### STATE OF ILLINOIS

# DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STA. 427 + 11.90 (AH) = STA. 25 + 70.10 (BK) STA. 2 + 00.00 (AH) = STA. 376 + 31.00 (BK)

# **PROPOSED** HIGHWAY PLANS

F.A.P. ROUTE 783 (IL. RTE. 33) SECTION (51-24-2,1-2)RS-1 & (1-X-1)RS-3

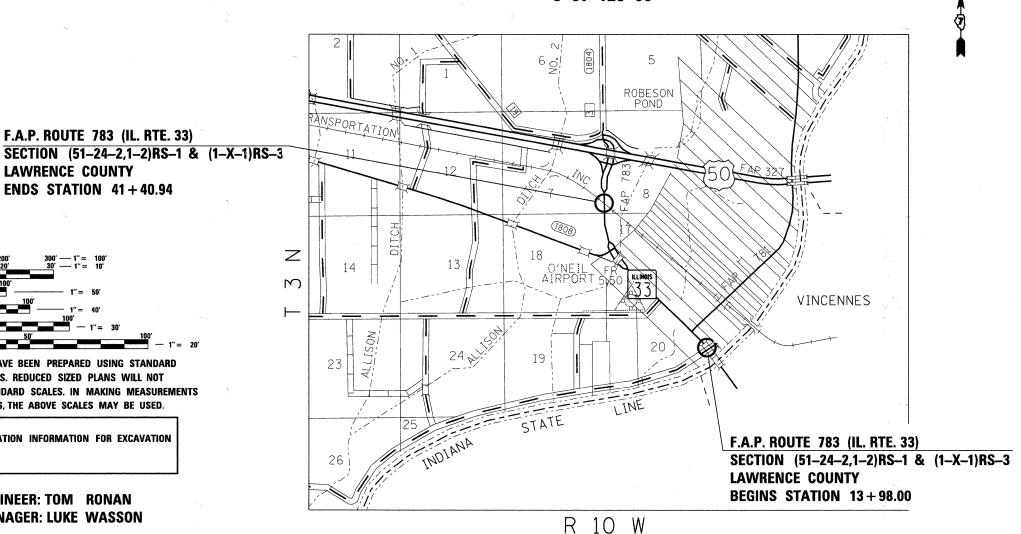
ADT = 5,200 (2009)

**STATION EQUATION:** 

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**RESURFACING (3P) LAWRENCE COUNTY** C-97-128-09

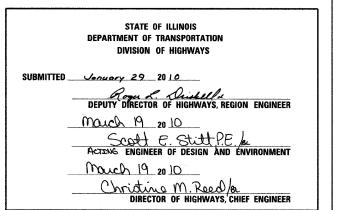


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D-97-072-09

783





GROSS LENGTH = 9,943 FT. = 1.88 MILE NET LENGTH = 9,943 FT. = 1.88 MILE

**LAWRENCE COUNTY** 

F.A.P. ROUTE 783 (IL. RTE. 33)

ENDS STATION 41+40.94

ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

PROJECT ENGINEER: TOM RONAN PROJECT MANAGER: LUKE WASSON

CONTRACT NO. 74414

#### INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS & GENERAL NOTES
3	SUMMARY OF QUANTITIES
4 - 1 1	TYPICAL SECTIONS
12-13	SCHEDULES OF QUANTITIES
14	ENTRANCE SCHEDULE AND DETAILS
15-18	PLAN SHEETS
19-20	STAGE 1 CONSTRUCTION
21-22	STAGE 2 CONSTRUCTION
23-26	PAVEMENT MARKING PLAN SHEETS
27-30	PAVEMENT MARKING DETAILS
31-41	STRUCTURAL DETAILS
42	DISTRICT DETAILS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 42:

STD. NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
406201-01	MAILBOX TURNOUT
442201-03	CLASS C AND D PATCHES
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FO
	SPEEDS >= 45 MPH
701311-03	LANE CLOSURE 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-10	LANE CLOSURE 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR
	SPEEDS >= 45 MPH
701336-05	LANE CLOSURE, 2L, 2W, WORK AREA IN SERIES, FOR
	SPEEDS >= 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

#### GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS; THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2010, AND THE SPECIAL PROVISIONS INCLUDED IN THIS PROPOSAL.

THE WORK INCLUDED IN SECTION (51-24-2,1-2)RS-1 & (1-X-1)RS-3 CONSISTS OF PAVEMENT PATCHING, MILLING, OVERLAYING THE PAVEMENT WITH HOT-MIX ASPHALT, CURB REMOVAL, PCC BASE COURSE, AGGREGATE SHOULDERS, PAVEMENT MARKING, B-SMART BRIDGE REPAIRS, AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION LOCATED ON ILLINOIS ROUTE 33 IN LAWRENCE COUNTY FROM 0.75 MILES SOUTH OF US ROUTE 50 TO THE INDIANA STATE LINE.

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SECTION 780 OF THE STANDARD SPECIFICATIONS. SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE MILLED SURFACE, BITUMINOUS MATERIALS (PRIME COAT), HOT-MIX ASPHALT LEVELING BINDER, AND HOT-MIX ASPHALT SURFACE COURSE AS SPECIFIED IN SECTION 703 OF THE STANDARD SPECIFICATIONS. TEMPORARY TAPE SHALL BE USED ON THE SURFACE COURSE AND PAINT SHALL BE USED ON MILLED SURFACES.

THE TOTAL QUANTITY OF PAINT PAVEMENT MARKING - LINE 4" CONSISTS OF 2,181 FEET OF YELLOW AND 12,822 FEET OF WHITE.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS CONSISTS OF 125 SQUARE FEET OF WHITE.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LINE 4" CONSISTS OF 14,730 FEET OF YELLOW AND 9,144 FEET OF WHITE.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LINE 6" CONSISTS OF 693 FEET OF WHITE.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKING - LINE 12" CONSISTS OF 1,143 FEET OF YELLOW AND 547 FEET OF WHITE.

THE EXISTING PAVEMENT SHALL BE PATCHED IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS. THE QUANTITY OF PATCHING SHOWN IN THE PLANS IS AN ESTIMATE ONLY. THE FINAL LOCATIONS AND QUANTITY SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 781 OF THE STANDARD SPECIFICATIONS. THE TOTAL QUANTITY OF RAISED REFLECTIVE PAVEMENT MARKERS CONSISTS OF 14 ONE-WAY CRYSTAL MARKERS, 162 ONE-WAY AMBER MARKERS, 156 TWO-WAY AMBER MARKERS, AND 3 TWO-WAY AMBER MARKERS (BRIDGE).

THE CONTRACTOR SHALL PROVIDE INTERNET ACCESSIBILITY TO THE HOT-MIX ASPHALT PLANT QUALITY CONTROL LAB SO THAT HOT-MIX ASPHALT PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK SHALL BE INCLUDED IN THE COST OF ALL HOT-MIX ASPHALT PAY ITEMS.

THE CONTRACTOR SHALL USE EITHER RC-70 SSIH OR AN EMULSIFIED POLYMER PRIME SS-1HP FOR THE PAY ITEM BITUMINOUS MATERIALS (PRIME COAT).

THE RESIDENT ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE CURING TIME FOR ALL HOT-MIX ASPHALT.

THE MATERIAL USED FOR AGGREGATE SHOULDERS, TYPE B AND AGGREGATE SURFACE COURSE, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE, OR RAP.

THE PAY ITEM TEMPORARY RAMP HAS BEEN INCLUDED FOR THE CONSTRUCTION OF TEMPORARY RAMPS IN ACCORDANCE WITH ARTICLE 406.08 OF THE STANDARD SPECIFICATIONS. THE CONTRACT UNIT PRICE PER SQUARE YARD FOR TEMPORARY RAMP SHALL INCLUDE BOTH THE INSTALLATION AND THE REMOVAL OF THE RAMPS.

THE BASE COURSE WIDENING SHALL, AT THE CONTRACTOR'S OPTION, BE CONSTRUCTED OF EITHER PORTLAND CEMENT CONCRETE, 8" THICK, OR HOT-MIX ASPHALT, 10" THICK. ANY EXCAVATION AND PAVED SHOULDER REMOVAL REQUIRED FOR PLACEMENT OF THE BASE COURSE WIDENING SHALL BE INCLUDED IN THE COST OF THE BASE COURSE WIDENING. THE BASE COURSE WIDENING SHALL REMAIN IN PLACE AT THE COMPLETION OF THE PROJECT.

#### GENERAL NOTES (Cont'd)

THE BASE COURSE SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE, 13" THICK. ANY EXCAVATION BETWEEN THE CURB REMOVAL REQUIRED FOR PLACEMENT OF THE BASE COURSE SHALL BE INCLUDED IN THE COST OF THE BASE COURSE.

THE PAY ITEM CURB REMOVAL HAS BEEN INCLUDED FOR THE REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE CURB, INLETS, AND PORTLAND CEMENT CONCRETE MEDIAN NOSE IN ACCORDANCE WITH ARTICLE 440 OF THE STANDARD SPECIFICATIONS.

IN AREAS OF HOT-MIX ASPHALT REMOVAL, 2 1/4". WHERE DROP-OFFS OF  $\geq$  3" EXIST BETWEEN THE PAVEMENT REMOVAL AND EXISTING SHOULDERS, THE CONTRACTOR SHALL PROVIDE TYPE 1 OR TYPE 14 BARRICADES IN ORDER TO PROTECT THE DROP-OFF IN ACCORDANCE WITH ARTICLE 701.07 OF THE STANDARD SPECIFICATIONS. THE COST OF THE BARRICADES SHALL BE INCLUDED IN THE COST OF HOT-MIX ASPHALT REMOVAL, 2 1/4".

WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. THE SAW CUT IS TO BE INCLUDED IN THE COST OF THE BUTT JOINT.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

SURFACE COURSE (1 1/2")

APPLICATION: HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 PG GRADE: PG 64-22
DESIGN AIR VOIDS: 4.0% NDESIGN = 70
MIXTURE COMPOSITION: IL-9.5

FRICTION AGGREGATE: MIXTURE C

LEVEL BINDER (3/4")

APPLICATION: LEVELING BINDER (MACHINE METHOD) N70
PG GRADE: PG 64-22
DESIGN AIR VOIDS: 4.0%@NDESIGN = 70
MIXTURE COMPOSITION: IL-9.5

FRICTION AGGREGATE: N/A

INCIDENTAL HMA

APPLICATION: HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 PG GRADE: PG 64-22
DESIGN AIR VOIDS: 4.0% NDESIGN = 70

MIXTURE COMPOSITION: IL-9.5
FRICTION AGGREGATE: MIXTURE C

PAVEMENT PATCHING & BASE COURSE WIDENING

APPLICATION: HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 PG GRADE: PG 64-22

DESIGN AIR VOIDS: 4.0%eNDESIGN = 70
MIXTURE COMPOSITION: IL-19.0

FRICTION AGGREGATE: N/A

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

HOT MIX ASPHALT BITUMINOUS MATERIALS PRIME COAT AGGREGATE PRIME COAT GRANULAR MATERIAL

0.10 GALLONS/SO YD 2.00 LBS/SO YD 2.05 TONS/CU YD

112 IBS/S0 YD/IN

• (51-24-2,1-2)RS-1 & (1-X-1)RS-3

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	PLOT DATE = 1/29/2010	DATE -	REVISED -		SCALE: NA	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.		ILLINOIS FED. AI	D PROJECT	

	SUMMARY OF QUANTITIES	1001. STATE	CONSTRUCTIO	N TYPE CODE	
CODE NO	ITEM	TOTAL QUANTITIES	RURAL 1000	SN 051-0032 SFTY-2A	
35300720	PORTLAND CEMENT CONCRETE BASE COURSE 13"	SQ YD	1624	1624	
35650700	BASE COURSE WIDENING	SQ YD	125	125	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	199	199	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	7128	7128	
40600300	AGGREGATE (PRIME COAT)	TON	143	143	
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	1456	1456	
40600895	CONSTRUCTING TEST STRIP	EACH	1	1	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	93	93	
40600990	TEMPORARY RAMP	SQ YD	121	121	
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	2920	2920	
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	295	295	·
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	13273	13273	'
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	21396	21396	
44000300	CURB REMOVAL	FOOT	3190	3190	
44200152	PAVEMENT PATCHING, TYPE I, 13 INCH	SQ YD	18	18	
44200156	PAVEMENT PATCHING, TYPE II, 13 INCH	SQ YD	650	650	
44200160	PAVEMENT PATCHING, TYPE III, 13 INCH	SQ YD	40	40	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	621	621	
50102400	CONCRETE REMOVAL	CU YD	18. 1		18.1
50157300	PROTECTIVE SHIELD	SQ YD	267		267
50300255	CONCRETE SUPERSTRUCTURE	CU YD	20		20
50300260	BRIDGE DECK GROOVING	SQ YD	642		642
50300300	PROTECTIVE COAT	SQ YD	712		712
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1680		1680
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	12		12
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1310		1310
50800515	BAR SPLICERS	EACH	24		24
52000110	PREFORMED JOINT STRIP SEAL	FOOT	92		92
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	6		6
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6		6
52100520	ANCHOR BOLTS, 1"	EACH	24		24
60500305	FILLING INLETS	EACH	. 3	3	·
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	5	5	
67100100	MOBILIZATION	L SUM	1	1	,
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1		1

CIII	MARY OF CHANTITIES (Cont	<b>/ / / /</b>	1001. STATE	CONSTRUCTIO	ON TYPE CODE
301	MMARY OF QUANTITIES (Cont	<u> </u>	TOTAL	RURAL	SN 051-0032
CODE NO	ITEM	UNIT	OUANTITIES	1000	SFTY-2A
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	. 1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	. 1	1	
70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	15	15	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	18294	18294	
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	125	125	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	32488	32488	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	693	693	
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	1690	1690	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2033	2033	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	444	444	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	444	444	
<b>*</b> 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	125	125	·
<b>*</b> 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	23874	23874	
<b>*</b> 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	693	693	
<b>*</b> 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1690	1690	
<del>*</del> 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	15003	15003	
<del>*</del> 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	332	332	,
<b>¥</b> 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3		3
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	47		47
XZ193500	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/4"	SQ YD	685	V.	685
Z0006204	BRIDGE DECK HYDRO-SCARIFICATION 1/2"	SQ YD	685		685
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	3		3
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	. 8	,	8
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	-
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
20048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	Loum	/	/	

#### \* Specially Hems

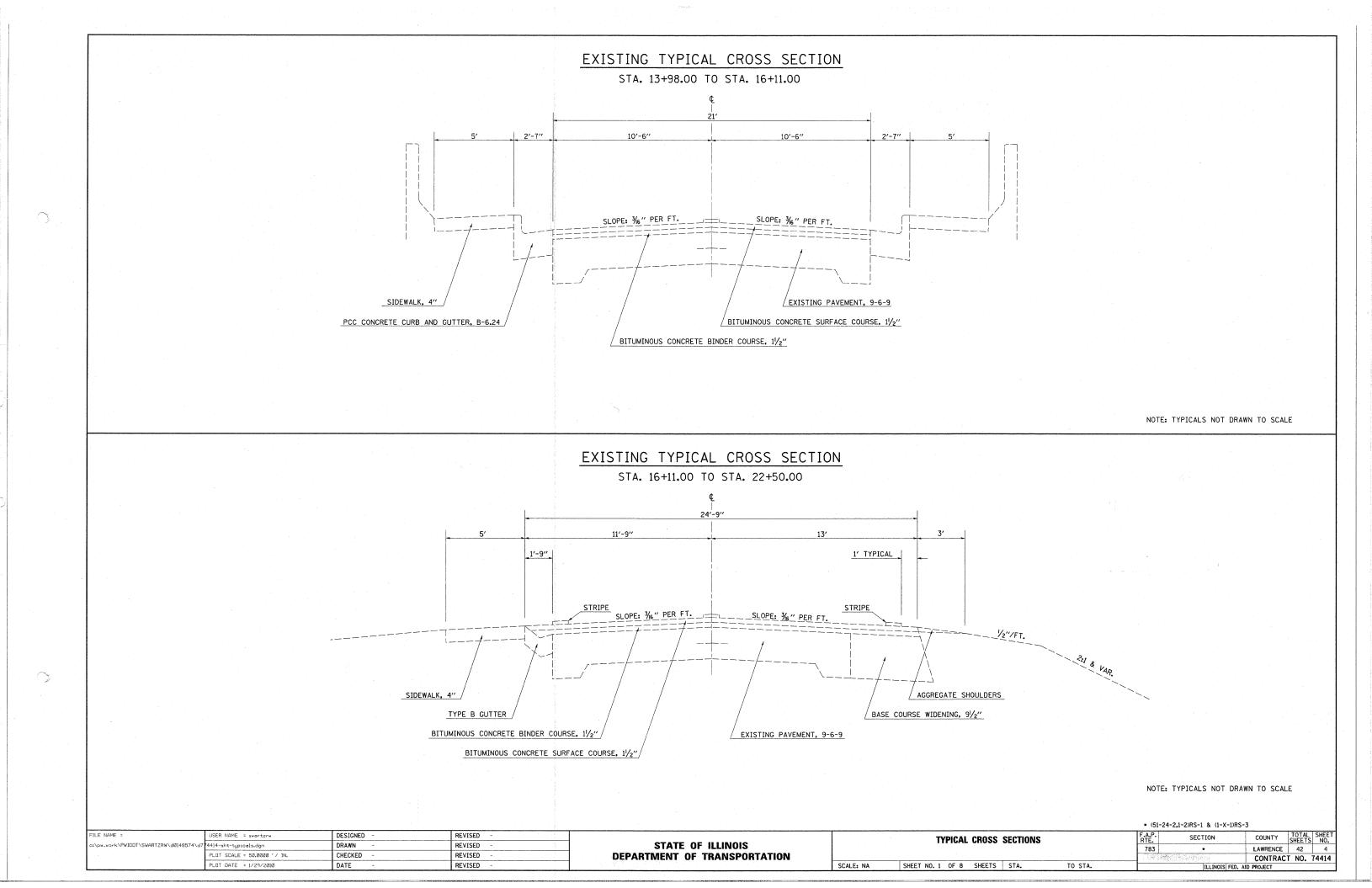
•	(51-24-2,1-2)RS-1	&	(1-X-1)RS-3
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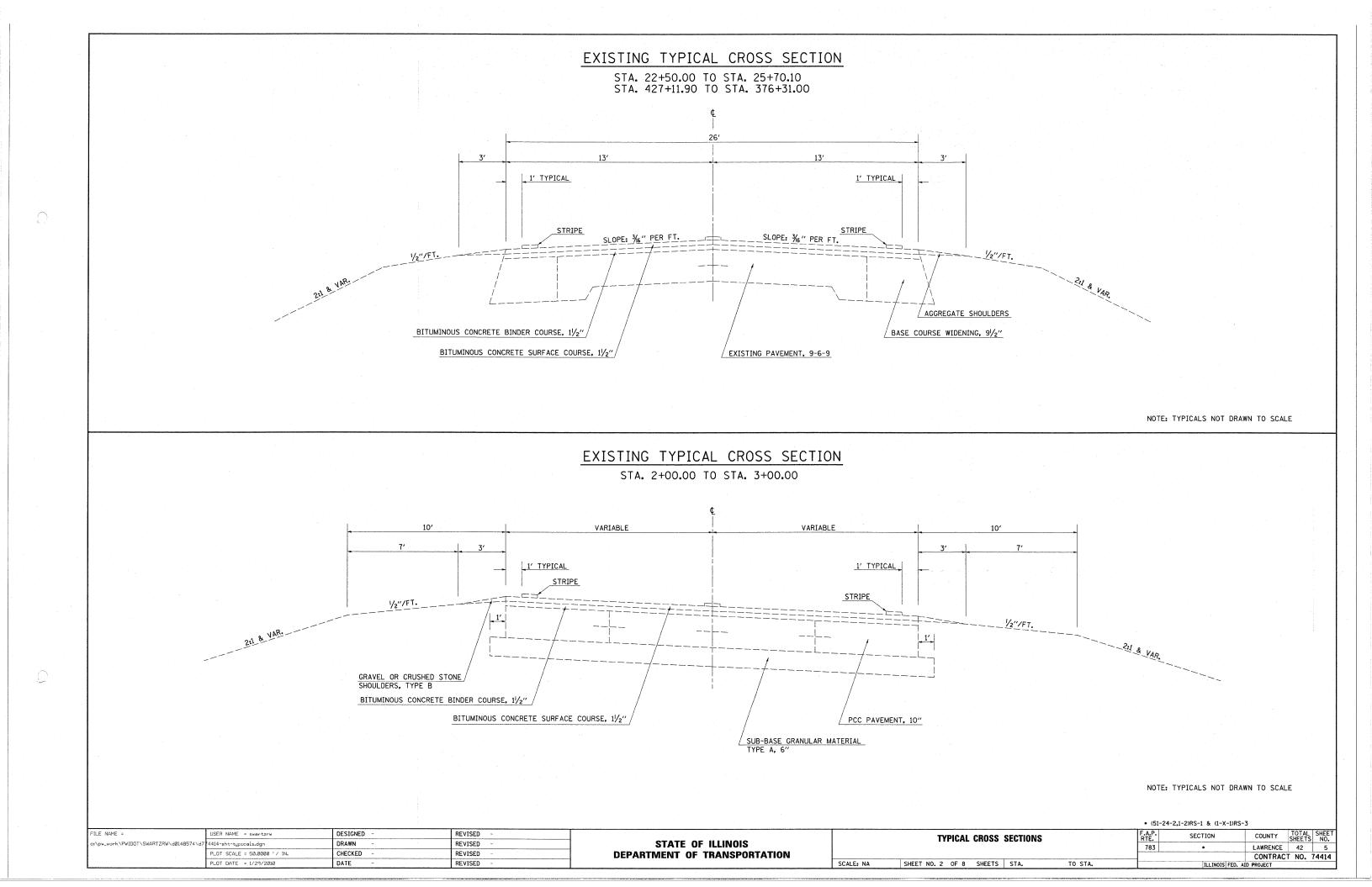
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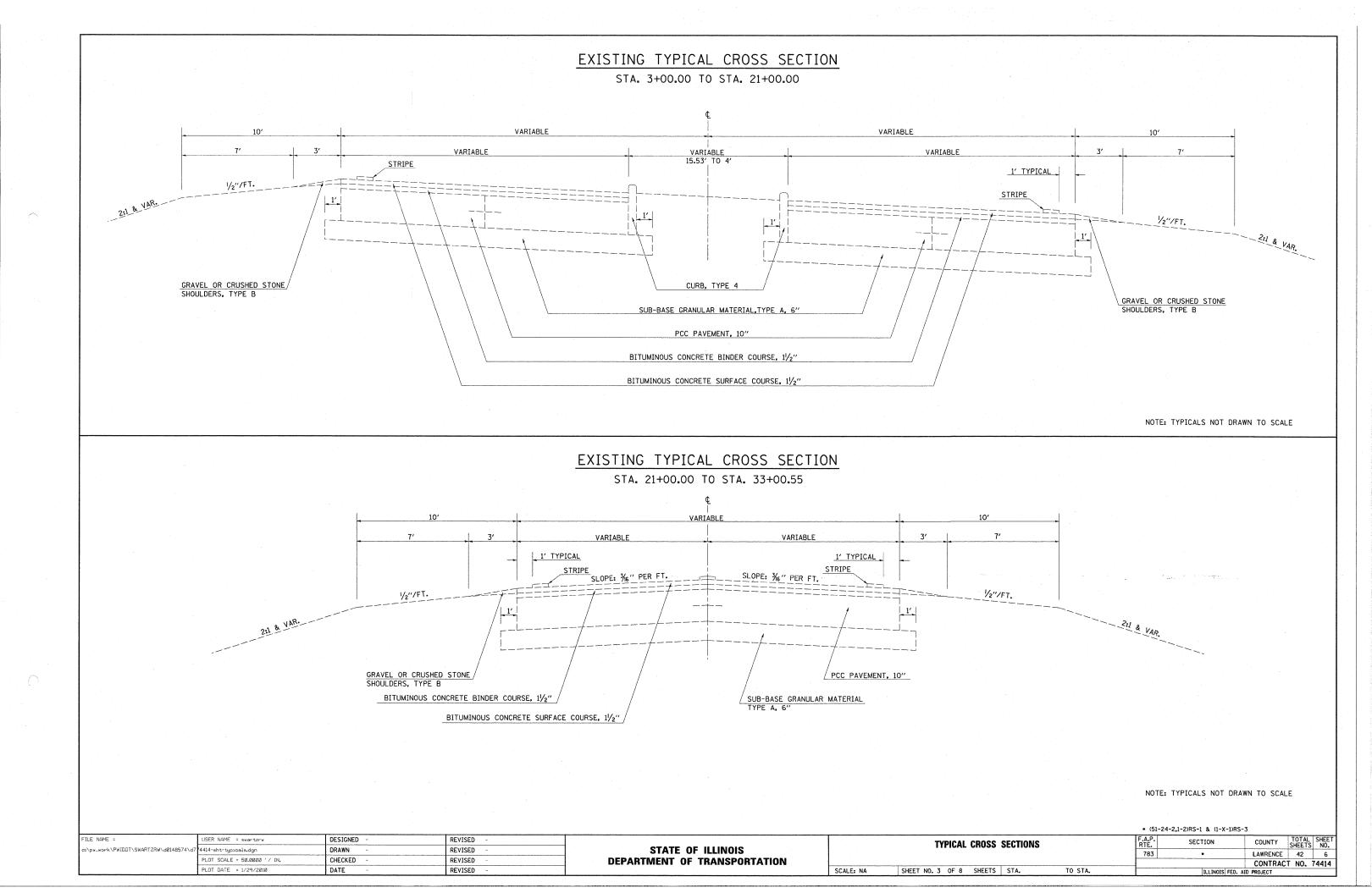
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DEPARTMENT	OF	TRANSPORTATION

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SUMMARY OF QUANT	ITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
		783	•	LAWRENCE	42	3
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SHEET NO. 1 OF 1 SHEETS   STA.	TO STA.		ILLINOIS FED. A	D PROJECT		

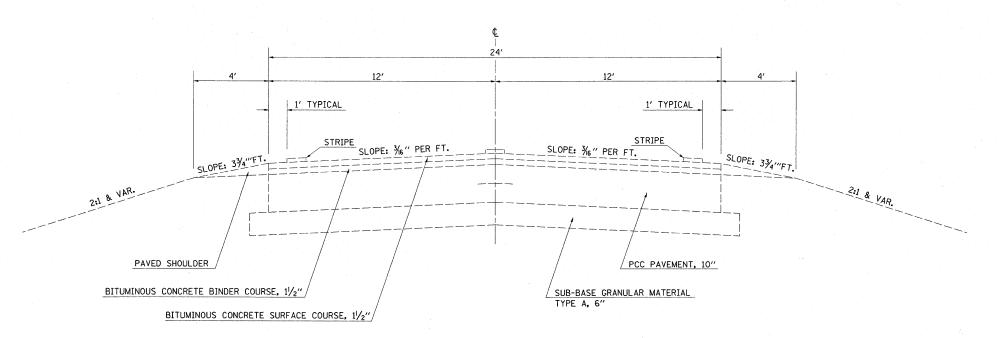








STA. 33+00.55 TO STA. 38+90.20



NOTE: TYPICALS NOT DRAWN TO SCALE

\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NA

 TYPICAL CROSS SECTIONS
 F.A.P. RTE. SECTION
 COUNTY SHEETS NO.

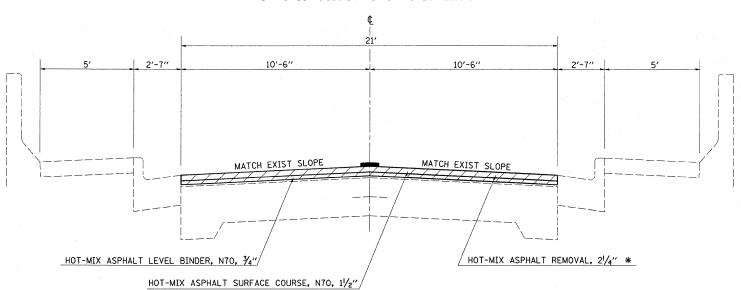
 783
 • LAWRENCE
 42
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 CONTRACT NO. 74414

 SHEET NO. 4 OF 8 SHEETS STA. TO STA.
 IILINOIS FED. AID PROJECT



STA. 13+98.00 TO STA. 16+11.00

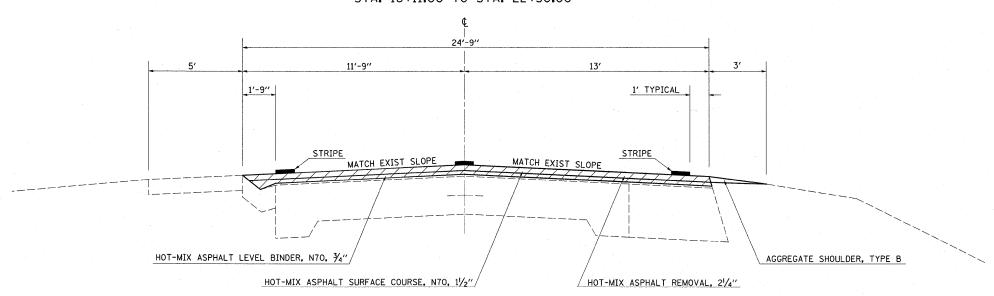


\* TO BE COMPLETED IN TWO PASSES
TO PREVENT DROP OFF >2" AT CENTERLINE

NOTE: TYPICALS NOT DRAWN TO SCALE

#### PROPOSED TYPICAL CROSS SECTION

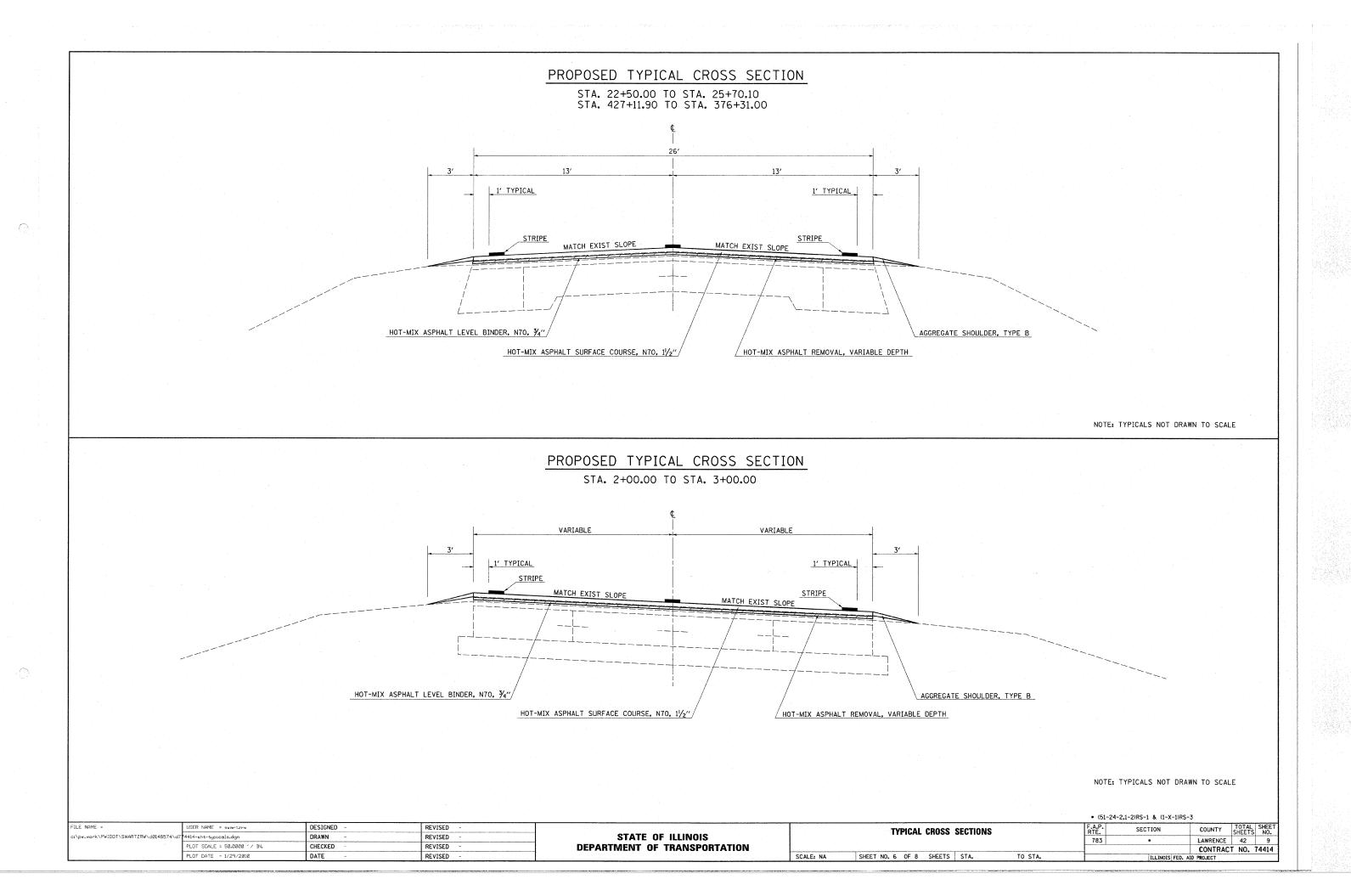
STA. 16+11.00 TO STA. 22+50.00



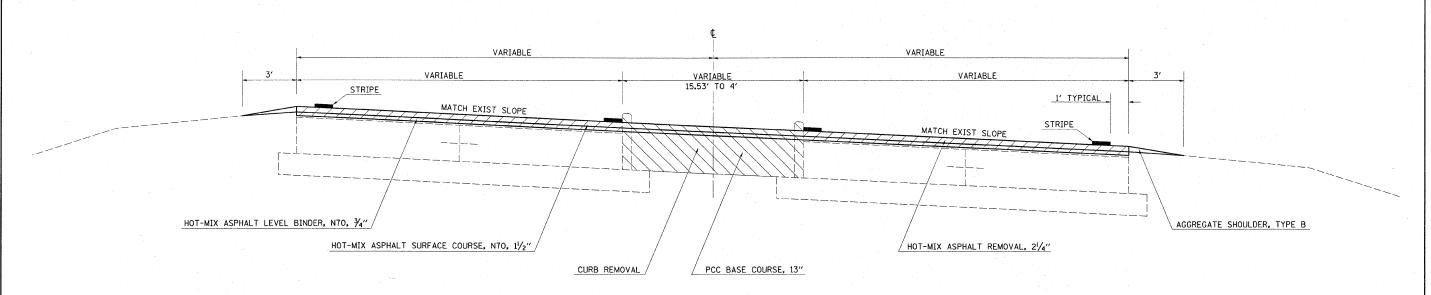
NOTE: TYPICALS NOT DRAWN TO SCALE

\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

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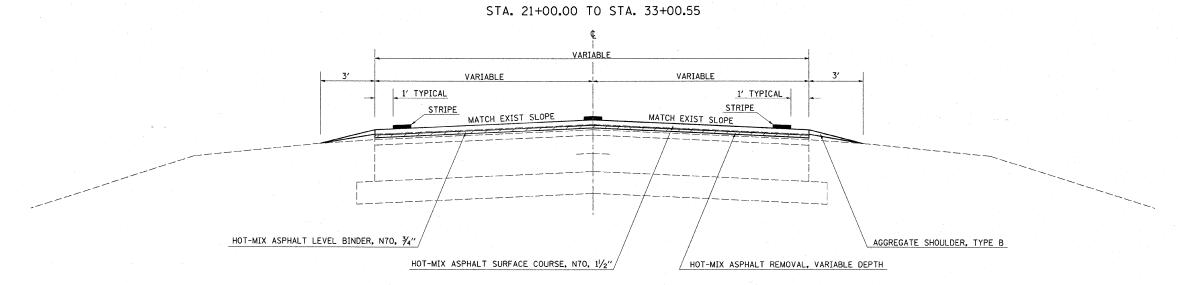






NOTE: TYPICALS NOT DRAWN TO SCALE

### PROPOSED TYPICAL CROSS SECTION



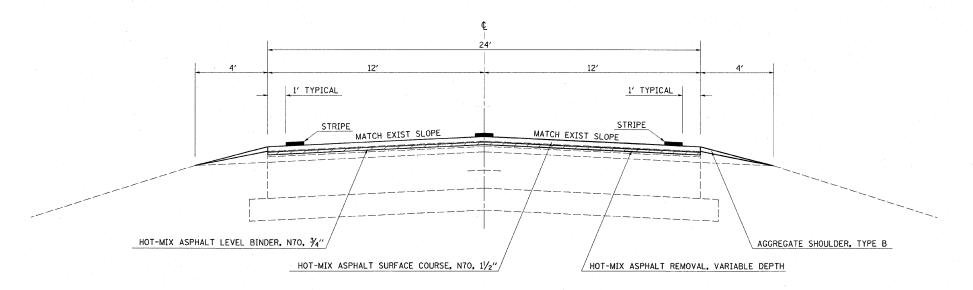
NOTE: TYPICALS NOT DRAWN TO SCALE

•	(51-24-2,1-2)RS-1	&	(1-X-1)RS-3	

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		PLOT DATE = 1/29/2010	DATE -	REVISED -		SCALE: NA	SHEET NO. 7 OF 8 SHEETS STA. TO STA.		ILLINOIS FED. AI	ID PROJECT	



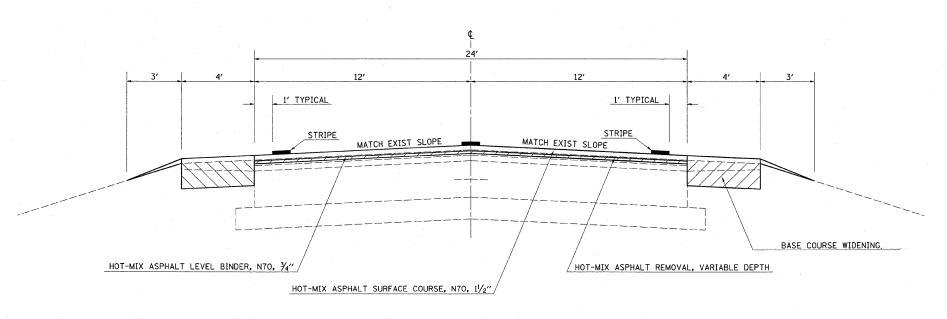
STA. 33+00.55 TO STA. 38+00.00



NOTE: TYPICALS NOT DRAWN TO SCALE

#### PROPOSED TYPICAL CROSS SECTION

STA. 38+00.00 TO STA. 39+54.00



NOTE: TYPICALS NOT DRAWN TO SCALE

\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

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	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						CONTRAC	CT NO. 74414
	PLOT DATE = 1/29/2010	DATE -	REVISED -		SCALE: NA	SHEET NO. 8 OF 8 SHEETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT	

RESURFACING		WIDTH		SURFACE REMOVAL,	SURFACE REMOVAL,	IALS (PRIME COAT)	COAT)	SURFACE COURSE,	(MACHINE METHOD),	ERS,	SURFACE REMOVAL -	
SCHEDULE	LENGTH	AVERAGE PAVEMENT	AREA	HOT-MIX ASPHALT S VARIABLE DEPTH	HOT-MIX ASPHALT 3 2 1/4"	BITUMINOUS MATERIALS	AGGREGATE ( PRIME	HOT-MIX ASPHALT S MIX "C", N70	LEVELING BINDER (N70	AGGREGATE SHOULDERS TYPE B	HOT-MIX ASPHALT : BUTT JOINT	TEMPORARY RAMP
STATION TO STATION	FOOT	FOOT	SQ YD	SQ YD	SQ YD	GALLON	TON	TON	TON	TON	SQ YD	SQ YD
13+98.00 TO 14+33.00	35.0	21.0	81. 7	0.0	81.7	16. 3	0.3	6.9	1.7	0.0	0.0	
14+33.00 TO 16+11.00	178.0	21.0	415.3	0.0	415.3		1.7	34.9	17.4	0.0	0.0	
16+11.00 TO 22+50.00	639.0	24.8	1757.3	0.0	1757.3		10.5	<u> </u>	73. 8	27. 3	0.0	
22+50.00 TO 22+85.00	35.0	26.0	101.1	101. 1	0.0		0.4	8. 5	4.2	1.5	0.0	0.0
22+85.00 TO 25+70.10	285. 1	26.0	823.6	823.6	0.0	164.7	3. 3	69. 2	34.6	17.9	0.0	0.0
25+70.10 = 427+11.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
427+11.90 TO 376+31.00	5080.9	26.0	14678.2	14678.2	0.0	2935.6	58.7	1233.0	616.5	258.8	0.0	0.0
376+31.00 = 2+00.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2+00.00 TO 3+00.00	100.0	VAR	336. 1	336. 1	0.0	67.2	1.3	28. 2	14.1	8. 5	0.0	0.0
3+00.00 T0 3+35.00	35.0	VAR	138.1	138.1	0.0	27.6	0.6	11.6	5.8	3. 0	0.0	0.0
3+35.00 TO 21+00.00	1765.0	VAR	9394.5	0.0	9394.5	1878.9	37.6	789. 1	394.6	139.4	0.0	95.6
21+00.00 TO 21+35.00	35.0	VAR	148.8	148.8	0.0	29.8	0.6	12.5	6. 2	3. 0	0.0	0.0
21+35.00 TO 33+00.55	1165.6	VAR	3691.0	3691.0	0.0	738. 2	14.8	310.0	155.0	99. 6	0.0	0.0
33+00.55 TO 38+55.20	554.7	24.0	1479.1	1479.1	0.0	295.8	5.9	124.2	62.1	47. 4	0.0	0.0
38+55. 20 TO 38+90. 20	35.0	24.0	93. 3	0.0	0.0	18.7	0.4	7.8	2.0	15.0	93. 3	13.3
MEDIAN REMOVAL			1624.0	0.0	1624.0	324.8	6.5	136.4	68.2	0.0	0.0	0.0
TOTALS			34762.0	21396.0	13273.0	7128.0	143.0	2920.0	1456.0	621.0	93.0	121.0

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
783	•	LAWRENCE	42	12
		CONTRAC	T NO.	74414
	ILLINOIS FED. A	ID PROJECT		

\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

SCHEDULE OF QUANTITIES

SCALE: NA

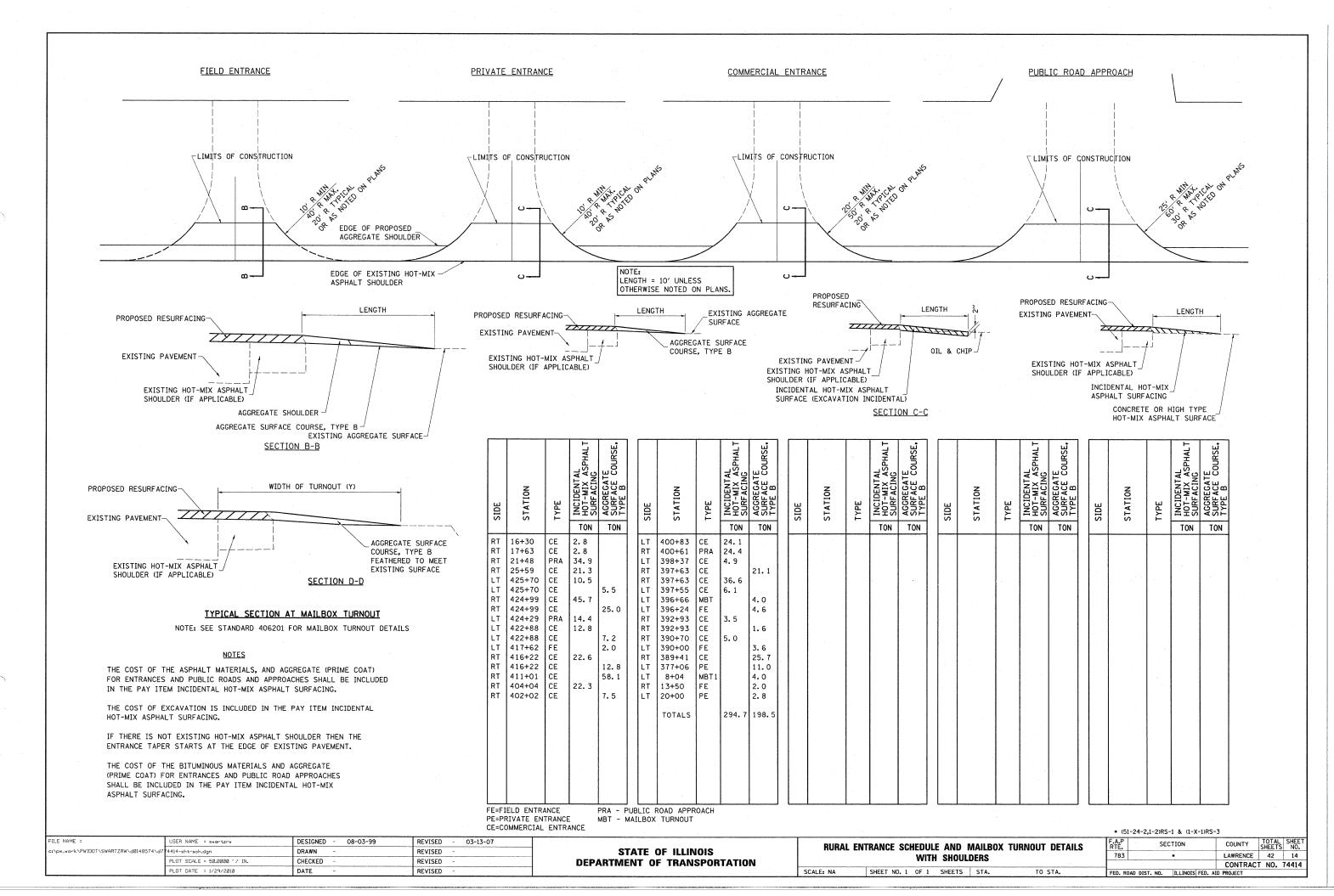
SO	CHEDL	IARKING JLE STATION	LENGTH	PAINT PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 6"	TEMPORARY PAVEMENT MARKING - LINE 12"	SHORT-TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	RAISED REFLECTIVE PAVEMENT MARKERS	RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE)
STATION	1 10	31A110N	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	SQ FT	SQ FT	FOOT	FOOT	FOOT	EACH	EACH
13+98.00	то	14+33.00	35.0	140.0	140.0	0.0	0.0	12.0	1. 3	0.0	0.0	0.0	0.0	0.0	2. 0	0.0
14+33.00	то	16+10.00	177.0	708. 0	708.0	0.0	0.0	48.0	5. 3	0.0	0.0	0.0	0.0	0.0	6. 0	0.0
16+10.00	то	22+50.00	640.0	1440.0	1440.0	0.0	0.0	192.0	21.3	0.0	0.0	0.0	0.0	0.0	8. 0	0.0
22+50.00	то	22+85.00	35.0	78.8	78.8	0.0	0.0	12.0	1.3	0.0	0.0	0.0	0.0	0.0	1.0	0.0
22+85.00	ТО	25+70.10	285. 1	641.5	641.5	0.0	0.0	84.0	9. 3	0.0	0.0	0.0	0.0	0.0	4.0	0.0
25+70.10	=	427+11.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
427+11.90	ТО	377+36.00	4975.9	11010.8	11010.8	0.0	0.0	1488.0	165.3	0.0	0.0	0.0	0.0	0.0	63.0	0.0
376+31.00	то	377+36.00	0.0	420.0	420.0	0.0	0.0	36.0	4. 0	0.0	0.0	420.0	0.0	0.0	4.0	0.0
376+31.00	=	2+00.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0
2+00.00	то	3+00.00	100.0	0.0	400.0	0.0	0.0	27.0	3. 0	0.0	0.0	400.0	0.0	0.0	4.0	0.0
3+00.00	ТО	3+35.00	35.0	0.0	70.0	0.0	0.0	9.0	1.0	0.0	0.0	70.0	0.0	0.0	2.0	0.0
3+35.00	ТО	21+00.00	1765.0	0.0	5083.0	528.0	547.0	15885.0	1765.0	124.8	124.8	5083.0	528.0	547.0	14.0	0.0
21+00.00	ТО	21+35.00	35.0	0.0	70.0	0.0	0.0	9.0	1.0	0.0	0.0	70.0	0.0	0.0	2. 0	0.0
21+35.00	то	33+00.55	1165.6	0.0	4662.2	0.0	0.0	261.0	29.0	0.0	0.0	4662.2	0.0	0.0	30.0	0.0
33+00.55	то	38+55.20	554.7	0. 0	2218.6	0.0	0.0	168.0	18. 7	0.0	0.0	2218.6	0.0	0.0	14.0	0.0
38+55. 20	то	41+40.94	285. 7	564. 2	140.0	0.0	0.0	63.0	7. 0	0.0	0.0	140.0	0.0	0.0	2. 0	3.0
MED	IAN REM	IOVAL	0.0	0.0	5405.0	165. 3	1143.0	0.0	0.0	0.0	0.0	10810.0	165.3	1143.0	176.0	0.0
	TOTALS		10089.0	15003.0	32488.0	693.0	1690.0	18294.0	2033. 0	125.0	125.0	23874.0	693.0	1690.0	332.0	3. 0

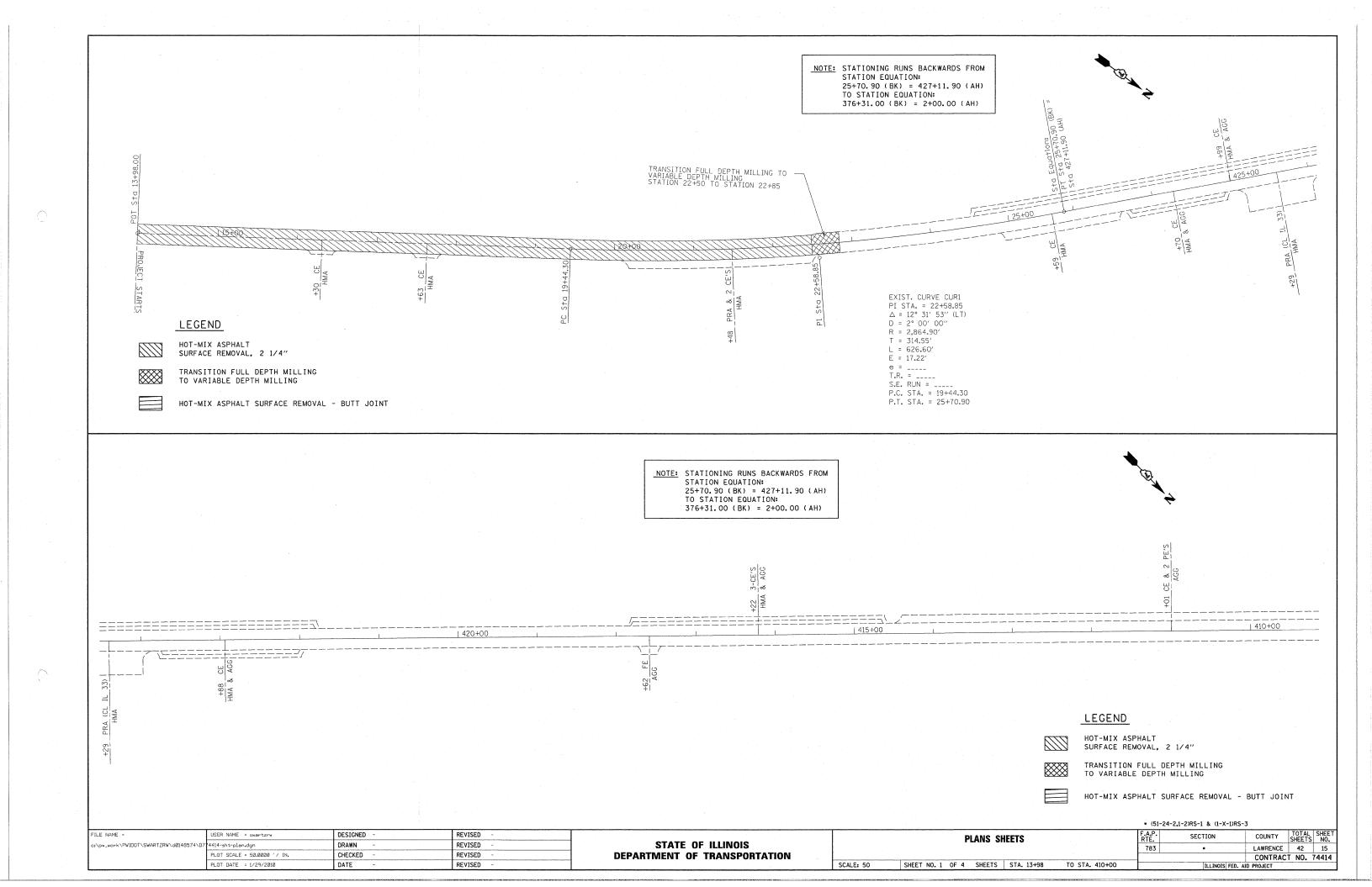
• (51-24-2,1-2)RS-1 & (1-X-1)RS-3 F.A.P. RTE. 783 COUNTY TOTAL SHEET NO.

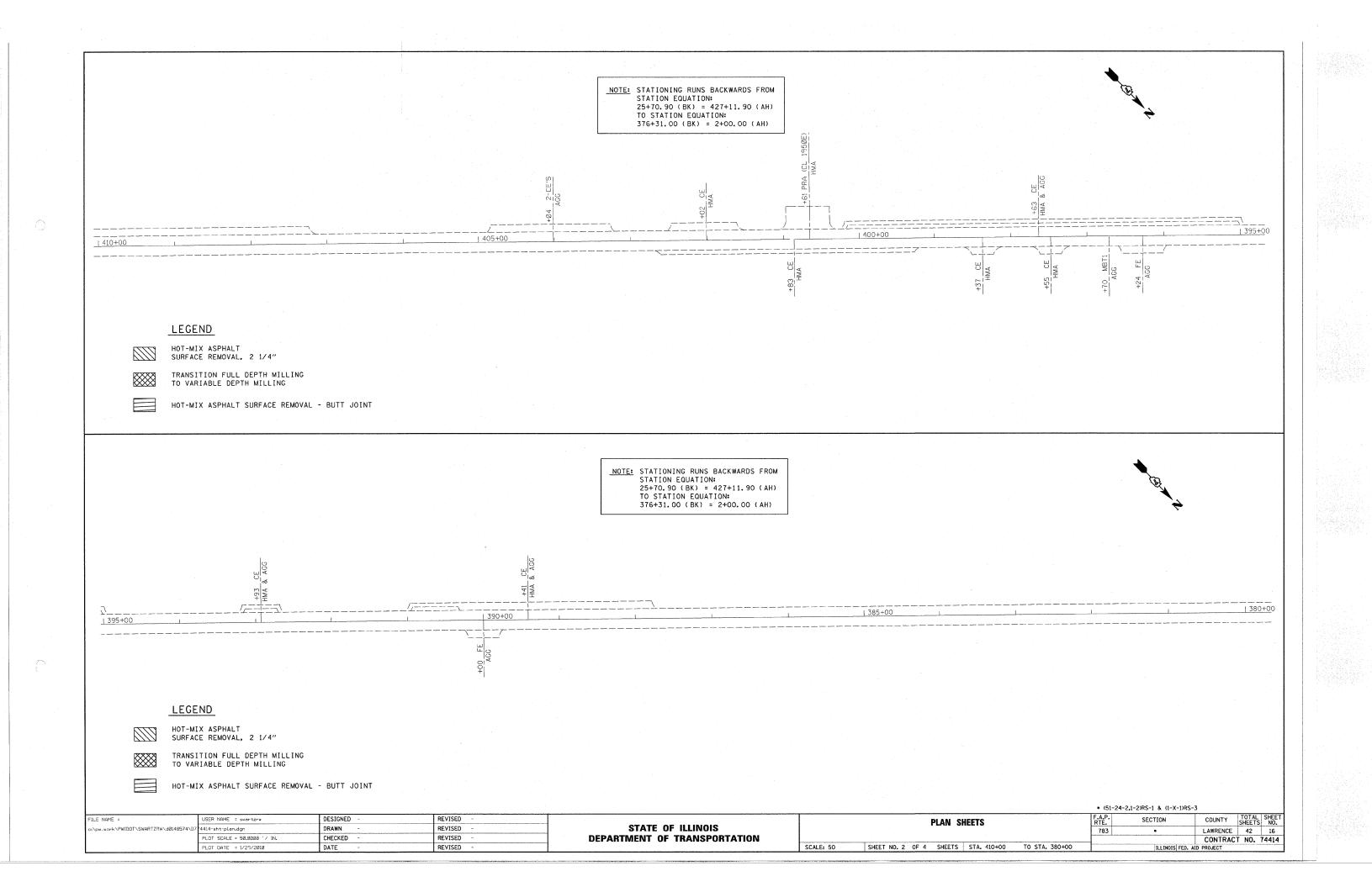
LAWRENCE 42 13

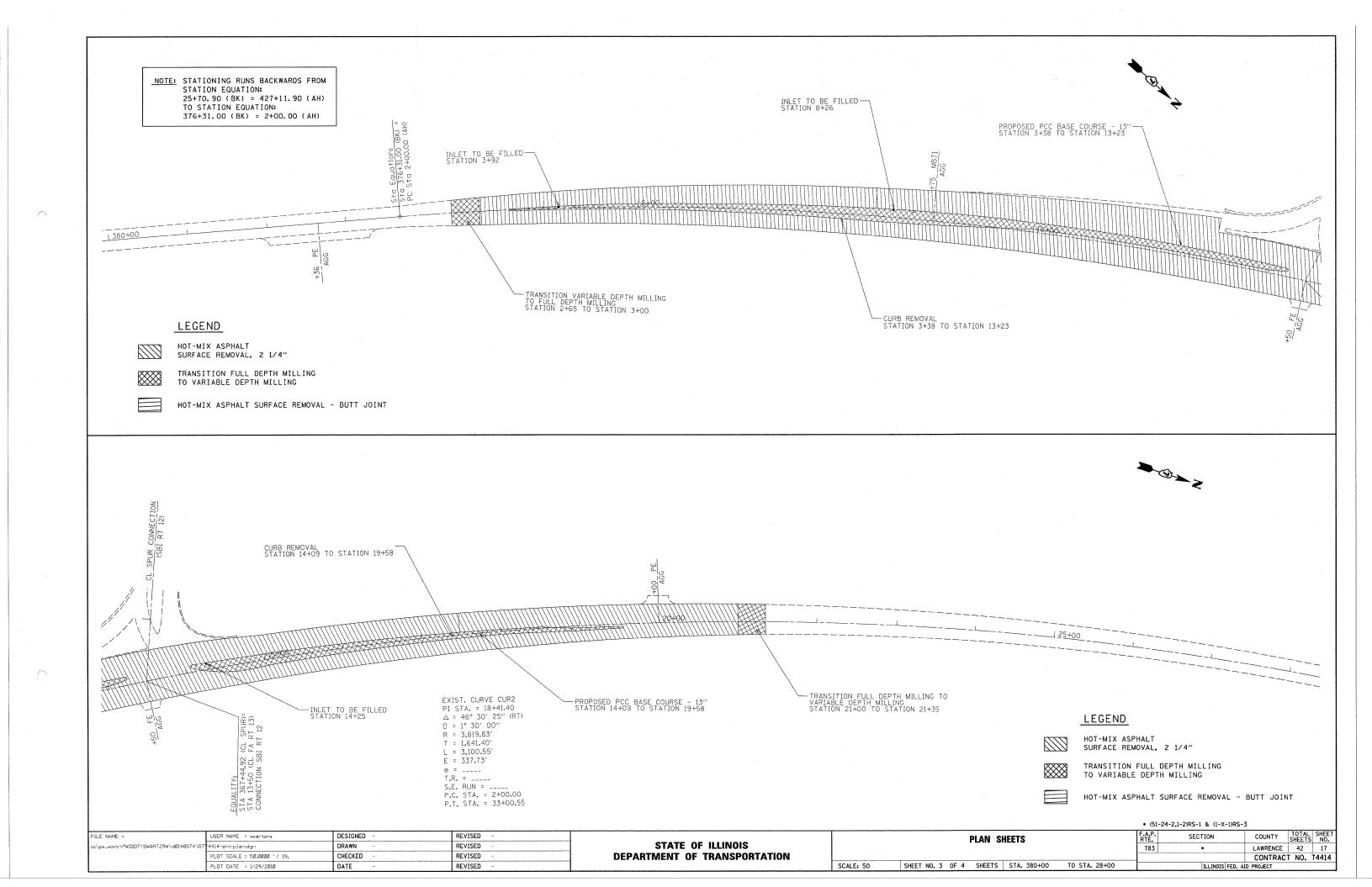
CONTRACT NO. 74414

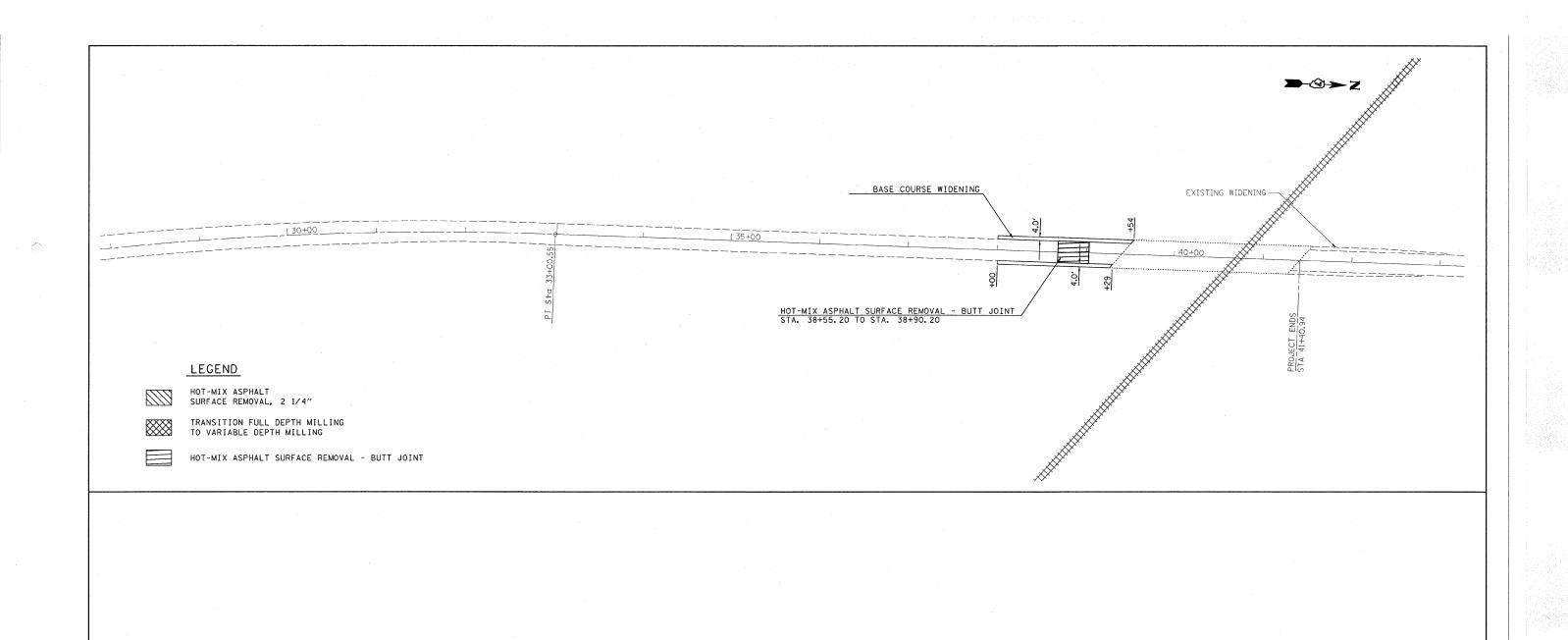
ILLINOIS FED. AID PROJECT DESIGNED -REVISED FILE NAME = USER NAME = swartzrw SECTION SCHEDULE OF QUANTITIES STATE OF ILLINOIS ::\pw\_work\PWIDOT\SWARTZRW\dØ148574\d7 DRAWN REVISED PLOT SCALE = 50.0000 '/ IN. CHECKED -REVISED **DEPARTMENT OF TRANSPORTATION** DATE REVISED SCALE: NA SHEET NO. 2 OF 2 SHEETS STA. TO STA. PLOT DATE = 1/29/2010



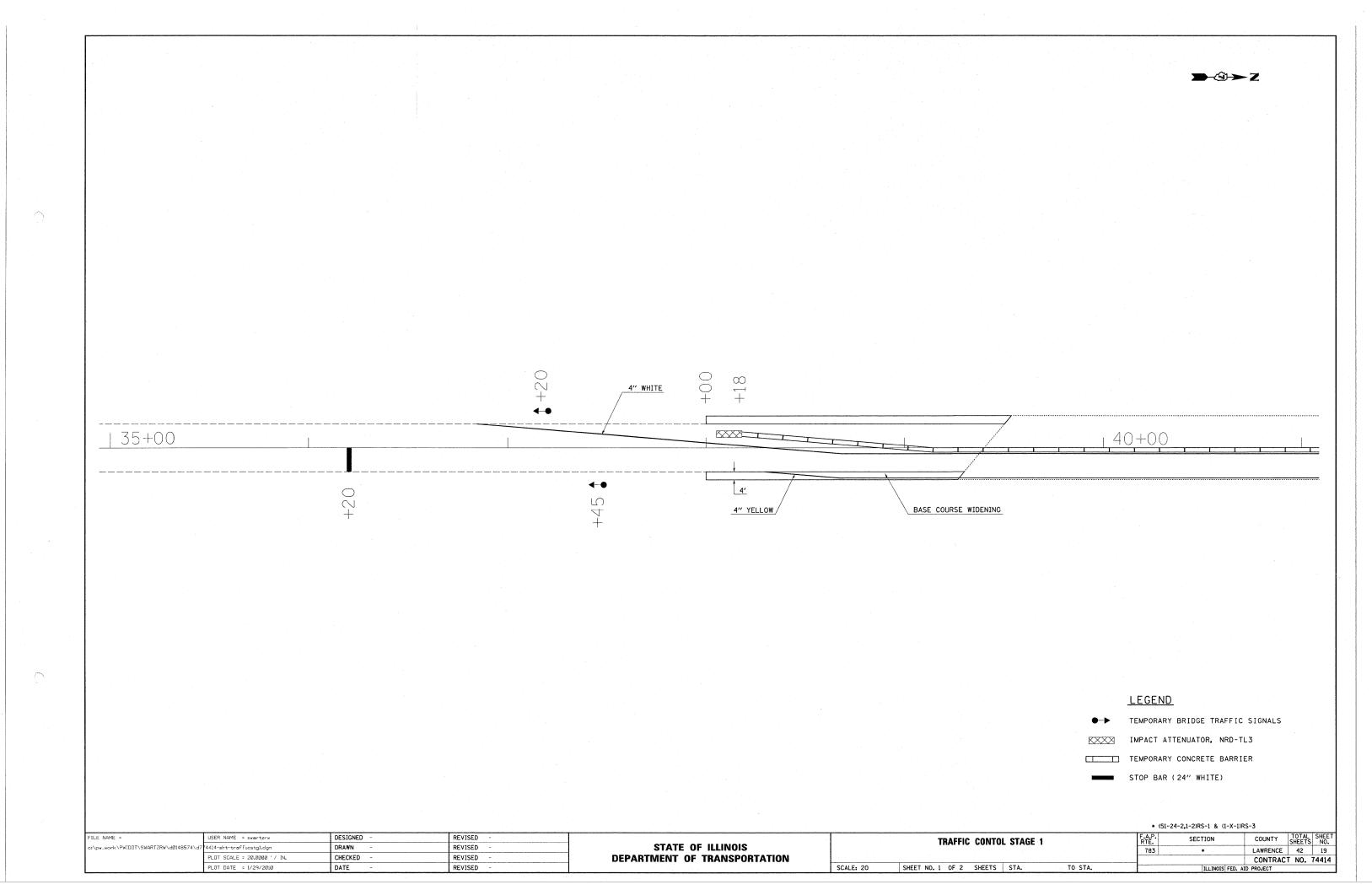




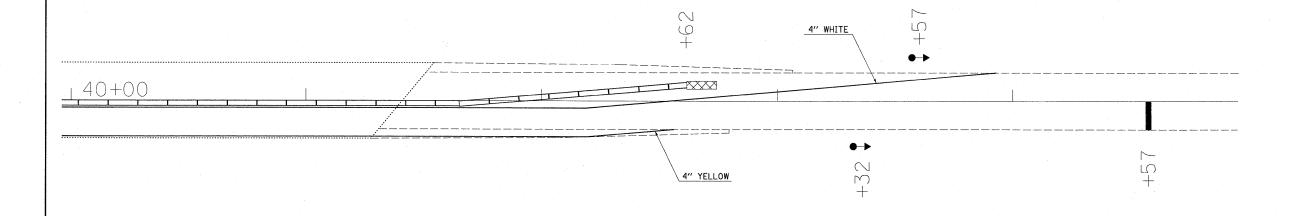




• (51-24-2,1-2)RS-1 & (1-X-1)RS-3 F.A.P. RTE. 783 DESIGNED -REVISED USER NAME = swartzrw PLAN SHEETS DRAWN REVISED STATE OF ILLINOIS PLOT SCALE = 50.0000 '/ IN. CHECKED -REVISED DEPARTMENT OF TRANSPORTATION SCALE: 50 SHEET NO. 4 OF 4 SHEETS STA. 28+00 TO STA. 41+40.94 PLOT DATE = 1/29/2010 DATE REVISED







#### <u>LEGEND</u>

● ► TEMPORARY BRIDGE TRAFFIC SIGNALS

IMPACT ATTENUATOR, NRD-TL3

TEMPORARY CONCRETE BARRIER

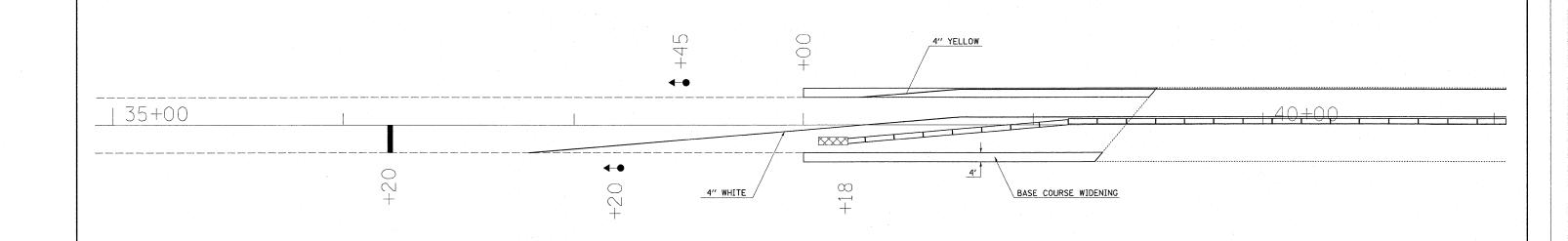
STOP BAR (24" WHITE)

• (51-24-2,1-2)RS-1 & (1-X-1)RS-3

 
 ECTION
 COUNTY SHEETS NO.

 •
 LAWRENCE
 42
 20

 CONTRACT NO.
 74414
 F.A.P. RTE. 783 FILE NAME = DESIGNED -USER NAME = swartzrw REVISED SECTION TRAFFIC CONTOL STAGE 1 o:\pw\_work\PWIDOT\SWARTZRW\d0148574\d7 4414-sht-traffiostg1.dgn DRAWN REVISED STATE OF ILLINOIS PLOT SCALE = 20.0000 '/ IN. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** PLOT DATE = 1/29/2010 DATE REVISED -SCALE: 20 SHEET NO. 2 OF 2 SHEETS STA. TO STA.



#### LEGEND

TEMPORARY BRIDGE TRAFFIC SIGNALS

IMPACT ATTENUATOR, NRD-TL3

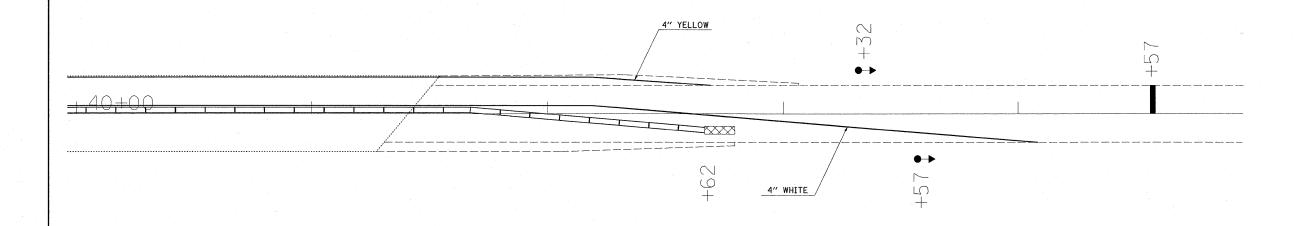
TEMPORARY CONCRETE BARRIER

STOP BAR (24" WHITE)

\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

į						- (31-24-2,1-2/K3-1 & (1-X-1/K3	_J
FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -		TRAFFIC CONTROL STAGE 2	F.A.P. SECTION	COUNTY TOTAL SHEET
c:\pw_work\PWIDOT\SWARTZRW\dØ1489	574\d7¶4414-sht~trafficstg2.dgn	DRAWN -	REVISED -	STATE OF ILLINOIS	HIMITIO GONTHOL GIAGL L	783 •	LAWRENCE 42 21
	PLOT SCALE = 20.0000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION			CONTRACT NO. 74414
	PLOT DATE = 1/29/2010	DATE -	REVISED -		SCALE: 20 SHEET NO. 1 OF 2 SHEETS STA. TO STA.	ILLINOIS FED. AIT	PROJECT





#### LEGEND

● ► TEMPORARY BRIDGE TRAFFIC SIGNALS

IMPACT ATTENUATOR, NRD-TL3

TEMPORARY CONCRETE BARRIER

STOP BAR (24" WHITE)

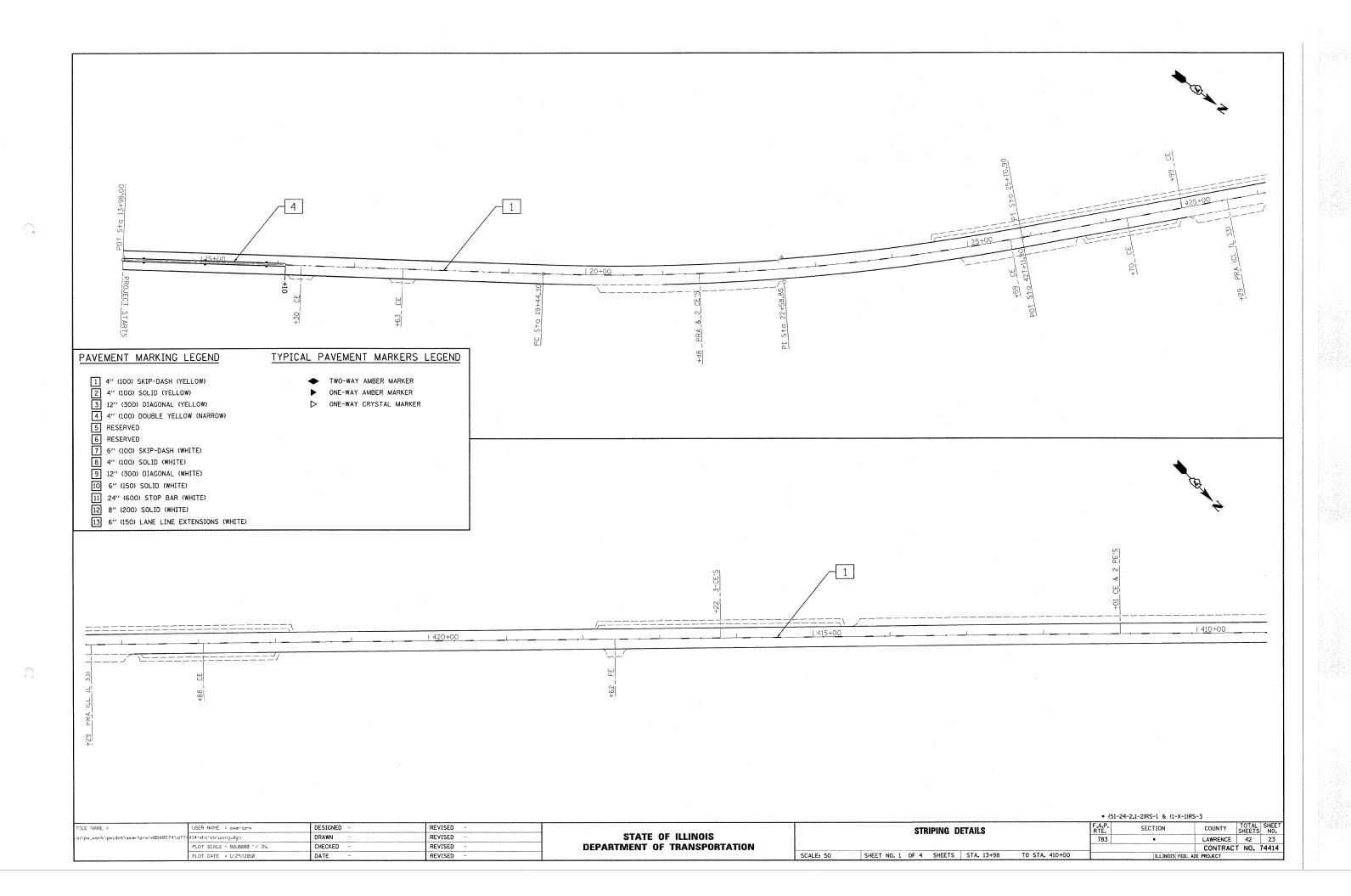
\* (51-24-2,1-2)RS-1 & (1-X-1)RS-3

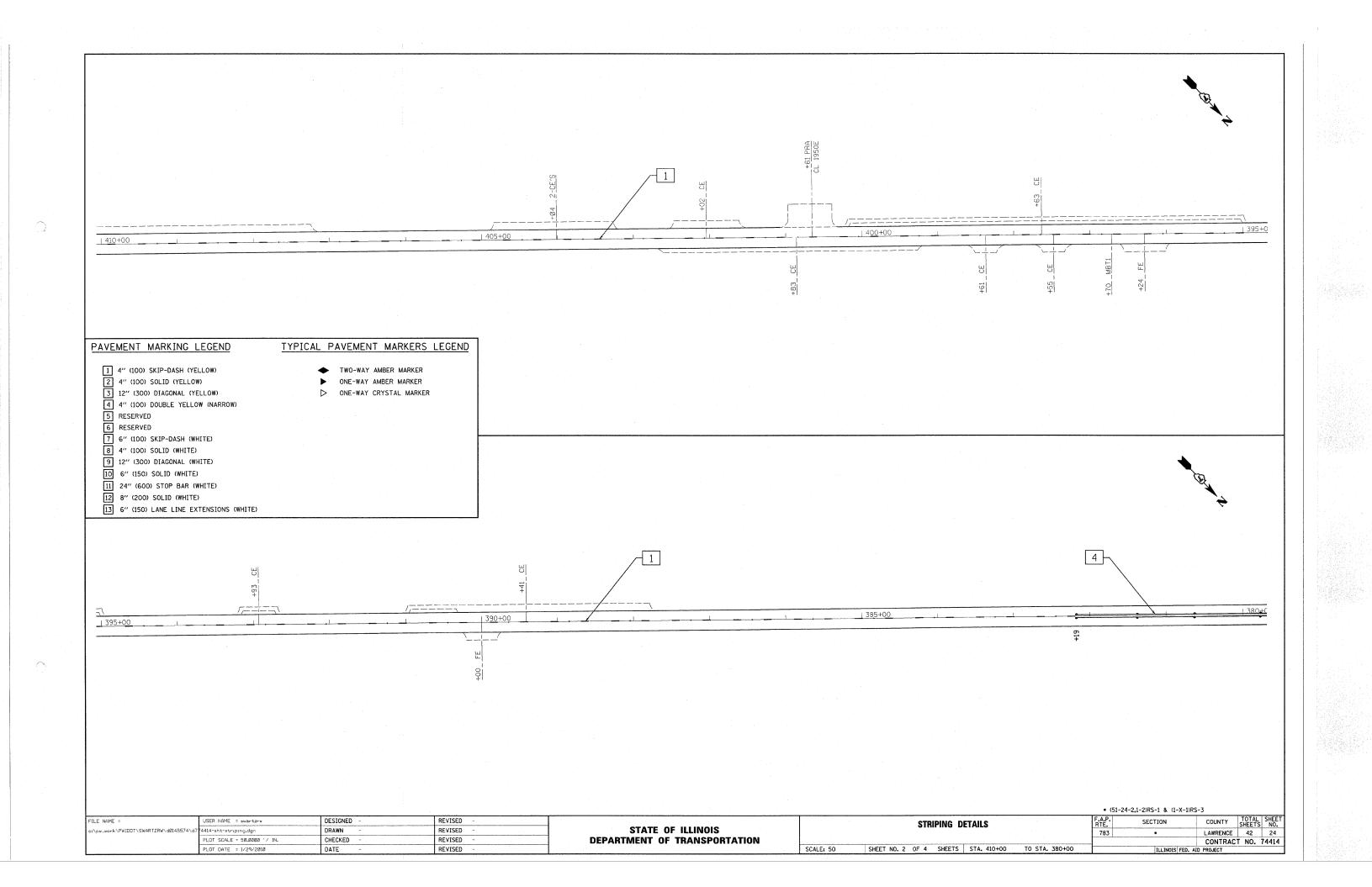
CTION COUNTY SHEETS NO.

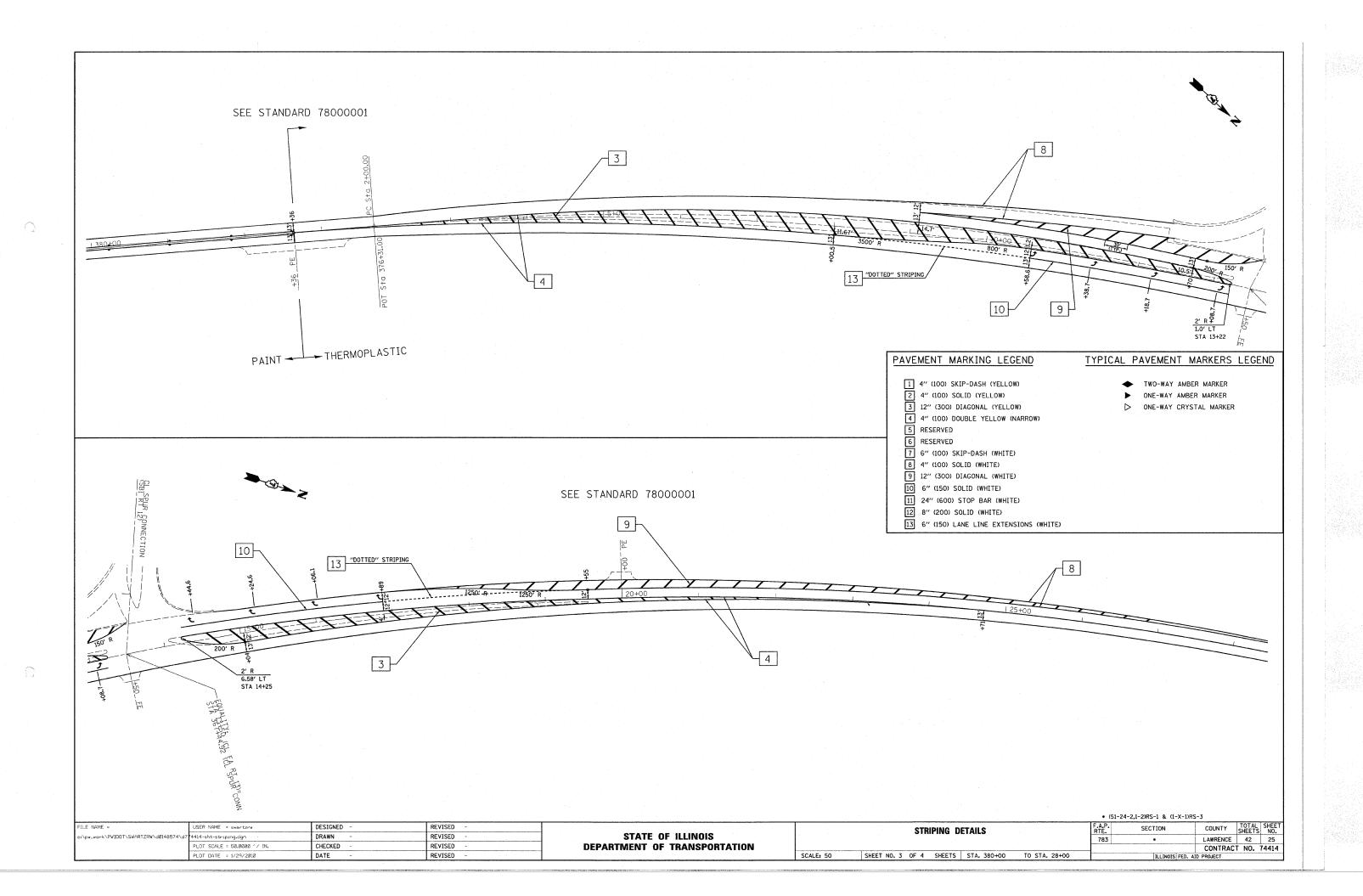
LAWRENCE 42 22

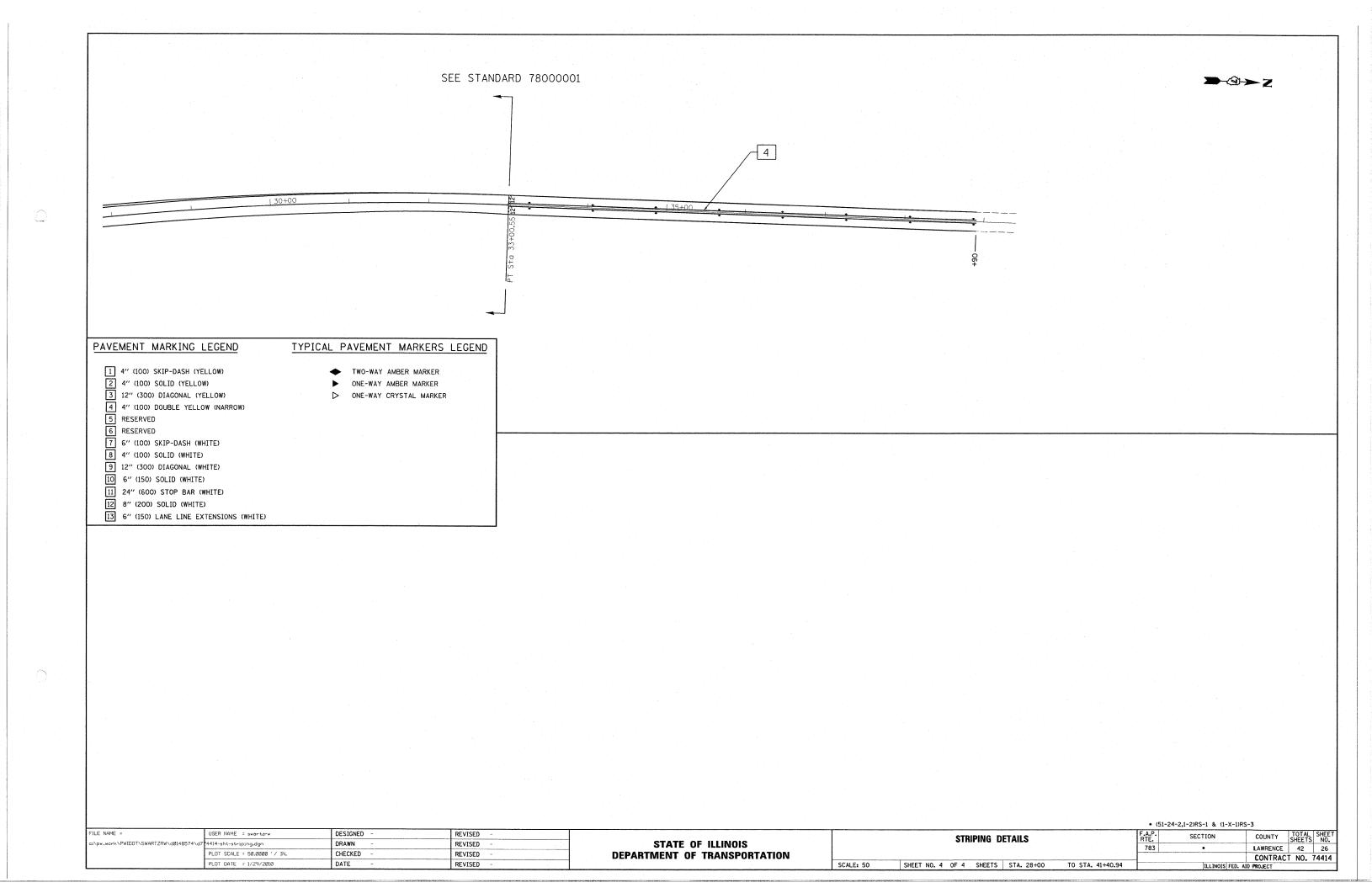
CONTRACT NO. 74414

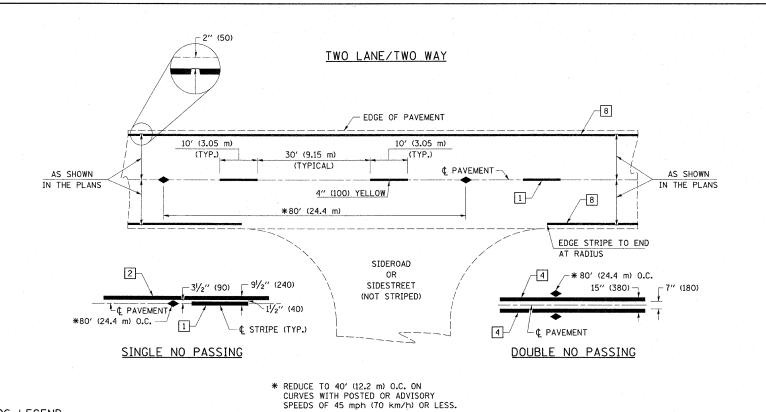
||ILLINOIS||FED. AID PROJECT| FILE NAME = DESIGNED -REVISED USER NAME = swartzrw TRAFFIC CONTROL STAGE 2 STATE OF ILLINOIS ::\pw\_work\PWIDOT\\$WARTZRW\dØ148574\d7<mark>7</mark>4414-sht-trafficstg2.dgn DRAWN REVISED PLOT SCALE = 20.0000 '/ IN. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** DATE SHEET NO. 2 OF 2 SHEETS STA. TO STA. PLOT DATE = 1/29/2010 REVISED SCALE: 20











#### TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER

#### PAVEMENT MARKING LEGEND

1 4" (100) SKIP-DASH (YELLOW)

(3.05 m) (9.15 m) (3.05 m

2 4" (100) SOLID (YELLOW)

3 12" (300) DIAGONAL (YELLOW)

45° (300) TRAFFIC

TRAFFIC \$\to\$ 4" (100) \$\text{ (100)}\$ \$\text{DOUBLE YELLOW (NARROW)}\$ \$\text{NARROW}\$ \$\text{8" (200) CTS.}\$

5 RESERVED

6 RESERVED

7 6" (150) SKIP-DASH (WHITE)

10' 30' 10' (3.05 m) (3.05 m)

8 4" (100) SOLID (WHITE)

9 12" (300) DIAGONAL (WHITE)

45° (300)

10 6" (150) SOLID (WHITE)

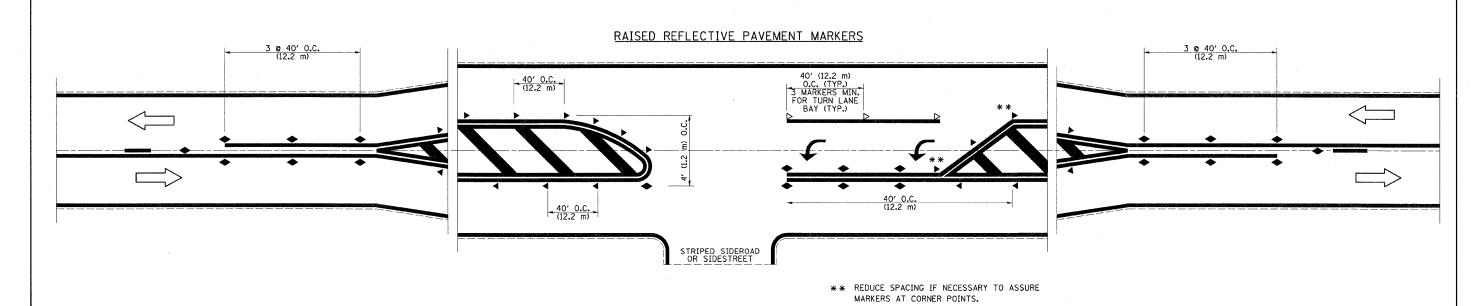
11 24" (600) STOP BAR (WHITE)

12 8" (200) SOLID (WHITE)

13 6" (100) LANE LINE EXTENSIONS (WHITE)

600) (610) (610)

14 4" (100) PARKING WHITE



NOT TO SCALE Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

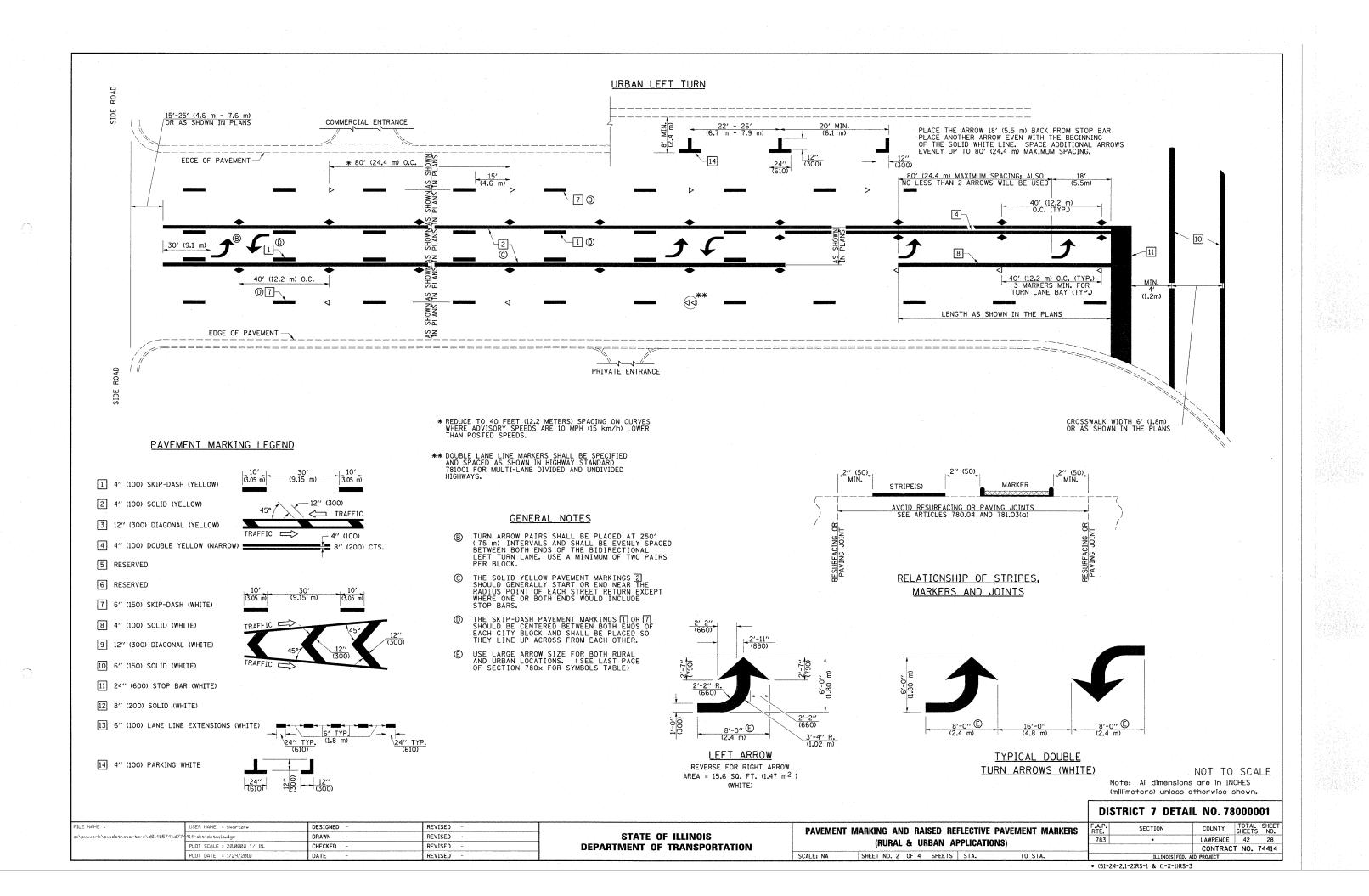
DI	STRICT	7 DE	ETAII	L NO.	780000	01
F.A.P. RTE.	SEC	TION		COUNTY	TOTAL	SHEE

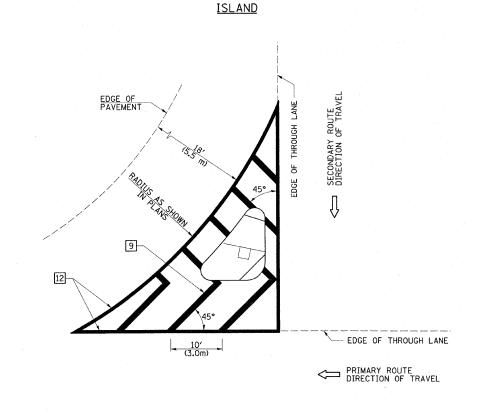
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: NA SHEET NO. 1 OF 4 SHEETS STA. TO STA.

• (51-24-2,1-2)RS-1 & (1-X-1)RS-3





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414-sht-details.dgn

PLOT SCALE = 20.0000 '/ IN.

PLOT DATE = 1/29/2010

#### GENERAL NOTES

- 1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
- SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
- 3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
- 4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
- 5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:

15' (4.5 m) 20' (6.0 m) 30' (9.0 m) <30 MPH (<50 km/h) 30-45 MPH (50-75 km/h >45 MPH (>75 km/h

#### PAVEMENT MARKING LEGEND

1 4" (100) SKIP-DASH (YELLOW) 2 4" (100) SOLID (YELLOW)

<☐ TRAFFIC 3 12" (300) DIAGONAL (YELLOW)

4 4" (100) DOUBLE YELLOW (NARROW) **8**" (200) CTS.

5 RESERVED

6 RESERVED

7 6" (150) SKIP-DASH (WHITE)

8 4" (100) SOLID (WHITE)

9 12" (300) DIAGONAL (WHITE)

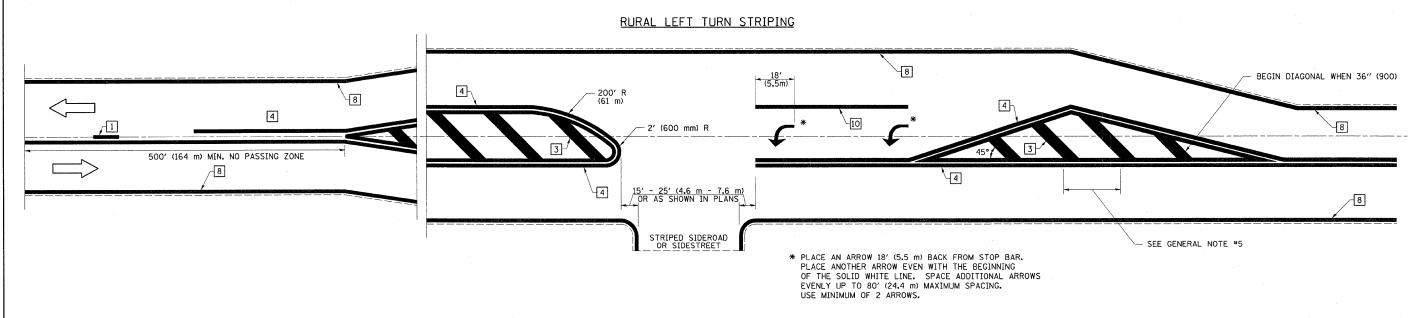
10 6" (150) SOLID (WHITE)

11 24" (600) STOP BAR (WHITE)

12 8" (200) SOLID (WHITE)

13 6" (100) LANE LINE EXTENSIONS (WHITE)

14 4" (100) PARKING WHITE



STATE OF ILLINOIS

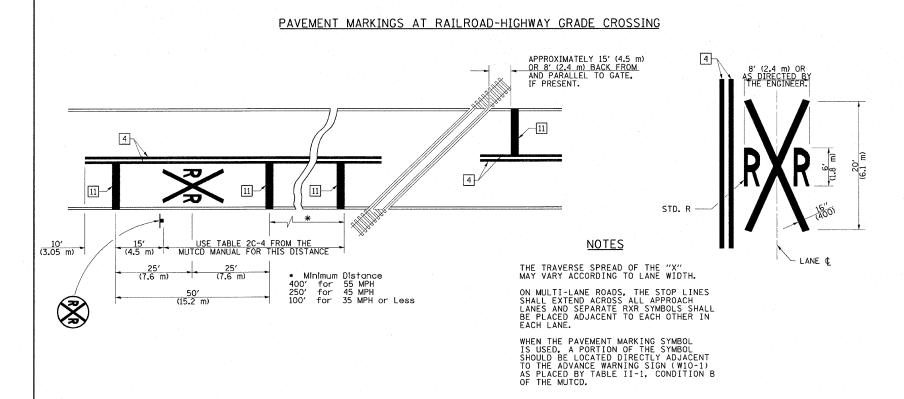
**DEPARTMENT OF TRANSPORTATION** 

NOT TO SCALE Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

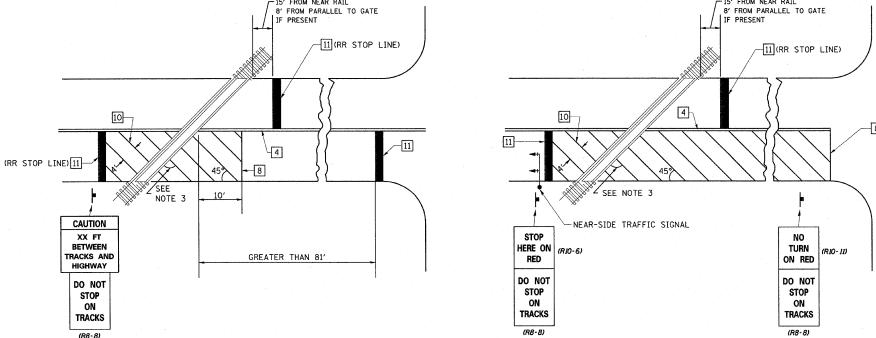
DICTRICT 7 DETAIL NO 7000004

					DIS	SIRICI / DEIAI	L NU. /8	UUUU	UI
PAVEMENT M	ARKING AND RA	ISED REI	FLECTIVE PAVE	MENT MARKERS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	RURAL & III	RRAN AF	PLICATIONS)		783	. •.	LAWRENCE	42	29
	Inonver a o	IIDAIT AI	· LIOATIONO,			*	CONTRAC	T NO.	74414
SCALE: NA	SHEET NO. 3 OF 4	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		

• (51-24-2,1-2)RS-1 & (1-X-1)RS-3



# RAILROAD CROSSING WITH INTERCONNECT ONLY RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS CONTRACTOR OF THE PROPERTY OF CASE OF THE PROPERTY OF THE PROPERTY OF CASE OF THE PROPERTY OF THE PROPE



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

#### PAVEMENT MARKING LEGEND

1 4" (100) SKIP-DASH (YELLOW) (3.05 m) (9.15 m) (3.05 m)

2 4" (100) SOLID (YELLOW) 45°

4" (100) DOUBLE YELLOW (NARROW) 8" (200) CTS.

5 RESERVED

6 RESERVED

7 6" (150) SKIP-DASH (WHITE)

3 12" (300) DIAGONAL (YELLOW)

(9.15 m) (3.05 m)

8 4" (100) SOLID (WHITE)

9 12" (300) DIAGONAL (WHITE)

45° 12" (300)

10 6" (150) SOLID (WHITE)

11 24" (600) STOP BAR (WHITE)

12 8" (200) SOLID (WHITE)

13 6" (100) LANE LINE EXTENSIONS (WHITE)

(610)

14 4" (100) PARKING WHITE

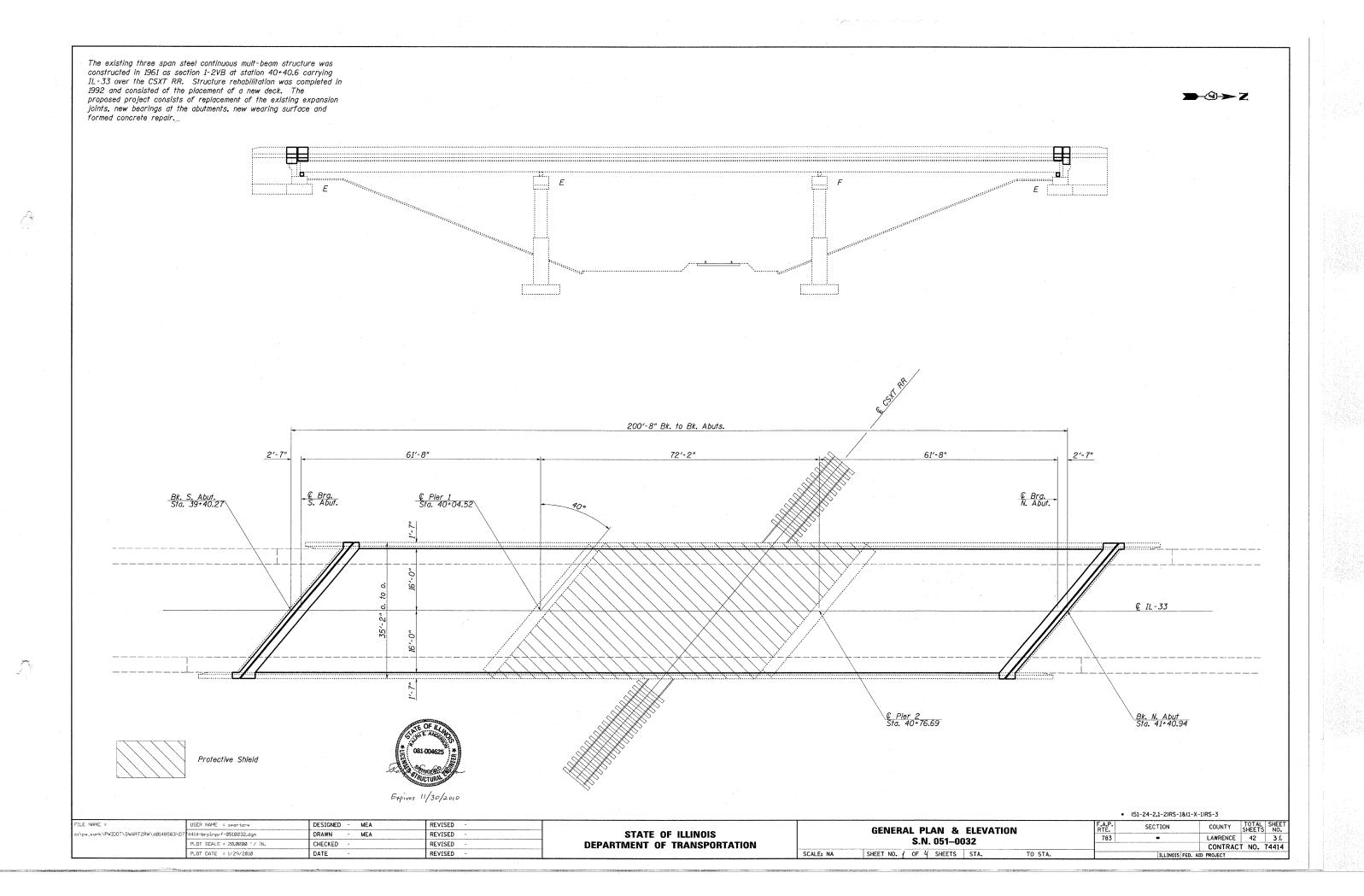
#### GENERAL NOTES

- 1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- 2. EXTEND PAYEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- 3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

						DISTRICT 7 DETAIL	NO. 78000001
FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -		PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS	RTE. SECTION	COUNTY TOTAL SHEET NO.
c:\pw_work\pwidot\swartzrw\d0148574\d7	414-sht-details.dgn DRAWN -	REVISED -	STATE OF ILLINOIS	(RURAL & URBAN APPLICATIONS)	783 •	LAWRENCE 42 30	
	PLOT SCALE = 20.00000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	INUNAL & UNDAN APPLICATIONS)		CONTRACT NO. 74414
	PLOT DATE = 1/29/2010	DATE -	REVISED -		SCALE: NA SHEET NO. 4 OF 4 SHEETS STA. TO STA.	ILLINOIS FED. AID I	PROJECT
						• (51-24-2.1-2)RS-1 & (1-X-1)RS-3	



#### GENERAL NOTES

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

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

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

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions. Reinforcement bars designated (E) shall be epoxy coated.

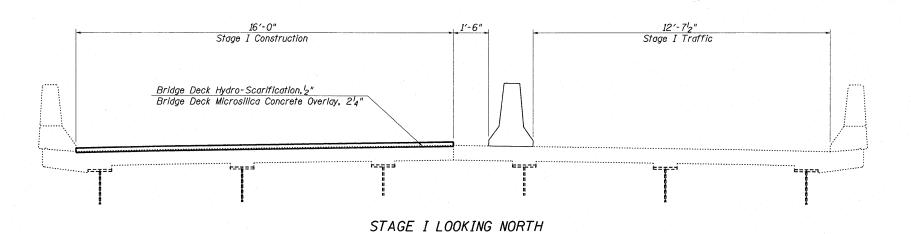
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall 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.

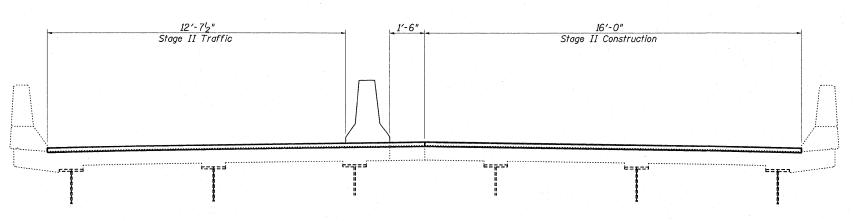
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

#### TOTAL BILL OF MATERIALS

ITEM DESCRIPTION	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	18.1
Concrete Superstructure	Cu. Yd.	20
Reinforcement Bars, Epoxy Coated	Pound	1310
Bar Splicers	Each	24
Elastomeric Bearing Assembly Type I	Each	6
Elastomeric Bearing Assembly Type II	Each	6
Furnishing and Erecting Structural Steel	Pound	1680
Jack and Remove Existing Bearings	Each	12
Protective Shield	Sq. Yd.	267
Bridge Deck Hydro-Scarification, 1/2 "	Sq. Yd.	685
Bridge Deck Microsilica Concrete Overlay, 2 1/4 "	Sq. Yd.	685
Bridge Deck Grooving	Sq. Yd.	642
Protective Coat	Sq. Yd.	712
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	3
Deck Slab Repair (Full Depth Type II)	Sq. Yd.	8
Preformed Joint Strip Seal	Foot	92
Structural Repair of Concrete <5"	Sq. Ft.	47
Anchor Bolts 1" Ø	Each	24





STAGE II LOOKING NORTH

• (51-24-2,1-2)RS-1&(1-X-1)RS-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

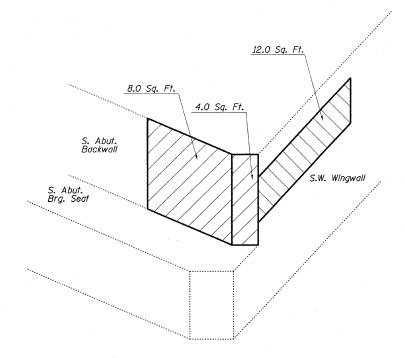
GENERAL NOTES, BILL OF MATERIALS, STAGING PLAN
S.N. 051-0032

SCALE: NA SHEET NO. I OF U SHEETS STA. TO STA.

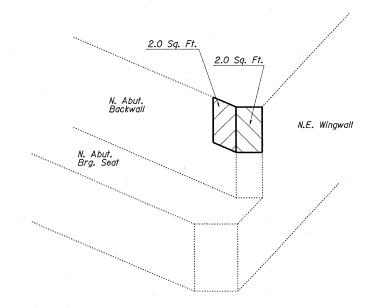
A.P. SECTION COUNTY TOTAL SHEETS NO.

783 • LAWRENCE 42 3.2

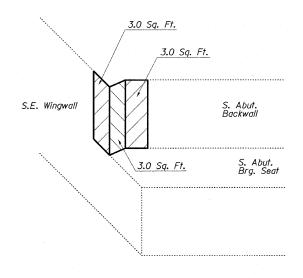
CONTRACT NO. 74414



South Abut., West End

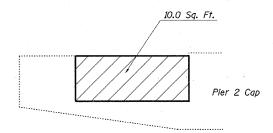


North Abut., East End



South Abut., East End

Note: Quantities are estimated. Actual quantities to be determined by the Resident Engineer.

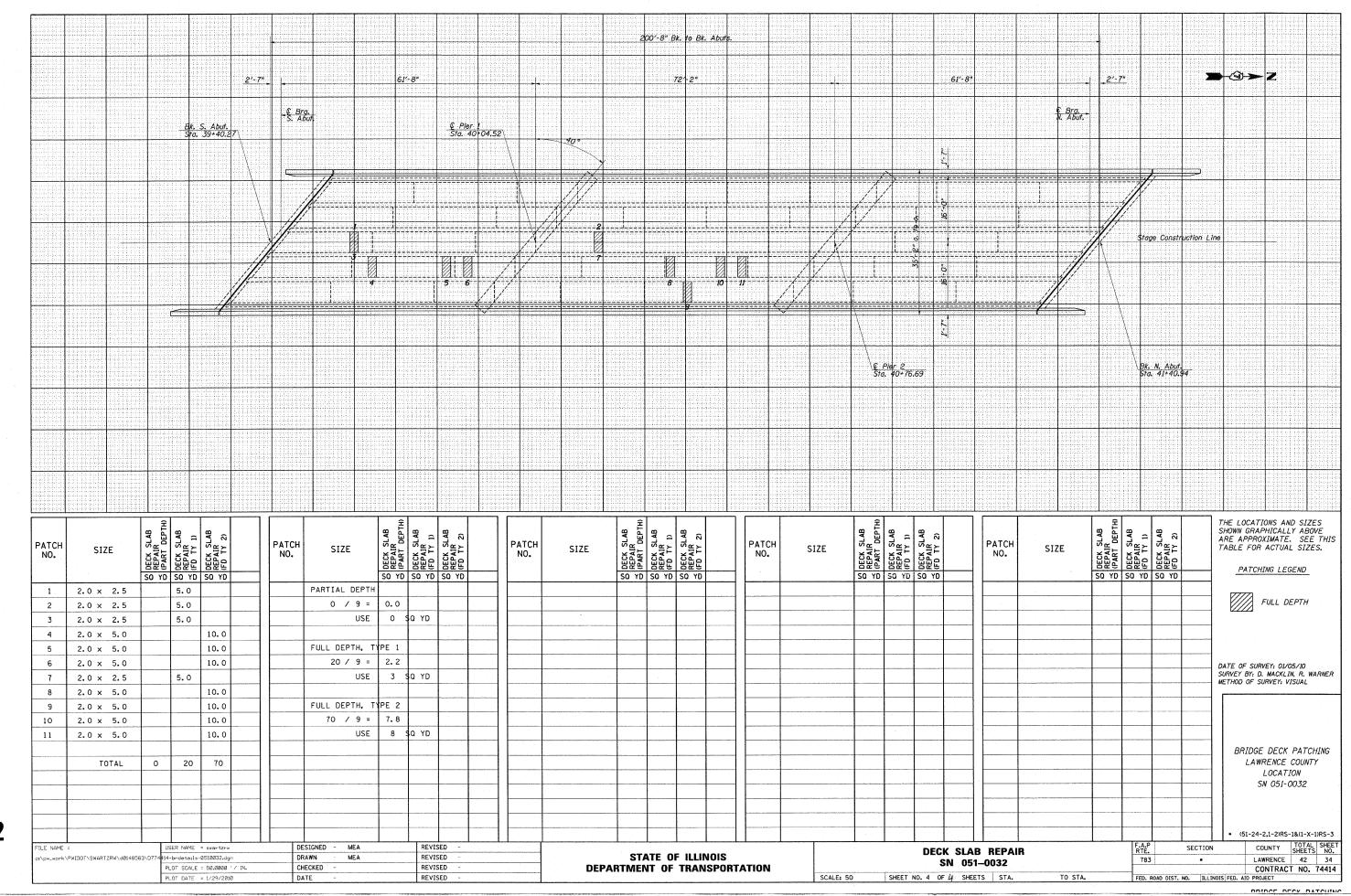


Pier 2, East End, North Face

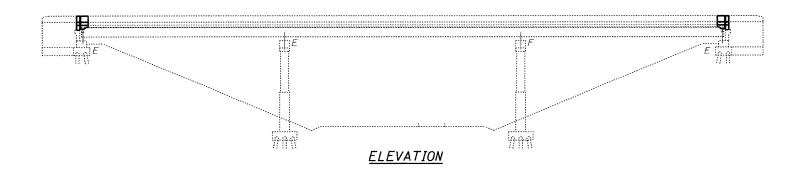


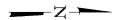
Structural Repair of Concrete (Depth < 5")

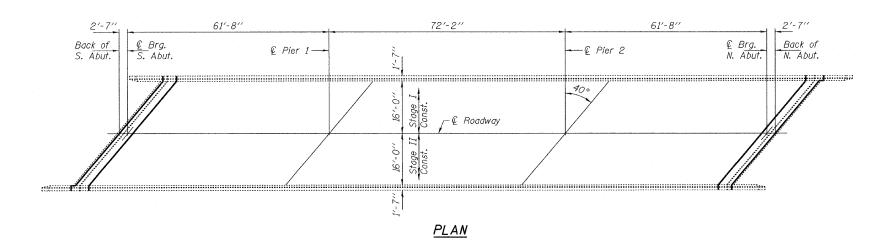
							• (51-24-2,1-2)RS-1&(1-X-1)RS-3
FILE N	AME =	USER NAME = swartzrw	DESIGNED - MEA	REVISED -		STRUCTURAL REPAIR OF CONCRETE <5"	RTE SECTION COUNTY TOTAL SHEET
o1/bw-w	vork\PWIDOT\SWARTZRW\d0148563\D7	4414-brdetails-0510032.dgn	DRAWN - MEA	REVISED -	STATE OF ILLINOIS	S.N. 051-0032	783 • LAWRENCE 42 33
		PLOT SCALE = 20.0000 '/ IN.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	3.IV. U3 I—UU3Z	CONTRACT NO. 74414
		PLOT DATE = 1/29/2010	DATE -	REVISED		SCALE: NA SHEET NO. 3 OF 4 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT



## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION







DESIGNED Jan J. form
CHECKED Wird M

DRAWN baliva
CHECKED IJL WE

EXAMINED LONG STRUCTURES

PASSED ROLL C. Andrew
ENGINEER OF STRUCTURES

ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-2010

#### NOTES

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

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

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

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

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.

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".

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

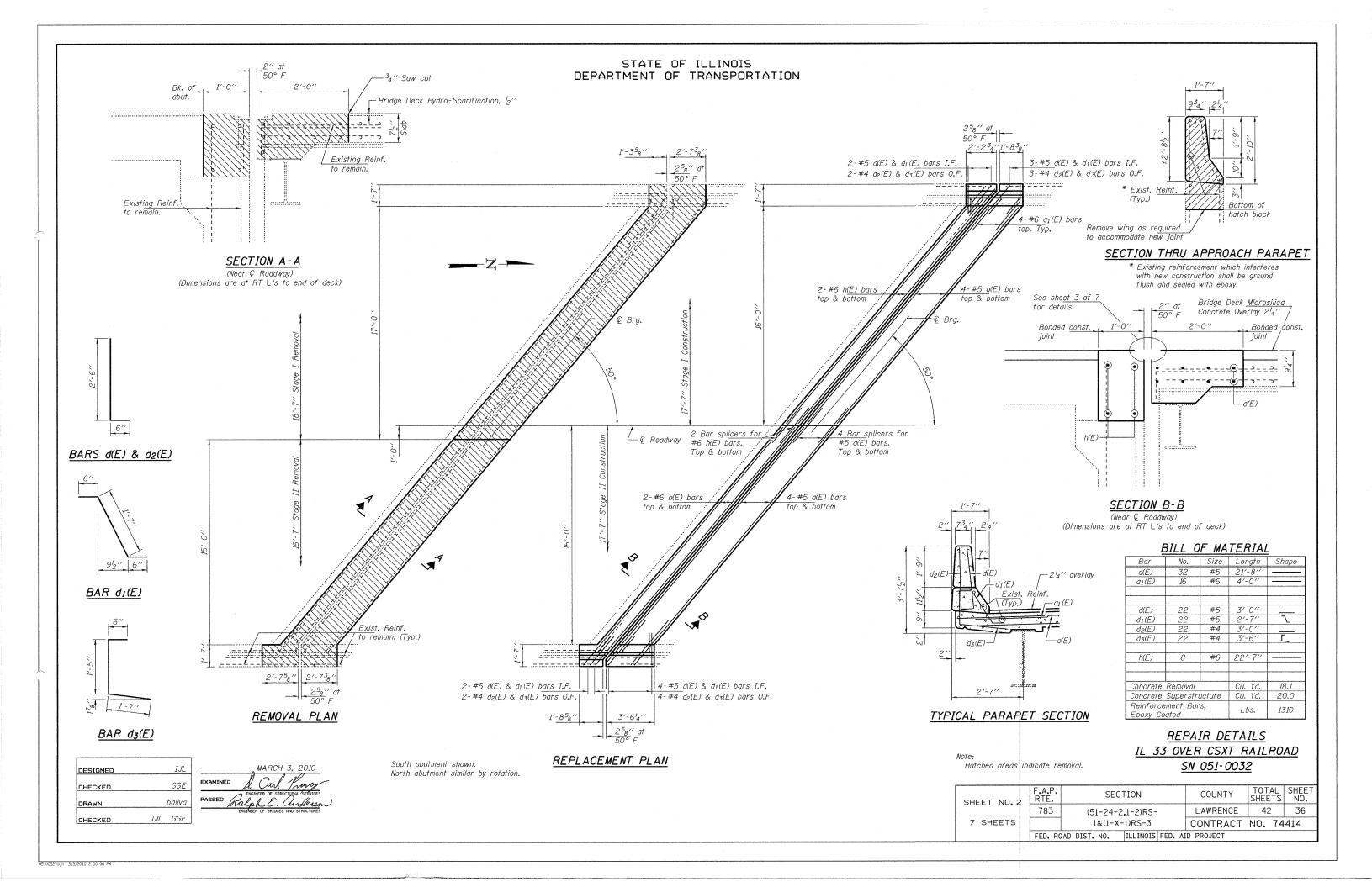
Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

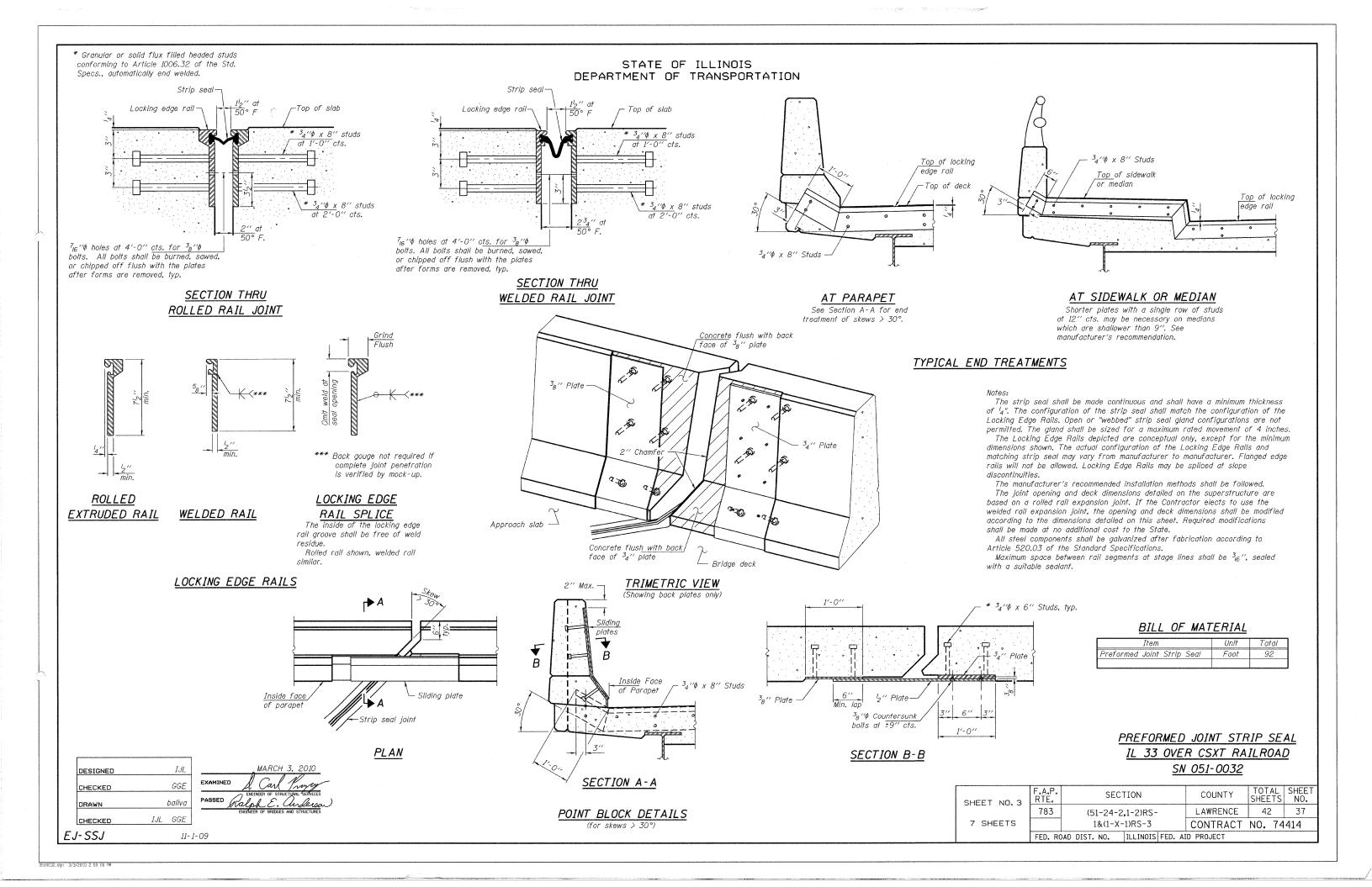
BILL OF MATERIAL

<u> </u>	=	
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	18.1
Concrete Superstructure	Cu. Yd.	20.0
Elastomeric Bearing Assembly, Type I	Each	6
Elastomeric Bearing Assembly, Type II	Each	6
Furnishing and Erecting Structural Steel	Pound	1680
Jack and Remove Existing Bearings	Each	12
Reinforcement Bars, Epoxy Coated	Pound	1310
Bar Splicers	Each	24
Preformed Joint Strip Seal	Foot	92
Anchor Bolts 1"4	Each	24

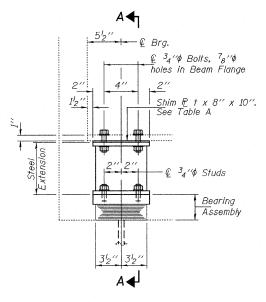
# PLAN AND ELEVATION IL 33 OVER CSXT RAILROAD SN 051-0032

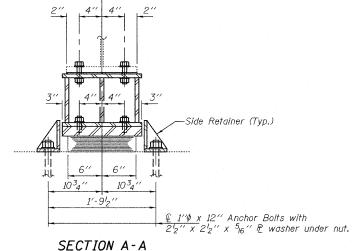
SHEET NO.1	F.A.P. RTE.	SECTI	ON		COUNTY	COUNTY TOTAL SHEETS	
011221 11011	783	(51-24-2,1	-2)RS-		LAWRENCE	42	35
7 SHEETS		1&(1-X-1)	RS-3		CONTRACT	NO. 74	414
*	FED. RO	AD DIST. NO. IL	LLINOIS F	FED. AI	D PROJECT		





#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

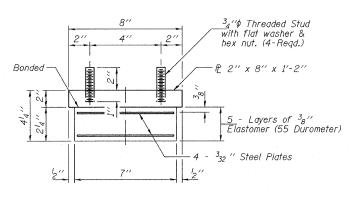




**-**-€ Beam

#### ELEVATION AT N. ABUTMENT

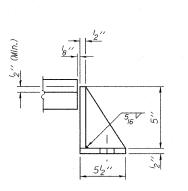
#### TYPE I ELASTOMERIC EXP. BRG.

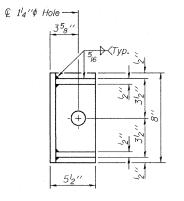


<u>TABLE A</u>						
†						
0						
0						
0						
4''						
34''						
14''						

#### BEARING ASSEMBLY

Shim plates shall not be placed under Bearing Assembly.





#### SIDE RETAINER

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

#### BEAM REACTIONS

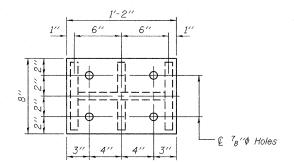
R₽	(K)	26.6
R4	(K)	32.2
Imp.	(K)	8.5
R (Total)	(K)	67.3

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

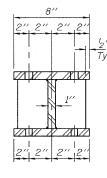
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 36Tons.

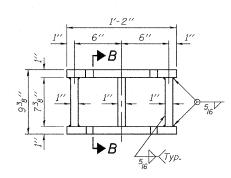
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified in lieu of ASTM F1554. in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



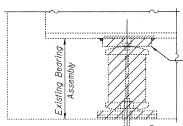
#### PLAN TOP AND BOTTOM PLATE





SECTION B-B

STEEL EXTENSION DETAIL



Existing P to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

#### EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

#### BILL OF MATERIAL

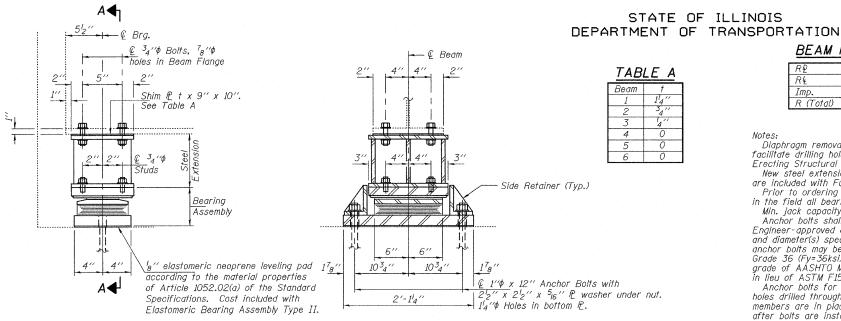
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	860
Anchor Bolts 1''¢	Each	12

NORTH ABUTMENT BEARING REPLACEMENT DETAILS IL 33 OVER CSXT RAILROAD SN 051-0032

SHEET NO. 4	F.A.P. RTE.	SEC <sup>-</sup>	TION		COUNTY	TOTAL SHEETS	SHEE NO.
Office Finds Fin	783	(51-24-2	,1-2)RS-		LAWRENCE	42	38
7 SHEETS		1&(1-X-	1)RS-3		CONTRACT	NO. 74	414
	FED. RO	DAD DIST. NO.	ILLINOIS	FED. AI	D PROJECT		

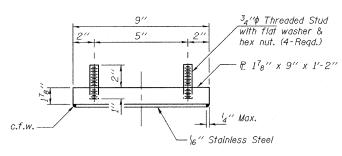
DESIGNED	IJL
CHECKED	GGE
DRAWN	baliva
CHECKED	IJL GGE

TYI/REPS 12-03-2008



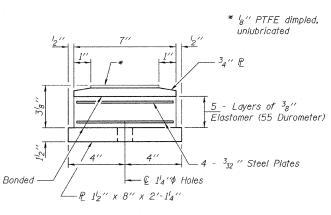
SECTION A-A

#### TYPE II TFE ELASTOMERIC EXP. BRG.



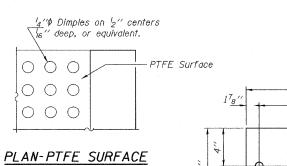
#### TOP BEARING ASSEMBLY

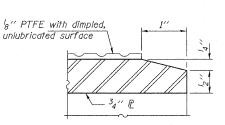
ELEVATION AT S. ABUTMENT



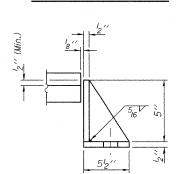
#### BOTTOM BEARING ASSEMBLY

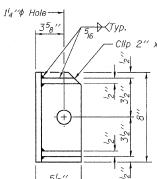
DESIGNED		IJL	MARCH 3, 2010
CHECKED		GGE	EXAMINED & Carl Prayey
DRAWN		baliva	PASSED Ralph E. andersa
CHECKED	IJL	GGE	ENGINEER OF BRIDGES AND STRUCTURES
TYII/REPS	12-03	- 2008	

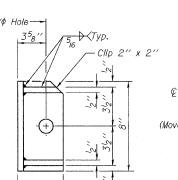


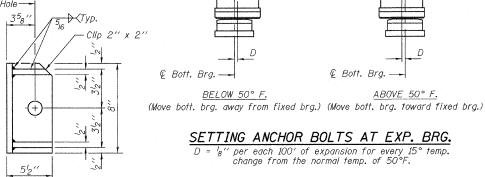


## SECTION THRU PTFE









2'-14"

1'-95"

PLAN BOTTOM BEARING PLATE

#### SETTING ANCHOR BOLTS AT EXP. BRG. $D = {}^{l}8$ " per each 100" of expansion for every 15° temp. change from the normal temp. of 50°F.

€ Bott. Brg.

ABOVE 50° F.

#### BEAM REACTIONS

R₽	(K)	26.6
R4	(K)	32.2
Imp.	(K)	<b>8.</b> 5
R (Total)	(K)	67.3

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

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

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 36Tons. Anchor bolts shall be ASTM F1554 all-thread (or an

Anchor boils shall be ASTM F1354 all filled (of discovering the state) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor botts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ks)). The corresponding specified grade of AASHTO M314 anchor botts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled through 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 shall be included in the cost of

State rerainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 'g' 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.

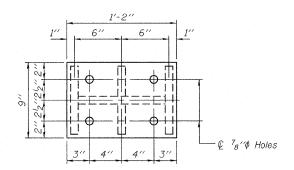
Bonding of 18" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Clip 2" x 2"

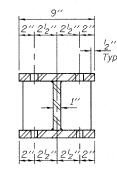
€ 14" holes

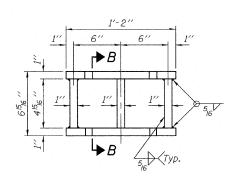
BELOW 50° F.

<u>5′2″|-</u> € Top Brg.



#### PLAN TOP AND BOTTOM PLATE

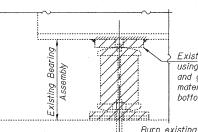




#### SECTION B-B

1-5½″|-- € Top Brg.

#### STEEL EXTENSION DETAIL



Existing R to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

#### EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

#### BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each .	6
Jack and Remove Existing Bearings	Each	6
Furnishing and Erecting Structural Steel	Pound	820
Anchor Bolts 1''Φ	Each	12

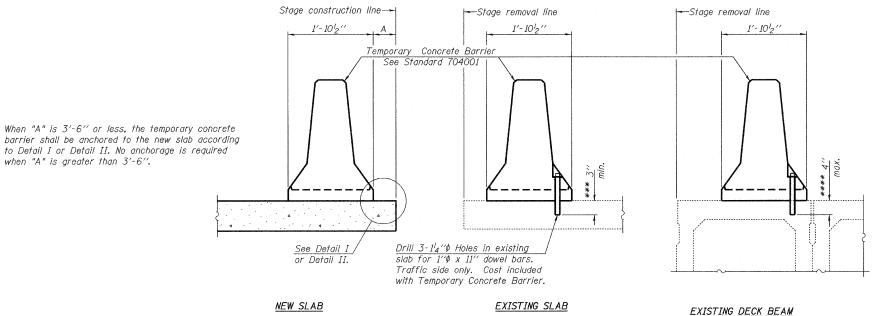
#### SOUTH ABUTMENT BEARING REPLACEMENT DETAILS IL 33 OVER CSXT RAILROAD SN 051-0032

SHEET NO.5	F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
011221 110.0	783	(51-24-2,1-2)RS-		LAWRENCE	42	39	
7 SHEETS		1&(1-X-1)RS-3		CONTRACT	NO. 74	414	
	FED. RO	AD DIST. NO.	ILLINOIS FE	ED. AI	D PROJECT		

#### SIDE RETAINER

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

## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



#### NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" $X^T$ " $X^T$ " steel P to the top layer of couplers with  $2^{-5}g''\phi$  bolts screwed to coupler at approximate P of each barrier panel.

Detail II - With Extended Reinforcement Bars:

Connect one (1) 1"x7"x 10" steel P to the concrete slab or concrete wearing surface with 2-58" Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate © of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

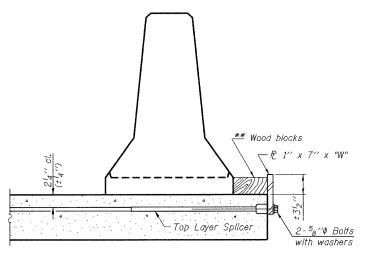
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

#### SECTIONS THRU SLAB OR DECK BEAM

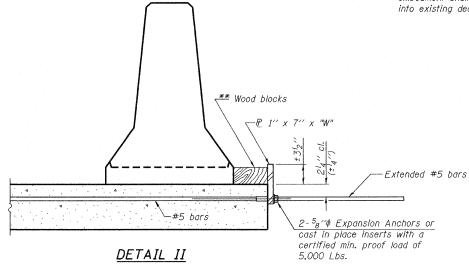
\*\*\* Dimension shown is minimum required embedment into concrete.

If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

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

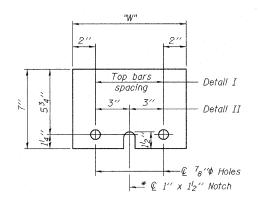


<u>DETAIL I</u>



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

"W" = Top bars spacing + 4"



#### STEEL RETAINER & 1" x 7" x 10"

\* Required only with Detail II

TEMPORARY CONCRETE BARRIER

IL 33 OVER CSXT RAILROAD

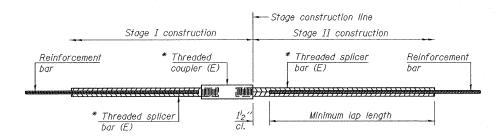
SN 051-0032

SHEET NO.6	F.A.P. RTE.	SEC <sup>-</sup>	TION		COUNTY	TOTAL SHEETS	SHEET NO.
011221 11010	783	(51-24-2	,1-2)RS-		LAWRENCE	42	40
7 SHEETS		1&(1-X-	1)RS-3		CONTRACT	NO. 74	414
	FED. RO	DAD DIST. NO.	ILLINOIS FEE	D. AI	D PROJECT		

DESIGNED	IJL	MARCH 3, 2010
CHECKED	GGE	EXAMINED & Carl Prayry
DRAWN	baliva	PASSED Walph E. andersa
CHECKED	IJL GGE	ENGINEER OF BRIDGES AND STRUCTURES

**R-27** 11-1-09

0510032.dgn 3/3/2010 2:00:08 PN



#### STANDARD BAR SPLICER ASSEMBLY

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

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

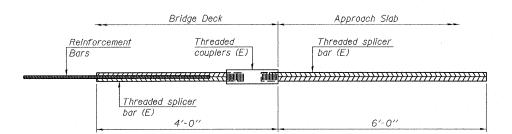
Table 3: Epoxy bar, 0.8 Class C

Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length +  $1_2^{\prime\prime}$  + 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		
North Abutment	#5	8	3		
North Abutment	#6	4	3		
South Abutment	#5	8	3		
South Abutment	#6	4	3		

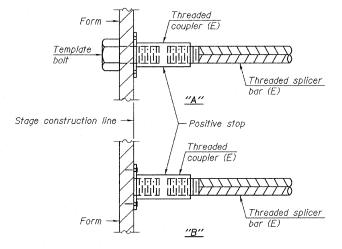


# BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =

		٦
DESIGNED	IJL	MARCH 3, 2010
CHECKED	GGE	EXAMINED & Carl Prayry
DRAWN	baliva	PASSED Ralph E. Curlersan
CHECKED	IJL GGE	ENGINEER OF BRIDGES AND STRUCTURES
BSD-1		

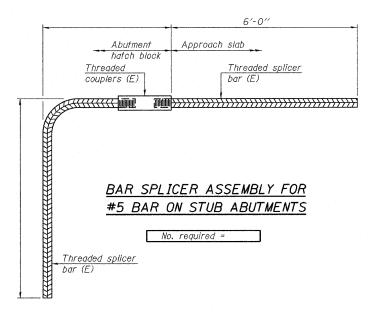
# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

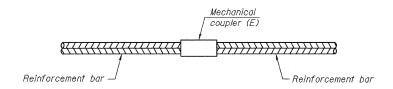


#### INSTALLATION AND SETTING METHODS

"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		

NOTES

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

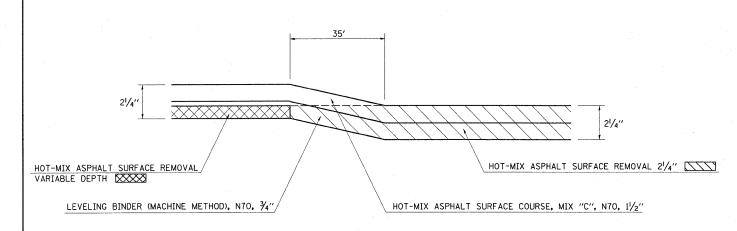
All reinforcement shall be lapped and tied to the splicer bars.

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.

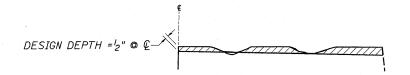
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS IL 33 OVER CSXT RAILROAD SN 051-0032

	SHEET NO. 7	F.A.P. RTE.	SECT	TION		COUNTY	TOTAL SHEETS	SHEET NO.
		783	(51-24-2	,1-2)RS-		LAWRENCE	42	41
	7 SHEETS		1&(1-X-1)RS-3		CONTRACT	NO. 74	414	
		FED. RO	DAD DIST. NO.	ILLINOIS	FED. A	ID PROJECT		



#### MILLING TRANSITION DETAIL

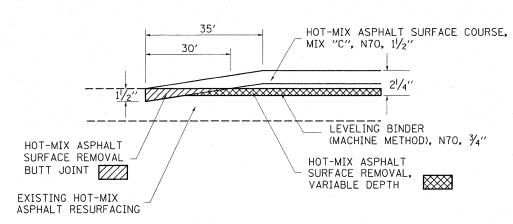
STATION 21+00.00 TO STATION 21+35.00 STATION 2+65.00 TO STATION 3+00.00 STATION 22+50.00 TO STATION 22+85.00



#### NOTES:

- 1. MILLING SHALL BE DONE TO ATTAIN A 3/16 "/FT. SLOPE IN CROWN SECTIONS
- 2. EXISTING S.E. AND S.E. TRANSITIONS SHALL BE MAINTAINED UNLESS OTHERWISE SHOWN ON THE PLANS.
- 3. MILLING TO THE BOTTOM OF WHEEL RUTS SHALL NOT BE NECESSARY UNLESS REQUIRED TO OBTAIN SLOPE OR THE DESIGN DEPTH AT CENTERLINE.
- 4. THE AVERAGE DEPTH OF MILLING IS ESTIMATED TO BE  $^{\prime}_{2}$ " BUT MAY VARY IN ISOLATED LOCATIONS.

HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH) DETAIL



BUTT JOINT DETAIL

STATION 38+55.20 TO STATION 38+90.20

• (51-24-2,1-2)RS-1 & (1-X-1)RS-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NA