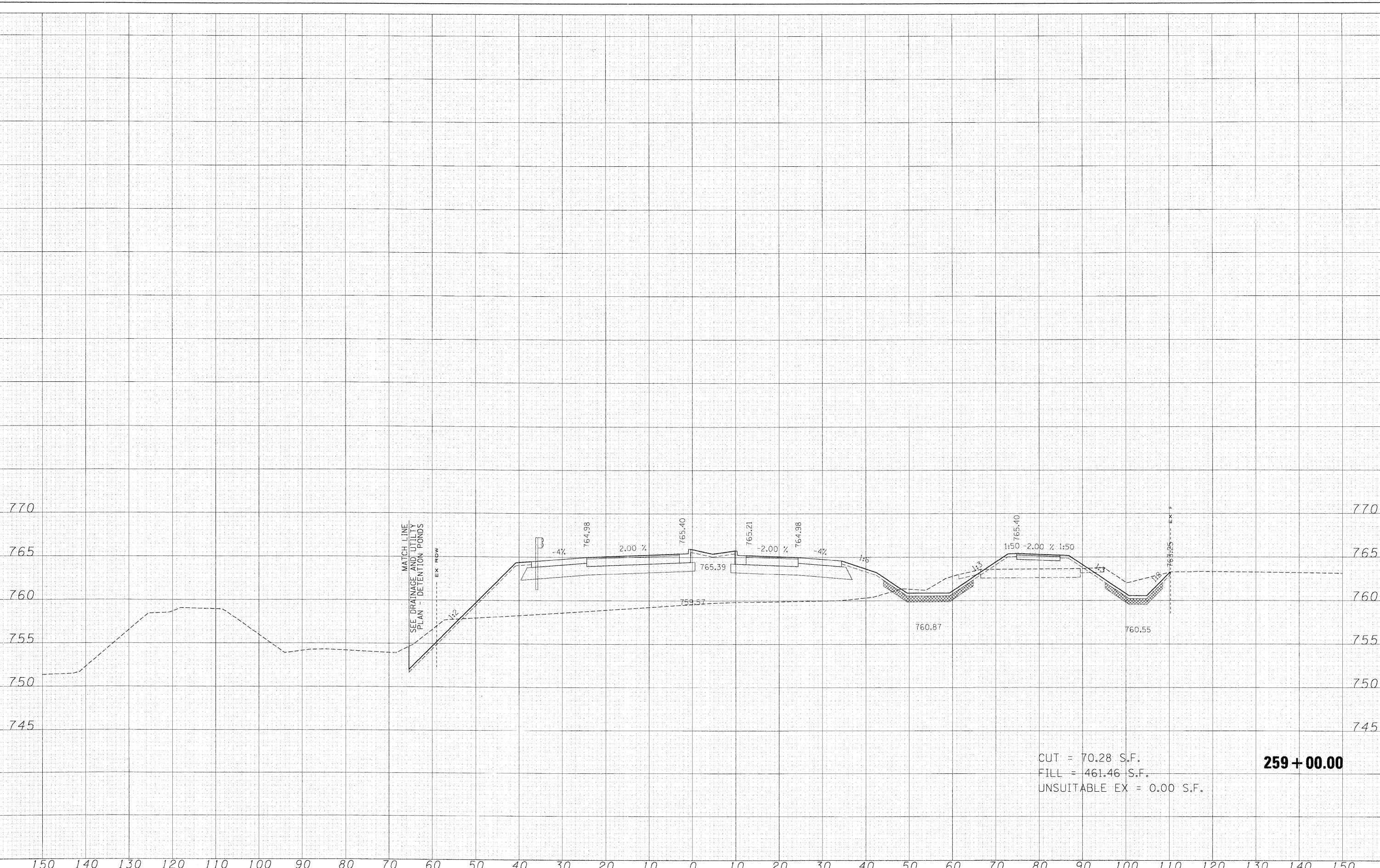
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FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
#FILES#	PLOT SCALE = 10.0000' / IN.	DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 258+50.00 TO STA. 258+92.15	361	06-00214-15-BR	KANE/DUPAGE	545	394
	PLOT DATE 3/30/2009	CHECKED - JJT	REVISED -											
		DATE - 3/31/09	REVISED -											
										CONTRACT NO. 63074			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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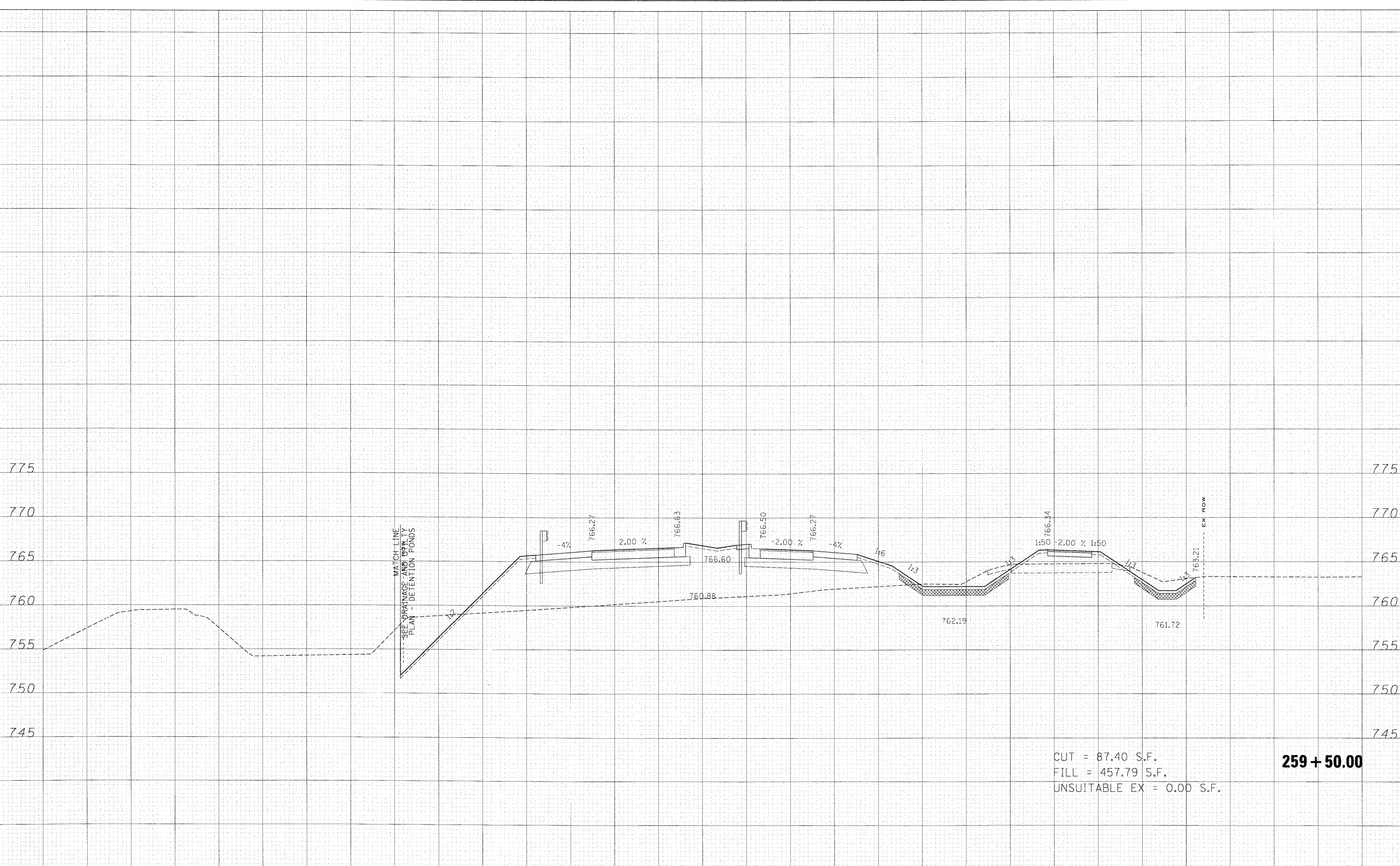
259 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CHECKED - JJT	REVISED -		STA. 259+00.00	TO STA. 259+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				
		DATE - 3/31/09	REVISED -		CONTRACT NO. 63074							

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

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 FILL = 457.79 S.F.
 UNSUITABLE EX = 0.00 S.F.

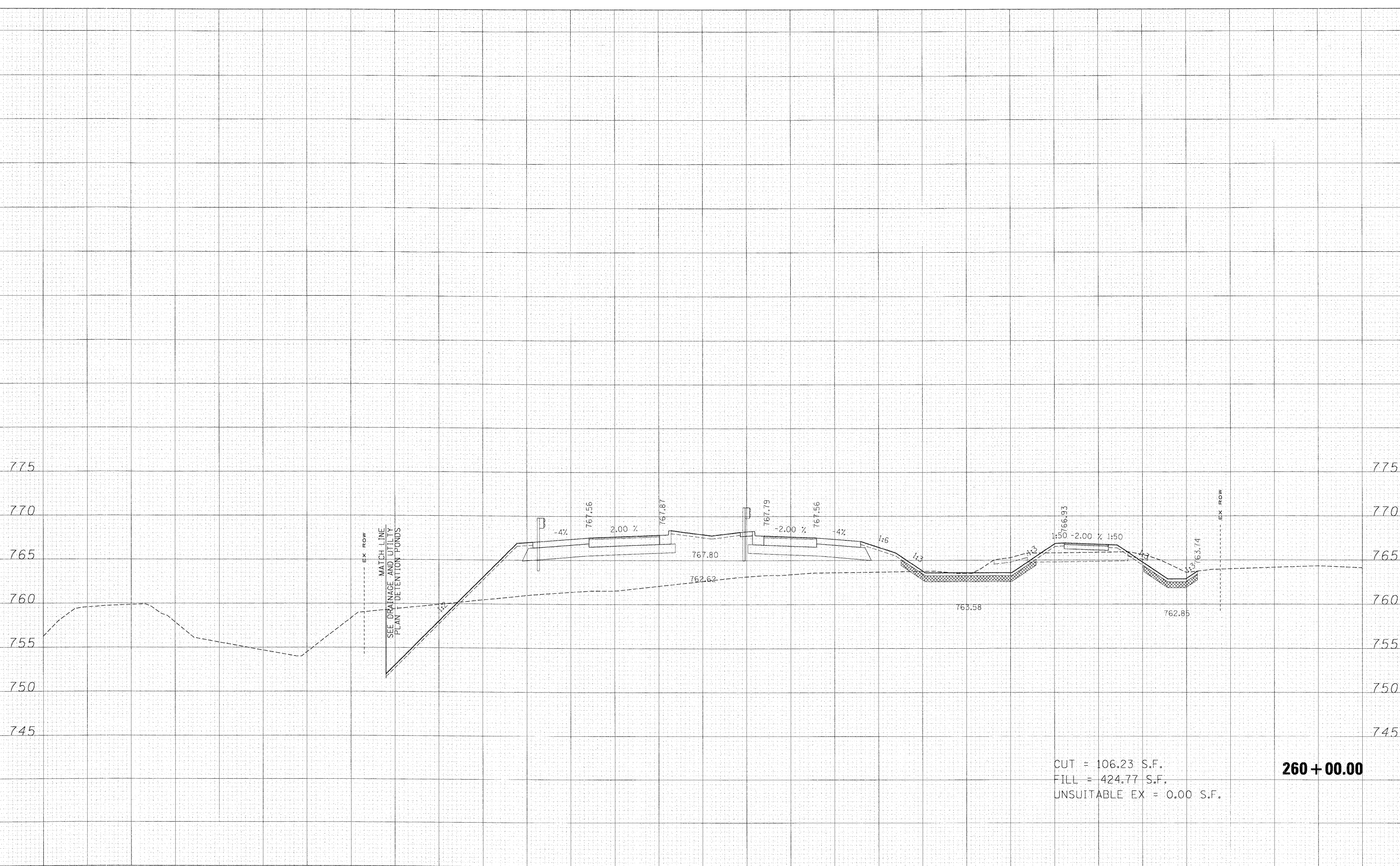
259 + 50.00

FILE NAME =	USER NAME = #USER#	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES#	PLOT SCALE = 10.0000' / IN.	DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	361	06-00214-15-BR	KANE/DUPAGE	545	396
	PLOT DATE 3/30/2009	CHECKED - JJT	REVISED -		STA. 259+50.00	TO STA. 259+50.00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 63074			
		DATE - 3/31/09	REVISED -										

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

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

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CUT = 106.23 S.F.
 FILL = 424.77 S.F.
 UNSUITABLE EX = 0.00 S.F.

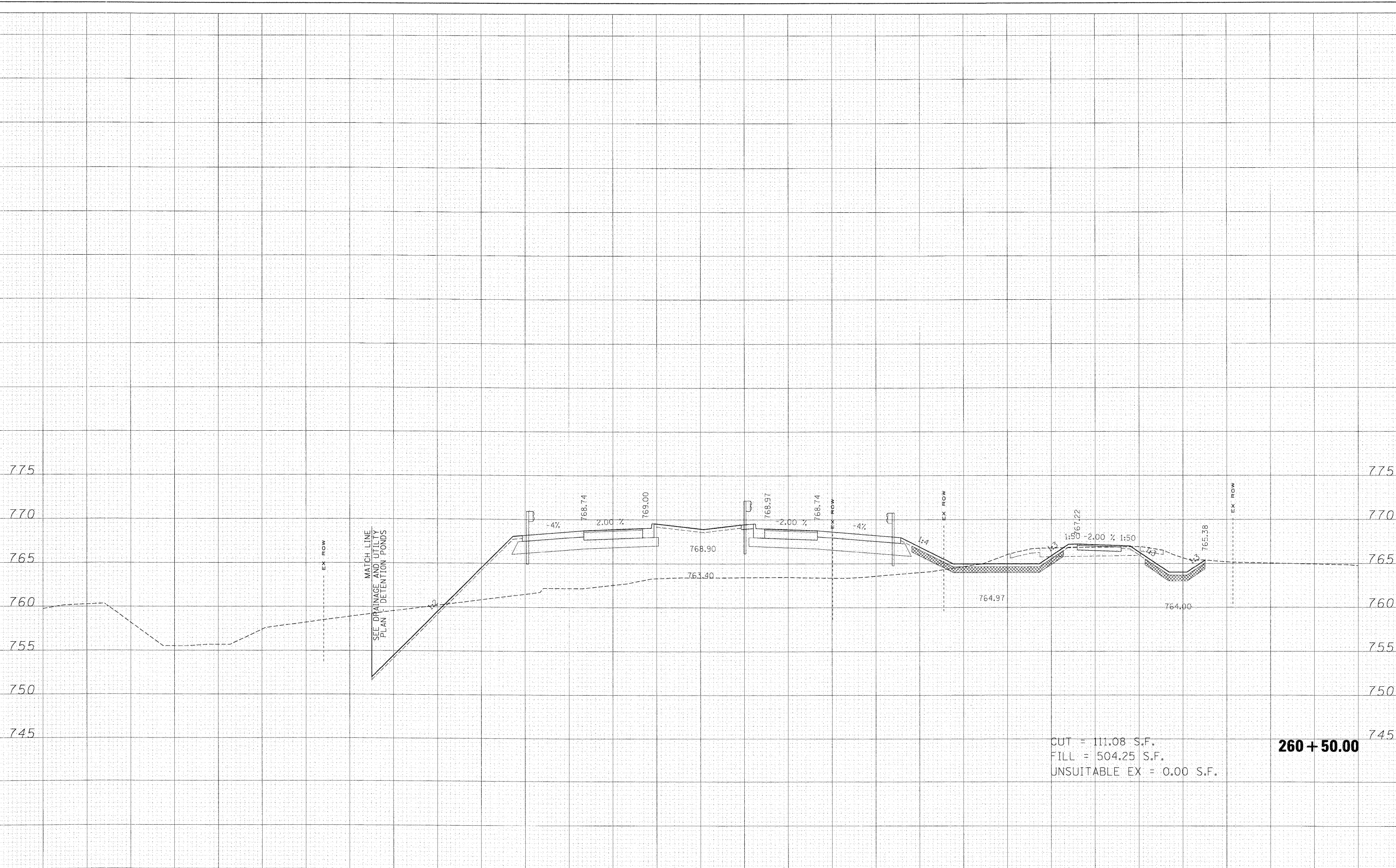
260 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILES*	PLT SCALE = 10.0000' / IN.	DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	361	06-00214-15-BR	KANE/DUPAGE	545	397
	PLT DATE = 3/30/2009	CHECKED - JJT	REVISED -		STA. 260+00.00	TO	STA. 260+00.00	CONTRACT NO. 63074					
		DATE - 3/31/09	REVISED -		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT						

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

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

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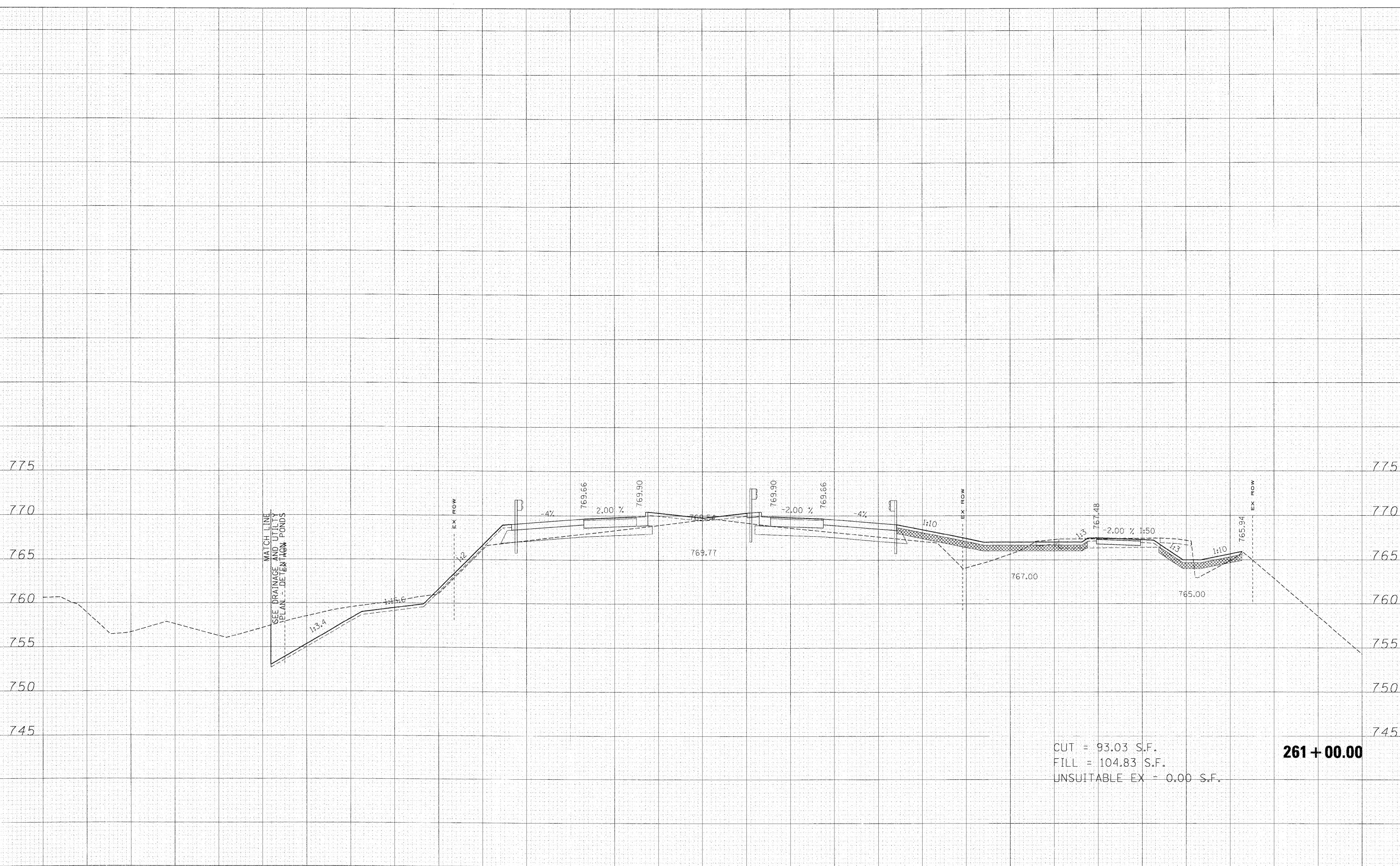


FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT.ES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA. 260+50.00 TO STA. 260+50.00	361	06-00214-15-BR	KANE/DUPAGE	545	398
		CHECKED - JJT	REVISED -										
		DATE - 3/31/09	REVISED -										
											CONTRACT NO. 63074		
											FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		

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

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

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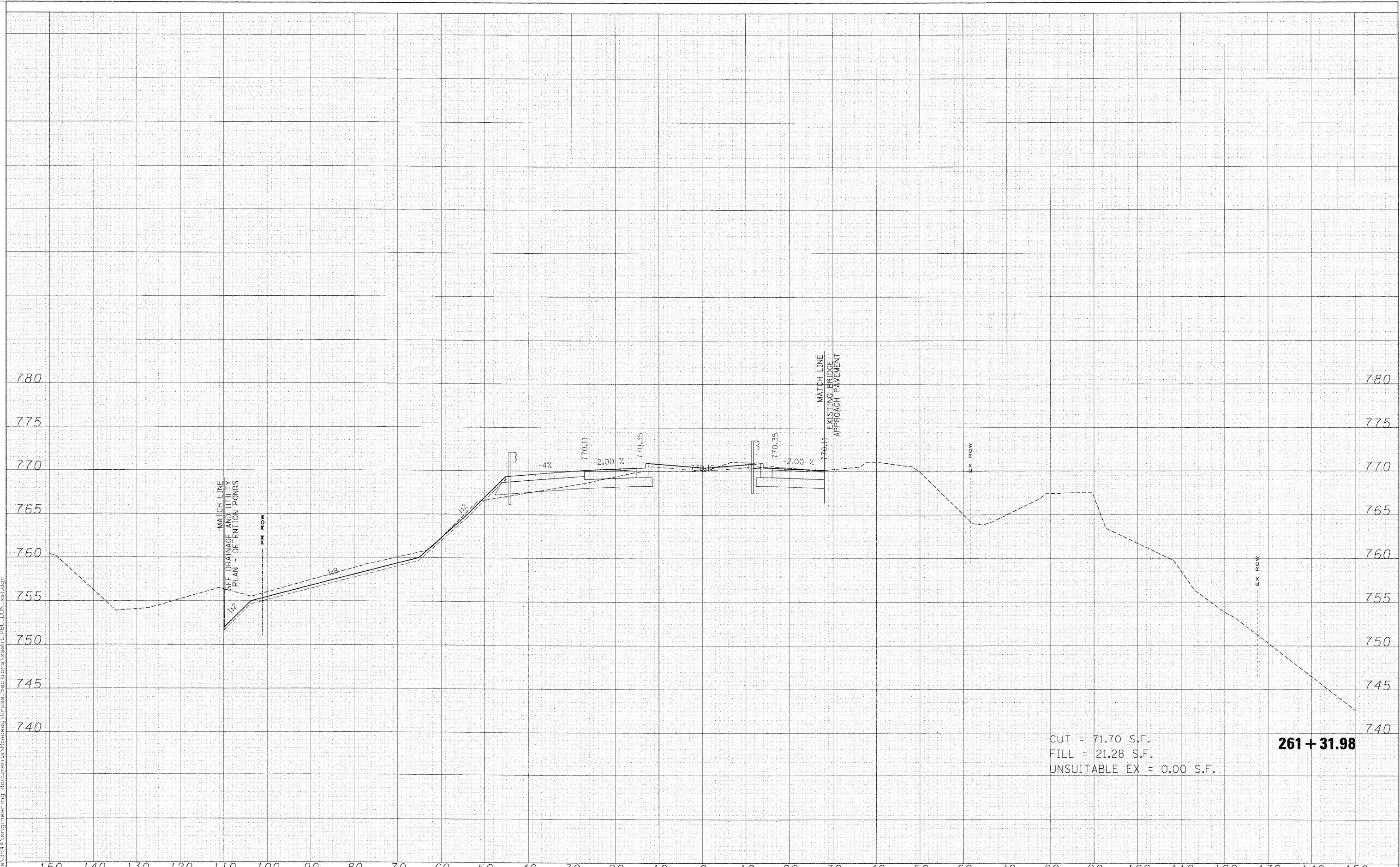
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 FILL = 104.83 S.F.
 UNSUITABLE EX = 0.00 S.F.

261 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
FILES		DRAWN - MAC	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 261+00.00 TO STA. 261+00.00	361	06-00214-15-BR	KANE/DUPAGE	545	399
		CHECKED - JJT	REVISED -											
		DATE - 3/31/09	REVISED -											
								CONTRACT NO. 63074		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
AREAS CHECKED	TEMPLATE
AREAS CHECKED	AREAS
AREAS CHECKED	AREAS

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
AREAS CHECKED	TEMPLATE
AREAS CHECKED	AREAS
AREAS CHECKED	AREAS



CUT = 71.70 S.F.
 FILL = 21.28 S.F.
 UNSUITABLE EX = 0.00 S.F.

261 + 31.98

FILE NAME =	USER NAME = *USER*	DESIGNED - MAC	REVISED -	KANE COUNTY DIVISION OF TRANSPORTATION	DUNHAM ROAD CROSS SECTIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 3/30/2009	CHECKED - JJT	REVISED -			CONTRACT NO. 63074					
		DATE - 3/31/09	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					

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