

06-14-13 LETTING ITEM 017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

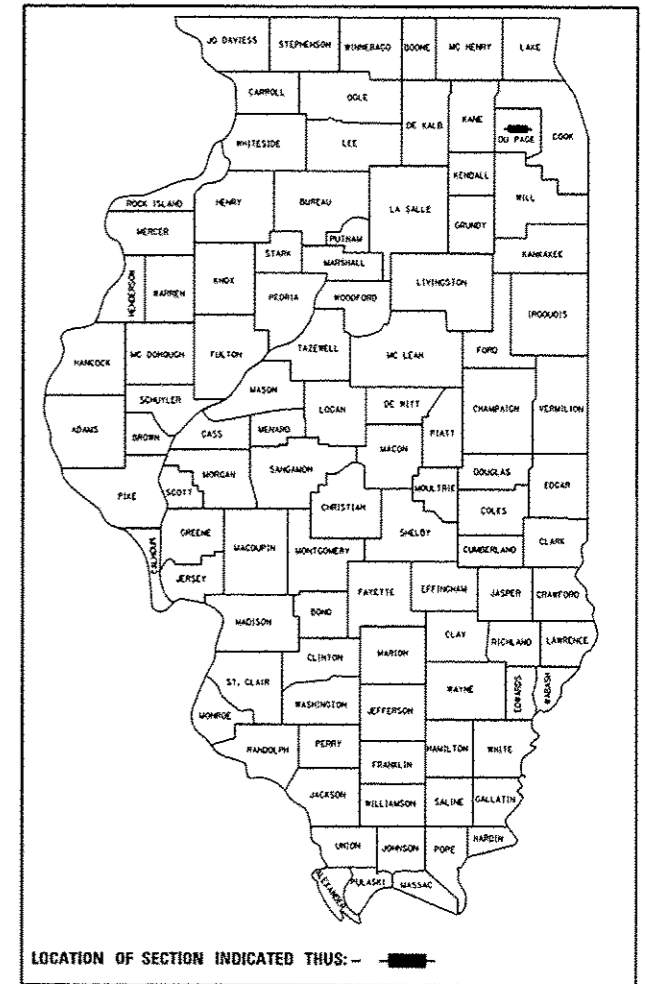
FAI ROUTE 290: I-290 AT U.S. 20 / LAKE STREET (WB)
SECTION 22-3HB-I
BRIDGE DECK OVERLAY, BRIDGE JOINT REPAIR

DuPAGE COUNTY

C-91-203-11

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-I	DUPAGE	37	1
		ILLINOIS	CONTRACT NO. 60M97	

D-91-203-11



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

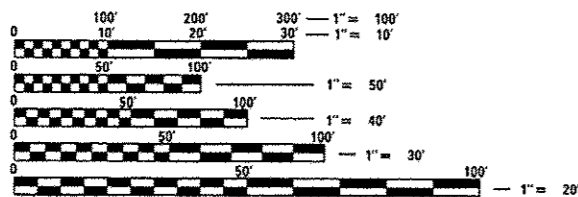
FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION

INTERSTATE, FAI
ADT 16400 (2009)
SPEED LIMIT 55 MPH

IMPROVEMENT LOCATED IN
VILLAGE OF ELMHURST

IMPROVEMENT LOCATION
US 20 WB (LAKE STREET)
OVER I-290
STRUCTURE NO: 022-0090

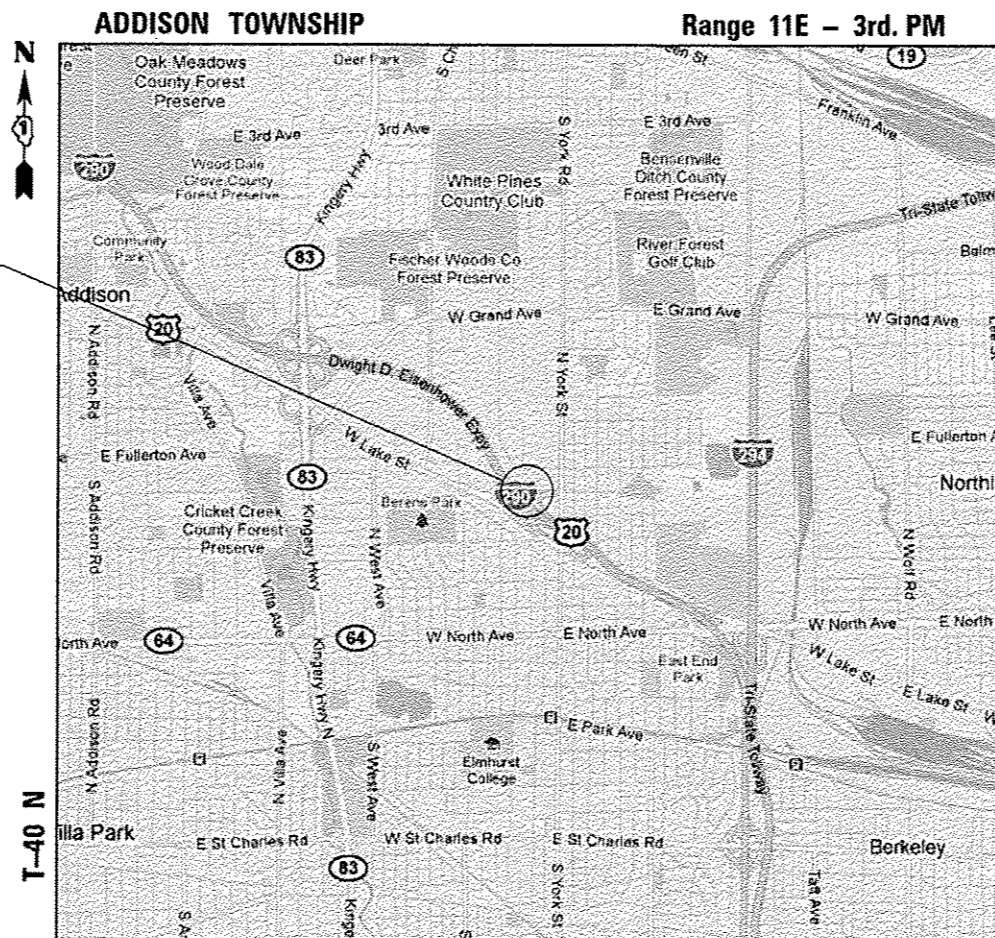


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

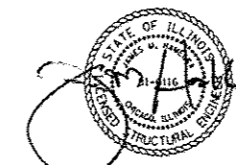
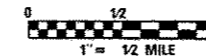
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT MANAGER: MR. ISSAM RAYYAN, P.E. (847) 705-4178
PROJECT ENGINEER: MR. ROBERT T. BORO, P.E. (847) 705-4237

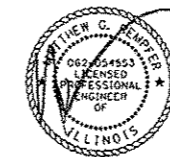
CONTRACT NO. 60M97



GROSS LENGTH = 431.26 FT. = 0.082 MILE
NET LENGTH = 431.26 FT. = 0.082 MILE



COLLINS ENGINEERS, INC.
JAMES M. HAMELKA
NO. 81-6116
EXPIRES 11-30-2014



COLLINS ENGINEERS, INC.
MATTHEW G. REMPPER
NO. 062-054553
EXPIRES 11-30-2013

COLLINS ENGINEERS
123 N. WACKER DR., SUITE 900
CHICAGO, IL 60606
(312) 704-9300

ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000993

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 18, 2012
John Futerman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 10, 2013
John D. Baranelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT
May 10, 2013
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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INDEX OF HIGHWAY STANDARDS

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|--------------|---|
| 280001-07 | Temporary Erosion Control Systems |
| 542401-01 | Metal End Sections for Pipe Culverts |
| 609006-05 | Bridge Approach Pavement (Drain Detail) |
| 635006-03 | Reflector and Terminal Marker Placement |
| 635011-02 | Reflector Marker and Mounting Details |
| 643001-01 | Sand Module Impact Attenuators |
| 701101-03 | Multi-Lane Off-Road Operations |
| 701400-06 | Approach to Lane Closure, Freeway/Expressway |
| 701401-07 | Lane Closure, Freeway/Expressway |
| 701411-08 | Multi-Lane, Traffic Control at Entrance or Exit Ramps |
| 701446-04 | Two Lane Closure Freeway/Expressway |
| 701901-02 | Traffic Control Devices |
| 704001-07 | Temporary Concrete Barrier |

GENERAL NOTES

1. These plans have been prepared from notes received from IDOT Field Maintenance Engineers.
2. 10 ft (3 m) transitions shall be used to match proposed items of work to existing items in the field, unless otherwise shown. The transitions shall be paid for at the contract unit price for the proposed item of work specified.
3. Where 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 areas.
4. The Contractor must contact the Expressways Traffic Control Supervisor at (847)705-4151 at least 72 hours prior to installation of the start of work.
5. The Resident Engineer shall contact the Expressways Traffic Control Supervisor at (847)705-4151 at least two (2) weeks prior to the placement of permanent pavement markings.
6. All pavement markings and raised reflectors affected by the bridge repairs shall be replaced. Nominal quantities have been included in the contract for this work.
7. The Contractor will not be allowed to set up a yard or field office on State property without written permission from the Department.
8. Do not scale these plans for construction purposes.
9. Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS @ Ndes
Hot-Mix Asphalt Surface Course, Mix "D", N70 (IL 9.5mm), N70	4% @ 70 Gyr.

The unit weight used to calculate all HMA Surface mixture quantities is 112 Lbs./Sq. Yd./In.

The "AC Type" for all polymerized HMA Mixes shall be SBS/SBR PG 76-22" and for Non-Polymerized HMA the "AC Type" shall be "PG 64-22" unless modified by the District One special provisions.

For Use of Recycled Materials, See Special Provisions.

10. During construction operations, loose material deposits that obstruct the flow of water in draining the area shall be removed before the end of each work day. At the conclusion of construction operations, all drainage structures (new and existing) shall be free from all dirt and debris. This work will not be paid for separately but shall be considered incidental to the contract.
11. The quantity for Hot-Mix Asphalt Surface Course, Mix "D", N70 have been prepared assuming 1/2 inch thick hot-mix asphalt overlays.
12. All raised reflective pavement markers (bridge) shall be low profile.
13. Before beginning any work, the Contractor shall retain and record for future reference, all existing pavement marking lines, symbols and letters (and raised reflective markers) in order that these locations can be re-established for striping. Exact locations of all pavement markings and raised reflective pavement markers shall be as directed by the Engineer.
14. The plans do not represent a complete depiction of all utilities that may be impacted by the proposed work. The Contractor shall conduct his or her own investigation to determine the ownership of impacted utilities. The Contractor shall coordinate with the utility owners and may be required to provide temporary support, adjust, relocate or remove utilities that are impacted by the proposed improvement. This work shall be considered incidental to the project.
15. The Contractor shall maintain the existing lighting for the duration of the project. Cost included in the pay item "Maintenance of Lighting System."

V:\B1132\12\1\1\Detail\1\Posident\005\6718\6718.02 - Bridge Overlays (IN\CAD\Structural Drawings\CA00 Sheets\022-00\08-01\08\03-ht-gemote.dgn

FILE NAME :	USER NAME : jachneider	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX OF SHEETS AND HIGHWAY STANDARDS STRUCTURE NO. 022-0090	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE : 2.0000 "/ in.	DRAWN - DR	REVISID -			290	22-3HB-1	DUPAGE	37	2
	PLOT DATE : 12/6/2012	CHECKED - JMH	REVISID -			CONTRACT NO. 60M97		ILLINOIS FED. AID PROJECT		
		DATE - JANUARY, 2013	REVISED -	SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.						

SUMMARY OF QUANTITIES				100% STATE CONSTR. TYPE CODE	
CODE	ITEM DESCRIPTION	UNIT	QUANTITY	ROADWAY	STRUCTURE
				0004	0014
				URBAN	URBAN
60900240	TYPE C INLET BOX, STANDARD 609006	EACH	1		1
60900315	TYPE D INLET BOX, STANDARD 609006	EACH	1		1
60900515	CONCRETE THRUST BLOCK	EACH	2	2	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	8	8	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	325	325	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2082	2082	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	812.5	812.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	487.5	487.5	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	3	3	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	3	3	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1801	1801	
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	220	220	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	190	190	

SUMMARY OF QUANTITIES				100% STATE CONSTR. TYPE CODE	
CODE	ITEM DESCRIPTION	UNIT	QUANTITY	ROADWAY	STRUCTURE
				0004	0014
				URBAN	URBAN
* 78003120	PERFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5"	SQ FT	310	310	
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	610	610	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4	
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	7		7
* 78100300	REPLACEMENT REFLECTOR	EACH	25	25	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	35	35	
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	58	58	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1268	1268	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	11	11	
X0322215	CLEAN BRIDGE SCUPPERS AND DOWNSPOUTS	EACH	9		9
X0931400	INLET BOXES TO BE ADJUSTED (SPECIAL)	EACH	2		2
X6050700	REMOVE INLET BOX	EACH	2		2
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1	
X7030030	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH	FOOT	5302	5302	
X7030045	WET REFLECTIVE TEMPORARY TAPE TYPE III, 8 INCH	FOOT	231	231	

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* SPECIALTY ITEMS

FILE NAME :	USER NAME : j.schneider	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES STRUCTURE NO. 022-0090				F.A.I. RTE. 290	SECTION 22-3HB-1	COUNTY DuPAGE	TOTAL SHEETS 37	SHEET NO. 4
	PLOT SCALE : 2.0000' / 1"	DRAWN - DR	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 60M97	
	PLOT DATE : 12/6/2012	CHECKED - JMH	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE - JANUARY, 2013	REVISED -										

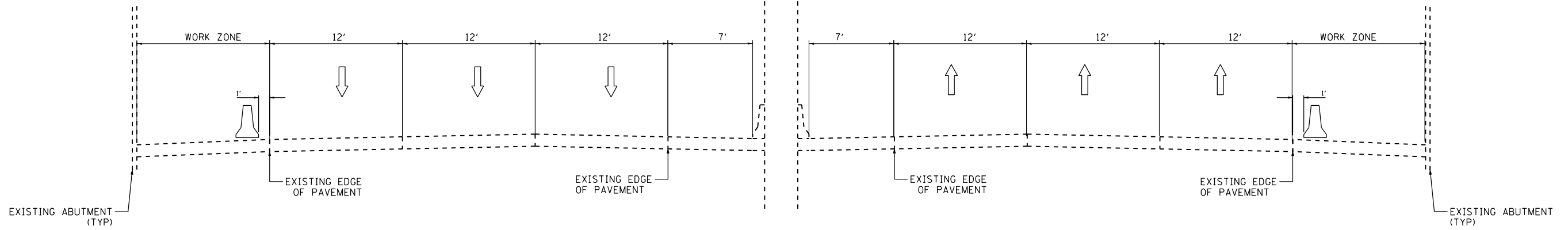
100% STATE

SUMMARY OF QUANTITIES				CONSTR. TYPE CODE	
CODE	ITEM DESCRIPTION	UNIT	QUANTITY	ROADWAY	STRUCTURE
				0004	0014
				URBAN	URBAN
X7030050	WET REFLECTIVE TEMPORARY TAPE TYPE III, 12 INCH	FOOT	160	160	
* X7830070	GROOVING FOR RECESSED PAVEMENT MARKINGS 5"	FOOT	310	310	
* X8210305	PROTECTION AND MAINTENANCE OF EXISTING UNDERPASS LUMINAIRES	L SUM	1		1
Z0001700	APPROACH SLAB REPAIRS (FULL DEPTH)	SQ YD	1		1
Z0001800	APPROACH SLAB REPAIRS (PARTIAL DEPTH)	SQ YD	3		3
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	12		12
Z0001905	STRUCTURAL STEEL REPAIR	POUND	430		430
Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2-1/4"	SQ YD	1063		1063
Z0012130	BRIDGE DECK SCARIFICATION, 3/4"	SQ YD	1063		1063
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	294		294
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")	SQ FT	28		28
Z0041895	POLYMER CONCRETE	CU FT	5.8	5.8	
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	2		2

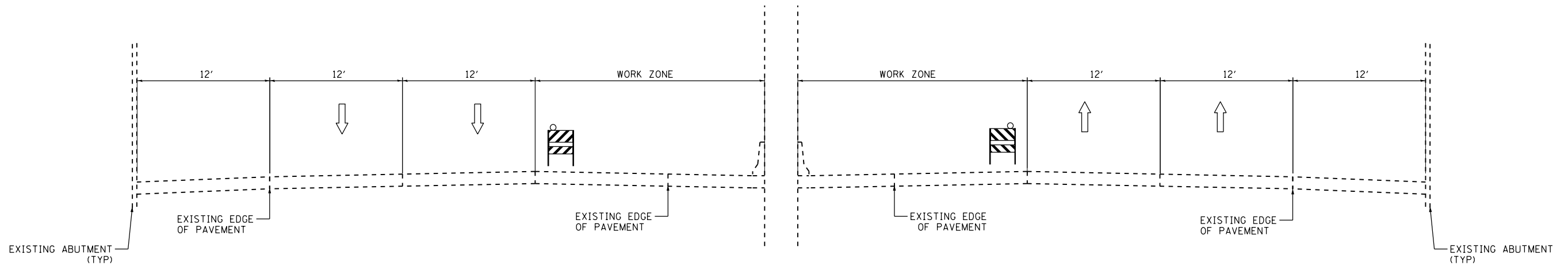
* SPECIALTY ITEMS

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FILE NAME :	USER NAME : j.schneider	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES STRUCTURE NO. 022-0090				F.A.I. RTE. 290	SECTION 22-3H8-1	COUNTY DuPAGE	TOTAL SHEETS 37	SHEET NO. 5
	PLOT SCALE : 2.0000 ' / 1"	DRAWN - DR	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 60M97		
	PLOT DATE : 12/6/2012	CHECKED - JMH	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE - JANUARY, 2013	REVISED -										



**I-290
STAGE I TYPICAL SECTION**



**I-290
STAGE II TYPICAL SECTION**

STAGING NOTES:

PRESTAGE A (I-290)

CLOSE INSIDE TWO LANES OF EASTBOUND AND WESTBOUND I-290 DURING NIGHTTIME HOURS IN ACCORDANCE WITH STANDARD 701400 AND 701446, AND THE SPECIAL PROVISIONS.

INSTALL TEMPORARY PROTECTIVE SHIELDING WITHIN THE WORK ZONE

PRESTAGE B (I-290)

CLOSE INSIDE TWO LANES OF WESTBOUND AND EASTBOUND I-290 DURING NIGHTTIME HOURS IN ACCORDANCE WITH STANDARD 701400 AND 701446, AND THE SPECIAL PROVISIONS. SHIFT TRAFFIC ALONG WESTBOUND I-290 TO THE INSIDE LANE PER SINGLE-LANE WEAVE DETAIL TC-09 AND AS SHOWN ON THE PLAN.

COMPLETE INSTALLATION OF TEMPORARY PROTECTIVE SHIELDING.

RESTORE EXISTING TRAFFIC PATTERNS.

STAGE I (LAKE STREET)

ESTABLISH TRAFFIC CONTROL AS DETAILED IN THE TRAFFIC CONTROL PLAN.

INSTALL TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATOR AS SHOWN ON PLAN.

PERFORM DECK SLAB REPAIR AND APPROACH SLAB REPAIR.

PLACE CONCRETE OVERLAY AND RECONSTRUCT TRANSVERSE JOINTS ON STRUCTURE.

CONSTRUCT HMA PAVEMENT AND INSTALL BUTT JOINTS

REMOVE AND RELOCATE TEMPORARY CONCRETE BARRIER.

STAGE I (I-290)

ESTABLISH OVERHEAD SIGN MODIFICATIONS, AS SHOWN IN THE PLANS.

ESTABLISH TRAFFIC CONTROL PER DISTRICT STD. TC-17 CLOSING OUTSIDE SHOULDER OF EASTBOUND AND WESTBOUND I-290.

PERFORM STRUCTURAL REPAIR OF PIER 1 AND PIER 3.

STAGE II (LAKE STREET)

MAINTAIN OVERHEAD SIGN MODIFICATIONS FROM STAGE I.

ESTABLISH TRAFFIC CONTROL AS DETAILED IN THE TRAFFIC CONTROL PLAN.

RELOCATE TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATOR AS SHOWN ON PLAN.

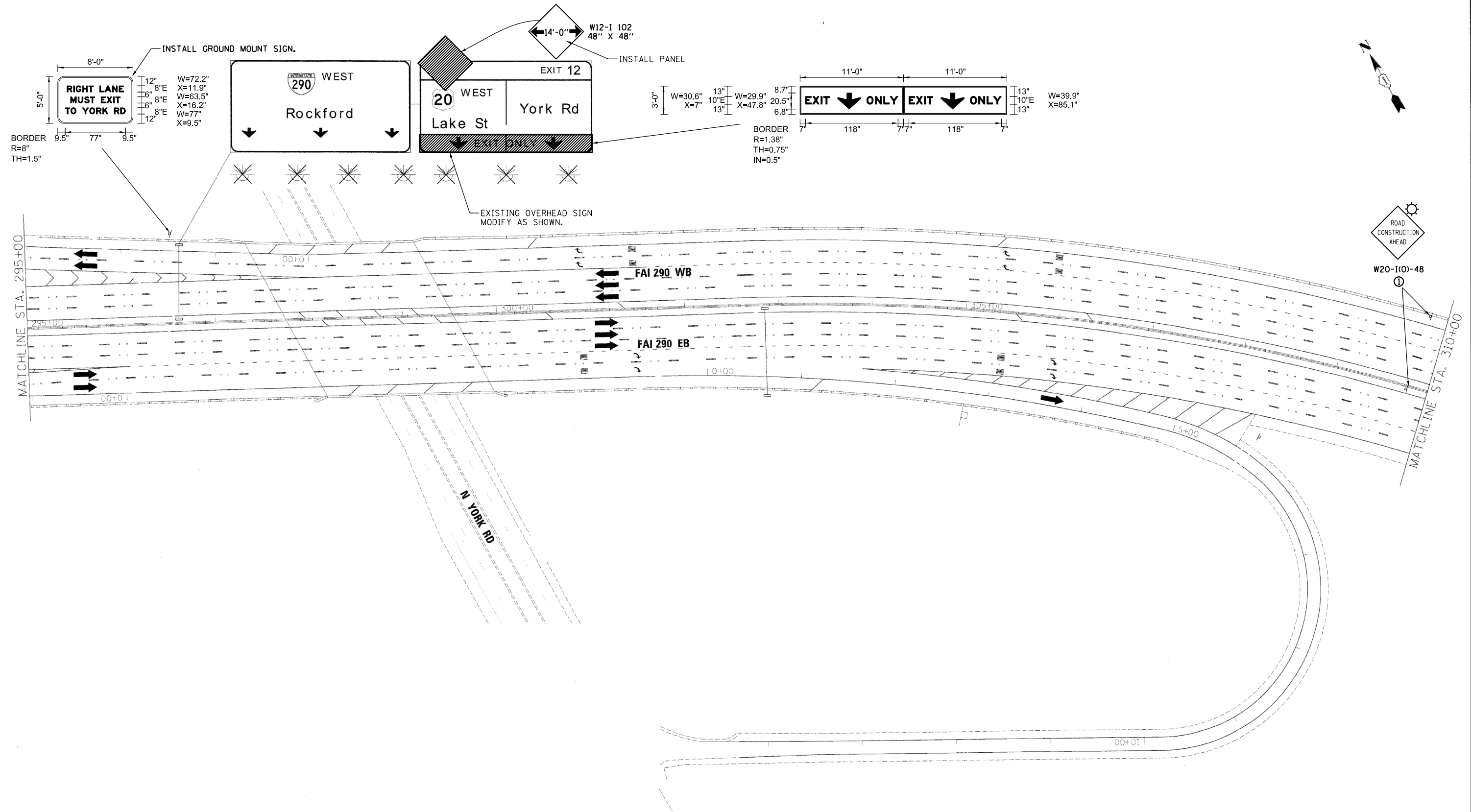
PERFORM REPAIRS IN SAME SEQUENCE AS STAGE I

STAGE II (I-290)

DURING NIGHTTIME HOURS, CLOSE TRAFFIC LANES IN ACCORDANCE WITH STD. 701400 AND STD. 701401

PERFORM STRUCTURAL REPAIR OF PIER 2.

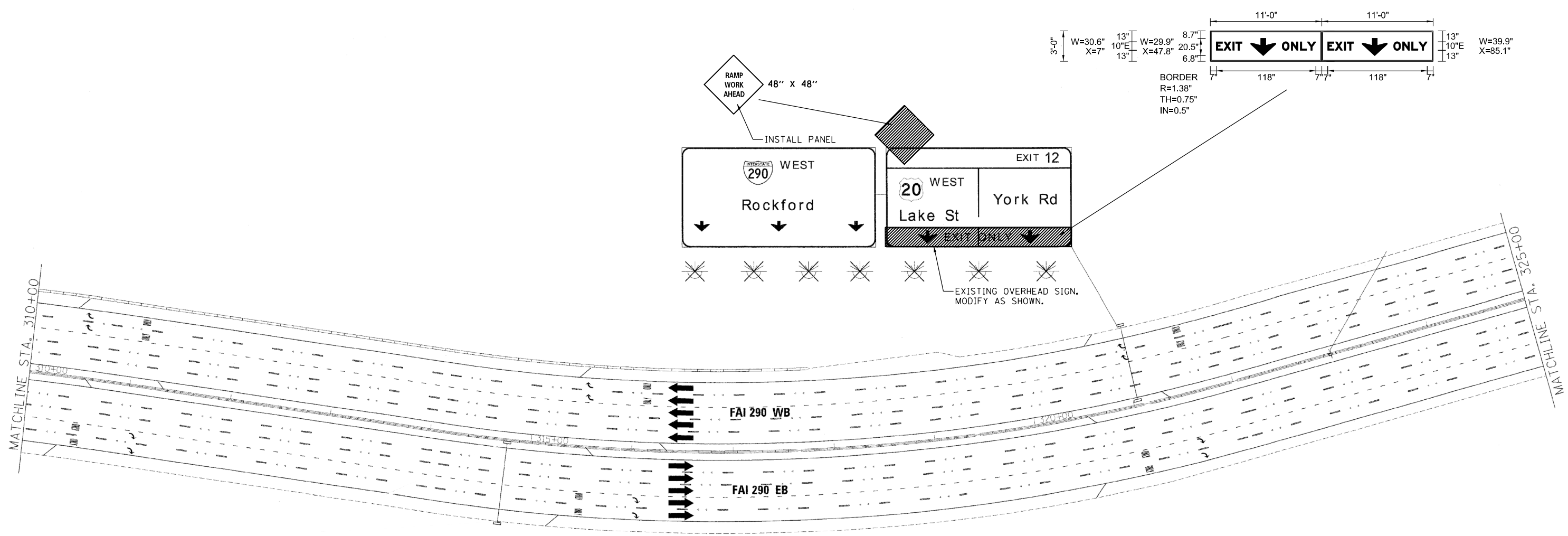
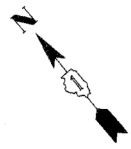
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	PLOT SCALE = 100.0000' / 1" =	DRAWN - DR	REVISED -					290	22-3HB-1	DuPAGE	37	6
	PLOT DATE = 12/4/2012	CHECKED - JMH	REVISED -					CONTRACT NO. 60M97				
		DATE - JANUARY, 2013	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				



- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING SIGN DIMENSIONS PRIOR TO FABRICATING ANY SIGN OVERLAY PANELS.
 2. BACKGROUND SHEETING FOR TEMPORARY SIGNS AND TEMPORARY SIGN OVERLAYS SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS

FILE NAME =	USER NAME = mremper	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 20 WB (LAKE ST) MAINTENANCE OF TRAFFIC - SIGN MODIFICATIONS		F.A.I. RTE. = 290	SECTION = 22-3HB-1	COUNTY =	TOTAL SHEETS = 37	SHEET NO. = 7
	PLOT SCALE = 100.0000' / in.	CHECKED - JMH	REVISED -		SCALE:	SHEET NO. 1 OF 4 SHEETS	STA. TO STA.	CONTRACT NO. 60M97		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 12/4/2012	DATE - JANUARY, 2013	REVISED -								

9FILES



- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING SIGN DIMENSIONS PRIOR TO FABRICATING ANY SIGN OVERLAY PANELS.
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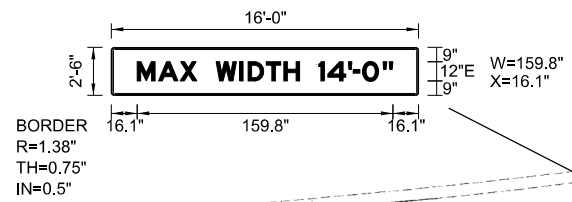
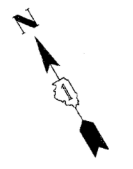
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	PLOT SCALE = 100.0000' / in.	CHECKED - JMH	REVISED -
	PLOT DATE = 12/4/2012	DATE - JANUARY, 2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

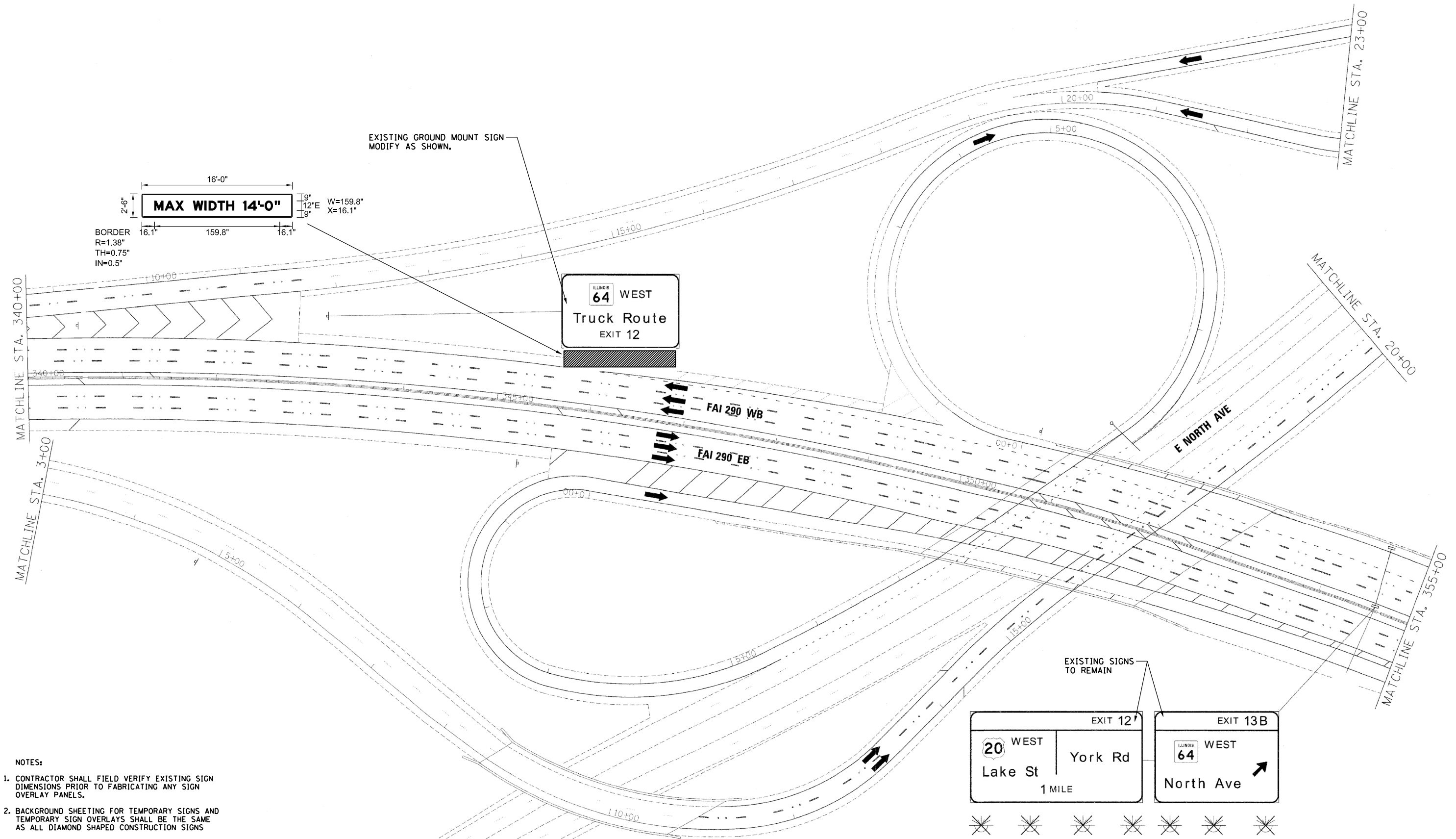
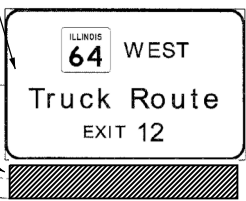
**US ROUTE 20 WB (LAKE ST)
MAINTENANCE OF TRAFFIC - SIGN MODIFICATIONS**

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

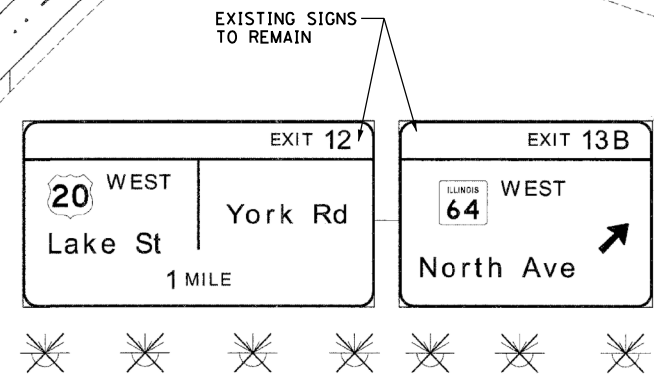
F.A.I. RTE. 290	SECTION 22-3HB-1	COUNTY	TOTAL SHEETS 37	SHEET NO. 8
CONTRACT NO. 60M97			ILLINOIS FED. AID PROJECT	



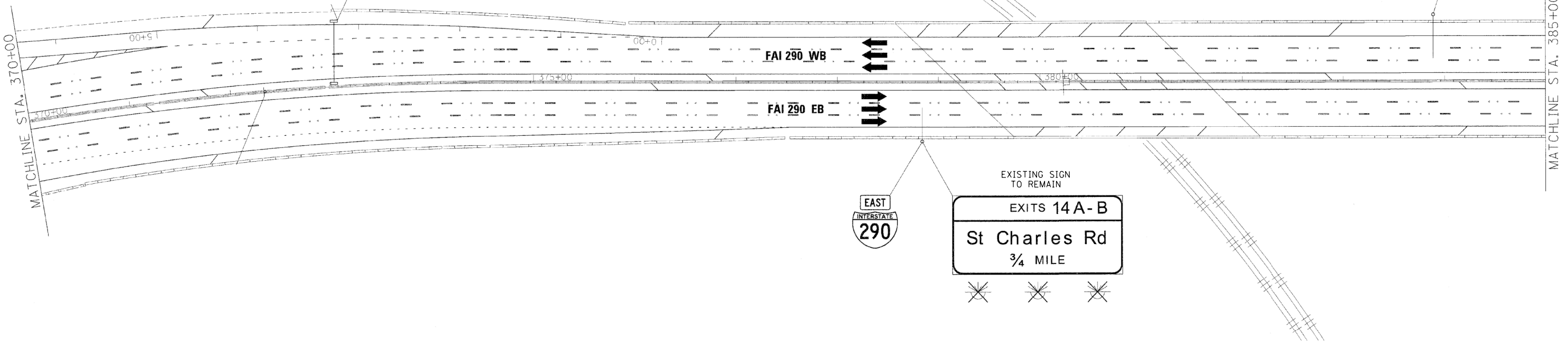
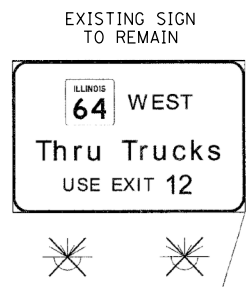
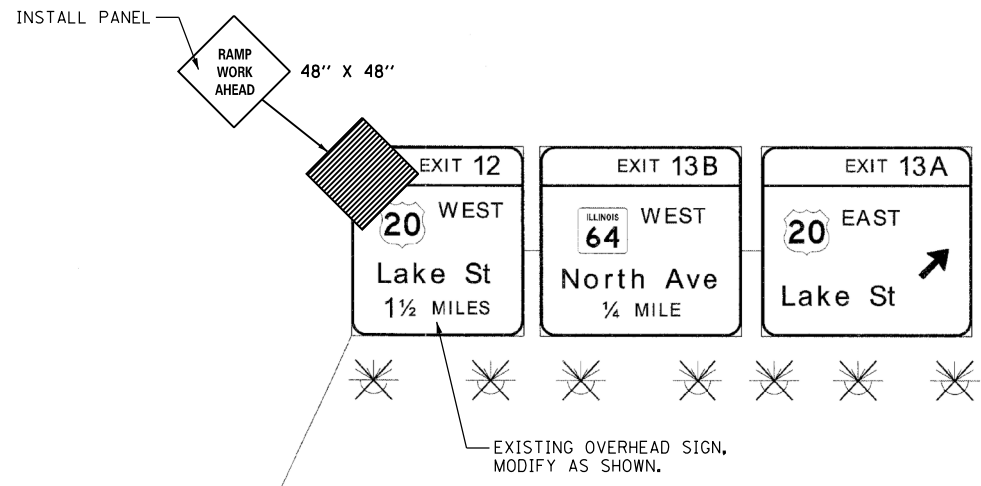
EXISTING GROUND MOUNT SIGN
MODIFY AS SHOWN.



- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY EXISTING SIGN DIMENSIONS PRIOR TO FABRICATING ANY SIGN OVERLAY PANELS.
 2. BACKGROUND SHEETING FOR TEMPORARY SIGNS AND TEMPORARY SIGN OVERLAYS SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS



FILE NAME :	USER NAME = mremper	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 20 WB (LAKE ST) MAINTENANCE OF TRAFFIC - SIGN MODIFICATIONS		F.A.I. RTE. 290	SECTION 22-3HB-1	COUNTY DuPAGE	TOTAL SHEETS 37	SHEET NO. 9
	PLOT SCALE = 100.0000' / in.	CHECKED - JMH	REVISED -		SCALE:	SHEET NO. 3 OF 4 SHEETS	STA. TO STA.	CONTRACT NO. 60M97		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 12/4/2012	DATE - JANUARY, 2013	REVISED -								



FILE NAME =	USER NAME = mremper	DESIGNED - JMS	REVISED -
		DRAWN - DR	REVISED -
		CHECKED - JMH	REVISED -
		DATE - JANUARY, 2013	REVISED -

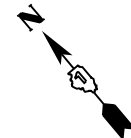
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US ROUTE 20 WB (LAKE ST)
MAINTENANCE OF TRAFFIC - SIGN MODIFICATIONS**

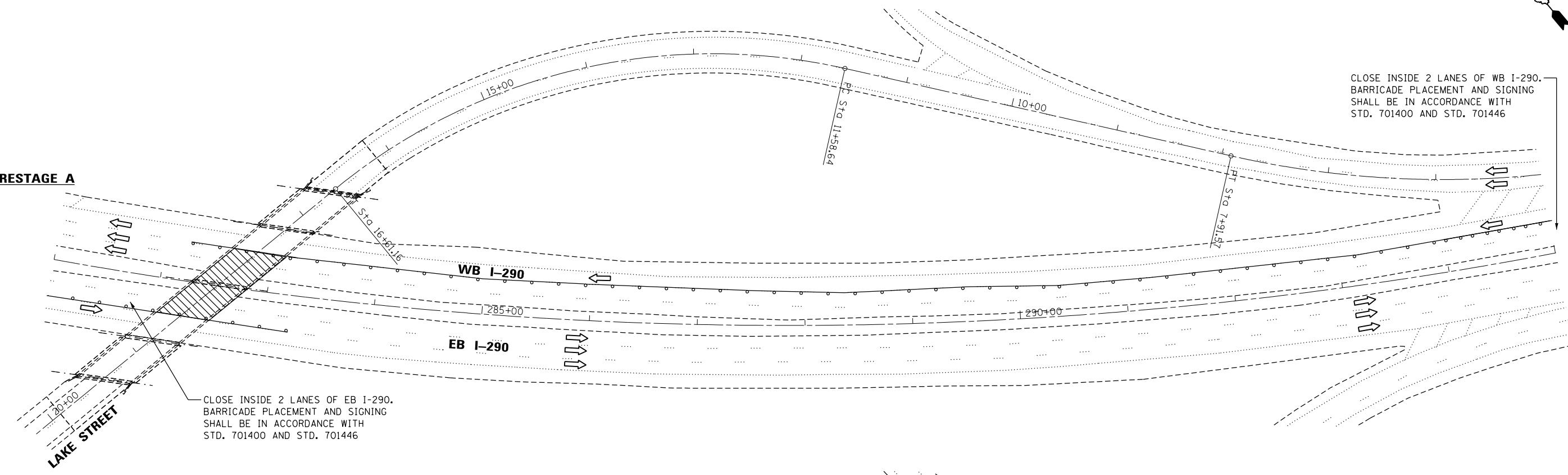
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-1		37	10
CONTRACT NO. 60M97			ILLINOIS FED. AID PROJECT	

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

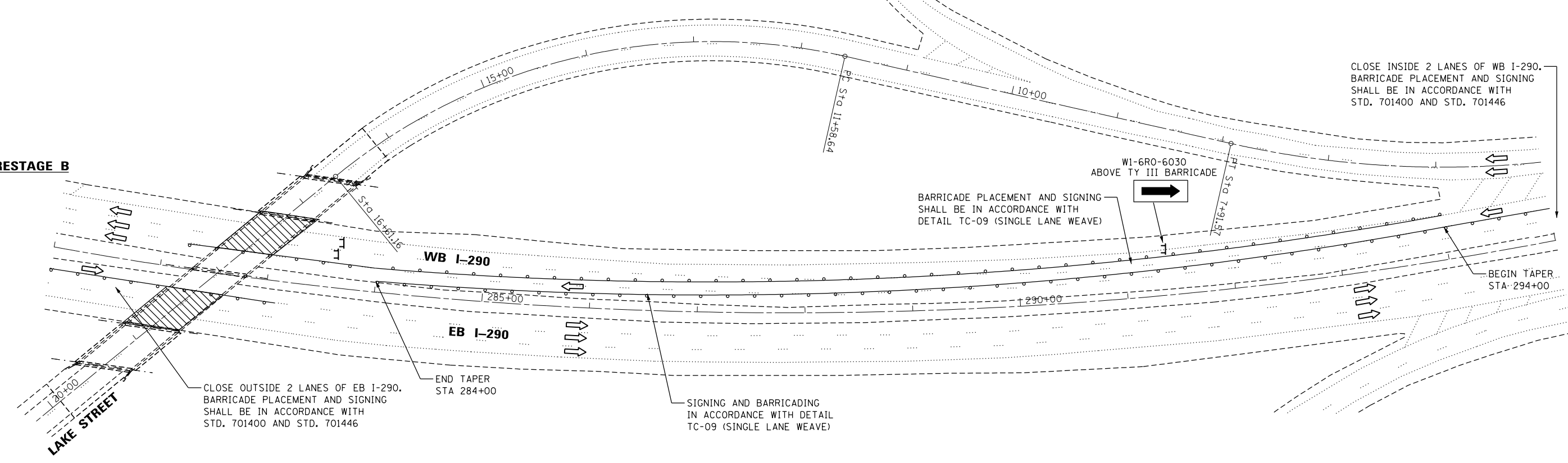
9FILES\$



PRESTAGE A



PRESTAGE B



W1-4R-48
STA 194+00

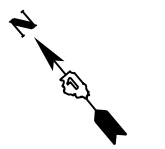
8FILES

FILE NAME =	USER NAME = mremper	DESIGNED - JMS	REVISED -
		DRAWN - DR	REVISED -
	PLOT SCALE = 100.0000' / in.	CHECKED - JMH	REVISED -
	PLOT DATE = 12/6/2012	DATE - JANUARY, 2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US ROUTE 20 WB (LAKE ST) MAINTENANCE OF TRAFFIC PRESTAGE			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

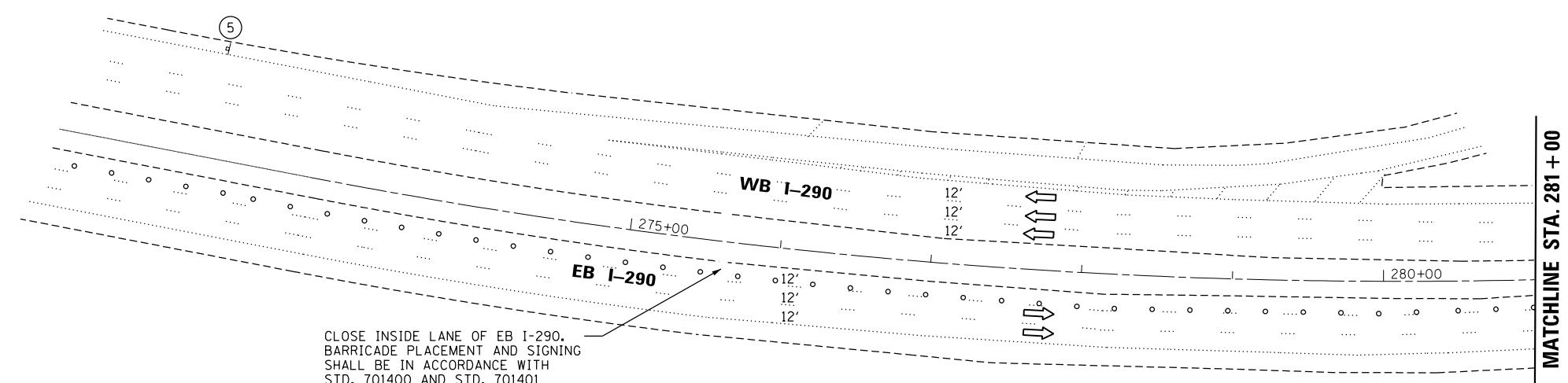
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-1	DuPAGE	37	11
CONTRACT NO. 60M97				
ILLINOIS FED. AID PROJECT				



SCALE: 1" = 40'

NOTES:

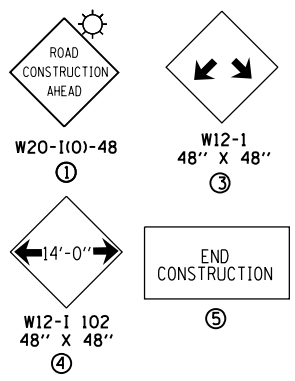
- SEE TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17) FOR ADDITIONAL SIGNS AND SIGNING DETAILS.
- MARKERS ON RIGHT SHALL BE CRYSTAL AND MARKERS ON THE LEFT SHALL BE AMBER.



CLOSE INSIDE LANE OF EB I-290. BARRICADE PLACEMENT AND SIGNING SHALL BE IN ACCORDANCE WITH STD. 701400 AND STD. 701401

MATCHLINE STA. 281+00

SIGN LEGEND

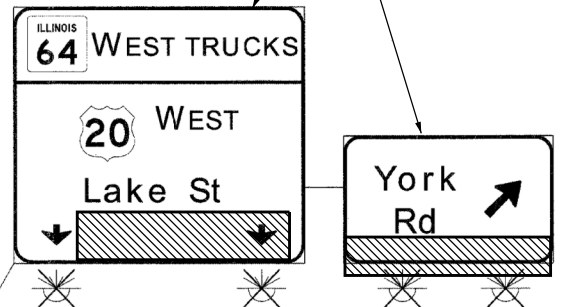


VERTICAL PANEL WITH LIGHT (TYP.) 25' C-C

BARRICADES (50' C-C)

IMP ATTN TEMP FRN TL3
TEMP CONC. BARRIER

CLOSE INSIDE LANE OF WB I-290. BARRICADE PLACEMENT AND SIGNING SHALL BE IN ACCORDANCE WITH STD. 701400 AND STD. 701401



MAINTAIN SIGN CONFIGURATION AND SIGN OVERLAY PANELS FROM STAGE I.

MATCHLINE STA. 281+00

MATCHLINE STA. 295+00

LAKE STREET
RAMP

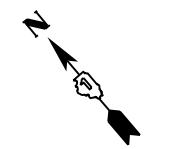
PAVEMENT MARKING LEGEND

- 1 4" WHITE LINE, TYPE III WET REFLECTIVE TAPE
- 2 4" YELLOW LINE, TYPE III WET REFLECTIVE TAPE
- 3 NOT USED
- 4 TEMPORARY PAVEMENT MARKING - LINE 6" WHITE (ON LOWER SLOPE OF BARRIER WALL)
- 5 NOT USED
- 6 8" WHITE, TYPE III WET REFLECTIVE TAPE
- 7 12" WHITE, TYPE III WET REFLECTIVE TAPE

LEGEND

- WORK AREA
- CONSTRUCTION SIGN
- TYPE II BARRICADE/ REFLECTORIZED DRUM
- TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY THE ENGINEER)
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- BARRIER WALL MARKERS, TYPE C
- GUARDRAIL MARKERS, TYPE A

FILE NAME =	USER NAME = mremper	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 20 WB (LAKE ST) MAINTENANCE OF TRAFFIC STAGE II			F.A.I. RTE. 290	SECTION 22-3HB-1	COUNTY DuPAGE	TOTAL SHEETS 37	SHEET NO. 13
	PLOT SCALE = 100.0000' / in.	CHECKED - JMH	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 60M97		
	PLOT DATE = 12/6/2012	DATE - JANUARY, 2013	REVISED -		ILLINOIS FED. AID PROJECT							



SCALE: 1" = 40'

PAVEMENT MARKING LEGEND:

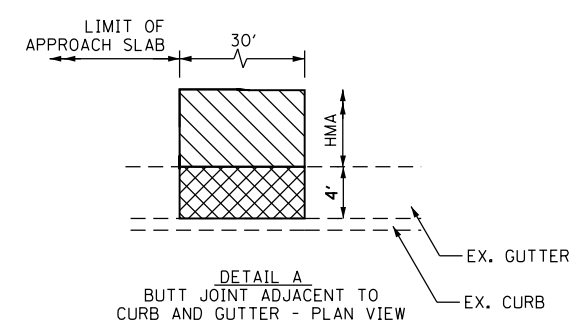
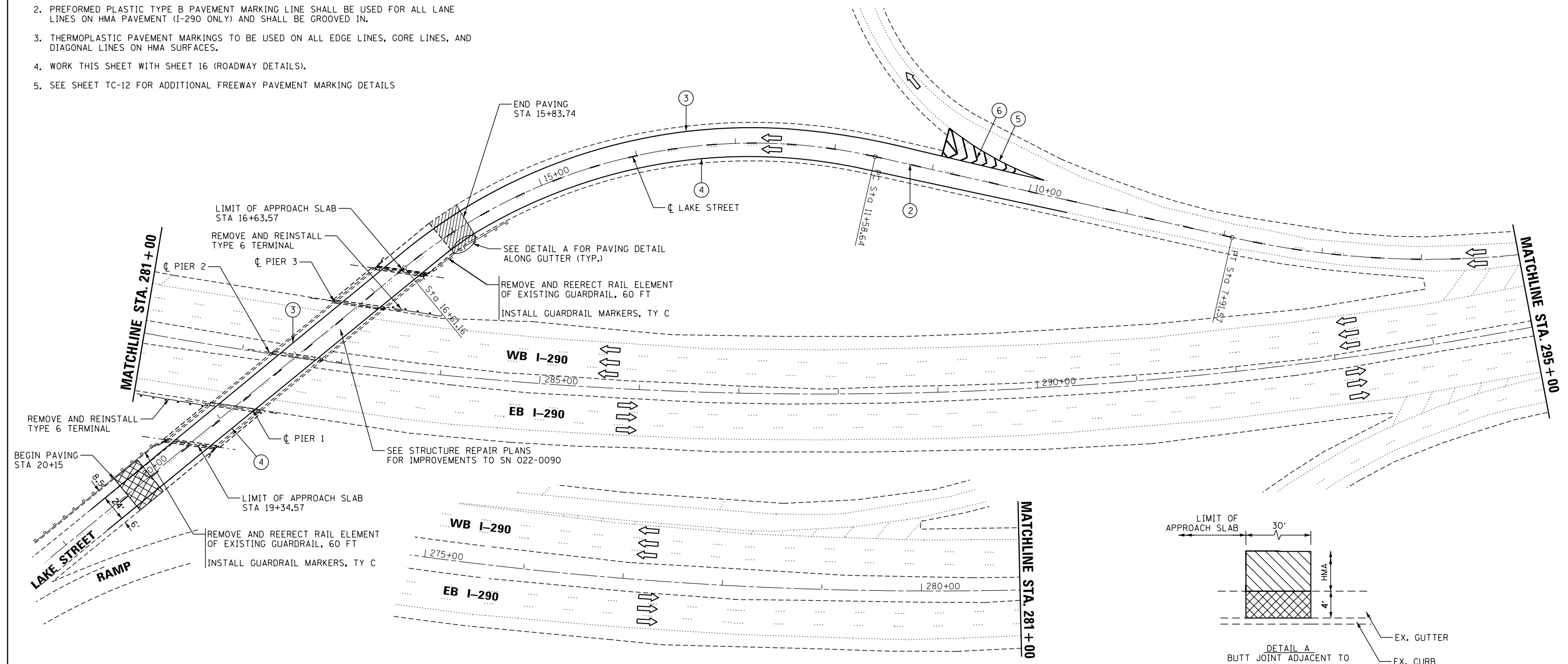
- ① NOT USED
- ② PAVEMENT MARKING LINE 5" (10' DASH, 30' SKIP)
- ③ PAVEMENT MARKING LINE 4" WHITE
- ④ PAVEMENT MARKING LINE 4" YELLOW
- ⑤ PAVEMENT MARKING LINE 8" WHITE GORE LINES
- ⑥ PAVEMENT MARKING LINE 12" WHITE CHEVRONS (45°)

LEGEND

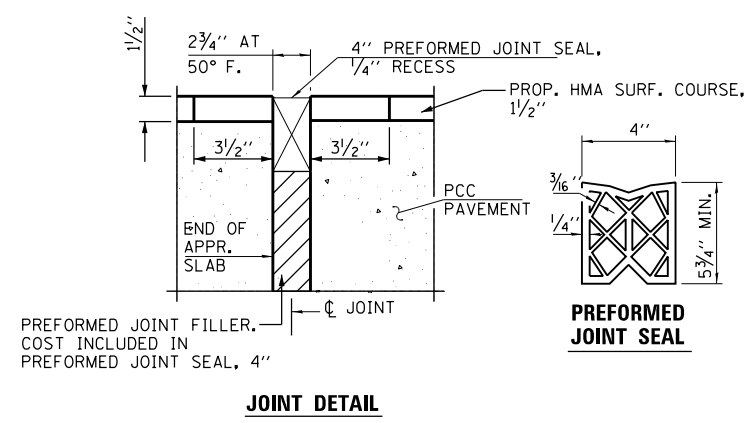
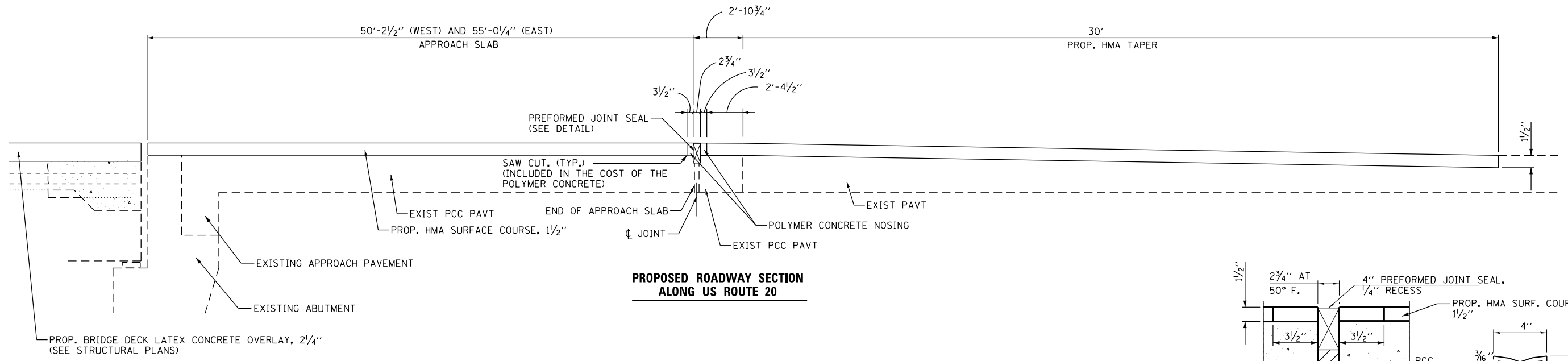
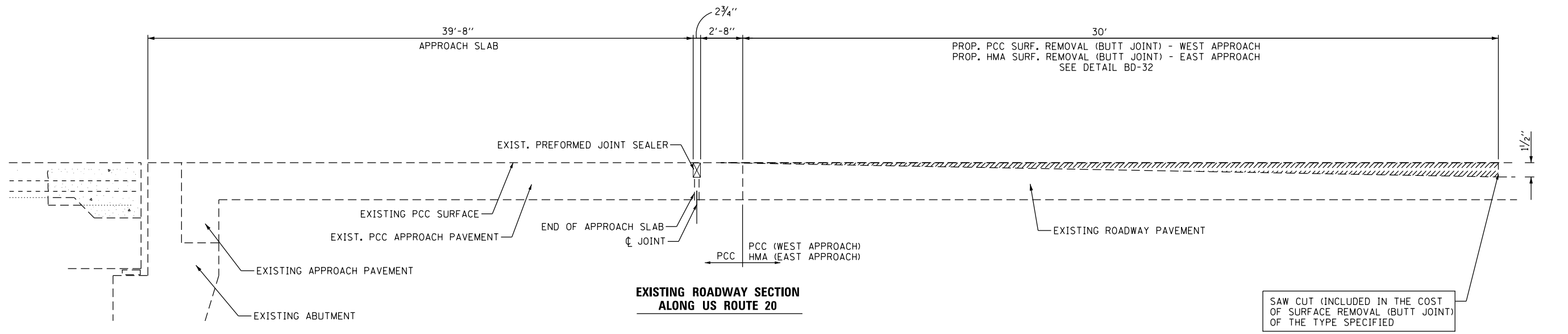
- HMA SURFACE REMOVAL-BUTT JOINT & PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2"
- PCC SURFACE REMOVAL-BUTT JOINT & PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2"

NOTES:

1. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC SURFACES.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENT (I-290 ONLY) AND SHALL BE GROOVED IN.
3. THERMOPLASTIC PAVEMENT MARKINGS TO BE USED ON ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA SURFACES.
4. WORK THIS SHEET WITH SHEET 16 (ROADWAY DETAILS).
5. SEE SHEET TC-12 FOR ADDITIONAL FREEWAY PAVEMENT MARKING DETAILS



FILE NAME =	USER NAME = mremper	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 20 WB (LAKE ST) ROADWAY PLAN			F.A.I. RTE. = 290	SECTION = 22-3HB-1	COUNTY = DuPAGE	TOTAL SHEETS = 37	SHEET NO. = 14
	PLOT SCALE = 100.0000' / 1" =	CHECKED - JMH	REVISED -					SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60M97	
	PLOT DATE = 12/4/2012	DATE - JANUARY, 2013	REVISED -		ILLINOIS FED. AID PROJECT							

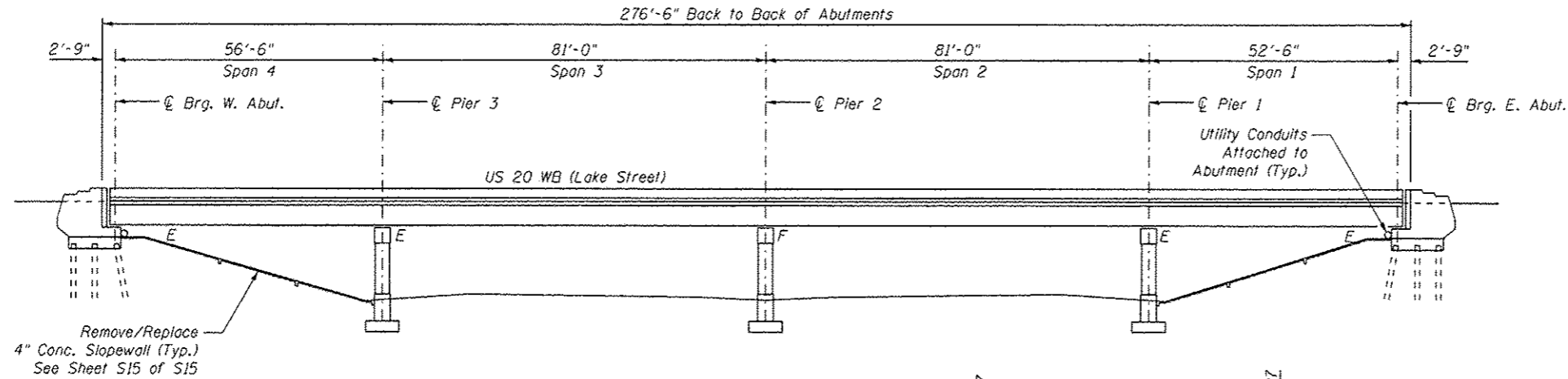
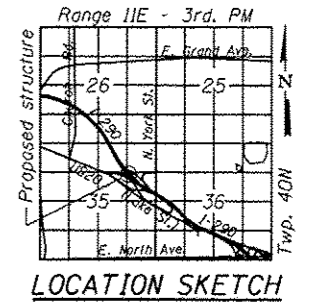


- NOTES:**
1. SEE DETAIL BD-32 FOR BUTT JOINT AND HMA TAPER DETAILS.
 2. WHEN THE POLYMER CONCRETE NOSING IS TO BE INSTALLED ADJACENT TO A DECK OVERLAY, THE NOSING SHALL BE INSTALLED AFTER THE OVERLAY IS PLACED.
 3. POLYMER CONCRETE MUST BE PLACED IN DIRECT CONTACT WITH THE CONCRETE APPROACH SLAB. REMOVAL OF ALL HMA OR OTHER MATERIAL THAT MAY BE ADHERED TO THE POLYMER CONCRETE CONTACT AREAS IS REQUIRED. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM FOR POLYMER CONCRETE.

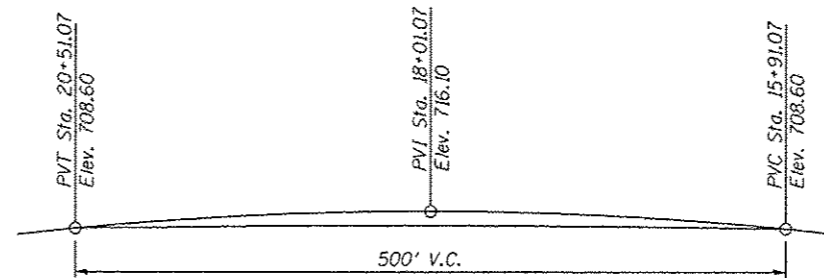
FILE NAME =	USER NAME = mremper	DESIGNED - MR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 20 WB (LAKE STREET) ROADWAY DETAILS			F.A.I. RTE. = 290	SECTION = 22-3HB-1	COUNTY = DuPAGE	TOTAL SHEETS = 37	SHEET NO. = 15
	PLOT SCALE = 100.0000' / 1" =	CHECKED - JMH	REVISED -					SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 60M97	
	PLOT DATE = 12/4/2012	DATE - JANUARY, 2013	REVISED -					ILLINOIS FED. AID PROJECT				

Existing Structure: Existing Structure 022-0090 carries two lanes of traffic from northwest bound I-290 to west bound Lake Street (US Route 20) over I-290. This bridge consists of a four-span continuous steel superstructure with a reinforced concrete deck and substructure. The original structure was constructed in 1962, and the deck was replaced in 1985. Staged construction will be utilized to maintain traffic during construction.

No Salvage



ELEVATION



PROFILE GRADE US 20 WB

SCOPE OF WORK

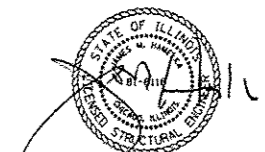
1. Install Protective Shield.
2. Bridge deck scarification.
3. Reconstruct deck joints at each abutment with preformed strip seal.
4. Repair bridge deck.
5. Repair approach slab pavement.
6. Place new overlay on bridge deck and approach slabs.
7. Structural concrete repairs at abutments and piers.
8. Replace slope walls.
9. Replace East and West Abutment bearings.
10. Replace diaphragm at West Abutment between Beams 5-6.
11. Remove abandoned attachments at north fascia girder.
12. Reconstruct and/or clean/adjust inlet boxes.

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges (17th Edition)

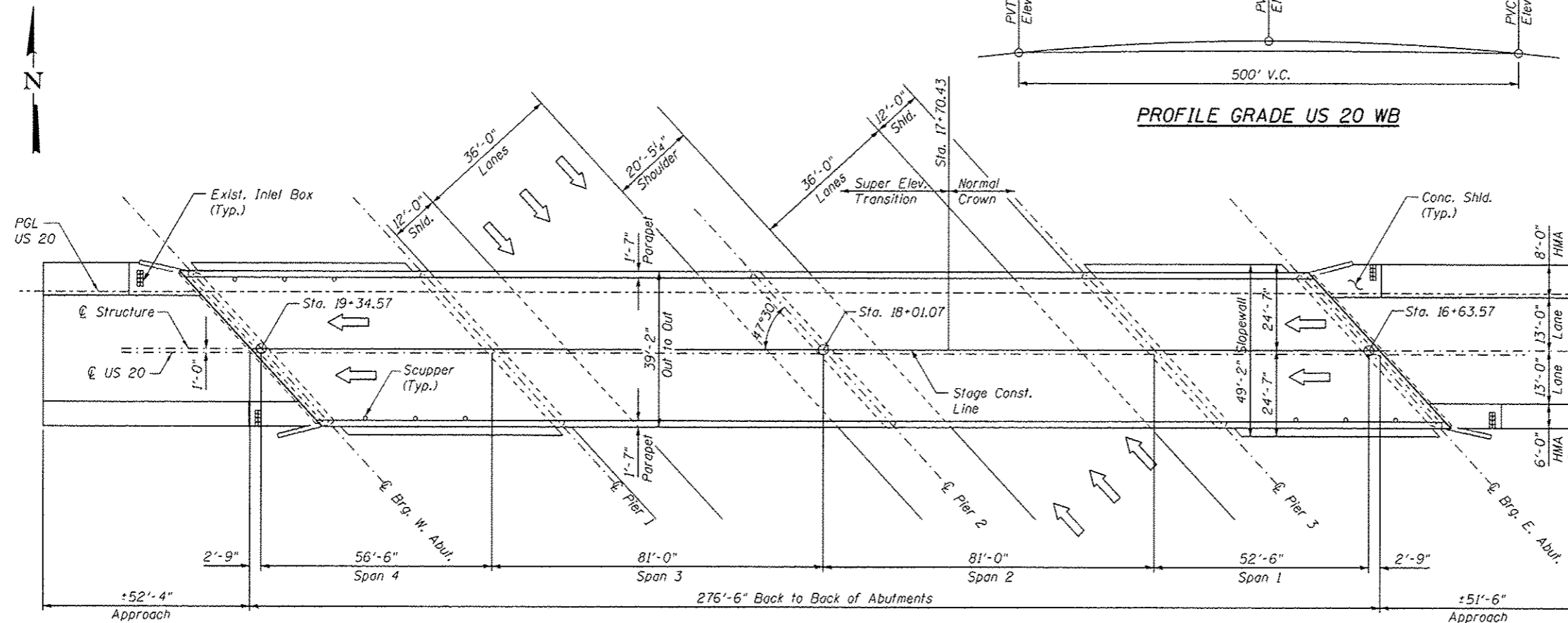
LOADING HS20-44

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 36,000$ psi (structural steel)



COLLINS ENGINEERS, INC.
JAMES M. HAMELKA
NO. 81-6116
EXPIRES 11-30-2014



PLAN

FILE NAME *	USER NAME *	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION US 20 WB OVER I-290 STRUCTURE NO. 022-0090	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE *	CHECKED - JMH	REVISED -			290	22-3HB-1	DU PAGE	37	16	
	PLOT DATE *	DRAWN - DR	REVISED -			CONTRACT NO. 60M97					
		CHECKED - JMH	REVISED -			SHEET NO. S1 OF S15 SHEETS					

INDEX OF SHEETS

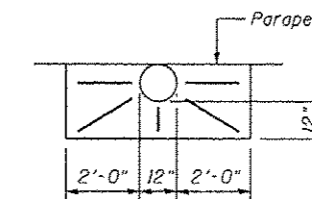
- S1. General Plan and Elevation
- S2. General Notes, Bill of Materials and Index of Sheets
- S3. Stage Construction Details
- S4. Bridge Deck Repair
- S5. East and West Abutment Repairs
- S6. Pier 1 Repairs
- S7. Pier 2 Repairs
- S8. Pier 3 Repairs
- S9. Structural Steel Repairs
- S10. Expansion Joint Repairs
- S11. Expansion Joint Details
- S12. Preformed Joint Strip Seal
- S13. Bar Splicer Assembly and Mechanical Splicer Details
- S14. Bearing Details
- S15. Slope Wall Details

GENERAL NOTES:

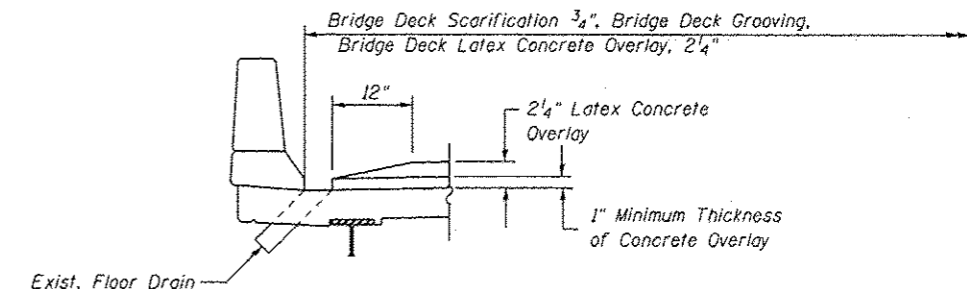
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior 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.
3. The Contractor shall exercise care during removal of existing joints to ensure that the slab, beams, and diaphragms' integrity will not be detrimentally impacted. The Contractor shall repair any damage(s) to the slab, beams, and diaphragms caused by his operation as directed by the Engineer at no additional cost to the Department.
4. Cost for removal and disposal of existing expansion joints shall be included in the pay item "Concrete Removal."
5. The removal and reattachment of guardrail, hand rail, steel railings, traffic barrier terminal, etc. required for repair work (e.g. transverse joint replacement) shall be included in the contract unit price of the work item being performed.
6. Staged construction shall be utilized to maintain traffic during construction.
7. All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead in this project.
9. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
10. All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I. Cost included with Structural Steel Repair.
11. 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.
12. Protective Coat shall be applied to the top and inside faces of the bridge deck parapets and the transverse joint reconstruction areas.
13. Fasteners shall be AASHTO M164 Type I, mechanically galvanized bolts. Bolts 3/4" dia., holes 13/16" dia., unless otherwise noted.

TOTAL BILL OF MATERIAL

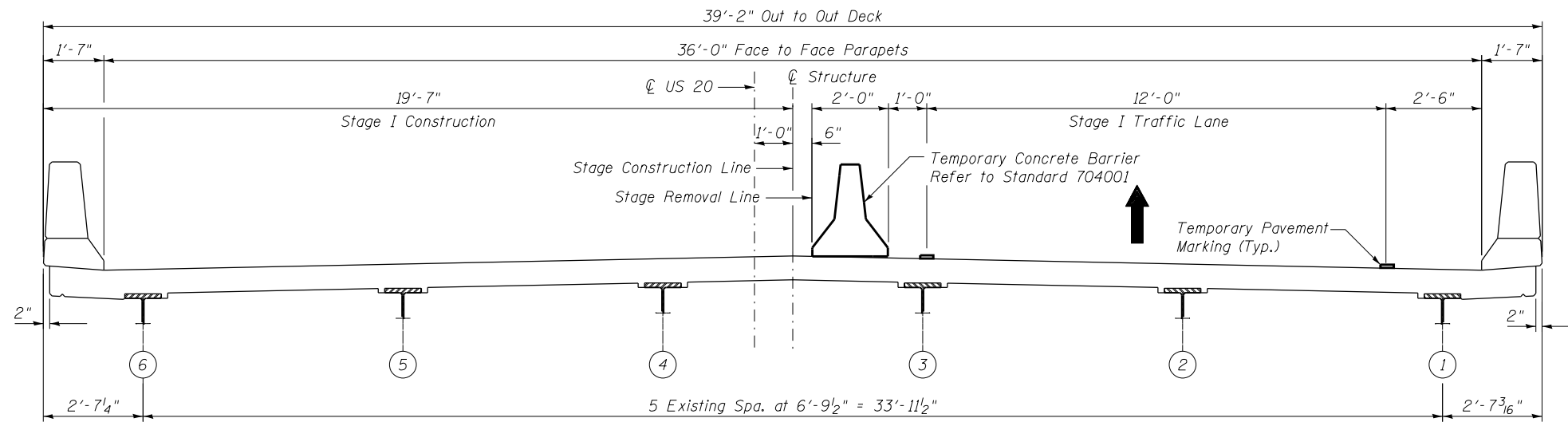
ITEM DESCRIPTION	UNIT	QUANTITY
Bituminous Materials (Prime Coat)	Gallon	47
Aggregate (Prime Coat)	Ton	1
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	39
Protective Coat	Sq. Yd.	272
Concrete Removal	Cu. Yd.	20.3
Slope Wall Removal	Sq. Yd.	452
Protective Shield	Sq. Yd.	567
Concrete Superstructure	Cu. Yd.	21.9
Bridge Deck Grooving	Sq. Yd.	1,030
Furnishing and Erecting Structural Steel	Pound	1,530
Reinforcement Bars, Epoxy Coated	Pound	2,240
Bar Splicers	Each	24
Slope Wall 4"	Sq. Yd.	452
Preformed Joint Strip Seal	Foot	116.0
Elastomeric Bearing Assembly, Type II	Each	12
Anchor Bolts, 1"	Each	48
Controlled Low Strength Material (CLSM)	Cu. Yd.	6.0
Type C Inlet Box, Standard 609006	Each	1
Type D Inlet Box, Standard 609006	Each	1
Inlet Boxes to be Adjusted (Special)	Each	2
Remove Inlet Box	Each	2
Approach Slab Repairs (Full Depth)	Sq. Yd.	1
Approach Slab Repairs (Partial Depth)	Sq. Yd.	3
Jack and Remove Existing Bearings	Each	12
Structural Steel Repair	Pound	430
Bridge Deck Latex Concrete Overlay, 2 1/4"	Sq. Yd.	1,063
Bridge Deck Scarification, 3/4"	Sq. Yd.	1,063
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	294
Structural Repair of Concrete (Depth Greater Than 5")	Sq. Ft.	28
Temporary Shoring and Cribbing	Each	2
Porous Granular Embankment	Cu. Yd.	20
Protection and Maintenance of Underpass Luminaires	L. Sum	1
Clean Bridge Scuppers and Downspouts	Each	9



PLAN-DETAIL OF CONCRETE OVERLAY AT SCUPPER

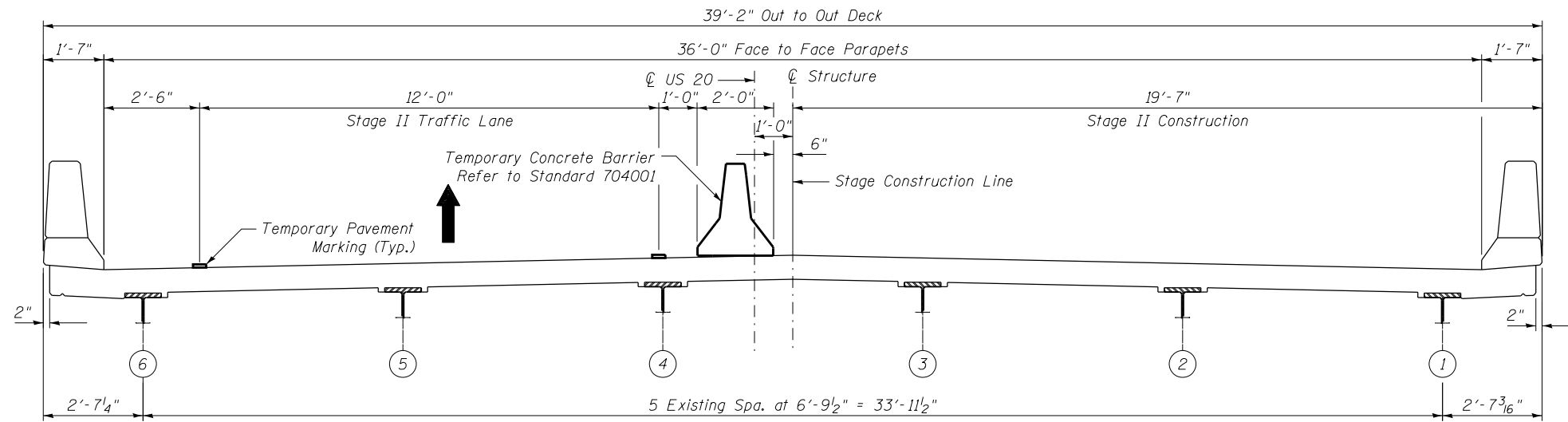


CONCRETE OVERLAY AT FLOOR DRAIN



STAGE I CROSS SECTION

Looking West



STAGE II CROSS SECTION

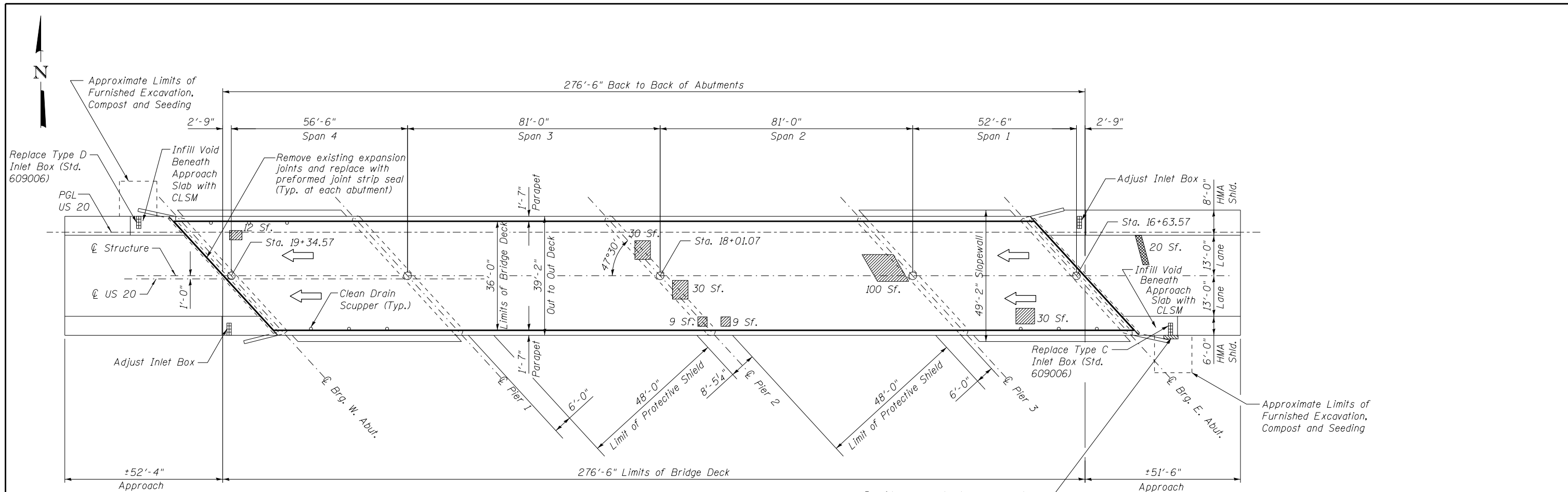
Looking West

Notes:

The Contractor shall maintain a minimum of one lane of through traffic on US 20 (Lake Street) at all times.

The exact number, location, and spacing of all signs and traffic control devices may be adjusted to fit field conditions as directed by the Engineer.

FILE NAME =	USER NAME =	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 022-0090	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - JMH	REVISED -			290	22-3HB-1	DuPAGE	37	18	
		PLOT SCALE =	REVISIED -			CONTRACT NO. 60M97					
		DRAWN - DR	REVISED -			ILLINOIS FED. AID PROJECT					
		PLOT DATE =	CHECKED - JMH	REVISED -	SHEET NO. S3 OF S15 SHEETS						



PLAN

Provide new curb along approach slab repair to match adjacent curb. Provide 1-#5(E) at top of curb and bottom of repair and epoxy grout into existing curb per Section 584. Cost included in pay item "Approach Slab (Full Depth)".

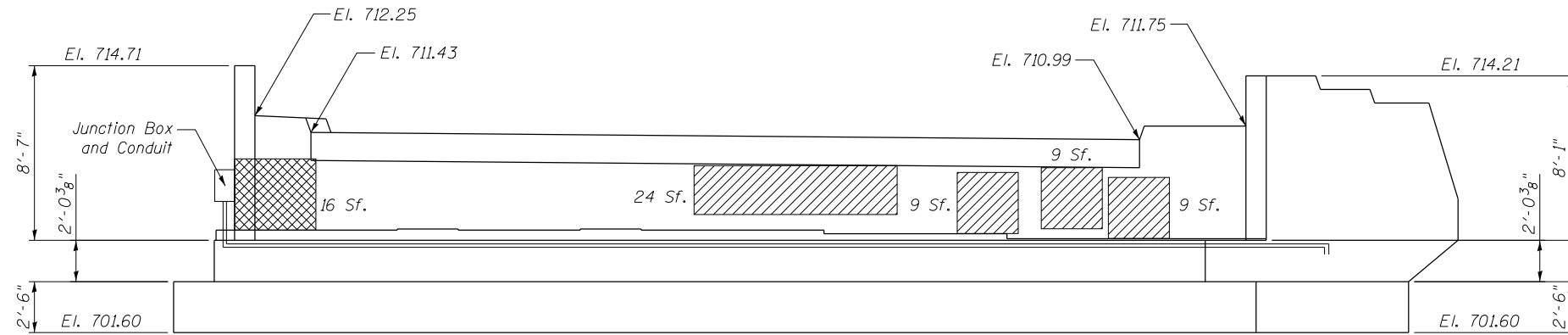
NOTES:

- Deck and approach repair areas are estimated based on visual inspection completed in November 2010. Actual repair areas and locations shall be determined by the Engineer and shown on As-built plans.
- Bridge Deck Scarification, $\frac{3}{4}$ " and Bridge Deck Latex Concrete Overlay, $2\frac{1}{4}$ " shall be performed over the limits of the bridge deck, excluding the transverse joint reconstruction areas.
- Protective coat shall be applied to the top and inside faces of the bridge deck parapets and the transverse joint reconstruction areas.
- The following items apply to the extents of the approaches:
Aggregate (Prime Coat)
Bituminous Materials (Prime Coat)
Hot-Mix Asphalt Surface Course, Max. "D", N70 ($1\frac{1}{2}$ ".)
- Protective shield shall be installed over the width of I-290, excluding half the shoulder width.

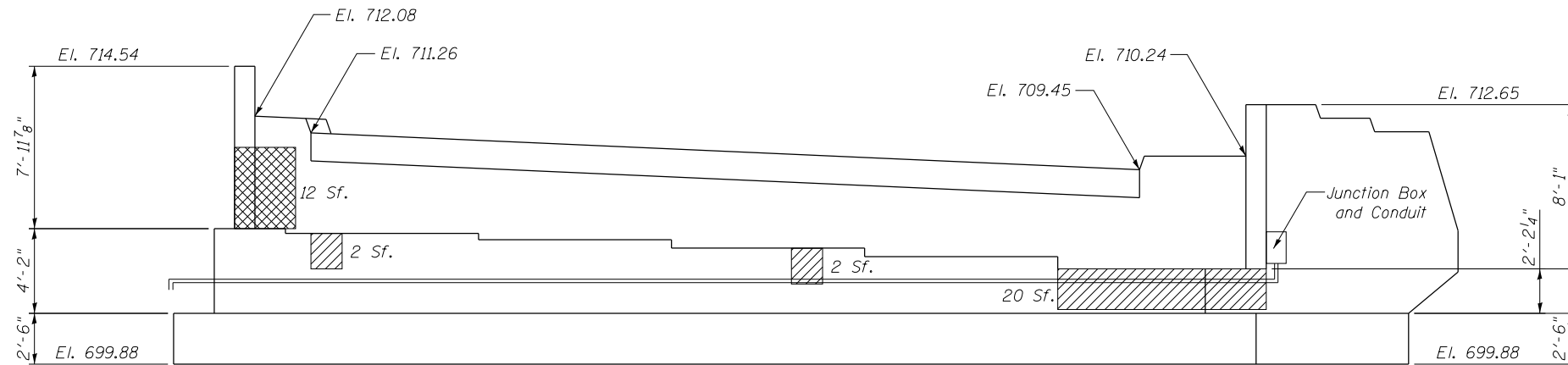
BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Approach Slab Repairs (Partial Depth)	Sq. Yd.	3
	Approach Slab Repairs (Full Depth)	Sq. Yd.	1
	Protective Coat	Sq. Yd.	272
	Bridge Deck Grooving	Sq. Yd.	1,030
	Bridge Deck Latex Concrete Overlay $2\frac{1}{4}$ "	Sq. Yd.	1,063
	Bridge Deck Scarification, $\frac{3}{4}$ "	Sq. Yd.	1,063
	Bituminous Materials (Prime Coat)	Gallon	47
	Hot-Mix Asphalt Surface Course Mix "D", N70	Ton	39
	Aggregate Prime Coat	Ton	1
	Protective Shield	Sq. Yd.	567
	Type C Inlet Box, Standard 609006	Each	1
	Type D Inlet Box, Standard 609006	Each	1
	Controlled Low-Strength Material (CLSM)	Cu. Yd.	6.0
	Inlet Boxes to be Adjusted (Special)	Each	2
	Remove Inlet Box	Each	2
	Clean Bridge Scuppers and Downspouts	Each	9
	Deck Slab Repair (Partial Depth) Δ	Sq. Yd.	25

Δ For information only to assist the Contractor in bidding. See Special Provision for "Bridge Deck Latex Overlay."





WEST ABUTMENT ELEVATION
Looking West

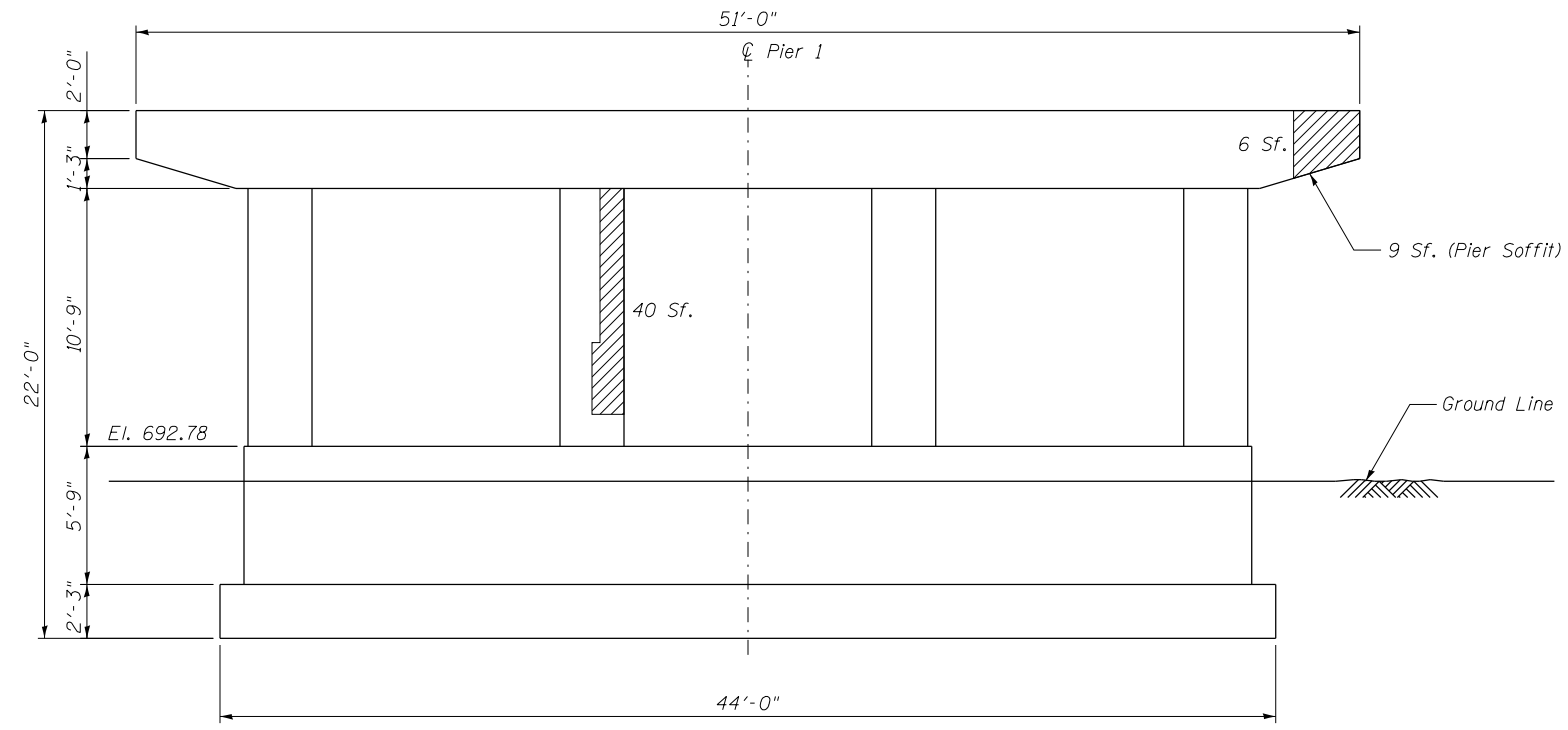


EAST ABUTMENT ELEVATION
Looking East

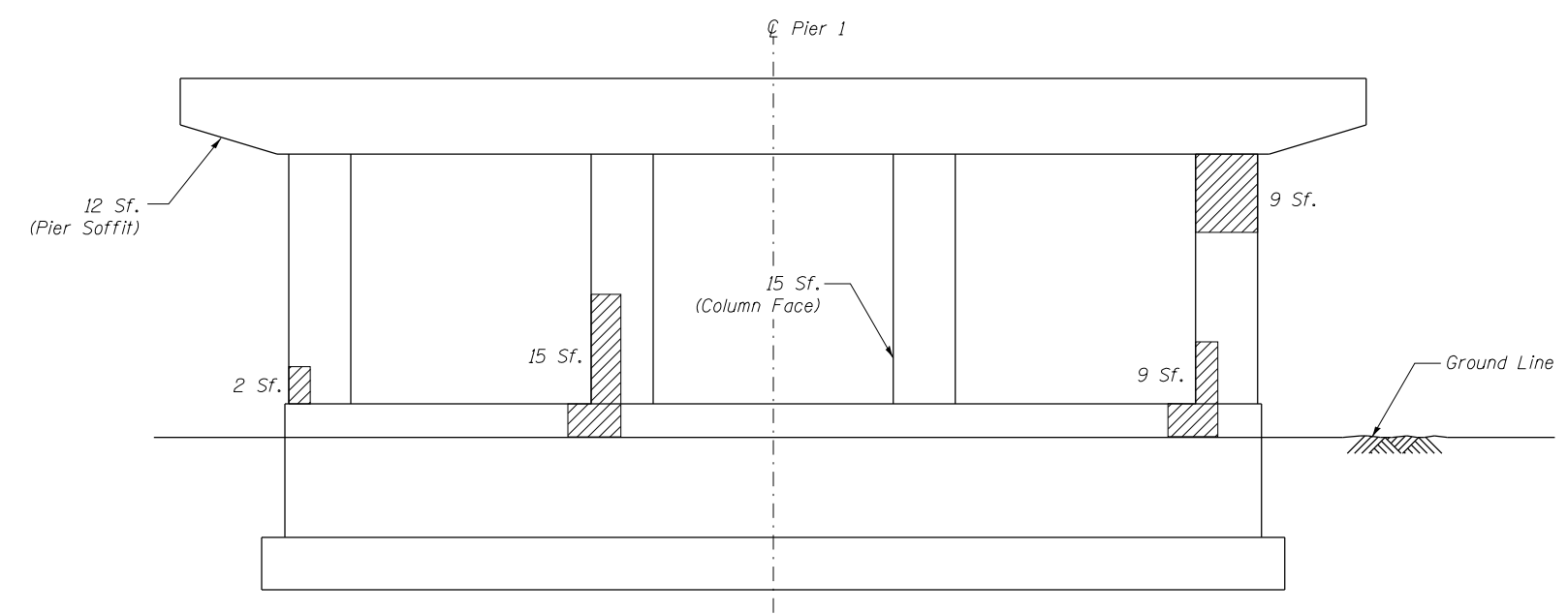
Note:
Lighting conduits are located along each abutment. The Contractor is responsible for protection, support, re-hanging, etc. of all conduits for the duration of the project. Cost included in the pay item "Protection and Maintenance of Existing Underpass Luminaires." The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	75
	Structural Repair of Concrete (Depth Greater Than 5")	Sq. Ft.	28



PIER 1 ELEVATION EAST FACE
Looking West

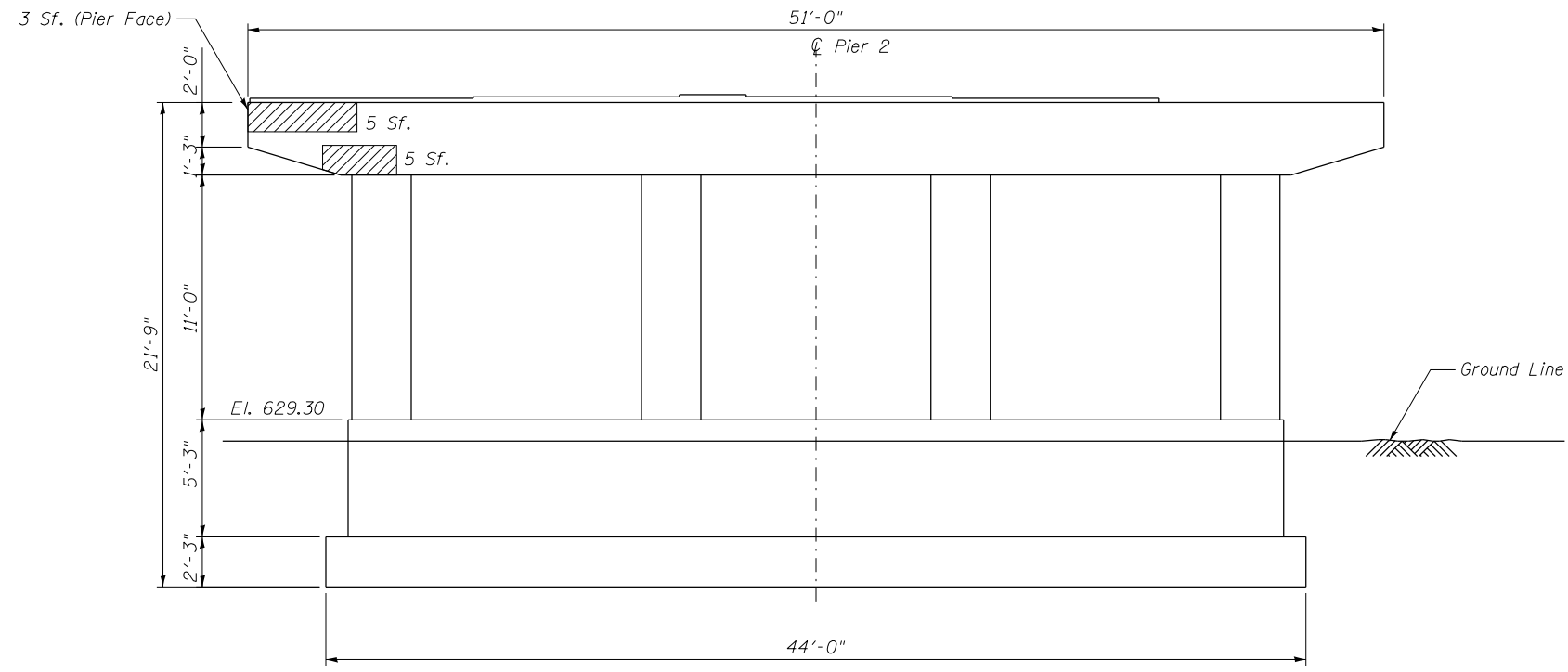


PIER 1 ELEVATION WEST FACE
Looking East

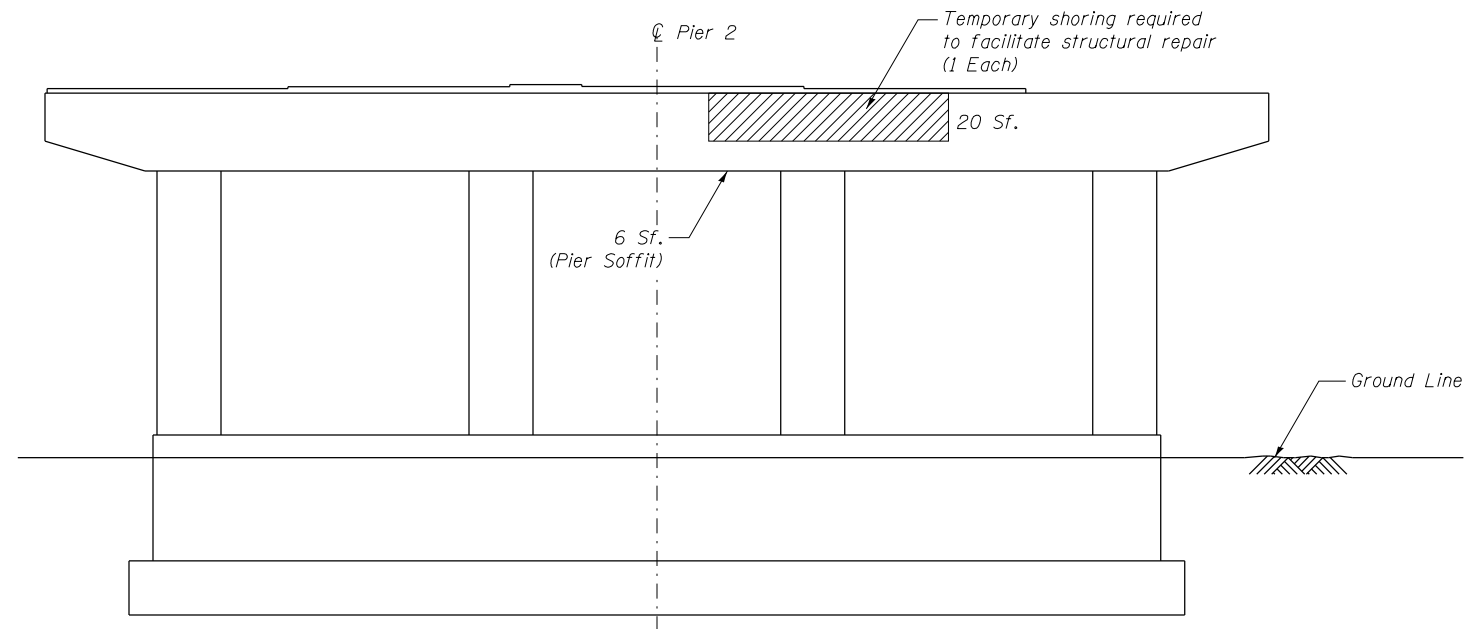
Note:
Lighting conduits are located along each abutment. The Contractor is responsible for protection, support, re-hanging, etc. of all conduits for the duration of the project. Cost included in the pay item "Protection and Maintenance of Existing Underpass Luminaires." The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	117



PIER 2 ELEVATION EAST FACE
Looking West



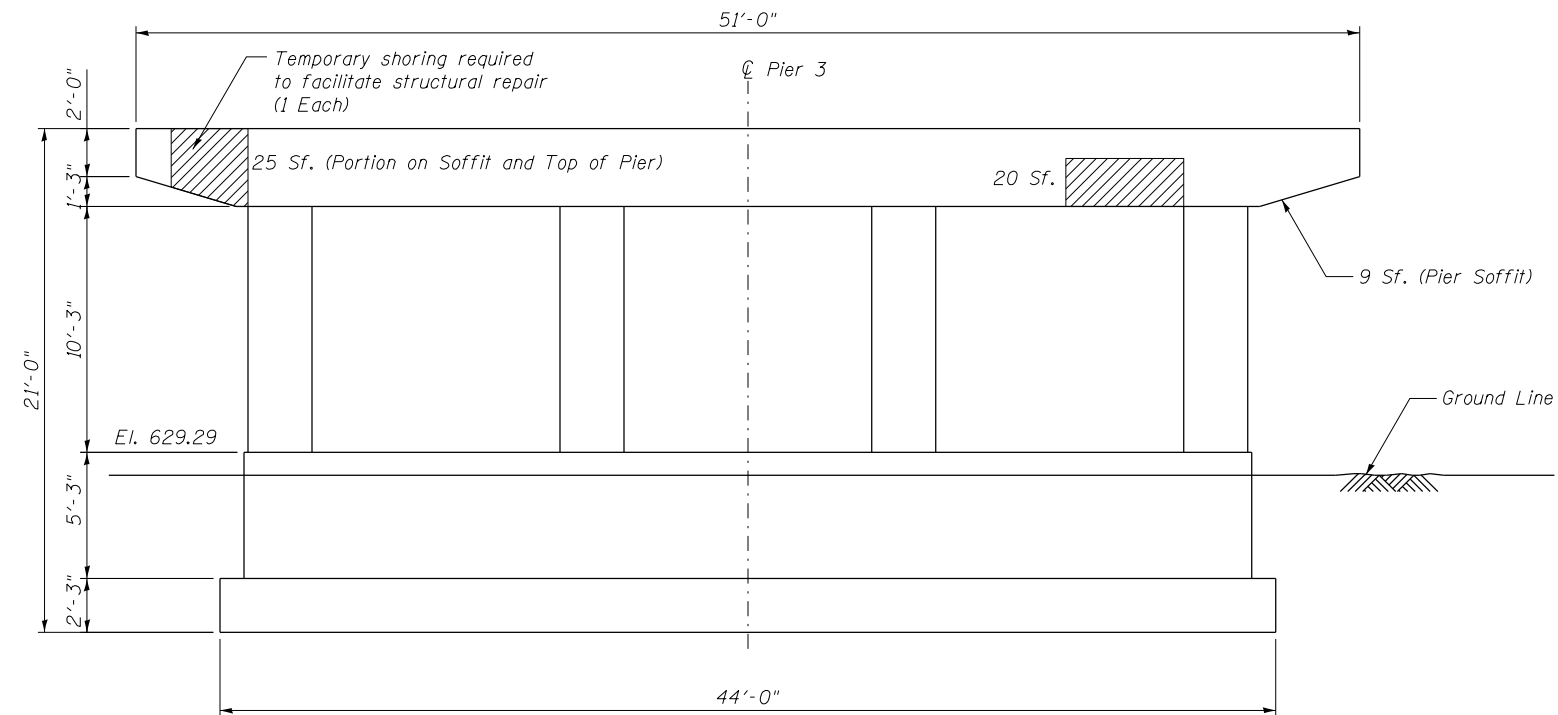
PIER 2 ELEVATION WEST FACE
Looking East

INTERIOR GIRDER REACTION TABLE		
Pier 2		
R_{DL}	(k)	71.1
R_{SDL}	(k)	33.5
R_{LL}	(k)	51.8
R_{Imp}	(k)	12.6
R_{TOTAL}	(k)	155.7

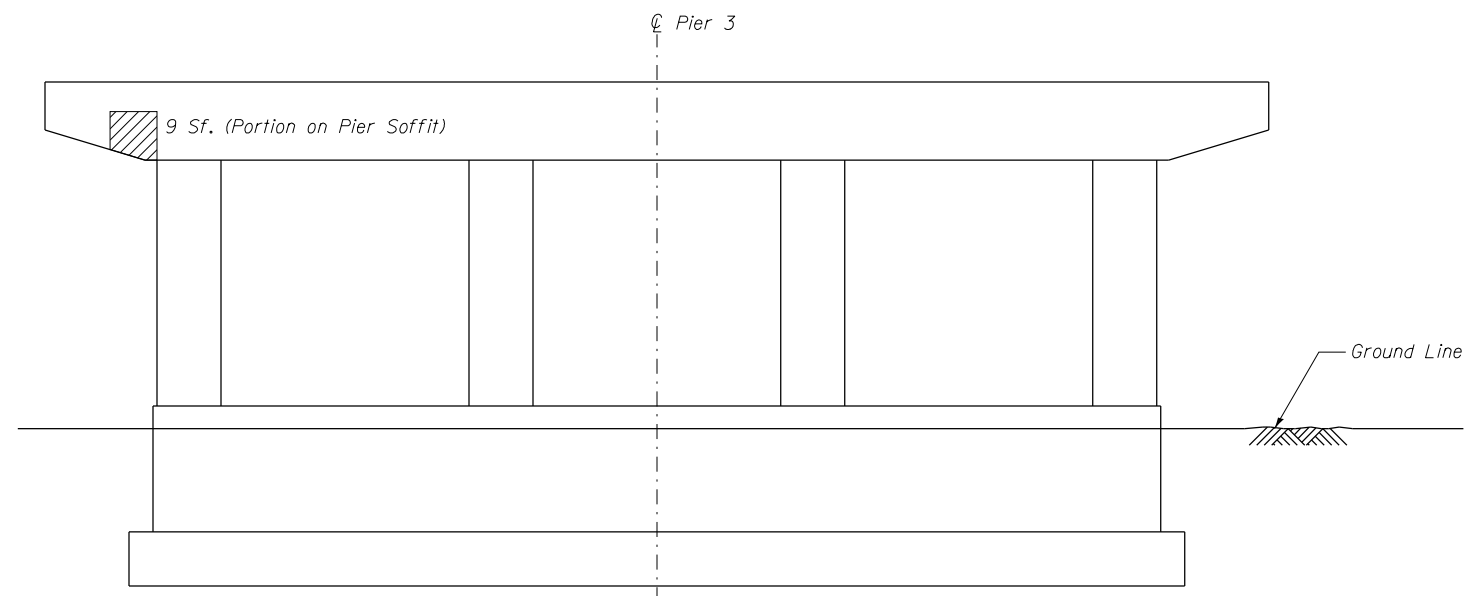
Note:
Lighting conduits are located along each abutment. The Contractor is responsible for protection, support, re-hanging, etc. of all conduits for the duration of the project. Cost included in the pay item "Protection and Maintenance of Existing Underpass Luminaires." The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.

BILL OF MATERIAL

SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	39
	Temporary Shoring and Cribbing	Each	1



PIER 3 ELEVATION EAST FACE
Looking West



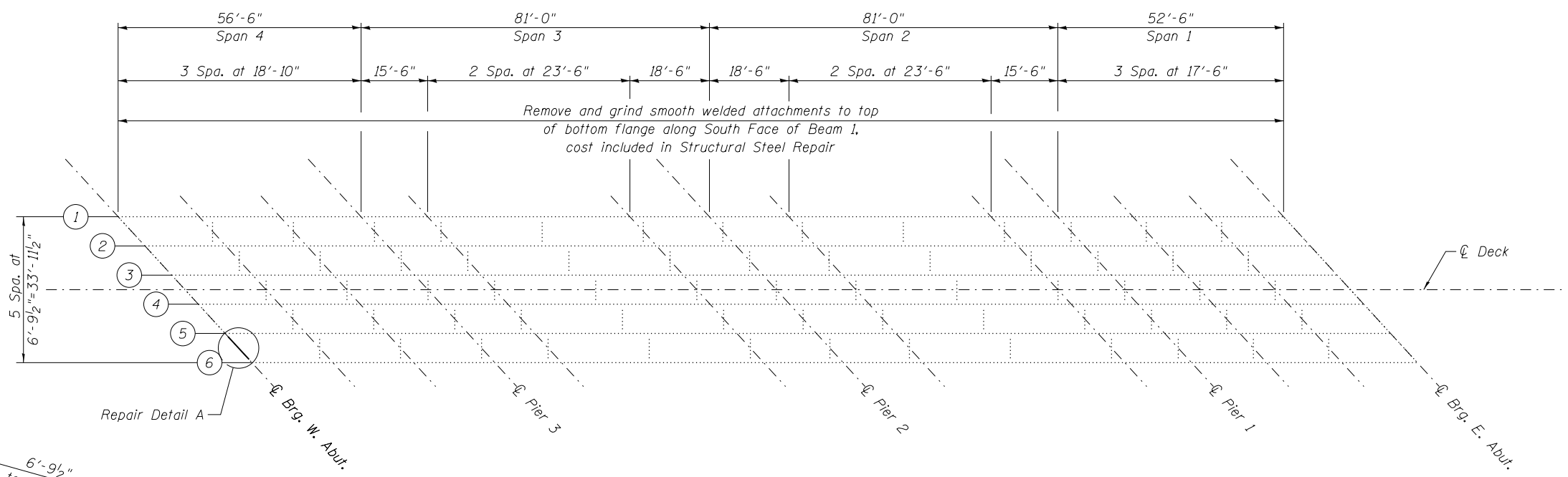
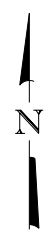
PIER 3 ELEVATION WEST FACE
Looking East

INTERIOR GIRDER REACTION TABLE		
Pier 3		
R_{DL}	(k)	62.4
R_{SDL}	(k)	29.4
R_{LL}	(k)	48.2
R_{Imp}	(k)	12.6
R_{TOTAL}	(k)	152.6

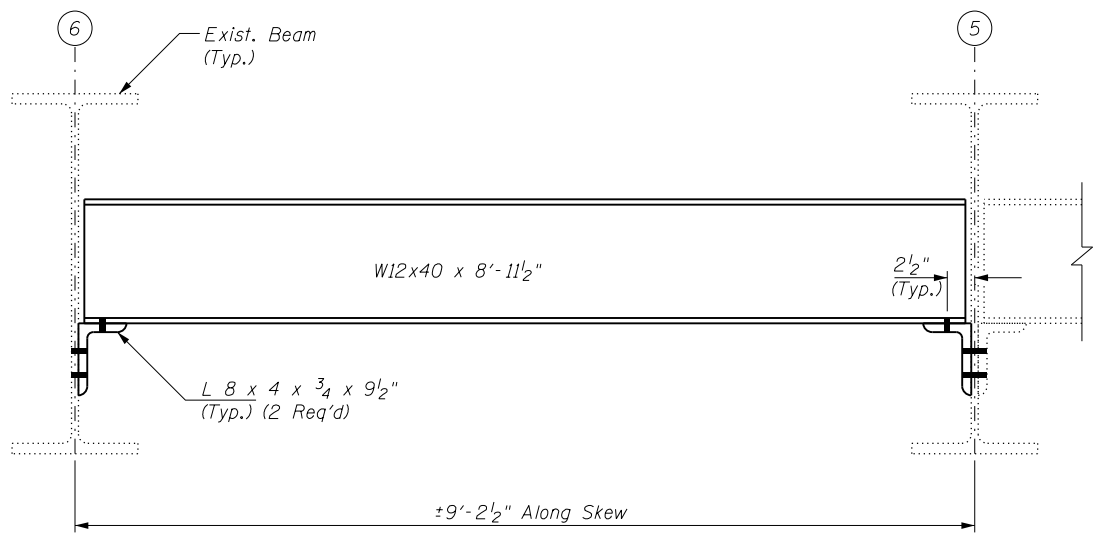
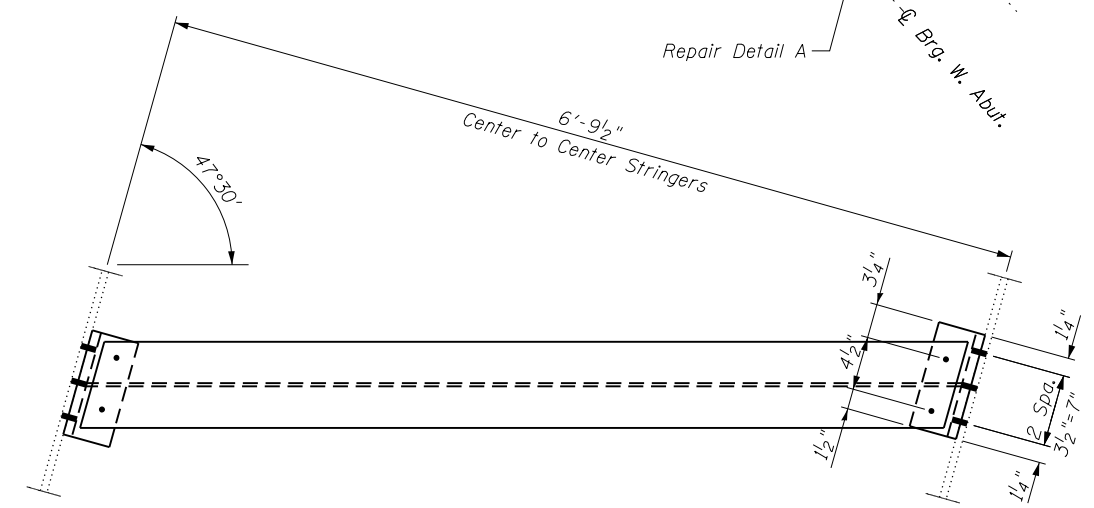
Note:
Lighting conduits are located along each abutment. The Contractor is responsible for protection, support, re-hanging, etc. of all conduits for the duration of the project. Cost included in the pay item "Protection and Maintenance of Existing Underpass Luminaires." The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.

BILL OF MATERIAL

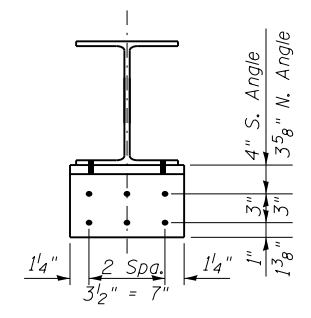
SYMBOL	ITEM	UNIT	QUANTITY
	Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	63
	Temporary Shoring and Cribbing	Each	1



FRAMING PLAN



REPAIR DETAIL A



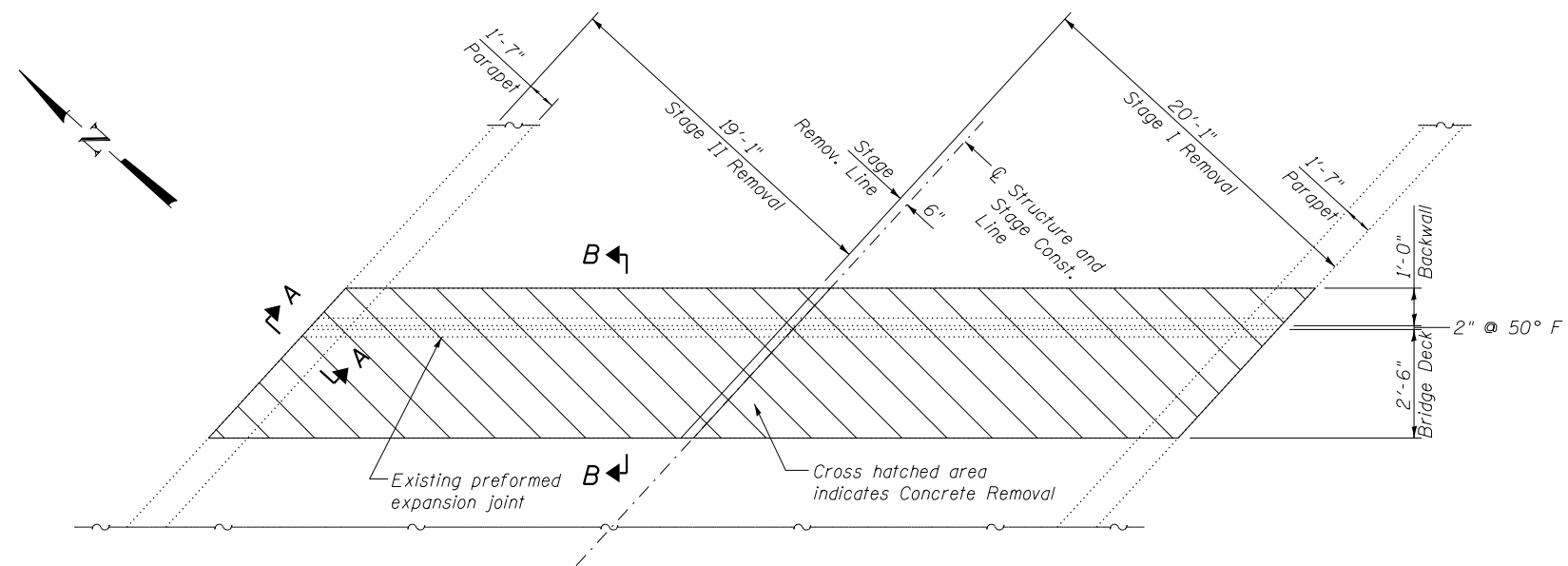
Note:
Prior to ordering any material, the Contractor shall verify in the field all existing bolt hole dimensions in existing beam.

BILL OF MATERIAL

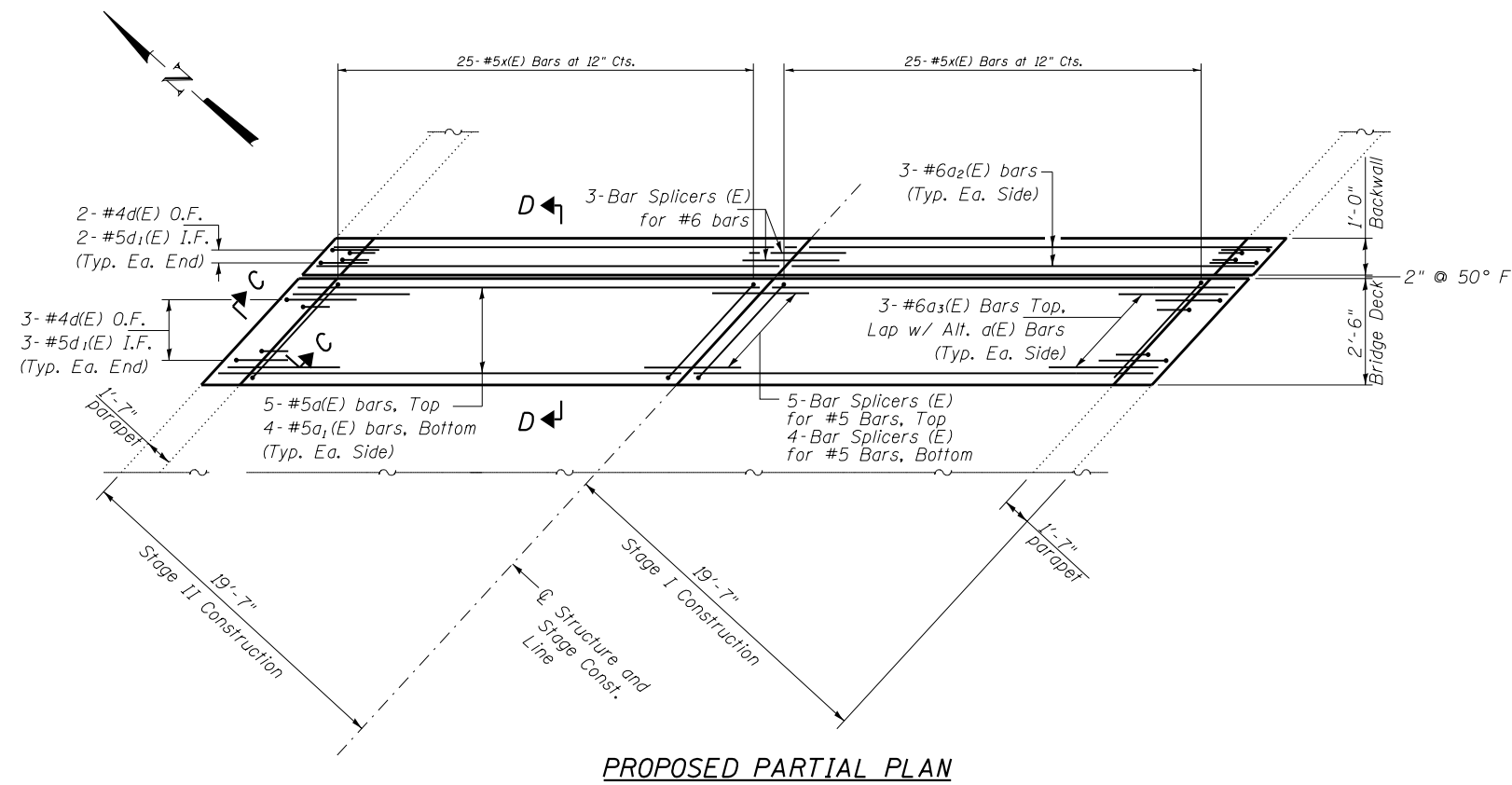
ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	430

Notes:

- Field drill holes in new diaphragms.
- Cost of removal and disposal of existing diaphragms shall be included with Structural Steel Repair.
- Lighting conduits are located along each abutment. The Contractor is responsible for protection, support, re-hanging, etc. of all conduits for the duration of the project. Cost included in the pay item "Protection and Maintenance of Existing Underpass Luminaires." The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.



EXISTING PARTIAL PLAN
East Joint Shown - West Joint Opposite Hand



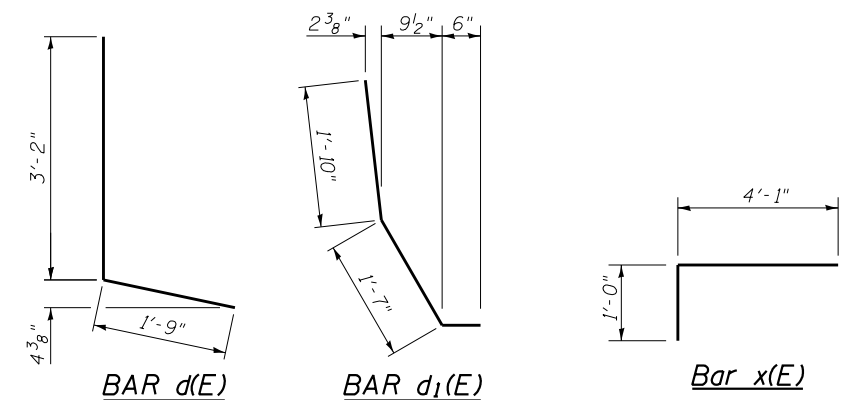
PROPOSED PARTIAL PLAN

EAST AND WEST JOINTS
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
d(E)	20	#5	26'-4"	—
a ₁ (E)	16	#5	26'-0"	—
a ₂ (E)	12	#6	26'-4"	—
a ₃ (E)	12	#6	5'-6"	—
d(E)	20	#4	4'-11"	L
d ₁ (E)	20	#5	3'-11"	L
x(E)	100	#5	5'-1"	┌
Concrete Removal			Cu. Yd.	20.3
Concrete Superstructure			Cu. Yd.	21.9
Reinforcement Bars, Epoxy Coated			Pound	2,240

Notes:

1. Work this sheet with Sheets S11-S-13.
2. I.F. Denotes Inside Face.
O.F. Denotes Outside Face.



FILE NAME =	USER NAME =	DESIGNED - JMS	REVISED -
		CHECKED - JMH	REVISED -
	PLOT SCALE =	DRAWN - DR	REVISED -
	PLOT DATE =	CHECKED - JMH	REVISED -

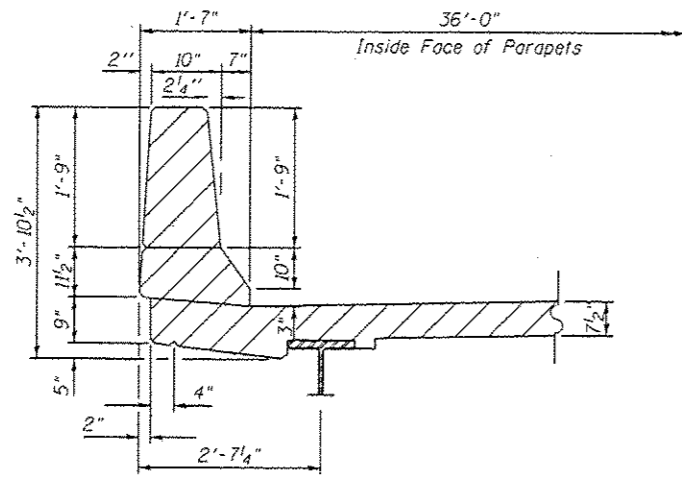
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPAIRS
STRUCTURE NO. 022-0090

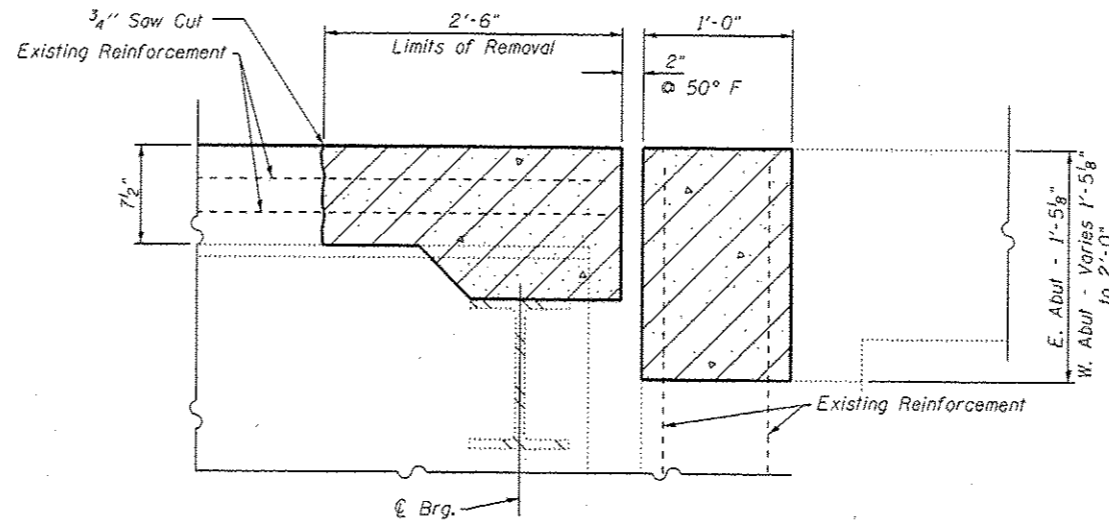
SHEET NO. S10 OF S15 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-1	DuPAGE	37	25
			CONTRACT NO. 60M97	

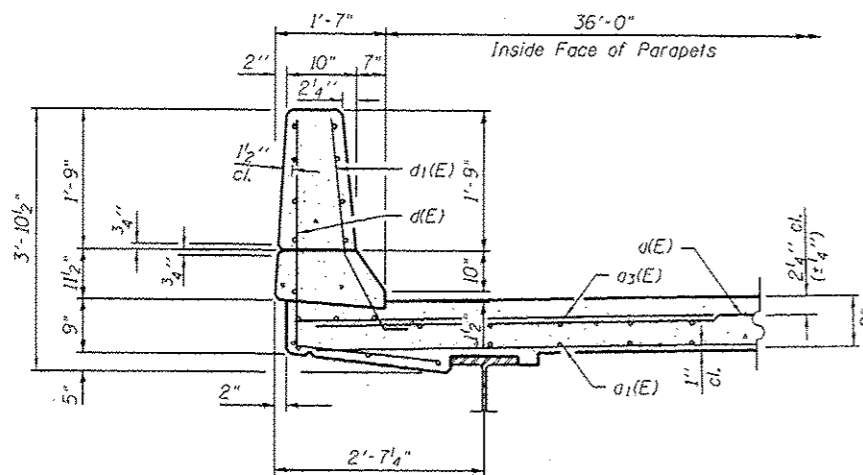
ILLINOIS FED. AID PROJECT



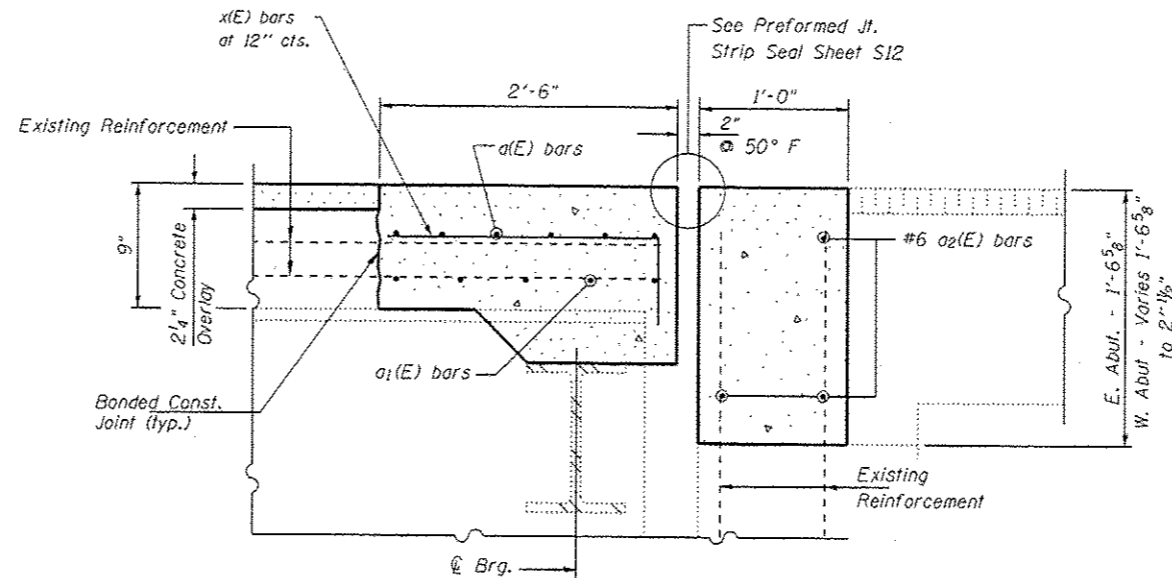
SECTION A-A



SECTION B-B



SECTION C-C

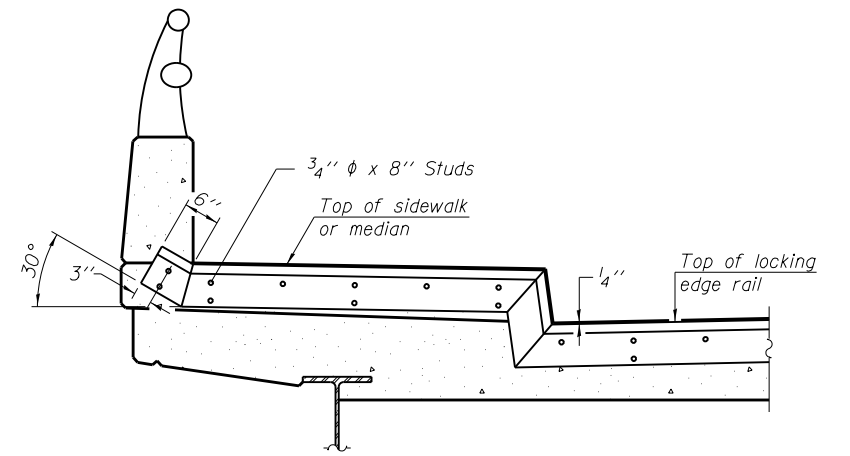
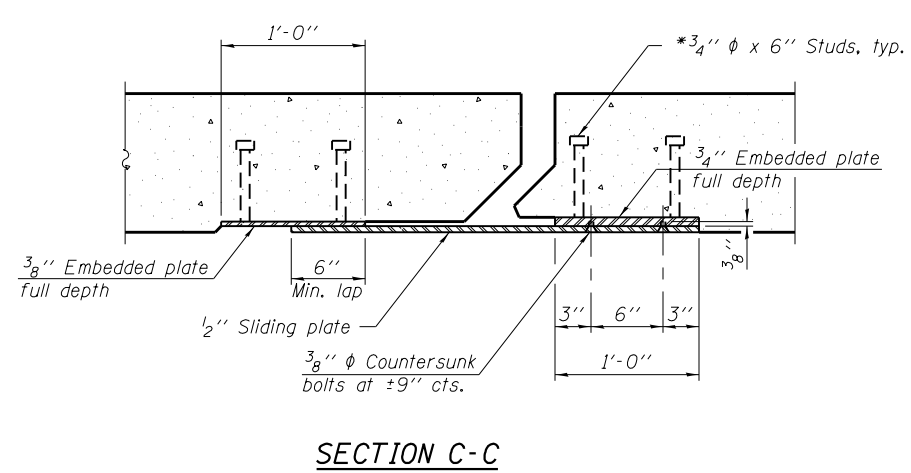
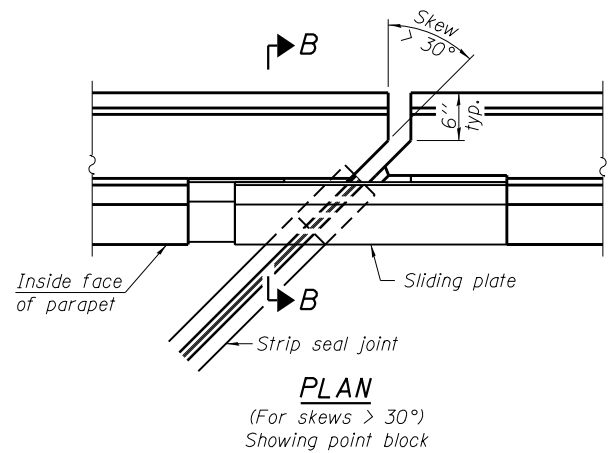
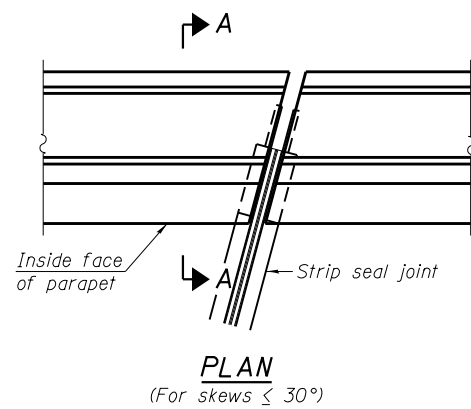


SECTION D-D

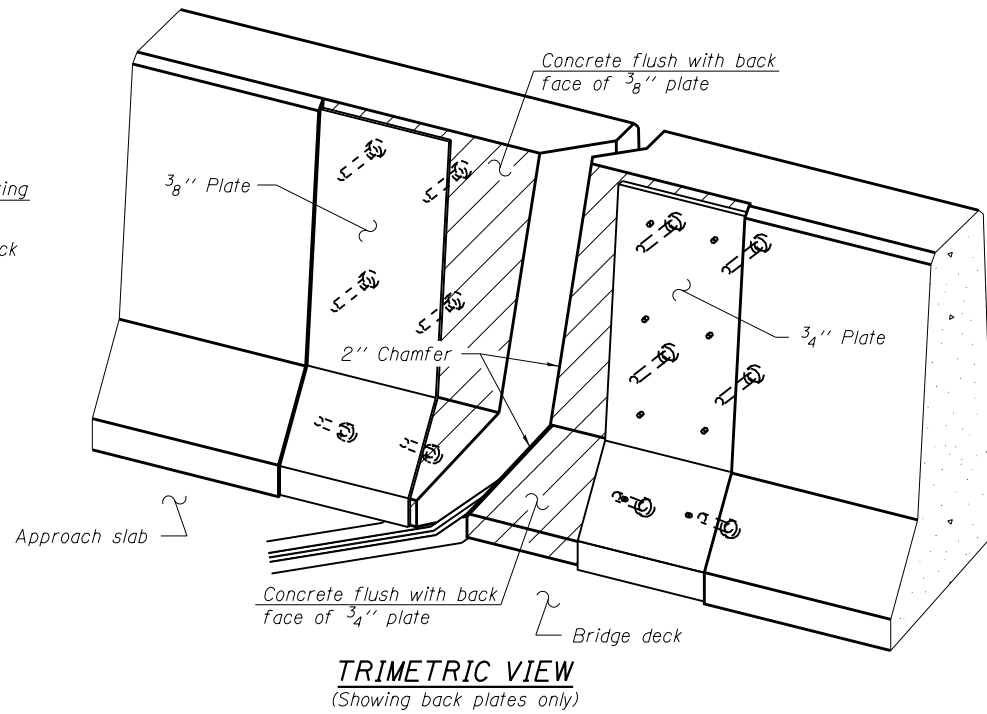
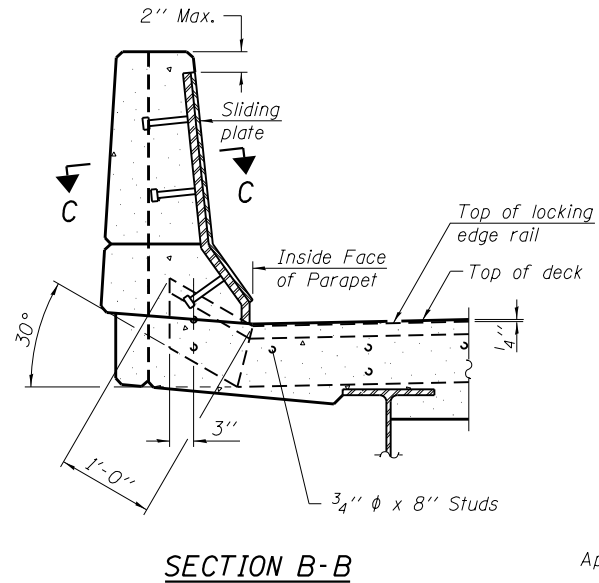
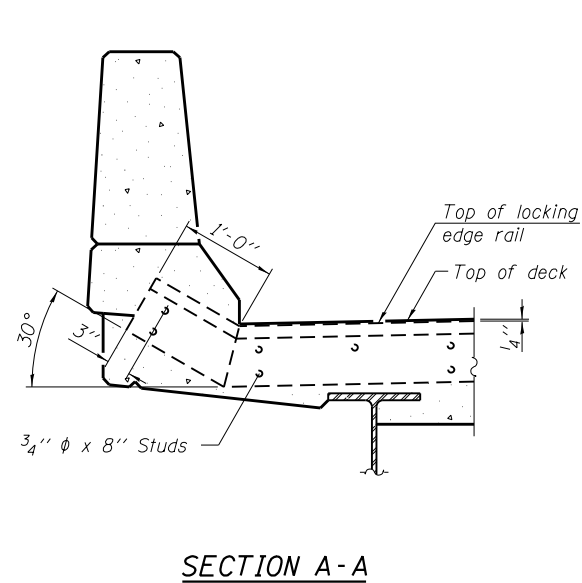
Notes:

- Existing reinforcement bars extending into the concrete removal area shall be cleaned straightened and incorporated into the new construction. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Existing reinforcement bars in the concrete removal area parallel to the expansion joints shall be removed.
- Removal and disposal of the existing expansion joints will not be paid for separately, but shall be included with the cost of Concrete Removal.
- If existing name plate falls within the limits of Concrete Removal, it shall be removed and reinstalled in its original location in accordance with IDOT Std. 515001. Cost included with Concrete Removal.
- The Contractor shall exercise extreme care with the existing conduits in sections of the parapet to be removed and to protect and support the conduit. The Contractor will be required to repair any damage done to the conduit to the satisfaction of the Engineer. No splicing will be allowed to any cable damage resulting from this work, instead the Contractor will be required to repair the entire span of any damaged cable at no additional cost to the Department.
- Work this sheet with Sheets S10, S12, & S13.

FILE NAME *	USER NAME *	DESIGNED - JMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXPANSION JOINT DETAILS STRUCTURE NO. 022-0090	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - JMH	REVISED -			290	22-3HB-1	DUPAGE	37	26	
		DRAWN - DR	REVISED -			CONTRACT NO. 60M97					
		CHECKED - JMH	REVISED -			SHEET NO. S11 OF S15 SHEETS					
						[ILLINOIS] FED. AID PROJECT					

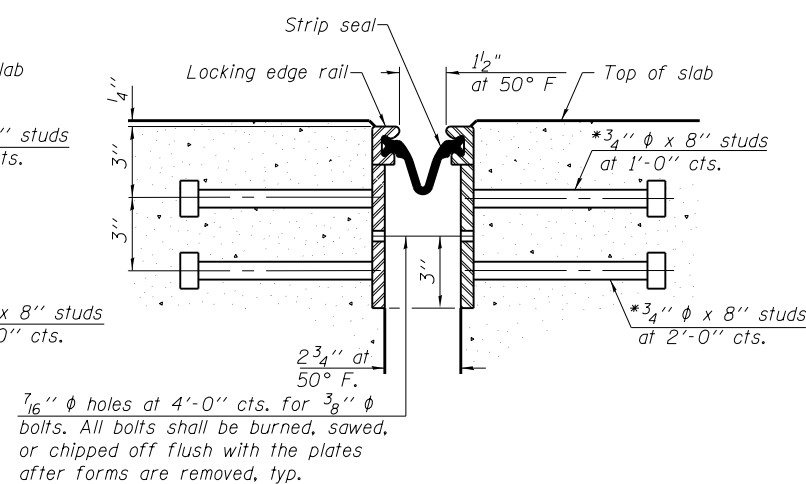
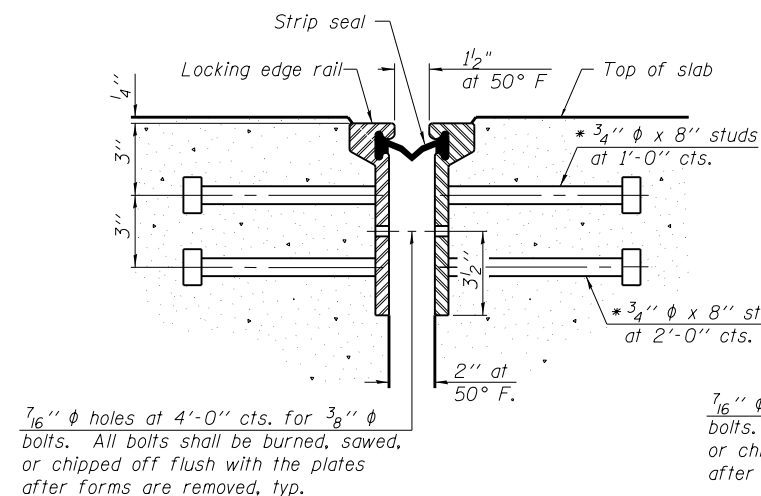


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. 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 at stage lines shall be 3/16", sealed with a suitable sealant.
Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



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

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

ROLLED EXTRUDED RAIL **WELDED RAIL**

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

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

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	116.0

EJ-SSJ

7-1-10

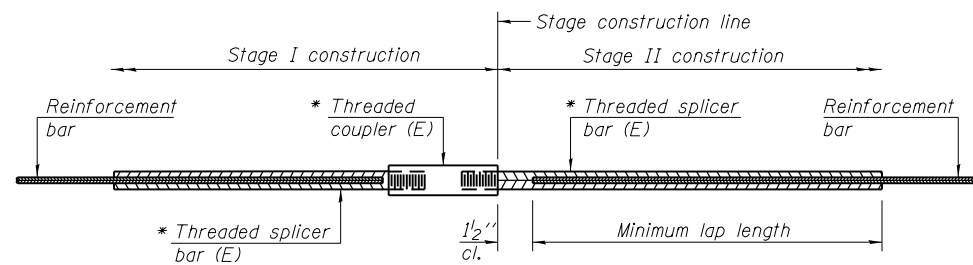
FILE NAME =	USER NAME =	DESIGNED - JMS	REVISED -
		CHECKED - JMH	REVISED -
		DRAWN - DR	REVISED -
		CHECKED - JMH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 022-0090

SHEET NO. S12 OF S15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-1	DuPAGE	37	27
CONTRACT NO. 60M97				
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

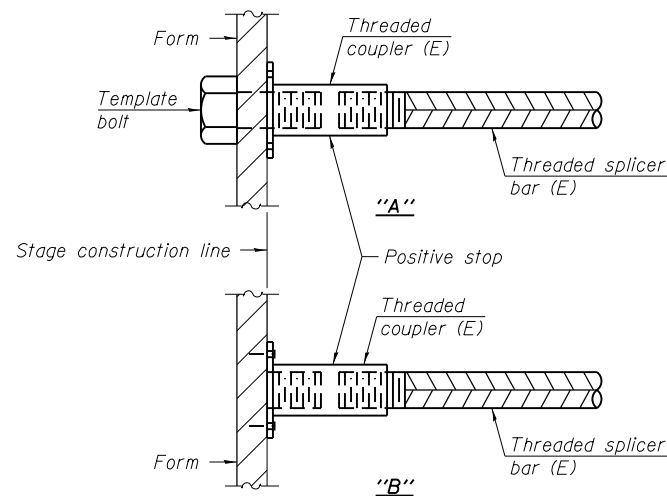
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

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

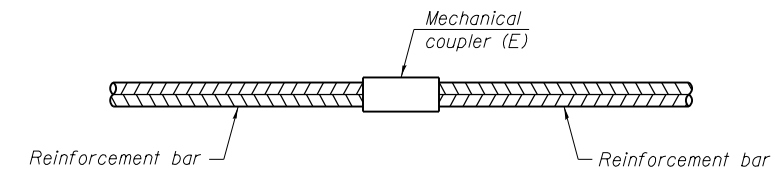
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	18	3
Backwall	#6	6	3



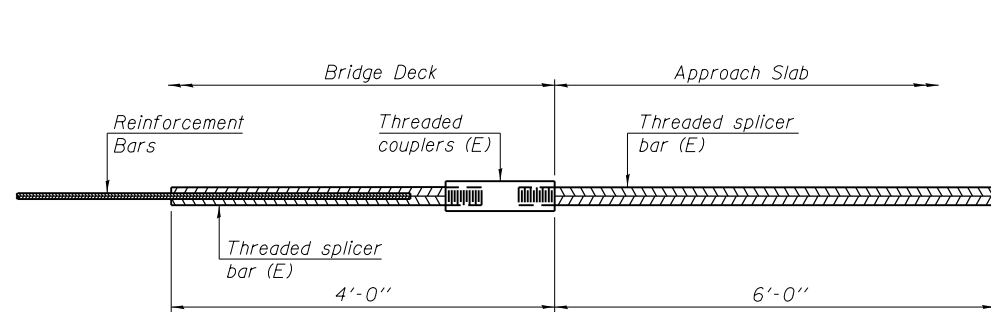
INSTALLATION AND SETTING METHODS

- "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.



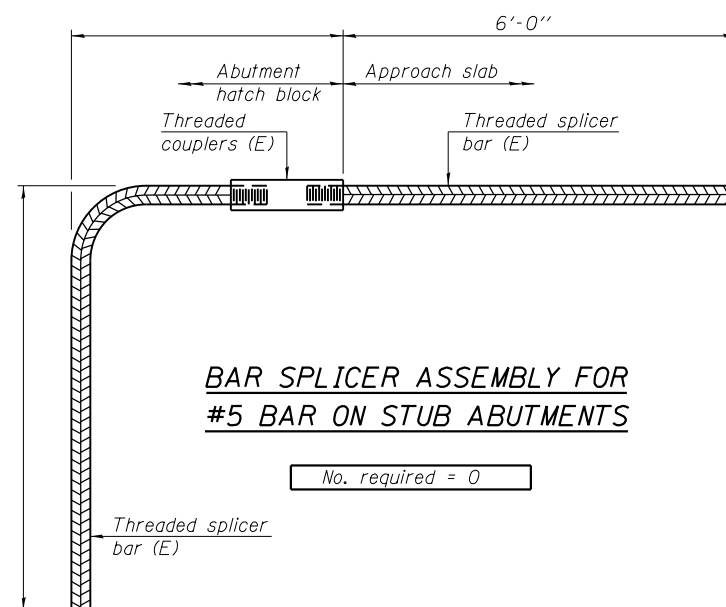
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

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 special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

FILE NAME =	USER NAME =	DESIGNED - JMS	REVISED -
		CHECKED - JMH	REVISED -
	PLOT SCALE =	DRAWN - DR	REVISED -
	PLOT DATE =	CHECKED - JMH	REVISED -

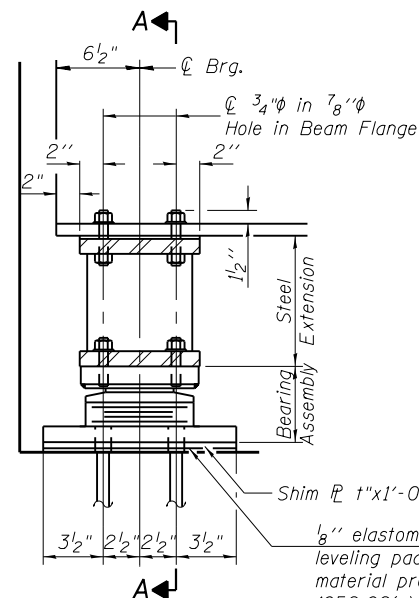
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 022-0090

SHEET NO. S13 OF S15 SHEETS

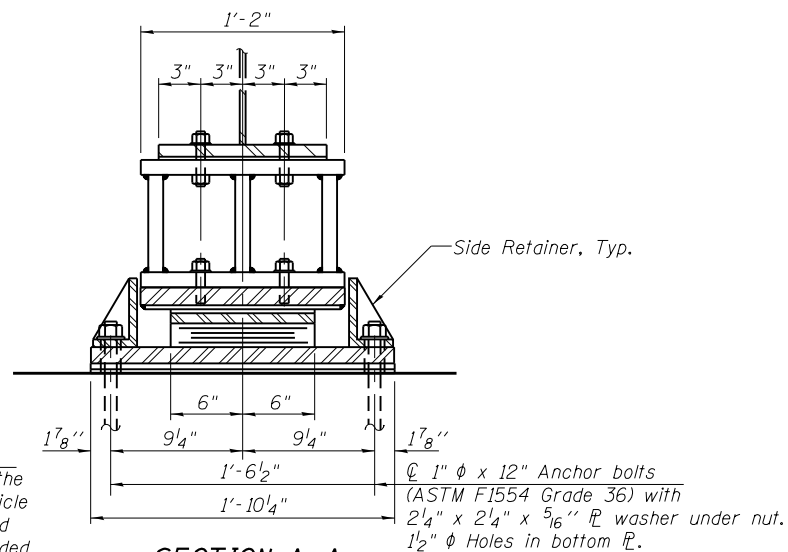
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-1	DuPAGE	37	28
CONTRACT NO. 60M97				

ILLINOIS FED. AID PROJECT



ELEVATION AT ABUT.

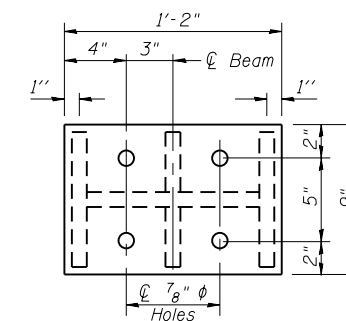
TYPE II ELASTOMERIC EXP. BRG. AT EAST AND WEST ABUTMENTS



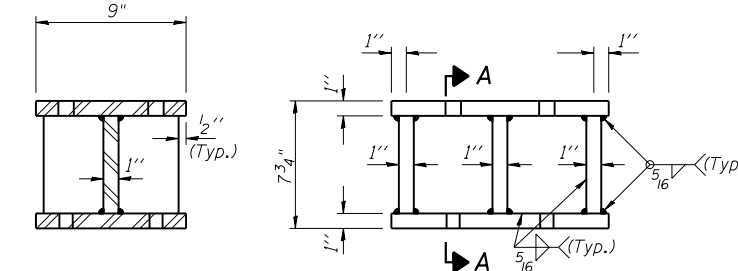
SECTION A-A

4" DIMENSIONS

Beam / Location	1	2	3	4	5	6
W. Abutment	--	--	--	3/8"	1/2"	5/8"
E. Abutment	--	--	--	--	--	--

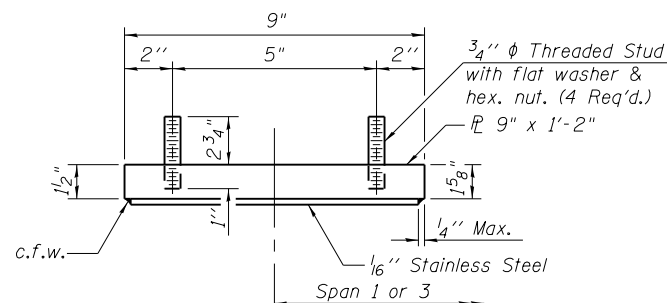


PLAN STEEL EXTENSION

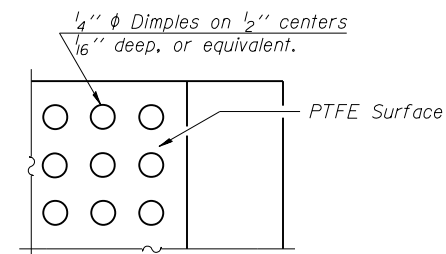


SECTION A-A

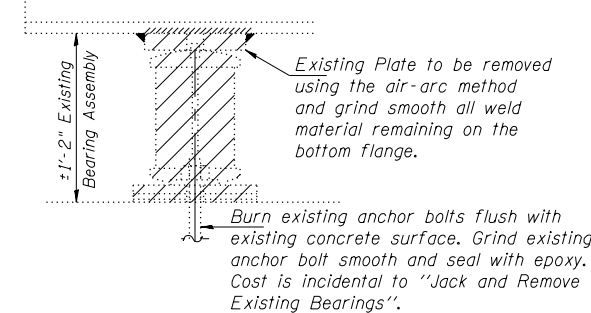
ELEVATION STEEL EXTENSION



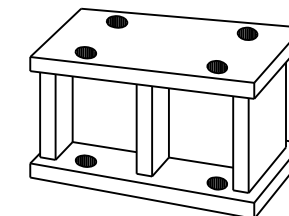
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



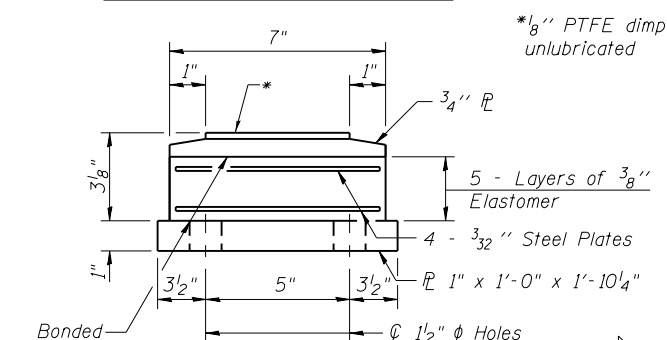
EXISTING STEEL ROCKER BEARING REMOVAL



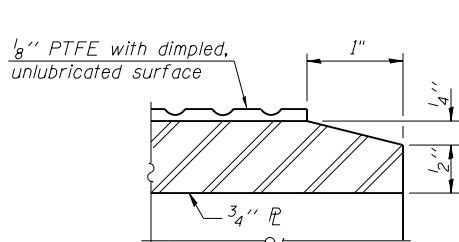
Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

FABRICATED STEEL EXTENSION

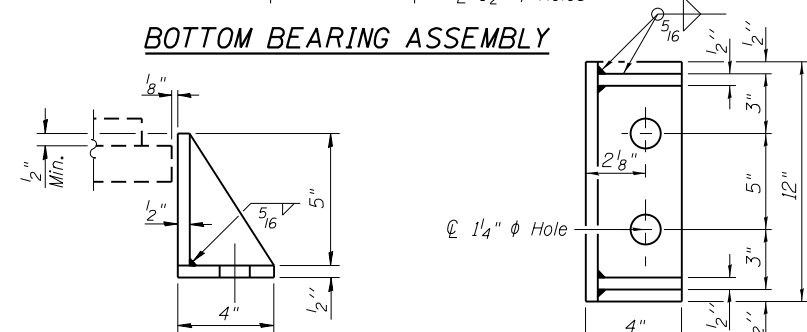
Notes:
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in 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.
 Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BOTTOM BEARING ASSEMBLY

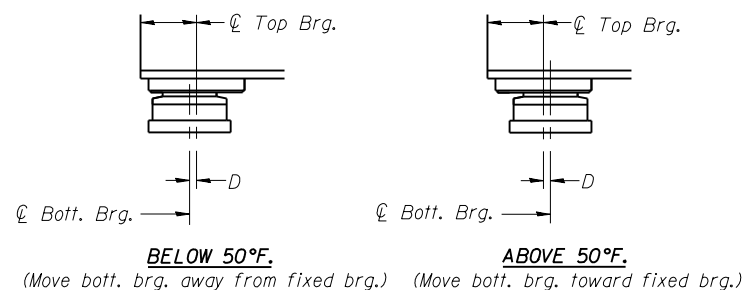


SECTION THRU PTFE



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

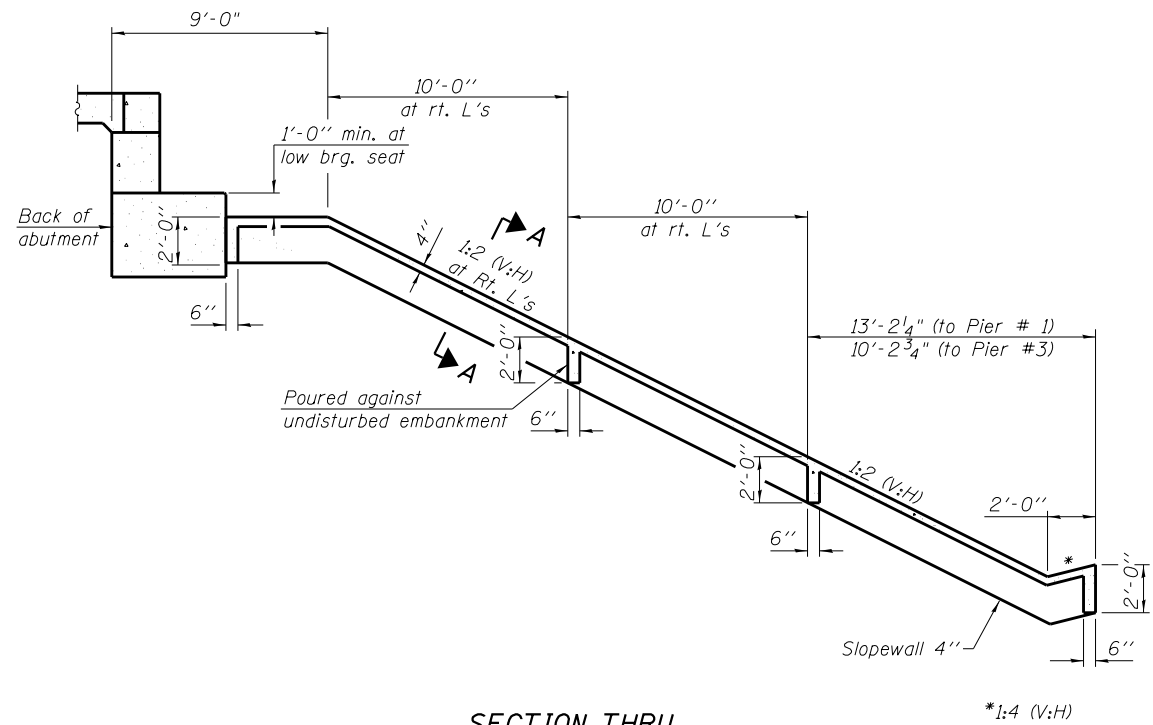
D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

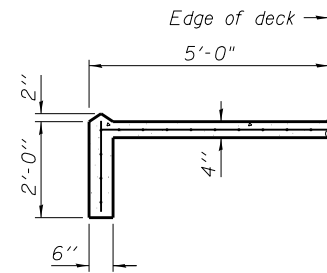
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Anchor Bolts, 1"	Each	48
Furnishing and Erecting Structural Steel	Pound	1,530

INTERIOR GIRDER REACTION TABLE		
	West Abutment	East Abutment
R _{DL} (k)	16.8	14.9
R _{SDL} (k)	7.9	7.0
R _{LL} (k)	35.6	35.1
R _{Imp} (k)	9.8	9.9
R _{TOTAL} (k)	70.1	66.9

Minimum Jack Size = 40 Tons



**SECTION THRU
CONCRETE SLOPEWALL**



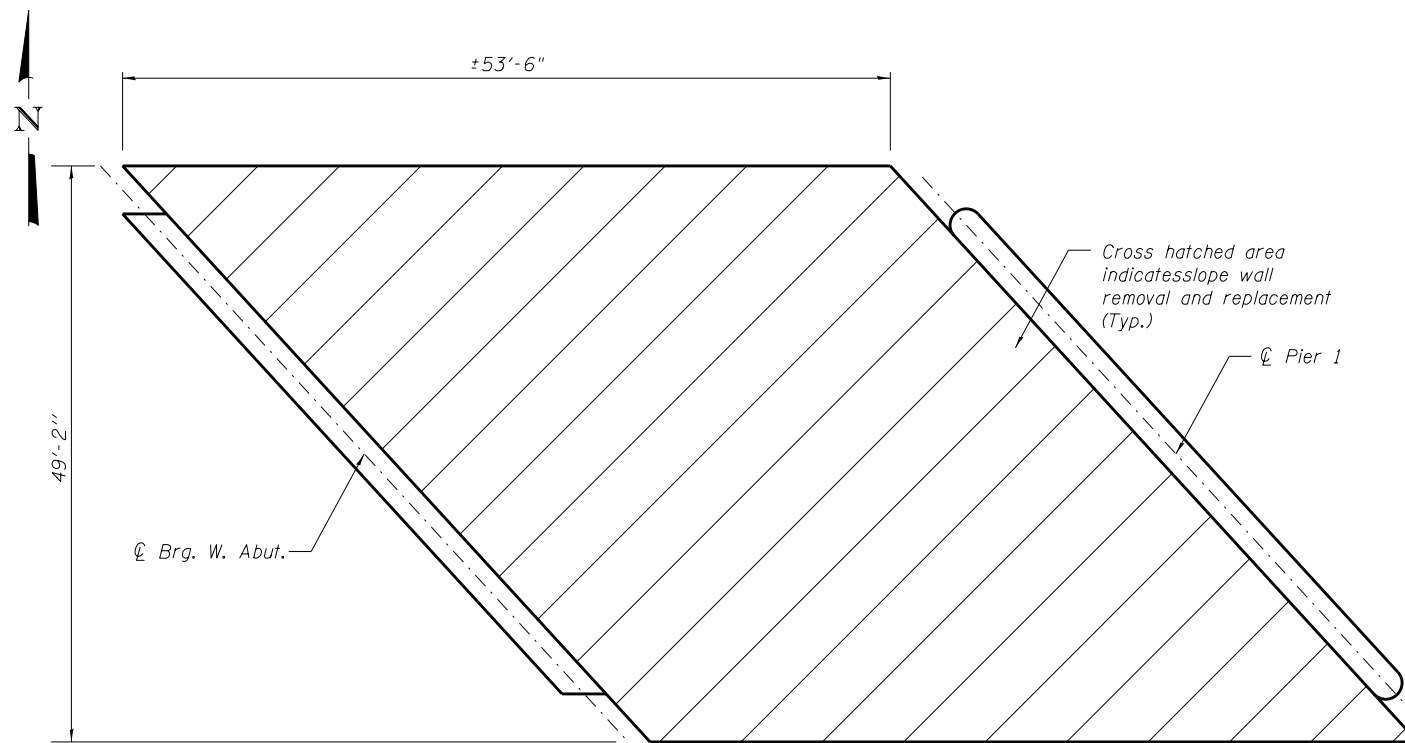
SECTION A-A

BILL OF MATERIAL

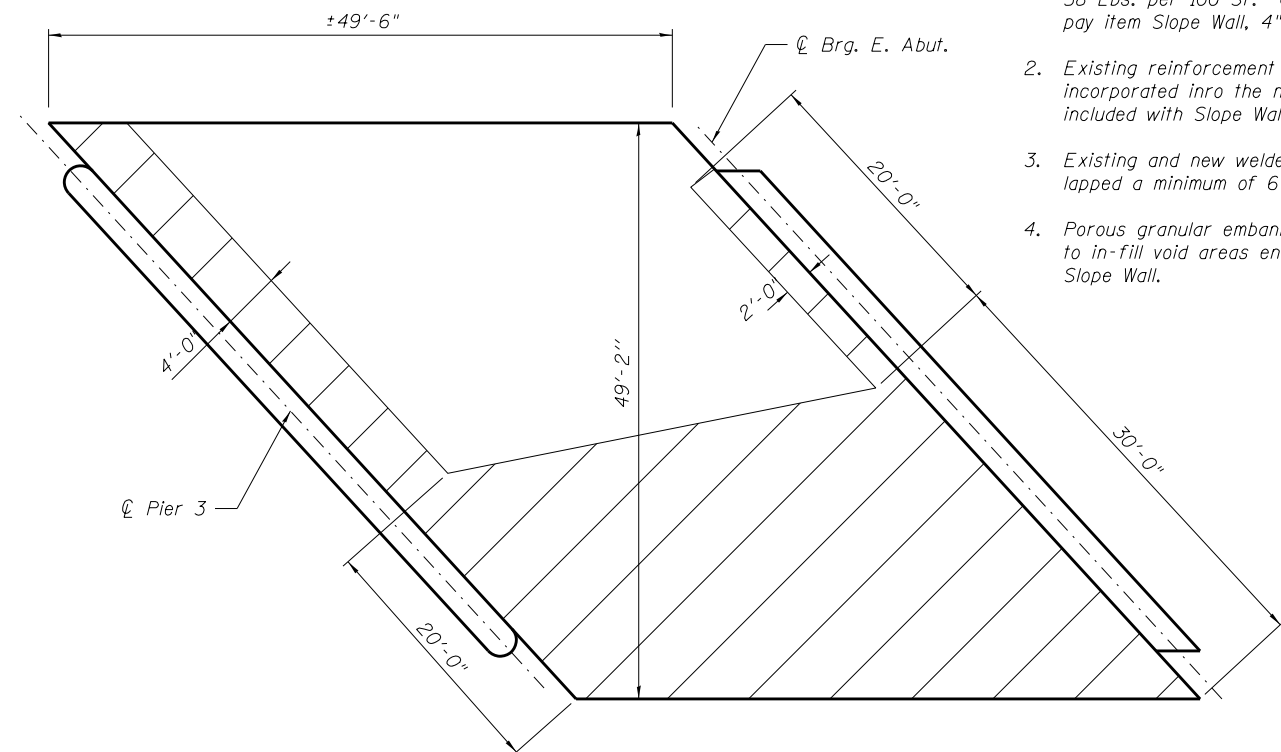
Item	Unit	Total
Slope Wall Removal	Sq. Yd.	452
Slope Wall, 4"	Sq. Yd.	452
Porous Granular Embankment	Cu. Yd.	20

Notes:

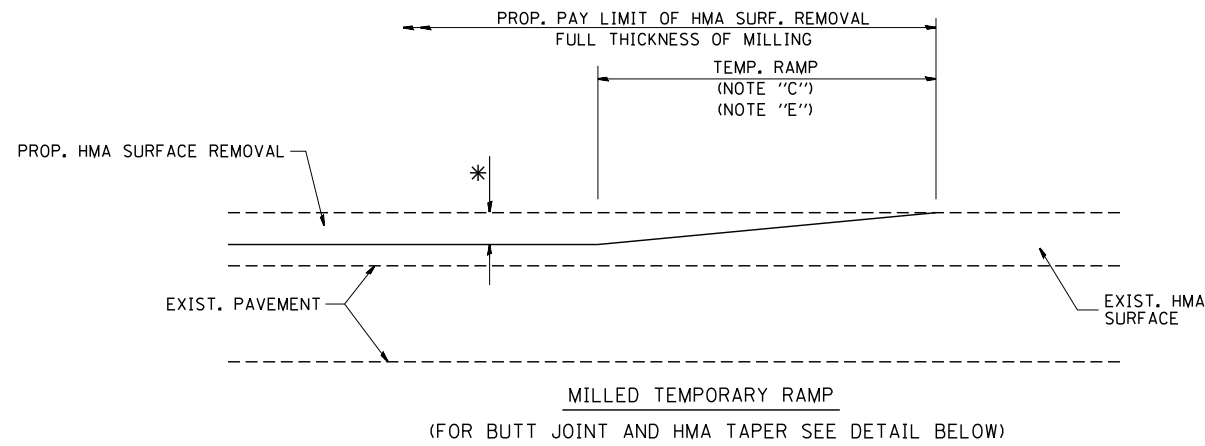
- Slope wall shall be reinforced with welded wire fabric, 6"x6"-W4.0xW4.0, weighing 58 Lbs. per 100 Sf. Cost included in the pay item Slope Wall, 4".
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Slope Wall Removal.
- Existing and new welded wire fabric must be lapped a minimum of 6".
- Porous granular embankment shall be used to in-fill void areas encountered beneath Slope Wall.



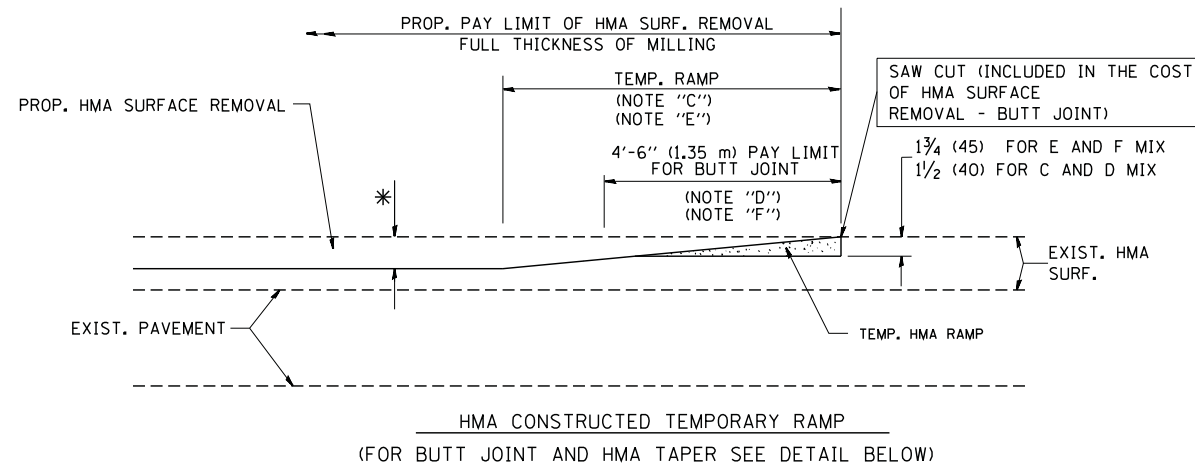
WEST SLOPEWALL PLAN



EAST SLOPEWALL PLAN

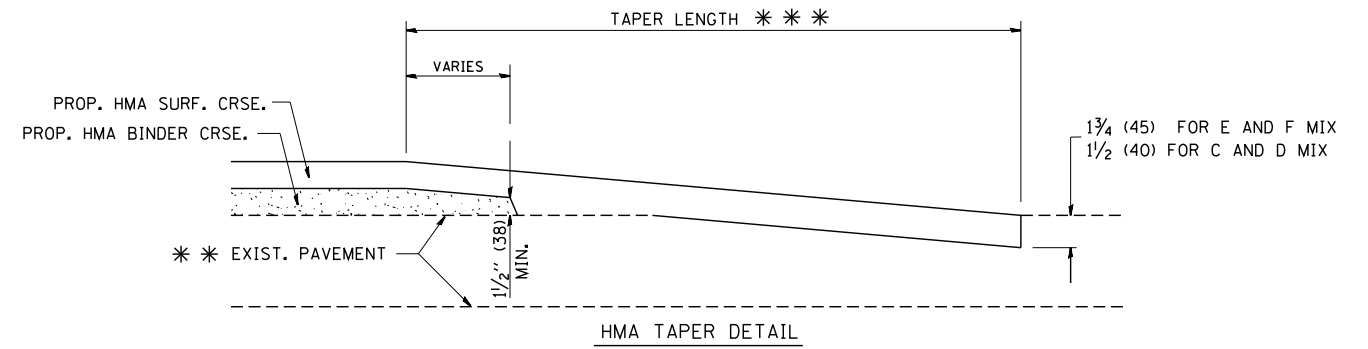
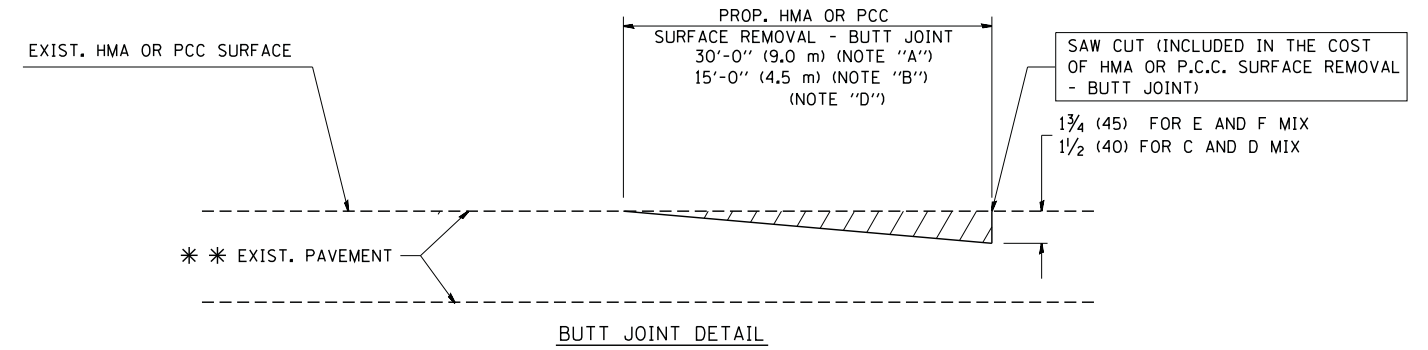


OPTION 1



OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

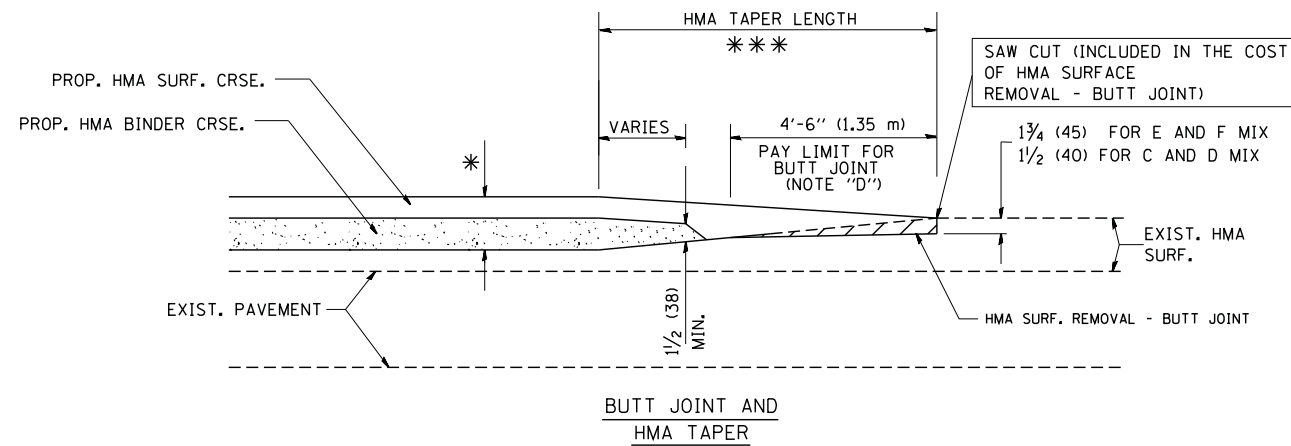
NOTES

- 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.



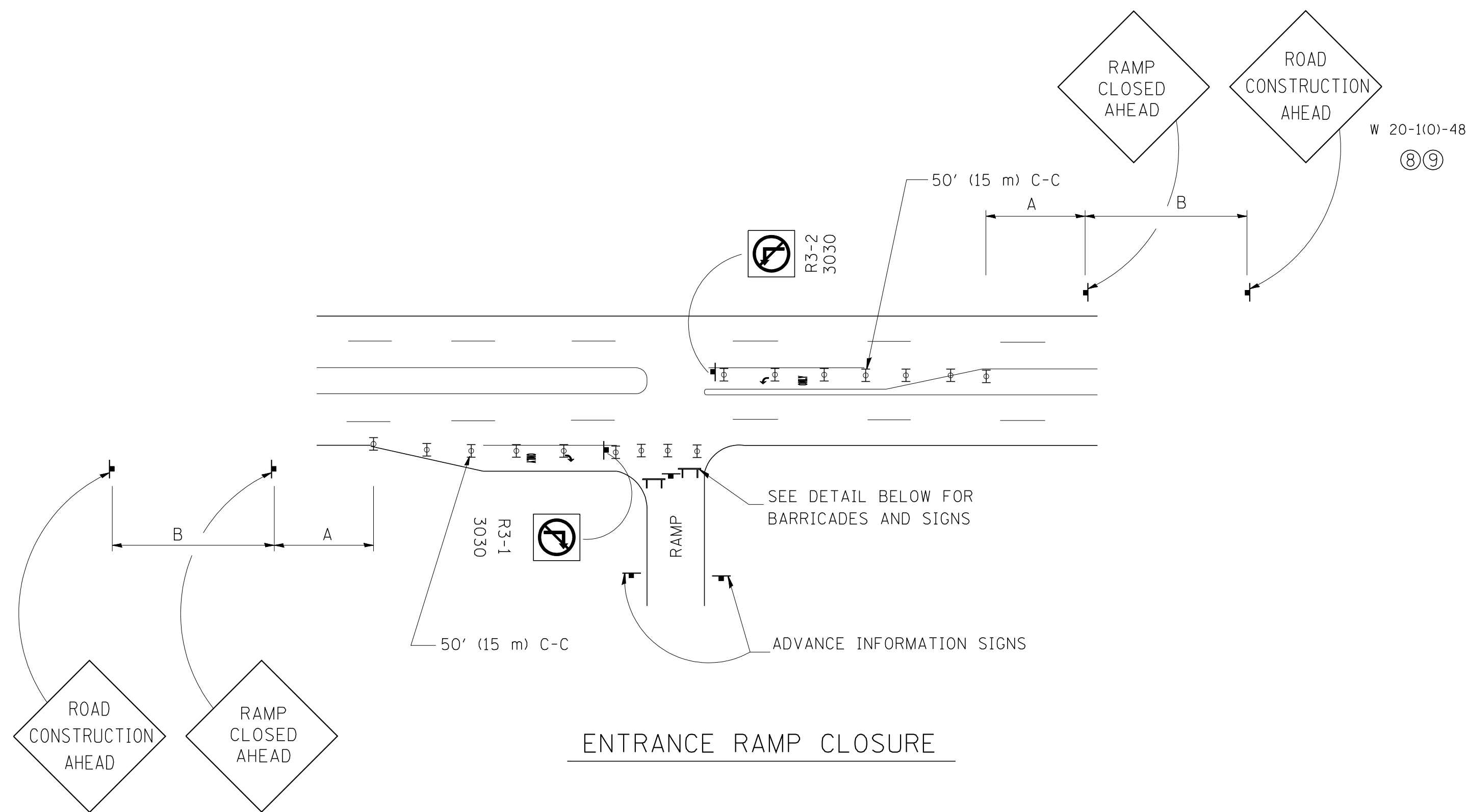
TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	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. RTE. 290	SECTION 22-3HB-I	COUNTY DuPage	TOTAL SHEETS 37	SHEET NO. 31
BD400-05 BD32		CONTRACT NO. 60M97		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



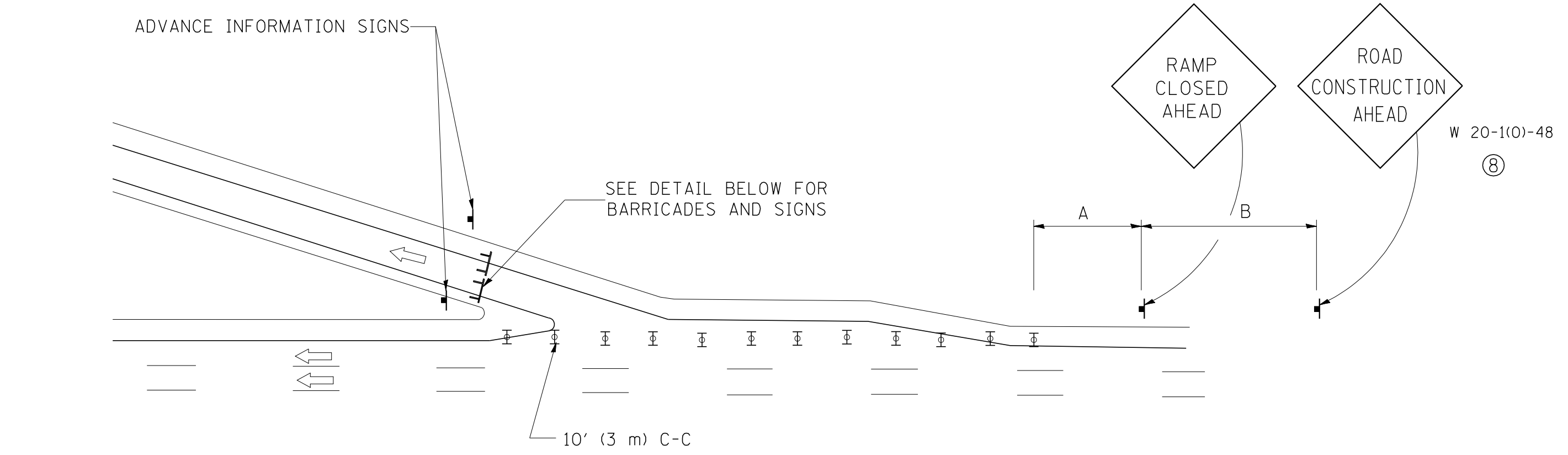
ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL ≥45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	150' (45 m)	150' (45 m)

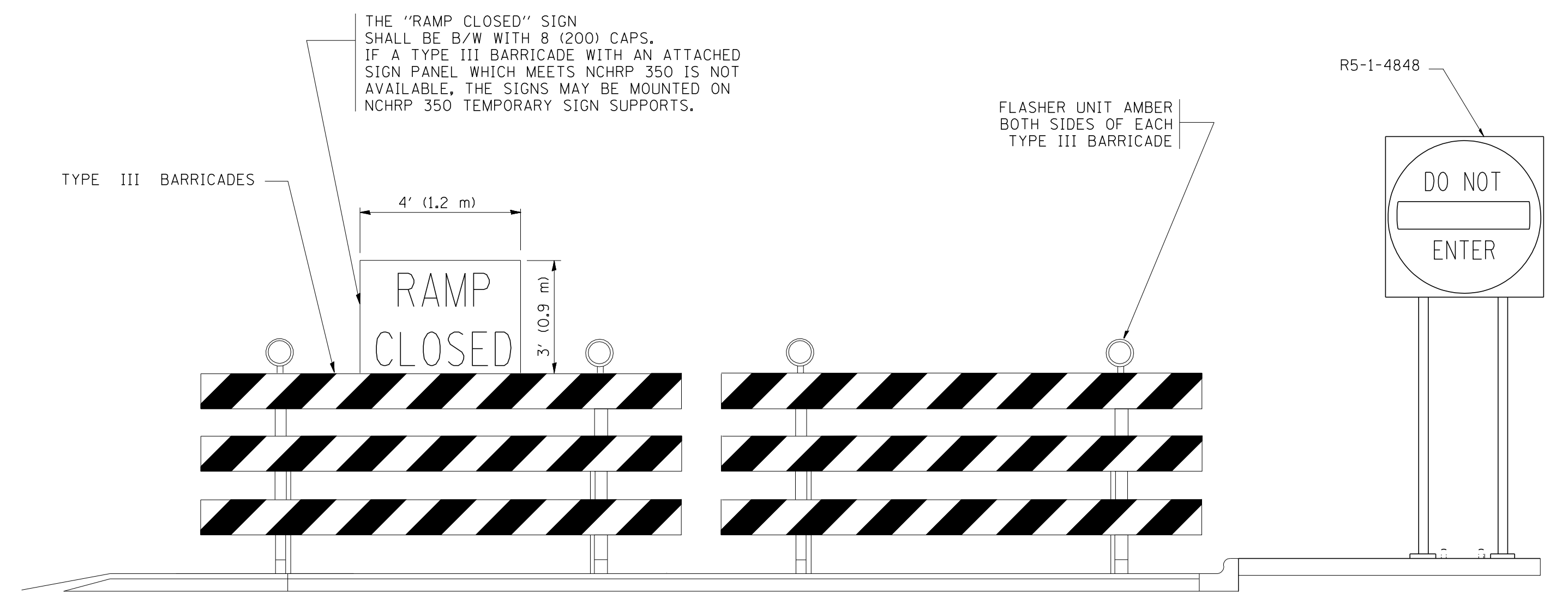
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

W 20-110-48
⑧⑨

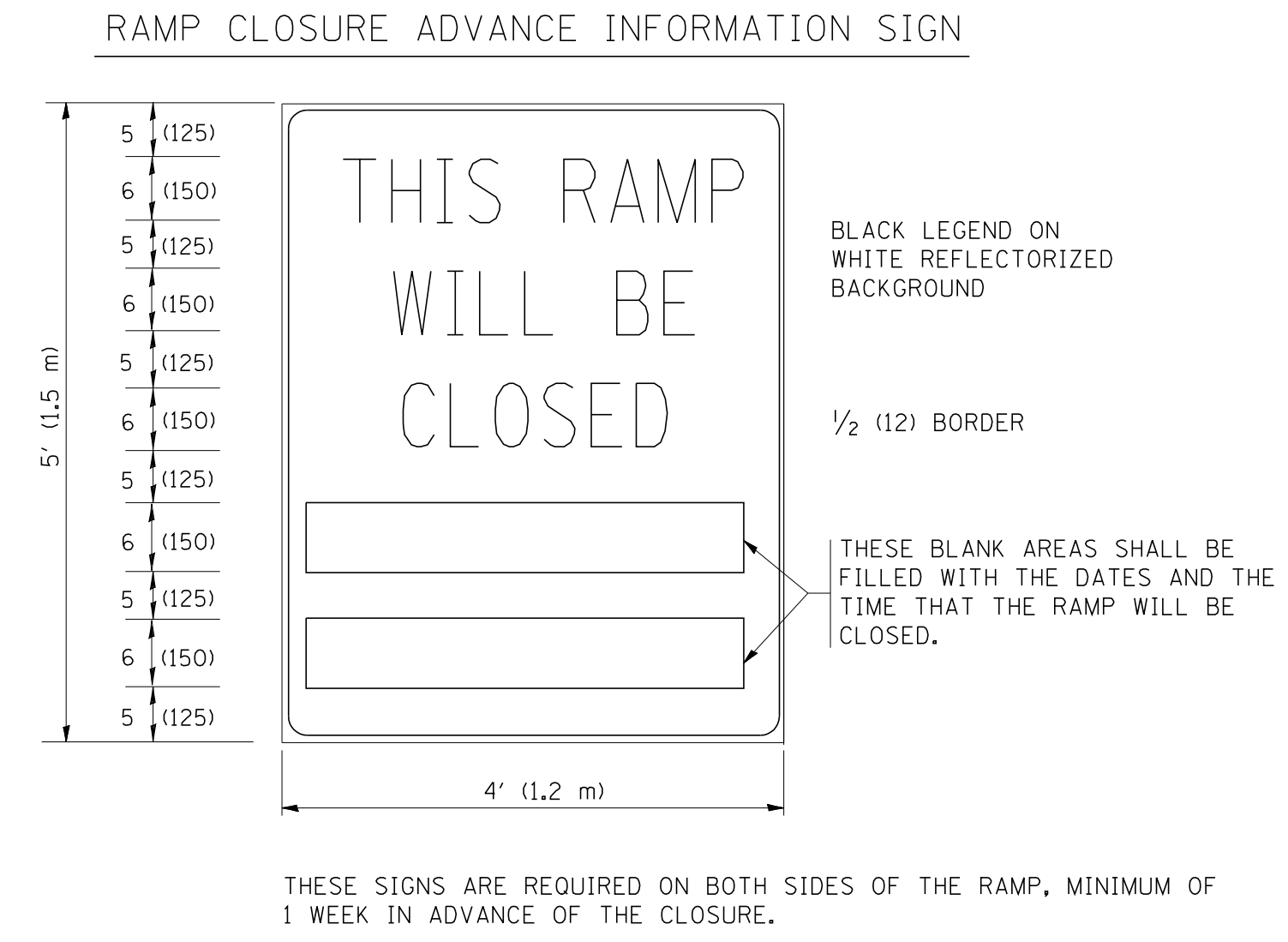
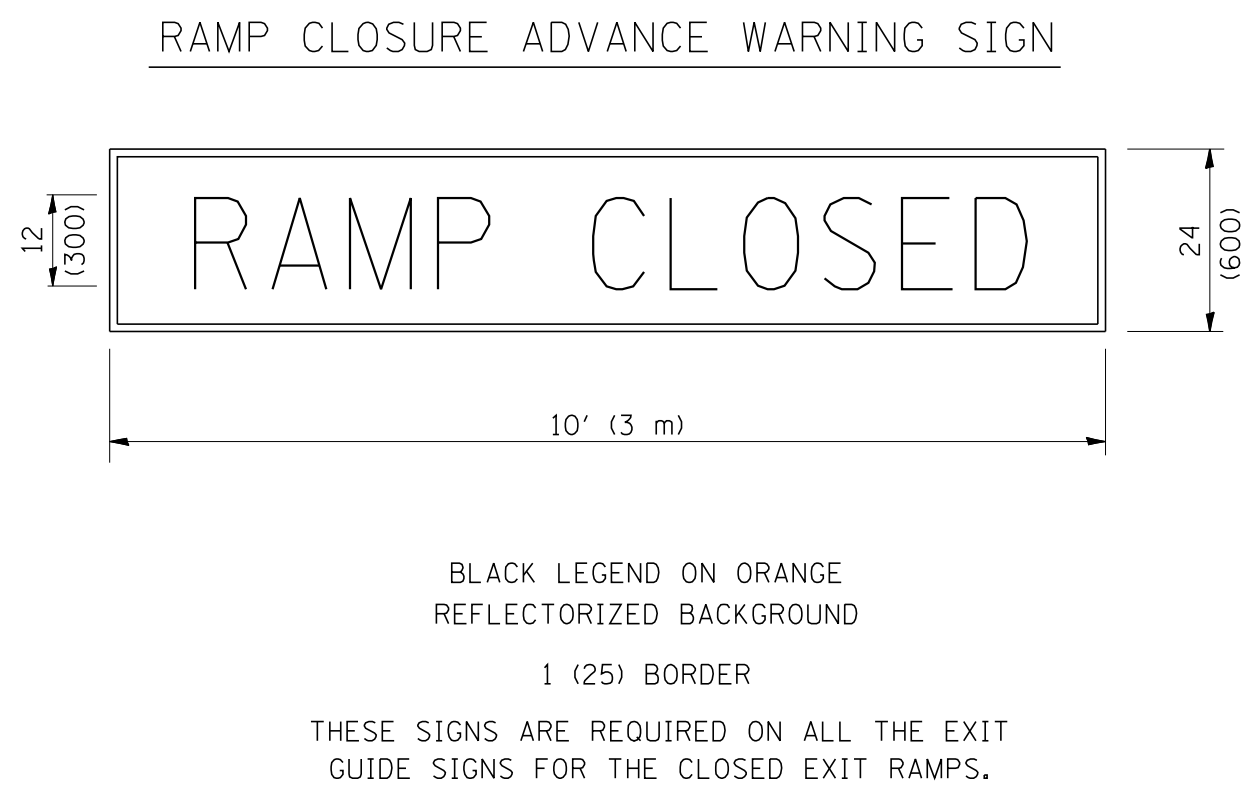


EXIT RAMP CLOSURE

- SYMBOLS**
- ⊥ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - ⊏ TYPE III BARRICADE WITH FLASHING LIGHT



DETAIL FOR REQUIRED BARRICADES & SIGNS



GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

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

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		DRAWN -	REVISED - JAF 02-06
		CHECKED -	REVISED - SPB 01-07
		DATE - 02-83	REVISED - SPB 12-09

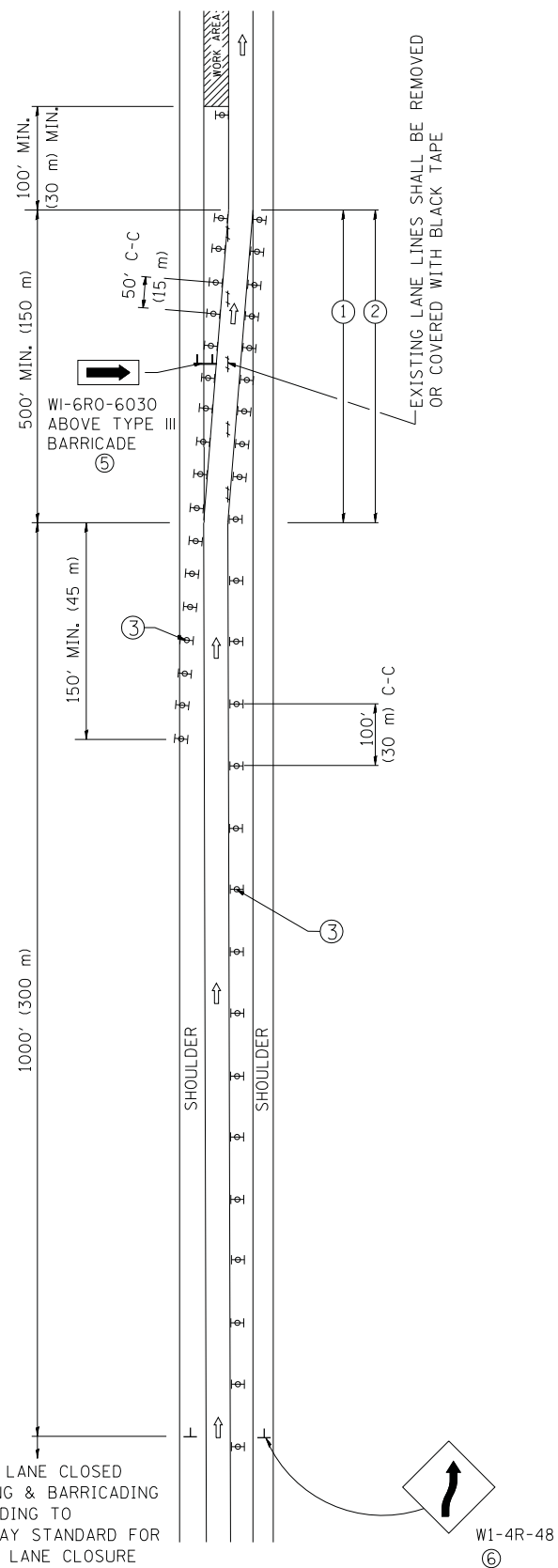
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FREEWAY ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

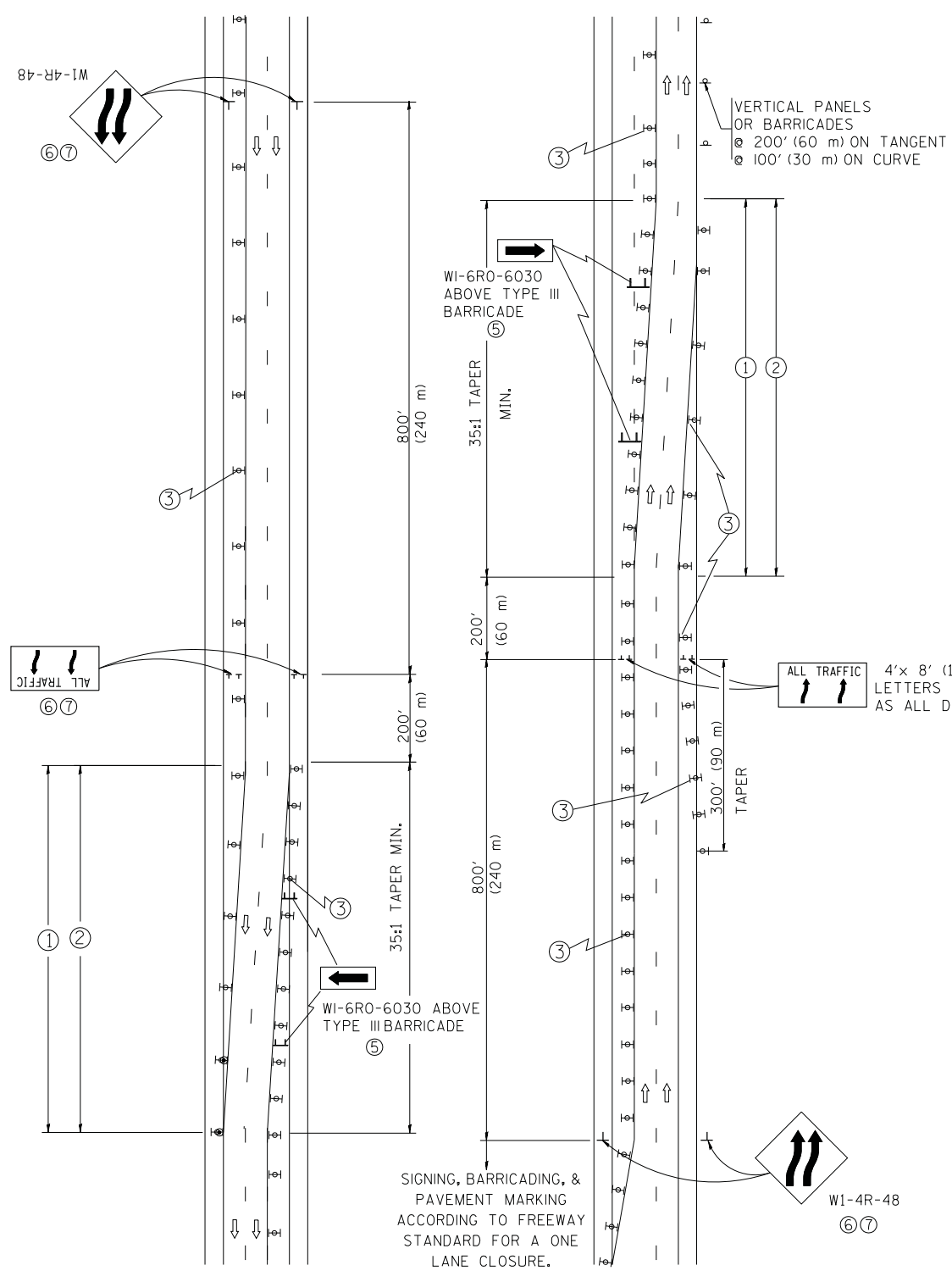
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-I	DuPage	37	32
TC-08			CONTRACT NO. 60M97	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SINGLE LANE WEAVE



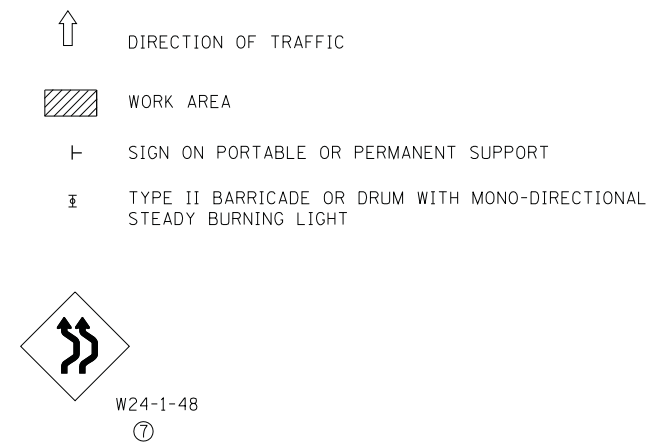
MULTI-LANE WEAVE



GENERAL NOTES

- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS. TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. WI-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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USER NAME = leuss

PLOT SCALE = 50.000' / IN.

PLOT DATE = 1/26/2010

DESIGNED - DWS

DRAWN -

CHECKED -

DATE - 02-87

REVISED - JAF 01-03

REVISED - JAF 02-06

REVISED - SPB 01-07

REVISED - SPB 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

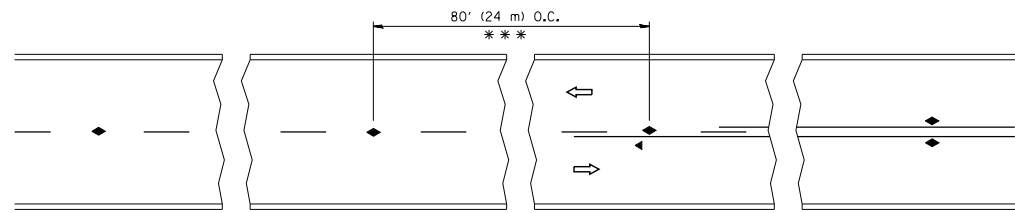
TRAFFIC CONTROL DETAILS FOR
FREEWAY SINGLE & MULTI-LANE WEAVE

SCALE: NONE

SHEET NO. 1 OF 1 SHEETS

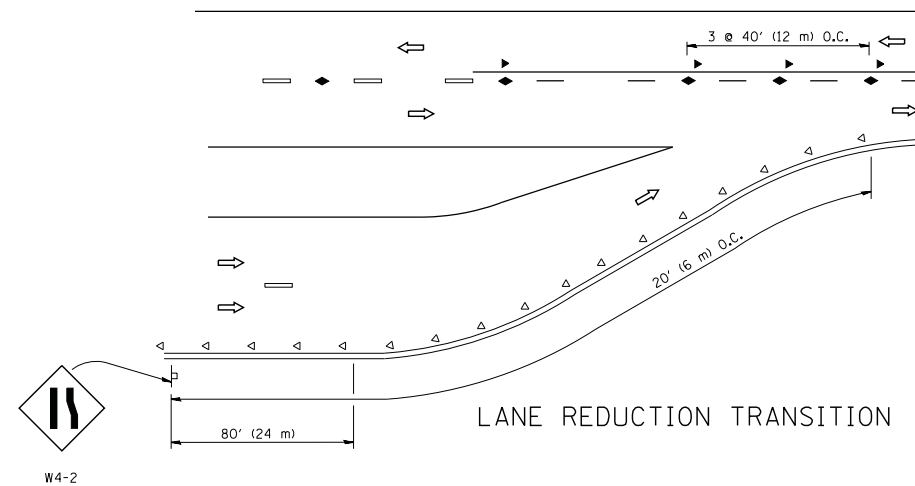
STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-09			CONTRACT NO. 60M97	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

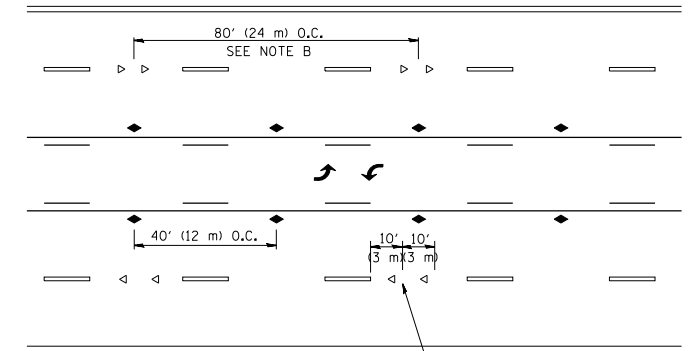


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

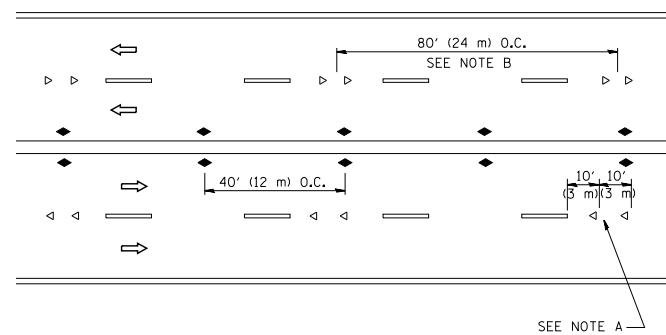
TWO-LANE/TWO-WAY



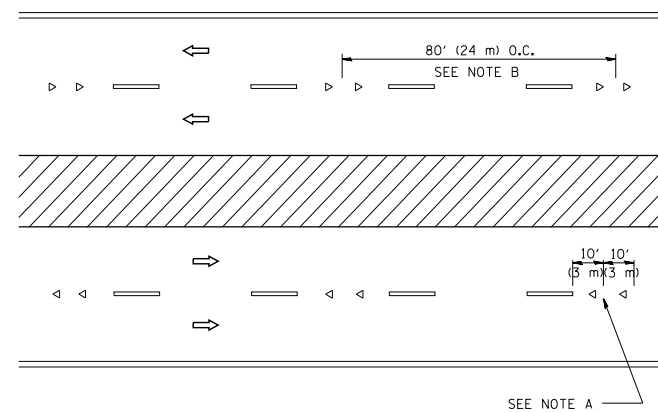
LANE REDUCTION TRANSITION



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

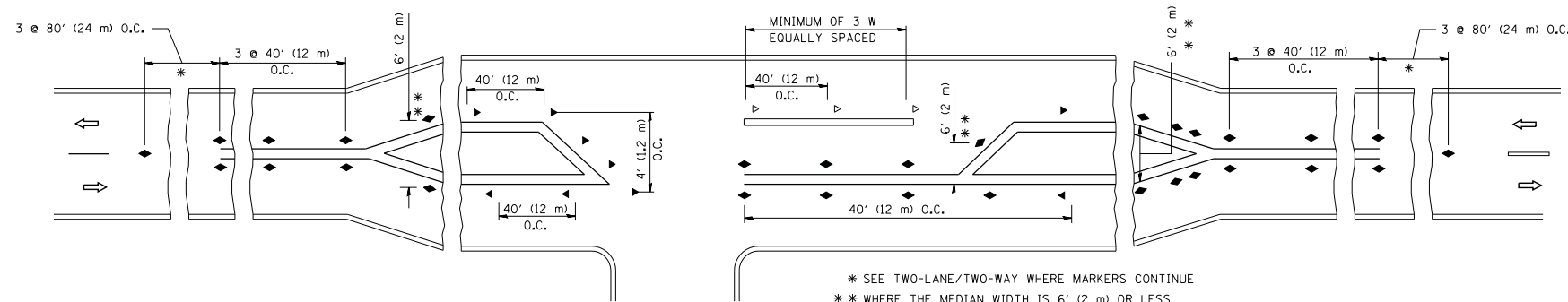
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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.



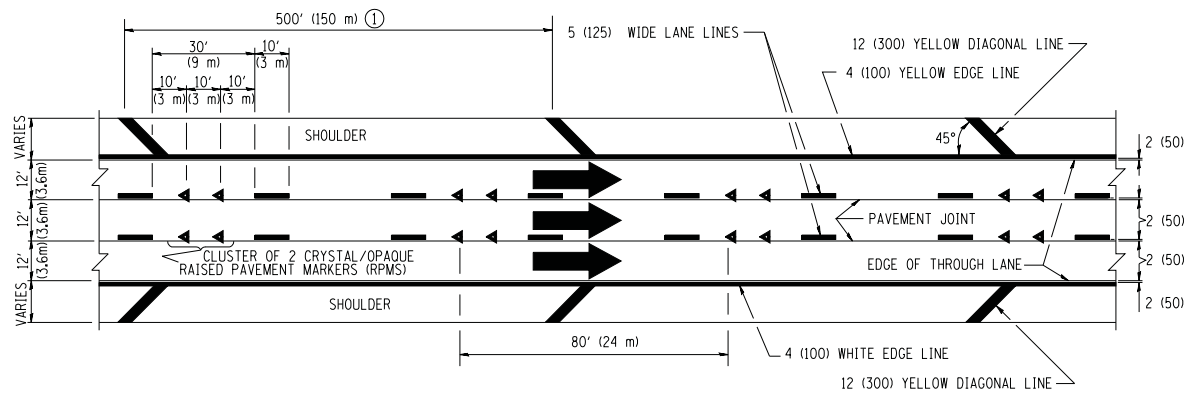
LEFT TURN

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

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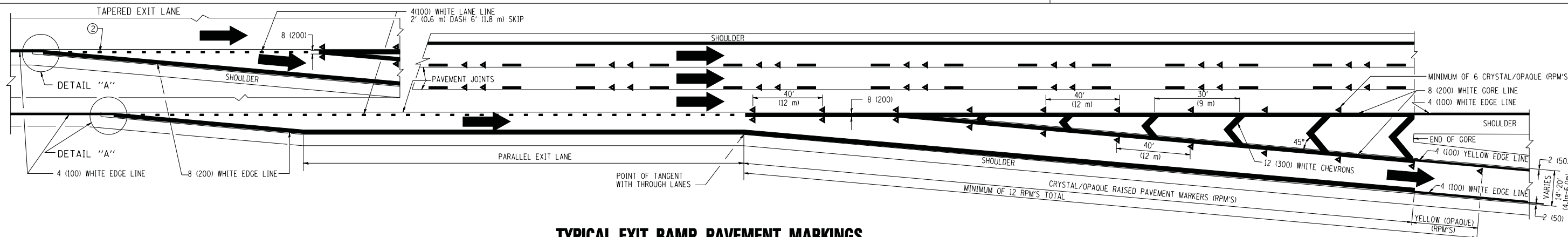
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		290	22-3HB-I	DuPage	37	34
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.	
		TC-11		CONTRACT NO. 60M97		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						

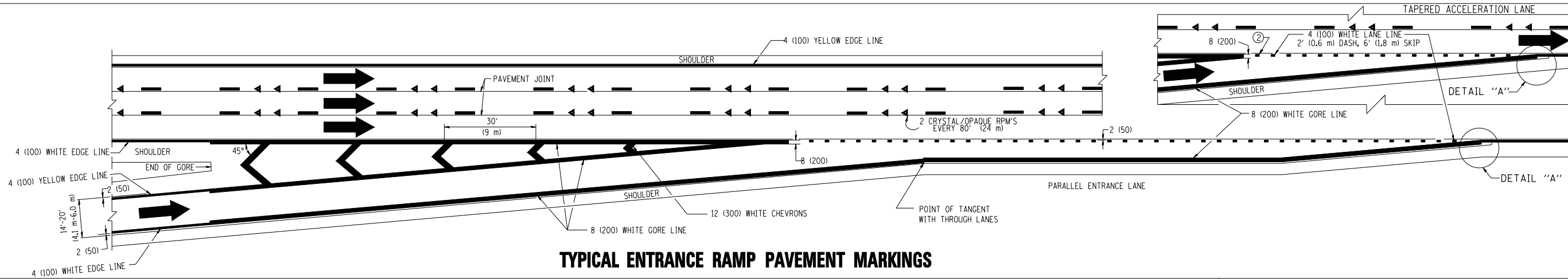


TYPICAL EDGE LINES & LANE LINES

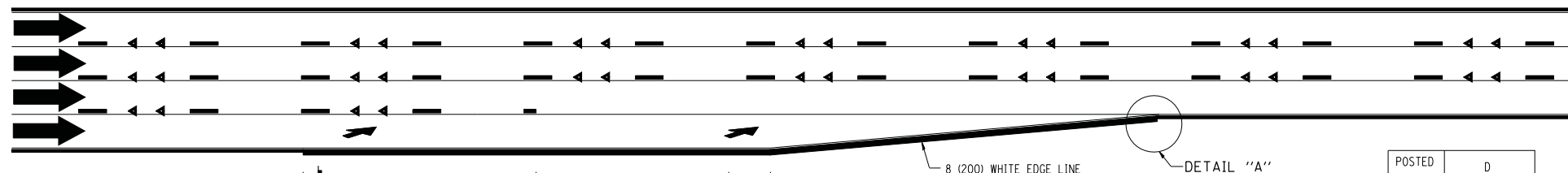
- PAVEMENT MARKING MATERIALS**
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
 2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT.
 3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

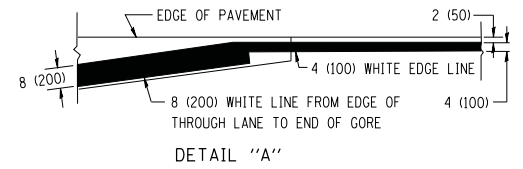


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



LANE REDUCTION PAVEMENT MARKINGS

POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



- NOTES:**
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.

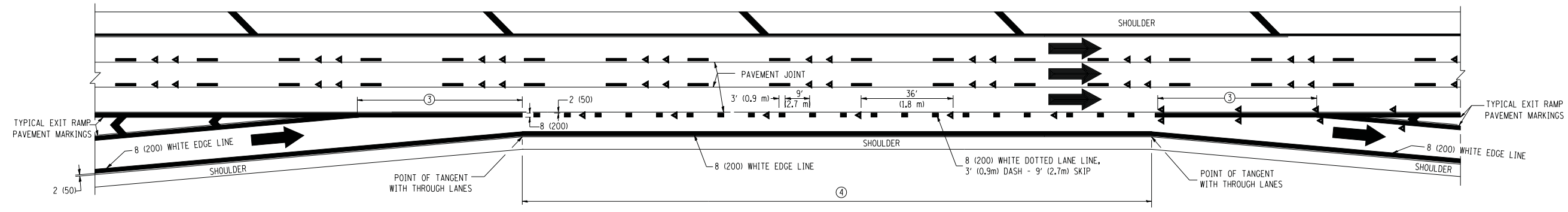
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - S.P.B. 01-07
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

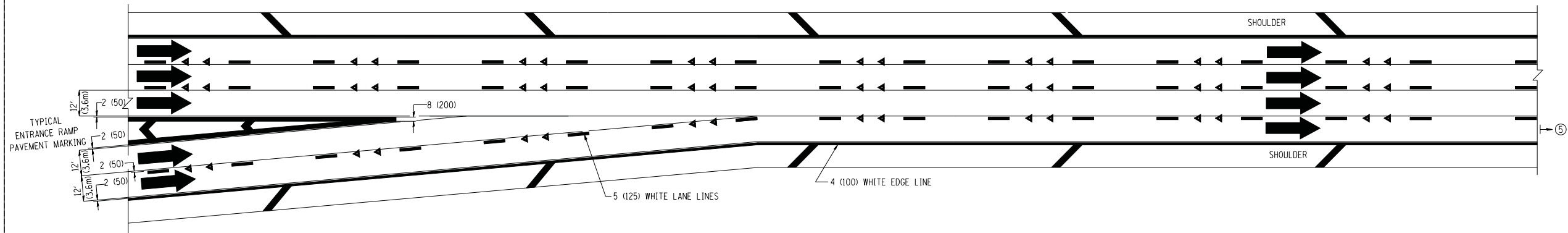
**MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS**

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

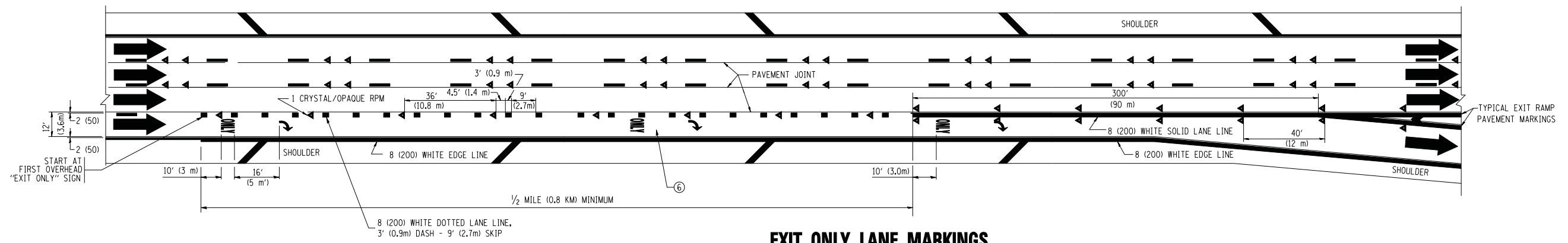
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-12			CONTRACT NO. 60M97	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



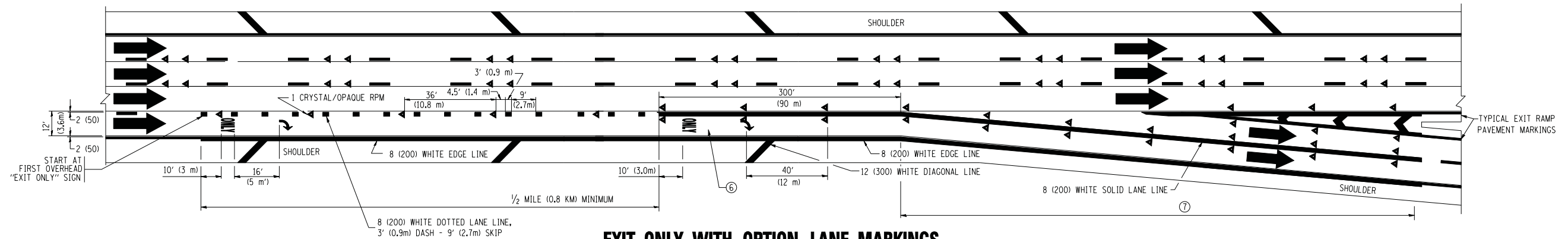
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

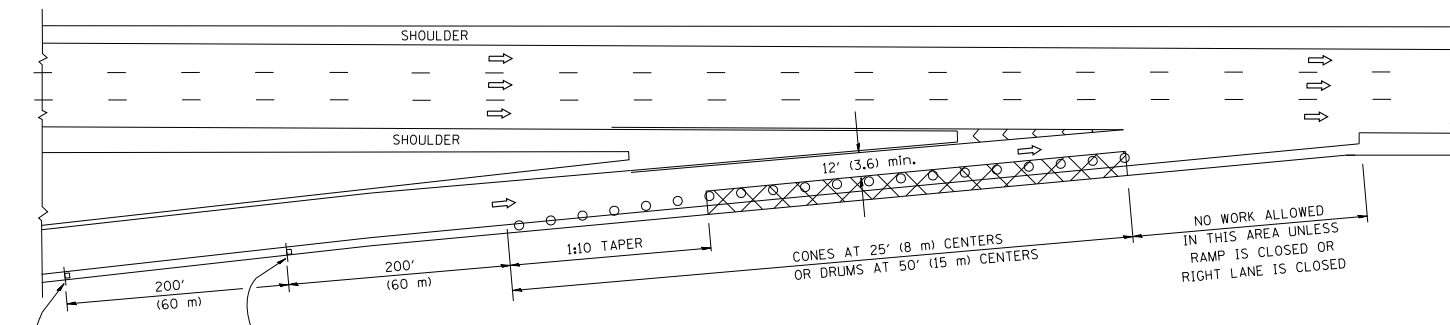
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

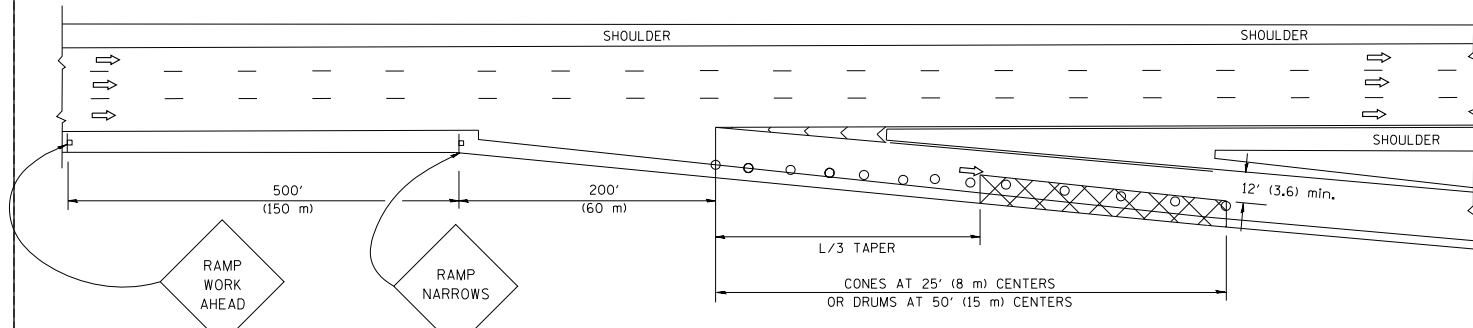
MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS			
SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-12			CONTRACT NO. 60M97	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

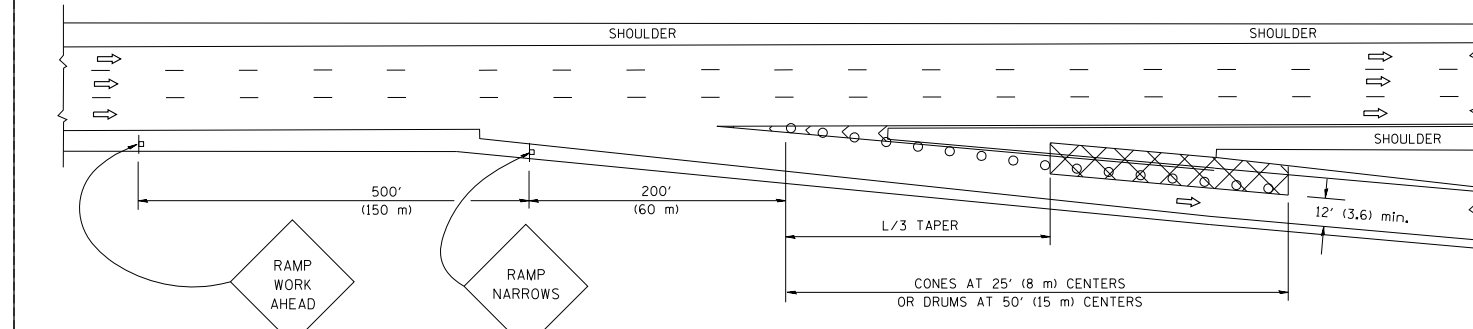
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

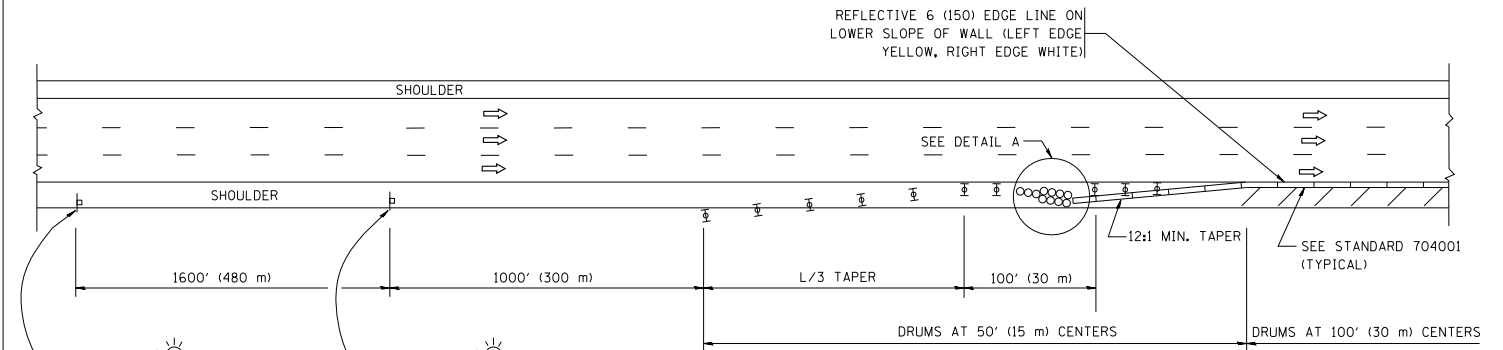
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

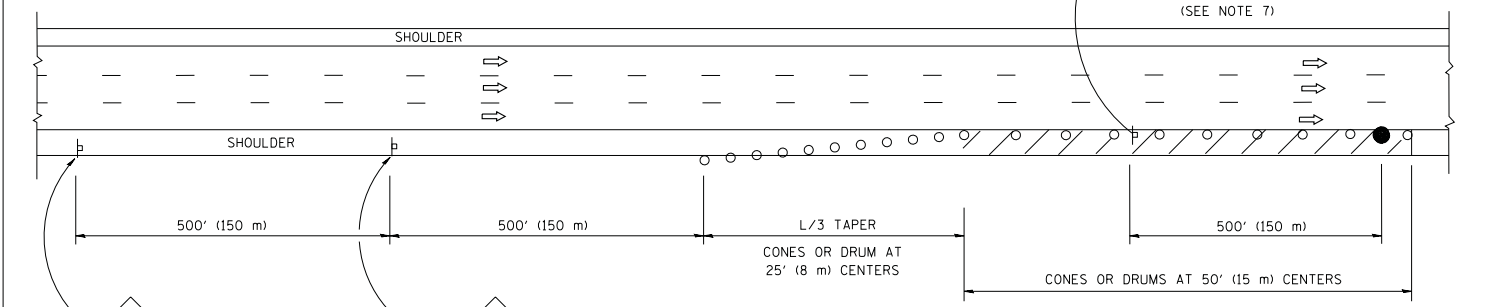
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH L=0.65(W)(S) L=(W)(S)
W = WIDTH OF OFFSET IN FEET (METERS) S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

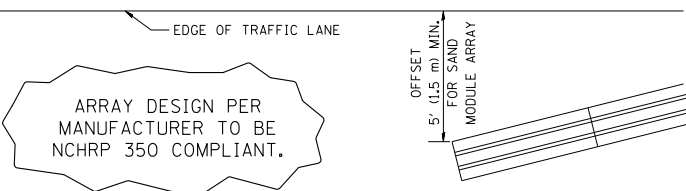
SHOULDER CLOSURE DETAILS



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE



DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

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

FILE NAME = W:\diststd\22x34\17.dgn	USER NAME = leuss	DESIGNED -	REVISED - 04-03
		DRAWN - D.W.S.	REVISED - J.A.F. 12-06
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	PLOT DATE = 1/26/2010	DATE - 11-96	REVISED - S.P.B. 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY			
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	22-3HB-I	DuPage	37	37
TC-17		CONTRACT NO. 60M97		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				