03-08-13 LETTING ITEM 118

FAS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	1

CONTRACT NO. 95701

INDEX OF SHEETS

See Page 2 of 29 Pages

HIGHWAY STANDARDS

See Page 2 of 29 Pages

EXISTING STRUCTURE NO. 087–3014

3 SPAN NON–COMPOSITE CONTINUOUS STEL
I–BEAN BRIDGE ON PILE BENT PIERS AND ABUTMENTS

PROPOSED STRUCTURE NO. 087–3555

3 SPAN–27" PPC DECK BEAMS ON PILE
BENT PIERS AND ABUTMENTS

DESIGN INFORMATION

DESIGN CLASSIFICATION: COLLECTOR (MAJOR)
CURRENT ADT: 1100
DESIGN ADT: 1400
DESIGN YEAR: 2030
DESIGN SPEED 50 M.P.H.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1–800–892–0123 (TOLL FREE)

CONTRACT NO. 95701

PLANS PREPARED BY:
SHELBY CO HWY DEPT
R. R. 3 BOX 38A
SHELBYVILLE IL 62565
217–774–2721

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
MAJOR BRIDGE PROGRAM

SHELBY COUNTY HIGHWAY DEPARTMENT
SECTION 06–00265–00–BR
PROJECT BRS – 656 (113)
SHELBY COUNTY
F.A.S. ROUTE 656 (CH–33)
JOB NO. C – 97 – 044 – 12
PROPOSED STRUCTURE NO. 087– 3555
EXISTING STRUCTURE NO. 087–3014

LOCATION OF SECTION INDICATED THUS:– ▬▬

N

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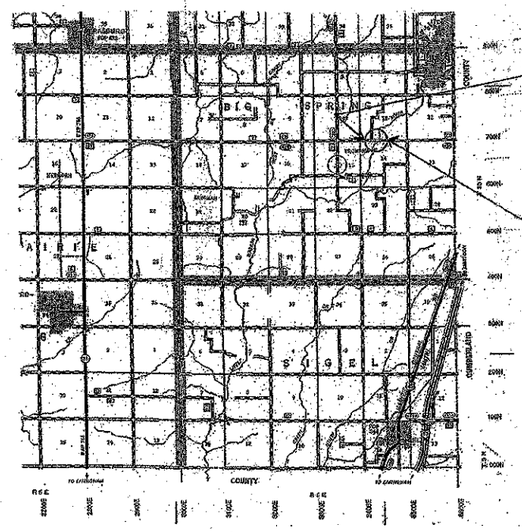

R 6 E

BEGIN PROJECT
STA 189 + 72

END PROJECT
STA 196 + 52

TOTAL PROJECT LENGTH
680 FEET = 0.129 MILES

PLANS PREPARED BY:
S. ALAN SPESARD, COUNTY ENGINEER, PE
ILLINOIS PROFESSIONAL ENGINEER 062–052965
EXPIRES 11–30–2013

12-21-12
DATE

S. ALAN SPESARD
ILLINOIS

APPROVED 12-21 20 12
COUNTY ENGINEER, SHELBY COUNTY

PASSED 1-14 20 13
District Seven Engineer of
Local Roads and Streets

RELEASING FOR BID BASED ON LIMITED REVIEW 1/14 20 13
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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NEOGA BRIDGE PROJECT

CONTRACT # 95701

INDEX OF PLANS

INDEX OF STANDARDS

STANDARD NUMBER	STANDARD NAME
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREA OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420101-04	24' JOINTED PCC PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
601001-04	SUB-SURFACE DRAINS
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 REPLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT OF WAY MARKERS
701901-02	TRAFFIC CONTROL DEVICES
780001-03	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SUMMARY OF QUANTITIES

	ITEM #	ITEM	UNIT	TOTAL QUANTITY
	20100500	TREE REMOVAL, ACRES	ACRE	2.1
	20200100	EARTH EXCAVATION	CU YD	145
	20300100	CHANNEL EXCAVATION	CU YD	945
	20400800	FURNISHED EXCAVATION	CU YD	1601
	21301072	EXPLORATION TRENCH 72" DEPTH	FOOT	100
	25000200	SEEDING, CLASS 2	ACRE	1.6
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	144
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	144
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	144
	25100115	MULCH, METHOD 2	ACRE	1.6
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	640
	28000305	TEMPORARY DITCH CHECKS	FOOT	32
	28000400	PERIMETER EROSION BARRIER	FOOT	150
	28100207	STONE RIPRAP, CLASS A4	TON	621
	28200200	FILTER FABRIC	SQ YD	677
	42000301	PORTLAND CEMENT CONCRETE PAVEMENT 8" (JOINTED)	SQ YD	1221
	48100100	AGGREGATE SHOULDERS, TYPE A	TON	157
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	85
	50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1
	50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1
	50300225	CONCRETE STRUCTURES	CU YD	56.2
	50300260	BRIDGE DECK GROOVING	SQ YD	540
	50300280	CONCRETE ENCASEMENT	CU YD	21.5
	50300300	PROTECTIVE COAT	SQ YD	578
	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	5153
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	14760
△	50901050	STEEL RAILING, TYPE SM	FOOT	344
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	550
	51500100	NAME PLATES	EACH	1
	58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1548
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	37
△	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	175
△	63000009	STEEL PLATE BEAM GUARDRAIL, TYPE B, 9 FOOT POSTS	FOOT	100
△	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
△	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
	63200310	GUARDRAIL REMOVAL	FOOT	100
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	4
	67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	5
	67100100	MOBILIZATION	L SUM	1
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	68
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	22
△	78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	2720
△	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6
△	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	4
△	78200410	GUARDRAIL MARKERS, TYPE A	EACH	26
△	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	3
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	118
	Z0062000	SAW CUTTING	FOOT	44
	Z0065000	SETTING PILES IN ROCK	EACH	22
	X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	67
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1221
	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	573

△ SPECIALTY ITEMS

SHELBY COUNTY
NEOGA BRIDGE PROJECT
F.A.S. 656
SECTION 06-00265-00-BR
DETAILS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	3

NEOGA BRIDGE PROJECT

CONTRACT # 95701

GENERAL NOTES

WHEREVER IN THE PLANS OR SPECIFICATIONS THE TERM STANDARD SPECIFICATIONS IS USED, IT SHALL BE UNDERSTOOD BY THE CONTRACTOR TO MEAN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS PREPARED BY THE DEPARTMENT OF TRANSPORTATION OF THE STATE OF ILLINOIS AND ADOPTED JANUARY 1, 2012.

ALL ELEVATIONS SHOWN ARE IN REFERENCE TO A U.S.G.S. DATUM.

WHERE SECTION, SUB-SECTION MARKERS, OR U.S. ARMY CORPS OF ENGINEER MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE DEPARTMENT AND AUTHORIZED AGENT OR LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

EXISTING ROAD SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER, THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR.

EXCEPT WHERE DESIGNATED OTHERWISE, THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS & MUST BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. CONTACT J.U.L.I.E., PHONE 800-892-0123, AND ALL UTILITY COMPANIES PRIOR TO DIGGING.

THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION OPERATIONS.

THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PROTECT PUBLIC AND PRIVATE PROPERTY. IF AT ANY TIME THE CONTRACTOR DAMAGES OR DESTROYS PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, RESTORE SUCH PROPERTY TO A CONDITION EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE.

THE CONTRACTOR SHALL NOTIFY THE SHELBY COUNTY HIGHWAY DEPARTMENT RESIDENT ENGINEER AND THE COUNTY ENGINEER 72 HOURS IN ADVANCE OF CONSTRUCTION WORK.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES AT THE TIME OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THEY PERFORM THEIR WORK.

GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THESE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENT AS POSSIBLE. THE DECISION AS TO ITEMS TO REMIAN IN PLACE SHALL BE DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

EARTH STOCK PILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN 14 DAYS.

TEMPORARY EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS SHOWN IN THE EROSION CONTROL PLAN AND AS DIRECTED BY THE ENGINEER.

SEEDING SHALL BE DONE ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS AS DIRECTED BY THE ENGINEER. SEEDING SHALL BE PAID FOR ONLY WITHIN THE PROPOSED RIGHT-OF-WAY OR EASEMENT LIMITS. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMIT SHALL BE SEEDED AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER TO VERIFY THE LENGTHS NEEDED.

UTILITIES

SHELBY ELECTRIC COOPERATIVE
NORTH ROUTE 128
SHELBYVILLE, ILLINOIS 62565
217-774-3986
(JAMES MATLOCK)

FRONTIER COMMUNICATIONS
112 SOUTH MAIN STREET
SULLIVAN, ILLINOIS 61951
217-821-6725
(DAVID LOVE)

LINCOLN PRAIRIE WATER COMPANY
P.O. BOX 336
DIETERICH, ILLINOIS 62424
217-925-5566

RATES OF APPLICATIONS FOR RECONSTRUCTION

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

THESE RATES MAY BE ADJUSTED BY THE ENGINEER IN THE FIELD.

AGGREGATE SHOULDERS = 2.10 TONS/CU.YD.

AGGREGATE BASE COURSE TYPE A = 2.10 TONS/CU.YD.

FERTILIZER NUTRIENT = 90.0 POUNDS OF NUTRIENT/ACRE

MULCH, METHOD 2 = 2.0 TON/ACRE

TEMPORARY EROSION SEEDING = 200 POUND/ACRE

STONE RIPRAP A4 = 0.67 TON/SQ.YD.

SHELBY COUNTY
NEOGA BRIDGE PROJECT
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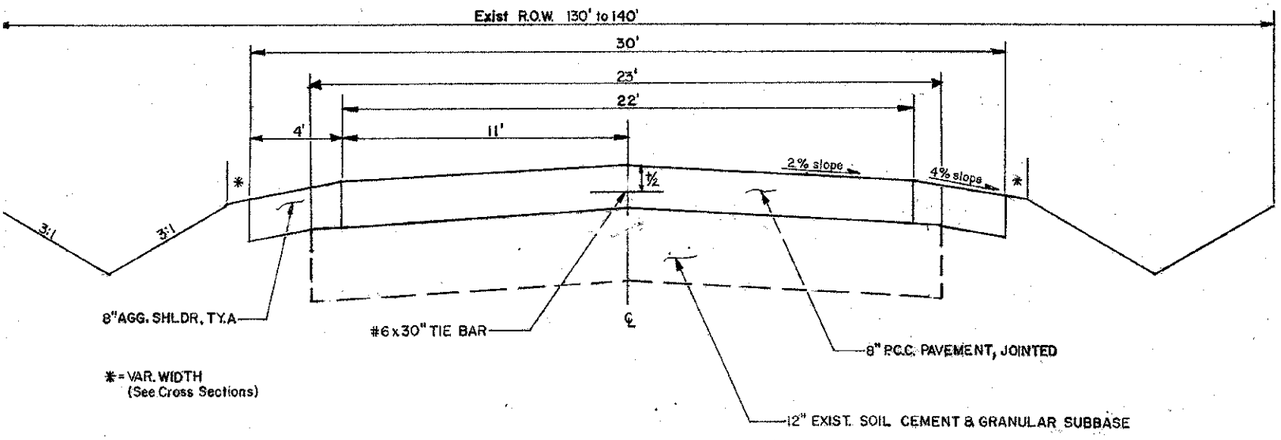
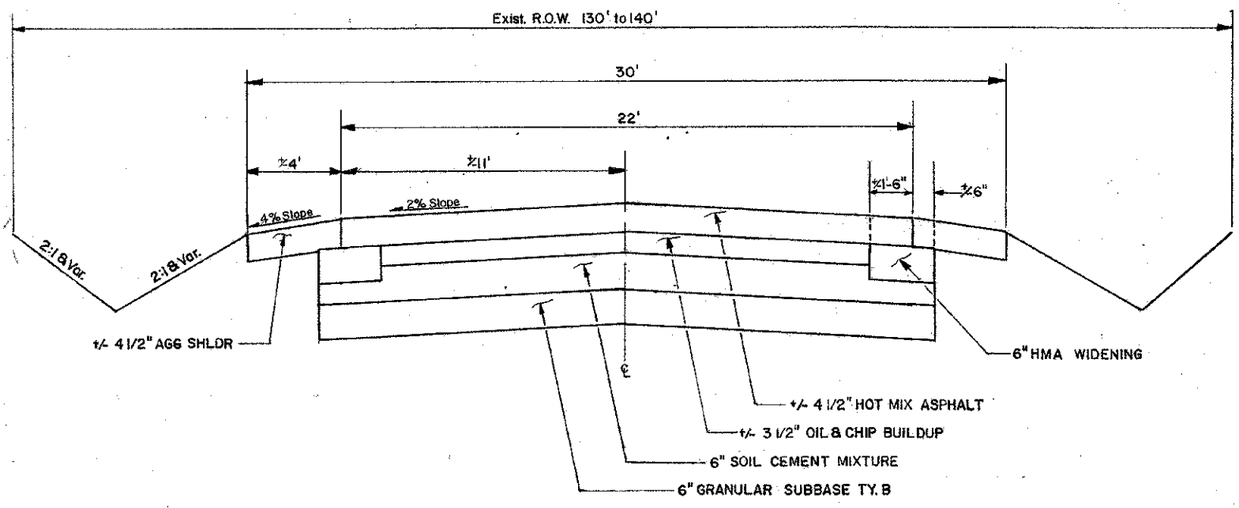
SHELBY COUNTY
SECTION: 06-00265-00-BR
F.A.S. 656
SHEET 4 OF 29 SHEETS

CONTRACT NO. 95701



PROPOSED TYPICAL CROSS SECTION



EXISTING TYPICAL CROSS SECTION

PAVEMENT DESIGN INFORMATION

F.A.S. 656 (NEOGA ROAD) (CH-33)

FUNCTIONAL CLASSIFICATION: RURAL MAJOR COLLECTOR
CLASS III ROAD

DESIGN PERIOD = 20 YEARS

LOAD = 80,000 POUND ROAD

IBV = 4

DESIGN LANE DISTRIBUTION (FOR ALL VEHICLE CLASSES) = 50%

PAVEMENT DESIGN TRAFFIC

CURRENT A.D.T. = 1100

DESIGN YEAR = 2030

DESIGN A.D.T. = 1400

PU% = 88.7% = 1242 PASSENGER CARS

SU% = 8.7% = 122 SINGLE UNIT TRUCKS

MU% = 2.6% = 136 MULTI UNIT TRUCKS

NUMBER OF VEHICLES FOR THE DESIGN YEAR WERE PROVIDED

BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED PAVEMENT

JOINT SPACING = 15 FOOT (NOMIAL)

DOWEL BARS = 1 ½ INCH DIAMETER

8" PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED)

+/- 3" AGGREGATE BASE COURSE TYPE A

TYPICAL SECTIONS

SCALE:	APPROVED BY:	DRAWN BY
DATE:		REVISED
		DRAWING NUMBER

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	5

NEOGA BRIDGE PROJECT

CONTRACT # 95701

Earthwork Schedule

Station to Station	Location	Earth Excavation	Earth Excavation (Adjusted for Shrinkage)	Embankment	Earth Balance-Waste(+) or Shortage(-)
189+72 to 192+25.58	West Approach	69	52	864	(-) 812
193+99.08 to 196+52	East Approach	76	57	846	(-) 789
	Total:	145	109	1710	(-)1601 **

Notes: All quantities are in cubic yards.

** Furnished Excavation Required.

Channel Excavation	
Station to Station	Quantity (cubic yards)
192+25.58 to 193+99.08	945
Total:	945

***No channel excavation shall be suitable for use in embankment construction, The cost of disposing excess channel excavation shall be included in the contract unit price for channel excavation.

Additional Notes: Channel shall be shaped Right Of Way line to Right of Way line as directed by engineer.

TREE REMOVAL - ACRES		
STA TO STA	O/S	QUANTITY
189+72 TO 196+52	75' LT	1.2 ACRES
189+72 TO 196+52	65' RT – 60' RT	0.9 ACRES
	TOTAL:	2.1 ACRES

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH			
STA TO STA	LOCATION	O/S	QUANTITY
190+25 TO 192+25.88	MAINLINE (WEST SIDE)	LT & RT	491 YD²
193+99.08 TO 195+75	MAINLINE (EAST SIDE)	LT & RT	730 YD²
		TOTAL	1221 YD²

AGGREGATE SHOULDERS TYPE A			
STA TO STA	LOCATION	O/S	QUANTITY
190+25 TO 192+25.88	MAINLINE (WEST SIDE)	LT & RT	84 TON
193+99.08 TO 195+75	MAINLINE (EAST SIDE)	LT & RT	73 TON
		TOTAL	157 TON

PCC CONCRETE PAVEMENT 8" JOINTED			
STA TO STA	LOCATION	O/S	QUANTITY
190+25 TO 192+25.88	MAINLINE (WEST SIDE)	LT & RT	491 YD²
193+99.08 TO 195+75	MAINLINE (EAST SIDE)	LT & RT	730 YD²
		TOTAL	1221 YD²

SHELBY COUNTY
NEOGA BRIDGE PROJECT
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NEOGA BRIDGE PROJECT

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TEMPORARY DITCH CHECKS		
STATION	O/S	QUANTITY
191+50	LT	8 FOOT
191+50	RT	8 FOOT
194+00	LT	8 FOOT
194+00	RT	8 FOOT
	TOTAL	32 FOOT

DESCRIPTION OF INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB EARTH AND LEAD TO POSSIBLE EROSION FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. PLACEMENT OF PERIMETER EROSION CONTROL BARRIER (AS DIRECTED BY THE ENGINEER) PRIOR TO THE COMMENCEMENT OF ANY ROAD OR BRIDGE WORK. SEE STD. 280001
2. REMOVAL OF EXISTING STRUCTURE.
3. CONSTRUCTION OF THE REPLACEMENT STRUCTURE.
4. PLACEMENT OF ROADWAY EMBANKMENT TO RAISE THE ROADWAY TO THE PROPOSED GRADE.
5. DRAINAGE STRUCTURES, INCLUDING DITCHES. WILL BE INSTALLED BEFORE AND/OR DURING THE COMPLETION OF THE EMBANKMENT.
6. PLACEMENT AND MAINTENANCE OF TEMPORARY EROSION CONTROL.
7. FINAL GRADING, PLACING AGGREGATE AND OTHER MISCELLANEOUS ITEMS.
8. PLACEMENT OF PERMANENT EROSION CONTROL.
9. REMOVAL AND PROPER CLEAN UP OF TEMPORARY EROSION CONTROL.

PERIMETER EROSION BARRIER

PERIMETER EROSION BARRIER SHALL BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.

THE QUANTITY IN THE PLANS IS ESTIMATED TO ESTABLISH A CONTRACT UNIT PRICE. FINAL PAYMENT WILL BE MADE BASED UPON THE AMOUNT ORDERED AND INSTALLED.

SHELBY COUNTY
NEOGA BRIDGE PROJECT
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NEOGA BRIDGE PROJECT

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EXPLORATORY TRENCH – 72" DEPTH

EXPLORATORY TRENCH SHALL BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.

THE QUANTITY IN THE PLANS IS ESTIMATED TO ESTABLISH A CONTRACT UNIT PRICE. FINAL PAYMENT WILL BE MADE BASED UPON THE AMOUNT ORDERED AND INSTALLED.

PORTLAND CEMENT MORTAR FAIRING COURSE		
STATION TO STATION	O/S	QUANTITY
192+26.37 TO 193+98.29	12' LT TO 12' RT	1548 FOOT
	TOTAL	1548 FOOT

SAW CUTTING		
STATION	O/S	QUANTITY
190+25	11' RT TO 11' LT	22 FOOT
195+75	11' RT TO 11' LT	22 FOOT
	TOTAL	44 FOOT

FURNISHING & ERECTING RIGHT OF WAY MARKERS		
STATION	O/S	QUANTITY
190+25	75' LT	1.0 EACH
190+25	65' RT	1.0 EACH
195+75	75' LT	1.0 EACH
195+75	60' RT	1.0 EACH
	TOTAL	4.0 EACH

SHELBY COUNTY
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F.A.S. 656
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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NEOGA BRIDGE PROJECT

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RAISED REFLECTIVE PAVEMENT MARKER REMOVAL		
STATION	**O/S**	**QUANTITY**
190+10	CENTERLINE	1.0 EACH
195+72	CENTERLINE	1.0 EACH
196+52	CENTERLINE	1.0 EACH
	TOTAL	**3.0 EACH**

RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE)		
STATION	**O/S**	**QUANTITY**
192+25.58	CENTERLINE	1.0 EACH
192+83.66	CENTERLINE	1.0 EACH
193+41.00	CENTERLINE	1.0 EACH
193+99.08	CENTERLINE	1.0 EACH
	TOTAL	**4.0 EACH**

RAISED REFLECTIVE PAVEMENT MARKERS		
STATION TO STATION	**O/S**	**QUANTITY**
189+72 TO 192+25.58	CENTERLINE	3.0 EACH
193+99.08 TO 196+52	CENTERLINE	3.0 EACH
	TOTAL	**6.0 EACH**

TEMPORARY MARKINGS & REMOVAL			
STA TO STA	**O/S**	**SHORT TERM PAVEMENT MARKING**	**WORK ZONE PAVEMENT MARKING REMOVAL**
189+72 TO 196+52	CENTERLINE SURFACE MAT	68 FOOT	----------
189+72 TO 196+52	CENTERLINE SURFACE MAT	----------	22 FT²
	TOTAL	**68 FOOT**	**22 FT²**

EPOXY PAVEMENT MARKING LINE 4"				
STA TO STA	**O/S**	**LOCATION**	**COLOR**	**QUANTITY**
189+72 TO 196+52	LT	NORTH EDGE LINE	WHITE	680 FOOT
189+72 TO 196+52	CENTERLINE	DOUBLE NO PASSING CENTERLINE	YELLOW	1360 FOOT
189+72 TO 196+52	RT	SOUTH EDGE LINE	WHITE	680 FOOT
			TOTAL	**2720 FOOT**

SHELBY COUNTY
NEOGA BRIDGE PROJECT
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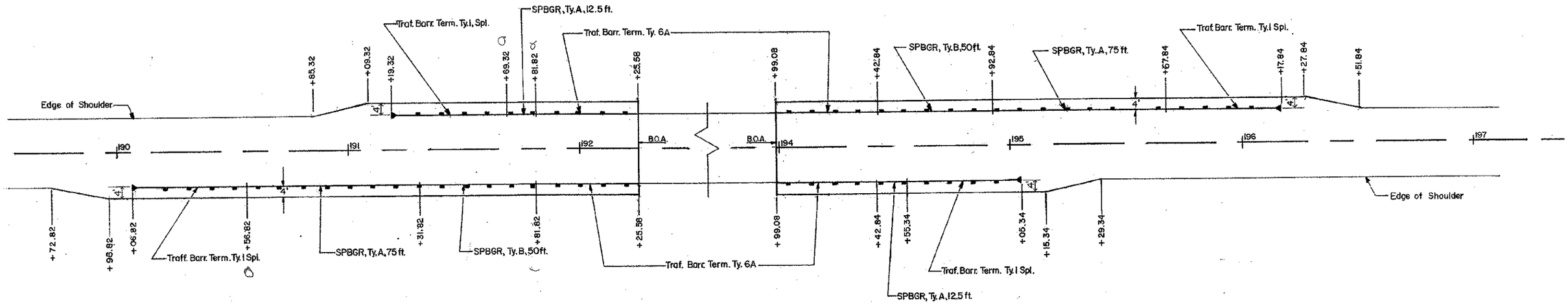
SHOULDER AND GUARDRAIL DETAIL



Terminal Marker – Direct Applied		
Station	O/S	Quantity
190+06.82	16' RT	1.0 EACH
191+19.32	16' LT	1.0 EACH
195+05.34	16' RT	1.0 EACH
196+17.84	16' LT	1.0 EACH
	TOTAL:	4.0 EACH

Guardrail Marker Ty A

STA	O/S	QUANTITY
190+56.82 TO 191+81.82	15' RT	11.0 EACH
194+42.84 TO 194+55.34	15' RT	2.0 EACH
191+69.32 TO 191+81.82	15' LT	2.0 EACH
194+42.84 TO 195+67.84	15' LT	11.0 EACH
	TOTAL	26.0 EACH

GUARDRAIL REMOVAL		
STA TO STA	O/S	QUANTITY
191+97 TO 192+22	LEFT	25 FOOT
191+97 TO 192+22	RIGHT	25 FOOT
194+00 TO 194+25	LEFT	25 FOOT
194+00 TO 194+25	RIGHT	25 FOOT
	TOTAL	100 FOOT

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

16' RT, STA 190+06.82 TO 15' RT, STA 190+56.82	=	1 EACH
16' LT, STA 191+19.32 TO 15' LT, STA 191+69.32	=	1 EACH
15' RT, STA 194+55.34 TO 16' RT, STA 195+05.34	=	1 EACH
15' LT, STA 195+67.84 TO 16' LT, STA 196+17.84	=	1 EACH
TOTAL	=	4 EACH

TRAFFIC BARRIER TERMINAL, TYPE 6A

15' RT, STA 191+81.82 TO 15' RT, STA 192+25.58	=	1 EACH
15' LT, STA 191+81.82 TO 15' LT, 192+25.58	=	1 EACH
15' RT, STA 193+99.08 TO 15' RT, STA 194+42.84	=	1 EACH
15' LT, STA 193+99.08 TO 15' LT, STA 194+42.84	=	1 EACH
TOTAL	=	4 EACH

STEEL PLATE BEAM GUARDRAIL, TYPE A

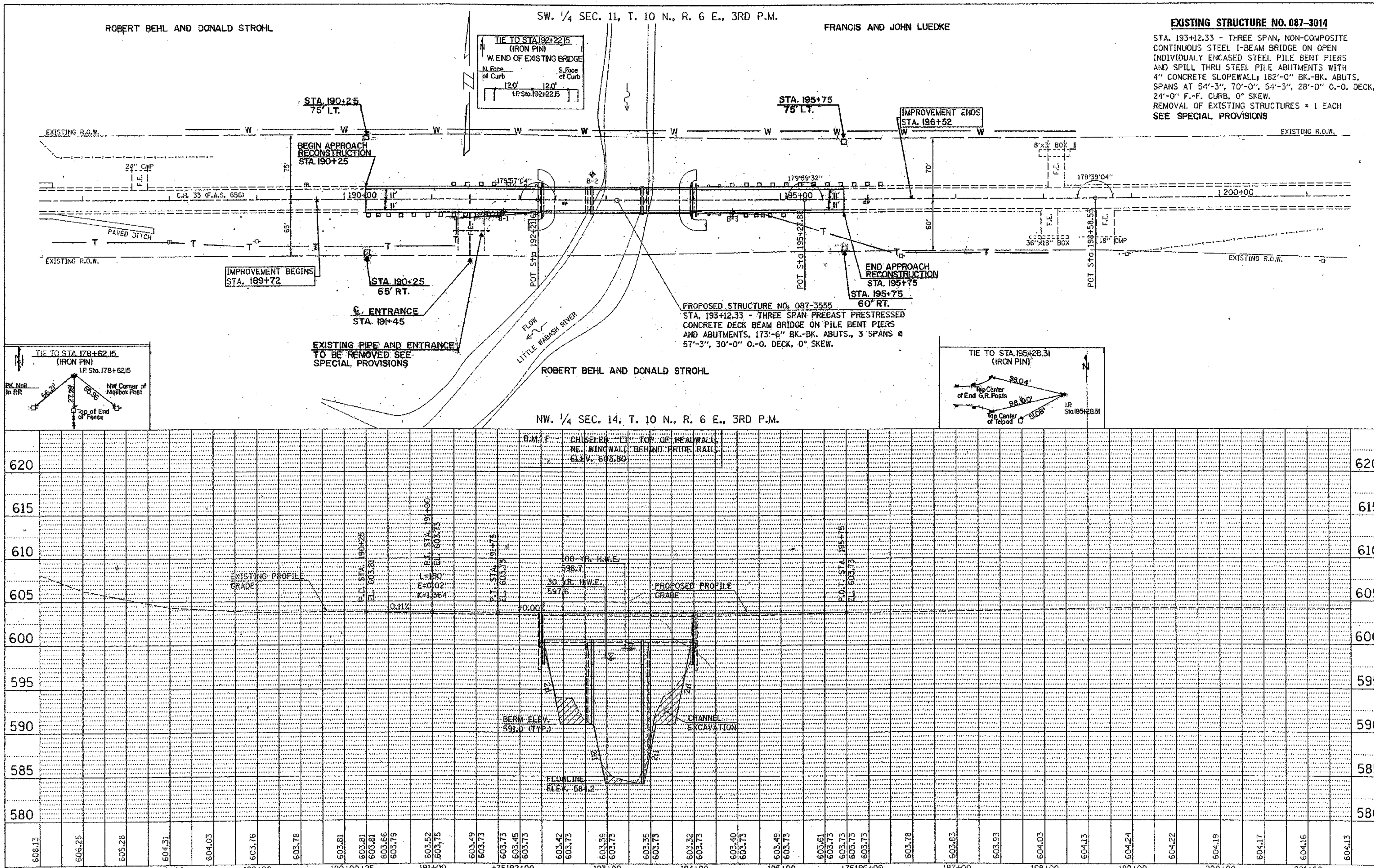
15' RT, STA 190+56.82 TO 15' RT, STA 191+31.82	=	75 FOOT
15' LT, STA 191+69.32 TO 15' LT, STA 191+81.82	=	12.5 FOOT
15' RT, STA 194+42.84 TO 15' RT, STA 194+55.34	=	12.5 FOOT
15' LT, STA 194+92.84 TO 15' LT, STA 195+67.84	=	75 FOOT
TOTAL	=	175 FOOT

STEEL PLATE BEAM GUARDRAIL, TYPE B

15' RT, STA 191+31.82 TO 15' RT, STA 191+81.82	=	50 FOOT
15' LT, STA 194+42.84 TO 15' LT, STA 194+92.84	=	50 FOOT
TOTAL	=	100 FOOT

GUARDRAIL DETAILS

SCALE:	APPROVED BY:	DRAWN BY
DATE:		REVISED
		DRAWING NUMBER



FILE NAME = 46804_P&P.DGN	DESIGNED -	REVISED -	4440 ASH GROVE SPRINGFIELD, IL. 62711 (217) 793-8600 www.fehr-graham.com
USER NAME = S.A.P.	DRAWN - S.A.P.	REVISED -	
PLOT SCALE = 50	CHECKED -	REVISED -	
PLOT DATE = 6/10/09	DATE - 6/10/09	REVISED -	

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

PLAN & PROFILE - C.H. 33 (F.A.S. 656)

SCALE: H:50, V:5 | STA. 86+50.00 TO STA. 201+50.00

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
33	06-00265-00-BR	SHELBY	29	10

CONTRACT NO. 95701

ILLINOIS

#46804

CONTRACT NO.
SHELBY CO.
SECTION-06-00265-00-BR
FAS-656(CH-33)
SHEET 1 OF 4 SHEETS

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

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

605
600
595
590

190+50

595.0

603.79

592.9

190+50

605
600
595
590

0+10
F=10

BEGIN APPROACH RECONSTRUCTION
STA 90+25
C=5
F=0

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

605
600
595
590

189+96

189+96

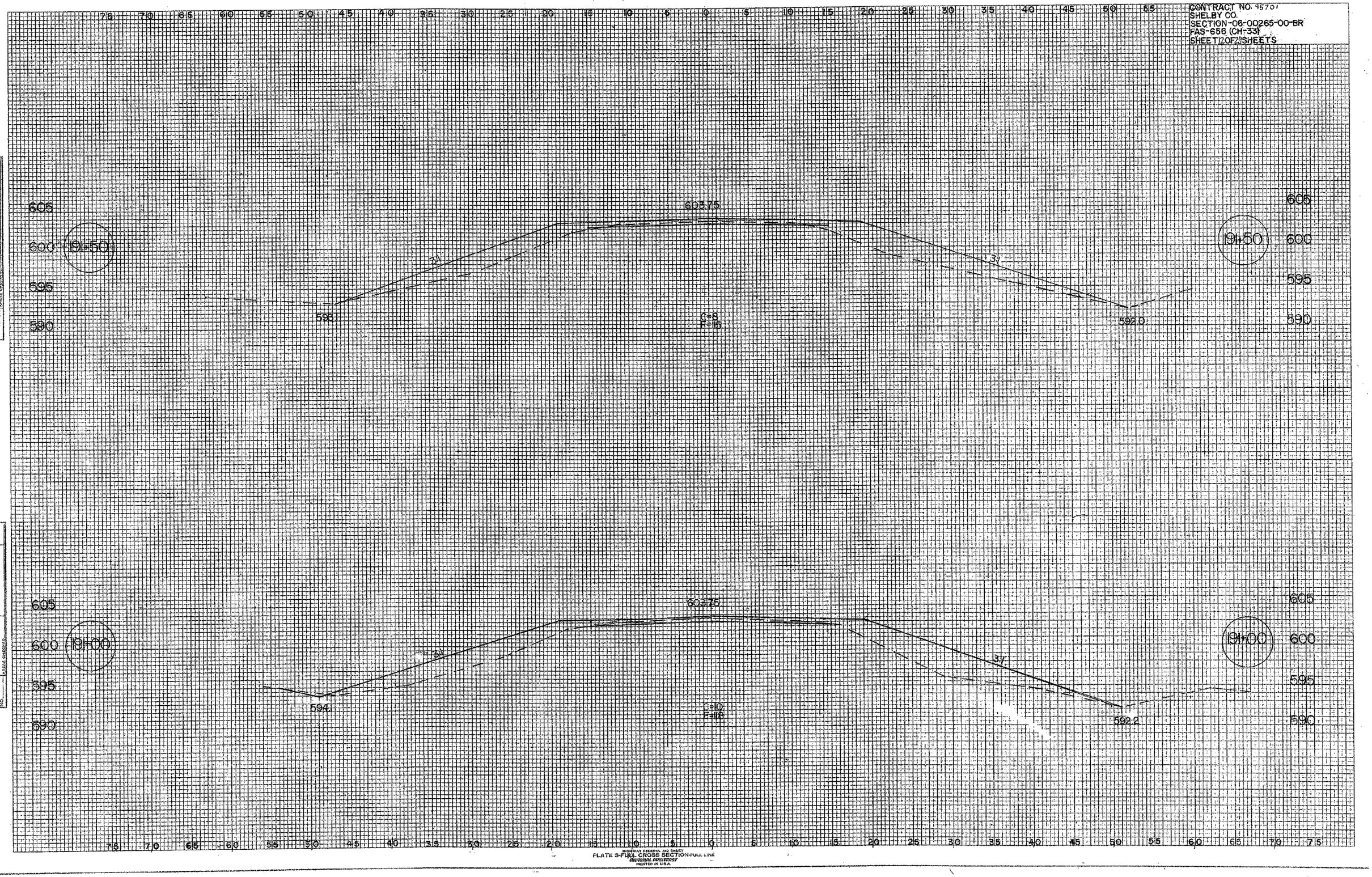
605
600
595
590

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

PLATE 3-1 HIGHWAY FEDERAL AID PROJ
CROSS SECTION-FULL
NATIONAL PRINTOUT
PRINTED IN U.S.A.

CONTRACT NO. 45707
SHELBY CO.
SECTION-08-00265-00-BR
FAS-656 (CH-33)
SHEET 12 OF 24 SHEETS

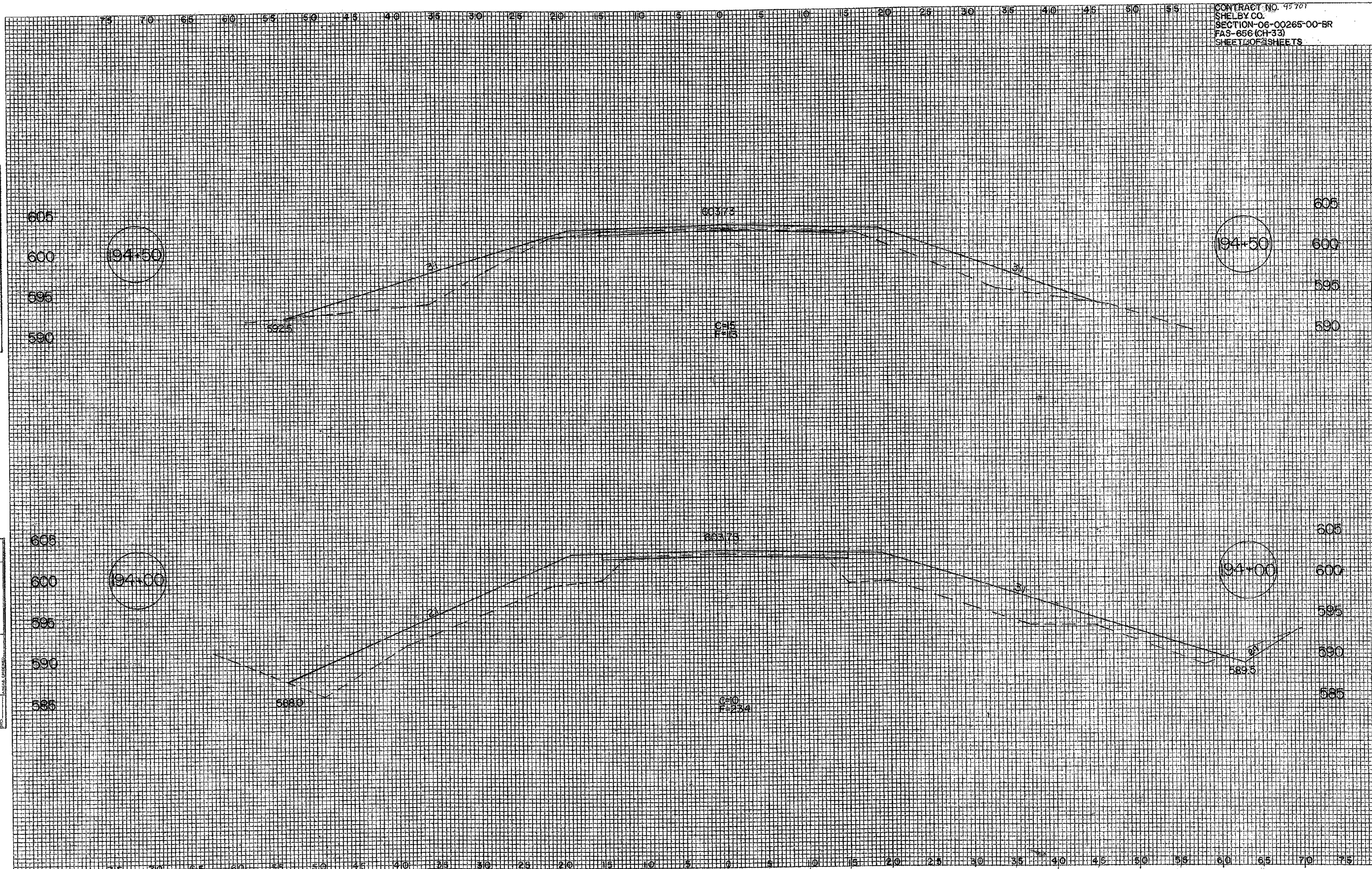
FINAL SURVEY
NOTE BOOK NO.
BY
DATE
SURVEYED
REVISED
PLOTTED
TEMPLATE
AREAS
CROSS SECTIONED



ORIGINAL SURVEY
NOTE BOOK NO.
BY
DATE
SURVEYED
REVISED
PLOTTED
TEMPLATE
AREAS
CROSS SECTIONED

HIGHWAY FEDERAL AID SERIES
PLATE 3-FULL CROSS SECTION-FULL LINE
REGIONAL INVESTIGATE
PRINTED IN U.S.A.

CONTRACT NO. 95701
SHELBY CO.
SECTION-06-00265-00-BR
FAS-656 (CH-33)
SHEET 13 OF 24 SHEETS

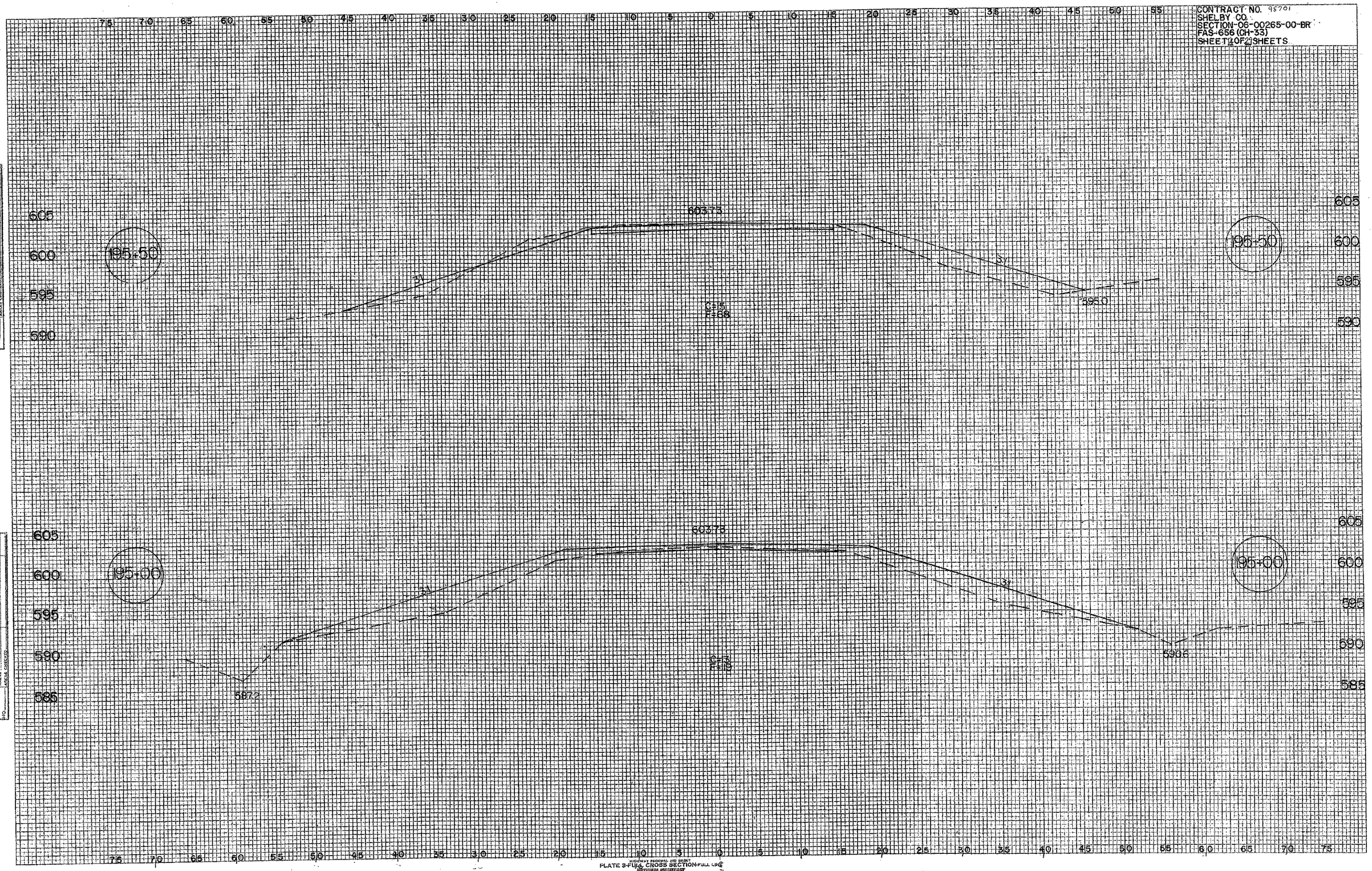


HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
"NATIONAL PRINTWAST"
PRINTED IN U.S.A.

CONTRACT NO. 95701
SHELBY CO.
SECTION-06-00265-00-BR
FAS-656 (CH-33)
SHEET 4 OF 4 SHEETS

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

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



HIGHWAY FEDERAL AID ROAD
PLATE 3-FUS, CROSS SECTION-FULL LINE
BUREAU OF PUBLIC ROADS
PRINTED IN U.S.A.

087-3014

B.M. - N.E.C.W. in 36" COTTONWOOD TREE. ST. STA. 59+15 - EL. 594.13
EXISTING STRUCTURE - STEEL TRUSS, 80' SPAN, 16' ROADWAY,
STONE ABUTMENTS & STEEL TUBES WITH CONCRETE BACKING.
TO BE REMOVED BY CONTRACTOR FOR SEC. 25-B
MATERIALS TO BE SALVAGED FOR REUSE — NONE

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

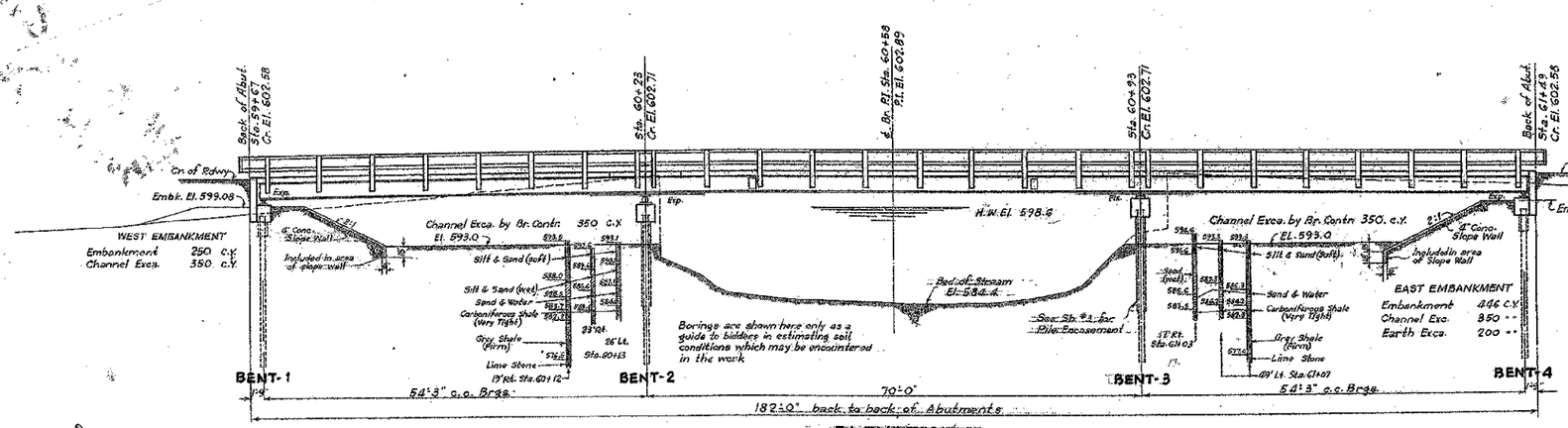
BOND ISSUE ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.A. Rt. 7	25B	Shelby	19	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT - F.A.S. 2A		

SHEET NO. 1
3 SHEETS

R.T.E. P.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	15
		CONTRACT NO. 95701		
	ILLINOIS FED. AID PROJECT			

All Conc. Good Built 1938

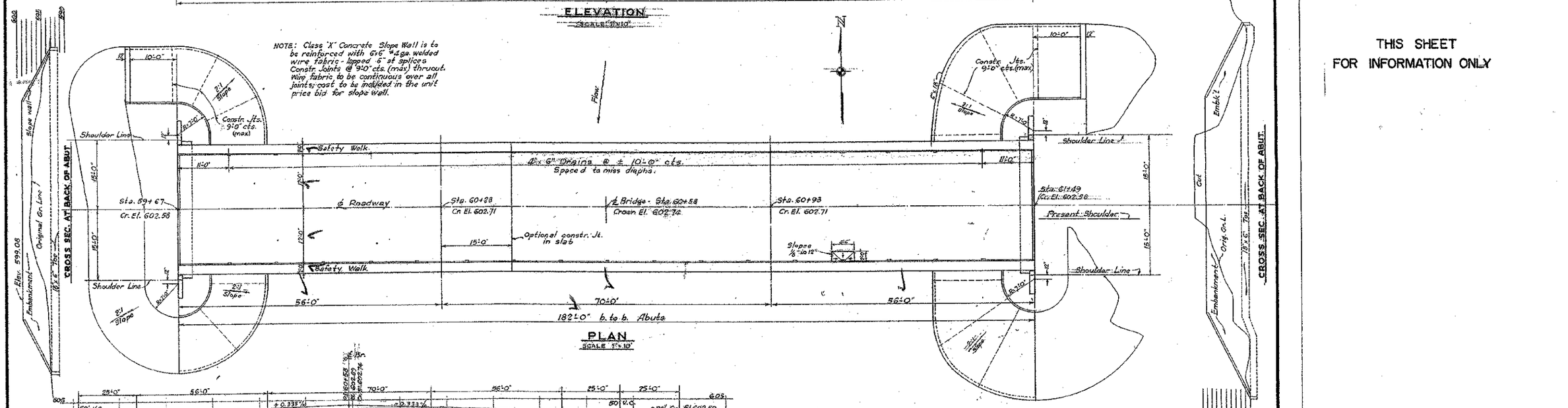
THIS SHEET
FOR INFORMATION ONLY



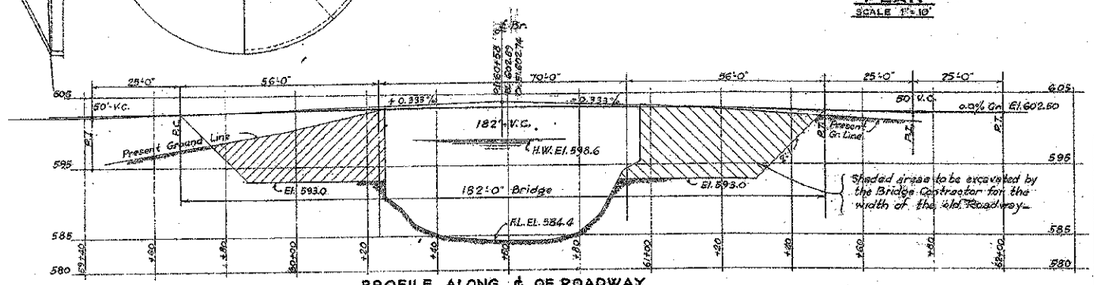
ELEVATION
SCALE 1"=10'

NOTE:- Before the superstructure is placed, the Bridge Contractor shall construct the embankments as shown in accordance with Sec 13 of the Std. Specs.
Material for the Embankments are to be obtained from the Channel Excavation and Roadway Cut. West Channel Excavation shall be placed in the W. Embank't, with excess placed in adjacent Roadway Fill. East Channel Excavation shall be placed in E. Embankment, and any additional fill is to be obtained as Earth Excavation from the roadway cut betw. Stas. 72+00 & 76+00. No additional compensation will be allowed for overhaul.

NOTE: Class 'X' Concrete Slope Wall is to be reinforced with 6"x6" 4 ga. welded wire fabric - lapped 6" at splices. Constr. Joints @ 9'0" cts. (max) thruout. Wire fabric to be continuous over all joints; cost to be included in the unit price bid for slope wall.



PLAN
SCALE 1"=10'



PROFILE ALONG ℄ OF ROADWAY
SCALES: 1"=20' HORIZ. 1"=10' VERT.

STANDARD	COMPUTED	R.A. Broderick
	CHECKED	M.P. Superak
	DRAWN	R.A.B. H.L. Fischer
	CHECKED	M.P.S.
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED 3-7-1938
BRIDGE ENGINEER
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

TOTAL BILL OF MATERIAL

ITEM		SUPER	SUBSTR	TOTAL
Class 'X' Concrete	Cu. Yds.	123.6	41.6	165.2
Reinforcement Bars	Lbs.	29,460	2600	32,060
Structural Steel	Lbs.	131,650		131,650
Furnishing Steel Piles	Lbs		19440	19,440
Driving Steel Piles (Est. 25 lb)	Lin. Ft.		500	500
Slope Wall	Sq. Yds.		350	350
Class 'X' Conc. Encasement	Cu. Yds.		8.6	8.6
Name Plate	Each	One		One
Removal of Existing Structure	Each		One	One
Channel Excavation	Cu. Yds.		700	700
Earth Excavation	Cu. Yds.		200	200

I-15 LOADING

Drainage Area	37600 Acres
Character	Rolling
Assumed "c"	0.45
Opening provided	1264 sq. ft.

F.A.S. PROJECT 2A
S.A. RTE. 7 - SECTION 25B
SHELBY COUNTY
STA. 60+58

087-3014

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

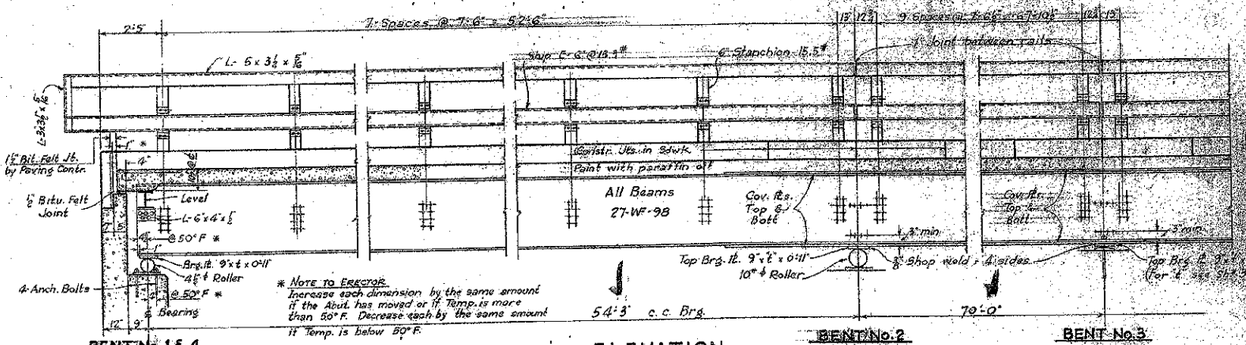
ROAD DIST. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA RT 7	25B	Shelby	19	17

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. 3-4A

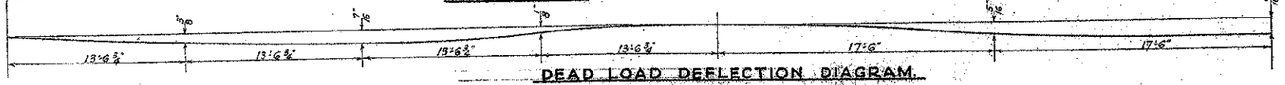
SHEET NO. 2
3 SHEETS

P.T.E. P.A.'S	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	100-00265-00-BR	SHELBY	29	16
		CONTRACT NO. 65701		
	ILLINOIS FED. AID PROJECT			

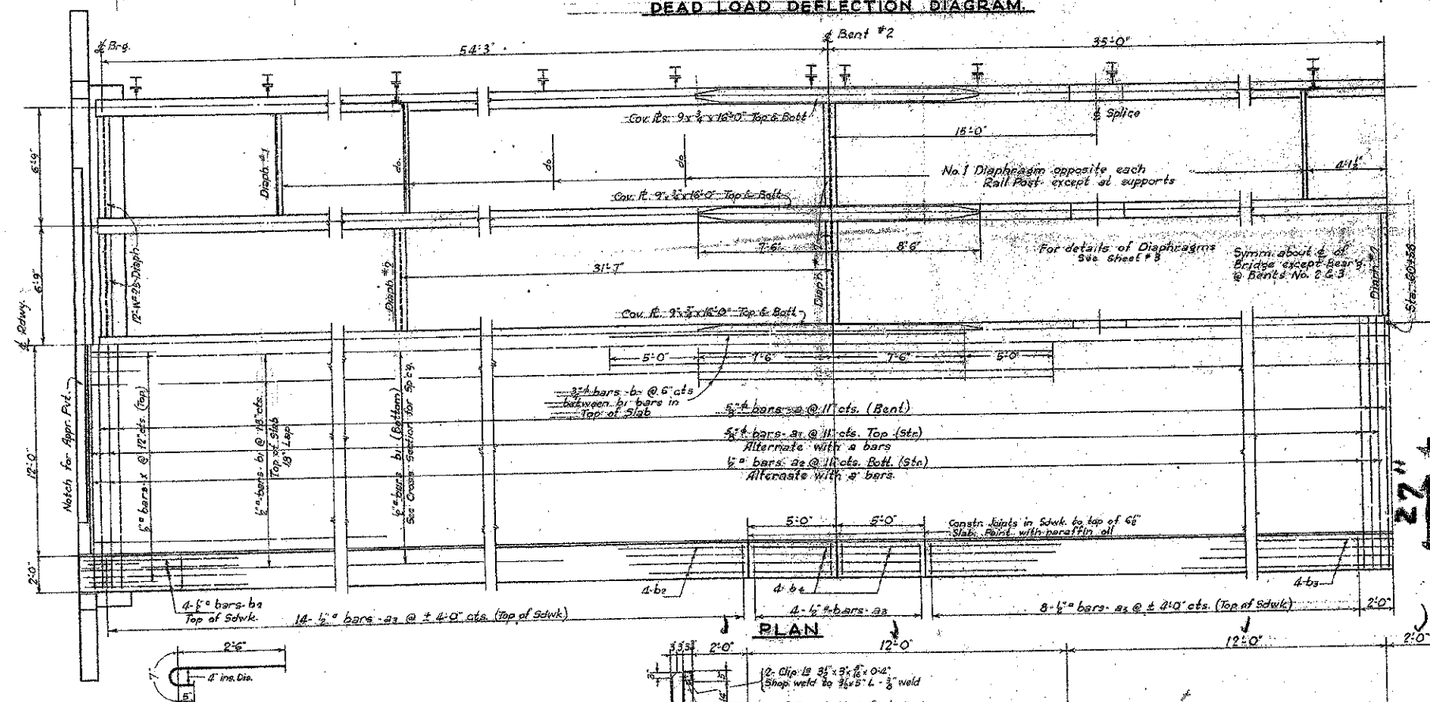
THIS SHEET
FOR INFORMATION ONLY

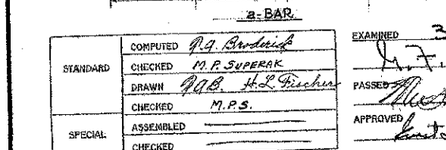


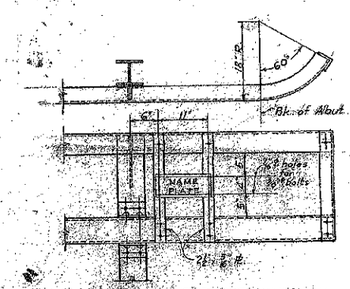
ELEVATION



DEAD LOAD DEFLECTION DIAGRAM.







NAME PLATE & RAIL BEND DETS.

SUPERSTRUCTURE
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH
a	197	⅝" ϕ	30'-6"
a1	197	"	27'-6"
a2	197	½" ϕ	27'-6"
a3	104	"	1'-9"
b	68	⅝" ϕ	29'-0"
b1	406	½" ϕ	27'-0"
b2	32	"	26'-0"
b3	16	"	30'-6"
b4	32	"	4'-9"
x	56	½" ϕ	3'-6"

Class X Concrete	Cu. Yds	123.6
Reinforcement Bars.	Lbs.	29,460
* Structural Steel	Lbs	131,650
Name Plate	Each	One

* Includes the weight of lead plates, rollers and bearing plates which are to be paid for at the unit price per pound of structural steel.

GENERAL NOTES

Class X Concrete shall be used throughout.

The floor shall receive a smooth finish in accordance with Art. 37.3(a) of the Standard Specifications.

The concrete floor slab shall be poured for the full width of the Bridge within the limits of the construction joints, in one continuous operation. See Sheet No. 1.

Rivets are ⅞" ϕ holes, except as noted.

Close ϕ bolts of an approved type may be used for field rivets, provided all holes are sub-punched ⅞" and reamed either after all steel has been assembled in the shop or after erection. These bolts shall be made of steel conforming to the following specifications:

Carbon - 0.18% to 0.44%. Manganese - 0.75% to 1.00%

Ultimate strength not less than 70,000 lbs. per sq. in.

Ribbed bolts shall be driven in place before turning up nut.

Anchor bolts shall be set before riveting diaphragm connections at all bents.

Structural steel shall be painted with one shop coat of blue lead paint and two field coats of white lead paint. Steel in contact with concrete and contact surfaces of shop connected steel shall not be painted. Steel piles and struts shall be painted their full length with two shop coats of blue lead paint.

All paint to be furnished by the Department.

Rollers are included as structural steel; see Special Provisions for material and painting.

Welding shall comply with the specifications of the American Welding Society, for fusion welding of Highway and Railway Bridges.

Inspection of structural steel by the Department before painting

The steel piles shall be furnished of finished elevations. Tops of piles at the cut-off shall be made as smooth as practicable before welding pile cap plate to top of pile.

Payment for driving steel piles will be made in accordance with Art. 19(a) of the Specifications for Piling, effective Feb-1-37

STANDARD	COMPUTED	P.G. Broderick
	CHECKED	M.P. SUPERAK
	DRAWN	P.G.B. H.L. Fischer
	CHECKED	M.P.S.
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED 3-7-1938
ENGINEER
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

F.A.S. PROJECT 2A
S.A.RTE. 7 - SECTION-25B
SHELBY COUNTY
STA. 60+58

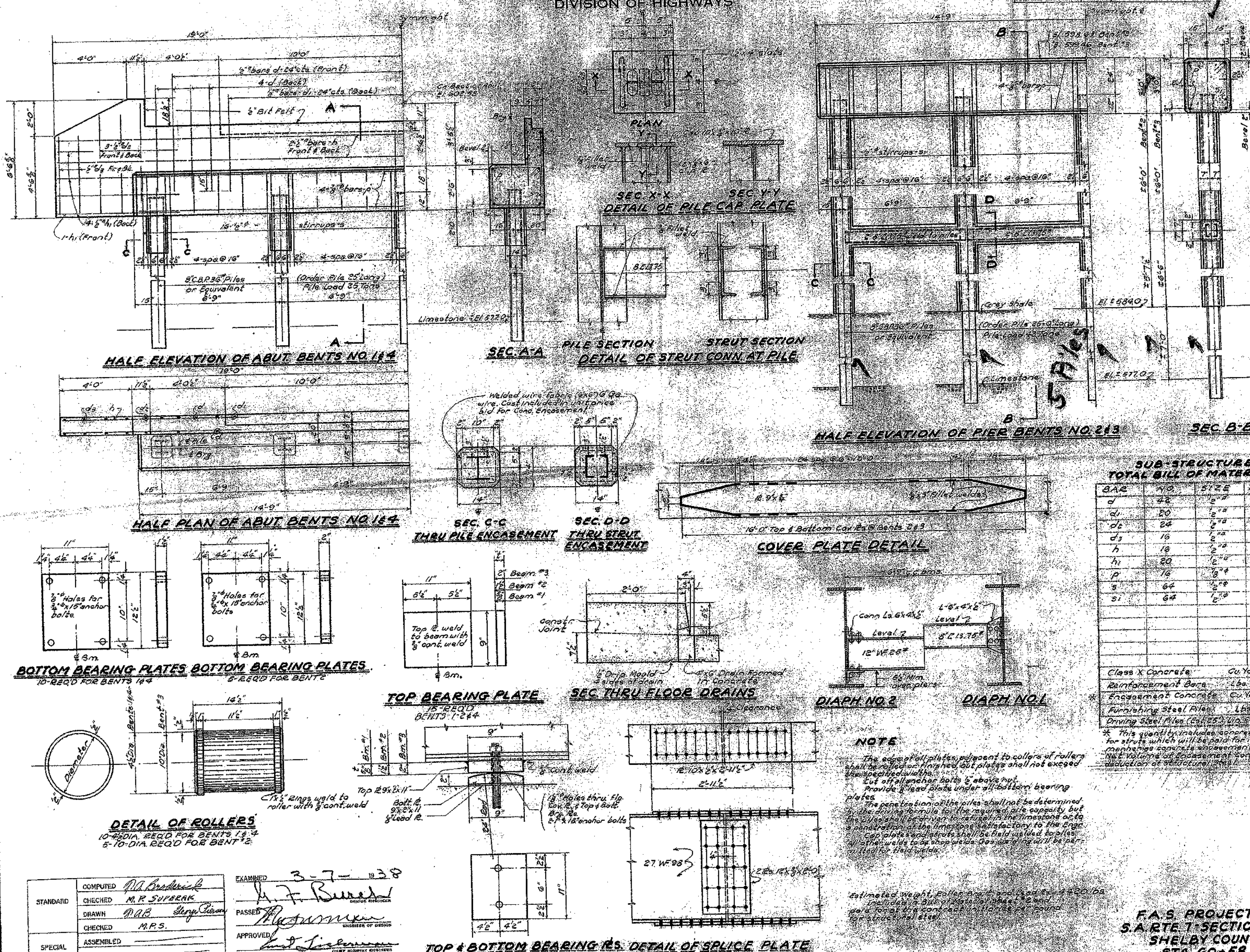
087-3014

RTE. F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	00-265-00-BR	SHELBY	29	17
		CONTRACT NO. 95701		
	ILLINOIS	FED. AID PROJECT		

THIS SHEET FOR INFORMATION ONLY

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

SHEET NO. 3
3 SHEETS



SUB-STRUCTURE TOTAL BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH
d	42	1/2"□	3'-9"
d1	20	1/2"□	3'-3"
d2	24	1/2"□	5'-6"
d3	16	1/2"□	4'-6"
h	16	1/2"□	20'-0"
h1	20	1/2"□	6'-6"
p	76	7/8"ϕ	29'-3"
s	64	1/2"ϕ	10'-6"
s1	64	1/2"ϕ	10'-6"

Class X Concrete	Cu. Yds.	41.6
Reinforcement Bars	Lbs.	2600
* Encasement Concrete	Cu. Yds.	8.6
Furnishing Steel Piles	Lbs.	19,940
Driving Steel Piles (Est. 25')	Lin. Ft.	500

* This quantity includes concrete encasement for struts which will be paid for in the same manner as concrete encasement of steel piles. Net Volume of Encasement Concrete after deduction of structural steel.

NOTE

The edges of all plates adjacent to collars of rollers shall be rolled or finished, but plates shall not exceed the specified widths.
Cut off all anchor bolts 1/2" above nut.
Provide 1/8" lead plate under all bottom bearing plates.
The penetration of the piles shall not be determined by the driving formula for the required pile capacity but the piles shall be driven to refusal in the limestone or to a penetration of the limestone satisfactory to the Engr.
Cap plates and struts shall be field welded to piles. All other welds to be shop welds. Gas welding will be permitted for field welds.

Estimated Weight, Roller Brg. Pl. and Lead Pl. = 4420 lbs.
Included in Bill of Material sheet [illegible] and paid for at the contract unit price per pound for structural steel.

STANDARD	COMPUTED	D.A. Broderick
	CHECKED	M. F. Suprak
	DRAWN	D.A.B. / Geo. Lucas
	CHECKED	M.P.S.
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED 3-7-1938 G. F. Burch, BRIDGE ENGINEER
PASSED [signature], ENGINEER OF DESIGN
APPROVED Ernst Lieberman, CHIEF HIGHWAY ENGINEER

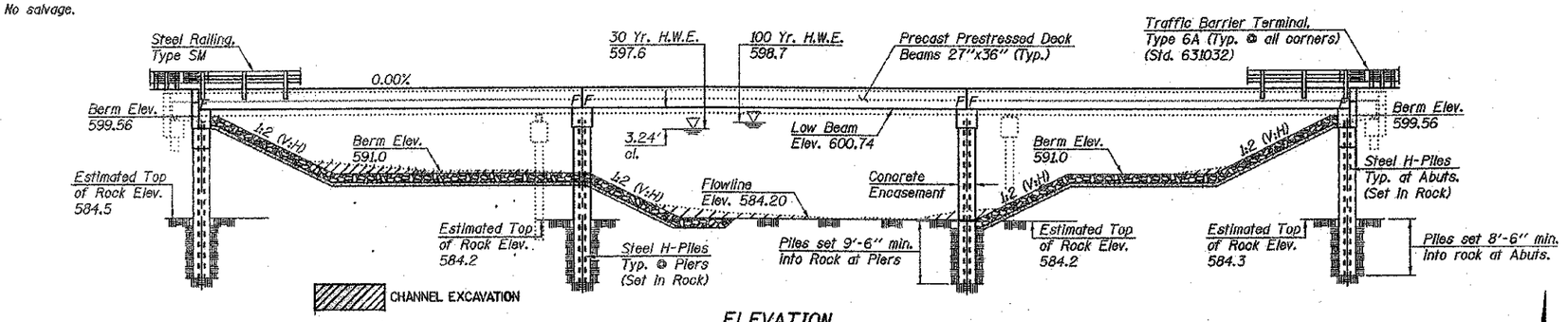
F.A.S. PROJECT 2A
S.A. RTE. 7 SECTION 25B
SHELBY COUNTY
STA. 60+58

087-3014

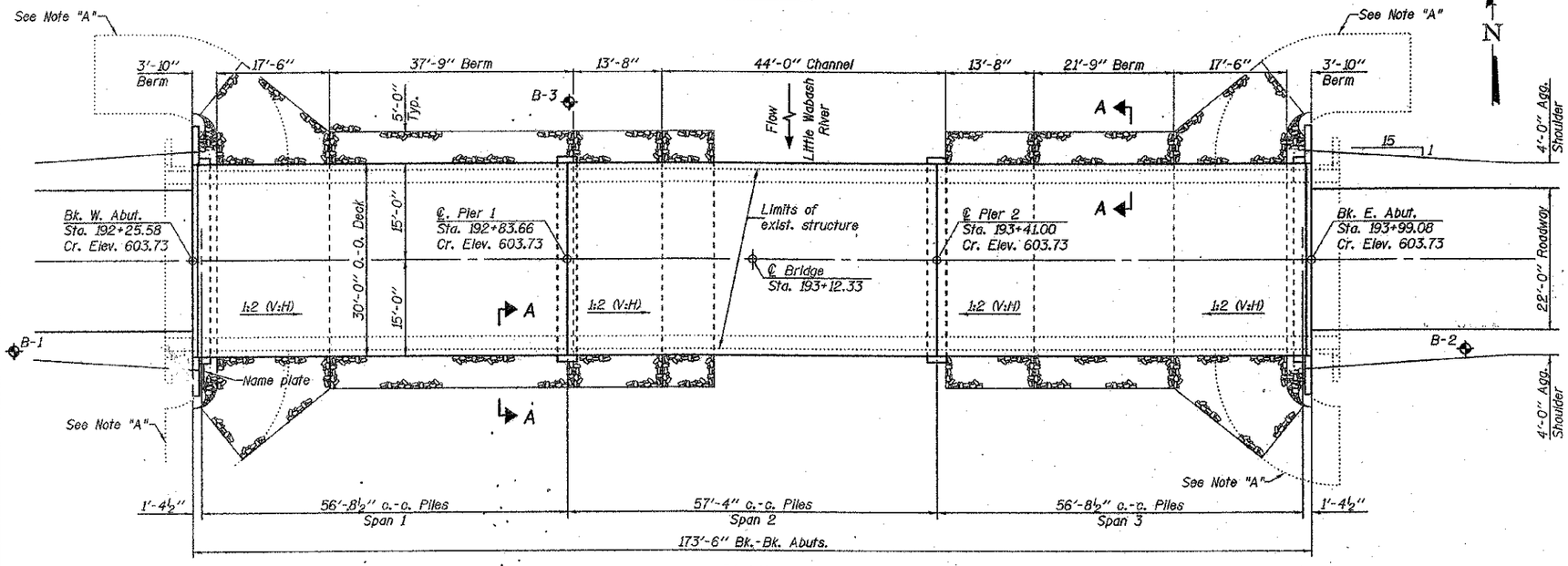
Bench Mark:
B.M. F - Chiseled "□" on Top of Headwall NE. Wingwall Behind Bridge Rail. Elev. 603.80

Existing Structure
S.N. 087-3014, Three Span, Non-Composite Continuous Steel I-Beam Bridge on Open Individually Encased Steel Pile Bent Piers and Spill Thru Concrete Abutments with 4" Concrete Slopewall. Structure Length: 182'-0" Bk.-Bk. Abutments. Spans: 1 @ 54'-3", 1 @ 70'-0", 1 @ 54'-3". Total Width: 30'-0" O.-O. Deck. Skew = 0°.

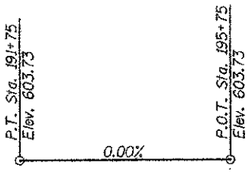
No salvage.



ELEVATION



PLAN



PROPOSED PROFILE GRADE
(County Highway 33)

Expires 11/30/12

WATERWAY INFORMATION

Drainage Area	58.14 Sq. Mi.
Existing Opening (30 Yr.)	1,118 Sq. Ft.
Required Opening (30 Yr.)	1,331 Sq. Ft.
Proposed Opening (30 Yr.)	1,331 Sq. Ft.
Design Discharge (30 Yr.)	7,290 C.F.S.
Created Head (30 Yr.)	1.0 Ft.
100 Year Discharge	9,740 C.F.S.
100 Yr. Created Head	1.4 Ft.
100 Yr. H.W.E.	598.7 Ft.

Note "A": Portions of Existing Concrete Slope Wall, located on sides of embankment, to remain in place. Portions of Existing Concrete Slope Wall under and adjacent to the proposed structure to be removed as required for placement of Stone Riprap. Cost included with Removal of Existing Structures.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	594.9	582.1	582.1	594.9

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.135
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.308
Soil Site Class = C

DESIGN STRESSES

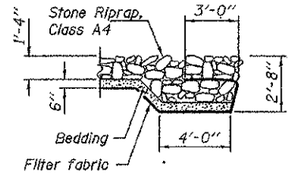
FIELD UNITS

f'c = 3,500 psi (Field Units)
fy = 60,000 psi (Reinforcement)
f'c = 6,000 psi (Prestressed Beams)
f'ci = 5,000 psi (Prestressed Beams)
f's = 270,000 psi (½" Low Relax Strands)
f'si = 201,960 psi (½" Low Relax Strands)

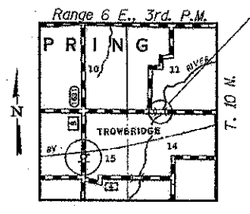
LITTLE WABASH RIVER
BUILT 20 BY
SHELBY COUNTY
SEC. 06-00265-00-BR
F.A.S. RTE. 656 STA. 193+12.33
STR. NO. 087-3555 LOADING HL-93

NAME PLATE

See Std. 515001



SECTION A-A



LOCATION PLAN

GENERAL PLAN & ELEVATION
SECTION 06-00265-00-BR
C.H. 33 (F.A.S. 656)
OVER LITTLE WABASH RIVER
SHELBY COUNTY
STATION 193+12.33
STRUCTURE NO. 087-3555

DESIGNED -	Fesseha T. Bellehumeur	EXAMINED	
CHECKED -	Stephen M. Egan	PASSED	
DRAWN -	N.T. Duong	DATE -	4/19/2012
CHECKED -	FTB/SME	REVISED	
		REVISED	

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 087-3555
SHEET NO. 1 OF 12 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	18
		CONTRACT NO. 95701		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

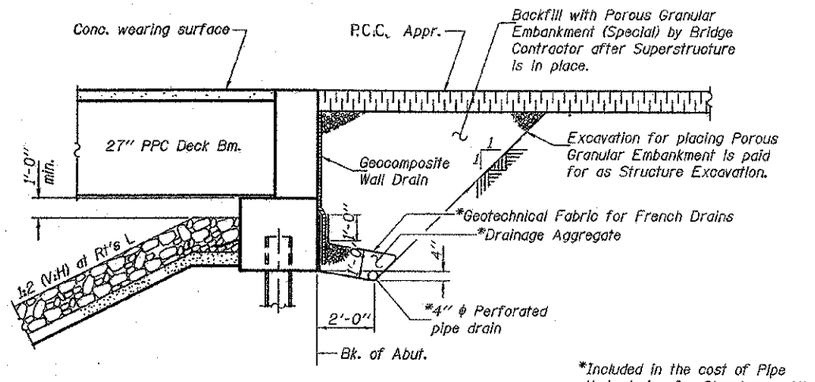
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

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

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		67	67
Stone Riprap, Class A4	Ton		621	621
Filter Fabric	Sq. Yd.		677	677
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		85	85
Concrete Structures	Cu. Yd.		56.2	56.2
Bridge Deck Grooving	Sq. Yd.	540		540
Concrete Encasement	Cu. Yd.		21.5	21.5
Protective Coat	Sq. Yd.	578		578
Concrete Wearing Surface, 5"	Sq. Yd.	573		573
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	5153		5153
Reinforcement Bars, Epoxy Coated	Pound	7670	7090	14760
Steel Railing, Type SM	Foot	344		344
Furnishing Steel Piles HP10x42	Foot		550	550
Name Plates	Each	1		
Setting Piles in Rock	Each		22	22
Geocomposite Wall Drain	Sq. Yd.		37	37
Pipe Underdrains for Structures, 4"	Foot		118	118

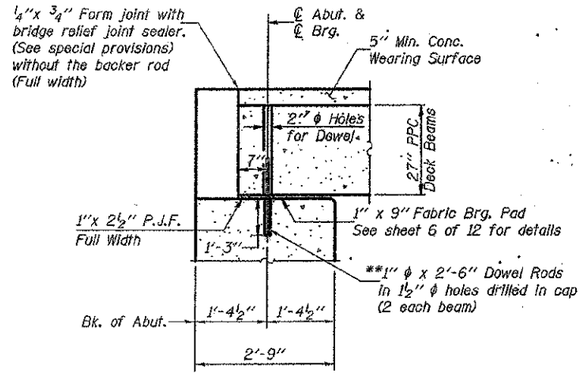


*Included in the cost of Pipe Underdrains for Structures, 4".

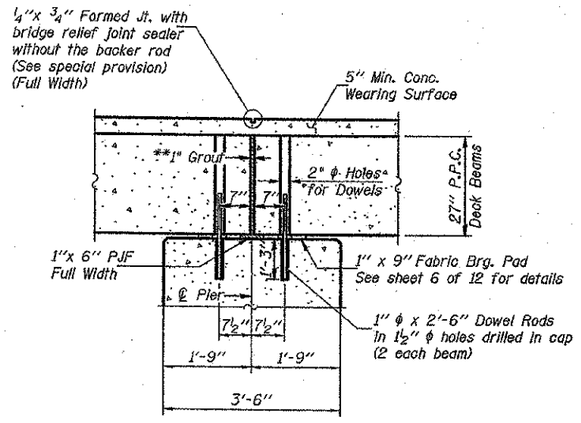
SECTION THRU ABUTMENT

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

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).

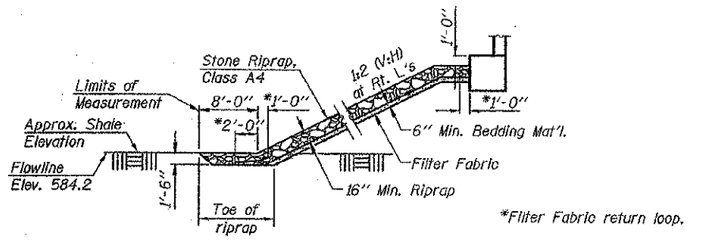


SEC. THRU ABUT.



SEC. AT PIER

**1" joint shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam length.



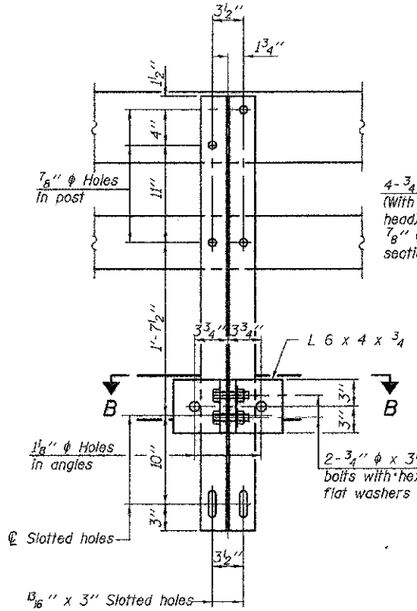
*Filter Fabric return loop.

RIPRAP PLACEMENT DETAIL

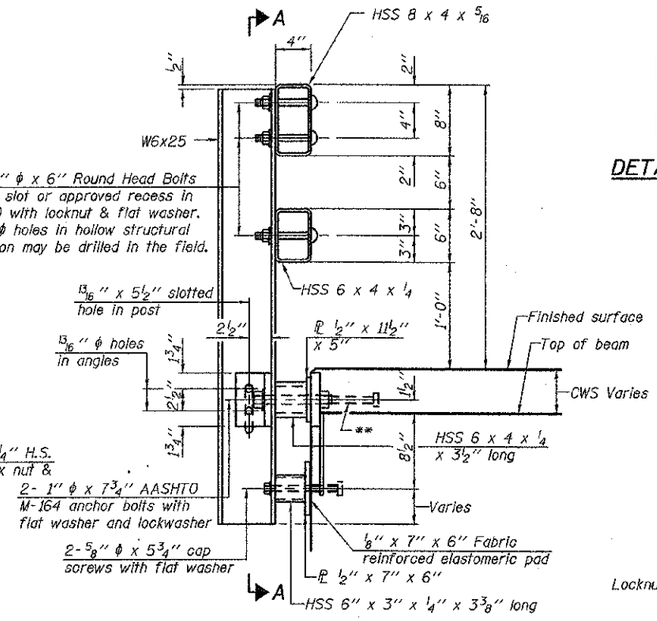
(Toe of riprap at Pier 1 only)

Note: Excavation and aggregate bedding will not be paid for as separate items and shall be considered as included in Stone Riprap, Class A4.

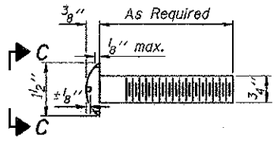
DESIGNED - Fess Teklehaimanot	EXAMINED	Thomas J. Domagalski	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan		ENGINEER OF BRIDGE DESIGN				656	06-00265-00-BR	SHELBY	29	19
DRAWN - h.t. duong	PASSED	J. Carl Hanneg	REVISED		SHEET NO. 2 OF 12 SHEETS			CONTRACT NO. 95701		
CHECKED - FT/SMR		ENGINEER OF BRIDGES AND STRUCTURES	REVISED					ILLINOIS FED. AID PROJECT		



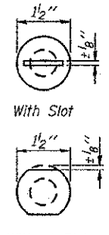
SECTION A-A



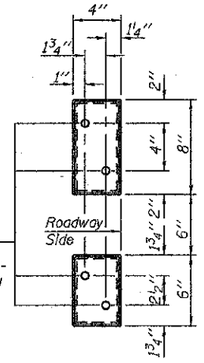
SECTION AT RAIL POST



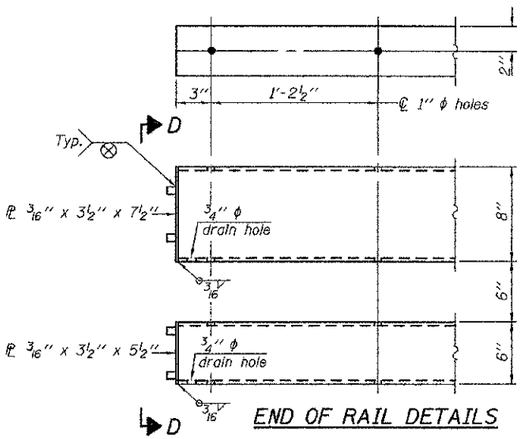
DETAIL OF ¾" ϕ ROUND HEAD BOLT



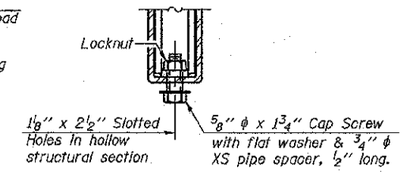
VIEW C-C



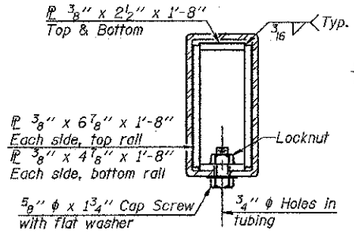
VIEW D-D



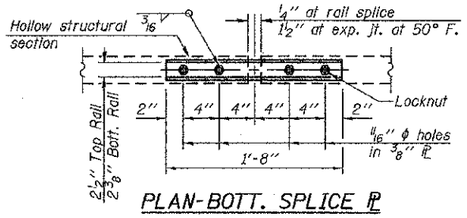
END OF RAIL DETAILS



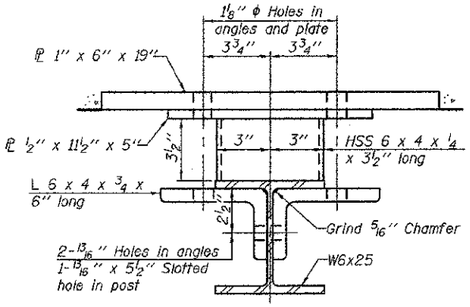
RAIL SPLICE CONNECTION AT EXPANSION JT.



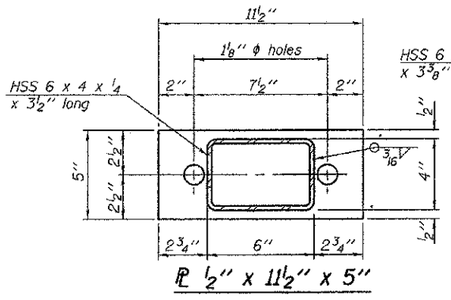
SECTION AT RAIL SPLICE



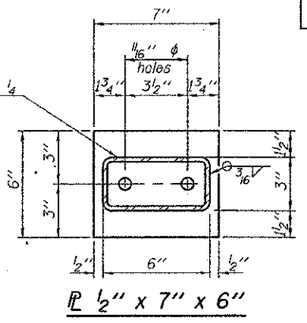
PLAN-BOTT. SPLICE ℄ TYPICAL



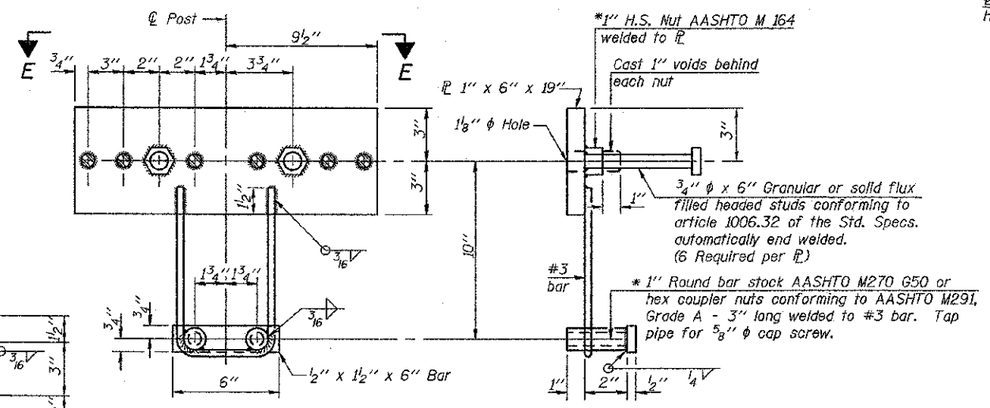
SECTION B-B



℄ ½" x 11½" x 5"

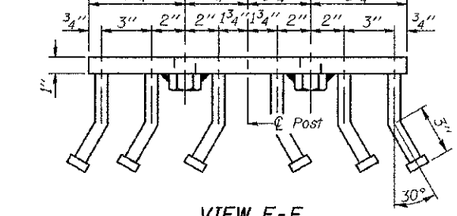


℄ ½" x 7" x 6"



ANCHOR DEVICE

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



VIEW E-E

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.

Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

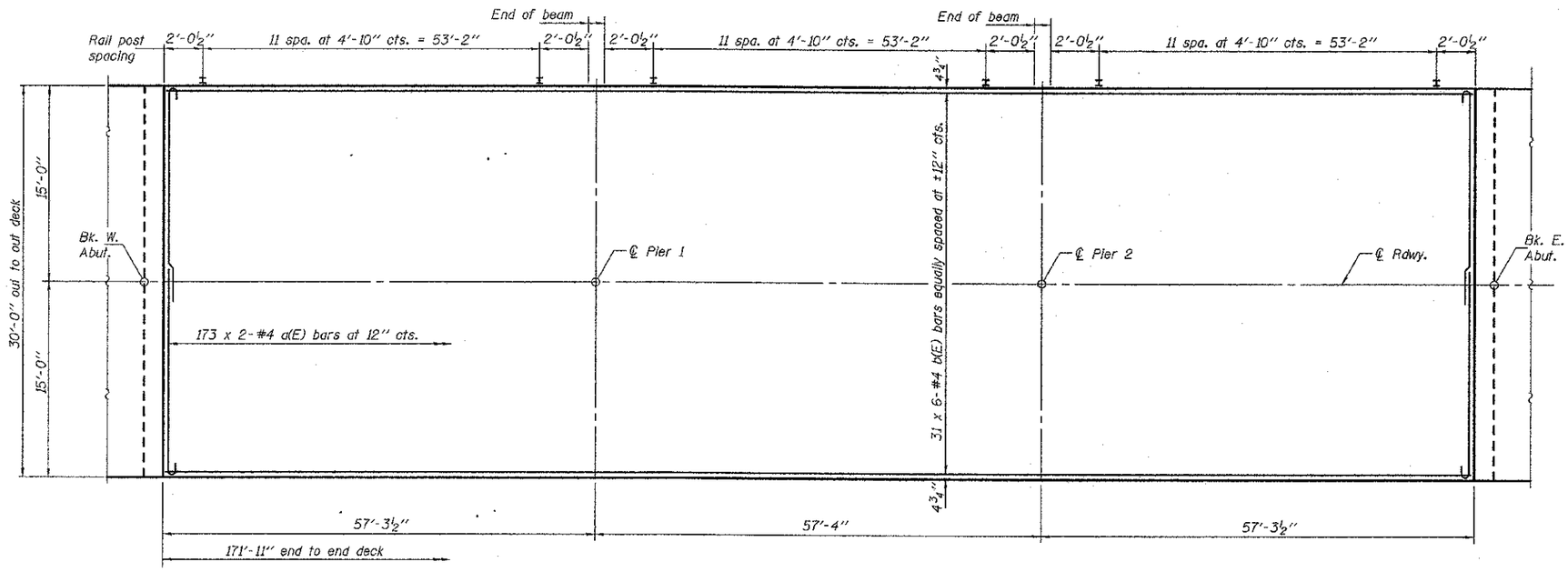
**The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

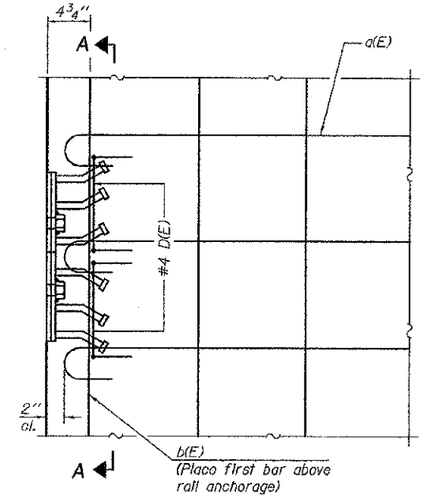
Item	Unit	Quantity
Steel Railing, Type SM	Foot	344

R-34CWS 7-1-10 (6'-3" Maximum Post Spacing) (5" minimum to 7⅛" maximum CWS thickness)

DESIGNED - Feas Teklehaimenot	EXAMINED	Thomas J. Domagalski, ENGINEER OF BRIDGE DESIGN	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan	PASSED	Carl Puzey, ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 3 OF 12 SHEETS	656	06-00265-00-BR	SHELBY	29	20
DRAWN - h.t. duong			REVISED						CONTRACT NO. 95701	
CHECKED - FT/SMR								ILLINOIS	FED. AID PROJECT	

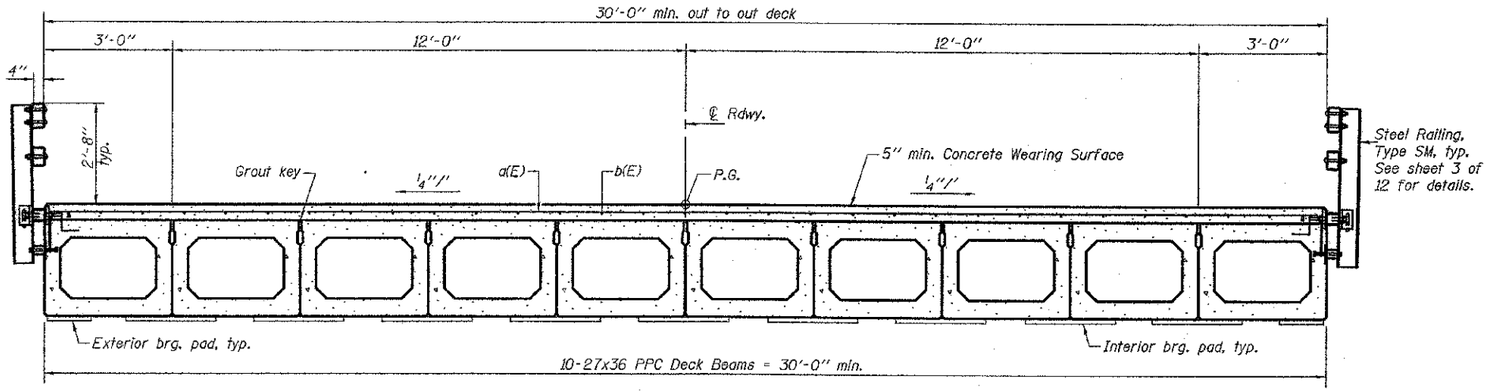


PLAN

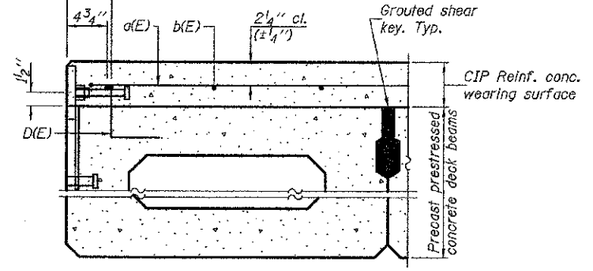


PLAN

Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



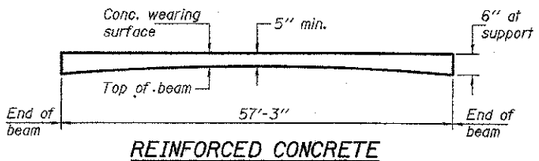
CROSS SECTION
(Looking east)



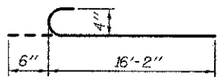
SECTION THRU FASCIA BEAM

Notes: See sheet 6 of 12 for fabric bearing pad details.
Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (27" Depth).

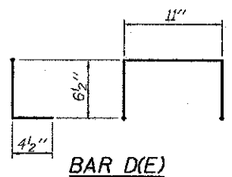
MIN. BAR LAP
#4 bar = 2'-7"



REINFORCED CONCRETE WEARING SURFACE PROFILE

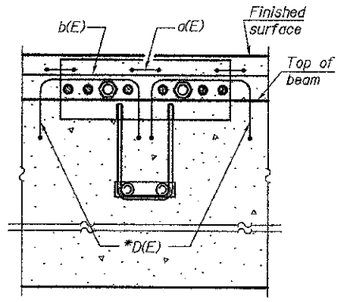


BAR d(E)



BAR D(E)

*Place 2-#4 D(E) bars in beam at each post location as shown. D(E) bar included in cost of beam.



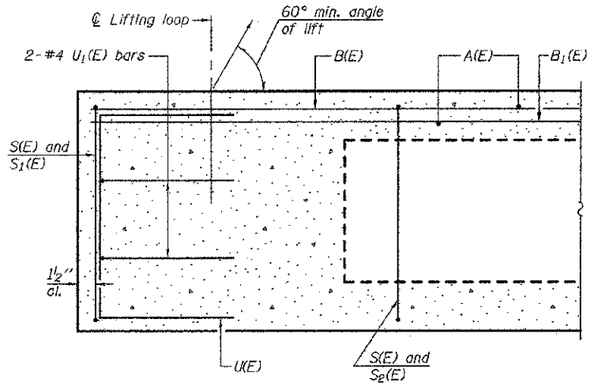
SECTION A-A

SUPERSTRUCTURE BILL OF MATERIAL

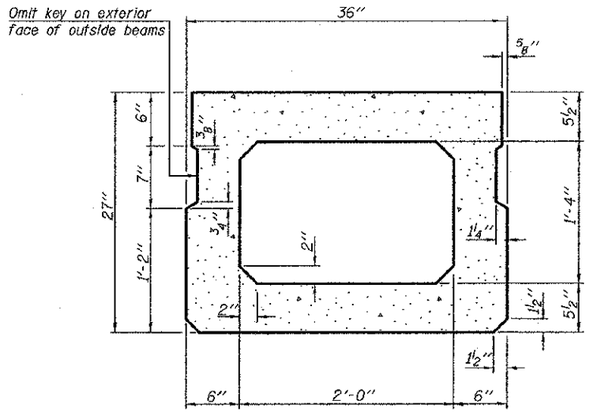
Bar	No.	Size	Length	Shape
d(E)	346	#4	16'-8"	
b(E)	186	#4	30'-9"	
Reinforcement Bars, Epoxy Coated			Pound	7670
Concrete Wearing Surface, 5"			Sq. Yd.	573
Bridge Deck Grooving			Sq. Yd.	540
Protective Coat			Sq. Yd.	578

Bars indicated thus 31 x 4-#4 etc. indicates 31 lines of bars with 4 lengths per line.

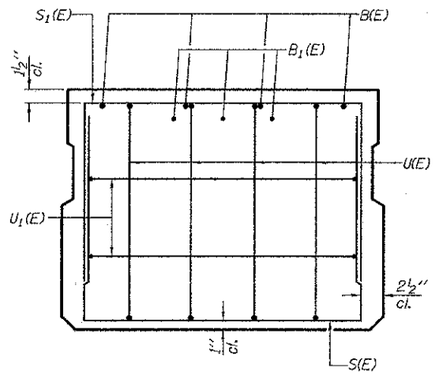
DESIGNED - Fess Tekiehalmanot	EXAMINED	Thomas J. Domagalski ENGINEER OF BRIDGE DESIGN	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan	PASSED	J. Carl Hanneg ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 4 OF 12 SHEETS	656	06-00265-00-BR	SHELBY	29	21
DRAWN - h.t. duong			REVISED						CONTRACT NO. 95701	
CHECKED - FT/SMR								ILLINOIS	FED. AID PROJECT	



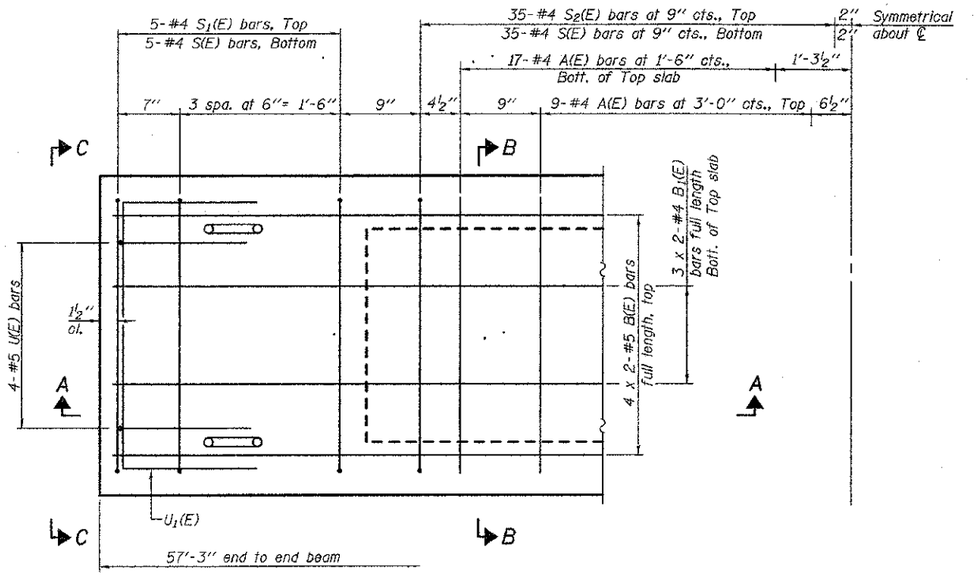
SECTION A-A



SECTION B-B
(Showing dimensions)

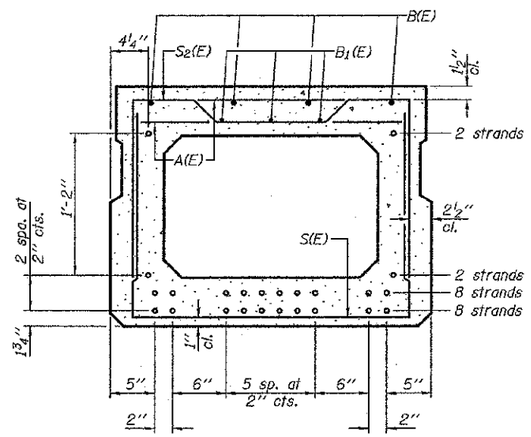


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP

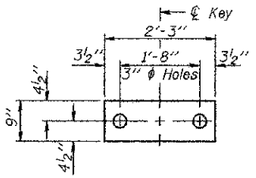
#4 bar = 2'-0"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

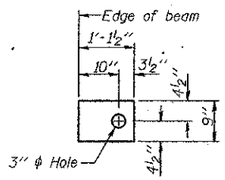
Bar	No.	Size	Length	Shape
A(E)	52	#4	2'-7"	—
B(E)	8	#5	29'-9"	—
B1(E)	6	#4	29'-6"	—
S(E)	80	#4	6'-5"	⊔
S1(E)	10	#4	5'-11"	⊓
S2(E)	70	#4	6'-2"	⊓
U(E)	8	#5	4'-6"	⊏
U1(E)	4	#4	5'-0"	⊓

Note: See sheet 6 of 12 for additional details and Bill of Material.

DESIGNED - Fess Teklehaimanot	EXAMINED	Thomas J. Domagalski	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	27" x 36" PPC DECK BEAM STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan		ENGINEER OF BRIDGE DESIGN				656	06-00265-00-BR	SHELBY	29	22
DRAWN - h.t. duong	PASSED		REVISED		SHEET NO. 5 OF 12 SHEETS			CONTRACT NO. 95701		
CHECKED - FT/SMR		ENGINEER OF BRIDGES AND STRUCTURES	REVISED					ILLINOIS FED. AID PROJECT		



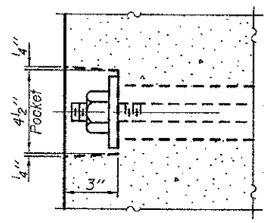
FABRIC BEARING PAD
(Interior)



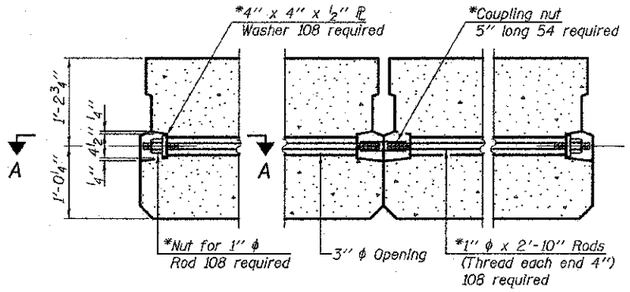
FABRIC BEARING PAD
(Exterior)

FIXED

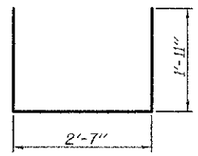
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



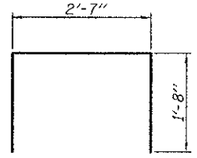
SECTION A-A



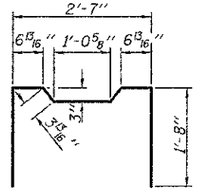
TYPICAL TRANSVERSE TIE ASSEMBLY
*All beams & spans



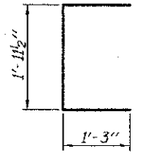
BAR S(E)



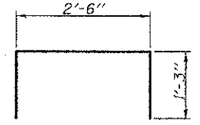
BAR S1(E)



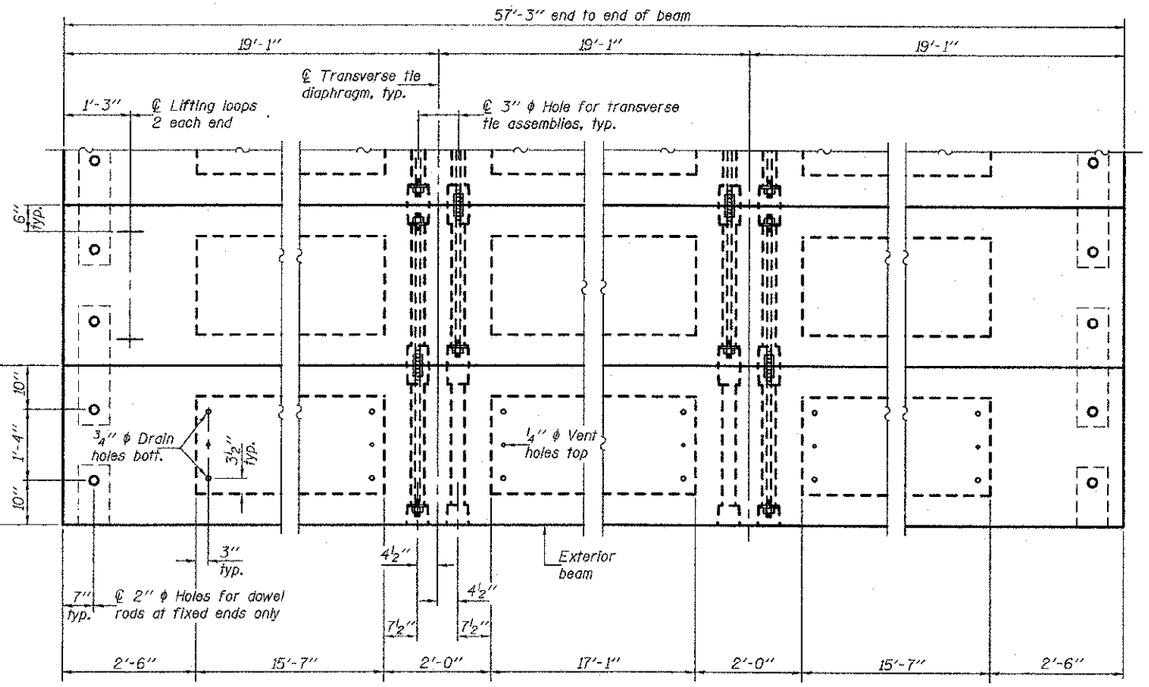
BAR S2(E)



BAR U(E)

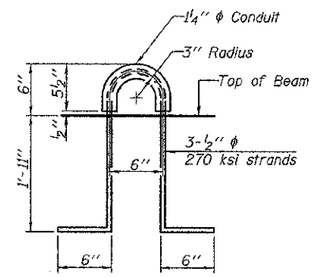


BAR U1(E)



PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.



LIFTING LOOP DETAIL

NOTES

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.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

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

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

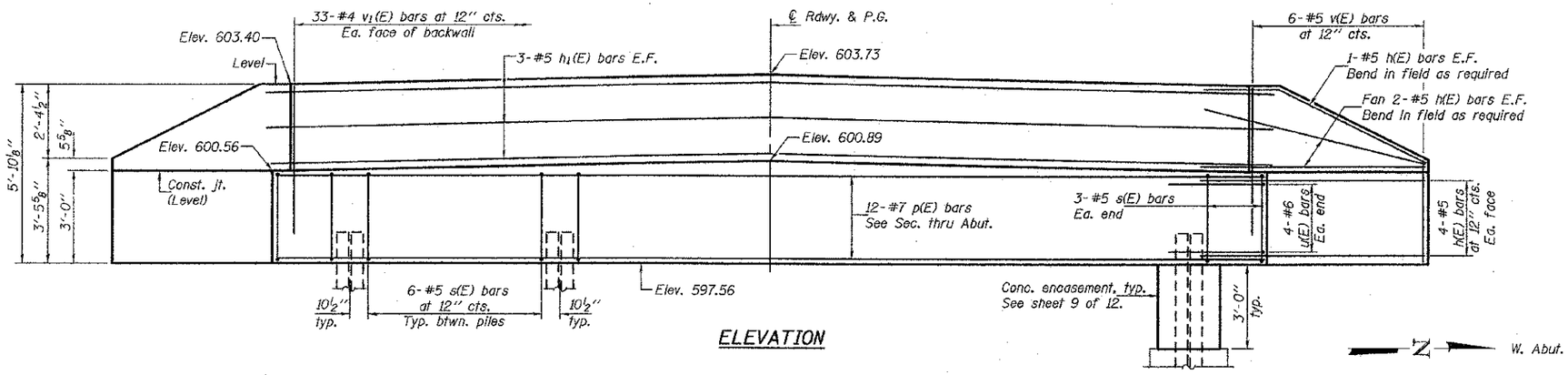
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

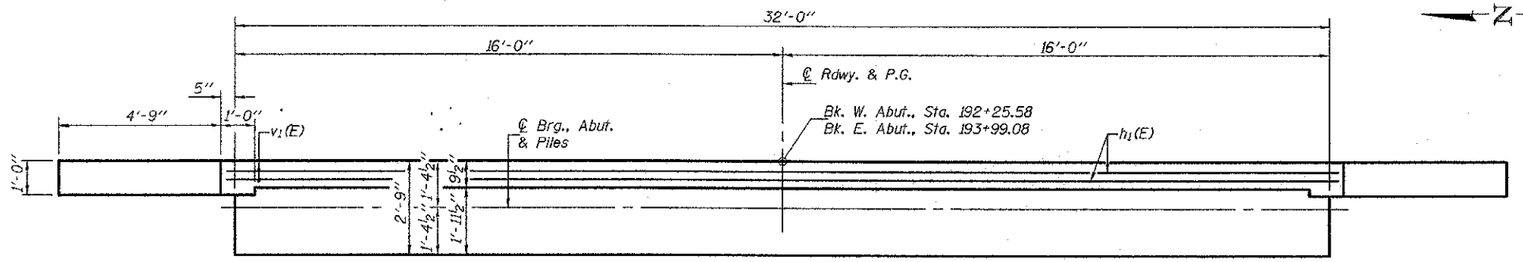
BILL OF MATERIAL

Precast Prestressed Concrete Deck Beams (27" depth)	Sq. Ft.	5153

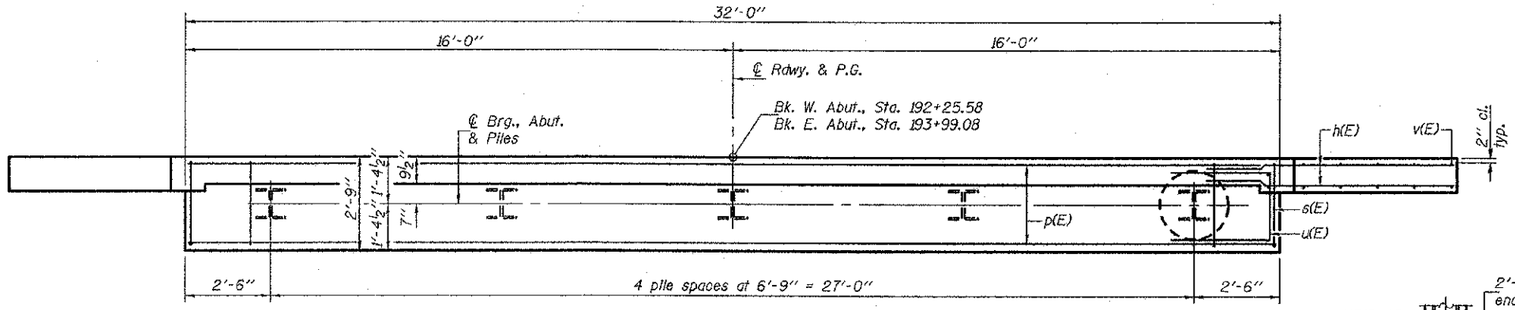
DESIGNED - Fess Teklehaimanot	EXAMINED	Thomas J. Domagalski	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	27" x 36" PPC DECK BEAM DETAILS STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan		ENGINEER OF BRIDGE DESIGN				656	06-00265-00-BR	SHELBY	24	23
DRAWN - h.t. duong	PASSED	A. Carl Peyer	REVISED					CONTRACT NO. 95701		
CHECKED - FT/SMR		ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 6 OF 12 SHEETS			ILLINOIS FED. AID PROJECT		



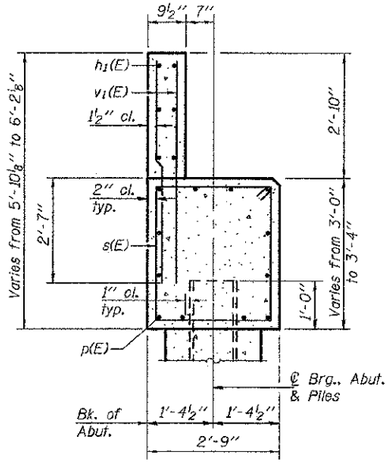
ELEVATION



TOP VIEW



PLAN



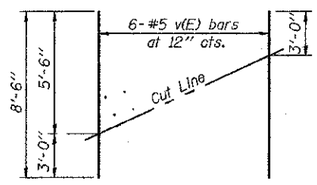
SEC. THRU ABUT.

W. Abut.

E. Abut.

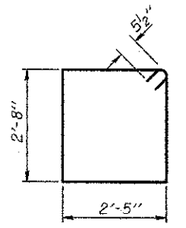
PILE DATA

Type: Steel HP10x42
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 165 Kips
Est. Length: 25'
No. Production Piles (2 Abuts.): 10
No. Test Piles: 0

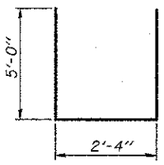


FIELD CUTTING DIAGRAM

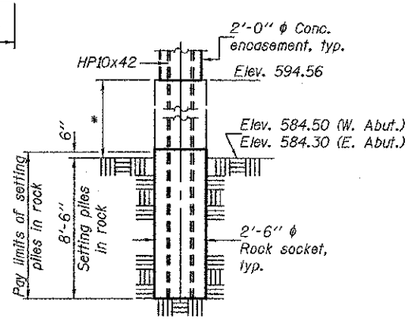
Order v(E) full length. Cut as shown & use remainder of bars in opposite face.



BAR s(E)



BAR u(E)



SETTING PILES IN ROCK DETAIL

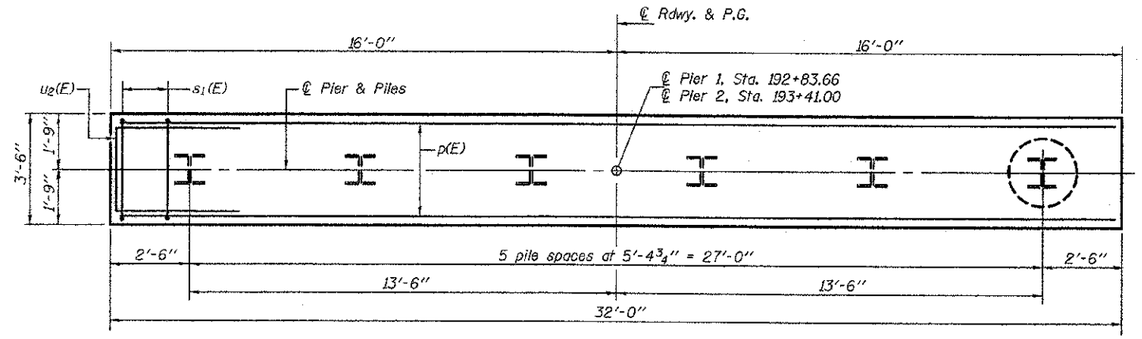
*Backfill remaining holes according to the special provisions for Setting Piles in Rock.

TWO ABUTMENTS BILL OF MATERIAL

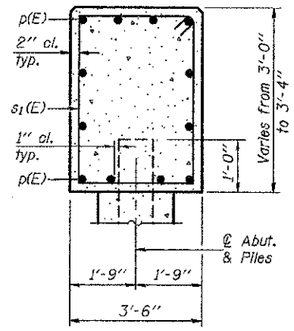
Bar	No.	Size	Length	Shape
h(E)	56	#5	9'-0"	
h1(E)	12	#5	32'-6"	
p(E)	24	#7	31'-8"	
s(E)	60	#5	11'-1"	
u(E)	16	#6	12'-4"	
v(E)	24	#5	8'-6"	
v1(E)	132	#5	5'-3"	
Structure Excavation		Cu. Yd.	85	
Concrete Structures		Cu. Yd.	29.9	
Reinforcement Bars, Epoxy Coated		Pound	4410	
Furnishing Steel Piles, HP10x42		Foot	250	
Concrete Encasement		Cu. Yd.	3.5	
Setting Piles In Rock		Each	10	

For details of piles and conc. encasement, see sheet 9 of 12.

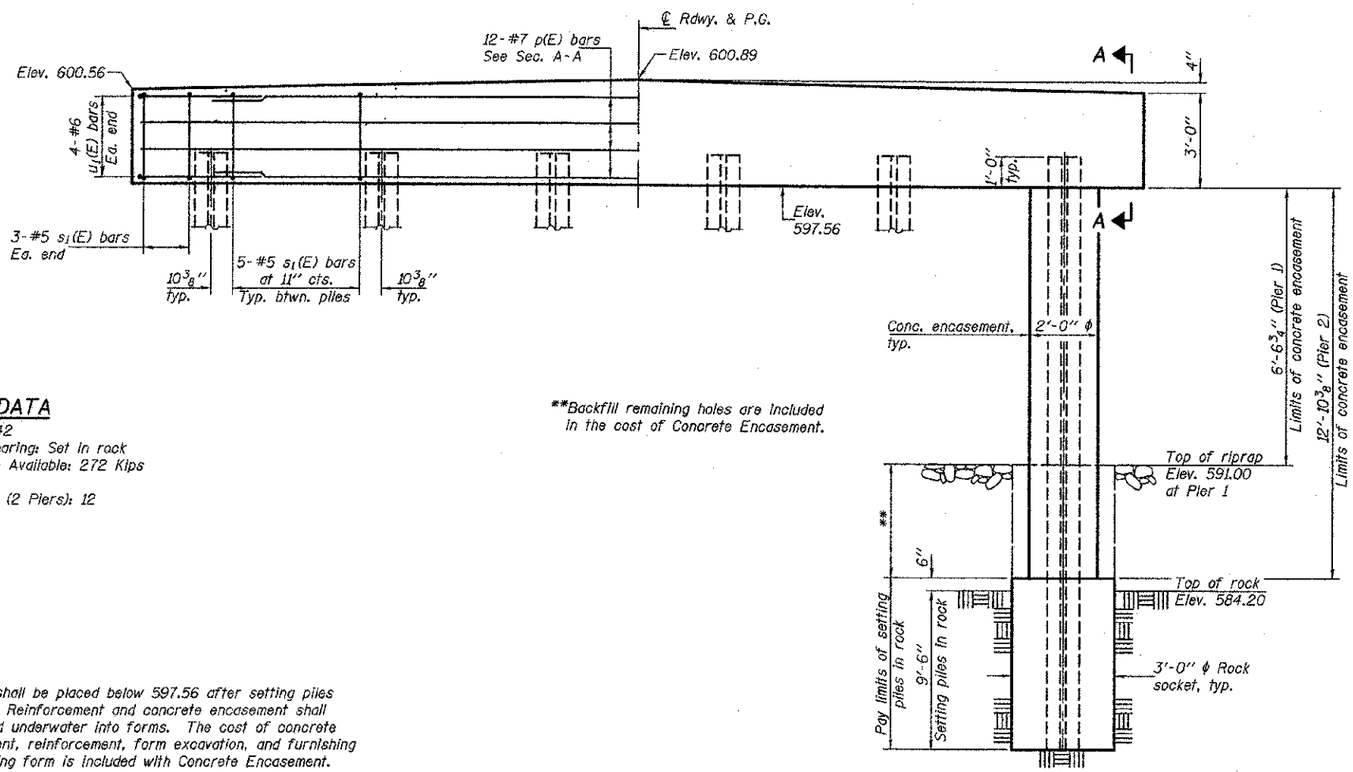
DESIGNED - Fess Teklehaimanot	EXAMINED	Thomas J. Domagalski ENGINEER OF BRIDGE DESIGN	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENTS STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan	PASSED	Carl Puzey ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 7 OF 12 SHEETS	656	06-00265-00-BR	SHELBY	29	24
DRAWN - h.t. duong			REVISED						CONTRACT NO. 95701	
CHECKED - FT/SMR								ILLINOIS FED. AID PROJECT		



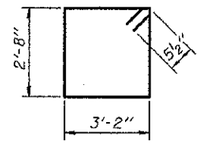
PLAN



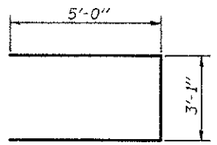
SECTION A-A



ELEVATION
(Looking east)



BAR s_1(E)



BAR u_1(E)

PILE DATA

Type: Steel HP10x42
Nominal Required Bearing: Set in rock
Factored Resistance Available: 272 Kips
Est. Length: 25'
No. Production Piles (2 Piers): 12
No. Test Piles: 0

**Backfill remaining holes are included in the cost of Concrete Encasement.

Notes: Form shall be placed below 597.56 after setting piles in rock. Reinforcement and concrete encasement shall be placed underwater into forms. The cost of concrete encasement, reinforcement, form excavation, and furnishing and placing form is included with Concrete Encasement. If a portion of the concrete encasement is under water, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be trimmed to an elevation 1'-0" above the water level at the time of construction.
Pile cap concrete shall not be trimmed.

TWO PIERS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p(E)	24	#7	31'-8"	——
s_1(E)	62	#5	12'-7"	□
u_1(E)	16	#6	13'-1"	⊐
Concrete Structures			Cu. Yd.	26.3
Reinforcement Bars, Epoxy Coated			Pound	2680
Furnishing Steel Piles, HP10x42			Foot	300
Concrete Encasement			Cu. Yd.	18
Setting Piles In Rock			Each	12

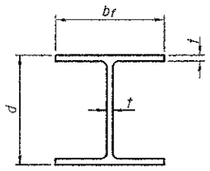
For details of piles and conc. encasement, see sheet 9 of 12.

DESIGNED -	Esse Teklehaimanot	EXAMINED	Thomas J. Domagalski, ENGINEER OF BRIDGE DESIGN
CHECKED -	Stephen M. Ryan	DATE -	4/19/2012
DRAWN -	b.t. duong	PASSED	J. Carl Ryan, ENGINEER OF BRIDGES AND STRUCTURES
CHECKED -	FTL/SMR	REVISED	—
		REVISED	—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

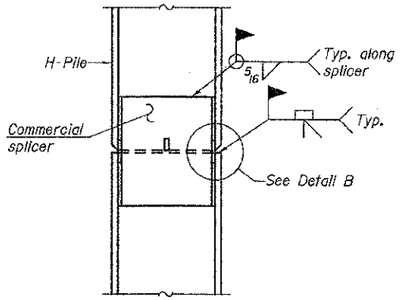
PIERS
STRUCTURE NO. 087-3555
SHEET NO. 8 OF 12 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	24	25
		CONTRACT NO. 95701		
		ILLINOIS FED. AID PROJECT		

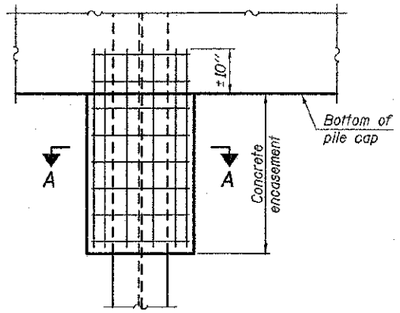


STEEL PILE TABLE

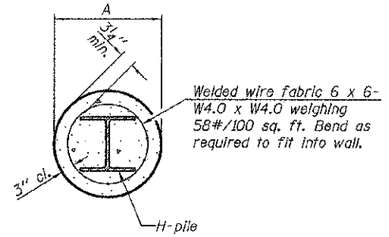
Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{15}{16}''$	30"
x102	14"	$14\frac{3}{4}''$	$\frac{11}{16}''$	30"
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30"
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30"
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24"
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24"
x63	12"	$12\frac{1}{8}''$	$\frac{1}{2}''$	24"
x53	$11\frac{3}{4}''$	12"	$\frac{7}{16}''$	24"
HP 10x57	10"	$10\frac{1}{4}''$	$\frac{9}{16}''$	24"
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24"
HP 8x36	8"	$8\frac{1}{8}''$	$\frac{7}{16}''$	18"



ELEVATION



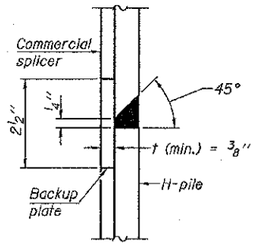
ELEVATION



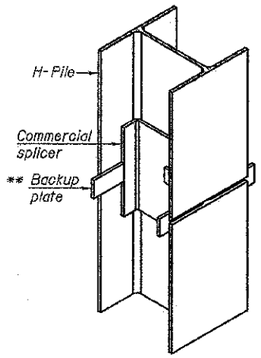
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT

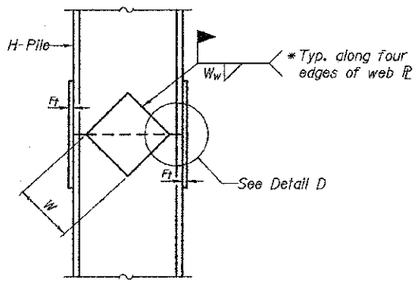


DETAIL "B"

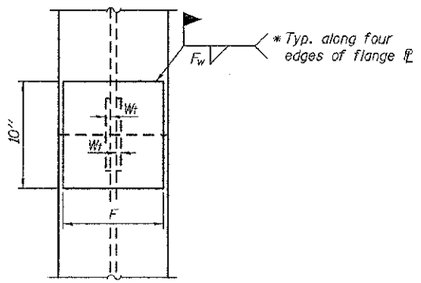


ISOMETRIC VIEW

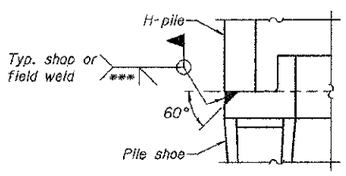
WELDED COMMERCIAL SPLICE



ELEVATION



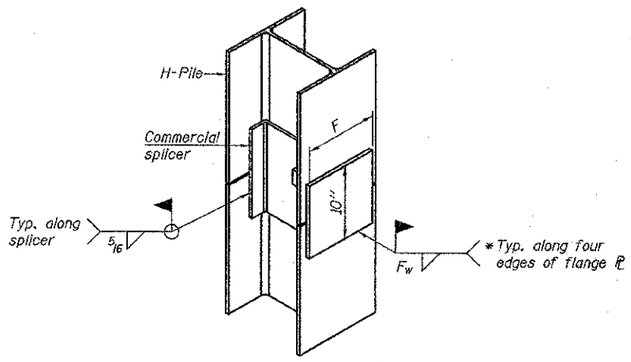
END VIEW



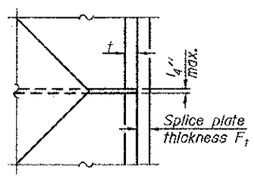
ELEVATION

DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	$12\frac{1}{2}''$	1"	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10"	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10"	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10"	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10"	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8"	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8"	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7"	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

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

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

*** Weld size per pile shoe manufacturer ($\frac{5}{16}$" min.).

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

F-HP 1-27-12

DESIGNED - Fesa Tekiehalmanot	EXAMINED	DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - Stephen M. Ryan	PASSED	REVISED	HP PILE DETAILS STRUCTURE NO. 087-3555
DRAWN - h.t. duong	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	SHEET NO. 9 OF 12 SHEETS
CHECKED - FT/SMR	ENGINEER OF BRIDGE DESIGN		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	26
		CONTRACT NO. 95701		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

SOIL BORING LOG

Page 1 of 2

Date 4/14/09

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MER

SECTION 06-00265-00-BR LOCATION Big Spring Tshp, SEC. 11, TWP. 10N, RNG. 6E, 3rd PM

COUNTY Shelby DRILLING METHOD Hollow Stem Auger HAMMER TYPE Hydraulic

STRUCT. NO. 087-3014
Station

BORING NO. B-1
Station 191+82
Offset 14.00ft lt Rt
Ground Surface Elev. 609.04 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After hrs. ft

DEPTH (ft)	SLOWS (6")	UCS Qu (tsf)	MOIST (%)
MIXED CLAY FILL			
601.54			
SILTY CLAY LOAM, brown, moist, little sand, A-7-6	5 6 7	2.4 B	16.0
600.04			
SILTY CLAY LOAM, brown, moist, little sand, A-6	2 6 11	1.8 B	20.2
	2 11 15	1.9 B	13.8
594.54			
Gray, trace organics, A-6	2 4 7	1.0 B	22.9
592.04			
SANDY LOAM, gray wet, fine sand, A-4	0 2 3	1.6 P	24.6
	2 2 3		20.3
587.04			
SAND, gray, wet, medium to coarse sand, A-1-a	0 6 50		20.8
586.04			
SHALE, dark gray to black, clayey, thinly bedded, fissile, moderately hard, dense, fine grain, slightly micaceous, flat bedded, weathered, at top, solid. Borehole continued with rock coring.			
584.54			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

ROCK CORE LOG

Page 2 of 2

Date 4/14/09

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MER

SECTION 06-00265-00-BR LOCATION Big Spring Tshp, SEC. 11, TWP. 10N, RNG. 6E, 3rd PM

COUNTY Shelby CORING METHOD conventional

STRUCT. NO. 087-3014
Station

CORING BARREL TYPE & SIZE NX

BORING NO. B-1
Station 191+82
Offset 14.00ft lt Rt
Ground Surface Elev. 609.04 ft

Core Diameter 2 in
Top of Rock Elev. 594.54 ft
Begin Core Elev. 594.54 ft

DEPTH (ft)	CORE (ft)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE, dark gray to black, clayey, thinly bedded, fissile, moderately hard, dense, fine grain, slightly micaceous, flat bedded, weathered, at top, solid.	1	71	36	2	12.1
592.54					
Limestone, gray, massive, hard, dense, fine grain, fossiliferous.					
590.04					
SHALE/CLAYSTONE, gray, massive, soft blocky, solid.					
589.14					
Limestone, gray, massive, coarse grain, hard, well cemented, dense, flat bedded with occasional horizontal fractures.	2	72	36	2	33.9
574.54					
End of boring					

Color pictures of the cores No
Cores will be stored for examination until Yes
The "Strength" column represents the unfield compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

DESIGNED -	EXAMINED	DATE - 4/19/2012	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED -	ENGINEER OF BRIDGE DESIGN		
DRAWN -	PASSED	REVISED	
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	

SOIL BORING LOGS
STRUCTURE NO. 087-3555
SHEET NO. 10 OF 12 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
656	06-00265-00-BR	SHELBY	29	27
		CONTRACT NO. 45701		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

SOIL BORING LOG

Page 1 of 2

Date 4/14/09

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MEH

SECTION 06-00265-00-BR LOCATION Big Spring Taha, SEC. 11, TWP. 10N, RNG. 5E, 3rd PM

COUNTY Shelby DRILLING METHOD Hollow Stem Auger HAMMER TYPE Hydraulic

STRUCT. NO. 087-3014
Station

BORING NO. B-2
Station 184+45
Offset 14.00ft Rt
Ground Surface Elev. 602.51 ft

Surface Water Elev. ft
Stream Bed Elev. ft

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

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM, mixed silty clay, trace organics, fill, A-6	3		
	4	0.4	16.7
	4	B	
	3		
	4	0.6	13.1
	7	B	
598.51			
	5		
LOAM, gray, fills to some sand, A-4	5	0.4	16.8
	9	B	
	2		
	2	0.6	23.9
	4	B	
	1		
	1		18.4
	1		
	3		
	6		15.8
	13		
	4		
	8		16.8
	8		
584.31			
Borehole continued with rock coring	60		21

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

BBS, form 137 (Rev. 8-89)

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

ROCK CORE LOG

Page 2 of 2

Date 4/14/09

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MEH

SECTION 06-00265-00-BR LOCATION Big Spring Taha, SEC. 11, TWP. 10N, RNG. 5E, 3rd PM

COUNTY Shelby CORING METHOD conventional

STRUCT. NO. 087-3014
Station

CORING BARREL TYPE & SIZE NX
Core Diameter 3 in
Top of Rock Elev. 584.31 ft
Begin Core Elev. 583.91 ft

BORING NO. B-2
Station 184+45
Offset 14.00ft Rt
Ground Surface Elev. 602.51 ft

DEPTH (ft)	CORE (sf)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE, dark gray to black, clayey, thinly bedded, fissile, moderately hard, dense, fine grain, slightly micaceous, flat bedded, weathered, at top, solid.	1	67	50	2	9.7
580.01					
SHALECLAYSTONE, gray, massive, soft blocky, solid.	2	67	50	2	7.3
574.01					
End of Boring					

Color pictures of the cores No
Cores will be stored for examination until yes
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 139 (Rev. 8-89)

DESIGNED -	EXAMINED		DATE - 4/19/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 087-3555	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -		ENGINEER OF BRIDGE DESIGN				656	06-00265-00-BR	SHELBY	29	28
DRAWN -	PASSED		REVISED		SHEET NO. 11 OF 12 SHEETS				CONTRACT NO. 95701	
CHECKED -		ENGINEER OF BRIDGES AND STRUCTURES	REVISED					ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

SOIL BORING LOG

Page 1 of 2

Date 4/1509

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MER

SECTION 06-00265-00-BR LOCATION Big Spring Twp, SEC. 11, TWP. 10N, RNG. 6E, 3rd PM

COUNTY Shelby DRILLING METHOD Hollow Stem Auger HAMMER TYPE Hydraulic

STRUCT. NO. 087-3014
Station

BORING NO. B-3
Station 192+84
Offset 30.00ft Lt
Ground Surface Elev. 592.75 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion 584.8 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (#6")	UCS Qu (tsf)	MOIST (%)	
LOAM, brown, little to some sand, A-4	1			
	2 3	0.3 B	20.4	
	3			
	2 2	0.5 P	20.5	
586.25				
SAND, medium to coarse, trace gravel, A-1-a 589.25	6			
Borehole continued with rock coring. ▽	47 50	4.5 P	11.7	

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Reynolds Drilling Corp.

ROCK CORE LOG

Page 2 of 2

Date 4/1509

ROUTE County Road 700 North DESCRIPTION Bridge Replacement Boring LOGGED BY MER

SECTION 06-00265-00-BR LOCATION Big Spring Twp, SEC. 11, TWP. 10N, RNG. 6E, 3rd PM

COUNTY Shelby CORING METHOD conventional

STRUCT. NO. 087-3014
Station

CORING BARREL TYPE & SIZE NX

BORING NO. B-3
Station 192+84
Offset 30.00ft Lt
Ground Surface Elev. 592.75 ft

Core Diameter 3 in
Top of Rock Elev. 584.85 ft
Begin Core Elev. 584.85 ft

DEPTH (ft)	CORE	RECOVERY (#)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SHALE, dark gray to black, clayey, thinly bedded, fissile, moderately hard, dense, fine grain, slightly micaceous, flat bedded, weathered, at top, solid. 583.25	1	58	58	2	26.7
SHALE/CLAYSTONE, gray, massive, soft blocky, solid. 580.45					
Limestone, gray, massive, hard, dense, fine grain, fossiliferous. 579.86					
SHALE/SILTSTONE, light gray, massive, blocky, soft, fine grain, scattered horizontal fractures, slightly weathered at top, contains fine crystaline pyrite. 574.75	2	63	63	2	9.7
End of Boring					

Color pictures of the cores No
Cores will be stored for examination until yes
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

DESIGNED -	EXAMINED		DATE - 4/19/2012	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORING LOGS STRUCTURE NO. 087-3555**	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED -		ENGINEER OF BRIDGE DESIGN				656	06-00265-00-BR	SHELBY	29	29
DRAWN -	PASSED		REVISED		SHEET NO. 12 OF 12 SHEETS			CONTRACT NO. 95701		
CHECKED -		ENGINEER OF BRIDGES AND STRUCTURES	REVISED					ILLINOIS FED. AID PROJECT		