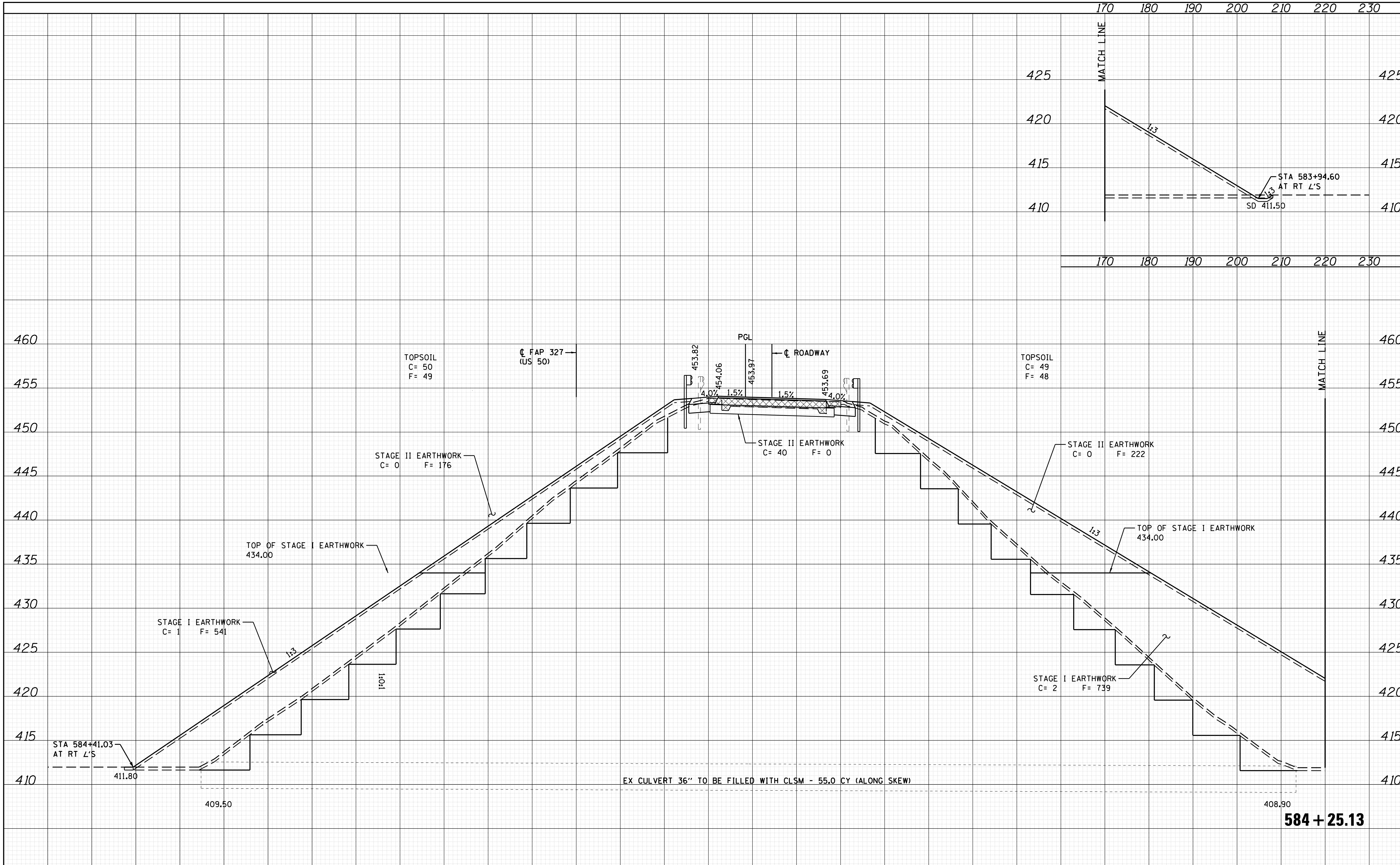


CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED -	REVISED -
	FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -

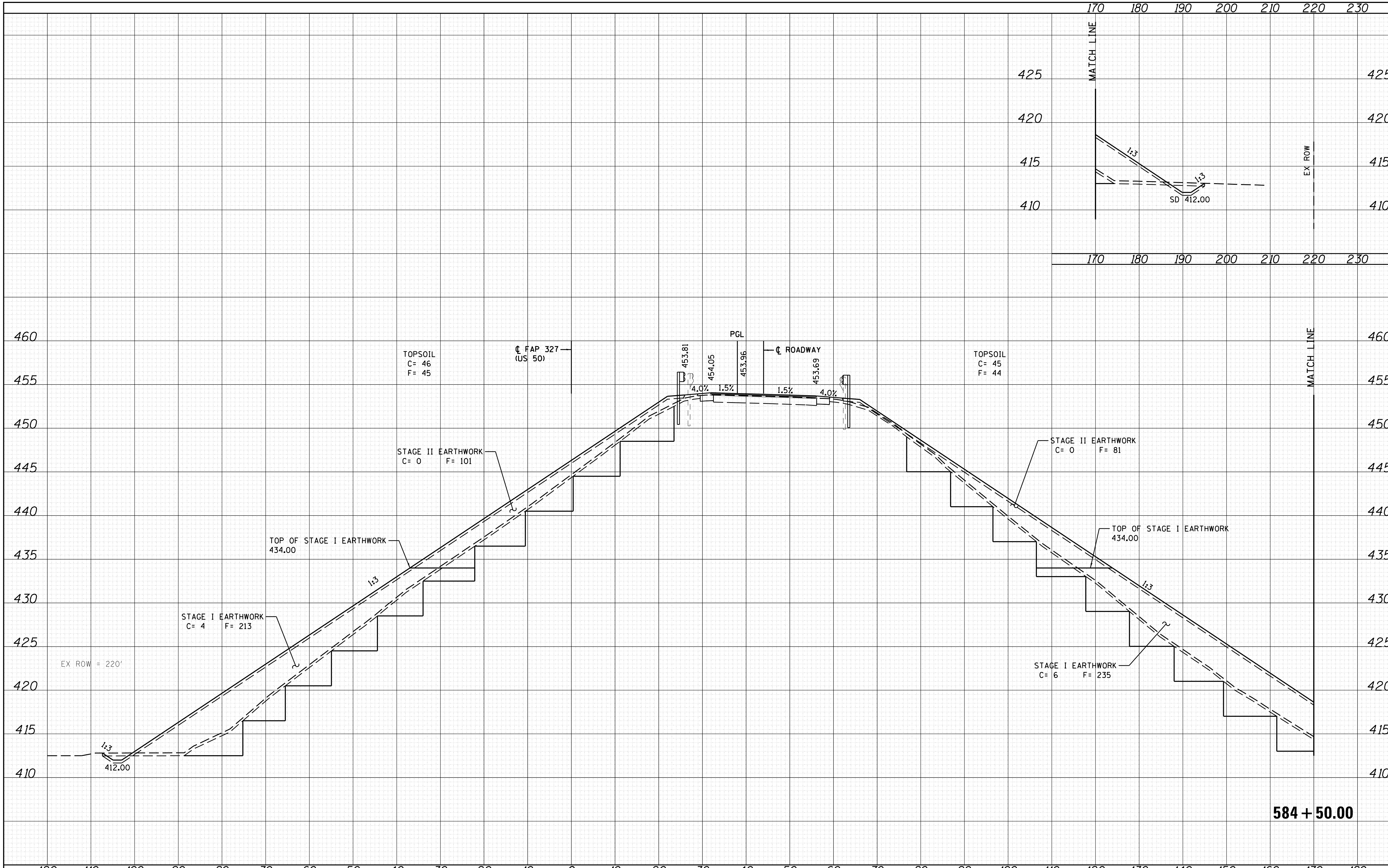
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 11 OF 16 SHEETS | STA. 584+25.13 TO STA. 584+25.13

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	101
		CONTRACT NO. 74177		

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



FINAL SURVEY	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED
NOTE BOOK	NO.	BY	DATE		
ORIGINAL SURVEY	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED
NOTE BOOK	NO.	BY	DATE		

CEC Cummins Engineering Corporation
Civil and Structural Engineering

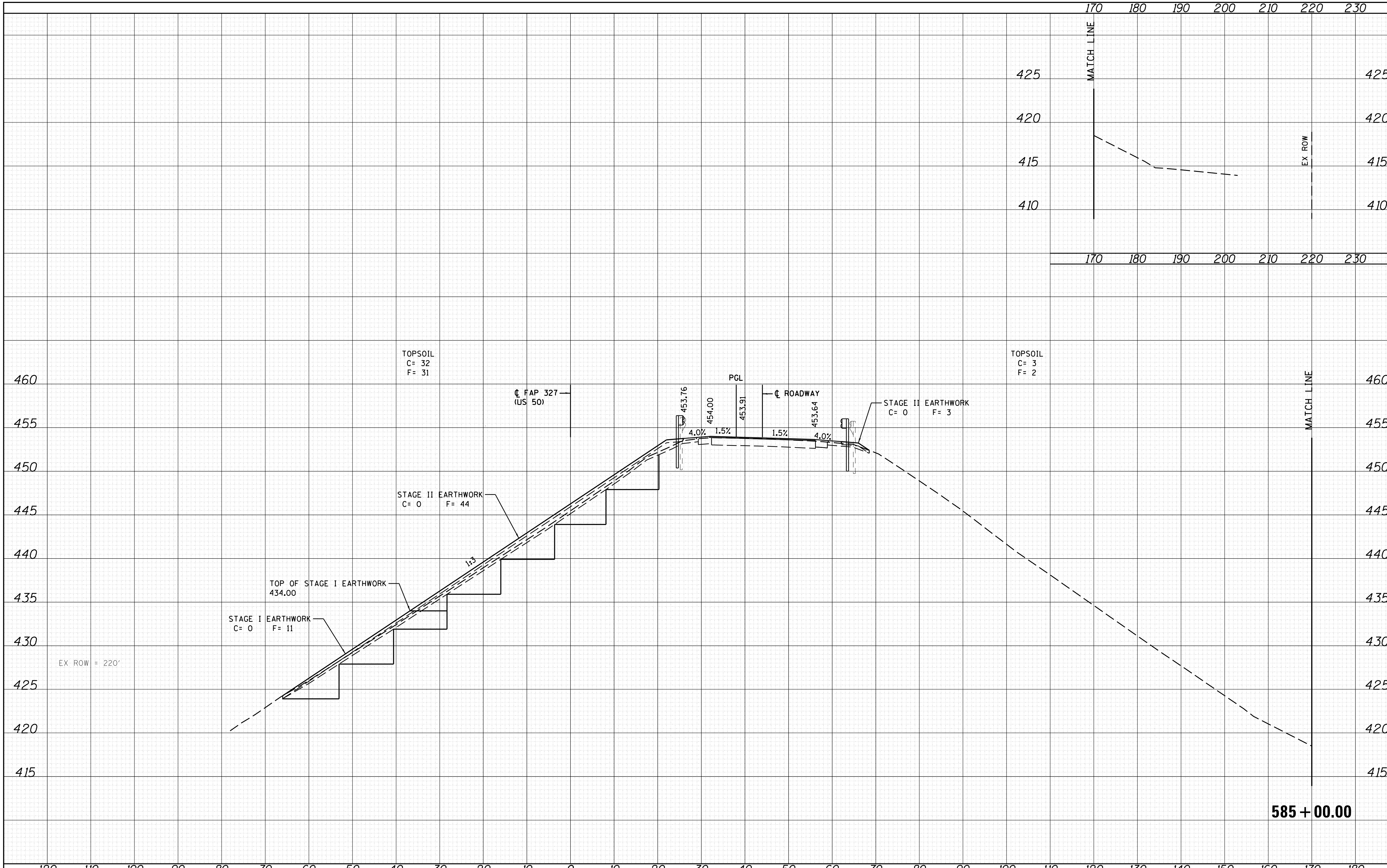
JOB = 2480.2	DESIGNED -	REVISED -
FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -
PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 12 OF 16 SHEETS | STA. 584+50.00 TO STA. 584+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	102
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED -	REVISED -
	FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

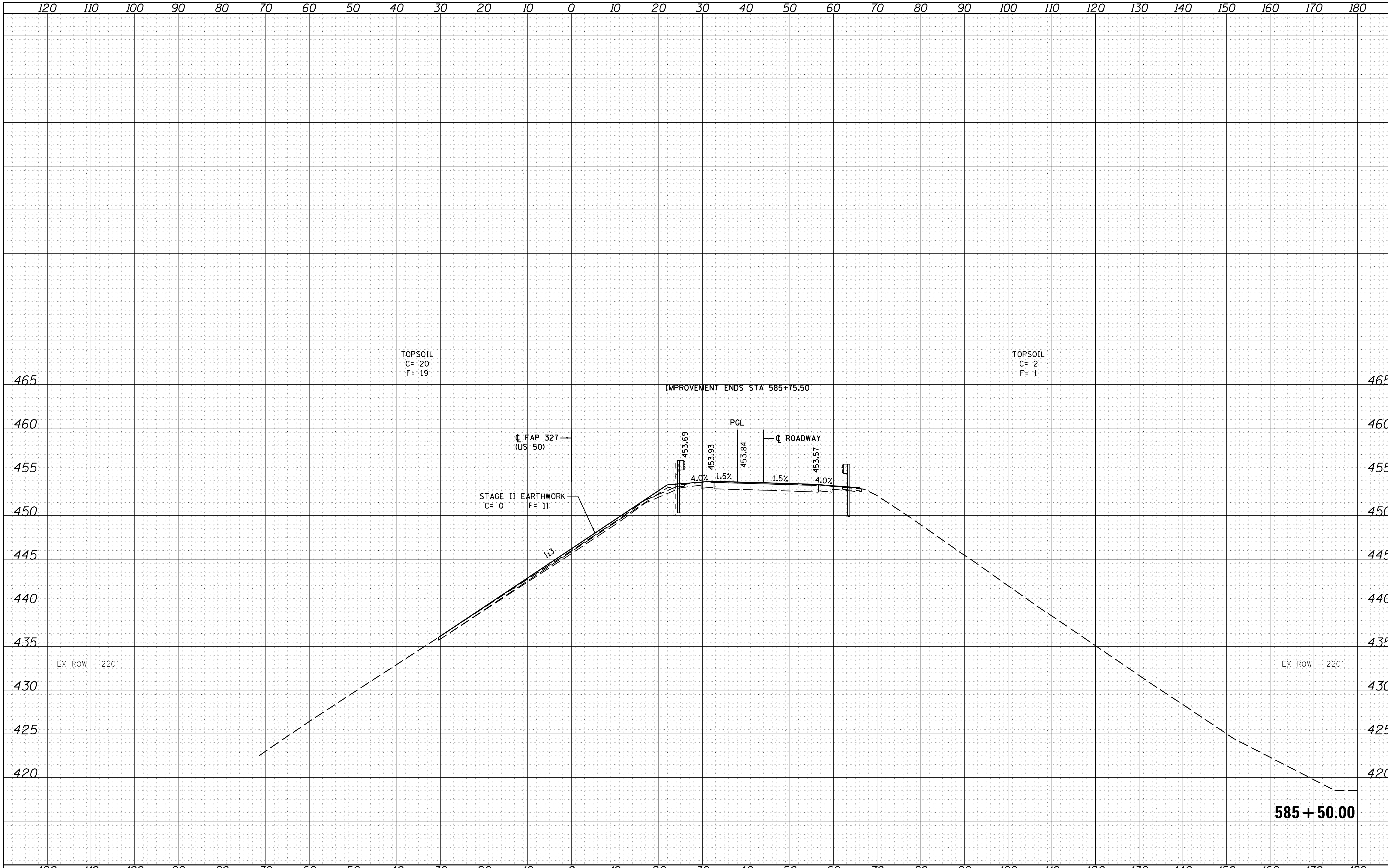
CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 13 OF 16 SHEETS | STA. 585+00.00 TO STA. 585+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	103

CONTRACT NO. 74177

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



FINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

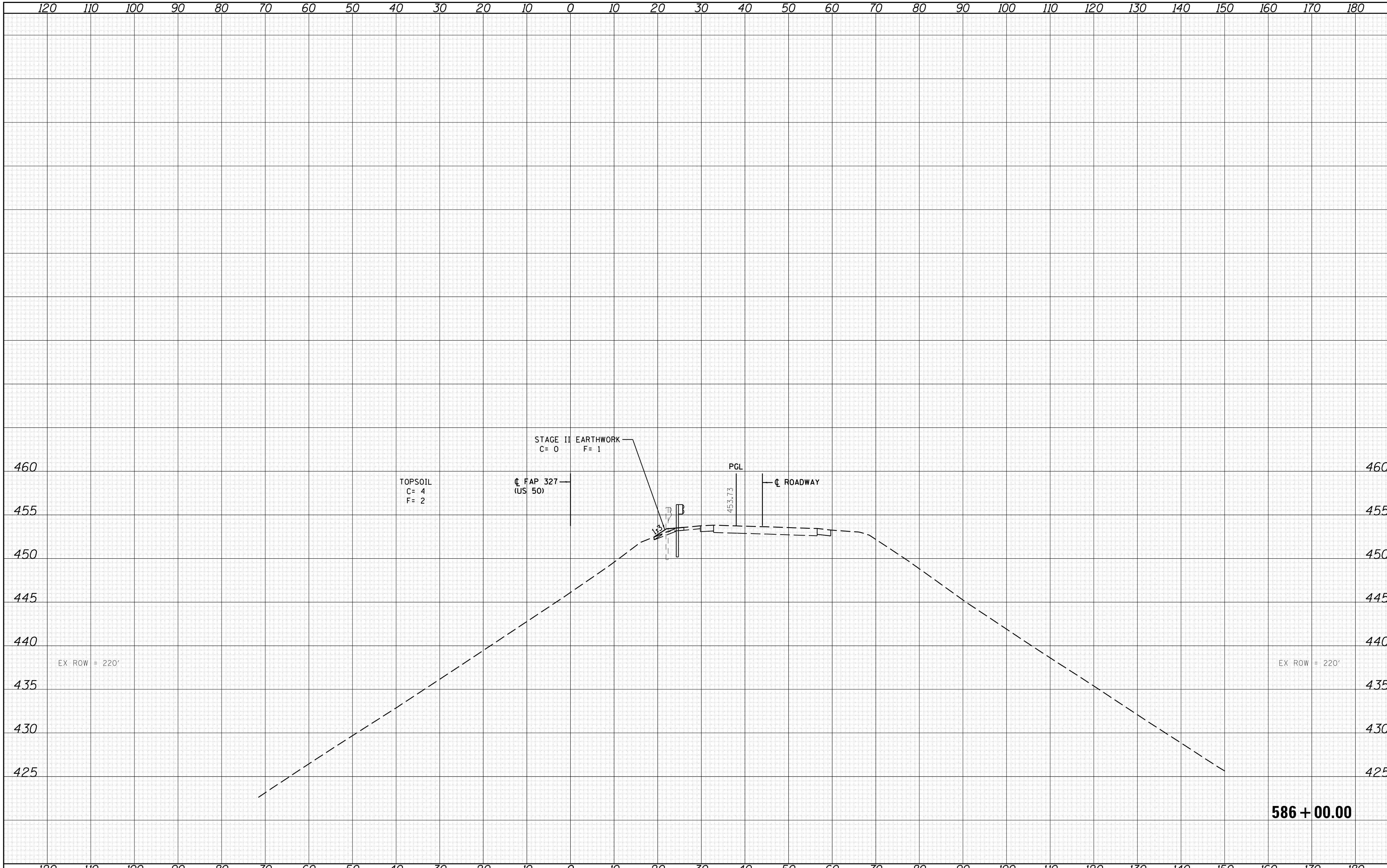
ORIGINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.2	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 051-0013 (OLD) SN 051-8634 (NEW)	F.A.P. RTE. 327
	FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -			SECTION (51-23)B
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -		SCALE:	COUNTY LAWRENCE
	PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -		SHEET NO. 14 OF 16 SHEETS	STA. 585+50.00 TO STA. 585+50.00

TOTAL SHEETS	SHEET NO.
260	104

CONTRACT NO. 74177

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



CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.2	DESIGNED -	REVISED -
	FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

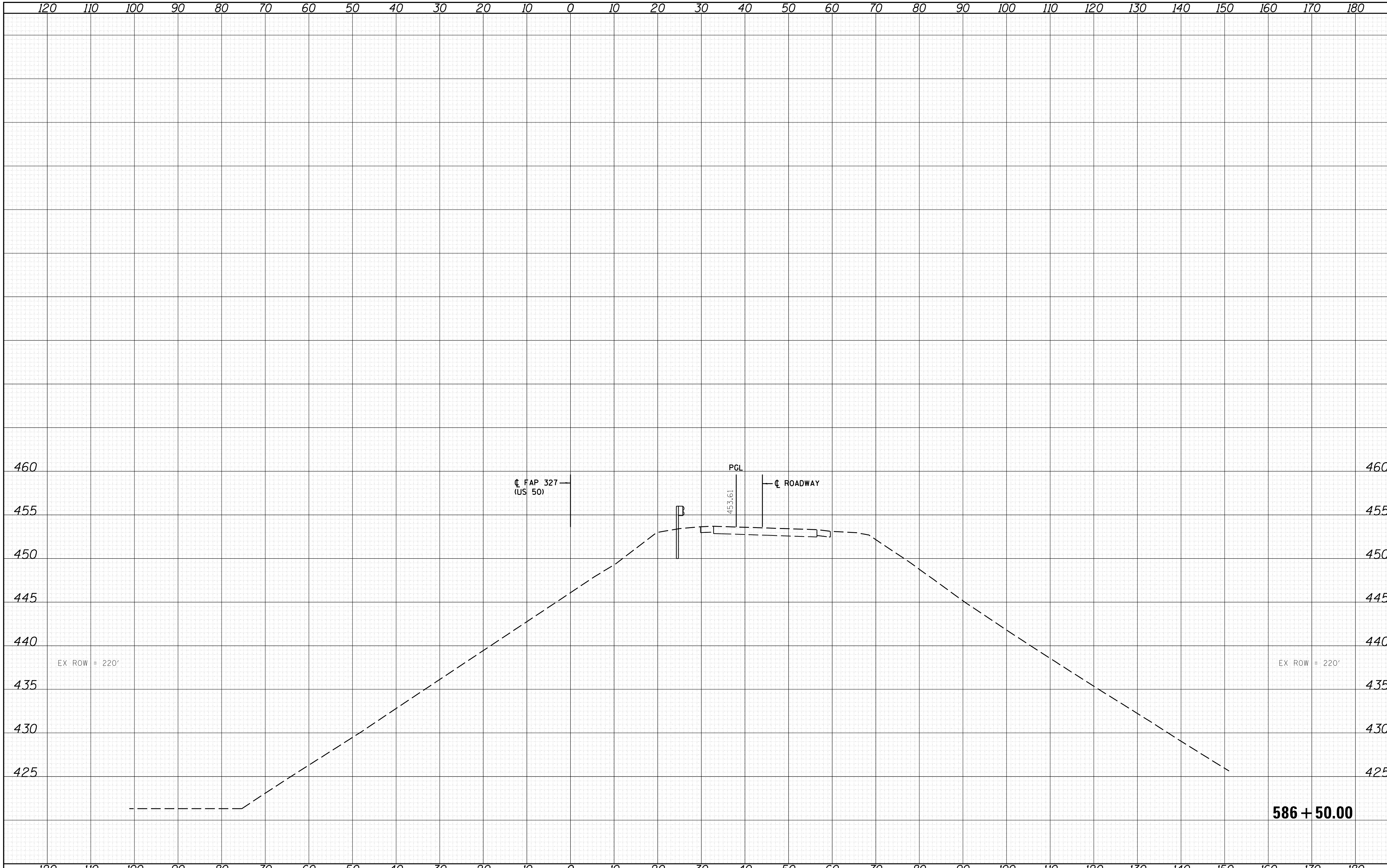
CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE:	SHEET NO. 15 OF 16 SHEETS	STA. 586+00.00 TO STA. 586+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	105
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NOTE BOOK NO.	
BY	
DATE	

ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NOTE BOOK NO.	
BY	
DATE	

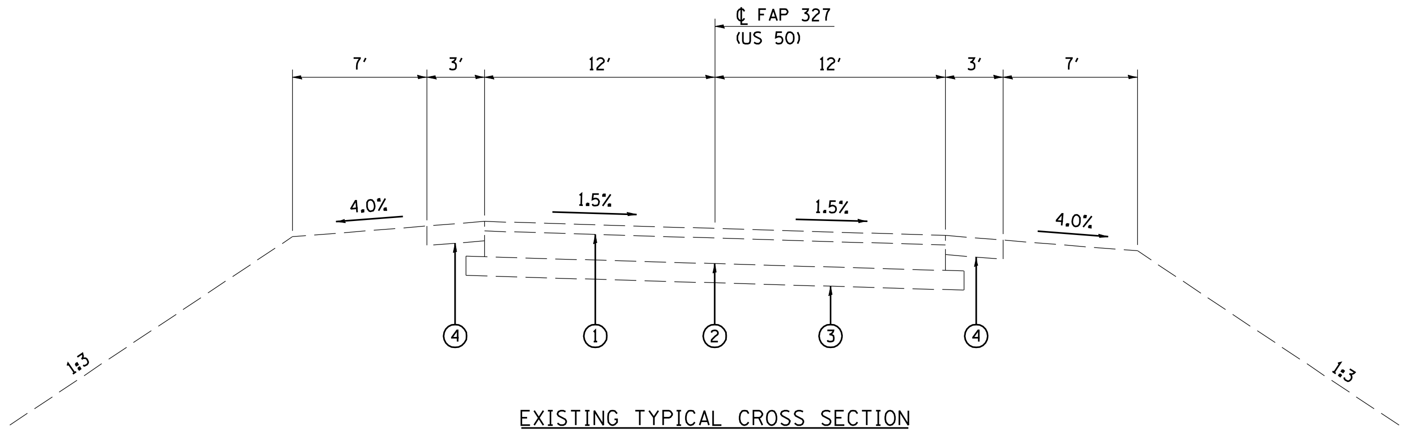


CEC Cummins Engineering Corporation	JOB = 2480.2	DESIGNED -	REVISED -	STATE OF ILLINOIS	CROSS SECTIONS
	FILE NAME = D774113-sht-xs.dgn	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	SN 051-0013 (OLD) SN 051-8634 (NEW)
	PLOT SCALE = 20.000000 ' / in.	CHECKED -	REVISED -		
Civil and Structural Engineering	PLOT DATE = 10/18/2018	DATE - 3/22/17	REVISED -		SCALE: SHEET NO. 16 OF 16 SHEETS STA. 586+50.00 TO STA. 586+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	206	106
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY: NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

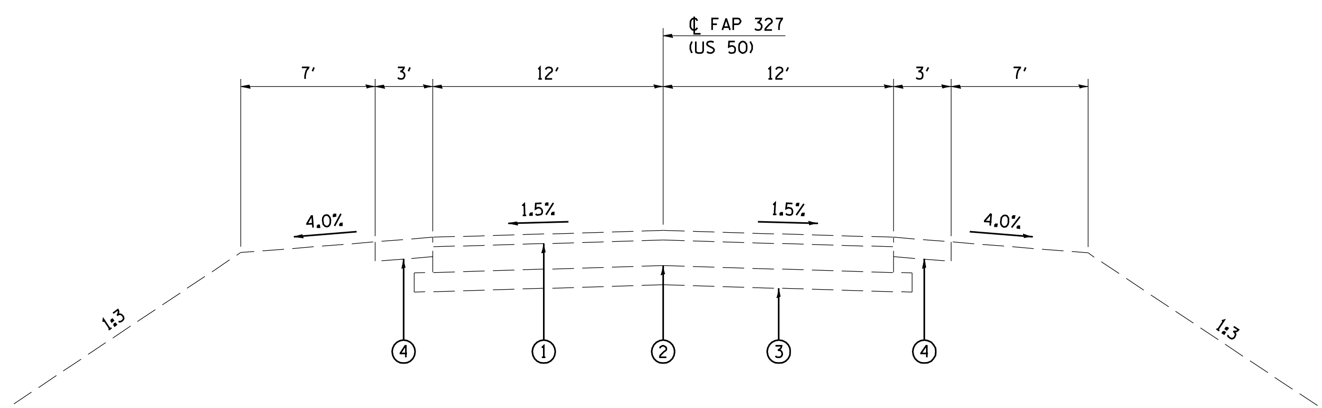
ORIGINAL SURVEY: NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE



EXISTING TYPICAL CROSS SECTION

STA 597+75 TO STA 602+39.04
STA 604+60.33 TO STA 605+71.68

EXISTING PCC BRIDGE APPROACH PAVEMENT
STA 602+39.04 TO STA 602+85.87
STA 604+13.50 TO STA 604+60.33



EXISTING TYPICAL CROSS SECTION

STA 605+71.68 TO STA 609+75

LEGEND

1. EX HOT-MIX ASPHALT
2. EX PORTLAND CEMENT CONCRETE PAVEMENT 8″
3. EX SUB-BASE GRANULAR MATERIAL 6″
4. EX HOT-MIX ASPHALT SHOULDER
5. PR PAVED SHOULDER REMOVAL
6. PR PAVEMENT REMOVAL
7. PR HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH
8. PR LEVELING BINDER (MACHINE METHOD) N90 F.G.
9. PR HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 $1\frac{1}{2}$″
10. PR HOT-MIX ASPHALT BASE COURSE 12″
11. PR HOT-MIX ASPHALT SHOULDERS
12. PR HOT-MIX ASPHALT SHOULDERS 8″
13. PR AGGREGATE SHOULDERS, TYPE B 8″
14. PR PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
15. PR SUB-BASE GRANULAR MATERIAL, TYPE B 6″
16. PR PAINT PAVEMENT MARKING - LINE 4″
17. PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

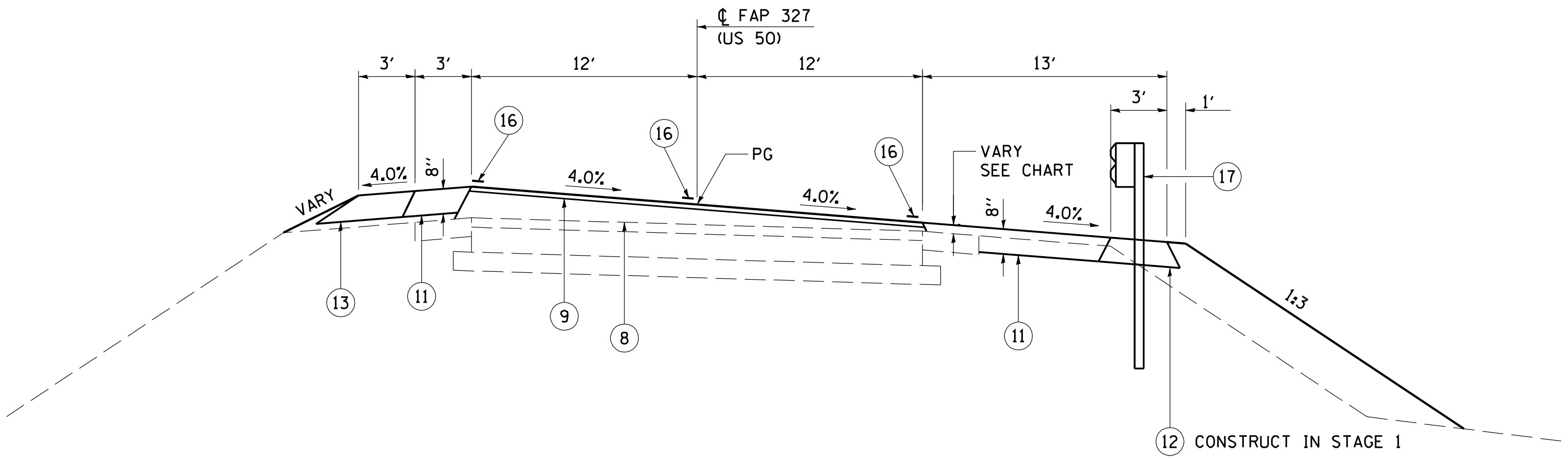
CEC Cummins Engineering Corporation	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-typ.dgn	DRAWN - TJD	REVISED -
	PLOT SCALE = 10.0000 ′ / IN.	CHECKED - NAK	REVISED -
Civil and Structural Engineering	PLOT DATE = 10/18/2018	DATE - 1/6/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	107
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL CROSS SECTION

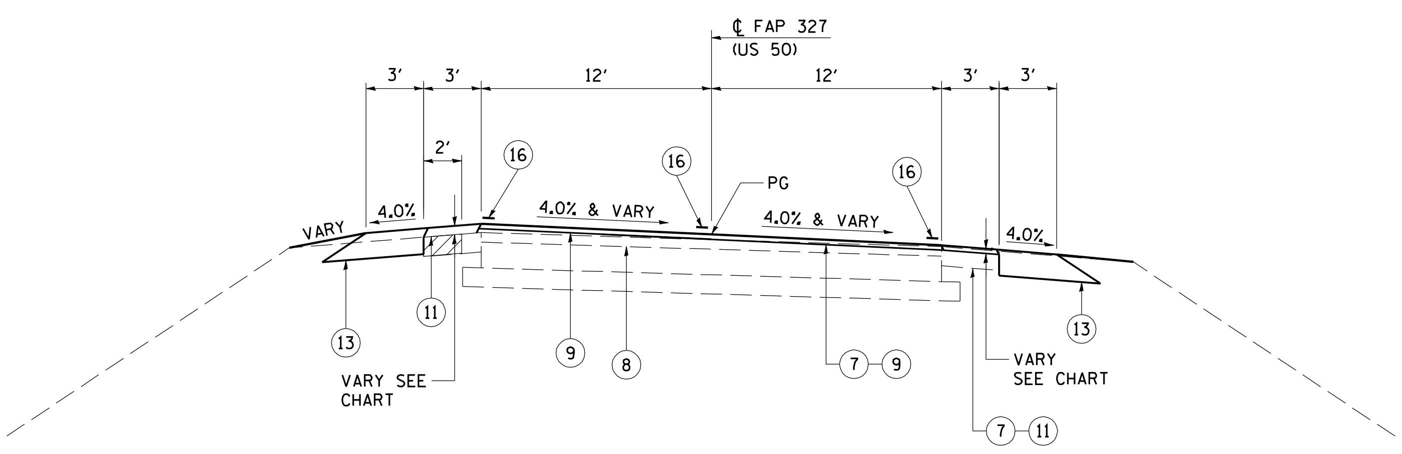
RT STA 599+84.5 TO STA 600+03
LT STA 599+84.5 TO STA 600+12

HOT-MIX ASPHALT SHOULDERS

STATION	LEFT SHOULDER			
	OFFSET (FT)	THICKNESS (FT)	OFFSET (FT)	THICKNESS (FT)
STA. 600+23.00	15.0	0.39	12.0	0.42
STA. 601+00.00	15.0	0.43	12.0	0.52
STA. 601+44.60	15.0	0.55	12.0	0.55
STA. 601+50.00	15.6	0.55	12.0	0.55
STA. 601+74.30	18.0	0.55	12.0	0.55
STA. 602+00.00	18.0	0.60	12.0	0.60
STA. 602+50.00	18.0	0.61	12.0	0.61
STA. 602+55.87	18.0	0.61	12.0	0.61
STA. 602+55.87 STA. 604+43.50	BRIDGE AND APPROACH PAVEMENT OMISSION			
STA. 604+43.50	18.0	0.52	12.0	0.52
STA. 604+50.00	18.0	0.52	12.0	0.52
STA. 604+60.97	18.0	0.52	12.0	0.52
STA. 604+60.97 STA. 605+11.68	STATION EQUATION			
STA. 605+11.68	18.0	0.45	12.0	0.45
STA. 605+50.00	18.0	0.45	12.0	0.45
STA. 605+78.00	18.0	0.42	12.0	0.42
STA. 606+00.00	16.1	0.39	12.0	0.39
STA. 606+12.60	15.0	0.38	12.0	0.38
STA. 606+44.00	15.0	0.32	12.0	0.32

HOT-MIX ASPHALT SHOULDERS

STATION	RIGHT SHOULDER			
	OFFSET (FT)	THICKNESS (FT)	OFFSET (FT)	THICKNESS (FT)
STA. 601+14.00	12.0	0.47	22.0	0.47
STA. 601+50.00	12.0	0.49	22.0	0.49
STA. 602+00.00	12.0	0.51	22.0	0.51
STA. 602+50.00	12.0	0.52	22.0	0.52
STA. 602+55.87	12.0	0.52	22.0	0.52
STA. 602+55.87 STA. 604+43.50	BRIDGE AND APPROACH PAVEMENT OMISSION			
STA. 604+43.50	12.0	0.52	22.0	0.52
STA. 604+50.00	12.0	0.52	22.0	0.52
STA. 604+60.97	12.0	0.52	22.0	0.52
STA. 604+60.97 STA. 605+11.68	STATION EQUATION			
STA. 605+11.68	12.0	0.52	22.0	0.52
STA. 605+50.00	12.0	0.56	22.0	0.56
STA. 606+00.00	12.0	0.61	22.0	0.61
STA. 606+18.00	12.0	0.60	22.0	0.61
STA. 606+50.00	12.0	0.58	19.3	0.58
STA. 607+00.00	12.0	0.58	15.2	0.58
STA. 607+02.00	12.0	0.58	15.0	0.58



PROPOSED TYPICAL CROSS SECTION

STA 597+75 TO STA 599+84.5

SHOULDER THICKNESS AT EDGE OF PAVEMENT (FOOT)

STA	12' LT	12' RT
597+75.00	0.12	0.12
598+00.00	0.12	0.12
598+50.00	0.12	0.12
599+00.00	0.26	0.12
599+50.00	0.67	0.12
600+00.00	0.67	0.22
600+50.00	0.67	0.45
601+00.00	0.67	0.58
601+50.00	0.67	0.67
602+00.00	1.23	0.73
602+40.63	1.45	0.75
604+58.10	1.28	0.86
605+50.00	1.20	1.08
606+00.00	0.67	0.67
606+50.00	0.67	0.67
607+00.00	0.67	0.67
607+50.00	0.51	0.67
608+00.00	0.29	0.50
608+50.00	0.12	0.28
609+00.00	0.12	0.12
609+50.00	0.12	0.12
609+75.00	0.12	0.12

PAVEMENT SLOPE

-1.5% STA 597+75 TO STA 598+75
TRANSITION FROM 1.5% AT STA 598+75
TO 4.0% AT STA 599+50

LIMITS OF HMA SURFACE REMOVAL VARIABLE DEPTH

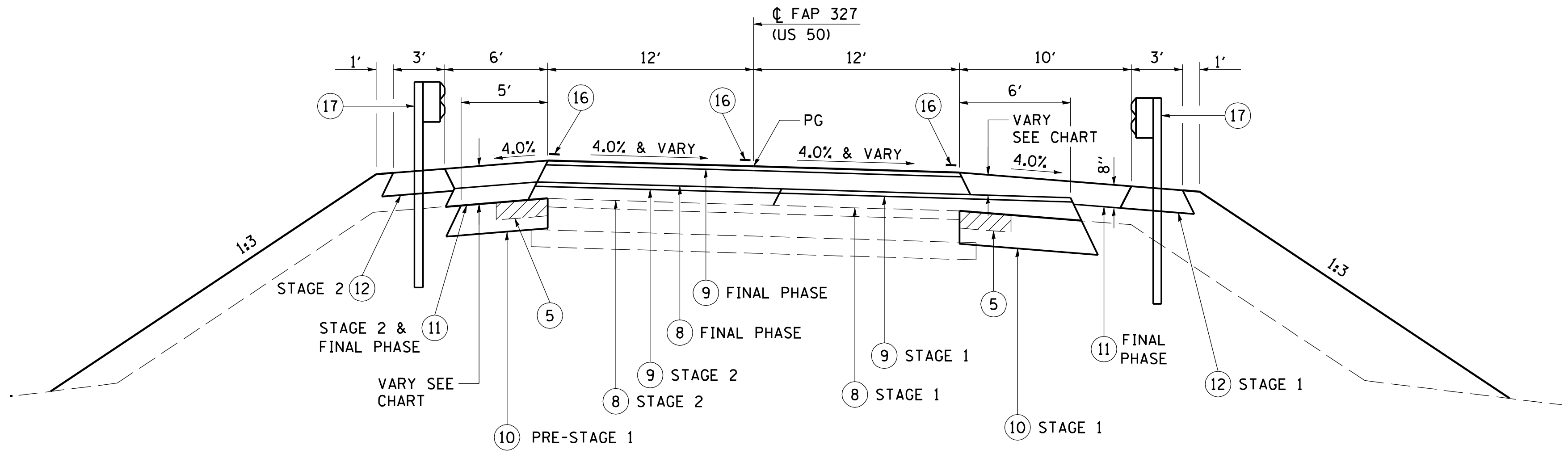
RT STA 597+75 TO STA 599+75
LT STA 597+75 TO STA 598+75

LEGEND

1. EX HOT-MIX ASPHALT
2. EX PORTLAND CEMENT CONCRETE PAVEMENT 8"
3. EX SUB-BASE GRANULAR MATERIAL 6"
4. EX HOT-MIX ASPHALT SHOULDER
5. PR PAVED SHOULDER REMOVAL
6. PR PAVEMENT REMOVAL
7. PR HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH
8. PR LEVELING BINDER (MACHINE METHOD) N90 F.G.
9. PR HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 1½"
10. PR HOT-MIX ASPHALT BASE COURSE 12"
11. PR HOT-MIX ASPHALT SHOULDERS
12. PR HOT-MIX ASPHALT SHOULDERS 8"
13. PR AGGREGATE SHOULDERS, TYPE B 8"
14. PR PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
15. PR SUB-BASE GRANULAR MATERIAL, TYPE B 6"
16. PR PAINT PAVEMENT MARKING - LINE 4"
17. PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6 FILE NAME = D774179-sht-typ.dgn PLOT SCALE = 10.0000 '/ IN. PLOT DATE = 10/18/2018	DESIGNED - NAK DRAWN - TJD CHECKED - NAK DATE - 1/6/2011	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL CROSS SECTIONS SN 051-0014
					SCALE: SHEET NO. OF SHEETS STA. TO STA.

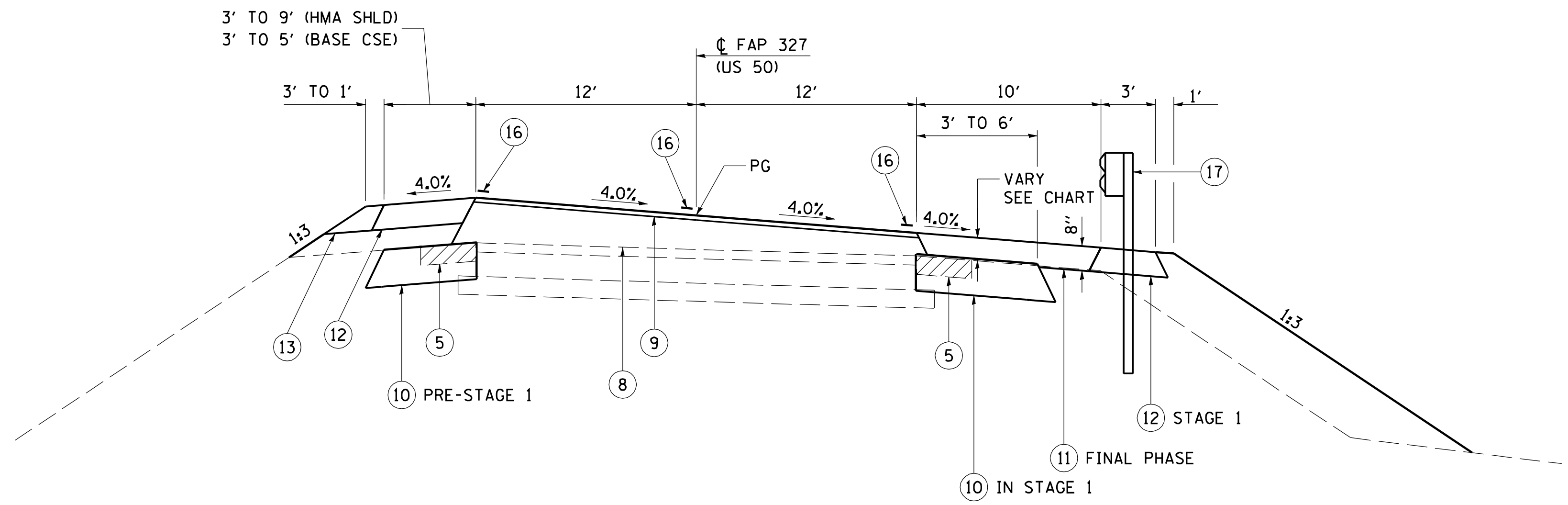
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	108
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL CROSS SECTION

STA 601+55.60 TO STA 602+40.50
STA 604+57.95 TO STA 605+94.07

TRANSITION PAVEMENT SLOPE FROM 4.0% AT STA 604+40.79 TO 1.5% AT STA 605+71.68



PROPOSED TYPICAL CROSS SECTION

RT STA 600+03 TO STA 601+55.60
LT STA 600+12 TO STA 601+55.60

LEFT SIDE: AGGREGATE SHOULDER TRANSITIONS FORM 1′ AT STA 601+39.22 TO 0′ AT STA 601+41.
HMA SHOULDER AND HMA BASE COURSE TRANSITION FROM 3′ AT STA 600+56.96 TO 5′ AT STA 600+78.62
HMA SHOULDER TRANSITIONS FROM 5′ AT STA 601+39.22 TO 9′ AT STA 601+47.12

RIGHT SIDE: TRANSITION HMA BASE COURSE FROM 3′ AT STA 600+48.60 TO 6′ AT STA 600+89.6

STAGE 1 LEVELING BINDER THICKNESS			
STA		1.4' RT	18' RT
601+55.54		0.00	0.00
602+00.00		0.39	0.03
602+40.63		0.86	0.47
604+58.10		0.88	0.61
605+50.00		0.36	0.24
605+94.07		0.00	0.00

STAGE 2 LEVELING BINDER THICKNESS			
STA	12' LT	1.4' RT	
601+55.54	0.00	0.00	
602+00.00	0.74	0.39	
602+40.63	1.18	0.86	
604+58.10	1.01	0.88	
605+50.00	0.56	0.36	
605+94.07	0.00	0.00	

FINAL PHASE LEVELING BINDER THICKNE			
STA	12' LT	CL	12' RT
597+75.00	0.00	0.00	0.00
598+00.00	0.00	0.00	0.00
598+50.00	0.00	0.00	0.00
599+00.00	0.15	0.00	0.00
599+50.00	0.55	0.17	0.00
600+00.00	0.77	0.39	0.10
600+50.00	0.95	0.63	0.30
601+00.00	1.10	0.80	0.45
601+50.00	1.19	0.85	0.54
602+00.00	0.44	0.44	0.44
602+40.63	0.04	0.04	0.04
604+58.10	0.04	0.04	0.04
605+50.00	0.41	0.50	0.59
606+00.00	0.88	0.98	0.96
606+50.00	0.68	0.83	0.85
607+00.00	0.56	0.69	0.76
607+50.00	0.38	0.54	0.61
608+00.00	0.15	0.35	0.38
608+50.00	0.00	0.18	0.14
609+00.00	0.00	0.00	0.00
609+50.00	0.00	0.00	0.00
609+75.00	0.00	0.00	0.00

LEGEND

1. EX HOT-MIX ASPHALT
2. EX PORTLAND CEMENT CONCRETE PAVEMENT 8″
3. EX SUB-BASE GRANULAR MATERIAL 6″
4. EX HOT-MIX ASPHALT SHOULDER
5. PR PAVED SHOULDER REMOVAL
6. PR PAVEMENT REMOVAL
7. PR HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH
8. PR LEVELING BINDER (MACHINE METHOD) N90 F.G.
9. PR HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 1½″
10. PR HOT-MIX ASPHALT BASE COURSE 12″
11. PR HOT-MIX ASPHALT SHOULDERS
12. PR HOT-MIX ASPHALT SHOULDERS 8″
13. PR AGGREGATE SHOULDERS, TYPE B 8″
14. PR PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
15. PR SUB-BASE GRANULAR MATERIAL, TYPE B 6″
16. PR PAINT PAVEMENT MARKING - LINE 4″
17. PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -
FILE NAME = D774179-sht-typ.dgn	DRAWN - TJD	REVISED -
PLOT SCALE = 10.0000 ' / IN.	CHECKED - NAK	REVISED -
PLOT DATE = 10/18/2018	DATE - 1/6/2011	REVISED -

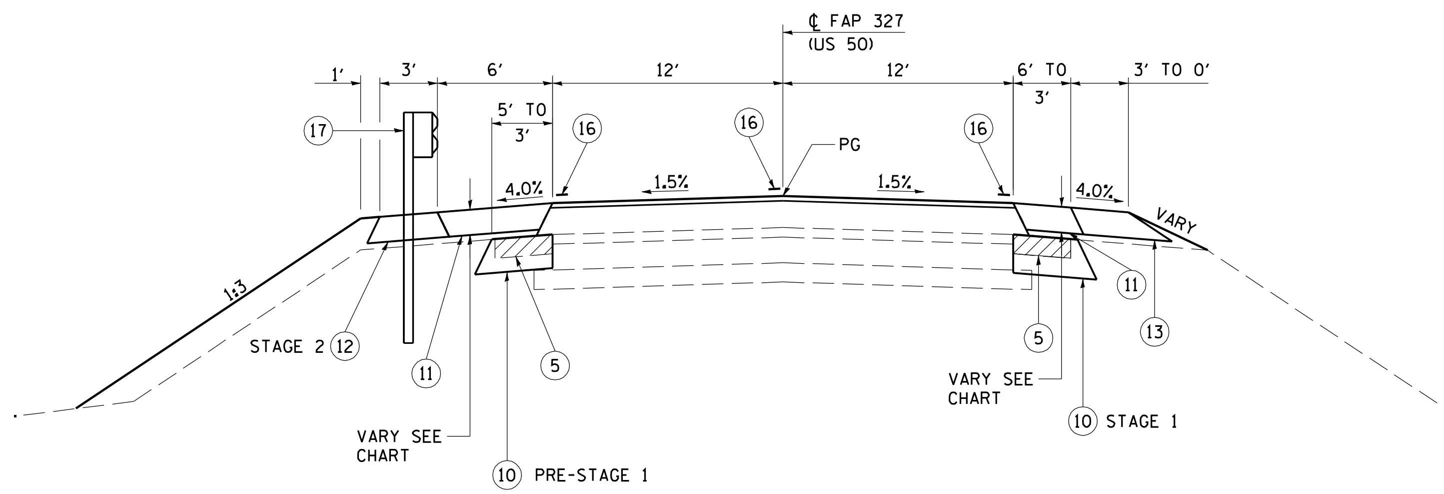
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	109
		CONTRACT NO. 74177		

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



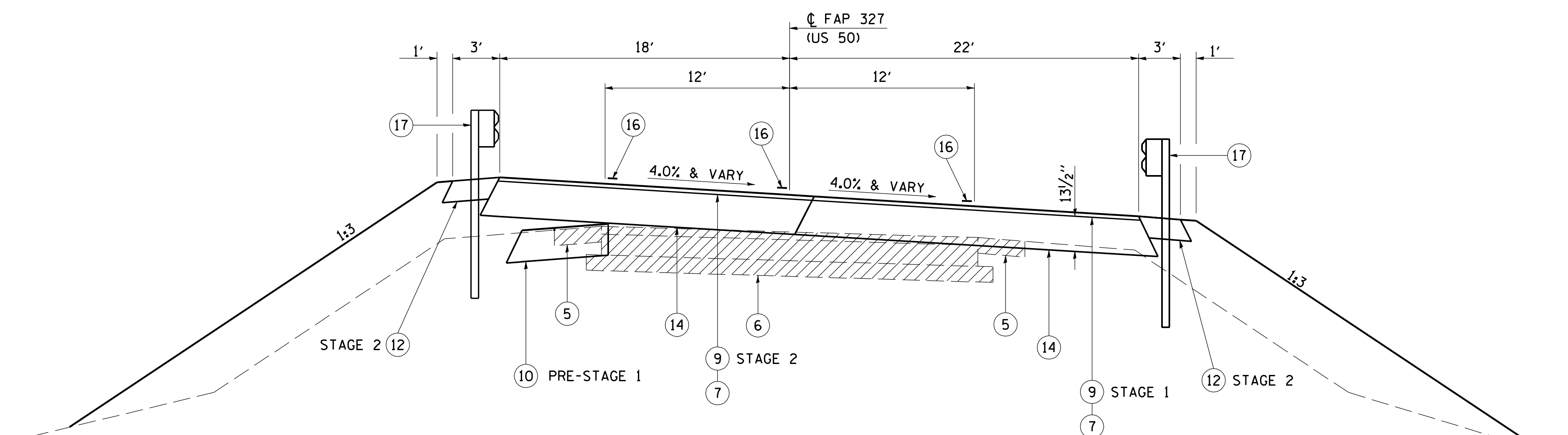
PROPOSED TYPICAL CROSS SECTION

LT STA 605+94.02 TO STA 607+40
RT STA 605+94.02 TO STA 607+47

LEFT SIDE: TRANSITION HMA BASE COURSE FROM
5' AT STA 606+71 TO 3' AT STA 606+94

RIGHT SIDE: TRANSITION HMA BASE COURSE AND HMA SHOULDER FROM
6' AT STA 606+62 TO 5' AT STA 606+98
TRANSITION AGGERGATE SHOULDER FROM 0' AT STA 606+92 TO 3' AT STA 606+98

OMISSIONS
BRIDGE APPROACH PAVEMENT
STA 602+55.57 TO STA 602+85.83
STA 604+13.47 TO STA 604+43.32
BRIDGE
STA 602+85.83 TO STA 604+13.47



PROPOSED TYPICAL CROSS SECTION

STA 602+40.50 TO STA 602+55.57
STA 604+43.32 TO STA 604+57.95

HMA SURFACE REMOVAL VARIABLE DEPTH IN FINAL PHASE TO PROVIDE 1½"
DEEP BUTT JOINT ADJACENT TO BRIDGE APPROACH PAVEMENT
STA 602+25.61 TO STA 602+55.61
STA 604+42.28 TO STA 64+72.28

LEGEND

1 EX HOT-MIX ASPHALT
2 EX PORTLAND CEMENT CONCRETE PAVEMENT 8"
3 EX SUB-BASE GRANULAR MATERIAL 6"
4 EX HOT-MIX ASPHALT SHOULDER
5 PR PAVED SHOULDER REMOVAL
6 PR PAVEMENT REMOVAL
7 PR HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH
8 PR LEVELING BINDER (MACHINE METHOD) N90 F.G.
9 PR HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 1½"
10 PR HOT-MIX ASPHALT BASE COURSE 12"
11 PR HOT-MIX ASPHALT SHOULDERS
12 PR HOT-MIX ASPHALT SHOULDERS 8"
13 PR AGGREGATE SHOULDERS, TYPE B 8"
14 PR PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
15 PR SUB-BASE GRANULAR MATERIAL, TYPE B 6"
16 PR PAINT PAVEMENT MARKING - LINE 4"
17 PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -	
FILE NAME = D774179-sht-typ.dgn	DRAWN - TJD	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 1/6/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
SN 051-0014

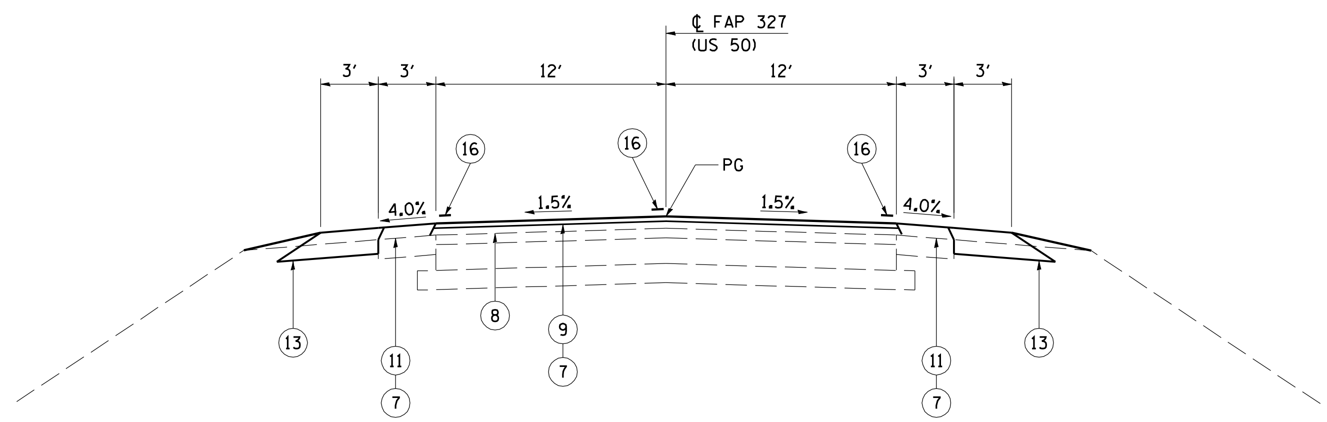
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	110
		CONTRACT NO. 74177		

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

HMA SURFACE REMOVAL VARIABLE DEPTH

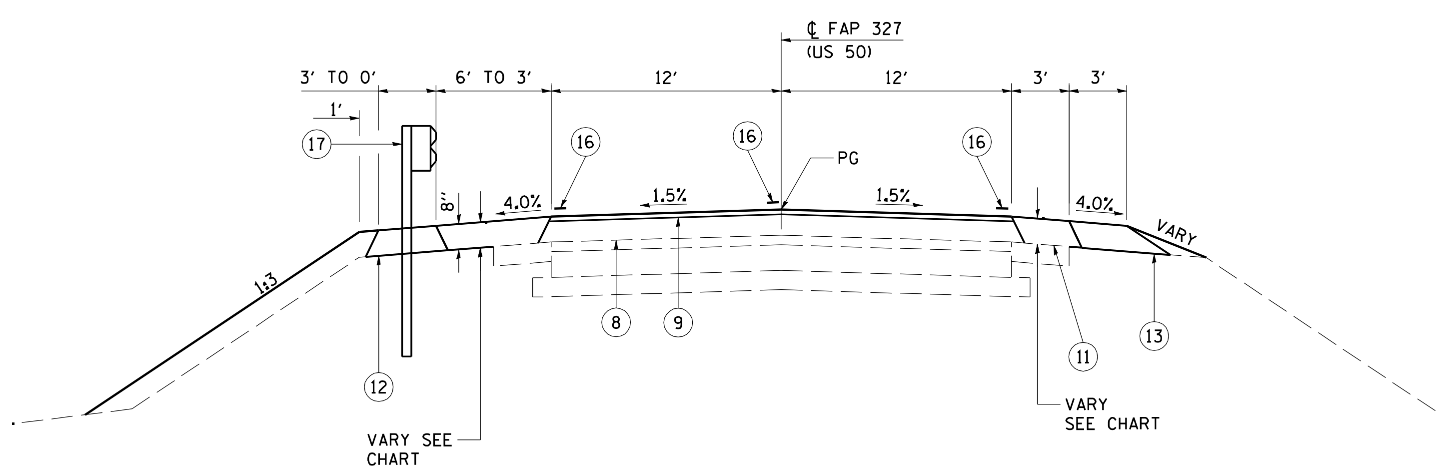
STATION	MILLING DEPTH (FT) LT EDGE OF PVT	CENTERLINE	RT EDGE OF PVT
STA. 597+75.00	0.12	0.12	0.12
STA. 598+00.00	0.08	0.12	0.12
STA. 598+50.00	0.07	0.10	0.12
STA. 599+00.00	0.03	0.07	0.09
STA. 599+32.00	0.00	0.00	0.00
STA. 608+12.00	0.00	0.00	0.00
STA. 608+50.00	0.10	0.00	0.00
STA. 608+82.00	0.12	0.00	0.00
STA. 609+00.00	0.12	0.06	0.05
STA. 609+50.00	0.12	0.11	0.12
STA. 609+75.00	0.12	0.12	0.12



PROPOSED TYPICAL CROSS SECTION
LT STA 607+99 TO STA 609+75

LIMITS OF HMA SURFACE REMOVAL VARIABLE DEPTH
LT STA 608+25 TO STA 609+75
RT STA 608+75 TO STA 609+75

LEFT SIDE: TRANSITION HMA SHOULDER FROM
9' AT STA 607+93.2 TO 3' AT STA 607+99



PROPOSED TYPICAL CROSS SECTION
LT STA 607+40 TO STA 607+99
RT STA 607+47 TO STA 607+99

LEGEND

1. EX HOT-MIX ASPHALT
2. EX PORTLAND CEMENT CONCRETE PAVEMENT 8"
3. EX SUB-BASE GRANULAR MATERIAL 6"
4. EX HOT-MIX ASPHALT SHOULDER
5. PR PAVED SHOULDER REMOVAL
6. PR PAVEMENT REMOVAL
7. PR HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH
8. PR LEVELING BINDER (MACHINE METHOD) N90 F.G.
9. PR HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 1½"
10. PR HOT-MIX ASPHALT BASE COURSE 12"
11. PR HOT-MIX ASPHALT SHOULDERS
12. PR HOT-MIX ASPHALT SHOULDERS 8"
13. PR AGGREGATE SHOULDERS, TYPE B 8"
14. PR PAVEMENT CONNECTOR (HMA) BRIDGE APPROACH SLAB
15. PR SUB-BASE GRANULAR MATERIAL, TYPE B 6"
16. PR PAINT PAVEMENT MARKING - LINE 4"
17. PR STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -	
FILE NAME = D774179-sht-typ.dgn	DRAWN - TJD	REVISED -	
PLOT SCALE = 10.0000 ' / IN.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 1/6/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	111

CONTRACT NO. 74177

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

EARTHWORK

LOCATION		EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
		CU YD	CU YD	CU YD	CU YD
PRE-STAGE 1					
STA 600+12	TO STA 602+94	50	40	0	40
STA 604+18	TO STA 607+40	45	35	0	35
STAGE 1					
STA 599+85	TO STA 602+77	50	40	365	-325
STA 604+14	TO STA 607+47	75	60	415	-355
STAGE 2					
STA 601+00	TO STA 602+94	0	0	290	-290
STA 604+18	TO STA 608+00	5	5	1,145	-1,140
FINAL PHASE					
STA 597+75	TO STA 602+50	40	30	45	-15
STA 604+18	TO STA 609+75	35	30	150	-120
TOTAL		300	240	2,410	-2,170

SHRINKAGE: 25%

PAVED SHOULDER REMOVAL

LOCATION		WIDTH	SQ YD
PRE-STAGE 1			
LT STA 600+12.00	TO STA 602+92.95	3'	93.65
LT STA 604+16.68	TO STA 604+60.97	3'	14.76
RT STA 605+11.68	TO STA 607+40.00	3'	76.11
STAGE 1			
RT STA 600+03.00	TO STA 601+78.50	3'	58.50
RT STA 601+78.50	TO STA 602+77.12	3' TO 8'	60.27
RT STA 604+05.10	TO STA 604+60.97	8.5' TO 4.85'	41.44
RT STA 605+11.68	TO STA 605+40.80	4.9' TO 3'	12.70
RT STA 605+40.80	TO STA 607+47.00	3'	68.73
TOTAL			426.16
USE			426

PAVEMENT REMOVAL

LOCATION		WIDTH	SQ YD
LT STA 602+40.65	TO STA 602+94.30	5'	29.81
LT STA 604+16.80	TO STA 604+58.31	5'	23.06
TOTAL			52.87
USE			53

APPROACH SLAB REMOVAL

LOCATION		WIDTH	SQ YD
STAGE 1			
STA 602+40.65	TO STA 602+87.47	12.20' TO 13.05'	63.11
STA 604+07.44	TO STA 604+58.17	12.20' TO 13.05'	69.14
STAGE 2			
STA 602+40.64	TO STA 602+91.98	11.80' TO 10.95'	60.37
STA 604+12.27	TO STA 604+58.12	11.80' TO 10.95'	53.04
TOTAL			245.66
USE			246

SEEDING AND EROSION CONTROL

LOCATION	SEEDING, CLASS 2	NITROGEN FERTILZER NUTRIENTS	PHOSPHORUS FERTILZER NUTRIENTS	POTASSIUM FERTILZER NUTRIENTS	MULCH, METHOD 2	AGRICULTURAL GROUND LIMESTONE	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER
	ACRE	POUND	POUND	POUND	ACRE	TON	POUND	FOOT
LT STA 597+75.00 TO STA 603+59.00	0.20	18	18	18	0.40	0.4	20	660
LT STA 603+76.00 TO STA 609+75.00	0.22	20	20	20	0.44	0.4	22	605
RT STA 597+75.00 TO STA 603+22.00	0.22	20	20	20	0.44	0.4	22	595
RT STA 603+42.00 TO STA 609+75.00	0.24	22	22	22	0.48	0.5	24	660
TOTAL	0.88	79	79	79	1.76	1.8	88	2,520
USE	1.00	80	80	80	2.00	2.0		

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

LOCATION	WIDTH	SQ YD
FINAL PHASE		
LT STA 597+75.00 TO STA 598+75.00	15'	166.67
RT STA 597+75.00 TO STA 599+75.00	15'	333.33
LT STA 608+25.00 TO STA 609+75.00	15'	250.00
RT STA 608+75.00 TO STA 609+75.00	15'	166.67
TOTAL		916.67
USE		917

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

LOCATION	WIDTH	SQ YD
STAGE 1		
RT STA 601+55.60 TO STA 601+67.60	16.65'	11.10
RT STA 605+82.07 TO STA 605+94.07	16.65'	11.10
STAGE 2		
RT STA 601+55.60 TO STA 601+67.60	18.35'	12.23
RT STA 605+82.07 TO STA 605+94.07	18.35'	12.23
FINAL PHASE		
STA 602+43.61 TO STA 602+55.61	40.00'	53.33
STA 604+42.28 TO STA 604+54.28	40.00'	53.33
TOTAL		153.32
USE		153

TEMPORARY RAMP

LOCATION	WIDTH	SQ YD
STA 597+75.00 TO STA 597+80.00	24'	13.33
STA 602+50.61 TO STA 602+55.61	24'	13.33
STA 604+43.36 TO STA 604+48.36	24'	13.33
STA 609+70.00 TO STA 609+75.00	24'	13.33
TOTAL		53.32
USE		53

HOT-MIX ASPHALT BASE COURSE, 12"

LOCATION	WIDTH (FT)	SQ YD
PRE-STAGE 1		
LT STA 600+12.00 TO STA 600+57.00	3'	15.00
LT STA 600+57.00 TO STA 600+78.60	3' TO 5'	9.60
LT STA 600+78.60 TO STA 602+94.30	5'	119.84
LT STA 604+16.80 TO STA 604+60.97	5'	24.54
LT STA 605+11.68 TO STA 606+71.00	5'	88.52
LT STA 606+71.00 TO STA 606+94.00	5' TO 3'	10.23
LT STA 606+94.00 TO STA 607+40.00	3'	15.34
STAGE 1		
RT STA 600+03.00 TO STA 600+48.60	3'	15.20
RT STA 600+48.60 TO STA 600+89.60	3' TO 6'	20.50
RT STA 600+89.60 TO STA 602+40.50	6'	100.61
RT STA 604+57.95 TO STA 604+60.97	6'	2.02
RT STA 605+11.68 TO STA 606+62.00	6'	100.22
RT STA 606+62.00 TO STA 606+98.00	6' TO 3'	18.00
RT STA 606+98.00 TO STA 607+47.00	6'	32.67
TOTAL		572.29
USE		572

PAVEMENT CONNECTOR

LOCATION	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB		SUBBASE GRANULAR MATERIAL, TYPE B 6"	
	WIDTH (FT)	SQ YD	WIDTH (FT)	SQ YD
STAGE 1				
STA 602+40.65 TO STA 602+54.85	20.62	23.13	22.62	23.76
STA 604+33.44 TO STA 604+58.19	20.81	44.37	22.81	47.01
STAGE 2				
STA 602+40.65 TO STA 602+63.84	20.18	42.23	22.18	44.89
STA 604+41.58 TO STA 604+58.19	20.09	26.25	22.09	27.06
TOTAL		135.98		142.72
USE		136		143

TOPSOIL

LOCATION	TOPSOIL EXCAVATION	TOPSOIL EXCAVATION ADJUSTED FOR SHRINKAGE	TOPSOIL PLACEMENT	TOPSOIL BALANCE WASTE (+) OR SHORTAGE (-)	TOPSOIL FURNISH AND PLACE 4"
	CU YD	CU YD	CU YD	CU YD	SQ YD
LT STA 599+00.00 TO STA 602+95.00	185	139	155	-16	101
RT STA 604+20.00 TO STA 609+75.00	185	140	135	5	
TOTAL	370	279	290	-11	101

NOTES:

1. QUANTITY OF TOPSOIL EXCAVATION WILL BE PAID FOR AS "TOPSOIL EXCAVATION AND PLACEMENT"
2. TOPSOIL AVAILABLE FOR TOPSOIL PLACEMENT = TOPSOIL EXCAVATION X 0.75

BITUMINOUS MATERIALS (TACK COAT)

LOCATION		WIDTH (FT)	POUND
STAGE 1			
PAVEMENT AND SHOULDER			
RT STA 601+55.60	TO STA 602+40.50	16.60	35.23
RT STA 602+40.50	TO STA 602+54.96	20.55	7.43
RT STA 604+34.10	TO STA 604+57.95	20.55	12.25
RT STA 604+58.61	TO STA 604+60.97	16.60	0.98
RT STA 605+11.68	TO STA 605+94.00	16.60	34.16
STAGE 2			
PAVEMENT			
LT STA 601+55.60	TO STA 602+40.65	13.40	28.49
LT STA 602+40.65	TO STA 602+63.65	13.40	7.71
LT STA 604+41.58	TO STA 604+58.19	13.40	5.56
LT STA 604+58.19	TO STA 604+60.97	13.40	0.93
LT STA 605+11.68	TO STA 605+94.00	13.40	27.58
SHOULDER			
LT STA 601+55.60	TO STA 602+63.65	5.00	13.51
LT STA 604+41.58	TO STA 604+60.97	5.00	2.42
LT STA 605+11.68	TO STA 605+94.00	5.00	10.29
FINAL PHASE			
PAVEMENT			
STA 597+75.00	TO STA 602+40.65	24.00	279.39
STA 604+58.61	TO STA 604+60.97	24.00	1.42
STA 605+11.68	TO STA 609+75.00	24.00	277.99
SHOULDER			
LT STA 597+75.00	TO STA 600+57.00	3.00	21.15
LT STA 600+57.00	TO STA 600+78.60	3.00 TO 5.00'	1.62
LT STA 600+78.60	TO STA 601+39.22	5.00	7.58
LT STA 601+39.22	TO STA 601+41.40	5.00 TO 6.00'	0.27
LT STA 601+41.40	TO STA 602+40.63	6.00	14.88
LT STA 604+58.61	TO STA 604+60.97	5.00	0.30
LT STA 605+11.68	TO STA 607+99.13	5.00	35.93
LT STA 607+99.13	TO STA 608+05.05	5.00 TO 3.00'	0.74
LT STA 608+05.05	TO STA 609+75.00	3.00	12.75
RT STA 597+75.00	TO STA 599+70.45	3.00	14.66
RT STA 599+70.45	TO STA 599+84.87	3.00 TO 10.00'	1.08
RT STA 599+84.87	TO STA 602+40.65	10.00	63.94
LT STA 604+58.61	TO STA 604+60.97	10.00	0.59
LT STA 605+11.68	TO STA 605+98.97	10.00	21.82
LT STA 605+98.97	TO STA 606+10.95	10.00 TO 6.00'	2.99
LT STA 606+10.95	TO STA 606+62.00	6.00	7.66
RT STA 606+62.00	TO STA 606+98.00	6.00 TO 3.00'	5.40
RT STA 606+98.00	TO STA 609+75.00	3.00	20.78
TOTAL			979.48
USE			979

LEVELING BINDER (MACHINE METHOD), N90 F.G.

LOCATION		WIDTH	TON
STAGE 1			
RT STA 601+55.54	TO STA 602+40.63	16.60	27.82
RT STA 604+58.10	TO STA 605+94.07	16.60	34.87
STAGE 2			
LT STA 601+55.54	TO STA 602+40.63	13.40	44.79
LT STA 604+58.10	TO STA 605+94.07	13.40	39.09
FINAL PHASE			
STA 597+75.00	TO STA 602+40.63	24.00	301.06
STA 604+58.10	TO STA 609+75.00	24.00	344.51
TOTAL			792.14
USE			792

HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90

LOCATION		WIDTH (FT)	TON
STAGE 1			
RT STA 601+55.60	TO STA 602+40.65	16.6	13.18
RT STA 602+40.65	TO STA 602+54.85	20.55	2.72
RT STA 604+33.31	TO STA 604+58.19	20.55	4.77
RT STA 604+58.61	TO STA 604+60.97	16.6	0.37
RT STA 605+11.68	TO STA 605+94.00	16.6	12.75
STAGE 2			
PAVEMENT			
LT STA 601+55.60	TO STA 602+40.65	13.4	10.64
LT STA 602+40.65	TO STA 602+63.65	13.4	2.88
LT STA 604+41.58	TO STA 604+58.19	13.4	2.08
LT STA 604+58.61	TO STA 604+60.97	13.4	0.30
LT STA 605+11.68	TO STA 605+94.00	13.4	10.30
FINAL PHASE			
STA 597+75.00	TO STA 602+55.61	24	107.66
STA 604+43.36	TO STA 604+60.97	24	3.94
STA 605+11.68	TO STA 609+75.00	24	103.78
TOTAL			275.37
USE			275

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

LOCATION	EACH
STA 600+37.50	1
STA 607+12.80	1
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STA 600+37.30	1
STA 607+12.75	1
TOTAL	2

HOT-MIX ASPHALT SHOULDERS

LOCATION	ENDAREAS		QTY	
	LT	RT	LT	RT
	SQ FT	SQ FT	TON	TON
597+75.00	0.380	0.380		
598+00.00	0.895	0.380	1.19	0.71
598+50.00	0.799	0.380	3.16	1.42
599+00.00	0.962	0.380	3.29	1.42
599+50.00	1.907	0.380	5.36	1.42
600+00.00	1.976	5.159	7.25	10.34
600+50.00	1.976	5.468	7.38	19.84
601+00.00	3.307	5.702	9.86	20.85
601+50.00	6.694	6.15	18.67	22.12
602+00.00	7.827	5.408	27.11	21.57
602+40.63	7.827	5.408	23.74	16.41
BRIDGE AND APPROACH PAVEMENT OMISSION				
604+58.10	6.153	5.507		
605+50.00	6.153	5.507	42.22	37.79
606+00.00	5.041	6.594	20.9	22.59
606+50.00	4.176	3.985	17.21	19.75
607+00.00	3.659	1.843	14.63	10.88
607+50.00	3.034	2.088	12.49	7.34
608+00.00	2.469	1.549	10.27	6.79
608+50.00	0.367	0.764	5.29	4.32
609+00.00	0.367	0.33	1.37	2.04
609+50.00	0.367	0.367	1.37	1.3
609+75.00	0.367	0.367	0.69	0.69
SUBTOTAL			233.45	229.59
TOTAL				463.04
USE				463

HOT-MIX ASPHALT SHOULDERS, 8"

LOCATION	WIDTH (FT)	SQ YD
STAGE 1		
RT STA 599+74.25 TO STA 599+94.35	0' TO 3'	3.35
RT STA 599+94.35 TO STA 602+65.90	3'	90.52
RT STA 604+14.40 TO STA 604+60.97	3'	15.53
RT STA 605+11.68 TO STA 605+85.85	3'	24.73
RT STA 605+85.85 TO STA 605+99.85	3' TO 0'	2.34
STAGE 2		
LT STA 601+45.00 TO STA 601+51.00	0' TO 3'	1.00
LT STA 601+51.00 TO STA 602+83.30	3'	44.11
LT STA 604+30.90 TO STA 604+60.97	3'	10.03
RT STA 605+11.68 TO STA 607+89.15	3'	92.50
LT STA 607+89.15 TO STA 608+01.00	3' TO 0'	1.98
TOTAL		286.09
USE		286

AGGREGATE SHOULDERS, TYPE B 8"

LOCATION	WIDTH (FT)	SQ YD
FINAL PHASE		
LT STA 597+75.00 TO STA 600+57.00	3'	94.00
LT STA 600+57.00 TO STA 600+78.60	3' TO 1'	4.80
LT STA 600+78.60 TO STA 601+39.20	1'	6.74
LT STA 601+39.20 TO STA 601+41.23	1' TO 0'	0.12
LT STA 607+99.13 TO STA 608+05.05	0' TO 3'	0.99
LT STA 608+05.05 TO STA 609+75.00	3'	56.65
RT STA 597+75.00 TO STA 599+70.45	3'	65.15
RT STA 599+70.45 TO STA 599+76.44	3' TO 0'	1.00
RT STA 606+62.00 TO STA 606+98.00	0' TO 3'	6.00
RT STA 606+98.00 TO STA 609+75.00	3'	92.34
TOTAL		327.79
USE		328

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS

LOCATION	FOOT
LT STA 602+09.12 TO STA 602+46.47	37.5
LT STA 605+18.38 TO STA 607+30.88	212.5
RT STA 600+52.91 TO STA 602+28.73	175.0
RT STA 604+51.84 TO STA 605+27.59	25.0
TOTAL	450.0

TRAFFIC BARRIER TERMINAL, TYPE 6

LOCATION	EACH
LT STA 602+46.47 TO STA 602+83.25	1
LT STA 604+30.95 TO STA 605+18.38	1
RT STA 602+28.73 TO STA 602+65.94	1
RT STA 604+14.85 TO STA 604+51.84	1
TOTAL	4

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION	EACH
LT STA 601+59.32 TO STA 602+09.12	1
LT STA 607+30.88 TO STA 607+80.88	1
RT STA 600+02.68 TO STA 600+52.91	1
RT STA 605+27.59 TO STA 605+77.59	1
TOTAL	4

GUARDRAIL REMOVAL

LOCATION	FOOT
LT STA 601+55.45 TO STA 602+94.86	140
LT STA 604+18.90 TO STA 606+83.60	215
RT STA 600+62.80 TO STA 602+78.30	215
RT STA 604+03.10 TO STA 605+93.30	140
TOTAL	710

GUARDRAIL REFLECTORS, TYPE A

LOCATION	EACH
LT STA 602+09.12 TO STA 602+86.09	1
LT STA 604+13.51 TO STA 604+60.97	1
LT STA 605+11.68 TO STA 607+37.20	3
RT STA 600+52.91 TO STA 602+86.09	3
RT STA 604+13.51 TO STA 604+60.97	1
RT STA 605+11.68 TO STA 605+33.95	1
TOTAL	10

TERMINAL MARKER - DIRECT APPLIED

LOCATION	EACH
LT STA 601+59.32	1
LT STA 607+80.88	1
RT STA 600+02.68	1
RT STA 605+77.59	1
TOTAL	4

TEMPORARY CONCRETE BARRIER

LOCATION			FOOT
STAGE 1			
STA 600+37.50	TO STA 601+37.30	12:1 TAPER	100.0
STA 601+37.30	TO STA 604+60.97	TANGENT	325.0
STA 605+11.68	TO STA 606+12.80	TANGENT	100.0
STA 606+12.80	TO STA 607+12.80	12:1 TAPER	100.0
TOTAL			625.0

RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION			FOOT
STA 600+37.30	TO STA 601+37.10	12:1 TAPER	100.0
STA 601+37.10	TO STA 604+60.97	TANGENT	325.0
STA 605+11.68	TO STA 606+12.95	TANGENT	100.0
STA 606+12.95	TO STA 607+12.75	12:1 TAPER	100.0
TOTAL			625.0

SHORT-TERM PAVEMENT MARKING

LOCATION		FOOT
OPEN ALL LANES FOR FINAL PHASE		
CENTERLINE		
STA 598+40.00	TO STA 604+60.97	64
STA 605+11.68	TO STA 608+74.00	40
SHOULDER		
LT STA 601+47.10	TO STA 602+61.00	8
LT STA 604+48.00	TO STA 604+60.97	4
LT STA 605+11.68	TO STA 607+93.20	12
RT STA 599+90.50	TO STA 604+60.97	20
RT STA 605+11.68	TO STA 605+89.95	4
HMA SURFACE REMOVAL		
CENTERLINE		
STA 597+75.00	TO STA 599+75.00	20
STA 602+40.54	TO STA 602+55.54	4
STA 604+42.28	TO STA 604+57.28	4
STA 608+25.00	TO STA 609+75.00	16
PRIME COAT		
CENTERLINE		
STA 597+75.00	TO STA 602+55.61	52
STA 604+42.28	TO STA 604+60.97	4
STA 605+11.68	TO STA 609+75.00	48
SHOULDER		
LT STA 601+47.10	TO STA 602+61.00	8
LT STA 604+48.00	TO STA 604+60.97	4
LT STA 605+11.68	TO STA 607+93.20	12
RT STA 599+90.50	TO STA 604+60.97	20
RT STA 605+11.68	TO STA 605+89.95	4
HMA LEVELING BINDER		
CENTERLINE		
STA 598+75.00	TO STA 602+55.61	40
STA 604+42.28	TO STA 604+60.97	4
STA 605+11.68	TO STA 608+75.00	40
HMA SURFACE COURSE		
CENTERLINE		
STA 597+75.00	TO STA 602+55.61	52
STA 604+42.28	TO STA 604+60.97	4
STA 605+11.68	TO STA 609+75.00	48
HMA SHOULDER		
SHOULDER		
LT STA 601+47.10	TO STA 602+61.00	8
LT STA 604+48.00	TO STA 604+60.97	4
LT STA 605+11.68	TO STA 607+93.20	12
RT STA 599+90.50	TO STA 604+60.97	20
RT STA 605+11.68	TO STA 605+89.95	4
TOTAL		584

SHORT TERM PAVEMENT MARKING REMOVAL

LOCATION		SQ FT
CENTERLINE		
STA 597+75.00	TO STA 602+55.61	17.33
STA 604+42.28	TO STA 604+60.97	1.33
STA 605+11.68	TO STA 609+75.00	16.00
SHOULDER		
LT STA 601+47.10	TO STA 602+61.00	2.67
LT STA 604+48.00	TO STA 604+60.97	1.33
LT STA 605+11.68	TO STA 607+93.20	4.00
RT STA 599+90.50	TO STA 604+60.97	6.67
RT STA 605+11.68	TO STA 605+89.95	1.33
TOTAL		50.66
USE		51

PAINT PAVEMENT MARKING - LINE 4"

LOCATION		FOOT
YELLOW CENTERLINE SKIP DASH		
STA 597+75.00	TO STA 602+85.83	130
STA 604+13.47	TO STA 604+60.97	20
STA 605+11.68	TO STA 609+75.00	120
SOLID WHITE EDGE LINE		
LT STA 597+75.00	TO STA 602+85.83	511
LT STA 604+13.47	TO STA 604+60.97	48
LT STA 605+11.68	TO STA 609+75.00	464
RT STA 597+75.00	TO STA 602+85.83	511
RT STA 604+13.47	TO STA 604+60.97	48
RT STA 605+11.68	TO STA 609+75.00	464
TOTAL		2,316

PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"

LOCATION		FOOT
YELLOW CENTERLINE SKIP DASH		
STA 602+85.83	TO STA 604+13.47	40
SOLID WHITE EDGE LINE		
LT STA 602+85.83	TO STA 604+13.47	128
RT STA 602+85.83	TO STA 604+13.47	128
TOTAL		296

GROOVING FOR RECESSED PAVEMENT MARKING 5"

LOCATION		FOOT
YELLOW CENTERLINE SKIP DASH		
STA 602+85.83	TO STA 604+13.47	40
SOLID WHITE EDGE LINE		
LT STA 602+85.83	TO STA 604+13.47	128
RT STA 602+85.83	TO STA 604+13.47	128
TOTAL		296

TEMPORARY PAVEMENT MARKING

LOCATION		TEMP PVT MK - LINE 4"	TEMPORARY PAVEMENT MARKING REMOVAL
		FOOT	SQ FT
STAGE 1			
SOLID WHITE EDGE LINE			
RT STA 598+50.60	TO LT STA 604+60.97	611	271.56
LT STA 605+11.68	TO RT STA 608+18.45	307	136.44
LT STA 600+32.35	TO LT STA 604+60.97	429	190.67
LT STA 605+11.68	TO LT STA 607+19.65	208	92.44
STAGE 2			
SOLID WHITE EDGE LINE			
LT STA 598+04.45	TO RT STA 604+60.97	657	292.00
RT STA 605+11.68	TO LT STA 608+64.00	353	156.89
RT STA 600+23.45	TO RT STA 604+60.97	438	194.67
TOTAL		3,219	
USE			

PAVEMENT MARKING REMOVAL - WATER BLASTING

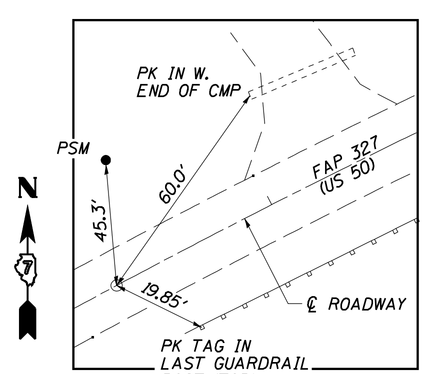
LOCATION		SQ FT
STAGE 1		
SKIP DASH		
STA 598+40.00	TO STA 600+50.00	20.00
STA 607+00.00	TO STA 608+74.00	16.67
EDGE LINE		
LT STA 600+32.35	TO STA 604+60.97	142.87
LT STA 605+11.68	TO STA 607+19.65	69.32
STAGE 2		
EDGE LINE		
RT STA 600+23.45	TO STA 601+55.60	44.05
TOTAL		2,316

RAISED REFLECTIVE PAVEMENT MARKER

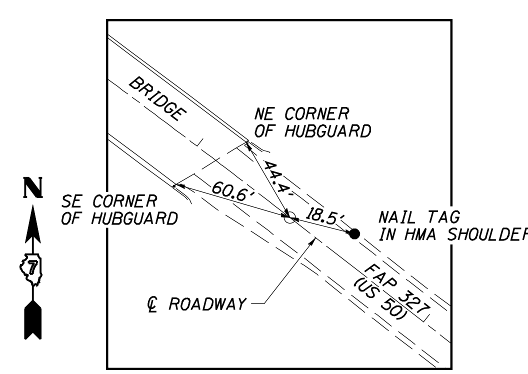
LOCATION		EACH
STA 597+75.00	TO STA 602+86.09	7

FAP 327 (US 50)			
CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
P.C.	550+08.96	754785.9699	1166831.2113
P.I.	580+83.00	756233.1450	1169543.2963
P.T.	605+11.68 R 2	754342.7664	1171967.3817
P.O.T	623+59.05 R 2	753206.7285	1173424.1548

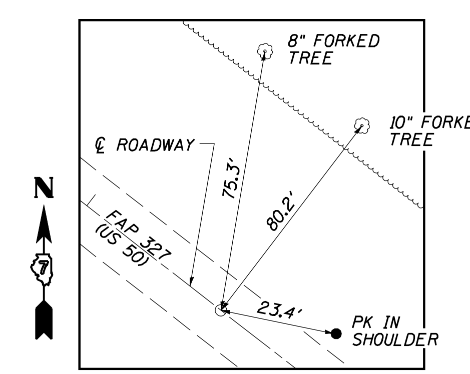
EXIST. CURVE C1A-1
PI STA. = 580+83.00
Δ = 66° 01′ 58″ (RT)
D = 1° 12′ 40″
R = 4,730.65′
T = 3,074.04′
L = 5,452.02′
E = 911.05′
SE = 4.0%
T.R. = 45′
L_1 = 12′
P.C. STA. = 550+08.96
P.T. STA. = 604+60.97
REMOVE SE STA 605+21.37 TO STA 606+37.08



P.C. STA 550+08.96
PK NAIL (SET)



P.T. STA 604+60.97 BK =
STA 605+11.68 AH



P.O.T. STA 623+59.05
PK NAIL (SET)

BM 805
CHISELED "□" N.E. CORNER OF BRIDGE
ELEV. 435.13

BM 804
CHISELED "□" S.W. CORNER OF BRIDGE
ELEV. 436.24

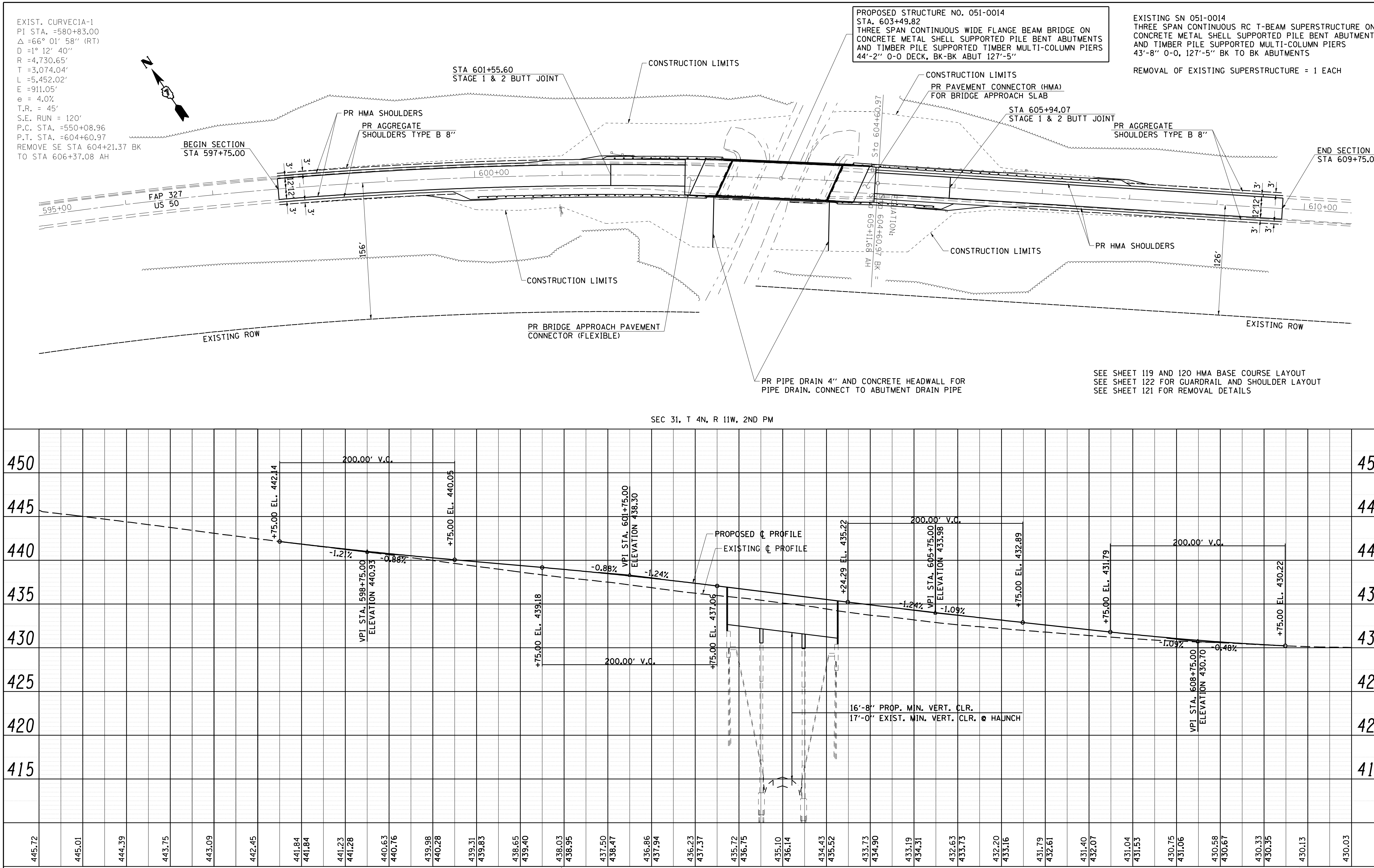
CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-ali.dgn	DRAWN - TJD	REVISED -
	PLOT SCALE = 400.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 2/17/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, CROSS TIES AND BENCHMARKS
SN 051–0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	117
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
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	PLOT SCALE = 100.000 ' / IN.	CHECKED - MDC	REVISED -
	PLOT DATE = 10/18/2018	DATE - 9/17/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

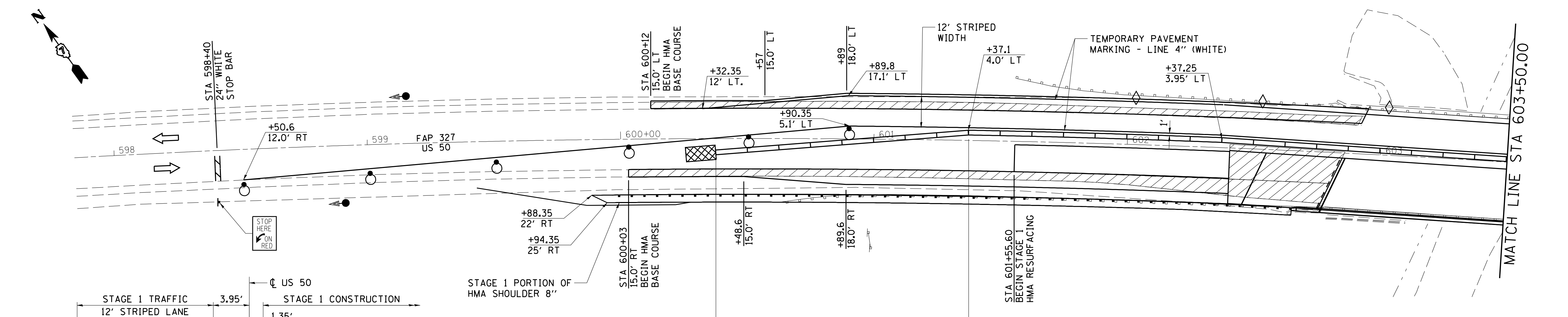
PLAN & PROFILE US 50
SN 051-0014

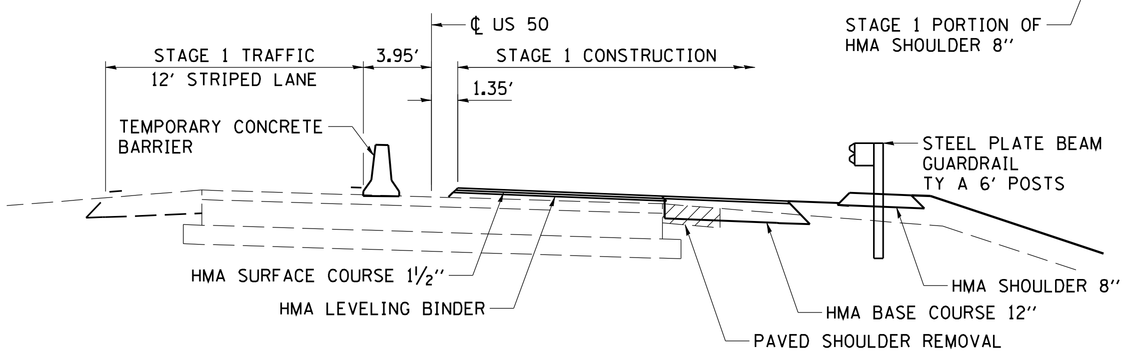
SCALE: | SHEET NO. OF SHEETS | STA. 597+75.00 TO STA. 609+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	118

CONTRACT NO. 74177

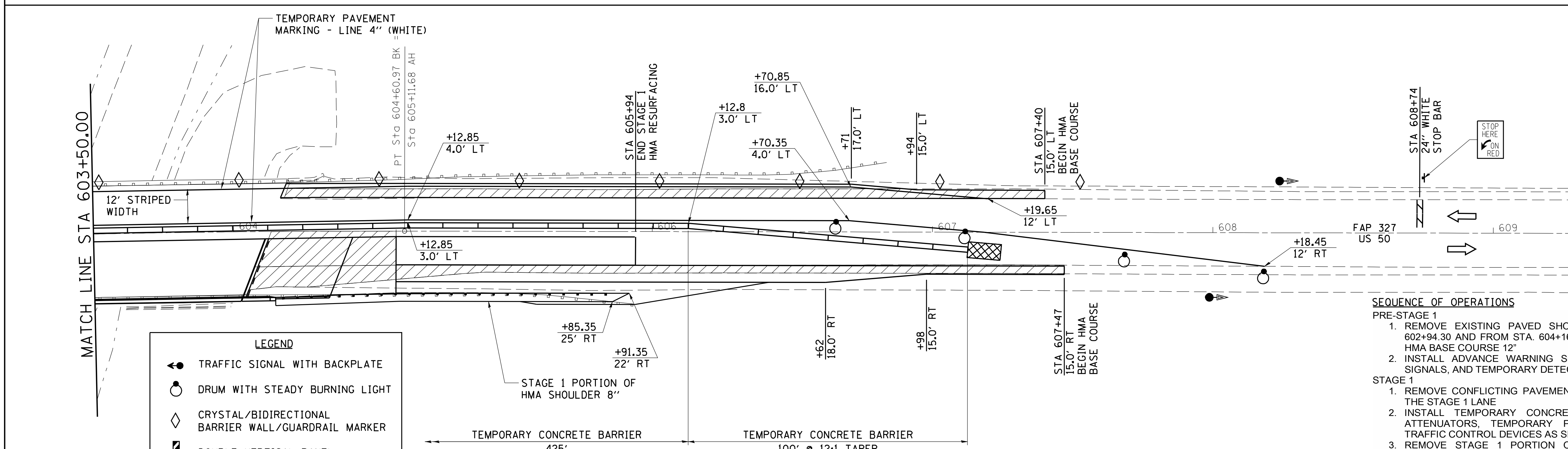
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT





APPROACH ROADWAY TYPICAL CROSS SECTION

PLACE TEMPORARY CONCRETE BARRIER AND TEMPORARY PAVEMENT MARKING PARALLEL TO CENTERLINE FROM STA 601+37.3 TO STA 602+37.25 AND FROM STA 605+12.8 TO STA 606+12.8. PLACE PARALLEL TO BRIDGE CHORD STA 602+37.25 TO STA 605+12.8.



LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- CRYSTAL/BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
- DOUBLE VERTICAL PANEL
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- HMA BASE COURSE

SEQUENCE OF OPERATIONS

PRE-STAGE 1

1. REMOVE EXISTING PAVED SHOULDER LEFT STA. 600+12 TO STA. 602+94.30 AND FROM STA. 604+16.80 TO STA. 607+40 AND CONSTRUCT HMA BASE COURSE 12"
2. INSTALL ADVANCE WARNING SIGNS, TEMPORARY BRIDGE TRAFFIC SIGNALS, AND TEMPORARY DETECTOR LOOPS

STAGE 1

1. REMOVE CONFLICTING PAVEMENT MARKINGS AND PLACE TRAFFIC IN THE STAGE 1 LANE
2. INSTALL TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES AS SHOWN IN THE PLANS
3. REMOVE STAGE 1 PORTION OF THE EXISTING STRUCTURE AND PAVEMENT AND CONSTRUCT STAGE 1 PORTION OF THE PROPOSED BRIDGE AND APPROACH PAVEMENTS.
4. REMOVE EXISTING PAVED SHOULDER RIGHT STA. 600+03 TO STA. 602+82 AND FROM STA. 604+05 TO STA. 607+47 AND CONSTRUCT BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) AND HMA BASE COURSE 12"
5. CONSTRUCT PORTION OF PAVED SHOULDER AT GUARDRAIL AND TERMINALS AND INSTALL STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS.
6. CONSTRUCT STAGE 1 HMA RESURFACING AT APPROACH SLABS.

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-stage1.dgn	DRAWN - SJS	REVISED -
	PLOT SCALE = 40.0000 '/ IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 10/20/2010	REVISED -

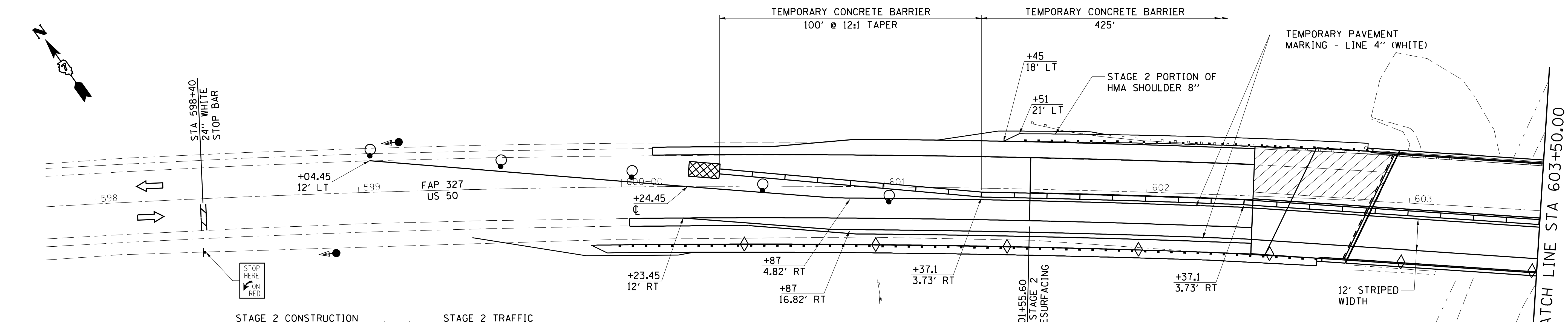
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

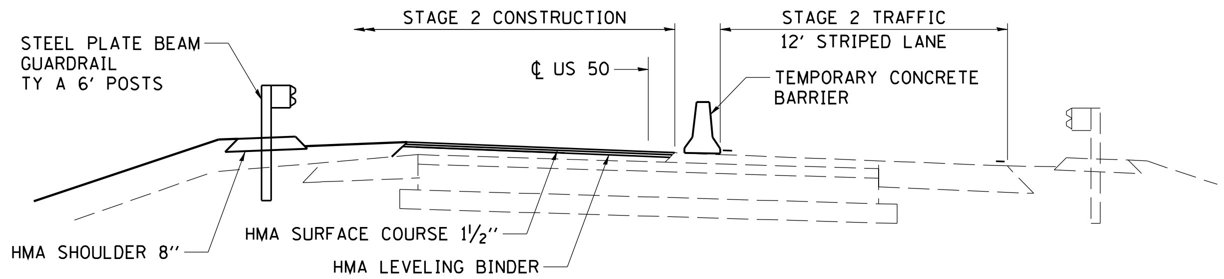
STAGE 1 TRAFFIC CONTROL AND PROTECTION
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	119
		CONTRACT NO. 74177		

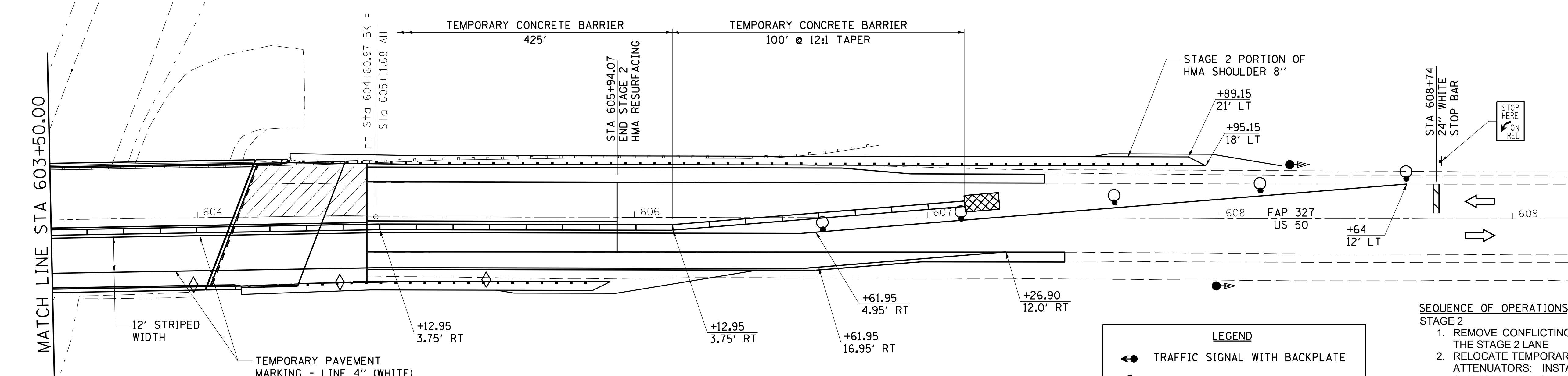
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT





PLACE TEMPORARY CONCRETE BARRIER AND TEMPORARY PAVEMENT MARKING PARALLEL TO CENTERLINE STA 601+37.1 TO STA 602+37.1 AND FROM STA 605+13 TO STA 606+13. PLACE PARALLEL TO BRIDGE CHORD STA 602+37.1 TO STA 605+13.

APPROACH ROADWAY TYPICAL CROSS SECTION



LEGEND

- TRAFFIC SIGNAL WITH BACKPLATE
- DRUM WITH STEADY BURNING LIGHT
- CRYSTAL/BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
- DOUBLE VERTICAL PANEL
- TYPE III BARRICADE
- IMPACT ATTENUATOR
- HMA BASE COURSE

SEQUENCE OF OPERATIONS

STAGE 2

1. REMOVE CONFLICTING PAVEMENT MARKINGS AND PLACE TRAFFIC IN THE STAGE 2 LANE
2. RELOCATE TEMPORARY CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATORS: INSTALL TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES AS SHOWN IN THE PLANS
3. REMOVE STAGE 2 PORTION OF THE EXISTING STRUCTURE AND PAVEMENT AND CONSTRUCT STAGE 2 PORTION OF THE PROPOSED BRIDGE AND APPROACH PAVEMENTS.
4. CONSTRUCT EARTHWORK ALONG NORTH SIDE AND INSTALL STEEL PLATE BEAM GUARDRAIL AND TRAFFIC BARRIER TERMINALS.
5. CONSTRUCT STAGE 2 HMA RESURFACING AT APPROACH SLABS.

STAGE 3

1. REMOVE TRAFFIC CONTROL DEVICES, INSTALL SHORT-TERM PAVEMENT MARKINGS, AND PLACE TRAFFIC IN PERMANENT LANES
2. CONSTRUCT HMA BINDER AND SURFACE COURSE; INSTALL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS.

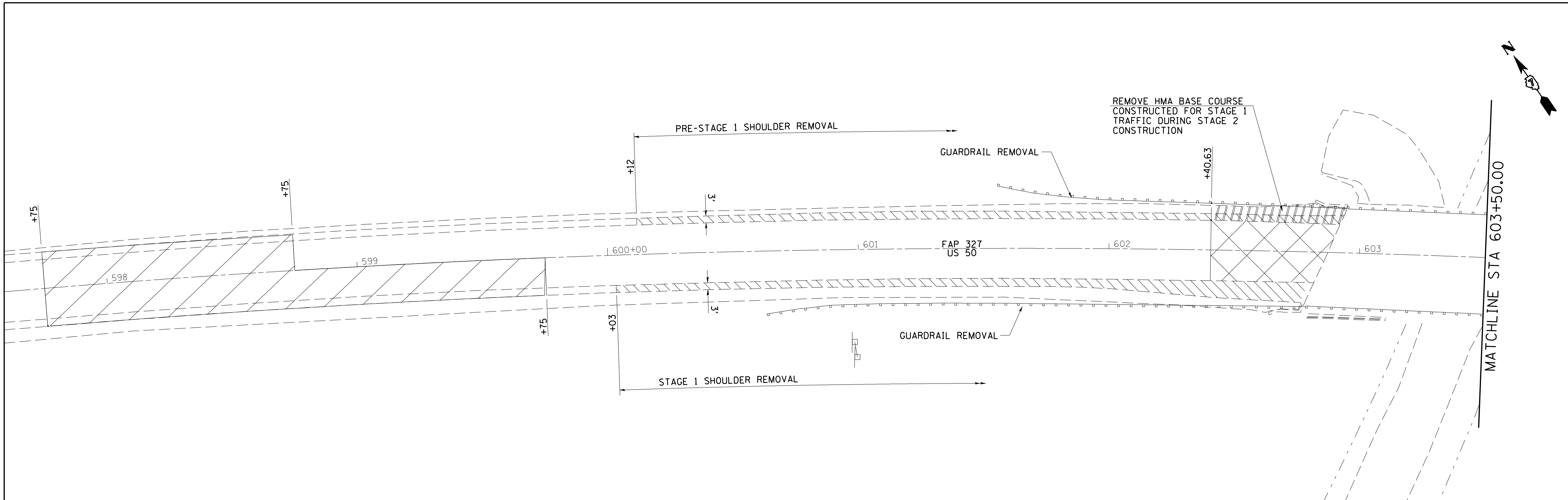
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-stage2.dgn	DRAWN - SJS	REVISED -
	PLOT SCALE = 40.0000 ' / IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 10/20/2010	REVISED -

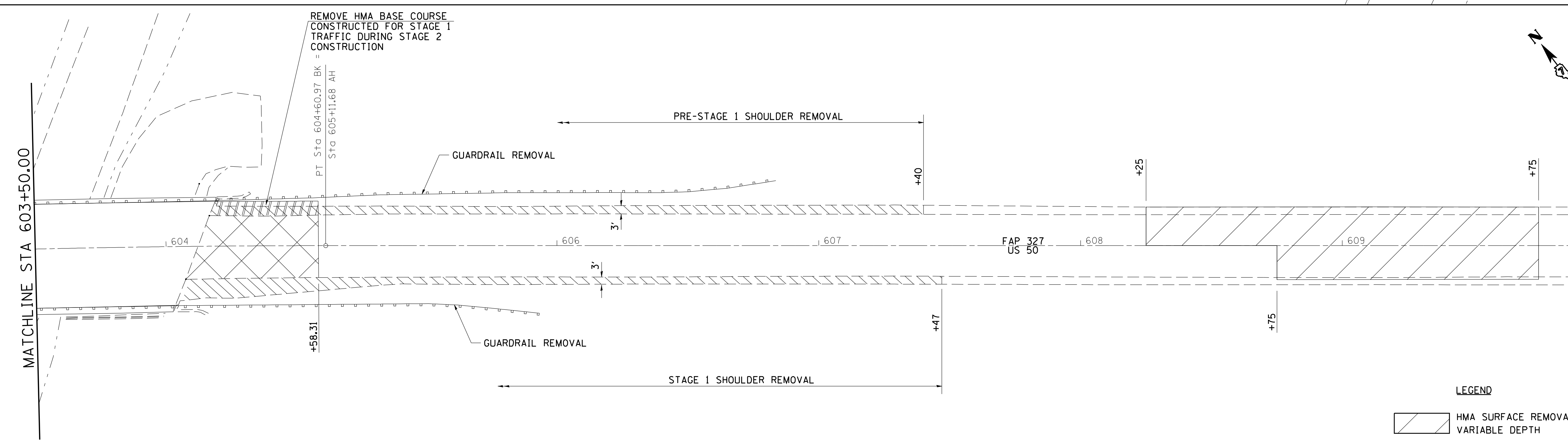
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 TRAFFIC CONTROL AND PROTECTION
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	120
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





LEGEND

HMA SURFACE REMOVAL VARIABLE DEPTH

APPROACH SLAB REMOVAL

PAVED SHOULDER REMOVAL

PAVEMENT REMOVAL

SEE PAVEMENT CONNECTOR (HMA)
DETAIL FOR ADDITIONAL HMA SURFACE REMOVAL
VARIABLE DEPTH LIMITS

CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-rem.dgn	DRAWN - TJD	REVISED -
	PLOT SCALE = 40.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 1/6/2011	REVISED -

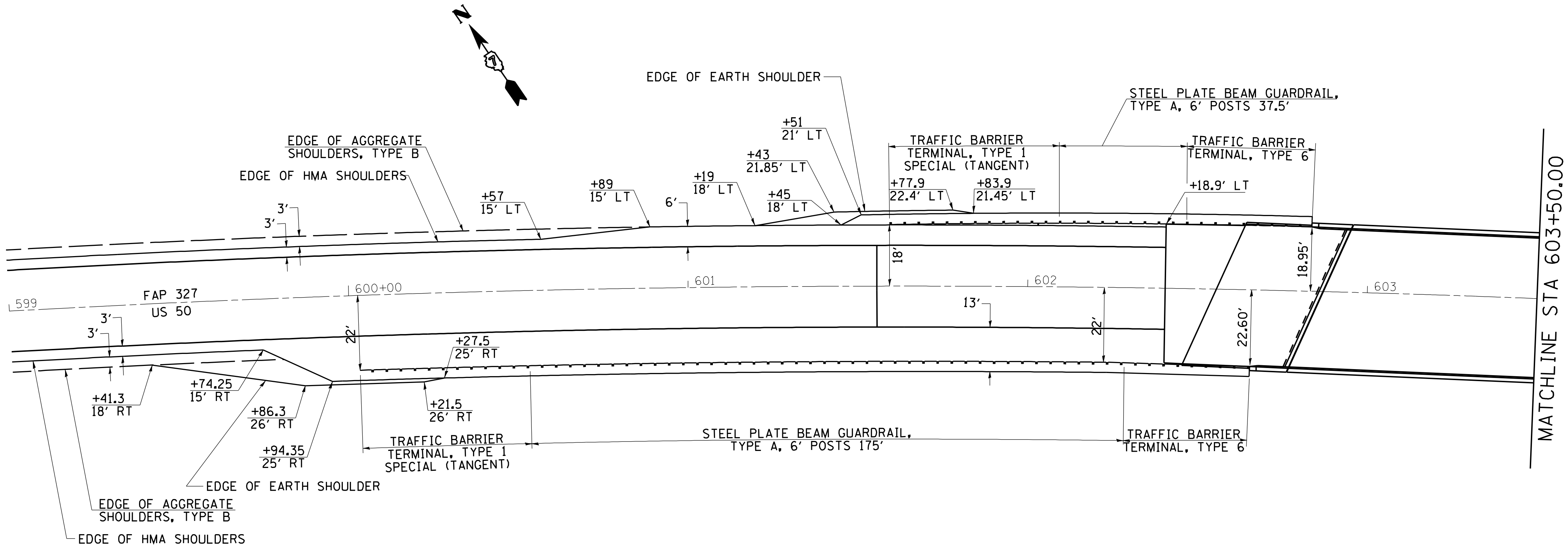
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

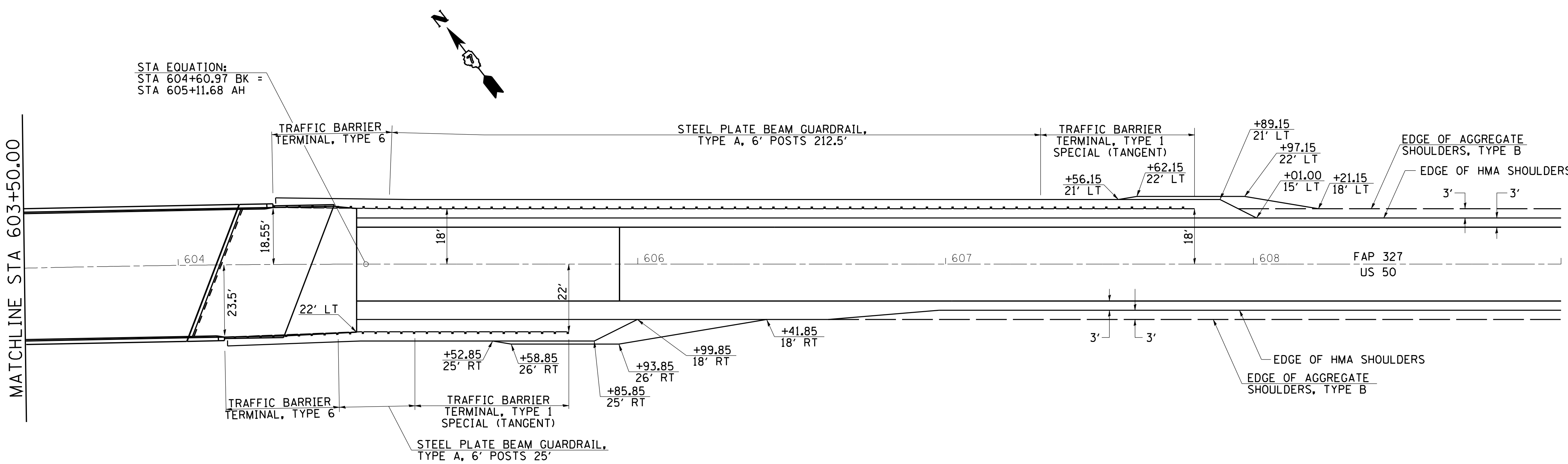
REMOVAL PLAN
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	121
		CONTRACT NO. 74177		

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





CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
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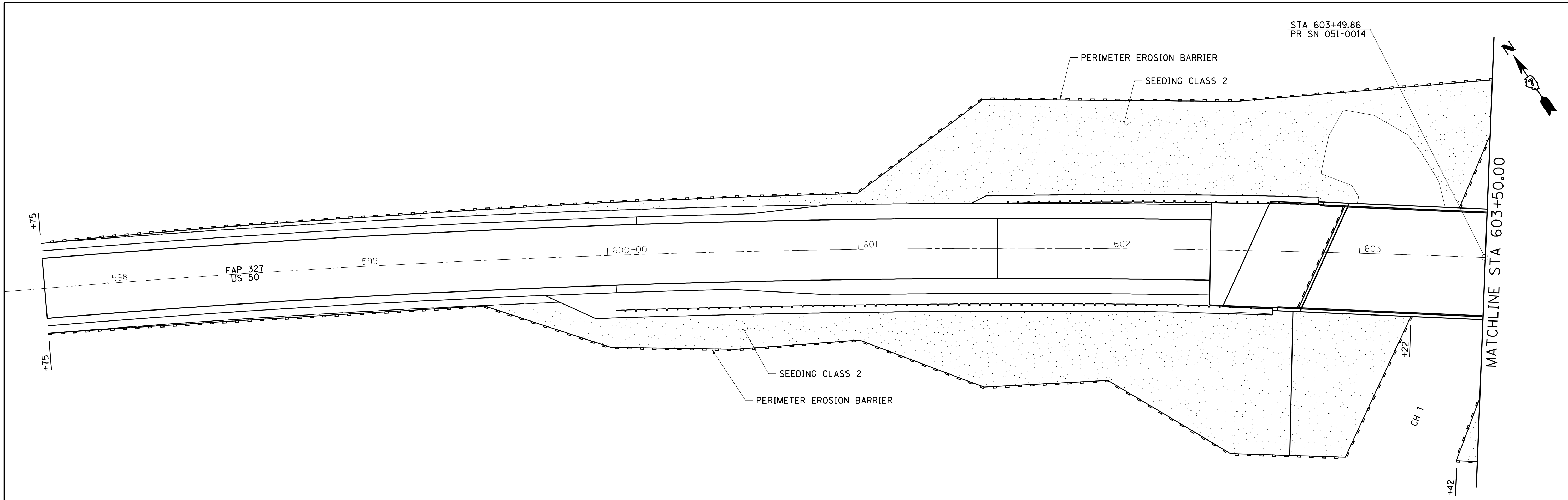
	PLOT SCALE = 40.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE - 9/17/2010	REVISED -

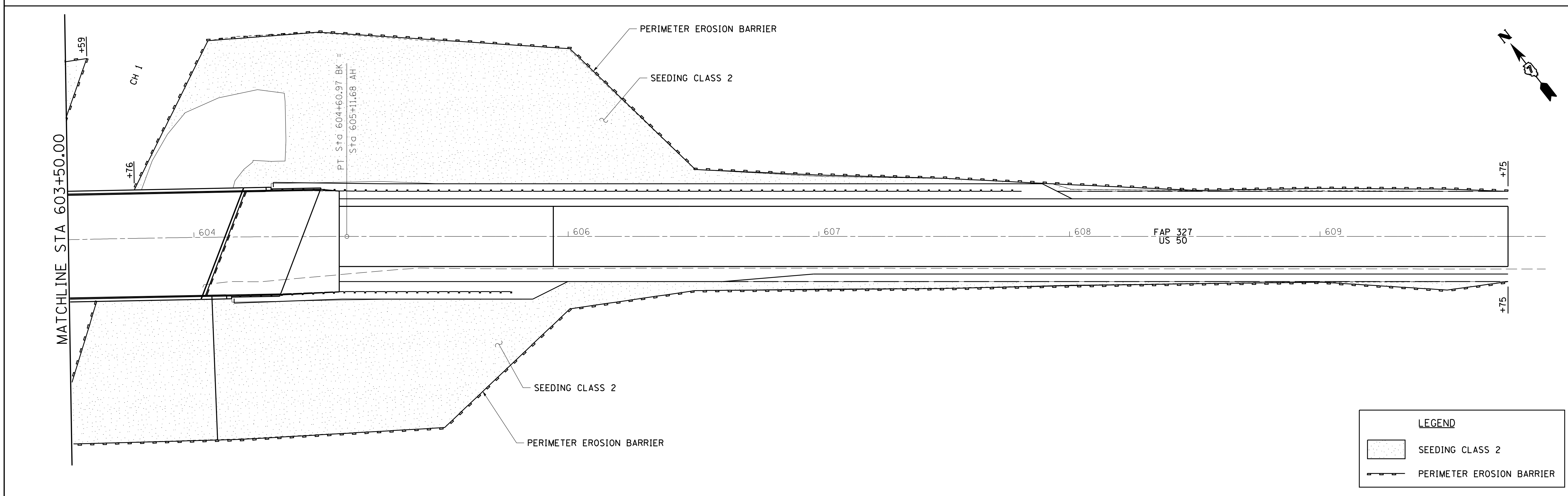
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL LAYOUT AND SHOULDER WIDENING DETAILS
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	122
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -	
FILE NAME = D774179-sht-ero.dgn	DRAWN - TJD	REVISED -	
PLOT SCALE = 40.000 ' / IN.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 5/11/2011	REVISED -	

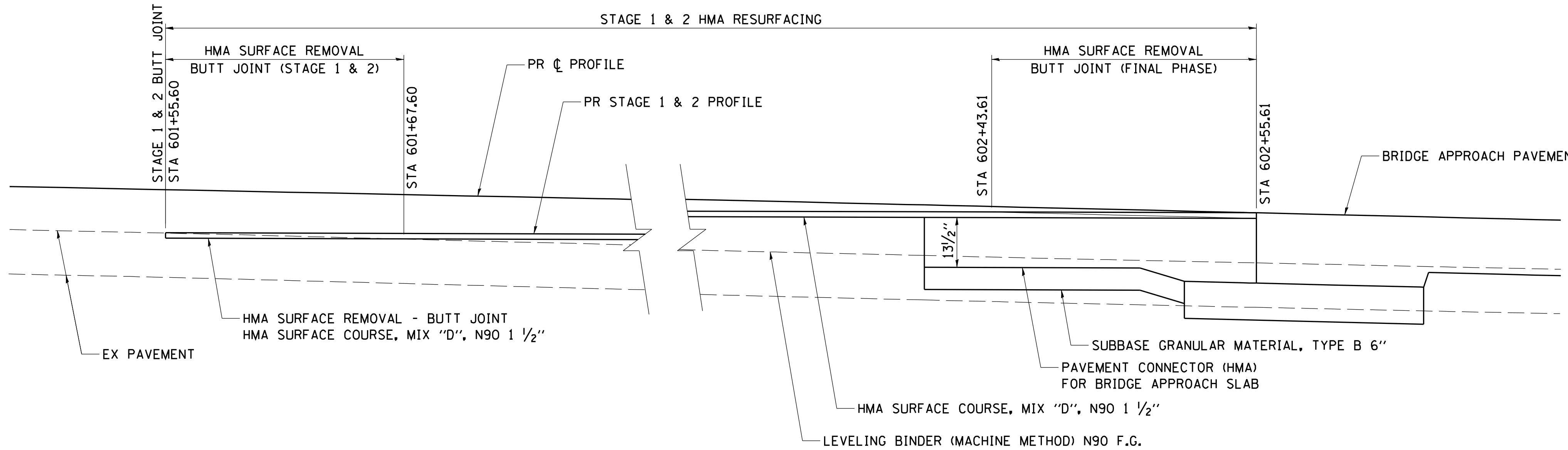
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

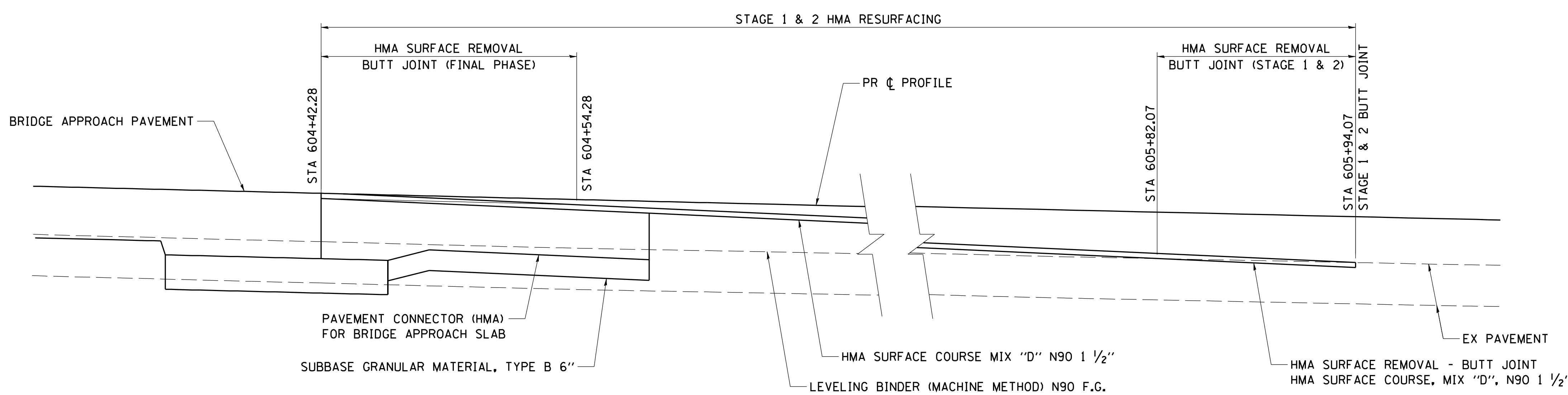
EROSION CONTROL PLAN
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	123
		CONTRACT NO. 74177		

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





SEE STANDARD 420406 FOR DETAILS OF
PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-connector.dgn	DRAWN - TJD	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 2/17/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT DETAILS
SN 051-0014

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	124
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

B.M. #805 Chiseled Square on the N.E. corner of S.N. 051-0014, 18.6' Lt. Sta. 604+18.80, Elev. 435.13

Existing Structure: SN 051-0014, originally built in 1959 as FAI Rte. 64, Section 51-23HB-3 at Sta. 603+49.82. The existing structure is a Three Span Continuous R.C. T-Beam bridge on concrete metal shell supported pile bent abutments and timber pile supported multi-column piers. The existing structure has been resurfaced with a HMA overlay. Overall length is 127'-5" back to back abutments. Bridge width is 43'-8" out to out of deck with a 39'-0" clear roadway width measured face to face of curbs with two 12'-0" traffic lanes about ℄ Roadway. The contractor will remove and replace the existing superstructure and complete other work as described in the plans.

Traffic shall be maintained at all times utilizing Stage Construction.

No Salvage.

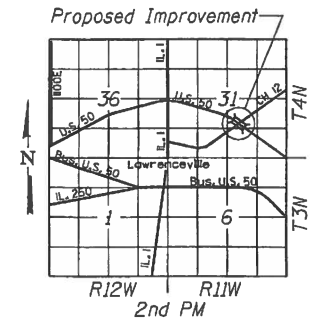
STATION 603+49.82
RE-BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 327
SECTION (51-23HB-3)BR
LOADING HL-93
STR. NO. 051-0014

NAME PLATE

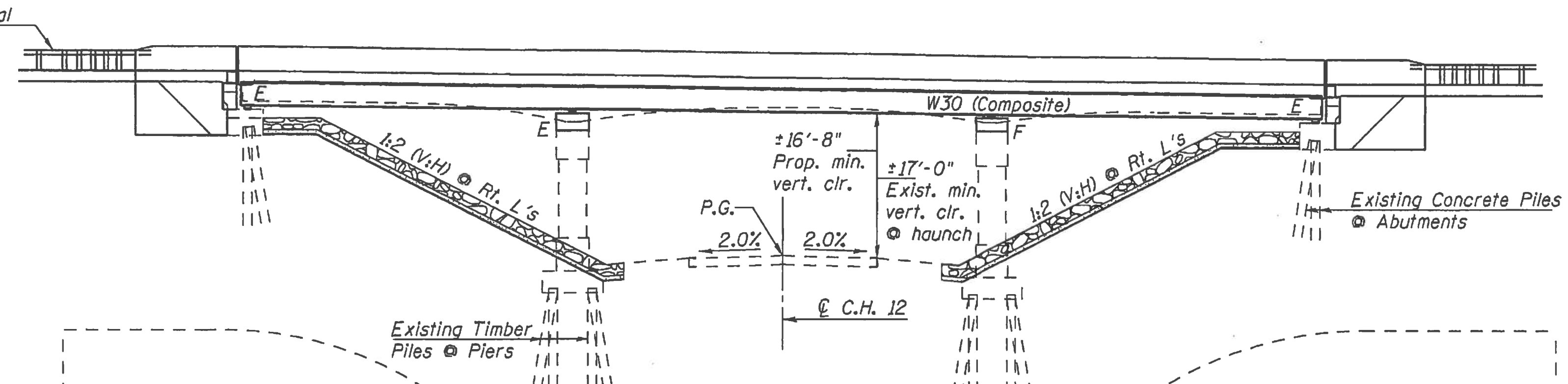
See Std. 515001

Existing name plate shall be cleaned and relocated next to new name plate. Cost included with Name Plates.

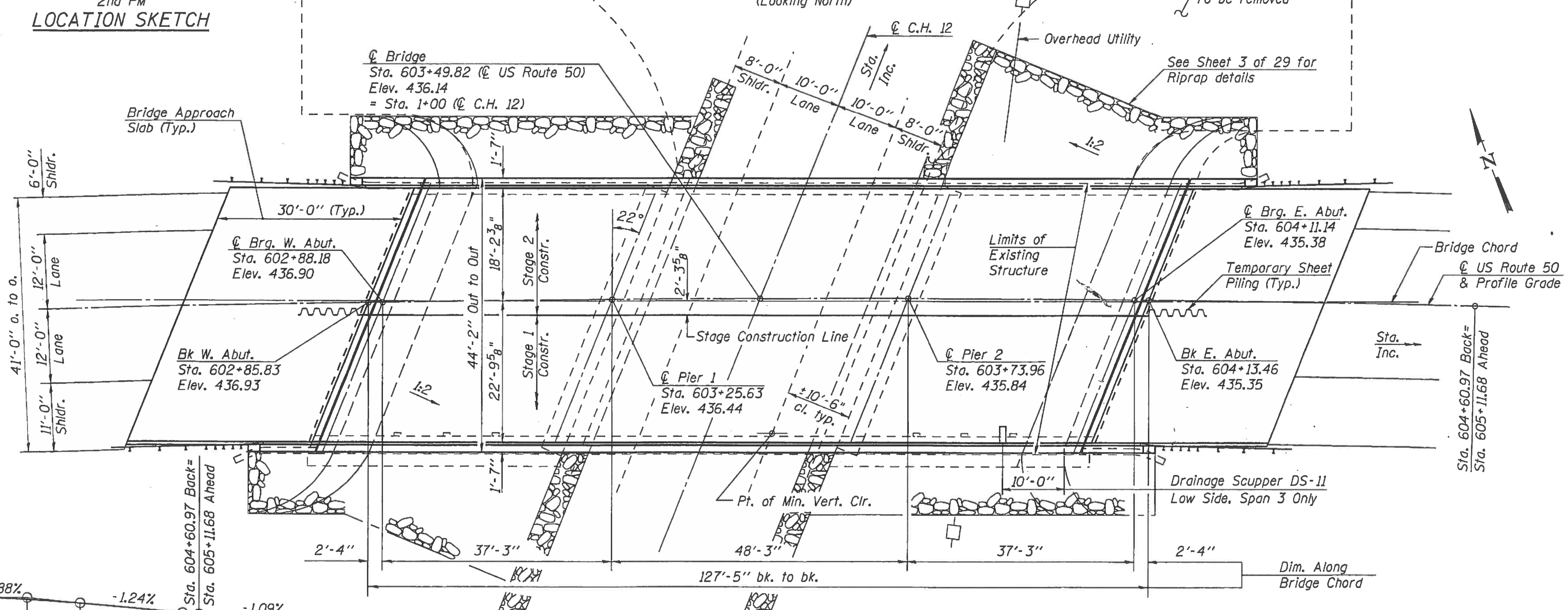
INDEX OF SHEETS



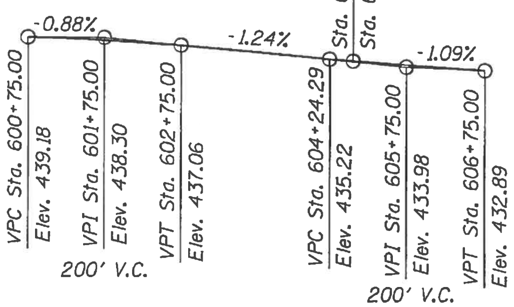
LOCATION SKETCH



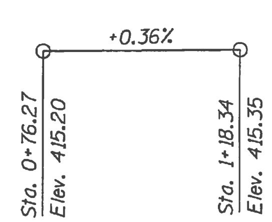
ELEVATION
(Looking North)



PLAN



PROFILE GRADE
(along ℄ F.A.P. Rte. 327)



PROFILE GRADE
(along ℄ County Highway 12)

CURVE DATA
(℄ F.A.P. Route 327)

Δ = 66° 01' 58"
D = 1° 12' 40"
T = 3,074.04'
R = 4,730.65'
L = 5,452.02'
E = 911.05'
P.C. Sta. = 550+08.96
P.I. Sta. = 580+83.00
P.T. Sta. = 604+60.97
S.E. = 0.040'/Ft.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER ★ MICHAEL D. CUMMINS 4822 SPRINGFIELD ★ STATE OF ILLINOIS

10/18/18
(Expires 11/30/2018)

SEISMIC DATA

New Construction:
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.225g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.515g
Soil Site Class = D

Existing Abutments and Piers:
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.09g
Site Coefficient (S) = 1.2

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims

Existing Abutments and Piers:
1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94-052

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
fy = 36,000 psi (M270 Grade 36)

FIELD UNITS (Existing Construction)
fc = 1,000 psi (Substructure)
fs = 20,000 psi (Reinforcement)

GENERAL PLAN & ELEVATION
US ROUTE 50 OVER COUNTY HIGHWAY 12
F.A.P. ROUTE 327
SECTION (51-23HB-3)BR
LAWRENCE COUNTY
STATION 603+49.82
STRUCTURE NO. 051-0014

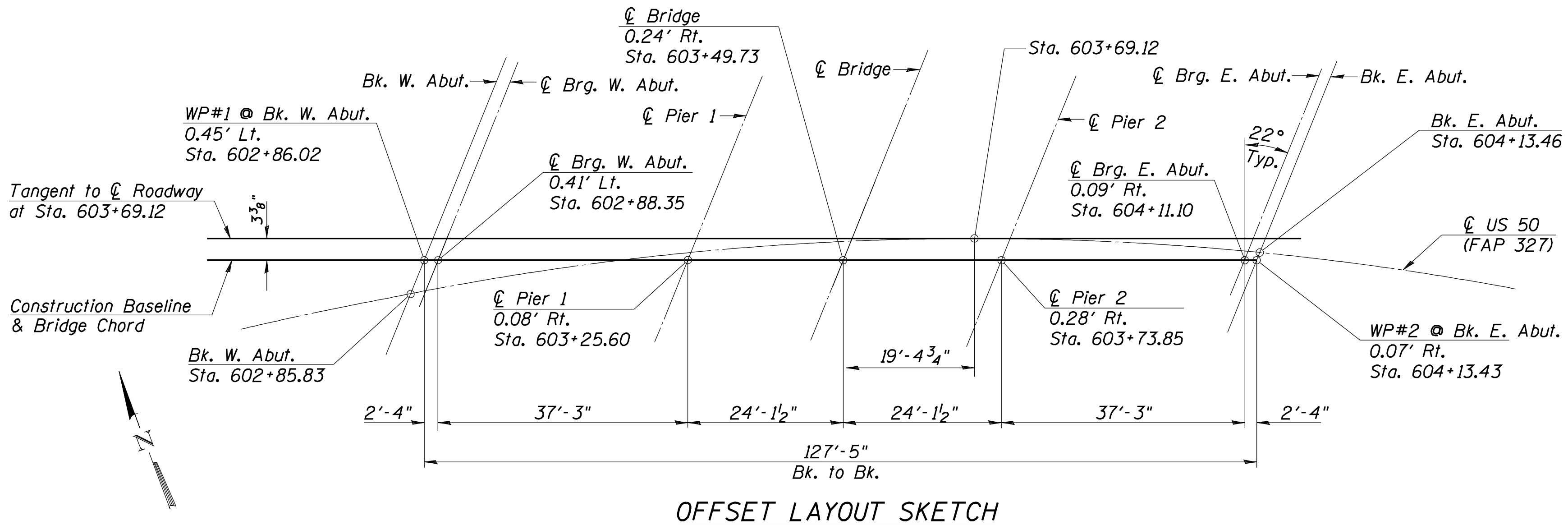
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-GPE.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 051-0014

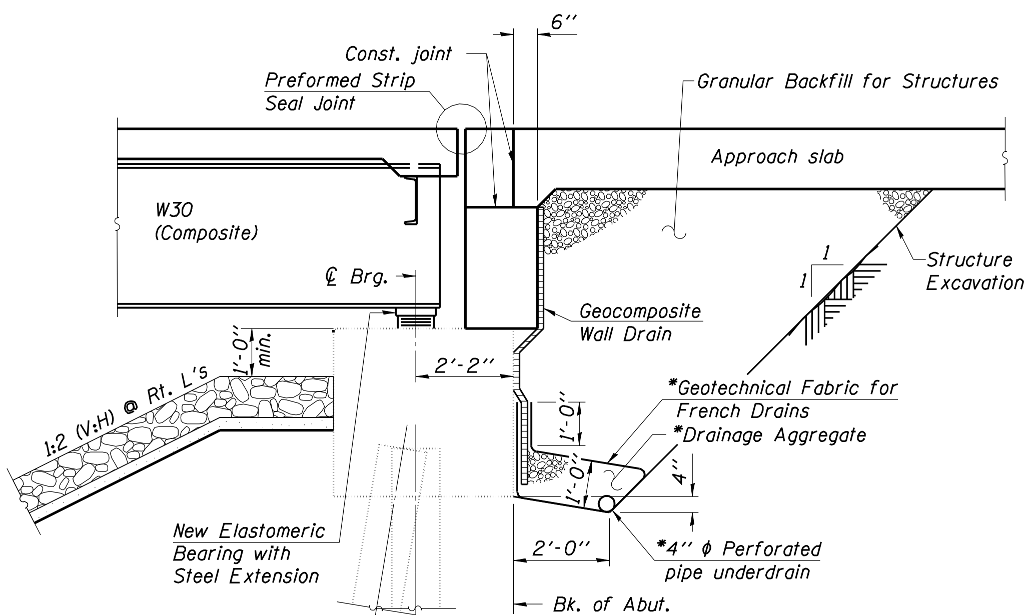
SHEET NO. 1 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	125
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



OFFSET LAYOUT SKETCH

Note: Bridge Layout is based upon as-built location of bridge and stationing has been adjusted to reflect the new Centerline of Survey of US 50.



SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures. (See Special Provision)

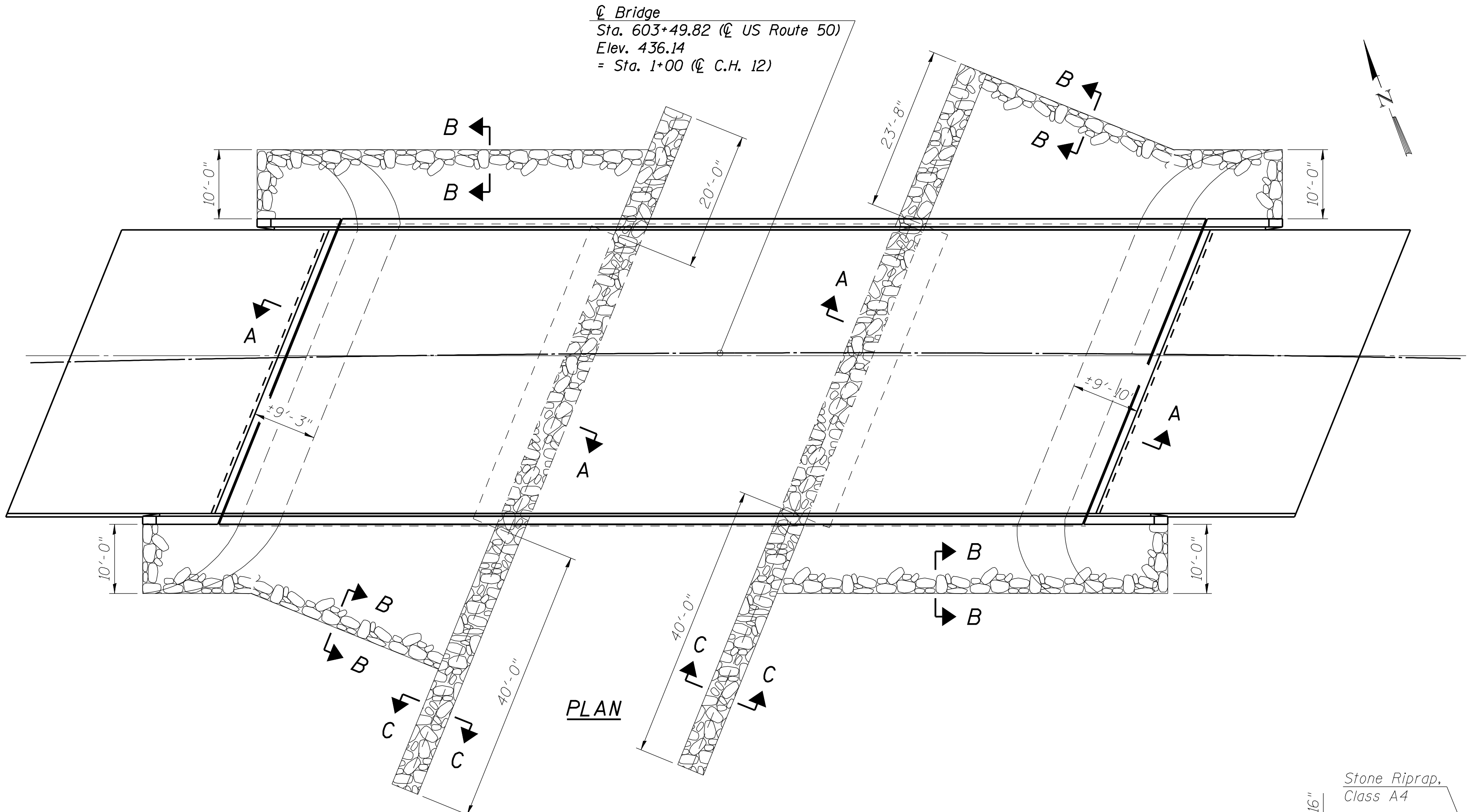
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101.)

GENERAL NOTES

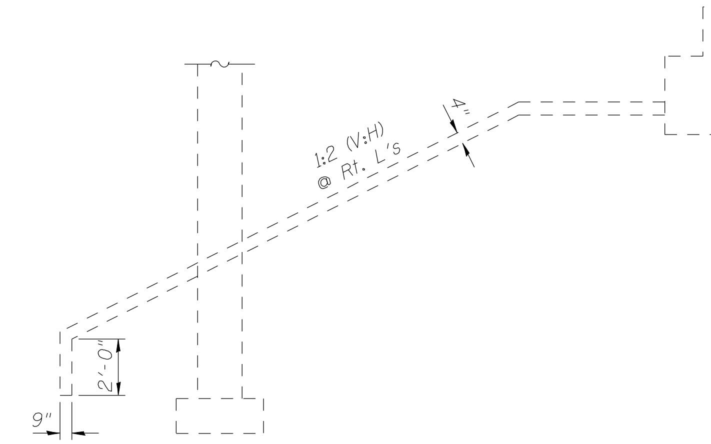
1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8 in. ϕ, holes 15/16 in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 85,830lb (Grade 50), 10,690lb (Grade 36)
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. 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.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. Concrete Sealer shall be applied to the outisde face of the new concrete backwalls.
8. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be gray, Munsell No. 5B 7/1.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	QUANTITY
Stone Riprap, Class A4	Tons		545	545
Granular Backfill for Structures	Cu. Yd.		102	102
Removal of Existing Superstructures No. 3	Each	1		1
Concrete Removal	Cu. Yd.		25	25
Structure Excavation	Cu. Yd.		76	76
Concrete Structures	Cu. Yd.		97.3	97.3
Concrete Superstructure	Cu. Yd.	179.5		179.5
Concrete Superstructure (Approach Slab)	Cu. Yd.	119.0		119.0
Bridge Deck Grooving	Sq. Yd.	540		540
Protective Coat	Sq. Yd.	978		978
Elastomeric Bearing Assembly, Type I	Each		18	18
Furnishing and Erecting Structural Steel	L. Sum	0.14		0.14
Stud Shear Connectors	Each	4122		4122
Reinforcement Bars, Epoxy Coated	Pound	79,820	9260	89,080
Slope Wall Removal	Sq. Yd.		778	778
Temporary Sheet Piling	Sq. Ft.		350	350
Name Plates	Each		1	1
Preformed Joint Strip Seal	Foot	101		101
Concrete Sealer	Sq. Ft.		278	278
Geocomposite Wall Drain	Sq. Yd.		65	65
Pipe Underdrains for Structures 4"	Foot		230	230
Drainage Scuppers, DS-11	Each	1		1
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft.		28	28
Bar Splicers	Each			798
Anchor Bolts 3/4"	Each		12	12
Anchor Bolts 1"	Each		12	12
Anchor Bolts 5/8"	Each		24	24
Filter Fabric	Sq. Yd.		732	732

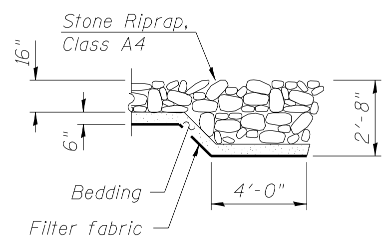


PLAN



SECTION THRU EXISTING SLOPEWALL

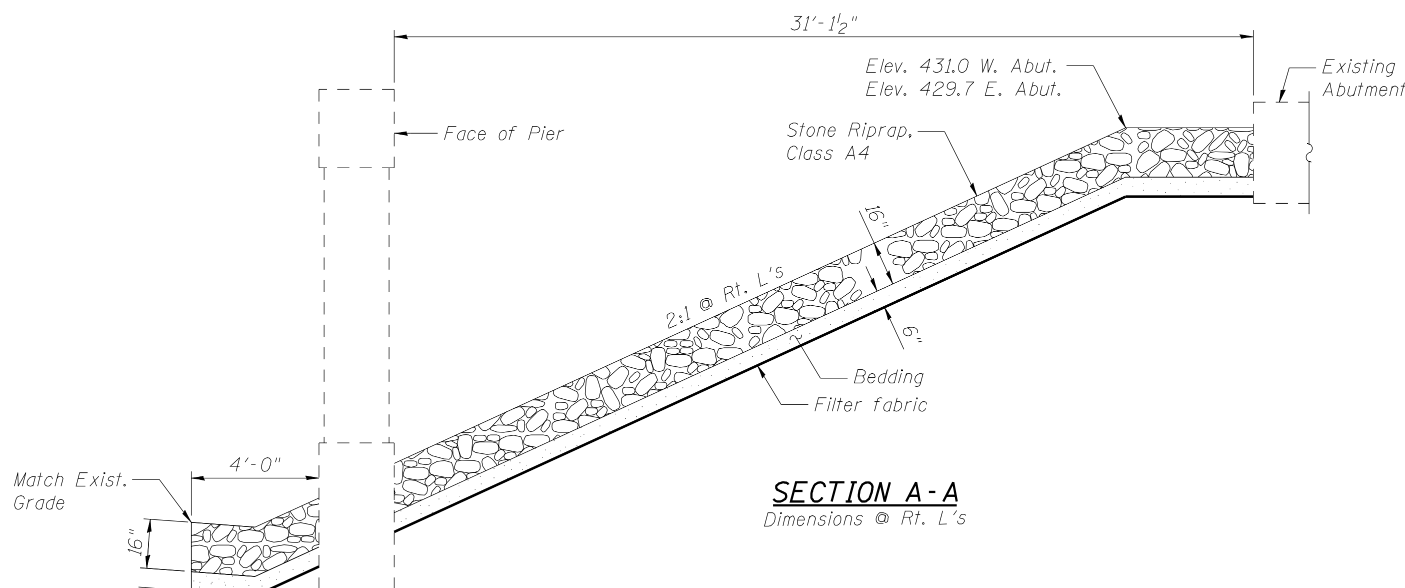
See sheet 1 of 29 for exisitng slope wall layout.



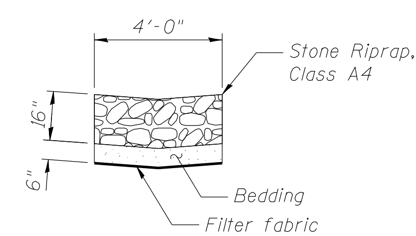
SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	778
Stone Riprap, Class A4	Tons	545
Filter Fabric	Sq. Yd.	732



SECTION A-A
Dimensions @ Rt. L's



SECTION C-C

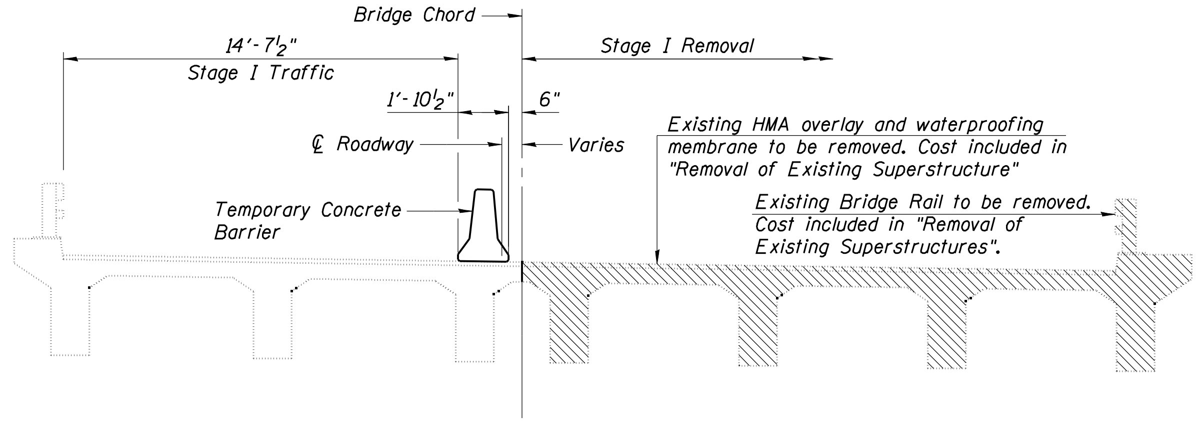
CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-slope.dgn	CHECKED - TSH	REVISED -
	DATE = 12/6/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

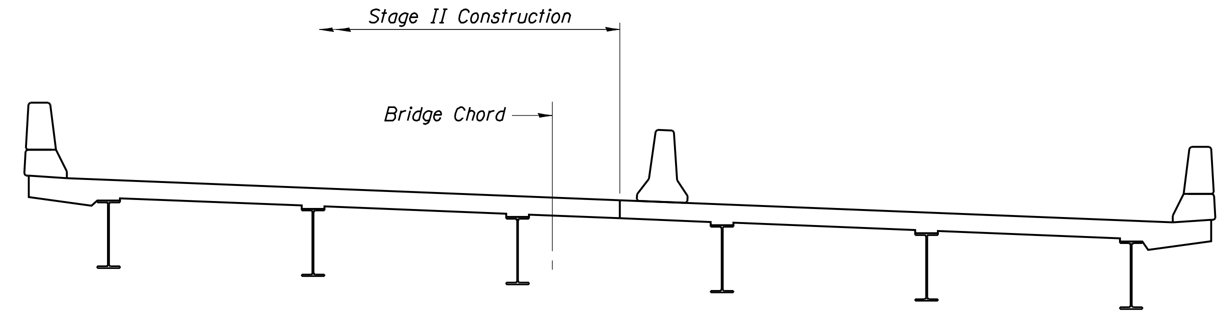
STONE RIPRAP DETAILS
STRUCTURE NO. 051-0014

SHEET NO. 3 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	127
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



STAGE I REMOVAL



STAGE II CONSTRUCTION

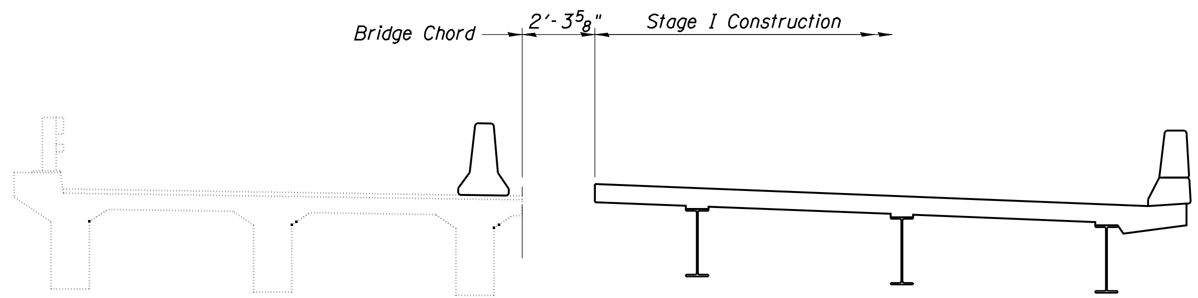
Notes:
All staging cross sections are looking east.

Hatched areas indicates "Removal of Existing Superstructures".

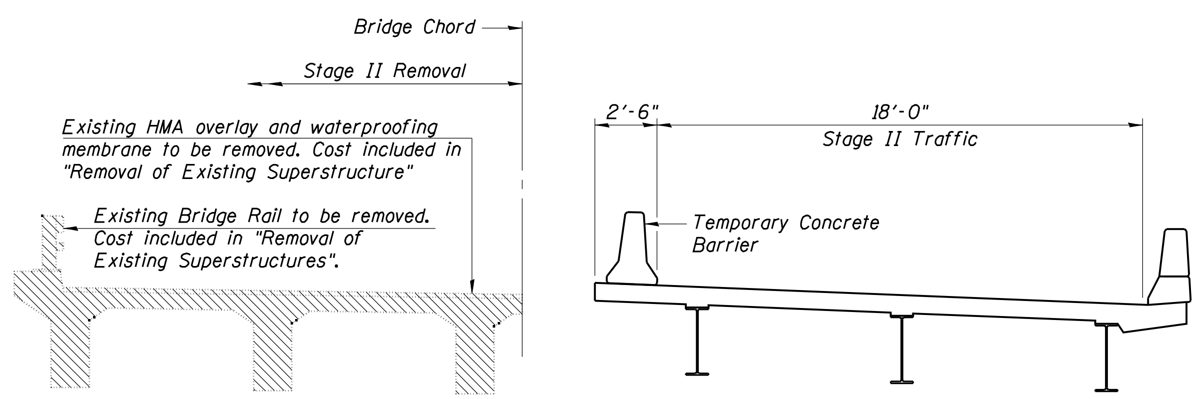
For details of "Temporary Concrete Barrier" see Sheet 5 of 29.

See roadway plans for quantity of "Temporary Concrete Barrier".

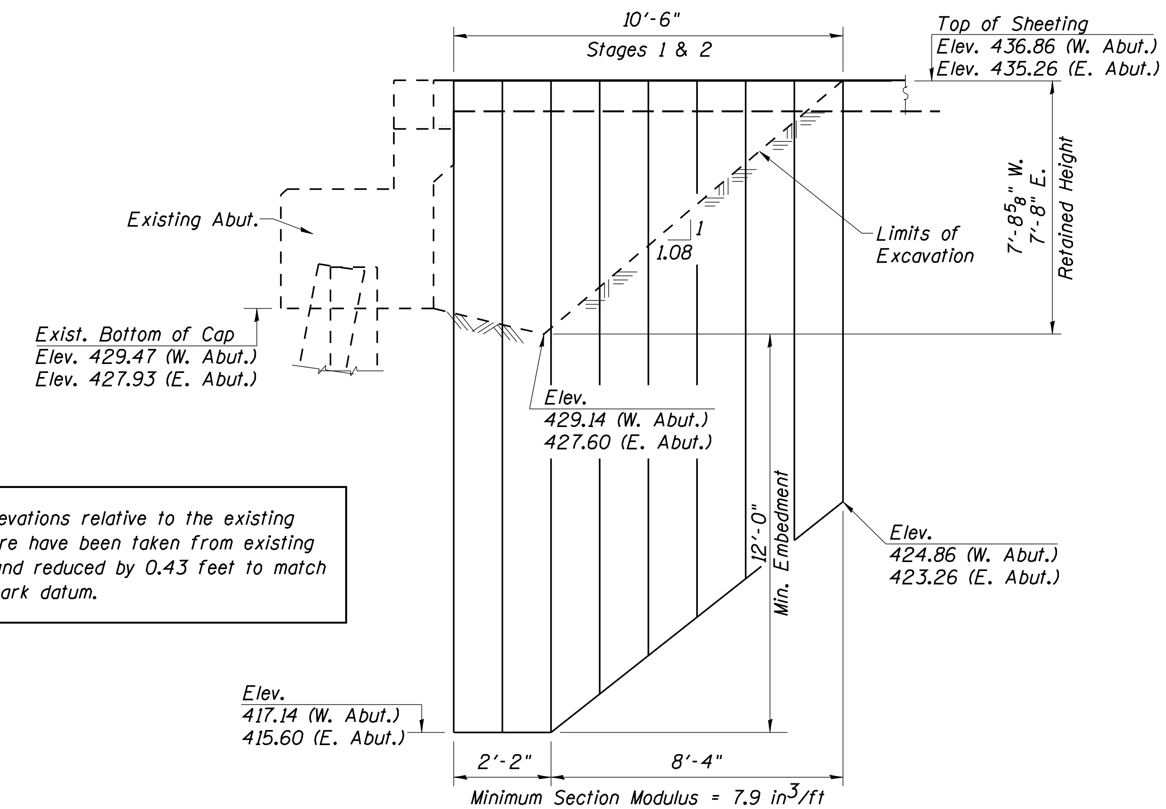
The Stage Removal and Stage Construction lines are different for the superstructure and substructure.



STAGE I CONSTRUCTION



STAGE II REMOVAL



NOTE

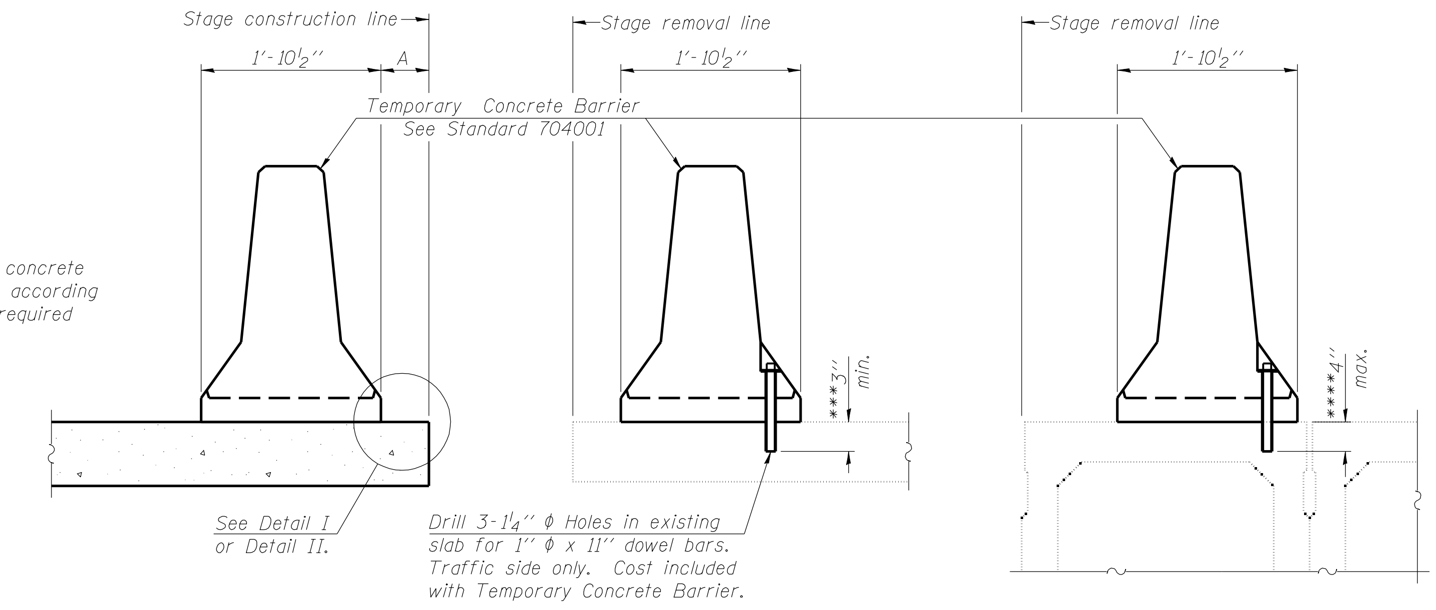
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.

TEMPORARY SHEET PILING DETAILS

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION & TEMPORARY SHEET PILING DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE = 0510014-74179-001-stage.dgn	CHECKED - MDC	REVISED -		STRUCTURE NO. 051-0014	327	(51-23HB-3)BR	LAWRENCE	260	128
	DATE = 10/18/2018	DRAWN - SJS	REVISED -					CONTRACT NO. 74177		
		CHECKED - MDC	REVISED -		SHEET NO. 4 OF 29 SHEETS			ILLINOIS FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel PL to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

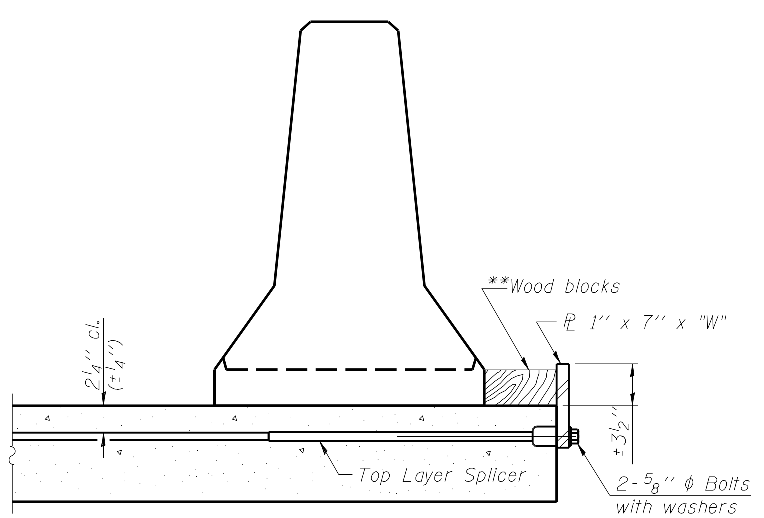
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel PL to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

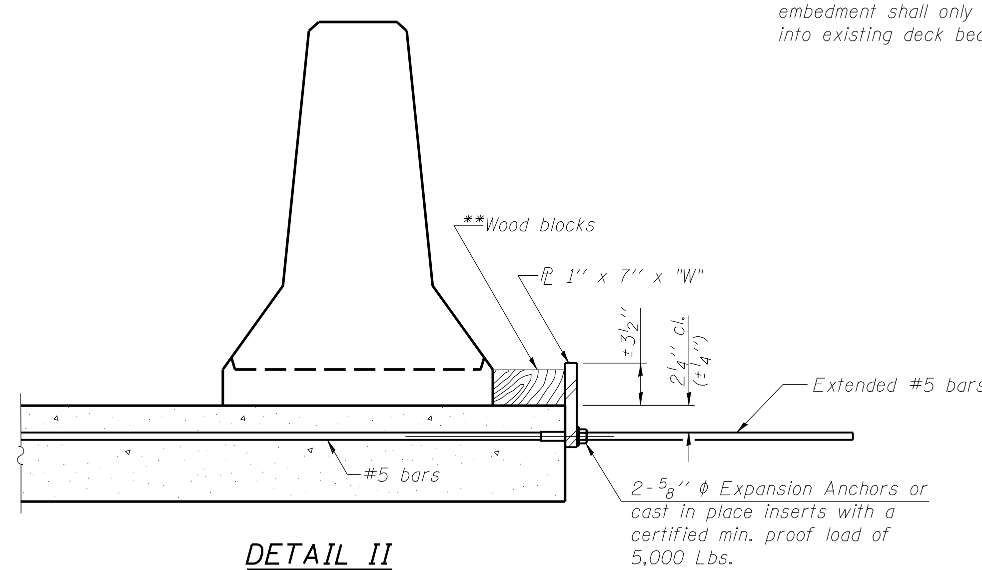
The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

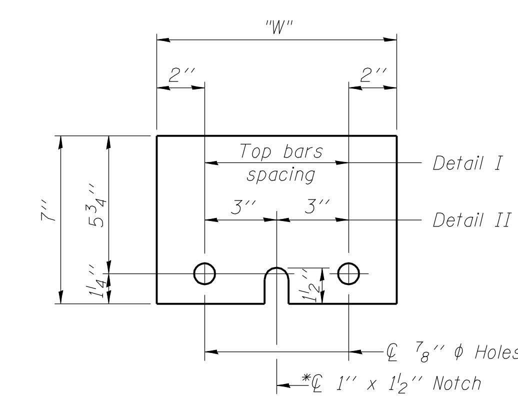
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1'' x 7'' x ''W''

* Required only with Detail II

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

"W" = Top bars spacing + 4''

R-27

7-1-10

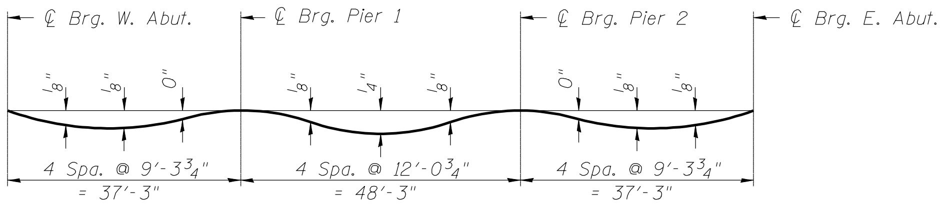
CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-tempbarrier.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 051-0014

SHEET NO. 5 OF 29 SHEETS

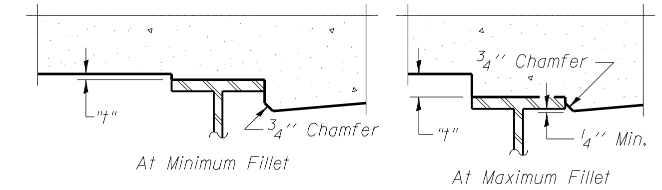
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	129
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 6 and 7 of 29.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6 and 7 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

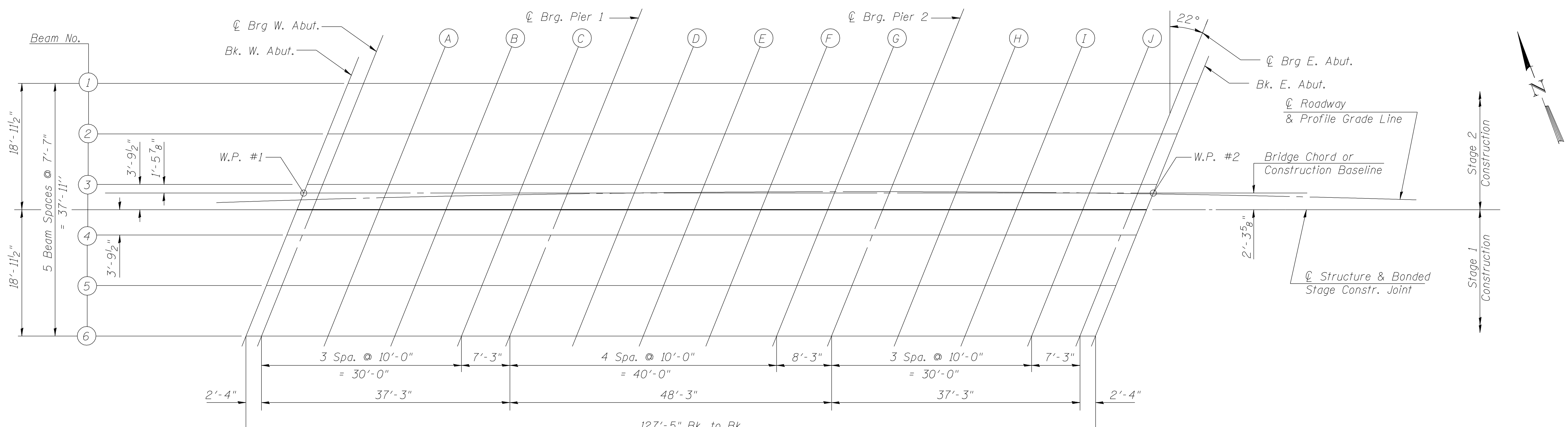
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+93.03	-16.99	437.52	437.52
℄ Brg. W. Abut.	602+95.35	-16.95	437.49	437.49
A	603+05.32	-16.81	437.36	437.37
B	603+15.28	-16.68	437.23	437.24
C	603+25.25	-16.58	437.11	437.10
℄ Brg. Pier 1	603+32.47	-16.52	437.01	437.01
D	603+42.44	-16.45	436.89	436.90
E	603+52.40	-16.41	436.76	436.78
F	603+62.37	-16.38	436.64	436.66
G	603+72.32	-16.38	436.52	436.52
℄ Brg. Pier 2	603+80.54	-16.39	436.41	436.41
H	603+90.50	-16.42	436.29	436.29
I	604+00.47	-16.48	436.17	436.18
J	604+10.43	-16.56	436.05	436.06
℄ Brg. E. Abut.	604+17.66	-16.63	435.97	435.97
Bk. E. Abut.	604+19.98	-16.65	435.94	435.94

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+89.85	-9.46	437.26	437.26
℄ Brg. W. Abut.	602+92.18	-9.42	437.23	437.23
A	603+02.16	-9.27	437.10	437.11
B	603+12.14	-9.14	436.97	436.98
C	603+22.12	-9.03	436.84	436.84
℄ Brg. Pier 1	603+29.35	-8.96	436.75	436.75
D	603+39.34	-8.89	436.62	436.63
E	603+49.32	-8.83	436.50	436.52
F	603+59.30	-8.80	436.37	436.39
G	603+69.27	-8.79	436.25	436.26
℄ Brg. Pier 2	603+77.50	-8.80	436.15	436.15
H	603+87.48	-8.83	436.03	436.03
I	603+97.46	-8.88	435.91	435.92
J	604+07.44	-8.95	435.78	435.79
℄ Brg. E. Abut.	604+14.68	-9.01	435.70	435.70
Bk. E. Abut.	604+17.01	-9.04	435.67	435.67

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+86.66	-1.93	437.00	437.00
℄ Brg. W. Abut.	602+88.99	-1.89	436.97	436.97
A	602+98.99	-1.73	436.84	436.85
B	603+08.98	-1.59	436.71	436.72
C	603+18.98	-1.47	436.58	436.58
℄ Brg. Pier 1	603+26.23	-1.40	436.49	436.49
D	603+36.22	-1.32	436.36	436.37
E	603+46.22	-1.26	436.23	436.25
F	603+56.22	-1.23	436.11	436.13
G	603+66.22	-1.21	435.98	435.99
℄ Brg. Pier 2	603+74.45	-1.21	435.88	435.88
H	603+84.45	-1.23	435.76	435.76
I	603+94.44	-1.28	435.64	435.65
J	604+04.44	-1.34	435.52	435.53
℄ Brg. E. Abut.	604+11.69	-1.40	435.43	435.43
Bk. E. Abut.	604+14.02	-1.42	435.40	435.40



PLAN

E-S

7-1-10

CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-topofslab.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0014

SHEET NO. 6 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	130
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

BRIDGE CHORD OR CONSTRUCTION BASELINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+86.02	-0.45	436.95	436.95
℄ Brg. W. Abut.	602+88.35	-0.41	436.92	436.92
A	602+98.36	-0.25	436.79	436.80
B	603+08.36	-0.11	436.66	436.67
C	603+18.36	0.01	436.53	436.53
℄ Brg. Pier 1	603+25.60	0.08	436.44	436.44
D	603+35.61	0.16	436.31	436.32
E	603+45.61	0.22	436.18	436.20
F	603+55.61	0.26	436.06	436.08
G	603+65.61	0.28	435.93	435.94
℄ Brg. Pier 2	603+73.85	0.28	435.83	435.83
H	603+83.85	0.26	435.71	435.71
I	603+93.85	0.22	435.59	435.60
J	604+03.85	0.15	435.46	435.47
℄ Brg. E. Abut.	604+11.10	0.09	435.38	435.38
Bk. E. Abut.	604+13.43	0.07	435.35	435.35

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+85.83	0.00	436.93	436.93
℄ Brg. W. Abut.	602+88.18	0.00	436.90	436.90
A	602+98.20	0.00	436.78	436.79
B	603+08.22	0.00	436.65	436.66
C	603+18.23	0.00	436.53	436.53
℄ Brg. Pier 1	603+25.63	0.00	436.44	436.44
D	603+35.66	0.00	436.31	436.32
E	603+45.67	0.00	436.19	436.21
F	603+55.68	0.00	436.07	436.08
G	603+65.69	0.00	435.94	435.95
℄ Brg. Pier 2	603+73.96	0.00	435.84	435.84
H	603+83.96	0.00	435.72	435.72
I	603+93.96	0.00	435.59	435.60
J	604+03.96	0.00	435.47	435.48
℄ Brg. E. Abut.	604+11.14	0.00	435.38	435.38
Bk. E. Abut.	604+13.46	0.00	435.35	435.35

BONDED STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+85.06	1.84	436.87	436.87
℄ Brg. W. Abut.	602+87.40	1.88	436.84	436.84
A	602+97.40	2.04	436.71	436.72
B	603+07.40	2.18	436.58	436.59
C	603+17.41	2.30	436.45	436.45
℄ Brg. Pier 1	603+24.66	2.37	436.36	436.36
D	603+34.67	2.46	436.23	436.24
E	603+44.67	2.52	436.10	436.12
F	603+54.68	2.56	435.98	435.99
G	603+64.68	2.58	435.85	435.86
℄ Brg. Pier 2	603+72.92	2.58	435.75	435.75
H	603+82.93	2.56	435.63	435.63
I	603+92.93	2.52	435.51	435.52
J	604+02.94	2.46	435.38	435.39
℄ Brg. E. Abut.	604+10.19	2.40	435.30	435.30
Bk. E. Abut.	604+12.52	2.38	435.27	435.27

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+83.46	5.60	436.74	436.74
℄ Brg. W. Abut.	602+85.80	5.64	436.71	436.71
A	602+95.81	5.81	436.57	436.59
B	603+05.82	5.95	436.45	436.45
C	603+15.83	6.07	436.32	436.31
℄ Brg. Pier 1	603+23.09	6.15	436.22	436.22
D	603+33.10	6.24	436.10	436.10
E	603+43.12	6.30	435.97	435.99
F	603+53.13	6.35	435.84	435.86
G	603+63.14	6.37	435.72	435.72
℄ Brg. Pier 2	603+71.39	6.37	435.62	435.62
H	603+81.40	6.36	435.49	435.50
I	603+91.42	6.32	435.37	435.38
J	604+01.43	6.26	435.25	435.26
℄ Brg. E. Abut.	604+08.69	6.21	435.16	435.16
Bk. E. Abut.	604+11.02	6.19	435.13	435.13

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+80.25	13.13	436.47	436.47
℄ Brg. W. Abut.	602+82.59	13.17	436.44	436.44
A	602+92.62	13.34	436.31	436.32
B	603+02.64	13.49	436.18	436.19
C	603+12.67	13.62	436.05	436.05
℄ Brg. Pier 1	603+19.94	13.70	435.96	435.96
D	603+29.97	13.80	435.83	435.84
E	603+40.00	13.87	435.71	435.73
F	603+50.03	13.92	435.58	435.60
G	603+60.06	13.95	435.45	435.46
℄ Brg. Pier 2	603+68.33	13.96	435.35	435.35
H	603+78.35	13.95	435.23	435.23
I	603+88.38	13.92	435.11	435.12
J	603+98.41	13.87	434.98	434.99
℄ Brg. E. Abut.	604+05.68	13.82	434.90	434.90
Bk. E. Abut.	604+08.02	13.80	434.87	434.87

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	602+77.03	20.65	436.21	436.21
℄ Brg. W. Abut.	602+79.37	20.69	436.18	436.18
A	602+89.42	20.87	436.05	436.06
B	602+99.46	21.03	435.92	435.93
C	603+09.50	21.17	435.79	435.79
℄ Brg. Pier 1	603+16.79	21.25	435.70	435.70
D	603+26.83	21.35	435.57	435.58
E	603+36.88	21.43	435.44	435.46
F	603+46.92	21.49	435.32	435.33
G	603+56.97	21.53	435.19	435.19
℄ Brg. Pier 2	603+65.25	21.54	435.09	435.09
H	603+75.29	21.54	434.96	434.96
I	603+85.33	21.51	434.84	434.85
J	603+95.38	21.47	434.72	434.73
℄ Brg. E. Abut.	604+02.66	21.42	434.63	434.63
Bk. E. Abut.	604+05.00	21.41	434.60	434.60

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - AAN	REVISED -
FILE = 0510014-74179-001-topofslab.dgn	CHECKED - TSH	REVISED -
DATE = 10/18/2018	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0014

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	131

CONTRACT NO. 74177
ILLINOIS FED. AID PROJECT

NORTH FACE OF PARAPET

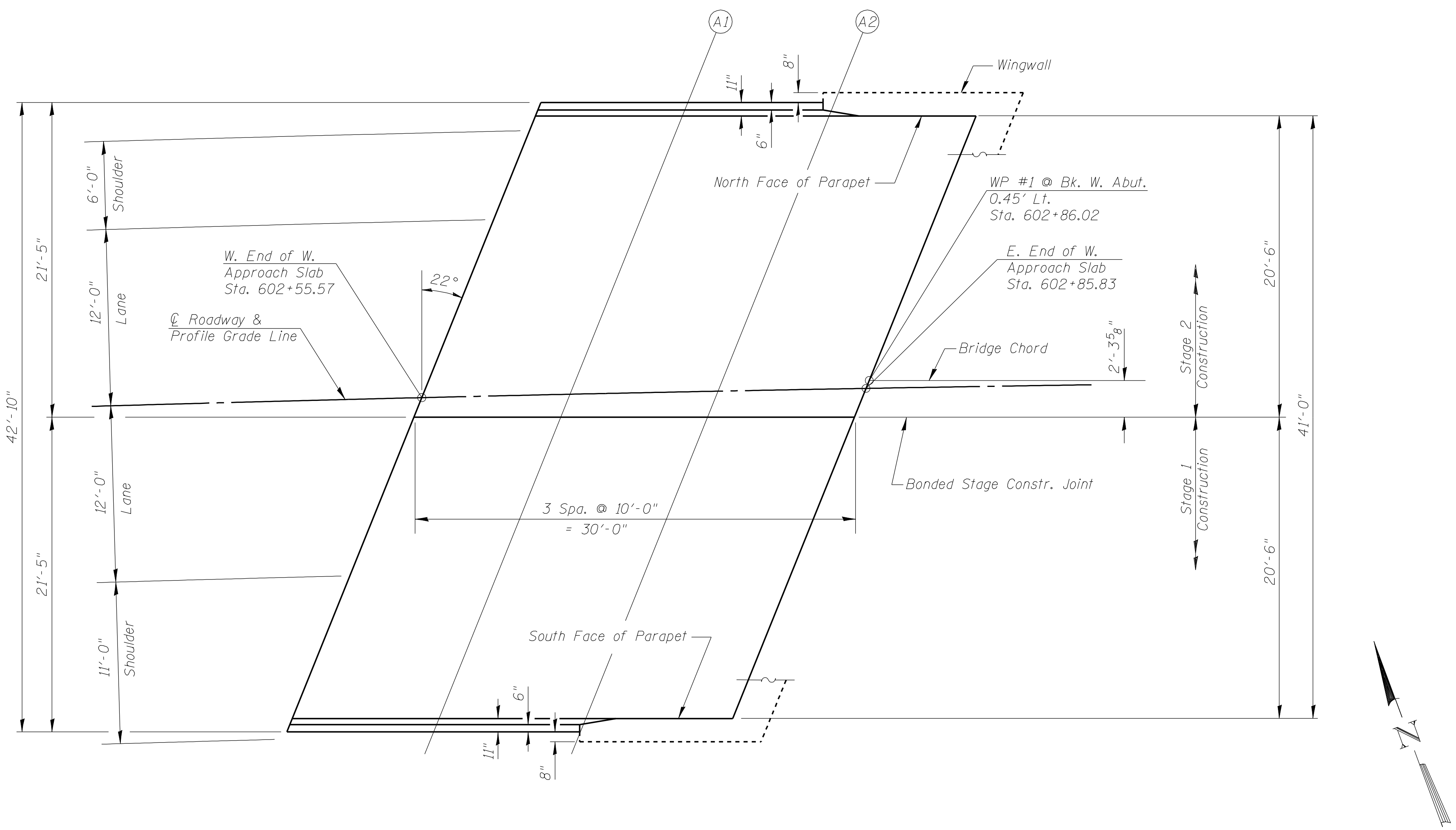
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	602+63.80	-19.09	437.97
A1	602+73.76	-18.88	437.84
A2	602+83.72	-18.69	437.70
Bk. of Exist. W. Abut.	602+93.67	-18.52	437.57

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	602+55.58	0.00	437.30
A1	602+65.60	0.00	437.18
A2	602+75.61	0.00	437.06
Bk. of Exist. W. Abut.	602+85.83	0.00	436.93

BONDED STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	602+55.06	1.21	437.26
A1	602+65.06	1.44	437.13
A2	602+75.06	1.65	437.00
Bk. of Exist. W. Abut.	602+85.06	1.84	436.87



PLAN - WEST APPROACH

SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	602+46.25	21.49	436.55
A1	602+56.29	21.74	436.42
A2	602+66.33	21.97	436.29
Bk. of Exist. W. Abut.	602+76.37	22.18	436.16

E-AS

7-1-10

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 051-0014	F.A.P. RTE. 327
	FILE = 0510014-74179-001-topofapproach.dgn	CHECKED - TSH	REVISED -			SECTION (51-23HB-3)BR
	DATE = 10/18/2018	DRAWN - SJS	REVISED -			COUNTY LAWRENCE
		CHECKED - MDC	REVISED -		SHEET NO. 8 OF 29 SHEETS	TOTAL SHEETS 260 SHEET NO. 132
						CONTRACT NO. 74177
						ILLINOIS FED. AID PROJECT

NORTH FACE OF PARAPET

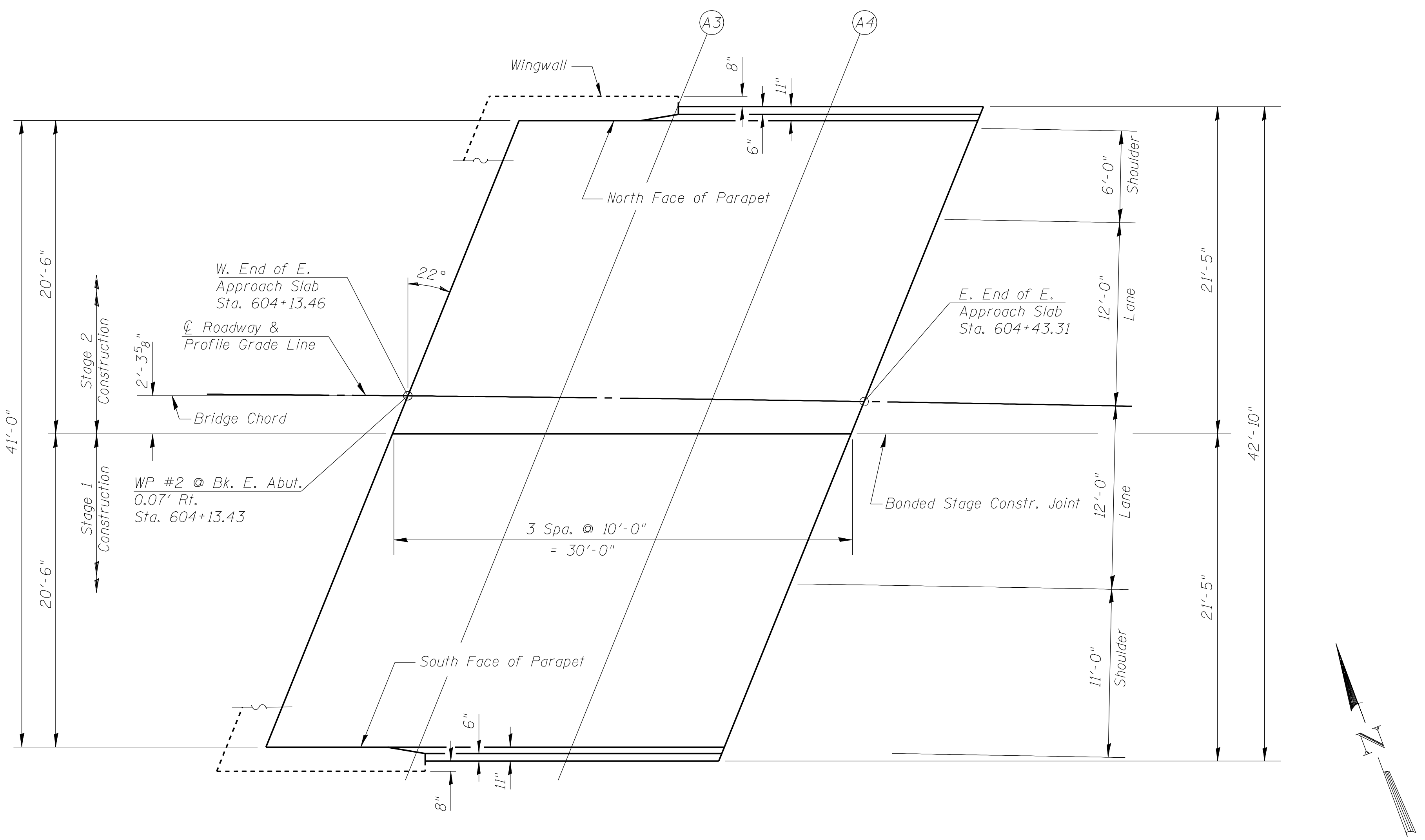
Location	Station	Offset	Theoretical Grade Elevations
Bk. of Exist E. Abut.	604+20.59	-18.20	435.99
A3	604+30.55	-18.32	435.87
A4	604+40.51	-18.46	435.76
E. End of E. Appr. Slab	604+50.47	-18.62	435.64

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. of Exist E. Abut.	604+13.46	0.00	435.35
A3	604+23.46	0.00	435.23
A4	604+33.46	0.00	435.10
E. End of E. Appr. Slab	604+43.31	0.00	434.98

BONDED STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
Bk. of Exist E. Abut.	604+12.52	2.38	435.27
A3	604+22.53	2.28	435.15
A4	604+32.53	2.16	435.03
E. End of E. Appr. Slab	604+42.54	2.01	434.91



PLAN - EAST APPROACH

SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
Bk. of Exist E. Abut.	604+04.39	22.95	434.55
A3	604+14.44	22.87	434.43
A4	604+24.49	22.76	434.31
E. End of E. Appr. Slab	604+34.53	22.63	434.19

E-AS 7-1-10

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-topofapproach.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

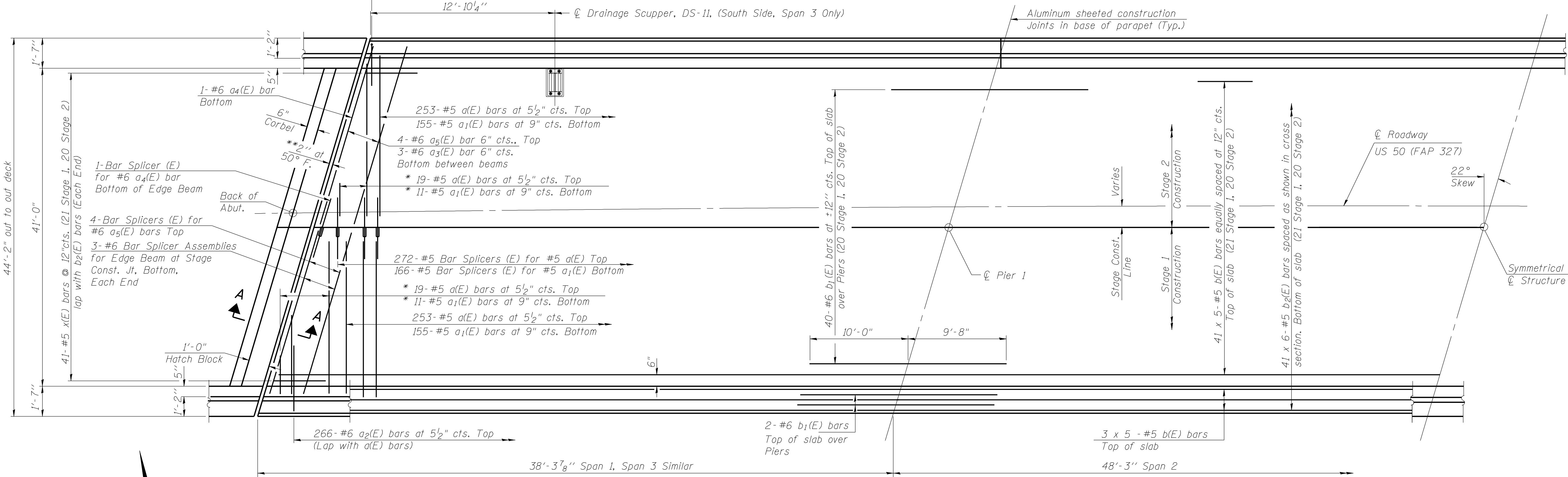
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0014
SHEET NO. 9 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	133
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

MINIMUM BAR LAP

#5 bar = 2'-7"

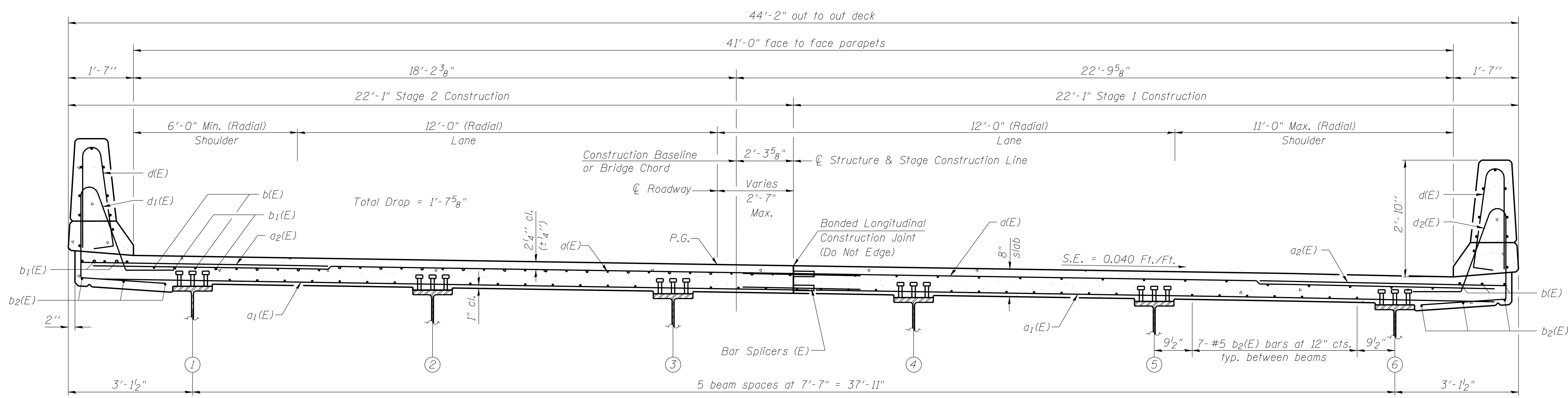


HALF PLAN

* Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

** Dimension showing concrete opening. For joint opening see sheet 14 of 29.

Notes:
See Sheet 11 of 29 for superstructure details and Bill of Material.
Bars indicated thus 42 x 5-#5 etc. indicates 42 line of bars with 5 lengths per line.
See Sheet 11 of 29 for parapet reinforcement.



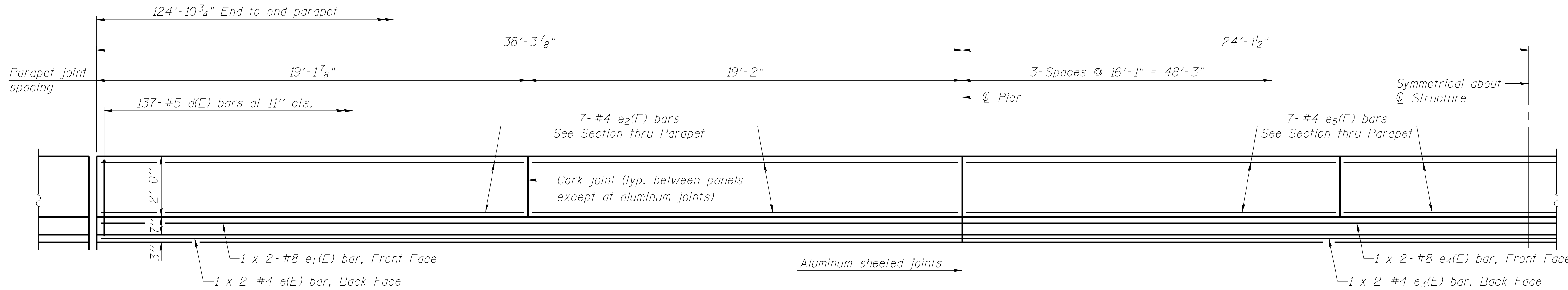
NEAR PIER

NEAR MIDSPAN

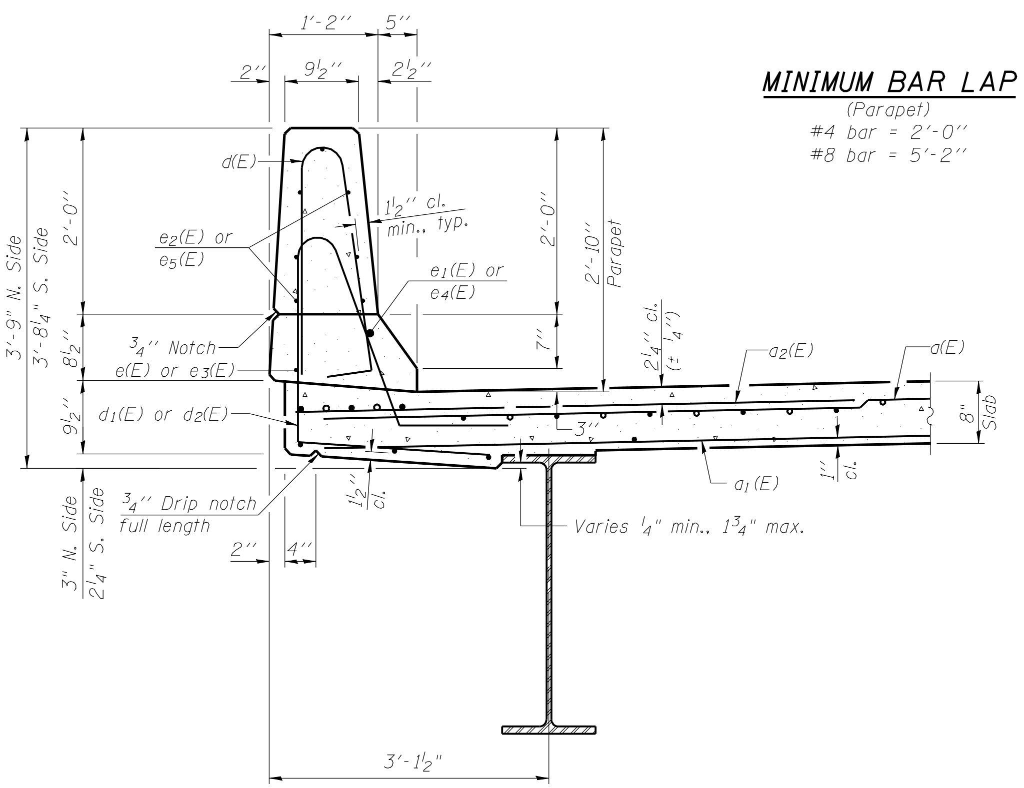
CROSS SECTION

(Looking East, Dimensions at Rt. ∠'s)

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 051-0014	F.A.P. RTE. 327
	FILE = 0510014-74179-001-superstructure.dgn	CHECKED - TSH	REVISED -			SECTION (51-23HB-3)BR
	DATE = 10/18/2018	DRAWN - SJS	REVISED -			COUNTY LAWRENCE
		CHECKED - MDC	REVISED -		SHEET NO. 10 OF 29 SHEETS	TOTAL SHEETS 260, SHEET NO. 134
						CONTRACT NO. 74177
						ILLINOIS FED. AID PROJECT

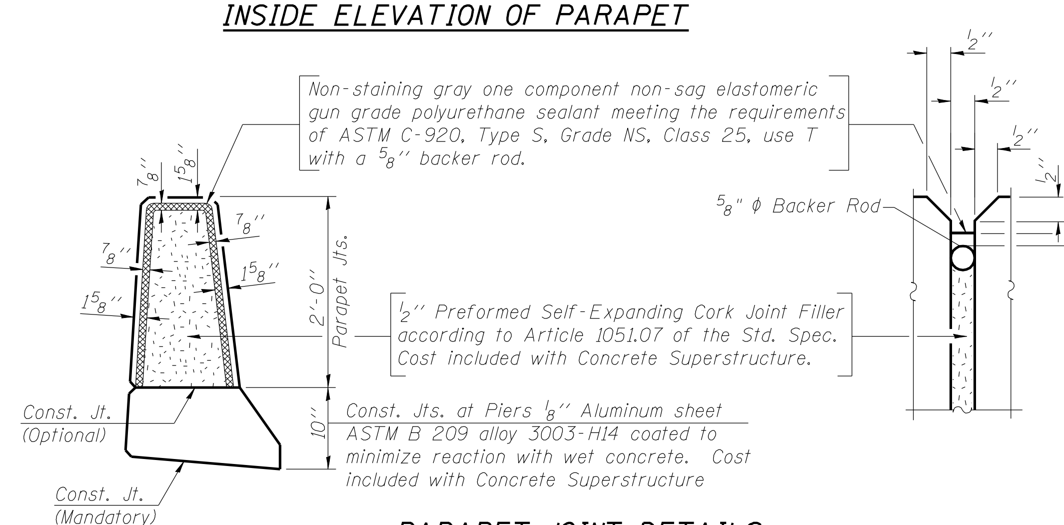


INSIDE ELEVATION OF PARAPET



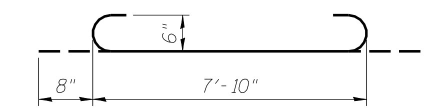
SECTION THRU PARAPET

MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

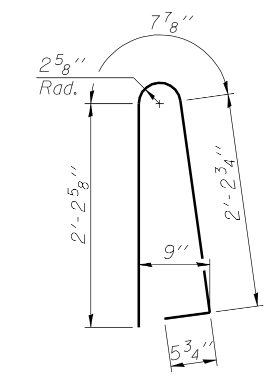


PARAPET JOINT DETAILS

Notes:
Scuppers shall be located clear of all diaphragms.



a3(E) BAR

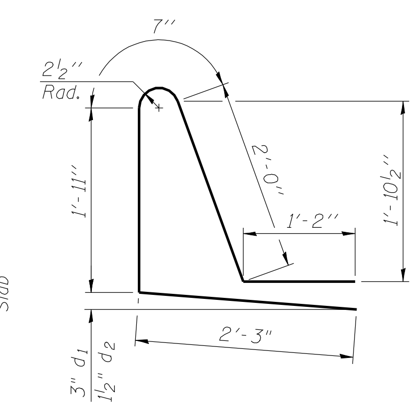


BAR d(E)

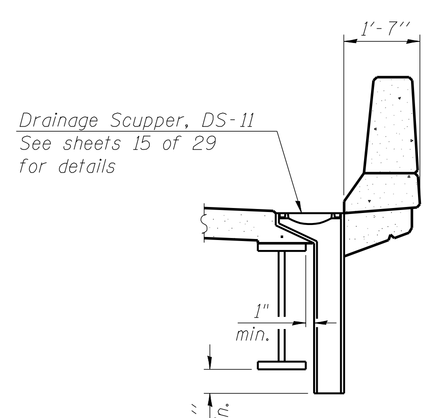
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	544	#5	21'-7"	
a1(E)	332	#5	21'-1"	
a2(E)	532	#6	6'-6"	
a3(E)	24	#6	9'-2"	
a4(E)	4	#6	19'-6"	
a5(E)	16	#6	23'-3"	
a6(E)	8	#5	1'-6"	
b(E)	235	#5	27'-10"	
b1(E)	88	#6	20'-1"	
b2(E)	246	#5	23'-9"	
d(E)	274	#5	5'-7"	
d1(E)	137	#5	7'-11"	
d2(E)	137	#5	7'-11"	
e(E)	8	#4	20'-4"	
e1(E)	8	#8	22'-0"	
e2(E)	56	#4	18'-10"	
e3(E)	4	#4	25'-4"	
e4(E)	4	#8	26'-11"	
e5(E)	42	#4	15'-9"	
x(E)	82	#5	6'-5"	
Reinforcement Bars, Epoxy Coated		Pound	47,830	
Concrete Superstructure		Cu. Yds.	179.5	

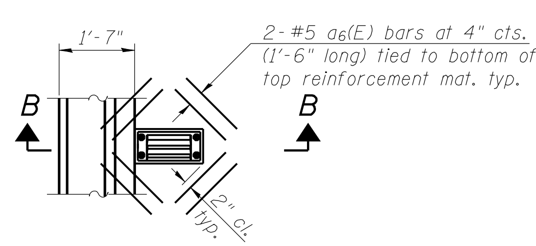
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.



BAR d1(E) & d2(E)

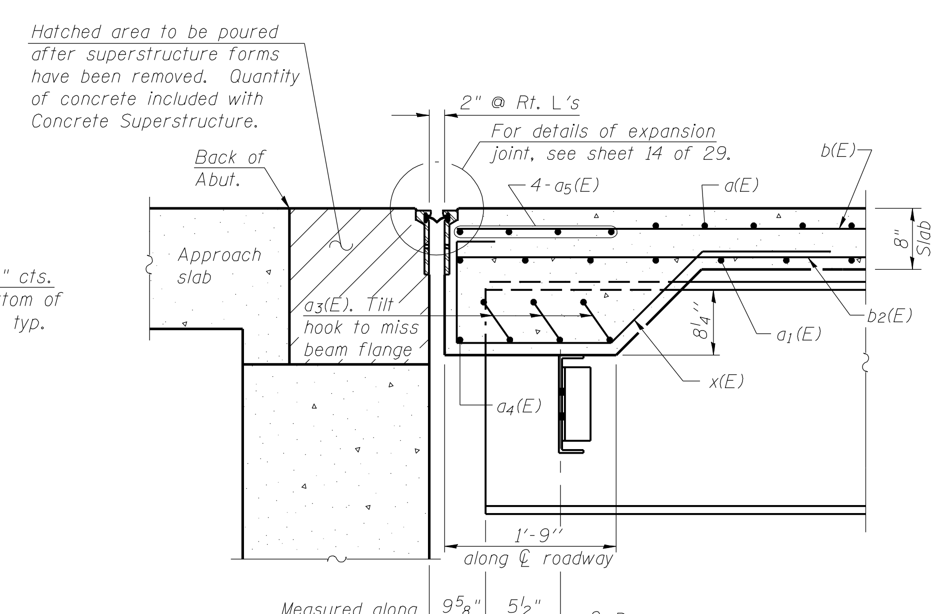


SECTION B-B

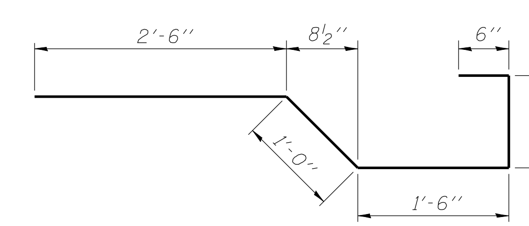


PLAN

Note:
Cut longitudinal reinforcement to clear drainage scuppers.



SECTION A-A
(Dim. @ Right Angles)



BAR x(E)

S-D2

8-31-12

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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		CHECKED - MDC	REVISED -	

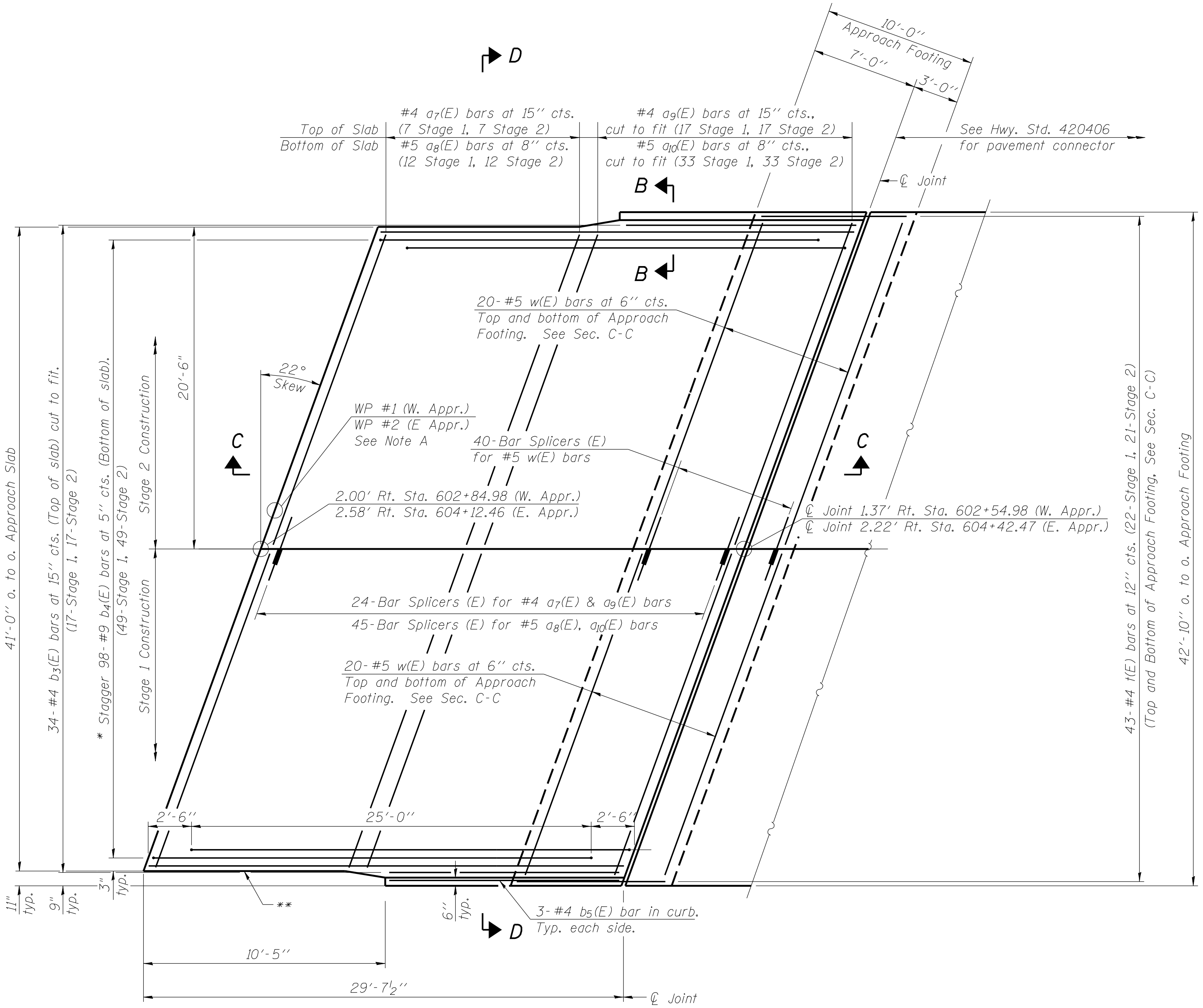
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-0014
SHEET NO. 11 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	135

CONTRACT NO. 74177
ILLINOIS FED. AID PROJECT

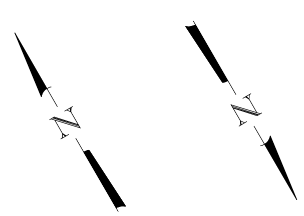
Note A:
WP #1 @ Bk. W. Abut. = 0.45' Lt. Sta. 602+86.02
WP #2 @ Bk. E. Abut. = 0.07' Rt. Sta. 604+13.43

Notes:
See sheet 13 of 29 for Sections C-C & D-D.
a_7(E), a_8(E), a_9(E), and a_{10}(E) bar spacings measured along ℄ Rdwy.

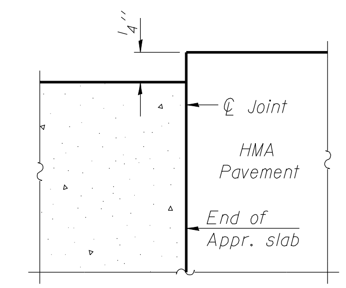


PLAN

* Tilt #9 b_4(E) bars as required to maintain clearance.
** Preformed Flexible Foam Expansion Joint Filler according to Article 1051.09 of the Std. Specifications; full depth of slab, full length of parapet. Typ. each parapet.

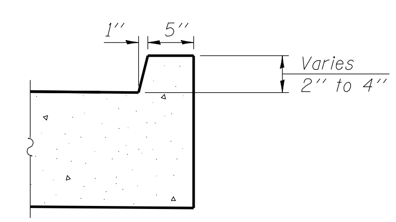


(East Approach) (West Approach)



FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B

(Sheet 1 of 2)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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	DATE = 10/18/2018	DRAWN - SJS	REVISED -	
		CHECKED - MDC	REVISED -	

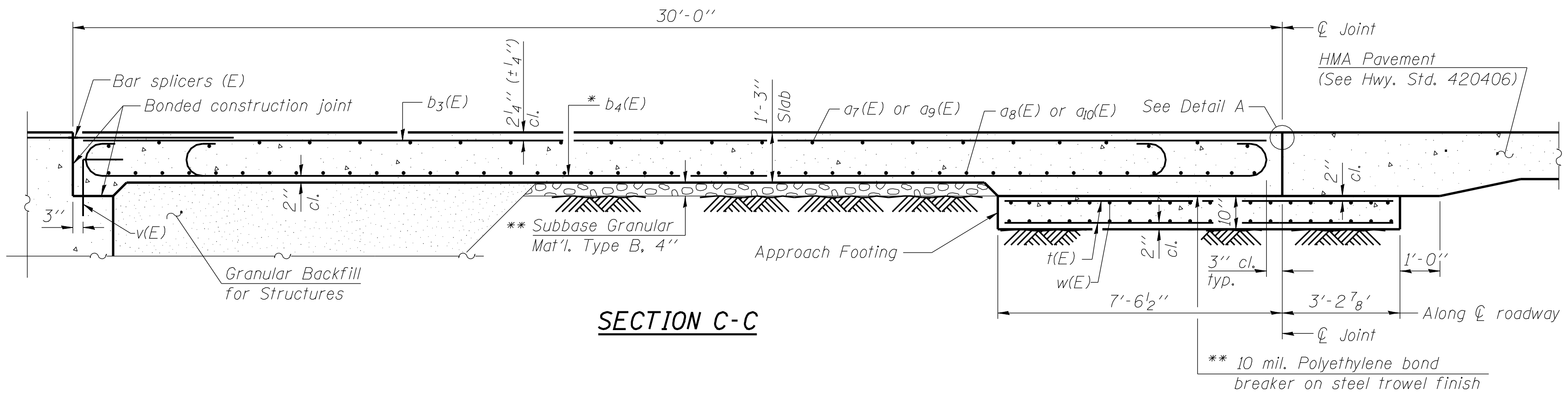
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0014
SHEET NO. 12 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	136

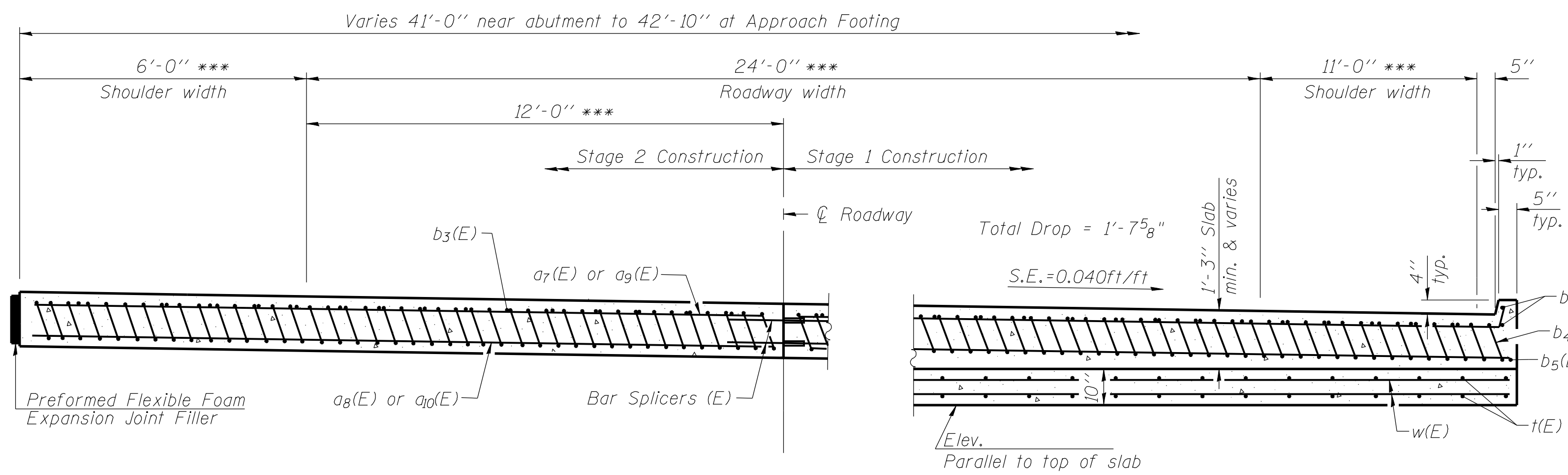
CONTRACT NO. 74177
ILLINOIS FED. AID PROJECT

Notes:

See sheet 12 of 29 for Detail A and View B-B.
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 25 of 29.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 28 of 29.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 29.



SECTION C-C



SECTION D-D
(See Plan for dimensions not shown)

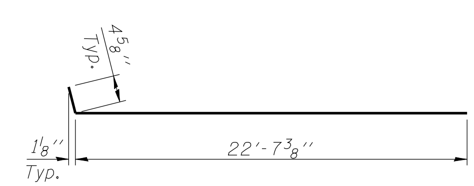
* Tilt #9 b4(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure (Approach Slab).

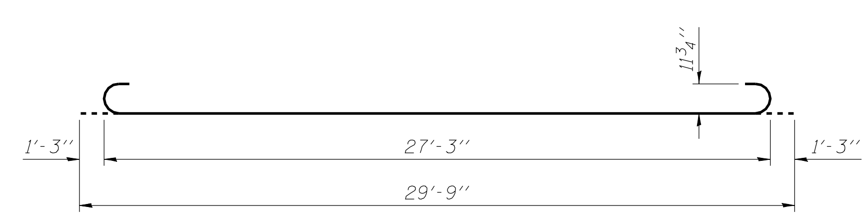
*** Radial dimensions

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_7(E)	28	#4	21'-9''	
a_8(E)	48	#5	21'-9''	
a_9(E)	68	#4	23'-0''	
a_{10}(E)	132	#5	22'-9''	
b_3(E)	68	#4	29'-8''	
b_4(E)	196	#9	29'-9''	
b_5(E)	12	#4	18'-10''	
t(E)	172	#4	10'-5''	
w(E)	160	#5	22'-9''	
Concrete Superstructure (Approach Slab)			Cu. Yd.	119.0
Concrete Structures			Cu. Yd.	28.4
Reinforcement Bars, Epoxy Coated			Pound	31,990



BAR a_9(E)

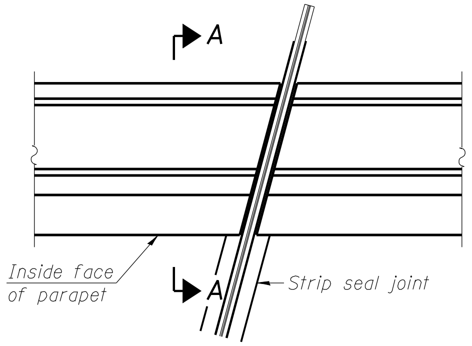


BAR b_4(E)

(Sheet 2 of 2)

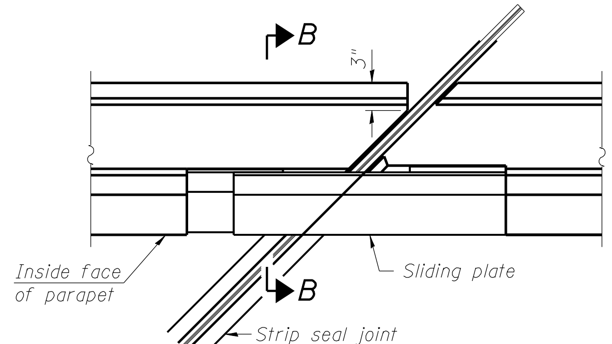
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 051-0014
	FILE = 0510014-74179-001-approach.dgn	CHECKED - TSH	REVISED -		
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		SHEET NO. 13 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	137
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



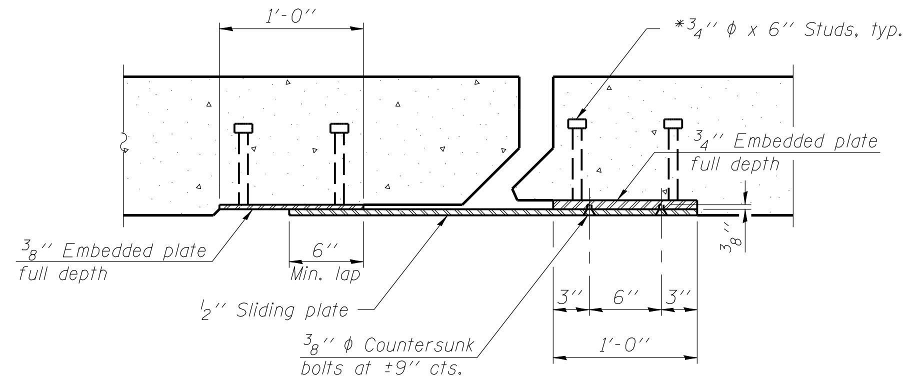
PLAN

(For skews ≤ 30°)

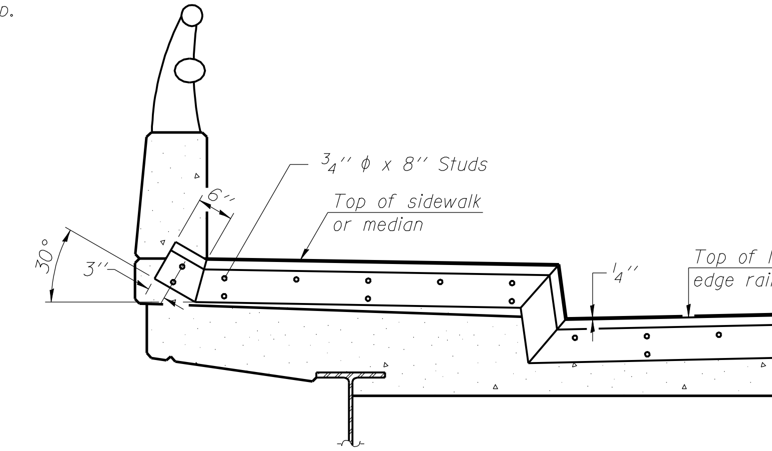


PLAN

(For skews > 30°)
Showing point block

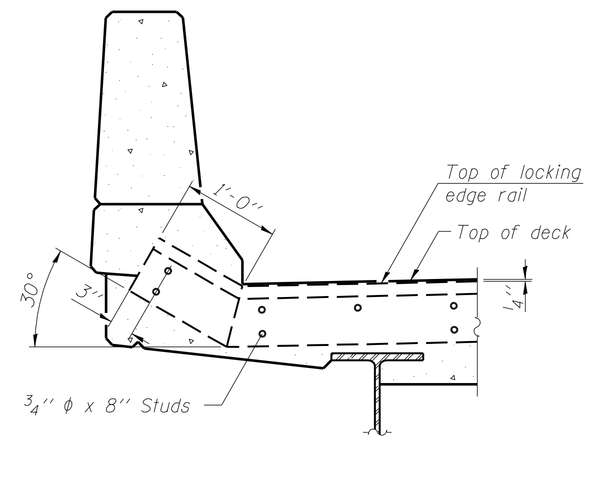


SECTION C-C

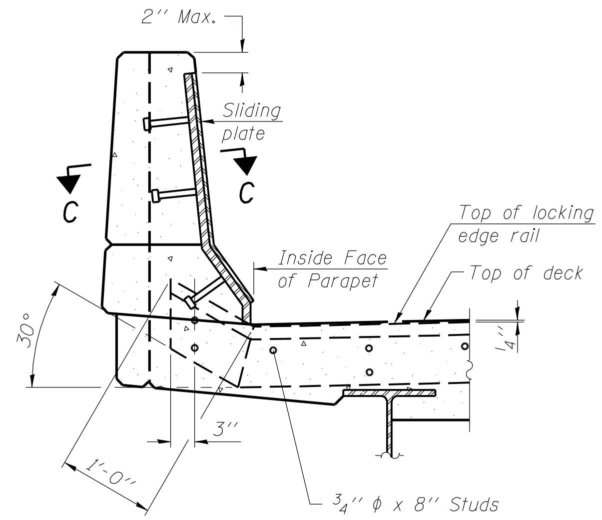


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

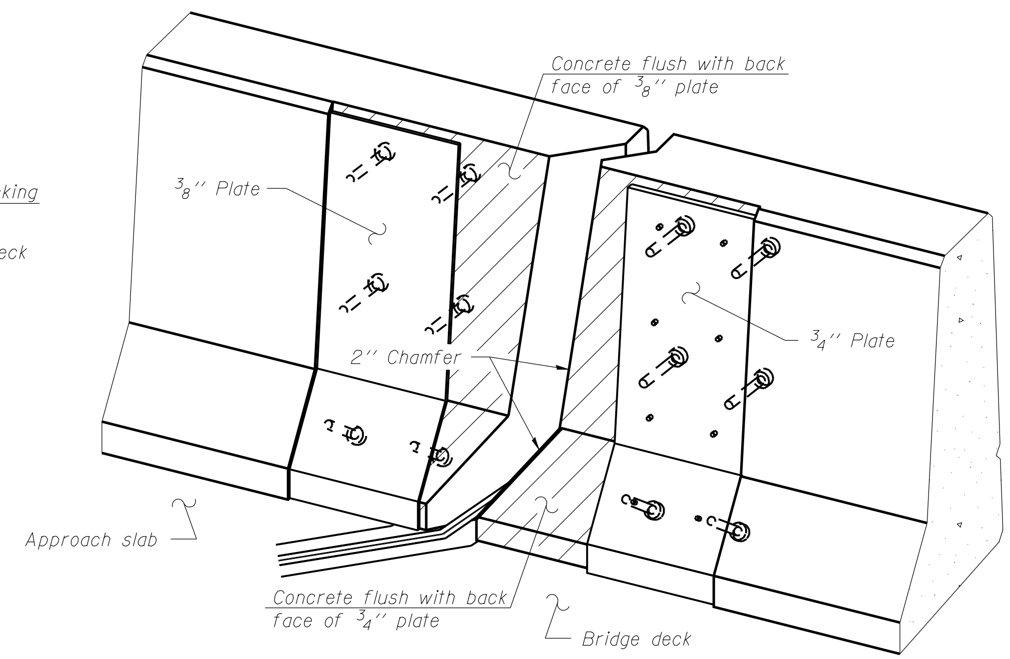
Shorter plates with a single row of studs at 12'' cts. may be necessary on medians which are shallower than 9''. See manufacturer's recommendation.



SECTION A-A

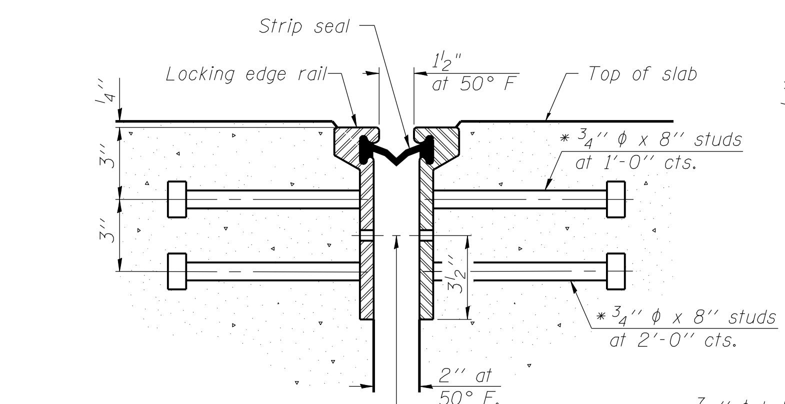


SECTION B-B



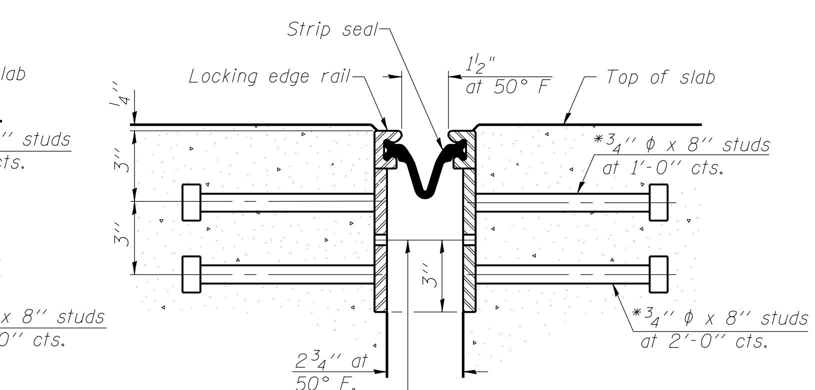
TRIMETRIC VIEW

(Showing back plates only)



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

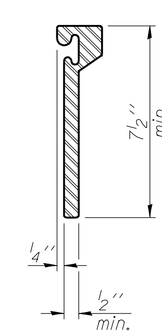
SECTION THRU ROLLED RAIL JOINT



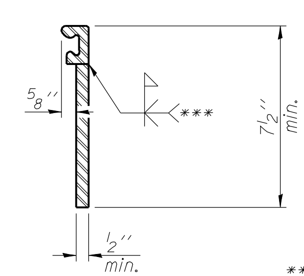
7/16'' ϕ holes at 4'-0'' cts. for 3/8'' ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

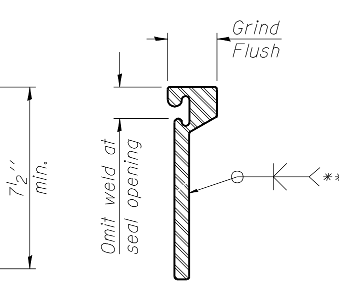
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



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

LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4''. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

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

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

Maximum space between rail segments shall be 3/16'', sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	101

EJ-SSJ 1-27-12

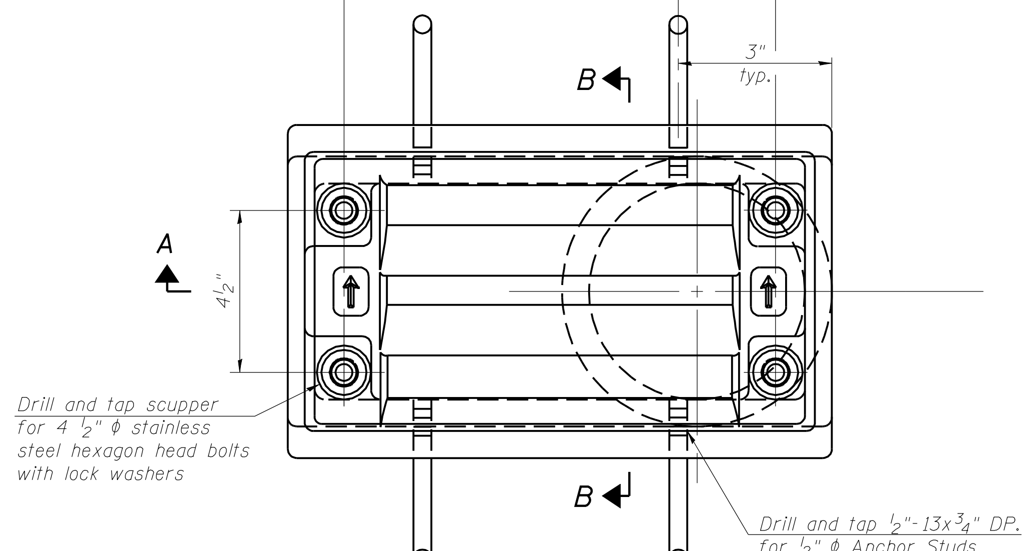
CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-expjoint.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

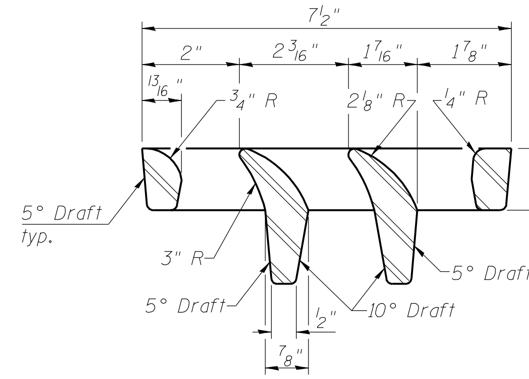
PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 051-0014

SHEET NO. 14 OF 29 SHEETS

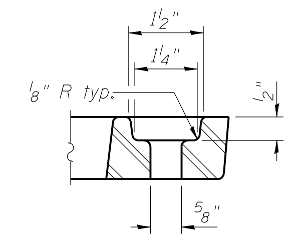
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	138
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

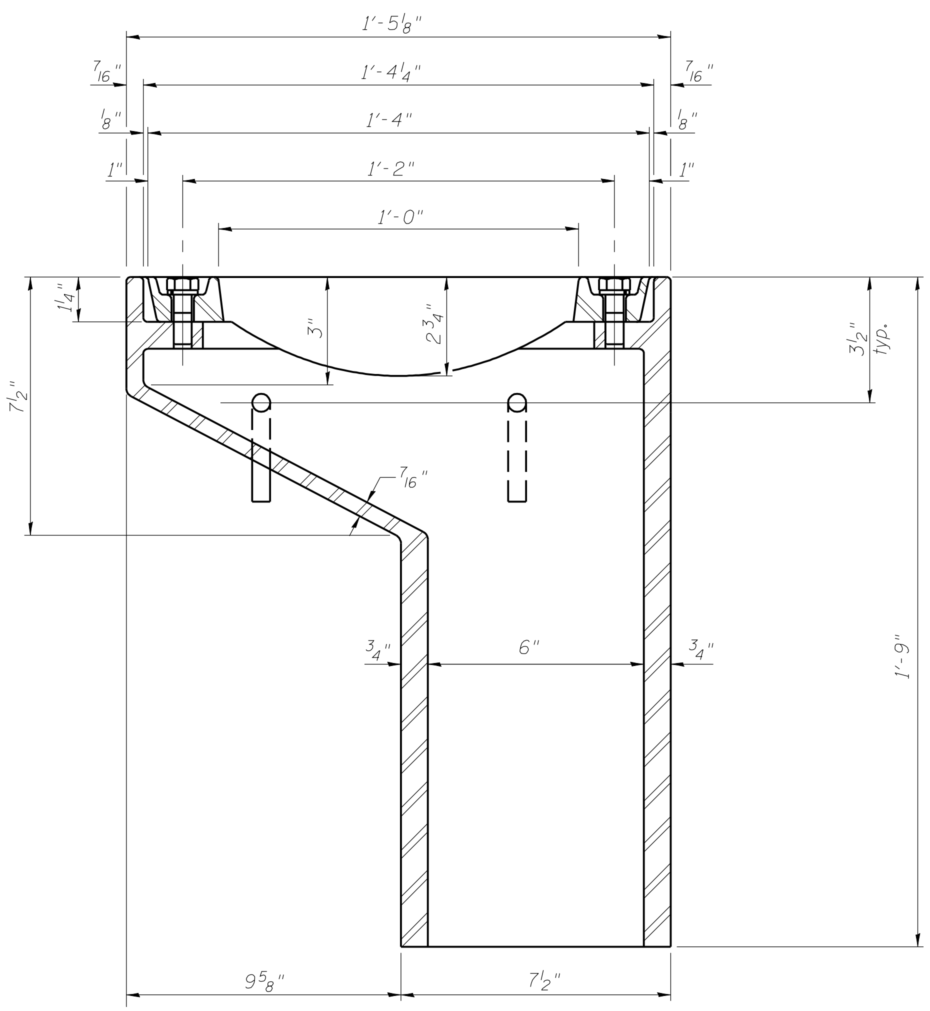
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

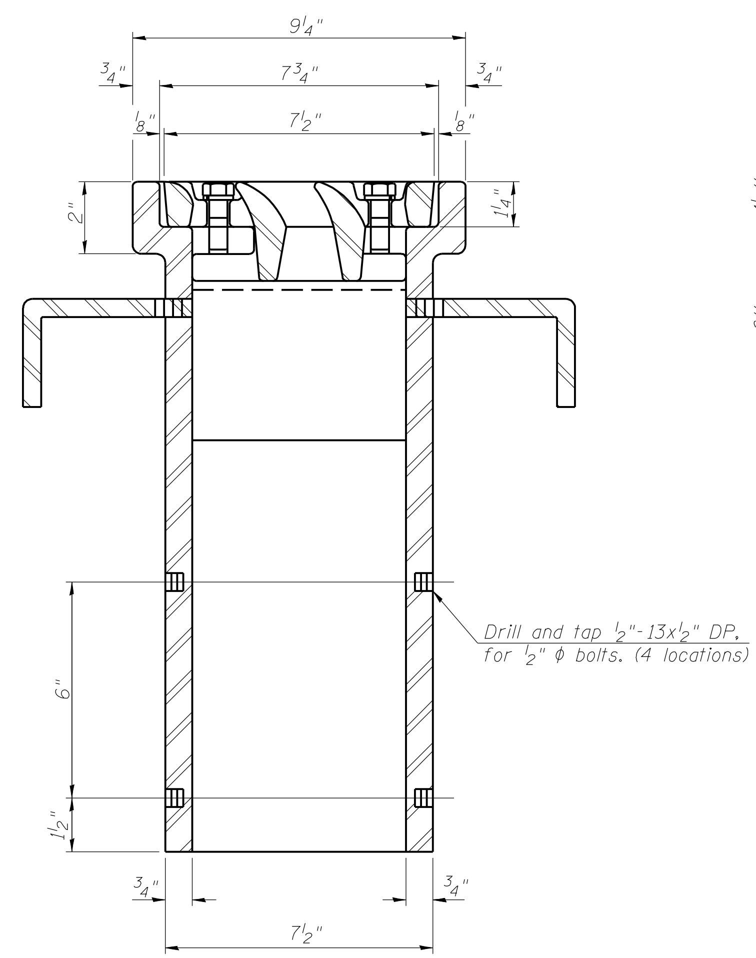
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

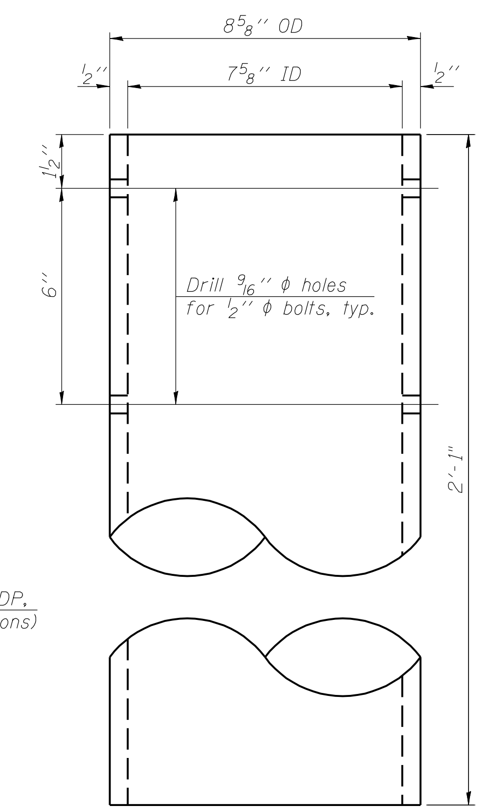


SECTION A-A

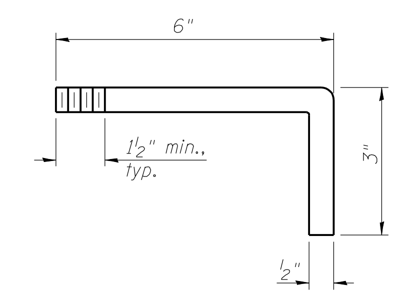
See sheet 10 of 29 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

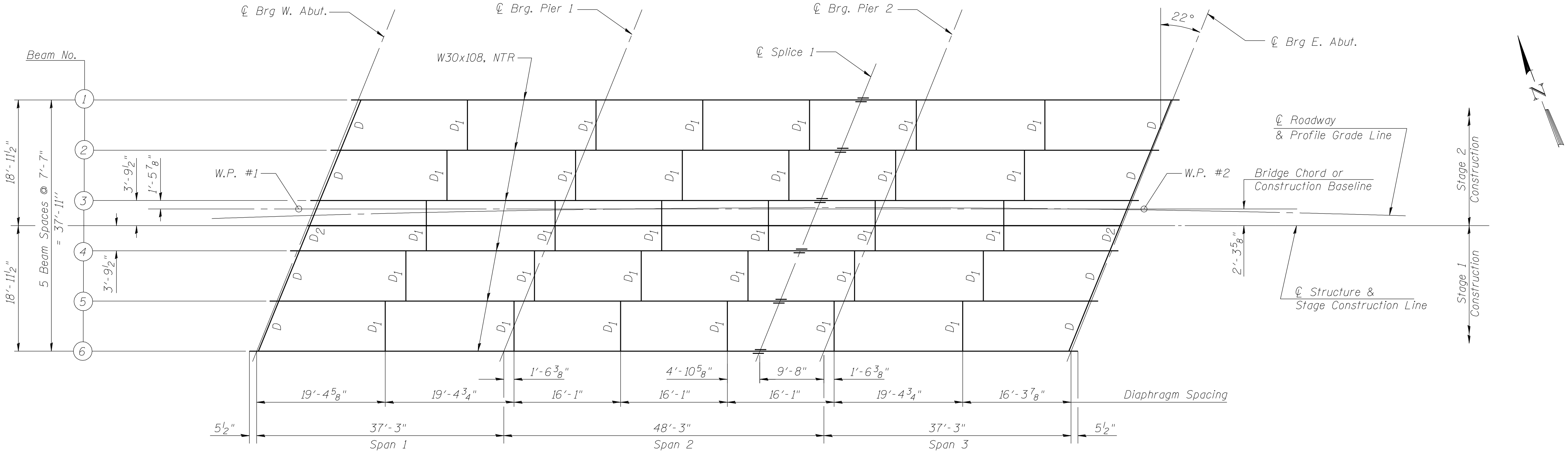
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	1

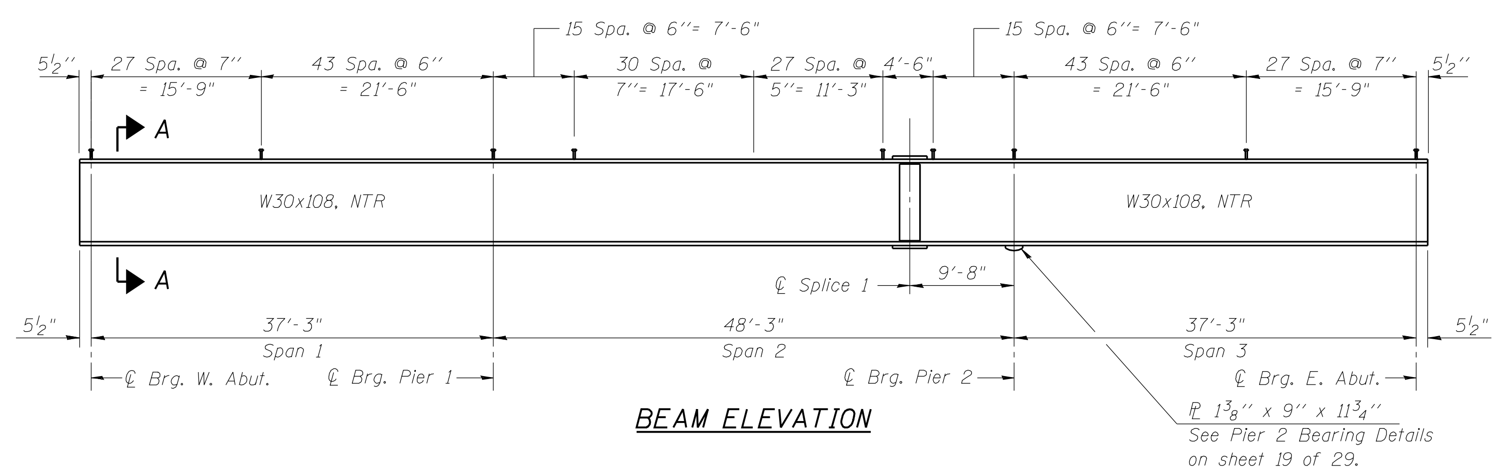
DS-11 7-1-10

CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SCUPPER, DS-11 STRUCTURE NO. 051-0014
	FILE = 0510014-74179-001-scupper.dgn	CHECKED - TSH	REVISED -		
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		SHEET NO. 15 OF 29 SHEETS

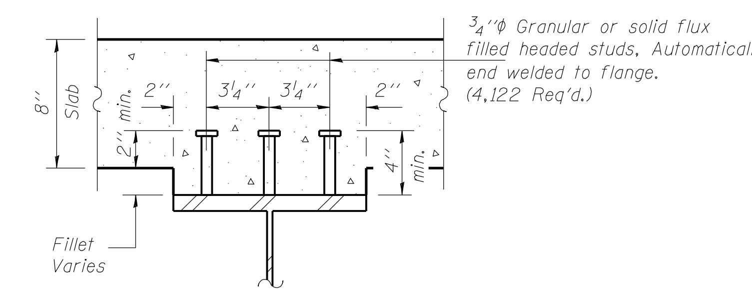
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	139
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



FRAMING PLAN



BEAM ELEVATION



SECTION A-A

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. W. Abut.	436.77	436.50	436.23	435.96	435.69	435.42
℄ Brg. Pier 1	436.26	435.99	435.72	435.45	435.18	434.91
℄ Splice 1	435.74	435.47	435.20	434.93	434.66	434.39
℄ Brg. Pier 2	435.64	435.37	435.10	434.83	434.56	434.29
℄ Brg. E. Abut.	435.25	434.98	434.71	434.44	434.17	433.90

Note:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-structuralsteel.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

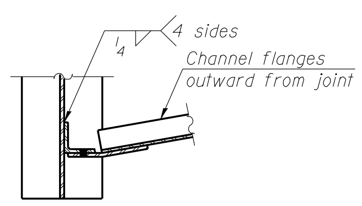
STRUCTURAL STEEL
STRUCTURE NO. 051-0014

SHEET NO. 16 OF 29 SHEETS

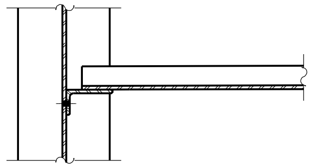
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	140

CONTRACT NO. 74177

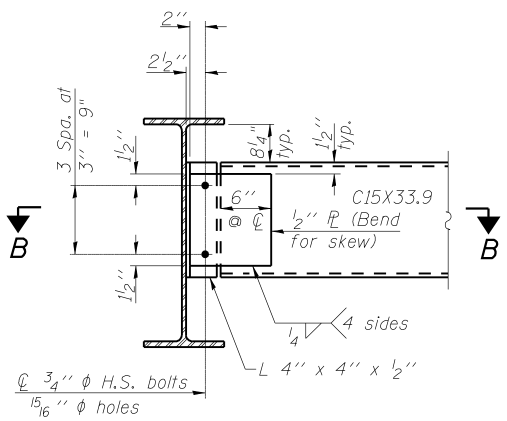
ILLINOIS FED. AID PROJECT



SECTION B-B



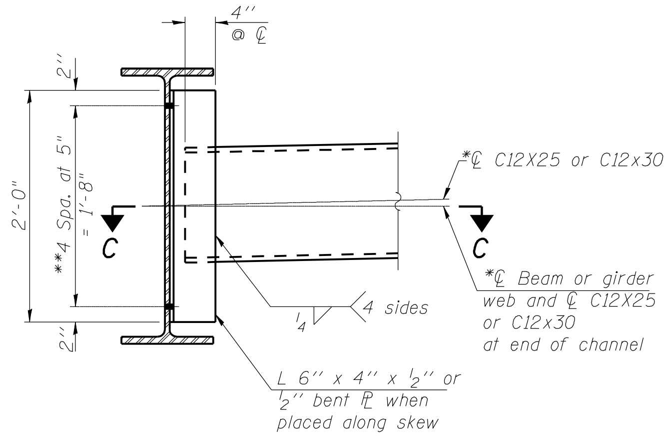
SECTION C-C



END DIAPHRAGM D

(8 Required)

Note:
Two hardened washers required for each set of oversized holes.

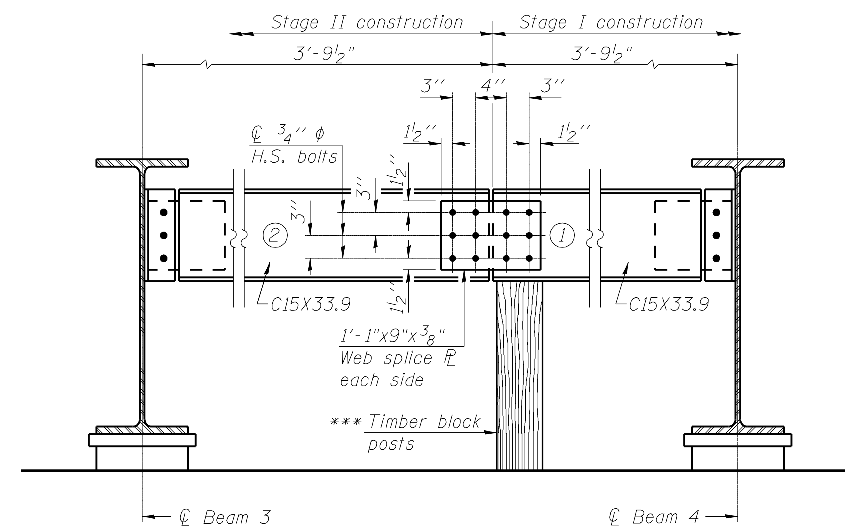


INTERIOR DIAPHRAGM D1

(30 Required)

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**3/4'' ϕ HS bolts, 15/16'' ϕ holes. Provide 13/16''x1 7/8'' slotted holes in L on Stage II side of diaphragms between Beams 3 and 4.

*** Cost of Timber Block Posts is included with Structural Steel.



END DIAPHRAGM D2

(2 Required)

END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

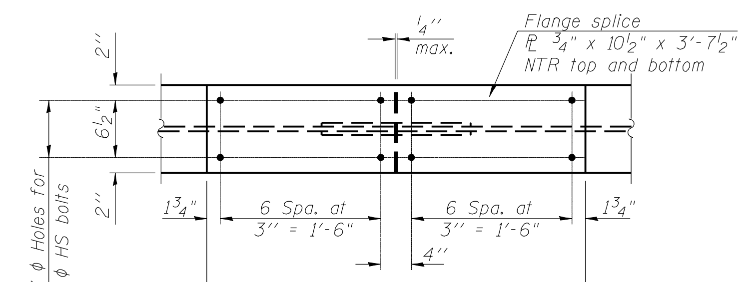
1.) Order diaphragm in two sections.
2.) Attach section (1) of diaphragm to beam 4
3.) Place timber block posts between section (1) of diaphragm and abutment bearing section.
4.) Attach section (2) of diaphragm to both beam 3 and section (1) of diaphragm during stage 2 construction with splice plates.
5.) Remove timber block posts.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I_s	(in^4)	4470	4470	4470
$I_c(n)$	(in^4)	13,787	-	13,787
$I_c(3n)$	(in^4)	10,288	-	10,288
$I_c(cr)$	(in^4)	-	6773	-
S_s	(in^3)	299	299	299
$S_c(n)$	(in^3)	471	-	471
$S_c(3n)$	(in^3)	426	-	426
$S_c(cr)$	(in^3)	-	362	-
DC1	(k/')	0.897	0.897	0.897
M_{DC1}	('k)	82.9	166.1	95.0
DC2	(k/')	0.150	0.150	0.150
M_{DC2}	('k)	13.9	27.8	15.9
DW	(k/')	0.341	0.341	0.341
M_{DW}	('k)	31.5	63.2	36.1
M_{LL+IM}	('k)	396.2	322.7	400.4
M_u (Strength I)	('k)	866.9	912.3	899.5
$\phi_f M_n$	('k)	2462	1461	2462
f_s DC1	(ksi)	3.3	6.7	3.8
f_s DC2	(ksi)	0.4	0.9	0.4
f_s DW	(ksi)	1.0	2.3	1.1
f_s (LL+IM)	(ksi)	10.1	10.7	10.2
f_s (Service II)	(ksi)	17.8	23.8	18.6
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	-	-
$\phi_f F_n$	(ksi)	-	-	-
V_f	(k)	37.7	44.8	27.3

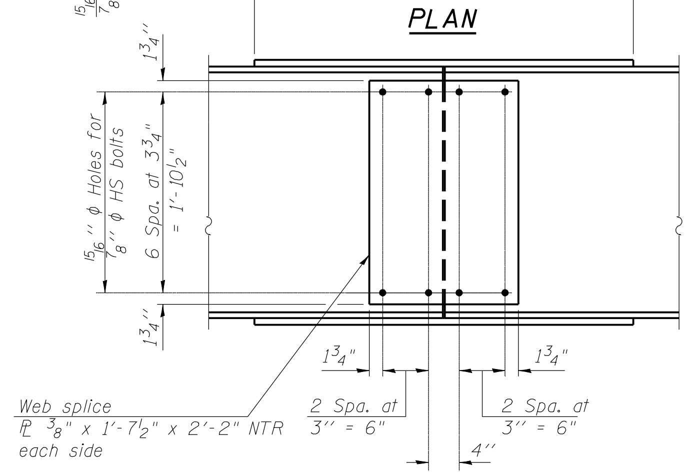
INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	12.2	42.8
R_{DC2}	(k)	2.0	7.2
R_{DW}	(k)	4.7	16.3
R_{LL+IM}	(k)	61.6	93.7
R_{Total}	(k)	80.5	160.0

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.^{4} and in.^{3}).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).
$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{LL+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_u (Strength I): Factored design moment (kip-ft.).
$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{LL+IM}$
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).
f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}
f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
f_s (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{LL+IM} / S_c(n)$ or $M_{LL+IM} / S_c(cr)$ as applicable.
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(LL+IM)$
$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s(LL+IM)$
$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
V_f: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{LL} and R_{LL} include the effects of centrifugal force and superelevation.



PLAN



ELEVATION

SPLICE DETAIL

(6 Required)

Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

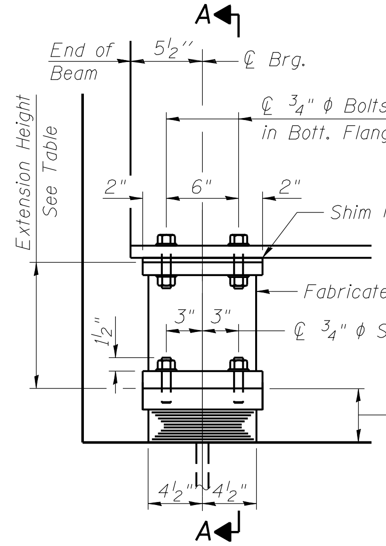
CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-structuralsteel.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

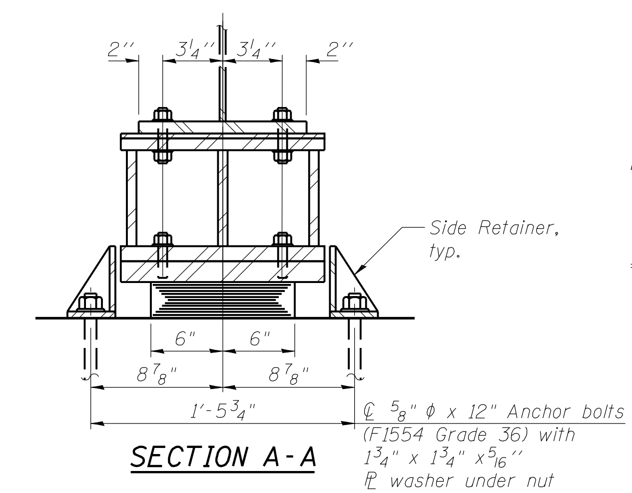
STRUCTURAL STEEL
STRUCTURE NO. 051-0014

SHEET NO. 17 OF 29 SHEETS

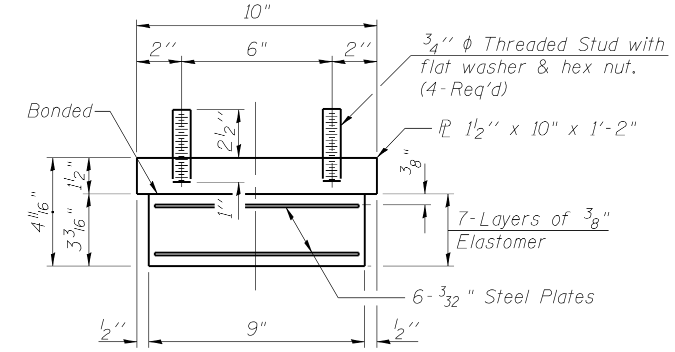
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	141
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



ELEVATION



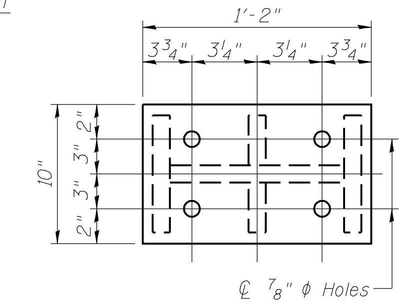
SECTION A-A



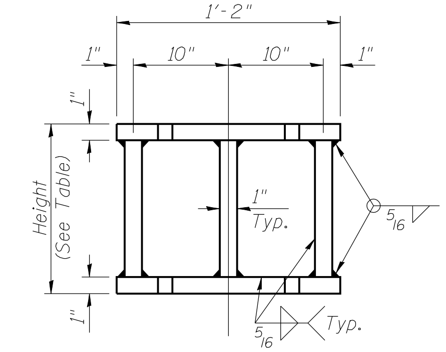
BEARING ASSEMBLY

(Beams 1-3)

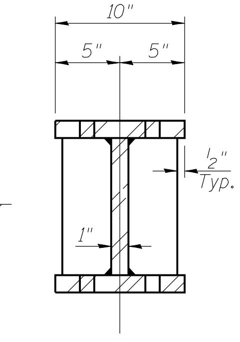
Note:
Shim plates shall not be placed under Bearing Assembly.



PLAN - TOP & BOTTOM



ELEVATION

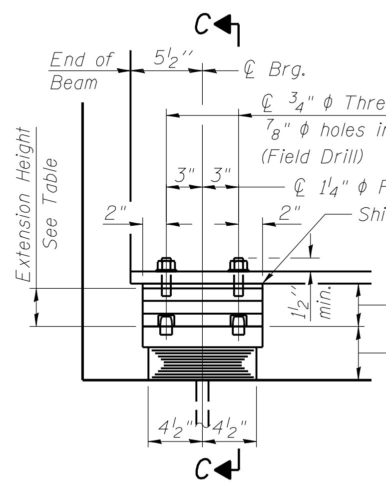


SECTION

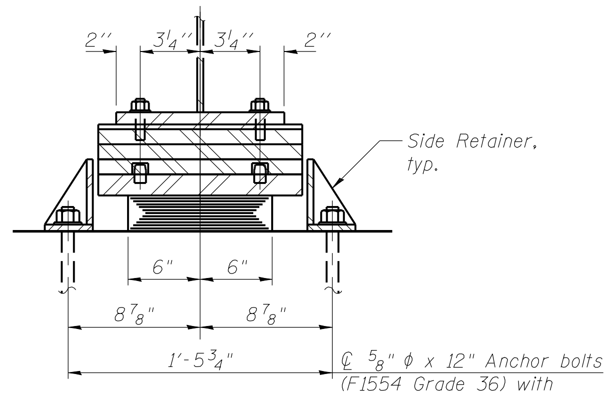
FABRICATED STEEL EXTENSION

(6 Required)

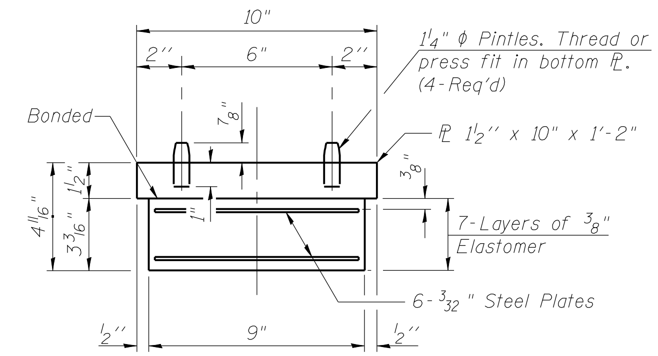
TYPE I ELASTOMERIC EXPANSION BEARING WITH FABRICATED STEEL EXTENSION BEAMS 1-3



ELEVATION



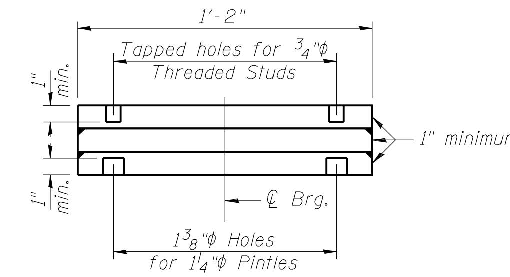
SECTION C-C



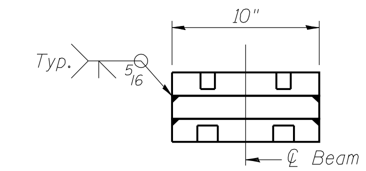
BEARING ASSEMBLY

(Beams 4-5)

Note:
Shim plates shall not be placed under Bearing Assembly.



ELEVATION



END VIEW

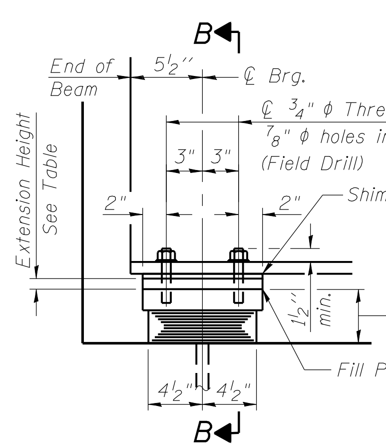
STACKED PLATE STEEL EXTENSION

Dimensions same as top bearing ℙ. Fill ℙs may be fabricated with multiple thinner ℙs welded together as shown above.

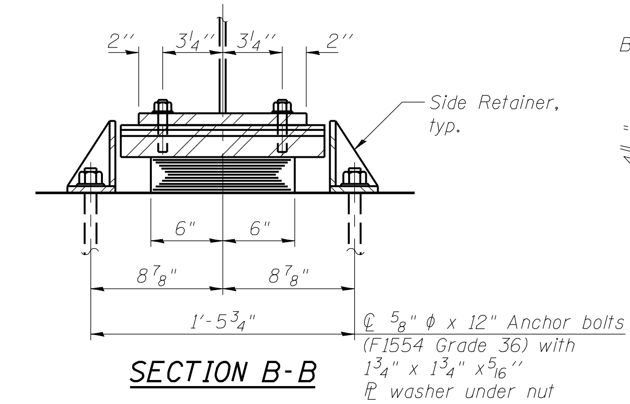
TYPE I ELASTOMERIC EXPANSION BEARING WITH STACKED PLATE EXTENSION BEAMS 4-5

BILL OF MATERIAL

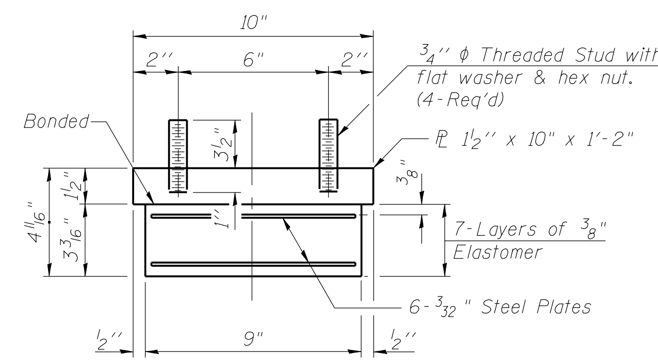
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, ⅝″	Each	24



ELEVATION



SECTION B-B



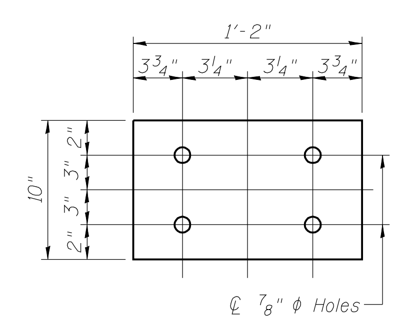
BEARING ASSEMBLY

(Beam 6)

Note:
Shim plates shall not be placed under Bearing Assembly.

EXTENSION HEIGHT

Beam	1	2	3	4	5	6
W. Abut.	12½″	10⅛″	8⅛″	5⅝″	3¼″	⅞″
E. Abut.	12⅝″	10¼″	8¼″	5⅞″	3½″	1⅛″



FILL PLATE DETAIL

TYPE I ELASTOMERIC EXPANSION BEARING WITH FILL PLATE BEAM 6

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

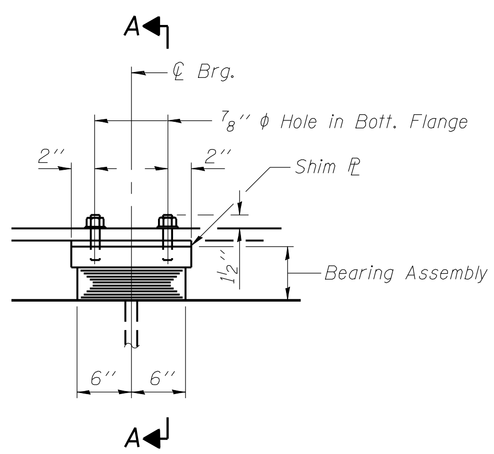
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

Steel for bearing shall be M270 Grade 50.

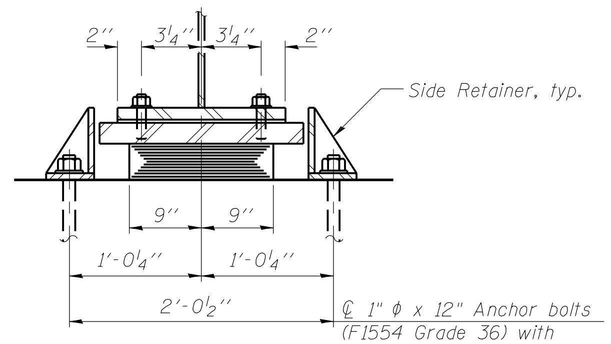
See Sheet 19 of 29 for Pintle detail, Side Retainer and Existing Bearing Removal detail.

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6 / FILE = 0510014-74179-001-bearing.dgn / DATE = 10/18/2018	DESIGNED - AAN / CHECKED - TSH / DRAWN - SJS / CHECKED - MDC	REVISED - / REVISED - / REVISED - / REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT BEARING DETAILS STRUCTURE NO. 051-0014

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	142
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

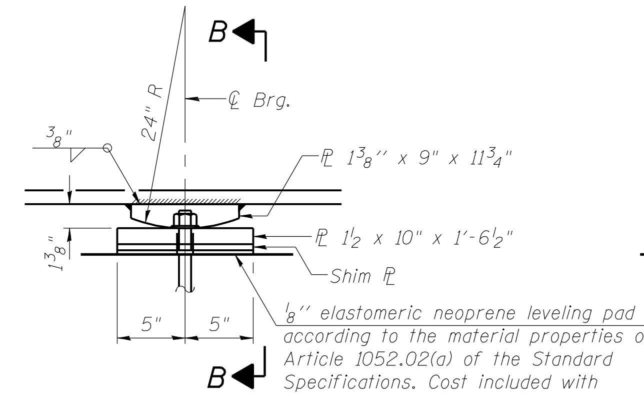


ELEVATION AT PIER 1

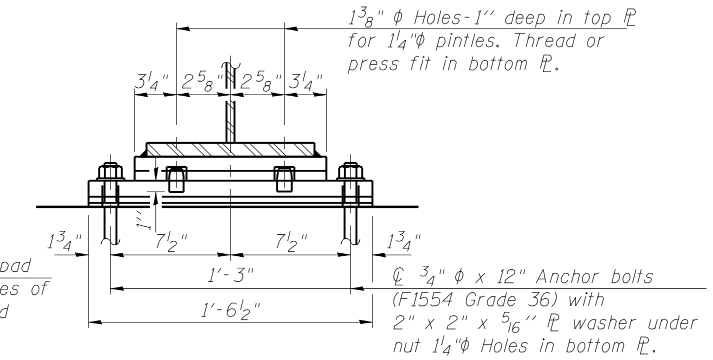


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT PIER 1



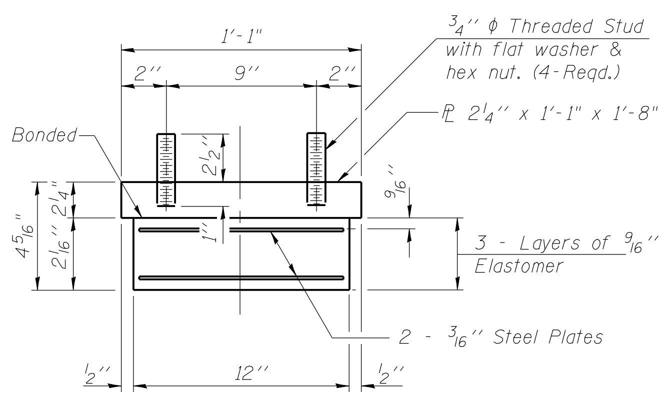
ELEVATION AT PIER 2



SECTION B-B

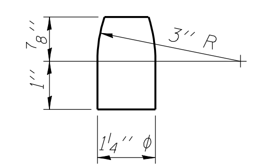
FIXED BEARING AT PIER 2

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.
Steel for bearing shall be M270 Grade 50.

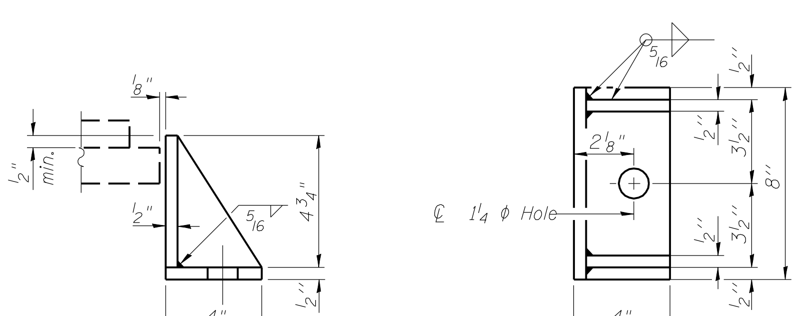


BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

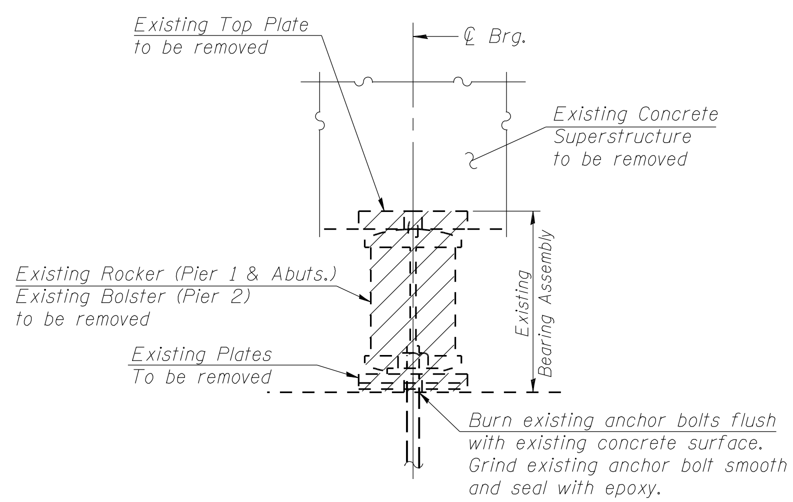


PINTLE



SIDE RETAINER

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



EXISTING BEARING REMOVAL AT PIERS AND ABUTMENTS

Work is included with the cost for Removal of Existing Superstructures.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Anchor Bolts, 3/4"	Each	12
Anchor Bolts, 1"	Each	12

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-bearing.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 051-0014

SHEET NO. 19 OF 29 SHEETS

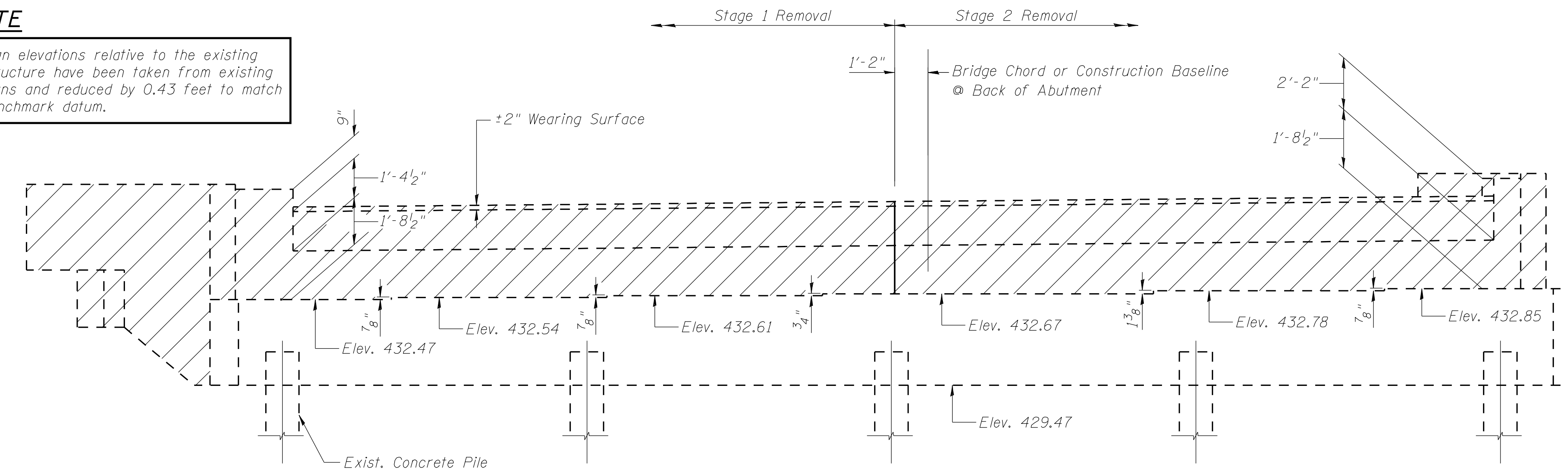
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	143

CONTRACT NO. 74177

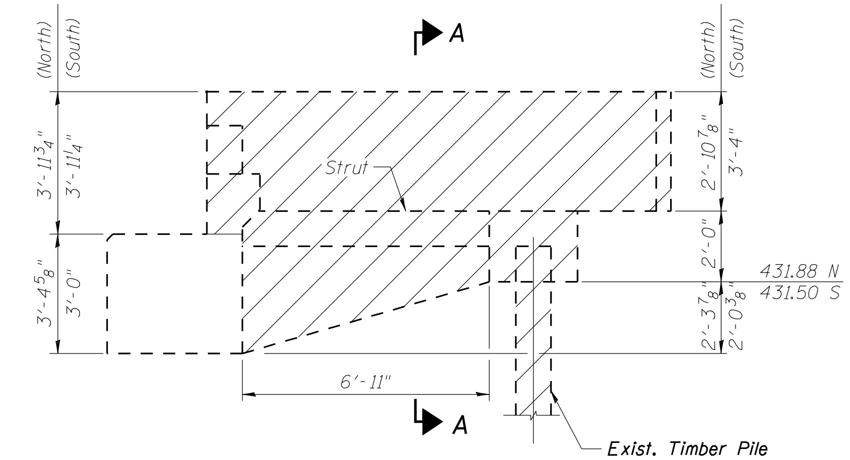
ILLINOIS FED. AID PROJECT

NOTE

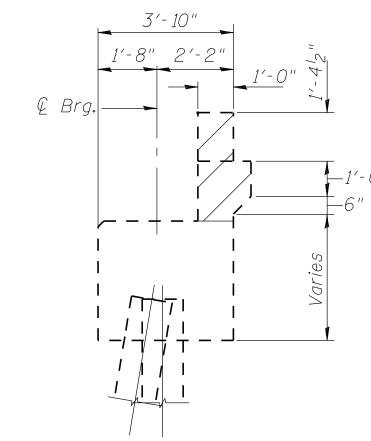
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.



ELEVATION

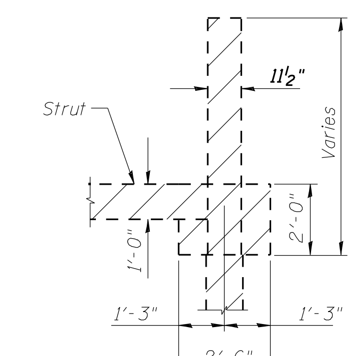


WINGWALL ELEVATION

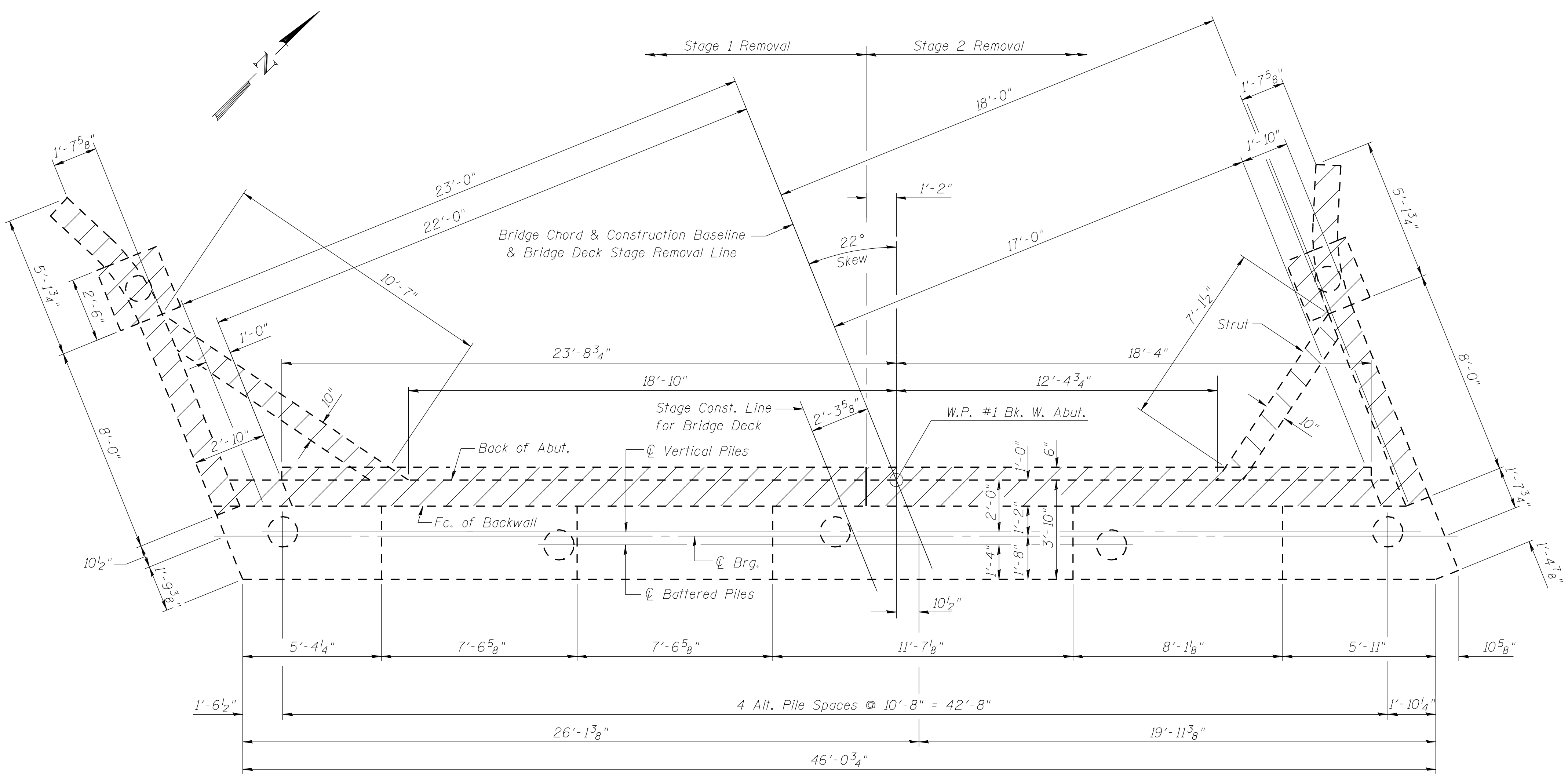


SEC. THRU WEST ABUT.

Dimensions at Rt. L's



SEC. A-A



PLAN

NOTES

1. Hatched area indicates Concrete Removal
2. See sheet 4 of 29 for Temporary Sheet Piling.
3. Piles supporting existing wingwalls shall be removed to min. 1' below existing grade.

WEST ABUTMENT BILL OF MATERIAL

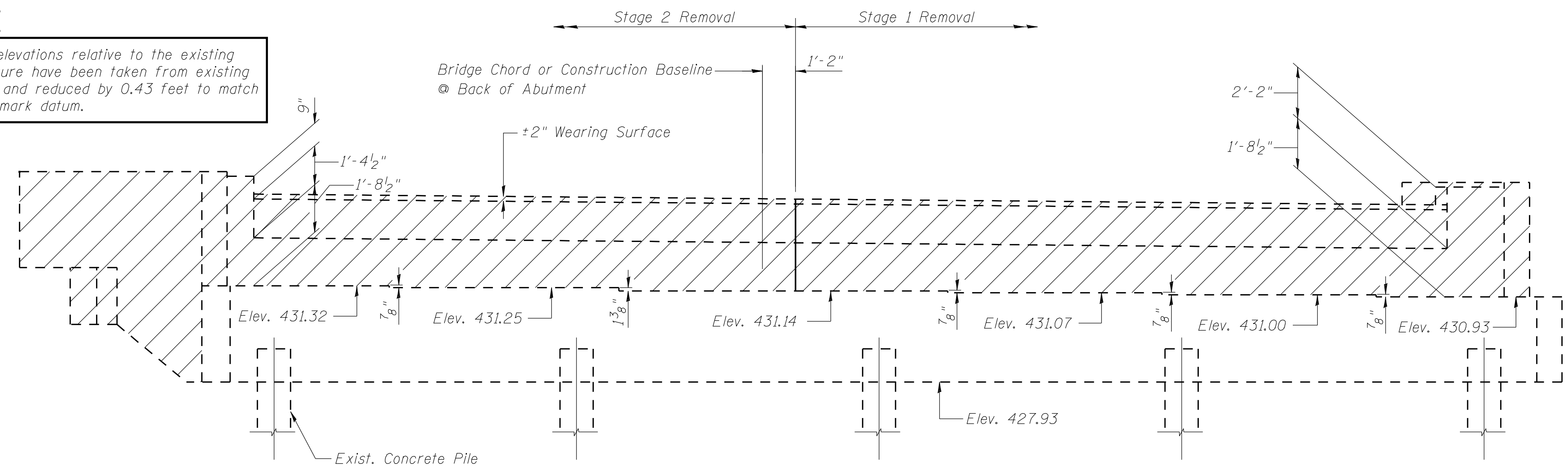
Item	Unit	Total
Concrete Removal	Cu. Yd.	12.5

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6 FILE = 0510014-74179-001-abutremoval.dgn DATE = 10/18/2018	DESIGNED - AAN CHECKED - TSH DRAWN - SJS CHECKED - MDC	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST ABUTMENT CONCRETE REMOVAL DETAILS STRUCTURE NO. 051-0014 SHEET NO. 20 OF 29 SHEETS

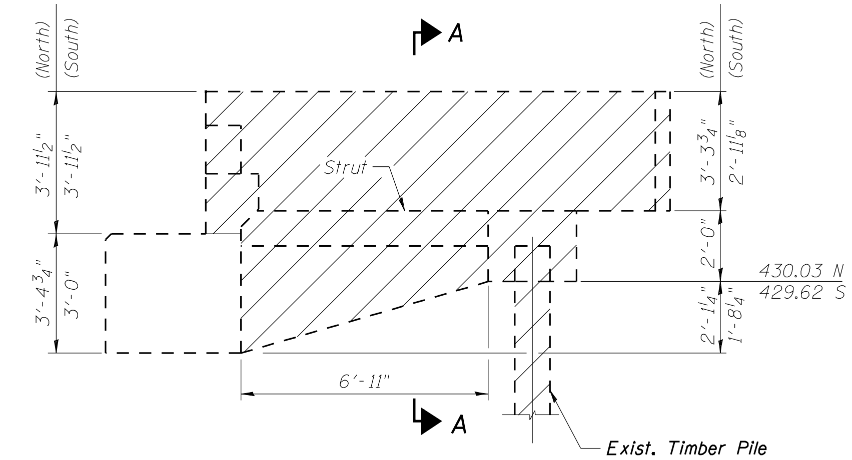
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	144
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

NOTE

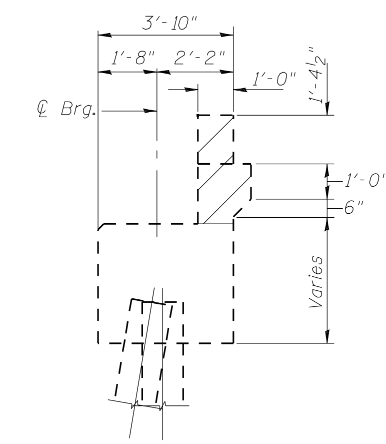
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.



ELEVATION

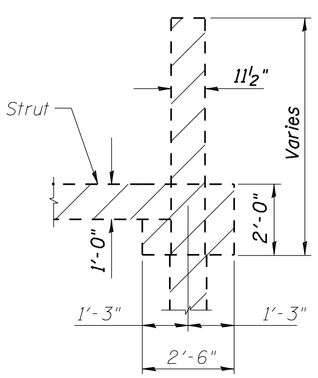


WINGWALL ELEVATION

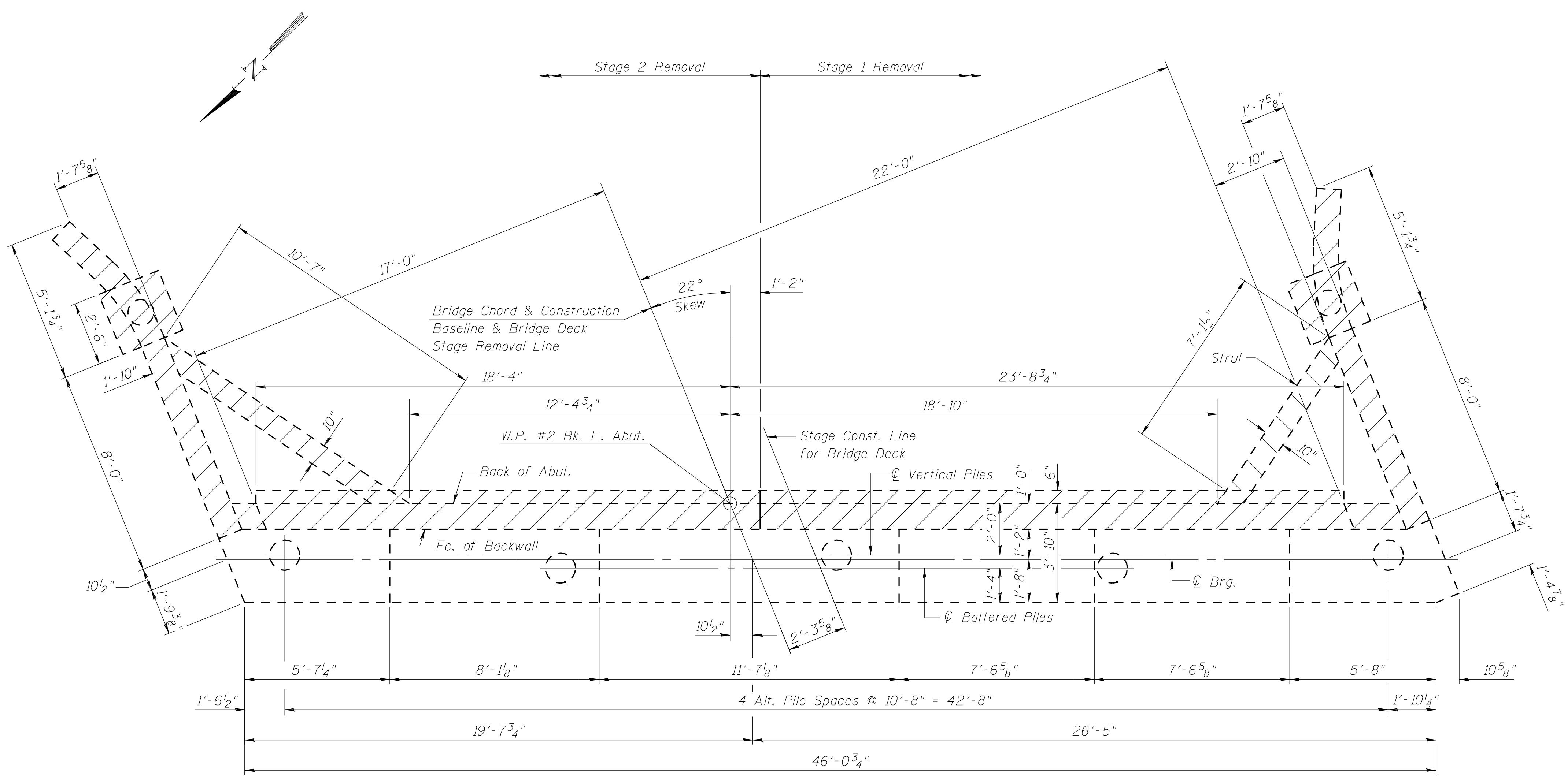


SEC. THRU EAST ABUT.

Dimensions at Rt. L's



SEC. A-A



PLAN

NOTES

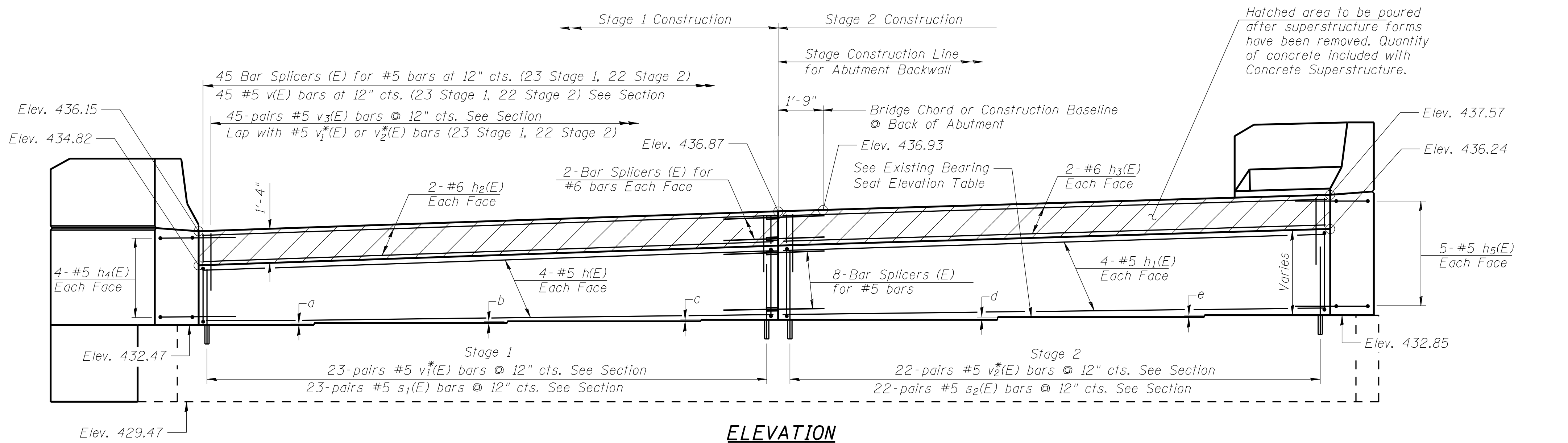
1. Hatched area indicates Concrete Removal
2. See sheet 4 of 29 for Temporary Sheet Piling.
3. Piles supporting existing wingwalls shall be removed to min. 1' below existing grade.
4. Existing reinforcement extending into removal ares shall be cut off flush.

EAST ABUTMENT BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	12.5

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT CONCRETE REMOVAL DETAILS STRUCTURE NO. 051-0014
	FILE = 0510014-74179-001-abutremoval.dgn	CHECKED - TSH	REVISED -		
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		SHEET NO. 21 OF 29 SHEETS
		CHECKED - MDC	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	145
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



ELEVATION

NOTE

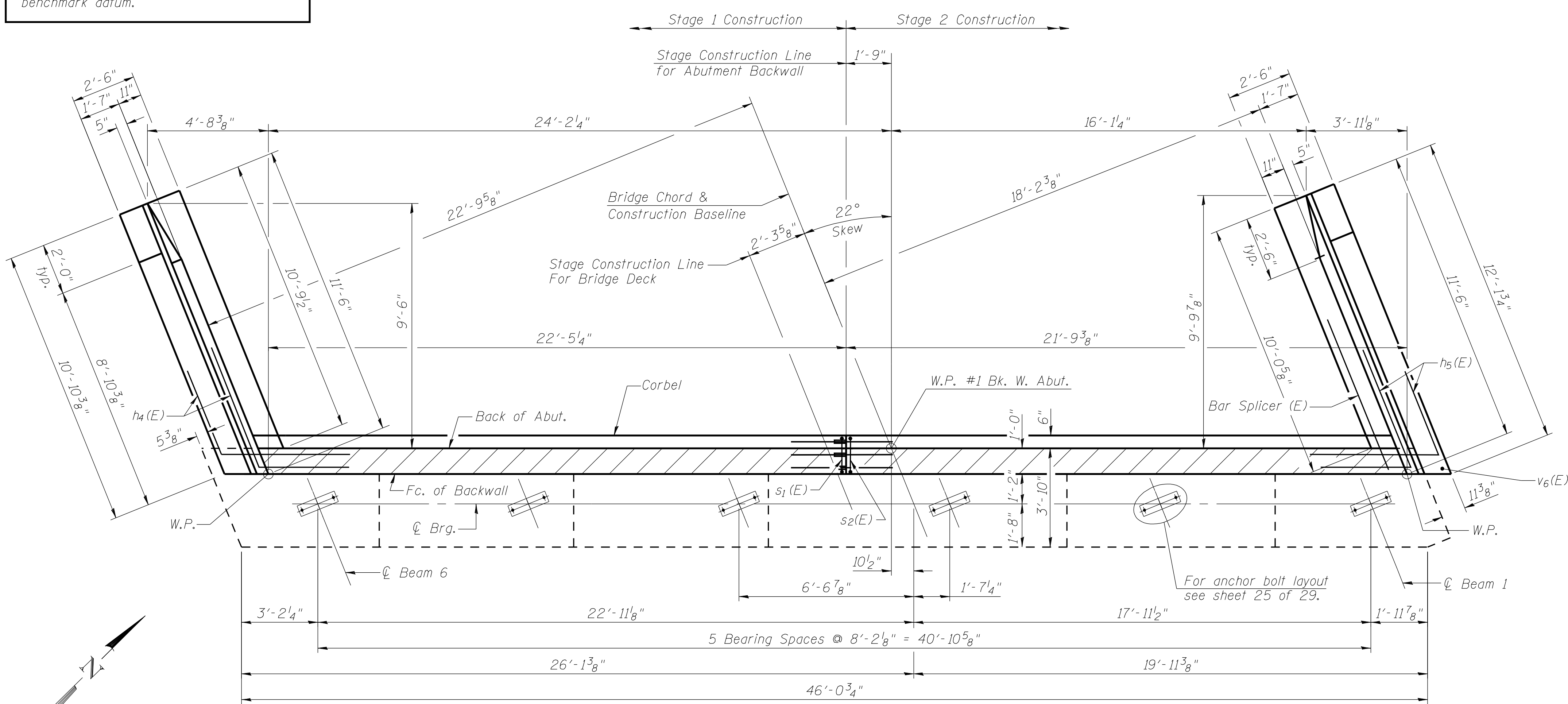
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.

TABLE OF EXISTING STEP HEIGHTS

	a	b	c	d	e
West Abutment	7/8"	7/8"	3/4"	1 3/8"	7/8"

EXISTING BEARING SEAT ELEVATIONS WEST ABUTMENT

Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
432.85	432.78	432.67	432.61	432.54	432.47



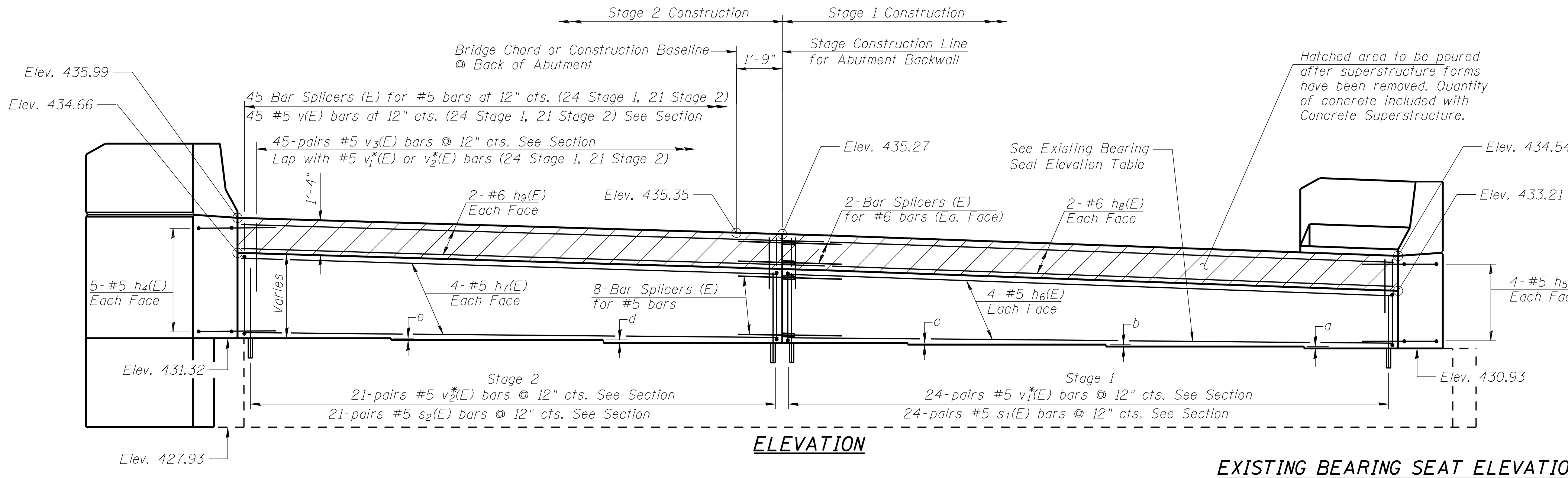
PLAN

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6 FILE = 0510014-74179-001-abutments.dgn DATE = 10/18/2018	DESIGNED - AAN CHECKED - TSH DRAWN - SJS CHECKED - MDC	REVISED - REVISED - REVISED - REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 051-0014
SHEET NO. 22 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	146
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



ELEVATION

TABLE OF EXISTING STEP HEIGHTS

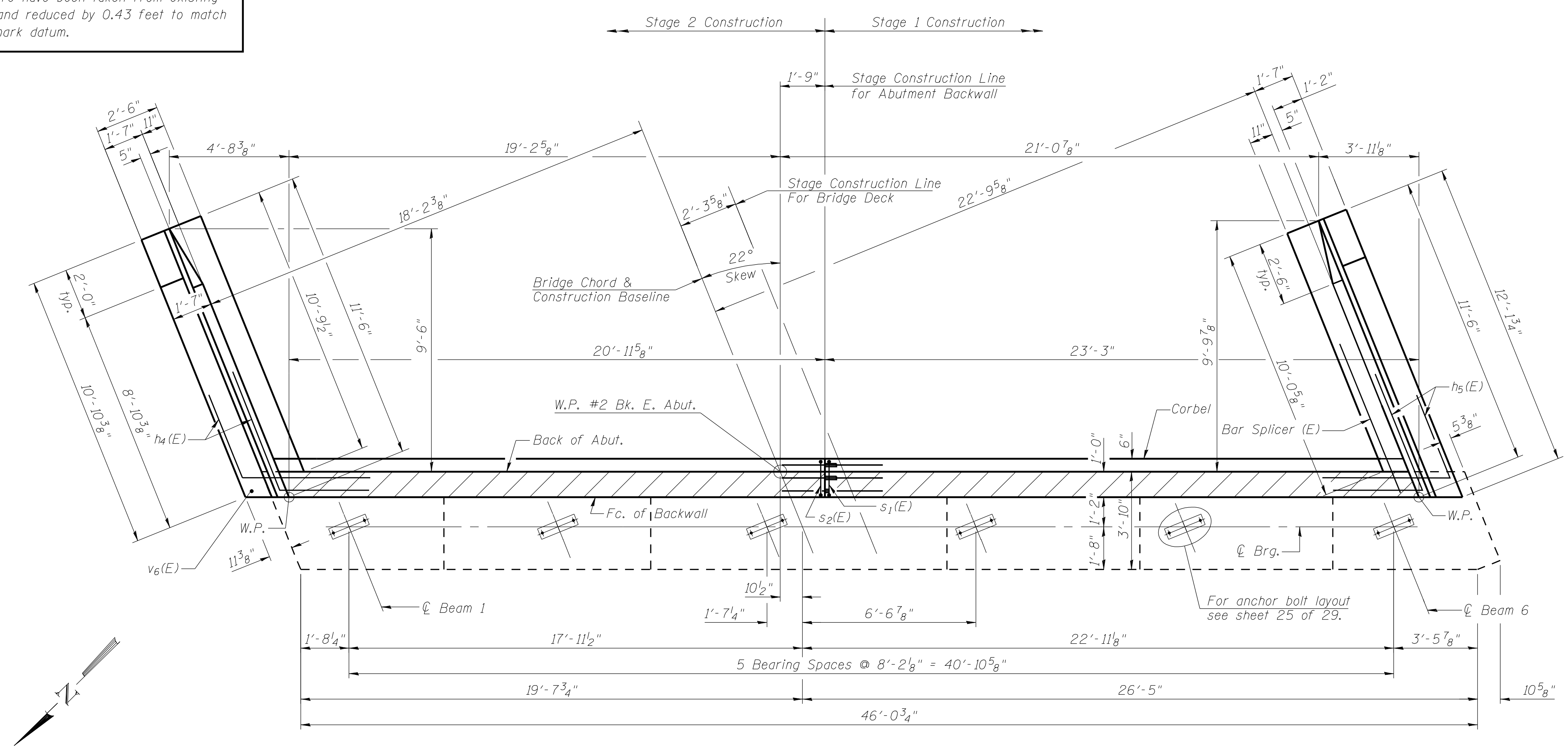
	a	b	c	d	e
East Abutment	7/8"	7/8"	7/8"	1 3/8"	7/8"

EXISTING BEARING SEAT ELEVATIONS EAST ABUTMENT

Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
431.32	431.25	431.14	431.07	431.00	430.93

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.



PLAN

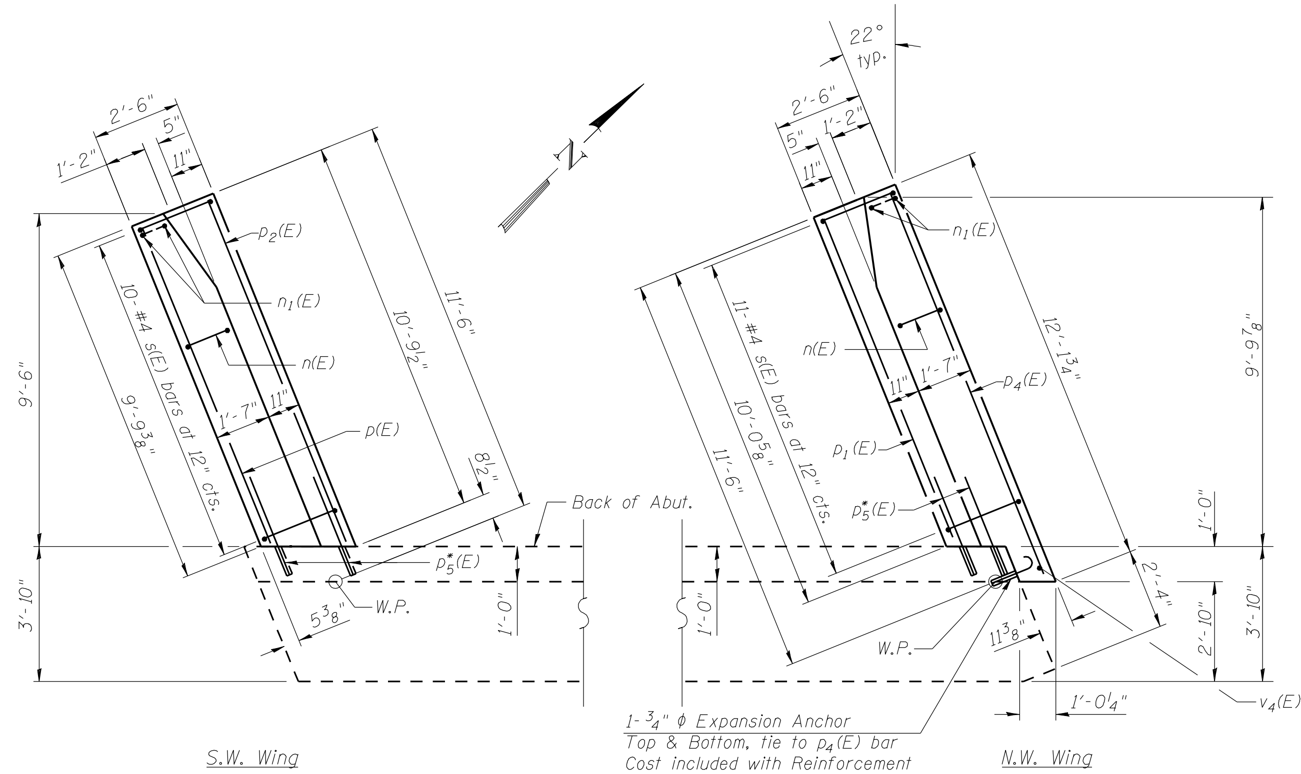
CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-abutments.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

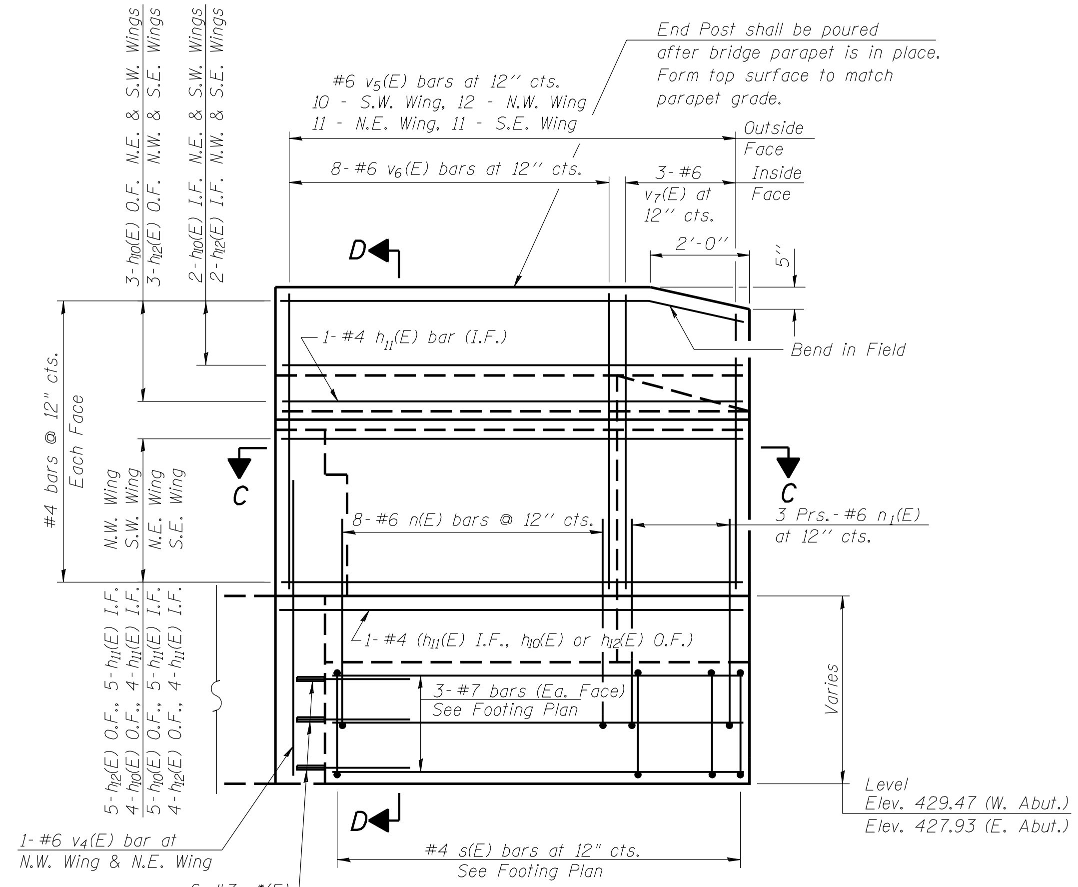
EAST ABUTMENT
STRUCTURE NO. 051-0014

SHEET NO. 23 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	147
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

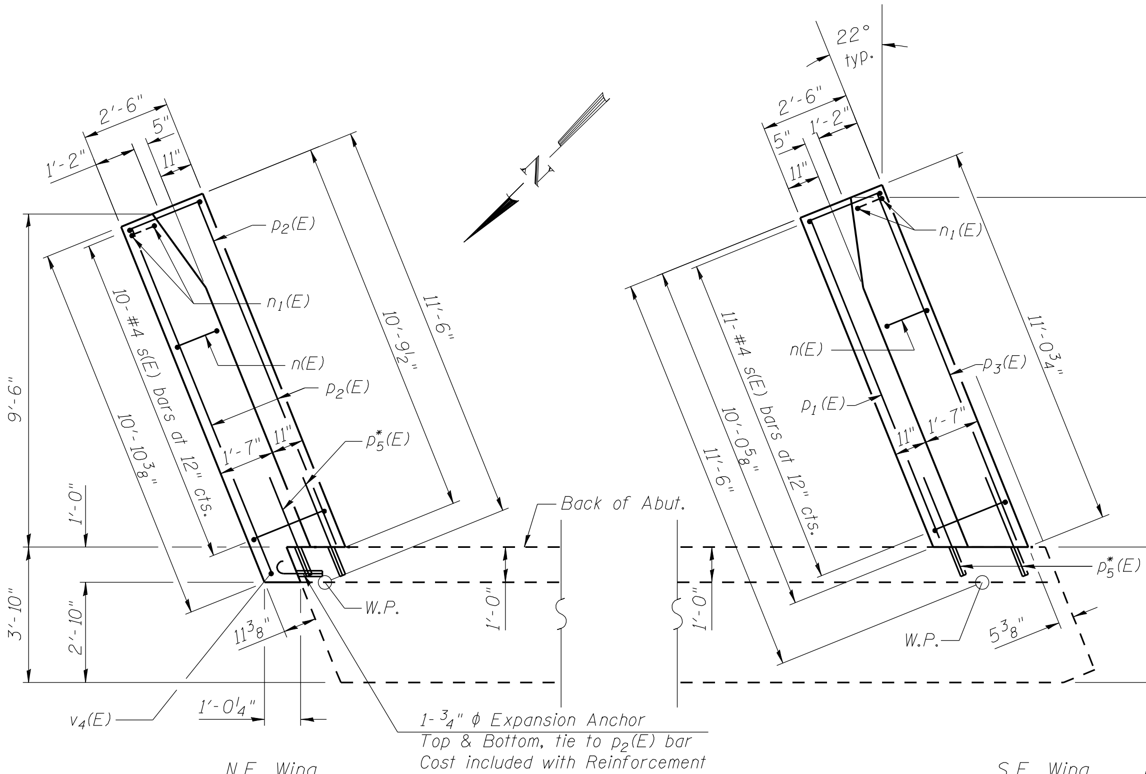


WINGWALL FOOTING PLAN - WEST ABUTMENT

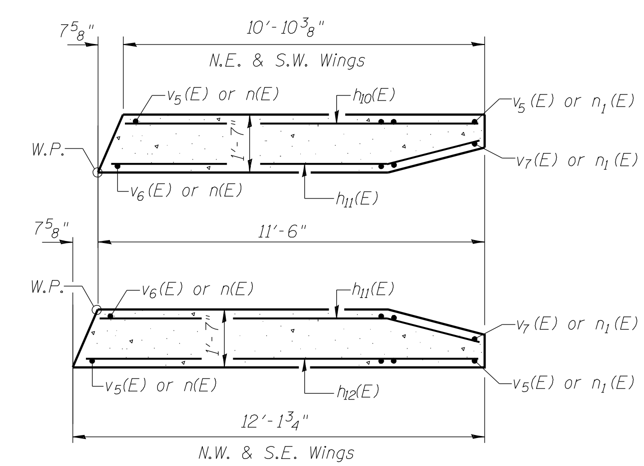


WING WALL ELEVATION

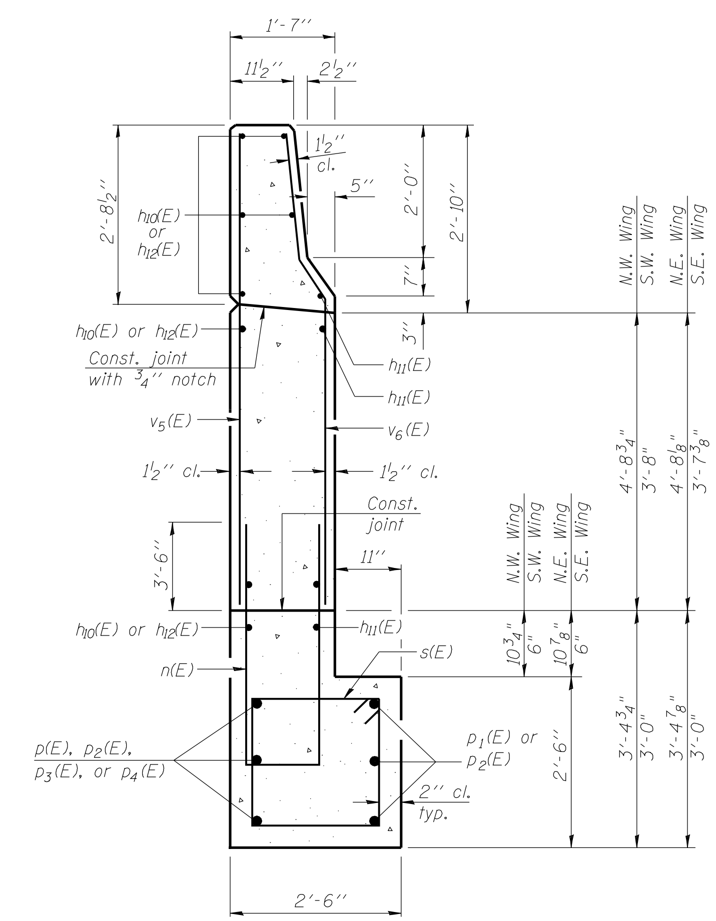
I.F. - Inside Face
O.F. - Outside Face



WINGWALL FOOTING PLAN - EAST ABUTMENT



SEC. C-C



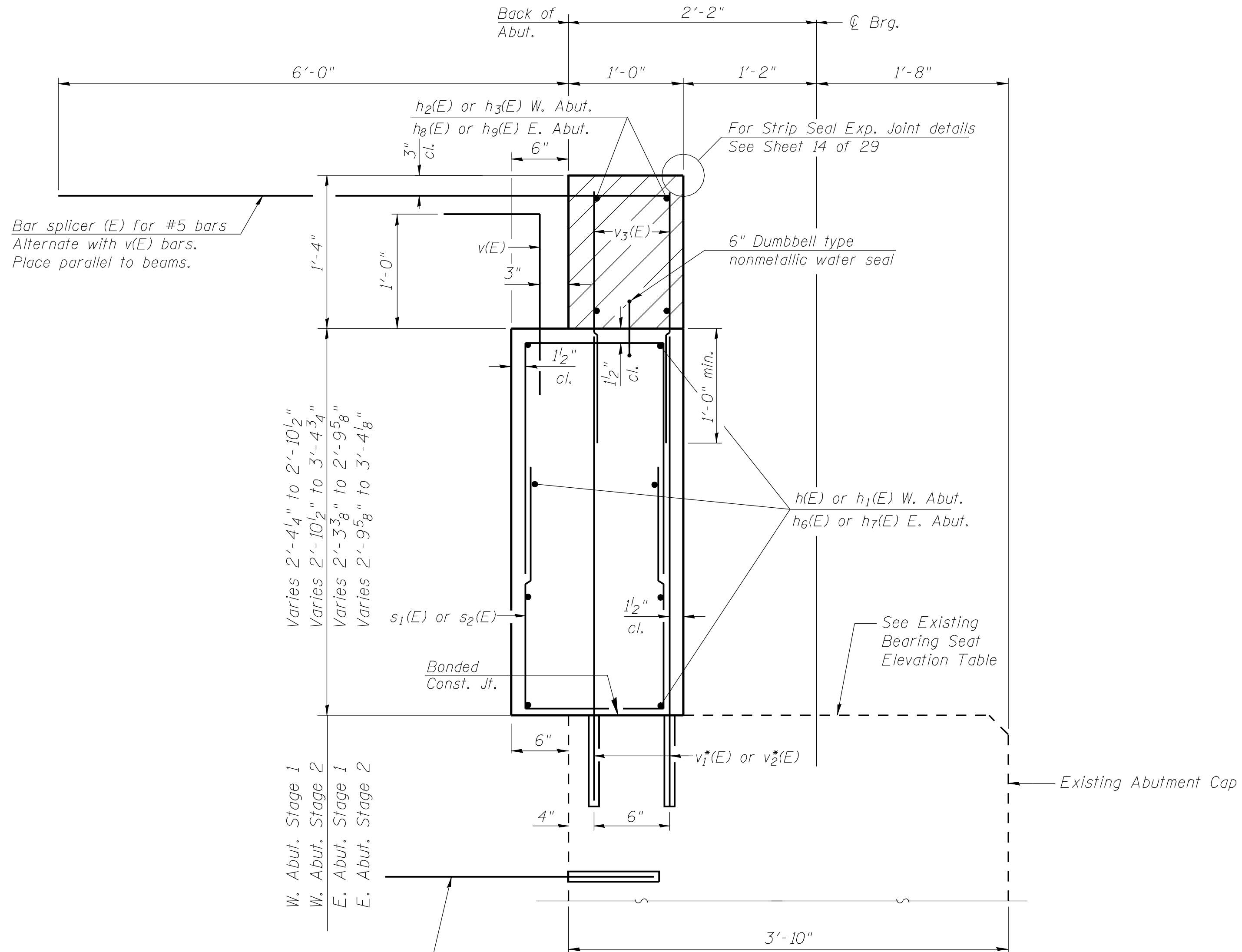
SECTION D-D

(Dimensions @ Bk. ok Abut.)

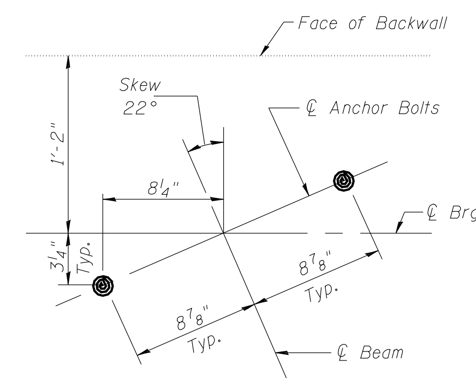
NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.

CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT DETAILS STRUCTURE NO. 051-0014	F.A.P. RTE. 327	SECTION (51-23HB-3)BR	COUNTY LAWRENCE
	FILE = 0510014-74179-001-abutments.dgn	CHECKED - TSH	REVISED -				TOTAL SHEETS 260	SHEET NO. 148
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		SHEET NO. 24 OF 29 SHEETS		CONTRACT NO. 74177	
		CHECKED - MDC	REVISED -				ILLINOIS FED. AID PROJECT	



SEC. THRU ABUTMENT
(Dimensions at Rt. L's)



ANCHOR BOLT LAYOUT

TWO ABUTMENTS
BILL OF MATERIAL

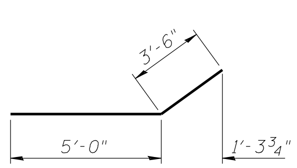
Bar	No.	Size	Length	Shape
h(E)	8	#5	22'-4"	
h_1(E)	8	#5	21'-3"	
h_2(E)	4	#6	22'-4"	
h_3(E)	4	#6	21'-3"	
h_4(E)	18	#5	8'-6"	
h_5(E)	18	#5	8'-6"	
h_6(E)	8	#5	23'-2"	
h_7(E)	8	#5	20'-6"	
h_8(E)	4	#6	23'-2"	
h_9(E)	4	#6	20'-6"	
h_{10}(E)	21	#4	10'-7"	
h_{11}(E)	26	#4	11'-2"	
h_{12}(E)	21	#4	11'-10"	
n(E)	32	#6	12'-10"	
n_1(E)	24	#6	6'-5"	
p(E)	3	#7	9'-5"	
p_1(E)	6	#7	9'-8"	
p_2(E)	9	#7	10'-5"	
p_3(E)	3	#7	10'-8"	
p_4(E)	3	#7	11'-9"	
p_5^*(E)	24	#7	3'-0"	
s(E)	42	#4	9'-5"	
s_1(E)	94	#5	5'-3"	
s_2(E)	86	#5	6'-3"	
v(E)	90	#5	3'-9"	
v_1^*(E)	94	#5	2'-11"	
v_2^*(E)	86	#5	3'-5"	
v_3(E)	180	#5	2'-1"	
v_4(E)	2	#6	6'-6"	
v_5(E)	44	#6	6'-1"	
v_6(E)	32	#6	6'-1"	
v_7(E)	12	#6	5'-11"	
Structure Excavation			Cu. Yd.	76
Concrete Structures			Cu. Yd.	41.8
Reinforcement Bars, Epoxy Coated			Pound	7110
Concrete Sealer			Sq. Ft.	278

Notes:

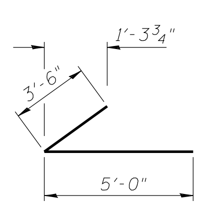
All bars designated with an asterisk (ex: v_2^*(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.

Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

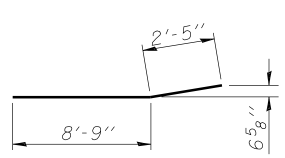
Concrete Sealer shall be applied to the front face of the backwall.



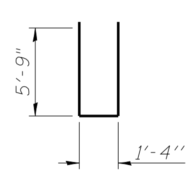
BAR h_4(E)



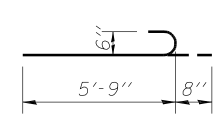
BAR h_5(E)



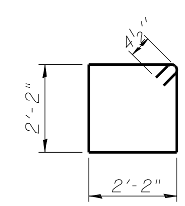
BAR h_{11}(E)



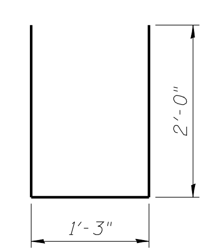
BAR n(E)



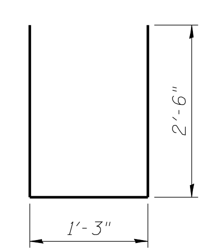
BAR n_1(E)



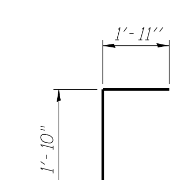
BARS s(E)



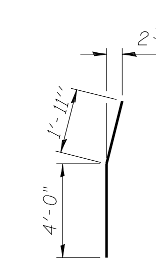
BAR s_1(E)



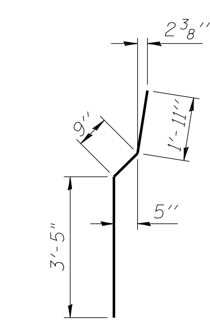
BAR s_2(E)



BAR v(E)



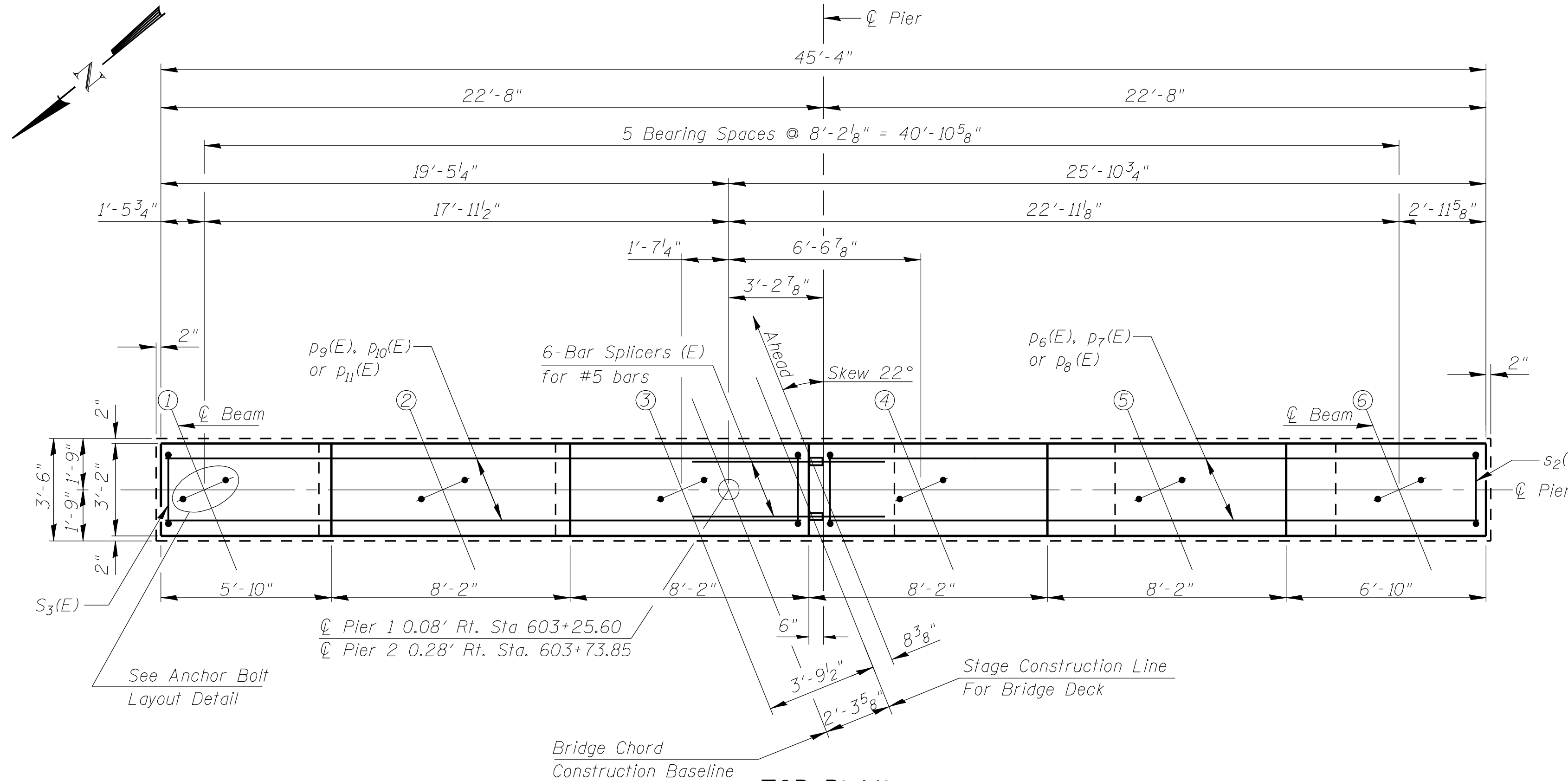
BAR v_7(E)



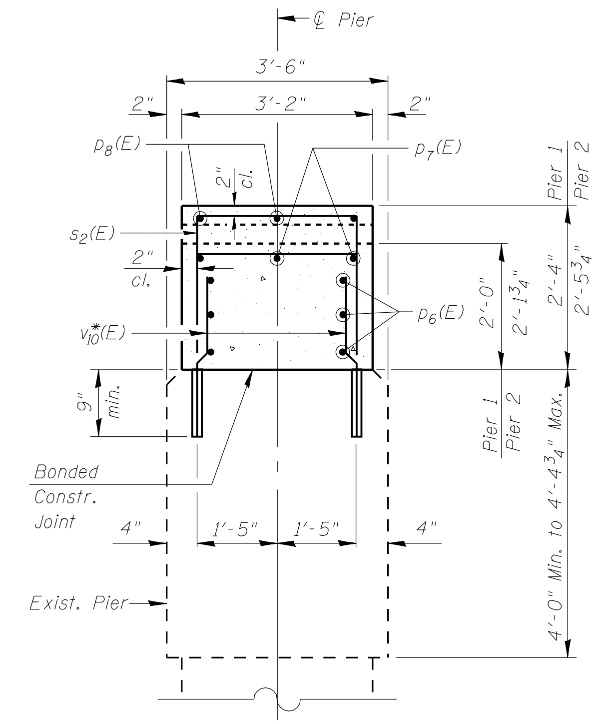
BAR v_6(E)

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT DETAILS STRUCTURE NO. 051-0014
	FILE = 0510014-74179-001-abutments.dgn	CHECKED - TSH	REVISED -		
	DATE = 12/6/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		SHEET NO. 25 OF 29 SHEETS

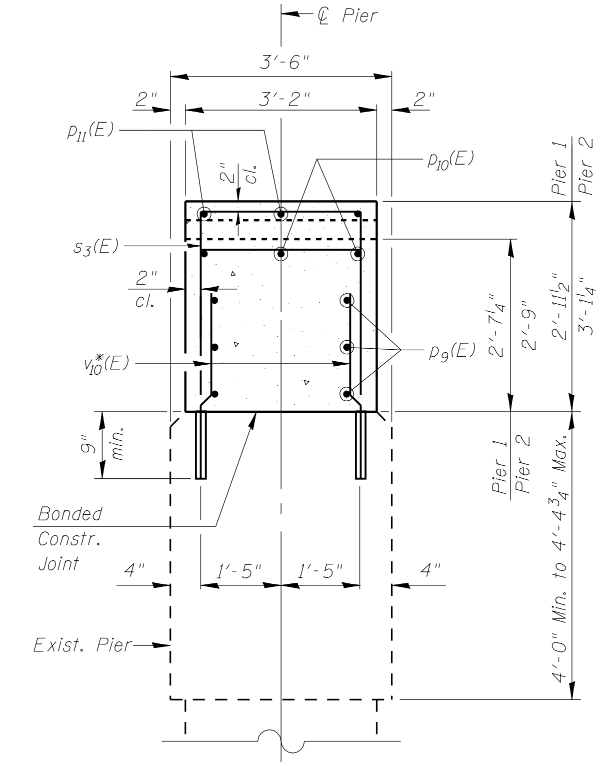
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	149
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



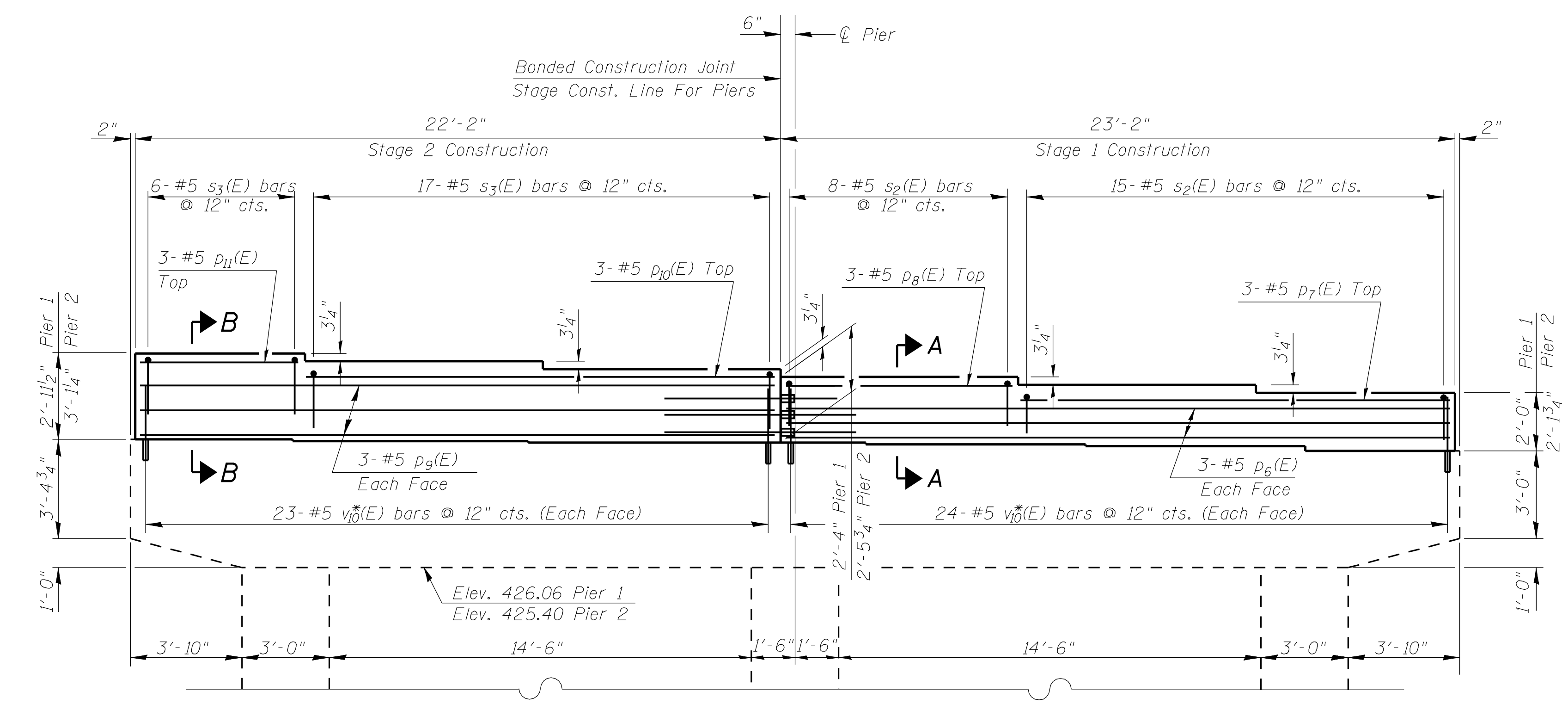
TOP PLAN



SECTION A-A

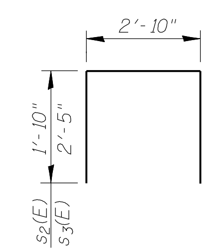


SECTION B-B

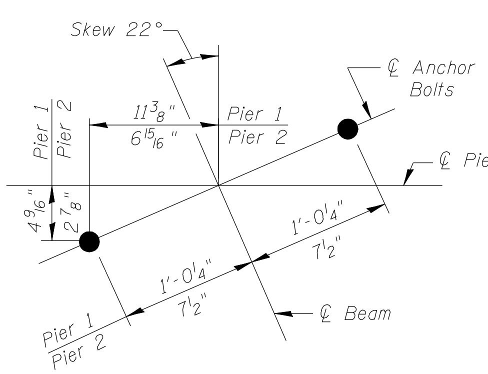


ELEVATION

(Looking East)



BARS s_2(E) & s_3(E)



ANCHOR BOLT LAYOUT

TWO (2) PIERS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p_6(E)	12	#5	22'-10"	——
p_7(E)	6	#5	15'-10"	——
p_8(E)	6	#5	7'-10"	——
p_9(E)	12	#5	21'-10"	——
p_{10}(E)	6	#5	17'-2"	——
p_{11}(E)	6	#5	5'-6"	——
s_2(E)	48	#5	6'-6"	⊓
s_3(E)	46	#5	7'-8"	⊓
v_{10}^*(E)	188	#5	2'-7"	——
Concrete Structures		Cu. Yd.	27.1	
Reinforcement Bars, Epoxy Coated		Pound	2150	

Reinforcement Bars designated (E) shall be epoxy coated.

v_{10}^*(E) bars shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement bars.

All edges of proposed concrete shall have standard ¾" chamfers unless noted otherwise.

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.43 feet to match benchmark datum.

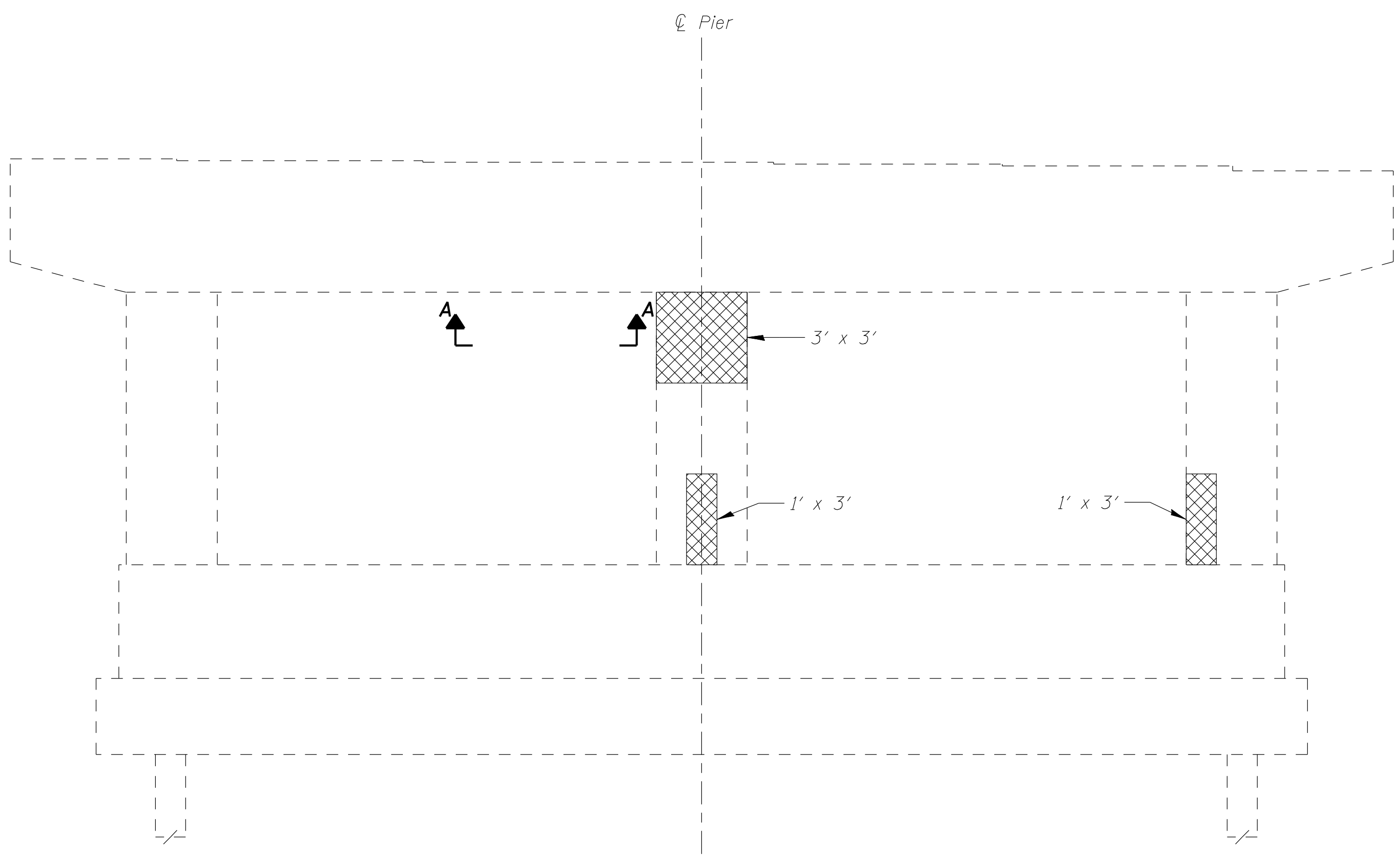
TABLE OF EXISTING BEAM SEAT ELEVATIONS

(For Information Only)

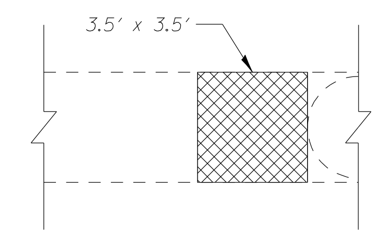
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Pier 1	430.45	430.38	430.27	430.20	430.13	430.06
℄ Pier 2	429.79	429.72	429.61	429.54	429.47	429.40

TABLE OF NEW BEAM SEAT ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Pier 1	433.41	433.14	432.87	432.60	432.33	432.06
℄ Pier 2	432.90	432.63	432.36	432.09	431.82	431.55



PIER 2 ELEVATION
WEST FACE



VIEW A-A

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft	28

LEGEND

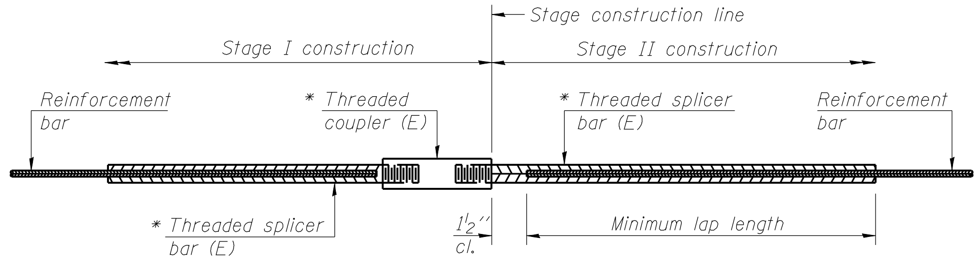
Structural Repair of Concrete
(Depth Equal to or Less Than 5 inches)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-piers.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 REPAIR
STRUCTURE NO. 051-0014

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	151
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

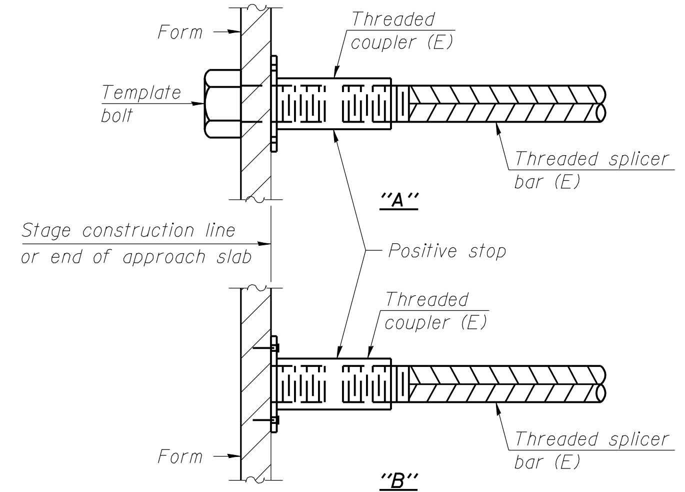
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar lap, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

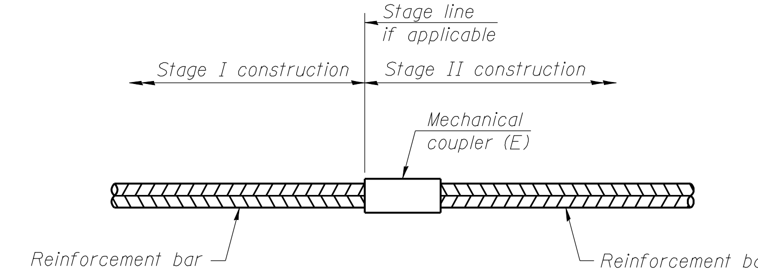
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	438	3
Ends of Deck	#6	10	3
Approach, Top	#4	48	4
Approach, Bottom	#5	90	3
Approach, Footing	#5	80	3
Abutment Backwall	#5	16	4
Abutment Hatch Block	#6	8	4
Piers	#5	12	4



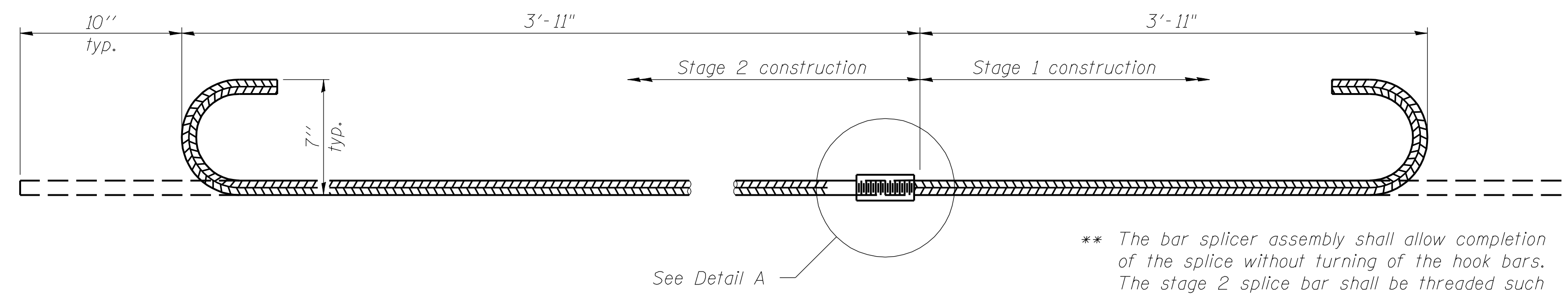
INSTALLATION AND SETTING METHODS

"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

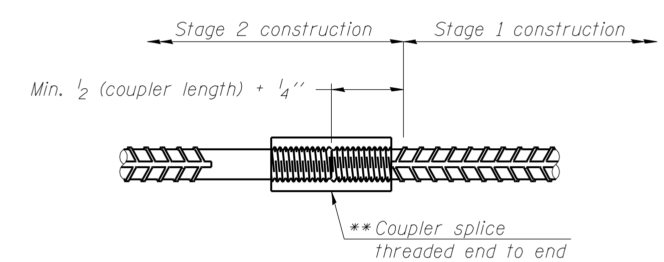
Location	Bar size	No. assemblies required



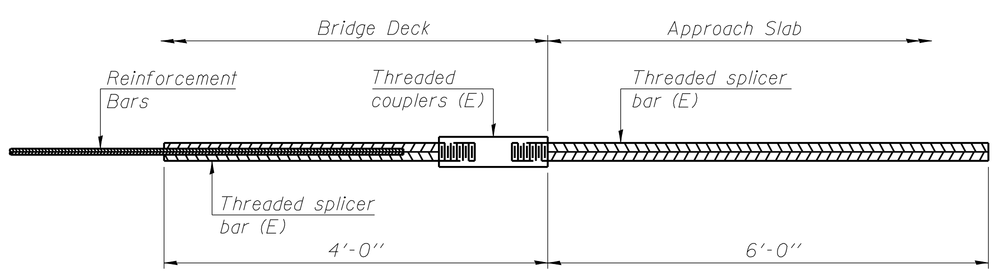
** The bar splicer assembly shall allow completion of the splice without turning of the hook bars. The stage 2 splice bar shall be threaded such that the entire coupler can be threaded onto the splice bar.

#6 BAR SPLICER ASSEMBLY FOR EDGE BEAMS AT STAGE CONSTRUCTION JOINT

No. required = 6

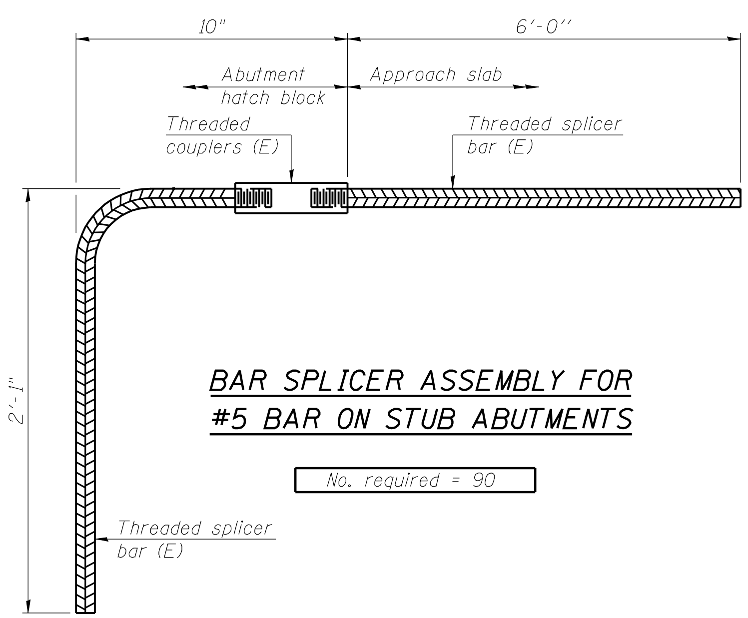


DETAIL A



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 90

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.

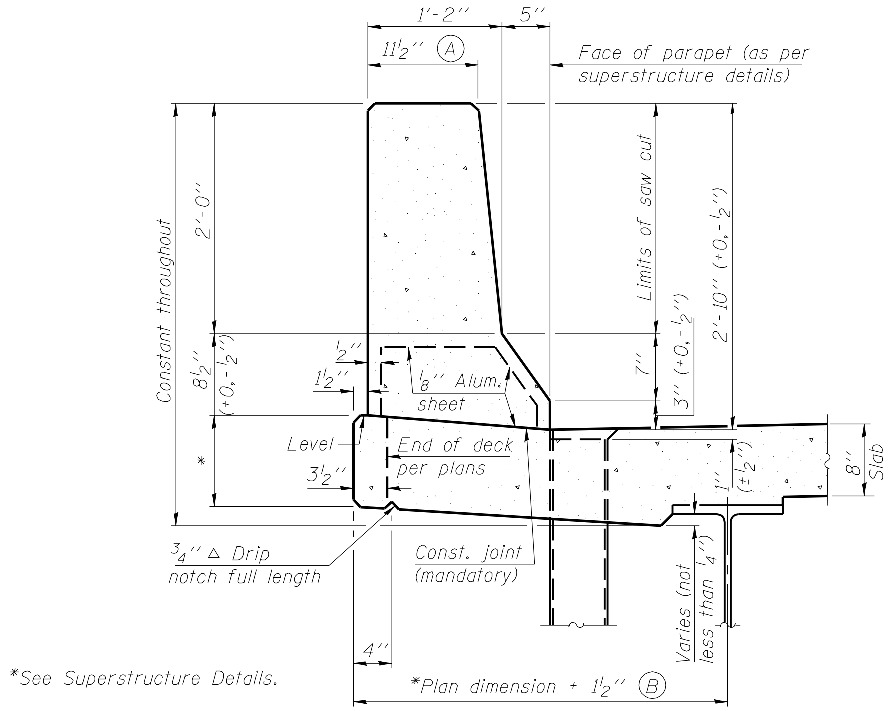
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -
	FILE = 0510014-74179-001-splicer.dgn	CHECKED - TSH	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

(MODIFIED) BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 051-0014

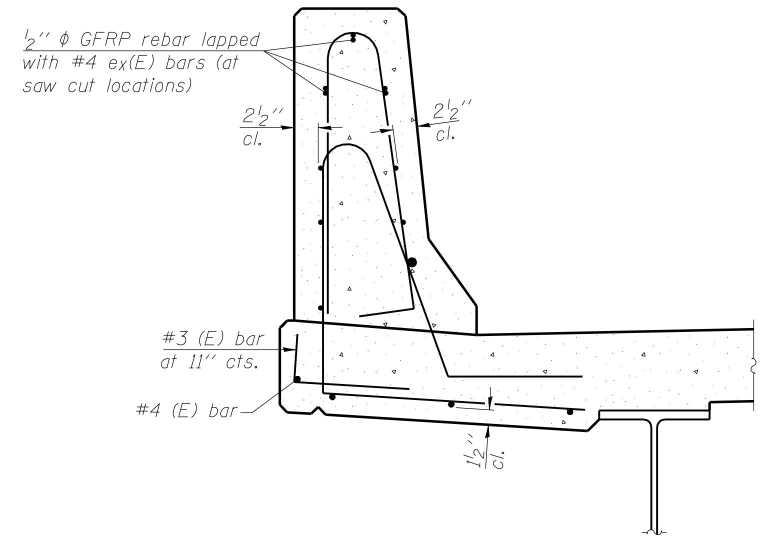
SHEET NO. 28 OF 29 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	206	152
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



34'' F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

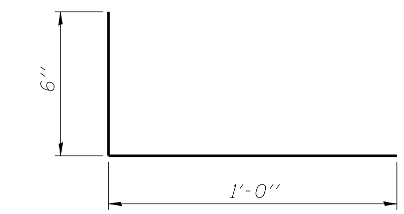
(34'' parapet shown - 42'' parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

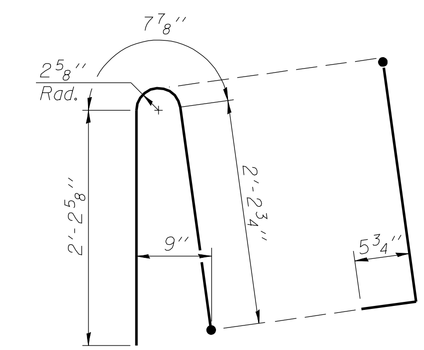
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34'' parapet or = 0.0223 cu. yds./ft. for 42'' parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.

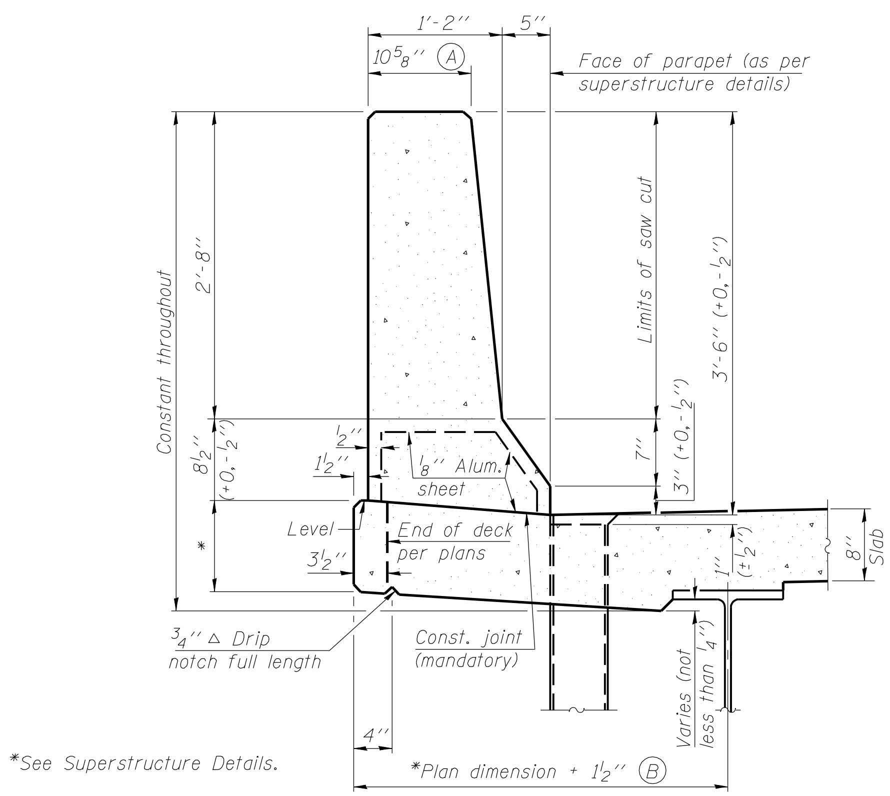


#3 (E) BAR



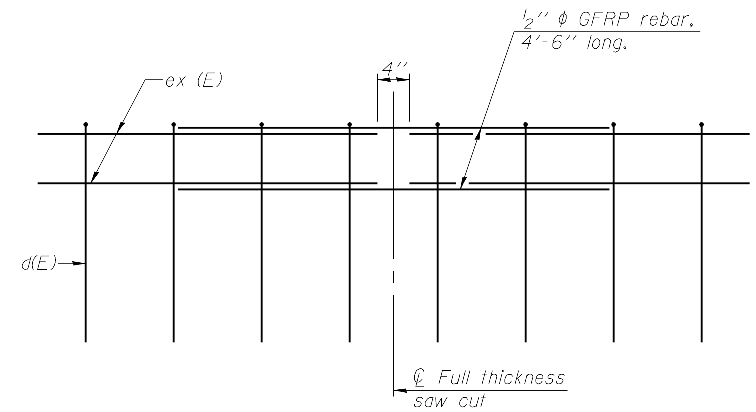
ALTERNATE BAR d(E)

(For 34'' parapet when conduit is present)



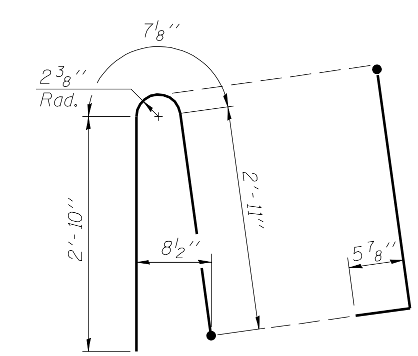
42'' F SHAPE PARAPET SECTION

(Showing dimensions)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)



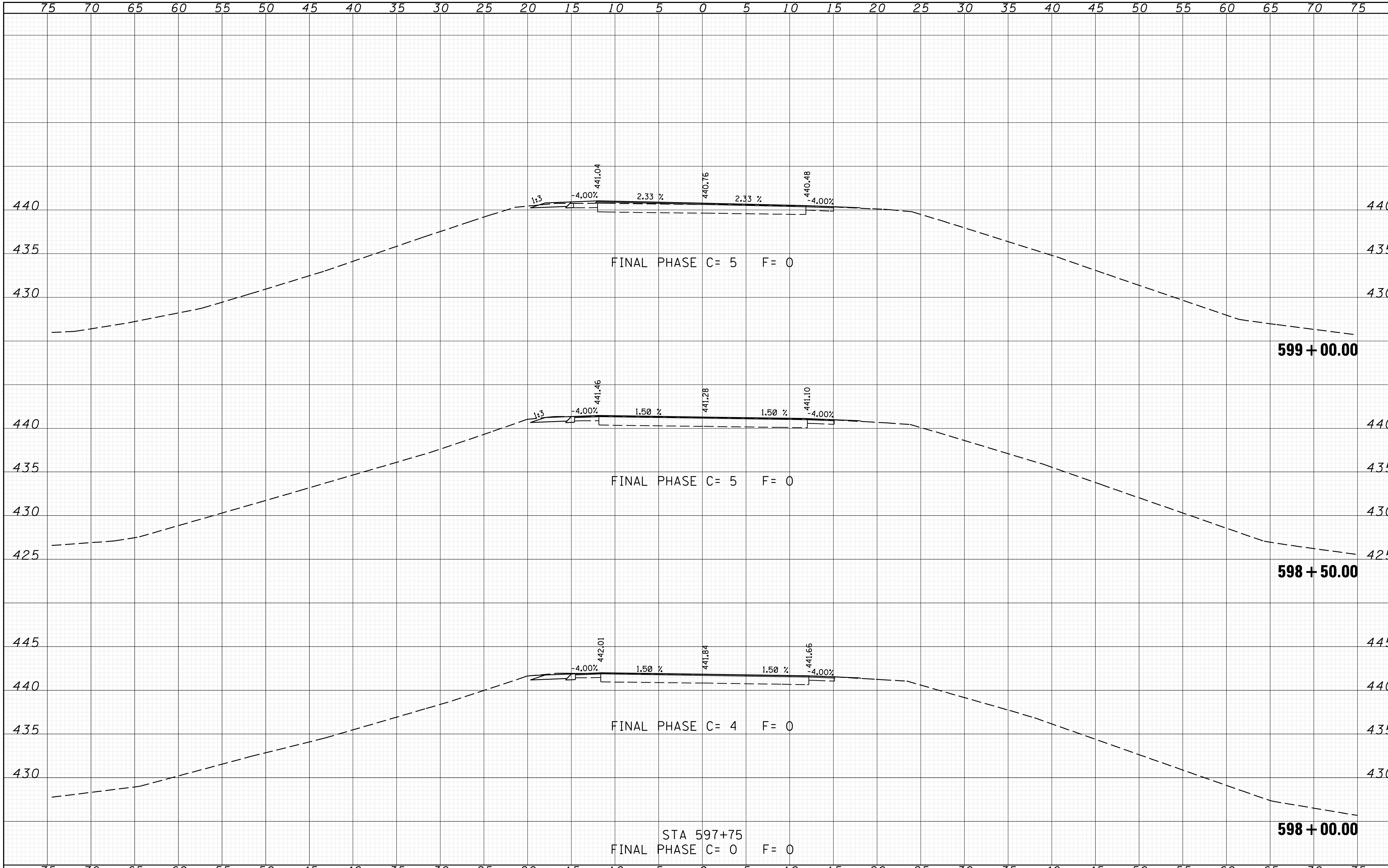
ALTERNATE BAR d(E)

(For 42'' parapet when conduit is present)

SFP 34-42 8-16-12

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 051-0014
	FILE = 0510014-74179-001-parapet.dgn	CHECKED - TSH	REVISED -		SHEET NO. 29 OF 29 SHEETS
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-3)BR	LAWRENCE	260	153
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -	
FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

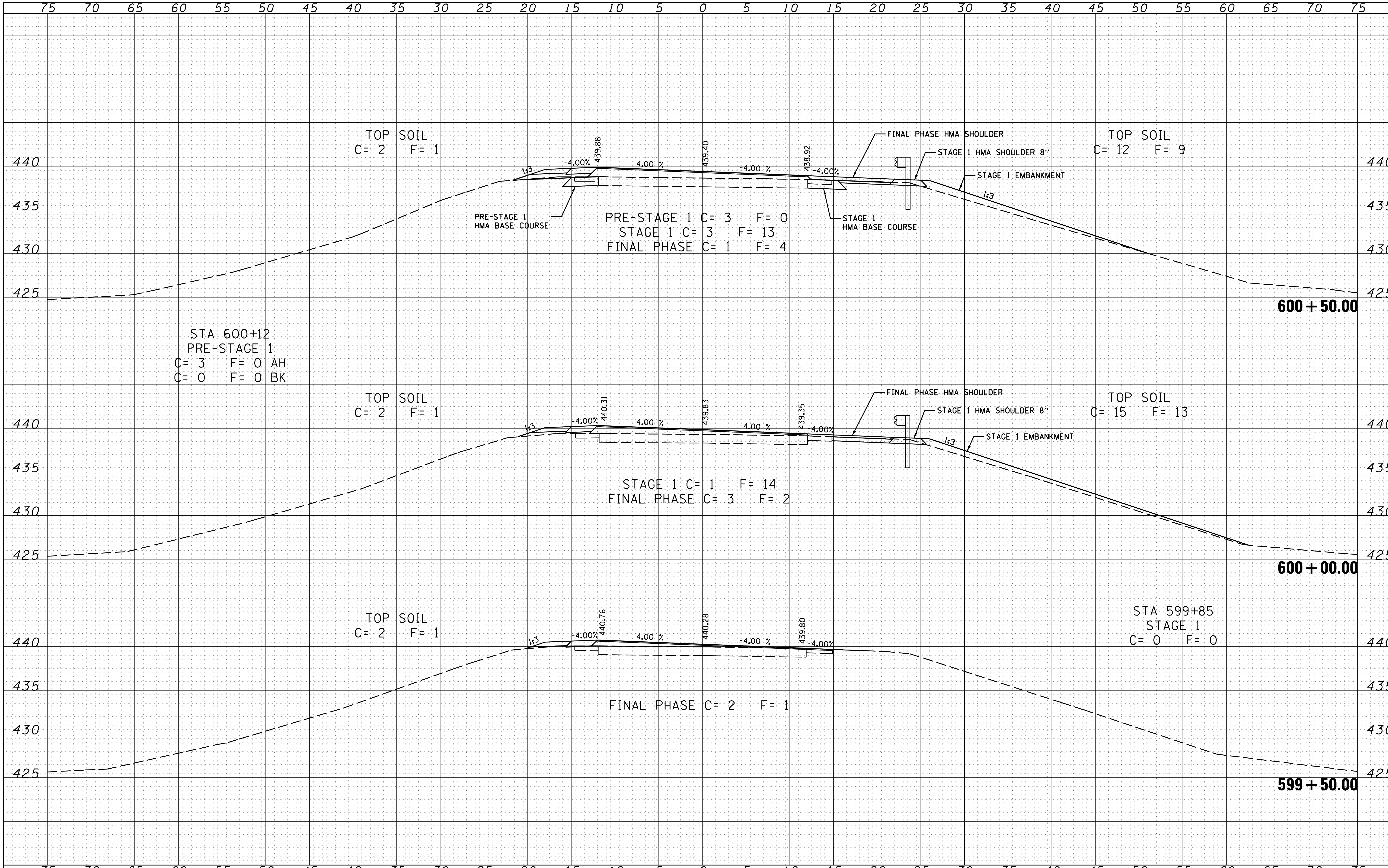
CROSS SECTIONS
SN 051–0014

SCALE: | SHEET NO. OF SHEETS | STA. 598+00.00 TO STA. 599+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	154

CONTRACT NO. 74177

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



CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -
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PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -
PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0014

SCALE: | SHEET NO. OF SHEETS | STA. 599+50.00 TO STA. 600+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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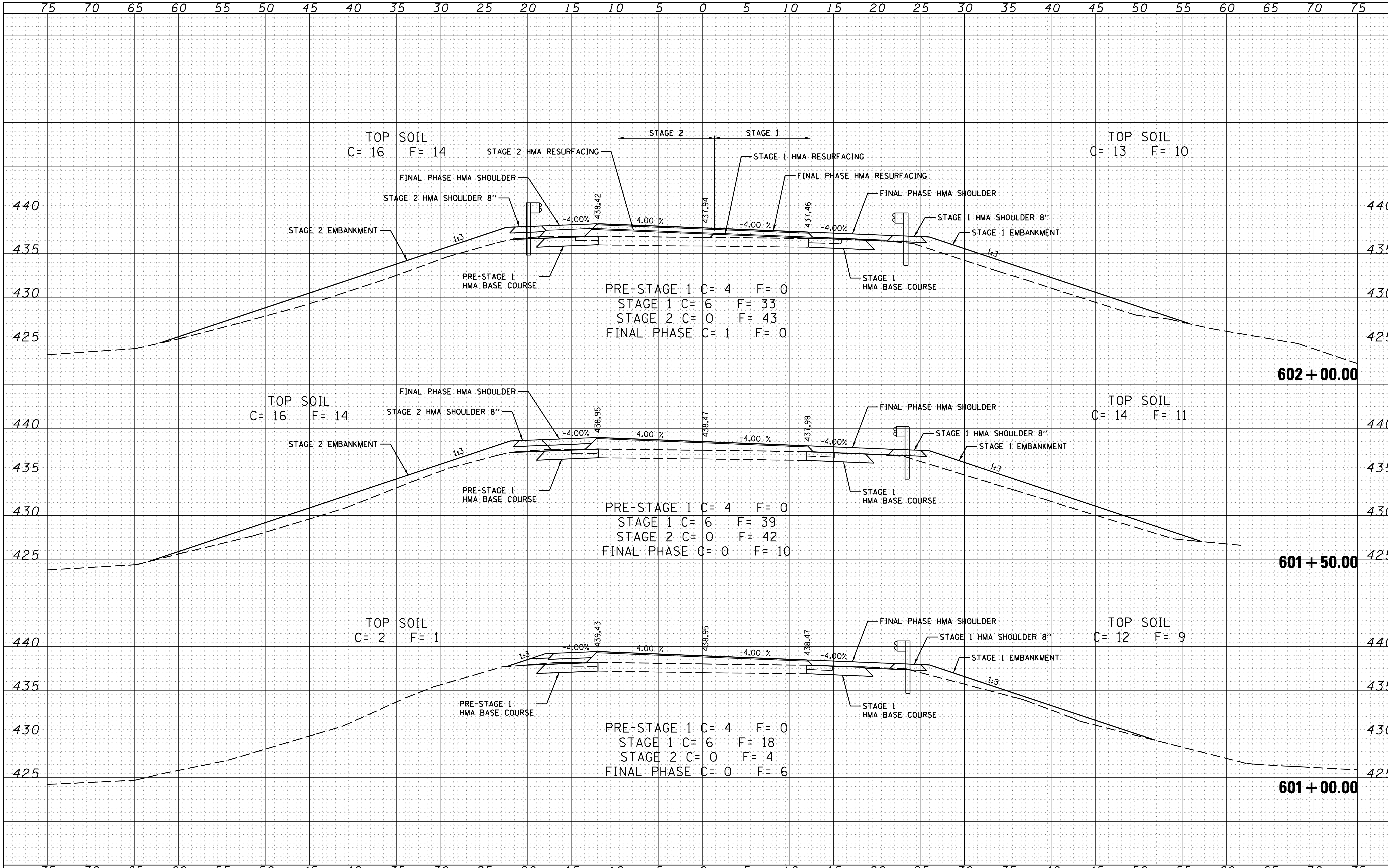
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -	
FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -	

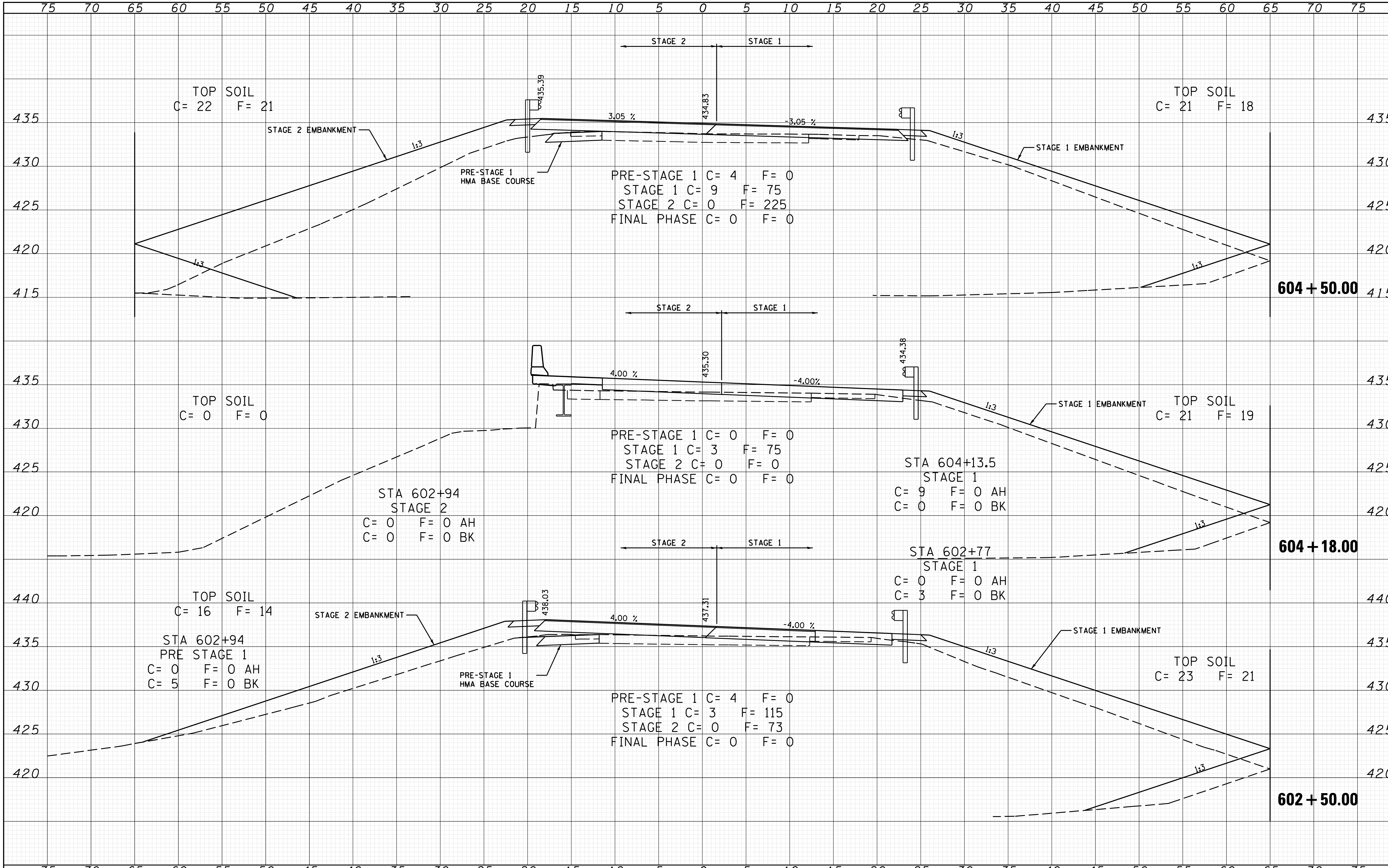
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0014

SCALE: | SHEET NO. OF SHEETS | STA. 601+00.00 TO STA. 602+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	156
		CONTRACT NO. 74177		

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



FINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY | NOTE BOOK NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

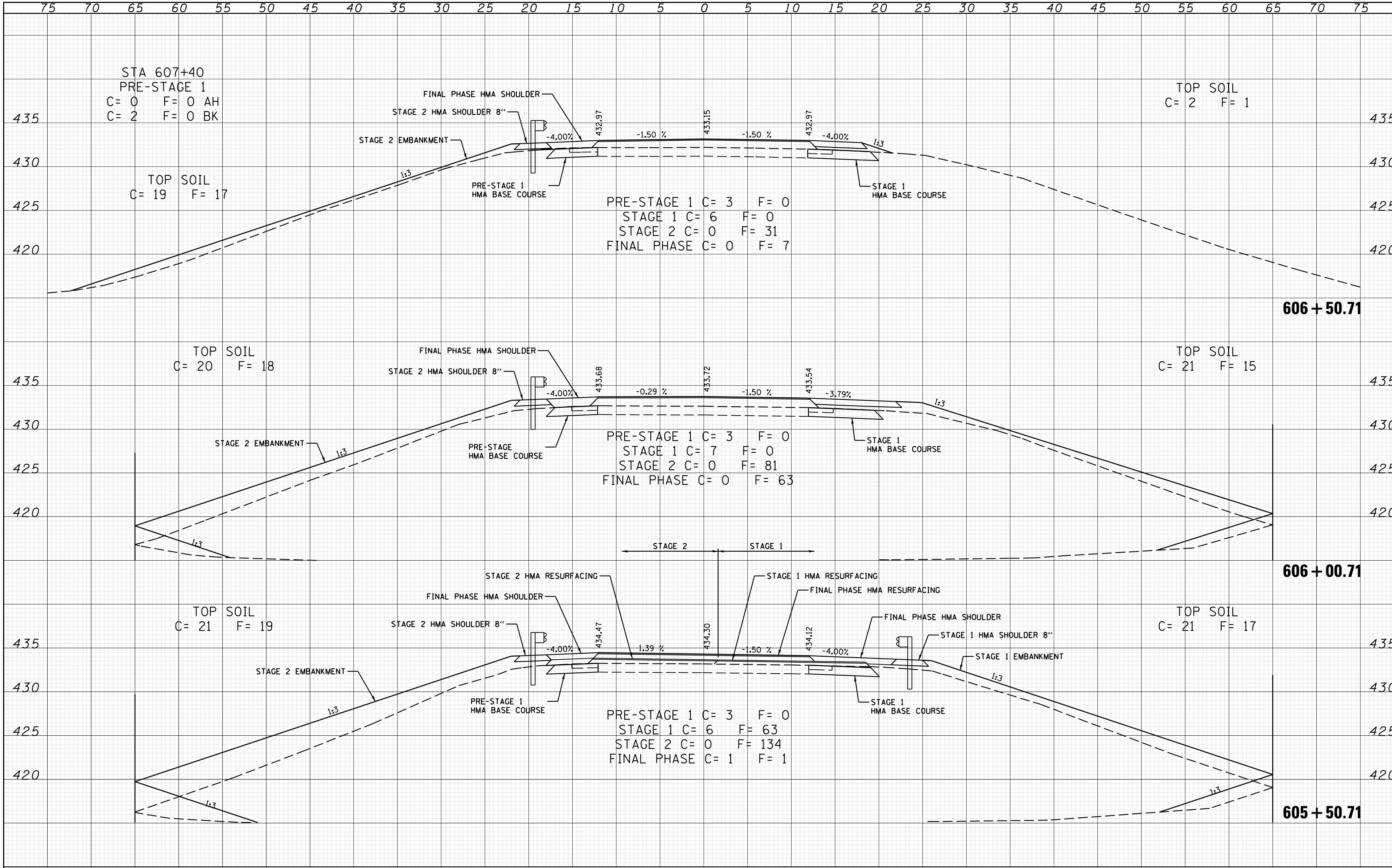
CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -
	PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0014

SCALE: | SHEET NO. OF SHEETS | STA. 602+50.00 TO STA. 604+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	157
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.6	DESIGNED - NAK	REVISED -
FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -
PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -
PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -

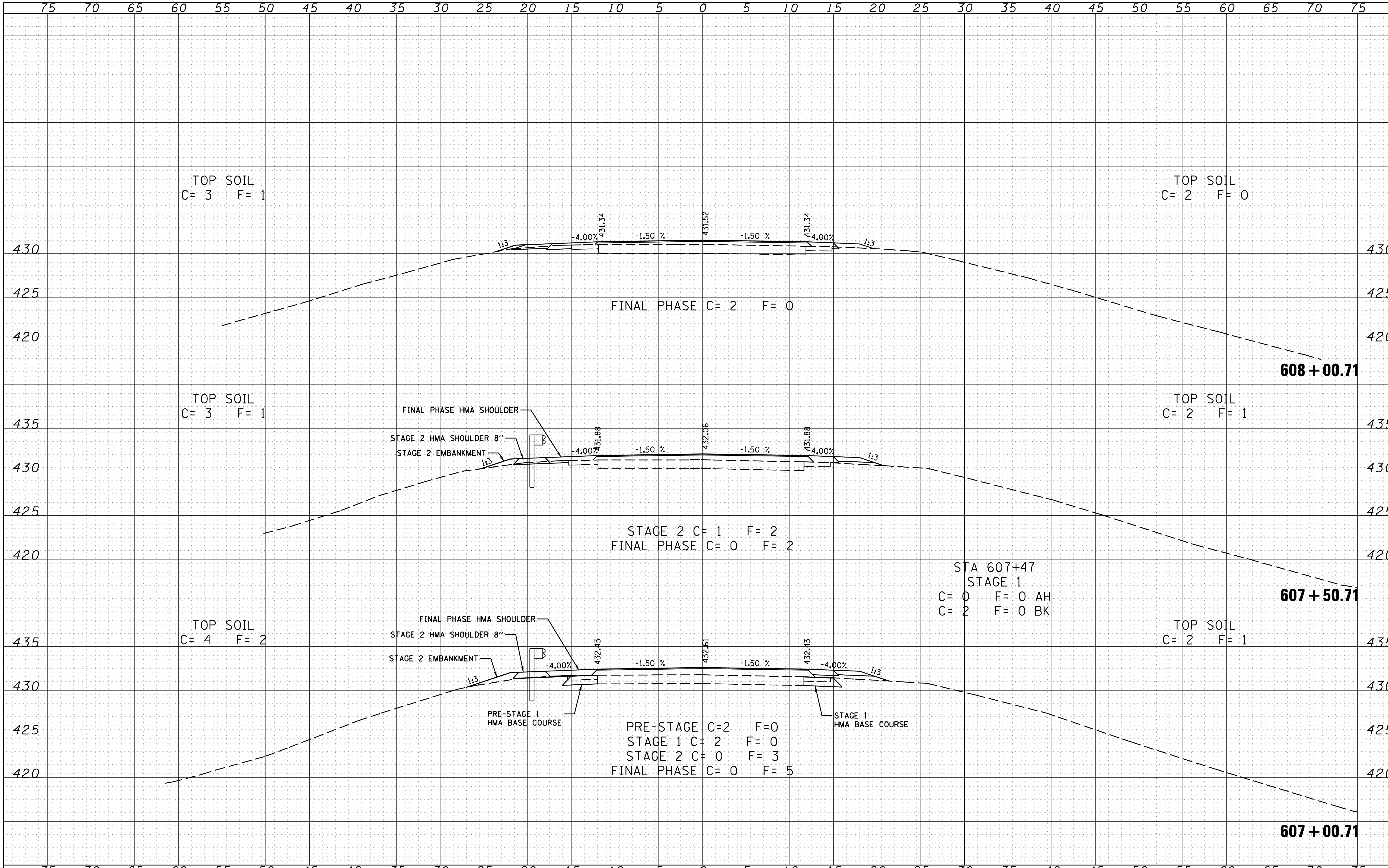
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0014

SCALE: SHEET NO. OF SHEETS STA. 605+50.71 TO STA. 606+50.71

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	158
		CONTRACT NO. 74177		

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



CEC Cummins Engineering Corporation, Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -
	FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -
	PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -

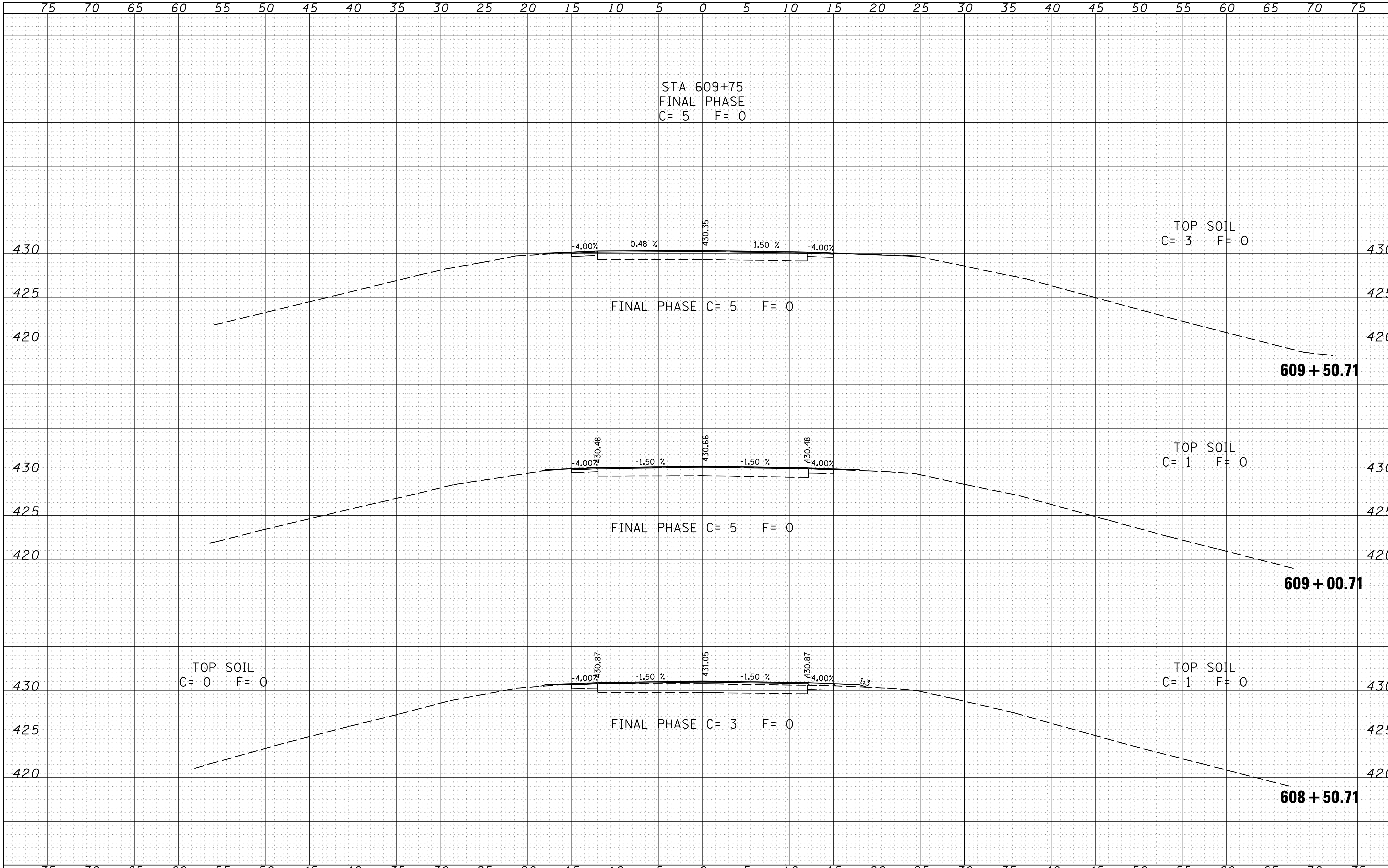
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0014

SCALE: | SHEET NO. OF SHEETS | STA. 607+00.71 TO STA. 608+00.71

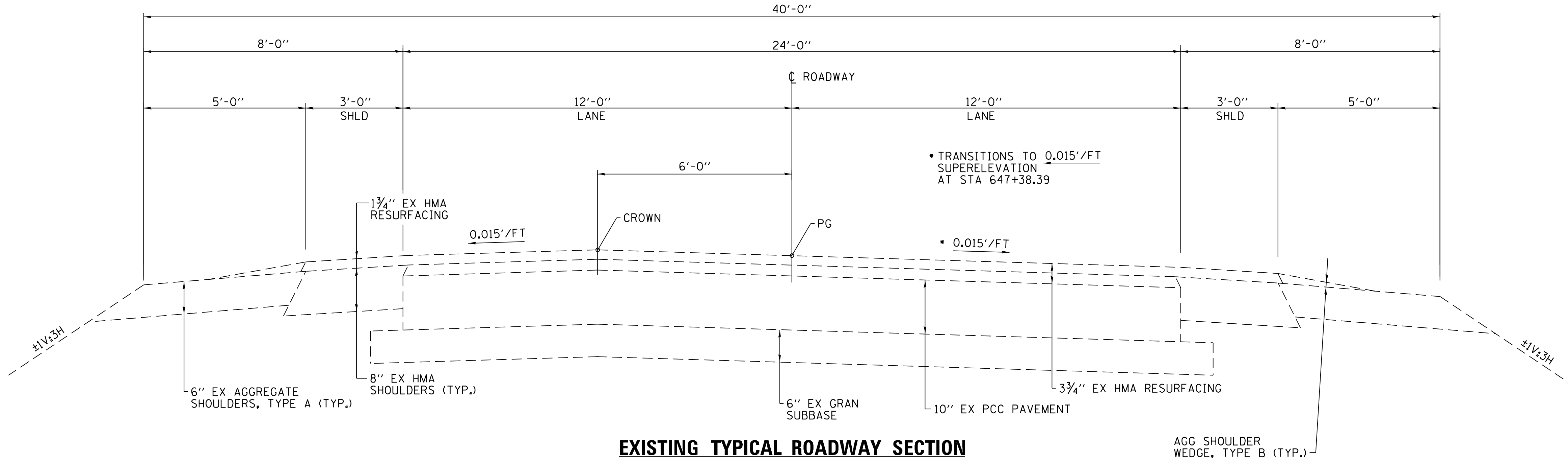
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	159
		CONTRACT NO. 74177		

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

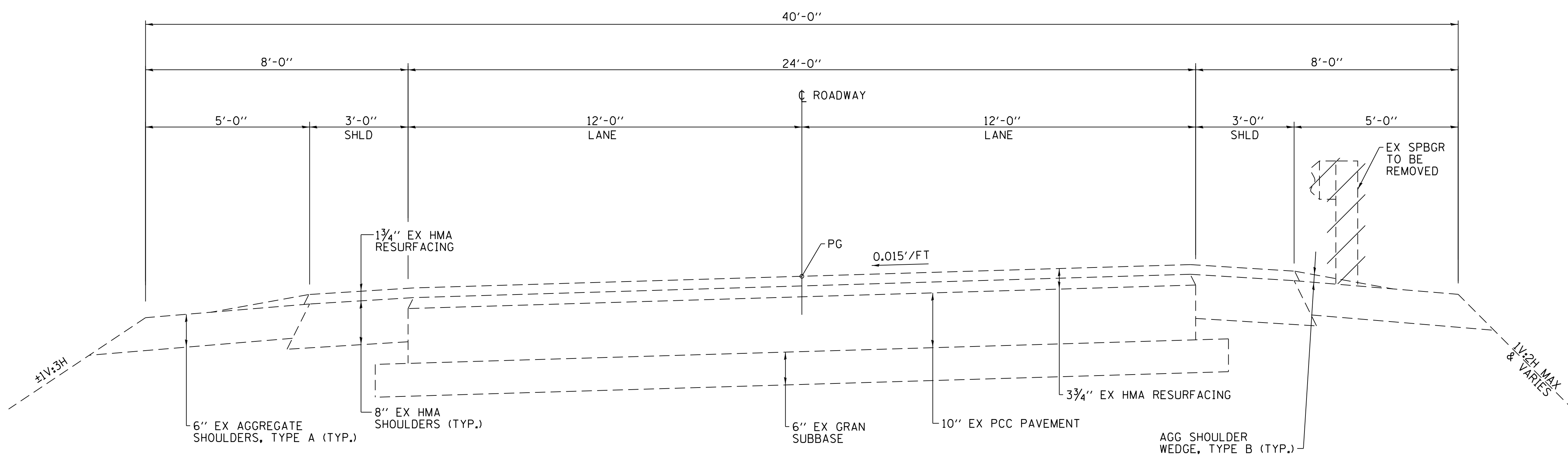


CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2223.6	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 051–0014
	FILE NAME = D774179-sht-XSIL50.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 10.000 ' / IN.	CHECKED - NAK	REVISED -		
	PLOT DATE = 10/18/2018	DATE - 3/23/2015	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 608+50.71 TO STA. 609+50.71

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	160
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL ROADWAY SECTION
STA 640+00.00 TO STA 647+38.39



WITHOUT GUARDRAIL

EXISTING TYPICAL ROADWAY SECTION
STA 647+38.39 TO STA 667+00.00
BRIDGE OMISSION STA 652+09.40 TO STA 656+61.75

WITH GUARDRAIL

ESCA
CONSULTANTS, INC.

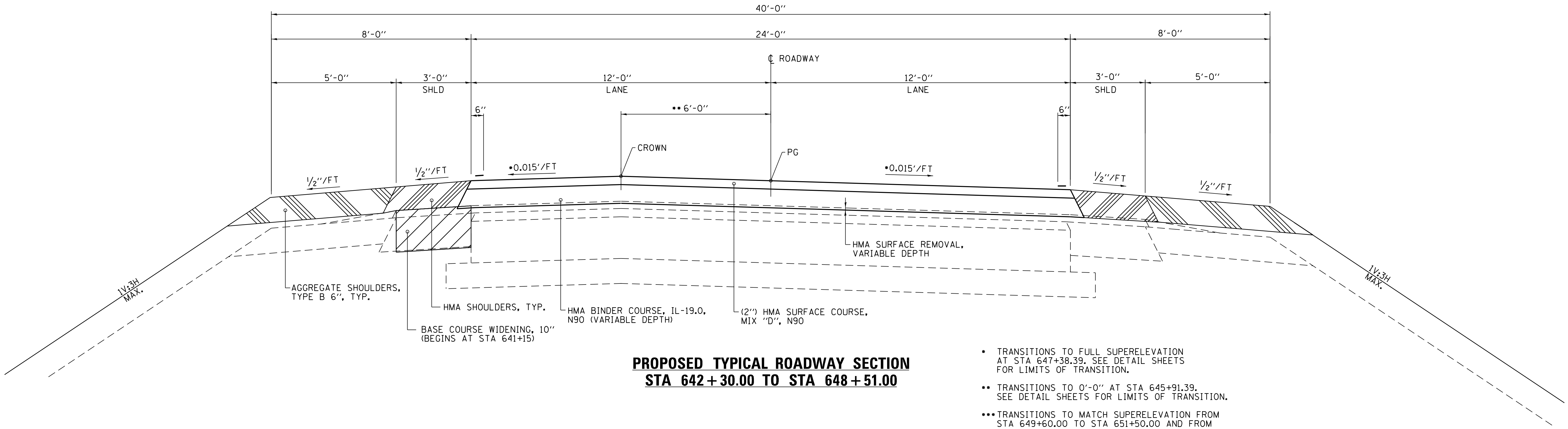
USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -
PLOT SCALE = 0.2 ' / in.	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:50:43 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
SN051-0015(OLD)/SN051-0066(NEW)

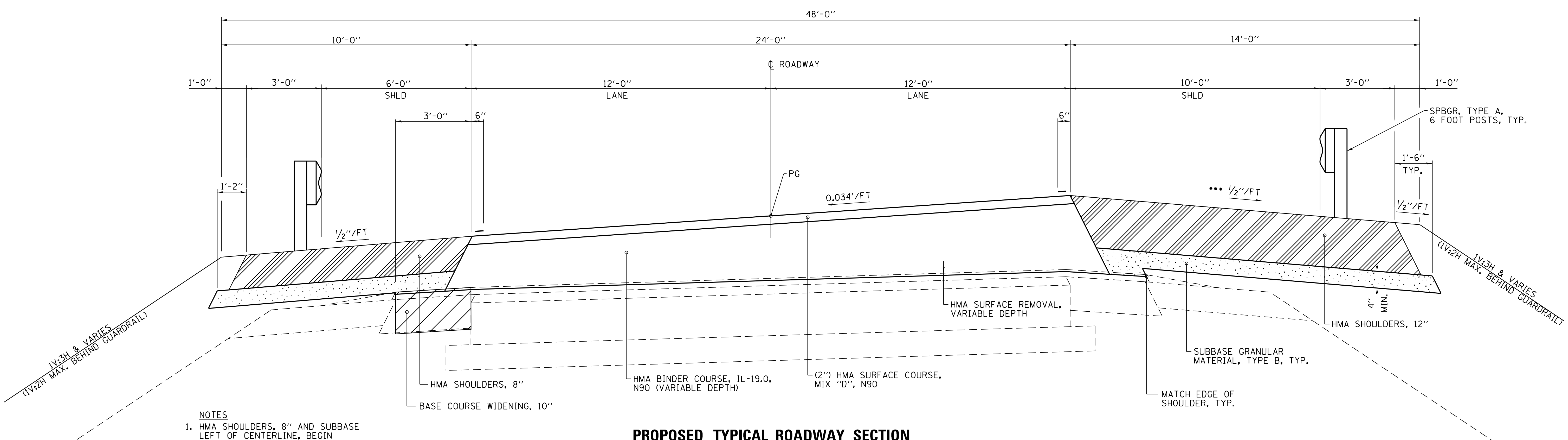
SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	161
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL ROADWAY SECTION
STA 642 + 30.00 TO STA 648 + 51.00

- • TRANSITIONS TO FULL SUPERELEVATION AT STA 647+38.39. SEE DETAIL SHEETS FOR LIMITS OF TRANSITION.
- •• TRANSITIONS TO 0'-0" AT STA 645+91.39. SEE DETAIL SHEETS FOR LIMITS OF TRANSITION.
- ••• TRANSITIONS TO MATCH SUPERELEVATION FROM STA 649+60.00 TO STA 651+50.00 AND FROM STA 657+20.00 TO STA 659+10.00



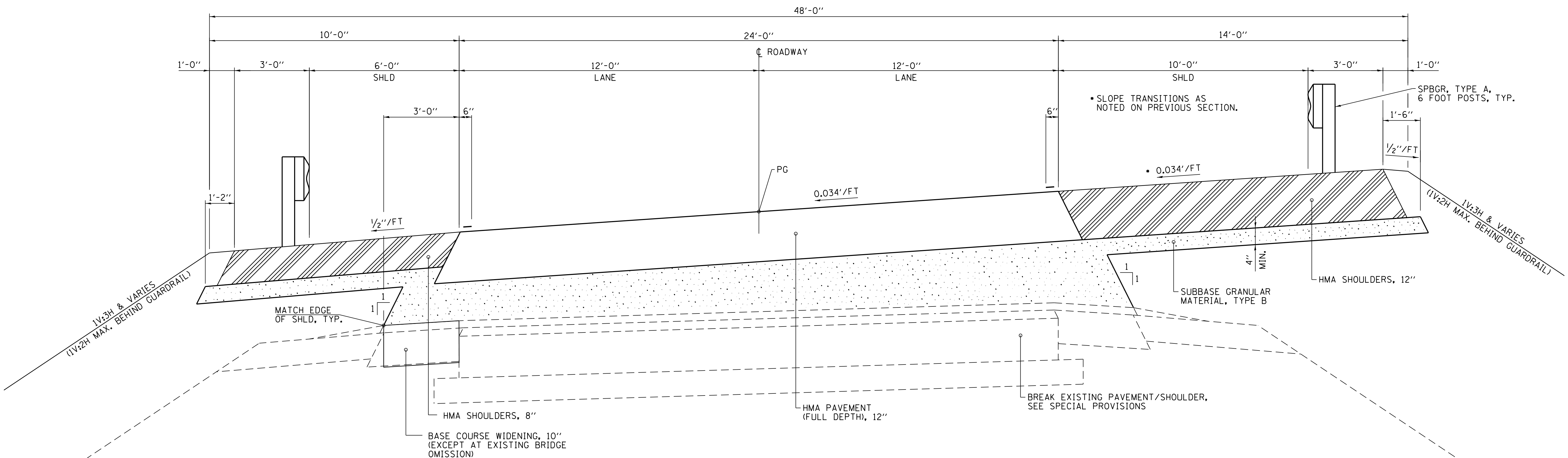
NOTES

1. HMA SHOULDERS, 8" AND SUBBASE LEFT OF CENTERLINE, BEGIN AT STA 649+68.00.
2. SEE PLANS FOR LIMITS OF SPBGR AND SHOULDER WIDTH TRANSITIONS.

PROPOSED TYPICAL ROADWAY SECTION
STA 648 + 51.00 TO STA 650 + 25.00
STA 661 + 40.00 TO STA 661 + 65.00

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS SN051-0015(OLD)/SN051-0066(NEW)
	ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -		
	PLOT SCALE = 0.2 ' / in.	CHECKED - RDP	REVISED -		
	PLOT DATE = 10/19/2018 1:50:44 PM	DATE - 08/15	REVISED -		SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	162
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT AID		



NOTES

1. SEE PLANS FOR LIMITS OF SPBGR AND SHOULDER WIDTH TRANSITIONS.
2. THICKEN HMA SHOULDERS AS REQUIRED ON TOP OF PROPOSED APPROACH SLAB FOOTING. COST INCLUDED IN HMA SHOULDERS, 8" AND HMA SHOULDERS, 12".
3. 10' OF FULL DEPTH PAVEMENT ADJACENT TO APPROACH SLABS WILL BE PAID FOR AS BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE). SEE STANDARD 420401 FOR DETAILS.

PROPOSED TYPICAL ROADWAY SECTION
STA 650+25.00 TO STA 651+61.39
STA 657+09.76 TO STA 659+10.00

STRUCTURAL DESIGN TRAFFIC: 6,405 Year 2025

PV = 5,034 SU = 391 MU = 980

ROAD/STREET CLASSIFICATION: Class I

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:

P = 51% S = 51% M = 51%

TRAFFIC FACTOR: Actual TF = 5.36

Minimum TF = 4.03

PG GRADE: Binder = 64-22 Surface = 64-22

SUBGRADE SUPPORT RATING:

SSR = POOR (FULL LENGTH OF PROJECT)

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -
	ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -
	PLOT SCALE = 0.2 ' / in.	CHECKED - RDP	REVISED -
	PLOT DATE = 10/19/2018 1:50:45 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

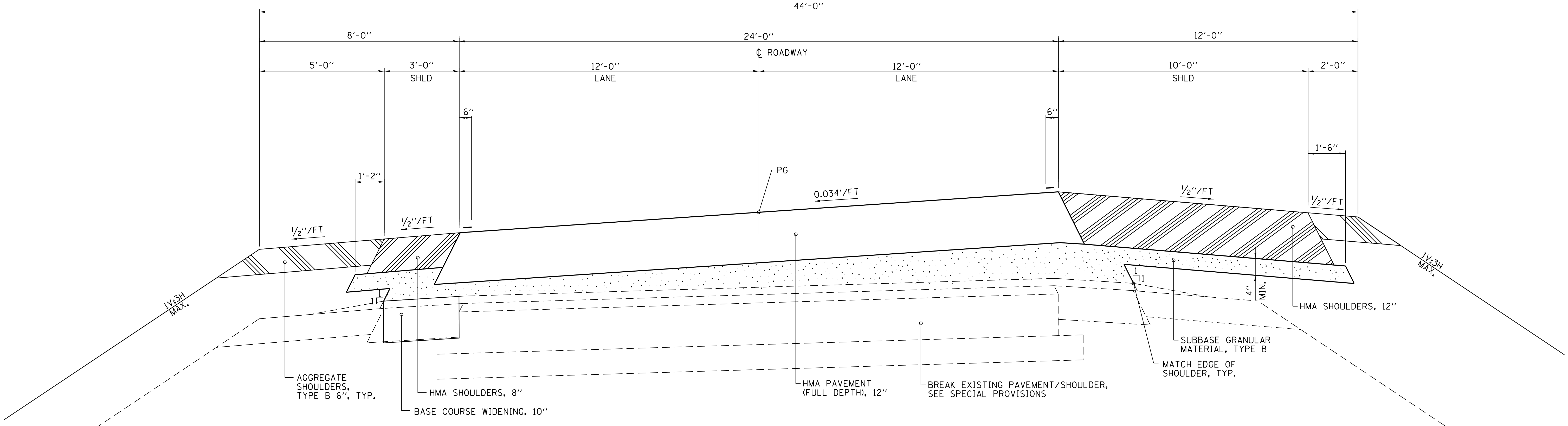
TYPICAL SECTIONS
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: | SHEET NO. 3 OF 4 SHEETS | STA. TO STA.

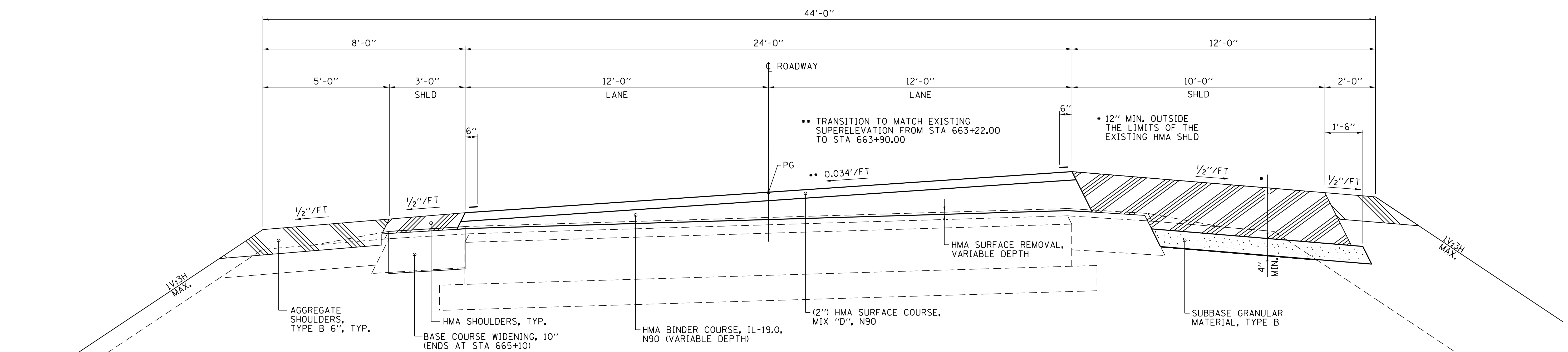
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	163

CONTRACT NO. 74177

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



PROPOSED TYPICAL ROADWAY SECTION
STA 659+10.00 TO STA 661+40.00



PROPOSED TYPICAL ROADWAY SECTION
STA 661+65.00 TO STA 663+90.00

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -
	ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -
	PLOT SCALE = 0.2 ' / in.	CHECKED - RDP	REVISED -
	PLOT DATE = 10/19/2018 1:50:45 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
SN051–0015(OLD) / SN051–0066(NEW)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	164
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT AID		

TREE REMOVAL SCHEDULE

LOCATION	TREE REMOVAL, ACRES
	ACRE
STA 644+00 TO 646+00, LT	0.1
STA 648+30 TO 649+90, RT	0.1
TOTAL	0.2

BASE COURSE WIDENING SCHEDULE

LOCATION	BASE COURSE WIDENING 10"
	SQ YD
STA 641+15 TO 652+09.40, LT	365
STA 656+61.75 TO 665+10, LT	283
TOTAL	648

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2	SEEDING, CLASS 4B	SEEDING, CLASS 5B	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 1	EROSION CONTROL BLANKET
	ACRE	ACRE	ACRE	POUND	POUND	POUND	TON	ACRE	SQ YD
STA 642+30 TO 651+80, LT	0.5			45	45	45	1.0		2420
STA 642+30 TO 651+80, RT	0.6			54	54	54	1.2		2904
STA 644+80 TO 645+20, LT		0.1	0.1	9	9	9	0.2	0.1	
STA 648+40 TO 649+50, RT		0.1	0.1	9	9	9	0.2	0.1	
STA 651+80 TO 656+90, LT & RT		1.7	1.7	153	153	153	3.4	1.7	
STA 656+90 TO 663+90, LT	0.4			36	36	36	0.8		1936
STA 656+90 TO 664+00, RT	0.4			36	36	36	0.8		2420
TOTALS	1.9	1.9	1.9	342	342	342	7.6	1.9	9680

NOTES:

1. ALL SEEDING SHALL BE INSTALLED IN ACCORDNACE WITH ARTICLE 250 OF IDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	STRUCTURE EXCAVATION	SUITABLE STRUCTURE EXCAVATION ADJUSTED FOR SHRINKAGE	INCIDENTAL EXCAVATION	SUITABLE INCIDENTAL EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT OR BACKFILL (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
STA 642+30 TO 651+80, LT	13	9.75					265	-255
STA 642+30 TO 651+80, RT	22	16.5					1058	-1042
STA 656+90 TO 663+90, LT	11	8.25					761	-753
STA 656+90 TO 664+00, RT	34	25.5					998	-973
WEST END SLOPE	945	708.5						708
EAST END SLOPE	1045	783.5						783
WEST ABUTMENT			145	109				109
EAST ABUTMENT			115	86				86
PIERS 1, 2, 5 & 6			108	0			76	5
PIERS 3 & 4			364	0			206	67
RIPRAP ON WEST END SLOPE					510	191		191
RIPRAP ON EAST END SLOPE					490	184		184
RIPRAP IN CHANNEL					420	0		0
DRILLED HOLES FOR SETTING PILES					178	33		33
TOTALS	2070	1552	732	195	1598	408	3364	-857

NOTES:

1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION + SUITABLE STRUCTURE EXCAVATION + SUITABLE INCIDENTAL EXCAVATION)*0.75
2. THE EARTHWORK SCHEDULE HAS ASSUMED THAT 100% OF THE EARTH EXCAVATION IS SUITABLE AS EMBANKMENT.
3. THE EARTHWORK SCHEDULE HAS ASSUMED THAT 0% OF THE PIER EXCAVATION IS SUITABLE AS EMBANKMENT, HOWEVER IT IS SUITABLE FOR BACKFILLING PIER EXCAVATIONS.
4. THE EARTHWORK SCHEDULE HAS ASSUMED THAT 50% OF THE RIPRAP EXCAVATION ON THE END SLOPES AND 0% OF THE RIPRAP EXCAVATION IN THE CHANNEL IS SUITABLE AS EMBANKMENT.
5. THE EARTHWORK SCHEDULE HAS ASSUMED THAT 25% OF THE EXCAVATION REQUIRED FOR SETTING PILES IS SUITABLE AS EMBANKMENT.

EROSION CONTROL SCHEDULE

LOCATION	TEMP EROSION CONTROL SEEDING	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION
	POUND	FOOT	FOOT	EACH
STA 642+30 TO 651+80, LT	100		970	
STA 642+30 TO 651+80, RT	120		1000	
STA 651+80 TO 656+90, LT & RT	100			
STA 656+90 TO 663+90, LT	80		700	
STA 656+90 TO 664+00, RT	100		730	
WEST END SLOPE			260	
EAST END SLOPE			240	
STA 657+00, RT		10		
STA 658+00, RT		10		
STA 659+00, RT		10		
STA 661+14.9, 55.6' RT				1
TOTALS	500	30	3900	1

NOTES:

1. QUANTITY OF TEMPORARY EROSION CONTROL SEEDING IS BASED ON 2 APPLICATIONS.

SUBBASE AND HMA PAVEMENT SCHEDULE

LOCATION	SUBBASE GRANULAR MATERIAL, TYPE B	BITUMINOUS MATERIALS (TACK COAT)	HMA SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	HMA BINDER COURSE, IL-19.0, N90	HMA SURFACE COURSE, MIX "D", N90	HMA PAVEMENT (FULL-DEPTH), 12"	BRIDGE APPR PVMT CONNECTOR (FLEXIBLE)
	TON	POUND	SQ YD	SQ YD	TON	TON	SQ YD	SQ YD
STA 642+30, RT				10.7				
STA 642+30 TO 643+48		177	394			36		
STA 643+48 TO 643+66		44				7		
STA 643+66 TO 650+25	75	2430			687	200		
STA 650+25 TO 651+51.39	250	1060					338	
STA 651+51.39 TO 651+61.39	20	89						27
STA 651+61.39, RT				13.3				
STA 657+09.76, RT				13.3				
STA 657+09.76 TO 657+19.76	40	89						27
STA 657+19.76 TO 661+40	1555	3535					1122	
STA 661+40 TO 663+46	50	1281			233	63		
STA 663+46 TO 663+57	2	44				4		
STA 663+57 TO 663+90	8	89	110			10		
STA 663+90, RT				10.7				
NEW HMA SHOULDER, 8"		1724						
NEW HMA SHOULDER, 12"		3138						
TOTALS	2000	13700	504	48	920	320	1460	54

TOPSOIL SCHEDULE

LOCATION	TOPSOIL EXCAVATION	TOPSOIL EXCAVATION ADJUSTED FOR SHRINKAGE	TOPSOIL PLACEMENT	TOPSOIL BALANCE WASTE (+) OR SHORTAGE (-)	TOPSOIL FURNISH AND PLACE, 4"
	CU YD	CU YD	CU YD	CU YD	SQ YD
STA 642+30 TO 651+80, LT	199	149.25	216	-66.75	383
STA 642+30 TO 651+80, RT	245	183.75	266	-82.25	472
STA 656+90 TO 663+90, LT	133	99.75	155	-55.25	317
STA 656+90 TO 664+00, RT	152	114	160	-46	263
WEST END SLOPE	67	50.25		50.25	
EAST END SLOPE	54	40.5		40.5	
TOTALS	850	637.5	797	-159.5	1435

NOTES:

1. QUANTITY OF TOPSOIL EXCAVATION WILL BE PAID FOR AS "TOPSOIL EXCAVATION AND PLACEMENT".
2. TOPSOIL AVAILABLE FOR TOPSOIL PLACEMENT = (TOPSOIL EXCAVATION)*0.75

PAVEMENT & SHOULDER REMOVAL SCHEDULE

LOCATION	APPROACH SLAB REMOVAL	HMA SURFACE REMOVAL, VARIABLE DEPTH	PAVED SHOULDER REMOVAL	PAVEMENT BREAKING
	SQ YD	SQ YD	SQ YD	SQ YD
STA 641+15 TO 651+56, LT			347	
STA 643+48 TO 650+25		2256.7		
STA 650+25 TO 651+56				437
STA 651+56 TO 652+09.40	142.5		36	
STA 656+61.75 TO 657+15	142.5		36	
STA 657+15 TO 661+40				1417
STA 657+15 TO 665+10, LT			265	
STA 661+40 TO 663+57		723.3		
TOTALS	285	2980	684	1854

PAVEMENT MARKING REMOVAL SCHEDULE

LOCATION	DESCRIPTION	PAVEMENT MARKING REMOVAL WATER BLASTING
		SQ FT
STA 639+60 TO 642+30, CL	4" SKIP-DASH CENTERLINE	22.5
STA 641+25 TO 665+00, LT	4" SOLID EDGE LINE	791.8
STA 641+25 TO 642+30, RT	4" SOLID EDGE LINE	35.0
STA 663+90 TO 665+00, RT	4" SOLID EDGE LINE	36.7
STA 663+90 TO 666+77, CL	4" SKIP-DASH CENTERLINE	24.0
	TOTAL	910

SHOULDER SCHEDULE

LOCATION	AGGREGATE SHOULDERS, TYPE B 6"	HMA SHOULDERS, 8"	HMA SHOULDERS, 12"	HMA SHOULDERS
	SQ YD	SQ YD	SQ YD	TON
STA 642+30 TO 648+51, RT	345			
STA 642+30 TO 648+51, RT				67
STA 642+30 TO 649+68, LT				74
STA 642+30 TO 649+80, LT	410			
STA 648+51 TO 648+61, RT	2.8			
STA 648+51 TO 648+71, RT			18	
STA 648+71 TO 651+61.39, RT			421	
STA 649+68 TO 649+78, LT	2.8			
STA 649+68 TO 649+80, LT		8		
STA 649+80 TO 651+61.39, LT		182		
STA 651+61.39 TO 651+77.2, LT		4		
STA 651+61.39 TO 651+78.8, RT			4	
STA 656+92.2 TO 657+09.76, RT			4	
STA 656+94.0 TO 657+09.76, LT		4		
STA 657+09.76 TO 658+88, RT			258	
STA 657+09.76 TO 660+04, LT		294		
STA 658+88 TO 658+94, RT			8	
STA 658+90 TO 658+94, RT	0.6			
STA 658+94 TO 661+65, RT			302	
STA 658+94 TO 663+90, RT	110			
STA 660+04 TO 660+16, LT		8		
STA 660+06 TO 660+16, LT	2.8			
STA 660+16 TO 661+65, LT		50		
STA 660+16 TO 663+90, RT	208			
STA 661+65 TO 663+90, LT				21
STA 661+65 TO 663+90, RT				148
STA 663+90 TO 664+00, RT	8			
TOTALS	1090	550	1015	310

PAVEMENT MARKING SCHEDULE

LOCATION	DESCRIPTION	SHORT TERM PAVEMENT MARKING	TEMPORARY PAVEMENT MARKING - LINE 4"	SHORT TERM PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING - LINE 4"	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	GROOVING FOR RECESSED PAVEMENT MARKING 5"
		FOOT	FOOT	SQ FT	FOOT	FOOT	FOOT
STA 639+60 TO 666+77, CL	SKIP-DASH YELLOW	544		181.3			
STA 648+51 TO 663+00, RT	SOLID WHITE	128		42.7			
STA 649+68 TO 660+16, LT	SOLID WHITE	88		29.3			
STA 641+25 TO 651+61, LT	SOLID WHITE		1036	345.3	1036		
STA 641+25 TO 651+62, RT	SOLID WHITE		1037	345.7	1037		
STA 651+61 TO 657+10, LT	SOLID WHITE		549	183		549	549
STA 651+62 TO 657+09, RT	SOLID WHITE		547	182.4		547	547
STA 657+10 TO 665+00, LT	SOLID WHITE		790	263.3	790		
STA 657+09 TO 665+00, RT	SOLID WHITE		791	263.7	791		
STA 639+60 TO 651+61, CL	SKIP-DASH YELLOW		301	100.3	301		
STA 651+61 TO 657+09, CL	SKIP-DASH YELLOW		137	45.7		137	137
STA 657+09 TO 666+77, CL	SKIP-DASH YELLOW		242	80.7	242		
	TOTALS	760	5430	2064	4197	1233	1233

NOTES:
1. QUANTITY OF SHORT TERM PAVEMENT MARKING IS BASED ON 2 APPLICATIONS.

DRAINAGE SCHEDULE

LOCATION	REINFORCEMENT BARS	EXPANSION BOLTS 3/4 INCH	PIPE CULVERTS, CLASS A, TYPE 1 36"	PRECAST REINF CONC FLARED END SECTIONS 36"	METAL END SECTIONS 12"	CONCRETE COLLAR	PIPE DRAINS 12"	TYPE E INLET BOX, STANDARD 610001	CONCRETE THRUST BLOCKS
	POUND	EACH	FOOT	EACH	EACH	CU YD	FOOT	EACH	EACH
STA 651+74.3, LT					1		43	1	1
STA 661+11.7, 46.5' RT	37	12	2			0.42			
STA 661+14.9, 55.6' RT				1					
TOTALS	37	12	2	1	1	0.42	43	1	1

RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE

LOCATION	DESCRIPTION	RAISED REFLECTIVE PAVEMENT MARKER
		EACH
STA 642+63, CL	TWO-WAY AMBER	1
STA 643+43, CL	TWO-WAY AMBER	1
STA 644+23, CL	TWO-WAY AMBER	1
STA 645+03, CL	TWO-WAY AMBER	1
STA 645+83, CL	TWO-WAY AMBER	1
STA 646+63, CL	TWO-WAY AMBER	1
STA 647+43, CL	TWO-WAY AMBER	1
STA 648+23, CL	TWO-WAY AMBER	1
STA 649+03, CL	TWO-WAY AMBER	1
STA 649+83, CL	TWO-WAY AMBER	1
STA 650+63, CL	TWO-WAY AMBER	1
STA 651+43, CL	TWO-WAY AMBER	1
STA 657+83, CL	TWO-WAY AMBER	1
STA 658+63, CL	TWO-WAY AMBER	1
STA 659+43, CL	TWO-WAY AMBER	1
STA 660+23, CL	TWO-WAY AMBER	1
STA 661+01, CL	TWO-WAY AMBER	1
STA 661+83, CL	TWO-WAY AMBER	1
STA 662+63, CL	TWO-WAY AMBER	1
STA 663+43, CL	TWO-WAY AMBER	1
	TOTALS	20

GUARDRAIL SCHEDULE

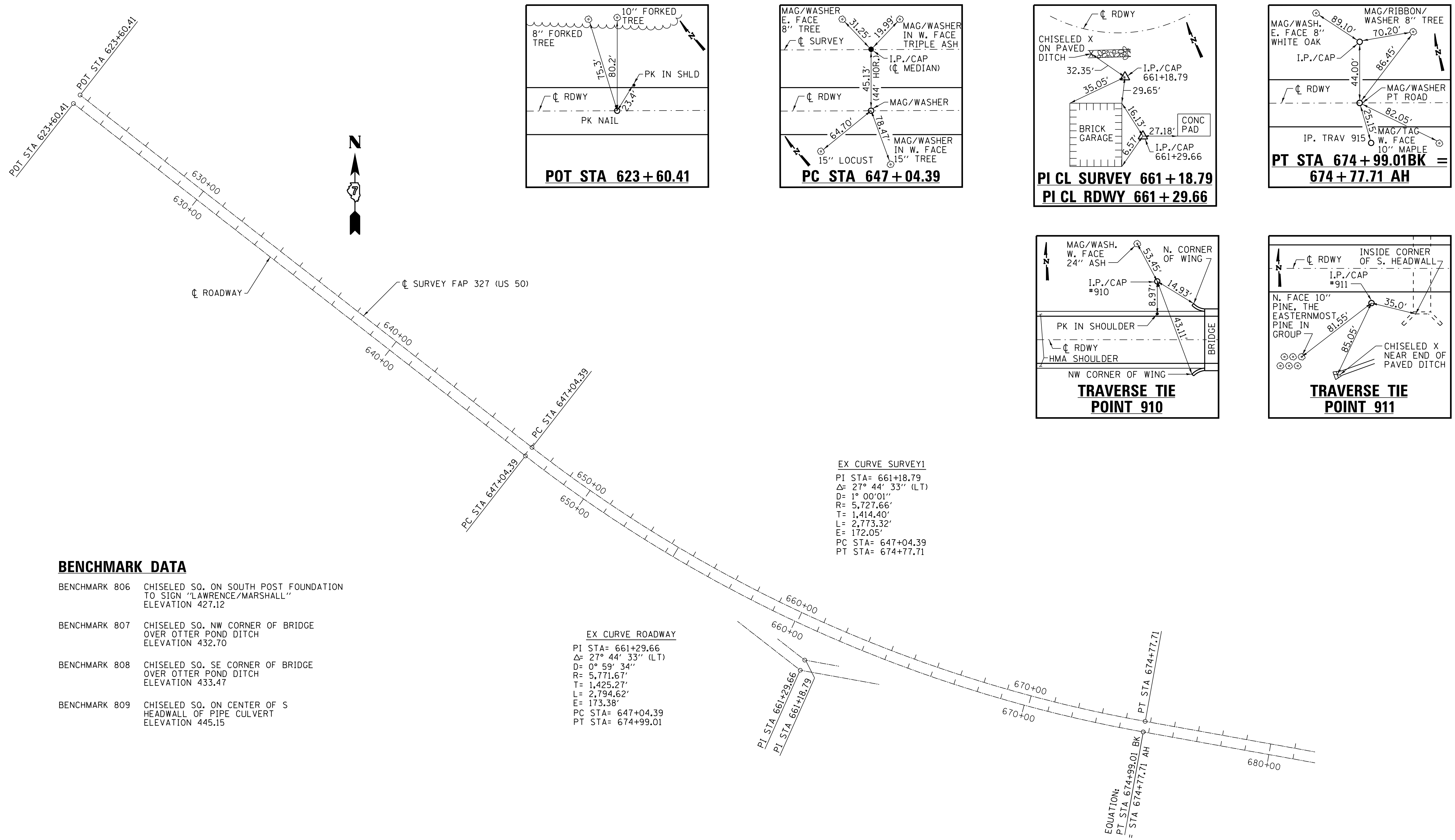
LOCATION	STEEL PLATE BEAM GUARDRAIL, TYPE A 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	GUARDRAIL REMOVAL	GUARDRAIL REFLECTORS, TYPE A	TERMINAL MARKER - DIRECT APPLIED
	FOOT	EACH	EACH	FOOT	EACH	EACH
NORTHWEST CORNER OF BRIDGE	103.125	1	1	140		1
SOUTHWEST CORNER OF BRIDGE	215.625	1	1	215		1
NORTHEAST CORNER OF BRIDGE	215.625	1	1	215		1
SOUTHEAST CORNER OF BRIDGE	103.125	1	1	140		1
STA 649+50, RT					1	
STA 650+30, RT					1	
STA 651+10, RT					1	
STA 657+60, LT					1	
STA 658+40, LT					1	
STA 659+20, LT					1	
TOTALS	637.5	4	4	710	6	4

SURVEY MARKERS SCHEDULE

LOCATION	PERMANENT SURVEY MARKERS, TYPE II
	EACH
PC STA 647+04.39, CL	1
TOTAL	1

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULES OF QUANTITIES SN051-0015(OLD)/SN051-0066(NEW)
	ESCA PROJECT NO. 1000.02	DRAWN - JLF	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -		
	PLOT DATE = 11/12/2018 1:49:25 PM	DATE - 11/18	REVISED -		SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	166
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EX CURVE SURVEY1

PI STA= 661+18.79
Δ= 27° 44' 33'' (LT)
D= 1° 00'01''
R= 5,727.66'
T= 1,414.40'
L= 2,773.32'
E= 172.05'
PC STA= 647+04.39
PT STA= 674+77.71

EX CURVE ROADWAY

PI STA= 661+29.66
Δ= 27° 44' 33'' (LT)
D= 0° 59' 34''
R= 5,771.67'
T= 1,425.27'
L= 2,794.62'
E= 173.38'
PC STA= 647+04.39
PT STA= 674+99.01

BENCHMARK DATA

BENCHMARK 806	CHISELED SQ. ON SOUTH POST FOUNDATION TO SIGN ''LAWRENCE/MARSHALL'' ELEVATION 427.12
BENCHMARK 807	CHISELED SQ. NW CORNER OF BRIDGE OVER OTTER POND DITCH ELEVATION 432.70
BENCHMARK 808	CHISELED SQ. SE CORNER OF BRIDGE OVER OTTER POND DITCH ELEVATION 433.47
BENCHMARK 809	CHISELED SQ. ON CENTER OF S HEADWALL OF PIPE CULVERT ELEVATION 445.15

PLOT DRIVER = $PLTDRV$
PEN TABLE = $PENTBL$
MODEL NAME = $MODEL$
FILE NAME = D:\74177-alt-a001.dgn

ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - MTD	REVISED -
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -
PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -
PLOT DATE = 10/19/2018 1:50:48 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARKS
SN051-0015(OLD)/SN051-0066(NEW)

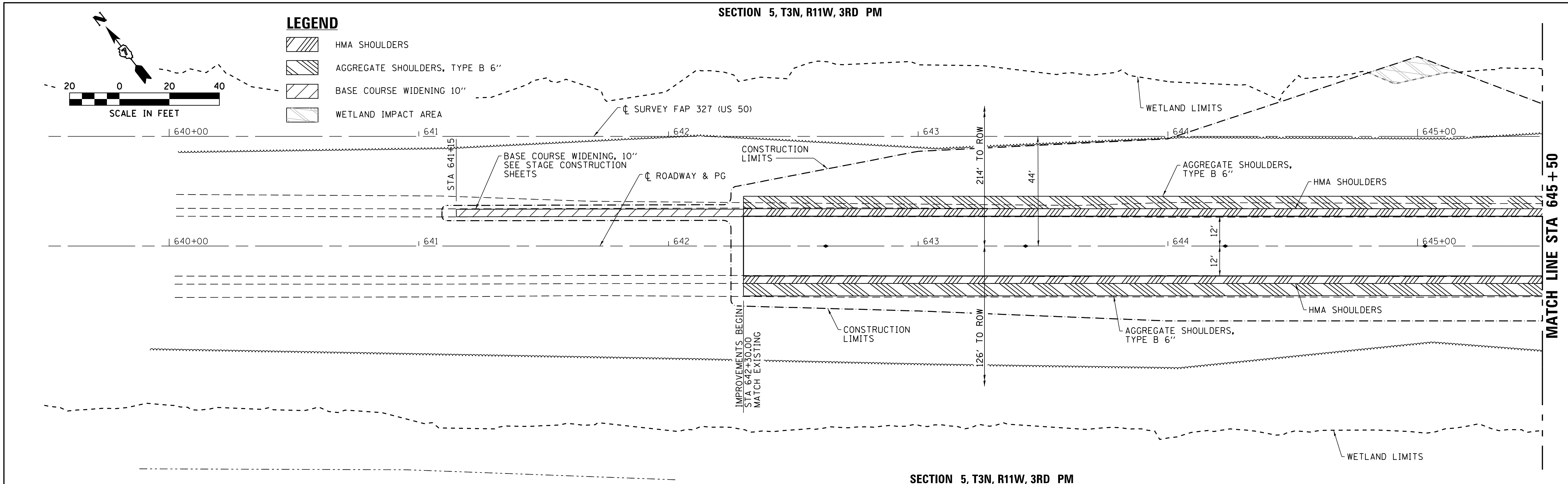
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	167

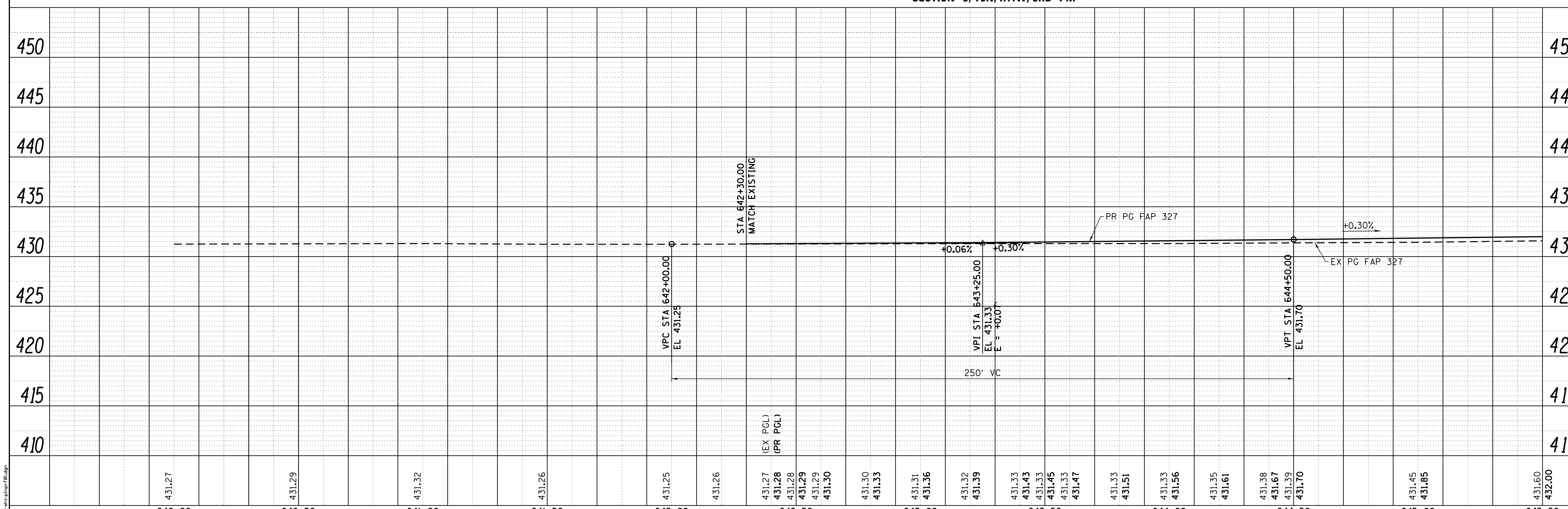
CONTRACT NO. 74177

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

SECTION 5, T3N, R11W, 3RD PM



SECTION 5, T3N, R11W, 3RD PM



ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - MTD	REVISED -	
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -	
SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -	
PLOT DATE = 11/12/2018 1:49:27 PM	DATE - 11/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

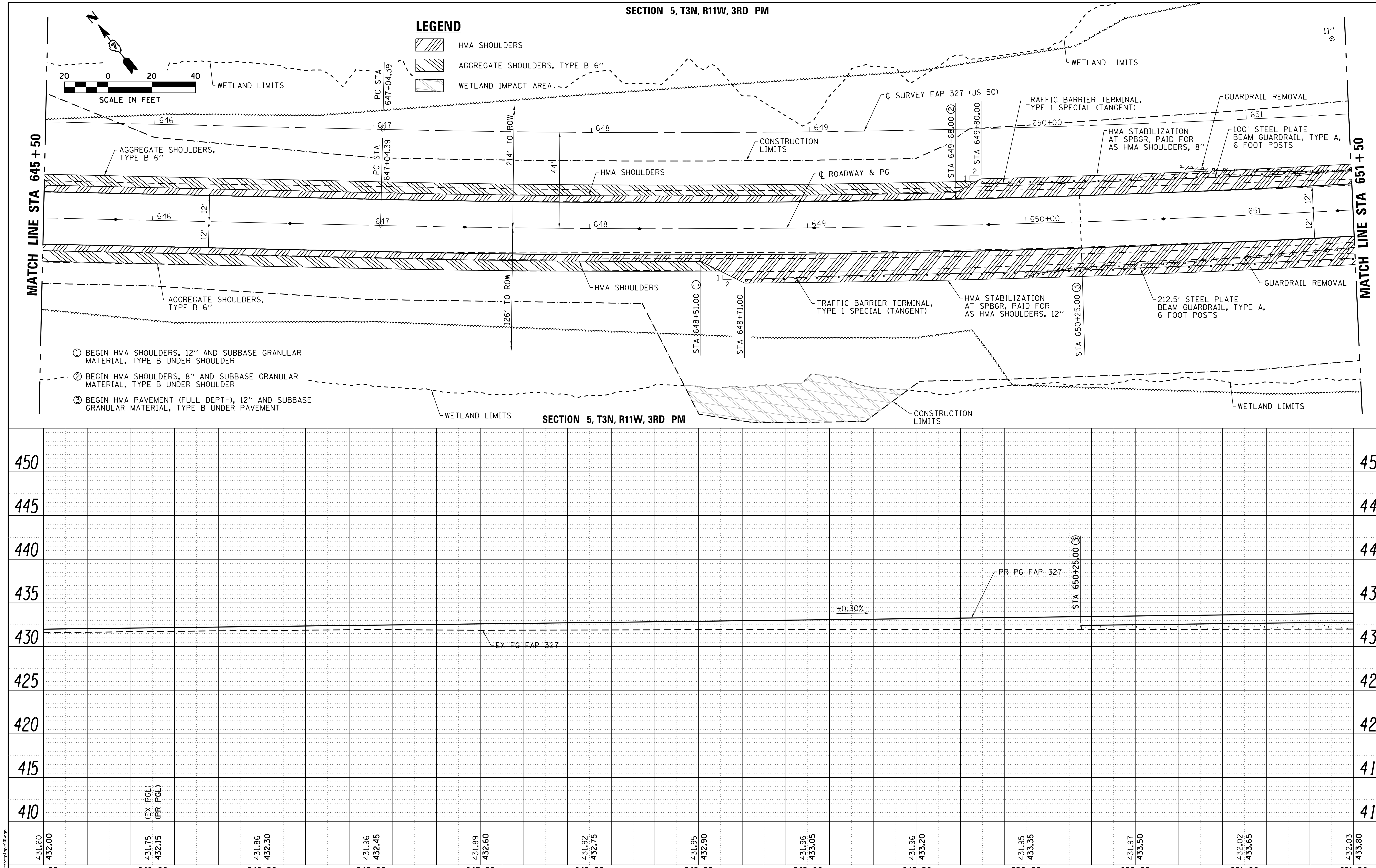
PLAN AND PROFILE
SN051-0015(OLD)/SN051-0066(NEW)

SCALE: 1"=20'-0" | SHEET NO. 1 OF 5 SHEETS | STA. 640+00 TO STA. 645+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	168
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

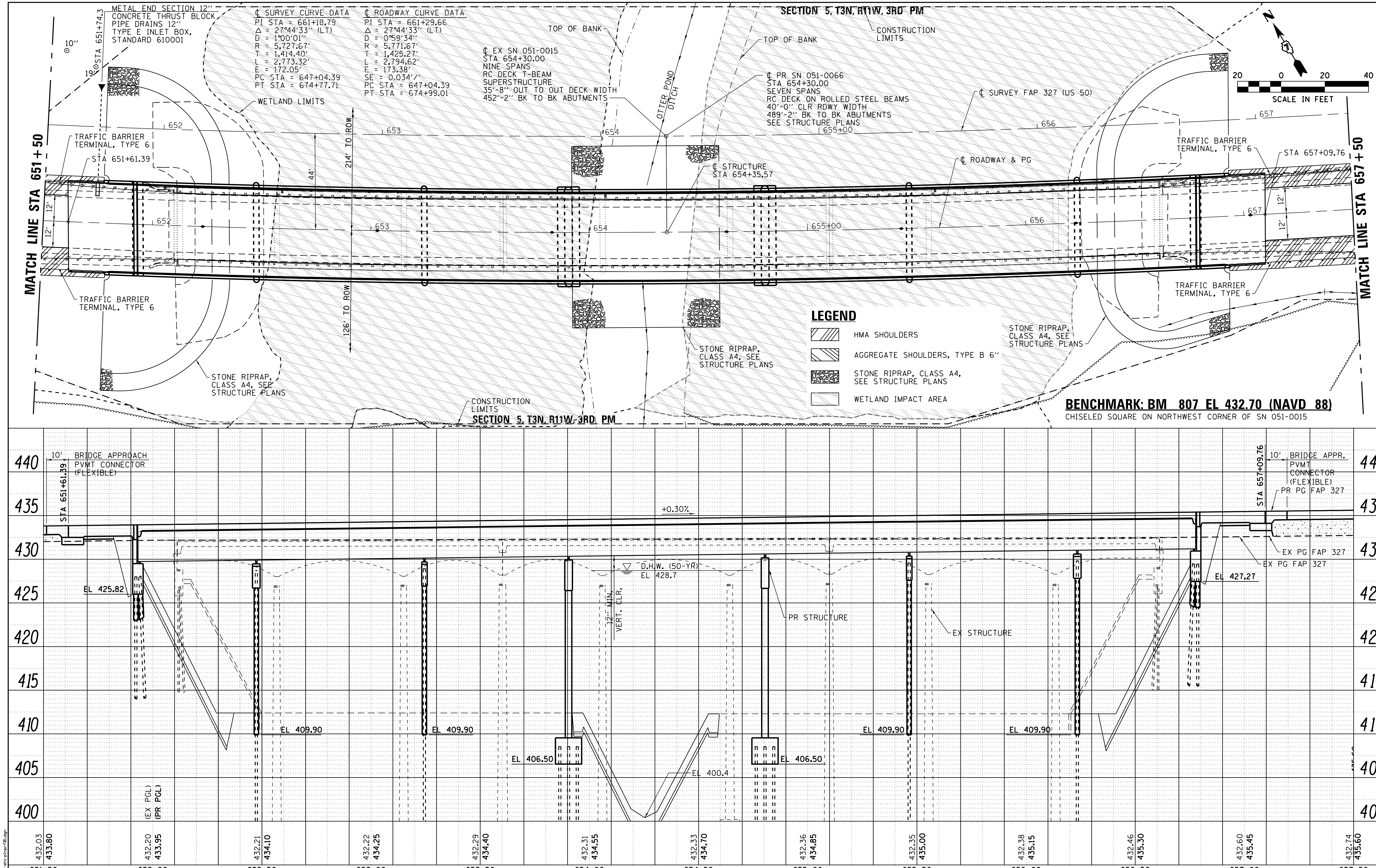
PLAN | NOTE BOOK NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | RT. OF WAY CHECKED | CADD FILE NAME | BY | DATE

PROFILE | NOTE BOOK NO. | SURVEYED | PLOTTED | GRADES CHECKED | STA. NOTED | STRUCTURE NOTATIONS CHKD | BY | DATE



ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE SN051-0015(OLD)/SN051-0066(NEW)
	ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -		
	SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -		
	PLOT DATE = 11/12/2018 1:49:27 PM	DATE - 11/18	REVISED -		SCALE: 1"=20'-0" SHEET NO. 2 OF 5 SHEETS STA. 645+50 TO STA. 651+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	169
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / R.T. OF WAY CHECKED / CADD FILE NAME — NOTE BOOK NO.

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHECKED — NOTE BOOK NO.

ESCA CONSULTANTS, INC.

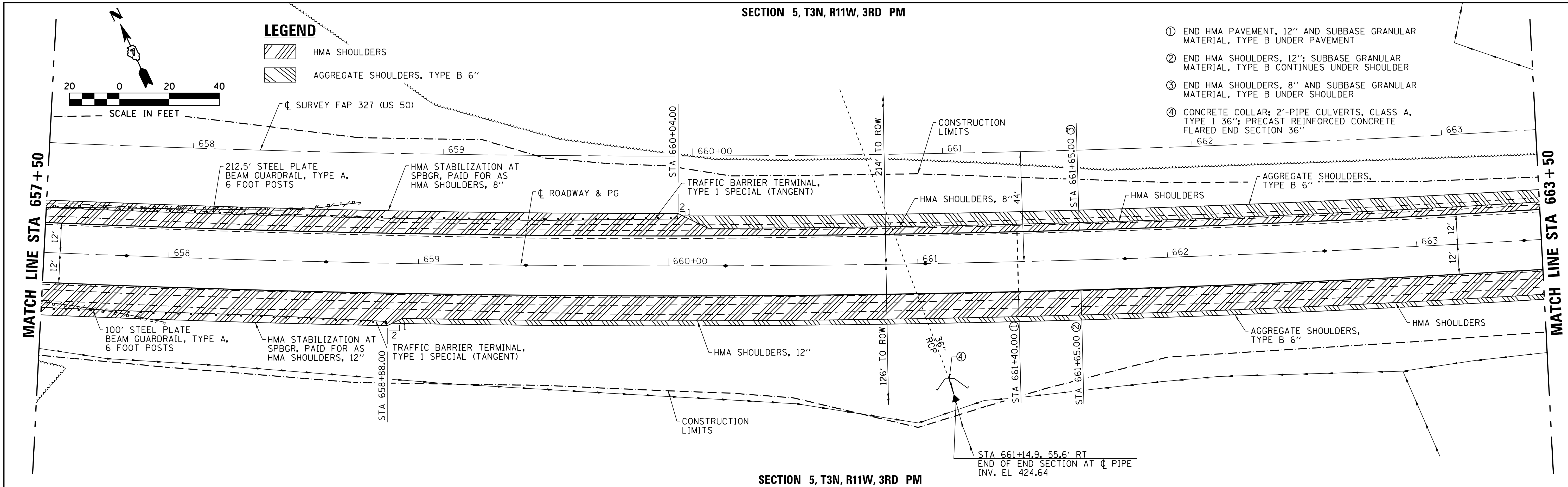
USER NAME = kah	DESIGNED - MTD	REVISED -	
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -	
SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -	
PLOT DATE = 11/12/2018 1:49:28 PM	DATE - 11/18	REVISED -	

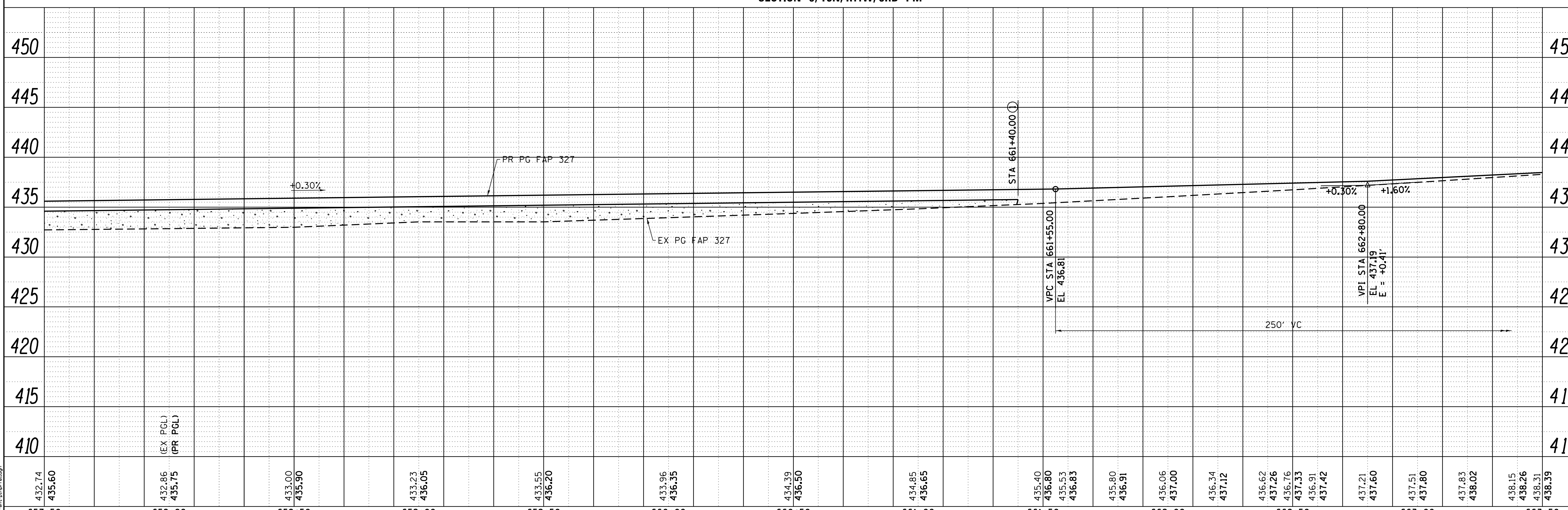
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SN051-0015(OLD) / SN051-0066(NEW)

SCALE: 1"=20'-0" | SHEET NO. 3 OF 5 SHEETS | STA. 651+50 TO STA. 657+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	170
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - MTD	REVISED -	
ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -	
SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -	
PLOT DATE = 11/12/2018 1:49:29 PM	DATE - 08/15	REVISED -	

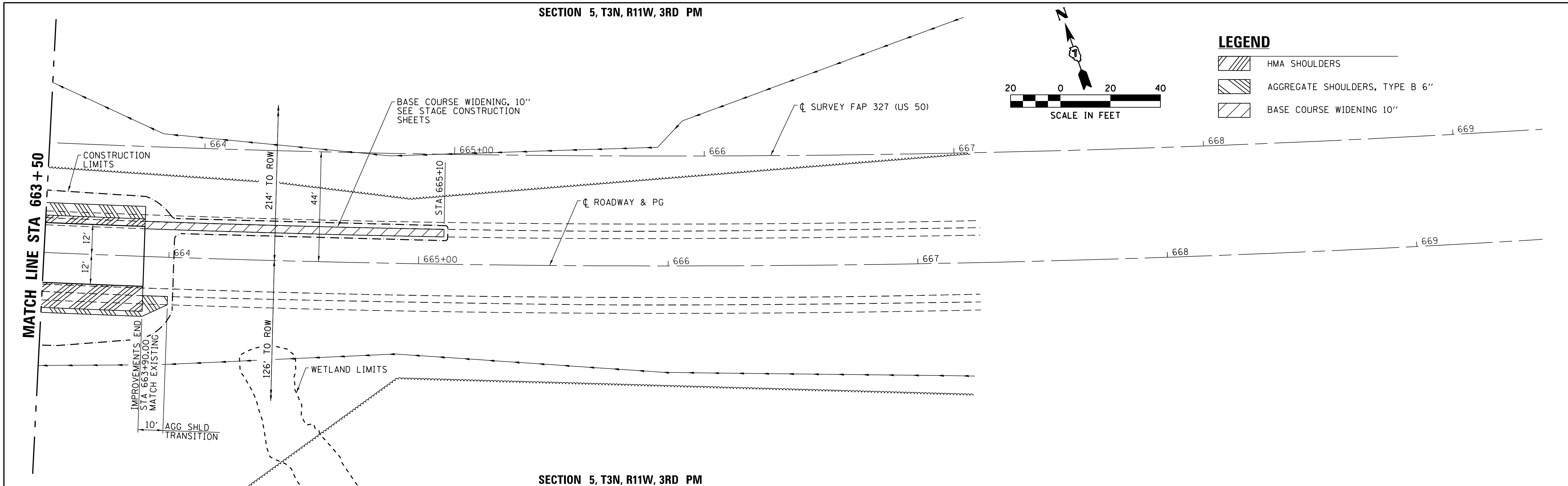
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

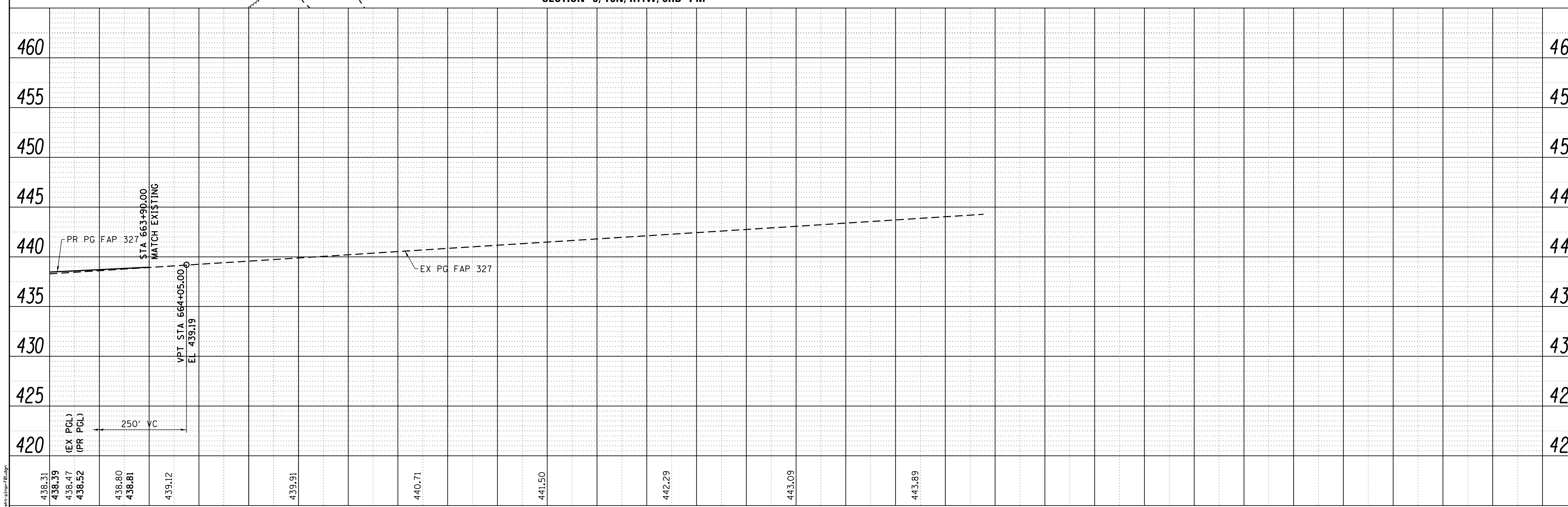
PLAN AND PROFILE
SN051-0015(OLD)/SN051-0066(NEW)

SCALE: 1"=20'-0" | SHEET NO. 4 OF 5 SHEETS | STA. 657+50 TO STA. 663+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	171
		CONTRACT NO. 74177		

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





ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -
	ESCA PROJECT NO. 1000.02	DRAWN - RJT/HAS	REVISED -
	SCALES: (HORIZ) 1"=20' (VERT) 1"=5'	CHECKED - RDP	REVISED -
	PLOT DATE = 11/12/2018 1:49:29 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SN051–0015(OLD)/SN051–0066(NEW)

SCALE: 1"=20'-0" | SHEET NO. 5 OF 5 SHEETS | STA. 663+50 TO STA. 667+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	172

CONTRACT NO. 74177

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

SCHEDULE OF QUANTITIES

TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	FEET
641+05		665+18	2400
		TOTAL -	2400

TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

TEMPORARY RUMBLE STRIPS - 6 EACH

PINNING TEMPORARY CONCRETE BARRIER - 36 EACH

LEGEND

TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED

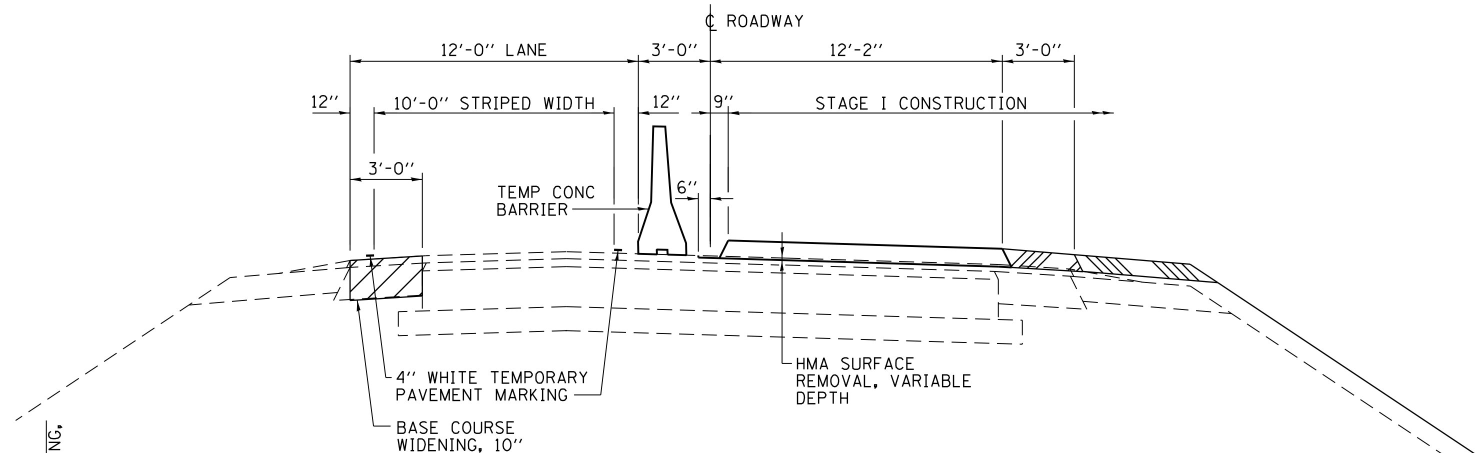
HMA SHOULDERS

AGGREGATE SHOULDERS, TYPE B 6″

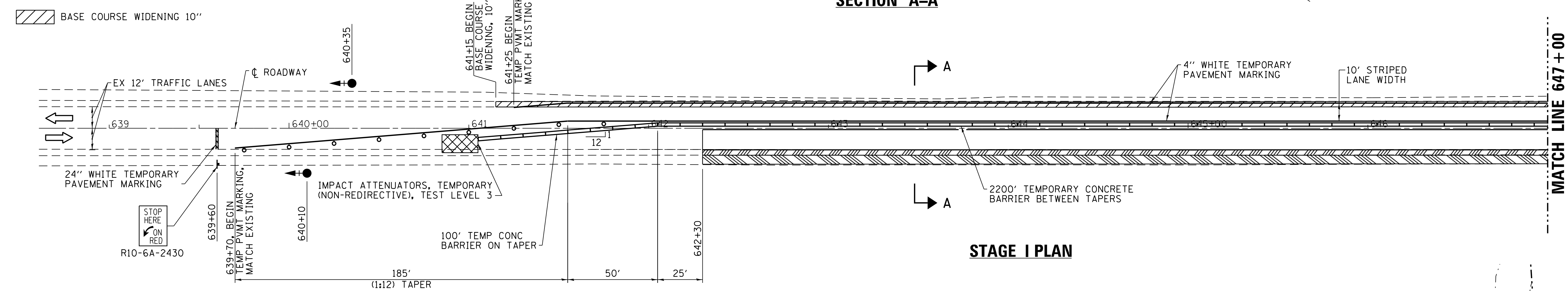
BASE COURSE WIDENING 10″

GENERAL NOTES

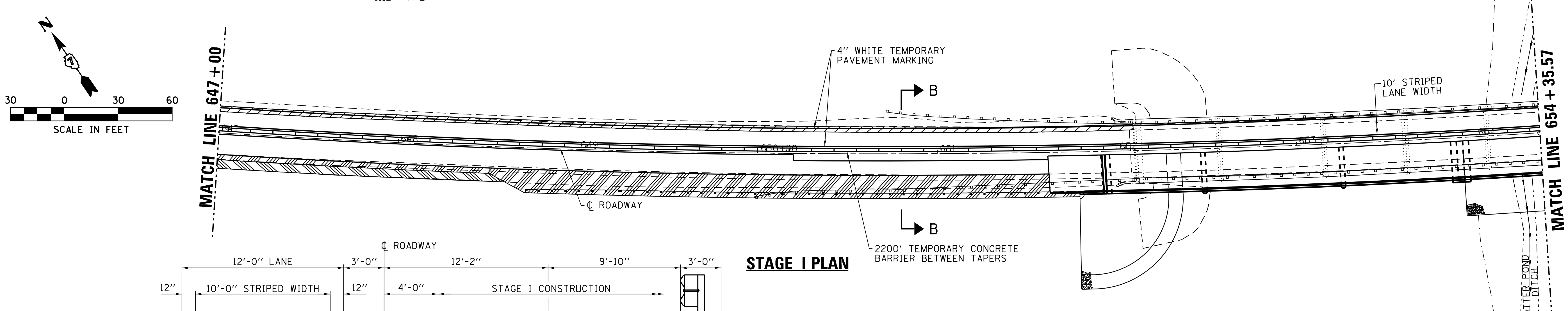
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. SEE STRUCTURE PLANS FOR STAGE CONSTRUCTION DETAILS OF BRIDGE.
5. THE HMA SURFACE COURSE AND THE FINAL LIFT OF HMA SHOULDERS SHALL NOT BE PLACED DURING STAGE I CONSTRUCTION.
6. STAGE I TEMPORARY CONCRETE BARRIER SHALL BE PINNED FROM STATION 651+56 TO STATION 657+15.



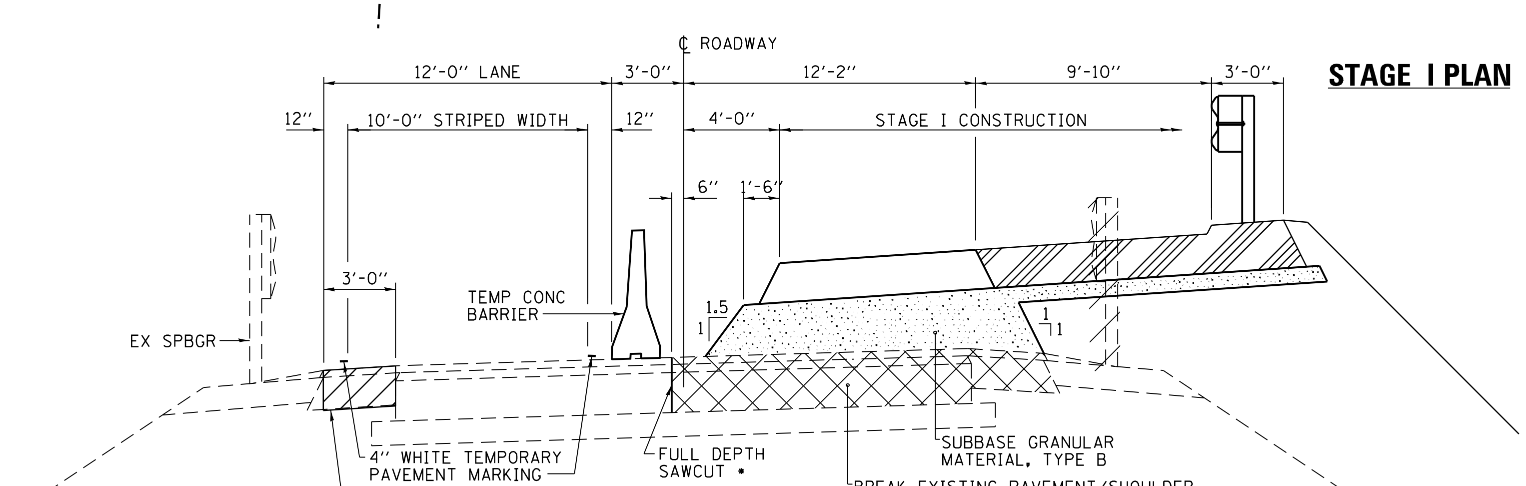
SECTION A–A



STAGE I PLAN



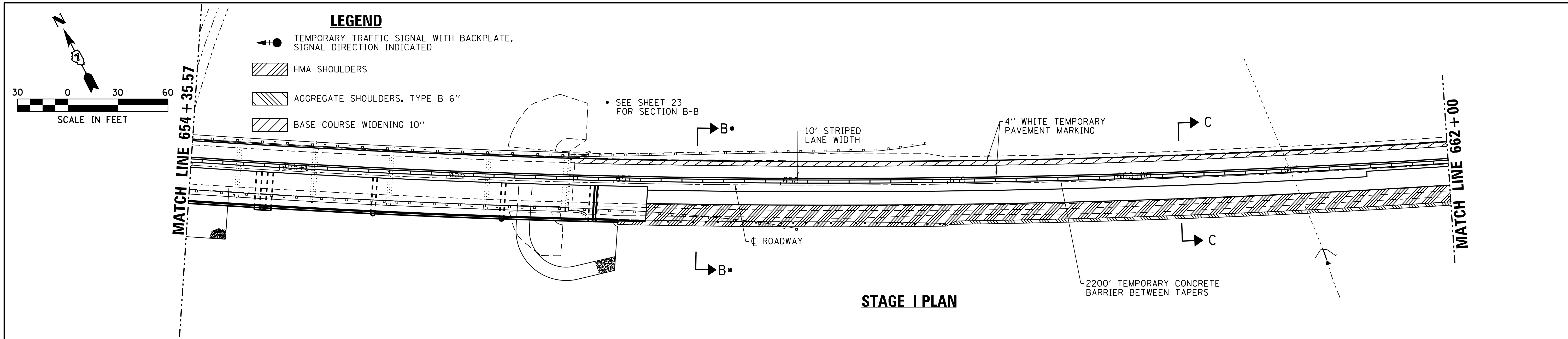
STAGE I PLAN

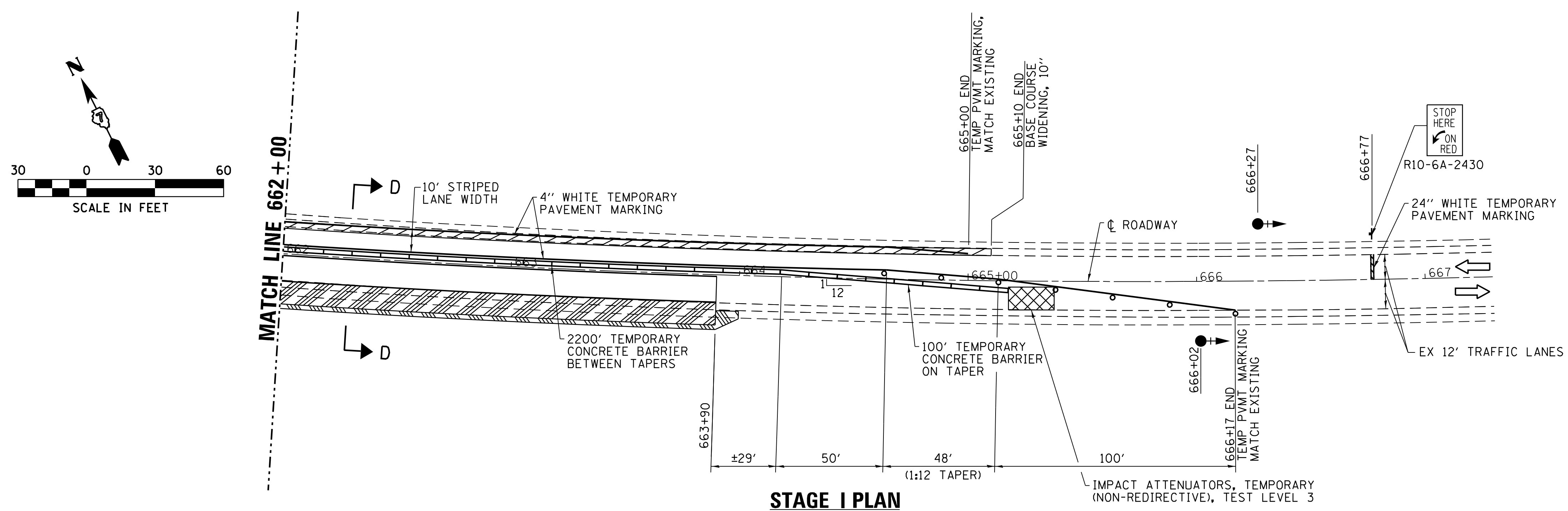


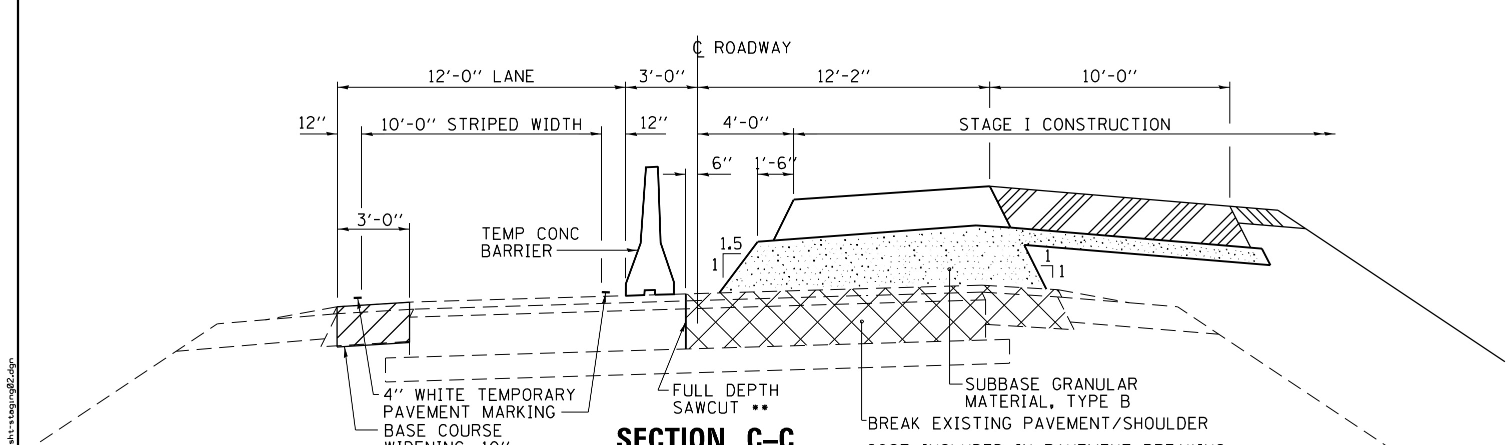
SECTION B–B

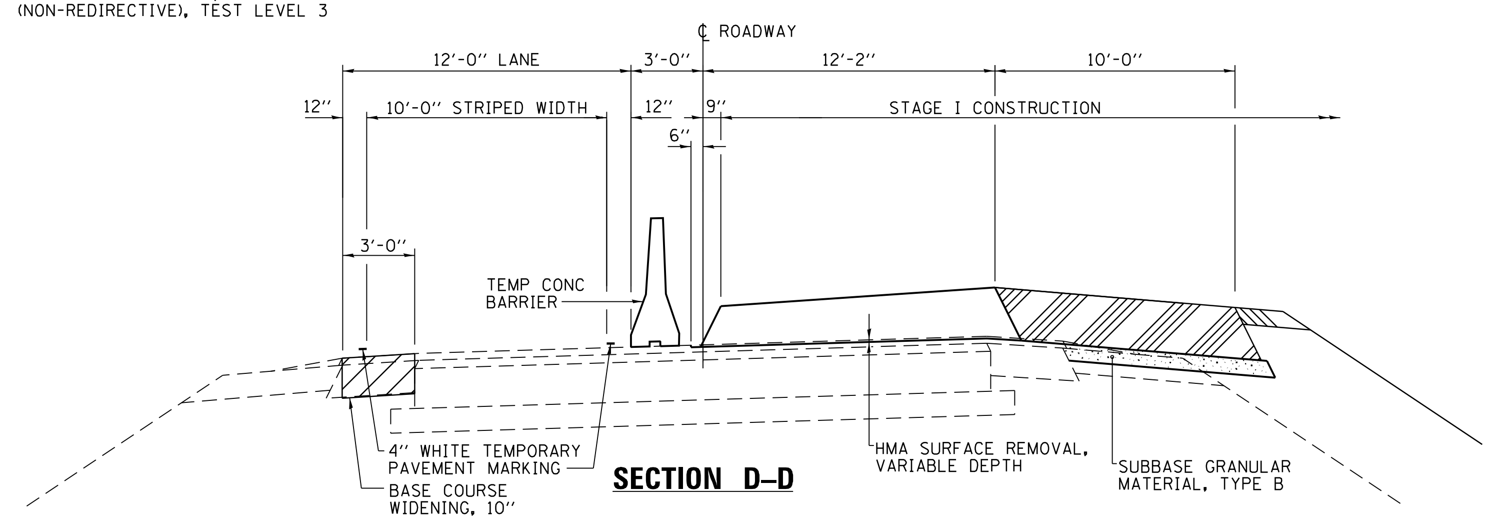
• COST INCLUDED IN PAVEMENT BREAKING

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - NHP/MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I CONSTRUCTION DETAILS SN051-0015(OLD)/SN051-0066(NEW)	F.A.P RTE. 327	SECTION (51-23)B	COUNTY LAWRENCE	TOTAL SHEETS 260	SHEET NO. 173
	ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -		SCALE: 1″=30′			CONTRACT NO. 74177		
	PLOT SCALE = 0.1667 ′/ in.	CHECKED - RDP	REVISED -		SHEET NO. 1 OF 4 SHEETS	STA. 638+60 TO STA. 654+35.57	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
	PLOT DATE = 10/19/2018 1:50:52 PM	DATE - 08/15	REVISED -							









ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - NHP/MTD	REVISED -	
ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -	
PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -	
PLOT DATE = 10/19/2018 1:50:52 PM	DATE - 08/15	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I CONSTRUCTION DETAILS
SN051-0015(OLD)/SN051-0066(NEW)

SCALE: 1''=30' | SHEET NO. 2 OF 4 SHEETS | STA. 654+35.57 TO STA. 667+25

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	174
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND

TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED

HMA SHOULDERS

AGGREGATE SHOULDERS, TYPE B 6"

SCHEDULE OF QUANTITIES

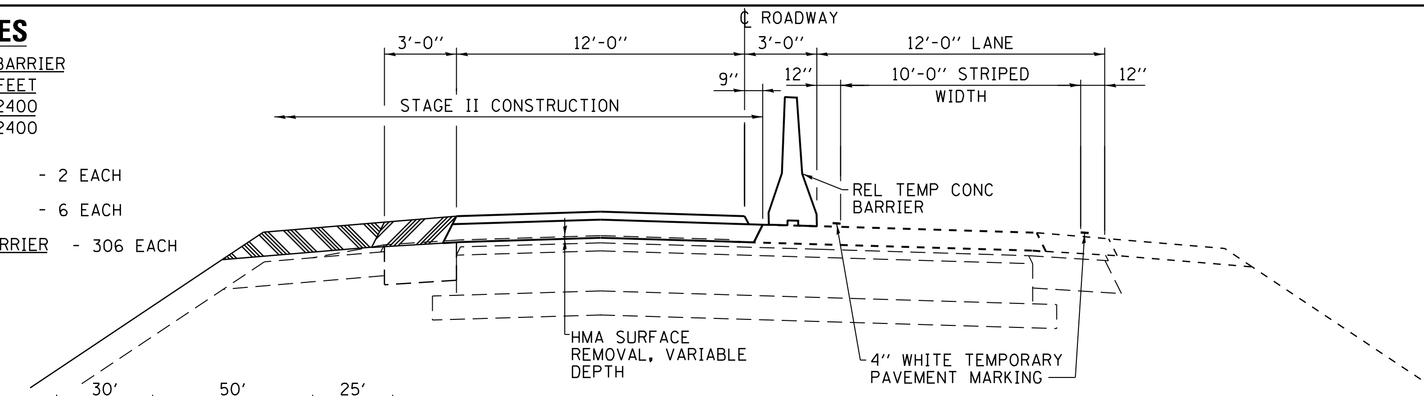
RELOCATE TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	FEET
641+05		665+15	2400
		TOTAL -	2400

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 - 2 EACH

TEMPORARY RUMBLE STRIPS - 6 EACH

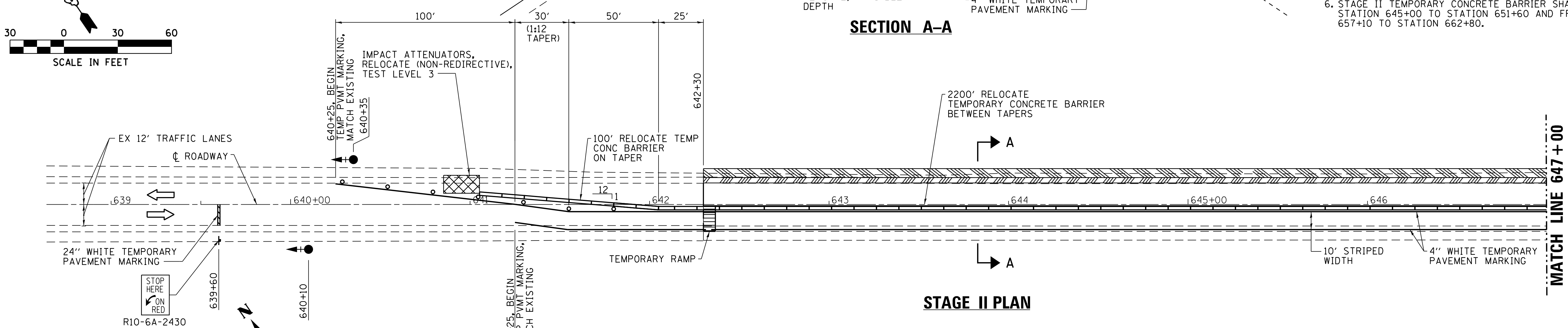
PINNING TEMPORARY CONCRETE BARRIER - 306 EACH



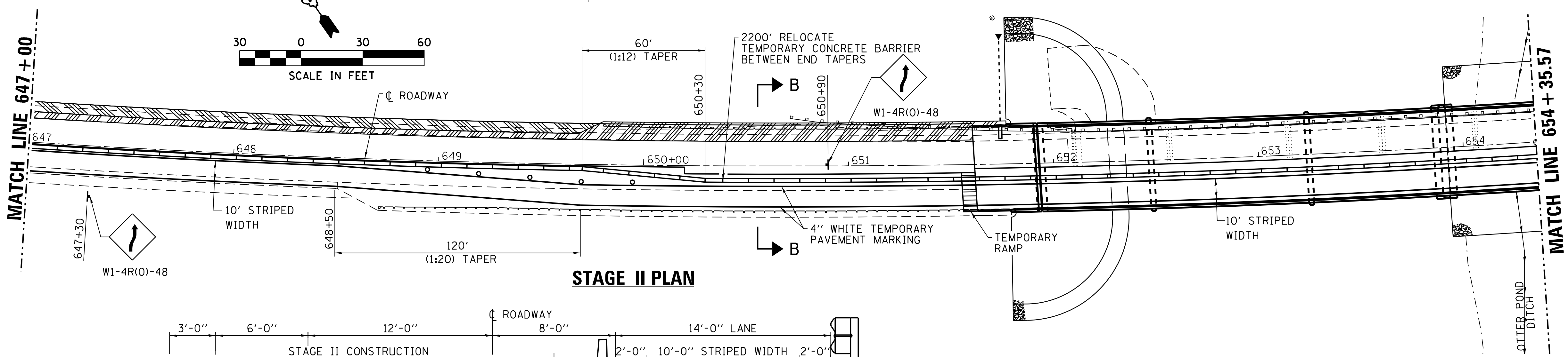
SECTION A–A

GENERAL NOTES

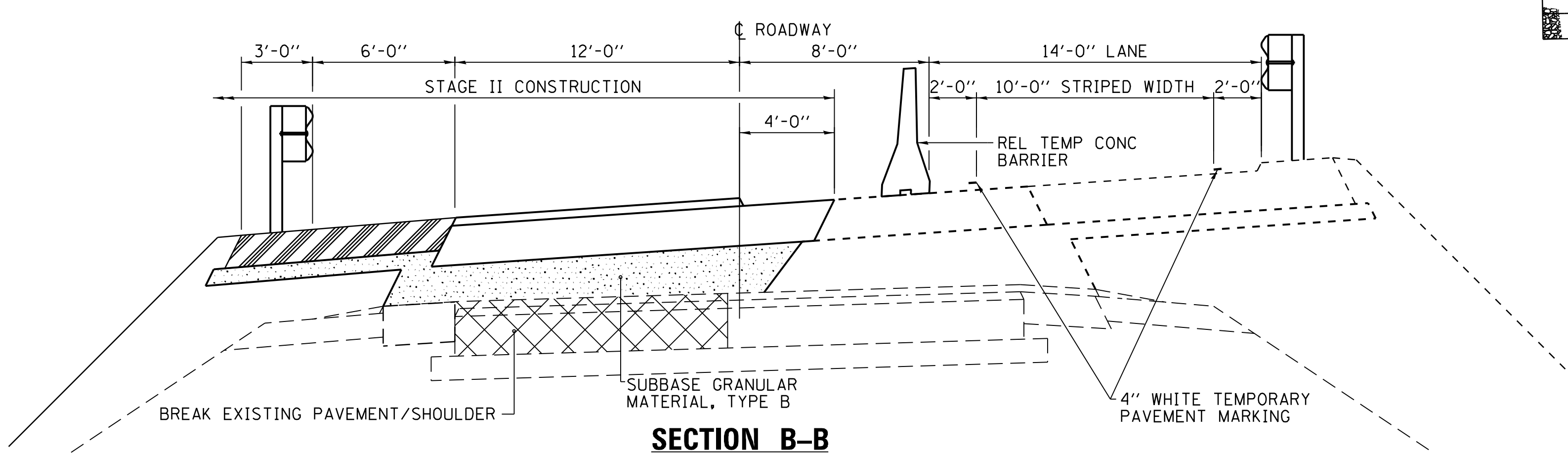
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.
4. SEE STRUCTURE PLANS FOR STAGE CONSTRUCTION DETAILS OF BRIDGE.
5. SURFACE REMOVAL OVER THE BASE COURSE WIDENING WILL BE PAID FOR AS HMA SURFACE REMOVAL, VARIABLE DEPTH REGARDLESS WHICH OPTION, PCC OR HMA, THE CONTRACTOR CHOOSES FOR THE BASE COURSE WIDENING.
6. STAGE II TEMPORARY CONCRETE BARRIER SHALL BE PINNED FROM STATION 645+00 TO STATION 651+60 AND FROM STATION 657+10 TO STATION 662+80.



STAGE II PLAN



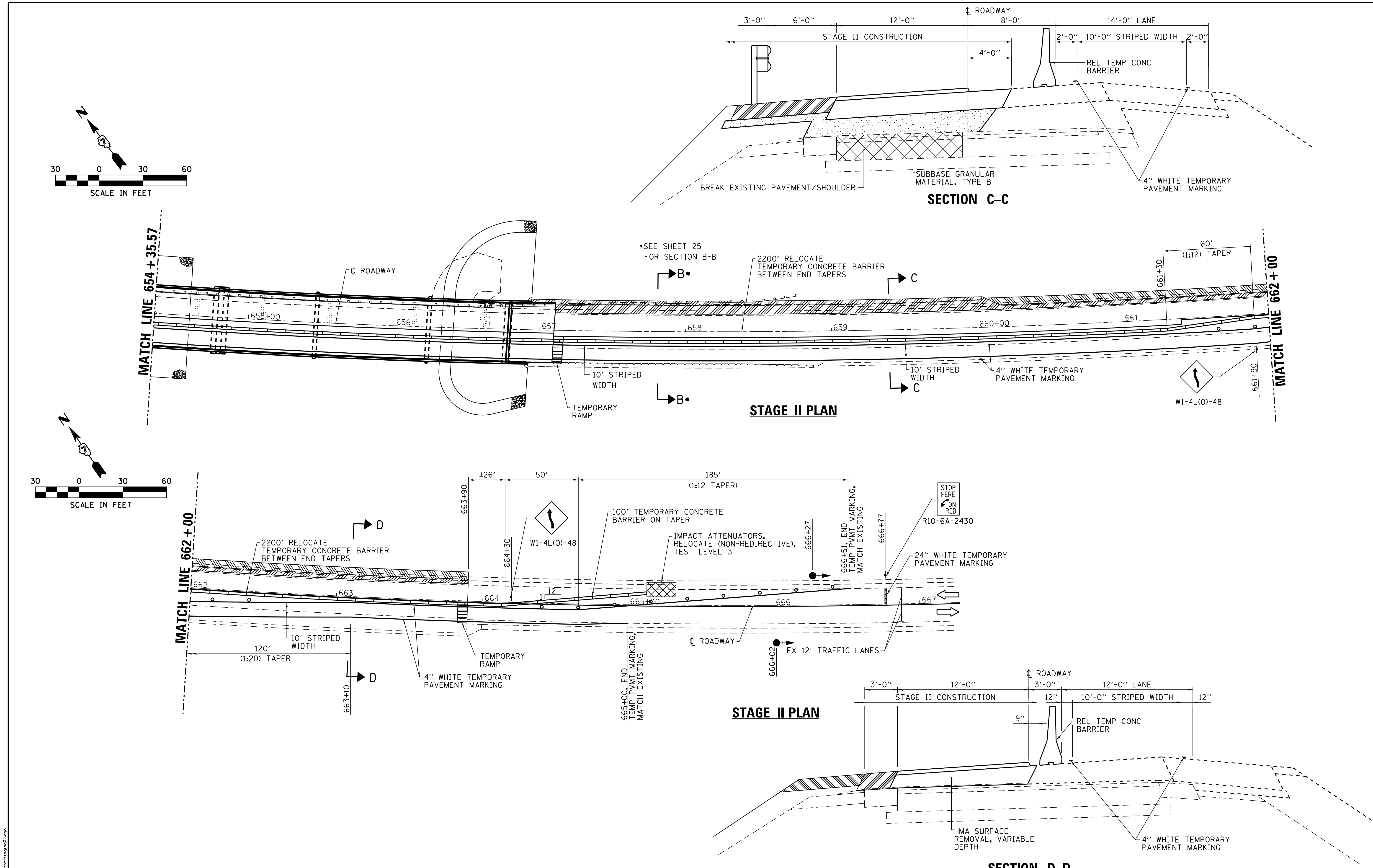
STAGE II PLAN



SECTION B–B

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - NHP/MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II CONSTRUCTION DETAILS SN051-0015(OLD)/SN051-0066(NEW)
	ESCA PROJECT NO. 1000.02	DRAWN - DWH/HAS	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -		
	PLOT DATE = 10/19/2018 1:50:54 PM	DATE - 08/15	REVISED -		SCALE: 1"=30' SHEET NO. 3 OF 4 SHEETS STA. 638+60 TO STA. 654+35.57

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	175
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - NHP/MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -	
	PLOT SCALE = 0.1667 '/ in.	CHECKED - RDP	REVISED -	
	PLOT DATE = 10/19/2018 1:50:55 PM	DATE - 08/15	REVISED -	

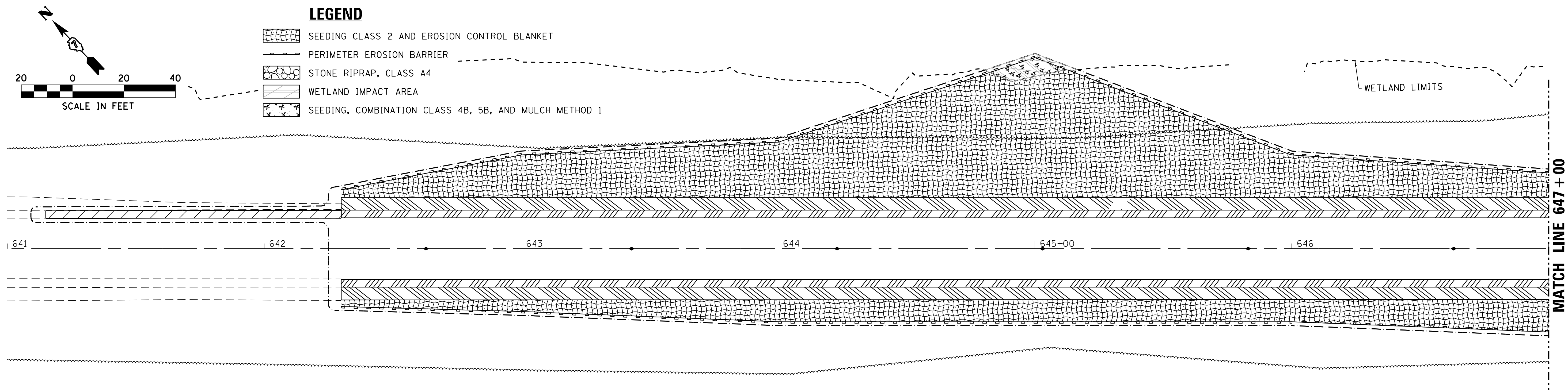
STAGE II CONSTRUCTION DETAILS
SN051-0015(OLD)/SN051-0066(NEW)

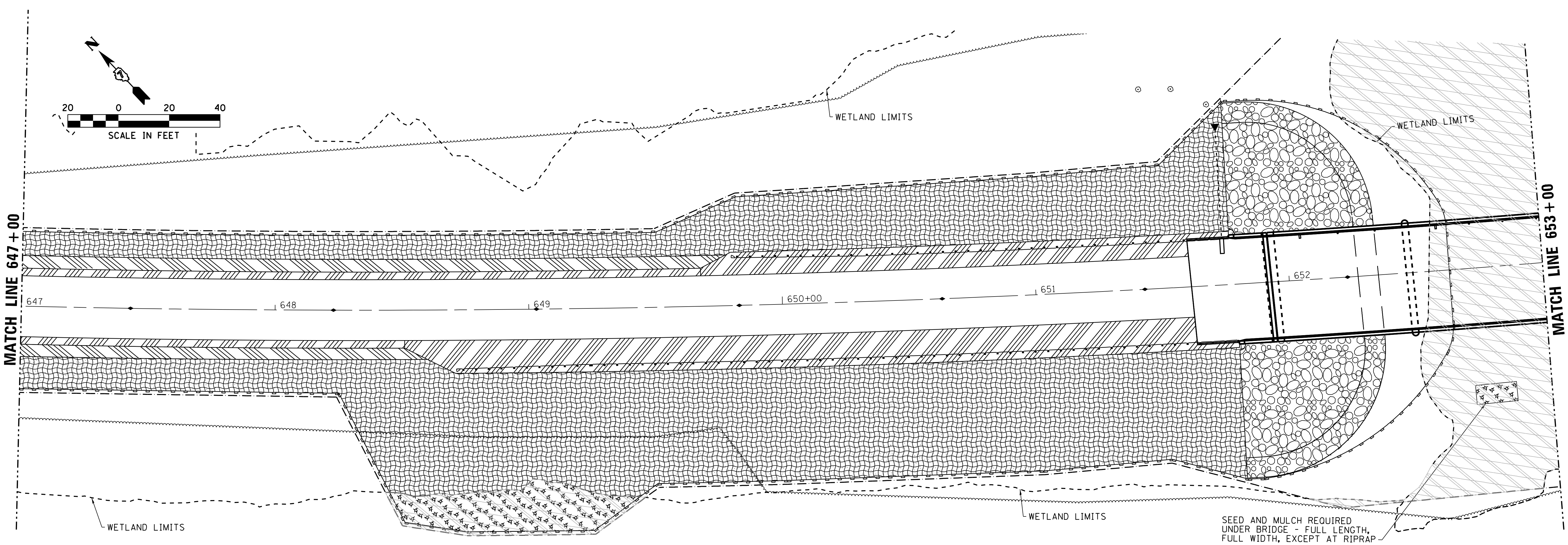
SCALE: | SHEET NO. 4 OF 4 SHEETS | STA. 654+35.57 TO STA. 667+25

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	176
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND

- SEEDING CLASS 2 AND EROSION CONTROL BLANKET
- PERIMETER EROSION BARRIER
- STONE RIPRAP, CLASS A4
- WETLAND IMPACT AREA
- SEEDING, COMBINATION CLASS 4B, 5B, AND MULCH METHOD 1





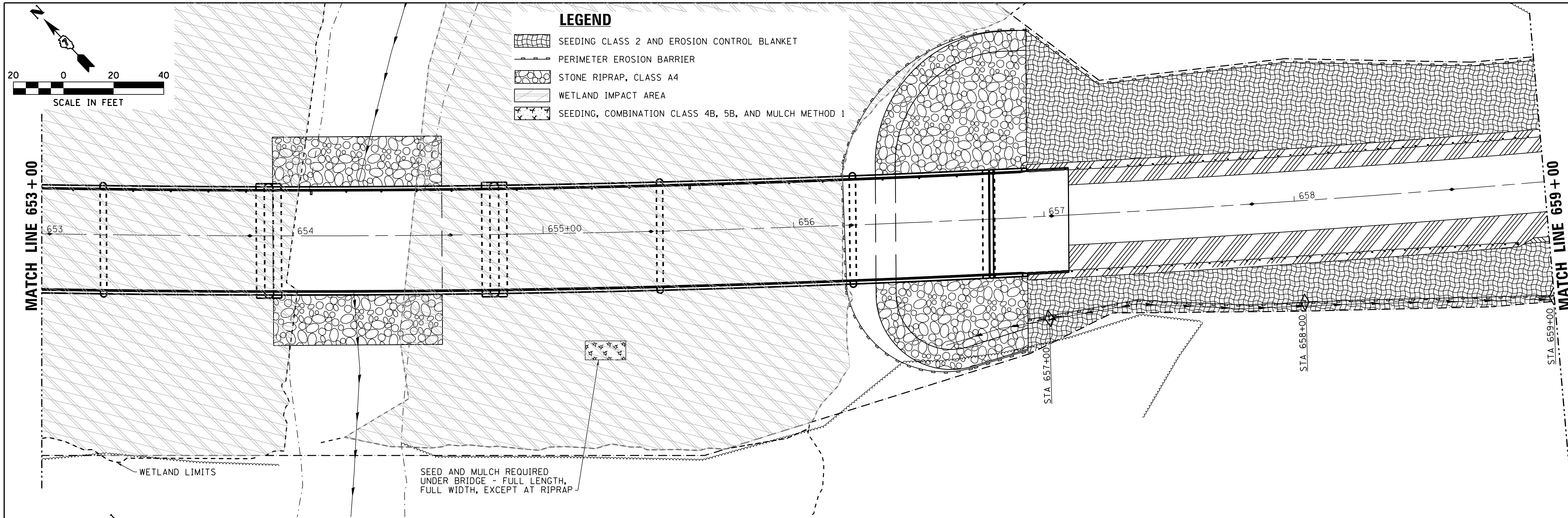
ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -
	ESCA PROJECT NO. 1000.02	DRAWN - HAS	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -
	PLOT DATE = 11/12/2018 1:49:34 PM	DATE - 11/18	REVISED -

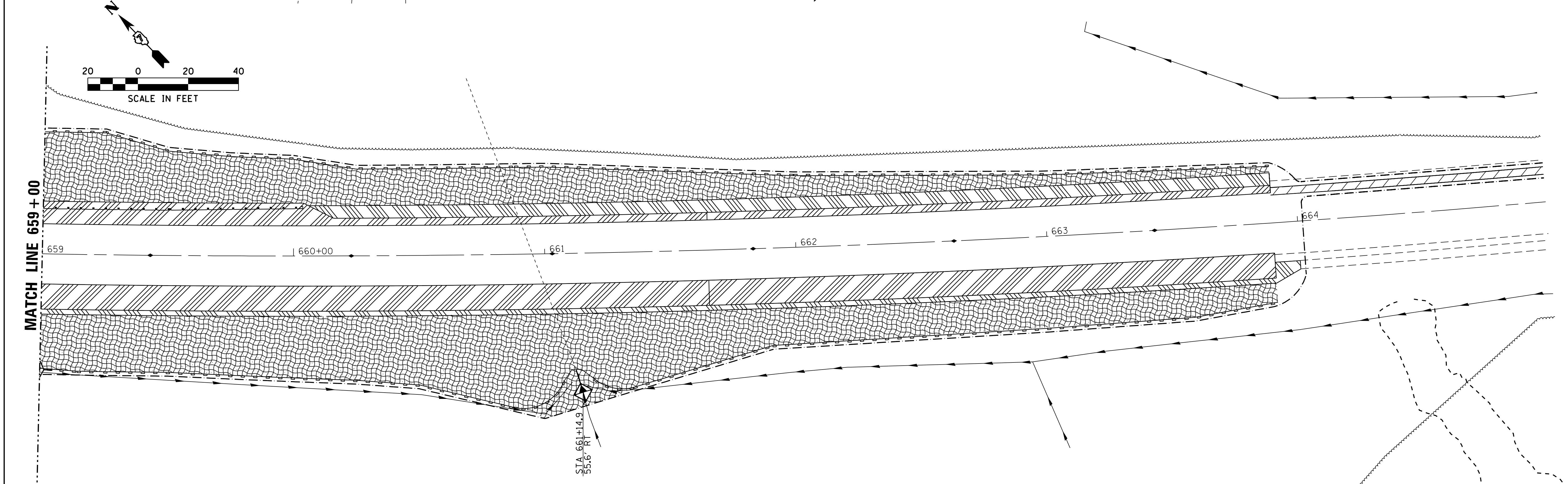
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
SN051-0015(OLD)/SN051-0066(NEW)

SCALE: 1" = 20'-0" | SHEET NO. 1 OF 2 SHEETS | STA. 641+00 TO STA. 653+00

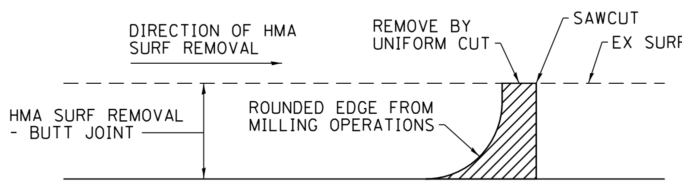
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	177
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





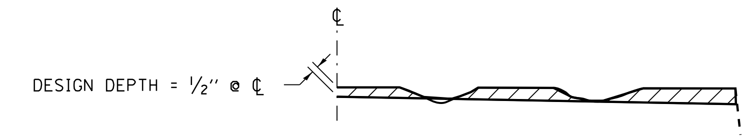
ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLAN SN051-0015(OLD)/SN051-0066(NEW)
	ESCA PROJECT NO. 1000.02	DRAWN - HAS	REVISED -		
	PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -		SCALE: 1" = 20'-0" SHEET NO. 2 OF 2 SHEETS STA. 653+00 TO STA. 665+00
	PLOT DATE = 11/12/2018 1:49:36 PM	DATE - 11/18	REVISED -		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	178
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DETAIL AT BUTT JOINT

NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAWCUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE COST OF ALL WORK SHOWN IN THE DETAIL IS INCLUDED IN HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.



NOTES:

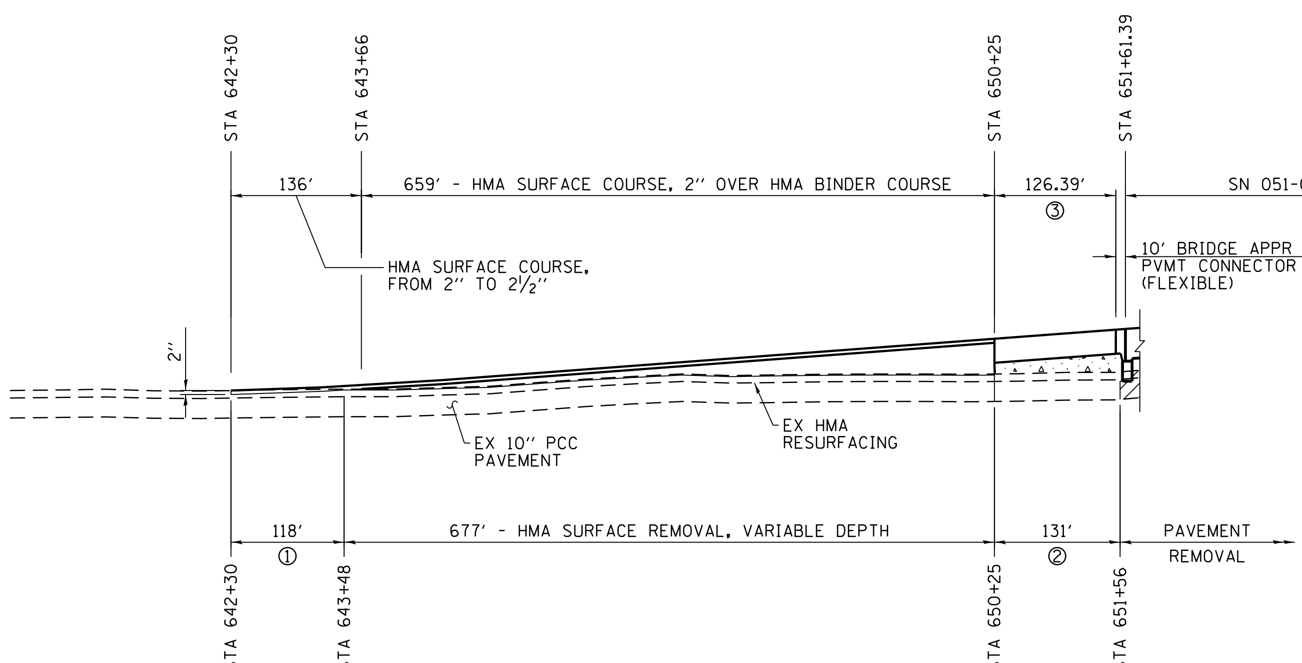
1. MILLING SHALL BE DONE TO ATTAIN A 3/16″/′ SLOPE IN CROWN SECTIONS.
2. EXISTING S.E. AND S.E. TRANSITIONS SHALL BE MAINTAINED UNLESS OTHERWISE SHOWN ON THE PLANS.
3. MILLING TO THE BOTTOM OF WHEEL RUTS SHALL NOT BE NECESSARY UNLESS REQUIRED TO OBTAIN SLOPE OR THE DESIGN DEPTH AT CENTERLINE.
4. THE AVERAGE DEPTH OF MILLING IS ESTIMATED TO BE ½″ BUT MAY VARY IN ISOLATED LOCATIONS.

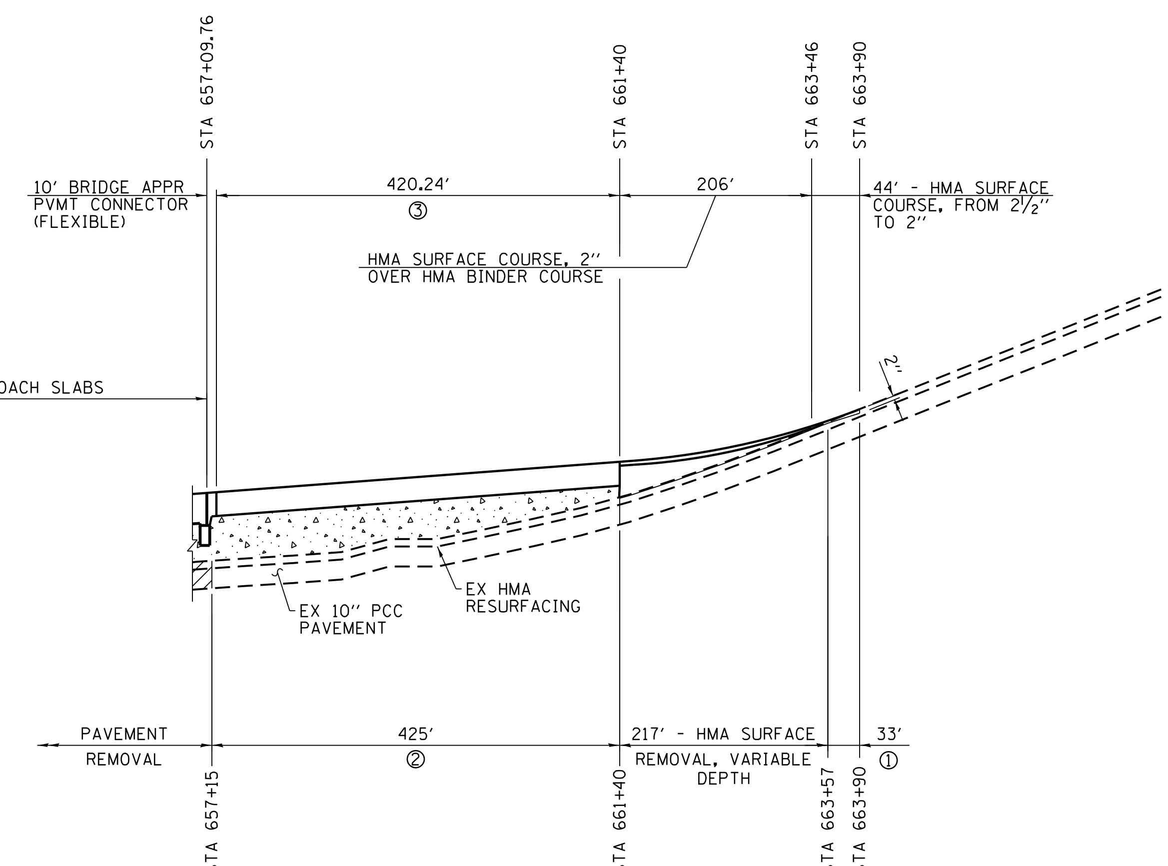
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH DETAIL

① HMA SURFACE REMOVAL - BUTT JOINT (FROM ½″ TO 2″)

② BREAK EXISTING PAVEMENT/SHOULDER, SEE SPECIAL PROVISIONS

③ HMA PAVEMENT (FULL DEPTH), 12″ OVER SUBBASE GRANULAR MATERIAL, TYPE B





NOTE:
FOR HMA PAVEMENT (FULL-DEPTH) 12″, THE TOP 2″ SHALL BE CONSTRUCTED USING HMA SURFACE COURSE AND THE FINAL LIFT OF HMA BINDER COURSE SHALL BE 2½″

HMA PROFILE GRADE CHANGE DETAIL WEST END

HMA PROFILE GRADE CHANGE DETAIL EAST END

ESCA CONSULTANTS, INC.

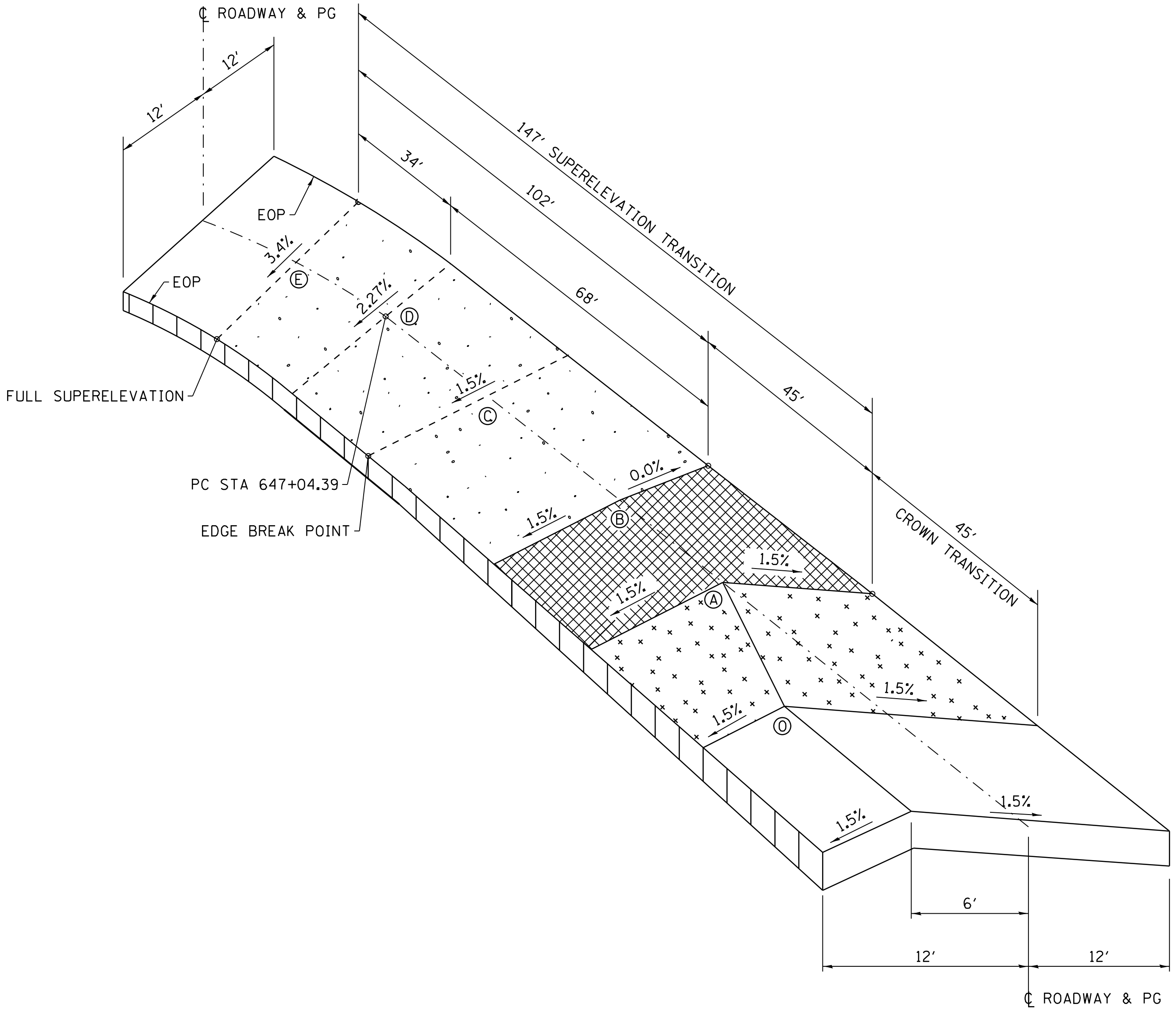
USER NAME = kah	DESIGNED - MTD	REVISED -	
ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -	
PLOT SCALE = 0.1667 ′ / in.	CHECKED - RDP	REVISED -	
PLOT DATE = 10/19/2018 1:50:59 PM	DATE - 08/15	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

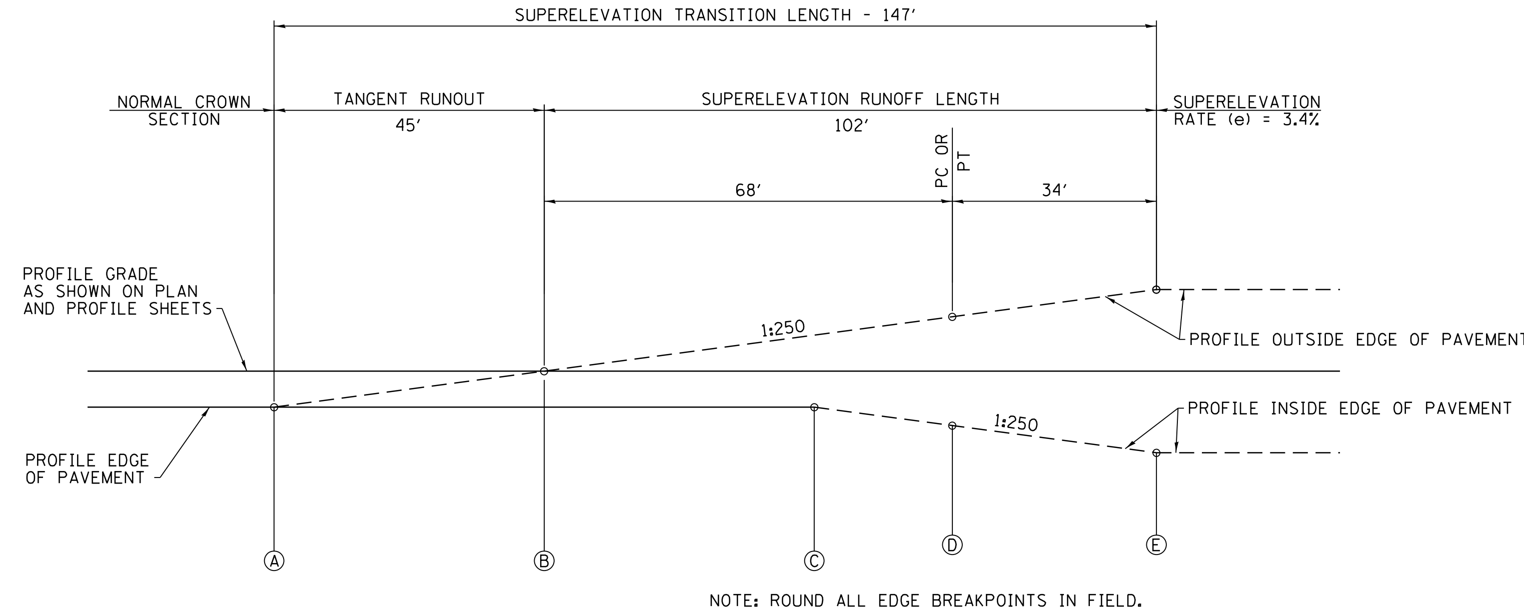
DETAILS
SN051-0015(OLD)/SN051-0066(NEW)

SCALE: | SHEET NO. 1 OF 5 SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	179
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

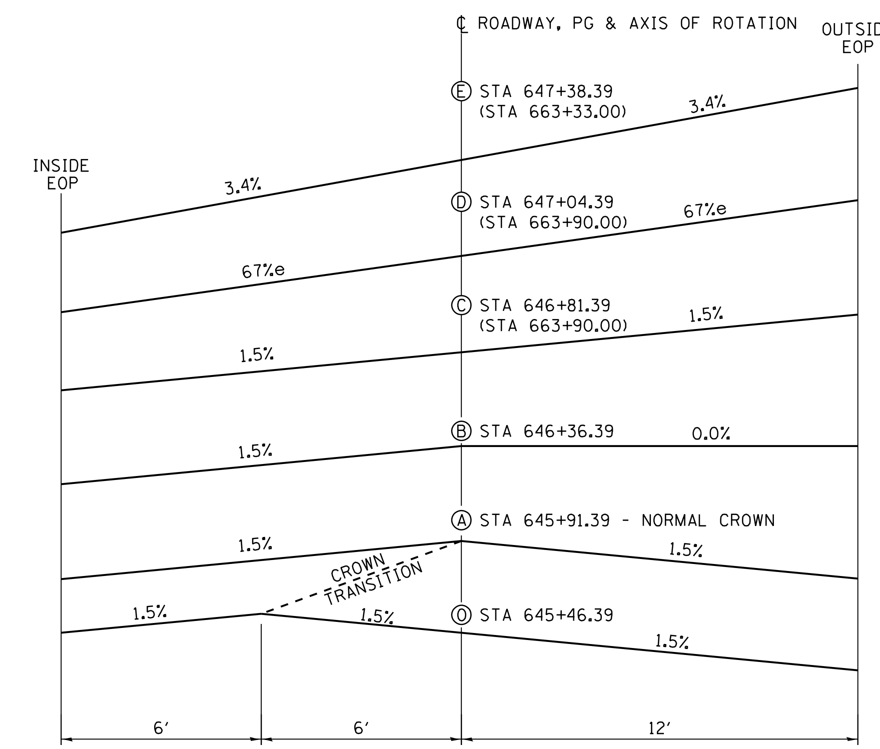


THREE–DIMENSIONAL VIEW OF SUPERELEVATION TRANSITION



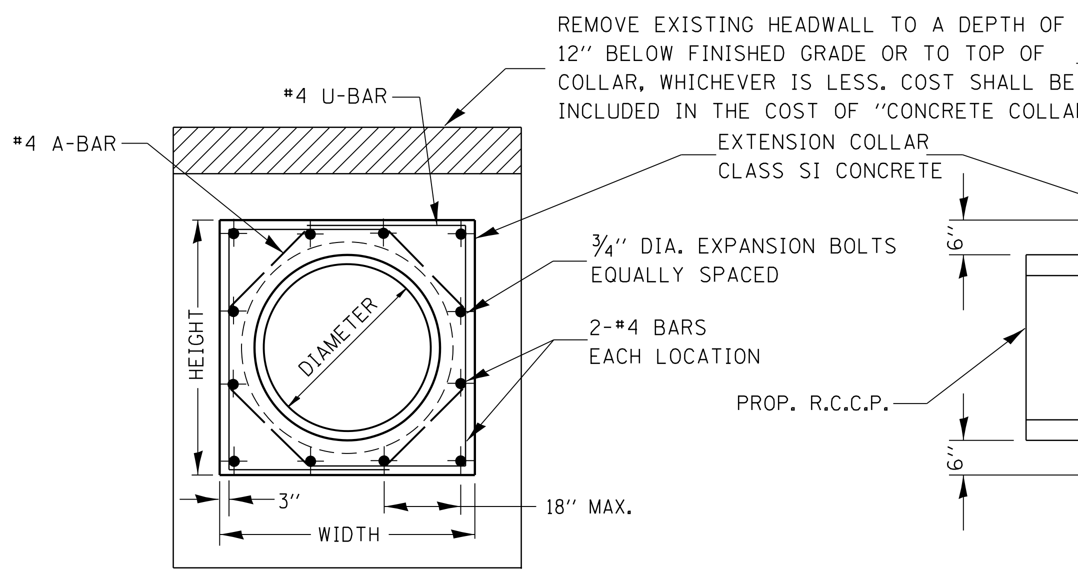
NOTE: ROUND ALL EDGE BREAKPOINTS IN FIELD.

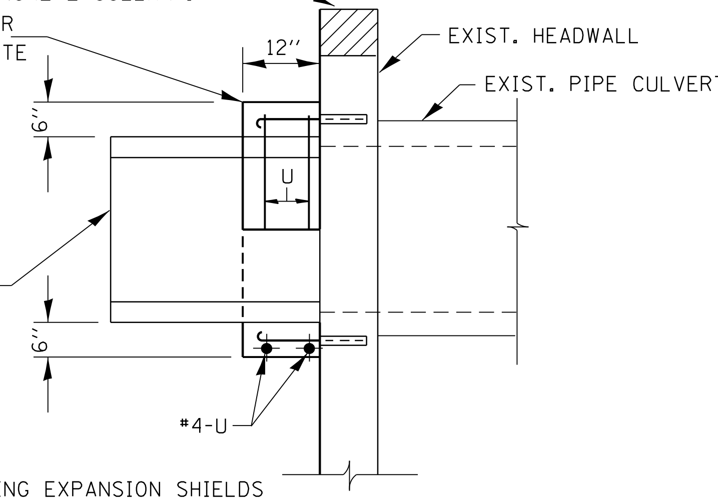
PROFILES



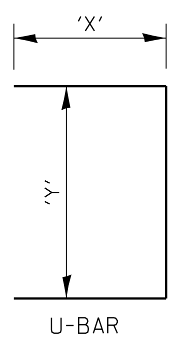
SECTIONS

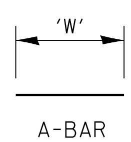
ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS SN051–0015(OLD)/SN051–0066(NEW)	F.A.P RTE. 327	SECTION (51-23)B
	ESCA PROJECT NO. 1000.02	DRAWN - DWH	REVISED -			COUNTY LAWRENCE	TOTAL SHEETS 260 / SHEET NO. 180
	PLOT SCALE = 0.1667 '/ in.	CHECKED - RDP	REVISED -		SCALE:	CONTRACT NO. 74177	
	PLOT DATE = 10/19/2018 1:51:00 PM	DATE - 08/15	REVISED -		SHEET NO. 2 OF 5 SHEETS STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT





EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND ¾" DIA. HOOKED BOLTS. HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.
MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS

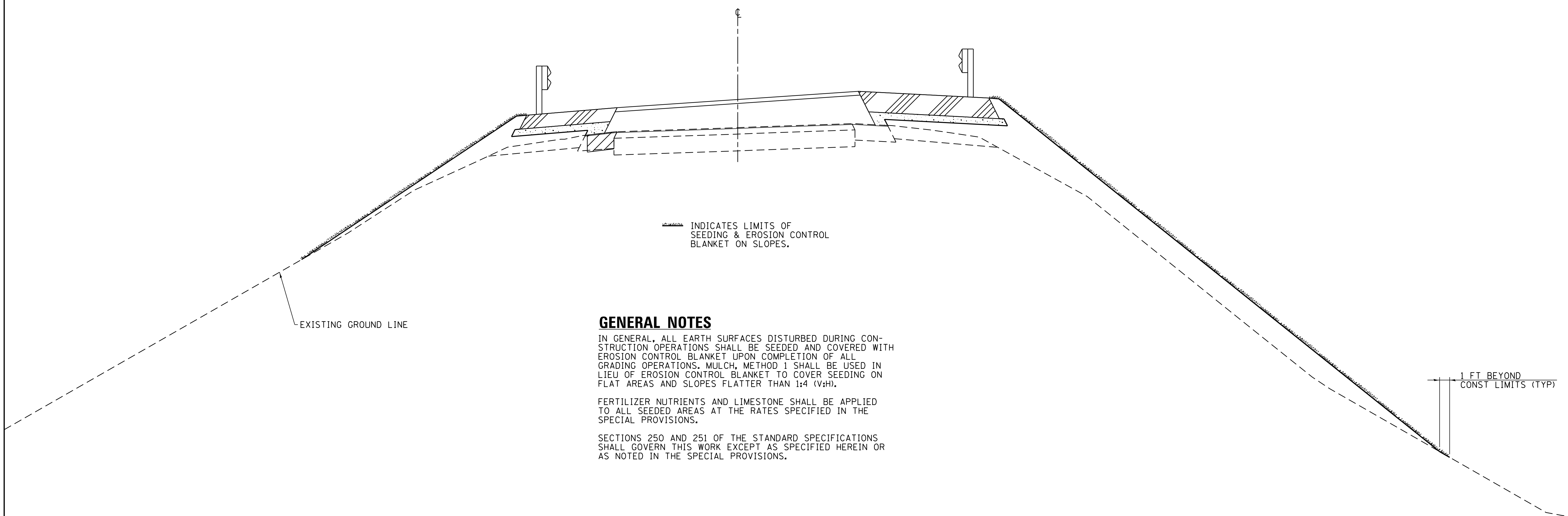




LOCATION	EXISTING CULVERT SIZE	PIPE DIMENSION	PIPE AREA	EXTENSION COLLAR		A-BAR	U-BAR		QUANTITIES ARE FOR ONE SIDE ONLY: CLASS SI CONC. COLLAR	REINFORCEMENT BARS	3/4" DIA. EXPANSION BOLTS
				WIDTH	HEIGHT	'W'	'X'	'Y'			
STATION	DIA. IN.	DIA. IN.	SQ.FT.	IN.	IN.	IN.	IN.	IN.	CU. YD.	POUND	EACH
661+11.7, 46.5' RT	36	36	10.56	56	56	20	37	50	0.42	37	12

COLLAR DETAIL (R.C.C.P. EXTENSION OF PIPE CULVERT)

SEEDING, MULCHING & EROSION CONTROL BLANKET



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND COVERED WITH EROSION CONTROL BLANKET UPON COMPLETION OF ALL GRADING OPERATIONS. MULCH, METHOD 1 SHALL BE USED IN LIEU OF EROSION CONTROL BLANKET TO COVER SEEDING ON FLAT AREAS AND SLOPES FLATTER THAN 1:4 (V:H).

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS AT THE RATES SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD	REVISED -
	ESCA PROJECT NO. 1000.02	DRAWN - HAS	REVISED -
	PLOT SCALE = 0.1667 ' / in.	CHECKED - RDP	REVISED -
	PLOT DATE = 10/19/2018 1:51:01 PM	DATE - 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
SN051-0015(OLD) / SN051-0066(NEW)

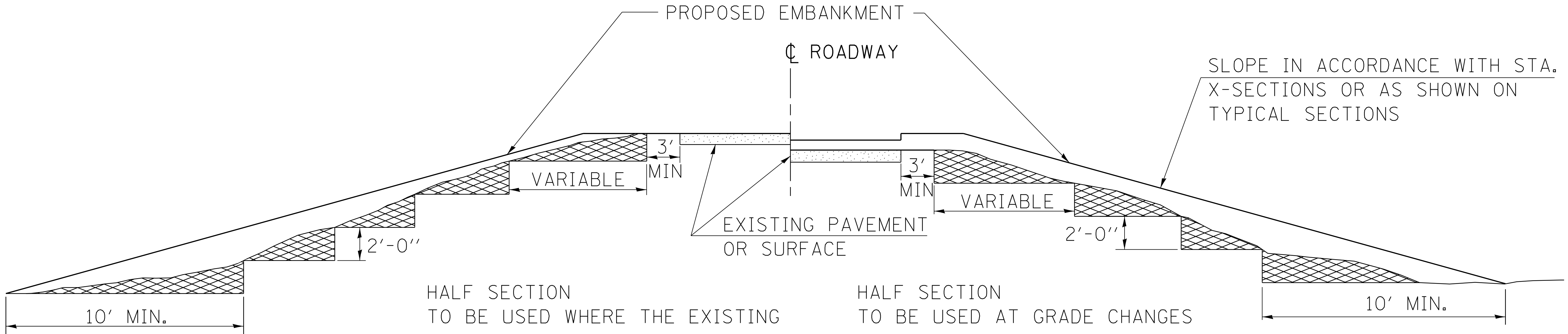
SCALE: | SHEET NO. 4 OF 5 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	182

CONTRACT NO. 74177

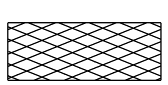
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



HALF SECTION
TO BE USED WHERE THE EXISTING EMBANKMENT IS TO BE WIDENED

HALF SECTION
TO BE USED AT GRADE CHANGES



MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

PRINT DRIVER = $PLTDRVS$
PEN TABLE = $PENTBLS$
MODEL NAME = PLOT
FILE NAME = D774177-sht-details05.dgn

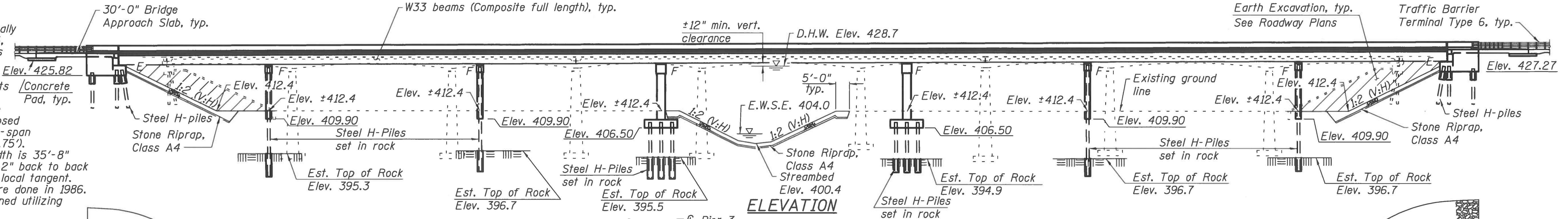
ESCA CONSULTANTS, INC. CIVIL & STRUCTURAL ENGINEERS	USER NAME = kah	DESIGNED - MTD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS SN051–0015(OLD) / SN051–0066(NEW)	
	ESCA PROJECT NO. 1000.02	DRAWN - HAS	REVISED -			
	PLOT SCALE = 0.1667 ′ / in.	CHECKED - RDP	REVISED -			
	PLOT DATE = 10/19/2018 1:51:02 PM	DATE - 08/15	REVISED -		SCALE:	SHEET NO. 5 OF 5 SHEETS STA. TO STA.

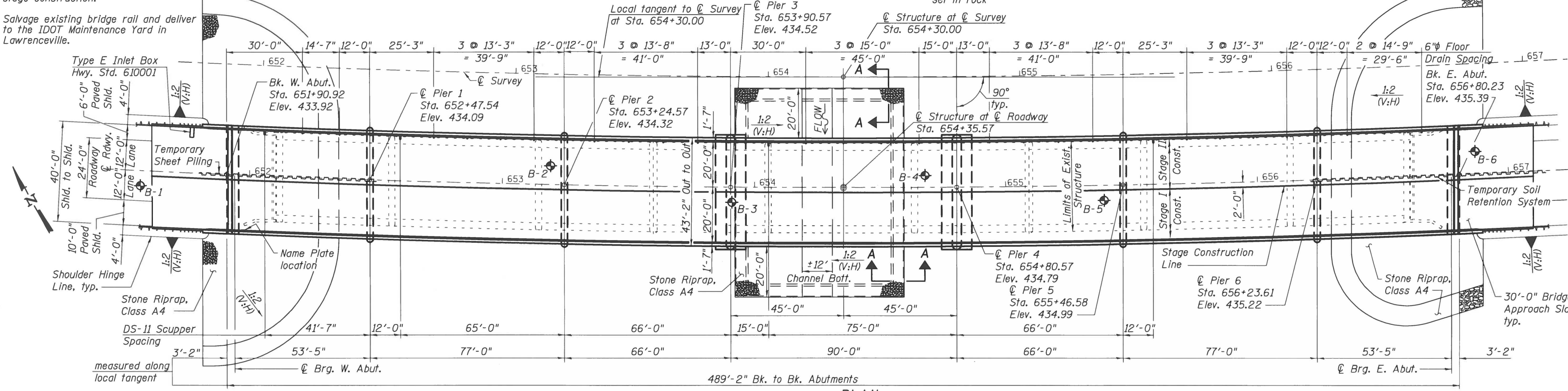
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	183
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BENCHMARK: BM 807 - Chiseled square on NW corner of SN 051-0015, Elev. 432.70 (NAVD 88)

EXISTING STRUCTURE:
SN 051-0015 was originally built in 1959 as FAI 64, Section 51-23B-2. It is a RC deck T-beam superstructure on pile supported stub abutments and solid shaft piers on spread footings. The superstructure is composed of three separate three-span units (44.75'-58.17'-44.75'). The out to out deck width is 35'-8" and the length is 452'-2" back to back of abutments along the local tangent. Bridge deck repairs were done in 1986. Traffic shall be maintained utilizing stage construction.

Salvage existing bridge rail and deliver to the IDOT Maintenance Yard in Lawrenceville.





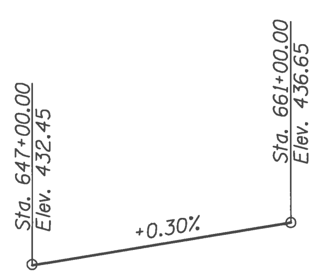
Notes:
All horizontal dimensions measured radially unless noted otherwise.
See sheet 2 of 41 for Section A-A.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

STATE OF ILLINOIS MICHAEL T. DOOLEY No. 5661 LICENSED STRUCTURAL ENGINEER
EXPIRES 11-30-20
SIGNATURE
11/05/2018
DATE

DESIGN SCOUR ELEVATION TABLE

	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	E. Abut.
Design Scour Elevation (Ft.)	425.9	391.7	394.0	392.5	394.9	393.6	398.5	427.3



PROFILE GRADE
(Along ℄ Roadway)

℄ SURVEY CURVE DATA
Δ = 27°44'33" (LT)
D = 1°00'01"
R = 5,727.67'
T = 1,414.40'
L = 2,773.32'
E = 172.05'
P.C. Sta. = 647+04.39
P.T. Sta. = 674+77.71
P.I. Sta. = 661+18.79

℄ ROADWAY CURVE DATA
Δ = 27°44'33" (LT)
D = 0°59'34"
R = 5,771.67'
T = 1,425.27'
L = 2,794.62'
E = 173.38'
S.E. = 0.034'/'
P.C. Sta. = 647+04.39
P.T. Sta. = 674+99.01
P.I. Sta. = 661+29.66

WATERWAY INFORMATION

Drainage Area = 2350.6 Sq. Mi. — Low Grade Elev. 431.60 @ Sta. 640+00

	Freq. Yr.	Exist. SN	Q C.F.S.	Opening-Sq. Ft. Exist.	Opening-Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	SN 051-0011	20466	5102	5677	425.5	0.7	0.6	426.2	426.1
		SN 051-0015	19863							
		Total	40329							
Design	50	SN 051-0011	31775	6431	7188	428.7	0.9	0.8	429.6	429.5
		SN 051-0015	28091							
		Total	59866							
Overtop.	80	SN 051-0011	38292	6640	7620	429.6	1.9	1.8	431.5	431.4
		SN 051-0015	27270							
		Total	65562							
Base	100	SN 051-0011	39647	6644	7706	430.1	1.8	1.7	431.9	431.8
		SN 051-0015	28481							
		Total	68128							

DESIGN SPECIFICATIONS
2010 AASHTO LRFD
Bridge Design Specifications

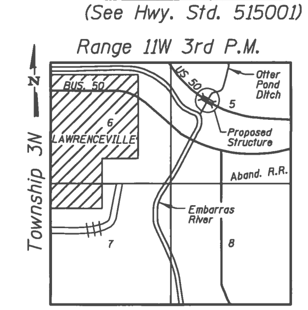
LOADING HL-93
Allow 50 psf for future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
fy = 36,000 psi (M270 Grade 36)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.158g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.398g
Soil Site Class = C

STATION 654+30.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 327 SEC. (51-23B-2)B-1
LOADING HL-93
STR. NO. 051-0066

NAME PLATE
(See Hwy. Std. 515001)



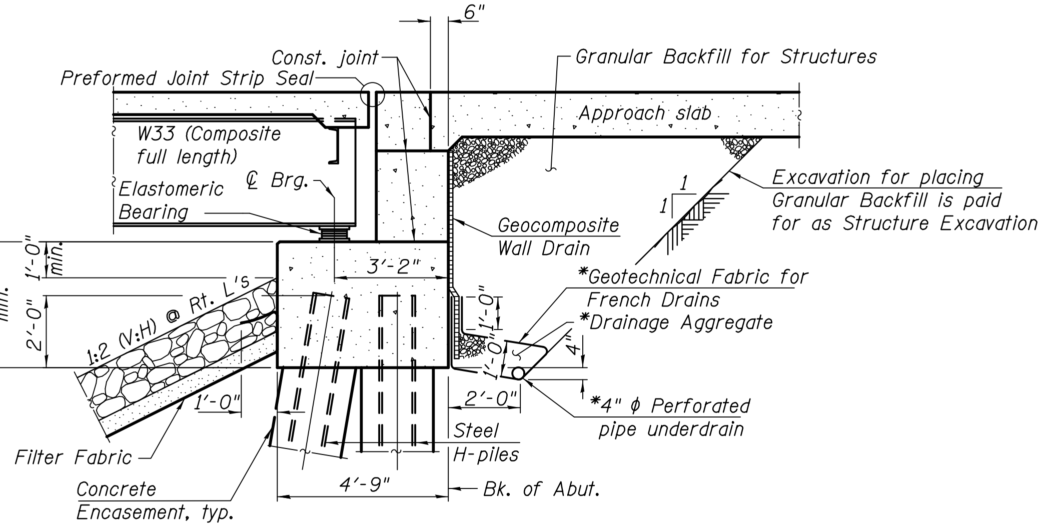
LOCATION SKETCH

GENERAL PLAN AND ELEVATION
US 50 OVER OTTER POND DITCH
FAP ROUTE 327 - SECTION (51-23B-2)B-1
LAWRENCE COUNTY
STATION 654+30.00
STRUCTURE NO. 051-0066

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -	
	PLOT SCALE = 0:2 ':' / in.	DRAWN - DWH 03/11	REVISED -	
	PLOT DATE = 12/4/2018 1:44:15 PM	CHECKED - MTD 11/18	REVISED -	

SHEET NO. 1 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	184
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures 4"

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the wingwall, and to the toe of the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STRUCTURE INDEX OF SHEETS

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8" dia., holes 15/16" dia., unless otherwise noted.

2. Calculated weight of Structural Steel = 382,610 lbs. (AASHTO M270 Gr 50).
= 55,730 lbs. (AASHTO M270 Gr 36).

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

4. Reinforcement bars designated (E) shall be epoxy coated.

5. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

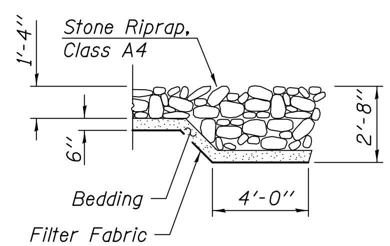
6. Concrete sealer shall be applied to the designated areas of the abutments.

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

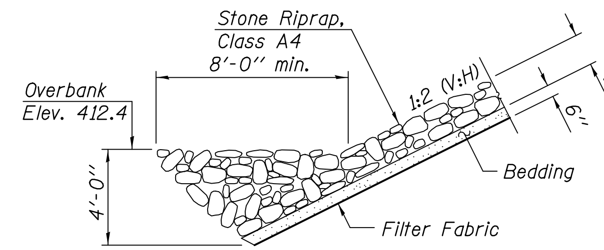
8. The Organic Zinc Rich Primer/Epoxy/Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that the exterior surfaces and bottom flange of the fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated in the field.
The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1.

9. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

10. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.



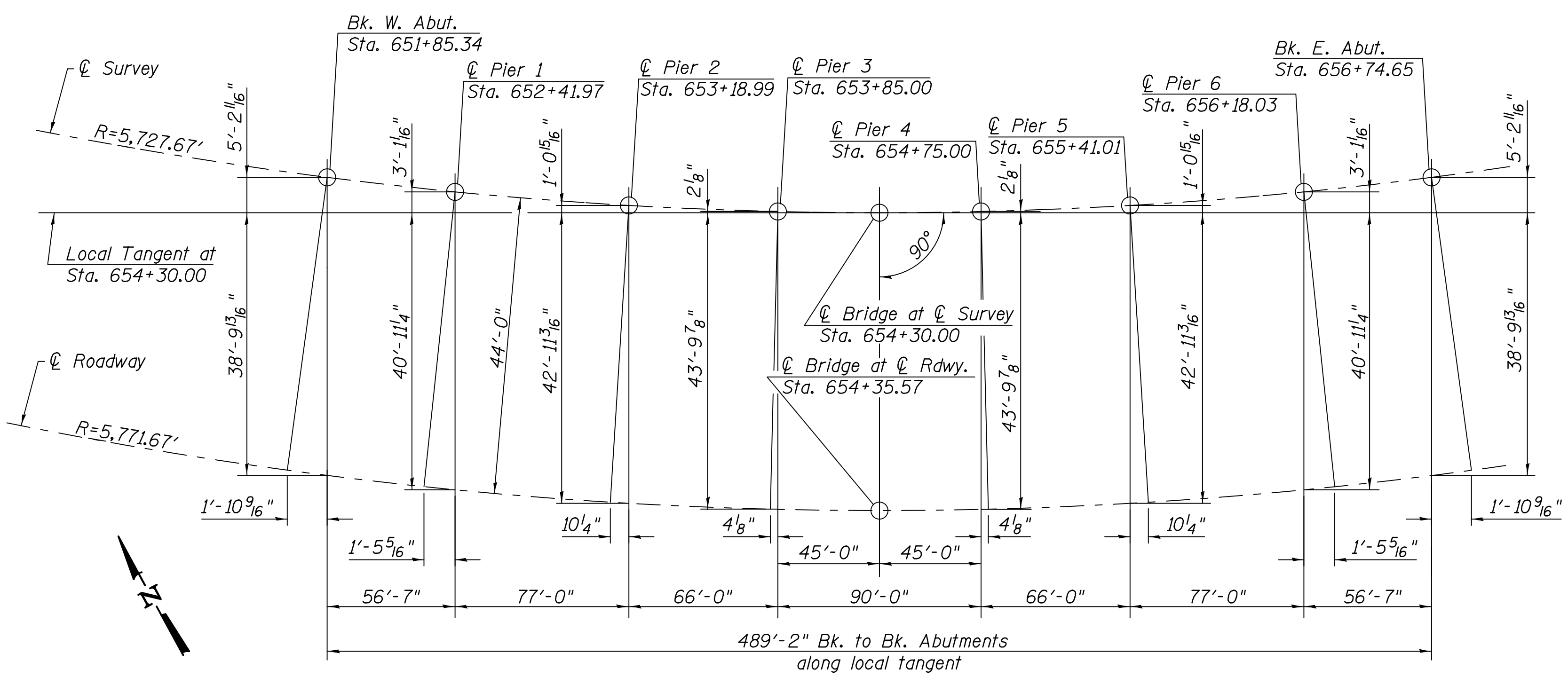
SECTION A-A



STONE RIPRAP ANCHOR DETAIL

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	-	2,300	2,300
Filter Fabric	Sq. Yd.	-	2,300	2,300
Removal of Existing Structures No. 4	Each	-	-	1
Bridge Rail Removal	Foot	905	-	905
Slope Wall Removal	Sq. Yd.	-	1,160	1,160
Structure Excavation	Cu. Yd.	-	732	732
Floor Drains	Each	25	-	25
Concrete Structures	Cu. Yd.	-	778.2	778.2
Concrete Superstructure	Cu. Yd.	669.0	-	669.0
Concrete Superstructure (Approach Slab)	Cu. Yd.	116.0	-	116.0
Bridge Deck Grooving	Sq. Yd.	2,314	-	2,314
Concrete Encasement	Cu. Yd.	-	12.0	12.0
Protective Coat	Sq. Yd.	2,880	-	2,880
Furnishing and Erecting Structural Steel	L Sum	0.64	-	0.64
Stud Shear Connectors	Each	15,498	400	15,898
Reinforcement Bars, Epoxy Coated	Pound	205,450	83,990	289,440
Bar Splicers	Each	1,850	532	2,382
Mechanical Splicers	Each	-	312	312
Furnishing Steel Piles HP14 x 89	Foot	-	3,331	3,331
Driving Piles	Foot	-	759	759
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	84	-	84
Elastomeric Bearing Assembly, Type II	Each	12	-	12
Anchor Bolts, 5/8"	Each	24	-	24
Anchor Bolts, 3/4"	Each	72	-	72
Concrete Sealer	Sq. Ft.	-	880	880
Geocomposite Wall Drain	Sq. Yd.	-	73	73
Granular Backfill for Structures	Cu. Yd.	-	112	112
Drainage Scuppers, DS-11	Each	4	-	4
Temporary Sheet Piling	Sq. Ft.	-	1,300	1,300
Pipe Underdrains for Structures 4"	Foot	-	180	180
Setting Piles in Rock	Each	-	88	88
Temporary Soil Retention System	Sq. Ft.	-	610	610



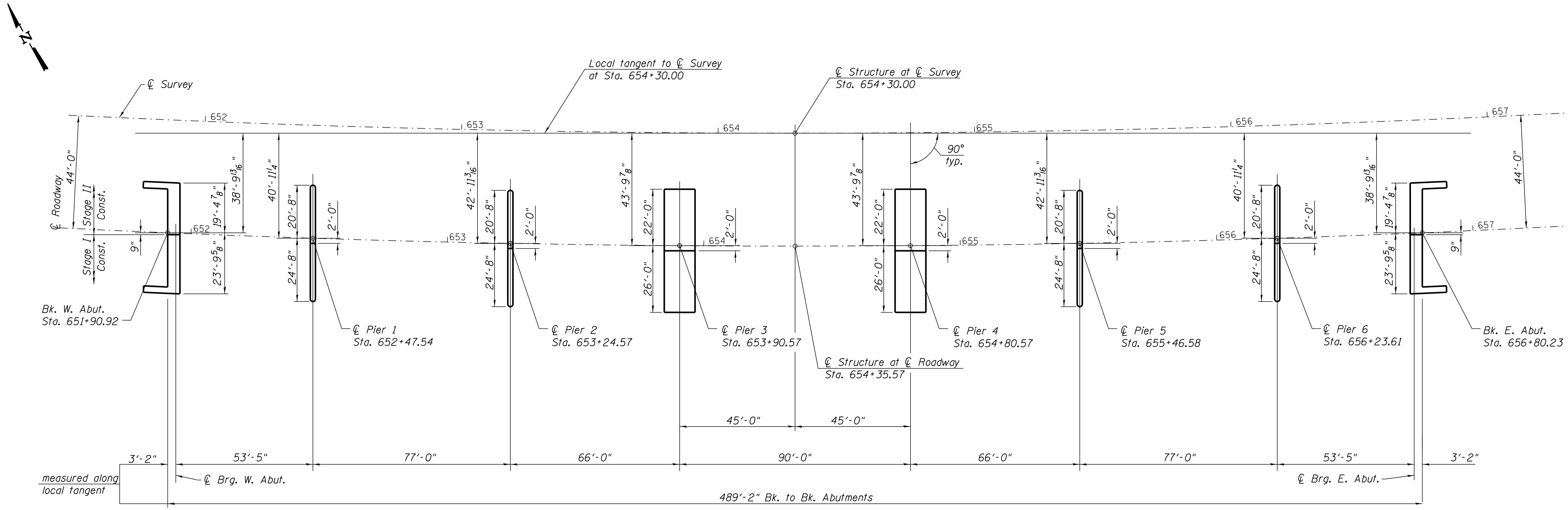
OFFSET SKETCH

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -	
	PLOT SCALE = 0.2 ' / in.	DRAWN - DWH 03/11	REVISED -	
	PLOT DATE = 12/4/2018 1:43:51 PM	CHECKED - MTD 11/18	REVISED -	

GENERAL DATA
STRUCTURE NO. 051-0066

SHEET NO. 2 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	185
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



SUBSTRUCTURE LAYOUT

℄ SURVEY CURVE DATA

Δ = 27°44'33" (LT)
D = 1°00'01"
R = 5,727.67'
T = 1,414.40'
L = 2,773.32'
E = 172.05'
P.C. Sta. = 647+04.69
P.T. Sta. = 674+77.71
P.I. Sta. = 661+18.79

℄ ROADWAY CURVE DATA

Δ = 27°44'33" (LT)
D = 0°59'34"
R = 5,771.67'
T = 1,425.27'
L = 2,794.62'
E = 173.38'
S.E. = 0.034'/'
P.C. Sta. = 647+04.39
P.T. Sta. = 674+99.01
P.I. Sta. = 661+29.66

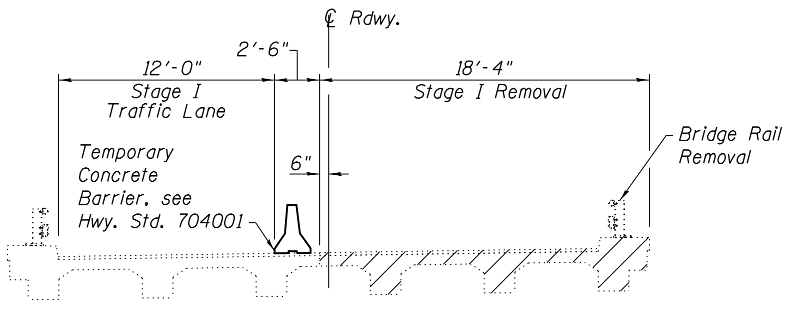
ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
	PLOT SCALE = 0:2 ' / in.	DRAWN - DWH 03/11	REVISED -
	PLOT DATE = 10/19/2018 1:51:05 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

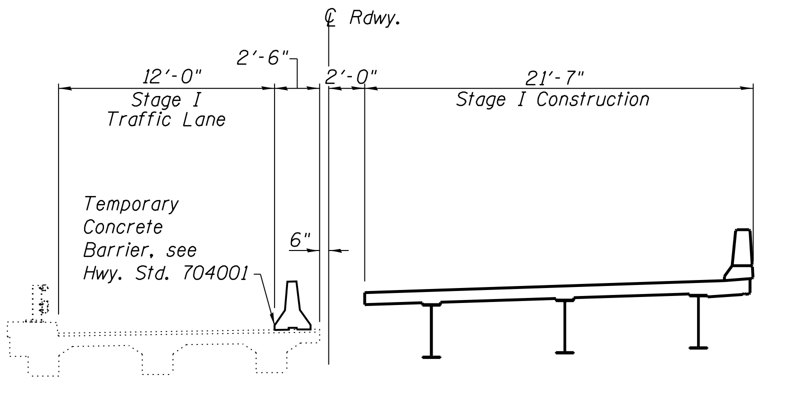
SUBSTRUCTURE LAYOUT
STRUCTURE NO. 051-0066

SHEET NO. 3 OF 41 SHEETS

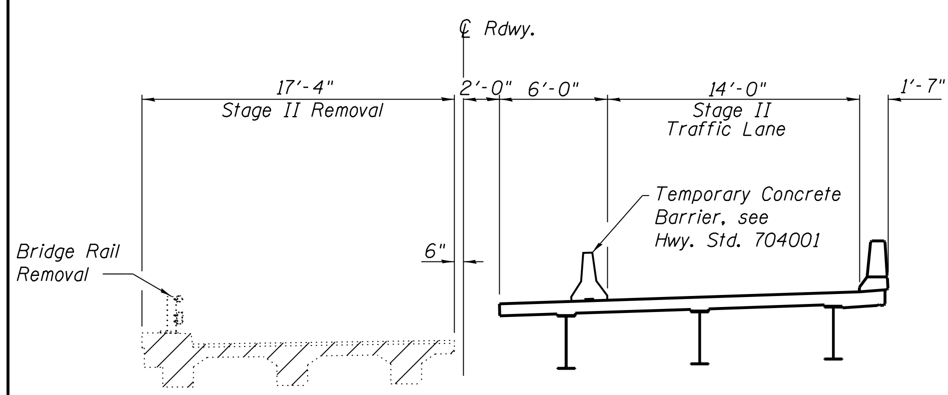
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	186
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



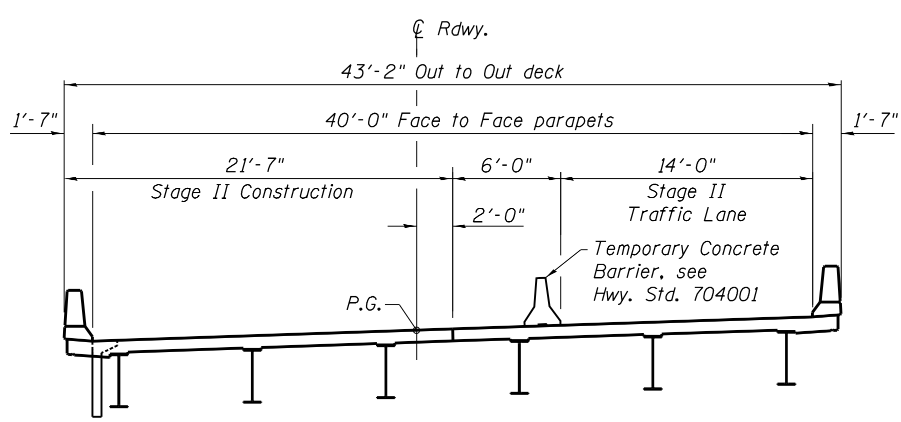
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

Stage Construction Notes:

All staging sections are looking East.

For quantities of Temporary Concrete Barrier, see Roadway Plans.

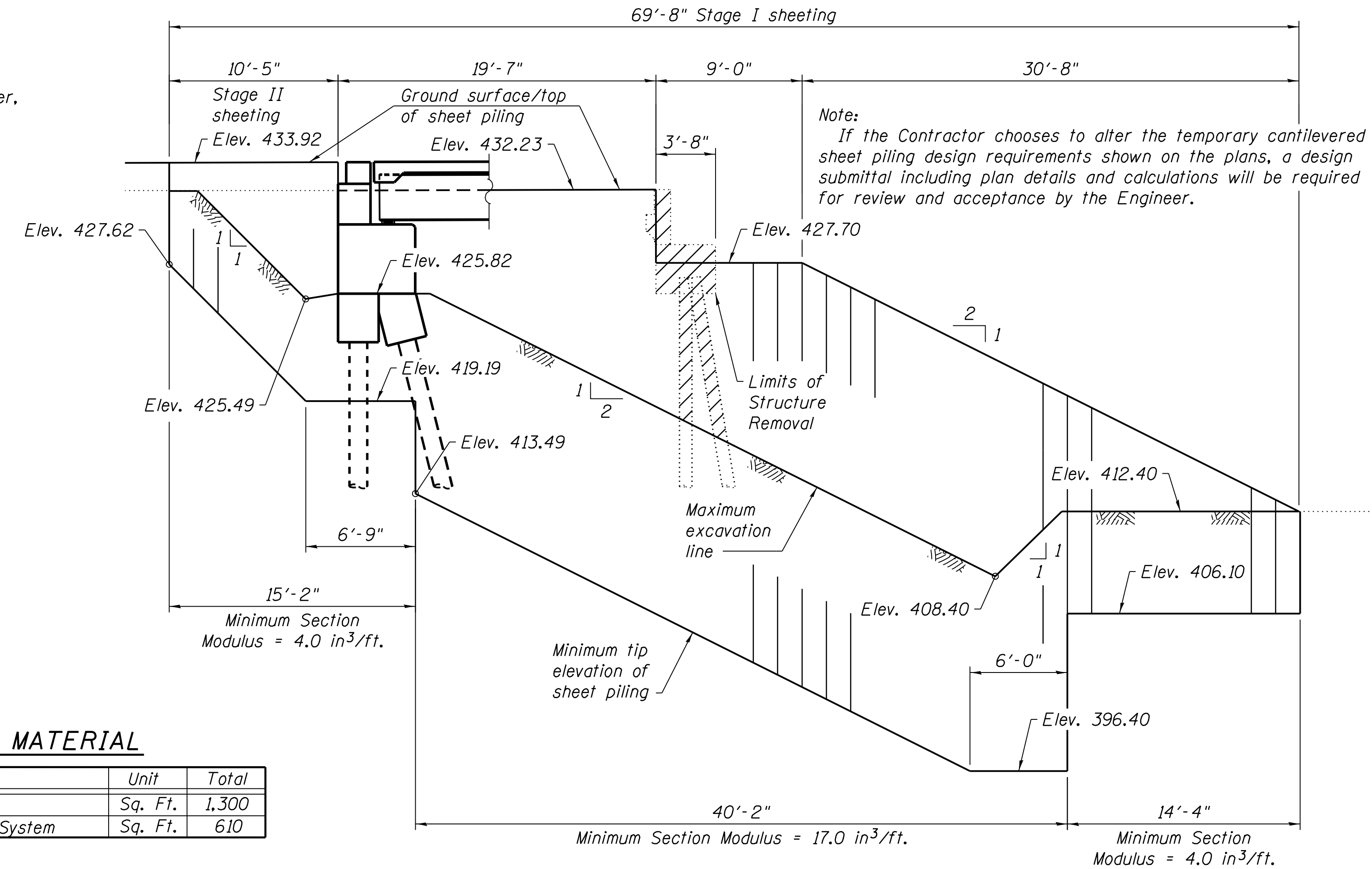
The stage construction lines for the substructure units differ from the stage construction line for the superstructure, see substructure sheets for details.

Hatched areas indicate Removal of Existing Structures which shall include removal of the existing bituminous wearing surface.

Existing bridge rail shall be salvaged and delivered to the IDOT Maintenance Yard in Lawrenceville. Cost of salvaging bridge rail is included with Bridge Rail Removal.

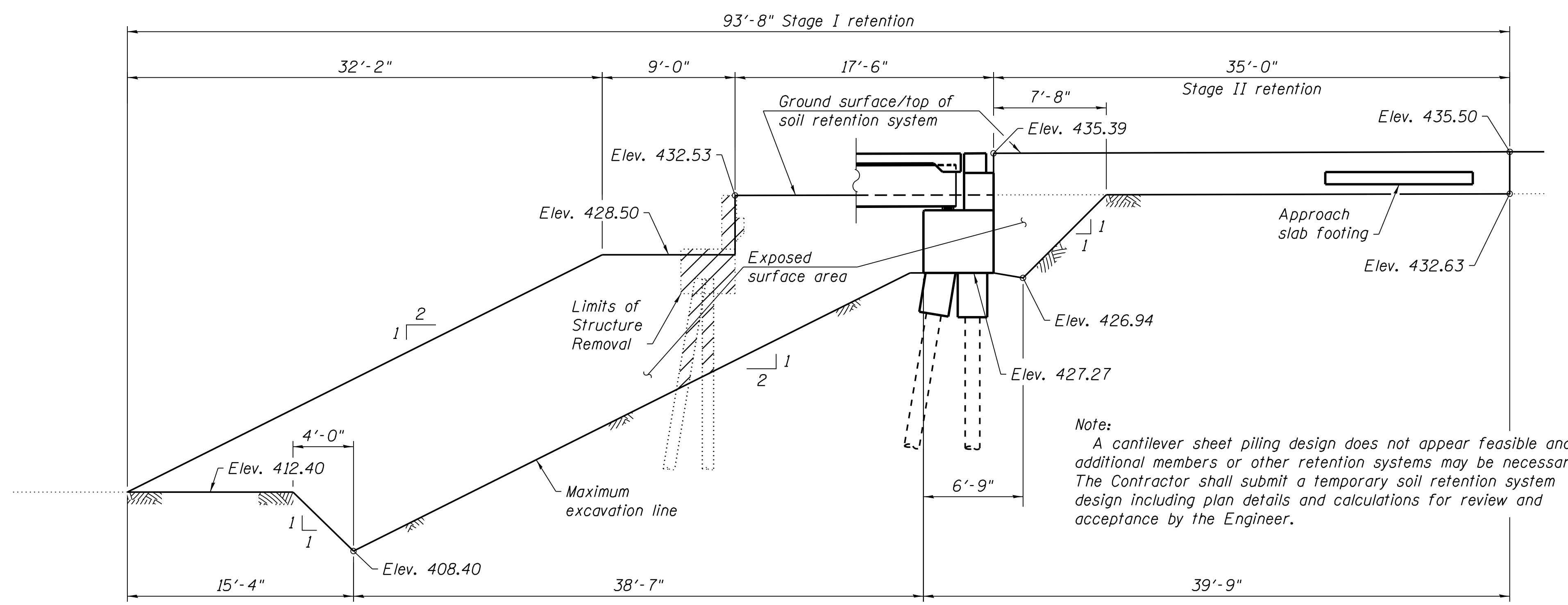
BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	1,300
Temporary Soil Retention System	Sq. Ft.	610



Note:
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

TEMPORARY SHEET PILING
(at West Abutment)



Note:
A cantilever sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

TEMPORARY SOIL RETENTION SYSTEM
(at East Abutment)

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
	PLOT SCALE = 0:2 ' / in.	DRAWN - DWH 03/11	REVISED -
	PLOT DATE = 10/19/2018 1:51:06 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

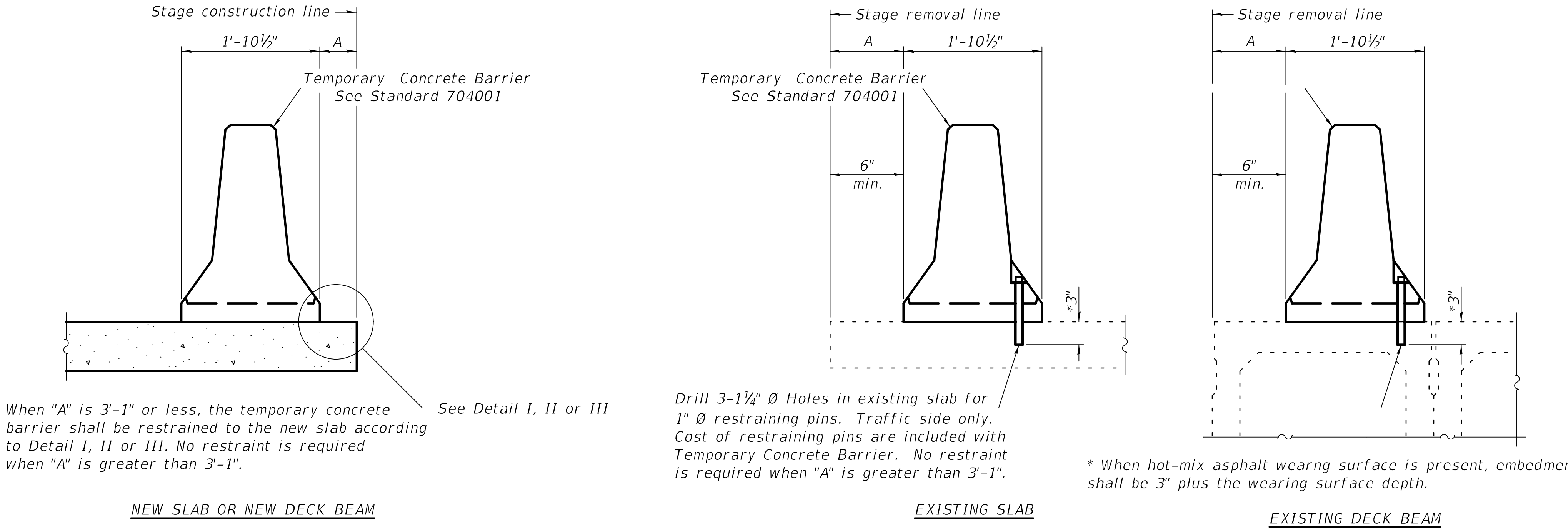
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 051-0066

SHEET NO. 4 OF 41 SHEETS

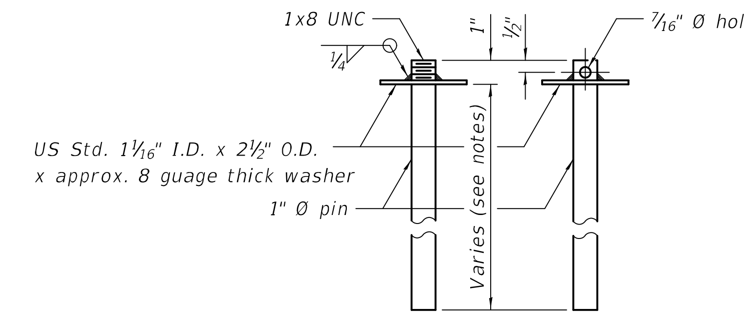
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	187

CONTRACT NO. 74177

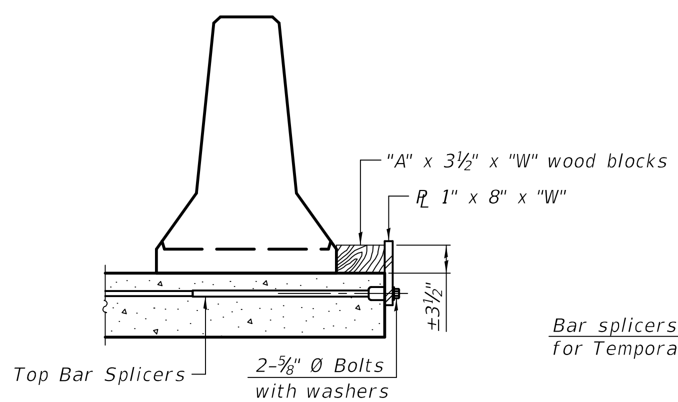
ILLINOIS FED. AID PROJECT



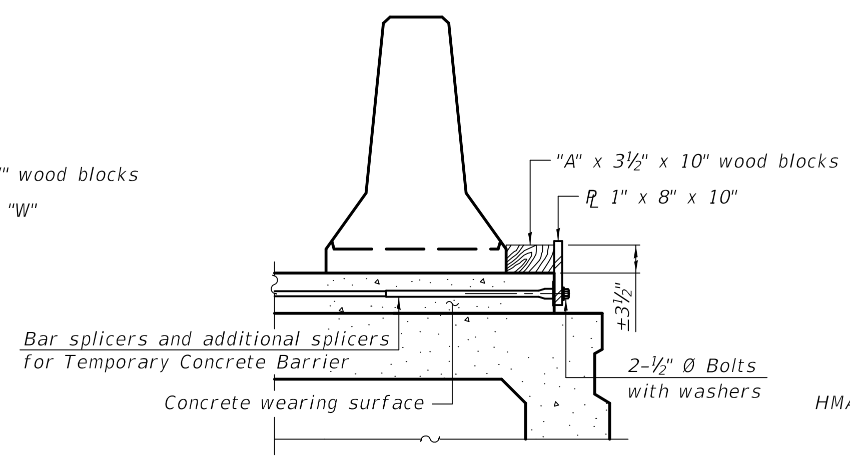
SECTIONS THRU SLAB OR DECK BEAM



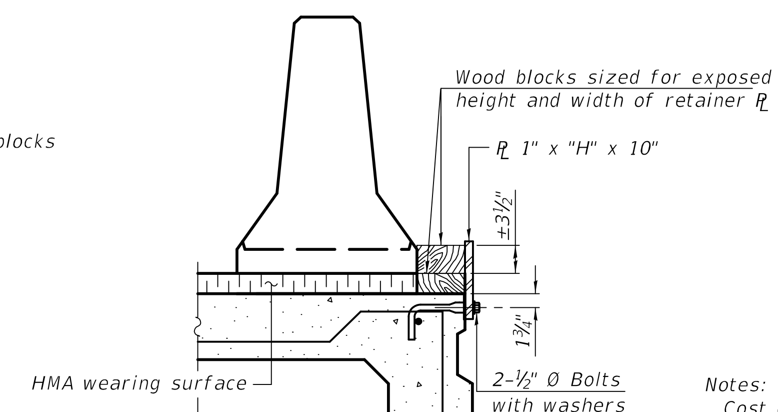
RESTRAINING PIN



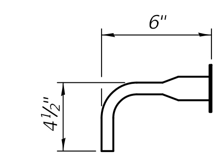
DETAIL I



DETAIL II



DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate CL of each temporary concrete barrier.

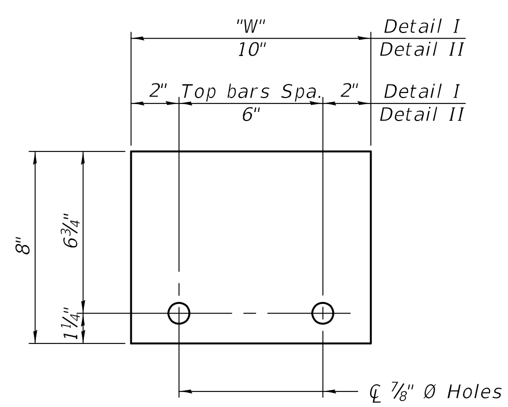
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½", 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.

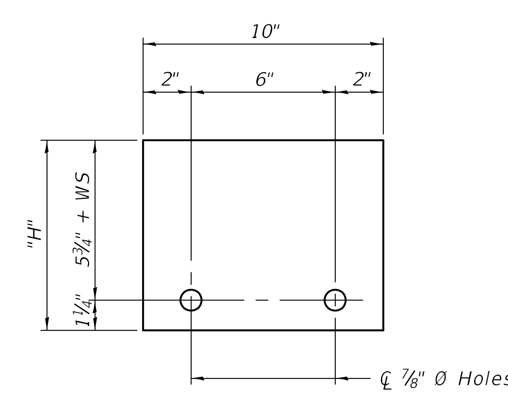
Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the 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.



STEEL RETAINER PL 1" x 8" x "W"

(Detail I and II)



STEEL RETAINER PL 1" x "H" x 10"

(Detail III)

R-27

8-11-2017

ESCA CONSULTANTS, INC.

USER NAME = rtm
ESCA PROJECT NO. 1000.02
PLOT SCALE = 0:2 ' / in.
PLOT DATE = 12/4/2018 1:43:22 PM

DESIGNED -	MTD	03/11	REVISED -
CHECKED -	RDP	04/11	REVISED -
DRAWN -	DWH	03/11	REVISED -
CHECKED -	MTD	11/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

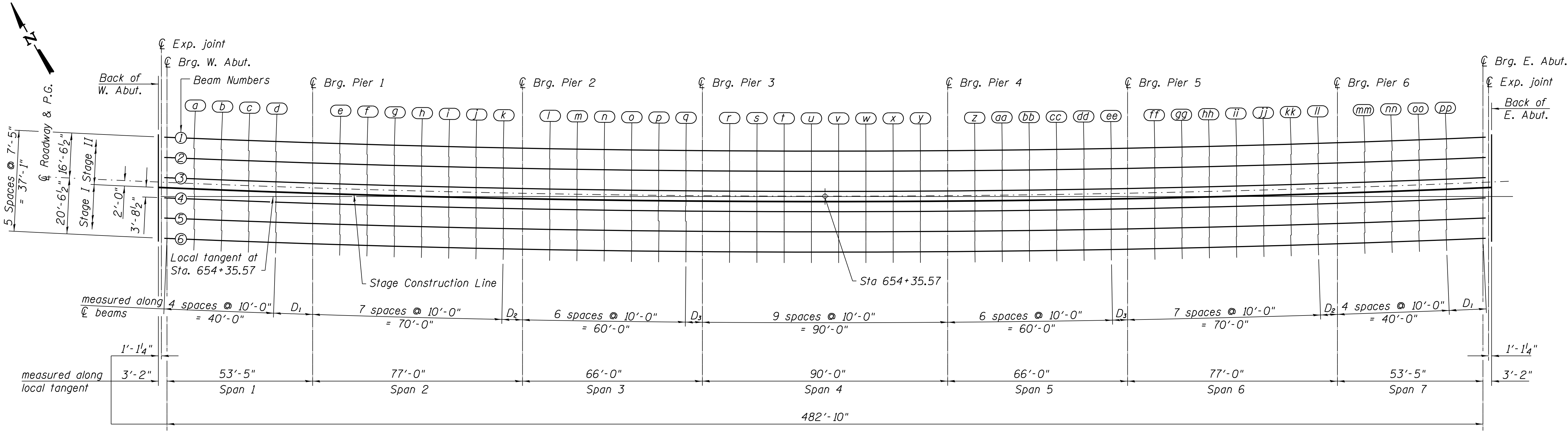
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 051-0066

SHEET NO. 5 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	188

CONTRACT NO. 74177

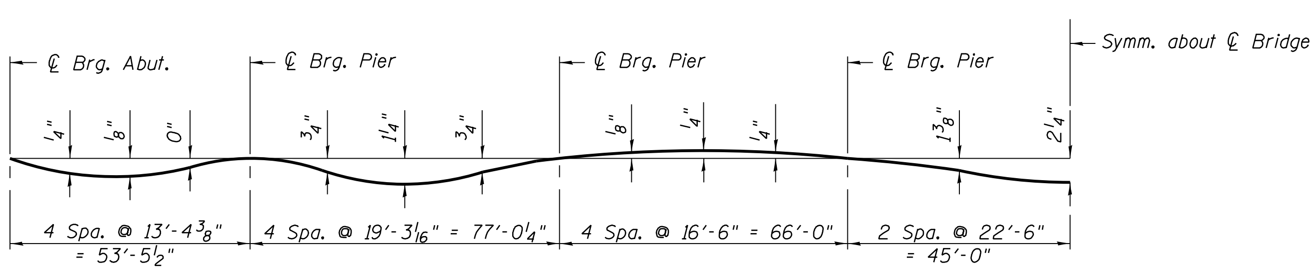
ILLINOIS FED. AID PROJECT



PLAN

'D' DIMENSIONS (in feet)

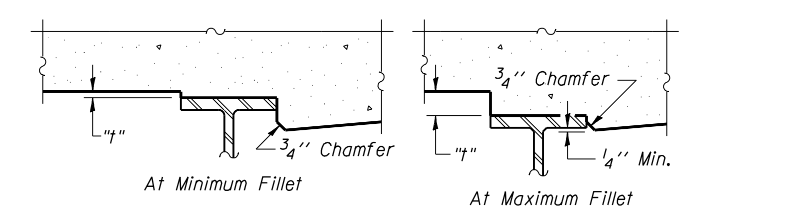
Beam	D_1	D_2	D_3
1	13.454	7.027	6.006
2	13.454	7.027	6.006
3	13.454	7.026	6.006
4	13.454	7.026	6.006
5	13.454	7.026	6.006
6	13.454	7.026	6.006



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 7 and 8 of 41.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 7 and 8 of 41, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 051-0066
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -		
	PLOT SCALE = 0:2 'f' / in.	DRAWN - DWH 03/11	REVISED -		
	PLOT DATE = 10/19/2018 1:51:07 PM	CHECKED - MTD 08/15	REVISED -		SHEET NO. 6 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	189
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

BEAM 1

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+90.21	-16.54	433.36	433.36
℄ Exp. joint	651+92.33	-16.54	433.36	433.36
℄ Brg. W. Abut.	651+93.39	-16.54	433.37	433.37
a	652+03.42	-16.54	433.40	433.41
b	652+13.45	-16.54	433.43	433.45
c	652+23.48	-16.54	433.46	433.47
d	652+33.51	-16.54	433.49	433.49
℄ Brg. Pier 1	652+47.00	-16.54	433.53	433.53
e	652+57.03	-16.54	433.56	433.58
f	652+67.06	-16.54	433.59	433.65
g	652+77.09	-16.54	433.62	433.71
h	652+87.12	-16.54	433.65	433.75
i	652+97.14	-16.54	433.68	433.76
j	653+07.17	-16.54	433.71	433.77
k	653+17.20	-16.54	433.74	433.76
℄ Brg. Pier 2	653+24.25	-16.54	433.76	433.76
l	653+34.28	-16.54	433.79	433.78
m	653+44.31	-16.54	433.82	433.81
n	653+54.33	-16.54	433.85	433.84
o	653+64.36	-16.54	433.88	433.86
p	653+74.39	-16.54	433.91	433.89
q	653+84.42	-16.54	433.94	433.93
℄ Brg. Pier 3	653+90.44	-16.54	433.96	433.96
r	654+00.47	-16.54	433.99	434.03
s	654+10.50	-16.54	434.02	434.12
t	654+20.53	-16.54	434.05	434.20
u	654+30.56	-16.54	434.08	434.25
v	654+40.59	-16.54	434.11	434.28
w	654+50.62	-16.54	434.14	434.29
x	654+60.65	-16.54	434.17	434.27
y	654+70.67	-16.54	434.20	434.24
℄ Brg. Pier 4	654+80.70	-16.54	434.23	434.23
z	654+90.73	-16.54	434.26	434.24
aa	655+00.76	-16.54	434.29	434.27
bb	655+10.79	-16.54	434.32	434.30
cc	655+20.82	-16.54	434.35	434.34
dd	655+30.85	-16.54	434.38	434.37
ee	655+40.88	-16.54	434.41	434.40
℄ Brg.Pier 5	655+46.90	-16.54	434.43	434.43
ff	655+56.93	-16.54	434.46	434.49
gg	655+66.96	-16.54	434.49	434.56
hh	655+76.99	-16.54	434.52	434.61
ii	655+87.02	-16.54	434.55	434.65
jj	655+97.04	-16.54	434.58	434.66
kk	656+07.07	-16.54	434.61	434.66
ll	656+17.10	-16.54	434.64	434.66
℄ Brg. Pier 6	656+24.15	-16.54	434.66	434.66
mm	656+34.18	-16.54	434.69	434.69
nn	656+44.21	-16.54	434.72	434.73
oo	656+54.23	-16.54	434.75	434.77
pp	656+64.26	-16.54	434.78	434.80
℄ Brg. E. Abut.	656+77.76	-16.54	434.82	434.82
℄ Exp. joint	656+78.82	-16.54	434.82	434.82
Back of E. Abut.	656+80.93	-16.54	434.83	434.83

BEAM 2

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+90.53	-9.13	433.61	433.61
℄ Exp. joint	651+92.64	-9.13	433.62	433.62
℄ Brg. W. Abut.	651+93.70	-9.13	433.62	433.62
a	652+03.72	-9.13	433.65	433.66
b	652+13.74	-9.13	433.68	433.70
c	652+23.75	-9.13	433.71	433.72
d	652+33.77	-9.13	433.74	433.74
℄ Brg. Pier 1	652+47.24	-9.13	433.78	433.78
e	652+57.26	-9.13	433.81	433.84
f	652+67.27	-9.13	433.84	433.90
g	652+77.29	-9.13	433.87	433.96
h	652+87.31	-9.13	433.90	434.00
i	652+97.32	-9.13	433.93	434.02
j	653+07.34	-9.13	433.96	434.02
k	653+17.35	-9.13	433.99	434.01
℄ Brg. Pier 2	653+24.39	-9.13	434.01	434.01
l	653+34.41	-9.13	434.04	434.03
m	653+44.42	-9.13	434.07	434.06
n	653+54.44	-9.13	434.10	434.09
o	653+64.45	-9.13	434.13	434.12
p	653+74.47	-9.13	434.16	434.14
q	653+84.49	-9.13	434.19	434.18
℄ Brg. Pier 3	653+90.50	-9.13	434.21	434.21
r	654+00.52	-9.13	434.24	434.29
s	654+10.53	-9.13	434.27	434.37
t	654+20.55	-9.13	434.30	434.45
u	654+30.57	-9.13	434.33	434.51
v	654+40.58	-9.13	434.36	434.54
w	654+50.60	-9.13	434.39	434.54
x	654+60.61	-9.13	434.42	434.52
y	654+70.63	-9.13	434.45	434.50
℄ Brg. Pier 4	654+80.65	-9.13	434.48	434.48
z	654+90.66	-9.13	434.51	434.49
aa	655+00.68	-9.13	434.54	434.52
bb	655+10.69	-9.13	434.57	434.56
cc	655+20.71	-9.13	434.60	434.59
dd	655+30.73	-9.13	434.63	434.62
ee	655+40.74	-9.13	434.66	434.65
℄ Brg. Pier 5	655+46.76	-9.13	434.68	434.68
ff	655+56.77	-9.13	434.71	434.74
gg	655+66.79	-9.13	434.74	434.81
hh	655+76.80	-9.13	434.77	434.86
ii	655+86.82	-9.13	434.80	434.90
jj	655+96.84	-9.13	434.83	434.91
kk	656+06.85	-9.13	434.86	434.91
ll	656+16.87	-9.13	434.89	434.91
℄ Brg. Pier 6	656+23.91	-9.13	434.91	434.91
mm	656+33.92	-9.13	434.94	434.94
nn	656+43.94	-9.13	434.97	434.98
oo	656+53.95	-9.13	435.00	435.02
pp	656+63.97	-9.13	435.03	435.05
℄ Brg. E. Abut.	656+77.44	-9.13	435.07	435.07
℄ Exp. joint	656+78.51	-9.13	435.08	435.08
Back of E. Abut.	656+80.62	-9.13	435.08	435.08

BEAM 3

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+90.85	-1.71	433.86	433.86
℄ Exp. joint	651+92.95	-1.71	433.87	433.87
℄ Brg. W. Abut.	651+94.02	-1.71	433.87	433.87
a	652+04.02	-1.71	433.90	433.92
b	652+14.02	-1.71	433.93	433.95
c	652+24.02	-1.71	433.96	433.98
d	652+34.03	-1.71	433.99	433.99
℄ Brg. Pier 1	652+47.49	-1.71	434.03	434.03
e	652+57.49	-1.71	434.06	434.09
f	652+67.49	-1.71	434.09	434.16
g	652+77.49	-1.71	434.12	434.21
h	652+87.50	-1.71	434.15	434.25
i	652+97.50	-1.71	434.18	434.27
j	653+07.50	-1.71	434.21	434.27
k	653+17.51	-1.71	434.24	434.27
℄ Brg. Pier 2	653+24.53	-1.71	434.27	434.27
l	653+34.54	-1.71	434.30	434.28
m	653+44.54	-1.71	434.33	434.31
n	653+54.54	-1.71	434.36	434.34
o	653+64.55	-1.71	434.39	434.37
p	653+74.55	-1.71	434.42	434.40
q	653+84.55	-1.71	434.45	434.43
℄ Brg. Pier 3	653+90.56	-1.71	434.46	434.46
r	654+00.56	-1.71	434.49	434.54
s	654+10.57	-1.71	434.52	434.62
t	654+20.57	-1.71	434.55	434.70
u	654+30.57	-1.71	434.58	434.76
v	654+40.58	-1.71	434.61	434.79
w	654+50.58	-1.71	434.64	434.79
x	654+60.58	-1.71	434.67	434.77
y	654+70.58	-1.71	434.70	434.75
℄ Brg. Pier 4	654+80.59	-1.71	434.73	434.73
z	654+90.59	-1.71	434.76	434.75
aa	655+00.59	-1.71	434.79	434.77
bb	655+10.60	-1.71	434.82	434.81
cc	655+20.60	-1.71	434.85	434.84
dd	655+30.60	-1.71	434.88	434.87
ee	655+40.61	-1.71	434.91	434.90
℄ Brg. Pier 5	655+46.61	-1.71	434.93	434.93
ff	655+56.62	-1.71	434.96	434.99
gg	655+66.62	-1.71	434.99	435.06
hh	655+76.62	-1.71	435.02	435.12
ii	655+86.63	-1.71	435.05	435.15
jj	655+96.63	-1.71	435.08	435.17
kk	656+06.63	-1.71	435.11	435.16
ll	656+16.63	-1.71	435.14	435.16
℄ Brg. Pier 6	656+23.66	-1.71	435.16	435.16
mm	656+33.67	-1.71	435.19	435.19
nn	656+43.67	-1.71	435.22	435.23
oo	656+53.67	-1.71	435.25	435.27
pp	656+63.67	-1.71	435.28	435.30
℄ Brg. E. Abut.	656+77.13	-1.71	435.32	435.32
℄ Exp. joint	656+78.20	-1.71	435.33	435.33
Back of E. Abut.	656+80.30	-1.71	435.33	435.33

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+90.92	0.00	433.92	433.92
℄ Exp. joint	651+93.02	0.00	433.93	433.93
℄ Brg. W. Abut.	651+94.09	0.00	433.93	433.93
a	652+04.09	0.00	433.96	433.98
b	652+14.09	0.00	433.99	434.01
c	652+24.09	0.00	434.02	434.03
d	652+34.09	0.00	434.05	434.05
℄ Brg. Pier 1	652+47.54	0.00	434.09	434.09
e	652+57.54	0.00	434.12	434.15
f	652+67.54	0.00	434.15	434.22
g	652+77.54	0.00	434.18	434.27
h	652+87.54	0.00	434.21	434.31
i	652+97.54	0.00	434.24	434.33
j	653+07.54	0.00	434.27	434.33
k	653+17.54	0.00	434.30	434.32
℄ Brg. Pier 2	653+24.57	0.00	434.32	434.32
l	653+34.57	0.00	434.35	434.34
m	653+44.57	0.00	434.38	434.37
n	653+54.57	0.00	434.41	434.40
o	653+64.57	0.00	434.44	434.43
p	653+74.57	0.00	434.47	434.45
q	653+84.57	0.00	434.50	434.49
℄ Brg. Pier 3	653+90.57	0.00	434.52	434.52
r	654+00.57	0.00	434.55	434.60
s	654+10.57	0.00	434.58	434.68
t	654+20.57	0.00	434.61	434.76
u	654+30.57	0.00	434.64	434.82
v	654+40.57	0.00	434.67	434.85
w	654+50.57	0.00	434.70	434.85
x	654+60.57	0.00	434.73	434.83
y	654+70.57	0.00	434.76	434.81
℄ Brg. Pier 4	654+80.57	0.00	434.79	434.79
z	654+90.57	0.00	434.82	434.80
aa	655+00.57	0.00	434.85	434.83
bb	655+10.57	0.00	434.88	434.87
cc	655+20.57	0.00	434.91	434.90
dd	655+30.57	0.00	434.94	434.93
ee	655+40.57	0.00	434.97	434.96
℄ Brg. Pier 5	655+46.58	0.00	434.99	434.99
ff	655+56.58	0.00	435.02	435.05
gg	655+66.58	0.00	435.05	435.12
hh	655+76.58	0.00	435.08	435.17
ii	655+86.58	0.00	435.11	435.21
jj	655+96.58	0.00	435.14	435.22
kk	656+06.58	0.00	435.17	435.22
ll	656+16.58	0.00	435.20	435.22
℄ Brg. Pier 6	656+23.61	0.00	435.22	435.22
mm	656+33.61	0.00	435.25	435.25
nn	656+43.61	0.00	435.28	435.29
oo	656+53.61	0.00	435.31	435.33
pp	656+63.61	0.00	435.34	435.36
℄ Brg. E. Abut.	656+77.06	0.00	435.38	435.38
℄ Exp. joint	656+78.12	0.00	435.38	435.38
Back of E. Abut.	656+80.23	0.00	435.39	435.39

E-S 7-1-10

ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - MTD	03/11	REVISED -	
ESCA PROJECT NO. 1000.02	CHECKED - RDP	04/11	REVISED -	
PLOT SCALE = 0:2 ' / in.	DRAWN - DWH	03/11	REVISED -	
PLOT DATE = 10/19/2018 1:51:08 PM	CHECKED - MTD	08/15	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0066

SHEET NO. 7 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	190

CONTRACT NO. 74177

ILLINOIS FED. AID PROJECT

STAGE CONSTRUCTION LINE

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+91.00	2.00	433.99	433.99
℄ Exp. joint	651+93.11	2.00	434.00	434.00
℄ Brg. W. Abut.	651+94.17	2.00	434.00	434.00
a	652+04.17	2.00	434.03	434.04
b	652+14.16	2.00	434.06	434.08
c	652+24.16	2.00	434.09	434.10
d	652+34.16	2.00	434.12	434.12
℄ Brg. Pier 1	652+47.61	2.00	434.16	434.16
e	652+57.60	2.00	434.19	434.22
f	652+67.60	2.00	434.22	434.28
g	652+77.60	2.00	434.25	434.34
h	652+87.59	2.00	434.28	434.38
i	652+97.59	2.00	434.31	434.40
j	653+07.59	2.00	434.34	434.40
k	653+17.58	2.00	434.37	434.39
℄ Brg. Pier 2	653+24.61	2.00	434.39	434.39
l	653+34.60	2.00	434.42	434.41
m	653+44.60	2.00	434.45	434.44
n	653+54.60	2.00	434.48	434.47
o	653+64.59	2.00	434.51	434.49
p	653+74.59	2.00	434.54	434.52
q	653+84.58	2.00	434.57	434.56
℄ Brg. Pier 3	653+90.59	2.00	434.59	434.59
r	654+00.59	2.00	434.62	434.66
s	654+10.58	2.00	434.65	434.75
t	654+20.58	2.00	434.68	434.83
u	654+30.58	2.00	434.71	434.89
v	654+40.57	2.00	434.74	434.92
w	654+50.57	2.00	434.77	434.92
x	654+60.57	2.00	434.80	434.90
y	654+70.56	2.00	434.83	434.87
℄ Brg. Pier 4	654+80.56	2.00	434.86	434.86
z	654+90.56	2.00	434.89	434.87
aa	655+00.55	2.00	434.92	434.90
bb	655+10.55	2.00	434.95	434.93
cc	655+20.55	2.00	434.98	434.97
dd	655+30.54	2.00	435.01	435.00
ee	655+40.54	2.00	435.04	435.03
℄ Brg. Pier 5	655+46.54	2.00	435.06	435.06
ff	655+56.54	2.00	435.09	435.12
gg	655+66.54	2.00	435.12	435.19
hh	655+76.53	2.00	435.15	435.24
ii	655+86.53	2.00	435.18	435.28
jj	655+96.53	2.00	435.21	435.29
kk	656+06.52	2.00	435.24	435.29
ll	656+16.52	2.00	435.27	435.28
℄ Brg. Pier 6	656+23.54	2.00	435.29	435.29
mm	656+33.54	2.00	435.32	435.32
nn	656+43.54	2.00	435.35	435.36
oo	656+53.53	2.00	435.38	435.40
pp	656+63.53	2.00	435.41	435.42
℄ Brg. E. Abut.	656+76.98	2.00	435.45	435.45
℄ Exp. joint	656+78.04	2.00	435.45	435.45
Back of E. Abut.	656+80.15	2.00	435.46	435.46

BEAM 4

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+91.16	5.71	434.12	434.12
℄ Exp. joint	651+93.26	5.71	434.12	434.12
℄ Brg. W. Abut.	651+94.33	5.71	434.13	434.13
a	652+04.32	5.71	434.16	434.17
b	652+14.31	5.71	434.19	434.20
c	652+24.30	5.71	434.22	434.23
d	652+34.29	5.71	434.25	434.25
℄ Brg. Pier 1	652+47.73	5.71	434.29	434.29
e	652+57.72	5.71	434.32	434.34
f	652+67.71	5.71	434.35	434.41
g	652+77.70	5.71	434.38	434.47
h	652+87.69	5.71	434.41	434.51
i	652+97.68	5.71	434.44	434.52
j	653+07.67	5.71	434.47	434.52
k	653+17.66	5.71	434.50	434.52
℄ Brg. Pier 2	653+24.68	5.71	434.52	434.52
l	653+34.67	5.71	434.55	434.54
m	653+44.66	5.71	434.58	434.57
n	653+54.65	5.71	434.61	434.59
o	653+64.64	5.71	434.64	434.62
p	653+74.63	5.71	434.67	434.65
q	653+84.62	5.71	434.70	434.68
℄ Brg. Pier 3	653+90.62	5.71	434.72	434.72
r	654+00.61	5.71	434.75	434.79
s	654+10.60	5.71	434.78	434.88
t	654+20.59	5.71	434.81	434.96
u	654+30.58	5.71	434.84	435.01
v	654+40.57	5.71	434.87	435.04
w	654+50.56	5.71	434.90	435.05
x	654+60.55	5.71	434.93	435.03
y	654+70.54	5.71	434.96	435.00
℄ Brg. Pier 4	654+80.53	5.71	434.99	434.99
z	654+90.52	5.71	435.02	435.00
aa	655+00.51	5.71	435.05	435.03
bb	655+10.50	5.71	435.08	435.06
cc	655+20.49	5.71	435.11	435.09
dd	655+30.48	5.71	435.14	435.12
ee	655+40.47	5.71	435.17	435.16
℄ Brg. Pier 5	655+46.47	5.71	435.18	435.18
ff	655+56.46	5.71	435.21	435.24
gg	655+66.45	5.71	435.24	435.31
hh	655+76.44	5.71	435.27	435.37
ii	655+86.43	5.71	435.30	435.40
jj	655+96.42	5.71	435.33	435.42
kk	656+06.41	5.71	435.36	435.42
ll	656+16.40	5.71	435.39	435.41
℄ Brg. Pier 6	656+23.42	5.71	435.41	435.41
mm	656+33.41	5.71	435.44	435.44
nn	656+43.40	5.71	435.47	435.48
oo	656+53.39	5.71	435.50	435.52
pp	656+63.38	5.71	435.53	435.55
℄ Brg. E. Abut.	656+76.82	5.71	435.57	435.57
℄ Exp. joint	656+77.88	5.71	435.58	435.58
Back of E. Abut.	656+79.99	5.71	435.58	435.58

BEAM 5

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+91.47	13.13	434.37	434.37
℄ Exp. joint	651+93.57	13.13	434.38	434.38
℄ Brg. W. Abut.	651+94.64	13.13	434.38	434.38
a	652+04.61	13.13	434.41	434.42
b	652+14.59	13.13	434.44	434.46
c	652+24.57	13.13	434.47	434.48
d	652+34.54	13.13	434.50	434.50
℄ Brg. Pier 1	652+47.97	13.13	434.54	434.54
e	652+57.94	13.13	434.57	434.60
f	652+67.92	13.13	434.60	434.66
g	652+77.90	13.13	434.63	434.72
h	652+87.88	13.13	434.66	434.76
i	652+97.85	13.13	434.69	434.78
j	653+07.83	13.13	434.72	434.78
k	653+17.81	13.13	434.75	434.77
℄ Brg. Pier 2	653+24.82	13.13	434.77	434.77
l	653+34.80	13.13	434.80	434.79
m	653+44.77	13.13	434.83	434.82
n	653+54.75	13.13	434.86	434.85
o	653+64.73	13.13	434.89	434.87
p	653+74.71	13.13	434.92	434.90
q	653+84.68	13.13	434.95	434.94
℄ Brg. Pier 3	653+90.68	13.13	434.97	434.97
r	654+00.65	13.13	435.00	435.04
s	654+10.63	13.13	435.03	435.13
t	654+20.61	13.13	435.06	435.21
u	654+30.59	13.13	435.09	435.27
v	654+40.56	13.13	435.12	435.30
w	654+50.54	13.13	435.15	435.30
x	654+60.52	13.13	435.18	435.28
y	654+70.49	13.13	435.21	435.25
℄ Brg. Pier 4	654+80.47	13.13	435.24	435.24
z	654+90.45	13.13	435.27	435.25
aa	655+00.43	13.13	435.30	435.28
bb	655+10.40	13.13	435.33	435.31
cc	655+20.38	13.13	435.36	435.34
dd	655+30.36	13.13	435.39	435.37
ee	655+40.34	13.13	435.42	435.41
℄ Brg. Pier 5	655+46.33	13.13	435.44	435.44
ff	655+56.31	13.13	435.47	435.50
gg	655+66.28	13.13	435.50	435.56
hh	655+76.26	13.13	435.53	435.62
ii	655+86.24	13.13	435.55	435.65
jj	655+96.22	13.13	435.58	435.67
kk	656+06.19	13.13	435.61	435.67
ll	656+16.17	13.13	435.64	435.66
℄ Brg. Pier 6	656+23.18	13.13	435.67	435.67
mm	656+33.16	13.13	435.70	435.69
nn	656+43.14	13.13	435.73	435.73
oo	656+53.11	13.13	435.76	435.77
pp	656+63.09	13.13	435.79	435.80
℄ Brg. E. Abut.	656+76.51	13.13	435.83	435.83
℄ Exp. joint	656+77.57	13.13	435.83	435.83
Back of E. Abut.	656+79.68	13.13	435.84	435.84

BEAM 6

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	651+91.79	20.54	434.62	434.62
℄ Exp. joint	651+93.88	20.54	434.63	434.63
℄ Brg. W. Abut.	651+94.94	20.54	434.63	434.63
a	652+04.91	20.54	434.66	434.68
b	652+14.87	20.54	434.69	434.71
c	652+24.84	20.54	434.72	434.73
d	652+34.80	20.54	434.75	434.75
℄ Brg. Pier 1	652+48.21	20.54	434.79	434.79
e	652+58.17	20.54	434.82	434.85
f	652+68.14	20.54	434.85	434.91
g	652+78.10	20.54	434.88	434.97
h	652+88.07	20.54	434.91	435.01
i	652+98.03	20.54	434.94	435.03
j	653+08.00	20.54	434.97	435.03
k	653+17.96	20.54	435.00	435.02
℄ Brg. Pier 2	653+24.96	20.54	435.02	435.02
l	653+34.93	20.54	435.05	435.04
m	653+44.89	20.54	435.08	435.07
n	653+54.85	20.54	435.11	435.10
o	653+64.82	20.54	435.14	435.13
p	653+74.78	20.54	435.17	435.15
q	653+84.75	20.54	435.20	435.19
℄ Brg. Pier 3	653+90.73	20.54	435.22	435.22
r	654+00.70	20.54	435.25	435.29
s	654+10.66	20.54	435.28	435.38
t	654+20.63	20.54	435.31	435.46
u	654+30.59	20.54	435.34	435.52
v	654+40.56	20.54	435.37	435.55
w	654+50.52	20.54	435.40	435.55
x	654+60.49	20.54	435.43	435.53
y	654+70.45	20.54	435.46	435.50
℄ Brg. Pier 4	654+80.42	20.54	435.49	435.49
z	654+90.38	20.54	435.52	435.50
aa	655+00.34	20.54	435.55	435.53
bb	655+10.31	20.54	435.58	435.56
cc	655+20.27	20.54	435.61	435.60
dd	655+30.24	20.54	435.64	435.63
ee	655+40.20	20.54	435.67	435.66
℄ Brg. Pier 5	655+46.19	20.54	435.69	435.69
ff	655+56.15	20.54	435.72	435.75
gg	655+66.12	20.54	435.75	435.81
hh	655+76.08	20.54	435.78	435.87
ii	655+86.05	20.54	435.81	435.90
jj	655+96.01	20.54	435.84	435.92
kk	656+05.97	20.54	435.87	435.92
ll	656+15.94	20.54	435.90	435.91
℄ Brg. Pier 6	656+22.94	20.54	435.92	435.92
mm	656+32.90	20.54	435.95	435.95
nn	656+42.87	20.54	435.98	435.99
oo	656+52.83	20.54	436.01	436.02
pp	656+62.80	20.54	436.04	436.05
℄ Brg. E. Abut.	656+76.20	20.54	436.08	436.08
℄ Exp. joint	656+77.26	20.54	436.08	436.08
Back of E. Abut.	656+79.36	20.54	436.09	436.09

E-S

7-1-10

ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -	
PLOT SCALE = 0.2 ' / in.	DRAWN - DWH 03/11	REVISED -	
PLOT DATE = 10/19/2018 1:51:09 PM	CHECKED - MTD 08/15	REVISED -	

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0066

SHEET NO. 8 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	191

CONTRACT NO. 74177

ILLINOIS FED. AID PROJECT

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+60.53	-18.00	433.22
A1	651+70.57	-18.00	433.25
A2	651+80.61	-18.00	433.28
E. End West Appr. Slab	651+90.65	-18.00	433.31

NORTH EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+60.82	-12.00	433.42
A1	651+70.85	-12.00	433.45
A2	651+80.88	-12.00	433.48
E. End West Appr. Slab	651+90.91	-12.00	433.51

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+61.39	0.00	433.83
A1	651+71.40	0.00	433.86
A2	651+81.41	0.00	433.89
E. End West Appr. Slab	651+91.42	0.00	433.92

STAGE CONSTRUCTION LINE

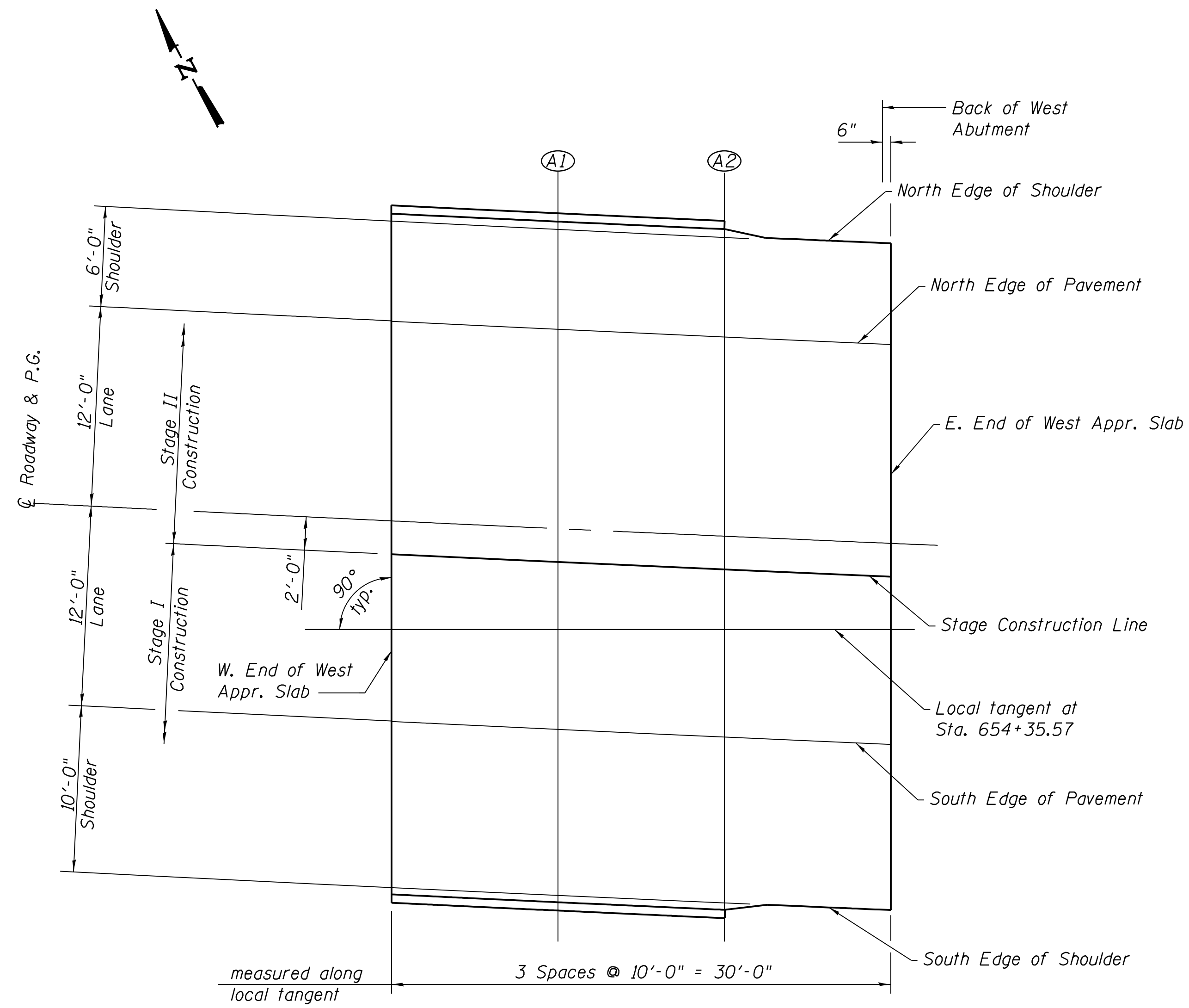
Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+61.48	2.00	433.90
A1	651+71.49	2.00	433.93
A2	651+81.50	2.00	433.96
E. End West Appr. Slab	651+91.50	2.00	433.99

SOUTH EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+61.96	12.00	434.24
A1	651+71.95	12.00	434.27
A2	651+81.94	12.00	434.30
E. End West Appr. Slab	651+91.92	12.00	434.33

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End West Appr. Slab	651+62.43	22.00	434.59
A1	651+72.40	22.00	434.62
A2	651+82.37	22.00	434.65
E. End West Appr. Slab	651+92.35	22.00	434.68



PLAN

E-AS

7-1-10

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
	PLOT SCALE = 0:2 ' / in.	DRAWN - DWH 03/11	REVISED -
	PLOT DATE = 10/19/2018 1:51:10 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0066

SHEET NO. 9 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	192
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

NORTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+80.49	-18.00	434.78
A3	656+90.54	-18.00	434.81
A4	657+00.58	-18.00	434.84
E. End East Appr. Slab	657+10.62	-18.00	434.87

NORTH EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+80.24	-12.00	434.98
A3	656+90.27	-12.00	435.01
A4	657+00.30	-12.00	435.04
E. End East Appr. Slab	657+10.33	-12.00	435.07

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+79.73	0.00	435.39
A3	656+89.74	0.00	435.42
A4	656+99.75	0.00	435.45
E. End East Appr. Slab	657+09.76	0.00	435.48

STAGE CONSTRUCTION LINE

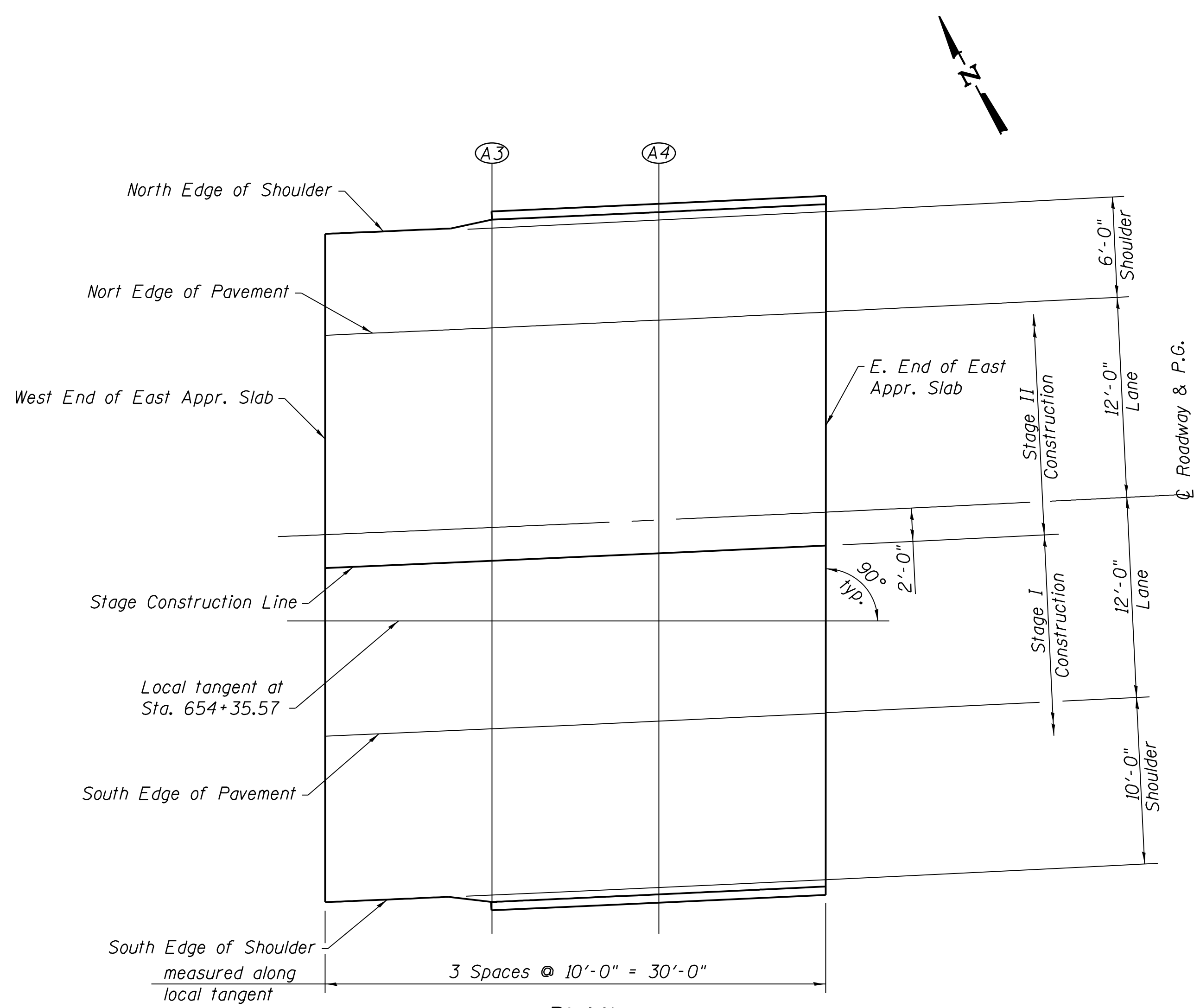
Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+79.65	2.00	435.46
A3	656+89.65	2.00	435.49
A4	656+99.66	2.00	435.52
E. End East Appr. Slab	657+09.67	2.00	435.55

SOUTH EDGE OF PAVEMENT

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+79.22	12.00	435.80
A3	656+89.21	12.00	435.83
A4	656+99.20	12.00	435.86
E. End East Appr. Slab	657+09.19	12.00	435.89

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End East Appr. Slab	656+78.80	22.00	436.13
A3	656+88.77	22.00	436.16
A4	656+98.75	22.00	436.19
E. End East Appr. Slab	657+08.72	22.00	436.22



PLAN

E-AS 7-1-10

ESCA CONSULTANTS, INC.	USER NAME = kah	DESIGNED - MTD 03/11	REVISED -
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
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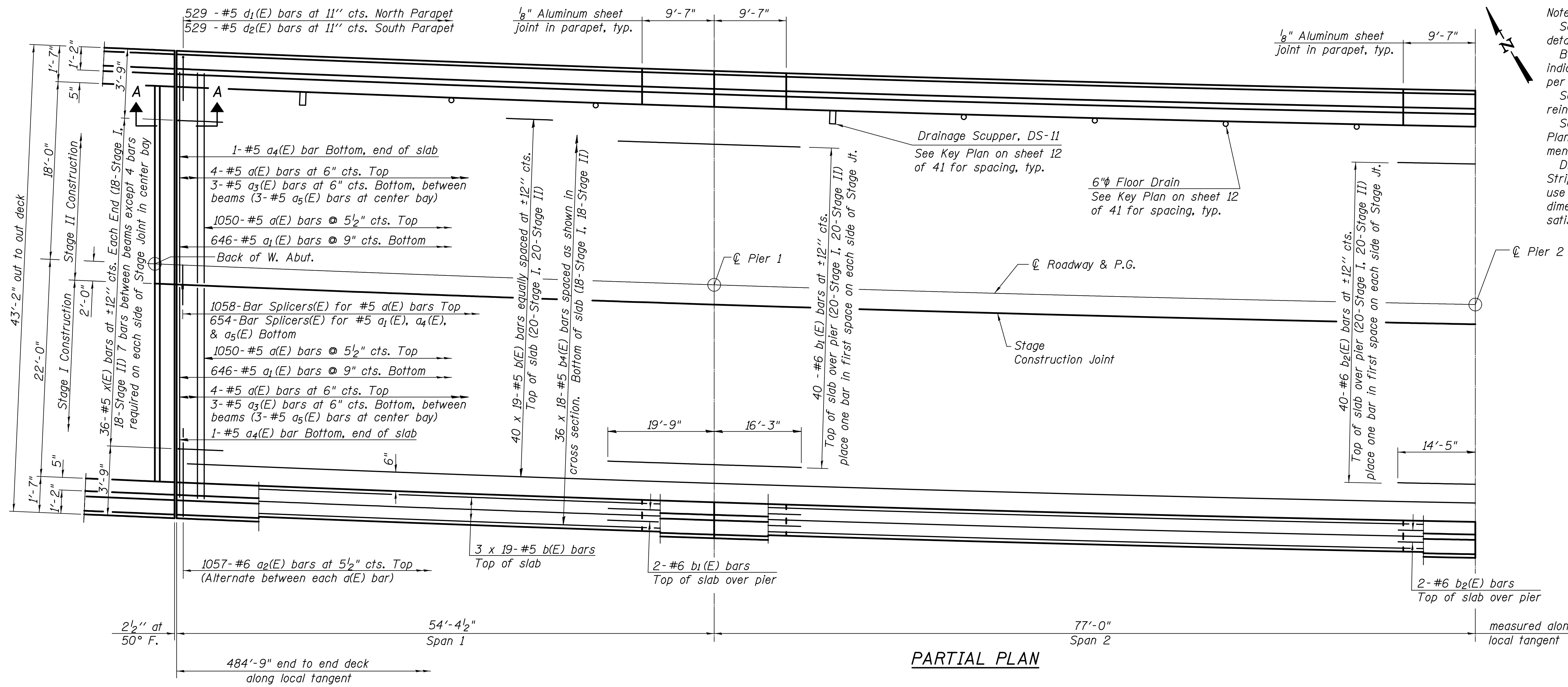
	PLOT DATE = 10/19/2018 1:51:11 PM	CHECKED - MTD 08/15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0066

SHEET NO. 10 OF 41 SHEETS

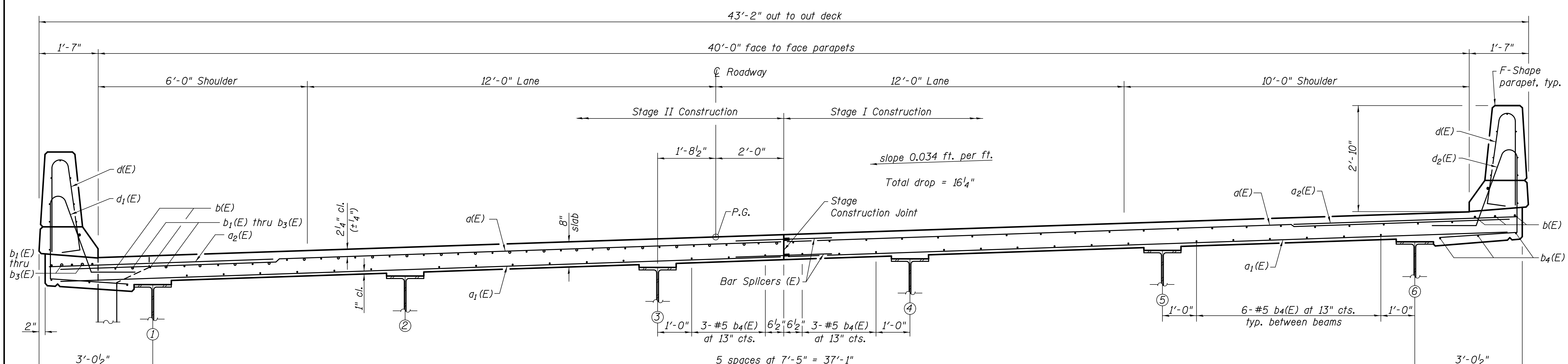
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	193
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



PARTIAL PLAN

Notes:
See sheet 13 of 41 for superstructure details and Bill of Material.
Bars indicated thus 40 x 19-#5 etc. indicates 40 lines of bars with 19 lengths per line.
See sheet 13 of 41 for parapet reinforcement.
See sheet 12 of 41 for continuation of Plan, Section A-A and additional reinforcement at drainage scuppers.
Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheets EJ-SSJ.

MINIMUM BAR LAP
(Slab)
#5 bar = 2'-7"

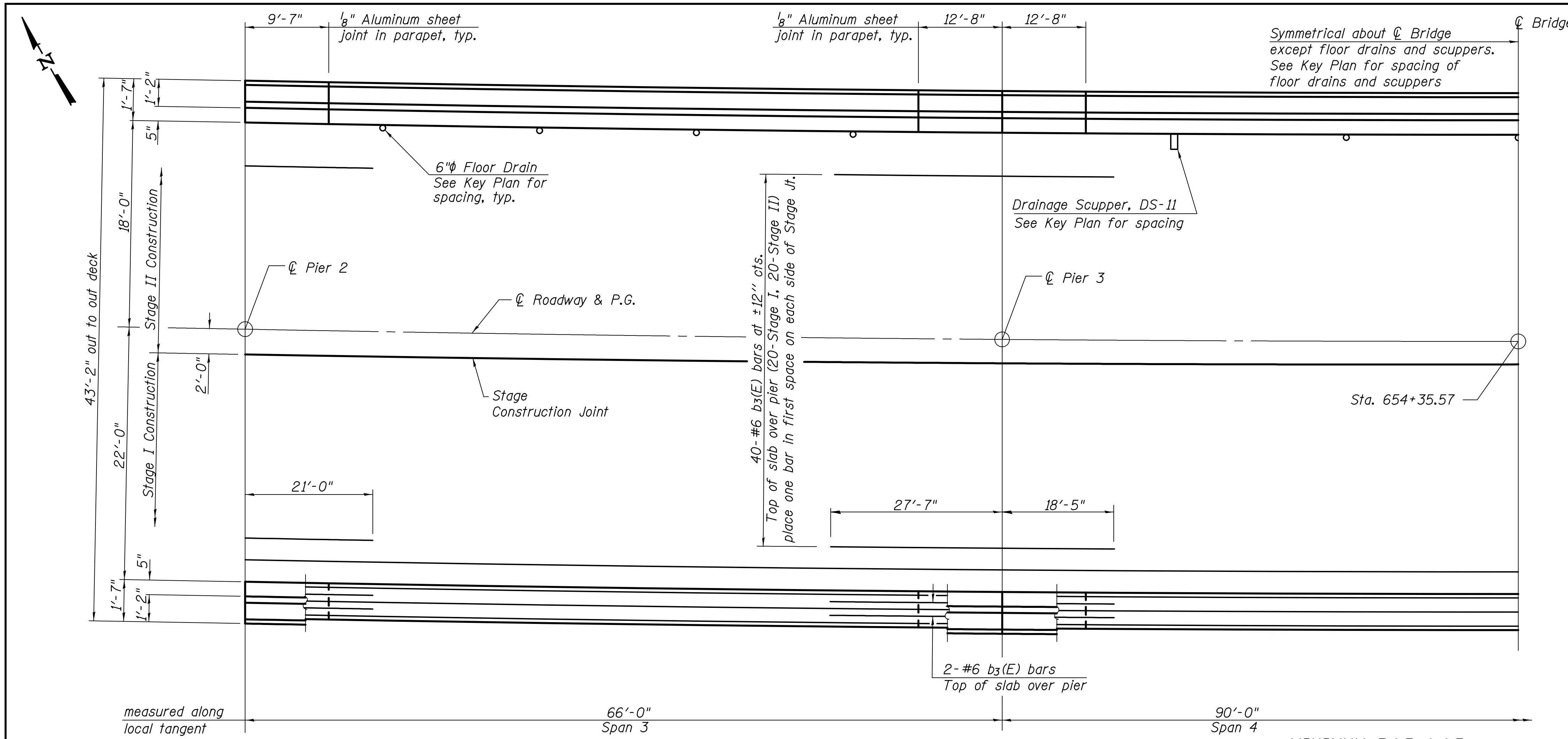


CROSS SECTION
(Looking East)

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -	
	PLOT SCALE = 0:2 '/' / in.	DRAWN - DWH 03/11	REVISED -	
	PLOT DATE = 12/4/2018 1:42:04 PM	CHECKED - MTD 11/18	REVISED -	

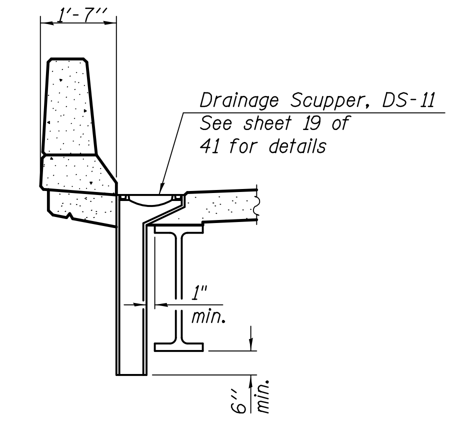
SUPERSTRUCTURE
STRUCTURE NO. 051-0066
SHEET NO. 11 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	194
CONTRACT NO. 74177				
ILLINOIS FED. AID PROJECT				

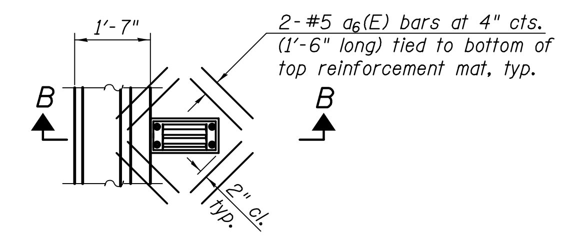


PARTIAL PLAN

MINIMUM BAR LAP
(Slab)
#5 bar = 2'-7"

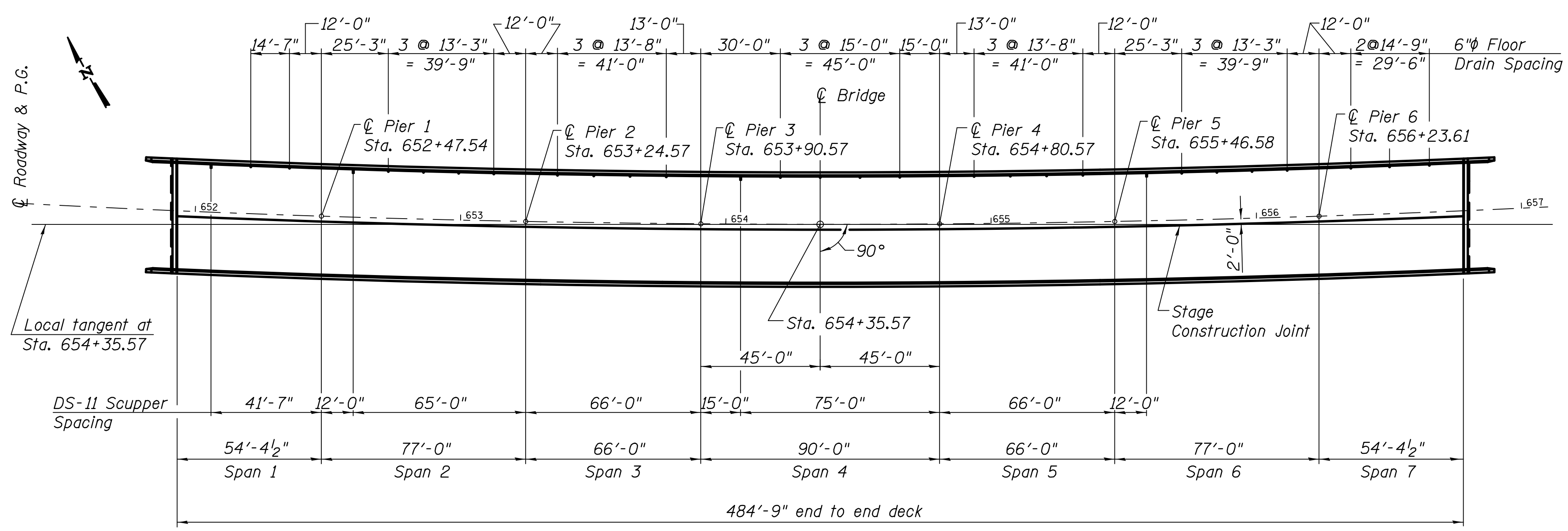


SECTION B-B



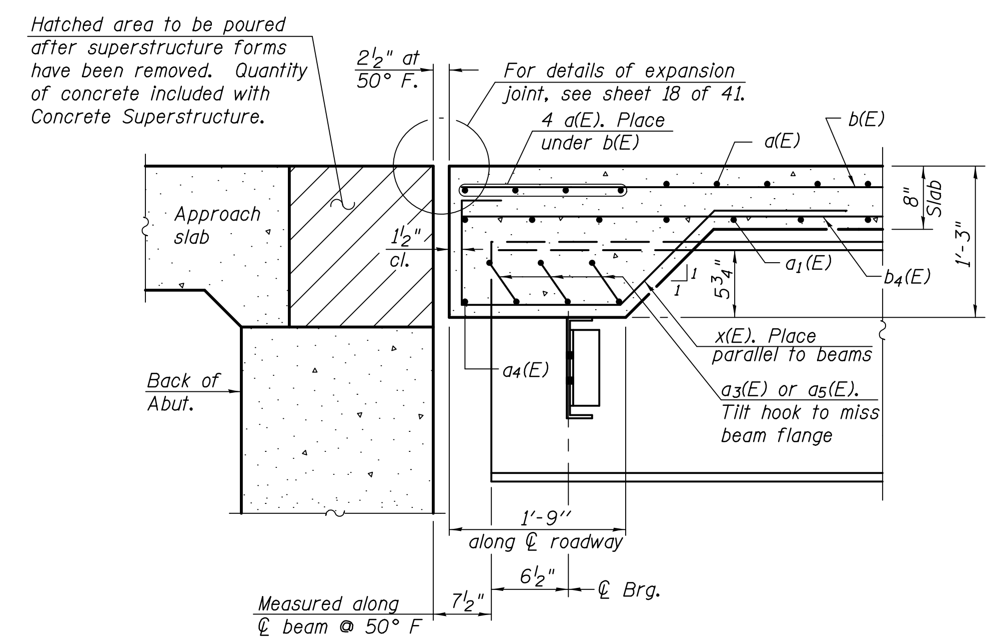
PLAN AT SCUPPER

Note:
Cut longitudinal reinforcement to clear drainage scuppers.



Note:
All horizontal dimensions measured along local tangent.

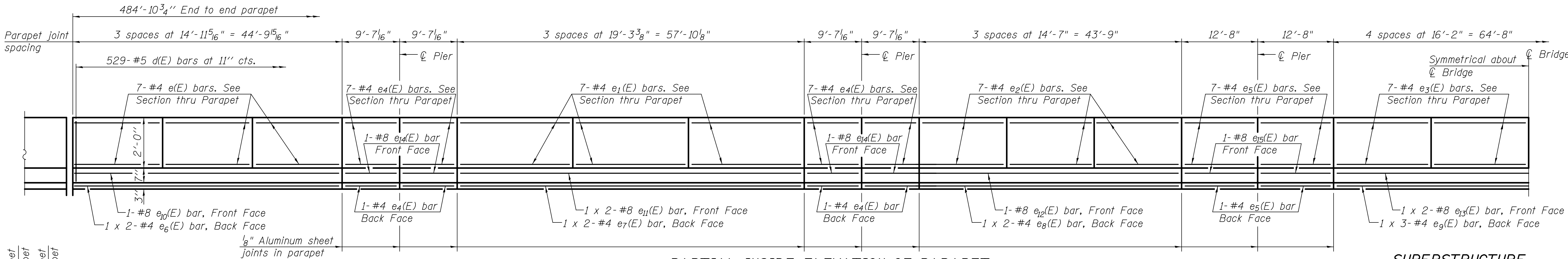
KEY PLAN



SECTION A-A

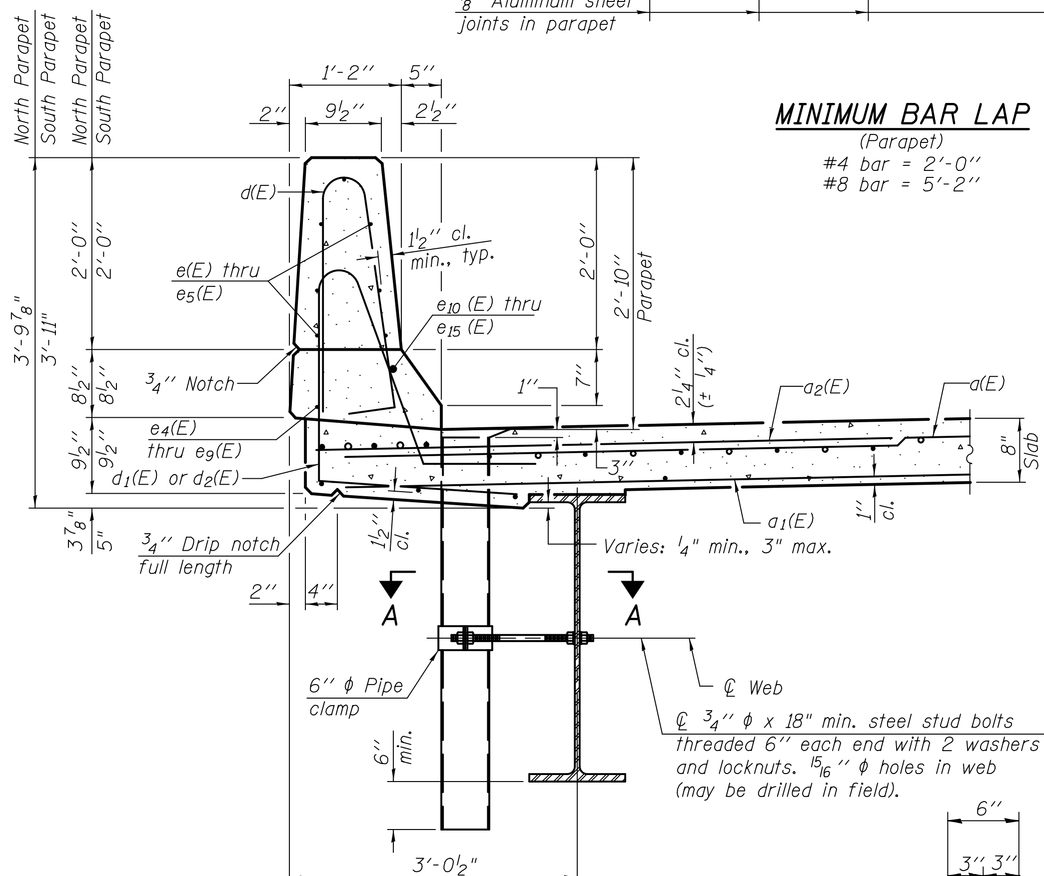
ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 051-0066
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -		
	PLOT SCALE = 0:2 '/' / in.	DRAWN - DWH 03/11	REVISED -		
	PLOT DATE = 12/4/2018 1:41:33 PM	CHECKED - MTD 11/18	REVISED -		SHEET NO. 12 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	195
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



PARTIAL INSIDE ELEVATION OF PARAPET

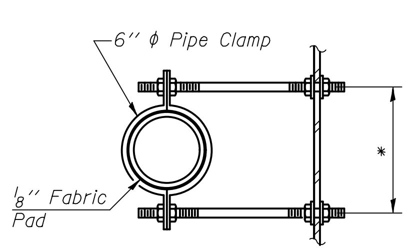
(Horizontal dimensions measured along I.F. of parapet)



MINIMUM BAR LAP

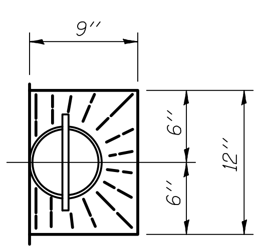
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

SECTION THRU PARAPET

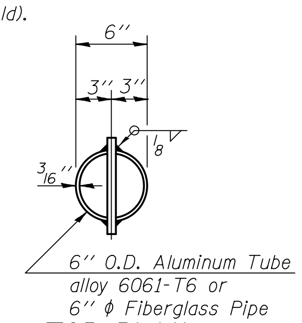


SECTION A-A

* Dimension as required by Pipe Clamp

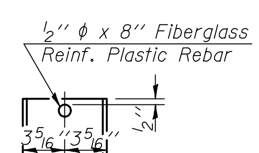


TOP PLAN

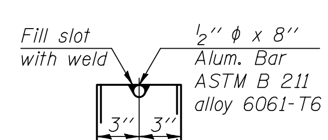


TOP PLAN

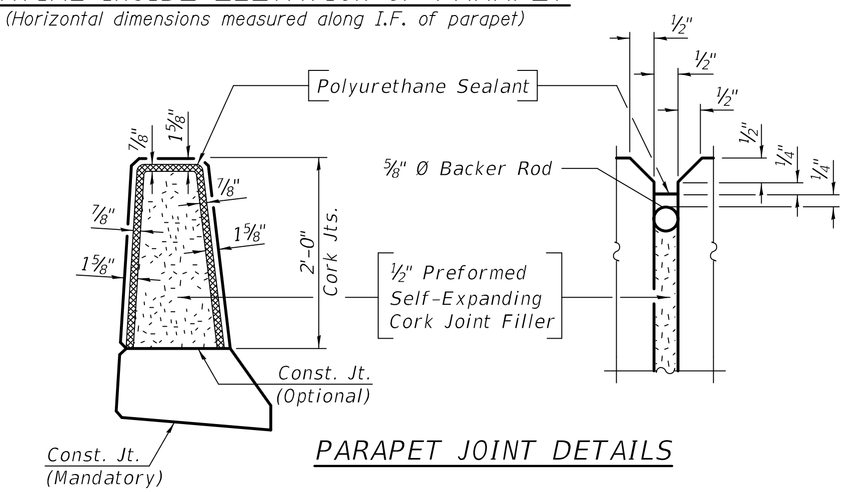
(Showing Aluminum Tube)



FIBERGLASS PIPE



ALUMINUM TUBE

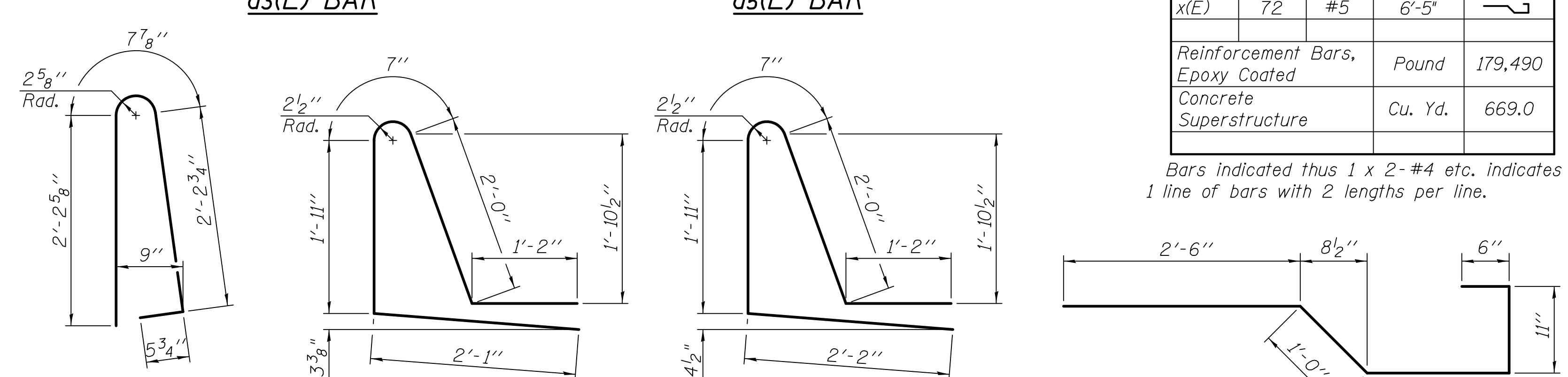


PARAPET JOINT DETAILS

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
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.
The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.
The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

a3(E) BAR

a5(E) BAR



BAR d(E)

BAR d1(E)

BAR d2(E)

BAR x(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	2116	#5	21'-2"	
a1(E)	1292	#5	20'-8"	
a2(E)	2114	#6	6'-6"	
a3(E)	24	#5	8'-4"	
a4(E)	4	#5	18'-3"	
a5(E)	12	#5	4'-0"	
a6(E)	32	#5	1'-6"	
b(E)	874	#5	28'-0"	
b1(E)	88	#6	36'-0"	
b2(E)	88	#6	35'-5"	
b3(E)	88	#6	46'-0"	
b4(E)	648	#5	29'-5"	
d(E)	1058	#5	5'-7"	
d1(E)	529	#5	7'-9"	
d2(E)	529	#5	7'-10"	
e(E)	84	#4	14'-7"	
e1(E)	84	#4	19'-0"	
e2(E)	84	#4	14'-3"	
e3(E)	56	#4	15'-10"	
e4(E)	128	#4	9'-3"	
e5(E)	64	#4	12'-4"	
e6(E)	8	#4	23'-4"	
e7(E)	8	#4	29'-10"	
e8(E)	8	#4	22'-9"	
e9(E)	6	#4	22'-10"	
e10(E)	4	#8	44'-6"	
e11(E)	8	#8	31'-5"	
e12(E)	4	#8	43'-5"	
e13(E)	4	#8	34'-10"	
e14(E)	16	#8	9'-3"	
e15(E)	8	#8	12'-4"	
x(E)	72	#5	6'-5"	
Reinforcement Bars, Epoxy Coated			Pound	179,490
Concrete Superstructure			Cu. Yd.	669.0

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.

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	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
	PLOT SCALE = 0:2 'I' / in.	DRAWN - DWH 03/11	REVISED -
	PLOT DATE = 12/4/2018 1:41:05 PM	CHECKED - MTD 11/18	REVISED -

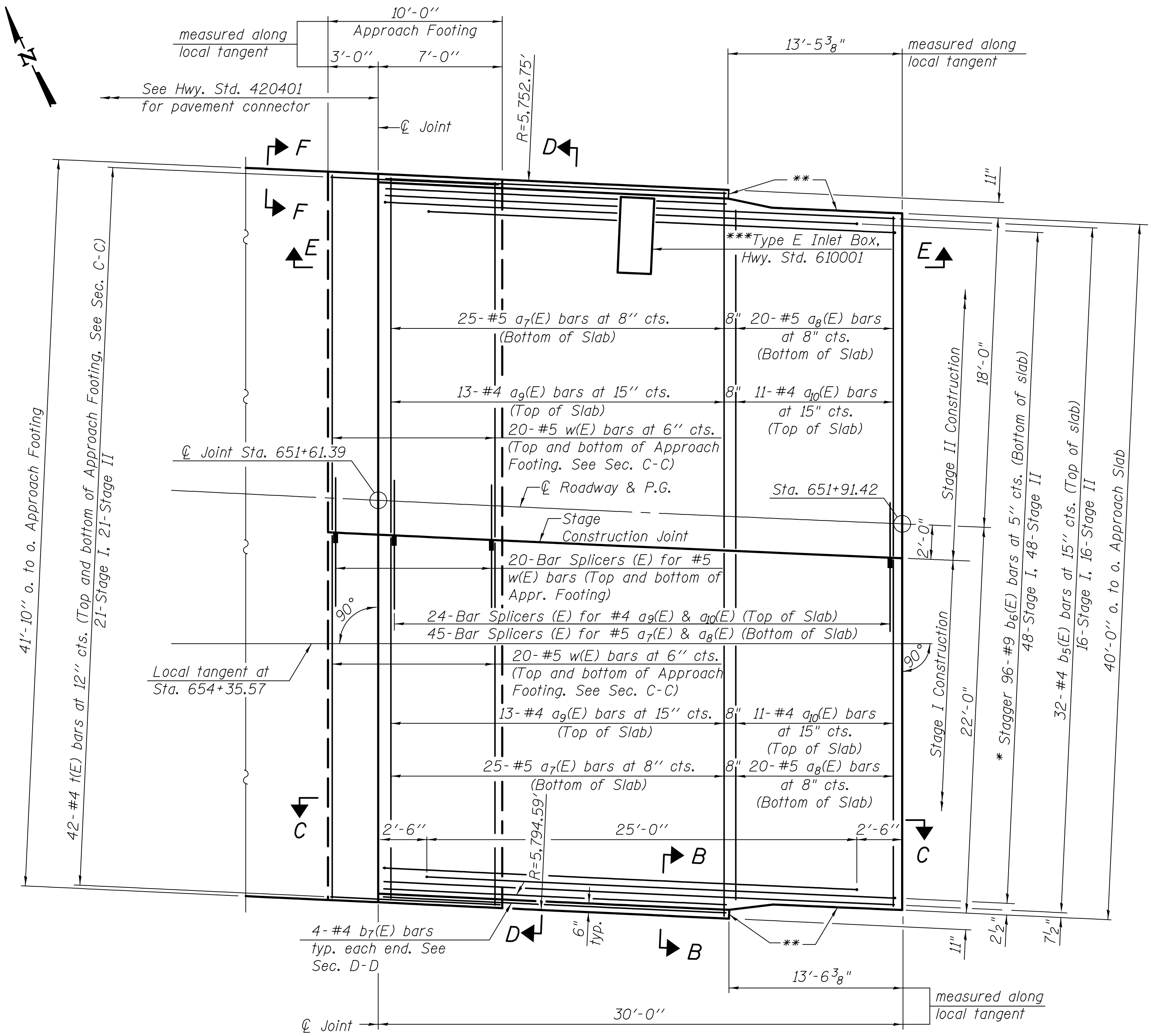
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-0066

SHEET NO. 13 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	196
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

Notes:
See sheet 15 of 41 for Sections C-C & D-D and View E-E.
a_7(E) thru a_{10}(E) and w(E) bar spacings measured along local tangent.

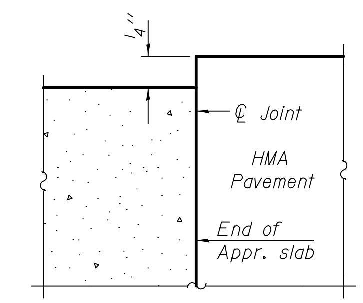


PLAN

* Tilt #9 b_6(E) bars as required to maintain clearance.

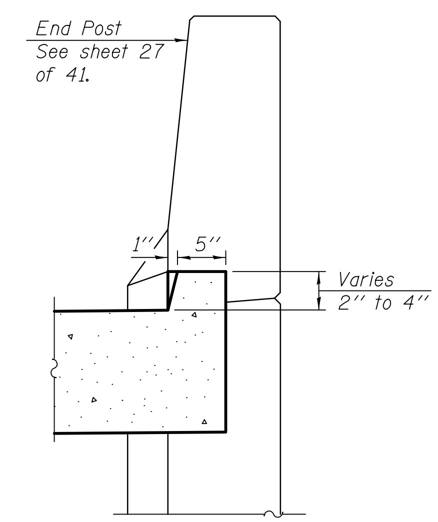
** Preformed Flexible Foam Expansion Joint Filler according to Article 1051.09 of the Std. Specifications; full depth of slab, full length of wingwall. Typ. each wingwall.

*** See Roadway plans for details and quantities.

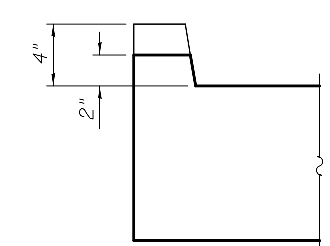


FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B

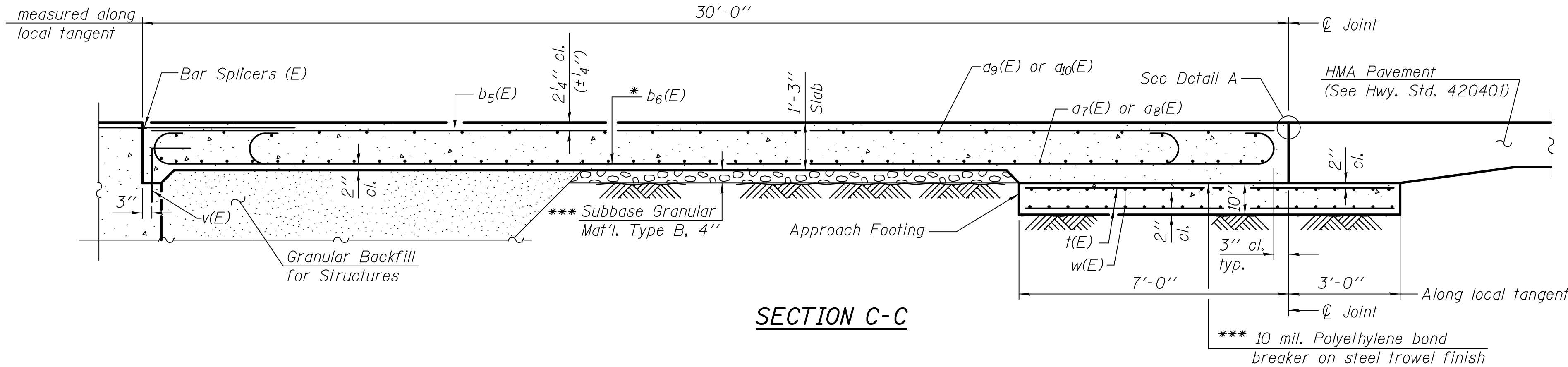


VIEW F-F

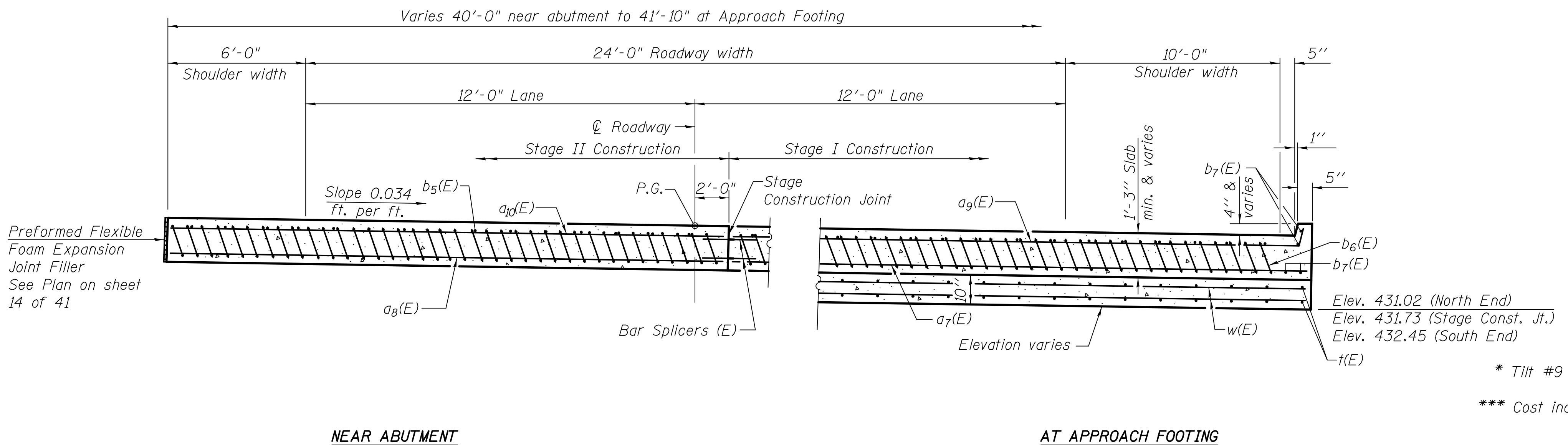
(Sheet 1 of 2)

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST BRIDGE APPROACH SLAB STRUCTURE NO. 051-0066
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -		
	PLOT SCALE = 0:2 'r' / in.	DRAWN - DWH 03/11	REVISED -		
	PLOT DATE = 12/4/2018 1:40:36 PM	CHECKED - MTD 11/18	REVISED -		SHEET NO. 14 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	197
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



SECTION C-C



* Tilt #9 b_6(E) bars as required to maintain clearance.

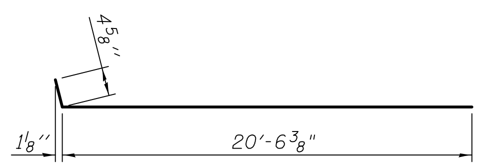
*** Cost included with Concrete Superstructure (Approach Slab).

SECTION D-D
(See Plan for dimensions not shown)

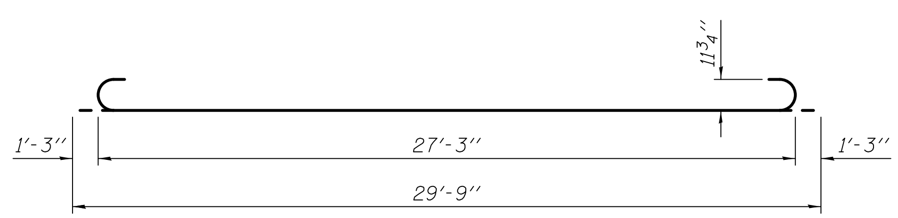
Notes:
- See sheet 14 of 41 for Plan and Detail A.
- Approach slab concrete shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see sheets 25 and 27 of 41.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see sheet 35 of 41.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 41.
- For End Post details, see sheets 25 and 27 of 41.

WEST APPROACH SLAB BILL OF MATERIAL

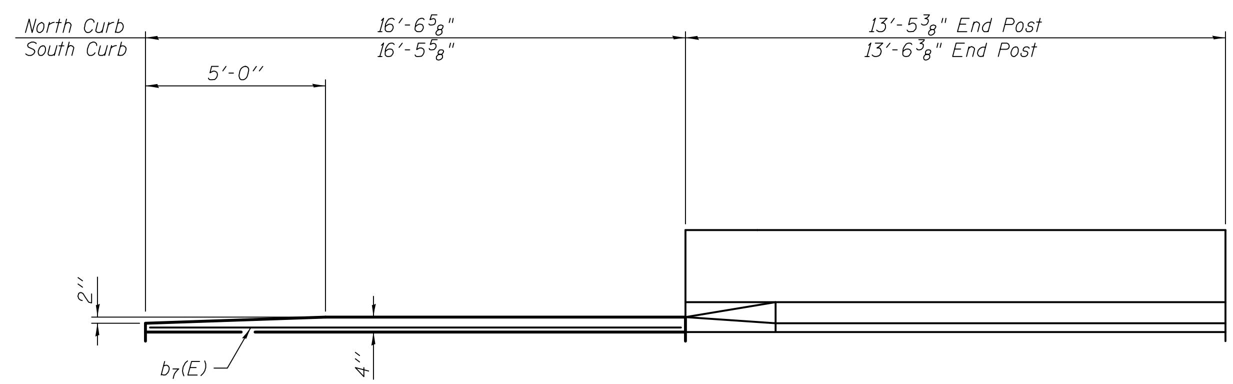
Bar	No.	Size	Length	Shape
a_7(E)	50	#5	20'-7"	
a_8(E)	40	#5	19'-8"	
a_9(E)	26	#4	20'-11"	
a_{10}(E)	22	#4	19'-8"	
b_5(E)	32	#4	29'-8"	
b_6(E)	96	#9	29'-9"	
b_7(E)	8	#4	16'-2"	
t(E)	84	#4	9'-8"	
w(E)	80	#5	20'-7"	
Concrete Superstructure (Approach Slab)		Cu. Yd.	57.7	
Concrete Structures		Cu. Yd.	13.0	
Reinforcement Bars, Epoxy Coated		Pound	15,240	



BAR a_9(E)



BAR b_6(E)



VIEW E-E

(Sheet 2 of 2)

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -	
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	PLOT DATE = 12/4/2018 1:40:08 PM	CHECKED - MTD 11/18	REVISED -	

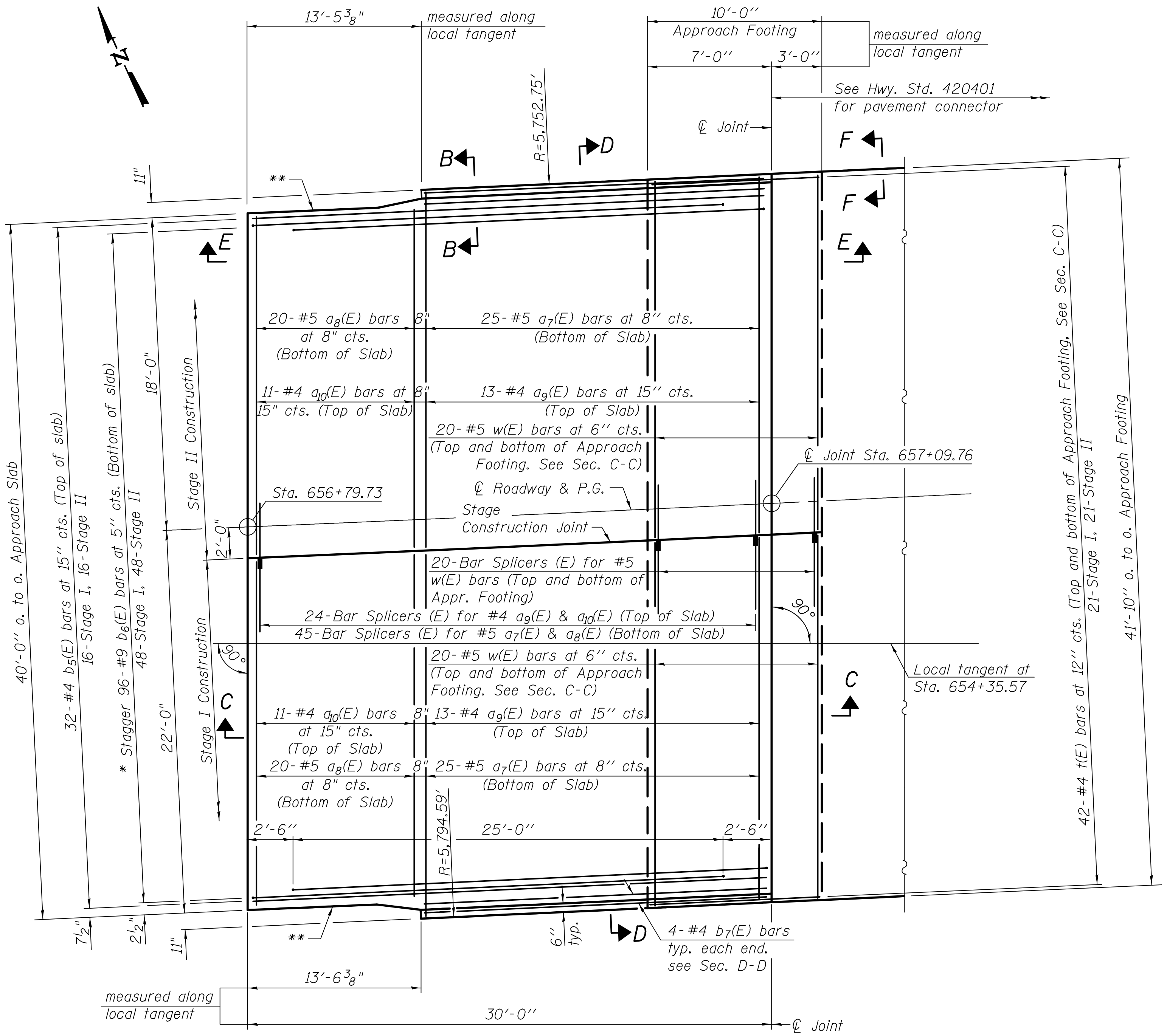
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0066

SHEET NO. 15 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	198
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

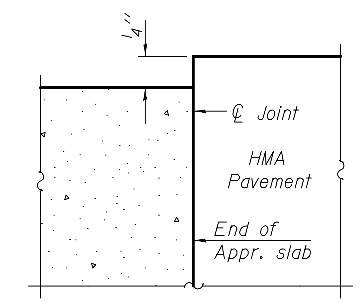
Notes:
See sheet 17 of 41 for Sections C-C & D-D and View E-E.
a_7(E) thru a_{10}(E) and w(E) bar spacings measured along local tangent.



PLAN

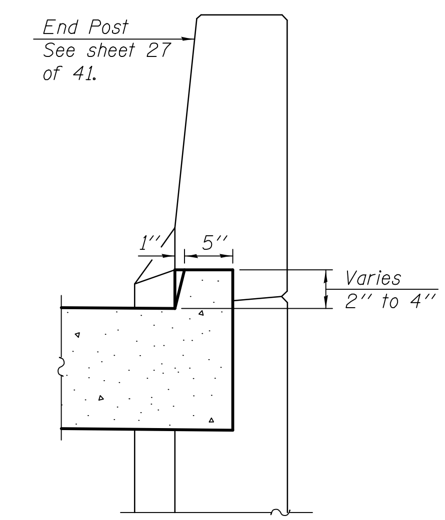
* Tilt #9 b_6(E) bars as required to maintain clearance.

** Preformed Flexible Foam Expansion Joint Filler according to Article 1051.09 of the Std. Specifications; full depth of slab, full length of wingwall. Typ. each wingwall.

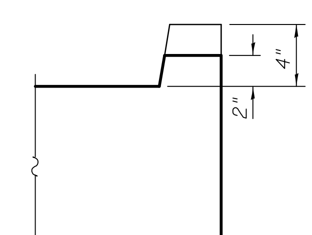


FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B

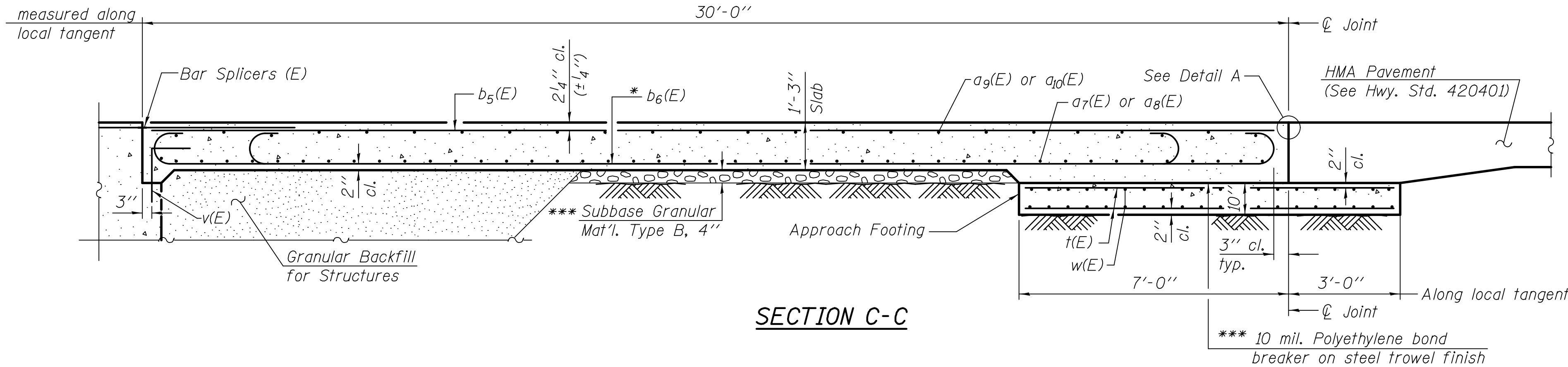


VIEW F-F

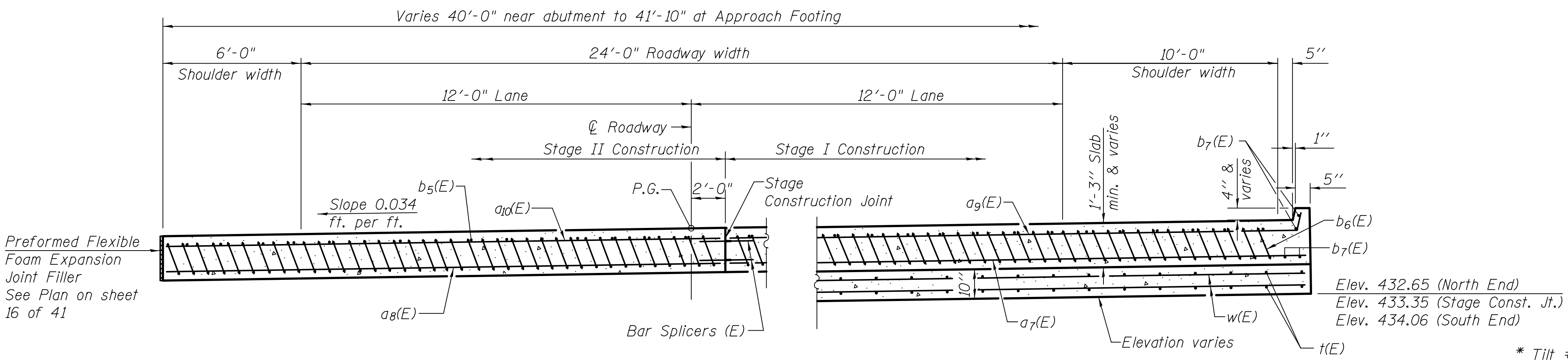
(Sheet 1 of 2)

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST BRIDGE APPROACH SLAB STRUCTURE NO. 051-0066
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -		
	PLOT SCALE = 0:2 ':' / in.	DRAWN - DWH 03/11	REVISED -		
	PLOT DATE = 12/4/2018 1:39:41 PM	CHECKED - MTD 11/18	REVISED -		SHEET NO. 16 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	199
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



SECTION C-C



* Tilt #9 $b_6(E)$ bars as required to maintain clearance.

*** Cost included with Concrete Superstructure (Approach Slab).

NEAR ABUTMENT

AT APPROACH FOOTING

SECTION D-D

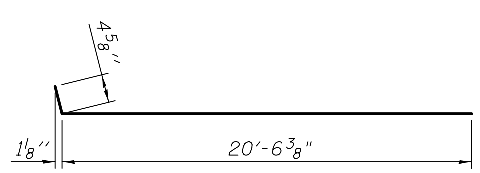
(See Plan for dimensions not shown)

Notes:

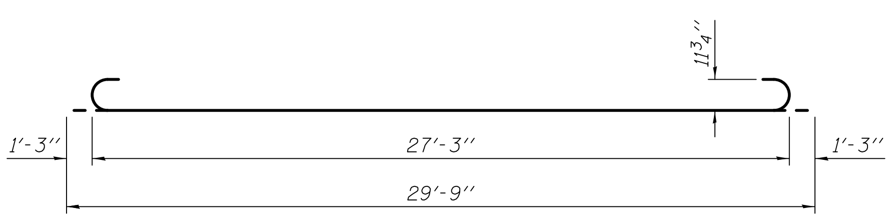
See sheet 16 of 41 for Plan and Detail A.
Approach slab concrete shall be paid for as Concrete Superstructure (Approach Slab).
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheets 26 and 27 of 41.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 35 of 41.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 41.
For End Post details, see sheets 26 and 27 of 41.

EAST APPROACH SLAB BILL OF MATERIAL

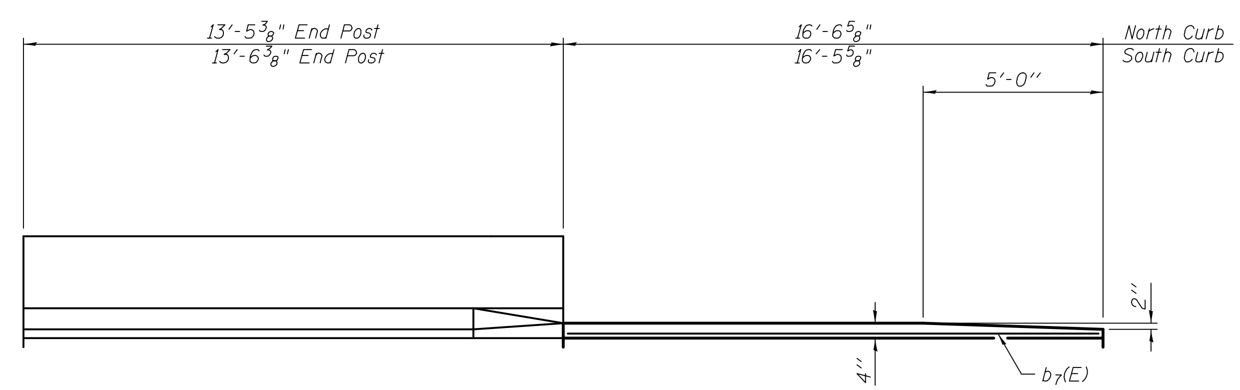
Bar	No.	Size	Length	Shape
$a_7(E)$	50	#5	20'-7"	
$a_8(E)$	40	#5	19'-8"	
$a_9(E)$	26	#4	20'-11"	
$a_{10}(E)$	22	#4	19'-8"	
$b_5(E)$	32	#4	29'-8"	
$b_6(E)$	96	#9	29'-9"	
$b_7(E)$	8	#4	16'-2"	
t(E)	84	#4	9'-8"	
w(E)	80	#5	20'-7"	
Concrete Superstructure (Approach Slab)			Cu. Yd.	58.3
Concrete Structures			Cu. Yd.	13.0
Reinforcement Bars, Epoxy Coated			Pound	15,240



BAR $a_9(E)$



BAR $b_6(E)$



VIEW E-E

(Sheet 2 of 2)

ESCA CONSULTANTS, INC.	USER NAME = rtm	DESIGNED - MTD 03/11	REVISED -
	ESCA PROJECT NO. 1000.02	CHECKED - RDP 04/11	REVISED -
	PLOT SCALE = 0:2 ' / in.	DRAWN - DWH 03/11	REVISED -
	PLOT DATE = 12/4/2018 1:39:14 PM	CHECKED - MTD 11/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0066

SHEET NO. 17 OF 41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23B-2)B-1	LAWRENCE	260	200
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		