

PLANS FOR PROPOSED FEDERAL-AID BRIDGE REPLACEMENT & REHABILITATION PROGRAM

TOWNSHIP BRIDGE PROGRAM NORTH GROVE ROAD (TR 89) SECTION 01-09114-00-BR DEKALB COUNTY - MAYFIELD ROAD DISTRICT PROJECT BROS-0037(045)

JOB NO. C-93-089-08

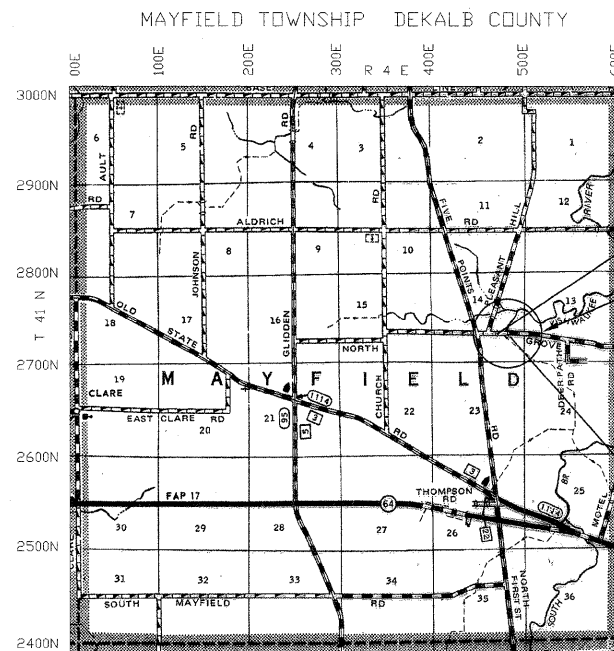
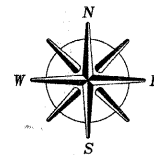
FAS ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	DEKALB	30	1
ILLINOIS PROJECT BROS-0037(045)				
* 01-09114-01-BR - CONTRACT NO. 87364				

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16. STRUCTURAL STEEL DETAILS
17. ELASTOMERIC BEARINGS
18. SUBSTRUCTURE - ABUTMENTS
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22. ANCHOR BOLT STANDARD
23. PILING DETAILS
24. EROSION & SEDIMENT CONTROL PLAN
- 25-30 EXISTING STRUCTURE PLANS

STANDARDS:

000001-05	STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
515001-02	NAME PLATE FOR BRIDGES
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) TRAFFIC BARRIER TERMINALS
701901	TRAFFIC CONTROL DEVICES
781001-02	TYPICAL PAVEMENT MARKINGS
BLR 21-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
BLR 26	STEEL PLATE BEAM GUARD RAIL 27 1/2" HEIGHT
BLR 27	TRAFFIC BARRIER TERMINAL, TYPE 5A



LOCATION MAP

GROSS LENGTH OF SECTION = 1055 FEET (0.20 MILE)
NET LENGTH OF SECTION = 1055 FEET (0.20 MILE)

SECTION 01-09114-00-BR
BEGINS AT STA. 4+00

SECTION 01-09114-00-BR SN 019-4402

REMOVAL OF EXISTING:
SUPERSTR - RC DECK ON STEEL I BEAMS WITH STEEL RAILING 24" WIDE X ±130" BK-BKABUTS.
SUBSTR - RC ABUTS WITH CONCRETE WING WALLS ON TIMBER PILE SOLID RC PIERS ON TIMBER PILE. EXISTING PLANS MAY BE VIEWED AT THE DEKALB COUNTY HIGHWAY DEPARTMENT
PROPOSED:
RC DECK ON STEEL I BEAMS WITH CLOSED PILE BENT STEEL SHEETING ABUTMENTS AND WINGWALLS AND PILE BENT PIERS WITH SOLID RC ENCASUREMENT.
30' WIDE x ±135'-6" BK-BK

SECTION 01-09114-00-BR
ENDS AT STA. 14+55

DESIGN CRITERIA

ROADWAY	DESIGN CLASSIFICATION	ADT 2008	ADT 2028	DESIGN SPEED
NORTH GROVE ROAD	LOCAL ROAD	500	575	50

BLR RURAL 3R GUIDELINES



Scott A. Brown 7/10/08
Exp. 11/30/2009

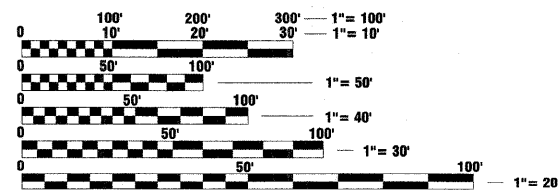
PLANS PREPARED BY:

WENDLER ENGINEERING SERVICES

DIXON, ILLINOIS
SYCAMORE, ILLINOIS
PRINCETON, ILLINOIS
STERLING, ILLINOIS



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



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

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

CONTRACT NO. 87364

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 8 20 08
William J. M. COUNTY ENGINEER

SUBMITTED July 8 20 08
Paul K. Kroll MAYFIELD ROAD DISTRICT

PASSED 7-22 20 08
Kenneth L. Long DISTRICT 3 ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW 7-22 20 08
George F. Ryan DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER

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OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES-FUNDING CODE X071-2A

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	10
20200100	EARTH EXCAVATION	CU YD	60
20400800	FURNISHED EXCAVATION	CU YD	1005
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.25
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	460
28000300	TEMPORARY DITCH CHECK	EACH	8
28000400	PERIMETER EROSION BARRIER	FOOT	1840
35101400	AGGREGATE BASE COURSE, TYPE B	TON	1389
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2.77
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	489
40603080	HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	290
40603305	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N30	TON	145
48101200	AGGREGATE SHOULDERS, TYPE B	TON	193
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	210
50300225	CONCRETE STRUCTURES	CU YD	71.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	130.8
50300260	BRIDGE DECK GROOVING	SQ YD	452
50300300	PROTECTIVE COAT	SQ YD	503
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L.SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	1775
50700305	HARDWARE	POUND	940
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	35,510
△ 50901050	STEEL RAILING, TYPE SM	FOOT	271
51201005	FURNISHING METAL SHELL PILES 12"	FOOT	980
51202305	DRIVING PILES	FOOT	980
51203200	TEST PILE METAL SHELLS	EACH	4
51500100	NAME PLATES	EACH	1
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	174
△ 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	350
△ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
△* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	4
* 67100100	MOBILIZATION	L.SUM	1
△ 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2375
△ 78200455	BIDIRECTIONAL GUARD RAIL REFLECTORS	EACH	10
△ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* X5121800	PERMANENT STEEL SHEET PILING	SQ FT	2457

* - SEE SPECIAL PROVISIONS
 △ - SPECIALTY ITEMS

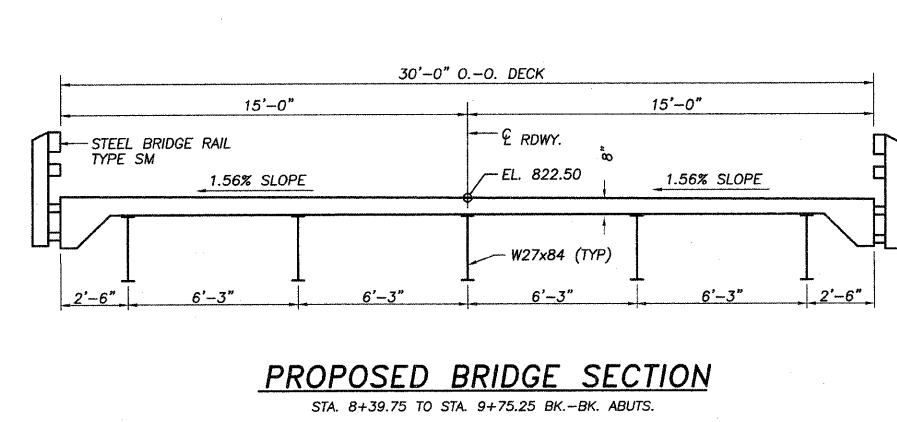
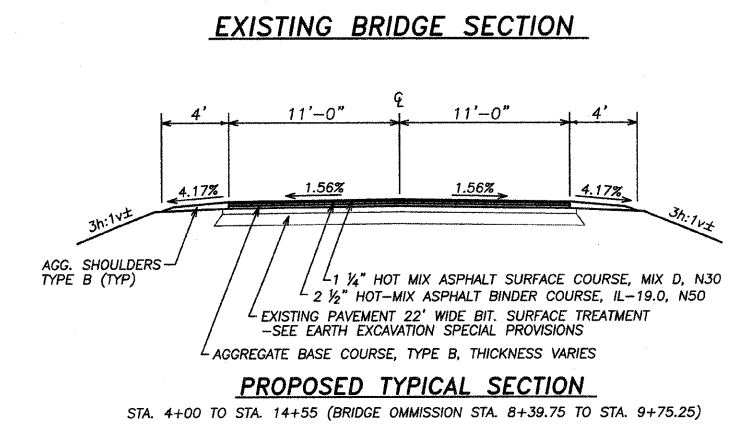
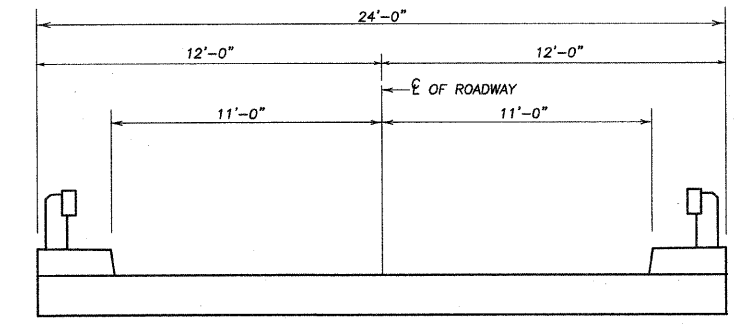
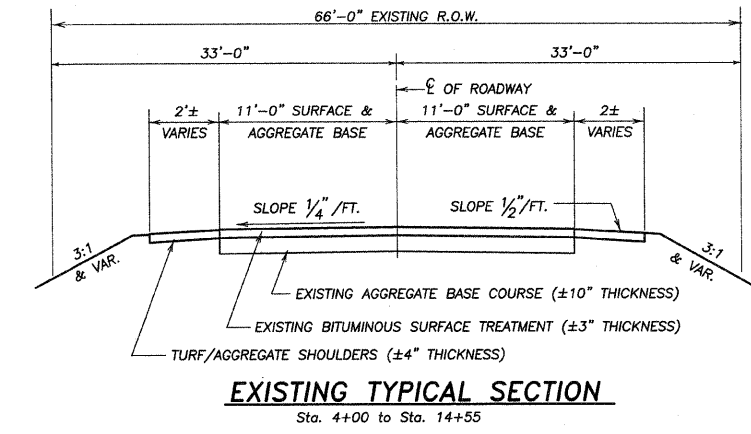
HOT-MIX ASPHALT CHART

	HMA BINDER	HMA SURFACE
PG GRADE	PG58-28	PG58-28
MAX % RAP ALLOWABLE**	25%	10%
DESIGN AIR VOIDS	4.0% @ N50	3.0% @ N30
MIXTURE COMPOSITION	IL 19.0	IL 9.5L
FRICTION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	SEE SPECIAL PROVISIONS	

**IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

SCHEDULE OF QUANTITIES

20100110	TREE REMOVAL (6 TO 15 UNIT DIAMETER)	UNIT	21
LOCATION			
LT. STA. 8+50			
TOTAL			21
28000300	TEMPORARY DITCH CHECK	EACH	8
LOCATION			
RT. & LT. STA. 6+30			
RT. & LT. STA. 8+00			
RT. & LT. STA. 10+00			
RT. & LT. STA. 12+50			
TOTAL			8
28000400	PERIMETER EROSION BARRIER	FOOT	1840
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
TOTAL			1840
35101400	AGGREGATE BASE COURSE, TYPE B	TON	1389
LOCATION			
LT. & RT. STA. 4+00 - 14+55			
TOTAL			1389
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2.77
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
TOTAL			2.77
40600982	HOT-MIX ASPHALT SURFACE COURSE REMOVAL - BUTT JOINT	SQ YD	489
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 13+00 - 14+55			
TOTAL			489
40603080	HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	290
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
TOTAL			290
40603305	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N30	TON	145
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
TOTAL			145
48101200	AGGREGATE SHOULDERS, TYPE B	TON	193
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
TOTAL			193
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	350
LOCATION			
RT. STA. 7+01.5 - RT. STA. 8+26.5			
LT. STA. 7+76.5 - LT. STA. 8+26.5			
RT. STA. 9+88.5 - RT. STA. 10+38.5			
LT. STA. 9+88.5 - LT. STA. 11+13.5			
TOTAL			350
63100075	TRAFFIC BARRIER, TYPE 5A	FOOT	4
LOCATION			
RT. STA. 8+26.5 - RT. STA. 8+39.75			
LT. STA. 8+26.5 - LT. STA. 8+39.75			
RT. STA. 9+75.25 - RT. STA. 9+88.5			
LT. STA. 9+75.25 - LT. STA. 9+88.5			
TOTAL			4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	FOOT	4
LOCATION			
RT. STA. 6+51.5 - RT. STA. 7+01.5			
LT. STA. 7+26.5 - LT. STA. 7+76.5			
RT. STA. 10+38.5 - RT. STA. 10+88.5			
LT. STA. 11+13.5 - LT. STA. 11+63.5			
TOTAL			4
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2070
LOCATION			
LT. & RT. STA. 4+00 - 8+40			
CL STA. 4+00 - 8+40			
LT. & RT. STA. 9+75 - 14+55			
STA. 9+75 - 14+55			
TOTAL			2070



SUMMARY OF QUANTITIES
 SCHEDULE OF QUANTITIES
 TYPICAL SECTIONS
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY

FAS ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
—	*	DEKALB	30	3

ILLINOIS PROJECT BROS-0037(045)
* 01-09114-01-BR

DATE	DESCRIPTION
2/28/08	

NOTES

ALL STUMP, TREE REMOVAL (< 6IN DIA.), CULVERTS AND BRUSH REMOVAL ARE CONSIDERED INCIDENTAL TO EARTH EXCAVATION.

ALL FENCES DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RELOCATED AND RESTORED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. (SEE SPECIAL PROVISIONS - COST CONSIDERED INCIDENTAL TO THE CONTRACT)

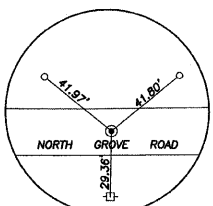
REQUIRED PAVEMENT SAWCUTS SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION.

EXISTING STRUCTURE: SN 019-4402
SUPERSTR - RC DECK ON STEEL I BEAMS WITH STEEL RAILING 24' WIDE X ±130' BK-BK ABUTS.
SUBSTR - RC ABUTS WITH CONCRETE WING WALLS ON TIMBER PILE SOLID RC PIERS ON TIMBER PILE. EXISTING PLANS MAY BE VIEWED AT THE DEKALB COUNTY HIGHWAY DEPARTMENT

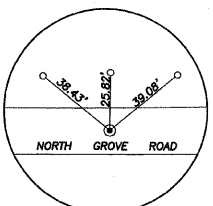
PROPOSED STRUCTURE: SN 019-4409
RC DECK ON STEEL I BEAMS WITH CLOSED PILE BENT STEEL SHEETING ABUTMENTS AND WINGWALLS AND PILE BENT PIERS WITH SOLID RC ENCASEMENT.
30' WIDE X ±135'-6" BK-BK

PI Sta = 11+84.40
N = 9991.84
E = 11043.85
I = 10°01'30"L

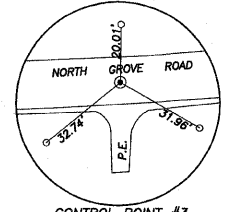
CIRCULAR
Da = 03'21"16"
Dc = 03'21"18"
T = 149.81
R = 1708.00
L = 298.85
C = 298.47
E = 6.56
M = 6.53



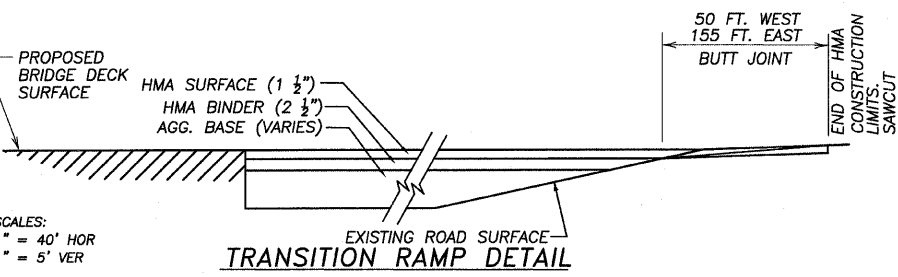
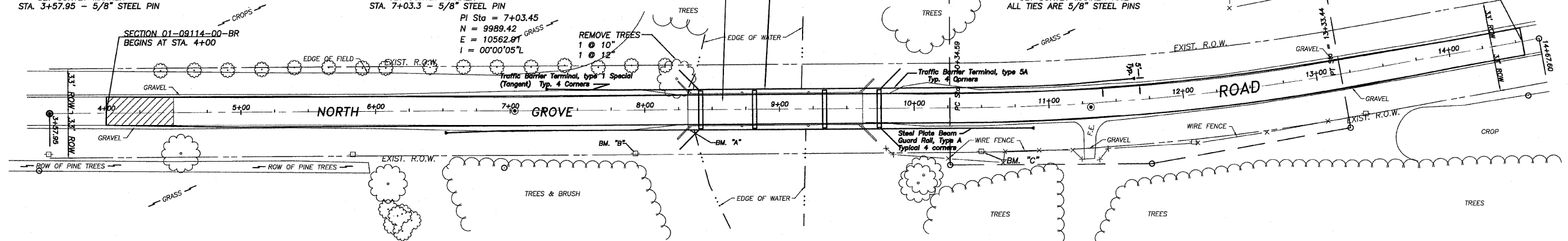
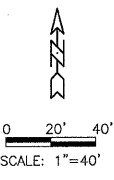
CONTROL POINT #1
SET SURVEY MARKER
STA. 3+57.95 - 5/8" STEEL PIN



CONTROL POINT #2
SET SURVEY MARKER
STA. 7+03.3 - 5/8" STEEL PIN



CONTROL POINT #3
SET SURVEY MARKER NAIL
ALL TIES ARE 5/8" STEEL PINS



BENCHMARK INFORMATION

B.M. "A" - SET CHISELED "□" W/ MASONRY NAIL IN CENTER @ SW WINGWALL. ELEV=822.04

B.M. "B" - SET COTTON SPINDLE IN FIRST P.P. WEST OF BRIDGE, ON SOUTH SIDE OF ROAD. ELEV=817.85

B.M. "C" - SET COTTON SPINDLE IN FIRST P.P. EAST OF BRIDGE ON SOUTH SIDE OF ROAD. ELEV=817.38

SUPERELEVATION DATA

MAX SUPER = 6%

IN	OUT
TR = 300.00	TR = 122
X = 33.00	X = 33.00
Y = 225.50	Y = 66.00
SR = 310.00	SR = 132.00
BS = 7+34.59	MS = 12+90.44
PX = 7+67.59	PY = 13+89.44
PY = 9+60.07	PX = 14+22.44
MS = 10+77.59	EX = 14+55.44

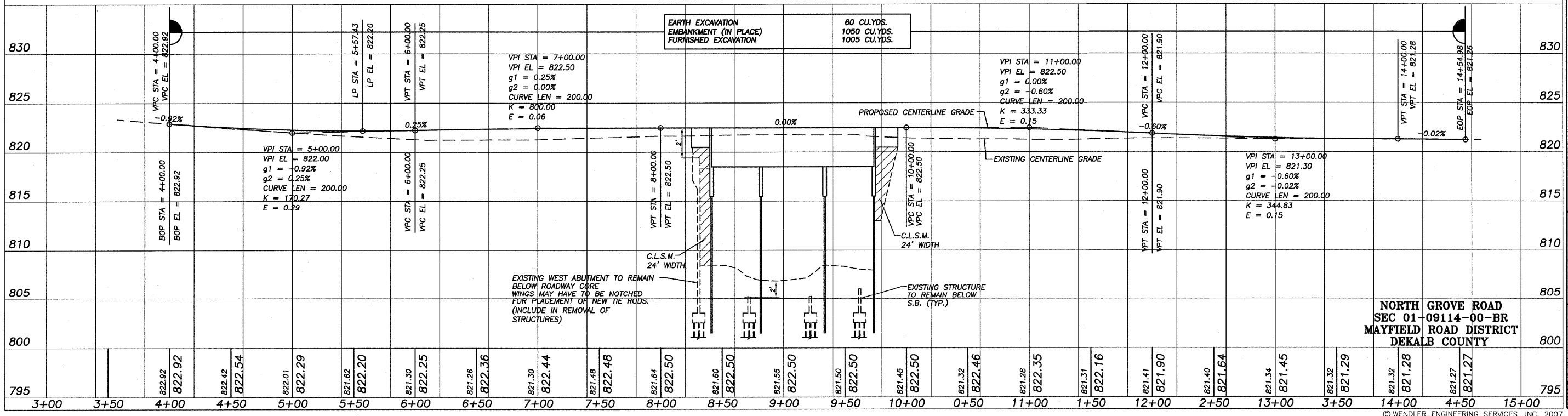
DESCRIPTION
TR = DISTANCE FROM BS TO TS
X = DISTANCE FROM BS TO PX
Y = DISTANCE FROM BS TO PY
SR = DISTANCE FROM PX TO BMS
BS = BEGIN SUPER ELEVATION
PX = CROWN REMOVED
PY = REVERSE CROWN
MS = MAX. SUPER ELEVATION

UTILITIES

ELECTRIC: COMMONWEALTH EDISON COMPANY TELEPHONE: VERIZON NORTH (815) 756-9541 (815) 564-6171 DEKALB, ILLINOIS BELVEDERE, ILLINOIS

GAS: NICOR (630) 983-8676 NAPERVILLE, ILLINOIS

THE LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THESE PLANS ARE AN ESTIMATE AND NOT INTENDED AS FIELD LOCATIONS FOR CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES PRIOR TO CONSTRUCTION AND CALLING J.U.L.I.E. AT 800-892-0123 FOR CONFIRMATION OF ALL EXISTING UTILITY LOCATIONS.

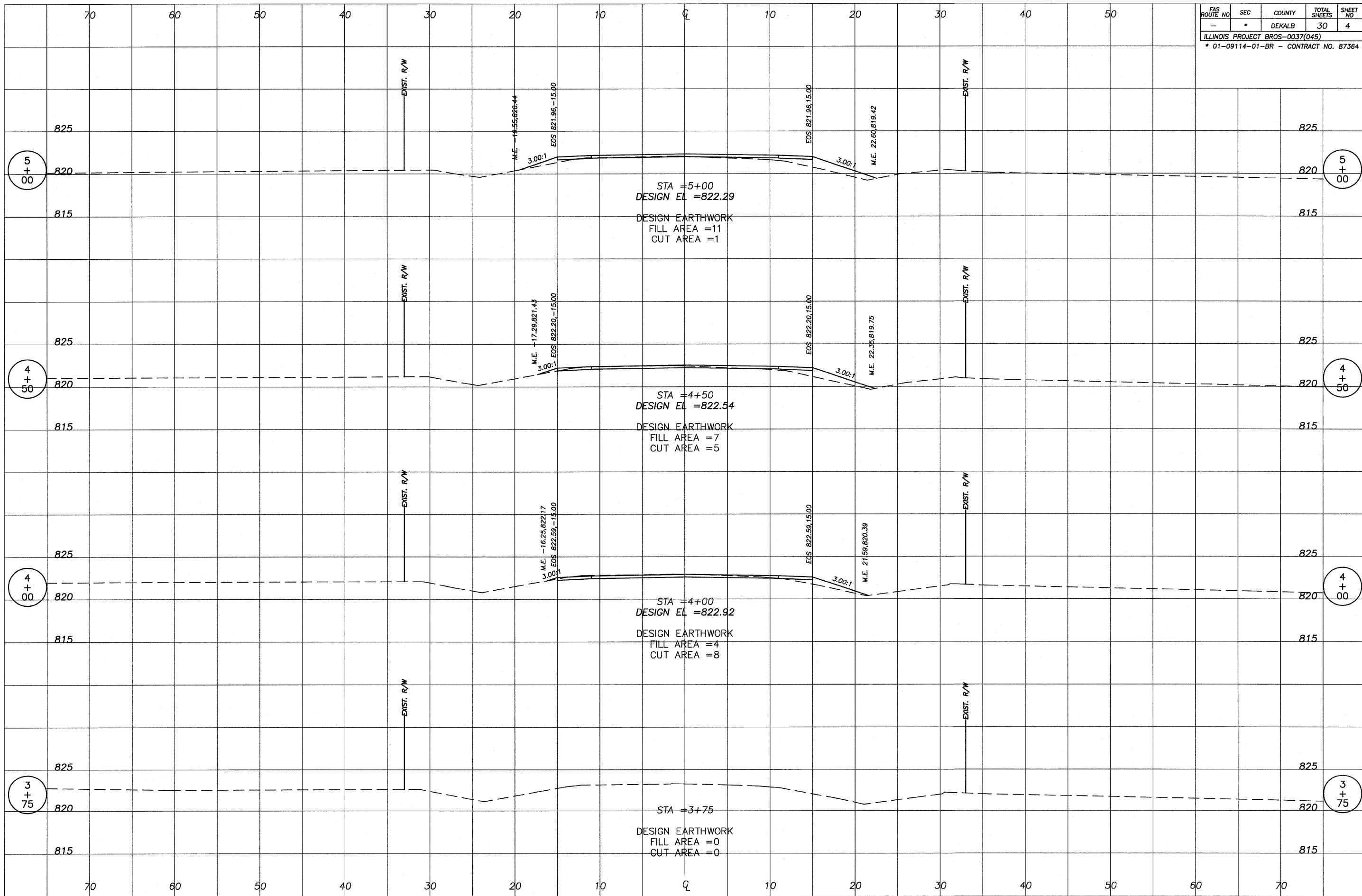


WENDLER ENGINEERING SERVICES, INC.
Structural & Civil Engineers-Land Surveying-Environmental Services
Illinois Professional Design Firm No. 184-000848



1968 - 2007
AFTER
39
YEARS,
WE'RE STILL
"Turning Ideas...
Into Reality!"

FAS ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
—	*	DEKALB	30	4
ILLINOIS PROJECT BROS-0037(045)				
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DATE: _____

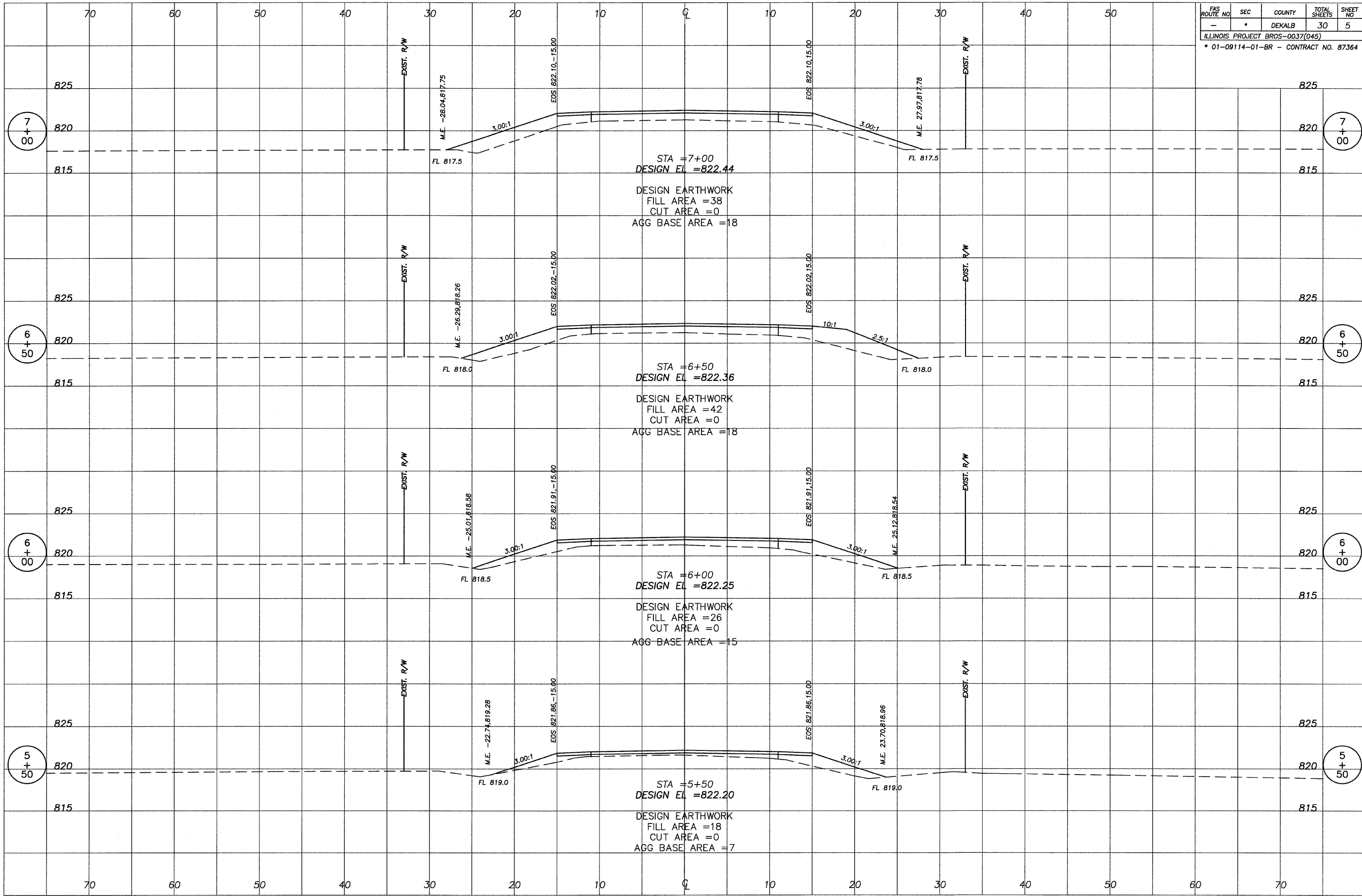
608 TIMBER CREEK ROAD - P.O. BOX 486 - DIXON, IL 61021 - 815-288-2261
 28 E. MARION SUITE 3 - PRINCETON, IL 61356 - 815-879-4731
 1778 WEST STATE ST. - SYCAMORE, IL 60178 - 815-895-5008
 804 FREEMONT RD. - STERRILING, IL 61081 - (815) 626-4428
 E-MAIL: info@wendlerengineering.com

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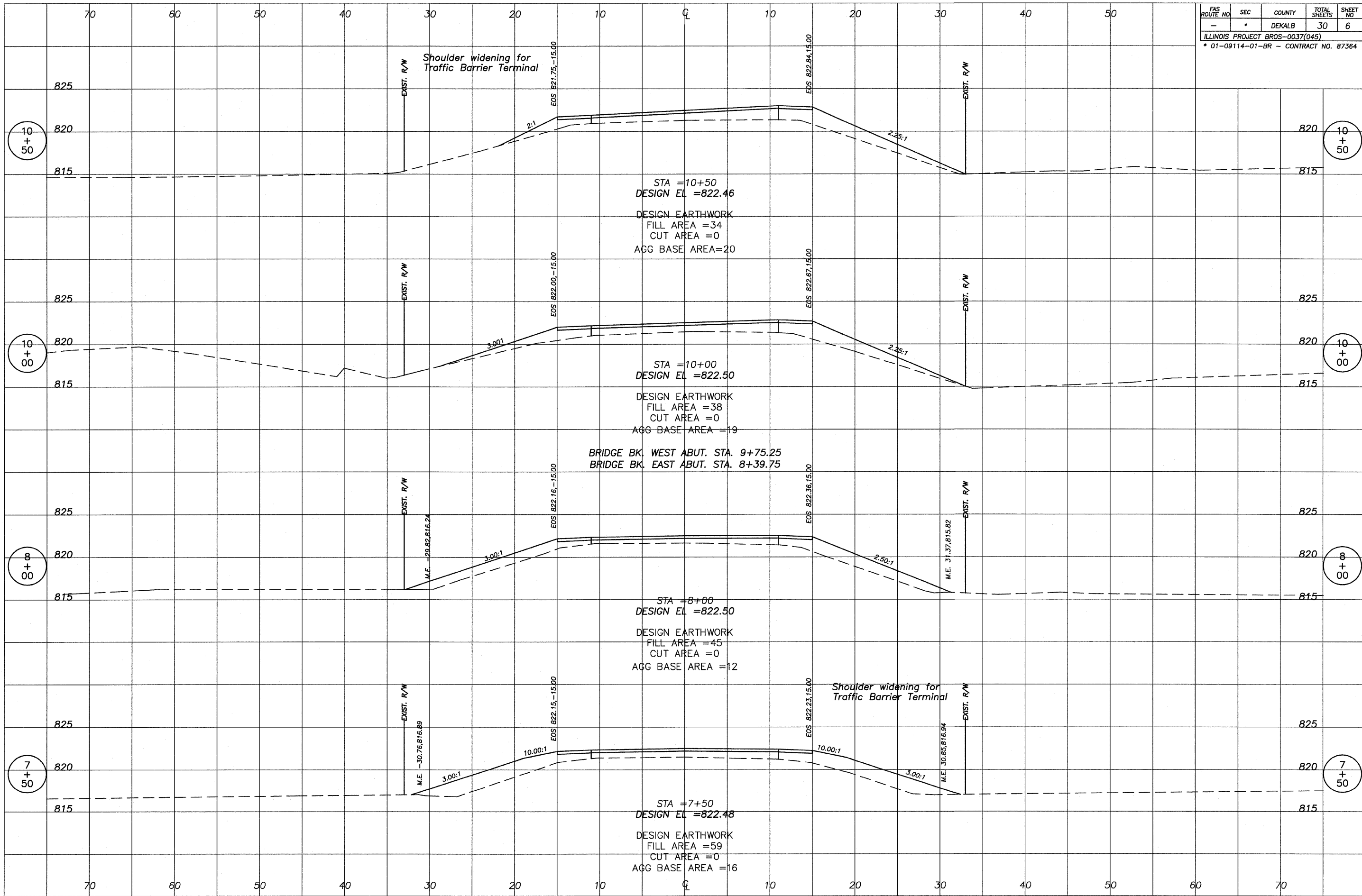
688 TIMBER CREEK ROAD - P.O. BOX 485 - DIXON, IL 61021 - 815-288-2261
 28 E. MARION - SUITE 3 - BRUNSTON, IL 61356 - 815-870-4731
 1778 WEST STATE ST. - SYCAMORE, IL 60178 - 815-895-5008
 804 FREEMONT RD. - STERRIL, IL 61081 - (815) 626-4428
 E-MAIL: info@wendlerengineering.com

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FAS ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
-	*	DEKALB	30	6
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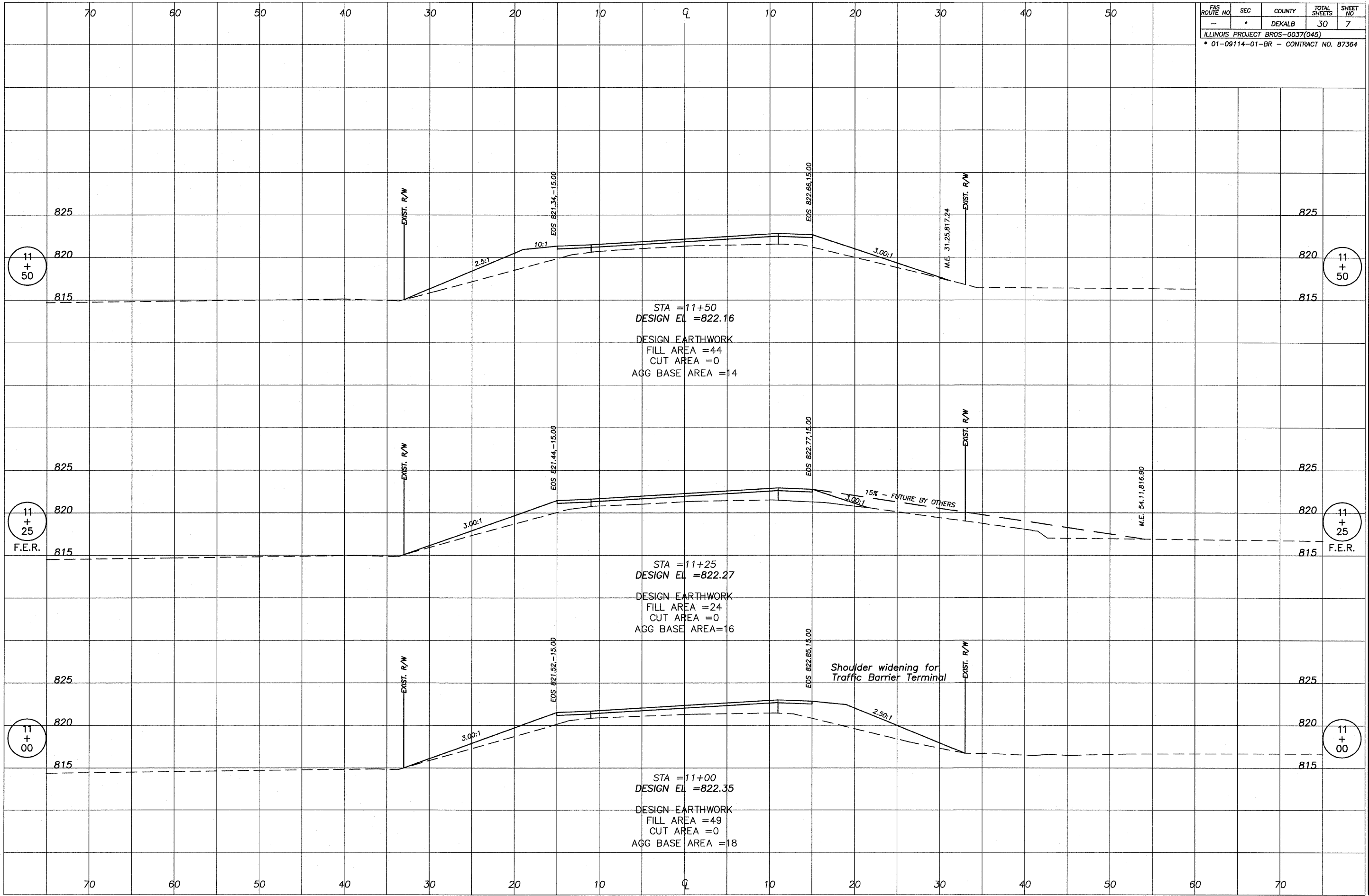


668 TIMBER CREEK ROAD - P.O. BOX 488 - DIXON, ILL. 61021 - 815-288-2261
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STA = 11+50
 DESIGN EL = 822.16
 DESIGN EARTHWORK
 FILL AREA = 44
 CUT AREA = 0
 AGG BASE AREA = 14

STA = 11+25
 DESIGN EL = 822.27
 DESIGN EARTHWORK
 FILL AREA = 24
 CUT AREA = 0
 AGG BASE AREA = 16

STA = 11+00
 DESIGN EL = 822.35
 DESIGN EARTHWORK
 FILL AREA = 49
 CUT AREA = 0
 AGG BASE AREA = 18

Shoulder widening for
 Traffic Barrier Terminal

15% - FUTURE BY OTHERS

DATE: _____

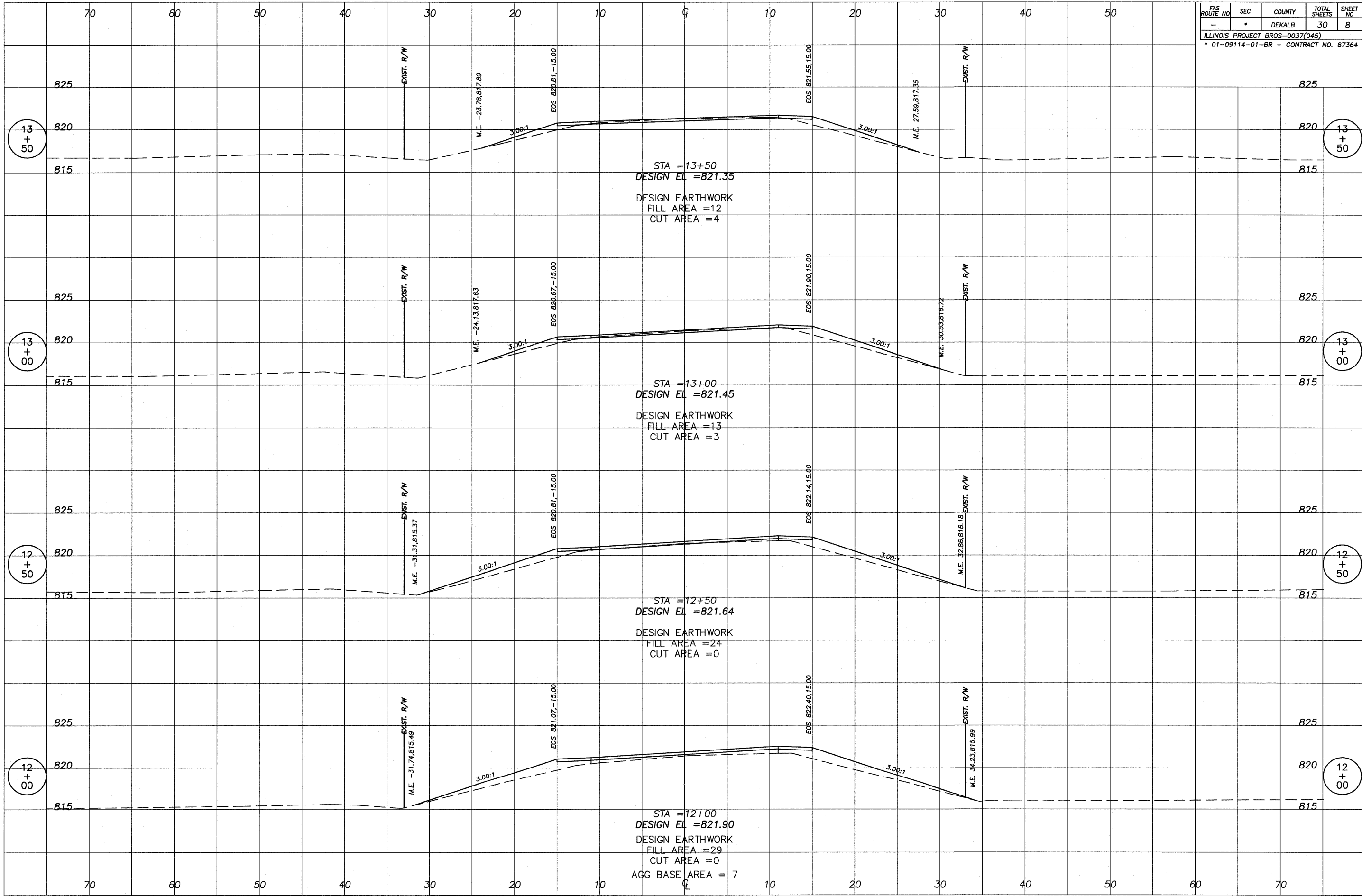
688 TIMBER CREEK ROAD - P.O. BOX 485 - DIXON, ILL. 61021 - 815-288-2261
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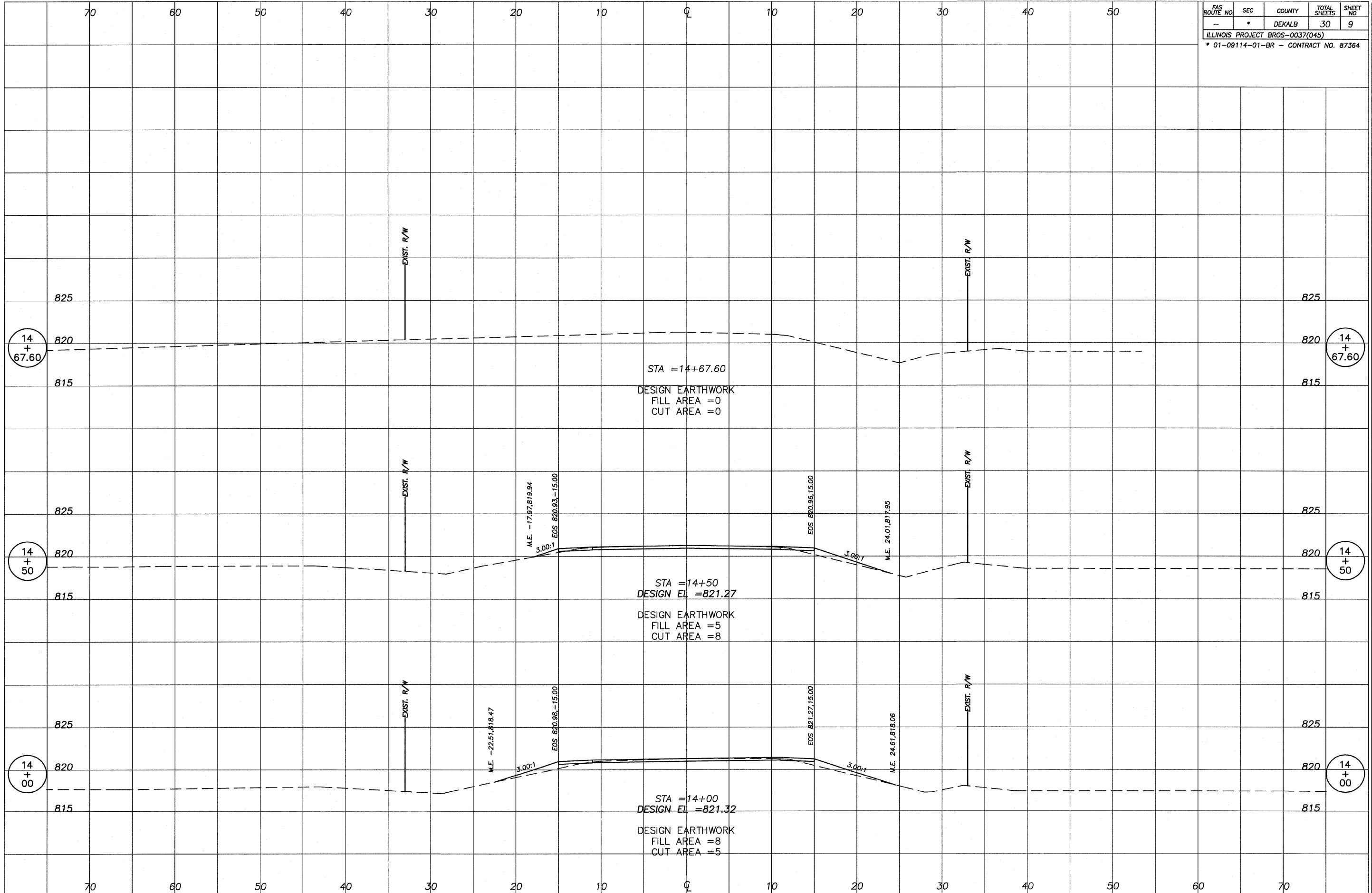


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-	*	DEKALB	30	9
ILLINOIS PROJECT BROS-0037(045)				
* 01-09114-01-BR - CONTRACT NO. 87364				



688 TIMBER CREEK ROAD - P.O. BOX 486 - DIXON, IL 61021 - 815-288-2261
 28 E. WAGON SUITE 3 - PRINCETON, IL 61778 - 815-879-4731
 1778 WEST STATE ST. - SYCAMORE, IL 60778 - 815-895-5008
 804 FREEMONT RD. - STERLING, IL 61081 - (815) 626-4428
 E-MAIL: info@wendlerengineering.com

WENDLER ENGINEERING SERVICES, INC.
 Structural & Civil Engineers—Land Surveying—Environmental Services
 Illinois Professional Design Firm No. 184-000848

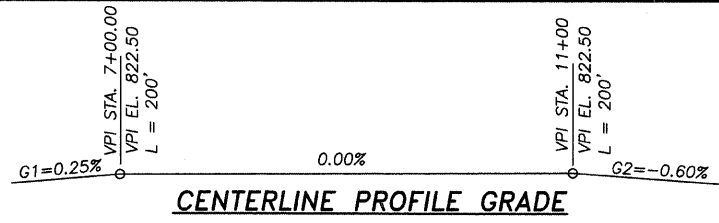
WME
 1968 - 2007
 AFTER
39
 YEARS,
 WE'RE STILL
 "Turning Ideas...
 Into Reality!"

BENCHMARK INFORMATION

- B.M. A - FND "□" W/ MASONRY NAIL IN CENTER @ S.W. WINGWALL.
ELEV = 822.04
- B.M. B - COTTON SPINDLE IN 1ST P.P. WEST OF STRUCTURE
SOUTH SIDE OF ROAD.
ELEV = 817.85
- B.M. B - COTTON SPINDLE IN 1ST P.P. EAST OF STRUCTURE
SOUTH SIDE OF ROAD.
ELEV = 817.38

FAS ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO
-	*	DEKALB	30	10

ILLINOIS PROJECT BROS-0037(045)
* 01-09114-01-BR - CONTRACT NO. 87364



GENERAL NOTES

THE UTILITIES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE EXACT LOCATIONS OF ALL UTILITIES WITHIN THE PROJECT LIMITS BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH AFFECTED UTILITIES AND BY CONTACTING J.U.L.I.E. AT 1-800-892-0123. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES PRIOR TO CONSTRUCTION.

FASTENERS SHALL BE HIGH STRENGTH BOLTS, AASHTO M164, TYPE 3. BOLTS 7/8" INCH DIAMETER, OPEN HOLES 15/16 INCH DIAMETER, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 64443 POUNDS OF AASHTO M270 GRADE 50W BEAMS, DIAPHRAGMS, SPLICES, AND PIER BEARINGS. 4208 POUNDS AASHTO M270 GRADE 36 PLATES, WALERS, WING CHANNELS, SIDE RETAINERS, ANCHOR BOLTS, & MISC.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE WIDE FLANGE BEAMS AND ALL SPLICE PLATE MATERIAL.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.

BACKFILL SHALL BE PLACED BEHIND THE ABUTMENTS AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL MAKE ALLOWANCE FOR THE DEFLECTION OF FORMS, SHRINKAGE AND SETTLEMENT OF FALSEWORK, IN ADDITION TO ALLOWANCE FOR DEAD LOAD DEFLECTION.

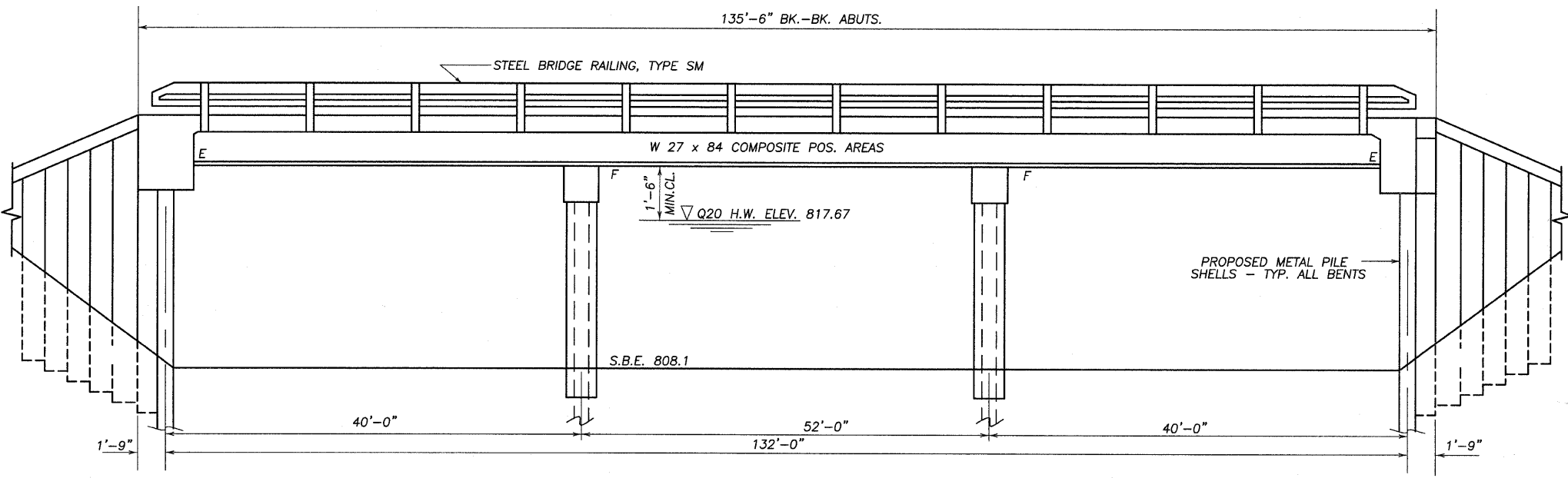
THE CROSS SECTIONS OF THE ENTIRE BRIDGE IS IN A CONSTANT SUPERELEVATION SO BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. BEAMS SHALL BE SET PLUMB, SLOPE SHALL BE TAKEN OUT OVER THE FILLER.

THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT, AND EACH PIER, AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

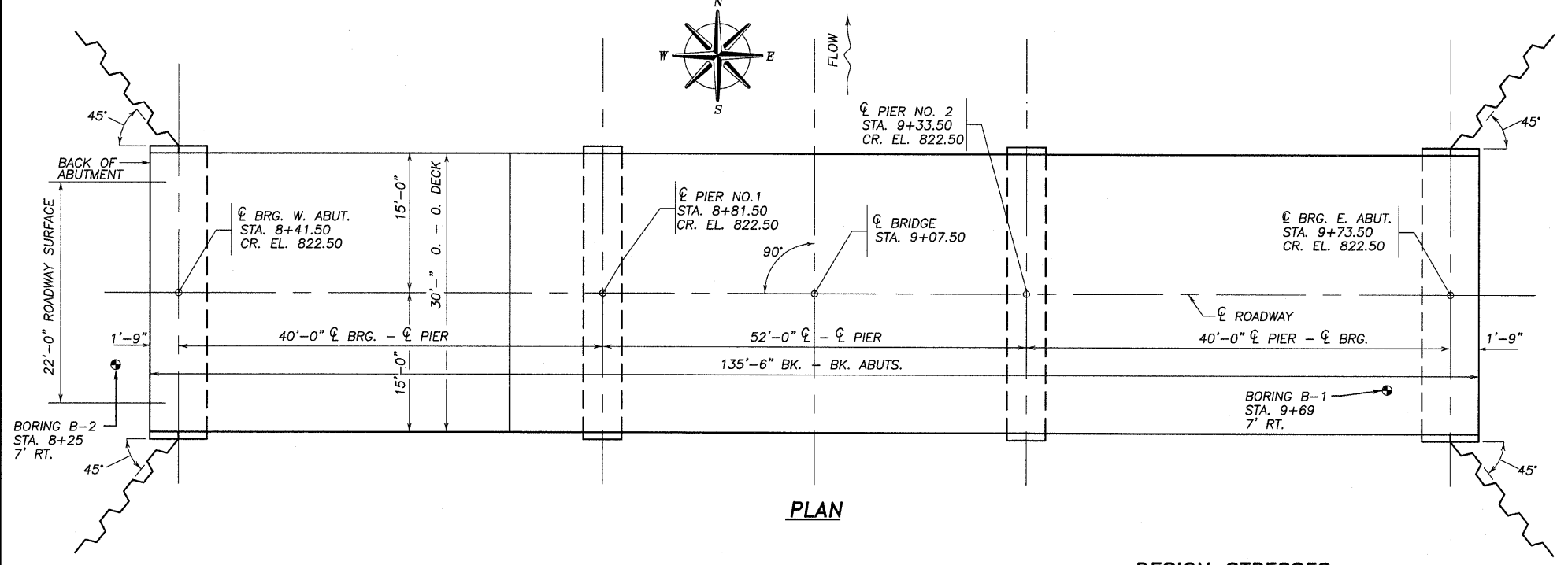
AASHTO M 270 GRADE 50W STRUCTURAL STEEL SHALL ONLY BE PAINTED, AT THE ENDS OF THE BEAMS, FOR A DISTANCE OF EQUAL TO THE DEPTH OF EMBEDMENT INTO THE CONCRETE CAP PLUS 3 INCHES. THOSE AREAS SHALL BE PRIMED IN THE SHOP WITH AN INORGANIC ZINC RICH PRIMER PER AASHTO M300, TYPE 1. NO FIELD PAINTING SHALL BE REQUIRED. ALL STRUCTURAL STEEL SHALL BE CLEANED AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "SURFACE PREPARATION AND PAINTING REQUIREMENTS FOR WEATHERING STEEL".

ALL CONSTRUCTION JOINTS SHALL BE BONDED.

FULL SIZE PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE FOR VIEWING AT THE DEKALB COUNTY HIGHWAY DEPARTMENT.



ELEVATION



PLAN

BILL OF MATERIAL

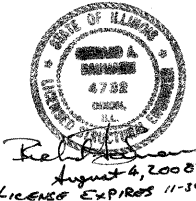
ITEM	UNIT	BRIDGE	
		SUPERSTR.	SUBSTR.
REMOVAL OF EXISTING STRUCTURES	EACH	1	1
STEEL SHEET PILING	SQ. FT.		2457
STRUCTURE EXCAVATION	CU. YD.		210
CONCRETE STRUCTURES	CU. YD.		71.2
CONCRETE SUPERSTRUCTURES	CU. YD.	130.8	130.8
BRIDGE DECK GROOVING	SQ. YD.	452	452
PROTECTIVE COAT	SQ. YD.	503	503
FURNISHING AND ERECTING STRUCTURAL STEEL	L.SUM	1	1
STUD SHEAR CONNECTORS	EACH	1775	1775
STEEL RAILING, TYPE SM	FOOT	271	271
REINFORCEMENT BARS (EPOXY COATED)	POUND	27230	8280
DRIVING PILES	FOOT		980
FURNISHING METAL SHELL PILES - 12"Ø	FOOT		980
TEST PILE - METAL SHELL PILE - 12"Ø	EACH		4
ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	10	10
NAME PLATES	EACH		1
HARDWARE	POUND		940

DESIGN STRESSES

- f'c = 3500 P.S.I.
- fy = 60,000 P.S.I. (REINFORCEMENT)
- fy = 50,000 P.S.I. (STRUCTURAL STEEL) (AASHTO M270, GRADE 50W)
- fy = 36,000 P.S.I. (STRUCTURAL STEEL) (AASHTO M270, GRADE 36)
- Fy = 36,000 P.S.I. (HARDWARE)

DESIGN SPECIFICATIONS 2002 AASHTO (ALLOWED FOR 25 P.S.F. FOR FUTURE WEARING SURFACE.)

LOADING HS 20-44



WATERWAY INFORMATION

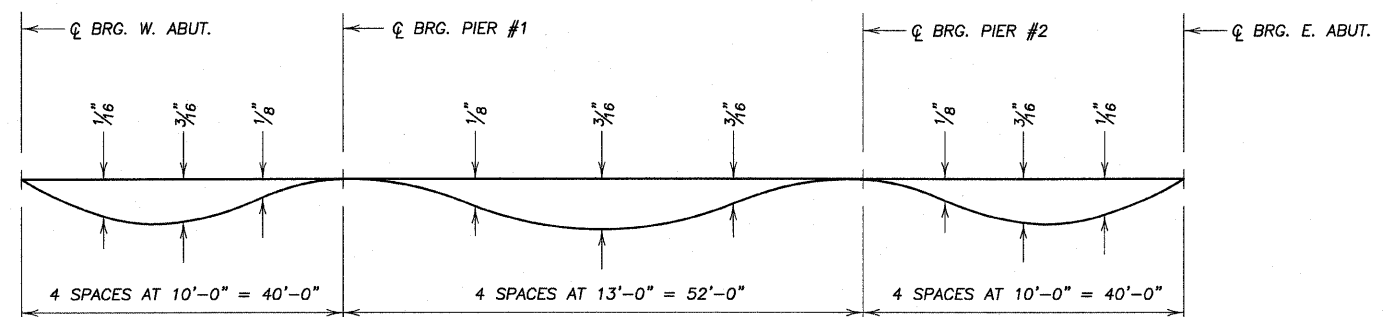
DRAINAGE AREA= 215.6 SQ.MI.		LOW GRADE ELEV. 821.35 AT STA. 13+50							
FLOOD	FREQ. YR.	Q. C.F.S.	OPENING SQ. FT. EXIST.	OPENING SQ. FT. PROP.	NAT. H.W.E.	HEAD-FT. EXIST.	HEAD-FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	20	4859	997	1294	817.48	0.17	0.19	817.65	817.67
BASE	100	6286	1107	1412	818.27	0.29	0.30	818.56	818.57
MAX. CALC.	500								

BUILT 2008 BY DEKALB COUNTY SECTION 01-09114-00-BR STA. 9+07.50 STR. NO. 019-4409 LOADING HS 20

LETTERING FOR NAME PLATE

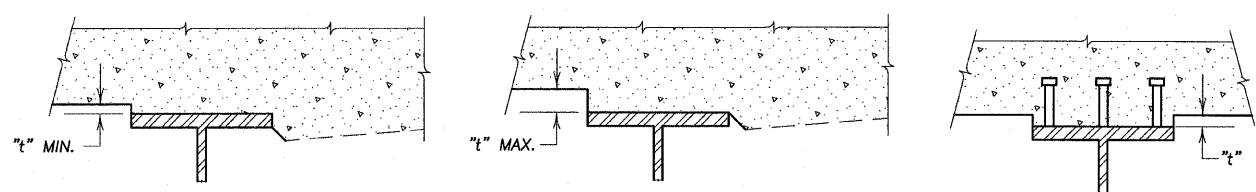
SEE STD. 515001-02

GENERAL PLAN AND ELEVATION SECTION 01-09114-00-BR NORTH GROVE ROAD DEKALB COUNTY S.N. 019-4409



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN BELOW.



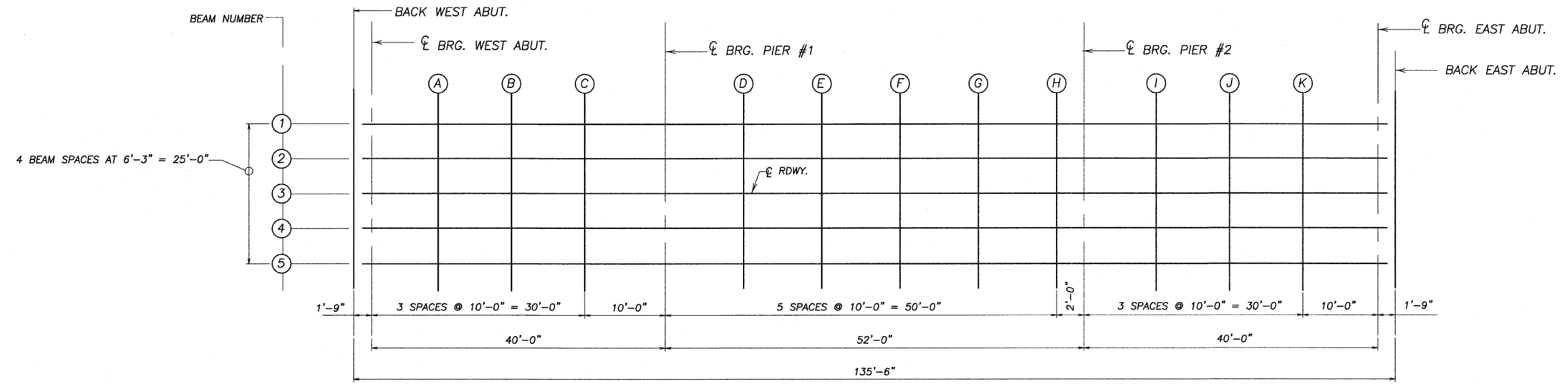
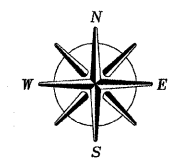
AT MINIMUM FILLET
EXTERIOR BEAM

AT MAXIMUM FILLET
EXTERIOR BEAM

COMPOSITE
INTERIOR BEAM

NOTE: TO DETERMINE "t" - AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE STATIONS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS, MINUS FLOOR THICKNESS, EQUALS THE FILLET HEIGHTS ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHTS



PLAN

DECK ELEVATIONS LAYOUT
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409

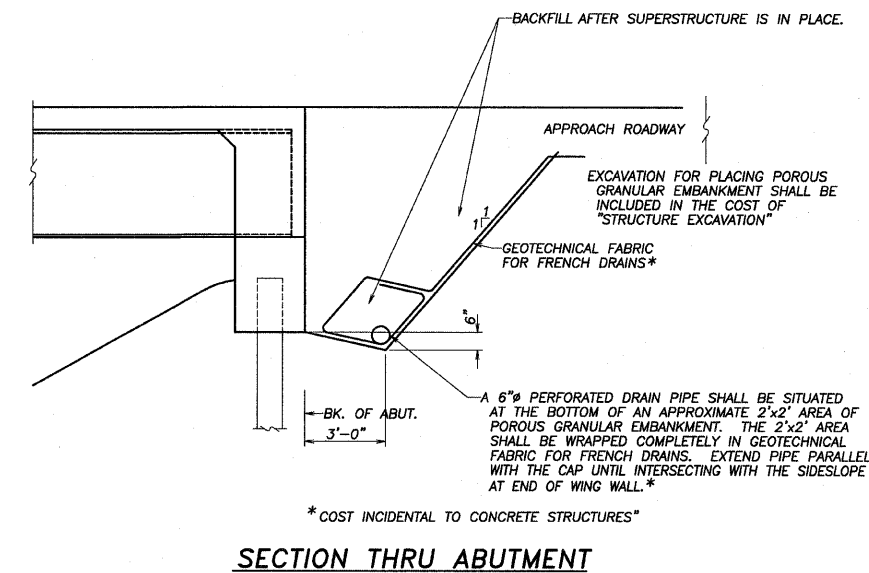
BEAM # 1				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	8+39.75	12.50	822.305	822.305
CL. BRG. W. ABUT.	8+41.50	12.50	822.305	822.305
A	8+51.50	12.50	822.305	822.333
B	8+61.50	12.50	822.305	822.326
C	8+71.50	12.50	822.305	822.320
CL. BRG. PIER #1	8+81.50	12.50	822.305	822.305
D	8+91.50	12.50	822.305	822.322
E	9+01.50	12.50	822.305	822.344
F	9+11.50	12.50	822.305	822.340
G	9+21.50	12.50	822.305	822.322
CL. BRG. PIER #2	9+33.50	12.50	822.305	822.305
H	9+43.50	12.50	822.305	822.320
I	9+53.50	12.50	822.305	822.333
J	9+63.50	12.50	822.305	822.325
CL. BRG. E. ABUT.	9+73.50	12.50	822.305	822.305
BK. E. ABUT.	9+75.25	12.50	822.305	822.305

BEAM # 3				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	8+39.75	0.00	822.500	822.500
CL. BRG. W. ABUT.	8+41.50	0.00	822.500	822.500
A	8+51.50	0.00	822.500	822.528
B	8+61.50	0.00	822.500	822.521
C	8+71.50	0.00	822.500	822.515
CL. BRG. PIER #1	8+81.50	0.00	822.500	822.500
D	8+91.50	0.00	822.500	822.517
E	9+01.50	0.00	822.500	822.539
F	9+11.50	0.00	822.500	822.535
G	9+21.50	0.00	822.500	822.517
CL. BRG. PIER #2	9+33.50	0.00	822.500	822.500
H	9+43.50	0.00	822.500	822.515
I	9+53.50	0.00	822.500	822.528
J	9+63.50	0.00	822.500	822.520
CL. BRG. E. ABUT.	9+73.50	0.00	822.500	822.500
BK. E. ABUT.	9+75.25	0.00	822.500	822.500

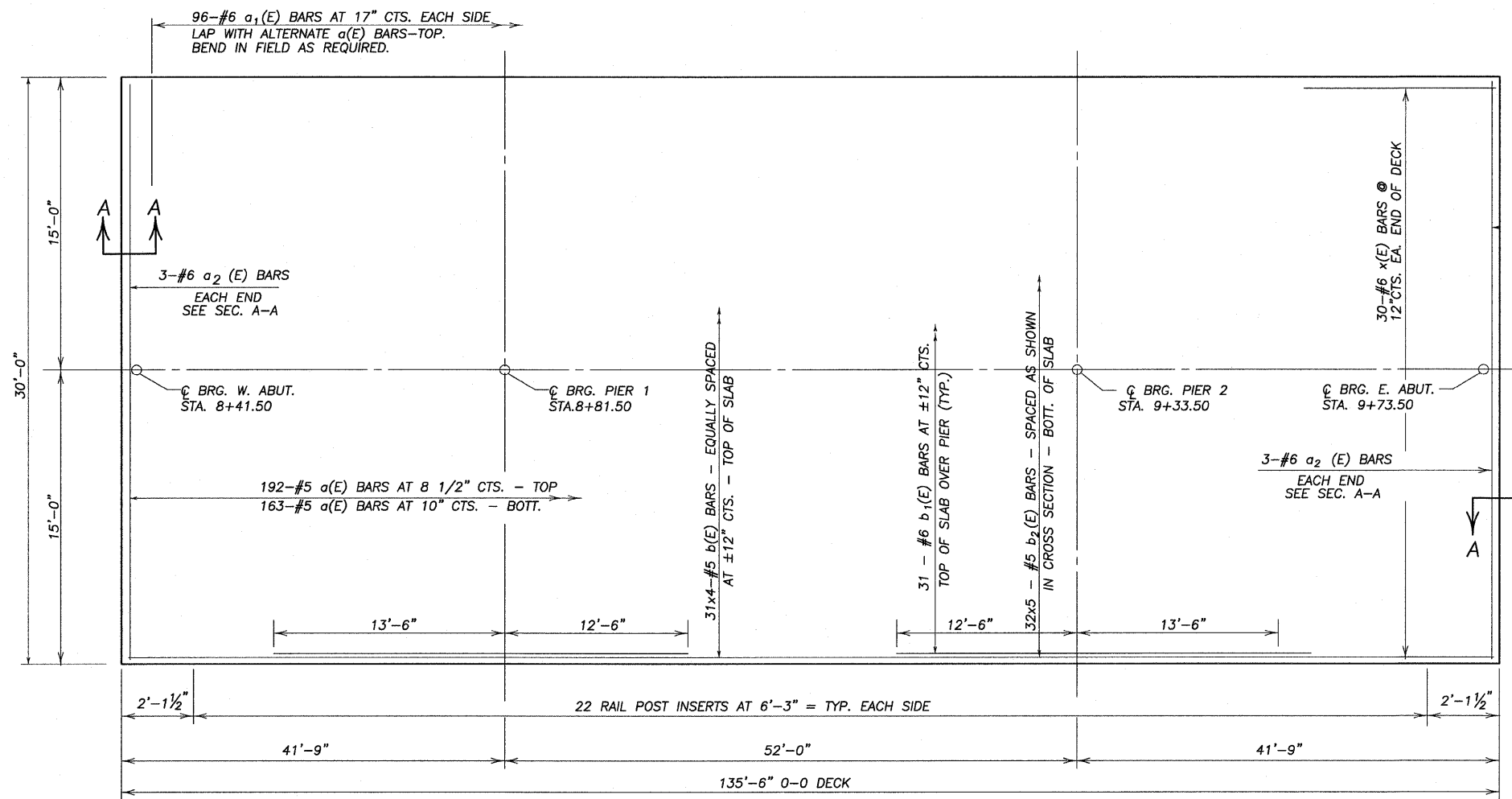
BEAM # 2				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	8+39.75	6.25	822.402	822.402
CL. BRG. W. ABUT.	8+41.50	6.25	822.402	822.402
A	8+51.50	6.25	822.402	822.430
B	8+61.50	6.25	822.402	822.423
C	8+71.50	6.25	822.402	822.417
CL. BRG. PIER #1	8+81.50	6.25	822.402	822.402
D	8+91.50	6.25	822.402	822.419
E	9+01.50	6.25	822.402	822.441
F	9+11.50	6.25	822.402	822.437
G	9+21.50	6.25	822.402	822.419
CL. BRG. PIER #2	9+33.50	6.25	822.402	822.402
H	9+43.50	6.25	822.402	822.417
I	9+53.50	6.25	822.402	822.430
J	9+63.50	6.25	822.402	822.422
CL. BRG. E. ABUT.	9+73.50	6.25	822.402	822.402
BK. E. ABUT.	9+75.25	6.25	822.402	822.402

BEAM # 4				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	8+39.75	6.25	822.598	822.598
CL. BRG. W. ABUT.	8+41.50	6.25	822.598	822.598
A	8+51.50	6.25	822.598	822.626
B	8+61.50	6.25	822.598	822.619
C	8+71.50	6.25	822.598	822.613
CL. BRG. PIER #1	8+81.50	6.25	822.598	822.598
D	8+91.50	6.25	822.598	822.615
E	9+01.50	6.25	822.598	822.637
F	9+11.50	6.25	822.598	822.633
G	9+21.50	6.25	822.598	822.615
CL. BRG. PIER #2	9+33.50	6.25	822.598	822.598
H	9+43.50	6.25	822.598	822.613
I	9+53.50	6.25	822.598	822.626
J	9+63.50	6.25	822.598	822.618
CL. BRG. E. ABUT.	9+73.50	6.25	822.598	822.598
BK. E. ABUT.	9+75.25	6.25	822.598	822.598

BEAM # 5				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	8+39.75	12.50	822.695	822.695
CL. BRG. W. ABUT.	8+41.50	12.50	822.695	822.695
A	8+51.50	12.50	822.695	822.723
B	8+61.50	12.50	822.695	822.716
C	8+71.50	12.50	822.695	822.710
CL. BRG. PIER #1	8+81.50	12.50	822.695	822.695
D	8+91.50	12.50	822.695	822.712
E	9+01.50	12.50	822.695	822.734
F	9+11.50	12.50	822.695	822.730
G	9+21.50	12.50	822.695	822.712
CL. BRG. PIER #2	9+33.50	12.50	822.695	822.695
H	9+43.50	12.50	822.695	822.710
I	9+53.50	12.50	822.695	822.723
J	9+63.50	12.50	822.695	822.715
CL. BRG. E. ABUT.	9+73.50	12.50	822.695	822.695
BK. E. ABUT.	9+75.25	12.50	822.695	822.695



DECK ELEVATIONS
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409

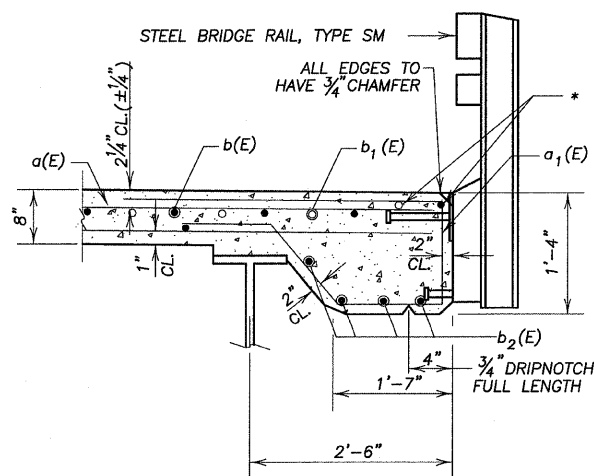


PLAN

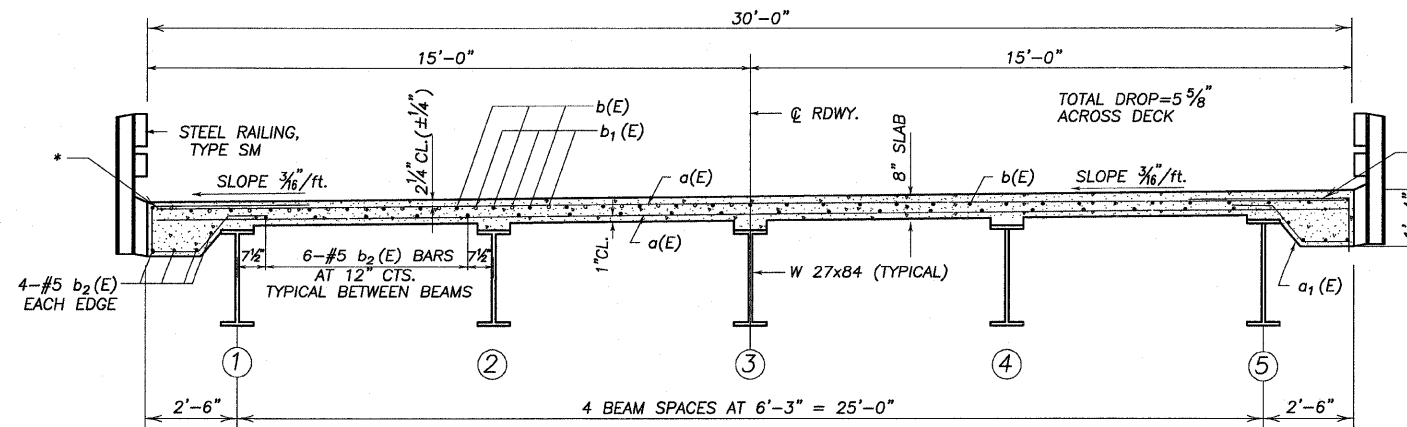
* NOTE: REINFORCEMENT BARS IN THE TOP OF THE DECK MAY BE PLACED WITH A 1 1/2" MINIMUM CLEARANCE IN THE AREA OF THE RAIL POST ANCHOR DEVICES. THE STUDS OF THE ANCHOR DEVICES SHALL BE POSITIONED BELOW THE TOP REINFORCEMENT BARS AND THE OUTERMOST LONGITUDINAL REINFORCEMENT BARS (b(E) AND b₁(E) BARS) SHALL BE PLACED DIRECTLY ABOVE THE STUDS OF THE RAIL POST ANCHOR DEVICE.

MIN. LAP

#5	2'-2"
#6	2'-7"

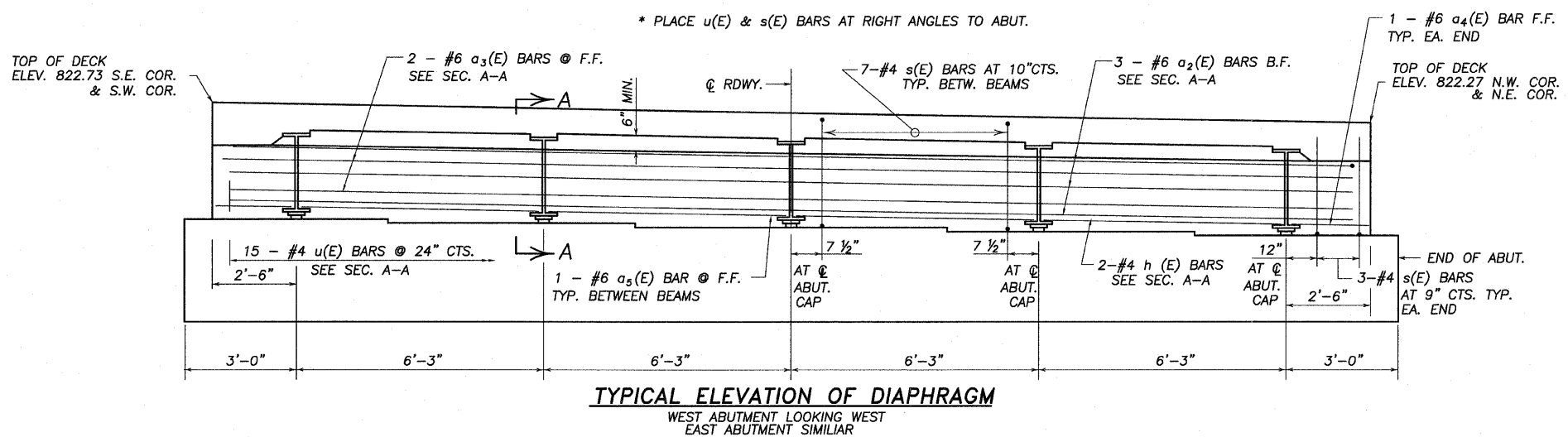


SECTION THRU EDGE OF SLAB



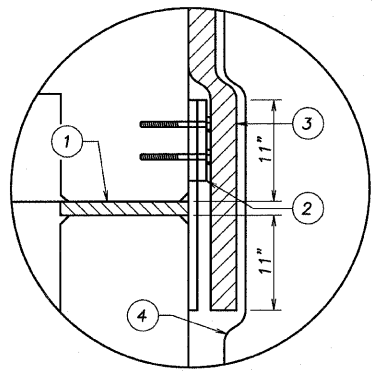
CROSS SECTION
 (LOOKING EAST)

SUPERSTRUCTURE
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY
 S.N. 019-4409

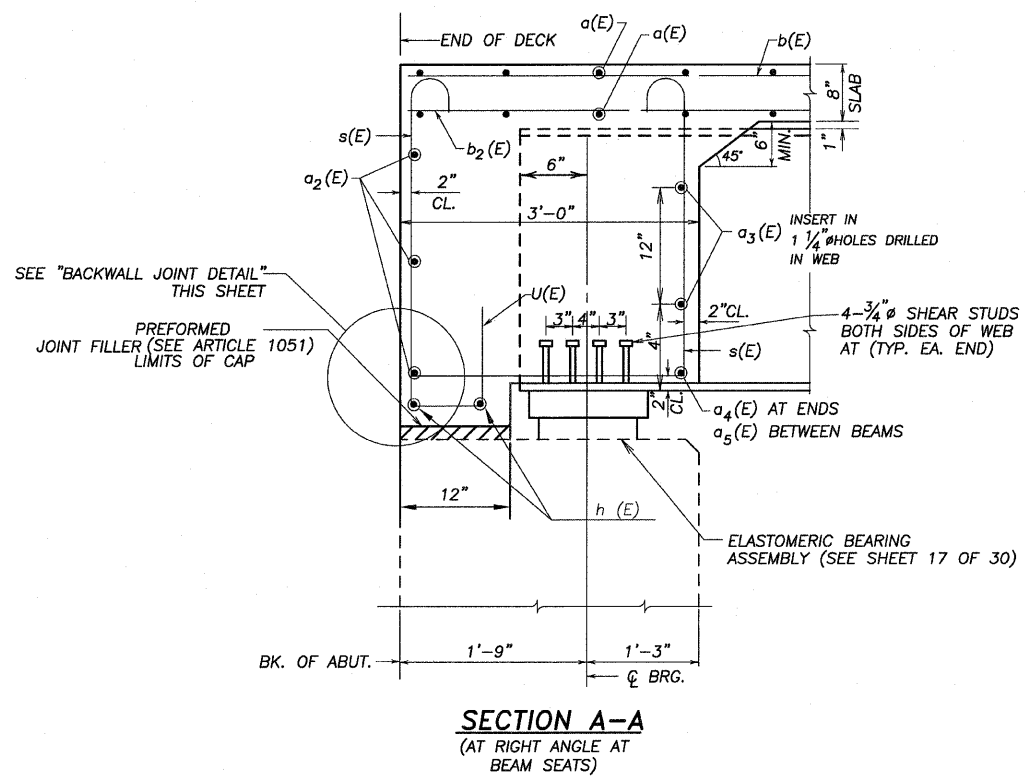


BILL OF MATERIAL - SUPERSTRUCTURE

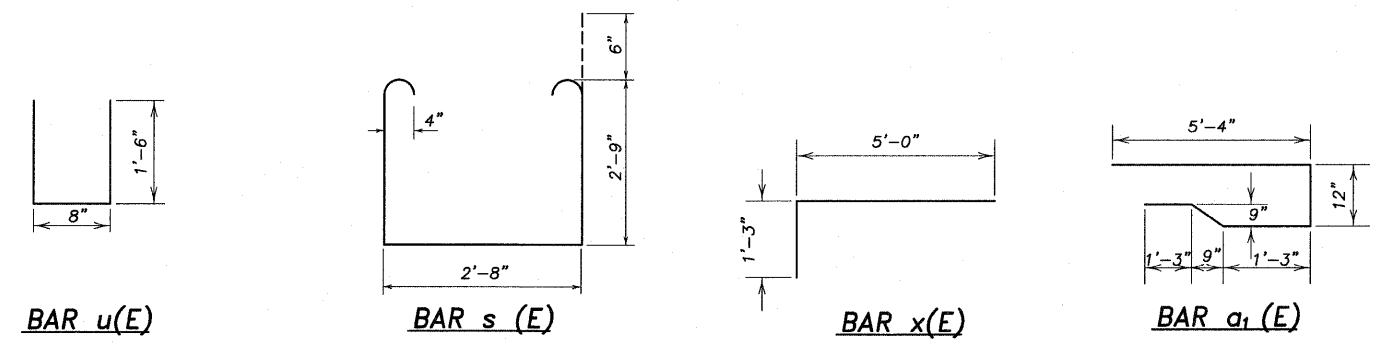
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	355	#5	29'-8"	—
a1(E)	192	#6	9'-7"	┌
a2(E)	6	#6	29'-8"	—
a3(E)	4	#6	29'-8"	—
a4(E)	4	#6	2'-2"	—
a5(E)	8	#6	5'-9"	—
b(E)	124	#5	35'-6"	—
b1(E)	62	#6	26'-0"	—
b2(E)	160	#5	28'-10"	—
h(E)	4	#4	29'-8"	—
s(E)	68	#4	9'-2"	┌
u(E)	30	#4	3'-8"	┌
x(E)	60	#6	6'-3"	┌
CONCRETE SUPERSTRUCTURE			CU. YD.	130.8
REINFORCEMENT BARS EPOXY COATED			LBS.	27230
PROTECTIVE COAT **			SQ. YD.	503
BRIDGE DECK GROOVING			SQ. YD.	452

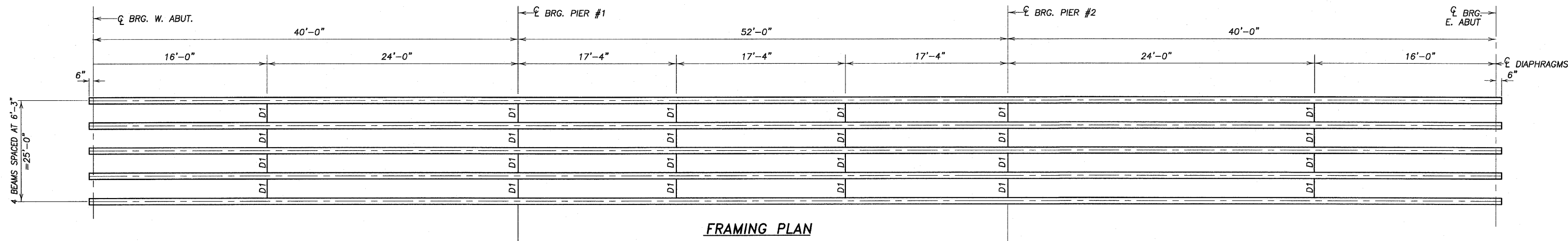


- ① - 2" PREFORMED JOINT FILLER (ARTICLE 1051) BONDED TO ABUTMENT CAP WITH APPROVED ADHESIVE (FULL WIDTH OF CAP)
 - ② - 1/8" THICK REINFORCED ELASTOMERIC NEOPRENE MAT
 - ③ - 2" PREFORMED JOINT FILLER (ARTICLE 1051) BONDED TO SUPERSTRUCTURE (FULL WIDTH OF CAP; 3'-0" WIDE)
 - ④ - GEOCOMPOSITE WALL DRAIN (FULL WIDTH OF CAP PLUS EXTEND 3' MINIMUM ONTO WINGWALLS; 4'-0" WIDE)
- ITEMS ①, ②, ③, & ④ SHALL BE INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE.

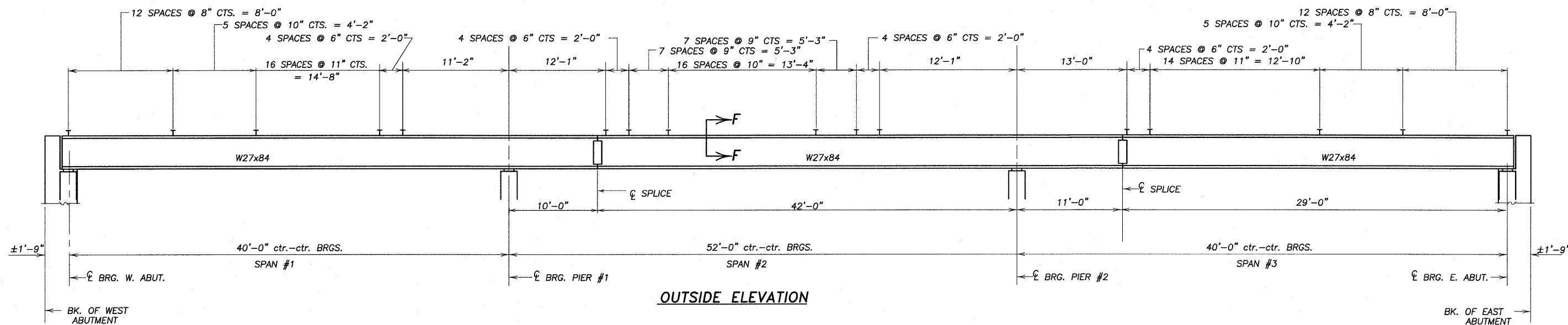


REINFORCEMENT BARS INDICATED (E) SHALL BE EPOXY COATED.
* INCLUDES BAR SPLICER
** INCLUDES TOP OF DECK AND EDGES TO THE DRIP NOTCH.



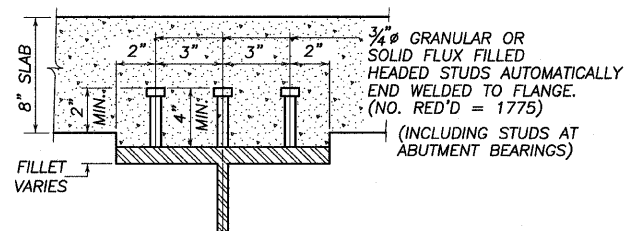


FRAMING PLAN

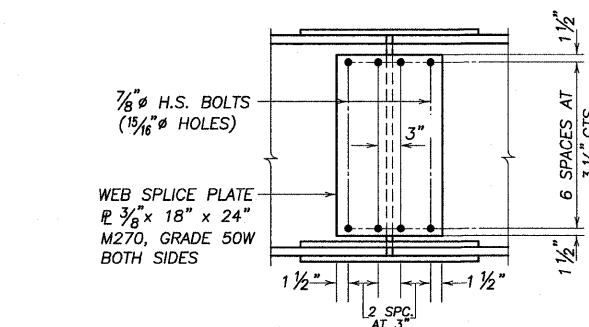
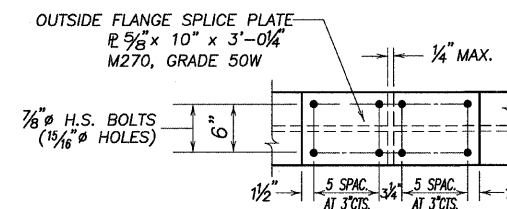


OUTSIDE ELEVATION

NOTE: SEE SEC A-A SHEET XX OF XX FOR 1 1/4" HOLE LOCATIONS IN WEB AT ENDS OF BEAM AND FOR STUD LOCATION ON TOP OF BOTTOM FLANGE AT ENDS OF BEAM.



SECTION F-F



DETAIL OF SPLICE
(ALL SPLICE PLATES N.T.R.)

FRAMING PLAN
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409

INTERIOR BEAM MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREA ONLY)

	0.4 SPAN 1 or 3	PIER 1 or 2	0.5 SPAN 2
I_s (in ⁴)	2850	2850	2850
I_c (in ⁴)(n)	9367		9367
I_c (in ⁴)(3n)	6705		6705
S_s (in ³)	213	213	213
S_c (in ³)(n)	348		348
S_c (in ³)(3n)	310		310
Q (k/ft.)	0.682	0.682	0.682
M_Q (ft.-k)	72	148	83
s_Q (k/ft.)	0.28	0.28	0.28
$M_s Q$ (ft.-k)	30	61	34
M_{LL} (ft.-k)	214	179	234
M_{IMP} (ft.-k)	64	52	66
$\frac{5}{3}(M_{LL} + M_{IMP})$ (k)	463	385	500
M_a (ft.-k)	735	772	802
M_u (ft.-k)			
$f_s Q$ (non-comp)(ksi)	4.0	8.3	4.7
$f_s Q$ (comp)(ksi)	1.0		1.2
$f_s \frac{5}{3} (LL + I)$ (ksi)	16.0	21.7	17.2
f_s (overload)(ksi)	21.0	30.0	23.1
f_s (total)(ksi)	27.3	39.0	30.0
VR (k)			

INTERIOR BEAM REACTION TABLE

	ABUTMENTS	PIERS
R_Q (k)	12.8	50.7
R_{LL} (k)	28.5	43.3
R_{IMP} (k)	15.1	22.8
R_{TOTAL} (k)	56.4	116.8

M_u = FULL PLASTIC MOMENT CAPACITY FOR COMPACT, BRACED SECTION.

M_a = (APPLIED MOMENT) = $1.3 [M_Q + M_s Q + \frac{5}{3} (M_{LL} + I)]$

I_s AND S_s ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING f_s (TOTAL AND OVERLOAD).

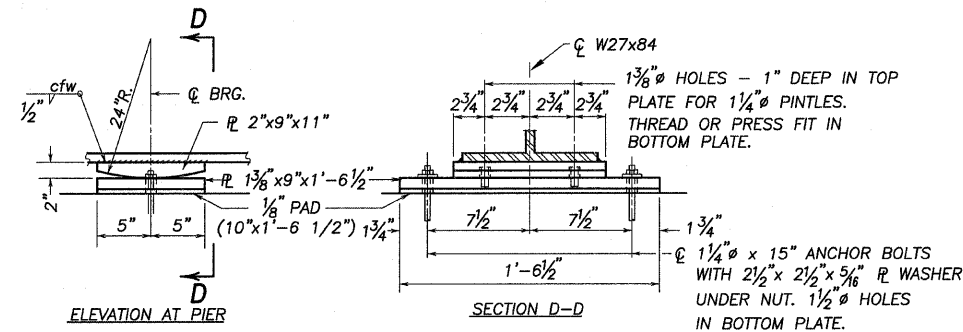
I_c AND S_c ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s (TOTAL AND OVERLOAD).

VR IS THE MAXIMUM Q + IMPACT SHEAR RANGE IN SPAN.

THE FULLY PLASTIC MOMENT CAPACITY (M_u) IS COMPUTED ACCORDING TO AASHTO 10.48.1 & 10.50.1.1.

f_s (TOTAL) IS THE SUM OF THE STRESSES DUE TO $1.3 [M_Q + M_s Q + \frac{5}{3} (M_{LL} + I)]$.

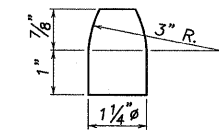
f (OVERLOAD) IS THE SUM OF THE STRESSES DUE TO $M_Q + M_s Q + \frac{5}{3} (M_{LL} + I)$.



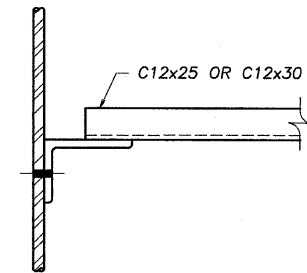
FIXED BEARING - PIERS NO. 1 & 2

(10 REQUIRED.)

* 1/8" REINFORCED ELASTOMERIC NEOPRENE PAD COST INCLUDED WITH STRUCTURAL STEEL.

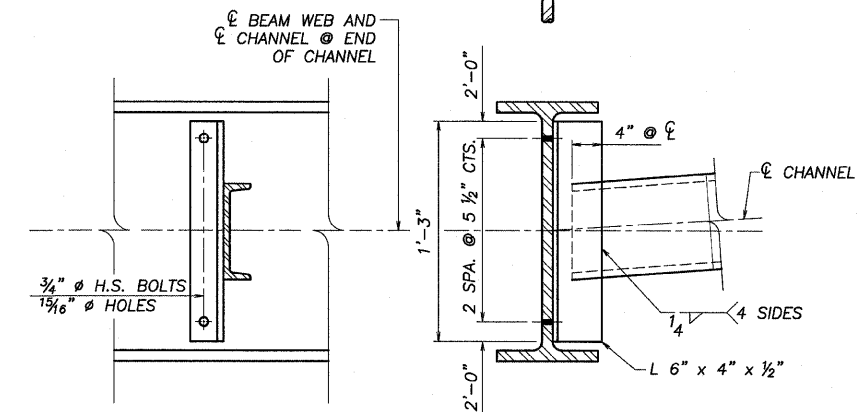


DETAIL OF PINTLE



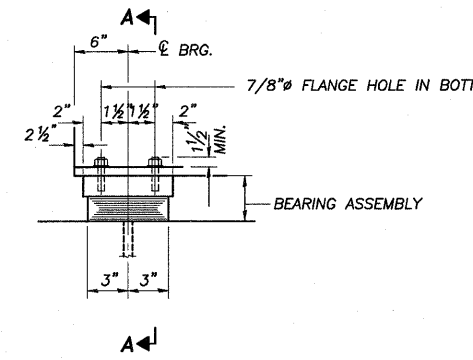
PROPOSED TOP OF BEAM ELEVATIONS

LOCATION \ BEAM No.	1	2	3	4	5
Q BRG. W. ABUT.	821.544	821.641	821.739	821.837	821.934
Q BRG. PIER #1	821.544	821.641	821.739	821.837	821.934
Q BRG. PIER #2	821.544	821.641	821.739	821.837	821.934
Q BRG. E. ABUT.	821.544	821.641	821.739	821.837	821.934

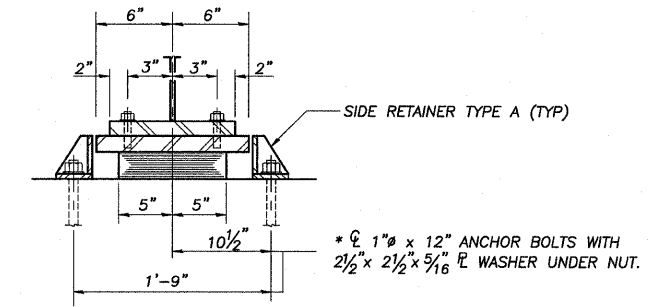


NOTE: TWO HARDENED WASHERS REQUIRED FOR EACH SET OF OVERIZED HOLES.

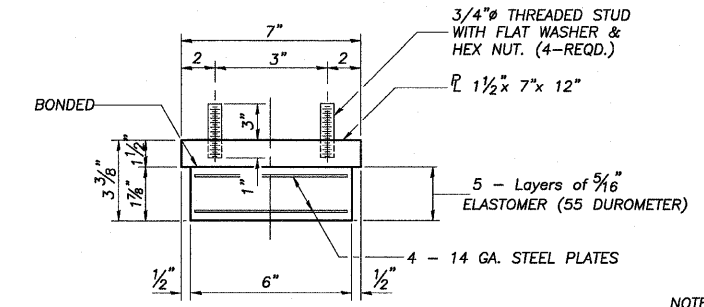
INTERIOR DIAPHRAGM



ELEVATION



SECTION A-A

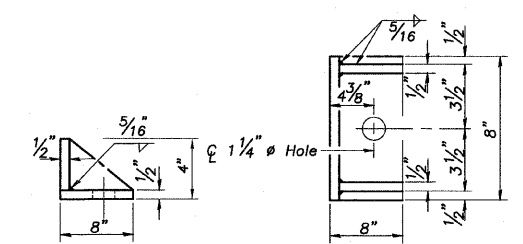


BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.
 *Lengths shown are the required total lengths for the Illinois Coil Anchor Bolts.

NOTE: THE STRUCTURAL STEEL BEARING PLATES OF THE ELASTOMERIC BEARING ASSEMBLY SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GRADE 50.

TYPE I ELASTOMERIC EXPANSION BRG. - ABUTS.
 (10 REQUIRED)



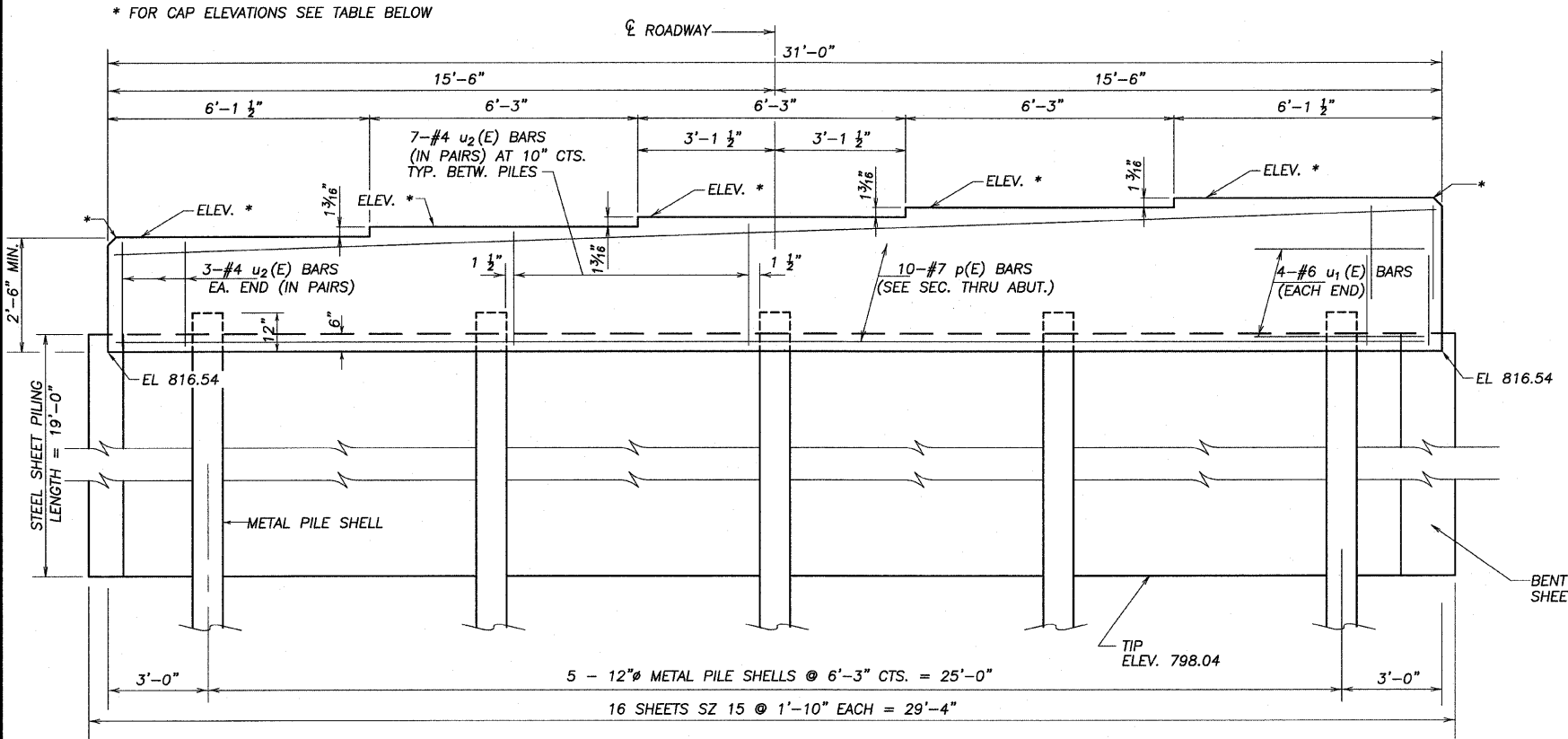
SIDE RETAINER - TYPE A

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
 (20 REQUIRED)

BILL OF MATERIAL

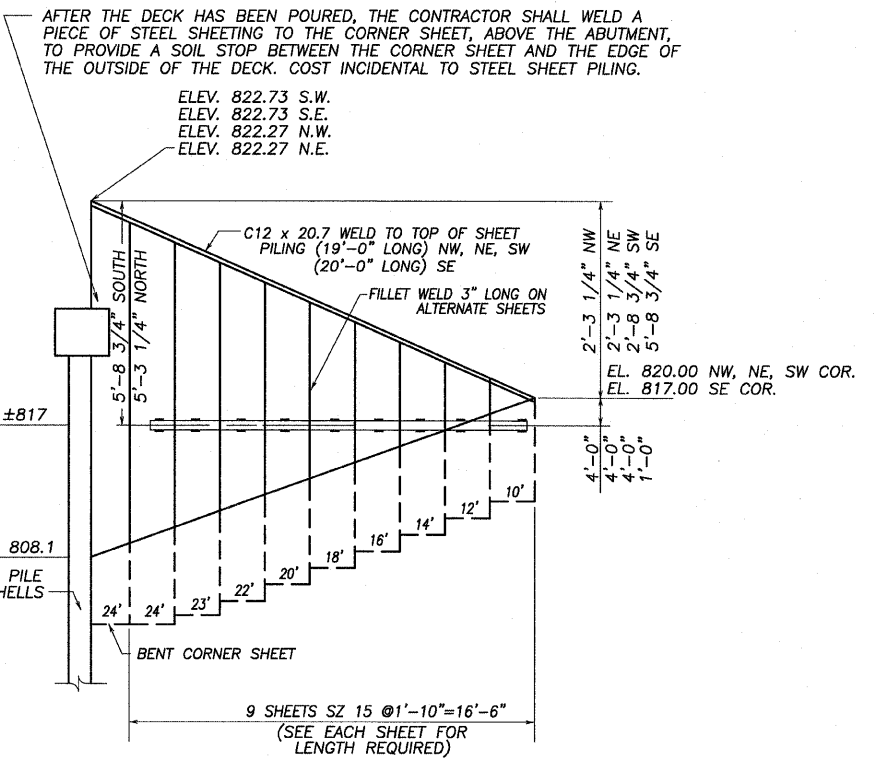
ITEM	UNIT	TOTAL
Elastomeric Bearing Assembly Type I	EACH	10

ELASTOMERIC BEARING TYPE I DETAILS
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY
 S.N. 019-4409

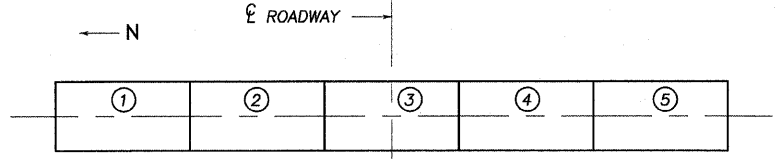


ELEVATION

ALL HORIZONTAL DIMENSIONS ARE ALONG CENTERLINE OF CAP
*FOR CAP ELEVATIONS, SEE TABLE BELOW

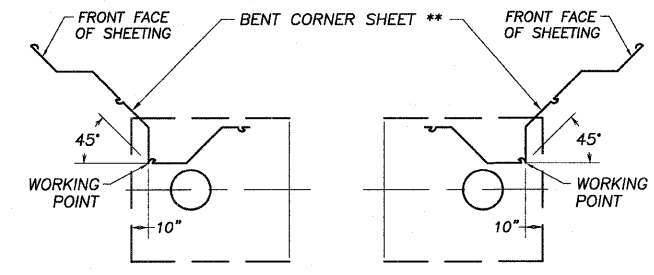


WINGWALL ELEVATION



LOCATION	ELEV.	①	②	③	④	⑤
EAST ABUT.	819.037	819.134	819.232	819.330	819.427	
WEST ABUT.	819.037	819.134	819.232	819.330	819.427	

ELEVATION TOP OF ABUTMENT CAP



DETAIL "A"

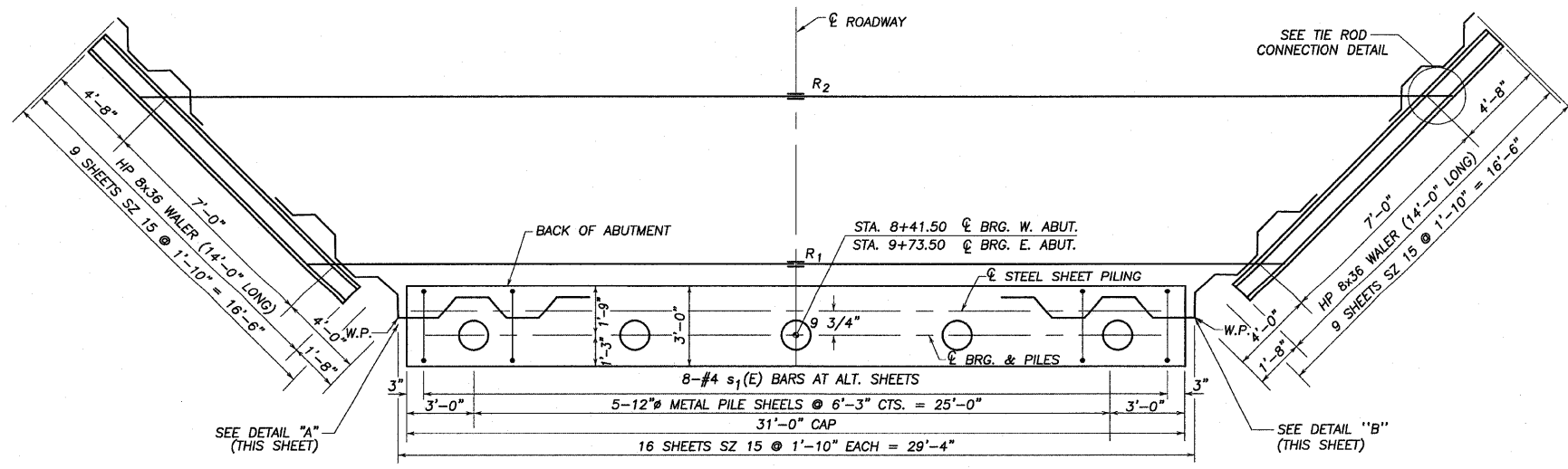
DETAIL "B"

** AFTER THE CORNER SHEETS ARE DRIVEN TO GRADE AND BEFORE THE DECK IS FORMED, THE CONTRACTOR SHALL NOTCH THE BENT CORNER SHEET TO FIT THE END OF DECK.

BILL OF MATERIAL - ABUTMENTS

BAR	NO.	SIZE	LENGTH	SHAPE	
p(E)	20	#7	30'-8"	—	
s ₁ (E)	16	#4	6'-10"	□	
u ₁ (E)	16	#6	11'-7"	□	
u ₂ (E)	136	#4	6'-0"	□	
CONCRETE STRUCTURES				CU. YD.	18.2
REINFORCEMENT BARS, EPOXY COATED				LBS.	2150
FURNISHING METAL SHELL PILES - 12"Ø				FOOT	316
DRIVING PILES				FOOT	316
TEST PILE METAL SHELL PILES - 12"Ø				EACH	2
STEEL SHEET PILING				SQ. FT.	2457
HARDWARE				LBS.	940

REINFORCEMENT BARS INDICATED (E) SHALL BE EPOXY COATED. WEIGHT OF WALERS & CHANNELS INCLUDED IN QUANTITY OF M270 GRADE 36. (SEE GENERAL NOTES BR. SHEET 1)



PLAN

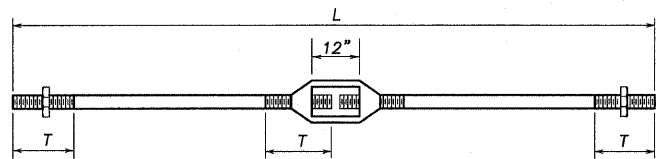
PILE DATA INFORMATION

TYPE AND SIZE: METAL SHELL 12" DIA. x 0.179 IN. WALLS
 NOMINAL REQUIRED BEARING: 204 KIPS
 ALLOWABLE RESISTANCE AVAILABLE: 68 KIPS

	WEST ABUTMENT	EAST ABUTMENT
NO. REQUIRED :	4+1 TEST PILE	4+1
EST. LENGTH:	39'	40'
MIN. PENETRATION	15' BELOW STREAMBED	
METAL SHELL PILES SHALL BE ACCORDING TO	ASTM A252 GRADE 3.	

THE TEST PILE SHALL BE DRIVEN TO 110 PERCENT OF THE NOMINAL REQUIRED BEARING INDICATED IN THE PILE DATA INFORMATION.

SUBSTRUCTURE - ABUTMENTS
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY
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ROD DETAILS

ROD DETAILS & DIMENSIONS

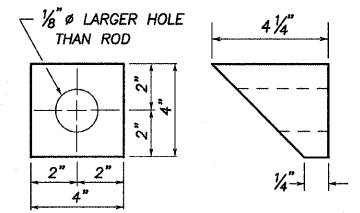
RODS	SIZE	NO.	L	T	TURN-BUCKLE	EACH ROD		NUT
						BEVELED WASHERS	SIZE	
R ₁	1 1/4" ø	2	38'-6"	12"	1 1/4" ø	4"x4"x *	2	2
R ₂	1 1/4" ø	2	48'-6"	12"	1 1/4" ø	4"x4"x *	2	2

*SEE DETAIL THIS SHEET

BILL OF HARDWARE

ITEM	NO.	SIZE
ROD R ₁	2	1 1/4" x 38'-6"
ROD R ₂	2	1 1/4" x 48'-6"
BEVELED WASHERS	8	4"x4"x *
NUTS FOR RODS	8	1 1/4"
TURNBUCKLES	4	1 1/4"

*SEE DETAIL THIS SHEET



BEVELED WASHER DETAIL
(8 REQUIRED)

SUBSTRUCTURE NOTES

AFTER THE ABUTMENT PILES ARE IN PLACE, THE CONTRACTOR SHALL START STEEL SHEET PILE DRIVING OPERATIONS WITH A BENT CORNER SHEET AT THE LOCATION SHOWN, OR BY MAKING AN ACCURATE LAYOUT OF THE WALL BEFORE STARTING, SO THAT ALL SHEETS, WALERS AND RODS WILL FIT AS PLANNED.

AFTER THE DECK HAS BEEN POURED, THE CONTRACTOR SHALL WELD A PIECE OF STEEL SHEETING TO THE CORNER SHEET, ABOVE THE ABUTMENT, TO PROVIDE A SOIL STOP BETWEEN THE CORNER SHEET AND THE EDGE OF THE OUTSIDE DECK. COST SHALL BE INCIDENTAL TO STEEL SHEET PILING.

HARDWARE ITEMS SHALL BE HOT-DIPPED GALVANIZED AND ARE INCLUDED FOR PAYMENT PER POUND OF HARDWARE. ALL OTHER MATERIAL AND LABOR REQUIRED FOR THE INSTALLATION OF HARDWARE SHALL BE INCIDENTAL TO THE CONTRACT.

AFTER THE WING SHEET PILING IS IN PLACE, HOLES SHALL BE DRILLED (NOT BURNT) IN THE WING SHEETING AND WALERS FOR PASSAGE OF TIERODS.

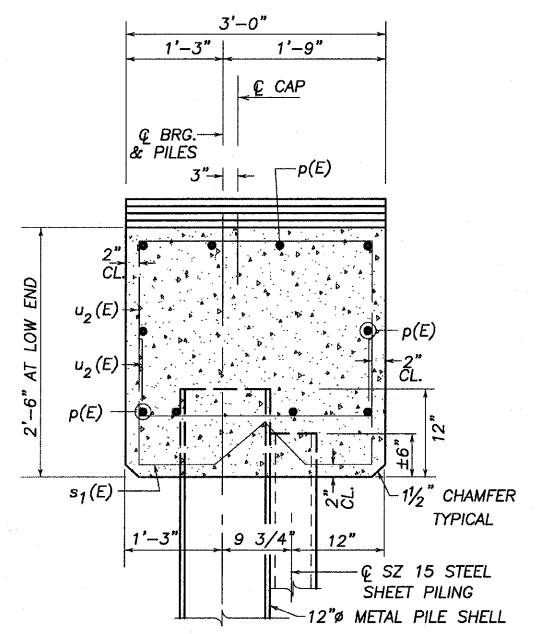
WALERS & CHANNEL SECTIONS ARE ALL INCLUDED FOR PAYMENT PER POUND OF FURNISHING AND ERECTING STRUCTURAL STEEL. WALERS SHALL HAVE 3/8 INCH DRAINAGE HOLES AT 24 INCH CTS. ALONG CENTERLINE OF WEB.

ALL RODS, NUTS, WASHERS, AND WALERS SHALL BE IN PLACE AND PROPERLY SECURED BEFORE BACKFILLING SHALL BEGIN.

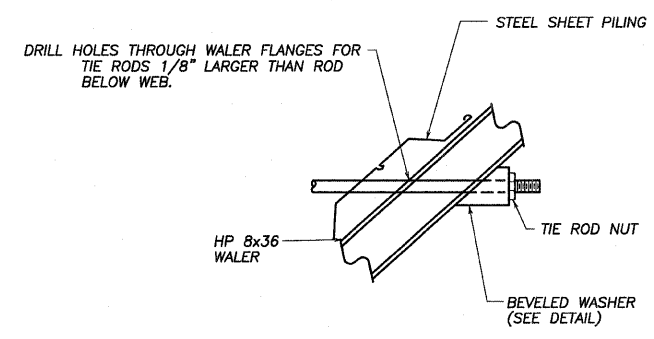
BACKFILL SHALL BE PLACED BEHIND THE ABUTMENT AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.

ALL EXPOSED WALERS AND CHANNELS SHALL BE PRIMED IN THE SHOP WITH AN INORGANIC ZINC RICH PRIMER PER AASHTO M300, TYPE 1. NO FIELD PAINTING SHALL BE REQUIRED.

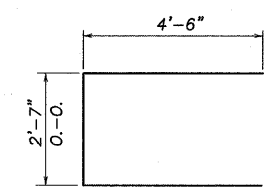
STEEL SHEET PILING SHALL BE NEW SZ 15 OR APPROVED EQUAL PILING WITH AN EFFECTIVE SECTION MODULUS EQUAL TO OR GREATER THAN 10.9 IN.³/FT. SEE SPECIAL PROVISION FOR "PERMANENT STEEL SHEET PILING."



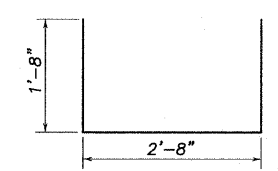
SEC. THRU ABUT.
(AT RIGHT ANGLES)



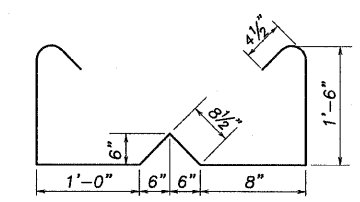
TYPICAL TIE ROD CONNECTION DETAIL



BAR u₁(E)

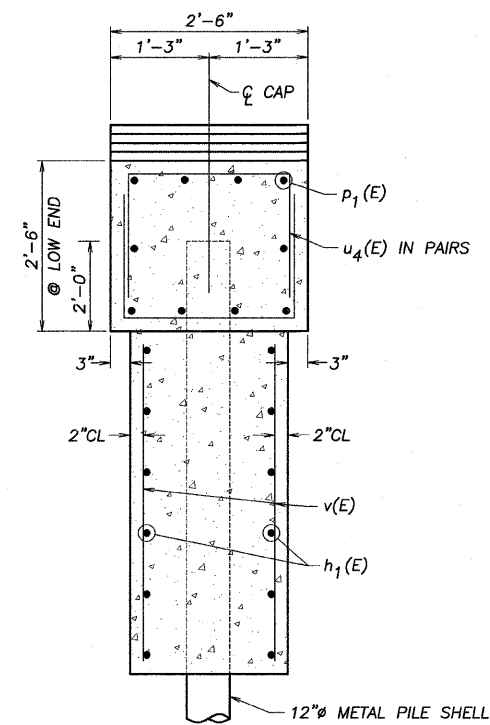
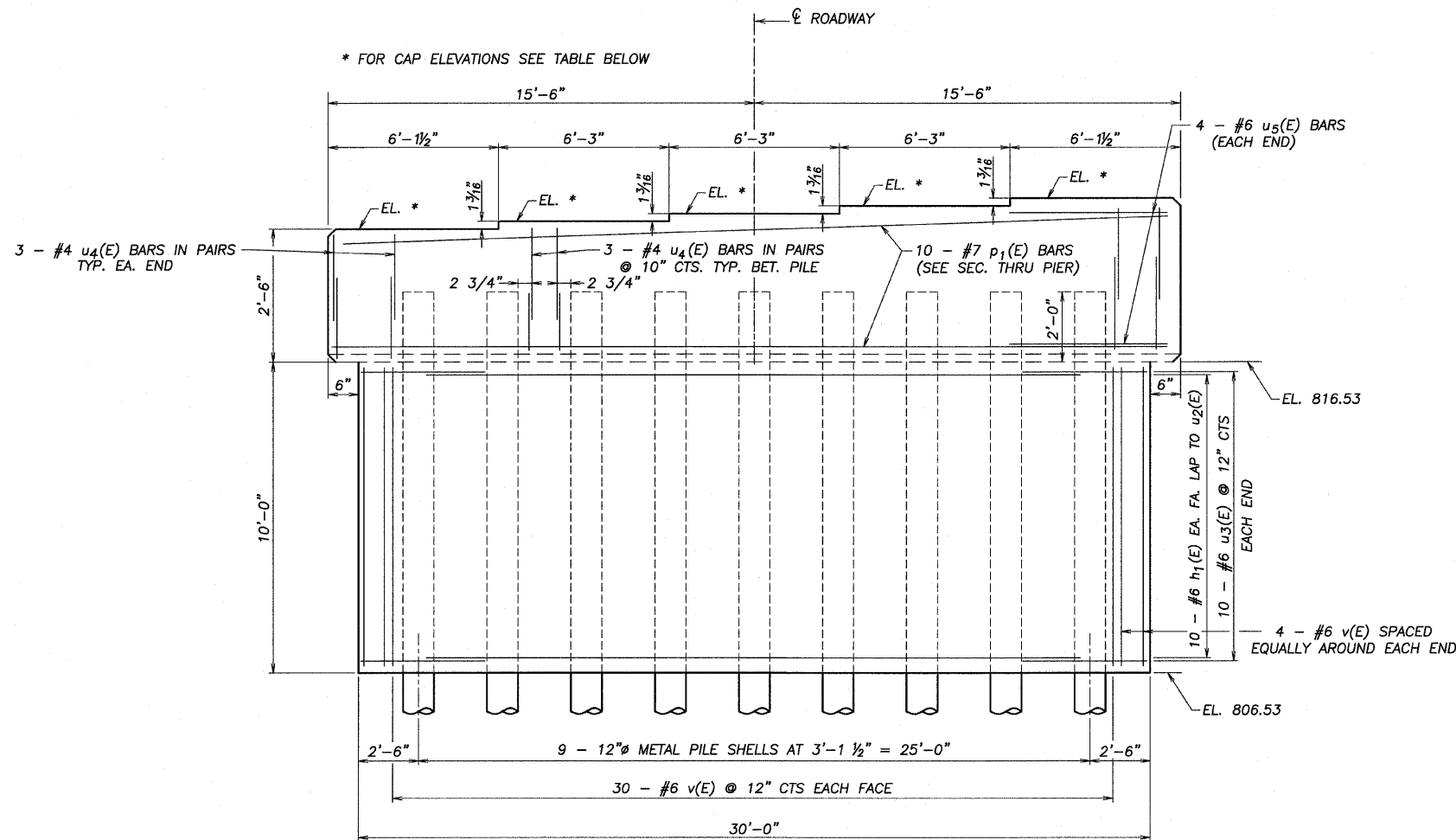
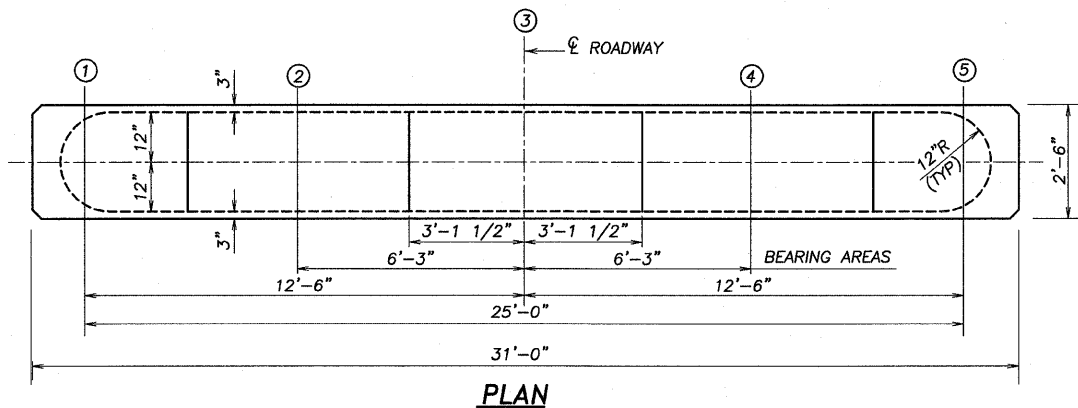


BAR u₂(E)



BAR s₁(E)

ABUTMENT DETAILS
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409



BILL OF MATERIAL - PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h ₁ (E)	40	#6	25'-0"	—
p ₁ (E)	20	#7	30'-8"	—
u ₃ (E)	40	#6	11'-7"	U
u ₄ (E)	120	#4	5'-6"	U
u ₅ (E)	16	#6	11'-1"	U
v(E)	136	#6	9'-8"	—
CONCRETE STRUCTURES			CU. YD.	53.0
REINFORCEMENT BARS, EPOXY COATED			LBS.	6130
FURNISHING METAL SHELL PILES - 12"Ø			FOOT	664
TEST PILE METAL SHELL PILE - 12"Ø			EACH	2
DRIVING PILES			FOOT	664

REINFORCEMENT BARS INDICATED (E) SHALL BE EPOXY COATED.
* INCLUDES WALERS & CHANNELS

PILE DATA INFORMATION

TYPE AND SIZE: METAL SHELL 12" DIA. x 0.179 IN. WALLS

NOMINAL REQUIRED BEARING: 216 KIPS

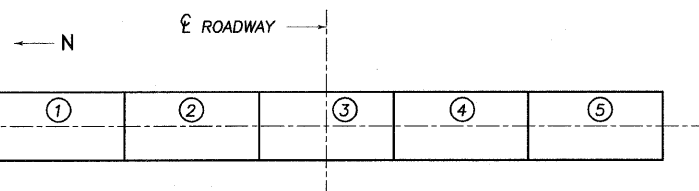
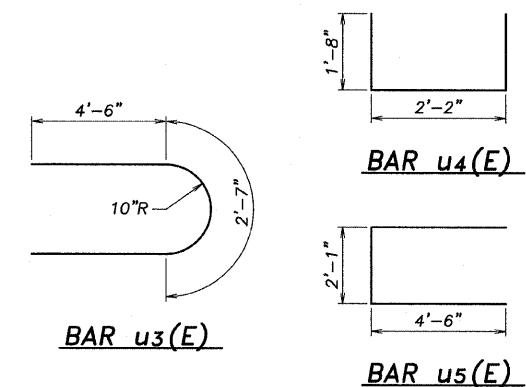
ALLOWABLE RESISTANCE AVAILABLE: 72 KIPS

	PIER 1	PIER 2
NO. REQUIRED :	8+1 TEST PILE	8+1
EST. LENGTH:	41'	42'

MIN. PENETRATION 15' BELOW STREAMBED

METAL SHELL PILES SHALL BE ACCORDING TO ASTM A252 GRADE 3.

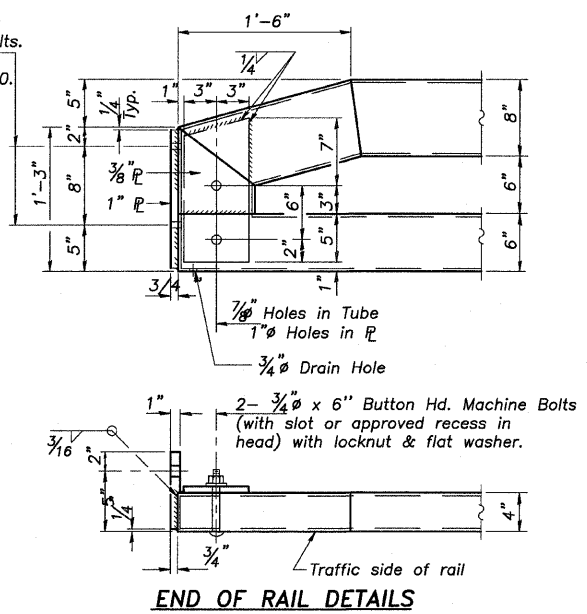
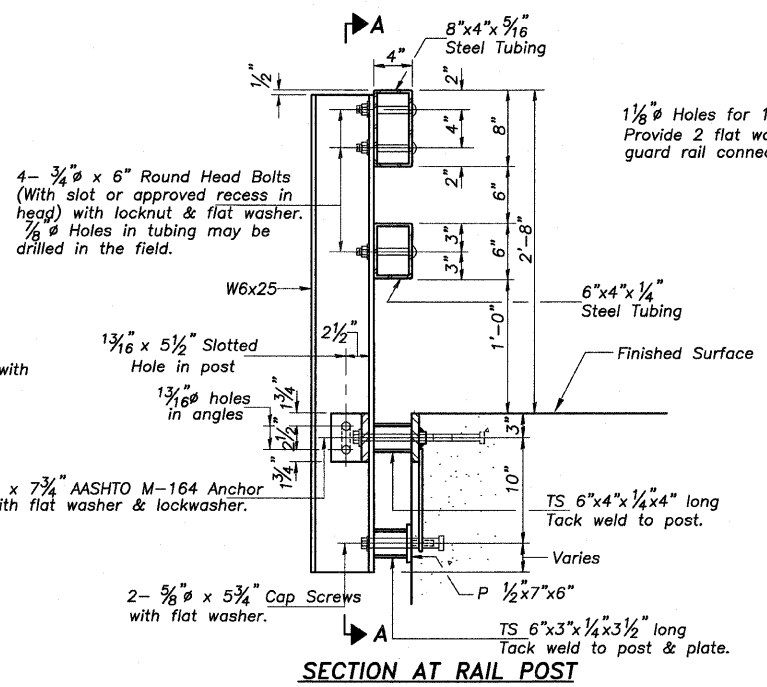
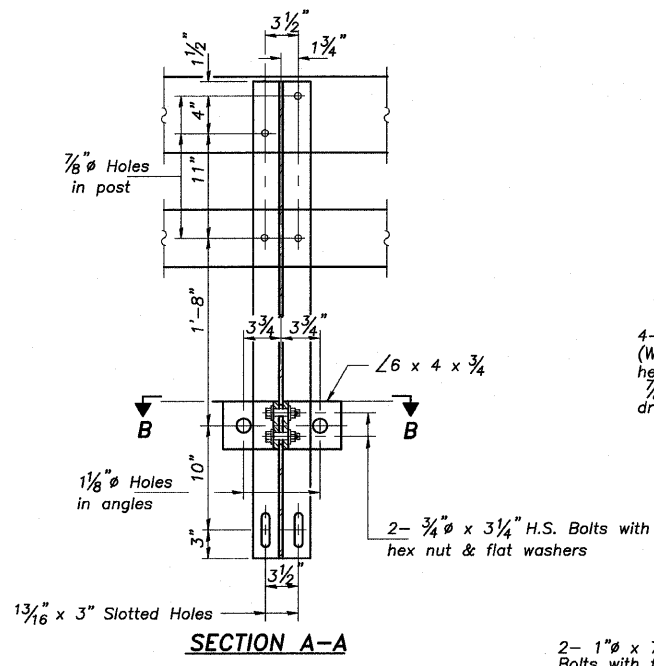
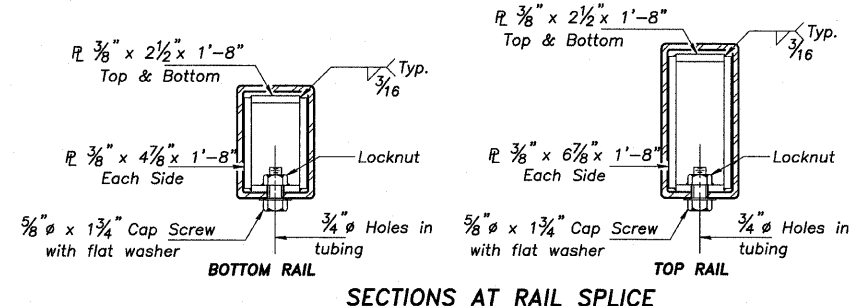
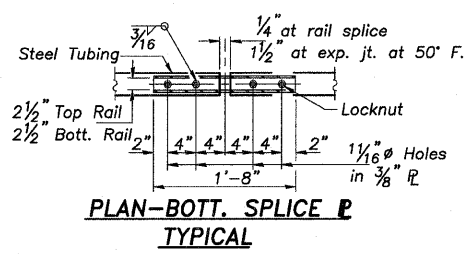
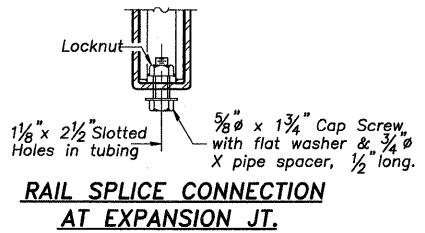
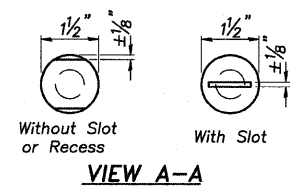
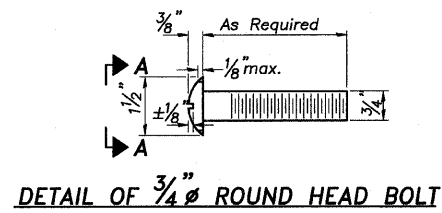
THE TEST PILE SHALL BE DRIVEN TO 110 PERCENT OF THE NOMINAL REQUIRED BEARING INDICATED IN THE PILE DATA INFORMATION.



LOCATION	ELEV.	①	②	③	④	⑤
PIER NO. 1		819.027	819.124	819.222	819.320	819.417
PIER NO. 2		819.027	819.124	819.222	819.320	819.417

ELEVATION TOP OF PIER CAP

PIERS
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409



GENERAL NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

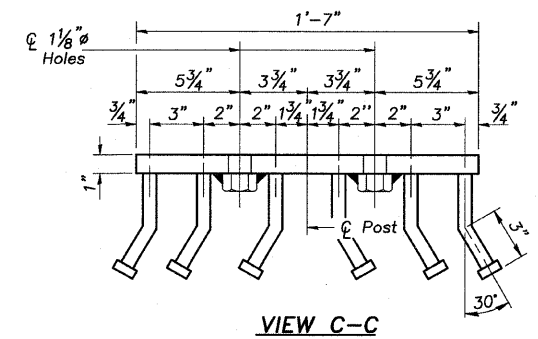
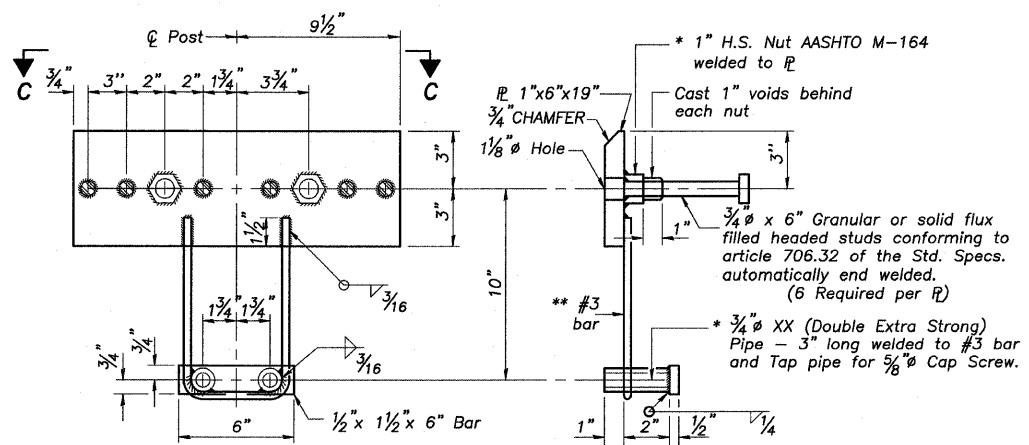
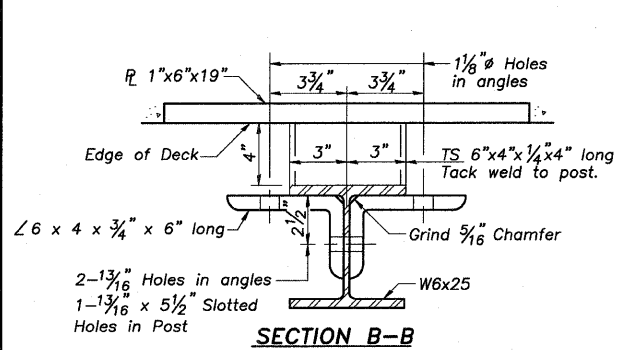
Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL BRIDGE RAIL, TYPE SM.

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

For multi-span PPC Deck bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to STEEL BRIDGE RAIL, TYPE SM.

Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 505.04(f)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	271

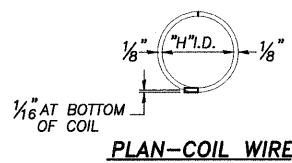
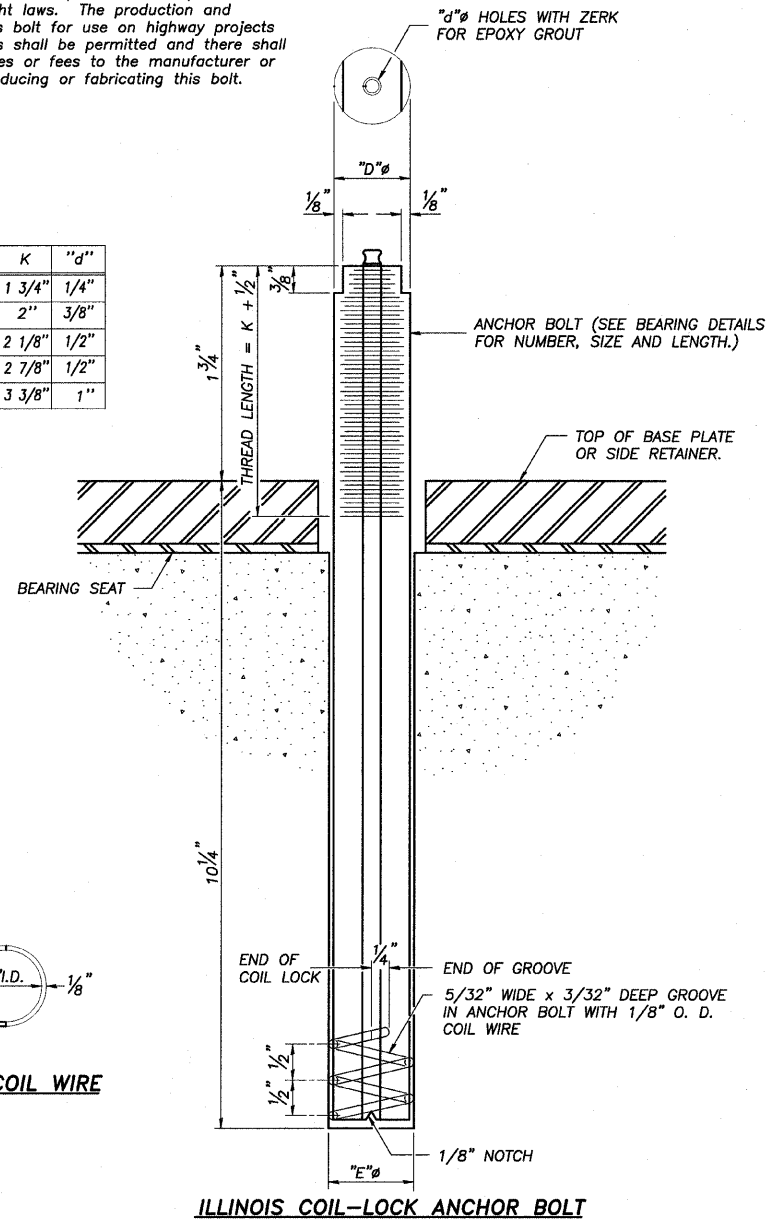
TYPE SM
STEEL BRIDGE RAIL SIDE MOUNTED
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY
 SN 019-4409

* 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 1/2".

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE FOR THE ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

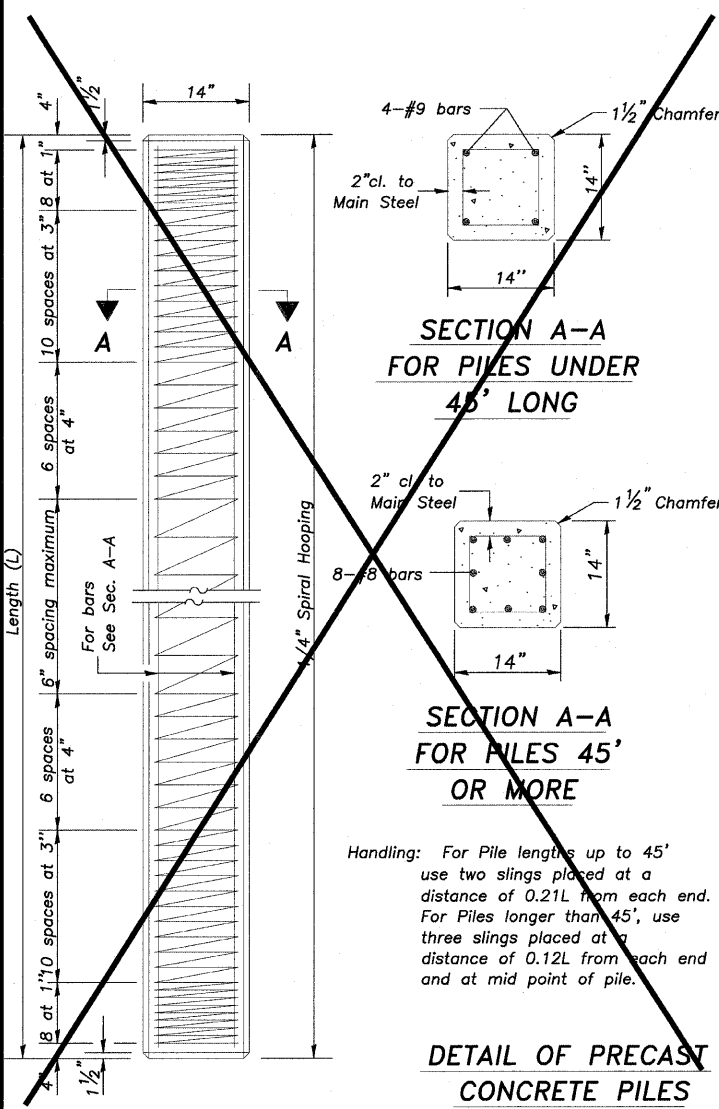
ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer conforming to ASTM A307.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

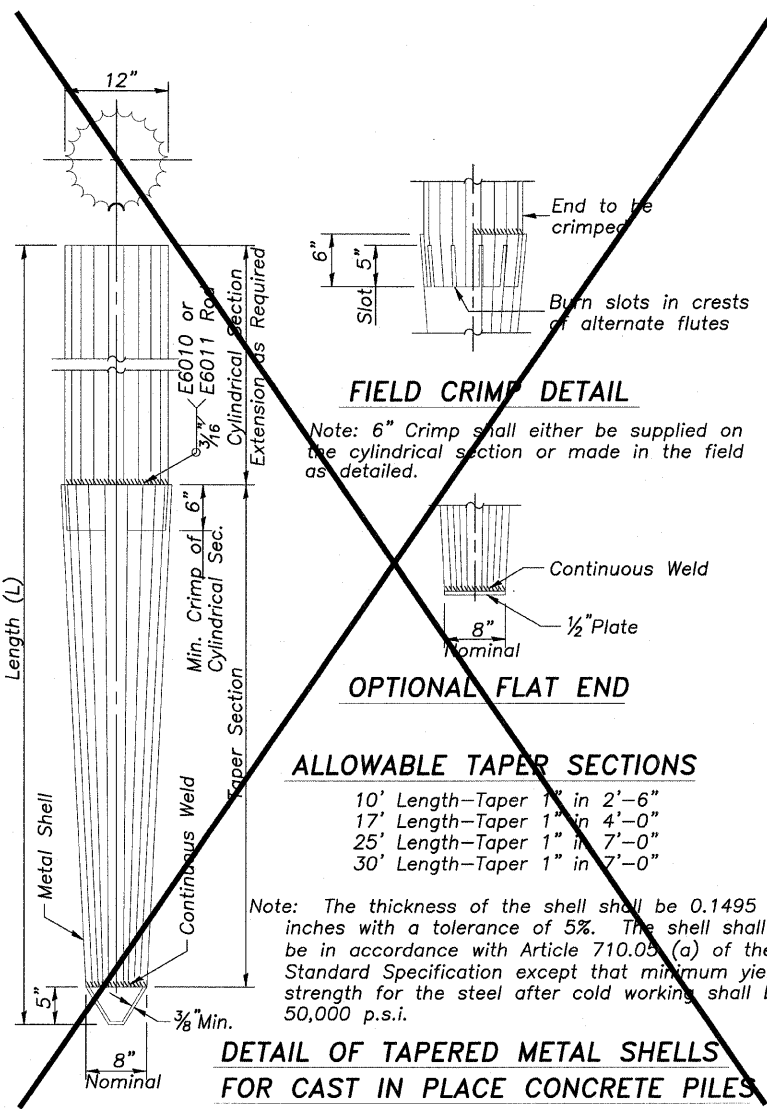
GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

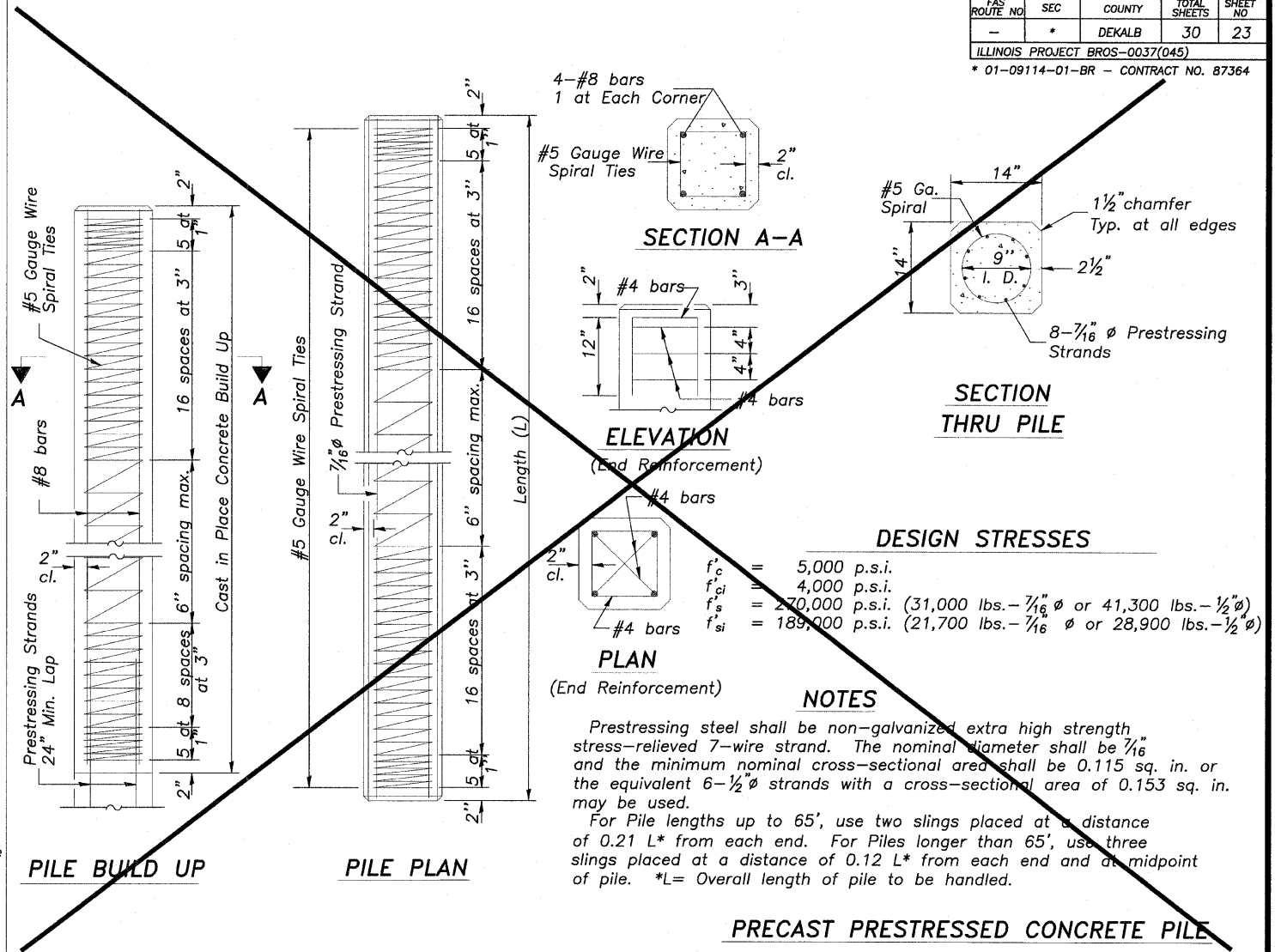
ANCHOR BOLT STANDARD
 SECTION 01-09114-00-BR
 NORTH GROVE ROAD
 DEKALB COUNTY
 S.N. 019-4409



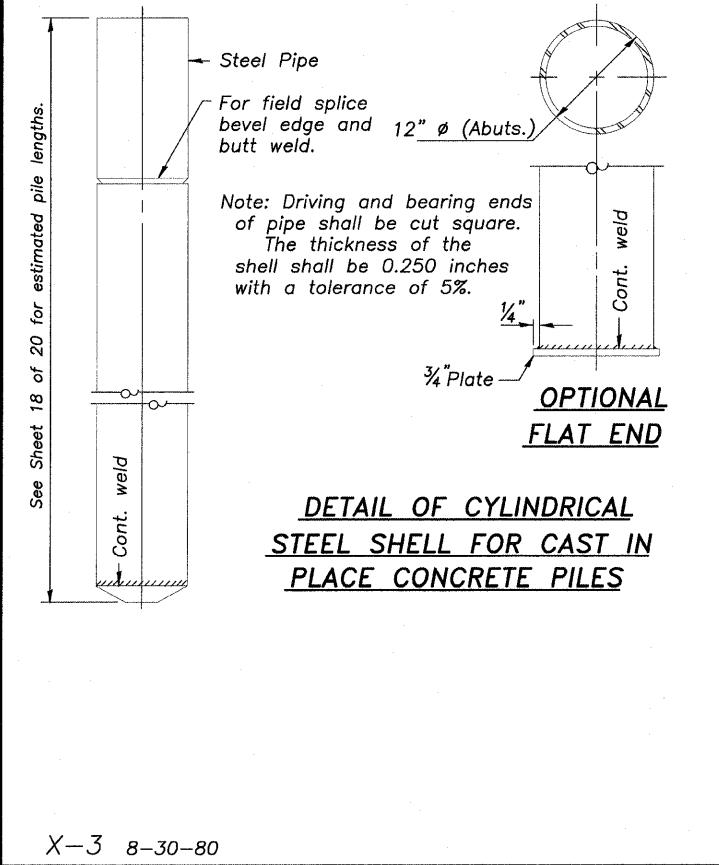
DETAIL OF PRECAST CONCRETE PILES



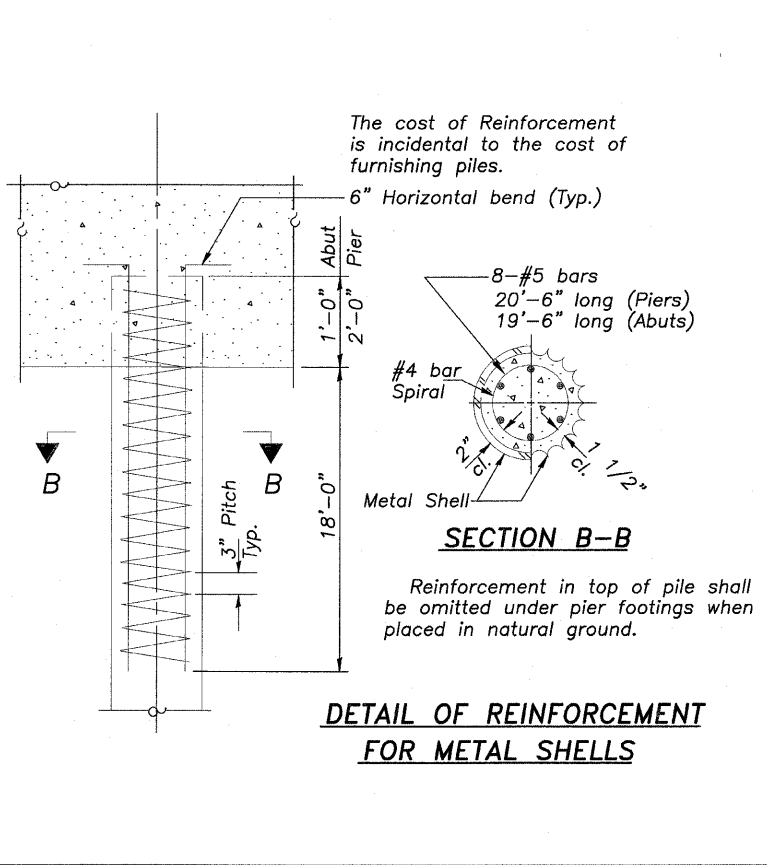
DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



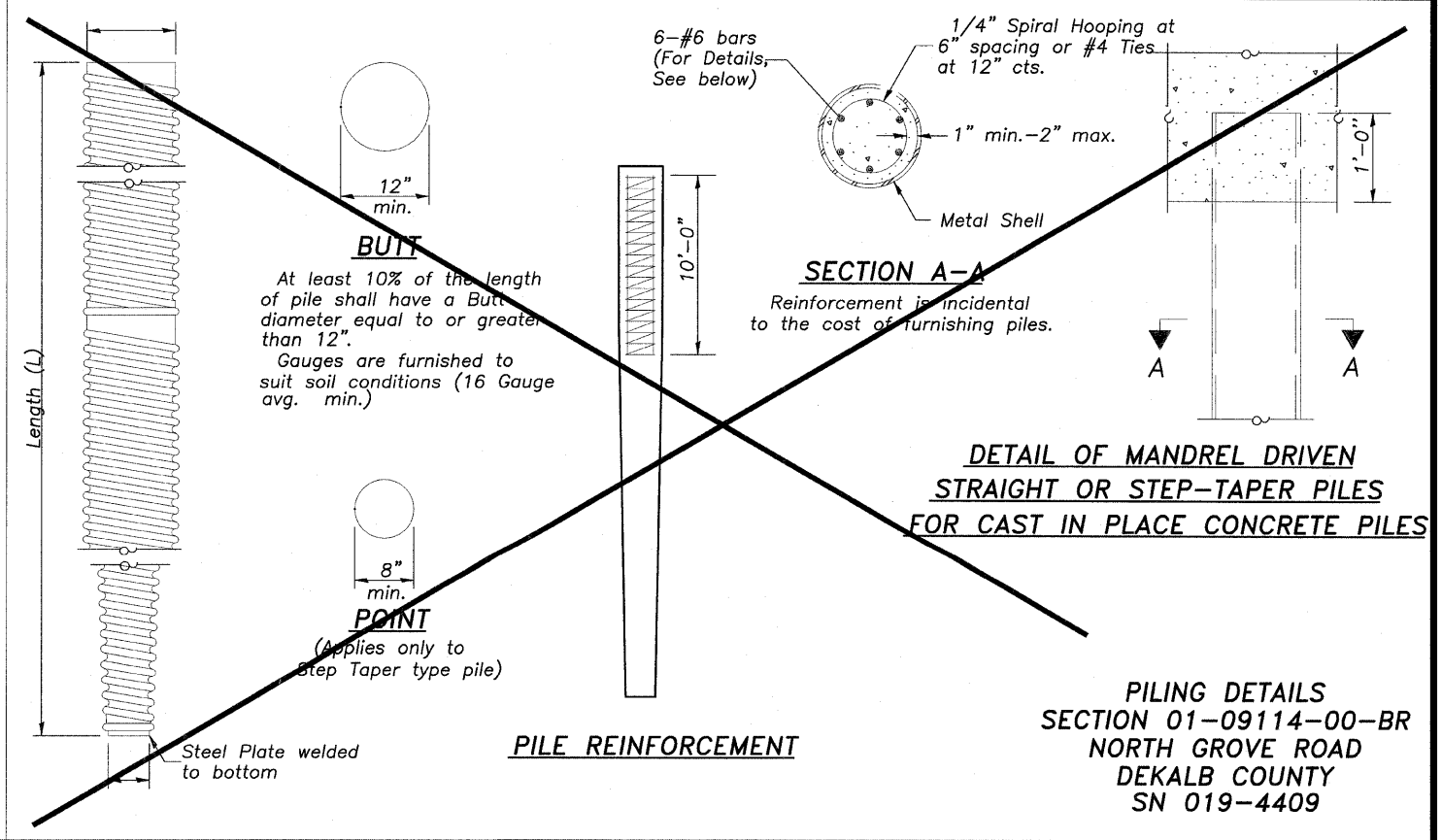
PRECAST PRESTRESSED CONCRETE PILE



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



DETAIL OF REINFORCEMENT FOR METAL SHELLS



PILE REINFORCEMENT

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

STORM WATER POLLUTION PREVENTION PLAN

1. THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO ASSIST THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.
2. THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.
3. CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.
4. THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIME FRAME SPECIFIED HEREIN, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLANS CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS SHOWN IN STANDARD 280001 OF THE PLANS.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. REMOVAL OF THE EXISTING BRIDGE STRUCTURE
2. EXCAVATION AND EMBANKMENT WILL BE COMPLETED ALONG THE JOB SITE TO GRADE OUT FOR THE ROADWAY ALIGNMENT AND CONSTRUCT EMBANKMENT AND DITCHES.
3. CONSTRUCTION OF NEW BRIDGE STRUCTURE.
4. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL, SUCH AS PERIMETER EROSION CONTROL BARRIER, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, TEMPORARY SEEDING, ETC.
5. FINAL GRADING, PAVING AND OTHER MISCELLANEOUS ITEMS.
6. PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS RIPRAP DITCH AND EROSION CONTROL BLANKET, SEEDING, ETC.

CONSTRUCTION SITE DESCRIPTION:

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 1.60 ACRES OF WHICH 1.60 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING AND OTHER ACTIVITIES.

CONTROLS : EROSION CONTROLS AND SEDIMENT CONTROL DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION

1. THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION AND OTHER APPROPRIATE MEASURES. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
 - a) AREAS OF EXISTING VEGETATION (WOOD AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.
 - b) DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED, ALONG WITH REQUIRED TREE REMOVAL.
 - c) AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, AND PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN.
 - d) BARE AND SPARSELY VEGETATED GROUND IN HIGH ERODABLE AREAS SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN DAYS.
 - e) IMMEDIATELY AFTER UTILITY INSTALLATION IS COMPLETED, AREAS WHICH ARE HIGHLY ERODABLE, SHALL BE TEMPORARILY SEEDED WHEN NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN DAYS.
 - f) AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE FROM OUTSIDE AREAS (ADJACENT LANDOWNERS), TEMPORARY DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE OF THE RIGHT OF WAY LINE.
2. ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND WILL SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING/MOWING AND OVERSEEDING CAN BE COMPLETED.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION

1. DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THESE AREAS FOR STAGING, PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.
 - a) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
 - b) EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN TWENTY- ONE DAYS.
 - c) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING:
 - i) PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
 - ii) TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
 - iii) MAINTAIN TEMPORARY EROSION CONTROL SYSTEMS.
 - d) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR 14 DAYS.
 - e) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
 - f) THE CONTRACTOR SHALL INSPECT THE PROJECT WEEKLY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE AFTER RAINS OF 0.5" INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING THE WINTER SHUTDOWN PERIOD.
 - g) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR PERIMETER EROSION BARRIER.
 - h) THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS REQUIRED AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

DESCRIPTION OF PRACTICES AFTER FINAL GRADING

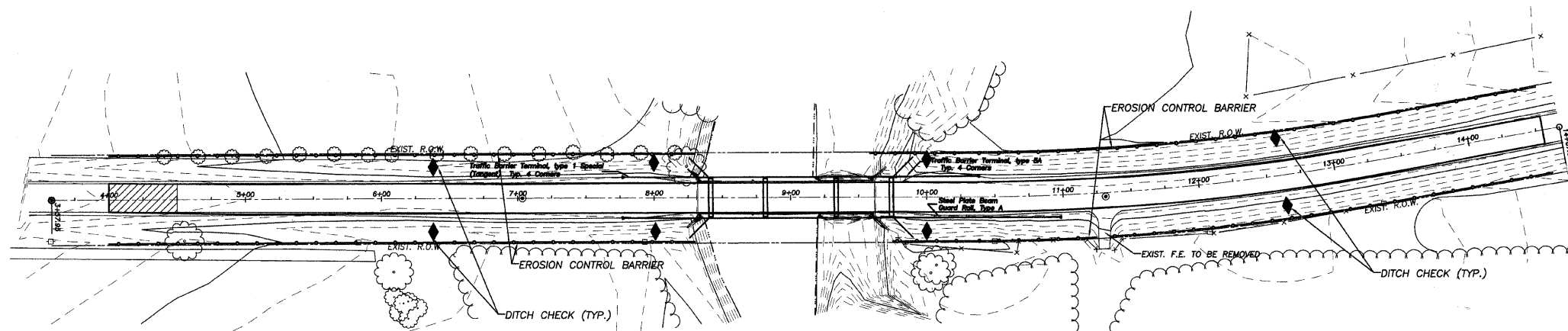
- 1) TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED.
- 2) ONCE PERMANENT EROSION CONTROL SYSTEMS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP AND DISTURBED TURF RESEDED.

MAINTENANCE AFTER CONSTRUCTION

- 1) CONSTRUCTION IS COMPLETE AFTER ACCEPTANCE BY OWNER MAINTENANCE UP TO THAT TIME SHALL BE BY THE CONTRACTOR.

MISCELLANEOUS

1. TEMPORARY DITCH CHECKS SHALL BE LOCATED AT LOCATIONS SHOWN ON THE PLANS AND PLACED IN ACCORDANCE WITH STANDARD 280001.
 2. TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 LBS/ACRES.
 3. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS, AS DIRECTED BY THE OWNER. THE COST OF THIS MAINTENANCE SHALL BE CONSIDERED INCIDENTAL.
 4. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE IN CONSTRUCTION INSPECTION.
- NOTE: ALL ITEMS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD 28001 AND AS DIRECTED BY THE ENGINEER. MAINTENANCE AND CLEANING OF THE EROSION CONTROL ITEMS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

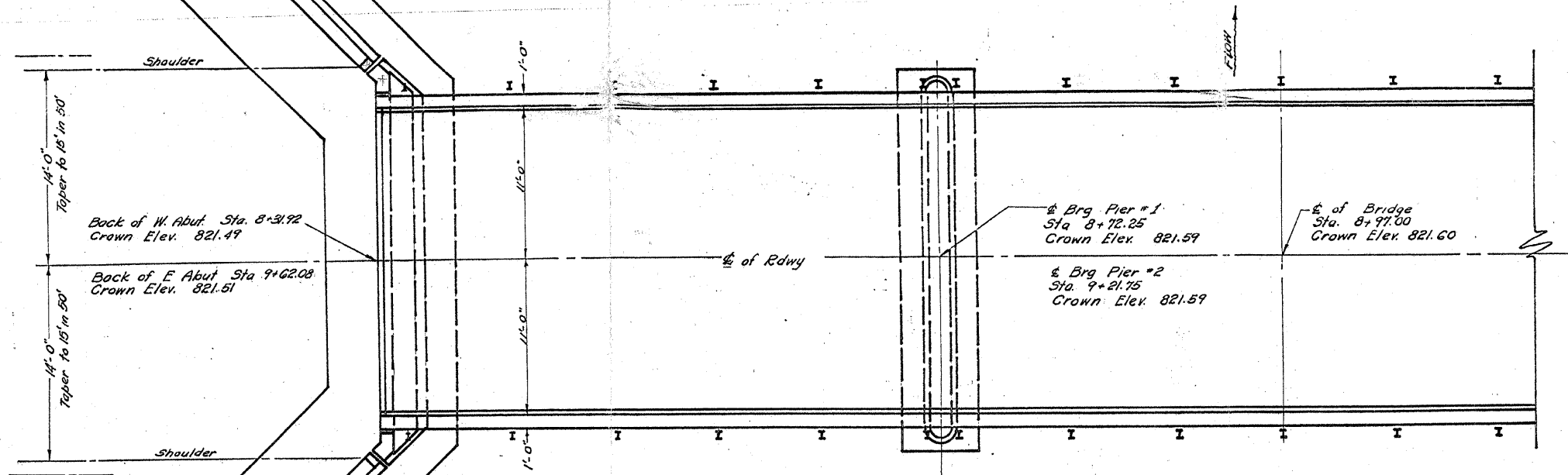
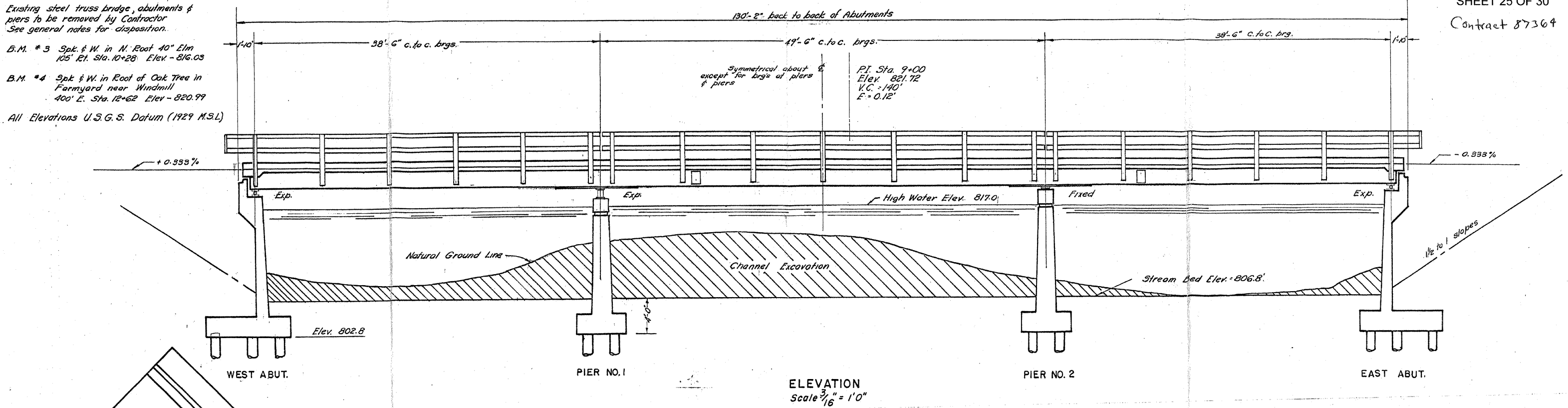


NOTE:
SOIL ALONG APPROACH ROADWAY
ELBURN (198) SILTY LOAM, SILTY CLAY LOAM
DEKALB COUNTY SOILS MAP

DEKALB COUNTY HIGHWAY DEPARTMENT
APPROVED *William Lorence* 2008
WILLIAM LORENCE, P.E.
DEKALB COUNTY ENGINEER

EROSION & SEDIMENT CONTROL PLAN
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY

Existing steel truss bridge, abutments & piers to be removed by Contractor. See general notes for disposition.
 B.M. #3 Spk. & W. in N. Root 40" Elm 105' Rt. Sta. 10+28 Elev. - 816.03
 B.M. #4 Spk. & W. in Root of Oak Tree in Farmyard near Windmill 400' E. Sta. 12+62 Elev. - 820.99
 All Elevations U.S.G.S. Datum (1929 M.S.L.)



GENERAL NOTES

Class X Concrete shall be used throughout except in Piers Class A Concrete shall be used in Piers
 The concrete floor slab shall be placed in one continuous operation, and finished in accordance with Art. 21.3 (c) of the Standard Specifications
 Structural grade reinforcement bars will not be permitted
 The Bridge Contractor shall drive two Untreated Test Piles as directed by the Engineer before furnishing the remainder of the piles. Test piles will be driven in permanent positions.
 All rollers, bearing plates, lead plates, pinners, and anchor bolts shall be finished, painted and set in accordance with Art. 54.3 (d) of the Standard Specifications and are included for payment as Structural Steel
 Anchor bolt shall be set before riveting diaphragms over Abut's or Piers
 Floor drains shall receive one shop coat of red lead paint and two field coats of Aluminum paint
 Structural Steel shall be inspected by Illinois Division of Highways before painting
 All Structural Steel shall receive one shop coat of red lead paint after inspection and shall receive two field coats of Aluminum paint
 All paint shall be furnished and applied by the Contractor
 All connections shall be riveted unless otherwise noted and all rivets shall be open holes 1/4" except as noted
 All splices for stringers shall have rivet holes punched 1/4" and reamed to required size with all stringers of a continuous unit assembled in the shop in their position with or without diaphragms in place. Leave assembled for inspection
 The steel truss bridge, piers and abutments shall be removed by the Bridge Contractor. The existing road plank floor shall be removed by and shall remain the property of Mayfield Township. The contractor shall notify the Township Commissioner at his intent to dismantle the existing bridge at least 10 days prior to his commencing the dismantling. The salvage steel trusses and steel floor system removed by the Contractor shall be turned over to the Mayfield Township Commissioner. The Contractor shall cut the salvaged truss members into suitable lengths for handling, and shall stack the members so cut in orderly piles along the R.O.W. The existing steel floor system shall be dismantled by members and stored on the R.O.W. in an orderly manner and separate from truss members. Existing pier and abutments removed by the Contractor shall be disposed of in a manner satisfactory to the Engineer. This work shall be paid for at the unit price bid for "Removal of Existing Structure"
 Before constructing abutments, the Contractor shall excavate channel as shown on plan, profile and cross-section sheets.
 Backfill at abutments and piers to be in accordance with Sec 16 of the Standard Specifications

FOR INFORMATION ONLY

WATERWAY DATA
 Drainage Area 138,000 Acres
 Assumed "C" (Talbot) 0.17
 Req'd Effective Opening 1,220 Sq. Ft.

STRESSES
 $f_s = 18,000$ psi Structural
 $f_s = 20,000$ psi Reinforcement
 $f_c = 1,200$ psi Superstructure
 $f_c = 800$ psi Substructure
 $n = 10$

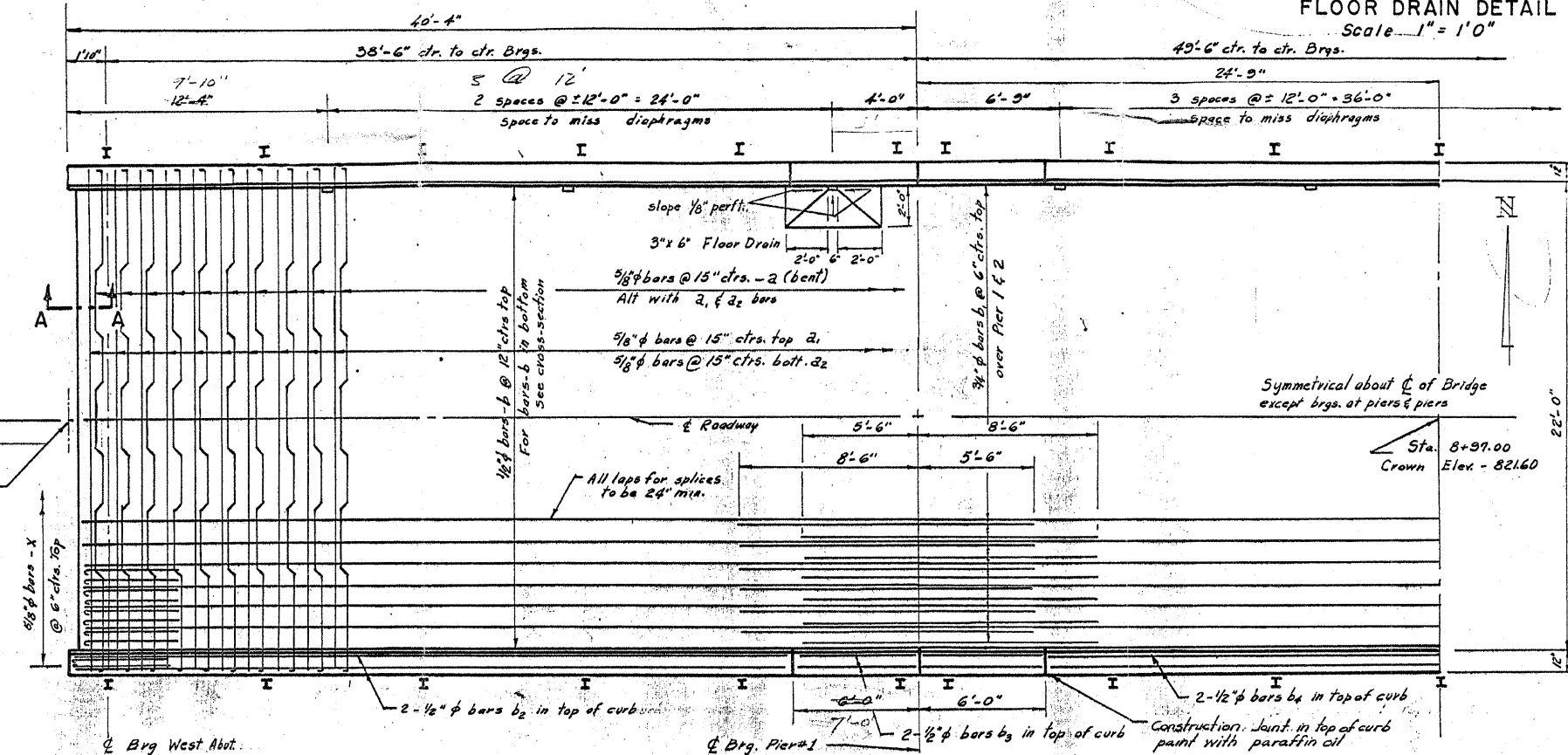
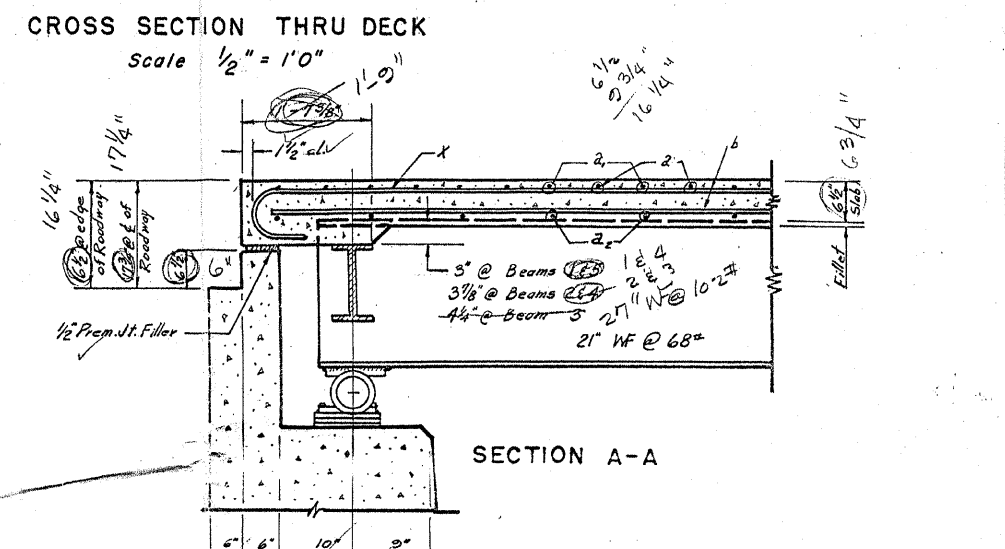
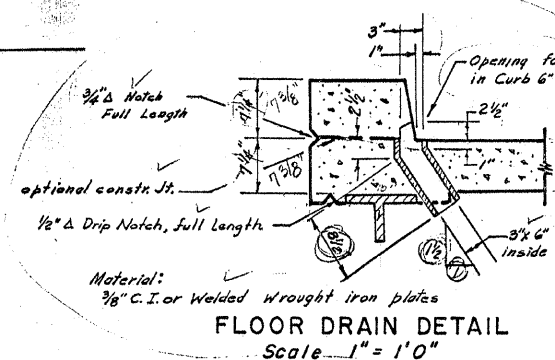
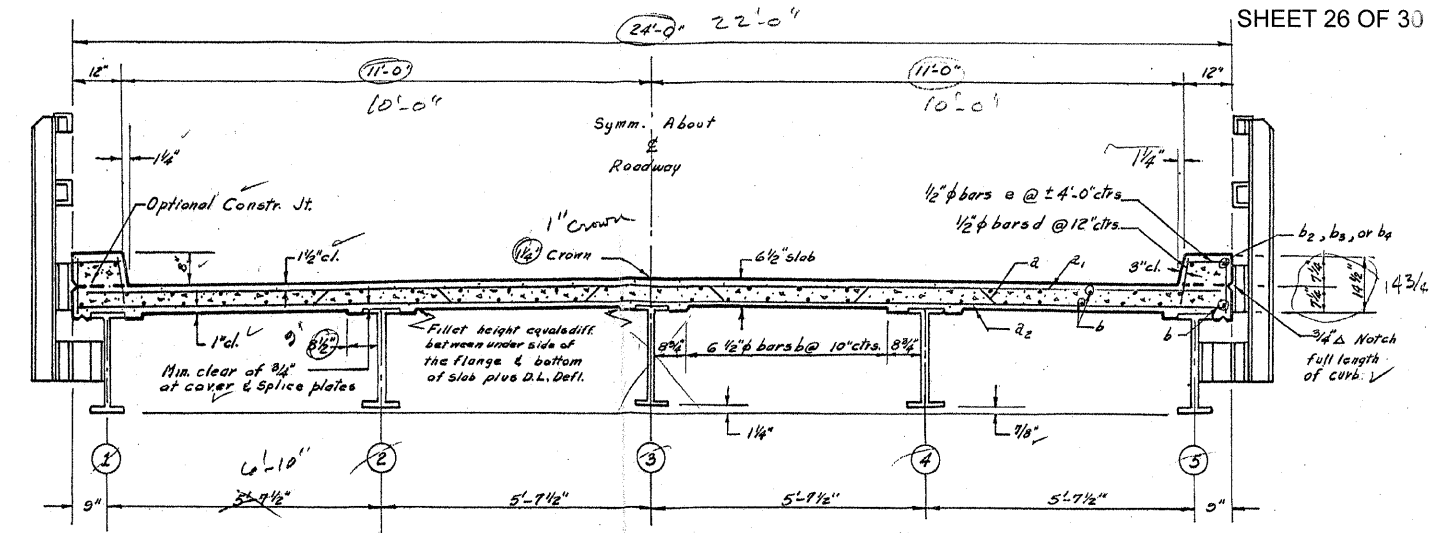
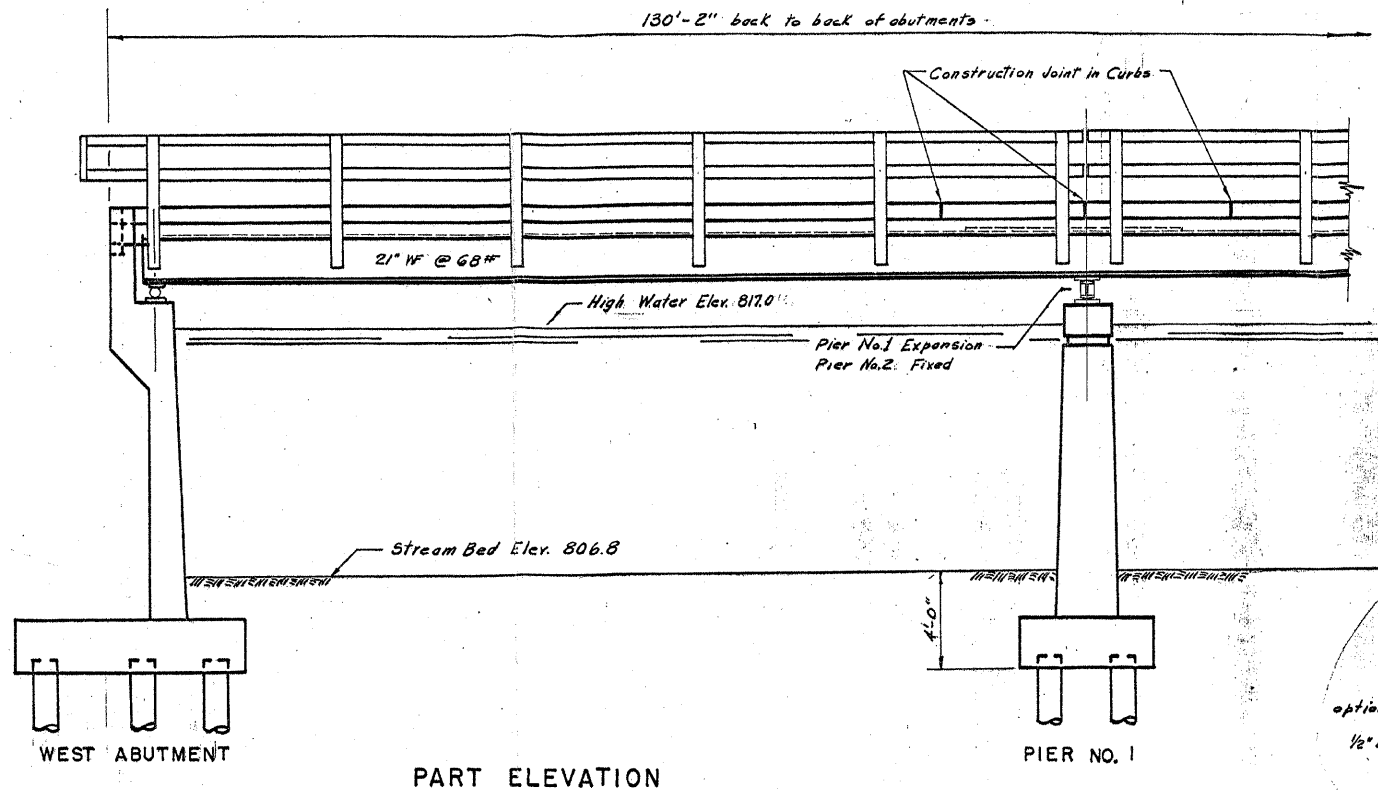
H-15 LOADING

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
CLASS X CONCRETE	CU. YDS.	71.2	175.0	246.2
CLASS A CONCRETE	CU. YDS.		72.6	72.6
REINFORCEMENT BARS	LBS.	15580	14080	29660
STRUCTURAL STEEL	LBS.	70580		70580
FLOOR DRAINS	EACH	20		20
FURNISH UNTREATED WOOD PILES (12") 15' LG	LIN. FT.		1620	1620
DRIVING UNTREATED WOOD PILES (12") 15' LG	LIN. FT.		1620	1620
UNTREATED WOOD TEST PILE	EACH		2	2
NAME PLATE	EACH	1		1
REMOVAL OF EXISTING STRUCTURE	EACH			1

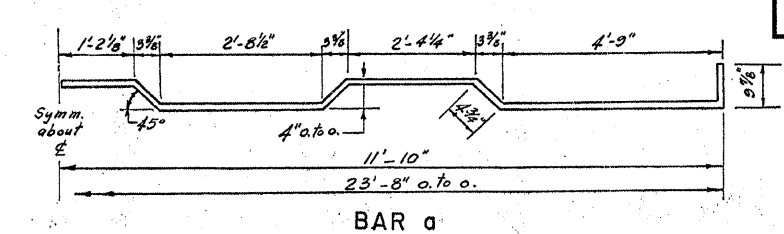
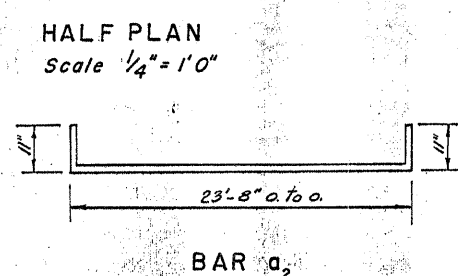
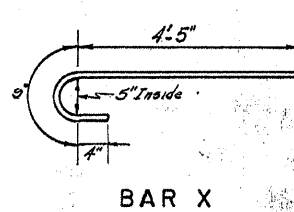
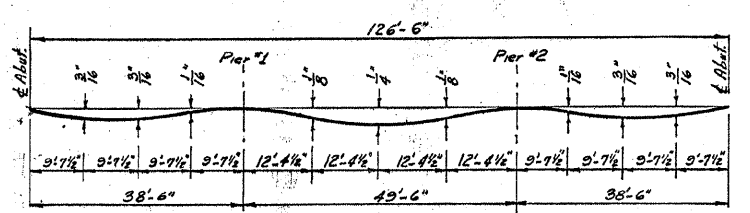
BRUSH POINT BRIDGE
 OVER
 KISHWAUKEE RIVER (SO. BRANCH)
 MAYFIELD TOWNSHIP
 DE KALB COUNTY, ILLINOIS

Drawn by:
 S.W.K., FOLJR
 Checked by:
 R.H.
 Designed by:
 R.H.R.
 C. K. WILLETT
 CONSULTING ENGINEERS
 DIXON, ILLINOIS
 April 1950
 Sheet No. 2
 of 14 sheets



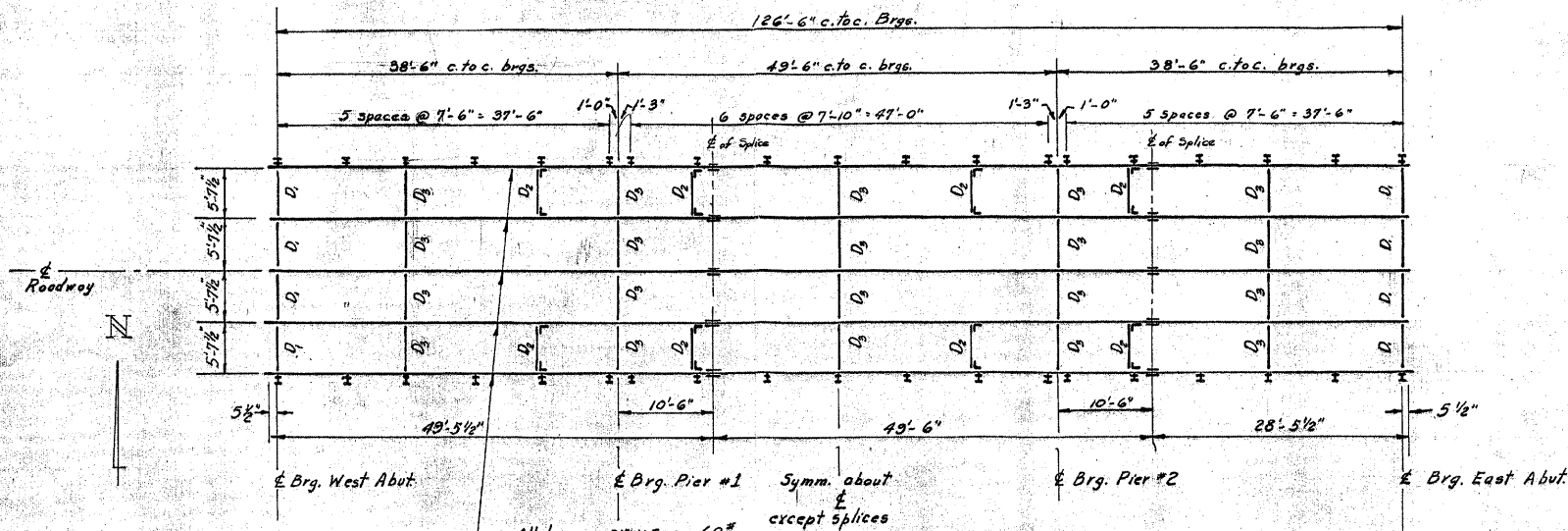
BILL OF MATERIAL SUPERSTRUCTURE

BAR NO.	SIZE	LENGTH	SHAPE	
a	103	5/8" φ	26'-0"	~
a1	104	5/8" φ	28'-6"	~
a2	104	5/8" φ	25'-6"	~
b	245	1/2" φ	27'-0"	~
b1	88	3/4" φ	14'-0"	~
b2	16	1/2" φ	18'-0"	~
b3	16	1/2" φ	5'-9"	~
b4	8	1/2" φ	19'-9"	~
d	262	1/2" φ	1'-0"	~
e	68	1/2" φ	0'-9"	~
x	96	5/8" φ	5'-6"	~
Class X Concrete			Cu. Yds.	71.2
Reinforcement Bars			Lbs.	15,580
Structural Steel			Lbs.	70,580
Floor Drains			Each	20
Name Plate			Each	1
Removal of Exist. Struct			Each	1

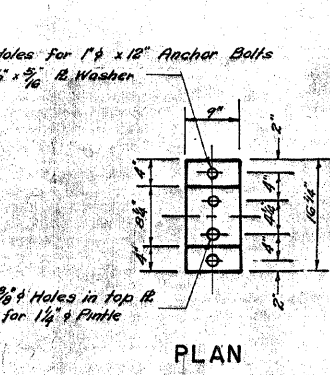
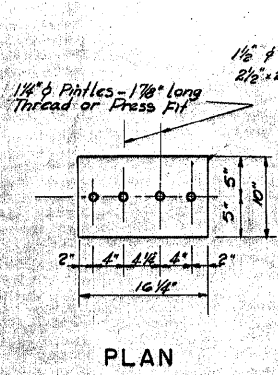
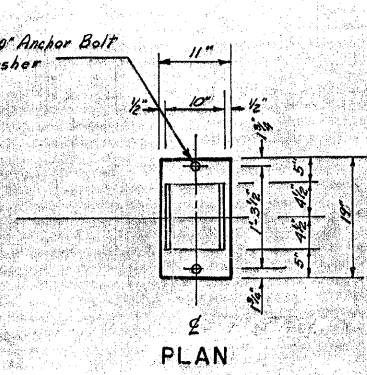
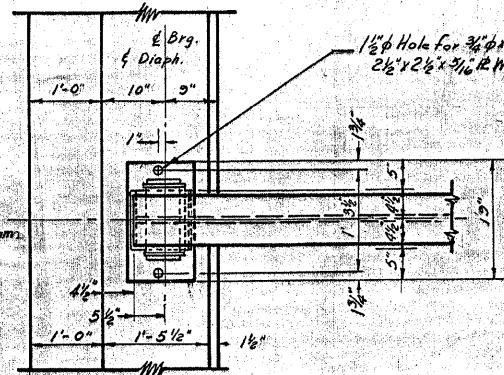


FOR INFORMATION ONLY

BRUSH POINT BRIDGE
OVER
KISHWAUKEE RIVER (SO. BRANCH)
MAYFIELD TOWNSHIP
DE KALB COUNTY, ILLINOIS



FRAMING PLAN
Scale $\frac{3}{32}'' = 1'0''$

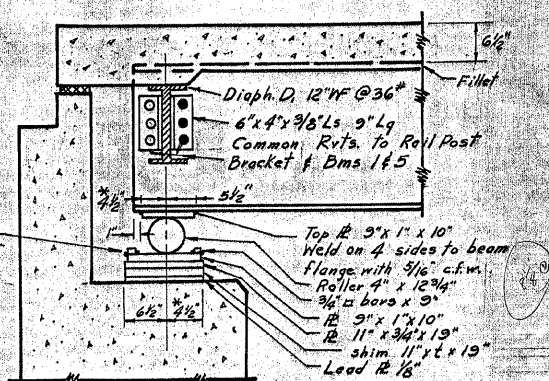


PLAN

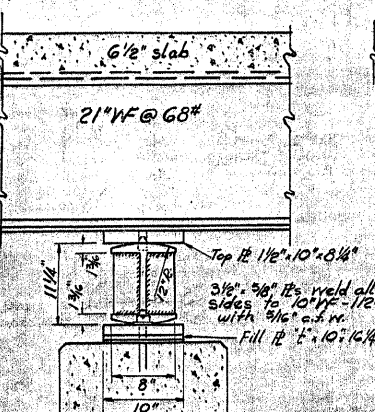
PLAN

PLAN

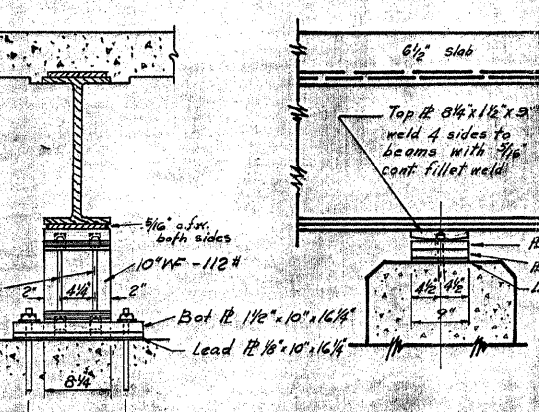
PLAN



SECTION AT ABUTMENT

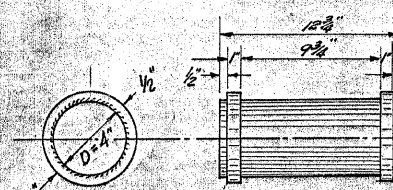


PIER NO. 1

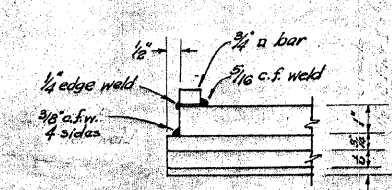


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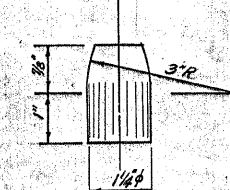
Note: Estimated weight of rollers, rockers, brg. fls anchor bolts and lead plates = 3300#, included in item "Structural Steel" of Bill of Materials.



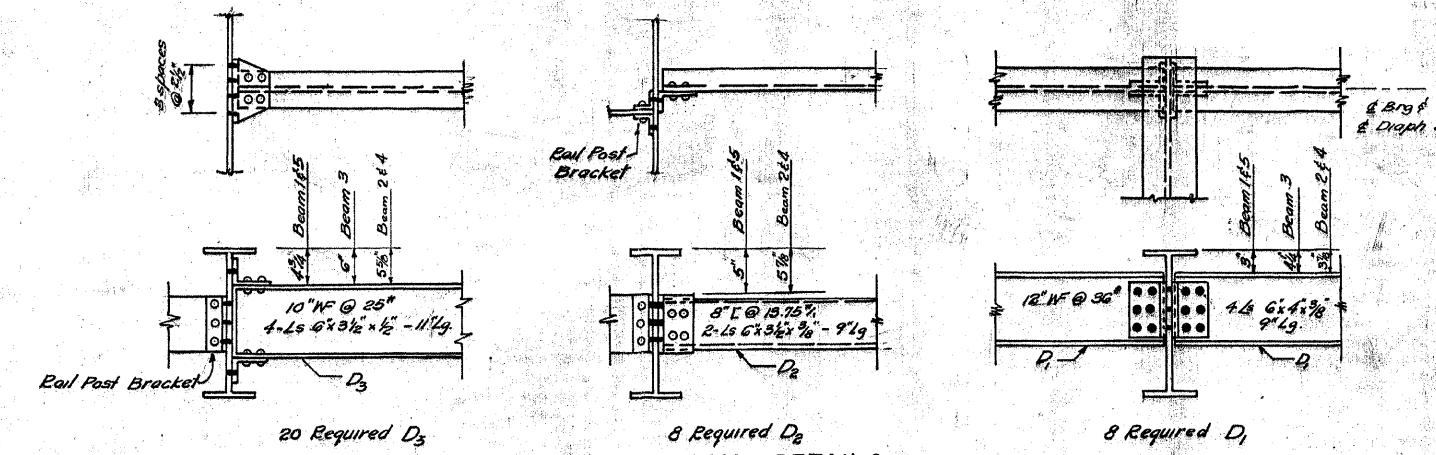
ROLLER DETAIL



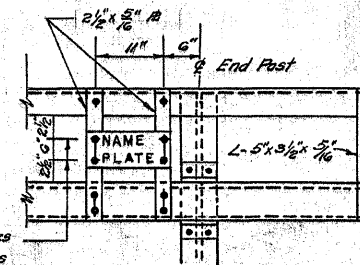
DETAIL "A"



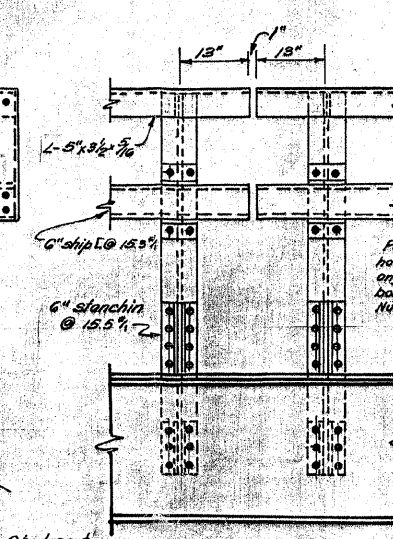
PINTLE DETAIL



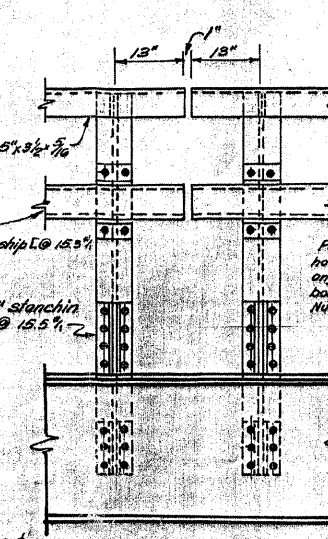
DIAPHRAGM DETAILS



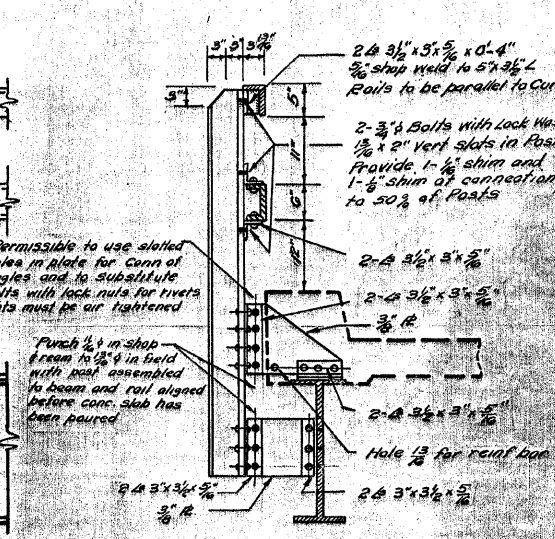
END OF RAIL



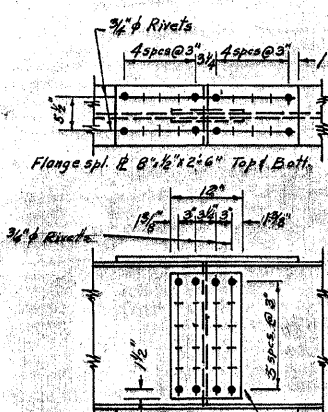
RAIL BEND



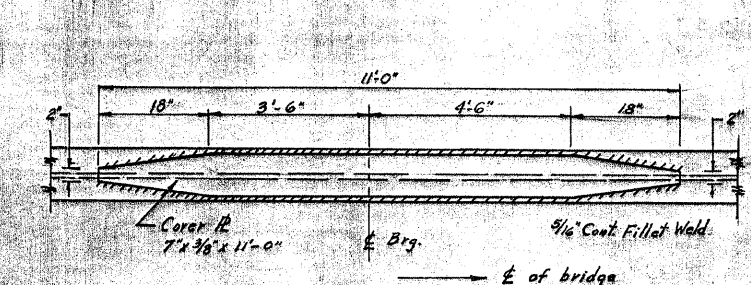
DETAIL OF RAIL



RAIL POST DETAIL



DETAIL OF SPLICE



COVER PLATE DETAIL

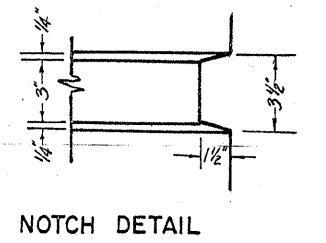
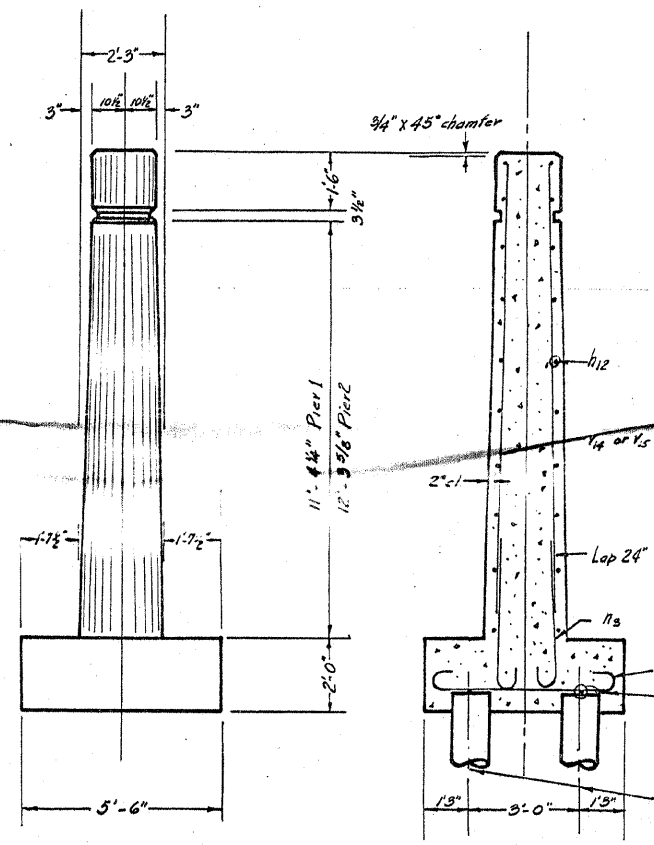
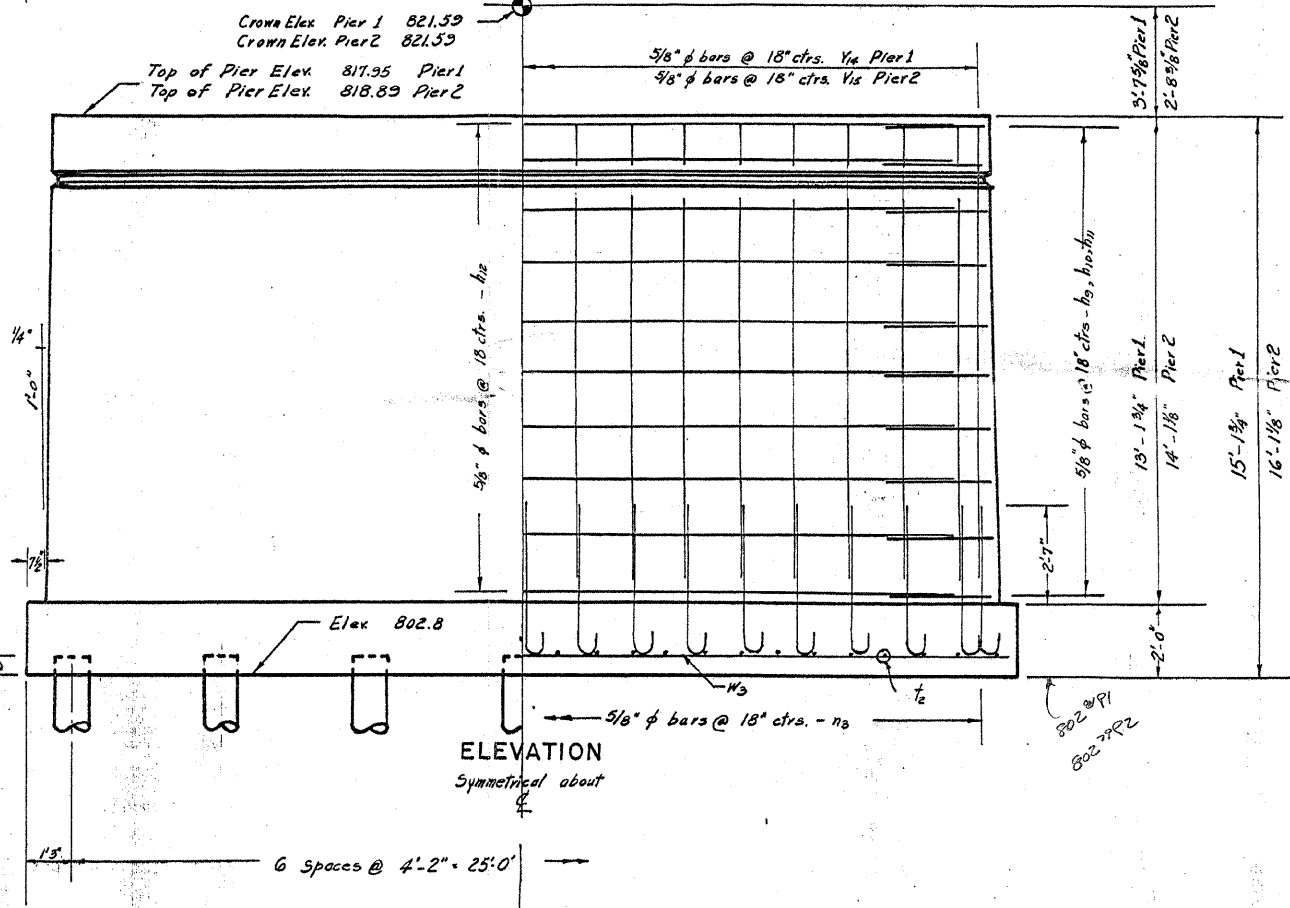
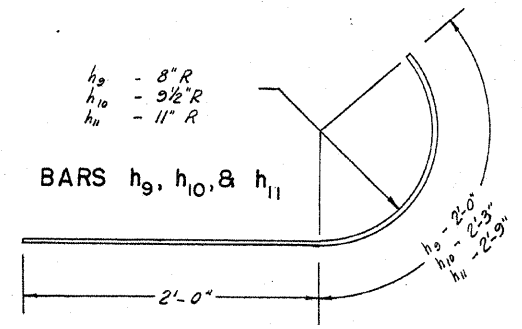
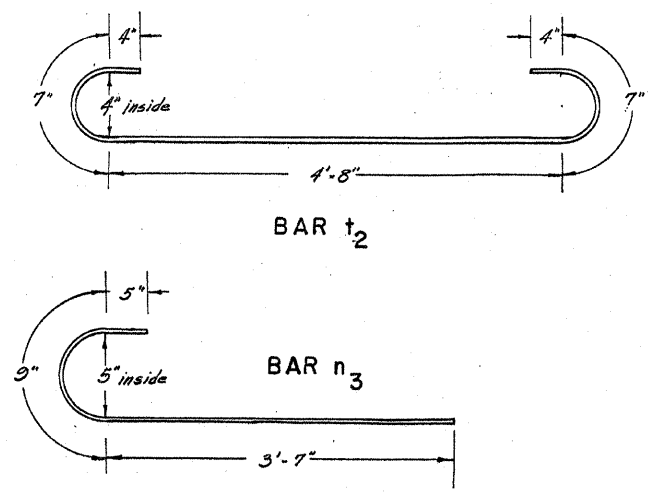
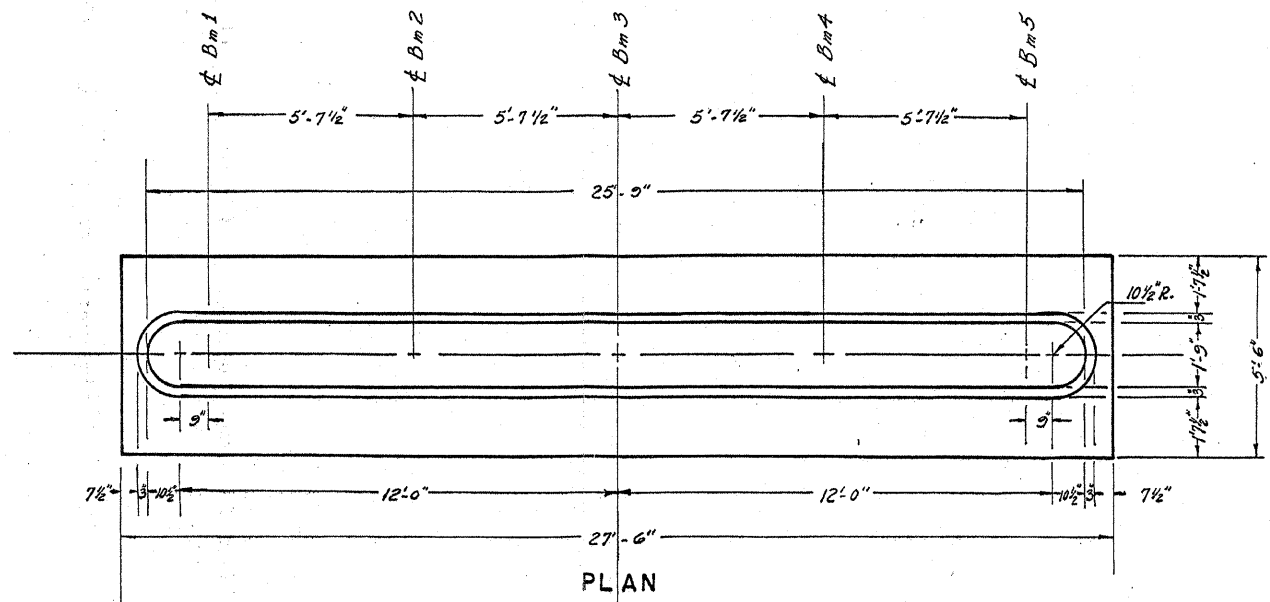
TABLE OF "t" DIMENSIONS

Beam No	1	2	3	4	5
Abuts.	7/8"	1 1/4"	7/8"		
Pier #1	7/8"	1 1/4"	7/8"		
Pier #2	7/8"	1 1/4"	7/8"		

NOTE: Fillet fls over 1" thick may be made up of thinner fls tack welded

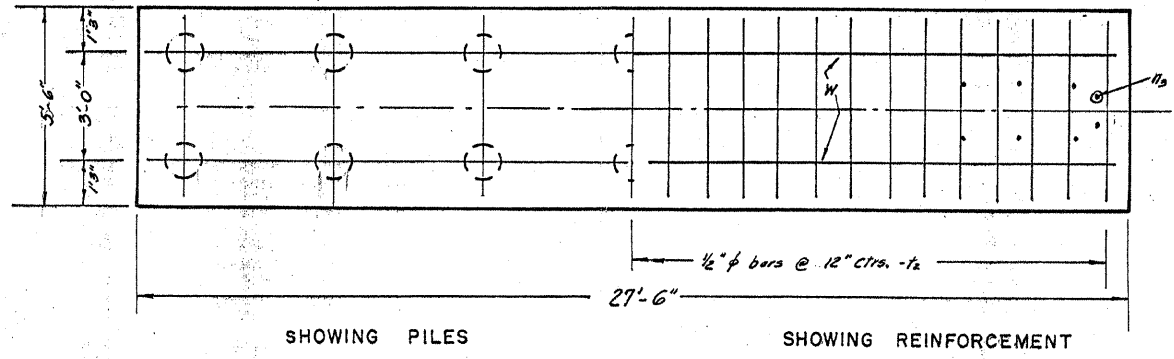
FOR INFORMATION ONLY

BRUSH POINT BRIDGE
OVER
KISHWAUKEE RIVER (SO. BRANCH)
MAYFIELD TOWNSHIP
DE KALB COUNTY, ILLINOIS



BILL OF MATERIALS—PIERS 1 & 2

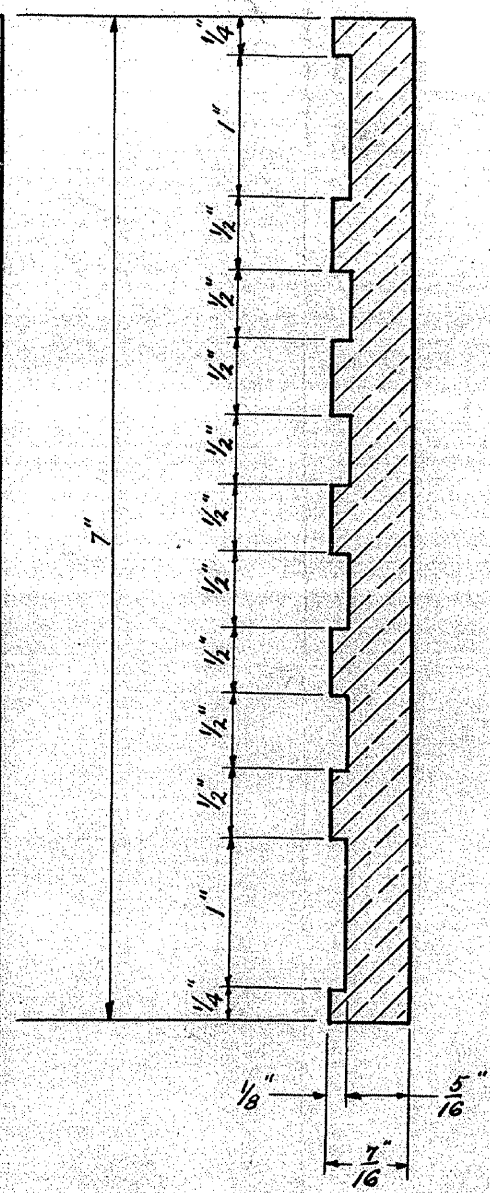
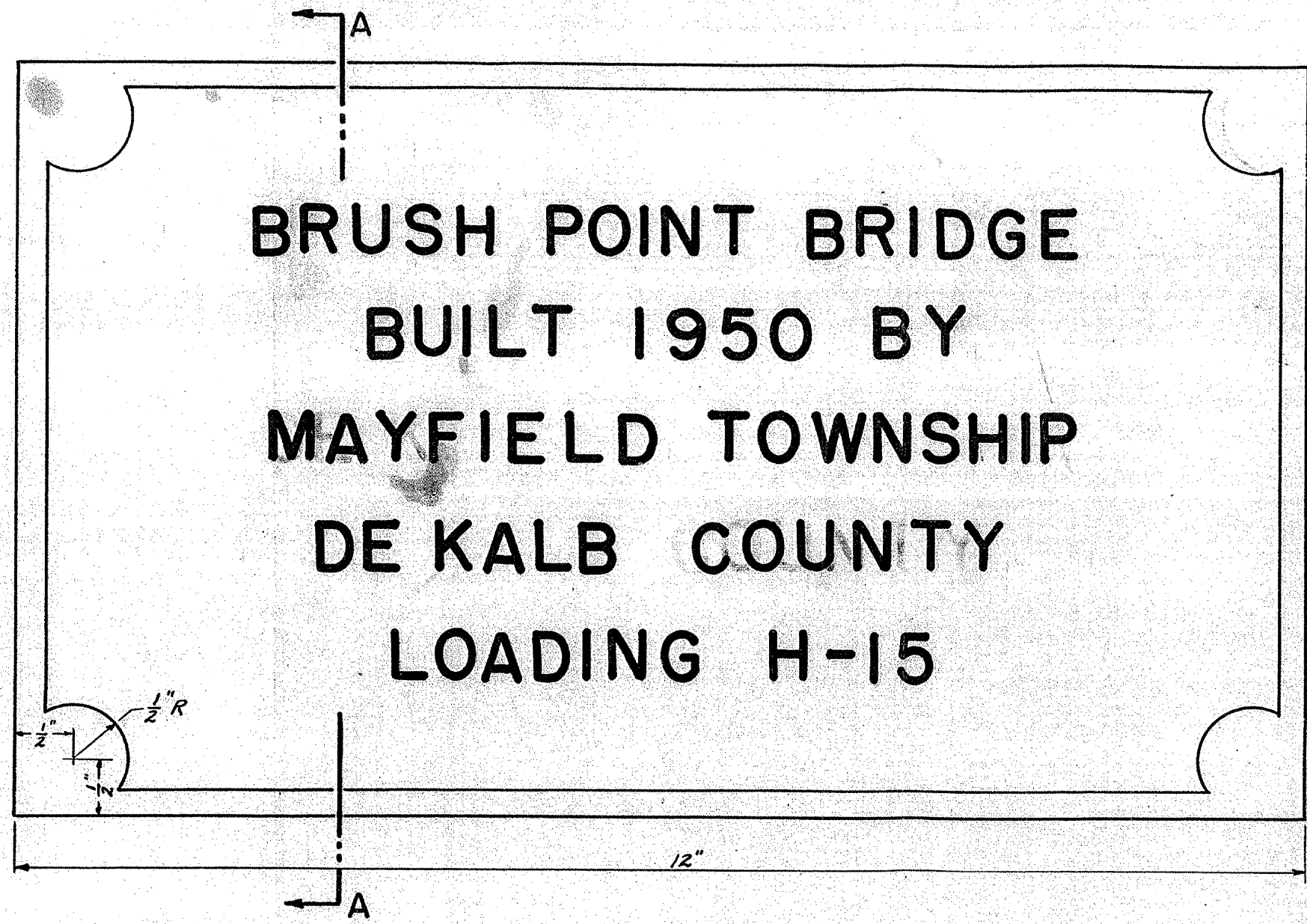
BAR NO.	SIZE	LENGTH	SHAPE		
h_9	28	5/8" ϕ	4'-0"		
h_{10}	24	5/8" ϕ	4'-3"		
h_{11}	24	5/8" ϕ	4'-9"		
h_{12}	38	5/8" ϕ	24'-0"		
n_3	38	5/8" ϕ	13'-3"		
t_2	76	1/2" ϕ	6'-6"		
n_3	4	1/2" ϕ	27'-0"		
Class A Concrete				Cu. Yds.	72.6
Reinforcement Bars				Lbs.	3,000
Fur. Untr. Wd. Piles 15' Lg.				Lin Ft	420
Driv. Untr. Wd. Piles 15' Lg.				Lin Ft	420



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BRUSH POINT BRIDGE
 OVER
 KISHWAUKEE RIVER (SO. BRANCH)
 MAYFIELD TOWNSHIP
 DE KALB COUNTY, ILLINOIS

**BRUSH POINT BRIDGE
BUILT 1950 BY
MAYFIELD TOWNSHIP
DE KALB COUNTY
LOADING H-15**



SECTION A-A

**LOCATE NAME PLATE AT S.W. CORNER OF
BRIDGE AS SHOWN ON SHEET NUMBER II.**

*Material: Best quality brass or bronze
Border & Lettering: Raised 1/8", Square cut and not tapered
Top surface polished
Fastening 4-3/8" φ brass or bronze hex head bolts.*

FOR INFORMATION ONLY

**BRUSH POINT BRIDGE
OVER
KISHWAUKEE RIVER (SO. BRANCH)
MAYFIELD TOWNSHIP
DE KALB COUNTY, ILLINOIS**