CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	1

P-93-048-04
D-93-044-05

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
	ROADWAY PLANS
1.	COVER SHEET
2.	GENERAL NOTES AND STANDARDS
3.	SUMMARY OF QUANTITIES
4.	TYPICAL SECTIONS
5.	SCHEDULES OF QUANTITIES
6.-8.	FAP RTE 681 (IL 116) PLAN AND PROFILE
9.	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR
10.	EROSION CONTROL AND DRAINAGE PLAN
11.	MISCELLANEOUS DETAILS
12.	GUARDRAIL DETAILS
	STRUCTURE PLANS
13.	GENERAL PLAN
14.	GENERAL DATA
15.	SUPERSTRUCTURE
16.-17.	SUPERSTRUCTURE DETAILS
18.	TYPE SM STEEL BRIDGE RAIL
19.	STRIP SEAL EXPANSION JOINT
20.	ANCHOR BOLT DETAILS
21.	WEST ABUTMENT
22.	EAST ABUTMENT
23.	ABUTMENT DETAILS
24.	PIER 1
25.	PIER 2
26.	PIER DETAILS
27.	BAR SPLICER ASSEMBLY DETAILS
	EXISTING STRUCTURE PLANS
28.-32.	EXISTING STRUCTURE PLANS
	CROSS SECTIONS
33.-37.	FAP RTE 681 (IL 116) CROSS SECTIONS

0 20 40 60
SCALE IN FEET – PLAN & PROFILE

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.

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

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

DISTRICT 3 NO. (815) 434–6131

PROJECT ENGINEER: RICK POWELL
UNIT CHIEF: BRAD DUNCAN
TOWNSHIP: MONA
CONTRACT NO.: 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

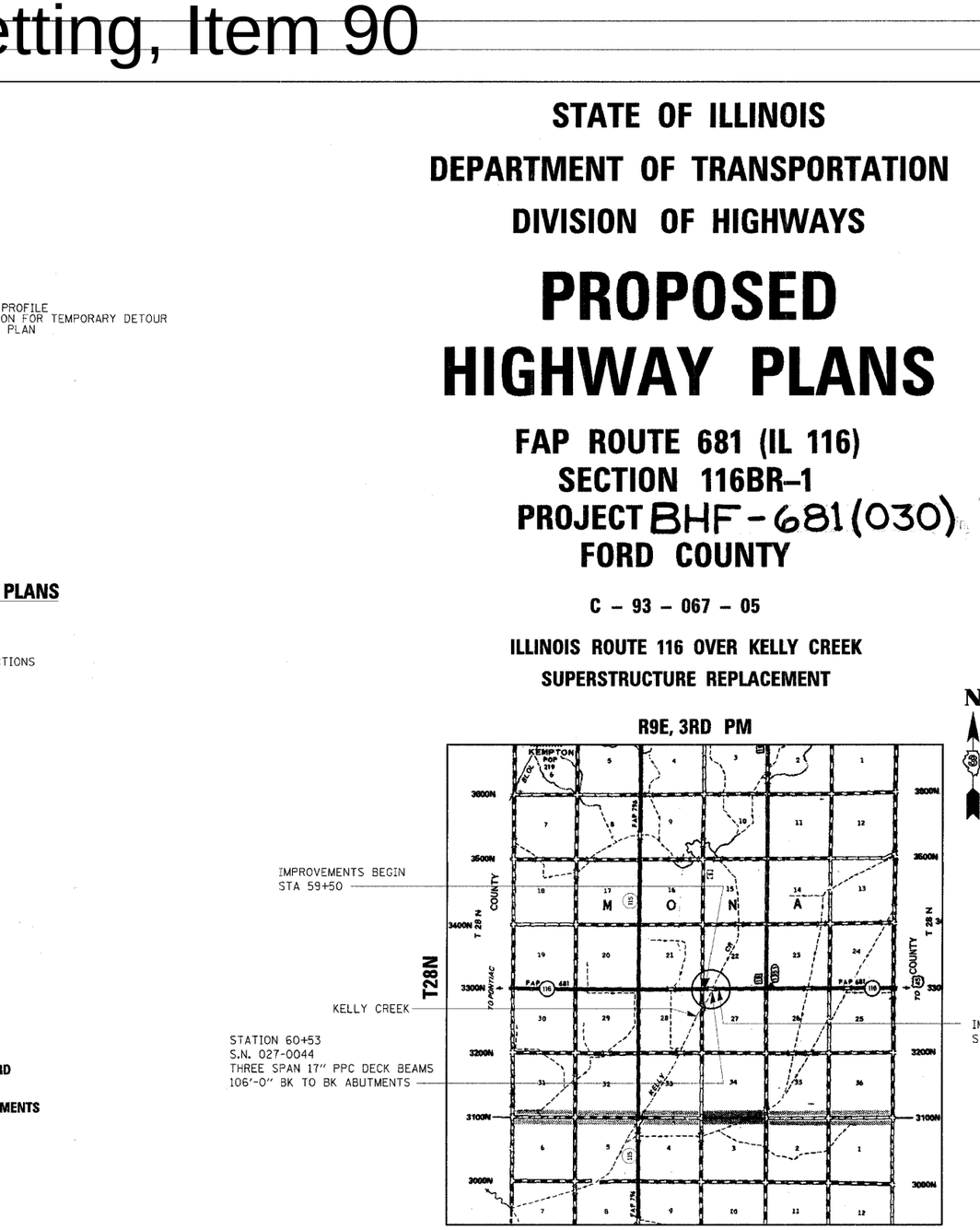
PROPOSED
HIGHWAY PLANS

FAP ROUTE 681 (IL 116)
SECTION 116BR–1
PROJECT BHF-681(030)
FORD COUNTY

C – 93 – 067 – 05

ILLINOIS ROUTE 116 OVER KELLY CREEK
SUPERSTRUCTURE REPLACEMENT

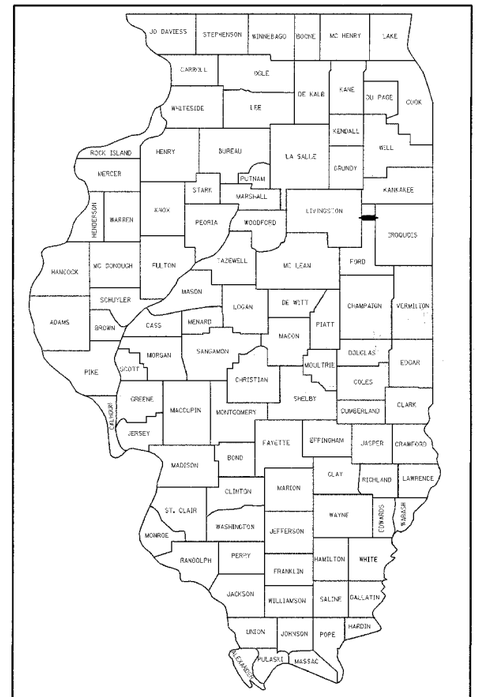
R9E, 3RD PM



LOCATION MAP

SCALE
0 1 3 5 7 MILES
5000 15000 25000 35000 FEET

GROSS LENGTH = 228.5 FT. = 0.043 MI.
NET LENGTH = 228.5 FT. = 0.043 MI.



LOCATION OF SECTION INDICATED THUS: ▬

FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (RURAL)
DESIGN SPEED: 55 mph
POSTED SPEED: 55 mph
ADT: 1200 (2006)
PV: 79.5%
SU: 9.1%
MU: 11.4%

DESIGN DESIGNATION
N.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 20 _____
Gregory Mounts 3rd
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 9, 2005
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
December 9, 2005
Eric Harm
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

ESCA
CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS
URBANA, ILLINOIS

RICHARD D. PAYNE 37421 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
Richard D. Payne DATE: 10/26/2005
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11–30–05)

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CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
482011-01	BIT. SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-05	STEEL PLATE BEAM GUARDRAIL
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF-RD OPERATION 2L, 2W, 4.5 m (15') MIN. AWAY FOR SPEEDS ≥ 45 MPH
701006-02	OFF-RD OPERATIONS 2L, 2W 4.5 m (15') TO PAVEMENT EDGE FOR SPEEDS ≥ 45 MPH
701011-01	OFF-RD MOVING OPERATIONS 2L, 2W DAY ONLY FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701306-01	LANE CLOSURE 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-02	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
702001-05	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE TOP 6" OF TOPSOIL SHALL BE STRIPPED FROM ALL AREAS WITHIN THE CONSTRUCTION LIMITS OUTSIDE OF THE PROPOSED ABUTMENTS. THIS MATERIAL SHALL BE STOCKPILED AT A LOCATION APPROVED BY THE ENGINEER AND REPLACED AFTER MAJOR GRADING OPERATIONS ARE COMPLETE. THIS WORK WILL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.
2. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
3. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
4. ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1½" UNLESS OTHERWISE NOTED.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
6. THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IN PLACED.
7. BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
8. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
9. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05 TON/CU YD
BITUMINOUS MATERIALS PRIME COAT	0.08 GAL/SQ YD
BITUMINOUS RESURFACING	112 LBS/SQ YD/INCH
SHORT TERM PAVEMENT MARKING	10 FT/100 FT OF APPLICATION

10. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
11. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
13. EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
14. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
15. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
16. ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
17. SKIP-DASH LINES FOR PAINT PAVEMENT MARKING SHALL BE 6" WIDE.
18. EXCELSIOR BLANKET SHALL BE USED AT ALL EROSION CONTROL BLANKET LOCATIONS.
19. THE CURBS SHOWN ON STANDARD 420401 ARE NOT REQUIRED AND SHALL NOT BE CONSTRUCTED.
20. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: Steve B. Andrews
DISTRICT STUDIES & PLANS ENGINEER (ACTING)

DATE: NOVEMBER 4, 2005

EXAMINED BY: Kenneth D. Long
DISTRICT CONSTRUCTION ENGINEER

Bruce A. Buchan
DISTRICT OPERATIONS ENGINEER

Kenneth E. Long
DISTRICT MATERIALS ENGINEER

GENERAL NOTES
AND STANDARDS
FAP RTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED CONSTRUCTION TYPE CODE 20% STATE X080-2A
20200100	EARTH EXCAVATION	CU YD	60
20700220	POROUS GRANULAR EMBANKMENT	CU YD	72
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	5
25000210	SEEDING, CLASS 2A	ACRE	0.10
25000350	SEEDING, CLASS 7	ACRE	0.10
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	9
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	9
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	9
25100115	MULCH, METHOD 2	ACRE	0.1
25100630	EROSION CONTROL BLANKET	SQ YD	10
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20
28000400	PERIMETER EROSION BARRIER	FOOT	430
28000500	INLET AND PIPE PROTECTION	EACH	1
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	12
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	214
42001300	PROTECTIVE COAT	SQ YD	214
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	150
44000100	PAVEMENT REMOVAL	SQ YD	215
48101200	AGGREGATE SHOULDERS, TYPE B	TON	10
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	4.4
50200100	STRUCTURE EXCAVATION	CU YD	72
50300225	CONCRETE STRUCTURES	CU YD	6.0
50300260	BRIDGE DECK GROOVING	SQ YD	341
50300300	PROTECTIVE COAT	SQ YD	364
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	364
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	457.1
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	3264
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5640
• 50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	205
51500100	NAME PLATES	EACH	1
58700200	BRIDGE SEAT SEALER	SQ FT	48
59000100	EPOXY CRACK SEALING	FOOT	221
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED CONSTRUCTION TYPE CODE 20% STATE X080-2A
63200310	GUARDRAIL REMOVAL	FOOT	128
• 63301210	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	100
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
67100100	MOBILIZATION	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	48
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	16
• 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	457
• 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	60
• 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
78200410	GUARDRAIL MARKERS, TYPE A	EACH	4
78200520	BARRIER WALL MARKERS, TYPE B	EACH	2
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	12.6
X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1
XX005128	STRIP SEAL EXPANSION JOINT ASSEMBLY	FOOT	74
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	44
Z0002600	BAR SPLICERS	EACH	64

• SPECIALTY ITEM

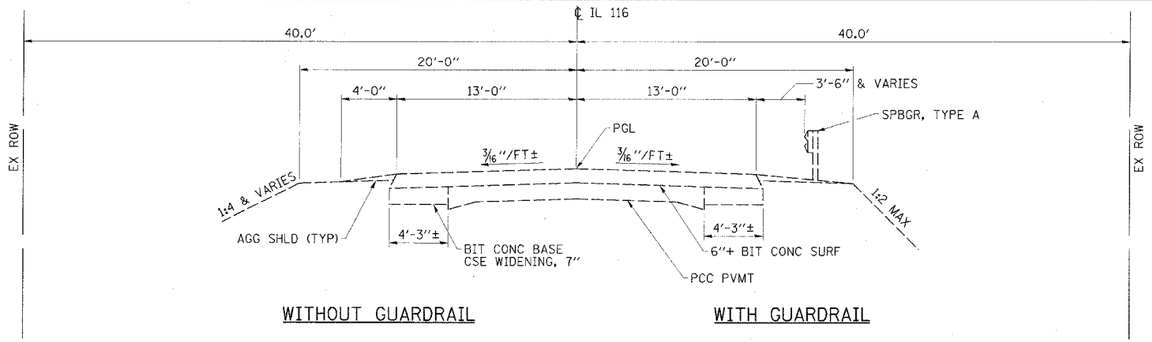
ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

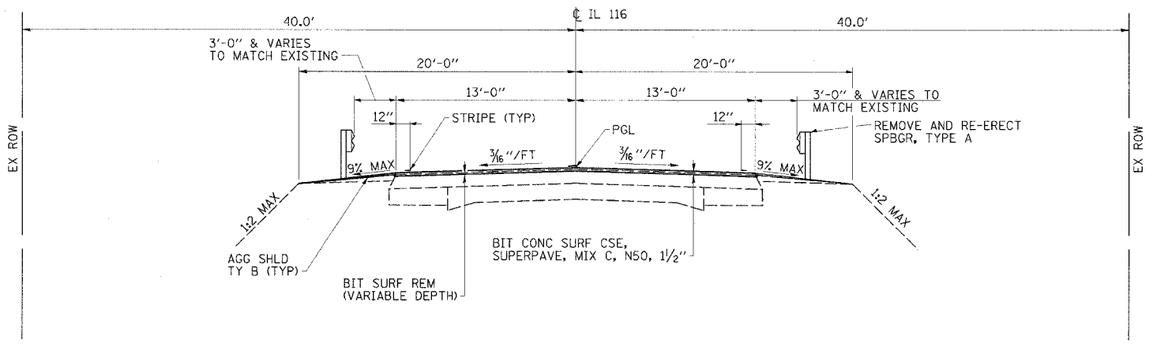
SUMMARY OF QUANTITIES
FAP RTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

CONTRACT NO. 66561

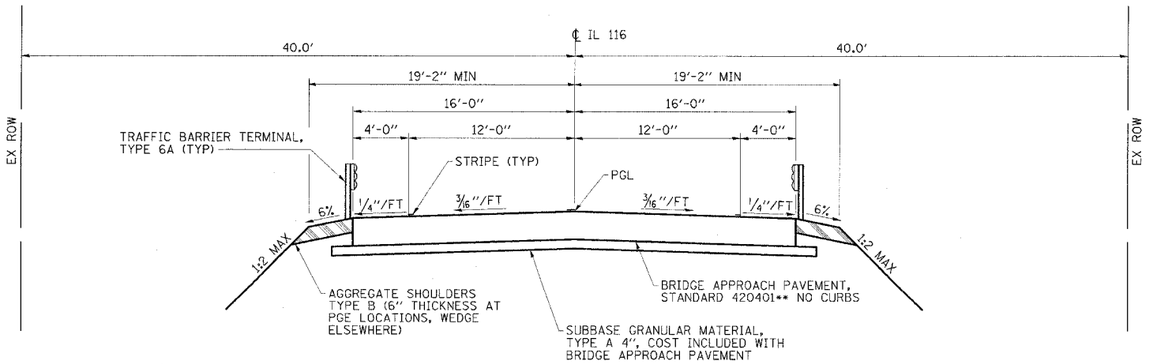
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL ROADWAY SECTION
STA. 54+00 TO 67+00
BRIDGE OMISSION STA. 60+00 TO 61+06



PROPOSED TYPICAL ROADWAY SECTION
STA. 59+50 TO 59+64.63
STA. 61+41.37 TO 61+78.5



** WITH BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

AT BRIDGE APPROACH PAVEMENT

PROPOSED TYPICAL ROADWAY SECTION
STA 59+64.63 TO 61+41.37
BRIDGE OMISSION STA 60+00.00 TO 61+06.00

NOTE:
TRANSITION CROSS SLOPES AS REQUIRED TO MATCH MAINLINE PAVING CROSS SLOPES

BITUMINOUS MIXTURES REQUIREMENTS

	SUPERPAVE BINDER	SUPERPAVE SURFACE
PG GRADE	PG64-22	PG64-22
MAX % RAP ALLOWABLE ***	25%	15%
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 12.5 OR IL 9.5
FRICTION AGGREGATE	N.A.	MIXTURE C
PLANT CONTROL LIMITS	CLASS I	CLASS I
DENSITY TEST METHOD	CORES/NUCLEAR	CORES/NUCLEAR

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

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	JDK	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

TYPICAL SECTIONS
FAP ROUTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK SCHEDULE

LOCATION	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	SUITABLE INCIDENTAL EXCAVATION MATERIAL	SUITABLE INCIDENTAL EXC. MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
NW QUADRANT CUTS & FILLS	15	11			2	+9
SW QUADRANT CUTS & FILLS	15	11			2	+9
NE QUADRANT CUTS & FILLS	15	11			2	+9
SE QUADRANT CUTS & FILLS	15	11			2	+9
STRUCTURE EXCAVATION			72	54		+54
CONC PAD UNDER PVMT CONNECTOR			12	9		+9
TOTALS	60	44	84	63	8	+99

NOTES:
1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE INCIDENTAL EXCAVATION)*0.75
2. TOPSOIL EXCAVATION AND PLACEMENT NOT INCLUDED IN THE ABOVE NUMBERS

EROSION CONTROL SCHEDULE

LOCATION	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)	INLET & PIPE PROTECTION
	SQ YD	FOOT	POUND	EACH
STRUCTURE NO. 027-0044 - NORTHWEST	2.5	125	4	
STRUCTURE NO. 027-0044 - SOUTHWEST	2.5	75	4	
STRUCTURE NO. 027-0044 - NORTHEAST	2.5	95	6	
STRUCTURE NO. 027-0044 - SOUTHEAST	2.5	135	6	
STA 62+46.1, 33.8' LT				1
TOTALS	10.0	430	20	1

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	ACRE
STA 59+50 TO STA 60+13, LT	0.02	0.02	1.8	1.8	1.8	0.02
STA 59+50 TO STA 59+92, RT	0.02	0.02	1.8	1.8	1.8	0.02
STA 60+92 TO STA 61+78.5, RT	0.03	0.03	2.7	2.7	2.7	0.03
STA 61+13 TO STA 61+78.5, LT	0.03	0.03	2.7	2.7	2.7	0.03
TOTALS	0.10	0.10	9.0	9.0	9.0	0.10

AGGREGATE SHOULDERS, TYPE B SCHEDULE

LOCATION	TON
STA 59+50 TO STA 60+13, LT	2.5
STA 59+50 TO STA 59+92, RT	2.0
STA 60+92 TO STA 61+78.5, RT	3.0
STA 61+13 TO STA 61+78.5, LT	2.5
TOTAL	10.0

REMOVAL SCHEDULE

LOCATION	PAVEMENT REMOVAL
	SQ YD
STA 59+64.63 TO STA. 60+01.78	107.5
STA. 61+04.22 TO STA 61+41.37	107.5
TOTAL	215

PAVEMENT MARKING SCHEDULE

LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING (2 APPLICATIONS)	PAINT PAVEMENT MARKING - LINE	
			4"	6"
		FOOT	FOOT	FOOT
STA 59+50 TO STA 61+78.5	SOLID WHITE EDGE LINE		457	
STA 59+50 TO STA 61+78.5	SKIP-DASH YELLOW CENTERLINE	48		60
TOTALS		48	457	60

PAVEMENT MARKERS SCHEDULE

LOCATION	RRPM (BRIDGE)
	EACH
STA 60+20	1
STA 61+00	1
TOTAL	2

WORK ZONE PAVEMENT MARKING REMOVAL SCHEDULE

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL
		SQ FT
CENTERLINE	SHORT-TERM	16
TOTAL		16

BRIDGE APPROACH PAVEMENT SCHEDULE

LOCATION	BRIDGE APPROACH PAVEMENT	PROTECTIVE COAT	CONNECTOR (FLEXIBLE)
	SQ YD	SQ YD	SQ YD
STRUCTURE NO. 027-0044 - WEST APPROACH	107	107	21.5
STRUCTURE NO. 027-0044 - EAST APPROACH	107	107	21.5
TOTALS	214	214	43

DRAINAGE SCHEDULE

LOCATION	CONCRETE HEADWALL FOR PIPE DRAINS
	EACH
STRUCTURE NO. 027-0044 - NW CORNER	1
STRUCTURE NO. 027-0044 - SW CORNER	1
STRUCTURE NO. 027-0044 - NE CORNER	1
STRUCTURE NO. 027-0044 - SE CORNER	1
TOTAL	4

GUARDRAIL SCHEDULE

LOCATION	REMOVE AND RE-ERECT SPBGR, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 6A	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	STEEL BRIDGE RAIL, TYPE SM
	FOOT	EACH	EACH	EACH	FOOT
STRUCTURE NO. 027-0044 - NORTHWEST	25	1	1		
STRUCTURE NO. 027-0044 - SOUTHWEST	25	1	1		
STRUCTURE NO. 027-0044 - NORTHEAST	25	1	1		
STRUCTURE NO. 027-0044 - SOUTHEAST	25	1	1		
STRUCTURE NO. 027-0044 - BRIDGE				2	205
TOTALS	100	4	4	2	205

GUARDRAIL REMOVAL SCHEDULE

LOCATION	FOOT
STRUCTURE NO. 027-0044 - NORTHWEST	32
STRUCTURE NO. 027-0044 - SOUTHWEST	32
STRUCTURE NO. 027-0044 - NORTHEAST	32
STRUCTURE NO. 027-0044 - SOUTHEAST	32
TOTAL	128

BIT SURF REMOVAL (VARIABLE DEPTH) SCHEDULE

LOCATION	SQ YD
STA 59+50 TO STA 59+64.63	42.5
STA 61+41.37 TO STA 61+78.5	107.5
TOTAL	150.0

PAVING SCHEDULE

LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50
	GALLON	TON
STA 59+50 TO STA 59+64.63	3.4	3.6
STA 61+41.37 TO STA 61+78.5	8.6	9.0
TOTALS	12.0	12.6

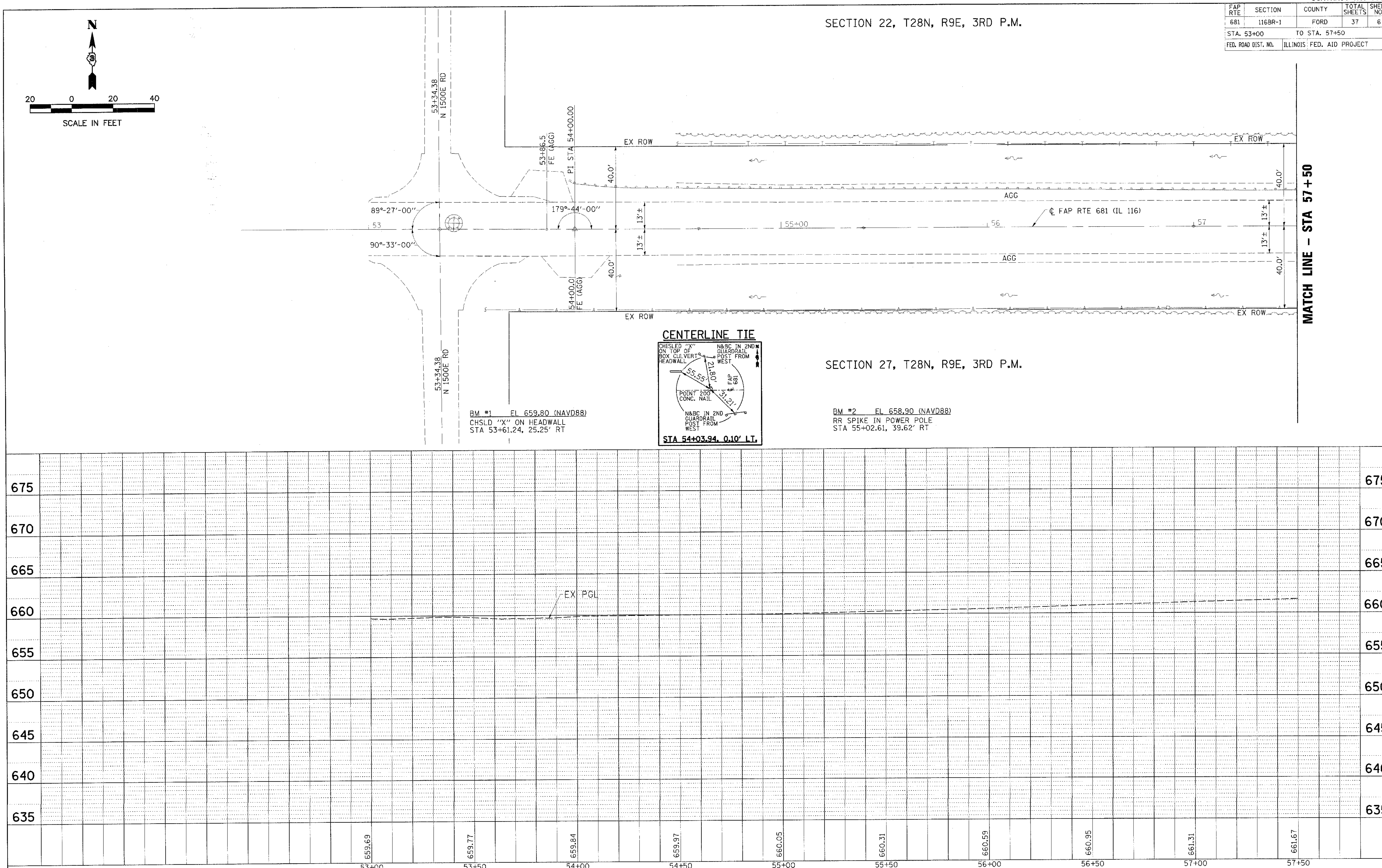
ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

SCHEDULES OF QUANTITIES
FAP RTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	6
STA. 53+00	TO STA. 57+50			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



N
20 0 20 40
SCALE IN FEET
SECTION 22, T28N, R9E, 3RD P.M.
SECTION 27, T28N, R9E, 3RD P.M.
53+34.38 N 1500E RD
53+86.5 FE (AGG)
PI STA 54+00.00
54+00.0 FE (AGG)
EX ROW
AGG
89°-27'-00"
90°-33'-00"
179°-44'-00"
℄ FAP RTE 681 (IL 116)
40.0'
13'±
MATCH LINE - STA 57+50
CENTERLINE TIE
CHISLED "X" ON TOP OF BOX CULVERT HEADWALL
N&BC IN 2ND GUARDRAIL POST FROM WEST
POINT 200 CONC. NAIL
STA 54+03.94, 0.10' LT.
BM #1 EL 659.80 (NAVD88)
CHSLD "X" ON HEADWALL
STA 53+61.24, 25.25' RT
BM #2 EL 658.90 (NAVD88)
RR SPIKE IN POWER POLE
STA 55+02.61, 39.62' RT
PLAN
PROFILE
EX PGL
675
670
665
660
655
650
645
640
635
659.69
659.77
659.84
659.97
660.05
660.31
660.59
660.95
661.31
661.67
53+00
53+50
54+00
54+50
55+00
55+50
56+00
56+50
57+00
57+50

FAP RTE 681 (IL 116) PLAN & PROFILE
STA 53+00 TO STA 57+50

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	7
STA. 57+50	TO STA. 63+50			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

N

20 0 20 40

SCALE IN FEET

SECTION 22, T28N, R9E, 3RD P.M.

MATCH LINE – STA 57+50

MATCH LINE – STA 63+50

TOP OF LEVEE
TOP OF BANK
TOE OF SLOPE
KELLY CREEK
CMP
EX S.N. 027-0044
℄ STA 60+53
THREE SPAN 17" PPC DECK BEAMS.
SUPERSTRUCTURE TO BE REPLACED.
TBT TY 6A
GUARDRAIL REMOVAL
BRIDGE APPROACH PAVEMENT STANDARD 420401 - NO CURBS
REMOVE & RE-ERECT SPBGR, TYPE A, 25'
SPL POST NO. 1, SEE GUARDRAIL DETAILS SHEET
59+50 BEGIN IMPROVEMENTS (BUTT JOINT)
61+35.37 END APPROACH PVMT
61+41.37 END CONNECTOR
61+78.5 END IMPROVEMENTS (BUTT JOINT)
62+71.0 FE (AGG)
15" CMP
EX ROW
AGG
40.0'
13'±
℄ FAP RTE 681 (IL 116)
SAWCUT
30°-0"
16'-0"
58+26.0 FE (AGG)
① CONNECT TO EXISTING GUARDRAIL
59+64.63 BEGIN CONNECTOR
59+70.63 BEGIN APPROACH PVMT

BM #3 EL 659.48 (NAVD88)
RR SPIKE IN POWER POLE
STA 59+32.75, 39.35' RT

SECTION 27, T28N, R9E, 3RD P.M.

LEGEND

- PAVEMENT REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
- AGGREGATE SHOULDER, TYPE B
- EXISTING RIPRAP

PROFILE

EX PGL

59+50 BEGIN IMPROVEMENTS (BUTT JOINT)

59+70.63 EL 662.63 (CONNECTOR)
EL 662.61 (APPROACH PVMT)

60+00.00 BK WEST ABUTMENT EL 662.61

PR SUPERSTRUCTURE REPLACEMENT

PR PGL

0.00%

61+06.00 BK EAST ABUTMENT EL 662.61

61+35.37 (APPROACH PVMT) EL 662.61
EL 662.63 (CONNECTOR)

VPI STA 61+50.0 EL 662.63

1:240 TAPER

61+78.5 END IMPROVEMENTS (BUTT JOINT)

1'-9" (TYP)

2:1

LIMITS OF POROUS GRANULAR EMBANKMENT (TYP). SEE STRUCTURE PLANS.

*AT RIGHT ANGLES

EX STRUCTURE (TYP)

EX SLOPE WALL (TYP)

STREAMBED EL 644.1±

	57+50	58+00	58+50	59+00	59+50 (EX)	59+50 (PR)	60+00	60+50	61+00	61+50	62+00	62+50	63+00	63+50
	661.67	662.03	662.36	662.57	662.64	**662.64**	662.57	662.57	662.53	662.53	662.40	662.07	661.55	660.98
							662.61	**662.61**	**662.61**	**662.63**				

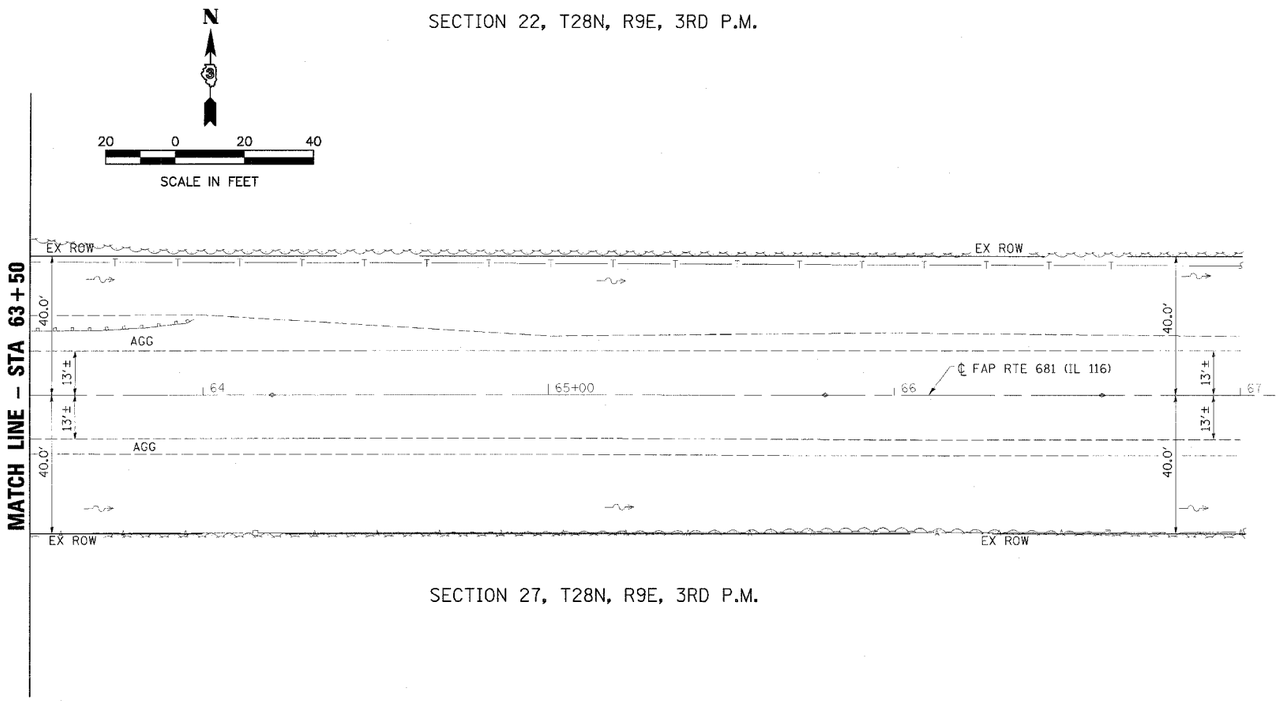
675 670 665 660 655 650 645 640 635

FAP RTE 681 (IL 116) PLAN & PROFILE
STA 57+50 TO STA 63+50

CONTRACT NO. 66561

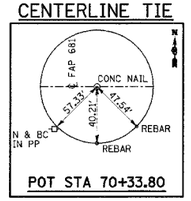
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	8
STA. 63+50		TO STA. 67+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SECTION 22, T28N, R9E, 3RD P.M.

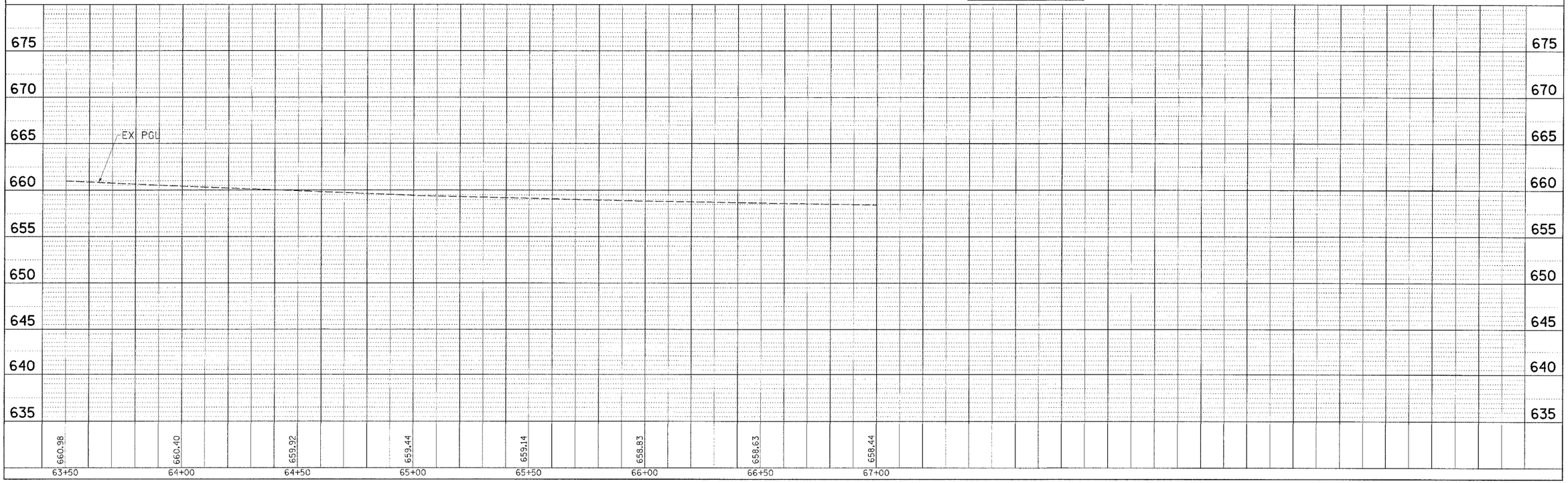


SECTION 27, T28N, R9E, 3RD P.M.

CENTERLINE TIE



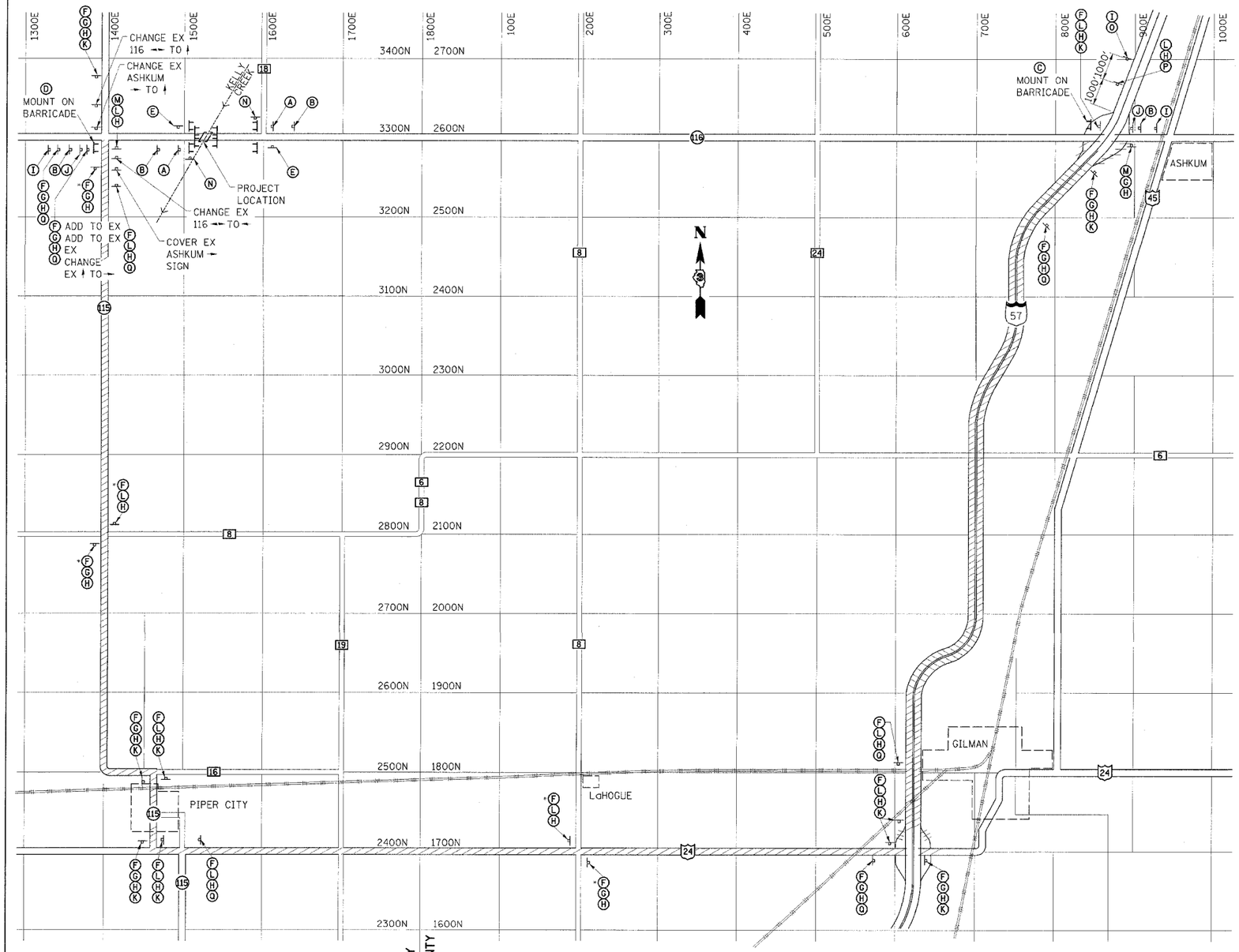
POT STA 70+33.80



FAP RTE 681 (IL 116) PLAN & PROFILE
STA 63+50 TO STA 67+00

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TEMPORARY DETOUR PLAN

NO SCALE

* TO BE LOCATED AS DIRECTED BY THE ENGINEER
** FURNISHED BY IDOT

LEGEND

- TYPE III BARRICADE WITH 2 FLASHING LIGHTS PER BARRICADE
- SIGNS ON PERMANENT SUPPORTS
- FLASHING LIGHT ABOVE SIGN
- 18"X18" ORANGE FLAG
- STANDARD 702001 "ROAD CLOSED TO ALL TRAFFIC" APPLICATION
- STANDARD 702001 "ROAD CLOSED TO THRU TRAFFIC" APPLICATION

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
2. ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR. OTHER ITEMS REQUIRED BY THE ENGINEER AND NOT SHOWN ON THIS DRAWING SHALL BE INCLUDED IN THE PAY ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
5. THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL FURNISH ALL IL 116 ROUTE SIGNS FOR THIS DETOUR. THE CONTRACTOR SHALL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO PLACING THE DETOUR.

SIGN MOUNTING LOCATIONS

- (J) 500' IN ADVANCE OF (C) OR (D)
- (B) 500' IN ADVANCE OF (J) AND 1000' IN ADVANCE OF (A)
- (I) 1000' IN ADVANCE OF (B)
- (A) 500' IN ADVANCE OF "ROAD CLOSED TO THRU TRAFFIC"

DETOUR — M4-10-4818 (K)

DETOUR — M4-10-4818 (K)

BRIDGE OUT 12 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3-6030

BRIDGE OUT 1 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3-6030

ROAD CLOSED 500 FT — W20-3-4848 (A)

ROAD CLOSED AHEAD — W20-3-4848 (B)

60" USE I 57 TO US 24 24" — USE 6" 'D' LETTERS (C)

60" USE IL 115 TO US 24 24" — USE 6" 'D' LETTERS (D)

NO LEFT TURN — R3-2a-2430 (E)

DETOUR — M4-8-2412 (F)

EAST — M3-2-2412 (G)

ILLINOIS 116 — M1-1100-2424 (H) **

ROAD CONSTRUCTION AHEAD — W20-1-4848 (I)

DETOUR AHEAD — W20-2-4848 (J)

M6-1-2115 (K) — ORIENT SIGN (K) AS DIRECTED BY THE ENGINEER

WEST — M3-4-2412 (L)

END DETOUR — M4-8a-2418 (M)

NO RIGHT TURN — R3-1a-2430 (N)

BRIDGE OUT ON IL 116 LOCAL TRAFFIC ONLY — R11-3-6030 (O)

60" USE I 57 TO US 24 24" — USE 6" 'D' LETTERS (P)

M5-1-2115 (Q) — ORIENT SIGN (Q) AS DIRECTED BY THE ENGINEER

TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR FAP RTE 681 (IL 116) SECTION 116BR-1 FORD COUNTY

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

CONTRACT NO. 66561

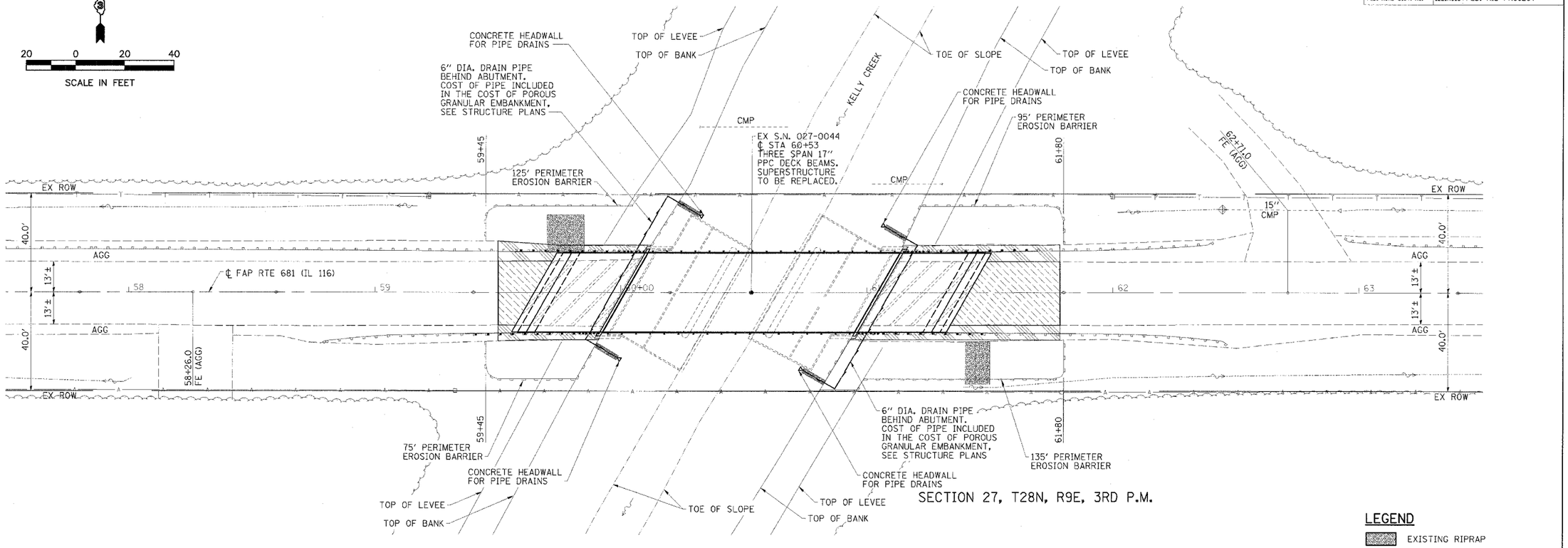
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	10
STA. 57+50		TO STA. 63+50		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

N

20 0 20 40

SCALE IN FEET

SECTION 22, T28N, R9E, 3RD P.M.



SECTION 27, T28N, R9E, 3RD P.M.

LEGEND

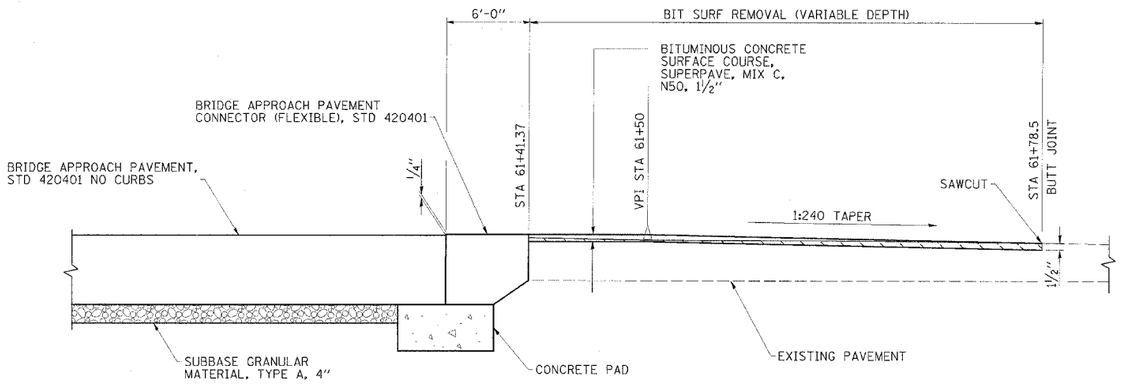
- EXISTING RIPRAP
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET
- EXISTING DITCH FLOW
- INLET & PIPE PROTECTION

ESCA CONSULTANTS, INC.		
DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

EROSION CONTROL AND DRAINAGE PLAN FAP RTE 681 (IL 116) SECTION 116BR-1 FORD COUNTY

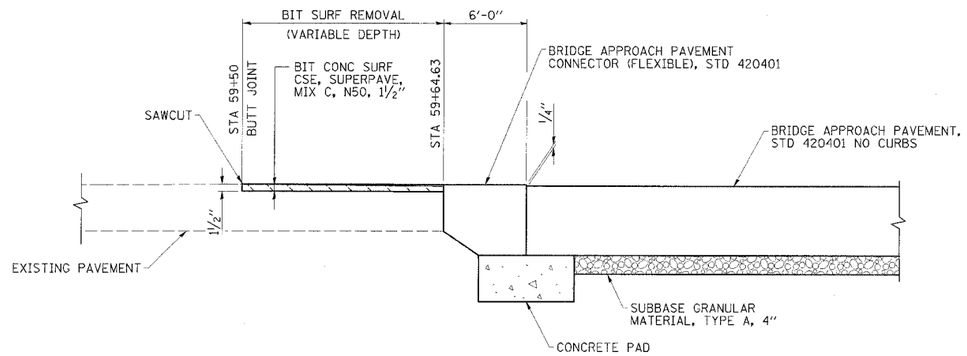
CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



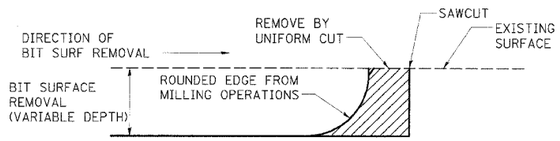
BUTT JOINT SECTION

STA 61+35.37 TO STA 61+78.5



BUTT JOINT SECTION

STA 59+50 TO STA 59+64.63

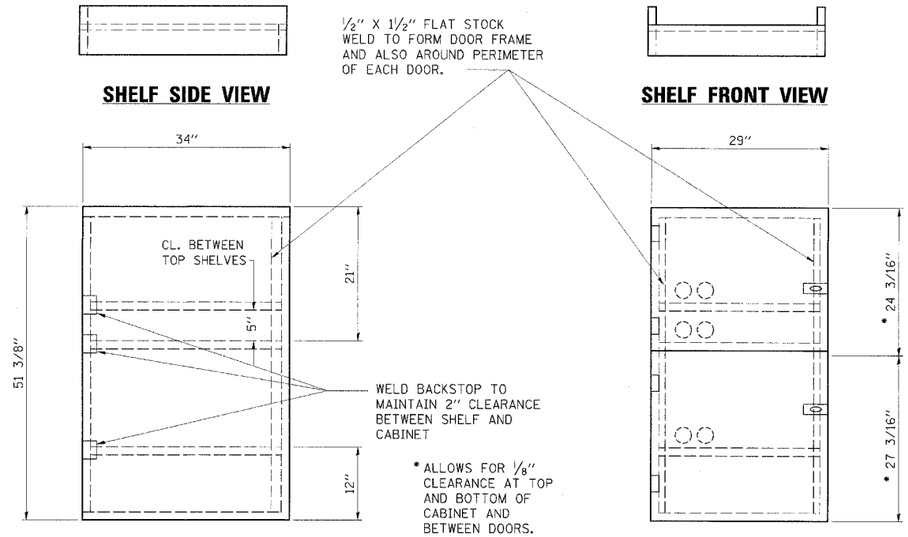


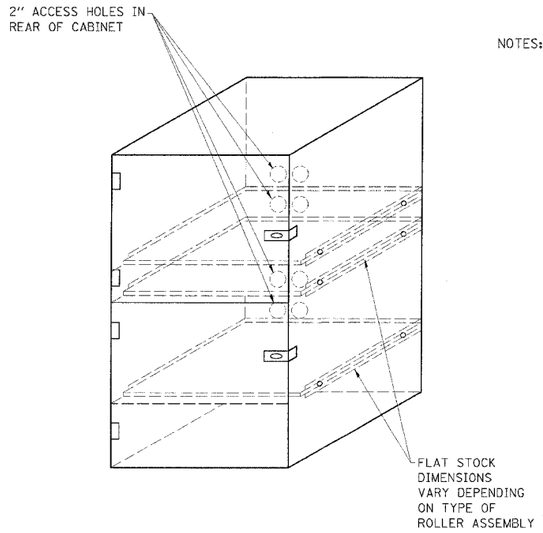
DETAIL AT BUTT JOINT

NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAWCUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE COST OF ALL WORK SHOWN IN THE DETAIL IS INCLUDED IN BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH). THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	HAG	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05





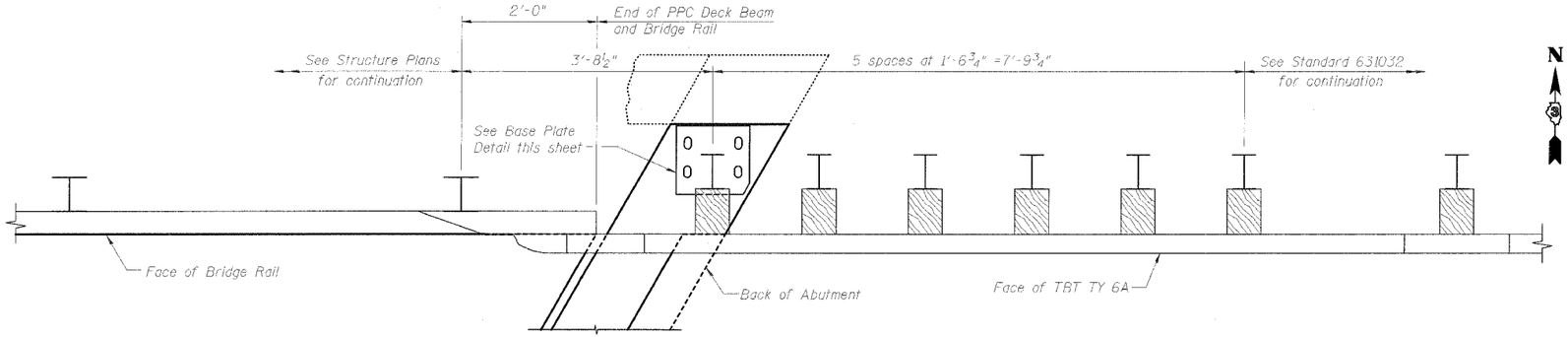
NOTES:
1. USE 16 GAUGE STEEL FOR CABINET.
2. THE TOP SHELF SHALL SLIDE IN OR OUT WITH THE TOP DOOR OPEN.
3. ALL HINGES AND HASPS WILL BE WELDED TO THE CABINET.
4. ALL EDGES SHALL BE GROUND SMOOTH.
5. TWO (2" DIA.) ACCESS HOLES WILL BE REQUIRED FOR EACH SHELF.
6. CABINET SHALL BE PAINTED WITH TWO COATS OF FLAT PAINT.
7. 2 EACH MATCHING KEY PADLOCKS, WITH 3 KEYS PROVIDED, MASTER MODEL 3 T OR EQUIVALENT.
8. 4 EACH PLAIN STEEL, NON-REMOVABLE PIN, NO HOLE 4"X4" SQUARE CORNER HINGES TO BE WELDED ON.
9. 2 EACH EXTRA HEAVY, PLAIN STEEL, FIXED STAPLE, NO HOLE, 7 1/4 " HASPS TO BE WELDED ON.

LOCKABLE COMPUTER CABINET

MISCELLANEOUS DETAILS
FAP RTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

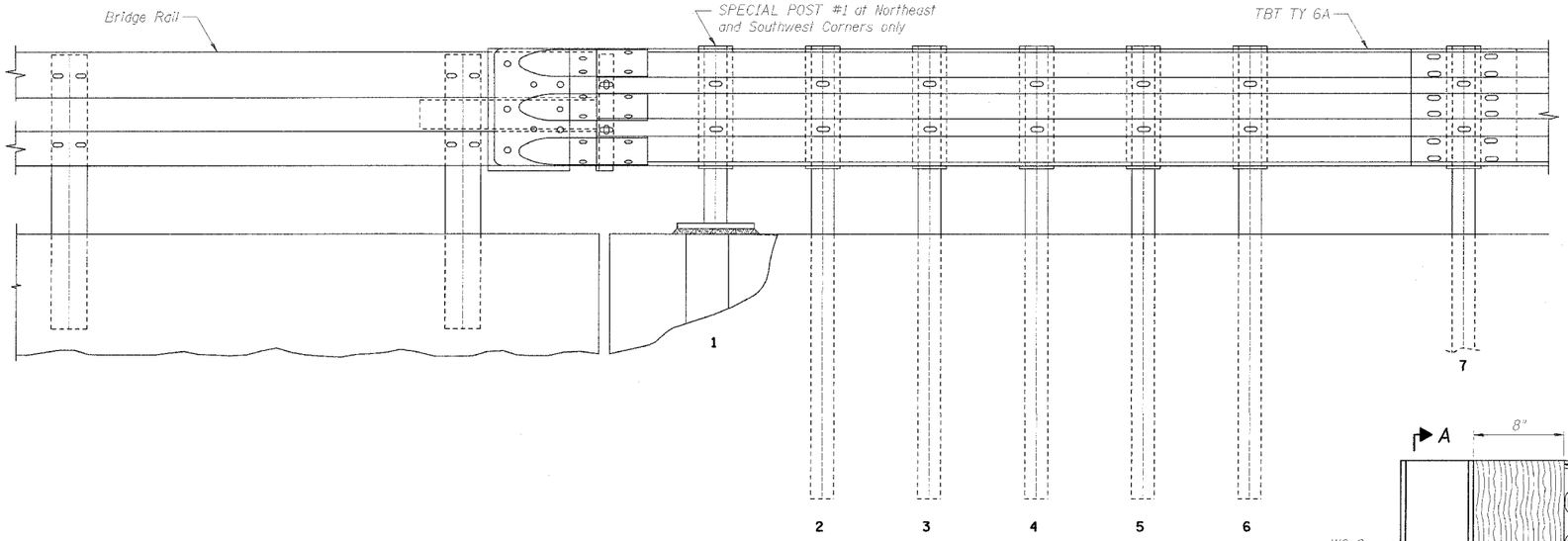
CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

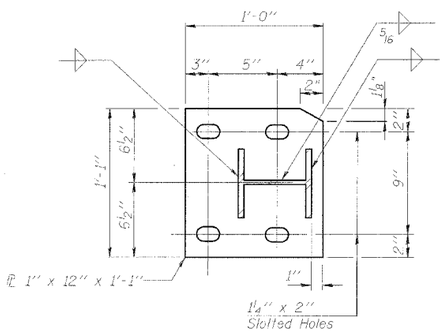


PLAN

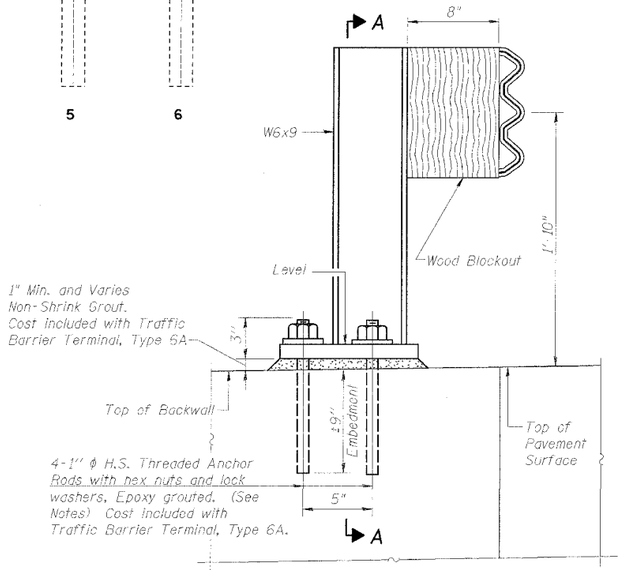
(Northeast corner shown, Southwest corner similar)



ELEVATION



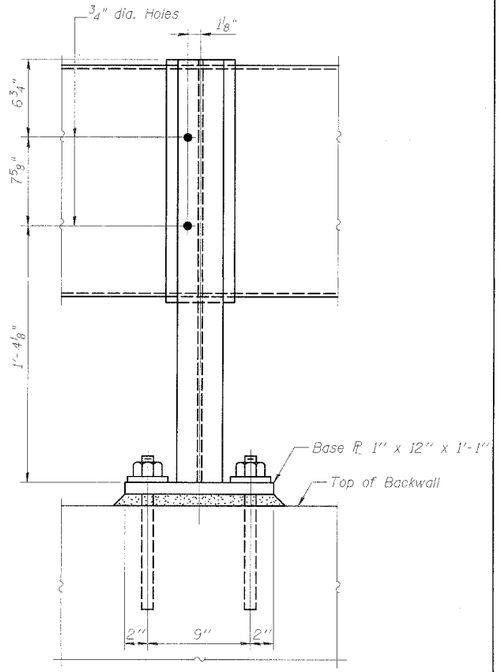
BASE PLATE DETAIL



SECTION AT SPECIAL RAIL POST #1

NOTES

1. Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.
2. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
3. All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
4. The Contractor shall use 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 according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.
5. Nuts for 1" ϕ threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional ⅛ turn.
6. See Standard 631032 for details of Traffic Barrier Terminal, Type 6A not shown. All material and work associated with the fabrication and installation of the special rail post shall be included with the cost of Traffic Barrier Terminal, Type 6A.



SECTION A-A

ESCA CONSULTANTS, INC.		
DESIGNED BY:	MTD	7/05
DRAWN BY:	DWH	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05

GUARDRAIL DETAILS
FAP RTE 681 (IL 116)
SECTION 116BR-1
FORD COUNTY

BENCHMARK: Railroad spike in power pole, station 59+32.75, 39.35' Rt. Elev. 659.48

EXISTING STRUCTURE: SN 027-0044 was originally built in 1971 as Section 116 BR. The superstructure consists of 3 simple spans of 17" PPC deck beams on pile bent abutments and piers. The back-to-back abutments dimension measures 106'-0" while the out-to-out width measures 33'-0". The existing superstructure shall be removed and replaced. Road closure shall be used during construction.

No salvage

STATION 60+53
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 681 SEC. 116BR-1
LOADING HS20
STR. NO. 027-0044

NAME PLATE

See Std. 515001

Note: Existing Name Plate shall be cleaned and relocated adjacent to the new plate. Cost included with Name Plates.

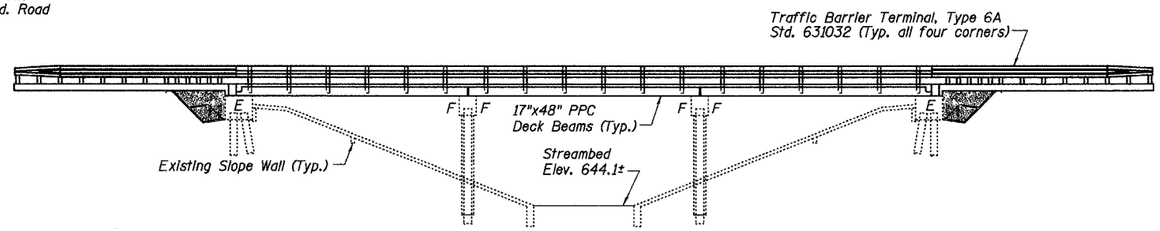
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	13
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 1 OF 15		

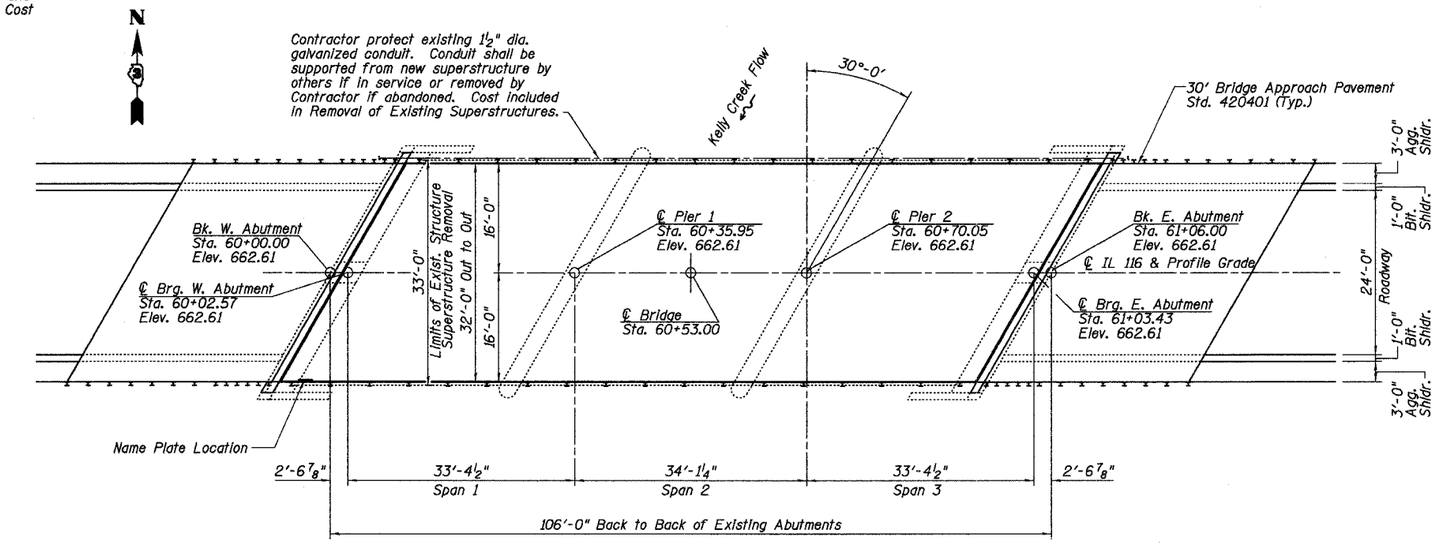
CONTRACT NO. 66561

STRUCTURE INDEX OF SHEETS

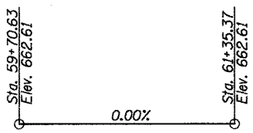
General Plan	Dwg. No. 1 of 15
General Data	Dwg. No. 2 of 15
Superstructure	Dwg. No. 3 of 15
Superstructure Details	Dwg. No. 4-5 of 15
Type SM Steel Bridge Rail	Dwg. No. 6 of 15
Strip Seal Expansion Joint	Dwg. No. 7 of 15
Anchor Bolt Details	Dwg. No. 8 of 15
West Abutment	Dwg. No. 9 of 15
East Abutment	Dwg. No. 10 of 15
Abutment Details	Dwg. No. 11 of 15
Pier 1	Dwg. No. 12 of 15
Pier 2	Dwg. No. 13 of 15
Pier Details	Dwg. No. 14 of 15
Bar Splicer Assembly Details	Dwg. No. 15 of 15



ELEVATION



PLAN



PROFILE GRADE

(Along ℄ Roadway)

SCOPE OF WORK

1. Remove existing surfacing, steel railing, and deck beams.
2. Seal existing cracks and repair delaminated/spalled concrete areas on substructure units.
3. Repair beam bearing seats at abutments and piers as required.
4. Reconstruct a three-span PPCD beam superstructure with concrete wearing surface and Steel Bridge Rail Type SM, and new bridge approach pavements.

DESIGN SPECIFICATION
2002 AASHTO

LOADING HS20-44
Allow 25 psf future wearing surface

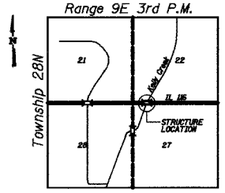
DESIGN STRESSES

FIELD UNITS
f'c = 5,000 psi (Concrete Wearing Surface)
f'c = 3,500 psi (All concrete except CWS)
fy = 60,000 psi (reinf.)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½"ϕ low lax strands)
fsi = 201,960 psi (½"ϕ low lax strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043g
Site Coefficient (S) = 1.2

EXPIRES 11-30-06
Richard D. Payne
SIGNATURE
10/13/05
DATE



LOCATION SKETCH

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

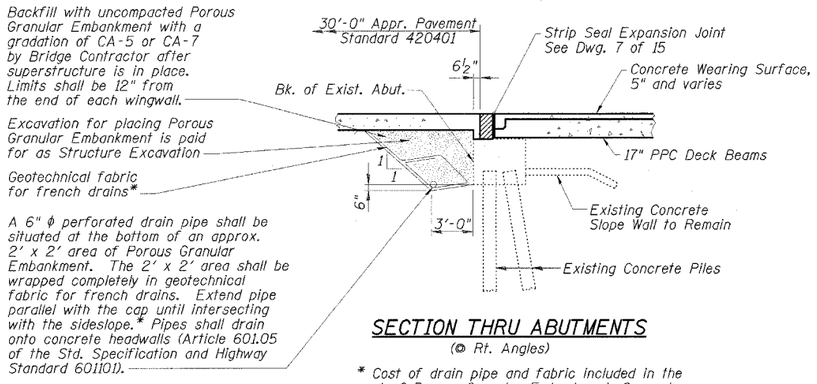
GENERAL PLAN
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	14
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 2 OF 15

CONTRACT NO. 66561



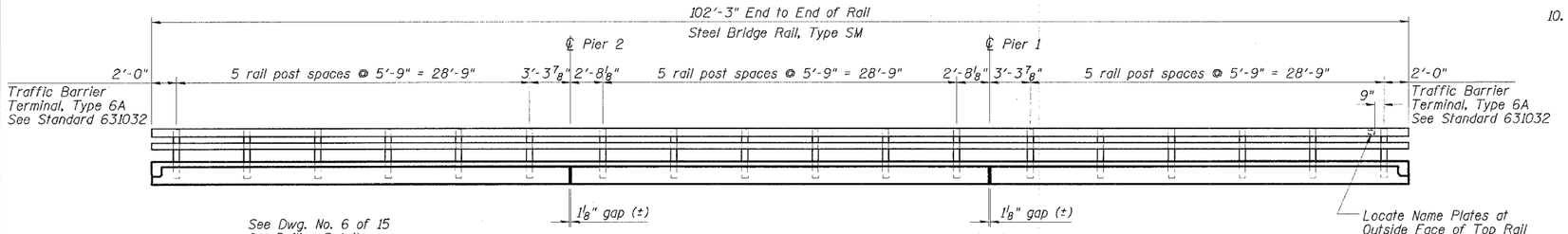
SECTION THRU ABUTMENTS

(© Rt. Angles)

* Cost of drain pipe and fabric included in the cost of Porous Granular Embankment, Concrete Headwalls paid for separately, see Roadway Plans.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		4.4	4.4
Structure Excavation	Cu. Yd.		72	72
Concrete Structures	Cu. Yd.		6.0	6.0
Bridge Deck Grooving	Sq. Yd.	341		341
Concrete Wearing Surface, 5"	Sq. Yd.	364		364
Bridge Seat Sealer	Sq. Ft.		48	48
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.		457.1	457.1
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	3264		3264
Reinforcement Bars, Epoxy Coated	Pound	4750	890	5640
Steel Bridge Rail, Type SM	Foot	205		205
Name Plates	Each	1		1
Porous Granular Embankment	Cu. Yd.		72	72
Epoxy Crack Sealing	Foot		221	221
Strip Seal Expansion Joint Assembly	Foot	74		74
Asbestos Bearing Pad Removal	Each		44	44
Bar Splicers	Each		64	64
Protective Coat	Sq. Yd.	364		364



RAIL ELEVATION

(Showing Inside Face of South Railing; North Railing Similar)

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
3. All construction joints shall be bonded.
4. Bridge Seat Sealer shall be applied to abutment bearing seats where formed concrete repairs are performed.
5. All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
6. Side retainers shall be AASHTO M270 Grade 36 minimum.
7. No work will be allowed in the stream.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
10. If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams. The side retainers shown in the drawing no. 11 of 15 shall be installed once the beams are in their final locations. These side retainers may also be used to provide the temporary lateral restraint required during construction. This work shall be considered included in the cost of Precast Prestressed Concrete Deck Beams.
11. Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
12. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
13. The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
14. Repair of the substructure shall be completed prior to placement of the new deck beams.

GENERAL DATA
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

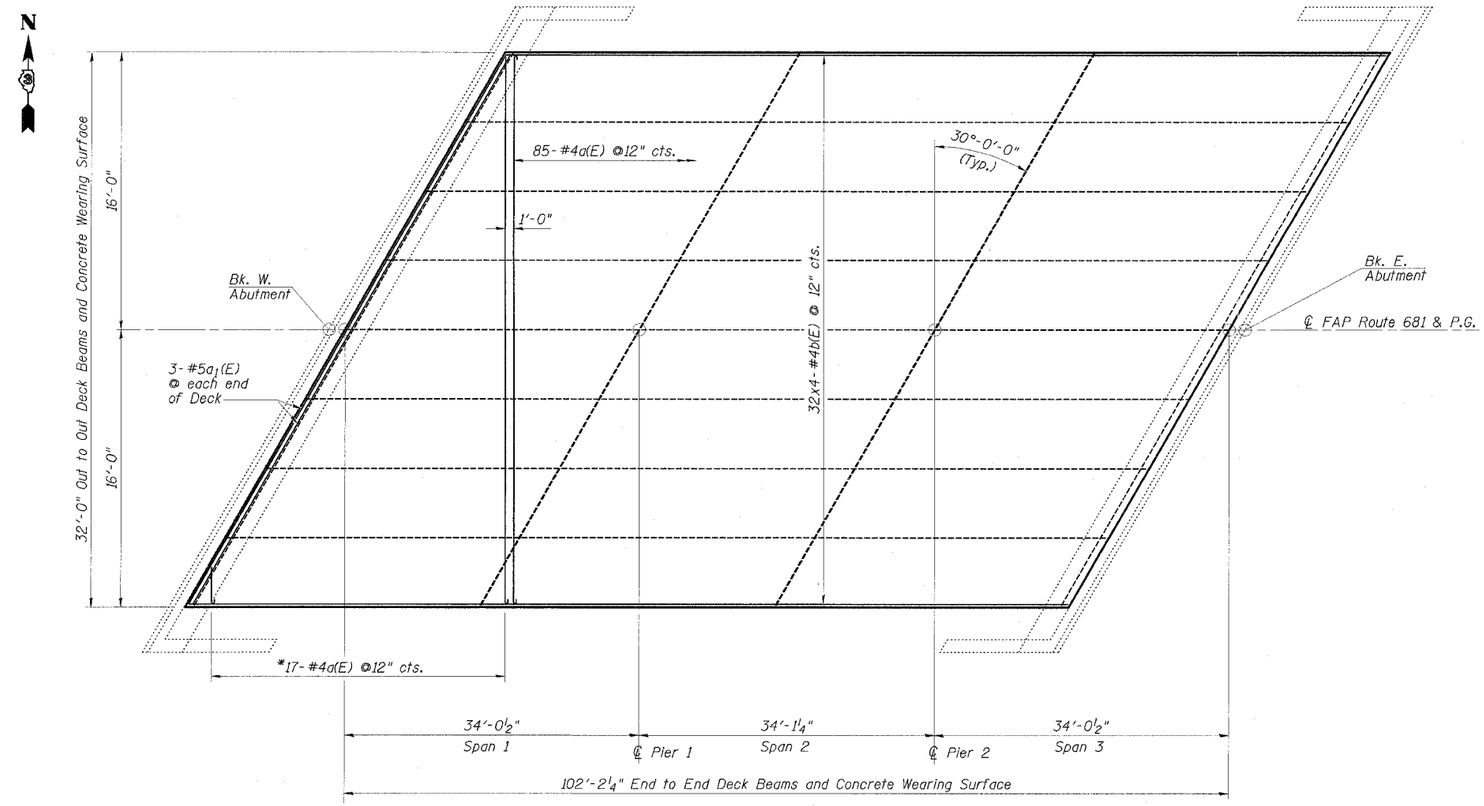
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	15
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 3 OF 15		

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

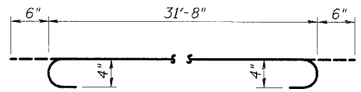
MIN. BAR LAP
#4 bar = 1'-8"

Note:
Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 32x4-#4 etc. indicates 32 lines of bars with 4 lengths per line. For remainder of superstructure details, see drawings 4 and 5 of 15.

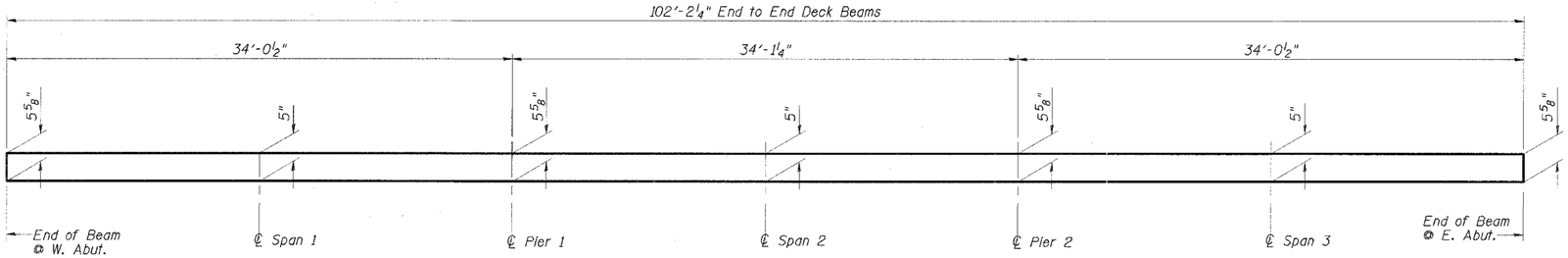
PLAN

CONCRETE WEARING SURFACE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	102	#4	32'-8"	⊂⊃
a_1(E)	6	#5	36'-6"	—
b(E)	128	#4	26'-9"	—
Reinforcement Bars, Epoxy Coated		Pound	4750	
Concrete Wearing Surface, 5"		Sq. Yd.	364	
Bridge Deck Grooving		Sq. Yd.	341	
Protective Coat		Sq. Yd.	364	



BAR d(E)



REINFORCED CONCRETE WEARING SURFACE PROFILE
(At centerline of roadway)

Note:
Greater thickness is required at edges of superstructure to conform to cross section slopes shown on Dwg. 4 of 15.

SUPERSTRUCTURE
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

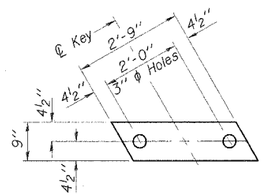
ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	16
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

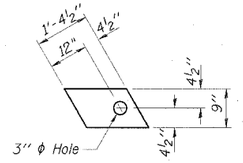
DWG. NO. 4 OF 15

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

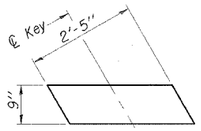


FABRIC BEARING PAD
Interior

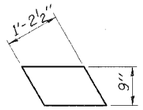


FABRIC BEARING PAD
Exterior

FIXED
(At Piers)

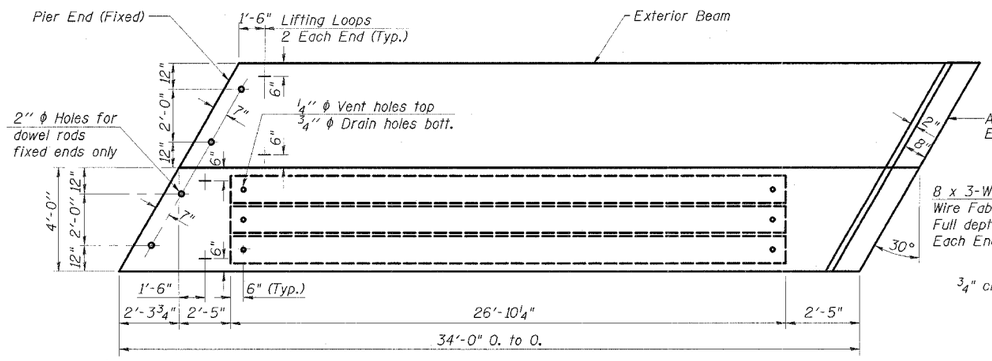


FABRIC BEARING PAD
Interior

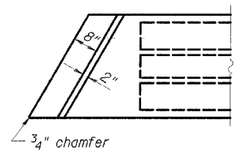


FABRIC BEARING PAD
Exterior

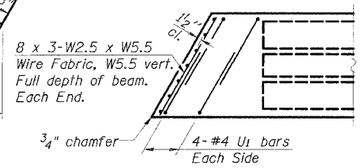
EXPANSION
(At Abutments)



PLAN

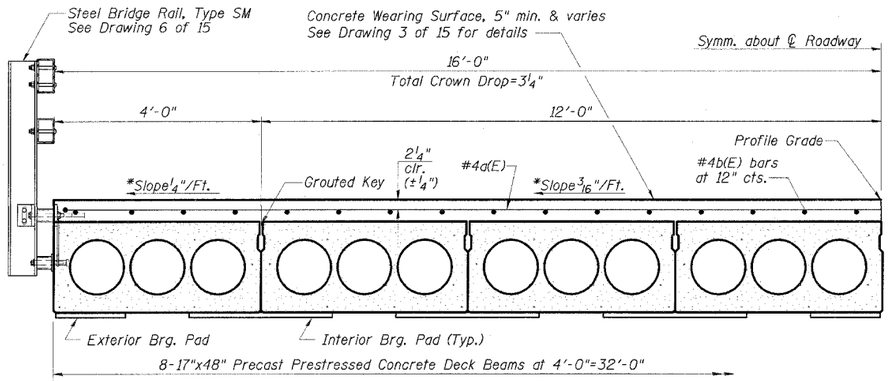


AT EXPANSION END
(See End of Beam detail on Dwg. 5 of 15 for reinforcement)



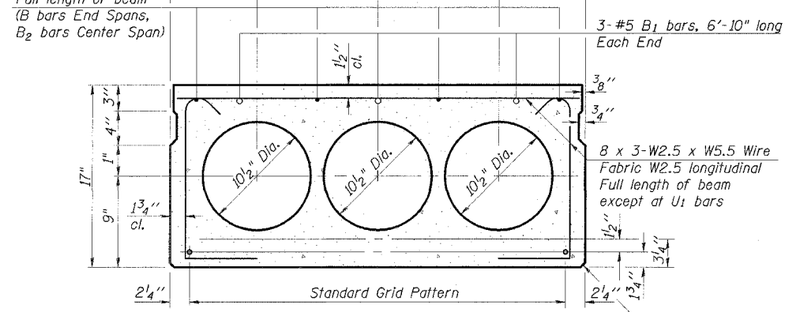
AT FIXED END

END PLANS



*Cross slopes shown are applicable to Concrete Wearing Surface.

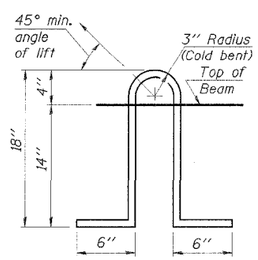
HALF CROSS SECTION



TYPICAL SECTION-INTERIOR BEAMS

11-½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
9-Strands 1¾" up, 2-Strands 3¼" up

Notes:
1. Place strands symmetrically about ℄ of beam.
2. See Dwg. 5 of 15 for fascia beam details.



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.
Lifting loops shall be 2 - ½" ϕ-270 ksi strands, as shown.
Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4,000 p.s.i.
See Drawing 2 of 15 for location of rail anchors and additional notes.
Bridge rail inserts shall be cast in precast beams, and the cost shall be included with Precast Prestressed Concrete Deck Beams.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

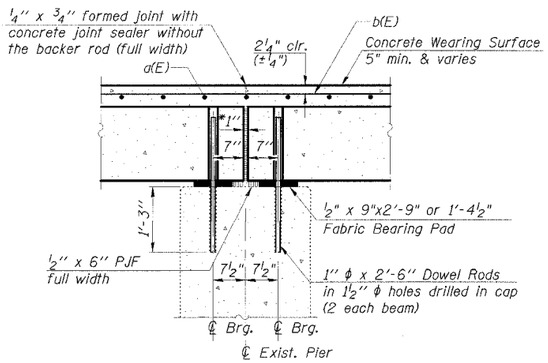
SUPERSTRUCTURE DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	17
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 5 OF 15

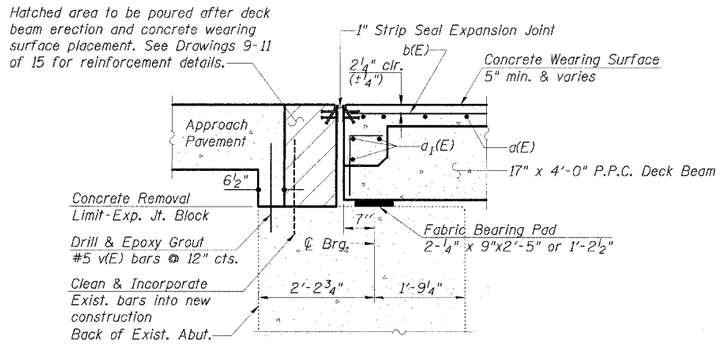
CONTRACT NO. 66561



SECTION THRU PIER

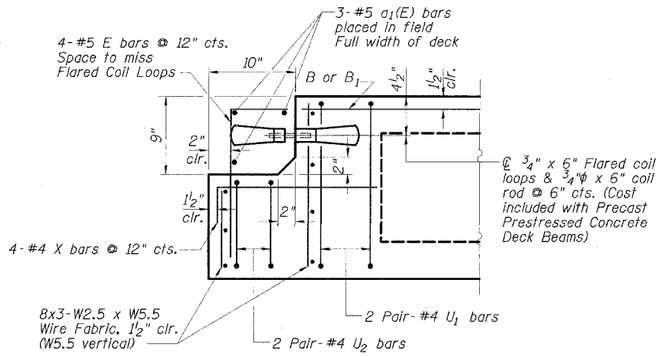
(Horizontal dimensions are at right angles to beam ends)

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



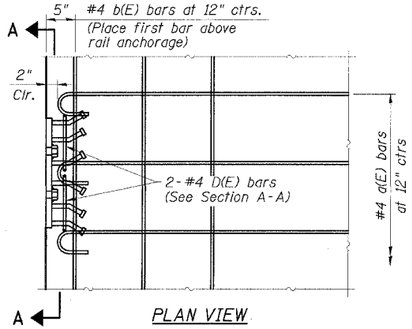
SECTION THRU ABUTMENT

(Dimensions at right angles)



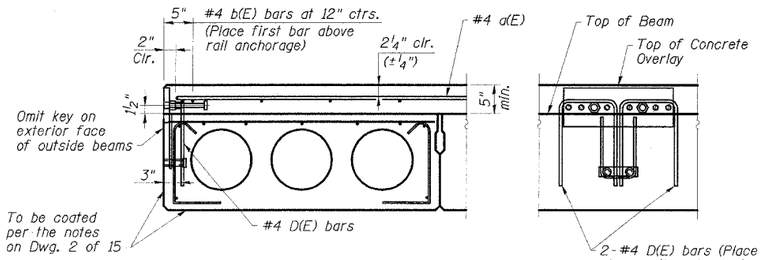
END OF BEAM (EXPANSION END)

(Dimensions at right angles)



PLAN VIEW

The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into beam. Drilling into the beam will not be permitted.



FASCIA BEAM CROSS SECTION

See Section Thru Interior Beams on Dwg. 4 of 15 for strand pattern, dimensions and bar call outs.

SECTION A-A

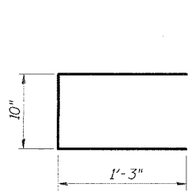
CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE

NOTES

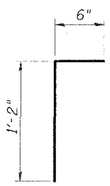
After beams have been erected, holes shall be drilled into substructure and dowels rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

Concrete wearing surface to be poured after grouting the shear keys.

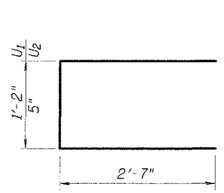
Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (17" depth).



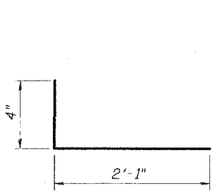
BAR D(E)



BAR E



BARS U1 & U2



BAR X

SUPERSTRUCTURE DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

ESCA CONSULTANTS, INC.

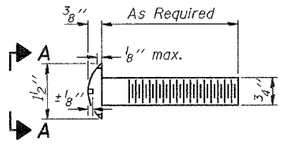
DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	18
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

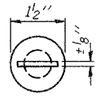
DWG. NO. 6 OF 15

CONTRACT NO. 66561

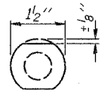
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DETAIL OF 3/4" ϕ ROUND HEAD BOLT

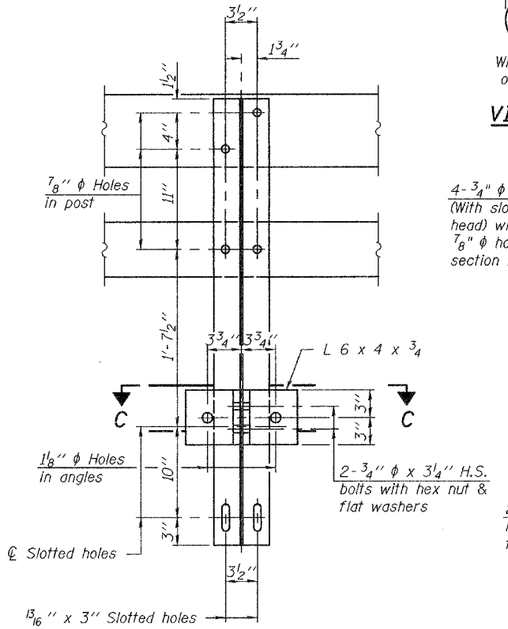


With Slot

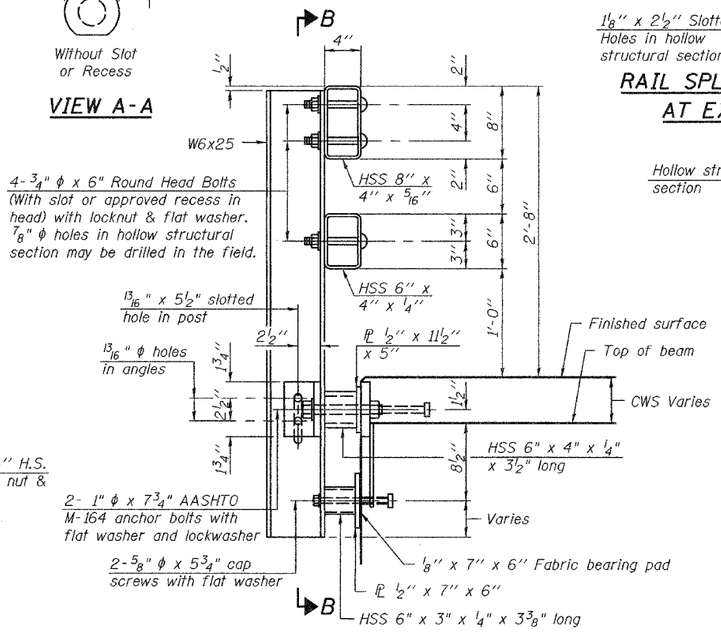


Without Slot or Recess

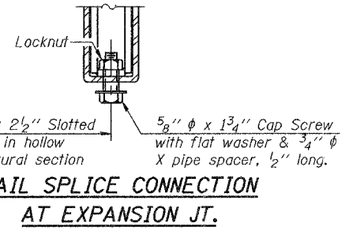
VIEW A-A



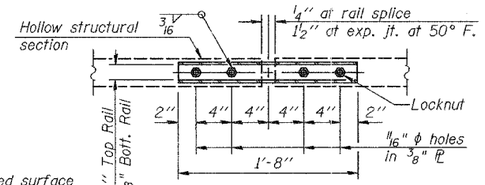
SECTION B-B



SECTION AT RAIL POST

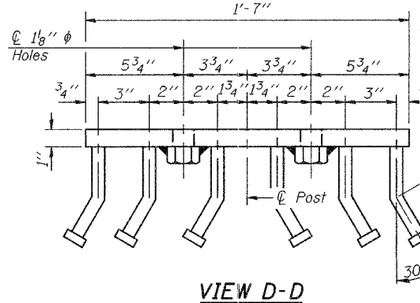


RAIL SPLICE CONNECTION AT EXPANSION JT.

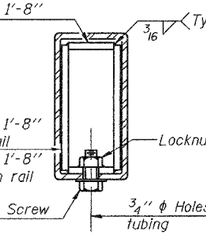


PLAN-BOTT. SPLICE PL TYPICAL

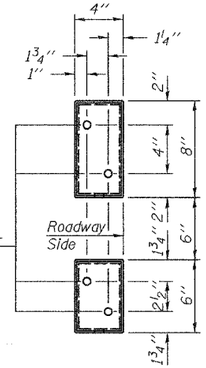
℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



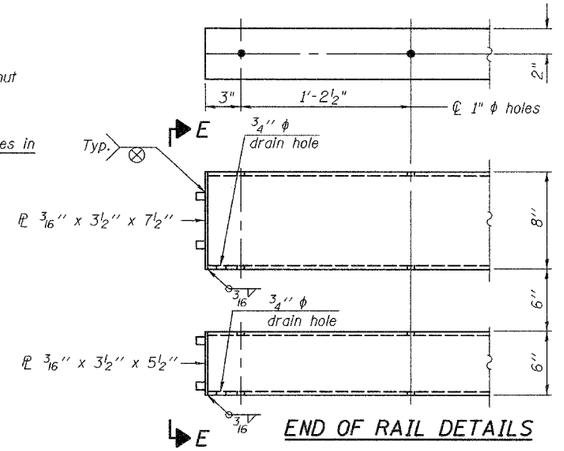
VIEW D-D



SECTION AT RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

NOTES

Hollow structural sections 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 requirements 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 according to AASHTO M 232.

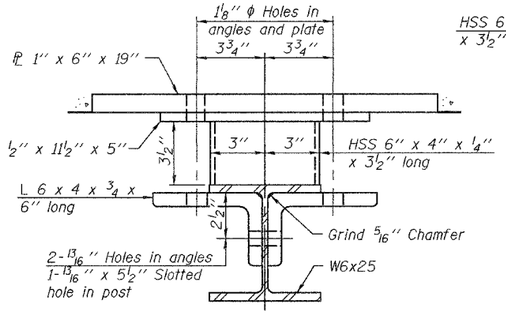
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to 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.

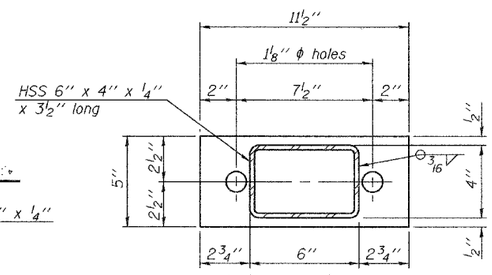
All field drilled holes shall be coated with an approved zinc rich paint before erection.

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

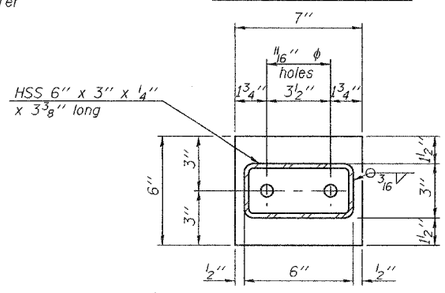
The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.



SECTION C-C

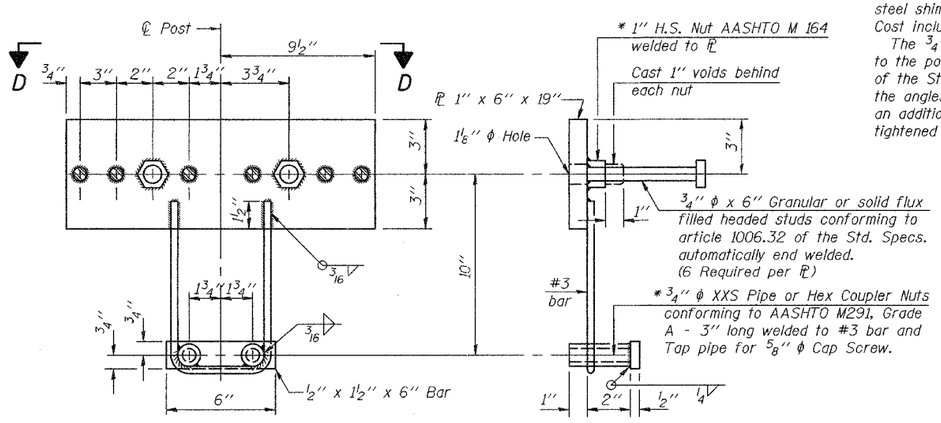


PL 1/2" x 11 1/2" x 5"



PL 1/2" x 7" x 6"

(6'-3" Maximum Post Spacing) (5" minimum to 7/8" maximum CWS thickness)



ANCHOR DEVICE

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	205

TYPE SM STEEL BRIDGE RAIL IL 116 OVER KELLY CREEK FAP ROUTE 681 - SECTION 116BR-1 FORD COUNTY STATION 60+53.00 STRUCTURE NO. 027-0044

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

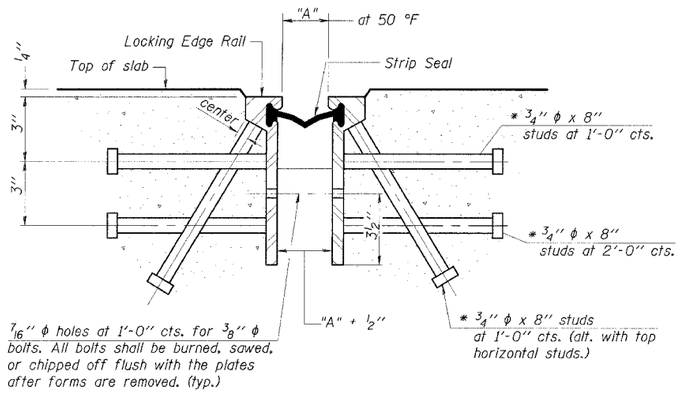
...\DGN\21306b06.dgn 11/16/2005 1:12:57 PM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	19
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

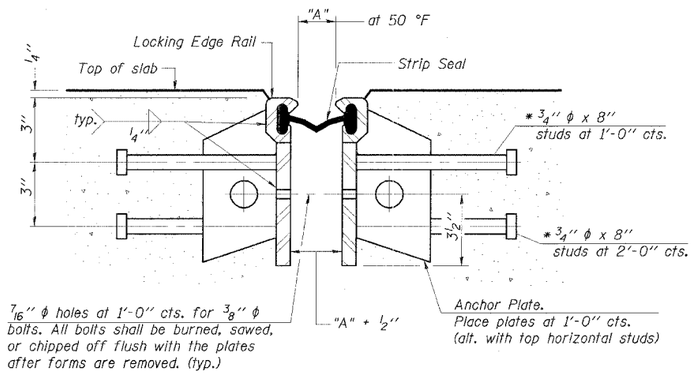
DWG. NO. 7 OF 15

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



SECTION THRU ROLLED RAIL EXP. JOINT

(178 Studs Required at Each Joint)

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

SECTION THRU WELDED RAIL AT EACH EXPANSION JOINT

(108 Studs Required at Each Joint)
(70 Anchor Plates Required at Each Joint)

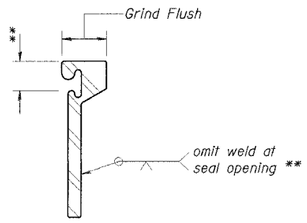
GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

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

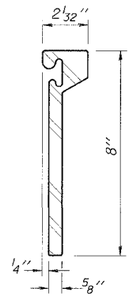
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

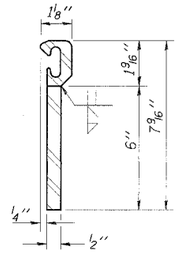


LOCKING EDGE RAIL SPLICE

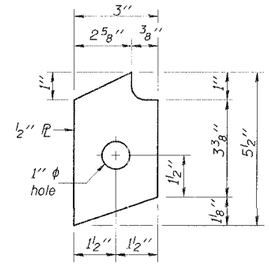
The inside of the locking edge rail groove shall be free of weld residue.



ROLLED (EXTRUDED) RAIL



WELDED RAIL



ANCHOR PL

(for welded rail)

LOCKING EDGE RAILS

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

STRIP SEAL EXPANSION JOINT
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

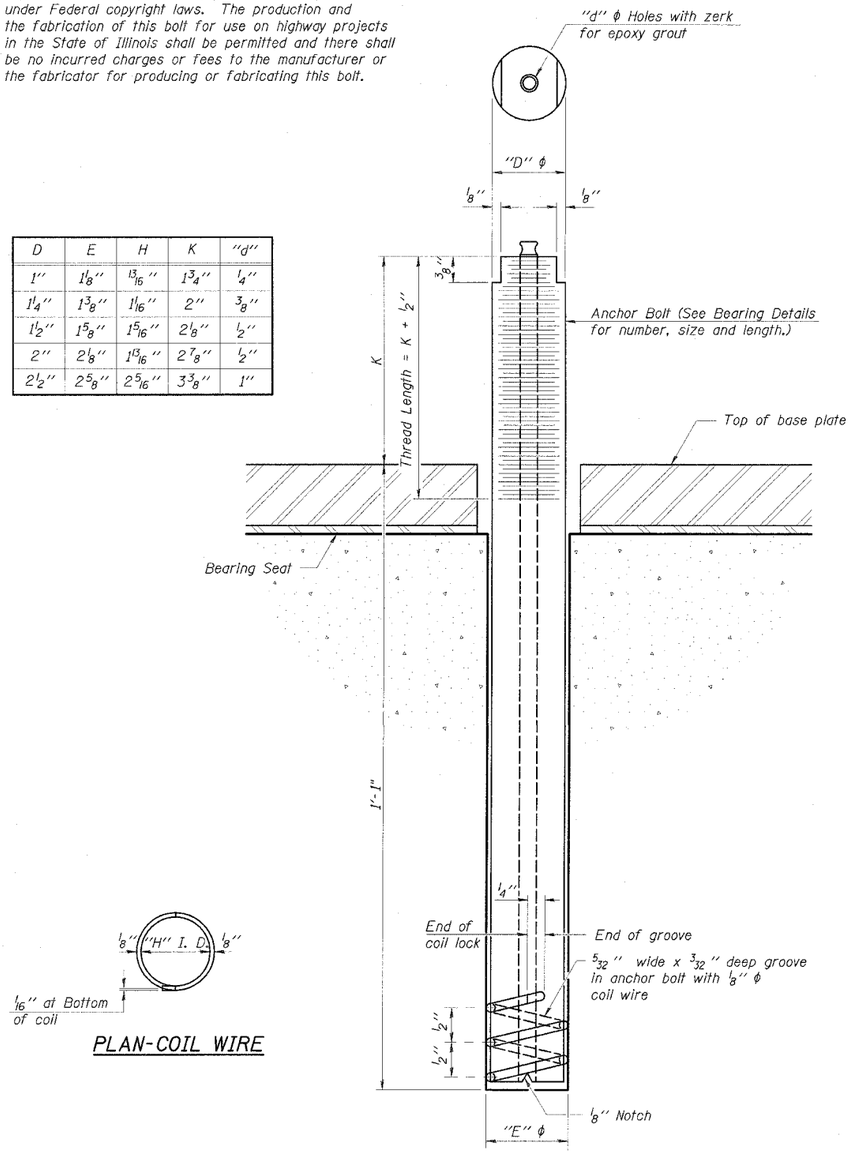
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	20
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 8 OF 15

CONTRACT NO. 66561

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

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 A 519, Grade 1026, CW 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 C 881, 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 according to 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 of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A-307 (Side Retainers)

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to 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 Precast Prestressed Concrete Deck Beams.

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

ABB-1 10-22-04

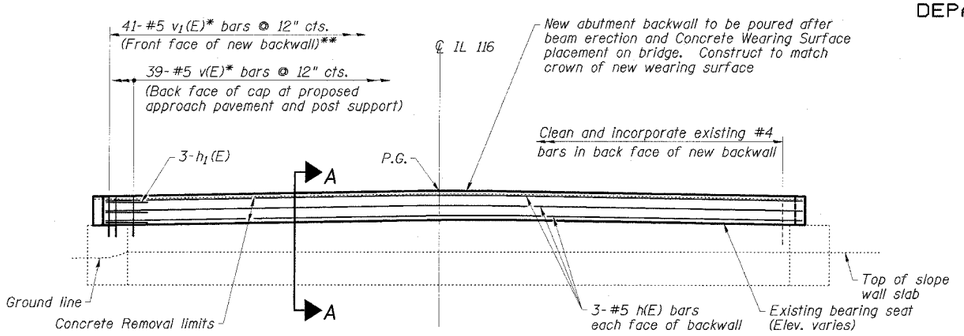
ANCHOR BOLT DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	21
STA		TO STA		
FED. ROAD DIST. NO. *		ILLINOIS	FED. AID PROJECT-	

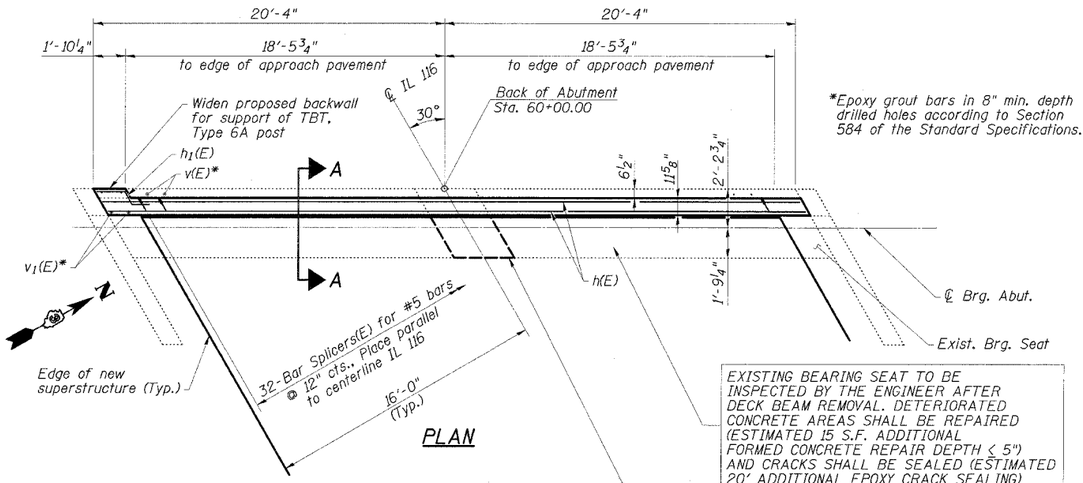
DWG. NO. 9 OF 15

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
Backwall Repairs

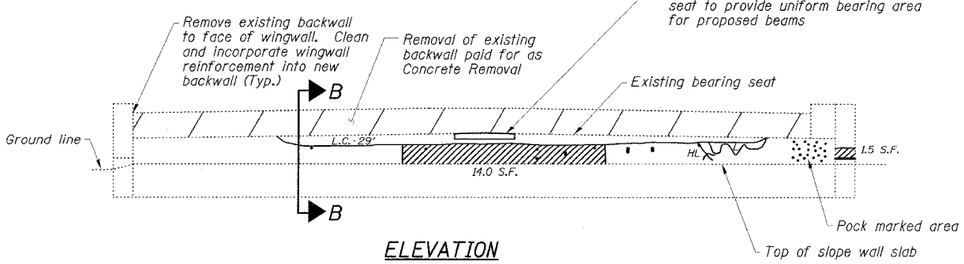


PLAN

*Epoxy grout bars in 8" min. depth drilled holes according to Section 584 of the Standard Specifications.

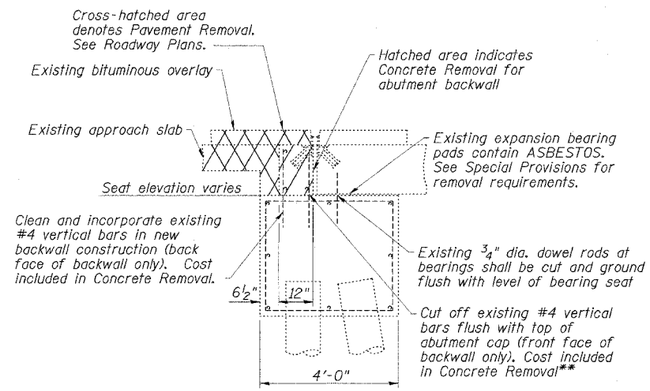
EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH ≤ 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND. BRIDGE SEAT SEALER SHALL BE APPLIED TO FORMED CONCRETE REPAIR AREAS.

8.7 S.F. Formed Concrete Repair to be used to slope existing level portion of abutment seat to provide uniform bearing area for proposed beams



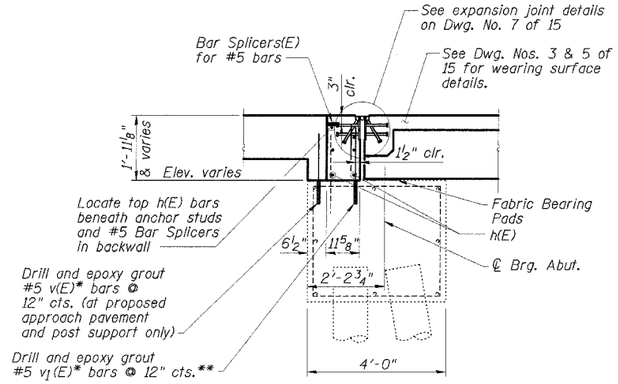
ELEVATION
Cap and Wingwall Repairs

NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 4-14-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

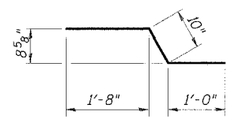


SECTION B-B EXISTING

**As directed by the Engineer, the existing #4 vertical bars in the front face of backwall may be cleaned and incorporated into new backwall construction and the #5 v1(E) bars eliminated from the contract if 1½" minimum clearance can be maintained from the face of the new backwall



SECTION A-A PROPOSED



BAR h1(E)

WEST ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h (E)	6	#5	40'-3"	——
	h1(E)	3	#5	3'-6"	⌐
	v (E)	39	#5	2'-0"	——
**	v1(E)	41	#5	2'-3"	——
	Concrete Removal		Cu. Yd.	2.2	
	Concrete Structures		Cu. Yd.	3.0	
	Reinforcement Bars, Epoxy Coated		Pound	445	
	Structure Excavation		Cu. Yd.	36	
	Asbestos Bearing Pad Removal		Each	22	
	Bridge Seat Sealer		Sq. Ft.	24	
	Epoxy Crack Sealing		Foot	49	
	Formed Concrete Repair (Depth Equal to or Less Than 5")		Sq. Ft.	39.2	
	Bar Splicers		Each	32	

REPAIR LEGEND
Inspection Date: 4-14-05

- Rust Stained Area
- (W/L) Moisture Stained or Leached Area
- HL Hairline Crack - Not to be Sealed
- C.-6' Crack (> 1/16" Width)
- L.C.-6' Leached Crack (> 1/16" Width)

EPOXY CRACK SEALING

- S.F. Delaminated Area
- S.F. Spalled Area (Depth ≤ 5")

FORMED CONC. REPAIR

WEST ABUTMENT
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

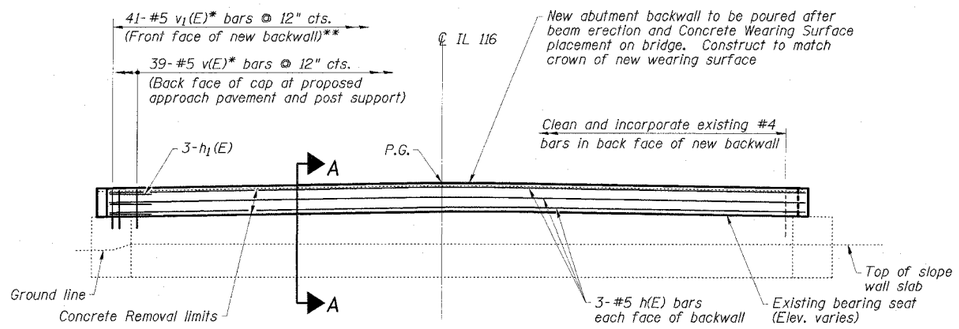
ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

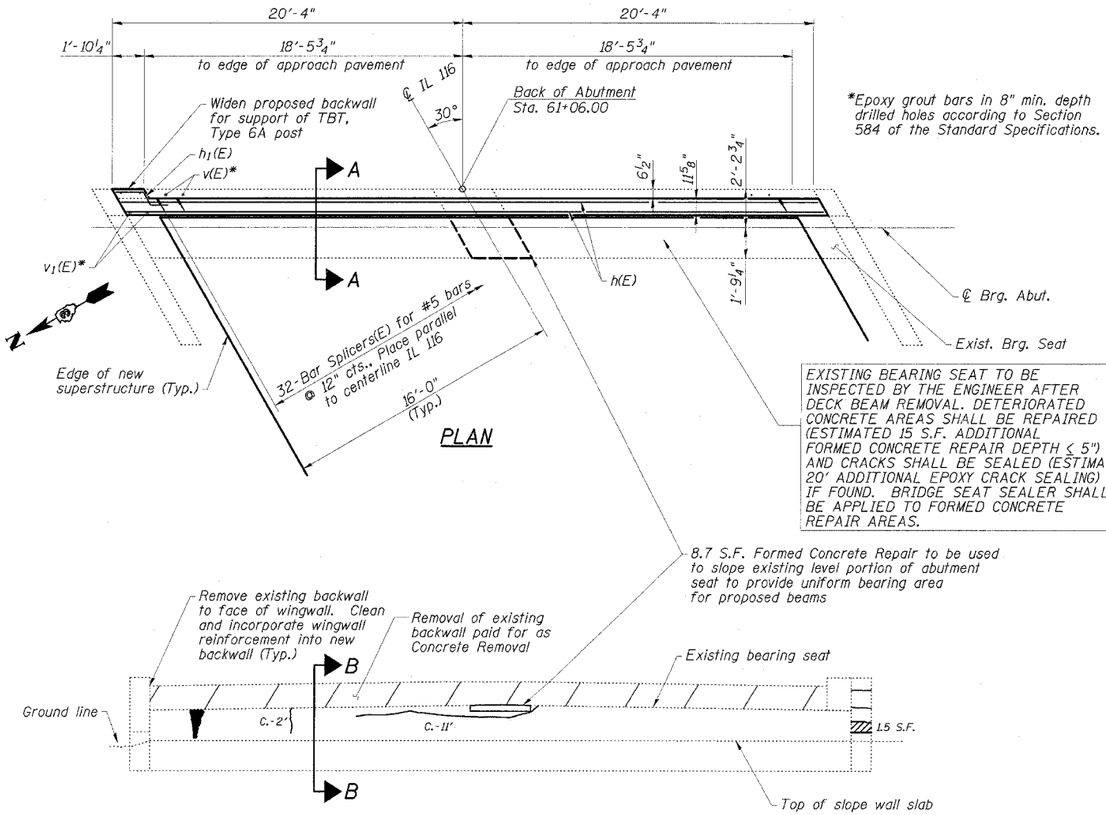
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	22
STA		TO STA		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 10 OF 15		

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
Backwall Repairs

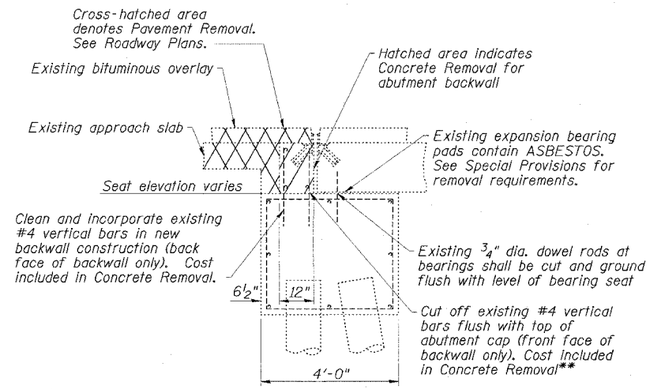


PLAN

*Epoxy grout bars in 8" min. depth drilled holes according to Section 584 of the Standard Specifications.

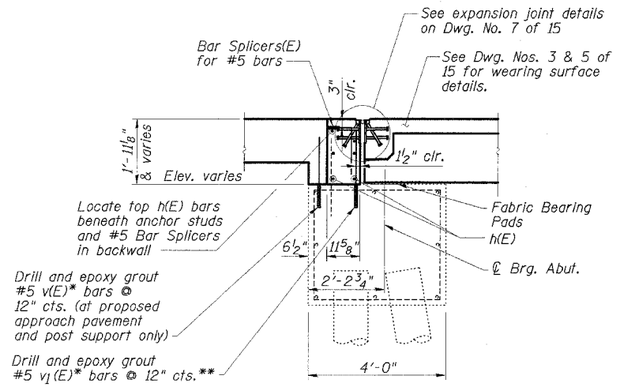
ELEVATION
Cap and Wingwall Repairs

NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 4-14-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

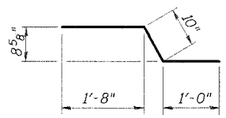


SECTION B-B
EXISTING

**As directed by the Engineer, the existing #4 vertical bars in the front face of backwall may be cleaned and incorporated into new backwall construction and the #5 $v_1(E)$ bars eliminated from the contract if 1½" minimum clearance can be maintained from the face of the new backwall



SECTION A-A
PROPOSED



BAR $h_1(E)$

EAST ABUTMENT
BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h (E)	6	#5	40'-3"	——
	$h_1(E)$	3	#5	3'-6"	⌐
	v (E)	39	#5	2'-0"	——
**	$v_1(E)$	41	#5	2'-3"	——
	Concrete Removal			Cu. Yd.	2.2
	Concrete Structures			Cu. Yd.	3.0
	Reinforcement Bars, Epoxy Coated			Pound	445
	Structure Excavation			Cu. Yd.	36
	Asbestos Bearing Pad Removal			Each	22
	Bridge Seat Sealer			Sq. Ft.	24
	Epoxy Crack Sealing			Foot	33
	Formed Concrete Repair (Depth Equal to or Less Than 5")			Sq. Ft.	25.2
	Bar Splicers			Each	32

REPAIR LEGEND
Inspection Date: 4-14-05

- Rust Stained Area
- (W/L) Moisture Stained or Leached Area
- HL Hairline Crack - Not to be Sealed
- C.-6' Crack (> 1/16" Width) — EPOXY CRACK SEALING
- L.C.-6' Leached Crack (> 1/16" Width) — EPOXY CRACK SEALING
- S.F. Delaminated Area — FORMED CONC. REPAIR
- S.F. Spalled Area (Depth ≤ 5") — FORMED CONC. REPAIR

EAST ABUTMENT
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

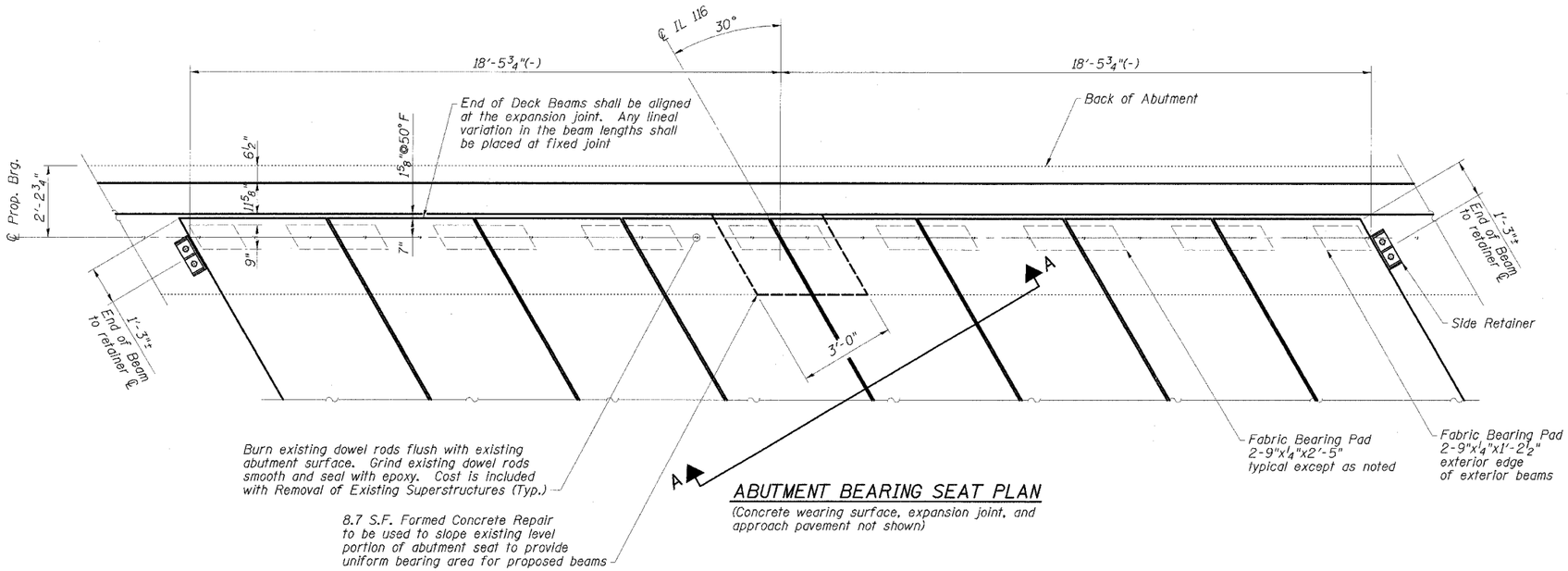
ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	23
STA		TO STA		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 11 OF 15

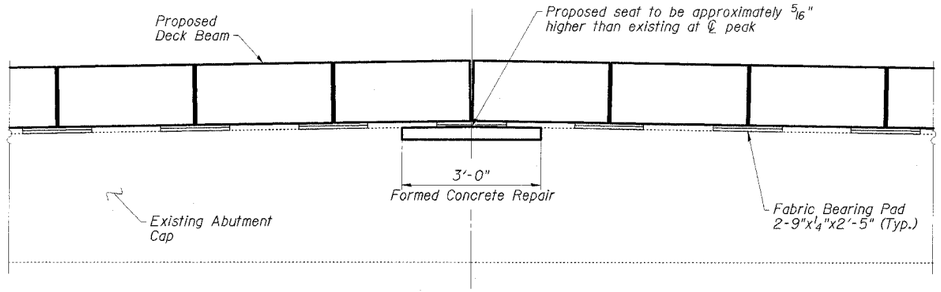
CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



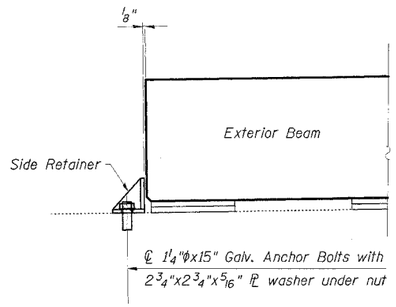
ABUTMENT BEARING SEAT PLAN

(Concrete wearing surface, expansion joint, and approach pavement not shown)



SECTION A-A

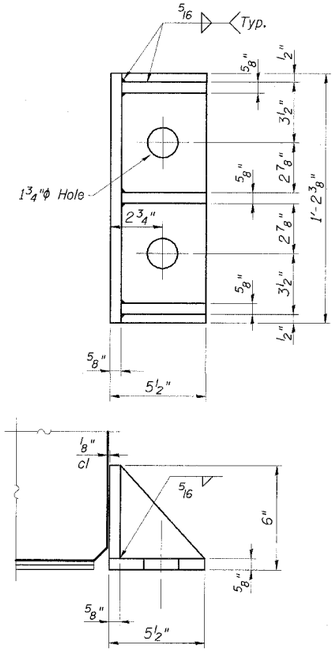
(Concrete wearing surface not shown)



EXTERIOR BEAM RETAINER DETAILS

(4 Required)

Cost of Retainer Angles, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams. Fill ⅛" gap with shim ℗ to provide temporary lateral support until shear keys have been grouted and concrete wearing surface has been placed.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

ABUTMENT DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

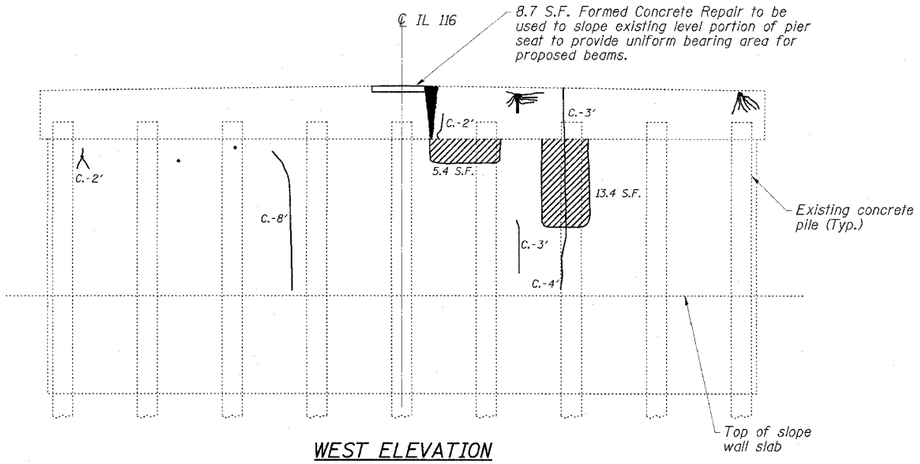
ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	DWH	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	24
STA.		TO STA.		
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT-		

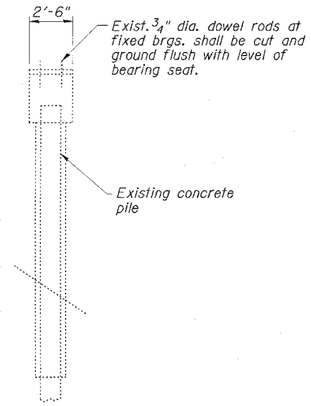
DWG. NO. 12 OF 15

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

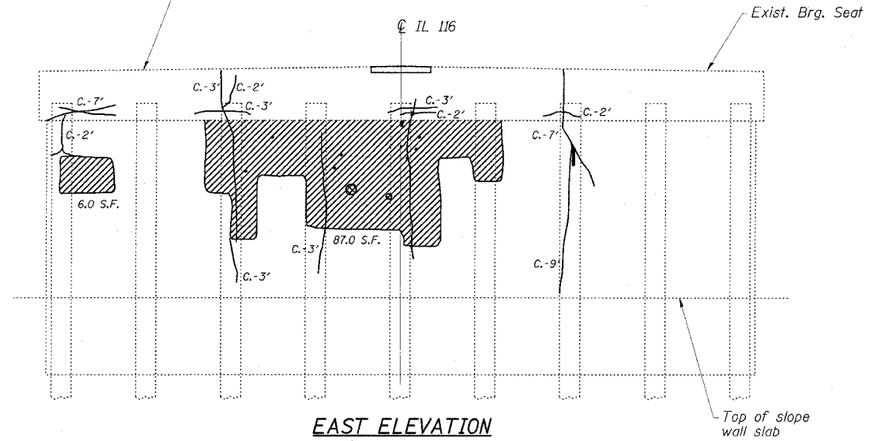


WEST ELEVATION

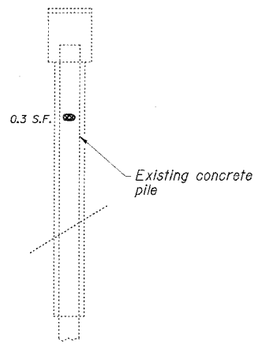


SOUTH END

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH ≤ 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND.



EAST ELEVATION



NORTH END

PIER 1
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	88
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	135.8

REPAIR LEGEND

Inspection Date: 4-14-05

- Rust Stained Area
- (W/L) Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width)
- L.C.-6' — Leached Crack (> 1/16" Width)

  (C.-6' and L.C.-6' = EPOXY CRACK SEALING)
- S.F. — Delaminated Area
- S.F. — Spalled Area (Depth ≤ 5")

  (S.F. and S.F. = FORMED CONC. REPAIR)

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	DWH	5/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 4-14-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

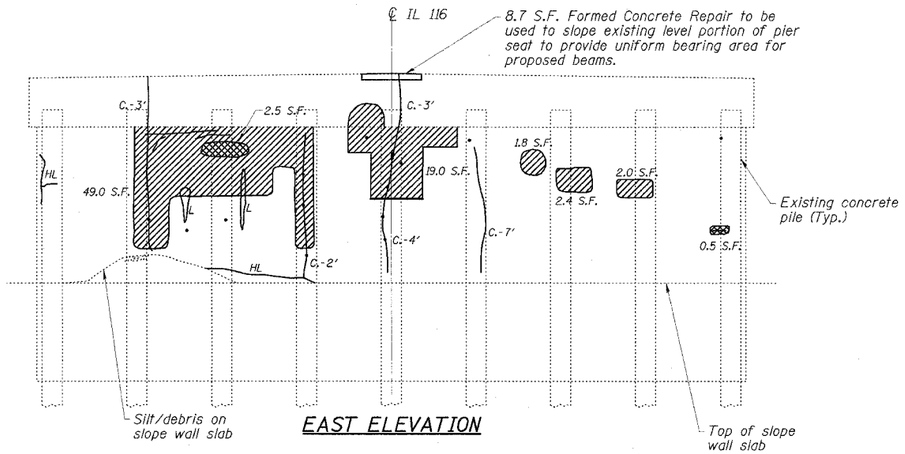
PIER 1
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	25
STA		TO STA		
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT-		

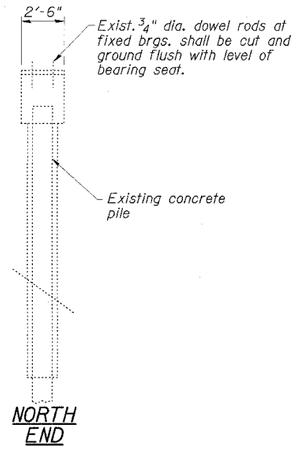
DWG. NO. 13 OF 15

CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

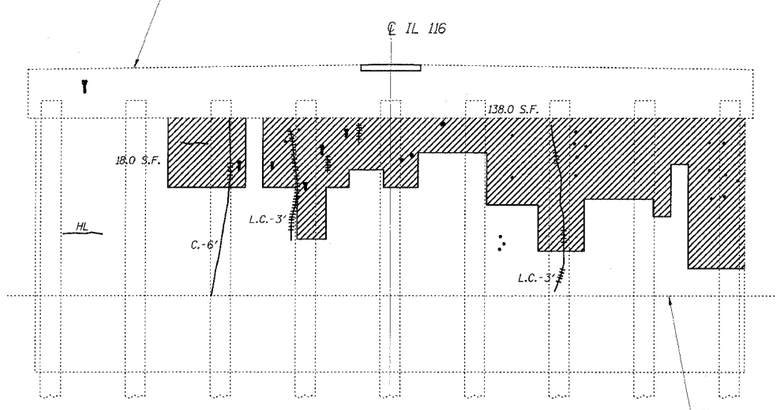


EAST ELEVATION

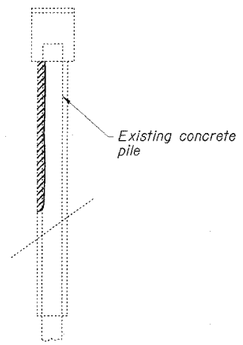


NORTH END

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH ≤ 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND.



WEST ELEVATION



SOUTH END

PIER 2
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	51
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	256.9

REPAIR LEGEND

Inspection Date: 4-14-05

- Rust Stained Area
- W/L — Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width) — EPOXY CRACK SEALING
- L.C.-6' — Leached Crack (> 1/16" Width) — EPOXY CRACK SEALING
- S.F. — Delaminated Area — FORMED CONC. REPAIR
- S.F. — Spalled Area (Depth ≤ 5") — FORMED CONC. REPAIR

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	DWH	5/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 4-14-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

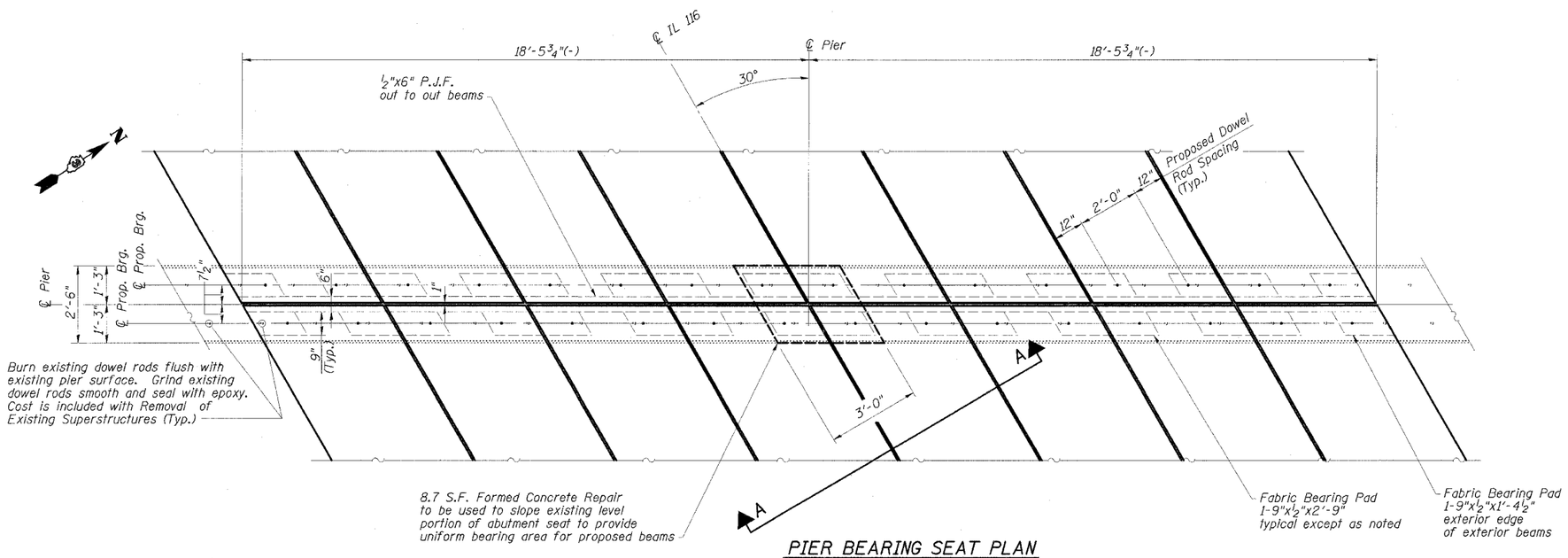
PIER 2
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	26
STA		TO STA		
FED. ROAD DIST. NO. *		ILLINOIS	FED. AID PROJECT-	

DWG. NO. 14 OF 15

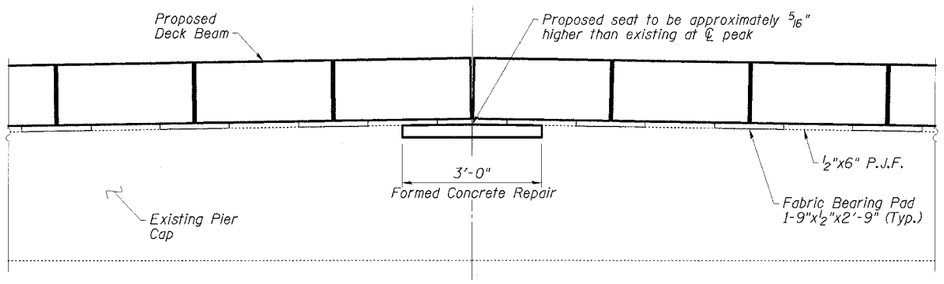
CONTRACT NO. 66561

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER BEARING SEAT PLAN

(Concrete wearing surface not shown)



SECTION A-A

(Concrete wearing surface and dowel rods not shown)

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	5/05
DRAWN BY:	DWH	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

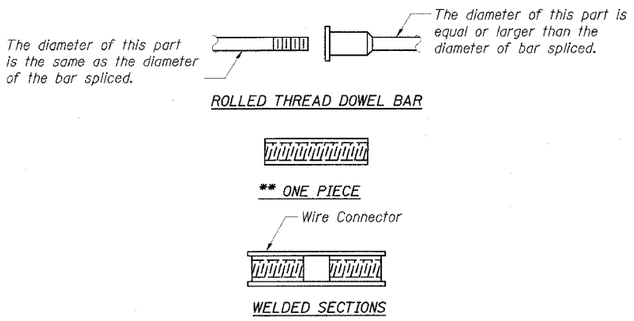
PIER DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	116BR-1	FORD	37	27
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

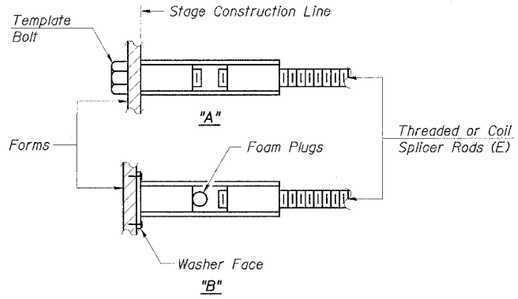
DWG. NO. 15 OF 15

CONTRACT NO. 66561



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

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

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

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

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

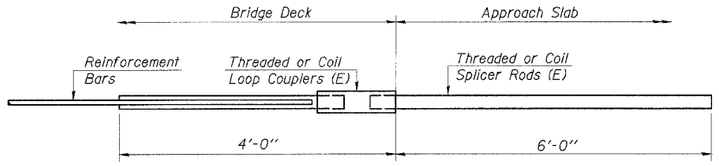
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

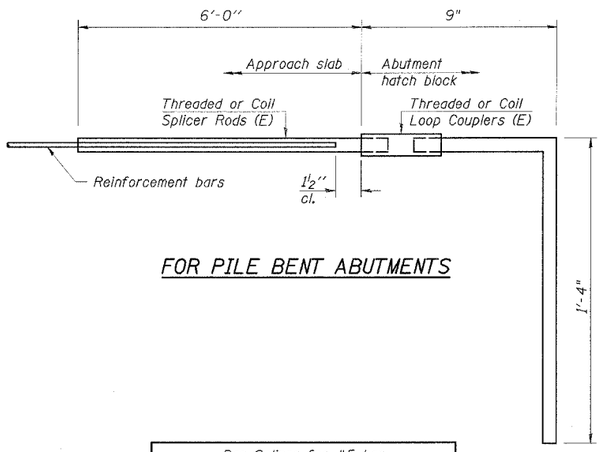
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



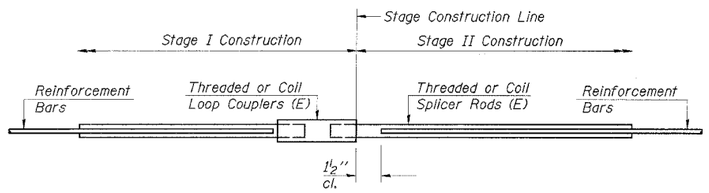
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 64



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
IL 116 OVER KELLY CREEK
FAP ROUTE 681 - SECTION 116BR-1
FORD COUNTY
STATION 60+53.00
STRUCTURE NO. 027-0044

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

BSD-1 10-22-04

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	28
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

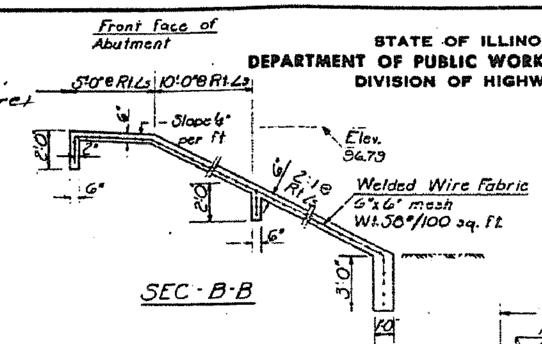
SHEET NO. 1
7 SHEETS

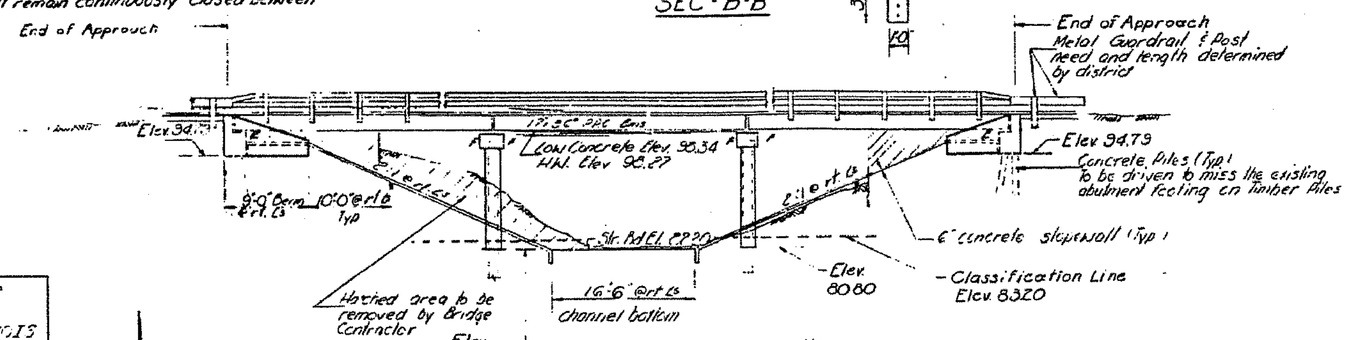
B.M.: "C.A. Top Wingwall at S.E. Corner of Bridge 11.5' Rt. Sta 60+82 El. 100.00

Existing Structure: Steel Truss span @ 70' with reinf. conc. closed abuts. built as S.B.I. Rt. 116, Sec. 116 B (Substructure) & Sec. 116-C (Superstructure) in 1929 @ Sta. 60+53 to be removed by Bridge Contractor before new construction starts.

Note: Channel Adjustment to proposed Cross Section under the bridge by Bridge Contractor

East & West Dikes North & South of Proposed bridge to be extended to road shoulder elevation ±100.00 at abutments so that highwater will remain continuously closed between dikes.





STATION 60+53
BUILT 19_ BY
STATE OF ILLINOIS
S.B.I. RT. 116 SEC. 116BR
LOADING HS20

NAME PLATE

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.08 (c) of the Standard Specifications and are included in quantity of structural steel.

Slope wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 sq. ft.

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

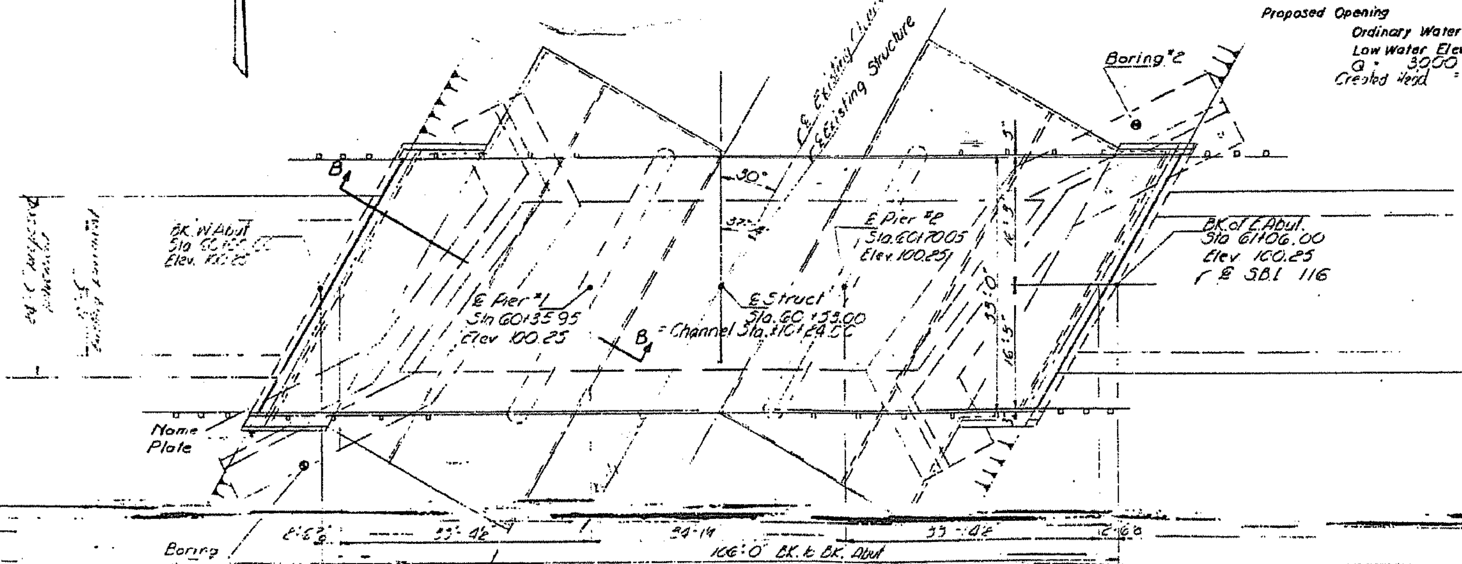
Class A & B Excav. for structures include excavation for slope wall.

An alternate strand pattern using Extra High Strength Prestressing strand (270 k.s.i.) is permitted.

The contractor shall drive two test piles in the permanent locations, one at E. Abutment; one at pier 1 as directed by the Engineer before ordering the remainder of piles.

WATERWAY INFORMATION

Drainage Area 31.84 Sq. Mi.
Character Level, Rolling, Cultivated
Required Opening (50 yr flood) 690 Sq. Ft.
Present Opening 630 Sq. Ft.
Proposed Opening 700 Sq. Ft.
Ordinary Water Elev.
Low Water Elev.
Q = 3000 cfs
Created Head = .07



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Channel Excavation	Cu. Yds.		520	520
Class A Excavation for Struct.	Cu. Yds.		80	80
Class B Excavation for Struct.	Cu. Yds.		100	100
Furn. & Erecting P.P.C. Deck Bms. (17")	Sq. Ft.	3366		3366
Class X Concrete	Cu. Yds.		153.2	153.2
Reinforcement Bars	Lbs.		10270	10270
Structural Steel	Lbs.	1,680		1,680
Steel Railing, Type N	Lin. Ft.	204		204
Piles	Lin. Ft.		1330	1330
Test Piles (Concrete)	Each		2	2
Coal Tar Interlayer Prot. Coat	Sq. Yds.	388		388
Name Plates	Each		1	1
Slope Wall (6")	Sq. Yds.		600	600
Removal of Existing Structures	Ea.			1
Preformed Jt. Sealer	Lin. Ft.	78		78
Bit. Conc. Surf. Course Class I	Tons	92.8		92.8

DESIGN STRESSES

FIELD UNITS

f'c = 1,000 psi Sub
Vc = 75 psi Footing
fs = 20,000 psi Reinf.
n = 10

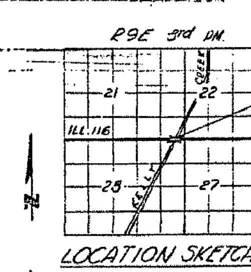
PRESTR. PRECAST UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 240,000 psi (Strands 7/16" Ø)
fsi = 175,600 psi (Strands 7/16" Ø)
Allow 25#/sq. ft. for future W.S.

Loading HS 20-44

DESIGNED	
CHECKED	G.B. Miller
DRAWN	
CHECKED	

January 15 1971
EXAMINED
PASSED W.E. Baumann
APPROVED



S.B.I. RT. 116 OVER KELLY CREEK
S.B.I. RT. 116 SEC. 116 BR
FORD COUNTY
STATION 60+53

K&E CO. 10-1253

FOR INFORMATION ONLY

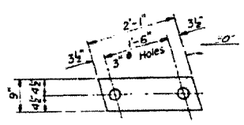
EXISTING BRIDGE PLANS

CONTRACT NO. 66561

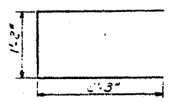
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	29
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

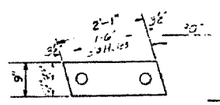
SHEET NO. 7 SHEETS



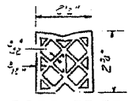
FABRIC BEARING PAD



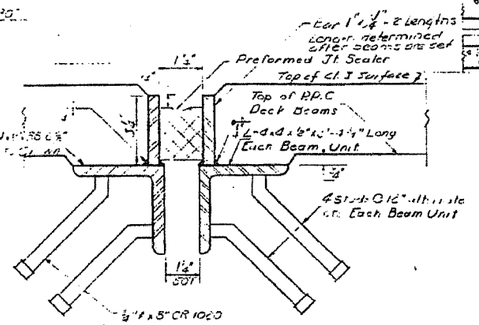
U₁ BAR

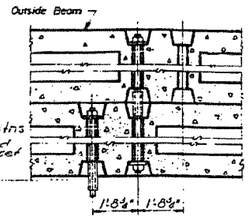


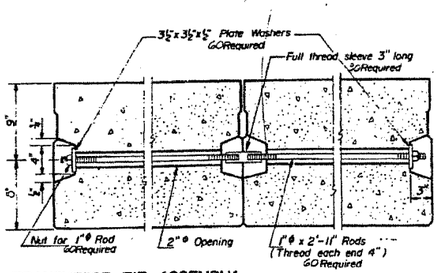
GRAPHITED ASBESTOS BEARING PAD



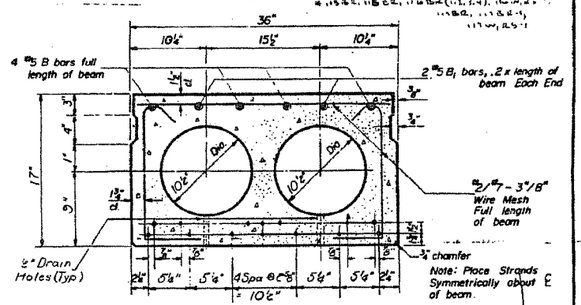
PREF. JT. SEALER





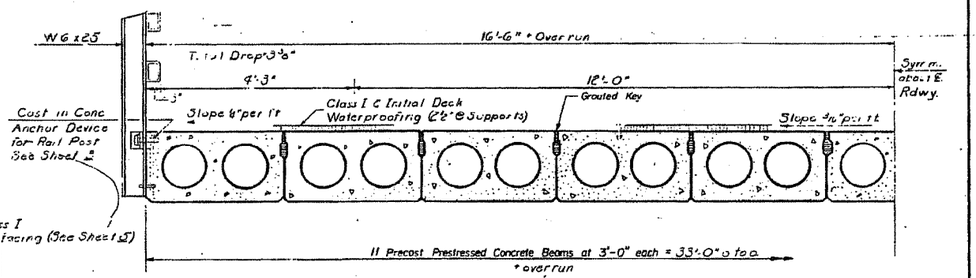


TYPICAL TRANSVERSE TIE ASSEMBLY

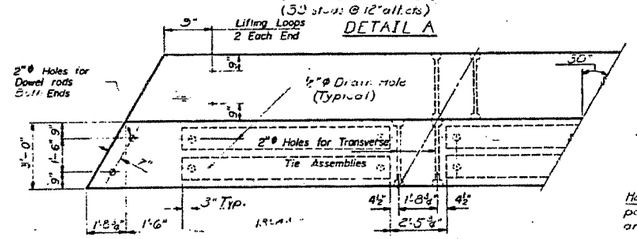


TYPICAL SECTION

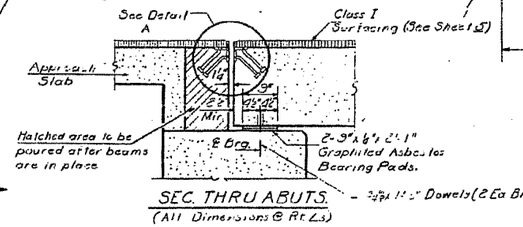
14 - 7/16ø Strands Each Strand Stressed to 18,900 lbs.
7 Strands 13½" up 7 Strands 3½" up



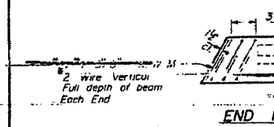
HALF CROSS SECTION



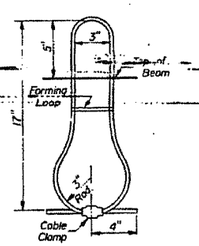
PLAN



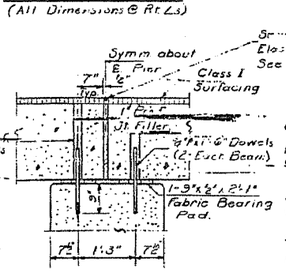
SEC. THRU ABUTS.
(All Dimensions @ Rt. ∠s)



END PLAN



LIFTING LOOP DETAIL



SEC. THRU PIERS
(All Dimensions @ Rt. ∠s.)

GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand.
The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.109 sq. in..
Lifting loops shall be ⅝" diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 18,700lbs.
The 1"ø rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place.
Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar.
After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure. Grout dowels at fixed end. At expansion end grout dowels into substructure & fill holes in beam with P.A.F.-4
Dowel rods shall be ASTM A 307, or ASTM A-615. Transverse tie rods shall be ASTM A-306, Grade 70-80.
After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped, galvanized in accordance with A.S.T.M. Designation: A153.
Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Concrete Deck Beams			Sq. Ft.	3,366

DECK BEAM DETAILS
S.B.I. RT. 116 SEC. 116 BR
FORD COUNTY
STA. 60+53

DESIGNED	[illegible]
CHECKED	C.G. Miller
DRAWN	[illegible]
CHECKED	[illegible]

EXAMINED
PASSED
APPROVED
January 15 1971

PD-1-L 11-19-65 Rev 5-20-68

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

CONTRACT NO. 66561

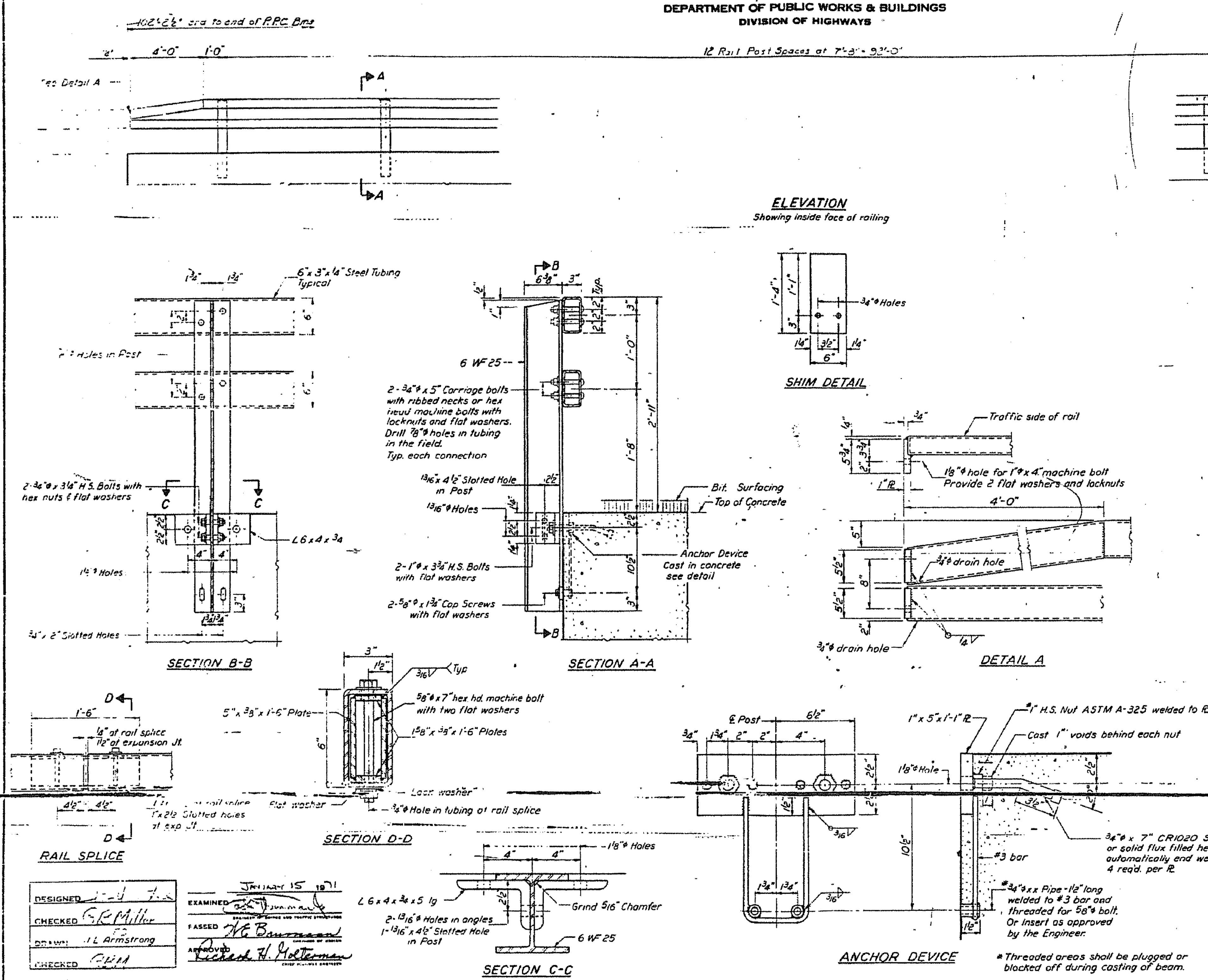
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	30

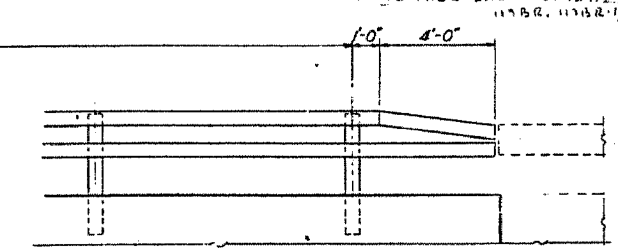
STA. TO STA.

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

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

SHEET NO. 3
7 SHEETS





NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-501 "Hot Formed Welded and Seamless Carbon Steel Structural Tubing."

All other steel shapes and plates shall conform to the requirements of ASTM designation A-36 except posts shall conform to ASTM A-441.

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 ASTM designation A-325.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with ASTM designation A-153.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with ASTM designation A-123 and A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE N

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

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post and concrete.

The 3/4"φ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 710.11 of the Standard Specifications. The 1"φ high strength bolts connecting the angles to the concrete beam shall be tightened to a snug fit and given an additional 1/8 turn.

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

BILL OF MATERIAL

Item	Unit	Quantity
STEEL RAILING, TYPE N	Lin. Ft.	204

TYPE N
STEEL RAILING
S.B.I. RT. 116, SEC. 116 BR
FORD COUNTY
STA. 60+53

DESIGNED
CHECKED G.R. Miller
DRAWN J.L. Armstrong
CHECKED

EXAMINED January 15 1971
PASSED
APPROVED

FOR INFORMATION ONLY

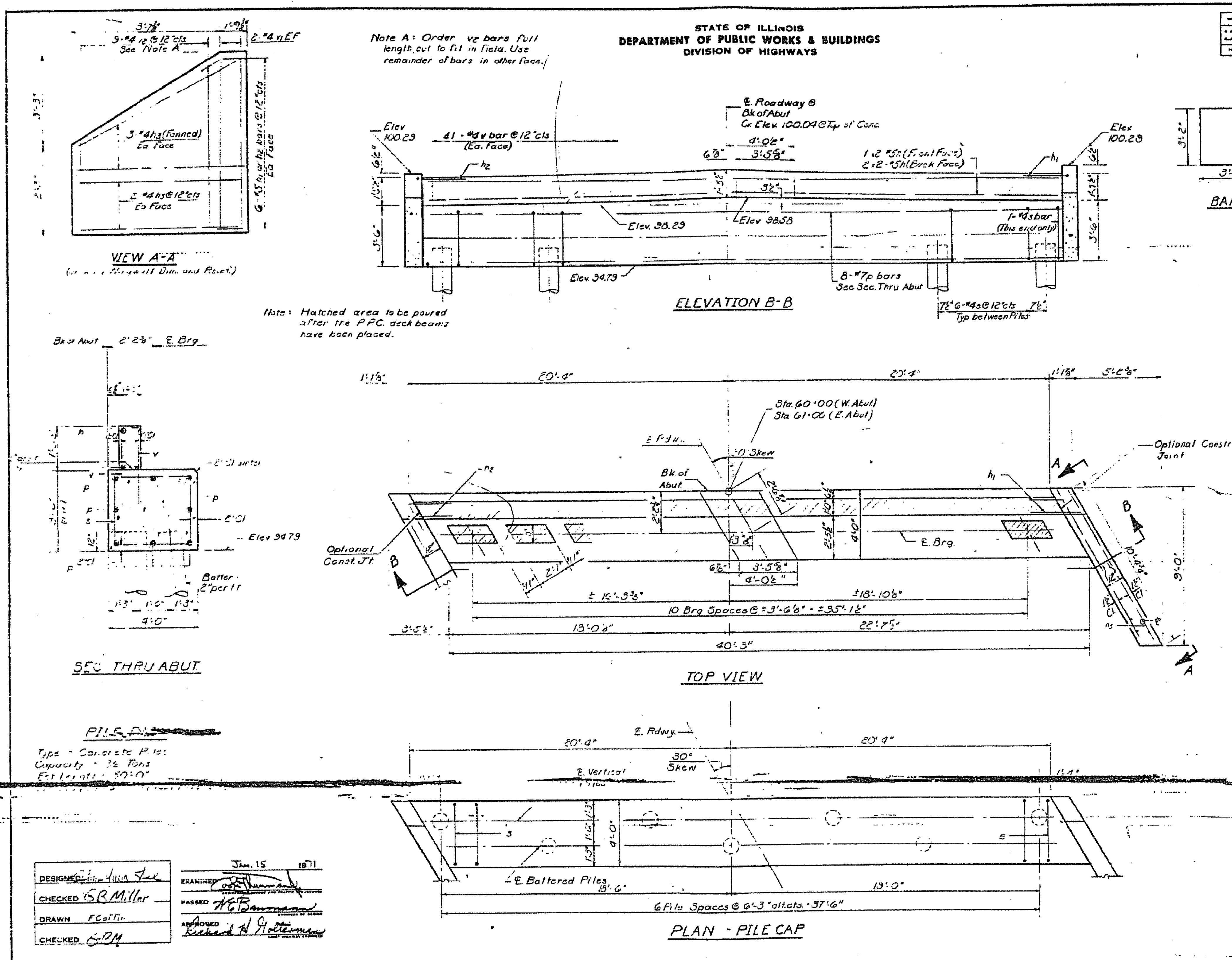
EXISTING BRIDGE PLANS

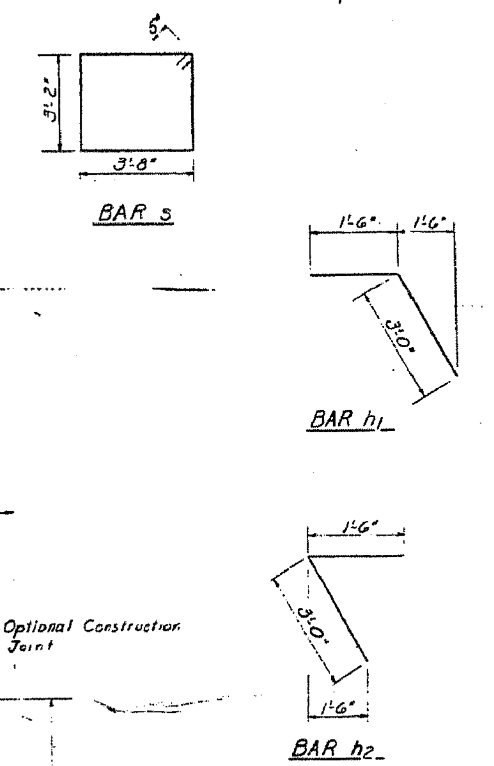
CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

SHEET NO. 4
7 SHEETS





TWO ABUTMENTS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
h	12	#5	21'-0"	—
h1	24	#5	4'-6"	bent
h2	24	#5	4'-6"	bent
h3	40	#4	10'-0"	—
p	16	#7	40'-6"	—
s	74	#4	14'-6"	□
v	164	#4	2'-3"	—
v1	16	#4	5'-3"	—
v2	36	#4	7'-0"	—
Class X Concrete			[illegible]	[illegible]
Reinforcement Bars			Lbs.	[illegible]
Concrete Piles			Lin. Ft	650
Test Piles (Concrete)			Ea	1

EAST & WEST ABUTMENTS
S.B.I. RT. 116 SEC. 116 BR
FORD COUNTY
STA. 60+53

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

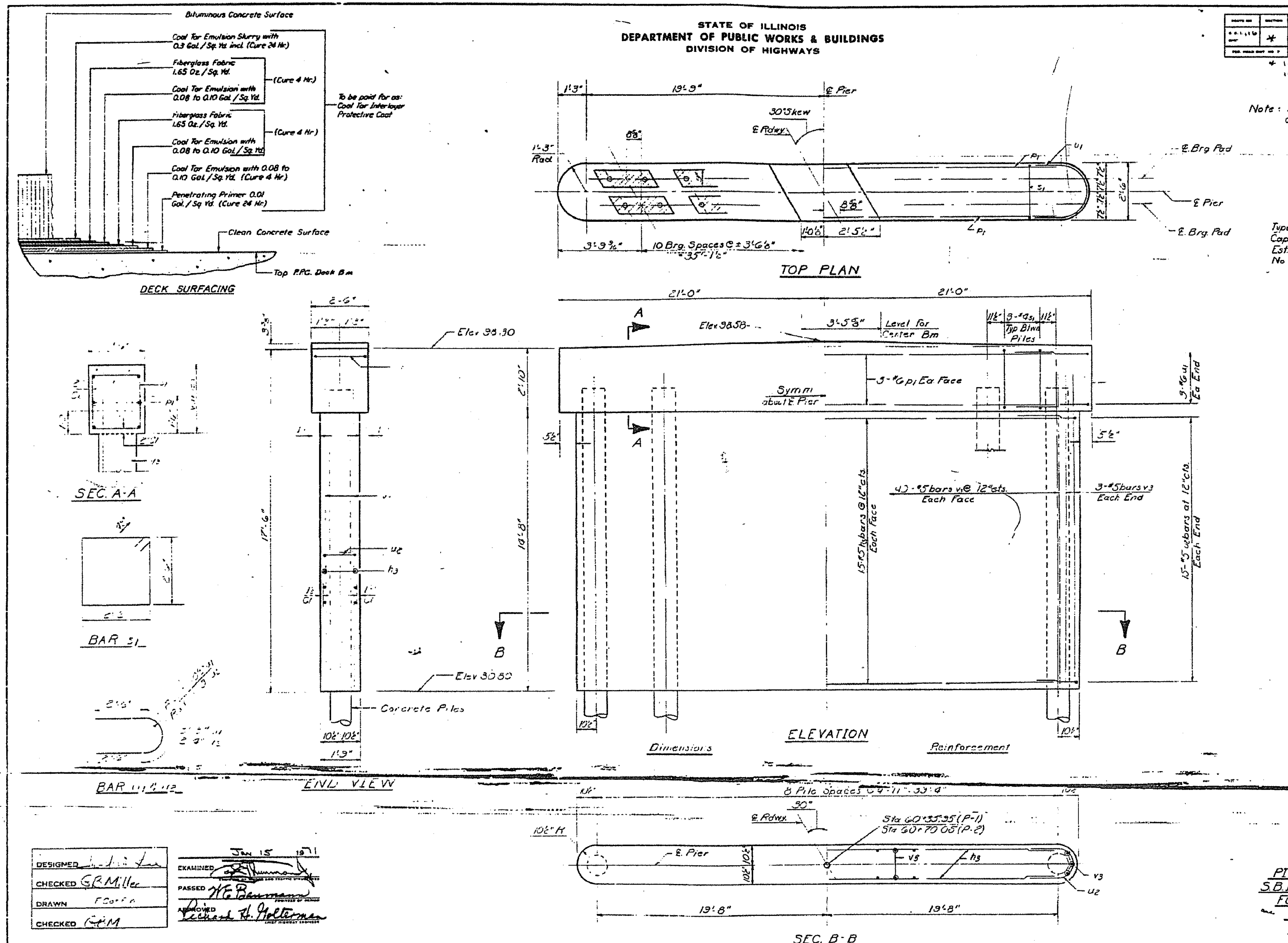
CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	32
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

SHEET NO. 5
7 SHEETS

Note: All edges shall have standard ¾" chamfers except as noted



TWO PIERS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3	60	#5	33'-4"	——
p1	12	#6	33'-6"	——
s1	48	#4	10'-1"	◻
u1	12	#6	8'-3"	⊃
u2	60	#5	7'-4"	⊃
v3	172	#5	16'-3"	——
Class X Concrete			Cu. Yds.	1002
Reinforcement Bars			Lbs.	7,000
Concrete Piles			Lin. Ft.	680
Test Piles (Conc.)			Ea.	1

DESIGNED
CHECKED G.B. Miller
DRAWN
CHECKED G.M.

EXAMINED
PASSED W.E. Baumann
APPROVED Richard H. Golterman

PIER 1 & PIER 2
S.B.I. RT. 116 SEC. 116 BR
FORD COUNTY
STA. 60+53

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	33
STA. 54+50.00		TO STA. 58+12.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCALES:
HORIZ: 1"=10'
VERT: 1"=5'

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

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

℄ FAP RTE 681 (IL 116)

58+12.00 | 58+00.00 | 57+00.00 | 56+00.00 | 55+00.00 | 54+50.00

EX ROW
EX SPBGR
TELEPHONE

FAP RTE 681 (IL 116) CROSS SECTIONS
STA 54+50.00 to STA 58+12.00

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	34
STA. 58+26.00		TO STA. 59+30.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCALES:
HORIZ: 1"=10'
VERT: 1"=5'

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

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

℄ FAP RTE 681 (IL 116)

60+97.00 | 60+08.00 | 60+00.00 | 59+90.00 | 58+42.00 | 58+26.00 FE

EX ROW

PR TBT TY 6A
EX SPBGR
BRIDGE DECK
PGL 662.61
POE BY BRIDGE CONTRACTOR
RIGHT C= 2.76 F= 0.00
TOP OF BANK KELLY CREEK
RIGHT C= 10.11 F= 1.44
LEFT C= 5.29 F= 0.00
LEFT C= 9.88 F= 0.00

FAP RTE 681 (IL 116) CROSS SECTIONS
STA 58+26.00 to STA 59+30.00

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	35
STA. 59+50.00		TO STA. 60+97.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SCALES
HORIZ: 1"=10'
VERT: 1"=5'

℄ FAP RTE 681 (IL 116)

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

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

FAP RTE 681 (IL 116) CROSS SECTIONS
STA 59+50.00 to STA 60+97.00

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	36
STA. 61+16.00		TO STA. 62+44.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCALES:
HORIZ: 1"=10'
VERT: 1"=5'

℄ FAP RTE 681 (IL 116)

61+16.00 | 61+38.00 | 61+50.00 | 61+71.00 | 62+00.00 | 62+44.00

EX ROW

REMOVE AND RE-ERECT SPBGR, TYPE A (TYP)

EX SPBGR

RIGHT C= 0.00 F= 0.00

PGL 662.61

PGL 662.63

PGL 662.63

PGL 662.54

LEFT C= 11.86 F= 0.00

LEFT C= 0.58 F= 0.00

LEFT C= 0.00 F= 0.00

PR TBT TY 6A

EX SPBGR (TYP)

PCE BY BRIDGE CONTRACTOR

TOP OF BANK KELLY CREEK

TELEPHONE

FAP RTE 681 (IL 116) CROSS SECTIONS
STA 61+16.00 to STA 62+44.00

CONTRACT NO. 66561

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	116BR-1	FORD	37	37
STA. 62+50.00		TO STA. 65+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCALES:
HORIZ: 1"=10'
VERT: 1"=5'

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

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

℄ FAP RTE 681 (IL 116)

65+00.00 64+00.00 63+00.00 62+92.00 62+83.00 62+71.00 FE 62+50.00

EX ROW

EX SPBGR

TELEPHONE

15" CMP

FAP RTE 681 (IL 116) CROSS SECTIONS
STA 62+50.00 to STA 65+00.00