06-12-2020 LETTING ITEM 150 **INDEX OF SHEETS COVER SHEET** 02 HIGHWAY STANDARDS AND GENERAL NOTES

SUMMARY OF QUANTITIES SCHEDULE OF QUANTITIES

REMOVAL & IMPROVEMENT PLAN

TRAFFIC CONTROL PLAN - STAGE 1

TRAFFIC CONTROL PLAN - STAGE 2

03-04

05-06

07

80

09-10

11-12

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS**

CONTRACT NO. 64P38

D-92-041-20

PROPOSED HIGHWAY PLANS

FAP ROUTE 525 (US 20) OVER FAI ROUTE 90 SECTION D2 BDR 2020-1 **BRIDGE REPAIR BOONE COUNTY**

C-92-062-20

TOWNSHIP 43 NORTH

RANGE 3 EAST OF 3RD P.M.

SECTION 5

PAVEMENT MARKING PLAN 13-14 15 GENERAL PLAN AND ELEVATION 16 STAGE CONSTRUCTION DETAILS 17 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION 18 **BRIDGE DECK OVERLAY PLAN** 19 **BRIDGE DECK OVERLAY DETAILS** 20 WESTBOUND EXPANSION JOINT DETAIL 21 **EASTBOUND EXPANSION JOINT DETAIL** 22 **EXPANSION JOINT DETAILS**

STAGE I & II CONSTRUCTION TYPICAL SECTIONS

23 PREFORMED JOINT STRIP SEAL 24 APPROACH JOINT DETAILS

25 BAR SLPLICE ASSEMBLY AND MECHANICAL SPLCER DETAILS

26 94.2 TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)

27-30 34.1 WORK ZONE SIGN DETAILS

31 40.1 TRAFFIC CONTROL FOR ROAD CLOSURE

41.1 TYPICAL PAVEMENT MARKINGS 32-34

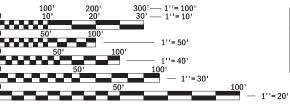
DESIGN DESIGNATIONS

PRINCIPAL ARTERIAL **CURRENT ADT: 19,400 (2017) DESIGN SPEED: 55 MPH** POSTED SPEED: 55 MPH MU = 9%, SU = 7%

 \circ

 \circ

PROJECT BEGINS STA. 1424 + 04



ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS

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

ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

EXISTING STRUCTURE

S.N. 004-9900 (WB) A CONTINUOUS FOUR SPAN WITH 94'-0" MAIN SPANS AND 61'-6" END SPANS ON A SKEW OF 47 24'

EXISTING STRUCTURE

S.N. 004-0004 (EB) A CONTINUOUS FOUR SPAN WITH 94'-0" MAIN SPANS AND 66'-9" AND 62'-3" END SPANS, ON A SKEW OF 47 25'

LOCATION MAP

MAP NOT TO SCALE

GROSS LENGTH = 3,803 FT. = 0.720 MILE NET LENGTH = 3.803 FT. = 0.720 MILE

Cherry ADDAMS GRAHAM

> LUKE G. NELSON 062-065230

03-30-2020

PROJECT ENDS

WILLETT HOFMANN

STA, 1462 + 07

QUIGG ENGINEERING INC

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

STATE OF ILLINOIS

Ahnd

LOCATION OF SECTION INDICATED THUS: -

EXPIRES 11/30/21

PROJECT ENGINEER LUKE NELSON, P.E. PROJECT MANAGER MAHMOUD ETEMADI, P.E.

CONTRACT NO. 64P38

HIGHWAY STANDARDS

000001-07 001001-02	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS AREAS OF REINFORCEMENT BARS
001001-02	DECIMAL OF AN INCH AND OF A FOOT
610001-08	SHOULDER INLET WITH CURB
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-16	TRAFFIC BARRIER TERMINAL, TYPE 6
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' T 24" FROM PAVEMENT EDGE
701101-03	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701422-10	LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH
701426-09	LANE CLOSURE, MULTILANE, INERMITTENT, OR MOVING OPER.,
	FOR SPEEDS ≥ 45 MPH
701428-01	TRAFFIC CONTROL SET UP AND REMOVAL FREEWAY / EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTIING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

THE AREA TO BE TACKED OR PRIMED SHALL BE LIMITED TO THAT WHICH CAN BE COVERED WITH HMA ON THE NEXT DAY'S PRODUCTION, BUT NO MORE THAN FIVE DAYS IN ADVANCE OF THE PLACEMENT OF THE HMA, UNLESS APPROVED BY THE ENGINEER.

THE STRUCTURES WILL RETAIN THE SAME NUMBERS: 004-0004 (EB) & 004-9900 (WB).

PAVEMENT MARKING SHALL BE DONE ACCORDING TO STANDARD 78001, EXCEPT AS FOLLOWS:

- 1. ALL WORDS, SUCH AS ONLY, SHALL BE 8 FEET HIGH.
- 2. ALL NON-FREEWAY ARROWS SHALL BE THE LARGE SIZE.
- 3. THE DISTANCE BETWEEN YELLOW NO-PASSING LINES SHALL BE 8 INCHES, NOT 7 INCHES, AS SHOWN IN THE DETAIL OR TYPICAL LANDE AND EDGE LINES
- 4. CENTERLINE SKIP DASH PAVEMENT MARKING ON MULTI-LANE DIVIDED,
 MULTI-LANE UNDIVIDED, AND ONE-WAY ROADWAY SHALL BE ACCORDING TO
 DISTRICT 41.1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIESLOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBER OF JULIE.

IDOT IS NOT A MEMBER OF JULIE, IF YOU ARE NEAR ANY OVERHEAD LIGHTING, INTERSECTION LIGHTING OR TRAFFIC SIGNALS, CONTACT THE IDOT TRAFFIC OFFICE AND 815-284-5469 AT LEAST 48 HOURS PRIOR TO WORK.

RELOCATE TEMPORARY IMPACT ATTENUATORS SHALL INCLUDE STORAGE AND TRASNPORTATION TO AND FROM STORAGE, WHEN THE DEVICE IS NOT NEEDED FOR A TIME, AS SHOWN ON THE STAGING PLANS. THIS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR IMPACT ATTENUATORS, RELOCATE OF THE TYPE SPECIFIED.

WHEN RELOCATE TEMPORARY CONCRETE BARRIER IS SPECIFIED, THE WALL SHALL BE REMOVED, STORAGE AND TRANSPORTATION TO AND FROM STORAGE, WHEN THE WALL IS NOT NEEDED FOR A TIME AS SHOWN ON THE STAGING PLANS, RELOCATED AND REINSTATED AT THE NEW LOCATION. THE REINSTALLATION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR A NEW INSTALLATION. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR RELOCATE TEMPORARY CONCRETE BARRIER.

THE FOLLOWING MIXTURE REQUITEMENTS ARE APPLICABLE FOR THIS PROJECT:

2 1/4"

LOCATIONS(S):	US 20
MIXTURE USE(S):	SURFACE
PG:	SBS PG 70-22
DESIGN AIR VOIDS:	4.0% @ N90
MIXTURE COMPOSITION:	IL 9.5
FRICTION AGGREGATE:	E
MIXTURE WEIGHT:	119 LB/SY/IN
QUALITY MANAGEMENT PROGRAM:	QC/QA
SUBLOT SIZE:	N/A
NUMBER OF ROLLER PASSES:	*

^{*}FOLLOW REQUIREMENTS OF SECTION 582 OF THE STANDARD SPECIFICATIONS FOR HMA SURFACING ON BRIDGE DECKS

WILLETT HOFMANN
8 AS NOCIATES INC
GOGGERGE AGENTICINE AND BUSINESS
BORGATT SOSTETI, DOOR, 1627
T, 815-284 3381 DESIGN FIRM ¢184 000018

	USER NAME = Inelson	DESIGNED	-	LGN	REVISED -	
N c		DRAWN	-	LGN	REVISED -	
1NG 67	PLOT SCALE = 120.0000 '/ ft.	CHECKED	-	GFS	REVISED -	
18	PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -	

	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HIGHWAY STANDARDS AND GENERAL NOTES		D2 BDR 2020-1	BOONE	34	02
			CONTRAC	T NO. 6	4P38
SCALE N / A SHEET 1 OF 1 SHEETS STA. N / A TO STA. N / A		ILLINOIS FED. A	ID PROJECT		

SUMMARY OF QUANTITIES

CONSTRUCT	TION CODE: 0013 100% STATE		MMARY
PAY CODE	PAY ITEM	UNIT	QUANTITY
	NAME		·
28000510	INLET FILTERS	EACH	8
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	451
40604174	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "E", N90	TON	521
50102400	CONCRETE REMOVAL	CU YD	12.1
		1	
50157300	PROTECTIVE SHIELD	SQ YD	744
50300255	CONCRETE SUPERSTRUCTURE	CU YD	12.9
50300300	PROTECTIVE COAT	SQ YD	38
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,780
50800515	BAR SPLICERS	EACH	20
52000110	DREEODMED JOINT STRIP SEAL	FOOT	209
52000110	PREFORMED JOINT STRIP SEAL	1001	209
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	2,386
63302400	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 5	EACH	2
63302700	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 6	EACH	4
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1

	DAY CODE	PAY ITEM AY CODE		OLIANITITY
	PAT CODE	NAME	UNIT	QUANTITY
	70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	13,587
	70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	2,646
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,250.0
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,250.0
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	280.8
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	11,065
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,412
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	1,505
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	14
*	78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	56
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	14
k	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	54

* SPECIALITY ITEM * SPECIALITY ITEM

WILLETT HOFMANN

USER NAME = lnelson DESIGNED - LGN REVISED -DRAWN - GBG REVISED -PLOT SCALE = 240.0000 '/ ft. CHECKED - GFS REVISED -PLOT DATE = 3/30/2020 DATE - 3/30/20 REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. RTE. 525 SECTION SUMMARY OF QUANTITIES D2 BDR 2020-1 SCALE N / A SHEET 1 OF 2 SHEETS STA. N / A TO STA. N / A

SUMMARY OF QUANTITIES

CONSTRUC	SUMMART		
PAY CODE	PAY ITEM	UNIT	QUANTITY
	NAME		
Z0021904	SILICONE JOINT SEALER, 1"	FOOT	208
Z0041895	POLYMER CONCRETE	CU FT	36.9
X0326440	SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL)	SQ YD	1,519
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	4,278
X0931400	INLET BOXES TO BE ADJUSTED (SPECIAL)	EACH	8
X7010208	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	6,293
X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	2,204
X7830074	GROOVING FOR RECESSED PAVEMENT MARKING 7"	FOOT	275

* SPECIALITY ITEM

WILLETT HOFMANN

8 A S S O C I A T E S I N C

COMMERCIANO ASCULTOUR SUPPLIED

8094377 DSITE (DODN, 16000)18

7.815243381 OSSOFFRM 7184000)18

USER NAME = Inelson	DESIGNED	-	LGN	REVISED -	_
	DRAWN	-	GBG	REVISED -	
PLOT SCALE = 240.0000 '/ ft.	CHECKED	-	GFS	REVISED -	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -	

	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES	525	D2 BDR 2020-1	BOONE	34	04
			CONTRAC	T NO. 6	4P38
SCALE N / A SHEET 2 OF 2 SHEETS STA. N / A TO STA. N / A		ILLINOIS FED. AI	D PROJECT		

40600295 POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)

STATION	POUND	REMARKS
US - 20		0.025 LB/SF 1 APP ON BIT
STAGE I		
1439+93 - 1441+24	55	WEST BOUND APPROACH & SHOULDER
1444+26 - 1445+63	62	WEST BOUND APPROACH & SHOULDER
1440+49- 1441+80	50	EAST BOUND APPROACH & SHOULDER
1445+06 - 1446+39	63	EAST BOUND APPROACH & SHOULDER
STAGE II		
1439+93 - 1441+41	58	WEST BOUND APPROACH & SHOULDER
1444+45 - 1445+63	49	WEST BOUND APPROACH & SHOULDER
1440+49- 1441+99	65	EAST BOUND APPROACH & SHOULDER
1445+23 - 1446+39	49	_ EAST BOUND APPROACH & SHOULDER
PROJECT TOTAL	451	

40604174 POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "E", N90 STATION REMARKS

STATION	1011	KEMAKKS
US - 20 STAGE I		119 LB / SY / IN
STAGE I		
1439+93 - 1441+24	33	WEST BOUND APPROACH & SHOULDER
1444+26 - 1445+63	37	WEST BOUND APPROACH & SHOULDER
1440+49- 1441+80	30	EAST BOUND APPROACH & SHOULDER
1445+06 - 1446+39	38	EAST BOUND APPROACH & SHOULDER
STAGE II		
1439+93 - 1441+41	35	WEST BOUND APPROACH & SHOULDER
1444+45 - 1445+63	29	WEST BOUND APPROACH & SHOULDER
1440+49- 1441+99	39	EAST BOUND APPROACH & SHOULDER
1445+23 - 1446+39	30	EAST BOUND APPROACH & SHOULDER
		=

PROJECT TOTAL 271

TOTAL STRUCTURAL QUANTITY SEE TOTAL BILL OF MATERIAL ON SHEET 15

63302400 REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 5

STATION	EACH
US - 20 STAGE I WEST BOUND DEPARTURE	1
STAGE II EAST BOUND DEPARTURE	1
PROJECT TOTAL	2

63302700 REMOVE AND REERECT TRAFFIC TERMINALS, TYPE 6

STATION	EACH	REMARKS
US - 20 STAGE I		
EAST BOUND APPROACH	1	
WEST BOUND APPROACH	1	
STAGE II		
EAST BOUND APPROACH	1	
WEST BOUND APPROACH	1	
PROJECT TOTAL	4	

70100205 TRAFFIC CONTROL AND PROTECTION, STANDARD 701401

	STATION	EACH	REMARKS
I - 90			
	EAST BOUND LANES	1	PRIOR TO CONSTRUCTION
	WEST BOUND LANES	1	PRIOR TO CONSTRUCTION
	PROJECT TOTAL	2	

70300220* TEMPORARY PAVEMENT MARKING - LINE 4"

STATION	FOOT	REMARKS
US - 20		
STAGE 1 - EAST BOUND LANES		
1423+50.2 - 1435+30.4	1,181	SOLID - YELLOW
1436+05.0 - 1438+50.2	246	SOLID - YELLOW
LT 1438+50.2 - 1448+52.0	1.006	SOLID - YELLOW
RT 1438+50.2 - 1452+09.3	1,363	SOLID - WHITE
STAGE 1 - WEST BOUND LANES	1,505	30210 *******
LT 1438+70.4 - 1447+60.7	891	SOLID - WHITE
RT 1440+06.6 - 1447+60.7	755	SOLID - YELLOW
1447+60.7 - 1450+95.4	367	SOLID - WHITE
RT 1451+88.9 - 1457+23.4	535	SOLID - YELLOW
LT 1455+54.6 - 1462+60.7	709	SOLID - WHITE
STAGE 2 - EAST BOUND LANES		
RT 1423+50.2 - 1433+58.6	1,008	SOLID - WHITE
RT 1435+71.5 - 1452+12.6	1,683	SOLID - WHITE
LT 1438+50.2 - 1445+90.2	741	SOLID - YELLOW
STAGE 2 - WEST BOUND LANES		
RT 1438+58.4 - 1450+82.0	1,228	SOLID - YELLOW
LT 1439+47.9 - 1447+60.7	813	SOLID - WHITE
1452+00.0 - 1462+60.7	1,061	SOLID - YELLOW
PROJECT TOTAL	13,587	

70300250* TEMPORARY PAVEMENT MARKING - LINE 8"

STATION	FOOT	REMARKS
US - 20		
STAGE 1 - EAST BOUND LANES		
1448+39.9 - 1452+12.6	757	SOLID - WHITE - LEFT TURN LANE
STAGE 1 - WEST BOUND LANES		
1451+91.0 - 1455+70.5	770	SOLID - WHITE - RIGHT TURN LANE
STAGE 2 - EAST BOUND LANES		
1433+50.2 - 1435+12.3	332	SOLID - WHITE - RIGHT TURN LANE
STAGE 2 - WEST BOUND LANES		
1434+80.4 - 1438+70.7	787	SOLID - WHITE - LEFT TURN LANE
PROJECT TOTAL	2,646	

70400100 TEMPORARY CONCRETE BARRIER

STATION	1001	KEMAKKS
S - 20		
TAGE 1		
1439+88 - 1446+25	637.5	EAST BOUND
1440+08 - 1446+23	612.5	WEST BOUND
PROJECT TOTAL	1,250.0	

70400200 RELOCATE TEMPORARY CONCRETE **BARRIER**

D, (1 (1 (1 L)		
STATION	FOOT	REMARKS
US - 20 STAGE 2		
1439+88 - 1446+25	637.5	EAST BOUND
1440+08 - 1446+23	612.5	WEST BOUND
PROJECT TOTAL	1,250,0	

70600250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 EACH

US - 20		
1439+88 1446+23	1 1	STAGE 1 - EAST BOUND STAGE 1 - WEST BOUND
PROJECT TOTAL	2	

70600350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 STATION REMARKS EACH

US - 20		
1439+88	1	STAGE 2 - EAST BOUND
1446+23	1	STAGE 2 - WEST BOUND
PROJECT TOTAL	2	

78000100 THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS

STATION	30 11	KLMAKKS
US - 20		
POST STAGE 1 - EAST BOUND LANES		
1447+98.4 - 1450+59.0	46.8	3 - LEFT TURN ARROWS - WHITE
POST STAGE 1 - WEST BOUND LANES		
1451+99.6 - 1455+36.4	62.4	4 - RIGHT TURN ARROWS - WHITE
POST STAGE 2 - EAST BOUND LANES		
1433+57.3 - 1434+85.5	31.2	2 - RIGHT TURN ARROWS - WHITE
1448+53.0 - 1450+58.2	46.8	3 - RIGHT TURN ARROWS - WHITE
POST STAGE 2 - WEST BOUND LANES		
1436+36.5 - 1438+72.9	31.2	2 - LEFT TURN ARROWS - WHITE
1452+03.0 - 1455+36.4	62.4	4 - LEFT TURN ARROWS - WHITE
PROJECT TOTAL	280.8	

USER NAME = lnelson	DESIGNED	-	LGN	REVISED -
	DRAWN	-	GBG	REVISED -
PLOT SCALE = 240.0000 '/ ft.	CHECKED	-	GFS	REVISED -
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -

- LINE 4"		
STATION	FOOT	REMARKS
US - 20		
POST STAGE 1 - EAST BOUND LANES		
1423+50.2 - 1435+22.0	1,169	N. EDGE LINE - YELLOW
1436+11.5 - 1438+50.2	236	N. EDGE LINE - YELLOW
1446+24.6 - 1450+93.8	477	N. EDGE LINE - YELLOW
POST STAGE 1 - WEST BOUND LANES	5	
1447+60.7 - 1450+99.0	381	N. EDGE LINE - WHITE
1451+59.6 - 1462+60.7	1,124	N. EDGE LINE - WHITE
POST STAGE 2 - EAST BOUND LANES		
1423+50.2 - 1435+37.8	1,207	S. EDGE LINE - WHITE
1438+50.2 - 1446+24.6	775	N. EDGE LINE - YELLOW
1435+70.5 - 1451+12.2	1,591	S. EDGE LINE - WHITE
1451+59.7 - 1452+12.6	86	S. EDGE LINE - WHITE
1451+76.5 - 1452+12.6	44	N. EDGE LINE - YELLOW
POST STAGE 2 - WEST BOUND LANES	5	
1434+80.4 - 1435+22.1	74	S. EDGE LINE - YELLOW
1434+80.4 - 1447+60.7	1,282	N. EDGE LINE - WHITE
1436+11.5 - 1450+93.8	1,529	S. EDGE LINE - YELLOW
1451+76.5 - 1462.60.7	1,090	S. EDGE LINE - YELLOW
PROJECT TOTAL	11.065	
TROJECT TOTAL	11,000	

78000400 THEMOPLASTIC PAVEMENT MARKING - LINE 6"

STATION	FOOT	REMARKS
US - 20 POST STAGE 1 - EAST BOUND		
1447+62.0 - 1452+12.6	113	SKIP DASH - WHITE
POST STAGE 2 - EAST BOUND 1423+50.2 - 1447+62.0	603	SKIP DASH - WHITE
POST STAGE 2 - WEST BOUND 1434+80.4 - 1462+60.7	696	SKIP DASH - WHITE
PROJECT TOTAL	1 412	2 271011 771112

78000500 THEMOPLASTIC PAVEMENT MARKING - LINE 8"

22		
FOOT	REMARKS	
262	LEFT TURN LANE - WHITE	
337	RIGHT TURN LANE - WHITE	
127	RIGHT TURN LANE - WHITE	
208	RIGHT TURN LANE - WHITE	
237	LEFT TURN LANE - WHITE	
334	LEFT TURN LANE - WHITE	
1,505		
	262 337 127 208 237 334	

78100100 RAISED REFLECTIVE PAVEMENT MARKER

STATION	EACH	REMARKS
US - 20		
1440+49 - 1446+39	7	CENTER LINE - EAST BOUND
1439+93 - 1445+63	7	CENTER LINE - WEST BOUND
PROJECT TOTAL	14	

78200010 BARRIER WALL REFLECTORS, TYPE B

	STATION	EACH	REMARKS
US - STAG			
EA	ST BOUND BRIDGE PARAPET	14	25' CENTERS
WE	ST BOUND BRIDGE PARAPET	14	25' CENTERS
STAG	E II		
EA	ST BOUND BRIDGE PARAPET	14	25' CENTERS
WE	ST BOUND BRIDGE PARAPET	14	25' CENTERS
	PROJECT TOTAL	56	

78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

STATION	EACH	REMARKS
US - 20		
1440+49 - 1446+39	7	CENTER LINE - EAST BOUND
1439+93 - 1445+63	7	CENTER LINE - WEST BOUND
PROJECT TOTAL	14	

X0326440 SURFACE REMOVAL, VARIABLE DEPTH (SPECIAL) STATION SQ YD REM

		. (
STATION	SQ YD	REMARKS
US - 20		
STAGE I		
1439+93 - 1440+81	181	WEST BOUND APPROACH & SHOULDER
1444+56 - 1445+63	210	WEST BOUND APPROACH & SHOULDER
1446+75 - 1441+69	159	EAST BOUND APPROACH & SHOULDER
1445+36 - 1446+39	220	EAST BOUND APPROACH & SHOULDER
STAGE II		
1439+93 - 1441+10	210	WEST BOUND APPROACH & SHOULDER
1444+75 - 1445+63	154	WEST BOUND APPROACH & SHOULDER
1440+49 - 1441+69	228	EAST BOUND APPROACH & SHOULDER
1445+53 - 1446+39 _	157	_ EAST BOUND APPROACH & SHOULDER
DD O LECT TOTAL	4.540	
PROJECT TOTAL	1,519	

X0327980* PAVEMENT MARKING REMOVAL WATER BLASTING STATION SQ FT REMARKS

****	9	
STATION	SQ FT	REMARKS
US - 20		
STAGE 1 - EAST BOUND		
1423+50.2 - 1440+62.7	215	CENTER LINE, 6" SKIP DASH
LT 1423+50.2 - 1435+21.7	391	N. EDGE LINE, 4" SOLID
LT 1436+03.2 - 1440+62.7	154	N. EDGE LINE, 4" SOLID
RT 1438+50.2 - 1450+39.8	397	S. EDGE LINE, 4" SOLID
1446+24.5 - 1452+12.6	295	CENTER LINE, 6" SKIP DASH
LT 1447+98.4 - 1450+59.0	174	LEFT TURN LANE, 8" SOLID
LT 1448+12.4	16	LEFT TURN ARROW
RT 1448+53.0 - 1450+58.2	137	RIGHT TURN LANE, 8" SOLID
STAGE 1 - WEST BOUND		
1438+70.4 - 1440+07.9	18	CENTER LINE, 6" SKIP DASH
RT 1440+06.6 - 1447+60.7	252	S. EDGE LINE, 4" SOLID
1445+48.2 - 1462+60.7	215	CENTER LINE, 6" SKIP DASH
LT 1445+48.2 - 1450+95.4	190	N. EDGE LINE, 4" SOLID
1451+93.2 - 1455+36.4	229	RIGHT TURN LANE, 8" SOLID
1455+13.8	16	RIGHT TURN ARROW
RT 1452+03.0 - 1455+36.4	223	LEFT TURN LANE, 8" SOLID
LT 1455+54.6 - 1462+60.7	236	N. EDGE LINE, 4" SOLID
STAGE 2 - EAST BOUND	227	0. 50.05 (W. 5.0) 10.00
RT 123+50.2 - 1433+58.6	337	S. EDGE LINE, 4" SOLID
1433+57.3 - 1434+85.5	86	RIGHT TURN LANE, 8" SOLID
1433+77.6	16	RIGHT TURN ARROW
RT 1435+70.5 - 1438+50.2	94	S. EDGE LINE, 4" SOLID
STAGE 2 - WEST BOUND 1434+80.4 - 1438+70.4	40	CENTED LINE OF CKID DACH
1434+80.4 - 1438+70.4	49	CENTER LINE, 6" SKIP DASH LEFT TURN LANE, 8" SOLID
LT 1439+47.9 - 1440+07.9	158 20	N. EDGE LINE, 4" SOLID
RT 1459+47.9 - 1440+07.9	20 360	S. EDGE LINE, 4" SOLID S. EDGE LINE. 4" SOLID
NI 1431+02.2 - 1402+00./	300	3. EDGE LINE, 4 SOLID
PROJECT TOTAL	4,278	

X0931400* INLET BOXES TO BE ADJUSTED (SPECIAL)

	(5: -	J1/ (L/	
	STATION	EACH	REMARKS
US - 20			
	1440+85 - LT	1	WEST BOUND BRIDGE
	1441+19 - RT	1	WEST BOUND BRIDGE
	1441+53 - LT	1	EAST BOUND BRIDGE
	1441+88 - RT	1	EAST BOUND BRIDGE
	1444+36 - LT	1	WEST BOUND BRIDGE
	1444+67 - RT	1	WEST BOUND BRIDGE
	1445+02 - LT	1	EAST BOUND BRIDGE
	1445+38 - RT	1	EAST BOUND BRIDGE
	PROJECT TOTAL	8	

X7010208* TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)

STATION	EACH	REMARKS
US - 20		
EAST BOUND LANES	1	TEMPORARY PAVEMENT MARKINGS
WEST BOUND LANES	1	TEMPORARY PAVEMENT MARKINGS
PROJECT TOTAL	2	

X7030005* TEMPORARY PAVEMENT MARKING REMOVAL

STATION	SQ FT	REMARKS
US - 20 STAGE 2		
ENTIRE STAGE 1 POST STAGE 2	3,369	TEMPORARY PAVEMENT MARKINGS
ENTIRE STAGE 2	2,924	TEMPORARY PAVEMENT MARKINGS
PROJECT TOTAL	6,293	

X7830070* GROOVING FOR RECESSED PAVEMENT MARKING 5" FOOT

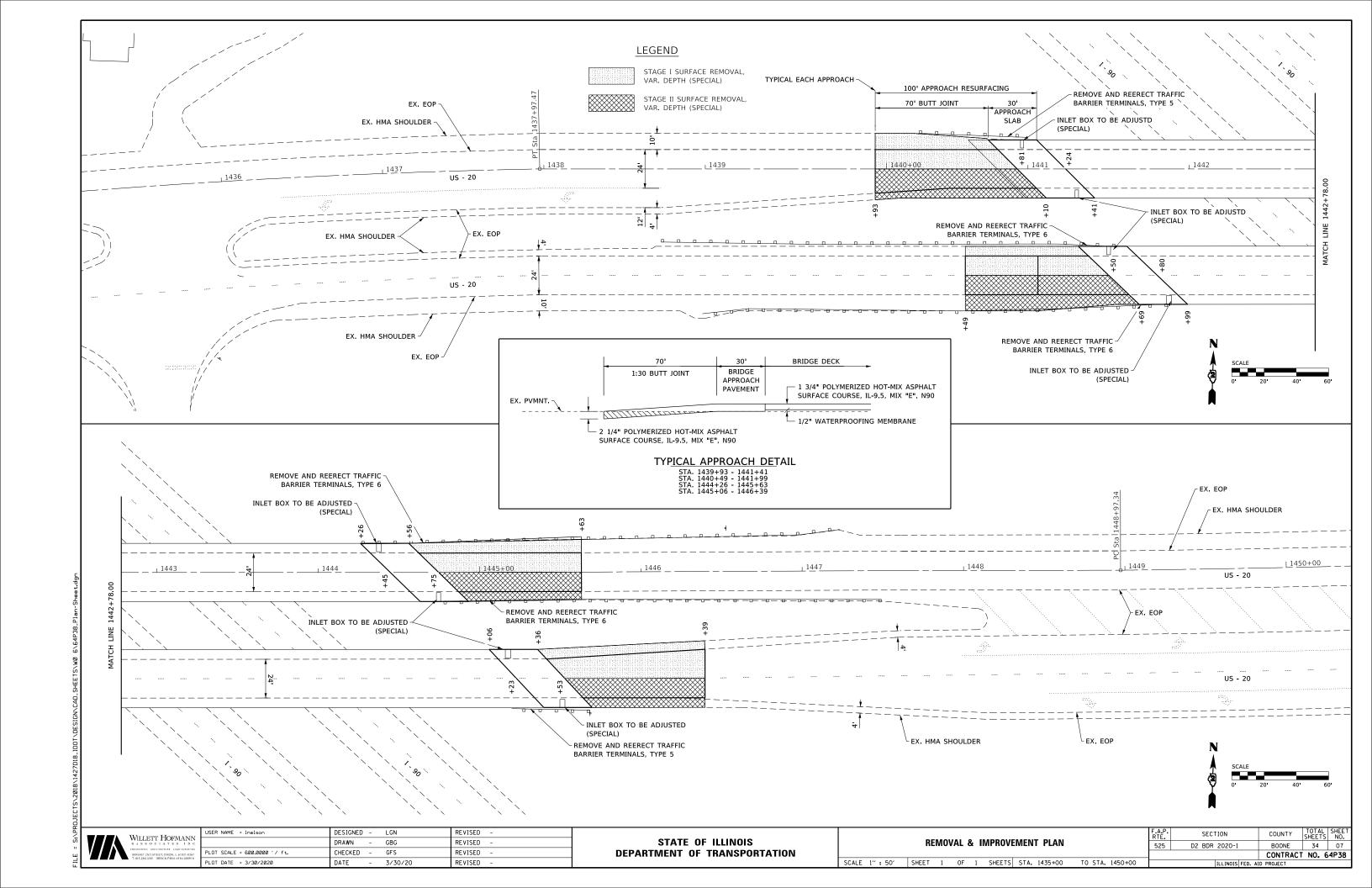
STATION	F001	REMARKS
US - 20		
LT 1440+62.7 - 1446+24.6	562	EAST BOUND
RT 1440+62.7 - 1446+24.6	562	EAST BOUND
LT 1440+07.9 - 1445+48.2	540	WEST BOUND
RT 1440+07.9 - 1445+48.2	540	WEST BOUND
PROJECT TOTAL	2,204	

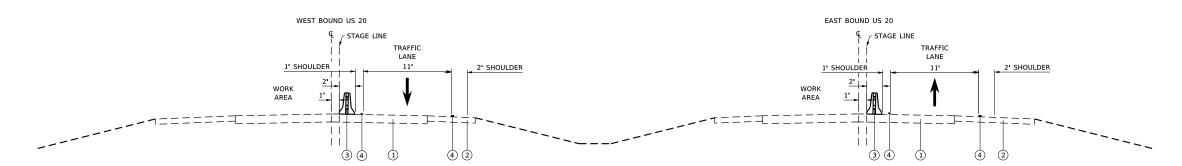
X7830074* GROOVING FOR RECESSED PAVEMENT MARKING 7"

STATION	FOOT	REMARKS
US - 20		
1440+62.7 - 1446+24.6	140	EAST BOUND
1440+07.9 - 1445+48.2	135	WEST BOUND
PROJECT TOTAL	275	

USER NAME = Inelson	DESIGNED	-	LGN	REVISED -
	DRAWN	-	GBG	REVISED -
PLOT SCALE = 240.0000 '/ ft.	CHECKED	-	GFS	REVISED -
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -

	ILLINOIS FED. AI	D PROJECT		
		CONTRACT	NO. 6	4P38
525	D2 BDR 2020-1	BOONE	34	06
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE1





- 1 EXISTING HMA ROADWAY
- 2 EXISTING HMA SHOULDER
- TEMPORARY CONCRETE BARRIER STA: 1439+05.8 TO 1446+24.5 - EAST BOUND STA: 1440+07.9 TO 1446+85.2 - WEST BOUND
- 4 TEMPORARY PAVEMENT MARKING 4

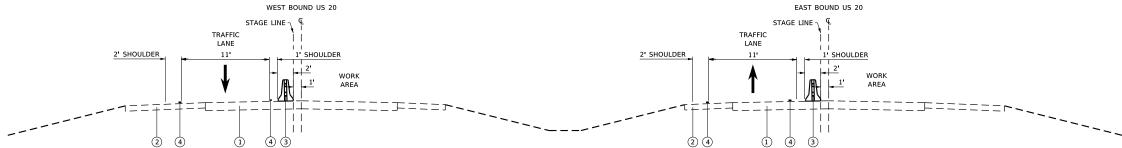
STAGE I CONSTRUCTION TYPICAL SECTION

STA: 1439+03.8 TO 1447+40.6 - EAST BOUND STA: 1439+90.9 TO 1447+06.3 - WEST BOUND (BRIDGE OMMITED FROM) (STA: 1441+36.6 TO 1445+52.9 - EAST BOUND) (STA: 1440+80.9 TO 1444+74.7 - WEST BOUND)

NOTES

TRAFFIC LANE WIDTHS ARE REDUCED TO 10FT AND INCLUDE 2FT SHOULDERS ACROSS THE EXISTING STRUCTURES. THE LANE WIDTHS WILL TRANSITION FROM 12FT TO 10FT, AT THE FOLLOWING LOCATIONS:

STA: 1439+03.8 TO 1440+42.8 - EAST BOUND STA: 1445+69.5 TO 1447+40.6 - EAST BOUND STA: 1439+90.9 TO 1440+62.9 - WEST BOUND STA: 1445+68.4 TO 1447+06.3 - WEST BOUND



- EXISTING HMA ROADWAY
- TEMPORARY CONCRETE BARRIER STA: 1439+13.3 TO 1446+24.5 EAST BOUND STA: 1440+07.9 TO 1447+07.7 WEST BOUND
- 4 TEMPORARY PAVEMENT MARKING 4

STAGE II CONSTRUCTION TYPICAL SECTION

STA: 1439+04.7 TO 1447+43.8 - EAST BOUND STA: 1440+02.9 TO 1447+06.3 - WEST BOUND (BRIDGE OMITTED FROM) (STA: 1441+36.6 TO 1445+52.9 - EAST BOUND) (STA: 1440+80.9 TO 1444+74.7 - WEST BOUND)

TRAFFIC LANE WIDTHS ARE REDUCED TO 10FT AND INCLUDE 2FT SHOULDERS ACROSS THE EXISTING STRUCTURE. THE LANE WIDTHS WILL TRANSITION FROM 12FT TO 10FT,

AT THE FOLLOWING LOCATIONS:

STA: 1439+04.7 TO 1440+42.7 - EAST BOUND
STA: 1445+69.5 TO 1447+43.8 - EAST BOUND
STA: 1440+02.9 TO 1440+62.9 - WEST BOUND
STA: 1445+68.2 TO 1447+06.3 - WEST BOUND

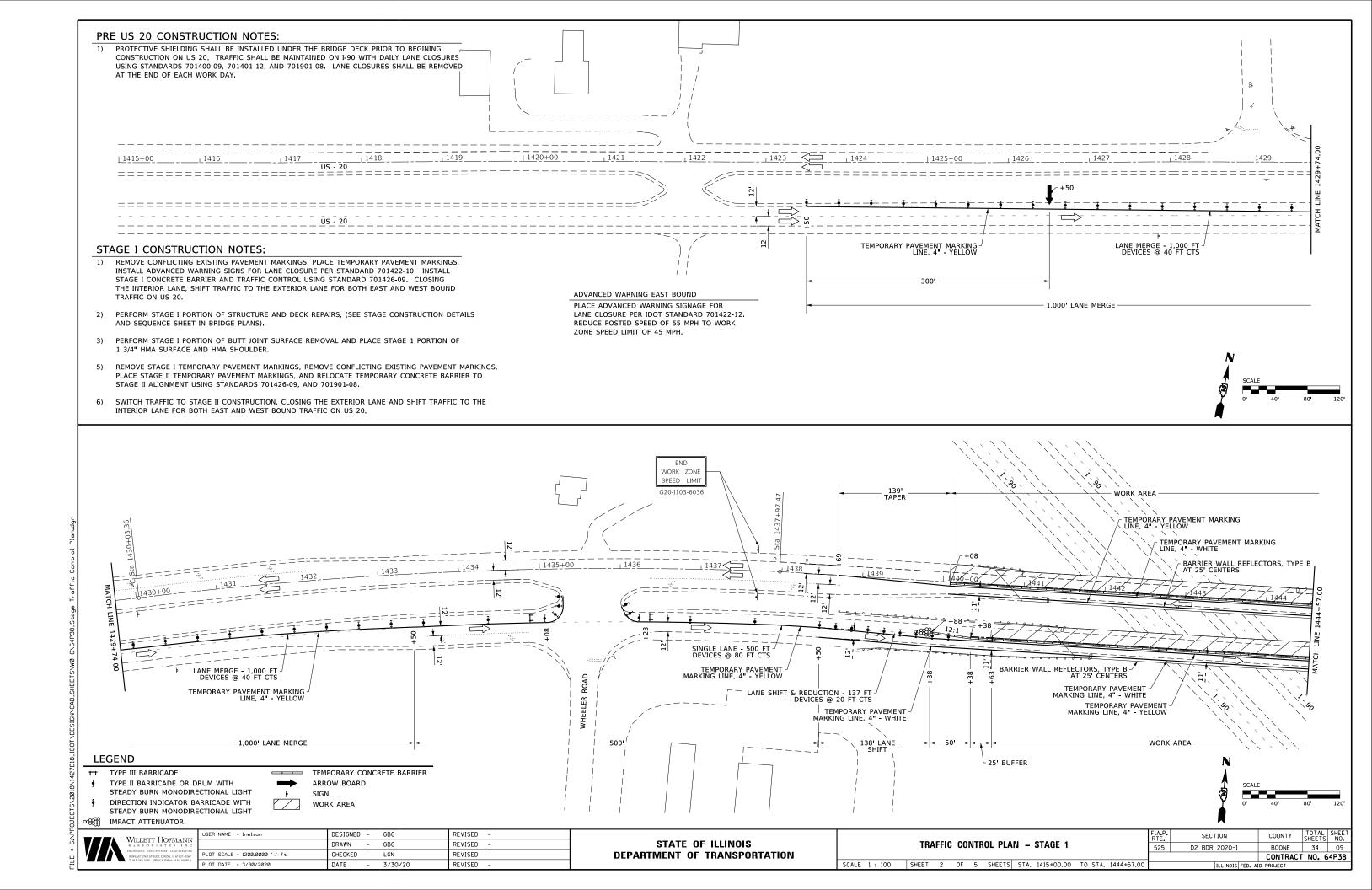
WILLETT HOFMANN

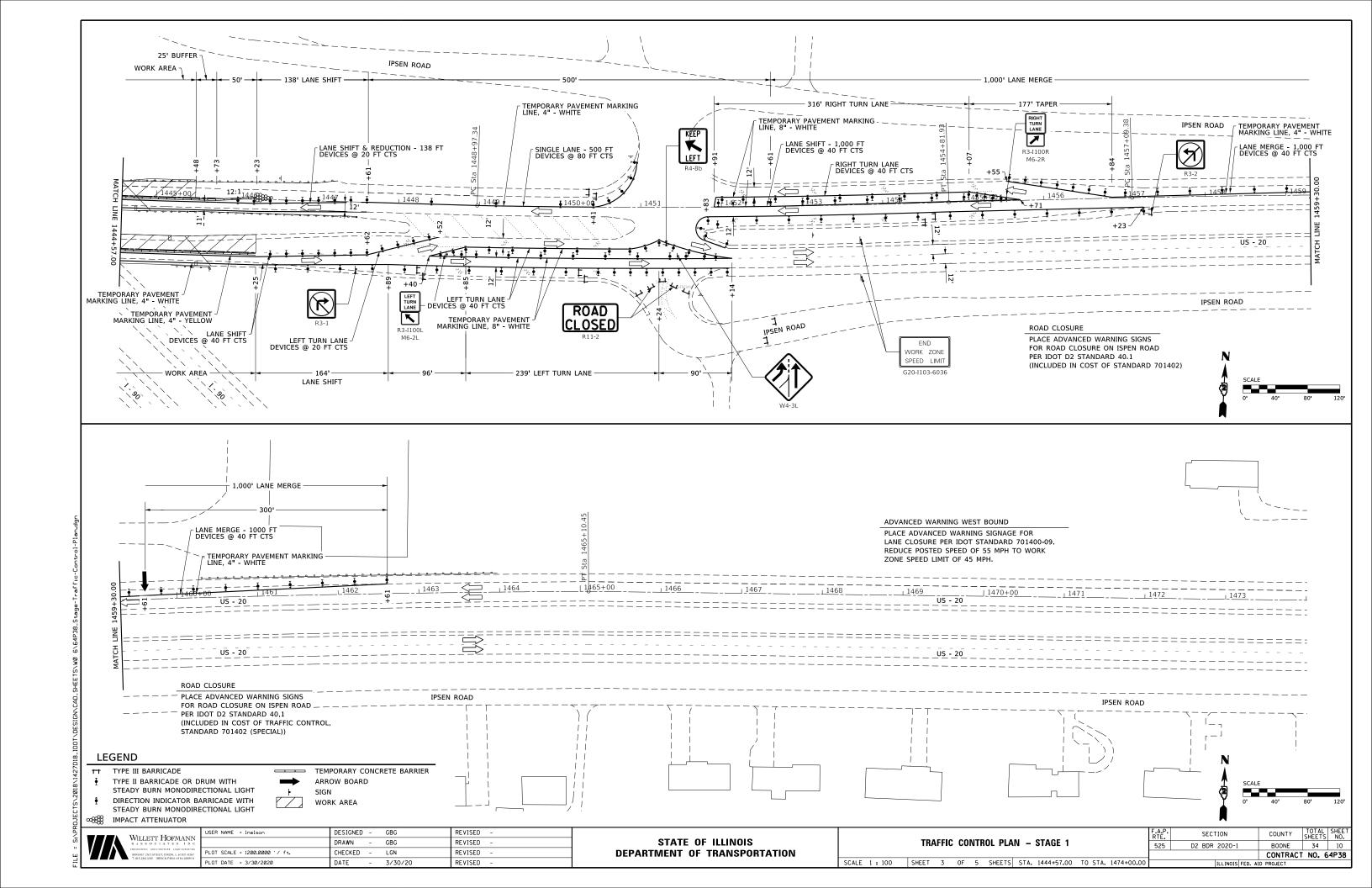
USER NAME = Inelson	DESIGNED	-	GBG	REVISED -	_
	DRAWN	-	GBG	REVISED -	
PLOT SCALE = 144.0000 '/ ft.	CHECKED	-	GFS	REVISED -	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -	

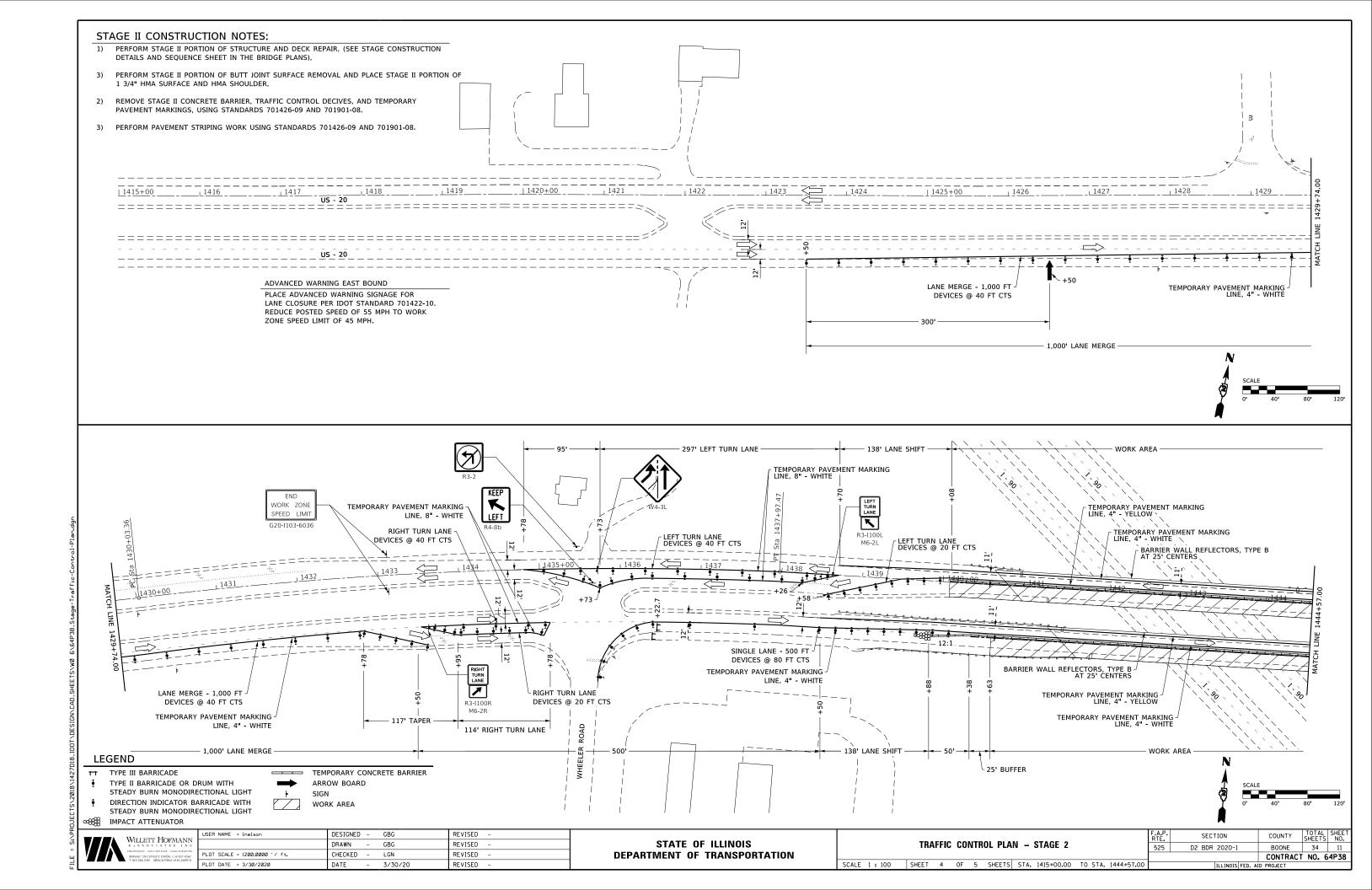
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

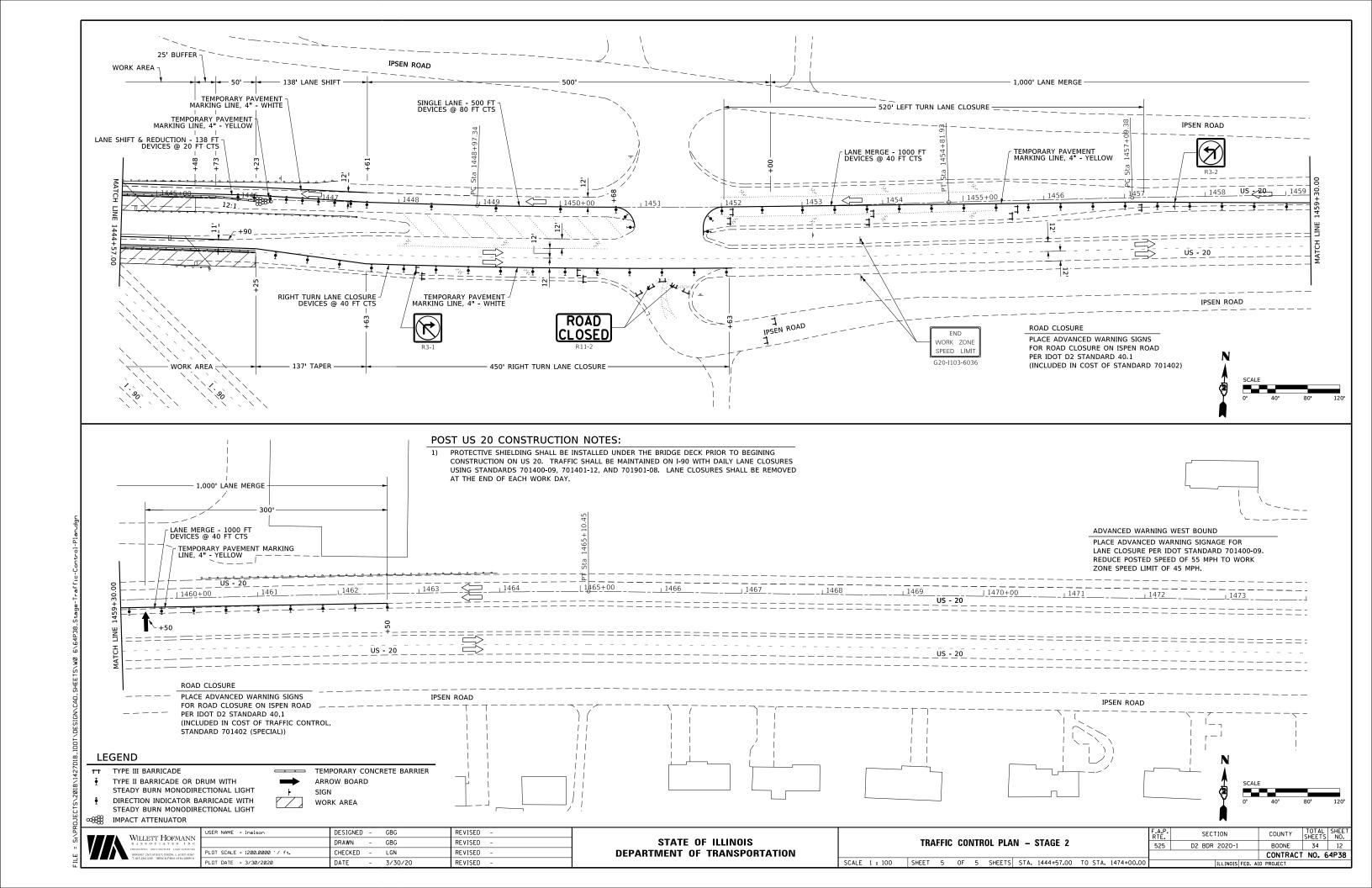
SCALE N / A

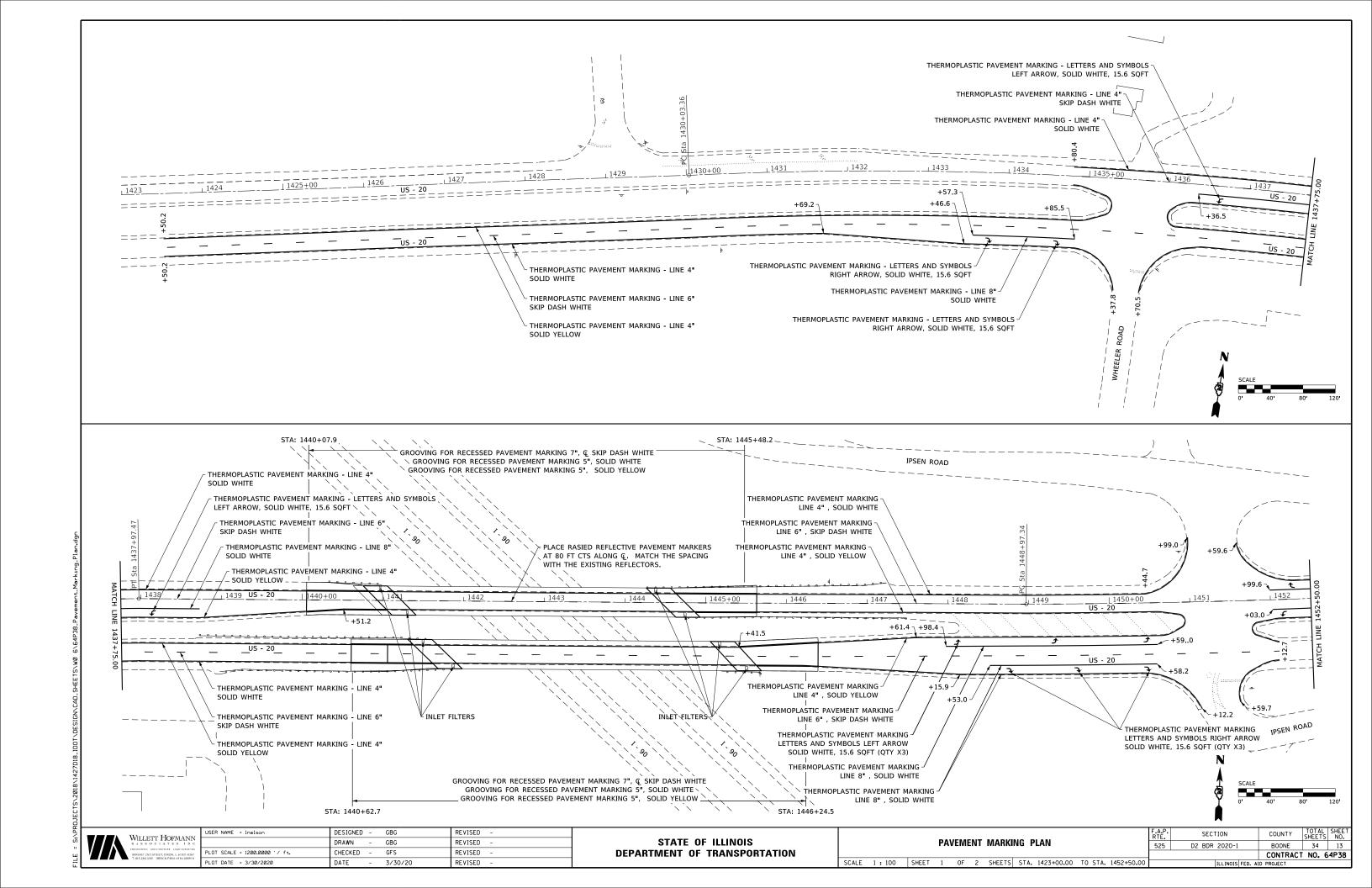
STAGE I & II CONSTRUCTION TYPICAL SECTIONS					F.A.P. RTE.	SECTI	ON	COUNTY	TOTAL SHEET					
					525	D2 BDR 2	2020-1	BOONE	34					
													CONTRACT	NO.
	SHEET	1	OF	5	SHEETS	STA	N / A	TO STA	Ν / Δ		Tr.	I INOIS EED AT	D DDO IECT	

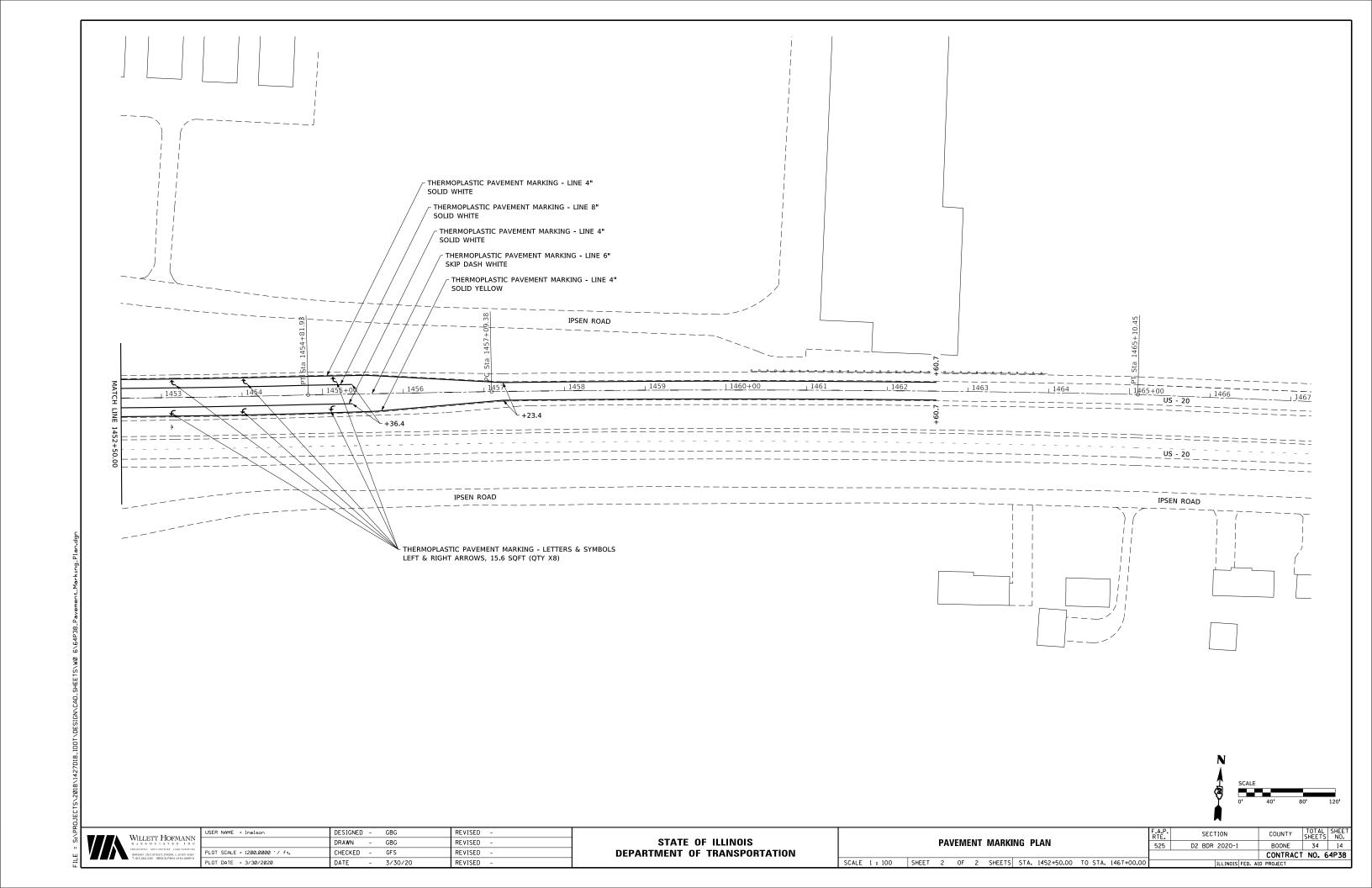










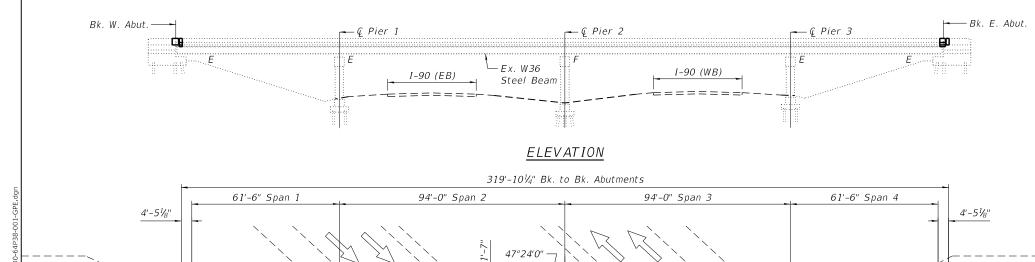


Existing Structures: S.N. 004-9900 (US 20 WB), originally built in 1958, as a four-span continuous wide flange steel beam superstructure with open abutments and multi-column piers. The back to back length = $319^{\circ}-10\frac{1}{4}$ " and the out to out width = 36'-4". In 1964 S.N. 004-0004 (US 20 EB) was constructed next to S.N. 004-9900. S.N. 004-0004 is a four-span continuous composite wide flange steel beam superstructure with open abutments and multi-column piers. The back to back length = 324'-4'' and the out to out width = 36'-0''. In 1993 both structures were rehabilited by replacing the reinforced concrete deck making both structures out to out width = 37'-2". The structures are to be repaired as detailed in these plans. Stage construction will be used to maintain traffic.

SCOPE OF WORK

- 1. Replace the transverse expansion joints located at the ends of the bridge decks using the shallow replacement detail.
- 2. Deck slab partial depth and full depth repairs.
- 3. Add waterproofing membrane system with 1¾" HMA overlay

No Salvage



US 20 WB & 🕻 Bra. W. Abut Pier 2 Stage Const. Line ⊊ Pier Abut © Pier 3 Q US 20 G Brg. W. Abut. î US 20 EB & Stage Const. Line @ Pier 3



INDEX OF SHEETS

- 1. General Plan and Elevation
- 2. Stage Construction Details
- 3. Temporary Concrete Barrier for Stage Construction
- 4. Bridge Deck Overlay Plan
- 5. Bridge Deck Overlay Details
- 6. Westbound Expansion Joint Details 7. Eastbound Expansion Joint Details
- 8. Expansion Joint Details
- 9. Preformed Joint Strip Seal
- 10. Approach Joint Details
- 11. Bar Splicer Details

DESIGN STRESSES

66'-9" Span 1

€ Pier 1

FIELD UNITS (NEW CONST.)

f'c = 4,000 psi (Superstructure)fy = 60,000 psi (Reinforcement)

FIELD UNITS (EXIST. CONST.)

f'c = 3,500 psi

W. Abut

fy = 60,000 psi (Reinforcement) fy = 33,000 psi (Westbound Steel)

fy = 36,000 psi (Eastbound Steel)

LOADING HS 20-44

© Pier 2

Limits of Protective Shield = 180'-0'

324'-4" Bk. to Bk. Abutments

94'-0" Span 3

Existing and Proposed

PLAN

94'-0" Span 2

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges - LFD

Range 3E, 3rd P.M. Project Location LOCATION SKETCH

& Brg. E. Abut.

62'-3" Span 4

GENERAL NOTES

TOTAL BILL OF MATERIAL

Ton

Cu. Yd.

Sq. Yd.

Cu. Yd.

Sq. Yd.

Pound

Each

Foot

Sa. Yd. l

Sq. Yd.

Foot

Cu. Ft.

Super

250

12.1

12.9

38

20 209

2,386

54

208

36.9

Sub Total

250

12.1

744

12.9

38

1,780 20

209

2,386

54

208

36.9

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

Reinforcement bars designated (E) shall be epoxy coated.

Item

Reinforcement Bars, Epoxy Coated

Waterproofing Membrane System

Hot-Mix Asphalt Surface Course,

IL-9.5, Mix "E", N90

Concrete Superstructure

Preformed Joint Strip Seal

Deck Slab Repair (Partial)

Silicone Joint Sealer, 1"

Polymer Concrete

Concrete Removal

Protective Shield

Protective Coat

Bar Splicers

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.

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

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.

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

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the joint concrete is poured at an ambient temperature other then 50°F.

The deck surface at abutment joints shall have its finish tined according to Article 420.09(e)(i) of the Standard Specifications. Cost included with Concrete Superstructure.

Michael D. Cima, Illinois S.E. 081-005984

Expires 11/30/2020

3/27/2020 Date

GENERAL PLAN & ELEVATION US 20 OVER I-90 SECTION D2 BDR 2020-1 BOONE COUNTY STRUTURES NO. 004-0004 (EB) & 004-9900 (WB)



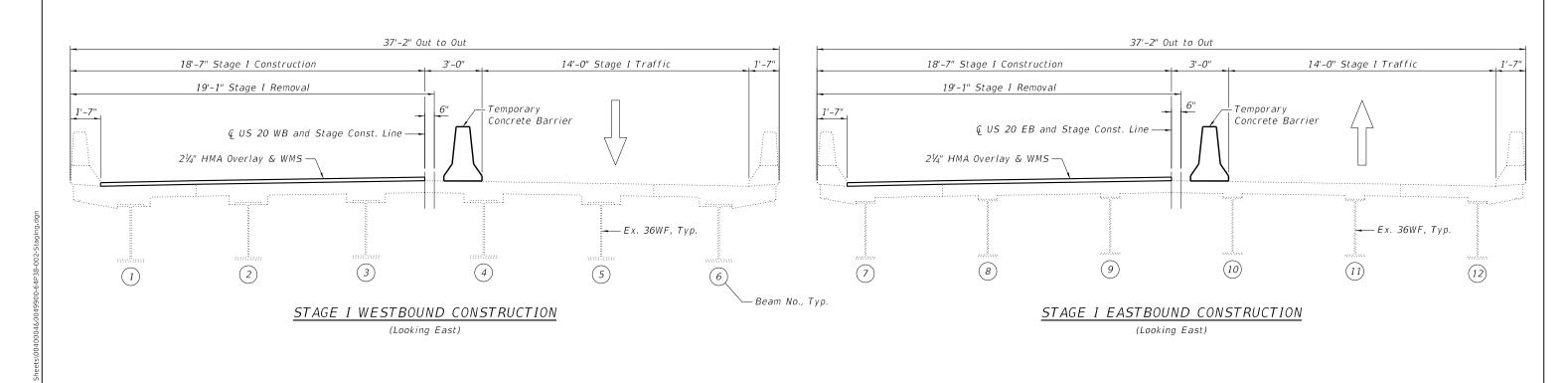
USER NAME = CStokes	DESIGNED - CFS	REVISED -
0040004&0049900-64P38-001-GPE.dgn	CHECKED - SDY	REVISED -
PLOT SCALE = 40:0.0000 ':" / in.	DRAWN - CFS	REVISED -
PLOT DATE = 03/27/2020	CHECKED - MDC	REVISED -

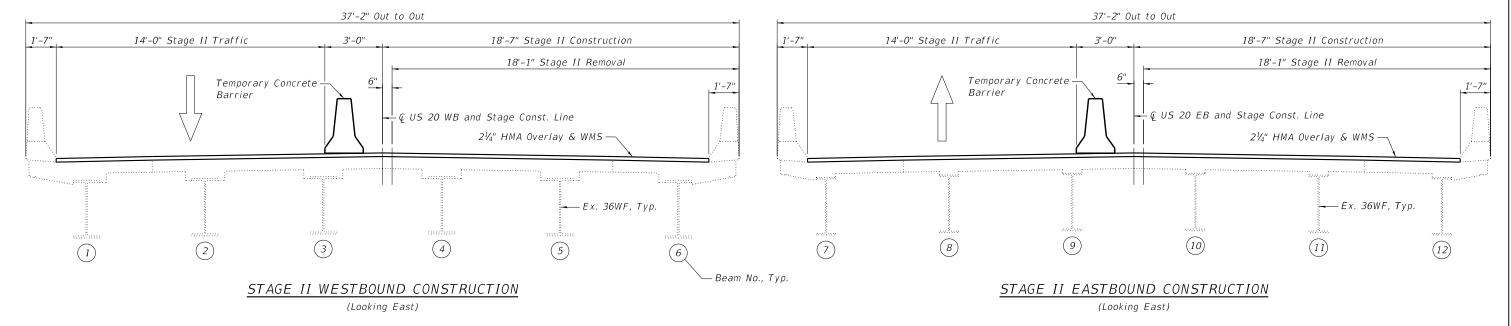
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN AND ELEVATION STRUCTURES NO. 004-0004 & 004-9900 SHEET 1 OF 11 SHEETS

3'-8"

F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
525	D2 BDR 2020-1	BOONE	34	15	
			CONTRA	CT NO.	64P38
ILLINOIS FED AID PROJECT					





Note

Temporary Concrete Barrier billed with roadway plans.

QUIGG ENGINEERING INC			

	USER NAME = CStokes	DESIGNED - CFS	REVISED -
	0040004&0049900-64P38-002-Staging.dgn	CHECKED - SDY	REVISED -
	PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - CFS	REVISED -
:	PLOT DATE = 03/27/2020	CHECKED - MDC	REVISED -

STAGE CONSTRUCTION DETAILS							
STRUCTU	STRUCTURES NO. 004-0004 & 004-9900						
	SHEET	2	OF	11	SHEETS	_	

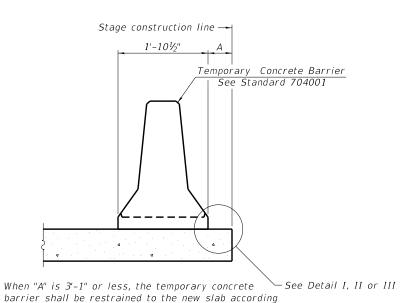
F.A.P. SECTION			COUNTY	TOTAL SHEETS	SHEE NO.
525	D2 BDR 2020-1		BOONE	34	16
			CONTRA	CT NO.	64P38
	ILLINOIS	FED. A	D PROJECT		

3/27/2020 11:11:52 AM

Bridge Rehab IDOT D2 Willett Hofmann PTB 189-18\Work Order 6 Bric

DEL: Default

SHEET 2 OF 11 SHEETS

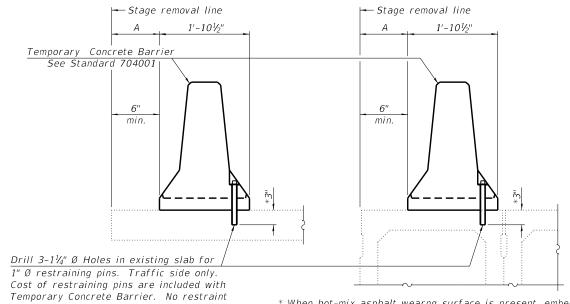


when "A" is greater than 3'-1".

to Detail I, II or III. No restraint is required

NEW SLAB OR NEW DECK BEAM

2-17-2017



* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

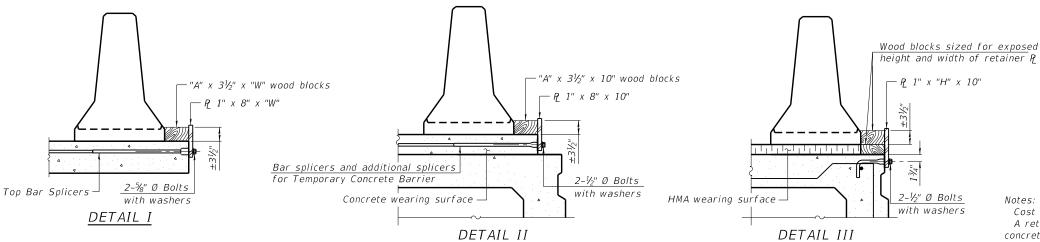
EXISTING DECK BEAM

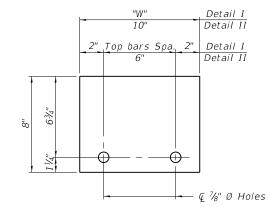
1x8 UNC US Std. 11/16" I.D. x 21/2" O.D. x approx. 8 guage thick washer RESTRAINING PIN

SECTIONS THRU SLAB OR DECK BEAM

is required when "A" is greater than 3'-1".

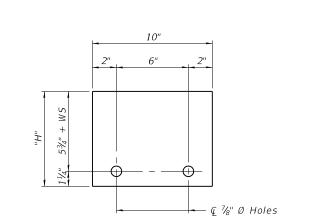
EXISTING SLAB



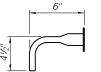


STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)



STEEL RETAINER P 1" x "H" x 10" (Detail III)



BAR SPLICER FOR #4 BAR - DETAIL III

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate (of each temporary

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than $1\frac{1}{2}$ ", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

- Detail I Installation for a new bridge deck or bridge slab.
- Detail II Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
- Detail III Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

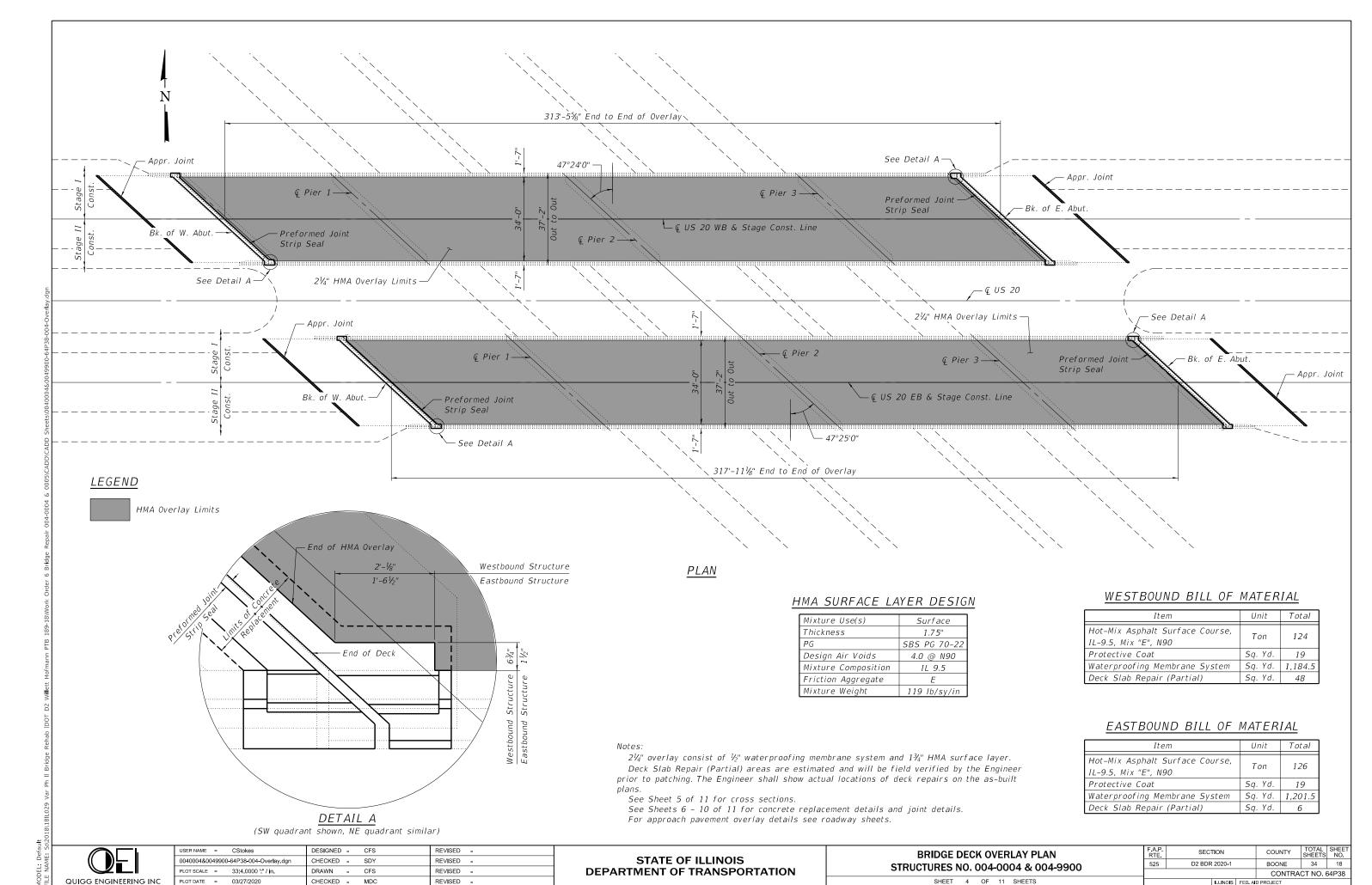
R - 27

QUIGG ENGINEERING INC

SER NAME = CStokes DESIGNED - CFS REVISED -040004&0049900-64P38-003-TCB.dar CHECKED - SDY REVISED -OT SCALE = 0:2.0000 ':" / in. REVISED -PLOT DATE = 03/27/2020 CHECKED - MDC REVISED -

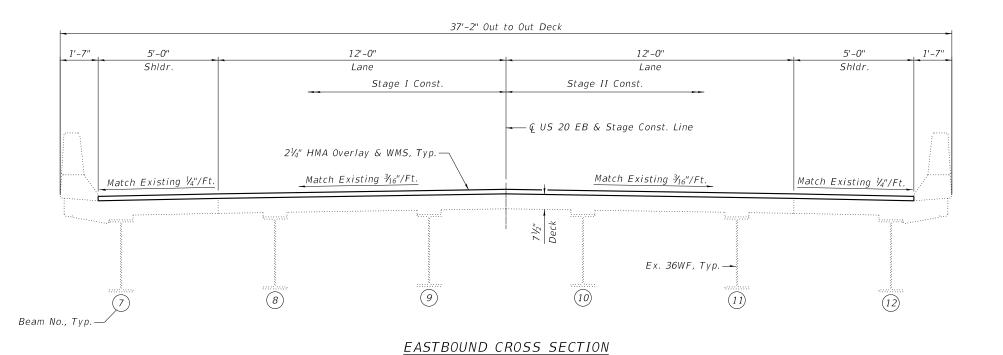
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURES NO. 004-0004 & 004-9900 SHEET 3 OF 11 SHEETS

SECTION COUNTY D2 BDR 2020-1 ROONE 34 17 CONTRACT NO. 64P38



3/27/2020 11:11:53 AM

WESTBOUND CROSS SECTION (Looking East)



Natası

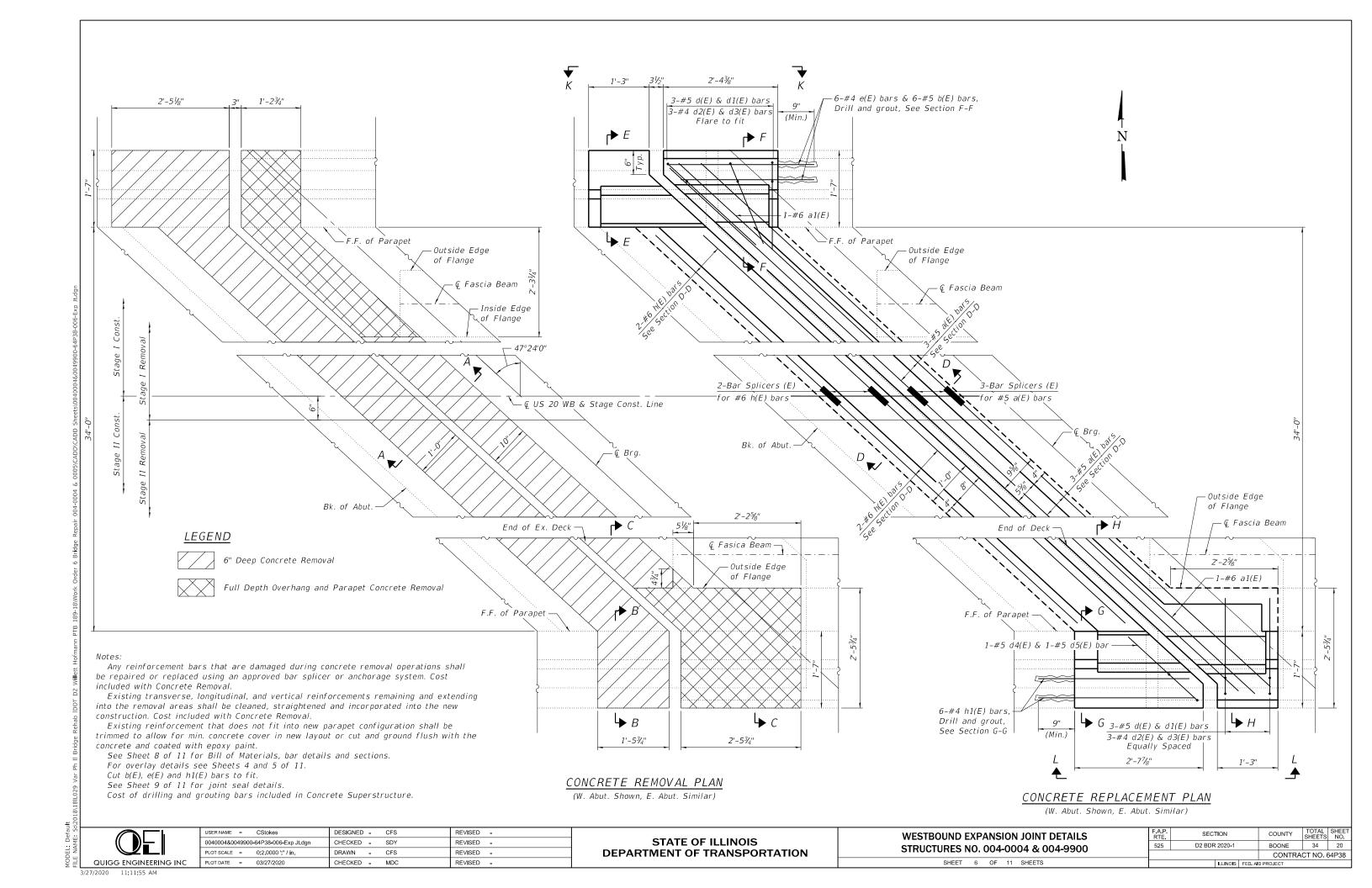
See Sheet 4 of 11 for overlay limits and Bill of Material.

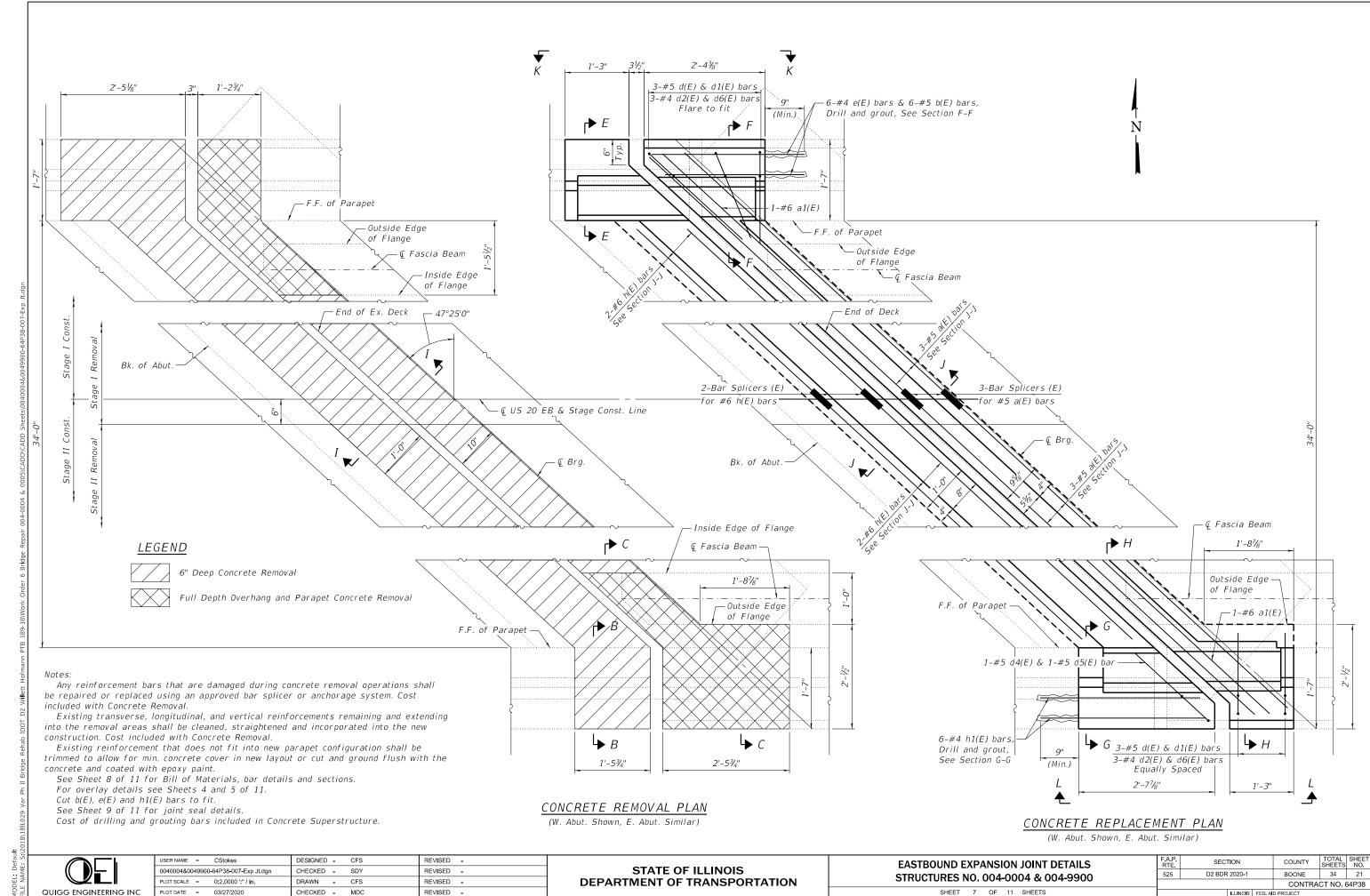
 $2lambda_4$ " overlay consist of $lambda_2$ " waterproofing membrane system and $1rac{3}{4}$ " HMA surface layer.

QUIGG ENGINEERING INC

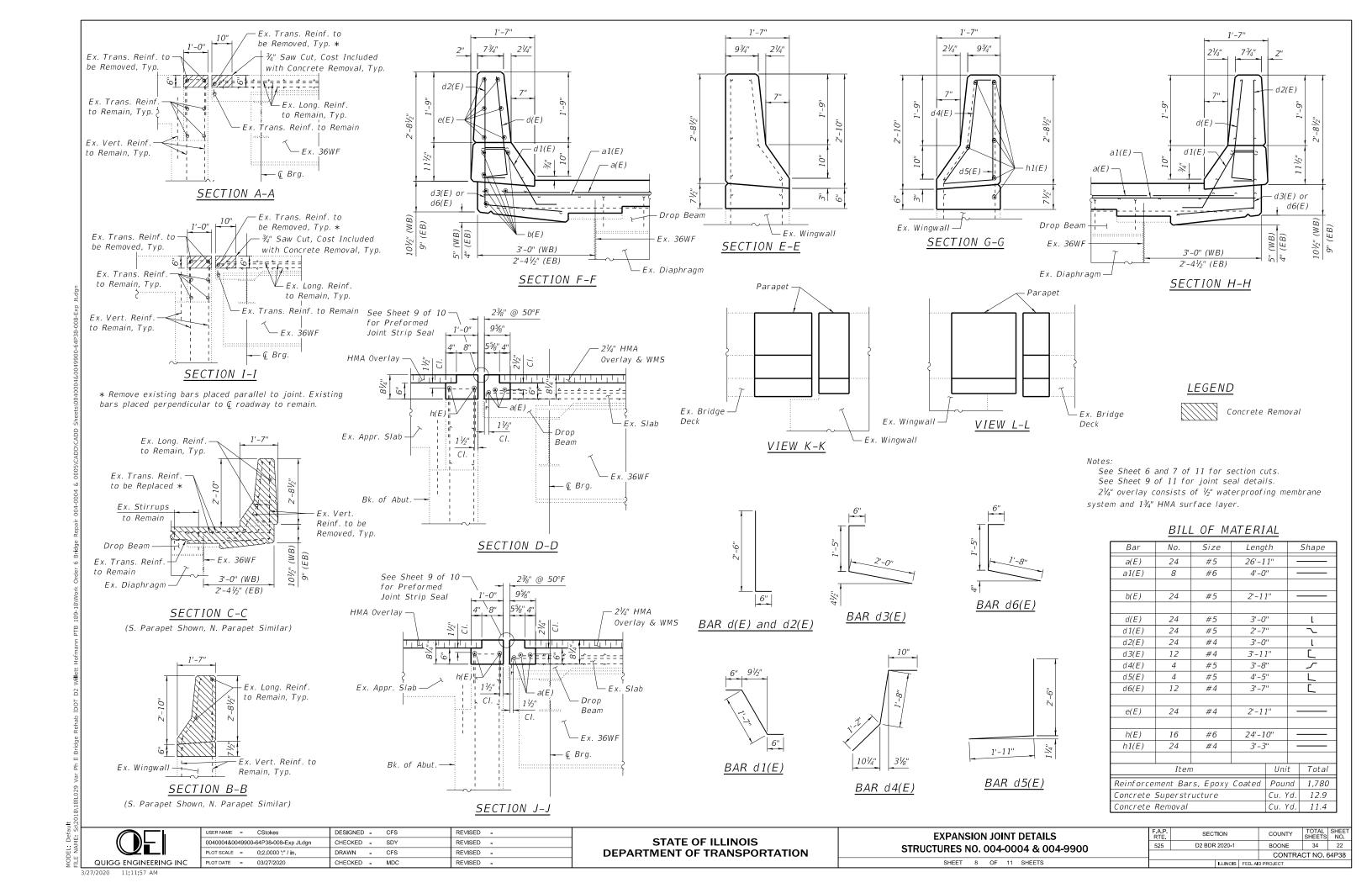
(Looking East)

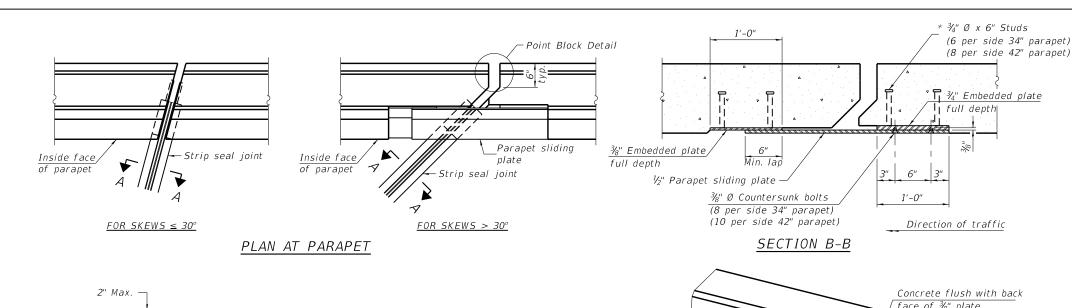
s.:2018/181L029 Var Ph II Bridge Rehab IDOT D2 Willett Hofmann PTB 189-18/Work Order 6 Bridge

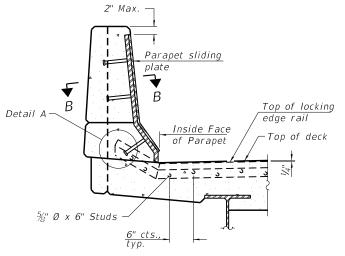




3/27/2020 11:11:56 AM

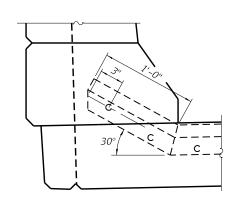




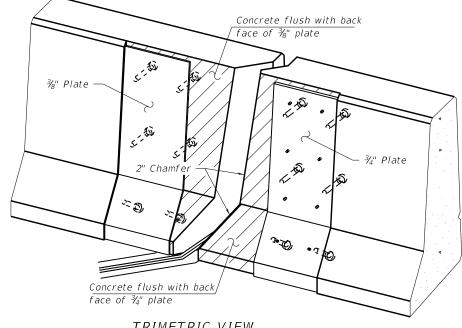


ELEVATION AT PARAPET

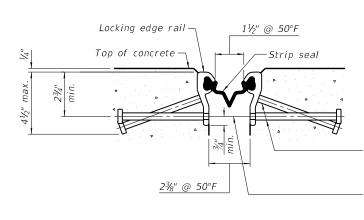
(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



DETAIL A

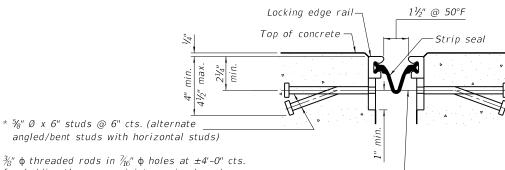


TRIMETRIC VIEW (Showing embedded plates only)



8-11-17

SHOWING ROLLED RAIL JOINT



 $\frac{3}{6}$ " ϕ threaded rods in $\frac{7}{6}$ " ϕ holes at ± 4 '-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SHOWING WELDED RAIL JOINT

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

penetration is verified by mock-up.

manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation. 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 strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip

are not permitted. The gland shall be sized for a maximum

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

seal shall match the configuration of the locking edge

rated movement of 4 inches.

rails. Open or "webbed" strip seal gland configurations

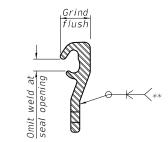
The Maximum space between locking edge rail segments shall be $\frac{3}{6}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal. 34" F-shape barrier shown, 42" F-shape similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths 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. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

LOCKING EDGE RAILS

** Back gouge not required if complete joint



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	209

SECTION A-A

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

EJ-SS



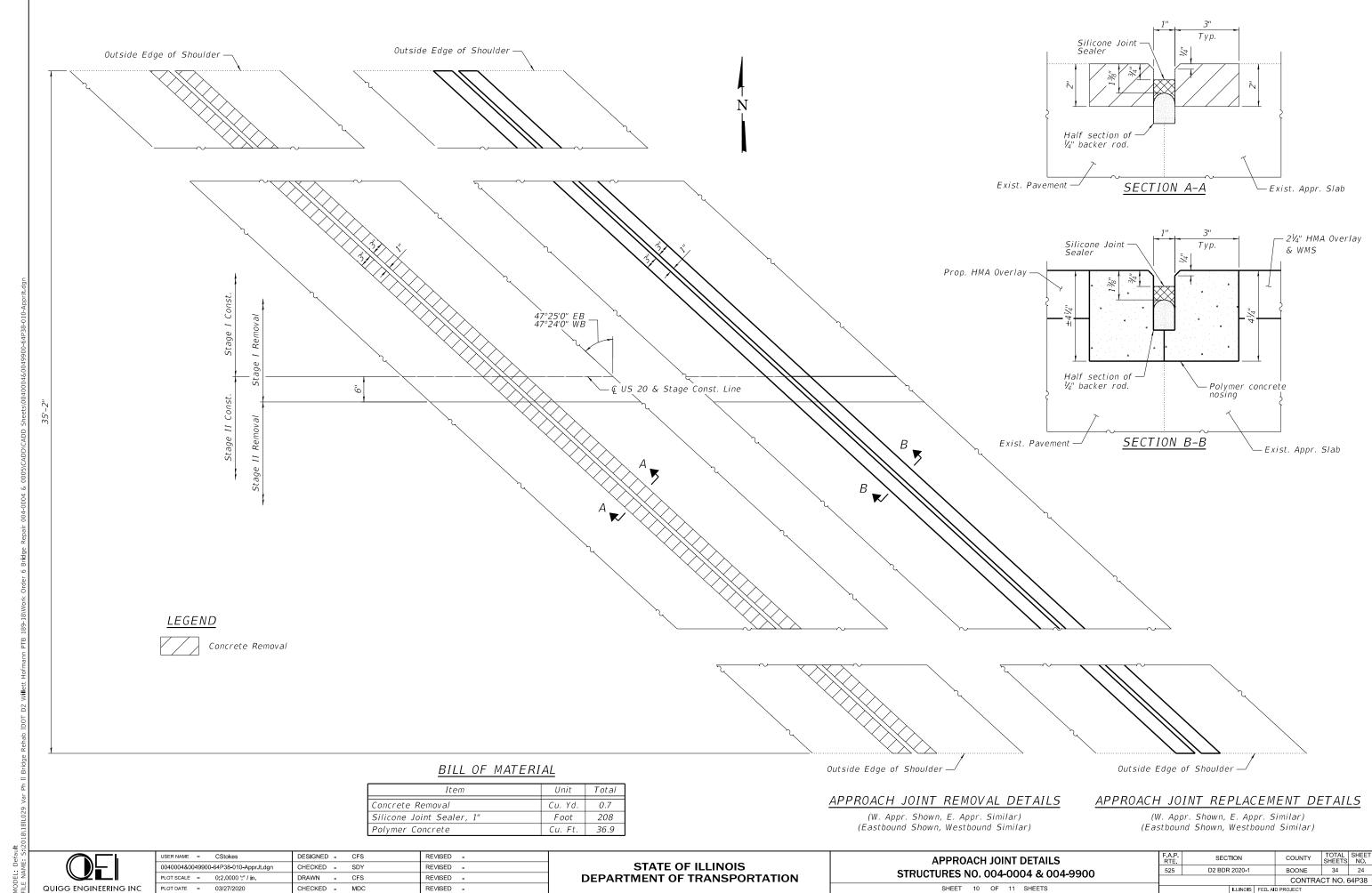
USER NAME = CStokes	DESIGNED - CFS	REVISED -
0040004&0049900-64P38-009-PJSS.dgn	CHECKED - SDY	REVISED -
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN - CFS	REVISED -
PLOT DATE = 03/27/2020	CHECKED - MDC	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL STRUCTURES NO. 004-0004 & 004-9900 SHEET 9 OF 11 SHEETS

F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
525	D2 BDR 2020-1		BOONE	34	23
			CONTRA	CT NO.	64P38
	ILLINOIS	FED AL	D PROJECT		

3/27/2020 11:11:59 AM



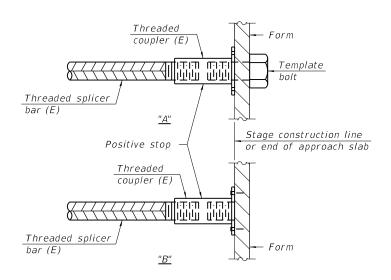
STANDARD BAR SPLICER ASSEMBLY PLAN

(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.

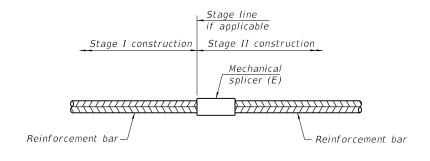
Location	Bar	No. assemblies	Minimum
Location	size	required	lap length
WB Hatchblock	#6	4	4'-0"
WB Edge of Deck	#5	6	3'-6"
EB Hatchblock	#6	4	4'-0"
EB Edge of Deck	#5	6	3'-6"



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

QUIGG ENGINEERING INC

1-1-2020

 USER NAME
 =
 CStokes
 DESIGNED
 CFS
 REVISED

 0040004&0049900-64P38-011-Splicer.dgn
 CHECKED
 SDY
 REVISED

 PLOT SCALE
 =
 0:2.0000 "." / in.
 DRAWN
 CFS
 REVISED

 PLOT DATE
 =
 03/27/2020
 CHECKED
 MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURES NO. 004-0004 & 004-9900

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

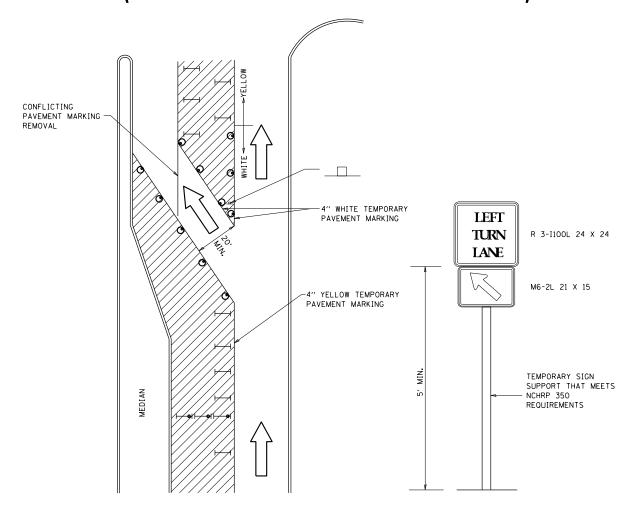
 525
 D2 BDR 2020-1
 BOONE
 34
 25

 CONTRACT NO. 64P38

 ILLINOIS FED. AID PROJECT

MODEL: Default FILE NAME: S\2018\181L029 Va

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)



LEGEND







LANE OPEN TO TRAFFIC



TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT



DRUM OR BARRICADE WITH STEADY BURN LIGHT



SIGN (SEE DETAIL)



TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

REVISED - 10-14-11

GENERAL NOTES

CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 IN HEIGHT.

STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.

TEMPORARY PAVEMENT MARKING SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.

THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 X 24 AND M6-2R 21 X 15

THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

Traffic Control and Protection at Turn Bays (To Remain Open to Traffic)



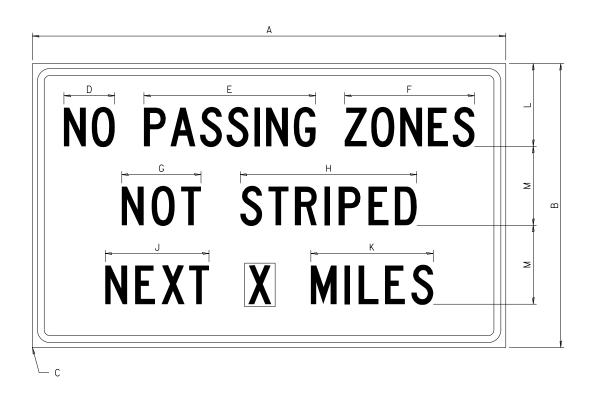
USER NAME = Inelson	DESIGNED	-	LGN	REVISED -
	DRAWN	-	GBG	REVISED -
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED -
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	DECION 2 / DICTRICT 2 CTANDARD					F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REGION 2 / DISTRICT 2 STANDARD				525	D2 BDR 2020-1	BOONE	34	26		
								CONTRACT	NO. 6	4P38
SCALE	SHEET XX	OF XX	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		

WORK ZONE SIGN DETAILS

ILLINOIS STANDARD G20–I100



COLOR LEGEND AND BORDER
BACKGROUND

BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE					[DIMEN	SIONS	5				
SIGN SIZE	Α	В	С	D	E	F	G	Н	J	K	L	М
60 × 36	60.00	36.00	2.25	6.4	21.80	16.40	10.00	22.40	13.20	15.50	10.50	10.00

SIGN SIZE	SERI	ES BY	LINE	MARGIN	BORDER	
310N 31ZE	1	2	3	MARGIN	DORDER	
60 x 36	5C	5C	5C	0.625	0.875	

Sign not to scale

GENERAL NOTES

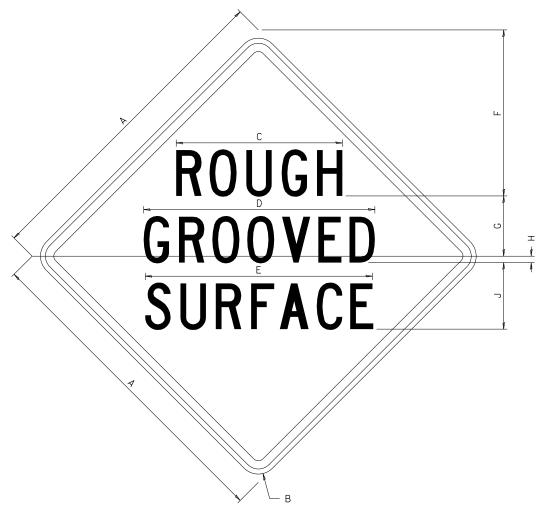
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

ILLINOIS STANDARD W8–I107



COLOR LEGEND AND BORDER BACKGROUND

BLACK

NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE				DIM	IENSI	ONS			
31GN 31ZE	Α	В	С	D	E	F	G	Н	J
48 × 48	48.00	3.00	25.00	34.80	34.20	24.94	9.00	1.00	10.00

SIGN SIZE	SERI	ES BY	LINE	MARGIN	BORDER	
SIGN SIZE	1	2	3	WARGIN		
48 × 48	7C	7C	7C	1.250	0.750	

Sign not to scale



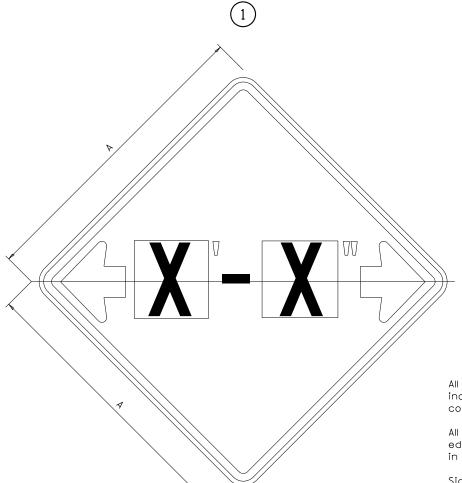
USER NAME = lnelson	DESIGNED	-	LGN	REVISED - 3-02-16
	DRAWN	-	GBG	REVISED -
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED -
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED -

	REGION	2 /	⁄ DIS	STRICT	2 STANDAR
SCALE	SHEET XX	OF	XX	SHEETS	STA.

	ILLINOIS F	FED. AI	D PROJECT		
			CONTRACT	NO. 6	4P3
525	D2 BDR 2020-1		BOONE	34	27
F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEI NO

WORK ZONE SIGN DETAILS

ILLINOIS STANDARD W12–I102



GENERAL NOTES

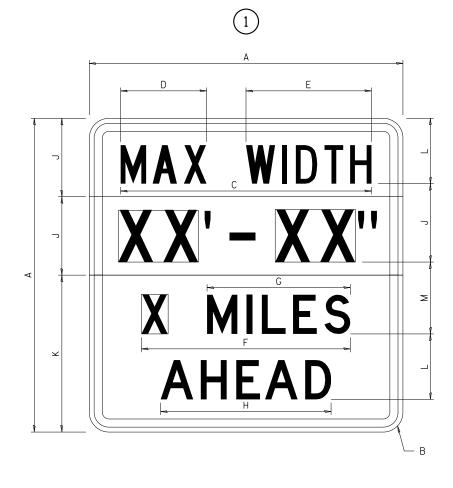
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

ILLINOIS STANDARD W12–I103



LEGEND AND BORDER BACKGROUND BACKGROUND (WIDTH) BLACK WHITE

NON-REFLECTORIZED REFLECTORIZED FL ORANGE REFLECTORIZED

SIGN SIZE		DIMENSIONS										
SIGN SIZE	Α	В	С	D	E	F	G	Η	J	К	L	М
48 × 48	48.00	3.00	38.40	13.20	19.20	32.00	22.00	26.20	12.00	24.00	10.00	11.00

SIGN SIZE	S	ERIES	BY LIN	MARGIN	BORDER		
SIGN SIZE	1	2	3	4	MARGIN	DORDER	
48 × 48	6C	8D	6D	6D	0.750	1.250	

Sign not to scale

XX'-XX'' WIDTH AND X MILES ARE VARIABLE TOP AND BOTTOM OF BACKGROUND WHITE

LEGEND AND BORDER COLOR BACKGROUND

BLACK FL ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS				
SIGN SIZE	Α	В			
48 × 48	48.00	3.00			

Illinois Standard signs W12-I102 and W12-I103 shall be Illinois Standard signs miz 1102 0... used as described in the special provisions.

SIGN SIZE	SERIES BY LINE	MADCIN	BODDED	
SIGN SIZE	1	WARGIN	BORDER	
48 × 48	12C	0.750	1.250	

Sign not to scale



USER NAME = Inelson	DESIGNED	-	LGN	REVISED	-	3-02-16
	DRAWN	-	GBG	REVISED	-	
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED	-	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED	-	

	REGION	2 /	DIS	TRICT	2 STANDARD	
SCALE	CHEET VV	ΛE	vv	CHEETS	CTA	ΤO

A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
525	D2 BDR 2020-1		BOONE	34	28
		Т	CONTRACT	NO. 6	4P38
	ILLINOIS FED.	AID	PROJECT		

WORK ZONE SIGN DETAILS

ROAD CLOSED TO OVERSIZED LOADS



COLOR

LEGEND AND BORDER BACKGROUND

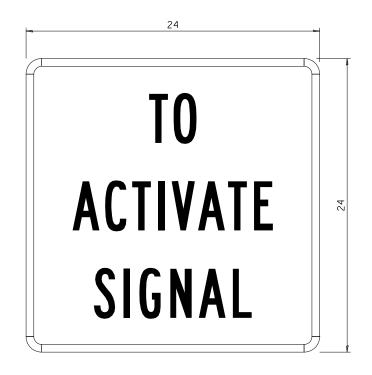
BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border; [NO OVERSIZE -] D; [OVERWEIGHT LOADS] D 85% spacing; [XX MILES AHEAD] D; Table of letter and object lefts.

N 11.7	0 18.1	0 30.0	V 36 . 2	E 42.8	R 48.4	S 54.4	I 60.7	Z 63 . 5	E 69 . 5	- 80.8				
0 2.6	V 8.6	E 15.0	R 20.4	W 26.2	E 33.4	I 38.8	G 41.3	H 47.4	T 53.2	L 64 . 5	0 69.9	A 75.9	D 82.9	S 88.7
X 7.6	X 13.6	M 25.3	I 32.3	L 35.1	E 40.6	S 46.2	A 57 . 9	H 65.1	E 71.4	A 76.6	D 83.7			

Sign not to scale

STOP LINE SIGN FOR TEMPORARY SIGNALS



COLOR

LEGEND AND BORDER BACKGROUND BLACK WHITE

NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	SERIES BY LINE					
310N 31ZE	1	2	3			
24 × 24	4C	4C	4C			

Sign not to scale

GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.



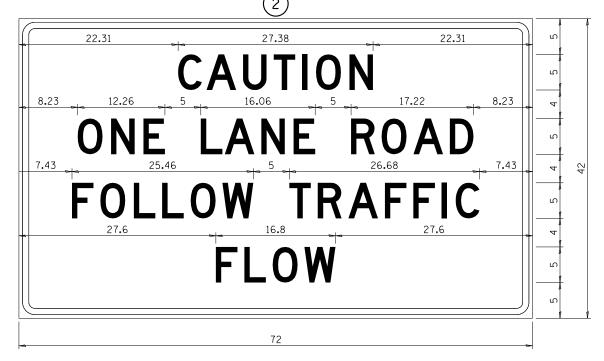
USER NAME = Inelson	DESIGNED	-	LGN	REVISED	-	3-02-16
	DRAWN	-	GBG	REVISED	-	
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED	-	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED	-	

	REGION	2 /	DIS	TRICT	2 STA	NDARD)
CALE	CHEET VV	0.5		CHEETC	CTA		

	ILLINOIS FED.	AID			
		Т	CONTRACT	NO. 6	4P3
525	D2 BDR 2020-1	Τ	BOONE	34	2
F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHE

ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS

WORK ZONE SIGN DETAILS



LEGEND AND BORDER BACKGROUND

BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

2.25" Radius, 0.88" Border, 0.50" IndenT; [CAUTION] D; [ONE LANE ROAD] D; [FOLLOW TRAFFIC] D; [FLOW] D

This sign shall be installed at entrances located between the temporary signals as shown in the staging plans.

Table Of Widths And Spaces

22.31	C 3.36	0.62	A 4.18	0.94	U 3.36	0.94	T 3.04	0.94	I 0.78	1.17	0 3 . 52	1.17	N 3.36	22.31	
-------	---------------	------	------------------	------	-----------	------	-----------	------	-----------	------	---------------------------	------	-----------	-------	--

	0		N		Ε
8.23	3 . 51	1.17	3.36	1.18	3.04

	L		Α		N		Ε
5.00	3.05	0.31	4.18	0.94	3.36	1.17	3 . 05

	R		0		Α		D	
5.00	3.36	0.93	3 . 52	0.94	4.18	0.93	3.36	8.23

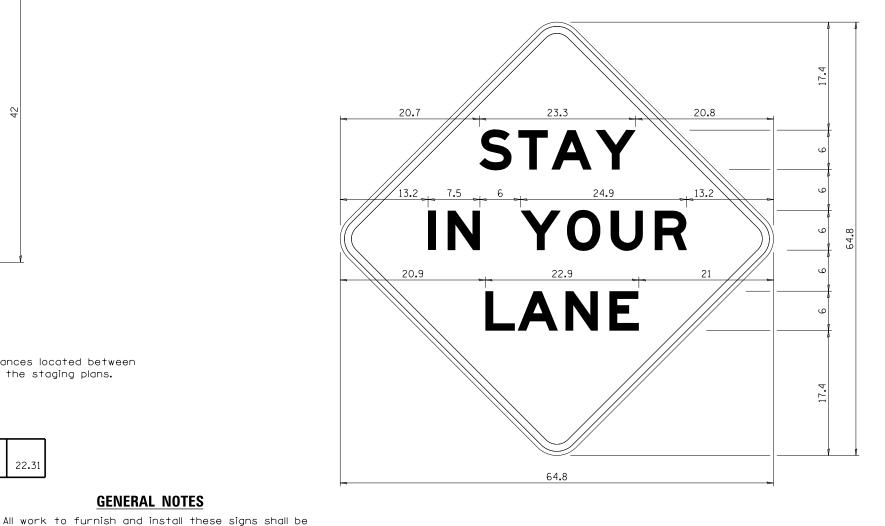


5.00	T 3 . 05	0.94	R 3.36	0.94	A 4 . 18	0.93	F 3 . 05	0.94	F 3.04	0.94	I 0.78	1.18	C 3.35	7.43	
------	---------------------------	------	-----------	------	---------------------------	------	---------------------------	------	------------------	------	-----------	------	---------------	------	--

		F		L		0		W	
L	27.60	3.05	0.94	3.04	0.94	3 . 52	0.93	4.38	27.60

Sign not to scale

STAY IN YOUR LANE



LEGEND AND BORDER BACKGROUND

BL ACK ORANGE NON-REFLECTORIZED REFLECTORIZED

48.0" across sides 3.8" Radius, 1.0" Border, 0.6" Indent; "STAY" E Mod; "IN YOUR" E Mod; "LANE" E Mod;

Table of Letter and Object Lefts

ſ	S	T	Α	Υ
	20.7	26.8	31.6	38.0

I	N	Υ	0	U	R
13.2	15.9	26.7	33.9	40.5	46.8

L	Α	N	Ε
20.9	25.8	33.1	39.4

Sign not to scale

WILLETT HOFMANN	u
WILLETT FIORMANN & ASSOCIATES INC ENGINEERING ARCHITECTURE LAND SURVEYING	<u> </u>
809 EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918	Р
	ıF

USER NAME = Inelson	DESIGNED	-	LGN	REVISED	-	3-02-16
	DRAWN	-	GBG	REVISED	-	
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED	-	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED	-	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

included in the cost of the specified traffic control standards and shall not be paid separately.

and 720 of the Standard Specifications.

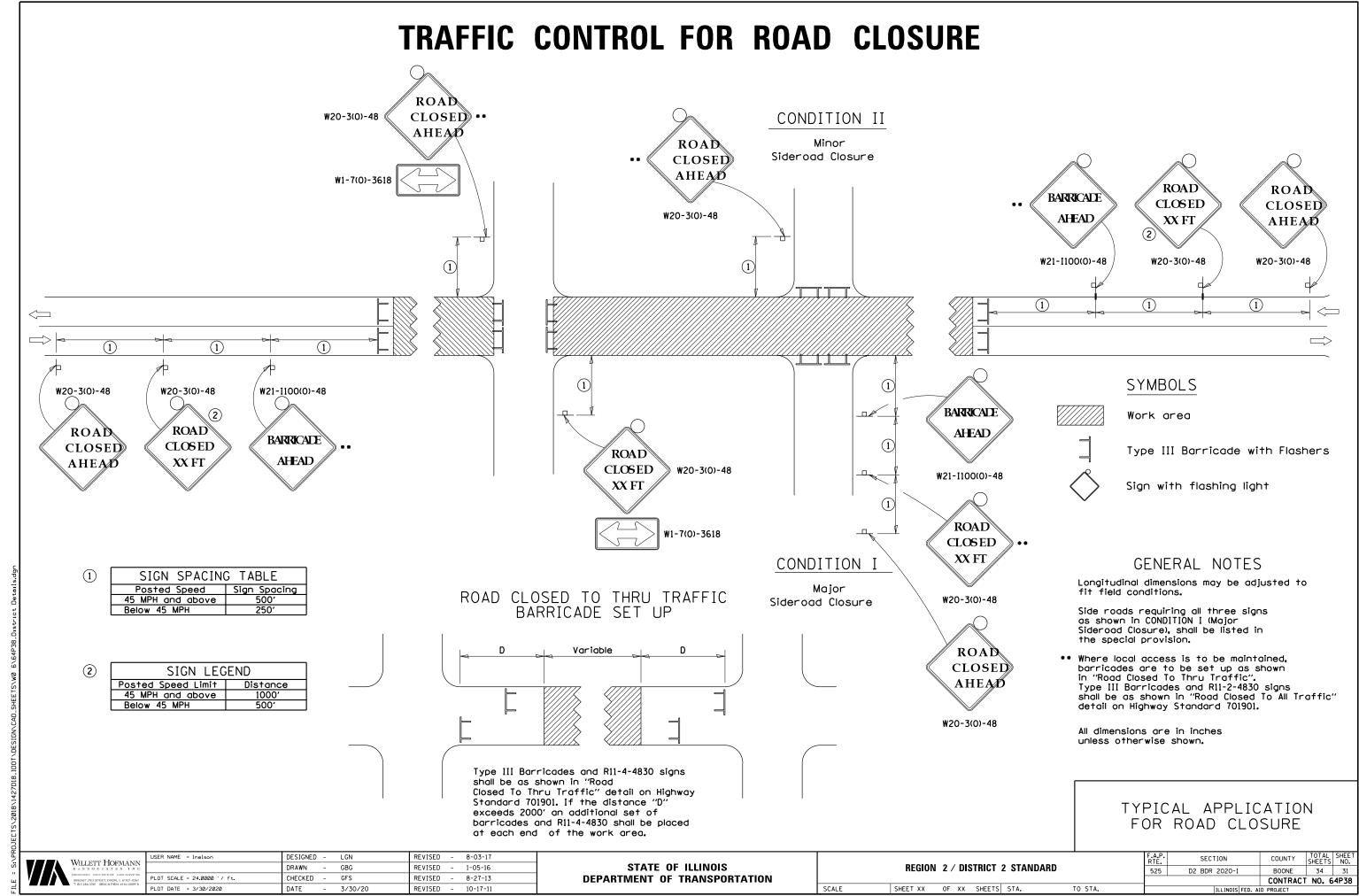
All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701

All dimensions are in inches unless otherwise noted.

		REGION	2 /	⁄ DIS	TRICT	2 STANDARD
Γ	SCALE	CHEET VV	OΕ	vv	CHEETE	CTA

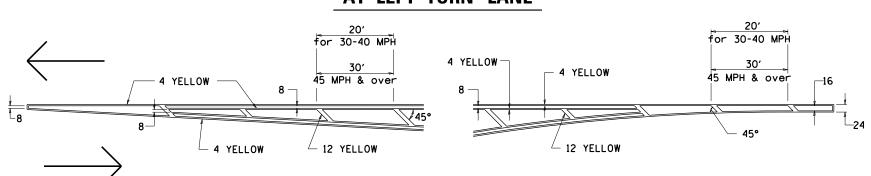
	TILLINOIS FED. A	ID PROJECT		
		CONTRACT	NO. 6	4P3
525	D2 BDR 2020-1	BOONE	34	30
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO

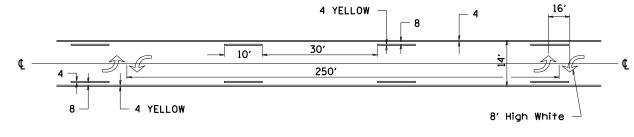


TYPICAL PAVEMENT MARKINGS

MEDIAN PAVEMENT MARKING

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE



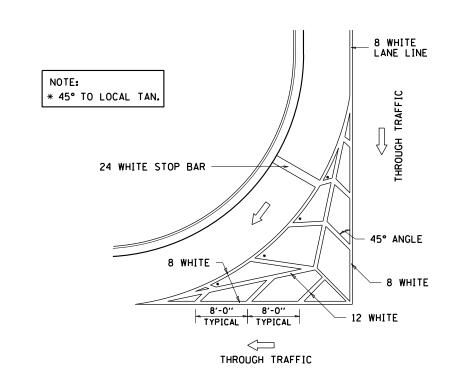


.. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TYPICAL ISLAND OFFSET SHOULDER WIDTH

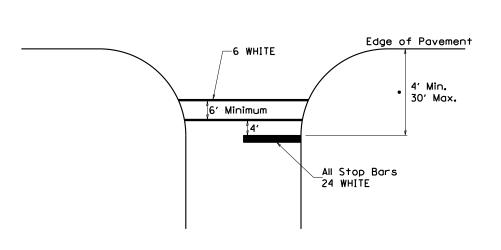
24 WHITE 8 WHITE 5 Diagonals Minimum 12 WHITE

TYPICAL MARKING FOR PAINTED ISLANDS



STANDARD CROSSWALK MARKING

See Schedules for Locations



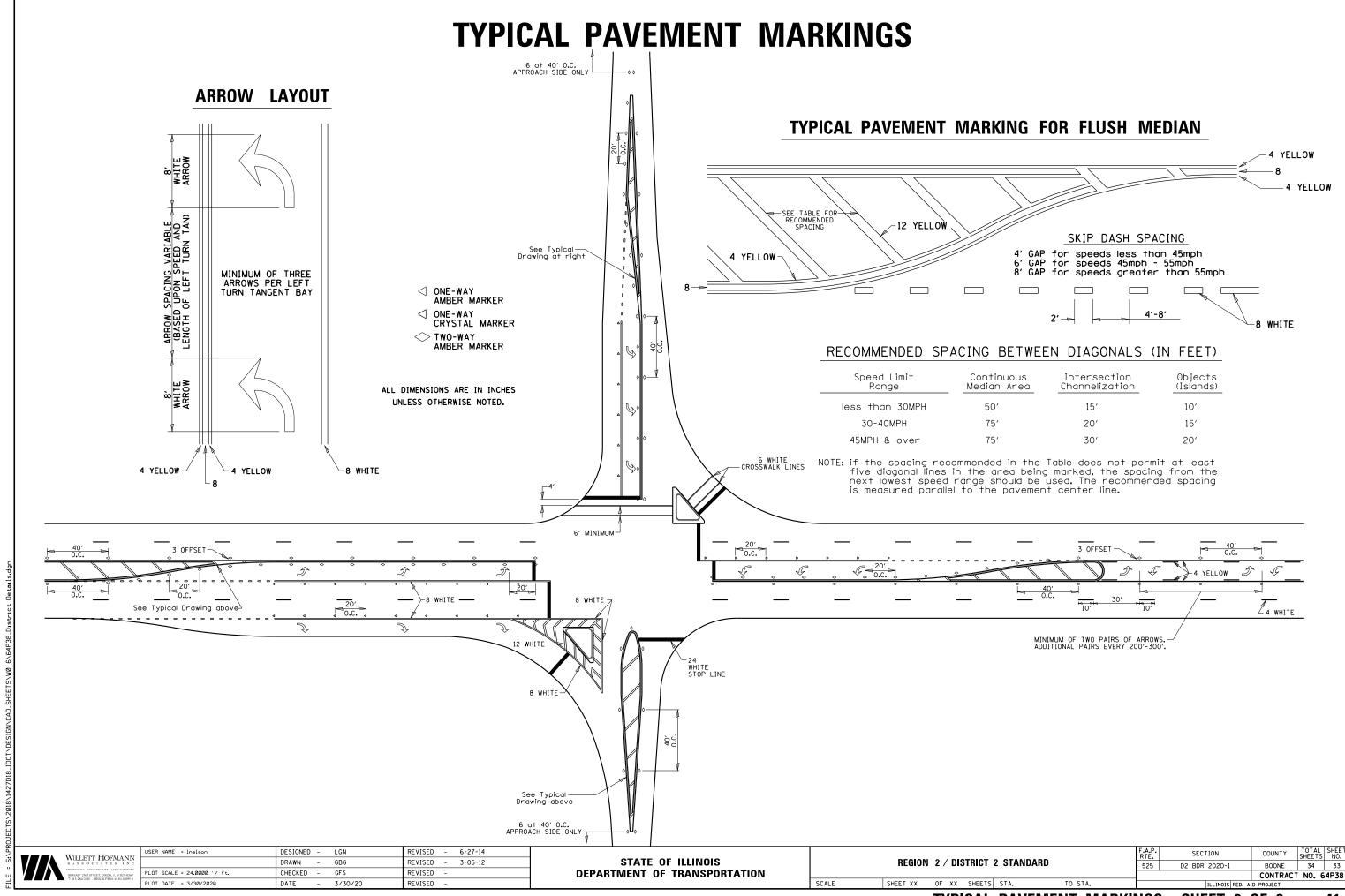
 Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

 WILLETT HOFMANN					
& ASSOCIATES INC					
809EAST 2ND STREET, DIXON, IL 61021-0367 T: 815-284-3381 DESIGN FIRM: #184-000918					

USER NAME = Inelson	DESIGNED	-	LGN	REVISED	-	6-27-14
	DRAWN	-	GBG	REVISED	-	3-05-12
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED	-	
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED	-	

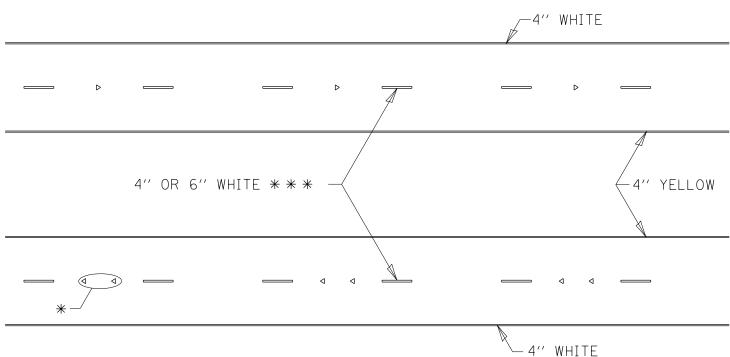
	REGION 2 / DISTRICT 2 STANDARD					
SCALE	SHEET XX	OF	XX	SHEETS	STA.	TO STA.

	TILL INDIS FED. AT	D PROJECT	
		CONTRACT	NO.
525	D2 BDR 2020-1	BOONE	34
F.A.P. RTE.	SECTION	COUNTY	TOT SHEE



TYPICAL PAVEMENT MARKINGS

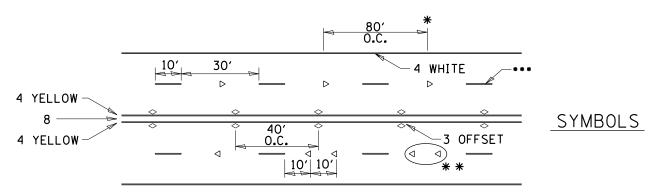
TYPICAL PARKING SPACING



4" WHITE

* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS. USE DOUBLE MARKERS WHEN ADT > 20,000.

MULTI-LANE / DIVIDED

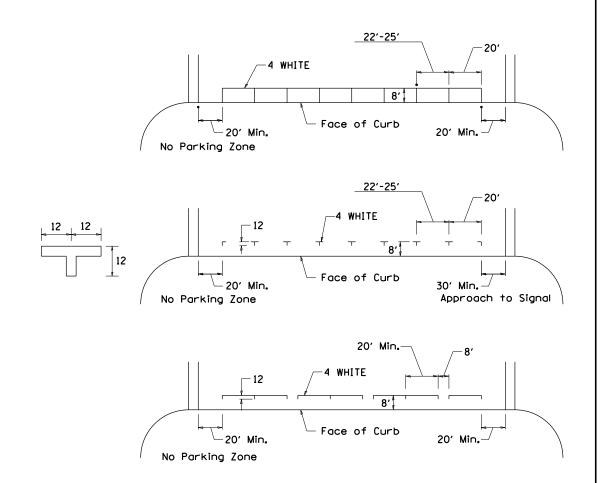


- REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH LOWER THAN POSTED SPEEDS.
- •• USE DOUBLE MARKERS WHEN ADT > 20,000

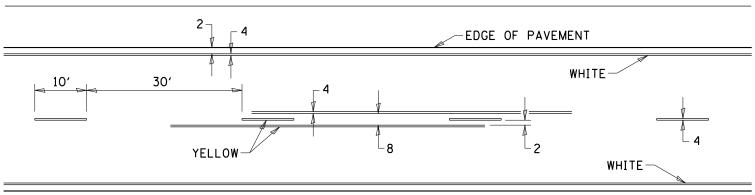
••• CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND OVER USE 6" LINE.

MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS DETAIL NOT HIGHWAY STANDARD 781001)



TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES



USER NAME = Inelson	DESIGNED	-	LGN	REVISED	=	6-27-14
	DRAWN	-	GBG	REVISED	-	8-27-13
PLOT SCALE = 24.0000 '/ ft.	CHECKED	-	GFS	REVISED	-	11-28-12
PLOT DATE = 3/30/2020	DATE	-	3/30/20	REVISED	-	

	REGION 2 / DISTRICT 2 STANDARD							
	525	D2 BDR						
SCALE	SHEET XX OF XX SHEETS STA. TO STA.	ı						