069

01-18-2019 LETTING ITEM 069

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	1
	ILLINOIS	CONTRACT NO. 74177		

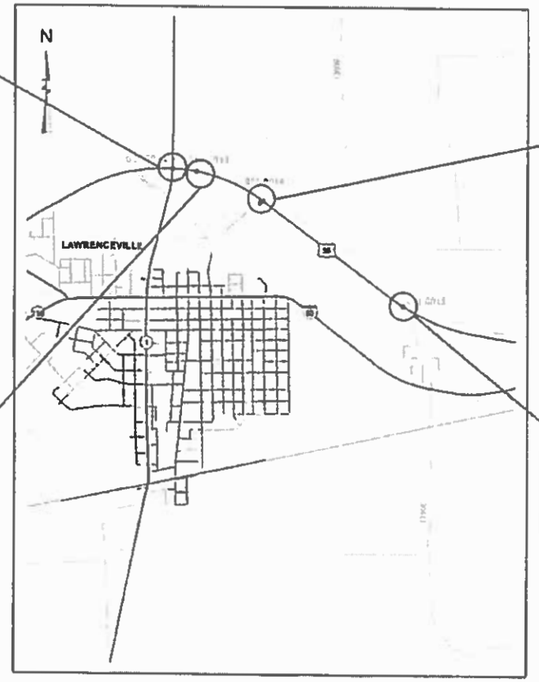
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAP ROUTE 327 (US 50)
SECTION (51-23)B
PROJECT NHPP 0TPN(995)
STRUCTURE REPLACEMENT
LAWRENCE COUNTY

C-97-089-06

STRUCTURE # 051-0012
STA. 576+87.10
SECTION (51-23HB-2)BR
SUPERSTRUCTURE REPLACEMENT
OVER FAP 332 (IL 1)



STRUCTURE 051-0014
STA. 603+49.82
SECTION (51-23HB-3)BR
SUPERSTRUCTURE REPLACEMENT
OVER CH 12

STRUCTURE # 051-0013 (OLD)
STRUCTURE # 051-8634 (NEW)
STA. 583+29.07
SECTION (51-23VB)B-1
STRUCTURE REPLACEMENT
OVER ABANDONED RAILROAD

STRUCTURE # 051-0015 (OLD)
STRUCTURE # 051-0066 (NEW)
STA. 654+30.00
SECTION (51-23B-2)B-1
STRUCTURE REPLACEMENT
OVER OTTER POND DITCH

D-97-050-06

LOCATION OF SECTION INDICATED THUS: -

FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL
DESIGN SPEED: 60-70 MPH
POSTED SPEED: 55 MPH
ADT: 5,500 (2015)
PV: 4525 81.5%
SU: 275 5%
MU: 750 13.5%

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

GROSS LENGTH = 4805.04 FT. = 0.910 MI.
NET LENGTH = 4805.04 FT. = 0.910 MI.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 19 20 18
Jeffrey M Smith /kg
REGIONAL ENGINEER
Dec 7 20 18
ENGINEER OF DESIGN AND ENVIRONMENT
Dec 7 20 18
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PROJECT ENGINEER: BRIAN LEWIS
PROJECT MANAGER: BRETT WALKER

CONTRACT NO. 74177

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 260:

STD. NO.	DESCRIPTION
000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
442201-03	CLASS C AND D PATCHES
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-03	METAL FLARED END SECTIONS FOR PIPE CULVERTS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606301-04	PC CONCRETE ISLAND AND MEDIANS
606306-04	CORRUGATED PC CONCRETE MEDIANS
610001-08	SHOULDER INLET WITH CURB
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-02	DELINEATORS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-17	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR-21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

INDEX OF SHEETS

USER NAME = steffenmk	DESIGNED - BRETT WALKER	REVISED -	
	DRAWN - MYRA OLTMAN	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

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

GENERAL NOTES

THE WORK ON THIS PROJECT IS LOCATED AT EXISTING STRUCTURE NUMBERS 051-0012, 051-0013, 051-0014, AND 051-0015. THE EXISTING STRUCTURE NUMBER 051-0012 CARRIES US ROUTE 50 OVER ILLINOIS ROUTE 1 AND IS LOCATED AT THE ILLINOIS ROUTE 1 INTERCHANGE IN LAWRENCE COUNTY. THE EXISTING STRUCTURE NUMBER 051-0013, CARRIES US ROUTE 50 OVER AN ABANDONED RAILROAD AND IS LOCATED APPROXIMATELY 0.1 MILES EAST OF THE ILLINOIS ROUTE 1 INTERCHANGE IN LAWRENCE COUNTY. THE EXISTING STRUCTURE NUMBER 051-0014 CARRIES US ROUTE 50 OVER COUNTY HIGHWAY 12 AND IS LOCATED APPROXIMATELY 0.5 MILES EAST OF THE ILLINOIS ROUTE 1 INTERCHANGE IN LAWRENCE COUNTY. THE EXISTING STRUCTURE NUMBER 051-0015 CARRIES US ROUTE 50 OVER OTTER POND DITCH AND IS LOCATED APPROXIMATELY 1.5 MILES EAST OF THE ILLINOIS ROUTE 1 INTERCHANGE IN LAWRENCE COUNTY.

THE WORK INCLUDED ON STRUCTURE NUMBER 051-0012 CONSISTS OF SUBSTRUCTURE WIDENING WITH SUPERSTRUCTURE REMOVAL AND REPLACEMENT. THE WORK INCLUDED AT STRUCTURE NUMBER 051-0013 CONSISTS OF CONSTRUCTION OF A DRIVE THROUGH BOX CULVERT, THE REMOVAL OF THE EXISTING STRUCTURE TO THE LIMITS SHOWN IN THE PLANS, PLACEMENT OF EMBANKMENT AND CONSTRUCTION OF NEW FULL-DEPTH HOT-MIX ASPHALT PAVEMENT. THE WORK INCLUDED ON STRUCTURE NUMBER 051-0014 CONSISTS OF SUPERSTRUCTURE REMOVAL AND REPLACEMENT. THE WORK INCLUDED ON STRUCTURE NUMBER 051-0015 CONSISTS OF THE COMPLETE REMOVAL AND REPLACEMENT OF THE EXISTING STRUCTURE WITH A NEW STRUCTURE. IN ADDITION TO THE STRUCTURE WORK THIS PROJECT ALSO INCLUDES BRIDGE APPROACH PAVEMENTS, HOT-MIX ASPHALT RESURFACING, RIP RAP, GUARDRAIL, PAVEMENT MARKING, TRAFFIC CONTROL AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION. THE WORK ON STRUCTURE NUMBERS 051-0012, 051-0014, AND 051-0015 SHALL BE COMPLETED UTILIZING STAGE CONSTRUCTION WITH TEMPORARY TRAFFIC SIGNALS. THE CONSTRUCTION OF THE BOX CULVERT BELOW STRUCTURE NUMBER 051-0013 AND A LIMITED PORTION OF THE EMBANKMENT WILL BE CONSTRUCTED WITH THE EXISTING OVERHEAD STRUCTURE IN PLACE AND OPEN TO TRAFFIC. THE REMOVAL OF STRUCTURE NUMBER 051-0013 AND THE PLACEMENT OF THE EMBANKMENT AND CONSTRUCTION OF THE NEW HMA PAVEMENT SHALL BE COMPLETED UTILIZING A ROAD CLOSURE WITH A MARKED ROUTE DETOUR.

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

WHEN APPLYING SHORT TERM PAVEMENT MARKINGS, TEMPORARY TAPE SHALL BE USED ON THE SURFACE COURSE AND PAINT SHALL BE USED ON MILLED SURFACES.

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

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE IMPACT ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BEDISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILLNOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

THE TREES LISTED IN THE PLANS SHALL BE APPROVED AND HAND PLANTED AT LOCATIONS AS DIRECTED BY THE DISTRICT ROADSIDE MAINTENANCE TECHNICIAN (217) 342-8281. THE CONTRACTOR SHALL BE REQUIRED TO GIVE TWO WEEKS NOTICE TO SCHEDULE A TIME FOR THE LOCATIONS TO BE STAKED AND ON THE SAME DAY THE TREES SHALL BE DELIVERED TO THE JOBSITE FOR ACCEPTANCE OF PLANTING MATERIAL BY THE DISTRICT ROADSIDE MAINTENANCE TECHNICIAN.

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

AGGREGATE	2.05 TONS/CU YD
BITUMINOUS MATERIALS: AGG BASE	0.25 LBS/SQ FT
BITUMINOUS MATERIALS: MILLED SURFACE	0.05 LBS/SQ FT
BITUMINOUS MATERIALS: FOG COAT	0.025 LBS/SQ FT
HOT-MIX ASPHALT	112 LBS/SQ YD/INCH
RIP RAP & ROCKFILL REPLACEMENT	1.5 TON/CU YD

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

APPLICATION	AC/PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	QUALITY MANAGEMENT
HMA SURFACE COURSE, MIX "D", N90	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE D	QC/QA
HMA LEVEL BINDER, MACHINE METHOD, N90FG	PG 64-22	4.0% @ N=90	IL - 9.5FG	N/A	QC/QA
HMA BINDER COURSE, N90	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
CLASS "D" PATCHING	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
HMA PAVEMENT CONNECTOR FOR BRIDGE APPROACH SLAB	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
BASE COURSE WIDENING, 10" (TOP LIFT)	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE C	QC/QA
BASE COURSE WIDENING, 10" (BOTTOM LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
HMA BASE COURSE, 12" (TOP LIFT)	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE C	QC/QA
HMA BASE COURSE, 12" (BOTTOM LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
HMA SHOULDERS, 8" (TOP LIFT)	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE C	QC/QA
HMA SHOULDERS, 8" (BOTTOM LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
HMA SHOULDERS, 12" (TOP LIFT)	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE C	QC/QA
HMA SHOULDERS, 12" (BOTTOM LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA
HMA SHOULDERS	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE C	QC/QA
HMA PAVEMENT, FULL DEPTH, 12" (TOP LIFT)	PG 64-22	4.0% @ N=90	IL - 9.5	MIXTURE D	QC/QA
HMA PAVEMENT, FULL DEPTH, 12" (BOTTOM LIFTS)	PG 64-22	4.0% @ N=90	IL - 19.0	N/A	QC/QA

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
	20100500	TREE REMOVAL, ACRES	ACRE	2.7		2.5		0.2
	20200100	EARTH EXCAVATION	CU YD	2699	119	210	300	2070
	20400800	FURNISHED EXCAVATION	CU YD	22982	292	19600	2170	920
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	2187	77	890	370	850
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3081	15	1530	101	1435
*	25000200	SEEDING, CLASS 2	ACRE	4.95	0.3	1.75	1	1.9
*	25000314	SEEDING, CLASS 4B	ACRE	1.9				1.9
*	25000324	SEEDING, CLASS 5B	ACRE	1.9				1.9
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	601	21	158	80	342
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	601	21	158	80	342
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	601	21	158	80	342
*	25000700	AGRICULTURAL GROUND LIMESTONE	TON	12.5	0.5	4	2	6
*	25100105	MULCH, METHOD 1	ACRE	1.9				1.9
*	25100115	MULCH, METHOD 2	ACRE	6.5	0.5	4	2	

* SPECIALTY ITEM

REV. - MS

USER NAME = steffenmk	DESIGNED - BRETT WALKER	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	4
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
*	25100630	EROSION CONTROL BLANKET	SQ YD	9680				9680
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	786	23	175	88	500
	28000305	TEMPORARY DITCH CHECKS	FOOT	52	6	16		30
	28000400	PERIMETER EROSION BARRIER	FOOT	8510	1115	975	2520	3900
	28000500	INLET AND PIPE PROTECTION	EACH	3		2		1
	28100107	STONE RIPRAP, CLASS A4	SQ YD	2300				2300
	28100207	STONE RIPRAP, CLASS A4	TON	545			545	
	28200200	FILTER FABRIC	SQ YD	3032			732	2300
	31101000	SUB-BASE GRANULAR MATERIAL, TYPE B	TON	2000				2000
	31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	143			143	
	31101900	SUBBASE GRANULAR MATERIAL, TYPE C	TON	732		732		
	35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ YD	572			572	
	35650500	BASE COURSE WIDENING 10"	SQ YD	1462	814			648
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	16771	1382	710	979	13700

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 2 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	5

CONTRACT NO. 74177

ILLINOIS | FED. AID PROJECT

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
40600647	LEVELING BINDER (MACHINE METHOD), IL-9.5FG, N90	TON	792			792	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SQ YD	777	120		153	504
40600990	TEMPORARY RAMP	SQ YD	136	35		53	48
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	920				920
40603345	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	935	307	33	275	320
40701921	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12"	SQ YD	2089			629	1460
42000070	PAVEMENT CONNECTOR (HMA) FOR BR. APPR. SLAB	SQ YD	359	169		136	54
44000100	PAVEMENT REMOVAL	SQ YD	148	95		53	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	698	698			
44004250	PAVED SHOULDER REMOVAL	SQ YD	1315	205		426	684
44201815	CLASS D PATCHES, TYPE II, 14 INCH	SQ YD	100				100
44201819	CLASS D PATCHES, TYPE III, 14 INCH	SQ YD	200				200
44201821	CLASS D PATCHES, TYPE IV, 14 INCH	SQ YD	300				300
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	1090				1090

REV. - MS

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USER NAME = steffenmk	DESIGNED - BRETT WALKER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
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SUMMARY OF QUANTITIES

SCALE: | SHEET 3 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	6
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

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20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	328			328	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	321	296	25		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	2687	1537	314	286	550
48203045	HOT-MIX ASPHALT SHOULDERS, 12"	SQ YD	1015				1015
48203100	HOT-MIX ASPHALT SHOULDERS	TON	781		8	463	310
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1		
50100600	REMOVAL OF EXISTING STRUCTURES NO. 4	EACH	1				1
50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1	1			
50101900	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 3	EACH	1			1	
50102400	CONCRETE REMOVAL	CU YD	42.8	17.8		25	
50104000	BRIDGE RAIL REMOVAL	FOOT	905				905
50104650	SLOPE WALL REMOVAL	SQ YD	2435	497		778	1160
50157300	PROTECTIVE SHIELD	SQ YD	507	507			
50200100	STRUCTURE EXCAVATION	CU YD	1065	257		76	732

REV. - MS

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FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 7\Projects\74177\CADData\CADSheets\D7741 77-sht-SOQ.dgn

USER NAME = steffenmk	DESIGNED - BRETT WALKER	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
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SUMMARY OF QUANTITIES

SCALE: | SHEET 4 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	7
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	832		832		
	FOR STRUCTURES						
50300100	FLOOR DRAINS	EACH	25				25
50300225	CONCRETE STRUCTURES	CU YD	978.7	103.2		97.3	778.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1134.6	286.1		179.5	669
50300260	BRIDGE DECK GROOVING	SQ YD	4037	1183		540	2314
50300280	CONCRETE ENCASEMENT	CU YD	12				12
50300300	PROTECTIVE COAT	SQ YD	5264	1406		978	2880
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	378.6	143.6		119	116
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	0.22		0.14	0.64
50500505	STUD SHEAR CONNECTORS	EACH	26428	6408		4122	15898
50800105	REINFORCEMENT BARS	POUND	85497		85460		37
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	528510	145110	4880	89080	289440
50800515	BAR SPLICERS	EACH	4049	869		798	2382
50800530	MECHANICAL SPLICERS	EACH	312				312

REV. - MS

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SUMMARY OF QUANTITIES

SCALE: | SHEET 5 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	8

CONTRACT NO. 74177

ILLINOIS | FED. AID PROJECT

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
51100100	SLOPE WALL 4 INCH	SQ YD	526	526			
51201600	FURNISHING STEEL PILES HP12X53	FOOT	465	465			
51201900	FURNISHING STEEL PILES HP14X89	FOOT	3331				3331
51202305	DRIVING PILES	FOOT	1224	465			759
51500100	NAME PLATES	EACH	4	1	1	1	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	185			101	84
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	50	32		18	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12				12
52100505	ANCHOR BOLTS, 5/8"	EACH	48			24	24
52100510	ANCHOR BOLTS, 3/4"	EACH	148	64		12	72
52100520	ANCHOR BOLTS, 1"	EACH	28	16		12	
52200010	TEMPORARY SHEET PILING	SQ FT	2148	498		350	1300
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	610				610
54002020	EXPANSION BOLTS 3/4 INCH	EACH	12				12

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SUMMARY OF QUANTITIES

SCALE: | SHEET 6 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	9
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
54003000	CONCRETE BOX CULVERTS	CU YD	419.4		419.4		
54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	5		4		1
54248510	CONCRETE COLLAR	CU YD	12.72		12.3		0.42
54262712	METAL FLARED END SECTION, 12"	EACH	1				1
542A0241	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	2				2
542A4651	PIPE CULVERTS, CLASS A, TYPE 7 36"	FOOT	136		136		
542JA036	PIPE CULVERTS, CLASS A 36" (JACKED)	FOOT	429		429		
58700300	CONCRETE SEALER	SQ FT	1158			278	880
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	265	127		65	73
60100945	PIPE DRAINS 12"	FOOT	43				43
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	380	380			
60624600	CORRUGATED MEDIAN	SQ FT	1208	1208			
61000050	CONCRETE THRUST BLOCKS	EACH	1				1
61000115	TYPE E INLET BOX, STANDARD 610001	EACH	1				1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 7 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	10

CONTRACT NO. 74177

ILLINOIS | FED. AID PROJECT

80% FED
20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
*	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6	FOOT	2662.5	750	825	450	637.5
		FOOT POSTS						
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	12	4		4	4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	12	2	2	4	4
		(SPECIAL) TANGENT						
	63200310	GUARDRAIL REMOVAL	FOOT	3059	1082	557	710	710
	66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	1				1
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	28	5	5	5	13
	67000600	ENGINEER'S FIELD LABORATORY	CAL MO	28	5	5	5	13
	67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
	70100405	TRAFFIC CONTROL AND PROTECTION,	EACH	3	1		1	1
		STANDARD 701321						
	70100450	TRAFFIC CONTROL AND PROTECTION,	L SUM	1	0.25	0.25	0.25	0.25
		STANDARD 701201						
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1				1
		701306						

* SPECIALTY ITEM

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD	LSUM	1	0.33		0.34	0.33
	701326						
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR	LSUM	1		1		
	21						
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	19	4		5	10
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	3	1		1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	18	6		6	6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	2232	888		584	760
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	2411	296		51	2064
70300220	TEMPORARY PAVEMENT MARKING -	FOOT	14025.5	4511	865.5	3219	5430
	LINE 4"						
70400100	TEMPORARY CONCRETE BARRIER	FOOT	3637.5	612.5		625	2400
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	3412.5	387.5		625	2400
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	5	1		2	2
	REDIRECTIVE), TEST LEVEL 3						
70600251	IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	1	1			
	REDIRECTIVE, NARROW), TEST LEVEL 3						

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 9 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	12
			CONTRACT NO. 74177	
		ILLINOIS	FED. AID PROJECT	

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20% STATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
	70600350	IMPACT ATTENUATORS, RELOCATE (NON-	EACH	5	1		2	2
		REDIRECTIVE), TEST LEVEL 3						
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	12	2	2	4	4
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	10941	3562	866	2316	4197
*	78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B -	FOOT	2897	1368		296	1233
		LINE 4"						
*	78003150	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B -	FOOT	37	37			
		LINE 12"						
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	49	10	5	14	20
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	38	10	12	10	6
*	A2001016	TREE, ACER RUBRUM (RED MAPLE), 2" CALIPER,	EACH	25		20		5
		BALLED AND BURLAPPED						
*	A2002316	TREE, BETULA NIGRA (RIVER BIRCH), 2" CALIPER,	EACH	25		20		5
		BALLED AND BURLAPPED						
*	A2005816	TREE, PLATANUS OCCIDENTALIS (SYCAMORE), 2"	EACH	25		20		5
		CALIPER, BALLED AND BURLAPPED						
*	A2006516	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2"	EACH	25		20		5
		CALIPER, BALLED AND BURLAPPED						

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 10 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	13

CONTRACT NO. 74177

ILLINOIS | FED. AID PROJECT

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
*	A2007616	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 2" CALIPER, BALLED AND BURLAPPED	EACH	25		20		5
*	D2002960	EVERGREEN, PINUS STROBUS (EASTERN WHITE PINE), 5' HEIGHT, BALLED AND BURLAPPED	EACH	25		20		5
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1447	200		337	910
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	7126	2739	490	917	2980
	X4403800	MEDIAN SURFACE REMOVAL	SQ FT	334	334			
	58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	456	242		102	112
	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	7	7	7	7
	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	1431			1431	
	X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	417	75			342
*	X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	2914	1368		296	1250
*	X7830078	GROOVING FOR RECESSED PAVEMENT MARKING 13"	FOOT	37	37			
	Z0004552	APPROACH SLAB REMOVAL	SQ YD	1047	292	224	246	285

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 11 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	14
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0013 SN 051-0012	CONSTRUCTION TYPE CODE 0010 SN 051-0013 SN 051-8634	CONSTRUCTION TYPE CODE 0013 SN 051-0014	CONSTRUCTION TYPE CODE 0010 SN 051-0015 SN 051-0066
	Z0004638	PAVEMENT BREAKING	SQ YD	1854				1854
	Z0005010	HOT-MIX ASPHALT FOR PATCHING POTHOLES (COLD MIX)	TON	3				3
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	58	30		28	
	Z0016702	DETOUR SIGNING	LSUM	1		1		
	Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	5			1	4
	Z0018004	DRAINAGE SCUPPERS, DS-12	EACH	4	4			
	Z0023500	FILLING EXISTING CULVERTS	CU YD	120.4		120.4		
	Z0027800	GEOTECHNICAL FABRIC	SQ YD	479		479		
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	604	194		230	180
*	Z0054505	ROCK FILL - REPLACEMENT	TON	1250		1250		
	Z0065000	SETTING PILES IN ROCK	EACH	88				88
Ø	Z0076600	TRAINEES	HOUR	500	500			
Ø	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500			

Ø 0042 * SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 12 OF 12 SHEETS | STA. | TO STA.

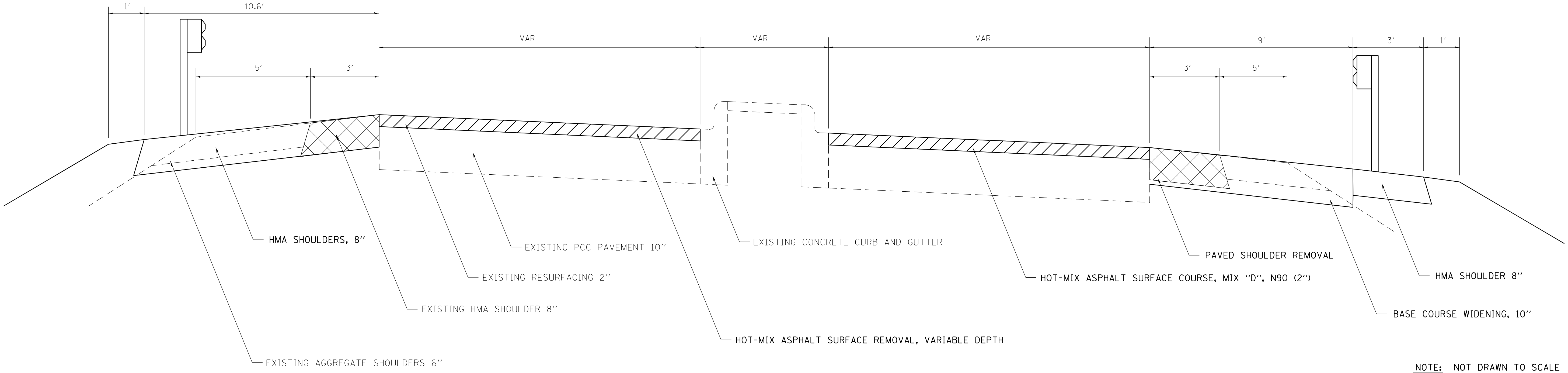
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B		260	15

CONTRACT NO. 74177

ILLINOIS | FED. AID PROJECT

TYPICAL CROSS SECTIONS

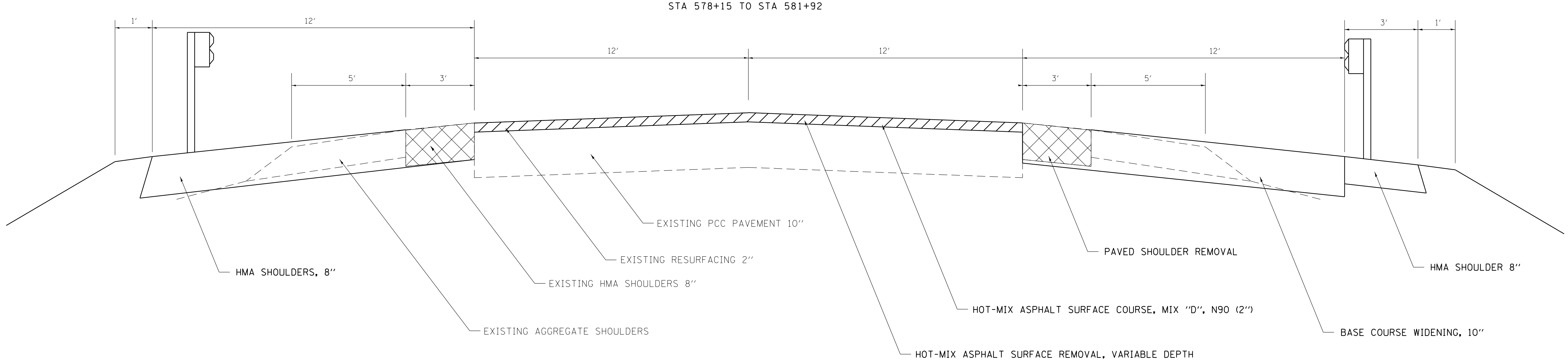
STA 570+80 TO STA 575+57



NOTE: NOT DRAWN TO SCALE

TYPICAL CROSS SECTIONS

STA 578+15 TO STA 581+92



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051–0012
TYPICAL SECTIONS

SCALE: | SHEET | OF | SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	16
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

PAVING SCHEDULE

STATION	TO	STATION	LENGTH	PAVEMENT WIDTH	SHOULDER WIDTH - RT (INCLUDES WIDENING)	SHOULDER WIDTH - LT	BITIMINOUS MATERIALS(TACK COAT)	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N90	HOT-MIX ASPHALT SHOULDERS, 8"	AGGREGATE WEDGE SHOULDERS, TYPE B
			FEET	FEET	FEET	FEET	POUND	SQ YD	TON	SQ YD	TON
570+50.00		570+80.00	30.0	36.0	12.0	10.6	52.2	120.0	13.4	45.3	9.1
570+80.00		572+78.00	198.0	28.0-36.0	12.0	10.6	380.2	704.0	78.8	299.2	60.1
572+78.00		575+57.00	279.0	28.0	12.0	10.6	418.5	868.0	97.2	421.6	84.7
575+57.00		575+72.00	15.0	28.0	13.0	11.0				22.7	4.6
575+72.00		576+02.00	30.0	28.0	13.0	11.0				45.3	9.1
576+02.00		577+70.00	168.0	28-26	13-15	11-12					
577+70.00		578+00.00	30.0	26.0	15.0	12.0				50.0	9.1
578+00.00		578+15.00	15.0	26.0	15.0	12.0				25.0	4.6
578+15.00		581+92.00	377.0	26-24	15.0	12.0	531.6	1,047.2	117.3	628.3	114.5
TOTALS			**1,142**				**1,382**	**2,739**	**307**	**1,537**	**296**

PAVEMENT MARKING SCHEDULE

STATION	TO	STATION	LENGTH	PAINT PAVEMENT MARKING - LINE 4"	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 12"	GROOVING FOR RECESSED PAVEMENT MARKING 5"	GROOVING FOR RECESSED PAVEMENT MARKING 13"	SHORT-TERM PAVEMENT MARKING	SHORT-TERM PAVEMENT MARKING REMOVAL	TEMPORARY PAVEMENT MARKING - LINE 4"	RAISED REFLECTIVE PAVEMENT MARKER
			FEET	FEET	FEET	FEET	FEET	FEET	FEET	SQ FT	FEET	EACH
570+50.00		570+80.00	30	120					32	11	120	
570+80.00		572+78.00	198	792					160	53	792	
572+78.00		575+57.00	279	1116					224	75	1116	
575+57.00		575+72.00	15	60					5	2	60	
575+72.00		576+02.00	30		180	10	180	10	32	11	190	
576+02.00		577+70.00	168		1008	27	1008	27	128	43	1035	
577+70.00		578+00.00	30		180		180		32	11	180	
578+00.00		578+15.00	15	60					5	2	60	
578+15.00		581+92.00	377	1414					270	90	1414	10
TOTALS			**1,142**	**3,562**	**1,368**	**37**	**1,368**	**37**	**888**	**296**	**4,967**	**10**

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SN 051-0012
SCHEDULES OF QUANTITIES

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	17
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

EROSION CONTROL SCHEDULE

LOCATION	SEEDING, CLASS 2 (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUND)	PHOPHOROUS FERTILIZER NUTRIENT (POUND)	POTASSIUM FERTILIZER NUTRIENT (POUND)	AGRIGULTURAL GROUND LIMESTONE (TON)	MULCH, METHOD 2 (ACRE)	PERIMETER EROSION BARRIER (FOOT)	TEMPORARY EROSION CONTROL SEEDING (POUND)
NW QUAD	0.09	7.9	7.9	7.9	0.18	0.2	245.0	8.8
NE QUAD	0.08	7.2	7.2	7.2	0.16	0.2	335.0	8.0
SW QUAD	0.02	2.1	2.1	2.1	0.05	0.1	240.0	2.3
SE QUAD	0.04	3.6	3.6	3.6	0.08	0.1	295.0	4.0
TOTALS	**0.23**	**21**	**21**	**21**	**0.5**	**0.5**	**1,115**	**23**

STAGING SCHEDULE

STATION	TO	STATION	LOCATION	LENGTH (FEET)	WIDTH (FEET)	BASE COURSE WIDENING, 10" (SQ YD)	PAVED SHOULDER REMOVAL (SQ YD)	CURB AND GUTTER REMOVAL (FOOT)	MEDIAN SURFACE REMOVAL (SQ FT)	* PAVEMENT REMOVAL (SQ YD)
574+00.00		576+02.00	RT	202.0	9.0	202.0				
577+72.00		580+59.00	RT	287.0	12.0	382.7				
574+00.00		576+02.00	RT	202.0	3.5		78.6			
577+72.00		580+59.00	RT	287.0	3.0		95.7			
575+57.00		576+02.00	LT	45.0	3.0		15.0			
577+71.00		578+17.00	LT	46.0	3.0		15.3			
571+97.00		575+88.00	MEDIAN	391.0		229.6		698.0	334.0	95.4
TOTALS						**814**	**205**	**698**	**334**	**95**

* REMOVING BASE COURSE USED FOR STAGING

EARTHWORK SCHEDULE

STATION	TO	STATION	FEET	EARTH EXCAVATION (CU YD)	EMBNANKMENT (CU YD)	EARTHWORK BALANCE, WASTE (+) OR SHORTAGE (-) (CU YD)	TOPSOIL EXCAVATION AND PLACEMENT (CU YD)	TOPSOIL FURNISH AND PLACE, 4" (SQ YD)
573+75		574+00	25.0	2.3	0.5	1.9	0.0	0.0
574+00		574+25	25.0	4.6	0.9	3.7	0.0	0.0
574+25		574+50	25.0	4.6	1.4	3.2	0.0	0.0
574+50		574+75	25.0	6.0	1.9	4.2	0.0	0.0
574+75		575+00	25.0	7.4	2.3	5.1	0.0	0.0
575+00		575+25	25.0	6.9	2.8	4.2	0.0	0.0
575+25		575+50	25.0	6.0	23.6	-17.6	12.0	-1.2
575+50		575+75	25.0	2.8	115.7	-113.0	24.6	-2.1
575+75		576+10	35.0	0.0	130.9	-130.9	17.6	0.0
576+10		577+66	156.0	0.0	0.0	0.0	0.0	0.0
577+66		578+00	34.0	0.0	61.7	-61.7	12.8	18.9
578+00		578+25	25.0	5.1	47.7	-42.6	9.4	0.0
578+25		578+50	25.0	9.7	4.2	5.6	0.0	0.0
578+50		578+75	25.0	9.3	3.2	6.0	0.0	0.0
578+75		579+00	25.0	8.8	2.8	6.0	0.0	0.0
579+00		579+25	25.0	8.3	2.8	5.6	0.0	0.0
579+25		579+50	25.0	8.8	2.8	6.0	0.0	0.0
579+50		579+75	25.0	9.7	2.3	7.4	0.0	0.0
579+75		580+00	25.0	10.2	1.9	8.3	0.0	0.0
580+00		580+25	25.0	8.8	1.9	6.9	0.0	0.0
TOTALS				**119.0**	**411.0**	**-292.0**	**77.0**	**15.0**

NOTES:

NO SHRINKAGE FACTOR USED DUE TO SMALL QUANTITY & NATURE OF PLACEMENT ON SIDE SLOPES

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/4/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
SCHEDULES OF QUANTITIES

SCALE: | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	18
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

EXIST. CURVE C1
PI STA. = 581+11.59
Δ = 66° 01' 58" (RT)
D = 1° 12' 00"
R = 4,774.65'
T = 3,102.63'
L = 5,502.73'
E = 919.52'
e = ____
T.R. = ____
S.E. RUN = ____
P.C. STA. = 550+08.96
P.T. STA. = 605+11.68

PROPOSED STRUCTURE NO. 051-0012
STA 576+87.10
4 SPAN REINFORCED CONCRETE DECK
ON CONTINIOUS STEEL WF BEAMS
SUPPORTED ON SPILL-THRU ABUTMENTS
AND MULTI COLUMN PIERS
53'-5" O-O DECK AT BACK OF W. ABUT.
50'-10.5" O-O DECK AT BACK OF E. ABUT.
BK-BK ABUT 168'-0"

EXISITING STRUCTURE NO. 051-0012
STA 576+87.10
4 SPAN REINFORCED CONCRETE DECK
ON CONTINIOUS STEEL WF BEAMS
SUPPORTED ON SPILL-THRU ABUTMENTS
AND MULTI COLUMN PIERS
52'-5" O-O DECK AT BACK OF W. ABUT.
49'-10.5" O-O DECK AT BACK OF E. ABUT.
BK-BK ABUT 168'-0"

REMOVAL OF EXISTING SUPERSTRUCTURE = 1 EACH

CONSTRUCTION LIMITS

FAP 327
US 50

570+00 575+00 580+00 585+00

IL. 1

SN 051-0013

STA. 570+80
BEGIN RESURFACING

PR. PAVEMENT CONNECTOR (HMA)
FOR BRIDGE APPROACH SLAB

PR. HMA
SHOULDERS, 8"

PR. BCC BASE COURSE, 10"

PR. GUARDRAIL

STA. 581+93
END RESURFACING
TIE IN (SEE SN 0013 PLANS)

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

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

455 450 445 440 435 430 425

441.02 441.37 441.73 442.07 442.45 442.85 443.24 443.63 444.01 444.38 444.76 445.13 445.51 445.88 445.87 446.22 446.23 446.57 446.61 446.93 447.00 447.29 447.40 447.70 447.81 448.17 448.24 448.61 448.66 449.07 449.07 449.46 449.44 449.77 449.78 450.08 450.09 450.34 450.37 450.59 450.62 450.80 450.84 450.98 451.03 451.03 451.19 451.21 451.34 451.37 451.49 451.58 451.66 451.81 451.82 452.01 452.00 452.19 452.18 452.37 452.37 452.53 452.66 452.66 452.90 453.02 453.14 453.25 453.34 453.42 453.55 453.71 453.91 454.03 454.11 454.10 453.97 453.75 453.74 453.75 453.76 453.79

571+00 572+00 573+00 574+00 575+00 576+00 577+00 578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00

+80.00 EL. 445.59
180.00' V.C.
+1.39%
VPI STA. 574+70.00
ELEVATION 446.84
+1.74%
+60.00 EL. 448.41
+60.00 EL. 448.41
+1.74%
VPI STA. 576+80.00
ELEVATION 450.50
+0.58%
+00.00 EL. 451.19
180.00' V.C.
+00.00 EL. 451.19
240.00' V.C.
+0.58%
VPI STA. 578+90.00
ELEVATION 451.71
+0.78%
+80.00 EL. 452.41

USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
PLAN AND PROFILE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	19
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

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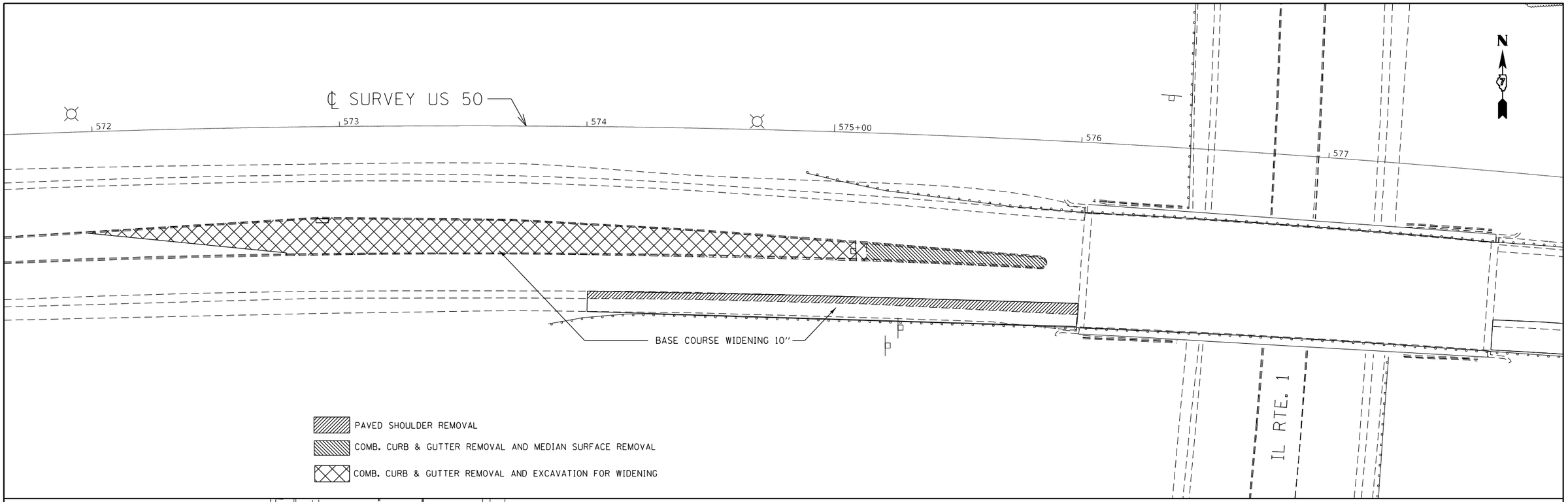

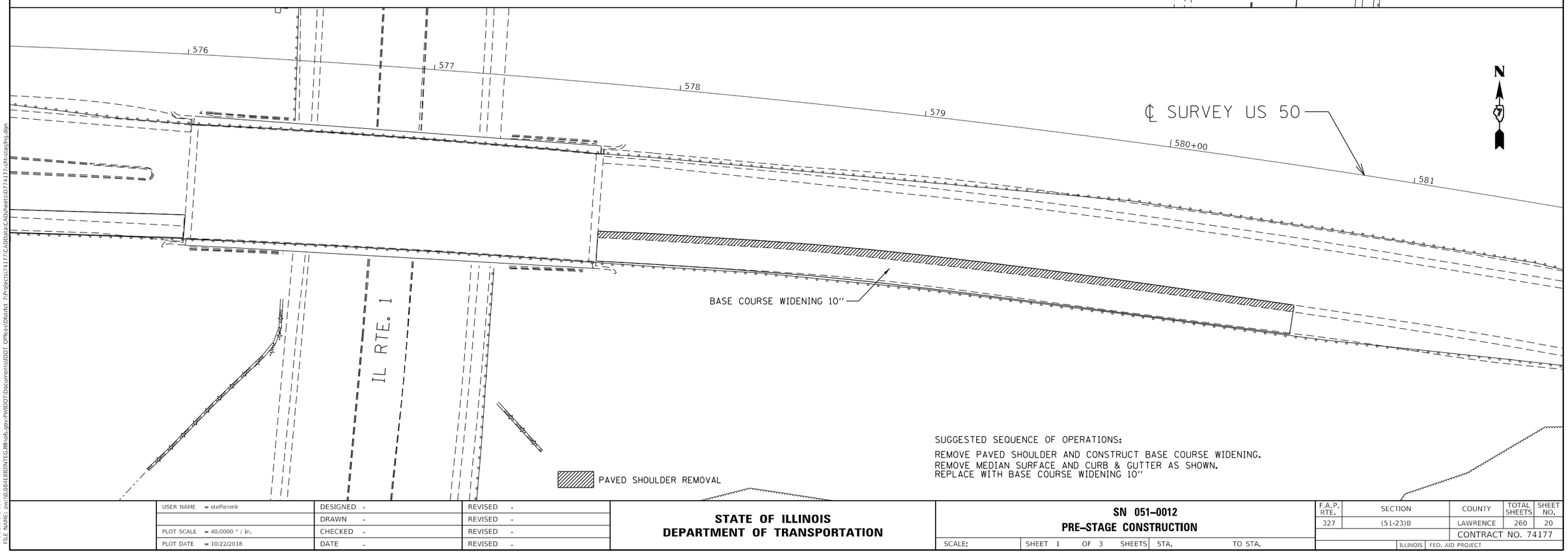

SUGGESTED SEQUENCE OF OPERATIONS:

REMOVE PAVED SHOULDER AND CONSTRUCT BASE COURSE WIDENING.
REMOVE MEDIAN SURFACE AND CURB & GUTTER AS SHOWN.
REPLACE WITH BASE COURSE WIDENING 10''

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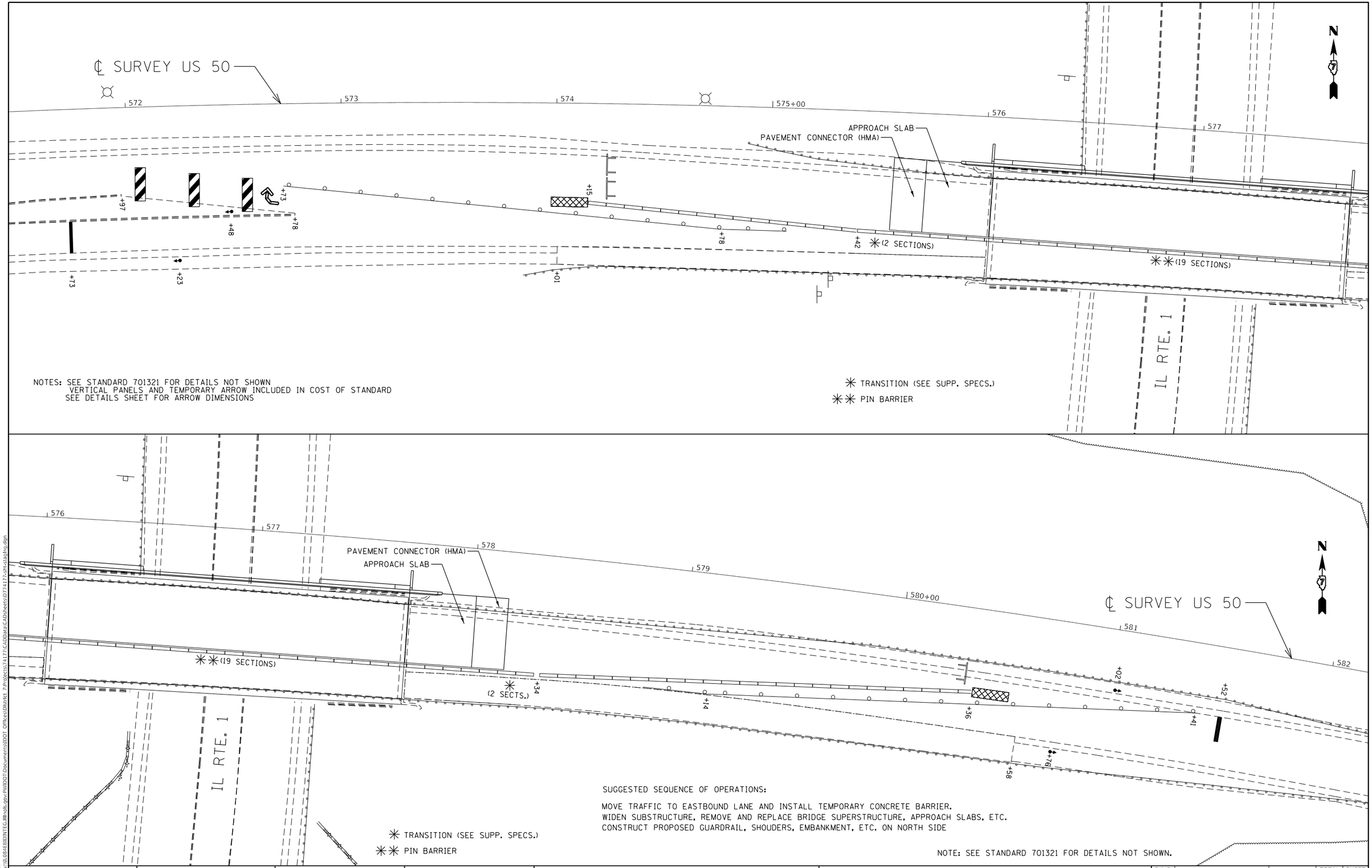
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
PRE-STAGE CONSTRUCTION

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	20
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



NOTES: SEE STANDARD 701321 FOR DETAILS NOT SHOWN
VERTICAL PANELS AND TEMPORARY ARROW INCLUDED IN COST OF STANDARD
SEE DETAILS SHEET FOR ARROW DIMENSIONS

✳ TRANSITION (SEE SUPP. SPECS.)
✳✳ PIN BARRIER

SUGGESTED SEQUENCE OF OPERATIONS:

MOVE TRAFFIC TO EASTBOUND LANE AND INSTALL TEMPORARY CONCRETE BARRIER.
WIDEN SUBSTRUCTURE, REMOVE AND REPLACE BRIDGE SUPERSTRUCTURE, APPROACH SLABS, ETC.
CONSTRUCT PROPOSED GUARDRAIL, SHOULDERS, EMBANKMENT, ETC. ON NORTH SIDE

NOTE: SEE STANDARD 701321 FOR DETAILS NOT SHOWN.

MODEL: Default
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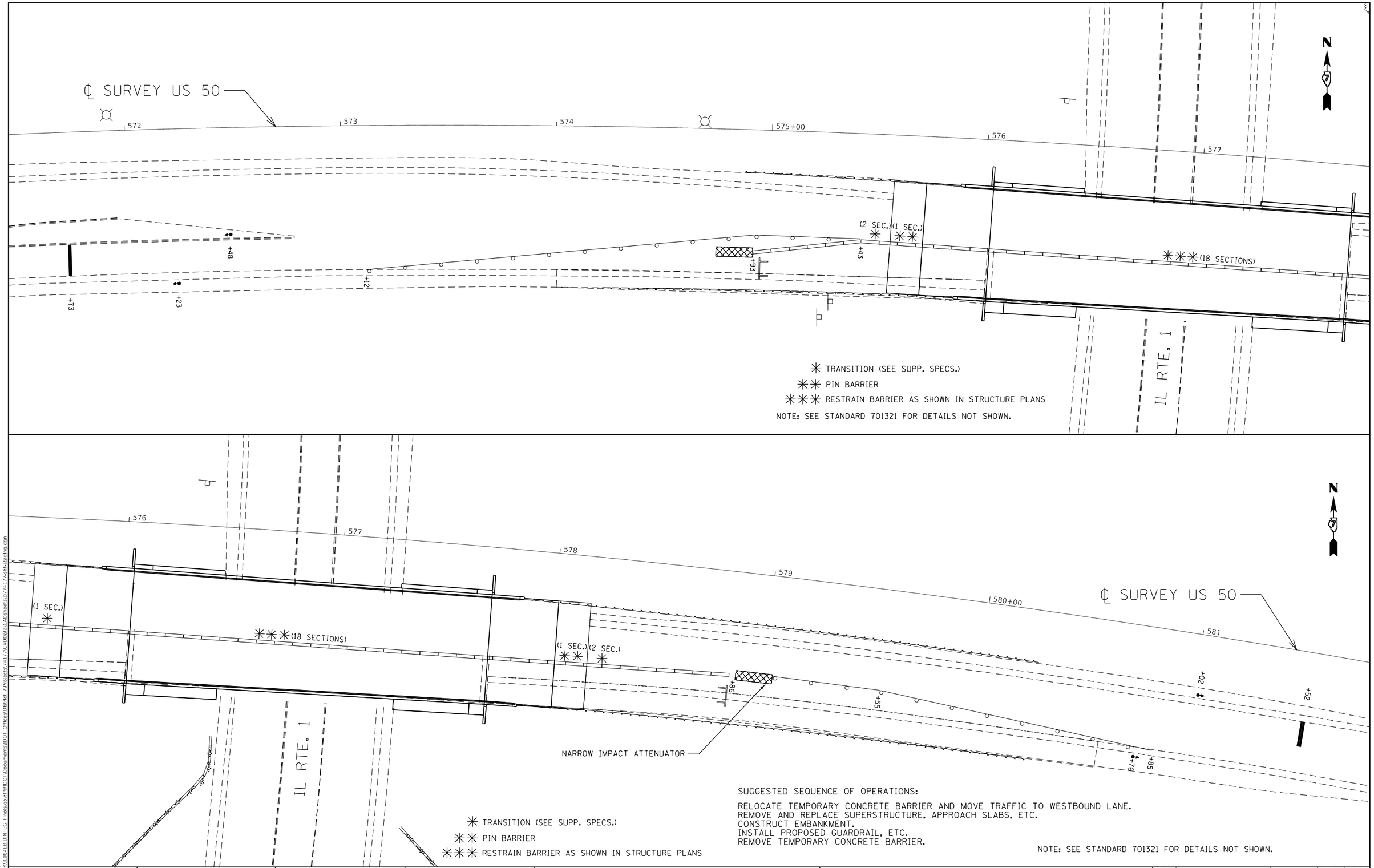
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
STAGE 1 CONSTRUCTION

SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	21
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



✳ TRANSITION (SEE SUPP. SPECS.)
✳✳ PIN BARRIER
✳✳✳ RESTRAIN BARRIER AS SHOWN IN STRUCTURE PLANS
NOTE: SEE STANDARD 701321 FOR DETAILS NOT SHOWN.

SUGGESTED SEQUENCE OF OPERATIONS:

RELOCATE TEMPORARY CONCRETE BARRIER AND MOVE TRAFFIC TO WESTBOUND LANE.
REMOVE AND REPLACE SUPERSTRUCTURE, APPROACH SLABS, ETC.
CONSTRUCT EMBANKMENT.
INSTALL PROPOSED GUARDRAIL, ETC.
REMOVE TEMPORARY CONCRETE BARRIER.

NOTE: SEE STANDARD 701321 FOR DETAILS NOT SHOWN.

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PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
STAGE 2 CONSTRUCTION

SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	22
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

N

574

575+00

576

577

578

579

580+00

LEGEND

PERIMETER EROSION BARRIER

SEEDING, CLASS 2

MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT1Documents\IDOT Offices\District 7\Projects\74177\CADData\CADsheets\D774177-sht-erosion

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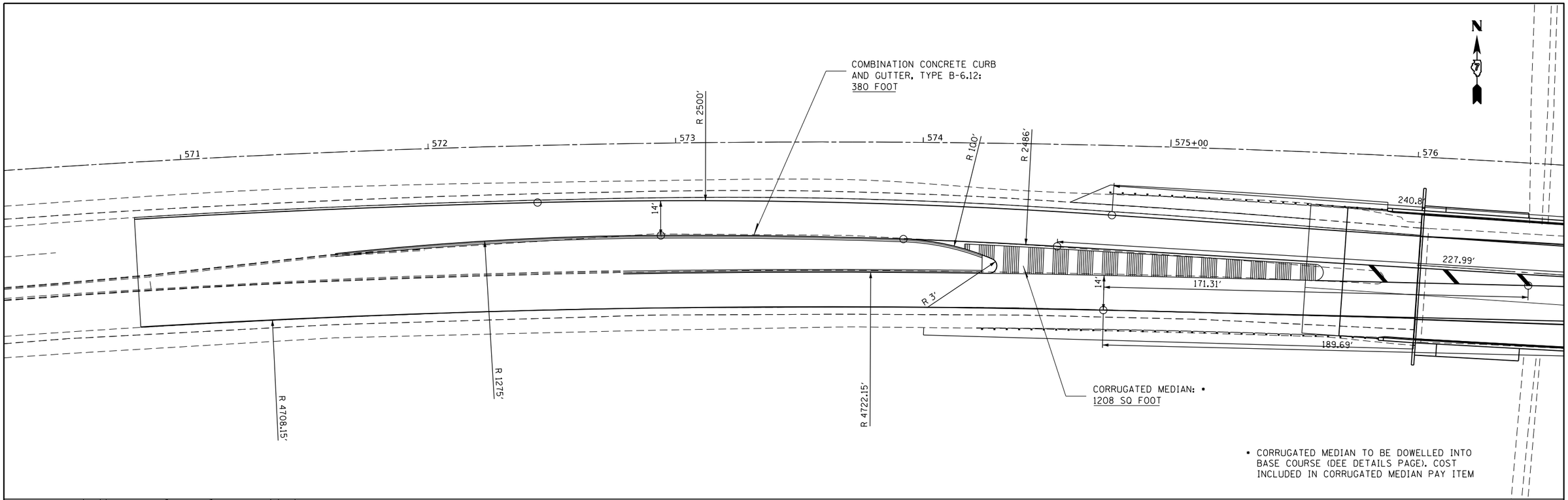
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

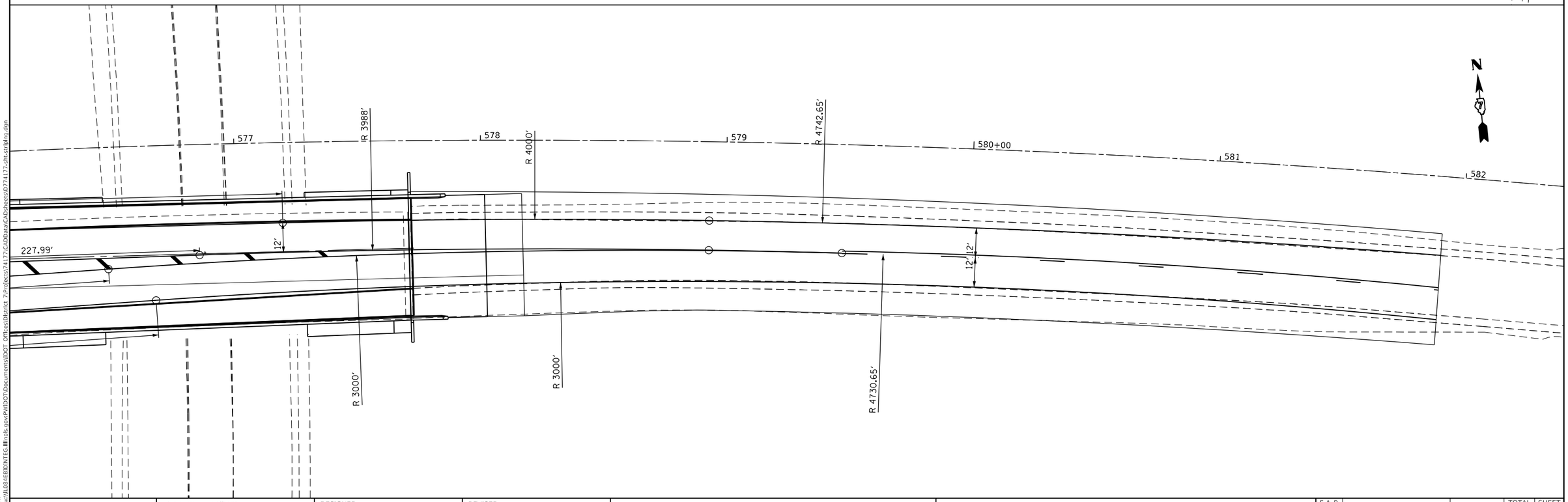
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
EROSION CONTROL PLAN

SCALE: | SHEET OF SHEETS | STA. | TO STA.

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





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	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/23/2018	DATE -	REVISED -	

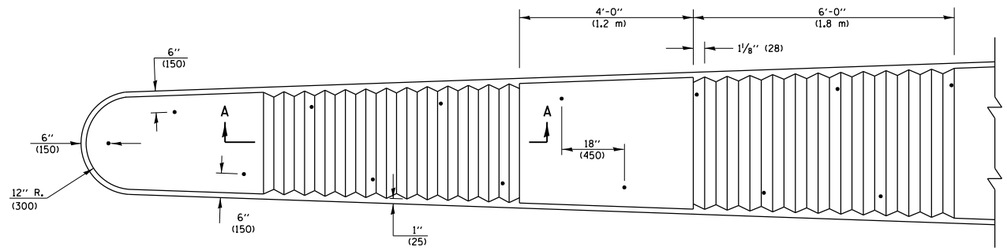
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
STRIPING AND MEDIAN PLAN

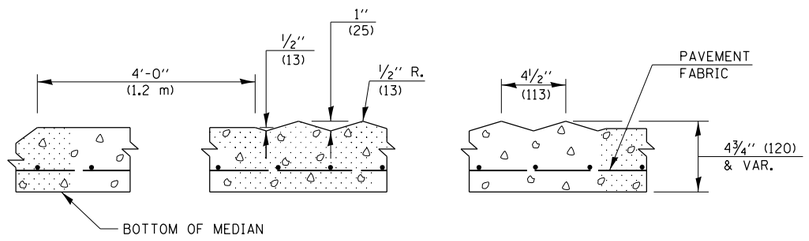
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	24
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

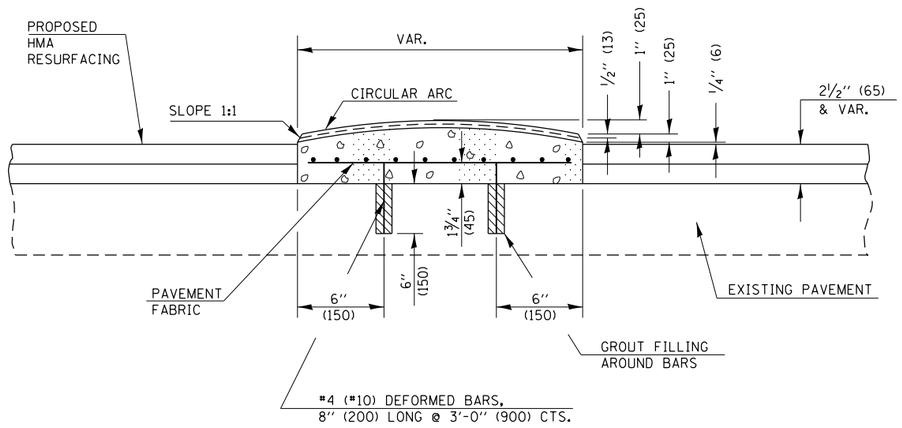
CORRUGATED MEDIAN DETAILS



PLAN



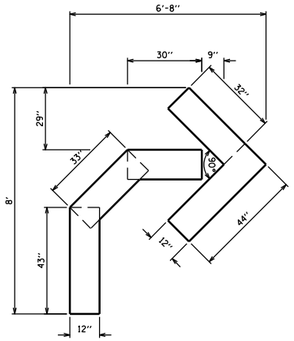
SECTION A-A



TRANSVERSE SECTION

MEDIAN GENERAL NOTES

1. DOWELS AT 3'-0" (900) INTERVALS OR AS DIRECTED BY THE ENGINEER.
2. SEE STANDARD 420701 FOR PAVEMENT FABRIC DETAILS.



STAGING ARROW DETAIL

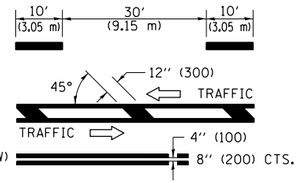
STRIPING GENERAL NOTES

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

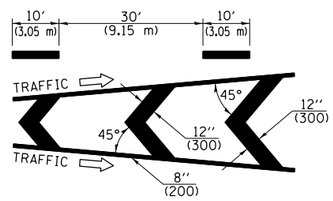
<30 MPH	(<50 km/h)	15' (4.5 m)
30-45 MPH	(50-75 km/h	20' (6.0 m)
>45 MPH	(>75 km/h	30' (9.0 m)

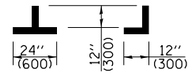
PAVEMENT MARKING LEGEND

1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. 12" (300) SOLID WHITE
6. RESERVED

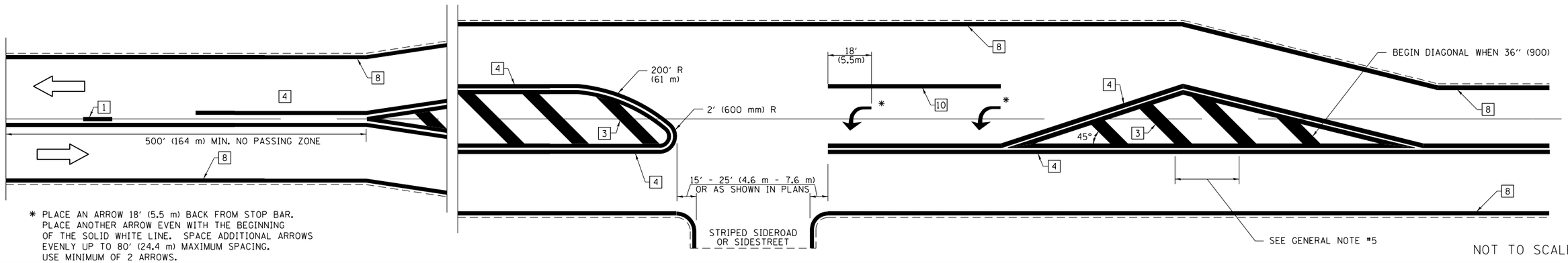


7. 6" (150) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) PARKING WHITE





RURAL LEFT TURN STRIPING



* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE

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	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 051-0012
DETAILS

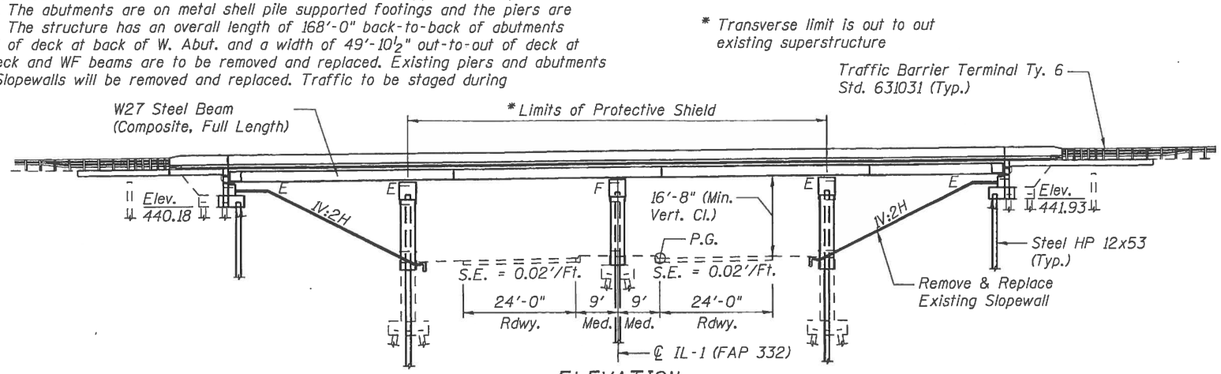
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	25
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

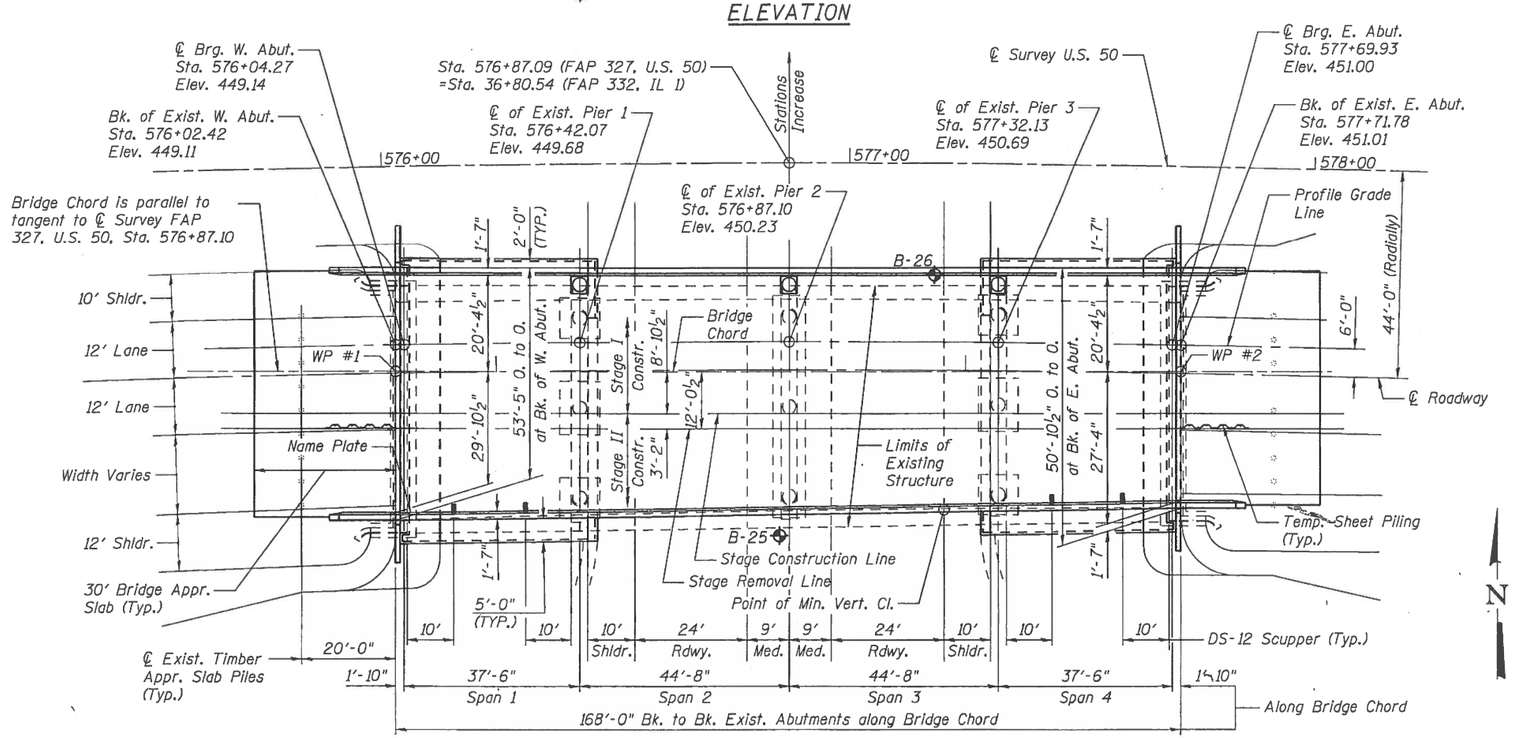
Bench Mark: Chiseled square at S.E. corner of structure over Rte. 1. Elevation 451.11

Existing Structure: S.N. 051-0012 built in 1959 as F.A.I. Rte. 64, Section 51-23HB-2 at Station 576+87.10. Structure consists of 4 span reinforced concrete deck on continuous steel WF beams supported on spill-thru abutments and multi-column piers. The abutments are on metal shell pile supported footings and the piers are on timber pile supported footings. The structure has an overall length of 168'-0" back-to-back of abutments and a width of 52'-5" out-to-out of deck at back of W. Abut. and a width of 49'-10½" out-to-out of deck at back of E. Abut. The concrete deck and WF beams are to be removed and replaced. Existing piers and abutments are to be widened and re-used. Slopewalls will be removed and replaced. Traffic to be staged during construction.

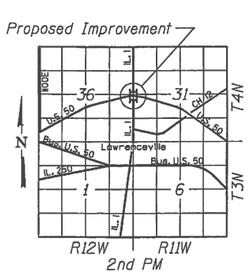
No Salvage.



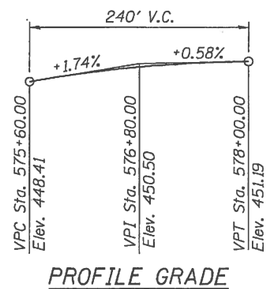
ELEVATION



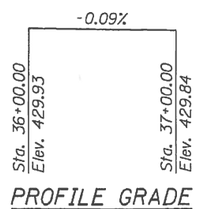
PLAN



LOCATION SKETCH



PROFILE GRADE
(along Profile Grade Line US 50)



PROFILE GRADE
(along IL. 1)

STATION 576+87.10
RE-BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 327
SEC. (51-23HB-2)BR
LOADING HL-93
STR. NO. 051-0012

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

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 Substructure:
Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient (A) = 0.087g
Site Coefficient (S) = 1.5

DESIGN SPECIFICATIONS

New Construction:
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 and 2016 Interims
Existing Substructure:
1995 FHWA Seismic Retrofitting Manual for Highway Bridges

LOADING HL-93

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

CURVE DATA

(Along ℄ Survey US 50)

Δ = 66° 01' 58" (RT)
D = 1° 12' 00"
T = 3,102.63'
L = 5,502.73'
E = 919.52'
R = 4,774.65'
S.E. = 0.015'/Ft.
P.C. Sta. 550+08.96
P.T. Sta. 605+11.68
P.I. Sta. 581+11.59
N.C. = 3/16"/Ft.

N

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Structural Steel AASHTO M270 Grade 50)
FIELD UNITS (Existing Construction)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 33,000 psi (Structural Steel)

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

MICHAEL D. CUMMINS 081-004822 LICENSED STRUCTURAL ENGINEER OF SPRINGFIELD ILLINOIS

Michael D. Cummins 10/18/18
(Expires 11/30/2018)

GENERAL PLAN AND ELEVATION
FAP 327 (U.S. 50) OVER FAP 332 (IL 1)
SECTION (51-23HB-2)BR
LAWRENCE COUNTY
STA 576+87.10
STRUCTURE NO. 051-0012

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 24801	DESIGNED - AAN	REVISED -	
FILE = 051012-74178-01-GPE.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 051-0012
SHEET NO. 1 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	26
		CONTRACT NO. 74177		
ILLINOIS FED. AID PROJECT				

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 = 143,440 lb (128,850 lb Grade 50, 14,590 lb Grade 36)

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

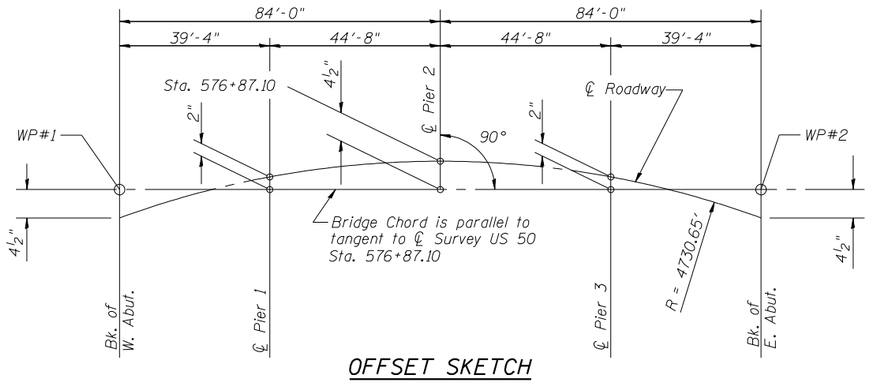
4. Reinforcement bars designated (E) shall be epoxy coated.

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.

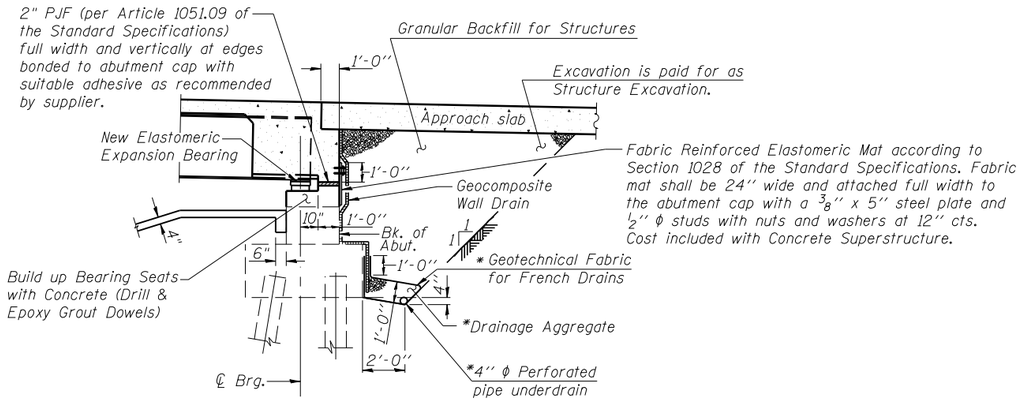
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

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

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.



OFFSET SKETCH



SECTION THRU SEMI-INTEGRAL ABUTMENT

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

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

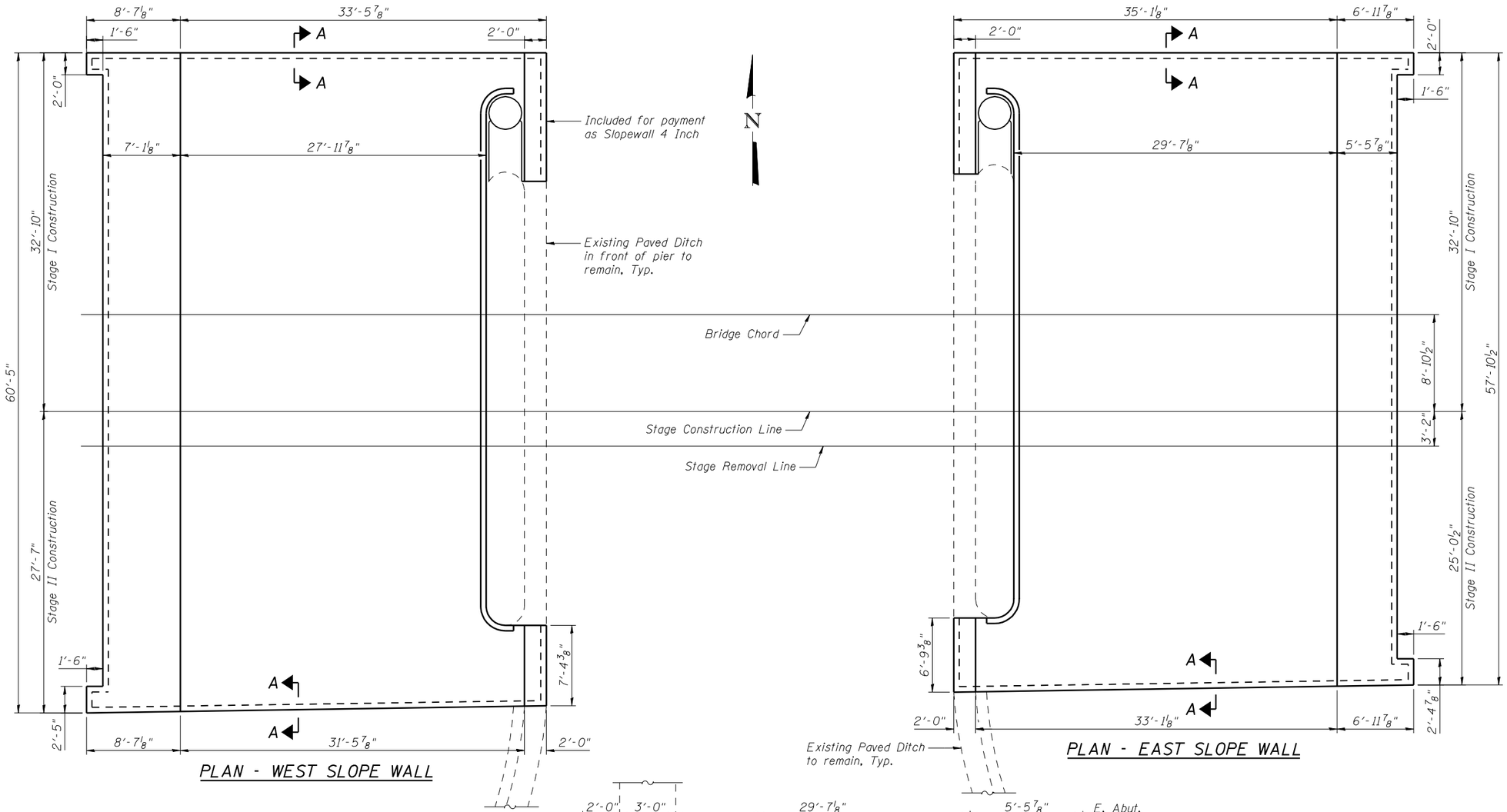
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.

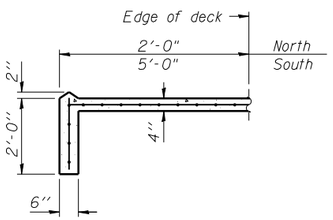
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	QUANTITY
Removal of Existing Superstructures No. 1	Each	1		1
Concrete Removal	Cu. Yd.		17.8	17.8
Slope Wall Removal	Sq. Yd.		497	497
Protective Shield	Sq. Yd.	507		507
Structure Excavation	Cu. Yd.		257	257
Concrete Structures	Cu. Yd.		103.2	103.2
Concrete Superstructure	Cu. Yd.	286.1		286.1
Bridge Deck Grooving	Sq. Yd.	1183		1183
Protective Coat	Sq. Yd.	1406		1406
Elastomeric Bearing Assembly, Type I	Each	32		32
Concrete Superstructure (Approach Slab)	Cu. Yd.	143.6		143.6
Furnishing and Erecting Structural Steel	L. Sum	0.22		0.22
Stud Shear Connectors	Each	6408		6408
Reinforcement Bars, Epoxy Coated	Pound	136040	9070	145110
Bar Splicers	Each	783	86	869
Slope Wall 4 Inch	Sq. Yd.		526	526
Temporary Sheet Piling	Sq. Ft.		498	498
Furnishing Steel Piles HP12X53	Foot		465	465
Driving Piles	Foot		465	465
Name Plates	Each	1		1
Anchor Bolts $^{3}/_{4}$"	Each	64		64
Anchor Bolts 1"	Each	16		16
Geocomposite Wall Drain	Sq. Yd.		127	127
Pipe Underdrains for Structures, 4"	Foot		194	194
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft.		30	30
Granular Backfill for Structures	Cu. Yd.		242	242
Drainage Scuppers, DS-12	Each	4		4

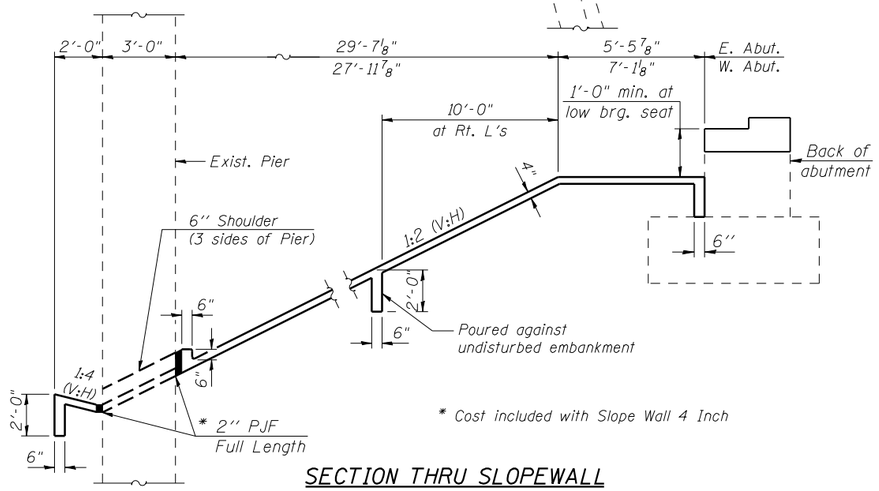


PLAN - WEST SLOPE WALL

PLAN - EAST SLOPE WALL



SECTION A-A



* Cost included with Slope Wall 4 Inch

SECTION THRU SLOPEWALL

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Slope Wall 4 Inch	Sq. Yd.	526

Notes:
Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

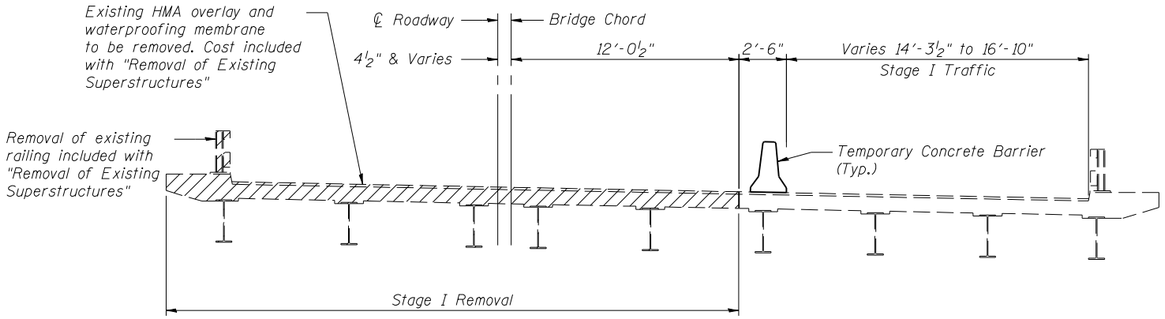
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-03-SlopeWall.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

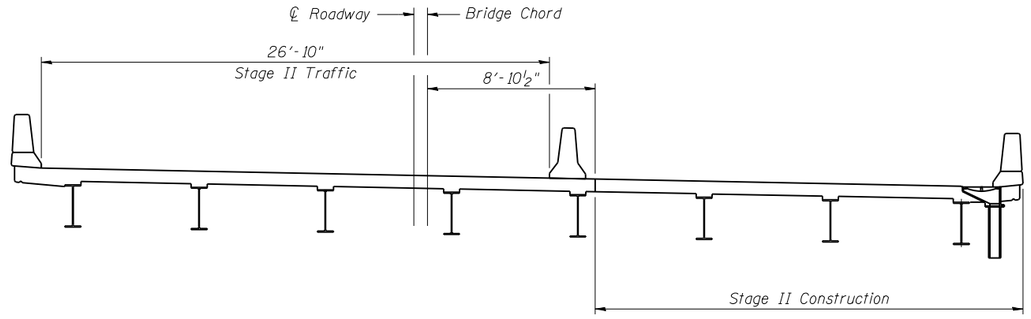
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPEWALL DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 3 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	28
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



STAGE I REMOVAL



STAGE II CONSTRUCTION

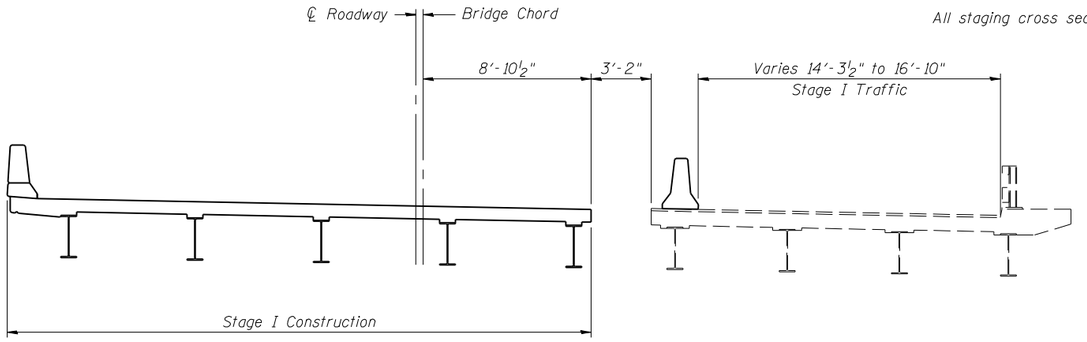
Notes:

Hatched area indicates "Removal of Existing Superstructures."

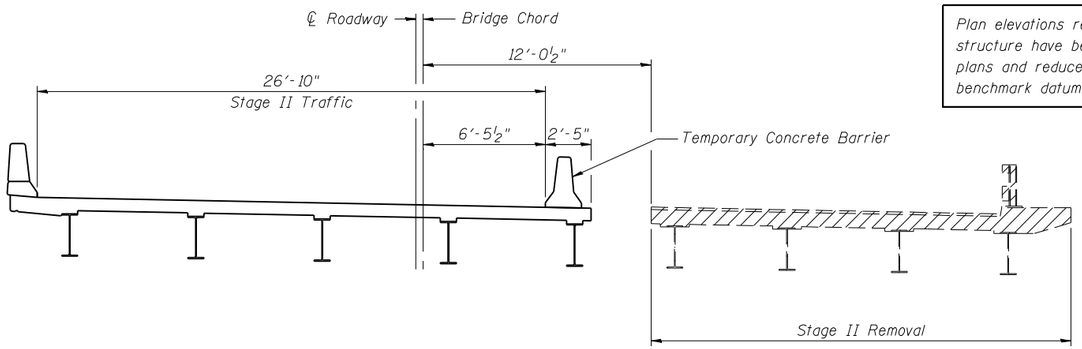
For details of "Temporary Concrete Barrier" see Sheet 5 of 36.

For quantity of "Temporary Concrete Barrier," see roadway plans.

All staging cross sections are looking East.



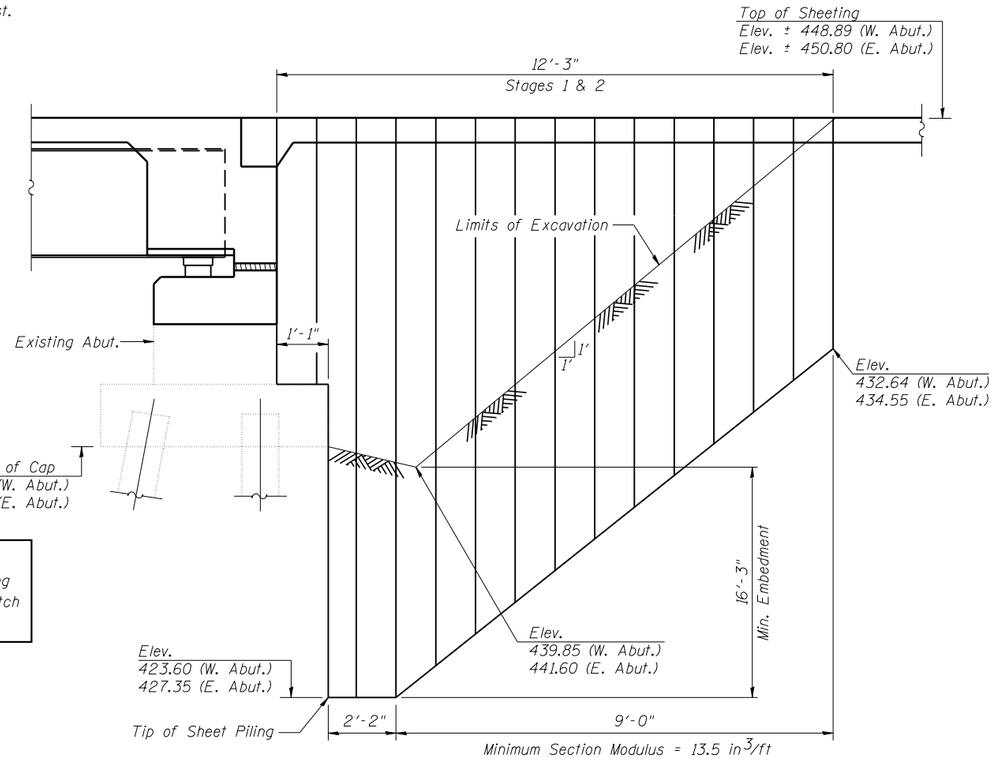
STAGE I CONSTRUCTION



STAGE II REMOVAL

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.



TEMPORARY SHEET PILING DETAILS

Notes:

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.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

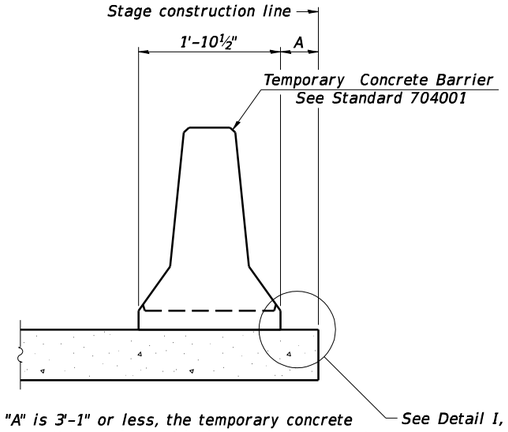
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-04-Stage.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

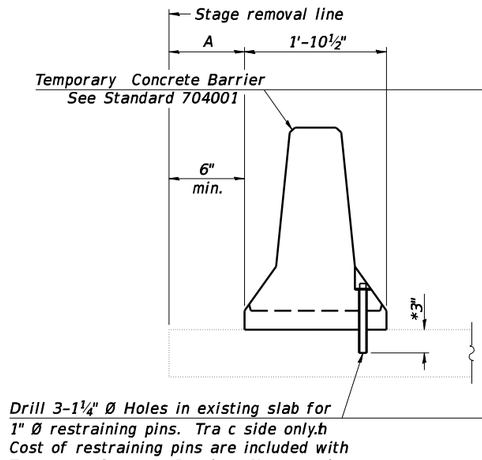
STAGE CONSTRUCTION & TEMPORARY SHEET PILING DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 4 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	29
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



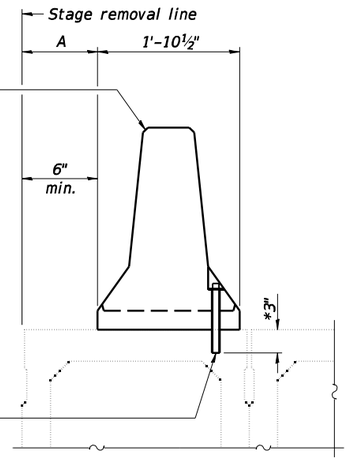
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" Ø Holes in existing slab for 1" Ø restraining pins. Tra c side only.h Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

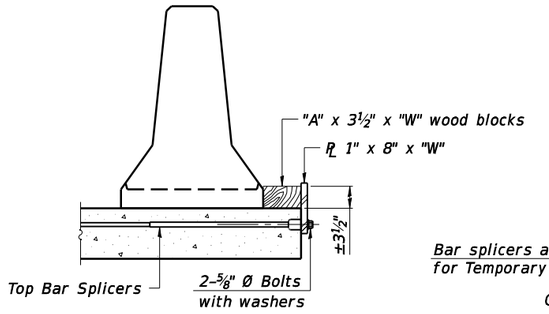
EXISTING SLAB



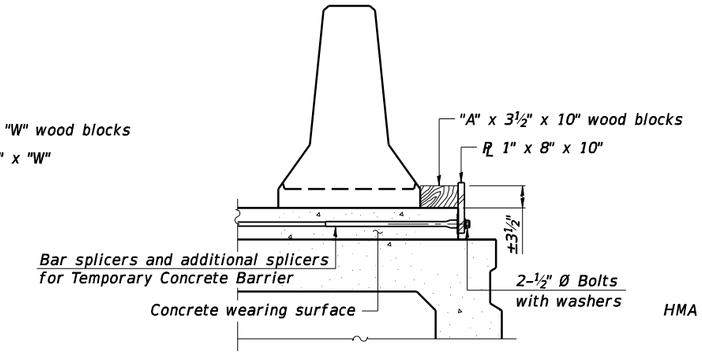
* When hot-mix asphalt wearng surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

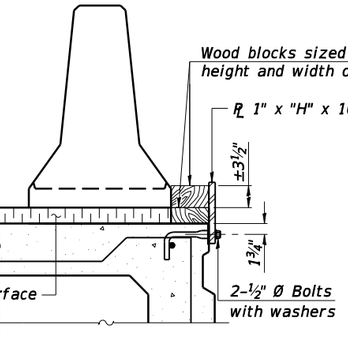
SECTIONS THRU SLAB OR DECK BEAM



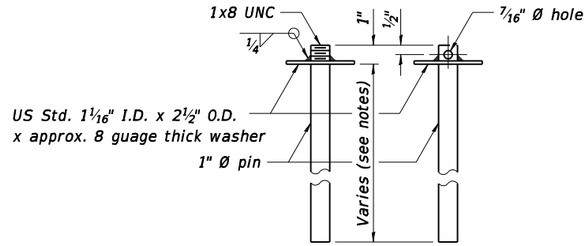
DETAIL I



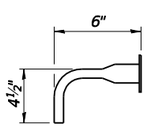
DETAIL II



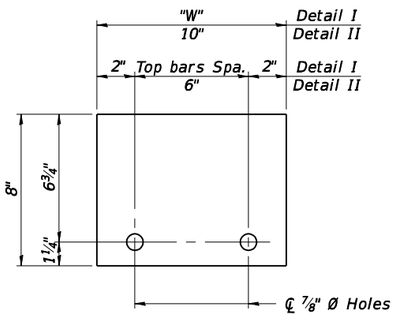
DETAIL III



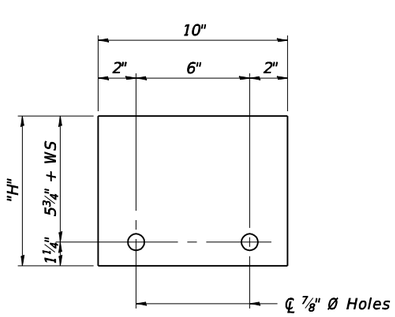
RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER ℄ 1" x 8" x "W"
(Detail I and II)



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

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ 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.

R-27

8-11-2017

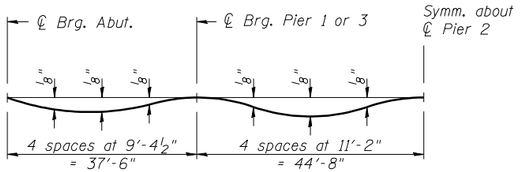
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 051I0012-74178-05-Temp.dgn	CHECKED - MDC	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. 051-0012
SHEET NO. 5 OF 36 SHEETS

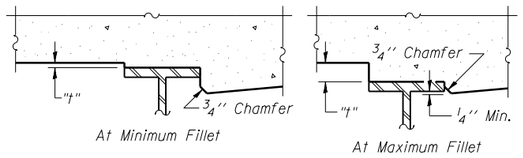
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	30
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

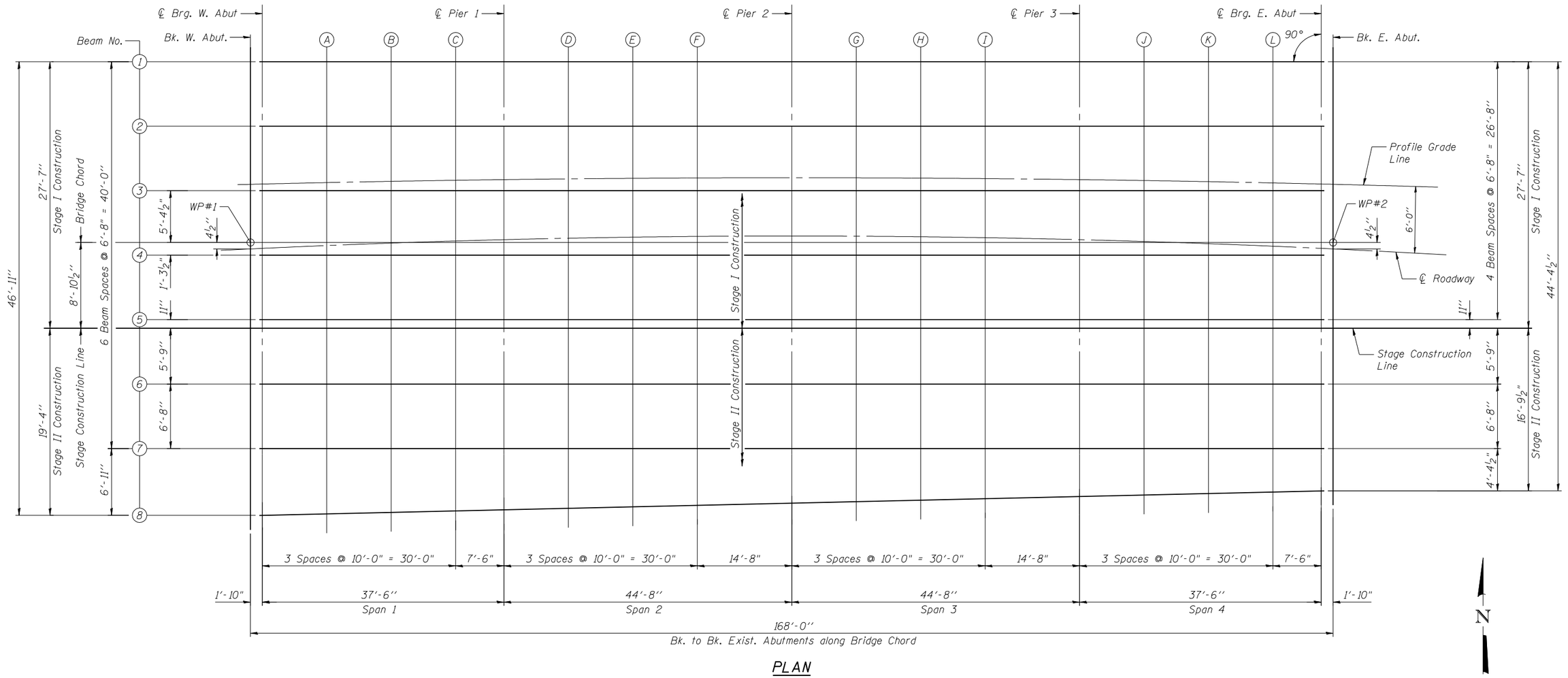
(Includes weight of concrete only.)

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 7 and 8.



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

FILLET HEIGHTS



PLAN

E-S 7-1-10

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 051–0012
	FILE = 0510012-74178-06-08-TopSlabElev.dgn	CHECKED - MDC	REVISED -		SHEET NO. 6 OF 36 SHEETS
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	31
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.66	24.92	449.31	449.31
℄ Brg. W. Abut.	576+04.50	24.96	449.33	449.33
A	576+14.55	25.12	449.48	449.49
B	576+24.61	25.26	449.63	449.64
C	576+34.66	25.38	449.77	449.78
℄ Brg. Pier 1	576+42.20	25.46	449.87	449.87
D	576+52.25	25.54	450.00	450.01
E	576+62.30	25.60	450.13	450.14
F	576+72.36	25.64	450.25	450.26
℄ Brg. Pier 2	576+87.10	25.67	450.42	450.42
G	576+97.15	25.66	450.53	450.54
H	577+07.20	25.62	450.64	450.65
I	577+17.25	25.57	450.74	450.75
℄ Brg. Pier 3	577+32.00	25.46	450.88	450.88
J	577+42.05	25.35	450.97	450.98
K	577+52.10	25.23	451.06	451.07
L	577+62.16	25.08	451.14	451.15
℄ Brg. E. Abut.	577+69.69	24.96	451.19	451.19
Bk. E. Abut.	577+71.54	24.92	451.21	451.21

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.54	31.59	449.20	449.20
℄ Brg. W. Abut.	576+04.39	31.62	449.23	449.23
A	576+14.45	31.78	449.38	449.39
B	576+24.52	31.93	449.53	449.54
C	576+34.58	32.05	449.66	449.67
℄ Brg. Pier 1	576+42.13	32.12	449.77	449.77
D	576+52.20	32.21	449.90	449.91
E	576+62.27	32.27	450.03	450.04
F	576+72.34	32.31	450.15	450.16
℄ Brg. Pier 2	576+87.10	32.33	450.32	450.32
G	576+97.16	32.32	450.43	450.44
H	577+07.23	32.29	450.54	450.55
I	577+17.30	32.24	450.64	450.65
℄ Brg. Pier 3	577+32.06	32.12	450.78	450.78
J	577+42.13	32.02	450.87	450.88
K	577+52.20	31.89	450.96	450.97
L	577+62.26	31.75	451.04	451.05
℄ Brg. E. Abut.	577+69.81	31.62	451.09	451.09
Bk. E. Abut.	577+71.66	31.59	451.11	451.11

PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.43	38.00	449.11	449.11
℄ Brg. W. Abut.	576+04.27	38.00	449.13	449.13
A	576+14.37	38.00	449.29	449.30
B	576+24.46	38.00	449.43	449.44
C	576+34.55	38.00	449.57	449.58
℄ Brg. Pier 1	576+42.07	38.00	449.68	449.68
D	576+52.17	38.00	449.81	449.82
E	576+62.26	38.00	449.94	449.95
F	576+72.36	38.00	450.06	450.07
℄ Brg. Pier 2	576+87.10	38.00	450.23	450.23
G	576+97.18	38.00	450.34	450.35
H	577+07.26	38.00	450.45	450.46
I	577+17.35	38.00	450.55	450.56
℄ Brg. Pier 3	577+32.13	38.00	450.69	450.69
J	577+42.20	38.00	450.78	450.79
K	577+52.28	38.00	450.87	450.88
L	577+62.36	38.00	450.94	450.95
℄ Brg. E. Abut.	577+69.93	38.00	451.00	451.00
Bk. E. Abut.	577+71.78	38.00	451.01	451.01

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.42	38.25	449.10	449.10
℄ Brg. W. Abut.	576+04.27	38.29	449.13	449.13
A	576+14.35	38.45	449.28	449.29
B	576+24.43	38.59	449.42	449.43
C	576+34.51	38.71	449.56	449.57
℄ Brg. Pier 1	576+42.07	38.79	449.67	449.67
D	576+52.15	38.87	449.80	449.81
E	576+62.23	38.94	449.92	449.93
F	576+72.32	38.98	450.05	450.06
℄ Brg. Pier 2	576+87.10	39.00	450.22	450.22
G	576+97.17	38.99	450.33	450.34
H	577+07.26	38.96	450.44	450.45
I	577+17.34	38.90	450.54	450.55
℄ Brg. Pier 3	577+32.12	38.79	450.68	450.68
J	577+42.21	38.68	450.77	450.78
K	577+52.29	38.56	450.86	450.87
L	577+62.37	38.41	450.94	450.95
℄ Brg. E. Abut.	577+69.93	38.29	450.99	450.99
Bk. E. Abut.	577+71.77	38.25	451.01	451.01

℄ ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.32	44.00	449.02	449.02
℄ Brg. W. Abut.	576+04.17	44.00	449.04	449.04
A	576+14.27	44.00	449.20	449.21
B	576+24.38	44.00	449.34	449.35
C	576+34.48	44.00	449.48	449.49
℄ Brg. Pier 1	576+42.02	44.00	449.59	449.59
D	576+52.13	44.00	449.72	449.73
E	576+62.23	44.00	449.85	449.86
F	576+72.34	44.00	449.97	449.98
℄ Brg. Pier 2	576+87.10	44.00	450.14	450.14
G	576+97.19	44.00	450.25	450.26
H	577+07.28	44.00	450.36	450.37
I	577+17.38	44.00	450.46	450.47
℄ Brg. Pier 3	577+32.17	44.00	450.60	450.60
J	577+42.27	44.00	450.69	450.70
K	577+52.36	44.00	450.78	450.79
L	577+62.45	44.00	450.85	450.86
℄ Brg. E. Abut.	577+70.03	44.00	450.91	450.91
Bk. E. Abut.	577+71.88	44.00	450.92	450.92

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.30	44.92	449.00	449.00
℄ Brg. W. Abut.	576+04.15	44.95	449.03	449.03
A	576+14.25	45.12	449.18	449.19
B	576+24.34	45.26	449.32	449.33
C	576+34.44	45.38	449.46	449.47
℄ Brg. Pier 1	576+42.01	45.46	449.57	449.57
D	576+52.10	45.54	449.70	449.71
E	576+62.20	45.60	449.82	449.83
F	576+72.30	45.64	449.95	449.96
℄ Brg. Pier 2	576+87.10	45.67	450.12	450.12
G	576+97.19	45.66	450.23	450.24
H	577+07.28	45.62	450.34	450.35
I	577+17.38	45.57	450.44	450.45
℄ Brg. Pier 3	577+32.19	45.46	450.58	450.58
J	577+42.28	45.35	450.67	450.68
K	577+52.38	45.22	450.76	450.77
L	577+62.47	45.08	450.84	450.85
℄ Brg. E. Abut.	577+70.04	44.95	450.89	450.89
Bk. E. Abut.	577+71.89	44.92	450.91	450.91

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0012
SHEET NO. 7 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	32
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.18	51.59	448.90	448.90
℄ Brg. W. Abut.	576+04.04	51.62	448.93	448.93
A	576+14.14	51.78	449.08	449.09
B	576+24.25	51.92	449.22	449.23
C	576+34.36	52.04	449.36	449.37
℄ Brg. Pier 1	576+41.94	52.12	449.47	449.47
D	576+52.05	52.21	449.60	449.61
E	576+62.16	52.27	449.72	449.73
F	576+72.28	52.31	449.85	449.86
℄ Brg. Pier 2	576+87.10	52.33	450.02	450.02
G	576+97.20	52.32	450.13	450.14
H	577+07.31	52.29	450.24	450.25
I	577+17.42	52.24	450.34	450.35
℄ Brg. Pier 3	577+32.25	52.12	450.48	450.48
J	577+42.36	52.02	450.57	450.58
K	577+52.47	51.89	450.66	450.67
L	577+62.58	51.74	450.74	450.75
℄ Brg. E. Abut.	577+70.16	51.62	450.79	450.79
Bk. E. Abut.	577+72.01	51.59	450.81	450.81

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.17	52.50	448.89	448.89
℄ Brg. W. Abut.	576+04.02	52.53	448.91	448.91
A	576+14.13	52.70	449.06	449.07
B	576+24.24	52.84	449.21	449.22
C	576+34.35	52.96	449.35	449.36
℄ Brg. Pier 1	576+41.94	53.04	449.45	449.45
D	576+52.05	53.12	449.58	449.59
E	576+62.16	53.18	449.71	449.72
F	576+72.27	53.22	449.83	449.84
℄ Brg. Pier 2	576+87.10	53.25	450.00	450.00
G	576+97.20	53.24	450.11	450.12
H	577+07.32	53.21	450.22	450.23
I	577+17.43	53.15	450.32	450.33
℄ Brg. Pier 3	577+32.26	53.04	450.47	450.47
J	577+42.37	52.93	450.56	450.57
K	577+52.48	52.80	450.65	450.66
L	577+62.59	52.66	450.73	450.74
℄ Brg. E. Abut.	577+70.18	52.53	450.78	450.78
Bk. E. Abut.	577+72.03	52.50	450.80	450.80

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+02.06	58.25	448.80	448.80
℄ Brg. W. Abut.	576+03.92	58.28	448.83	448.83
A	576+14.04	58.45	448.98	448.99
B	576+24.16	58.59	449.12	449.13
C	576+34.29	58.71	449.26	449.27
℄ Brg. Pier 1	576+41.88	58.79	449.37	449.37
D	576+52.00	58.87	449.50	449.51
E	576+62.13	58.94	449.62	449.63
F	576+72.25	58.98	449.75	449.76
℄ Brg. Pier 2	576+87.10	59.00	449.92	449.92
G	576+97.22	58.99	450.03	450.04
H	577+07.34	58.96	450.14	450.15
I	577+17.47	58.90	450.24	450.25
℄ Brg. Pier 3	577+32.32	58.79	450.38	450.38
J	577+42.44	58.68	450.47	450.48
K	577+52.56	58.56	450.56	450.57
L	577+62.69	58.41	450.64	450.65
℄ Brg. E. Abut.	577+70.28	58.28	450.69	450.69
Bk. E. Abut.	577+72.13	58.25	450.71	450.71

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+01.94	64.92	448.70	448.70
℄ Brg. W. Abut.	576+03.80	64.95	448.73	448.73
A	576+13.94	65.11	448.87	448.88
B	576+24.07	65.26	449.02	449.03
C	576+34.21	65.38	449.16	449.16
℄ Brg. Pier 1	576+41.82	65.45	449.27	449.27
D	576+51.95	65.54	449.39	449.40
E	576+62.09	65.60	449.52	449.53
F	576+72.23	65.64	449.65	449.65
℄ Brg. Pier 2	576+87.10	65.67	449.82	449.82
G	576+97.23	65.66	449.93	449.94
H	577+07.37	65.62	450.04	450.05
I	577+17.51	65.57	450.14	450.15
℄ Brg. Pier 3	577+32.38	65.45	450.28	450.28
J	577+42.52	65.35	450.37	450.38
K	577+52.66	65.22	450.46	450.47
L	577+62.79	65.07	450.54	450.55
℄ Brg. E. Abut.	577+70.40	64.95	450.59	450.59
Bk. E. Abut.	577+72.25	64.92	450.61	450.61

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	576+01.82	71.85	448.59	448.59
℄ Brg. W. Abut.	576+03.68	71.86	448.63	448.63
A	576+13.83	71.87	448.77	448.78
B	576+23.98	71.86	448.92	448.93
C	576+34.14	71.82	449.06	449.07
℄ Brg. Pier 1	576+41.75	71.79	449.17	449.17
D	576+51.91	71.72	449.30	449.31
E	576+62.06	71.62	449.43	449.44
F	576+72.21	71.51	449.56	449.57
℄ Brg. Pier 2	576+87.10	71.31	449.73	449.73
G	576+97.24	71.14	449.85	449.86
H	577+07.39	70.96	449.96	449.97
I	577+17.54	70.75	450.06	450.07
℄ Brg. Pier 3	577+32.43	70.41	450.21	450.21
J	577+42.57	70.15	450.30	450.31
K	577+52.72	69.87	450.39	450.40
L	577+62.86	69.56	450.47	450.48
℄ Brg. E. Abut.	577+70.47	69.32	450.53	450.53
Bk. E. Abut.	577+72.33	69.26	450.55	450.55

CEC Cummins Engineering Corporation
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 051-0012
SHEET NO. 8 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	33
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

NORTH FACE OF PARAPET

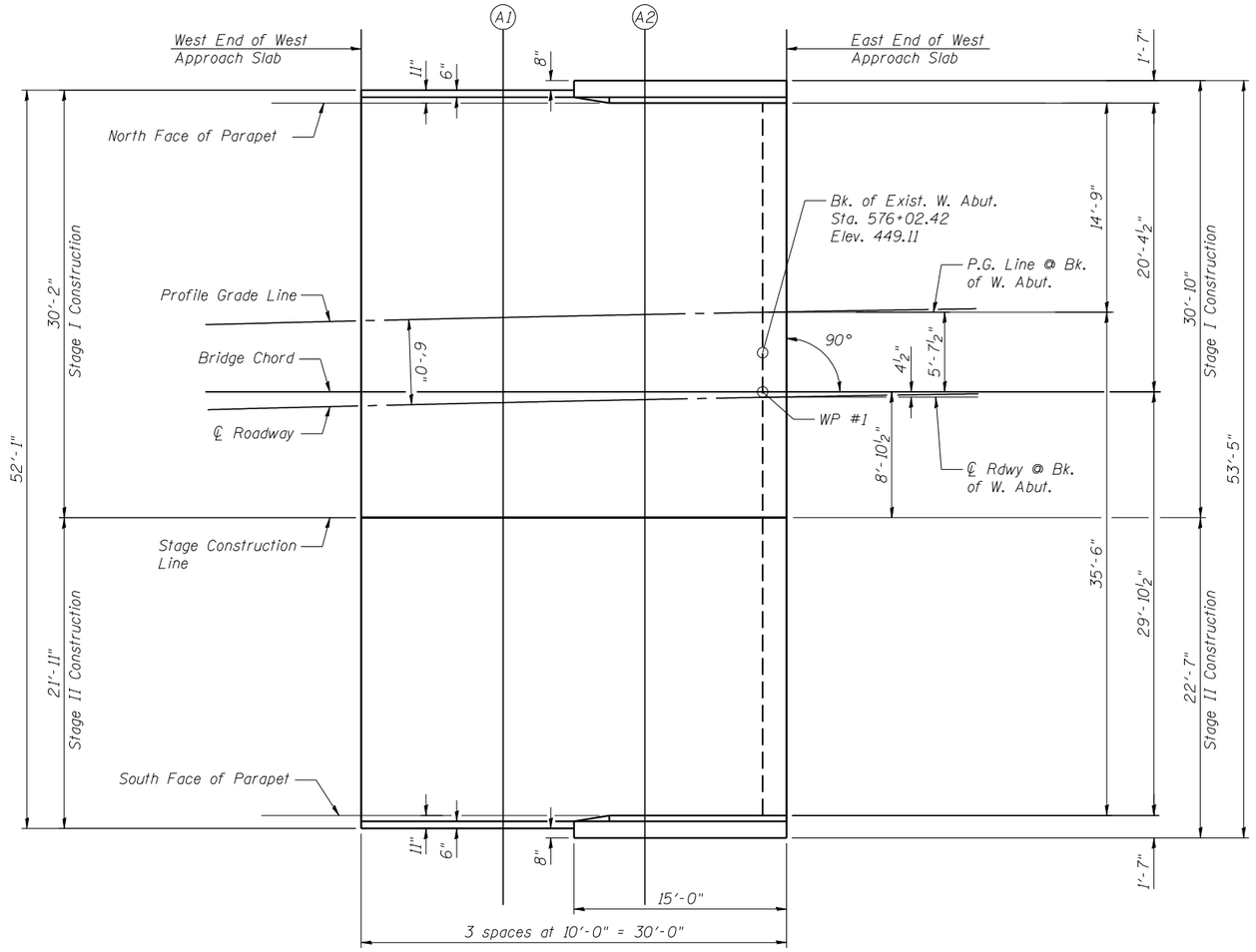
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	575+73.55	22.66	448.87
A1	575+83.60	22.88	449.04
A2	575+93.64	23.09	449.19
Bk. of Exist. W. Abut.	576+02.68	23.26	449.33
E. End of W. Appr. Slab	576+03.69	23.27	449.35

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	575+73.18	38.00	448.64
A1	575+83.27	38.00	448.80
A2	575+93.35	38.00	448.97
Bk. of Exist. W. Abut.	576+02.42	38.00	449.11
E. End of W. Appr. Slab	576+03.43	38.00	449.12

℄ OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	575+73.04	44.00	448.54
A1	575+83.13	44.00	448.71
A2	575+93.23	44.00	448.87
Bk. of Exist. W. Abut.	576+02.31	44.00	449.01
E. End of W. Appr. Slab	576+03.32	44.00	449.03



PLAN - WEST APPROACH

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	575+72.85	51.90	448.42
A1	575+82.95	52.12	448.59
A2	575+93.06	52.33	448.75
Bk. of Exist. W. Abut.	576+02.16	52.50	448.89
E. End of W. Appr. Slab	576+03.17	52.52	448.90

SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	575+72.34	72.89	448.10
A1	575+82.49	73.12	448.26
A2	575+92.64	73.33	448.42
Bk. of Exist. W. Abut.	576+01.78	73.50	448.56
E. End of W. Appr. Slab	576+02.80	73.52	448.58

Note:
Offsets are given at back of abutment.

E-AS 7-1-10

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0012
SHEET NO. 9 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	34
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

NORTH FACE OF PARAPET

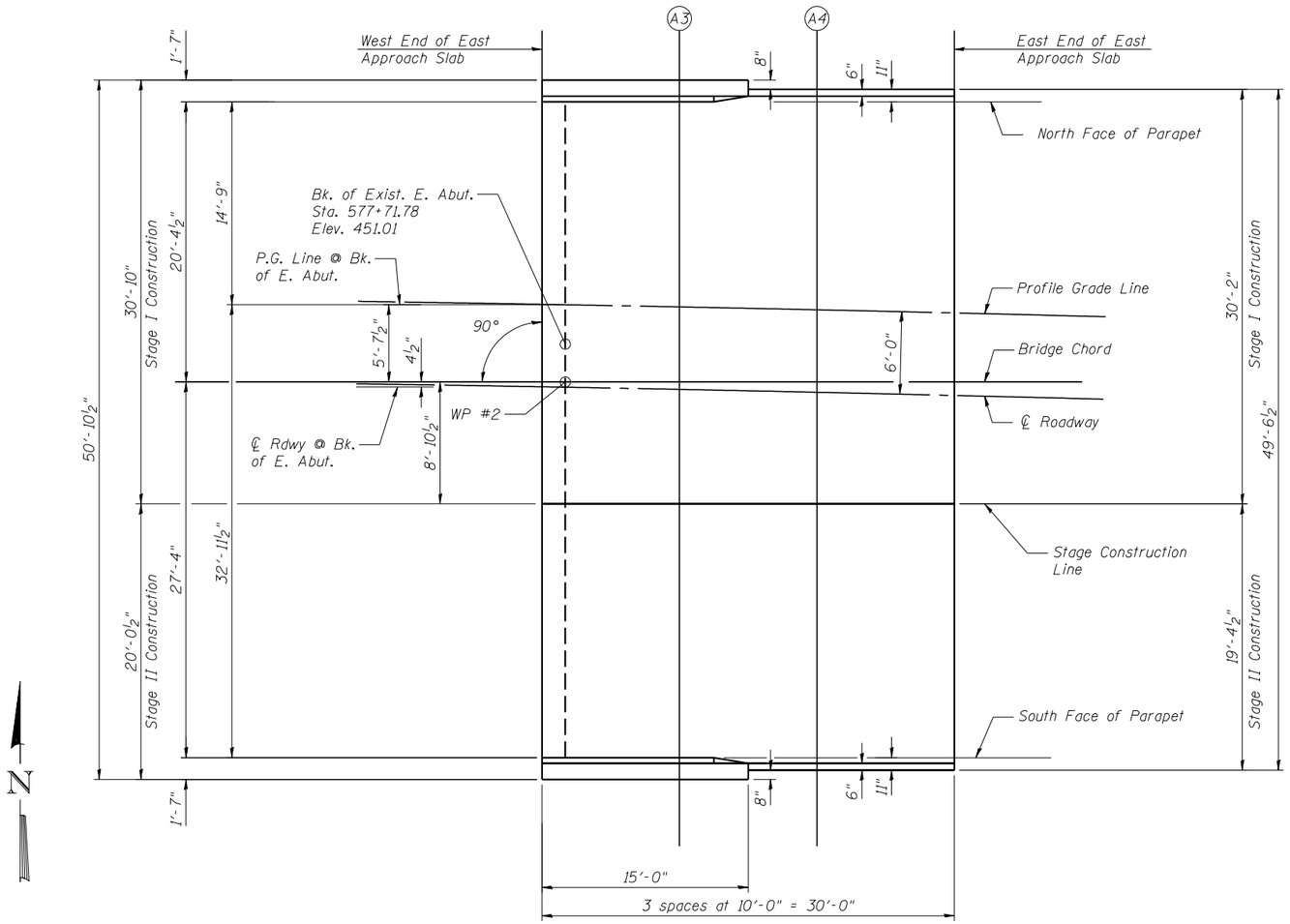
Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	577+70.50	23.27	451.22
Bk. of Exist. E. Abut.	577+71.50	23.26	451.23
A3	577+80.54	23.09	451.30
A4	577+90.59	22.88	451.37
E. End of E. Appr. Slab	578+00.64	22.66	451.43

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	577+70.76	38.00	451.01
Bk. of Exist. E. Abut.	577+71.78	38.00	451.01
A3	577+80.84	38.00	451.08
A4	577+90.92	38.00	451.14
E. End of E. Appr. Slab	578+01.00	38.00	451.20

℄ OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	577+70.86	44.00	450.92
Bk. of Exist. E. Abut.	577+71.87	44.00	450.92
A3	577+80.96	44.00	450.99
A4	577+91.05	44.00	451.05
E. End of E. Appr. Slab	578+01.15	44.00	451.11



PLAN - EAST APPROACH

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	577+71.01	52.52	450.79
Bk. of Exist. E. Abut.	577+72.03	52.50	450.80
A3	577+81.12	52.33	450.86
A4	577+91.23	52.12	450.93
E. End of E. Appr. Slab	578+01.34	51.90	451.00

SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Appr. Slab	577+71.34	70.98	450.52
Bk. of Exist. E. Abut.	577+72.36	70.96	450.52
A3	577+81.49	70.79	450.59
A4	577+91.64	70.58	450.66
E. End of E. Appr. Slab	578+01.79	70.35	450.72

Note:
Offsets are given at back of abutment.

E-AS

7-1-10

CEC Cummins Engineering Corporation
Civil and Structural Engineering

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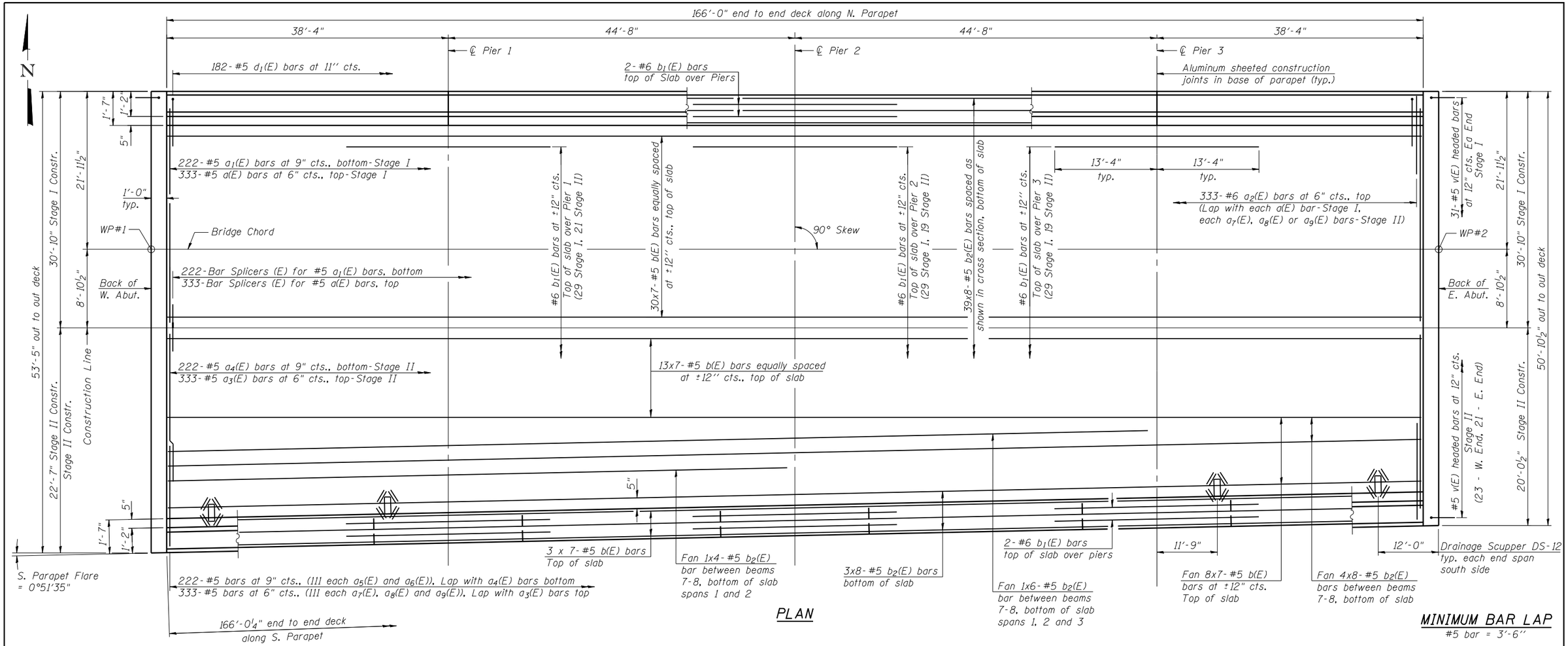
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 051-0012
SHEET NO. 10 OF 36 SHEETS

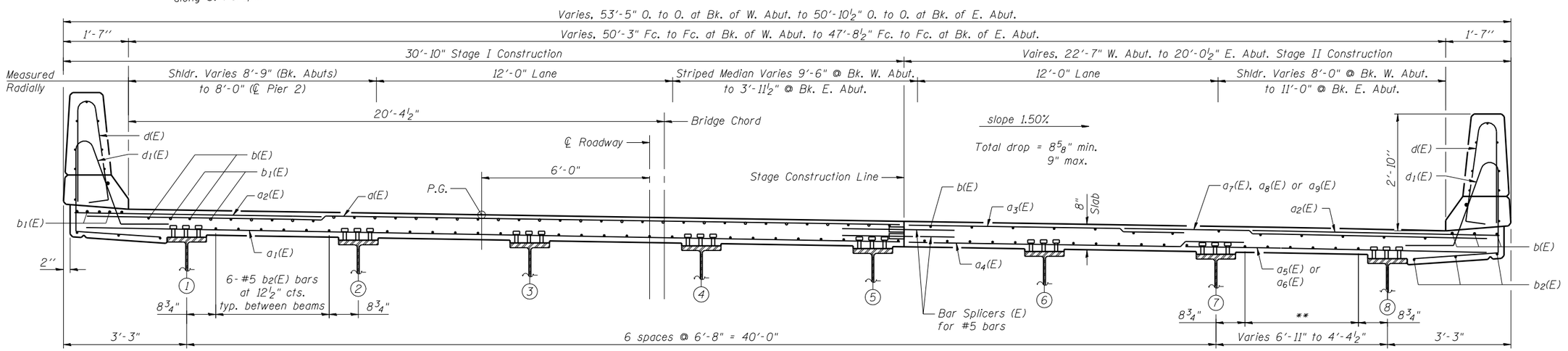
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	35
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



PLAN

MINIMUM BAR LAP

#5 bar = 3'-6"



NEAR PIER

CROSS SECTION

(Looking East)

NEAR MIDSPAN

**#5 $b_2(E)$ bars typ. between beams 7-8
Spacing & number for bars vaires-See Plan

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
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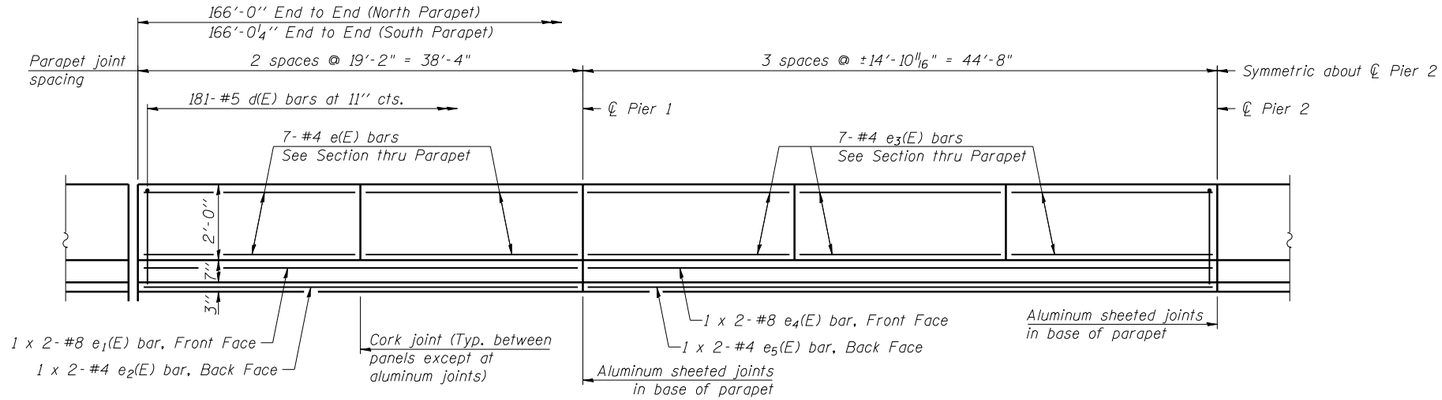
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 051-0012
SHEET NO. 11 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	36
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



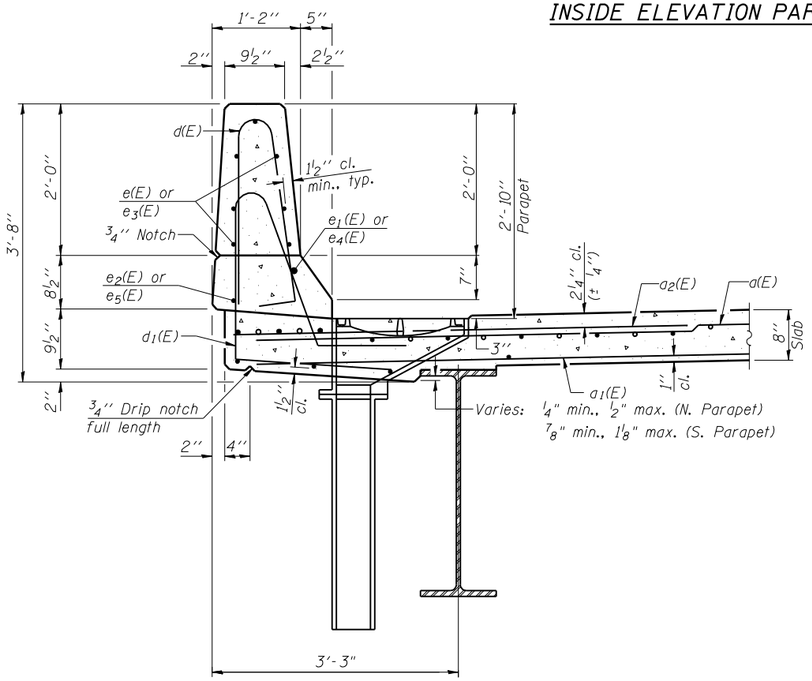
INSIDE ELEVATION PARAPETS

MINIMUM BAR LAP

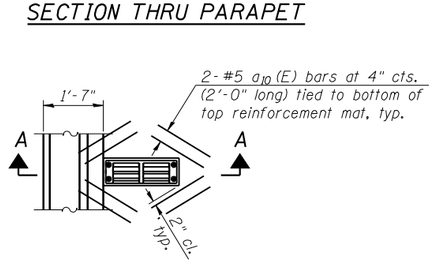
(Parapet)

#4 bar = 2'-5"

#8 bar = 5'-11"

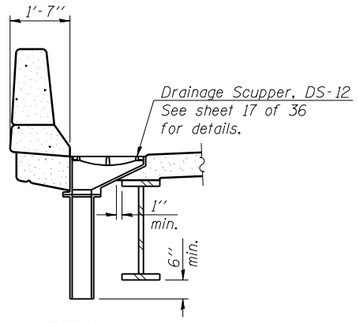


SECTION THRU PARAPET

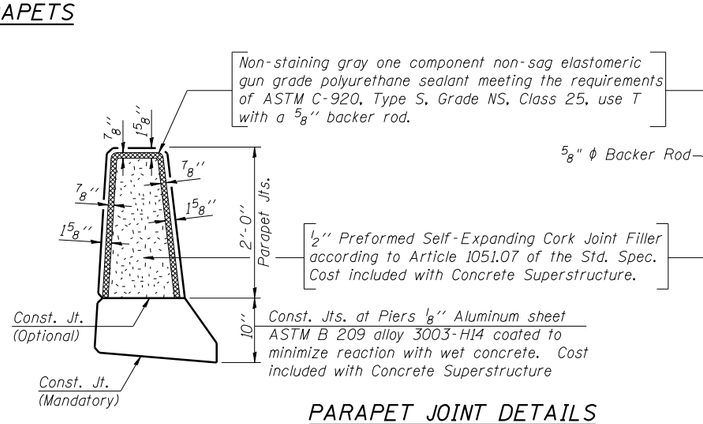


PLAN

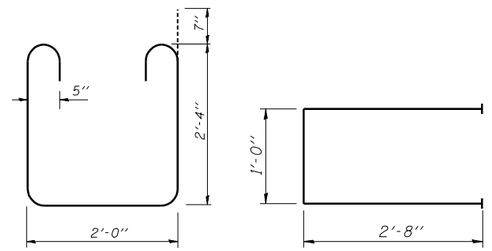
Note:
Cut longitudinal reinforcement to clear drainage scuppers.



SECTION A-B

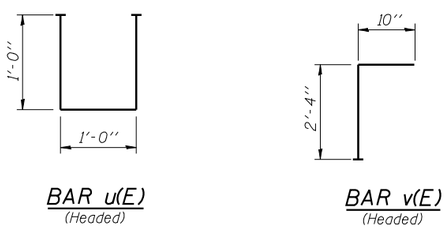


PARAPET JOINT DETAILS



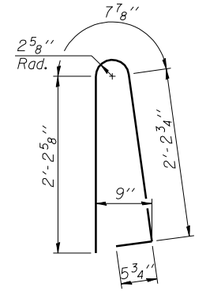
BAR s(E)

BAR s1(E)
(Headed)

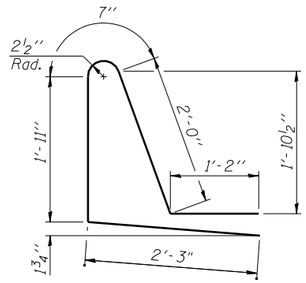


BAR u(E)
(Headed)

BAR v(E)
(Headed)



BAR d(E)



BAR d1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	333	#5	30'-5"	——
a1(E)	222	#5	29'-11"	——
a2(E)	666	#6	6'-6"	——
a3(E)	333	#5	13'-6"	——
a4(E)	222	#5	16'-10"	——
a5(E)	111	#5	11'-8"	——
a6(E)	111	#5	10'-4"	——
a7(E)	111	#5	14'-6"	——
a8(E)	111	#5	13'-7"	——
a9(E)	111	#5	12'-9"	——
a10(E)	32	#5	2'-0"	——
b(E)	399	#5	26'-8"	——
b1(E)	158	#6	26'-8"	——
b2(E)	378	#5	23'-10"	——
d(E)	364	#5	5'-7"	
d1(E)	364	#5	7'-11"	
e(E)	56	#4	18'-10"	——
e1(E)	8	#8	22'-0"	——
e2(E)	8	#4	20'-3"	——
e3(E)	84	#4	14'-7"	——
e4(E)	8	#8	25'-2"	——
e5(E)	8	#4	23'-5"	——
m(E)	16	#6	30'-6"	——
m1(E)	32	#6	4'-0"	——
m2(E)	48	#6	6'-4"	——
m3(E)	16	#6	2'-11"	——
m4(E)	8	#6	22'-3"	——
m5(E)	8	#6	19'-8"	——
m6(E)	4	#6	6'-7"	——
m7(E)	4	#6	4'-0"	——
s(E)	94	#5	7'-10"	⊔
s1(E)	96	#5	6'-4"	⊏
u(E)	106	#5	3'-0"	⊔
v(E)	106	#5	3'-2"	⌐
Reinforcement Bars, Epoxy Coated		Pound	78,390	
Concrete Superstructure		Cu. Yds.	279.4	

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

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

S-D2

6-8-15

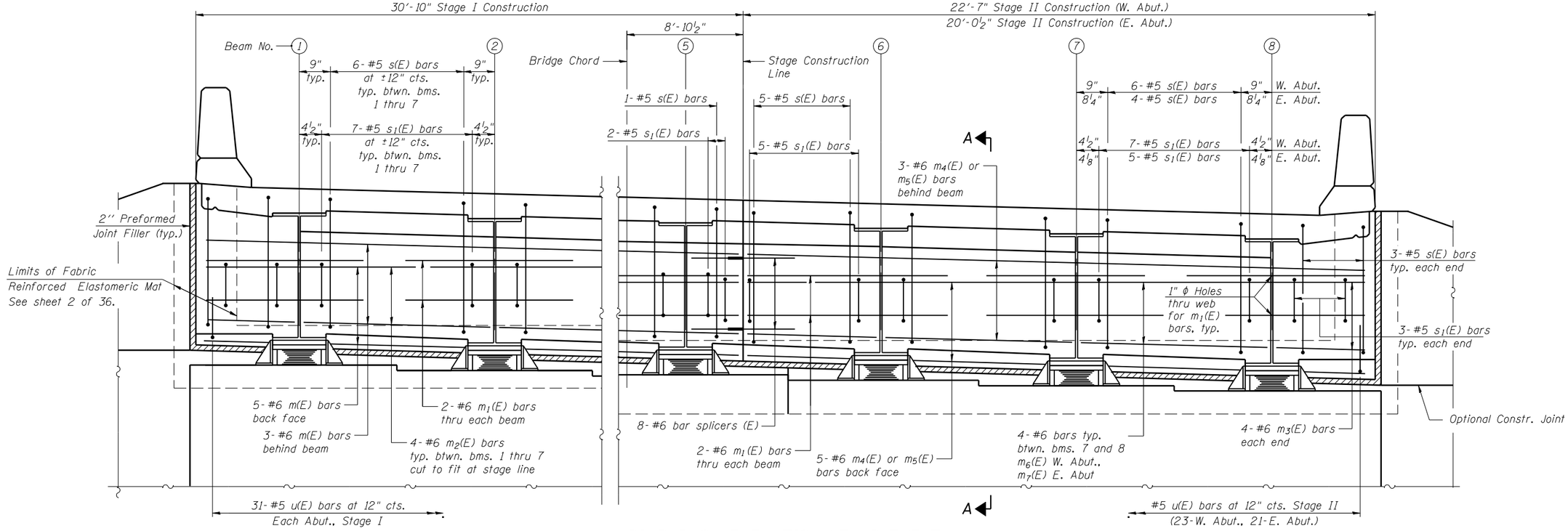
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-12-SuperDet.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

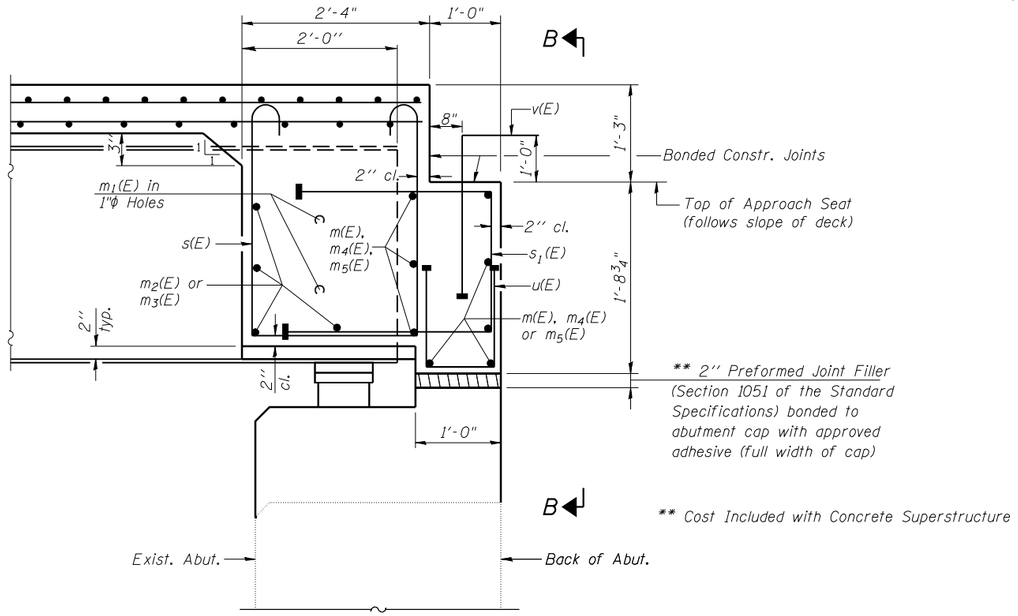
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 12 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	37
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



DIAPHRAGM ELEVATION AT ABUTMENT

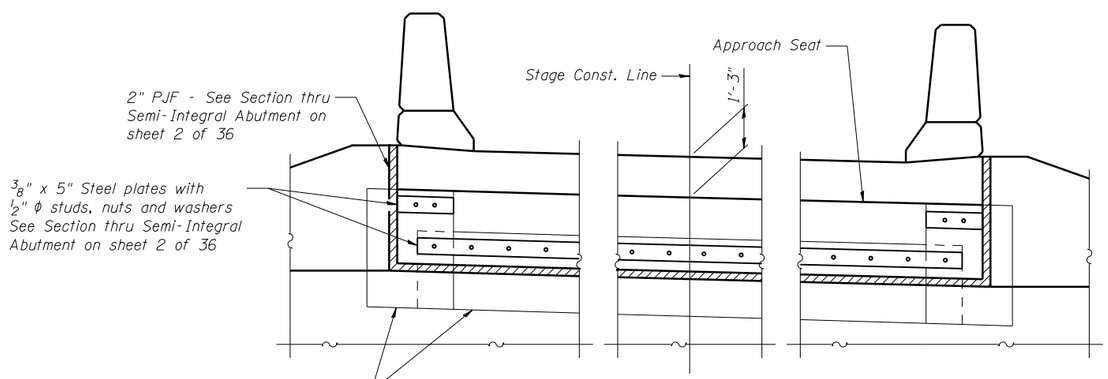
(Looking East at E. Abut. West Abut. Similar)



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:
Reinforcement bars and concrete in diaphragm are billed with superstructure on sheet 12 of 36.
For details of bars s(E), s_1(E) and u(E) bars see sheet 12 of 36.
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.



VIEW B-B

(Showing 2" PJF and limits of Fabric Reinforced Elastomeric Mat.)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 051l0012-74178-13-IntegralDiaph.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

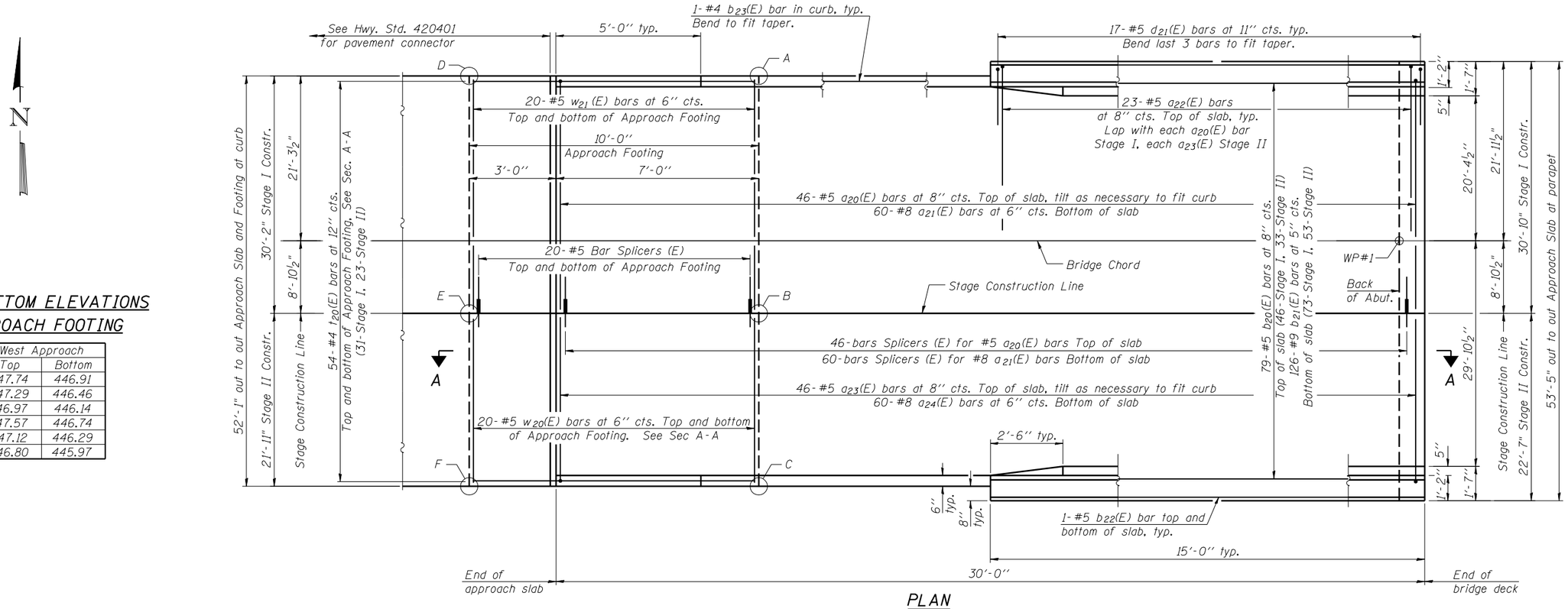
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SEMI-INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 13 OF 36 SHEETS

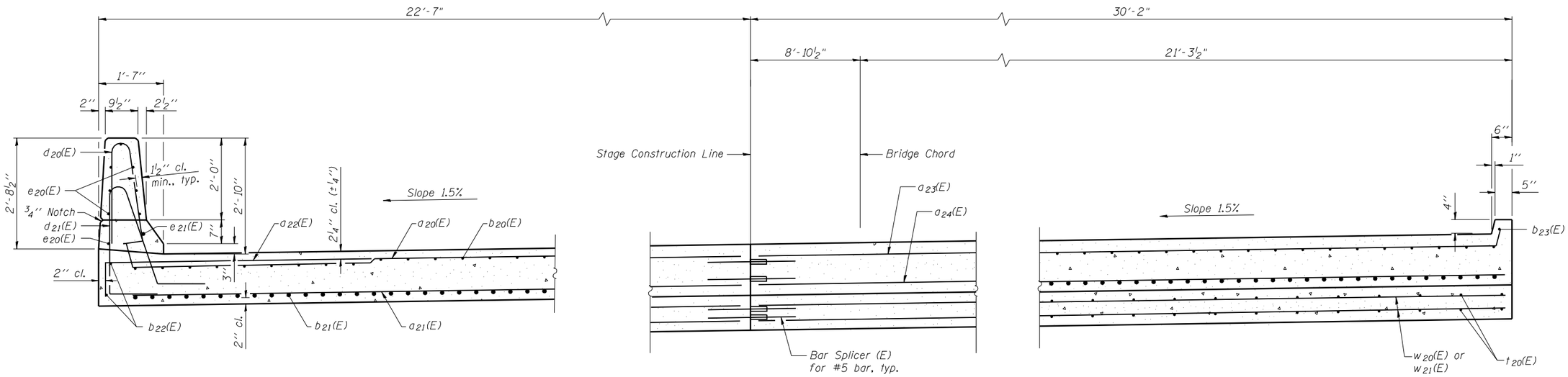
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	38
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	West Approach	
Point	Top	Bottom
A	447.74	446.91
B	447.29	446.46
C	446.97	446.14
D	447.57	446.74
E	447.12	446.29
F	446.80	445.97



PLAN



NEAR ABUTMENT

CROSS SECTION
(Looking West)

AT APPROACH FOOTING

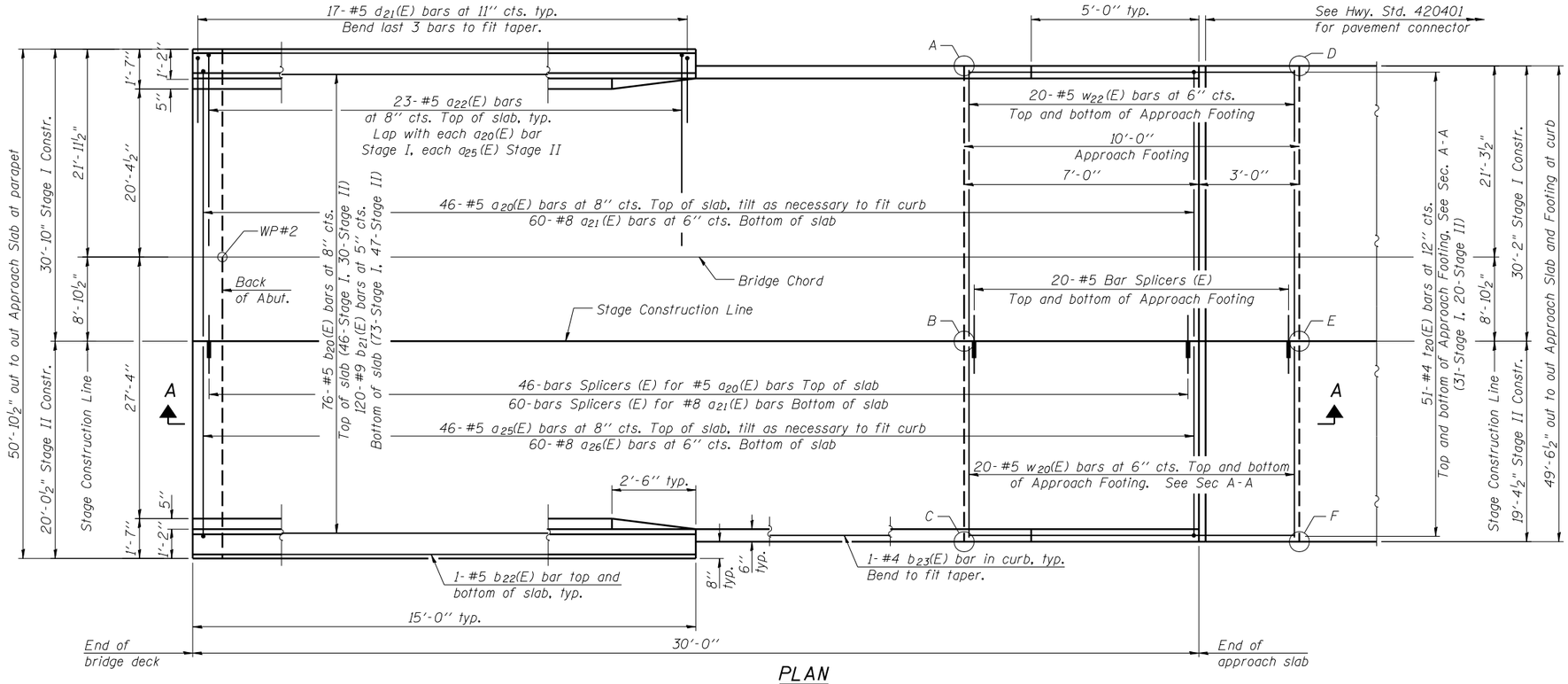
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -
FILE = 0510012-74178-14-16-ApprDet.dgn	CHECKED - MDC	REVISED -
DATE = 10/18/2018	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED WEST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 14 OF 36 SHEETS

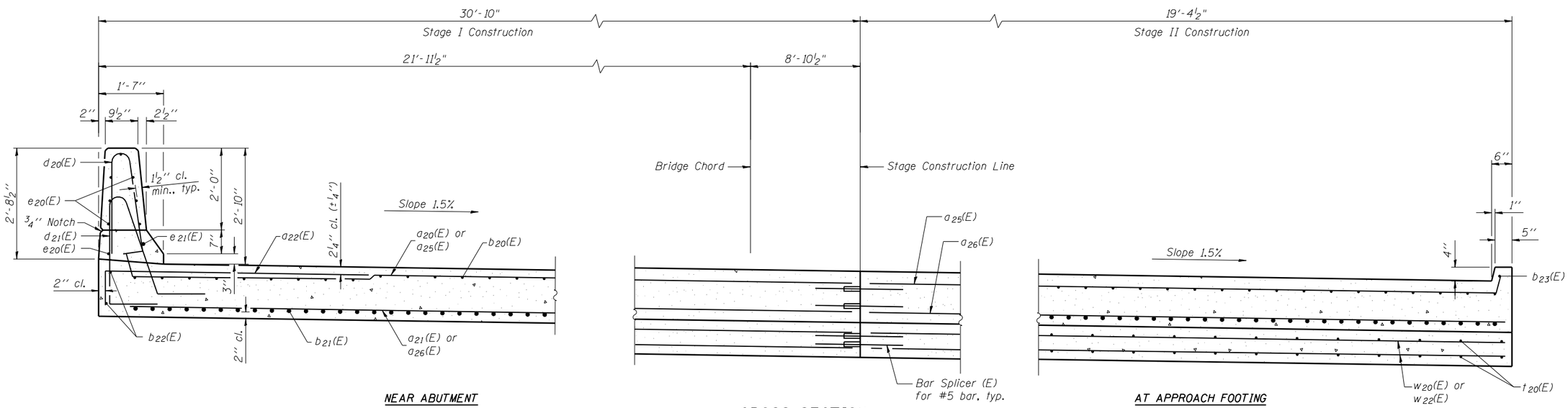
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	39
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		



PLAN

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	East Approach	
Point	Top	Bottom
A	446.91	449.30
B	446.46	448.87
C	446.14	448.60
D	446.74	449.37
E	446.29	448.93
F	445.97	448.66



NEAR ABUTMENT

CROSS SECTION
(Looking East)

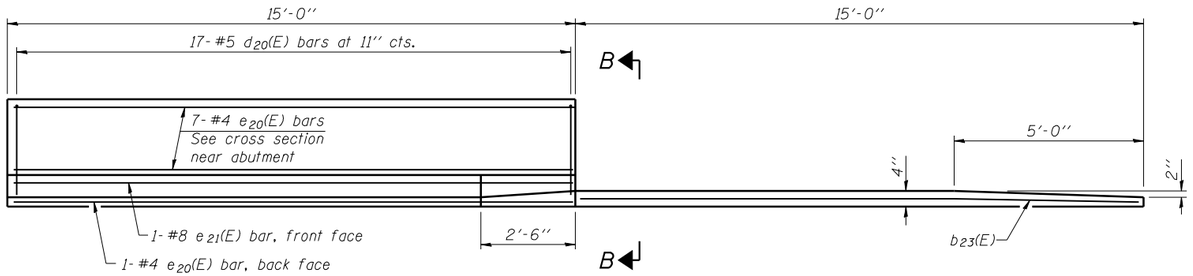
AT APPROACH FOOTING

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 0510012-74178-14-16-ApprDet.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED EAST BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 15 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	40
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF PARAPET AND CURB

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach pavement.

Parapet concrete shall be paid for as Concrete Superstructure.

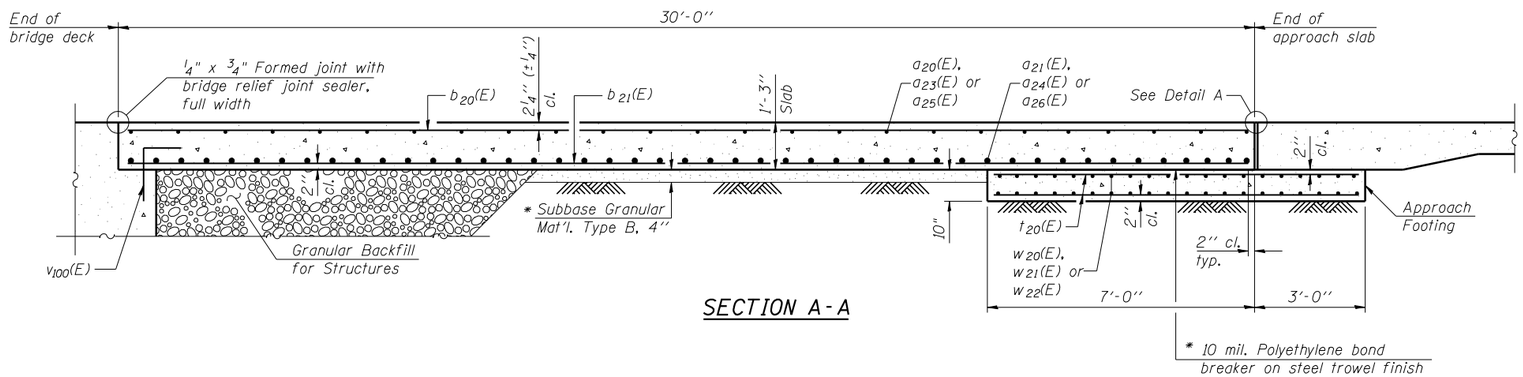
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

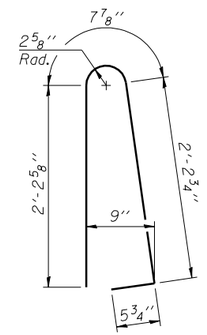
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

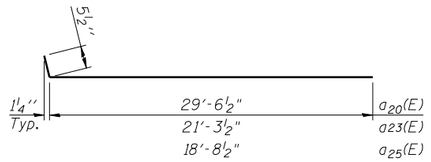
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 36.



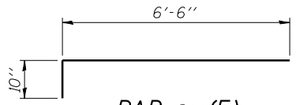
SECTION A-A



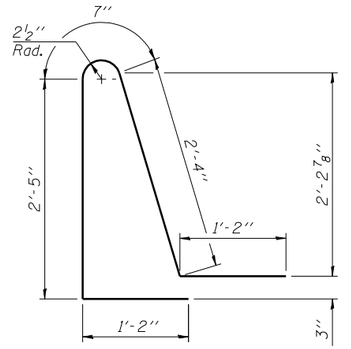
BAR d_{20}(E)



BAR a_{20}(E), a_{23}(E) & a_{25}(E)



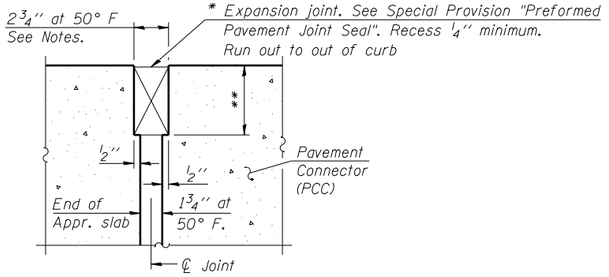
BAR a_{22}(E)



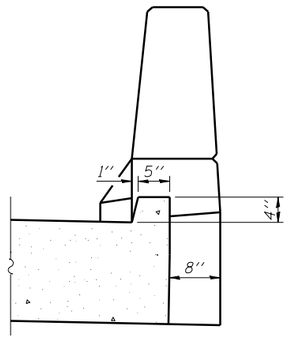
BAR d_{21}(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{20}(E)	92	#5	30'-0"	
a_{21}(E)	120	#8	29'-10"	
a_{22}(E)	92	#5	7'-4"	
a_{23}(E)	46	#5	21'-9"	
a_{24}(E)	60	#8	21'-7"	
a_{25}(E)	46	#5	19'-2"	
a_{26}(E)	60	#8	19'-0"	
b_{20}(E)	155	#5	29'-8"	
b_{21}(E)	246	#9	29'-8"	
b_{22}(E)	8	#5	14'-8"	
b_{23}(E)	4	#4	14'-8"	
d_{20}(E)	68	#5	5'-7"	
d_{21}(E)	68	#5	7'-8"	
e_{20}(E)	32	#4	14'-8"	
e_{21}(E)	4	#8	14'-8"	
t_{20}(E)	105	#4	9'-8"	
w_{20}(E)	80	#5	29'-10"	
w_{21}(E)	40	#5	21'-7"	
w_{22}(E)	40	#5	19'-0"	
Concrete Superstructure		Cu. Yd.	6.7	
Concrete Superstructure (Approach Slab)		Cu. Yd.	143.6	
Concrete Structures		Cu. Yd.	31.4	
Reinforcement Bars, Epoxy Coated		Pound	57,650	



DETAIL A



VIEW B-B

* Cost included with Concrete Superstructure (Approach Slab).

** Per manufacturer recommendations

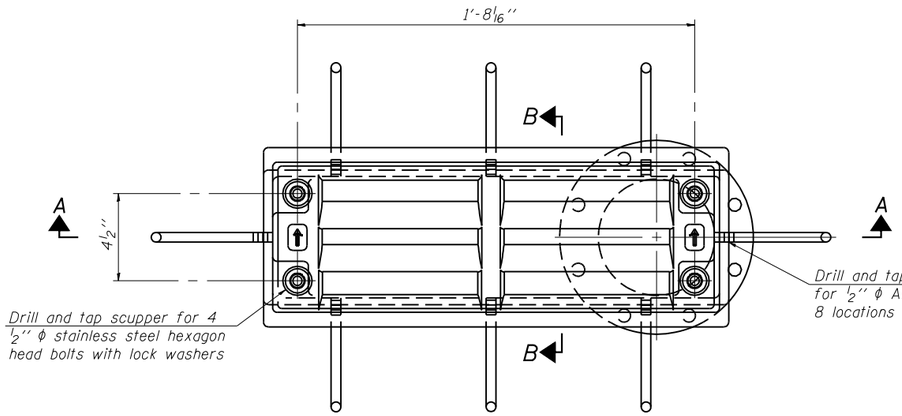
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-14-16-ApprDet.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

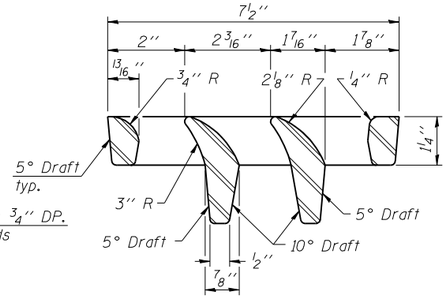
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED APPROACH SLAB DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 16 OF 36 SHEETS

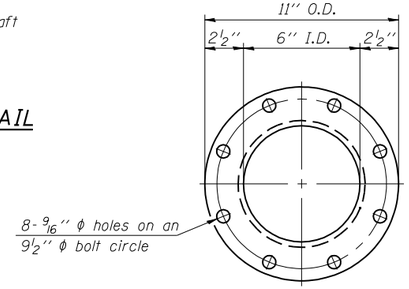
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	41
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



PLAN



VANE GRATE 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.

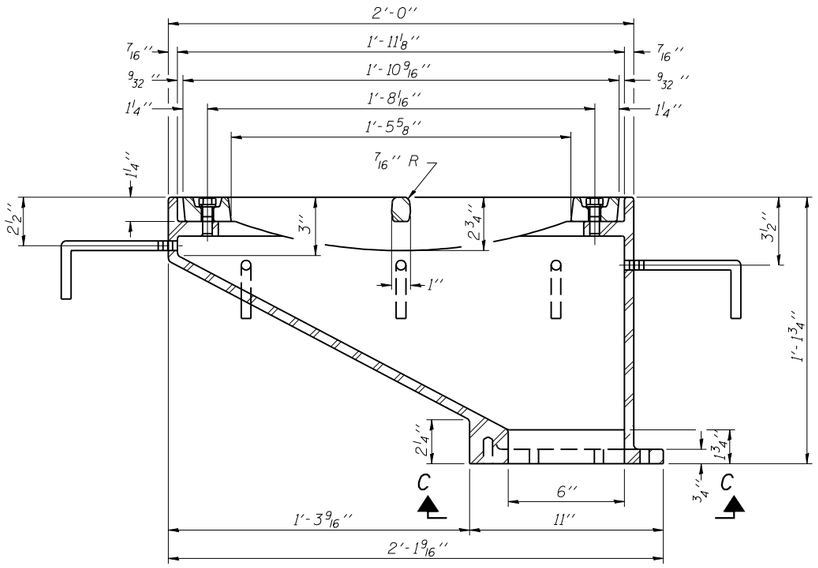
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

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-12.

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.

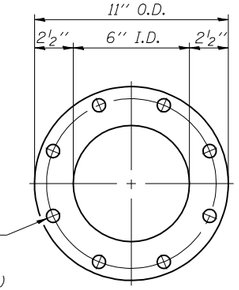


SECTION A-A

See sheet 12 of 36 for scupper location relative to parapet.

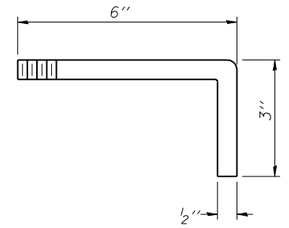
SECTION B-B

DOWNSPOUT



VIEW C-C

BOLT HOLE DETAIL



ANCHOR STUD DETAIL

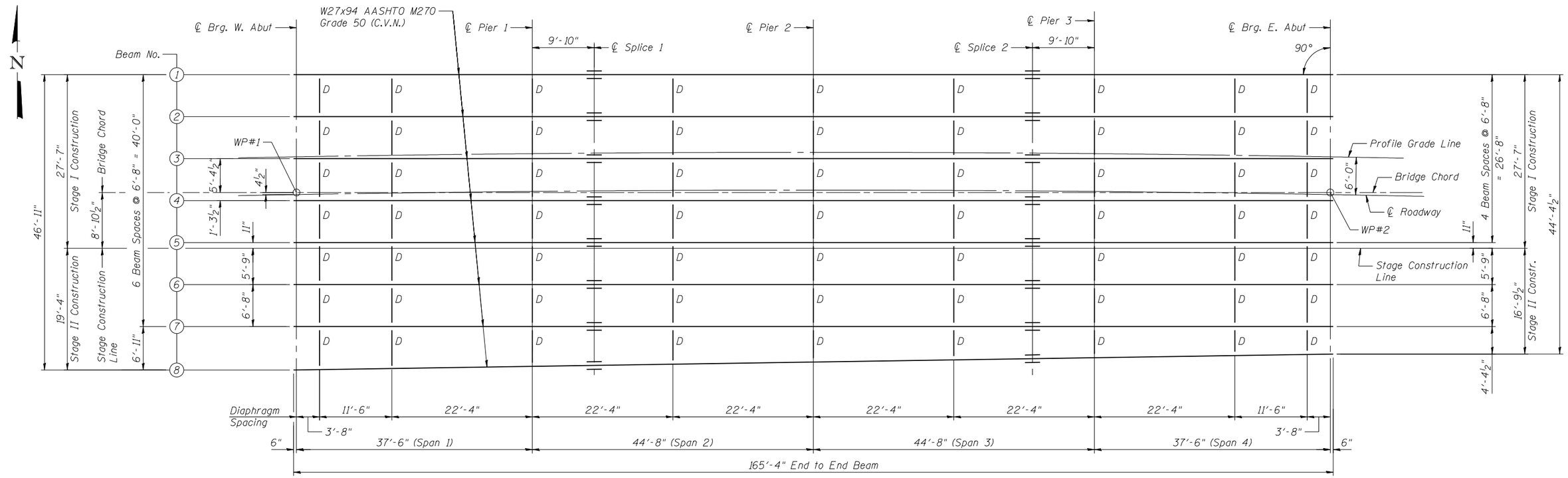
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	4

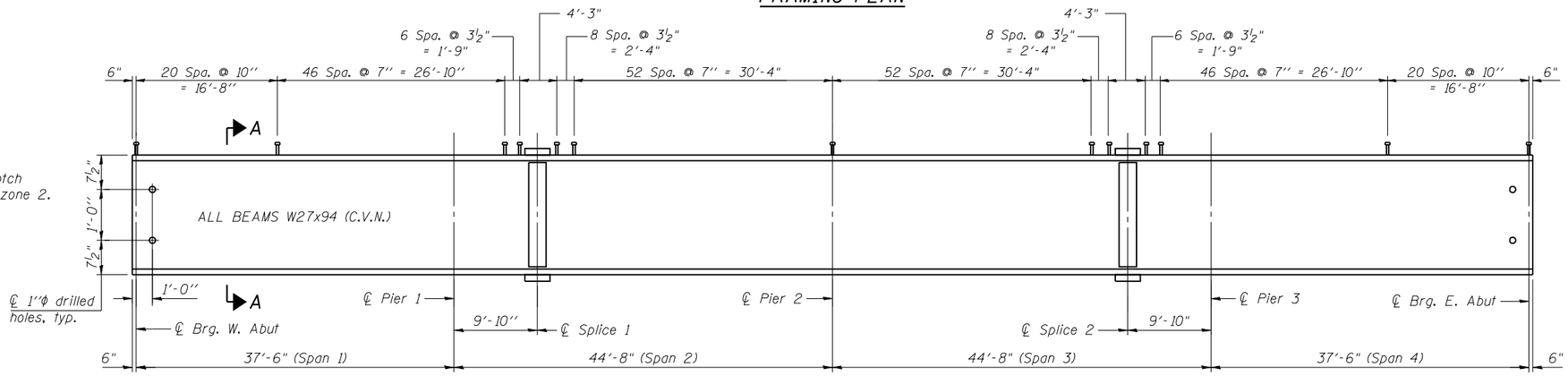
DS-12 7-1-10

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	FILE = 0510012-74178-17-Scupper.dgn	CHECKED - MDC	REVISED -	
	DATE = 10/18/2018	DRAWN - SJS	REVISED -	DRAINAGE SCUPPER, DS-12 STRUCTURE NO. 051-0012 SHEET NO. 17 OF 36 SHEETS
		CHECKED - MDC	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	42
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



FRAMING PLAN



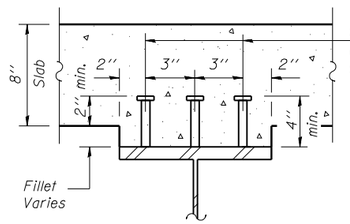
Note:
"C.V.N." denotes Charpy-V-Notch impact energy requirements, zone 2.

BEAM ELEVATION

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

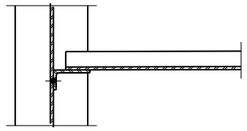
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
℄ Brg. W. Abut.	448.62	448.52	448.42	448.32	448.22	448.12	448.02	447.92
℄ Pier 1	449.16	449.06	448.96	448.86	448.76	448.66	448.56	448.46
℄ Splice 1	449.28	449.18	449.08	448.98	449.18	449.08	448.98	448.88
℄ Pier 2	449.71	449.61	449.51	449.41	449.31	449.21	449.11	449.02
℄ Splice 2	449.81	449.71	449.61	449.51	449.41	449.31	449.21	449.13
℄ Pier 3	450.17	450.07	449.97	449.87	449.77	449.67	449.57	449.58
℄ Splice 3	450.25	450.15	450.05	449.95	449.85	449.75	449.65	449.58
℄ Brg. E. Abut.	450.48	450.38	450.28	450.18	450.08	449.98	449.88	449.82



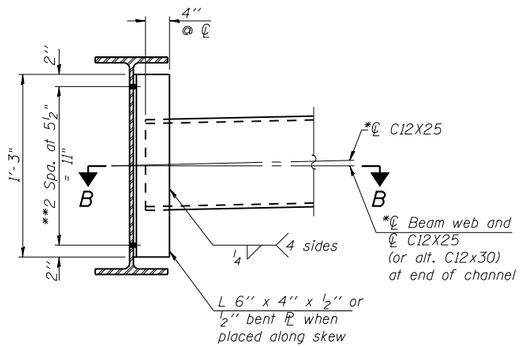
¾"ϕ Granular or solid flux filled headed studs. Automatically end welded to flange. (6.408 Req'd.)

SECTION A-A

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STRUCTURAL STEEL STRUCTURE NO. 051-0012 SHEET NO. 18 OF 36 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE = 051l0012-74178-18-19-StructSteel.dgn	CHECKED - MDC	REVISED -			327	(51-23HB-2)BR	LAWRENCE	260	43
	DATE = 12/5/2018	DRAWN - SJS	REVISED -						CONTRACT NO. 74177	
		CHECKED - MDC	REVISED -					ILLINOIS	FED. AID PROJECT	



SECTION B-B



INTERIOR DIAPHRAGM D

(63 Required)

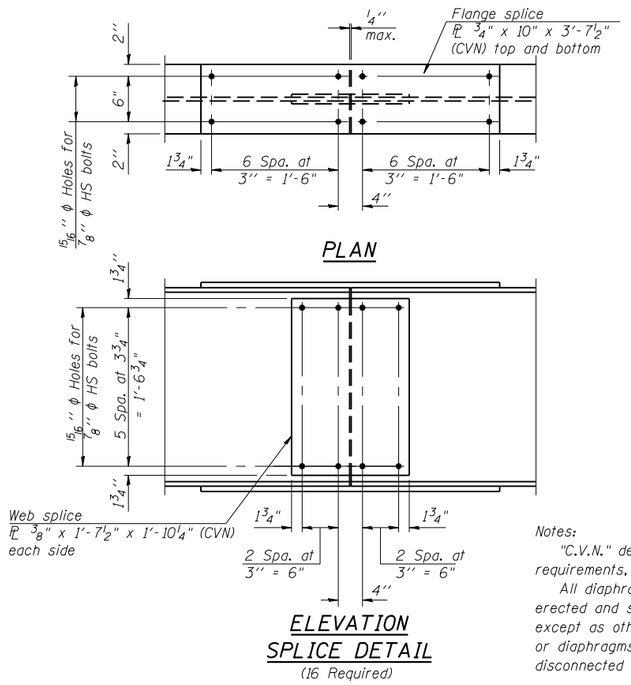
Notes:

Two hardened washers required for each set of oversized holes.

*Alternate C12x30 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.

**¾'' ϕ HS bolts, 15/16'' ϕ holes



ELEVATION
SPLICE DETAIL

(16 Required)

Notes:

"C.V.N." denotes Charpy-V-Notch impact energy requirements, zone 2.

All 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.

INTERIOR BEAM MOMENT TABLE

		0.4 Sp. 1 or 0.6 Sp. 4	Pier 1 or 3	0.5 Sp. 2 or 0.5 Sp. 3	Pier 2
I_s	(in^4)	3270	3,270	3,270	3,270
$I_c(n)$	(in^4)	10,308	-	10,308	-
$I_c(3n)$	(in^4)	7,782	-	7,782	-
$I_c(cr)$	(in^4)	-	5,049	-	5,049
S_s	(in^3)	243	243	243	243
$S_c(n)$	(in^3)	385	-	385	-
$S_c(3n)$	(in^3)	349	-	349	-
$S_c(cr)$	(in^3)	-	297	-	297
DC1	(k/')	0.785	0.785	0.785	0.785
M_{DC1}	('k)	80	133	66	127
DC2	(k/')	0.113	0.113	0.113	0.113
M_{DC2}	('k)	11	19	9	18
DW	(k/')	0.314	0.314	0.314	0.314
M_{DW}	('k)	32	54	27	51
LLDF		0.659	0.659	0.659	0.659
M_{L+IM}	('k)	363	265	357	266
M_u (Strength I)	('k)	797	735	759	724
$\phi_f M_n$	('k)	2,019	-	2,033	-
f_s DC1	(ksi)	4.0	6.6	3.3	6.3
f_s DC2	(ksi)	0.4	0.8	0.3	0.7
f_s DW	(ksi)	1.1	2.2	0.9	2.1
f_s (L+IM)	(ksi)	11.3	10.7	11.1	10.7
f_s (Service II)	(ksi)	20.2	23.5	18.9	23.0
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	31.3	-	30.6
$\phi_f F_n$	(ksi)	-	41.4	-	41.3
V_f	(k)	36.8		42.1	

BEAM REACTION TABLE

		Abut.	Pier 1 or 3	Pier 2
LLDF		0.720	0.720	0.720
R_{DC1}	(k)	39.7	35.9	34.8
R_{DC2}	(k)	1.6	5.2	5.0
R_{DW}	(k)	4.5	14.4	13.9
R_{L}	(k)	44.7	69.4	69.9
R_{IM}	(k)	12.1	15.4	15.4
R_{Total}	(k)	102.6	140.3	139.0

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.).

LLDF: Live Load Distribution Factor for moment

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: 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 (L+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).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

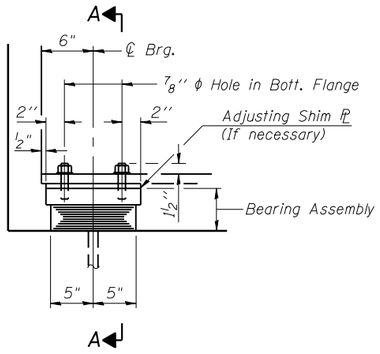
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

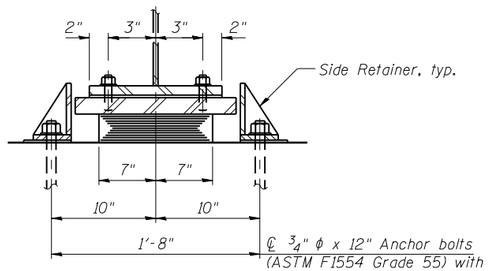
V_f: Maximum factored shear range in span computed according to Article 6.10.10.

Note:

M_L and R_L include the effects of centrifugal force and superelevation.

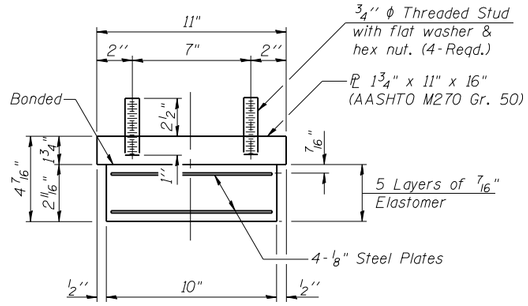


ELEVATION
AT ABUTMENTS



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT ABUTMENTS



BEARING ASSEMBLY

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

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.

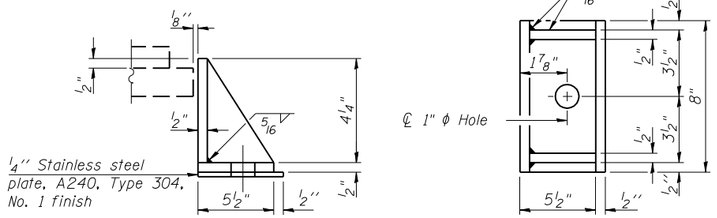
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

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.



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	16
Anchor Bolts, 3/4"	Each	32

I-2E-1

12-2-15

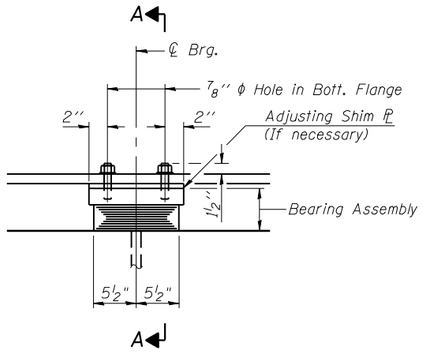
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-20-21-Bearing.dgn	CHECKED - MDC	REVISED -	
DATE = 12/5/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

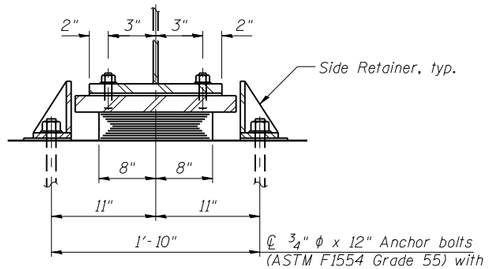
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT BEARING DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 20 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	45
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

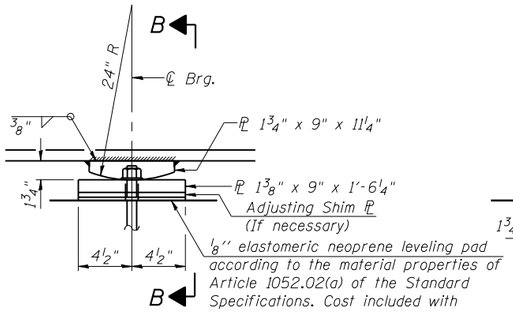


ELEVATION AT PIERS 1 & 3

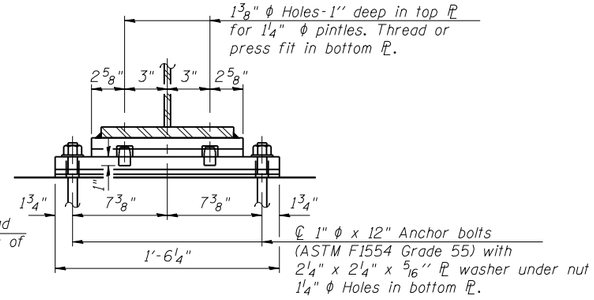


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT PIERS 1 & 3

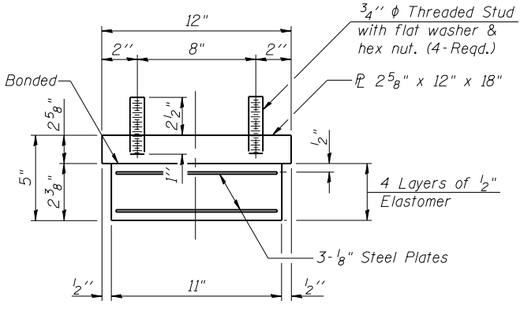


ELEVATION AT PIER 2



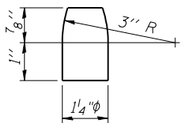
SECTION B-B

FIXED BEARING AT PIER 2



BEARING ASSEMBLY

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



PINTLE

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.

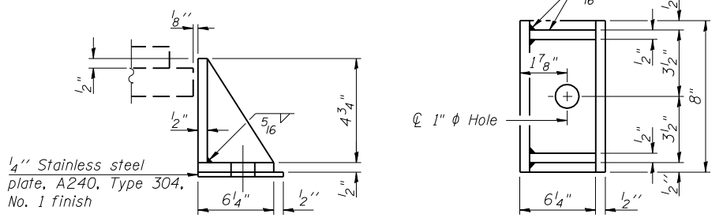
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

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.



SIDE RETAINER

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

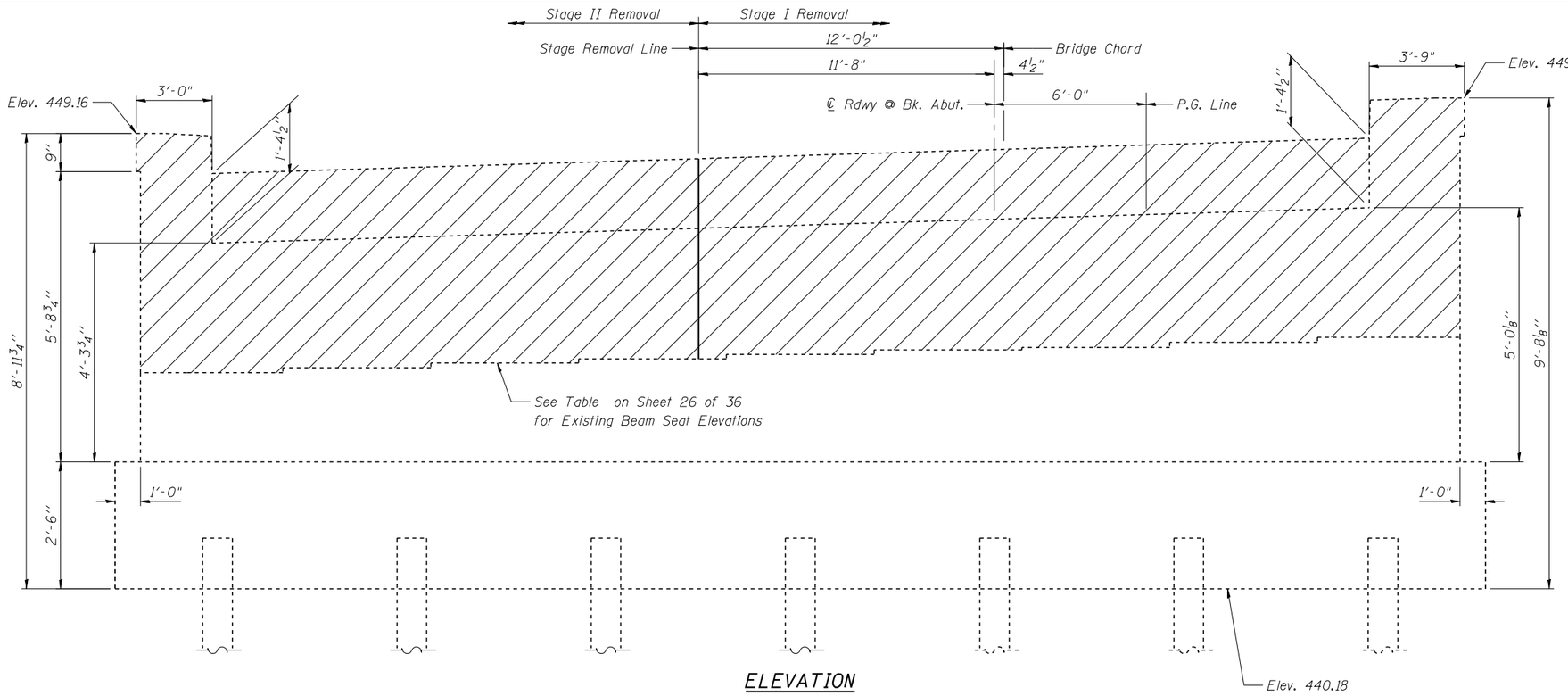
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	16
Anchor Bolts, 3/4"	Each	32
Anchor Bolts, 1"	Each	16

I-2E-1

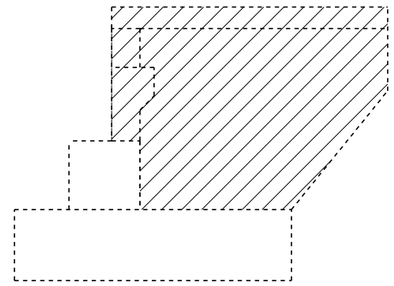
12-2-15

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER BEARING DETAILS STRUCTURE NO. 051-0012	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE = 0510012-74178-20-21-Bearing.dgn	CHECKED - MDC	REVISED -			327	(51-23HB-2)BR	LAWRENCE	260	46
	DATE = 12/5/2018	DRAWN - SJS	REVISED -						CONTRACT NO. 74177	
		CHECKED - MDC	REVISED -		SHEET NO. 21 OF 36 SHEETS			ILLINOIS	FED. AID PROJECT	

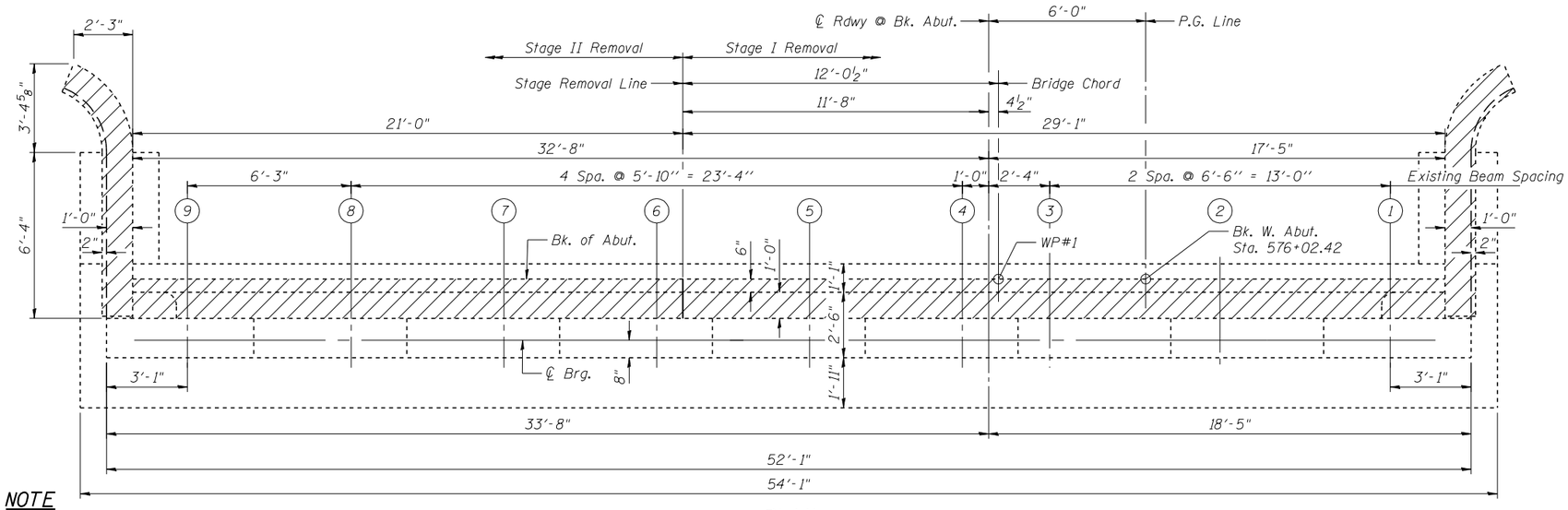


ELEVATION

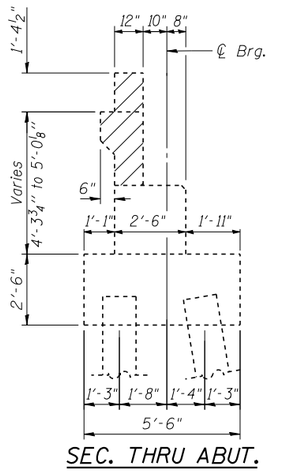
(Looking West)



SIDE ELEVATION



PLAN



SEC. THRU ABUT.

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.

Notes:

Hatched areas indicate limits of Concrete Removal.

Existing reinforcement bars not extending into the new construction shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

WEST ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	8.8

CEC Cummins Engineering Corporation
Civil and Structural Engineering

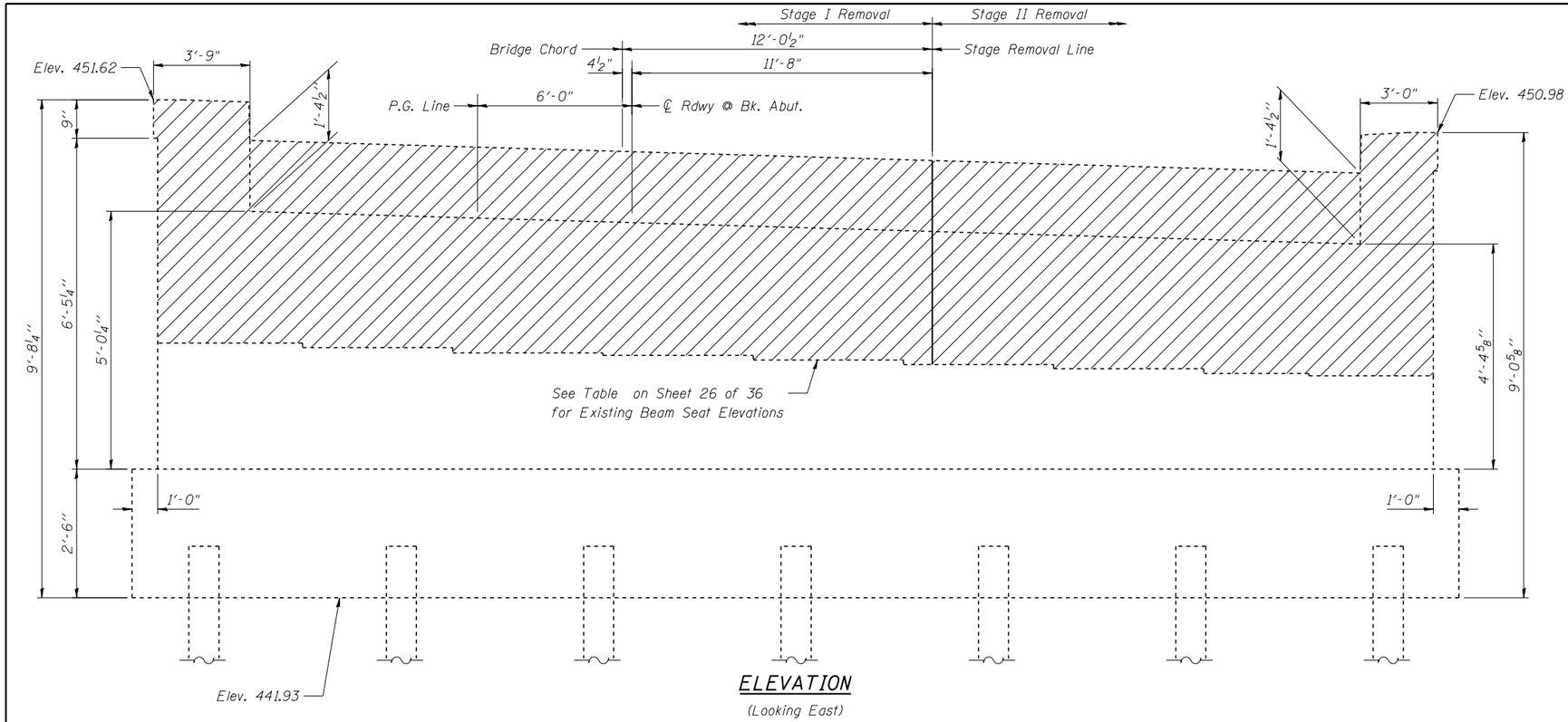
JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 051-0012-74178-22-23-AbutRem.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 051-0012

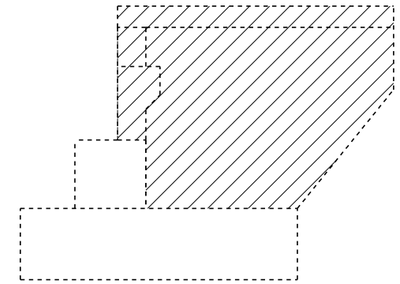
SHEET NO. 22 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	47
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

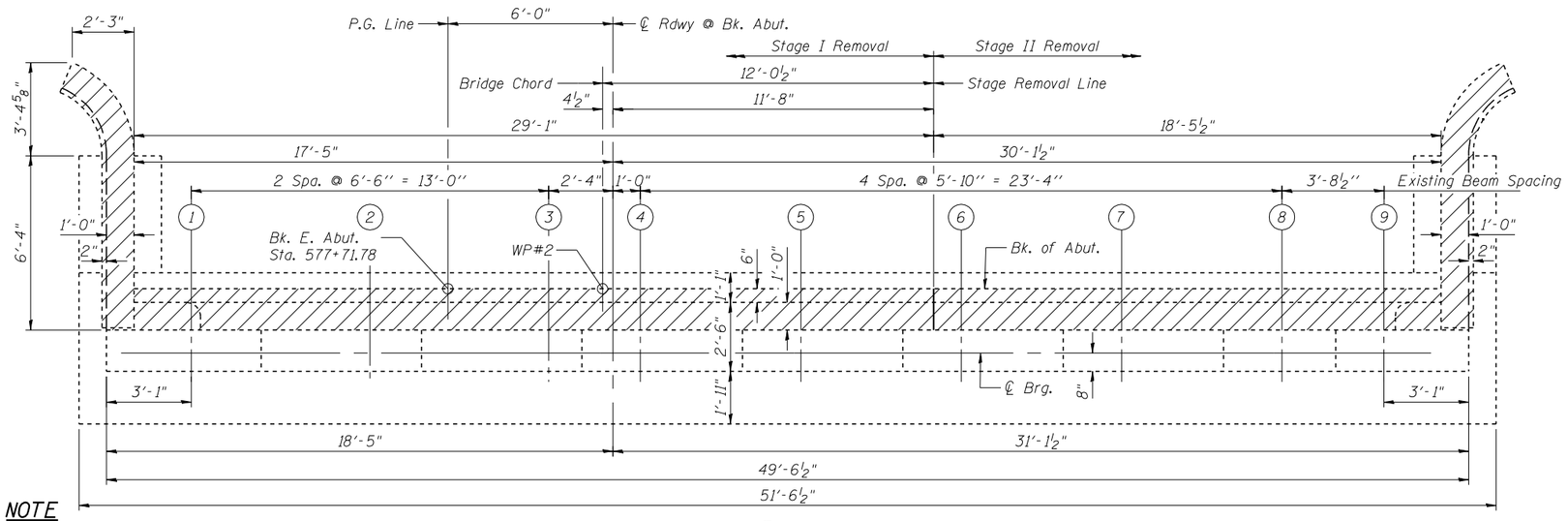


ELEVATION

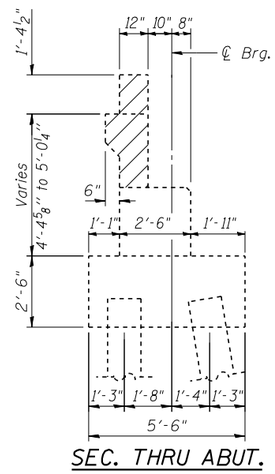
(Looking East)



SIDE ELEVATION



PLAN



SEC. THRU ABUT.

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.

Notes:

Hatched areas indicate limits of Concrete Removal.

Existing reinforcement bars not extending into the new construction shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

WEST ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	9.0

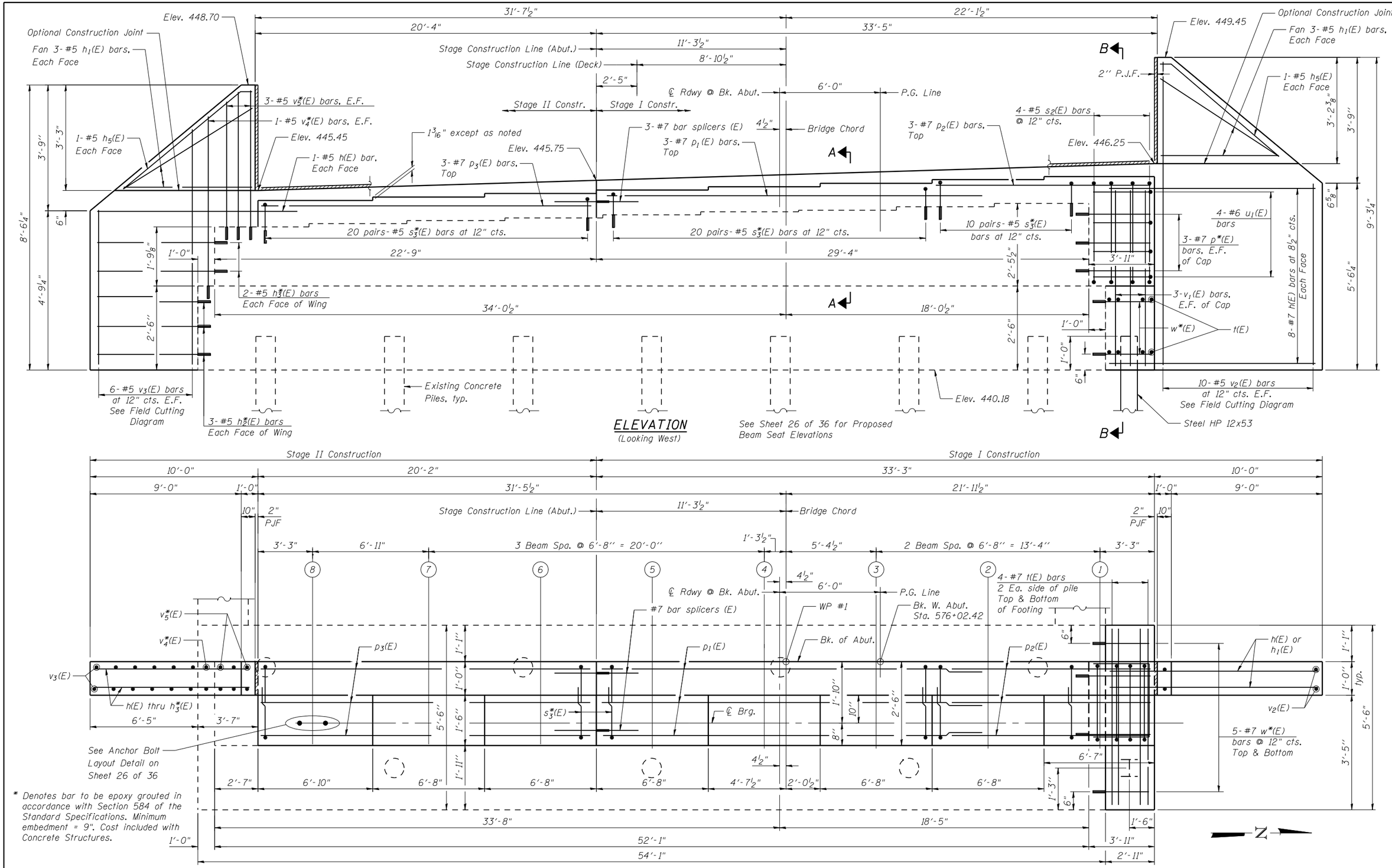
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-22-23-AbutRem.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 051-0012
SHEET NO. 23 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	48
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



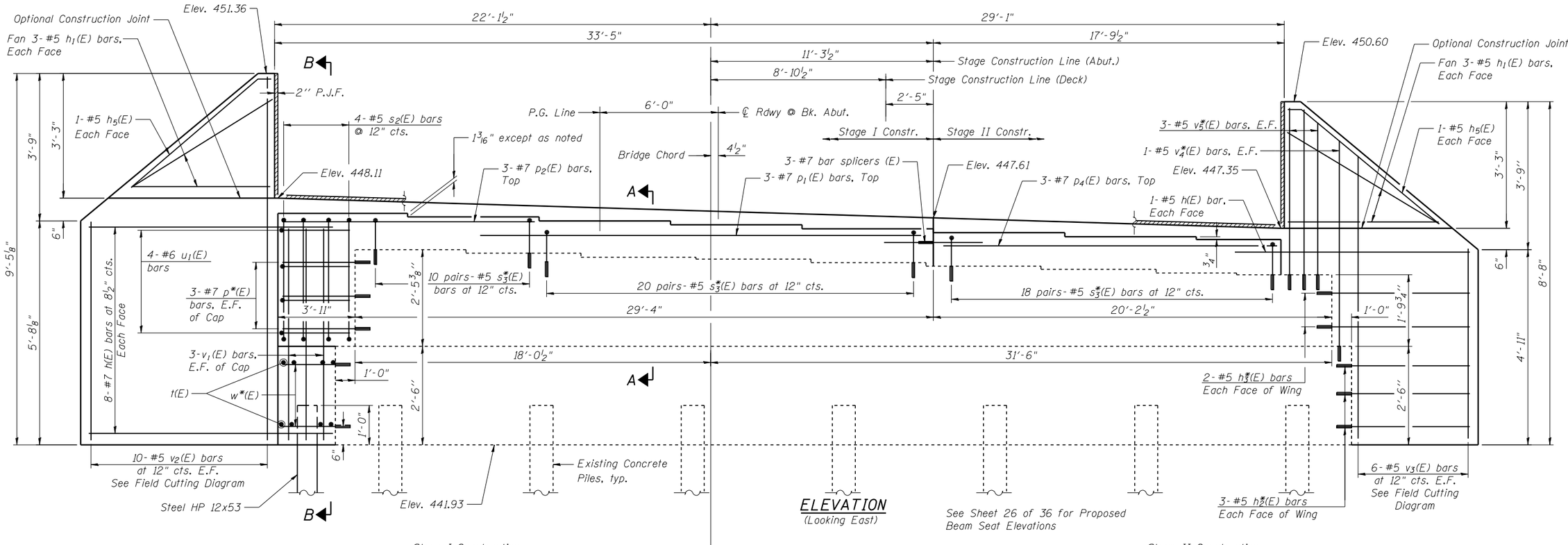
(Sheet 1 of 3)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 0510012-74178-24-26-Abut.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT
STRUCTURE NO. 051-0012
SHEET NO. 24 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	49
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



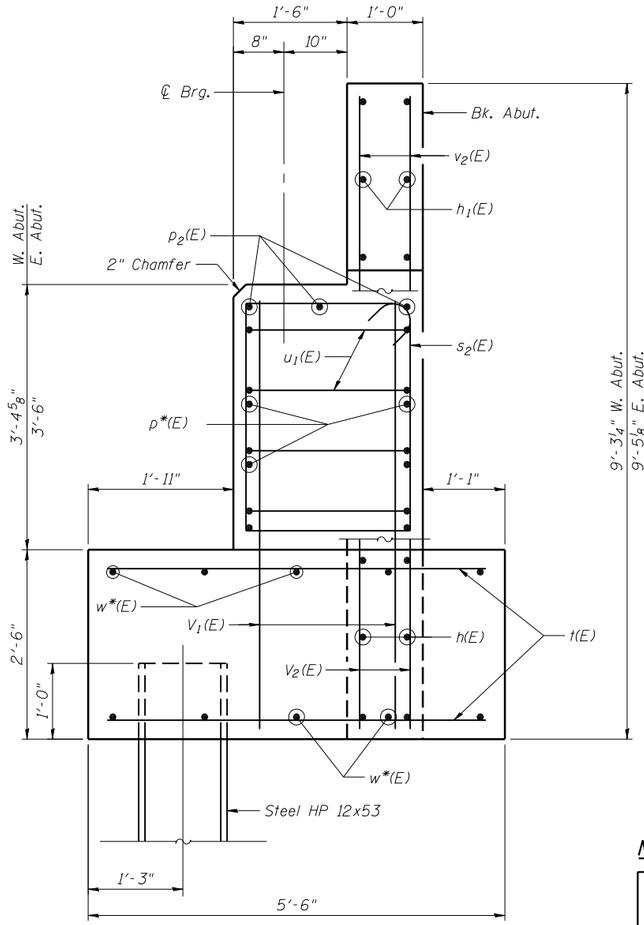
(Sheet 2 of 3)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 051012-74178-24-26-Abut.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

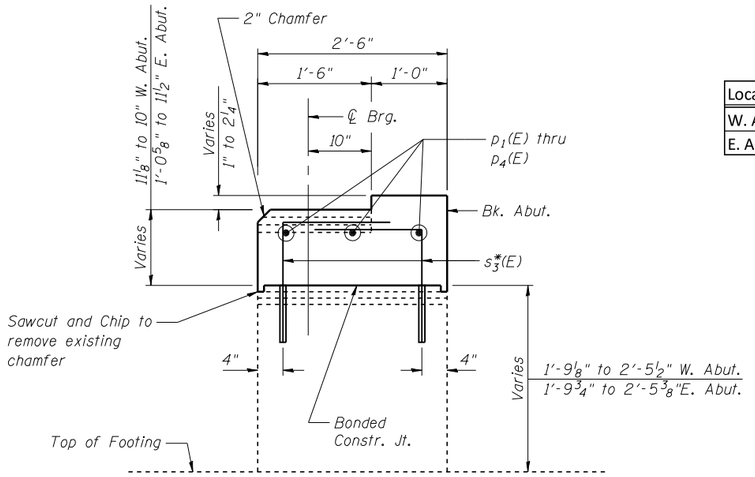
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT
STRUCTURE NO. 051-0012
SHEET NO. 25 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	50
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



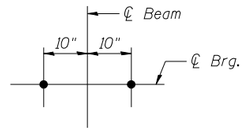
SECTION B-B



SECTION A-A

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.



ANCHOR BOLT LAYOUT DETAIL

EXISTING BEAM SEAT ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9
W. Abut.	445.14	445.04	444.94	444.89	444.8	444.71	444.63	444.54	444.44
E. Abut	446.88	446.78	446.68	446.63	446.55	446.46	446.37	446.29	446.24

PROPOSED BEAM SEAT ELEVATIONS

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
W. Abut.	446.07	445.97	445.87	445.77	445.67	445.57	445.47	445.37
E. Abut	447.93	447.83	447.73	447.63	447.53	447.43	447.33	447.27

BILL OF MATERIAL
TWO (2) ABUTMENTS

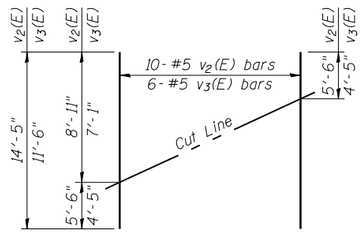
Bar	No.	Size	Length	Shape
h(E)	32	#7	12'-7"	
h_1(E)	24	#5	7'-11"	
h_2^*(E)	12	#5	7'-0"	
h_3^*(E)	8	#5	8'-0"	
h_5(E)	8	#5	8'-1"	
p*(E)	12	#7	4'-6"	
p_1(E)	6	#7	25'-0"	
p_2(E)	6	#7	12'-11"	
p_3(E)	3	#7	19'-10"	
p_4(E)	3	#7	17'-3"	
s_2(E)	8	#5	11'-3"	
s_3^*(E)	196	#5	3'-0"	
t(E)	16	#7	5'-0"	
u_1(E)	8	#6	7'-2"	
v_1(E)	12	#5	5'-6"	
v_2(E)	20	#5	14'-5"	
v_3(E)	12	#5	11'-6"	
v_4(E)	4	#5	5'-11"	
v_5(E)	12	#5	4'-10"	
w*(E)	20	#7	3'-6"	
Structure Excavation		Cu. Yd.	242	
Concrete Structures		Cu. Yd.	24.0	
Reinforcement Bars, Epoxy Coated		Pound	3540	
Furnishing Steel Piles HP 12x53		Foot	180	
Driving Piles		Foot	180	

For details of Bar Splicers, see sheet 31 of 36.

* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.

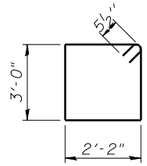
PILE DATA

Type: Steel HP 12x53
Nominal Required Bearing: 418^k
Factored Resistance Available: 230^k
Est. Length: 90'
No. Production Piles: 2

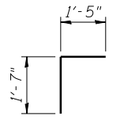


FIELD CUTTING DIAGRAM

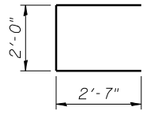
Order v_2(E) and v_3(E) bars full length. Cut as shown and use remainder of bars in opposite face.



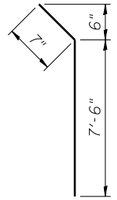
BARS s_2(E)



BAR s_3^*(E)



BAR u_1(E)



BAR h_5^*(E)

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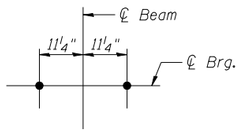
FILE = 0510012-74178-24-26-Abut.dgn	CHECKED - MDC	REVISED -	
DATE = 12/5/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

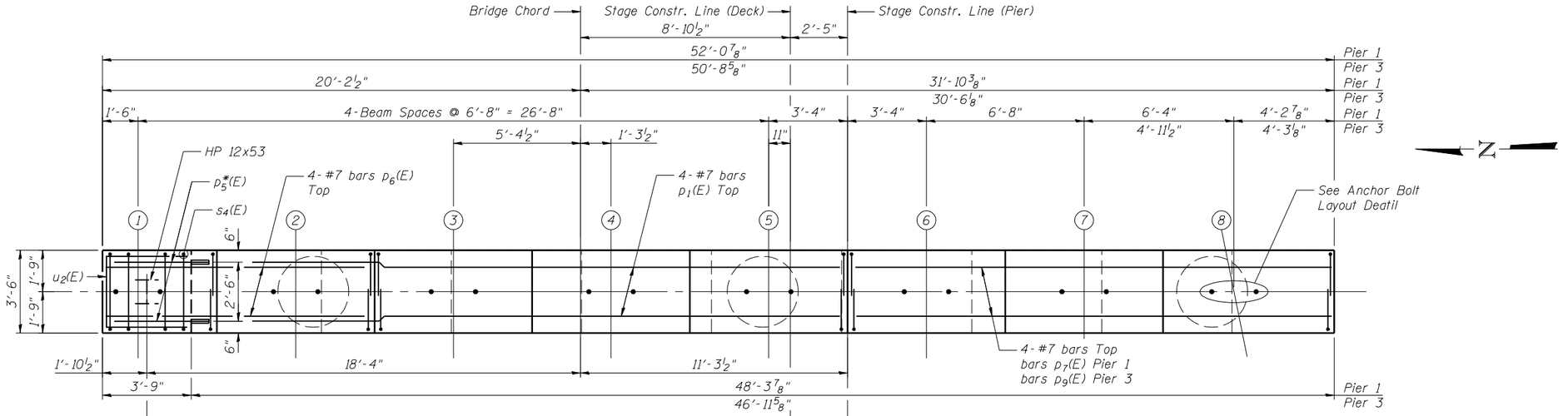
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 26 OF 36 SHEETS

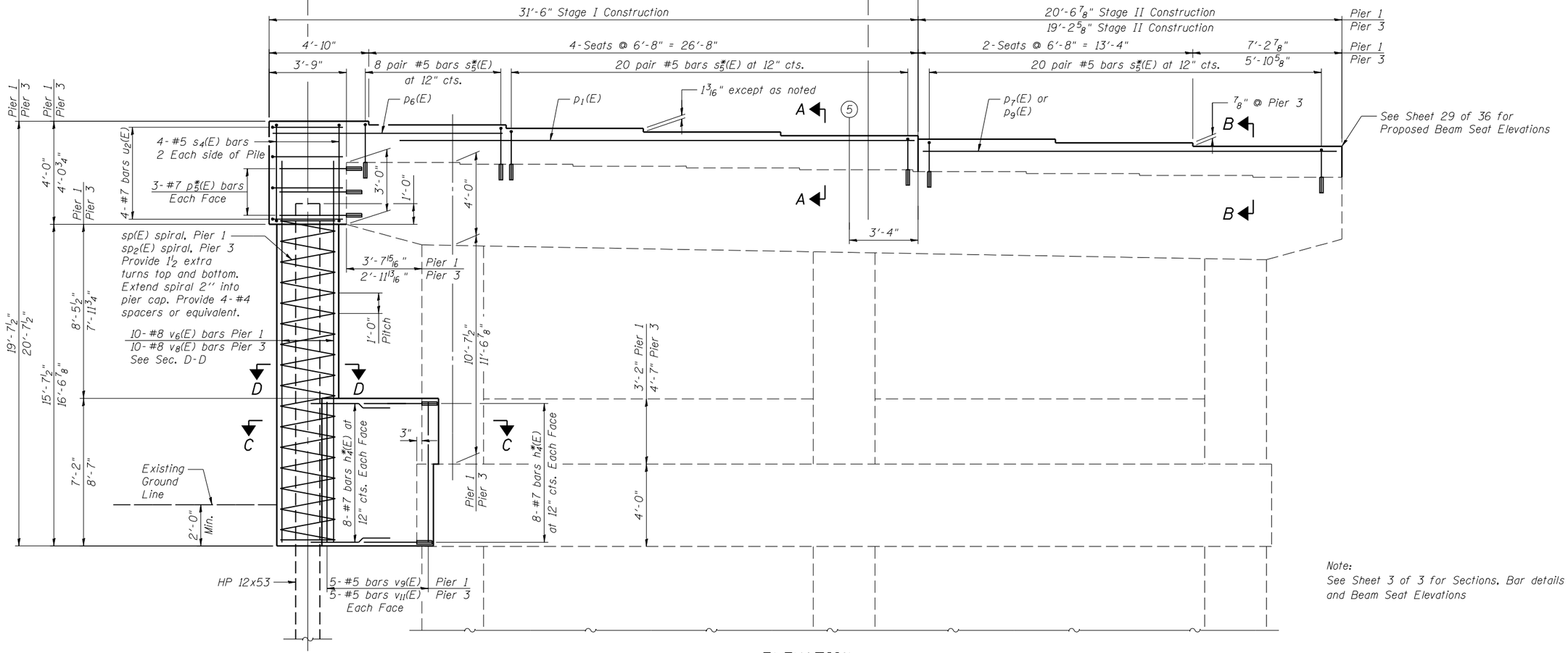
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	51
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



ANCHOR BOLT LAYOUT DETAIL



PLAN



ELEVATION

(Looking East)

Note:
See Sheet 3 of 3 for Sections, Bar details and Beam Seat Elevations

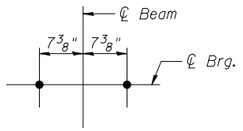
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 051012-74178-27-29-PierDet.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

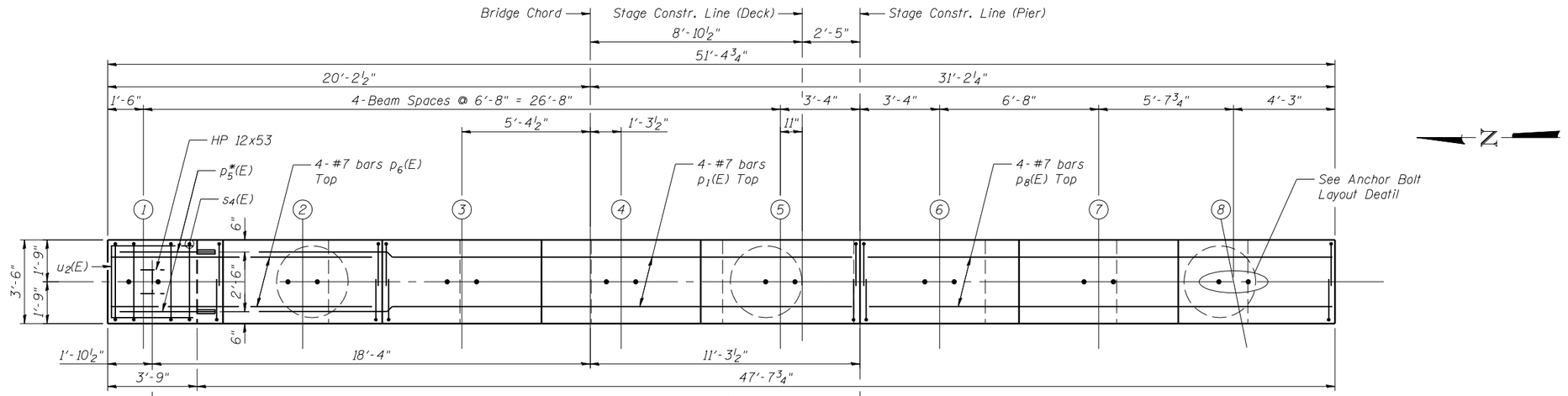
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 1 AND 3 DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 27 OF 36 SHEETS

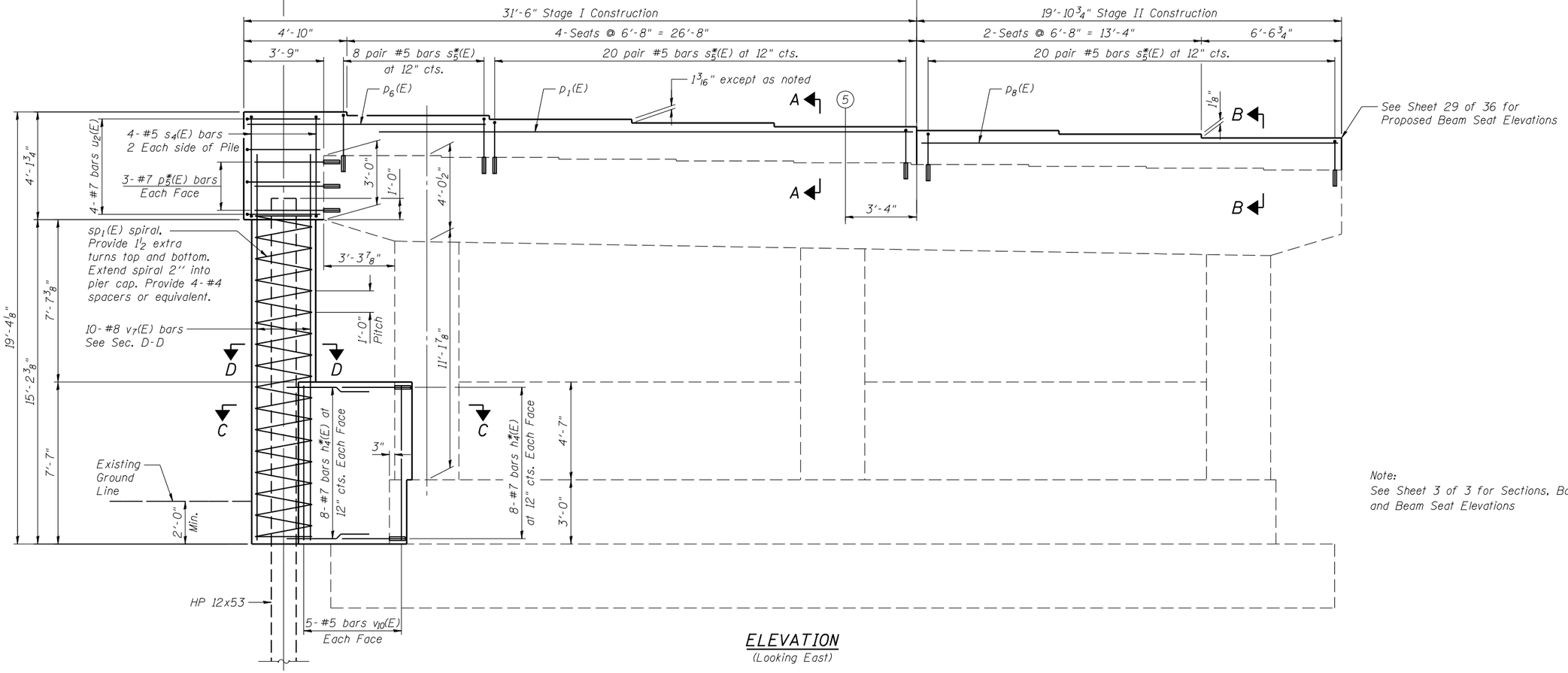
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	52
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



ANCHOR BOLT LAYOUT DETAIL



PLAN



ELEVATION

(Looking East)

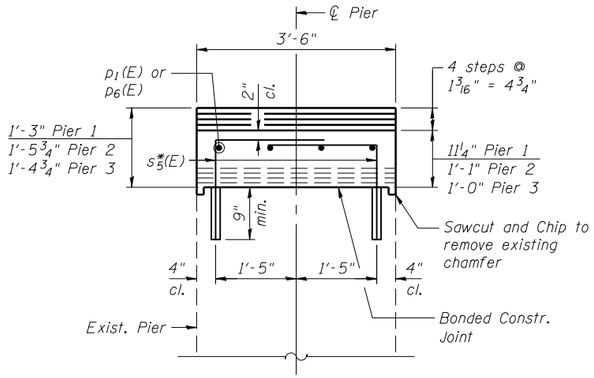
Note:
See Sheet 3 of 3 for Sections, Bar details and Beam Seat Elevations

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 0510012-74178-27-29-PierDet.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

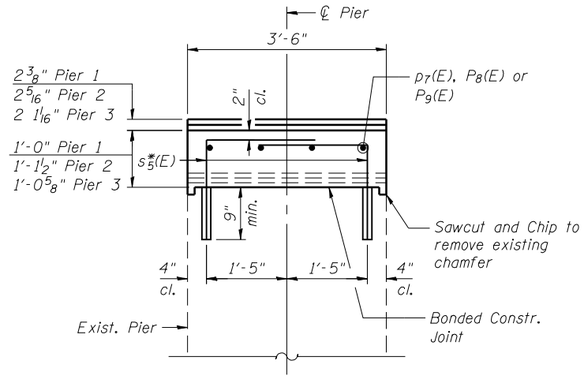
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 28 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	53
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



SECTION A-A



SECTION B-B

EXISTING BEAM SEAT ELEVATIONS

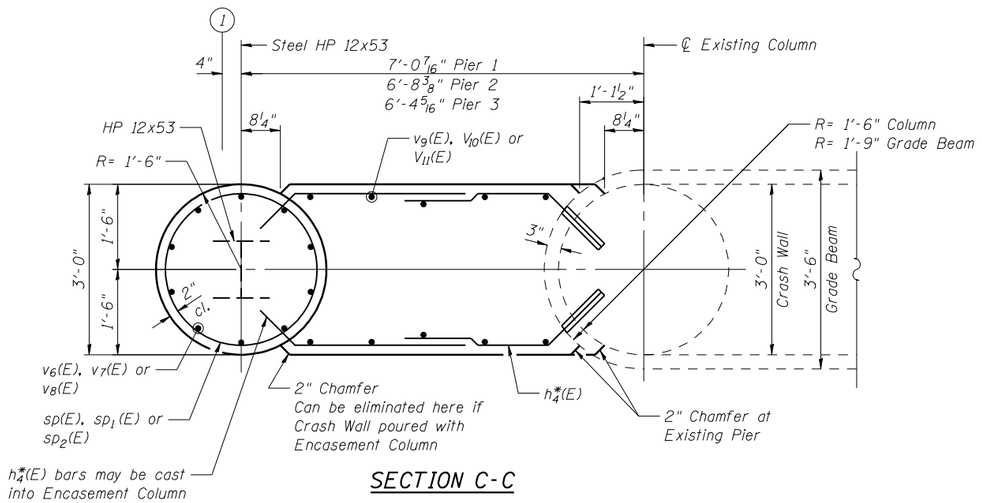
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9
Pier 1	445.50	445.40	445.31	445.26	445.17	445.08	444.99	444.90	444.81
Pier 2	446.06	445.96	445.86	445.81	445.72	445.64	445.55	445.46	445.39
Pier 3	446.45	446.35	446.25	446.20	446.12	446.03	445.94	445.86	445.79

PROPOSED BEAM SEAT ELEVATIONS

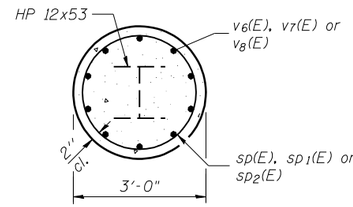
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
Pier 1	446.50	446.40	446.30	446.20	446.10	446.00	445.90	445.80
Pier 2	447.20	447.10	447.00	446.90	446.80	446.70	446.60	446.51
Pier 3	447.51	447.41	447.31	447.21	447.11	447.01	446.91	446.84

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.82 feet to match benchmark datum.



SECTION C-C



SEC. D-D

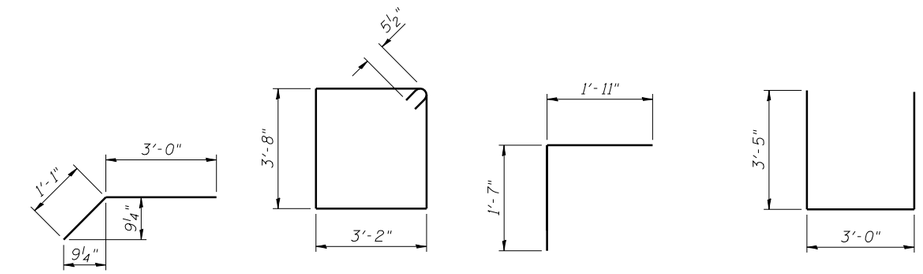
PILE DATA

Type: Steel HP 12x53
Nominal Required Bearing: 418^k
Factored Resistance Available: 230^k
Est. Length: 95'
No. Production Piles: 3

BILL OF MATERIAL
THREE (3) PIERS 1, 2 & 3

	Bar	No.	Size	Length	Shape
	h_4^*(E)	84	#7	4'-1"	
	p_1(E)	12	#7	25'-0"	
	p_5^*(E)	18	#7	4'-3"	
	p_6(E)	12	#7	11'-2"	
	p_7(E)	4	#7	20'-2"	
	p_8(E)	4	#7	19'-6"	
	p_9(E)	4	#7	18'-10"	
	s_4(E)	12	#5	14'-7"	
	s_5^*(E)	288	#5	3'-6"	
**	sp(E)	1	#3	15'-7"	
**	sp_1(E)	1	#3	15'-2"	
**	sp_2(E)	1	#3	16'-7"	
	u_2(E)	12	#6	9'-10"	
	v_6(E)	10	#8	18'-3"	
	v_7(E)	10	#8	17'-10"	
	v_8(E)	10	#8	19'-3"	
	v_9(E)	10	#5	6'-10"	
	v_{10}(E)	10	#5	7'-3"	
	v_{11}(E)	10	#5	8'-3"	
	Structure Excavation		Cu. Yd.	15	
	Concrete Structures		Cu. Yd.	47.8	
	Reinforcement Bars, Epoxy Coated		Pound	5,530	
	Furnishing Steel Piles HP 12x53		Foot	285	
	Driving Piles		Foot	285	

** Length is height of spiral.



BAR h_4^*(E) BAR s_4(E) BAR s_5^*(E) BAR u_2(E)

Notes:
Reinforcement Bars designated (E) shall be epoxy coated.
* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.

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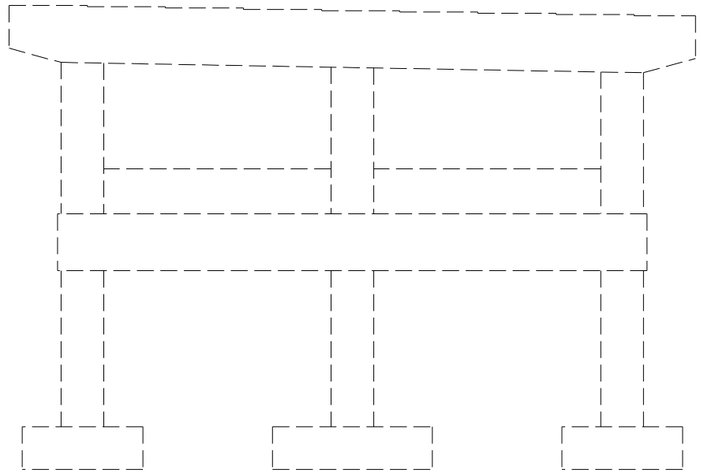
JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-27-29-PierDet.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

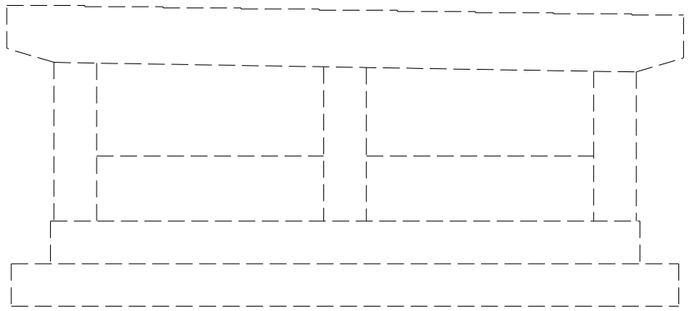
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 29 OF 36 SHEETS

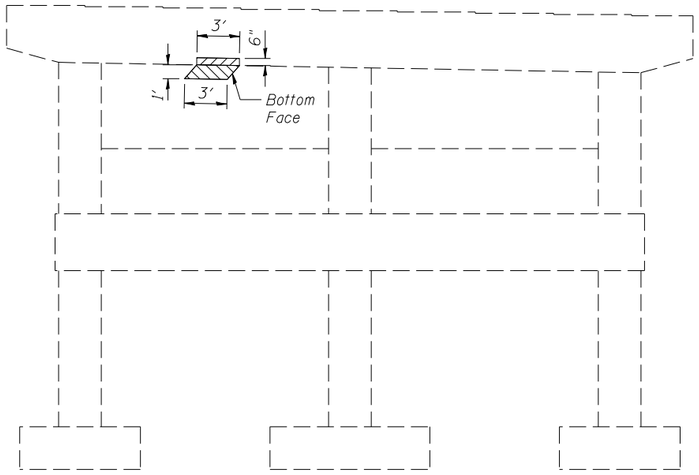
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	54
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



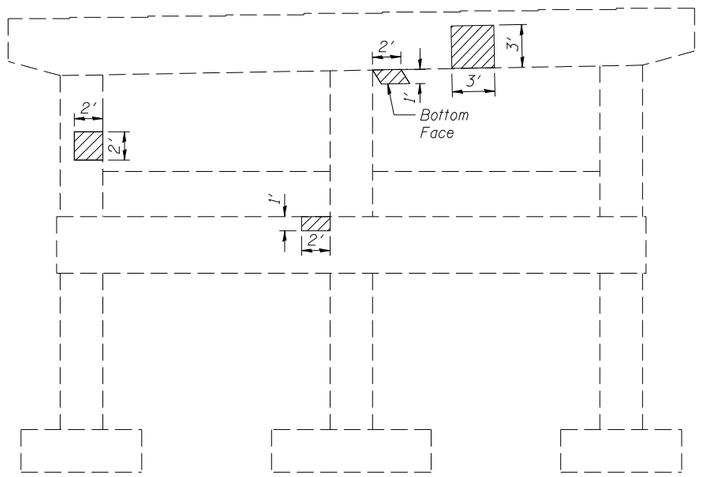
ELEVATION
PIER 1
(Looking East)



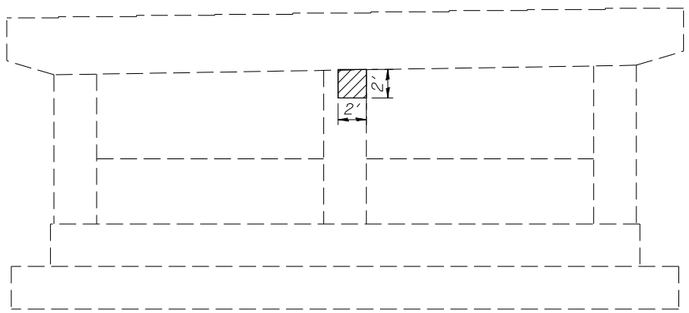
ELEVATION
PIER 2
(Looking East)



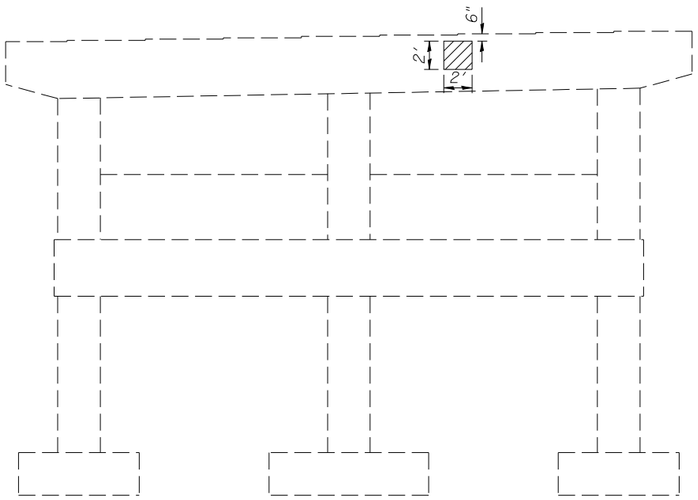
ELEVATION
PIER 3
(Looking East)



ELEVATION
PIER 1
(Looking West)



ELEVATION
PIER 2
(Looking West)



ELEVATION
PIER 3
(Looking West)

PIER REPAIR

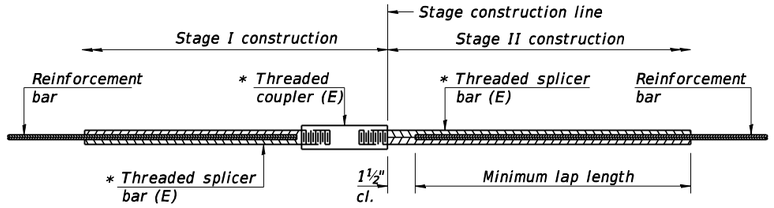
ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	30

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -
	FILE = 0510012-74178-38-PierRepairs.dgn	CHECKED - MDC	REVISED -
	DATE = 10/18/2018	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS
STRUCTURE NO. 051-0012
SHEET NO. 30 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	55
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

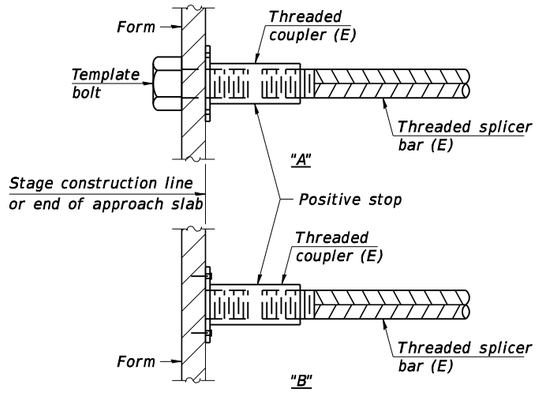


STANDARD BAR SPLICER ASSEMBLY

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

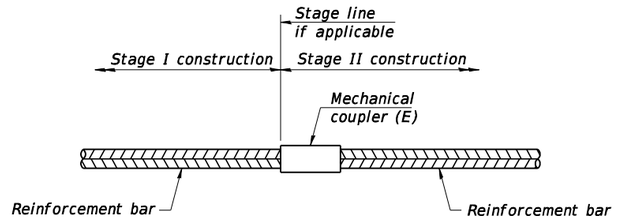
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	555	3'-6"
Diaphragms	#6	16	4'-0"
Abutments	#7	6	4'-5"
Approach	#5	172	3'-4"
Approach	#8	120	4'-9"



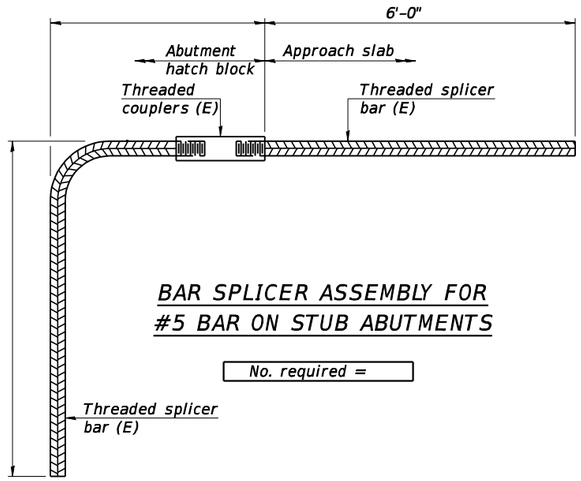
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



NOTES

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

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Speci cations.m

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-17-2017

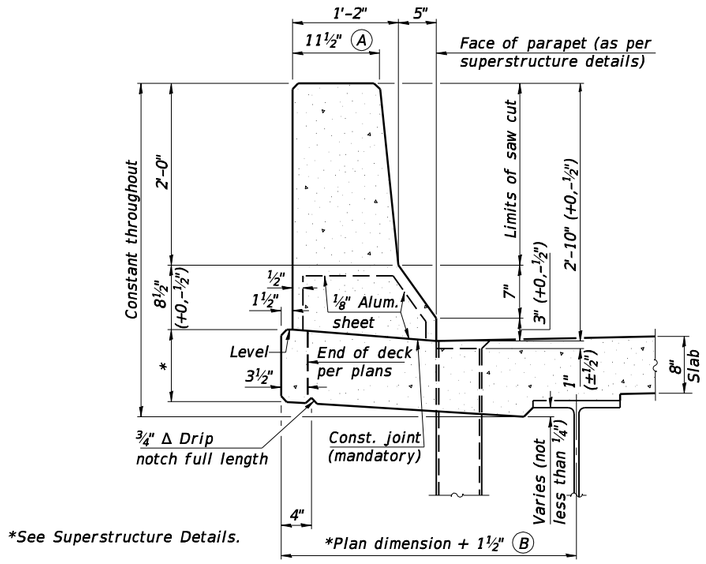
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-31-Splicer.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

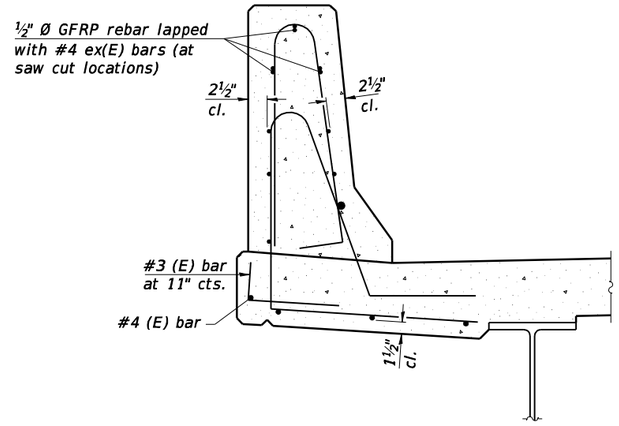
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 051-0012
SHEET NO. 31 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	56
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



34" F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

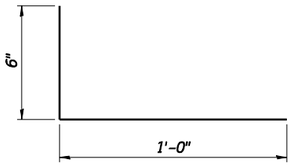
(34" parapet shown – 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

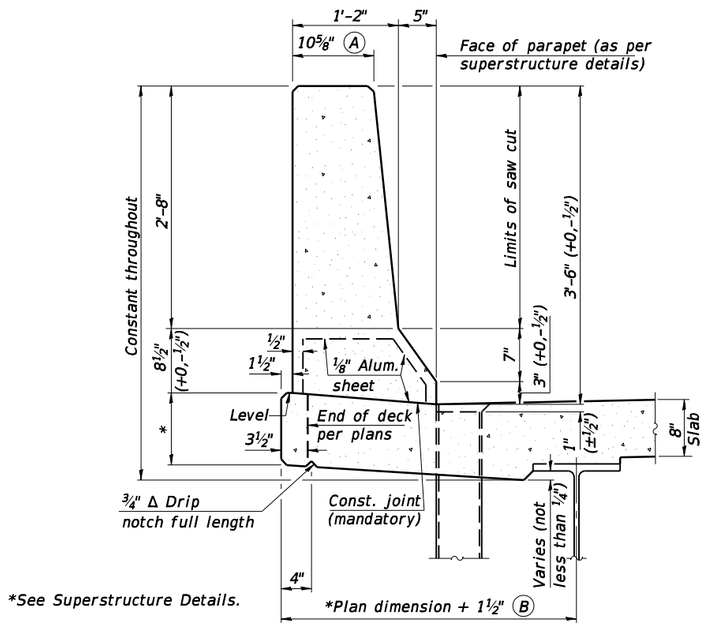
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet.

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

Steel superstructure shown. Other superstructure types similar.

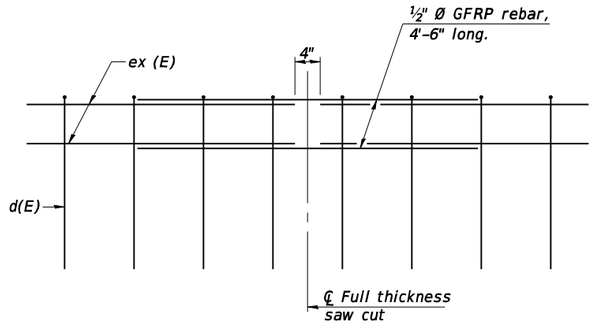


#3 (E) BAR



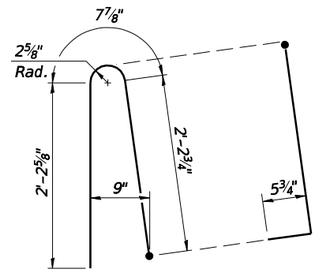
42" F SHAPE PARAPET SECTION

(Showing dimensions)



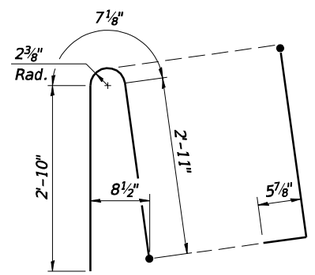
GFRP REBAR STIFFENING DETAIL

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



ALTERNATE BAR d(E)

(For 34" parapet when conduit is present)



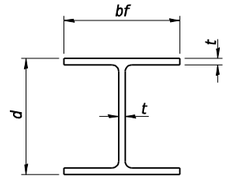
ALTERNATE BAR d(E)

(For 42" parapet when conduit is present)

SFP 34-42 2-17-2017

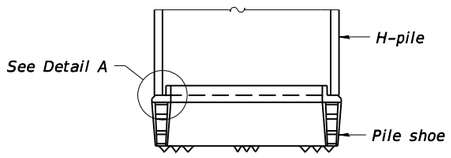
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.1	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 051-0012
	FILE = 0510012-74178-32-ParaSlip.dgn	CHECKED - MDC	REVISED -		SHEET NO. 32 OF 36 SHEETS
	DATE = 10/18/2018	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	57
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

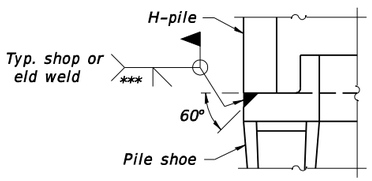


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



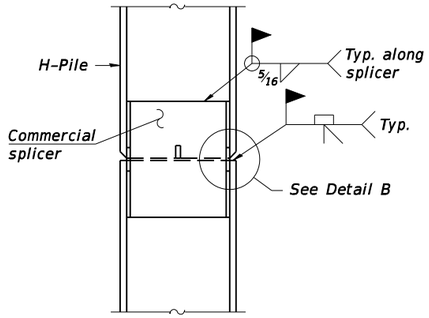
ELEVATION



DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



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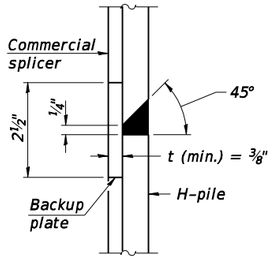
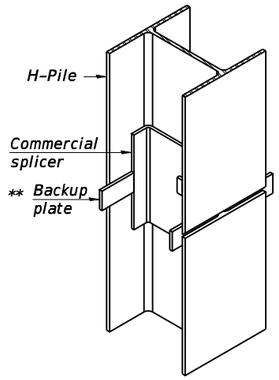
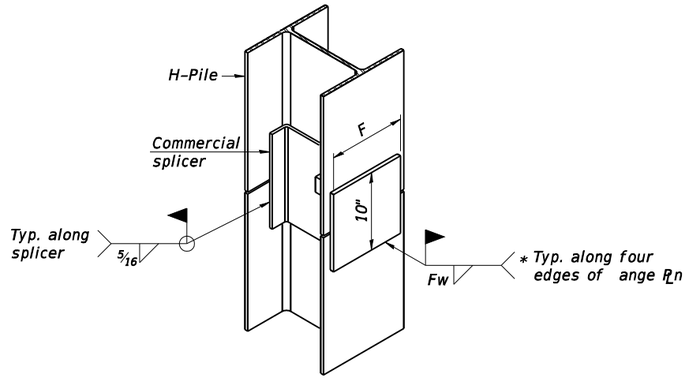


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



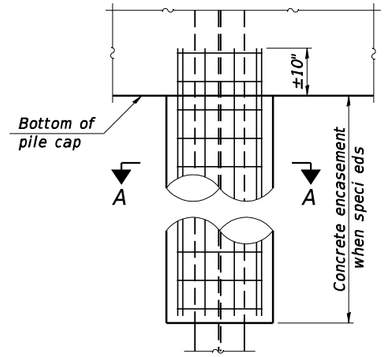
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each ange.n

** Remove portions of backup plates that extend outside the anges.i

*** Weld size per pile shoe manufacturer (5/16" min.).



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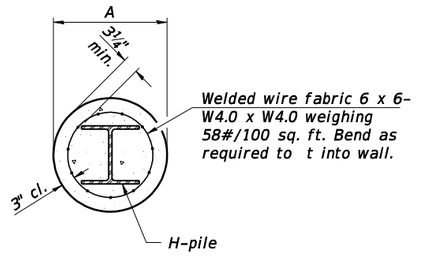
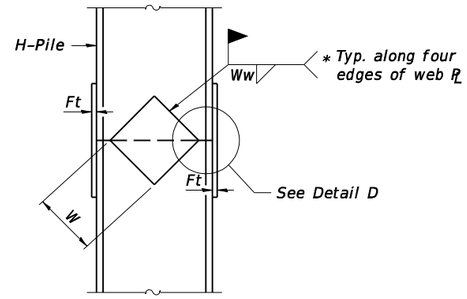


SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT

(Forms for encasement may be omitted when soil conditions permit).



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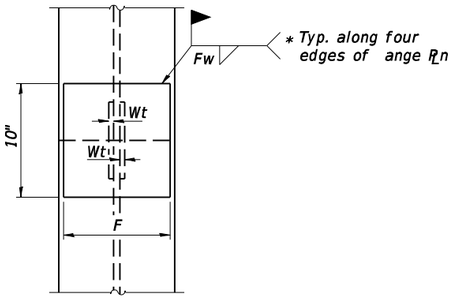
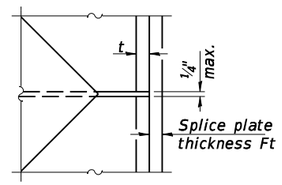


END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

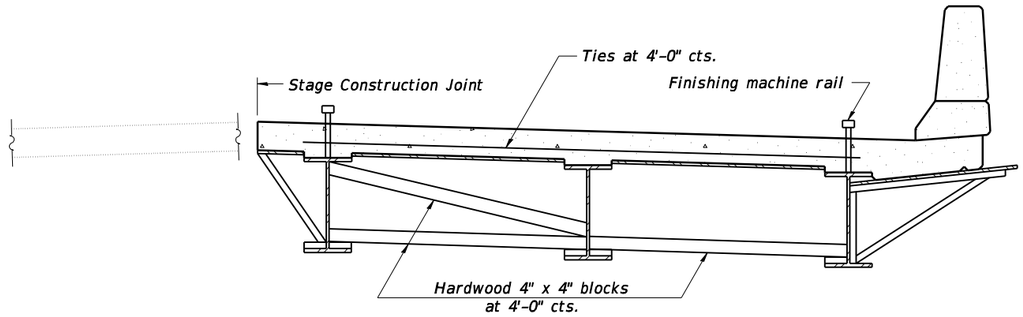
F-HP 8-11-2017

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Speci cations, except. as modi ed below and in the details shown on this sheet.i

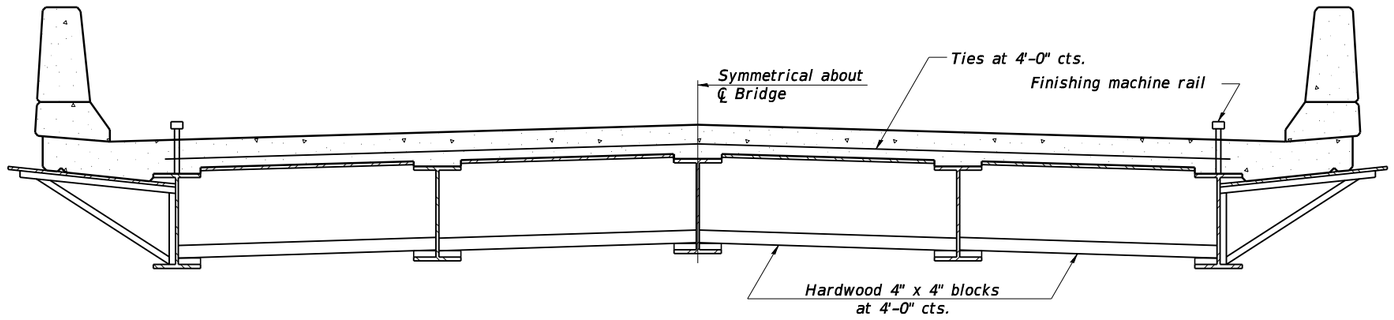
The nishing machine rails shall be placed on the top ange of the. exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

SB-1 2-17-2017

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-34-Cantilever.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER STRUCTURE NO. 051-0012

SHEET NO. 34 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	59
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
SAM Consultants, Inc.

SOIL BORING LOG

Date 12/30/13

ROUTE US 50- DISTRICT 7 DESCRIPTION Drilled at 7' South from staked location First Encounter LOGGED BY MDM

SECTION P-97-003-10 LOCATION , SEC. 36, TWP. 4N, RNG. 12W, 2nd PM

COUNTY LAWRENCE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-25
Station 576+85
Offset 80.5ft South
Ground Surface Elev. 430.16 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
Upon Completion 408.2 ft ▼
After 24 Hrs. 411.2 ft ▽
415.2 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
429.56				TOPSOIL, Black
	2			CLAY with trace of sand, Brown and gray, stiff. CL
	3	1.0	14.2	
	6	S		
	5			
	8	1.1	23.0	
425.16 -5	9	S		
	2			CLAY, Brown and gray, medium stiff to soft. CL
	2	0.5	23.0	
	4	S		
	1			
	1	0.4	26.7	
420.16 -10	2	B		
	2			CLAY, Brown and gray, soft. CL
	3	0.3	28.5	
	4	B		
	1			
	2	0.3	39.3	
▽15	2	B		
	0			
	2	0.5	29.3	
	4	B		
	1			
▽	2	0.3	30.0	
410.16 -20	4	B		
	2			SILTY CLAY, Brown and gray, medium stiff. CL-ML
▼	5	0.8	26.5	
	5	B		
	2			
	4	0.6	27.6	
405.16 -25	3	B		
	0			SILTY LOAM, Brown and gray, soft. CL-ML
	2	0.3	29.6	
402.66	3	B		
	1			CLAYEY SAND, Gray, very soft. SC
	3	0.1	24.1	
400.16 -30	3	B		
	8			SAND, Gray, dense. SP
	14		25.4	
395.16 -35	20			
	5			GRAVELLY SAND, Gray, medium dense. GP
	8		16.7	
390.16 -40	8			

Illinois Department of Transportation
Division of Highways
SAM Consultants, Inc.

SOIL BORING LOG

Date 12/30/13

ROUTE US 50- DISTRICT 7 DESCRIPTION Drilled at 7' South from staked location First Encounter LOGGED BY MDM

SECTION P-97-003-10 LOCATION , SEC. 36, TWP. 4N, RNG. 12W, 2nd PM

COUNTY LAWRENCE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-25
Station 576+85
Offset 80.5ft South
Ground Surface Elev. 430.16 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
Upon Completion 408.2 ft ▼
After 24 Hrs. 411.2 ft ▽
415.2 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				CLAY, Gray, medium stiff to stiff. CL
	4			
	5	0.7	25.0	
-45	7	S		
	5			
	7	1.2	22.8	
380.16 -50	8	S		
	1			SILTY CLAY, Gray, soft. CL-ML
	3	0.3	27.3	
-55	3	B		
	2			
	2	0.1	23.9	
-60	3	B		
	3			SILTY CLAY, Gray, soft. CL-ML *(continued)*
	3	0.2	34.9	
365.16 -65	3	B		
	3			GRAVELLY SAND, Gray, medium dense. GP
	4		21.1	
-70	6			
	3			
	4		18.6	
355.16 -75	5			
				No Recovery
				Apparent Auger Refusal @ 79.0'.
351.16	50/1"			
-80				End of Boring

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -	
FILE = 0510012-74178-35-36-Borings.dgn	CHECKED - MDC	REVISED -	
DATE = 10/18/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0012
SHEET NO. 35 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	60
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
SAM Consultants, Inc.

SOIL BORING LOG

Date 12/27/13

ROUTE US 50- DISTRICT 7 DESCRIPTION Drilled at 57' West from staked location LOGGED BY MDM

SECTION P-97-003-10 LOCATION First Encounter, SEC. 31, TWP. 4N, RNG. 11W, 2nd PM

COUNTY LAWRENCE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-26
Station 577+19
Offset 25.7ft South
Ground Surface Elev. 430.00 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
Upon Completion 411.0 ft
After 24 Hrs. 415.0 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Aggregate Base Course			
429.2			
CLAY with trace of sand, Brown and gray, very stiff to stiff. CL	4		
	4 6	2.5 S	16.4
	4		
-5	5 9	1.2 S	16.0
	3		
	5 6	1.0 S	17.4
	3		
420.00 -10	6 7	1.7 S	21.3
CLAY with trace of sand and gravel, Brown and gray, medium stiff. CL	3		
	5 10	0.8 S	18.4
417.50			
SAND, Gray, medium dense. SP	4		
▽-15	7 5		11.1
414.00			
CLAY, Brown and gray, stiff. CL	2		
	3 4	1.0 B	27.3
▽	3		
-20	4 6	1.5 S	23.4

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY, Brown and gray, stiff. CL *(continued)*	4		
407.5			
	4 8	1.1 B	25.2
CLAY, Brown and gray, soft. CL	0		
-25	1 3	0.3 B	25.1
404.00			
SAND, Gray, medium dense to dense. SP	5		
	9 9		25.2
	0		
-30	0 3		22.6
	9		
395.00 -35	19 25		24.8
GRAVELLY SAND, Gray, medium dense. GP			
	2		
390.00 -40	4 7		23.2

Illinois Department of Transportation
Division of Highways
SAM Consultants, Inc.

SOIL BORING LOG

Date 12/27/13

ROUTE US 50- DISTRICT 7 DESCRIPTION Drilled at 57' West from staked location LOGGED BY MDM

SECTION P-97-003-10 LOCATION First Encounter, SEC. 31, TWP. 4N, RNG. 11W, 2nd PM

COUNTY LAWRENCE DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-26
Station 577+19
Offset 25.7ft South
Ground Surface Elev. 430.00 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
Upon Completion 411.0 ft
After 24 Hrs. 415.0 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY, Gray, stiff to very stiff. CL-ML	4		
-45	5 8	1.8 S	24.4
	4		
-50	8 10	2.4 S	25.6
	4		
375.00 -55	5 5	1.1 B	28.6
CLAYEY SAND, Gray, soft to medium stiff. SC	0		
-60	0 3	0.2 B	27.0

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAYEY SAND, Gray, soft to medium stiff. SC *(continued)*	5		
-65	6 10	0.6 B	28.1
365.00			
SAND, Gray, medium dense to dense. SP	5		
	9 9		27.9
-70			
	11		
355.00 -75	17 22		19.1
WEATHERED SHALE, Gray, very hard.	27		
Apparent Auger Refusal @ 80.0'	50/3"		13.2
350.00 -80			
End of Boring			

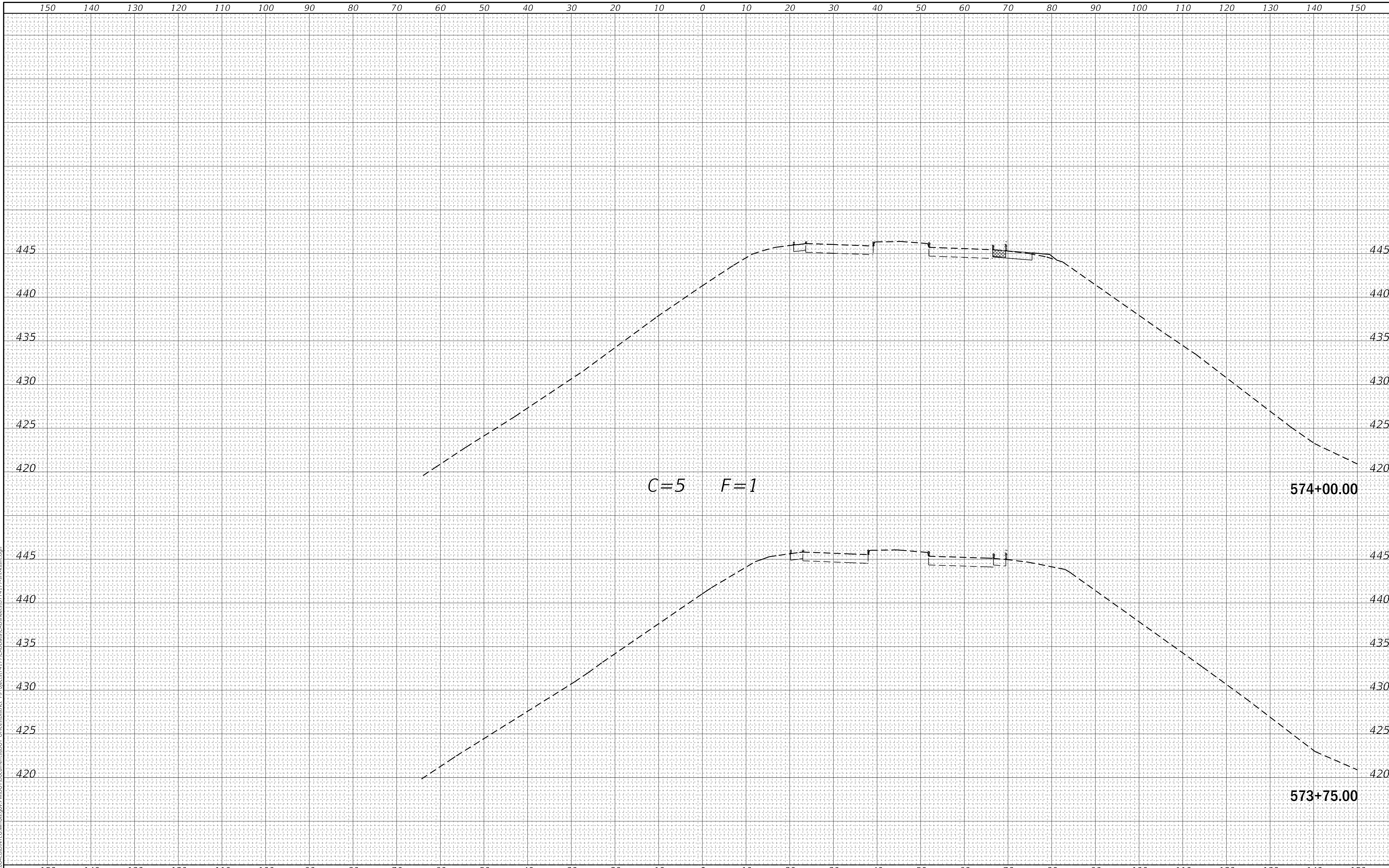
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.1	DESIGNED - AAN	REVISED -
FILE = 051I0012-74178-35-36-Borings.dgn	CHECKED - MDC	REVISED -
DATE = 10/18/2018	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 051-0012
SHEET NO. 36 OF 36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23HB-2)BR	LAWRENCE	260	61
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



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	DRAWN -
PLOT SCALE = 20.0000 ' / in.	CHECKED -
PLOT DATE = 10/22/2018	DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0012

SCALE: | SHEET 1 OF 11 SHEETS | STA. 573+75.00 TO STA. 574+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	62

CONTRACT NO. 74177

ILLINOIS FED. AID PROJECT

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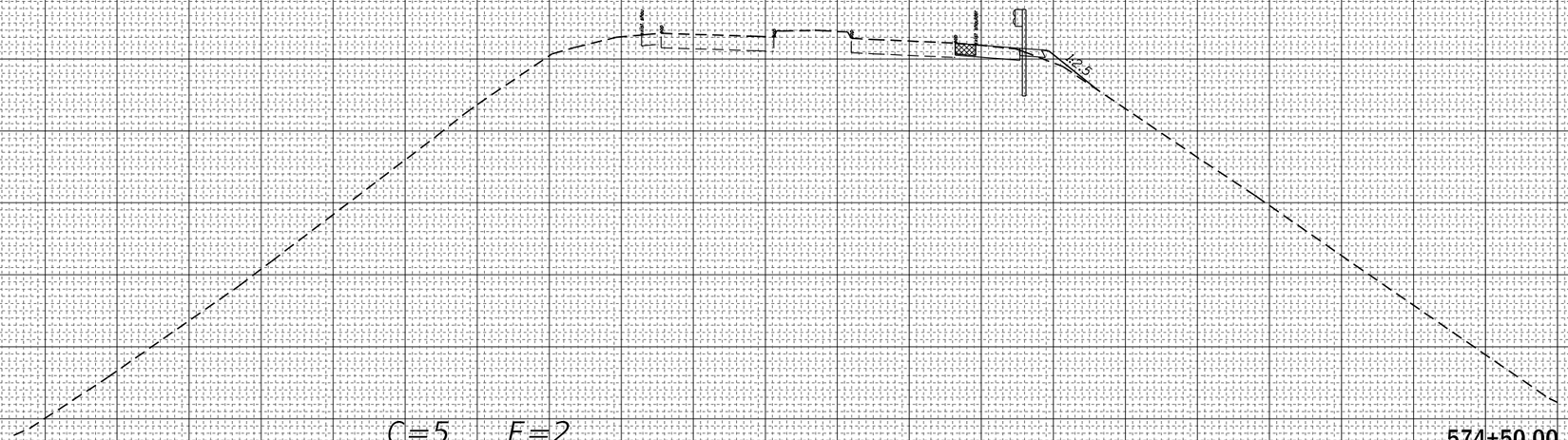

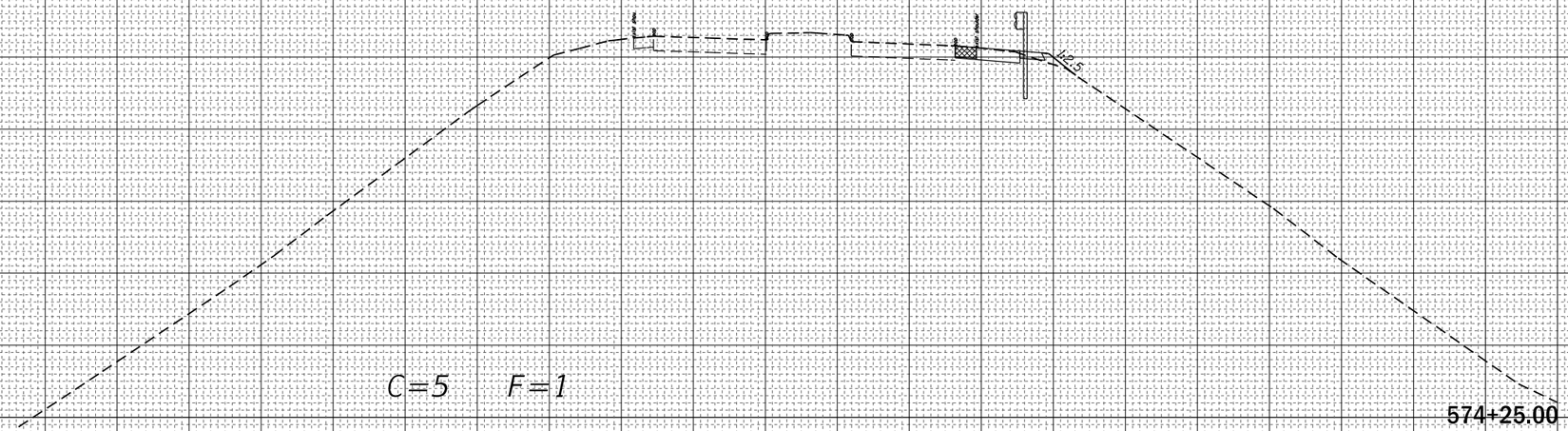

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PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 2 OF 11 SHEETS | STA. 574+25.00 | TO STA. 574+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	63
		CONTRACT NO. 74177		
	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

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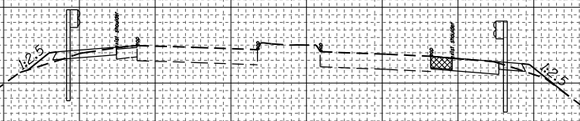

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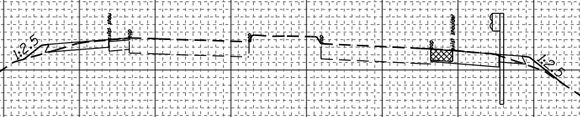

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USER NAME = steffenmk	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 3 OF 11 SHEETS | STA. 574+75.00 | TO STA. 575+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	64
		CONTRACT NO. 74177		
	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

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DATE	BY	FINAL SURVEY
		NOTE BOOK
		NO.

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

DATE	BY	ORIGINAL SURVEY
		NOTE BOOK
		NO.

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

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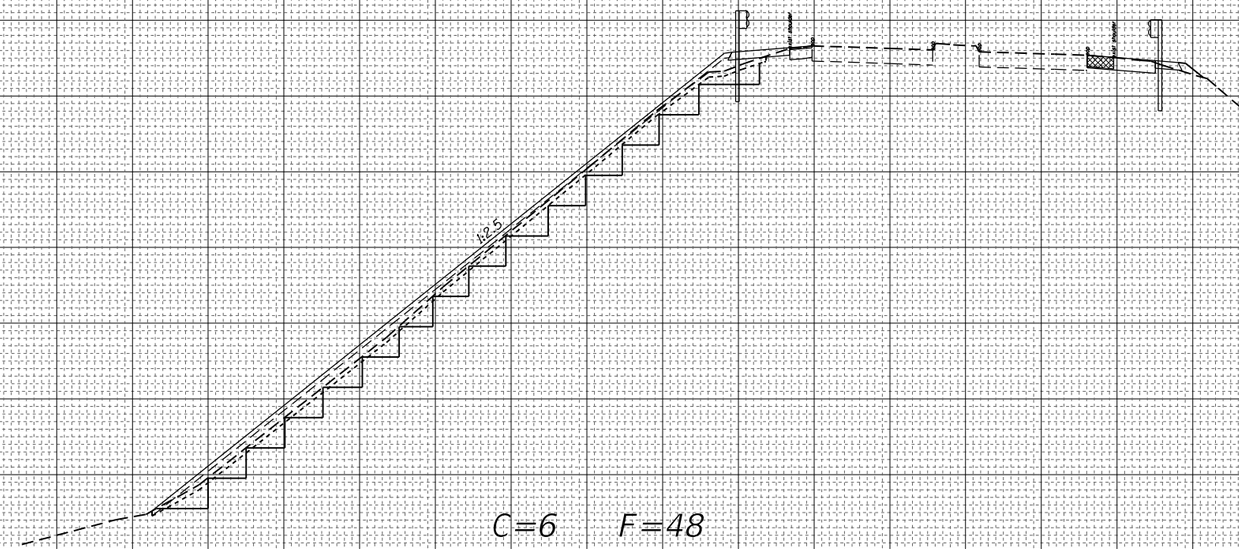

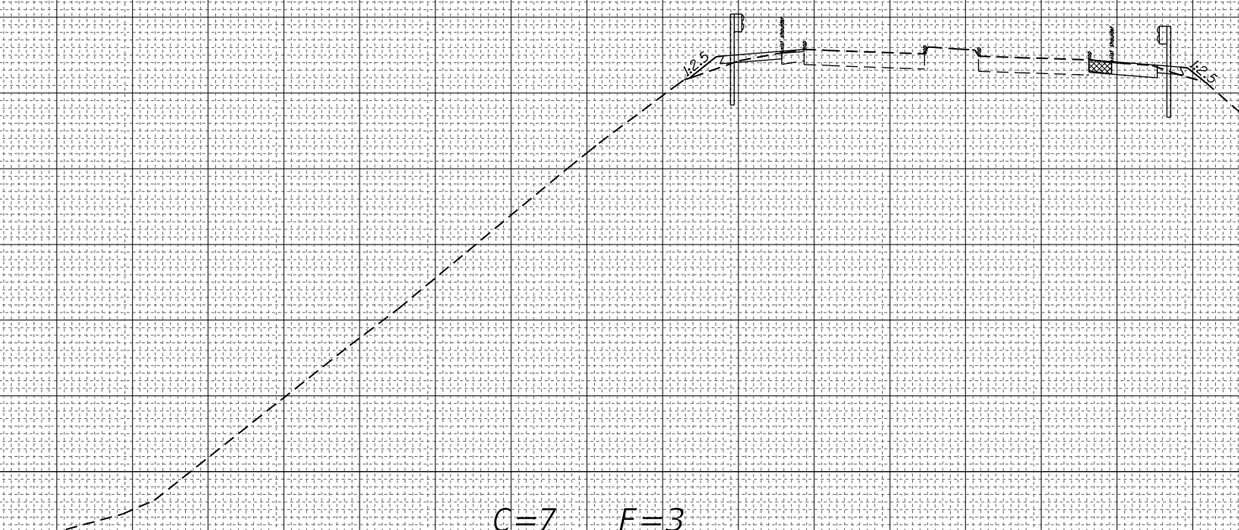

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	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 4 OF 11 SHEETS | STA. 575+25.00 | TO STA. 575+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	65
		CONTRACT NO. 74177		
		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	
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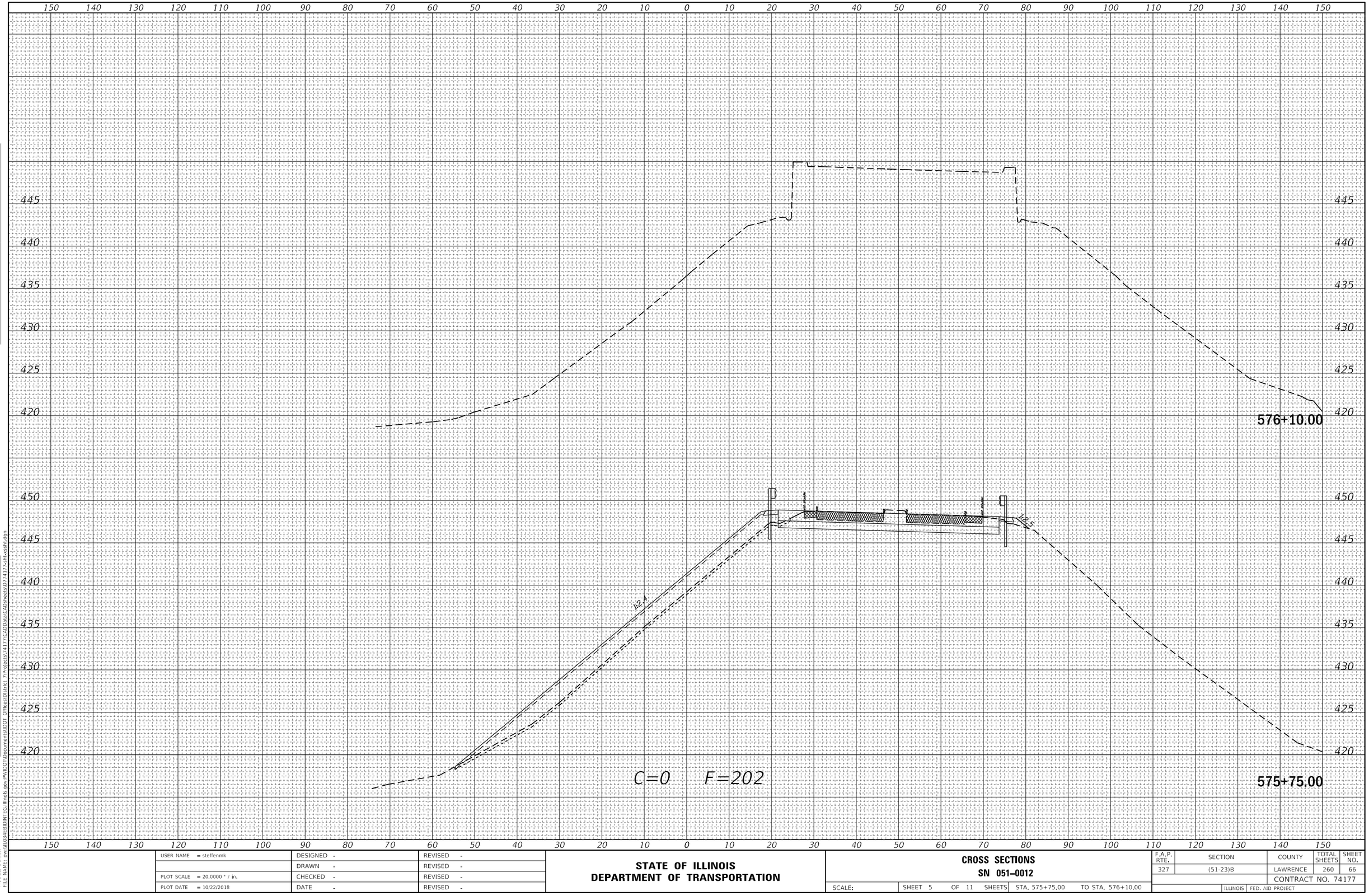
	BY	
	DATE	



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	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

CROSS SECTIONS
SN 051–0012

SCALE: | SHEET 5 OF 11 SHEETS | STA. 575+75.00 | TO STA. 576+10.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	66
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY
NOTE BOOK
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SURVEYED __
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TEMPLATE __
AREAS __
AREAS CHECKED __
BY
DATE

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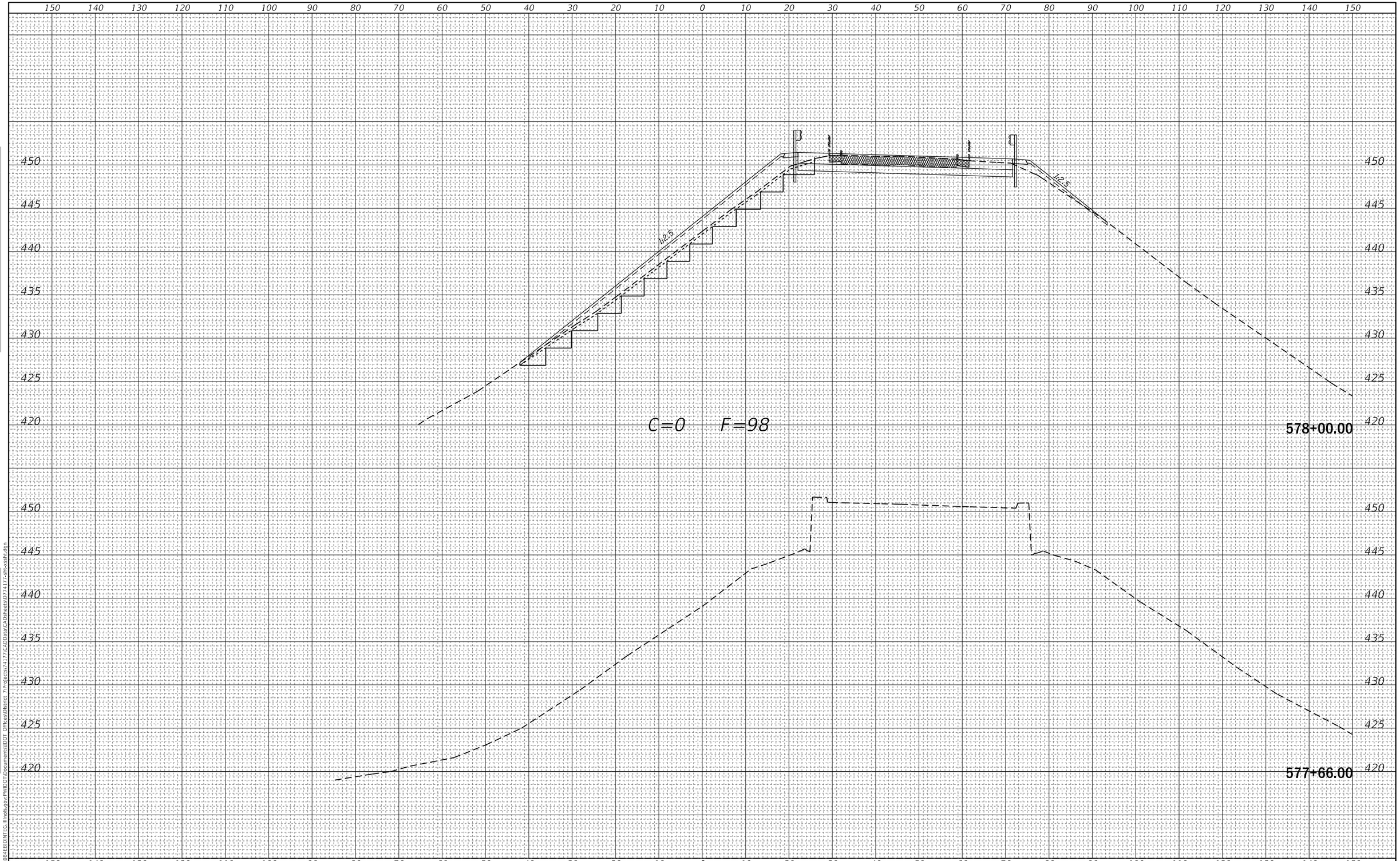

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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 6 OF 11 SHEETS | STA. 577+66.00 TO STA. 578+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	67
		CONTRACT NO. 74177		
		ILLINOIS FED. AID PROJECT		

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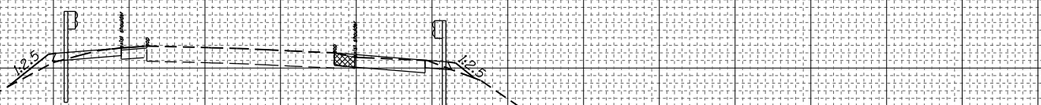

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578+50.00

C=11 F=5

578+25.00

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USER NAME = steffenmk	DESIGNED -	REVISED -	
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PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 7 OF 11 SHEETS | STA. 578+25.00 | TO STA. 578+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	68
		CONTRACT NO. 74177		
		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

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

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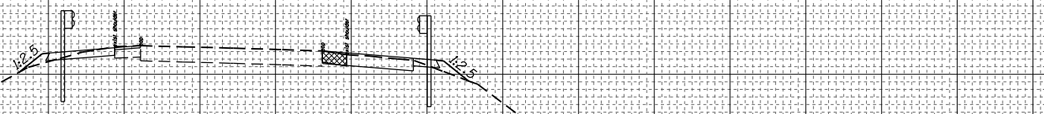
450 445 440 435 430 425 420



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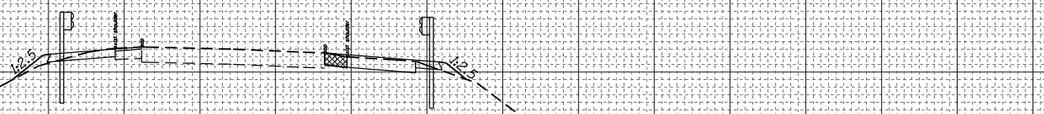
579+00.00



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578+75.00

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

MODEL: Default
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PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 8 OF 11 SHEETS | STA. 578+75.00 | TO STA. 579+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	69
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		

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450 445 440 435 430 425

C=10 F=3

579+50.00

C=9 F=3

579+25.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 9 OF 11 SHEETS | STA. 579+25.00 | TO STA. 579+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	70
		CONTRACT NO. 74177		
	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

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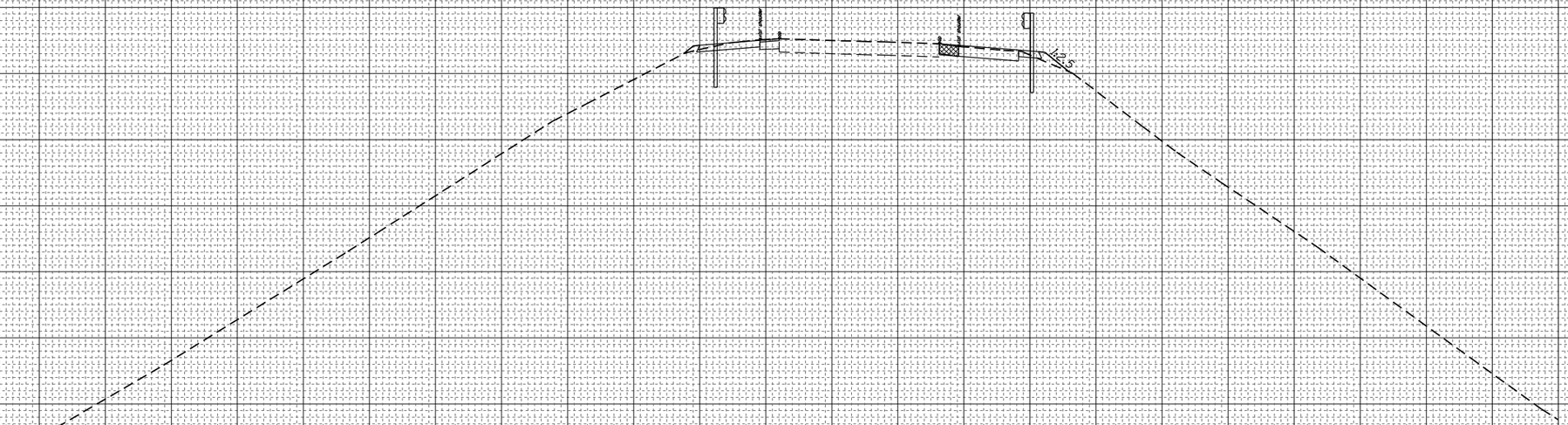

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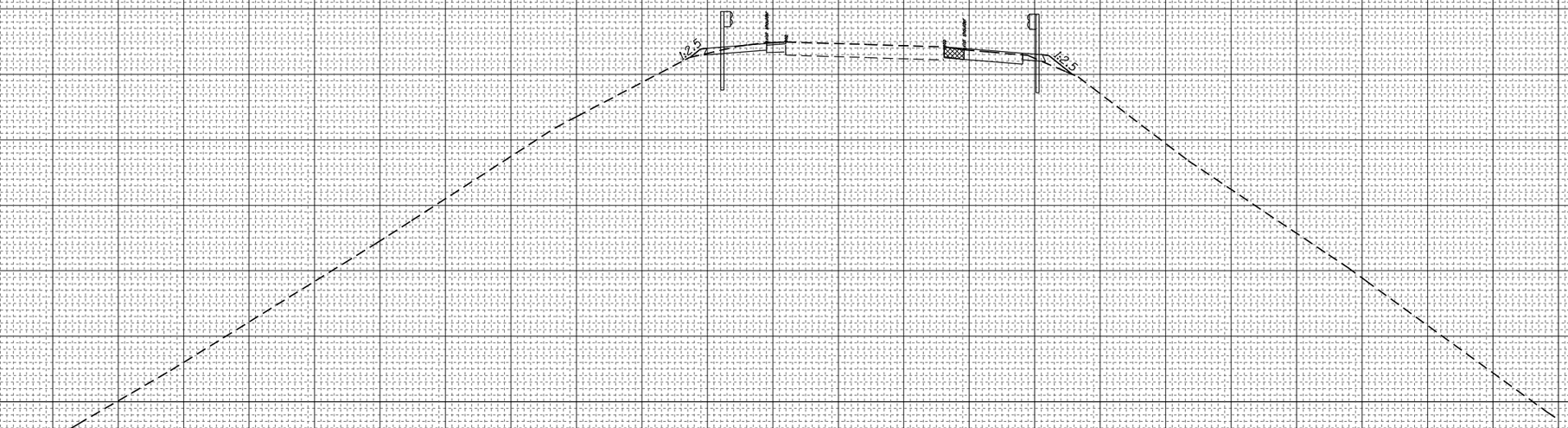
580+00.00



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579+75.00

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	DRAWN -	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051-0012

SCALE: | SHEET 10 OF 11 SHEETS | STA. 579+75.00 | TO STA. 580+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	71
		CONTRACT NO. 74177		
	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

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FINAL SURVEY	
NOTE BOOK	
NO.	

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY

DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

455
450
445
440
435
430
425

ORIGINAL SURVEY	
NOTE BOOK	
NO.	

SURVEYED
PLOTTED
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AREAS CHECKED

BY

DATE

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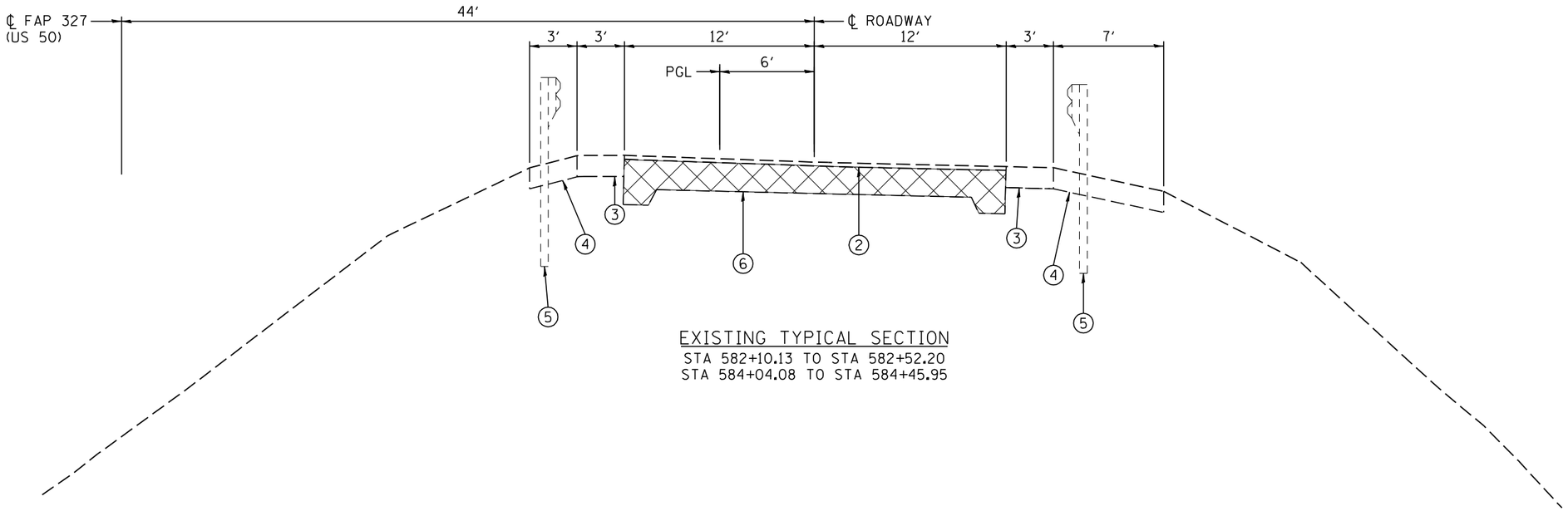
PLOT DATE = 10/22/2018	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 051–0012

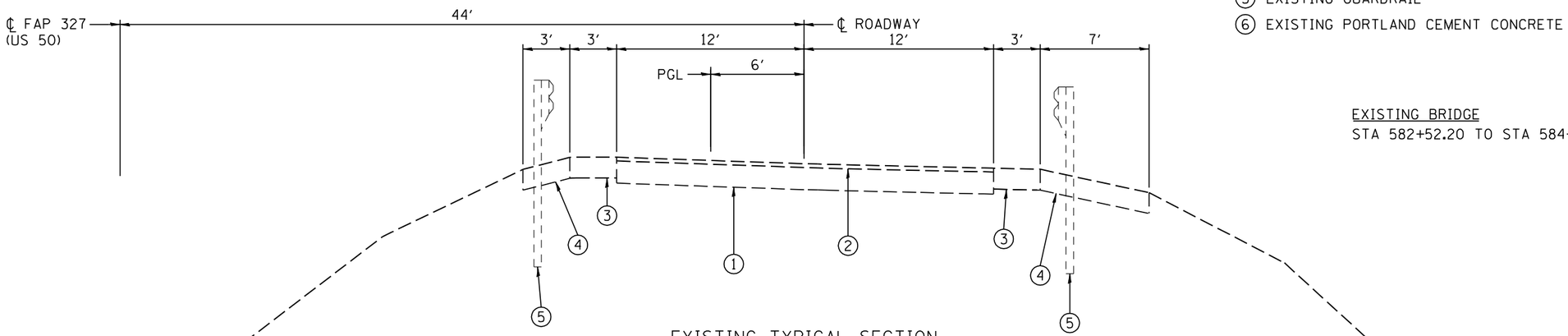
SCALE: | SHEET 11 OF 11 SHEETS | STA. 580+25.00 | TO STA. 580+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	72
		CONTRACT NO. 74177		
	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL SECTION
STA 582+10.13 TO STA 582+52.20
STA 584+04.08 TO STA 584+45.95

① EXISTING PORTLAND CEMENT CONCRETE PAVEMENT 10″
② EXISTING HMA RESURFACING 2″
③ EXISTING BITUMINOUS SHOULDERS 8″
④ EXISTING AGGERGATE SHOULDERS
⑤ EXISTING GUARDRAIL
⑥ EXISTING PORTLAND CEMENT CONCRETE PAVEMENT 16½″-10½″-16½″



EXISTING TYPICAL SECTION
STA 581+92.75 TO STA 582+10.13
STA 584+45.95 TO STA 585+75.50

EXISTING BRIDGE
STA 582+52.20 TO STA 584+04.08

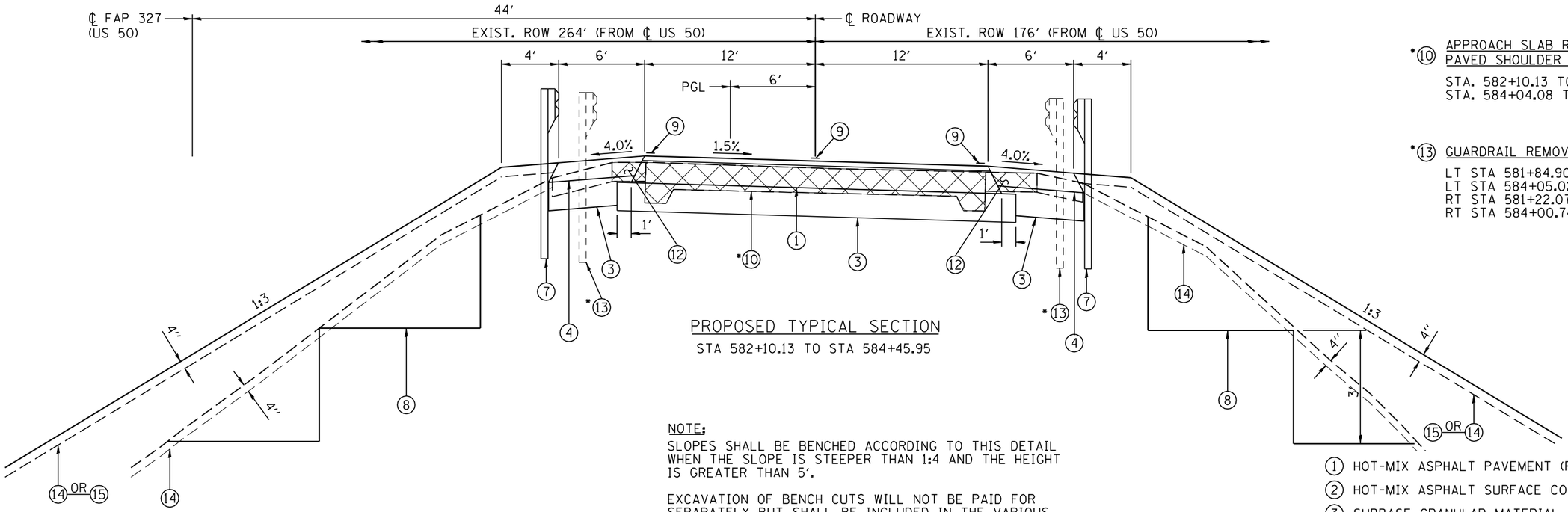
CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED - NAK	REVISED -
	FILE NAME = D774113-sht-typical.dgn	DRAWN - SJS	REVISED -
	PLOT SCALE = 8.0000 ' / IN.	CHECKED - NAK	REVISED -
	PLOT DATE = 10/18/2018	DATE - 3/10/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS
SN 051-0013 (OLD) SN 051-8634 (NEW)

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	73
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL SECTION

STA 582+10.13 TO STA 584+45.95

NOTE:

SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 1:4 AND THE HEIGHT IS GREATER THAN 5′.

EXCAVATION OF BENCH CUTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE VARIOUS EARTHWORK ITEMS.

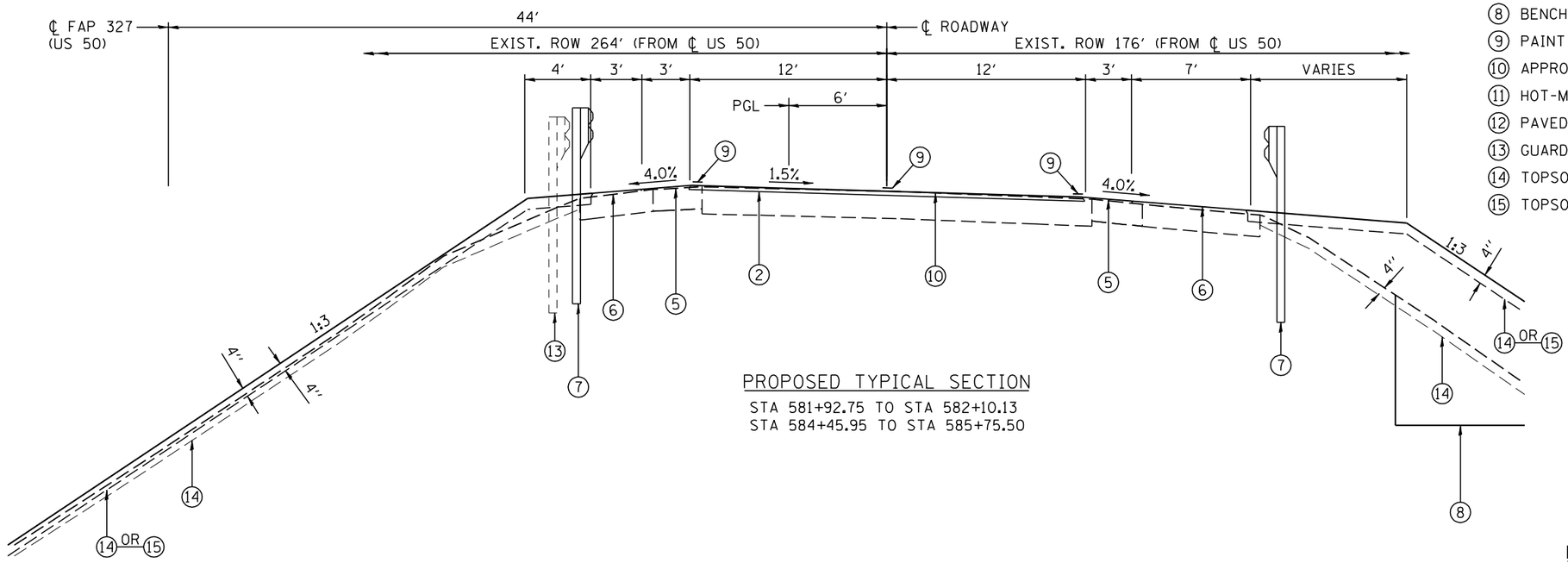
*(10) APPROACH SLAB REMOVAL AND PAVED SHOULDER REMOVAL

STA. 582+10.13 TO STA. 582+52.20
STA. 584+04.08 TO STA. 584+45.95

*(13) GUARDRAIL REMOVAL LIMITS

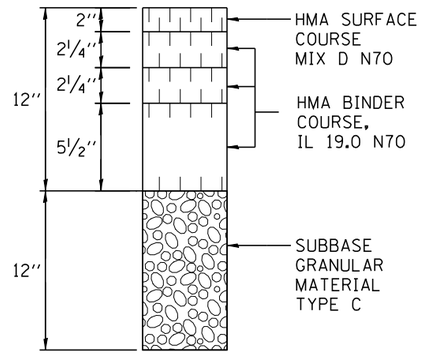
LT STA 581+84.90 TO STA 582+56.02
LT STA 584+05.02 TO STA 586+20.59
RT STA 581+22.07 TO STA 582+50.56
RT STA 584+00.74 TO STA 585+41.98

(1) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12″
(2) HOT-MIX ASPHALT SURFACE COURSE, MIX ″D″, N90
(3) SUBBASE GRANULAR MATERIAL, TYPE C 12″
(4) HOT-MIX ASPHALT SHOULDERS 8″
(5) HOT-MIX ASPHALT SHOULDERS 1½″ AND VARIES
(6) AGGREGATE WEDGE SHOULDER, TYPE B
(7) STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
(8) BENCH CUTS
(9) PAINT PAVEMENT MARKING - LINE 4″
(10) APPROACH SLAB REMOVAL
(11) HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
(12) PAVED SHOULDER REMOVAL
(13) GUARDRAIL REMOVAL
(14) TOPSOIL EXCAVATION AND PLACEMENT
(15) TOPSOIL FURNISH AND PLACE 4″



PROPOSED TYPICAL SECTION

STA 581+92.75 TO STA 582+10.13
STA 584+45.95 TO STA 585+75.50



HMA PAVEMENT (FULL DEPTH) DETAIL

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTIONS SN 051-0013 (OLD) SN 051-8634 (NEW)
	FILE NAME = D774113-sht-typical.dgn	DRAWN - SJS	REVISED -		SCALE: — SHEET NO. 2 OF 2 SHEETS — STA. — TO STA.
	PLOT SCALE = 8.0000 ′ / IN.	CHECKED - NAK	REVISED -		
	PLOT DATE = 10/18/2018	DATE - 3/10/2017	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	74
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TREE REMOVAL, ACRES

LOCATION	ACRE
LT STA 582+14.00 TO STA 585+06.00	1.00
RT STA 581+24.00 TO STA 585+94.00	1.50
TOTAL	2.50
PLAN QUANTITY TOTAL	2.5

EARTHWORK

LOCATION		EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
STAGE 1					
STA 581+22.07	TO STA 586+97.35	140	105	10,500	-10,395
STAGE 2					
STA 581+22.07	TO STA 586+97.35	70	55	9,260	-9,205
TOTAL		210	160	19,760	-19,600

SHRINKAGE = 25%

FILLING EXISTING CULVERTS

LOCATION	DIAMETER	LENGTH	CU YD
STA 582+45.00	36"	212'	55.50
STA 584+24.00	36"	248'	64.93
TOTAL			120.43
PLAN QUANTITY TOTAL			120.4

PIPE CULVERTS, CLASS A, TYPE 7 36"

LOCATION	FOOT
RT STA 582+17.97 TO STA 582+25.57	41
LT STA 582+62.47 TO STA 582+67.99	33
RT STA 583+90.22 TO STA 583+96.06	38
LT STA 584+27.93 TO STA 584+31.24	24
TOTAL	136

PIPE CULVERTS, CLASS A 36" (JACKED)

LOCATION	FOOT
RT STA 582+25.57 TO LT STA 582+62.47	210
RT STA 583+96.06 TO LT STA 584+27.93	219
TOTAL	429

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"

LOCATION	EACH
RT STA 582+69.18	1
LT STA 582+16.75	1
RT STA 584+32.23	1
LT STA 583+89.24	1
TOTAL	4

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 581+22.07	TO STA 586+97.35	500	375	475	-100	900
RT STA 581+22.07	TO STA 586+97.35	390	295	365	-70	630
TOTAL		890	670	840	-170	1,530

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

SEEDING

LOCATION	FERTILIZER NUTRIENTS			AGRICULTURAL GROUND LIMESTONE	MULCH, METHOD 2	SEEDING, CLASS 2
	NITROGEN	PHOSPHORUS	POTASSIUM			
	POUND	POUND	POUND	TON	ACRE	ACRE
LT STA 581+85 TO STA 586+97	90	90	90	2	2	1
RT STA 581+22 TO STA 586+14	67.5	67.5	67.5	1.5	1.5	0.75
TOTAL	157.5	157.5	157.5	3.5	3.5	1.75
PLAN QUANTITY TOTAL	158	158	158	4	4	1.75

SUBBASE GRANULAR MATERIAL, TYPE C

LOCATION	SQ YD
STA 582+10.13 TO STA 584+45.95	731.57
TOTAL	731.57
PLAN QUANTITY TOTAL	732

INLET AND PIPE PROTECTION

LOCATION	EACH
LT STA 582+69.00	1
LT STA 583+89.00	1
TOTAL	2

TEMPORARY EROSION CONTROL SEEDING

LOCATION	POUND
LT STA 581+84.90 TO STA 586+97.35	100
RT STA 581+22.07 TO STA 586+13.74	75.00
TOTAL	175

TEMPORARY DITCH CHECKS

LOCATION	FOOT
RT STA 582+10.00	8
RT STA 582+20.00	8
TOTAL	16

PERIMETER EROSION BARRIER

LOCATION	FOOT
LT STA 582+87.00 TO STA 583+36.00	99
LT STA 583+46.00 TO STA 584+20.00	132
LT STA 584+49.00 TO STA 586+77.00	293
RT STA 581+46.00 TO STA 582+04.00	66
RT STA 582+21.00 TO STA 583+11.00	124
RT STA 583+21.00 TO STA 583+50.00	95
RT STA 584+19.00 TO STA 585+82.00	166
TOTAL	975

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2
FILE NAME = D774113-sht-schedules.dgn
PLOT SCALE = 2.0000 ' / in.
PLOT DATE = 10/18/2018

DESIGNED - NAK | REVISED -
DRAWN - SJS | REVISED -
CHECKED - NAK | REVISED -
DATE - 3/10/2017 | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SN 051-0013 (OLD) SN 051-8634 (NEW)

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	75
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BITUMINOUS MATERIALS (TACK COAT)

LOCATION	NO. OF APPLICATIONS	RATE LB/SQ FT	POUND
FULL DEPTH PAVEMENT			
STA 582+10.13 TO STA 584+45.95	3	0.025	424.48
MILLED PAVEMENT			
STA 581+92.75 TO STA 582+10.13	1	0.05	20.86
STA 584+45.95 TO STA 585+75.50	1	0.05	155.46
MILLED SHOULDER			
LT STA 581+92.75 TO STA 582+10.13	1	0.05	2.61
LT STA 584+45.95 TO STA 585+75.50	1	0.05	19.43
RT STA 581+92.75 TO STA 582+10.13	1	0.05	6.08
RT STA 584+45.95 TO STA 585+75.50	1	0.05	45.34
8" SHOULDER			
LT STA 582+10.13 TO STA 584+45.95	1	0.025	17.69
RT STA 582+10.13 TO STA 584+45.95	1	0.025	17.69
TOTAL			709.64
PLAN QUANTITY TOTAL			710

HOT-MIX ASPHALT SHOULDERS, 8"

LOCATION	WIDTH	SQ YD
LT STA 582+10.13 TO STA 584+45.95	6'	157.21
RT STA 582+10.13 TO STA 584+45.95	6'	157.21
TOTAL		314.42
PLAN QUANTITY TOTAL		314

HOT-MIX ASPHALT SHOULDERS

LOCATION	WIDTH	TON
LT STA 581+92.75 TO STA 582+10.13	3'	0.49
LT STA 584+45.95 TO STA 585+75.50	3'	3.63
RT STA 581+92.75 TO STA 582+10.13	3'	0.49
RT STA 584+45.95 TO STA 585+75.50	3'	3.63
TOTAL		8.24
PLAN QUANTITY TOTAL		8

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

LOCATION	TON
STA 581+92.75 TO STA 582+10.13	3.89
STA 584+45.95 TO STA 585+75.50	29.02
TOTAL	32.91
PLAN QUANTITY TOTAL	33

HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12"

LOCATION	SQ YD
STA 582+10.13 TO STA 584+45.95	628.85
TOTAL	628.85
PLAN QUANTITY TOTAL	629

HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH

LOCATION	WIDTH	SQ YD
PAVEMENT		
STA 581+92.75 TO STA 582+10.13	24'	46.35
STA 584+45.95 TO STA 585+75.50	24'	345.47
SHOULDER		
LT STA 581+92.75 TO STA 582+10.13	3'	5.79
LT STA 584+45.95 TO STA 585+75.50	3'	43.18
RT STA 581+92.75 TO STA 582+10.13	3'	5.79
RT STA 584+45.95 TO STA 585+75.50	3'	43.18
TOTAL		489.76
PLAN QUANTITY TOTAL		490

RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	EACH
STA 581+92.75 TO STA 585+75.50	5
TOTAL	5

AGGREGATE WEDGE SHOULDER, TYPE B

LOCATION	TON
LT STA 581+84.90 TO STA 582+10.13	0.17
LT STA 584+45.95 TO STA 585+75.50	12.86
RT STA 581+22.07 TO STA 582+10.13	3.19
RT STA 584+45.95 TO STA 585+75.50	8.46
TOTAL	24.68
PLAN QUANTITY TOTAL	25

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

LOCATION	FOOT
LT STA 581+84.90 TO STA 586+12.22	425.00
RT STA 581+22.07 TO STA 585+27.67	400.00
TOTAL	825.00
PLAN QUANTITY TOTAL	825.0

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION	EACH
LT STA 586+12.22 TO STA 586+62.26	1
RT STA 585+27.67 TO STA 585+78.17	1
TOTAL	2

GUARDRAIL REMOVAL

LOCATION	FOOT
LT STA 581+84.90 TO STA 582+56.02	71.12
LT STA 584+05.02 TO STA 586+20.59	215.57
RT STA 581+22.07 TO STA 582+50.56	128.49
RT STA 584+00.74 TO STA 585+41.98	141.24
TOTAL	556.42
PLAN QUANTITY TOTAL	557

GUARDRAIL REFLECTORS, TYPE A

LOCATION	EACH
LT STA 581+84.90 TO STA 586+12.22	6
RT STA 581+22.07 TO STA 585+27.67	6
TOTAL	12

TERMINAL MARKER - DIRECT APPLIED

LOCATION	EACH
LT STA 586+62.26	1
RT STA 585+78.17	1
TOTAL	2

APPROACH SLAB REMOVAL

LOCATION	WIDTH	SQ YD
STA 582+10.13 TO STA 582+52.20	24'	112.19
STA 584+04.09 TO STA 584+45.95	24'	111.63
TOTAL		223.82
PLAN QUANTITY TOTAL		224

PAINT PAVEMENT MARKING - LINE 4"

LOCATION	WHITE FOOT	YELLOW FOOT	TOTAL FOOT
YELLOW SKIP DASH			
STA 581+92.75 TO STA 585+75.50		100.00	100.00
WHITE EDGE LINE			
LT STA 581+92.75 TO STA 585+75.50	382.75		382.75
RT STA 581+92.75 TO STA 585+75.50	382.75		382.75
TOTAL	765.50	100.00	865.50
PLAN QUANTITY TOTAL	765.5	100.0	865.5

TEMPORARY PAVEMENT MARKING - LINE 4"

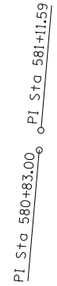
LOCATION	WHITE FOOT	YELLOW FOOT	TOTAL FOOT
YELLOW SKIP DASH			
STA 581+92.75 TO STA 585+75.50		100.00	100.00
WHITE EDGE LINE			
LT STA 581+92.75 TO STA 585+75.50	382.75		382.75
RT STA 581+92.75 TO STA 585+75.50	382.75		382.75
TOTAL	765.50	100.00	865.50
PLAN QUANTITY TOTAL	765.5	100.0	865.5

EX ℄ FAP 327 (US 50)

EXIST. CURVE C1
PI STA. = 581+11.59
Δ = 66° 01′ 58″ (RT)
D = 1° 12′ 00″
R = 4,774.65′
T = 3,102.63′
L = 5,502.73′
E = 919.52′
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 550+08.96
P.T. STA. = 605+11.68

EX ℄ ROADWAY

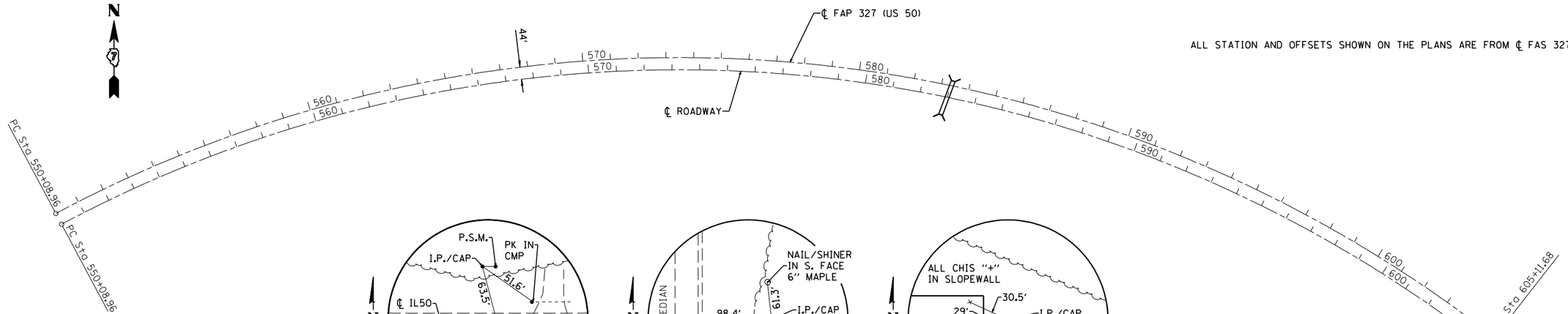
EXIST. CURVE C1A-1
PI STA. = 580+83.00
Δ = 66° 01′ 58″ (RT)
D = 1° 12′ 40″
R = 4,730.65′
T = 3,074.04′
L = 5,452.02′
E = 911.05′
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 550+08.96
P.T. STA. = 604+60.97



℄ FAP 327 (US 50)			
CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
P.C.	550+08.96	754,825.79	1,166,810.50
P.I.	581+11.59	756,285.42	1,169,547.81
P.T.	605+11.68	754,377.46	1,171,994.44

℄ ROADWAY			
CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
P.C.	550+08.96	754,785.97	1,166,831.21
P.I.	580+83.00	756,233.14	1,169,543.30
P.T.	604+60.97 BK = 605+11.68 AH	754,342.77	1,171,967.38

ALL STATION AND OFFSETS SHOWN ON THE PLANS ARE FROM ℄ FAS 327 (US 50)

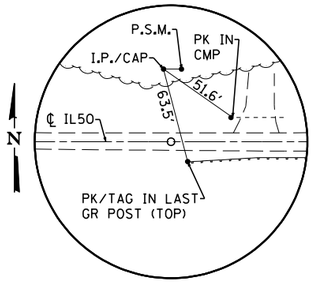


BM*800-CHISELED "□" NW CORNER OF
BRIDGE OVER RTE 1
25.6′ RT. STA. 576+04.37
ELEV. 449.92

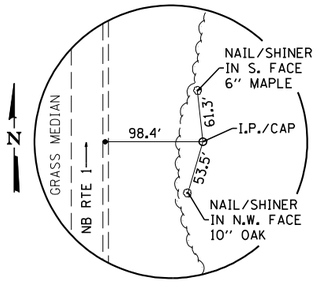
BM*801-CHISELED "□" SE CORNER OF
BRIDGE OVER RTE 1
74.7′ RT. STA. 577+70.57
ELEV. 451.11

BM*802-CHISELED "□" SW CORNER OF
BRIDGE OVER ABANDONED RR
61.7′ RT. STA. 582+50.65
ELEV. 454.13

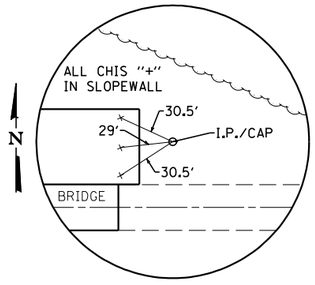
BM*803-CHISELED "□" NE CORNER OF
BRIDGE OVER ABANDONED RR
26.2′ RT. STA. 584+05.05
ELEV. 454.49



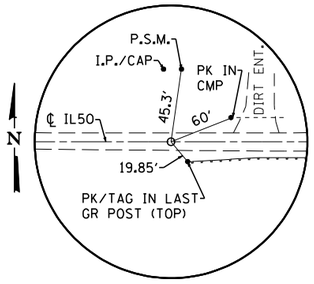
PC STA 550+08.96
℄ FAP 327 (US 50)
IRON PIN W/ CAP (SET)



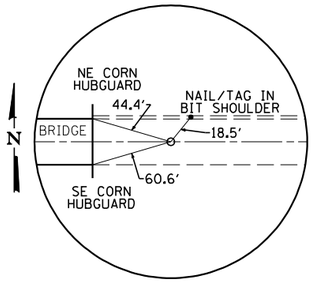
PI STA 581+11.59 RTE 50=
RTE 1 46+00 101′ RT OF E. EGDE PAVE.
℄ FAP 327 (US 50)
IRON PIN W/ CAP (SET)



PT STA 605+11.68
℄ FAP 327 (US 50)
IRON PIN W/ CAP (SET)



PC STA 550+08.96
℄ ROADWAY
PK (SET)



PT STA 604+60.97 BK=
STA 605+11.68 AH
℄ ROADWAY
PK (SET)

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ALIGNMENT, BENCHMARKS AND CROSS TIES SN 051-0013 (OLD) SN 051-8634 (NEW)
	FILE NAME = D774113-sht-align.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 400.0000 ' / IN.	CHECKED - NAK	REVISED -		SCALE: / SHEET NO. OF SHEETS / STA. TO STA.
	PLOT DATE = 10/18/2018	DATE - 3/10/2017	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	77
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 31, T4N, R11W, 3RD PM

EXISTING SN 051-0013
THREE SPAN STEEL CONTINUOUS MULTI-STRINGER SUPERSTRUCTURE ON PILE BENT ABUTMENTS AND MULTI-COLUMN PIERS
36-5" 0-0, 151'-0" BK TO BK ABUTMENTS

REMOVAL OF EXISTING STRUCTURE - 1 EA

STA 582+51.73
PR PIPE CULVERT, CL A, TYPE 7, 36"
W/STD 542301 END SECTIONS
USFL 193.08' RT STA 582+16.75 411.40
DSFL 102.62' LT STA 582+69.18 411.00
210' JACKED
74' IN TRENCH

WAKEFIELD, WAYNEL
TRUSTEE OF REVOCALBE TRUST
07-31-100-002

EX ROW

BRUSH

CONSTRUCTION LIMITS

ABANDONED RAILROAD

STA 584+18.06
PR PIPE CULVERT, CL A, TYPE 7, 36"
W/STD 542301 END SECTIONS
USFL 101.12' LT STA 584+32.23 411.70
DSFL 193.06' RT STA 583+89.24 411.50
219' JACKED
62' IN TRENCH

EX 36"x212' CULVERT
FILL W/CLSM

PR STRUCTURE NO. 051-8634
STA 583+36.00
12'x13'-6"x120'-9"
CONCRETE BOX CULVERT
US INV. ELEV. 426.10
DS INV. ELEV. 425.95

PR STEEL PLATE BEAM
GUARDRAIL TYPE A
6 FOOT POSTS 437.5'

AGGREGATE WEDGE SHOULDER, TYPE B
STA 581+84.90 TO STA 582+10.13

AGGREGATE WEDGE SHOULDER, TYPE B
STA 584+45.95 TO STA 586+62.50

IMPROVEMENT BEGINS
STA 581+92.75
MATCH EXISTING

IMPROVEMENT ENDS
STA 585+75.50
MATCH EXISTING

EDGE OF EARTH SHOULDER

EX 36"x249' CULVERT
FILL W/CLSM

PR TRAFFIC BARRIER TERMINAL,
TYPE 1 (SPECIL) TANGENT
WIDEN SHOULDER AS SHOWN
ON STANDARD 630301

℄ FAS 327
(US 50)

581 582 583 584 585+00 586 587

+84.90 26' RT

+10.13 26' RT

+45.95 26' RT

+62.50 26' RT

44'

℄ ROADWAY

+22.07 66' RT

+10.13 66' RT

+45.95 66' RT

PR HMA SHOULDER 1½"
STA 581+92.75 TO
STA 582+10.13

PR STEEL PLATE BEAM
GUARDRAIL TYPE A
6 FOOT POSTS 412.5'

PR TRAFFIC BARRIER TERMINAL,
TYPE 1 (SPECIAL) TANGENT
WIDEN SHOULDER AS SHOWN
ON STANDARD 630301

PR HMA SHOULDER 1½"
STA 584+45.95 TO STA 585+75.50

AGGREGATE WEDGE SHOULDER, TYPE B
STA 584+45.95 TO STA 585+75.50

EX ROW

AGGREGATE WEDGE SHOULDER, TYPE B
STA 581+22.07 TO STA 582+10.13

EDGE OF EARTH SHOULDER

PR HMA SHOULDERS, 8" ON SUBBASE
GRANULAR MATERIAL, TYPE C, 12"
STA 582+10.13 TO STA 584+45.95

CONSTRUCTION LIMITS

PR HMA PAVEMENT (FULL DEPTH), 12"
ON SUBBASE GRANULAR MATERIAL, TYPE C, 12"
STA 582+10.13 TO STA 584+45.95

EX ROW

WAKEFIELD, WAYNEL
TRUSTEE OF REVOCALBE TRUST
07-31-300-001

EX ROW

MARLEY, ROBERTA MARIE (FOSTER)
(KEITH) ½ INT RUCKER, RICHARD ½ INT
07-31-300-008

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - ·	REVISED -
FILE NAME = D774113-sht-plan.dgn	DRAWN - ·	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - ·	REVISED -
PLOT DATE = 12/4/2018	DATE - ·	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN
SN 051-0013 (OLD) SN 051-8634 (NEW)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	78
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTAT'NS CH'K'D
BY
DATE

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.2	DESIGNED -	REVISED -
	FILE NAME = D774113-sht-profile.dgn	DRAWN -	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/18/2018	DATE -	REVISED -

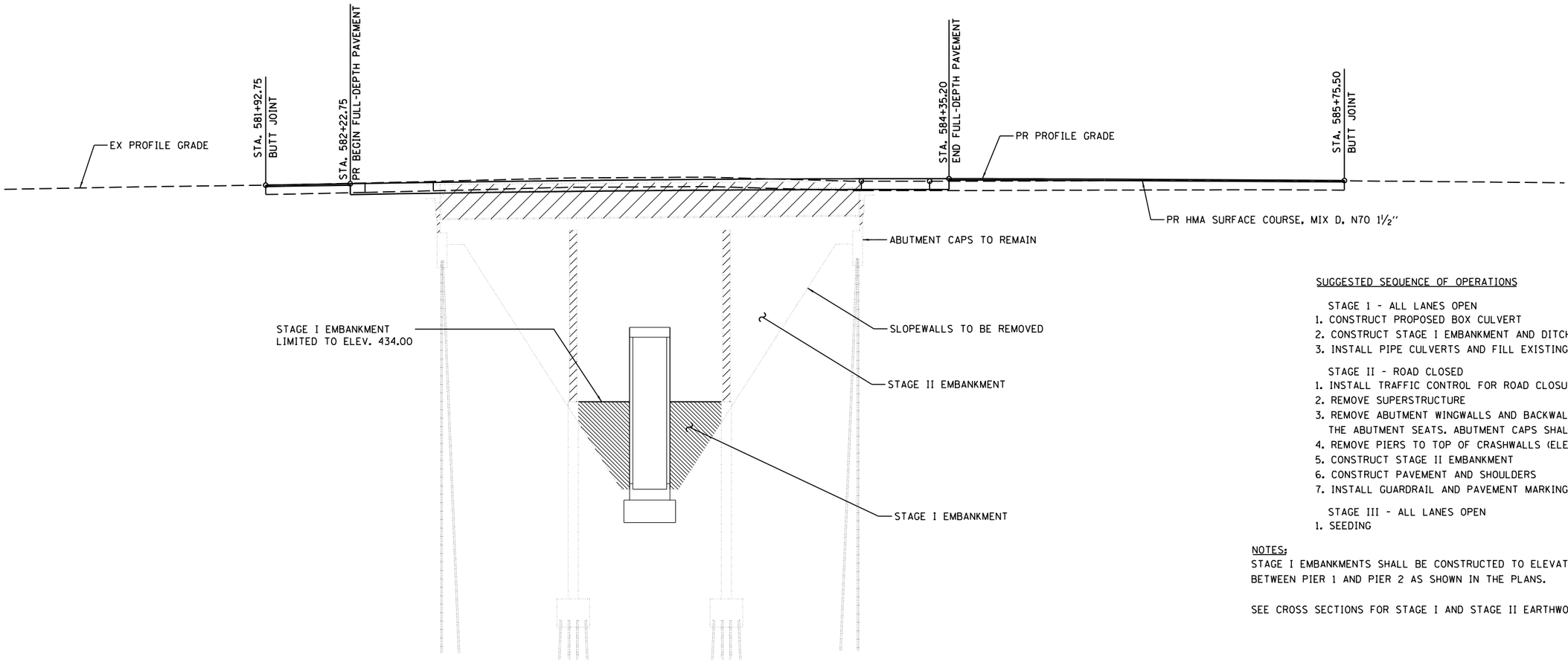
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILE
SN 051–0013 (OLD) SN 051–8634 (NEW)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	79
		CONTRACT NO. 74177		

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



SUGGESTED SEQUENCE OF OPERATIONS

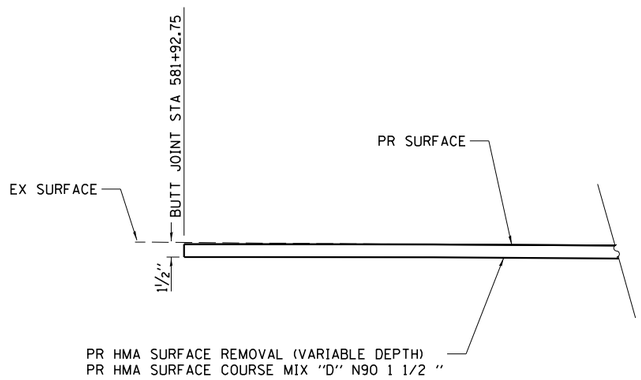
STAGE I - ALL LANES OPEN
1. CONSTRUCT PROPOSED BOX CULVERT
2. CONSTRUCT STAGE I EMBANKMENT AND DITCHES
3. INSTALL PIPE CULVERTS AND FILL EXISTING PIPES

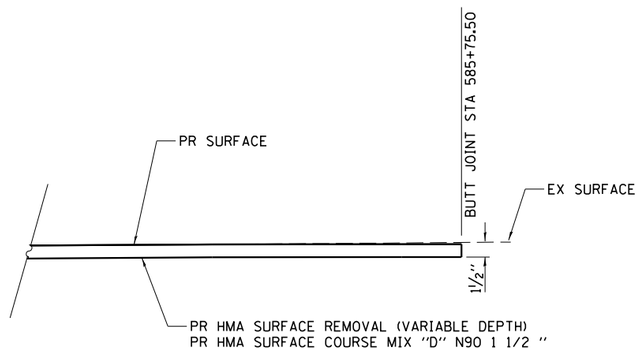
STAGE II - ROAD CLOSED
1. INSTALL TRAFFIC CONTROL FOR ROAD CLOSURE
2. REMOVE SUPERSTRUCTURE
3. REMOVE ABUTMENT WINGWALLS AND BACKWALLS DOWN TO THE ABUTMENT SEATS. ABUTMENT CAPS SHALL REMAIN.
4. REMOVE PIERS TO TOP OF CRASHWALLS (ELEV. 434.0)
5. CONSTRUCT STAGE II EMBANKMENT
6. CONSTRUCT PAVEMENT AND SHOULDERS
7. INSTALL GUARDRAIL AND PAVEMENT MARKINGS

STAGE III - ALL LANES OPEN
1. SEEDING

NOTES:
STAGE I EMBANKMENTS SHALL BE CONSTRUCTED TO ELEVATION 434.0 BETWEEN PIER 1 AND PIER 2 AS SHOWN IN THE PLANS.

SEE CROSS SECTIONS FOR STAGE I AND STAGE II EARTHWORK





NOTE:
MILLING SHALL BE 1½" BELOW THE PROPOSED FINISHED SURFACE ELEVATION AND AT THE PROPOSED PAVEMENT SLOPE.

CEC Cummins Engineering Corporation
Civil and Structural Engineering

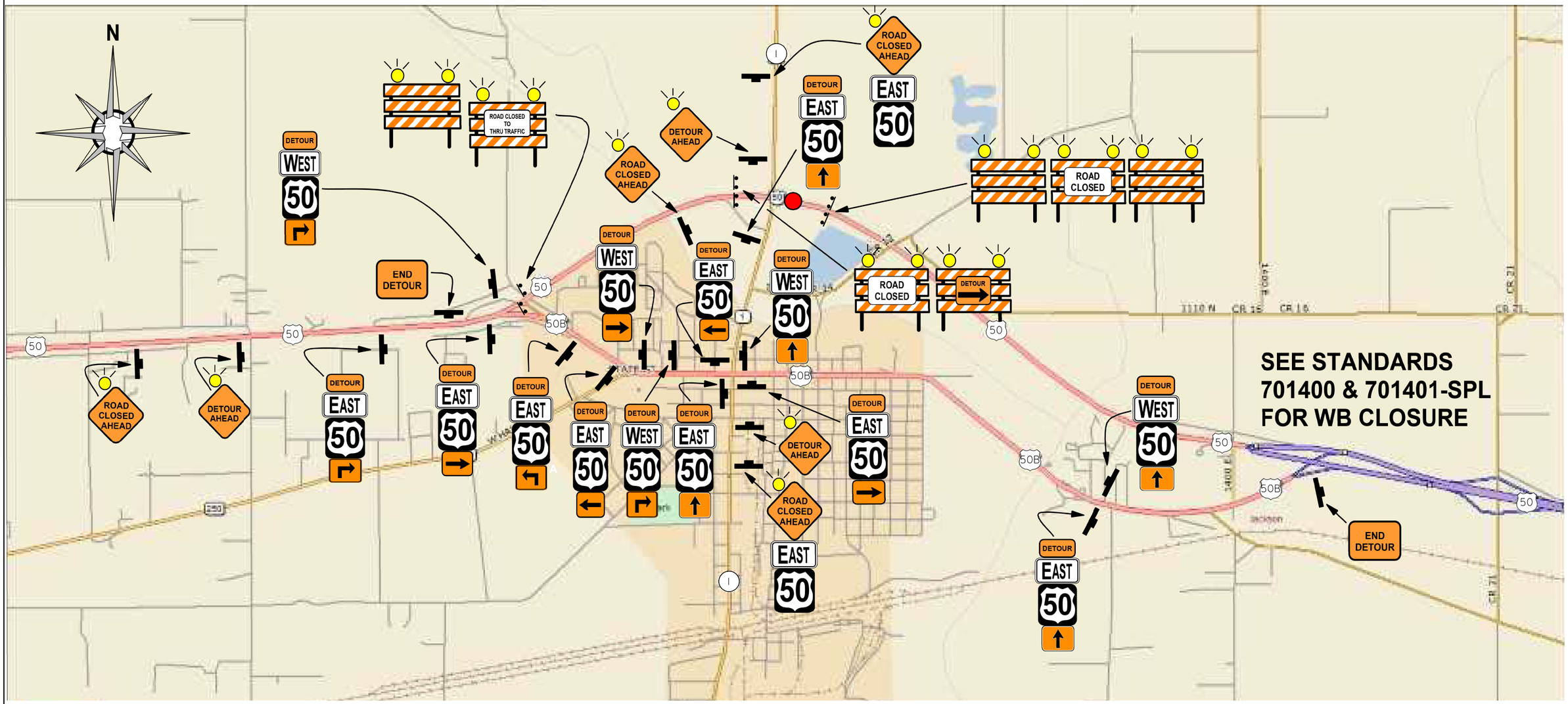
JOB = 2480.2	DESIGNED - ·	REVISED -
FILE NAME = D774113-sht-sequence.dgn	DRAWN - ·	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - ·	REVISED -
PLOT DATE = 10/18/2018	DATE - ·	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SEQUENCE OF OPERATIONS AND BUTT JOINT DETAILS
SN 051-0013 (OLD) SN 051-8634 (NEW)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	80
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



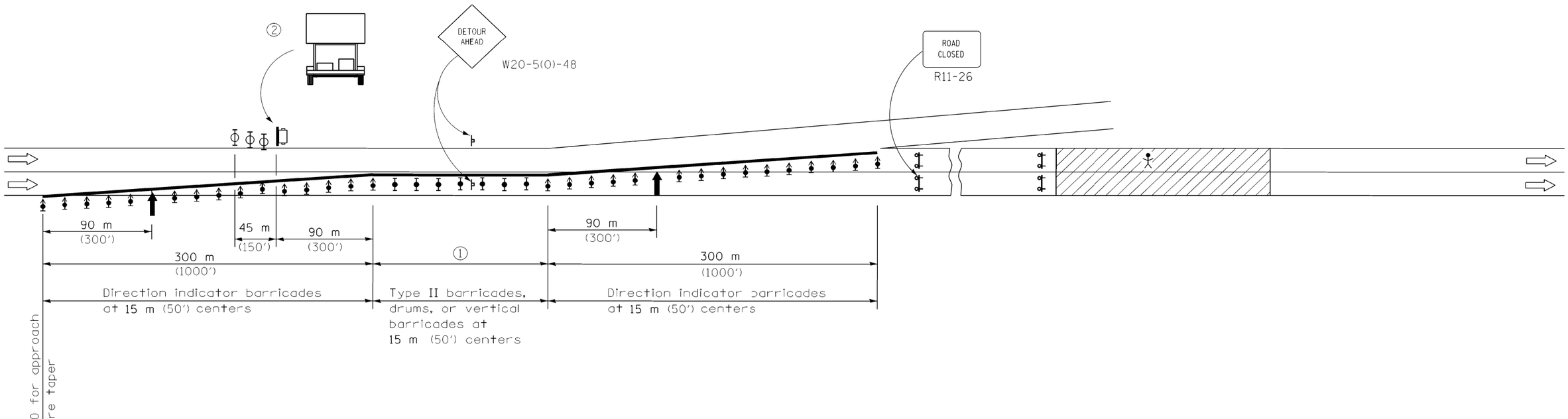
LEGEND

ROAD CLOSED AHEAD	- 3 EACH W20-3(O)-48
DETOUR AHEAD	- 3 EACH W20-2(O)-48
END DETOUR	- 2 EACH M4-8a(O)-2418
DETOUR	- 14 EACH M4-8(O)-3015
EAST	- 11 EACH M3-2-3015
WEST	- 5 EACH M3-4-3015
50	- 16 EACH M1-4-36
	- 2 EACH M6-1R(O)-3018
	- 3 EACH M6-1L(O)-3018
	- 5 EACH M6-3(O)-3018
	- 1 EACH M5-1L(O)-3018
	- 3 EACH M5-1R(O)-3018
ROAD CLOSED	- 2 EACH R11-2-4830
ROAD CLOSED TO THRU TRAFFIC	- 1 EACH R11-4-6030
DETOUR	- 1 EACH M4-9R(O)-3024
	- 7 EACH
	- PROJECT LOCATION

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - NAK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINENTANCE OF TRAFFIC – DETOUR PLAN SN 051–0013 (OLD) SN 051–8634 (NEW)	
FILE NAME = D774113-sht-detour.dgn	DRAWN - SJS	REVISED -			
PLOT SCALE = 100.0000 ' / in.	CHECKED - NAK	REVISED -			
PLOT DATE = 10/18/2018	DATE - 3/22/2017	REVISED -		SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	81
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SYMBOLS

- Arrow board
- Work area
- Worker
- Sign
- Direction indicator barricade with steady burn monodirectional light
- Type II barricade, drum, or vertical barricade with steady burn monodirectional light
- Portable changeable message sign
- Type III barricade with flashing monodirectional lights

① The length of the min. tangent section shall be:

Duration of Closure	Lenth of Tangent Section
< 14 Days	300 m (1000')
≥ 14 Days	600 m (2000')

For off peak closures less than 24 hours, the tangent section may be omitted if approved by the Engineer.

② The message board shall be used to display status of lanes within the project. The primary messages shall be:
"All Trf Must Exit" / "Follow Marked Detour"

GENERAL NOTES

This Standard is to used for the closure of a Freeway/Expressway.

This Standard must always be used in combination with Standard 701400

This Standard also applies when the exit ramp is on the right side of traffic. Under these conditions, the set up would be a mirror image to what is shown.

All dimensions are in millimeters (inches) unless otherwise shown.

FULL ROAD CLOSURE FREEWAY/EXPRESSWAY

STANDARD 701401-SPL

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - NAK	REVISED -	
FILE NAME = D774113-sht-detour.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - NAK	REVISED -	
PLOT DATE = 10/18/2018	DATE - 3/22/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINENTANCE OF TRAFFIC - DETOUR PLAN
SN 051-0013 (OLD) SN 051-8634 (NEW)

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	82
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 31, T4N, R11W, 3RD PM

EXISTING SN 051-0013
THREE SPAN STEEL CONTINUOUS MULTI-STRINGER SUPERSTRUCTURE ON PILE BENT ABUTMENTS AND MULTI-COLUMN PIERS
36-5" 0-0, 151'-0" BK TO BK ABUTMENTS

REMOVAL OF EXISTING STRUCTURE - 1 EA

N

GUARDRAIL REMOVAL
STA 581+84.90 TO
STA 582+56.02

IMPROVEMENT BEGINS
STA 581+92.75
MATCH EXISTING

GUARDRAIL REMOVAL
STA 581+22.07 TO
STA 582+50.56

GUARDRAIL REMOVAL
STA 584+05.02 TO STA 586+20.59

℄ FAP 327
(US 50)

℄ ROADWAY

STA. 582+54.71
STA. 582+52.20
STA. 582+49.39
STA. 582+10.13
STA. 584+06.11
STA. 584+04.08
STA. 584+01.82
STA. 584+46.95

IMPROVEMENT ENDS
STA 585+75.50
MATCH EXISTING

GUARDRAIL REMOVAL
STA 584+00.74 TO STA 585+41.98

EX ROW

+50 119'
+00 102'
+15 130'
+42 130'
+00 119'
+00 66'
+07 62'
+33 20'
+44 18'
+14 18'
+14 22'
+07 22'
+00 66'
+00 68.5'
+12 110'
+24 111'
+68 182'
+50 195'
+89 192'
+50 195'
+08 195'
+15 203'
+94 206'

581 582 583 584 585+00 586 587

LEGEND

1 PAVED SHOULDER REMOVAL

2 APPROACH SLAB REMOVAL

3 HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

4 TREE REMOVAL, ACRES

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2480.2	DESIGNED - ·	REVISED -
	FILE NAME = D774113-sht-removal.dgn	DRAWN - ·	REVISED -
	PLOT SCALE = 40.000000 ' / in.	CHECKED - ·	REVISED -
	PLOT DATE = 10/18/2018	DATE - ·	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
SN 051-0013 (OLD) SN 051-8634 (NEW)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	83
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 31, T4N, R11W, 3RD PM

N

CONSTRUCTION LIMITS

EX ROW

IMPROVEMENT BEGINS
STA 581+92.75
MATCH EXISTING

℄ FAP 327
(US 50)

℄ ROADWAY

STA 583+36
PROPOSED STRUCTURE NO. 051-8634

581 582 583 584 585+00 586 587

+69 +87 +20 +49 +45 +36 +46 +85 +77 +97 +22 +14 +11 +21 +10 +20 +46 +04 +21 +50 +19 +82

IMPROVEMENT ENDS
STA 585+75.50
MATCH EXISTING

CONSTRUCTION LIMITS

EX ROW

EX ROW

EX ROW

LEGEND

- PERIMETER EROSIN BARRIER
- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECKS
- SEEDING, CLASS 2

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - ·	REVISED -
FILE NAME = D774113-sht-erosion.dgn	DRAWN - ·	REVISED -
PLOT SCALE = 40.000000 ' / in.	CHECKED - ·	REVISED -
PLOT DATE = 10/18/2018	DATE - ·	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
SN 051-0013 (OLD) SN 051-8634 (NEW)

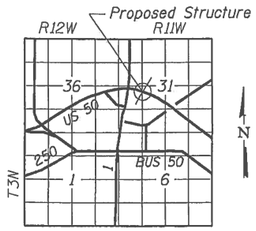
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	84
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Benchmark: B.M. 802, Chiseled square on S.W. Corner S.N. 051-0013, Elev. 454.13

Existing structure: SN 051-0013 built in 1959 as FAI 64, Section 51-23VB at Sta. 583+60. The existing structure consists of a 3-span steel continuous multi-stringer superstructure with a CIP concrete deck supported by pile bent spill thru abutments and multi-column piers with crashwalls on timber pile supported footings. 151'-0" back-to-back of abutments and 36'-5" out to out of deck. Repairs were performed on the structure In 1987, including deck patching, rail retrofitting and replacement of expansion joints. The Proposed Structure is to be constructed under the existing structure. The structure will remain open to traffic during construction of the proposed culvert. Traffic will be detoured during demolition of the existing structure and placement of the proposed embankment.

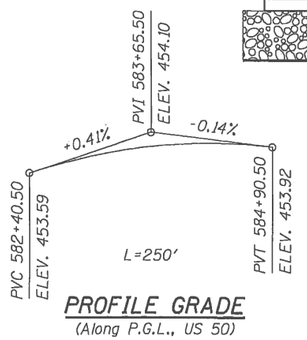
No salvage.



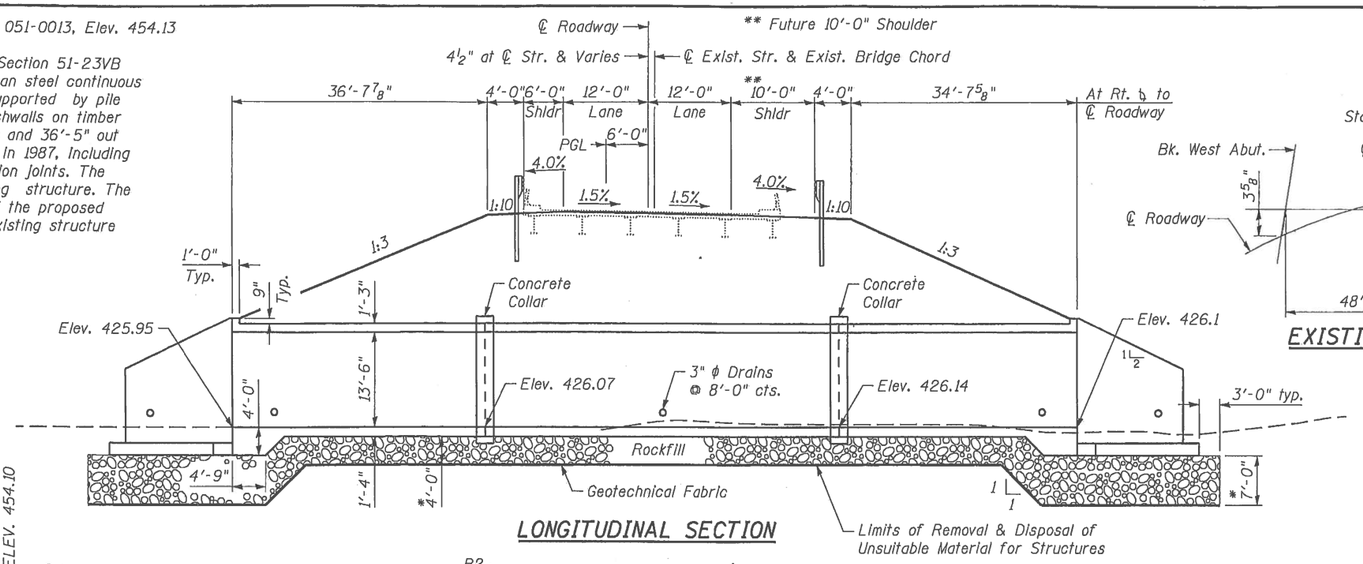
LOCATION SKETCH

STATION 583+29.07
BUILT BY
STATE OF ILLINOIS
F.A.P. RTE. 327
SEC. (51-23VB)B-1
LOADING HL-93
STRUCTURE NO. 051-8634

NAME PLATE
See Std. 515001

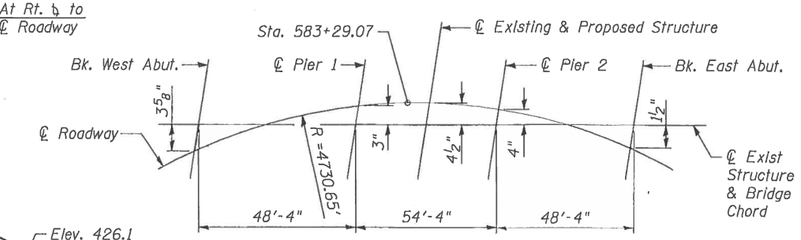


PROFILE GRADE
(Along P.G.L., US 50)

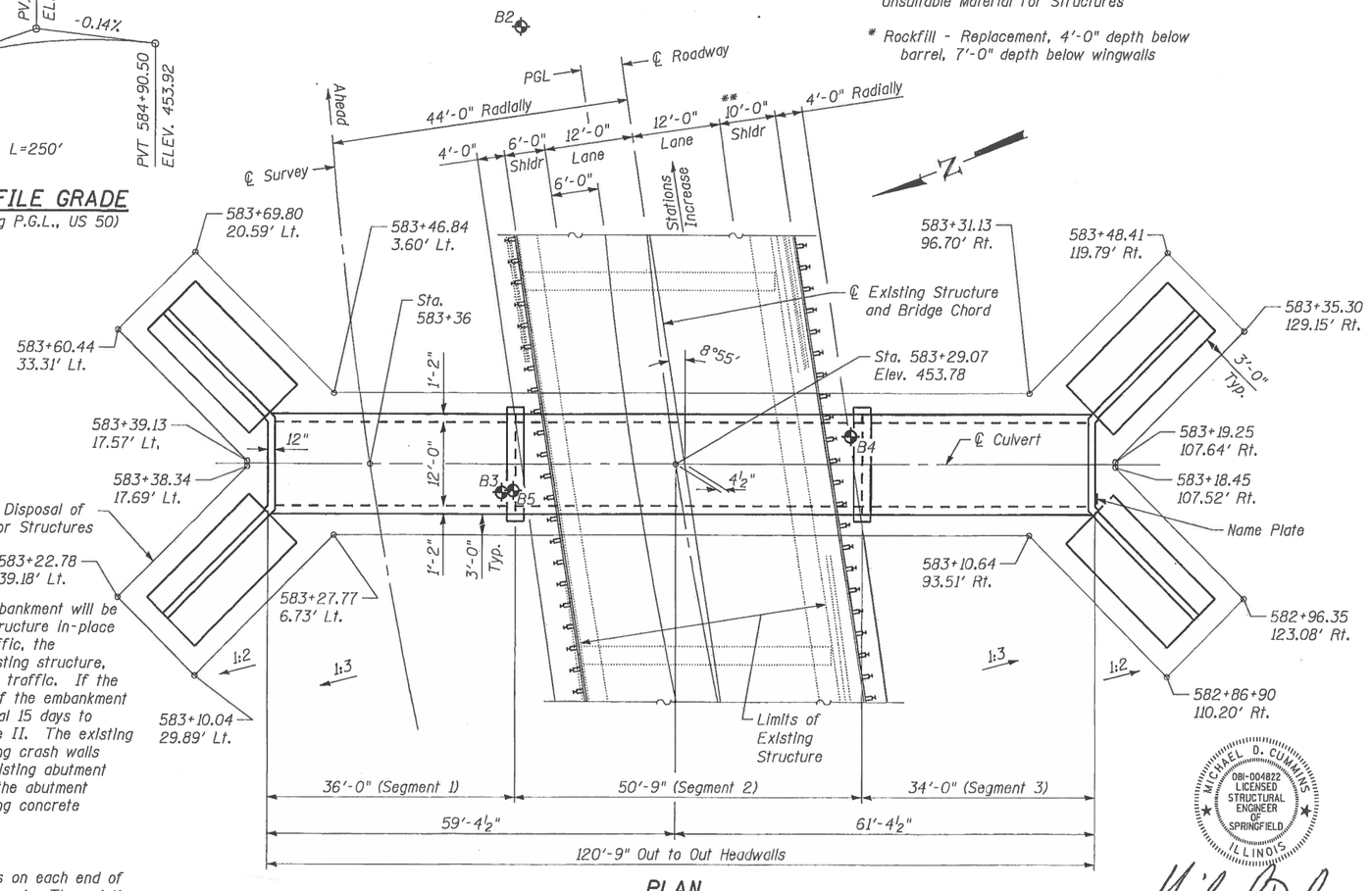


LONGITUDINAL SECTION

* Rockfill - Replacement, 4'-0" depth below barrel, 7'-0" depth below wingwalls



EXISTING STRUCTURE OFFSET SKETCH



PLAN

CURVE DATA

PI STA. = 581+11.59
Δ = 66° 01' 58" (RT)
D = 1° 12' 00"
R = 4,774.65'
T = 3,102.63'
L = 5,502.73'
E = 919.52'
P.C. STA. = 550+08.96
P.T. STA. = 605+11.68
S.E. = 0.015 FT/FT

Sequence of Construction

The proposed culvert and a limited portion of the embankment will be constructed in Stage I, with the existing overhead structure in-place and open to traffic. Once the road is closed to traffic, the contractor will be allowed 30 days to remove the existing structure, complete the embankment and to re-open the road to traffic. If the Engineer closes the road to traffic before Stage I of the embankment is complete the contractor will be allowed an additional 15 days to complete Stage I of the embankment along with Stage II. The existing piers shall be removed down to the top of the existing crash walls prior to completing Stage II of the embankment. Existing abutment wing walls and back walls shall be removed down to the abutment seats. Abutment caps shall be left in place. Existing concrete slopewall shall be removed.

Monitoring of the Existing Structure

The Engineer will establish and monitor Control Points on each end of each pier during Stage I construction of the embankment. The existing structure will be closed to traffic in the event of any settlement or movement of the existing piers exceeding 1 inch in any direction.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

INDEX OF SHEETS

LOADING HL-93

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

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

MICHAEL D. CUMMINS 081-004822 LICENSED STRUCTURAL ENGINEER OF SPRINGFIELD ILLINOIS

Michael D. Cummins 12-5-18
(Expires 11/30/2018)

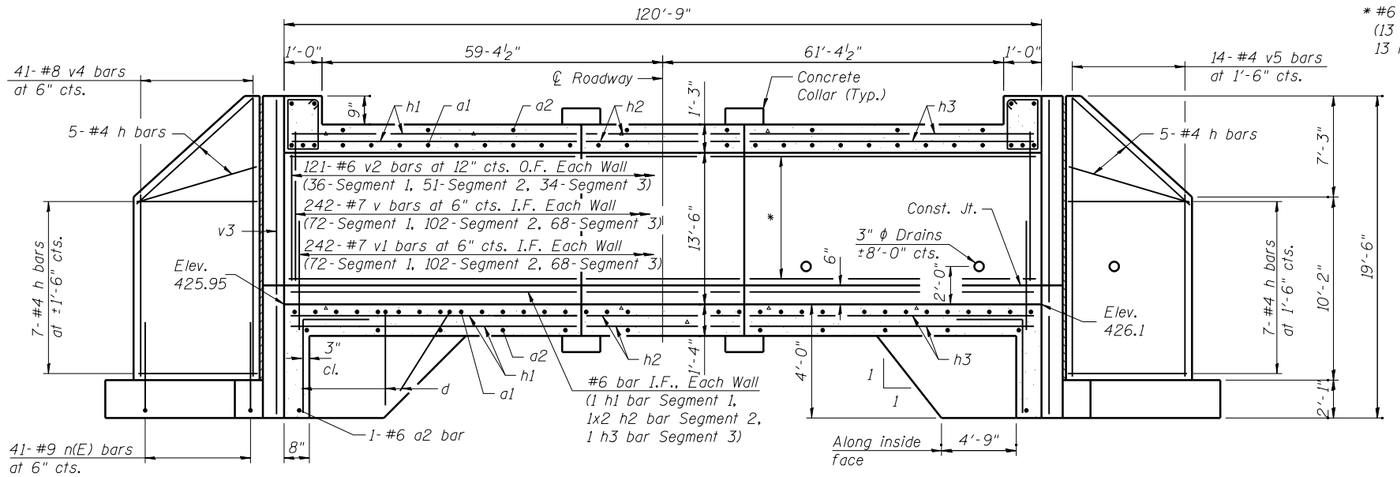
GENERAL PLAN AND ELEVATION
U.S. ROUTE 50 OVER ABANDONED RAILROAD
F.A.P. ROUTE 327 SECTION (51-23VB)B-1
LAWRENCE COUNTY
STATION 583+29.07
STRUCTURE NO. 051-8634

CEC Cummins Engineering Corporation — Civil and Structural Engineering	JOB = 2480.2	DESIGNED - AAN	REVISED -	
	FILE = 051B634-74113-01-DPE.dgn	CHECKED - MDC	REVISED -	
	DATE = 12/5/2018	DRAWN - SJS	REVISED -	
		CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 051-8634
SHEET NO. 1 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23VB)B-1	LAWRENCE	260	85
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



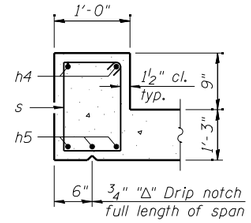
REINF. - BACK FACE

* #6 bars at 12" cts. Each Face, Each Wall
(13 h1 bars Segment 1, 13x2 h2 bars Segment 2,
13 h3 bars Segnent 3)

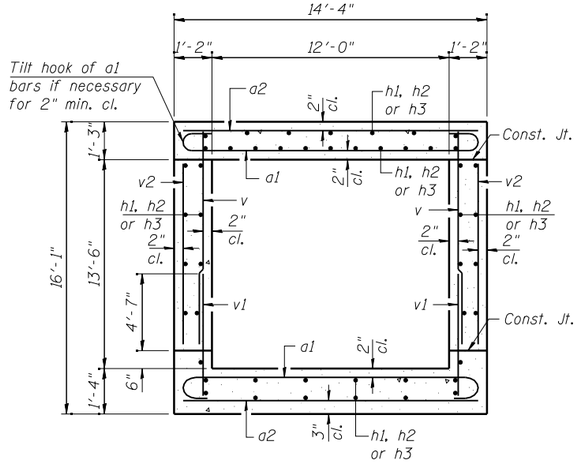
REINF. - FRONT FACE

MINIMUM LAP

#6 bar 4'-4"

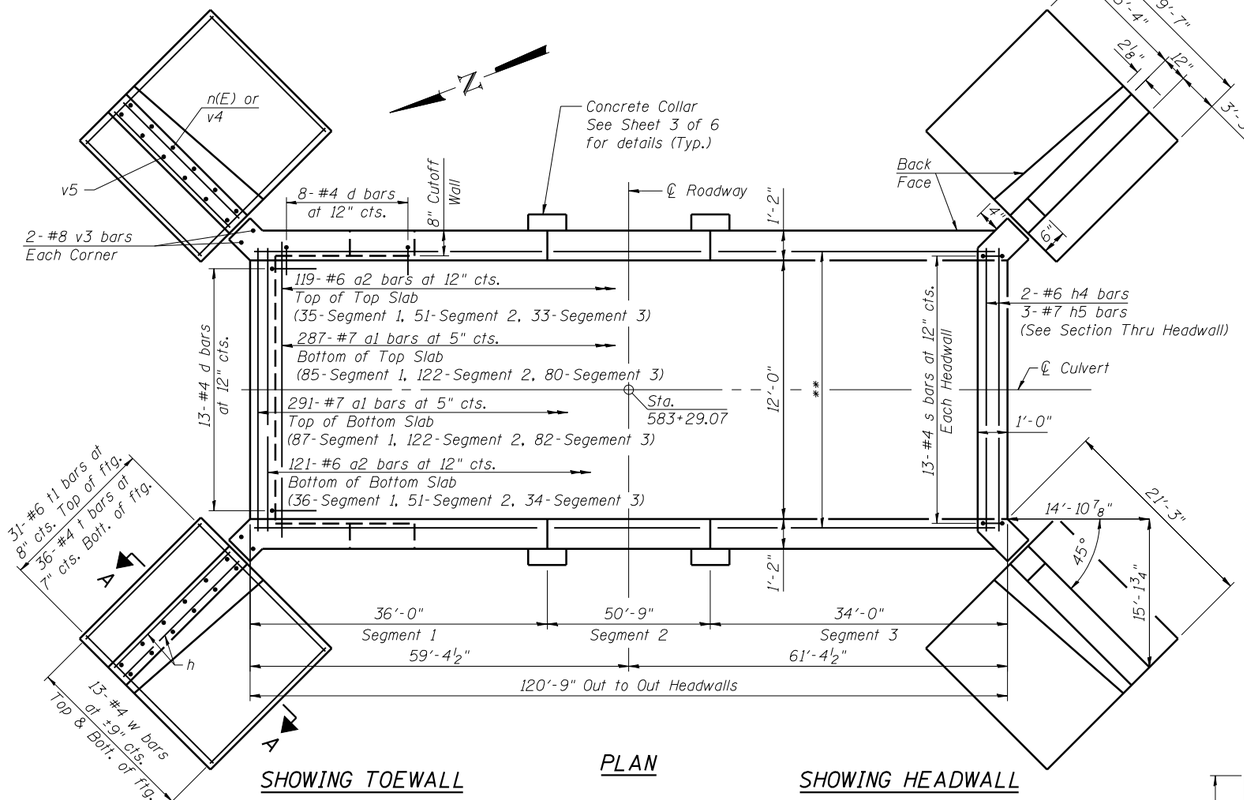


SECTION THRU HEADWALL



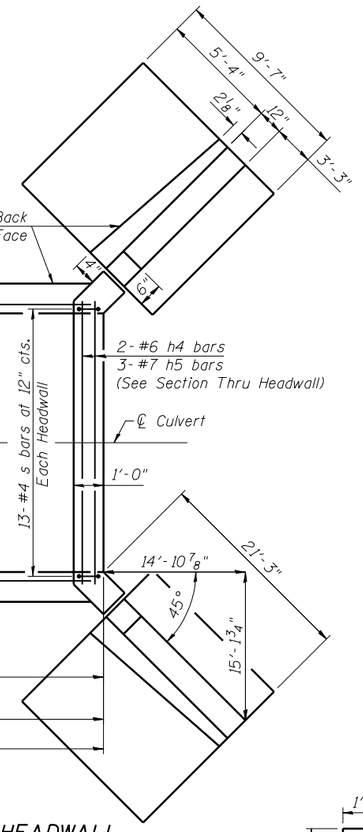
SECTION THRU BARREL

LONGITUDINAL SECTION



SHOWING TOEWALL

PLAN



SHOWING HEADWALL

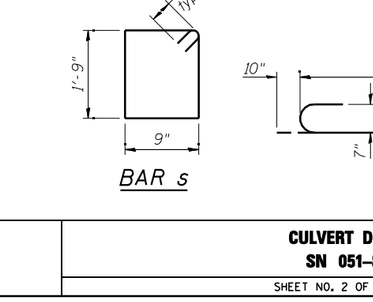
Notes:

Bars indicated thus 14 x 2-#5 etc. indicates 14 lines of bars with 2 lengths per line.

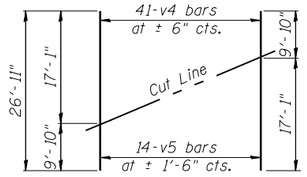
At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.

See sheet 3 of 6 for additional bar bend details.

** #6 bars at 12" cts. Top & Bottom of Top & Bottom slab
(14 h1 bars Segment 1, 14x2 h2 bars Segment 2,
14-h3 bars Segment 3)

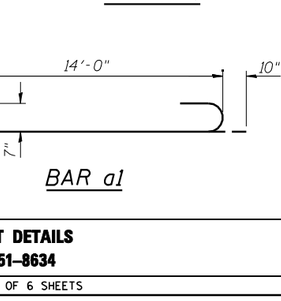


CORNER DETAIL



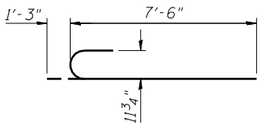
FIELD CUTTING DIAGRAM

Order bars shown full length. Cut as shown and use remainder of bars in opposite wingwall.

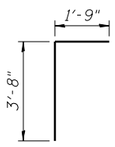


SECTION A-A

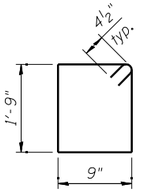
(Max. Applied Service Bearing Pressure = 4510 ksf)



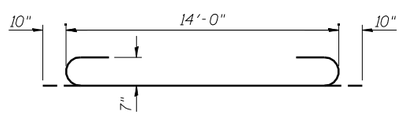
BAR n(E)



BAR d



BAR s



BAR a1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	578	#7	15'-8"	
a2	242	#6	14'-0"	
d	58	#4	5'-5"	
h	96	#4	20'-2"	
h1	110	#6	35'-8"	
h2	220	#6	27'-5"	
h3	110	#6	33'-8"	
h4	4	#6	13'-2"	
h5	6	#7	13'-2"	
h6	8	#8	16'-1"	
h7	10	#8	14'-9"	
h8	10	#8	23'-3"	
n(E)	164	#9	8'-9"	
s	26	#4	5'-9"	
s1	98	#4	6'-5"	
s2	30	#4	6'-7"	
t	144	#4	9'-4"	
t1	124	#6	9'-4"	
v	484	#7	13'-11"	
v1	484	#7	6'-2"	
v2	242	#6	12'-8"	
v3	8	#8	19'-2"	
v4	82	#8	26'-11"	
v5	28	#4	26'-11"	
v6	20	#8	4'-10"	
v7	20	#8	18'-1"	
v8	20	#8	19'-9"	
w	104	#4	20'-2"	
Concrete Box Culverts		Cu. Yd.	419.4	
Concrete Collar		Cu. Yd.	12.3	
Reinforcement Bars		Pound	85,460	
Reinforcement Bars, Epoxy Coated		Pound	4,880	

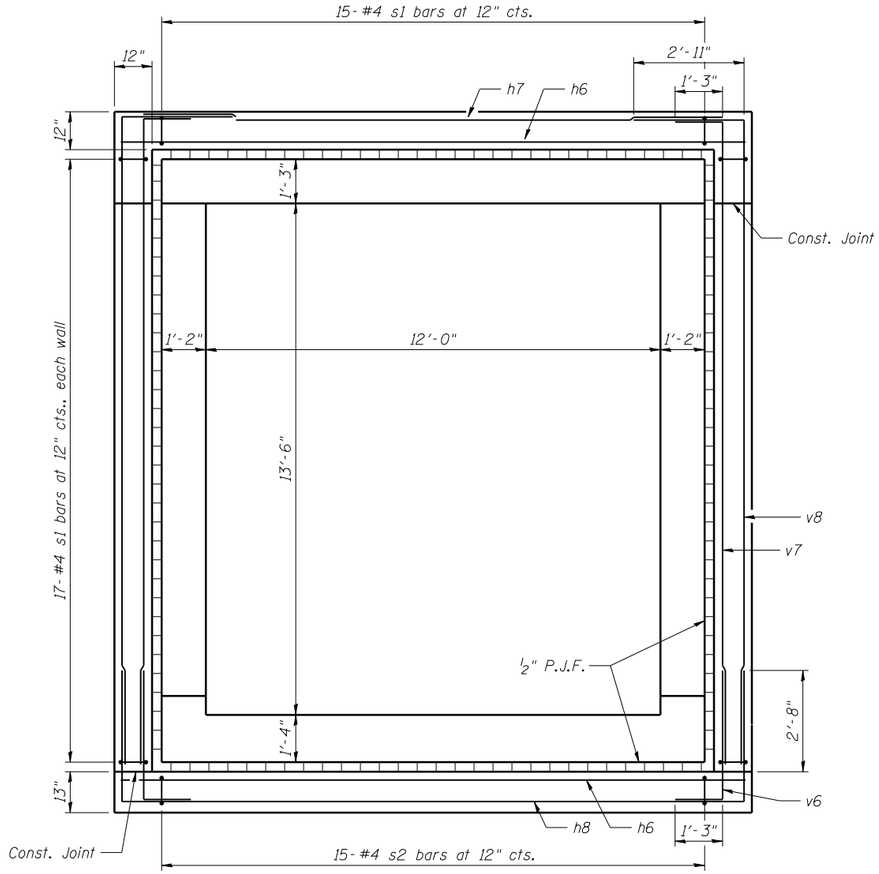
CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - AAN	REVISED -	
FILE = 0518634-74113-00-Culvert.dgn	CHECKED - MDC	REVISED -	
DATE = 12/4/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

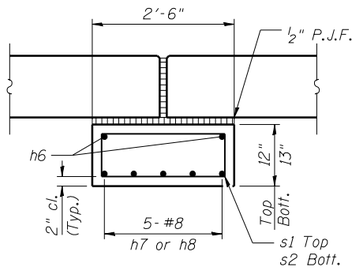
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
SN 051-8634
SHEET NO. 2 OF 6 SHEETS

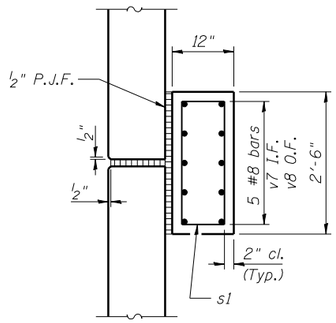
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23VBIB-1	LAWRENCE	260	86
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			



SECTION THRU BOX AT COLLAR



SECTION THRU TOP AND BOTTOM SLAB



SECTION THRU SIDEWALL

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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

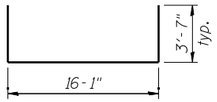
The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.

The Rockfill-Replacement shall be capped with 6 in. of CA7 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of the capping material shall be included in the pay item for Rockfill-Replacement.

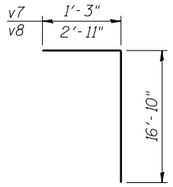
See roadway plans for Stage I Embankment limits and Sequence of Operations. Precast alternate is not allowed.

TOTAL BILL OF MATERIAL

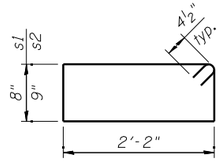
ITEM	UNIT	TOTAL
Removal of Existing Structures No. 2	Each	1
Removal and Disposal of Unsuitable Material For Structures	Cu. Yd.	832
Reinforcement Bars	Pound	85,460
Reinforcement Bars, Epoxy Coated	Pound	4,880
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	419.4
Concrete Collar	Cu. Yd.	12.3
Rockfill - Replacement	Ton	1250
Geotechnical Fabric	Sq. Yd.	479



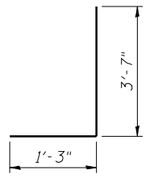
BAR h8



BAR v7 or v8



BAR s1 or s2



BAR v6

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - AAN	REVISED -	
FILE = 0518634-74113-00-Culvert.dgn	CHECKED - MDC	REVISED -	
DATE = 12/4/2018	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE COLLAR, GENERAL NOTES & TOTAL BILL OF MATERIAL
SN 051-8634
SHEET NO. 3 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23VB)B-1	LAWRENCE	260	87
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 9/8/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 1 W Abut
Station 581+84
Offset 8.00ft Rt
Ground Surface Elev. 453.37 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 96 **Hrs.** Dry ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
2" asphalt on 13" concrete pavement.				
452.07				
Medium to stiff, damp, gray, SILTY CLAY.		1		
		3	1.0	19
		3	B	
448.87	-5	2		
Stiff, damp, gray, CLAY LOAM.		3	1.5	17
		5	B	
446.37				
Gray, SANDY LOAM.		1		
445.87				
Stiff, damp, gray, SANDY CLAY LOAM.		3	1.3	17
		5	B	
443.87				
Gray, SANDY LOAM.	-10	3		
443.07		4	1.9	18
Stiff, damp, gray, CLAY.		4	B	
441.37				
Medium, damp, gray, SANDY LOAM.		3		
		4	0.4	15
		6	S	
438.87				
Very stiff, damp, gray, CLAY LOAM.	-15	4		
		5	2.2	18
437.57		8	B	
Medium, damp, gray, SANDY LOAM w/ petroleum odor.		4		
		5	0.9	15
		10	S	
	-20	4		
Medium, damp, gray, SANDY LOAM w/ petroleum odor. *(continued)*		11	0.4	10
		13	S	
431.37				
Stiff, damp, gray, CLAY LOAM w/ layers of Sandy Loam and petroleum odor.		4		
		4	1.3	36
		5	B	
	-25	4		
		5	1.3	17
		6	B	
		3		
		6	1.2	12
		7	B	
	-30	2		
422.87		4	1.8	20
Gray, SANDY LOAM.		8	B	
418.87				
Stiff, damp, gray, CLAY w/ few Clay Till pieces.	-35	3		
417.67		3	1.5	18
Stiff, damp, gray, SILTY CLAY w/ many roots and wood fragments.		6	B	
413.87				
Gray, SANDY LOAM.	-40	2		
413.37				

Latitude W 87 deg 40.644 min, Longitude N 38 deg 44.338 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 9/8/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 1 W Abut
Station 581+84
Offset 8.00ft Rt
Ground Surface Elev. 453.37 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 96 **Hrs.** Dry ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray, SILTY CLAY w/ many roots and wood fragments.		3	2.0	18
412.37		4	B	
Extent of exploration.				
Benchmark: BM 801 Chiseled square on SE corner of existing bridge on US 50 over IL 1 (approx 0.1 mile West of this structure) = 451.11' elevation. Provided by Program Development.	-45			
	-50			
	-55			
	-60			

Latitude W 87 deg 40.644 min, Longitude N 38 deg 44.338 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 9/8/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 2 E Abut
Station 584+60
Offset 13.00ft Lt
Ground Surface Elev. 453.80 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 96 **Hrs.** Dry ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
9 1/2" asphalt shoulder.				
453.00				
Stiff, damp, gray, CLAY.		4		
		4	1.1	19
		5	B	
	-5	3		
		3	2.4	16
		5	B	
446.30		2		
Medium, very damp, gray, SILTY CLAY.		2	0.4	21
		3	BS	
444.30				
Stiff, damp, gray mottled brown, CLAY.	-10	2		
		4	1.5	19
		5	B	
441.30		2		
Red, SANDY LOAM.		4	1.6	17
441.00		5	B	
Very stiff, damp, gray mottled red, CLAY.	-15	2		
		4	1.4	16
		5	B	
		2		
		4	2.3	15
		5	B	
433.80	-20	3		
Very stiff, damp, gray marbled red, CLAY.		4	2.1	20
		4	B	
		2		
		4	2.6	15
		5	B	
	-25	3		
		4	2.3	17
		5	B	
		3		
		5	2.3	17
		5	B	
	-30	2		
		4	1.9	14
		7	B	
	-35	3		
		4	2.2	14
		7	B	
	-40	2		

Latitude W 87 deg 40.683 min, Longitude N 38 deg 44.350 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 9/8/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 2 E Abut
Station 584+60
Offset 13.00ft Lt
Ground Surface Elev. 453.80 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 96 **Hrs.** Dry ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	413.30	4	0.4	22
Medium, very damp, gray, SILTY CLAY.	412.80	5	B	
Extent of exploration.				
Benchmark: BM 801 Chiseled square on SE corner of existing bridge on US 50 over IL 1 (approx 0.1 mile West of this structure) = 451.11' elevation. Provided by Program Development.	-45			
	-50			
	-55			
	-60			

Latitude W 87 deg 40 883 min, Longitude N 38 deg 44.350 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/9/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 3 North
Station ~~582+84~~ **583+29**
Offset 25.70ft Lt
Ground Surface Elev. 425.43 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After ____ **Hrs.** N/A ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Railroad ballast rock.	421.43			
Very stiff, damp, gray, CLAY.	-5	5		
		6	3.7	27
	418.43	9	PP	
Soft, damp, gray, SILTY CLAY.		2		
		4	0.4	25
	416.43	4	B	
Medium, damp, gray, CLAY w/ trace Silt.	-10	2		
		4	0.7	25
	413.43	4	B	
Soft, damp, gray, SILTY CLAY.		1		
		2	0.3	25
	410.93	3	B	
Medium, damp, gray, CLAY w/ trace Silt.	-15	1		
		2	0.7	24
	409.43	3	B	
Extent of exploration.				
Benchmark: BM 801 Chiseled square on SE corner of existing bridge on US 50 over IL 1 (approx 0.1 mile West of this structure) = 451.11' elevation. Provided by Program Development.	-20			

Latitude W 87 deg 40.921 min, Longitude N 38 deg 44.341 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/9/08

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, **SEC.** , **TWP.** 4 N, **RNG.** 11 W, 3 **PM**

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+36

BORING NO. 4 South
Station ~~582+84~~ **583+29**
Offset 26.00ft Rt
Ground Surface Elev. 426.39 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After ____ **Hrs.** N/A ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Railroad ballast rock.	421.89			
Medium, damp, gray, CLAY w/ trace Silt.	-5	2		
		2	0.7	15
		3	BS	
		2		
		2	0.8	25
		3	B	
	416.09	2		
Soft to medium, damp, gray, SILTY CLAY.	-10	2	0.5	26
		3	B	
	413.89	1		
Medium, damp, gray, CLAY w/ trace Silt.		2	0.8	25
		3	B	
	-15	2		
		2	0.8	23
	410.39	3	B	
Extent of exploration.				
Benchmark: BM 801 Chiseled square on SE corner of existing bridge on US 50 over IL 1 (approx 0.1 mile West of this structure) = 451.11' elevation. Provided by Program Development.	-20			

Latitude W 87 deg 40.634 min, Longitude N 38 deg 44.327 min, Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2480.2	DESIGNED - AAN	REVISED -
FILE = 0518634-74113-009-borings.dgn	CHECKED - TSH	REVISED -
DATE = 12/4/2018	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
SN 051-8634
SHEET NO. 5 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23VB)B-1	LAWRENCE	260	89
		CONTRACT NO. 74177		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 4/25/13

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, SEC. , TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+29

BORING NO. 5 (North)
Station 583+29
Offset 24.0ft Lt
Ground Surface Elev. 426.43 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
∇ First Encounter 399.4 ft
▼ Upon Completion 415.9 ft
▼ After 24 Hrs. 419.2 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Railroad ballast rock.	421.93				
Medium, damp, gray, SILTY CLAY LOAM.		-5	2 / 3 / 3	0.62 B	24
▼	416.93		1 / 2 / 3	0.54 B	30
Medium to very stiff, damp, gray, SILTY CLAY. ▼		-10	2 / 2 / 3	1.07 B	32
			2 / 2 / 3	0.91 B	25
		-15	1 / 2 / 3	2.06 BS	22
			2 / 2 / 3	1.57 B	23
	406.93	-20	3		

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to medium, damp, brown marbled gray, SILTY CLAY LOAM. *(continued)*			3 / 3	1.07 B	25
	403.23		2 / 2 / 2	0.82 B	25
Gray, SANDY LOAM.	401.93				
Very soft, very damp, gray, SANDY LOAM.	∇ 399.43	-25	1 / 2 / 3	0.25 B	24
Loose, wet, gray, fine grained, SAND.			0 / 1 / 3		28
		-30	2 / 3 / 5		23
		-35	2 / 3 / 3		32
	386.43	-40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\LAWRENCE CO (051)\051-0013 SOIL ROCK 2008.GPJ Data Template D6TEMPLT.GDT Date Printed 5/16/13
Latitude W 87 deg 40.923 min Longitude N 38 deg 44.348 min Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 4/25/13

ROUTE FAP 327 (US 50) DESCRIPTION Over abandoned railroad LOGGED BY E. Sandschafer

SECTION (51-23VB)B-1 LOCATION West 1/2 - Section 31, SEC. , TWP. 4 N, RNG. 11 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 051-0013
Station 583+29

BORING NO. 5 (North)
Station 583+29
Offset 24.0ft Lt
Ground Surface Elev. 426.43 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
∇ First Encounter 399.4 ft
▼ Upon Completion 415.9 ft
▼ After 24 Hrs. 419.2 ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very stiff to stiff, damp, gray, SILTY CLAY.			6 / 7	2.06 B	22
		-45	3 / 4 / 7	3.50 B	23
		-50	3 / 4 / 4	1.65 B	25
		-55			
	366.43	-60	2		

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	365.43		3 / 10	1.65 B	27
Extent of exploration.					
Benchmark: BM 801 Chiseled square on SE corner of existing bridge on US 50 over IL 1 (approx 0.1 mile West of this structure) = 451.11' elevation. Provided by Program Development.		-65			
		-70			
		-75			
		-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

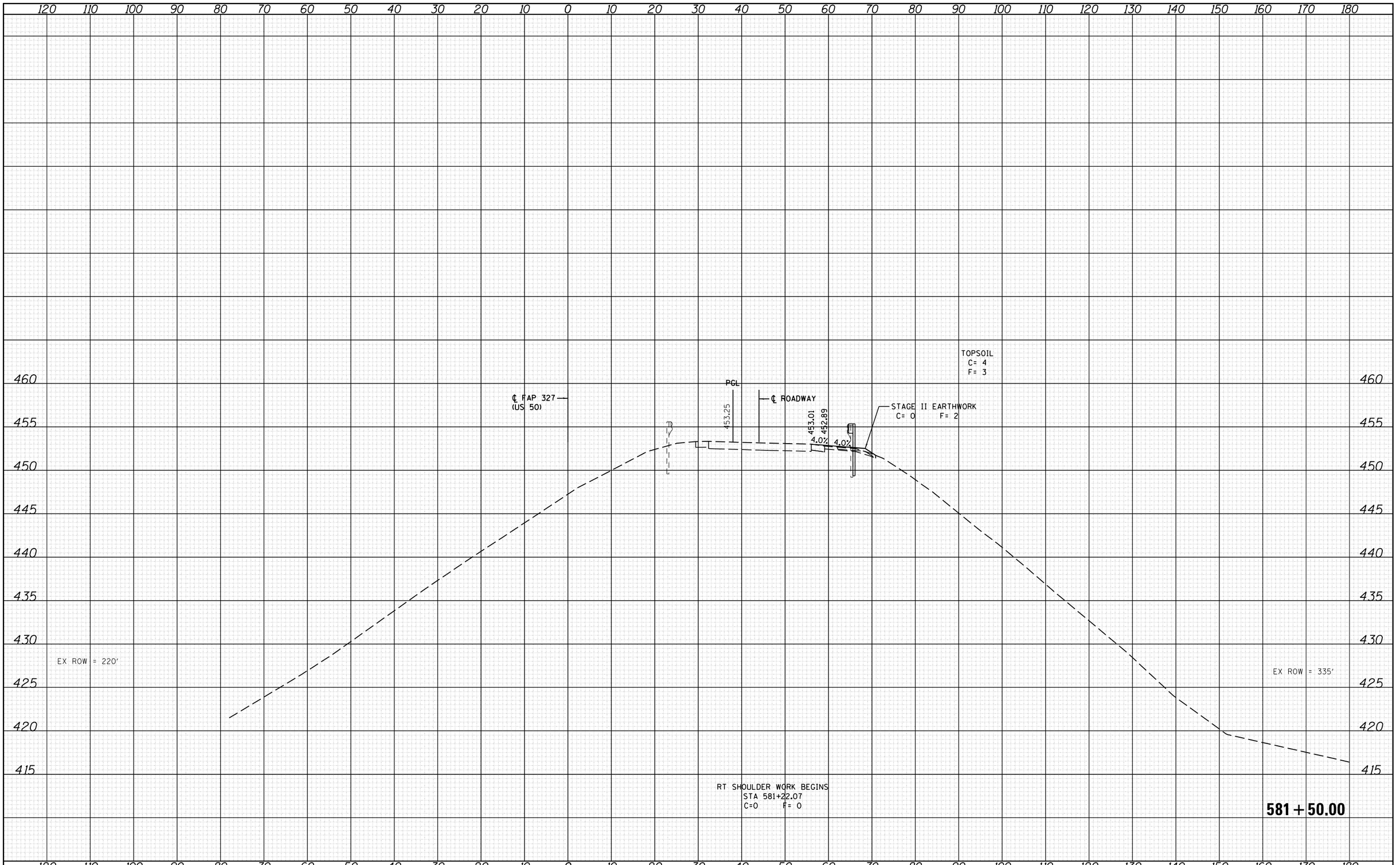
File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\LAWRENCE CO (051)\051-0013 SOIL ROCK 2008.GPJ Data Template D6TEMPLT.GDT Date Printed 5/16/13
Latitude W 87 deg 40.923 min Longitude N 38 deg 44.348 min Datum Job Number

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



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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 -	

CEC Cummins Engineering Corporation
Civil and Structural Engineering

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET NO. 1 OF 16 SHEETS | STA. 581+50.00 TO STA. 581+50.00

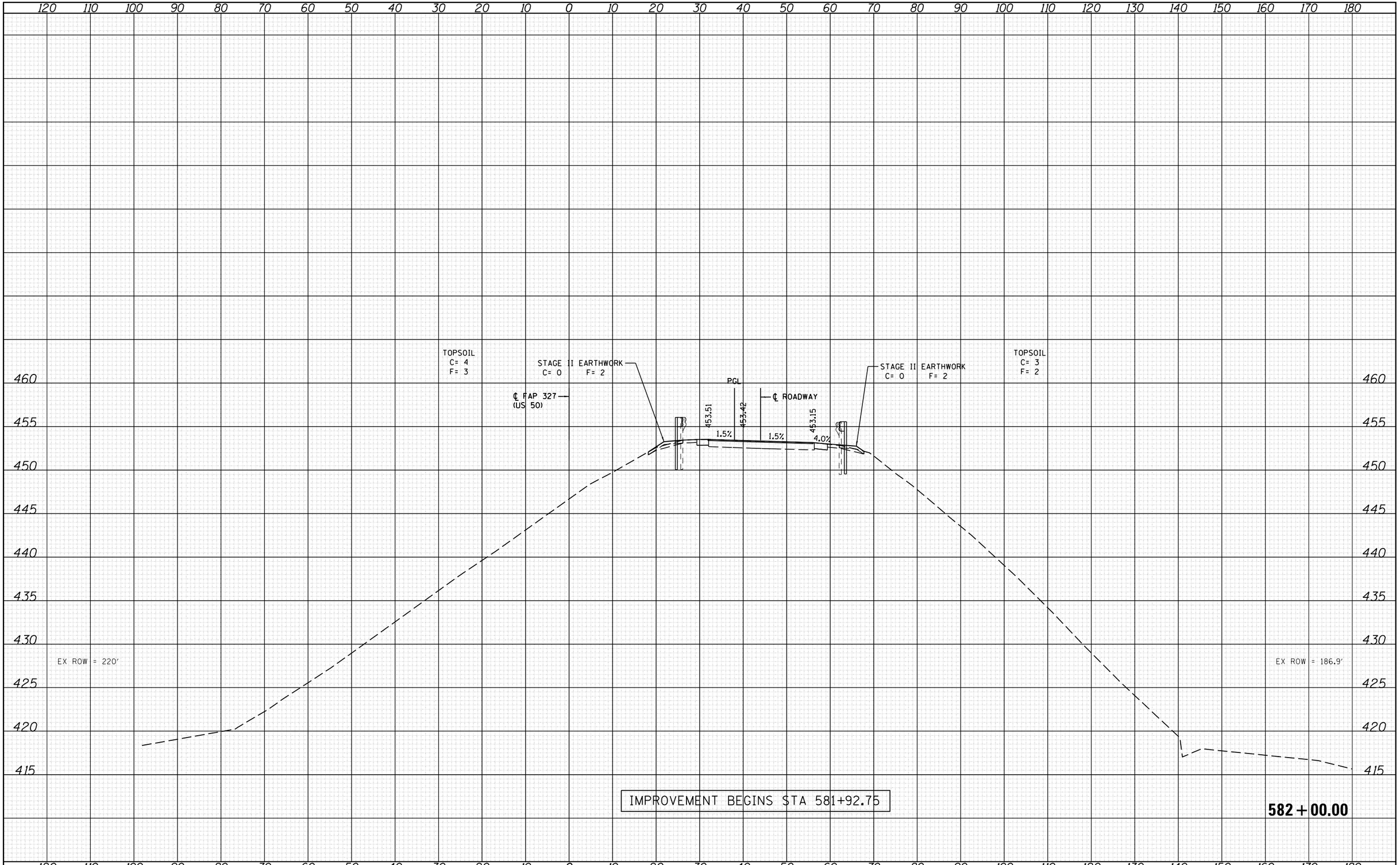
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	91
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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 -
	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

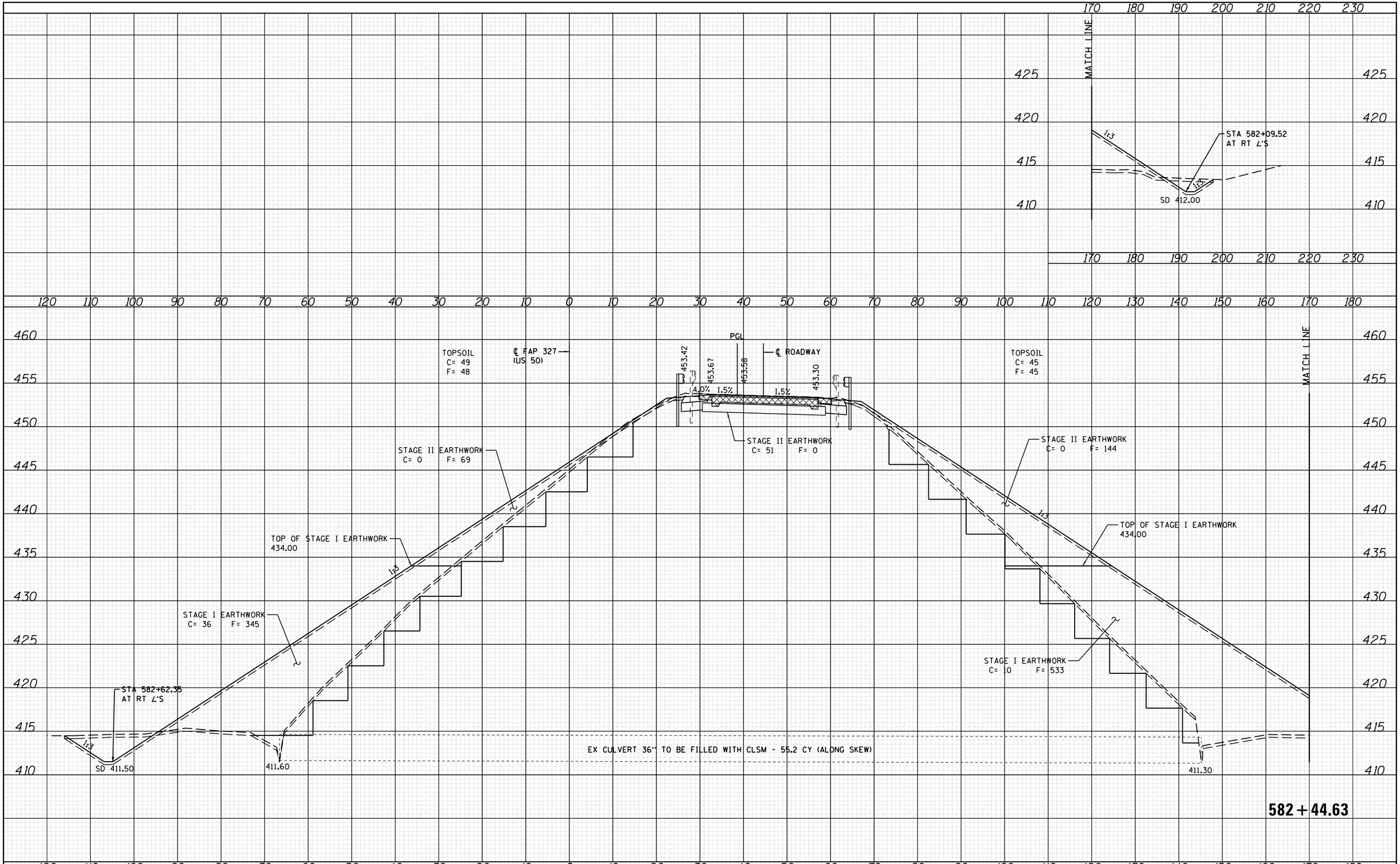
CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 2 OF 16 SHEETS | STA. 582+00.00 TO STA. 582+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	92
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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 -	

CEC Cummins Engineering Corporation
Civil and Structural Engineering

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

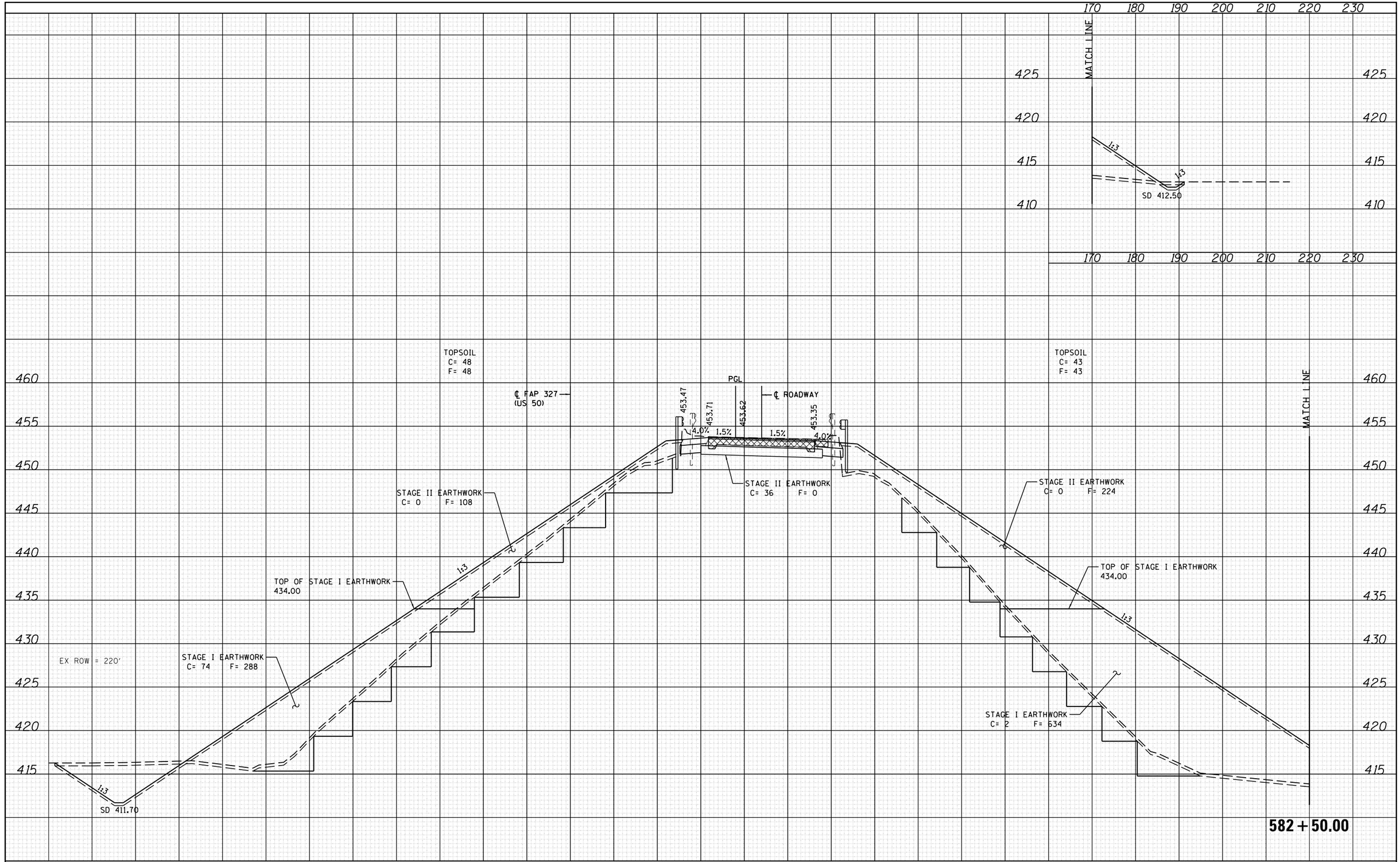
CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 3 OF 16 SHEETS | STA. 582+44.63 TO STA. 582+44.63

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	93
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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. 4 OF 16 SHEETS | STA. 582+50.00 TO STA. 582+50.00

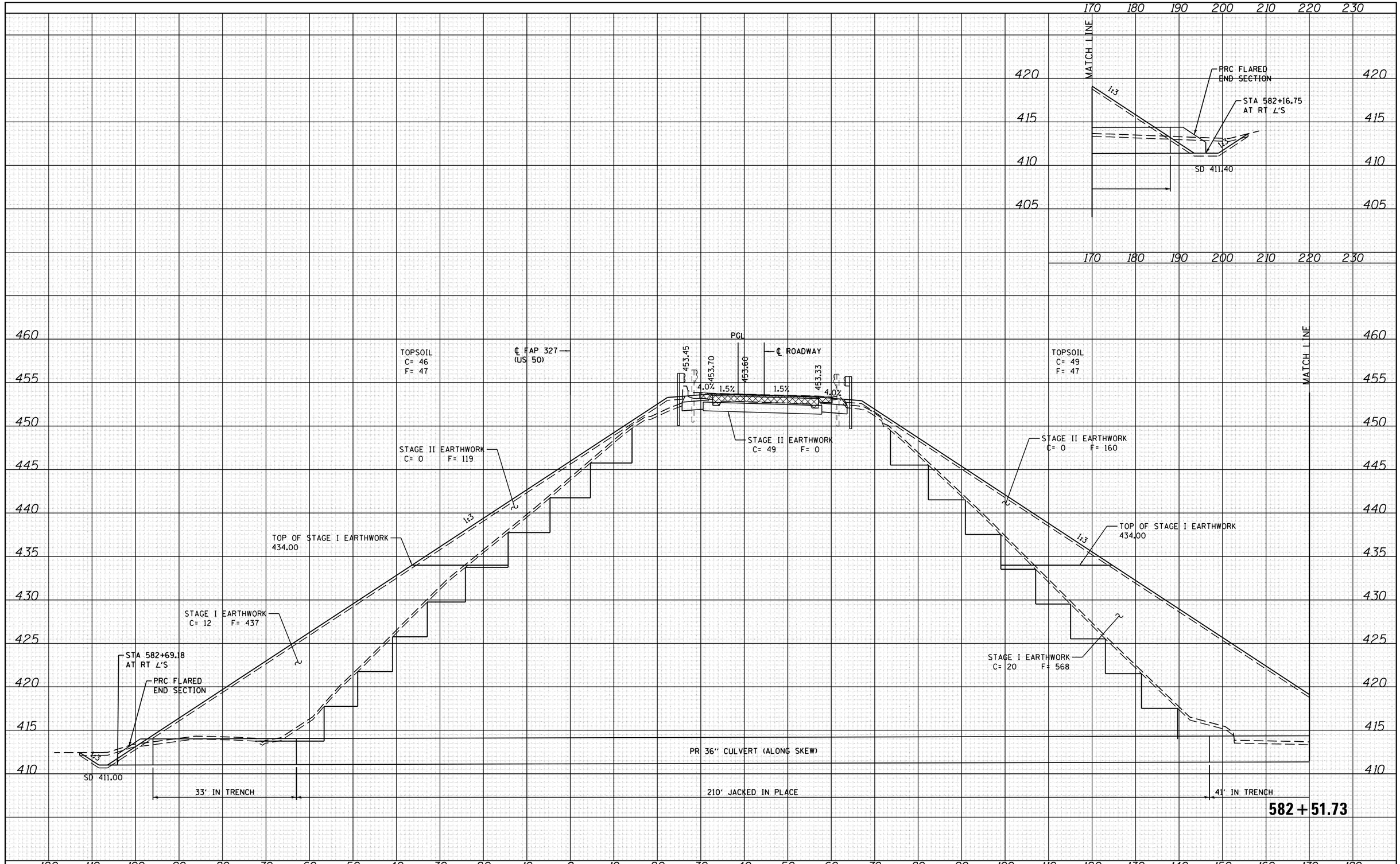
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	94
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED



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

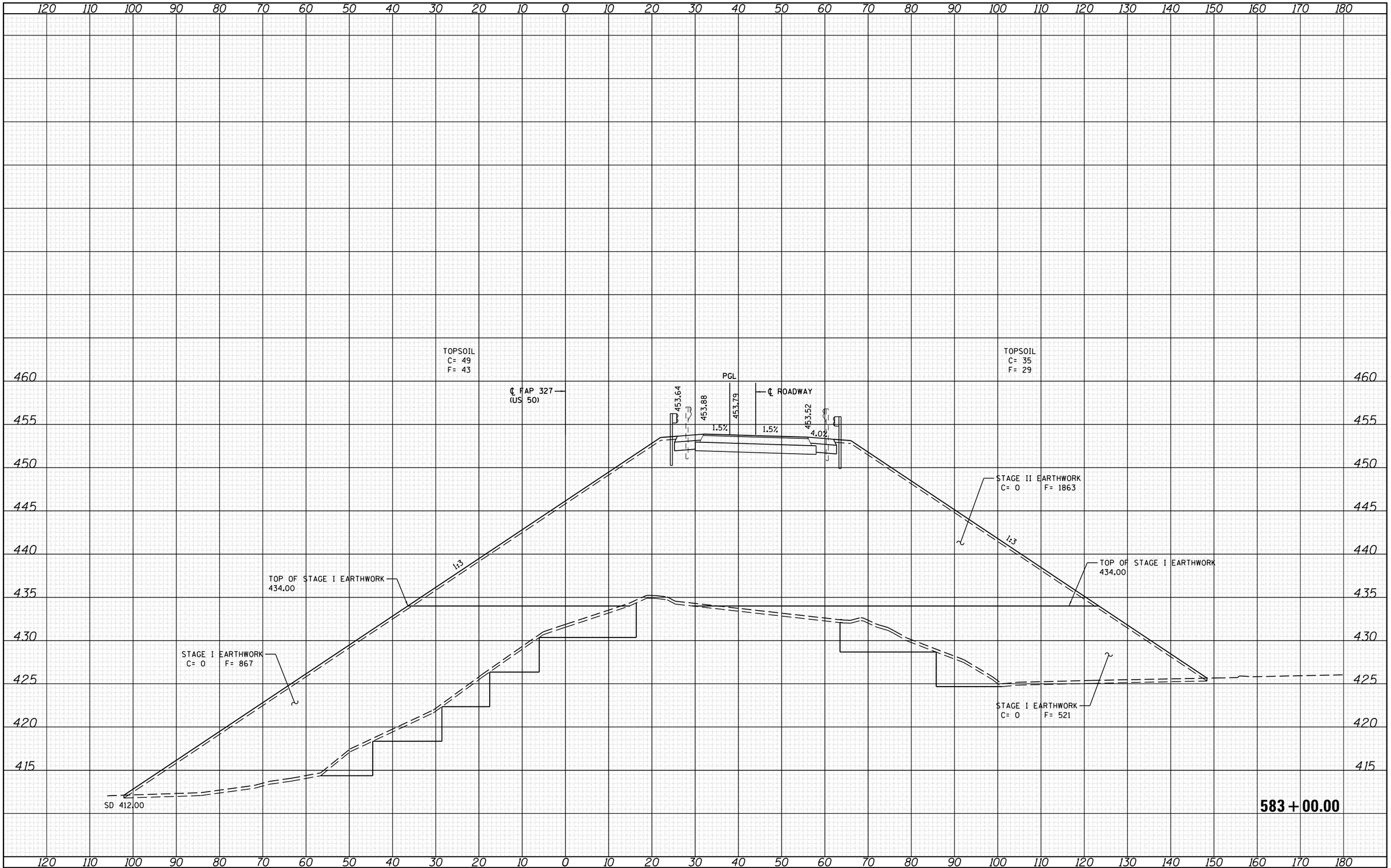
CROSS SECTIONS
SN 051-0013 (OLD) SN 051-8634 (NEW)

SCALE: | SHEET NO. 5 OF 16 SHEETS | STA. 582+51.73 TO STA. 582+51.73

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	95
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	



ORIGINAL SURVEY	NOTE BOOK	NO.

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	

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. 6 OF 16 SHEETS | STA. 583+00.00 TO STA. 583+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	96
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

TOPSOIL
C= 0
F= 15

TOPSOIL
C= 0
F= 14

℄ RAP 327
(US 50)

453.83

454.07

453.98

PGL

℄ ROADWAY

453.71

4.0% 1.5% 1.5% 4.0%

STAGE II EARTHWORK
C= 0 F= 1013

1:3

1:3

1
2

℄ 425.95

(ALONG SKEW)

℄ 426.1

PR CAST-IN-PLACE
CONCRETE BOX CULVERT
12' SPAN 13'-6" RISE 120'-9" LONG

583+36.00

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

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 = 12/4/2018	DATE - 3/22/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

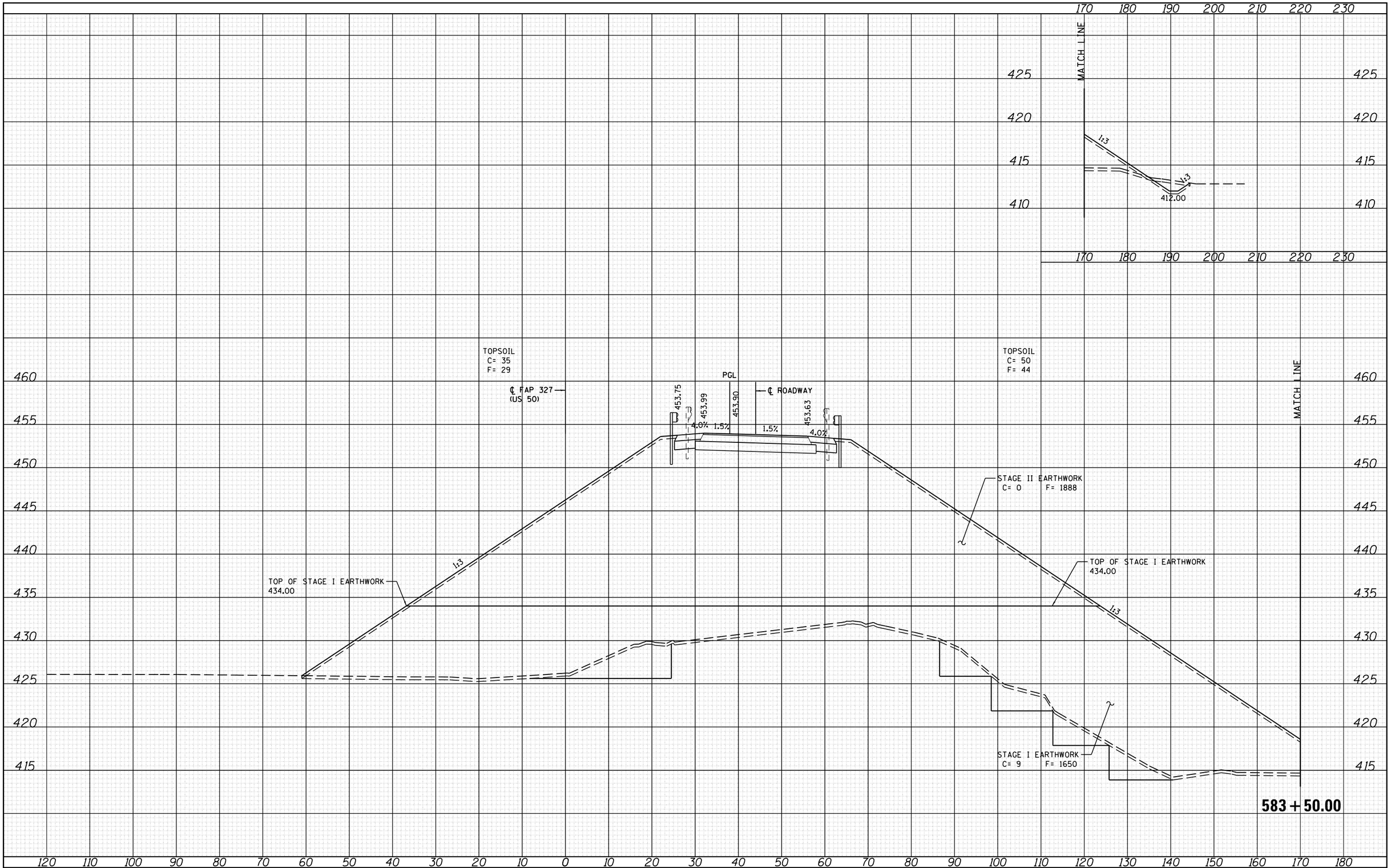
CROSS SECTIONS
SN 051-0013 (OLD) SN 051-8634 (NEW)

SCALE: | SHEET NO. 7 OF 16 SHEETS | STA. 583+36.00 TO STA. 583+36.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	97
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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

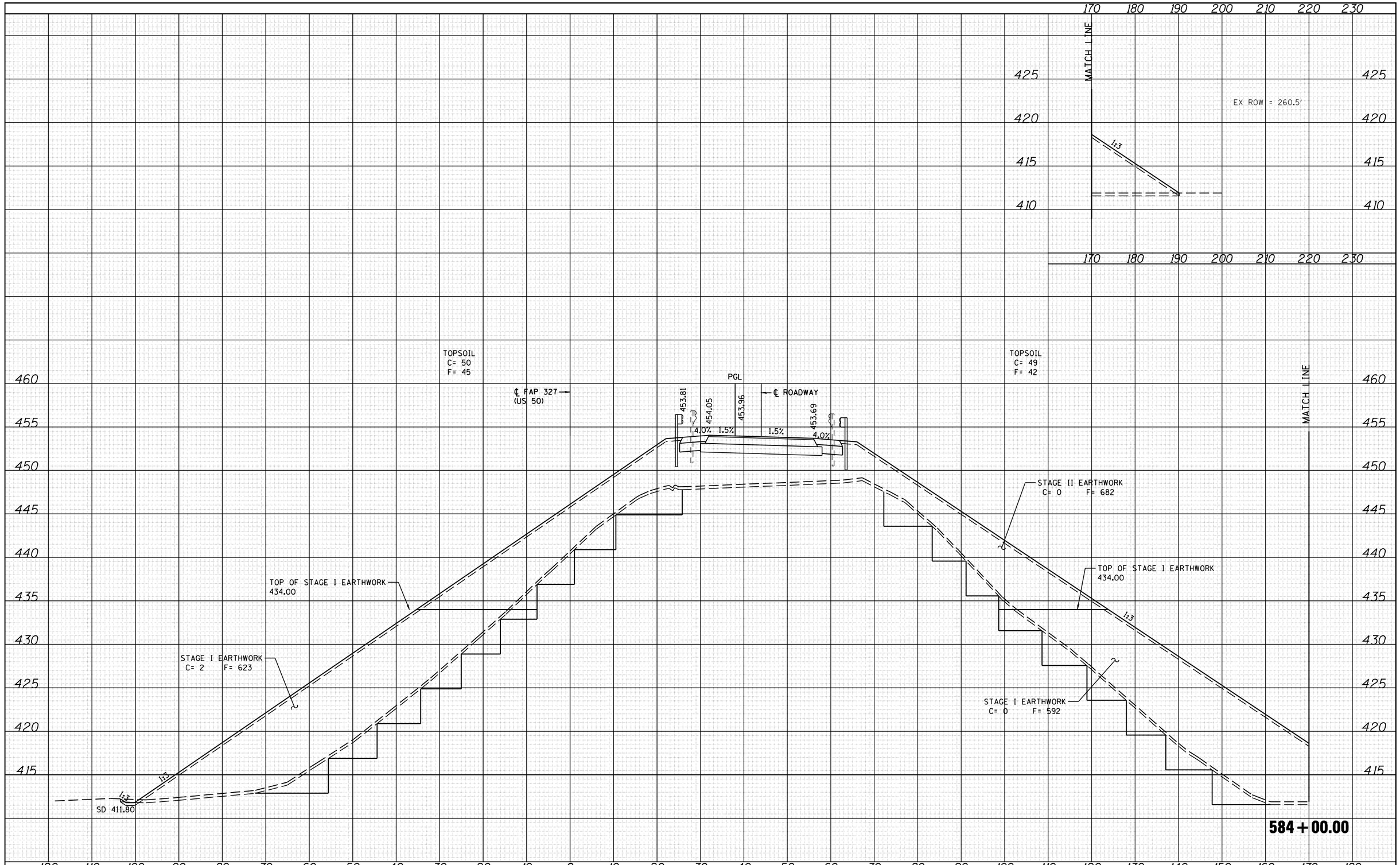
CROSS SECTIONS
SN 051–0013 (OLD) SN 051–8634 (NEW)

SCALE: | SHEET NO. 8 OF 16 SHEETS | STA. 583+50.00 TO STA. 583+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	98
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED	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. 9 OF 16 SHEETS | STA. 584+00.00 TO STA. 584+00.00

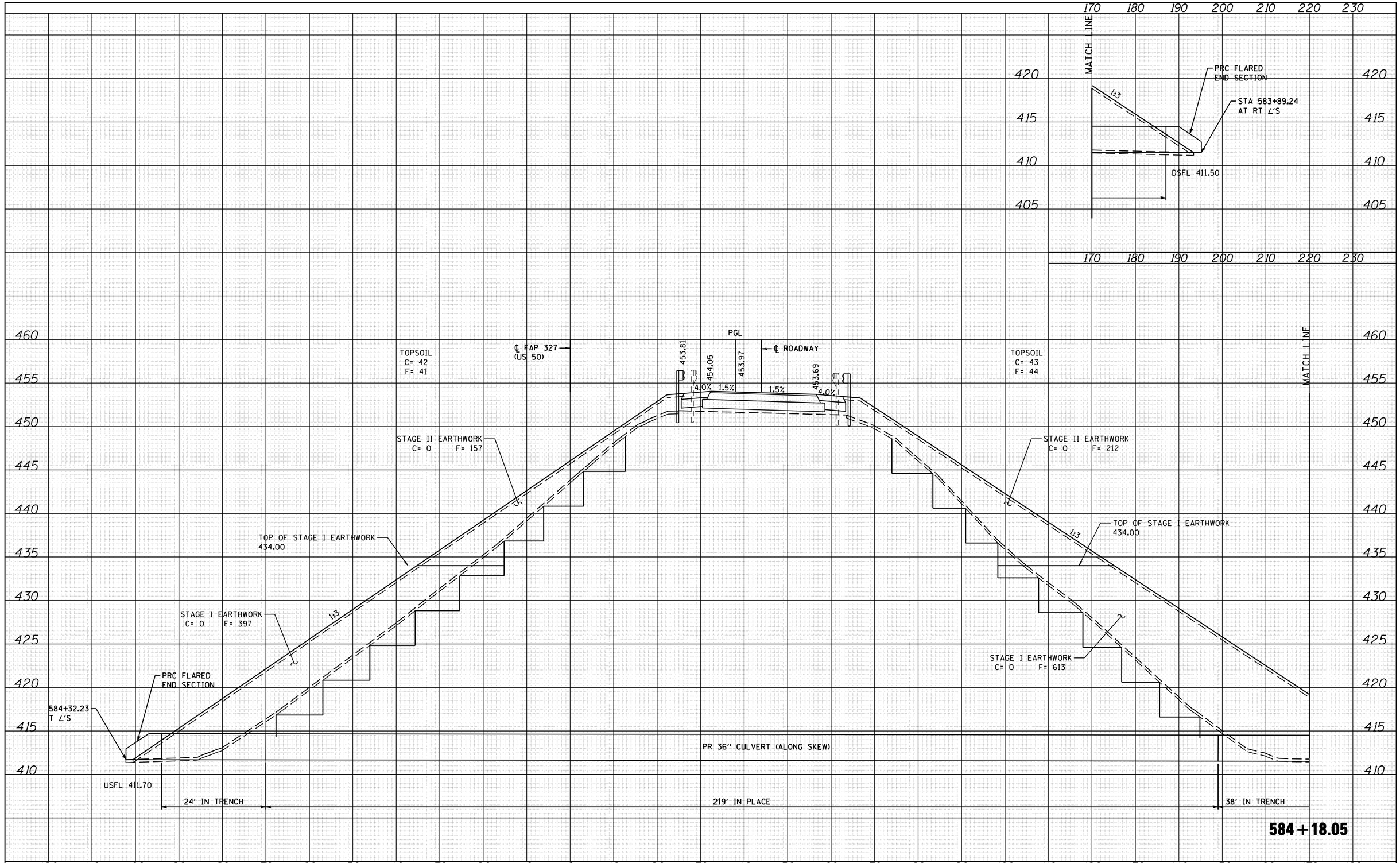
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	99
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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 -	

CEC Cummins Engineering Corporation
Civil and Structural Engineering

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET NO. 10 OF 16 SHEETS | STA. 584+18.05 TO STA. 584+18.05

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	(51-23)B	LAWRENCE	260	100
		CONTRACT NO. 74177		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		