F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	1
STA. 1248+00	TO STA.1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

D-93-063-98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.S. ROUTE 317 (U.S. 45)
SECTION 36 BR
IROQUOIS COUNTY
C-93-057-01

INDEX OF SHEETS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
630001-08	STEEL PLATE BEAM GUARDRAIL
630101-07	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-03	OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

ENGLISH RATIOS

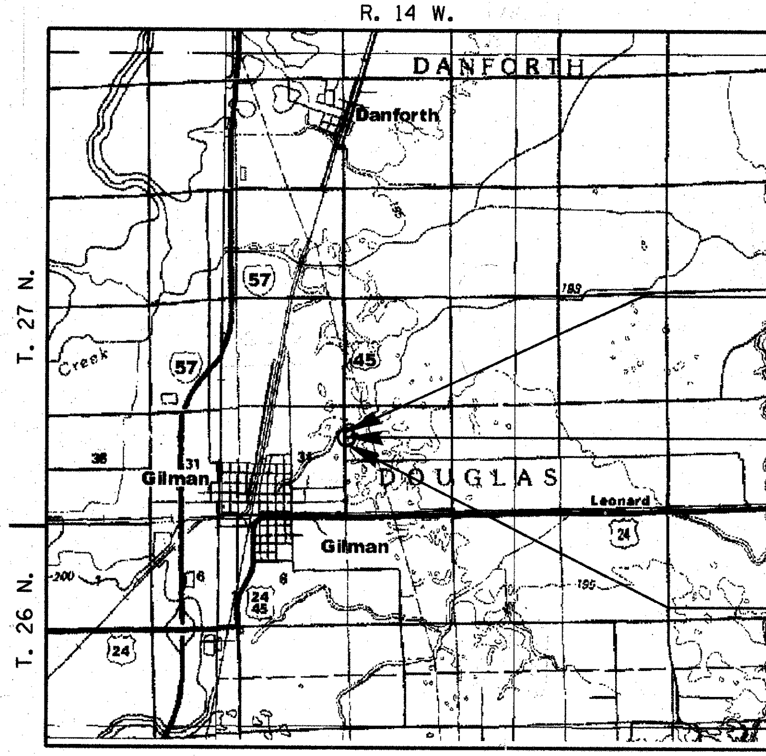
0 0.5 MI. 1 MI. — 1" = 0.5 Mile
100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: DAVE BROVIAK
UNIT CHIEF: MARK JONES
TOWNSHIP: DOUGLAS

R. 14 W.



BEGIN IMPROVEMENT
STA. 1248+00.00

SECTION 36 BR INCLUDES
REMOVE SN 038-0040, REPLACE WITH
TRIPLE 10' X 9' BOX CULVERT SN 038-2015

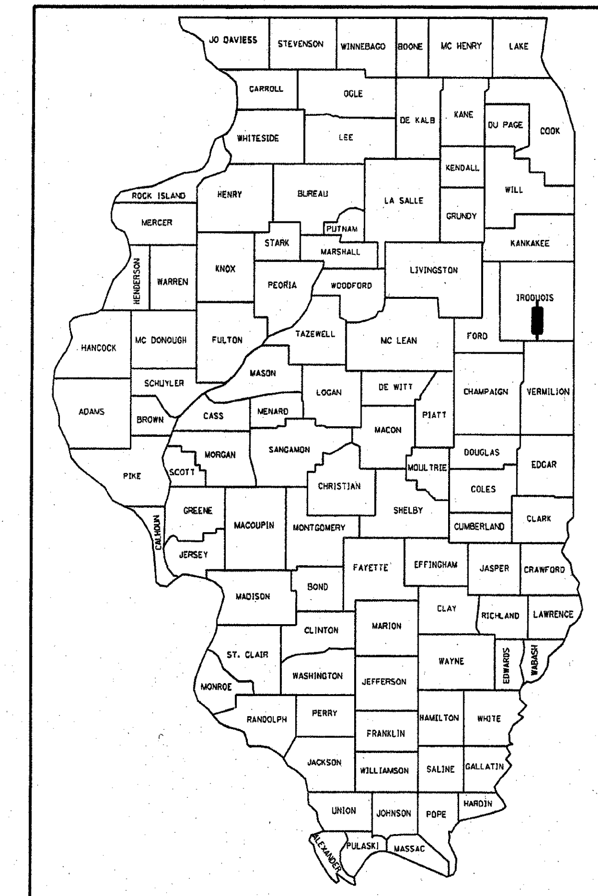
END IMPROVEMENT
STA. 1254+50.00

GROSS & NET LENGTH OF IMPROVEMENT = 650.00 FEET
= 0.123 MILES

SCALE: 1" = 0.5 MILE

MARK E. BLOOME
52930
PROFESSIONAL ENGINEER
STATE OF ILLINOIS

Mark E. Bloome
ILLINOIS PROFESSIONAL ENGINEER NO. 52930
DATE SIGNED: 5-5-2005
LICENSE EXP. DATE: 11-30-2005



LOCATION OF SECTION INDICATED THUS:-

DESIGN DESIGNATION:
MAJOR COLLECTOR

2001 ADT 1875
PV 95% SU 3% MU 2%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED February 10 2010
George Ryan
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 19 2010
Scott E. Stitt, P.E. /a
ACTING ENGINEER OF DESIGN AND ENVIRONMENT
March 19 2010
Christine M. Reed /a
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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CONSULTING ENGINEERS · SPRINGFIELD, ILLINOIS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	2
STA. 1248+00	TO STA.1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

GENERAL NOTES

(Revised May 13, 2009)

THE THICKNESS OF HMA 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 HMA IS PLACED.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

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.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW HMA PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

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.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

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

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.08	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.05	GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT /100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (HAND METHOD)	0.0005	TONS / SQ YD
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

AMEREN CIPS	PAXTON, IL
NICOR GAS	NAPERVILLE, IL
COMCAST CABLE	SOUTH HOLLAND, IL

THE CONTRACTOR SHALL CONTACT JULIE 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: ACTING DISTRICT STUDIES & PLANS ENGINEER

DATE:

EXAMINED BY: DISTRICT CONSTRUCTION ENGINEER

DISTRICT MATERIALS ENGINEER

DISTRICT OPERATIONS ENGINEER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: VERT. HORIZ. NONE

DRAWN BY LLO

DATE 01/14/05

CHECKED BY MEB

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	3
STA. 1248+00	TO STA.1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

SUMMARY OF QUANTITIES

CODE NUMBER	PAY ITEMS	UNIT	TOTAL QUANT.	CONSTRUCTION TYPE CODE I000	X028-2A
20200100	EARTH EXCAVATION	CU YD	350	350	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	620	620	
25000200	SEEDING, CLASS 2	ACRE	0.5	0.5	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50	50	
28000305	TEMPORARY DITCH CHECKS	FOOT	80	80	
31100300	SUB-BASE GRANULAR MATERIAL,TYPE A 4"	SQ YD	285	285	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	160	160	
40600300	AGGREGATE (PRIME COAT)	TON	4	4	
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1477	1477	
44000100	PAVEMENT REMOVAL	SQ YD	273	273	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	908	908	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50800105	REINFORCEMENT BARS	POUND	31640		31640
51205200	TEMPORARY SHEET PILING	SQ FT	1105		1105
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	174.7		174.7
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	550	550	
* 63000025	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	75		75
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	454	454	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
28100107	STONE RIPRAP, CLASS A 4	SQ YD	98		98
28200200	FILTER FABRIC	SQ YD	98		98
28000400	PERIMETER EROSION BARRIER	FOOT	900	900	
25100630	EROSION CONTROL BLANKET	SQ YD	2500	2500	

SUMMARY OF QUANTITIES

CODE NUMBER	PAY ITEMS	UNIT	TOTAL QUANT.	CONSTRUCTION TYPE CODE I000	X028-2A
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	11	11	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1950	1950	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1300	1300	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	170	170	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	325	325	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	325	325	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	275	275	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1300	1300	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	170	170	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9	
* 78200405	GUARDRAIL MARKERS	EACH	12	12	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	62	62	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	9	9	
X0321100	GEOTEXTILE RETAINING WALL	SQ FT	94		94
35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ. YD	267	267	
35600712	HOT-MIX ASPHALT BASE COURSE WIDENING, 9"	SQ YD	129	129	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	150	150	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	97	97	
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1	
50800515	BAR SPLICERS	EACH	154		154
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

* SPECIALTY ITEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT. HORIZ. NONE

DATE

DRAWN BY

CHECKED BY

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	4
STA. 1248+00	TO STA.1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

SCHEDULE OF BITUMINOUS MATERIALS

ITEM	LOCATION	QUANTITY
HMA BASE COURSE WIDENING, 9"	RT. STA. 1248+99 TO 1250+64	64.0 SY
	RT. STA. 1251+06 TO 1252+72	65.0 SY
HMA SHOULDERS 8"	RT. STA. 1248+00 TO 1254+50	454.0 SY
	LT. STA. 1248+00 TO 1254+50	454.0 SY
HMA BASE COURSE 12"	RT. STA. 1250+37 TO 1251+33	133.5 SY
	LT. STA. 1250+37 TO 1251+33	133.5 SY
HMA SURFACE REMOVAL, (VARIABLE DEPTH)	RT. & LT. STA. 1248+00 TO 1250+37	632.0 SY
	RT. & LT. STA. 1251+33 TO 1254+50	845.3 SY
LEVELING BINDER (MACHINE METHOD), N50	RT. & LT. STA. 1248+00 TO 1254+50	97.0 TON
HMA SURFACE COURSE, MIX "C", N50	RT. & LT. STA. 1248+00 TO 1254+50	150.0 TON

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT*	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUDIC YARD
STA. 1248+00 TO 1250+37	135	101	58	43
STA. 1251+33 TO 1254+50	215	161	164	-3
TOTALS	350	262	222	40

*ASSUMED 25% SHRINKAGE FACTOR

SCHEDULE OF PAINT PAVEMENT MARKING

	LOCATION	WHITE SOLID, 4"	YELLOW SKIP-DASH, 6"
LT.	1248+00 TO 1254+50	650'	
℄	1248+00 TO 1254+50		170
RT.	1248+00 TO 1254+50	650'	
TOTAL		1300'	170

GUARDRAIL REMOVAL

	LOCATION	LENGTH
LT.	1249+74.5 TO 1250+63.5	89'
	1251+06.5 TO 1252+44.5	138'
RT.	1249+25.5 TO 1250+63.5	138'
	1251+06.5 TO 1251+95.5	89'
TOTAL		454'

SCHEDULE OF HMA SURFACE REMOVAL, VARIABLE DEPTH

STATION	EXIST. ELEV.	PROP. ELEV.	DIFF.	REMOVAL (FT.)	REMOVAL (IN.)
1248+00	642.01	642.01	0.00	0.1875	2.25
1248+50	641.93	641.93	0.00	0.1875	2.25
1249+00	641.85	641.88	0.03	0.1575	1.89
1249+50	641.72	641.85	0.13	0.0575	0.69
1250+00	641.53	641.85	0.32	0.0000	0.00
1250+37	641.53	641.85	0.32	0.0000	0.00
1251+33	641.56	641.85	0.29	0.0000	0.00
1251+50	641.56	641.85	0.29	0.0000	0.00
1252+00	641.85	641.89	0.04	0.1475	1.77
1252+50	642.06	641.96	-0.10	0.2875	3.45
1253+00	642.08	642.07	-0.01	0.1975	2.37
1253+50	642.04	642.18	0.14	0.0475	0.57
1254+00	642.17	642.29	0.12	0.0675	0.81
1254+50	642.40	642.40	0.00	0.1875	2.25

SCHEDULE OF STEEL PLATE BEAM GUARDRAIL

	LOCATION	SPBGR, TYPE A	TERMINAL, TYPE 1 (SPL)	SPBGR ATTACHED TO STRUCTURES
LT.	1249+14 TO 1249+64		1 EACH	
	1249+64 TO 1250+64	100		
	1250+64 TO 1251+01.5			37.5
	1251+01.5 TO 1252+76.5	175		
	1252+76.5 TO 1253+26.5		1 EACH	
RT.	1248+43.50 1248+93.5		1 EACH	
	1248+93.50 1250+68.50	175		
	1250+68.5 TO 1251+06.0			37.5
	1251+06.0 TO 1252+06.0	100		
	1252+06.0 TO 1252+56		1 EACH	
TOTAL		550	4 EACH	75

BITUMINOUS MIXTURE TABLE

MIX	PG GRADE	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	DENSITY CONTROL METHOD
HMA SHOULDERS	PG58-22	2.0% @ N30	IL 19.0	-----	* CORES
HMA LEVEL BINDER	PG64-22	4.0% @ N50	IL 9.5	-----	SATISFACTION OF ENG.
HMA SURFACE	PG64-22	4.0% @ N50	IL 12.5 OR IL 9.5	MIXTURE C	* CORES
HMA BASE COURSE	PG64-22	4.0% @ N50	IL 19.0	-----	* CORES

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

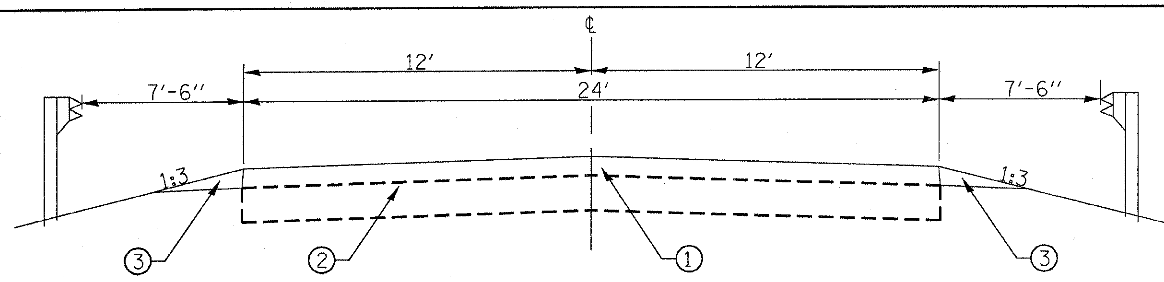
SCHEDULE OF QUANTITIES

SCALE: VERT. HORIZ. NONE
DATE: 01/14/05

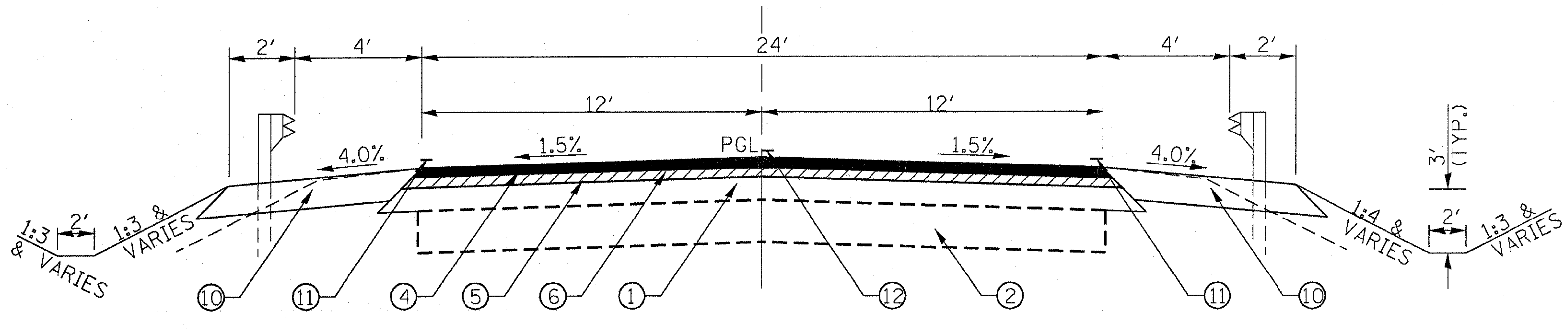
DRAWN BY LLO
CHECKED BY MEB

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	5
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171



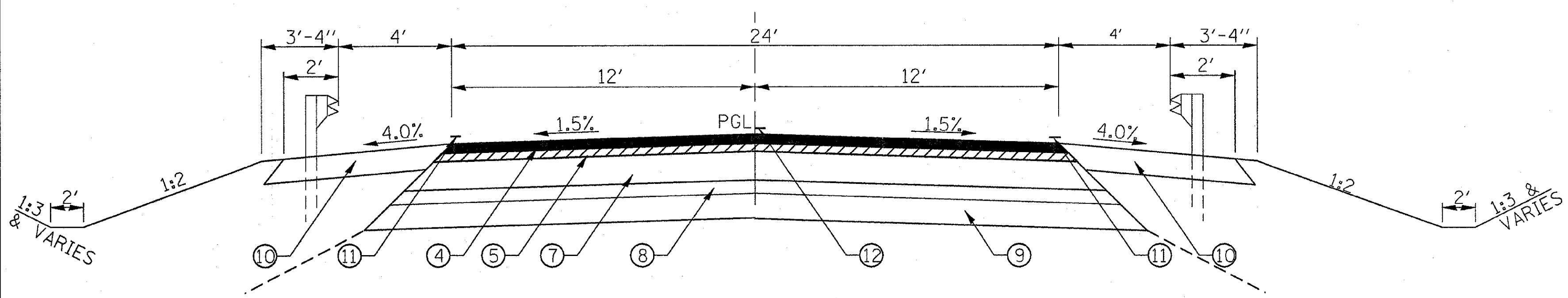
EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

STA 1248+50 TO 1250+37
STA. 1251+33 TO 1254+00

TRANSITION FROM EXISTING ROADWAY TO PROPOSED ROADWAY. TO BE CONSTRUCTED FROM STA. 1248+00 TO STA. 1248+50 AND FROM STA. 1254+00 TO STA. 1254+50.

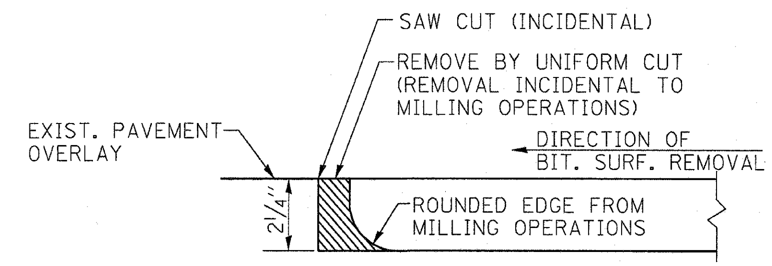


PROPOSED TYPICAL SECTION

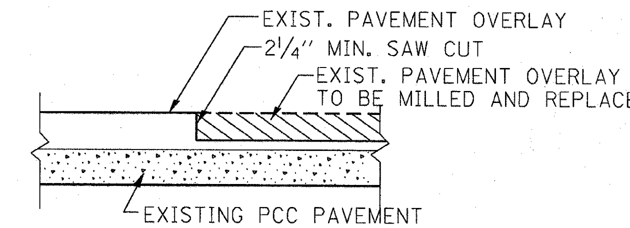
STA 1250+37 TO 1251+33

LEGEND

① EXISTING BITUMINOUS OVERLAY ± 6"
② EXISTING PCC PAVEMENT, 9"
③ EXISTING AGGREGATE SHOULDER
④ PROPOSED 1½" HMA BITUMOUS CONCRETE SURFACE COURSE MIX "C" N50
⑤ PROPOSED ¾" MIN. LEVELING BINDER (MACHINE METHOD), N50
⑥ PROPOSED 2¼" MAX. HMA SURFACE REMOVAL (VARIABLE DEPTH)
⑦ PROPOSED HMA BASE COURSE 12"
⑧ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A, 4"
⑨ PROPOSED POROUS GRANULAR EMBANKMENT
⑩ PROPOSED HMA SHOULDERS 8"
⑪ PROPOSED WHITE PAINT PAVEMENT MARKING - LINE 4"
⑫ PROPOSED SKIP DASH YELLOW PAINT PAVEMENT MARKING - LINE 6"



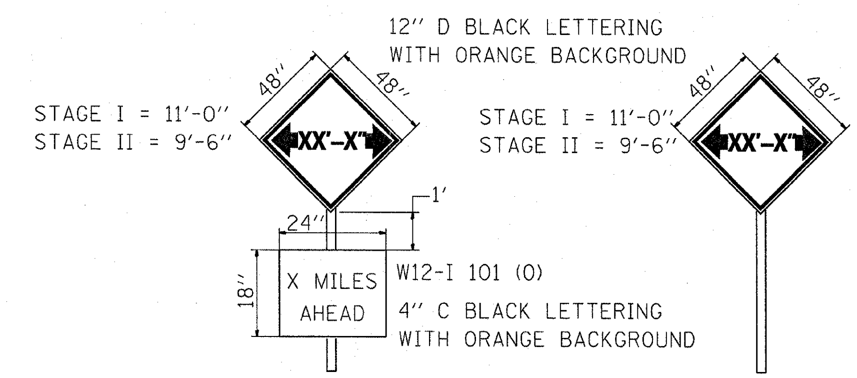
NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.



NOTE:
THE COST OF THE SAW CUT AND BUTT JOINT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR BITUMINOUS SURFACE REMOVAL.

PROPOSED BUTT JOINT DETAILS

AT STA. 1248+00 & STA. 1254+50



TO BE POST MOUNTED FOR STAGE I & STAGE II.

A TOTAL OF 4 SIGNS & POSTS ARE REQUIRED. FOR STAGE I, PLACE (1) 11'-0" X MILES AHEAD SIGN ON US 45 JUST SOUTH OF IL. 116, (1) 11'-0" X MILES AHEAD SIGN ON US 45 JUST NORTH OF US 24 AND PLACE (2) 11'-0" WIDTH SIGNS BETWEEN THE RCA & SIGNAL AHEAD SIGNS ON EITHER SIDE OF THE CULVERT. FOR STAGE II ALL THE WIDTHS WILL CHANGE TO 9'-6" AT ALL 4 LOCATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THESE REQUIREMENTS & GIVE PROPER ADVANCE NOTICE TO THE ENGINEER ALSO.

THE COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE PAID FOR AS WIDTH RESTRICTION SIGNING.

WIDTH RESTRICTION SIGNING DETAILS

I.D.O.T. DIST. 3 STANDARD 702.5

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

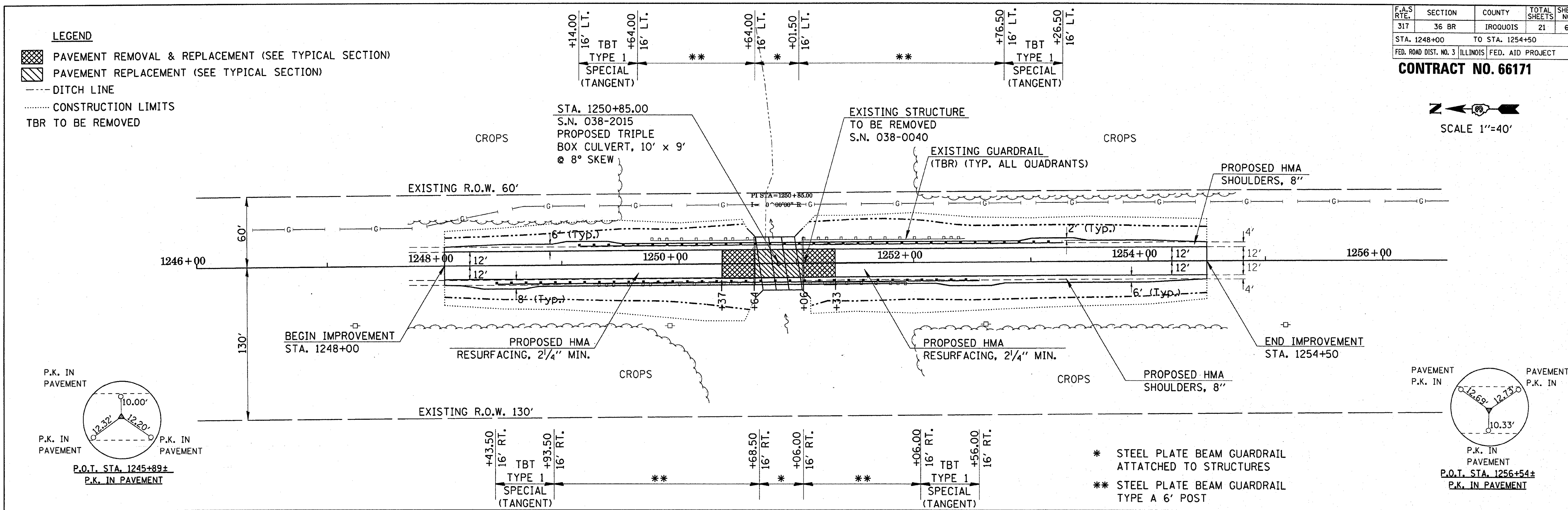
TYPICAL SECTIONS & DETAILS

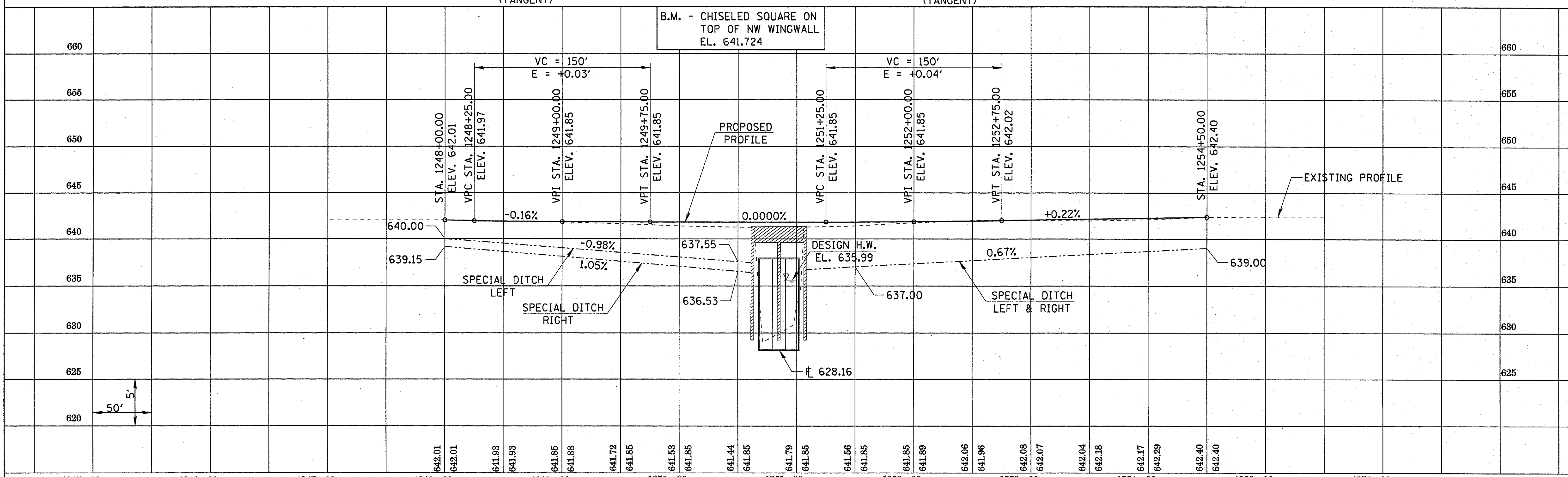
SCALE: VERT. HORIZ. NONE
DATE 01/14/05

DRAWN BY LLQ
CHECKED BY MEB

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	6
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171





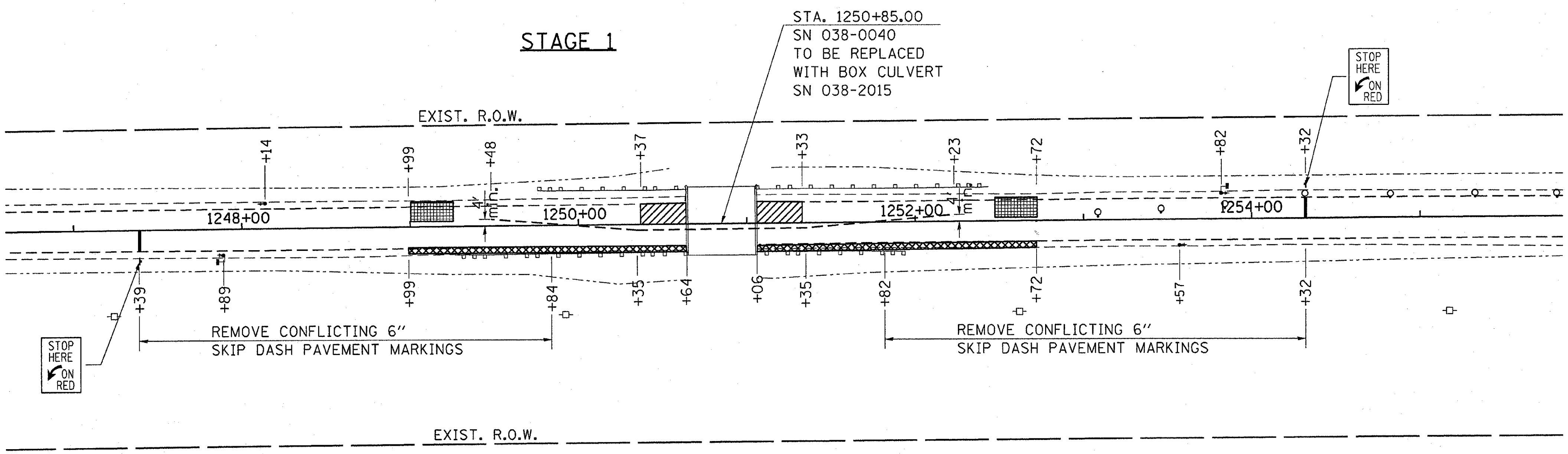
PLAN	
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
R.O.W. NOTED CHECKED	
CADD FILE NAME	
NOTE BOOK NO.	

PROFILE	
SURVEYED	
PLOTTED	
GRADES CHECKED	
B.M. NOTED	
STRUCTURE NOTAT'NS CHK'D	
NOTE BOOK NO.	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	7
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

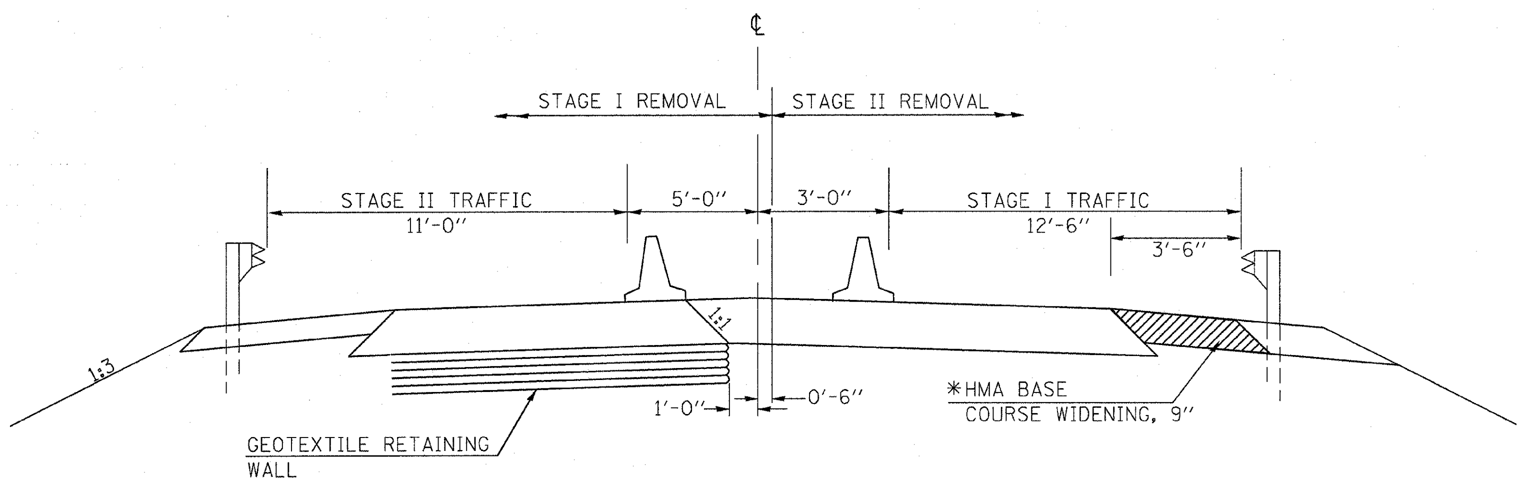
STAGE 1



SCALE 1″ = 40′

LEGEND

- PAVEMENT REMOVAL
- HMA BASE COURSE WIDENING, 9″
- TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE
- TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE & MICROWAVE DETECTOR
- SAND MODULE IMPACT ATTENUATORS
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER



STAGE CONSTRUCTION TYPICAL SECTION

TO BE REMOVED IN STAGE 2 CONSTRUCTION

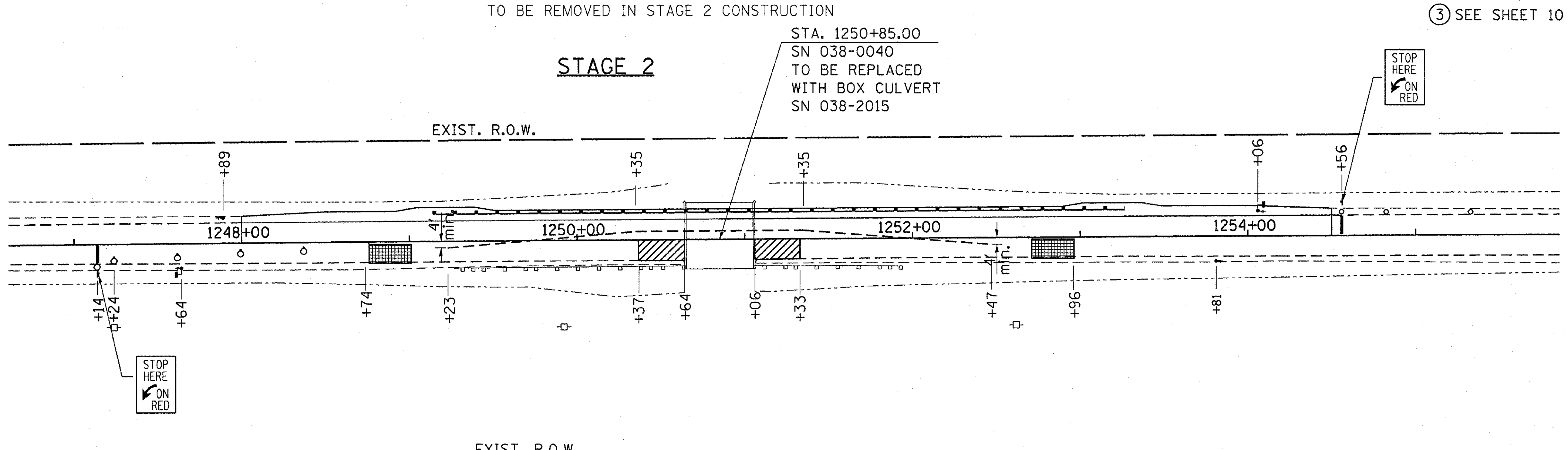
STAGE CONSTRUCTION SEQUENCE

1. ERECT TRAFFIC CONTROL & PROTECTION, STANDARD 701321, EARTH EXCAVATION AND HMA BASE COURSE WIDENING, 9″
   RT. STA. 1248+99 TO STA. 1250+64
   RT. STA. 1251+06 TO STA. 1252+72
2. STAGE I CONSTRUCTION, EAST SIDE GUARDRAIL AND PAVEMENT REMOVAL, PAVEMENT REPLACEMENT, EARTH EXCAVATION, HMA SHOULDERS, ERECT STEEL PLATE BEAM GUARDRAIL.
3. STAGE II CONSTRUCTION, RELOCATE TEMPORARY CONCRETE BARRIER, WEST SIDE GUARDRAIL AND PAVEMENT REMOVAL, PAVEMENT REPLACEMENT, EARTH EXCAVATION, HMA SHOULDERS, ERECT STEEL PLATE BEAM GUARDRAIL.

STAGE CONSTRUCTION NOTES

1. THIS SHEET IS FOR THE LOCATION OF STAGE CONSTRUCTION, TEMPORARY CONCRETE BARRIER, SIGNALS AND STOP BARS. THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
2. SEE DETAIL 702.5 ON SHEET 5 OF 21 FOR WIDTH RESTRICTION SIGNING.
3. SEE SHEET 10 OF 21 FOR ADDITIONAL DETAILS.

STAGE 2



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION

SCALE: VERT. HORIZ. 1″=40′

DATE

DRAWN BY

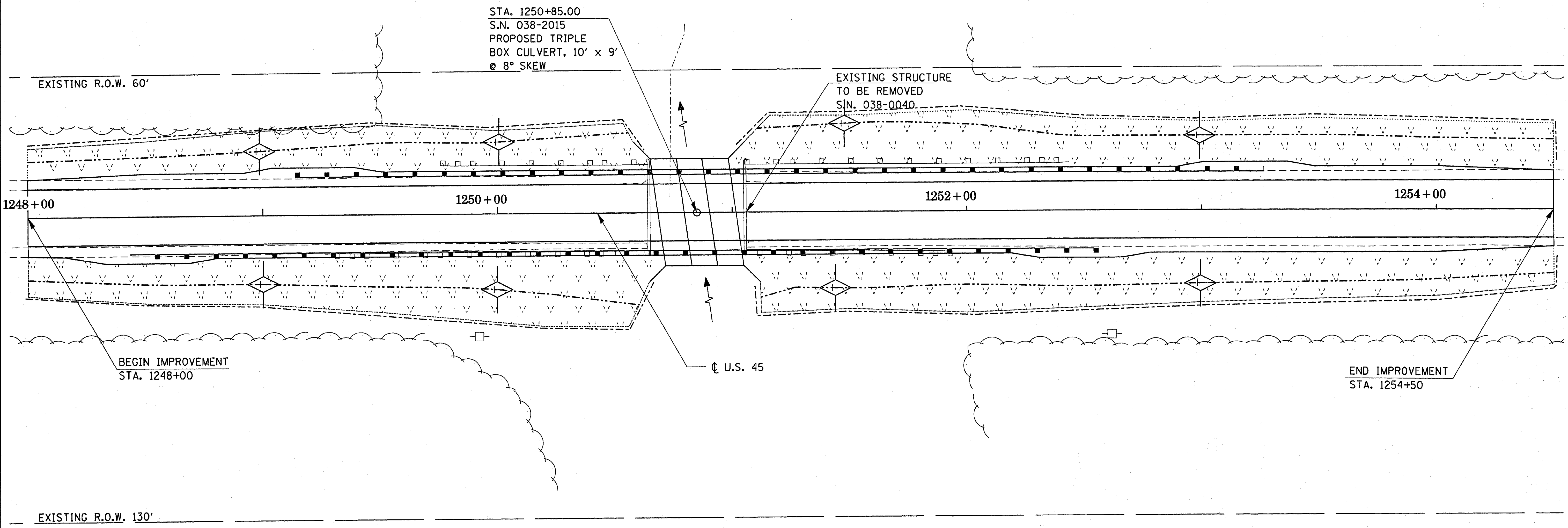
CHECKED BY

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36BR	IROQUOIS	21	8
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

N

SCALE 1" = 20'



LEGEND

— —	EXISTING R.O.W.		SEEDING CLASS 2
....	CONSTRUCTION LIMITS		TEMPORARY DITCH CHECK
		-··-··-	PROPOSED DITCH LINE
		-·-·-	PERIMETER EROSION BARRIER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: VERT. HORIZ. 1"=20'

DATE

DRAWN BY

CHECKED BY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

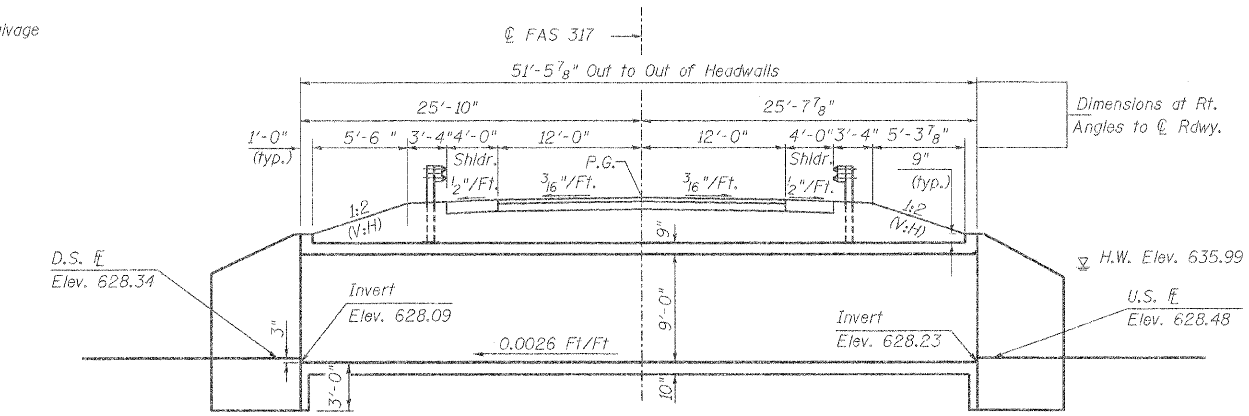
SHEET NO. 1
10 SHEETS

CONTRACT NO. 66171

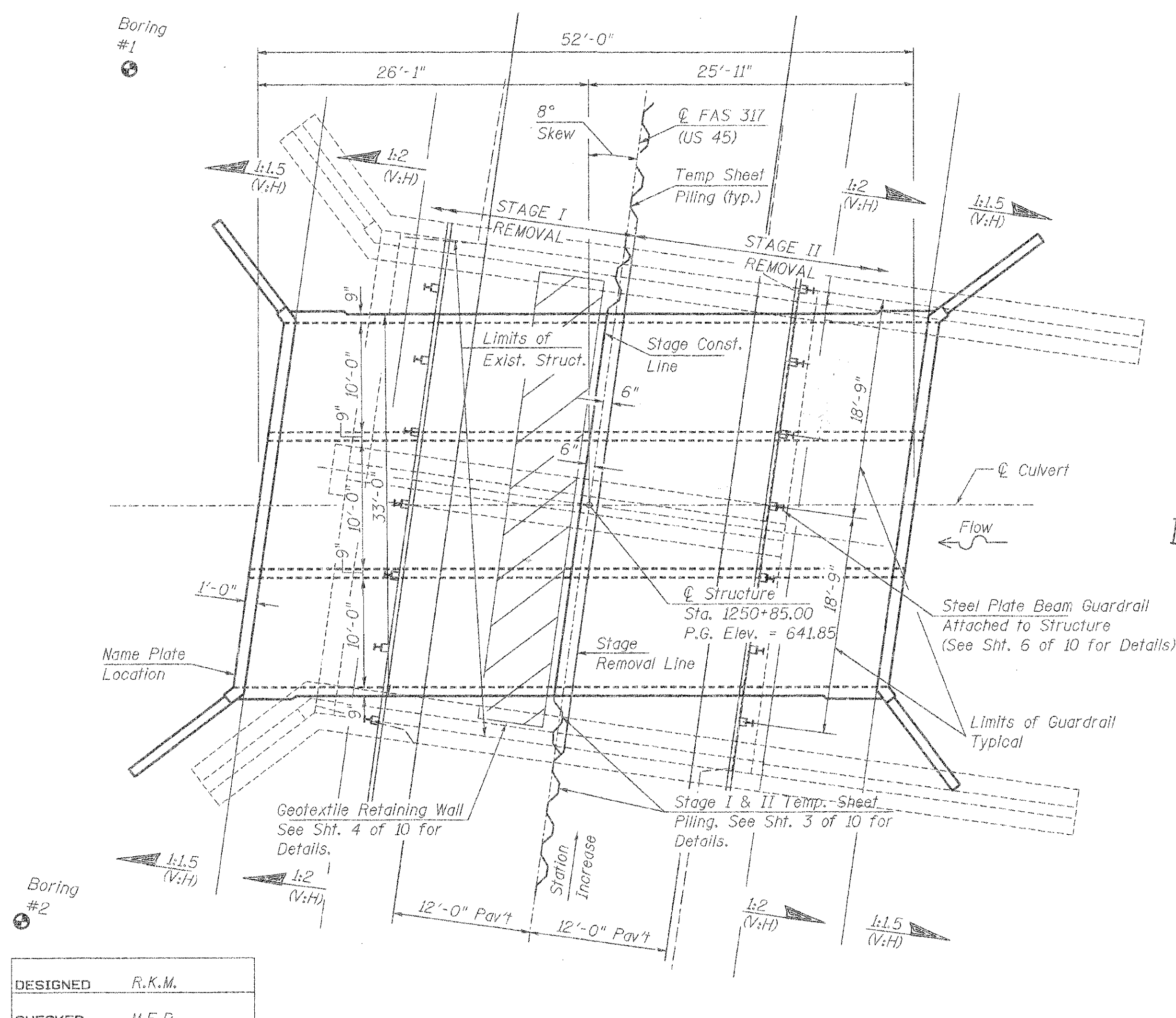
B.M. Top of N.W. Wingwall
Chis. Sq. Elev. 641.724

Existing Structure No. 038-0040 built as SBI Rte 25 Sec. 36 BY in 1952 is a two span continuous bridge with an 11" R.C. Slab. 43'-0" bk. to bk. abutments. 2 Spans @ 20'-0" with closed abutments. 35'-0" f. to f. of curb and 38'-4" o. to o. of deck.
Structure to be replaced with a triple box culvert.
Traffic to be maintained utilizing stage construction

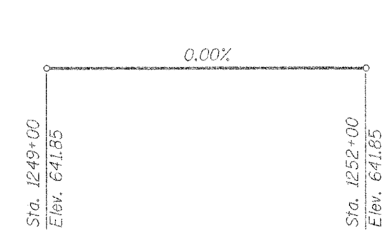
No Salvage



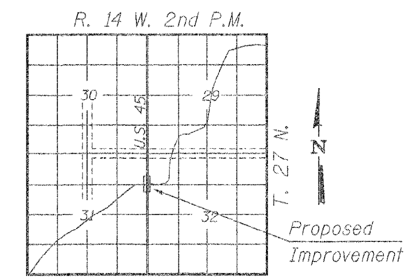
LONGITUDINAL SECTION



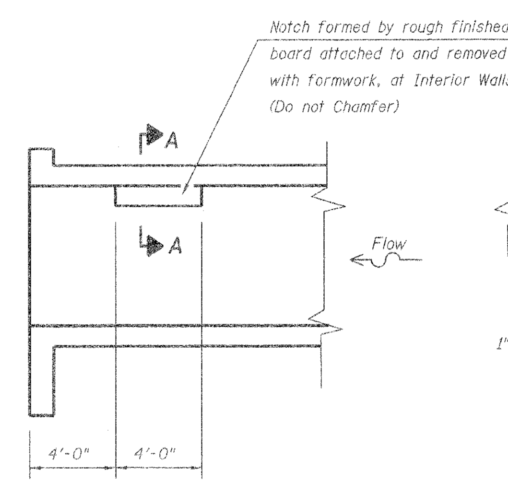
PLAN



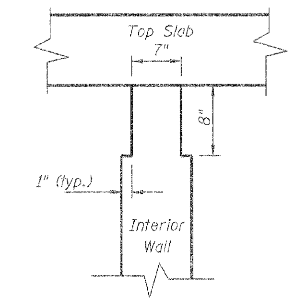
PROFILE GRADE FAS 317
(along ℄ roadway)



LOCATION SKETCH



LONGITUDINAL SECTION
PHOEBE NESTING
SIDE DETAILS
@ D.S. side only



SECTION A-A

GENERAL NOTES

~~Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.~~

Exposed edges shall be beveled 3/4" unless otherwise noted.

For backfilling and embankment, see Standard Specifications.

The precast concrete alternate will not be allowed.

Saw cut existing abutments and piers at stage removal line before removing the existing structures.

The Contractor shall excavate behind the existing abutment walls prior to removal of the exisiting superstructure. Cost included with Removal of Existing Structures.

All construction joints shall be bonded.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Reinforcement Bars	Pounds	31,640
Removal of Existing Structures	Each	1
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	174.7
Bar Splicers	Each	154
* Temporary Sheet Piling	Sq. Ft.	1,105
* Geotextile Retaining Wall	Sq. Ft. ~~Sq. Yd.~~	~~10.5~~ 94
Steel Plate Beam Guardrail Attached to Structures	Foot	75

* See Special Provisions.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2002 Interims

LOADING HS20-44

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

DESIGN STRESSES

f'_c = 3,500 psi (Concrete)
f_y = 60,000 psi (Reinforcement)

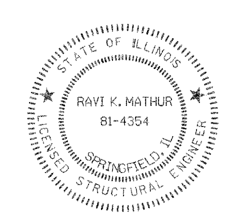
WATERWAY INFORMATION

Drainage Area = 2.8 sq. mi. Low Grade Elev. 641.85 @ Sta. 1250+85.00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		*Nat. H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	386	180	232	635.99	0.0	0.07	635.99	636.06
Base	100	434	191	239	636.22	0.0	0.10	636.22	636.32
Overtopping	NA								
Max. Calc.	500	544	208	252	636.65	0.03	0.10	636.68	636.75

* Upstream face of culvert

STATION 1250+85.00
BUILT 20___ BY
STATE OF ILLINOIS
F.A.S. RTE. 317 SEC. 36-BR
LOADING HS20
STR. NO. 038-2015

NAME PLATE
See Std. 515001



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TSD)
ENGINEER OF BRIDGES AND STRUCTURES

Ravi K. Mathur 5/5/05
ILLINOIS STRUCTURAL NO. 081-004354 EXPIRES 11/30/2006

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	J.T.C.
CHECKED	M.E.B.

GENERAL PLAN & ELEVATION
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

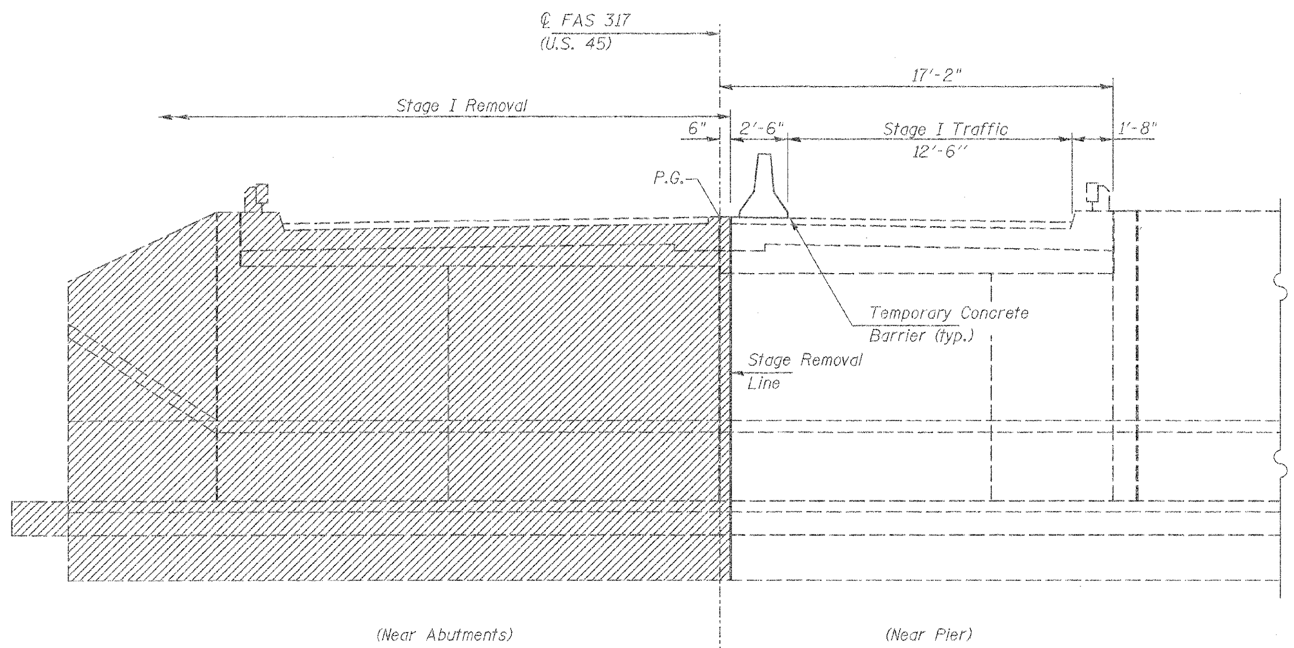
R C ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76/038-2015/tgp&e.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

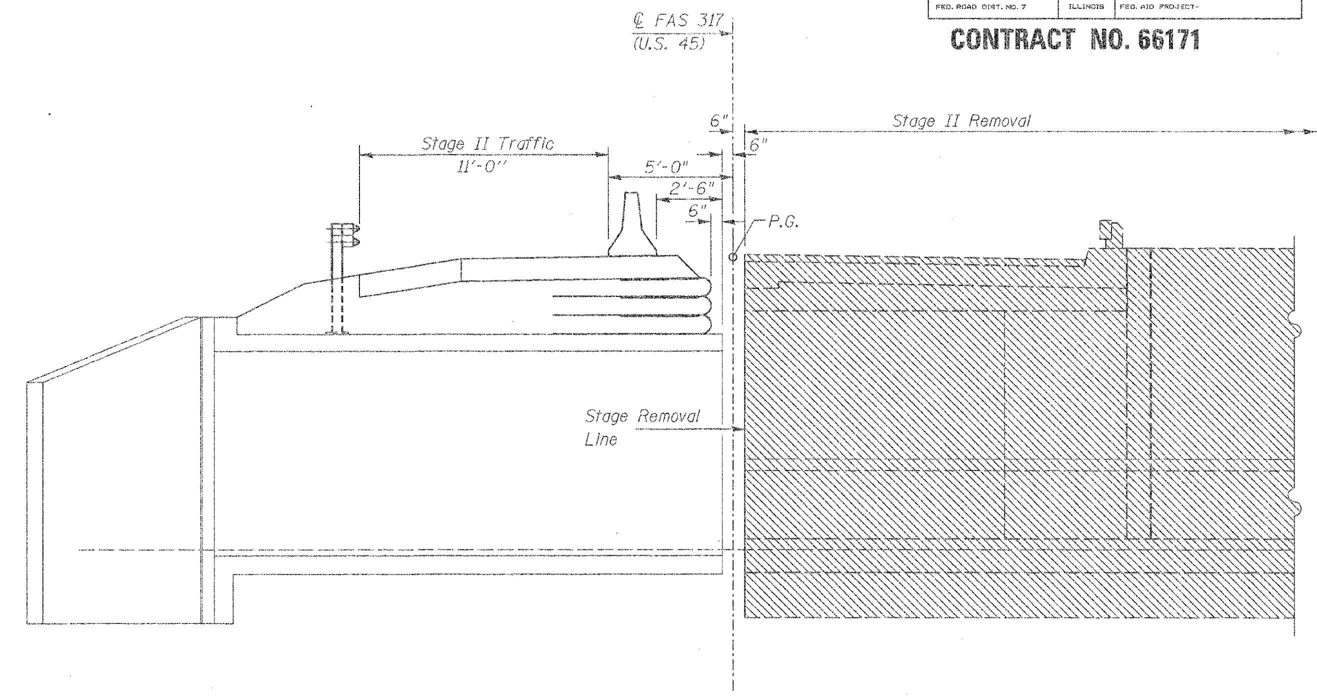
SHEET NO. 2
10 SHEETS

CONTRACT NO. 66171



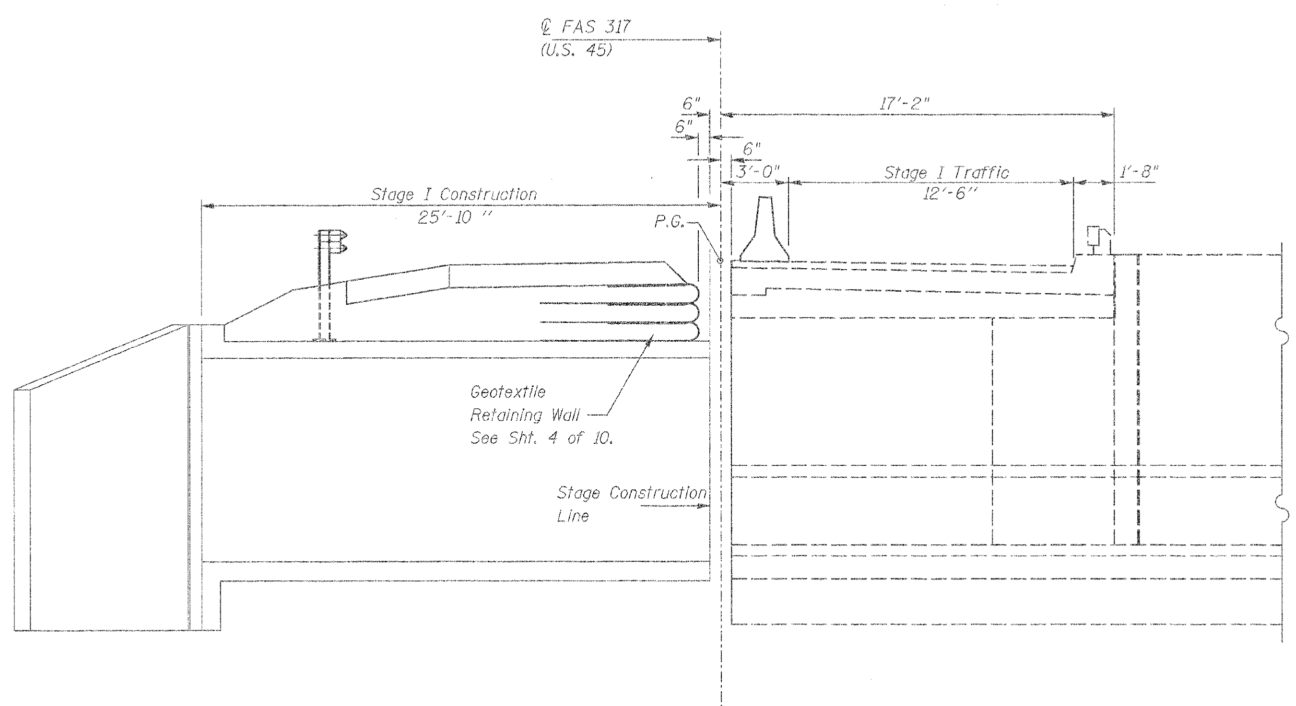
STAGE I REMOVAL

(Looking South)
(Dimensions are at Rt. Angles to ℄ Roadway)



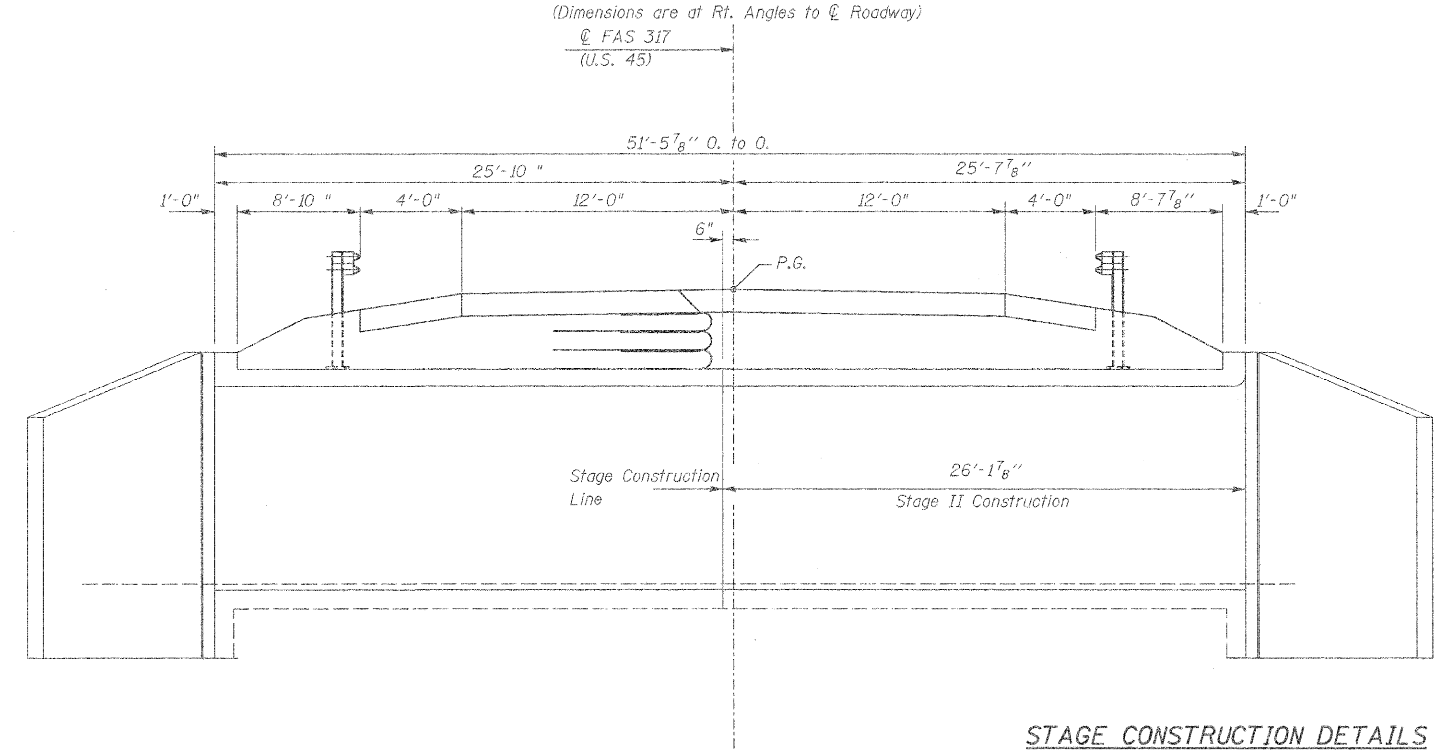
STAGE II REMOVAL

(Looking South)
(Dimensions are at Rt. Angles to ℄ Roadway)



STAGE I CONSTRUCTION

(Looking South)
(Dimensions are at Rt. Angles to ℄ Roadway)



STAGE II CONSTRUCTION

(Looking South)
(Dimensions are at Rt. Angles to ℄ Roadway)

NOTES:

One lane shall be available for traffic during Stage Construction.

Bracing the existing abutments is the responsibility of the Contractor, prior to removing the existing bridge superstructure.

Hatched area indicates "Removal of Existing Structures". Removal of existing hand rail and existing wearing surface is included with "Removal of Existing Structures".

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	P.W.S.
CHECKED	M.E.B.

STAGE CONSTRUCTION DETAILS
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

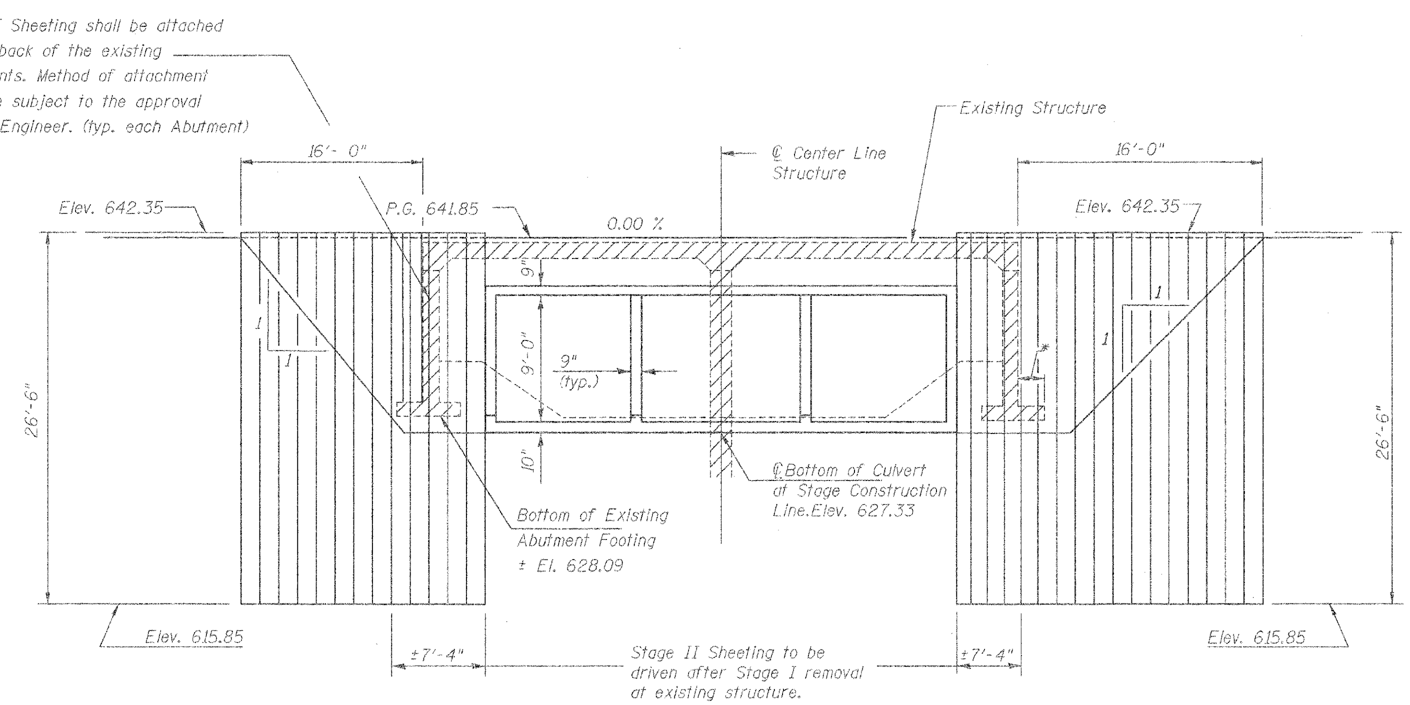
R C ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76/038-0040/2stageconstr.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
10 SHEETS

CONTRACT NO. 66171



ELEVATION

(Looking West)

NOTE:
If the contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department for review and approval.

Hatched areas indicate "Removal of Existing Structures".

SHEET PILE DATA

Minimum Required Section Modulus of Temporary Sheet Piling: 17.7 in³/ft
fy= 38 Ksi (Temporary Sheet Piling)

* Stage I Sheeting in this portion shall be driven to top of existing footing. (typ. each Abutment)

TEMPORARY SHEET PILING
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	M.D.
CHECKED	M.E.B.

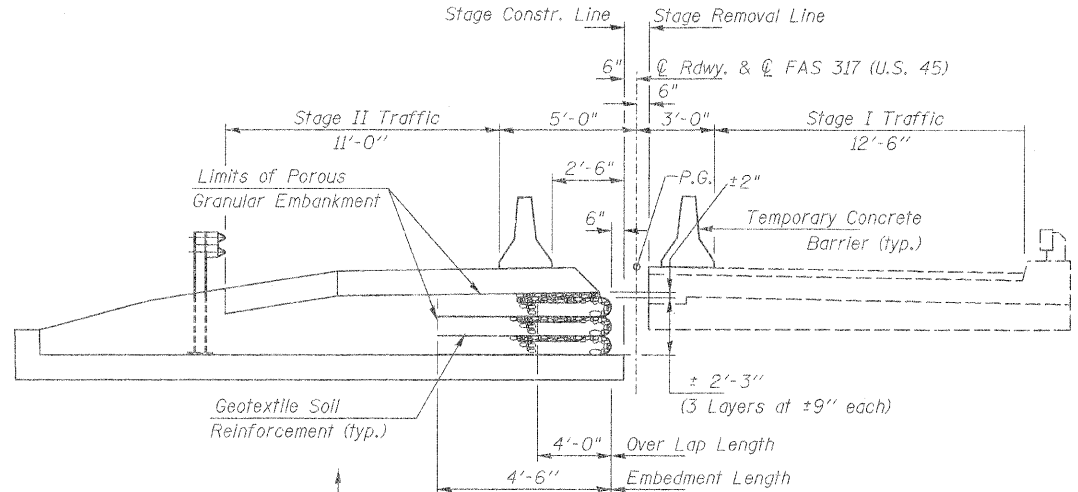
R C ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76/038-2015/3shtpile.dgn

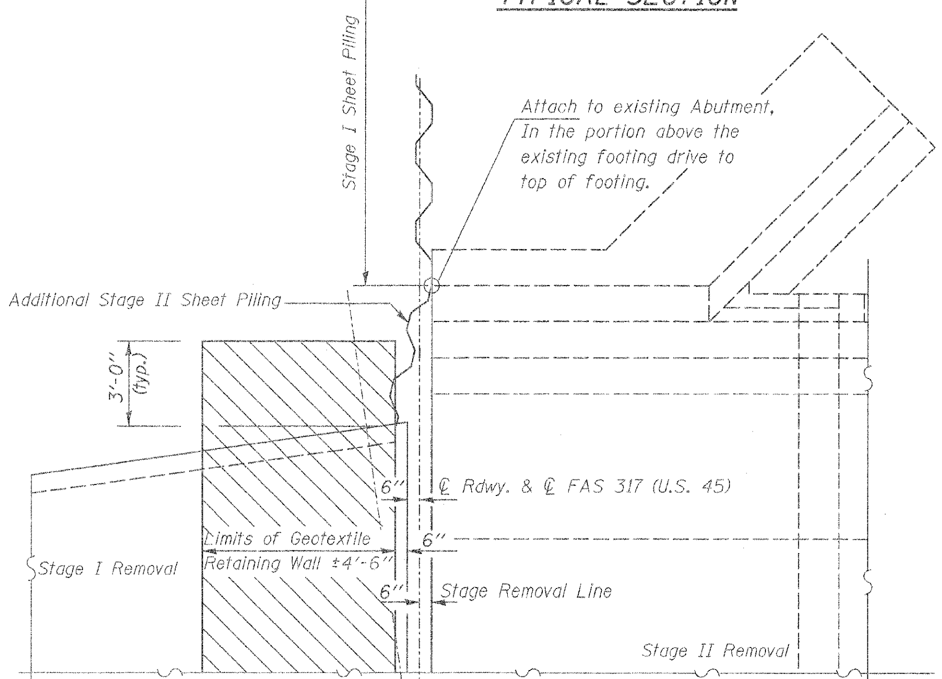
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
10 SHEETS

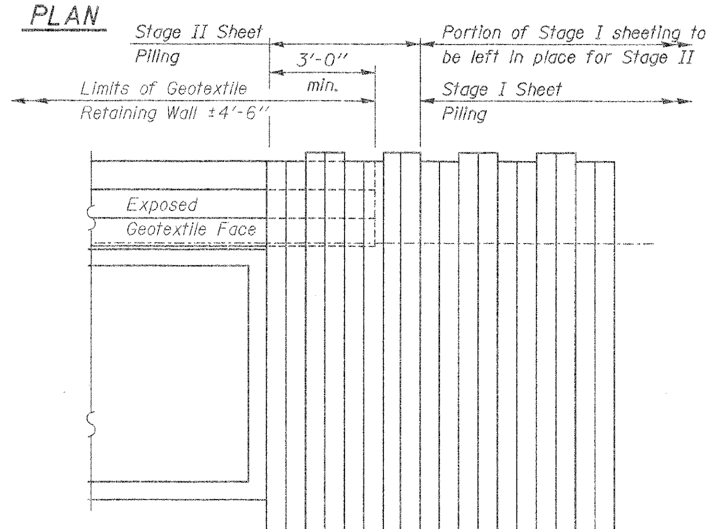
CONTRACT NO. 66171



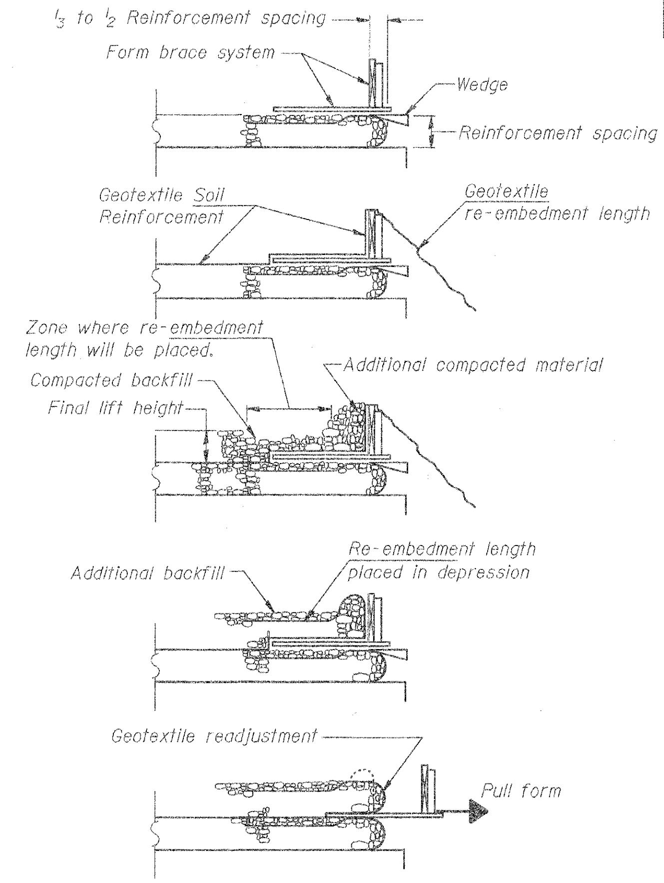
TYPICAL SECTION



PLAN

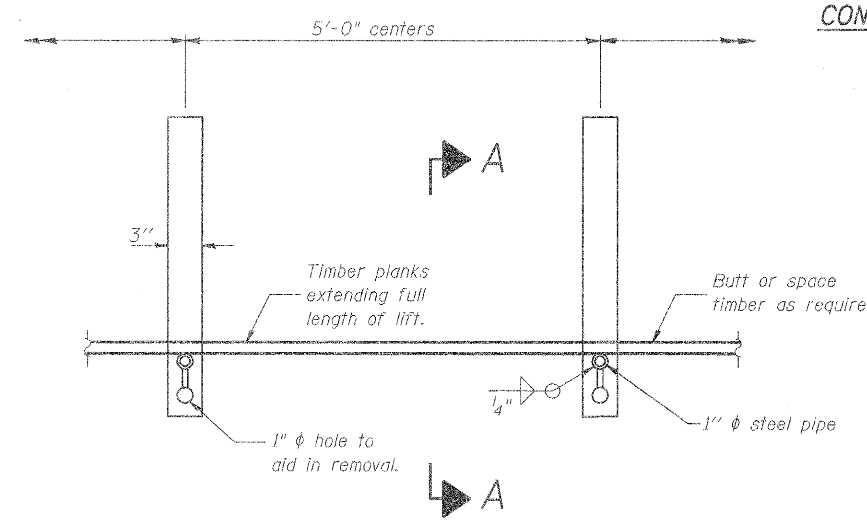


ELEVATION

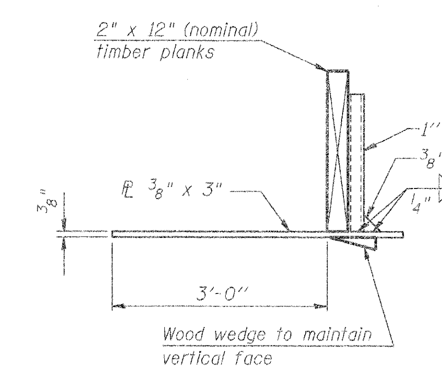


1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of 1/3 to 1/2 the geotextile reinforcement spacing.
2. Position fabric so that the required geotextile re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.
3. Compact backfill material in lifts to final lift height, create (±3") depression in zone where re-embedment length will be located and place additional height of compacted material against form brace.
4. Fold Geotextile re-embedment length back over form brace into zone where depression was made in backfill and place additional compacted backfill, (±3") to embed geotextile and bring to final lift height.
5. Pull form brace outward allowing geotextile face to slightly readjust to form tight round face and level with plan reinforcement spacing.

GEOTEXTILE WALL
CONSTRUCTION PROCEDURE



GEOTEXTILE TEMPORARY
FORM BRACE DETAIL



SECTION A-A

Note:
The Geotextile Soil reinforcement shall have a minimum allowable tensile strength (T min.) of 80 lb./in. The computations supporting the determination of T min. shall be submitted to the engineer for approval.

Note:
The temporary form brace detail is provided as a guide. The contractor is responsible for the design and performance of the form system used.

GEOTEXTILE WALL CONSTRUCTION
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	M.E.B.
CHECKED	R.K.M.
DRAWN	P.W.S.
CHECKED	M.E.B.

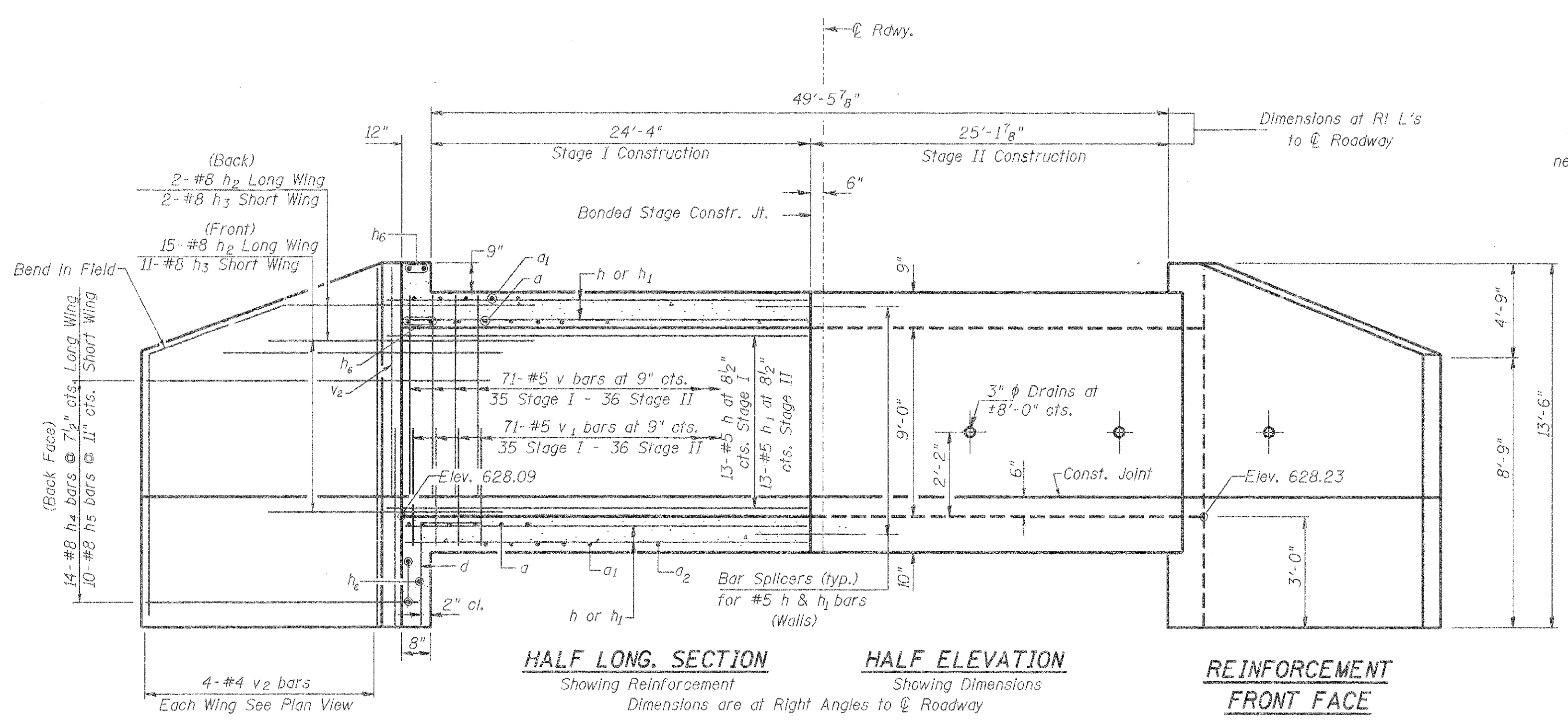
R C ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76/038-2015/4geotextile.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	13
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
10 SHEETS

CONTRACT NO. 66171

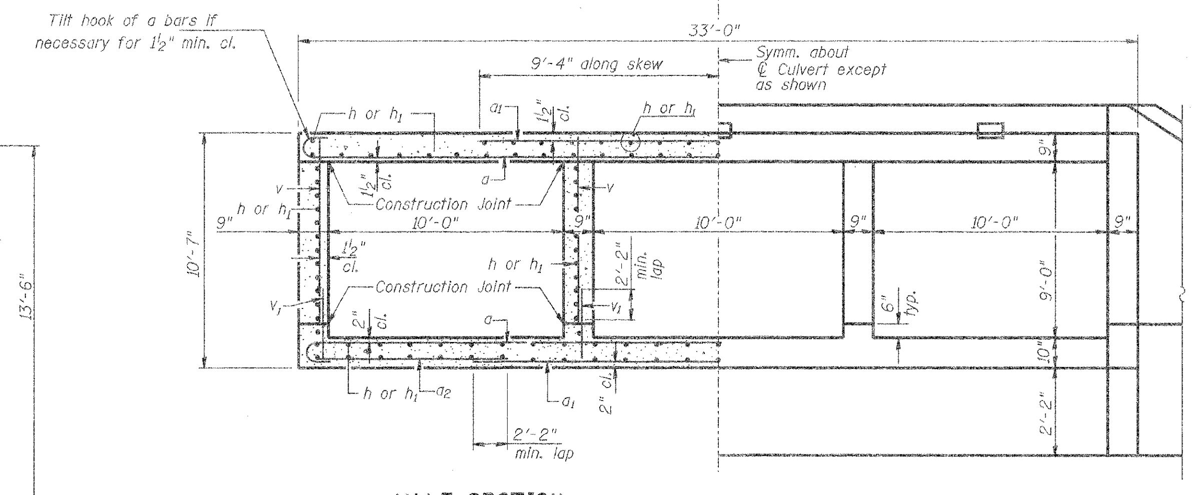


REINFORCEMENT BACK FACE

HALF LONG. SECTION
Showing Reinforcement

HALF ELEVATION
Showing Dimensions
Dimensions are at Right Angles to ℄ Roadway

REINFORCEMENT FRONT FACE



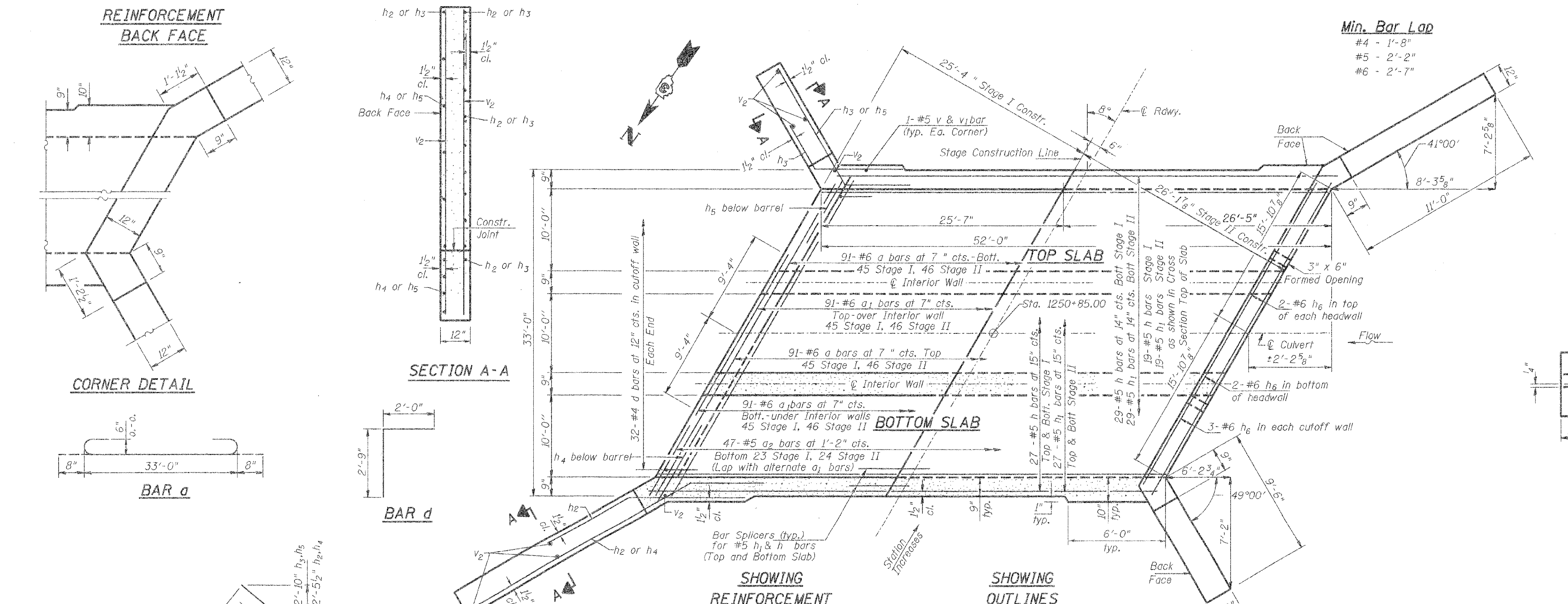
HALF SECTION THRU BARRELS

HALF END ELEVATION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
a	182	#6	34'-4"		v	288	#5	9'-0"	
a_1	182	#6	18-8"		v_1	288	#5	3'-3"	
a_2	94	#5	9'-5"		v_2	16	#4	13'-3"	
d	64	#4	4'-9"						
h	154	#5	25'-4"						
h_1	154	#5	26'-2"						
h_2	34	#8	9'-3"						
h_3	24	#8	9'-3"						
h_4	28	#8	14'-7"						
h_5	20	#8	13'-1"						
h_6	18	#6	33'-6"						
Concrete Box Culverts								Cu. Yd.	174.7
Reinforcement Bars								Pound	31,640

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



CORNER DETAIL

SECTION A-A

BAR a

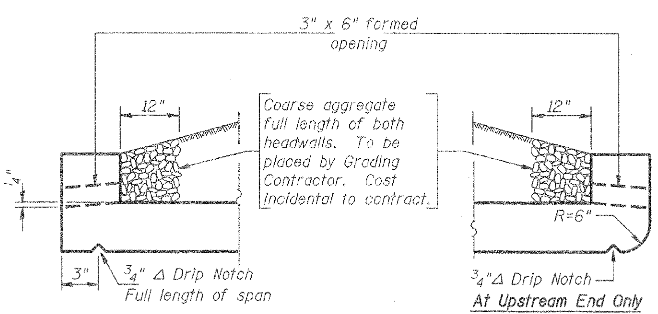
BAR d

BARS h_2 h_3 h_4 and h_5

SHOWING REINFORCEMENT

SHOWING OUTLINES

PLAN



DRAIN DETAIL

Note:
A distance of not less than 6 feet of the barrel shall be poured monolithically with the wing walls.

CULVERT DETAILS
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	M.D.
CHECKED	M.E.B.

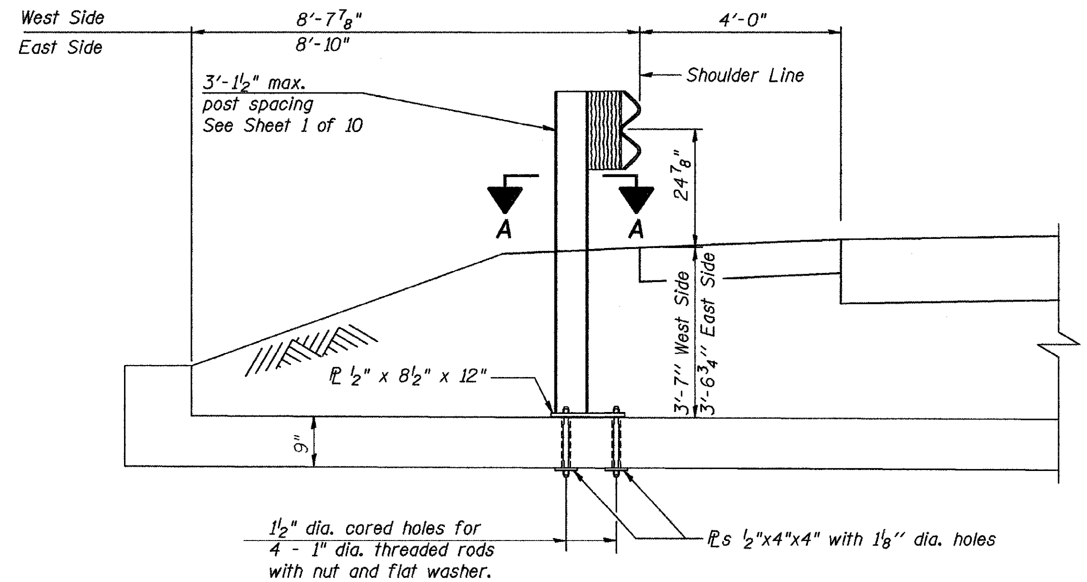
R C ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76/038-0015/5culvertdetails.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
10 SHEETS

CONTRACT NO. 66171

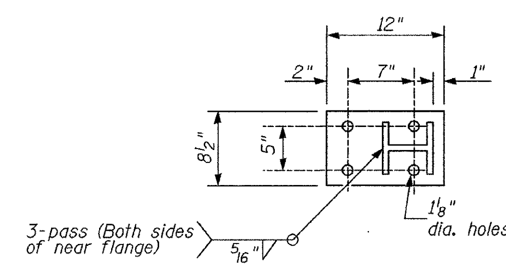


STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES

Lt. & Rt. Sta. 1250+64.00 to 1251+01.50 = 37.5 feet
Lt. & Rt. Sta. 1250+68.50 to 1251+06.00 = 37.5 feet
75 feet

GUARDRAIL ANCHORAGE DETAIL

(For Guardrail Details See Std. 630101 - Case IV)



SECTION A-A

NOTES

Railing shall be according to Section 630 of the Standard Specifications except as noted, and will be paid for at the contract unit price per foot for STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES.

Contractor shall space a & a_1 bars to miss cored holes.

All bolts, nuts and plates shall be galvanized. See Article 1006.25 of Standard Specifications.

CULVERT DETAILS
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	M.E.B.
CHECKED	R.K.M.
DRAWN	P.W.S.
CHECKED	M.E.B.

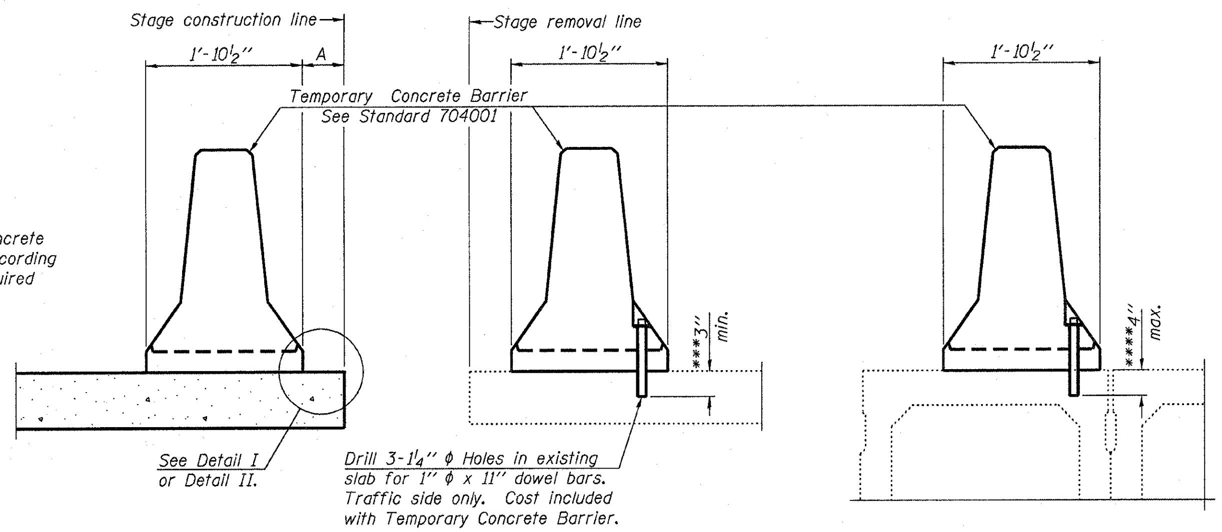
98-76/038-0015/6culvertdetails.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
10 SHEETS

CONTRACT NO. 66171

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℘ to the top layer of couplers with 2-⅝" φ bolts screwed to coupler at approximate ℄ of each barrier panel.

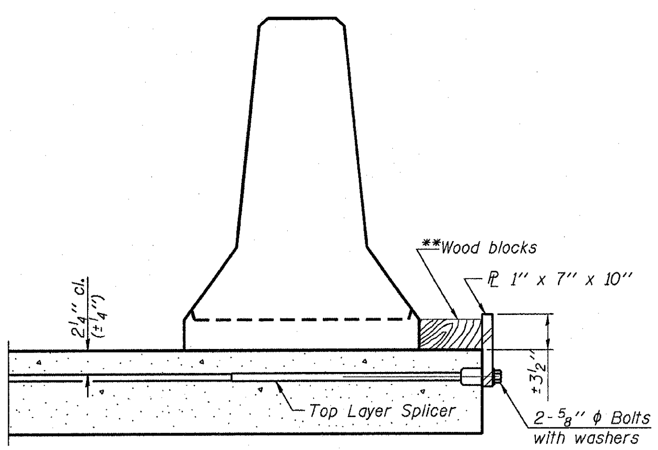
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel ℘ to the concrete slab or concrete wearing surface with 2-⅝" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

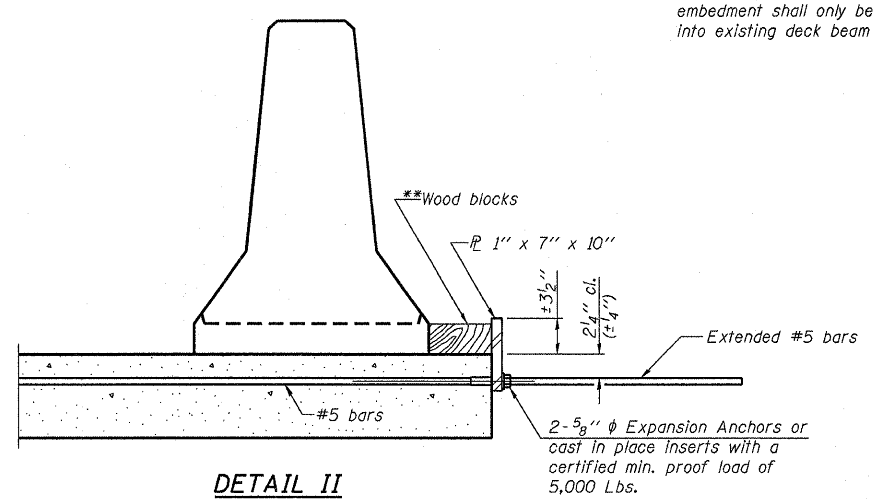
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

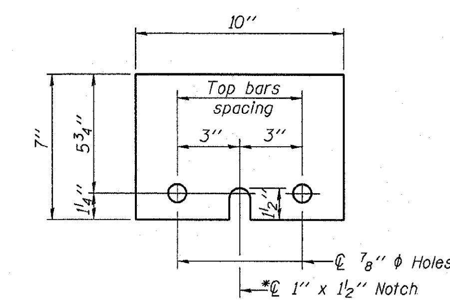


DETAIL I



DETAIL II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER ℘ 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
SN-038-2015

DESIGNED	-
CHECKED	-
DRAWN	MV
CHECKED	JKC

R-27 10-1-08

⚠ - Sheet inserted by Chamlin & Associates

NOTES

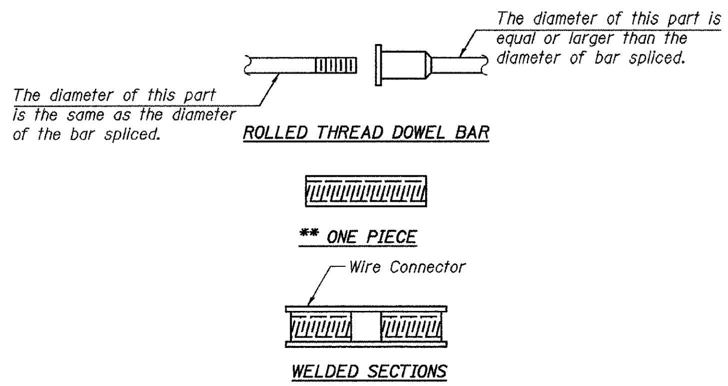
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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) $= 1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 0.66 \times f_y \times A_t$

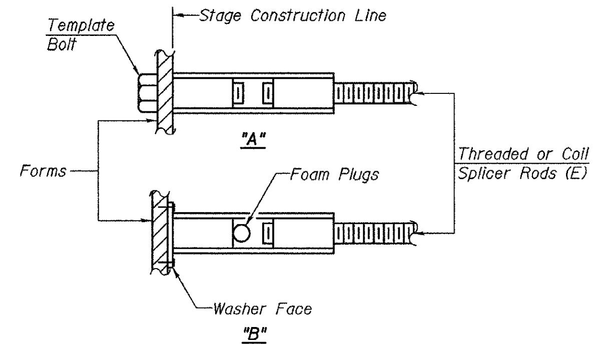
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



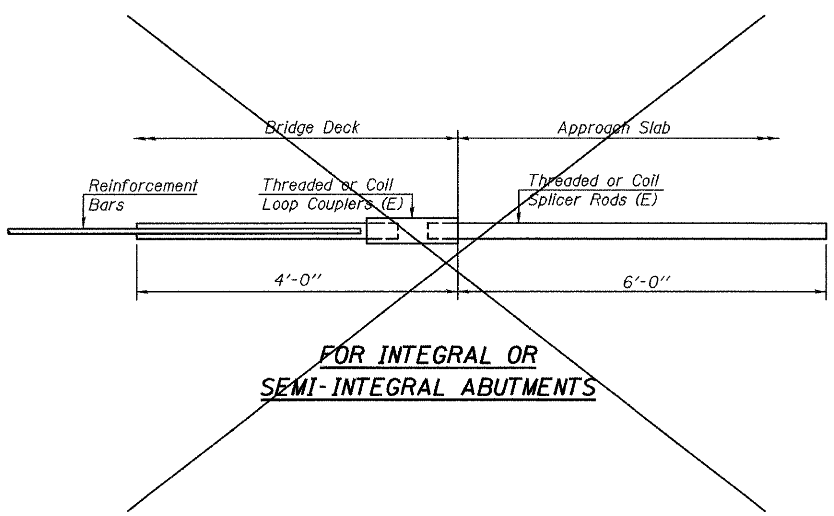
BAR SPLICER ASSEMBLY ALTERNATIVES

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



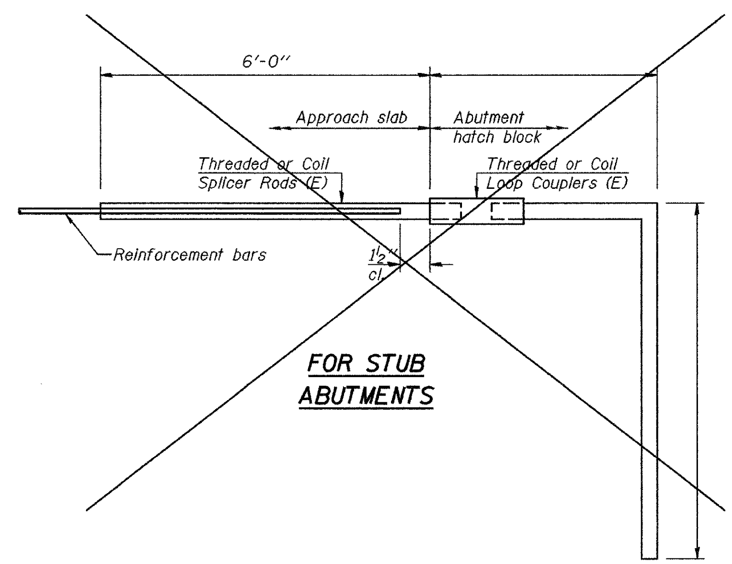
INSTALLATION AND SETTING METHODS

"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.



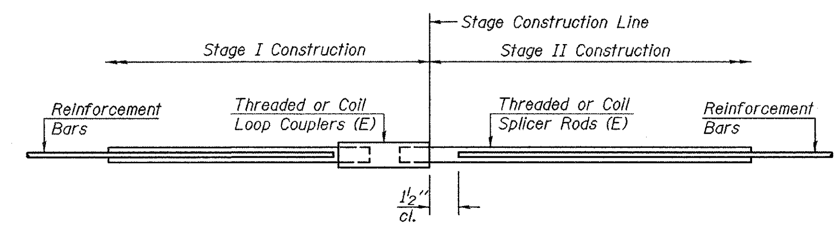
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	48	Top Slab
#5	52	Walls
#5	54	Bottom Slab

BAR SPLICER ASSEMBLY DETAILS
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
SN-038-2015

DESIGNED	-
CHECKED	-
DRAWN	NV
CHECKED	JKC

BSD-1 10-1-08

⚠ - Sheet inserted by Chamlin & Associates

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 9

10 SHEETS

CONTRACT NO. 66171

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 8/20/99

ROUTE FAS 317(US45) DESCRIPTION US 45 OVER A CREEK NEAR GILMAN LOGGED BY K.W.

SECTION 36-BR LOCATION NE1/4, SEC. 31, TWP. 27N, RNG. 14W, 2nd PM

COUNTY IROQUOIS DRILLING METHOD HOLLOW STEM AUGER HAMMER TYPE AUTOMATIC

STRUCT. NO. 038-0040 EXISITING / 038-2015 NEW
Station 1250+85.00

BORING NO. 1 SOUTH ABUT.
Station 1251+23
Offset 31.00ft LT
Ground Surface Elev. 636.46 ft

Surface Water Elev. 628.51 ft
Stream Bed Elev. ______ ft

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

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray-Brown CLAY					
	633.96		3		
Stiff Gray-Brown CLAY with SANDY Layers Below 4'			2	1.0	31.0
			4	P	
		-5	1		
			3	1.0	20.0
			3	P	
	629.96				
Hard Gray SILTY CLAY TILL					
			1		
			6	5.3	18.0
			7	B	
	627.46				
Very Stiff Gray CLAY TILL					
		-10	3		
			4	3.3	21.0
			7	B	
			2		
			3	2.4	22.0
			4	B	
	622.46				
Stiff Gray CLAY TILL					
		-15	2		
			2	1.8	24.0
			4	B	
			1		
			2	1.3	24.0
	617.96		3	B	
Stiff Gray SILTY CLAY TILL					
		-20			

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff Gray SILTY CLAY TILL (continued)			1	1.3	25.0
			2	B	
			4		
			1		
	613.46		3	1.8	24.0
Medium Gray SILT with 4" Layer of Gray TILL at 25'			7	–	25.0
		-25	3		
			3		25.0
			4	–	
			2		
	608.46		3	1.3	24.0
Stiff Gray CLAY TILL			3	B	
	606.46	-30	2		
Very Stiff Gray SILTY CLAY TILL			3	2.4	24.0
			6	B	
	604.46				
Stiff Gray CLAY TILL			1		
			4	1.8	23.0
			6	B	
	602.46				
Very Stiff Gray CLAY					
		-35	WOH		
			4	1.8	25.0
			5	B	
		-40			

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

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 8/20/99

ROUTE FAS 317(US45) DESCRIPTION US 45 OVER A CREEK NEAR GILMAN LOGGED BY K.W.

SECTION 36-BR LOCATION NE1/4, SEC. 31, TWP. 27N, RNG. 14W, 2nd PM

COUNTY IROQUOIS DRILLING METHOD HOLLOW STEM AUGER HAMMER TYPE AUTOMATIC

STRUCT. NO. 038-0040 EXISITING / 038-2015 NEW
Station 1250+85.00

BORING NO. 1 SOUTH ABUT.
Station 1251+23
Offset 31.00ft LT
Ground Surface Elev. 636.46 ft

Surface Water Elev. 628.51 ft
Stream Bed Elev. ______ ft

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

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Gray CLAY (continued)			2	2.9	24.0
			4	B	
			8		
	591.46	-45	3		
Medium Gray SILT			5		22.0
			9	–	
	588.46				
Stiff to Very Stiff Gray VARVED CLAY					
		-50	2		
			4	2.2	27.0
			6	B	
		-55	1		
			3	1.8	34.0
			3	B	
	591.46				
Medium Gray VARVED CLAY					
		-60			

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium Gray VARVED CLAY (continued)			WOH	0.9	37.0
			5	B	
			6		
	573.46				
Stiff Gray SILTY CLAY LOAM TILL					
		-65	3		
			6	1.8	15.0
			8	B	
	569.46				
Very Stiff Gray SILTY CLAY LOAM TILL					
		-70	5		
			8	2.4	22.0
	565.46		10	S	
End of Boring					
		-75			
		-80			

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

BBS, from 137 (Rev. 8-99)

BORINGS
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	P.W.S.
CHECKED	M.E.B.

98-76/038-2015/9boring.dgn

RC ENGINEERS, LTD.
CONSULTING ENGINEERS · SPRINGFIELD, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
10 SHEETS

CONTRACT NO. 66171

Illinois Department of Transportation

Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 8/23/99

ROUTE FAS 317(US45) DESCRIPTION US 45 OVER A CREEK NEAR GILMAN LOGGED BY K.W.

SECTION 36-BR LOCATION NE1/4, SEC. 31, TWP. 27N, RNG. 14W, 2nd PM

COUNTY IROQUOIS DRILLING METHOD HOLLOW STEM AUGER HAMMER TYPE AUTOMATIC

STRUCT. NO. 038-0040 EXISITING / 038-2015 NEW
Station 1250+85.00

BORING NO. 2 NORTH ABUT.
Station 1250+31
Offset 30.50ft LT
Ground Surface Elev. 636.74 ft

Surface Water Elev. 628.51 ft
Stream Bed Elev. ft

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

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Brown SILTY CLAY to Gray CLAY			1		
			2		–
			2	–	
Stiff Gray CLAY	632.24	-5	2		
			2	1.3	26.0
			3	B	
Hard Gray SILTY CLAY TILL	630.24		8		
			7	5.3	18.0
			7	B	
Very Stiff Gray SILTY CLAY to CLAY TILL	627.74	-10	3		
			6	3.6	18.0
			5	B	
Very Stiff Gray CLAY TILL	625.24		3		
			3	2.4	23.0
			4	B	
Stiff Gray CLAY TILL	622.74	-15	4		
			3	1.7	24.0
			4	B	
			WOH		
			2	1.3	25.0
			4	B	
		-20			
Stiff Gray CLAY TILL (continued)			2	1.6B	25.0
Stiff Gray SILTY CLAY TILL	616.24		2	1.5B	18.0
			5		
Soft to Medium Gray CLAY TILL	613.74	-25	2		
			5	0.5	25.0
			5	P	
Very Stiff Gray CLAY TILL	608.74	-30	1		
			3	2.4	24.0
			5	B	
Very Stiff Gray CLAY	602.24	-35	2		
			4	2.2	26.0
			8	B	
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation

Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 8/23/99

ROUTE FAS 317(US45) DESCRIPTION US 45 OVER A CREEK NEAR GILMAN LOGGED BY K.W.

SECTION 36-BR LOCATION NE1/4, SEC. 31, TWP. 27N, RNG. 14W, 2nd PM

COUNTY IROQUOIS DRILLING METHOD HOLLOW STEM AUGER HAMMER TYPE AUTOMATIC

STRUCT. NO. 038-0040 EXISITING / 038-2015 NEW
Station 1250+85.00

BORING NO. 2 NORTH ABUT.
Station 1250+31
Offset 30.50ft LT
Ground Surface Elev. 636.74 ft

Surface Water Elev. 628.51 ft
Stream Bed Elev. ft

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

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Gray CLAY (continued)			2	2.7	24.0
			4	B	
			8		
		-45	4		
			5		25.0
			7	–	
		-50	4		
			6	3.8	26.0
			9	B	
Very Stiff Gray CLAY with SILT Layers	583.74	-55	4		
			6	3.9	21.0
			9	B	
Stiff Gary VARVED CLAY	579.74				
		-60			
Stiff Gray VARVED CLAY (continued)			2	1.1	35.0
			5	B	
			6		
Stiff Gray SILTY CLAY LOAM TILL	573.74	-65	2		
			4	1.2	16.0
			5	B	
		-70	2		
			3	1.5	16.0
			6	B	
End of Boring	565.74	-75			
		-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

BORINGS
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

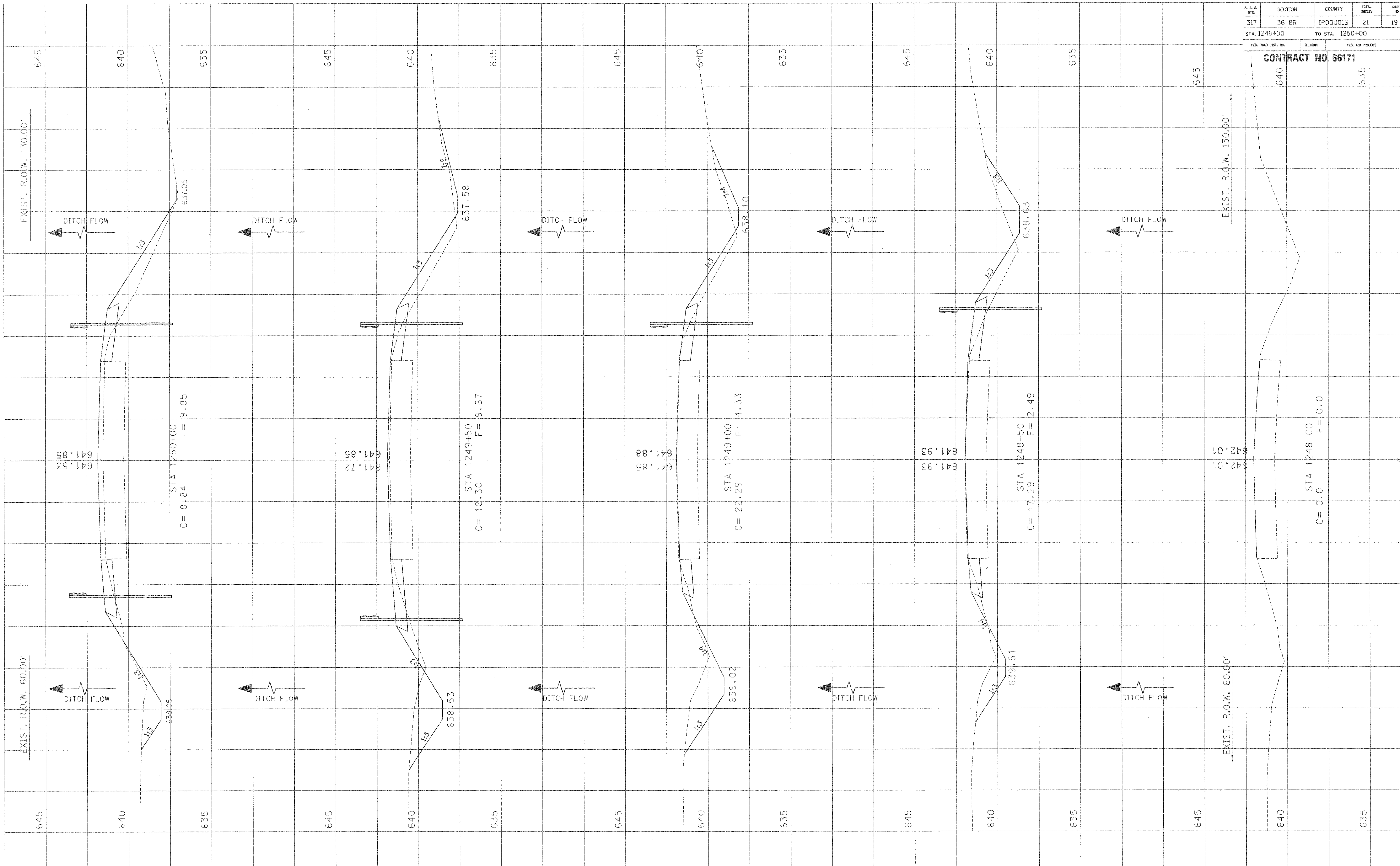
DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	P.W.S.
CHECKED	M.E.B.

98-76/038-2015/10boring.dgn

R.C. ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	19
STA. 1248+00		TO STA. 1250+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171



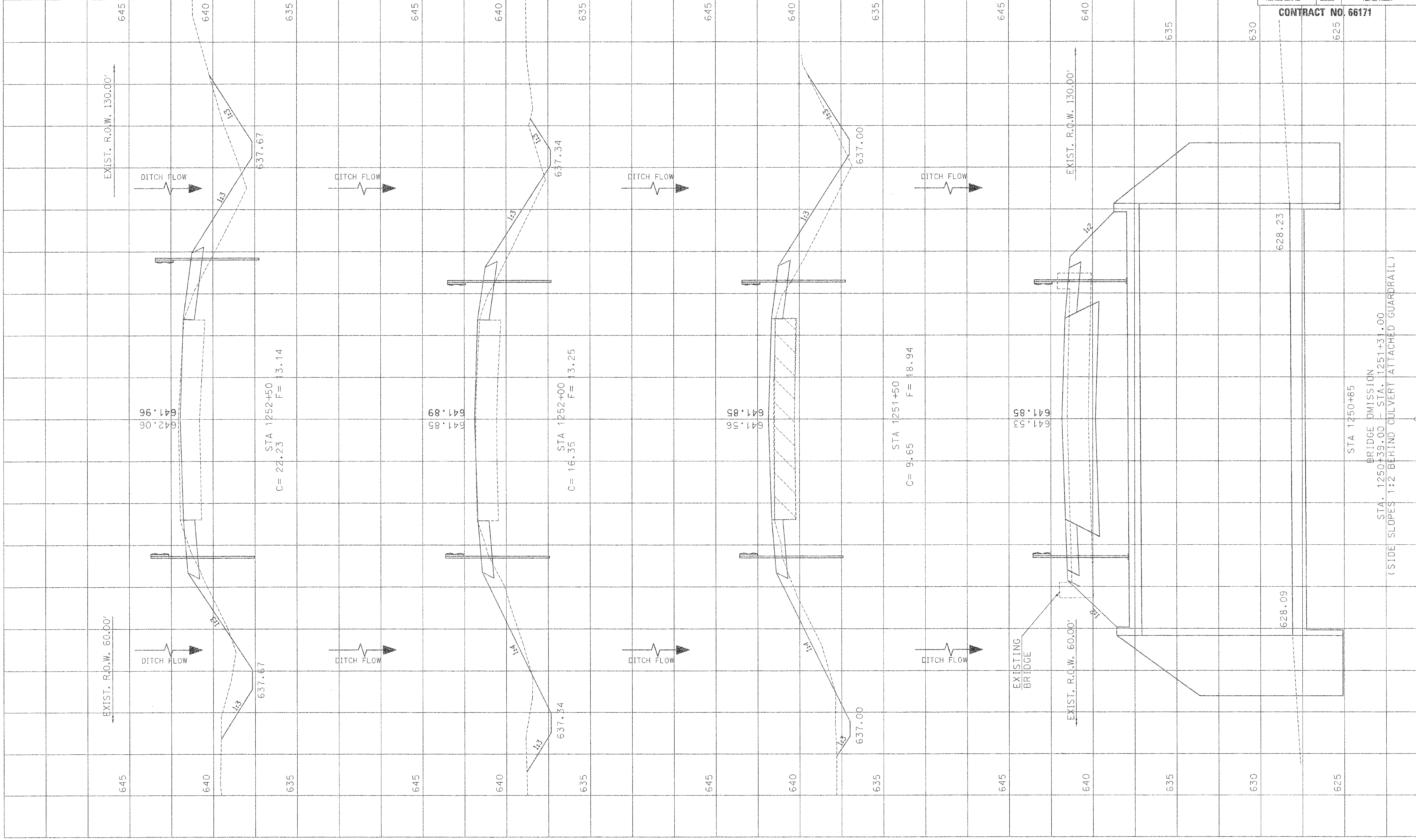
FINAL SURVEY	NOTE BOOK NO.	SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED	BY / DATE
ORIGINAL SURVEY	NOTE BOOK NO.	SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED	BY / DATE

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
317	36 BR	IROQUOIS	21	20

STA. 1250+85 TO STA. 1252+50

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

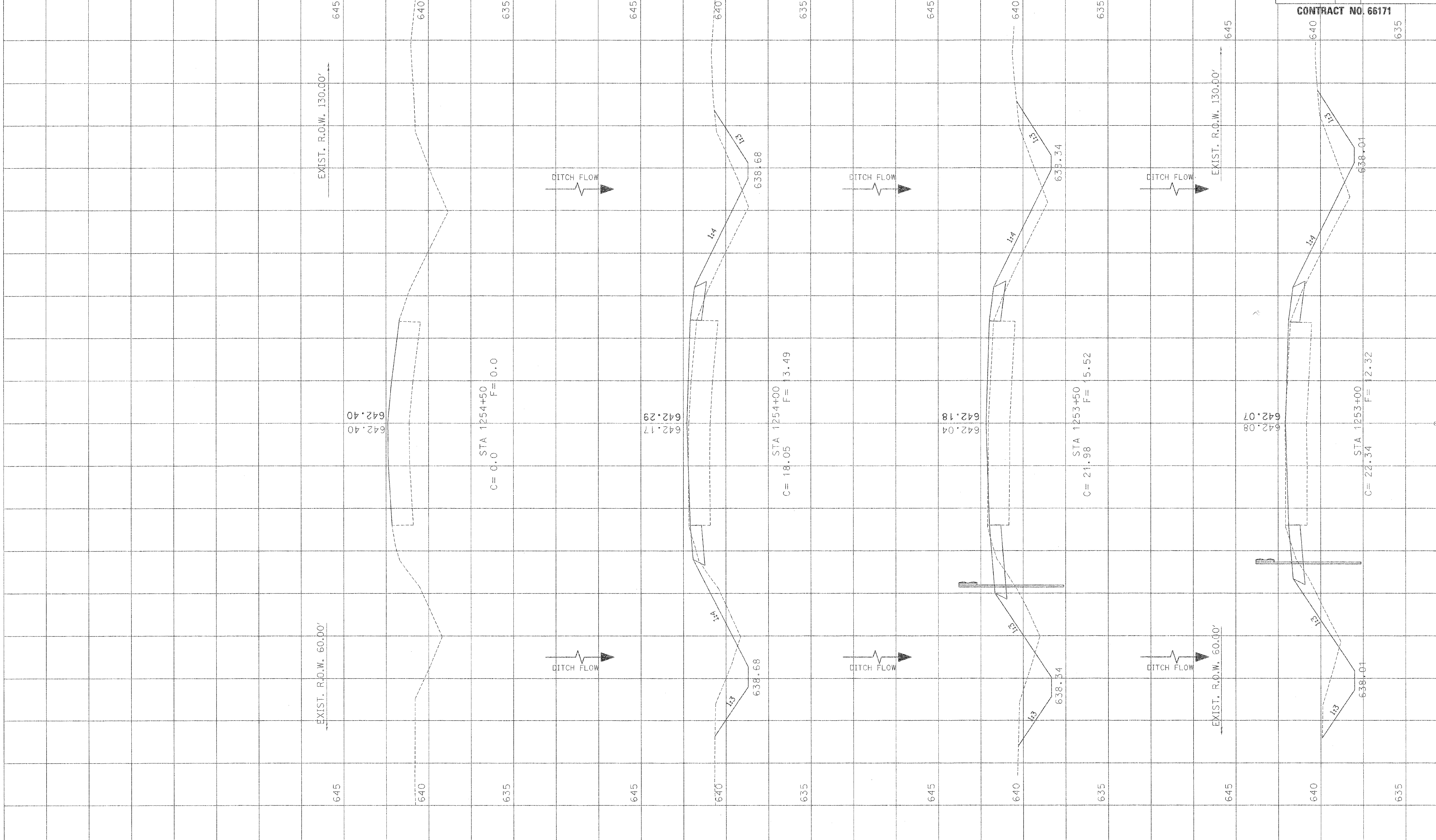
CONTRACT NO. 66171



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
317	36 BR	IROQUOIS	21	21

STA. 1253+00 TO STA. 1254+50

CONTRACT NO. 66171



FOR INFORMATION ONLY

SN° 038-0040

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21A
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

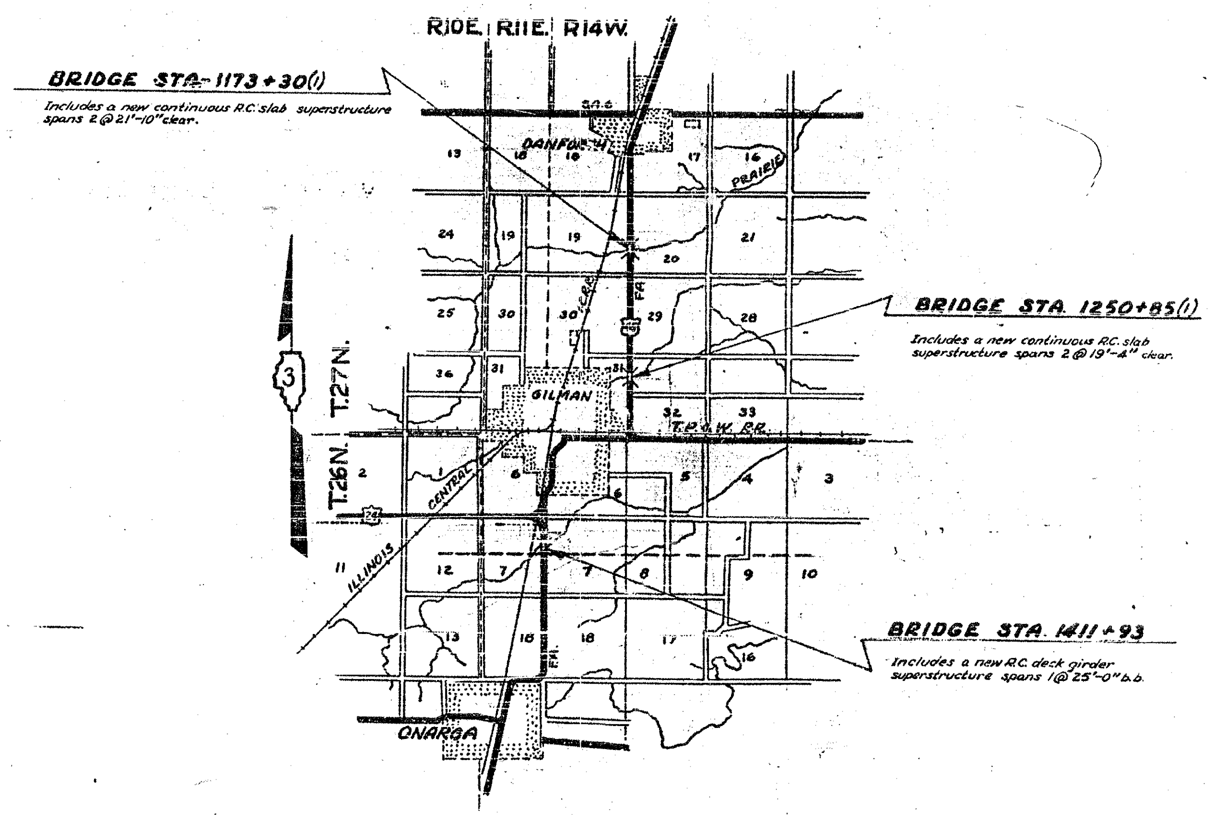
CONTRACT NO. 66171

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 25	36 BY	IROQUOIS.	24	1
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT F.I.-29(13)		

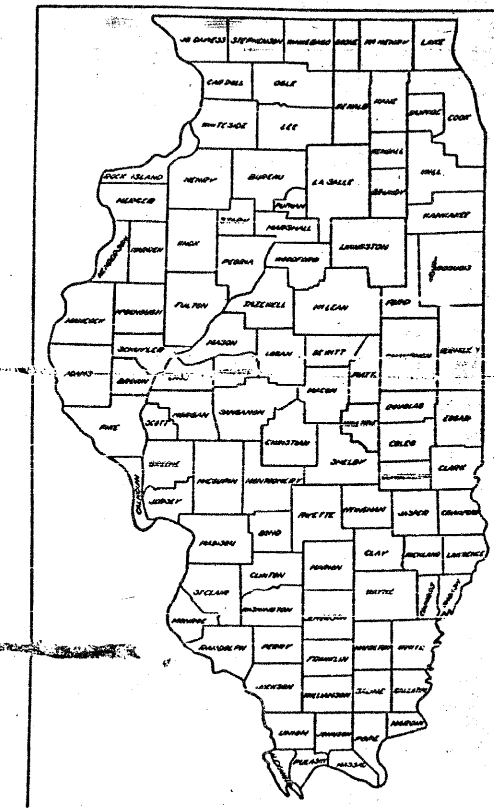
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
STATE B.ISSUE HIGHWAY

SCALES
- PLAN: 1 INCH 100 FT.
- PROFILE, HOR.: 1 INCH 100 FT.
- PROFILE, VERT.: 1 INCH 10 FT.
- CROSS-SECTIONS: 1 INCH 5 FT. VERTICAL; 1 INCH 10 FT. HORIZONTAL

S.B.I. ROUTE 25, SECTION 36 BY.
PROJECT F.I.-29(13) IROQUOIS COUNTY.



LAYOUT
APPROXIMATE SCALE: 1" = 1 MILE



LOCATION OF SECTION INDICATED THUS:—

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

SUBMITTED March 13 1952
Kendrick Harger
DISTRICT ENGINEER

EXAMINED May 15 1952
ENGINEER OF ROAD PLANS AND CONTRACTS

PASSED May 15 1952
ENGINEER OF DESIGN

APPROVED May 15 1952
F. N. Barker
CHIEF HIGHWAY ENGINEER

APPROVED May 15 1952
DIRECTOR

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL
[redacted]
DISTRICT ENGINEER — DATE

APPROVED
[redacted]
DIVISION ENGINEER — DATE

FOR INFORMATION ONLY

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21B

STA. 1248+00 TO STA. 1254+50

FED. ROAD DIST. NO. 3 | ILLINOIS | FED. AID PROJECT

CONTRACT NO. 66171

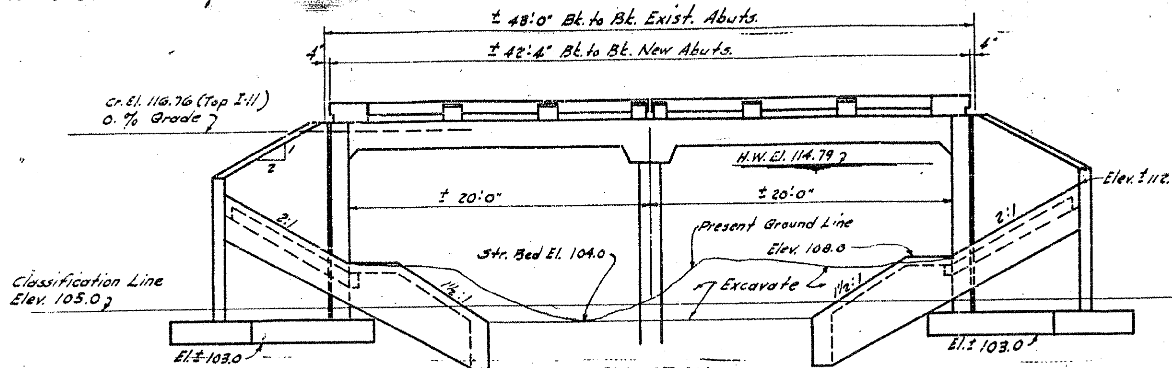
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 25 / F.A.	36 BY	Iroquois	24	15

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT

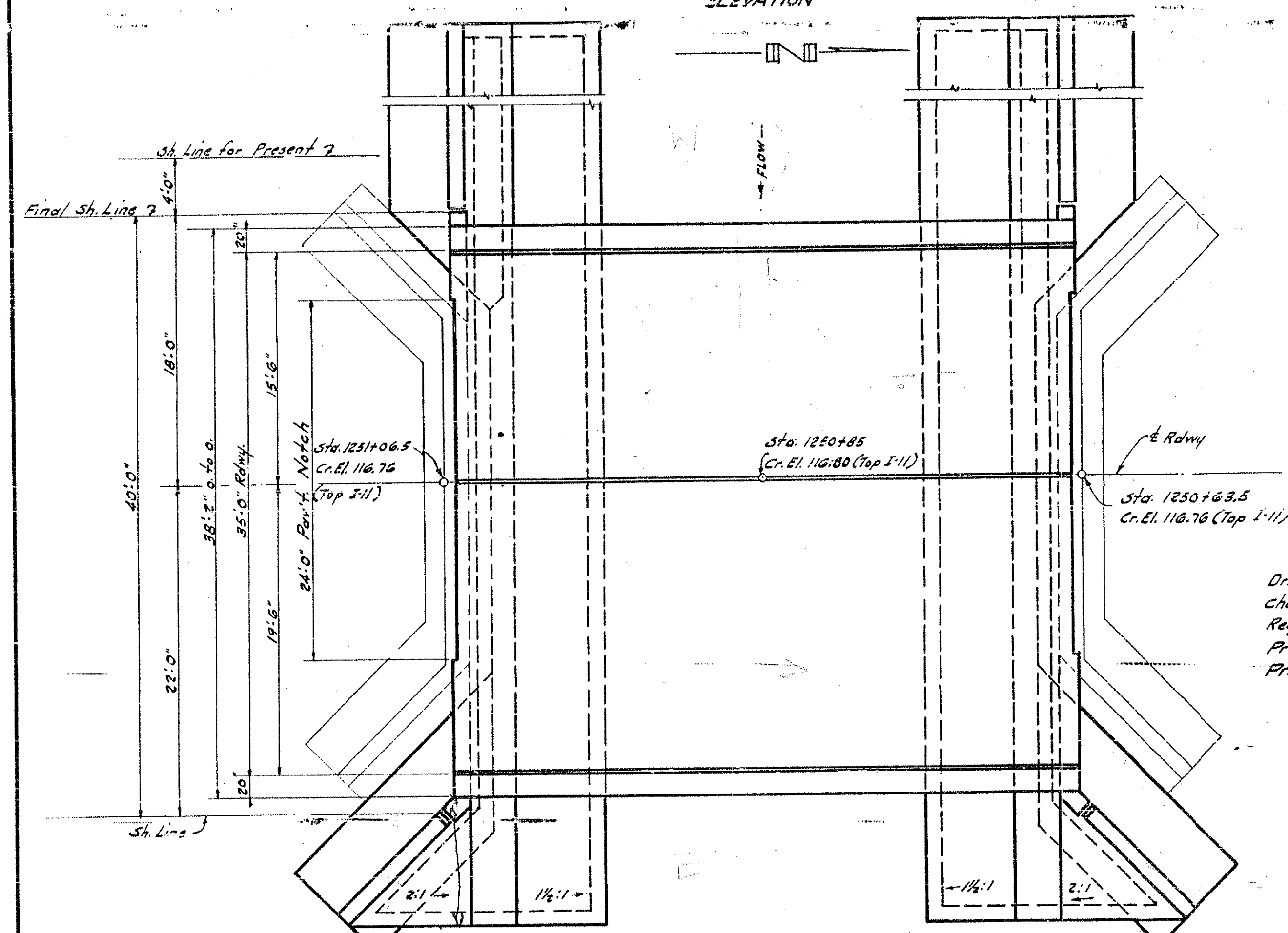
SHEET NO. 1
4 SHEETS

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

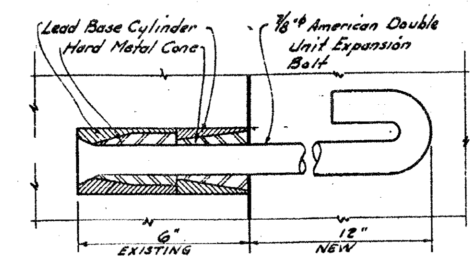
B.M. Top S.W. Abut. Elev. 116.5
Existing Structure R.C. Thru Girder 1@40'0" Rdwy. 20'0" R.C. Closed Abuts. Contractor shall remove existing super & portions of existing abuts. as indicated on plans



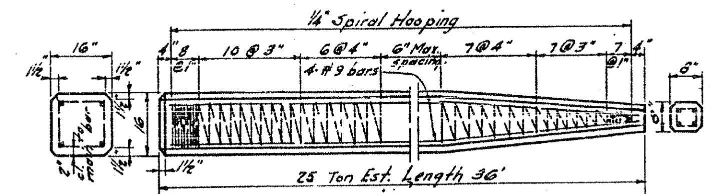
ELEVATION



PLAN



DETAIL OF EXPANSION BOLT



DETAIL OF PRECAST CONCRETE PILE

GENERAL NOTES

Class X Concrete shall be used thruout except ~~in~~ Handrail.
Handrail Concrete shall be used in Handrail.
The concrete floor slab on each side of the center line joint shall be poured in one continuous operation.
Handrail shall not be poured until falsework has been removed.
The cost of cement nails and joint filler shall be included in the unit price for Class X Concrete.
The contract unit price for Expansion Bolts shall include furnishing, drilling holes, and setting Expansion Bolts.
Backfilling shall be done in accordance with Art. 50.10 of the Std. Specs.
For waterproofing see Special Provisions.
The Contractor shall drive one test pile in permanent location as directed by the Engineer, before casting remainder of piles
Concrete floor slab shall be finished in accordance with the applicable provisions of Section 29 of the Std. Specs.
Bridge Contractor shall excavate channel as shown for 50' each side of ℄ Roadway

STA. 1250+85 (1)
BUILT 195 BY
STATE OF ILLINOIS
S.B.I. RT. 25 SEC. 36-BY
F.A. PROJ. F.I.-29(13)
LOADING H-20-S16

NAME PL DATA
STD 1881

WATERWAY INFORMATION

Drainage Area	3000 Acres
Character	Rolling, Cult. & City of Gilman
Req'd Opening (c = 0.6 Talbots)	243 □'
Present Opening	323 □'
Proposed Opening	369 □'

TOTAL BILL OF MATERIAL

ITEM		SUPER	SUB	TOTALS
Reinforcement Bars	Lbs.	15,140	4,930	20,070
Class X Concrete	Cu. Yds.	67.8	87.4	155.2
Handrail Concrete	Cu. Yds	1.9		1.9
Name PL	Ea.	One		One
Expansion Bolts	Ea.		76	76
Slope Wall	Sq. Yds.		270	270
16" Precast Conc. Piles (Lt. 36')	Lin. Ft.		216	216
Test Pile	Ea.		One	One
Class "A" Exca. for Struct.	Cu. Yds.		220	220
Class "B" Exca. for Struct	Cu. Yds.		120	120
Channel Excavation	Cu. Yds		250	250
Concrete Removal	Cu. Yds.		2.0	2.0
Removal of Exist. Super.	Ea.	One		One
Temporary Bridge Complete	Ea.			One
Removal of Temporary Bridge	Ea.			One
Transporting Temporary Bridge				Lump Sum

STRESSES
f_s 20000 #/□"
f_c 1400 #/□" Positive
f_c 1400 #/□" Negative
f_c 800 #/□"
n 10

Loading H20-S16

DESIGNED	Ralph Haslett	EXAMINED	W. E. Hanson — Engineer of Bridge and Traffic Structures
CHECKED	James J. Wavering	PASSED	F. L. Sheriff — Engineer of Design
DRAWN	R.H. Sudgar	APPROVED	F. N. Barker — Chief Highway Engineer
CHECKED	James J. Wavering		

Apr 16 1952

GENERAL PLAN & ELEVATION
PROJ. FI-29(13)
F.A. RTE. 26 (S.B.I. RT. 25) SEC. 36-BY
IROQUOIS CO.
STA. 1250+85 (1)

FOR INFORMATION ONLY

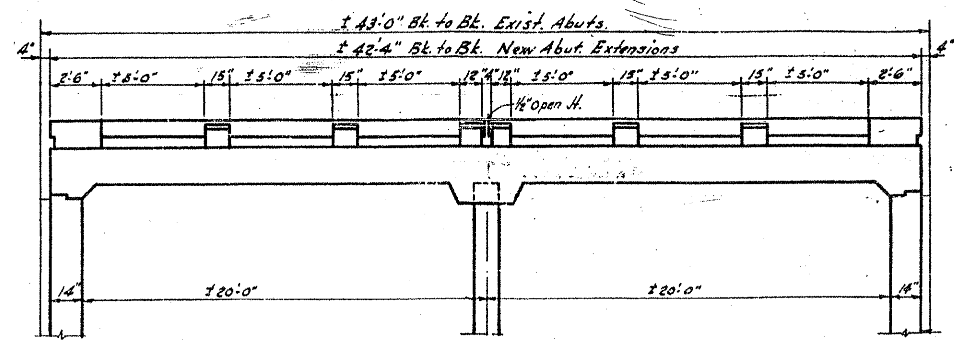
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21C
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

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

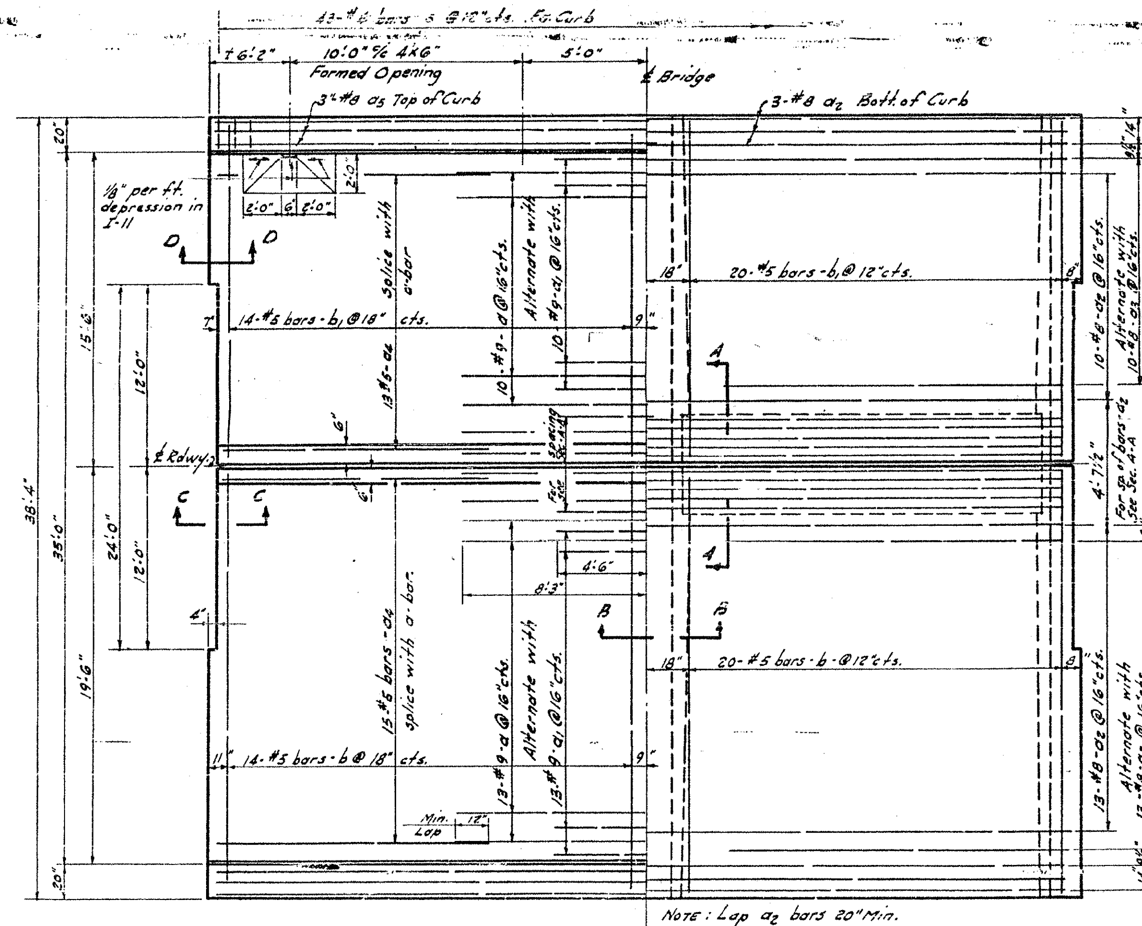
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 25 / F.A.	36BY	Iroquois	24	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
4 SHEETS



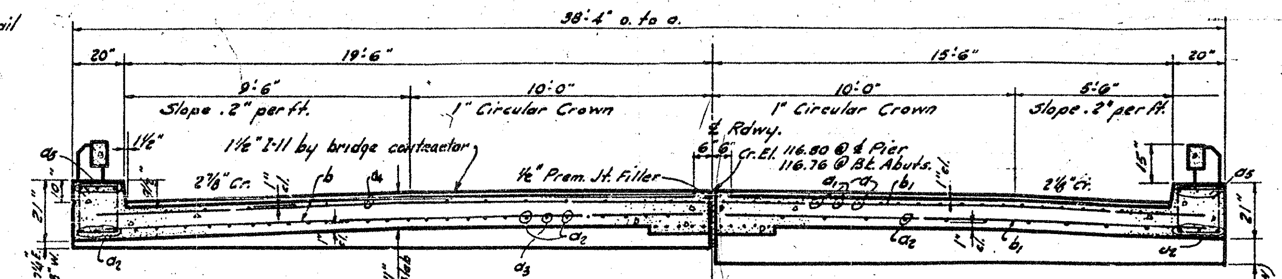
ELEVATION

For details of handrail see Std. 2070 R Type 3-C

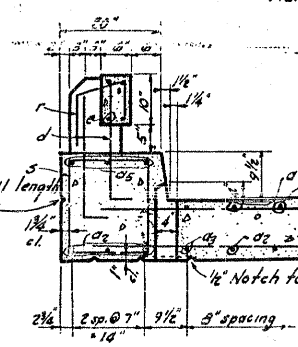


SHOWING REINF. IN TOP OF SLAB — SHOWING REINF. IN BOTT. OF SLAB

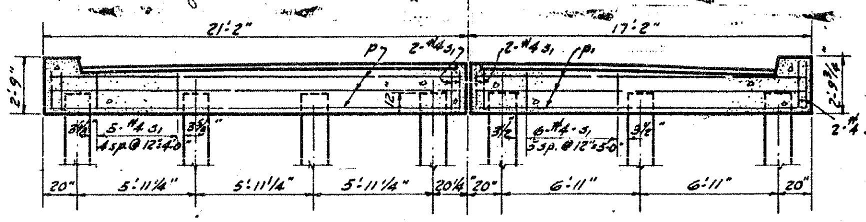
PLAN



NEAR ABUT. — CROSS-SECTION OF RDWY. — NEAR PIER

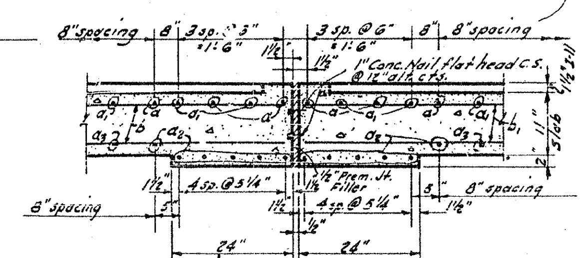


CURB & DRAIN DETAIL

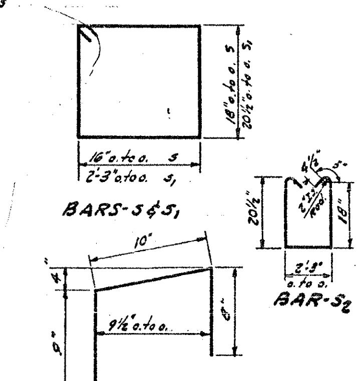


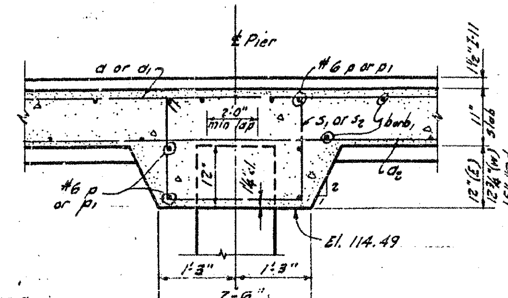
PIER PILES
16" R.C. Piles
7 Req'd.
Cap. 25 Tons
Est. lgth. 36'

CROSS-SECTION OF PIER

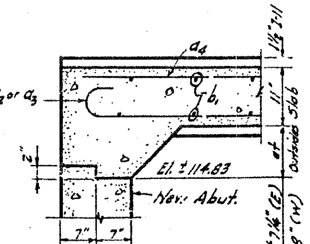


SEC. A-A

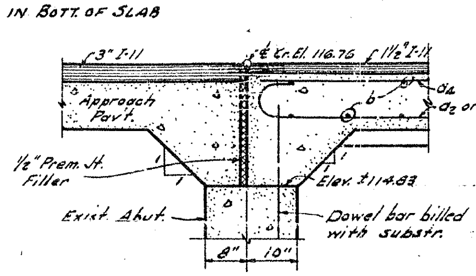




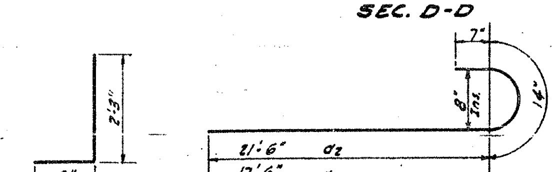
SEC. B-B



SEC. D-D



SEC. C-C



BAR-d — BARS a2 & a3

BILL OF MATERIAL - SUPER

Bar	No.	Size	Length	Shape
a	27	#9	16'-6"	
a1	27	#9	9'-0"	
a2	78	#8	23'-3"	
a3	46	#8	19'-3"	
a4	54	#5	13'-9"	
a5	12	#8	22'-0"	
b	68	#5	20'-3"	
b1	68	#5	16'-3"	
e	16	#5	20'-0"	
d	68	#5	3'-0"	
r	32	#4	2'-3"	
s	86	#4	6'-9"	
s1	31	#4	9'-0"	
s2	4	#4	6'-9"	
p	6	#6	20'-6"	
p1	6	#6	16'-6"	

Cl. X Concrete	Cu. Yds.	67.8
Handrail Concrete	Cu. Yds.	1.9
Reinforcement Bars	Lbs.	15,140
Name Pl.	Ea.	One
Removal of Exist. Super.	Ea.	One
Precast Conc. Piles (36')	Lin Ft.	216
Test Pile	Ea	One

NOTE - All bars shall be round A.S.T.M. A305-49
The size number is the number of one-eighth inches in the nominal diameter

DESIGNED	Ralph Haslett
CHECKED	James J. Wavering
DRAWN	Sutter
CHECKED	James J. Wavering

Apr 16 1952
EXAMINED: W E Simpson — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED: ENGINEER OF DESIGN
APPROVED: F. N. Barker — CHIEF HIGHWAY ENGINEER

SUPERSTRUCTURE
PROJ. F.I.-29(13)
F.A. RTE. 26 (S.B.I. RT 25) SEC. 36 B-Y
IROQUOIS CO.
STA. 1250+85(±)

FOR INFORMATION ONLY

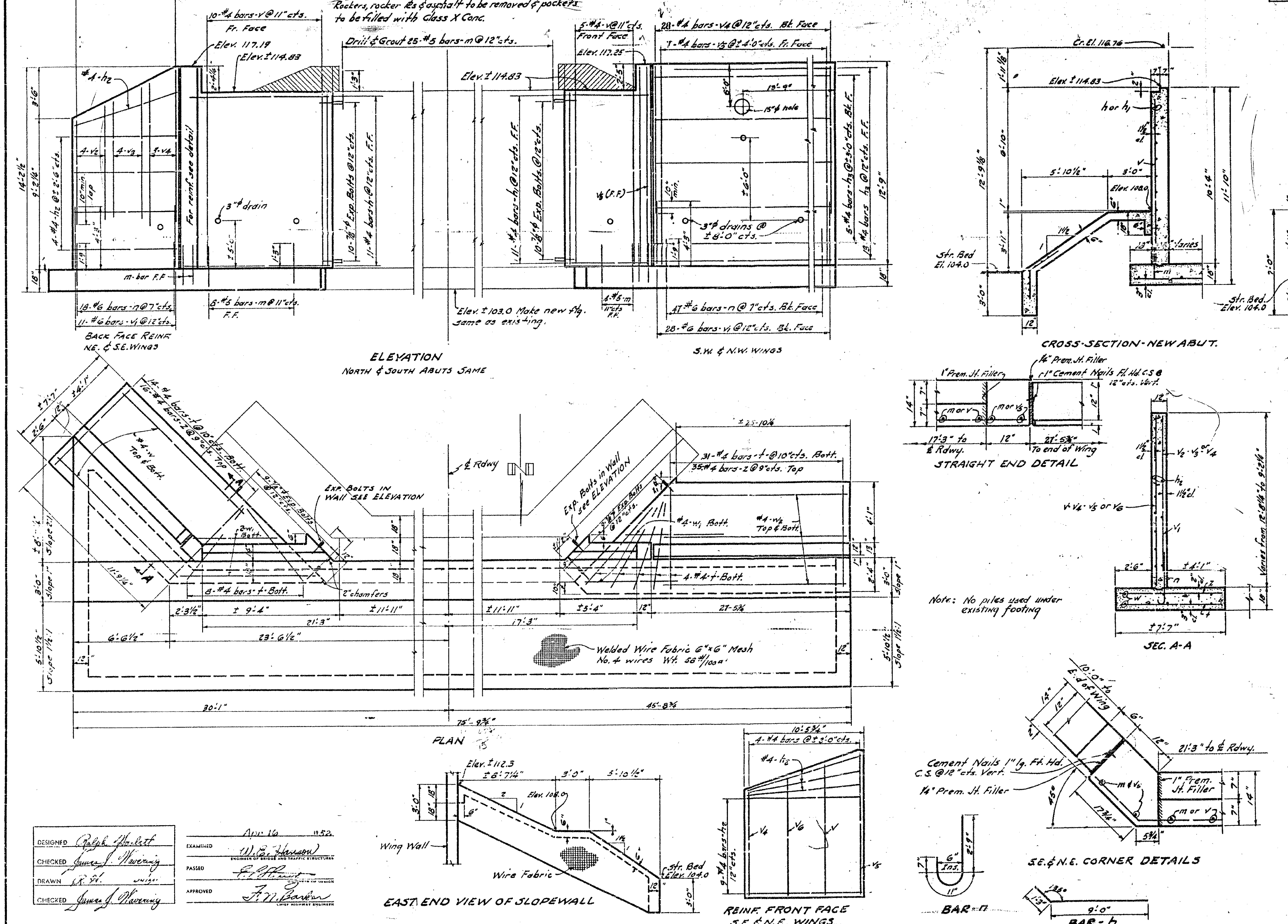
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21P
STA. 1248+00	TO STA. 1254+50			
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

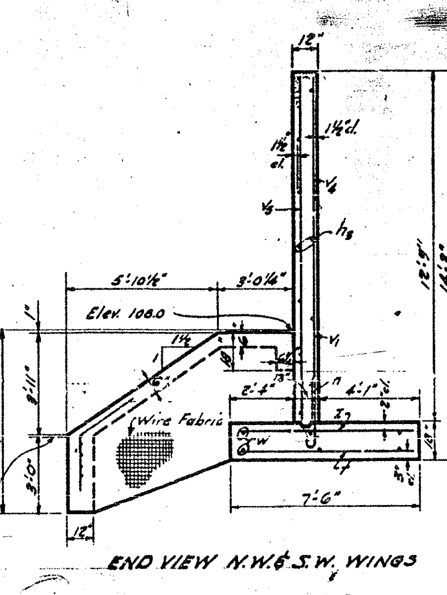
CONTRACT NO. 66171

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 25 / F.A.	36 BY	Iroquois	23	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
4 SHEETS

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





BILL OF MATERIAL - SUBSTRUCTURE

Bar	No.	Size	Length	Shape
v	32	#4	11'-6"	
v_1	78	#6	4'-3"	
v_2	8	#4	6'-9"	
v_3	8	#4	8'-0"	
v_4	64	#4	9'-0"	
v_5	24	#4	12'-6"	
v_6	2	#4	10'-3"	
h	22	#4	10'-3"	
h_1	22	#4	5'-3"	
h_2	34	#4	10'-0"	
h_3	36	#4	27'-0"	
m	82	#5	2'-6"	
n	130	#6	4'-3"	
t	114	#4	7'-0"	
z	102	#4	7'-0"	
w	12	#4	11'-6"	
w_1	8	#4	8'-0"	
w_2	12	#4	27'-0"	

Class X Concrete	Cu.Yds.	87.4
Reinforcement Bars	Lbs.	4,930
Expansion Bolts (7/8"φ)	Ea.	76
Concrete Removal	Cu.Yds.	2.0
Slopewall	Sq.Yds.	270
Class A Excav. for Structure	Cu.Yds.	220.0
Class B Excav. for Structure	Cu.Yds.	120.0
Channel Excavation	Cu.Yds.	250

Note - All bars shall be round A.S.T.M. A305-49. The size number is the number of one eighth inches in the nominal diameter.

SUBSTRUCTURE
PROJ. F.I. 29(13)
F.A. RTE. 29 (S.B.I. RT. 25) SEC. 36-BY
IROQUOIS CO.
STA. 1250+85(1)