F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	1
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 87559		

1-17-14 LETTING ITEM 081

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE
LASALLE COUNTY
SECTION 14–00729–00–BR
F.A.S. 268 (CH 15) OVER WOLF CREEK
PROJECT NO. BRS–0268(114)
JOB NUMBER C–93–078–13

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL NOTES, DETAILS, TYPICAL SECTIONS
3.	SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
4.	TRAFFIC CONTROL PLAN
5.	EROSION CONTROL PLAN
6.	PLAN AND PROFILE
7.-26.	STRUCTURE PLANS AND SOIL BORING LOGS
27.-29.	EXISTING STRUCTURE PLANS
30.-37.	CROSS SECTIONS

REQUIRED HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-10	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701901-03	TRAFFIC CONTROL DEVICES
780001-04	TYPICAL PAVEMENT MARKINGS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SCALES
- PLAN / PROFILE HORIZ. — 30′ 0 30′
- PROFILE VERT. — 5′ 0 5′
- CROSS SECTIONS HORIZ. / CROSS SECTIONS VERT. — 5′ 0 5′

LOCATION OF SECTION INDICATED THUS:–

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

UTILITY COMPANIES

CommED
JOLIET, ILLINOIS

NICOR GAS
NAPERVILLE, ILLINOIS

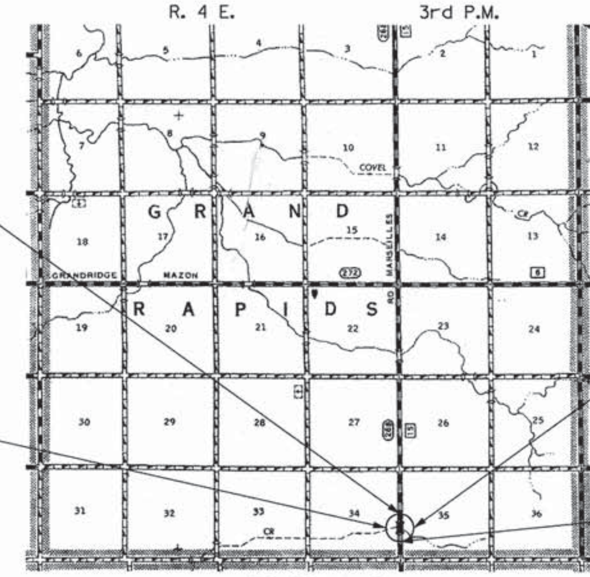
MEDIACOM
ELBURN, ILLINOIS

FRONTIER
BLOOMINGTON, ILLINOIS

MARSEILLES TELEPHONE
METAMORA, ILLINOIS

INVENERGY
MARSEILLES, ILLINOIS

SECTION 14-00729-00-BR
ENDS
STATION 43+00.00



LOCATION MAP

1 MI 0 1 MI
APPROXIMATE SCALE

EXISTING STRUCTURE 050-3025
SINGLE SPAN PRECAST NELSON BEAM BRIDGE
ON TIMBER PILE CLOSED ABUTMENTS WITH
REINFORCED CONCRETE CAPS
33′-9″ BK. TO BK., AND 26′-3″ O. TO O.,
NO SKEW (TO BE REMOVED)

PROPOSED STRUCTURE NO. 050-3611
SINGLE SPAN 36″ P.P.C. I-BEAM WITH
CONCRETE DECK SUPERSTRUCTURE
ON CONC. INTEGRAL ABUTMENTS,
49′-0″ BK. TO BK. AND 31′-0″ O. TO O.,
NO SKEW.

SECTION 14-00729-00-BR
BEGINS
STATION 37+50.00

PLANS DESIGNED IN ACCORDANCE WITH BUREAU
OF LOCAL ROADS AND STREETS MANUAL GUIDELINES
FOR TWO LANE RURAL COLLECTORS - RECONSTRUCTION

APPROVED 10/29 2013
[illegible]
LASALLE COUNTY ENGINEER

PASSED Oct 30 2013
[illegible]
DISTRICT THREE ENGINEER OF
LOCAL ROADS & STREETS

Released For
Bid Based on
Limited Review Oct 30 2013
[illegible]
DEPUTY DIRECTOR OF HIGHWAYS,
REGION TWO ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

NET LENGTH OF PROJECT = 550.00 FEET = 0.104 MILES

DESIGN CLASSIFICATION: MAJOR-COLLECTOR (NON-URBAN)
DESIGN ADT = 1130 (2034)
DESIGN SPEED = 50 MPH

Hutchison Engineering, Inc.
JACKSONVILLE–SHOREWOOD–PEORIA
2013 JOB#3329

JOSEPH E. HUTCHISON
[illegible]
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
10/24/2013
[illegible]
Lic Exp 11/30/2015
SIGNATURE
ENGINEER'S SEAL

3329E001

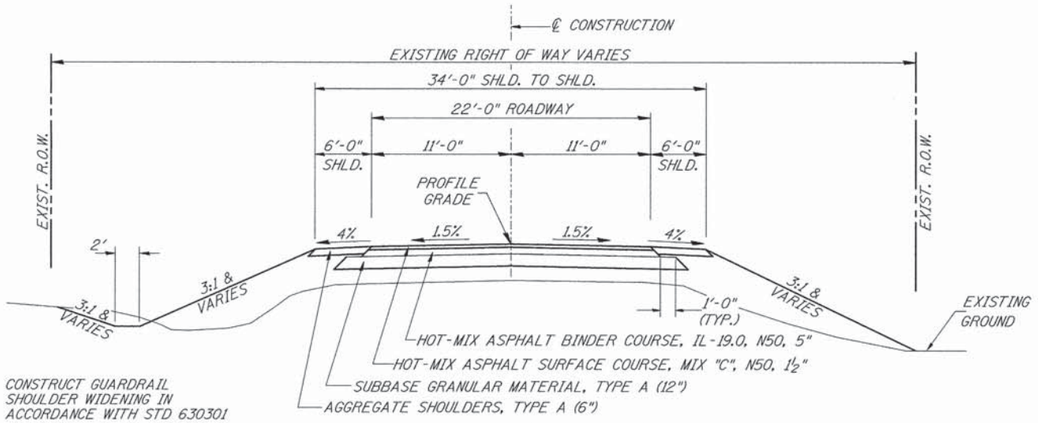
CONTRACT NO. 87559

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	HMA BINDER	HMA SURFACE
PG GRADE	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4% @ N50	4% @ N50
MIXTURE COMPOSITION	IL-19.0	IL-9.5
FRICTION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	CORES	CORES

STRUCTURAL DESIGN INFORMATION
COUNTY HIGHWAY 15

ROAD CLASSIFICATION: CLASS III 80,000 lb./20 YEAR DESIGN
STRUCTURAL DESIGN TRAFFIC:
PV = 942 SU = 75 MU = 54
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
P = 88% S = 7% M = 5%
MINIMUM SUBGRADE SUPPORT RATING: FAIR
FLEXIBLE PAVEMENT DESIGN: MINIMUM TF = 0.29
ASPHALT PAVEMENT THICKNESS: 6 1/2 "
SUB-BASE GRANULAR MATERIAL, TYPE A: 12"



CONSTRUCT GUARDRAIL SHOULDER WIDENING IN ACCORDANCE WITH STD 630301

PROPOSED TYPICAL SECTION

STA. 37+50.00 TO STA. 39+44.00
STA. 40+61.00 TO STA. 43+00.00
EXCEPT TRANSITIONS

BRIDGE APPROACH PAVEMENT CONNECTOR
STA. 39+44.00 TO STA. 39+49.00
STA. 40+56.00 TO STA. 40+61.00

BRIDGE APPROACH PAVEMENT
STA. 39+49.00 TO STA. 39+79.00
STA. 40+26.00 TO STA. 40+56.00

BRIDGE OMISSION
STA. 39+79.00 TO STA. 40+26.00

GENERAL NOTES

THE REMOVAL OF EXISTING ASPHALT SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION

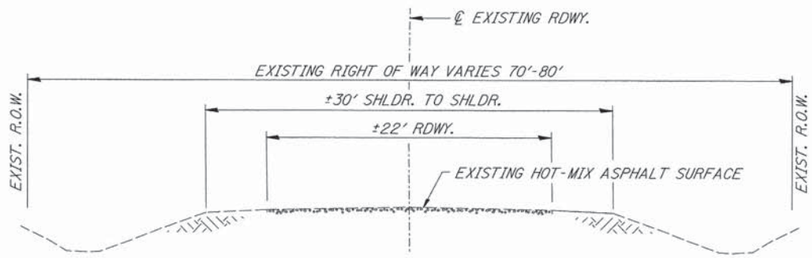
THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE FINAL SURFACE OF ALL DISTURBED/EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE COHESIVE VEGETATION SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATION SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. TOPSOIL MAY BE STRIPPED AND STOCKPILED FROM THE SITE OR HAULED IN FROM AN ALTERNATE LOCATION AS APPROVED BY THE ENGINEER.

ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.



EXISTING TYPICAL SECTION

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	PLOT DATE = 10/22/2013	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

GENERAL NOTES, DETAILS, TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 TO STA. 43+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	2
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	QUANTITY
①	20200100	EARTH EXCAVATION	CU YD	895
	20300100	CHANNEL EXCAVATION	CU YD	160
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	500
	28000305	TEMPORARY DITCH CHECKS	FOOT	60
	28000400	PERIMETER EROSION BARRIER	FOOT	615
	28000500	INLET AND PIPE PROTECTION	EACH	1
	28100109	STONE RIPRAP, CLASS A5	SQ YD	385
	28200200	FILTER FABRIC	SQ YD	385
	31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	792
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	605
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	307
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	90
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	34
	48100100	AGGREGATE SHOULDERS, TYPE A	TON	222
①	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	195
	50300100	FLOOR DRAINS	EACH	4
	50300225	CONCRETE STRUCTURES	CU YD	55.8
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	158.4
	50300260	BRIDGE DECK GROOVING	SQ YD	333
	50300280	CONCRETE ENCASEMENT	CU YD	2.6
	50300300	PROTECTIVE COAT	SQ YD	377
	50400805	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36"	FOOT	232
①	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	43,360
②	50901050	STEEL RAILING, TYPE SM	FOOT	154
	51200957	FURNISHING METAL SHELL PILES 12"X0.250"	FOOT	368
	51202305	DRIVING PILES	FOOT	368
	51203200	TEST PILE METAL SHELLS	EACH	2
	51500100	NAME PLATES	EACH	1
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	55
②	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	25.0
②	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
②	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3
	63200310	GUARDRAIL REMOVAL	FOOT	470
②①	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	215
	67100100	MOBILIZATION	L SUM	1
②	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,306
②	78200410	GUARDRAIL MARKERS, TYPE A	EACH	13
②①	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3
①	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5
①	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	90
①	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
①	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
①	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	113

① SEE SPECIAL PROVISIONS ② SPECIALTY ITEMS

CONSTRUCTION CODE TYPE: 0011

EARTHWORK SUMMARY

STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
	CU YD	CU YD	CU YD	CU YD	CU YD
RDWY 37+50.00 - 39+78.00	396			227	70
RDWY 40+27.00 - 43+00.00	500			185	190
CHANNEL		160			
STRUCTURE			195		
TOTAL	896	160	195	412	260
USE	895	160	195	-	260

(@ 25% SHRINKAGE)

PERIMETER EROSION BARRIER

STATION TO STATION	SIDE	FOOT
37+50 - 38+75	RIGHT	125
39+25 - 39+78	RIGHT	65
40+27 - 43+00	LEFT	290
40+27 - 41+50	RIGHT	135
	TOTAL	615

AGGREGATE SHOULDERS, TYPE A

STATION TO STATION	SIDE	WIDTH	LENGTH	TON
37+50.00 - 38+00.00	LEFT	4.27' AVG.	50.00'	7
37+50.00 - 38+00.00	RIGHT	4.12' AVG.	50.00'	7
38+00.00 - 38+48.25	LEFT	6.00'	48.25'	10
38+00.00 - 38+48.25	RIGHT	6.00'	48.25'	10
38+48.25 - 38+60.25	LEFT	7.00' AVG.	12.00'	3
38+48.25 - 38+60.25	RIGHT	7.00' AVG.	12.00'	3
38+60.25 - 38+95.25	LEFT	8.00'	35.00'	10
38+60.25 - 38+95.25	RIGHT	8.00'	35.00'	10
38+95.25 - 38+96.75	LEFT	7.88' AVG.	1.50'	1
38+95.25 - 38+96.75	RIGHT	7.88' AVG.	1.50'	1
38+96.75 - 39+44.00	LEFT	7.75'	47.25'	13
38+96.75 - 39+44.00	RIGHT	7.75'	47.25'	13
39+44.00 - 39+78.00	LEFT	3.25'	34.00'	4
39+44.00 - 39+78.00	RIGHT	3.25'	34.00'	4
40+27.00 - 40+61.00	LEFT	3.25'	34.00'	4
40+27.00 - 40+61.00	RIGHT	3.25'	34.00'	4
40+61.00 - 42+50.00	LEFT	7.75'	189.00'	51
40+61.00 - 41+33.25	RIGHT	7.75'	72.25'	20
41+33.25 - 41+34.75	RIGHT	7.88' AVG.	1.50'	1
41+34.75 - 41+69.75	RIGHT	8.00'	35.00'	10
41+69.75 - 41+81.75	RIGHT	7.00' AVG.	12.00'	3
41+81.75 - 42+50.00	RIGHT	6.00'	68.25'	14
42+50.00 - 43+00.00	LEFT	7.05' AVG.	50.00'	12
42+50.00 - 43+00.00	RIGHT	4.19' AVG.	50.00'	7
			TOTAL	222

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6' POSTS

SIDE	STATION TO STATION	FOOT
RIGHT	40+84.75 - 41+09.75	25.0
	TOTAL	25.0

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

SIDE	STATION TO STATION	EACH
LEFT	38+70.25 - 39+20.25	1
RIGHT	38+70.25 - 39+20.25	1
RIGHT	41+09.75 - 41+59.75	1
	TOTAL	3

TRAFFIC BARRIER TERMINAL, TYPE 6A

SIDE	STATION TO STATION	EACH
LEFT	39+20.25 - 39+64.00	1
RIGHT	39+20.25 - 39+64.00	1
LEFT	40+41.00 - 40+84.75	1
RIGHT	40+41.00 - 40+84.75	1
	TOTAL	4

GUARDRAIL MARKERS, TYPE A

STATION TO STATION	SIDE	GUARDRAIL MARKERS (EACH)
38+70.25 - 43+00.00	LEFT	8
38+70.25 - 41+59.75	RIGHT	5
	TOTAL	13

ALL GUARDRAIL MARKERS SHALL BE BI-DIRECTIONAL

PAINT PAVEMENT MARKING - LINE 4"

STATION TO STATION	SIDE	DESCRIPTION	FOOT
37+50.00 - 43+00.00	LEFT	WHITE EDGE LINE	550
37+50.00 - 43+00.00	℄	YELLOW SKIP DASH	206
37+50.00 - 43+00.00	RIGHT	WHITE EDGE LINE	550
		TOTAL	1,306

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A

STATION TO STATION	SIDE	FOOT
40+85 - 43+00	LEFT	215
	TOTAL	215

GUARDRAIL REMOVAL

STATION TO STATION	SIDE	FOOT
38+09 - 39+84	RIGHT	175
38+71 - 39+84	LEFT	113
40+16 - 41+29	RIGHT	113
40+16 - 40+85	LEFT	69
	TOTAL	470

TEMPORARY DITCH CHECKS

STATION	SIDE	FOOT
38+35	LEFT	12
39+25	RIGHT	12
39+30	LEFT	12
39+85	LEFT	12
41+50	RIGHT	12
	TOTAL	60

INLET & PIPE PROTECTION

STATION	SIDE	EACH
37+65	RIGHT	1
	TOTAL	1

PAVEMENT SCHEDULE

STATION TO STATION	WIDTH	LENGTH	PRIME COAT GALLON 0.50 GAL/SQ YD	HOT-MIX ASPHALT SURF CSE TON 112#/SQ YD/IN	HOT-MIX ASPHALT BINDER CSE TON 112#/SQ YD/IN	SUB-BASE GRANULAR MATERIAL, TYPE A TON	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SQ YD
37+50.00 - 38+00.00	25.09' AVG.	50.00'	70				
38+00.00 - 39+44.00	25.08'	144.00'	201				
40+61.00 - 42+50.00	25.08'	189.00'	263				
42+50.00 - 43+00.00	25.44' AVG.	50.00'	71				
37+50.00 - 38+00.00	22.14' AVG.	50.00'		10			
38+00.00 - 39+44.00	22.13'	144.00'		30			
40+61.00 - 42+50.00	22.13'	189.00'		39			
42+50.00 - 43+00.00	22.49' AVG.	50.00'		11			
37+50.00 - 38+00.00	22.68' AVG.	50.00'			35		
38+00.00 - 39+44.00	22.67'	144.00'			102		
40+61.00 - 42+50.00	22.67'	189.00'			134		
42+50.00 - 43+00.00	23.03' AVG.	50.00'			36		
37+50.00 - 38+00.00	26.09' AVG.	50.00'				91	
38+00.00 - 39+44.00	26.08'	144.00'				263	
40+61.00 - 42+50.00	26.08'	189.00'				345	
42+50.00 - 43+00.00	26.44' AVG.	50.00'				93	
39+44.00 - 39+49.00	31.00'	5.00'					17
40+56.00 - 40+61.00	31.00'	5.00'					17
		TOTAL	605	90	307	792	34

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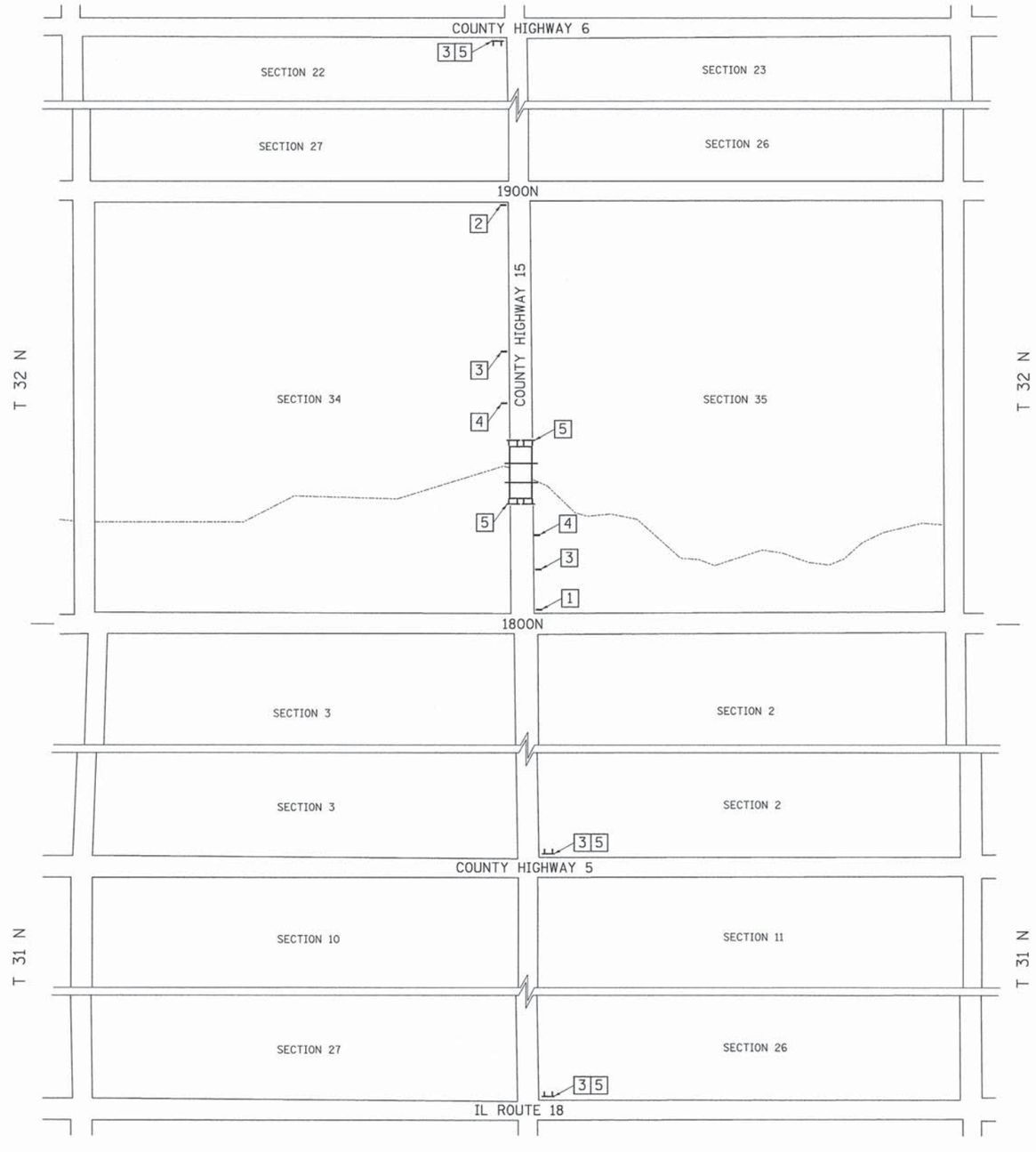
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

SUMMARY OF QUANTITIES, & SCHEDULES OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 TO STA. 43+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	3
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. BRS-0268(114)		

R 4 E, 3rd PM



1 ROAD CLOSED 1/3 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3 — ROAD CLOSED 1/3 MILE AHEAD LOCAL TRAFFIC ONLY

2 ROAD CLOSED 2/3 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3 — ROAD CLOSED 2/3 MILE AHEAD LOCAL TRAFFIC ONLY

3 ROAD CLOSED AHEAD — W20-3 — ROAD CLOSED AHEAD

4 ROAD CLOSED 500 FT — W20-3 — ROAD CLOSED 500 FT

5 TYPE III BARRICADES

SEE STANDARDS BLR 21 & BLR 22
AND SPECIAL PROVISIONS

1/4 MI 0 1/4 MI

GRAPHIC SCALE IN MILES

R 4 E, 3rd PM

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	PLOT DATE = 10/22/2013	DATE -	REVISED -

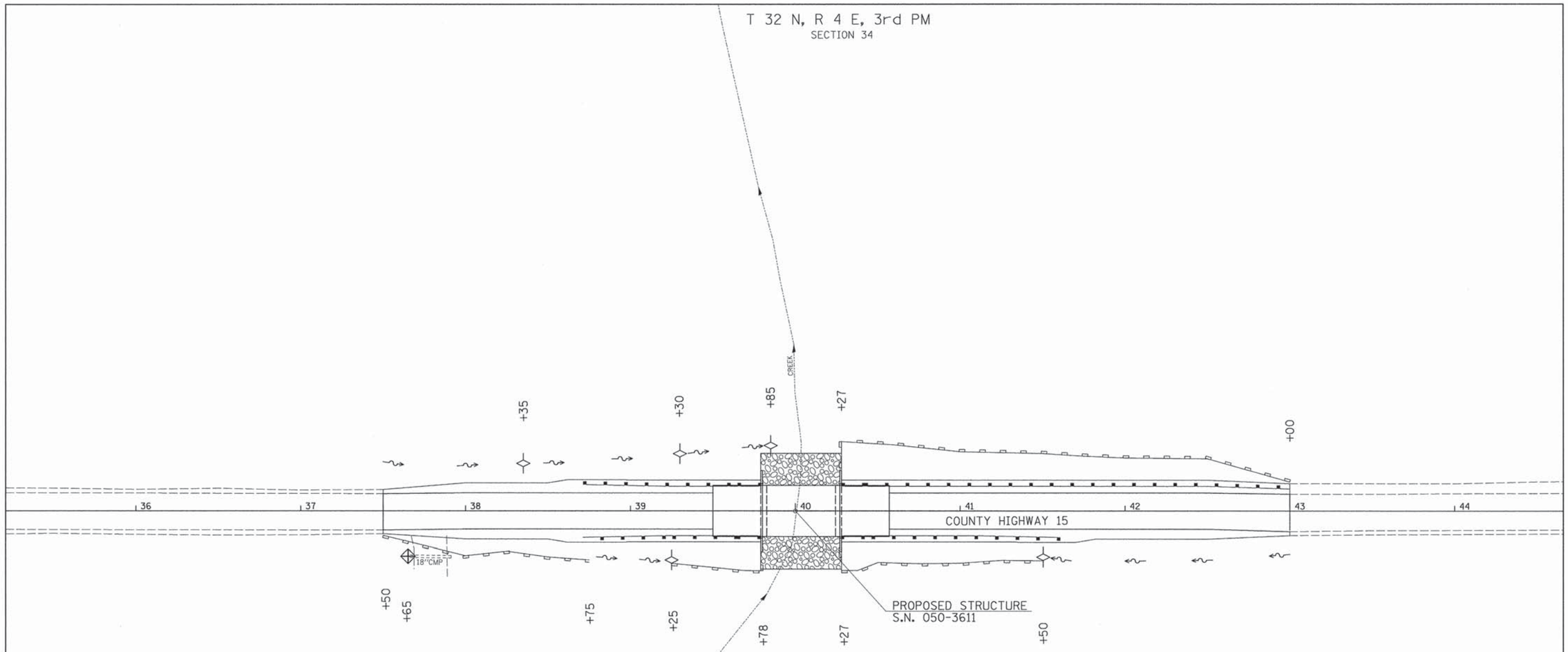
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

TRAFFIC CONTROL PLAN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 TO STA. 43+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	4
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-02680114)		

T 32 N, R 4 E, 3rd PM
SECTION 34



LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET & PIPE PROTECTION
- SPECIAL DITCH - FLOW LINE AND DIRECTION
- PROPOSED RIPRAP PLACEMENT

NOTE: TEMPORARY EROSION CONTROL SEEDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 280.04 OF THE STANDARD SPECIFICATIONS.

30' 0' 30'
GRAPHIC SCALE IN FEET

T 32 N, R 4 E, 3rd PM
SECTION 35

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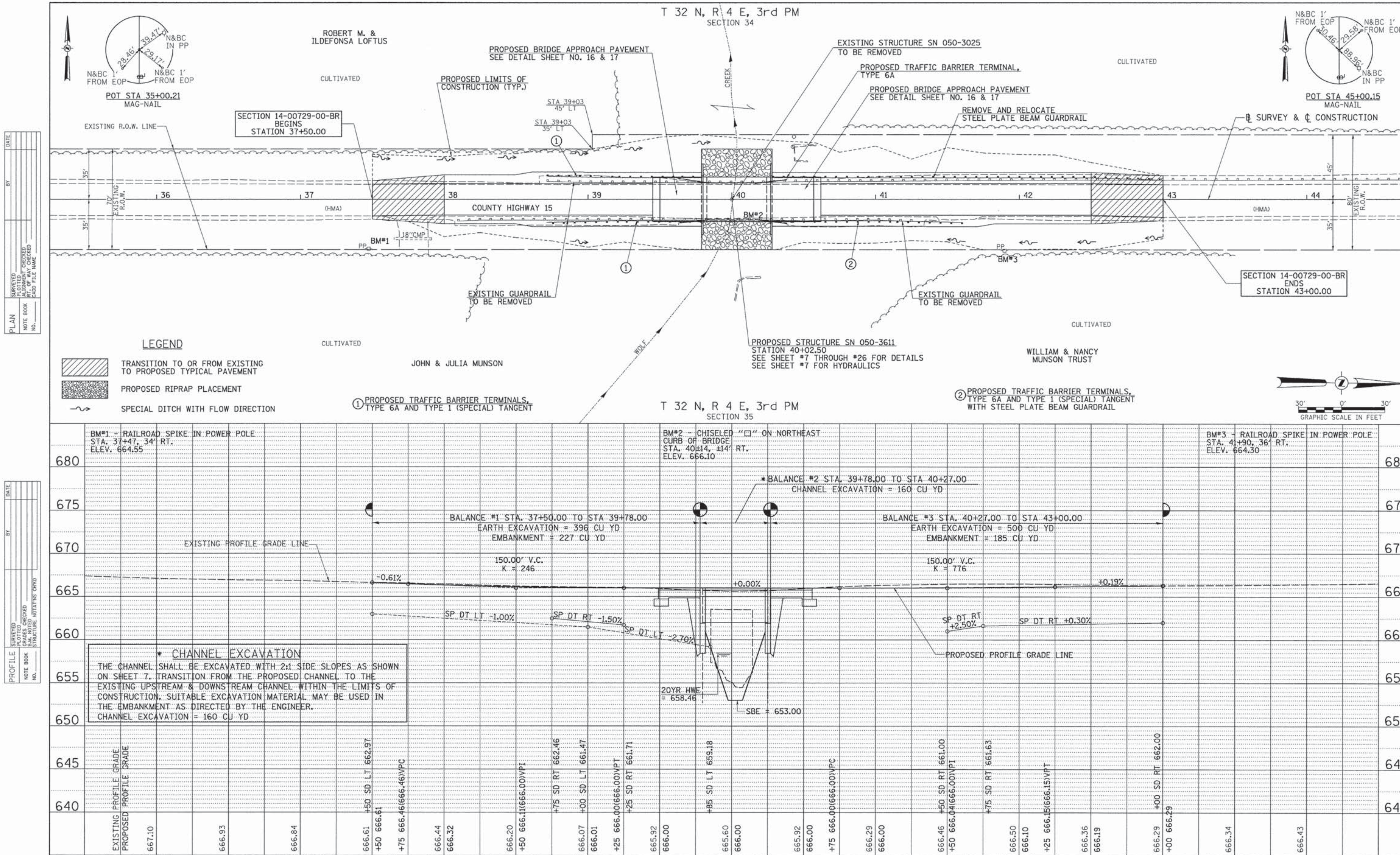
	PLOT DATE = 10/22/2013	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

EROSION CONTROL PLAN

SCALE: 1" = 30' | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 TO STA. 43+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	5
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		



FILE NAME = V:\Bridge\3329-LaSalle\3329P001.dgn	USER NAME = cthomas	DESIGNED -	REVISED -	LASALLE COUNTY COUNTY HIGHWAY 15 OVER WOLF CREEK	PLAN AND PROFILE	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			268	14-00729-00-BR	LASALLE	37	6
	PLOT SCALE = 30.0000 '/ in.	CHECKED -	REVISED -					CONTRACT NO. 87559		
	PLOT DATE = 10/22/2013	DATE -	REVISED -		SCALE: 1"=30' SHEET NO. 1 OF 1 SHEETS STA. 37+50.00 TO STA. 43+00.00	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

BM: Railroad Spike in Power Pole
Sta. 37+47, 34' Rt.
Elev. 664.55

BM: Railroad Spike in Power Pole
Sta. 41+90, 36' Rt.
Elev. 664.30

Existing Structure:
Single span precast channel beam bridge on timber pile closed abutments with reinforced concrete caps. The structure is 33'-9" back to back of abutments, 26'-3" out to out deck, and is not skewed.
Str. No. 050-3025

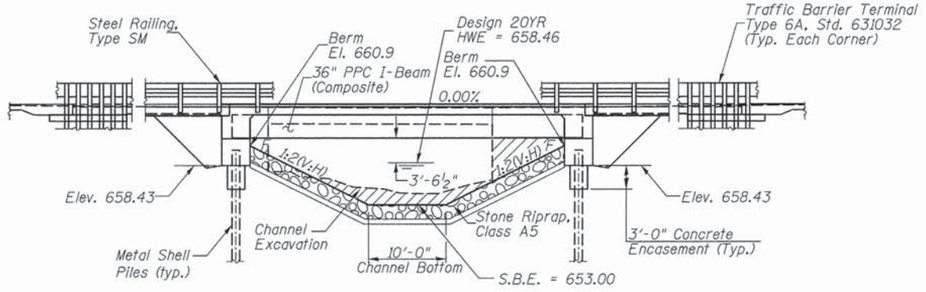
Salvage: None

Road to be closed to traffic during construction.

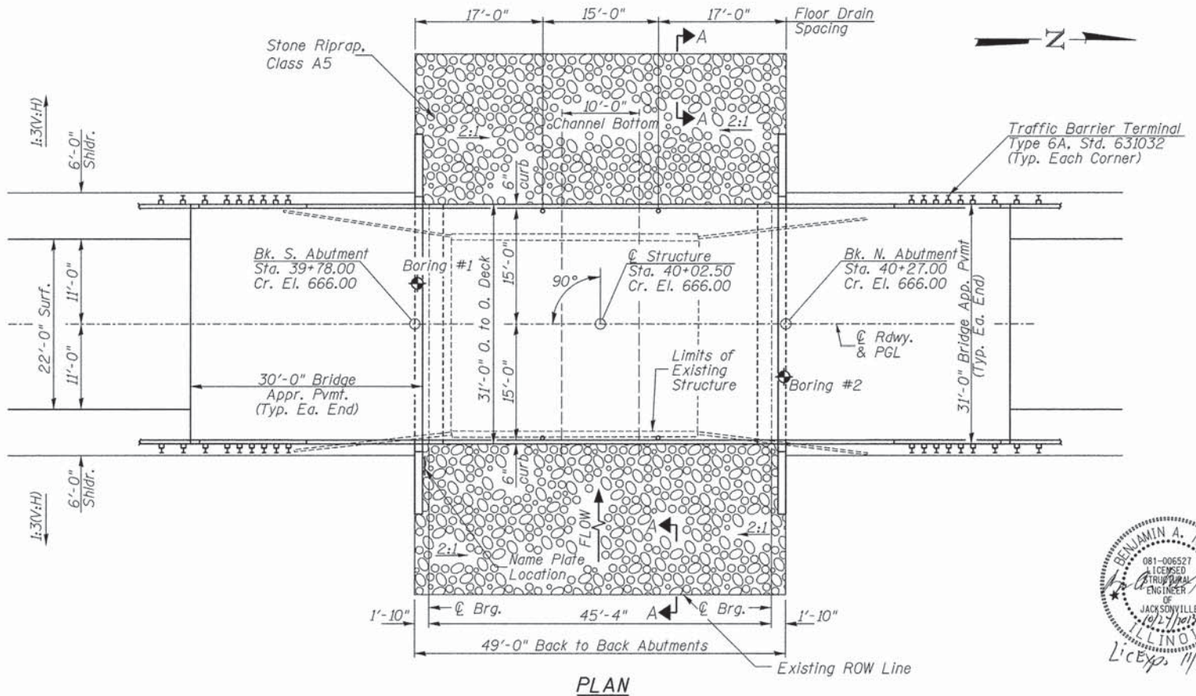
WOLF CREEK
BUILT 201_ BY
LASALLE COUNTY
SEC. 14-00729-00-BR
C.H. 15 STATION 40+02.50
F.A. PROJ. BRS-0268(114)
STR. NO. 050-3611 LOADING HL-93

NAME PLATE

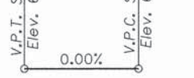
Locate Name Plate on Wingwall
S.E. Corner of Bridge (See Std. 515001)



ELEVATION



PLAN



PROFILE GRADE

(CH 15)

NOTE:
See Sheet 2 of 20 for Bill of Material, General Notes and Section A-A.

INDEX OF SHEETS

SHEET #'s	DESCRIPTION
1	General Plan & Elevation
2	Bill of Material, Details and General Notes
3-4	Top of Slab Elevations
5-6	Top of Approach Slab Elevations
7	Superstructure
8	Superstructure Details
9	Diaphragm Details
10-11	Bridge Approach Slab Details
12	Steel Railing Type SM
13	Framing Plan and Details
14	36" PPC I-Beam
15	36" PPC I-Beam Details
16	Abutments
17	Metal Shell Pile Details
18-20	Soil Boring Logs

DESIGN SCOUR TABLE

Location	S. Abut.	N. Abut.
Design Scour Elevation	658.43	658.43

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
6th Edition with 2013 Interims

LOADING HL-93

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

DESIGN STRESSES

(FIELD UNITS)
f'c = 5,000 p.s.i. (superstructure)
f'c = 3,500 p.s.i. (substructure)
fy = 60,000 p.s.i. (Rein.)

(PRECAST PRESTRESSED UNITS)
f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i. (½" Strands)
f'si = 201,960 p.s.i. (½" Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.10g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.18g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 0.72 Sq. Mi. Low Grade Elev. = 666.00 @ Sta. 40+00.00

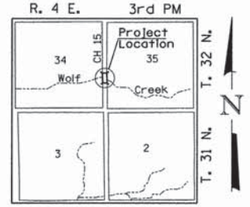
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	502	82	114	658.46	0.19	0.00	658.65	658.46
Base	100	765	109	146	659.41	0.11	0.00	659.52	659.41

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

BENJAMIN A. NEBEL
081-006527
LICENSED STRUCTURAL ENGINEER
OF JACKSONVILLE
10/24/2013
ILLINOIS
Lic. Exp. 11/30/2014

10/24/13

Illinois Structural No. 6527
Expires 11/30/2014



LOCATION SKETCH

DESIGNED	C.T.M.
CHECKED	B.A.N.
DRAWN	C.T.M.
CHECKED	B.A.N.

HUTCHISON ENGINEERING, INC.
JACKSONVILLE-SHOREWOOD-PEORIA
Date: August 28, 2013

SHEET NO. 1
20 SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 15	14-00729-00-BR	LASALLE	37	7
	S.N. 050-3611	CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

GENERAL PLAN & ELEVATION

3329B001

GENERAL NOTES

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.

Reinforcement bars designated (E) shall be epoxy coated.

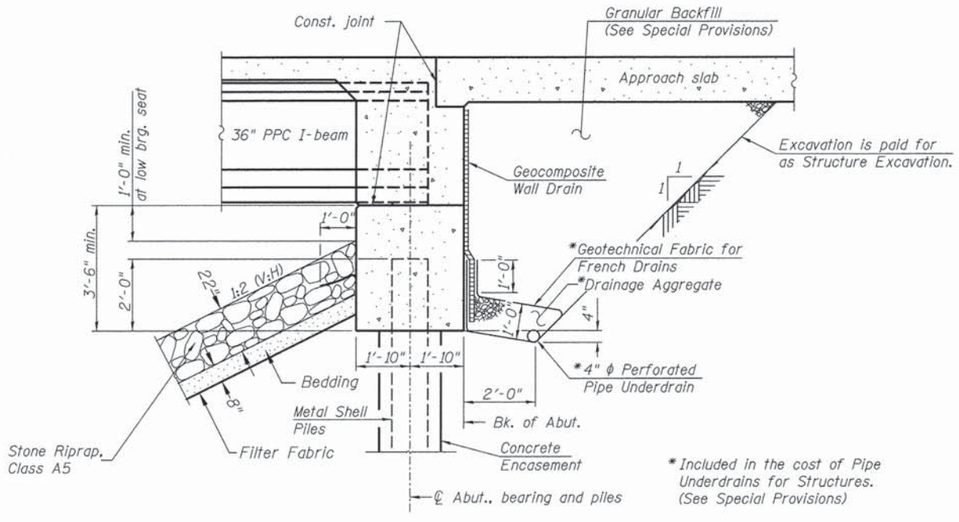
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the engineer.

Protective Coat shall be applied to the top of the deck, approach pavement, and face and top of curbs.

Bridge Deck Grooving is figured 1'-0" from curb face and includes the approach pavements.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

See Sheets 18 thru 20 of 20 for Soil Boring Logs.

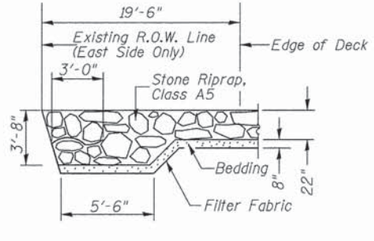


*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

SECTION THRU INTEGRAL ABUTMENT

Note:

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



SECTION A-A

TOTAL BILL OF MATERIAL

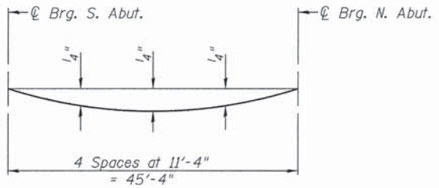
	ITEM	UNIT	SUPER	SUB	TOTAL
	Channel Excavation	CU YD	——	160	160
(1)	Granular Backfill For Structures	CU YD	——	90	90
	Stone Riprap, Class A5	SQ YD	——	385	385
	Filter Fabric	SQ YD	——	385	385
(1)	Removal of Existing Structures	EACH	——	——	1
	Structure Excavation	CU YD	——	195	195
	Concrete Structures	CU YD	——	55.8	55.8
	Concrete Superstructure	CU YD	158.4	——	158.4
	Bridge Deck Grooving	SQ YD	333	——	333
	Protective Coat	SQ YD	377	——	377
	Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	FOOT	232	——	232
(1)	Reinforcement Bars, Epoxy Coated	POUND	38,040	5,320	43,360
	Steel Railing, Type SM	FOOT	154	——	154
	Furnishing Metal Shell Piles 12"x0.250"	FOOT	——	368	368
	Driving Piles	FOOT	——	368	368
	Test Pile Metal Shells	EACH	——	2	2
	Concrete Encasement	CU YD	——	2.6	2.6
	Name Plates	EACH	——	1	1
	Geocomposite Wall Drain	SQ YD	——	55	55
(1)	Pipe Underdrains for Structures, 4"	FOOT	——	113	113
	Floor Drains	EACH	4	——	4

(1) See Special Provisions

BILL OF MATERIAL, DETAILS AND GENERAL NOTES

SHEET NO. 2	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	8
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

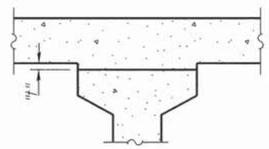
3329B002



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

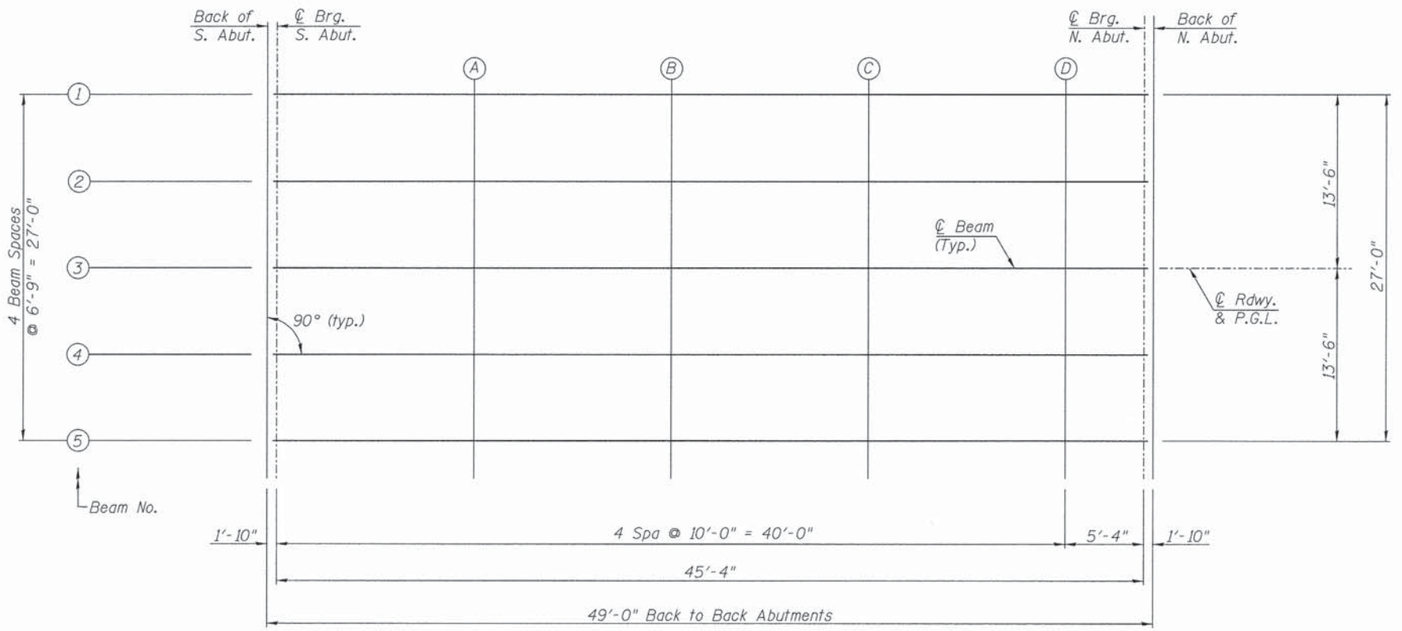
Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sh. 4 of 20.



To determine "t": 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 on Sh. 4 of 20, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

N



PLAN

TOP OF SLAB ELEVATIONS

SHEET NO. 3	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	9
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B003

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abutment	39+78.00	-13.50	665.78	665.78
CL Brg. S. Abut.	39+79.83	-13.50	665.78	665.78
A	39+89.83	-13.50	665.78	665.79
B	39+99.83	-13.50	665.78	665.80
C	40+09.83	-13.50	665.78	665.80
D	40+19.83	-13.50	665.78	665.79
CL Brg. N. Abut.	40+25.17	-13.50	665.78	665.78
Bk. N. Abutment	40+27.00	-13.50	665.78	665.78

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abutment	39+78.00	-6.75	665.89	665.89
CL Brg. S. Abut.	39+79.83	-6.75	665.89	665.89
A	39+89.83	-6.75	665.89	665.91
B	39+99.83	-6.75	665.89	665.92
C	40+09.83	-6.75	665.89	665.92
D	40+19.83	-6.75	665.89	665.90
CL Brg. N. Abut.	40+25.17	-6.75	665.89	665.89
Bk. N. Abutment	40+27.00	-6.75	665.89	665.89

℄ ROADWAY, PROFILE GRADE, & BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abutment	39+78.00	0.00	666.00	666.00
CL Brg. S. Abut.	39+79.83	0.00	666.00	666.00
A	39+89.83	0.00	666.00	666.02
B	39+99.83	0.00	666.00	666.02
C	40+09.83	0.00	666.00	666.02
D	40+19.83	0.00	666.00	666.01
CL Brg. N. Abut.	40+25.17	0.00	666.00	666.00
Bk. N. Abutment	40+27.00	0.00	666.00	666.00

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abutment	39+78.00	6.75	665.89	665.89
CL Brg. S. Abut.	39+79.83	6.75	665.89	665.89
A	39+89.83	6.75	665.89	665.91
B	39+99.83	6.75	665.89	665.92
C	40+09.83	6.75	665.89	665.92
D	40+19.83	6.75	665.89	665.90
CL Brg. N. Abut.	40+25.17	6.75	665.89	665.89
Bk. N. Abutment	40+27.00	6.75	665.89	665.89

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abutment	39+78.00	13.50	665.78	665.78
CL Brg. S. Abut.	39+79.83	13.50	665.78	665.78
A	39+89.83	13.50	665.78	665.79
B	39+99.83	13.50	665.78	665.80
C	40+09.83	13.50	665.78	665.80
D	40+19.83	13.50	665.78	665.79
CL Brg. N. Abut.	40+25.17	13.50	665.78	665.78
Bk. N. Abutment	40+27.00	13.50	665.78	665.78

TOP OF SLAB ELEVATIONS

SHEET NO. 4	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	10
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B004

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	39+49.00	-15.00	665.74
A	39+59.00	-15.00	665.74
B	39+69.00	-15.00	665.74
N. End South Appr. Pav't.	39+79.00	-15.00	665.74

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	39+49.00	-11.00	665.83
A	39+59.00	-11.00	665.83
B	39+69.00	-11.00	665.83
N. End South Appr. Pav't.	39+79.00	-11.00	665.83

PROFILE GRADE & ℄ ROADWAY

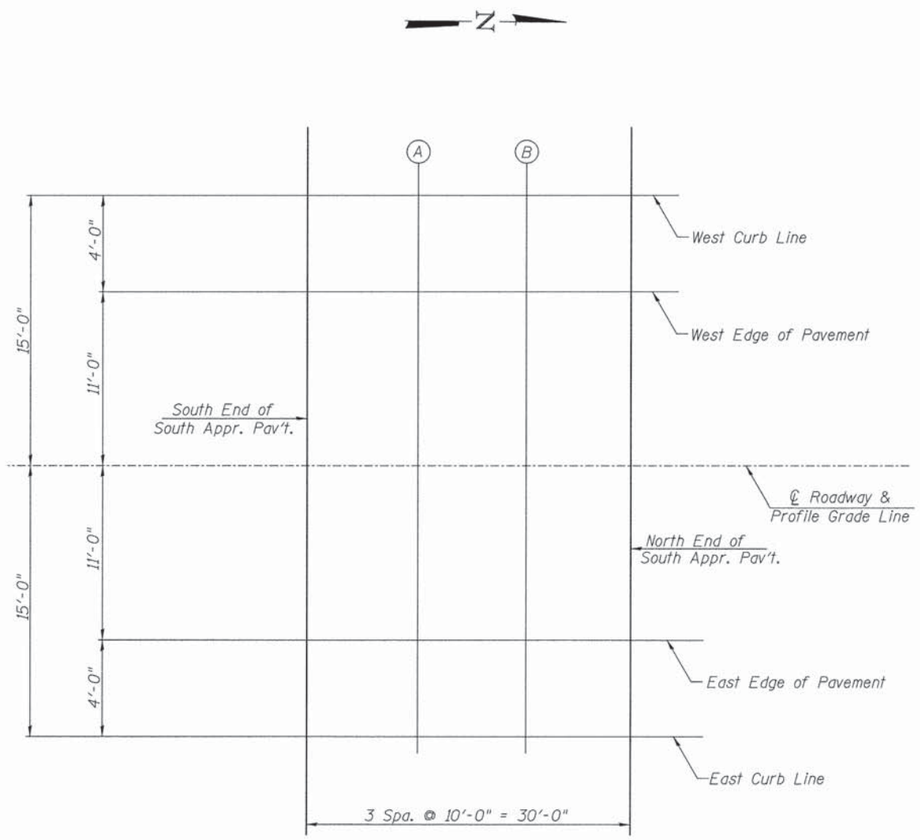
Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	39+49.00	0.00	666.00
A	39+59.00	0.00	666.00
B	39+69.00	0.00	666.00
N. End South Appr. Pav't.	39+79.00	0.00	666.00

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	39+49.00	11.00	665.83
A	39+59.00	11.00	665.83
B	39+69.00	11.00	665.83
N. End South Appr. Pav't.	39+79.00	11.00	665.83

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End South Appr. Pav't.	39+49.00	15.00	665.74
A	39+59.00	15.00	665.74
B	39+69.00	15.00	665.74
N. End South Appr. Pav't.	39+79.00	15.00	665.74



PLAN SOUTH APPROACH PAVEMENT

TOP OF SOUTH APPROACH SLAB ELEVATIONS

SHEET NO. 5	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	11
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B005

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	40+26.00	-15.00	665.74
A	40+36.00	-15.00	665.74
B	40+46.00	-15.00	665.74
N. End North Appr. Pav't.	40+56.00	-15.00	665.74

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	40+26.00	-11.00	665.83
A	40+36.00	-11.00	665.83
B	40+46.00	-11.00	665.83
N. End North Appr. Pav't.	40+56.00	-11.00	665.83

PROFILE GRADE & ℄ ROADWAY

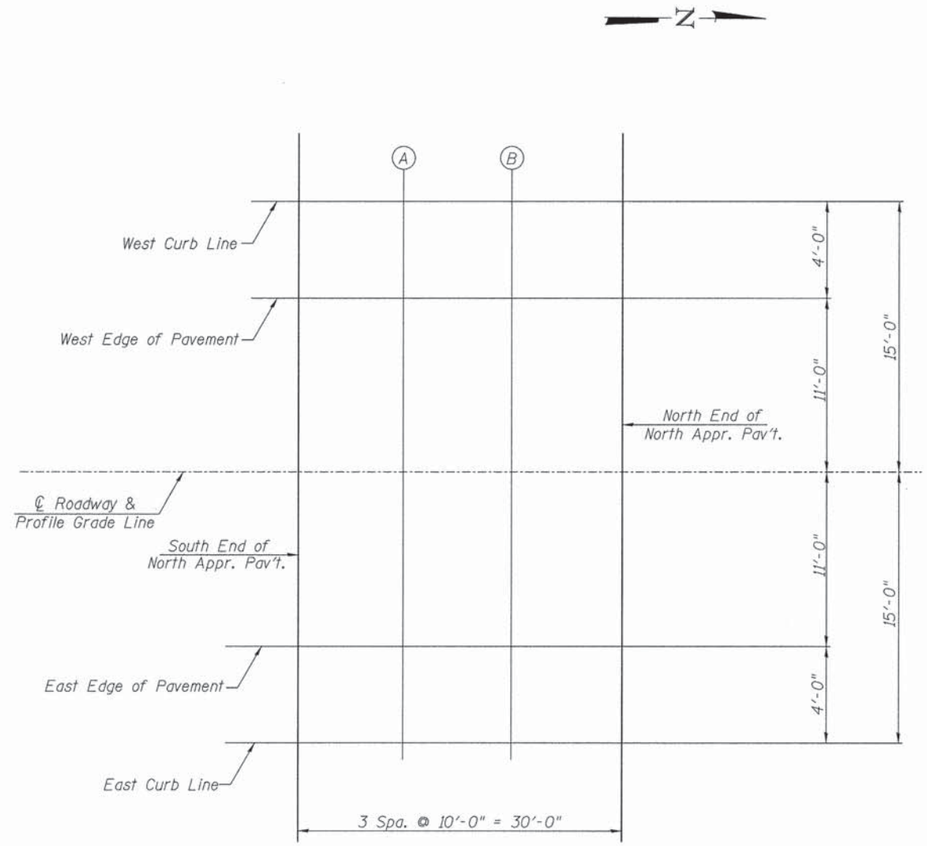
Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	40+26.00	0.00	666.00
A	40+36.00	0.00	666.00
B	40+46.00	0.00	666.00
N. End North Appr. Pav't.	40+56.00	0.00	666.00

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	40+26.00	11.00	665.83
A	40+36.00	11.00	665.83
B	40+46.00	11.00	665.83
N. End North Appr. Pav't.	40+56.00	11.00	665.83

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Pav't.	40+26.00	15.00	665.74
A	40+36.00	15.00	665.74
B	40+46.00	15.00	665.74
N. End North Appr. Pav't.	40+56.00	15.00	665.74

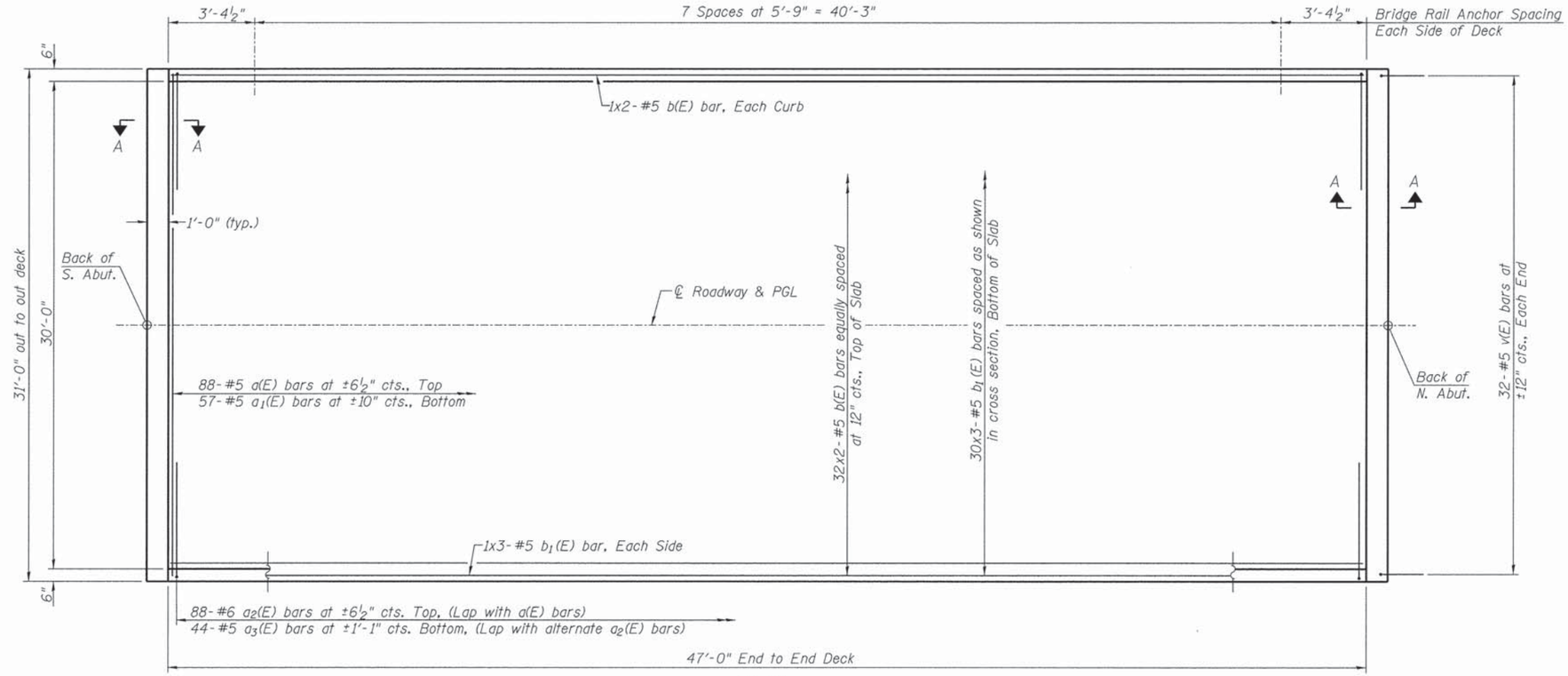


PLAN NORTH APPROACH PAVEMENT

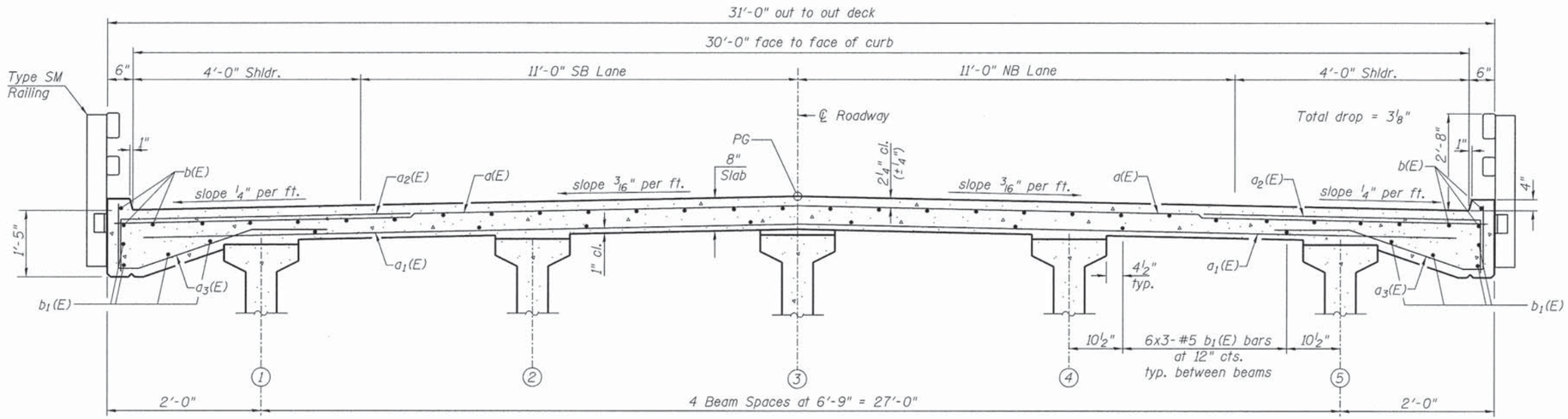
TOP OF NORTH APPROACH SLAB ELEVATIONS

SHEET NO. 6	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	12
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

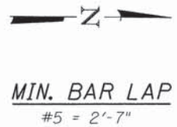
3329B006



PLAN



CROSS SECTION
(Looking North)



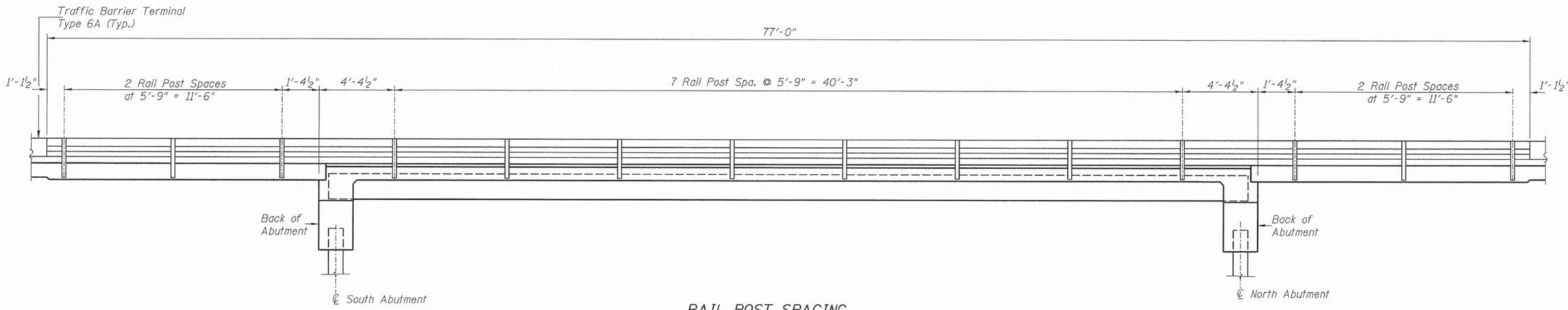
MIN. BAR LAP
#5 = 2'-7"

Notes:
See Sheet 8 of 20 for superstructure details and Bill of Material.
Bars indicated thus 32x3-#5 etc. indicates 32 lines of bars with 3 lengths per line.
See Sheet 9 of 20 for Section A-A & Diaphragm Details.
See Sheet 12 of 20 for Rail Post Anchor Details.

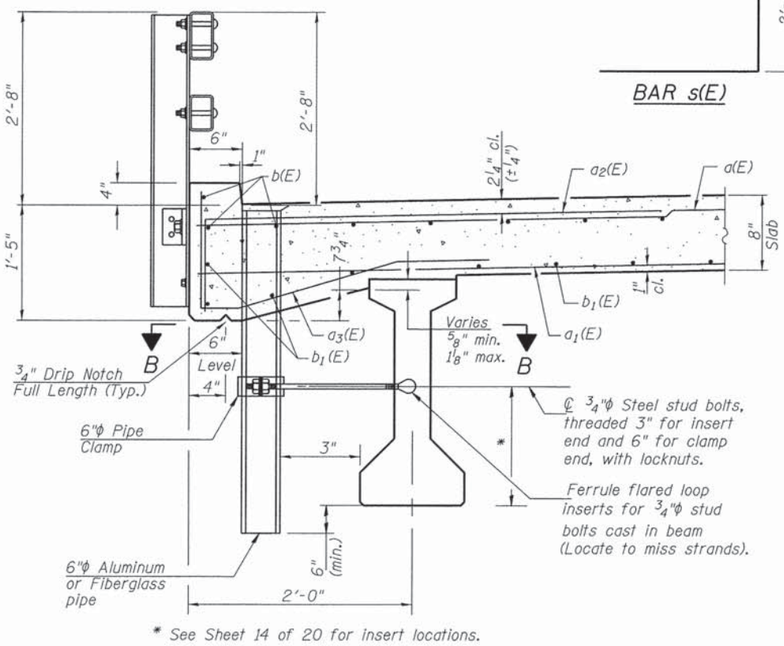
SUPERSTRUCTURE

SHEET NO. 7	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	13
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B007



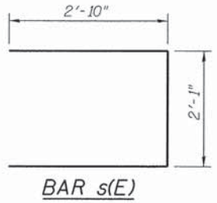
RAIL POST SPACING



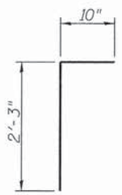
* See Sheet 14 of 20 for insert locations.

SECTION THRU PARAPET

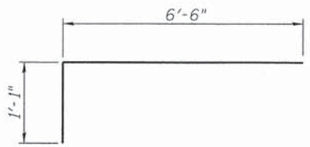
See Sheet 12 of 20 for Rail Post Anchor Details.



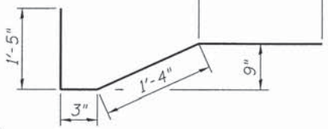
BAR s(E)



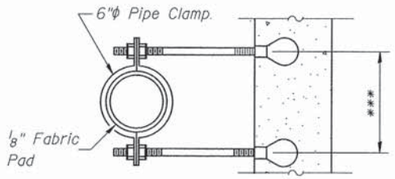
BAR v(E)



BAR a2(E)

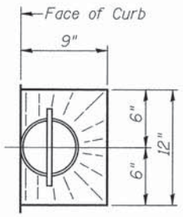


BAR a3(E)

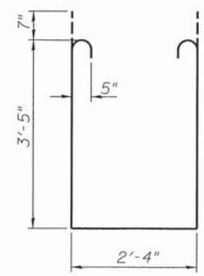


SECTION B-B

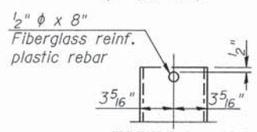
***Dimension as required by Pipe Clamp



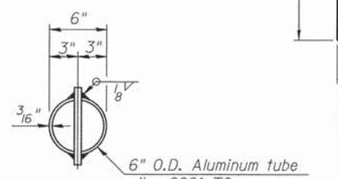
TOP PLAN



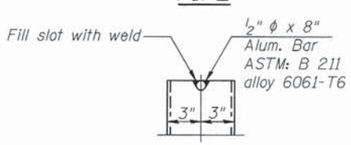
BAR s1(E)



FIBERGLASS PIPE



TOP PLAN
(Showing aluminum tube)



ALUMINUM TUBE

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	88	#5	30'-9"	
a1(E)	57	#5	29'-9"	
a2(E)	176	#6	7'-7"	
a3(E)	88	#5	5'-6"	
b(E)	68	#5	24'-8"	
b1(E)	96	#5	17'-4"	
m(E)	8	#6	30'-9"	
m1(E)	16	#6	6'-0"	
m2(E)	8	#6	1'-6"	
m3(E)	8	#6	5'-0"	
m4(E)	4	#6	1'-0"	
m5(E)	20	#5	4'-0"	
s(E)	56	#5	7'-9"	
s1(E)	56	#5	10'-4"	
v(E)	64	#5	3'-1"	
① Reinforcement Bars, Epoxy Coated			POUND	12,530
Concrete Superstructure			CU YD	63.0

① See Special Provisions

Notes:

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

The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.

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

SUPERSTRUCTURE DETAILS

SHEET NO. 8	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	14
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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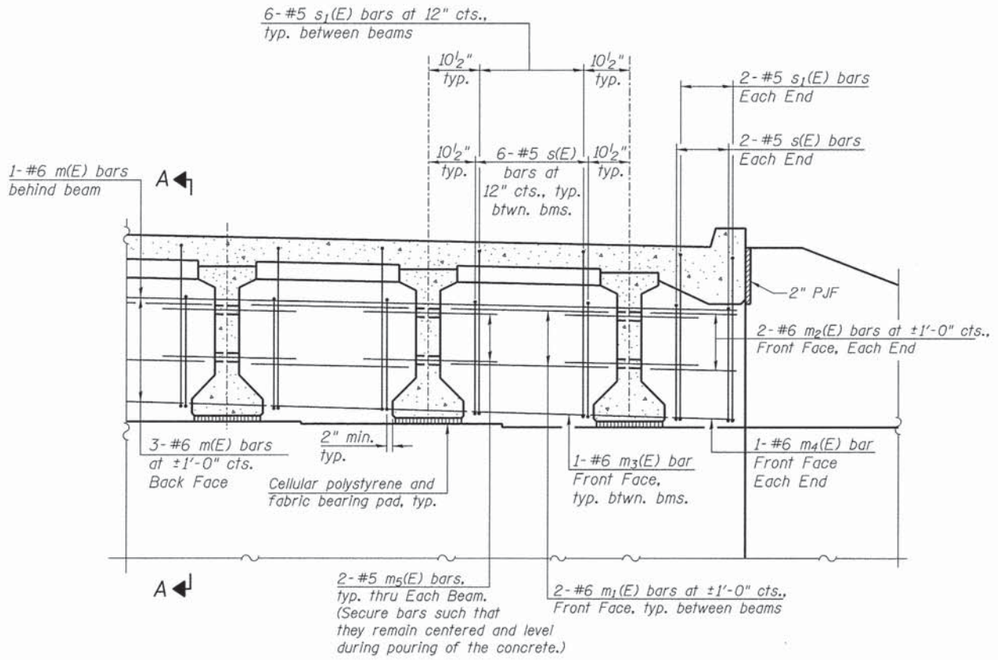
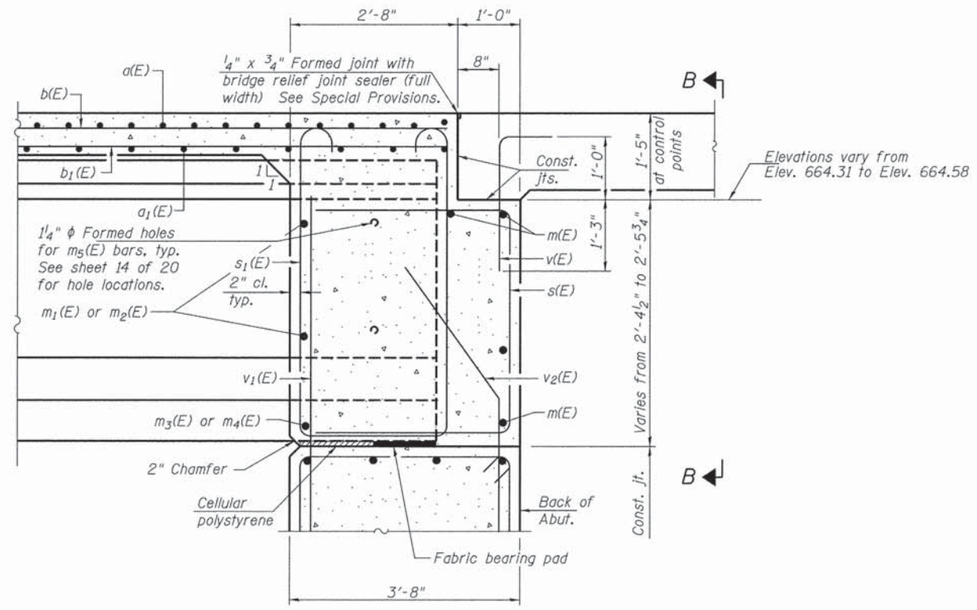
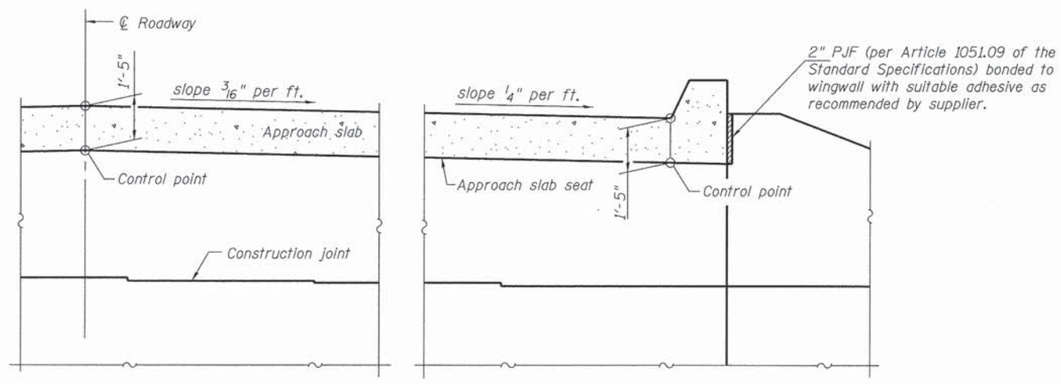


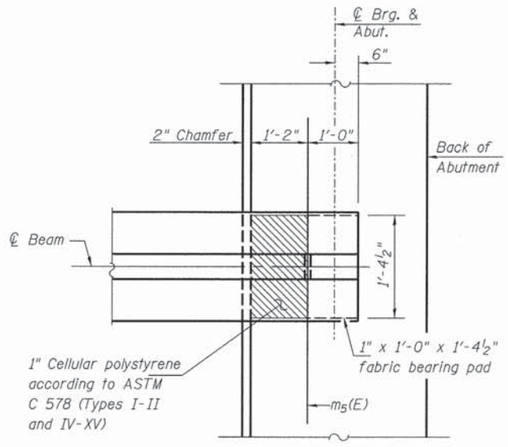
DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A



VIEW B-B



PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 20.

Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 20.

See sheet 8 of 20 for details of bars s(E), s_1(E), and v(E).

See sheet 16 of 20 for v_1(E) and v_2(E) bar placement.

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

Cost of cellular polystyrene is included with Concrete Superstructure.

DIAPHRAGM DETAILS

SHEET NO. 9	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	15
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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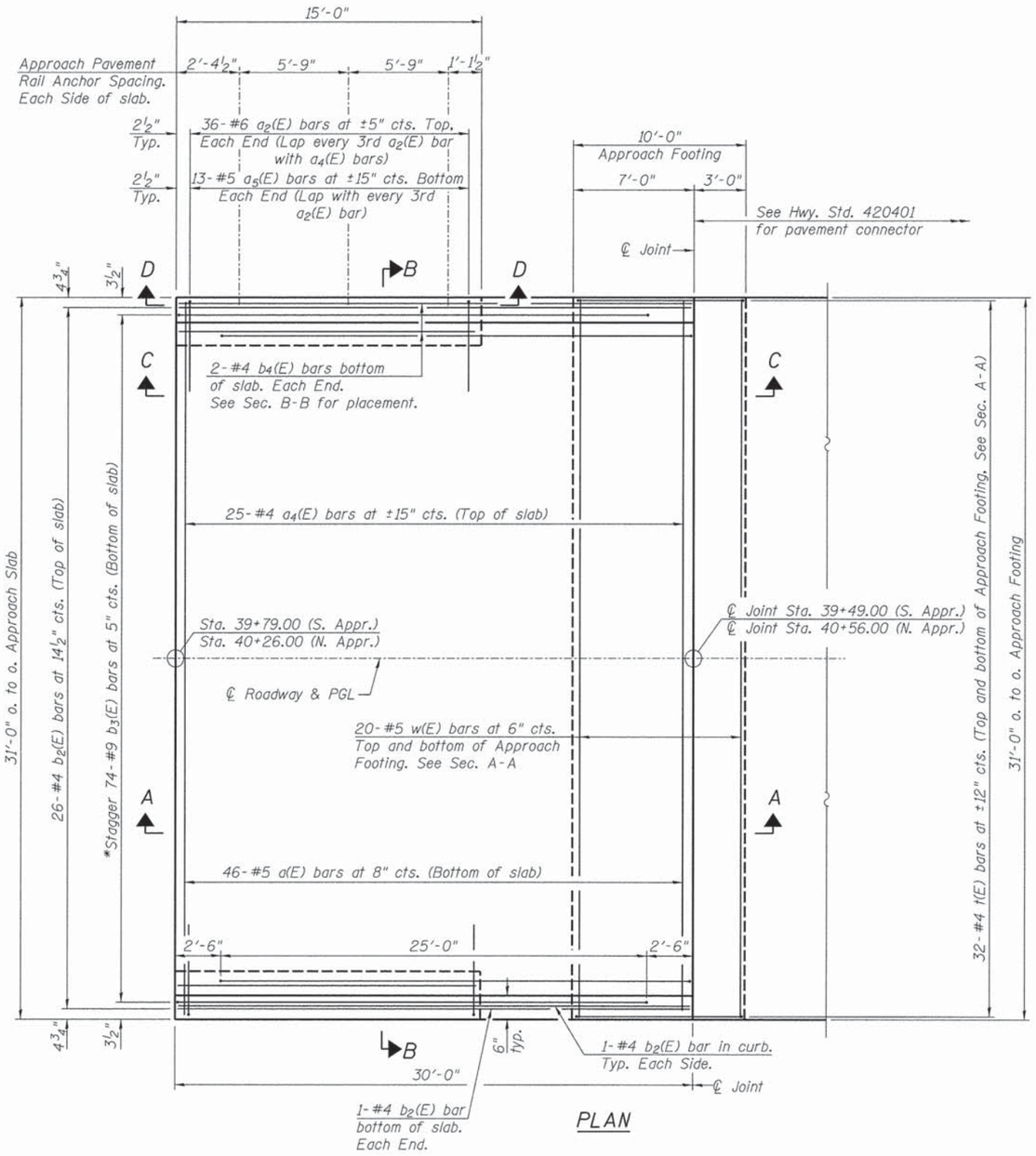


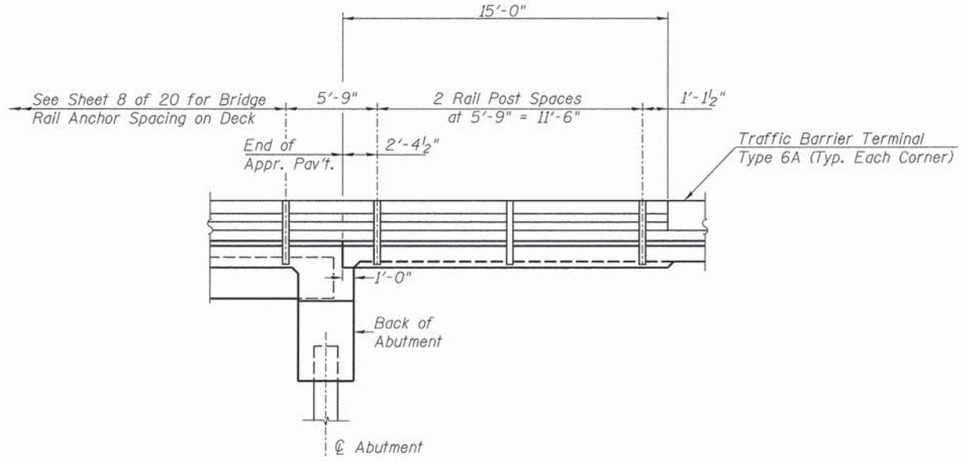
PLAN

* Tilt #9 $b_3(E)$ bars as required to maintain clearance.

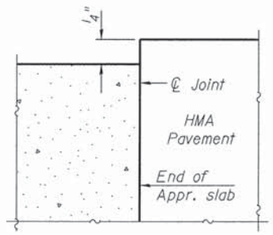
Notes:
See sheet 11 of 20 for Sections A-A, B-B, D-D and View C-C.
a(E), $a_2(E)$, $a_4(E)$, and $a_5(E)$ bar spacings measured along ℄ Rdwy.
See Sheet 12 of 20 for Rail Post Anchor Details.

S. Approach Pav't.

N. Approach Pav't.



RAIL POST ANCHOR SPACING



FLEXIBLE PAVEMENT

DETAIL A

(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS

SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	16
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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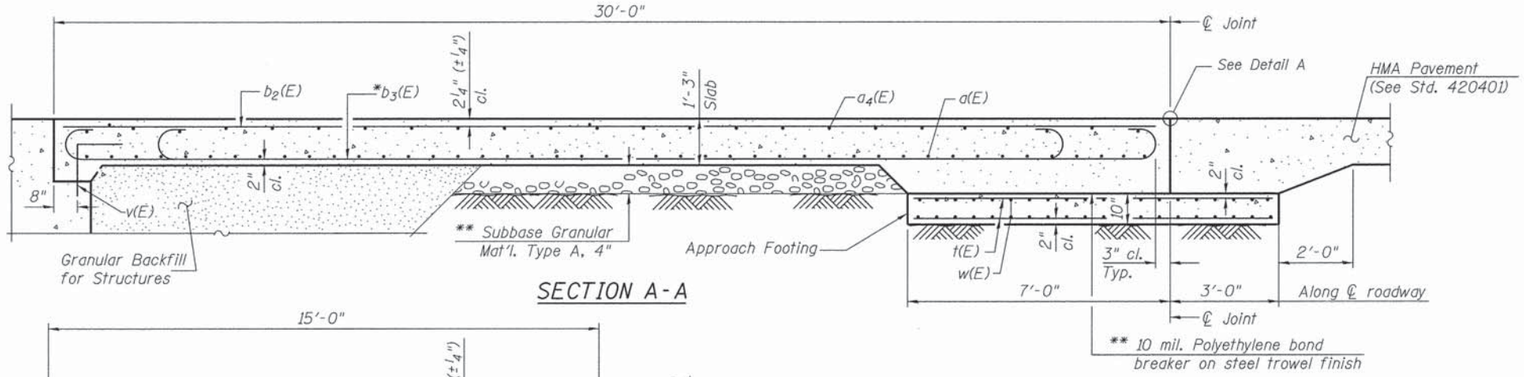
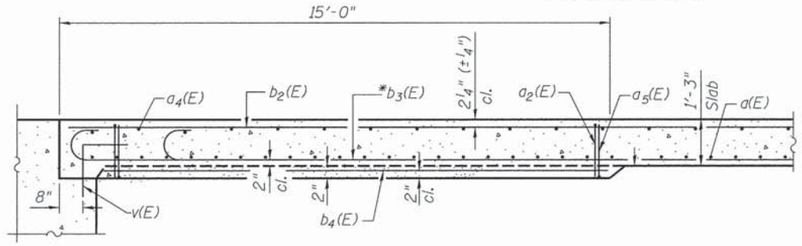
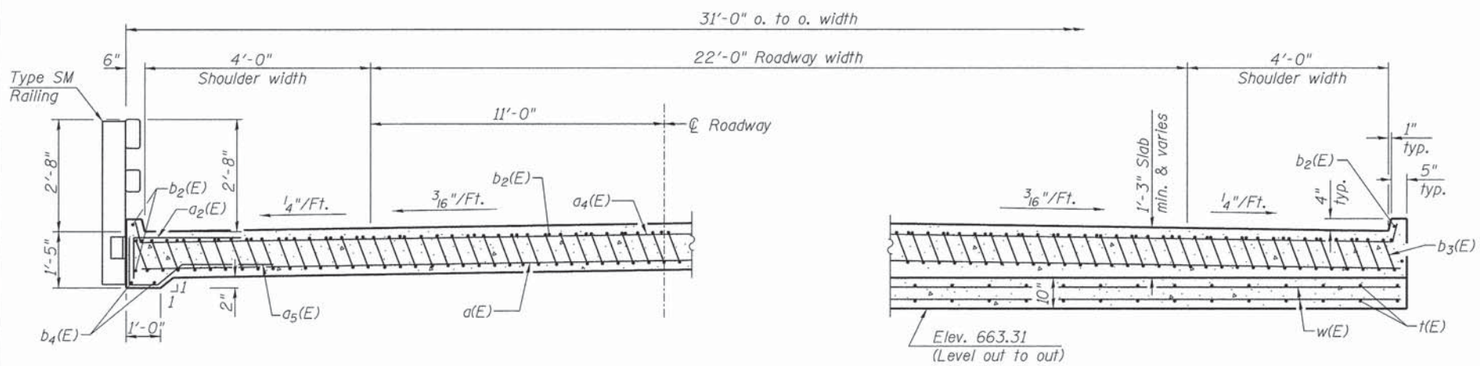


SECTION A-A



SECTION D-D

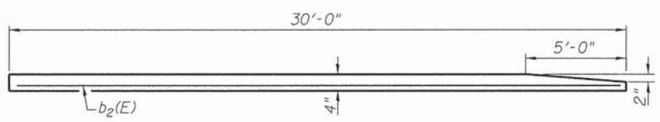


NEAR ABUTMENT

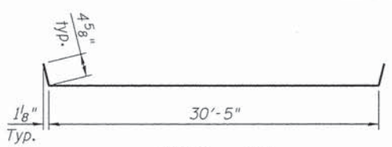
AT APPROACH FOOTING

SECTION B-B

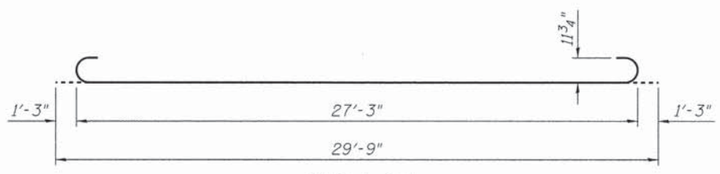
(See Plan for dimensions not shown)



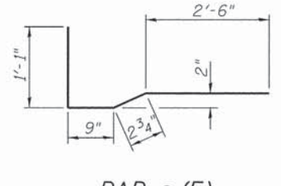
VIEW C-C



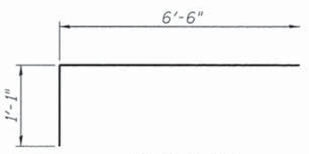
BAR a4(E)



BAR b3(E)



BAR a5(E)



BAR a2(E)

Notes:

See sheet 10 of 20 for Detail A.
Approach slab and curb shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
See sheet 8 of 20 for v(E) bar details.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
See sheet 2 of 20 for Granular Backfill and drainage treatment details.

* Tilt #9 $b_3(E)$ bars as required to maintain clearance.

** Cost included with Concrete Superstructure

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	92	#5	30'-9"	
$a_2(E)$	144	#6	7'-7"	
$a_4(E)$	50	#4	31'-3"	
$a_5(E)$	52	#5	4'-7"	
$b_2(E)$	60	#4	29'-8"	
$b_3(E)$	148	#9	29'-9"	
$b_4(E)$	8	#4	14'-8"	
t(E)	128	#4	9'-8"	
w(E)	80	#5	30'-8"	
Concrete Superstructure			CU YD	95.4
Concrete Structures			CU YD	19.2
(1) Reinforcement Bars, Epoxy Coated			POUND	25,510

(1) See Special Provisions

(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS

SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	17
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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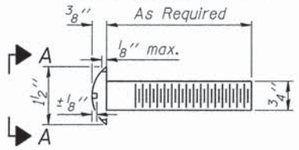
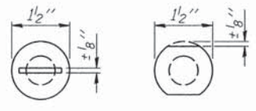
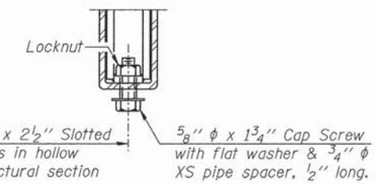
FOR RAIL POST SPACING SEE SHEET 8 OF 20.



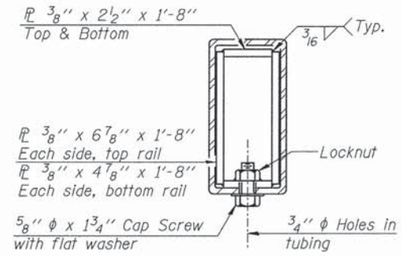
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



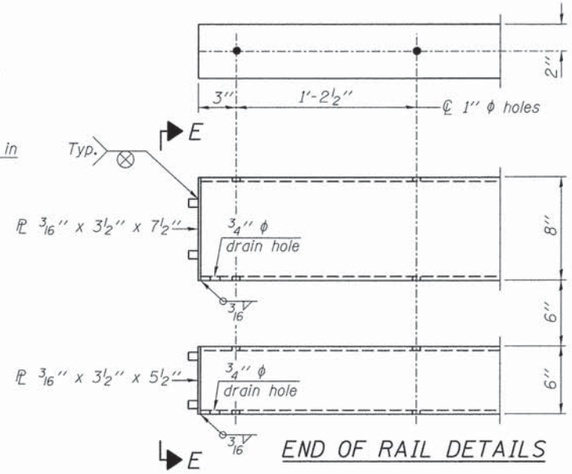
VIEW A-A



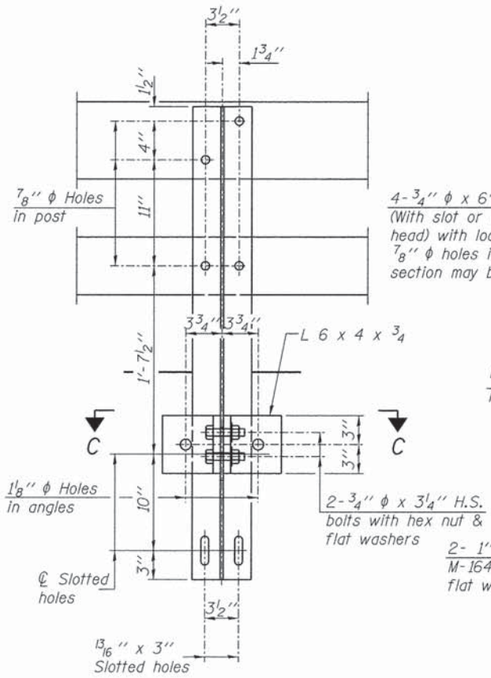
RAIL SPLICE CONNECTION AT EXPANSION JT.



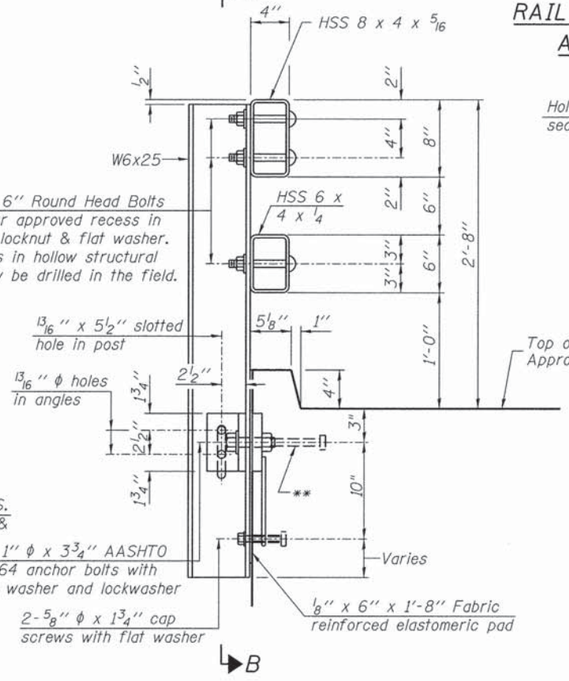
SECTION AT RAIL SPLICE



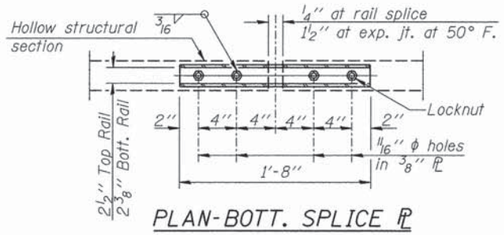
END OF RAIL DETAILS



SECTION B-B

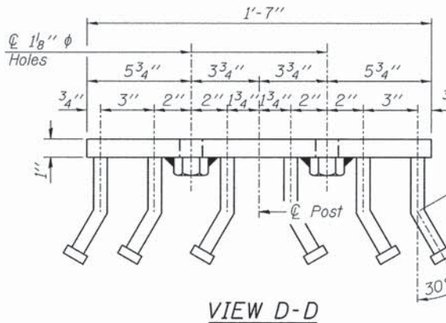


SECTION AT RAIL POST

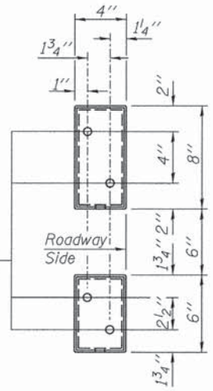


PLAN-BOTT. SPLICE PL TYPICAL

℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



VIEW D-D



VIEW E-E

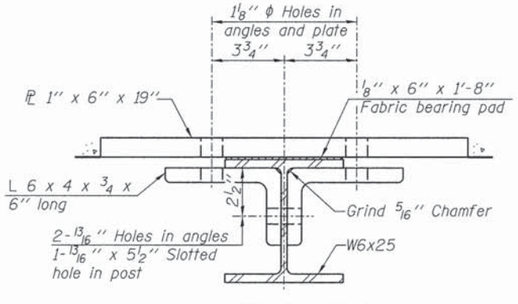
Notes:

All field drilled holes shall be coated with an approved zinc rich paint before erection.

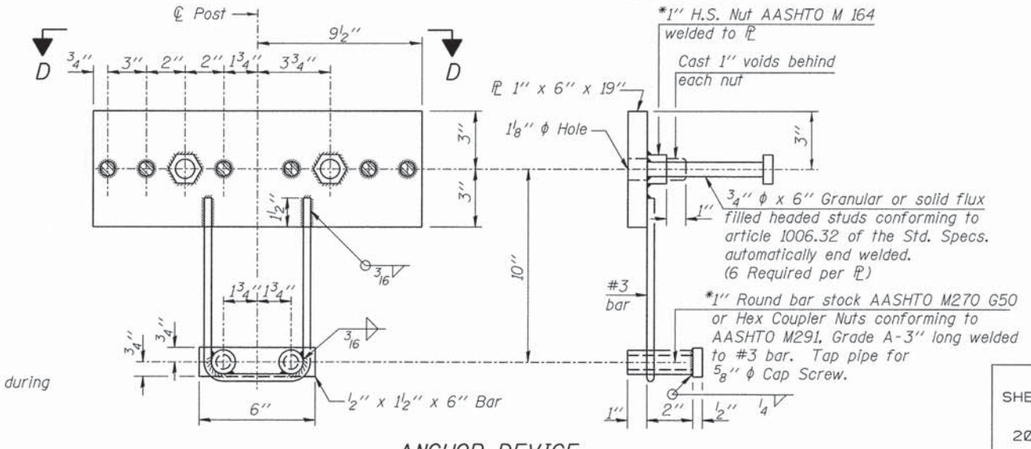
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

All steel railing elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION C-C



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during pouring of deck. Galvanized after fabrication.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	FOOT	154

STEEL RAILING TYPE SM

SHEET NO. 12	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	18
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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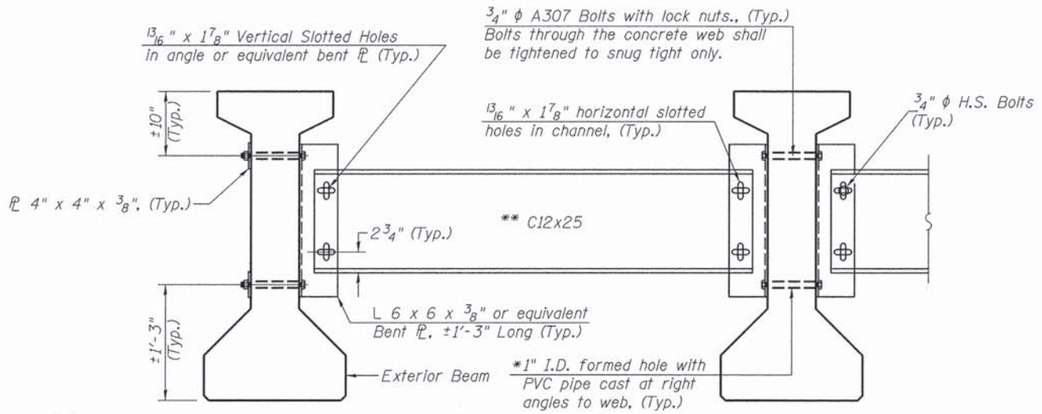


Notes:

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 15/16"ϕ unless otherwise noted.

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.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

All structural steel for permanent bracing shall be AASHTO M270 Gr. 50.

* Fabricator shall locate to miss strands within permissible tolerances.

** Alternate C12x30 channels are permitted to facilitate material acquisition.

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.).

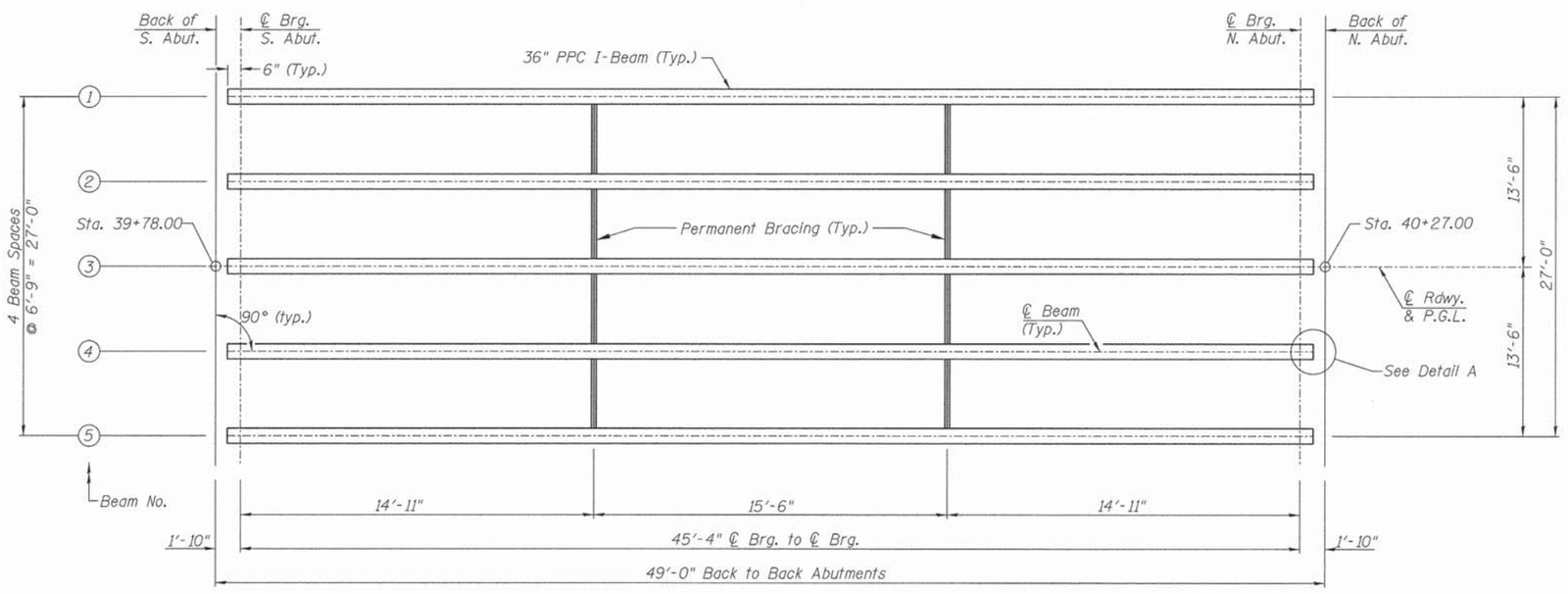
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).

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

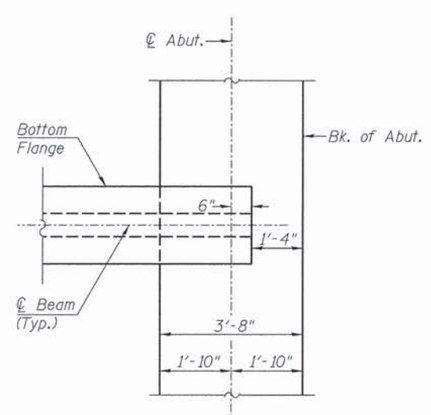
INTERIOR BEAM MOMENT TABLE		
		0.5 Sp. 1
I	($in.^4$)	48,648
I'	($in.^4$)	177,102
S_b	($in.^3$)	3,165
S_b'	($in.^3$)	5,967
S_t	($in.^3$)	2,358
S_t'	($in.^3$)	28,017
DC1	(k/')	1.069
M_{DC1}	('k)	274
DC2	(k/')	0.03
M_{DC2}	('k)	8
DW	(k/')	0.338
M_{DW}	('k)	87
M_{L+IM}	('k)	610

INTERIOR BEAM REACTION TABLE		
		Abut.
R_{DC1}	(k)	24.2
R_{DC2}	(k)	0.7
R_{DW}	(k)	7.7
R_{L+IM}	(k)	65.7
R_{Total}	(k)	98.3

PERMANENT BRACING DETAILS FOR 36" PPC I-BEAMS



PLAN



DETAIL A

(Typical @ Abutments)

FRAMING PLAN AND DETAILS

SHEET NO. 13	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	19
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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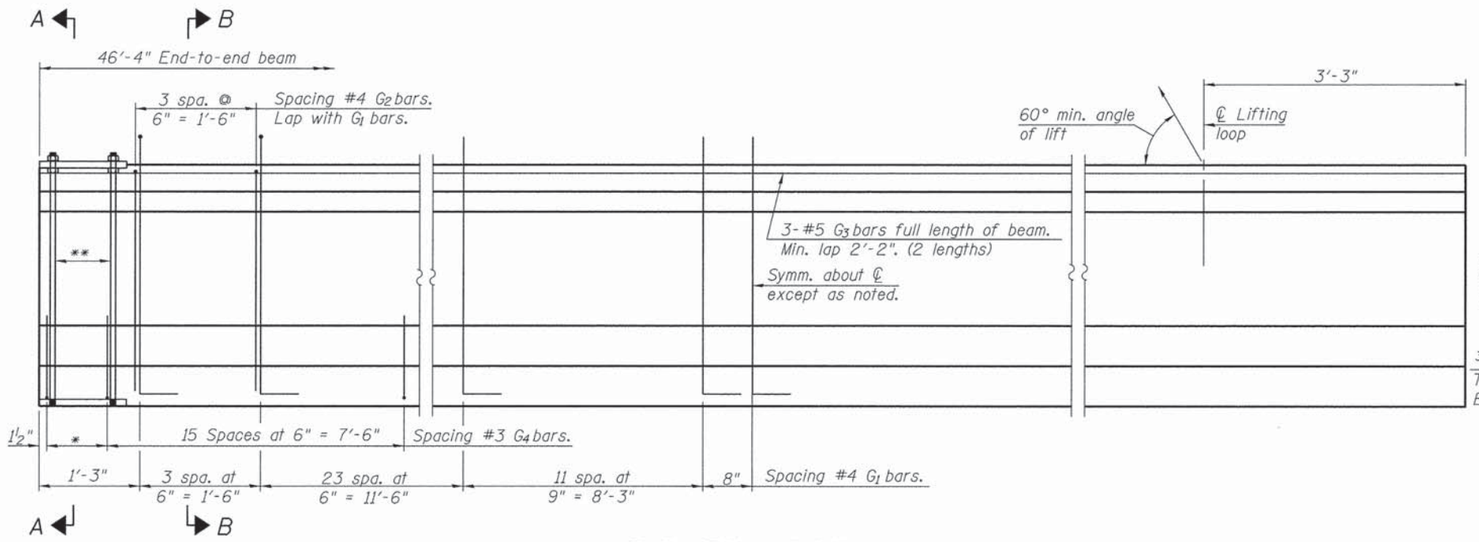
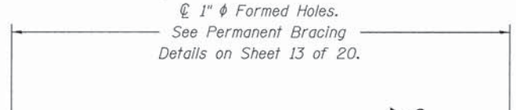
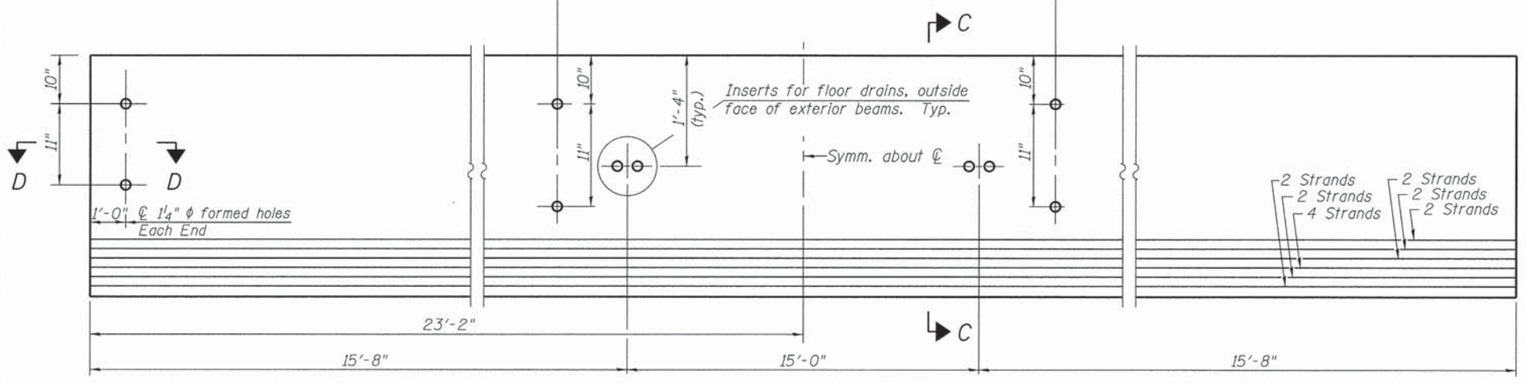


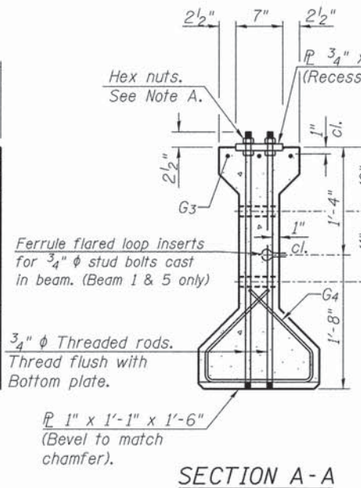
* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., Each Face

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

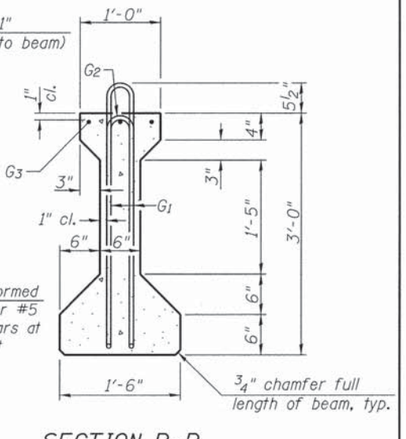




ELEVATION OF BEAM
(Showing prestressing steel)

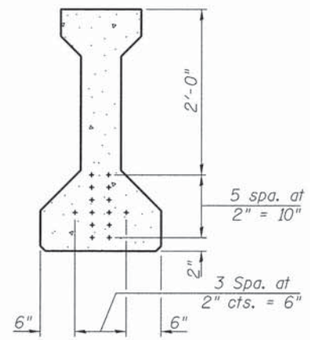


SECTION A-A



SECTION B-B

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



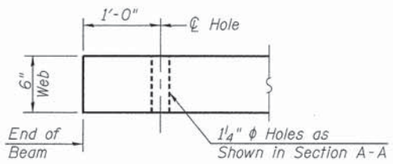
SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	77	#4	7'-7"	⊓L
G_2	8	#4	5'-8"	⊓
G_3	6	#5	24'-2"	—
G_4	38	#3	4'-1"	⌓

***For information only

Notes:
See sheet 15 of 20 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

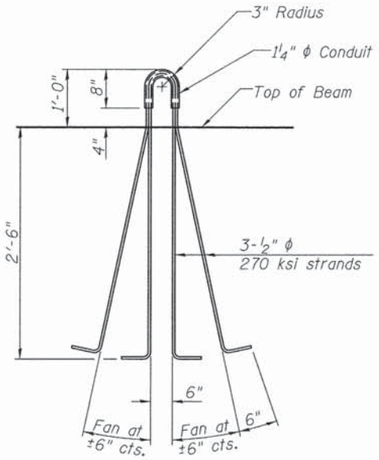


SECTION D-D

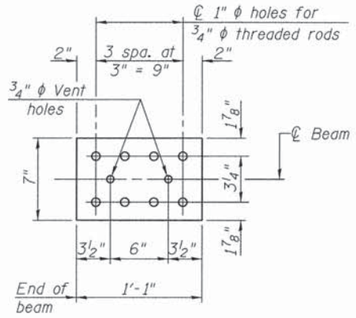
36" PPC I-BEAM

SHEET NO. 14	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	20
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

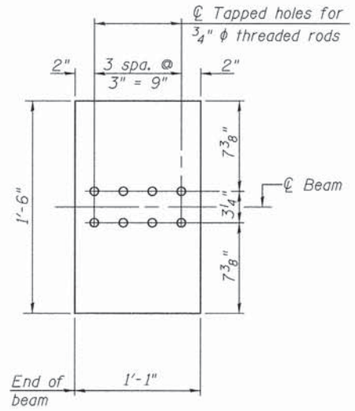
3329B014



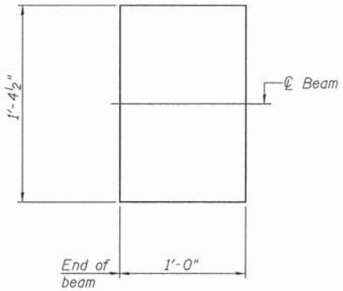
LIFTING LOOP DETAIL



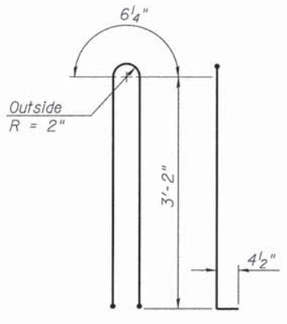
TOP PLATE



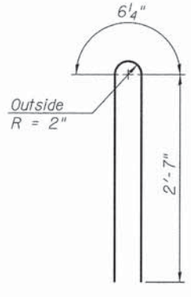
BOTTOM PLATE
(Showing threaded rods)



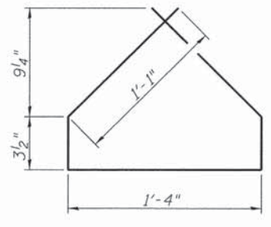
1" FABRIC BEARING PAD



BAR G1



BAR G2



BAR G4

NOTES

Inserts for ¾" ϕ 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 ½" and the nominal cross-sectional area shall be 0.153 sq. in.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

Threaded rods shall be ASTM F 1554 Grade 55.

BILL OF MATERIAL

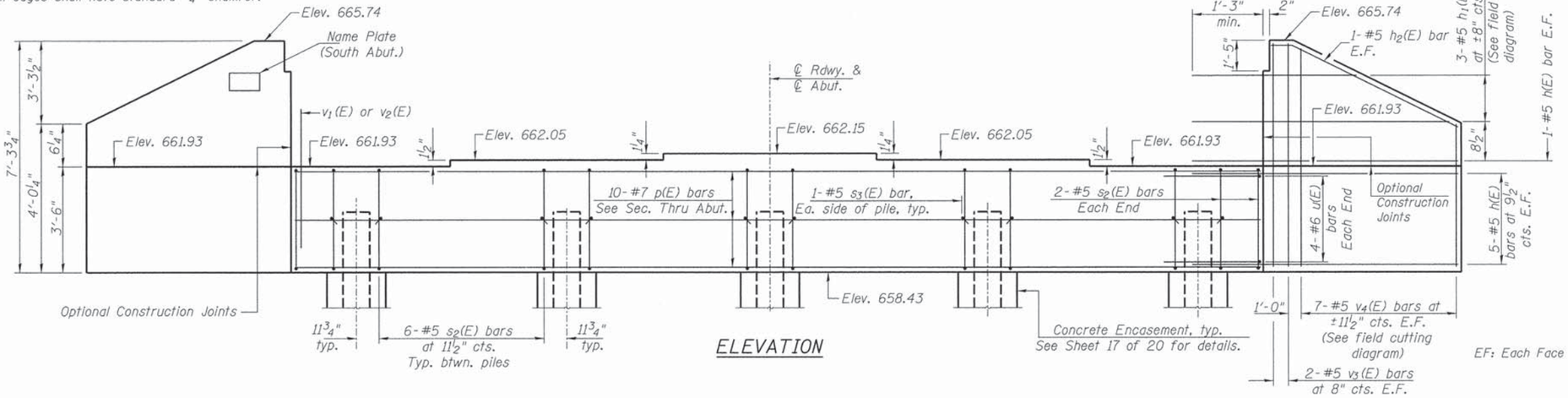
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	FOOT	232

36" PPC I-BEAM DETAILS

SHEET NO. 15	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	21
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

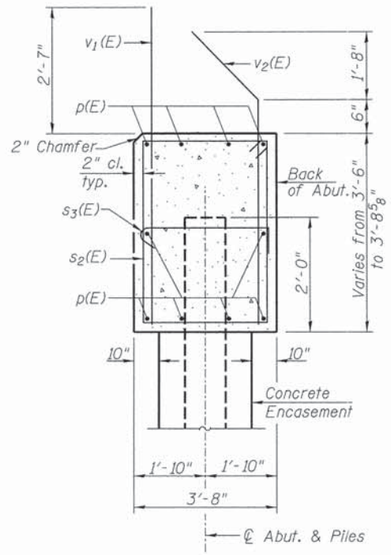
3329B015

Notes:
Pour steps monolithically with cap.
All edges shall have standard $\frac{3}{4}$" chamfer.

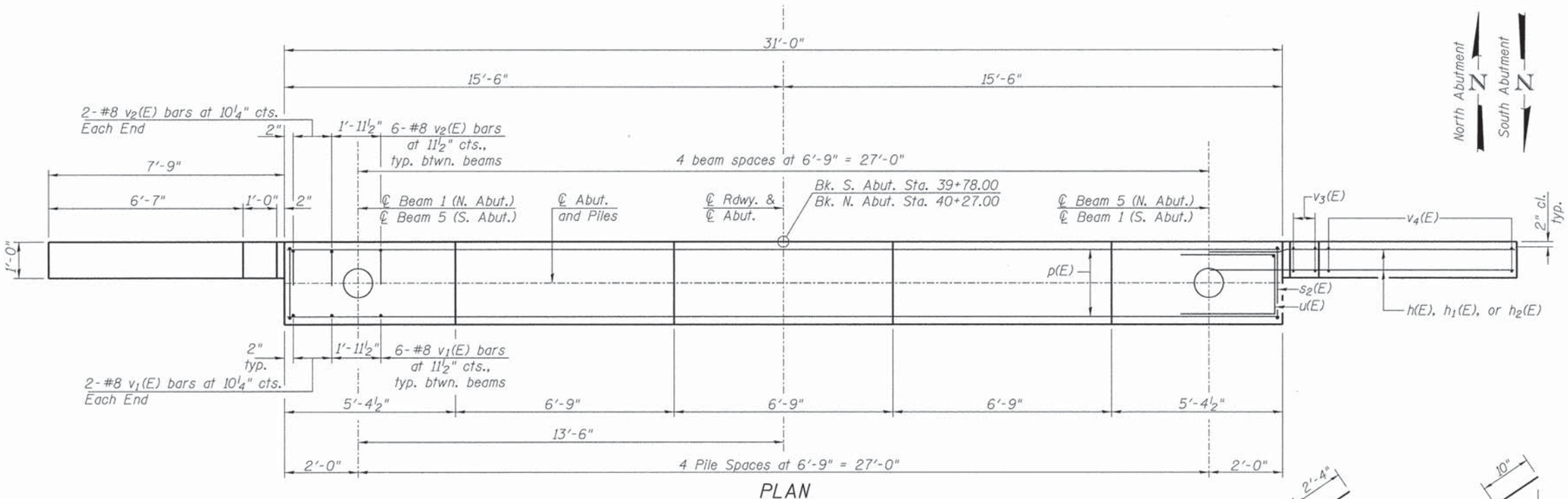


EF: Each Face

ELEVATION



SEC. THRU ABUT.



PLAN

North Abutment
South Abutment

BILL OF MATERIALS
TWO ABUTMENTS

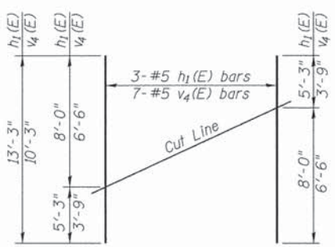
Bar	No.	Size	Length	Shape
h(E)	48	#5	8'-10"	
h_1(E)	12	#5	13'-3"	
h_2(E)	8	#5	8'-0"	
p(E)	20	#7	30'-9"	
s_2(E)	56	#5	13'-11"	
s_3(E)	20	#5	4'-4"	
u(E)	16	#6	11'-0"	
v_1(E)	56	#8	5'-11"	
v_2(E)	56	#8	6'-2"	
v_3(E)	16	#5	6'-11"	
v_4(E)	28	#5	10'-3"	
Structure Excavation		CU YD	195	
Concrete Structures		CU YD	36.6	
① Reinforcement Bars, Epoxy Coated		POUND	5,320	
Name Plates		EACH	1	
Furnishing Metal Shell Piles 12"x0.250"		FOOT	368	
Driving Piles		FOOT	368	
Test Pile Metal Shells		EACH	2	
Concrete Encasement		CU YD	2.6	

① See Special Provisions

For details of Piles and Concrete Encasement, see sheet 17 of 20.

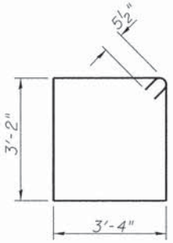
PILE DATA

Type: Metal Shell 12"x0.250"
Nominal Required Bearing: 309 kips
Factored Resistance Available: 170 kips
Est. Length: 46' S. Abutment
46' N. Abutment
No. Required: 10 (Includes 1 Test Pile at Each Abut.)

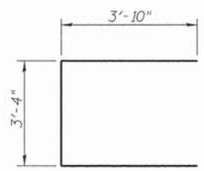


FIELD CUTTING DIAGRAM

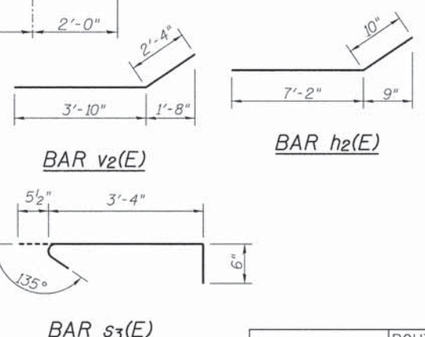
Order h_1(E) and v_4(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s_2(E)



BAR u(E)



BAR v_2(E)

BAR h_2(E)

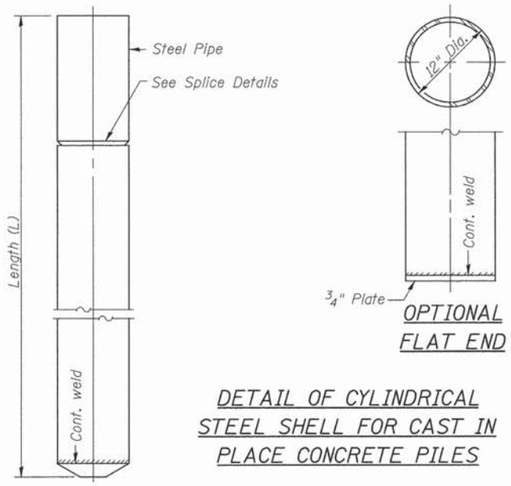
BAR s_3(E)

SHEET NO. 16	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
	CH 15	14-00729-00-BR	LASALLE	37 / 22
20 SHEETS		S.N. 050-3611	CONTRACT NO. 87559	
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)	

ABUTMENTS

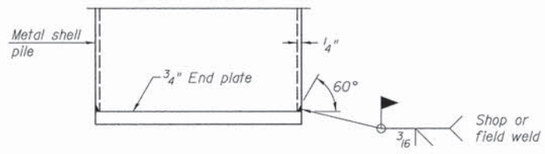
3329B016

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications, and shall be ASTM A252 Grade 3.

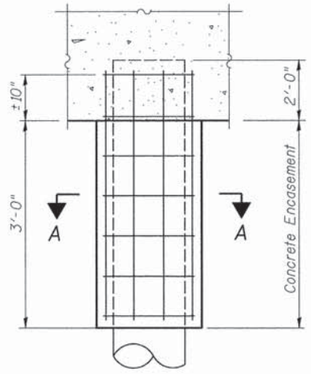


OPTIONAL FLAT END

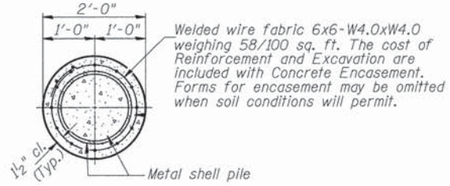
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



END PLATE ATTACHMENT

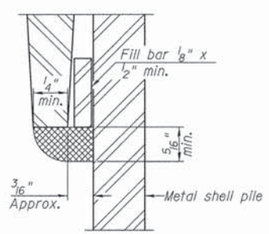


ELEVATION

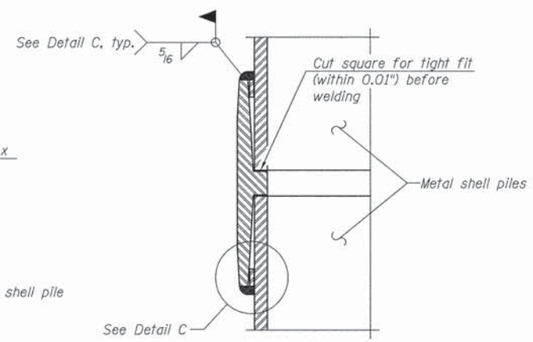


SECTION A-A

DETAIL OF METAL SHELL PILE ENCASEMENT AT ABUTMENTS

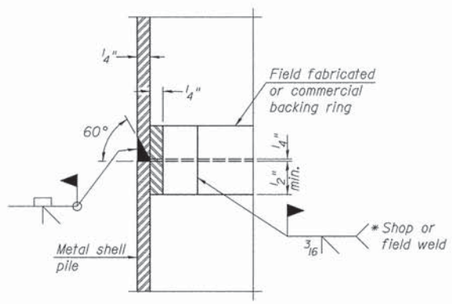


DETAIL C



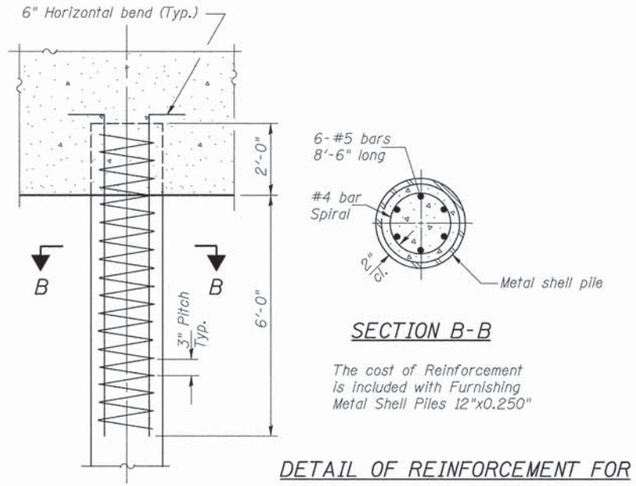
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



SECTION B-B

The cost of Reinforcement is included with Furnishing Metal Shell Piles 12"x0.250"

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS

METAL SHELL PILE DETAILS

SHEET NO. 17	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	23
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B017

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 1 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-1
Surface Elev. 665.60
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 6' Left Station 39+80

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV. 665.60	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES: Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
664.60			1								
663.60			2								
662.60	Stiff Black And Brown Clay (Fill With Concrete Fragments)		3	1	SS	1.3	8	B	23		
661.60			4								
660.60			5	2	SS	1.6	10	B	20		
659.60			6								
658.60			7								
657.60	Stiff Brownish Black Clay		8	3	SS	1.4	8	B	25		
656.60			9								
655.60			10								
654.60			11	4	SS	1.4	9	B	25		
653.60			12								
652.60			13	5	SS	3.5	19	S	22		
651.60			14								
650.60	Very Stiff Brownish Gray To Gray Clay Till		15								
649.60			16	6	SS	3.7	23	S	20		
648.60			17								
647.60			18	7	SS	3.1	19	B	25		
646.60			19								
645.60			20								
				8	SS	3.0	17	B	23		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
Comments:

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 2 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-1
Surface Elev. 665.60
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 6' Left Station 39+80

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV. 644.60	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES: Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
643.60			22								
642.60			23	9	SS	3.3	17	B	23		
641.60			24								
640.60			25								
639.60			26	10	SS	2.8	15	B	24		
638.60			27								
637.60			28	11	SS	2.6	14	B	24		
636.60			29								
635.60	Very Stiff Gray Clay Till		30								
634.60			31	12	SS	2.2	12	B	25		
633.60			32								
632.60			33	13	SS	2.4	13	B	22		
631.60			34								
630.60			35								
629.60			36	14	SS	2.8	18	B	18		
628.60			37								
627.60			38								
626.60			39								
625.60			40								
624.60			41	15	SS	2.4	18	B	21		

Groundwater Data: Static water level after auger removal - elevation 621.0
Comments:

SOIL BORING LOGS

SHEET NO. 18	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	24
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B018

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

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e-mail: mts37@comcast.net

BORING LOG

Sheet 3 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-1
Surface Elev. 665.60
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 6' Left Station 39+80

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
623.60											
622.60			43								
621.60			44								
620.60			45	16	SS	2.5	16	B	16		
619.60			46								
618.60			47								
617.60			48								
616.60			49								
615.60	Very Stiff Gray Clay Till With Sand Seams (45-56.5' Depth)		50	17	SS	2.5	14	B	17		
614.60			51								
613.60			52								
612.60			53								
611.60			54								
610.60			55	18	SS	2.3	14	B	18		
609.60			56								
608.60			57								
607.60			58								
606.60			59								
605.60			60	19	SS	--	22	---	14		
604.60	Bottom of Boring		61								
603.60			62								

Groundwater Data: Static water level after auger removal - elevation 621.0
Comments:

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

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Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 1 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-2
Surface Elev. 665.50
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 7' Right Station 40+25

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
665.50											
664.50			1								
663.50			2								
662.50	Very Stiff To Stiff Brown Clay (Fill)		3	1	SS	2.0	11	B	17		
661.50			4								
660.50			5	2	SS	1.7	9	B	21		
659.50			6								
658.50			7								
657.50	Stiff Brownish Black Clay		8	3	SS	1.2	7	B	26		
656.50			9								
655.50			10								
654.50	Very Stiff Brownish Gray Clay		11	4	SS	2.3	12	B	20		
653.50			12								
652.50			13	5	SS	3.3	18	B	18		
651.50			14								
650.50			15								
649.50	Very Stiff Gray Clay Till		16	6	SS	4.0	22	B	15		
648.50			17								
647.50			18	7	SS	3.0	18	B	24		
646.50			19								
645.50			20	8	SS	2.6	16	B	22		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
Comments:

SOIL BORING LOGS

SHEET NO. 19	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	25
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B019

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 2 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-2
Surface Elev. 665.50
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 7' Right Station 40+25

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV. 644.50	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES: Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
643.50			22								
642.50			23	9	SS	2.5	15	B	22		
641.50			24								
640.50			25								
639.50			26	10	SS	2.2	13	B	23		
638.50			27								
637.50			28	11	SS	2.5	16	B	23		
636.50			29								
635.50	Very Stiff Gray Clay Till		30	12	SS	2.7	17	B	23		
634.50			31								
633.50			32								
632.50			33	13	SS	2.6	16	B	21		
631.50			34								
630.50			35								
629.50			36	14	SS	3.0	17	B	16		
628.50			37								
627.50			38								
626.50			39								
625.50			40								
624.50			41	15	SS	2.2	16	B	20		

Groundwater Data: Static water level after auger removal - elevation 621.0
Comments:

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 3 of 3

Client: Hutchison Engineering, Inc.
Project Name: Section 14-00729-00-BR
Project Site: CH - 15 Over Wolf Creek
LaSalle County, IL.

Boring No. B-2
Surface Elev. 665.50
Auger Depth 61' Rotary Depth NA
Start Date 06/29/13 Finish Date 06/30/13

Location: 7' Right Station 40+25

DRILLED BY: Randy Safranski, Diedrich D-120

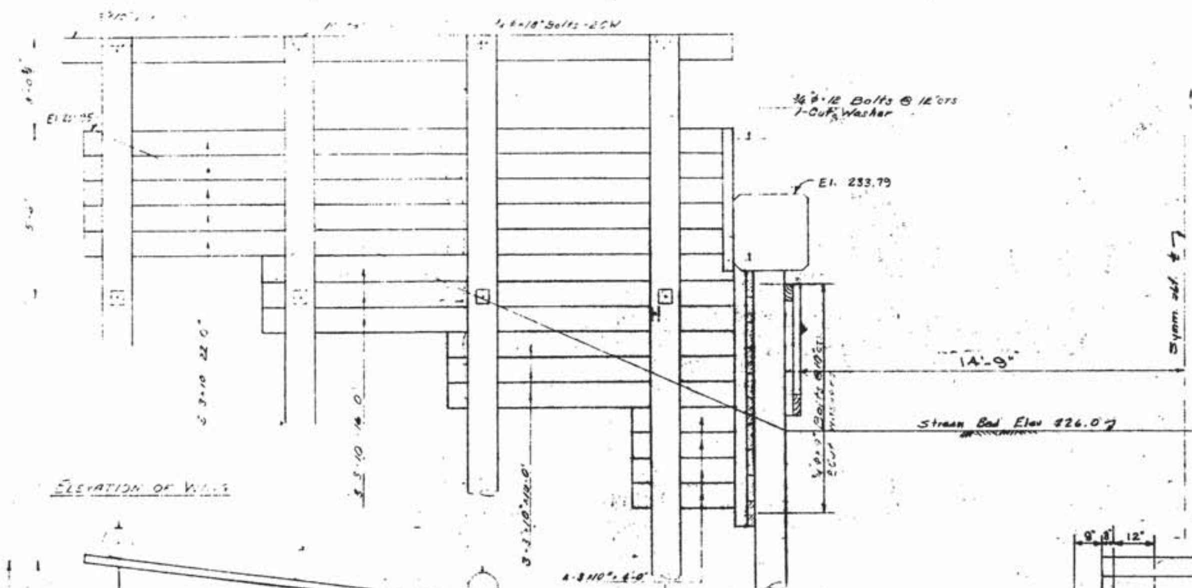
(DEPTH) ELEV. 623.50	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES: Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
622.50			43								
621.50			44								
620.50			45								
619.50			46	16	SS	2.6	15	B	15		
618.50			47								
617.50			48								
616.50			49								
615.50			50								
614.50			51	17	SS	3.2	17	B	15		
613.50			52								
612.50	Very Stiff Gray Clay Till		53								
611.50			54								
610.50			55								
609.50			56	18	SS	2.4	15	B	18		
608.50			57								
607.50			58								
606.50			59								
605.50			60								
604.50			61	19	SS	2.3	14	B	20		
603.50	Bottom of Boring		62								

Groundwater Data: Static water level after auger removal - elevation 621.0
Comments:

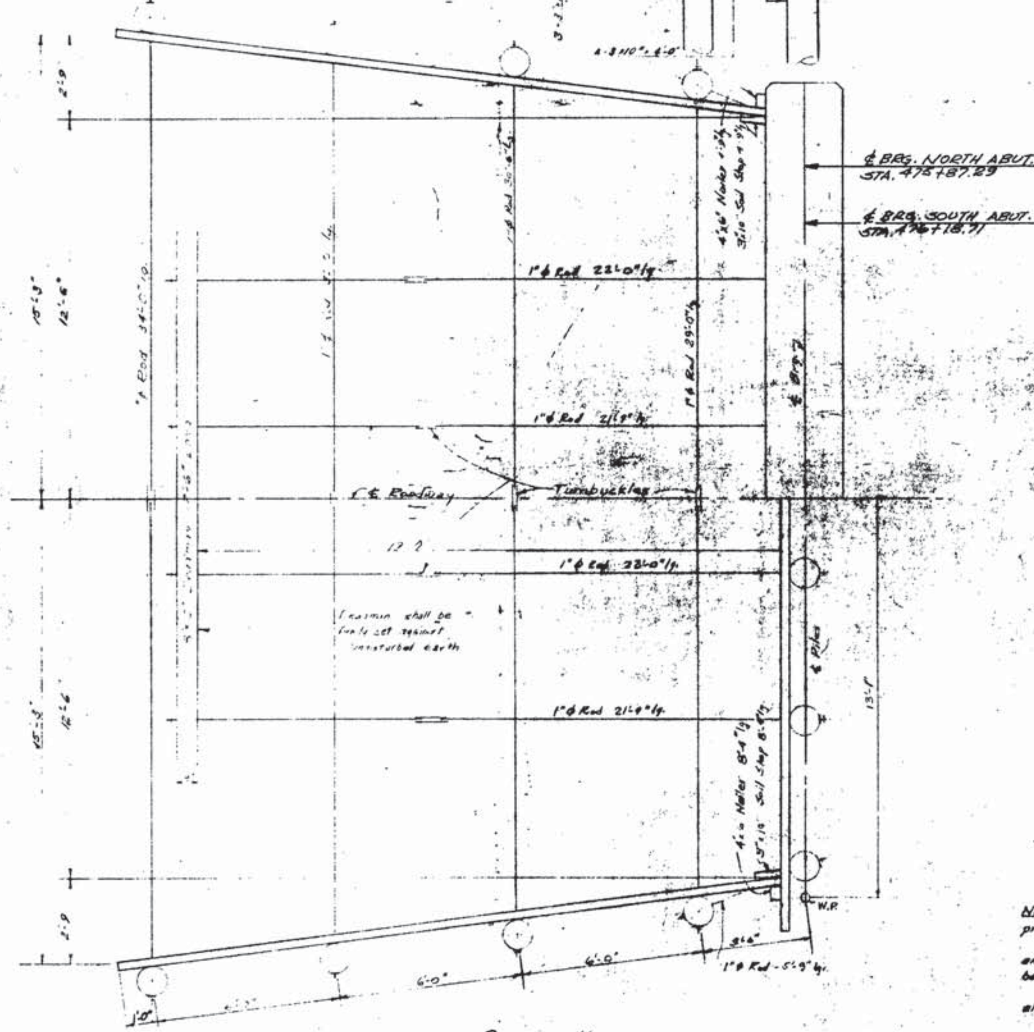
SOIL BORING LOGS

SHEET NO. 20	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	26
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

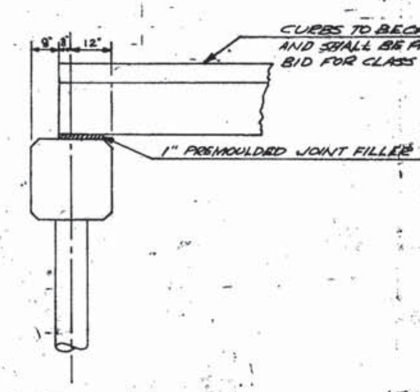
5-B	71GX	LA SALLE	27	20
476+03				

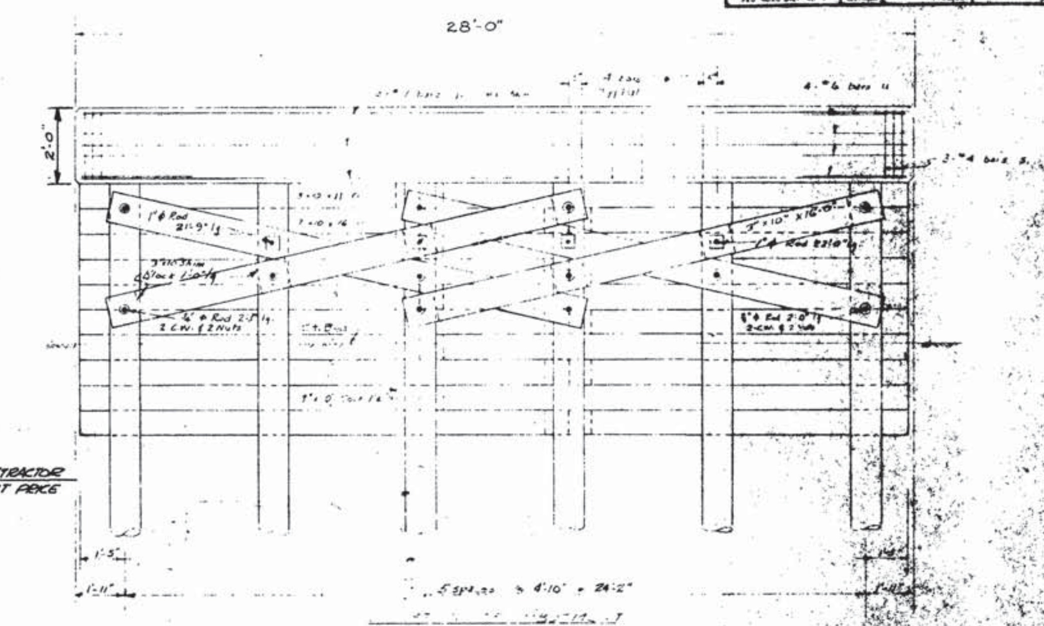


ELEVATION OF WING



PLAN OF WING

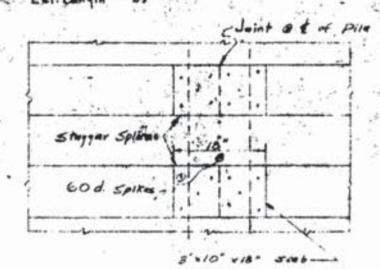




PILE DATA

Abutment Piles
- 20 Ton Capacity
- 12 Required
- Est Length 25'

Wing Piles
- 10 Ton Capacity
- 16 Required
- Est. Length 37'



BACKING SPLICE

Note: All tie rods shall be threaded 9" each end and provided with a 5½" x 5½" x ⅝" R washer.
All hardware shall be hot dipped galvanized steel and shall be galvanized after fabrication. 0.2% copper bearing steel may be substituted for galvanized steel.
The Contractor shall cut off at his own expense all rods projecting more than 1" beyond nut.

WATERWAY INFORMATION

DRAINAGE AREA	2780 ACRES
CHARACTER	LEVEL to ROLLING
OPENING REQ'D. (15 YEAR FLOOD)	145 SQ.FT.
PRESENT OPENING	50 SQ.FT.
PROPOSED OPENING	150 SQ.FT.

LETTERING FOR NAME PLATE

STA. 476+03
BUILT 1960 BY
LASALLE COUNTY

SECTION 71GX M.F.T.
LOADING H15-S12

BILL OF MATERIAL - TWO ABUTMENTS

PRECAST CONCRETE ABUTMENT CAPS	EACH	2
Treated Timber	F.B.M.	4514
Driving Timber Piles	Lin.Ft.	[illegible]
Test Piles	Ea.	[illegible]
Hardware	Lbs.	[illegible]
Furnishing Creosoted Piles	Lin. Ft.	782

BILL OF HARDWARE

No.	Item	Length
2	1"φ Rod	34'-0"
2	"	22'-0"
2	"	30'-6"
2	"	23'-0"
2	"	5'-9"
4	"	22'-[illegible]
4	"	21'-9"
40	R.Wash[illegible]	
160	Cut Washer ¾"	
40	1"φ Nut	
124	¾"φ [illegible]	
16	[illegible] Turnbuckle	
1328	60d Spikes	
12	¾"φ Rods	[illegible]
12	¾"φ Rods	[illegible]
16	¾"φ Bolts	[illegible]
[illegible]	¾"φ Bolts	[illegible]
40	[illegible]	[illegible]

BILL OF LUMBER

Creosoted (Full Sawn Rough)

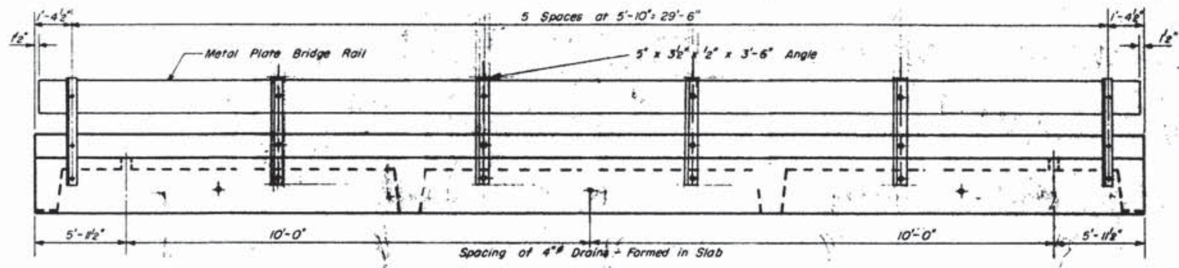
No.	Use	Size	Length
[illegible]	[illegible]	3"x10"	[illegible]
[illegible]		"	11'-0"
4	[illegible]	"	16'-0"
[illegible]	Backing Splice	"	1'-6"
[illegible]	[illegible]	"	1'-0"
[illegible]	[illegible]	"	22'-0"
12	"	"	14'-3"
12	"	"	10'-9"
[illegible]		"	4'-0"
4	[illegible]	"	4'-9"
4		"	8'-4"
4	[illegible]	4"x[illegible]"	4'-9"
[illegible]		"	8'-4"
[illegible]	[illegible]	4"x[illegible]"	17'-[illegible]
	Untreated (S4S)		
4	[illegible]	3"x10"	22'-0"

LA SALLE COUNTY
SEC. 71-GX MFT.
CH. 5-B
STA. 476+03

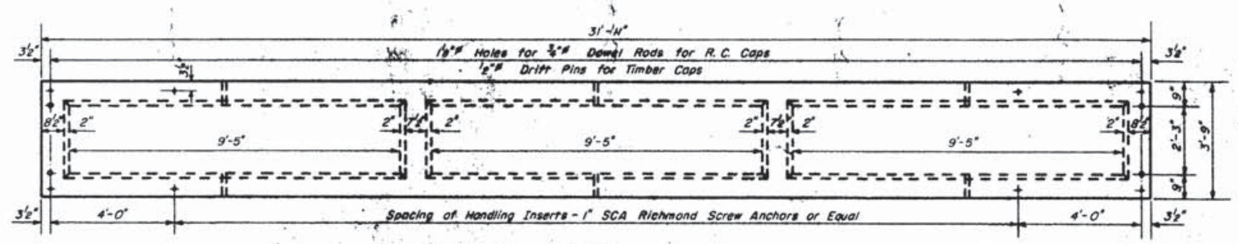
EXISTING STRUCTURE PLANS

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	27
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

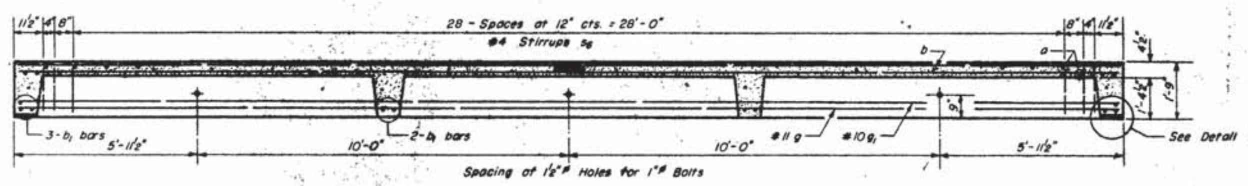
3329B021



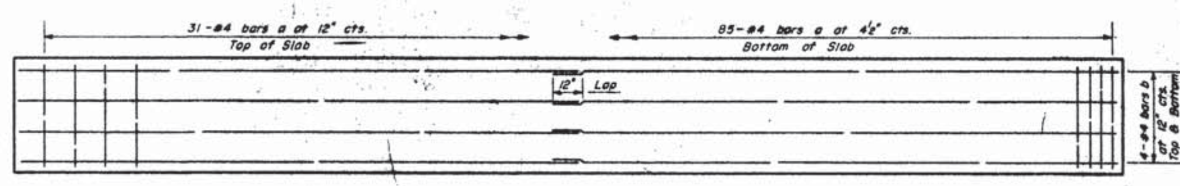
ELEVATION



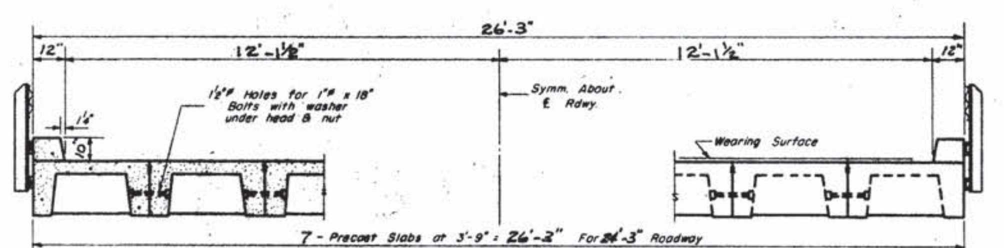
PLAN



SECTION ALONG ℄ OF BEAM



PLAN SHOWING SLAB REINFORCEMENT



HALF SECTION

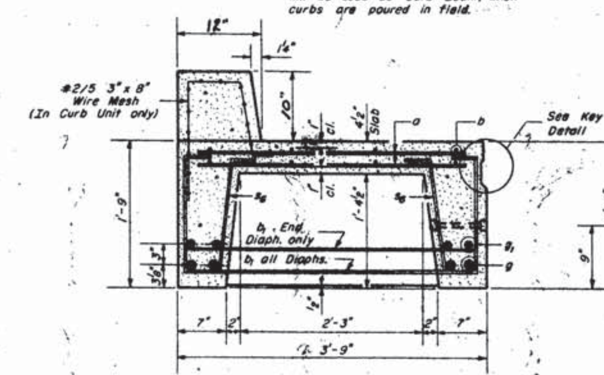
HALF END ELEVATION

NOTE:
WEARING SURFACE SHALL BE APPLIED BY LASALLE COUNTY.

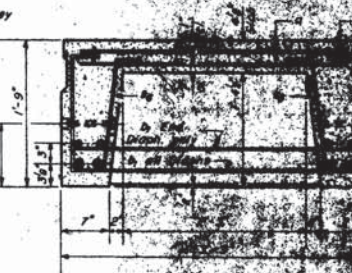
DESIGN STRESSES

f'c = 4500 psi.
fc = 1800 psi.
fs = 20,000 psi.
n = 8

Note: Wire Mesh will be placed in the Top of any Interior Beam that will be used as Curb Beam, when curbs are poured in field.



SECTION THRU CURB UNIT



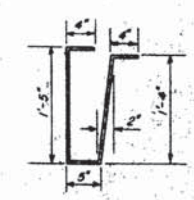
SECTION

BILL OF

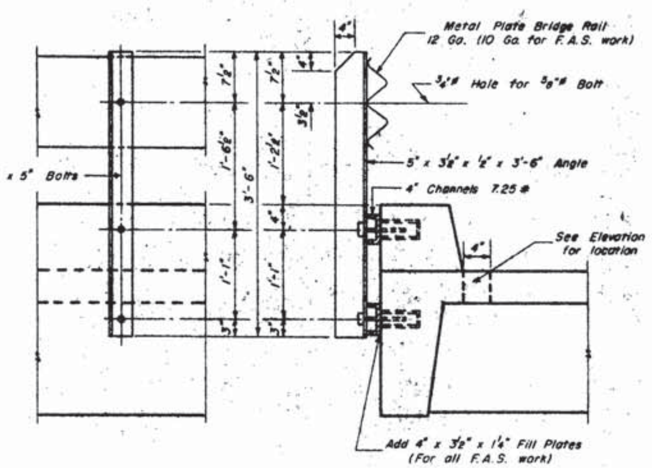
Bar	Size	No.		
a	#4	116	[illegible]	352
b	#4	[illegible]	[illegible]	175
b1	#4	[illegible]	[illegible]	[illegible]
g	#11	4	[illegible]	671
g1	#10	4	[illegible]	544
s6	#4	66	[illegible]	170
Class X Concrete			[illegible]	[illegible]
Reinforcement				203
Total Weight				[illegible]

Reinforcing and Concrete included in

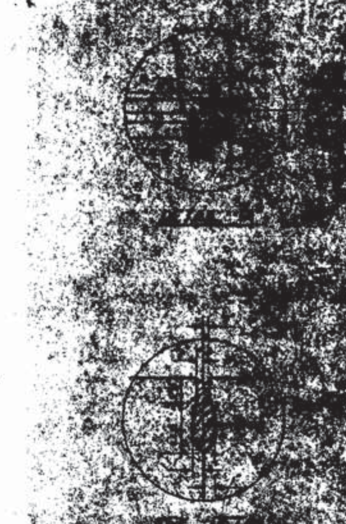
Note: maximum



BAR S6



RAIL POST CONNECTION DETAIL



PRECAST CONCRETE

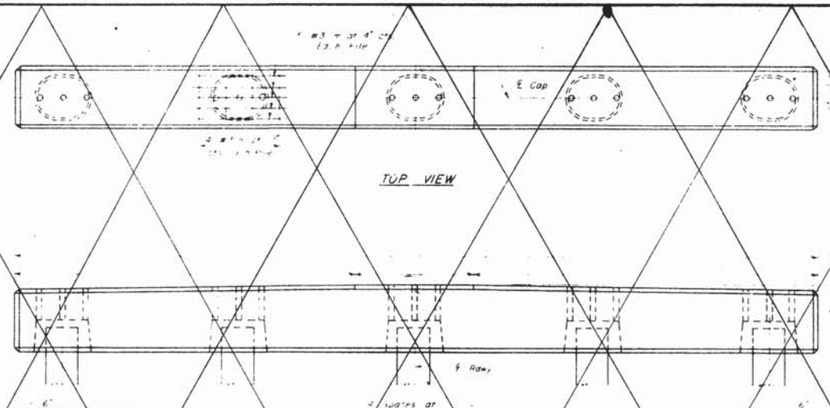
LASALLE COUNTY
C.H. 15
STR.

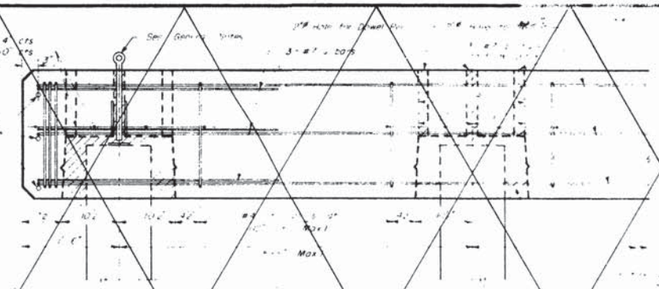
PAGE 16-1

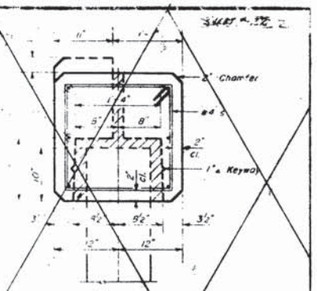
EXISTING STRUCTURE PLANS

SHEET NO. 2	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 15	14-00729-00-BR	LASALLE	37	28
3 SHEETS		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B022







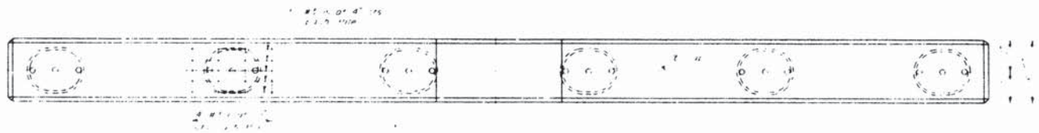
DESIGN STRESSES

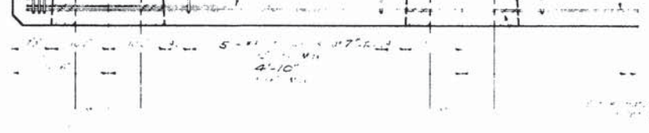
BILL OF MATERIAL

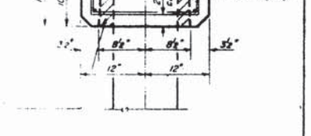
Bar	Size	No.	Length	Shape
m	#3	25	3'-0"	
n	#3	20	1'-6"	
p	#7	6		
s	#4		7'-4"	
u	#7	6	9'-1"	
355 X	Concrete		Cu. Yds.	
	Reinforcement Bars		Lbs.	
	Wt. Weight of Cap		Lbs.	

5 PILE - PRECAST CAP DETAILS

GENERAL NOTES







DESIGN STRESSES

BILL OF MATERIAL

Bar	Size	No.	Length	Shape
m	#3	30	3'-0"	
n	#3	24	1'-6"	
p	#7	6	27'-6"	
s	#4	51	7'-4"	
u	#7	6	9'-1"	
	Concrete		Cu. Yds.	3.7
	Reinforcement Bars		Lbs.	650
	Weight of Cap		Lbs.	15,030

6 PILE PRECAST CAP DETAILS

PAGE XXX

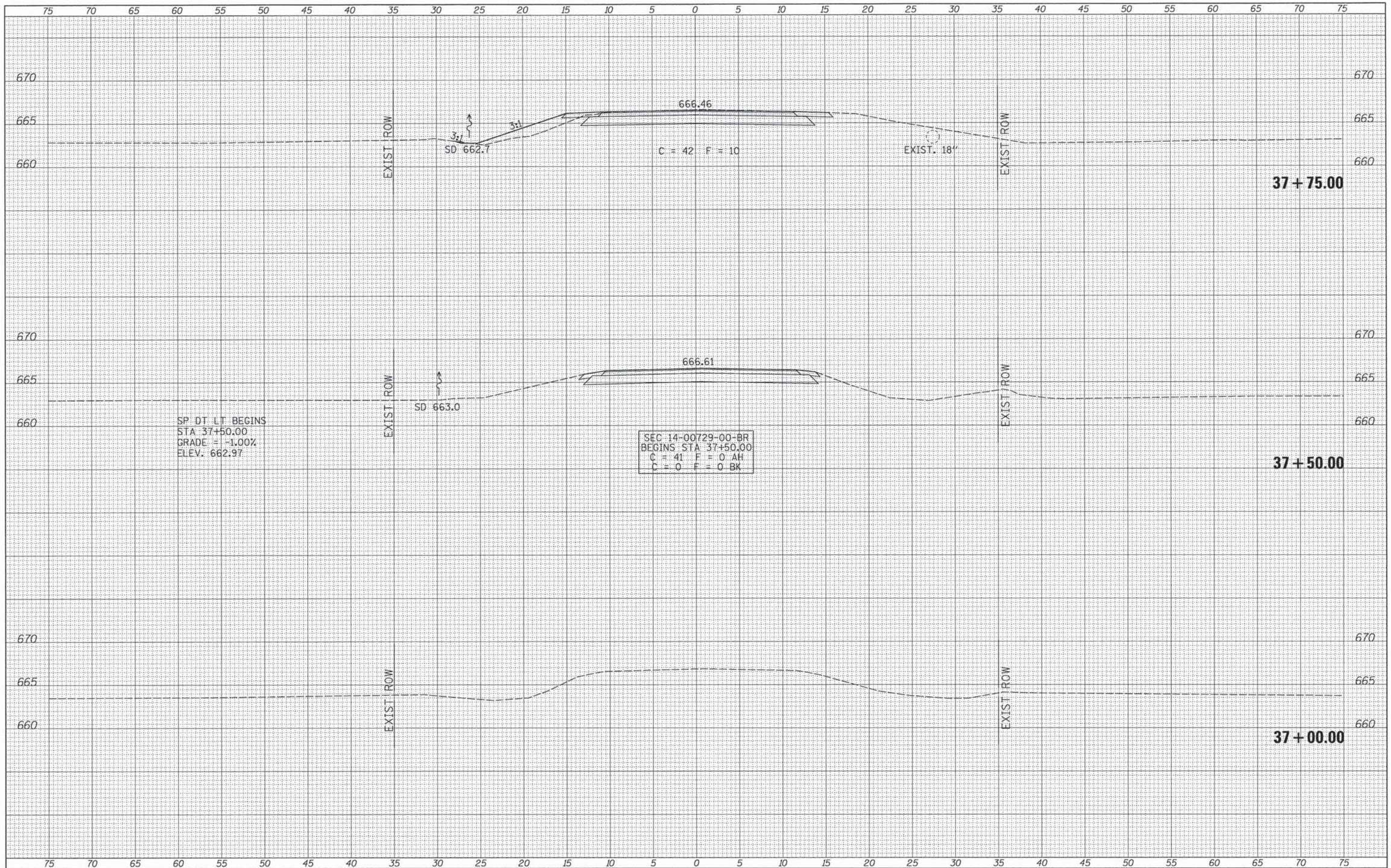
EXISTING STRUCTURE PLANS

SHEET NO. 3	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3 SHEETS	CH 15	14-00729-00-BR	LASALLE	37	29
		S.N. 050-3611	CONTRACT NO. 87559		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

3329B023

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

BY	DATE



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

BY	DATE

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LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 1 OF 8 SHEETS | STA. 37+00.00 TO STA. 37+75.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	30
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

670
665
660

EXIST ROW

3:1

SD 662.0

666.11

C = 43 F = 19

38 + 50.00

SD 662.2

666.20

C = 43 F = 21

38 + 25.00

SD 662.5

666.32

C = 43 F = 18

38 + 00.00

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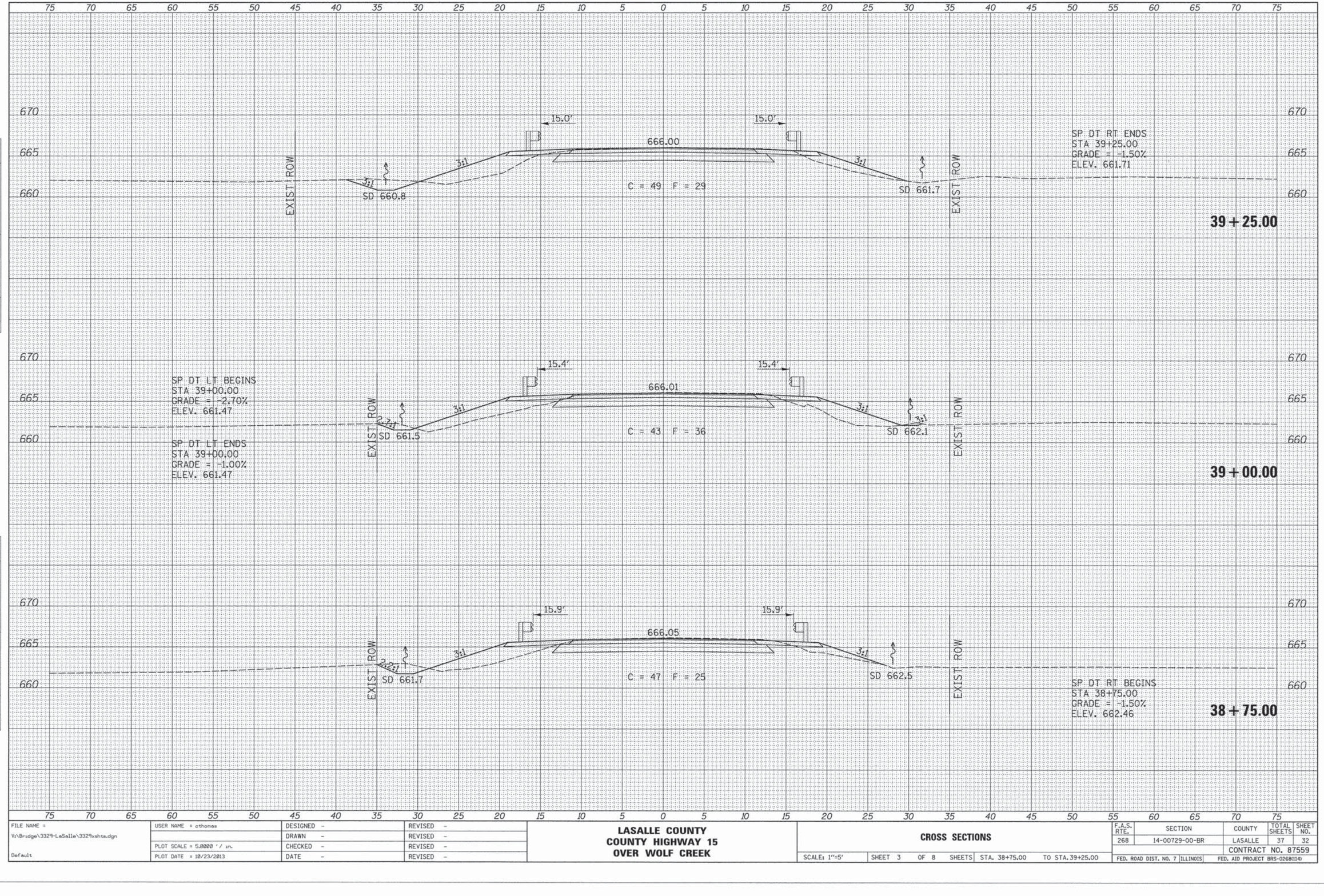
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 2 OF 8 SHEETS | STA. 38+00.00 TO STA.38+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	31
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		



FINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY — NOTE BOOK — NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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Default	PLOT DATE = 10/23/2013	DATE -	REVISED -

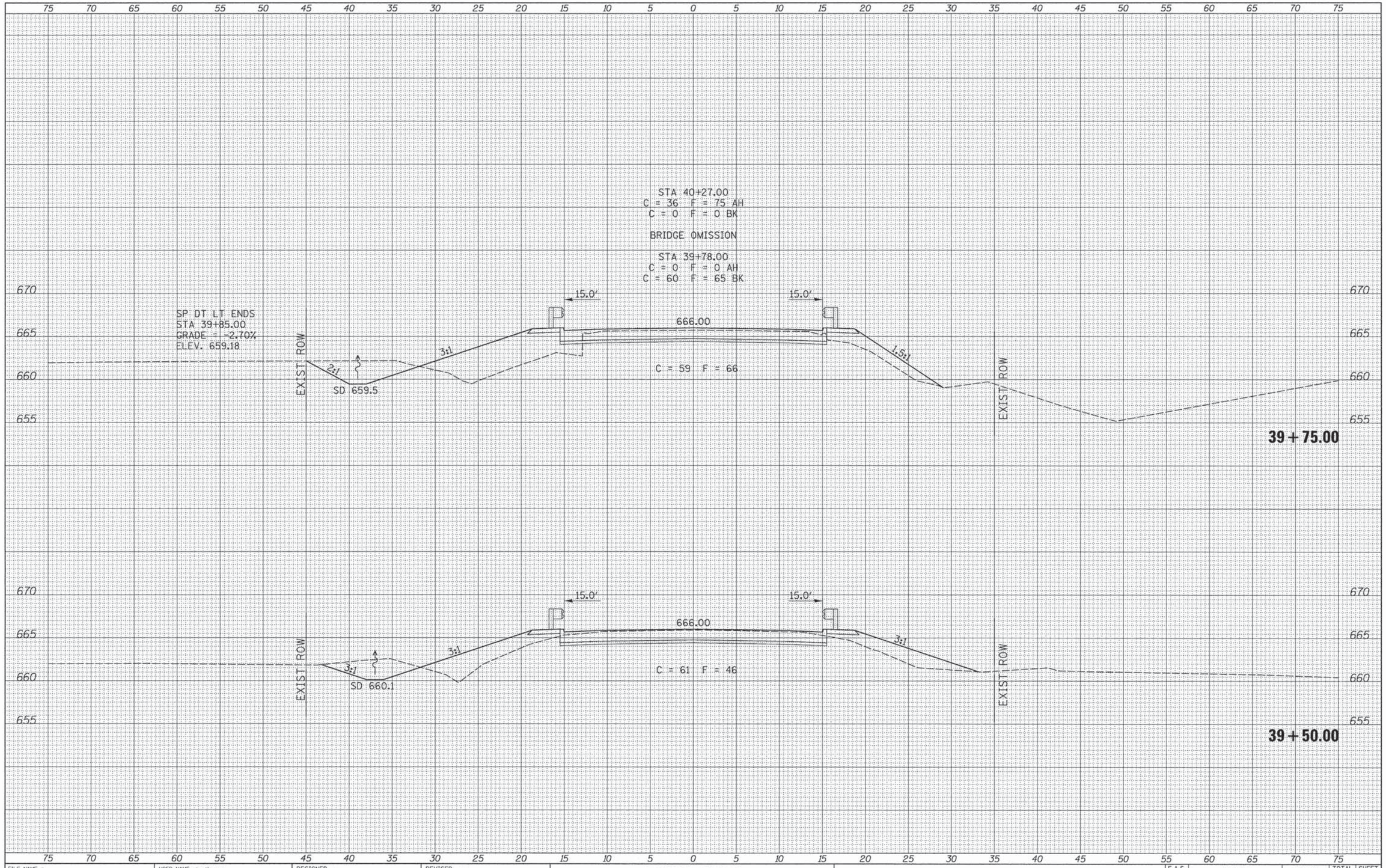
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 3 OF 8 SHEETS | STA. 38+75.00 TO STA. 39+25.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	32
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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



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

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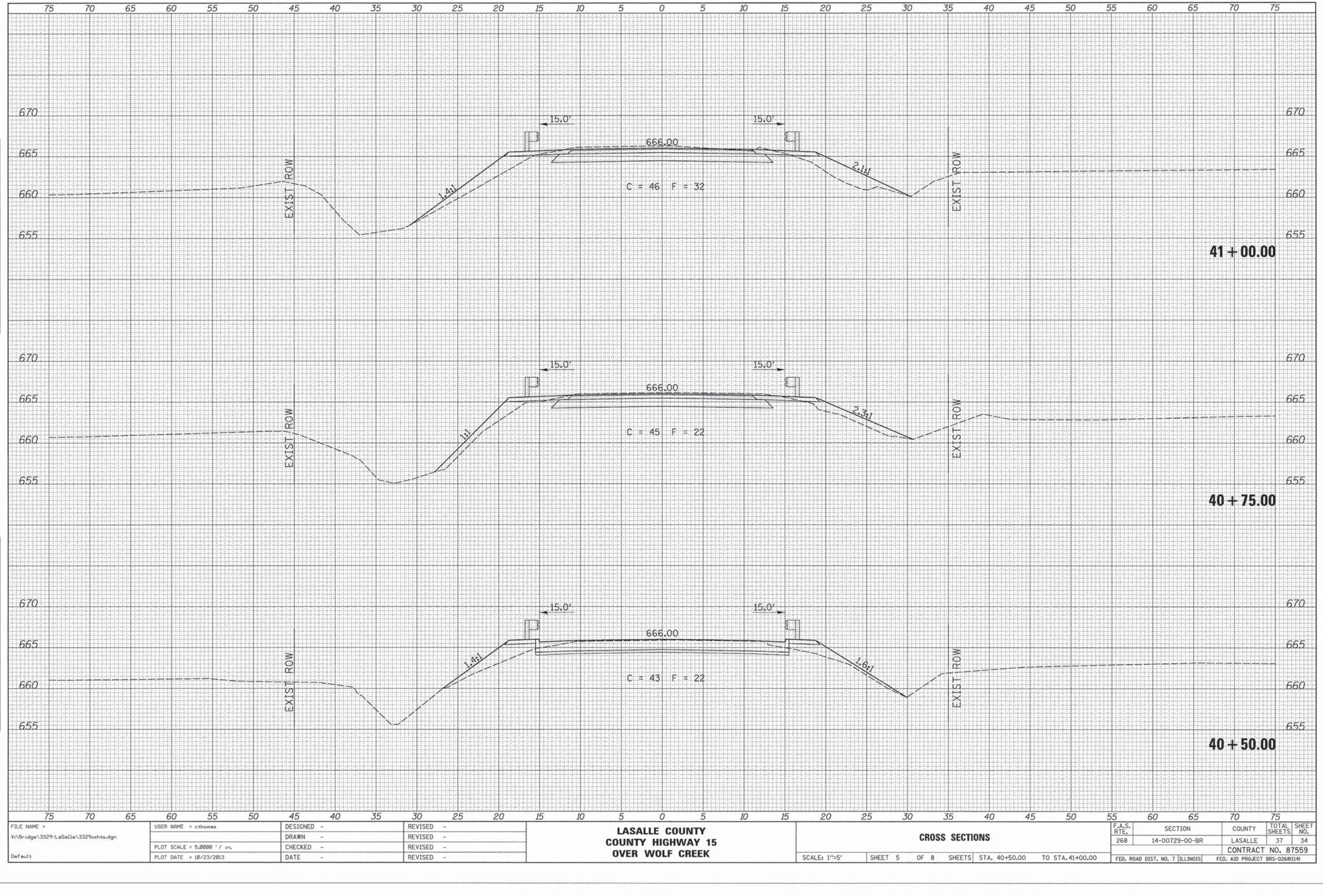
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 4 OF 8 SHEETS | STA. 39+50.00 TO STA. 39+75.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	33
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		



FINAL SURVEY

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

ORIGINAL SURVEY

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

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Default	PLOT DATE = 10/23/2013	DATE -	REVISED -

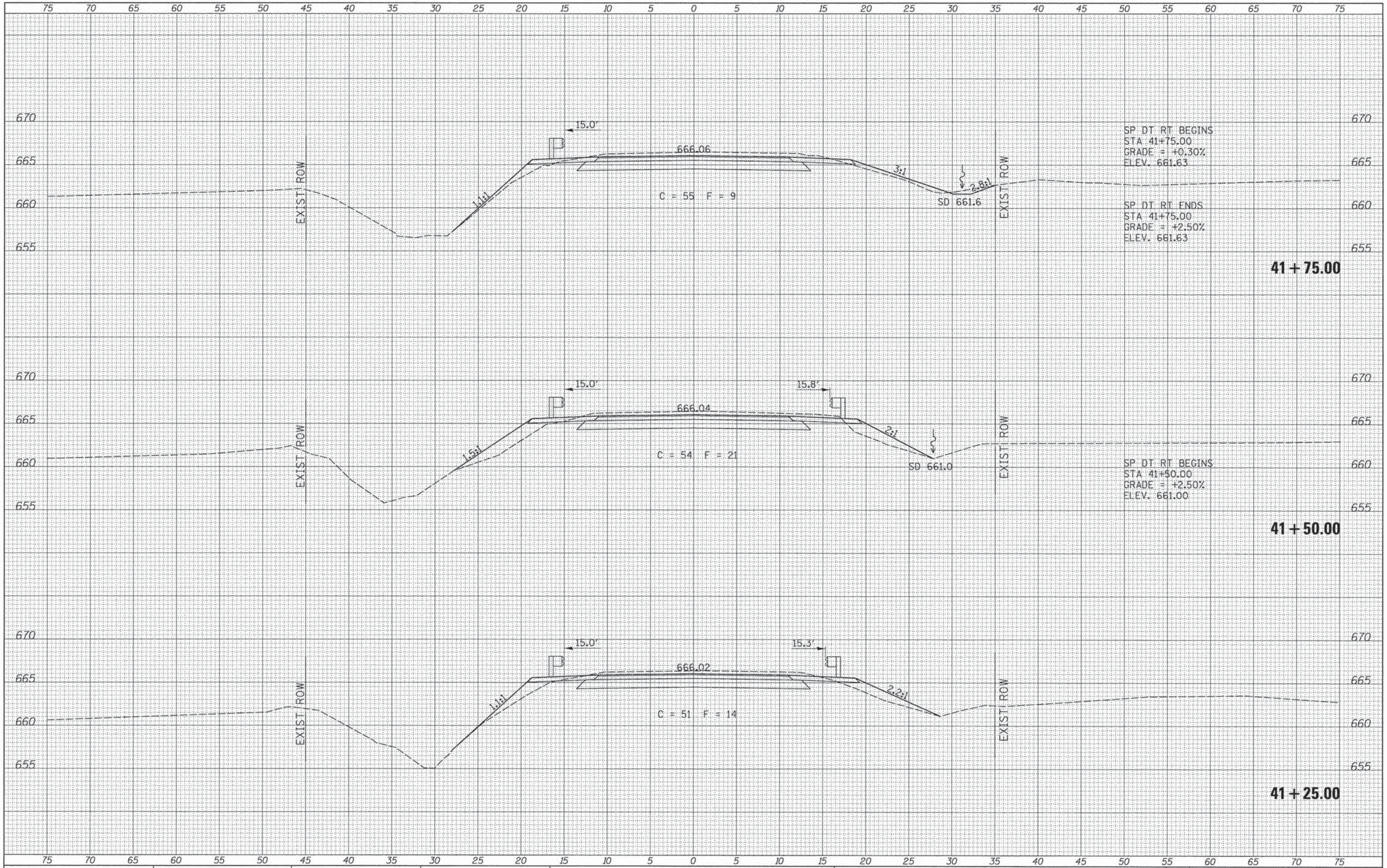
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 5 OF 8 SHEETS | STA. 40+50.00 TO STA. 41+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	34
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRS-0268(114)		

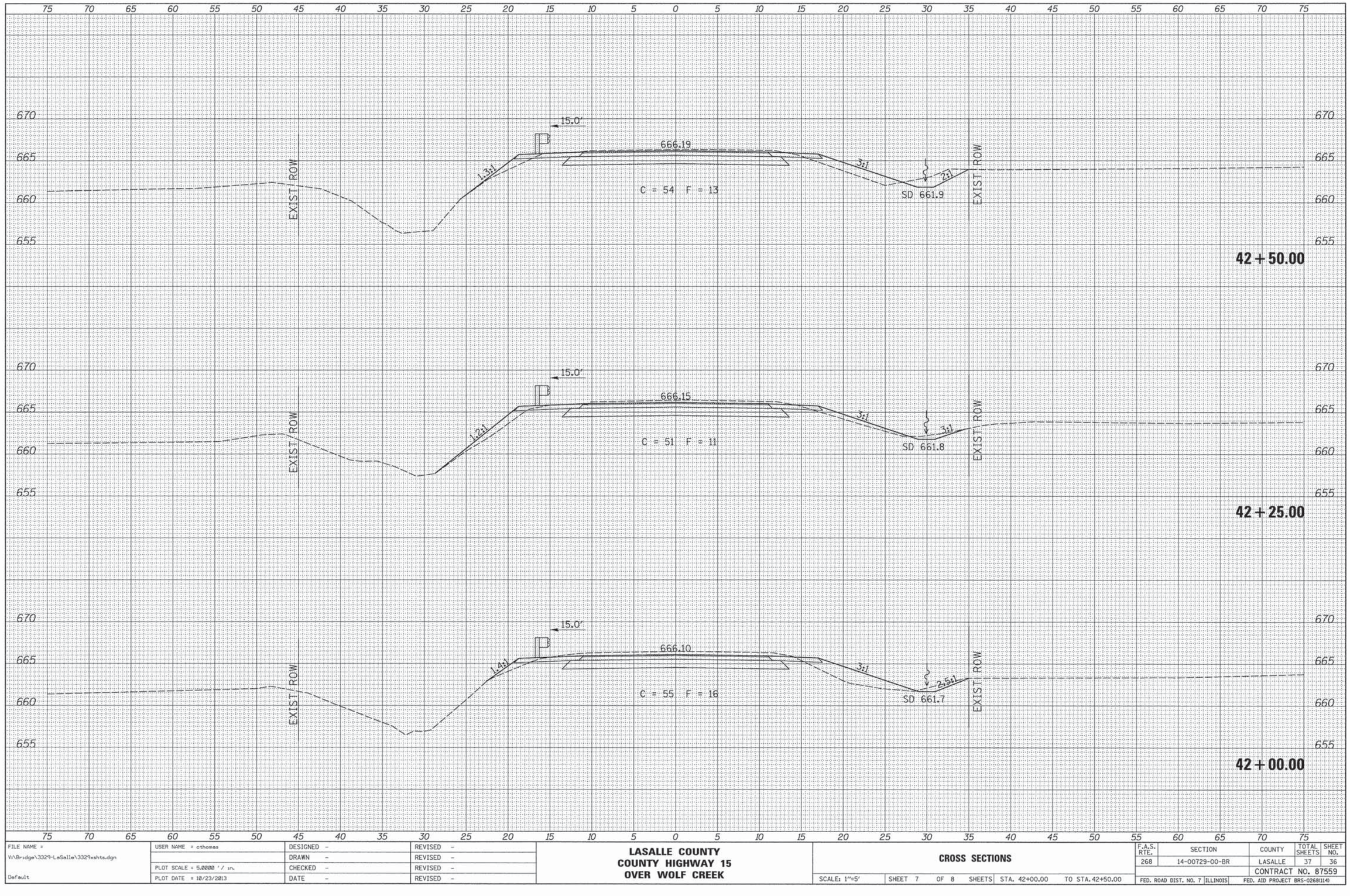
FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE



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

FILE NAME = V:\Bridge\3329-LaSalle\3329xshts.dgn	USER NAME = cthomas	DESIGNED -	REVISED -	LASALLE COUNTY COUNTY HIGHWAY 15 OVER WOLF CREEK	CROSS SECTIONS	F.A.S. RTE. 268	SECTION 14-00729-00-BR	COUNTY LASALLE	TOTAL SHEETS 37 / SHEET NO. 35
		DRAWN -	REVISED -						
	PLOT SCALE = 5.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 87559			
Default	PLOT DATE = 10/23/2013	DATE -	REVISED -		SCALE: 1"=5' SHEET 6 OF 8 SHEETS STA. 41+25.00 TO STA. 41+75.00	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)	

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



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

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Default	PLOT DATE = 10/23/2013	DATE -	REVISED -

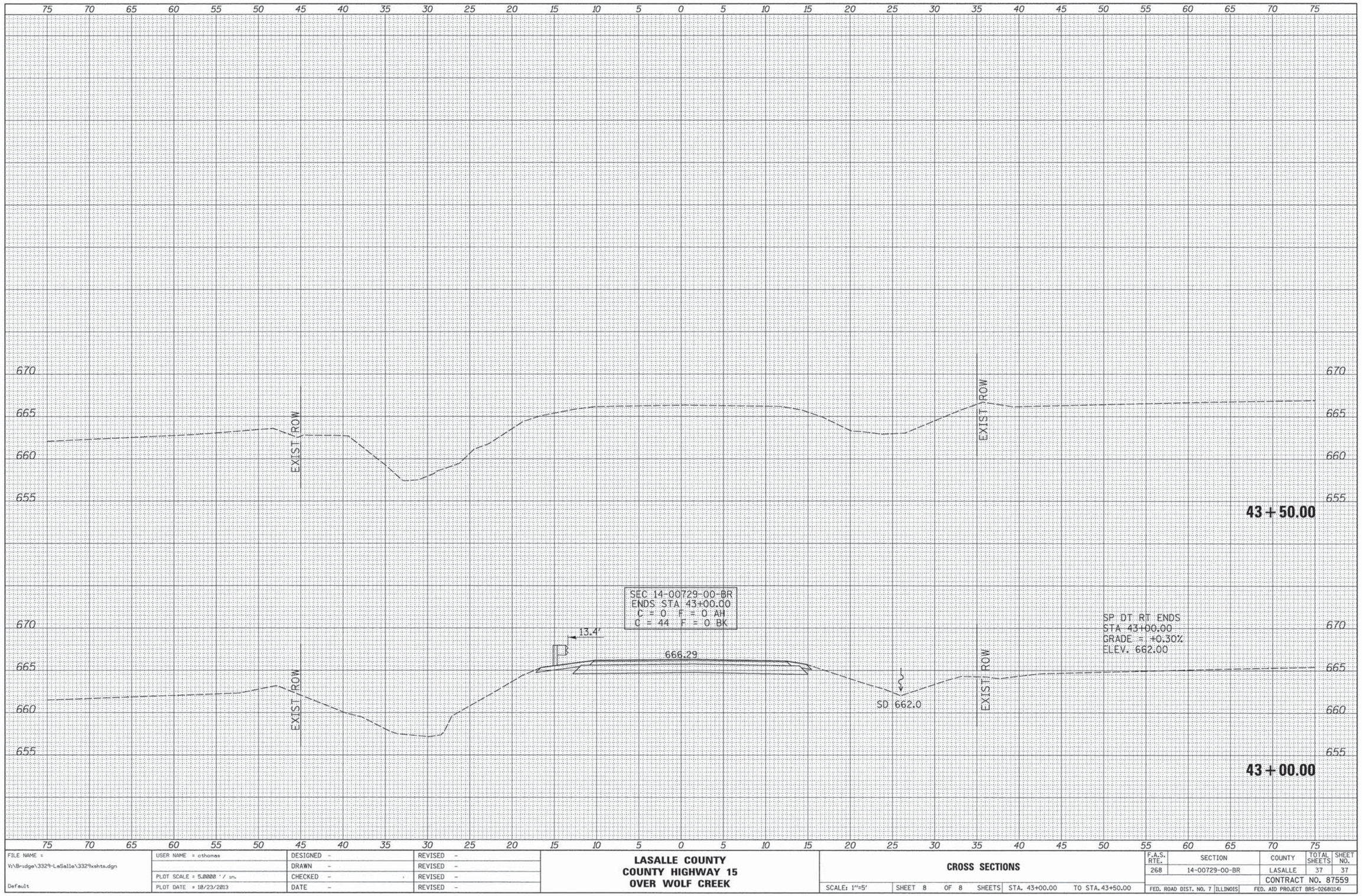
LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 7 OF 8 SHEETS | STA. 42+00.00 | TO STA. 42+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	36
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0268(114)		

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



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

FILE NAME = V:\Bridge\3329-LaSalle\3329xshts.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 10/23/2013	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 15
OVER WOLF CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET 8 OF 8 SHEETS | STA. 43+00.00 TO STA. 43+50.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
268	14-00729-00-BR	LASALLE	37	37
		CONTRACT NO. 87559		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRS-0268(114)		