COVER SHEET GENERAL NOTES

SCHEDULES PLAN VIEW

STAGING PLAN

DETAILS BRIDGE PLANS

TYPICAL SECTIONS

3-6

7-8

10

15

11-14

15-41

000001-07

001001-02

482001-02 643001-02

701601-09

701901-08

704001-08

780001-05 781001-04

001008

INDEX OF SHEETS

SUMMARY OF QUANTITIES

HIGHWAY STANDARDS

AREA OF REINFORCEMENT BARS

TRAFFIC CONTROL DEVICES

TEMPORARY CONCRETE BARRIERS

TYPICAL PAVEMENT MARKINGS

DECIMAL OF AN INCH AND OF A FOOT

SAND MODULE IMPACT ATTENUATORS

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAP ROUTE 785 (IL 140 /IL 111) SECTION 132-2VBR-2 PROJECT NO. NHPP-17J5(503) **BRIDGE REPAIR & DECK OVERLAY MADISON COUNTY**

C-98-059-20

DESIGN DESIGNATION

ROADWAY CLASSIFICATION = PRINCIPAL ARTERIAL DESIGN SPEED = 45 MPH CURRENT ADT (2019) = 20.800

21,000 ESTIMATED ADT (2040) = 24,600

SU = 5.5% MU = 2.4%



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.

PROJECT ENGINEER: TIFFANY BRASE (618) 346-3175 PROJECT MANAGER: PHILLIP FREIMUTH (618) 346-3194

R 10 W R 9 W 0 BEGIN PROJECT STA. 83+47 S.N. 060-0199 BRIDGE REPAIR AND DECK OVERLAY CARRYING IL 140 OVER ABANDONED END PROJECT STA. 87 + 34 STA 84+63.61 TO STA 86+55.57

> 1" = 1 MILE NET LENGTH = 387.00 FEET (0.073 MILES)

EXPIRES 11 /30 /2021

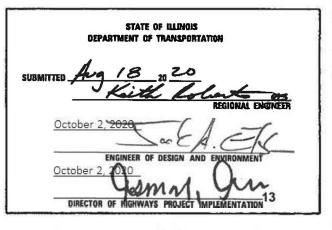
RESPONSIBLE FOR SHEETS 1-15

132-2VBR-20 MAGESON 41 1 RUNOS CONTRACT NO. 76N19

D-98-045-20

SECTION







St. Charles

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS 220022.001

ESTIMATED ADT (2020) =

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS 1-800-892-0123

CONTRACT NO. 76N19

0

0

UTILITIES

1. THE FOLLOWING UTILITIES ARE KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

CITY OF ALTON (UNKNOWN)* #2 EMMA KAUS LANE ALTON, IL 62002 (618) 463-3533

ILLINOIS AMERICAN WATER COMPANY (WATER)* 4436 INDUSTRIAL DRIVE P.O. BOX 186 ALTON, IL 62002 (618) 466-2131

AMEREN IP (GAS & ELECTRIC)* 2600 N. CENTER STREET P.O. BOX 378 MARYVILLE, IL 62062 (800) 755-5000

AT&T ILLINOIS (COMMUNICATIONS)* 160 WEST DIVISION STREET MARYVILLE, IL 62062

CHARTER COMMUNICATIONS (CABLE TV)* 101 NORTHWEST PLAZA SAINT ANN, MO 63074

MEMBERS OF J.U.L.I.E (800) 892-0123 OR 811 ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

GENERAL

- 2. NO SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS
- 3. THE CONTRACTOR SHALL STAGE ALL WORK IN SUCH A WAY AS TO MAINTAIN INGRESS AND EGRESS TO ALL ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
- 4. THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
- 5. WHERE PERMANENT RRPM ARE PRESENT AND CONFLICT WITH THE REVISED TRAFFIC PATTERNS ONLY THE REFLECTORS SHALL BE REMOVED AND PAID FOR AS RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL.
- 6. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

APPROXIMATE QUANTITIES, SYMBOLS AND ABBREVIATIONS

7. THE FOLLOWING SYMBOLS, ABBREVIATIONS AND PATTERNS SUPPLEMENT OR SUPERCEDE HIGHWAY STANDARD 000001:

BY OTHERS (USED IN CONJUNCTION WITH TBA & TBR) CONSTR CONSTRUCTION CONTROL POINT

ESMT EASEMENT ELEV ELEVATION

LENGTH OF VERTICAL CURVE PER PERCENT GRADE DIFFERENCE

N/F NOW OR FORMERLY OIL AND CHIP O/C PERM PERMANENT

POINT OF VERTICAL INTERSECTION PVI

POLYVINYL CHLORIDE PIPE PVC TEMPORARY CONSTRUCTION EASEMENT TCE

TEMPORARY USE PERMIT TUP

ТВА TO BE ADJUSTED TBRL TO BE RELOCATED

TYP TYPICAL WIDTH

ILLINOIS DESIGN FIRM LICENSE NO.: 184,001115

JSER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/17/2020	DATE -	REVISED -

NONE

MIXTURE REQUIREMENTS

MIXTURE USE	POLY SURFACE	BINDER	SHOULDERS (LOWER)	SHOULDERS (SURFACE)
AC/PG	SBS PG 76-22	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX)	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS	SEE SPECIAL PROVISIONS
DESIGN AIR VOIDS	4.0% @ NDES=90	4.0% @ NDES=90	4.0% @ NDES=30	4.0% @ NDES=30
MIX COMPOSITION (GRADATION)	IL 9.5	IL 19.0	IL 19.0L	IL 9.5L
FRICTION AGG	MIXTURE "E"	MIXTURE "B"		
QUALITY MGMT PROGRAM	QC/QA	QC/QA	QC/QA	QC/QA

SECTION COUNTY STATE OF ILLINOIS **GENERAL NOTES** 785 132-2VBR-2 MADISON 41 2 CONTRACT NO. 76N19 SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

SQ YD 28100107 | STONE RIPRAP, CLASS A4 224 224 40600290 BITUMINOUS MATERIALS (TACK COAT) POUND 6,240 6,240 40600982 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT SQ YD 1,243 1,243 40603090 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90 TON 464 464 40604174 POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "E", N90 TON 229 229 44000155 HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2" SQ YD 1,885 1,885 44000169 HOT-MIX ASPHALT SURFACE REMOVAL, 5" SQ YD 1,327 1,327 TON 48203100 HOT-MIX ASPHALT SHOULDERS 263 263 CU YD 50102400 | CONCRETE REMOVAL 36.8 36.8 EACH 36 50300100 | FLOOR DRAINS 36 CU YD 50300255 CONCRETE SUPERSTRUCTURE 41.1 41.1 SQ YD 1,824 1,824 50300260 | BRIDGE DECK GROOVING SQ YD 50300300 | PROTECTIVE COAT 1,929 1,929

ITEM

NOTES: SP - SEE PROJECT SPECIAL PROVISIONS SI - SPECIALTY ITEM

Ï	OATES	_
NAME:	O A I E S ASSOCIATES	
ž	A 5 5 O C A 1 E 5	F
Ē	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	F

USER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

CODE

NO.

SISP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

50500405 | FURNISHING AND ERECTING STRUCTURAL STEEL

		F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES		785	132-2VBR-2	MADISON	41	3
				CONTRACT	NO. 70	5N19
SHEET 1 OF 4 SHEETS STA	TO STA		TILINOIS SED	AID BROJECT		

80% FED 20% STATE BRIDGE

0047

URBAN

TOTAL

QUANTITY

UNIT

POUND

SCALE:

16,900

16,900

CONSTR. CODE 80% FED 20% STATE

		CODE			TOTAL	BRIDGE	
SI	SP		ITEM	UNIT	QUANTITY	0047	
	31 31 NO.				QUANTITY	URBAN	
		50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	48,080	48,080	
		50800515	BAR SPLICERS	EACH	432	432	
		52000110	PREFORMED JOINT STRIP SEAL	FOOT	255.0	255.0	
		52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	36	36	
		52100505	ANCHOR BOLTS, 5/8"	EACH	144	144	
		58700300	CONCRETE SEALER	SQ FT	2,118	2,118	
	*	67100100	MOBILIZATION	L SUM	1	1	
	*	70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	3,952	3,952	
		70300100	SHORT TERM PAVEMENT MARKING	FOOT	112	112	
		70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1,694	1,694	
	*	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	17,216	17,216	
		70400100	TEMPORARY CONCRETE BARRIER	FOOT	567	567	
		70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	567	567	
		70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

NOTES: SP - SEE PROJECT SPECIAL PROVISIONS
SI - SPECIALTY ITEM

OATES	US
ASSOCIATES	
www.oatesassociates.com	PL
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PL

USER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/17/2020	DATE -	REVISED -
		_

STATE	OF ILLINOIS
DEPARTMENT (OF TRANSPORTATION

SCALE:

								F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		SU	MMA	RY	OF QU	ANTITIES	5	785	132-2VBR-2	MADISON	41	4
										CONTRAC	Γ NO. 70	5N19
- 1	SHEET	2	OF	4	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

20% STATE BRIDGE CODE TOTAL SISP ITEM UNIT 0047 NO. QUANTITY URBAN 70600350 IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3 EACH 2 78200005 GUARDRAIL REFLECTORS, TYPE A EACH 78200011 BARRIER WALL REFLECTORS, TYPE C EACH 6 EACH 26 78200020 CURB REFLECTORS 26 X0550300 | SLOPE WALL BREAKING SQ YD 165 165 * X2700006 | PREFORMED PLASTIC PAVEMENT MARKING, TYPE D - LINE 4" FOOT 1,822 1,822 X5030308 | CONCRETE WEARING SURFACE, 4 1/2" SQ YD 1,839 1,839 X7010228 TRAFFIC CONTROL AND PROTECTION, STANDARD 701601, SPECIAL L SUM X7030005 TEMPORARY PAVEMENT MARKING REMOVAL SQ FT 5,139 5,139 EACH X7830050 RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL 12 12 * X7830070 GROOVING FOR RECESSED PAVEMENT MARKING 5" FOOT 1,822 1,822 EACH 36 Z0001899 JACK AND REMOVE EXISTING BEARINGS Z0001903 | STRUCTURAL STEEL REMOVAL POUND 10,160 10,160 Z0001905 | STRUCTURAL STEEL REPAIR POUND 7,870 7,870

NOTES: SP - SEE PROJECT SPECIAL PROVISIONS *SI - SPECIALTY ITEM

A OATES	_
ASSOCIATES	
Www.oatesassocjates.com	F
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	F

USER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/17/2020	DATE -	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

						•	F.A.P. RTE	SEC.	TION		COUNTY	TOTAL SHEETS	SHEET NO.
	SU	MINI	AKY	OF QU	ANIIIIE	S	785	132-2	VBR-2		MADISON	41	5
											CONTRACT	F NO. 76	5N19
SHEET	3	OF	4	SHEETS	STA.	TO STA.			ILLINOIS	FED AL	D PROJECT		

CONSTR. CODE 80% FED

						CONSTR. CODE 80% FED
SI	SP	CODE NO.	ITEM	UNIT	TOTAL	20% STATE BRIDGE 0047 URBAN
	*	Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUE NO. 1	L SUM	1	1
	*	Z0010400	CLEANING BRIDGE SEATS	SQ FT	759	759
	*	Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
	*	Z0012132	BRIDGE DECK SCARIFICATION 1"	SQ YD	1,839	1,839
	*	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	46	46
	*	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10	10
	*	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	10	10
	*	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	100	100
	*	Z0021904	SILICONE JOINT SEALER, 1"	FOOT	190	190
	*	Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	796	796
*		Z0049100	RAISED PAVEMENT MARKER REFLECTOR REPLACEMENT	EACH	12	12
77		25515150		271011		12
Ø		Z0076600	TRAINEES	HOUR	1000	1000
Ø		Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000

O A T E S A S S O C I A T E S

Ø 0042

NOTES: SP - SEE PROJECT SPECIAL PROVISIONS

★ SI - SPECIALTY ITEM

DESIGNED -REVISED -DRAWN -REVISED -CHECKED -REVISED -PLOT SCALE = 100.0000 ' / in. www.oatesassociates.com PLOT SCALE = 100.0000 .

LLINOIS DESIGN FIRM LICENSE NO. 184.001115 PLOT DATE = 8/14/2020 DATE REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SCALE:

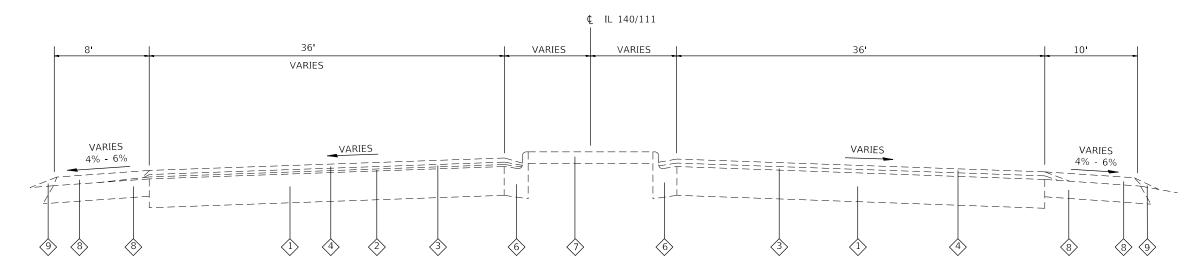
COUNTY TOTAL SHEET NO.

MADISON 41 6

CONTRACT NO. 76N19 F.A.P. RTE. 785 SECTION SUMMARY OF QUANTITIES 132-2VBR-2 SHEET 4 OF 4 SHEETS STA. TO STA.

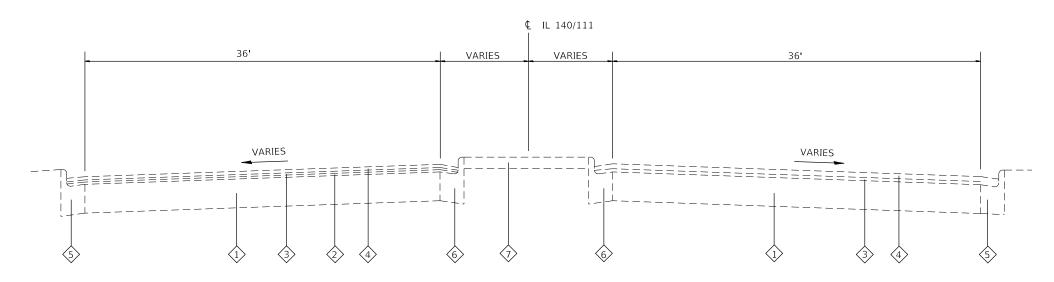
CONSTR. CODE

REV. - MS



EXISTING TYPICAL SECTION - IL 140/111

STA. 86+55.57 TO STA. 87+34.00 STRUCTURE OMISSION STA. 84+63.61 TO STA. 86+55.57



EXISTING TYPICAL SECTION - IL 140/111

STA. 83+47.00 TO STA. 84+63.61 STRUCTURE OMISSION STA. 84+63.61 TO STA. 86+55.57

P.\2		
Ī	O A T F S	ι
AME	ASSOCIATES	
TLE NAME: HIVE	A 5 5 O C A E 5	Р
Ξ	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	Р

USER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

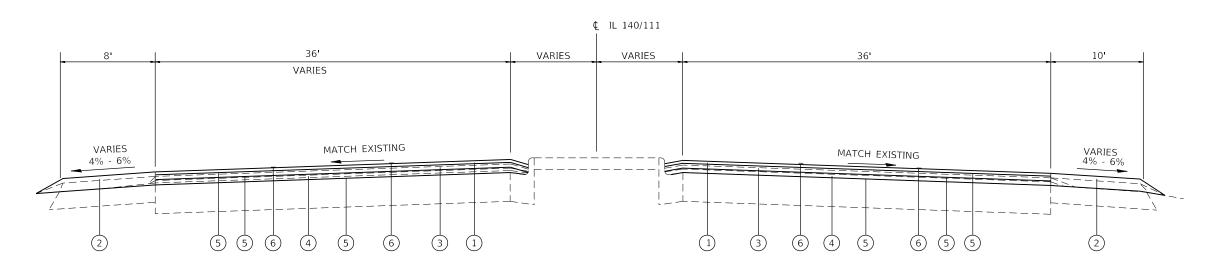
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

						F.A.P. RTE	SECT	ΠΟN		COUNTY	TOTAL SHEETS	SHEET NO.
	11	PIC	AL SECT	IONS		785	132-2VBR-20			MADISON	41	7
										CONTRACT	NO. 70	5N19
SHEET 1	OF	2	SHEETS	STA.	TO STA.			ILLINOIS	FED. A	ID PROJECT		

TYPICAL SECTION LEGEND

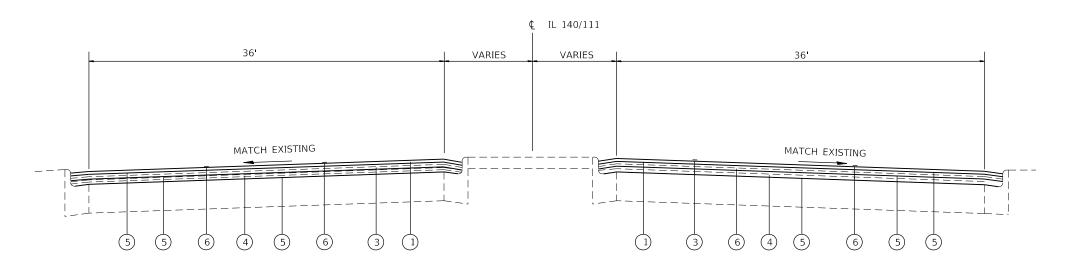
\wedge				
$\langle 1 \rangle$	EXISTING	10"	PCC	PAVEMEN ^T

$\langle 2 \rangle$	EXISTING	HMA	OVERLAY	2	1/



PROPOSED TYPICAL SECTION - IL 140/111

STA. 86+55.57 TO STA. 87+34.00 STRUCTURE OMISSION STA. 84+63.61 TO STA. 86+55.57



STA. 83+47.00 TO STA. 84+63.61 STRUCTURE OMISSION STA. 84+63.61 TO STA. 86+55.57

TYPICAL SECTION LEGEND

- 1) PROPOSED POLYMERIZED HMA SURFACE COURSE, IL-9.5, MIX "E", N90
- PROPOSED HMA SHOULDER 7"
- PROPOSED HMA SURFACE REMOVAL 2"
- PROPOSED HMA BINDER COURSE 5" (2 LIFTS)
- (5) PROPOSED BITUMINOUS MATERIALS (TACK COAT)
- PROPOSED LONGINTUDINAL JOINT SEALANT

SEE BUTT JOINT DETAIL REGARDING 50' HMA PAVEMENT TRANSITIONS FOR ELEVATED BRIDGE PROFILE.

PROPOSED TYPICAL SECTION - IL 140/111

ΣI		
É	OATES	-
AME	O A I E S	
Z L	www.oatesassociates.com	-
Ē	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	_

JSER NAME = matt.fields	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

						F.A.P. RTE	SECT	ION		COUNTY	TOTAL SHEETS	
	IYP	ICA	L SECT	IONS		785 132-2VBR-20				MADISON	41	8
										CONTRACT	NO. 76	5N19
SHEET 2	OF	2	SHEETS	STA.	TO STA.			ILLINOIS	FED. AI	D PROJECT		

PAVEMENT

			HMA SURF	P HMA SC	нма вс	BIT MATLS	HMA SURF	НМА	LONG JOINT
STATION STATION		OFFSET	REM BUTT	IL-9.5 E	IL-19.0	TACK CT	REM 5	SHOULDERS	SEALANT
			JΤ	N90	N90				
			(SQ YD)	(TON)	(TON)	(POUND)	(SQ YD)	(TONS)	(FOOT)
83+47.00	84+63.61	LT	397	87	194	2,274	320	173	266
83+47.00	84+63.61	RT	321	63	105	1,686	281	29	202
86+55.57	87+34.00	LT	249	31	61	858	455	20	130
86+55.57	87+34.00	RT	276	48	104	1,422	271	41	198
TOTAL			1,243	229	464	6,240	1,327	263	796

- 1. APPLICATION RATES USED FOR QUANTITY ESTIMATES ARE AS FOLLOWS:
 HOT-MIX ASPHALT: 0.056 TONS/SY/INCH THICKNESS
 TACK COAT: 0.05 LB/SQ FT (MILLED SURFACE), 0.025 LB/ SQ FT (HMA LIFT)
 TACK COAT QUANTITY REPRESENTS THREE APPLICATIONS

PAVEMENT MARKING

			RAISE	CURB	RAISD	PREF PL	PREF PL	GRV RCSD
STATION	STATION	OFFSET	PVT MK	REFLECTORS	REF PM	PM TD LN 4	PM TD LN 4	PVT MRKG
			REF REPL		REFL REM	(YELLOW)	(WHITE)	5
						(NOTE 1)	(NOTE 1)	
			(EACH)	(EACH)	(EACH)	(FOOT)	(FOOT)	(FOOT)
83+47.00	87+34.00	LT	6	15	6	690	217	907
83+47.00	87+34.00	RT	6	11	6	329	586	915
TOTAL			12	26	12	1,019	803	1,822

- PAVEMENT MARKING NOTES;

 1. SEE HIGHWAY STANDARD 780001 FOR PAVEMENT MARKING DETAILS.

 2. SEE HIGHWAY STANDARD 782001 FOR CURB REFLECTOR DETAILS.

SCALE:

TRAFFIC CONTROL

LOCATION	LOCATION	PAVT MK BLKOUT TAPE 5	SHORT TERM PAVT MKING (WHITE)	SHORT TERM PAVT MKING REM	TEMP PAVT MK LINE 4 (WHITE)	TEMP PAVT MK LINE 4 (YELLOW)	TEMP CONC BARRIER	RELOC TEMP CONC BARRIER	IMP ATTEN TEMP NRD TL2	IMP ATTEN REL NRD TL2	TEMP PAVT MKING REMOV
		(FOOT)	(FOOT)	(SQ FT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(EACH)	(EACH)	(SQ FT)
STAGE 1											
JACKSON DRIVE	PROFESSIONAL DRIVE	389		163	490	1,891					795
PROFESSIONAL DRIVE	IL 3 WEST EXIT RAMP	256		107	162	1,681					615
IL 3 WEST EXIT RAMP	IL 3 EAST EXIT RAMP	70		30		555					185
IL 3 EAST EXIT RAMP	CREST DRIVE	186		79		1,020					341
CREST DRIVE	END OF PROJECT	1,905	112	835	488	2,742	567		2		1,078
STAGE 2											
JACKSON DRIVE	PROFESSIONAL DRIVE	222		93		1,142					381
PROFESSIONAL DRIVE	IL 3 WEST EXIT RAMP	200		84		1,154					385
IL 3 WEST EXIT RAMP	IL 3 EAST EXIT RAMP	76		32		304					102
IL 3 EAST EXIT RAMP	CREST DRIVE	118		50	80	1,412					498
CREST DRIVE	END OF PROJECT	530		221	885	3,210		567		2	759
TOTAL		3,952	112	1,694	2,105	15,111	567	567	2	2	5,139

TRAFFIC CONTROL NOTES:

ONE APPLICATION OF SHORT TERM AND TEMPORARY PAVEMENT MARKING WAS FIGURED FOR SHOWN QUANTITY. AN ADDITIONAL QUANTITY EQUAL TO THE PERMANENT PAVEMENT MARKING QUANTITY HAS BEEN INCLUDED IN THE STAGE 2 TEMPORARY PAVEMENT MARKING QUANTITY.

SHORT TERM PAVEMENT MARKING REMOVAL INCLUDES REMOVAL OF SHORT TERM PAVEMENT MARKINGS AND PAVEMENT MARKING BLACKOUT TAPE.

BARRIER MARKERS

			GRDRAIL	BARR WALL
STATION	STATION	OFFSET	REFL	REFL
			TYPE A	TYPE C
			(EACH)	(EACH)
84+00.00	84+63.61	LT	2	
84+00.00	84+63.61	RT	1	
84+63.61	86+55.57	LT		3
84+63.61	86+55.57	RT		3
86+55.57	87+34.00	LT	1	
86+55.57	87+34.00	RT	2	
TOTAL			6	6
BARRIER MAI	RKERS NOTES:			

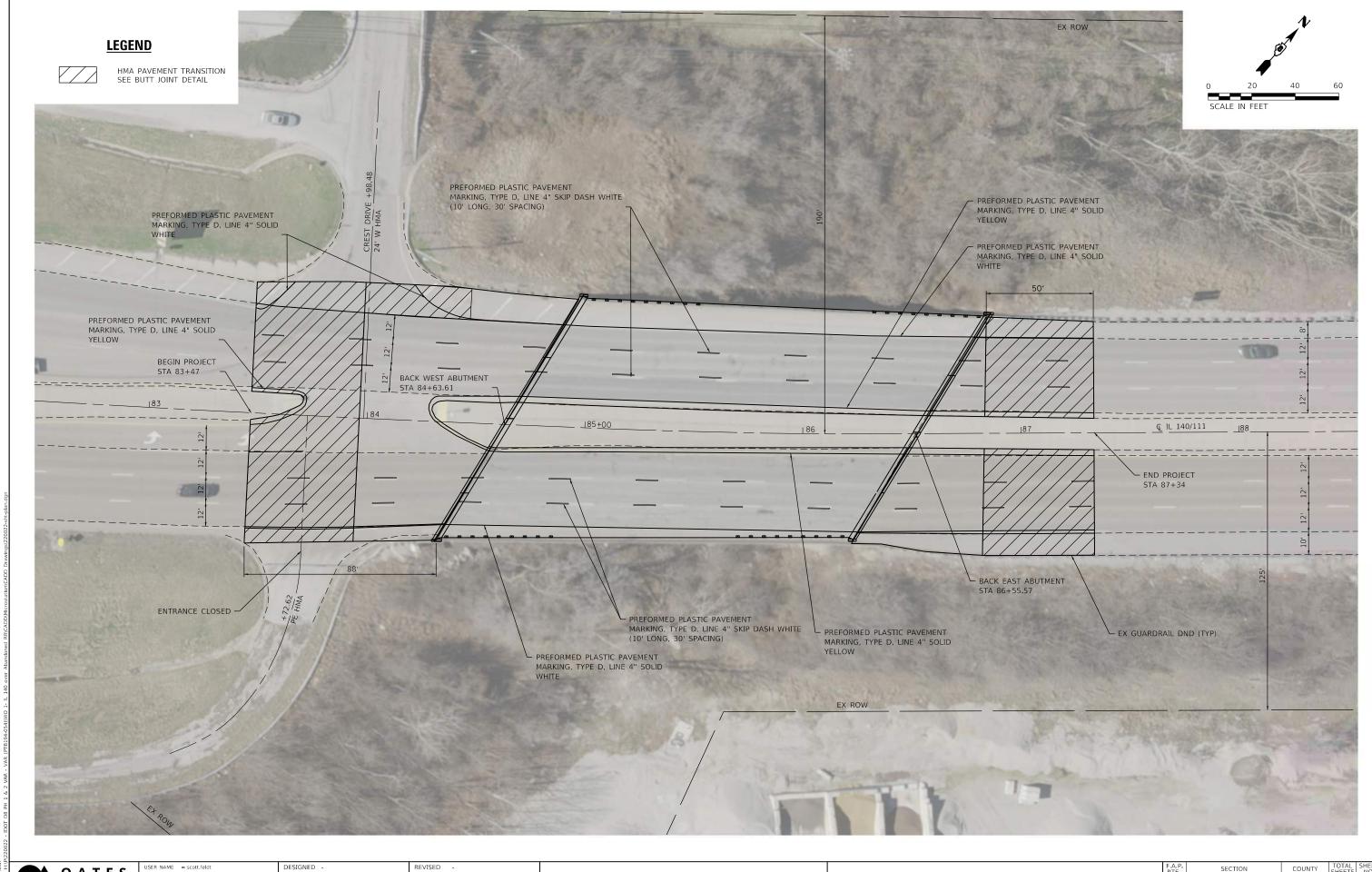
SEE HIGHWAY STANDARD 782006 FOR GUARDRAIL / BARRIER REFLECTORS DETAILS.

Ĩ	• • • • • • •
ü	OAIES
NAME:	ASSOCIATES
щ	www.oatesassociates.com
Ξ	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115

JSER NAME = matt.fields	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 8/17/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

						_		F.A.P. RTE	SECT	ΓΙΟΝ		COUNTY	TOTAL SHEETS	SHEET NO.
SCHEDULES								785	132-2	VBR-2		MADISON	41	9
												CONTRACT	NO. 76	5N19
	SHEET	1	OF	1	SHEETS	STA.	TO STA.			ILLINOIS	FED. A	ID PROJECT		



MODEL: Default

OATES

ASSOCIATES

www.oatesassociates.com

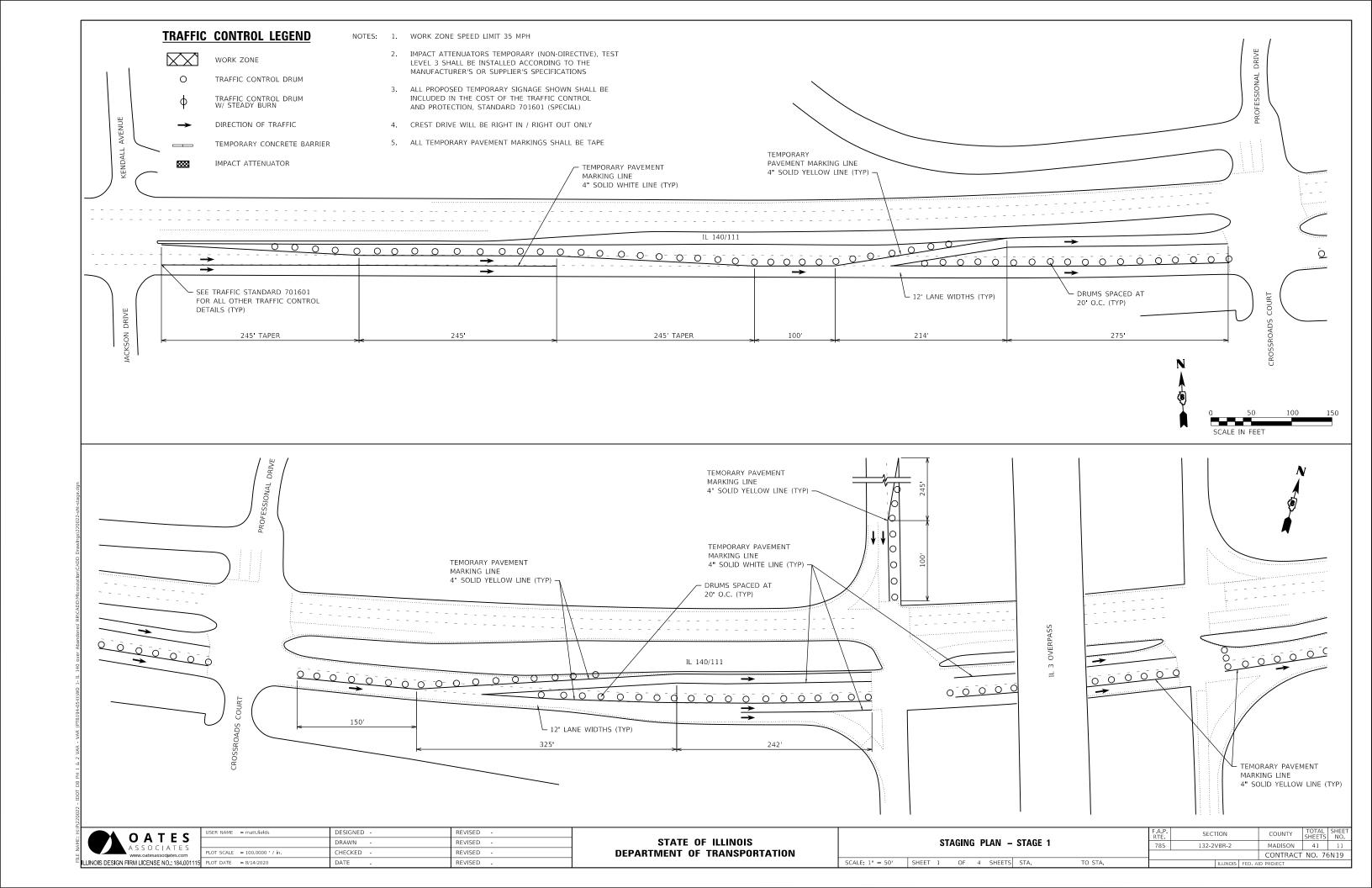
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115

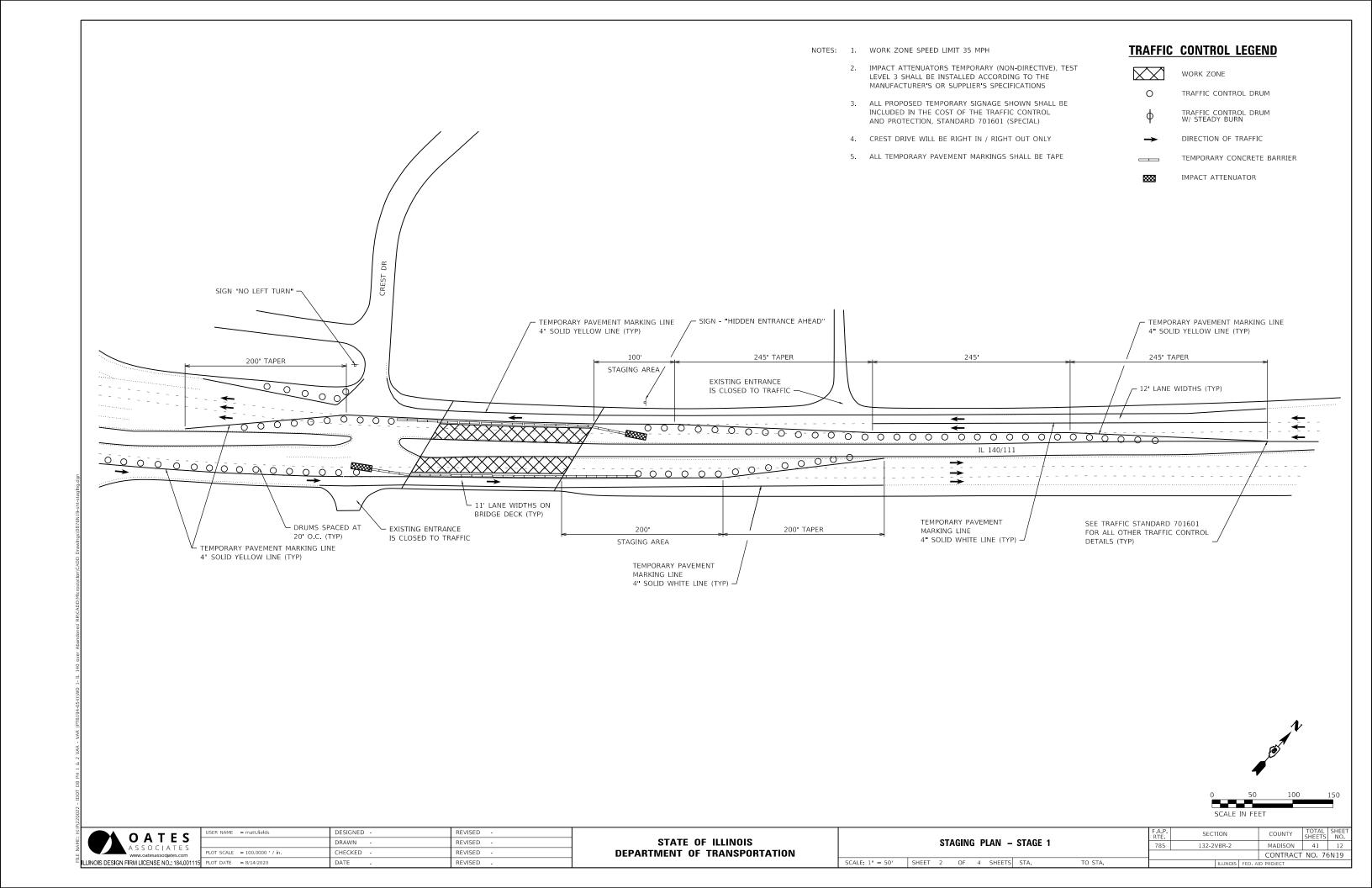
PLOT SCALE = 40.0000 '

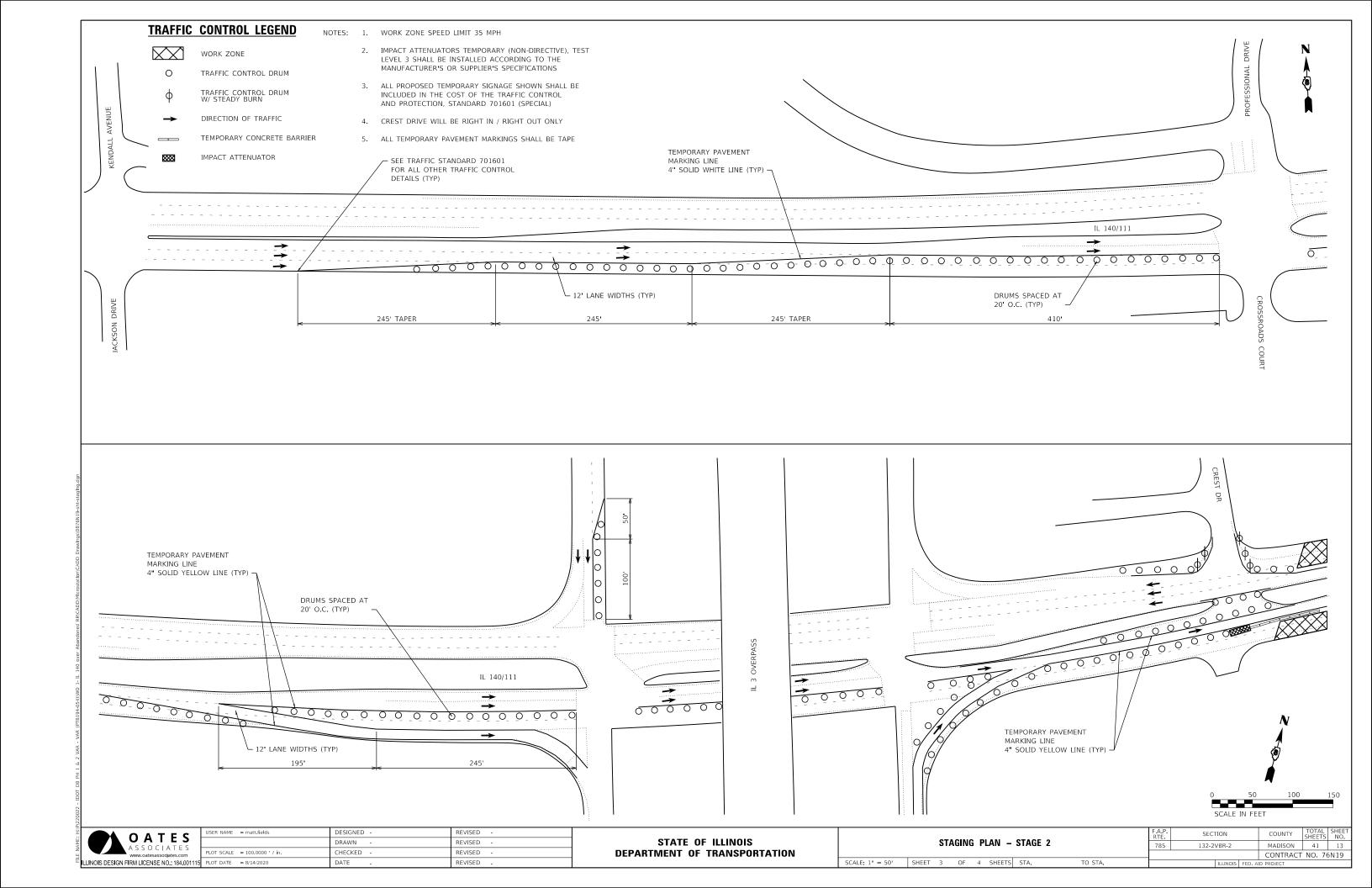
PLOT SCALE = 40.0000 '

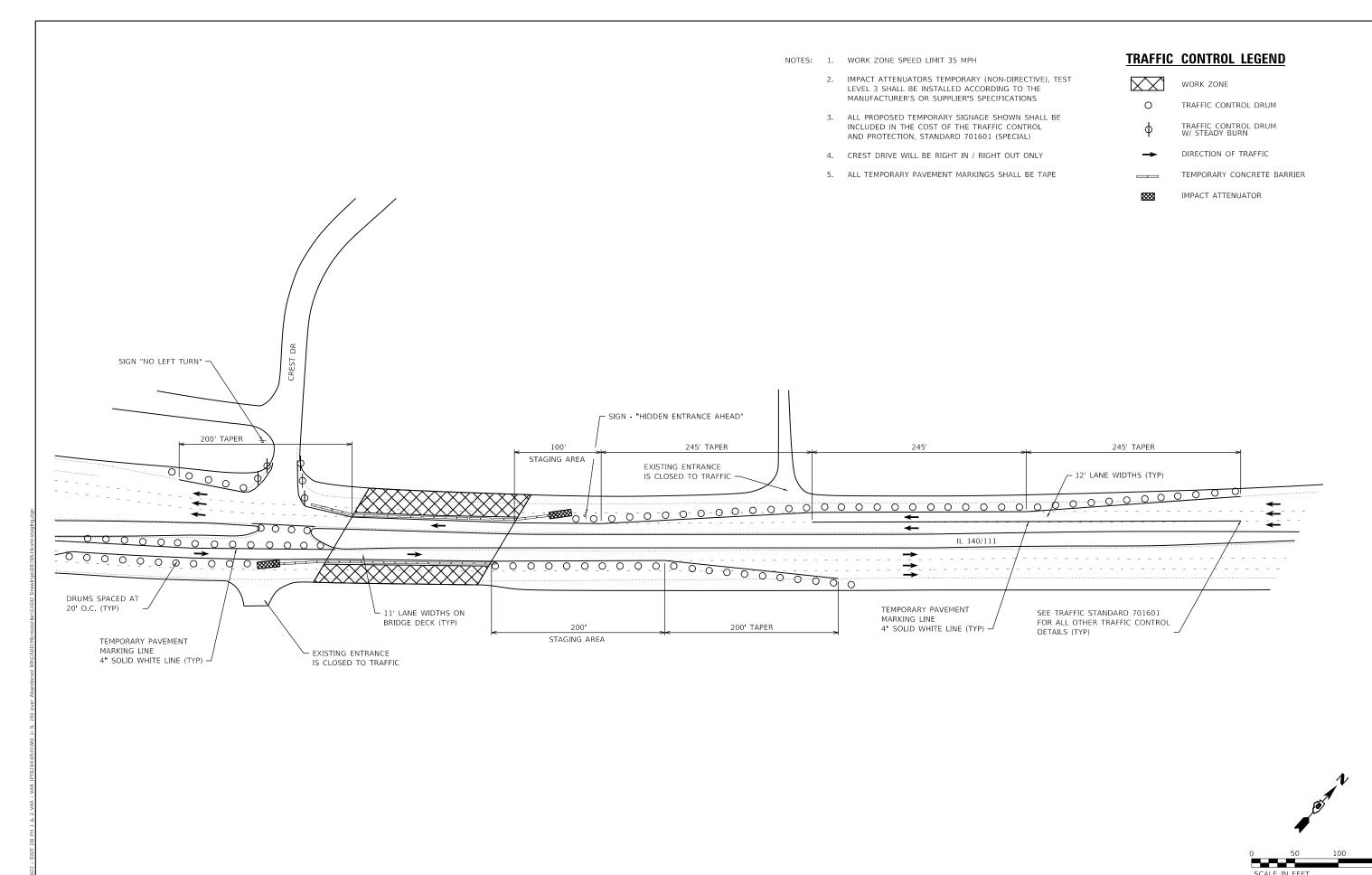
PLOT DATE = 8/9/2020

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION









	USER NAME = matt.fields	DESIGNED -	REVISED -						
A S S O C A T E S www.oatesassociates.com		DRAWN -	REVISED -	STATE OF ILLINOIS	STAGING PLAN - STAGE 2				
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION					
S DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	DATE -	REVISED -		SCALE: 1" = 50'	SHEET 4 OF 4 SHEETS	STA.	TO STA.	

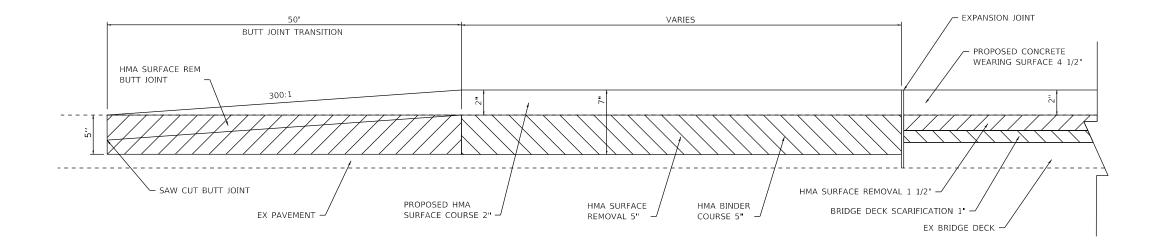
SECTION

132-2VBR-2

COUNTY

MADISON 41 14

CONTRACT NO. 76N19



BUTT JOINT DETAIL

TO BE PLACED AT EAST AND WEST ENDS OF THE STRUCTURE NOT TO SCALE

OATES
ASSOCIATES
www.oatesassociates.com
PLOT SCALE = 40,0000 '/
PLOT DATE = 8/14/2020

 USER NAME
 = matt.fields
 DESIGNED
 REVISED

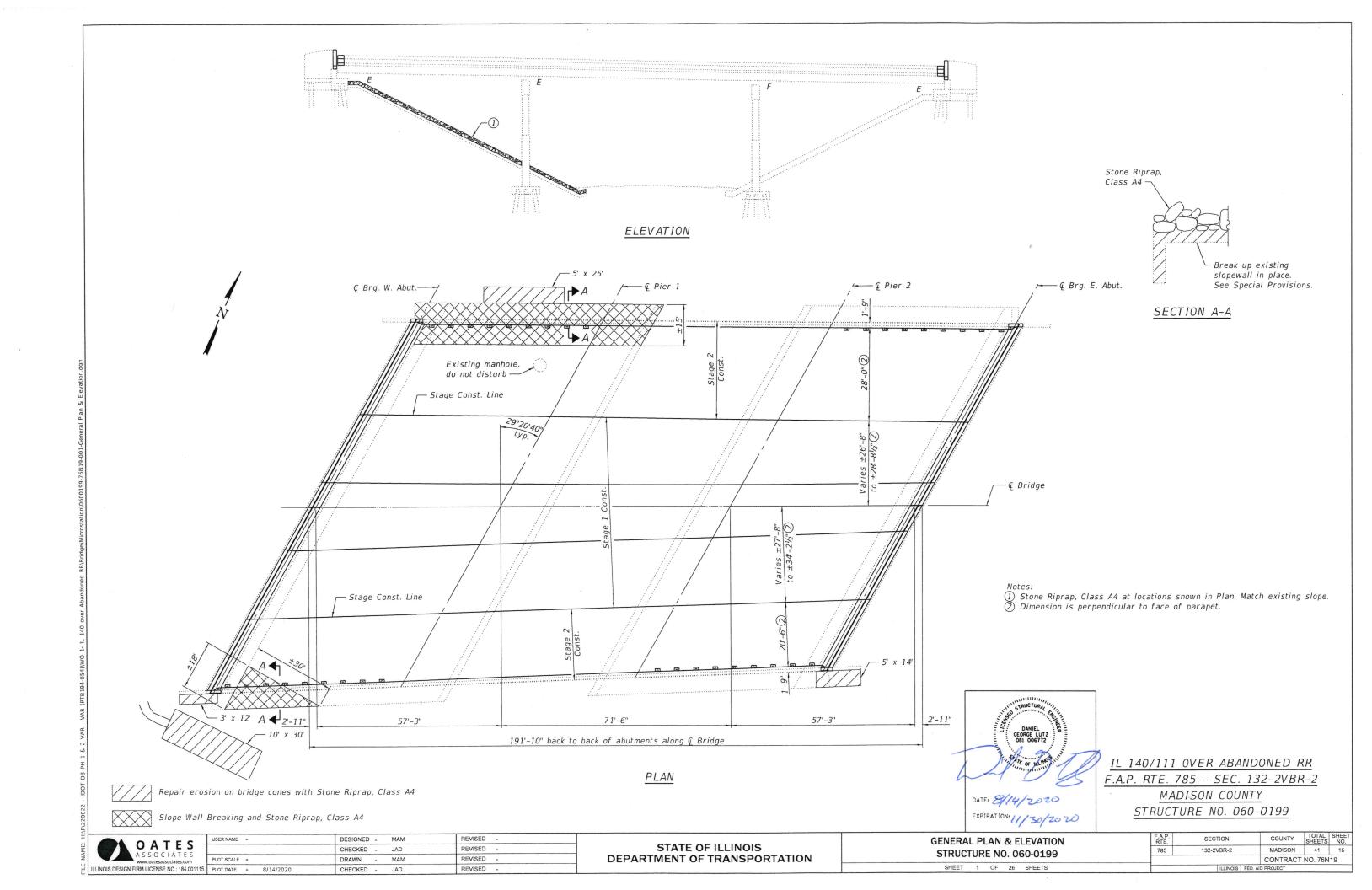
 DRAWN
 REVISED

 PLOT SCALE
 = 40.0000 ' / in.
 CHECKED
 REVISED

 PLOT DATE
 = 8/14/2020
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:



TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Stone Riprap, Class A4	Sq. Yd.	224
	Hot-Mix Asphalt Surface Removal, 1½"	Sq. Yd.	1,885
	Concrete Removal	Cu. Yd.	36.8
	Floor Drains	Each	36
	Concrete Superstructure	Cu. Yd.	41.1
	Bridge Deck Grooving	Sq. Yd.	1,824
1)	Protective Coat	Sq. Yd.	1,929
_	Furnishing and Erecting Structural Steel	Pound	16,900
	Reinforcement Bars, Epoxy Coated	Pound	48,080
	Bar Splicers	Each	432
	Preformed Joint Strip Seal	Foot	255.0
	Elastomeric Bearing Assembly, Type I	Each	36
	Anchor Bolts, ⅓"	Each	144
	Concrete Sealer	Sq. Ft.	2,118
	Slope Wall Breaking	Sq. Yd.	165
	Concrete Wearing Surface, 4½"	Sq. Yd.	1,839
	Jack and Remove Existing Bearings	Each	36
	Structural Steel Removal	Pound	10,160
	Structural Steel Repair	Pound	7,870
	Containment and Disposal of Lead Paint Cleaning Residue No. 1	L. Sum	1
	Cleaning Bridge Seats	Sq. Ft.	759
	Cleaning and Painting Steel Bridge No. 1	L. Sum.	1
	Bridge Deck Scarification 1"	Sq. Yd.	1,839
	Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	46
3)	Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10
ろ	Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	10
ろ	Deck Slab Repair (Partial)	Sq. Yd.	100
۷	Silicone Joint Sealer, 1"	Foot	190
	3232 22 7		

SCOPE OF WORK

- 1. Remove existing HMA (1½"), scarify bridge deck 1" and install 4½" reinforced concrete overlay
- 2. Replace floor drains
- 3. Replace expansion joints
- 4. Install Silicone Joint Sealer in longitudinal joint
- 5. Deck Slab Repair as directed by the Engineer
- 6. Replace abutment rocker bearings with elastomeric bearings
- 7. Paint beam ends
- 8. Repair beam ends
- 9. Replace steel diaphragms at abutments
- 10. Clean abutment seats
- 11. Structural repair of concrete at abutments
- 12. Seal abutments
- 13. Break up concrete slopewall and overlay with riprap
- 14. Repair bridge cone erosion with riprap

INDEX OF SHEETS

Sheet No.	Description
1	General Plan & Elevation
2	General Data
3-4	Stage Construction Details
5-6	Joint Removal
7-8	Joint Replacement
9-10	Joint Removal & Replacement Details
11	Preformed Joint Strip Seal
12	Bar Splicer Assembly & Mechanical Splicer Details
13	Partial Framing Plan
14	Diaphragm & Beam Repair Details
15	Bearing Replacement Details at Abutments
16-17	Substructure Repairs
18-26	Existing Bridge Plans

GENERAL NOTES

Fasteners shall be ASTM A325 Type I, mechanically galvanized bolts. Bolts $\frac{3}{4}$ " in. \bigcirc , holes $\frac{1}{3}$ % in. \bigcirc , unless otherwise noted.

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

Reinforcement bars designated (E) shall be epoxy coated.

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 the 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 existing concrete.

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.

Concrete sealer shall be applied to all exposed surfaces of the abutments.

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

All structural steel used in the beam end repairs and diaphragm replacement shall be hot dipped galvanized according to the Special Provision for "Hot Dip Galvanizing for Structural Steel" and shall not be painted.

Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Structural Steel Structures." All steel to remain within 10 ft. (measured along the beam) of the abutment joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10) and painted according to the requirements of paint System 1-0Z/E/U. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5G 4/8.

A minimum of 4 air monitors will be required to monitor abrasive blasting operations at this site. See Special Provision for "Containment and Disposal of Lead Paint Cleaning Residues."

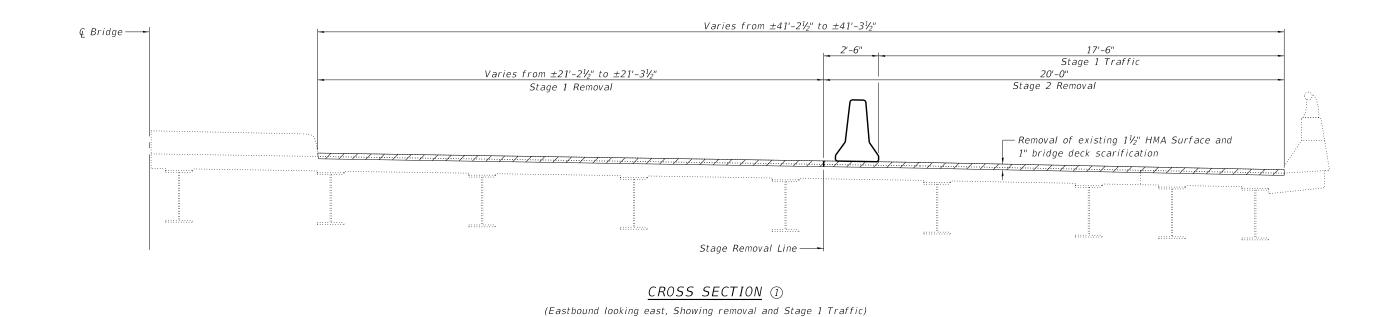
SSPC QP1 and SSPC QP2 Certification is required for this Contract.

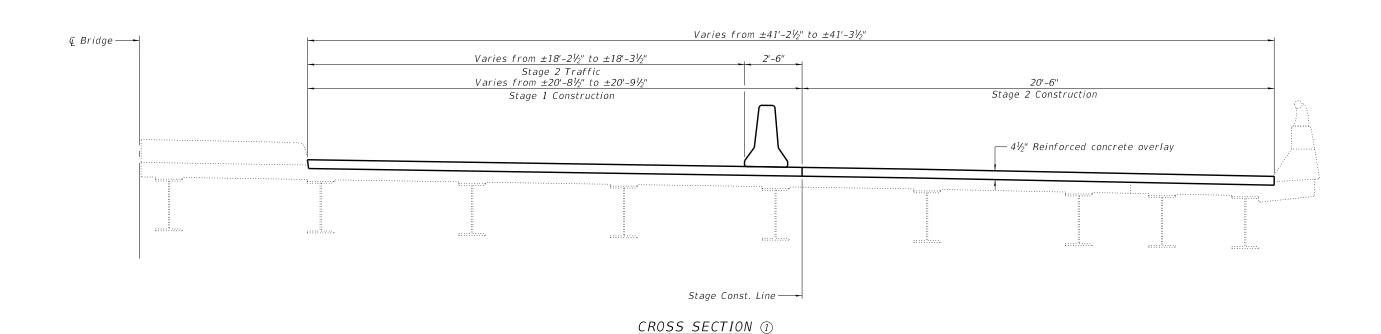
Notes:

Apply Protective Coat to new concrete and concrete overlay surfaces only.
 Deck Slab Repair quantities shown have been included to establish a unit price.
 Actual quantity of Deck Slab Repair shall be determined by the Engineer in the field.
 Repair areas shall be included on the as-built plans.

O A T E S	
A S S O C TA TE S www.oatesassociates.com	Г
ILLINOIS DESIGN FIRM LICENSE NO.: 184.0011	15 1

USER NAME =	DESIGNED - MAM	REVISED -
	CHECKED - JAD	REVISED -
PLOT SCALE =	DRAWN - MAM	REVISED -
PLOT DATE = 9/28/2020	CHECKED - JAD	REVISED -





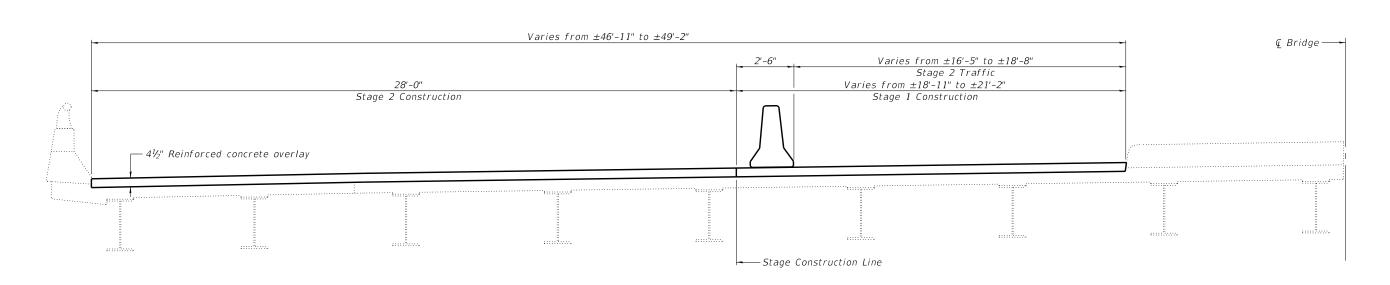
COUNTY TOTAL SHEET NO.

MADISON 41 18 DESIGNED - MAM REVISED -STAGE CONSTRUCTION DETAILS SECTION OATES STATE OF ILLINOIS REVISED -CHECKED - JAD 785 132-2VBR-2 STRUCTURE NO. 060-0199 **DEPARTMENT OF TRANSPORTATION** REVISED -CONTRACT NO. 76N19 LLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT DATE = 8/14/2020 SHEET 3 OF 26 SHEETS CHECKED - JAD REVISED -

(Eastbound looking east, Showing concrete overlay and Stage 2 Traffic)

① Dimensions are perpendicular to face of parapet.

(Westbound looking east, Showing removal and Stage 1 Traffic)



CROSS SECTION 1

(Westbound looking east, Showing concrete overlay and Stage 2 Traffic)

Notes:

① Dimensions are perpendicular to face of parapet.

OATES

ASSOCIATES

www.oatesassociates.com

LLINOIS DESIGN FIRM LICENSE NO.: 184.001115

PLOT SCALE = 8/14/2020

 USER NAME
 =
 DESIGNED
 MAM
 REVISED

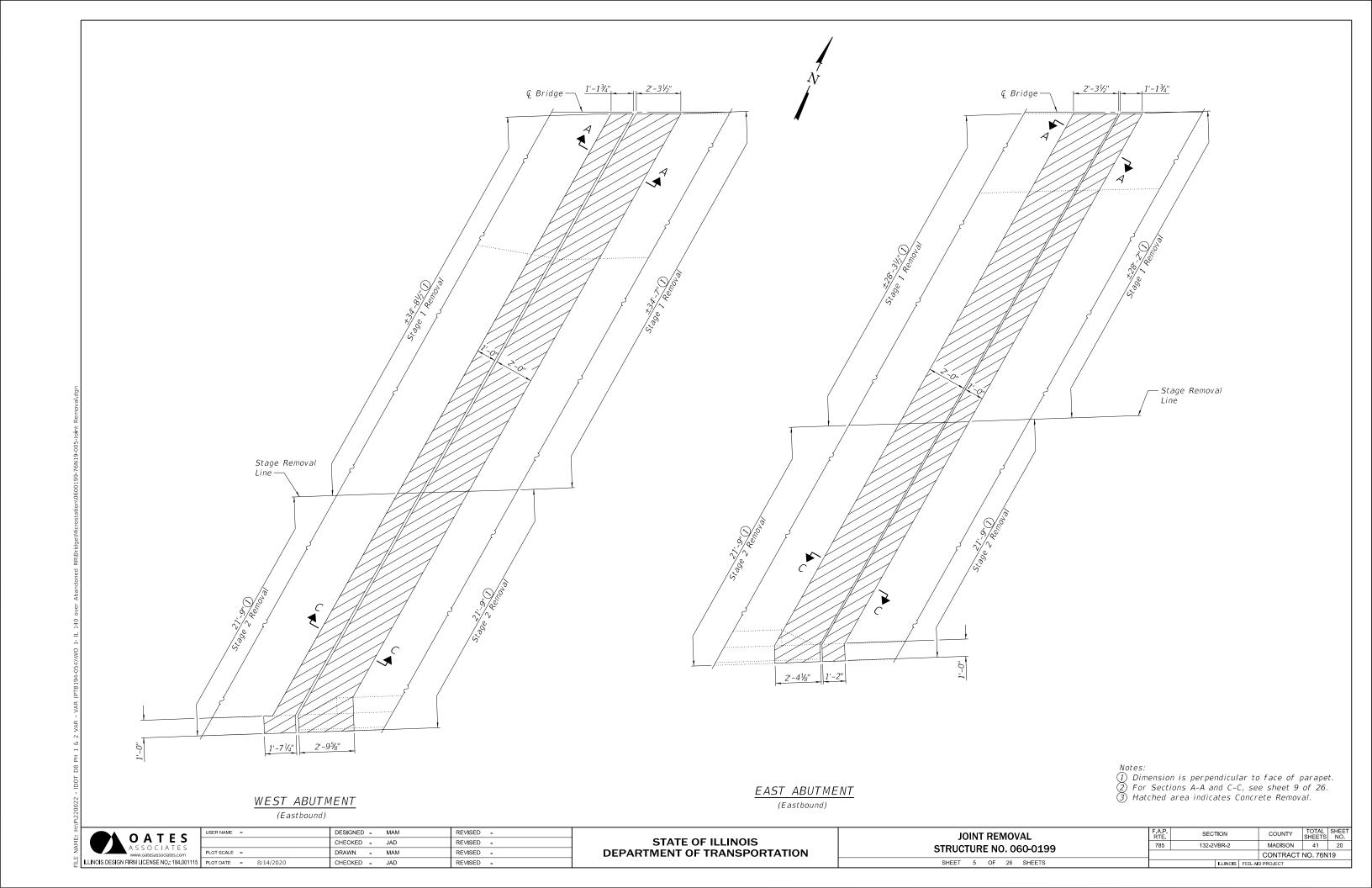
 CHECKED
 JAD
 REVISED

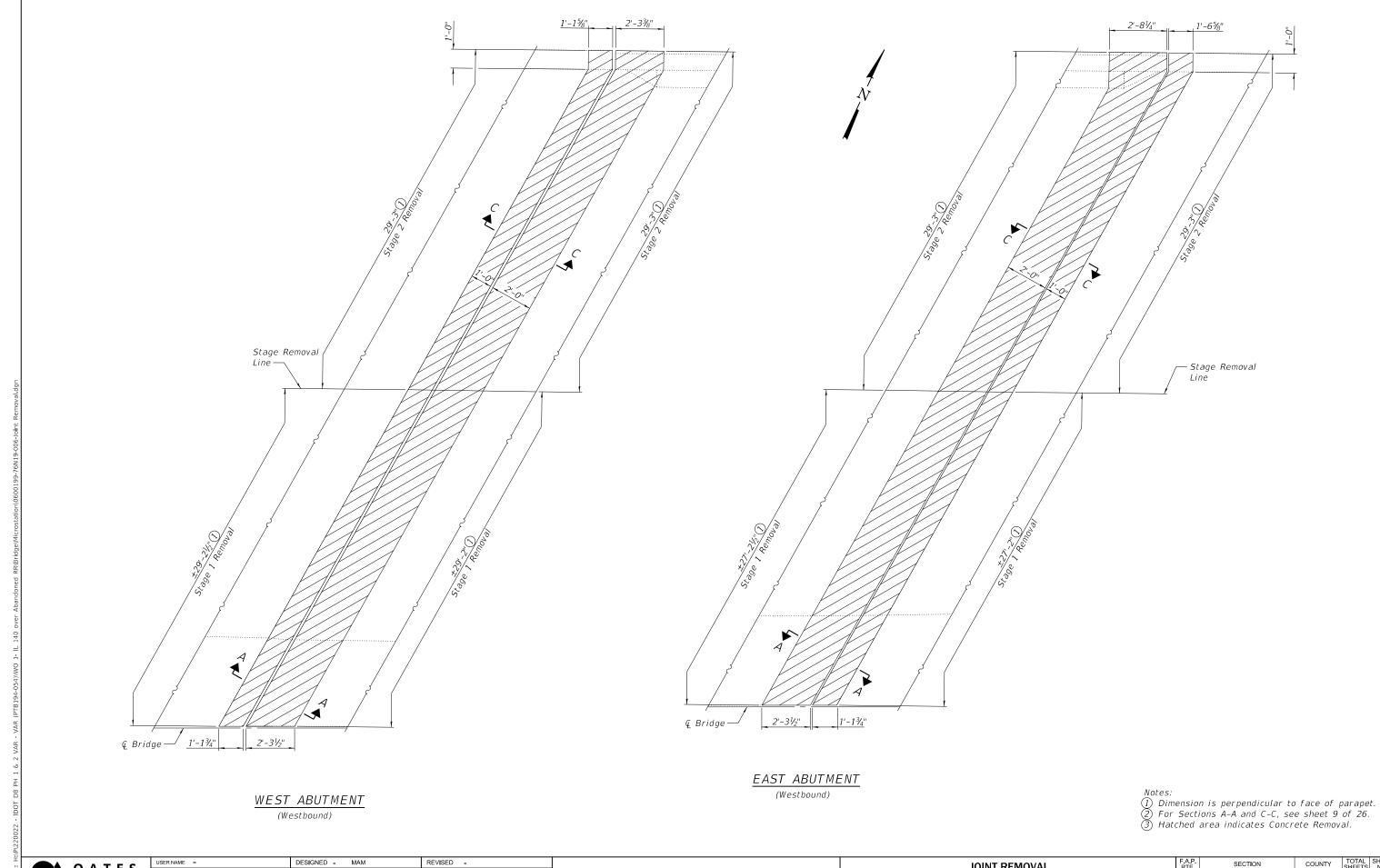
 PLOT SCALE
 =
 DRAWN
 MAM
 REVISED

 PLOT DATE
 =
 8/14/2020
 CHECKED
 JAD
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS STRUCTURE NO. 060-0199





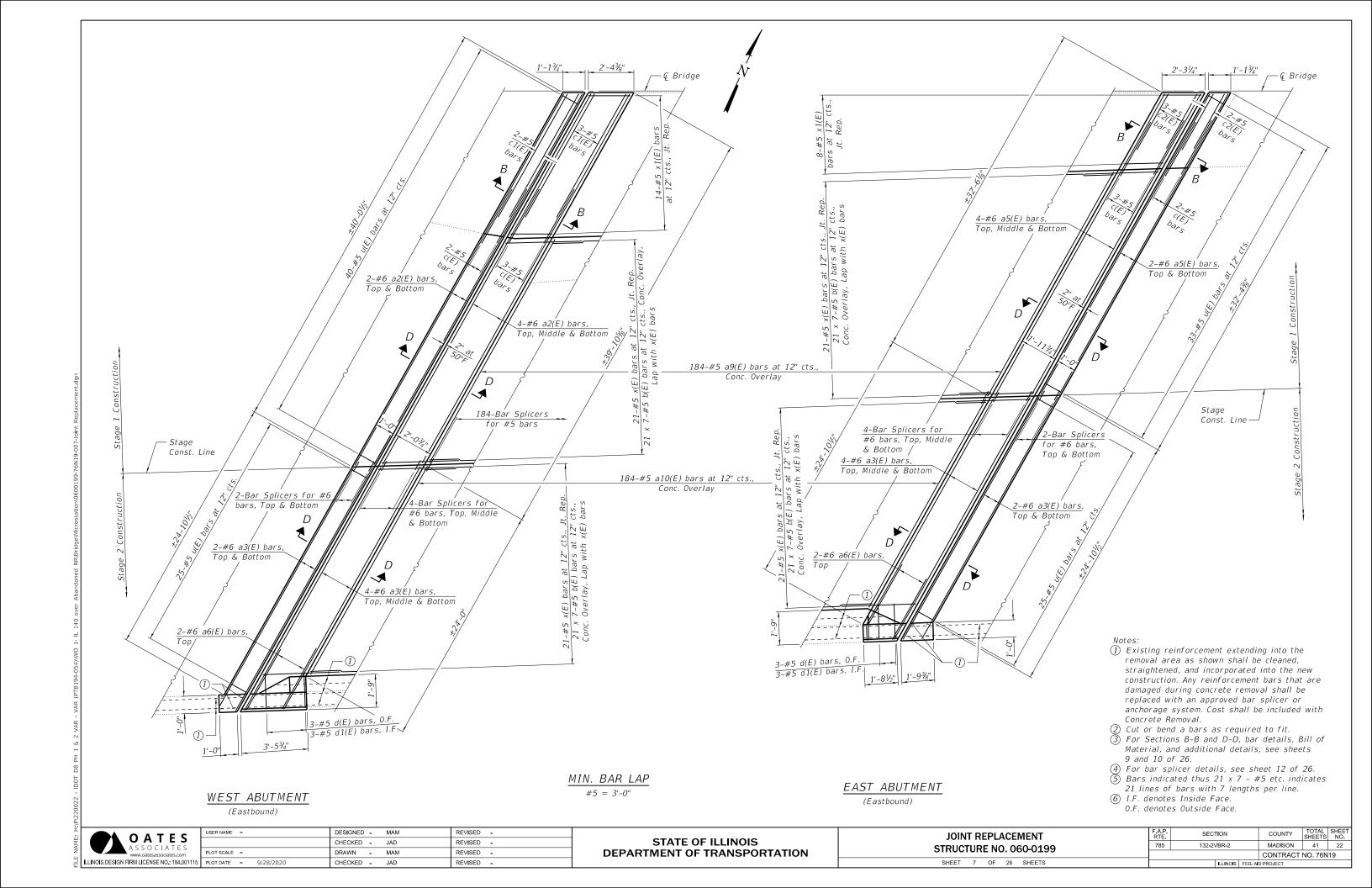
O A T E S ASSOCIATES LLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT DATE = 8/14/2020

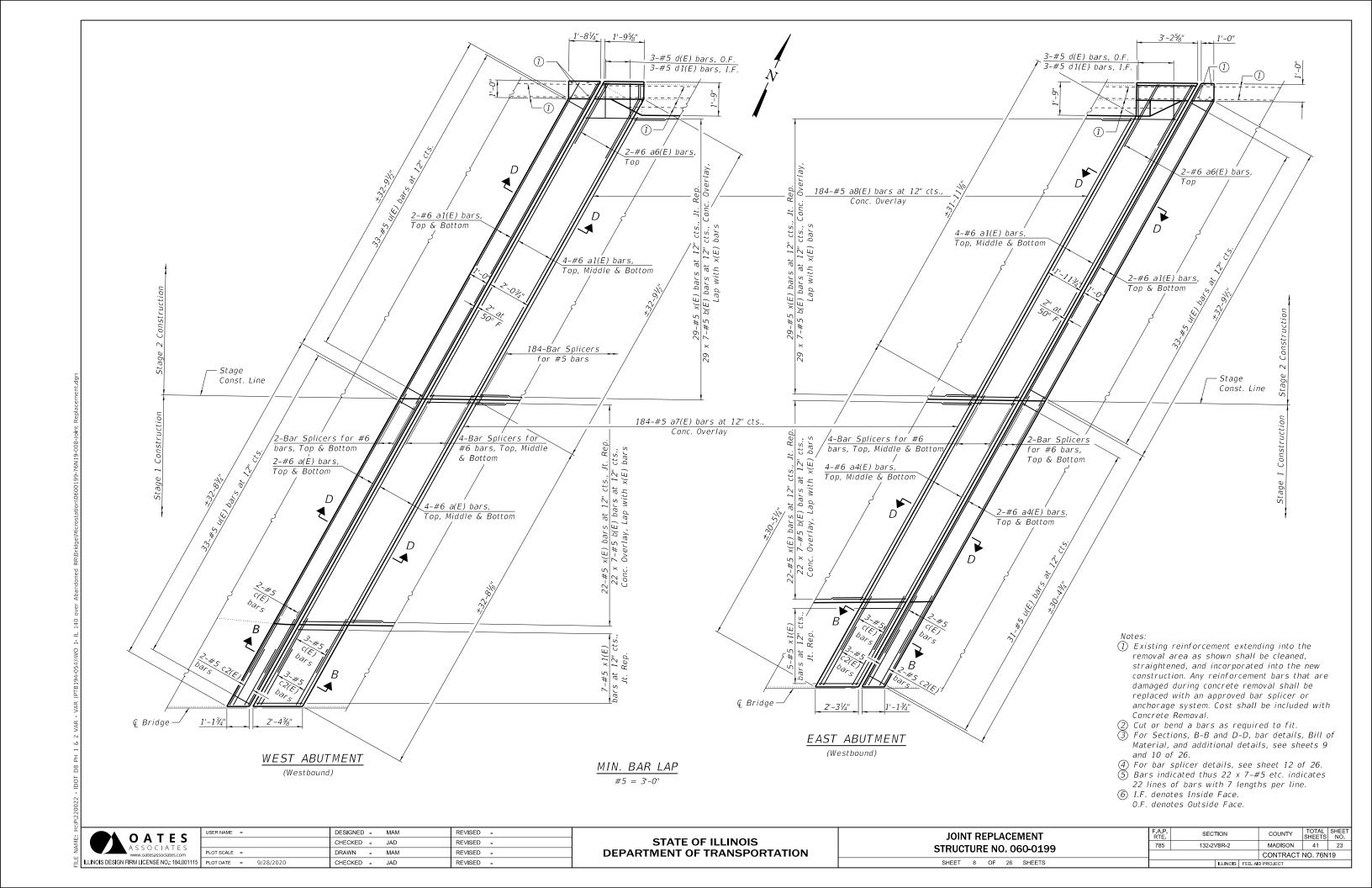
CHECKED - JAD REVISED -DRAWN - MAM REVISED -CHECKED - JAD REVISED - STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

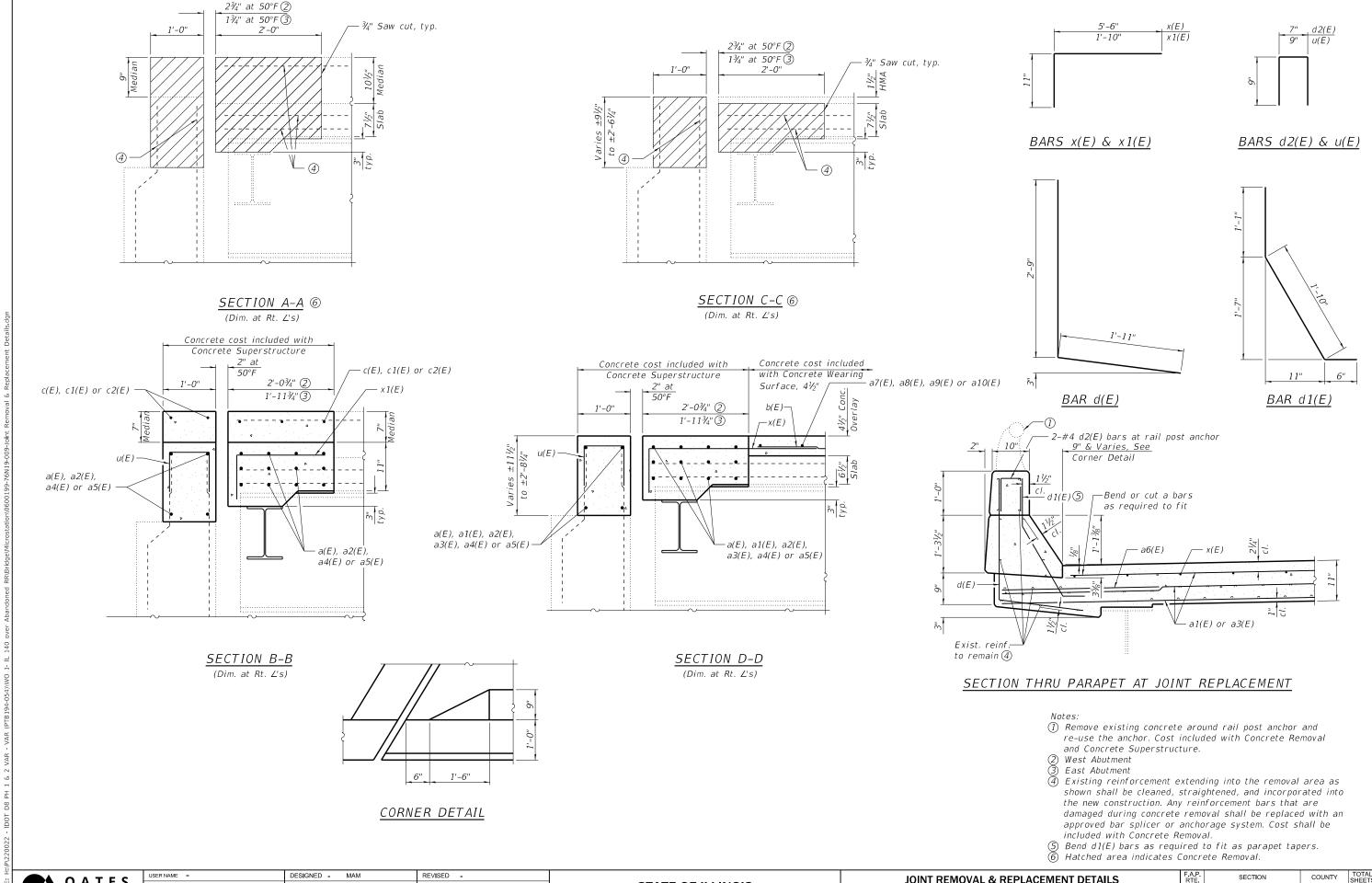
JOINT REMOVAL **STRUCTURE NO. 060-0199** SHEET 6 OF 26 SHEETS

COUNTY TOTAL SHEET NO.

MADISON 41 21 SECTION 785 132-2VBR-2 CONTRACT NO. 76N19







O A T E S

A S S O C | A T E S

www.oatesassociates.com
| PLOT SCALE | = |
| PLOT DATE | = | 9/28/2020

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

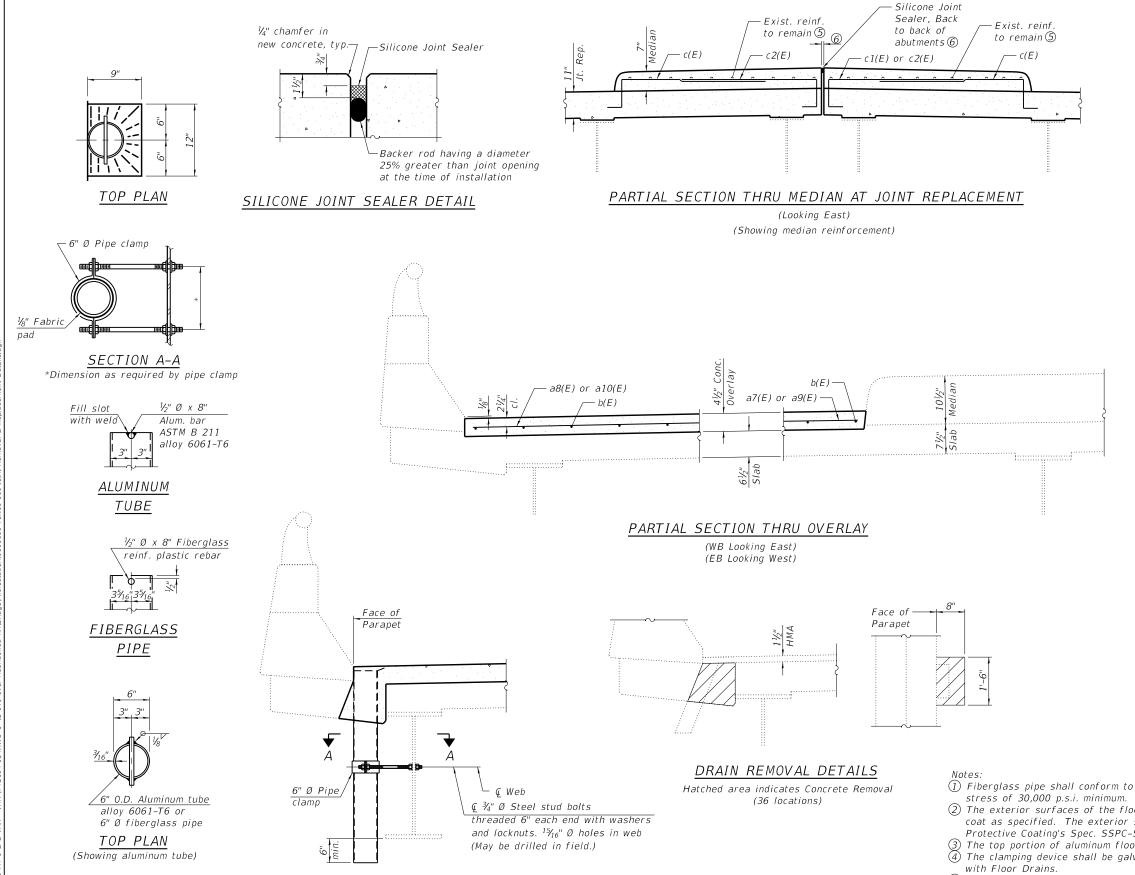
JOINT REMOVAL & REPLACEMENT DETAILS
STRUCTURE NO. 060-0199

SHEET 9 OF 26 SHEETS

 F.A.P. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEET NO.

 785
 132-2VBR-2
 MADISON
 41
 24

 CONTRACT NO. 76N19



<u>NEW DRAIN DETAIL</u>

(Overlay reinforcement not shown)

- ① Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
- ② The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.
- 3 The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.
- 4 The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.
- (5) Existing reinforcement extending into the removal area as shown 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 shall be included with Concrete Removal.
- 6 Existing longitudinal joint width varies from ½" to 2".

O A I E S ASSOCIATES	L
www.oatesassociates.com	Ľ
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	

1	USER NAME =	DESIGNED - MAM	REVISED -
ı		CHECKED - JAD	REVISED -
ı	PLOT SCALE =	DRAWN - MAM	REVISED -
	PLOT DATE = 9/28/2020	CHECKED - JAD	REVISED -
_			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS	F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 060-0199	785	132-2VBR-2		MADISON	41	25
311(00101(L1(0),000-0133				CONTRACT	NO. 76N	19
SHEET 10 OF 26 SHEETS		ILLINOIS	FED AID	PROJECT		

/4-054)/WO 1- IL 140 over Abandoned RR\Bridge\Microstation\0600199-76N19-010-Joint Removal & Replacement Dei

13'-3" c1(E) 6'-6" c2(E)

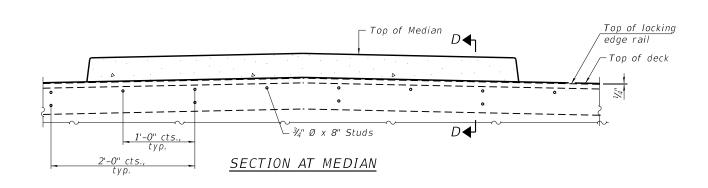
BAR c(E)

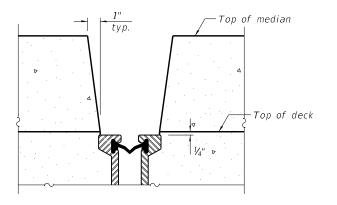
5'-0"

BARS c1(E) & c2(E)

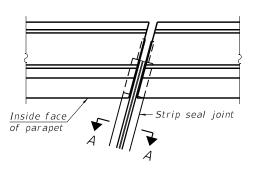
<u>BILL OF MATERIAL</u>

BILL OF MITTERIAL				
Bar	No.	Size	Length	Shape
a(E)	16	#6	32'-4"	
a1(E)	32	#6	33'-6"	
a2(E)	16	#6	39'-7"	
a3(E)	32	#6	25'-8"	
a4(E)	16	#6	30'-1"	
a5(E)	16	#6	32'-1"	
a6(E)	8	#6	4'-0"	
a7(E)	184	#5	23'-9"	
a8(E)	184	#5	31'-7"	
a9(E)	184	#5	23'-10"	
a10(E)	184	#5	23'-7"	
b(E)	651	#5	29'-3"	
c(E)	20	#5	6'-6"	
c1(E)	5	#5	14'-9"	
c2(E)	15	#5	8'-0"	
L				
d(E)	12	#5	4'-8"	<u> </u>
d1(E)	12	#5	3'-5"	
d2(E)	8	#4	2'-1"	H
(5)	252		21 211	_
u(E)	253	#5	2'-3"	П
(5)	100	4.5	CI FII	
x(E)	186	#5	6'-5" 2'-9"	
x1(E)	34	#5	2-9	!
Concre	te Rem	oval	Cu. Yd.	36.8
Concre				
	structur	·e	Cu. Yd.	41.1
Reinforcement Bars,		D	40.000	
Epoxy Coated		Pound	48,080	
Bar Sp	Bar Splicers		Each	432
Concre	te Wea	ring	Sq. Yd.	1,839
	e, 4½"		Jq. 14.	1,000
	e Joint		Foot	190
Sealer	, I"			

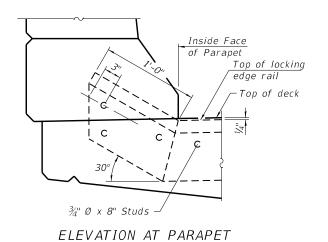




SECTION D-D



PLAN AT PARAPET



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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed.

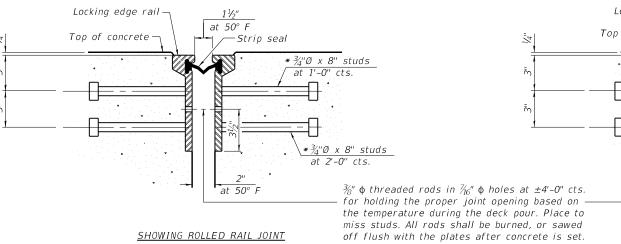
The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of anchorage studs included with Preformed Joint Strip Seal.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet dimensions shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required.



Locking edge railat 50° F Top of concrete ^{k3}⁄4"Ø x 8" studs √*¾"Ø x 8" studs at 2'-0" cts. <u>ROLLED</u> WELDED RAIL (EXTRUDED) RAIL 23/4" at 50° F LOCKING EDGE RAILS

> ** Back gouge not required if complete joint penetration is verified by mock-up. SHOWING WELDED RAIL JOINT

LOCKING EDGE RAIL SPLICE

Omit seal

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	255.0

SECTION A-A

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

STATE OF ILLINOIS

PREFORMED JOINT STRIP SEAL **STRUCTURE NO. 060-0199** SHEET 11 OF 26 SHEETS

SECTION COUNTY MADISON 41 26 785 132-2VBR-2 CONTRACT NO. 76N19

OATES ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT DATE = 8/14/2020

DESIGNED - MAM REVISED -CHECKED - JAD REVISED -REVISED -CHECKED - JAD REVISED -

DEPARTMENT OF TRANSPORTATION

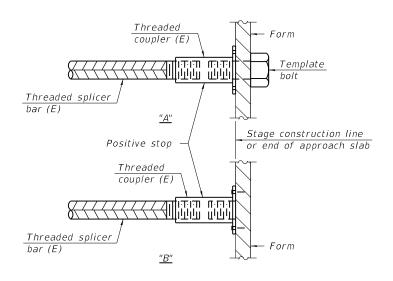
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

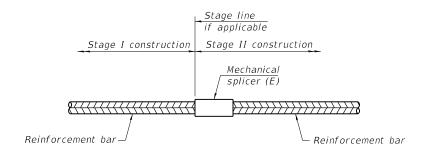
Location	Bar size	No. assemblies required	Minimum lap length
Joint Replacement	6	64	4'-0"
Overlay	5	368	3'-0"



INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E): Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:

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

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements

for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

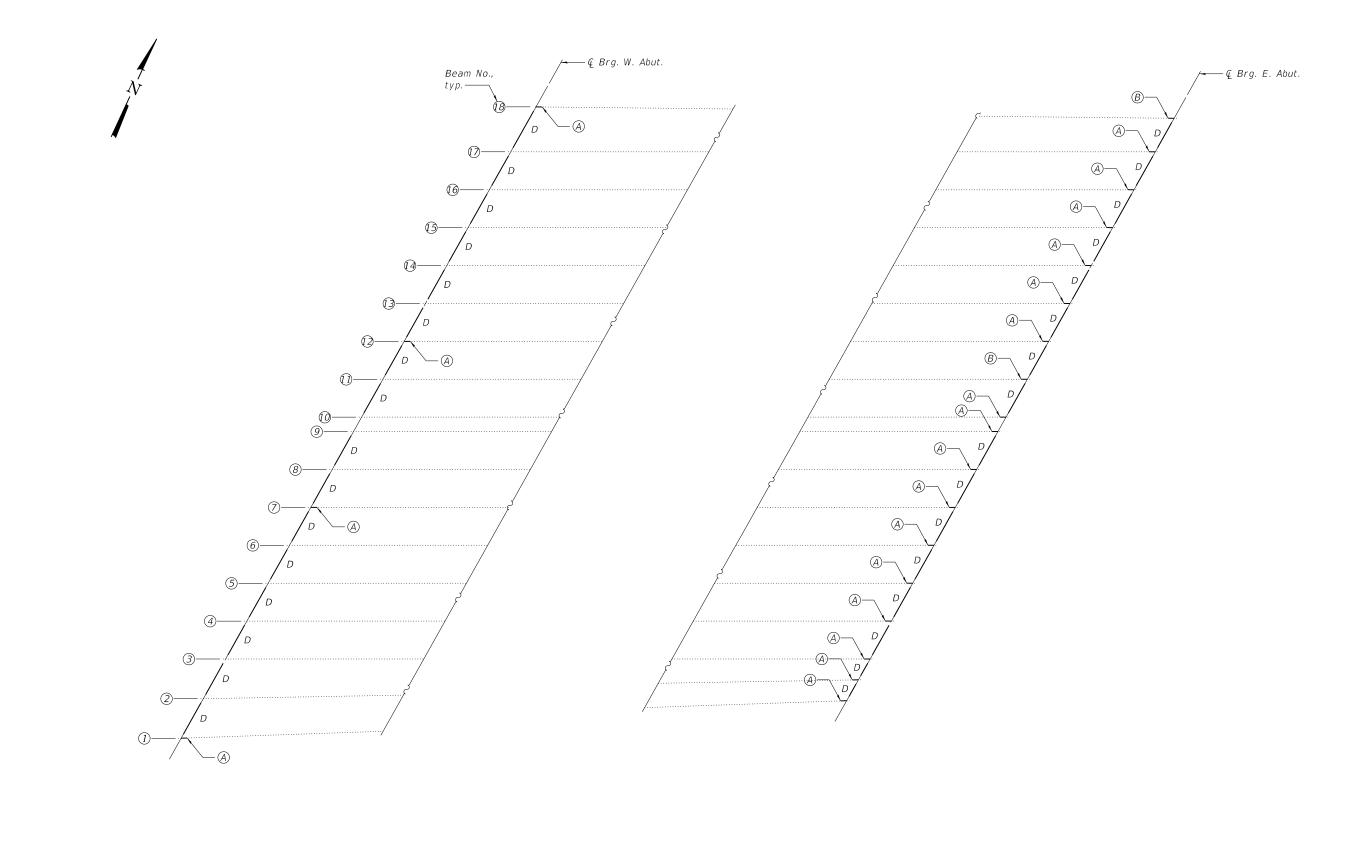
1-1-2020



	USER NAME =	DESIGNED -	MAM	REVISED -
		CHECKED -	JAD	REVISED -
	PLOT SCALE =	DRAWN -	MAM	REVISED -
15	PLOT DATE = 9/28/2020	CHECKED -	JAD	REVISED -

SHEET 12 OF 26 SHEETS

F.A.P. RTE	SEC ⁻	Γ Ι ΟΝ		COUNTY	TOTAL SHEETS	SHEE NO.
785	132-2VBR-2		MADISON	41	27	
				CONTRACT	NO. 76N	19
		ILLINOIS	FED. A	D PROJECT		



PARTIAL FRAMING PLAN

(A) - Repair A (B) - Repair B

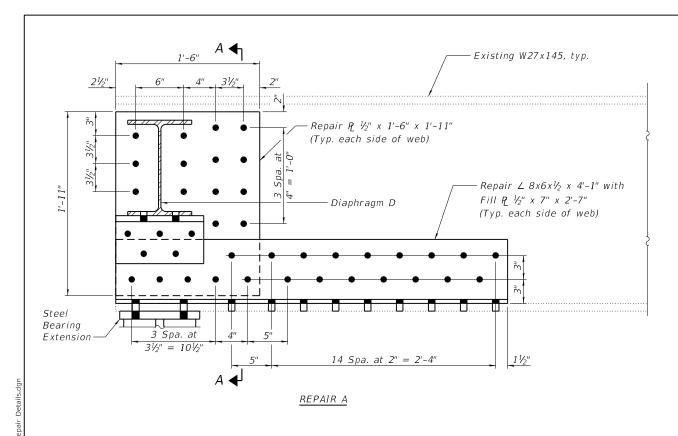
	O A T E S	E
NAN	ASSOCIATES	H
	www.oatesassociates.com	ı
Ĭ	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	Γ

	USER NAME =	DESIGNED - MAM	REVISED -
		CHECKED - JAD	REVISED -
	PLOT SCALE =	DRAWN - MAM	REVISED -
115	PLOT DATE = 8/14/2020	CHECKED - JAD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

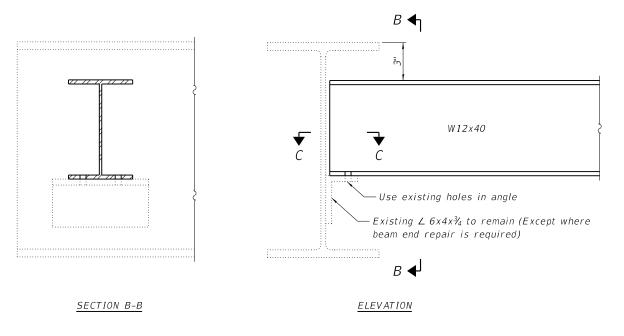
PARTIAL FRAMING PLAN						
STRUCTURE NO. 060-0199						
CHEET	12	OF	26	CHEETC		

F.A.P. RTE	SECTION			COUNTY	TOTAL SHEETS	SHE
785	132-2VBR-2			MADISON	41	28
				CONTRACT	NO. 76N	19
		ILLINOIS	FED. A	D PROJECT		

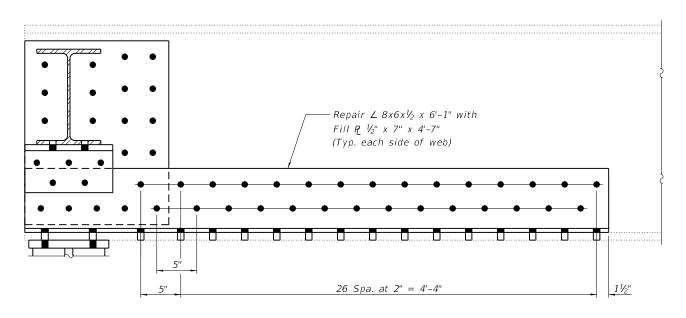


BOLT HOLE LEGEND 7

- O Field drill holes
- Shop drill holes

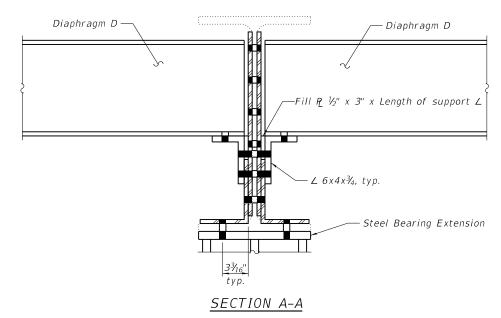


DIAPHRAGM D 5



REPAIR B

(For details not shown, see Repair A)



BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	10,210
Structural Steel Removal	Pound	10,160
Structural Steel Repair	Pound	7,870

- (1) All structural steel shall be AASHTO M 270 Grade 36, unless otherwise noted.
 (2) Cost of furnishing and erecting steel diaphragms and diaphragm support angles shall be included with Furnishing and Erecting Structural Steel.
- 3 Cost of furnishing and erecting steel for beam end repairs shall be included with Structural Steel Repair.
 4 Removal of existing diaphragm support angles, where required, and diaphragms shall be included in
- Structural Steel Removal.
- (5) Diaphragm D details shown for locations without beam end repairs. Details at location with beam end repairs similar, see section A-A.
- 6) Omit diaphragm support angle on outside face of beams 1 and 18.
 7) All holes in existing steel shall be field drilled using shop drilled holes in new steel as a template, except



REVISED -DESIGNED - MAM CHECKED - JAD REVISED -REVISED -CHECKED - JAD REVISED -

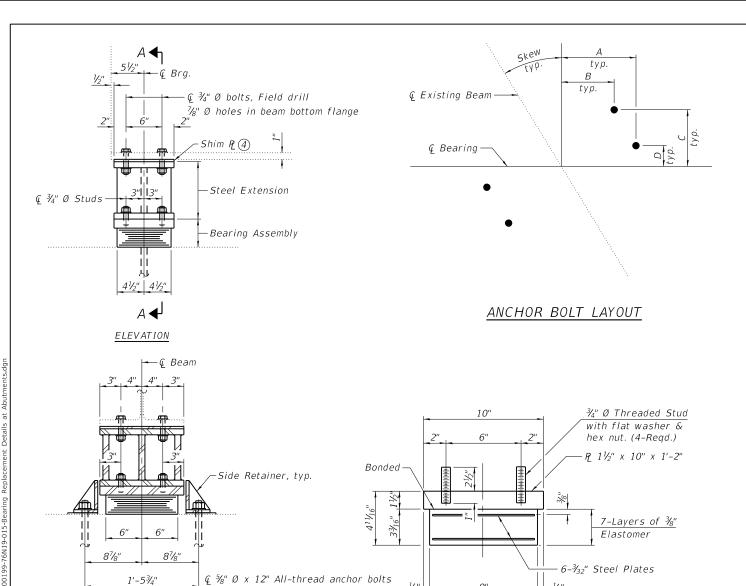
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION C-C

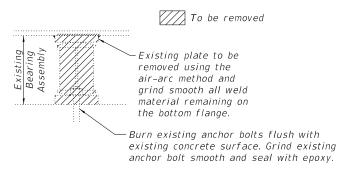
BEAM END REPAIRS 6

DIAPHRAGM & BEAM REPAIR DETAILS STRUCTURE NO. 060-0199 SHEET 14 OF 26 SHEETS

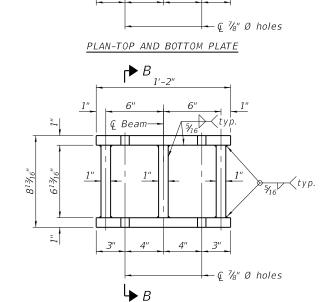
SECTION COUNTY MADISON 41 29 785 132-2VBR-2 CONTRACT NO. 76N19



BEARING ASSEMBLY



EXISTING BEARING REMOVAL DETAIL(1)



G Beam

STEEL EXTENSION 36 Required

DIMENSION TABLE

	Skew	Α	В	С	D
Beam 1	31°18'49"	8 ⁷ /8"	6½"	6¾"	21/2"
Beam 2	30°20′20″	8 ⁷ /8"	6¾"	65/8"	23/8"
Beam 3-17	29°20′40″	9"	6½"	6½"	21/8"
Beam 18	28°43'52"	9"	65/8"	6½"	21/8"

LOADING HS20-44 Allow 25#/sq. ft. for future wearing surface.

BILL OF MATERIAL

SECTION B-B

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	6,690
Elastomeric Bearing Assembly, Type I	Each	36
Anchor Bolts, 5/8"	Each	144
Jack and Remove Existing Bearings	Each	36

typ.

- Cost included with Jack and Remove Existing Bearings.
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

ELEVATION

- ③ Two $rac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
- 4) Shim plates shall be placed on top of Steel Extension. No more than two shim plates may be used at each bearing.
- ⑤ Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
- (6) Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- 7 Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
- (8) Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
- Minimum jack capacity = 23 Tons (includes weight of all steel and concrete). (10) If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

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

@ 1/8" Ø Hole

51/2"

(ASTM F1554 Grade 36) with

1¾" x 1¾" x ⅓₁₆" ₽ washer

under nut

TYPE I ELASTOMERIC EXP. BRG.

ESTIMATED BEARING SHIM PLATES @

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12	Beam 13	Beam 14	Beam 15	Beam 16	Beam 17	Beam 18
West Abut.	7/8"	1/4"	3/8"	11/8"	0"	3/4"	5/8"	1 1/4"	1/4"	1/2"	3/4"	7/8"	3/4"	3/4"	5/8"	3/4"	3/4"	7/8"
East Abut.	1/2"	7/8"	1"	7/8"	3/4"	7/8"	1 ½"	1 1/4"	1"	3/4"	5/8"	3/8"	5/8"	5/8"	1/8"	1/4"	5/ ₈ "	⁷ / ₈ "

OATES ILLINOIS DESIGN FIRM LICENSE NO.: 184.00111

1/4" Stainless steel

No. 1 finish-

plate, A240, Type 304,

SECTION A-A

	USER NAME =	DESIGNED - MAM	REVISED -
		CHECKED - JAD	REVISED -
	PLOT SCALE =	DRAWN - MAM	REVISED -
115	PLOT DATE = 8/14/2020	CHECKED - JAD	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

33.2

39.6

10.9

83.7

INTERIOR BEAM REACTION TABLE

(k)

(k)

(k)

R4

				AILS AT ABUTMENTS 60-0199
SHEET	15	OF	26	SHEETS

F.A.P. RTE	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
785	132-2VBR-2			MADISON	41	30
				CONTRACT	NO. 76N	19
		ILLINOIS	FFD. Al	D PROJECT		

<u>WEST ABUTMENT</u>

(Eastbound Roadway, Looking West)

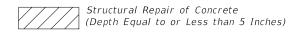


WEST ABUTMENT

(Westbound Roadway, Looking West)

Notes:

① Repair areas shown are estimated. The Engineer shall determine the repair areas and show actual locations on the as-built plans.



: 1		
	O A T E S	٥
	O A I E S	
	A 5 5 O C T A T E 5 www.oatesassociates.com	Ē
1	ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	Ē

USER NAME =	DESIGNED - MAM	REVISED -
	CHECKED - JAD	REVISED -
PLOT SCALE =	DRAWN - MAM	REVISED -
PLOT DATE = 8/14/2020	CHECKED - JAD	REVISED -

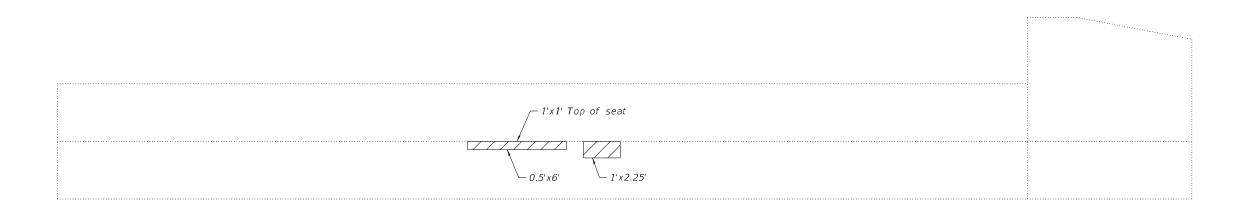
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS STRUCTURE NO. 060-0199							
SHEET	16	OF	26	SHEETS			

A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHE		
785	132-2VBR-2		MADISON	41	31		
			CONTRACT	NO. 76N	19		
	ILLINOIS FED AID PROJECT						

EAST ABUTMENT

(Westbound Roadway, Looking East)



EAST ABUTMENT

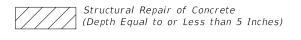
(Eastbound Roadway, Looking East)

Notes:

① Repair areas shown are estimated. The Engineer shall determine the repair areas and show actual locations on the as-built plans.

BILL OF MATERIAL

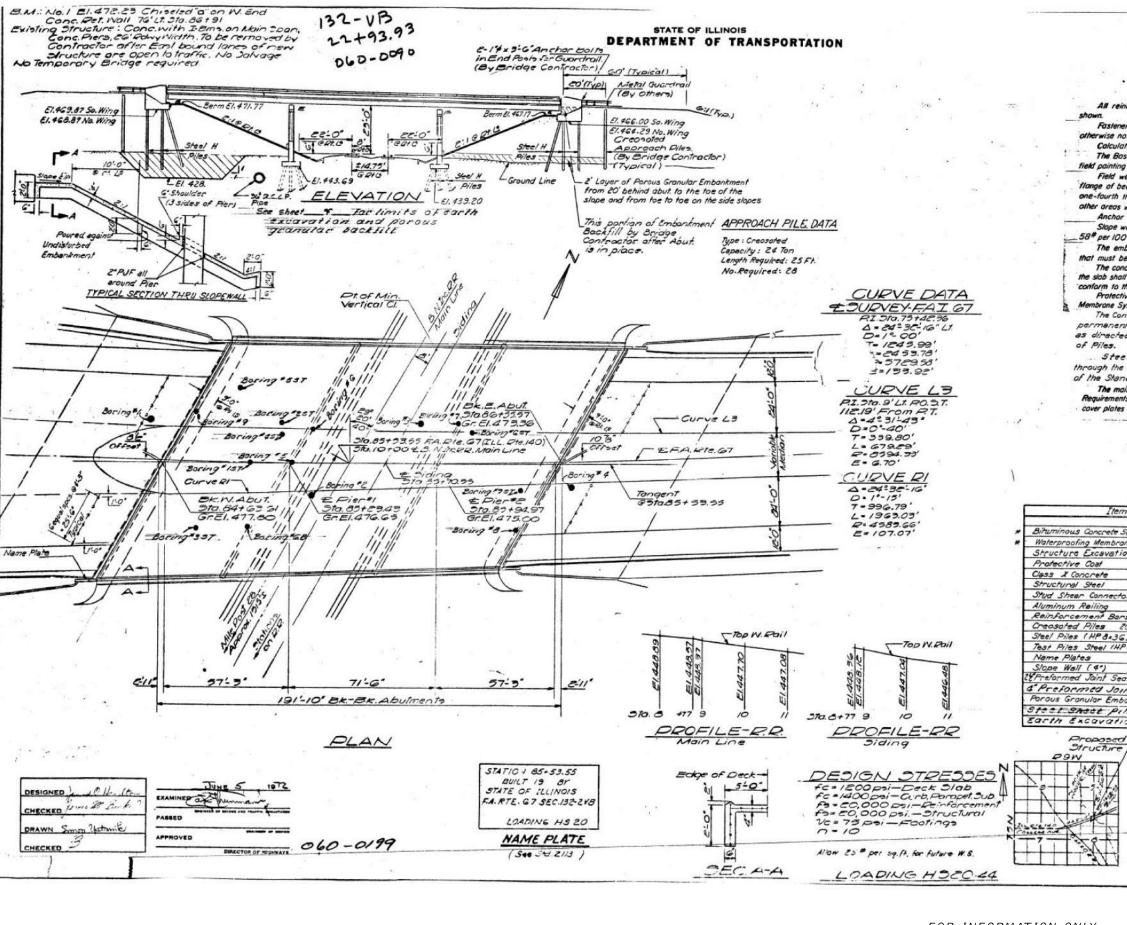
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less than 5	Inches) Sq. Ft.	46



OATES	USER NAME =	DESIGNED - MAM	REVISE
		CHECKED - JAD	REVISE
A S S O C I A T E S www.oatesassociates.com	PLOT SCALE =	DRAWN - MAM	REVISE
S DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	CHECKED - JAD	REVISE

SUBSTRUCTURE REPAIRS STRUCTURE NO. 060-0199						

A.P. TE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.		
85	132-2VBR-2		MADISON	41	32		
		CONTRACT NO. 76N19					
	ILLINOIS FED AID PROJECT						



GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise

Fasteners shall be high strength bolts. Balts 32; open hales 32, unless otherwise noted.

Calculated weight of Structural Steel. = 614,930 Lbs

The Basic Lead Silica Chromate paint system shall be used for shop and field painting of structural steel

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 sq.ft.

The embankment configuration shown shall be the minimum embankment, that must be constructed prior to construction of the abutments and piers. The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is to be applied.

The Contractor shall drive 2 steel (HP8x3G) test piles in a permanent location, one at the West Abutment and one at Pierz as directed by the Engineer before ordering the remainder of Piles.

Steel piles at Abutments shall be driven interholes precored through the embankment in accordance with Article 5/3.09(c) of the Standard Specifications.

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, splice plates and cover plates of the steel girders or wide flange beams.

TOTAL BILL OF MATERIAL

Item	Un!*	Super	Sub.	Total
Biruminous Concrete Surfece Course, Class I	Tons	140	-	140
Waterproofing Membrane System	Sq. Yds.	1662		1662
Structure Excavation	Cu. Yds.		554	554
Protective Coat	Sa Yds.	745		745
Class X Concrete	Qu. Yds.	690.3	773.2	
Structural Steel	Lump sum	1		1
Stud Shear Connectors	Each	7,668		7,668
Aluminum Reiling	Lin. Ft.	379		379
Reinforcement Bors	465.	174,260	69,950	244,210
Creosofed Piles 20.1 Ft. to 38 Ft.	Lin-FA	-	700	700
Steel Piles (HP8.36)	Lin.Ft.		6,676	6,676
Test Piles Steel (HP8 x 3G)	Each		2	2
Name Plates	Each	1	-	7
Slope Wall (4")	Sa. Ydg.		1,900	1,900
tereformed Joint Sealer	Lin.Ft.	124	7000	124
4 Preformed Joint Sealer	Lin. FA	138		138
Porous Granular Embankment	Cu. Yds.	3140		3140
Steet Sheet Piling	59.51	4550		4550
	Cu.Yos	2546	-	2546

8-99

GENERAL PLAN & ELEVATION

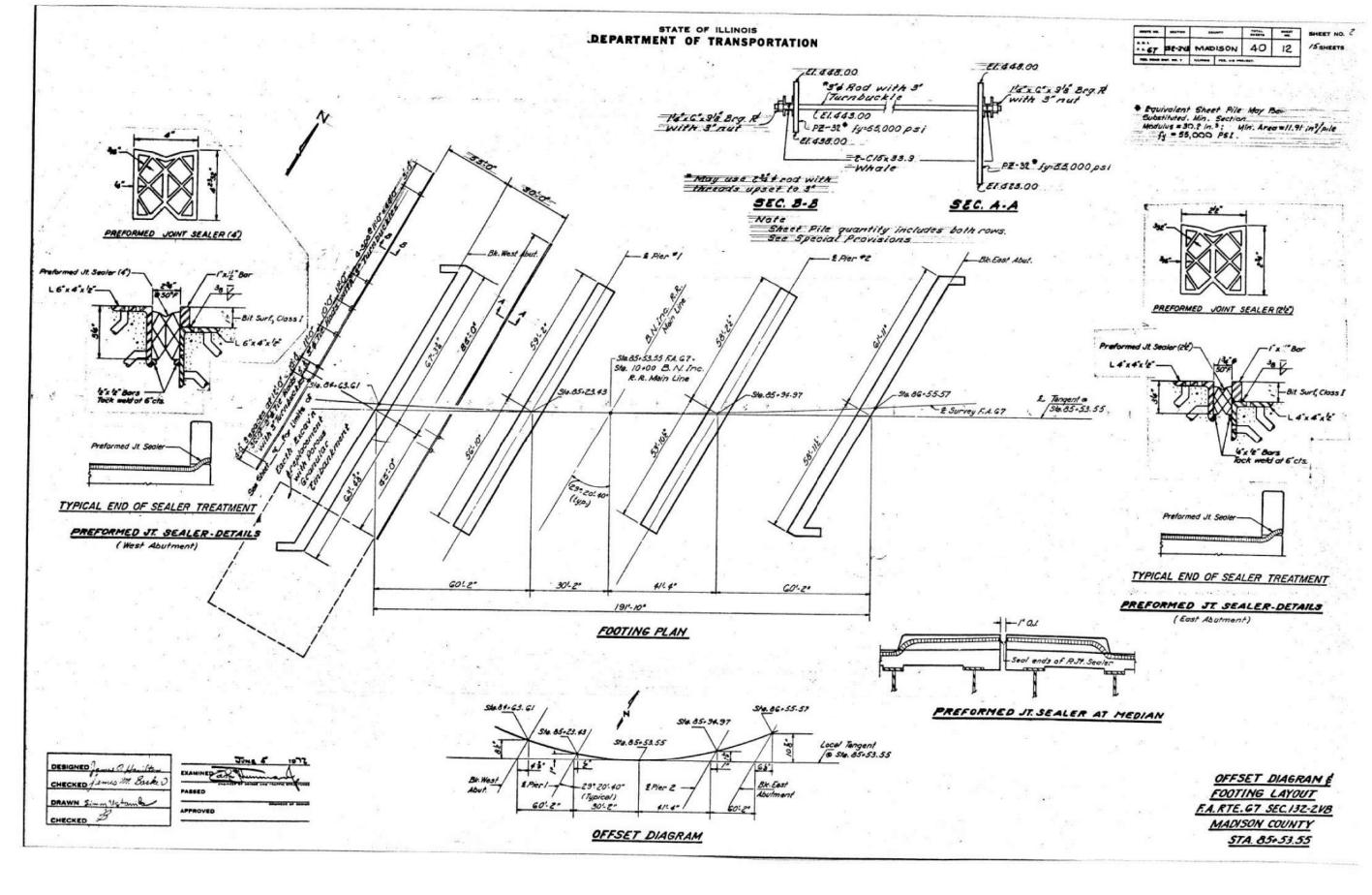
OVER BNING RA	ILROAL
F.A.DOUTE GT(IL	DIE 140
DECTION 136	EVE
MADISON CO	UNITY
DTATION 85	53.55

FOR INFORMATION ONLY

O A T E S	ŀ
A S S O C I A T E S www.oatesassociates.com	ŀ
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	ĺ

5	PLOT DATE = 8/14/2020	CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
		CHECKED -	REVISED -
	USER NAME =	DESIGNED -	REVISED -

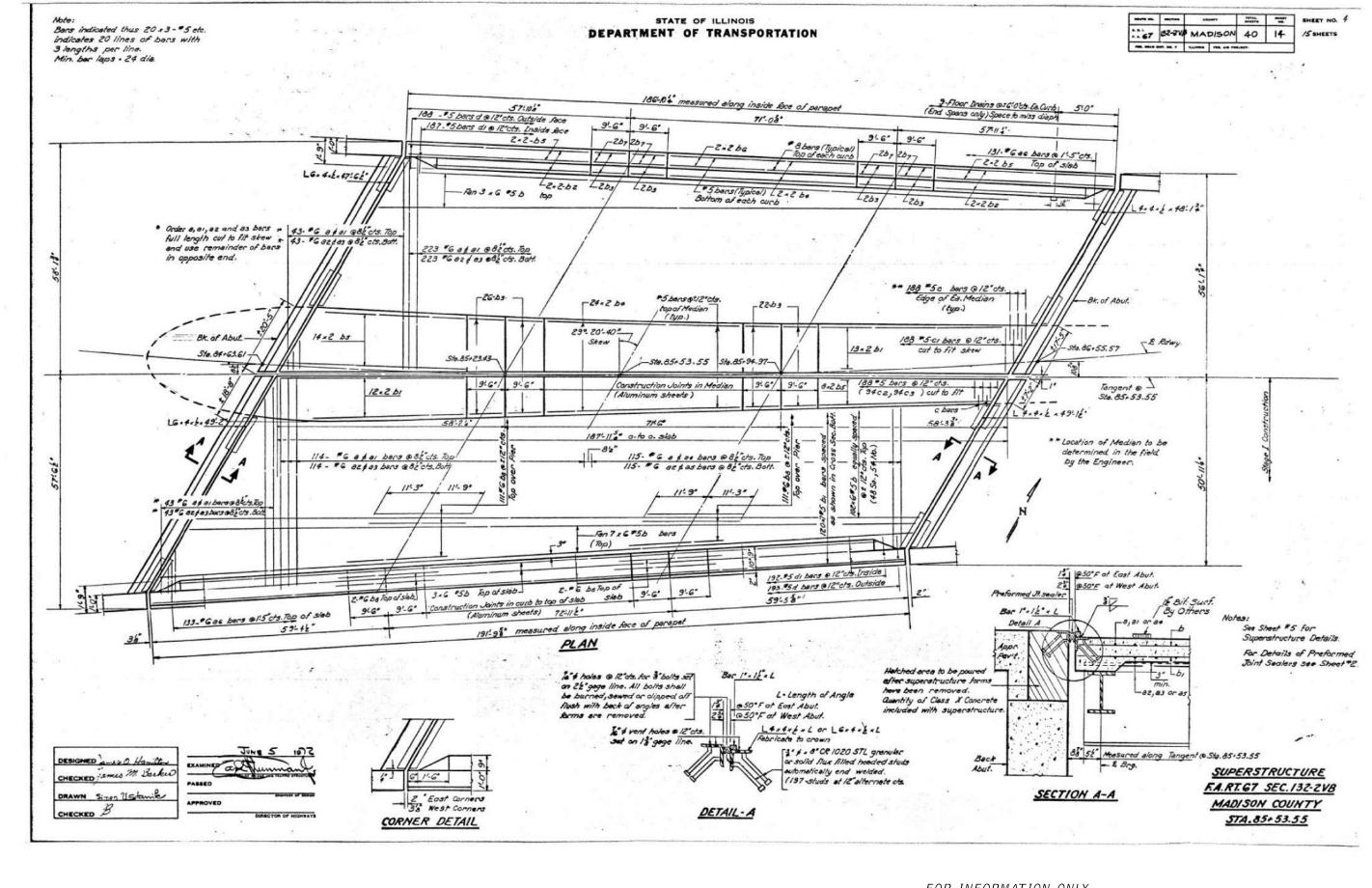
F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.		
785	132-2VBR-2		MADISON	41	33		
			CONTRACT	NO. 76N	19		
	ILLINOIS EED AID BROJECT						



FOR INFORMATION ONLY

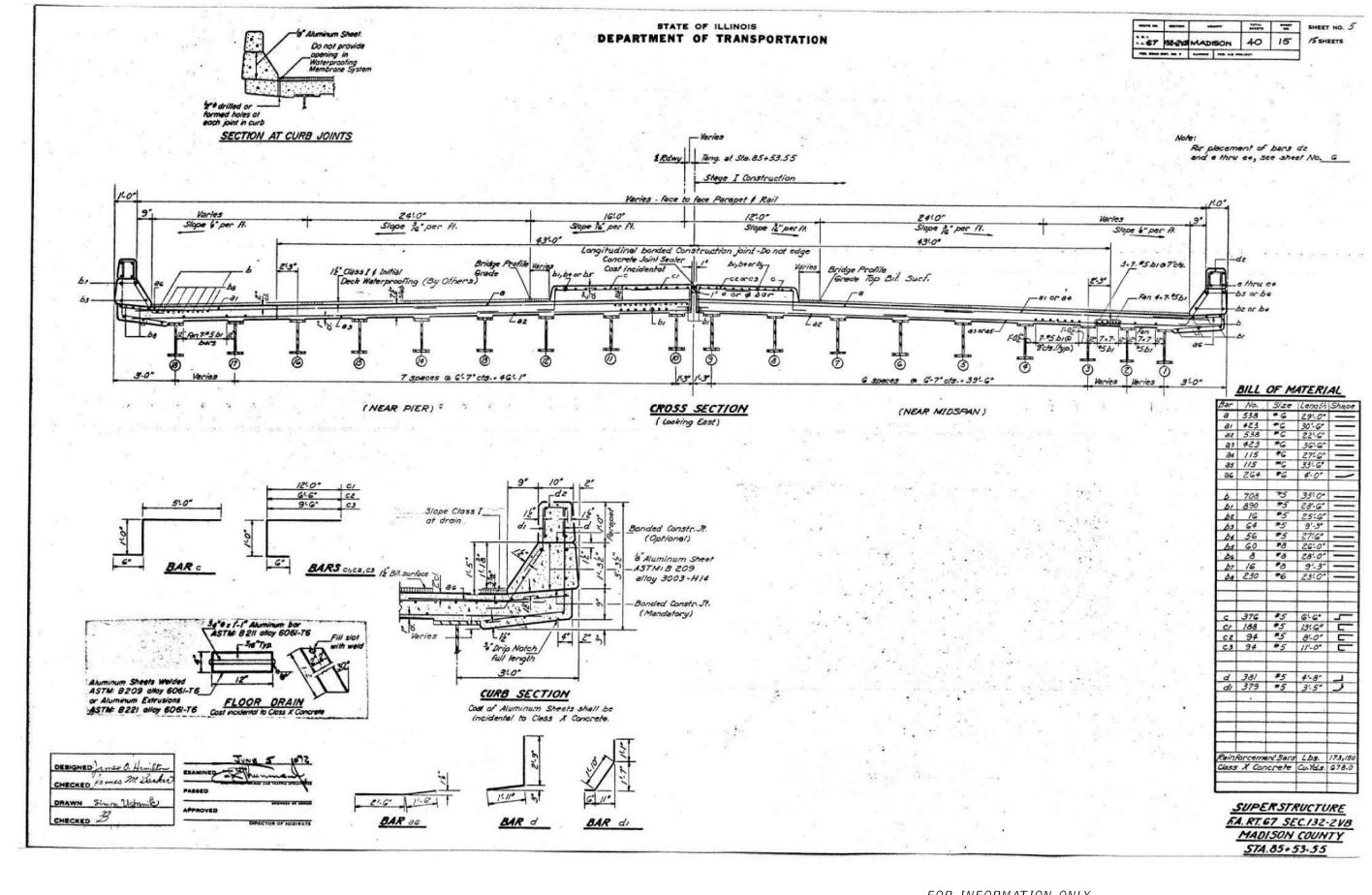
- 5 L											
Ξ[USER NAME =	DESIGNED -	REVISED -		EXISTING BRIDGE PLANS	F.A.P.	SECTION	COUNTY	TOTAL	SHEET
ME	UAIES		CHECKED -	REVISED -	STATE OF ILLINOIS	STRUCTURE NO. 060-0199	785	132-2VBR-2	MADISON	41	34
ž	A S S O C I A I E S www.oatesassociates.com PLOT SCALE =	PLOT SCALE =	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	21K0C10KE NO. 000-0199			CONTRACT	T NO. 76N	N19
==[LLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	CHECKED -	REVISED -		SHEET 19 OF 26 SHEETS		ILLINOIS FED.		AID PROJECT	

. 1022 - IDOT D8 PH 1 & 2 VAR - VAR (PTB194-054)\WO 1- IL 140 over Abandoned RR\Bridge\Microstation\0600199-76N19-019-Ex

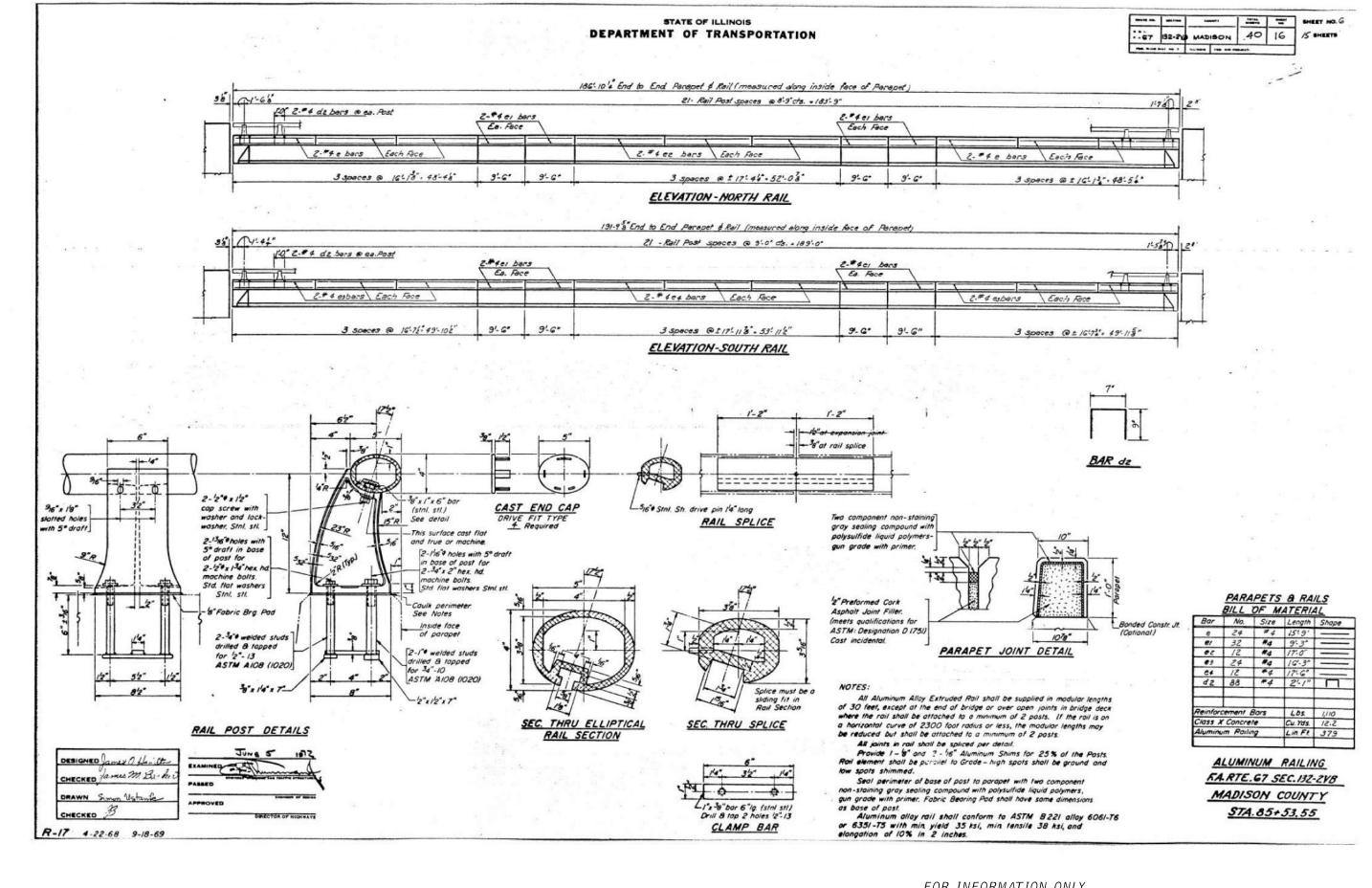


FOR INFORMATION ONLY

₽										
T OATES	USER NAME =	DESIGNED -	REVISED -		EXISTING BRIDGE PLANS	F.A.P.	SECTION	COUNTY	TOTAL S	SHEET
UAIES		CHECKED -	REVISED -	STATE OF ILLINOIS		785	132-2VBR-2	MADISON	41	35
www.oatesassociates.com	PLOT SCALE =	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 060-0199			CONTRACT	NO. 76N1	9
☐ ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	CHECKED -	REVISED -		SHEET 20 OF 26 SHEETS	ILLINOIS FED. AID PROJECT				
www.oatesassociates.com ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	DRAWN - CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION			ILLINOIS FE	D. AID PROJECT	NO. 76N	<u>11</u>

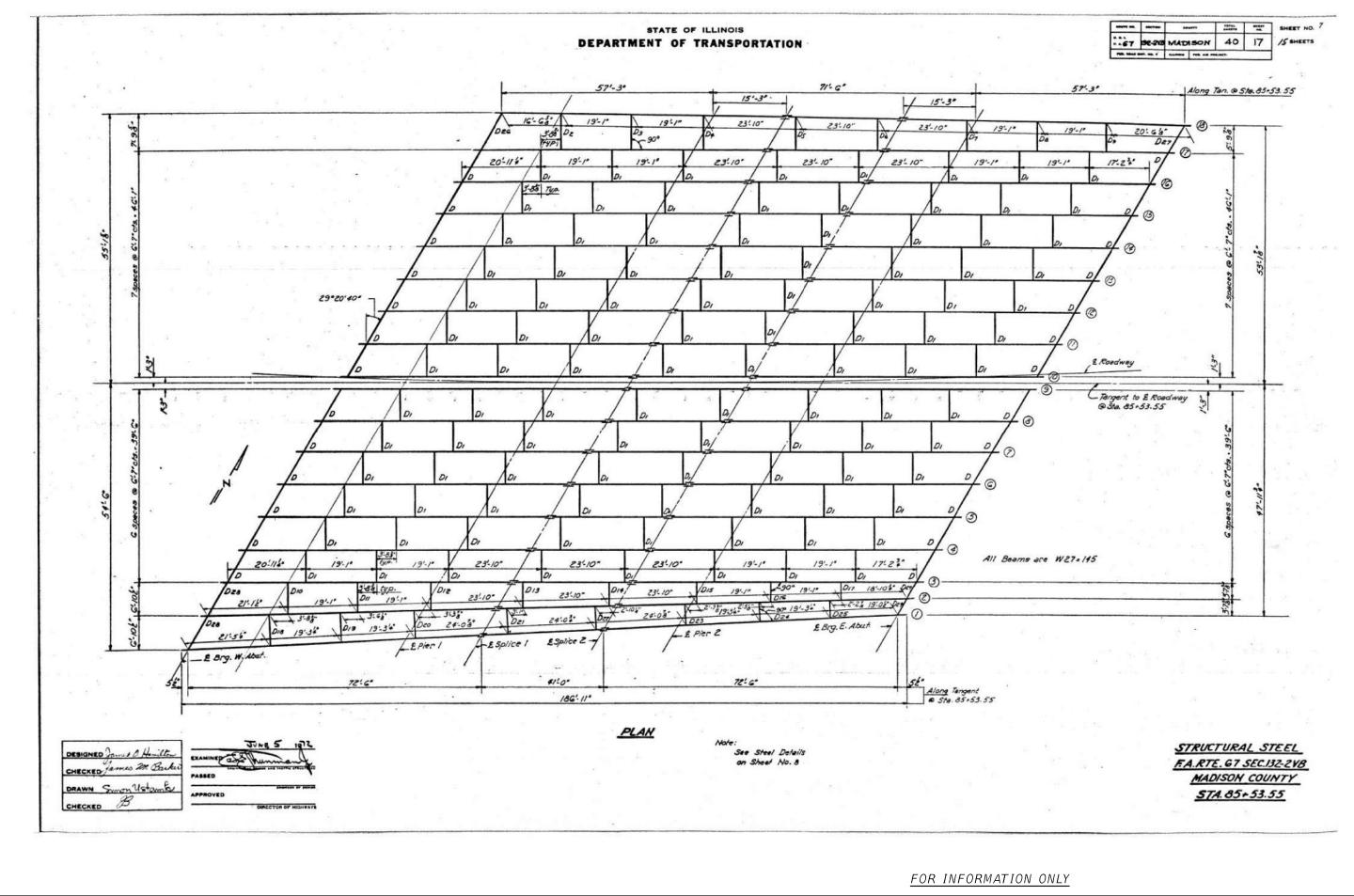


\P\220						FOR INFORMATION ONLY				
Ξ.		USER NAME =	DESIGNED -	REVISED -		EXISTING BRIDGE PLANS	F.A.P.	SECTION	COUNTY	TOTAL SHE
A S S O C I A T E S www.oatesassociates.com		CHECKED -	REVISED -	STATE OF ILLINOIS	STRUCTURE NO. 060-0199	785	132-2VBR-2	MADISON	41 3F	
	PLOT SCALE =	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION STRUCTURE NO. 060-019	21KUCTURE NO. 000-0199		CONTE		NO. 76N19	
# LIII	NOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2	020 CHECKED -	REVISED -		SHEET 21 OF 26 SHEETS		ILLINOIS FED	. AID PROJECT	

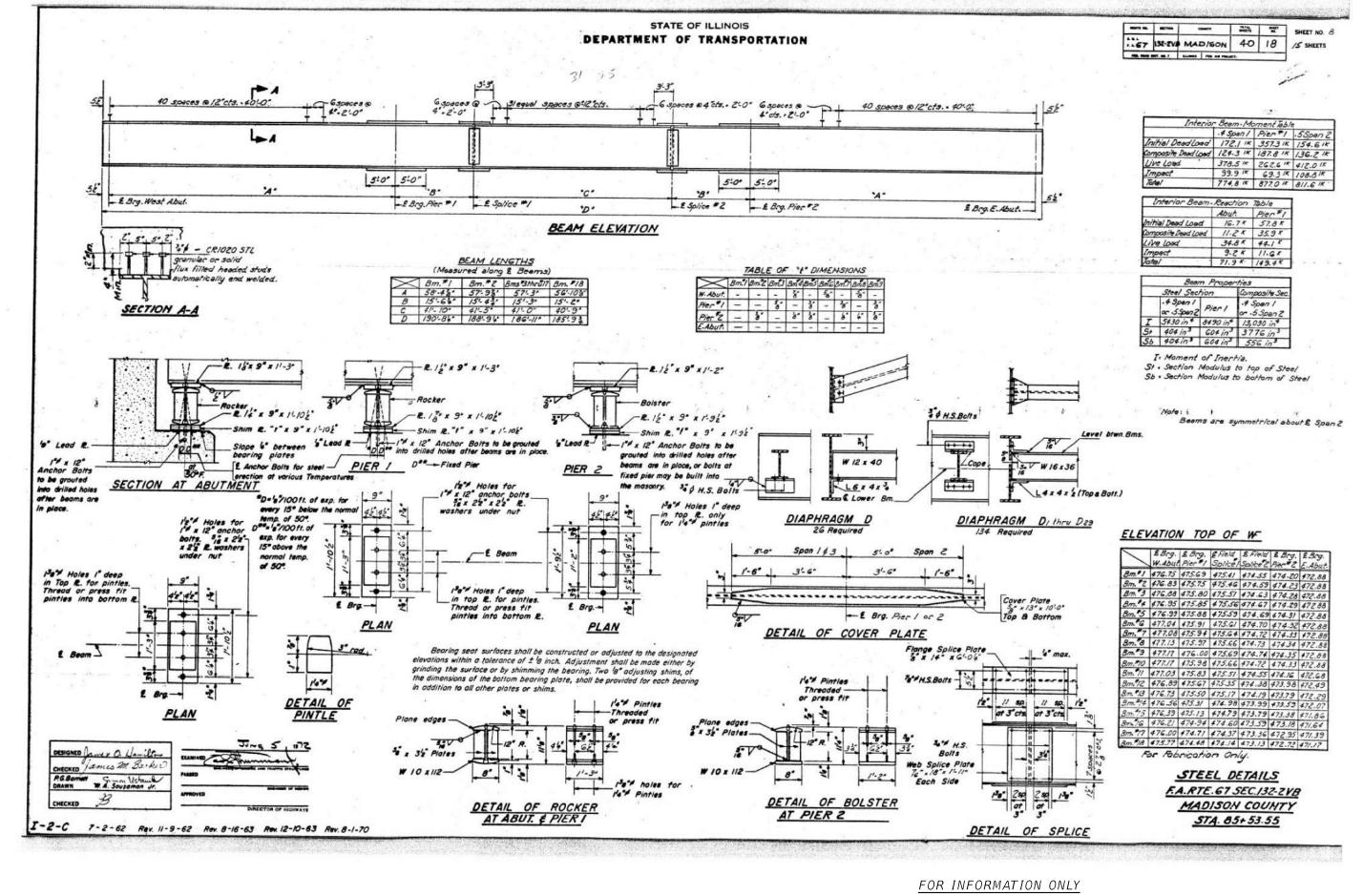


FOR INFORMATION ONLY

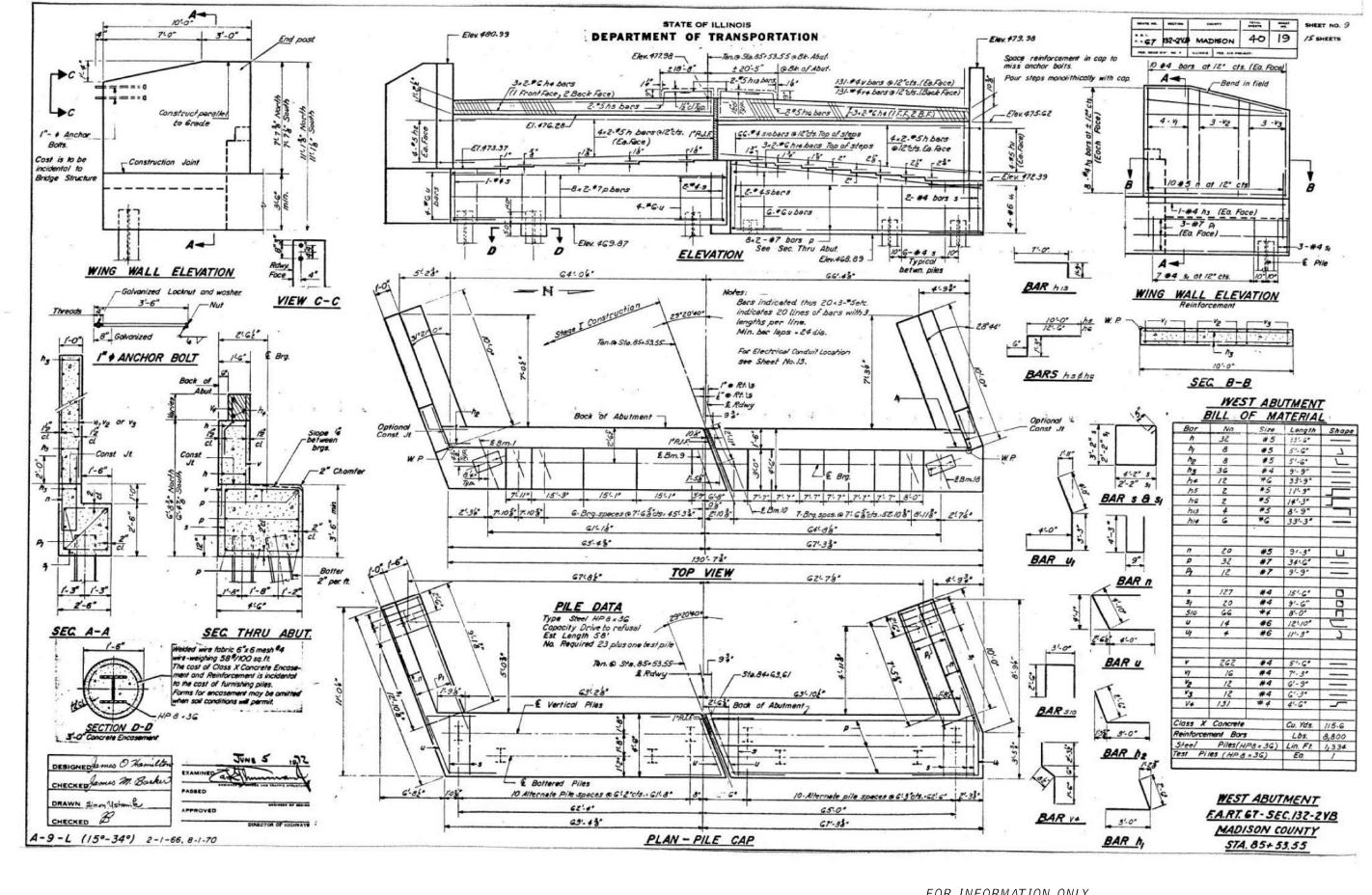




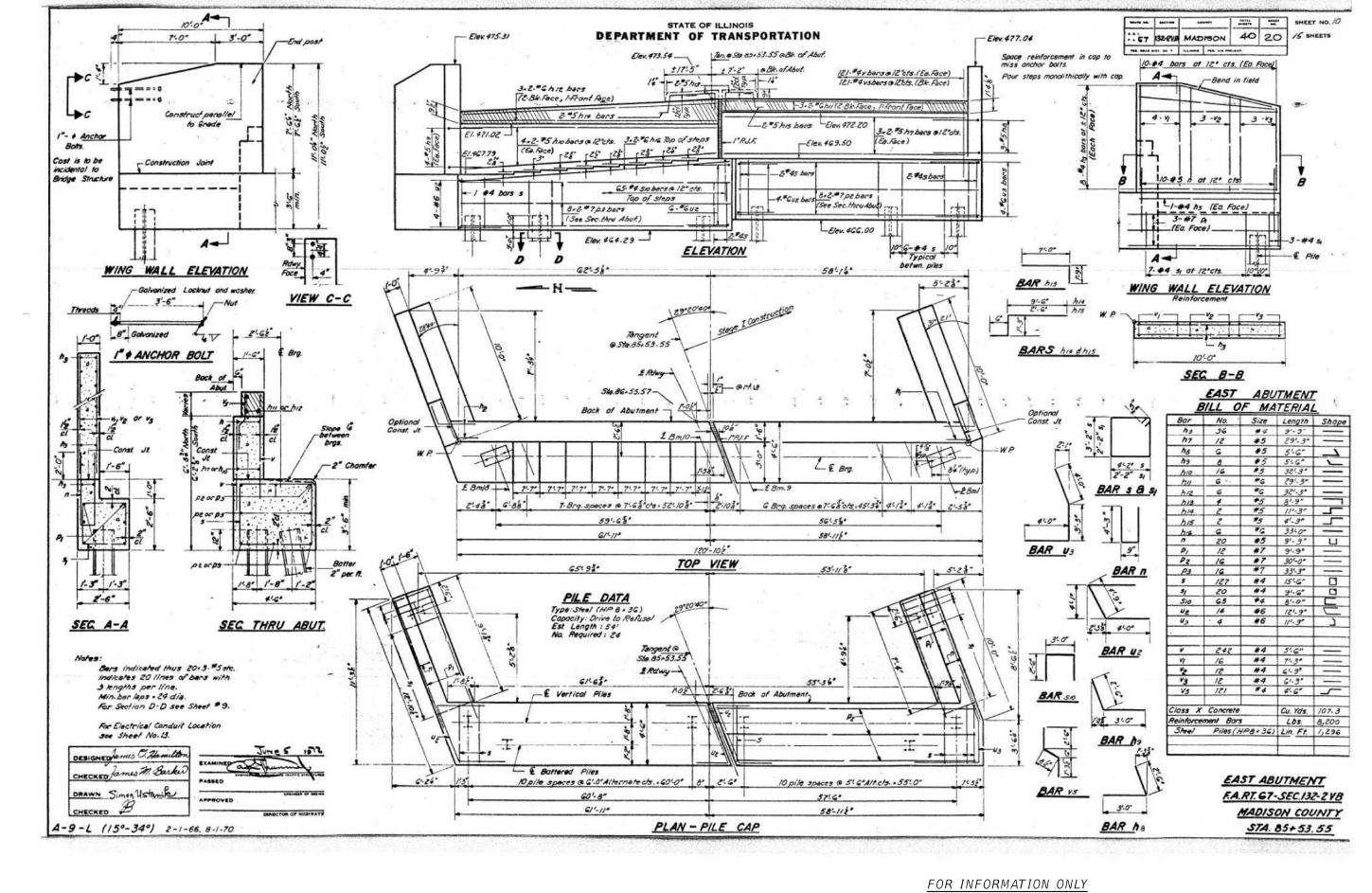




<u> </u>										
T OATES	USER NAME =	DESIGNED -	REVISED -		EXISTING BRIDGE PLANS	F.A.P.	SECTION	COUNTY	TOTAL S	HEET
UAIES		CHECKED -	REVISED -	STATE OF ILLINOIS		785	132-2VBR-2	MADISON	41	39
www.oatesassociates.com	PLOT SCALE =	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 060-0199			CONTRACT	NO. 76N1	9
☐ ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	CHECKED -	REVISED -		SHEET 24 OF 26 SHEETS	ILLINOIS FED. AID PROJECT				
www.oatesassociates.com ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 8/14/2020	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION			ILLINOIS FE	D. AID PROJECT	NO. 76N1	19



					FOR INFORMATION ONLY			
OATES USER	NAME =	DESIGNED -	REVISED -		EXISTING BRIDGE PLANS	F.A.P.	SECTION	COUNTY TOTAL SHEE
UAIES		CHECKED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		785	132-2VBR-2	MADISON 41 40
Www.oatesassociates.com	SCALE =	DRAWN -	REVISED -		STRUCTURE NO. 060-0199			CONTRACT NO. 76N19
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT D	DATE = 8/14/2020	CHECKED -	REVISED -		SHEET 25 OF 26 SHEETS		ILLINOIS FE	D. AID PROJECT



EXISTING BRIDGE PLANS
STRUCTURE NO. 060-0199

SHEET 26 OF 26 SHEETS

	ı
OAIES	Γ
ASSOCIATES	H
www.oatesassociates.com	L
ILLINOIS DESIGN FIRM LICENSE NO.: 184.001115	Γ

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION