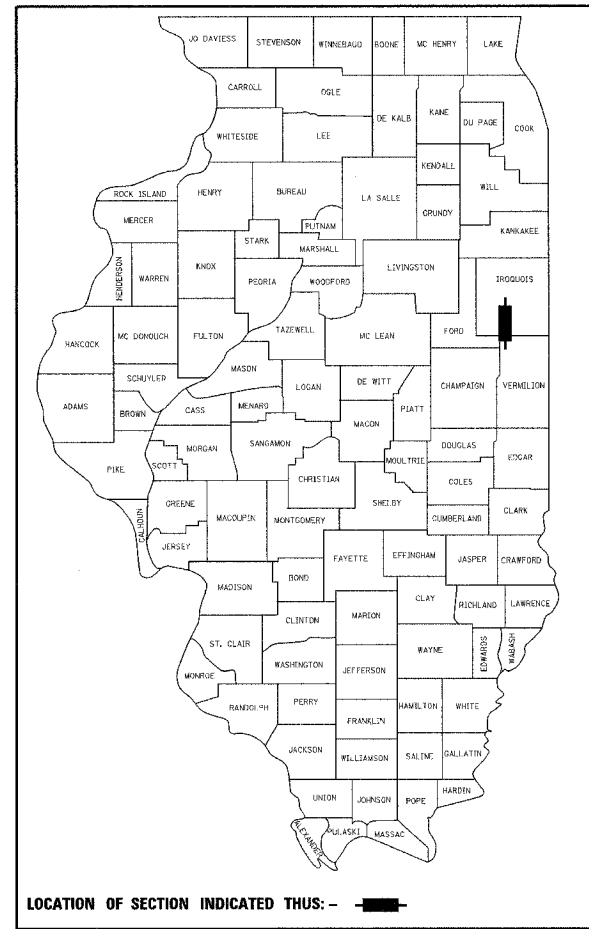


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	1

CONTRACT NO. 66612
#6711-68

P-93-053-04
D-93-013-06



DESIGN DESIGNATION: RURAL MINOR ARTERIAL
2008 ADT = 2300
P.V. = 87.2% S.U. = 7% M.U. = 5.8%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8/16 20 07
Deputy Director of Highways, Region Engineer
October 12, 2007
Interim Engineer of Design and Environment
October 12, 2007
Director of Highways, Chief Engineer

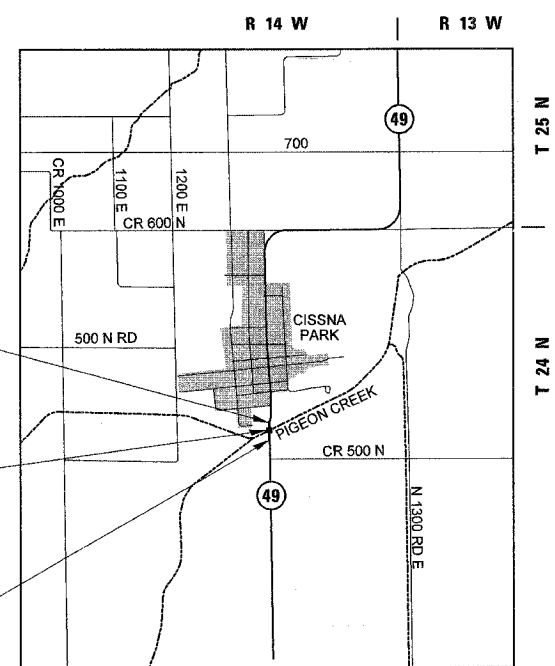
PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
HIGHWAY IMPROVEMENT

F.A.P. ROUTE 840 (ILLINOIS ROUTE 49)
OVER PIGEON CREEK
SECTION 123 BR-2
PROJECT ACBRF-0840(056)
IROQUOIS COUNTY

C-93-013-06
BRIDGE REPLACEMENT



LOCATION MAP
NOT TO SCALE

GROSS & NET LENGTH = 1,240 FT. = 0.235 MI.

rjngroup License # 184-000813
200 West Front Street
Wheaton, IL 60187
Excellence through Ownership

8-7-07
David W. Blak
REGISTERED P.E., STATE OF ILLINOIS
11-30-07 EXPIRES

8-7-07
William J. Vegrzyn
REGISTERED S.E., STATE OF ILLINOIS
11-30-08 EXPIRES

INDEX OF SHEETS

1. COVER
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
- 4-5. TYPICAL SECTIONS
6. SCHEDULE OF QUANTITIES
7. ALIGNMENT, TIES & BENCHMARKS
8. TRAFFIC CONTROL CONSTRUCTION STAGING NOTES AND DETAILS STAGE I
- 9-10. TRAFFIC CONTROL CONSTRUCTION STAGING STAGE I
11. TRAFFIC CONTROL CONSTRUCTION STAGING NOTES AND DETAILS STAGE II
- 12-13. TRAFFIC CONTROL CONSTRUCTION STAGING STAGE II
- 14-15. PLAN & PROFILE
16. EROSION CONTROL, LANDSCAPING AND PAVEMENT MARKING PLAN
17. RIGHT-OF-WAY PLAN
- 18-37. BRIDGE PLANS
- 38-44. EXISTING BRIDGE PLANS
- 45-46A. DETAILS
- 47-67. CROSS SECTIONS

HIGHWAY STANDARDS

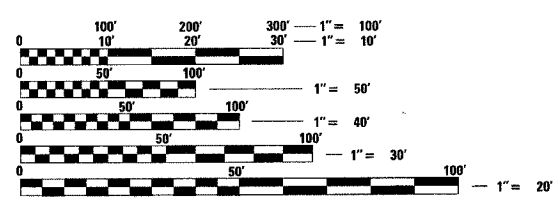
- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-03 TEMPORARY EROSION CONTROL SYSTEMS
- 420401-05 BRIDGE APPROACH PAVEMENT
- 515001-02 NAME PLATE FOR BRIDGES
- 601101 CONCRETE HEADWALL FOR PIPE DRAIN
- 606001-03 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 630001-07 STEEL PLATE BEAM GUARDRAIL
- 630201-04 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-04 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631031-06 TRAFFIC BARRIER TERMINAL TYPE 6
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 667101 PERMANENT SURVEY MARKERS
- 701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701321-08 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-02 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥45 MPH
- 702001-06 TRAFFIC CONTROL DEVICES
- 704001-03 TEMPORARY CONCRETE BARRIER
- 720001 SIGN PANEL MOUNTING DETAILS
- 720006-01 SIGN PANEL ERECTION DETAILS
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STRUCTURE NUMBER 038-0181 (STA 284 + 75)
REMOVE AND REPLACE THE EXISTING BRIDGE DECK,
VAULTED ABUTMENT SLABS, APPROACH SLABS AND
ALL JOINTS UTILIZING STAGED CONSTRUCTION.
REMOVE AND REPLACE THE EXPANSION BEARINGS
AT THE VAULTED ABUTMENTS. REPAIR SUBSTRUCTURE
AND SLOPE WALLS. PERFORM ALL NECESSARY
ROADWAY WORK TO COMPLETE THE BRIDGE REPAIRS,
INCLUDING GUARDRAIL REMOVAL AND REPLACEMENT
AND SHOULDER WIDENING AT ALL FOUR QUADRANTS
OF THE BRIDGE.

END IMPROVEMENT
STA 289 + 50

SECTION 123 BR-2
SN 038-0181 (EXISTING)
038-0217 (PROPOSED)
BRIDGE REPLACEMENT

BEGIN IMPROVEMENT
STA 277 + 10



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: JOE KANNEL
UNIT CHIEF: MICHELE LINDEMANN
TOWNSHIP: PIGEON GROVE

CONTRACT NO. 66612

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 66612

GENERAL NOTES – ROADWAY

1. 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.
2. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
3. THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
4. THE HMA SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY, IN A WORKMANLIKE MANNER, AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SAW CUT THE HMA SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE HMA SURFACE.

GENERAL NOTES – TRAFFIC CONTROL & PROTECTION

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

GENERAL NOTES – DRAINAGE & UTILITIES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED).
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
3. 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.
4. MEMBERS OF J.U.L.I.E. KNOWN TO BE WITHIN THE LIMITS OF IMPROVEMENT ARE:
 AMEREN CIPS
 EASTERN ILLINOIS ELECTRIC
 NICOR GAS
 VERIZON

GENERAL NOTES – EROSION CONTROL

1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE STATE STANDARDS FOR THE ENTIRE DURATION OF THE CONTRACT, OR UNTIL SUCH TIME AS DIRECTED BY THE ENGINEER.
2. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
3. 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 FURNISHED EXCAVATION.

GENERAL NOTES – MISCELLANEOUS

1. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
2. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT THE WRITTEN PERMISSION FROM THE DEPARTMENT.
3. 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 INCLUDED IN THESE PLANS.

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

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MAT PRIME COAT	0.08	GAL / SQ YD OR
	0.375	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
SUPPLEMENTAL WATERING	3	GAL / SQ YD / APPLICATION
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

COMMITMENTS

1. THE SLOPE OF THE COMMERCIAL ENTRANCE AT STA. 286+56 (RT) WAS DESIGNED TO SATISFY THE INTERSECTION SIGHT DISTANCE CRITERIA. THEREFORE, THE SLOPE OF THE DRIVEWAY SHOULD NOT BE ALTERED.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DISTRICT THREE


REVIEWED BY: *R. Powell*
 DISTRICT STUDIES & PLANS ENGINEER

DATE: 8-16-07

EXAMINED BY: *[Signature]*
 DISTRICT CONSTRUCTION ENGINEER

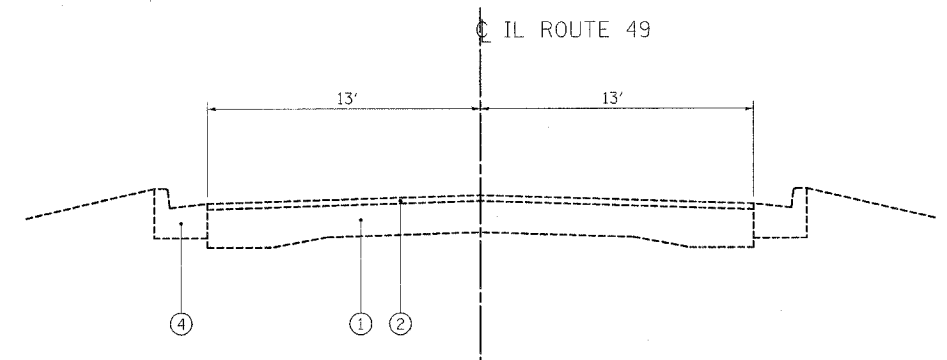
James D. Threlkoff III
 DISTRICT MATERIALS ENGINEER

Bruce A. Hendon
 DISTRICT OPERATIONS ENGINEER

 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) GENERAL NOTES SCALE: NO SCALE DATE: AUGUST 7, 2007
	NAME	DATE	
		DRAWN BY: JMC CHECKED BY: DWB	

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 PLOT TIME: 9:51:05 AM
 PLOTTED BY: JTR/CSY
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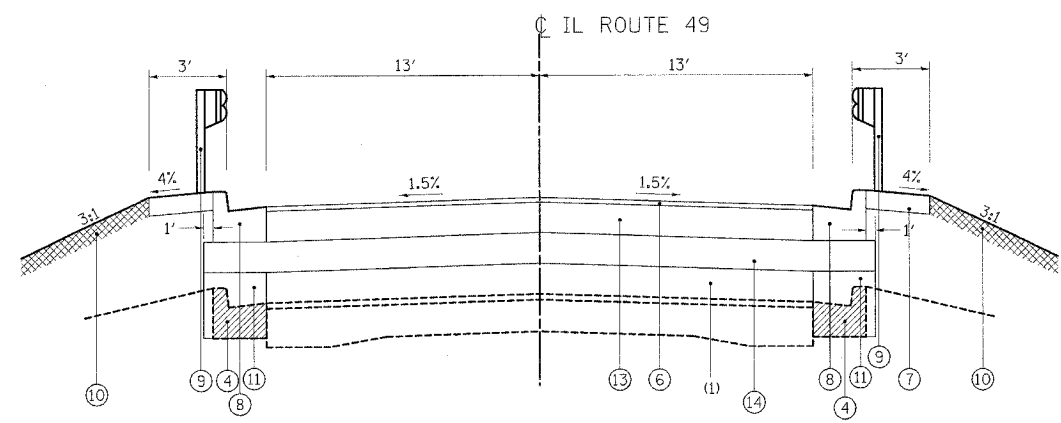
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	5
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 66612				



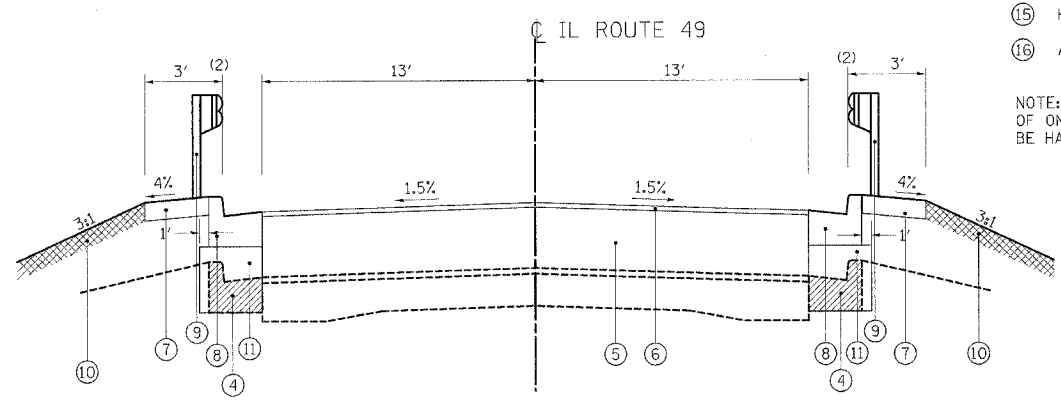
EXISTING TYPICAL SECTION
NORTH OF BRIDGE
STA. 285+74 TO 289+50

- LEGEND
- ① EXISTING P.C.C. PAVEMENT
 - ② EXISTING HOT-MIX ASPHALT SURFACE
 - ③ EXISTING AGGREGATE SHOULDER
 - ④ EXISTING CONCRETE CURB AND GUTTER, TYPE B-6.24 (TYP.) TO BE REMOVED
 - ⑤ HOT-MIX ASPHALT BINDER COURSE, VARIABLE DEPTH
 - ⑥ 1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
 - ⑦ HOT-MIX ASPHALT SHOULDER, 8"
 - ⑧ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (TYP.)
 - ⑨ PROPOSED GUARDRAIL
 - ⑩ VEGETATION SUSTAINING TOPSOIL, 4" (SEE NOTE)
 - ⑪ SUB-BASE GRANULAR MATERIAL, TYPE B
 - ⑫ LEVELING BINDER (MACHINE METHOD), N50 (VARIABLE DEPTH)
 - ⑬ HOT MIX ASPHALT BINDER COURSE, 1 1/2"
 - ⑭ SUB-BASE GRANULAR MATERIAL, TYPE A, 12"
 - ⑮ HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"
 - ⑯ AGGREGATE SHOULDERS, TYPE B, 6"

NOTE: REUSE EXISTING TOPSOIL WHENEVER POSSIBLE. WHEN EXISTING QUANTITY OF ON-SITE TOPSOIL IS NOT ADEQUATE, VEGETATION SUSTAINING TOPSOIL SHALL BE HAULED FROM OFF-SITE AND PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.

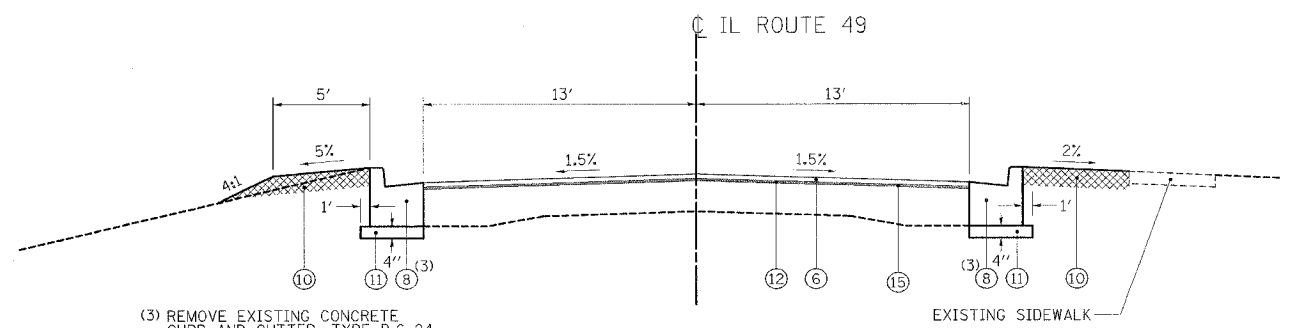


PROPOSED TYPICAL SECTION
NORTH OF BRIDGE
STA. 285+74 TO 286+25



PROPOSED TYPICAL SECTION
NORTH OF BRIDGE
STA. 286+25 TO 288+22
(2) GUARDRAIL
STA 286+25 TO 287+24, LT
STA 286+25 TO 286+42, RT

(1) EMBANKMENT BETWEEN 12" SUB-BASE GRANULAR MATERIAL AND EXISTING PAVEMENT TO BE CONSTRUCTED WITH SUITABLE SOIL OR GRANULAR MATERIAL AND PAID FOR AS FURNISHED EXCAVATION.



PROPOSED TYPICAL SECTION
NORTH OF BRIDGE
STA. 288+22 TO 289+50
EXISTING SIDEWALK

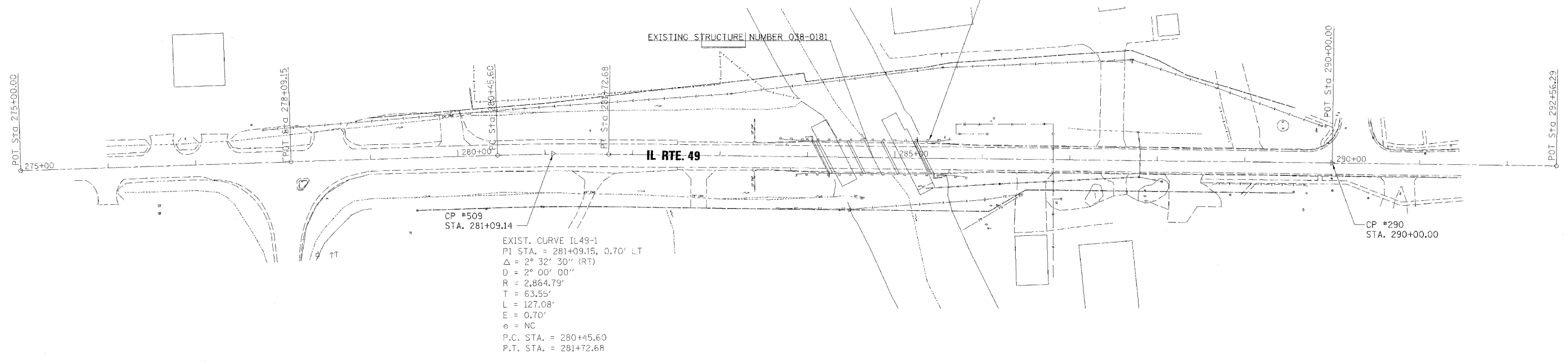
(3) REMOVE EXISTING CONCRETE CURB AND GUTTER, TYPE B.6-24

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) TYPICAL SECTIONS SCALE: NOT TO SCALE DATE: AUGUST 7, 2007 DRAWN BY: BMH CHECKED BY: DWB
	NAME	DATE	

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 PLOTTED BY: J. Tracey
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	7
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66612				

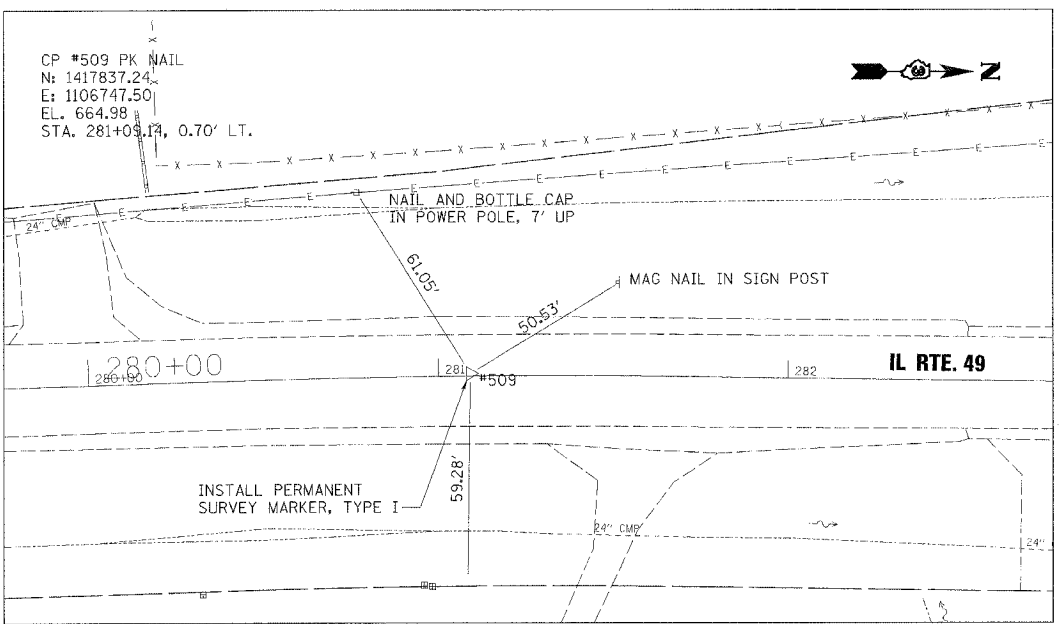
BENCHMARK: STA. 285+25.78, 18.5' LT
BRASS MONUMENT ON TOP OF N.W.
WINGWALL AT BRIDGE ELEV. 666.03



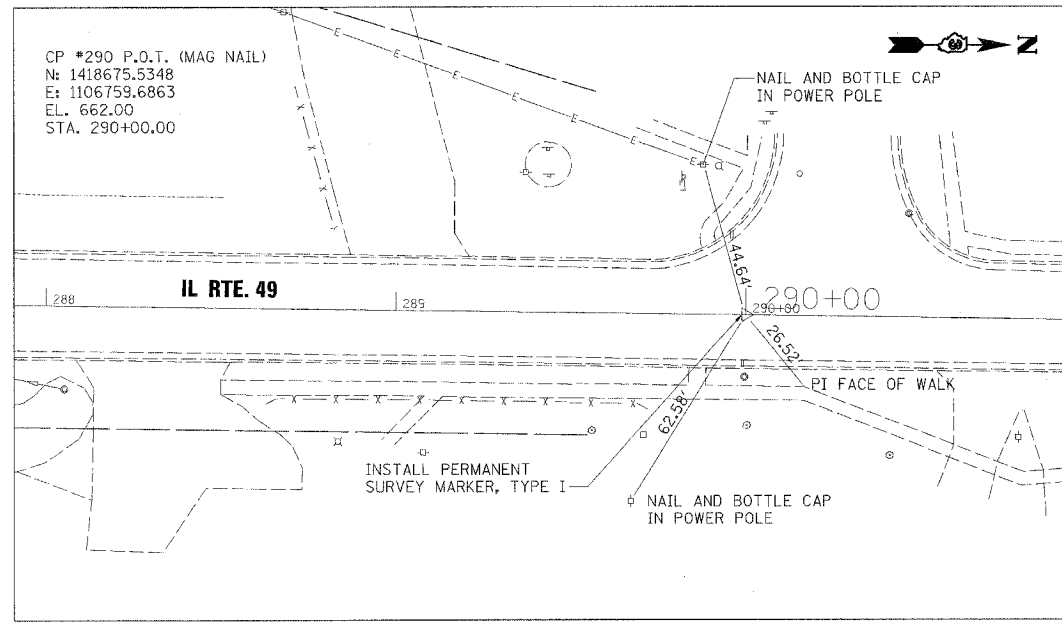
CP #509
STA. 281+09.14

EXIST. CURVE IL49-1
PI STA. = 281+09.15, 0.70' LT
 $\Delta = 2^\circ 32' 30''$ (RT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 63.55'$
 $L = 127.08'$
 $E = 0.70'$
 $e = NC$
P.C. STA. = 280+45.60
P.T. STA. = 281+72.68

CP #290
STA. 290+00.00



CP #509 PK NAIL
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STA. 281+09.14, 0.70' LT.

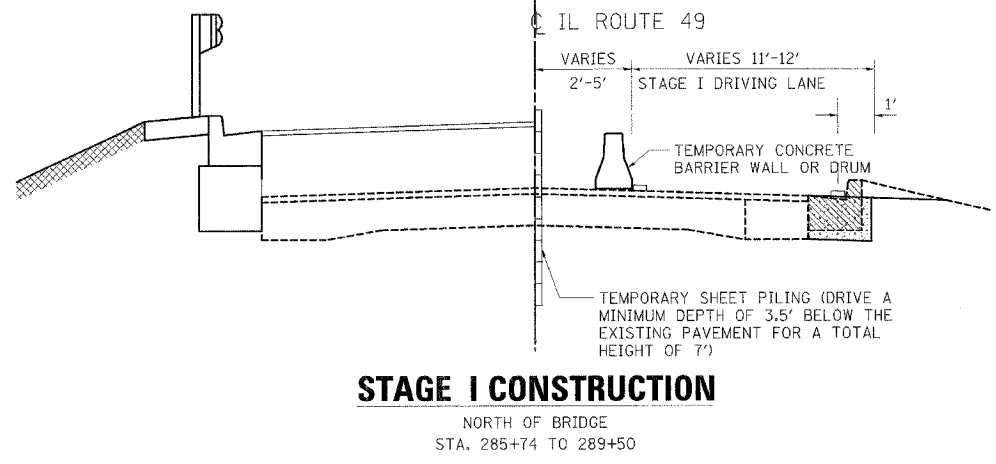
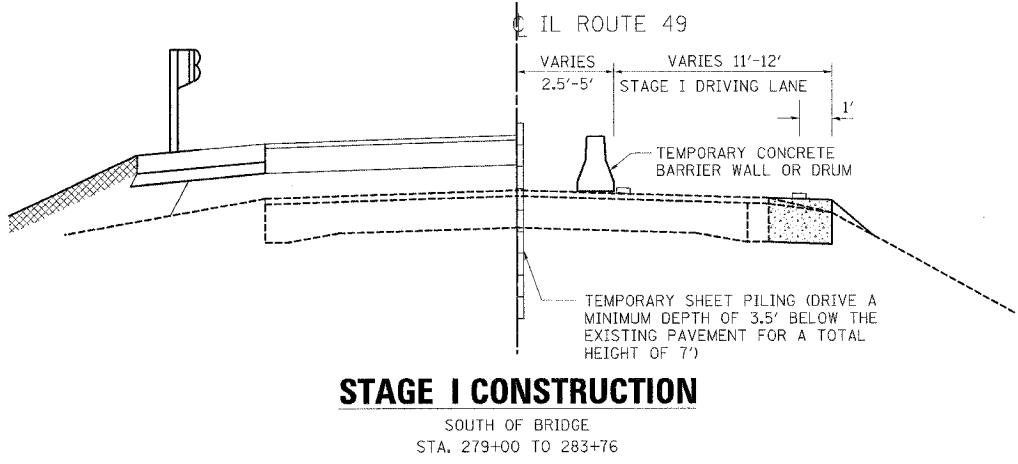
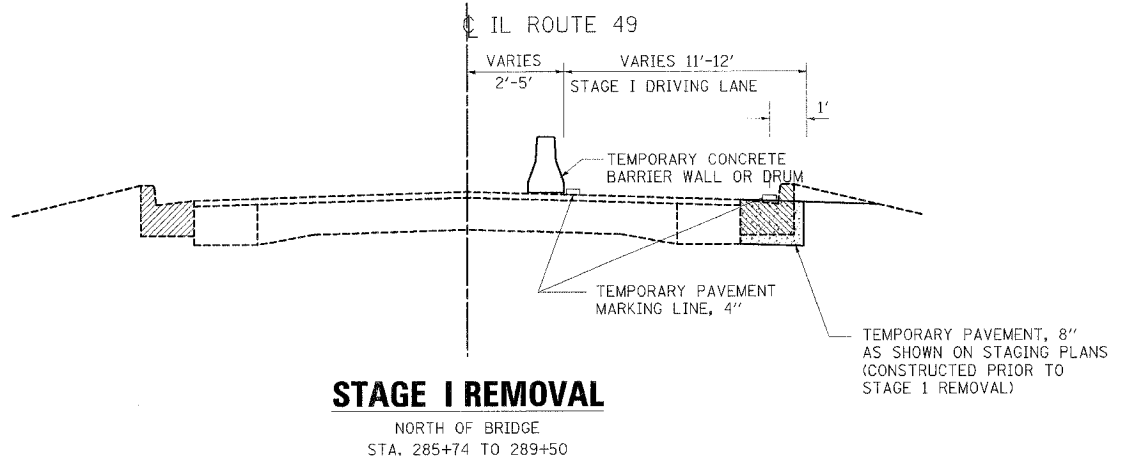
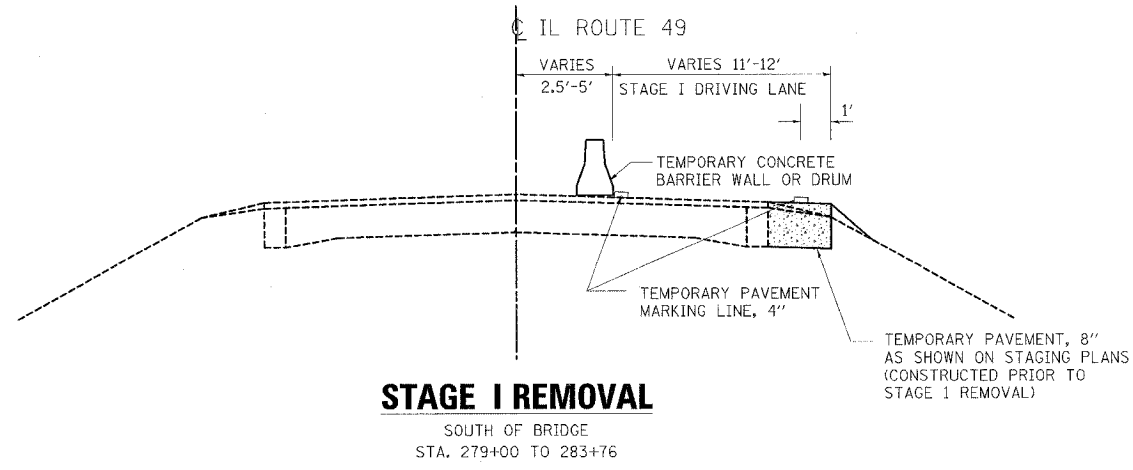


CP #290 P.O.T. (MAG NAIL)
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EL. 662.00
STA. 290+00.00



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 PLOTTED BY: JTR/cey
 ANI2022070004/resim/20207_Align & Ties.dwg
 MODEL NAME: Default

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) ALIGNMENT, TIES & BENCHMARKS SCALE: 1"=50' DATE: AUGUST 7, 2007 DRAWN BY: JMC CHECKED BY: DWB
	NAME	DATE	



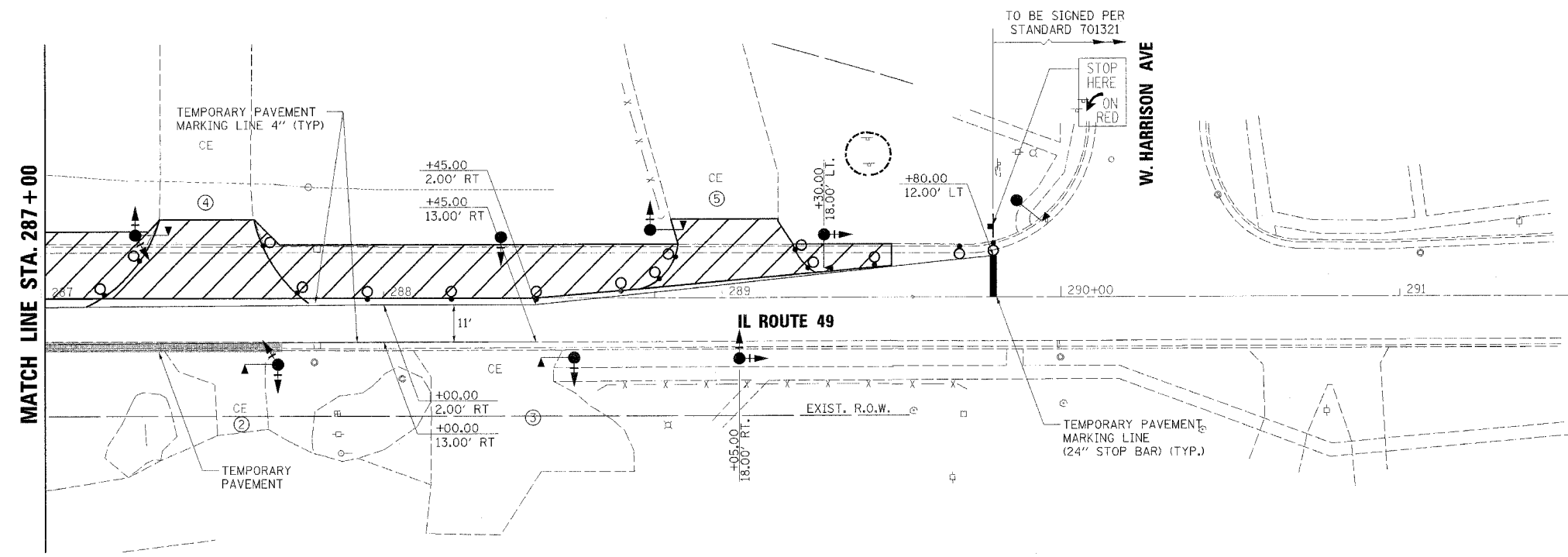
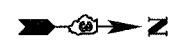
STAGE I CONSTRUCTION

1. CONSTRUCT TEMPORARY PAVEMENT
2. INSTALL TRAFFIC CONTROL PER STANDARD 701321 AND AS DETAILED IN THESE PLANS
3. INSTALL TEMPORARY SHEET PILING
4. REMOVE SOUTHBOUND PORTION OF EXISTING STRUCTURE
5. CONSTRUCT SOUTHBOUND PORTION OF STRUCTURE
6. CONSTRUCT SOUTHBOUND PAVEMENT, SHOULDER, AND CURB & GUTTER
7. INSTALL GUARDRAIL

PLOT SCALE: 1/2" = 10'
 PLOT DATE: 8/13/07
 PLOT TIME: 8:38:24 AM
 PLOTTED BY: Hrcoccy
 AVIEX2007\hrcoccy\station\20070813\StagingNotes.dwg
 MODEL NAME: DB-FOUT

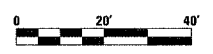
 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	REVISIONS <table border="1" style="width: 100%;"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	NAME	DATE																			ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) TRAFFIC CONTROL CONSTRUCTION STAGING NOTES AND DETAILS STAGE I SCALE: NOT TO SCALE DATE: AUGUST 7, 2007
	NAME	DATE																				
DRAWN BY: JMC CHECKED BY: DWB																						

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66612				



LEGEND

	WORK AREA
	TEMPORARY PAVEMENT
	SIGN
	TRAFFIC SIGNAL WITH BACKPLATE
	DRUM WITH STEADY BURNING LIGHT
	TYPE C BIDIRECTIONAL REFLECTOR
	DOUBLE VERTICAL PANEL
	TEMPORARY CONCRETE BARRIER
	IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
	STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
	TYPE III BARRICADE
	TEMPORARY SHEET PILING
	MICROWAVE DETECTOR
	ENTRANCE DESIGNATION

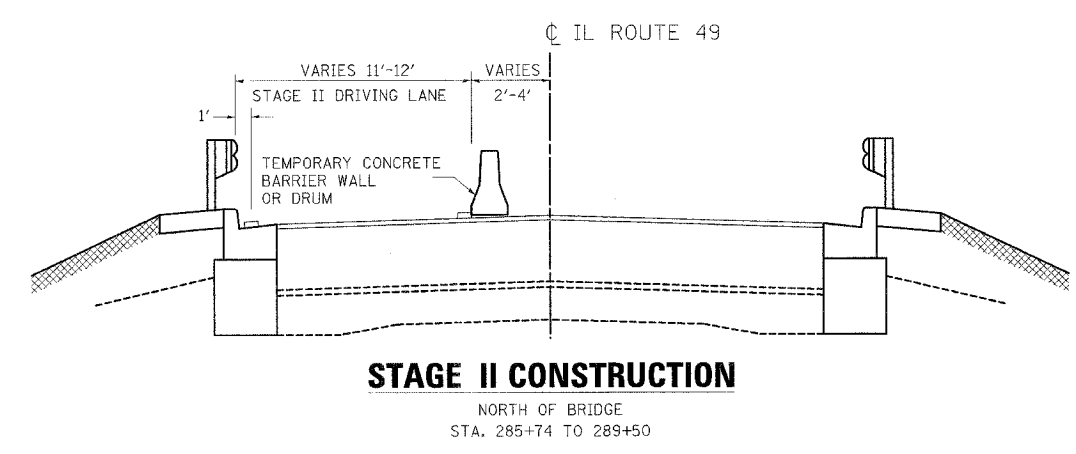
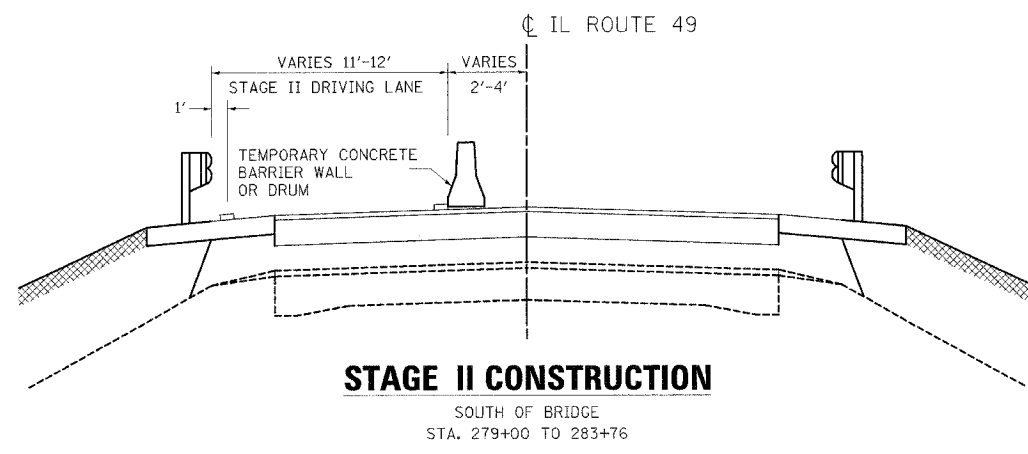
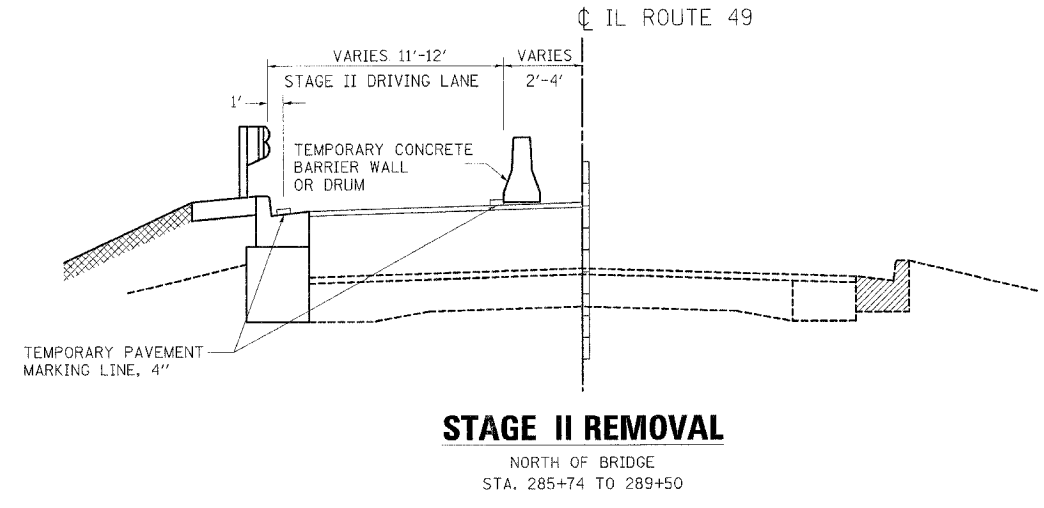
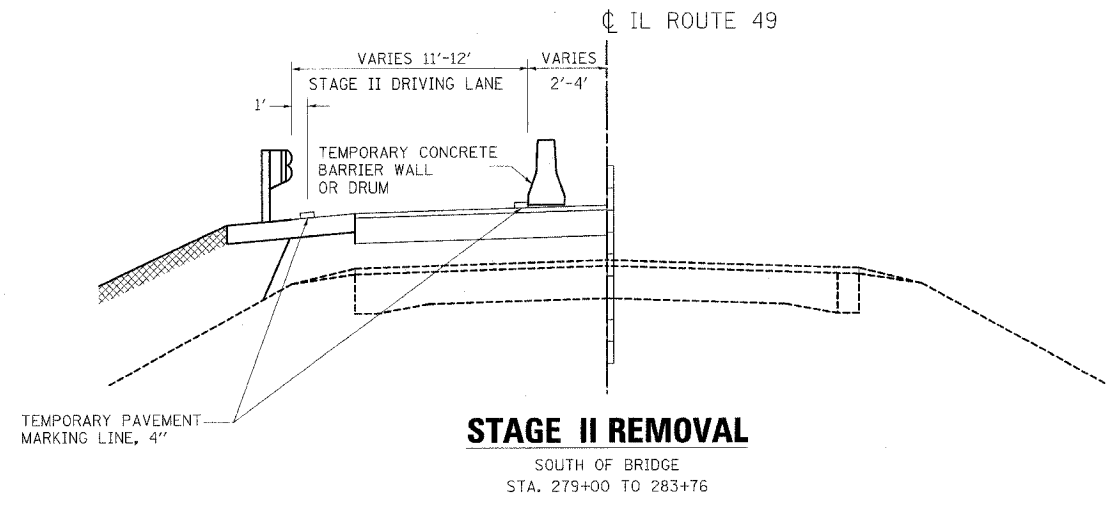


SEQUENCE OF OPERATIONS															
PHASE	A	B	C	D	E										
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NORTHBOUND IL ROUTE 49 SIGNALS	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R
SOUTHBOUND IL ROUTE 49 SIGNALS	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R
WESTBOUND CLAYTONVILLE/ GOODWINE SIGNALS	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
ENTRANCES ① & ③	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R
ENTRANCES ④ & ⑤	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y

PLOT SCALE: 1/20
 PLOT TIME: 8:38:13 AM
 PLOTTED BY: JH BOEY
 A:\M20207\road\design\20207_Stage1.dgn
 MODEL NAME: De Tour

 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) TRAFFIC CONTROL CONSTRUCTION STAGING STAGE I STA. 287+00 TO STA. 291+50 SCALE: 1" = 20' DATE: AUGUST 7, 2007
	NAME	DATE	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	11
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 66612				



STAGE II CONSTRUCTION

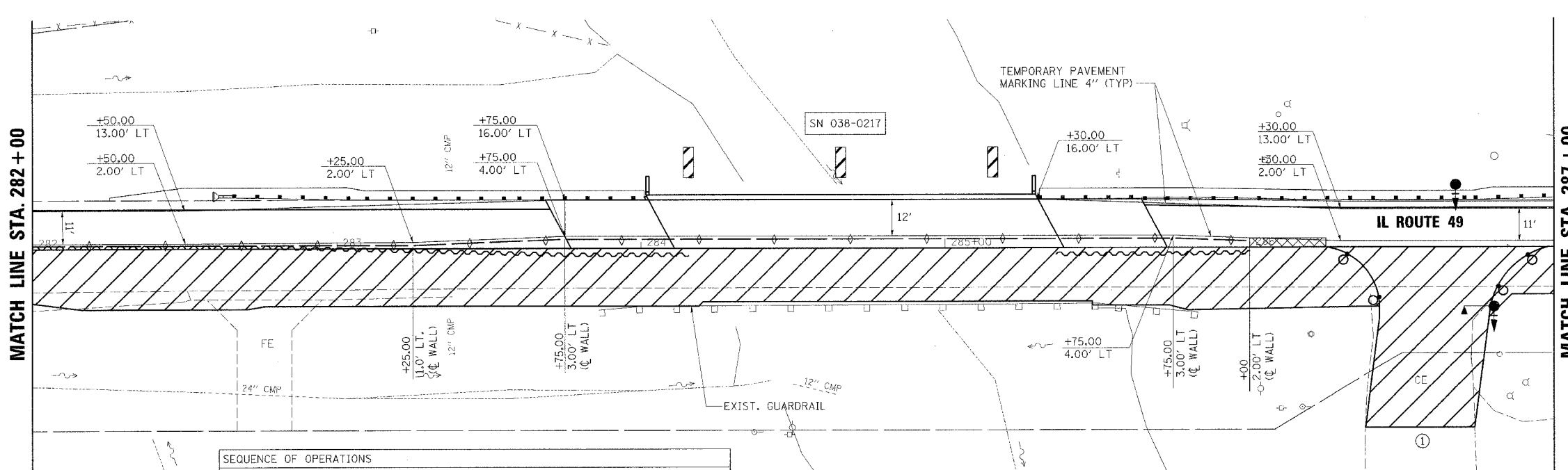
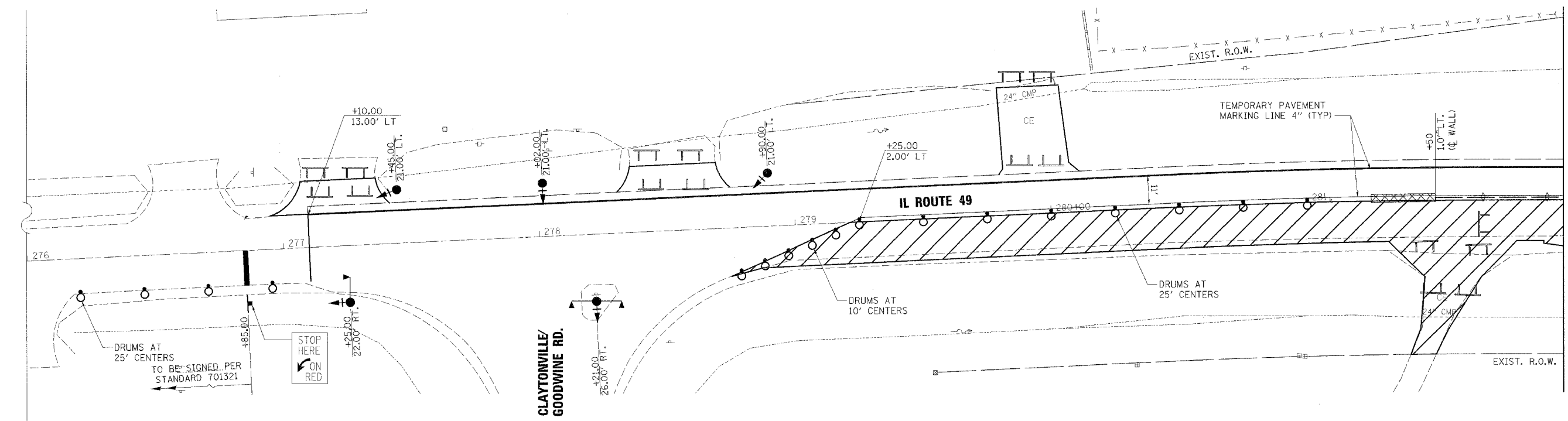
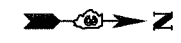
1. RELOCATE TRAFFIC CONTROL PER STANDARD 701321 AND AS DETAILED IN THESE PLANS
2. REMOVE TEMPORARY PAVEMENT
3. REMOVE NORTHBOUND PORTION OF EXISTING STRUCTURE
4. CONSTRUCT NORTHBOUND PORTION OF STRUCTURE
5. CONSTRUCT NORTHBOUND PAVEMENT, SHOULDER, AND CURB & GUTTER
6. INSTALL GUARDRAIL

STAGE III CONSTRUCTION

1. TRAFFIC CONTROL PER STANDARD 701301
2. HOT-MIX ASPHALT SURFACE COURSE
3. PLACE PERMANENT PAVEMENT MARKINGS ON NORTHBOUND AND SOUTHBOUND LANES
4. LANDSCAPE RESTORATION

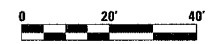
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 AVI20070807.dwg
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 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	REVISIONS <table border="1" style="width: 100%;"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	NAME	DATE																			ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49) TRAFFIC CONTROL CONSTRUCTION STAGING NOTES AND DETAILS STAGE II SCALE: NOT TO SCALE DATE: AUGUST 7, 2007	DRAWN BY: JMC CHECKED BY: DWB
	NAME	DATE																					



- LEGEND
- WORK AREA
 - TEMPORARY PAVEMENT
 - SIGN
 - TRAFFIC SIGNAL WITH BACKPLATE
 - DRUM WITH STEADY BURNING LIGHT
 - TYPE C BIDIRECTIONAL REFLECTOR
 - DOUBLE VERTICAL PANEL
 - TEMPORARY CONCRETE BARRIER
 - IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
 - STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
 - TYPE III BARRICADE
 - TEMPORARY SHEET PILING
 - MICROWAVE DETECTOR
 - ENTRANCE DESIGNATION

SEQUENCE OF OPERATIONS															
PHASE	A	B	C	D	E										
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NORTHBOUND IL ROUTE 49 SIGNALS	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R
SOUTHBOUND IL ROUTE 49 SIGNALS	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R
WESTBOUND CLAYTONVILLE/ GOODWINE SIGNALS	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R
ENTRANCES ① ② & ③	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R
ENTRANCES ④ & ⑤	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y



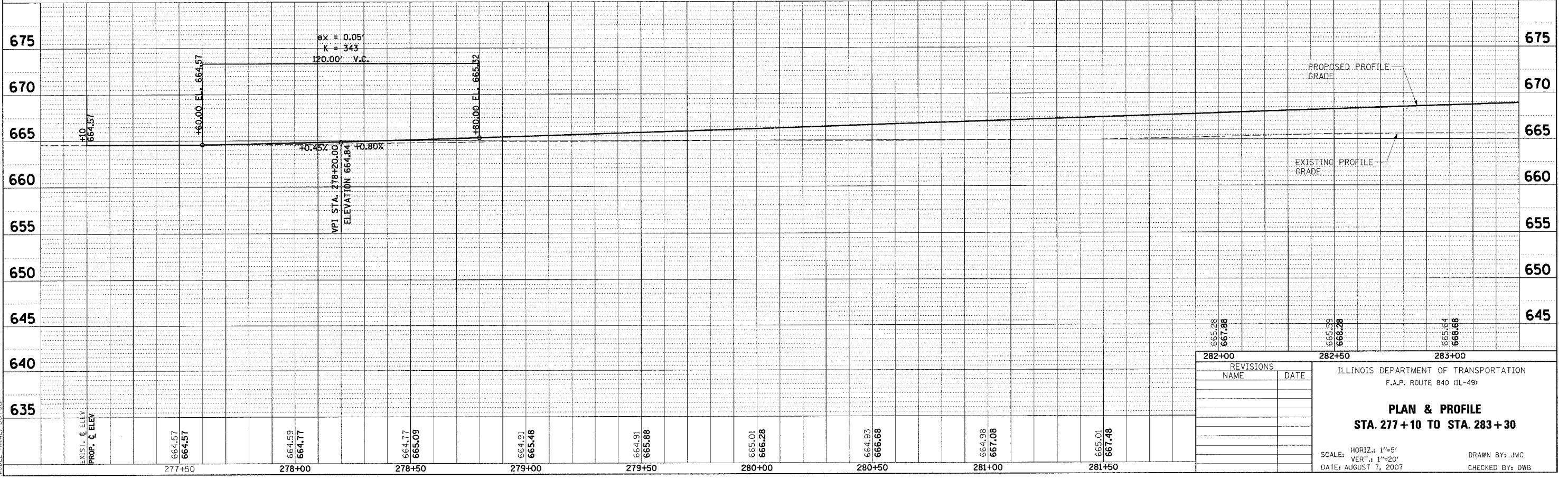
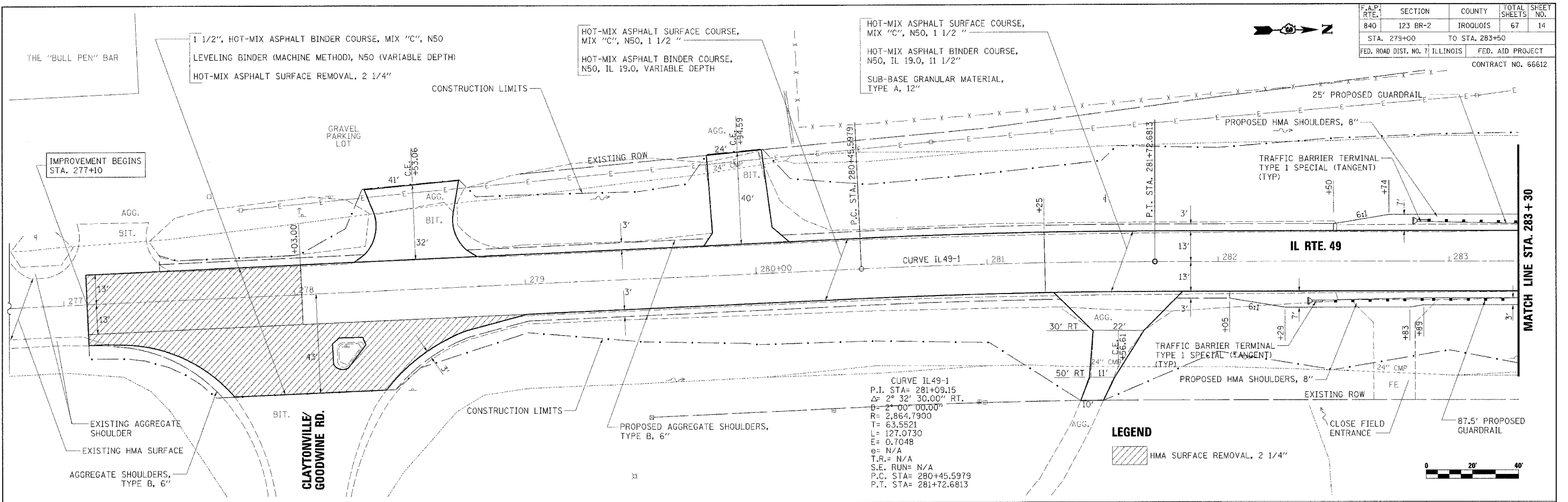
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 A:\2007\road\design\2007_Stage2.dgn
 MODEL NAME: D0-F04T

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 Excellence through Ownership
 200 West Front Street
 Wheaton, IL 60187

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.P. ROUTE 840 (IL-49)
TRAFFIC CONTROL
CONSTRUCTION STAGING
STAGE II
STA. 276 + 00 TO STA. 287 + 00
 SCALE: 1" = 20'
 DATE: AUGUST 7, 2007
 DRAWN BY: JMC
 CHECKED BY: DWB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	14
STA. 279+00		TO STA. 283+50		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 66612				



PLAN	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	FILED		
	NO. OF WAYS CHECKED		
	DATE FILED		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	FILED		
	NO. OF WAYS CHECKED		
	DATE FILED		
	FILE NAME		

PLOT SCALE: 1"=20'

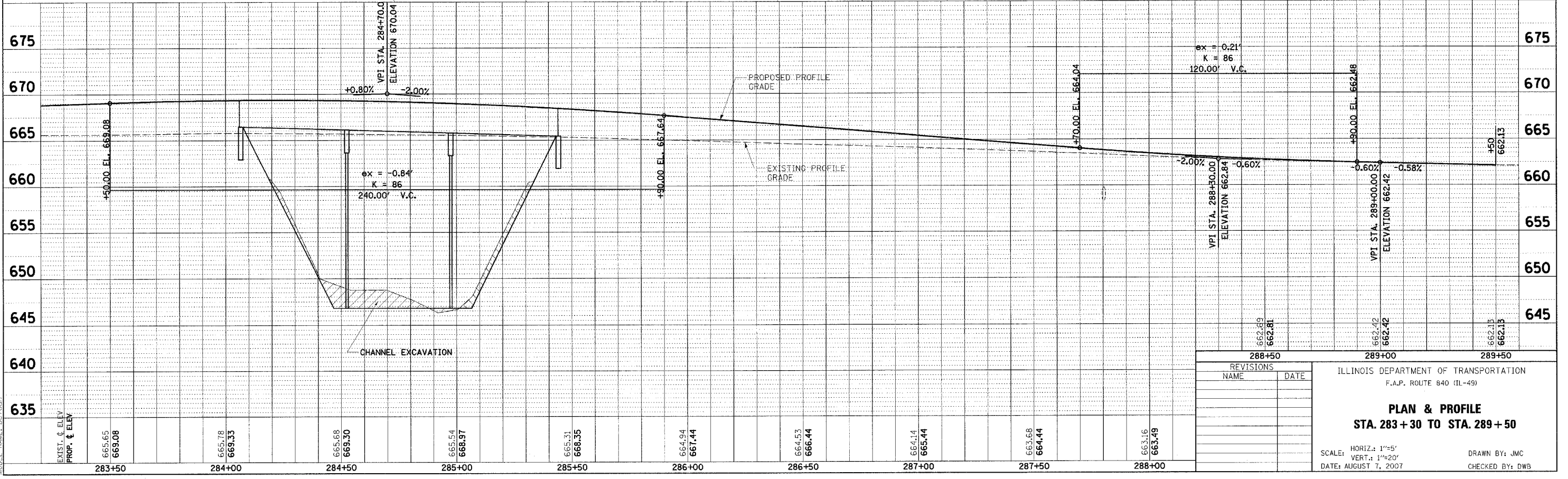
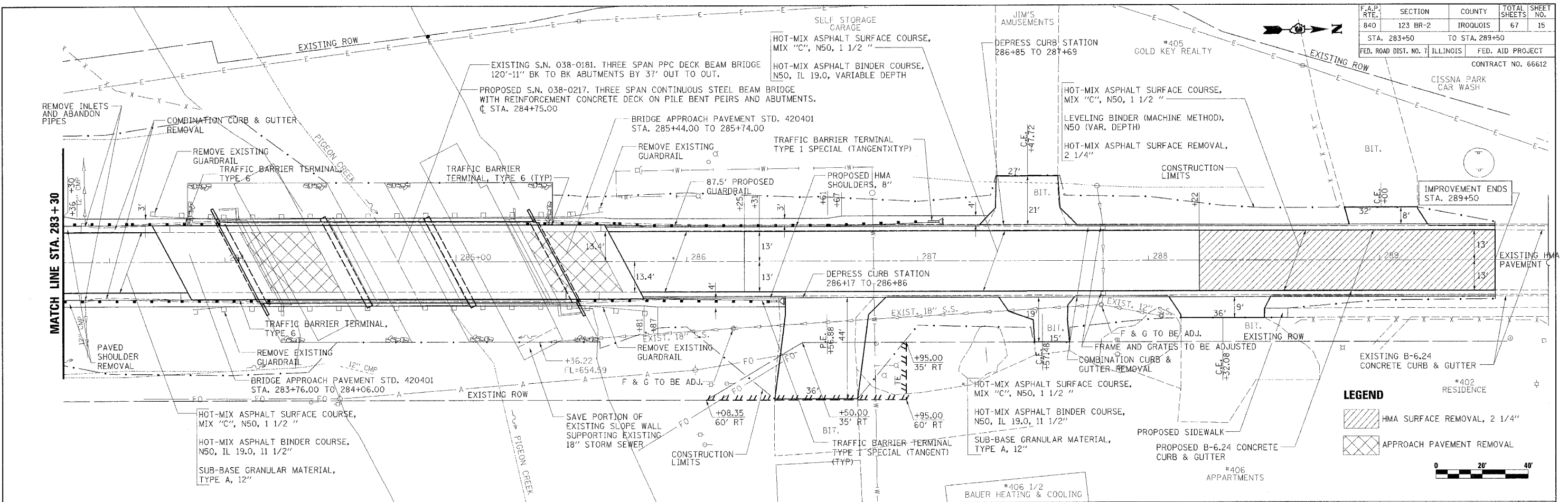
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PLOT TIME: 3:43:48 PM

PROJECT: I-55/80/90/100/110/120/130/140/150/160/170/180/190/200/210/220/230/240/250/260/270/280/290/300/310/320/330/340/350/360/370/380/390/400/410/420/430/440/450/460/470/480/490/500/510/520/530/540/550/560/570/580/590/600/610/620/630/640/650/660/670/680/690/700/710/720/730/740/750/760/770/780/790/800/810/820/830/840/850/860/870/880/890/900/910/920/930/940/950/960/970/980/990/1000

MODEL NAME: D:\p01

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	15
STA. 283+50		TO STA. 289+50		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		CONTRACT NO. 66612



PLAN	SURVEYED	DATE
	ALIGNED	
	CHECKED	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	ALIGNED	
	CHECKED	
	BY	
	NO.	

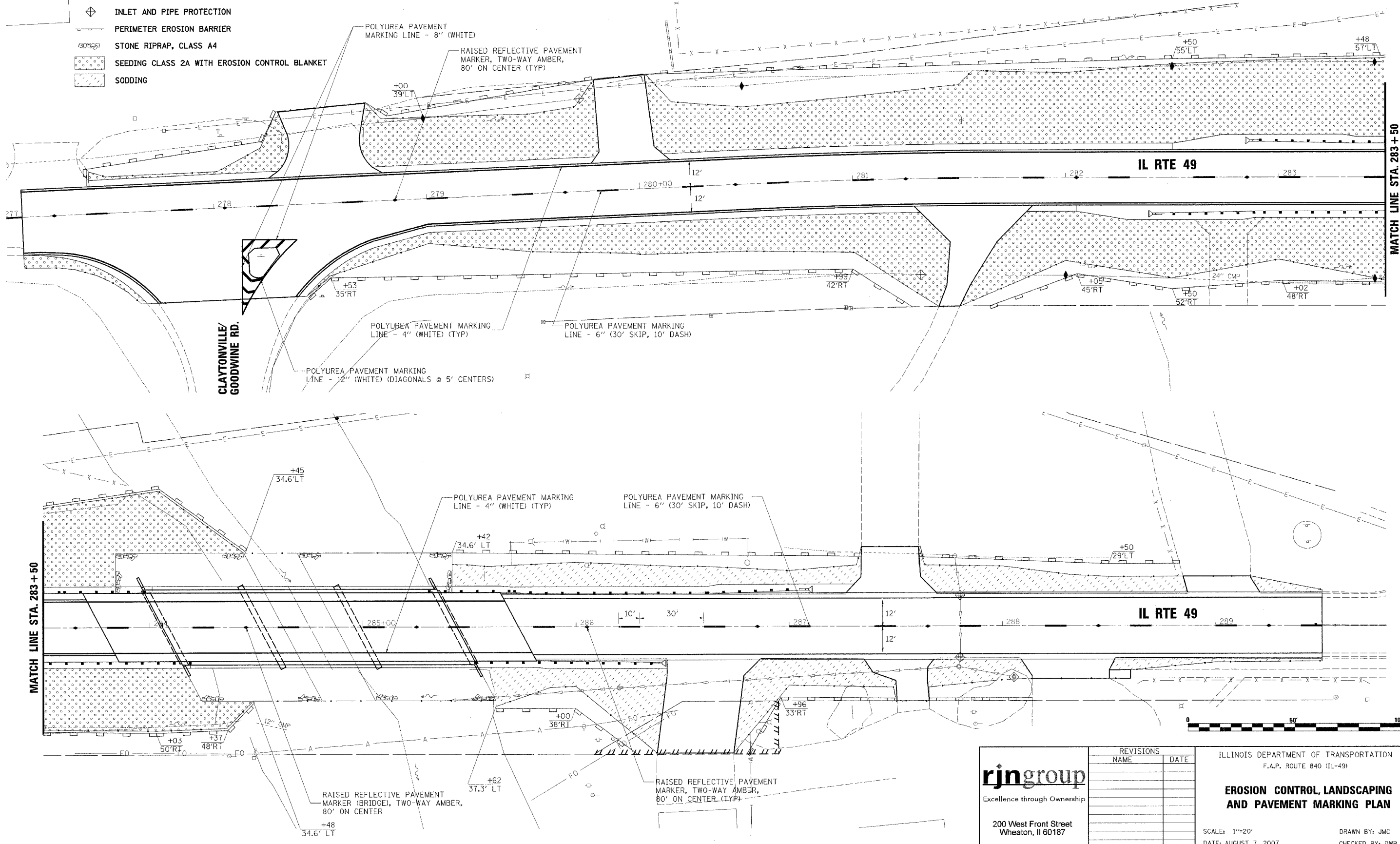
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.P. ROUTE 840 (IL-49)
PLAN & PROFILE
STA. 283+30 TO STA. 289+50
 SCALE: HORIZ.: 1"=5'
 VERT.: 1"=20'
 DATE: AUGUST 7, 2007
 DRAWN BY: JMC
 CHECKED BY: DWB

LEGEND

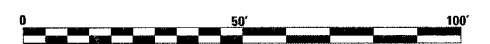
- ◆ TEMPORARY DITCH CHECK
- ◆ INLET AND PIPE PROTECTION
- PERIMETER EROSION BARRIER
- ▨ STONE RIPRAP, CLASS A4
- ▨ SEEDING CLASS 2A WITH EROSION CONTROL BLANKET
- ▨ SODDING



MATCH LINE STA. 283 + 50

MATCH LINE STA. 283 + 50

CLAYTONVILLE/
GOODWINE RD.



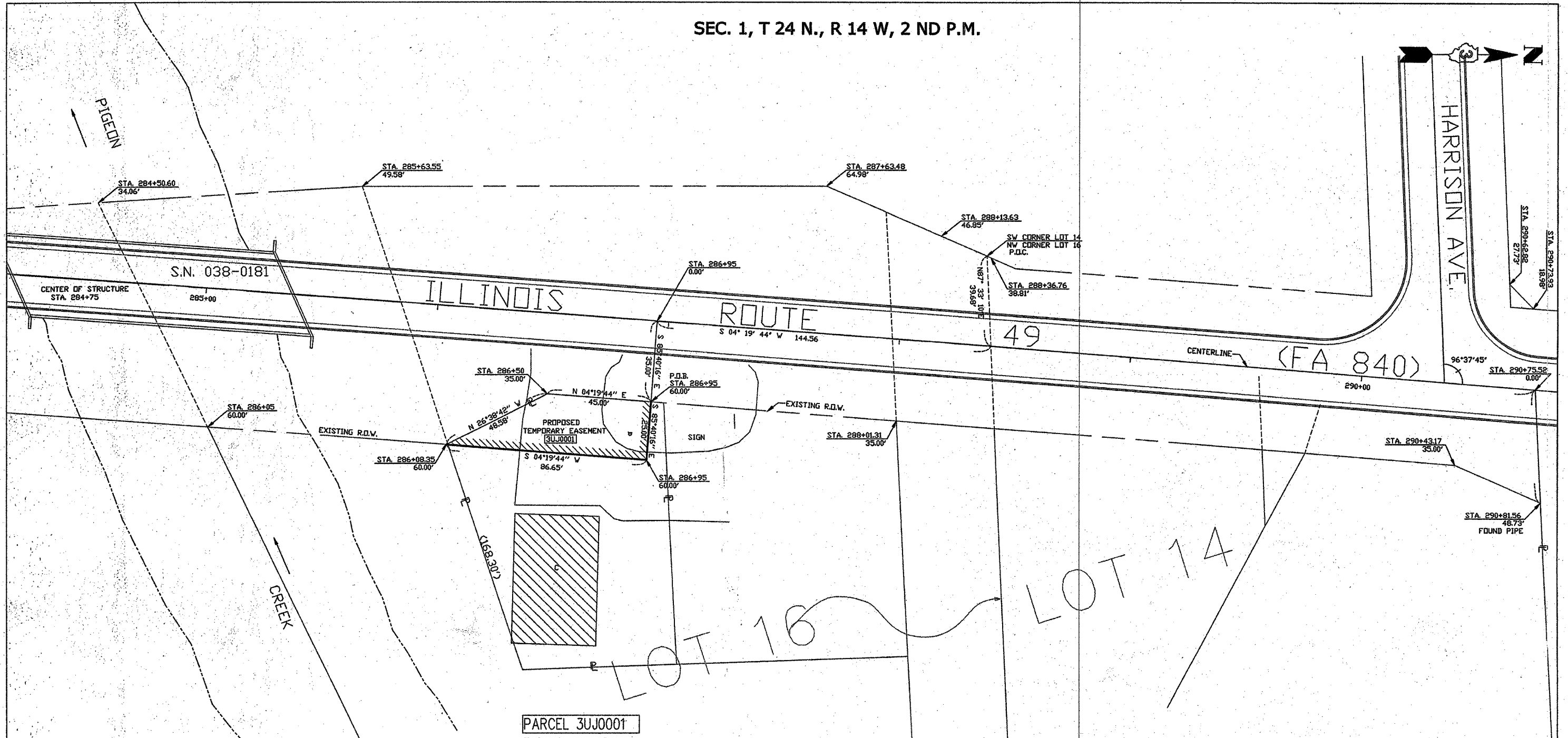
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 Wheaton, IL 60187

REVISIONS	
NAME	DATE

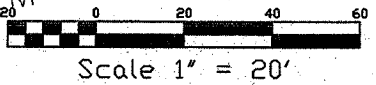
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.P. ROUTE 840 (IL-49)
**EROSION CONTROL, LANDSCAPING
 AND PAVEMENT MARKING PLAN**
 SCALE: 1"=20'
 DATE: AUGUST 7, 2007
 DRAWN BY: JMC
 CHECKED BY: DWB

SEC. 1, T 24 N., R 14 W, 2 ND P.M.



PARCEL 3UJ0001
 THOMAS A. MAUDLIN, et ux
 TOTAL HOLDING = 9,320 SQ FT ±
 TEMPORARY EASEMENT REQUIRED = 1,846 SQ FT ±
 PURPOSE OF EASEMENT: GRADING & SHAPING

NOTE: ALL BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (N.A.D. 83)



I ROBERT K. POUNDSTONE, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF THE PROPOSED F.A.P. 840 (IL 49) WAS MADE UNDER MY DIRECTION, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATE: 11-02-06

Robert K. Poundstone
 ILLINOIS PROFESSIONAL LAND SURVEYOR
 NO. 35-2105
 11-30-08
 EXPIRATION DATE

SURVEY BOOK NO. _____

SUBDIVISION OF THE SOUTH HALF OF SECTION 1-24-14, 2nd PM
 PLAT BOOK "D" PG. 11

SEC. 1, T 24 N., R 14 W, 2 ND P.M.

RIGHT OF WAY PLANS	
ROUTE	F.A.P. 840 (IL 49)
SECTION	123 BR-2
PROJECT	
COUNTY	IROQUOIS
JOB NUMBER	R-93-002-07
STATION	284+00 TO 291+00
SHEET	1 OF 1 SCALE 20

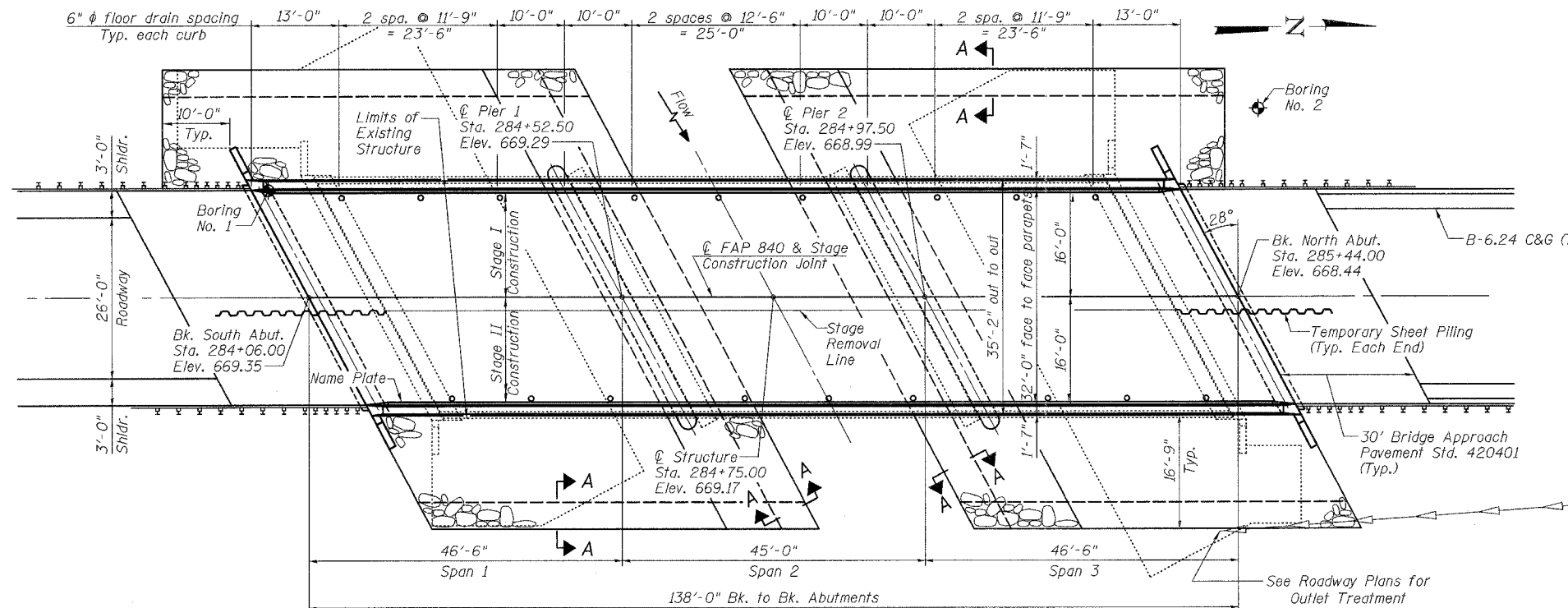
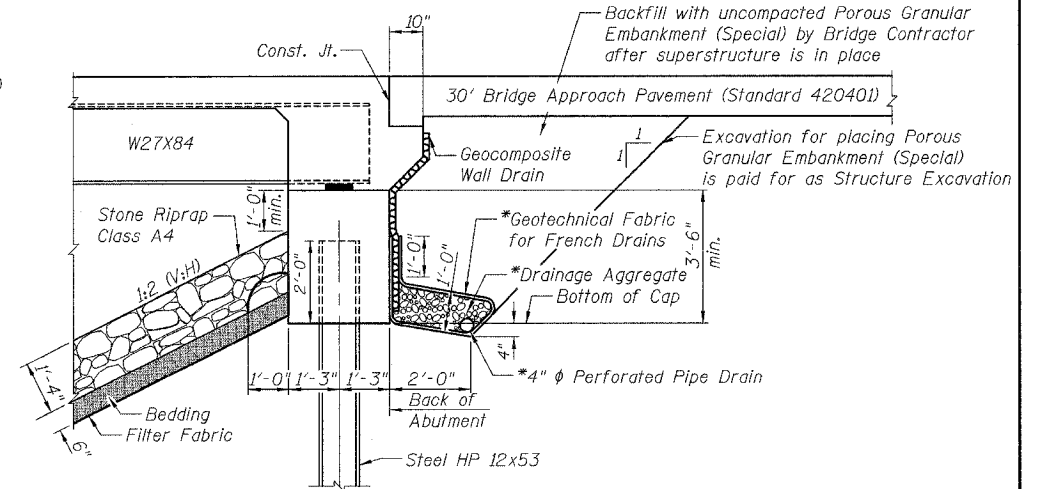
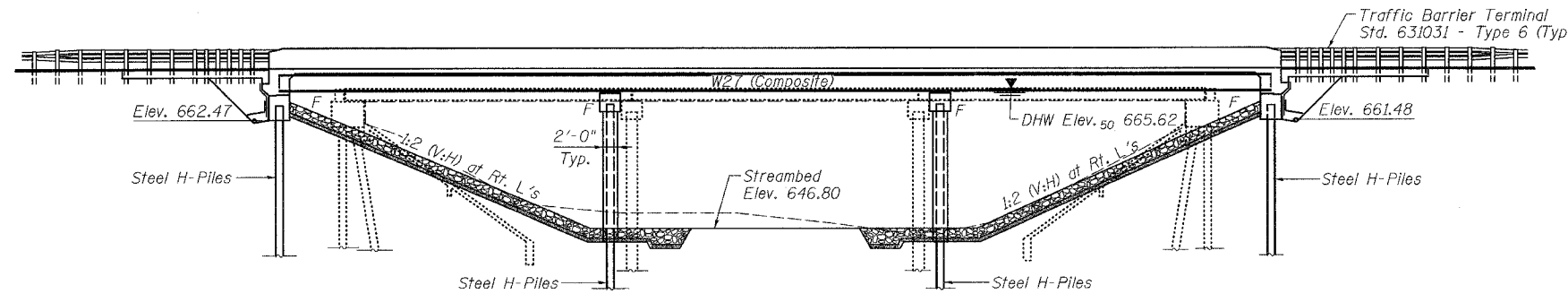
Bench Mark: Brass monument on top of N.W. wingwall Sta. 285+25.78, 18.5' Lt. Elev. 666.03

Existing Structure: Structure No. 038-0181, built in 1982 and rehabilitated in 1996, is a three span PPC Deck Beam bridge, 120'-11" bk. to bk. abutments by 36'-0" out to out. To be replaced with three span continuous steel beam bridge with reinforced concrete deck on pile bent piers and integral abutments. Existing structure to be removed in stages while maintaining one lane of traffic.

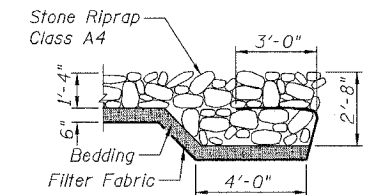
No Salvage.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 840	123BR-2	IROQUOIS	67	18
SHEET NO. 1				
20 SHEETS				

Contract #66612



NOTE: See Roadway Plans for Curb & Gutter, Traffic Barrier Terminals, and Approach Pavement details.



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	South Abut.	Pier 1	Pier 2	North Abut.
	662.4	628.8	628.8	661.4

WATERWAY INFORMATION

Drainage Area = 58.60 sq. ml.		Exist. Low Grade Elev. 661.66 @ Sta. 292+00		Prop. Low Grade Elev. 661.66 @ Sta. 292+00							
Flood	Freq. Yr.	Discharge (cfs) Exist.	Discharge (cfs) Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E. Exist.	Nat. H.W.E. Prop.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	10	6032	6032	1446.2	1567.8	664.44	664.44	0.07	0.02	664.51	664.46
Base	50	8218	8218	1446.2	1700.6	665.62	665.62	0.14	0.09	665.76	665.71
Overtopping	100	8949	8949	1446.2	1700.6	666.08	666.08	0.14	0.09	666.22	666.17
Max. Calc.	2	3959	3959	1324.5	1369.7	662.78	662.78	0.03	0.02	662.81	662.80
	100	8949	8949	1446.2	1700.6	666.08	666.08	0.14	0.09	666.22	666.17

DESIGN STRESSES

FIELD UNITS
 $f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (AASHTO M270 Gr. 50W)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.033 g
 Site Coefficient (S) = 1.2

LOADING HS20-44

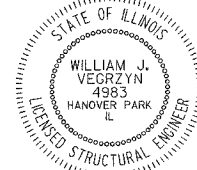
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TJD)
 ENGINEER OF BRIDGES AND STRUCTURES

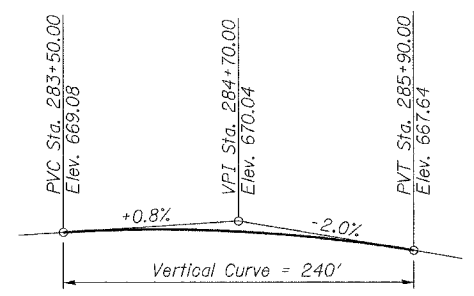
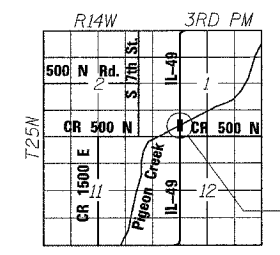


William J. Vegrzyn 8/7/2007
 Expires 11-30-08

NAME PLATE

STATION 284+75.00
 BUILT 2008 BY
 STATE OF ILLINOIS
 F.A.P. RT. 840 SEC. 123 BR-2
 LOADING HS20
 STRUCTURE NO. 038-0217

See Std. 515001



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 200 West Front Street
 Wheaton, IL 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION
 GENERAL PLAN AND ELEVATION
 IL RT. 49 OVER PIGEON CREEK
 FAP RTE 840 - SECTION 123 BR-2
 IROQUOIS COUNTY
 STATION 284+75.00
 STRUCTURE NO. 038-0217
 DATE: 8/7/2007
 DRAWN BY JMT
 CHECKED BY WJV

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
FAP 840	123BR-2	IROQUOIS	67	19	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #66612

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		146.1	146.1
Concrete Superstructure	Cu. Yd.	176.5		176.5
Concrete Structures	Cu. Yd.		147.1	147.1
Concrete Encasement	Cu. Yd.		11.2	11.2
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	2376		2376
Reinforcement Bars, Epoxy Coated	Pound	36,700	12,210	48,910
Furnishing Steel Piles HP 12 x 53	Foot		1579	1579
Driving Piles	Foot		1579	1579
Test Pile Steel HP 12 x 53	Each		4	4
Anchor Bolts, 1"	Each		48	48
Name Plates	Each	1		1
Bridge Deck Grooving	Sq. Yd.	460		460
Protective Coat	Sq. Yd.	606		606
Bar Splicers	Each	434	112	546
Stone Riprap, Class A4	Sq. Yd.		1034	1034
Filter Fabric	Sq. Yd.		1034	1034
Porous Granular Embankment (Special)	Cu. Yd.		241	241
Geocomposite Wall Drain	Sq. Yd.		67	67
Pipe Underdrains for Structures, 4"	Foot		146	146
Underwater Structure Excavation Protection, Location 1	Each		1	1
Underwater Structure Excavation Protection, Location 2	Each		1	1
Temporary Sheet Piling	Sq. Ft.		560	560
Asbestos Bearing Pad Removal	Each		36	36
Floor Drains	Each		18	18

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{9}{16}$ in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 77,060 lb.

All structural steel shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

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

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".

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

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

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.

If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Structures.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Notes and Total Bill of Material
3. Construction Staging and Temporary Sheet Pile Design
4. Top of Slab Elevations - I
5. Top of Slab Elevations - II
6. Top of South Approach Slab Elevations
7. Top of North Approach Slab Elevations
8. Superstructure
9. Superstructure Details
10. Diaphragm Details
11. Framing Plan
12. Structural Steel Details
13. Abutments
14. Piers
15. Steel H-Pile Details
16. Bar Splicer Assembly Details
17. Temporary Concrete Barrier for Stage Construction
18. Cantilever Forming Brackets
19. Boring Logs - I
20. Boring Logs - II

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200 West Front Street
Wheaton, IL 60187

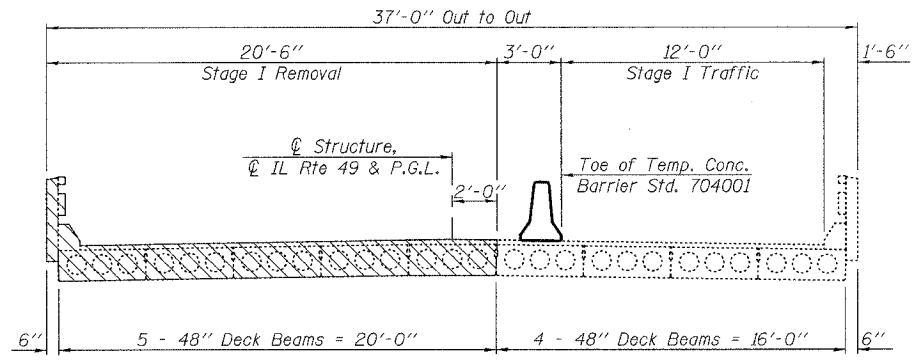
ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND TOTAL BILL OF MATERIAL
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

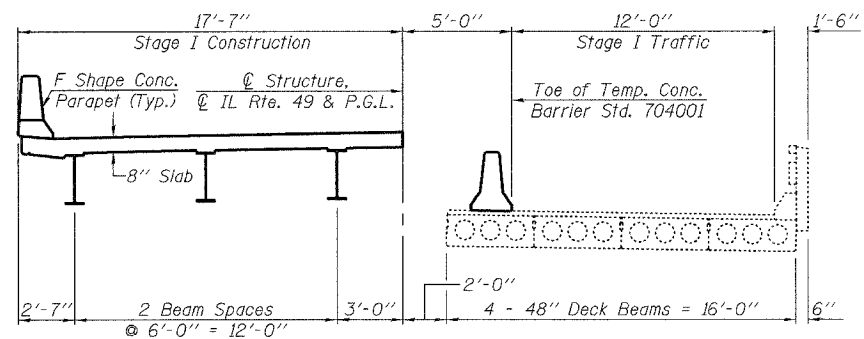
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CHECKED BY BLB

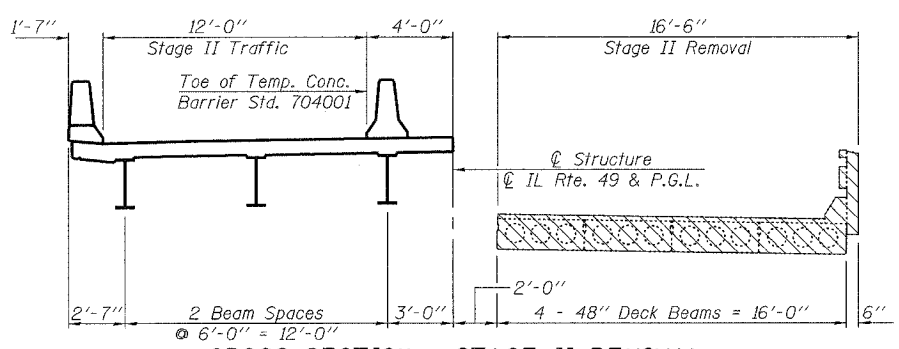
Contract #66612



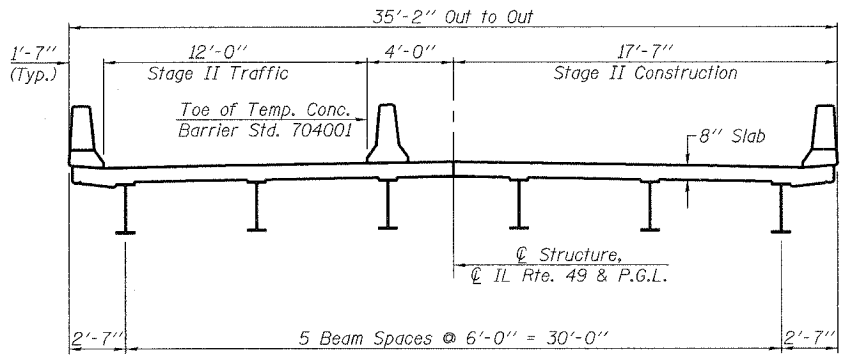
CROSS SECTION - STAGE I REMOVAL
(Looking North)



CROSS SECTION - STAGE I CONSTRUCTION
(Looking North)



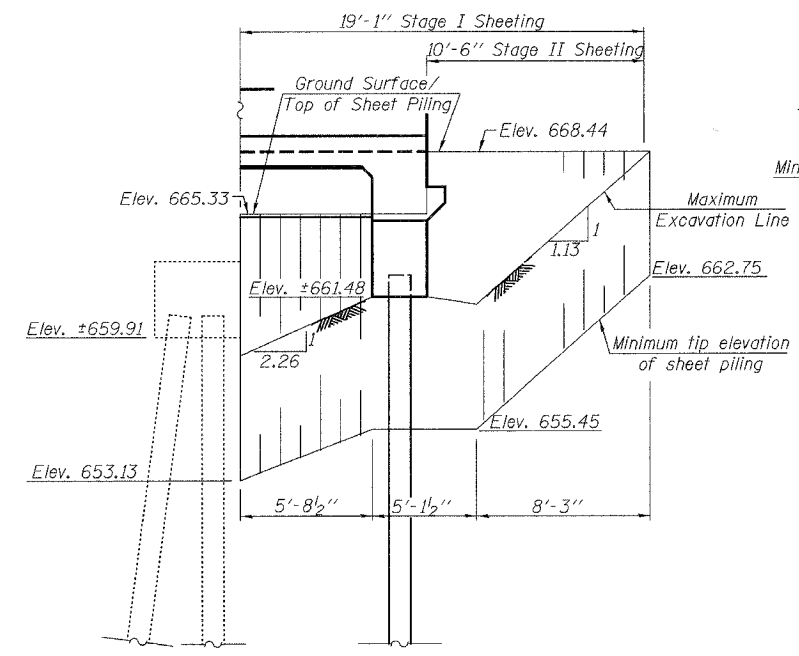
CROSS SECTION - STAGE II REMOVAL
(Looking North)



CROSS SECTION - STAGE II CONSTRUCTION
(Looking North)

SEQUENCE OF STAGE REMOVAL AND CONSTRUCTION OF TEMPORARY SHEET PILING:

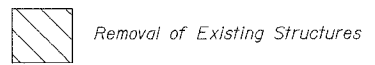
1. Install Temporary Sheet Piling for Stage I Construction.
2. Remove Stage I Superstructure.
3. Sawcut abutments and piers at Stage Removal Line.
4. Remove Stage I portions of abutments and piers.
5. Proceed with Stage I Construction.
6. Adjust Temporary Sheet Piling for Stage II Construction.
7. Remove Stage II Superstructure.
8. Remove Stage II portions of abutments and piers.
9. Proceed with Stage II Construction.
10. Remove Temporary Sheet Piling when Stage II Construction is complete.



TEMPORARY SHEET PILING - NORTH ABUTMENT

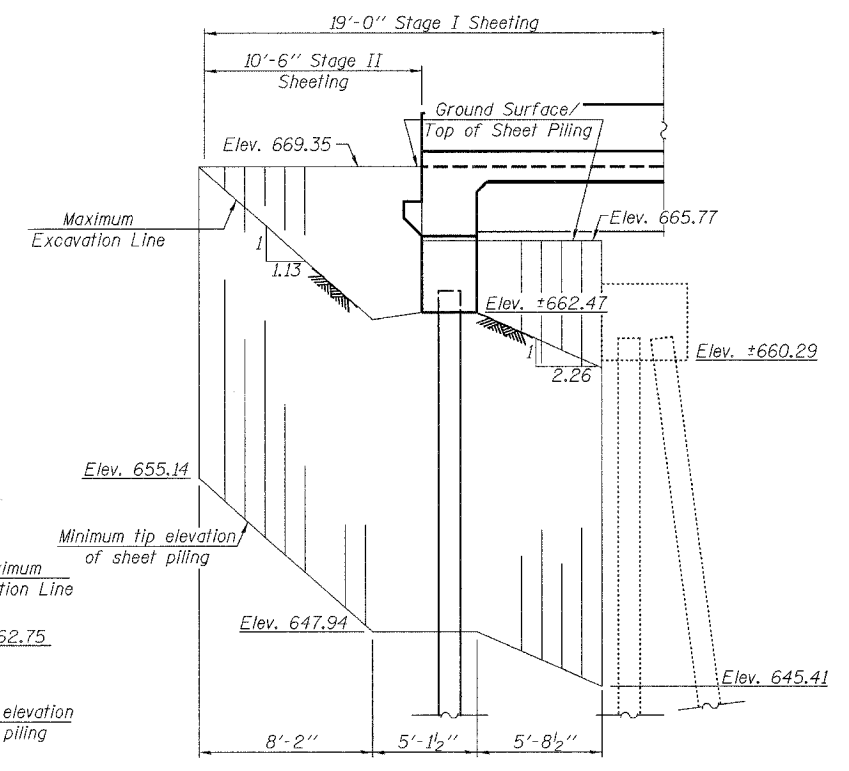
Slopes and Distances shown parallel to roadway centerline. Required Section Modulus for Temporary Sheet Piling must be greater than or equal to 3.0 in³/ft.

LEGEND:



NOTES:

Removal of existing Bituminous Wearing Surface, Bridge Rail, and Slope Wall is included with Removal of Existing Structures.
See Sheet 17 of 20 for Temporary Concrete Barrier Details.
Pay Item for Temporary Concrete Barrier is included with Roadway Plans.
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.



TEMPORARY SHEET PILING - SOUTH ABUTMENT

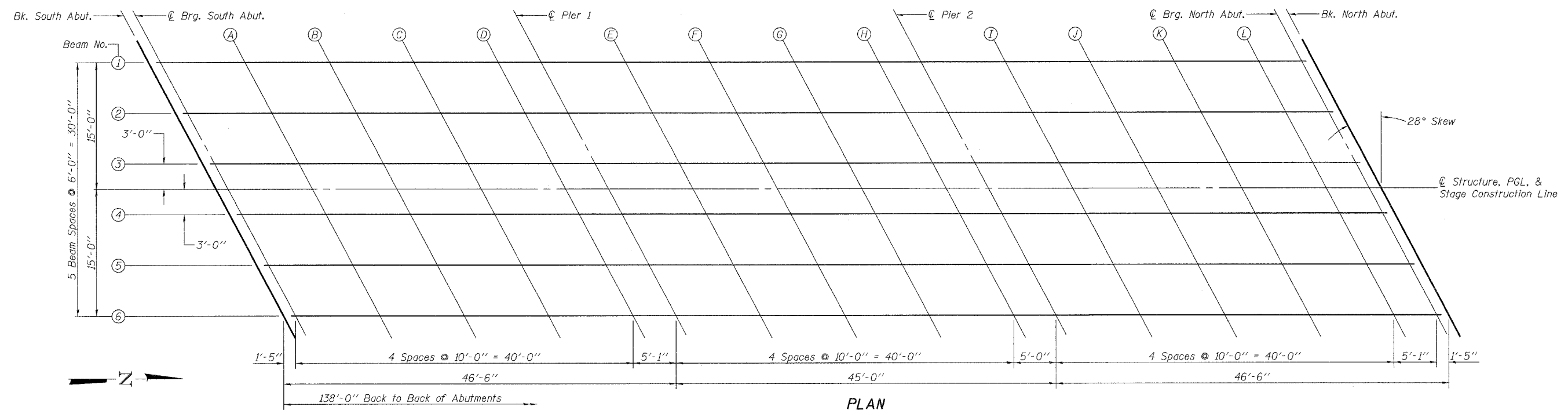
Slopes and Distances shown parallel to roadway centerline. Required Section Modulus for Temporary Sheet Piling must be greater than or equal to 10.0 in³/ft.

BILL OF MATERIAL

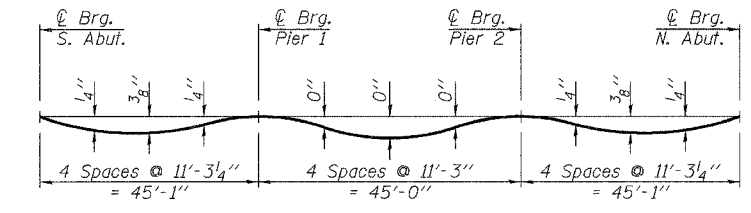
Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	560
Removal of Existing Structures	Each	1

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ILLINOIS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION STAGING AND
TEMPORARY SHEET PILE DESIGN
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217
DATE: 8/7/2007
DRAWN BY: JMT
CHECKED BY: BLB



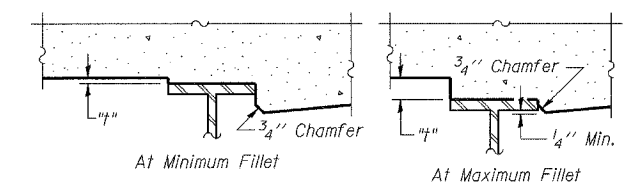
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown to the left and on Sheet 5 of 20. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown to the left and on Sheet 5 of 20, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	283+98.02	-15.00	669.08	669.08
☉ Brg. South Abutment	283+99.44	-15.00	669.08	669.08
A	284+09.44	-15.00	669.10	669.12
B	284+19.44	-15.00	669.10	669.14
C	284+29.44	-15.00	669.10	669.12
D	284+39.44	-15.00	669.08	669.09
☉ Pier 1	284+44.52	-15.00	669.06	669.06
E	284+54.52	-15.00	669.03	669.03
F	284+64.52	-15.00	668.98	668.98
G	284+74.52	-15.00	668.92	668.92
H	284+84.52	-15.00	668.85	668.85
☉ Pier 2	284+89.52	-15.00	668.81	668.81
I	284+99.52	-15.00	668.72	668.74
J	285+09.52	-15.00	668.62	668.65
K	285+19.52	-15.00	668.51	668.54
L	285+29.52	-15.00	668.39	668.40
☉ Brg. North Abutment	285+34.60	-15.00	668.32	668.32
Bk. North Abutment	285+36.02	-15.00	668.30	668.30

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+01.21	-9.00	669.20	669.20
☉ Brg. South Abutment	284+02.63	-9.00	669.20	669.20
A	284+12.63	-9.00	669.21	669.23
B	284+22.63	-9.00	669.21	669.24
C	284+32.63	-9.00	669.20	669.23
D	284+42.63	-9.00	669.18	669.19
☉ Pier 1	284+47.71	-9.00	669.16	669.16
E	284+57.71	-9.00	669.12	669.12
F	284+67.71	-9.00	669.07	669.08
G	284+77.71	-9.00	669.01	669.01
H	284+87.71	-9.00	668.93	668.93
☉ Pier 2	284+92.71	-9.00	668.89	668.89
I	285+02.71	-9.00	668.80	668.82
J	285+12.71	-9.00	668.70	668.73
K	285+22.71	-9.00	668.58	668.61
L	285+32.71	-9.00	668.45	668.47
☉ Brg. North Abutment	285+37.79	-9.00	668.38	668.38
Bk. North Abutment	285+39.21	-9.00	668.36	668.36

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>TOP OF SLAB ELEVATIONS - I IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217</p>
	<p>DATE: 8/7/2007</p> <p>DRAWN BY LCM CHECKED BY WJV</p>

Contract #66612

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+04.40	-3.00	669.30	669.30
☉ Brg. South Abutment	284+05.82	-3.00	669.30	669.30
A	284+15.82	-3.00	669.31	669.33
B	284+25.82	-3.00	669.30	669.34
C	284+35.82	-3.00	669.29	669.31
D	284+45.82	-3.00	669.26	669.27
☉ Pier 1	284+50.90	-3.00	669.25	669.25
E	284+60.90	-3.00	669.20	669.20
F	284+70.90	-3.00	669.15	669.15
G	284+80.90	-3.00	669.08	669.08
H	284+90.90	-3.00	669.00	669.00
☉ Pier 2	284+95.90	-3.00	668.96	668.96
I	285+05.90	-3.00	668.86	668.88
J	285+15.90	-3.00	668.75	668.78
K	285+25.90	-3.00	668.64	668.66
L	285+35.90	-3.00	668.50	668.52
☉ Brg. North Abutment	285+40.98	-3.00	668.43	668.43
Bk. North Abutment	285+42.40	-3.00	668.41	668.41

☉ STRUCTURE, PGL. AND STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+06.00	0.00	669.35	669.35
☉ Brg. South Abutment	284+07.42	0.00	669.35	669.35
A	284+17.42	0.00	669.35	669.38
B	284+27.42	0.00	669.35	669.38
C	284+37.42	0.00	669.33	669.36
D	284+47.42	0.00	669.31	669.31
☉ Pier 1	284+52.50	0.00	669.29	669.29
E	284+62.50	0.00	669.24	669.24
F	284+72.50	0.00	669.18	669.19
G	284+82.50	0.00	669.12	669.12
H	284+92.50	0.00	669.04	669.04
☉ Pier 2	284+97.50	0.00	668.99	668.99
I	285+07.50	0.00	668.89	668.91
J	285+17.50	0.00	668.78	668.81
K	285+27.50	0.00	668.66	668.69
L	285+37.50	0.00	668.53	668.54
☉ Brg. North Abutment	285+42.58	0.00	668.46	668.46
Bk. North Abutment	285+44.00	0.00	668.44	668.44

BEAM 4


Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+07.60	3.00	669.30	669.30
☉ Brg. South Abutment	284+09.02	3.00	669.30	669.30
A	284+19.02	3.00	669.31	669.33
B	284+29.02	3.00	669.30	669.33
C	284+39.02	3.00	669.28	669.31
D	284+49.02	3.00	669.25	669.26
☉ Pier 1	284+54.10	3.00	669.23	669.23
E	284+64.10	3.00	669.19	669.19
F	284+74.10	3.00	669.13	669.13
G	284+84.10	3.00	669.06	669.06
H	284+94.10	3.00	668.97	668.97
☉ Pier 2	284+99.10	3.00	668.93	668.93
I	285+09.10	3.00	668.83	668.85
J	285+19.10	3.00	668.72	668.75
K	285+29.10	3.00	668.59	668.62
L	285+39.10	3.00	668.46	668.47
☉ Brg. North Abutment	285+44.18	3.00	668.39	668.39
Bk. North Abutment	285+45.60	3.00	668.37	668.37

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+10.79	9.00	669.21	669.21
☉ Brg. South Abutment	284+12.21	9.00	669.21	669.21
A	284+22.21	9.00	669.21	669.24
B	284+32.21	9.00	669.20	669.23
C	284+42.21	9.00	669.18	669.20
D	284+52.21	9.00	669.15	669.16
☉ Pier 1	284+57.29	9.00	669.13	669.13
E	284+67.29	9.00	669.08	669.08
F	284+77.29	9.00	669.01	669.02
G	284+87.29	9.00	668.94	668.94
H	284+97.29	9.00	668.85	668.85
☉ Pier 2	285+02.29	9.00	668.80	668.80
I	285+12.29	9.00	668.70	668.72
J	285+22.29	9.00	668.59	668.62
K	285+32.29	9.00	668.46	668.49
L	285+42.29	9.00	668.32	668.33
☉ Brg. North Abutment	285+47.37	9.00	668.25	668.25
Bk. North Abutment	285+48.79	9.00	668.22	668.22

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. South Abutment	284+13.98	15.00	669.10	669.10
☉ Brg. South Abutment	284+15.40	15.00	669.10	669.10
A	284+25.40	15.00	669.10	669.12
B	284+35.40	15.00	669.09	669.12
C	284+45.40	15.00	669.06	669.09
D	284+55.40	15.00	669.03	669.03
☉ Pier 1	284+60.48	15.00	669.00	669.00
E	284+70.48	15.00	668.95	668.95
F	284+80.48	15.00	668.88	668.88
G	284+90.48	15.00	668.80	668.80
H	285+00.48	15.00	668.71	668.71
☉ Pier 2	285+05.48	15.00	668.66	668.66
I	285+15.48	15.00	668.56	668.57
J	285+25.48	15.00	668.44	668.47
K	285+35.48	15.00	668.31	668.34
L	285+45.48	15.00	668.16	668.18
☉ Brg. North Abutment	285+50.56	15.00	668.09	668.09
Bk. North Abutment	285+51.98	15.00	668.07	668.07

 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	ILLINOIS DEPARTMENT OF TRANSPORTATION
	TOP OF SLAB ELEVATIONS - II IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217 DATE: 8/7/2007 DRAWN BY LCM CHECKED BY WJV

8/3/2007 K:\11200207\Structure\Final_Plans\Final_Plans.dgn

Contract #66612

WEST CURB LINE

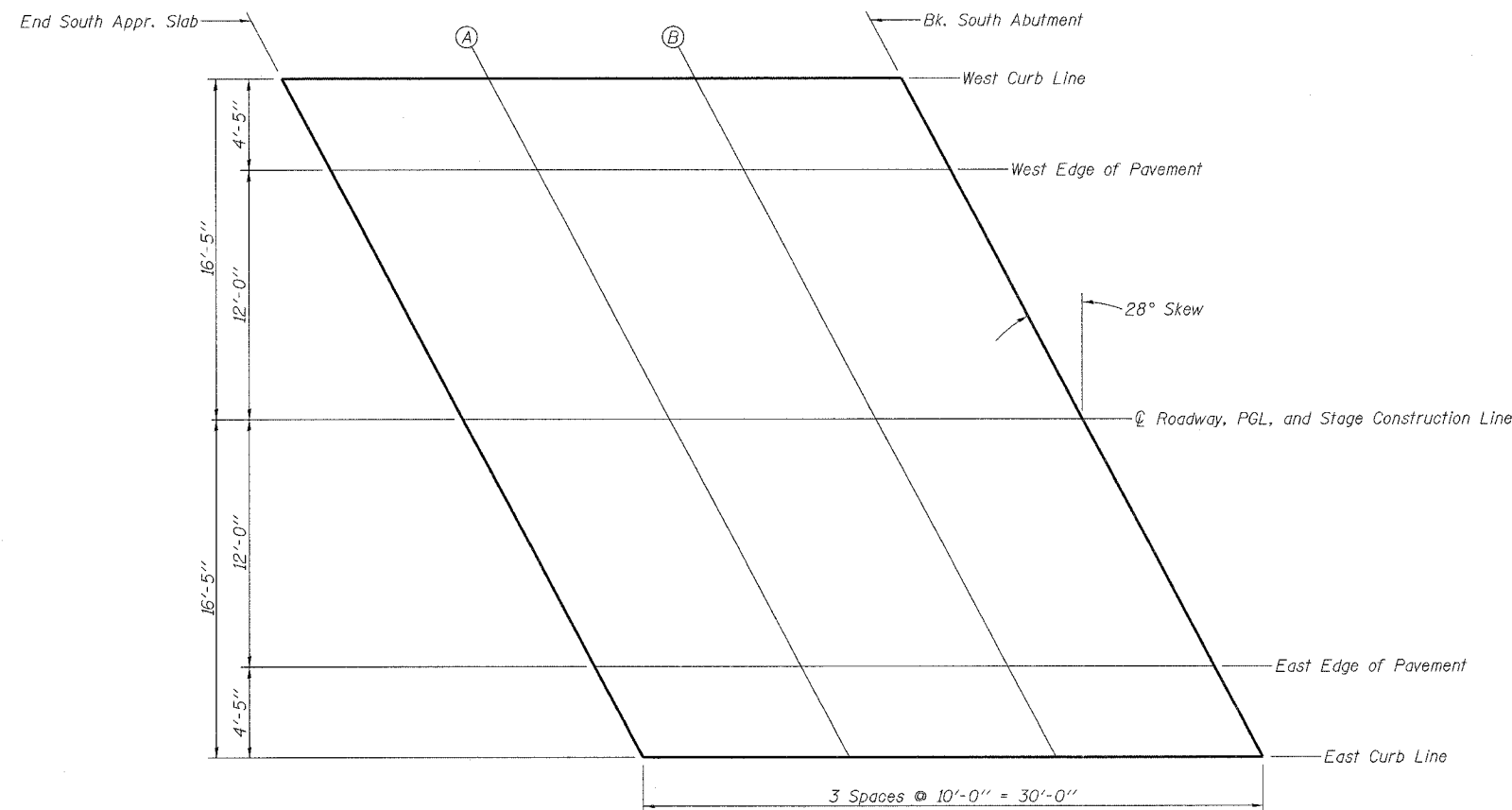
Location	Station	Offset	Theoretical Grade Elevations
End South Appr. Slab	283+67.27	-16.42	668.92
A	283+77.27	-16.42	668.98
B	283+87.27	-16.42	669.02
Bk. South Abutment	283+97.27	-16.42	669.05

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End South Appr. Slab	283+69.62	-12.00	669.03
A	283+79.62	-12.00	669.08
B	283+89.62	-12.00	669.12
Bk. South Abutment	283+99.62	-12.00	669.15

CL ROADWAY, PGL, AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
End South Appr. Slab	283+76.00	0.00	669.25
A	283+86.00	0.00	669.29
B	283+96.00	0.00	669.32
Bk. South Abutment	284+06.00	0.00	669.35



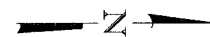
PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End South Appr. Slab	283+82.38	12.00	669.09
A	283+92.38	12.00	669.13
B	284+02.38	12.00	669.15
Bk. South Abutment	284+12.38	12.00	669.16

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End South Appr. Slab	283+84.73	16.42	669.01
A	283+94.73	16.42	669.04
B	284+04.73	16.42	669.06
Bk. South Abutment	284+14.73	16.42	669.07



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ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

DATE: 8/7/2007

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ROUTE NO.	SECTION	COUNTY	STATE	SHEET
FAP 840	123BR-2	IROQUOIS	67	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7

20 SHEETS

Contract #66612

WEST CURB LINE

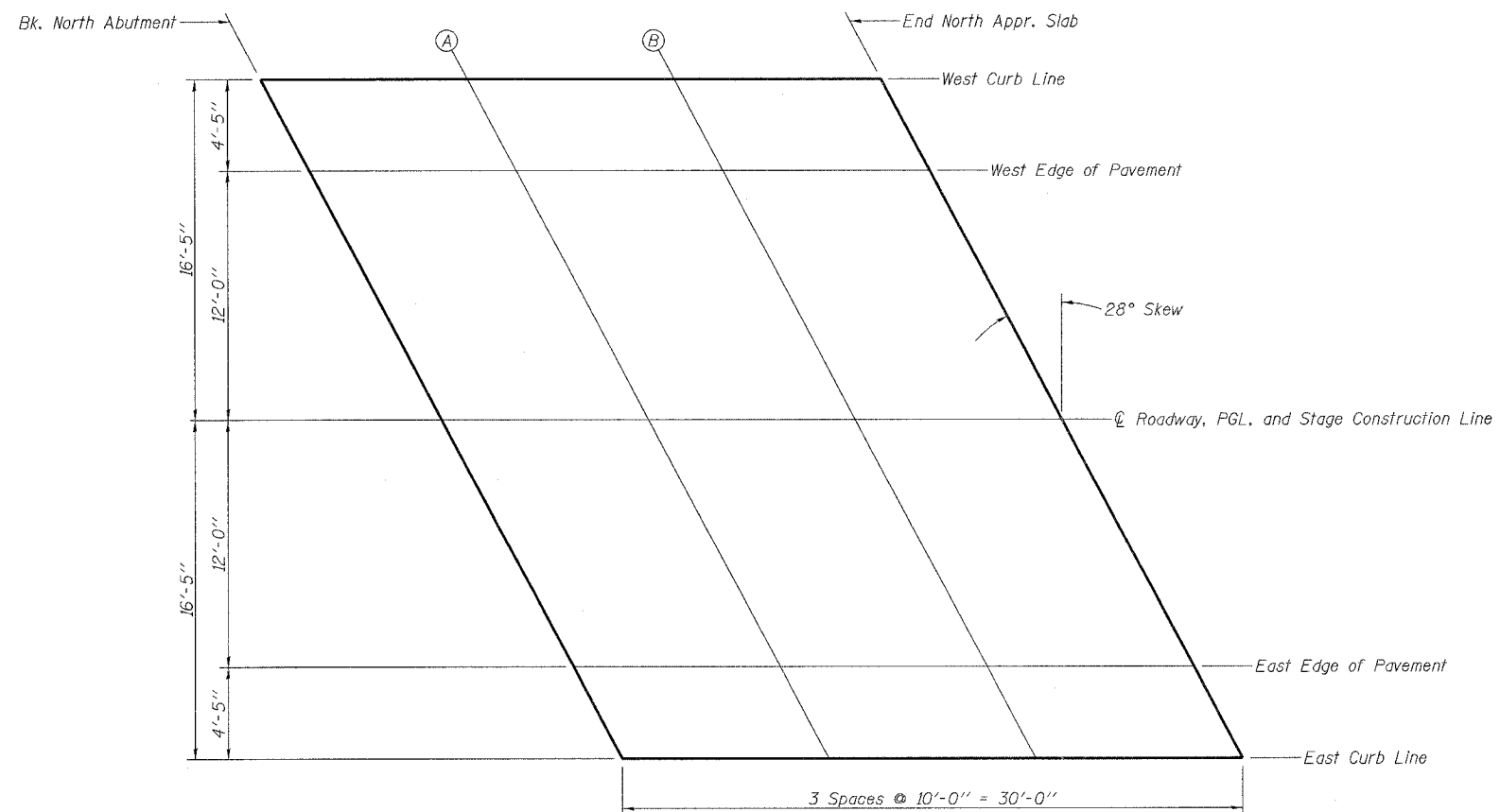
Location	Station	Offset	Theoretical Grade Elevations
Bk. North Abutment	285+35.27	-16.42	668.28
A	285+45.27	-16.42	668.14
B	285+55.27	-16.42	667.98
End North Appr. Slab	285+65.27	-16.42	667.82

WEST EDGE OF PAVEMENT

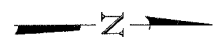
Location	Station	Offset	Theoretical Grade Elevations
Bk. North Abutment	285+37.62	-12.00	668.34
A	285+47.62	-12.00	668.20
B	285+57.62	-12.00	668.04
End North Appr. Slab	285+67.62	-12.00	667.87

CL ROADWAY, PGL, AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. North Abutment	285+44.00	0.00	668.44
A	285+54.00	0.00	668.28
B	285+64.00	0.00	668.12
End North Appr. Slab	285+74.00	0.00	667.95



PLAN



EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. North Abutment	285+50.38	12.00	668.15
A	285+60.38	12.00	667.99
B	285+70.38	12.00	667.82
End North Appr. Slab	285+80.38	12.00	667.64

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. North Abutment	285+52.73	16.42	668.02
A	285+62.73	16.42	667.86
B	285+72.73	16.42	667.69
End North Appr. Slab	285+82.73	16.42	667.50

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ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

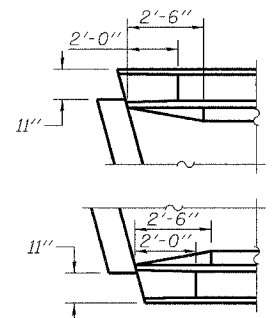
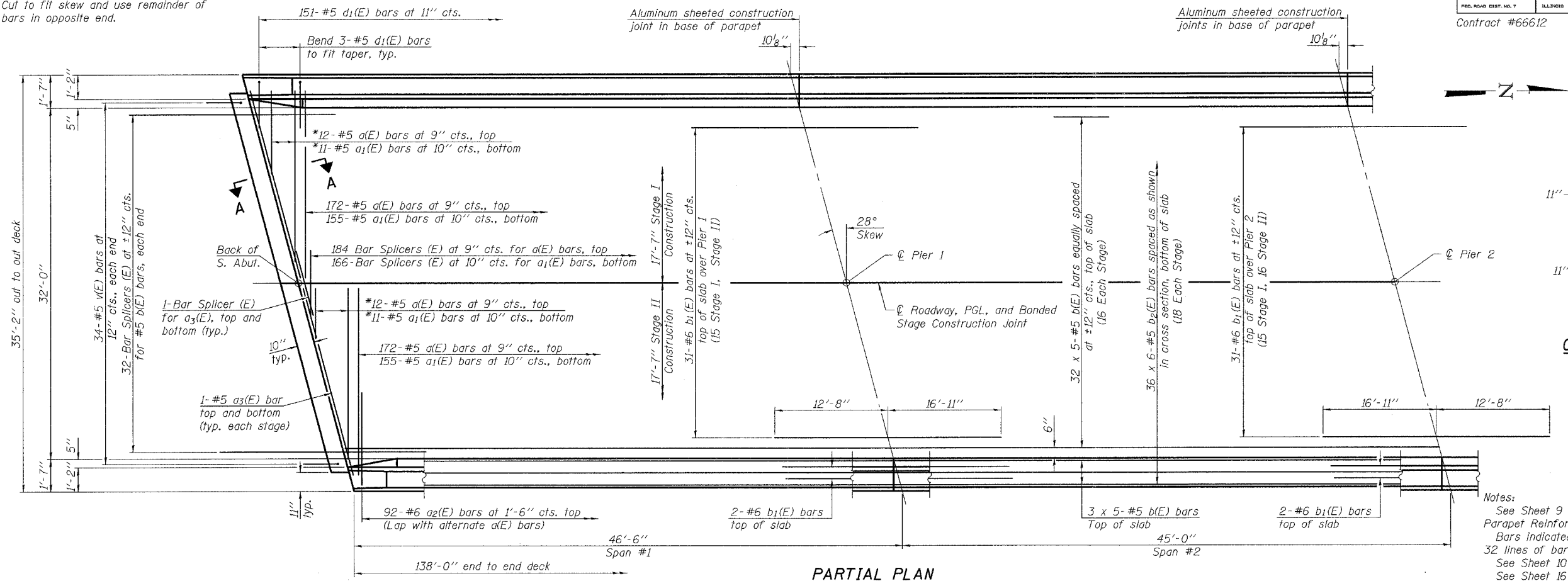
DATE: 8/7/2007

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CHECKED BY WJV

* Order a(E) and a₁(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

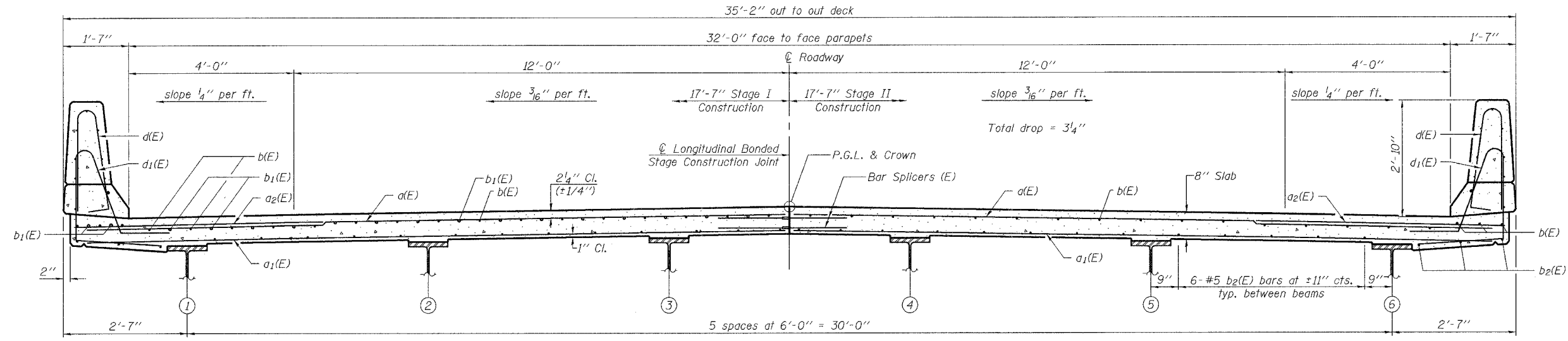
ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAP 840	123BR-2	IROQUOIS	67	25	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #66612



MIN. BAR LAP
#5 bar = 2'-2"

Notes:
See Sheet 9 of 20 for Superstructure Details, Parapet Reinforcement, and Bill of Material.
Bars indicated thus 32 x 5-#5 etc. Indicates 32 lines of bars with 5 lengths per line.
See Sheet 10 of 20 for Section A-A.
See Sheet 16 of 20 for Bar Splicer Details.
See Sheet 1 of 20 for Floor Drain Locations, Floor Drains shall be located clear of all diaphragms.



NEAR PIER

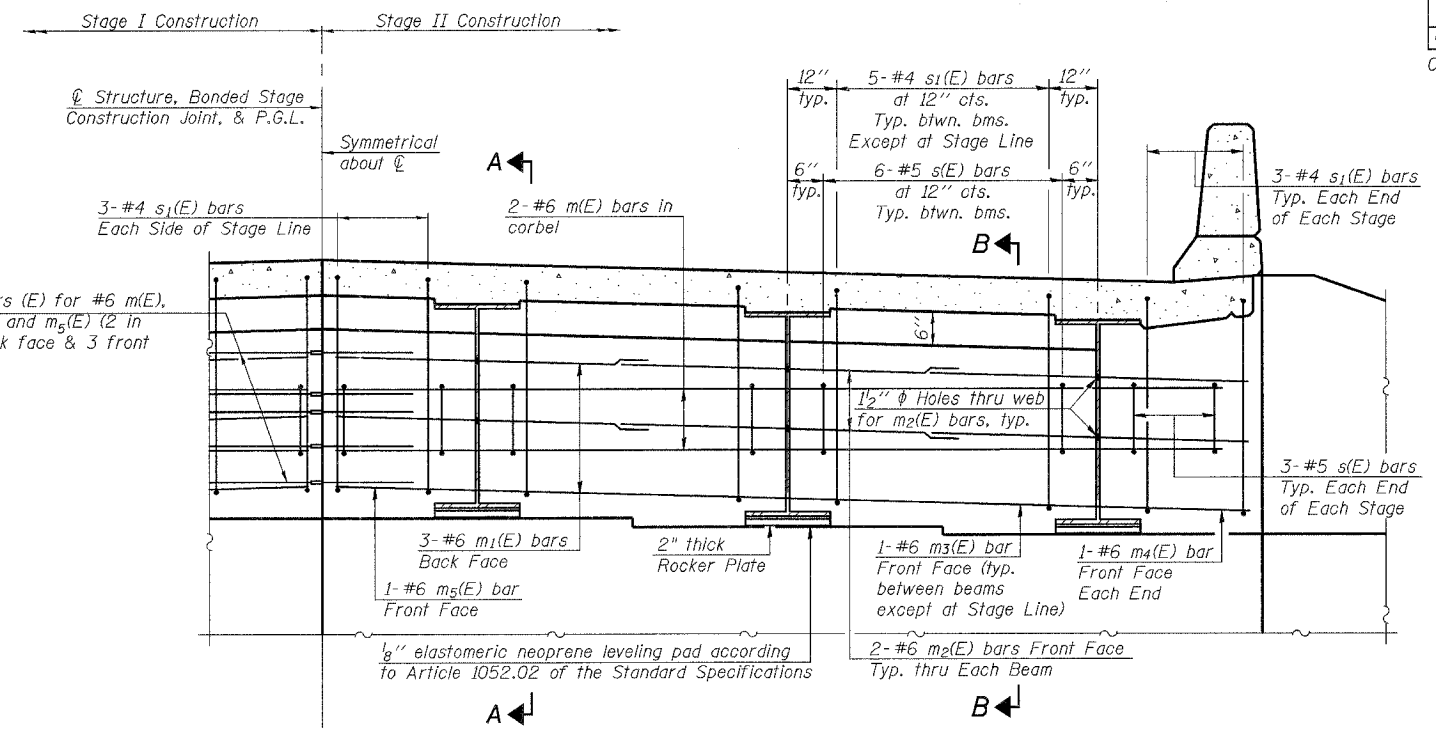
NEAR MIDSPAN

CROSS SECTION
(Looking North)

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	ILLINOIS DEPARTMENT OF TRANSPORTATION
	<p>SUPERSTRUCTURE</p> <p>IL RT. 49 OVER PIGEON CREEK</p> <p>FAP RTE 840 - SECTION 123 BR-2</p> <p>IROQUOIS COUNTY</p> <p>STATION 284+75.00</p> <p>STRUCTURE NO. 038-0217</p>
DATE: 8/7/2007	DRAWN BY LCM CHECKED BY WJV

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Contract #66612



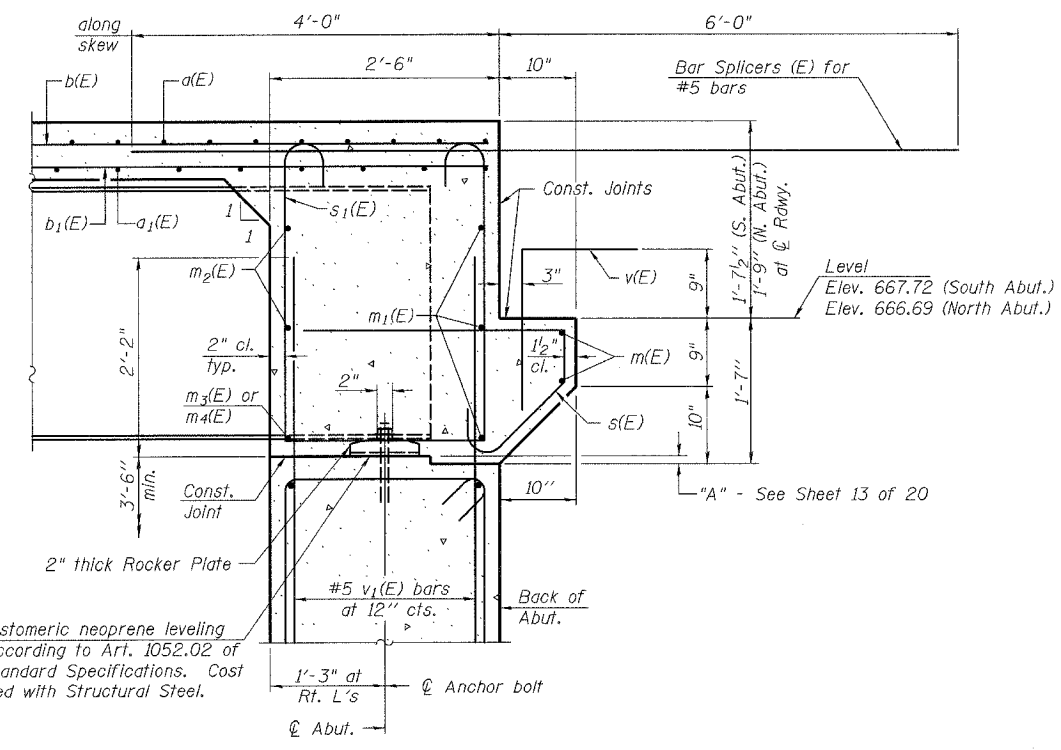
DIAPHRAGM ELEVATION AT ABUTMENT

(Looking North at North Diaphragm)
(Diaphragm at South Abutment is the same but mirrored)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 20.
Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 20.
For details of bars s(E) & s1(E) see sheet 9 of 20.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
See Sheet 16 of 20 for Bar Splicer Details.

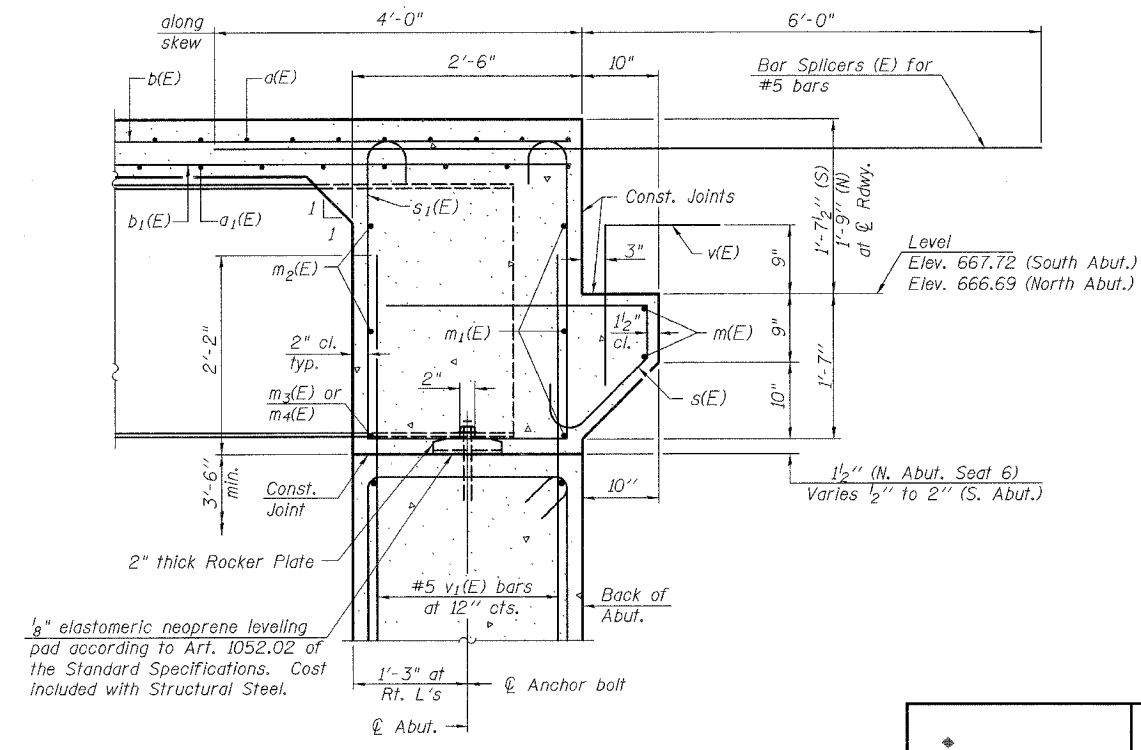
MIN. BAR LAP

#6 bar = 2'-9"



SECTION A-A

(Seats 3 & 4 South Abut., Seats 1-5 North Abut.)
Dimensions at right angles to abutment, except as shown.



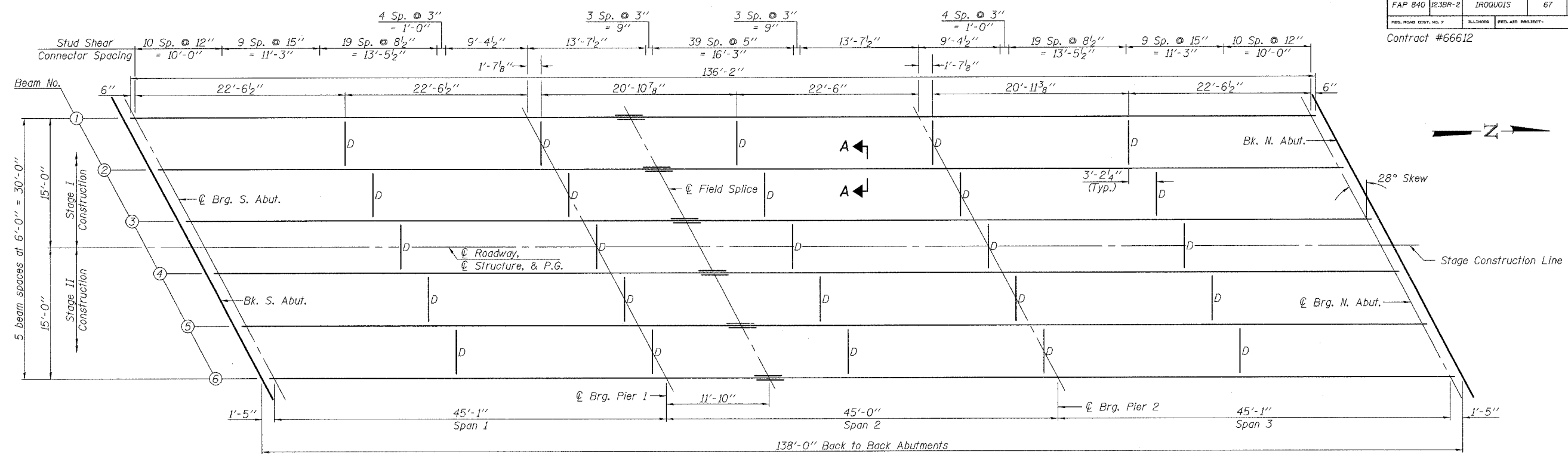
SECTION B-B

(Seats 1, 2, 5, & 6 South Abut., Seat 6 North Abut.)
Dimensions at right angles to abutment, except as shown.

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>DIAPHRAGM DETAILS IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217</p>
	<p>DATE: 8/7/2007</p> <p>DRAWN BY LCM CHECKED BY WJV</p>

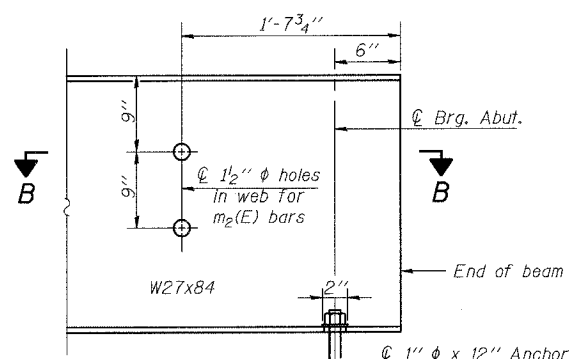
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Contract #66612

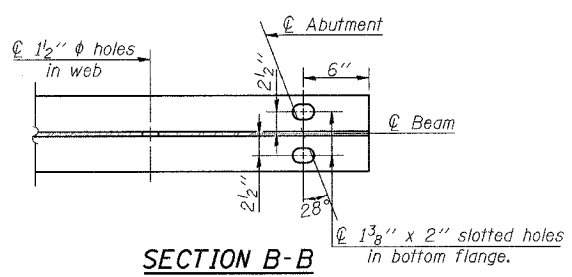


FRAMING PLAN

All beams shall be W27x84 AASHTO M 270, Grade 50W (NTR).



TYP. END OF BEAM ELEVATION

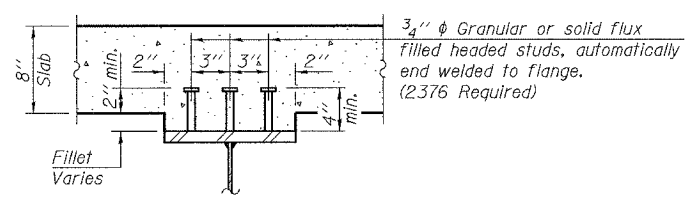


SECTION B-B

TOP OF BEAM ELEVATIONS**

Beam	Location	℄ Brg. S. Abut.	℄ Brg. Pier 1	℄ Splice	℄ Brg. Pier 2	℄ Brg. N. Abut.
Beam #1 Elev.		668.37	668.29	668.26	667.99	667.61
Beam #2 Elev.		668.49	668.38	668.35	668.07	667.67
Beam #3 Elev.		668.59	668.47	668.43	668.13	667.73
Beam #4 Elev.		668.59	668.46	668.42	668.11	667.68
Beam #5 Elev.		668.50	668.35	668.31	667.99	667.54
Beam #6 Elev.		668.39	668.23	668.18	667.85	667.38

** Elevations are before any deflections and are to be used for fabrication only.



SECTION A-A

NOTES

- D denotes interior diaphragm.
- See Sheet 12 of 20 for Field Splice, Bearings, Diaphragm Details, and Moment and Reaction Tables.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>FRAMING PLAN IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217</p>
	<p>DATE: 8/7/2007</p> <p>DRAWN BY: JMT CHECKED BY: WJV</p>

	0.4 Sp. 1 or 0.6 Sp. 3	Pier #1 or Pier #2	0.5 Span 2
I_s	(in ⁴) 2850	2850	2850
$I_c(n)$	(in ⁴) 9098	-	9098
$I_c(3n)$	(in ⁴) 6749	-	6749
S_s	(in ³) 213	213	213
$S_c(n)$	(in ³) 342	-	342
$S_c(3n)$	(in ³) 308	-	308
ρ	(k/')	1.16	0.74
$M \rho$	(k)	210.2	38.8
$s \rho$	(k/')	-	0.42
$M_s \rho$	(k)	-	44.6
M_t	(k)	111.7	204.2
M_{imp}	(k)	32.4	59.2
$M_{3[M_t + M_{imp}]}$	(k)	240.2	439.0
M_a	(k)	585.5	679.1
M_u	(k)	-	1385.0
$f_s \rho$ non-comp	(ksi)	11.8	2.2
$f_s \rho$ (comp)	(ksi)	-	1.7
$f_s \rho_{3[M_t + M_{imp}]}$	(ksi)	13.5	15.4
f_s (Overload)	(ksi)	25.3	19.3
f_s (Total)	(ksi)	32.9	-
VR	(k)	-	39.6

	Abuts.	Piers
$R \rho$	(k) 21.4	56.9
R_t	(k) 34.4	38.9
Imp.	(k) 10.0	11.3
R_{Total}	(k) 65.8	107.1

* Compact section
** Braced non-compact and partially braced section

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

ρ : Un-factored non-composite dead load (kips/ft.).

$M \rho$: Un-factored moment due to non-composite dead load (kip-ft.).

$s \rho$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s \rho$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_t : Un-factored live load moment (kip-ft.).

M_{imp} : Un-factored moment due to impact (kip-ft.).

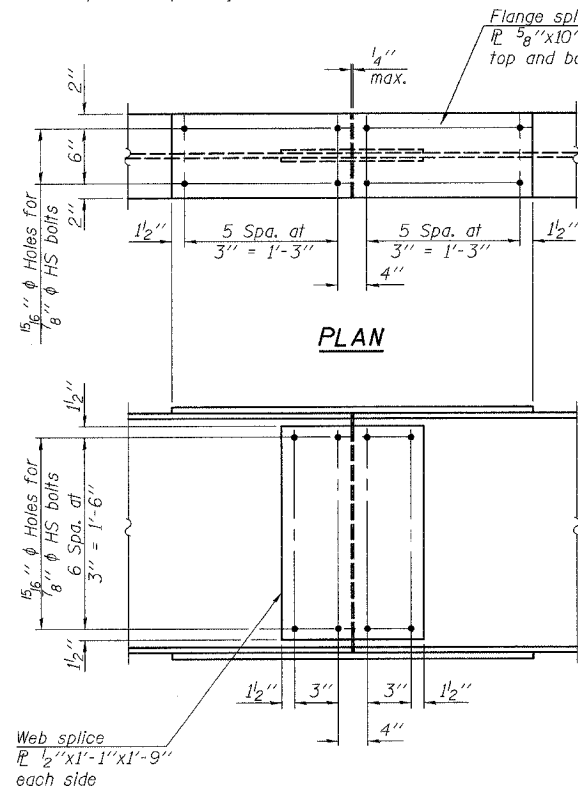
M_a : Factored design moment (kip-ft.).
 $1.3 [M + M + - (M + M)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1 or non-compact moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M + M + - (M + M)$

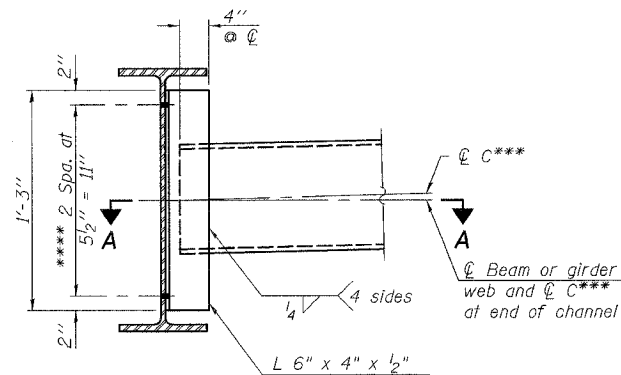
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M + M + - (M + M)]$

VR: Maximum + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).



ELEVATION
SPLICE DETAIL
(6 Required)

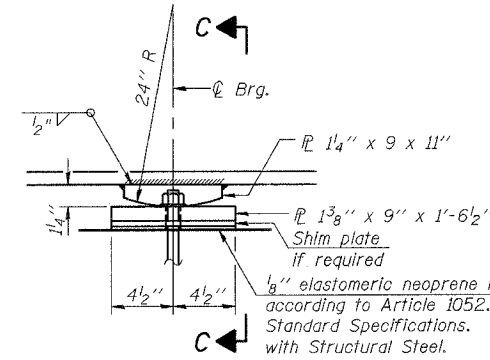
Beam No.	1	2	3	4	5	6
Pier 1 Shim	-	-	1/8"	-	-	-
Pier 2 Shim	-	-	3/4"	1/2"	-	-
N. Abut. Shim	-	-	5/8"	1/2"	-	-



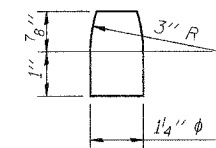
INTERIOR DIAPHRAGM
(25 Required)

Note:
Two hardened washers required for each set of oversized holes.

***C12x25 or C12x30. Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
****3/4" ϕ HS bolts, 15/16" ϕ holes

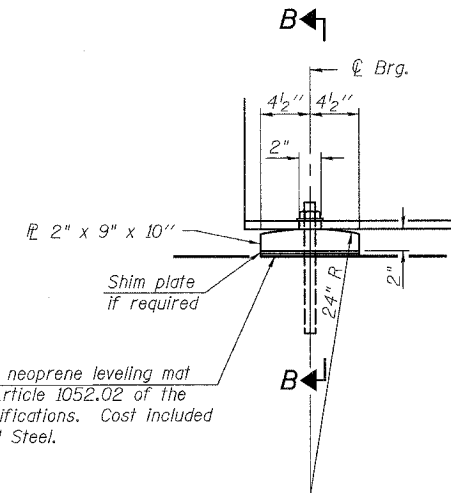


ELEVATION AT PIER



PINTLE

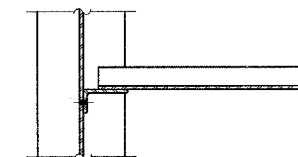
FIXED BEARING AT PIER



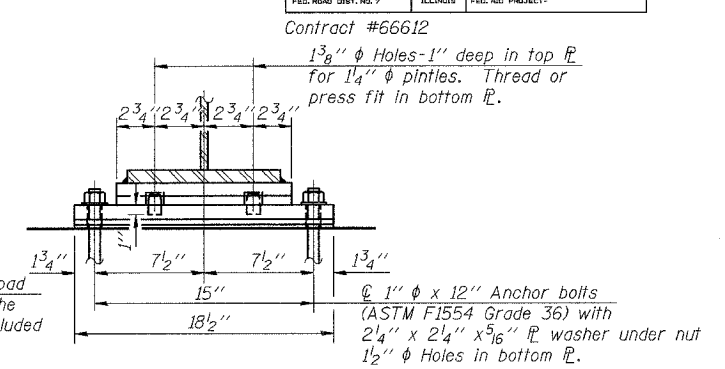
ELEVATION AT ABUTMENT

FIXED BEARING AT ABUTMENT

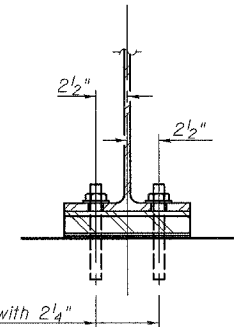
Notes:
Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
NTR is applicable to all splice materials, see notes on sheet 11 of 20.



SECTION A-A



SECTION C-C



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	48

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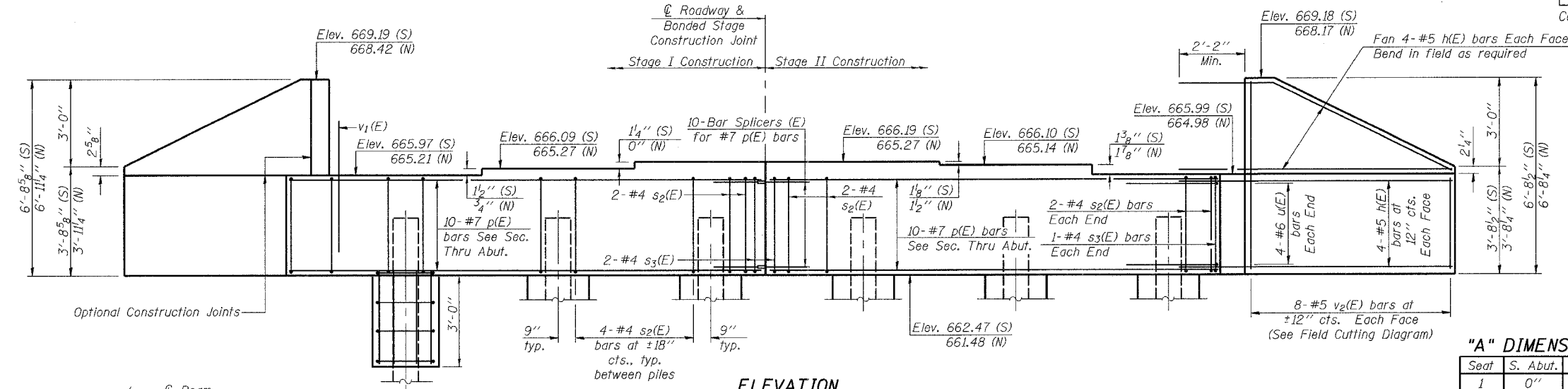
200 West Front Street
Wheaton, IL 60187

ILLINOIS DEPARTMENT OF TRANSPORTATION

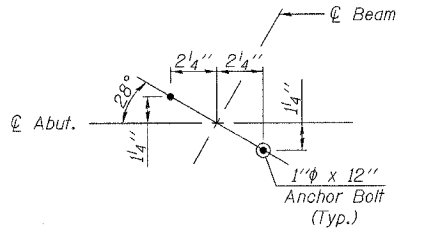
STRUCTURAL STEEL DETAILS
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

DATE: 8/7/2007

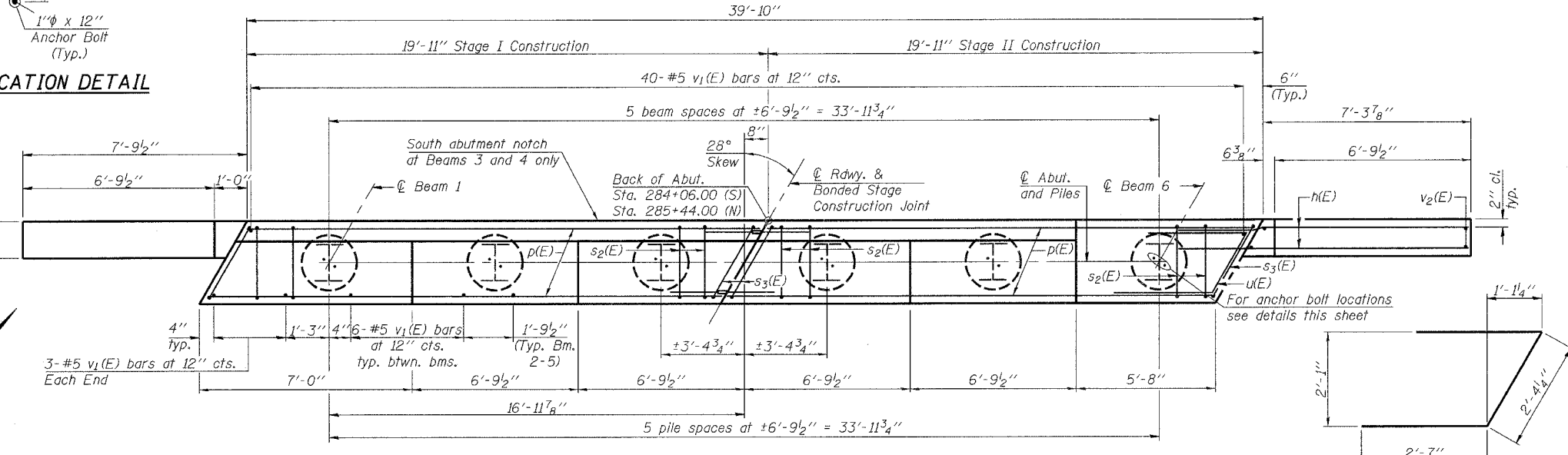
DRAWN BY JMT
CHECKED BY WJV



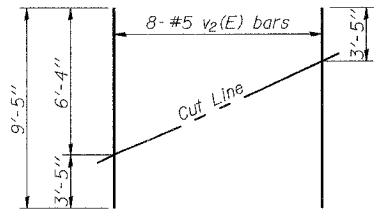
ELEVATION
Looking perpendicular to North Abutment
South Abutment is similar but mirrored.



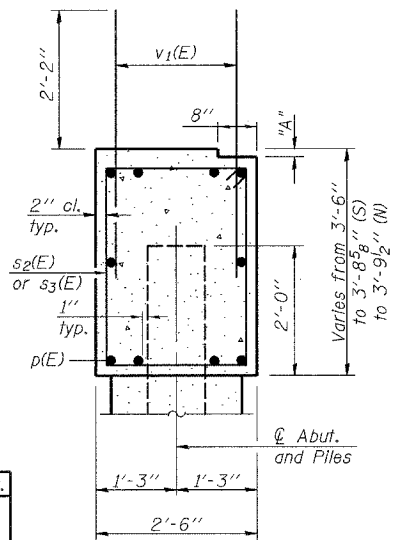
ANCHOR BOLT LOCATION DETAIL



PLAN
North Abutment shown
South Abutment similar by rotation



FIELD CUTTING DIAGRAM
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



"A" DIMENSIONS

Seat	S. Abut.	N. Abut.
1	0"	1 1/4"
2	0"	1 9/8"
3	5 5/8"	1 7/8"
4	5 5/8"	1 7/8"
5	0"	3 3/8"
6	0"	0"

SEC. THRU ABUT.
Dimensions at right angles to abutments

BILL OF MATERIAL
(2 Abutments)

Bar	No.	Size	Length	Shape
h(E)	64	#5	10'-6"	—
p(E)	40	#7	19'-6"	—
s2(E)	48	#4	11'-5"	□
s3(E)	8	#4	12'-0"	□
u(E)	16	#6	7'-7"	—
v1(E)	152	#5	4'-4"	—
v2(E)	32	#5	9'-5"	—
Structure Excavation		Cu. Yd.	127.5	
Concrete Structures		Cu. Yd.	32.4	
Reinforcement Bars, Epoxy Coated		Pound	3910	
Furnishing Steel Piles HP 12x53		Foot	490	
Driving Piles		Foot	490	
Test Pile Steel HP 12x53		Each	2	
Concrete Encasement		Cu. Yd.	4.2	
Bar Splicers		Each	20	

*Structure Excavation for S. Abut. = 59.7 Cu. Yd., N. Abut. = 67.8 Cu. Yd.

Notes:
Four steps monolithically with cap.
All edges shall have standard 3/4" chamfers.
The Steel H-Piles shall be according to AASHTO M270 Grade 50.
For details of Bar Splicers, see Sheet 16 of 20.
For details of piles and Concrete Encasement, see Sheet 15 of 20.
Space reinforcement in cap to miss anchor bolts.

PILE DATA
Type & Size: Steel HP 12x53
Nominal Required Bearing: 279 Kips
Factored Resistance Available: 93 Kips
Est. Length: 53' (South Abutment), 45' (North Abutment)
No. Production Piles: 5 (South Abutment), 5 (North Abutment)
No. Test Piles: 1 (South Abutment), 1 (North Abutment)

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ILLINOIS DEPARTMENT OF TRANSPORTATION
ABUTMENTS
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

DATE: 8/7/2007
DRAWN BY JMT
CHECKED BY WJV

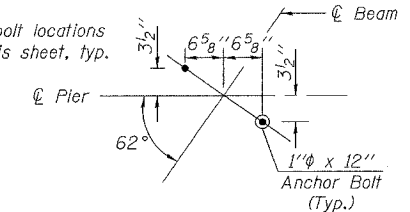
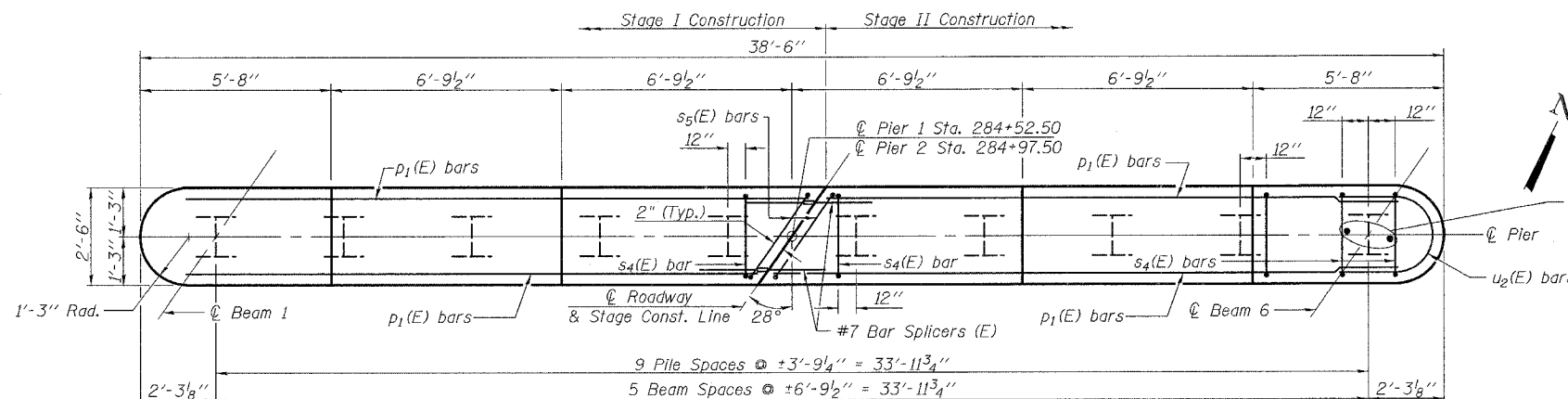
Notes: Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For bearing details and anchor bolt installation, see sheet 12 of 20.
 All edges shall have standard 3/4" chamfers.
 For Bar Splicer Details, see sheet 16 of 20.
 For Pile Details, see sheet 15 of 20.
 The Steel H-Piles shall be according to AASHTO M270 Grade 50.
 U.N.O.=Unless noted otherwise

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 840	123BR-2	IROQUOIS	67	31
FED. ROAD DIST. NO. 7		SHEET NO.		PROJECT

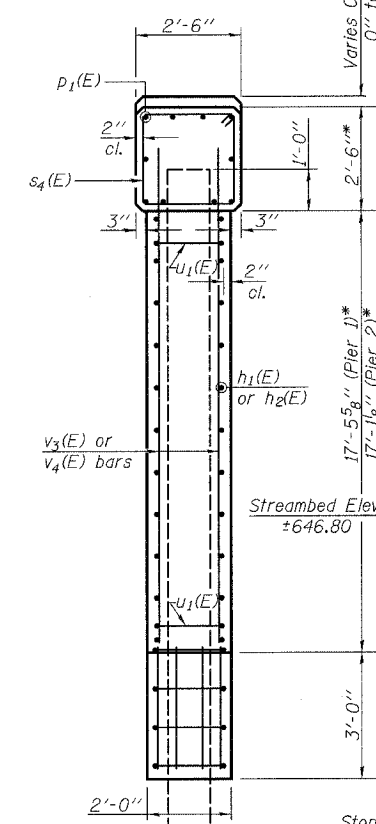
Contract #66612

PILE DATA

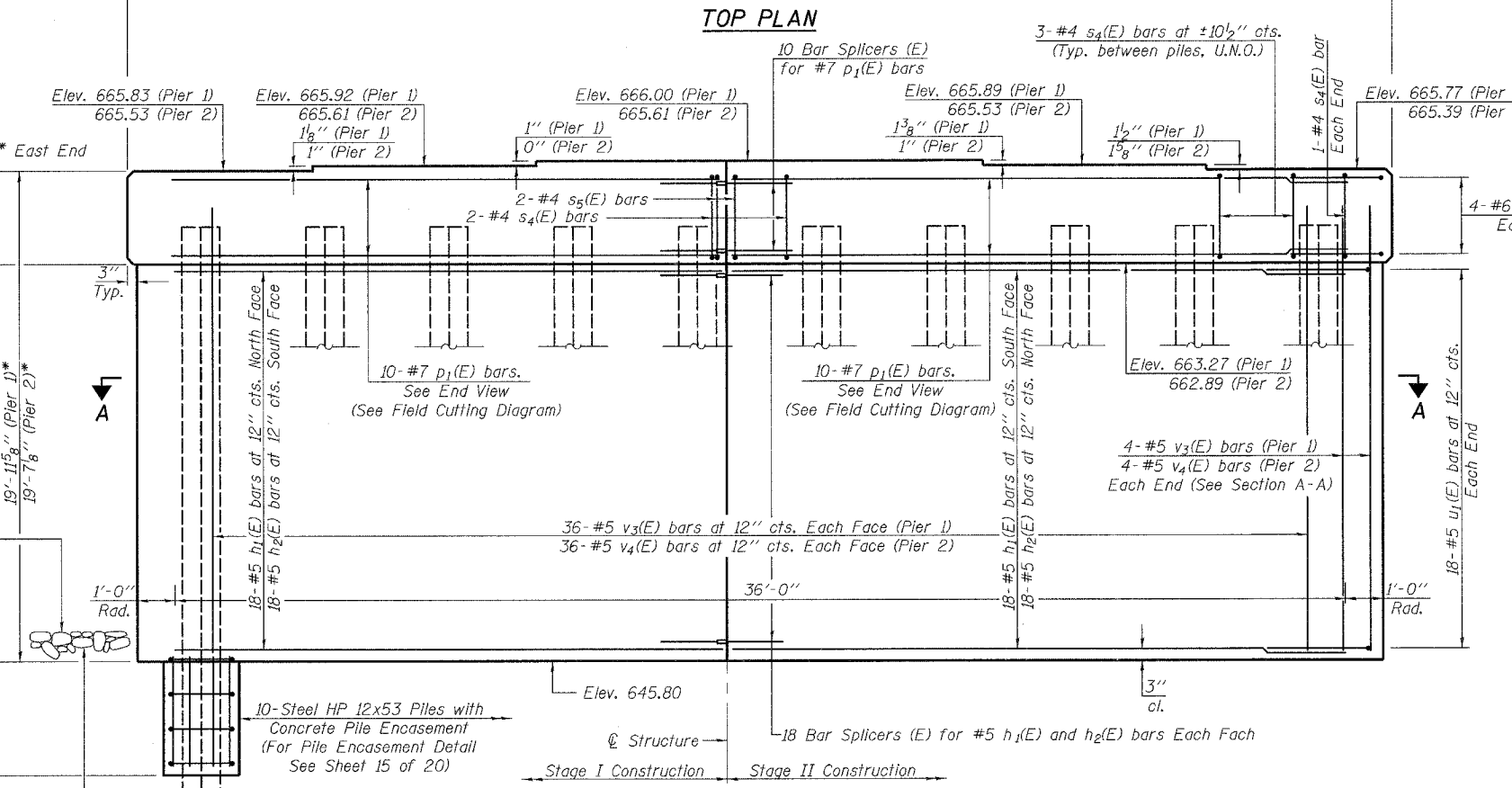
Type & Size: Steel HP 12x53
 Nominal Required Bearing: 283 kips (North Pier), 259 kips (South Pier)
 Allowable Resistance Available: 72 kips
 Est. Length: 53' (North Pier), 68' (South Pier)
 No. Req'd: 9 (North Pier), 9 (South Pier)
 No. Test Pile Req'd: 1 (North Pier), 1 (South Pier)



ANCHOR BOLT LOCATION DETAIL



END VIEW

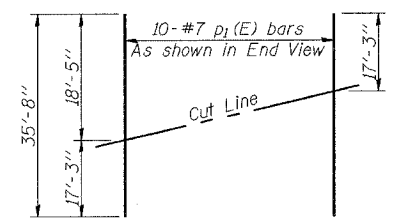


ELEVATION
(Looking perpendicular to pier)

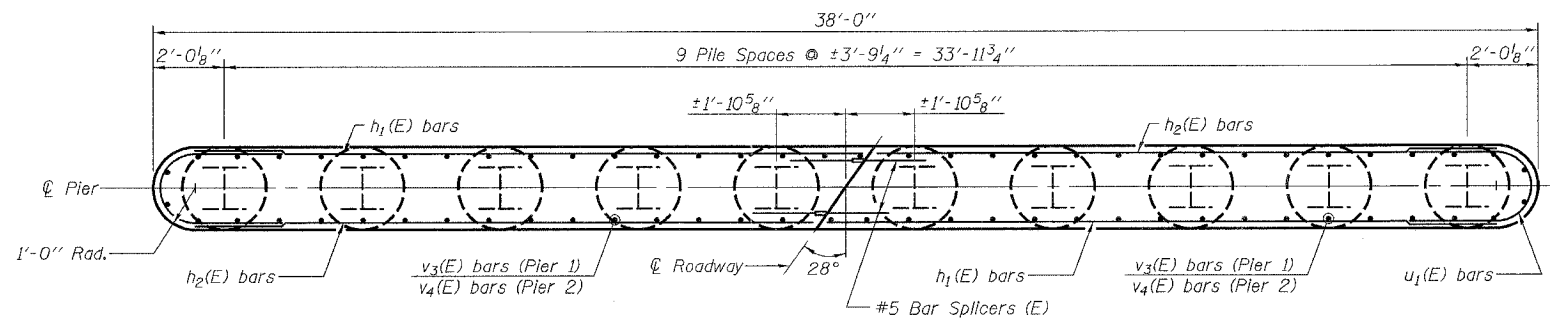
BILL OF MATERIAL
(2 Piers)

Bar	No.	Size	Length	Shape
h1(E)	72	#5	18'-4"	—
h2(E)	72	#5	17'-4"	—
p1(E)	20	#7	35'-8"	—
s4(E)	56	#4	9'-5"	□
s5(E)	4	#4	10'-0"	□
u1(E)	72	#5	6'-11"	U
u2(E)	16	#6	8'-5"	U
v3(E)	80	#5	18'-6"	—
v4(E)	80	#5	18'-2"	—
Concrete Structures		Cu. Yd.	114.7	
Furnishing Steel Piles HP 12x53		Foot	1089	
Driving Piles		Foot	1089	
Test Pile Steel HP 12x53		Each	2	
Reinforcement Bars, Epoxy Coated		Pound	8300	
** Structure Excavation		Cu. Yd.	18.6	
Underwater Structure Excavation Protection, Location 1		Each	1	
Underwater Structure Excavation Protection, Location 2		Each	1	
Bar Splicers		Each	92	
Concrete Encasement		Cu. Yd.	7.0	

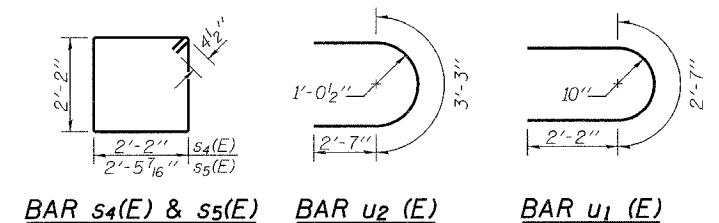
**Structure Excavation for Pier 1 = 9.3 Cu. Yd., Pier 2 = 9.3 Cu. Yd.



FIELD CUTTING DIAGRAM
Order p1(E) full length. Cut as shown and use remainder of bars in Stage II.



SECTION A - A



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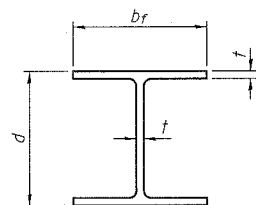
ILLINOIS DEPARTMENT OF TRANSPORTATION
 PIERS
 IL RT. 49 OVER PIGEON CREEK
 FAP RTE 840 - SECTION 123 BR-2
 IROQUOIS COUNTY
 STATION 284+75.00
 STRUCTURE NO. 038-0217
 DATE: 8/7/2007
 DRAWN BY: JMT
 CHECKED BY: WJV

K:\11280207\Structure\Final Plans\Final Plans.dgn 8/9/2007

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 840	123BR-2	IROQUOIS	67	32
FED. ROAD DIST. NO. 7	S.A. NUMBER	FED. AID PROJECT-		

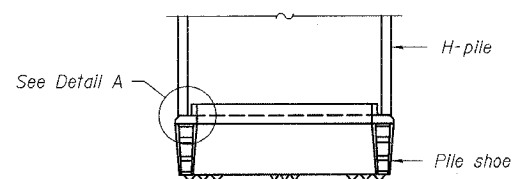
Contract #66612

SHEET NO. 15
20 SHEETS

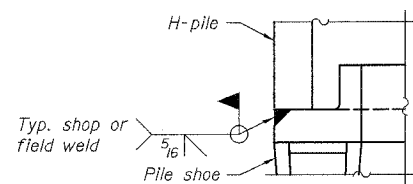


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

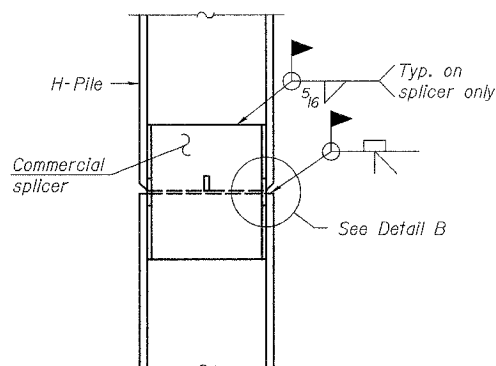


ELEVATION

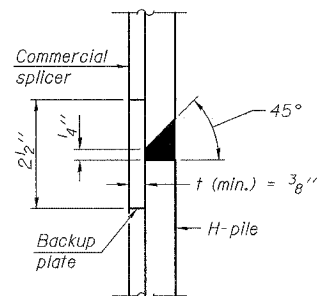


DETAIL A

H-PILE SHOE ATTACHMENT

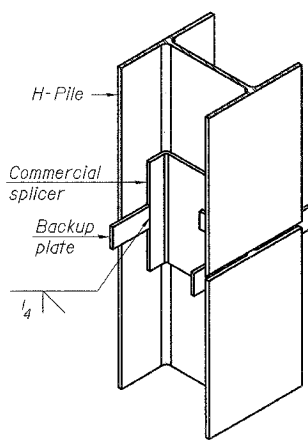


ELEVATION

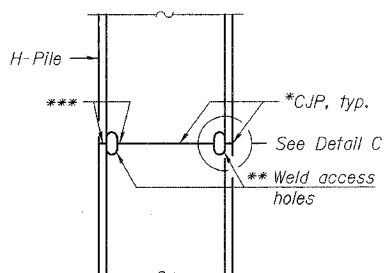


DETAIL "B"

WELDED COMMERCIAL SPLICE

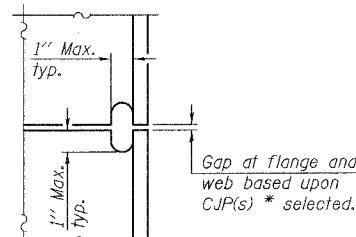


ISOMETRIC VIEW



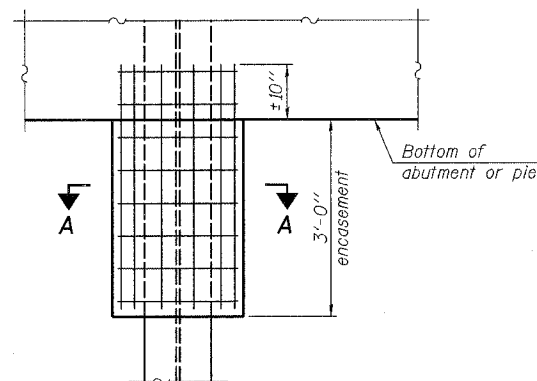
ELEVATION

COMPLETE PENETRATION WELD SPLICE



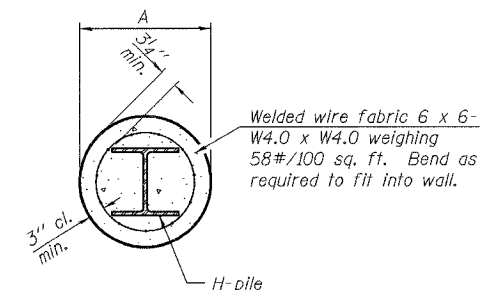
DETAIL C

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.



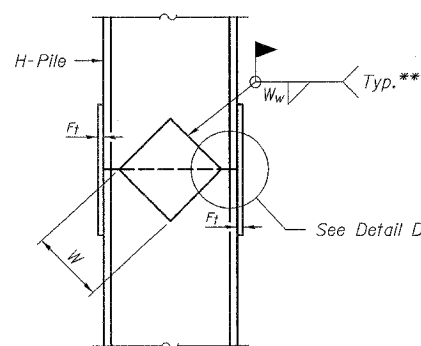
ELEVATION

PILE ENCASEMENT

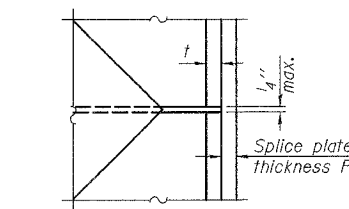


SECTION A-A

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



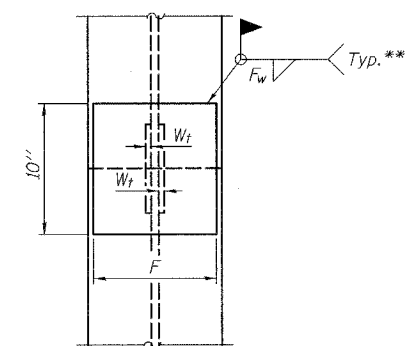
ELEVATION



DETAIL D

WELDED PLATE FIELD SPLICE

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



END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/6"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/6"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/6"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

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ILLINOIS DEPARTMENT OF TRANSPORTATION

STEEL H-PILE DETAILS
IL RT. 49 OVER PIGEON CREEK
FAP RTE 840 - SECTION 123 BR-2
IROQUOIS COUNTY
STATION 284+75.00
STRUCTURE NO. 038-0217

DATE: 8/7/2007

DRAWN BY JMT
CHECKED BY WJV

F-HP

11-1-06

Contract #66612

NOTES

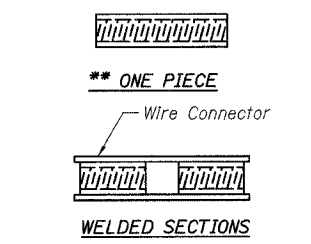
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the 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 = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- 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'-0"	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

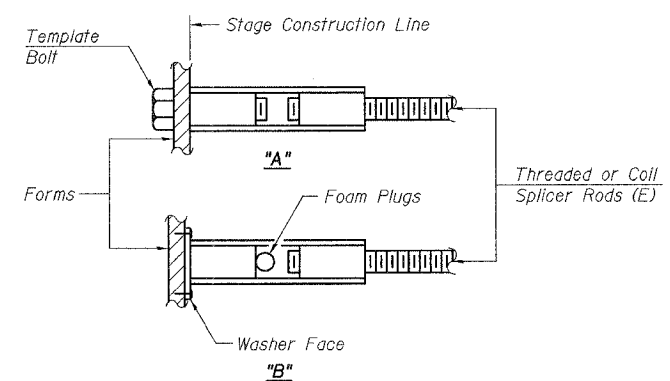
The diameter of this part is equal or larger than the diameter of bar spliced.
 The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



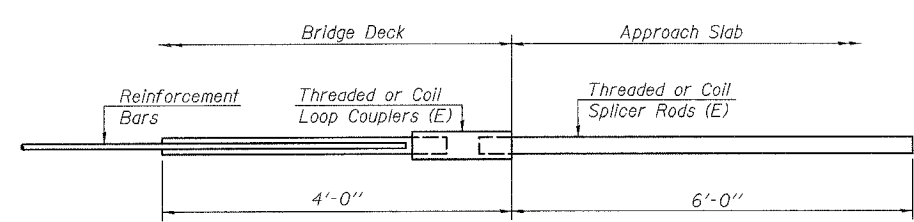
BAR SPLICER ASSEMBLY ALTERNATIVES

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



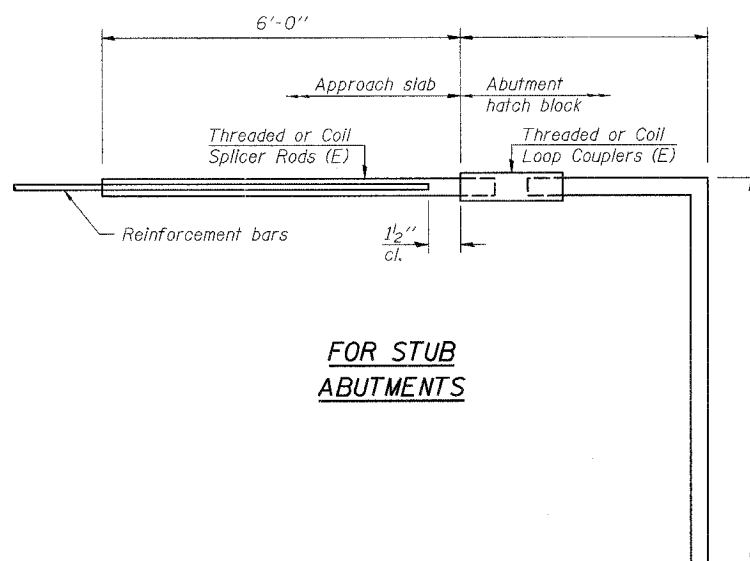
INSTALLATION AND SETTING METHODS

"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.



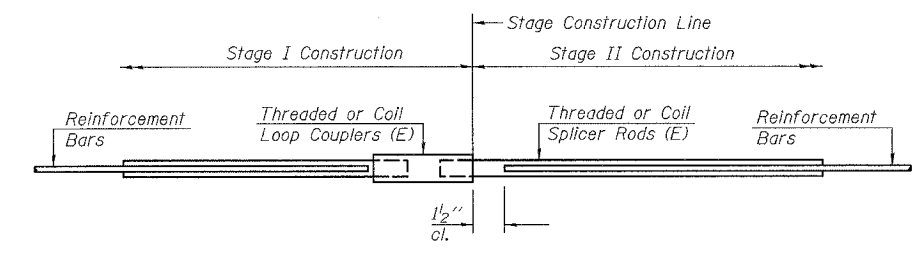
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 64



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



STANDARD

Bar Size	No. Assemblies Required	Location
#5	354	Deck
#5	72	Piers
#6	16	Diaphragms
#7	20	Piers
#7	20	Abutments

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 200 West Front Street
 Wheaton, IL 60187

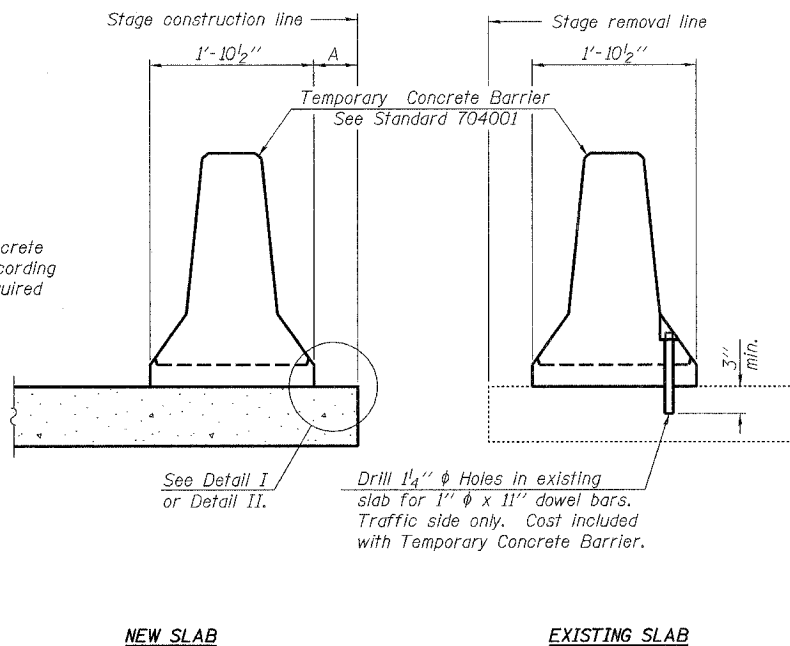
ILLINOIS DEPARTMENT OF TRANSPORTATION
 BAR SPLICER ASSEMBLY DETAILS
 IL RT. 49 OVER PIGEON CREEK
 FAP RTE 840 - SECTION 123 BR-2
 IROQUOIS COUNTY
 STATION 284+75.00
 STRUCTURE NO. 038-0217

DATE: 8/7/2007
 DRAWN BY: JMT
 CHECKED BY: WJV

K:\112806207\Structure\Final Plans\Final Plans.dgn 8/2/2007

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 840	123BR-2	IROQUOIS	67	34	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #66612



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".

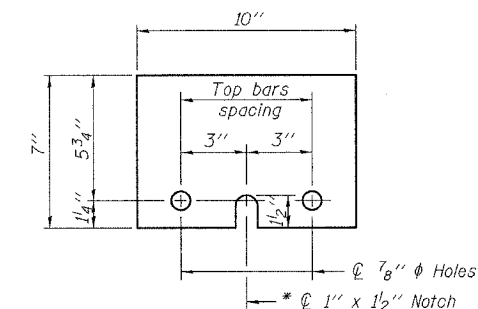
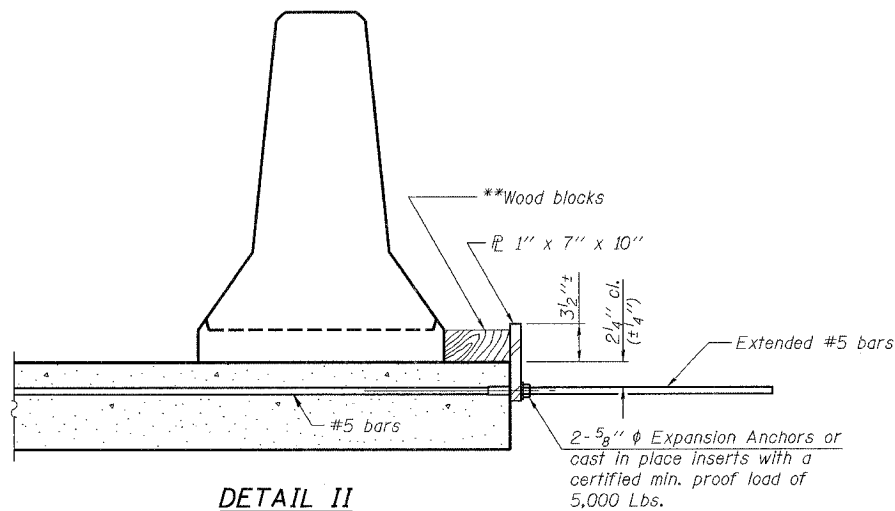
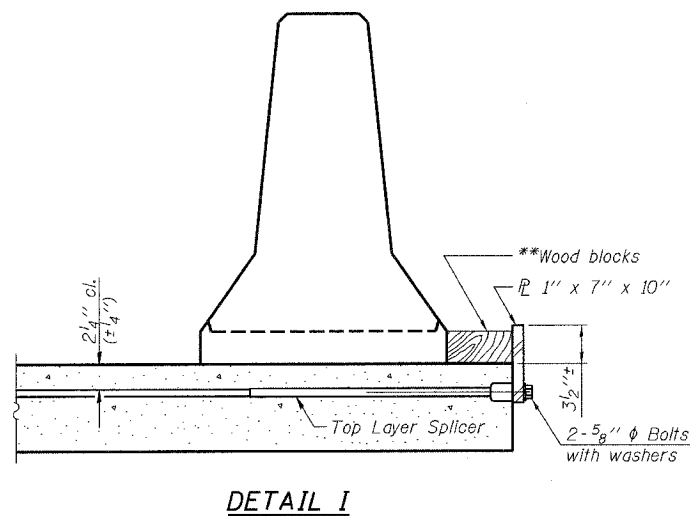
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL to the concrete slab with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C 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.

SECTIONS THRU SLAB



STEEL RETAINER PL 1' x 7' x 10"
* Required only with 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.

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217</p>
	<p>DATE: 8/7/2007</p> <p>DRAWN BY: JMT CHECKED BY: WJV</p>

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 840	123BR-2	IROQUOIS	67	35
FED. ROAD DIST. NO. 7	SLINGER	FED. AID PROJECT		

SHEET NO. 18

20 SHEETS

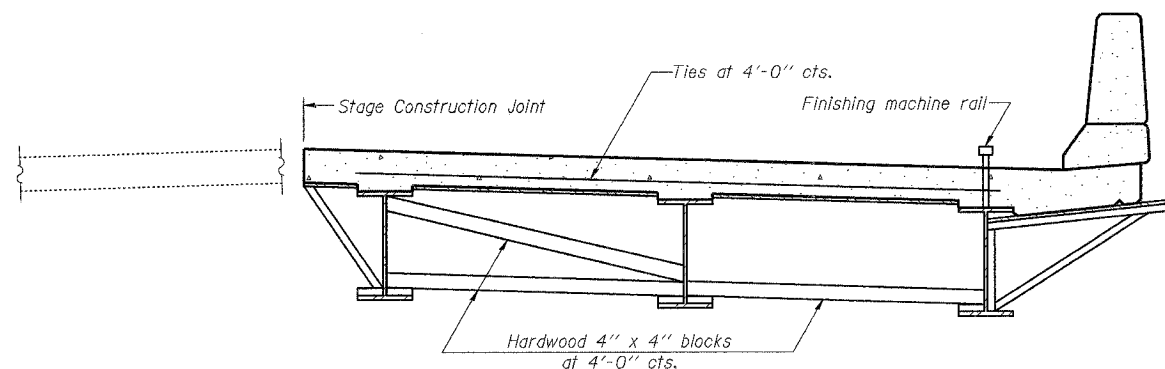
Contract #66612

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

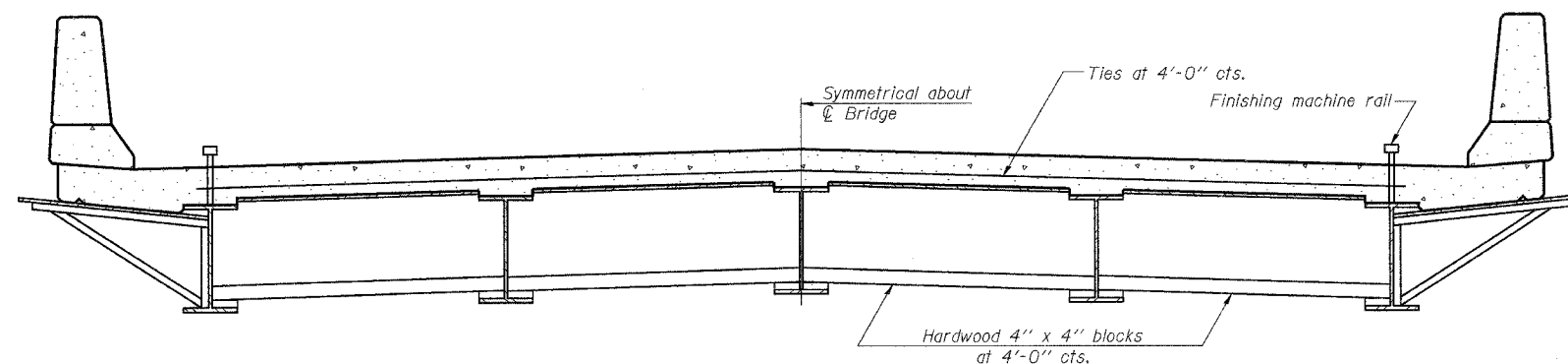
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STAGE CONSTRUCTION**



**FORM BRACES FOR
STANDARD CONSTRUCTION**

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>CANTILEVER FORMING BRACKETS IL RT. 49 OVER PIGEON CREEK FAP RTE 840 - SECTION 123 BR-2 IROQUOIS COUNTY STATION 284+75.00 STRUCTURE NO. 038-0217</p>
	<p>DATE: 8/7/2007</p> <p>DRAWN BY: JMT CHECKED BY: WJV</p>

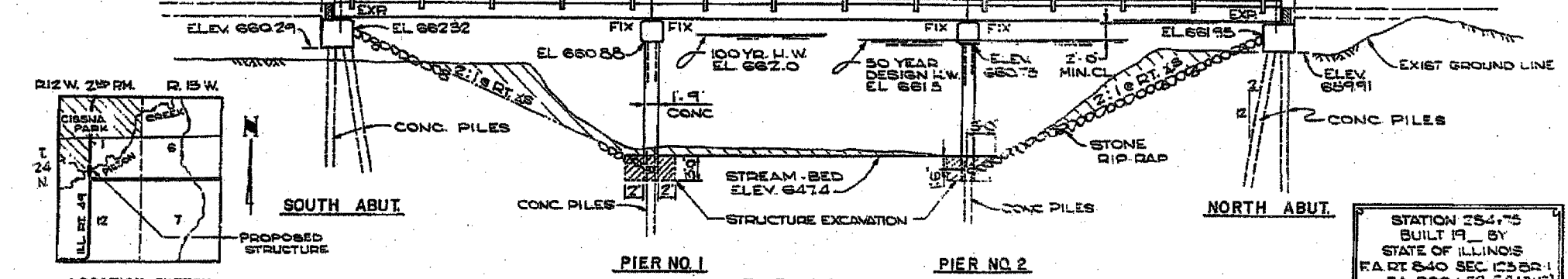
SB-1

11-1-06

BENCH MARK: N.W. WING OF EXIST. BRIDGE ELEV 663.96 (BM Y24 USC165)

EXISTING BRIDGE
A ONE SPAN STEEL TRUSS 150' 24" WIDE ON CLOSED CONC ABUTS. BUILT 1926 AS SECTION 123-C TO BE REMOVED AFTER COMPLETION OF NEW STRUCTURE. STRUCT. NO. 038-0096 NO SALVAGE

123 BR-1
840 IROQUOIS 22.11

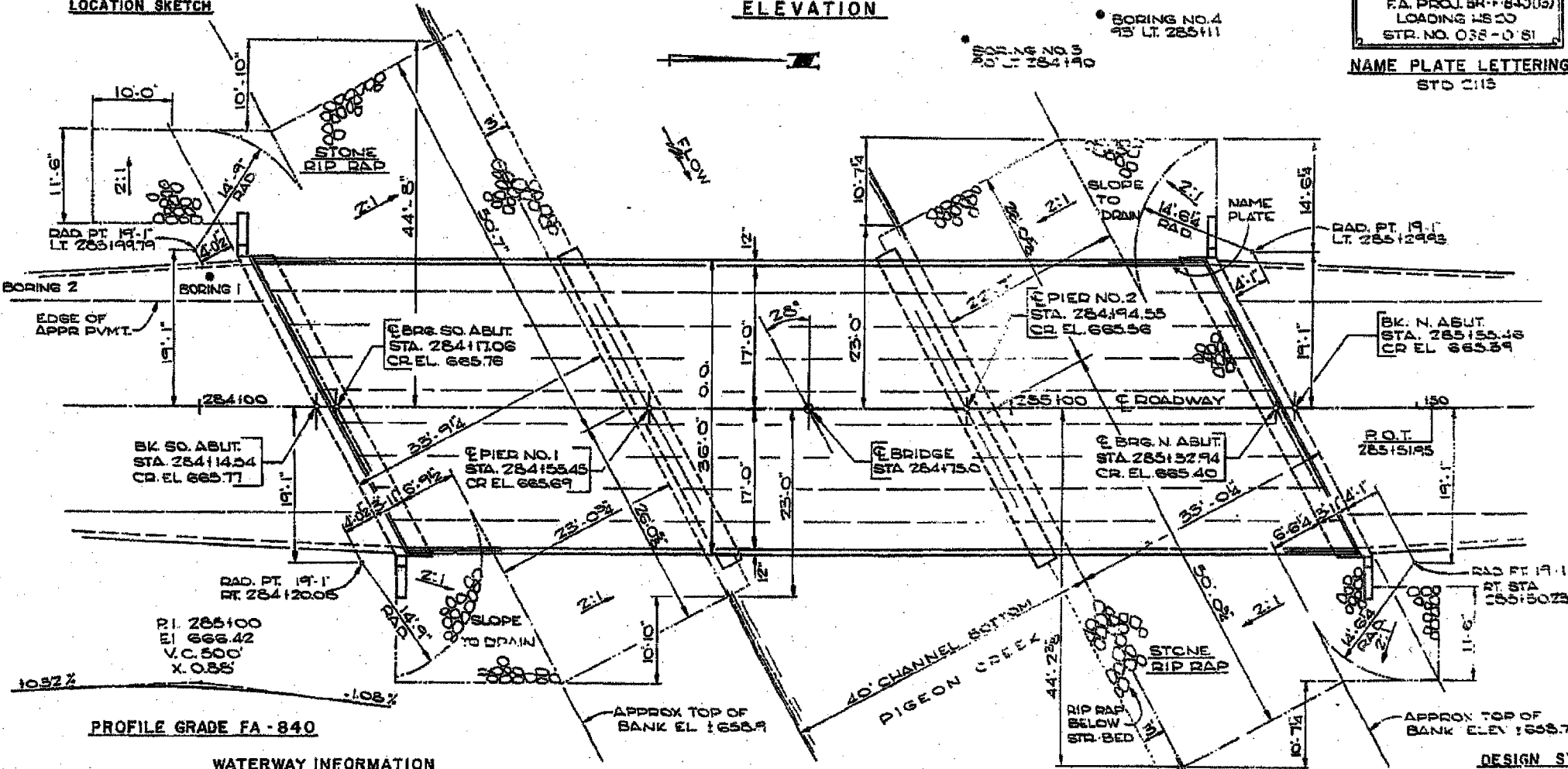


GENERAL NOTES

- SEE PROPOSAL FOR BORING DATA.
- ALL STRUCTURAL STEEL SHALL BE AASHTO M 183 AND SHOP PAINTED WITH TWO COATS OF BASIC LEAD SILICO CHROMATE PAINT.
- EXPANSION GUARDS WHICH ARE NOT CAST IN THE PRECAST UNITS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 50307 (C) OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL.
- LAYOUT OF SLOPE PROTECTION MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE AT THE NORTH ABUTMENT AND ONE CONCRETE TEST PILE AT PIER NO. 1 IN PERMANENT LOCATIONS AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
- THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 50506 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE SURFACE SHALL NOT BE DOUGHED BY BROOMING THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.
- REINFORCEMENT BARS SHALL CONFORM TO AASHTO M-31 OR M-53, GRADE 60.
- A CALCIUM NITRITE CORROSION INHIBITOR AS COVERED IN THE SPECIAL SPECIFICATIONS SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.

STATION 284.75
BUILT 19 BY
STATE OF ILLINOIS
F.A. RT 840 SEC. 123 BR-1
F.A. PROJ. BR-1840(15)
LOADING HS 20
STR. NO. 038-0081

NAME PLATE LETTERING
STD 2113



BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUB.	SUPER.	TOTAL
CHANNEL EXCAVATION	CU.YDS.			52.7
REMOVAL OF EXISTING STRUCTURES	EACH			1
PROTECTIVE COAT	SQ.YDS.		56	56
CLASS X CONCRETE	CU.YDS.	144.2	9.3	153.5
PRECAST PRESTRESSED CONC. DECK BMS. (17')	SQ. FT.		4212	4212
STRUCTURAL STEEL	LBS.		5330	5330
STEEL RAILING, TYPE T	LIN. FT.		234	234
REINFORCEMENT BARS	LBS.	10820	640	11460
CONCRETE PILES	LIN. FT.	1266		1266
TEST PILES (CONCRETE)	EACH	2		2
NAME PLATES	EACH			1
STONE RIPRAP	SQ.YDS.			674
PORTLAND CEMENT MORTAR FAIRING COURSE	LIN. FT.		936	936
PREFORMED JOINT SEALER 2 1/2	LIN. FT.		80	80
WATERPROOFING MEMBRANE SYSTEM	SQ.YDS.		443	443
STRUCTURE EXCAVATION	CU.YDS.			50
BITUMINOUS CONC. SLUR COURSE CL. 1, MIXTURE D	TONS		44	44

NOTE
STRUCTURE DESIGNED USING AASHTO SPECS. DATED 1977 AND INTERIM SPECS. DATED 1978 & 1979.

F.A. PROJECT F-840 (9)
F.A. RT. 840 (ILL. RT. 49) SEC. 123 BR-1
IROQUOIS COUNTY

GENERAL PLAN & ELEVATION

WATERWAY INFORMATION

DRAINAGE AREA	49.4 SQ. MILES
DESIGN DISCHARGE (50YR.)	4550 C.F./S.
EXISTING OPENING	472 SQ. FT.
REQUIRED OPENING	420 SQ. FT.
PROPOSED OPENING	420 SQ. FT.
CREATED HEAD (50YR.)	0.8 FOOT
100YR. DISCHARGE	5200 C.F./S.
CREATED HEAD (100YR.)	0.4 FOOT
HIGH WATER ELEV. (100YR.)	662.0

DESIGN STRESSES

FIELD UNITS	PRESTRESSED UNITS
f _s = 22,000 p.s.i.	f _c = 5,000 p.s.i.
f _r = 1,400 p.s.i.	f _{ci} = 4,300 p.s.i.
f _y = 56,000 p.s.i.	f _s = 270,000 p.s.i.
n = 9	f _{si} = 189,000 p.s.i.

ALLOWANCE FOR 25 P.S.F. FUTURE WEARING SURFACE

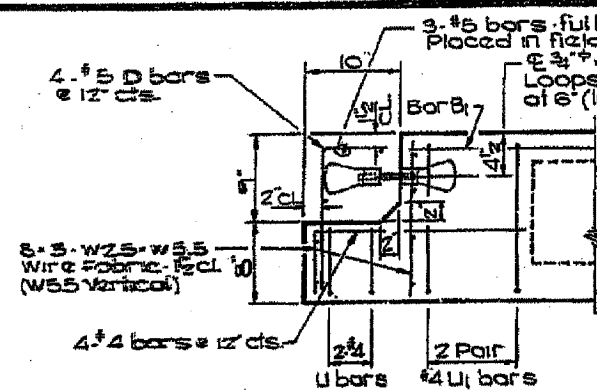
APPROVED
Carl E. Hoffman
CONSULTING ENGINEER

LOADING HS 20-44

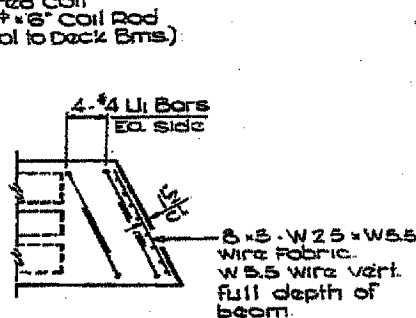
DESIGNED BY
B. THOMPSON
DATE: MAY 1979
CHECKED BY
D. E. HOFFMAN
DATE: JUNE 1979
APPROVED BY
DATE:

**WILLET
HOFFMAN &
ASSOCIATES, Inc.**
Consulting Engineers

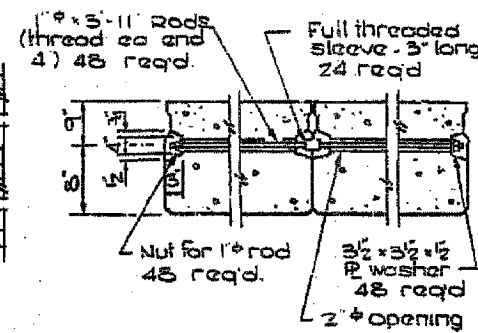
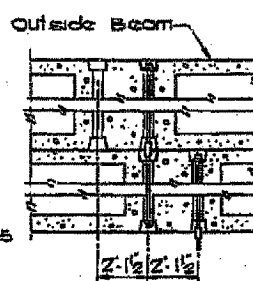
123 BR-1
220 (2000) IS 12



DETAIL EXPAN. END OF BEAMS



REINFORCEMENT FIXED ENDS



TYPICAL TRANSVERSE TIE ASSEMBLY

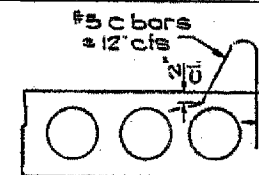
GENERAL NOTES:

Prestressing steel shall be non-galvanized high strength stress relieved 7-wire strand, Grade 270. The nominal dia shall be 1/2" and the nominal cross-sectional area shall be 0.153 Sq inch. Reinforcement bars shall conform to AASHTO: M 31 or M-53, Grade 60. The 1" dia. rods in the transverse tie assembly shall be tightened to a snug fit and set threads.

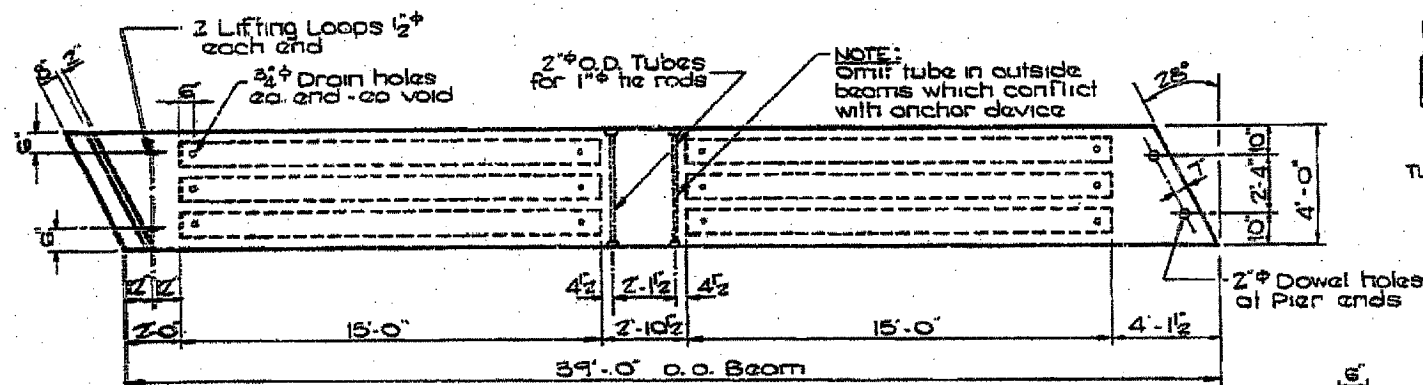
Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place. Cost of reinforcement and accessories cost into beams, of bearing pods, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed concrete Deck Beams."

Lifting loops shall be 1/2" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar.

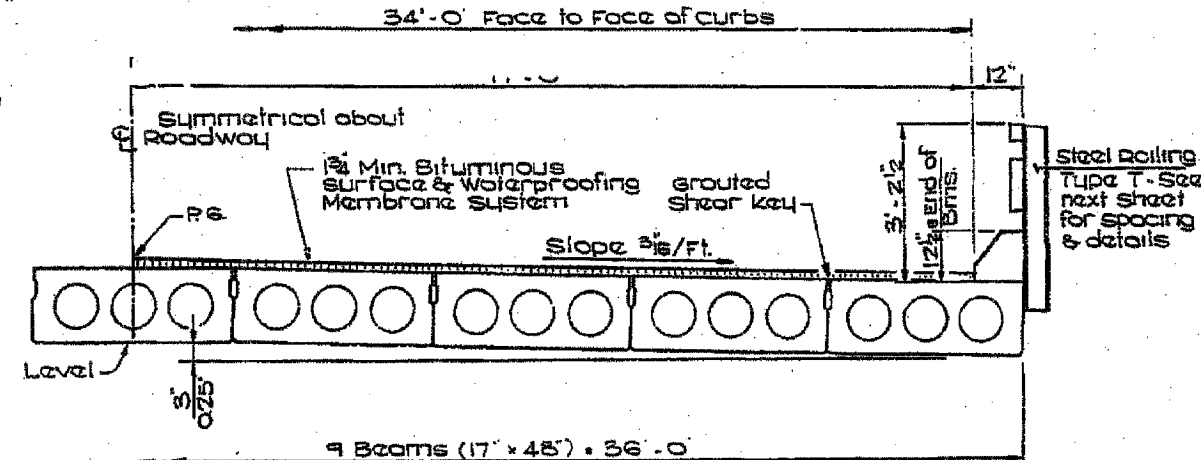
After beams have been erected, holes for the dowel anchors shall be drilled into the substructure and anchor dowels shall be grouted in place.



CURB REIN
Typical Each Exterior Beam

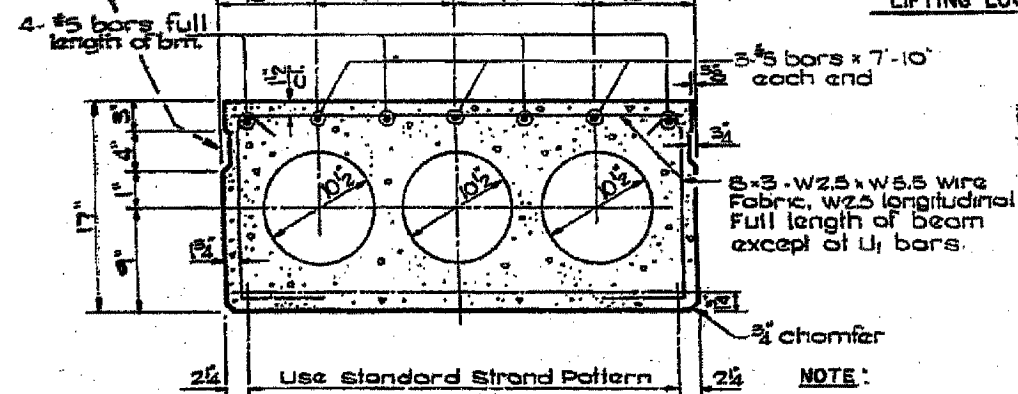


PLAN OF BEAM



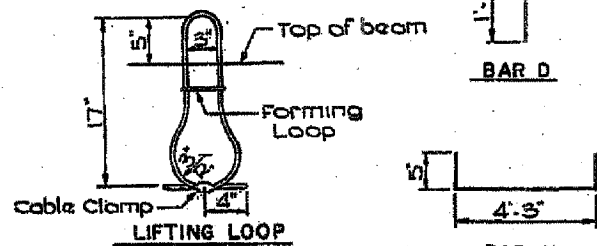
HALF SECTION THRU DECK

OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BEAMS

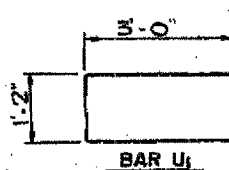


SECTION THRU BEAM

NOTE:
Place strands symmetrically about E beams. 7 wire - 1/2" strands. Stress to 25,900 lbs per strand

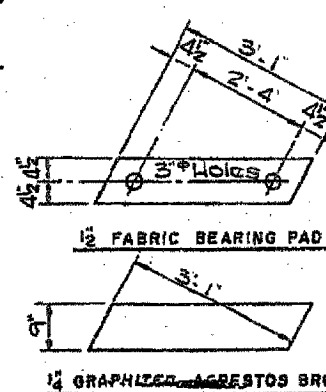


LIFTING LOOP

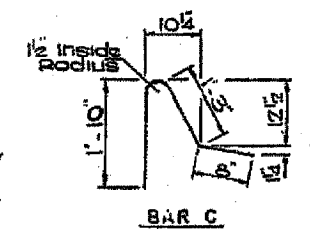


BAR U

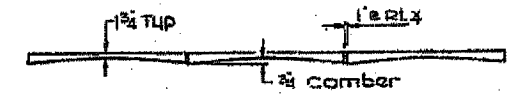
BAR U1



1/2" GRAPHIZED AGRESTOS BRG. PAD



BAR C



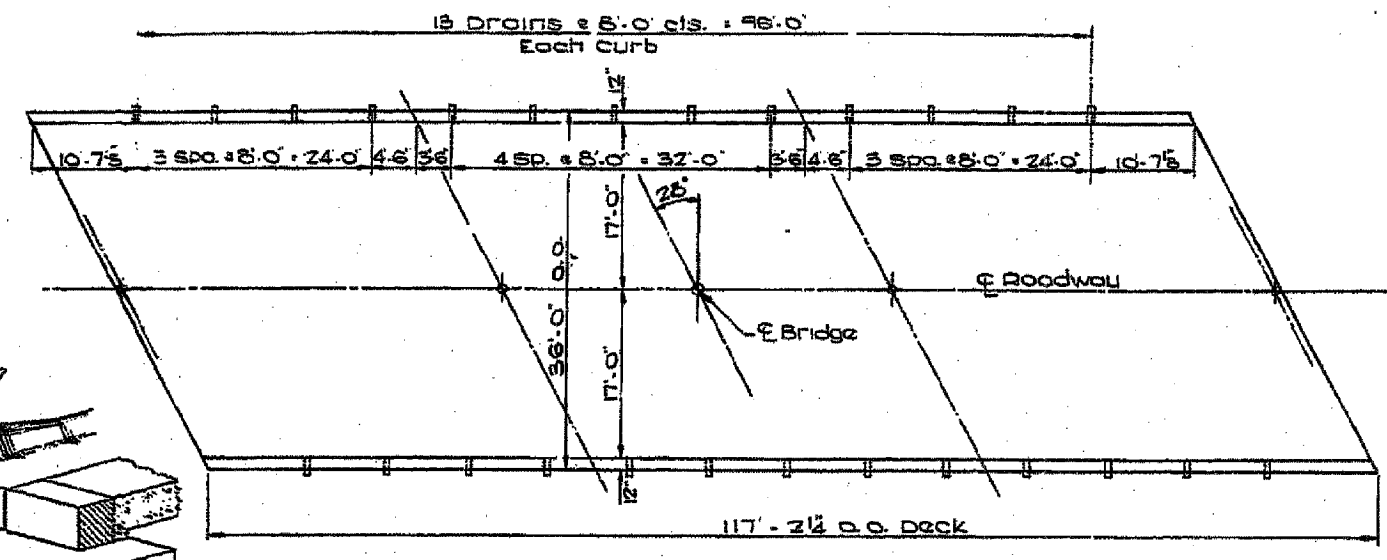
BIT SURFACE PROFILE (BEAM CAMBER)

BILL OF MATERIAL - DECK

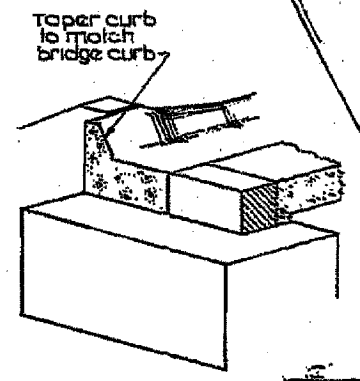
ITEM	UNIT	QUANT.
Precast Prestressed Conc. Deck Beams(17)	Sq. Ft.	4212

BEAM DETAILS
SECTION 123 BR-1
F.A. ROUTE 840
JROQUOIS COUNTY

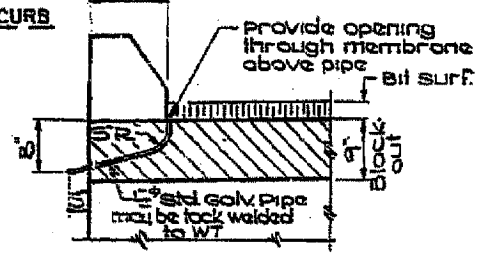
123 BR-1	22	13
800 IROQUOIS		



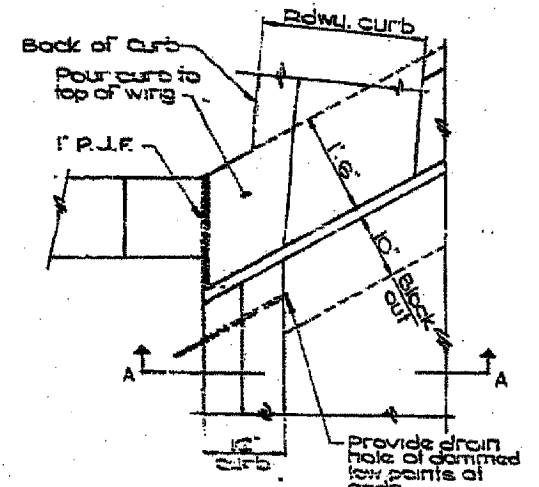
PLAN - DECK
SHOWING DRAIN SPACING



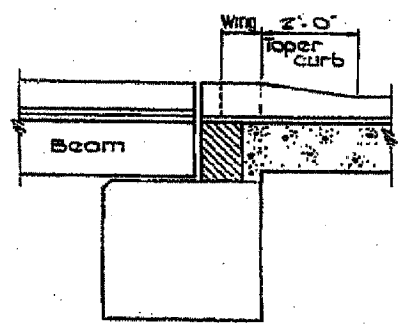
VIEW AT END OF CURB



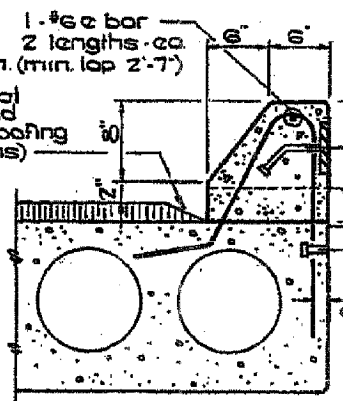
SECTION A-A



PLAN VIEW AT END OF DECK

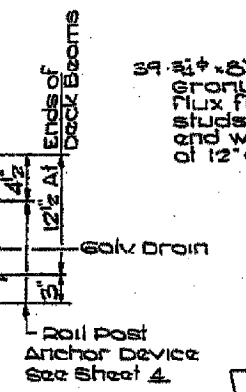


SECTION AT END OF DECK



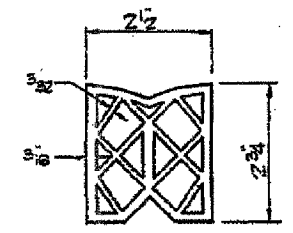
SECTION THRU CURB

curbs shall be poured in the field

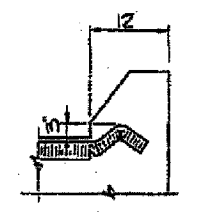


DRAIN DETAIL

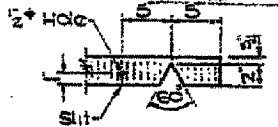
COST INCIDENTAL



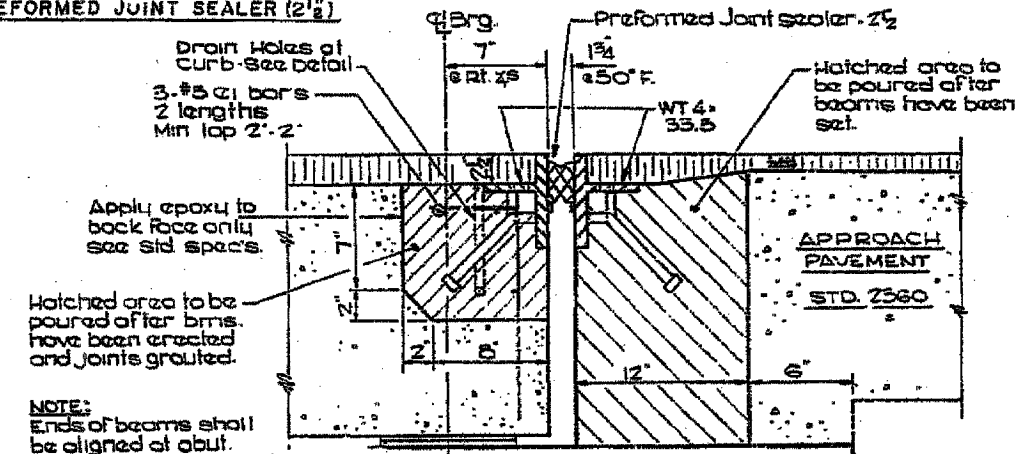
PREFORMED JOINT SEALER (2 1/2)



END TREATMENT

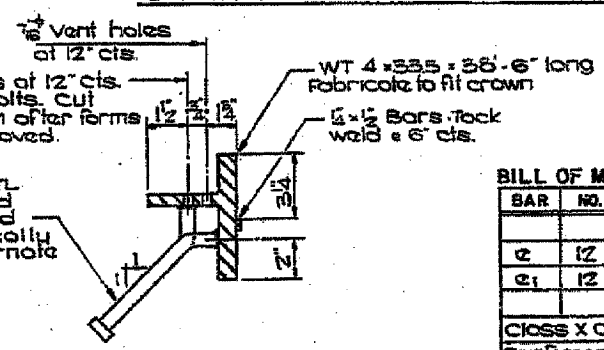


SEALER CUT-OUT



EXPANSION JOINT DETAIL AT ABUTS.

NOTE:
Ends of beams shall be aligned at abut. ends. Longitudinal variation in beam lengths shall be placed at pier joints.



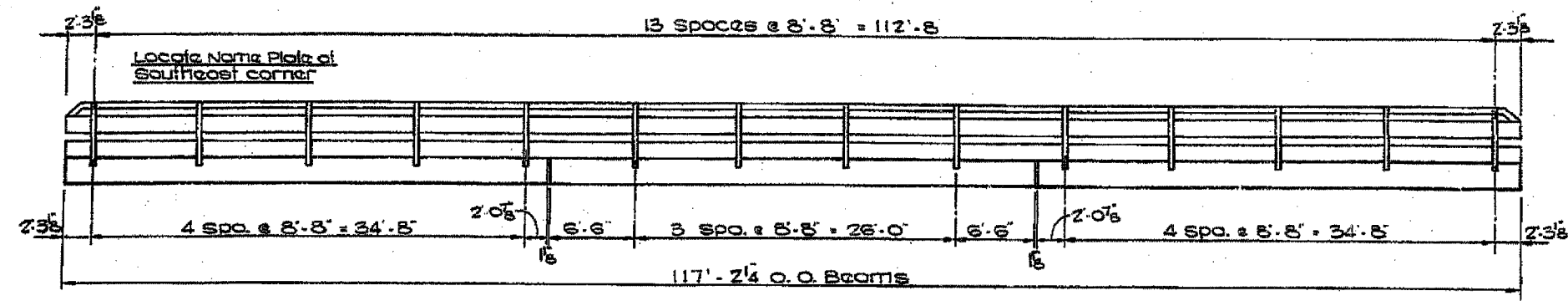
DETAIL - ARMOR DEVICE

BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE	
c2	12	#6	20'-8"	
c1	12	#5	21'-4"	
Class X Concrete cu Yds				4.5
Reinforcement Bars Lbs				640
Preformed Joint Sealer 2 1/2 LE				80
Waterproofing Membrane System sq Yds				445
Protective Coat sq Yds				38
Structural Steel Lbs				5350
Bituminous concrete Surface Course, C.I. Tons				44
Portland Cement Mortar Paving Course Lin. Ft.				936
Name Plates Each				1

EXPANSION JOINT & CURB DETAILS
SECTION 123 BR-1
F.A. ROUTE 840
IROQUOIS COUNTY

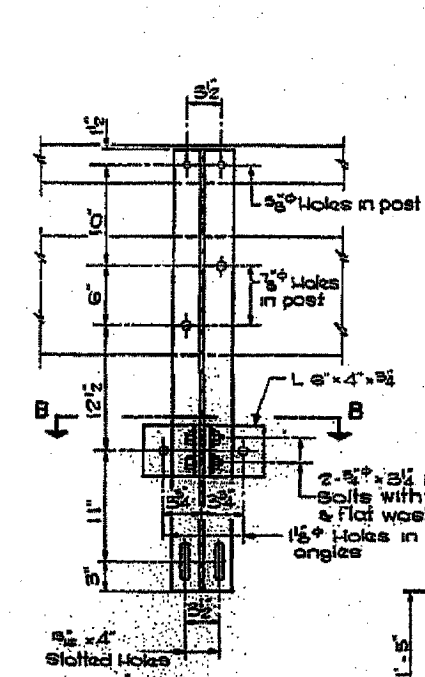
123 BR-1
840 IROQUOIS



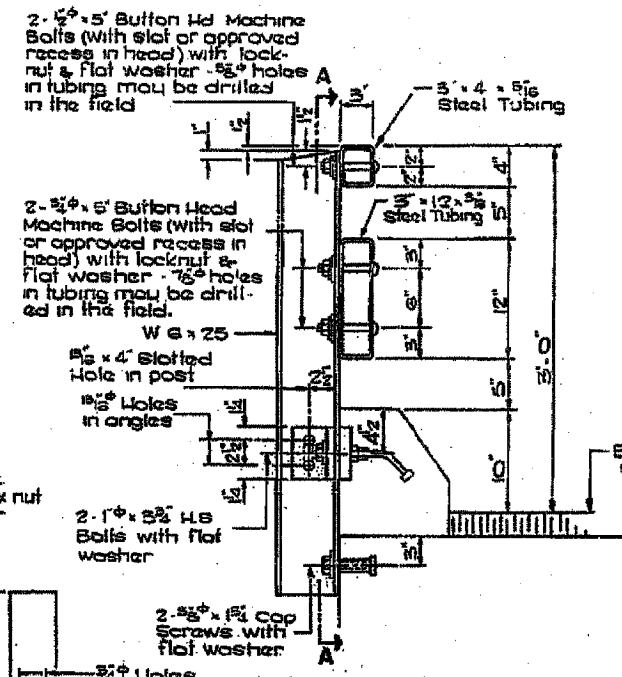
RAIL POST SPACING

NOTES:

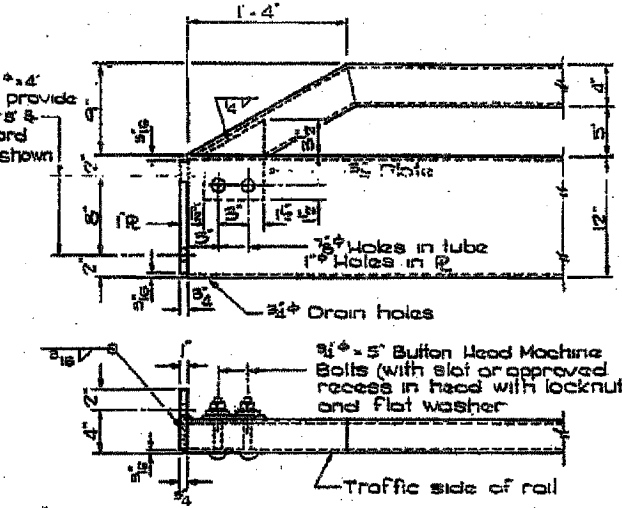
- Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B or of A-501 structural steel tubing.
- All other steel shapes and plates shall conform to the requirements of ASTM designation M-103 except posts and angles shall conform to AASHTO M-223 Grade 50.
- Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A-507 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.
- All bolts, nuts, cap screws, washers & lock washers shall be galvanized in accordance with ASTM designation M-292.
- All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO designation M-111 & ASTM A-365. 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 linear foot for STEEL RAILING, TYPE T.
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- The portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Sec. 714.05 Type B or place 1/2" fabric bearing pad between the post and concrete.
- The 1" high strength bolts used to connect the 6" x 4" angles to the posts shall be tightened in accordance with Article 502.4 (g) (2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit & given an additional 1/2 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.
- For multi-span bridges, sufficient 6" x 6" x 1/2" galvanized steel shims shall be provided to align rail between adjacent spans cost incidental to steel railing.



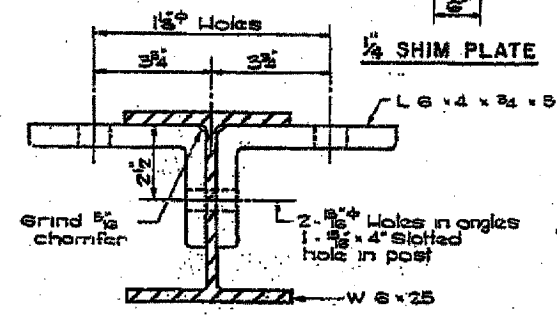
SECTION A-A



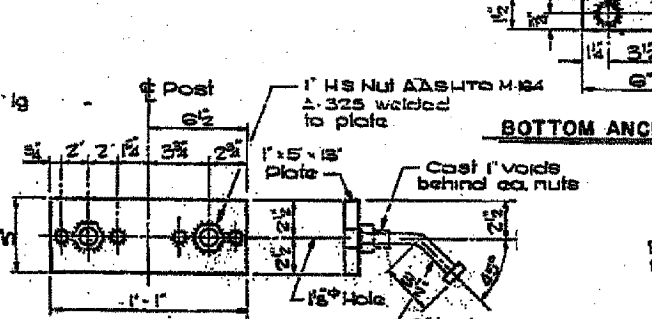
SECTION AT RAIL POST



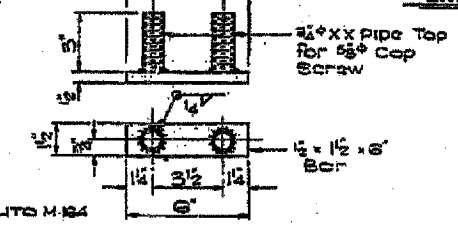
END OF RAIL DETAILS



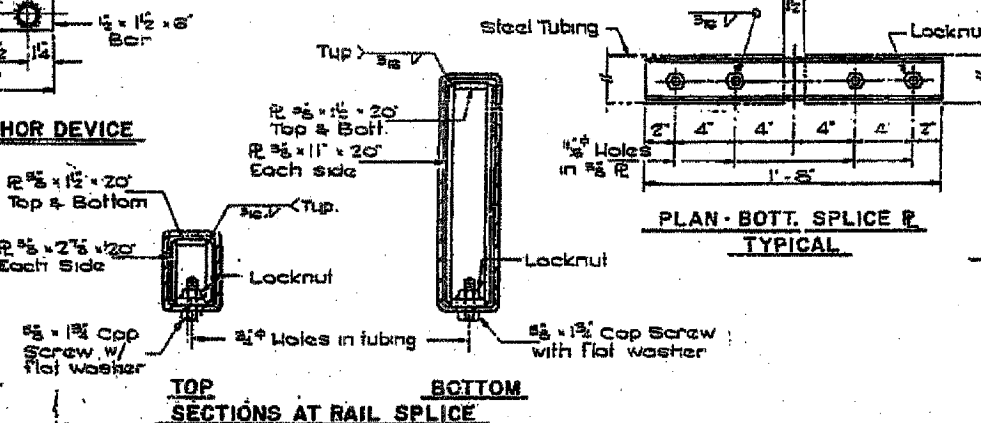
SECTION B-B



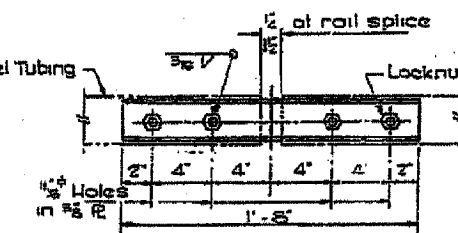
TOP ANCHOR PLATE



BOTTOM ANCHOR DEVICE



TOP AND BOTTOM SECTIONS AT RAIL SPLICE



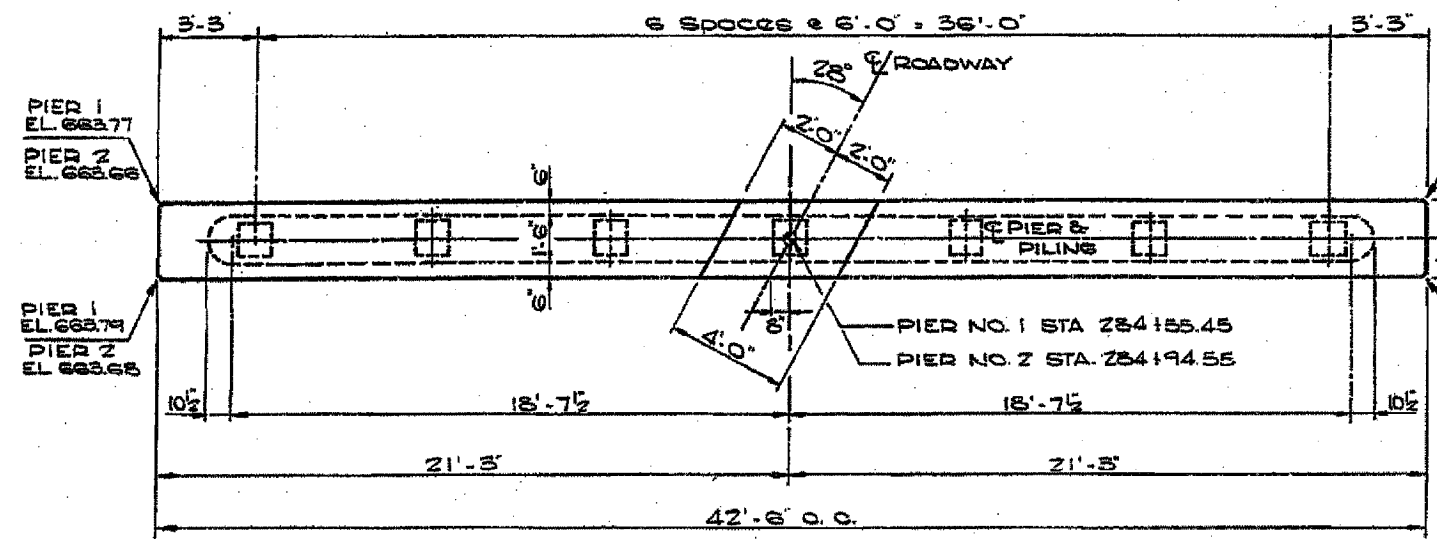
PLAN - BOTT. SPLICE P. TYPICAL

BILL OF MATERIAL

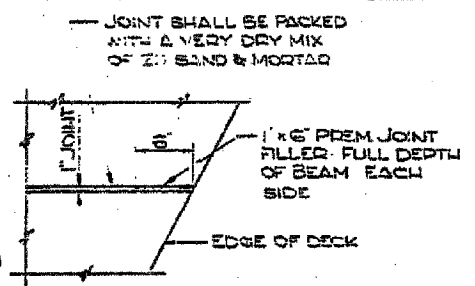
ITEM	QUANT.
Steel Railing, Type T L.F.	234

STEEL RAILING, TYPE T
SECTION 123 BR-1
E.A. ROUTE 840
IROQUOIS COUNTY

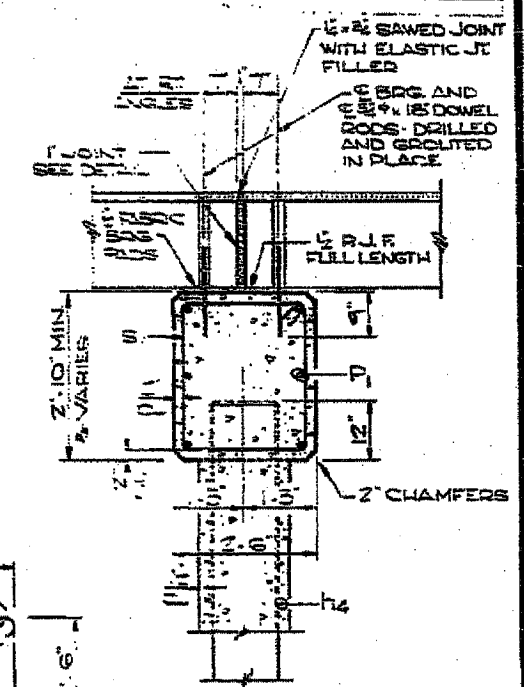
123 BR-1	2' 16"
2' 10" IROQUOIS	2' 16"



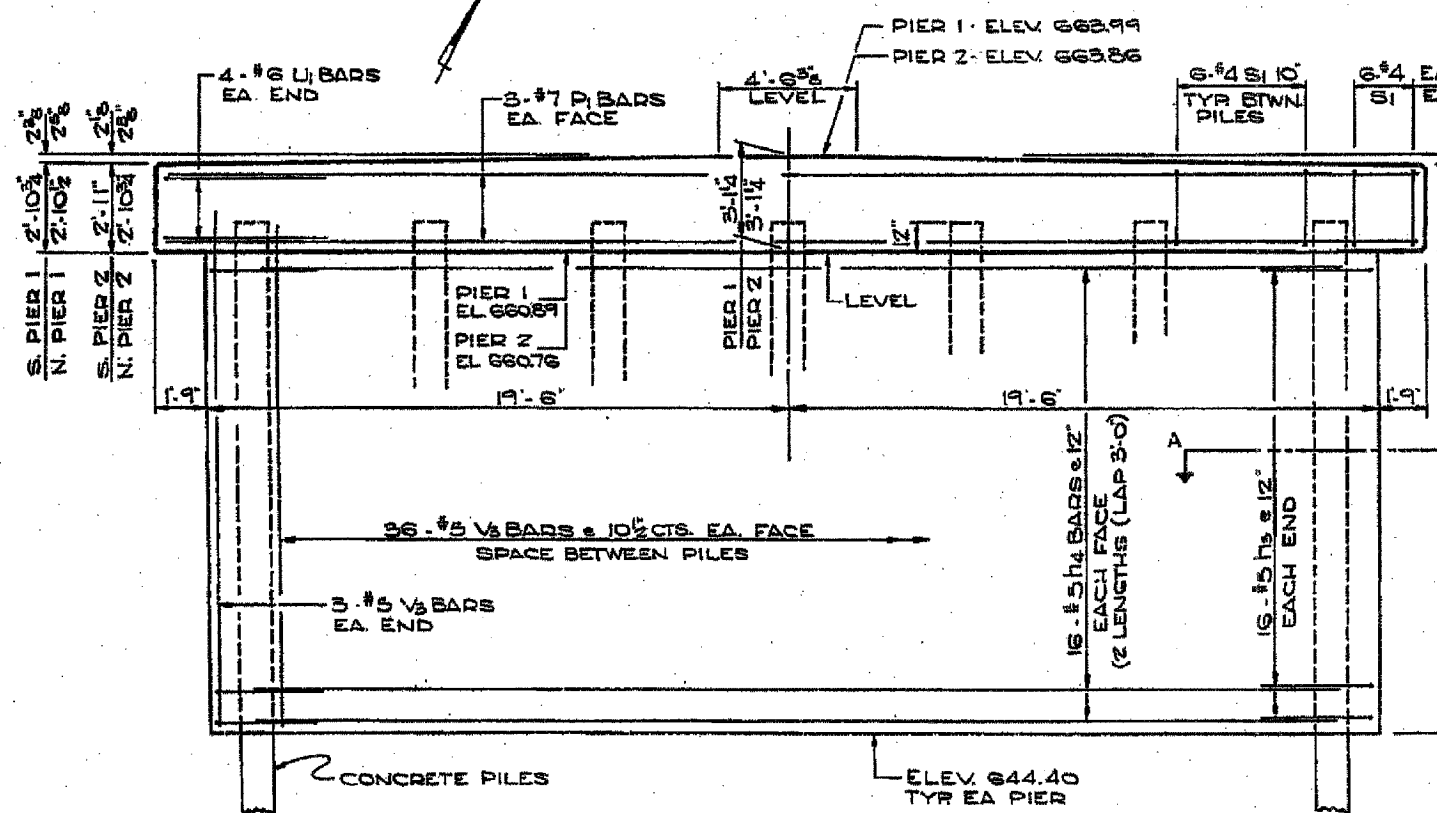
PLAN VIEW



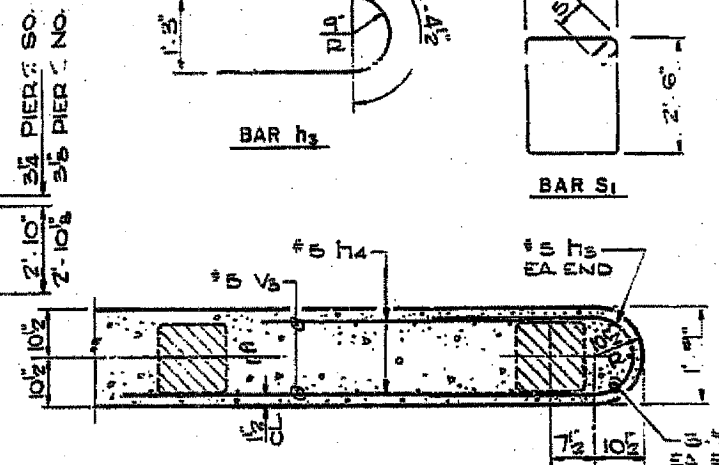
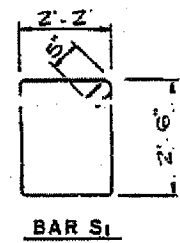
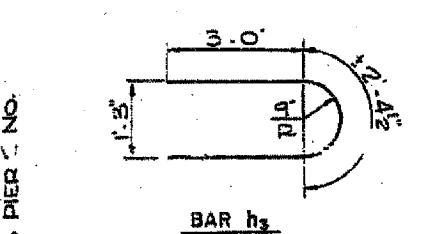
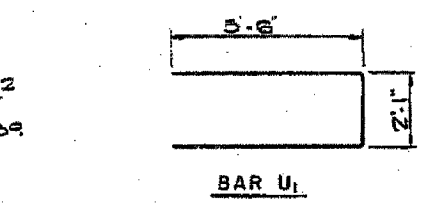
DECK JOINT DETAIL



SECTION THRU PIER



ELEVATION



SECTION A-A

PILE DATA

TYPE	CONCRETE
CAPACITY	42 TON
EST. LENGTH	44 FEET
NO. REQ'D. PIER 1	6+1 TEST PILE
PIER 2	7

SUM. OF MATERIAL - 2 PIERS

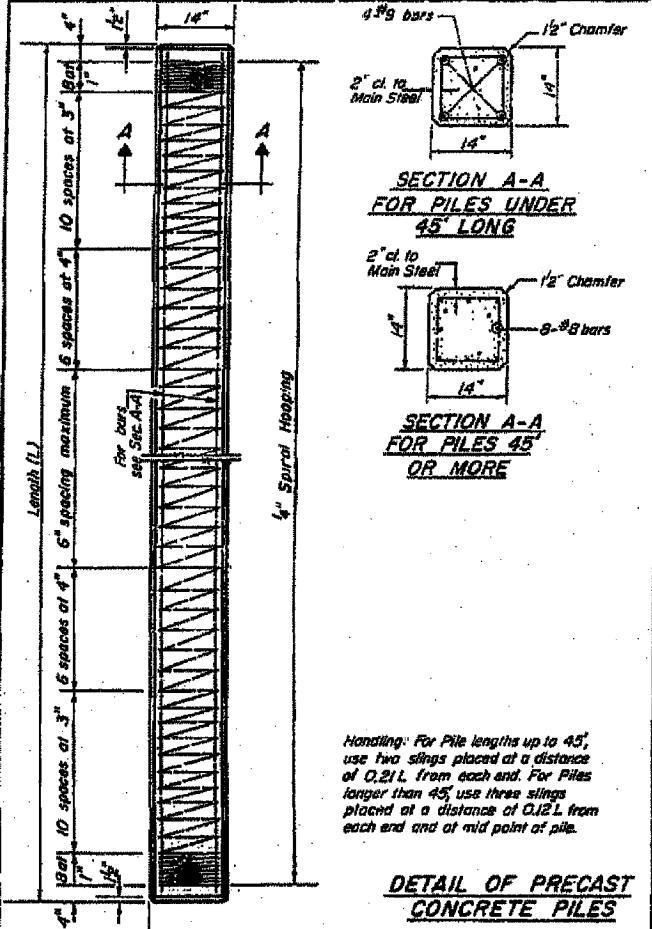
BAR NO.	SIZE	LENGTH	SHAPE
U ₁	#4	8'-5"	U
H ₅	#4	19'-6"	H
P ₁	#7	42'-0"	P
S ₁	#4	10'-2"	S
V ₅	#6	13'-1"	V
V ₅	#5	17'-8"	V
CLASS X CONCRETE CUYS			92.2
REINFORCEMENT BARS LBS			6670
CONCRETE PILES LIN. FT.			572
TEST PILES (CONCRETE) EA.			1
STRUCTURE EXCAV. CUYS			50

NOTE
FORMS FOR THE PIER STEM DO NOT HAVE TO BE DEWATERED IF CONSTRUCTED TIGHTLY AND IF CONCRETE PLACED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 504.12 OF THE STANDARD SPECIFICATIONS.

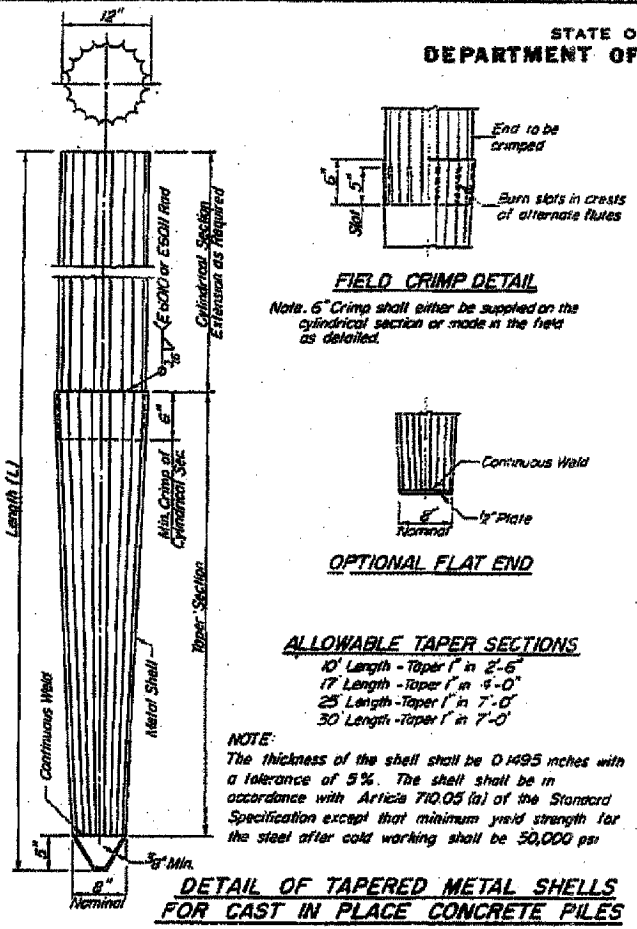
PIER DETAILS
SECTION 123 BR-1
F.A. ROUTE 840
IROQUOIS COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

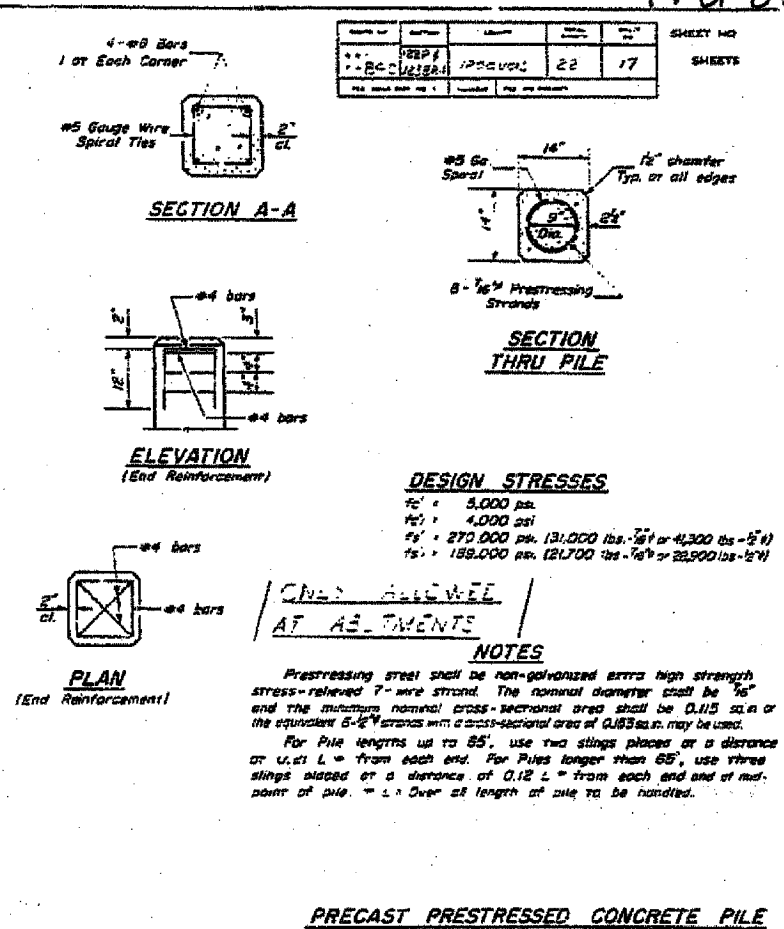
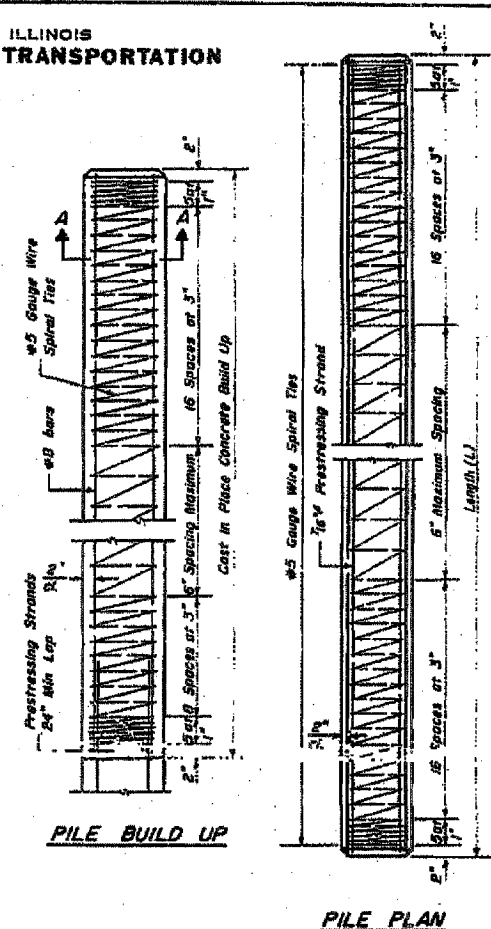
DESIGNED BY	EXAMINED BY	DATE	SHEET NO.
BC-1212A	IP-2001	22	17
SHEETS			



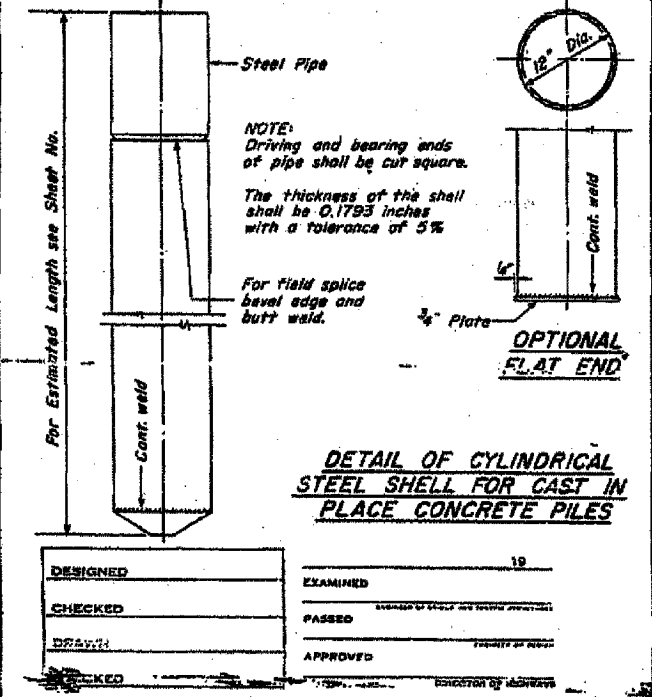
DETAIL OF PRECAST CONCRETE PILES



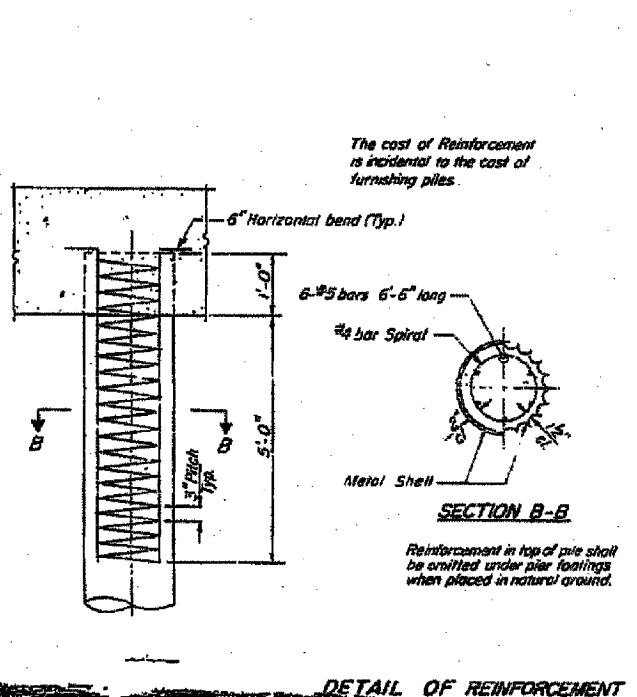
DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



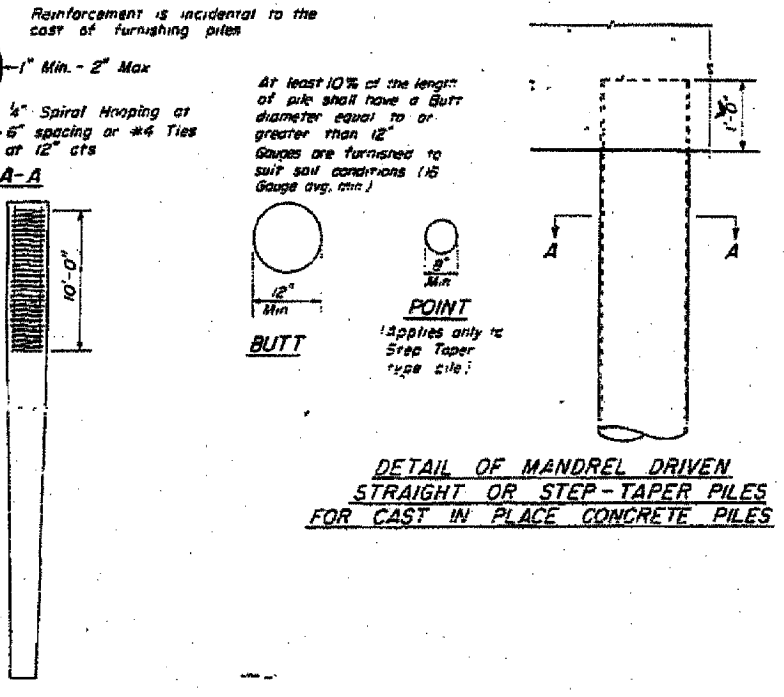
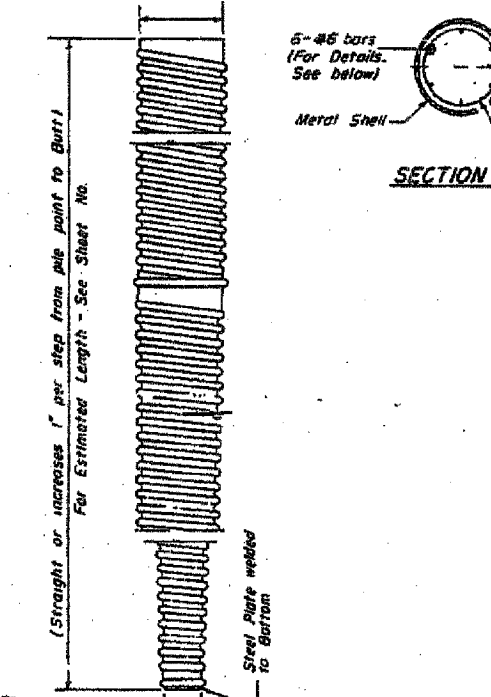
PRECAST PRESTRESSED CONCRETE PILE



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



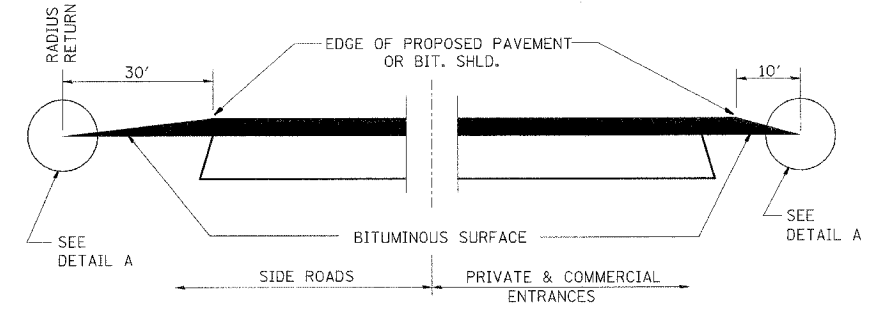
DETAIL OF REINFORCEMENT FOR METAL SHELLS



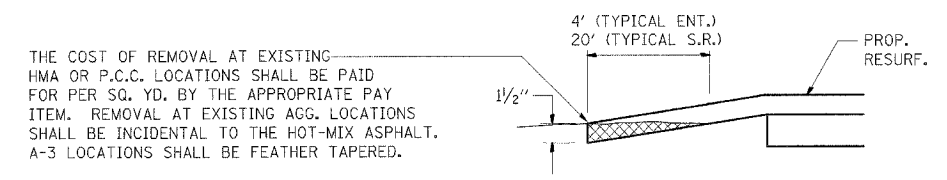
DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

DESIGNED	EXAMINED	19
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	45
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 66612				

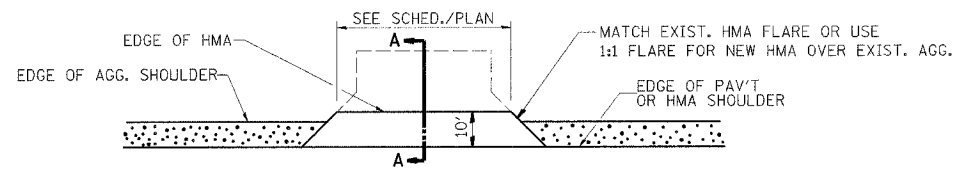


SECTION A-A
DETAILS AT ENTRANCES & SIDE ROADS

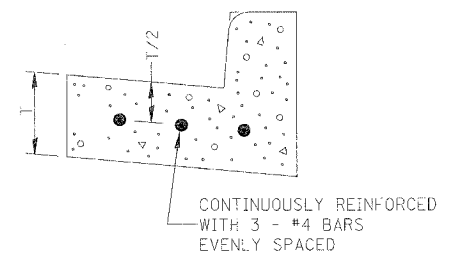


THE COST OF REMOVAL AT EXISTING HMA OR P.C.C. LOCATIONS SHALL BE PAID FOR PER SQ. YD. BY THE APPROPRIATE PAY ITEM. REMOVAL AT EXISTING AGG. LOCATIONS SHALL BE INCIDENTAL TO THE HOT-MIX ASPHALT. A-3 LOCATIONS SHALL BE FEATHER TAPERED.

DETAIL A

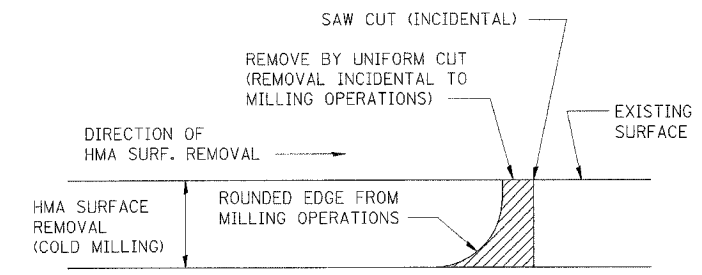


PLAN AT PRIVATE & COMMERCIAL ENTRANCES
(DO NOT RESURFACE FIELD ENTRANCES)



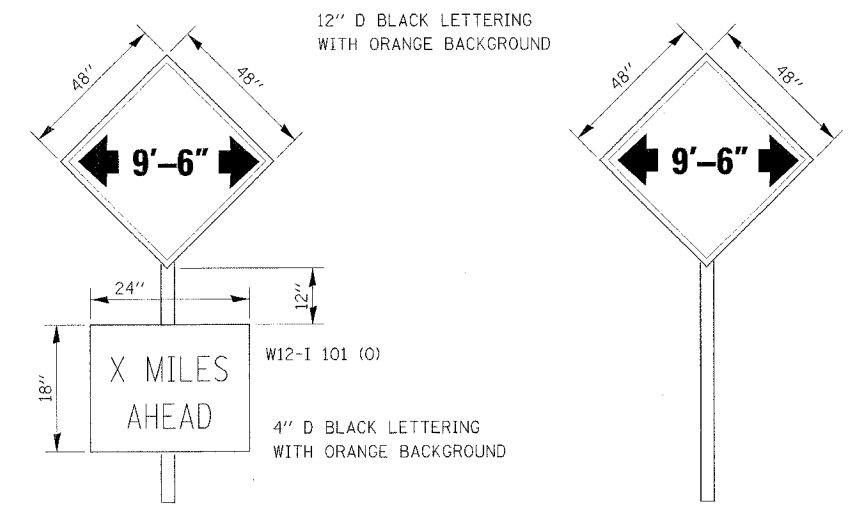
REINFORCEMENT SHALL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CC&G.

REINFORCEMENT DETAIL
FOR
COMBINATION CONCRETE
CURB AND GUTTER
TYPE B-6.24



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.

HOT-MIX ASPHALT DETAIL AT BUTT JOINTS



- LOCATIONS:
- IL 49 NORTHBOUND AND SOUTHBOUND IN ADVANCE OF PROJECT
 - WEST HARRISON AVENUE EASTBOUND WITH DIRECTIONAL ARROWS
 - CLAYTONVILLE/GOODWINE ROAD WESTBOUND WITH DIRECTIONAL ARROWS

TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

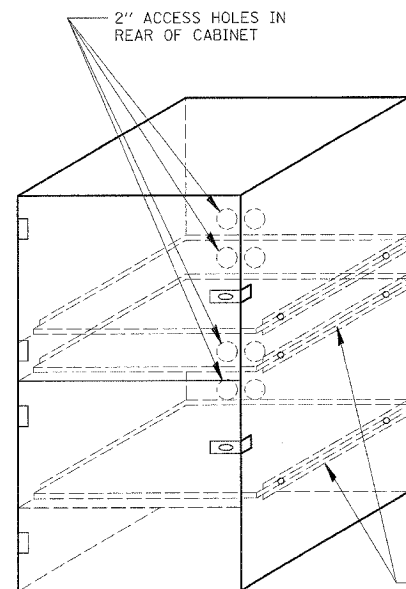
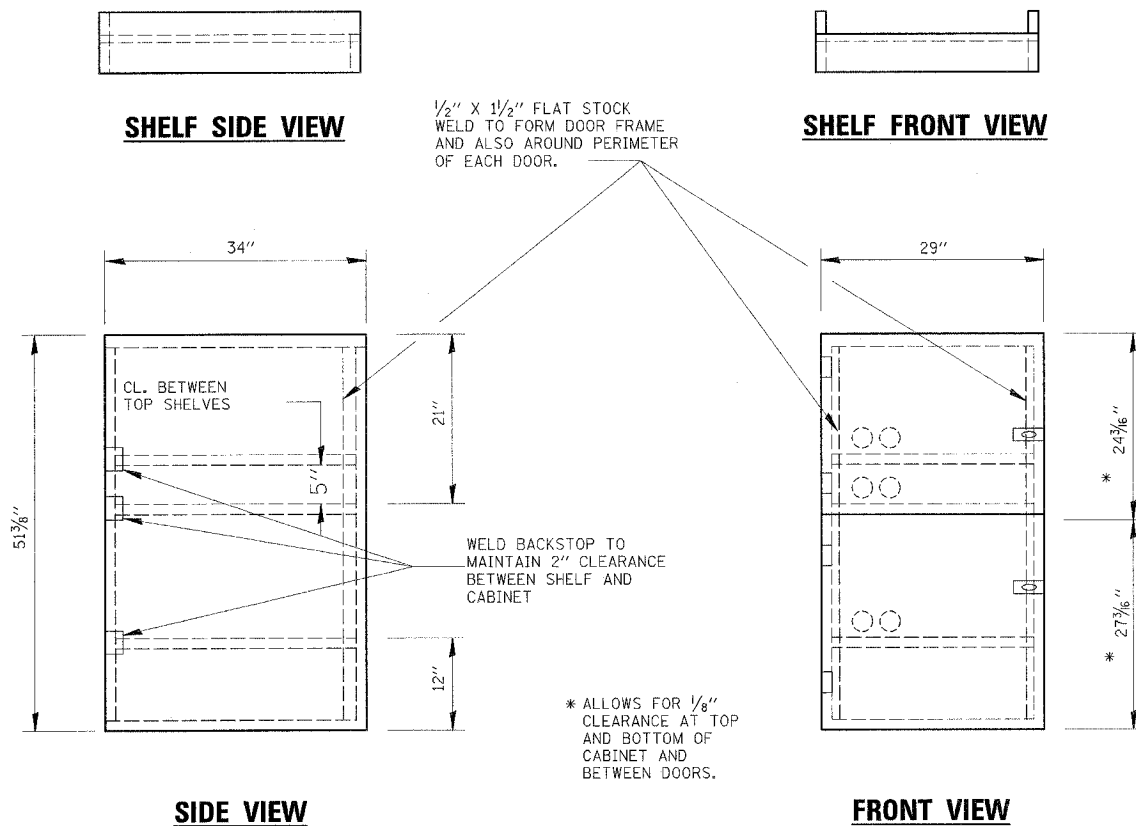
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

WIDTH RESTRICTION SIGNING DETAILS

 Excellence through Ownership 200 West Front Street Wheaton, IL 60187	REVISIONS NAME DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49)
	SCALE: NOT TO SCALE DATE: AUGUST 7, 2007	DETAILS

PLOT SCALE: 1/2"=1'-0"
 PLOT TIME: 3:43:51 PM
 PLOTTED BY: J. Tracey
 A:\2007\2007\road\Design\2007_DistDet_Dwg.dgn
 MODEL NAME: DETOUT



LOCKABLE COMPUTER CABINET

- 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.

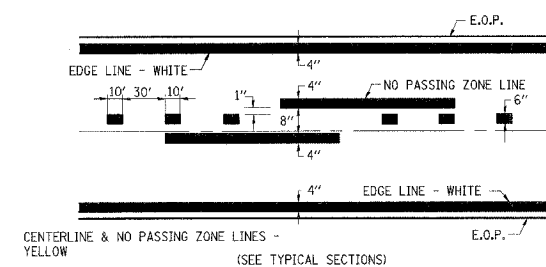
REMOVAL OF EXISTING HMA SHOULDER TO BE PAID FOR AS PAVED SHOULDER REMOVAL.

NEAT LINE REMOVAL TO BE CUT WITH AN ASPHALT CUTTING WHEEL ATTACHED TO A GRADER OR SIMILAR METHOD APPROVED BY THE ENGINEER.

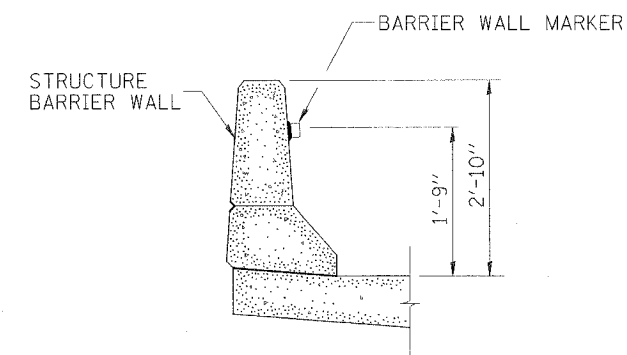
EXISTING RESURFACING

EXIST. PAV'T.

REMOVAL OF EXISTING HMA SHOULDER



PAVEMENT MARKING



BARRIER WALL MARKER

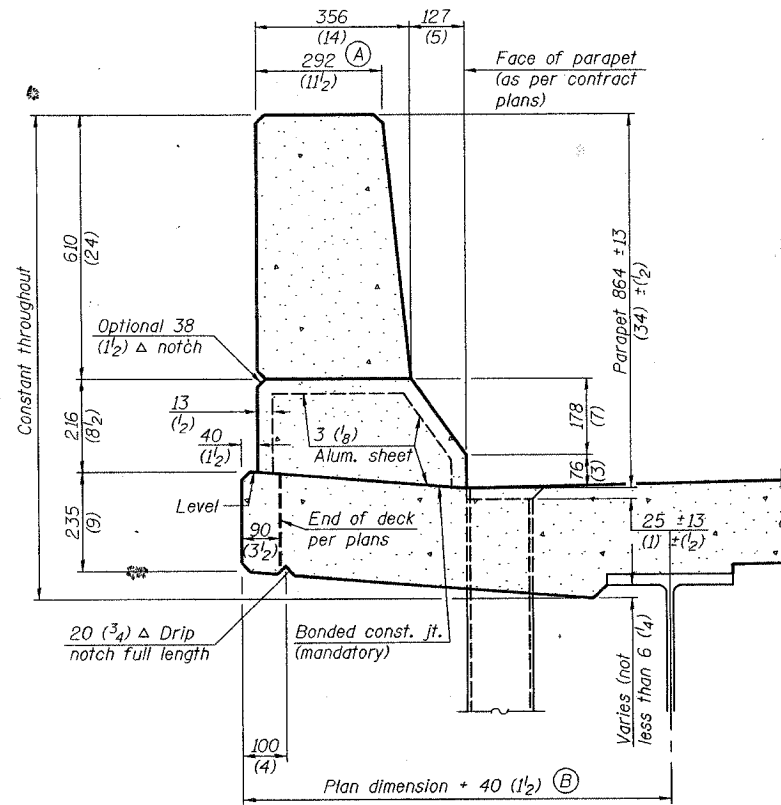
<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.P. ROUTE 840 (IL-49)
	NAME	DATE	
DETAILS		SCALE: NOT TO SCALE DATE: AUGUST 7, 2007	DRAWN BY: JMC CHECKED BY: DWB

PLOT SCALE: 1:20
 PLOT DATE: 8/7/2007
 PLOT TIME: 3:43:54 PM
 PLOT FILE: K:\V\2007\road\design\20070807_Dist04.dwg
 MODEL NAME: Dist04.dwg

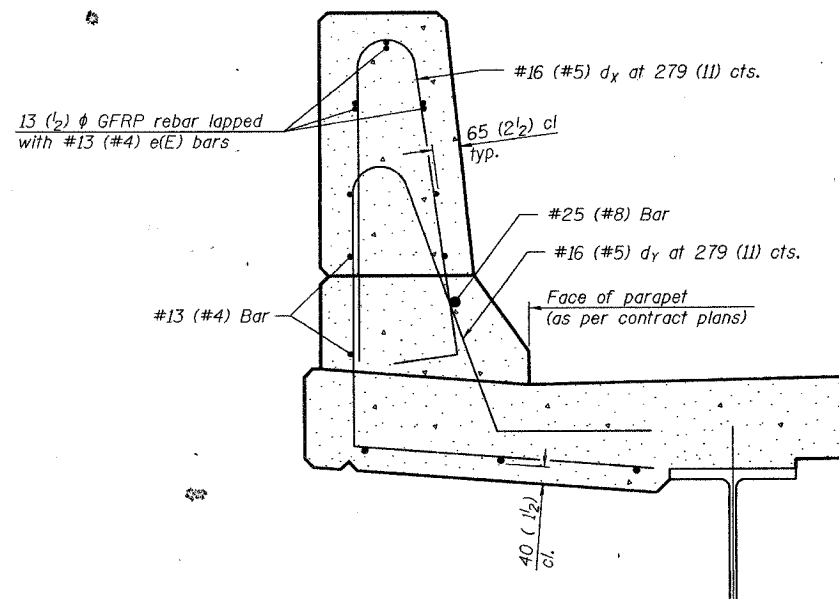
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
F.A.P. 840	123 BR-2	IROQUOIS	67	46A	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

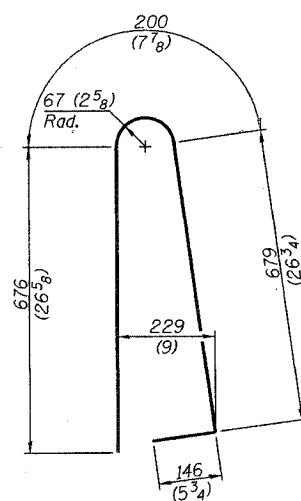
Contract # 66612



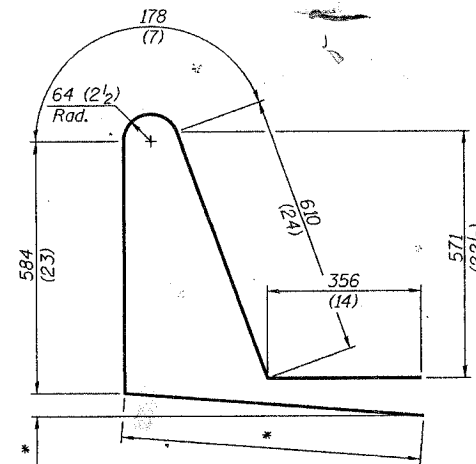
SECTION
(Showing dimensions)



SECTION
(Showing required reinforcement)

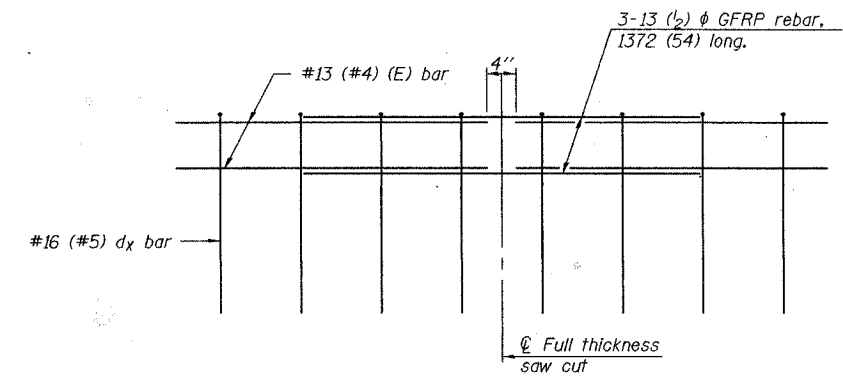


BAR dx(e)



BAR dx(e)

* Per contract plans



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section)

GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B= 0.0422 m³/m (.0165 cu. yds./ft.) of parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all other locations. Adjust/add joint locations to maintain 3 to 6 meter (10 to 20 foot) spacing.

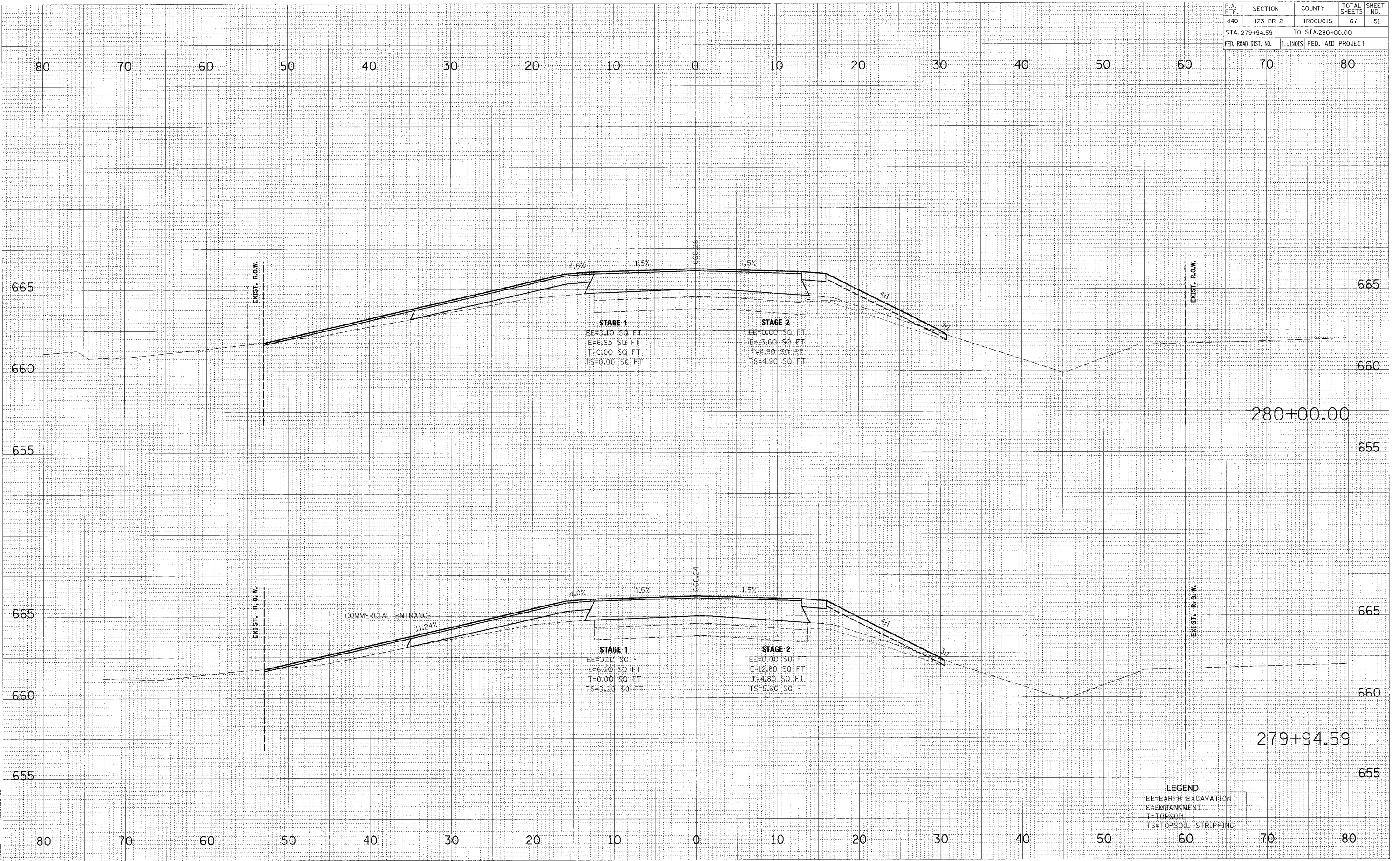
**CONCRETE PARAPET
SLIPFORMING OPTION**

CONTRACT NO. 66612				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	51
STA. 279+94.59		TO STA. 280+00.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

PLOT DATE = 8/7/2007
 PLOT SCALE = 1"=40'
 USER NAME = JP-ace
 MODEL = XS-SHEET 5



LEGEND

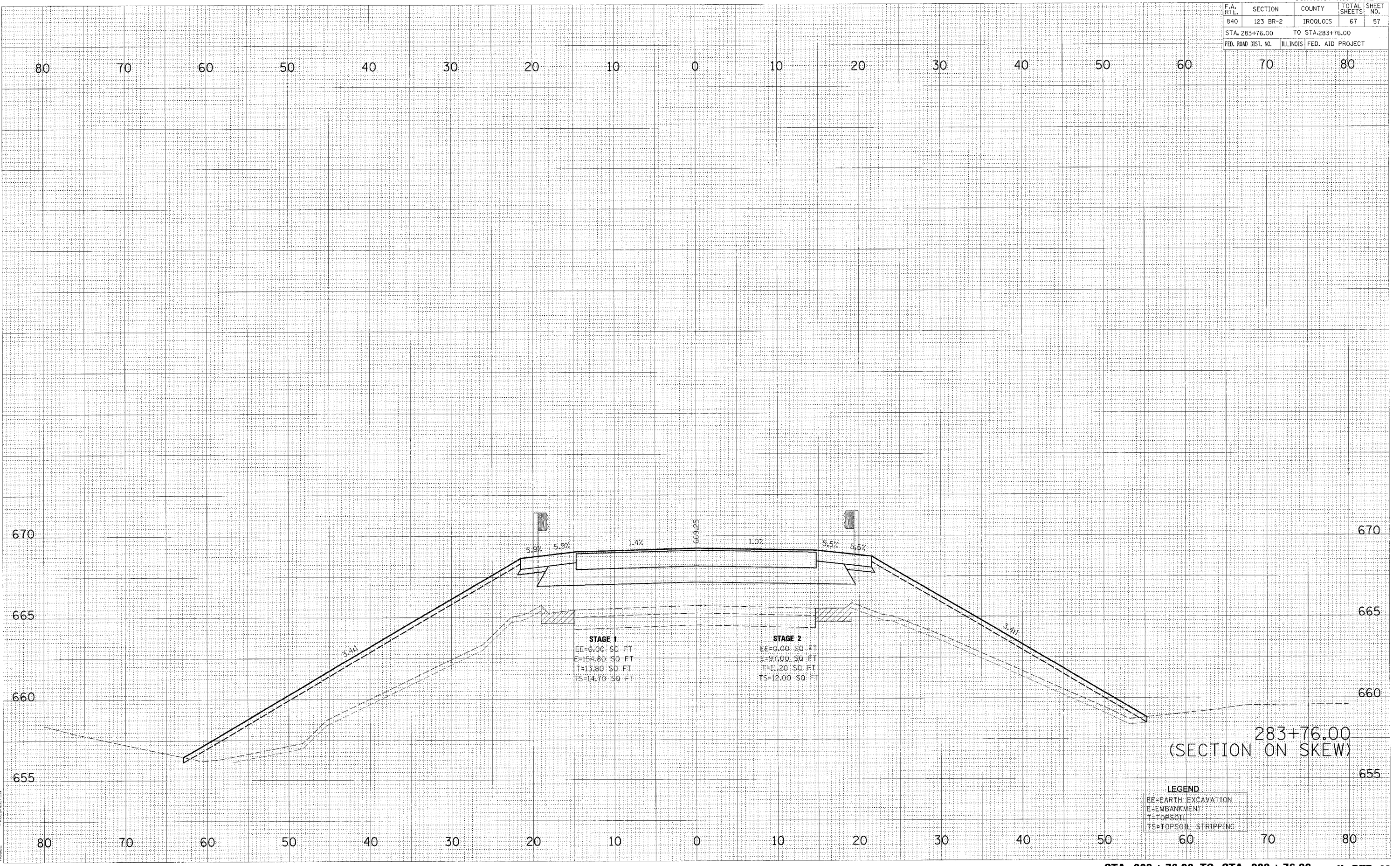
EE=EARTH EXCAVATION
E=EMBANKMENT
T=TOPSOIL
TS=TOPSOIL STRIPPING

CONTRACT NO. 66612				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	JROQUOIS	67	57
STA. 283+76.00 TO STA. 283+76.00				
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

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

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

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 USER NAME = jparson
 MODEL = XS_SHEET_11

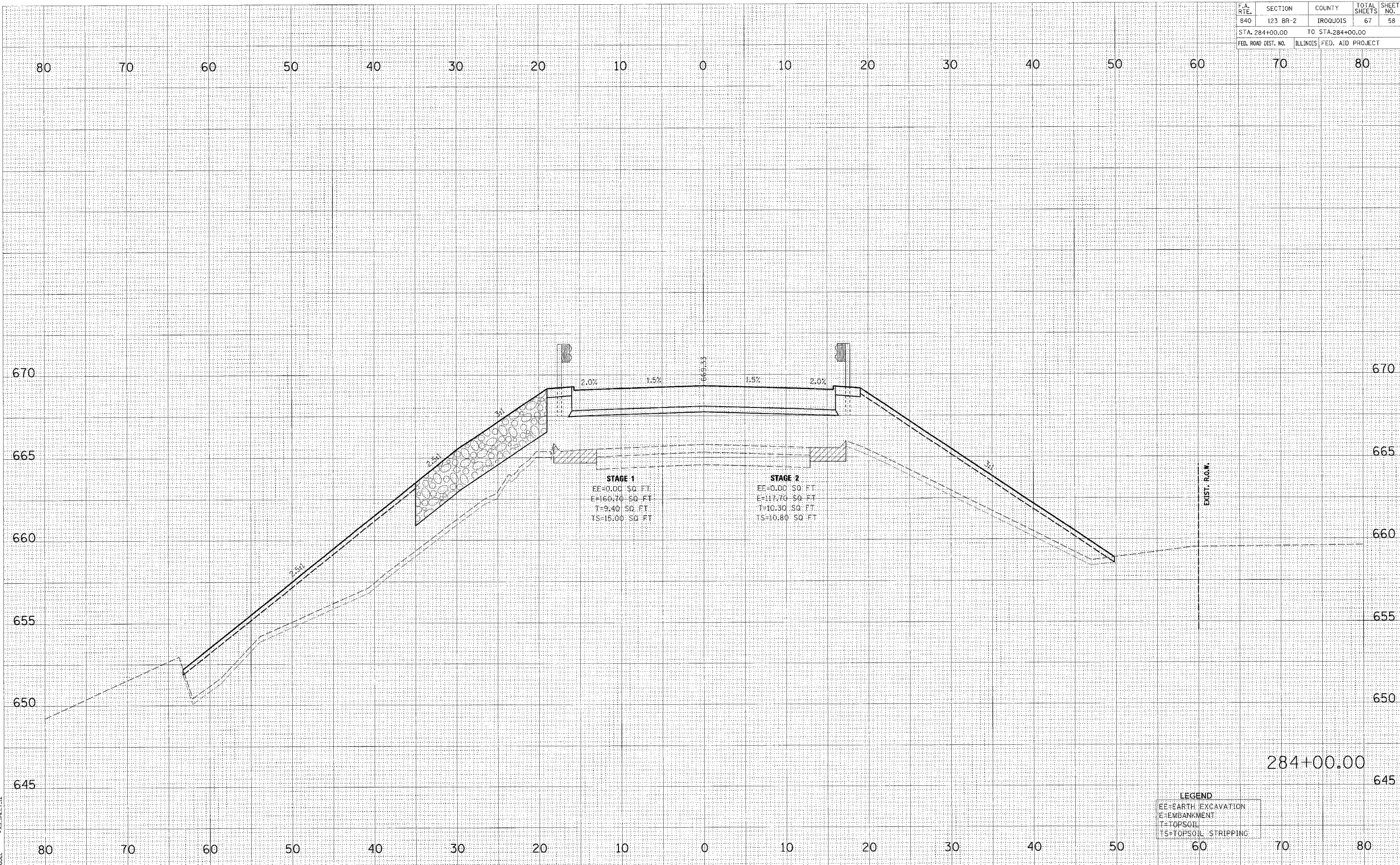


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	58
STA. 284+00.00		TO STA. 284+00.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

DATE	BY

DATE	BY

PLOT DATE = 8/7/2007
 FILE NAME = K:\1208287\Cadd\Gas\280287_41\MS256.dwg
 USER NAME = TP-robin
 MODEL = XS-SHEET.L2



LEGEND

EE	= EARTH EXCAVATION
E	= EMBANKMENT
T	= TOPSOIL
TS	= TOPSOIL STRIPPING

CONTRACT NO. 66612				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
B40	123 BR-2	TROQUOIS	67	63
STA. 287+00.00 TO STA. 287+47.72				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

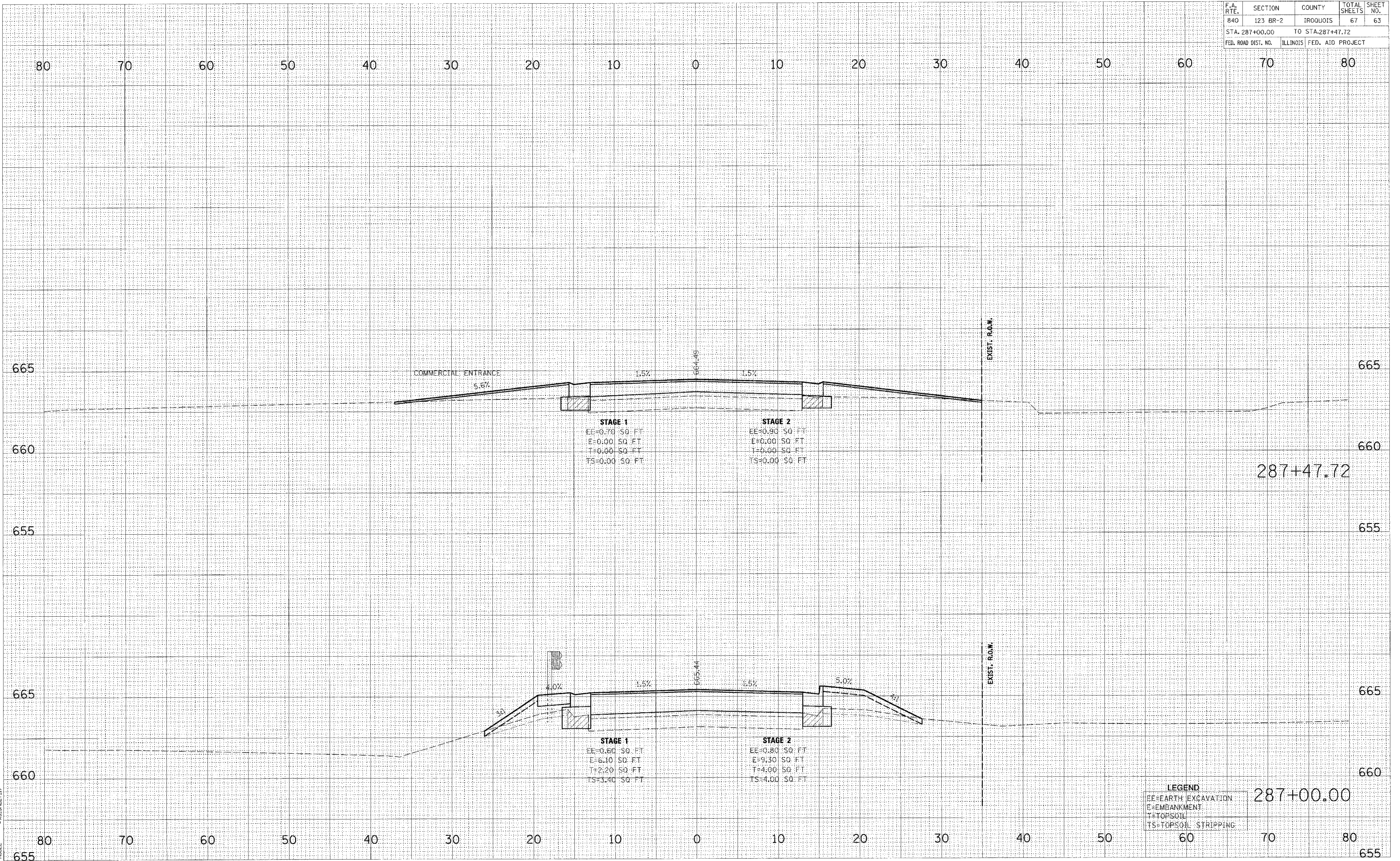
BY	DATE

NO.	AREAS CHECKED

BY	DATE

NO.	AREAS CHECKED

PLOT DATE = 8/7/2007
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 USER NAME = jpeaney
 MODEL = XS_SHEET_17



LEGEND

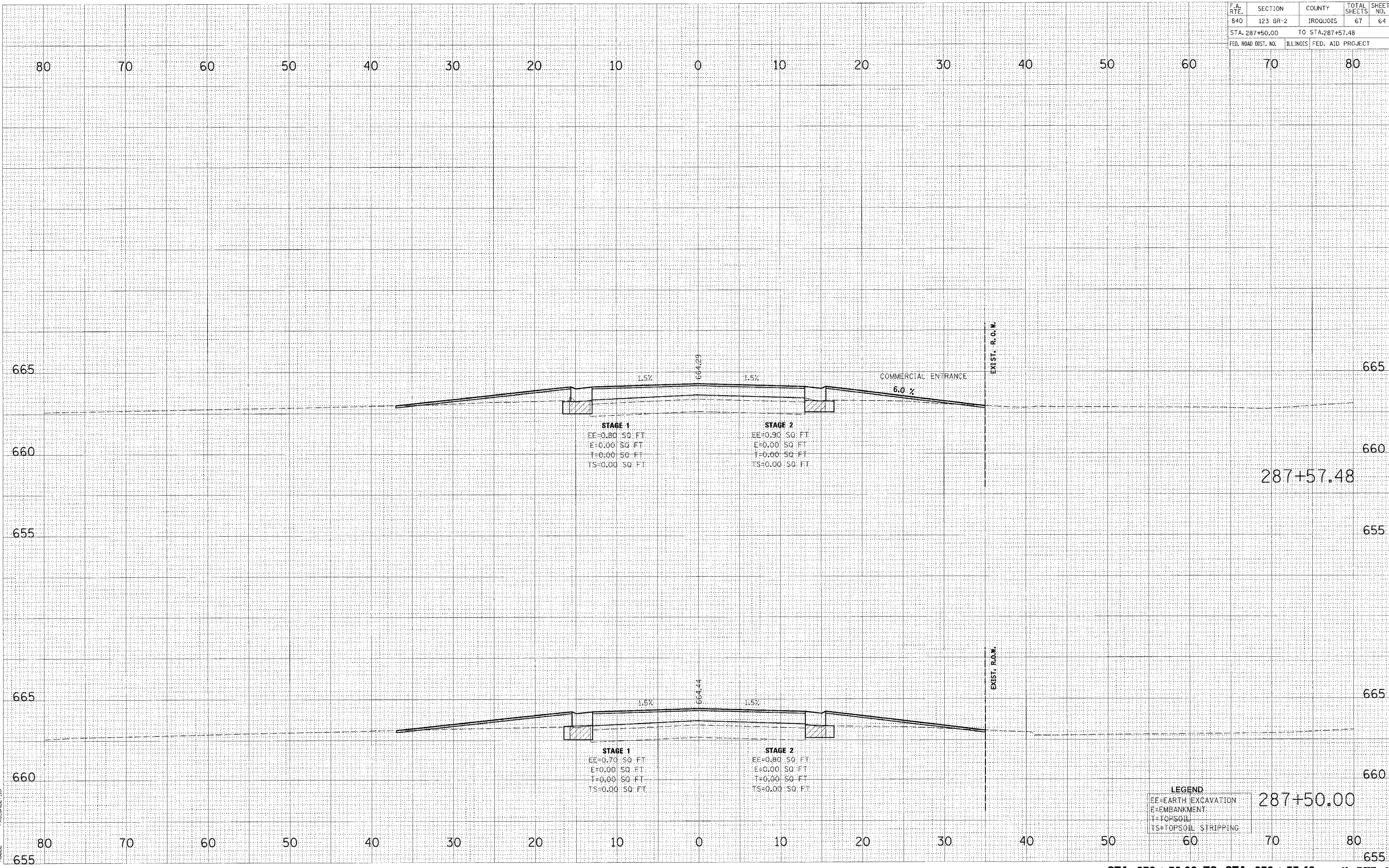
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E	= EMBANKMENT
T	= TOPSOIL
TS	= TOPSOIL STRIPPING

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
640	123 BR-2	IROQUOIS	67	64
STA. 287+50.00		TO STA. 287+57.48		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SKIPPED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

ORIGINAL SURVEY	DATE
SKIPPED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

PLOT DATE = 8/7/2007
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 MODEL = XS_SHEET_1B



LEGEND

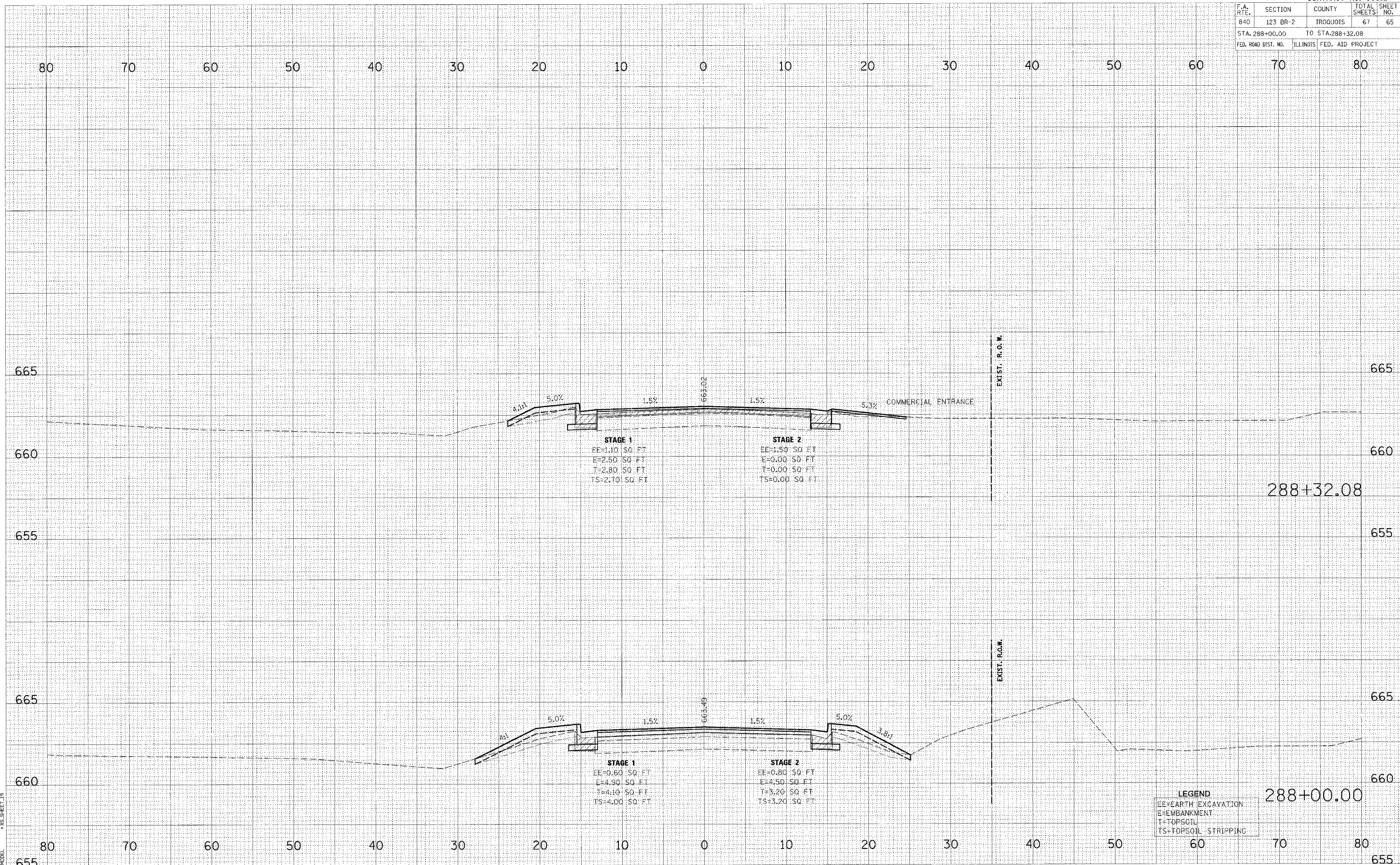
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E= EMBANKMENT
T= TOPSOIL
TS= TOPSOIL STRIPPING

CONTRACT NO. 66612				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	65
STA. 288+00.00 TO STA. 288+32.08				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	SUBMITTED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SUBMITTED	DATE
AREA	PLOTTED	
NO.	AREAS CHECKED	

PLOT DATE 8/7/2007
 FILE NAME k:\11200277\cadd\11200277.dwg
 PLOT SCALE 1/8"=1'-0"
 MODEL 11200277.dwg



LEGEND

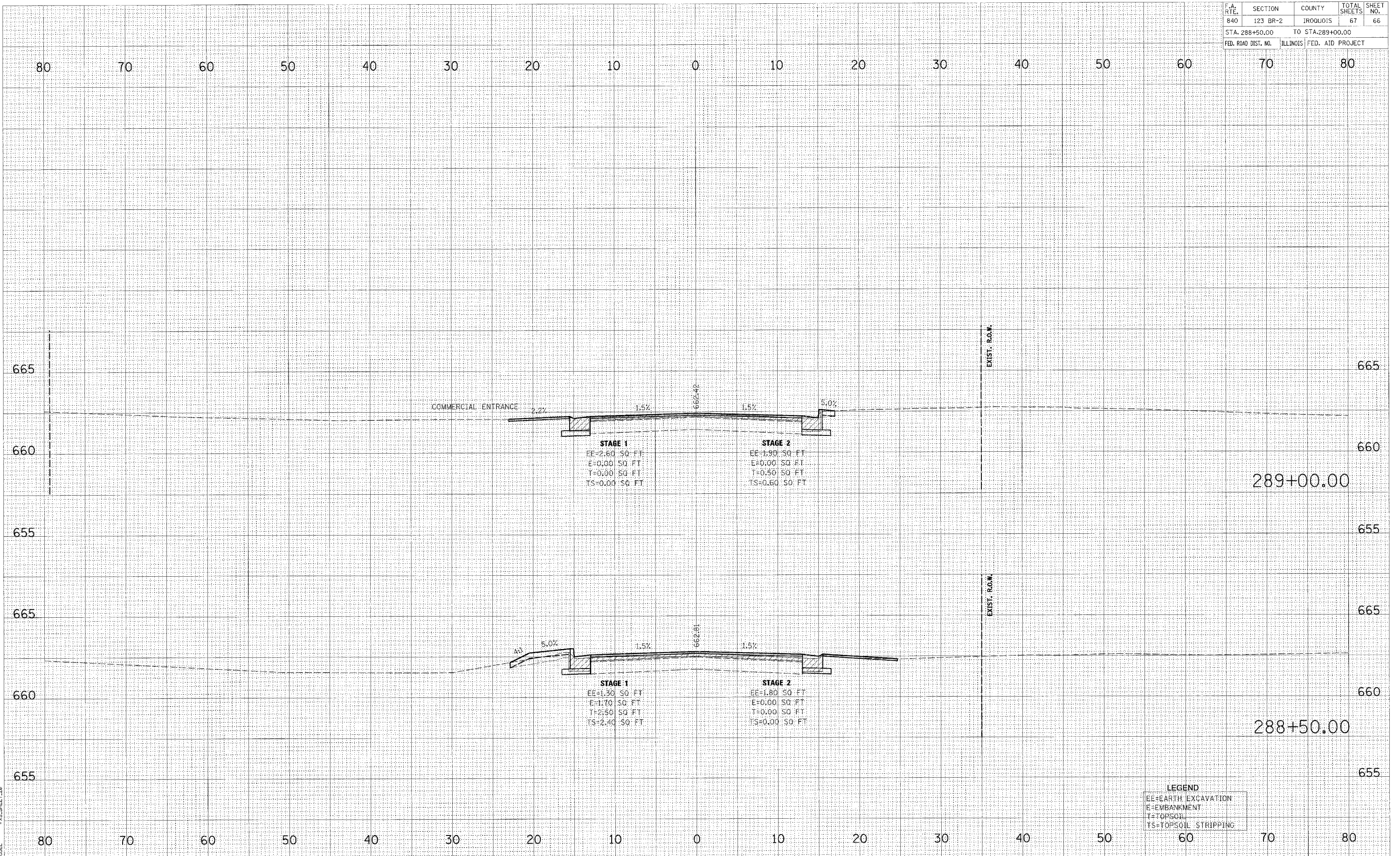
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E	= EMBANKMENT
T	= TOPSOIL
TS	= TOPSOIL STRIPPING

CONTRACT NO. 66612				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	123 BR-2	IROQUOIS	67	66
STA. 288+50.00 TO STA. 289+00.00				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

DATE	
BY	
NO.	
SAVED	
PLotted	
DATE	
AREAS CHECKED	

DATE	
BY	
NO.	
SAVED	
PLotted	
DATE	
AREAS CHECKED	

PLOT DATE = 8/7/2007
 FILE NAME = H:\1200237\cadd\Geo\288237.dwg
 USER NAME = JTP
 MODEL = XS_SHEET_L28



LEGEND	
EE	= EARTH EXCAVATION
E	= EMBANKMENT
T	= TOPSOIL
TS	= TOPSOIL STRIPPING

