ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-0002 -00-BR	DEKALB	20	1
	ILLINOIS			

CONTRACT NO. 87366

11-7-08 Letting, Item 026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

SECTION 06–00002–01–BR
DEKALB COUNTY
PROJECT NO. BHM–5076 (006)
F.A.U. 5411 (C.H. 11–SUYDAM ROAD)
C–93–104–08
CONTRACT NO. 87366

SCALES

PLAN	0'	50'	100'
PROFILE HORIZ.	0'	50'	100'
PROFILE VERT.	0'	5'	10'
CROSS SECTIONS	0'	5'	10'

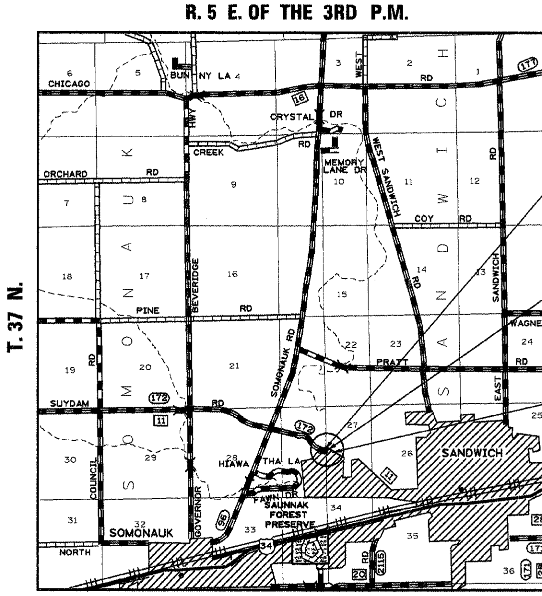
INDEX OF SHEETS

STANDARDS

280001–04	TEMPORARY EROSION CONTROL SYSTEMS
515001–02	NAME PLATES FOR BRIDGES
630001–07	STEEL PLATE BEAM GUARDRAIL
631032–03	TRAFFIC BARRIER TERMINAL, TYPE 6A
720011	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001	TELESCOPING STEEL SIGN SUPPORT
729001	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS AND MARKERS)
701901	TRAFFIC CONTROL DEVICES
780001–01	TYPICAL PAVEMENT MARKINGS
BLR 21–7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

R. 5 E. OF THE 3RD P.M.

T. 37 N.



IMPROVEMENT BEGINS
STA. 42+45.64

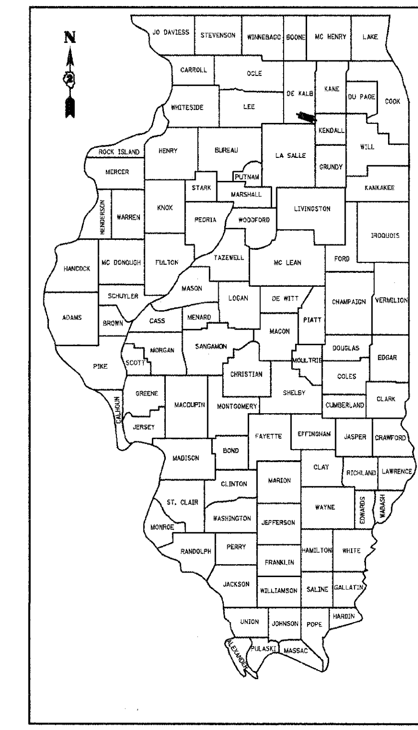
STA. 43+96 – SPECIAL BRIDGE DESIGN
3–SPAN CONTINUOUS R.C. SLAB BRIDGE ON EXISTING CLOSED R.C. ABUTMENTS AND NEW INDIVIDUALLY ENCASED PILE BENT PIERS.
SPANS @ 30'–9", 38'–6", 30'–9" ALONG TANGENT
104'–1 1/2" BK.–BK. ABUTS. ALONG TANGENT
32'–6" ROADWAY, SKEW 20° RT., S.N. 019–3017

IMPROVEMENT ENDS
STA. 45+47.97

LOCATION PLAN

GROSS LENGTH OF SECTION = 302.33 FEET = 0.057 MILES
NET LENGTH OF SECTION = 302.33 FEET = 0.057 MILES

0 1 2 3 4 5
SCALE IN MILES



LOCATION OF SECTION INDICATED THUS:

CLASSIFICATION: MINOR ARTERIAL – URBAN
DESIGN VOLUME: TWO–WAY DHV <1250
CURRENT ADT: 2840 (2008)
DESIGN SPEED: 40 M.P.H.

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
TELEPHONE NUMBER 1-800-892-0123

APPROVED 9/2/ 20 08
COUNTY ENGINEER

PASSED 09-03 20 08
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW 09-03 20 08
DEPUTY DIRECTOR OF HIGHWAYS, REGION TWO ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GARY J. CARTWRIGHT
43408
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Gary J. Cartwright 9-2-08
ILLINOIS PROFESSIONAL NO. 43408
EXPIRES 11-30-09

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL ROCKFORD, IL ROCHELLE, IL MONROE, WI SPRINGFIELD, IL

#47538

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	2
	ILLINOIS			

CONTRACT NO. 87366

SUMMARY OF QUANTITIES

	NUMBER	ITEM	UNIT	CONSTRUCTION TYPE CODE X020-2A QUANTITY
	20200100	EARTH EXCAVATION	CU YD	22
	20300100	CHANNEL EXCAVATION	CU YD	122
	20700220	POROUS GRANULAR EMBANKMENT	CU YD	32
*	25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.05
*	25100630	EROSION CONTROL BLANKET	SQ YD	242
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	10
	28000400	PERIMETER EROSION BARRIER	FOOT	350
*	28100207	STONE RIPRAP, CLASS A4	TON	574
	28200200	FILTER FABRIC	SQ YD	591
*	35101400	AGGREGATE BASE COURSE, TYPE B	TON	238
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	87
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	39
	40603305	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N30	TON	19
	44000100	PAVEMENT REMOVAL	SQ YD	224
	48203013	HOT-MIX ASPHALT SHOULDERS, 4"	SQ YD	110
*	50100200	REMOVAL OF EXISTING STRUCTURES	L SUM	1
	50102400	CONCRETE REMOVAL	CU YD	37
	50200100	STRUCTURE EXCAVATION	CU YD	202
	50300225	CONCRETE STRUCTURES	CU YD	89.4
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	215.0
	50300260	BRIDGE DECK GROOVING	SQ YD	298
	50300280	CONCRETE ENCASEMENT	CU YD	29.4
	50300300	PROTECTIVE COAT	SQ YD	418
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	42,470
Δ	50901050	STEEL RAILING, TYPE SM	FOOT	204
	51201600	FURNISHING STEEL PILES HP12X53	FOOT	450
	51202305	DRIVING PILES	FOOT	450
	51203600	TEST PILE STEEL HP12X53	EACH	1
	51500100	NAME PLATES	EACH	1
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	70
	52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	17
	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	148
Δ	63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	212.5
Δ	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
	63200310	GUARDRAIL REMOVAL	FOOT	402
	67100100	MOBILIZATION	L SUM	1
*	70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
Δ	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	800
*	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	10
*	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
*	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1
*	X5121800	PERMANENT STEEL SHEET PILING	SQ FT	1963

*SEE SPECIAL PROVISIONS

Δ SPECIALTY ITEMS

GENERAL NOTES

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

THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 0.05 ACRE

HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
	HMA BINDER	HMA SURFACE	HMA SURFACE
PG GRADE	PG64-22	PG58-22	PG58-22
MAX % RAP ALLOWABLE**	25%	30%	50%
DESIGN AIR VOIDS	4.0% @ N50	2.0% @ N30	2.0% @ N30
MIXTURE COMPOSTION	IL 19.0	IL 12.5 OR IL 9.5	IL 19.0
FRICTION AGGREGATE		MIXTURE C	
DENSITY TEST METHOD	NUCLEAR/ CORES	NUCLEAR/ CORES	NUCLEAR/ CORES

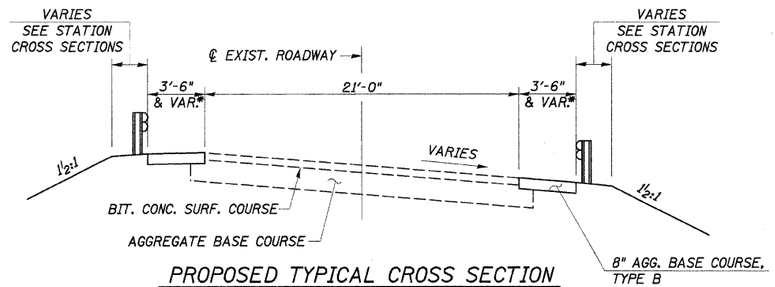
*MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

**WHEN MORE THAN 15% RAP IS USED, A SOFTER ASHPALT BINDER (PG58-22) MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.

TEMPORARY EROSION CONTROL

THE FOLLOWING QUANTITIES ARE ESTIMATE ONLY. ACTUAL QUANTITIES FOR EROSION CONTROL WILL BE DETERMINED BY THE ENGINEER IN THE FIELD AND THERE WILL BE NO ADJUSTMENT IN ANY PRICE DUE TO A CHANGE IN PLAN QUANTITY.

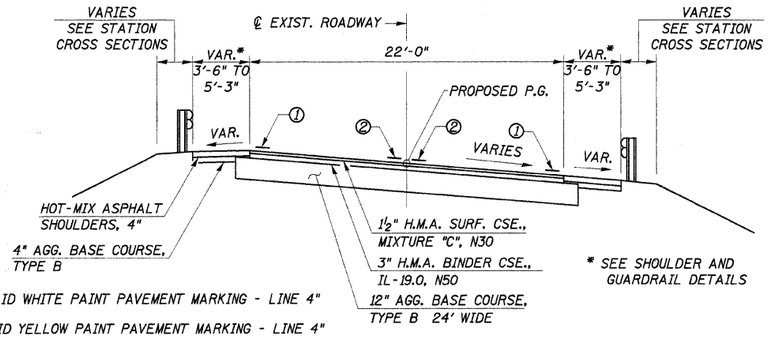
TEMPORARY EROSION CONTROL SEEDINGS = 10 POUND
PERIMETER EROSION BARRIER = 350 FOOT



PROPOSED TYPICAL CROSS SECTION

LT. STA. 42+45.64 TO LT. STA. 43+00
RT. STA. 42+55.90 TO RT. STA. 43+00
LT. STA. 45+00 TO LT. STA. 45+47.05
RT. STA. 45+00 TO RT. STA. 45+47.97

* SEE SHOULDER AND GUARDRAIL DETAILS

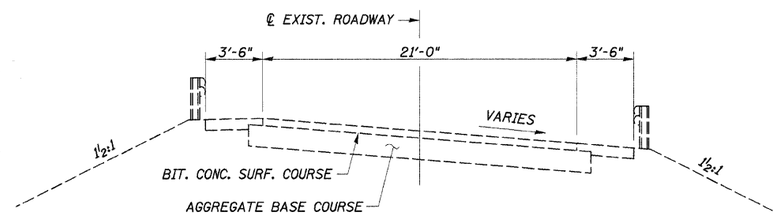


① SOLID WHITE PAINT PAVEMENT MARKING - LINE 4"

② SOLID YELLOW PAINT PAVEMENT MARKING - LINE 4"

PROPOSED TYPICAL CROSS SECTION

STA. 43+00 TO STA. 45+00
TRANSITION FROM EXISTING S.E. STA. 43+00
TO S.E. 0.035 '/' AT STRUCTURE
AND FROM S.E. 0.035'/' AT STRUCTURE
TO EXISTING S.E. STA. 45+00



EXISTING TYPICAL CROSS SECTION

PAVEMENT DESIGN

STRUCTURAL DESIGN TRAFFIC (S.D.T.) : YEAR 2018; P.V. = 2905, S.U. = 30, M.U. = 30

CLASS II ROAD

MINNIMUM SOIL SUPPORT: I.B.R. = 3.0 (ASSUMED) (> 3 k.s.i.)

PERCENT OF S.D.T. IN DESIGN LANE: P = 50%, S = 50%, M = 50%
T.F. = 0.1535

TEMP.=73.5° F.; E_{AC}= 620; DESIGN STRAIN = 253

APPLICATION RATES USED IN QUANTITY CALCULATIONS

STONE RIPRAP, CLASS A4	1.65 TON/CU YD
AGGREGATE BASE COURSE	2.05 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.35 GAL/SQ YD
HOT-MIX ASPHALT (BINDER & SURFACE COURSE)	112#/SQ YD/IN

THE ABOVE NOTED APPLICATION RATES FOR BITUMINOUS MATERIALS (PRIME COAT) ARE FOR QUANTITY CALCULATIONS ONLY. THE APPLICATION RATE TO BE APPLIED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF PLACEMENT.

SUMMARY OF QUANTITIES, GENERAL NOTES AND TYPICAL CROSS SECTION
COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
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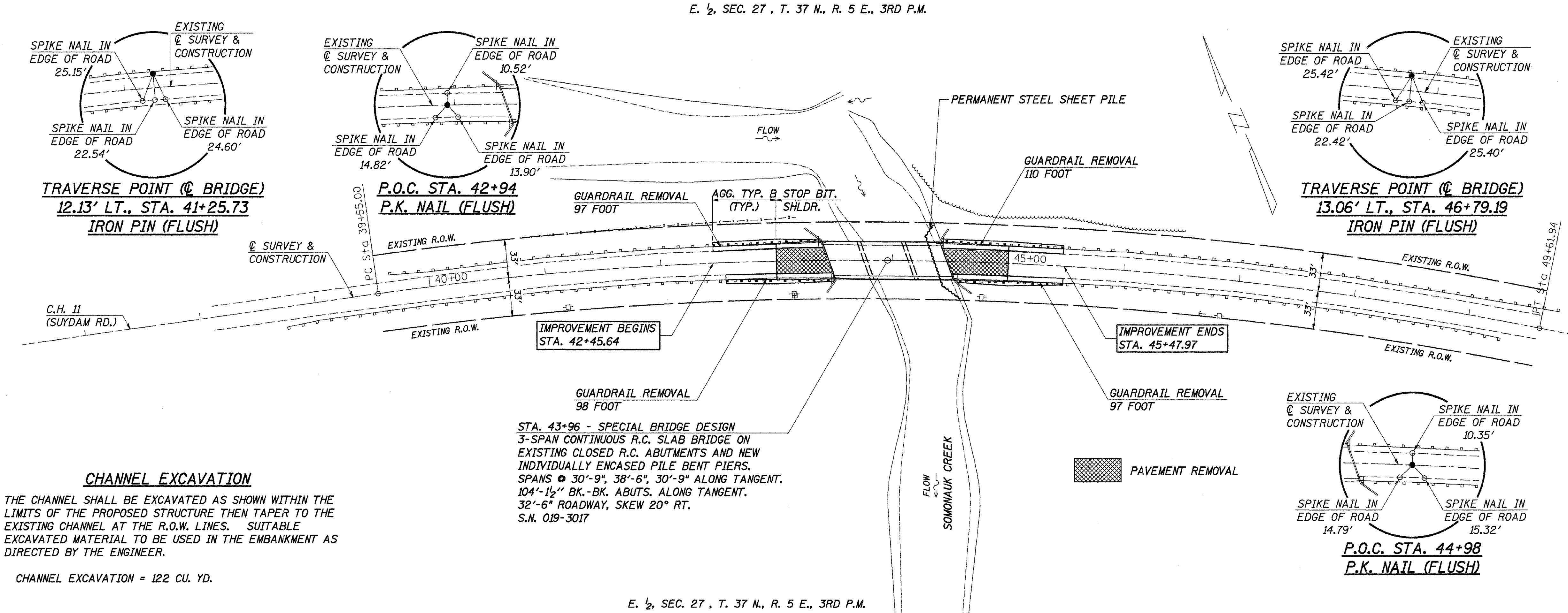
FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCKFORD, IL. MOLINE, IL. SPRINGFIELD, IL.

DRAWN: S.A.P. DATE: 02/07/08
CHECKED: G.J.C./R.J.C. DATE: 03/04/08
JOB NO.: 47538
FILE: SUMTYP.DGN
DATE: 09/02/08

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	3
STA. 37+00		TO STA. 52+00		
		ILLINOIS		

CONTRACT NO. 87366

E. ½, SEC. 27 , T. 37 N., R. 5 E., 3RD P.M.



STA. 43+96 - SPECIAL BRIDGE DESIGN
3-SPAN CONTINUOUS R.C. SLAB BRIDGE ON EXISTING CLOSED R.C. ABUTMENTS AND NEW INDIVIDUALLY ENCASED PILE BENT PIERS.
SPANS @ 30'-9", 38'-6", 30'-9" ALONG TANGENT.
104'-1½" BK.-BK. ABUTS. ALONG TANGENT.
32'-6" ROADWAY, SKEW 20° RT.
S.N. 019-3017

EXISTING STRUCTURE NO. 019-3017

STA. 43+96 - THREE SPAN CONTINUOUS R.C. SLAB BRIDGE WITH R.C. PILE BENT PIERS ON PRECAST CONCRETE PILES AND R.C. CLOSED ABUTMENTS ON STEEL H PILES; SPANS = 30'-9", 38'-6", 30'-9"; 104'-1½" BK.-BK. ABUTS, 26'-6" ROADWAY, 32'-10" O.-O. DECK, SKEW 20° RT.

REMOVAL OF EXISTING STRUCTURES = 1 L SUM

EXISTING CURVE DATA
PI STA. = 44+63.37
Δ = 19° 28' 00" (RT)
D = 1° 56' 00"
R = 2,963.70'
T = 508.37'
L = 1,006.94'
E = 43.28'
P.C. STA. = 39+55.00
P.T. STA. = 49+61.94
S.E. = 4.0%
BRIDGE S.E. = 3.5%

CHANNEL EXCAVATION

THE CHANNEL SHALL BE EXCAVATED AS SHOWN WITHIN THE LIMITS OF THE PROPOSED STRUCTURE THEN TAPER TO THE EXISTING CHANNEL AT THE R.O.W. LINES. SUITABLE EXCAVATED MATERIAL TO BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.

CHANNEL EXCAVATION = 122 CU. YD.

UTILITIES

COM ED TOM STUTZMAN	630-437-2236
COMCAST MARTHA GIERAS	630-600-6352
VERIZON NORTH, INC. MARY RUTH WILLIS	260-461-3222
NICOR GAS UTILITY CONSULTANT GO3W	630-388-2362
MEDIACOM MIKE DICKERSON	630-365-0045 EX. 6008

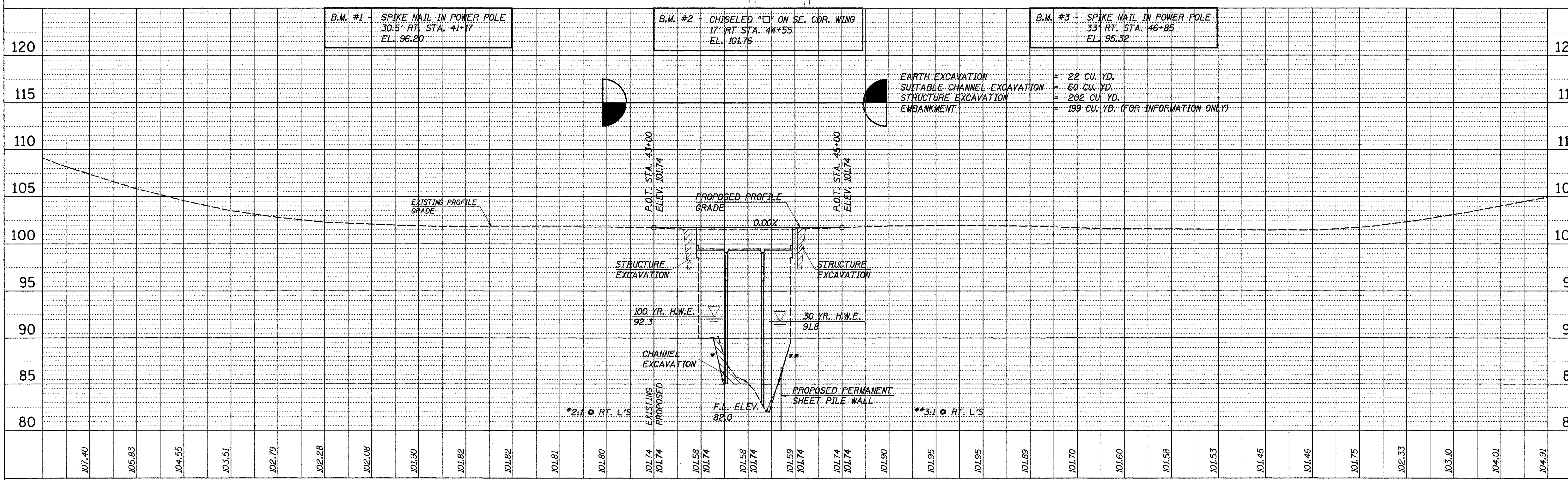
E. ½, SEC. 27 , T. 37 N., R. 5 E., 3RD P.M.

B.M. #1 - SPIKE NAIL IN POWER POLE 30.5' RT. STA. 41+17 EL. 96.20

B.M. #2 - CHISELED "□" ON SE. COR. WING 17' RT. STA. 44+55 EL. 101.76

B.M. #3 - SPIKE NAIL IN POWER POLE 33' RT. STA. 46+85 EL. 95.32

EARTH EXCAVATION = 22 CU. YD.
SUITABLE CHANNEL EXCAVATION = 60 CU. YD.
STRUCTURE EXCAVATION = 202 CU. YD.
EMBANKMENT = 199 CU. YD. (FOR INFORMATION ONLY)



#47538

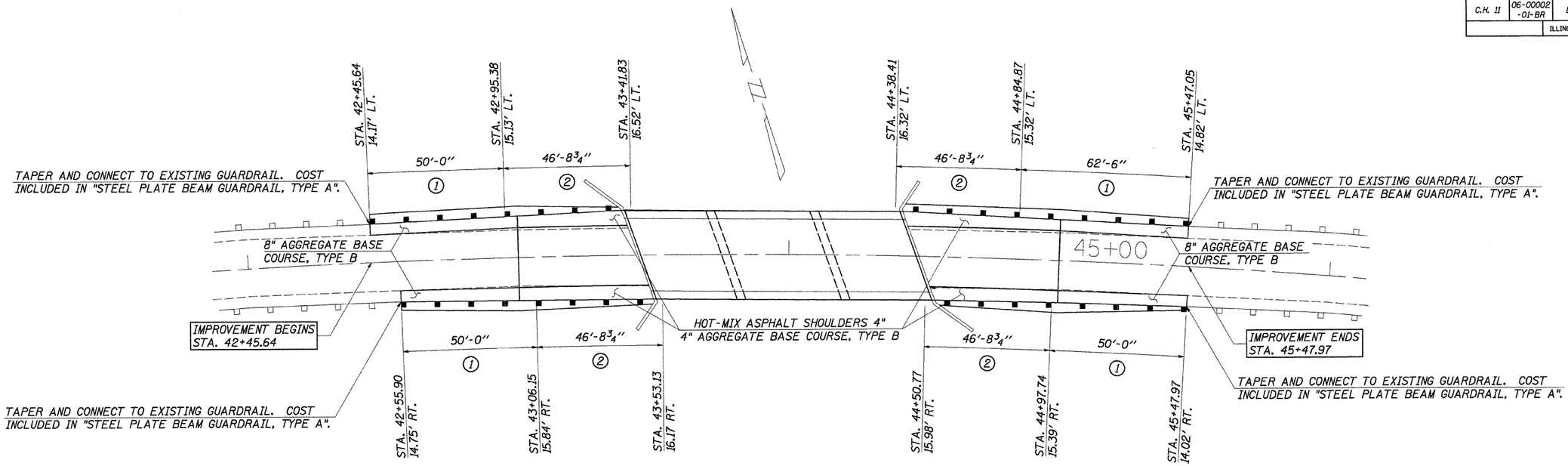
PLAN: NOTE BOOK, NO., SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.T. OF WAY CHECKED, CADD FILE NAME, BY, DATE

PROFILE: NOTE BOOK, NO., SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTATIONS CHKD, BY, DATE

PLOT DATE = 01/11/08
FILE NAME = 47538P&P.DGN
PLOT SCALE =
USER NAME = S. PRICE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	4
		ILLINOIS		

CONTRACT NO. 87366



GUARDRAIL AND SHOULDER DETAIL

STEEL PLATE BEAM GUARDRAIL, TYPE A

14.17' LT. STA. 42+45.64 TO 15.13' LT. STA. 42+95.38 = 50 FOOT
14.75' RT. STA. 42+55.90 TO 15.84' RT. STA. 43+06.15 = 50 FOOT
15.32' LT. STA. 44+84.87 TO 14.82 LT. STA. 45+47.05 = 62.5 FOOT
15.39' RT. STA. 44+97.74 TO 14.02' RT. STA. 45+47.97 = 50 FOOT
TOTAL = 212.5 FOOT

(SEE STD. 630001)

TRAFFIC BARRIER TERMINAL, TYPE 6A

15.13' LT. STA. 42+95.38 TO 16.52' LT. STA. 43+41.83 = 1 EACH
15.84' RT. STA. 43+06.15 TO 16.17' RT. STA. 43+53.13 = 1 EACH
16.32' LT. STA. 44+38.41 TO 15.32' LT. STA. 44+84.87 = 1 EACH
15.98' RT. STA. 44+50.77 TO 15.39' RT. STA. 44+97.74 = 1 EACH
TOTAL = 4 EACH

(SEE STD. 631032)

LEGEND

(1) STEEL PLATE BEAM GUARD RAIL, TYPE A

(2) TRAFFIC BARRIER TERMINAL, TYPE 6A

ALL DIMENSIONS REFER TO THE FRONT FACE OF THE PROPOSED RAILING.

SHOULDER & GUARDRAIL DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
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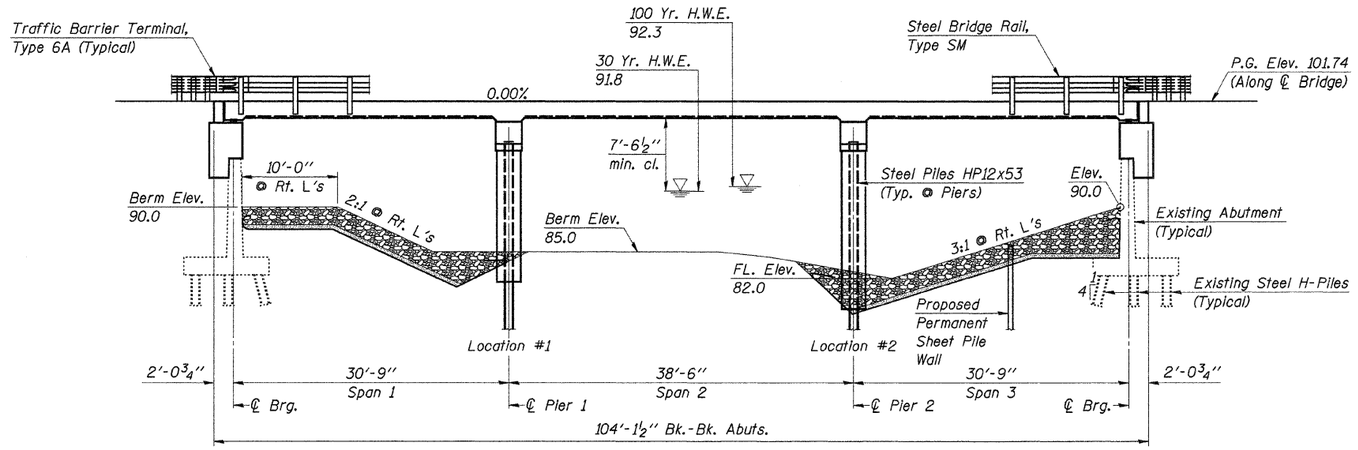
DRAWN: S.A.P.
DATE: 02/13/08

CHECKED: G.J.C.
DATE: 03/04/08

JOB NO.: 47538
FILE: SHLDR.DGN
DATE: 09/02/08

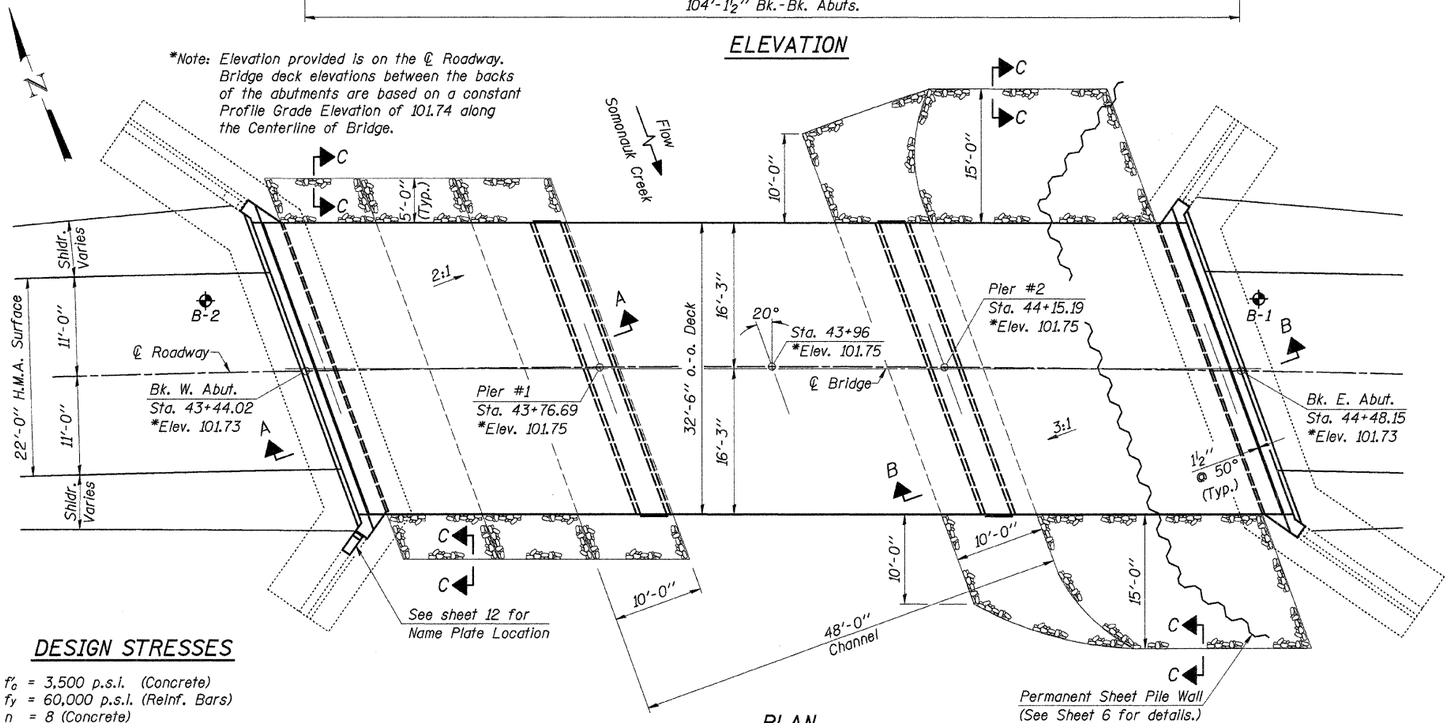
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	5
	ILLINOIS			

Contract No. 87366

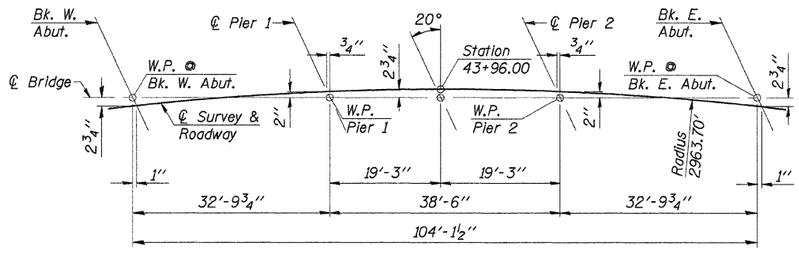


ELEVATION

*Note: Elevation provided is on the ℄ Roadway. Bridge deck elevations between the backs of the abutments are based on a constant Profile Grade Elevation of 101.74 along the Centerline of Bridge.



PLAN

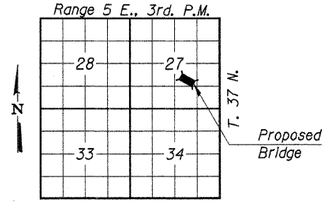


OFFSET SKETCH

DESIGN STRESSES

f'_c = 3,500 p.s.i. (Concrete)
f_y = 60,000 p.s.i. (Reinf. Bars)
n = 8 (Concrete)
LOADING HS20-44
Design Specifications: 2002 AASHTO
50#/Sq. Ft. included in dead load for future wearing surface.

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.



LOCATION PLAN

WATERWAY INFORMATION

Drainage Area	41.39 Sq. Mi.
Existing Opening (30 Yr.)	468 Sq. Ft.
Required Opening (30 Yr.)	521 Sq. Ft.
Proposed Opening (30 Yr.)	521 Sq. Ft.
Design Discharge (30 Yr.)	1,925 C.F.S.
Created Head (30 Yr.)	0.0 Ft.
100 Year Discharge	2,400 C.F.S.
100 Yr. Created Head	0.0 Ft.

SOMONAUK CREEK
BUILT 200_ BY
DEKALB COUNTY
SEC. 06-00002-01-BR
COUNTY HIGHWAY 11
STR. NO. 019-3017
LOADING HS20

LETTERING FOR NAME PLATE

See Std. 515001

Note: See Sheet 6 for Sections A-A, B-B and C-C

GENERAL NOTES

See Proposal Booklet for Boring data.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified) See Special Provisions. All reinforcement bars shall be epoxy coated.

The Contractor shall drive one Steel HP12x53 test pile in a permanent location at Pier #2 as directed by the Engineer, before ordering the remainder of piles.

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

Plan dimensions and details relative to existing plans are subject to routine 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 cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The vertical exposed portions of the Superstructure and all exposed portions of newly constructed abutments, wing walls and piers shall recieve a rubbed finish in accordance with Article 503.15(b) of the Standard Specifications. Cost shall be included in the cost of Concrete Structures.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Bridge Deck Grooving	Sq. Yd.	298		298
Concrete Superstructure	Cu. Yd.	215.0		215.0
Concrete Structures	Cu. Yd.		89.4	89.4
Reinforcement Bars, Epoxy Coated	Pound	34,180	8,290	42,470
Steel Railing, Type SM	Foot	204		204
Name Plates	Each		1	1
Steel Piles HP12x53	Foot		450	450
Test Pile Steel HP12x53	Each		1	1
Stone Riprap, Class A4	Ton		574	574
Filter Fabric	Sq. Yd.		591	591
Concrete Encasement	Cu. Yd.		29.4	29.4
Preformed Joint Strip Seal	Foot		70	70
Elastomeric Bearing Assembly, Type I	Each		12	12
Underwater Structure Excavation Protection - Location 1 (Pier 1)	Each		1	1
Underwater Structure Excavation Protection - Location 2 (Pier 2)	Each		1	1
Permanent Sheet Piling	Sq. Ft.		1,963	1,963
Geocomposite Wall Drain	Sq. Yd.		17	17
Porous Granular Embankment	Cu. Yd.		32	32
Protective Coat	Sq. Yd.	418		418
Structural Repair to Concrete (Depth equal to or less than 5 in.)	Sq. Ft.		10	10
Concrete Removal	Cu. Yd.		37	37
Controlled Low-Strength Material, Mix 2	Cu. Yd.		148	148
Structure Excavation	Cu. Yd.		202	202

"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 Standard Specifications for Highway Bridges'".

John A. Morris — 9-2-08
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/08)

LICENSED STRUCTURAL ENGINEER ★ JOHN A. MORRIS NO. 81-4277 ★ STATE OF ILLINOIS

GENERAL PLAN & ELEVATION

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
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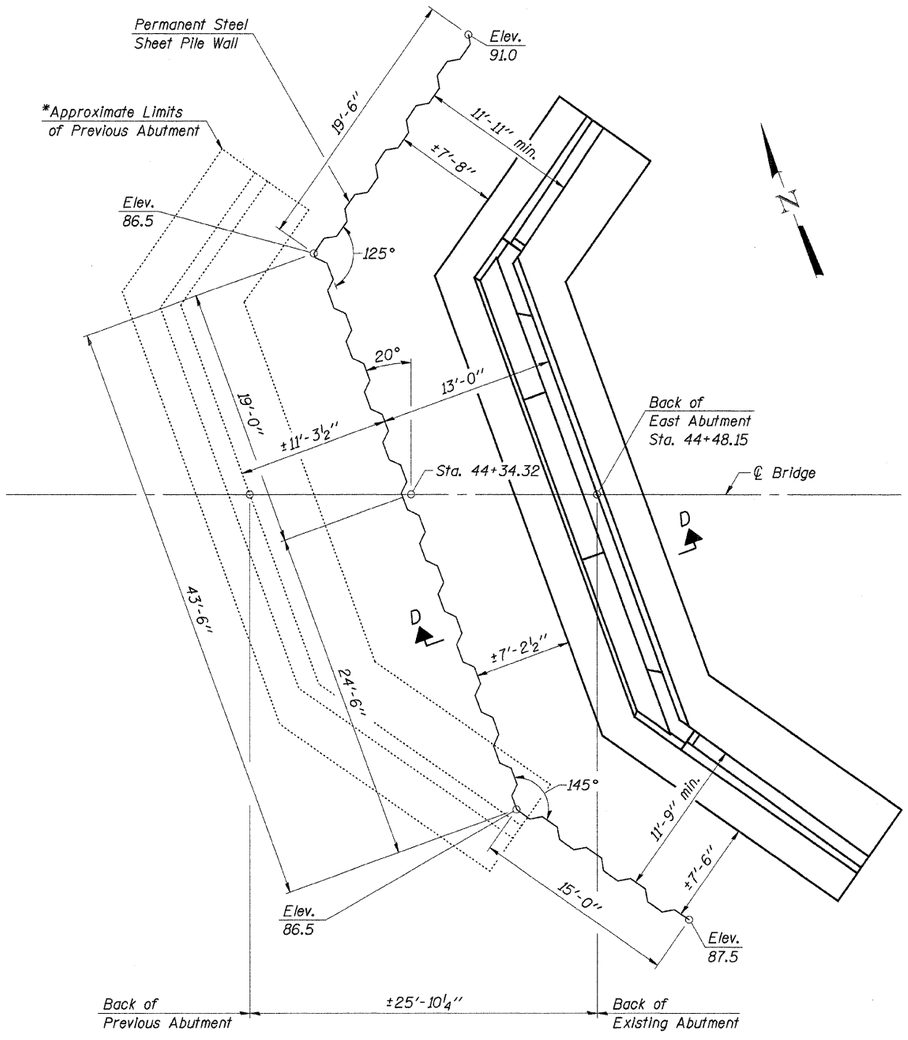
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. MORRIS, NY SPRINGFIELD, IL.

JOB NO.:	47538
FILE:	GPE.DGN
DATE:	09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	6
	ILLINOIS			

Contract No. 87366

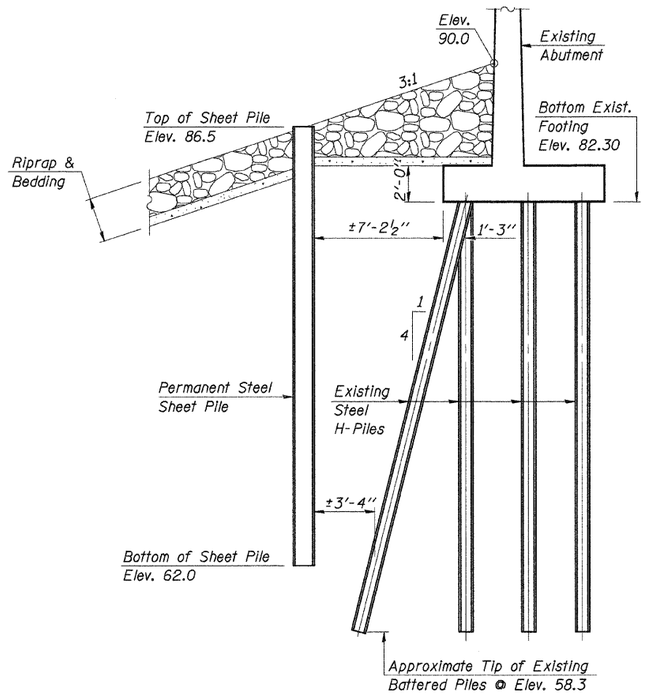


PERMANENT STEEL SHEET PILE LOCATION PLAN

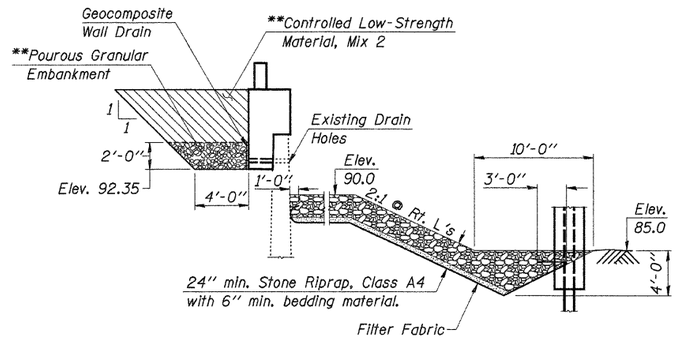
Minimum Required Effective Section Modulus = 13.9 cu. in./ft.
(See Proposal for Effective Section Modulus associated with available sheet pile sections.)

*Note: Remnants of a previous abutment may be encountered during the driving of permanent steel sheet piling. If encountered, portions of the previous abutment interfering with the driving of sheet piling shall be removed, and the cost of removing the interfering portions of the abutment shall be included in the cost of Permanent Steel Sheet Piling.

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

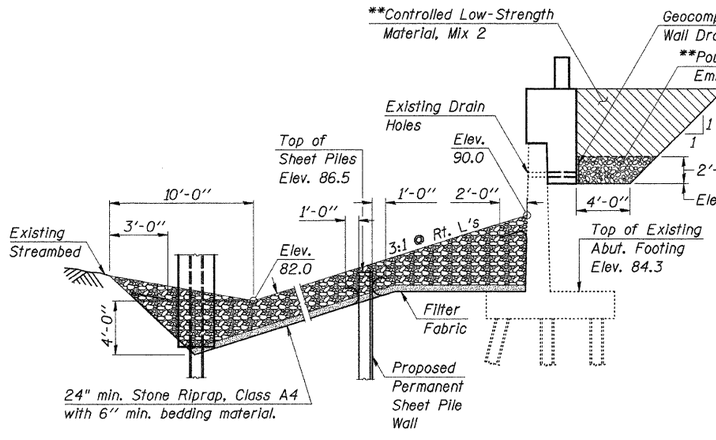


SEC. D-D



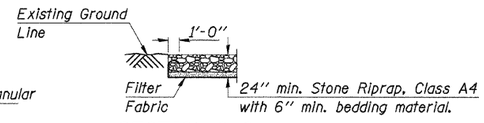
SECTION A-A

**Note: Excavation required for the placement of Porous Granular Embankment and Controlled Low Strength Material is included in the cost of Structure Excavation.



SECTION B-B

Note: The excavation and aggregate bedding shall be included in the cost of Stone Riprap, Class A4.



SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Permanent Steel Sheet Piling	Sq. Ft.	1,963
Geocomposite Wall Drain	Sq. Yd.	17
Porous Granular Embankment	Cu. Yd.	32
Stone Riprap, Class A4	Ton	574
Filter Fabric	Sq. Yd.	591
Controlled Low-Strength Material, Mix 2	Cu. Yd.	148

PERMANENT STEEL SHEET PILING AND RIPRAP DETAILS
COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

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JOB NO.: 47538
FILE: SHT_PILING.DGN
DATE: 09/02/08

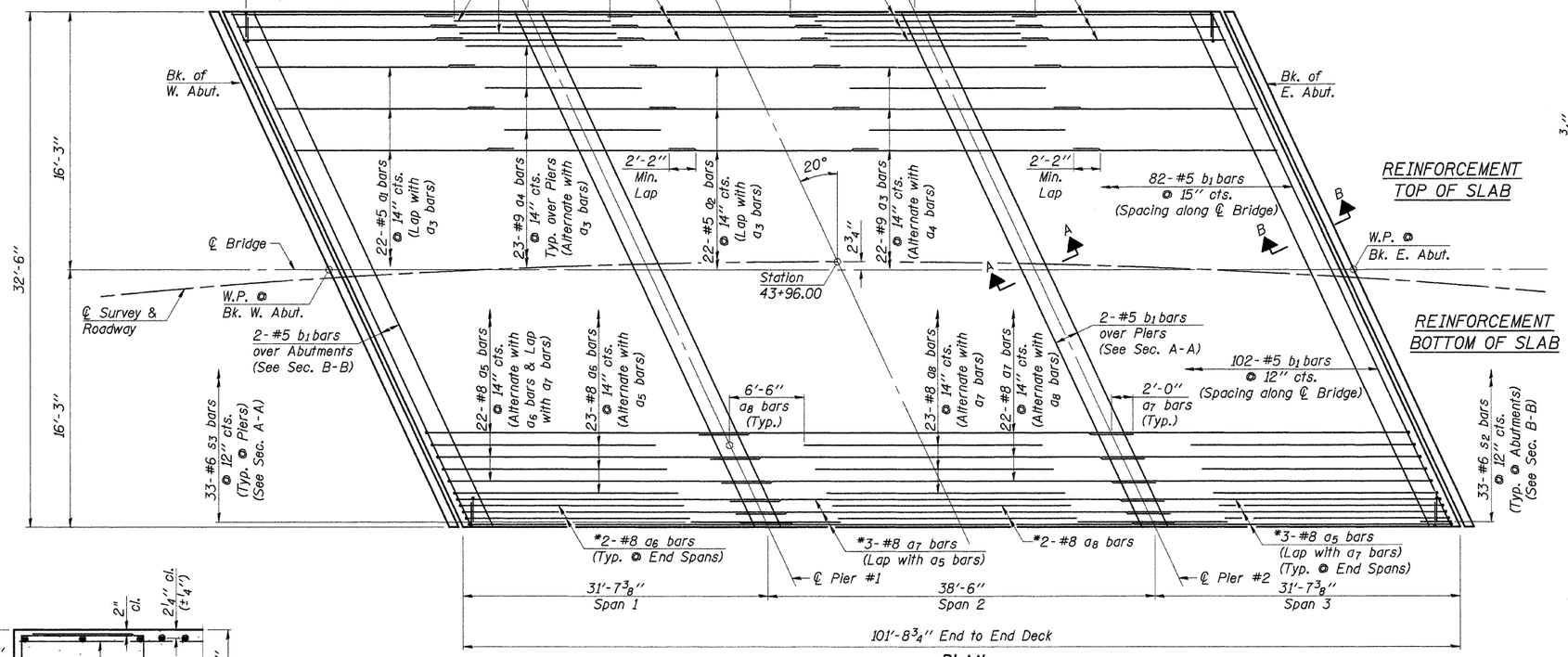
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	7
	ILLINOIS			

Contract No. 87366

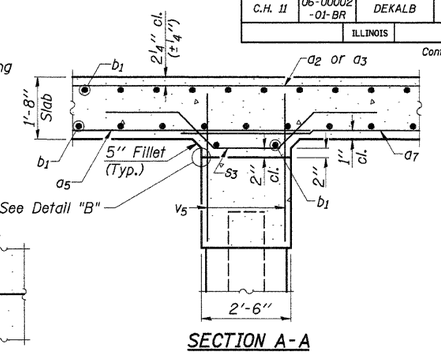
*Note: Edge beam bars to be enclosed in "s_1" bar stirups.

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

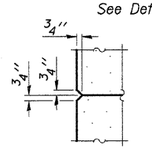
Note: After Bridge Deck Grooving has been completed, Protective Coat shall be applied to the top surface and facia of the superstructure. Bridge Deck Grooving shall be stopped 3'-0" from the edge of the deck facia and 2" from expansion joint edge rails.



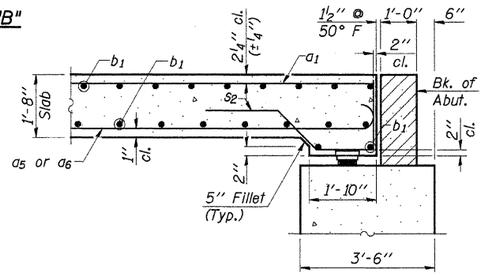
PLAN



SECTION A-A

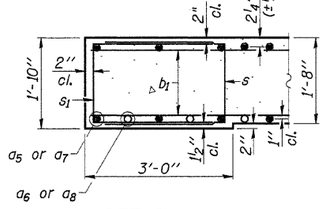


DETAIL "B"

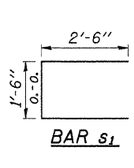


SECTION B-B

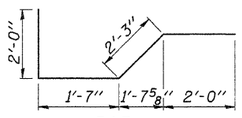
See Sheet 8 for Expansion Joint Detail



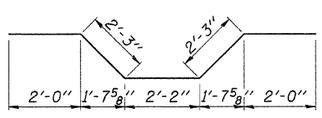
DETAIL "A"



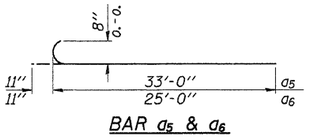
BAR s_1



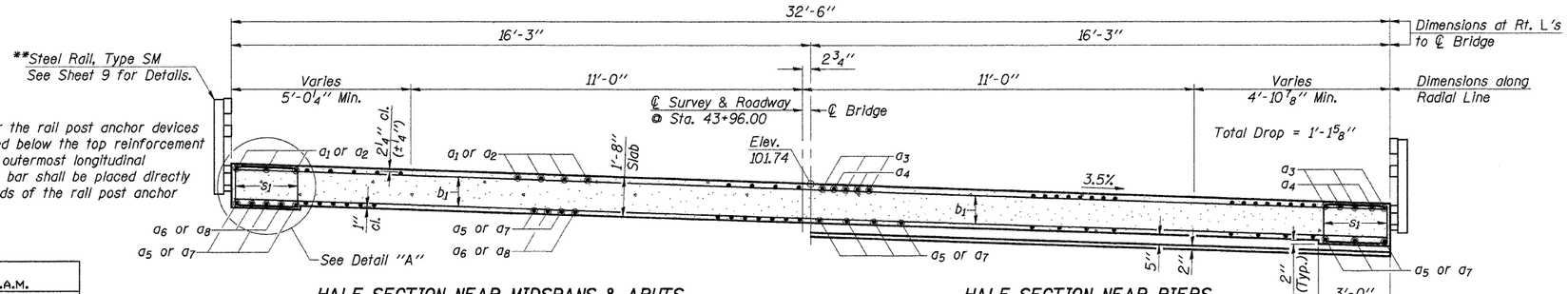
BAR s_2



BAR s_3



BAR a_5 & a_6



**Note: The studs for the rail post 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.

HALF SECTION NEAR MIDSPANS & ABUTS.

HALF SECTION NEAR PIERS

SECTIONS THRU SUPERSTRUCTURE

(Looking East)

SUPERSTRUCTURE BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a_1	56	#5	19'-6"	
a_2	28	#5	14'-6"	
a_3	56	#9	28'-6"	
a_4	54	#9	16'-0"	
a_5	56	#8	33'-11"	
a_6	54	#8	25'-11"	
a_7	28	#8	42'-6"	
a_8	27	#8	25'-6"	
b_1	192	#5	34'-2"	
s_1	404	#4	6'-6"	
s_2	66	#6	7'-10"	
s_3	66	#6	10'-8"	
Reinforcement Bars, Epoxy Coated			Pound	34,180
Concrete Superstructure			Cu. Yd.	215.0

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

SUPERSTRUCTURE

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

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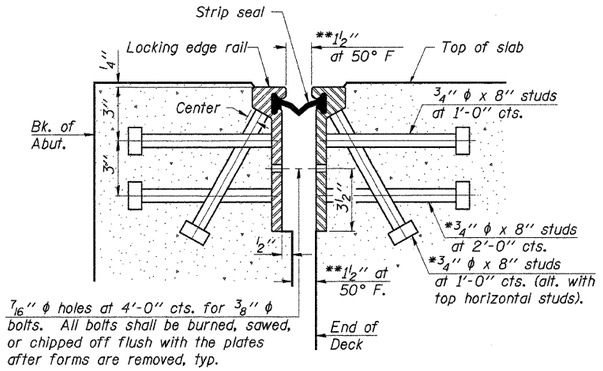
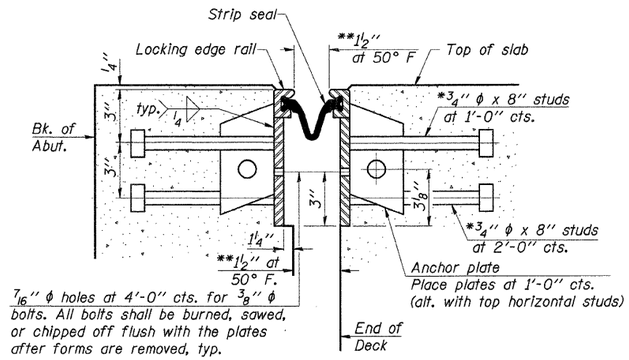
JOB NO.: 47538
FILE: SUPER.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	8
	ILLINOIS			

Contract No. 87366

*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.





Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

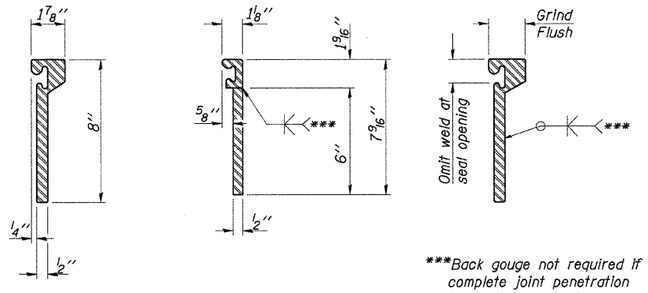
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

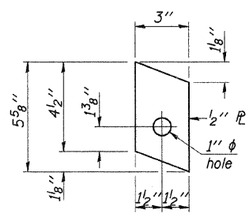
SECTION THRU ROLLED RAIL JOINT

(At Rt. L's to Abut.)



SECTION THRU WELDED RAIL JOINT

(At Rt. L's to Abut.)



***Joint Opening:** The components of the joint system shall be properly aligned and set prior to casting them into the deck or abutment. The joint opening shall be adjusted according to the temperature at the time of placing so that the specified opening will be secured at a temperature of 50° F. The opening shall be reduced 1/16 in. from the amount specified, for each 15° F the temperature at the time of placing exceeds 50° F and increased 1/16 in. from the amount specified, for each 15° F the temperature at the time of placing is below 50° F.*

***Back gouge not required if complete joint penetration is verified by mock-up.*

ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

ANCHOR ℄

(for welded rail)

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	70

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

EXPANSION JOINT DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
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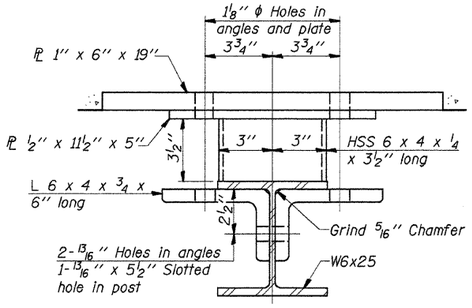
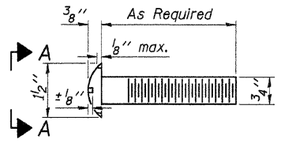
JOB NO.: 47538
FILE: EXP_JOINT.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	9
	ILLINOIS			

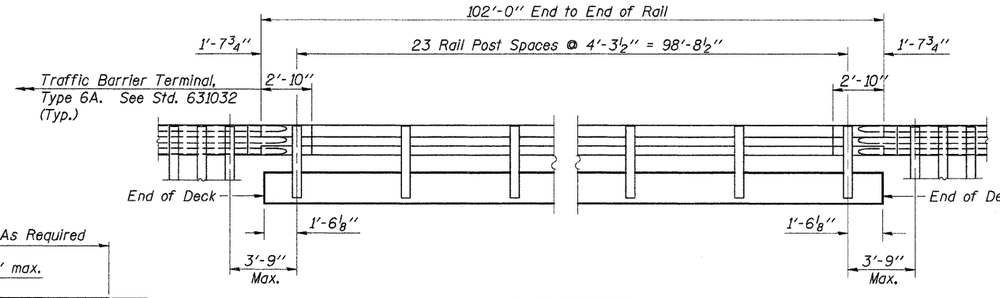
Contract No. 87366



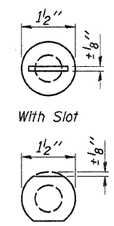
SECTION C-C



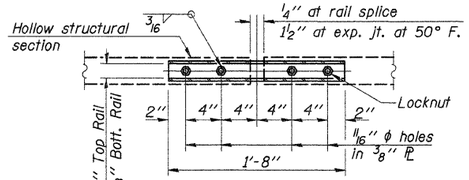
DETAIL OF ¾" ϕ ROUND HEAD BOLT



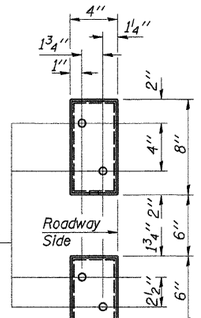
ELEVATION



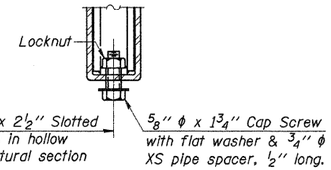
VIEW A-A



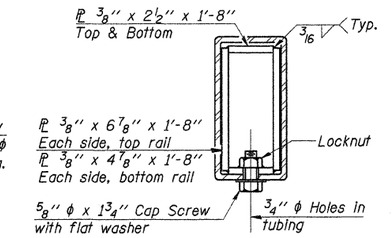
PLAN-BOTT. SPLICE PL TYPICAL



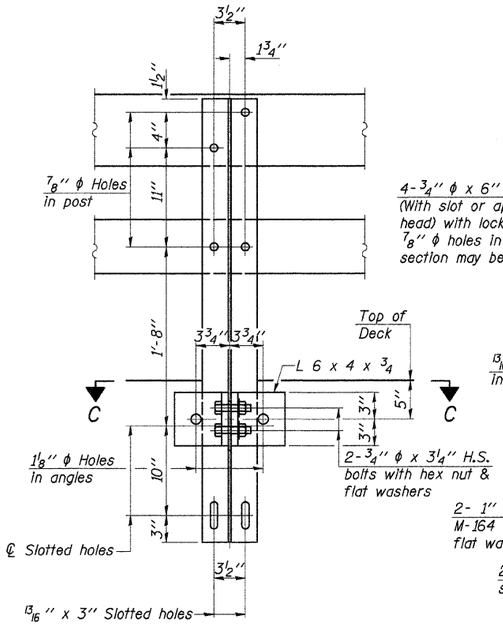
VIEW E-E



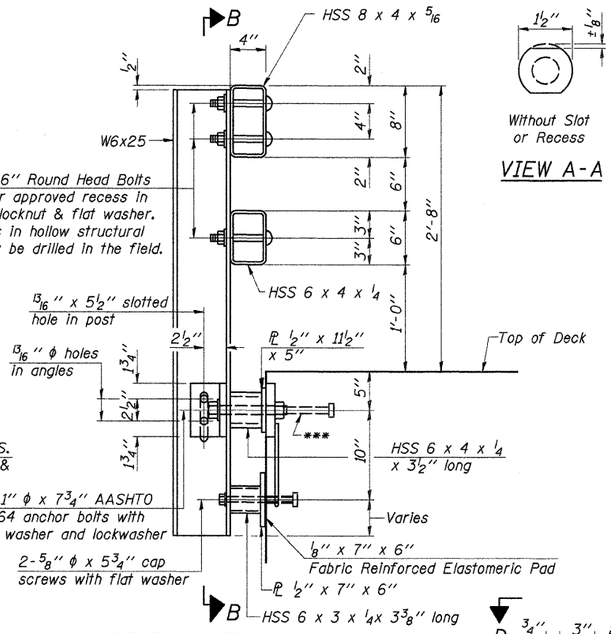
RAIL SPLICE CONNECTION AT EXPANSION JT.



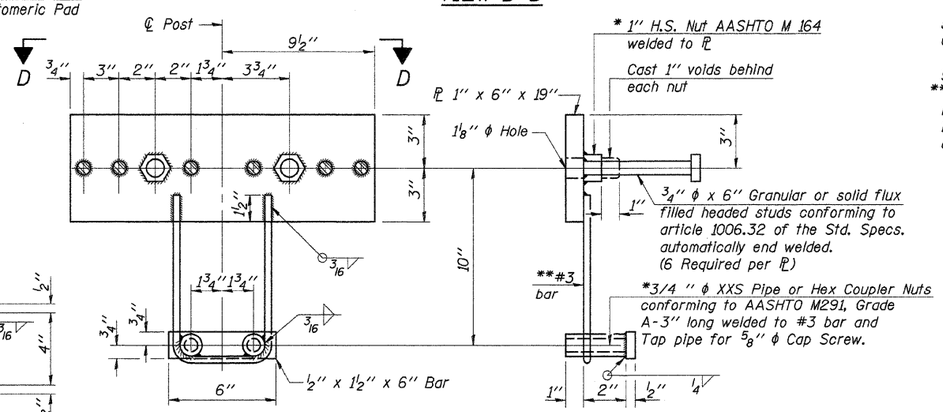
SECTION AT RAIL SPLICE



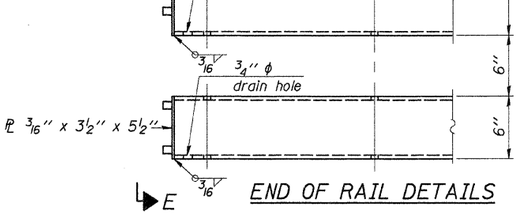
SECTION B-B



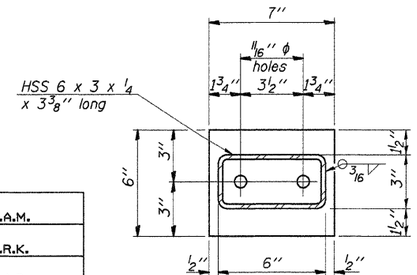
SECTION AT RAIL POST



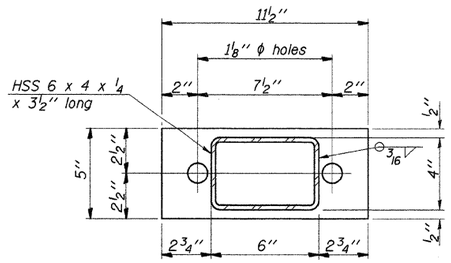
ANCHOR DEVICE



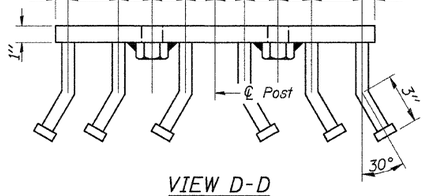
END OF RAIL DETAILS



PL ½" x 7" x 6"



PL ½" x 11½" x 5"



VIEW D-D

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

**Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed ½".

Notes:

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

For multi-span bridges, sufficient ¼" 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 rail members 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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	204

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

STEEL RAILING, TYPE SM

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL 62711
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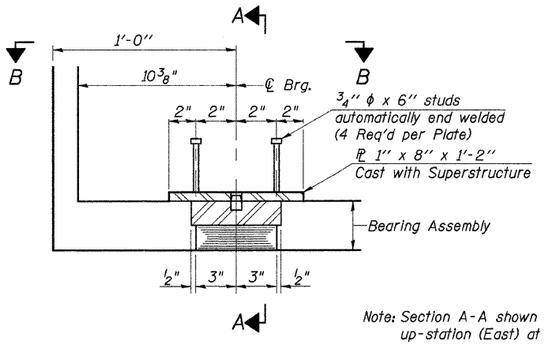
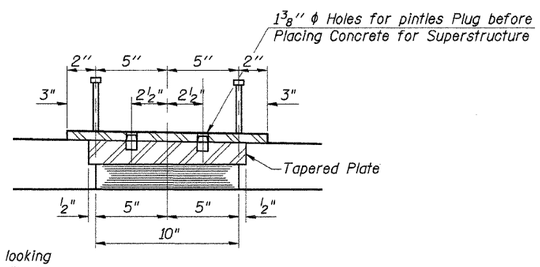
JOB NO.: 47538
FILE: RAIL.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	10
	ILLINOIS			

Contract No. 87366

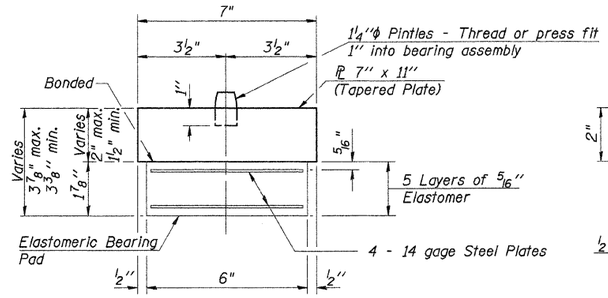


SECTION AT ABUT.
(Dimensions shown Parallel to ℄ Bridge.)

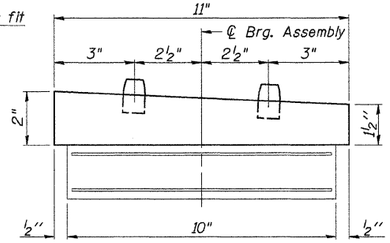


*SECTION A-A

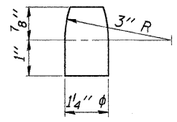
Note: Section A-A shown looking up-station (East) at East Abutment Bearing.



END VIEW



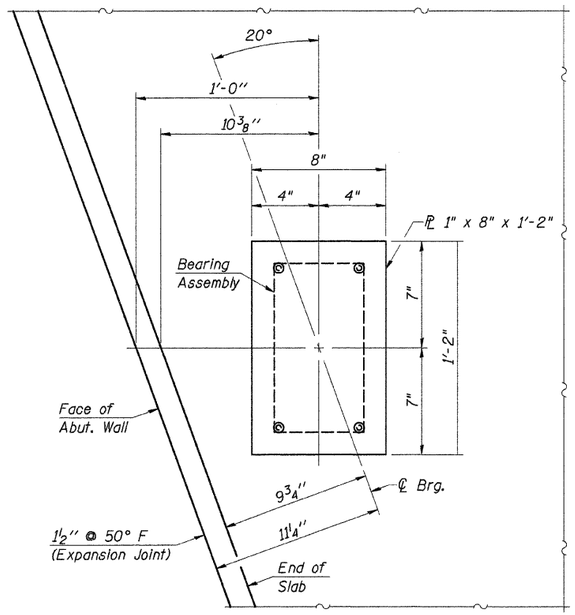
FRONT VIEW



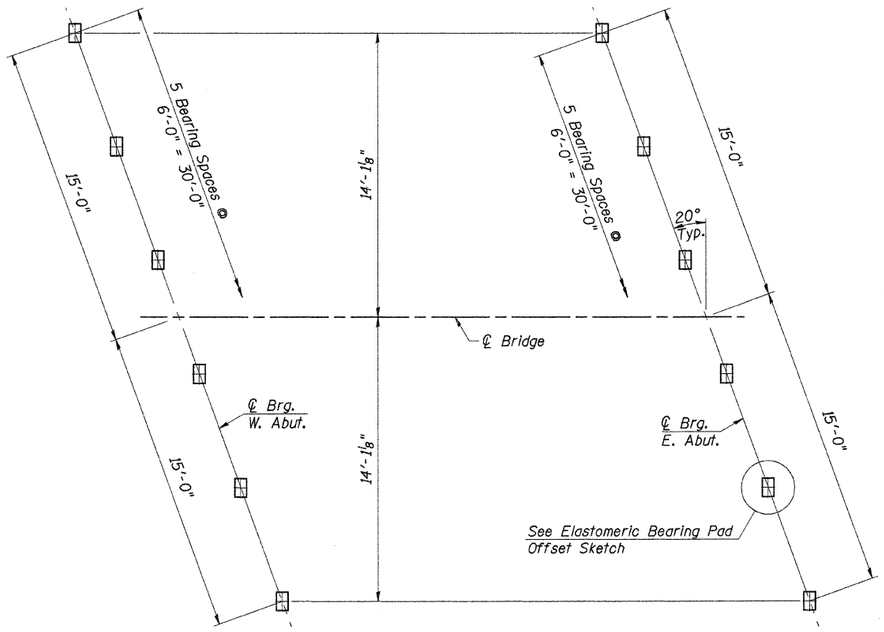
PINTLE

TYPE I ELASTOMERIC EXP. BRG.

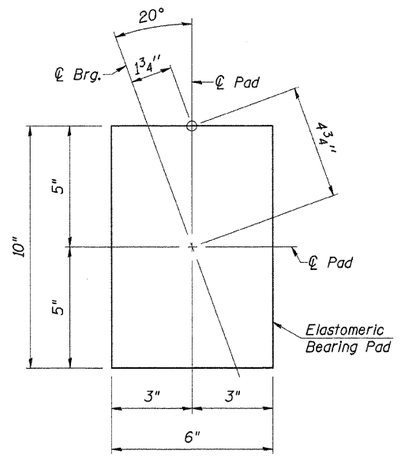
BEARING ASSEMBLY



VIEW B-B



ELASTOMERIC BEARING PAD
PLACEMENT PLAN



ELASTOMERIC BEARING PAD
OFFSET SKETCH

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

PI-2E-1 9-3-07

ELASTOMERIC BEARING DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. MONMOUTH, WI SPRINGFIELD, IL.

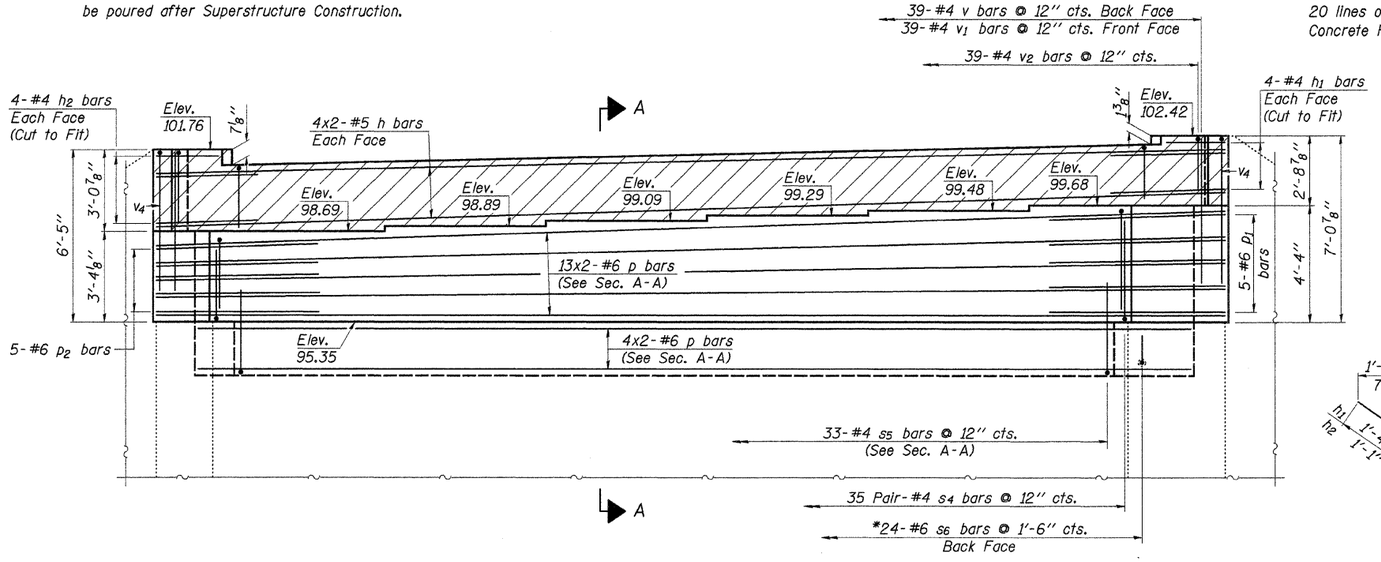
JOB NO.: 47538
FILE: BRG.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	11
	ILLINOIS			

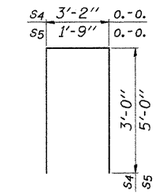
Contract No. 87366

Note: Hatched area indicates Concrete to be poured after Superstructure Construction.

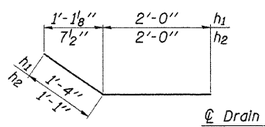
Note: All edges shall have standard $\frac{3}{4}$" chamfer. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Concrete Removal Details Shown on Sheet 12.



ELEVATION
(Looking West)

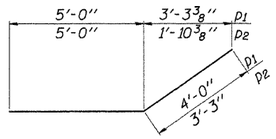


s4 & s5 BAR

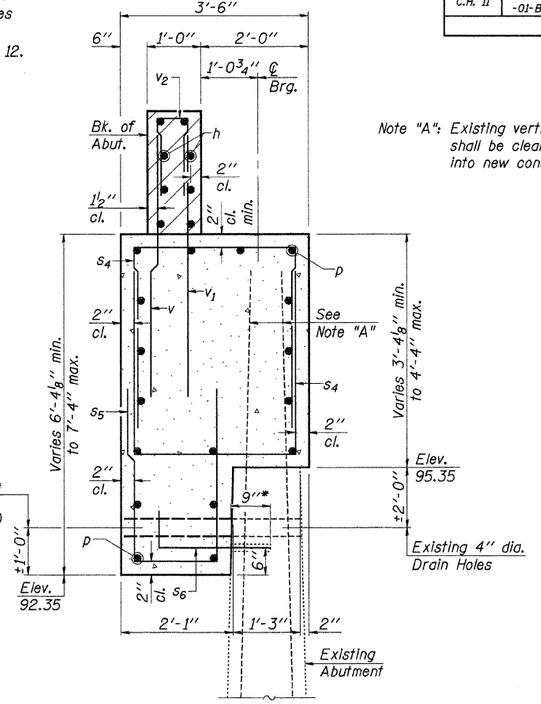


h1 & h2 BAR

℄ Drain Hole Extensions (4" Min. Dia.)



p1 & p2 BAR



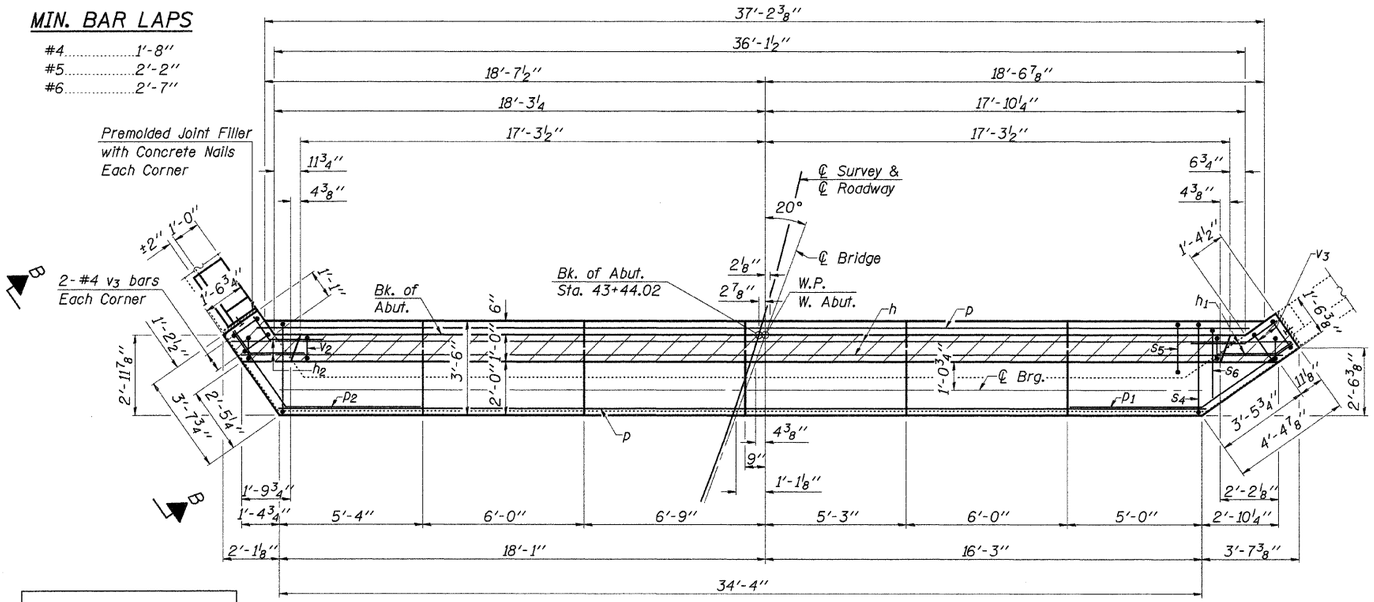
SECTION A-A

*#6 s_6 bars at 1'-6" cts. to be epoxy grouted into existing abutment wall. The cost of epoxy grouting is included with Reinforcement Bars, Epoxy Coated.

Note "A": Existing vertical reinforcement bars shall be cleaned and incorporated into new construction.

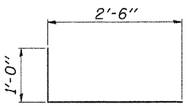
MIN. BAR LAPS

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

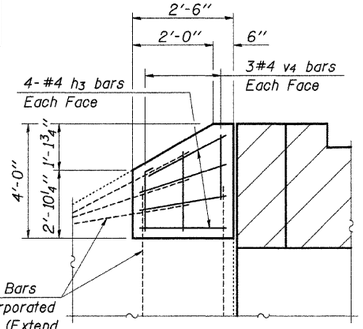


PLAN

Note: See Sheet 10 for Elastomeric Bearing Pad Placement Plan and Offset Sketch.

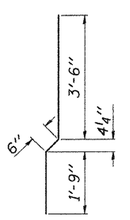


s6 BAR

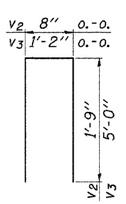


Existing Reinforcement Bars to be cleaned and incorporated into new construction. (Extend 1'-3" min. into area of repair.)

VIEW B-B
(Wing Wall Repair)



V BAR



v2 & v3 BAR

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	8	#5	21'-0"	
h1	8	#5	3'-4"	
h2	8	#5	3'-1"	
h3	8	#4	2'-6"	
p	34	#6	21'-3"	
p1	5	#6	9'-0"	
p2	5	#6	8'-3"	
s4	35	#4	9'-2"	
s5	31	#4	11'-9"	
s6	24	#6	3'-6"	
v	39	#4	5'-9"	
v1	39	#4	5'-0"	
v2	39	#4	4'-2"	
v3	4	#4	11'-2"	
v4	6	#4	3'-6"	
Concrete Structures			Cu. Yd.	31.5
Reinforcement Bars, Epoxy Coated			Pound	2,470

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

WEST ABUTMENT DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
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FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. MORRIS, NY SPRINGFIELD, IL.

JOB NO.: 47538
FILE: W_ABUT.DGN
DATE: 09/02/08

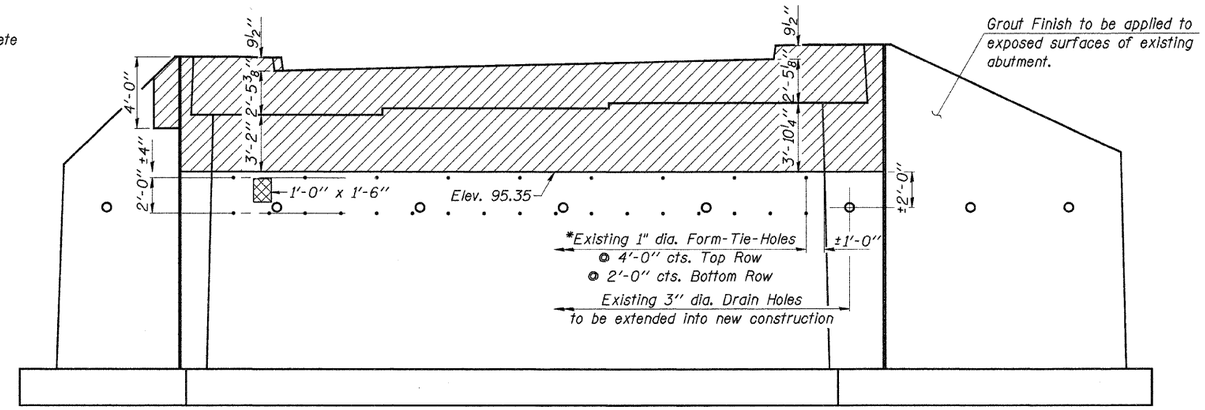
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	12
	ILLINOIS			

Contract No. 87366

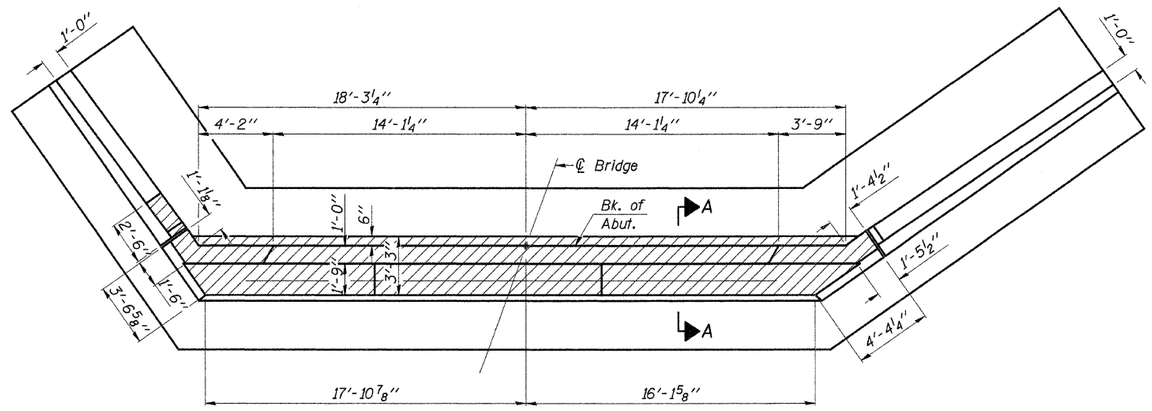
LEGEND

Hatched Area Indicates Concrete Removal

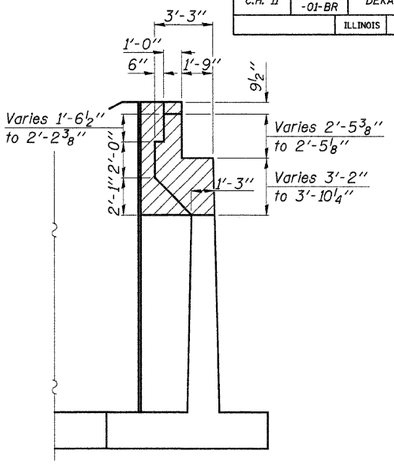
Cross Hatched area Indicates Structural Repair of Concrete



ELEVATION

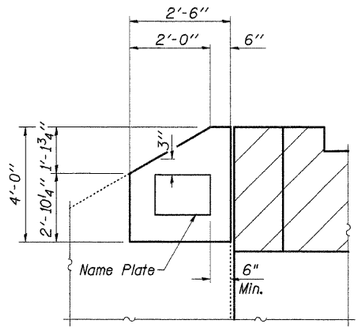


PLAN



SEC. A-A

Note: Structure Excavation required for Concrete Removal and rehabilitation of the existing abutment is included in the cost of Concrete Structures.



NAME PLATE LOCATION DETAIL

GROUT FINISH FOR EXISTING ABUTMENT SURFACES

After the existing abutment has been rehabilitated to be compatible with new construction, all exposed surfaces of the existing abutment shall receive a grout finish. The following procedures shall be used:

1. All existing surfaces receiving the grout finish shall be cleaned using methods acceptable to the Engineer to remove all dirt, mold, algae, grease, compounds or any bond breaking substance.
2. Sufficient water shall be applied to moisten the existing surfaces prior to application of grout material to prevent absorption of water from the grout.
3. Prepare an adhesive grout mixture having the consistency of thick paint and utilizing 1 part portland cement to 1½ parts fine sand with a 1:1 mixture of bonding admixture and water.
4. During the preparation of the grout mixture, white portland cement shall be added in amounts determined by trial batches so that the color of the dry grout will match adjacent surfaces of the new construction.
5. Apply grout, minimum 1/16 inch thickness, to the existing surfaces.
6. Immediately after applying grout, scrub the surface with a cork float or stone while working grout into surface voids.
7. While grout is still plastic, remove excess grout by working the surface with rubber floats or bundled burlap sacks.
8. After grout whitens, rub the surface with clean burlap and keep surface damp by fog spray or other method approved by the Engineer for a minimum of 48 hours.

The area of existing surface to receive a grout finish is estimated to be 398 Sq. Ft at the West Abutment. The cost of applying the grout finish to the existing abutment surfaces is included in the cost of Concrete Structures

*Note: The existing material filling form-tie-holes in the abutment wall shall be removed to a minimum depth of 9 inches. The holes shall then be cleaned and filled with nonshrink grout meeting the requirements of Section 1024 of the Standard Specification of Road Bridge Construction. The temperature of the grout at time of placement shall be a minimum of 50° F and a maximum of 90° F. The inside surface of the holes shall be wetted a minimum of one hour before placement of the nonshrink grout. Prior to placement of the grout, all excess water shall be removed from the interior of the holes. The grout shall be compacted as it is placed within the holes using a rod or other suitable tool. After placement, the grout shall be troweled flush with the surface of the abutment wall. The cost of grouting existing form-tie-holes is included in the cost of Structural Repair of Concrete (Depth Equal To Or Less Than 5 In.).

WEST ABUTMENT BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	19
Structural Repair of Concrete (Depth Equal to or less than 5 in.)	Sq. Ft.	2

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

WEST ABUTMENT
CONCRETE REMOVAL AND REPAIR DETAILS
COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8800
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCKVILLE, IL. MONROE, WI SPRINGFIELD, IL.

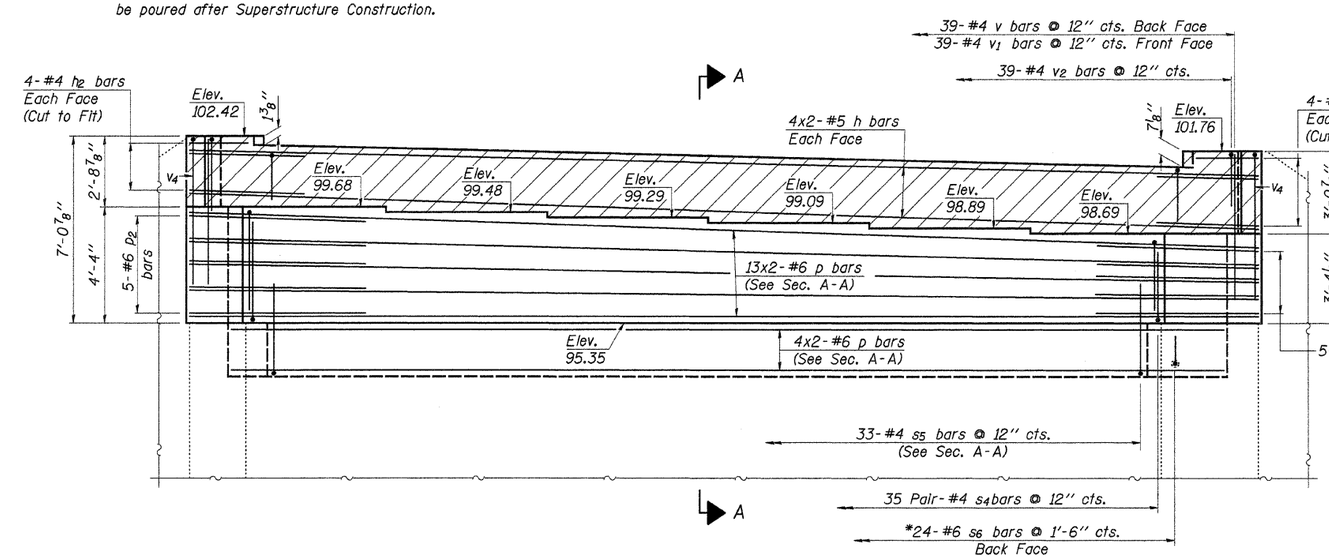
JOB NO.: 47538
FILE: W.ABUT_CONC.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	13
	ILLINOIS			

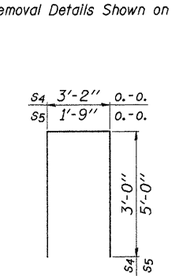
Contract No. 87366

Note: Hatched area indicates Concrete to be poured after Superstructure Construction.

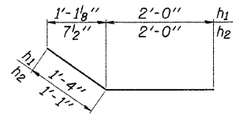
Note: All edges shall have standard $\frac{3}{4}$" chamfer. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Concrete Removal Details Shown on Sheet 14.



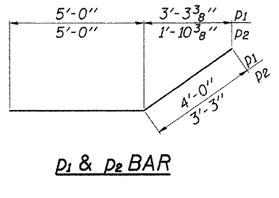
ELEVATION
(Looking East)



s4 & s5 BAR



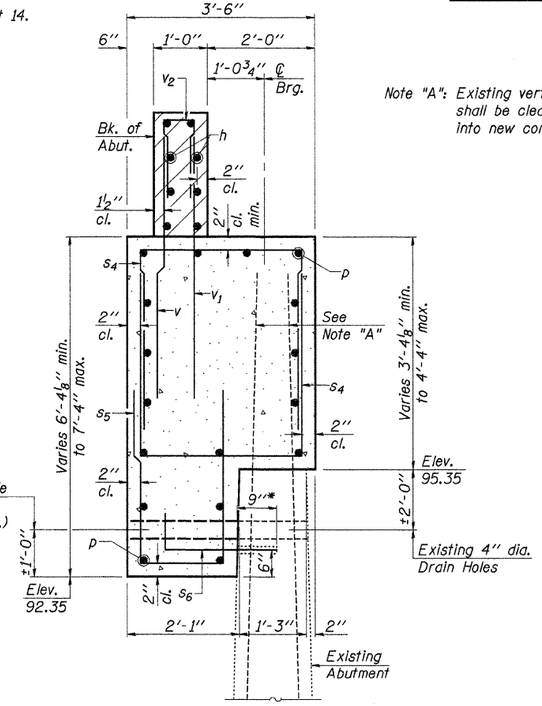
h1 & h2 BAR



p1 & p2 BAR

S6 BAR

Note "A": Existing vertical reinforcement bars shall be cleaned and incorportated into new construction.

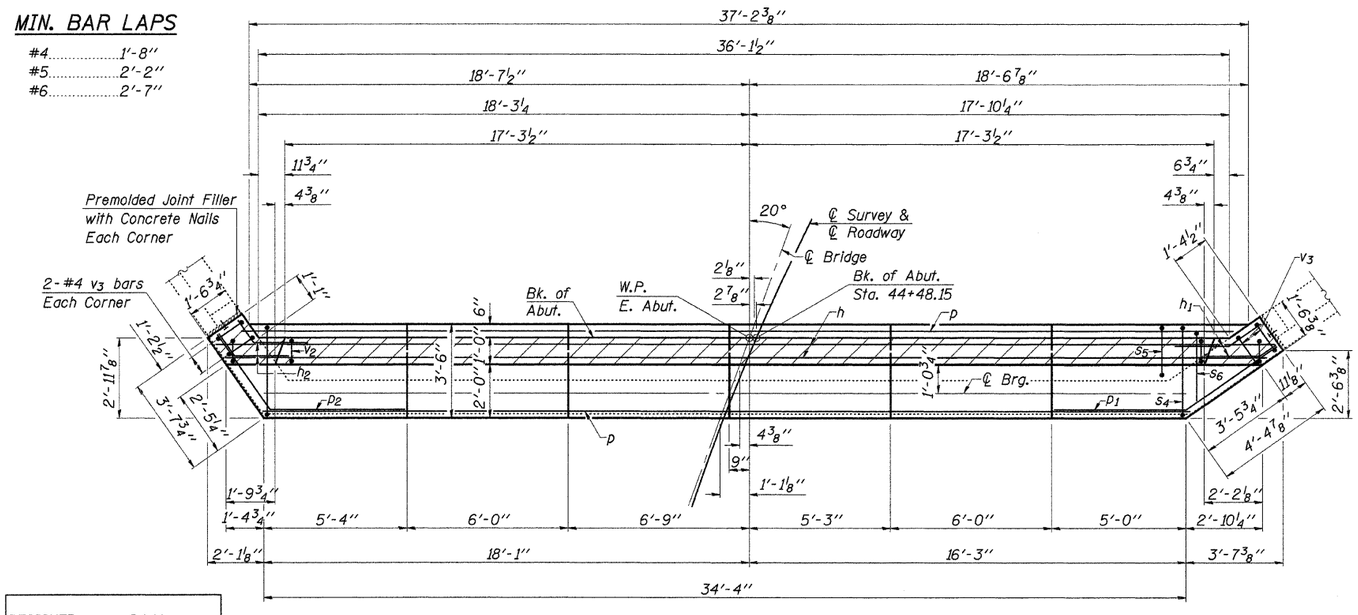


SECTION A-A

*#6 s_6 bars at 1'-6" cts. to be epoxy grouted into existing abutment wall. The cost of epoxy grouting is included with Reinforcement Bars, Epoxy Coated.

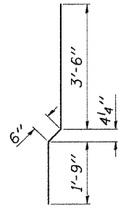
MIN. BAR LAPS

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

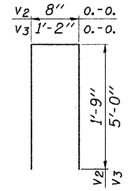


PLAN

Note: See Sheet 10 for Elastomeric Bearing Pad Placement Plan and Offset Sketch.



v BAR



v2 & v3 BAR

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	8	#5	21'-0"	
h1	8	#5	3'-4"	
h2	8	#5	3'-1"	
p	34	#6	21'-3"	
p1	5	#6	9'-0"	
p2	5	#6	8'-3"	
s4	35	#4	9'-2"	
s5	31	#4	11'-9"	
s6	24	#6	3'-6"	
v	39	#4	5'-9"	
v1	39	#4	5'-0"	
v2	39	#4	4'-2"	
v3	4	#4	11'-2"	
Concrete Structures			Cu. Yd.	31.1
Reinforcement Bars, Epoxy Coated			Pound	2,450

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

EAST ABUTMENT DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
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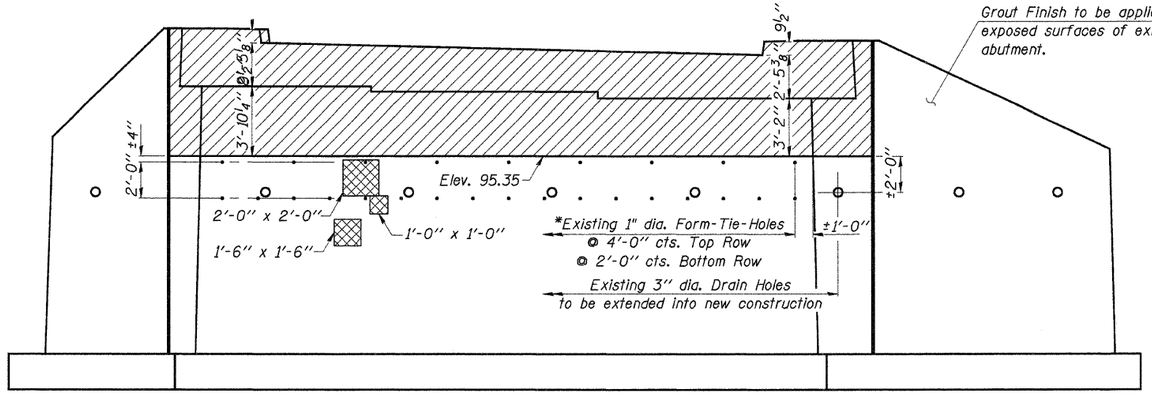
FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. MONROE, WI. SPRINGFIELD, IL.

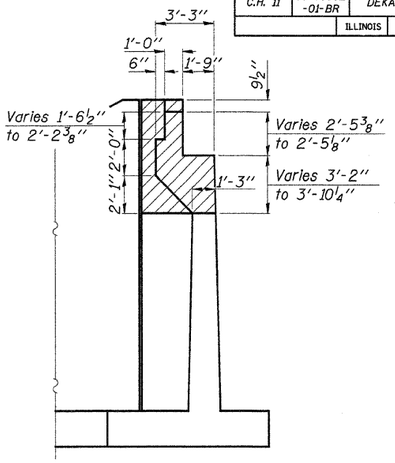
JOB NO.: 47538
FILE: E_ABUT.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	14
	ILLINOIS			

Contract No. 87366

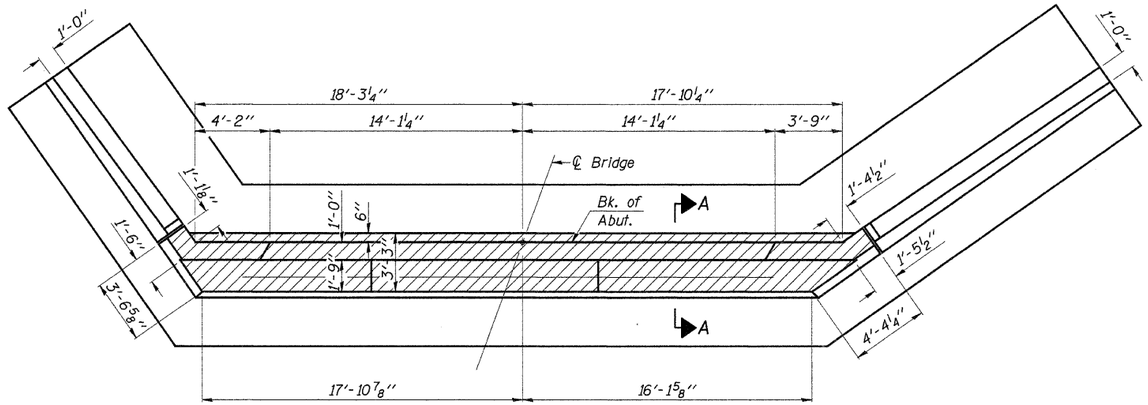


ELEVATION



SEC. A-A

Note: Structure Excavation required for Concrete Removal and rehabilitation of the existing abutment is included in the cost of Concrete Structures.



PLAN

LEGEND

Hatched Area Indicates Concrete Removal

Cross Hatched area indicates Structural Repair of Concrete

GROUT FINISH FOR EXISTING ABUTMENT SURFACES

After the existing abutment has been rehabilitated to be compatible with new construction, all exposed surfaces of the existing abutment shall receive a grout finish. The following procedures shall be used:

1. All existing surfaces receiving the grout finish shall be cleaned using methods acceptable to the Engineer to remove all dirt, mold, algae, grease, compounds or any bond breaking substance.
2. Sufficient water shall be applied to moisten the existing surfaces prior to application of grout material to prevent absorption of water from the grout.
3. Prepare an adhesive grout mixture having the consistency of thick paint and utilizing 1 part portland cement to 1½ parts fine sand with a 1:1 mixture of bonding admixture and water.
4. During the preparation of the grout mixture, white portland cement shall be added in amounts determined by trial batches so that the color of the dry grout will match adjacent surfaces of the new construction.
5. Apply grout, minimum 1/16 inch thickness, to the existing surfaces.
6. Immediately after applying grout, scrub the surface with a cork float or stone while working grout into surface voids.
7. While grout is still plastic, remove excess grout by working the surface with rubber floats or bundled burlap sacks.
8. After grout whitens, rub the surface with clean burlap and keep surface damp by fog spray or other method approved by the Engineer for a minimum of 48 hours.

The area of existing surface to receive a grout finish is estimated to be 398 Sq. Ft at the West Abutment. The cost of applying the grout finish to the existing abutment surfaces is included in the cost of Concrete Structures

*Note: The existing material filling form-tie-holes in the abutment wall shall be removed to a minimum depth of 9 inches. The holes shall then be cleaned and filled with nonshrink grout meeting the requirements of Section 1024 of the Standard Specification of Road Bridge Construction. The temperature of the grout at time of placement shall be a minimum of 50° F and a maximum of 90° F. The inside surface of the holes shall be wetted a minimum of one hour before placement of the nonshrink grout. Prior to placement of the grout, all excess water shall be removed from the interior of the holes. The grout shall be compacted as it is placed within the holes using a rod or other suitable tool. After placement, the grout shall be troweled flush with the surface of the abutment wall. The cost of grouting existing form-tie-holes is included in the cost of Structural Repair of Concrete (Depth Equal To Or Less Than 5 In.).

EAST ABUTMENT BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	18
Structural Repair of Concrete (Depth Equal to or less than 5 in.)	Sq. Ft.	8

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

EAST ABUTMENT
CONCRETE REMOVAL AND REPAIR DETAILS
COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

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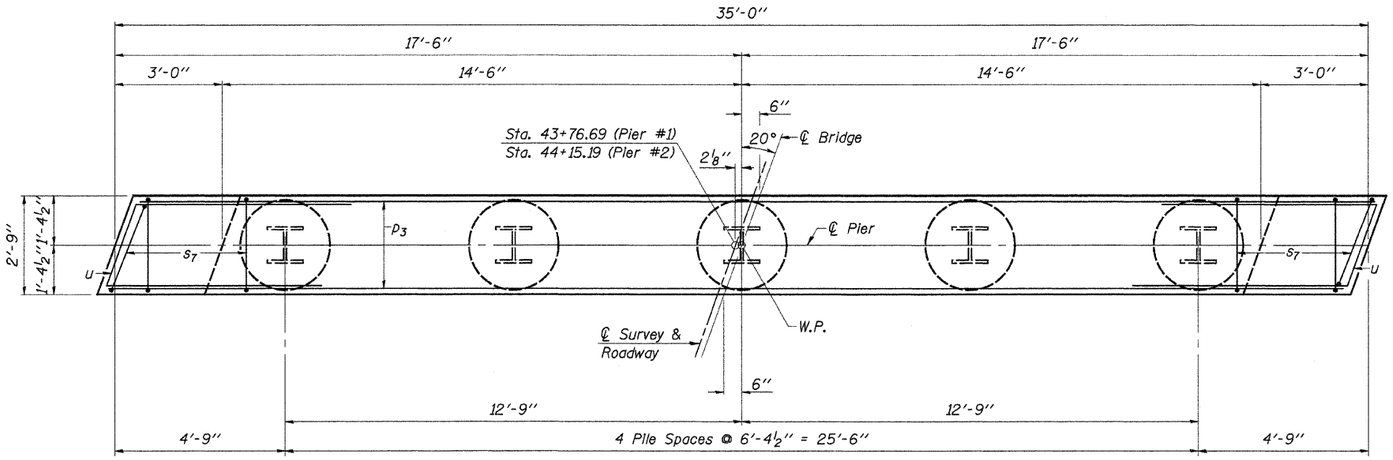
JOB NO.: 47538
FILE: E.ABUT_CONC.DGN
DATE: 09/02/08

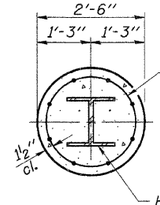
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	15
	ILLINOIS			

Contract No. 87366



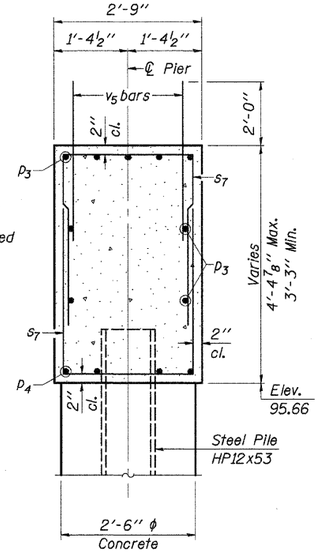
PLAN

Note: All edges shall have standard 3/4" chamfer.

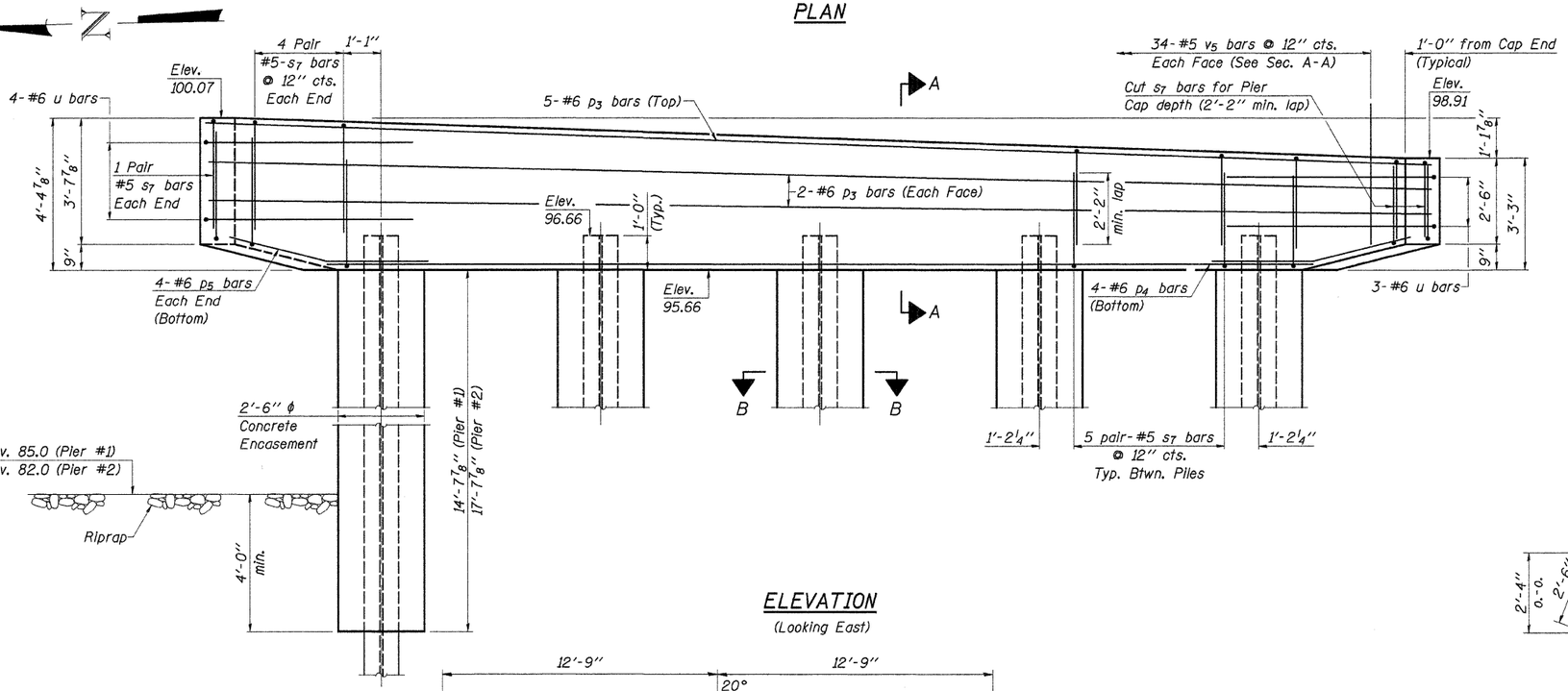


Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. Extend 1'-0" min. into cap. The cost of Excavation, and Reinforcement is included with Concrete Encasement. Forms for Encasement may be omitted when soil conditions permit.

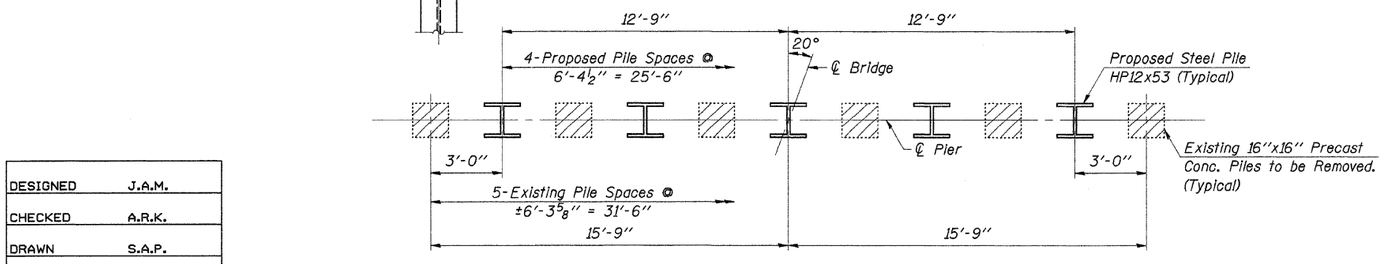
SECTION B-B
Concrete Encasement



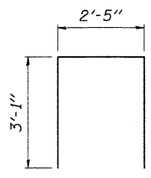
SECTION A-A



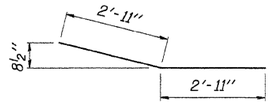
ELEVATION
(Looking East)



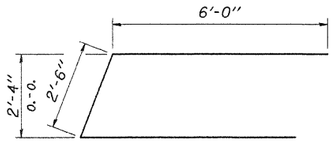
EXISTING & PROPOSED PILE LOCATION SKETCH



s7 BAR



p5 BAR



u BAR

TWO PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p_3	18	#6	34'-8"	
p_4	8	#6	28'-8"	
p_5	16	#6	5'-10"	
s_7	120	#5	8'-7"	
u	14	#6	14'-6"	
v_5	136	#5	4'-0"	
Concrete Structures			Cu. Yd.	26.8
Reinforcement Bars, Epoxy Coated			Pound	3,370
Steel Piles, HP12x53			Foot	450
Test Pile Steel HP12x53			Each	1
Concrete Encasement			Cu. Yd.	29.4

Note: All Reinforcement Bars shall be Epoxy Coated.

PILE DATA

Type & Size	Steel HP12x53
No. Req'd. (2 Piers)	*10
Nominal Required Bearing	417 Kips
Allowable Resistance Available	139 Kips
Estimated Length	50 ft.

*Includes 1 Test Pile to be driven in a permanent location at pier #2

The test piles shall be driven to 110 percent of the Nominal Required Bearing provided in the Pile Data.

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

PIERS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

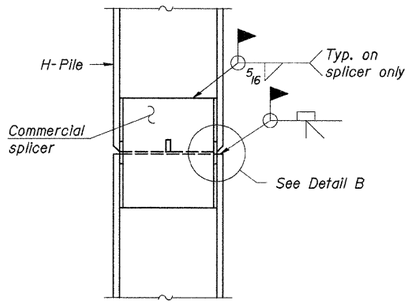
4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. MORRIS, NY SPRINGFIELD, IL.

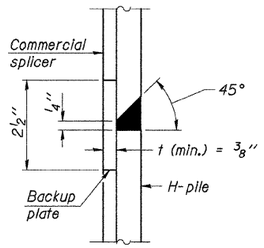
JOB NO.: 47538
FILE: PIERS.DGN
DATE: 09/02/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002 -01-BR	DEKALB	20	16
	ILLINOIS			

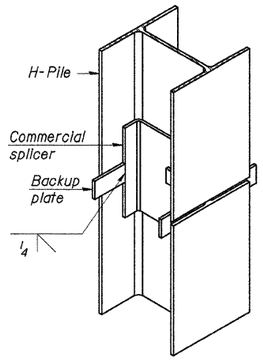
Contract No. 87366



ELEVATION

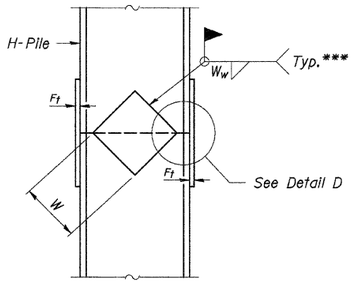


DETAIL "B"

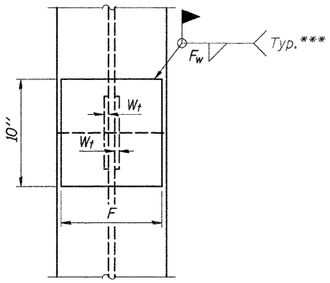


ISOMETRIC VIEW

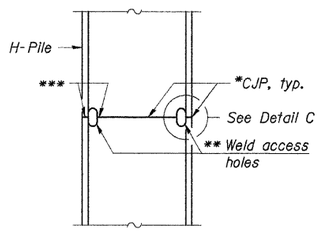
WELDED COMMERCIAL SPLICE



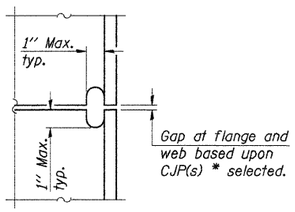
ELEVATION



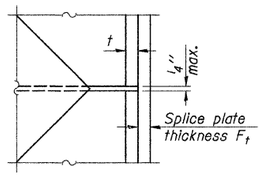
END VIEW



ELEVATION



DETAIL C



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12½"	1"	⅞"	7¾"	⅝"	½"
x102	12½"	⅞"	¾"	7¾"	⅝"	½"
x89	12½"	¾"	11/16"	7¾"	⅝"	½"
x73	12½"	⅝"	9/16"	7¾"	⅝"	½"
HP 12x84	10"	⅞"	11/16"	6½"	⅝"	½"
x74	10"	⅞"	11/16"	6½"	⅝"	½"
x63	10"	⅝"	½"	6½"	½"	⅜"
x53	10"	⅝"	½"	6½"	½"	⅜"
HP 10x57	8"	¾"	9/16"	5¼"	½"	⅜"
x42	8"	⅝"	9/16"	5¼"	½"	⅜"
HP 8x36	7"	⅝"	7/16"	4¼"	½"	⅜"

COMPLETE PENETRATION WELD SPLICE

WELDED PLATE FIELD SPLICE

* 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 ¼" from end of each pile.

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

DESIGNED	J.A.M.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.R.K. & J.A.M.

F-HP 11-1-06

STEEL PILE SPLICING DETAILS

COUNTY HIGHWAY 11
SECTION 06-00002-01-BR
DEKALB COUNTY
STATION 43+96

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
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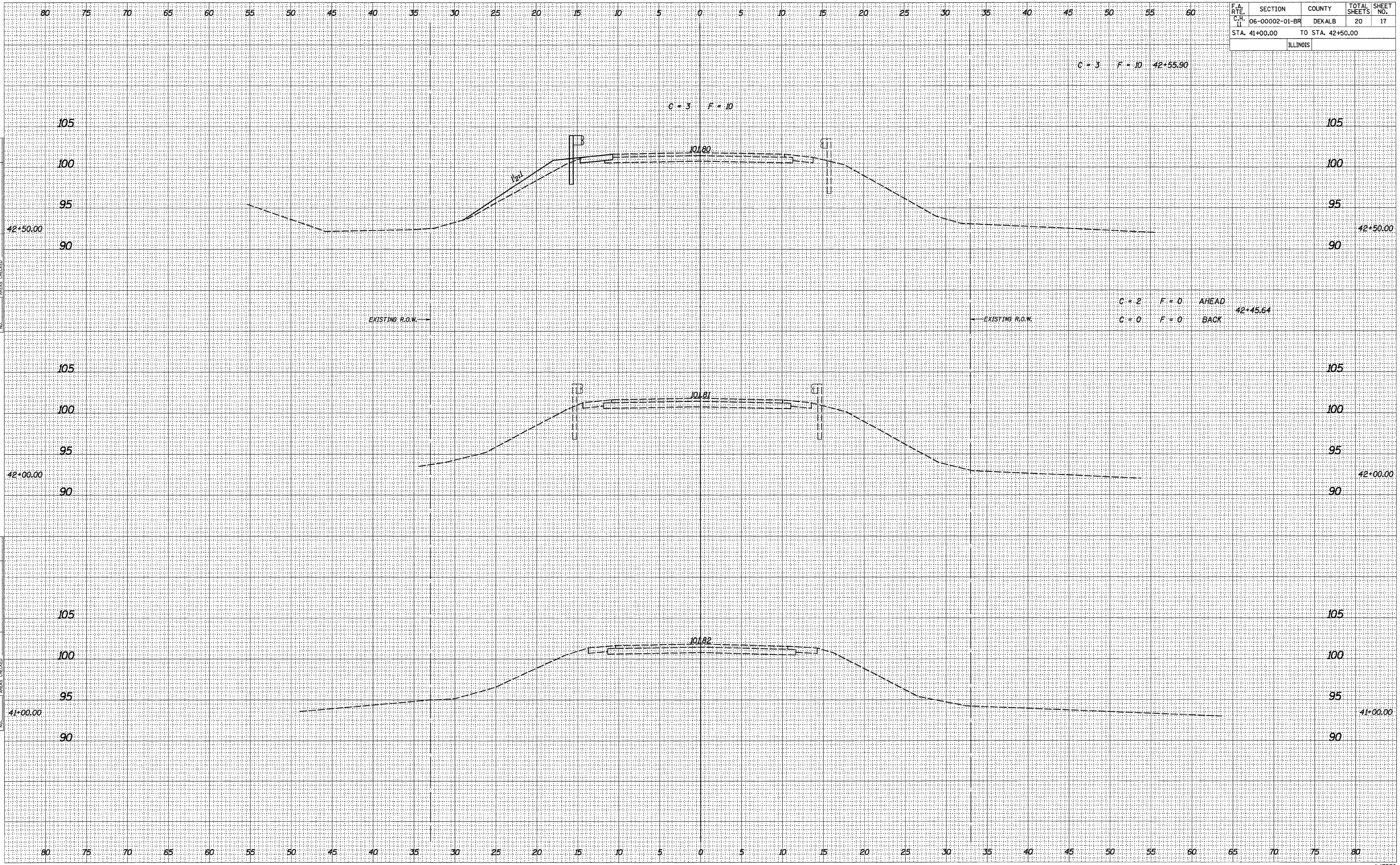
FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL. ROCKFORD, IL. ROCHELLE, IL. SHOREWOOD, WI SPRINGFIELD, IL.

JOB NO.: 47538
FILE: 47538PILES.DGN
DATE: 09/02/08

CONTRACT NO. 87366

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	17
STA. 41+00.00	TO STA. 42+50.00			
	ILLINOIS			



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

PLOT DATE = 01/11/08
FILE NAME = 47538XSECSHEETS.DGN
PLOT SCALE = 5
USER NAME = S. PRICE

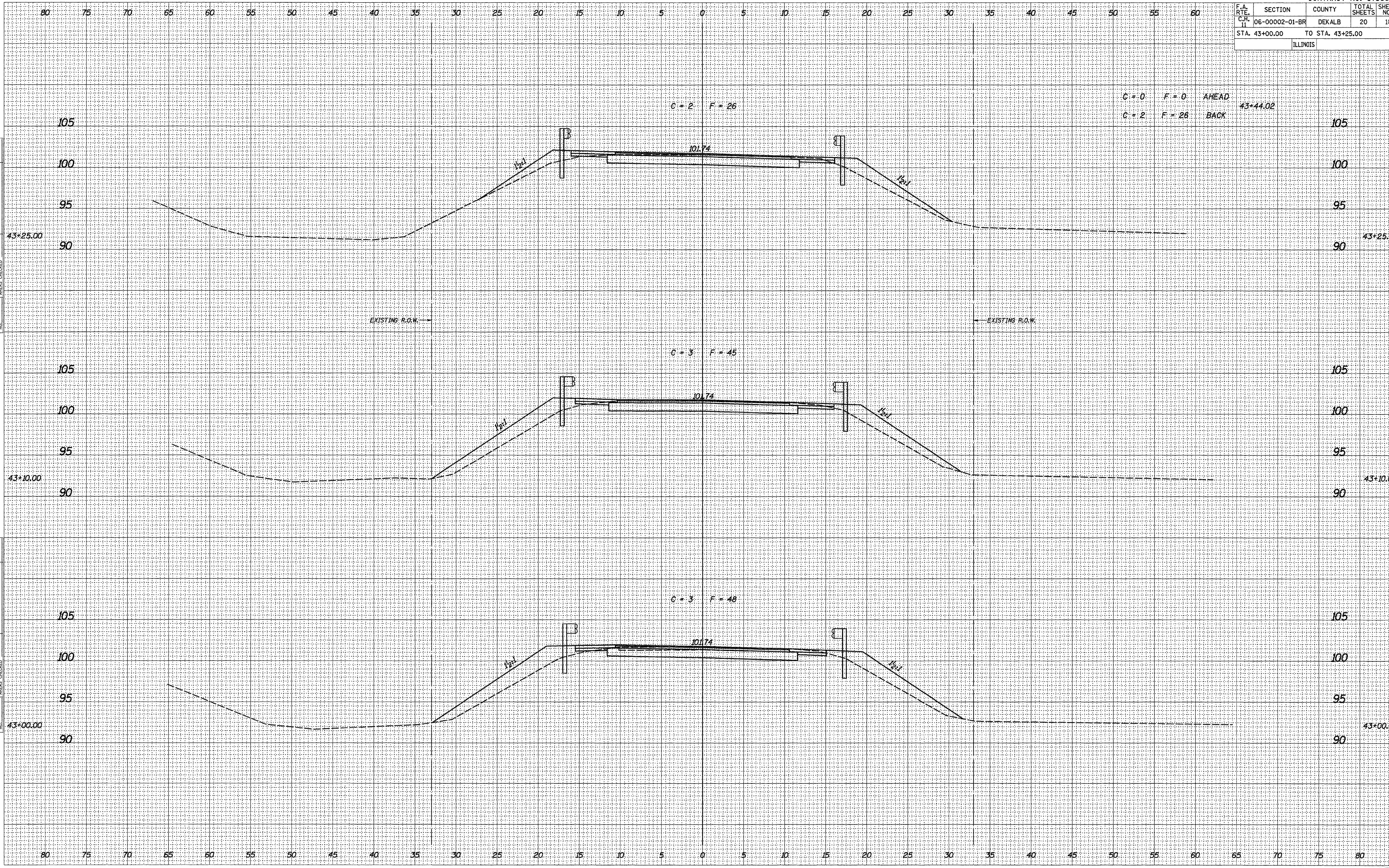
#47538

CONTRACT NO. 87366

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	18

STA. 43+00.00 TO STA. 43+25.00

ILLINOIS



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

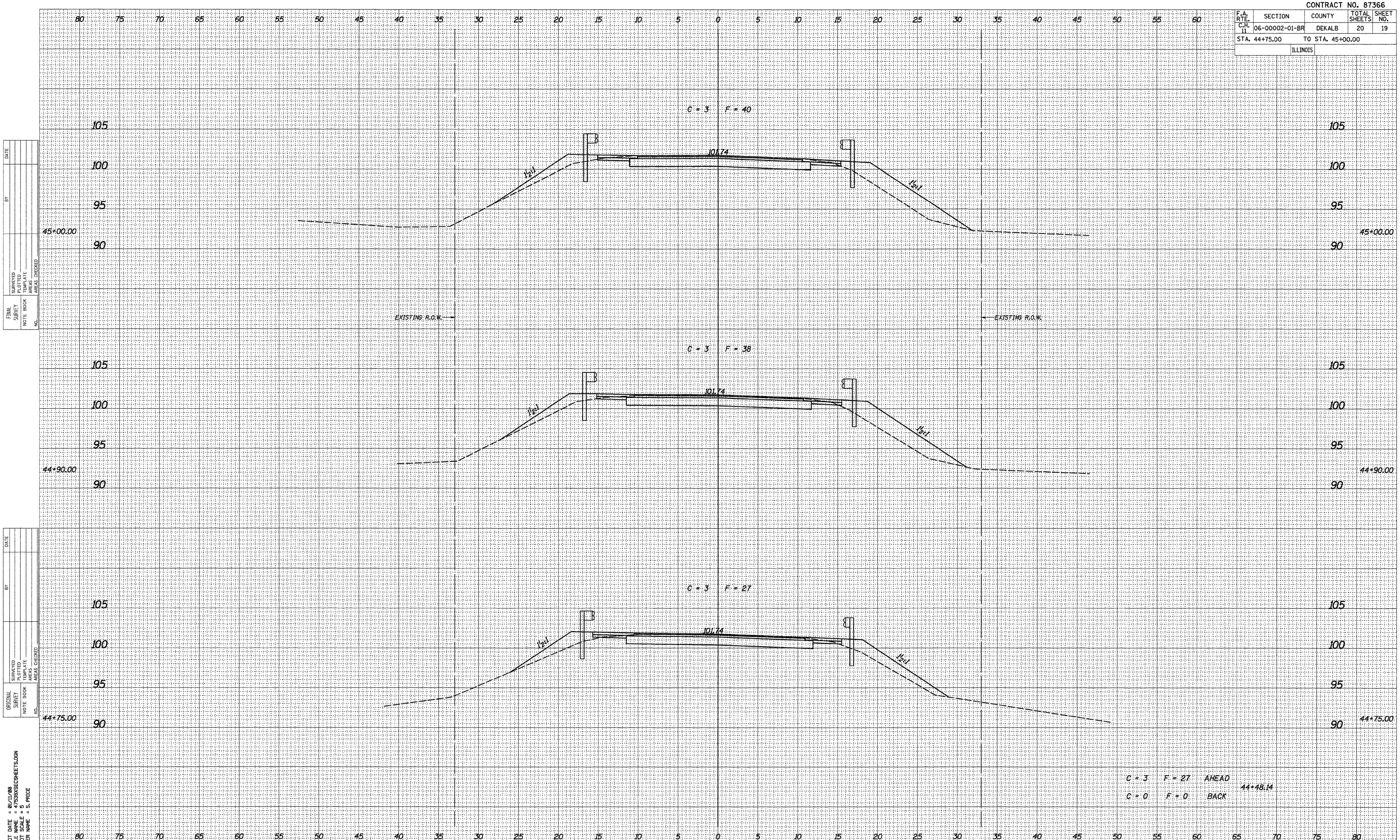
ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

PLOT DATE = 01/11/08
FILE NAME = 47538XSECSHEETS.DGN
PLOT SCALE = 5
USER NAME = S. PRICE

#47538

CONTRACT NO. 87366

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	19
STA. 44+75.00	TO STA. 45+00.00			
	ILLINOIS			



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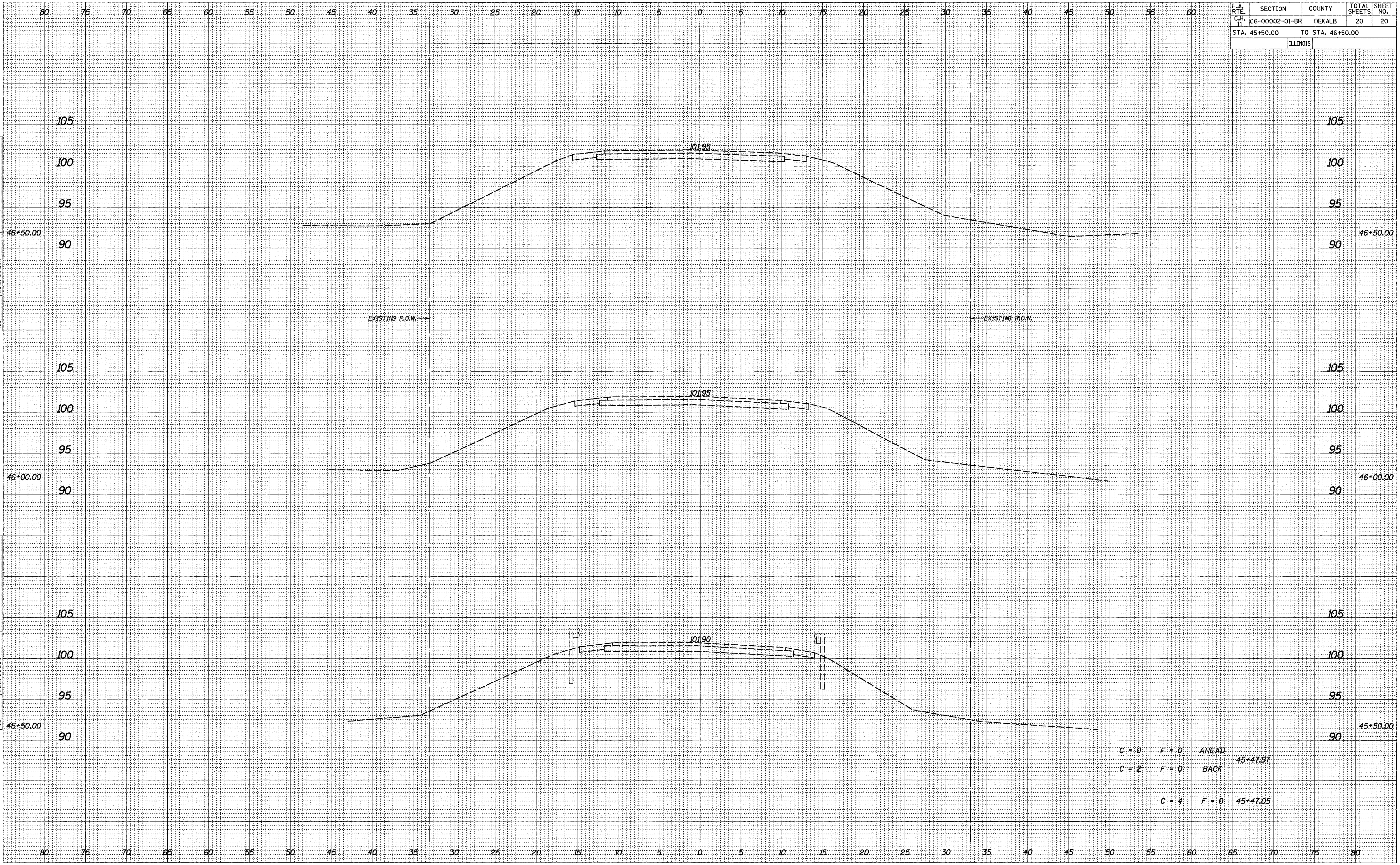
FILE NAME = 47538XSECSHEETS.DGN
PLOT SCALE = 5
USER NAME = S. PRICE

#47538

CONTRACT NO. 87366

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 11	06-00002-01-BR	DEKALB	20	20
STA. 45+50.00	TO STA. 46+50.00			
ILLINOIS				



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