

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. STATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	1
ILLINOIS CONTRACT NO. 60M98				

*26+2 = 28 total pages

D-91-204-11

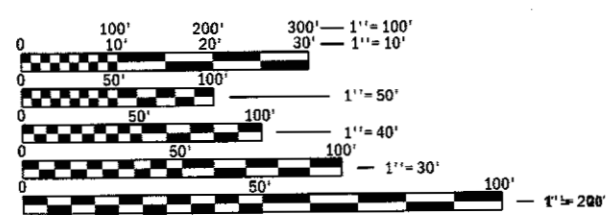
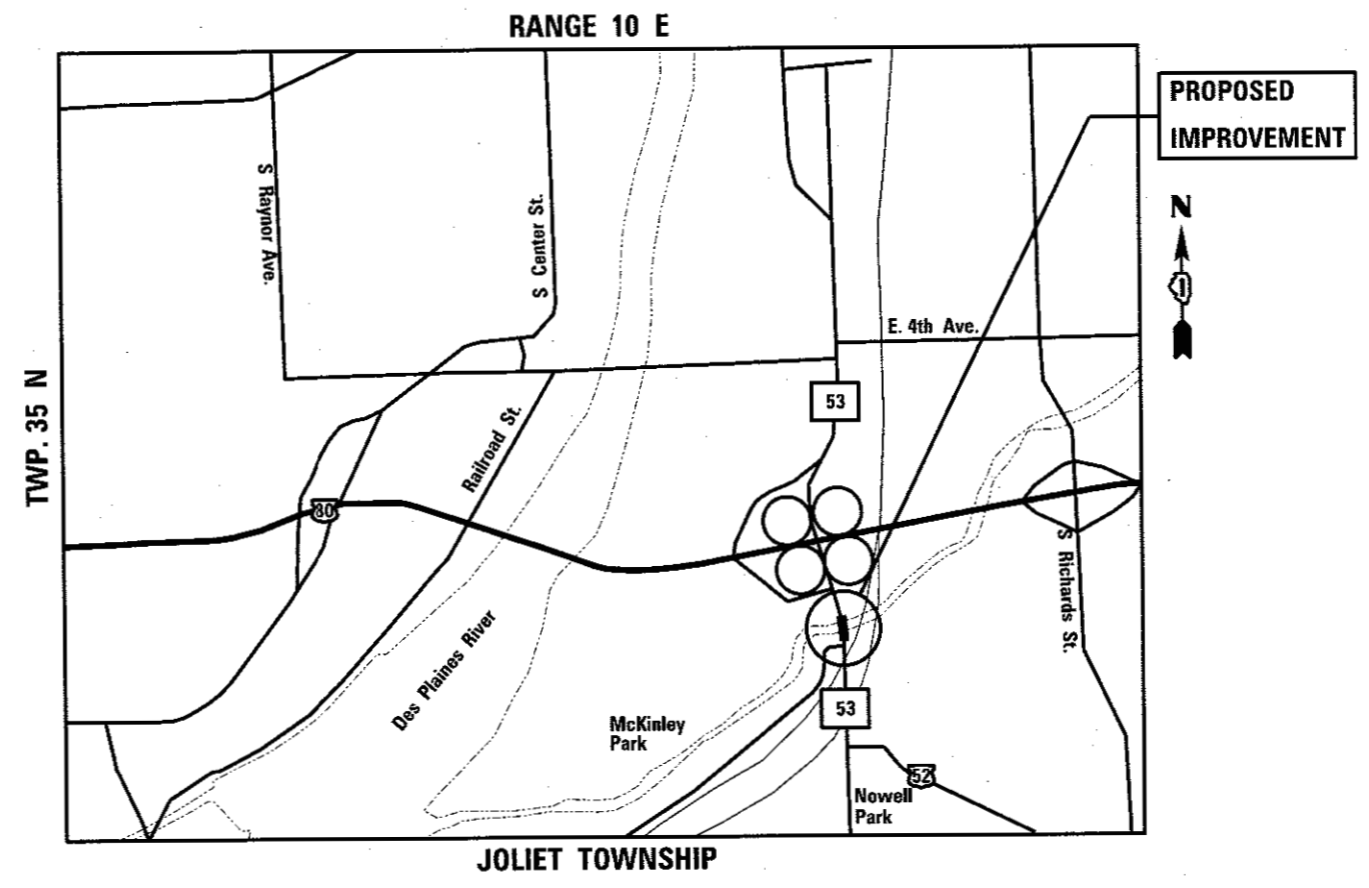
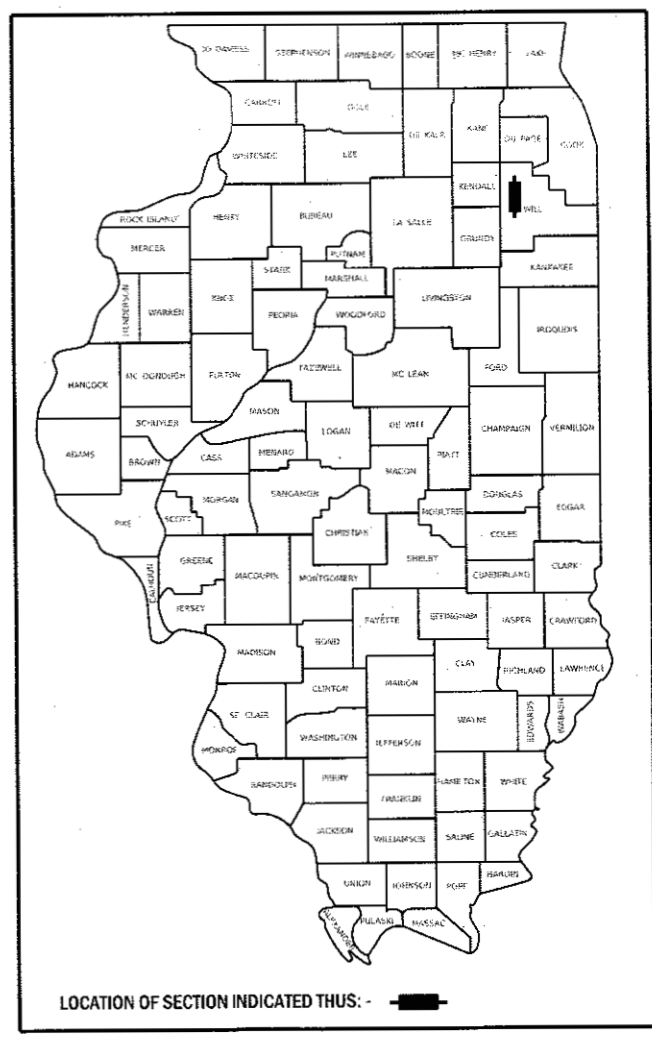
FOR INDEX OF SHEETS, SEE SHEET NO.

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 846 (US 52 /IL 53)
OVER HICKORY CREEK
SECTION 99-4-B-1
BRIDGE DECK OVERLAY & JOINT REPAIR (SN 099-0083)
WILL COUNTY
PROJECT NHPP-0846(027)
C-91-204-11

EXISTING ADT = 26,400 (2015)
POSTED SPEED LIMIT = 40 MPH

THIS PROJECT IS LOCATED IN THE
CITY OF JOLIET



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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER JEAN ALAIN MIDY (847) 221-3056
PROJECT MANAGER ISSAM RAYYAN (847) 705-4178

GROSS LENGTH = 207.32 FT. = 0.039 MILE
NET LENGTH = 207.32 FT. = 0.039 MILE

CONTRACT NO. 60M98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 27 20 17
Anthony J. Quigley / JR REGIONAL ENGINEER
Aug 18 20 17
Maureen M. Adair PE / JS ENGINEER OF DESIGN AND ENVIRONMENT
Aug 18 20 17
Tracie A. [Signature] DIRECTOR OF PROGRAM DEVELOPMENT

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OF THE STATE OF ILLINOIS

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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	MAINTENANCE OF TRAFFIC STAGING SECTIONS
5	STAGE 1 MAINTENANCE OF TRAFFIC
6	STAGE 2 MAINTENANCE OF TRAFFIC
7	PROPOSED PAVEMENT MARKINGS
8-19B	STRUCTURE DRAWINGS
20	BUTT JOINT AND HMA TAPER
21	TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS AND DRIVEWAYS
22	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
23	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
24	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
25	PAVEMENT MARKING LETTERS & SYMBOLS FOR TRAFFIC STAGING
26	ARTERIAL ROAD INFORMATION SIGN

STATE STANDARDS


STANDARD NO.	DESCRIPTION
782006	REFLECTOR MARKER AND MOUNTING DETAILS
701606-10	URBAN LANE CLOSURE MULTILANE, 2W WITH MOUNTABLE MEDIAN
701901-06	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATIONS OF TYPE A AND B METAL POSTS (FOR SIGNS AND MARKERS)

GENERAL NOTES - ROADWAY

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED.)
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE LOCAL MUNICIPALITY.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- ALL DAMAGE TO EXISTING PAVEMENT MARKING OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
- WHEN MILLED PAVEMENT IS OPENED TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT). IN ACCORDANCE WITH "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREA.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD (FOR FUTURE REFERENCES), ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL STRIPING SHALL BE AS DIRECTED BY THE ENGINEER.
- THE ENGINEER SHALL CONTACT LAWRENCE HILL TRAFFIC FIELD ENGINEER AT (815) 415-6475 A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE "ADVANCE WARNING SIGN DETAIL FOR ARTERIAL TRAFFIC" LOCATED IN THE SPECIAL PROVISIONS FOR "TEMPORARY INFORMATION SIGNING FOR LANE CLOSURES" IS APPLICABLE ONLY TO ARTERIAL ROADS.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM DISTRICT 1 BRIDGE INSPECTORS.
- SAW CUTTING OF PAVEMENTS, SHOULDERS, ETC., SHALL BE TO FULL DEPTH AND SHALL RESULT IN A CLEAN, STRAIGHT EDGE ON THE PORTION REMAINING. THE COST OF SAW CUTTING REMOVAL ITEMS SHALL BE INCLUDED IN THE UNIT PRICES OF THESE ITEMS.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATION SHALL NOT CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR QUANTITY ACTUALLY FURNISHED BASED AT THE UNIT PRICE BID FOR THE WORK.

GENERAL NOTES - TRAFFIC CONTROL & PROTECTION

- TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY OR REMOVE LANE CLOSURES OF CHANNELIZATION SHOWN IN THE PLANS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION WITHIN TWO HOURS FROM THE TIME OF NOTIFICATION.
- ALL TEMPORARY PAVEMENT MARKINGS PROPOSED WITHIN THE WORK AREA SHALL BE COMPLETED PRIOR TO THE CONSTRUCTION PHASE CHANGE.

 ABNA DESIGN FIRM REG. 184.002117	9901 S. Western Ave. Chicago, IL 60643 Ph. 773-881-4788 F: 773-239-3728	DESIGNED TPP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US 52 /IL53 OVER HICKORY CREEK SN. 099-0083	INDEX OF SHEETS, STANDARDS, AND GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED RJL	REVISED -	846				99-4-8-1	WILL	26	2	
	DRAWN JS	REVISED -	CONTRACT NO. 60M98								
	CHECKED TPP	REVISED -	ILLINOIS FED. AID PROJECT								
				SCALE: NONE	SHEET NO. OF SHEETS	STA.	TO STA.				

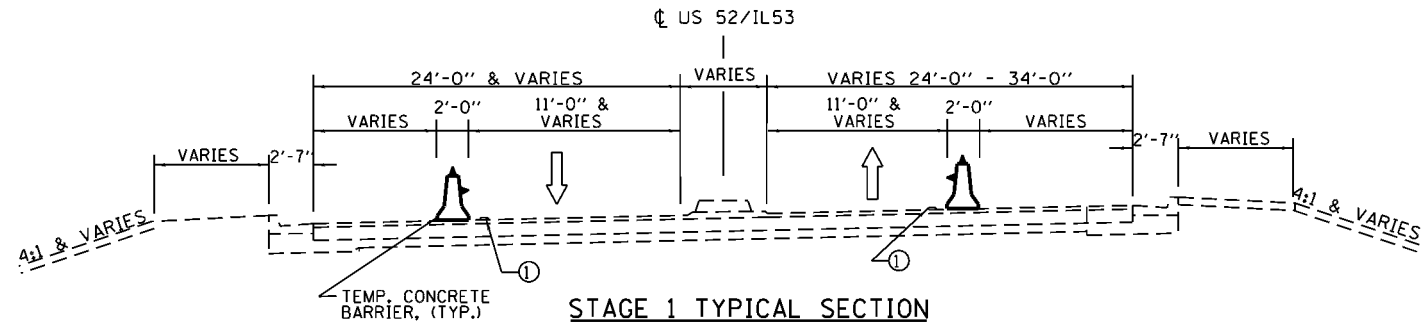
URBAN				
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE TYPE 0014 80% FED 20% STATE
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	167	167
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	107	107
40600990	TEMPORARY RAMP	SQ YD	50	50
40603085	HOT-MIX ASPHALT BINDER COURSE, 1L-19.0, N70	TON	5.8	5.8
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	25	25
42001300	PROTECTIVE COAT	SQ YD	118	118
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	54	54
44003100	MEDIAN REMOVAL	SQ FT	235	235
44003510	MEDIAN REMOVAL PARTIAL DEPTH	SQ FT	900	900
50102400	CONCRETE REMOVAL	CU YD	33	33
50104650	SLOPE WALL REMOVAL	SQ YD	9	9
50300225	CONCRETE STRUCTURES	CU YD	0.5	0.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	37.9	37.9
50300260	BRIDGE DECK GROOVING	SQ YD	910	910
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	18245	18245
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5220	5220
50800515	BAR SPLICERS	EACH	124	124
51100100	SCOPE WALL, 4 INCH	SQ YD	9	9
52000110	PREFORMED JOINT STRIP SEAL	FOOT	265	265
52100520	ANCHOR BOLTS, 1"	EACH	666	666
60605200	COMBINATION CURB AND GUTTER, TYPE B-6.24 (DOWELLED)	FOOT	54	54
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3
67100100	MOBILIZATION	L SUM	1	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	67	67
70400100	TEMPORARY CONCRETE BARRIER	FOOT	675	675
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425	425
*** 70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2
X 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	36.4	36.4
X 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	340	340
X 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	125	125
X 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	1264	1264
X 78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	32	32
X 78030005	TEMPORARY PAVEMENT MARKING REMOVAL	SO FT	1,225	1,225
X 78200011	BARRIER WALL REFLECTOR TYPE C	EACH	108	108

* SPECIAL PROVISION
 ** GUIDE BRIDGE SPECIAL PROVISION
 *** BDE SPECIAL PROVISION
 X SPECIALTY ITEMS

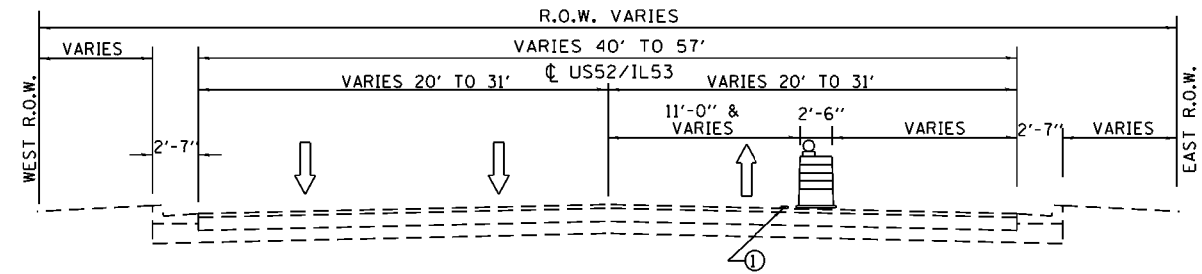
□ NON-PARTICIPATING

URBAN				
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE TYPE 0014 80% FED 20% STATE
X0327980	PAVEMENT MARKING REMOVAL-WATER BLASTING	SO FT	474	474
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4
* X0326394	FLOOR DRAINS TO BE CLEANED	EACH	15	15
* X0326766	CLEAN AND RESEAL RELIEF JOINT	FOOT	134	134
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
* 70300900	PAVEMENT MARKING TAPE TYPE IV - LETTERS AND SYMBOLS	SO FT	36.4	36.4
* 70300904	PAVEMENT MARKING TAPE, TYPE IV 4 INCH	FOOT	3566	3566
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	31	31
* Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	1	1
* Z0001903	STRUCTURAL STEEL REMOVAL	POUND	7820	7820
* Z0006014	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2" INCHES	SQ YD	1060	1060
* Z0001905	STRUCTURAL STEEL REPAIR	POUND	300	300
* Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1060	1060
* Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	850	850
* Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SO FT	18	18
* * * 70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4
* Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	102.8	102.8
* Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	2	2

ABNA DESIGN FIRM REG. 184.002117	9901 S. Western Ave. Chicago, IL 60643 PH. 773-881-4788 F: 773-239-3728	DESIGNED JS/SS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US521L53 OVER HICKORY CREEK SN 099-0083	SUMMARY OF QUANTITIES	F.A.P. RTE. 846	SECTION 99-4-B-I	COUNTY WILL	TOTAL SHEETS 26	SHEET NO. 3
		CHECKED TPP	REVISED -				SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 60M98



STAGE 1 TYPICAL SECTION
 (LOOKING NORTH)
 STA. 10+59.87 TO STA. 11+18.52
 STA. 12+85.84 TO STA. 14+84
 STA. 15+39 TO STA. 17+95 +/-

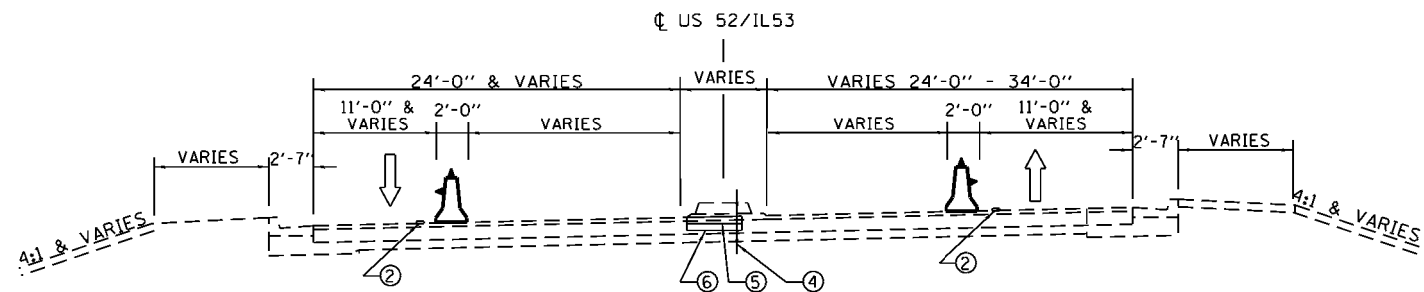


STAGE 1 TYPICAL SECTION
 (LOOKING NORTH)
 STA. 4+44 TO STA. 10+59.87
 STA. 14+84 TO STA. 15+39

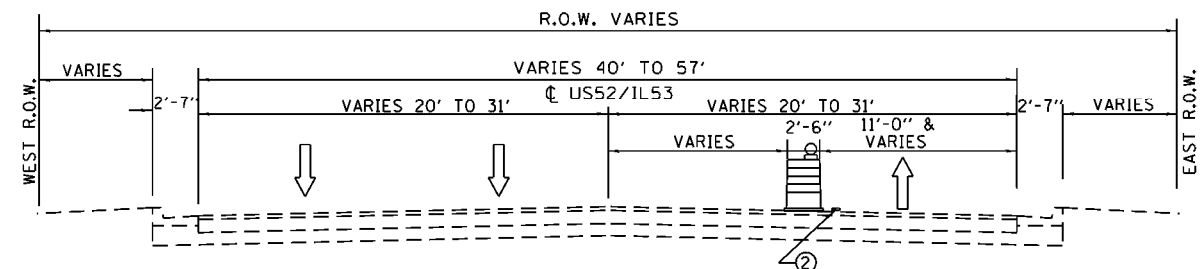
HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS (%) AT NDES	QUALITY MANAGEMENT PROGRAM (OMP)
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL-9.5mm), 1-3/4" & 2"	4.0% AT 70 GYR.	OC/OA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 2-1/4"	4.0% AT 70 GYR.	OC/OA
OMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (OC/OA)		

- NOTES:
- THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ. YD./IN.
 - THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
 - FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.
 - QUALITY MANAGEMENT PROGRAM IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.



STAGE 2 TYPICAL SECTION
 (LOOKING NORTH)
 STA. 10+59.87 TO STA. 11+18.52
 STA. 12+85.84 TO STA. 14+84
 STA. 15+39 TO STA. 21+34



STAGE 2 TYPICAL SECTION
 (LOOKING NORTH)
 STA. 4+44 TO STA. 10+59.87

LEGEND:

- WET REFLECTIVE TEMPORARY TYPE, TYPE III, 4" WHITE
- WET REFLECTIVE TEMPORARY TYPE, TYPE III, 4" YELLOW
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- CONCRETE MEDIAN REMOVAL (STA. 10+59.87 TO 11+18.52)
- HMA SURFACE COURSE, MIX "D", N70, 2" (STA. 10+59.87 TO 11+18.52)
- HMA BINDER COURSE, IL-19.0, N70, 2-1/4" (STA. 10+59.87 TO 11+18.52)



9901 S. Western Ave.
 Chicago, IL 60643
 Ph. 773-881-4788
 F: 773-239-3728

DESIGNED	TPP	REVISED	-
CHECKED	RJL	REVISED	-
DRAWN	TPP	REVISED	-
CHECKED	TPP	REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

US52/IL53 OVER HICKORY CREEK
 SN 099-0083

MAINTENANCE OF TRAFFIC
 STAGING SECTIONS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	4
CONTRACT NO. 60M98				
ILLINOIS FED. AID PROJECT				









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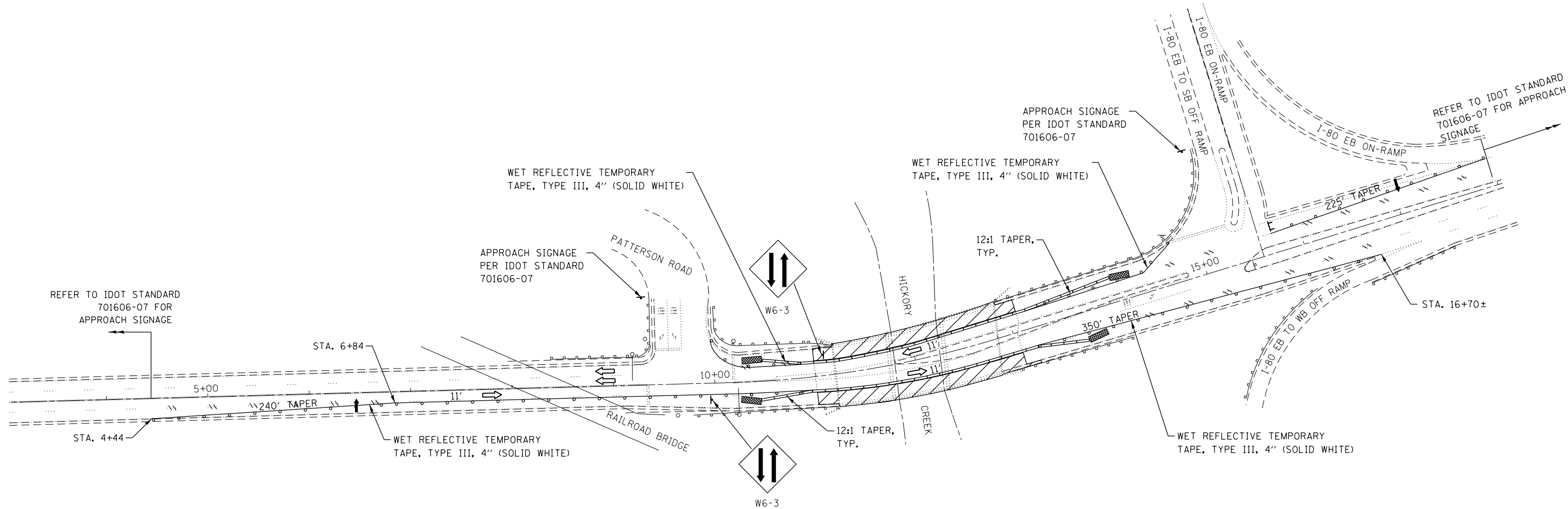
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NOTES:

1. ERECT TEMPORARY CONSTRUCTION SIGNS FOR STAGE 1 MOT.
2. INSTALL TEMPORARY MOT FOR STAGE 1 REPAIR WORK ON BRIDGE.
3. CONSTRUCTION FOR NORTH AND SOUTH BOUND OUTSIDE LANES: BRIDGE DECK HYDRO-SCARIFICATION, BRIDGE DECK CONCRETE OVERLAY, JOINT RECONSTRUCTION, PARTIAL DEPTH APPROACH PAVEMENT AND DECK PATCHING, COMBINATION CURB & GUTTER REMOVAL, CLEAN DECK DRAINS, AND SUBSTRUCTURE REPAIRS.

LEGEND

-  WORK AREA
-  SIGN ON PORTABLE SUPPORT
-  IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
-  TRAFFIC FLOW DIRECTION
-  PAVEMENT MARKING REMOVAL
-  DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT (Ø 25' C-C)
-  TEMPORARY CONCRETE BARRIER
-  ARROW BOARD



ABNA
DESIGN FIRM REG. 184.002117

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Chicago, IL 60643
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DESIGNED	TPP	REVISED	-
CHECKED	RJL	REVISED	-
DRAWN	JS	REVISED	-
CHECKED	TPP	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US 521L 53 OVER HICKORY CREEK
SN. 099-0083**

**STAGE 1 MAINTENANCE
OF TRAFFIC**

SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.










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CONTRACT NO. 60M98			ILLINOIS FED. AID PROJECT	

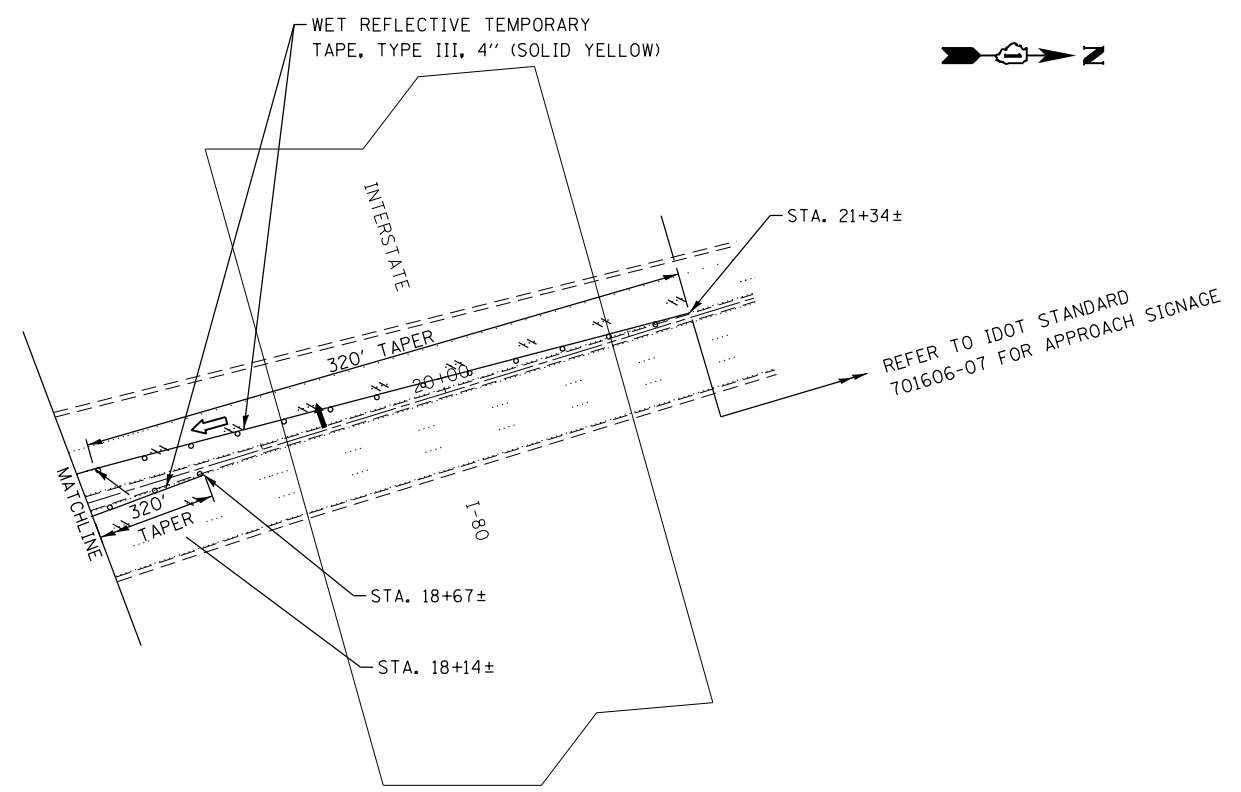
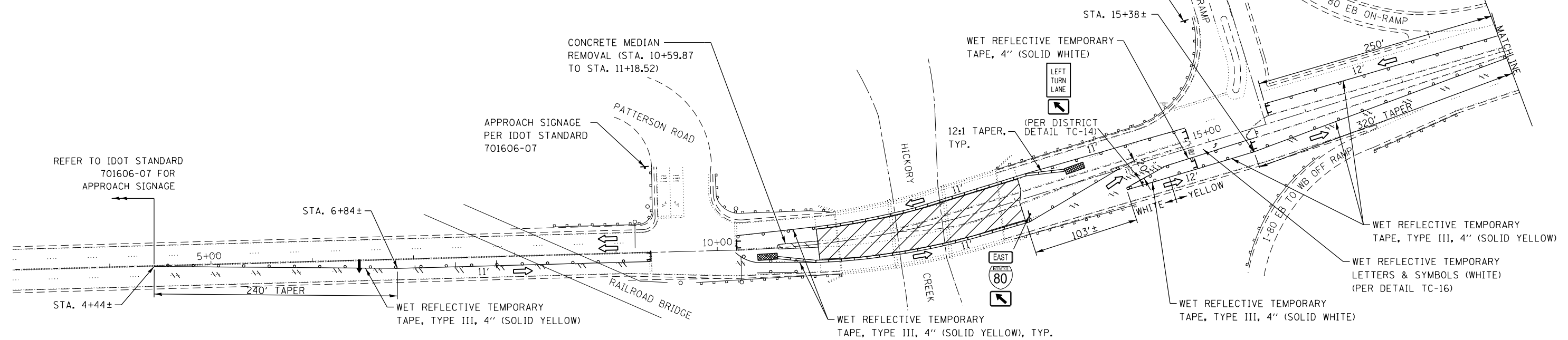
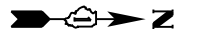
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NOTES:

1. ERECT TEMPORARY CONSTRUCTION SIGNS FOR STAGE 2 MOT.
2. INSTALL TEMPORARY MOT FOR STAGE 2 REPAIR WORK ON BRIDGE.
3. CONSTRUCTION FOR NORTH AND SOUTH BOUND INSIDE LANES: BRIDGE DECK HYDRO-SCARIFICATION, BRIDGE DECK CONCRETE OVERLAY, JOINT RECONSTRUCTION, PARTIAL DEPTH APPROACH PAVEMENT AND DECK PATCHING, DECK AND MEDIAN SEALING AND SUBSTRUCTURE REPAIRS.

LEGEND

-  WORK AREA
-  SIGN ON PORTABLE SUPPORT
-  IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
-  TRAFFIC FLOW DIRECTION
-  PAVEMENT MARKING REMOVAL
-  DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT (@ 25' C-C)
-  TEMPORARY CONCRETE BARRIER
-  ARROW BOARD
-  CONCRETE MEDIAN REMOVAL



9901 S. Western Ave.
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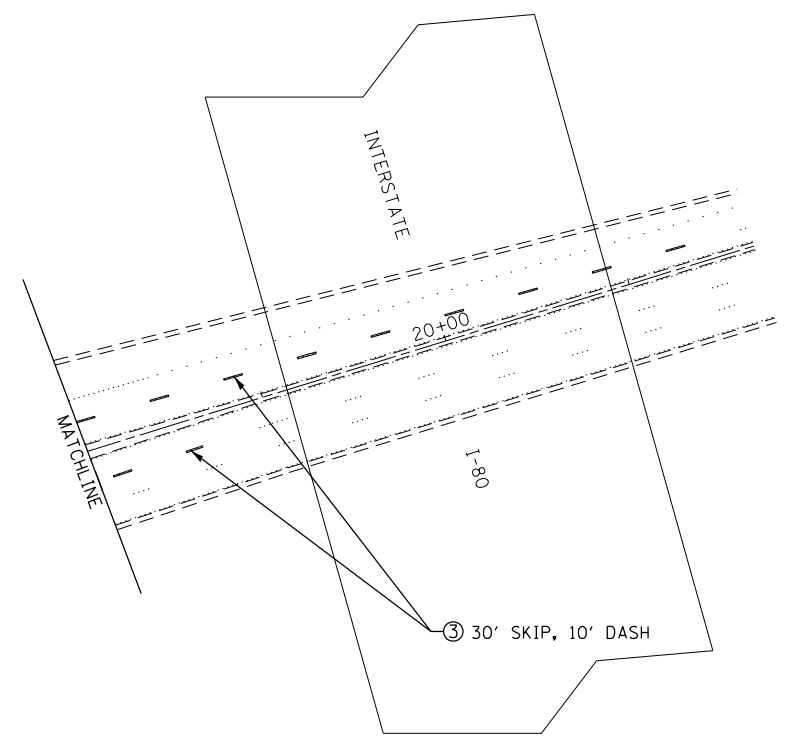
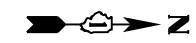
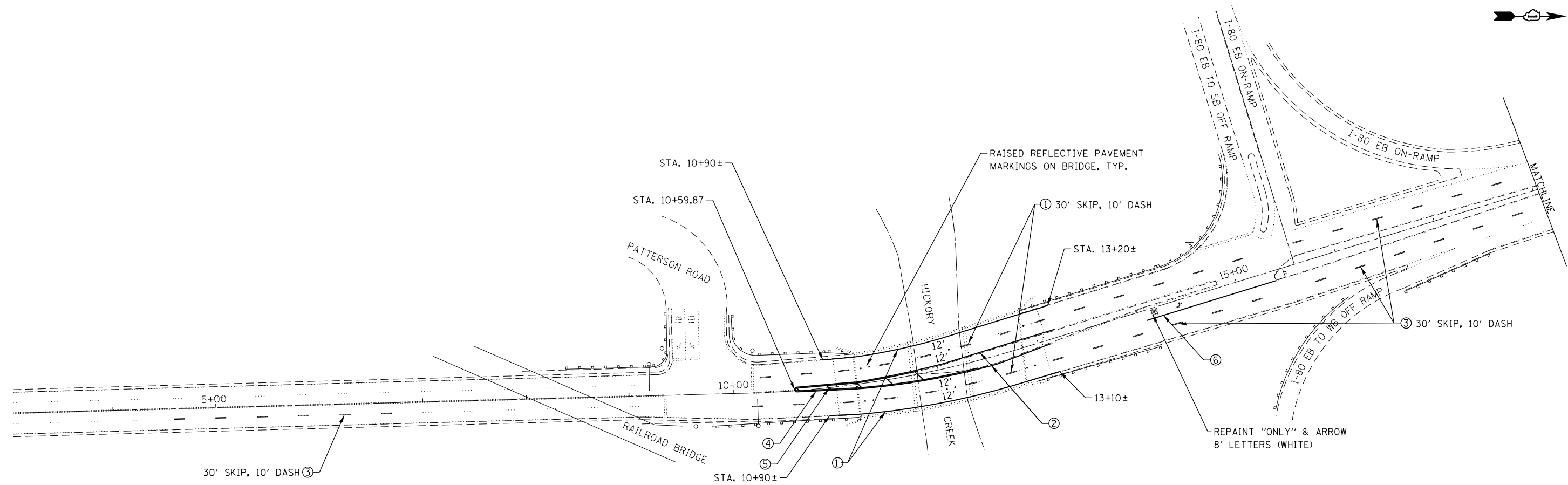
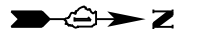
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US 521L 53 OVER HICKORY CREEK
SN. 099-0083**

**STAGE 2 MAINTENANCE
OF TRAFFIC**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-I	WILL	26	6
CONTRACT NO. 60M98				
ILLINOIS FED. AID PROJECT				

SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.



LEGEND

- ① POLYUREA PAVEMENT MARKING
TYPE I - LINE 4" (WHITE)
- ② POLYUREA PAVEMENT MARKING
TYPE I - LINE 4" (YELLOW)
- ③ THERMOPLASTIC PAVEMENT MARKING
- LINE 4" (WHITE)
- ④ POLYUREA PAVEMENT MARKING
TYPE I - LINE 4" (DOUBLE YELLOW)
(ALONG PREVIOUS LIMITS
OF CORRUGATED MEDIAN)
- ⑤ POLYUREA PAVEMENT MARKING
TYPE I - LINE 12" (YELLOW)
(SPACED @ 20'-0" C-C)
- ⑥ THERMOPLASTIC PAVEMENT MARKING
- LINE 6" (WHITE)

NOTE:

WHERE CONFLICTING PAVEMENT MARKINGS ARE TO BE REMOVED AND REPLACED THE CONTRACTOR SHALL DOCUMENT THE EXISTING LOCATION OF ALL NECESSARY MARKINGS.



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DESIGNED	TPP	REVISED	-
CHECKED	RJL	REVISED	-
DRAWN	JS	REVISED	-
CHECKED	TPP	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

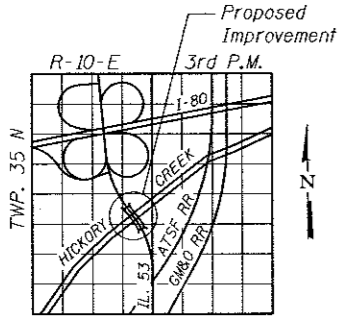
US 52/L 53 OVER HICKORY CREEK
SN. 099-0083

PROPOSED PAVEMENT
MARKINGS

SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-I	WILL	26	7
CONTRACT NO. 60M98				
ILLINOIS FED. AID PROJECT				

FILES \$TIMES\$ DATES\$



LOCATION SKETCH

INDEX OF SHEETS

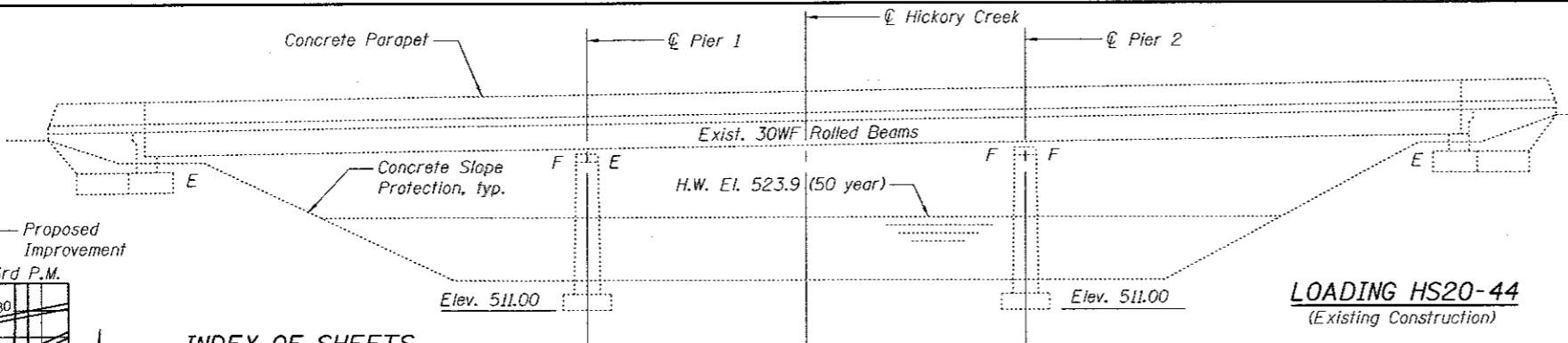
1. General Plan and Elevation
2. Construction Staging
3. Substructure Repair
4. Substructure Repair
5. Bearing Replacement at Pier 2
6. Expansion Joint Removal
7. Expansion Joint Repair
8. Expansion Joint Repair
9. Expansion Joint Repair
10. Expansion Joint Repair
11. Expansion Joint Details
12. Bar Splicer Details



I hereby certify that these plans were prepared by me or under my direct personal supervision and that I am a duly licensed structural engineer under the laws of the State of Illinois.

Stephen E. Alsbury DATE: 08-13-2014
 Stephen E. Alsbury S.E. #5261
 LICENSE EXP. 11-30-2014
 Applies to sheets 8-19 of 26

ELEVATION



LOADING HS20-44
(Existing Construction)

DESIGN SPECIFICATIONS
2002 Standard Specifications for Highway Bridges 17th Edition

DESIGN STRESSES

FIELD UNITS
(NEW CONSTRUCTION)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars designated (E) shall be epoxy coated.

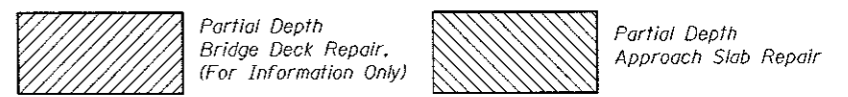
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

Cost of removal and disposal of existing abandoned conduits at abutments included with Concrete Removal.

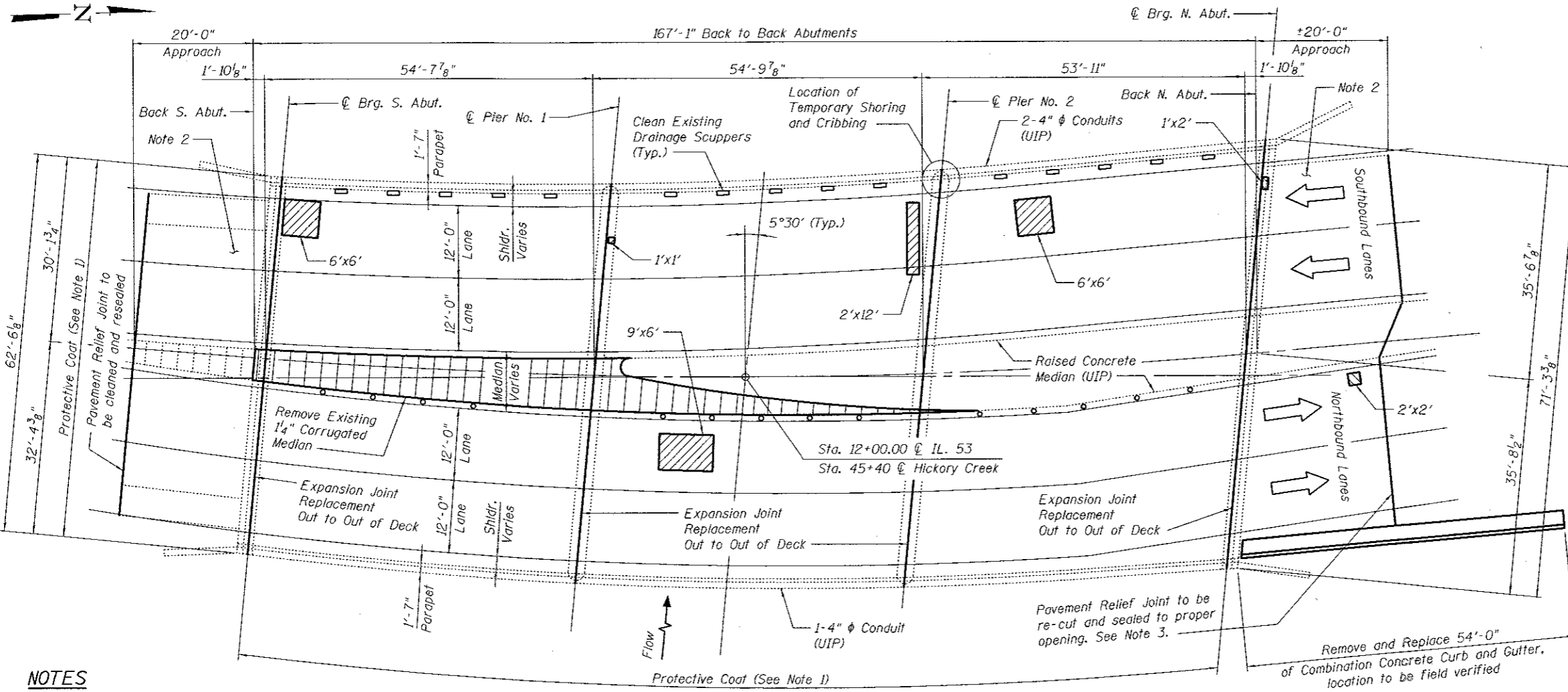
All existing conduits shall remain and be protected as required (unless otherwise noted).

LEGEND



TOTAL BILL OF MATERIAL

Item	Unit	Total
Bituminous Materials (Tack Coat)	Pound	167
Portland Cement Concrete Surface Removal - Butt Joint	Sq. Yd.	107
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	25
Protective Coat	Sq. Yd.	118
Combination Curb and Gutter Removal	Foot	54
Median Removal Partial Depth	Sq. Ft.	900
Concrete Removal	Cu. Yd.	33.0
Concrete Structures	Cu. Yd.	0.5
Concrete Superstructure	Cu. Yd.	37.9
Bridge Deck Grooving	Sq. Yd.	910
**Furnishing and Erecting Structural Steel Reinforcement Bars, Epoxy Coated	Pound	18245
Bar Splicers	Each	124
Slope Wall Removal	Sq. Yd.	9
Slope Wall 4"	Sq. Yd.	9
Preformed Joint Strip Seal	Foot	265
Combination Concrete Curb and Gutter, Type B-6.24 (Dowelled)	Foot	54
Floor Drains to be Cleaned	Each	15
Clean and Reseal Relief Joint	Foot	134
Approach Slab Repair (Partial Depth)	Sq. Yd.	1
Bridge Deck Latex Concrete Overlay 2 1/2"	Sq. Yd.	1060
Bridge Deck Scarification 3/4"	Sq. Yd.	1060
Structural Repair of Concrete (Depth Equal to or less than 5 inches)	Sq. Ft.	850
Structural Repair of Concrete (Depth Greater than 5 inches)	Sq. Ft.	18
Temporary Shoring and Cribbing	Each	2
*Structural Steel Removal	Pound	7820
*Structural Steel Repair	Pound	300
*Jack and Remove Existing Bearings	Each	31
Anchor Bolts 1"φ	Each	66



NOTES

1. Limits of Protective Coat are: tops and roadway faces of parapets, raised median and corrugated median.
2. Overlay North and South Approaches with HMA to proposed elevation of Bridge Deck Overlay.
3. Cost of re-cutting relief joint is included with Clean and Reseal Relief Joint.

NOTES

The limits and locations of the repairs shown are taken from the most recent survey performed by the District on August 31, 2010.
 UIP = Use in Place

PLAN

GENERAL PLAN AND ELEVATION
FAP-846 IL. 53 OVER HICKORY CREEK
SEC. 99-4WRS & 99-4B-Y(89)
WILL COUNTY
STATION 12+00.00
STRUCTURE NO. 099-0083



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 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

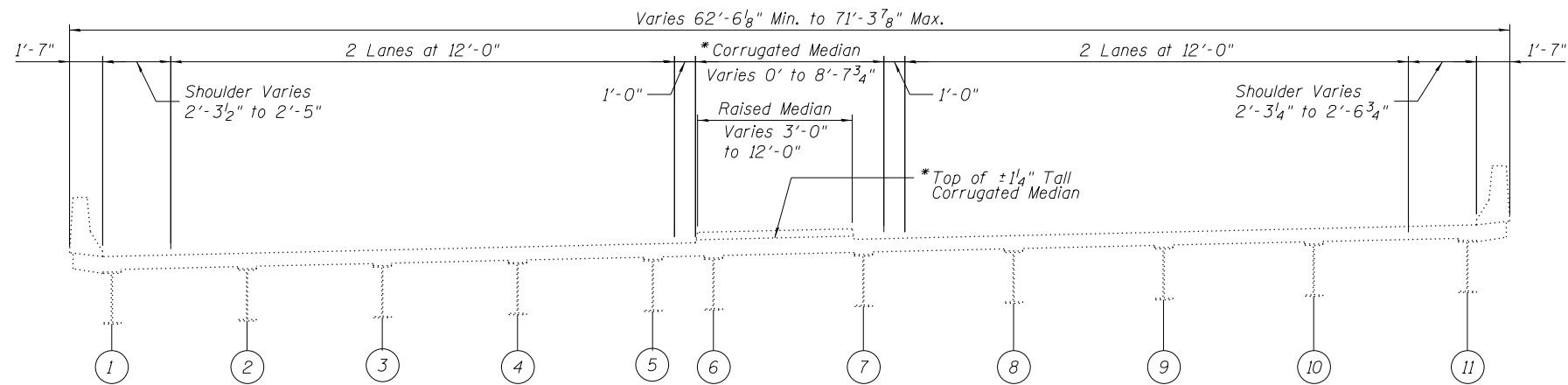
GENERAL PLAN AND ELEVATION

SHEET NO. 1 OF 12 SHEETS

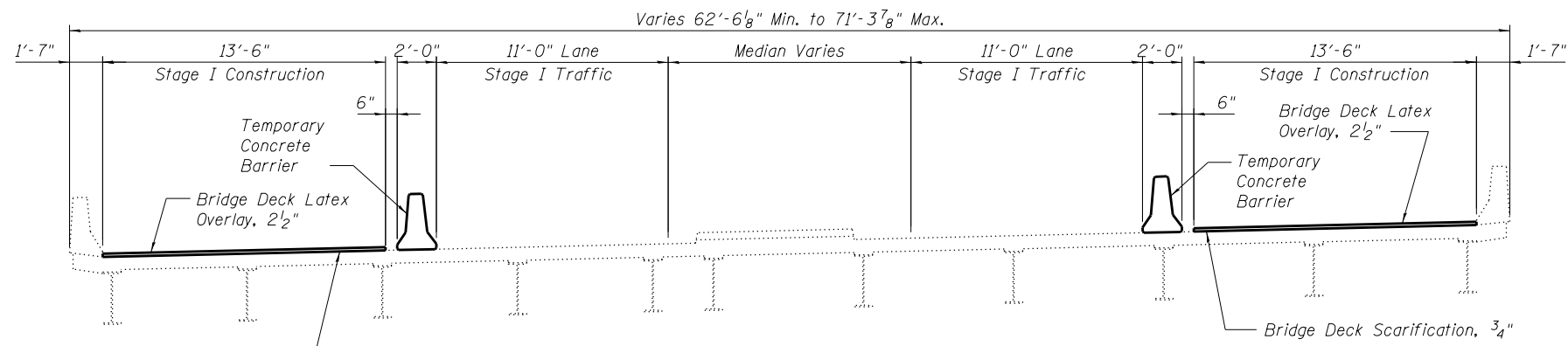
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846	99-4WRS & 99-4B-Y(89)	WILL	26	8
STA. 01+000.000 TO STA.		CONTRACT NO. 60M98		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

REV

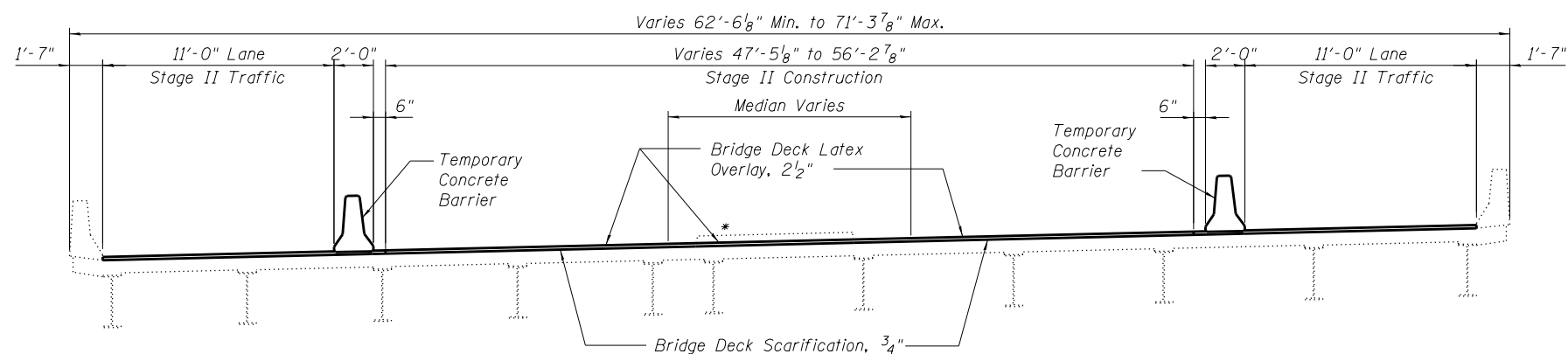
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EXISTING



STAGE I

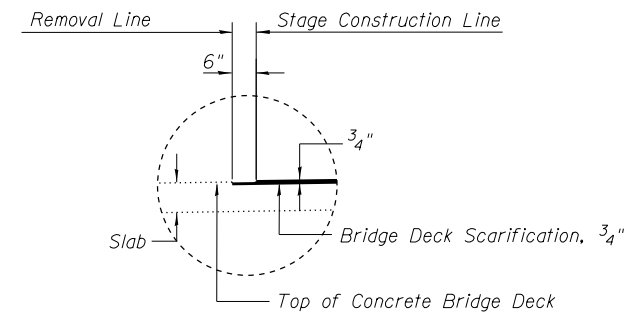


STAGE II

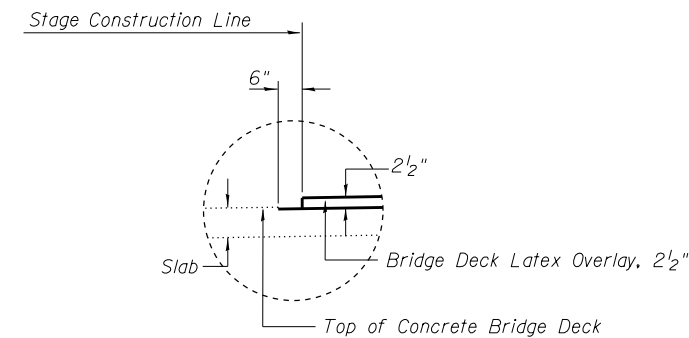
PROPOSED CONSTRUCTION STAGING

NOTE:

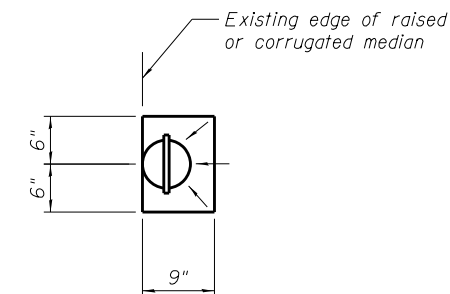
Temporary Concrete Barrier is paid for as Roadway Item. See Standard 704001-06
 *Corrugated Median to be removed and area scarified. New Concrete Overlay to be placed after scarification.



DETAIL A (Showing Removal)
(Looking North)

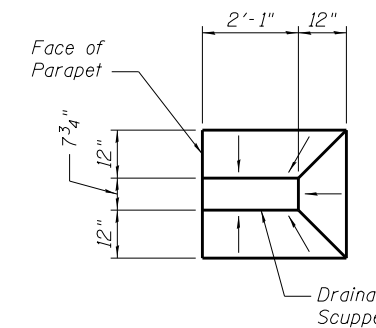


DETAIL B (Showing Proposed)
(Looking North)



OVERLAY TREATMENT AT FLOOR DRAIN

Taper overlay from 2 1/2" to 1" at edge of drain.



OVERLAY TREATMENT AT DRAINAGE SCUPPER

Taper overlay from 2 1/2" to 1" at edge of drain.



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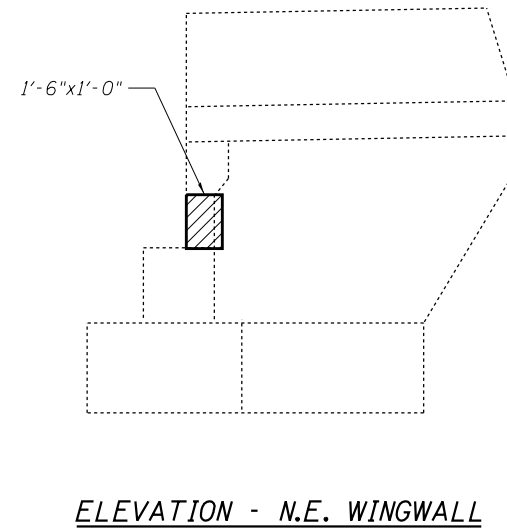
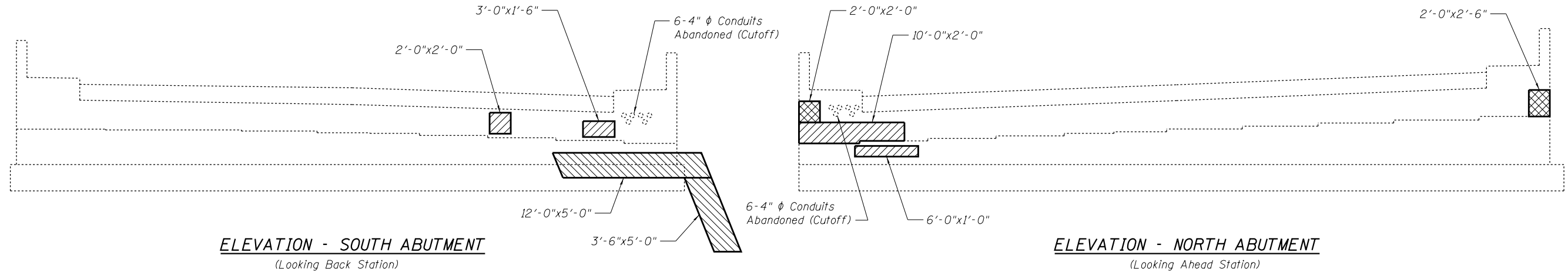
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION STAGING

SHEET NO. 2 OF 12 SHEETS

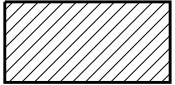
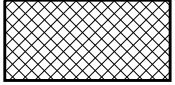

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	9
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FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

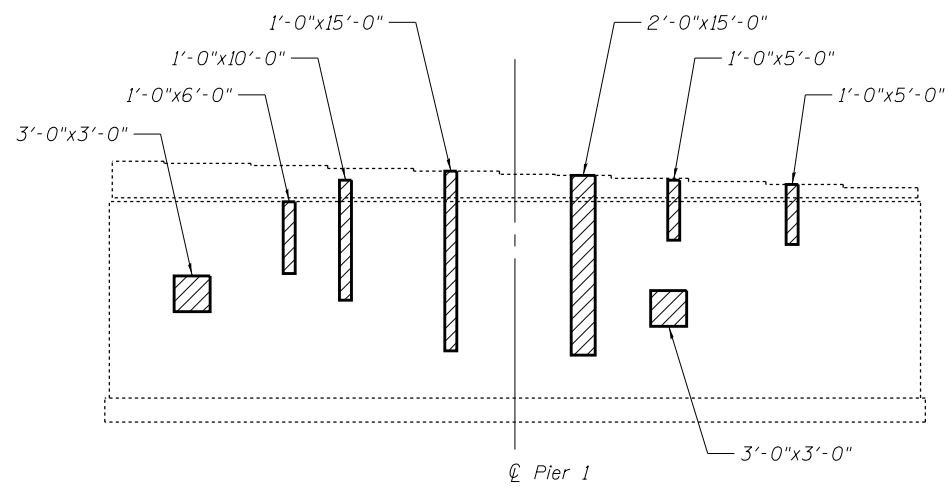


NOTES

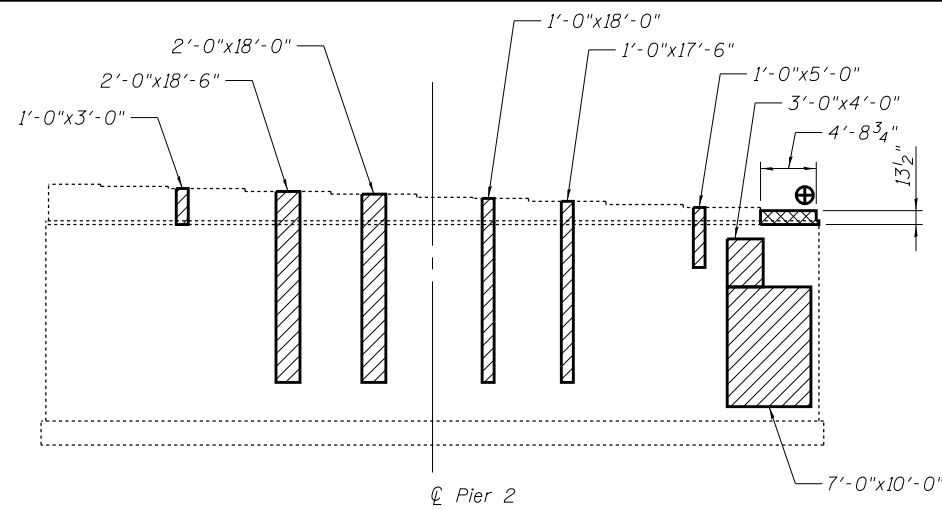
1. The contractor shall take sufficient precautions to prevent pollution of creeks or streams with construction materials.
2. The contractor shall avoid placing construction devices in creeks or streams. Placement of any such items shall be subject to approval by IDOT.
3. Slopewall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft. The cost of reinforcement shall be included with pay item for Slope Wall.
4. A minimum of 6" overlap between existing and new welded wire fabric must be provided.

LEGEND

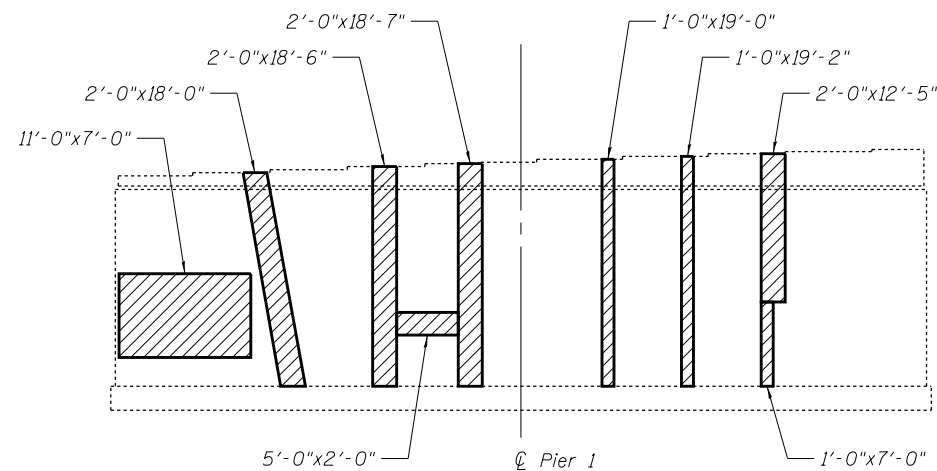
-  Structural Repair of Concrete (Depth Equal to or less than 5 in.)
-  Structural Repair of Concrete (Depth Greater than 5 in.)
-  Slope Wall Repair 4"



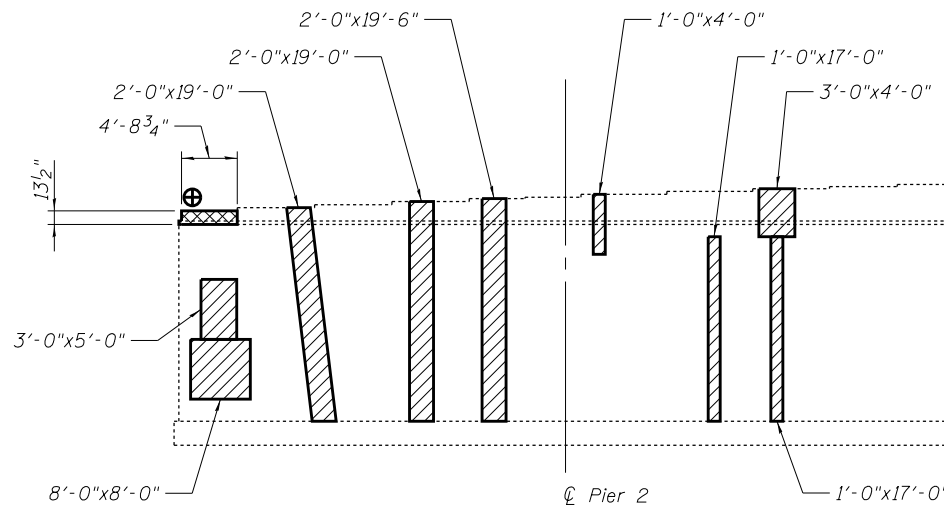
NORTH ELEVATION - PIER 1
(Looking Back Station)



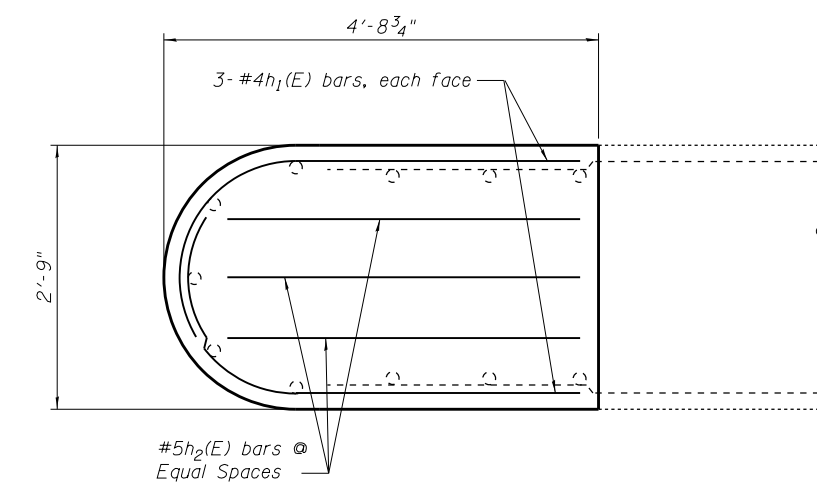
NORTH ELEVATION - PIER 2
(Looking Back Station)



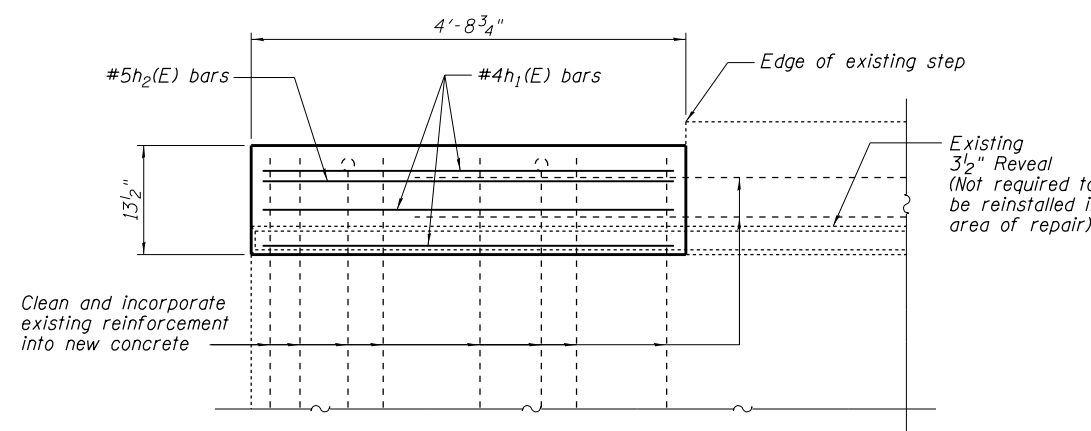
SOUTH ELEVATION - PIER 1
(Looking Ahead Station)



SOUTH ELEVATION - PIER 2
(Looking Ahead Station)



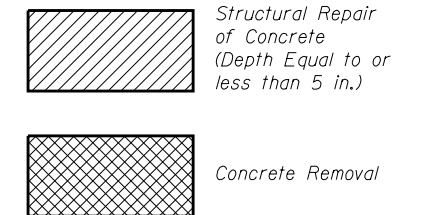
PLAN



SOUTH ELEVATION

WEST END - PIER 2 REPAIRS

LEGEND

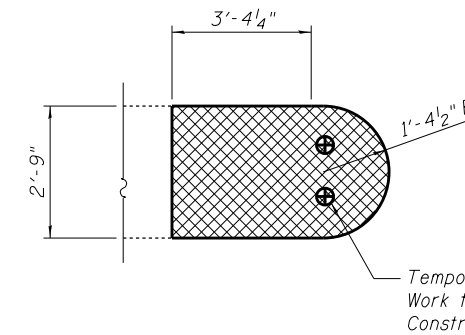


REACTION TABLE (KIPS)

Location	DL	1/2(LL+I)
Span 2	34.9	38.8
Span 3	34.9	38.9

Note: Reaction Table provided for Temporary Shoring. Contractor shall provide shoring system designed to carry dead load plus 1/2 live load plus impact.

WEST END - PIER 2

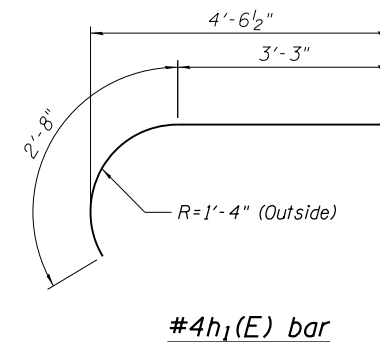


SECTION A-A

Note: Cost of anchor bolt removal is included in pay item Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	6	#4	5'-11"	
h ₂ (E)	3	#5	3'-4"	
Concrete Removal		Cu. Yd.	0.5	
Concrete Structures		Cu. Yd.	0.5	
Reinforcement Bars, Epoxy Coated		Pound	40	



#4h₁(E) bar

NOTES

- The contractor shall take sufficient precautions to prevent pollution of creeks or streams with construction materials.
- The contractor shall avoid placing construction devices in creeks or streams. Placement of any such items shall be subject to approval by IDOT.

\$FILES \$TIMES \$DATES



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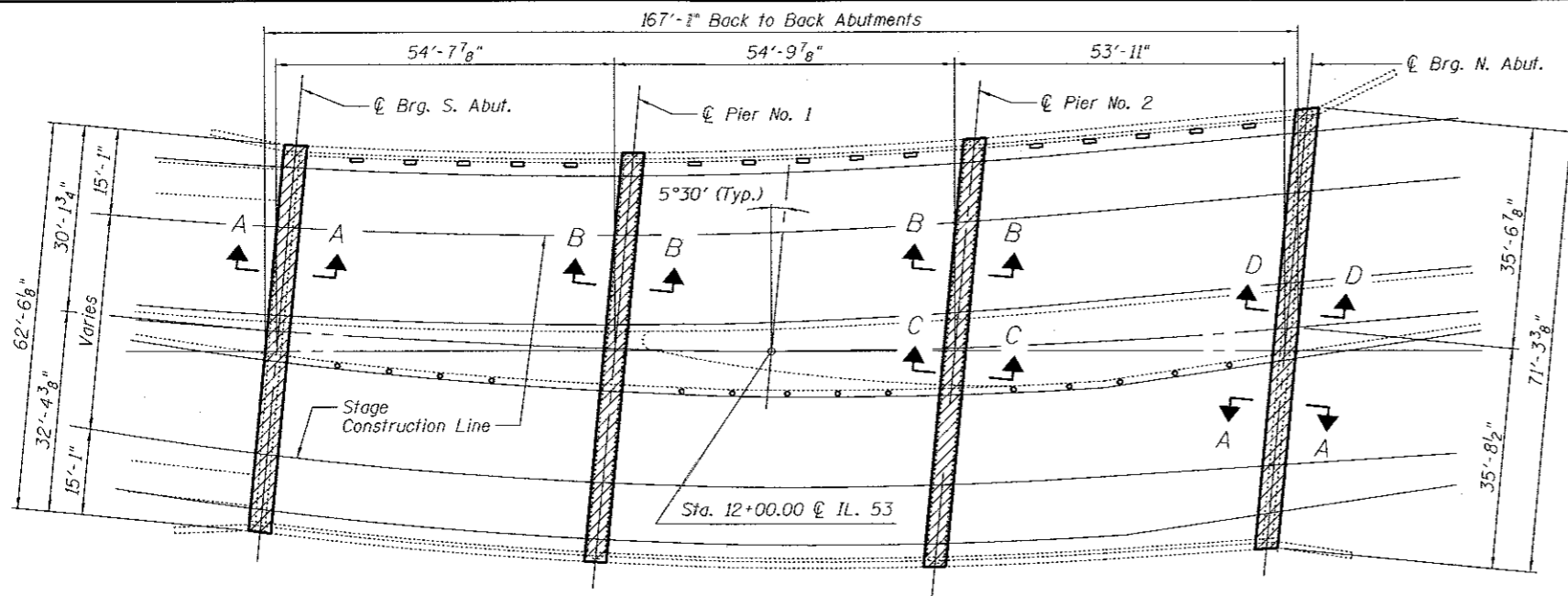
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT
AT PIER 2

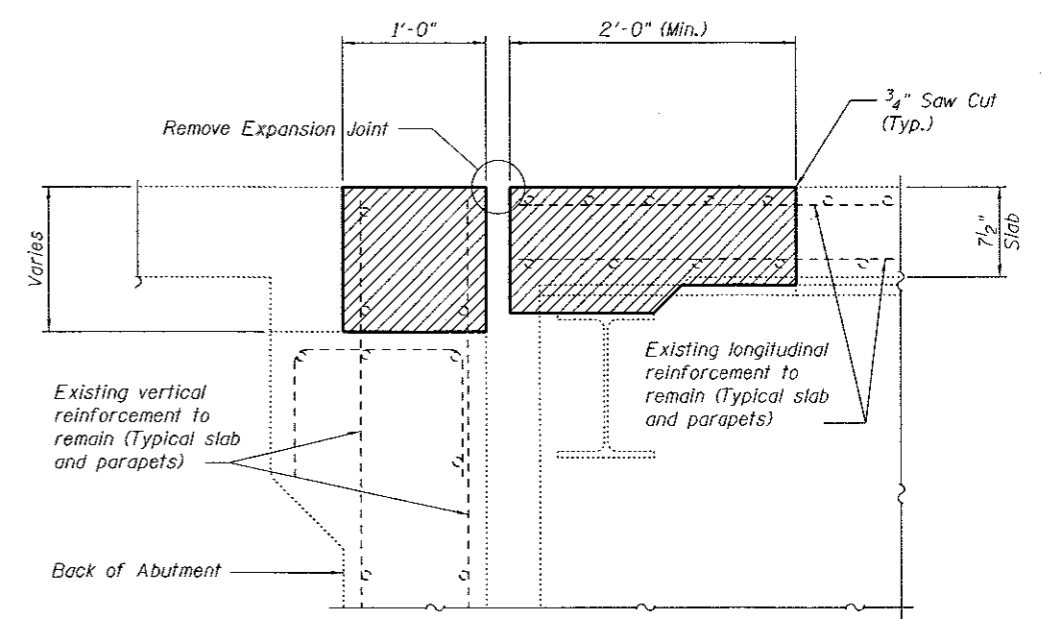
SHEET NO. 5 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	12
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

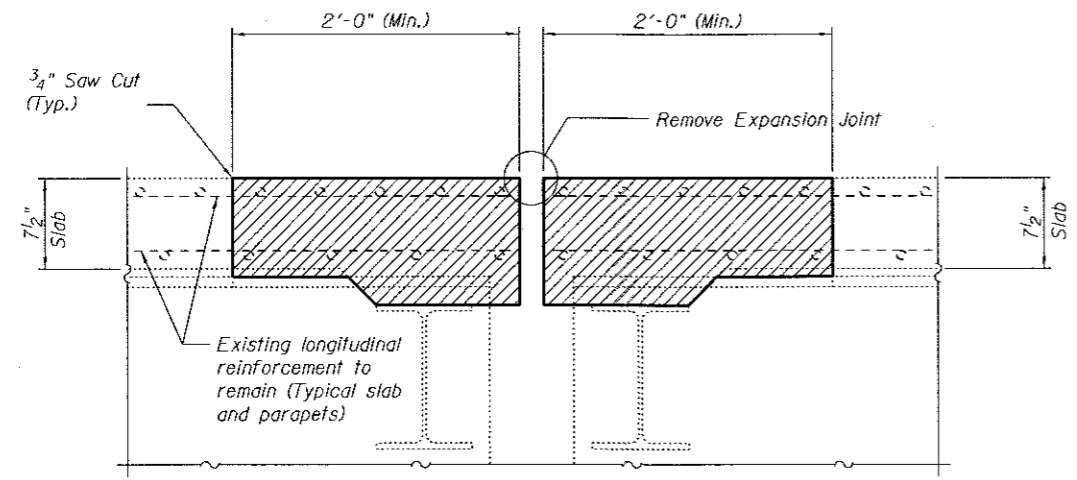
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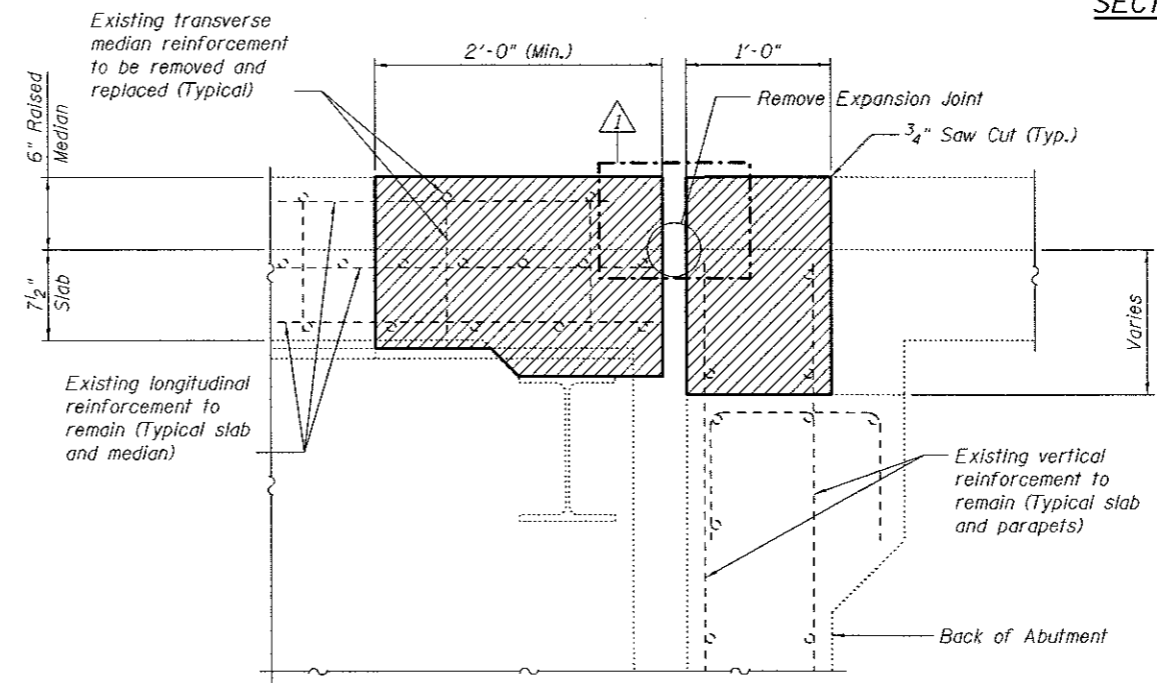
PLAN



SECTION A-A



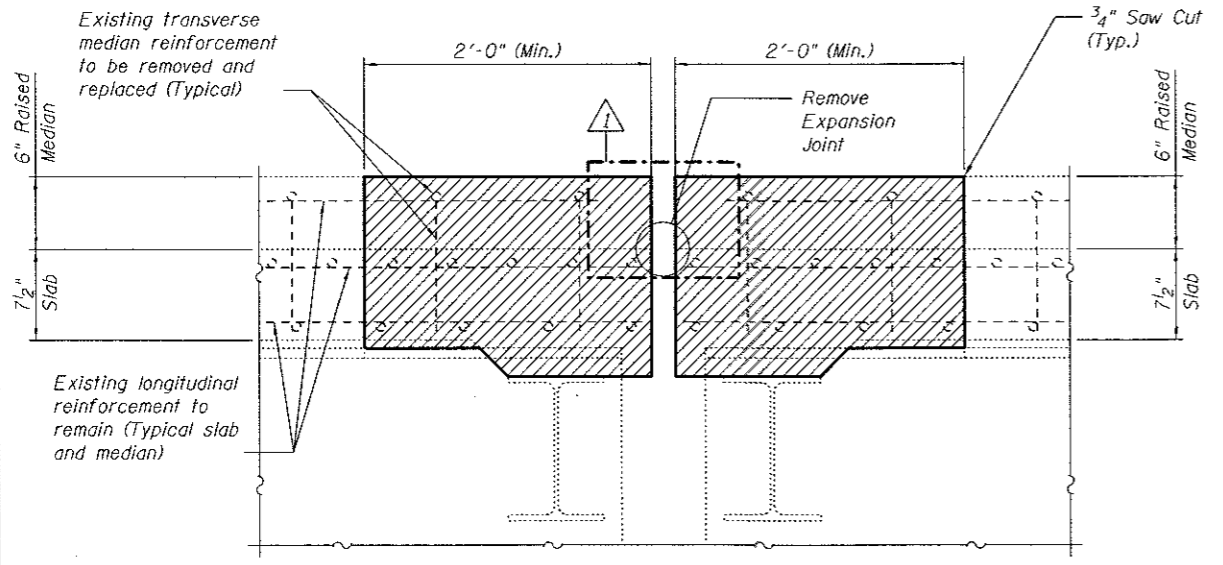
SECTION B-B



SECTION D-D

LEGEND

Concrete Removal



SECTION C-C

NOTES

Removal of the existing expansion joints will not be paid for separately but shall be included in the cost for Concrete Removal.

Hatched areas indicate concrete sections to be removed. Care shall be exercised by the contractor during and following concrete removal to ensure the existing reinforcement remaining in place is not damaged. All existing reinforcing to be incorporated into new construction shall be blast-cleaned, straightened and properly positioned prior to concrete placement. Any reinforcement damaged during concrete removal shall be repaired or replaced using an approved Mechanical Bar Splicer System. Cost of removal shall be included with pay item for Concrete Removal. Cost of replacement shall be included with pay item for Concrete Superstructure.

Parapets and medians shall be removed and replaced within the limits of hatched areas shown. All longitudinal parapet and median reinforcement shall remain in place.

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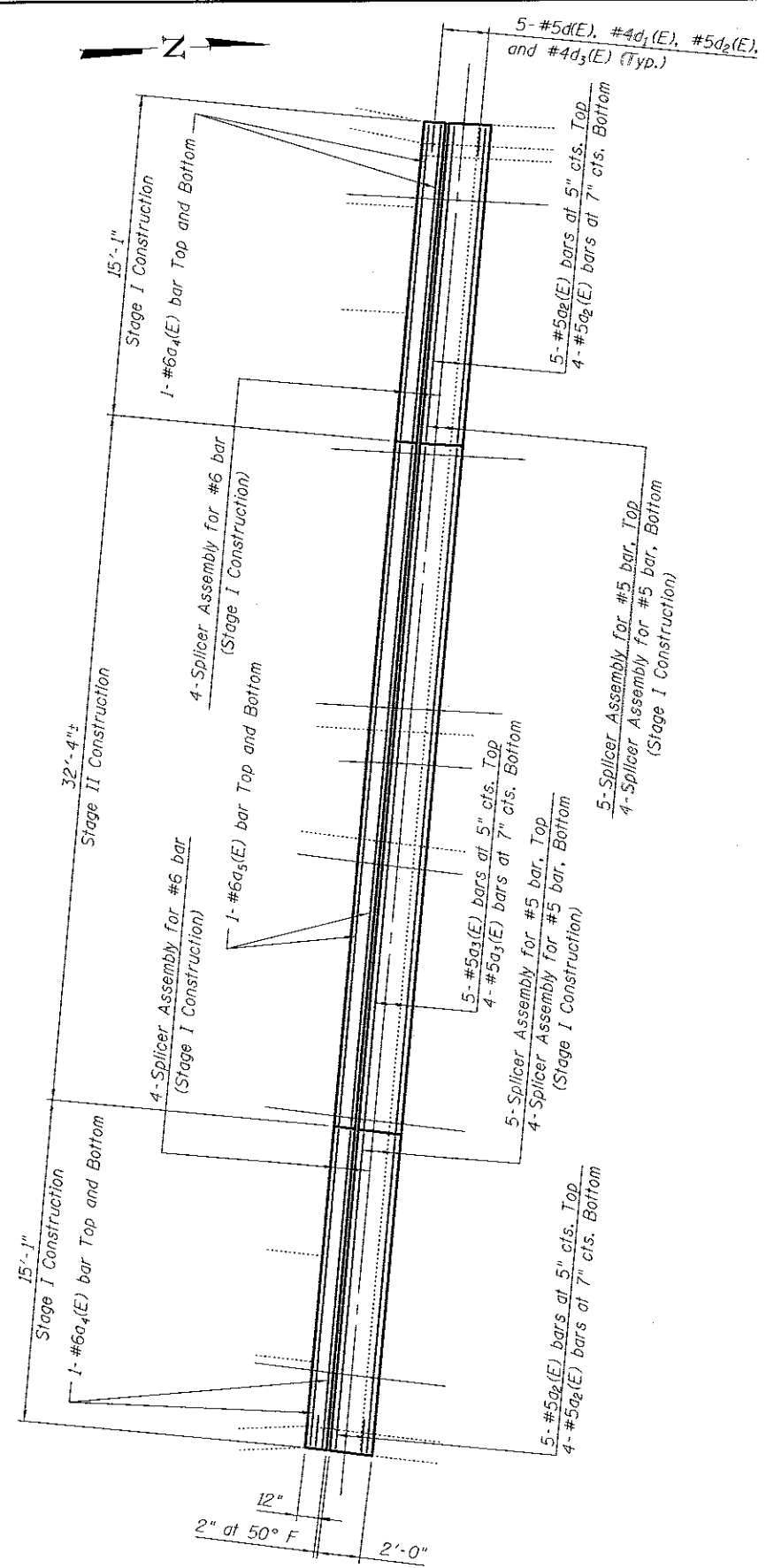
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

EXPANSION JOINT REMOVAL

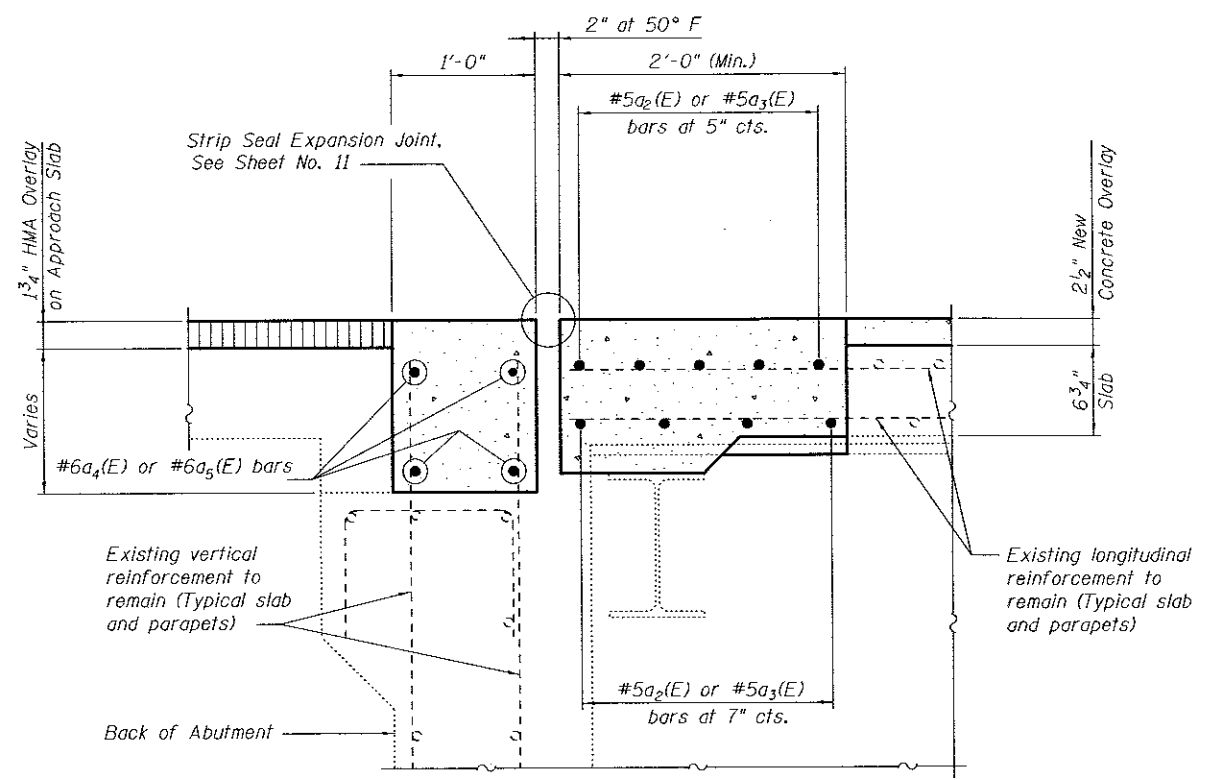
SHEET NO. 6 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	13
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

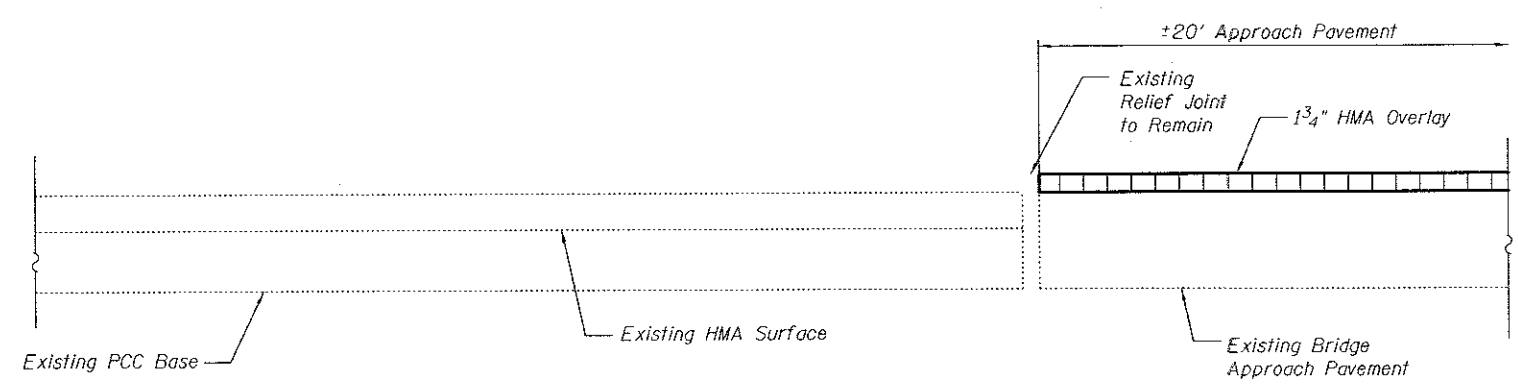
\$FILES \$TIMES \$DATES



EXPANSION JOINT PLAN SOUTH ABUTMENT



TYPICAL SECTION AT EXPANSION JOINT



OVERLAY TREATMENT ON APPROACHES

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₂ (E)	18	#5	14'-10"	—
a ₃ (E)	9	#5	32'-0"	—
a ₄ (E)	8	#6	14'-10"	—
a ₅ (E)	4	#6	32'-0"	—
d(E)	10	#5	2'-7"	⌋
d ₁ (E)	10	#4	3'-7"	⌋
d ₂ (E)	10	#5	3'-0"	⌋
d ₃ (E)	10	#4	3'-8"	⌋
Concrete Removal			Cu. Yd.	7.3
Concrete Superstructure			Cu. Yd.	8.4
Reinforcement Bars, Epoxy Coated			Pound	1090

NOTES

For details of Strip Seal Expansion Joints, see Sheet 11.
 Existing longitudinal parapet reinforcement shall remain in place. See Sheet 8 for Parapet Details.
 See Sheet 12 for details of Bar Splicers.

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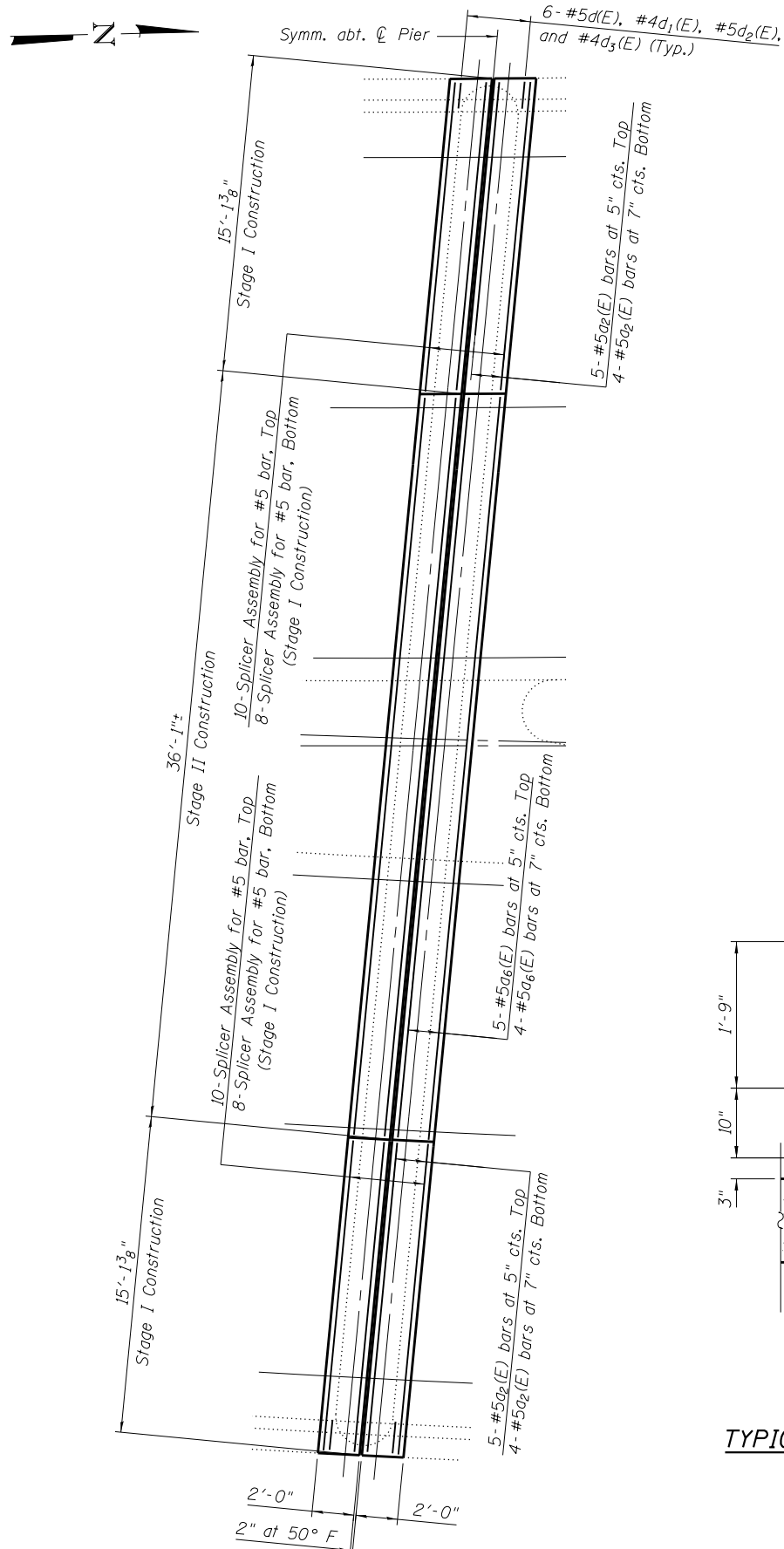
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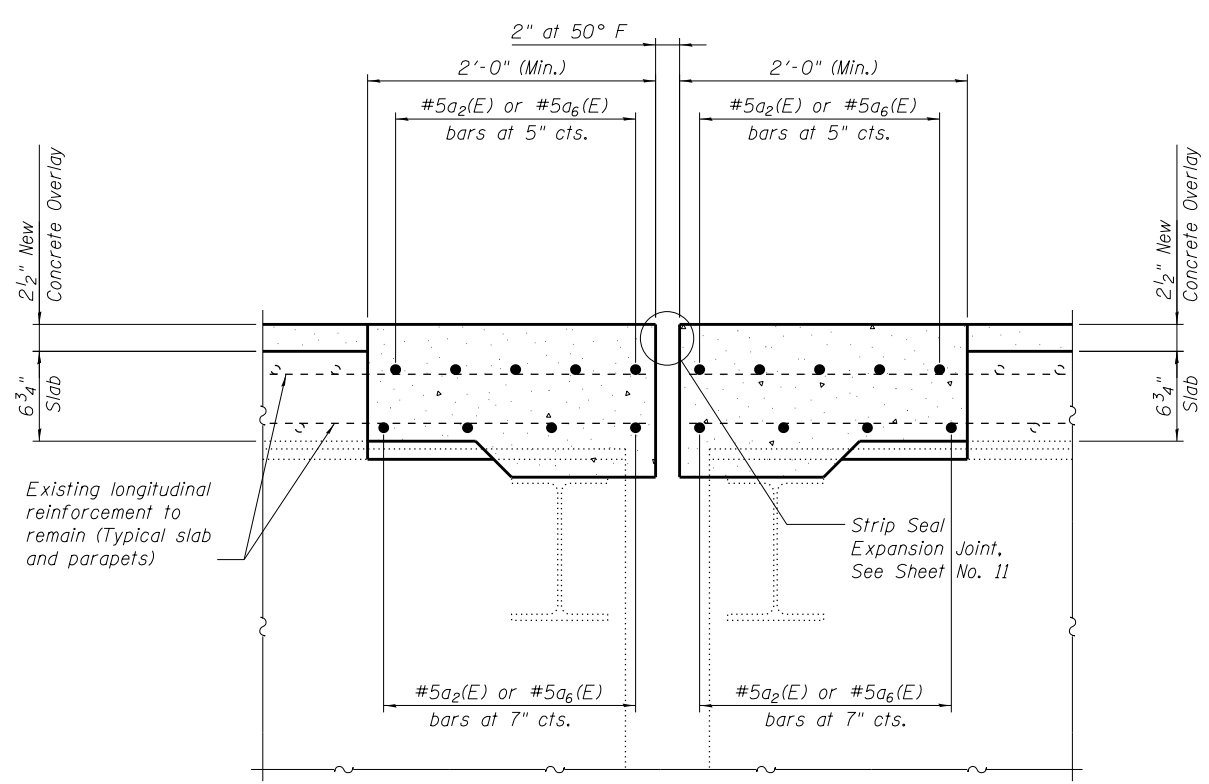
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPAIR
 SHEET NO. 7 OF 12 SHEETS

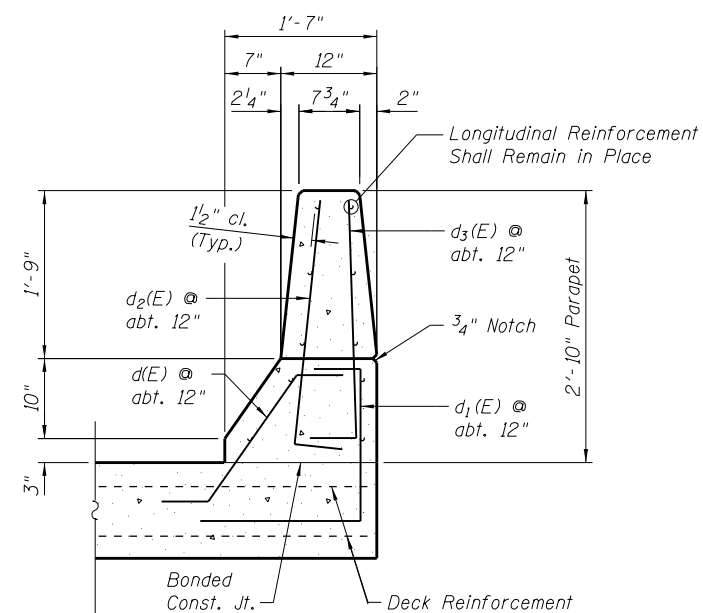
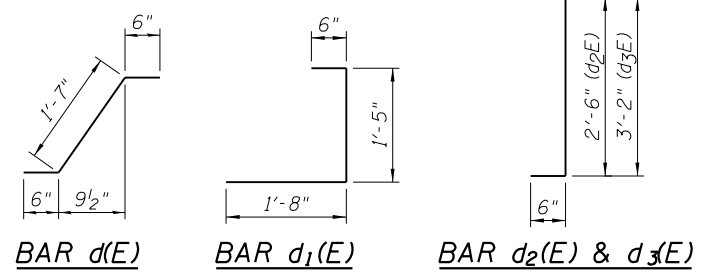
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846	99-4WRS & 99-4B-Y(89)	WILL	26	14
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



EXPANSION JOINT PLAN AT PIER 1



TYPICAL SECTION AT EXPANSION JOINT



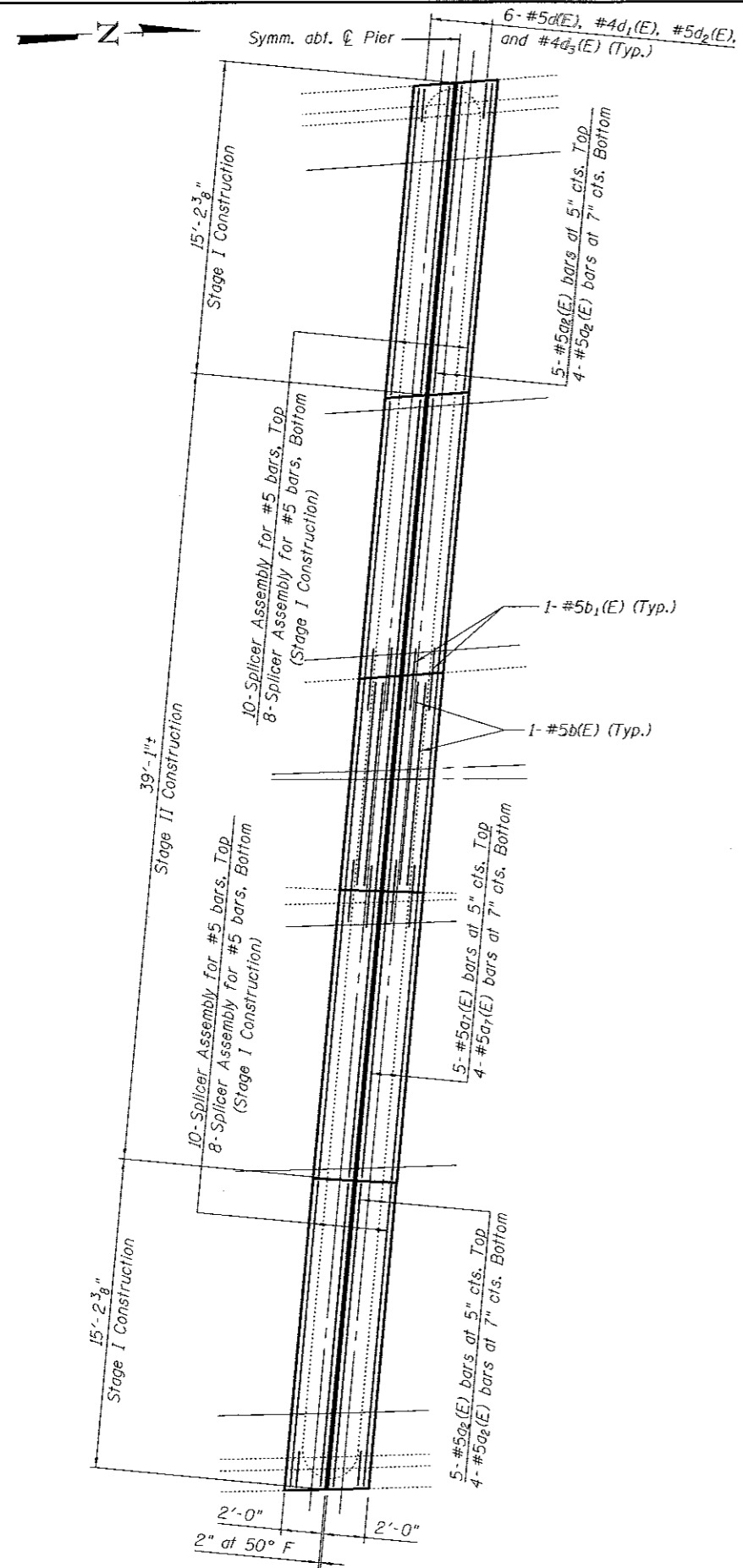
TYPICAL SECTION THRU PARAPET (Match Adjacent)

BILL OF MATERIAL

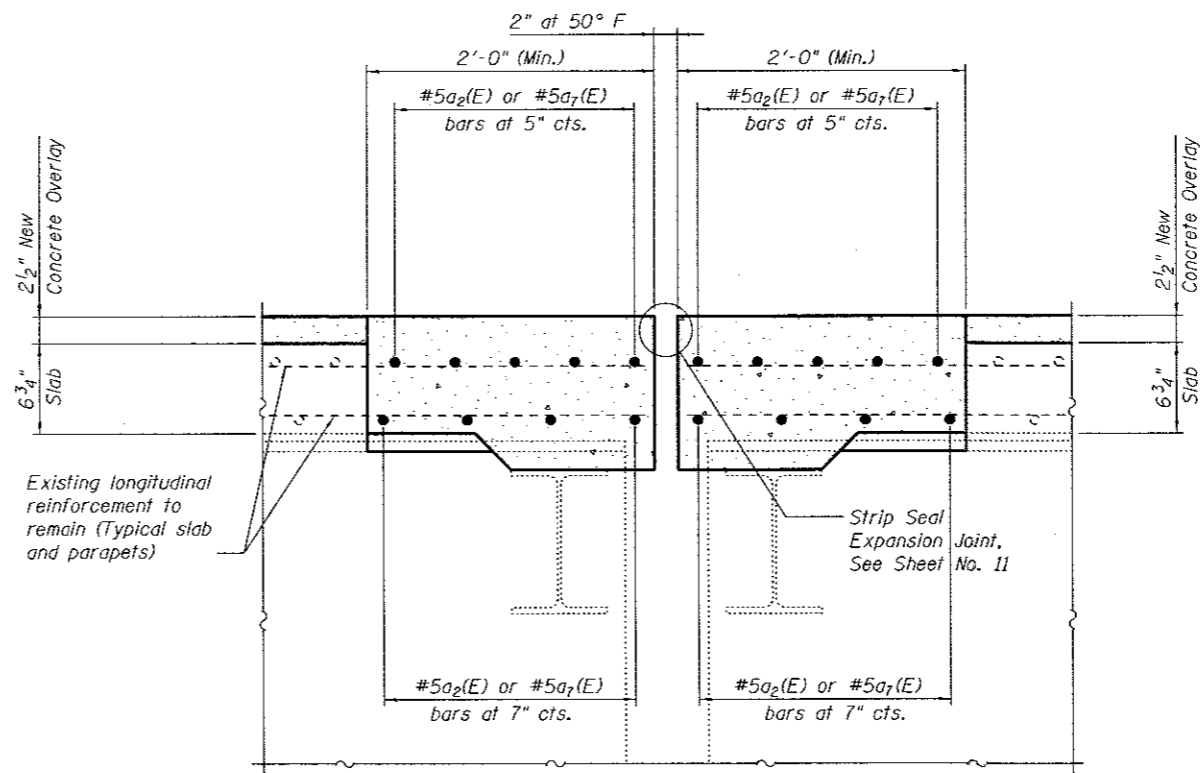
Bar	No.	Size	Length	Shape
a ₂ (E)	36	#5	14'-10"	—
a ₆ (E)	18	#5	35'-10"	—
d(E)	12	#5	2'-7"	⌋
d ₁ (E)	12	#4	3'-7"	└
d ₂ (E)	12	#5	3'-0"	└
d ₃ (E)	12	#4	3'-8"	└
Concrete Removal			Cu. Yd.	7.6
Concrete Superstructure			Cu. Yd.	9.1
Reinforcement Bars, Epoxy Coated			Pound	1360

NOTES

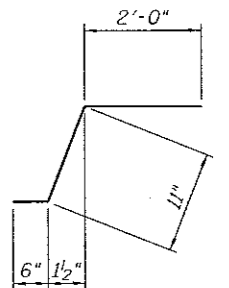
For details of Strip Seal Expansion Joints, see Sheet 11.
Existing longitudinal parapet reinforcement shall remain in place.
See Sheet 12 for details of Bar Splacers.



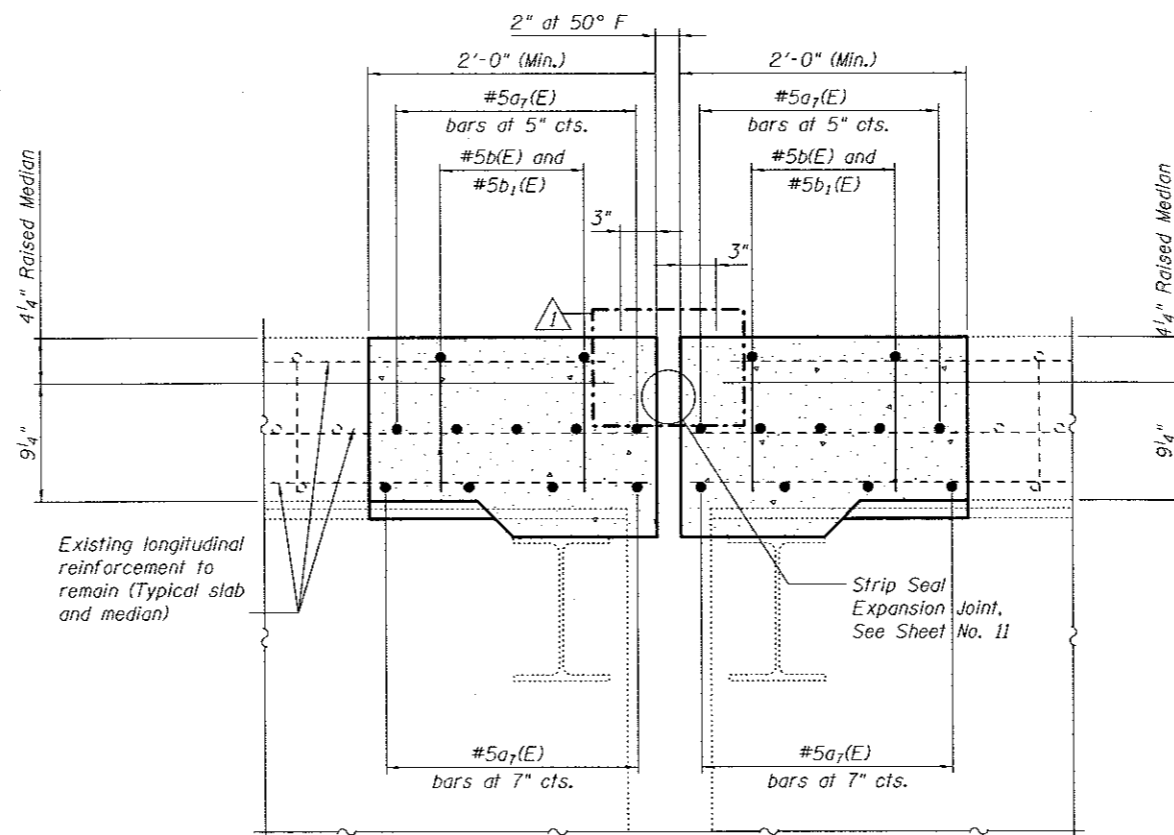
EXPANSION JOINT PLAN AT PIER 2



TYPICAL SECTION AT EXPANSION JOINT



BAR b₁(E)



TYPICAL SECTION THRU RAISED MEDIAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₂ (E)	36	#5	14'-10"	—
a ₇ (E)	18	#5	38'-10"	—
b(E)	4	#5	10'-1"	—
b ₁ (E)	8	#5	3'-5"	⌋
d(E)	12	#5	2'-7"	⌋
d ₁ (E)	12	#4	3'-7"	⌋
d ₂ (E)	12	#5	3'-0"	⌋
d ₃ (E)	12	#4	3'-8"	⌋
Concrete Removal			Cu. Yd.	8.8
Concrete Superstructure			Cu. Yd.	10.3
Reinforcement Bars, Epoxy Coated			Pound	1490

NOTES

For details of Strip Seal Expansion Joints, see Sheet 11.

Existing longitudinal parapet and raised median reinforcement shall remain in place. See Sheet 8 for parapet details.

See Sheet 12 for details of Bar Splicers.



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CHECKED - TBS

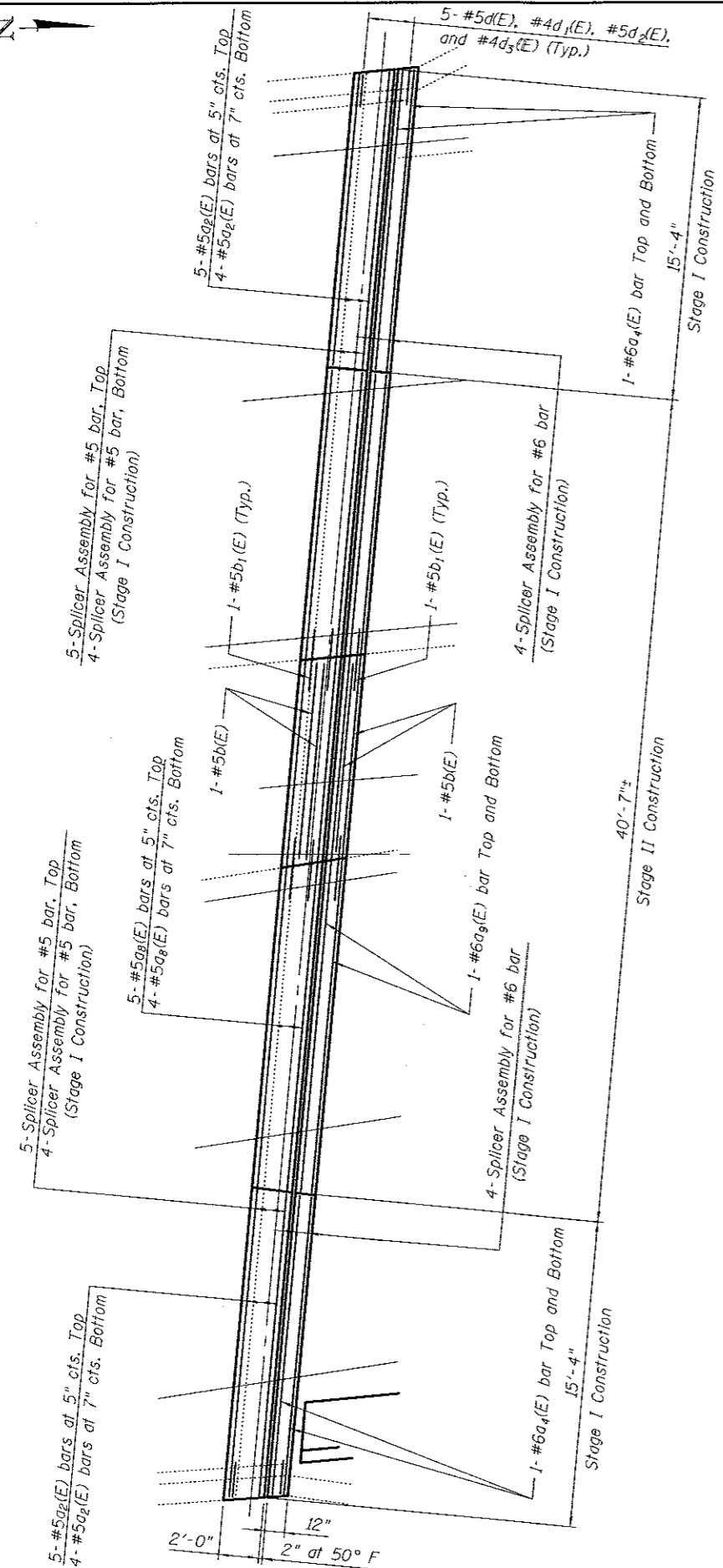
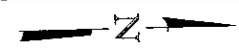
REVISED - Δ 8/10/2017 RPN
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DEPARTMENT OF TRANSPORTATION

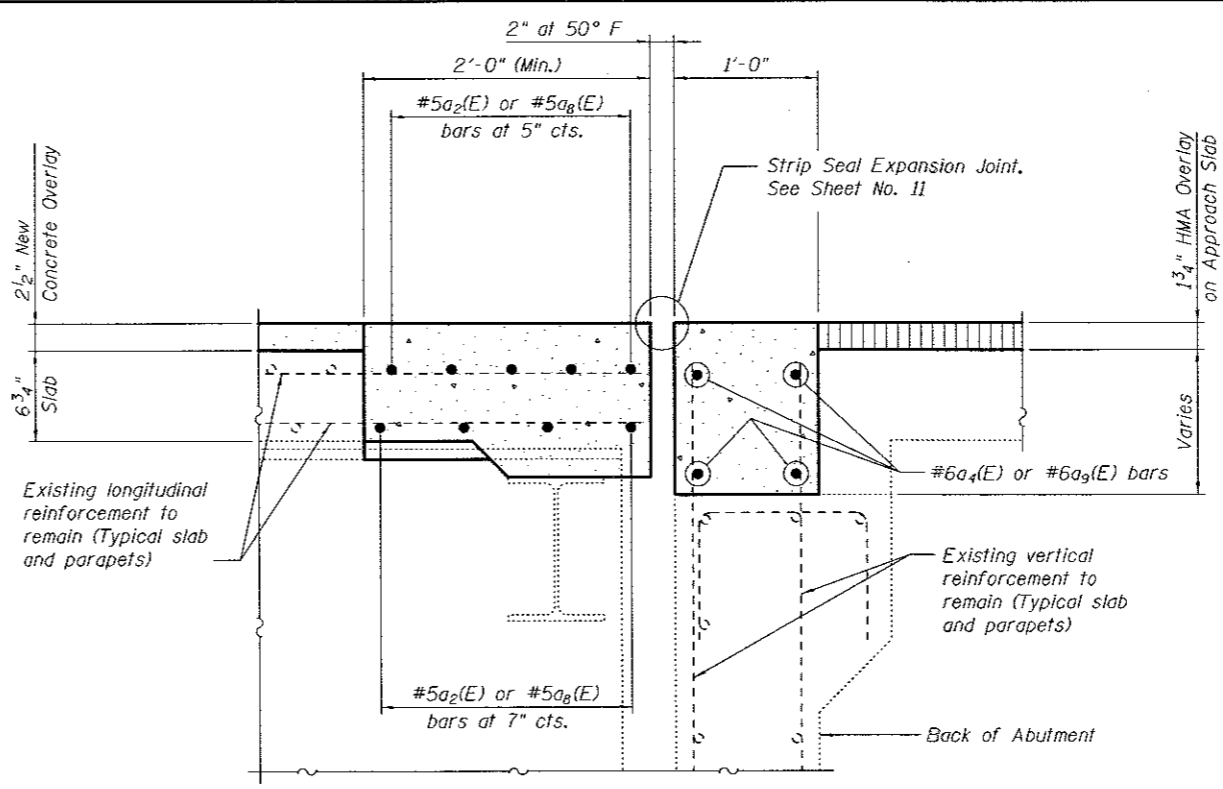
EXPANSION JOINT REPAIR

SHEET NO. 9 OF 12 SHEETS

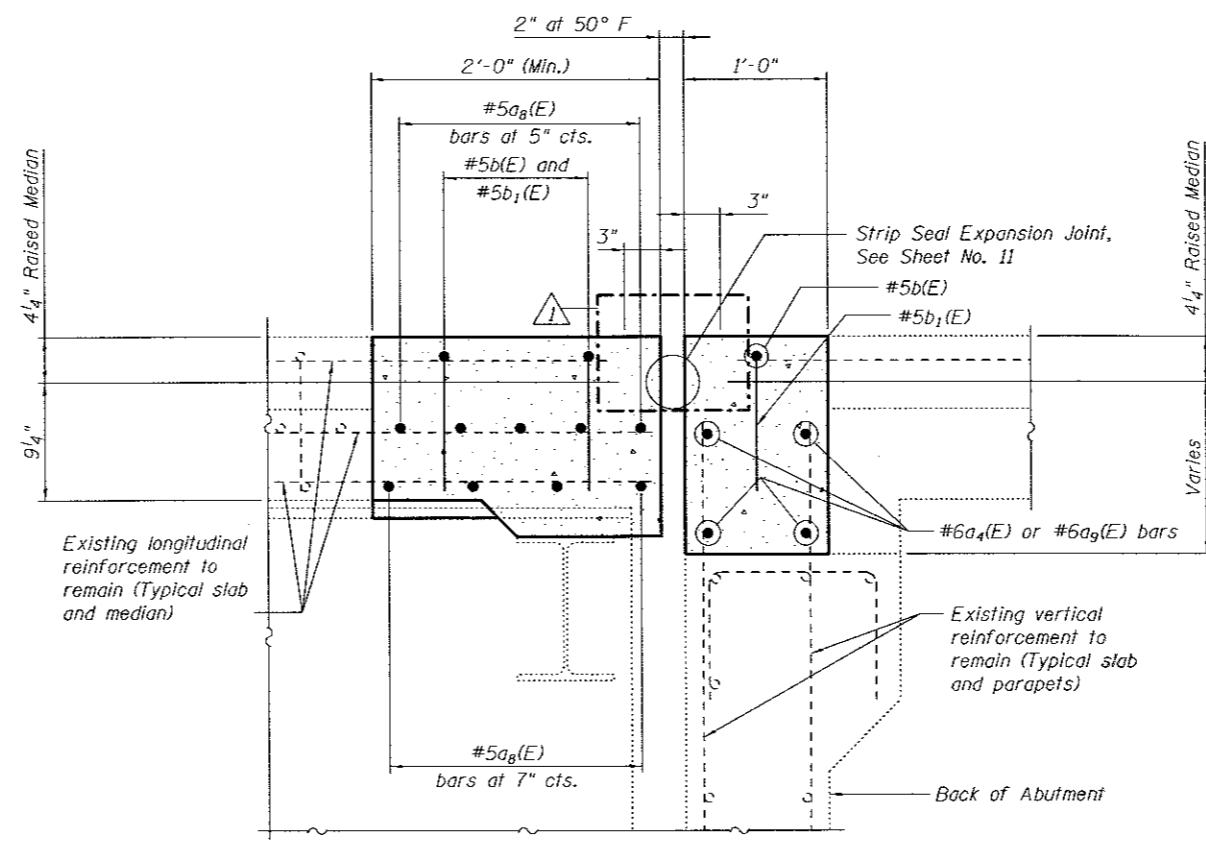
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	16
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



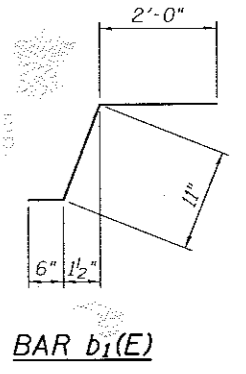
EXPANSION JOINT PLAN NORTH ABUTMENT



TYPICAL SECTION AT EXPANSION JOINT



TYPICAL SECTION THRU RAISED MEDIAN



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	18	#5	14'-10"	—
a4(E)	8	#6	14'-10"	—
a8(E)	9	#5	40'-4"	—
a9(E)	4	#6	40'-4"	—
b(E)	3	#5	10'-1"	—
b1(E)	6	#5	3'-5"	⌋
d(E)	10	#5	2'-7"	⌋
d1(E)	10	#4	3'-7"	⌋
d2(E)	10	#5	3'-0"	⌋
d3(E)	10	#4	3'-8"	⌋
Concrete Removal			Cu. Yd.	8.9
Concrete Superstructure			Cu. Yd.	10.1
Reinforcement Bars, Epoxy Coated			Pound	1240

NOTES

- For details of Strip Seal Expansion Joints, see Sheet 11.
- Existing longitudinal parapet and raised median reinforcement shall remain in place. See Sheet 8 for parapet details.
- See Sheet 12 for details of Bar Splicers.



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REVISED - 8/10/2017 RPN
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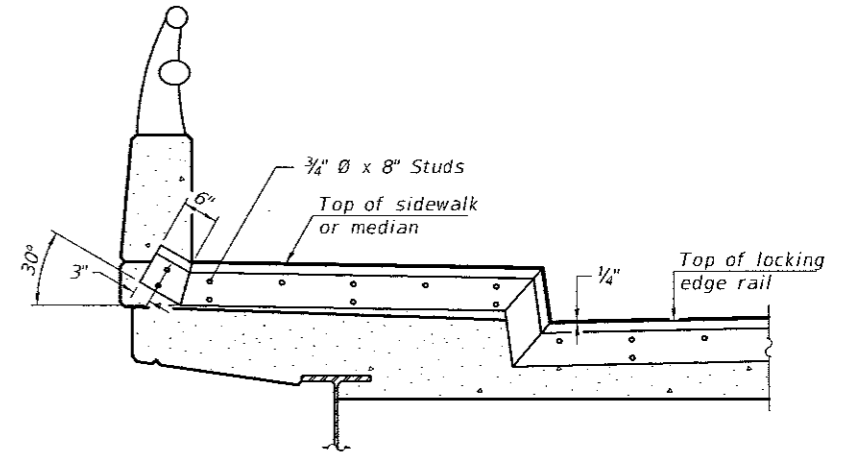
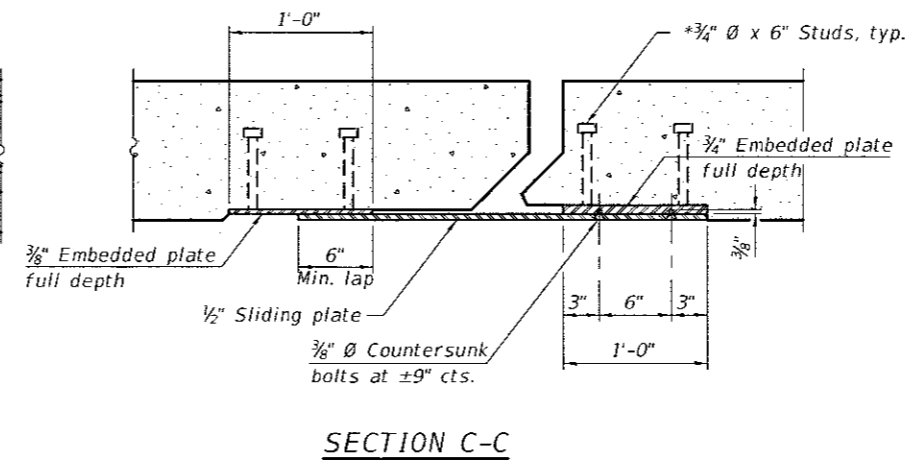
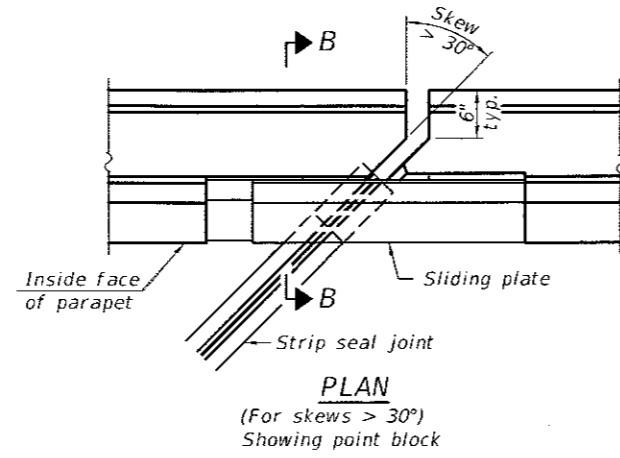
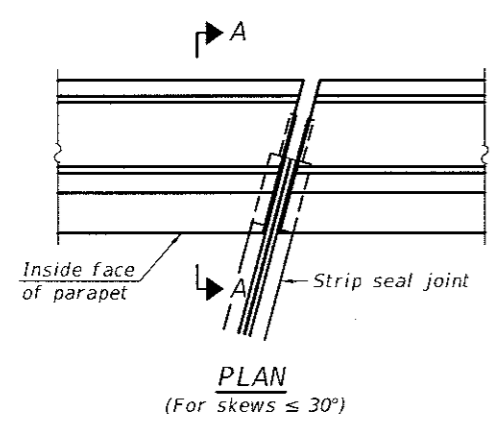
STATE OF ILLINOIS
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EXPANSION JOINT REPAIR

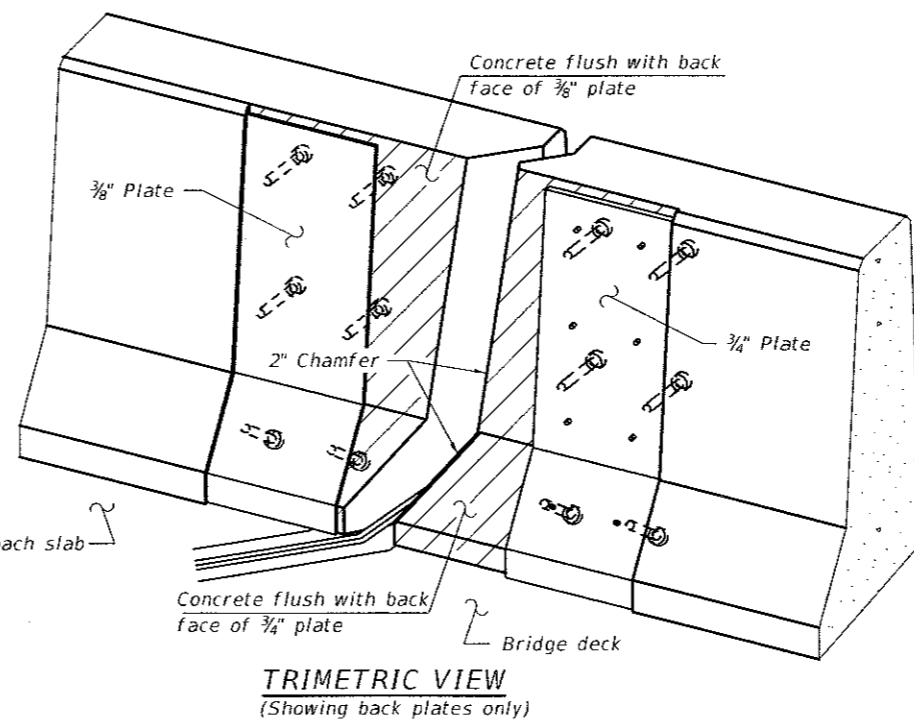
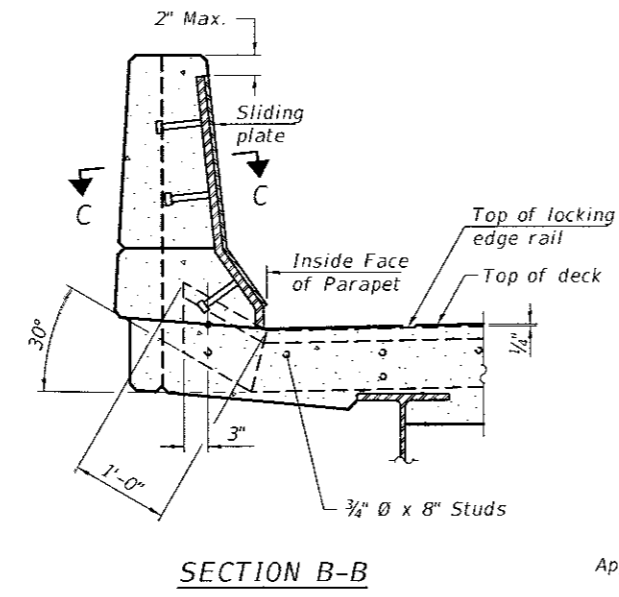
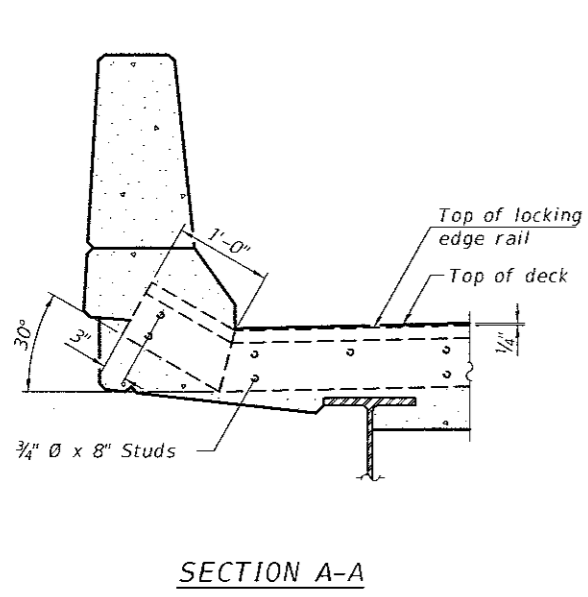
SHEET NO. 10 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	17
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

\$FILES \$TIMES \$DATES\$



Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

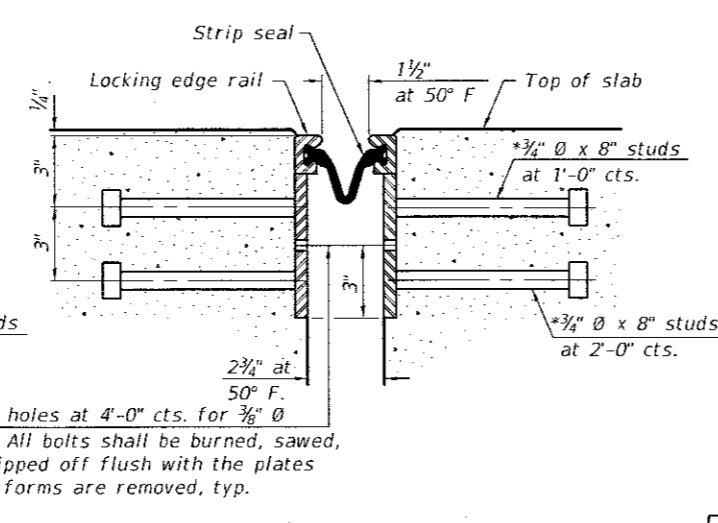
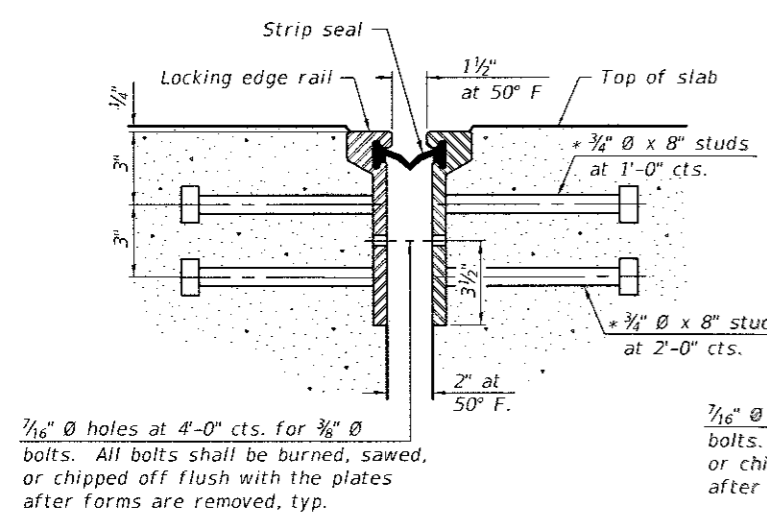
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

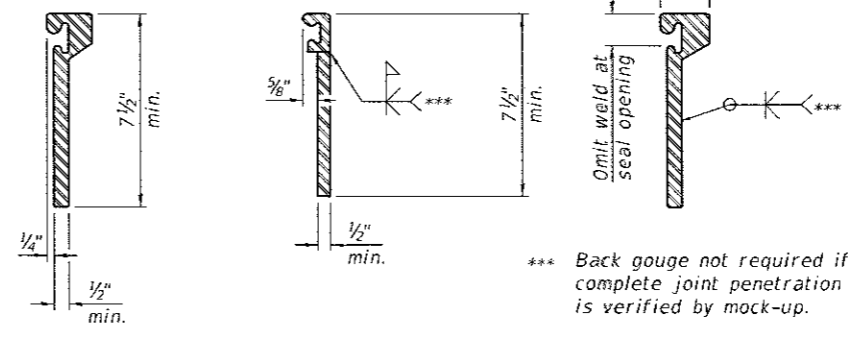
Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



7/16" \emptyset holes at 4'-0" cts. for 3/8" \emptyset bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" \emptyset holes at 4'-0" cts. for 3/8" \emptyset bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	265

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

LOCKING EDGE RAILS

EJ-SSJ 2-17-2017

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Chicago, IL 60643
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F: 773.239.3728

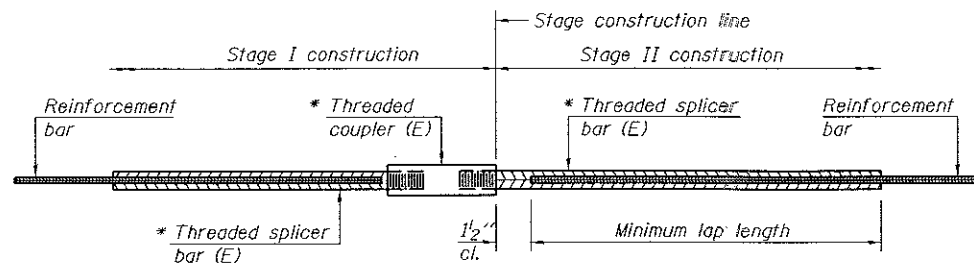
DESIGNED - TBS	COMPLETE REVISION 8/10/2017 RPN
CHECKED - R.J.L.	REVISED -
DRAWN - SCS	REVISED -
CHECKED - TBS	REVISED -

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EXPANSION JOINT DETAILS
SHEET NO. 11 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	18
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

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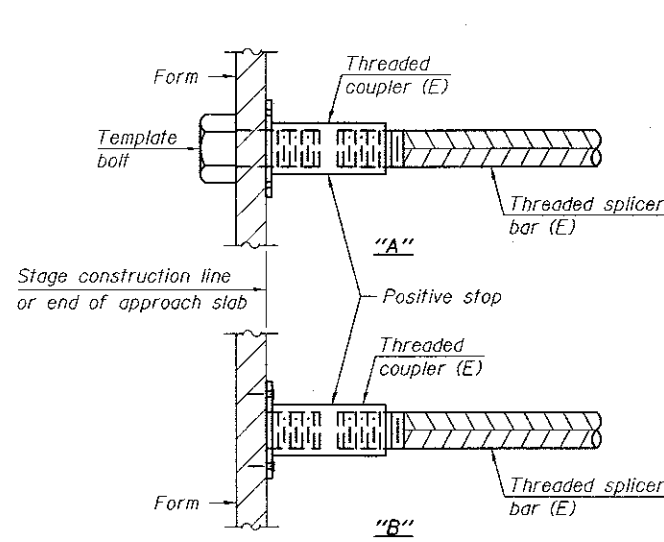


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
S. Abutment	5	18	3'-4"
S. Abutment	6	8	4'-0"
Pier 1	5	36	3'-6"
Pier 2	5	36	3'-6"
N. Abutment	5	18	3'-4"
N. Abutment	6	8	4'-0"

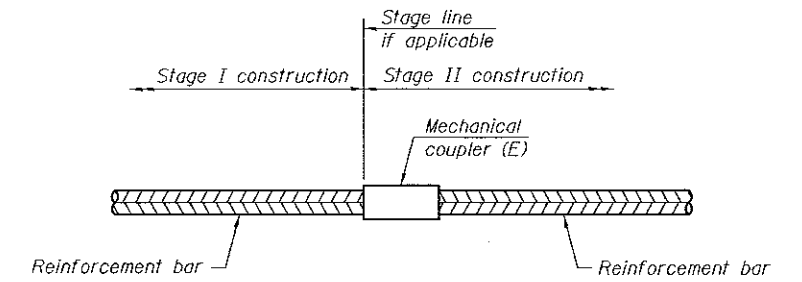


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

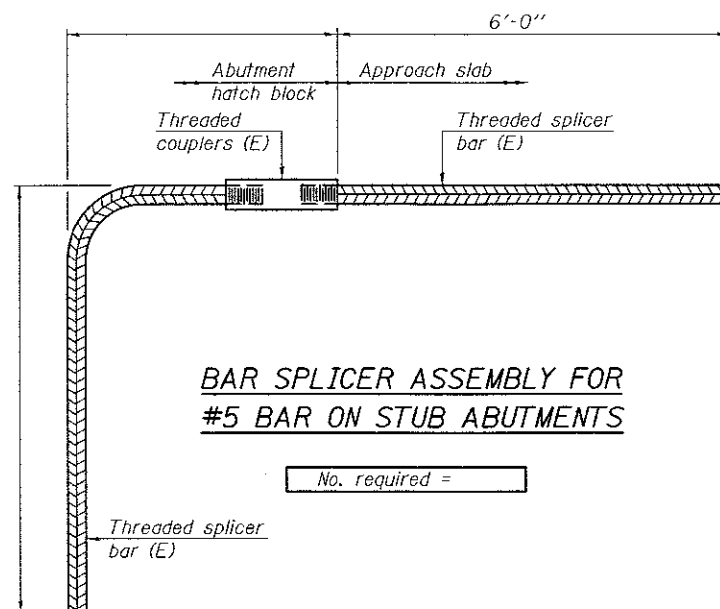
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

6-8-15

ABNA
 DESIGN FIRM REG. 184.002117
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 Ph. 773-881-4788
 F: 773.239.3728

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 DEPARTMENT OF TRANSPORTATION

BAR SPLICER DETAILS

SHEET NO. 12 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4WRS & 99-4B-Y(89)	WILL	26	19
STA. 01+000.000 TO STA.			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{1}{16}$ " ϕ , unless otherwise noted.

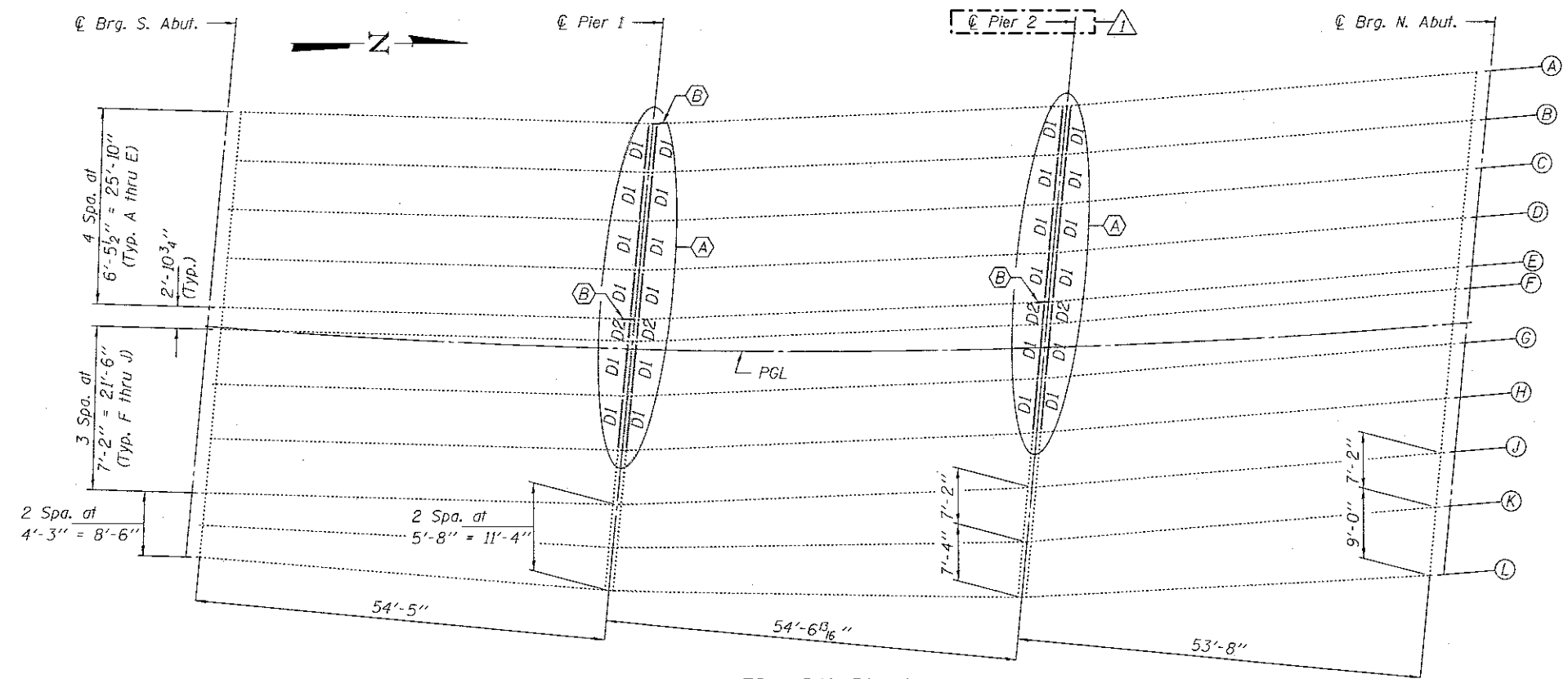
Diaphragm connection holes shall be $\frac{15}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.

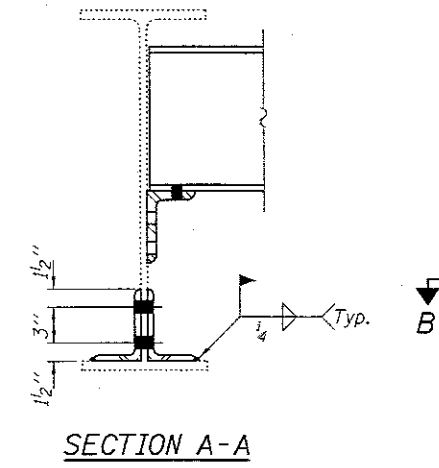
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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



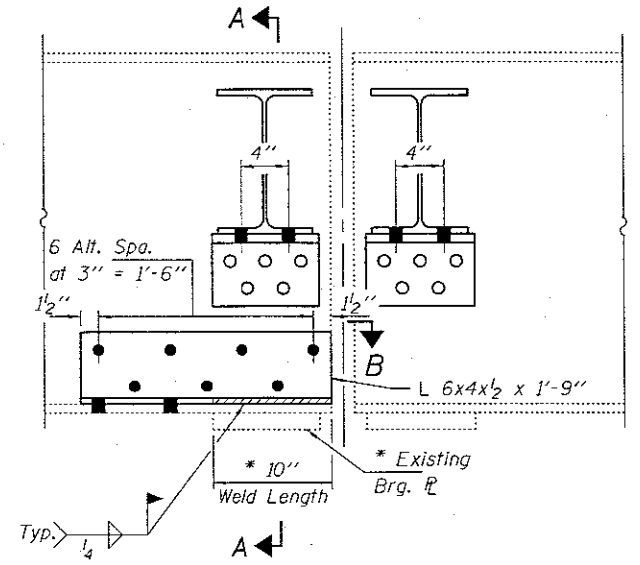
FRAMING PLAN

- (A) - Remove & Replace Diaphragms & Clip Angles
 - (B) - Beam End Repairs
- Remove & Replace all fixed bearings at Pier 1 Span 1 & Pier 2 Spans 2 & 3. (33 Locations)
- Use holes in new steel as template.
 - Use holes in existing beam as template for drilling holes in new clip angle.



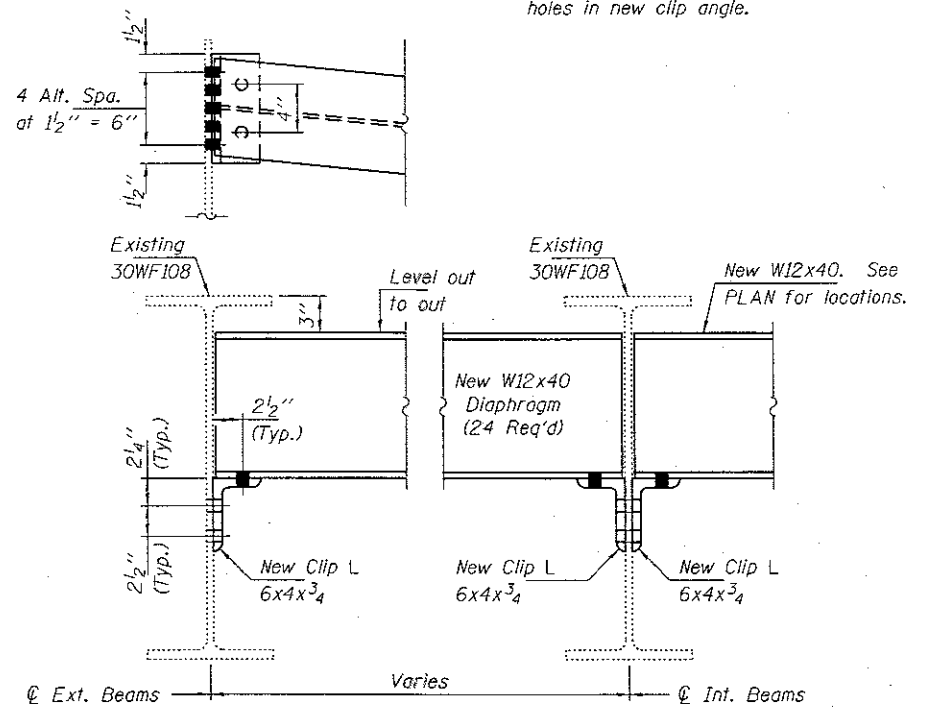
SECTION A-A

* Repair angle to be welded to bottom flange of beam. See Detail A this sheet for details. Cost included with Structural Steel Repair.



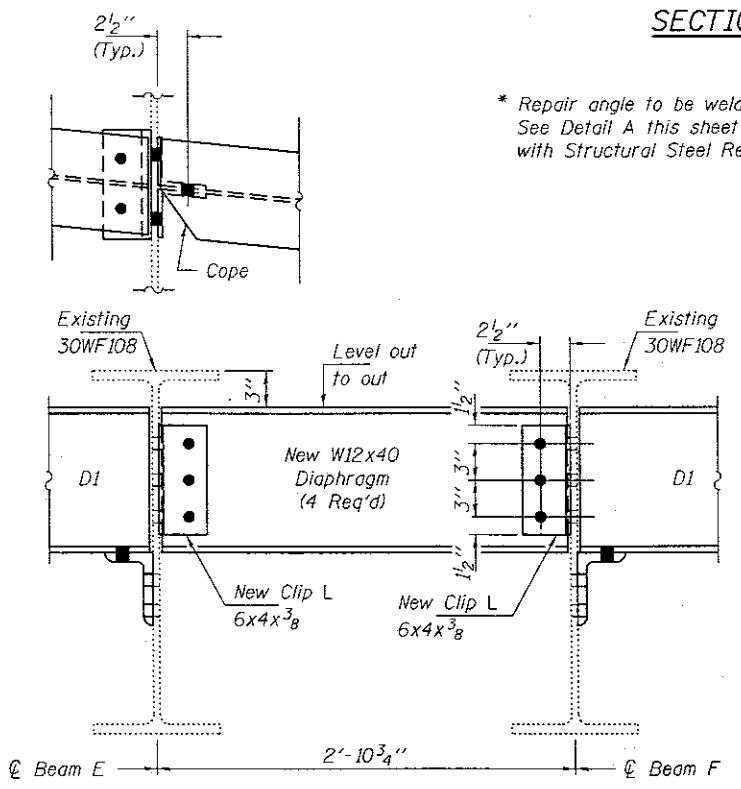
BEAM END REPAIR DETAIL

Beam "A" at Span 2 (Pier 1 Looking East)
 Beam "E" at Span 1 (Pier 1 Looking West)
 Beam "E" at Span 2 (Pier 2 Looking West)



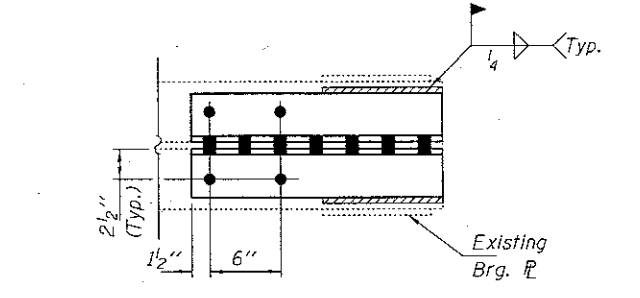
DIAPHRAGM D1 REPLACEMENT DETAILS

W12x40 Diaphragm (24 Required)
 Clip L 6x4x $\frac{3}{4}$ x 9" (48 Required)



DIAPHRAGM D2 REPLACEMENT DETAILS

W12x40 Diaphragm (4 Required)
 Clip L 6x4x $\frac{3}{8}$ x 9" (8 Required)



SECTION B-B

New diaphragms and connection clip angles to be paid for as Furnishing and Erecting Structural Steel. All other steel to be paid for as Structural Steel Repair.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	7820
Furnishing & Erecting Structural Steel	Pound	7820
Structural Steel Repair	Pound	300



Expires: November 30, 2018

DESIGNED - VHV	CHECKED - DAB
DRAWN - daburdell	CHECKED - VHV DAB

DATE - JULY 31, 2017	REVISOR - RPN
REVISION - 8/10/2017	REVISION -

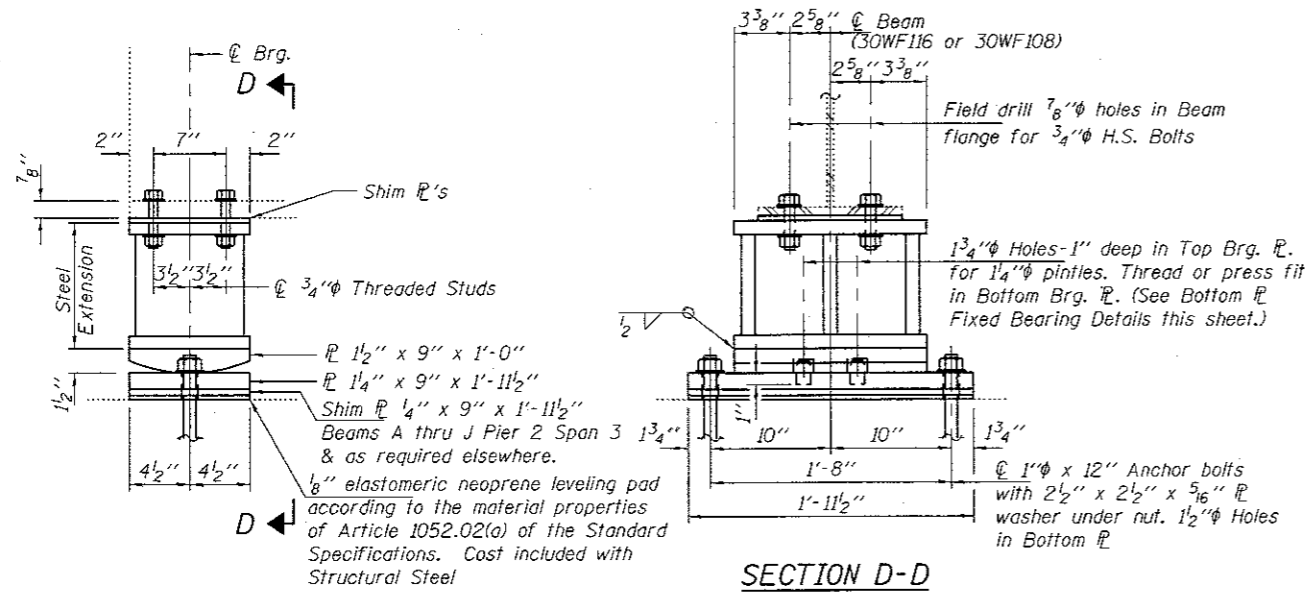
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
 SN 099-0083

SHEET NO. 1 OF 2 SHEETS

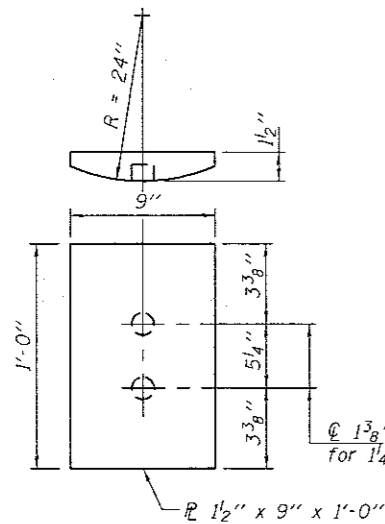
F.A.P. RTE. 846	SECTION 99-4-B-1	COUNTY WILL	TOTAL SHEETS 26	SHEET NO. 19A
CONTRACT NO. 60M98				ILLINOIS FED. AID PROJECT

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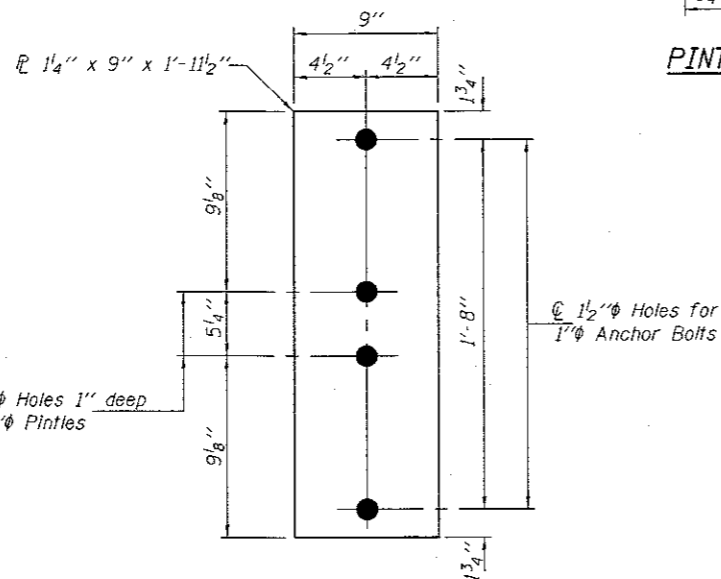


ELEVATION AT PIER

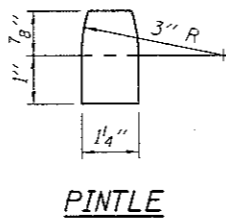
FIXED BEARINGS
PIER
 (33 Locations)



PLAN - TOP PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS



BEAM REACTIONS

		30WF116	30WF108
R ₀	(K)	33.7	21.9
R ₁	(K)	43.3	37.9
Imp.	(K)	12.2	10.6
R (Total)	(K)	89.2	70.4

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

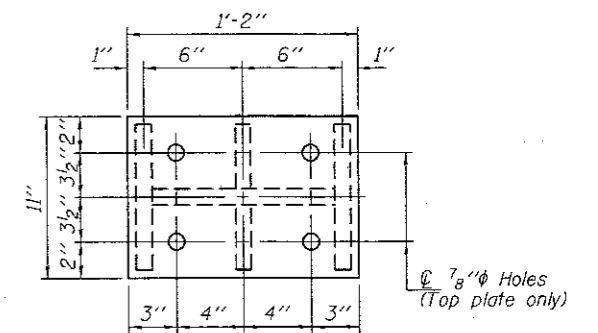
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

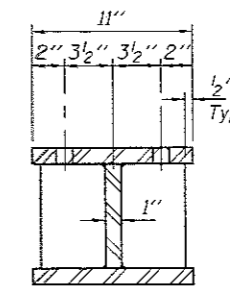
Min. jack capacity = 50 Tons.

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 (F_y=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

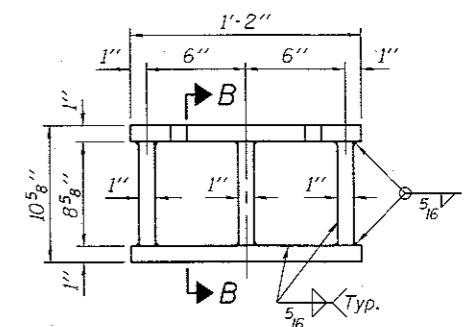
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



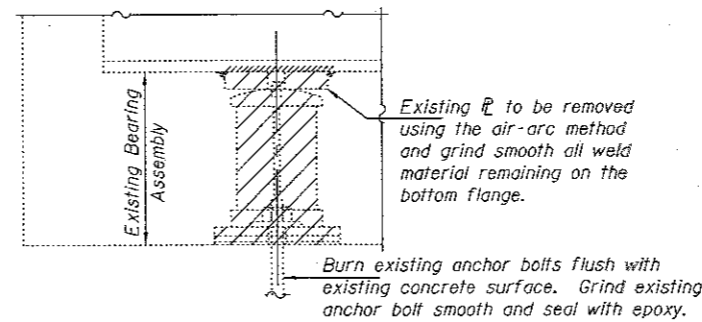
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	31
Furnishing and Erecting Structural Steel	Pound	10750
Anchor Bolts 1"φ	Each	66

* Jacking and Removing bearings at Beam A, Pier 2 is included with Temporary Shoring and Cribbing.

DESIGNED - VHV
 CHECKED - DAB
 DRAWN - daburdell
 CHECKED - VHV DAB

PASSED

Carl Propp
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - JULY 31, 2017

SHEET ADDED 8/10/2017 RPN
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

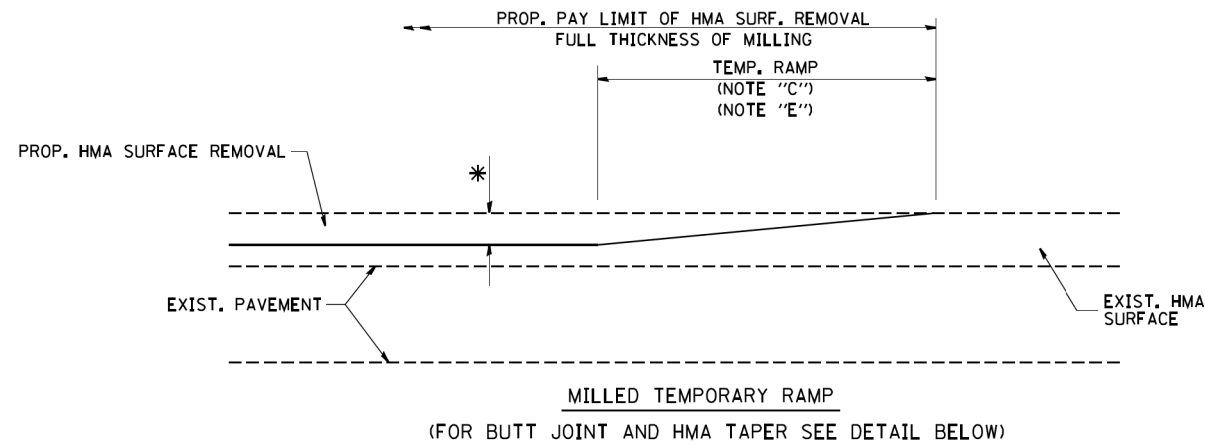
REPAIR DETAILS
 SN 099-0083

SHEET NO. 2 OF 2 SHEETS

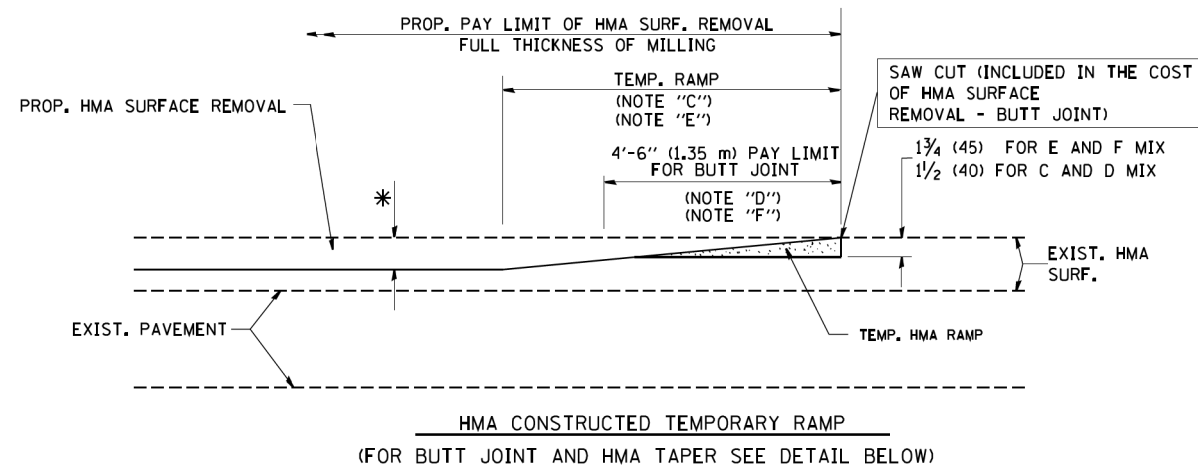
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	19B

CONTRACT NO. 60M98
 ILLINOIS FED. AID PROJECT

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 \$TIMES\$
 \$FILE\$

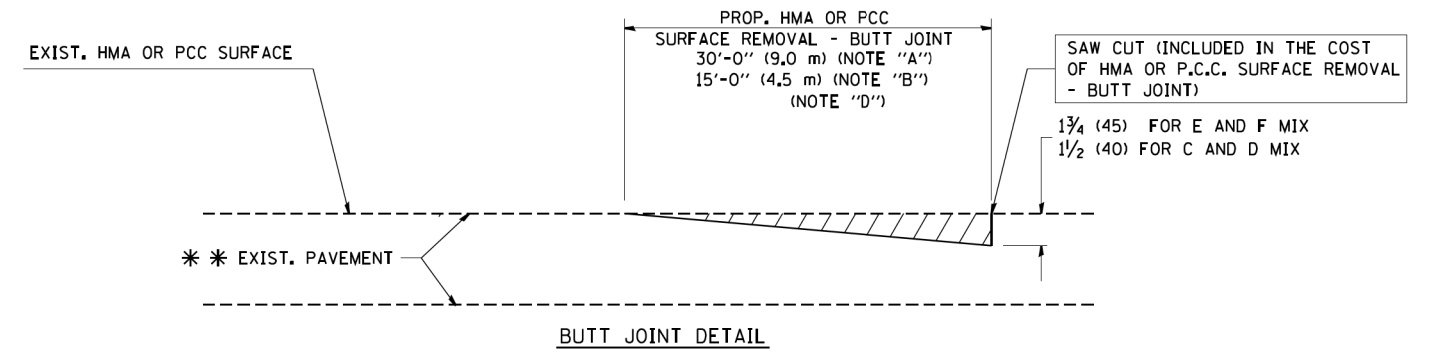


OPTION 1

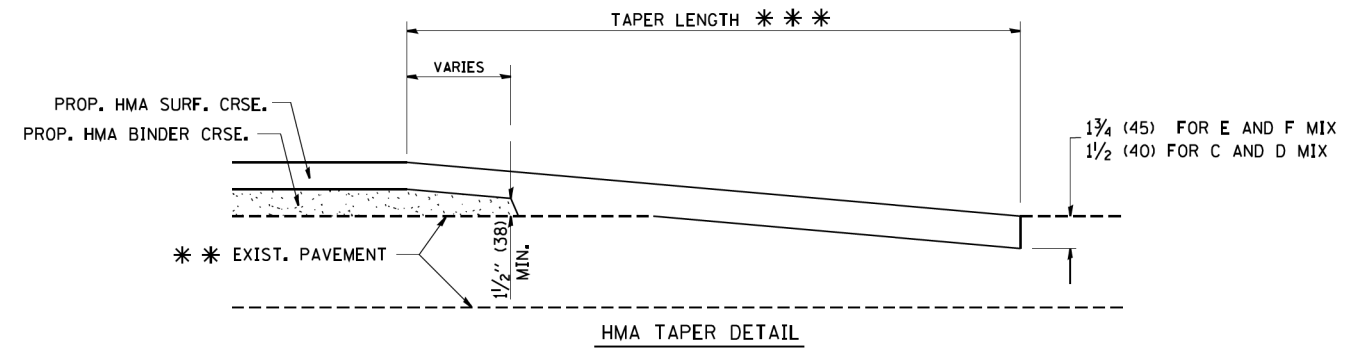


OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

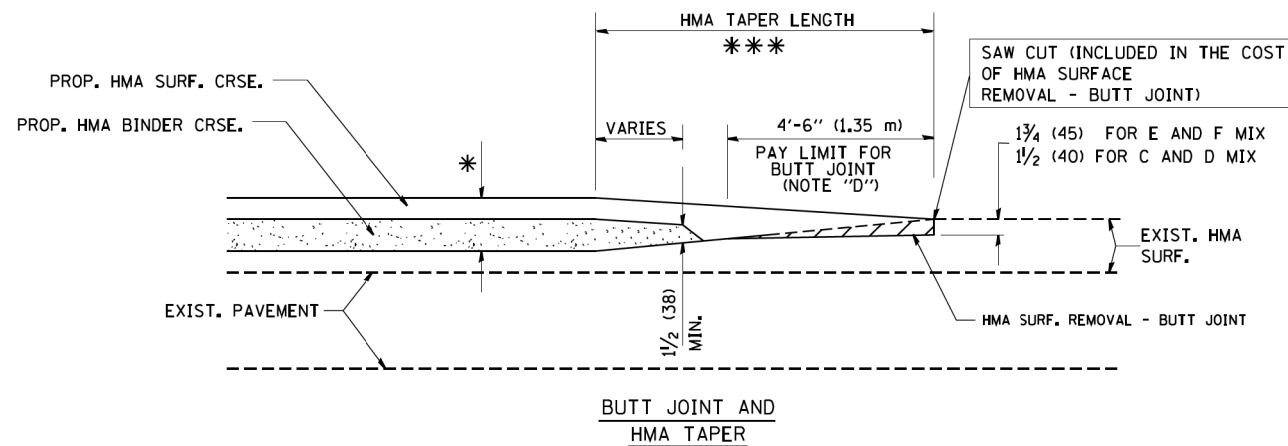
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- * * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



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 F: 773-239-3728

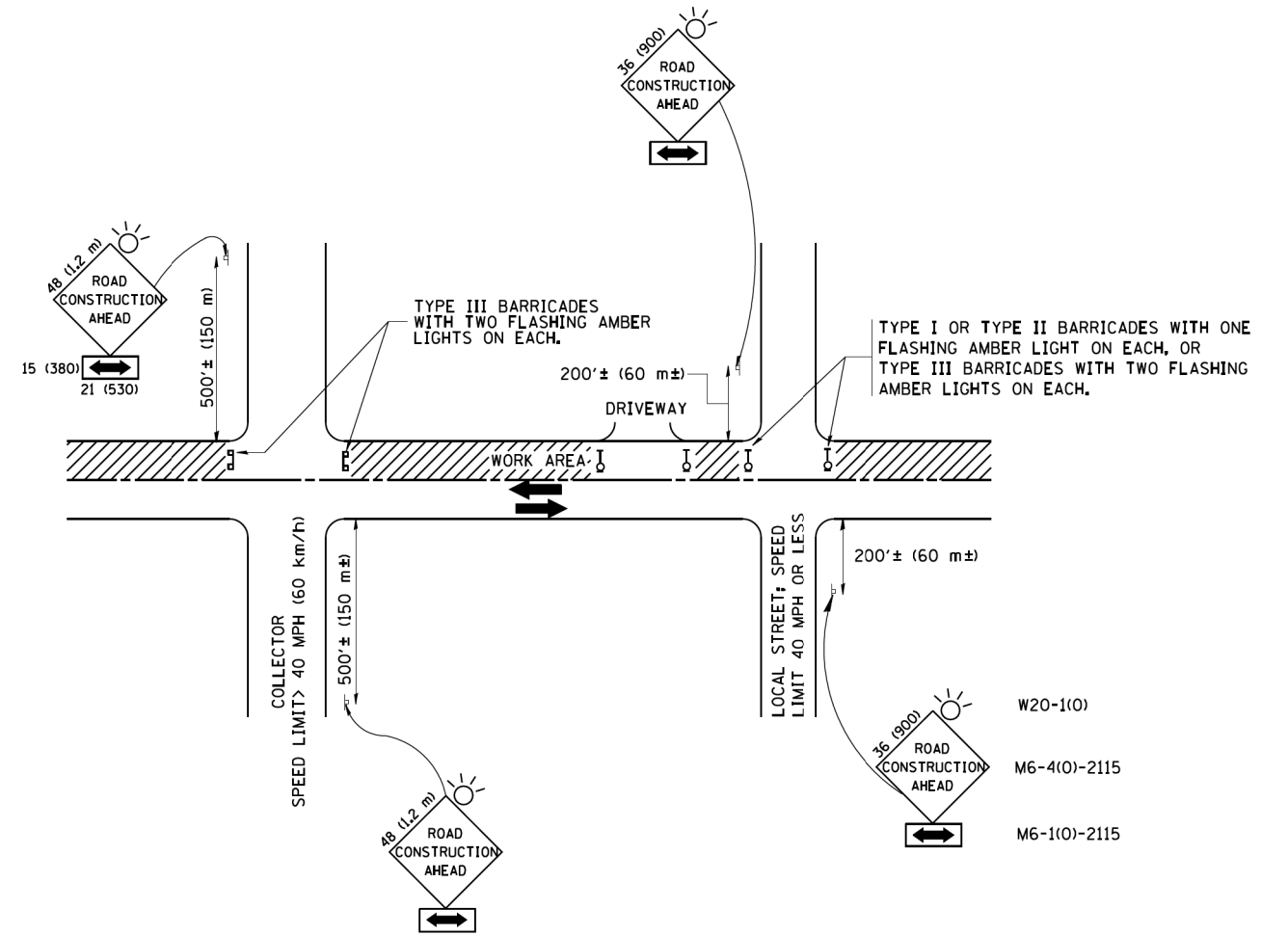
DESIGNED	M. DE YONG	REVISED	- R. SHAH 10-25-94
DRAWN		REVISED	- A. ABBAS 03-21-97
CHECKED		REVISED	- M. GOMEZ 04-06-01
DATE	06-13-90	REVISED	- R. BORO 01-01-07

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
 HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	20
BD400-05 BD32			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 - USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
 - C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
 - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.



9901 S. Western Ave.
Chicago, IL 60643
Ph. 773-881-4788
F: 773-239-3728

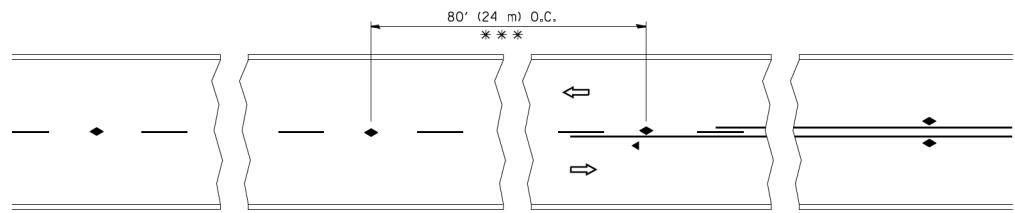
DESIGNED	LHA	REVISED	- J. OBERLE 10-18-95
DRAWN		REVISED	- A. HOUSEH 03-06-96
CHECKED		REVISED	- A. HOUSEH 10-15-96
DATE	06-89	REVISED	- T. RAMMACH 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS AND DRIVEWAYS

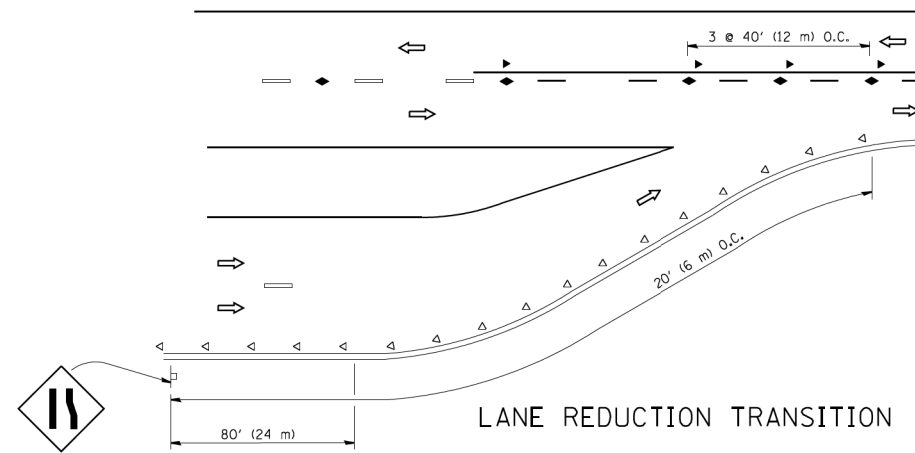
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	21
TC-10			CONTRACT NO. 60M98	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

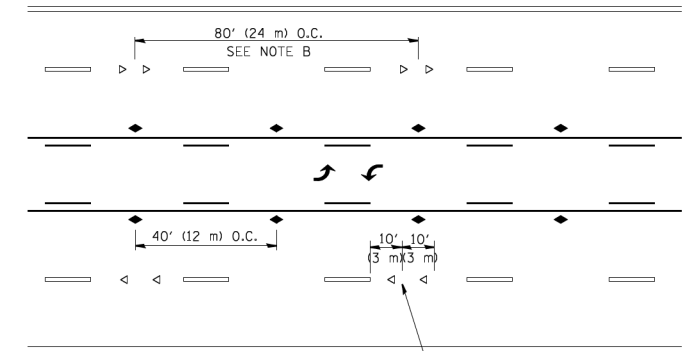


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

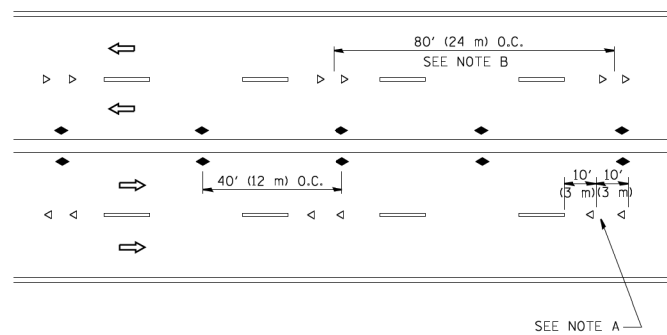
TWO-LANE/TWO-WAY



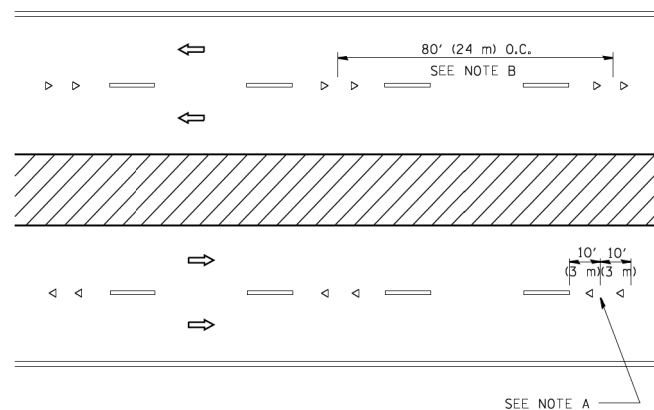
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

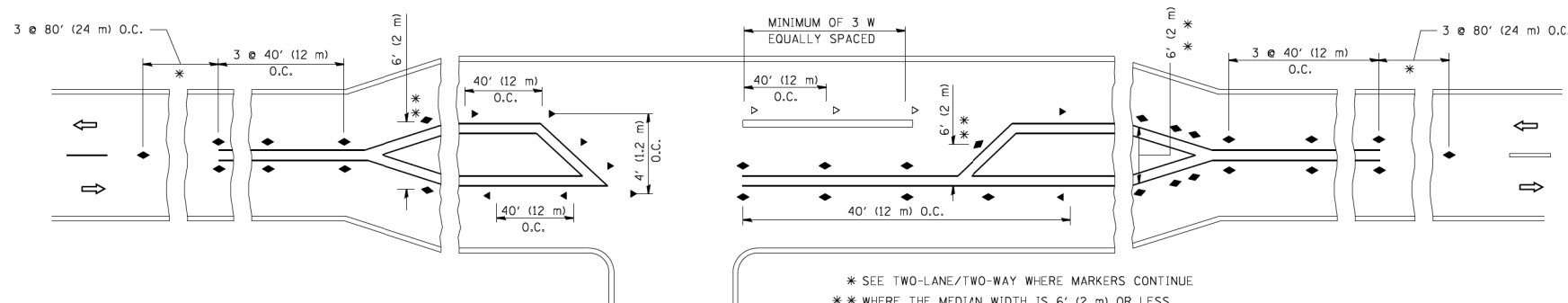
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- < ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

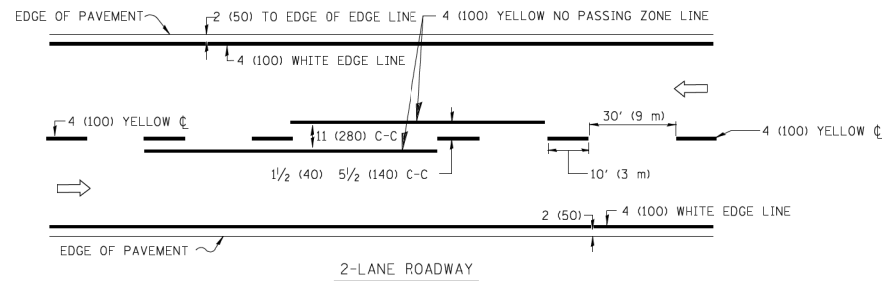
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



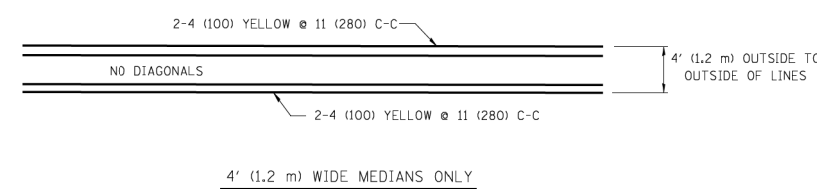
LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

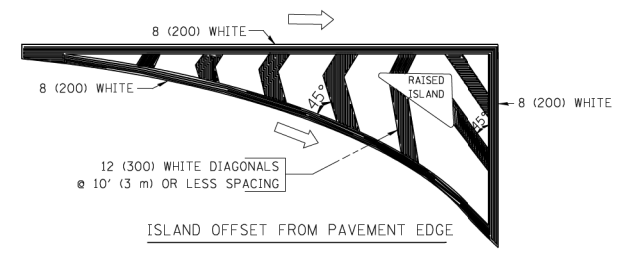
All dimensions are in inches (millimeters) unless otherwise shown.



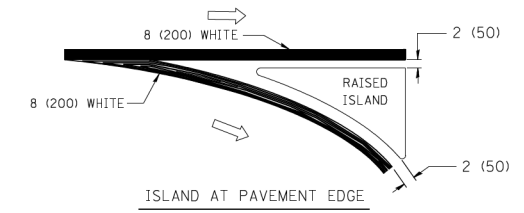
2-LANE ROADWAY



4' (1.2 m) WIDE MEDIANS ONLY

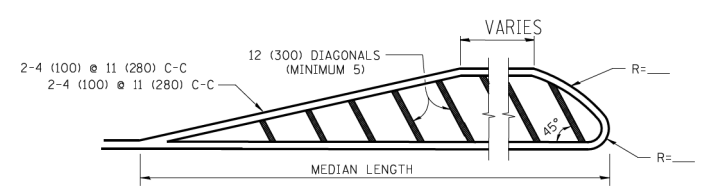


ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

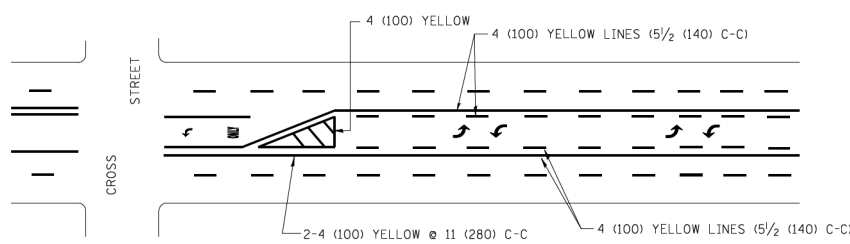
TYPICAL ISLAND MARKING



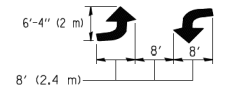
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

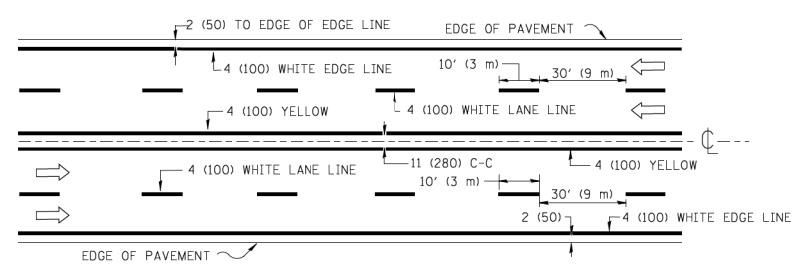


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

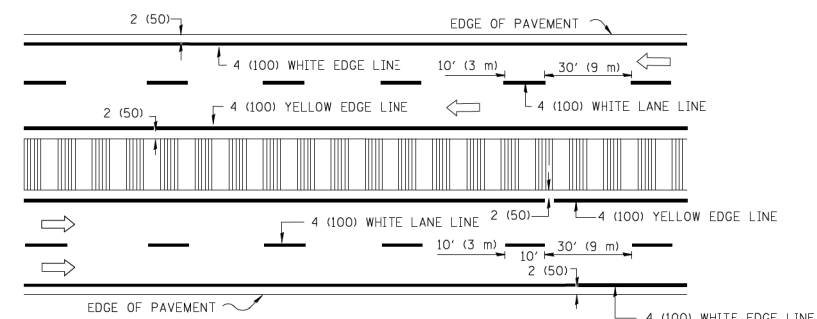


MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING



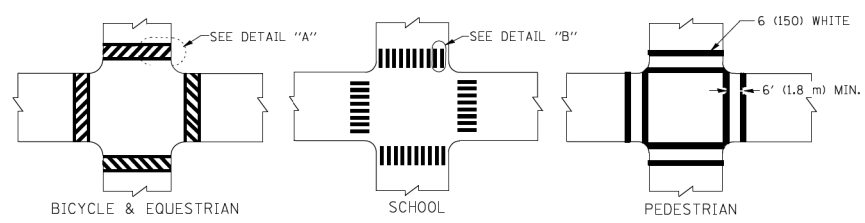
MULTI-LANE UNDIVIDED



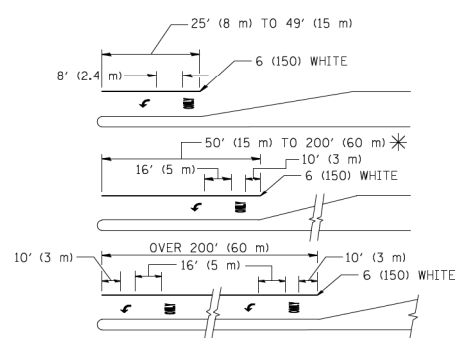
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

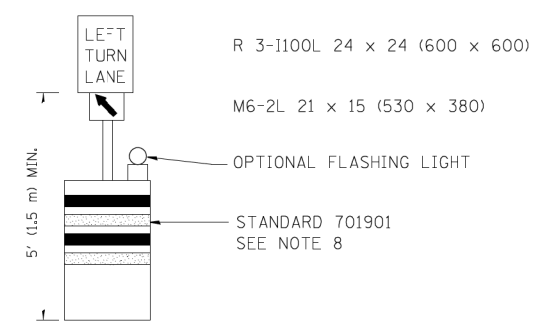
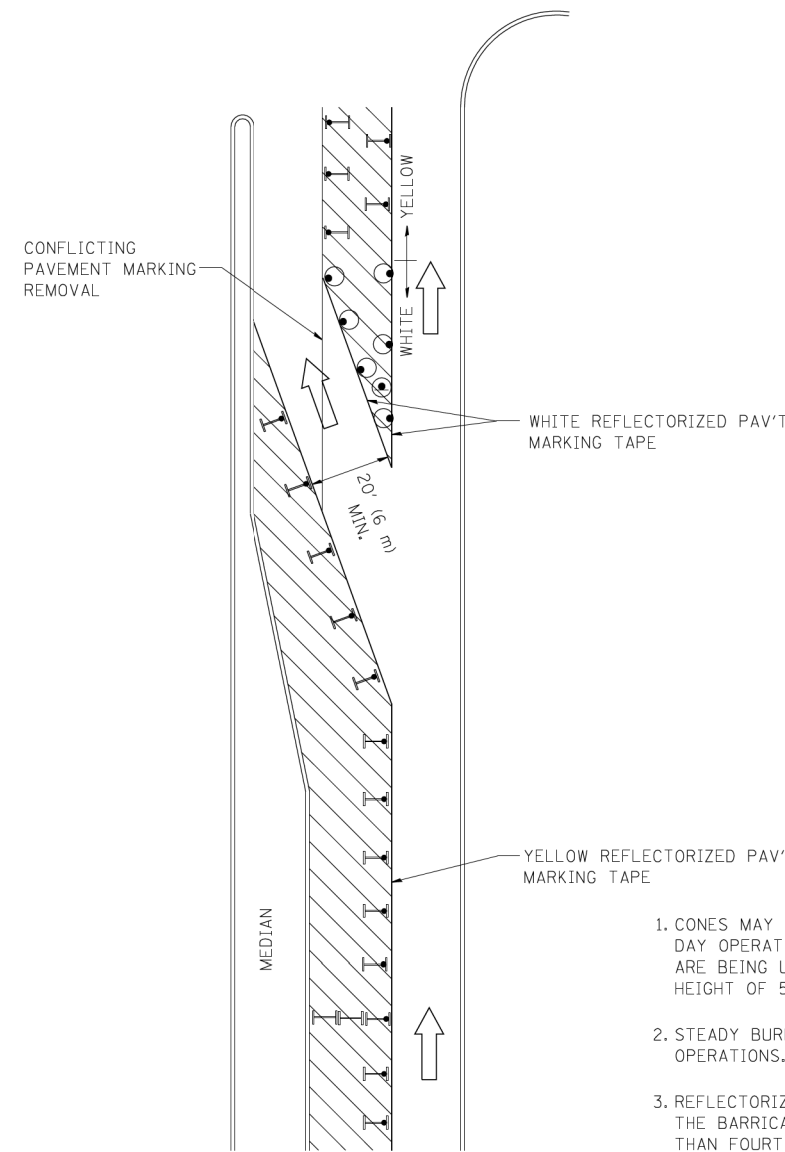
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.



GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COS- SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

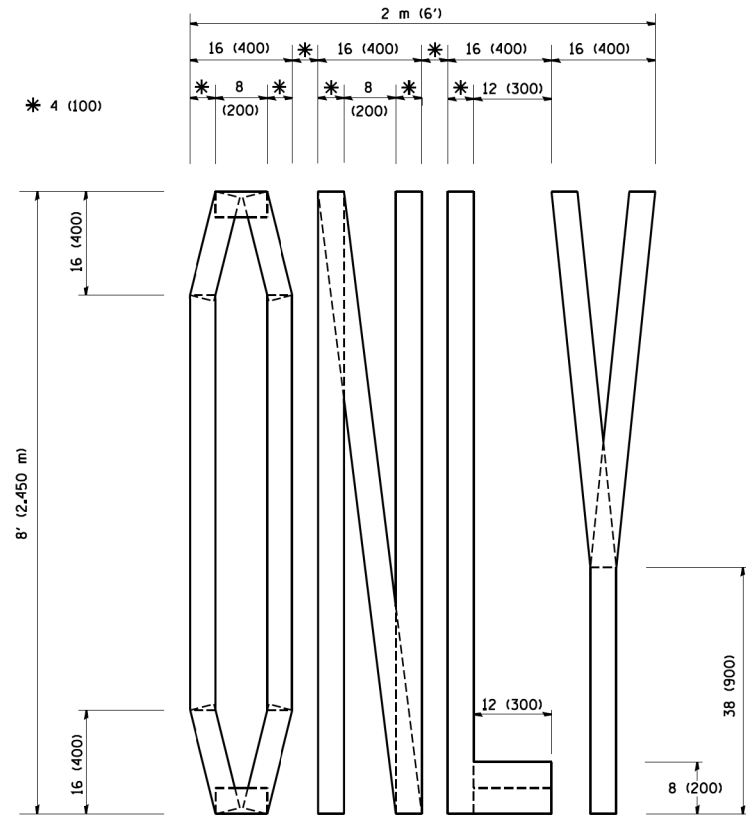
All dimensions are in inches (millimeters) unless otherwise shown.

LEGEND

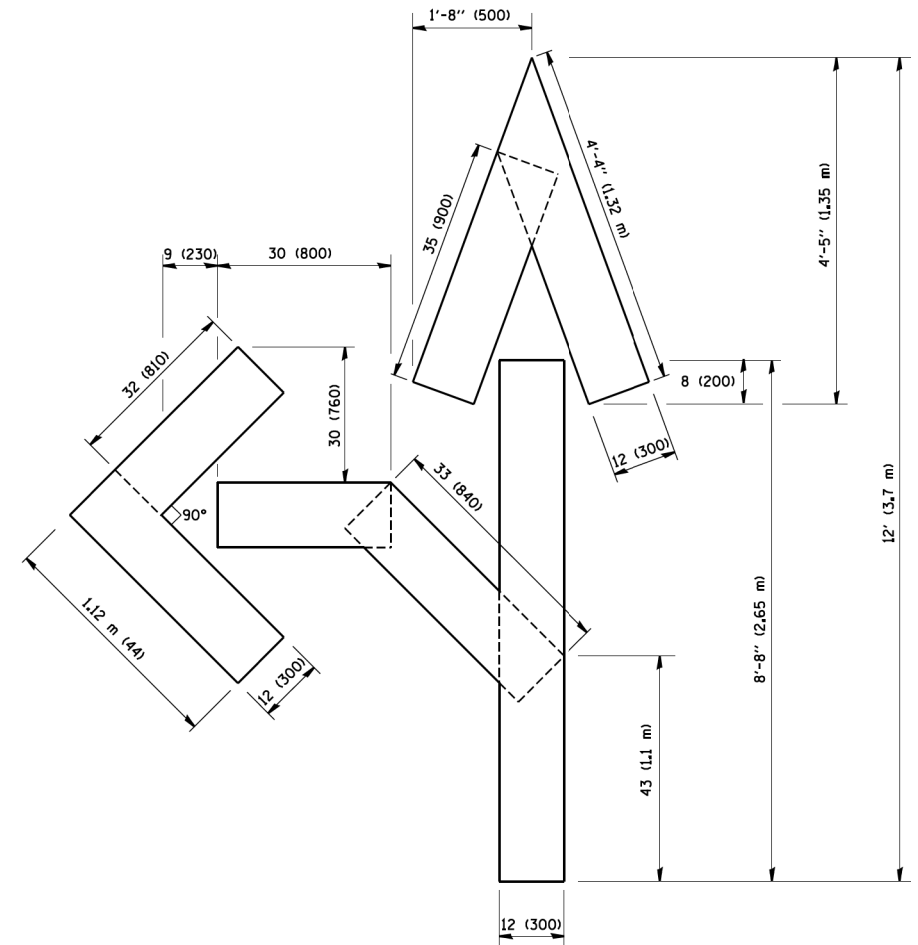
- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
REVISED - A. HOUSEH 11-07-95	REVISED -
REVISED - A. HOUSEH 10-12-96	REVISED -
REVISED - T. RAMMACHER 01-06-00	REVISED -

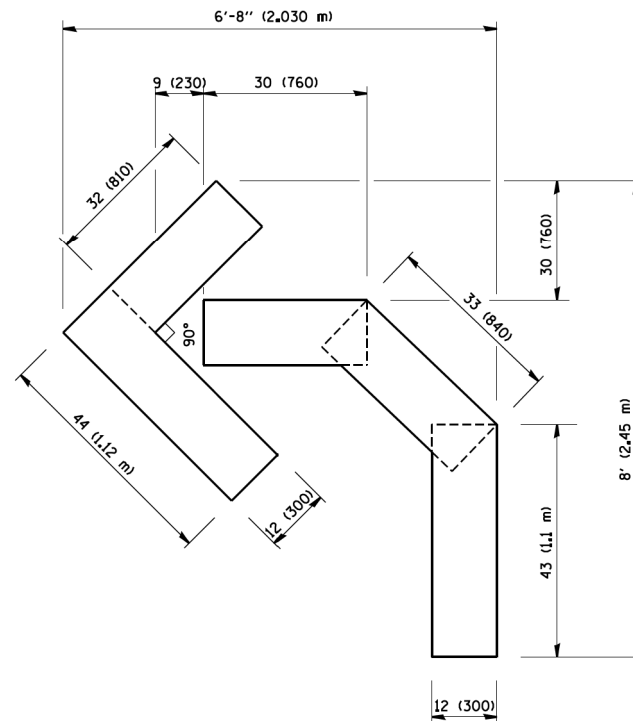
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
846	99-4-B-1	WILL	26	24
TC-14		CONTRACT NO. 60M98		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)

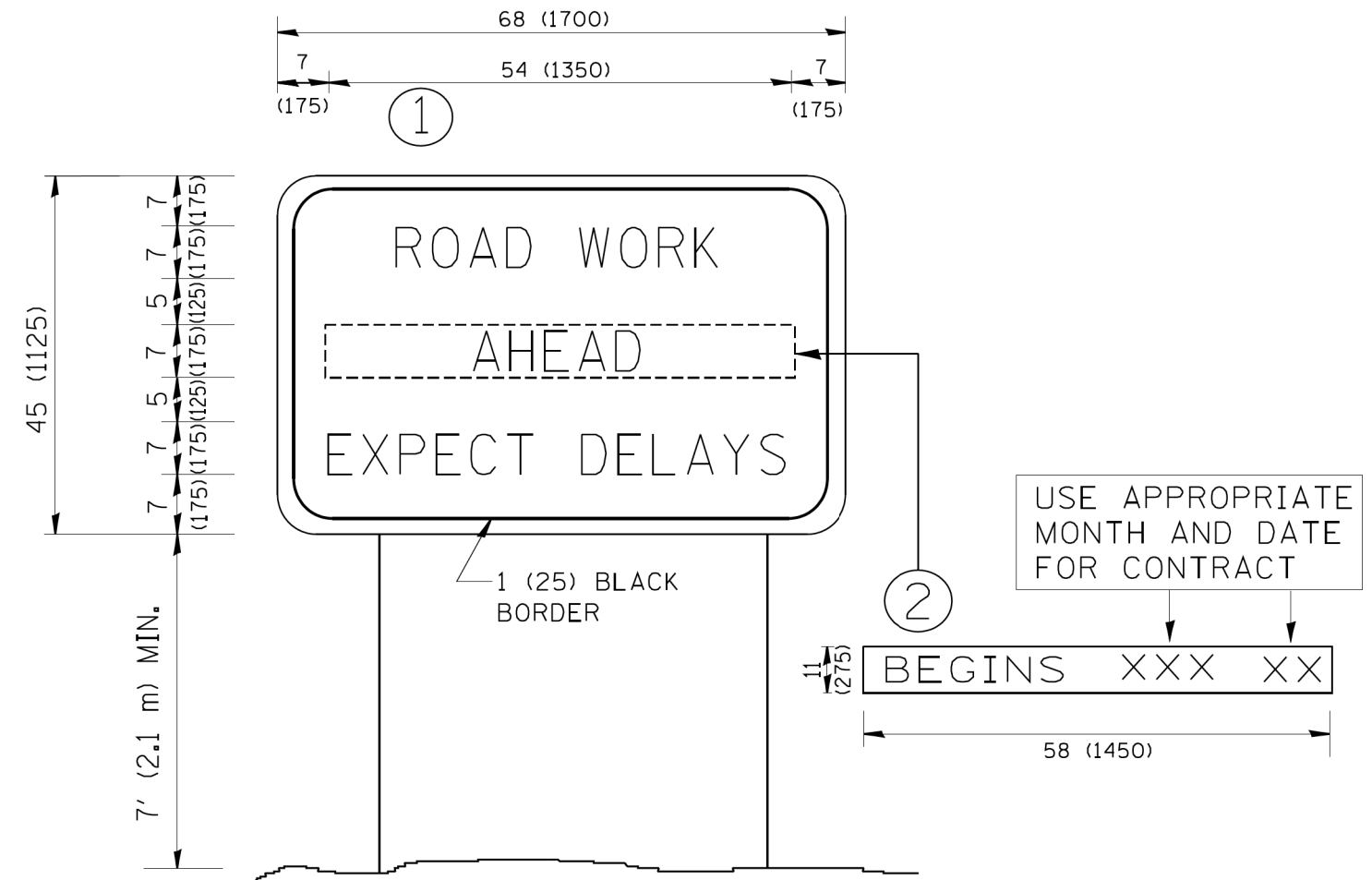


QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.