# 309) ENGINEER: PHONE: PROJEC

**INDEX OF SHEETS:** 

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2. GENERAL NOTES

3~5. SUMMARY OF QUANTITIES

6. TYPICALS

7~8. SCHEDULE OF QUANTITIES

9. GENERAL PLAN LOCATION

10~15. TRAFFIC STAGING SHEETS

16. PLAN AND ELEVATION

17~18. STAGE REMOVAL & CONSTRUCTION

19~20. ABUTMENT CONCRETE REMOVAL

21~22. ABUTMENT CONCRETE REPLACEMENT

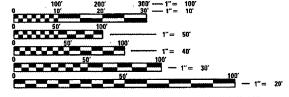
23 ~ 26. DETAILS

**STANDARDS:** 

701001-01 701401-03 704001-03

701006-02 701402-05

701400-02 702001-06



CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

CONTRACT NO. 68618 CAT. NO. 033343-00D

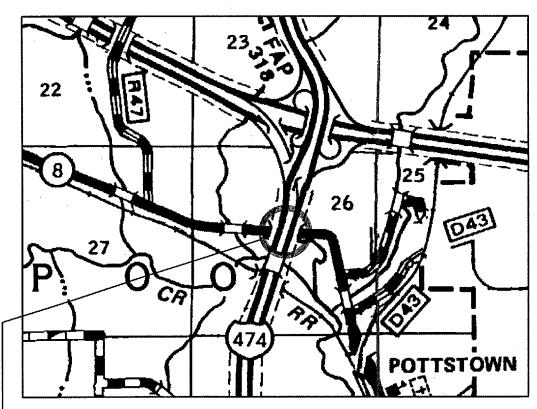
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

# **PROPOSED** HIGHWAY PLANS

FAI ROUTE 474 (I-474) SECTION (72-2HB)I PEORIA COUNTY C-94-105-06

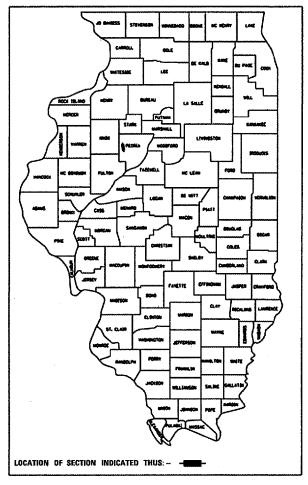


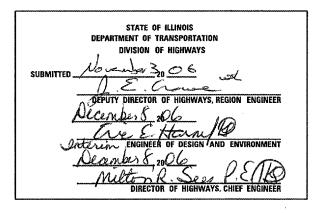
LOCATION MAP

PROJECT CONSISTS OF ENTRANCE RAMP 'B' GORE REMOVAL & REPLACEMENT AND BRIDGE DECK & PJS JOINT REMOVAL & REPLACEMENT WITH STRIP SEALS ON PARALLEL STRUCTURES SN 072-0112(EB) & 072-0113(WB) CARRYING I-474 OVER IL. 8

CONTRACT NO. COUNTY SECTION

D-94-086-06





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

# COMMI TMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

# GENERAL NOTES

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 REQUIREMENTS

Mixture Use(s):	Gore Surface Course	Gore Binder Course
AC/PG:	PG64-22	PG64-22
RAP% (Max):** Design Air Voids:	10% 3.0% @ N=70	15% 4.2% @ N=70
Mixture Composition: (Graduation Mixture)	IL 9.5 or IL 12.5	IL 19.0
Friction Aggregate:	Mixture D (Dolomite only)	N.A.

SN072-0112/072-0113 I-474 over IL.8

REVISIONS		THE THINKS DEPARTMENT	OF TRANSPORTATION
NAME D	ATE	ILLINOIS DEPARTMENT	OF TRANSPORTATION
		CENEDA	L NOTES
		GENERA	L NOIE2
****		VERT.	
	sc	ALE: VERT. HORIZ.	DRAWN BY CEJ

N.D.Y DATE = 6DATE |LE NAME = 8FILEL# |LDT SCALE = 6SCALE# |EFERENCE = 8MEF#

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

SUMMARY OF QUANTITIES

		1	TATE SAFETY Foria coun	1
CODE NO.	Į TEM	UNI T	URBAN	TOTAL
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	106	106
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0,N70	TON	312	312
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX ''D'', N70	TON	104	104
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	2700	2700
44004250	PAVED SHOULDER REMOVAL	SQ YD	1816	1816
50102400	CONCRETE REMOVAL	CU YD	36.2	36.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	36.2	36.2
50300260	BRIDGE DECK GROOVING	SQ YD	2670	2670
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4860	4860
50800515	BAR SPLICERS	EACH	40	40
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	2	2
			·	

REVIS	SIONS	
NAME	NAME DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
		SUMMARY OF
		QUANTITIES
		SCALE: VERT. DRAWN BY CEJ



				CONT	RACT N	O. 686
F.A.I. RTE.	SECTION		COUN	TY	TOTAL	SHEET NO.
474	(72~2HB)	1	PEC	RIA	26	4
STA.	STA. 56+57.18 TO STA. 58+86.79					
FEO. RO	ID DIST. NO. 4	ILLIN	OIS FEE	, AID	PROJECT	

SUMMARY	OF	QUANTI	TIES

	SUIVIIVIAITI OF QUAITITES	1	TATE SAFET' Eoria coun	
CODE NO.	ITEM	UNIT	URBAN	TOTAL
67100100	MOBILIZATION	LSUM	1.0	1.0
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	LSUM	1.0	1.0
70100805	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	LSUM	1.0	1.0
70101605	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1.0	1.0
703002 <b>2</b> 0	TEMPORARY PAVEMENT MARKING-LINE 4"	FOOT	1000	1000
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	800	800
70301000	WORKZONE PAVEMENT MARKING REMOVAL	SQ FT	1500	1500
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1 392	1 3 9 2
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1 392	1392
78005110	EPOXY MARKING - LINE 4"	FOOT	800	800
78005130	EPOXY MARKING - LINE, 6"	FOOT	600	600

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	ALCHOIS DEPARTMENT OF TRANSPORTATION	JN
		SUMMARY OF	
		QUANTITIES	

CHECKED BY

| CONTRACT NO. 68
| RTE. | SECTION | COUNTY | TOTAL SHEET | NO. 68
| A74 | (72-2HB)1 | PEORIA | 26 | 5

STA. 56+57,18 TO STA. 58+B6.79
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

SUMMARY OF QUANTITIES

		JUIVIANT OF QUANTITIES	100% ST	TATE SAFETY Foria coun	/ - 2A TY
	CODE NO.	[ PAVEMENT I TEM	UNIT	URBAN	TOTAL
	78005140	EPOXY MARKING - LINE 8''	FOOT	800	800
	X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	25	25
	X0325294	PREFORMED JOINT STRIP SEAL	FOOT	284	284
	Z0006100	BRIDGE DECK LATEX CONCRETE OVERLAY	SQ YD	2700	2700
	Z0030250	IMPACT ATTENUATORS, TEMPORARY(NON-REDIRECTIVE), TEST LEVEL 3	EACH	2 ,	2
•	Z0030350	IMPACT ATTENUATORS, RELOCATE(NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2
	Z0006204	BRIDGE DECK HYDRO-SCARIFICATION 1/2 ''	SQ YD	2700	2700

● SFTY-3N

REVISIONS
NAME DATE

SUMMARY OF

QUANTITIES

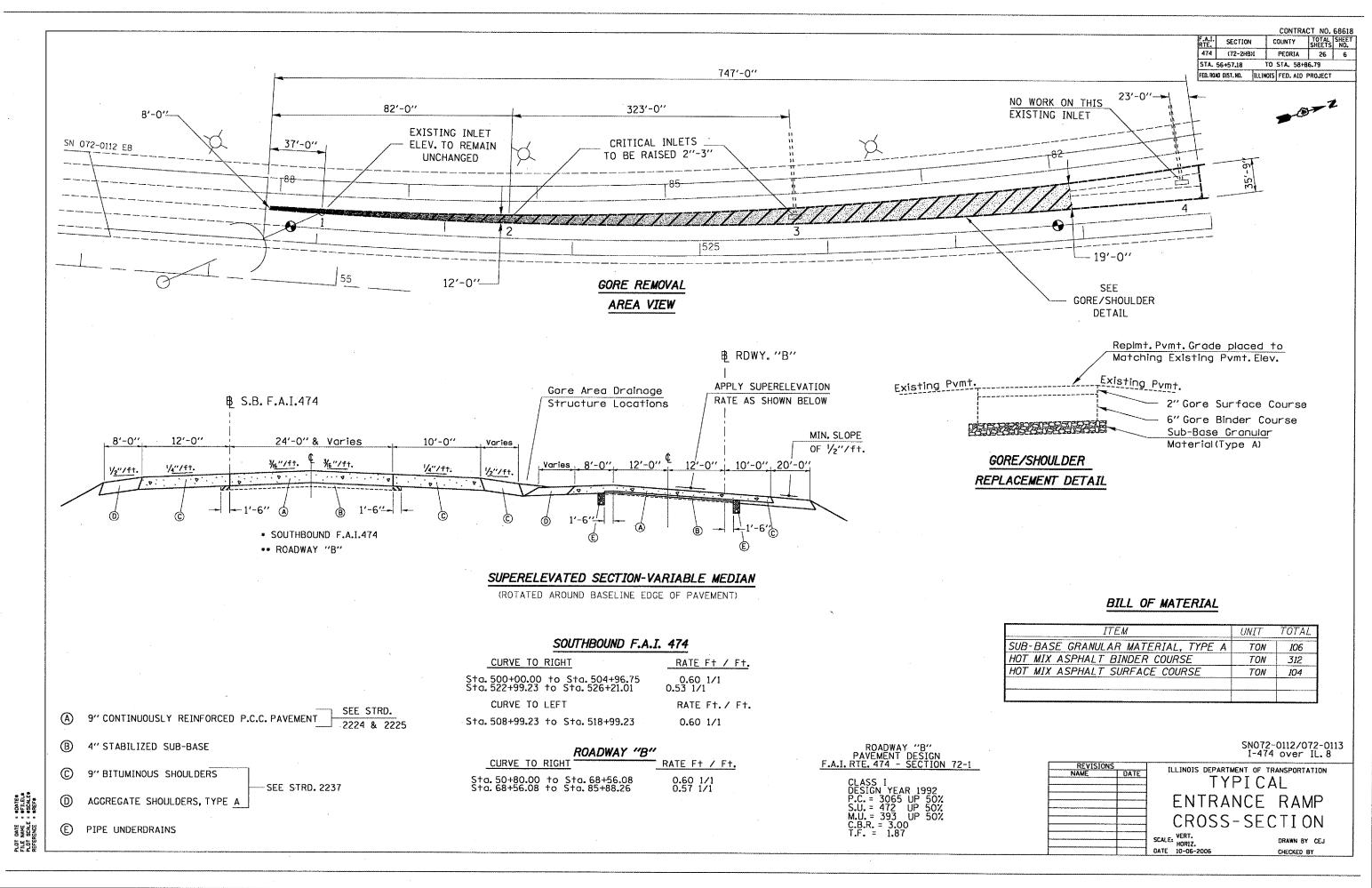
SCALE: VERT.

DRAWN BY CEJ

DATE = 851L NAME = 851L SCALE = 850A ENCE = 850A

TE 07-07-2006

CHECKED BY



STA. 56+57.18

## SCHEDULE OF QUANTITIES

MOBILIZATION

JOBSI TF

= 1.0 LSUM

T. C. & P. STANDARD 701400

JOBSI TE

= 1.0 LSUM

T, C, & P, STANDARD 701401

JOBST TF

= 1.0 LSUM

SUB-BASE GRANULAR MATERIAL

GORE/SHOULDER = 106 TON

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 = 312 TON

HOT-MIX ASPHALT SURFACE COURSE, MIX ''D'', N70 = 104 TON

TEMPORARY CONCRETE BARRIER

JOBSITE WORKING AREA

= 1392 FOOT

WORKZONE PAVEMENT MARKING REMOVAL

RAMP 'B'

= 1500 SQ.FT.

PAVEMENT MARKING TAPE, TYPE III, 4''

JOBSITE WORKING AREA

= 800 F00T

TEMP. PAVEMENT MARKING LINE, 4''

JOBSITE WORKING AREA = 1000 FOOT

CHANGEABLE MESSAGE SIGN

AHEAD OF RAMP 'B' = 25 DAY

PAVED SHOULDER REMOVAL

RAMP 'B' GORE AREA = 1816 SQ.FT.

IMPACT ATTENUATORS, TEMPORARY (NRD), TEST LEVEL 3

JOBSITE BRIDGE DECK AND ENTRANCE TAPER = 2 FACH

T. C. & P. STANDARD 701402

JOBSITE = 1.0 LSUM

T. C. & P. STANDARD 701402(SPECIAL)

JOBSI TE

= 1.0 EACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

## SCHEDULE OF QUANTITIES

CONCRETE REMOVAL

STRUCTURE JOINTS = 36.2 CU. YD.

REINFORCEMENT BARS, EPOXY COATED

ALL STRUCTURE JOINTS = 4860 POUNDS

PREFORMED JOINT STRIP SEAL

ALL STRUCTURE JOINTS = 284 FOOT

BAR SPLICERS

BRIDGE JOINTS

= 40 EACH

CONCRETE SUPERSTRUCTURE

BRIDGE JOINTS

= 36.2 CU.YD.

HOT-MIX ASPHALT CONCRETE REMOVAL (DECK)

JOBSI TE

= 2700 SQ. YD.

BR. DECK HYDRO-SCARIFICATION (1/2)''

JOBSI TE

= 2700 SQ. YD.

BRIDGE DECK LATEX CONCRETE OVERLAY

JOBSITE WORKING AREA

= 2700 SQ. YD.

RELOCATE TEMPORARY CONCRETE BARRIER

JOBSITE WORKING AREA

= 1392 F00T

IMPACT ATTENUATORS, RELOCATE(NRD), TEST LEVEL 3

JOBSITE BRIDGE DECK AND ENTRANCE TAPER = 2 EACH

BRIDGE DECK GROOVING

JOBSITE BRIDGE DECKS = 2670 SQ. YD.

EPOXY MARKING - LINE. 4''

JOBSITE BRIDGE DECKS = 800 FOOT

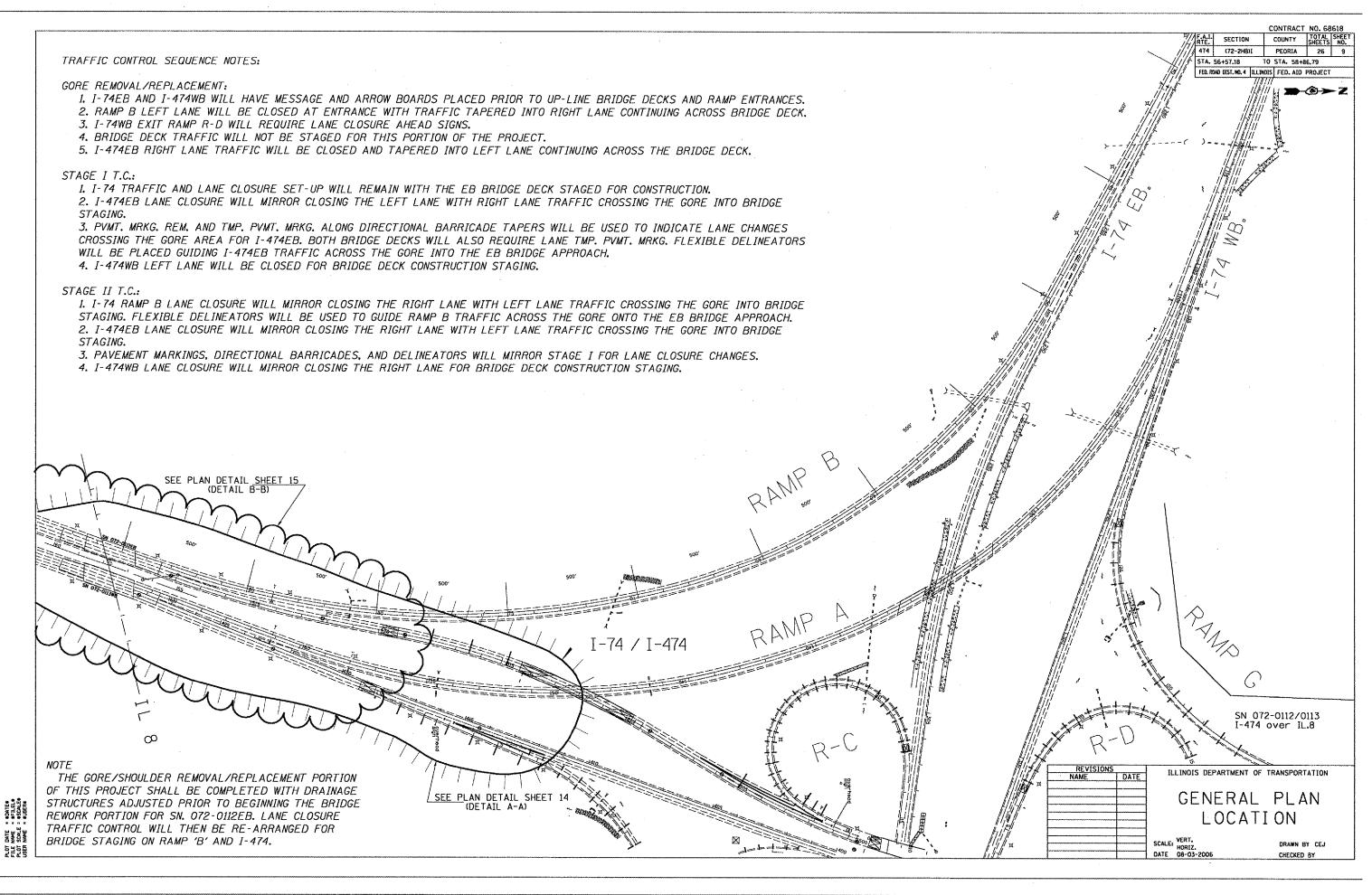
EPOXY MARKING - LINE. 6''

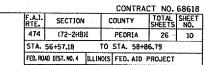
BRIDGE DECK SKIP-DASH = 600 FOOT

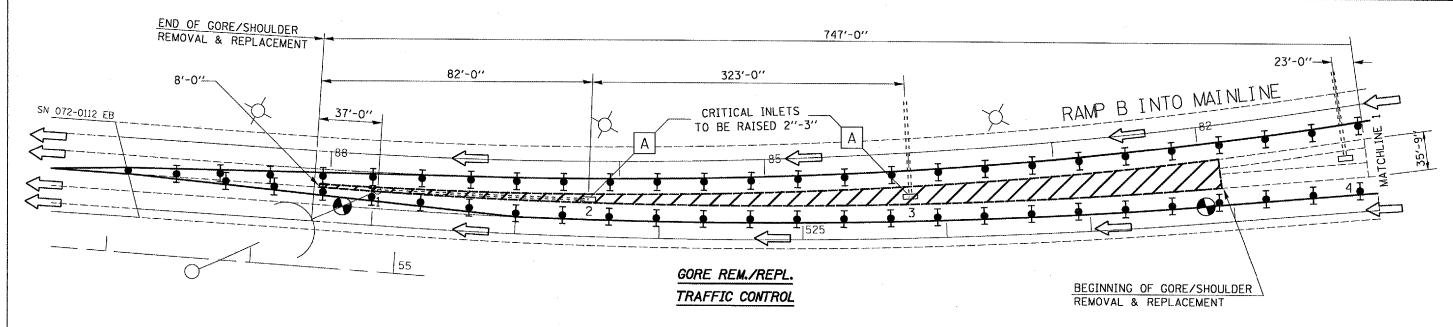
EPOXY MARKING - LINE. 8''

LANE EDGE TAPERS = 800 FOOT

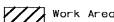
PLOT DATE = #DATE# FILE NAME = #FILEL# PLOT SCALE = #SCALE# REFERENCE = #REF# REVISIONS ILLINOIS DEPARTMENT OF TRANSPORTATION SCHEDULE OF QUANTITIES











\_ Sig

Type II barricade, drum, or verticle barricade w/steady-burn monodirectionallight

Direction Indicator barricade with steady burn monodirectionallight

Temporary Concrete Barrier

Type C Monodirectional Reflector

 Verticle Panel w/steady-burn monodirectional light

Adjustment Frame and Grate

#### TRAFFIC NOTES

Refer to Highway Standards 701401, 701402, and 701402 (Special) for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of these.

Both traffic lanes adjacent to the Ramp  $^\prime$ B $^\prime$  gore area shall be closed with traffic shifted into the outside lane of the ramp and the inside lane of I-474EB for the duration of the removal/replacement work.

Shoulder/Gore replacement work traffic control shall be according to Highway Standards 701401 and Bridge repair work traffic control shall be according to 701402 and 701402(Special).

Additional signage and Ramp 'B' lane reduction requirements may be determined by the Field Engineer and Traffic Control Technician at time of staging for bridge repair Traffic Control.

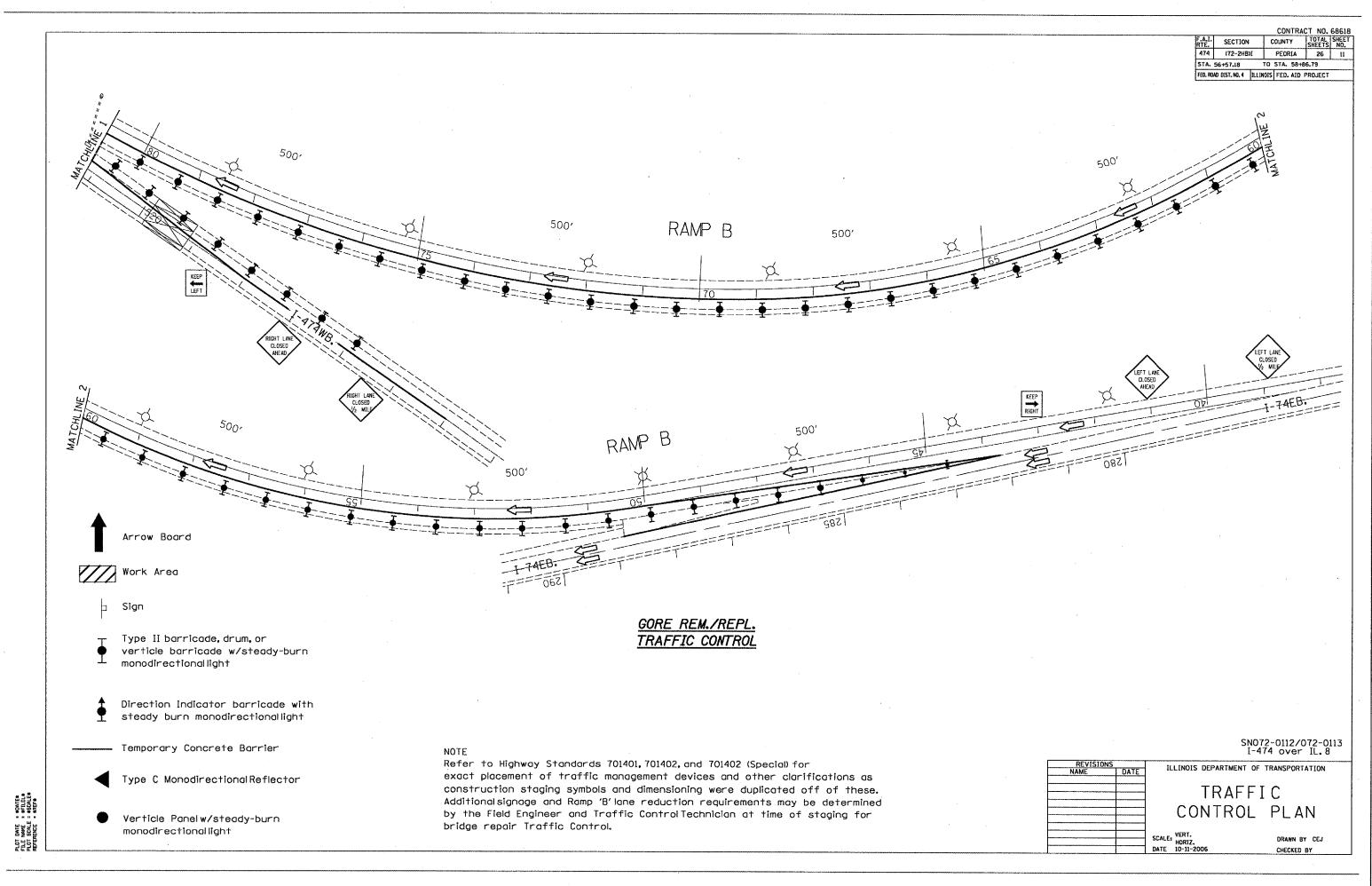
#### 701402 SPECIAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE W/STEADY- BURN MONODIRECTIONAL LIGHT	EACH	50
TEMPORARY PAVEMENT MARKING TAPE, 4"	FOOT	600
ARROW BOARD	EACH	2
DIRECTION INDICATOR BARRICADES	EACH	30
TYPE III BARRICADE	EACH	2
FLEXIBLE DELINEATORS	EACH	60
SIGNS	EACH	6

SN072-0112/072-0113 I-474 over IL.8

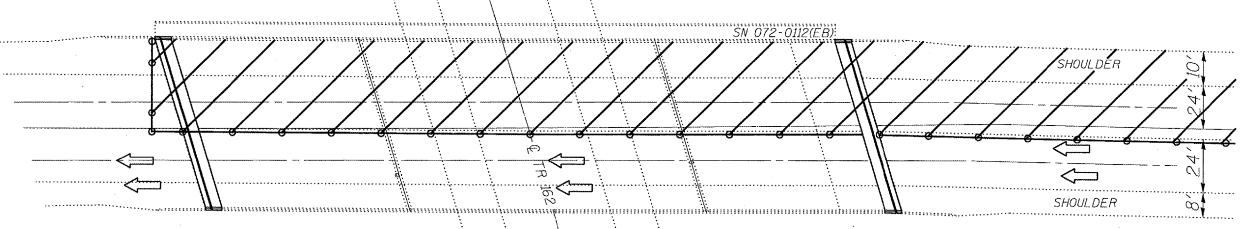
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NAME DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
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	SCALE: VERT. DRAWN BY CEJ

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COUNTY TOTAL SHEET SHEETS NO. PEORIA 26 12 F.A.I. SECTION 474 (72-2HB)I STA, 56+57.18 TO STA. 58+86.79 FED. ROAD DIST. NO. 4 | ILLINOIS | FED. AID PROJECT SN 072-0112(EB) SHOULDER Arrow Board Work Area STAGE I Sign TRAFFIC & CONTROL Type II barricade, drum, or verticle barricade w/steady-burn monodirectionallight Refer to Highway Standard 701402 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard. Direction Indicator barricade with steady burn monodirectionallight - @ Median F.A.I. 474 Temporary Concrete Barrier Type C Monodirectional Reflector Verticle Panel w/steady-burn monodirectionallight SHOULDER & SN 072-0113(WB) SN072-0112/072-0113 I-474 over IL.8 ILLINOIS DEPARTMENT OF TRANSPORTATION STAGE I TRAFFIC TRAFFIC & CONTROL STAGING PLAN DRAWN BY CEJ

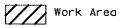




#### <u>STAGE II</u> TRAFFIC & CONTROL

NOTE
Refer to Highway Standard 701402 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard.





g Sigr

@ Median F.A.I. 474

SHOULDER &

Type II barricade, drum, or verticle barricade w/steady-burn monodirectionallight

Direction Indicator barricade with steady burn monodirectionalight

—— Temporary Concrete Barrier

Type C Monodirectional Reflector

Verticle Panel w/steady-burn monodirectional light

SN072-0112/072-0113 I-474 over IL.8

REVISIONS
NAME DATE

TRAFFIC

STAGING PLAN

SCALE VERT.
HORIZ.
DATE 07-10-2006

TRANSPORTATION

TRAFFIC

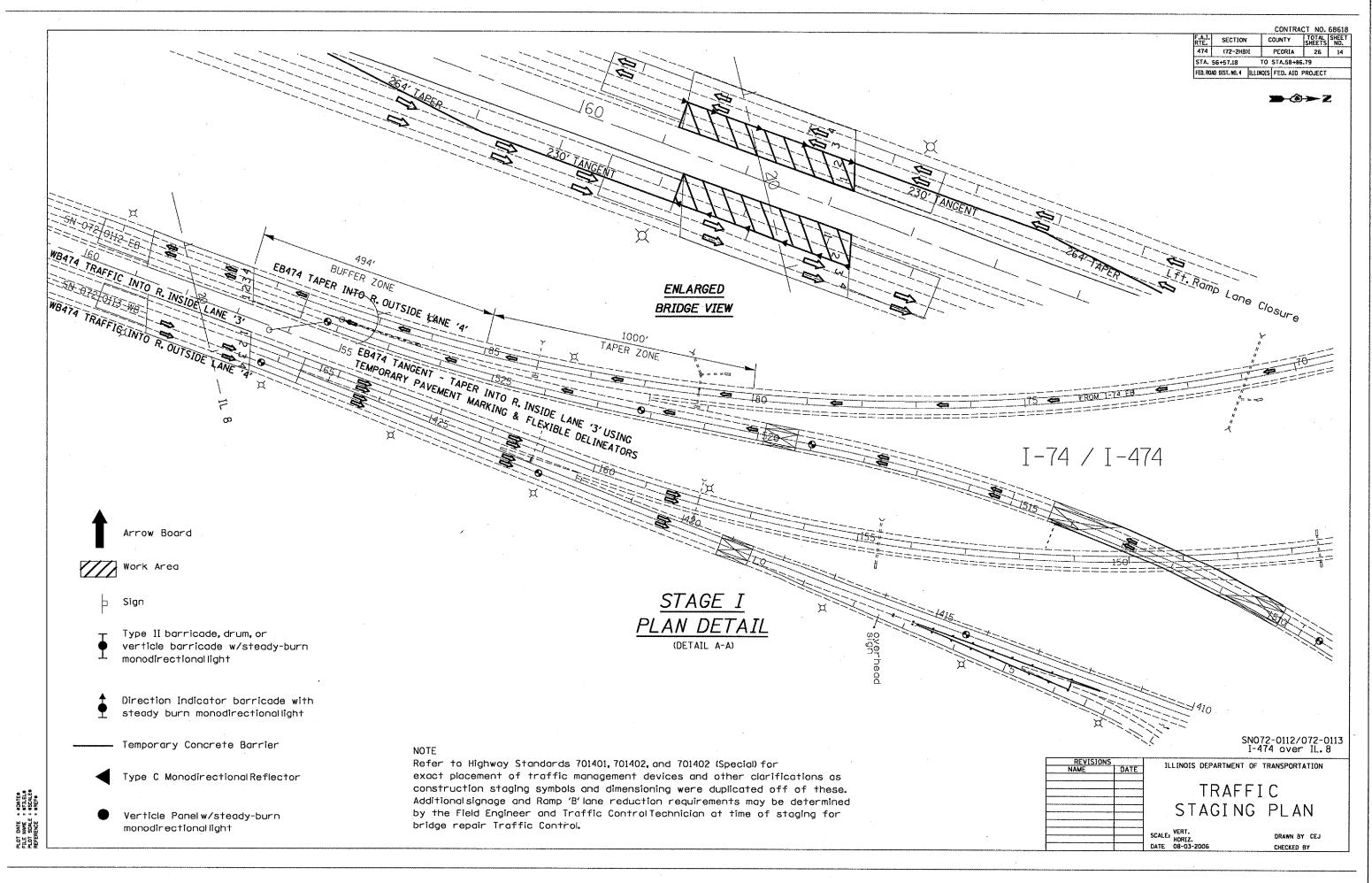
STAGING PLAN

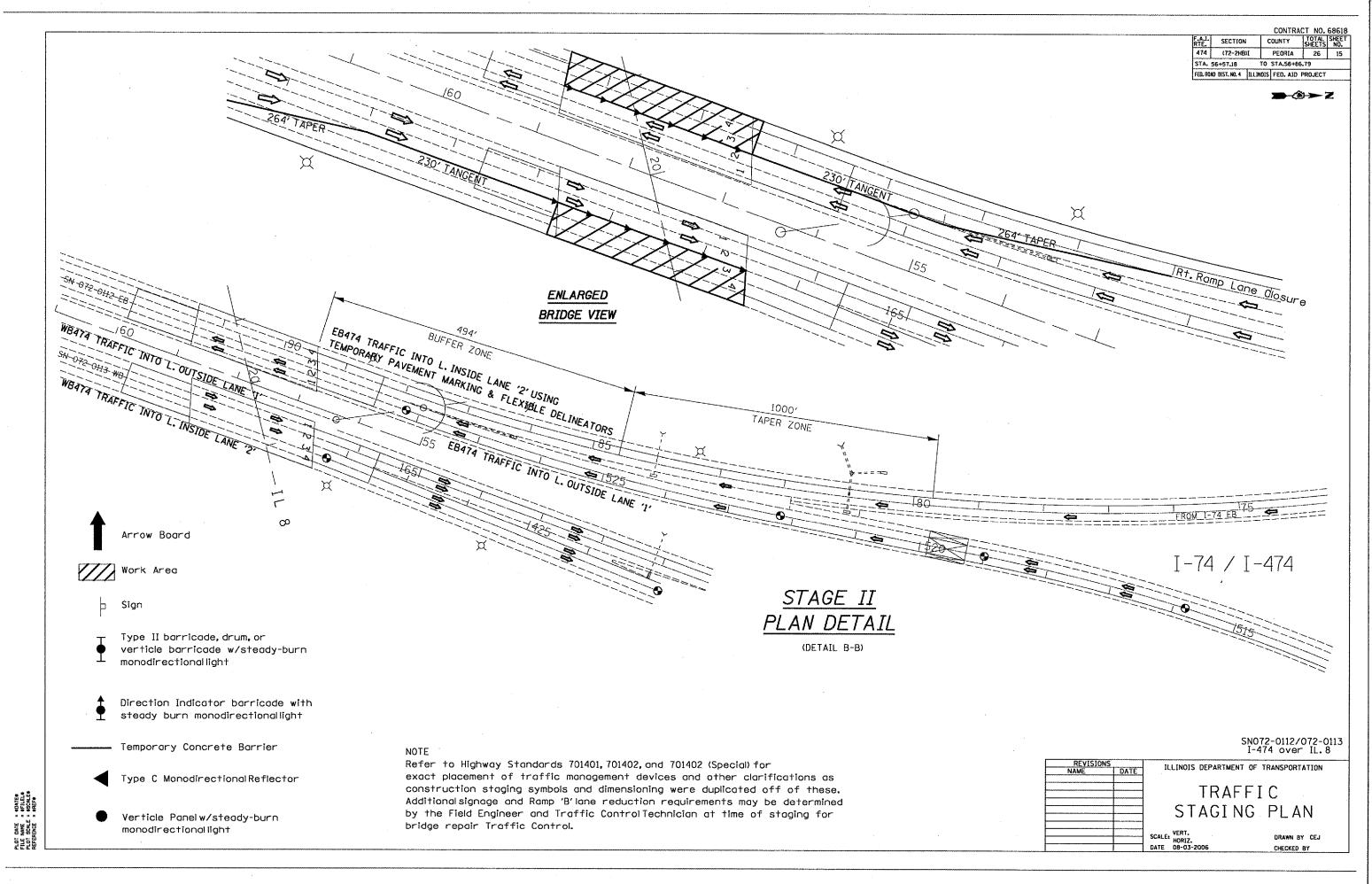
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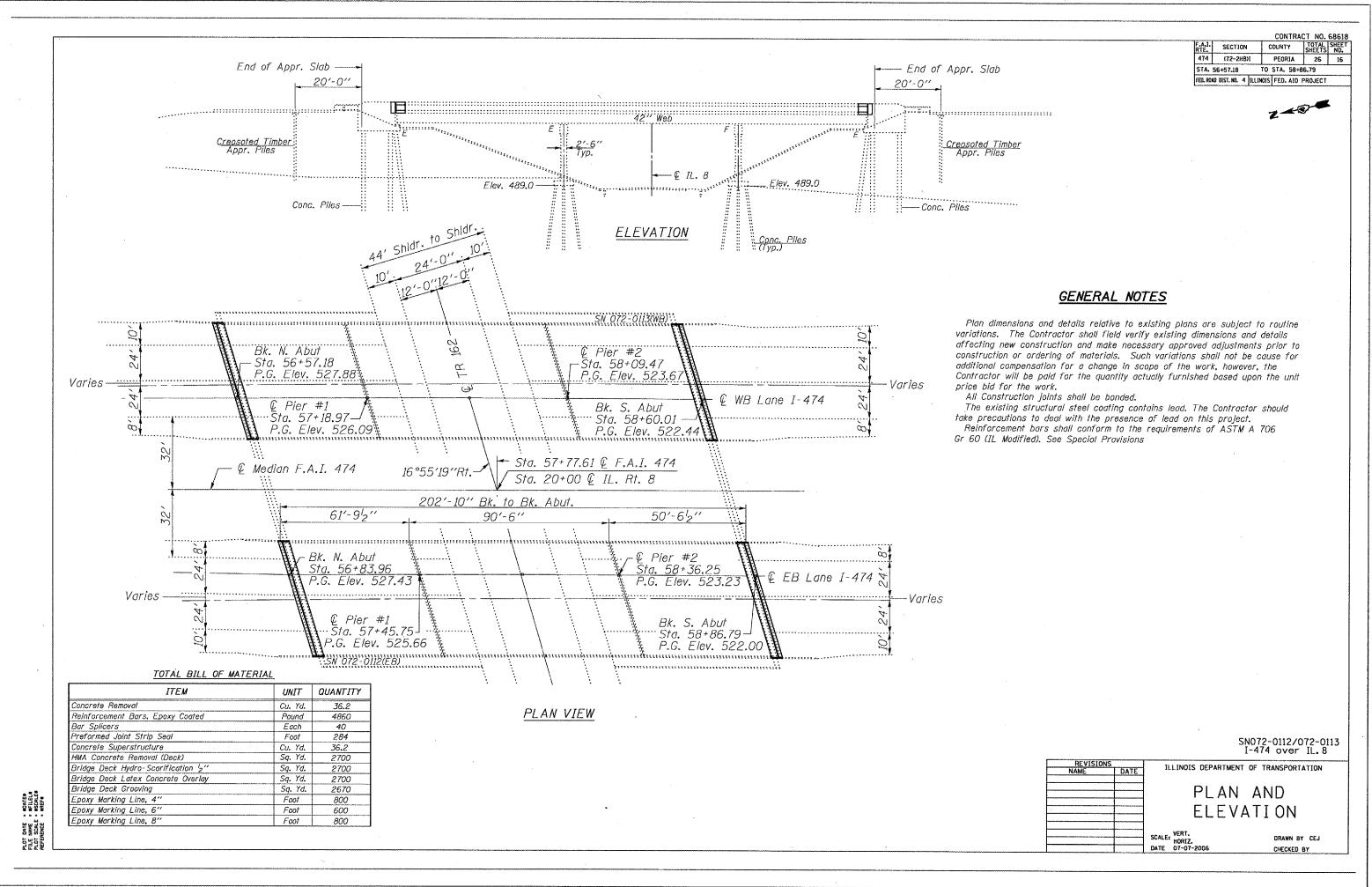
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<u>STAGE II</u> <u>TRAFFIC & CONTROL</u>

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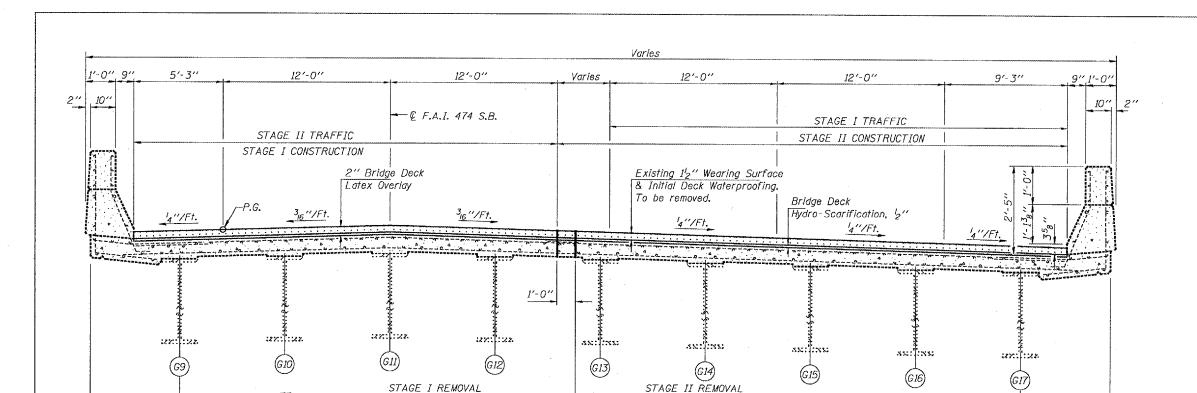




 
 CONTRACT
 NO.
 68618

 COUNTY
 TOTAL SHEET NO.

 PEORIA
 26
 17
 199'-4'2" End to End of Deck Varies, 11'-6'2''
to 5'-11'2'' Bk.of
N.Abut. <u>PLAN</u> WB Lanes 199'-4'2" End to End € Rdwy. SN072-0112/072-0113 I-474 over IL.8 <u>PLAN</u> EB Lanes ILLINOIS DEPARTMENT OF TRANSPORTATION SUPERSTRUCTURE STAGING SCALE: VERT. HORIZ. DATE 07-12-2006 DRAWN BY CEJ



NOTE
Refer to Highway Standard 701402 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of

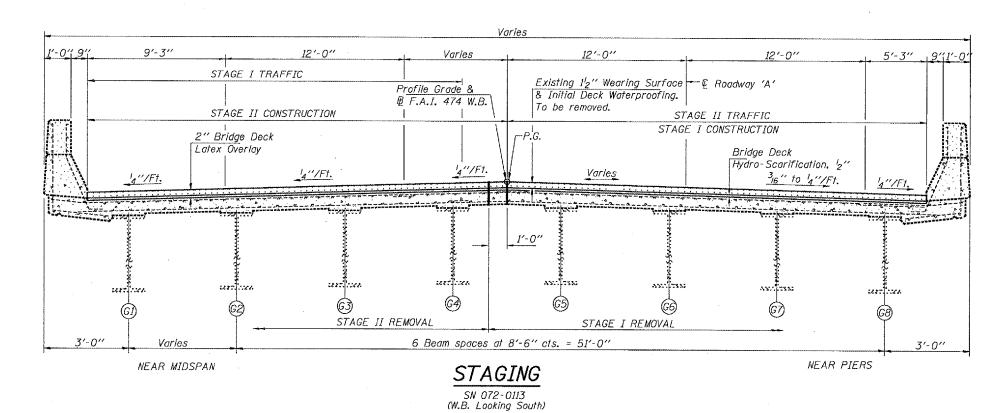
this standard.

3'-0"

## STAGING

6 Beam spaces at 8'-6" cts. = 51'-0"

SN 072-0112 (E.B. Looking South)



SN072-0112/072-0113 I-474 over IL.8

CONTRACT NO. 68618
COUNTY TOTAL SHEET NO.

PEORIA 26 18

TO STA. 58+86.79

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

474 (72-2HB)[

STA. 56+57.18

REVISIONS
NAME DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC

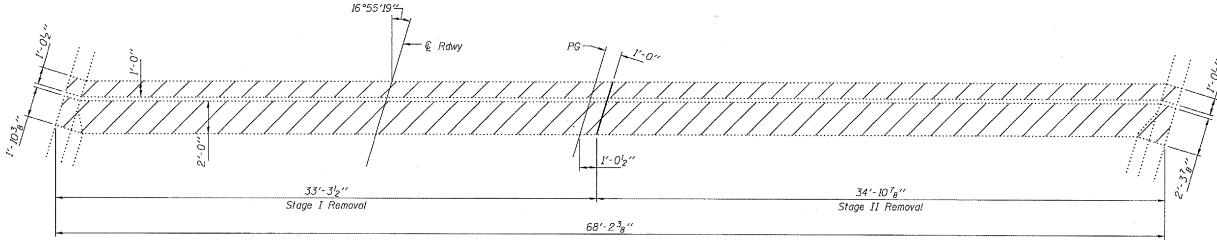
STAGING

SCALE: VERT. DRAWN BY CEJ
DATE 07-12-2006 CHECKED BY

LOT DATE \* SOSTES TLE NAME \* STIEL\* LOT SCALE \* SSCALE\* EFFERENCE \* SREF\* 3'-0"

CONTRACT NO. 68618

F.A.I.	SECTION	COUNTY	TOTAL SHEET	SHOL
474	(772-22HB)1	PEOUND	7 EB	19
STA. 56+57.18	TO STA.58+86.79			
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID	PROJECT	
16°55'19'4				

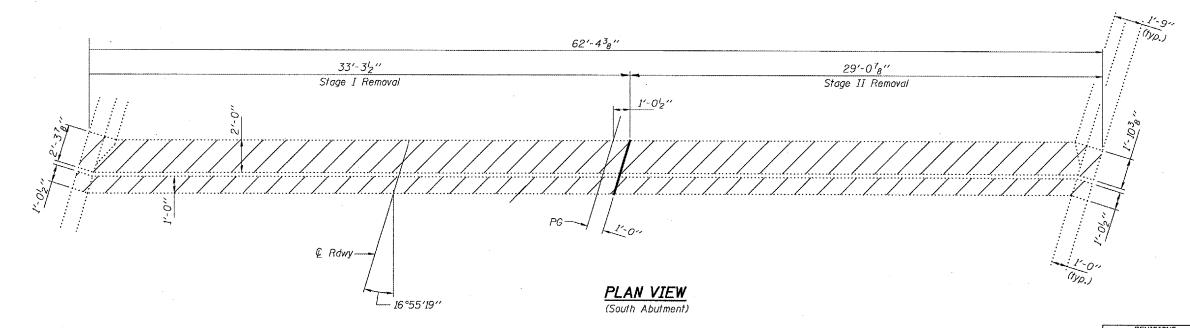


### PLAN VIEW

(North Abutment)

NOTE

Hatched areas indicate concrete removal. Existing reinforcement, extending into removal area, to be cleaned, straightened, and incorporated into new construction. Cost included with "Concrete Removal."



SN072-0113 W.B. I-474 over IL.8

DATE ILLINOIS DEPARTMENT OF TRANSPORTATION

JOINT CONCRETE REMOVAL

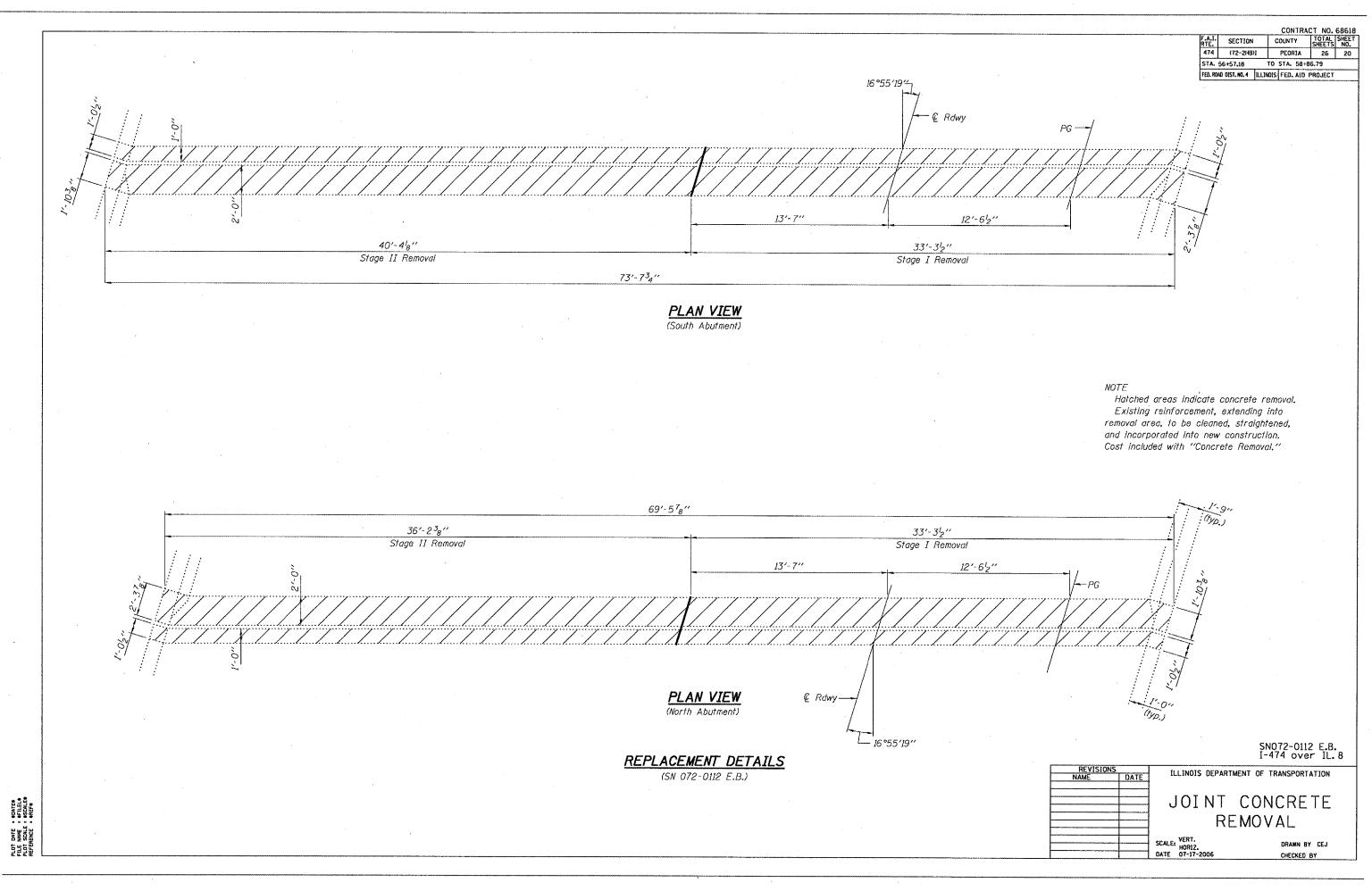
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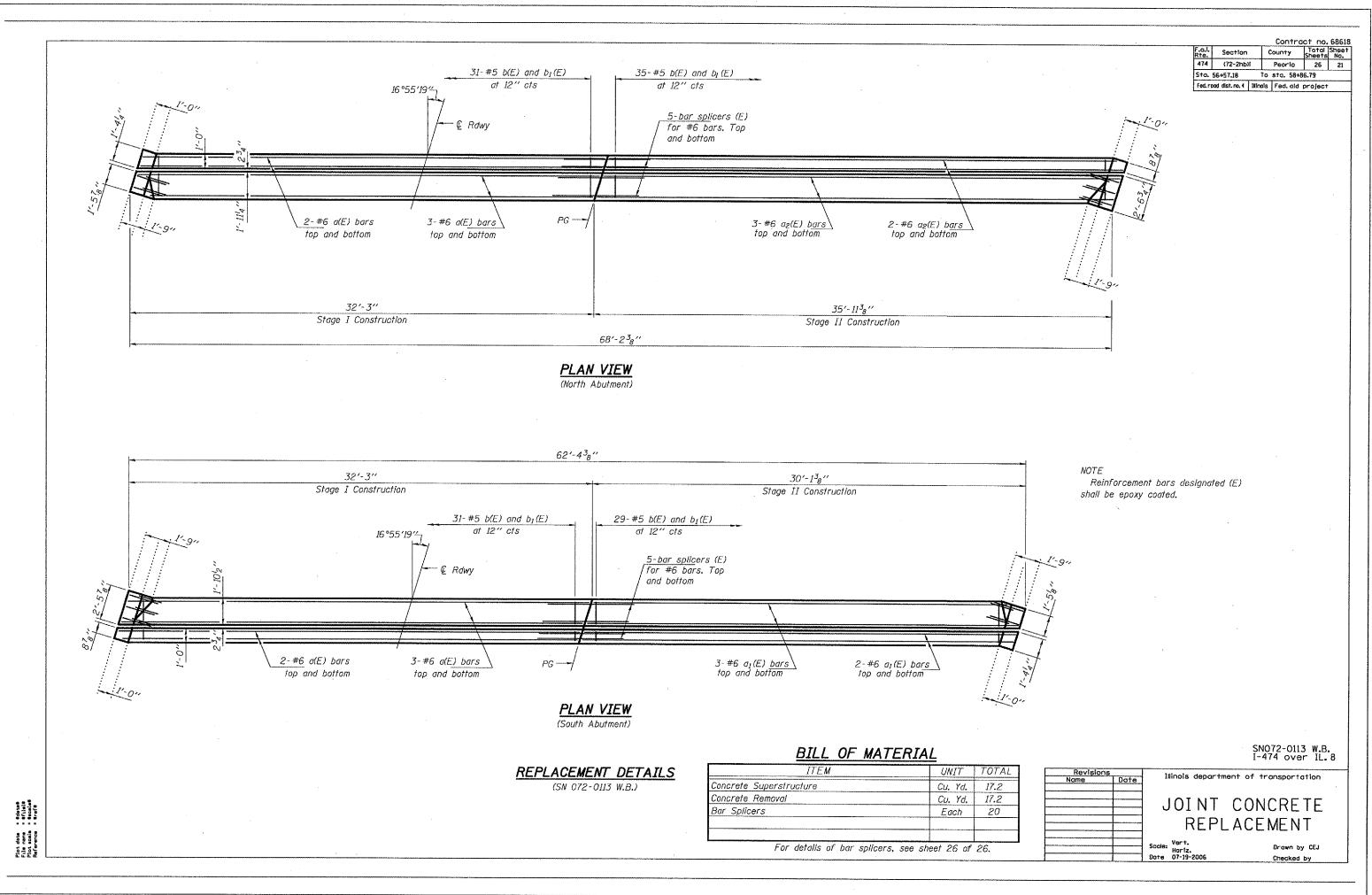
DRAWN BY CEJ CHECKED BY

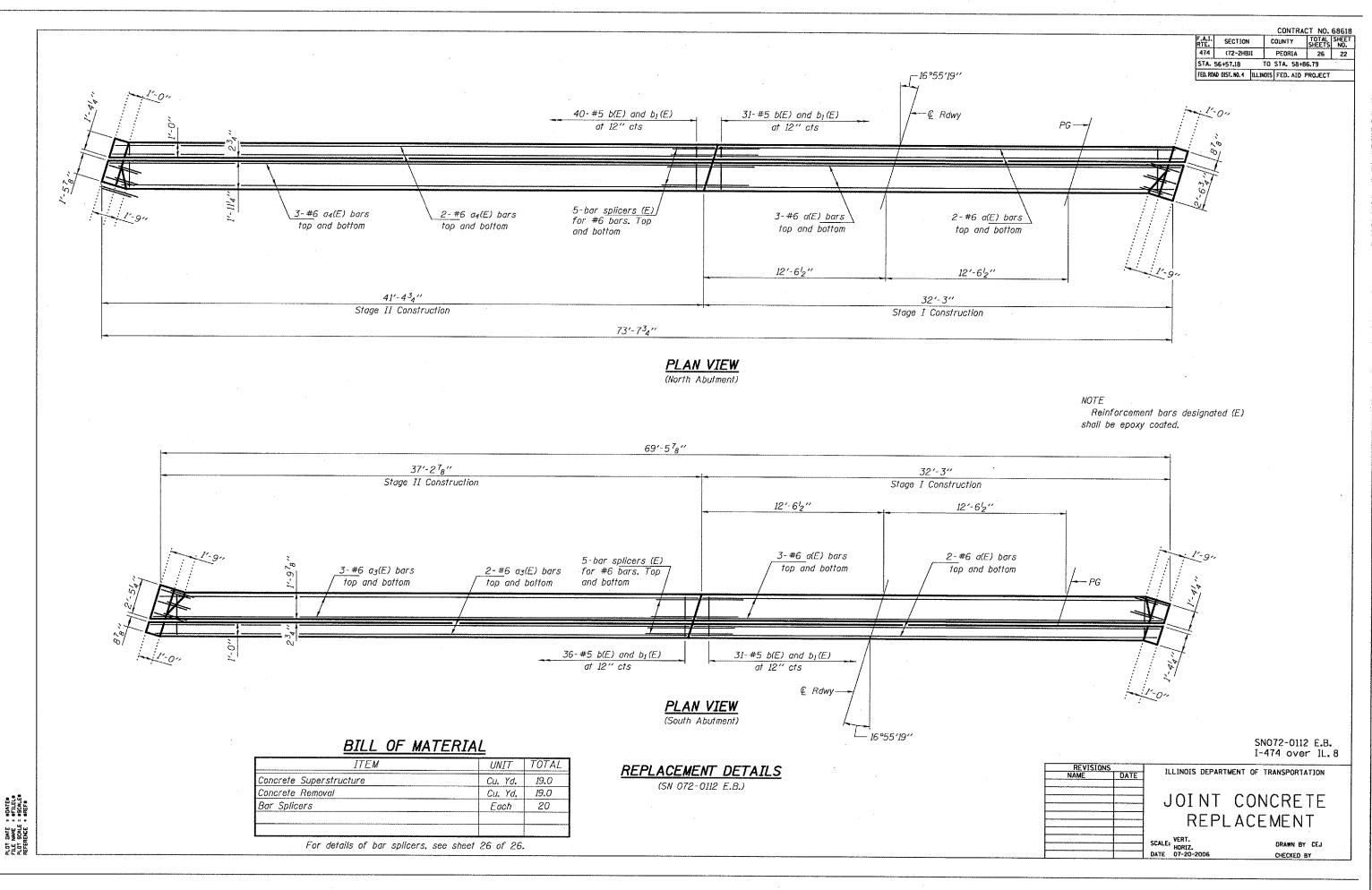
REPLACEMENT DETAILS

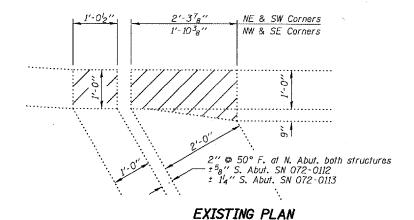
(SN 072-0113 W.B.)

PLOT DATE FILE MANE PLOT SCALE REFERENCE

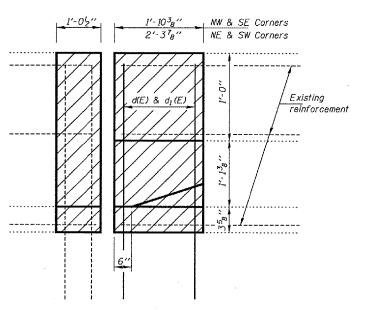








PARAPET REMOVAL



## INSIDE ELEVATION OF PARAPET REPLACEMENT AT ABUTMENTS

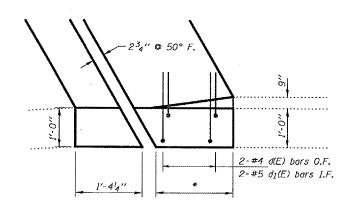
(Typical when facing Parapet)

NOTE

Hatched areas indicate concrete removal.

Existing reinforcement, extending into removal area, to be cleaned, straightened, and incorporated into new construction.

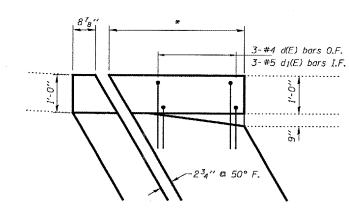
Cost included with "Concrete Removal."



### PLAN PARAPET REPLACEMENT

(Typical NW & SE corners)

\* See sheets 21 & 22 of 26 for dimensions.



## PLAN PARAPET REPLACEMENT

(Typical NE & SW corners)

## BILL OF MATERIAL

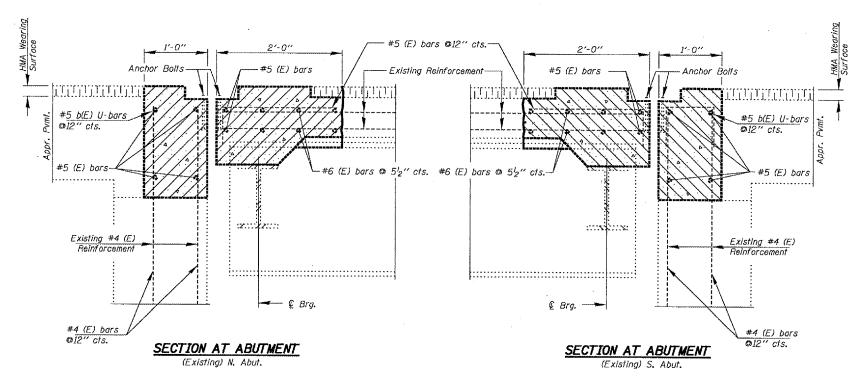
Bar	No.	Size	Length	Shape
a(E)	24	#6	32'-1"	
a1(E)	10	#6	30'-0"	
a <sub>2</sub> (E)	10	#6	35′-10′′	
a3(E)	10	#6	37′-1′′	
04(E)	10	#6	41'-3''	
			***************************************	
b(E)	264	#5	2'-5"	
b1(E)	264	#5	2'-8"	
d(E)	20	#4	4'-10''	L
d1(E)	20	#5	3′-8″	
<del></del>				
Bar Sp.	licers		Each	40
Concrete Removal			Cu. Yd.	36.2
Concrete Superstructure			Cu. Yd.	36.2
Reinforcement Bars, Epoxy Coated			Pound	4860

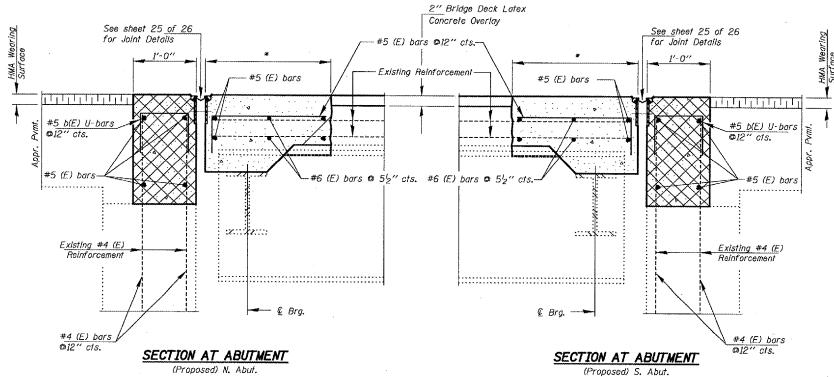
Reinforcement bars designated (E) shall be epoxy coated.

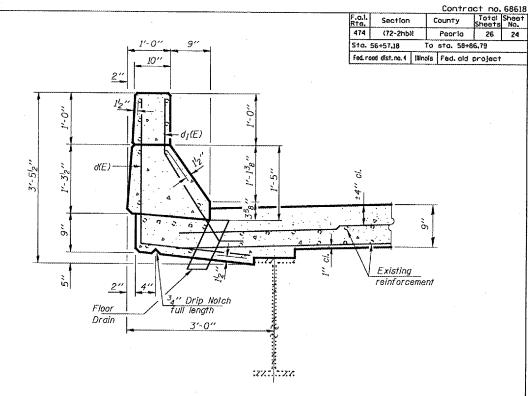
REVISIONS	ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
	0
	SUPERSTRUCTURE
	DETAILS

SCALE: VERT. HORIZ. DATE 05-05-2006

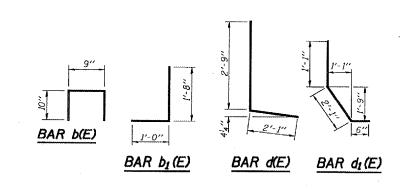
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#### SECTION THRU PARAPET



\* See sheets 21 & 22 of 26 for dimensions.

de te nome scole

Revisions Illinois department of transportation Date JOINT RECONSTRUCTION DETAIL Scole: Vert. Horiz. Date 06-05-2006 Drawn by CEJ

Hatched areas indicate concrete removal.

Quantity of HMA surface and waterproofing removal included with Concrete Removal.

Existing reinforcement & threaded rods to be

concrete is in place. Concrete quantity is included

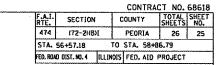
with Concrete Superstructure.
Reinforcement bar quantity in cross hatched area is included on sheet 23 of 26.

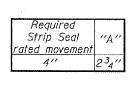
Reinforcement bars designated (E) shall be epoxy coated.

cleaned, straightened, and incorporated into new construction. Cost included with concrete removal. Cross hatched area to be poured after superstructure

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

\*\* When joint is fixed, dimension is set at  $1^{l_2}$ ".





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.

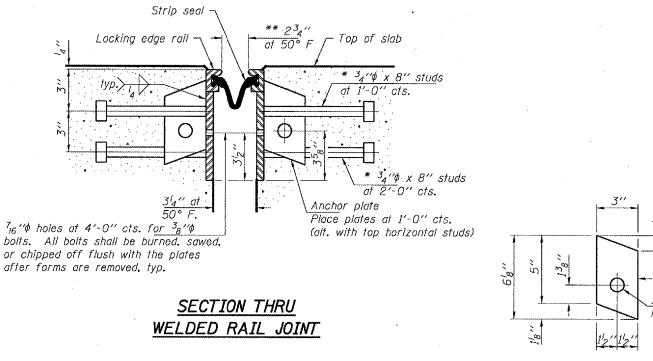
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and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

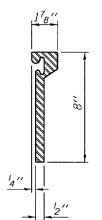
The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according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

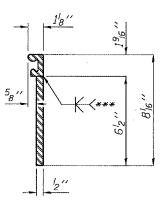
SCALE: VERT. HORIZ. DATE 07-15-2006

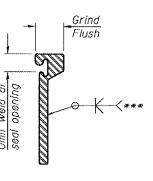
DRAWN BY CEJ

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









ANCHOR P (for welded rail)

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

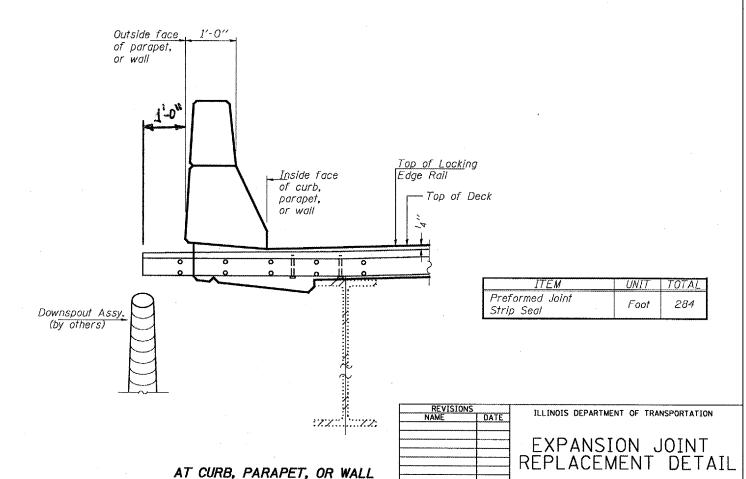
## <u>ROLLED</u> (EXTRUDED) RAIL

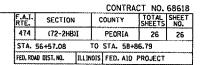
WELDED RAIL

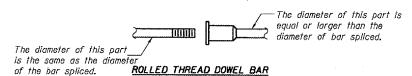
#### LOCKING EDGE RAIL SPLICE

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

#### LOCKING EDGE RAILS





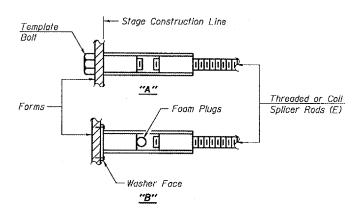


\*\* ONE PIECE ניעישיו ניעישיו

#### BAR SPLICER ASSEMBLY ALTERNATIVES

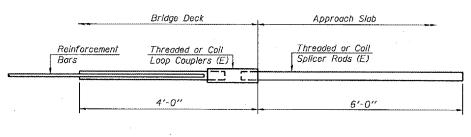
WELDED SECTIONS

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



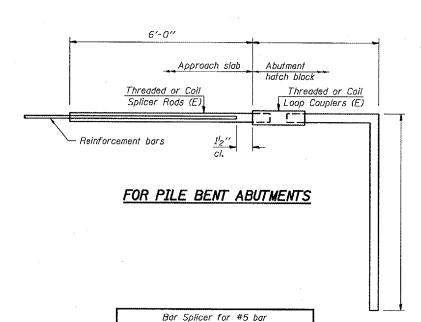
#### INSTALLATION AND SETTING METHODS

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



#### FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar Min. Capacity = 23.0 kips - tension Min. Pull-out Strength = 9.2 kips - tension No. Required = 0



Min. Capacity = 23.0 kips - tension Min. Pull-out Strength = 9.2 kips - tension

No. Required = 0

## NOTES

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

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

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

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

Minimum Capacity (Tension in kips) = 1.25 x fy x A,

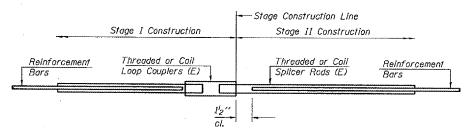
Tension in kips, Minimum \*Pull-out Strength = 1.25 x  $fs_{allow}$  x  $A_t$ 

Where fy = Yield strength of lapped reinforcement bars in ksl.

fs<sub>allow</sub> Allowable tensile stress in lapped reinforcement bars in ksi (Service Load) A<sub>t</sub> = Tensile stress area of lapped reinforcement bars.
\* = 28 day concrete

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

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



#### STANDARD

Bar Size	No. Assemblies Required	Location
#6	24	Deck
#6	16	Abutment
,		

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REVISIONS DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION		

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