06-14-2024 LETTING ITEM 215

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	1
FEDERAL AID PROJECT	ILLINOIS	CONTRACT NO. 93654		

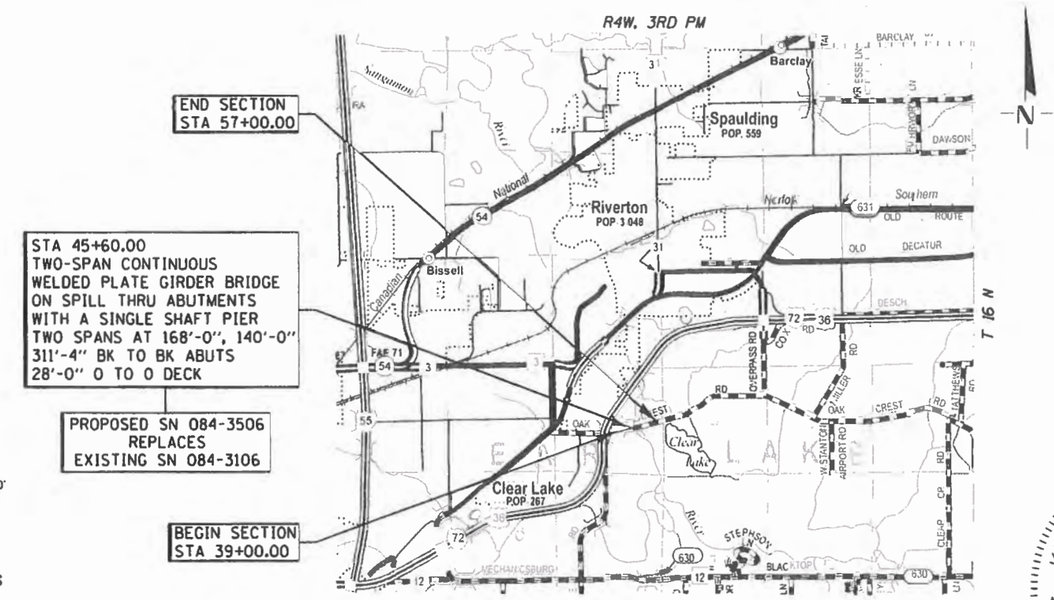
SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED LOCAL BRIDGE FUND PROGRAM

TR 171 OVER SANGAMON RIVER
SECTION 08–07116–00–BR
PROJECT NO. GJQQ(306)
SANGAMON COUNTY
CLEAR LAKE TOWNSHIP
C–96–232–12

LOCATION OF SECTION INDICATED THUS: –



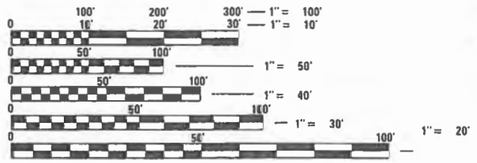
LAYOUT

Net Length of Section = 1800.00 Feet = 0.341 Miles

0 1 2 3 4 5

SCALE IN MILES

FUNCTIONAL CLASSIFICATION : LOCAL ROAD
DESIGN SPEED 30 MPH
CURRENT ADT= 175 (2022)



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.

UTILITY CONTACTS:

UTILITY TYPE:
GAS / ELECTRIC
AMEREN ILLINOIS (NORTH)
ATTN: NATHAN HILL
PHONE: (618) 301–5305

UTILITY TYPE:
CABLE
MEDIACOM
ATTN: DANIEL SALEE
PHONE: (845) 768–8074

UTILITY TYPE:
TELEPHONE
AT&T
ATTN: G11629@ATT.COM

UTILITY TYPE:
WATER
SUGAR CREEK PUBLIC WATER DISTRICT
ATTN: DONALD CARVER
PHONE: (217) 691–6545
PHONE: (217) 741–6544

UTILITY TYPE:
WATER
VILLAGE OF RIVERTON
ATTN: ALEX LYONS
PHONE: (217) 629–9122
PHONE: (217) 306–2846

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

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

KIMBERLY S. CUMMINS
56816
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

2-20-24
ILLINOIS PROFESSIONAL NO. 56816
(Expires 11/30/25)

APPROVED February 23, 20 24
B. Davis
SANGAMON COUNTY ENGINEER

PASSED FEB 23 2024, 20 ___
V. [illegible]
ROAD COMMISSIONER

PASSED ___, 20 24
DISTRICT SIX ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW ___, 20 24
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

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2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND ENTRANCE DETAILS
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6	TYPICAL SECTIONS
7–8	SCHEDULE OF QUANTITIES
9–10	ALIGNMENT, BENCHMARKS, AND CROSS TIES
11–12	PLAN AND PROFILE
13	ENTRANCE PLAN AND PROFILE
14	STAGE 1 CONSTRUCTION
15	STAGE 2 CONSTRUCTION
16–17	GUARDRAIL AND SHOULDER WIDENING
18–37	BRIDGE PLANS
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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001–08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001–07 TEMPORARY EROSION CONTROL SYSTEMS
515001–04 NAME PLATE FOR BRIDGES
542301–03 PRECAST REINFORCED CONCRETE FLARED END SECTION
630001–13 STEEL PLATE BEAM GUARDRAIL
630301–09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011–10 TRAFFIC BARRIER TERMINAL, TYPE 2
631032–10 TRAFFIC BARRIER TERMINAL, TYPE 6A
666001–01 RIGHT OF WAY MARKERS
701001–02 OFF–ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006–05 OFF–ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24' (600 MM) FROM PAVEMENT EDGE
701011–04 OFF–ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701901–09 TRAFFIC CONTROL DEVICES
725001–01 OBJECT AND TERMINAL MARKERS
729001–01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
782006–01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21–9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22–7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR RURAL LOCAL HIGHWAYS (TWO–LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

GENERAL NOTES

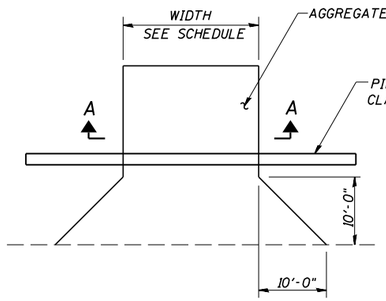
1. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
2. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.
3. ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NAVD 88 DATUM
4. THE LOCATION OF THOSE BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E NUMBER IS 1 (800) 892-0123. A MINIMUM 48 HOURS ADVANCE NOTICE IS REQUIRED. SEE SPECIAL PROVISIONS FOR STATUS OF UTILITIES WITH UTILITY COMPANIES LISTED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
6. WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE TYPE OF WORK ENCOUNTERED.
7. TREES WILL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30.
8. LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

APPLICATION RATES USED IN QUANTITY CALCULATIONS

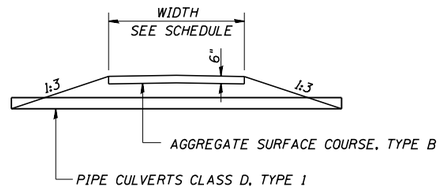
GRANULAR MATERIALS ..... 2.05 TONS/CU YD
RIPRAP ..... 1.5 TONS/CU YD
TEMPORARY EROSION CONTROL SEEDING ..... 100 LB/ACRE
BITUMINOUS MATERIALS (PRIME COAT) ..... 0.35 GALLON/SQ YD
BITUMINOUS MATERIALS (COVER & SEAL COAT) ..... 0.35 GALLON/SQ YD
COVER COAT AGGREGATE ..... 25 LB/SQ YD
SEAL COAT AGGREGATE ..... 25 LB/SQ YD

COMMITMENTS

NONE



PE & FE ENTRANCE DETAIL



SECTION A-A
AGG PE & FE

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS
	FILE NAME = 2262gen.dgn	DRAWN - SJS	REVISED -	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - KSC	REVISED -	
	PLOT DATE = 4/24/2024	DATE - 1/16/2013	REVISED -	

INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND ENTRANCE DETAILS

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	2
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	20200100	EARTH EXCAVATION	CU YD	3,935
	20400800	FURNISHED EXCAVATION	CU YD	15,800
*	25100630	EROSION CONTROL BLANKET	SQ YD	2,316
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	277
	28000305	TEMPORARY DITCH CHECKS	FOOT	56
	28000400	PERIMETER EROSION BARRIER	FOOT	1,123
	28000500	INLET AND PIPE PROTECTION	EACH	5
	28100109	STONE RIPRAP, CLASS A5	SQ YD	615
	28200200	FILTER FABRIC	SQ YD	565
	35100100	AGGREGATE BASE COURSE, TYPE A	TON	1,645
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	218
	40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	100
	50100200	REMOVAL OF EXISTING STRUCTURES	L SUM	1
	50105220	PIPE CULVERT REMOVAL	FOOT	271

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	50200100	STRUCTURE EXCAVATION	CU YD	65
	50200300	COFFERDAM EXCAVATION	CU YD	160
	50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	166
	50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1
	50300225	CONCRETE STRUCTURES	CU YD	290.0
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	362.4
	50300260	BRIDGE DECK GROOVING	SQ YD	1,067
	50300265	SEAL COAT CONCRETE	CU YD	11.9
	50300300	PROTECTIVE COAT	SQ YD	1,273
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
	50500505	STUD SHEAR CONNECTIONS	EACH	3,156
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	111,690
*	50901050	STEEL RAILING, TYPE SM	FOOT	621
	51201900	FURNISHING STEEL PILES HP14X89	FOOT	305

* SPECIALTY ITEMS

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

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PLOT DATE = 2/20/2024	DATE - 1/15/2024	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

SUMMARY OF QUANTITIES

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	3
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	51265002	DRILLING AND SETTING PILES (IN ROCK)	CU FT	160
	51500100	NAME PLATES	EACH	1
	52100520	ANCHOR BOLTS, 1"	EACH	16
	52100540	ANCHOR BOLTS, 1 1/2"	EACH	8
	54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	2
	542A2749	PIPE CULVERTS, CLASS A, TYPE 4 24"	FOOT	122
	542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	188
	542D0241	PIPE CULVERTS, CLASS D, TYPE 1 36"	FOOT	38
	58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	184
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	86
	60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	190
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	175
*	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4
*	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
	63200310	GUARDRAIL REMOVAL	FOOT	63
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	21
	67100100	MOBILIZATION	L SUM	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
*	72501100	TERMINAL MARKER - POST MOUNTED	EACH	2
*	72900100	METAL POST - TYPE A	FOOT	20
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	16
	LR403200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4.6
	LR403400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	4.6
	LR403500	COVER COAT AGGREGATE	TON	42
	LR403600	SEAL COAT AGGREGATE	TON	42
	X2010404	STUMP REMOVAL	EACH	96
*	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	3.00

* SPECIALTY ITEMS

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

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PLOT DATE = 2/20/2024	DATE - 1/15/2024	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

SUMMARY OF QUANTITIES

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	4
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
*	X6330725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	50
	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
	XX007149	EXISTING GATE TO BE RELOCATED	EACH	1
#	Z0076600	TRAINEES	HOUR	1,500
#	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1,500

* SPECIALTY ITEMS

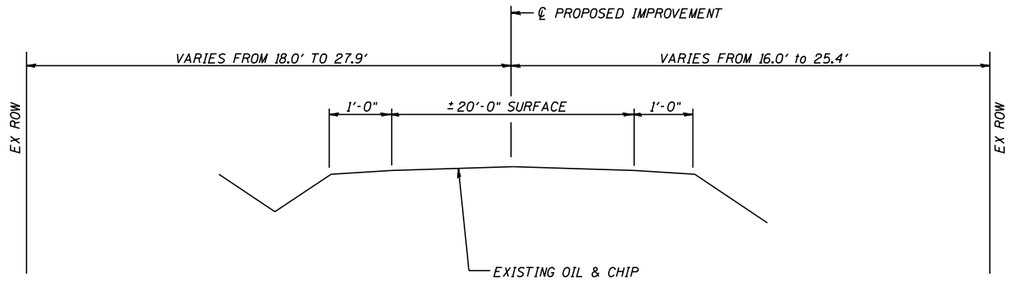
0042

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS
	FILE NAME = 2262 SOQ.dgn	DRAWN - SJS	REVISED -	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - CGF	REVISED -	
	PLOT DATE = 2/20/2024	DATE - 1/15/2024	REVISED -	

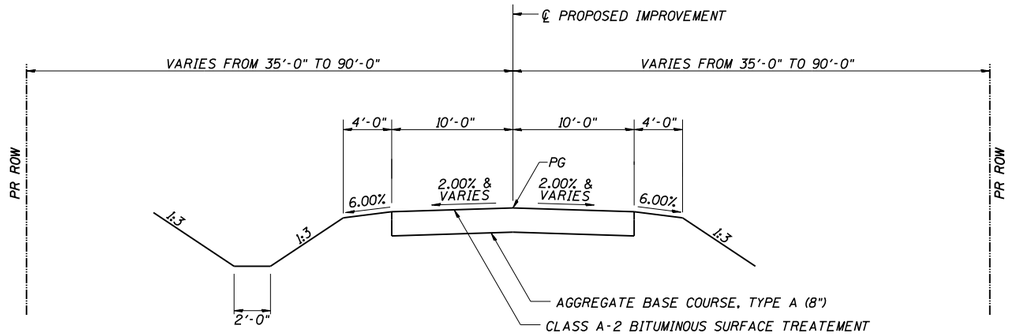
SUMMARY OF QUANTITIES

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	5
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL SECTION
STA 39+00.00 TO STA 57+00.00



FILL SECTION-CONSTRUCT AS
SHOWN ON STATION CROSS SECTIONS

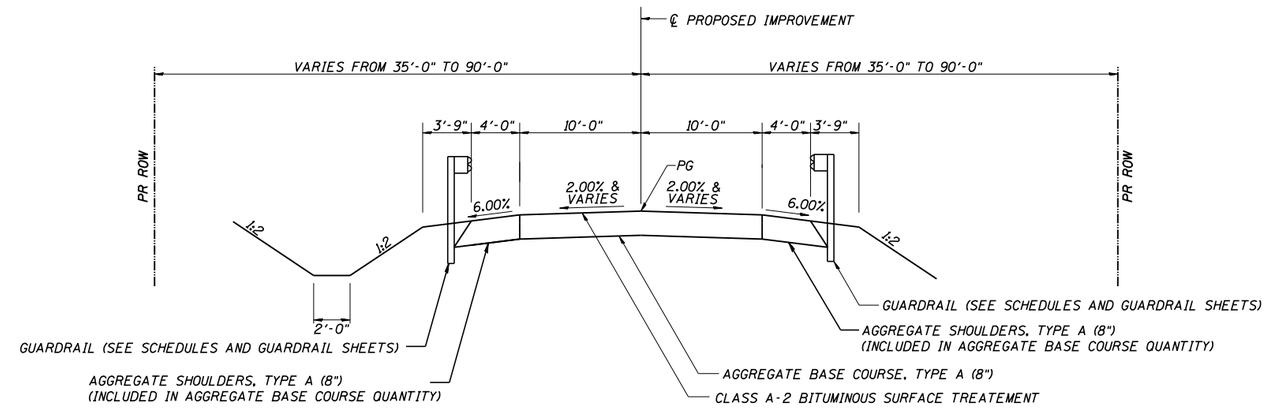
PROPOSED TYPICAL SECTION
LT STA 39+00.00 TO STA 43+06.45
RT STA 39+00.00 TO STA 43+12.60
RT STA 48+90.00 TO STA 57+00.00
LT STA 50+97.50 TO STA 57+00.00

CUT SECTION-CONSTRUCT AS
SHOWN ON STATION CROSS SECTIONS

OMISSIONS:

BRIDGE
STA 43+90.33 TO STA 47+01.67

BRIDGE APPROACH PAVEMENT
STA 43+61.33 TO STA 43+91.33
STA 47+00.67 TO STA 47+30.67



FILL SECTION-CONSTRUCT AS
SHOWN ON STATION CROSS SECTIONS

PROPOSED TYPICAL SECTION
LT STA 43+06.45 TO STA 43+61.33
RT STA 43+12.60 TO STA 43+61.33
RT STA 47+30.67 TO STA 48+90.00
LT STA 47+30.67 TO STA 50+97.50

CUT SECTION-CONSTRUCT AS
SHOWN ON STATION CROSS SECTIONS

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

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FILE NAME = 2262 typ.dgn	DRAWN - SJS	REVISED -	
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PLOT DATE = 1/18/2024	DATE - 1/16/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

TYPICAL SECTIONS

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	6
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK

LOCATION	20200100 EARTH EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	20400800 EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
STAGE 1				
STA 39+00.00 TO STA 57+00.00	3,185	2,390	14,070	-11,680
STAGE 2				
STA 48+00.00 TO STA 57+00.00	750	565	4,685	-4,120
TOTAL	3,935	2,955	18,755	-15,800

SHRINKAGE = 25%

25100630 EROSION CONTROL BLANKET

LOCATION		SQ YD
LT STA 42+99	TO STA 44+48	214.44
LT STA 47+00	TO STA 48+88	346.67
LT STA 48+23	TO STA 49+50	222.22
RT STA 43+06	RT STA 44+25	196.67
RT STA 47+00	RT STA 49+50	1,335.56
TOTAL		2,315.56
USE		2,316

28000250 TEMPORARY EROSION CONTROL SEEDING

LOCATION		POUND
LT STA 39+00	TO STA 42+47	25
LT STA 42+99	TO STA 44+40	11
LT STA 45+68	TO STA 48+88	30
LT STA 48+23	TO STA 52+00	35
LT STA 52+00	TO STA 57+00	30
RT STA 39+00	TO STA 41+26	11
RT STA 41+48	TO STA 42+90	8
RT STA 43+06	TO STA 44+25	9
RT STA 45+80	TO STA 52+00	88
RT STA 52+00	TO STA 52+50	4
RT STA 52+71	TO STA 57+00	26
TOTAL		277

28000305 TEMPORARY DITCH CHECKS

LOCATION	FOOT
LT STA 44+40	8
LT STA 50+00	8
RT STA 44+23	8
RT STA 45+80	8
RT STA 48+00	8
RT STA 50+00	8
RT STA 54+00	8
TOTAL	56

28000400 PERIMETER EROSION BARRIER

LOCATION		FOOT
RT STA 44+33.00	TO LT STA 44+48.00	113
RT STA 45+68.00	TO LT STA 48+20.00	380
LT STA 48+23.00	TO LT STA 49+50.00	130
LT STA 52+00.00	TO LT STA 57+00.00	500
TOTAL		1,123

28000500 INLET AND PIPE PROTECTION

LOCATION	EACH
LT STA 42+46.00	1
LT STA 49+50.00	1
RT STA 41+26.00	1
RT STA 42+46.00	1
RT STA 52+34.00	1
TOTAL	5

542D0220 PIPE CULVERTS, CLASS D, TYPE 1 15"

LOCATION	FOOT
LT STA 42+94.00	78
RT STA 41+35.00	48
RT STA 42+94.00	62
TOTAL	188

PAVEMENT

LOCATION		35100100 AGGREGATE BASE COURSE TYPE A	LR403200 BITUMINOUS MATERIALS (PRIME COAT)	LR403400 BITUMINOUS MATERIALS (COVER AND SEAL COATS)	LR403500 COVER COAT AGGREGATE	LR403600 SEAL COAT AGGREGATE
		TON	TON	TON	TON	TON
STA 39+00.00	TO STA 43+90.33	496.38	1.51	1.51	13.62	13.62
LT STA 43+00.00	TO STA 43+61.33	20.85				
RT STA 43+02.50	TO STA 43+61.33	19.88				
STA 47+01.67	TO STA 57+00.00	1,010.66	3.08	3.08	27.73	27.73
RT STA 47+30.67	TO STA 48+90.00	32.55				
LT STA 47+30.67	TO STA 50+97.50	64.03				
TOTAL		1,644.35	4.59	4.59	41.35	41.35
USE		1,645	4.6	4.6	42	42

40200800 AGGREGATE SURFACE COURSE, TYPE B

LOCATION	TYPE	WIDTH (FT)	TON
LT STA 42+94.00	AGG PE	14	30.50
LT STA 49+00.00	AGG PE	14	97.59
RT STA 41+35.00	AGG PE	22	26.24
RT STA 42+94.00	AGG PE	14	26.54
RT STA 52+62.00	AGG FE	22	36.52
TOTAL			217.39
USE			218

40201000 AGGREGATE FOR TEMPORARY ACCESS

LOCATION	TON
JOBSITE	100
TOTAL	100

50105220 PIPE CULVERT REMOVAL

LOCATION	TYPE	FOOT
LT STA 42+94.00	12" CMP	27
LT STA 48+21.00	12" CMP	37
RT STA 41+35.00	12" RCP	25
RT STA 42+94.00	15" CMP	125
RT STA 52+62.00	36" CMP	57
TOTAL		271

54213669 PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"

LOCATION	EACH
STA 49+50.00	2
TOTAL	2

542A2749 PIPE CULVERTS, CLASS A, TYPE 4 24"

LOCATION	FOOT
STA 49+50.00	122
TOTAL	122

542D0241 PIPE CULVERTS, CLASS D, TYPE 1 36"

LOCATION	FOOT
RT STA 52+62.00	38
TOTAL	38

63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

LOCATION		FOOT
LT STA 43+37.27	TO STA 43+48.67	12.5
LT STA 47+45.00	TO STA 48+08.20	62.5
LT STA 49+68.65	TO STA 49+93.95	25.0
RT STA 47+45.00	TO STA 48+20.00	75.0
TOTAL		175.0
USE		175

63100045 TRAFFIC BARRIER TERMINAL, TYPE 2

LOCATION		EACH
LT STA 43+06.45		1
LT STA 43+22.40	LT STA 43+37.27	1
RT STA 43+12.60		1
RT STA 43+34.40	TO STA 43+47.00	1
TOTAL		4

63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A

LOCATION		EACH
LT STA 43+48.67	TO STA 43+92.00	1
LT STA 47+01.25	TO STA 47+45.00	1
RT STA 43+47.00	TO STA 43+90.75	1
RT STA 47+01.25	TO STA 47+45.00	1
TOTAL		4

63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION		EACH
LT STA 48+08.20	TO STA 48+58.20	1
LT STA 49+17.90	TO STA 49+68.65	1
LT STA 49+93.95	TO STA 50+44.70	1
RT STA 48+20.00	TO STA 48+69.00	1
TOTAL		4

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262-sht-Schedules.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 2/22/2024	DATE - 1/14/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

SCHEDULE OF QUANTITIES

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	7
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

63200310 GUARDRAIL REMOVAL

LOCATION		FOOT
LT STA 43+68.85	TO STA 43+96.95	37.5
RT STA 43+85.50	TO STA 43+99.40	25.0
TOTAL		62.5
USE		63

66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS

LOCATION	EACH
LT STA 39+00.00	1
LT STA 39+00.00	1
LT STA 42+00.00	1
LT STA 44+00.00	1
LT STA 48+29.96	1
LT STA 48+29.60	1
LT STA 49+00.00	1
LT STA 49+00.00	1
LT STA 49+50.00	1
LT STA 53+50.00	1
LT STA 57+00.00	1
LT STA 57+00.00	1
RT STA 39+00.00	1
RT STA 39+00.00	1
RT STA 41+92.43	1
RT STA 43+29.42	1
RT STA 47+00.00	1
RT STA 49+75.00	1
RT STA 53+00.00	1
RT STA 57+00.00	1
RT STA 57+00.00	1
	21

72501000 TERMINAL MARKER - DIRECT APPLIED

LOCATION	EACH
LT STA 48+58.20	1
LT STA 49+17.90	1
LT STA 50+44.70	1
RT STA 48+69.00	1
TOTAL	4

72501100 TERMINAL MARKER - POST MOUNTED

LOCATION	EACH
LT STA 43+06.45	1
RT STA 43+12.60	1
TOTAL	2

72900100 METAL POST - TYPE A

LOCATION	FOOT
LT STA 43+06.45	10
RT STA 43+12.60	10
TOTAL	20

78200005 GUARDRAIL REFLECTORS, TYPE A

LOCATION		EACH
LT STA 43+06.45	TO STA 48+08.20	8
RT STA 43+12.60	TO STA 48+20.00	8
TOTAL		16

X2010404 STUMP REMOVAL

LOCATION	EACH
LT STA 43+42.00	1
LT STA 43+51.00	1
LT STA 43+51.00	1
LT STA 43+65.00	1
LT STA 43+84.00	1
LT STA 43+86.00	1
LT STA 43+88.00	1
LT STA 43+86.00	1
LT STA 43+88.00	1
LT STA 43+94.00	1
LT STA 44+02.00	1
LT STA 44+06.00	1
LT STA 44+08.00	1
LT STA 44+14.00	1
LT STA 48+51.00	1
LT STA 48+57.00	1
LT STA 48+61.00	1
LT STA 48+64.00	1
LT STA 48+67.00	1
LT STA 48+76.00	1
LT STA 48+76.00	1
LT STA 48+75.00	1
LT STA 48+81.00	1
LT STA 48+95.00	1
LT STA 48+98.00	1
LT STA 49+03.00	1
LT STA 49+05.00	1
LT STA 49+05.00	1
LT STA 49+05.00	1
LT STA 49+09.00	1
LT STA 49+25.00	1
LT STA 49+25.00	1
LT STA 49+25.00	1
LT STA 49+25.00	1
LT STA 49+29.00	1
LT STA 53+06.00	1
LT STA 53+12.00	1
LT STA 53+36.00	1
LT STA 53+68.00	1
LT STA 53+88.00	2
LT STA 53+91.00	1
LT STA 54+24.00	1
LT STA 54+29.00	1
LT STA 54+29.00	1
LT STA 55+73.00	1
LT STA 55+82.00	1
LT STA 56+01.00	1

X2010404 STUMP REMOVAL

LOCATION	EACH
RT STA 41+65.00	1
RT STA 43+44.00	1
RT STA 43+59.00	1
RT STA 43+65.00	1
RT STA 43+66.00	1
RT STA 43+71.00	1
RT STA 43+80.00	1
RT STA 43+97.00	1
RT STA 44+19.00	1
RT STA 46+14.00	1
RT STA 46+78.00	1
RT STA 46+78.00	1
RT STA 46+78.00	1
RT STA 46+78.00	1
RT STA 46+87.00	1
RT STA 47+01.00	1
RT STA 47+01.00	1
RT STA 47+07.00	1
RT STA 47+29.00	1
RT STA 47+29.00	1
RT STA 47+29.00	1
RT STA 47+29.00	1
RT STA 47+29.00	1
RT STA 47+36.00	1
RT STA 47+36.00	1
RT STA 47+80.00	1
RT STA 47+80.00	1
RT STA 48+04.00	1
RT STA 48+04.00	1
RT STA 52+16.00	1
RT STA 52+20.00	1
RT STA 52+23.00	1
RT STA 52+37.00	1
JOBSITE	*15
TOTAL	96

* TOTAL INCLUDES 15 EXTRA STUMP REMOVALS DUE TO GROWTH IN AREA. LOCATIONS TO BE DETERMINED IN THE FIELD AND COORDINATED WITH RESIDENT ENGINEER.

X2501000 SEEDING, CLASS 2 (SPECIAL)

LOCATION		ACRE
LT STA 39+00	TO STA 42+47	0.25
LT STA 42+99	TO STA 44+40	0.11
LT STA 45+68	TO STA 48+88	0.30
LT STA 48+23	TO STA 52+00	0.35
LT STA 52+00	TO STA 57+00	0.30
RT STA 39+00	TO STA 41+26	0.11
RT STA 41+48	TO STA 42+90	0.08
RT STA 43+06	TO STA 44+25	0.09
RT STA 45+80	TO STA 52+00	0.88
RT STA 52+00	TO STA 52+50	0.04
RT STA 52+71	TO STA 57+00	0.26
TOTAL		3.00

X6330725 STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)

LOCATION		FOOT
LT STA 43+06.45	TO STA 43+22.40	25.0
RT STA 43+12.60	TO STA 43+34.40	25.0
TOTAL		50.0
USE		50

XX007149 EXISTING GATE TO BE RELOCATED

LOCATION	TYPE	EACH
STA 52+62.00	AGG FE	1
TOTAL		1

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262-sht-Schedules.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 2.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 2/20/2024	DATE - 1/14/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

SCHEDULE OF QUANTITIES

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	8
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 21, T16N, R4W, 3RD PM

PROP. CURVE C001
PI STA. = 42+75.11
Δ = 12° 49′ 50″ (RT)
D = 10° 08′ 27″
R = 565.00′
T = 63.53′
L = 126.52′
E = 3.56′
e = 4.0%
T.R. = 35′
S.E. RUN = 69′
P.C. STA = 42+11.58
P.T. STA = 43+38.10
ATTAIN SE STA 41+33.59
TO STA 42+37.59
REMOVE SE STA 42+85.11
TO STA 43+89.11

PROP. CURVE C002
PI STA. = 49+35.71
Δ = 14° 33′ 33″ (LT)
D = 5° 43′ 46″
R = 1,000.00′
T = 127.74′
L = 254.11′
E = 8.13′
e = 3.5%
T.R. = 35′
S.E. RUN = 60′
P.C. STA = 48+07.97
P.T. STA = 50+62.08
ATTAIN SE STA 47+36.97
TO STA 48+31.97
REMOVE SE STA 50+38.08
TO STA 51+33.08

PROP. CURVE C003
PI STA. = 54+88.48
Δ = 5° 31′ 16″ (RT)
D = 1° 25′ 57″
R = 4,000.00′
T = 192.87′
L = 385.45′
E = 4.65′
e = 2.0%
T.R. = 28′
S.E. RUN = 22′
P.C. STA = 52+95.61
P.T. STA = 56+81.06
ATTAIN SE STA 52+42.61
TO STA 53+12.61
REMOVE SE STA 56+64.06
TO STA 57+34.06

BM#1: MAG SPIKE IN POWER POLE
22.0′ RT STA 37+66.0
ELEV 555.03

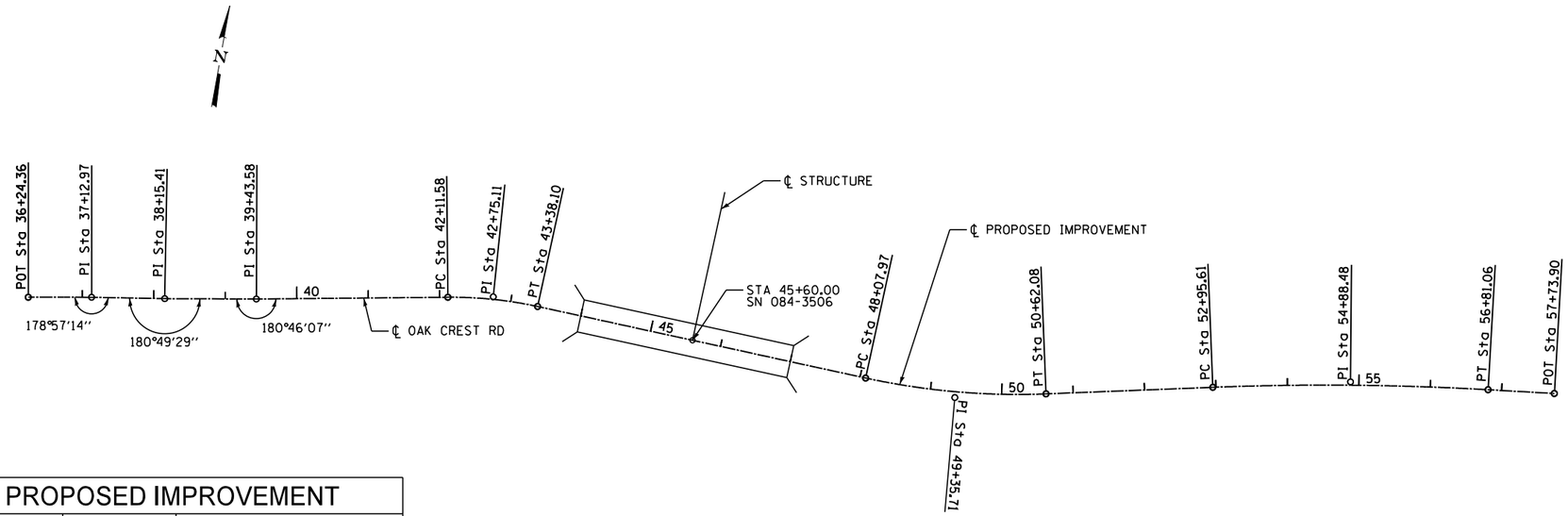
BM#2: MAG SPIKE IN POWER POLE
26.0′ RT STA 41+15.0
ELEV 554.87

BM#3: ARMY CORP. ENG. TABLET
"TBM-CB 1963"
14.0′ RT STA 43+99.0
ELEV 540.50 (GPS)

BM#4: CHISELED "□" ON NE
CORNER BRIDGE CURB
10.5′ LT STA 46+85.0
ELEV 539.50

BM#6: MAG SPIKE IN POWER POLE
36.0′ RT STA 53+53.0
ELEV 527.63

BM#7: RR SPIKE IN POWER POLE
33.0′ RT STA 59+13.0
ELEV 528.31



PROPOSED IMPROVEMENT

CONTROL POINT	STATION	COORDINATES	
		NORTHING	EASTING
POT	36+24.36	1149805.0100	2470649.4300
PI	37+12.97	1149831.1800	2470734.0900
PI	38+15.41	1149859.6400	2470832.4900
PI	39+43.58	1149897.0200	2470955.0900
PC	42+11.58	1149978.6148	2471210.3771
PI	42+75.11	1149997.9556	2471270.8892
PT	43+38.10	1150003.3757	2471334.1854
PC	48+07.97	1150043.4627	2471802.3297
PI	49+35.71	1150054.3612	2471929.6053
PT	50+62.08	1150096.9045	2472050.0541
PC	52+95.61	1150174.6814	2472270.2573
PI	54+88.48	1150238.9158	2472452.1185
PT	56+81.06	1150285.3550	2472639.3161
POT	57+73.90	1150307.7100	2472729.4300

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

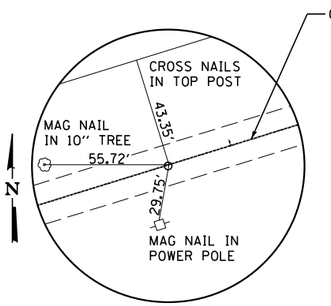
JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262 atb.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 200.0000 ′ / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/15/2024	DATE - 1/14/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

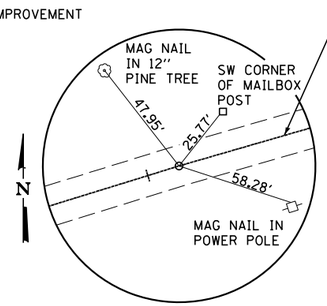
ALIGNMENT, BENCHMARKS, AND CROSS TIES

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

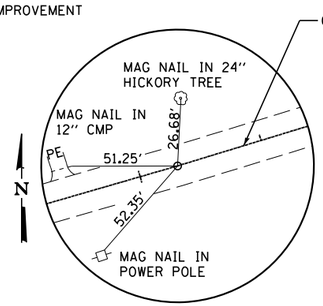
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	9
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



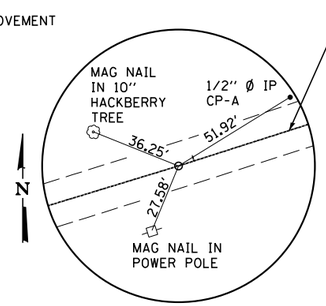
PI STA 36+24.36
MAG NAIL (SET)



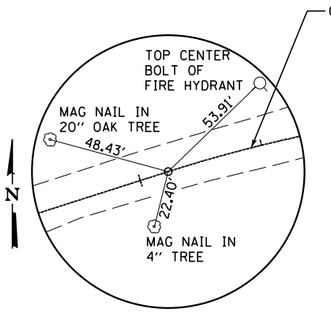
PI STA 37+12.97
MAG NAIL (SET)



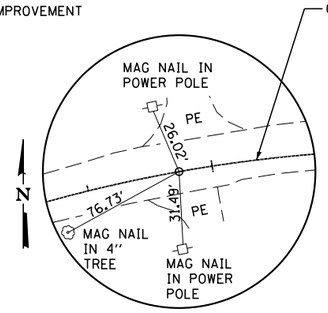
PI STA 38+15.41
MAG NAIL (SET)



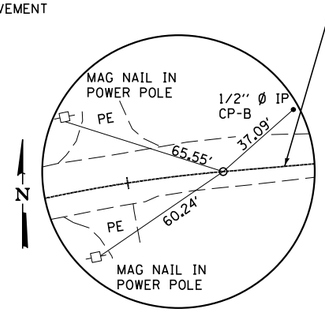
PI STA 39+43.58
MAG NAIL (SET)



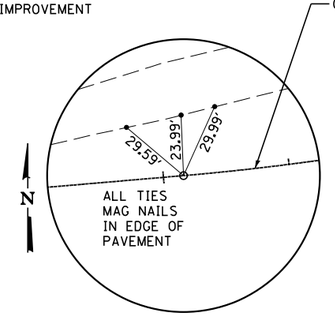
PC STA 42+11.58
MAG NAIL (SET)



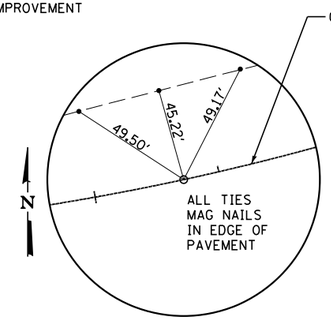
PI STA 42+75.11
MAG NAIL (SET)



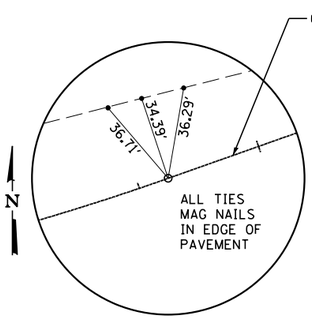
PT STA 43+38.10
MAG NAIL (SET)



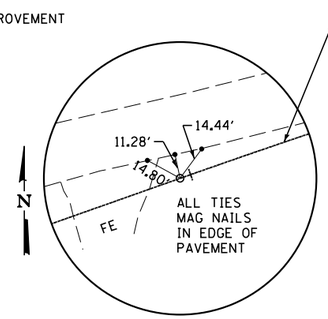
PC STA 48+07.97
IRON PIN (SET)



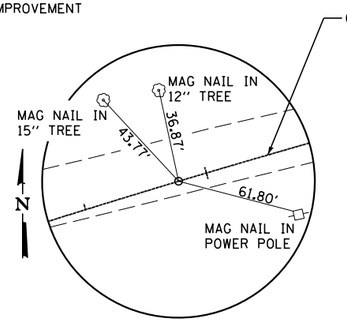
PI STA 49+35.71
IRON PIN (SET)



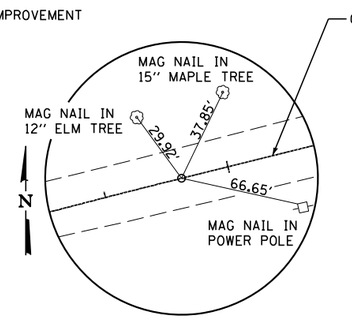
PT STA 50+62.08
IRON PIN (SET)



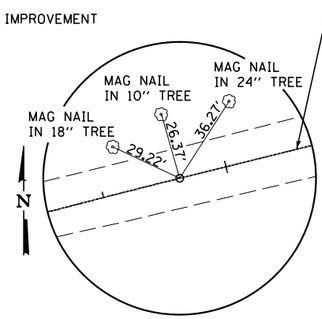
PC STA 52+95.61
IRON PIN (SET)



PI STA 54+88.48
MAG NAIL (SET)



PT STA 56+81.06
MAG NAIL (SET)



POT STA 57+73.90
MAG NAIL (FOUND)

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	ALIGNMENT, BENCHMARKS, AND CROSS TIES
	FILE NAME = 2262crossties.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 120.0000 ' / in.	CHECKED - KSC	REVISED -		
	PLOT DATE = 1/15/2024	DATE - 12/9/2013	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	10
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING STRUCTURE NO. 084-3106
STA 45+42 TWO SPAN STEEL THRU TRUSS AND CONCRETE SLAB BRIDGE
ON CLOSED CONCRETE ABUTMENTS AND SOLID WALL PIER ON SPREAD FOOTING
2 SPANS @ 140', 140'; 287'-2" BACK TO BACK ABUTMENTS
23.33' CTR-CTR TRUSSES
22.0' O-O DECK, 20.0' FC-FC CURBS, NO SKEW
REMOVAL OF EXISTING STRUCTURES = 1 LUMP SUM

MARK B MUTZBAUER
SEC 21, T16N, R4W, 3RD PM

BRANDON A & JACYLIN L ROBBINS
CLINTON E. HENRIKSON AND TARA L. HENRIKSON
DEBORAH S RHODES
YES COMMUNITIES - LINCOLN PLACE LLC
DONALD C CARVER SR. TRUSTEE
TIMBER
CROP
GRASS
SANGAMON RIVER

CONSTRUCTION LIMITS
PERMANENT EASEMENT
PR TEMPORARY EASEMENT
EX 12" CMP TO REMAIN IN PLACE
EX 42" CMP TO REMAIN IN PLACE
EX 12" CMP PIPE CULVERT REMOVAL
EX 15" CMP PIPE CULVERT REMOVAL
GUARDRAIL REMOVAL
EX 12" RCP PIPE CULVERT REMOVAL
EX 15" CMP PIPE CULVERT REMOVAL GUARDRAIL REMOVAL
*EX ELEVATED WALKWAY TO BE REMOVED TO RIGHT-OF-WAY LINE (COST INCLUDED IN REMOVAL OF EXISTING STRUCTURES)
℄ PROPOSED IMPROVEMENT OAK CREST RD
PR ROW
EX ROW
P.O.T. Sta = 36+24.36
P.I. Sta = 37+12.97
P.I. Sta = 38+15.41
P.I. Sta = 39+43.58
P.C. Sta = 42+11.58
P.T. Sta = 43+38.10
P.C. Sta = 48+07.97
P.T. Sta = 50+62.08
MATCH LINE STA 51+00.00

IMPROVEMENT BEGINS
STA 39+00.00
MATCH EXISTING

PR PIPE CULVERTS, CLASS D, TYPE 1 15"
USFL 20.95' RT STA 41+18.75 ELEV 550.69
DSFL 27.30' RT STA 41+66.35 ELEV 549.26

PR PIPE CULVERTS, CLASS D, TYPE 1 15"
USFL 29.15' RT STA 42+56.00 ELEV 546.13
DSFL 29.60' RT STA 43+21.40 ELEV 542.80

PR PIPE CULVERTS, CLASS D, TYPE 1 15"
USFL 29.95' LT STA 42+54.65 ELEV 546.02
DSFL 31.15' LT STA 43+20.70 ELEV 542.36

STA 45+60.00
PROPOSED STRUCTURE NO. 084-3506
TWO-SPAN CONTINUOUS WELDED PLATE GIRDER BRIDGE ON SPILL THRU ABUTMENTS WITH A SINGLE SHAFT PIER
TWO SPANS AT 168'-0", 140'-0"
311'-4" BK TO BK ABUTS
28'-0" O. TO O. DECK

STA 49+50
PR PIPE CULVERTS, CLASS A, TYPE 4 24" WITH PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"
USFL 66.60' LT STA 49+50.00 ELEV 524.50
DSFL 70.00' RT STA 49+50.00 ELEV 522.50

*THE PORTION OF THE EXISTING ELEVATED WALKWAY OFF EXISTING RIGHT-OF-WAY WILL BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION.

PROP CURVE C001
PI STA. = 42+75.11
Δ = 12° 49' 50"
D = 10° 08' 27"
R = 565.00'
T = 63.53'
L = 126.52'
E = 3.56'
e = 4.0%
T.R. = 35
S.E. RUN = 69
P.C. STA. = 42+11.58
P.T. STA. = 43+38.10
ATTAIN SE STA 41+33.59 TO STA 42+37.59
REMOVE SE STA 42+85.11 TO STA 43+89.11

PROP CURVE C002
PI STA. = 49+35.71
Δ = 14° 33' 33"
D = 5° 43' 46"
R = 1000.00'
T = 127.74'
L = 254.11'
E = 8.13'
e = 3.5%
T.R. = 35
S.E. RUN = 60
P.C. STA. = 48+07.97
P.T. STA. = 50+62.08
ATTAIN SE STA 47+36.97 TO STA 48+31.97
REMOVE SE STA 50+38.08 TO STA 51+33.08

LEGEND
⊠ STUMP REMOVAL
■ FURNISHING AND ERECTING RIGHT OF WAY MARKERS

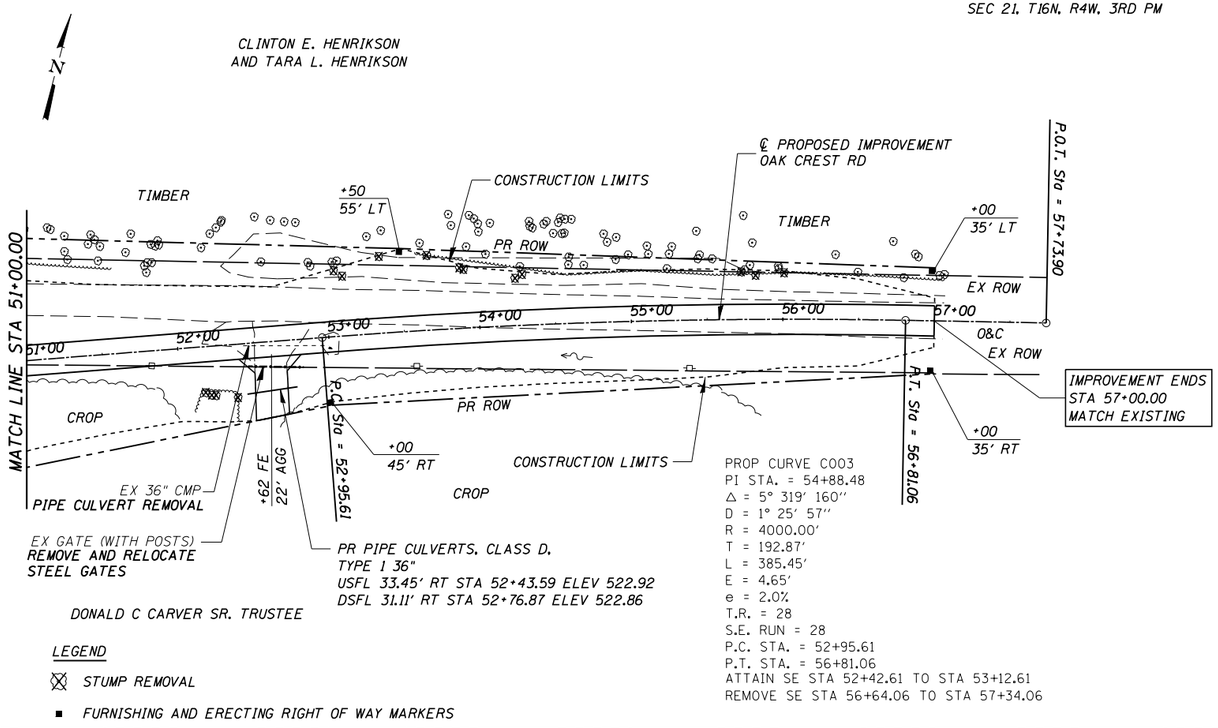
140.00' VC
VPI STA 40+50.00
ELEVATION 554.98
0.52%
VPC STA 39+75.00
ELEVATION 554.59
VPT STA 41+25.00
ELEVATION 552.99
150.00' VC
-2.65%
VPC STA 42+45.00
ELEVATION 549.81
VPI STA 43+15.00
ELEVATION 547.96
VPT STA 43+85.00
ELEVATION 547.62
140.00' V.C.
E = 0.38'
SD LT & RT 0.20%
-6.60%
-11.20%
-0.49%
100 YR HIGH WATER ELEVATION = 539.6
30 YR HIGH WATER ELEVATION = 537.5
PROPOSED ℄ PROFILE
EXISTING TR 171 PROFILE
EXISTING ℄ PROFILE
STREAMBED EL. = 509.0
250.00' VC
VPC STA 47+25.00
ELEVATION 545.95
VPI STA 48+50.00
ELEVATION 545.34
VPT STA 49+75.00
ELEVATION 540.27
-4.06%
SD LT 0.20
SD RT 0.20%

	36+00	37+00	38+00	39+00	40+00	41+00	42+00	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00
EXISTING				554.2	554.5	555.0	555.1	554.5	552.9	550.8	548.3	545.5	542.5	539.9	539.5	539.2	538.8	538.4	538.0	537.7	533.0	523.1	522.0	526.8	528.0	527.5	527.4	526.3
PROPOSED	554.3			554.20	554.46	554.65	554.39	553.59	552.33	551.01	549.68	548.59	547.88	547.54	547.30	547.05	546.81	546.56	546.32	546.07	545.79	545.18	544.23	542.91	541.24	539.26	537.23	535.20

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	PLAN AND PROFILE
	FILE NAME = 2262p&p.dgn	DRAWN - TSH	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 36+00 TO STA. 51+00
	PLOT SCALE = $SCALE$	CHECKED - KSC	REVISED -		
	PLOT DATE = $DATE$	DATE - 9/6/2012	REVISED - TSH 11/8/2023		

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	11
CLEAR LAKE ROAD DISTRICT		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEC 21, T16N, R4W, 3RD PM

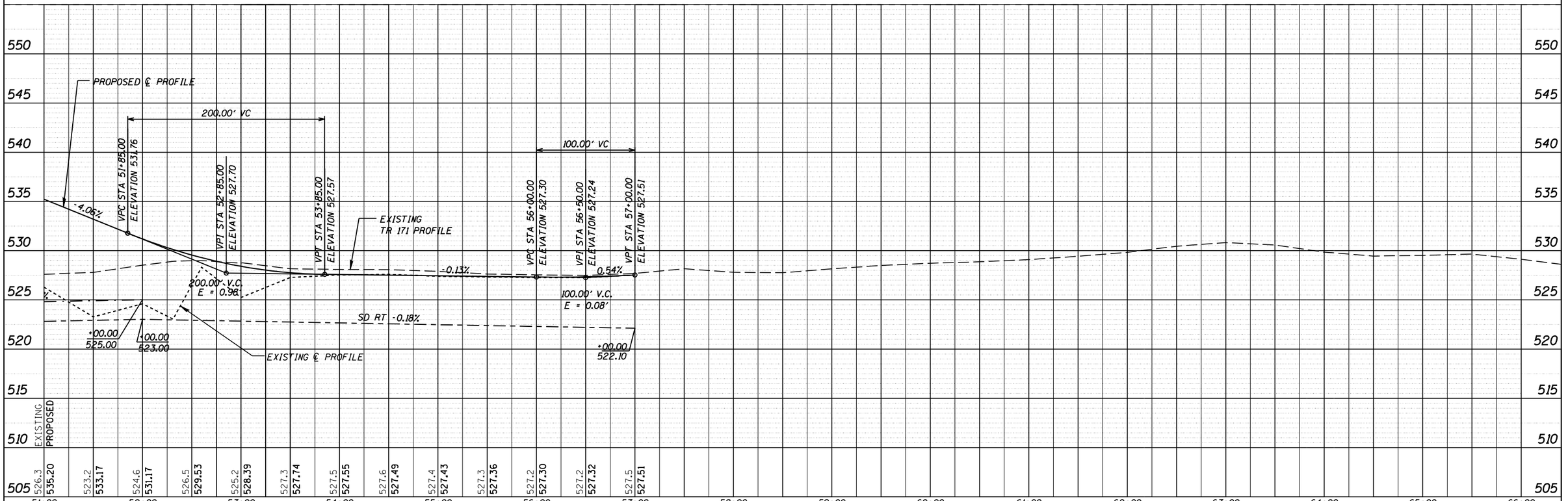


PROP CURVE C003
PI STA. = 54+88.48
△ = 5° 319' 160''
D = 1° 25' 57''
R = 4000.00'
T = 192.87'
L = 385.45'
E = 4.65'
e = 2.0%
T.R. = 28
S.E. RUN = 28
P.C. STA. = 52+95.61
P.T. STA. = 56+81.06
ATTAIN SE STA 52+42.61 TO STA 53+12.61
REMOVE SE STA 56+64.06 TO STA 57+34.06

LEGEND

⊠ STUMP REMOVAL

■ FURNISHING AND ERECTING RIGHT OF WAY MARKERS



CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	PLAN AND PROFILE
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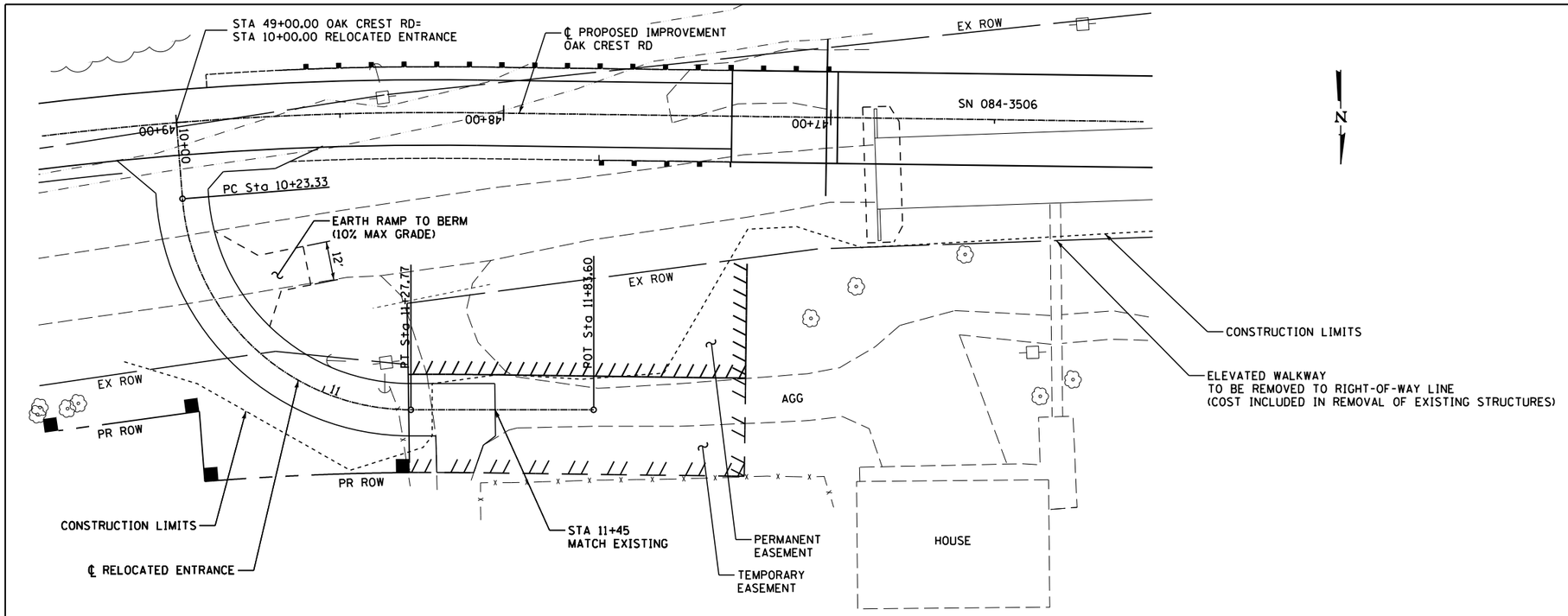
	PLOT SCALE = $SCALE$	CHECKED - KSC	REVISED -		
	PLOT DATE = $DATE$	DATE - 8/26/2010	REVISED - TSH 11/8/2023		SCALE: SHEET NO. OF SHEETS STA. 51+00 TO STA. 68+00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	12
CLEAR LAKE ROAD DISTRICT		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

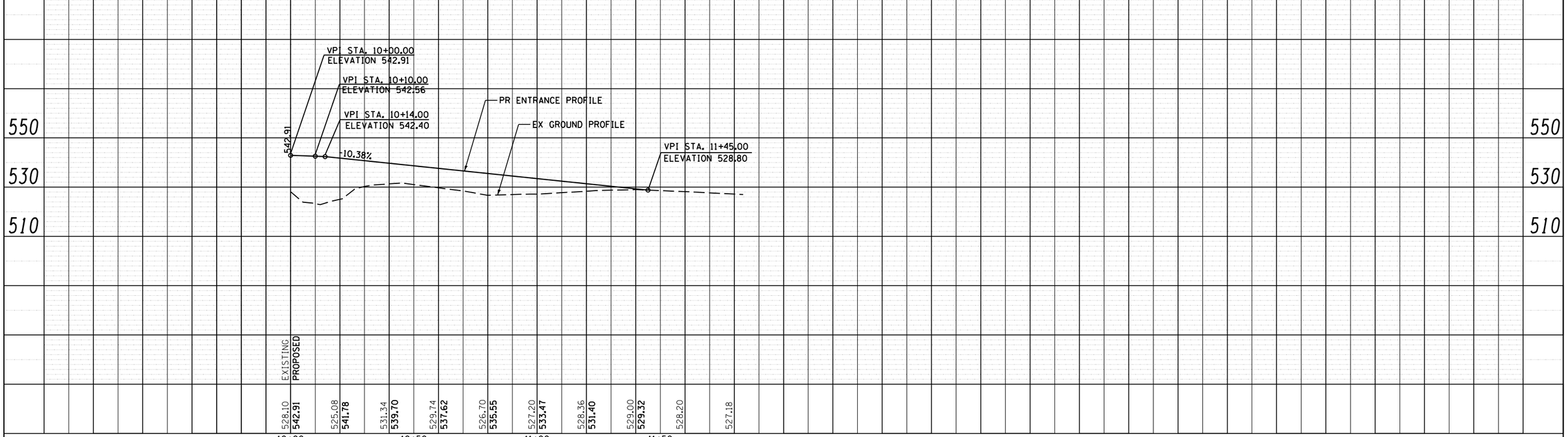
PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



PROP. CURVE R001
PI STA. = 10+88.03
Δ = 85° 29' 23" (LT)
D = 81° 51' 04"
R = 70.00'
T = 64.70'
L = 104.45'
E = 25.32'
e = NC
T.R. = -----
S.E. RUN = -----
P.C. STA = 10+23.33
P.T. STA = 11+27.77

BRANDON A & JACLYN L ROBBINS

PROFILE
SURVEYED
PLOTTED
DRAWN
CHECKED
BM. NOTED
STRUCTURE NO.
NOTE BOOK
NO.
BY
DATE



CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -
FILE NAME = 2262-robbinsll.dgn	DRAWN - SJS	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - KSC	REVISED -
PLOT DATE = 2/20/2024	DATE - 1/17/2013	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

ENTRANCE PLAN AND PROFILE

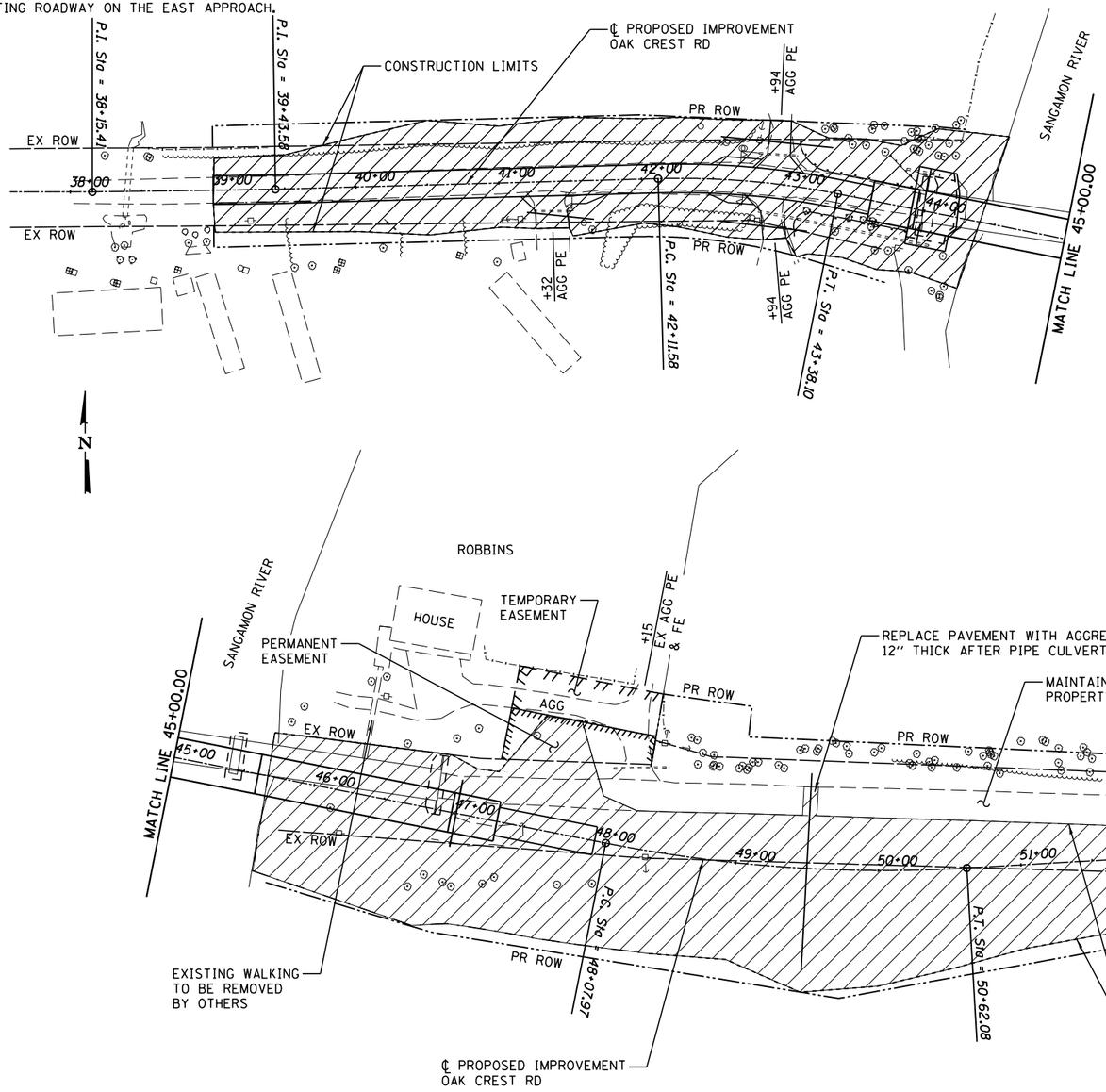
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

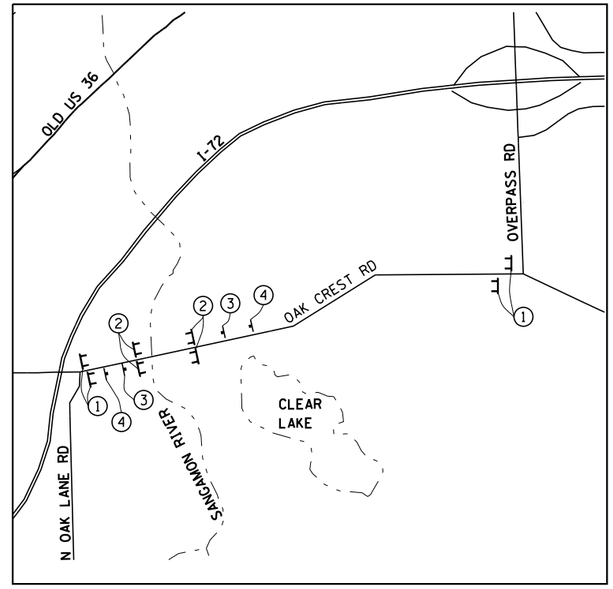
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	13
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SEQUENCE OF OPERATIONS

STAGE 1
1. CLOSE OAK CREST RD. TO THROUGH TRAFFIC
2. REMOVE EXISTING STRUCTURE
3. CONSTRUCT PROPOSED STRUCTURE
4. REMOVE STUMPS
5. CONSTRUCT EMBANKMENT AND EXCAVATE DITCHES ON THE WEST APPROACH
6. CONSTRUCT AGGREGATE BASE ON THE WEST APPROACH FROM STA. 39+00 TO STA. 43+90.76
   CONSTRUCT AGGREGATE SURFACE COURSE IN ENTRANCES ON WEST APPROACH
7. CONSTRUCT PIPE CULVERT STA. 49+50
8. CONSTRUCT STAGE 1 PORTION OF EMBANKMENT AND EXCAVATE DITCHES ON THE EAST APPROACH
9. CONSTRUCT AGGREGATE BASE ON THE EAST APPROACH FROM STA. 47+01.25 TO STA. 48+00.00
10. OPEN STAGE 1 PORTION OF OAK CREST RD TO LOCAL TRAFFIC

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTY WEST OF THE SANGAMON RIVER THROUGHOUT STAGE 1 CONSTRUCTION AS SPECIFIED IN ARTICLE 107.09 OF THE STANDARD SPECIFICATIONS. ACCESS TO THE ROBBINS PROPERTY SHALL BE MAINTAINED ON THE EXISTING ROADWAY ON THE EAST APPROACH.





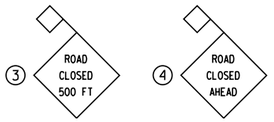
BARRICADE AND SIGN LOCATIONS

① TYPE III BARRICADE WITH "ROAD CLOSED TO THRU TRAFFIC" (R11-4) SIGNS

② TYPE III BARRICADE WITH "ROAD CLOSED" (R11-2) SIGNS

SEE STANDARD 701901 FOR DETAILS OF TYPE III BARRICADES

SEE STANDARD BLR 22 FOR SIGNING IN ADVANCE OF SPLIT TYPE III BARRICADES



CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262 TCP.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/18/2024	DATE - 1/14/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

STAGE 1 CONSTRUCTION

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

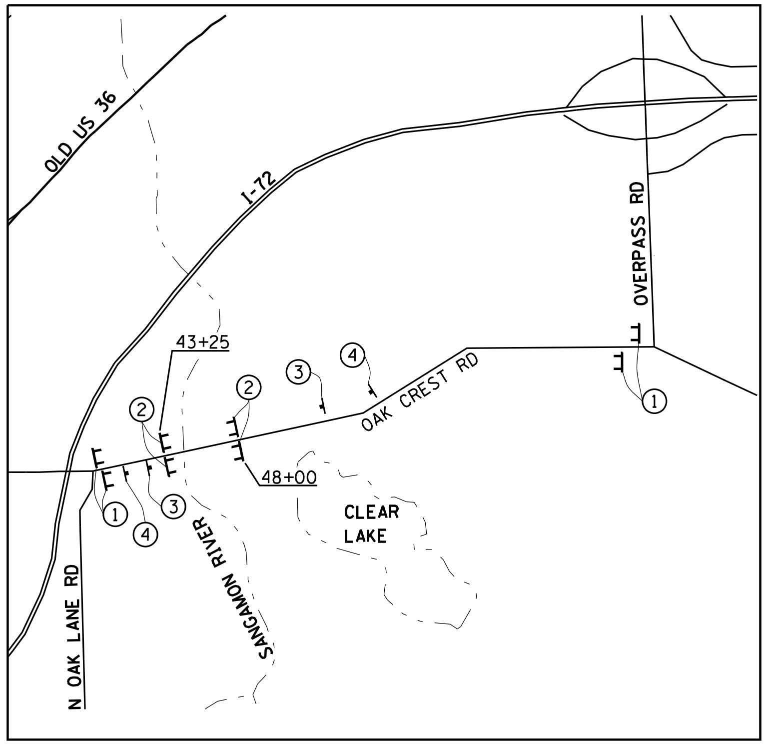
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	14
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

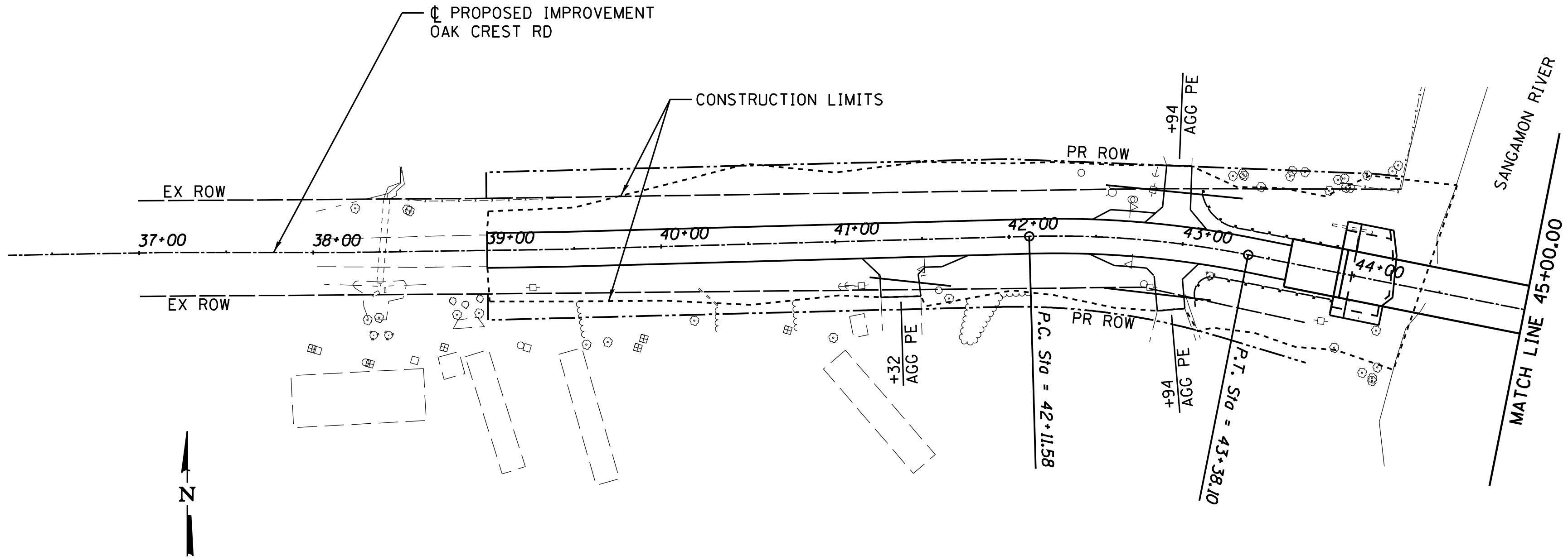
SEQUENCE OF OPERATIONS

STAGE 2

1. CONSTRUCT STAGE 2 EMBANKMENT AND EXCAVATE DITCHES ON THE EAST APPROACH
2. CONSTRUCT AGGREGATE BASE COURSE FROM STA. 48+00 TO STA. 57+00
3. CONSTRUCT ENTRANCES
4. INSTALL GUARDRAIL AND TERMINALS
5. CONSTRUCT A2 BITUMINOUS SURFACE TREATMENT
6. OPEN OAK CREST ROAD TO ALL TRAFFIC

DURING STAGE 2 CONSTRUCTION, ACCESS TO THE ROBBINS PROPERTY SHALL BE MAINTAINED ON THE WEST APPROACH ROADWAY. THE CONTRACTOR SHALL PROVIDE FOR SUITABLE PARKING AND A TEMPORARY WALKWAY, INCLUDING TEMPORARY STAIRS, FROM THE EDGE OF THE AGGREGATE BASE COURSE TO THE EDGE OF THE EXISTING ROBBINS ENTRANCE DURING THE TIME THAT THE PROPOSED ENTRANCE IS UNDER CONSTRUCTION. THE COST OF THE TEMPORARY WALKWAY SHALL BE INCLUDED IN THE COST FOR THE VARIOUS EARTHWORK ITEMS





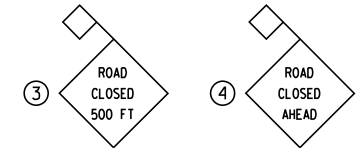
BARRICADE AND SIGN LOCATIONS

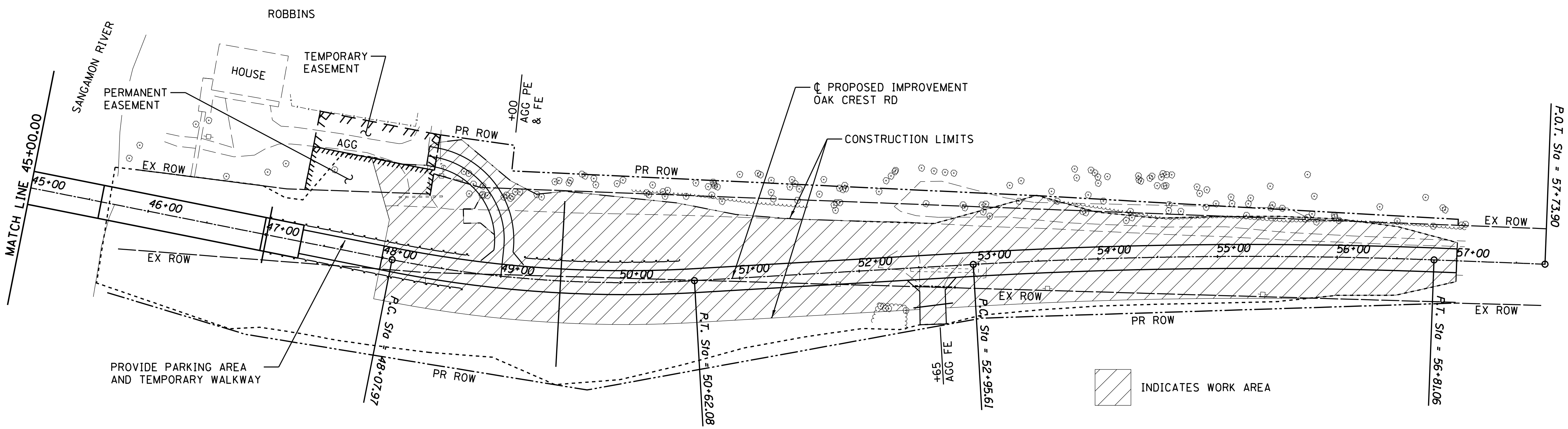
(1) TYPE III BARRICADE WITH "ROAD CLOSED TO THRU TRAFFIC" (R11-4) SIGNS

(2) TYPE III BARRICADE WITH "ROAD CLOSED" (R11-2) SIGNS

SEE STANDARD 701901 FOR DETAILS OF TYPE III BARRICADES

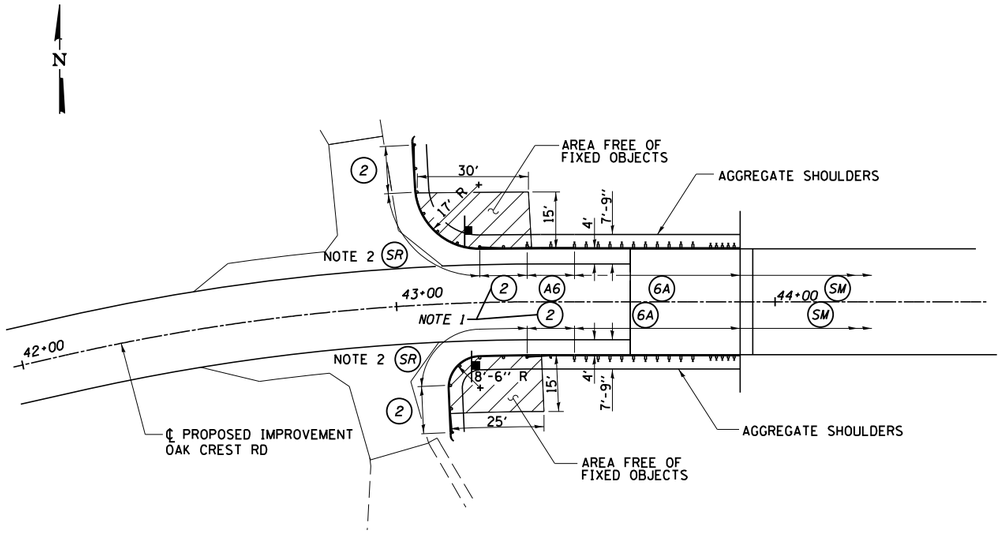
SEE STANDARD BLR 22 FOR SIGNING IN ADVANCE OF SPLIT TYPE III BARRICADES





CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	STAGE 2 CONSTRUCTION
	FILE NAME = 2262 TCP.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 100.0000 ' / in.	CHECKED - KSC	REVISED -		
	PLOT DATE = 1/15/2024	DATE - 1/14/2013	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	15
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

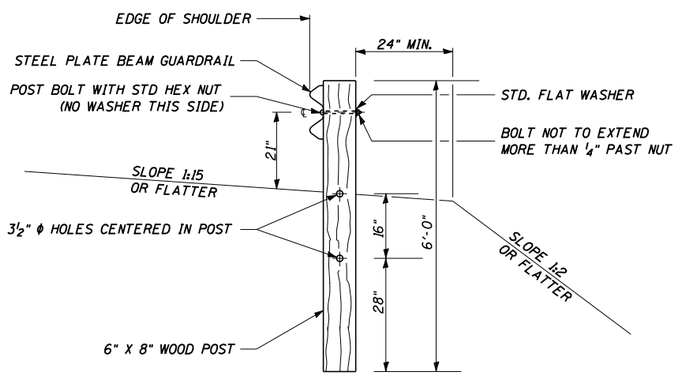


LEGEND

- (A6) STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
- (SR) STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)
- (2) TRAFFIC BARRIER TERMINAL, TYPE 2
- (6A) TRAFFIC BARRIER TERMINAL, TYPE 6A
- (1) TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT
- (SM) STEEL BRIDGE RAIL, TYPE SM
- TERMINAL MARKER POST MOUNTED

NOTES

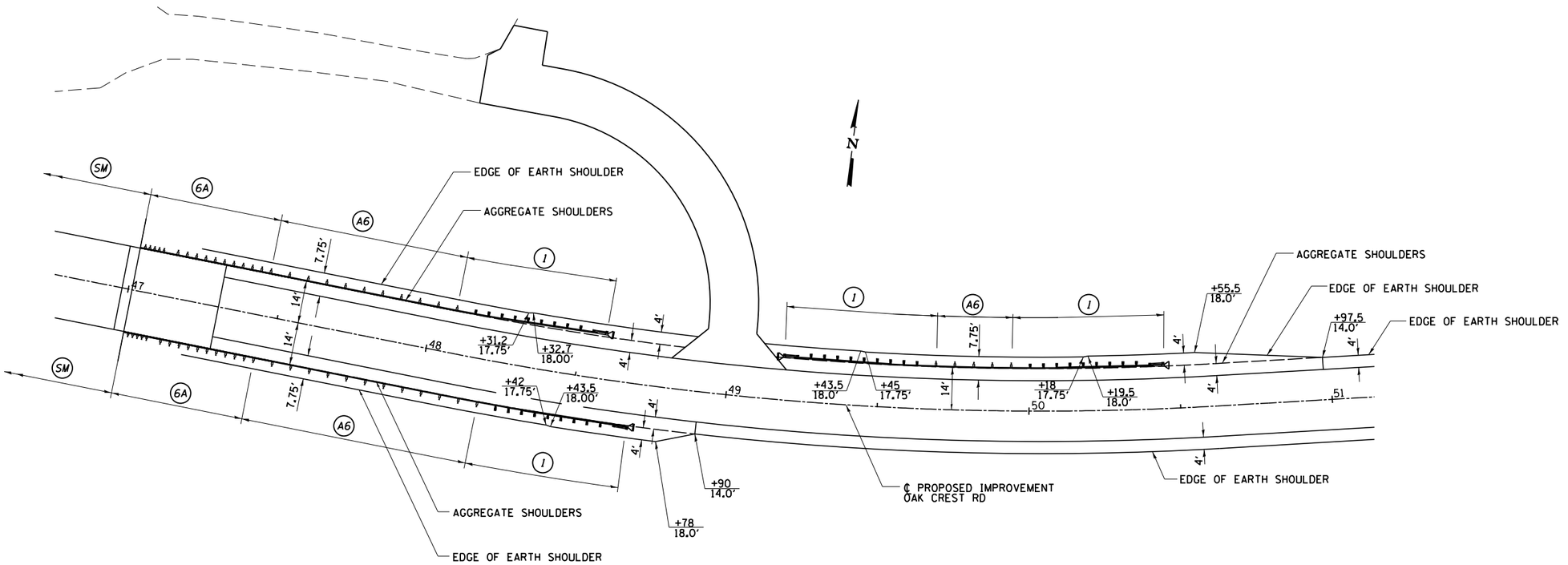
1. CONSTRUCT ACCORDING TO STANDARD 631011 FOR TRAFFIC BARRIER TERMINAL, TYPE 2, EXCEPT DELETE END SECTION AND SPLICE INTO RADIUS GUARDRAIL.
2. CONTROLLED RELEASING TERMINAL (CRT) POSTS AT 6'-3" SPACING.
3. FOR THE 8'-6" RADIUS, THE RAIL IS NOT BOLTED TO THE POST LOCATED AT THE MIDPOINT OF THE CURVE



CRT POST

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	GUARD RAIL AND SHOULDER WIDENING LAYOUT
	FILE NAME = 2262rail.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - KSC	REVISED -		
	PLOT DATE = 1/18/2024	DATE - 1/14/2013	REVISED -		SCALE: / SHEET NO. OF SHEETS / STA. / TO STA.

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	16
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



LEGEND

- (A6) *STEEL PLATE BEAM GUARDRAIL. TYPE A. 6 FOOT POSTS*
- (SR) *STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)*
- (2) *TRAFFIC BARRIER TERMINAL. TYPE 2*
- (6A) *TRAFFIC BARRIER TERMINAL. TYPE 6A*
- (1) *TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT*
- (SM) *STEEL BRIDGE RAIL. TYPE SM*

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262rail.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/18/2024	DATE - 1/14/2013	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

GUARD RAIL AND
SHOULDER WIDENING LAYOUT

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

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	17
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M. #4: Chiseled Square on N.E. corner bridge curb of S.N. 084-3106, 10.5' Lt. Sta. 46+85, Elev. 593.50

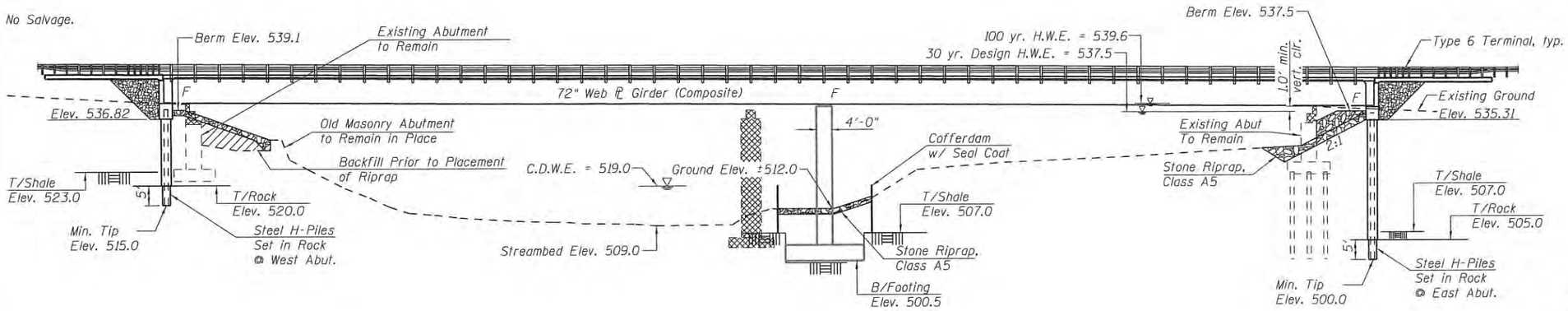
Existing Structure: SN 084-3106, originally built in 1950 as TR 171 Sta. 10+28.58. The existing structure is a two span thru truss and R.C. slab deck superstructure on a closed west abutment on spread footing, solid wall pier on spread footing and pile supported closed east abutment. The overall length is 287'-2" bk. to bk. abutments. The bridge width is 23'-4" ctr. to ctr. trusses with a slab measuring 22'-0" o. to o. of deck and a clear roadway width of 20'-0" fc. to fc. of curbs. The contractor will remove and replace the existing structure with a new two span continuous welded plate girder bridge as shown.

Structure to be built under road closure.

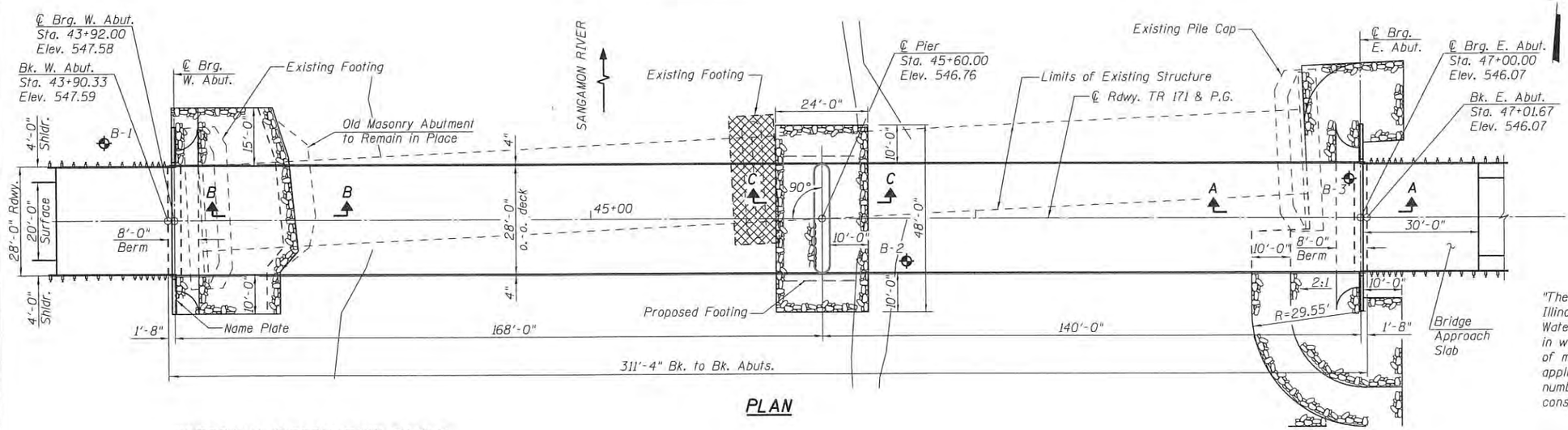
No Salvage.

SANGAMON RIVER
BUILT 20__ BY
SANGAMON COUNTY
CLEAR LAKE ROAD DISTRICT
SEC. 08-07116-00-BR
TOWNSHIP ROAD 171
STRUCTURE NO. 084-3506 LOADING HL-93

NAME PLATE
See Std. 515001



ELEVATION



PLAN

INDEX OF SHEETS

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (Substructure)
f'c = 5,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

CONSTRUCTION PERMITS

"The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the contractor shall refer to the IDNR permit number DS2010115 which was issued for the permanent construction."

DESIGN SPECIFICATIONS

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

LOADING HL-93

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

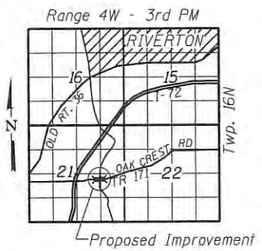
WATERWAY INFORMATION TABLE

Drainage Area = 2,615 Sq. Mi.

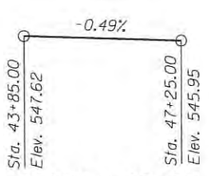
Existing Low Grade Elev. 526.7 @ Sta. 72+00
Proposed Low Grade Elev. 526.7 @ Sta. 72+00

	Structure	Freq. Yr.	Q (C.F.S.) Exist.	Q (C.F.S.) Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	Bridge		4,708	5,627	4,404	4,458					
	Roadway	10	26,695	25,776	24,466	22,412	535.4	0.0	0.0	535.4	535.4
	Total		31,403		28,870	26,870					
	Bridge		4,380	5,200	4,996	5,038					
Design	Roadway	30	36,050	35,230	35,576	32,834	537.5	0.0	0.0	537.5	537.5
	Total		40,430		40,572	37,872					
	Bridge		2,939	4,268	5,104	5,738					
Base	Roadway	100	47,373	46,044	47,638	44,209	539.6	0.0	0.0	539.6	539.6
	Total		50,312		52,742	49,947					
	Bridge		7,559	7,574	2,430	2,467					
Overtopping	Roadway	<2	441	426	433	459	527.7	0.1	0.1	527.8	527.8
	Total		8,000		2,863	2,926					

<2 yr. vel. thru existing bridge = 3.1 ft/s <2 yr. vel. thru proposed bridge = 3.1 ft/s



LOCATION SKETCH



PROFILE GRADE
(along ℄ Construction)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier	E. Abut.
	536.3	506.0	533.7

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'".

Michael D. Cummins 2/20/24
ILLINOIS STRUCTURAL NO. 4822 (Expires 11/30/24)

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

GENERAL PLAN
T.R. 171 OVER SANGAMON RIVER
SECTION 08-07116-00-BR
SANGAMON COUNTY
STATION 45+46.00
STRUCTURE NO. 084-3506
-PUBLIC WATERS-

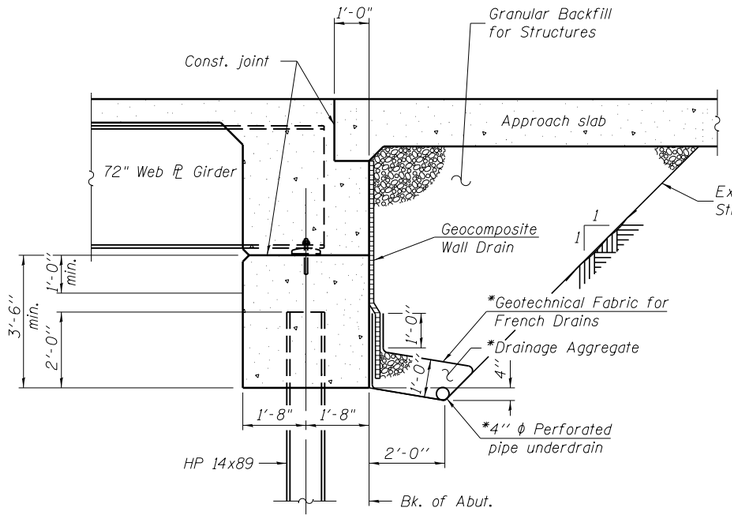
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262gpe.dgn	CHECKED - MDC	REVISED -	
DATE = 2/20/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

GENERAL PLAN
STRUCTURE NO. 084-3506
SHEET NO. 1 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	18
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

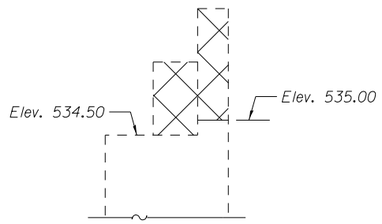


SECTION THRU INTEGRAL ABUTMENT

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

*Included in the cost of Pipe Underdrains for Structures.

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).

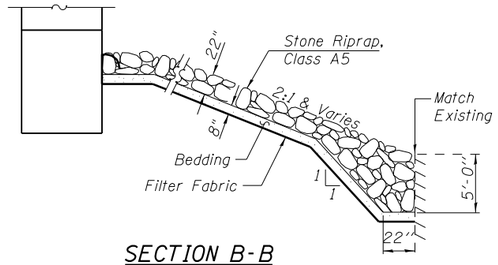


EAST ABUTMENT REMOVAL DETAIL

The east abutment shall be removed to the elevations shown above. Cost included in Removal of Existing Structures.

REMOVAL OF EXISTING STRUCTURES

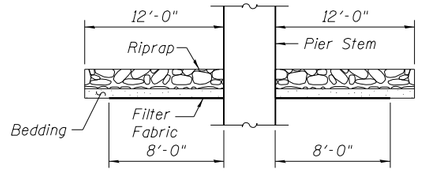
Except as otherwise noted, the existing structure including the pier, abutments and superstructure shall be removed in accordance with Section 501 of the Standard Specifications. This work will be paid for at the Lump Sum price for Removal of Existing Structures.



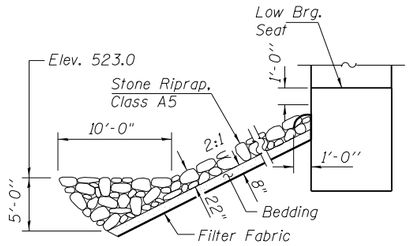
SECTION B-B

GENERAL NOTES

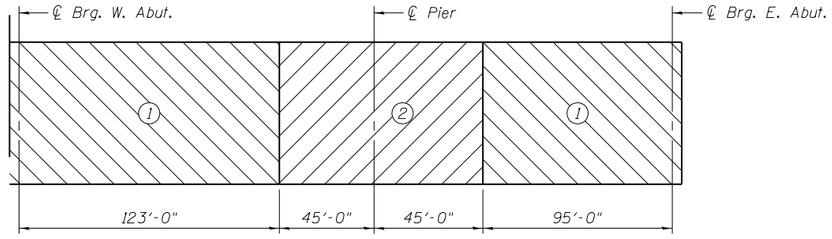
1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts (in painted areas and M164 Type 3 in unpainted areas). Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 392,510 lbs.
3. All structural steel shall be AASHTO M 270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
8. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
9. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
10. Seal coat thickness design is based on the Cofferdam Design Water Elevation (CDWE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.
11. When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
    1) At least 72 hours shall have elapsed from the end of the previous pour.
    2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.
12. Should the Contractor deem that dewatering is necessary or that a temporary cofferdam or temporary excavation support system is necessary to complete removal of existing substructure elements the contractor shall include such cost with "Removal of Existing Structures". No additional compensation will be considered or made.
13. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
14. After blasting and painting, all areas of the steel to remain unpainted shall be sprayed with a stream of potable water to ensure uniform weathering.
15. The piers and abutments shall be protected during construction to prevent rust staining of the concrete. This can be accomplished by temporarily wrapping the piers and abutments with polyethylene covering. Any rust staining of the piers or abutments shall be cleaned to the satisfaction of the Engineer after the bridge deck is complete.
16. The Contractor shall consider the location of the existing footing in their work. The existing footing may remain in place, provided that it does not interfere with the proposed construction. If the Contractor elects to leave portions of the existing structure in place, this shall be indicated in a Removal Plan, subject to the approval of the Engineer. This cost shall be included in the cost for Removal of Existing Structures and no additional compensation shall be allowed.



SECTION C-C



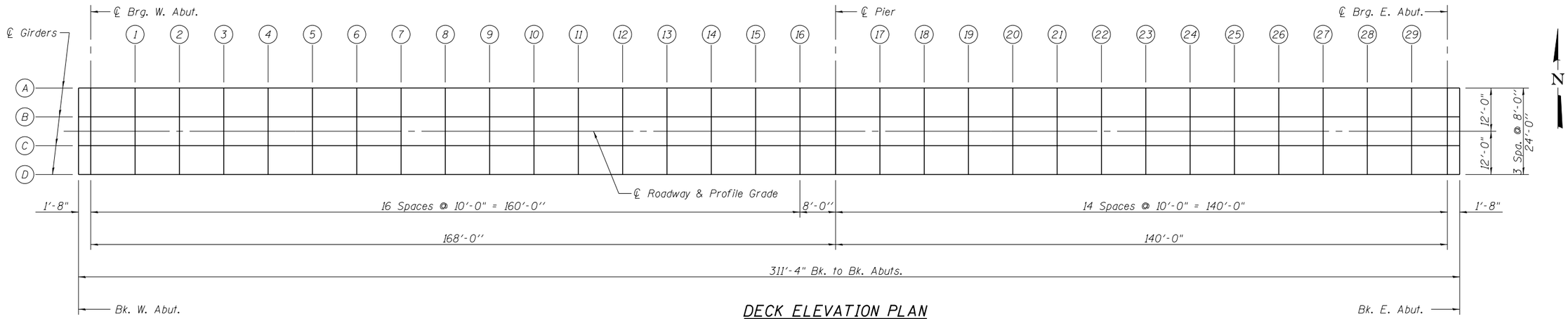
SECTION A-A



POURING SEQUENCE

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		615	615
Filter Fabric	Sq. Yd.		565	565
Removal of Existing Structures	L Sum	1		1
Structure Excavation	Cu. Yd.		65	65
Cofferdam Excavation	Cu. Yd.		160	160
Cofferdam (Type 2) (Location-1)	Each		1	1
Concrete Structures	Cu. Yd.		290.0	290.0
Concrete Superstructure	Cu. Yd.	362.4		362.4
Bridge Deck Grooving	Sq. Yd.	1067		1067
Protective Coat	Sq. Yd.	1273		1273
Furnishing and Erecting Structural Steel	L Sum.	1		1
Stud Shear Connectors	Each	3156		3156
Reinforcement Bars, Epoxy Coated	Pound	85,780	25,910	111,690
Steel Railing, Type SM	Foot	621		621
Furnishing Steel Piles HP 14x89	Foot		305	305
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		16	16
Anchor Bolts, 1½"	Each		8	8
Geocomposite Wall Drain	Sq. Yd.		86	86
Pipe Underdrains for Structures, 4"	Foot		190	190
Rock Excavation for Structures	Cu. Yd.		166	166
Drilling and Setting Piles (In Rock)	Cu. Ft.		160	160
Granular Backfill for Structures	Cu. Yd.		184	184
Seal Coat Concrete	Cu. Yd.		11.9	11.9



DECK ELEVATION PLAN

GIRDER A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	43+90.33	-12.00	547.40	547.40
CL Brg. W. Abut.	43+92.00	-12.00	547.40	547.40
1	44+02.00	-12.00	547.35	547.41
2	44+12.00	-12.00	547.30	547.42
3	44+22.00	-12.00	547.25	547.42
4	44+32.00	-12.00	547.20	547.41
5	44+42.00	-12.00	547.15	547.40
6	44+52.00	-12.00	547.10	547.37
7	44+62.00	-12.00	547.05	547.33
8	44+72.00	-12.00	547.00	547.28
9	44+82.00	-12.00	546.95	547.22
10	44+92.00	-12.00	546.91	547.14
11	45+02.00	-12.00	546.86	547.06
12	45+12.00	-12.00	546.81	546.97
13	45+22.00	-12.00	546.76	546.88
14	45+32.00	-12.00	546.71	546.79
15	45+42.00	-12.00	546.66	546.70
16	45+52.00	-12.00	546.61	546.62
CL Pier	45+60.00	-12.00	546.57	546.57
17	45+70.00	-12.00	546.52	546.51
18	45+80.00	-12.00	546.47	546.47
19	45+90.00	-12.00	546.43	546.43
20	46+00.00	-12.00	546.38	546.39
21	46+10.00	-12.00	546.33	546.36
22	46+20.00	-12.00	546.28	546.32
23	46+30.00	-12.00	546.23	546.29
24	46+40.00	-12.00	546.18	546.25
25	46+50.00	-12.00	546.13	546.20
26	46+60.00	-12.00	546.08	546.15
27	46+70.00	-12.00	546.03	546.09
28	46+80.00	-12.00	545.98	546.03
29	46+90.00	-12.00	545.94	545.96
CL Brg. E. Abut.	47+00.00	-12.00	545.89	545.89
Bk. E. Abut.	47+01.67	-12.00	545.88	545.88

GIRDER B

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	43+90.33	-4.00	547.53	547.53
CL Brg. W. Abut.	43+92.00	-4.00	547.52	547.52
1	44+02.00	-4.00	547.47	547.53
2	44+12.00	-4.00	547.42	547.54
3	44+22.00	-4.00	547.37	547.54
4	44+32.00	-4.00	547.32	547.54
5	44+42.00	-4.00	547.28	547.52
6	44+52.00	-4.00	547.23	547.50
7	44+62.00	-4.00	547.18	547.46
8	44+72.00	-4.00	547.13	547.41
9	44+82.00	-4.00	547.08	547.34
10	44+92.00	-4.00	547.03	547.27
11	45+02.00	-4.00	546.98	547.19
12	45+12.00	-4.00	546.93	547.10
13	45+22.00	-4.00	546.88	547.00
14	45+32.00	-4.00	546.83	546.91
15	45+42.00	-4.00	546.79	546.83
16	45+52.00	-4.00	546.74	546.75
CL Pier	45+60.00	-4.00	546.70	546.70
17	45+70.00	-4.00	546.65	546.64
18	45+80.00	-4.00	546.60	546.59
19	45+90.00	-4.00	546.55	546.55
20	46+00.00	-4.00	546.50	546.52
21	46+10.00	-4.00	546.45	546.48
22	46+20.00	-4.00	546.40	546.45
23	46+30.00	-4.00	546.35	546.41
24	46+40.00	-4.00	546.31	546.37
25	46+50.00	-4.00	546.26	546.32
26	46+60.00	-4.00	546.21	546.27
27	46+70.00	-4.00	546.16	546.21
28	46+80.00	-4.00	546.11	546.15
29	46+90.00	-4.00	546.06	546.08
CL Brg. E. Abut.	47+00.00	-4.00	546.01	546.01
Bk. E. Abut.	47+01.67	-4.00	546.00	546.00

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	43+90.33	0.00	547.59	547.59
CL Brg. W. Abut.	43+92.00	0.00	547.58	547.58
1	44+02.00	0.00	547.53	547.59
2	44+12.00	0.00	547.49	547.60
3	44+22.00	0.00	547.44	547.61
4	44+32.00	0.00	547.39	547.60
5	44+42.00	0.00	547.34	547.59
6	44+52.00	0.00	547.29	547.56
7	44+62.00	0.00	547.24	547.52
8	44+72.00	0.00	547.19	547.47
9	44+82.00	0.00	547.14	547.40
10	44+92.00	0.00	547.09	547.33
11	45+02.00	0.00	547.04	547.25
12	45+12.00	0.00	547.00	547.16
13	45+22.00	0.00	546.95	547.07
14	45+32.00	0.00	546.90	546.98
15	45+42.00	0.00	546.85	546.89
16	45+52.00	0.00	546.80	546.81
CL Pier	45+60.00	0.00	546.76	546.76
17	45+70.00	0.00	546.71	546.70
18	45+80.00	0.00	546.66	546.65
19	45+90.00	0.00	546.61	546.62
20	46+00.00	0.00	546.56	546.58
21	46+10.00	0.00	546.52	546.55
22	46+20.00	0.00	546.47	546.51
23	46+30.00	0.00	546.42	546.48
24	46+40.00	0.00	546.37	546.43
25	46+50.00	0.00	546.32	546.39
26	46+60.00	0.00	546.27	546.33
27	46+70.00	0.00	546.22	546.28
28	46+80.00	0.00	546.17	546.21
29	46+90.00	0.00	546.12	546.14
CL Brg. E. Abut.	47+00.00	0.00	546.07	546.07
Bk. E. Abut.	47+01.67	0.00	546.07	546.07

E-S

7-1-10

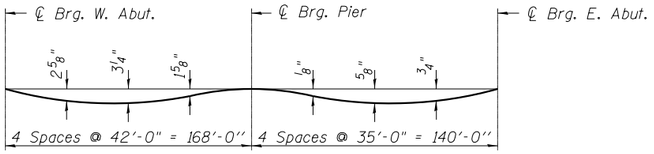
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262topofslab.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 084-3506
SHEET NO. 3 OF 20 SHEETS

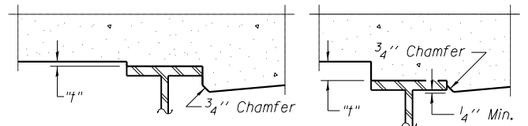
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	20
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			



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 below.



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 sheet 3. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 3, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

GIRDER C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	43+90.33	4.00	547.53	547.53
CL Brg. W. Abut.	43+92.00	4.00	547.52	547.52
1	44+02.00	4.00	547.47	547.53
2	44+12.00	4.00	547.42	547.54
3	44+22.00	4.00	547.37	547.54
4	44+32.00	4.00	547.32	547.54
5	44+42.00	4.00	547.28	547.52
6	44+52.00	4.00	547.23	547.50
7	44+62.00	4.00	547.18	547.46
8	44+72.00	4.00	547.13	547.41
9	44+82.00	4.00	547.08	547.34
10	44+92.00	4.00	547.03	547.27
11	45+02.00	4.00	546.98	547.19
12	45+12.00	4.00	546.93	547.10
13	45+22.00	4.00	546.88	547.00
14	45+32.00	4.00	546.83	546.91
15	45+42.00	4.00	546.79	546.83
16	45+52.00	4.00	546.74	546.75
CL Pier	45+60.00	4.00	546.70	546.70
17	45+70.00	4.00	546.65	546.64
18	45+80.00	4.00	546.60	546.59
19	45+90.00	4.00	546.55	546.55
20	46+00.00	4.00	546.50	546.52
21	46+10.00	4.00	546.45	546.48
22	46+20.00	4.00	546.40	546.45
23	46+30.00	4.00	546.35	546.41
24	46+40.00	4.00	546.31	546.37
25	46+50.00	4.00	546.26	546.32
26	46+60.00	4.00	546.21	546.27
27	46+70.00	4.00	546.16	546.21
28	46+80.00	4.00	546.11	546.15
29	46+90.00	4.00	546.06	546.08
CL Brg. E. Abut.	47+00.00	4.00	546.01	546.01
Bk. E. Abut.	47+01.67	4.00	546.00	546.00

GIRDER D

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	43+90.33	12.00	547.40	547.40
CL Brg. W. Abut.	43+92.00	12.00	547.40	547.40
1	44+02.00	12.00	547.35	547.41
2	44+12.00	12.00	547.30	547.42
3	44+22.00	12.00	547.25	547.42
4	44+32.00	12.00	547.20	547.41
5	44+42.00	12.00	547.15	547.40
6	44+52.00	12.00	547.10	547.37
7	44+62.00	12.00	547.05	547.33
8	44+72.00	12.00	547.00	547.28
9	44+82.00	12.00	546.95	547.22
10	44+92.00	12.00	546.91	547.14
11	45+02.00	12.00	546.86	547.06
12	45+12.00	12.00	546.81	546.97
13	45+22.00	12.00	546.76	546.88
14	45+32.00	12.00	546.71	546.79
15	45+42.00	12.00	546.66	546.70
16	45+52.00	12.00	546.61	546.62
CL Pier	45+60.00	12.00	546.57	546.57
17	45+70.00	12.00	546.52	546.51
18	45+80.00	12.00	546.47	546.47
19	45+90.00	12.00	546.43	546.43
20	46+00.00	12.00	546.38	546.39
21	46+10.00	12.00	546.33	546.36
22	46+20.00	12.00	546.28	546.32
23	46+30.00	12.00	546.23	546.29
24	46+40.00	12.00	546.18	546.25
25	46+50.00	12.00	546.13	546.20
26	46+60.00	12.00	546.08	546.15
27	46+70.00	12.00	546.03	546.09
28	46+80.00	12.00	545.98	546.03
29	46+90.00	12.00	545.94	545.96
CL Brg. E. Abut.	47+00.00	12.00	545.89	545.89
Bk. E. Abut.	47+01.67	12.00	545.88	545.88

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262topofslab.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 084-3506
SHEET NO. 4 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	21
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF PAVEMENT

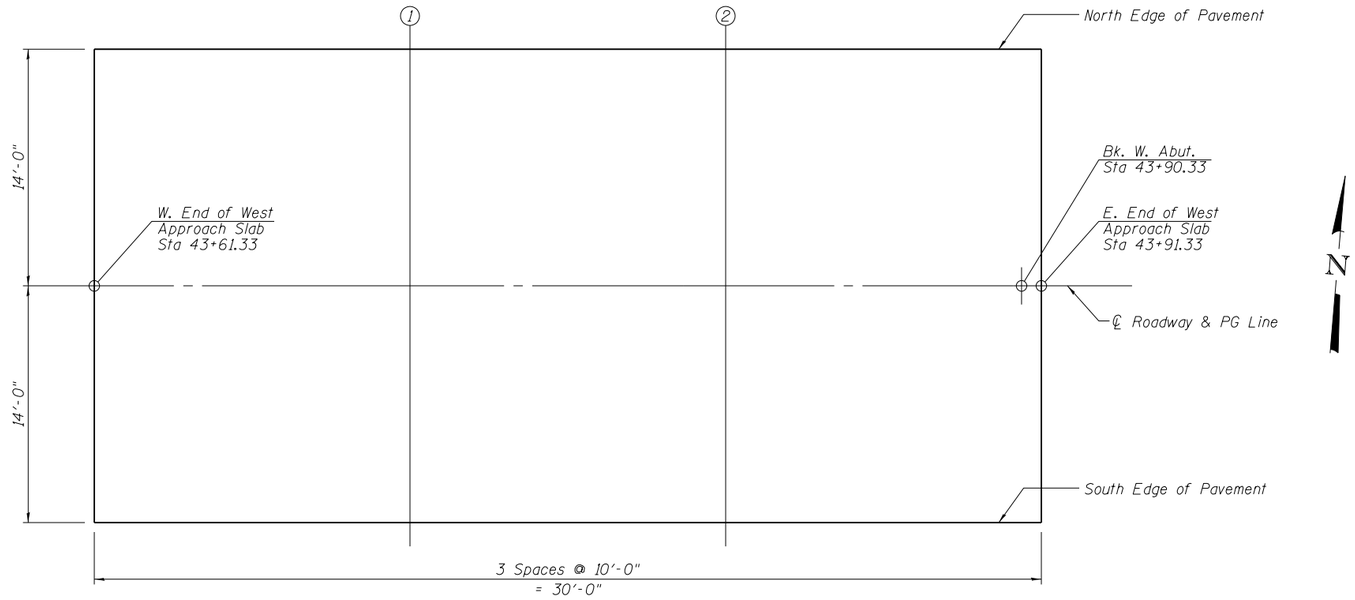
Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	43+61.33	-14.00	547.52
1	43+71.33	-14.00	547.47
2	43+81.33	-14.00	547.42
E. End West Appr. Slab	43+91.33	-14.00	547.37

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	43+61.33	0.00	547.74
1	43+71.33	0.00	547.69
2	43+81.33	0.00	547.64
E. End West Appr. Slab	43+91.33	0.00	547.59

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	43+61.33	14.00	547.52
1	43+71.33	14.00	547.47
2	43+81.33	14.00	547.42
E. End West Appr. Slab	43+91.33	14.00	547.37



PLAN

E-AS

7-1-10

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262topofapproach.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 084-3506
SHEET NO. 5 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	22
		CONTRACT NO. 93654		
	ILLINOIS	FED. AID PROJECT		

NORTH EDGE OF PAVEMENT

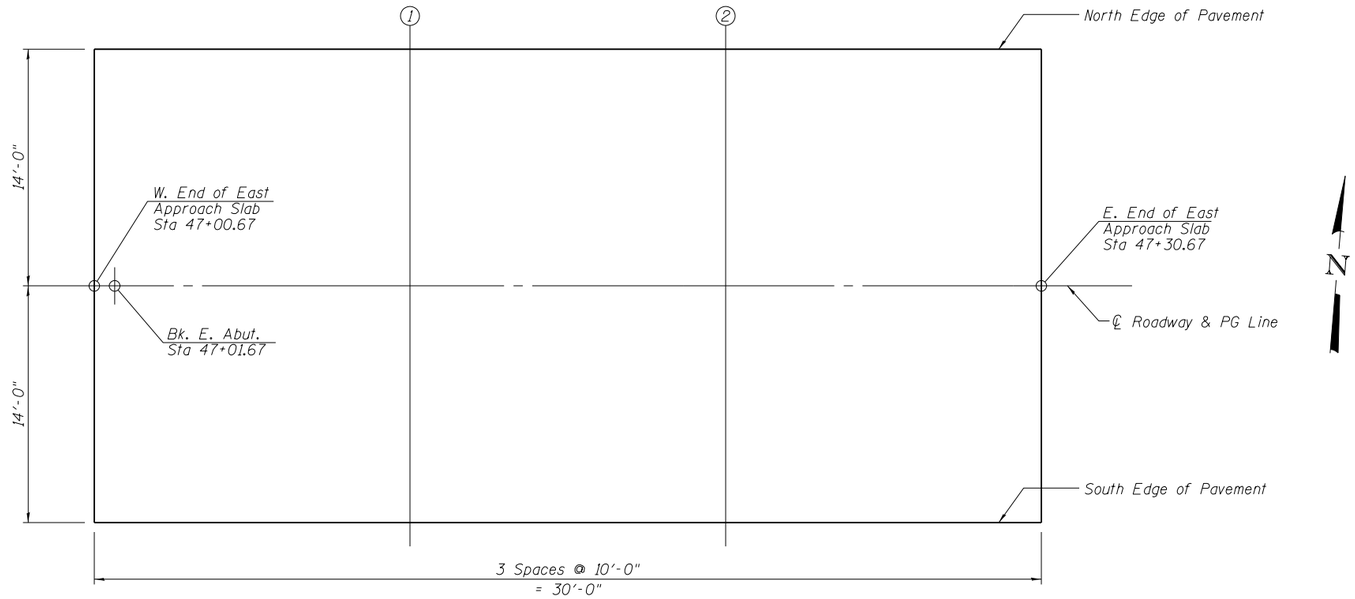
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	47+00.67	-14.00	545.85
1	47+10.67	-14.00	545.80
2	47+20.67	-14.00	545.75
E. End East Appr. Slab	47+30.67	-14.00	545.70

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	47+00.67	0.00	546.07
1	47+10.67	0.00	546.02
2	47+20.67	0.00	545.97
E. End East Appr. Slab	47+30.67	0.00	545.92

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	47+00.67	14.00	545.85
1	47+10.67	14.00	545.80
2	47+20.67	14.00	545.75
E. End East Appr. Slab	47+30.67	14.00	545.70



PLAN

E-AS 7-1-10

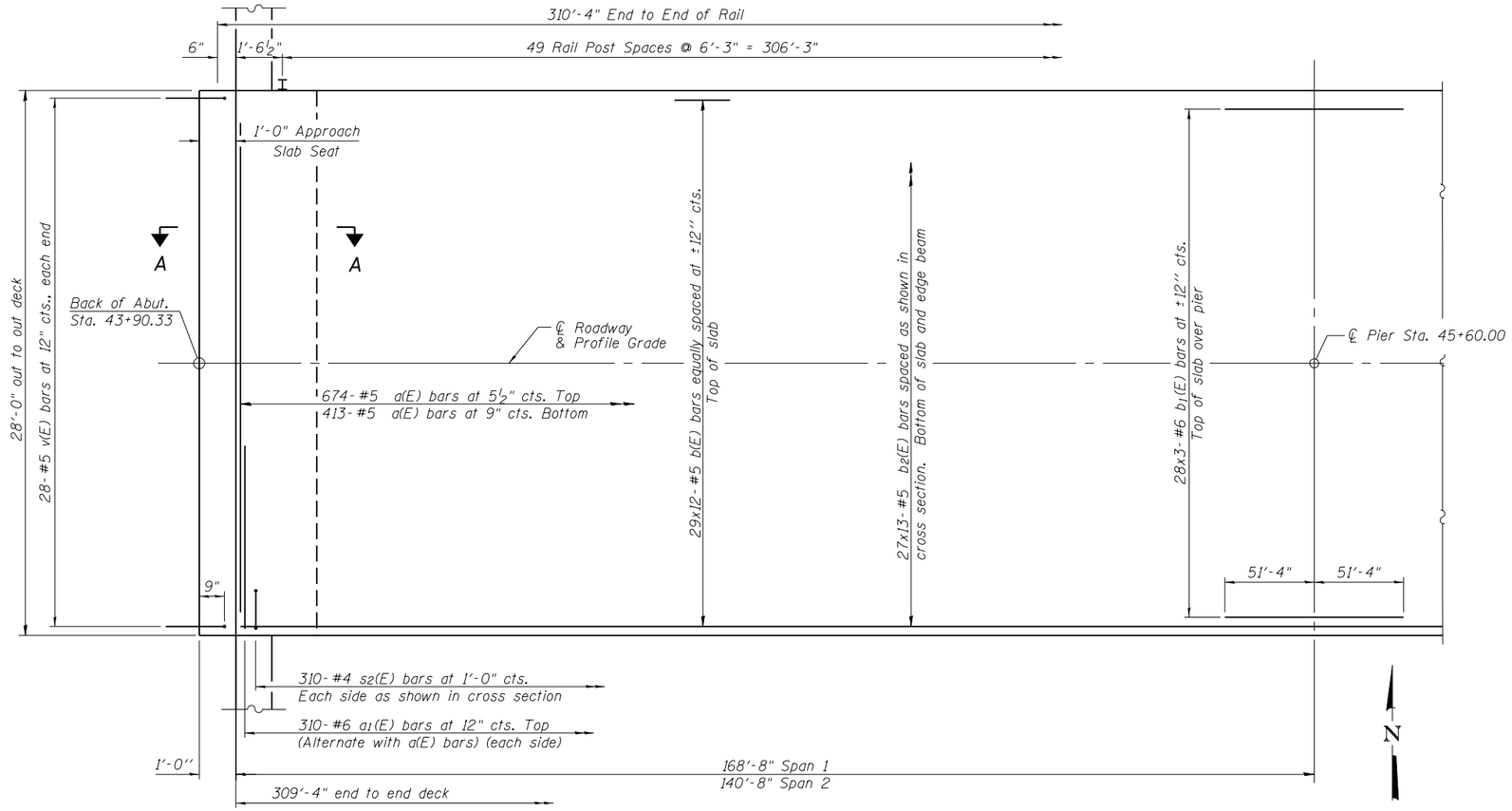
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262topofapproach.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

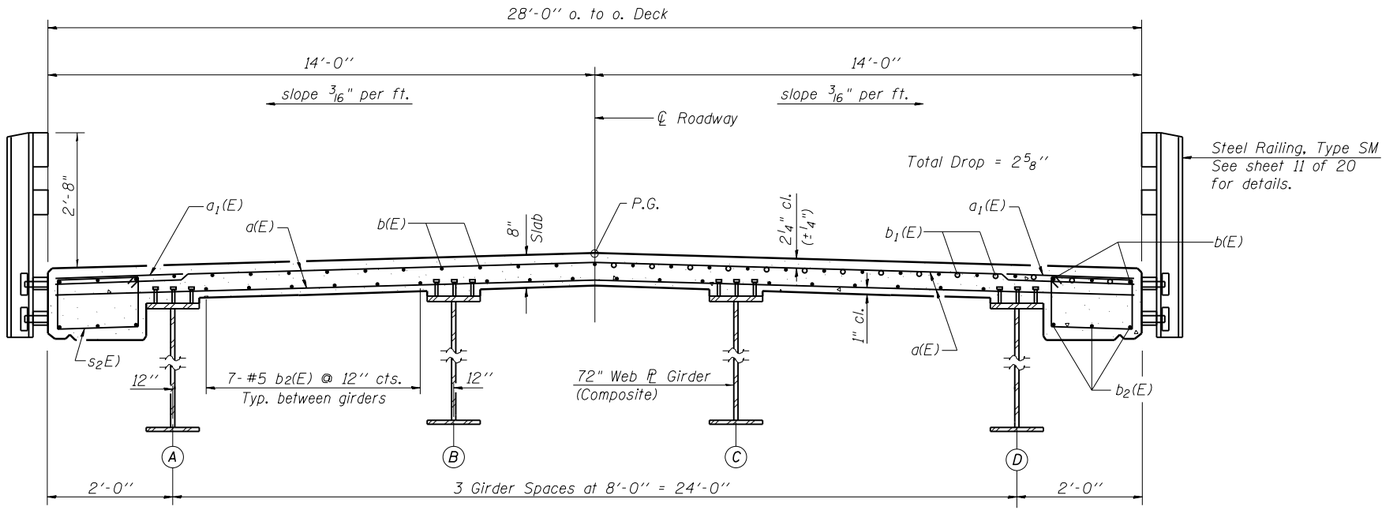
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 084-3506
SHEET NO. 6 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	23
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

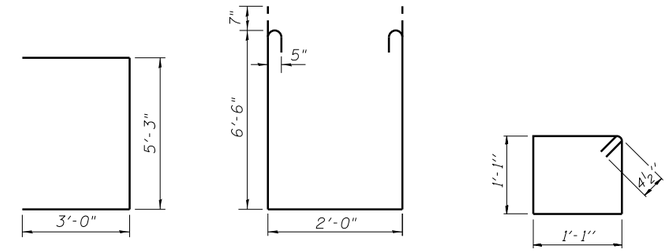


PARTIAL PLAN

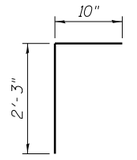


NEAR MIDSPAN NEAR PIER

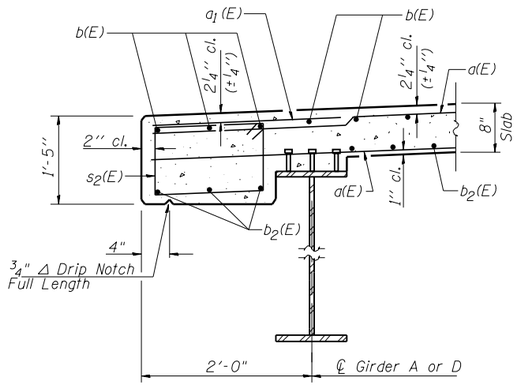
CROSS SECTION
(Looking East)



MIN. BAR LAPS
#5 Bar = 2'-7"
#6 Bar = 3'-1"



BAR v(E)



SECTION THRU EDGE OF SLAB

Reinforcement bars in the top of the deck may be placed with a 1½" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1087	#5	27'-7"	——
a1(E)	620	#6	4'-6"	——
b(E)	348	#5	28'-2"	——
b1(E)	84	#6	36'-4"	——
b2(E)	351	#5	26'-2"	——
m(E)	14	#6	27'-7"	——
m1(E)	36	#6	7'-8"	——
m2(E)	24	#6	1'-7"	——
m3(E)	48	#5	4'-0"	——
s(E)	54	#5	11'-3"	⌐
s1(E)	54	#4	16'-2"	⌐⌐
s2(E)	620	#4	5'-1"	□
v(E)	56	#5	3'-1"	Γ
Concrete Superstructure		Cu. Yd.	302.0	
Reinforcement Bars, Epoxy Coated		Pound	64.600	

Notes:
Bars indicated thus 35 x 3-#5 etc. indicates 35 lines of bars with 3 lengths per line.
See Sheet 8 of 20 for diaphragm details and Section A-A.

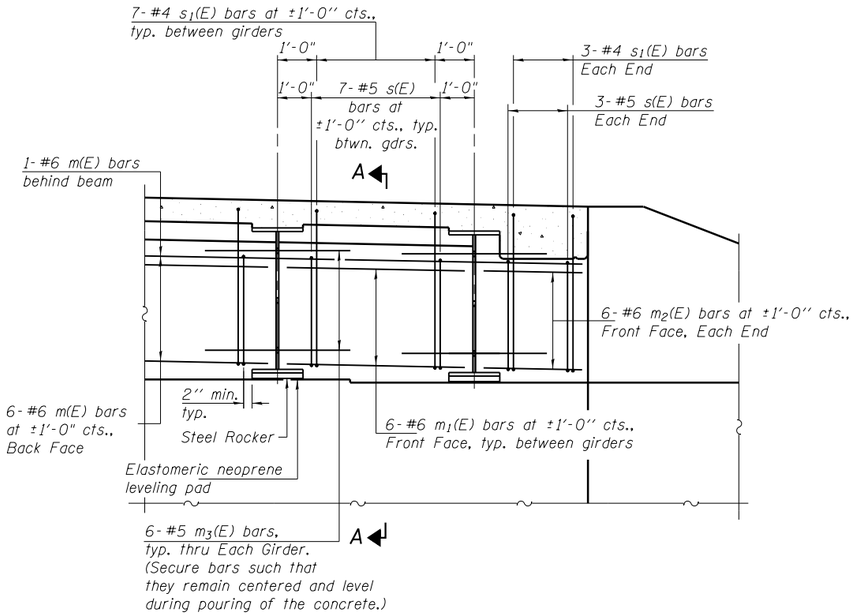
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262super.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

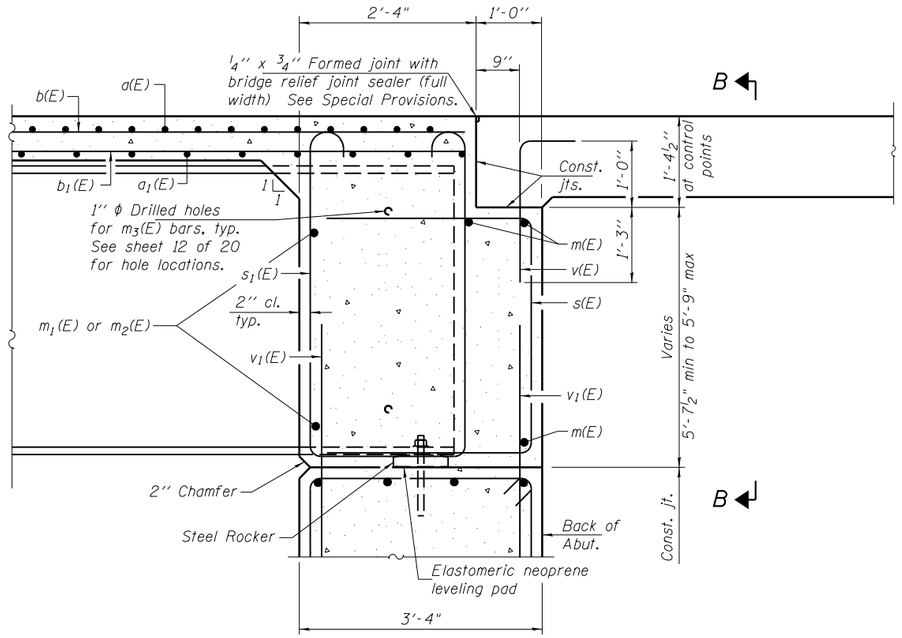
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

SUPERSTRUCTURE
STRUCTURE NO. 084-3506
SHEET NO. 7 OF 20 SHEETS

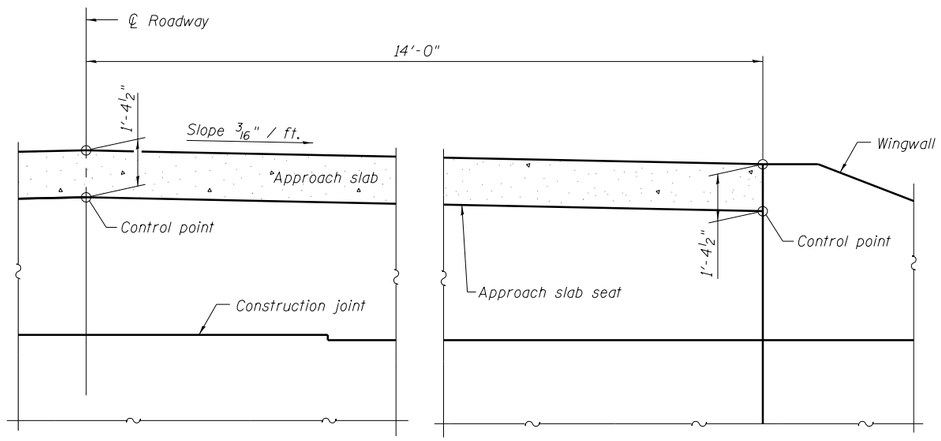
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	24
		CONTRACT NO. 93654		
		ILLINOIS FED. AID PROJECT		



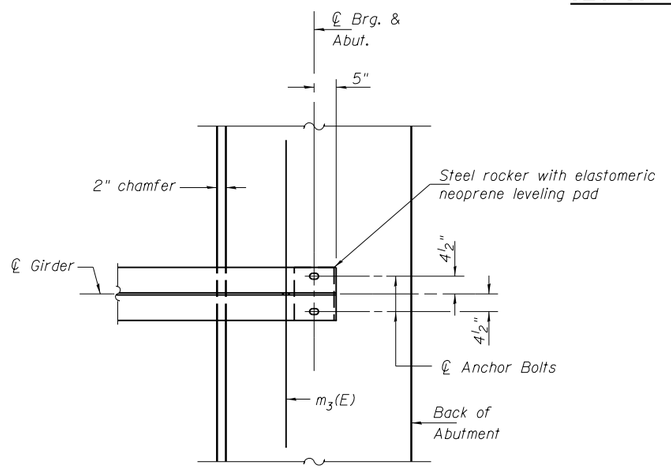
DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A



SECTION B-B



PARTIAL PLAN AT ABUTMENT
(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 20.

Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 20.

For details of bars s(E), s_1(E) and v(E) see sheet 7 of 20.

The approach slab seat shall have a constant slope determined from the control points shown.

For bearing details see sheet 15 of 20.

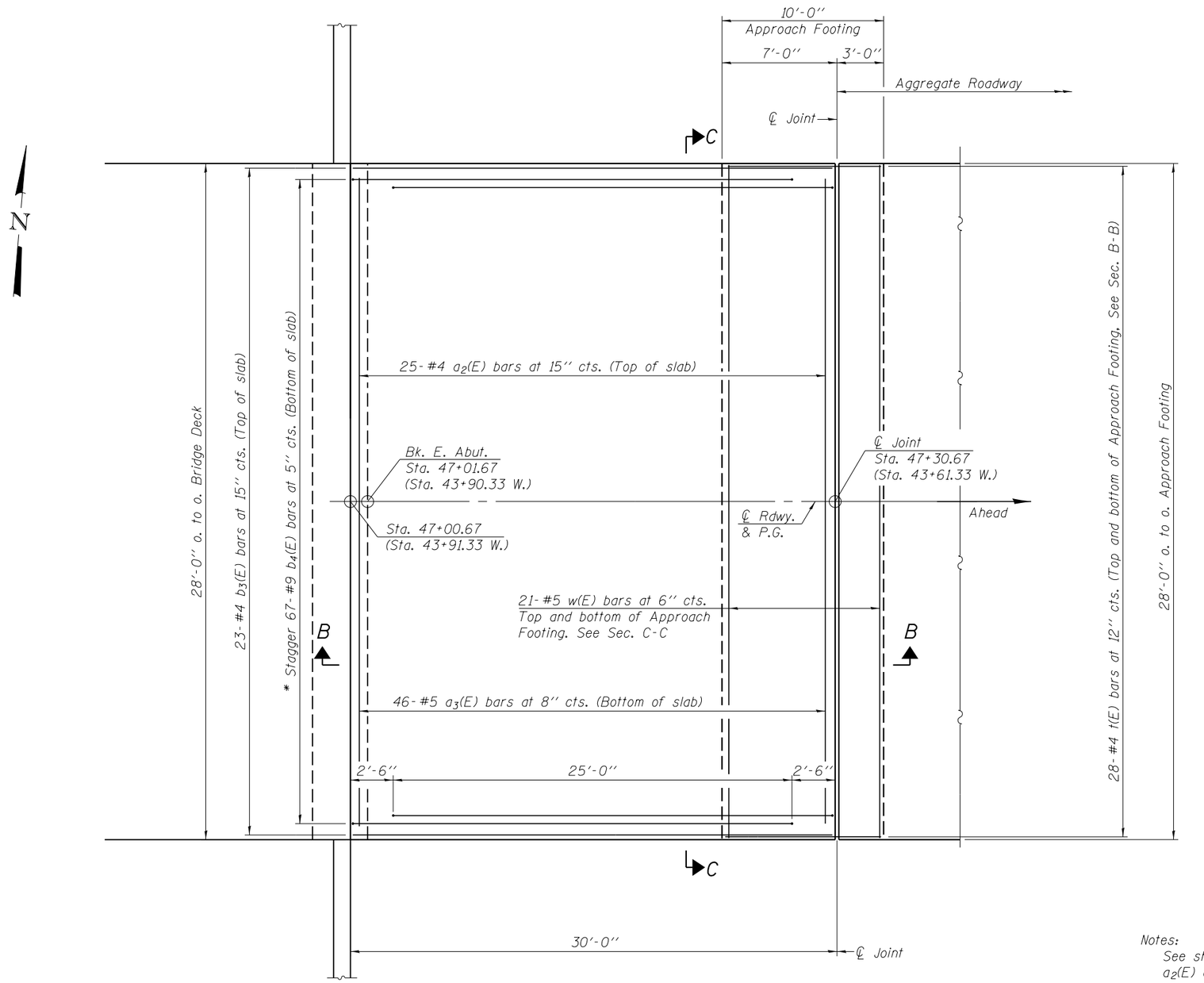
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262super.dgn	CHECKED - MDC	REVISED -	
DATE = 11/12/2010	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 084-3506
SHEET NO. 8 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	25
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			



PLAN

(East Approach Shown, West Approach Similar)

Notes:
See sheet 10 of 20 for Sections B-B & C-C.
a_2(E) and a_3(E) bar spacings measured along ℄ Rdwy.

* Tilt #9 b_4(E) bars as required to maintain clearance.

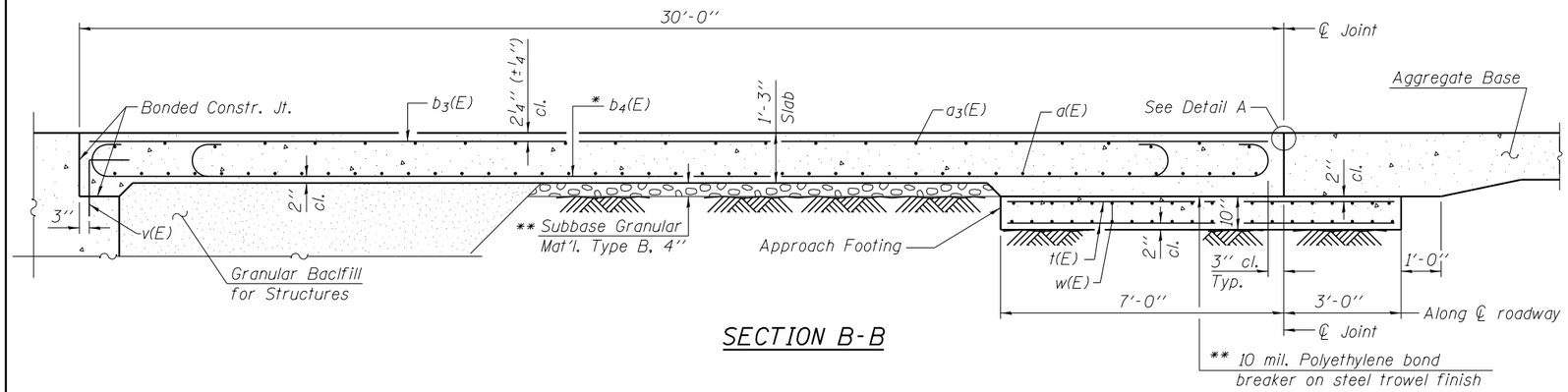
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262approach.dgn	CHECKED - MDC	REVISED -	
DATE = 1/15/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 084-3506
SHEET NO. 9 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	26
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			



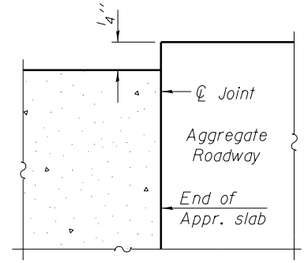
SECTION B-B

Notes:

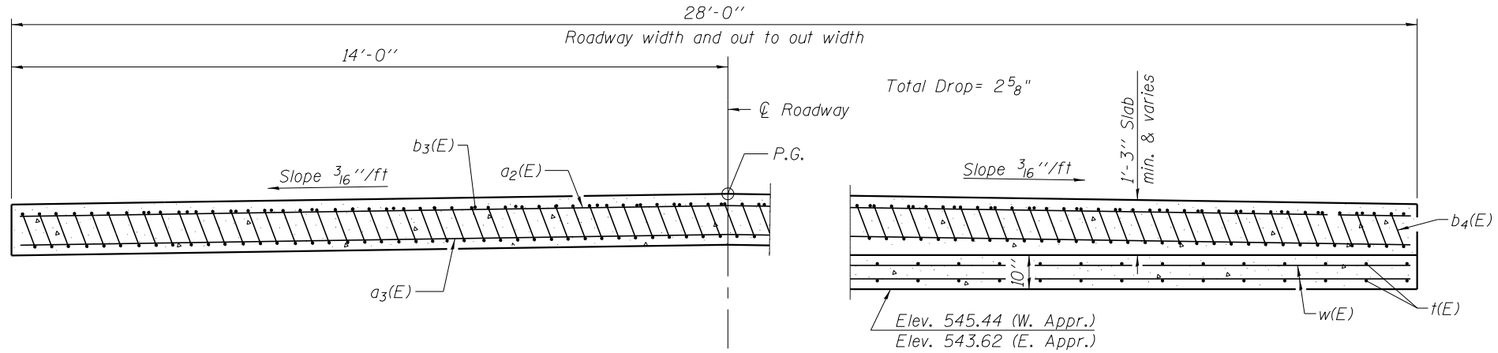
Approach slab concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 7 of 20.
The approach footing maximum applied service bearing pressure (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 20.

* Tilt #9 $b_4(E)$ bars as required to maintain clearance.

** Cost included with Concrete Superstructure.



DETAIL A

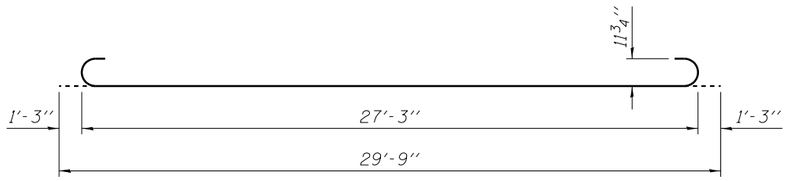


NEAR ABUTMENT

SECTION C-C

(See Plan for dimensions not shown)

AT APPROACH FOOTING



BAR $b_4(E)$

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_2(E)$	50	#4	27'-7"	———
$a_3(E)$	92	#5	27'-7"	———
$b_3(E)$	46	#4	29'-7"	———
$b_4(E)$	134	#9	29'-9"	⊂——⊃
t(E)	112	#4	9'-8"	———
w(E)	84	#5	27'-7"	———
Concrete Superstructure			Cu. Yd.	79.6
Concrete Structures			Cu. Yd.	17.2
Reinforcement Bars, Epoxy Coated			Pound	21,180

BA-0 7-1-10

(Sheet 2 of 2)

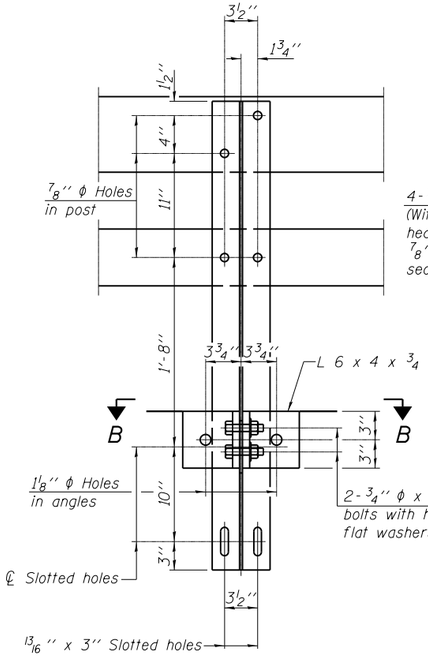
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262approach.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

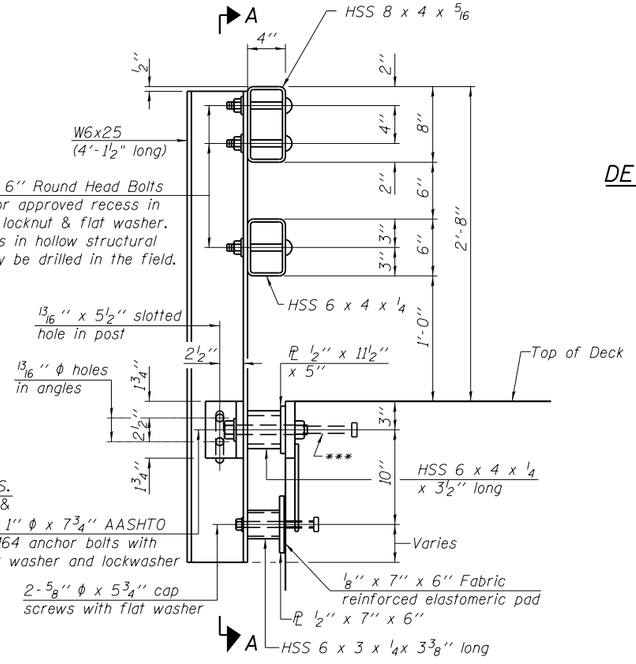
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 084-3506
SHEET NO. 10 OF 20 SHEETS

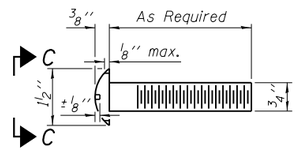
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	27
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			



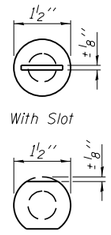
SECTION A-A



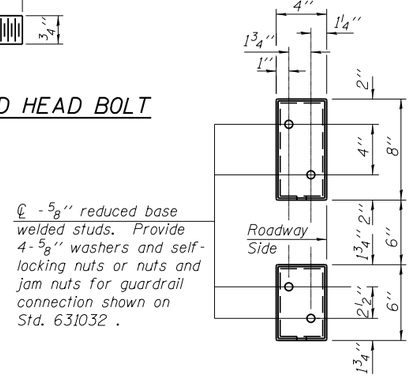
SECTION AT RAIL POST



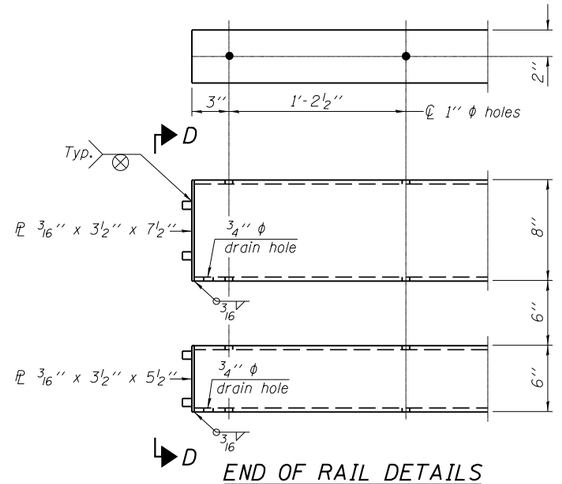
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



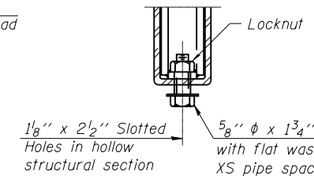
VIEW C-C



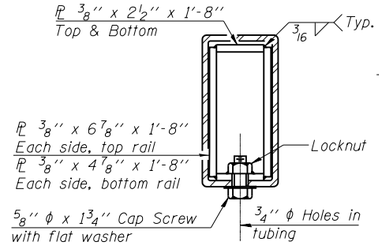
VIEW D-D



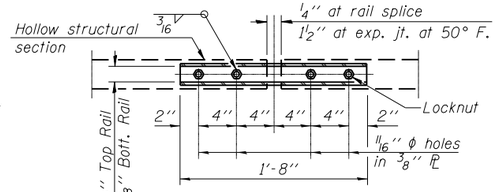
END OF RAIL DETAILS



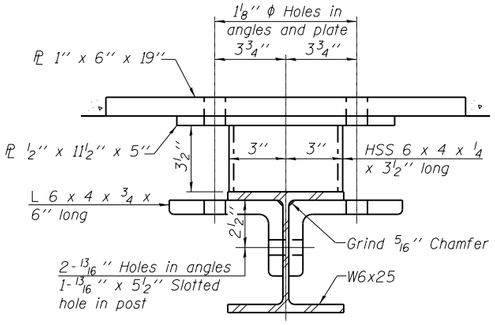
RAIL SPLICE CONNECTION AT EXPANSION JT.



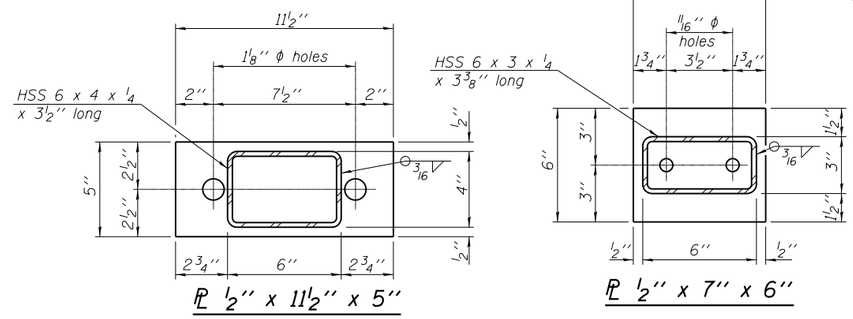
SECTION AT RAIL SPLICE

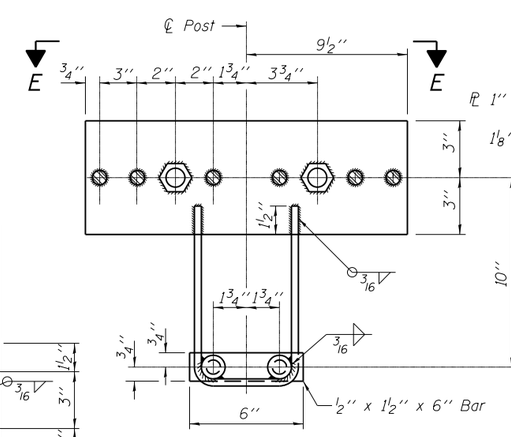


PLAN-BOTT. SPLICE PL TYPICAL

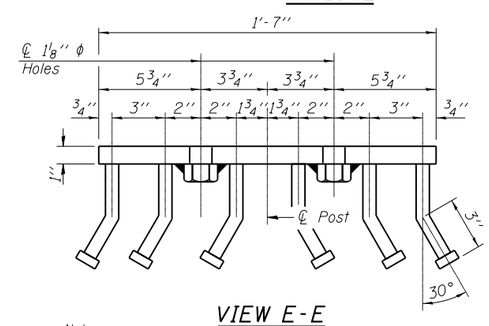


SECTION B-B





ANCHOR DEVICE



VIEW E-E

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

SPLICE DIMENSIONS

T = 1 7/8"

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	——

T = Total movement at expansion joint as shown on the design plans.

Notes:

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

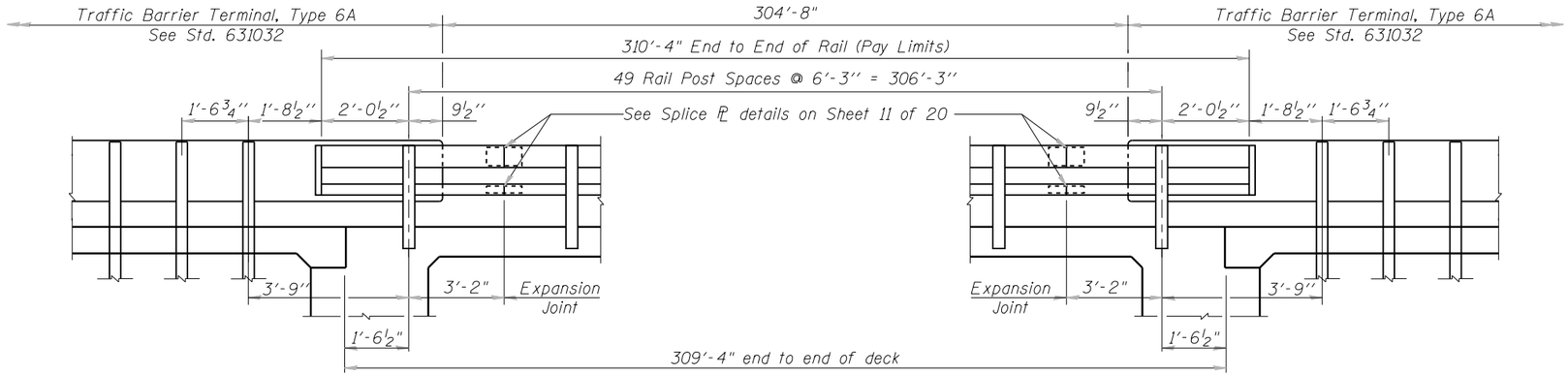
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	621

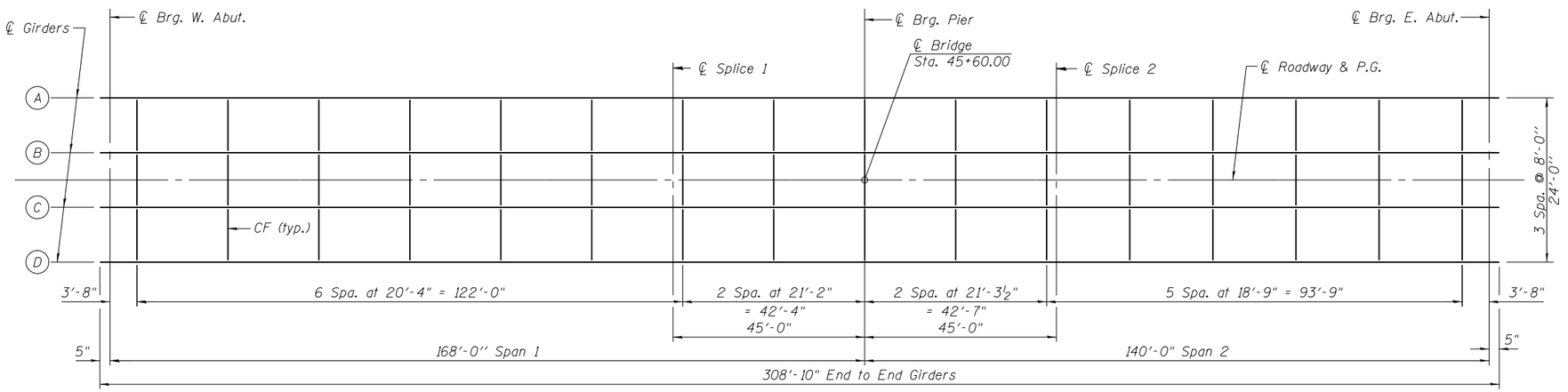
R-34HMAWS 7-1-10 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)



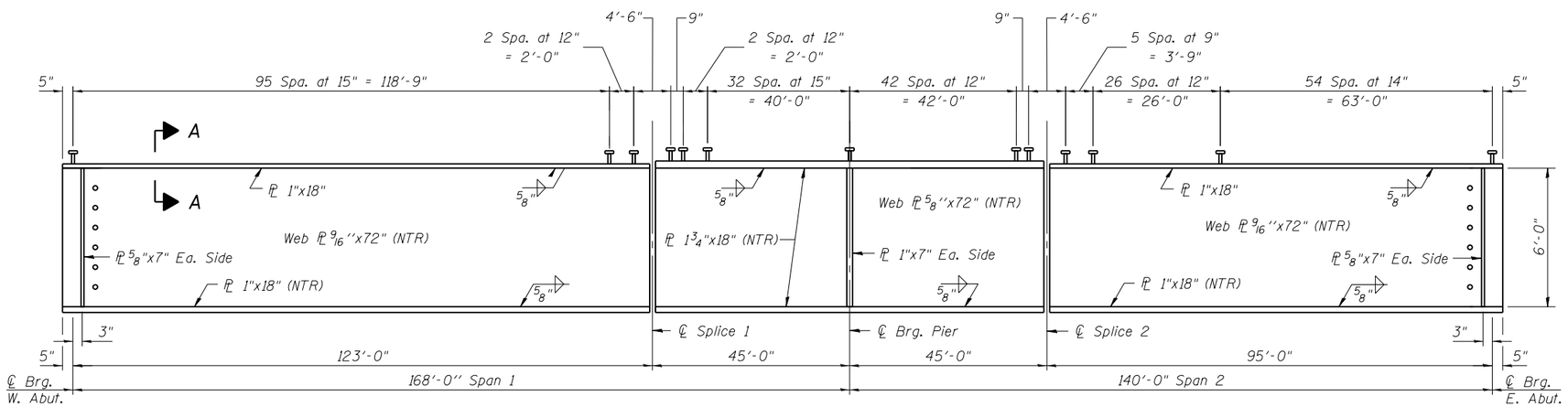
RAIL ELEVATION

Note: T ≤ 4" = Total movement at expansion joint.

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262 FILE = 2262rail.dgn DATE = 1/17/2024	DESIGNED - AAN CHECKED - MDC DRAWN - SJS CHECKED - MDC	REVISED - REVISED - REVISED - REVISED -	**CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS**	**STEEL RAILING, TYPE SM STRUCTURE NO. 084-3506** SHEET NO. 12 OF 20 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						TR 171	08-07116-00-BR	SANGAMON	46	29
								CONTRACT NO. 93654		
							ILLINOIS	FED. AID PROJECT		

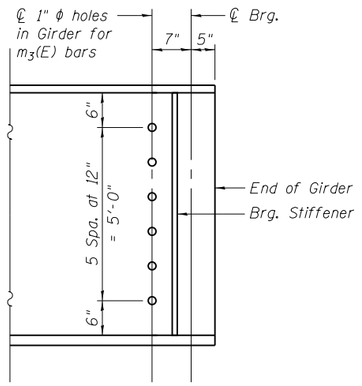


FRAMING PLAN

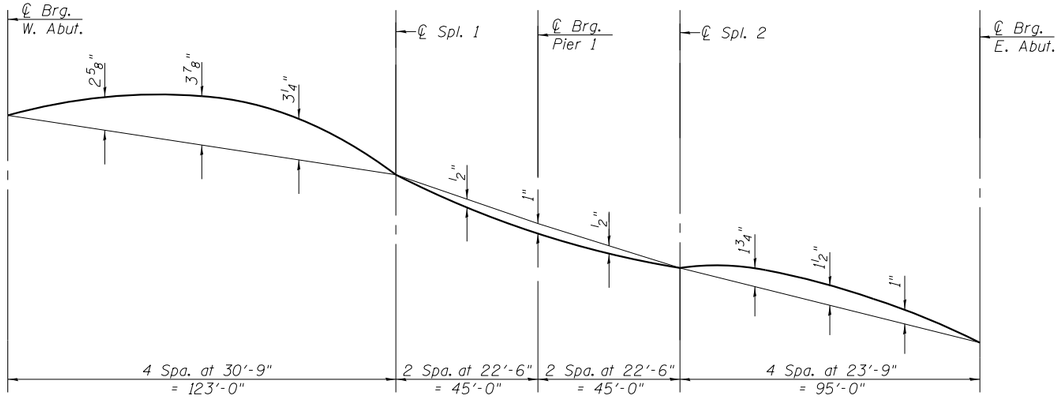


GIRDER ELEVATION

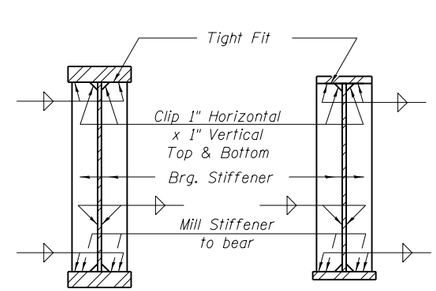
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.



END OF GIRDER ELEVATION

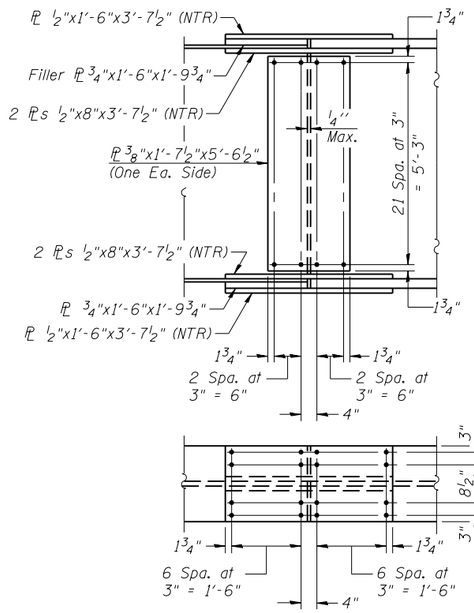


CAMBER DIAGRAM

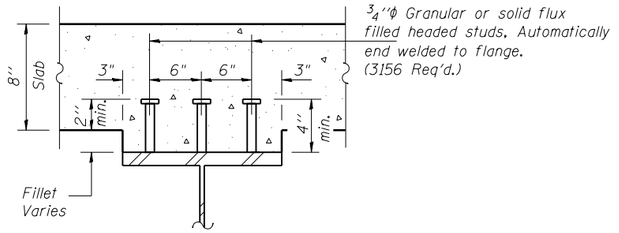


SECTION AT PIER

SECTION AT ABUTMENT



FIELD SPLICE DETAIL



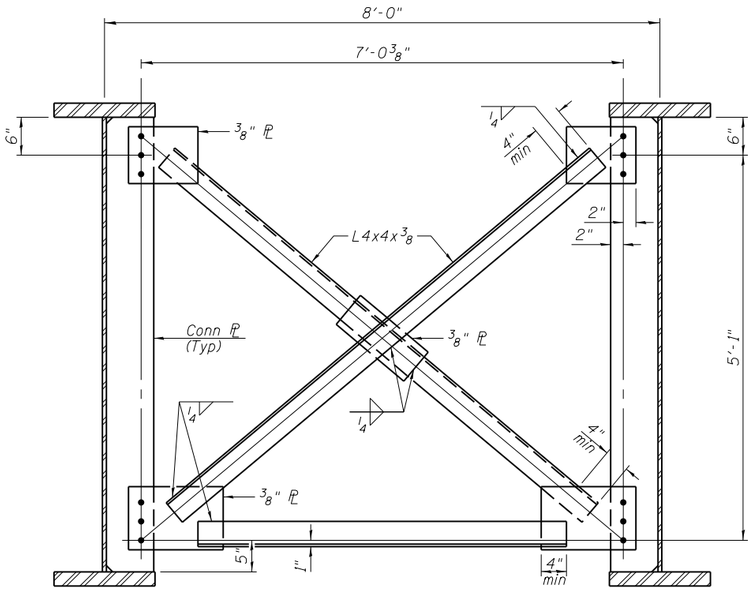
SECTION A-A

G-1

7-1-10

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262 FILE = 2262structsteel.dgn DATE = 1/17/2024	DESIGNED - AAN CHECKED - MDC DRAWN - SJS CHECKED - MDC	REVISED - REVISED - REVISED - REVISED -	**CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS**	**STRUCTURAL STEEL STRUCTURE NO. 084-3506** SHEET NO. 13 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	30
		CONTRACT NO. 93654		
		ILLINOIS FED. AID PROJECT		



CROSS FRAME CF

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

TOP OF WEB ELEVATIONS

(for fabrication only)

Location	Girder A	Girder B	Girder C	Girder D
℄ Brg. W. Abut.	546.58	546.71	546.71	546.58
℄ Splice 1	545.88	546.01	546.01	545.88
℄ Pier	545.69	545.82	545.82	545.69
℄ Splice 2	545.44	545.57	545.57	545.44
℄ Brg. E. Abut.	545.07	545.20	545.20	545.07

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in^4)	65,460	105,121	65,460
$I_c(n)$	(in^4)	144,609	-	144,609
$I_c(3n)$	(in^4)	108,738	-	108,738
$I_c(cr)$	(in^4)	-	118,996	-
S_s	(in^3)	1769	2785	1769
$S_c(n)$	(in^3)	2348	-	2348
$S_c(3n)$	(in^3)	2154	-	2154
$S_c(cr)$	(in^3)	-	2920	-
DC1	(k/')	1.16	1.16	1.16
M_{DC1}	('k)	2316	4033	1177
DC2	(k/')	0.031	0.031	0.031
M_{DC2}	('k)	63	102	32
DW	(k/')	0.350	0.350	0.350
M_{DW}	('k)	720	1176	371
M_{L+IM}	('k)	2563	2758	2147
M_u (Strength I)	('k)	8539	11,759	5825
$\phi_f M_n$	('k)	11,381	11,922	12,099
f_s DC1	(ksi)	15.7	17.4	8.0
f_s DC2	(ksi)	0.4	0.4	0.2
f_s DW	(ksi)	4.0	4.8	2.1
f_s (L+IM)	(ksi)	13.1	11.3	11.0
f_s (Service II)	(ksi)	37.1	37.3	24.6
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5
V_r	(k)	30.0	30.1	31.3

INTERIOR GIRDER REACTION TABLE				
		W. Abut.	Pier	E. Abut.
R_{DC1}	(k)	73.4	231.5	52.4
R_{DC2}	(k)	2.1	6.3	1.5
R_{DW}	(k)	22.4	69.2	16.1
R_{L+IM}	(k)	135.4	252.6	119.7
R_{Total}	(k)	233.3	559.6	189.7

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{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.

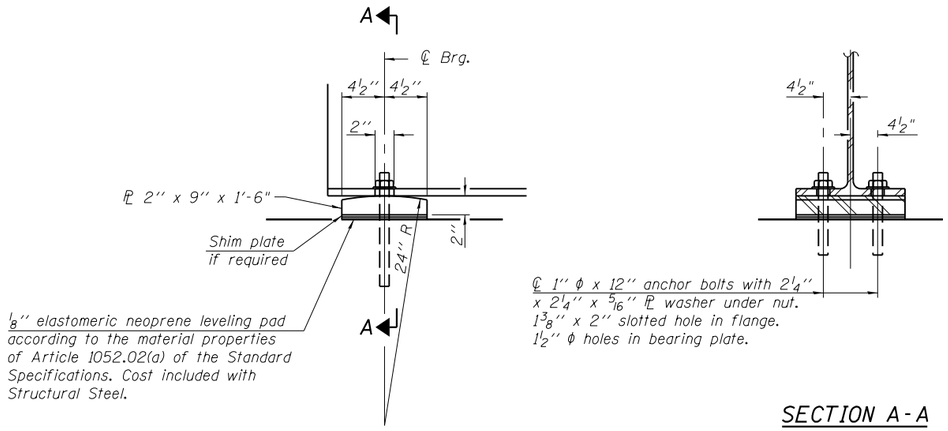
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

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).

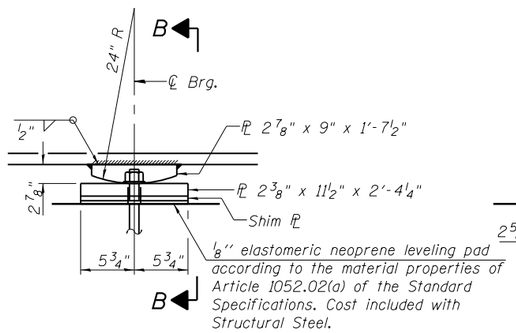
V_r: Maximum factored shear range in span computed according to Article 6.10.10.



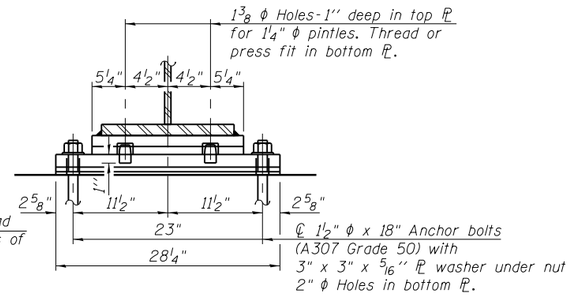
ELEVATION

SECTION A-A

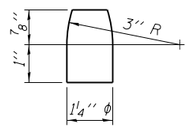
FIXED BEARING AT ABUTMENT



ELEVATION



SECTION B-B



PINTLE

FIXED BEARING AT PIER

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

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

The structure steel plates of the Bearing Assemblies shall conform to the requirements of AASHTO M207 Grade 50W.

I-2E-1

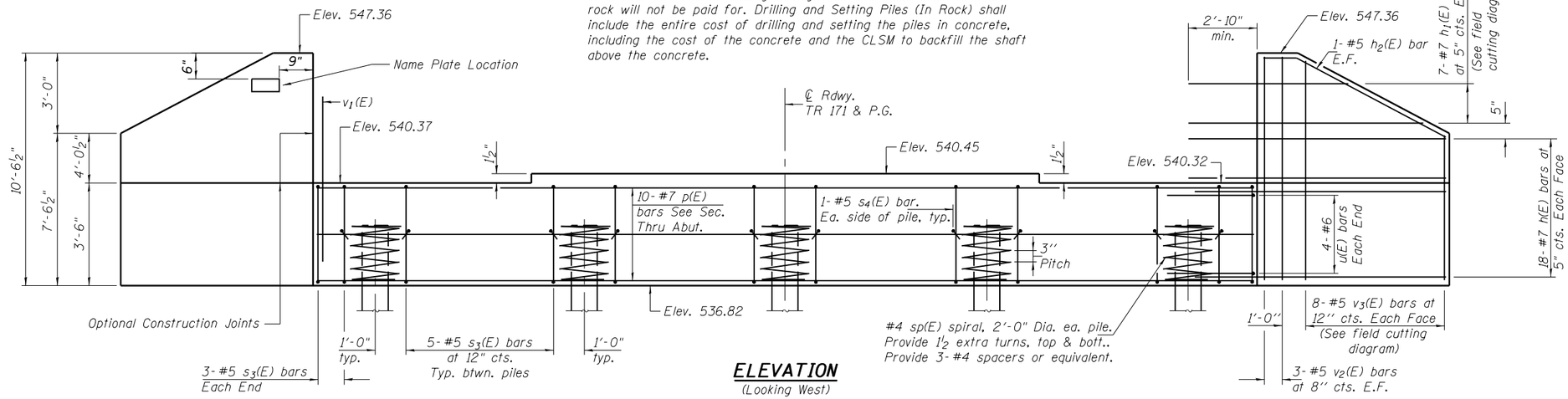
7-1-10

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - AAN	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	BEARING DETAILS STRUCTURE NO. 084-3506 SHEET NO. 15 OF 20 SHEETS
	FILE = 2262bearings.dgn	CHECKED - MDC	REVISED -		
	DATE = 1/17/2024	DRAWN - SJS	REVISED -		
		CHECKED - MDC	REVISED -		

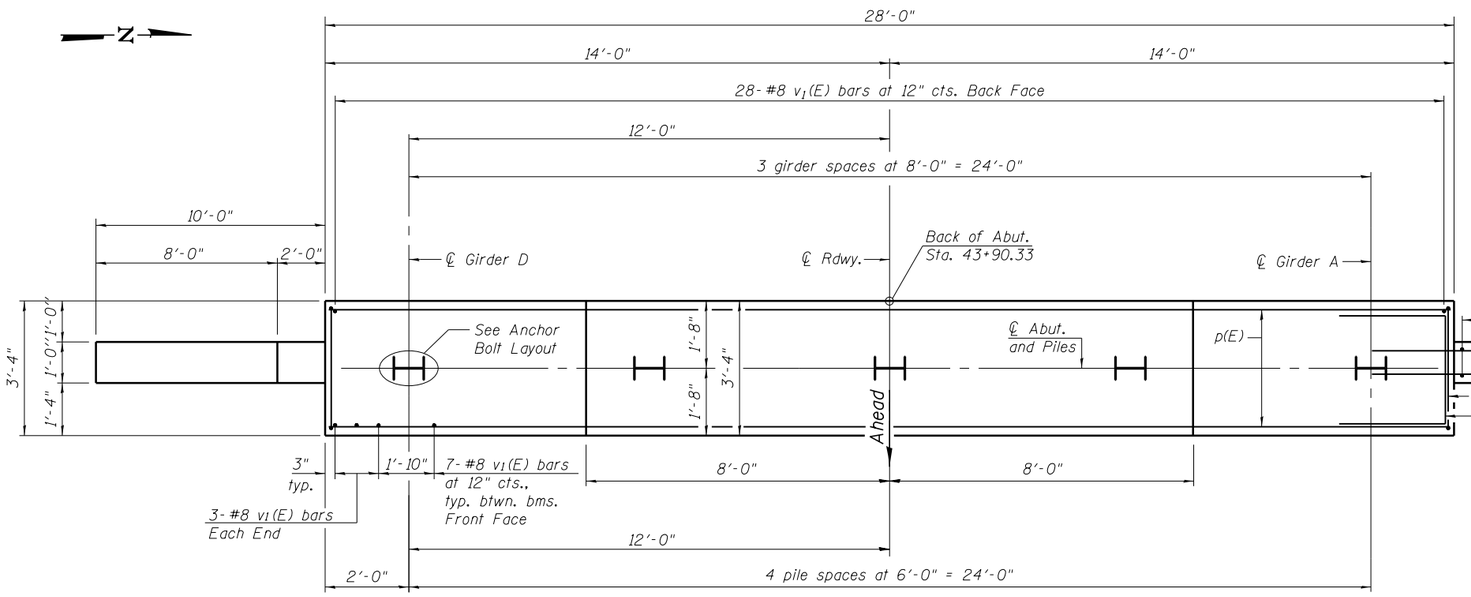
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	32
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

Notes:
Pour steps monolithically with cap.

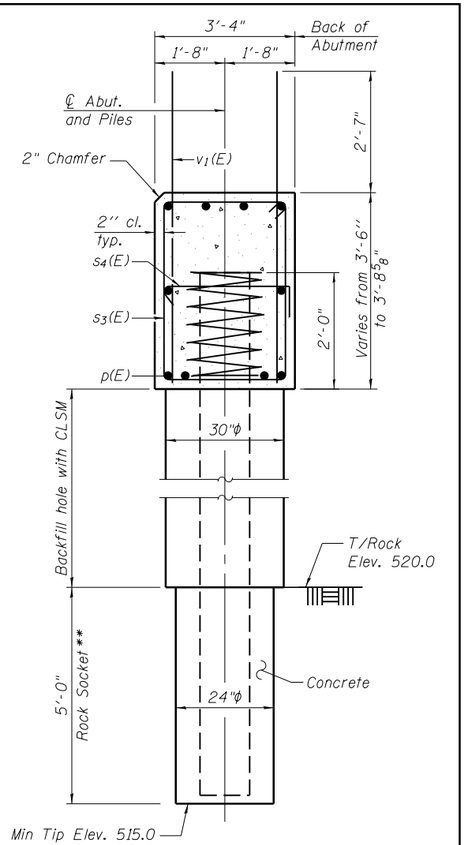
** Piles shall be set in 24-inch diameter rock sockets drilled a minimum of 5 foot into rock. Drilling through soil and shale down to sound rock will not be paid for. Drilling and Setting Piles (In Rock) shall include the entire cost of drilling and setting the piles in concrete, including the cost of the concrete and the CLSM to backfill the shaft above the concrete.



ELEVATION
(Looking West)



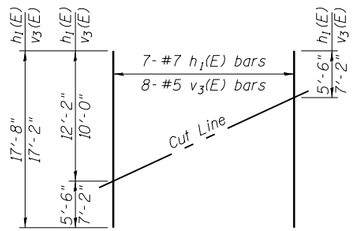
PLAN



SEC. THRU ABUT.

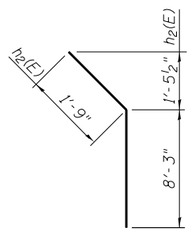
PILE DATA

Type: HP 14x89
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 388^k
Est. Length: 28'
No. Production Piles: 5
No. Test Piles: 0
Est. Top of Rock Elevation: 520.0
Rock Socket Depth: 5'
Rock Socket Diameter: 24"

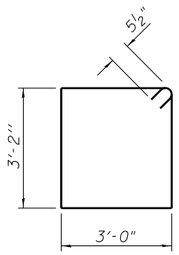


FIELD CUTTING DIAGRAM

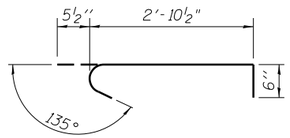
Order $h_1(E)$ and $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face.



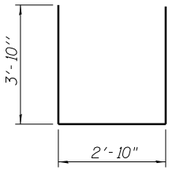
BAR $h_2(E)$



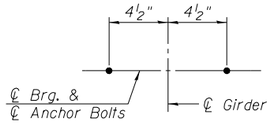
BAR $s_3(E)$



BAR $s_4(E)$



BAR $u(E)$



ANCHOR BOLT LAYOUT

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	72	#7	12'-8"	
	$h_1(E)$	14	#7	17'-8"	
	$h_2(E)$	4	#5	10'-0"	
	p(E)	10	#7	27'-8"	
	$s_3(E)$	26	#5	13'-3"	
	$s_4(E)$	10	#5	3'-10"	
*	sp(E)	5	#4	2'-0"	
	u(E)	8	#6	10'-6"	
	$v_1(E)$	55	#8	6'-2"	
	$v_2(E)$	12	#5	10'-2"	
	$v_3(E)$	16	#5	17'-2"	
	Structure Excavation		Cu. Yd.	43	
	Concrete Structures		Cu. Yd.	19.3	
	Reinforcement Bars, Epoxy Coated		Pound	5000	
	Furnishing Steel Piles, HP 14x89		Foot	120	
	Driving and Setting Piles (In Rock)		Cu. Ft.	80	

*Length is height of spiral.

AI->40S-0 8-31-12

CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - AAN	REVISED -
	FILE = 2262abut.dgn	CHECKED - MDC	REVISED -
	DATE = 1/17/2024	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

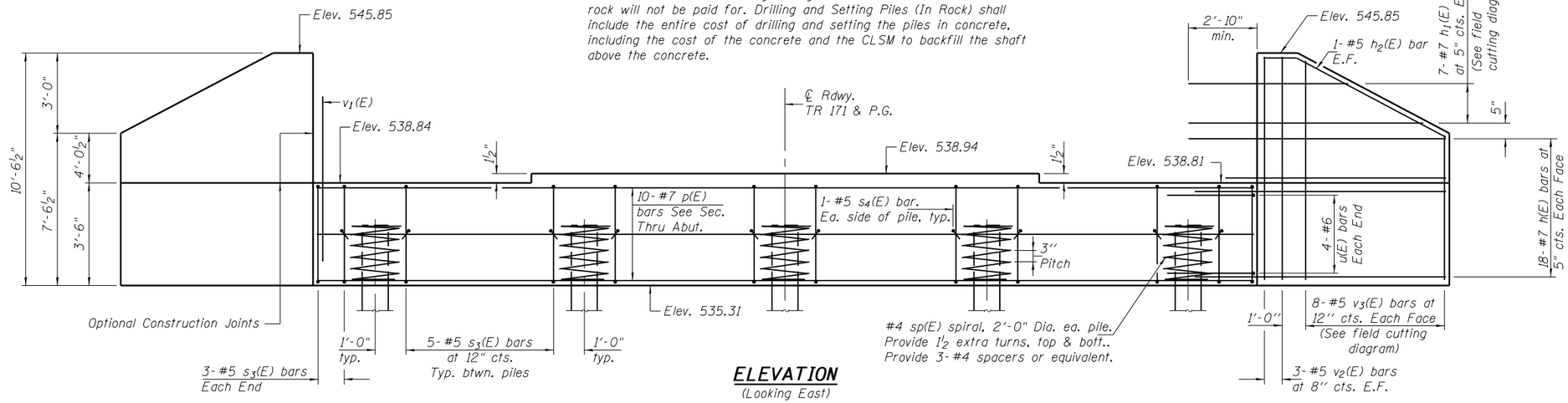
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

WEST ABUTMENT
STRUCTURE NO. 084-3506
SHEET NO. 16 OF 20 SHEETS

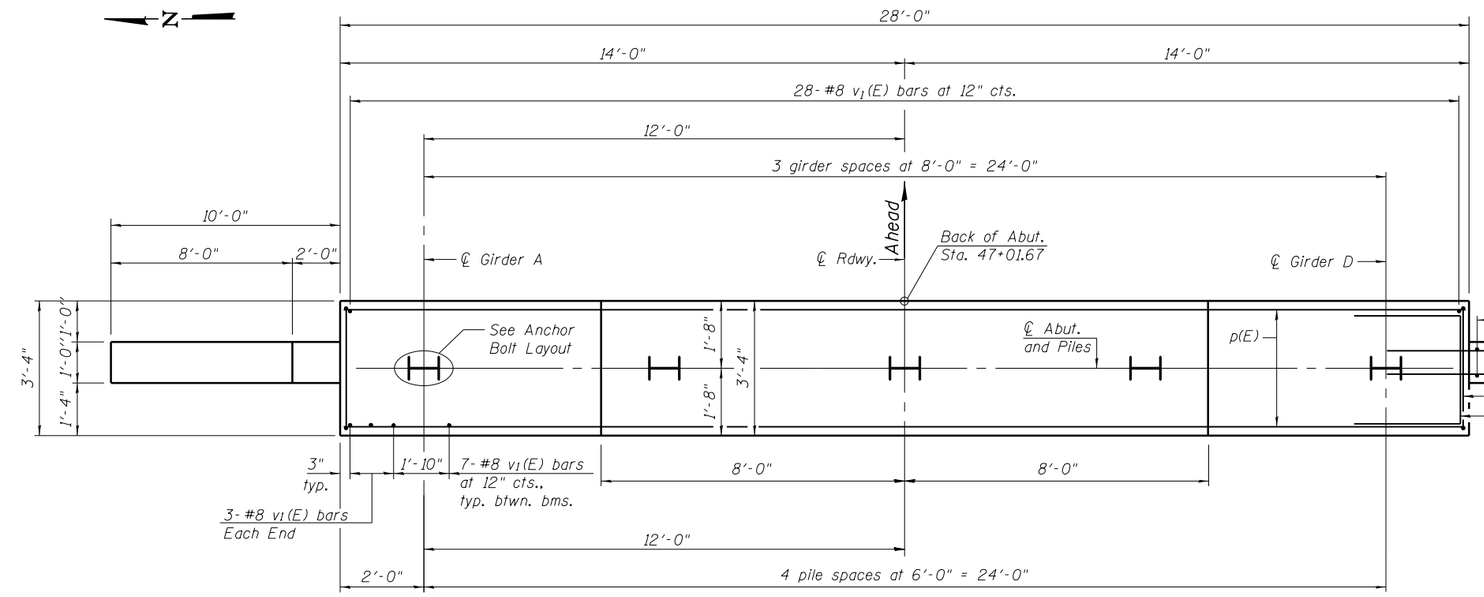
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	33
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

Notes:
Pour steps monolithically with cap.

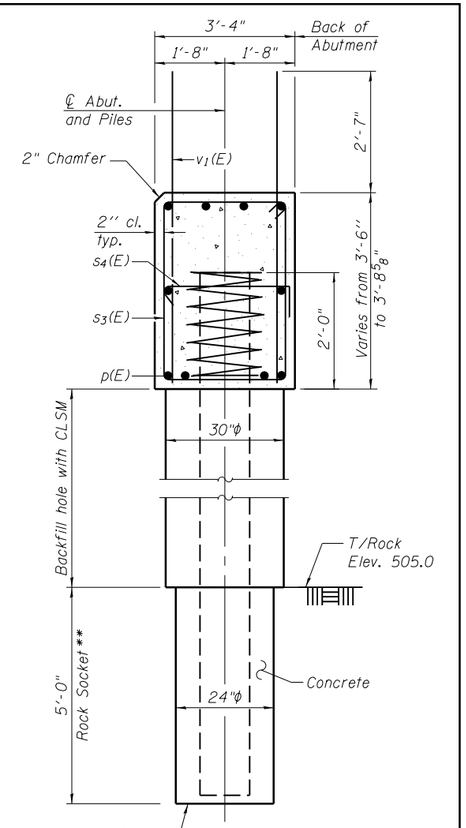
** Piles shall be set in 24-inch diameter rock sockets drilled a minimum of 5 foot into rock. Drilling through soil and shale down to sound rock will not be paid for. Drilling and Setting Piles (In Rock) shall include the entire cost of drilling and setting the piles in concrete, including the cost of the concrete and the CLSM to backfill the shaft above the concrete.



ELEVATION
(Looking East)



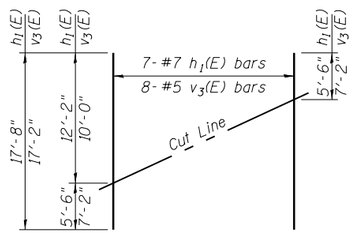
PLAN



SEC. THRU ABUT.

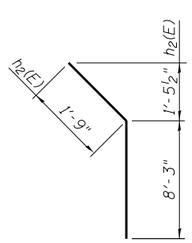
PILE DATA

Type: HP 14x89
Nominal Required Bearing: Set in Rock
Factored Resistance Available: 388^k
Est. Length: 36'
No. Production Piles: 5
No. Test Piles: 0
Est. Top of Rock Elevation: 505.0
Rock Socket Depth: 5'
Rock Socket Diameter: 24"

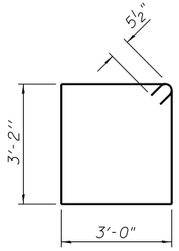


FIELD CUTTING DIAGRAM

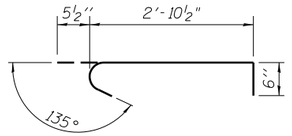
Order h_1(E) and v_3(E) full length. Cut as shown and use remainder of bars in opposite face.



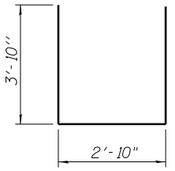
BAR h_2(E)



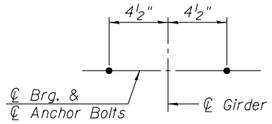
BAR s_3(E)



BAR s_4(E)



BAR u(E)



ANCHOR BOLT LAYOUT

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	72	#7	12'-8"	
	h_1(E)	14	#7	17'-8"	
	h_2(E)	4	#5	10'-0"	
	p(E)	10	#7	27'-8"	
	s_3(E)	26	#5	13'-3"	
	s_4(E)	10	#5	3'-10"	
*	sp(E)	5	#4	2'-0"	
	u(E)	8	#6	10'-6"	
	v_1(E)	55	#8	6'-2"	
	v_2(E)	12	#5	10'-2"	
	v_3(E)	16	#5	17'-2"	
	Structure Excavation		Cu. Yd.	22	
	Concrete Structures		Cu. Yd.	19.3	
	Reinforcement Bars, Epoxy Coated		Pound	5000	
	Furnishing Steel Piles, HP 14x89		Foot	185	
	Driving and Setting Piles (In Rock)		Cu. Ft.	80	

*Length is height of spiral.

AI->40S-0 8-31-12

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -
FILE = 2262abut.dgn	CHECKED - MDC	REVISED -
DATE = 1/17/2024	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

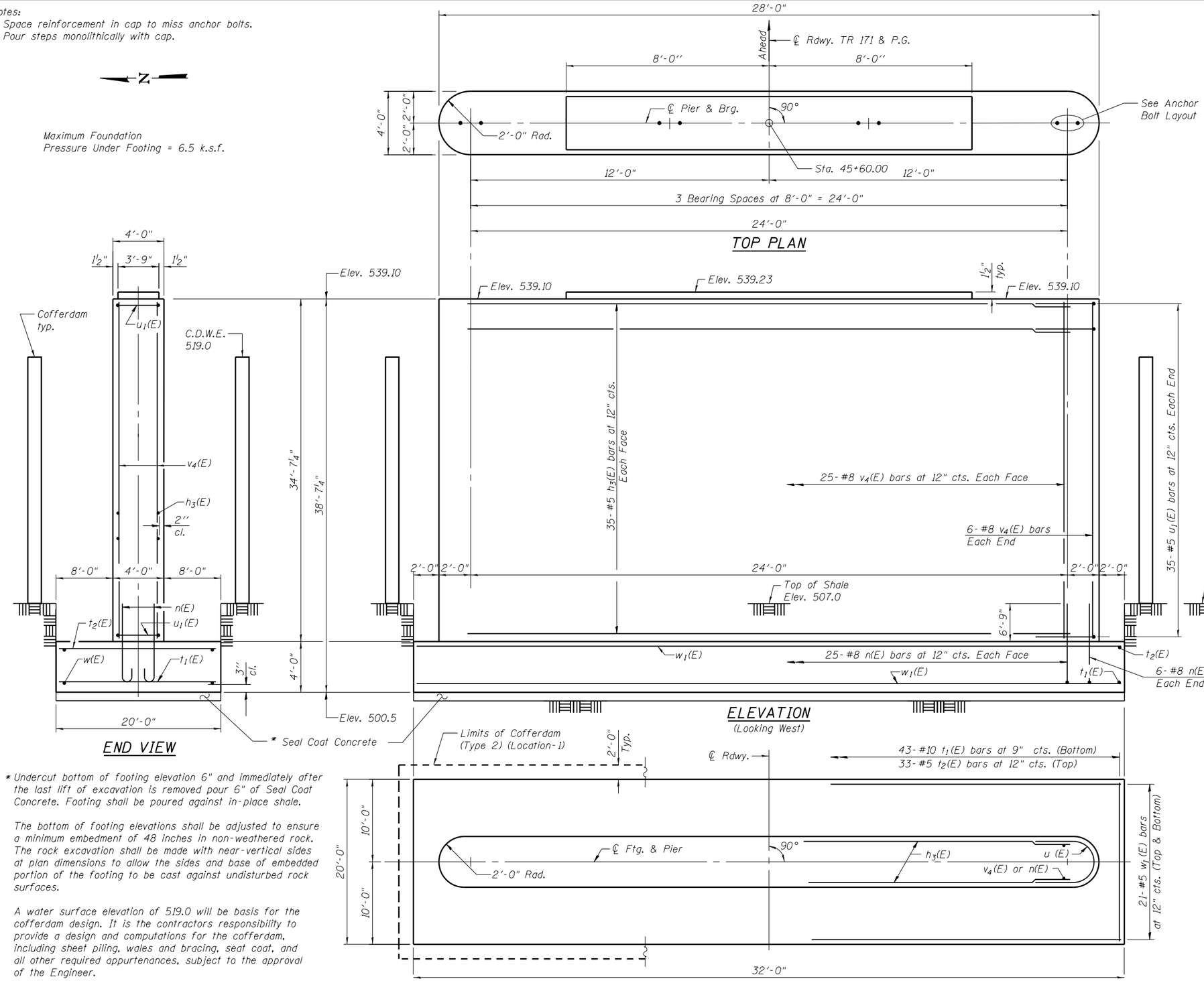
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

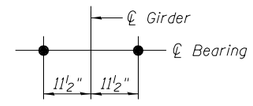
EAST ABUTMENT
STRUCTURE NO. 084-3506
SHEET NO. 17 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	34
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

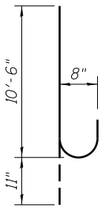
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.

Maximum Foundation
Pressure Under Footing = 6.5 k.s.f.

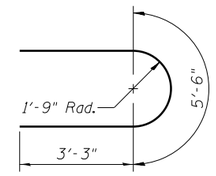




ANCHOR BOLT LAYOUT



BAR n(E)



BAR u1(E)

* Undercut bottom of footing elevation 6" and immediately after the last lift of excavation is removed pour 6" of Seal Coat Concrete. Footing shall be poured against in-place shale.

The bottom of footing elevations shall be adjusted to ensure a minimum embedment of 48 inches in non-weathered rock. The rock excavation shall be made with near-vertical sides at plan dimensions to allow the sides and base of embedded portion of the footing to be cast against undisturbed rock surfaces.

A water surface elevation of 519.0 will be basis for the cofferdam design. It is the contractors responsibility to provide a design and computations for the cofferdam, including sheet piling, wales and bracing, seat coat, and all other required appurtenances, subject to the approval of the Engineer.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_3(E)$	70	#5	24'-0"	——
$n(E)$	62	#8	11'-5"	⊃
$t_1(E)$	43	#10	19'-8"	——
$t_2(E)$	33	#5	19'-8"	——
$u_1(E)$	70	#5	12'-0"	⊃
$v_4(E)$	62	#8	34'-4"	——
$w_1(E)$	42	#5	31'-8"	——
Cofferdam Excavation		Cu. Yd.		160
Concrete Structures		Cu. Yd.		234.2
Reinforcement Bars, Epoxy Coated		Pound		15,910
Rock Excavation for Structures		Cu. Yd.		166
Seal Coat Concrete		Cu. Yd.		11.9
Cofferdam (Type 2) (Location-1)		Each		1

P-1 7-1-10

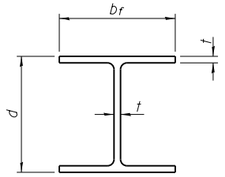
CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -
FILE = 2262pier.dgn	CHECKED - MDC	REVISED -
DATE = 2/21/2024	DRAWN - SJS	REVISED -
	CHECKED - MDC	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

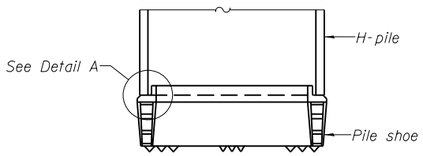
PIER DETAILS
STRUCTURE NO. 084-3506
SHEET NO. 18 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	35
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

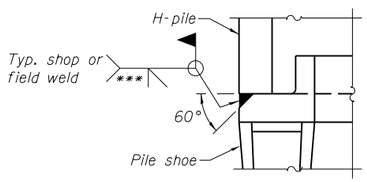


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	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"

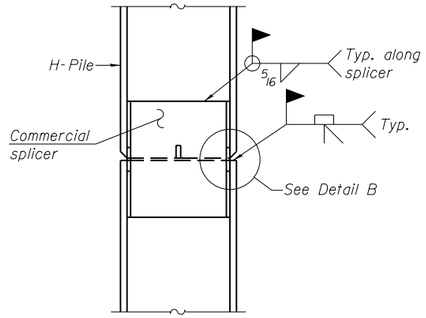


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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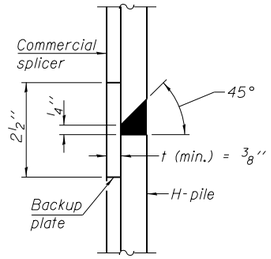
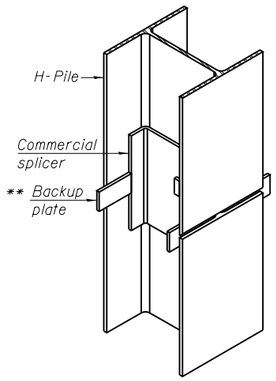
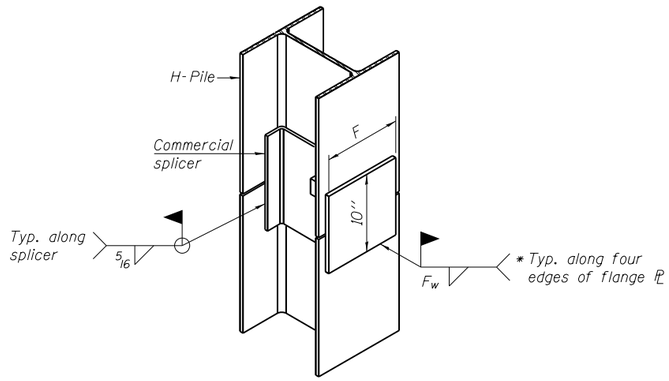


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



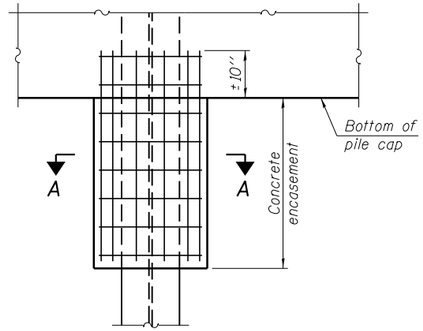
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

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

** Remove portions of backup plates that extend outside the flanges.

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



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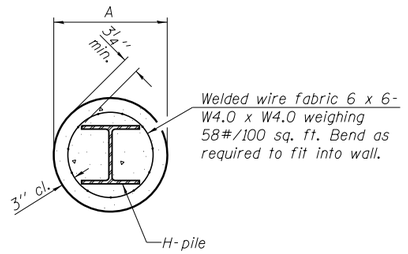
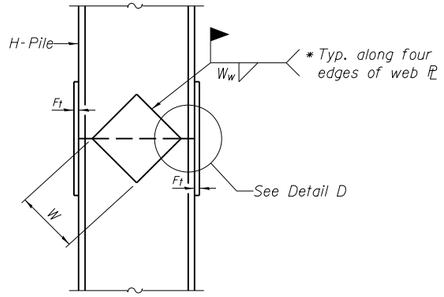


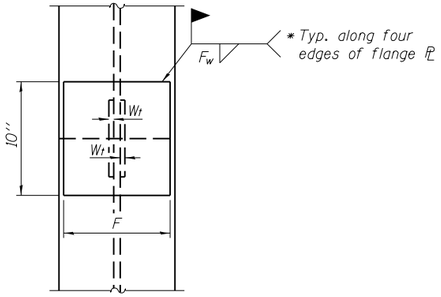
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

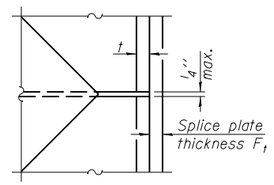
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
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

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

F-HP 1-27-12

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262piles.dgn	CHECKED - MDC	REVISED -	
DATE = 1/12/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

HP PILE DETAILS
STRUCTURE NO. 084-3506
SHEET NO. 19 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	36
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

Professional Service Industries, Inc
480 North Street
Springfield, Illinois
Telephone: 217-544-6663
Fax: 217-544-6148

LOG OF BORING B-1

Sheet 1 of 1

PSI Job No.: 0020602
Project: Oak Crest Road Over Sangamon River (TR 171)
Location: Sangamon County, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 91%
Boring Location: Sta. 43+74, 20' LT

WATER LEVELS
While Drilling 16 Feet
Upon Comp. 7 Feet
Delay None

Station: 43+74
Offset: 20' LT

Benchmark:"Corps of Engineers Disk"
Southwest Wing Wall
Surface Elev. 541.0 ft

Elevation (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
539.5	0	1	18	Brown silty SAND, gravel (Fill) 540.0	SM	4-3-2 N_{60}=8	10	
		2	18	Brown sandy CLAY, stiff, slightly moist 535.0	CLS	2-3-4 N_{60}=11	17	Q_u = 1.9 tsf
534.5	5	3	18	Brown/gray silty CLAY, some fine to medium sands, stiff, slightly moist		2-3-6 N_{60}=14	17	Q_u = 2.9 tsf
		4	18	527.5	CL	3-5-6 N_{60}=17	14	>>Q_u = 3.7 tsf
529.5	10	5	18			3-4-5 N_{60}=14	19	Q_u = 1.4 tsf
		6	18	Brown/gray silty SAND, firm, slightly moist to moist 523.0		2-1-2 N_{60}=5	19	
524.5	15	7	18		SM	0-1-2 N_{60}=5	22	
		8	0	Gray weathered SHALE, hard, slightly moist		100/4"	7	>> Qu = 1028 psi
519.5	20							Qu = 1191 psi
		9	120		CL			>> RQD=9%
514.5	25			514.0				Qu = 973 psi
				Gray weathered SHALE and COAL, hard, slightly moist 512.0	CL			
				Boring Terminated at -29'				

STANDARD PENETRATION TEST DATA
N in blows/ft @ Moisture PL LL (0 25 50)
STRENGTH, tsf Qu Qp (0 2.0 4.0)

Completion Depth:	29.0 ft
Date Boring Started:	8/27/10
Date Boring Completed:	8/27/10
Logged By:	Harry Waters
Drilling Contractor:	PSI, Inc.

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger, Texas Cone

Latitude:
Longitude:
Drill Rig: CME 55
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633.

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc
480 North Street
Springfield, Illinois
Telephone: 217-544-6663
Fax: 217-544-6148

LOG OF BORING B-2

Sheet 1 of 1

PSI Job No.: 0020602
Project: Oak Crest Road Over Sangamon River (TR 171)
Location: Sangamon County, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 91%
Boring Location: Sta. 45+82, 11' RT

WATER LEVELS
While Drilling 9.5 Feet
Upon Comp. None
Delay None

Station: 45+82
Offset: 11' RT

Benchmark:"Corps of Engineers Disk"
Southwest Wing Wall
Surface Elev. 526.0 ft

Elevation (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
525.5	0	1	18	Black sandy silty CLAY, firm, moist		2-2-3 N_{60}=8	23	Q_u = 1.0 tsf
		2	18			2-2-3 N_{60}=8	26	Q_u = 1.0 tsf
520.5	5	3	18		CL	2-1-2 N_{60}=5	29	Q_u = 0.6 tsf
		4	15	516.5		1-0-1 N_{60}=5	24	
515.5	10	5	18	Brown fine SAND, loose, moist 515.0	SP	1-2-3 N_{60}=2	28	
		6	18	Brown clayey SAND, loose, moist 513.0	SP-SC	1-2-3 N_{60}=8	13	
510.5	15	7	18	Brown fine to medium Sand, some fine to medium gravel, loose, slightly moist 509.0	SPG	5-6-7 N_{60}=20	16	>> Q_u = 6.6 tsf
		8	18	Gray sandy SILT, stiff, slightly moist 507.0	ML	16-25-33 N_{60}=88	16	>> Q_u = 5.7 tsf
505.5	20	9	18	Gray weathered SHALE, hard, slightly moist		15-21-30 N_{60}=77	15	>> Q_u = 1.6 tsf
		10	18			15-30-42 N_{60}=109	14	>> Q_u = 0.6 tsf
500.5	25	11	7			100/7"	15	>>
		12	8			100/8"	8	>>
495.5	30	13	6			100/6"	7	>>
		14	10			100/9"	12	>>
490.5	35	15	6			100/5"	13	>> Q_u = 1.2 tsf
		16	6			100/5"	10	>>
485.5	40	17	6		SHALE	100/6"	7	>>
		18	6			100/5"	12	>>
480.5	45	19	8			100/6"	13	>> Q_u = 2.3 tsf
		20	8			100/6"	16	>> Q_u = 3.1 tsf
475.5	50							>>
470.5	55	21	120	466.0				Qu = 4309 psi
	60			Boring terminated at -60'				RQD=20%

STANDARD PENETRATION TEST DATA
N in blows/ft @ Moisture PL LL (0 25 50)
STRENGTH, tsf Qu Qp (0 2.0 4.0)

Completion Depth:	60.0 ft
Date Boring Started:	10/6/10
Date Boring Completed:	10/6/10
Logged By:	R. GROFF
Drilling Contractor:	GROFF

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger, Texas Cone

Latitude:
Longitude:
Drill Rig: CME 55
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633.

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc
480 North Street
Springfield, Illinois
Telephone: 217-544-6663
Fax: 217-544-6148

LOG OF BORING B-3

Sheet 1 of 1

PSI Job No.: 0020602
Project: Oak Crest Road Over Sangamon River (TR 171)
Location: Sangamon County, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 91%
Boring Location: Sta. 46+97, 10' LT

WATER LEVELS
While Drilling 26 Feet
Upon Comp. Cave@ 19.5'
Delay None

Station: 46+97
Offset: 10' LT

Benchmark:"Corps of Engineers Disk"
Southwest Wing Wall
Surface Elev 538.5 ft

Elevation (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
535.5	0	1	18	Dark gray silty CLAY, some gravel, firm, slightly moist (Fill) 537.0	CL	4-3-3 N_{60}=9	13	
		2	18	Dark brown/dark gray sandy CLAY, stiff, slightly moist (Fill) 535.0	CL	2-2-3 N_{60}=8	17	
530.5	5	3	4	Brown/gray silty CLAY, some fine sand, firm, slightly moist (Fill) 530.0	CL	2-2-3 N_{60}=8	19	
		4	18	Black CINDERS, BRICK, Coarse SAND, medium dense, moist 527.5		6-3-5 N_{60}=12	21	
525.5	10	5	18	Gray/brown clayey SILT to SILT, some fine sand, firm, moist		2-2-3 N_{60}=8	24	
		6	18	522.5	ML	2-2-3 N_{60}=8	21	
520.5	15	7	18	Gray clayey SILT, trace fine sand, firm, slightly moist 520.0	ML	2-2-2 N_{60}=6	15	Q_u = 0.6 tsf
		8	18	Brown fine silty SAND, loose, slightly moist 517.5	SM	1-1-1 N_{60}=3	17	
515.5	20	9	18	Dark gray sandy SILT, loose, moist		0-1-1 N_{60}=3	21	
		10	18		ML	0-1-1 N_{60}=3	21	
510.5	25	11	18	510.0		0-0-1 N_{60}=2	20	
		12	18	Gray fine SAND, medium dense, moist 507.0	SP	9-10-10 N_{60}=30	22	
505.5	30	13	18	Gray weathered SHALE, hard, slightly moist		8-13-24 N_{60}=56	13	>>
		14	18	502.5	SHALE	18-30-38 N_{60}=103	14	>>
500.5	35	15	16	Gray weathered SHALE, hard, slightly moist		38-76-100/5"	11	>>
		16	14			57-69-100/3"	11	>>
495.5	40	17	9		SHALE	92-100/3"	12	>>
	45	18	9	493.5		91-100/3"	15	>> Q_u = 4.3 tsf
				Boring Terminated at -45'				

STANDARD PENETRATION TEST DATA
N in blows/ft @ Moisture PL LL (0 25 50)
STRENGTH, tsf Qu Qp (0 2.0 4.0)

Completion Depth:	45.0 ft
Date Boring Started:	8/26/10
Date Boring Completed:	8/26/10
Logged By:	Harry Waters
Drilling Contractor:	PSI, Inc.

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Shelby Tube, Hand Auger, Texas Cone

Latitude:
Longitude:
Drill Rig: CME 55
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633.

The stratification lines represent approximate boundaries. The transition may be gradual.

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - AAN	REVISED -	
FILE = 2262borings.dgn	CHECKED - MDC	REVISED -	
DATE = 1/17/2024	DRAWN - SJS	REVISED -	
	CHECKED - MDC	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

BORING LOGS
STRUCTURE NO. 084-3506
SHEET NO. 20 OF 20 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 171	08-07116-00-BR	SANGAMON	46	37
		CONTRACT NO. 93654		
	ILLINOIS FED. AID PROJECT			

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

560 555 550

553.45 552.70 PR ROW

PE 8.0%

550.24 GAS

PR PIPE CULVERTS, CLASS D. TYPE 1 15"

41+36.00

PR ROW 553.57 554.51 PR ROW

1:2 1:3 1:3 1:3

551.11 WATER GAS 551.11

STAGE 1 C =138 F =0

41+01.00

PR ROW 555.06 554.38 PR ROW

VARIES 1:3 1:3 1:3 1:3

551.92 WATER GAS 551.92

STAGE 1 C =167 F =0

40+51.00

PR ROW 554.65 555.03 PR ROW

1:3 1:3 1:3 1:2

552.20 WATER GAS 552.20

STAGE 1 C =80 F =0

40+01.00

PR ROW 554.52 554.47 PR ROW

1:3 1:3 1:3 1:2

552.01 WATER GAS 552.01

STAGE 1 C =34 F =2

39+51.00

PR ROW 554.18 554.21 PR ROW

WATER GAS

IMPROVEMENT BEGINS STA 39+01.00 MATCH EXISTING

STAGE 1 C =13 F =0

39+01.00

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

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
ENGINEERS & SURVEYORS

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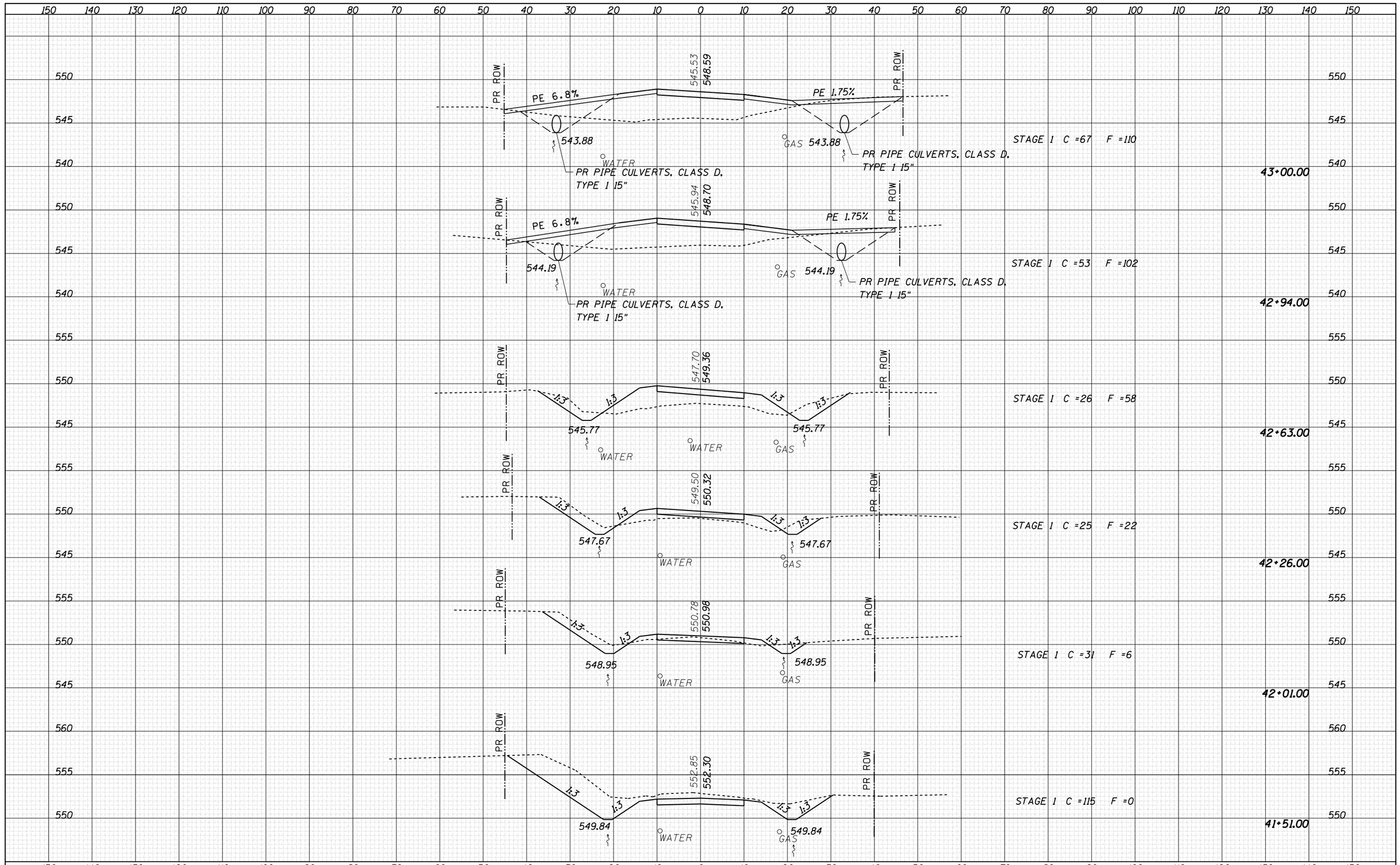
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

CROSS SECTIONS

STA. 39+01.00 TO STA. 41+36.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	38
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

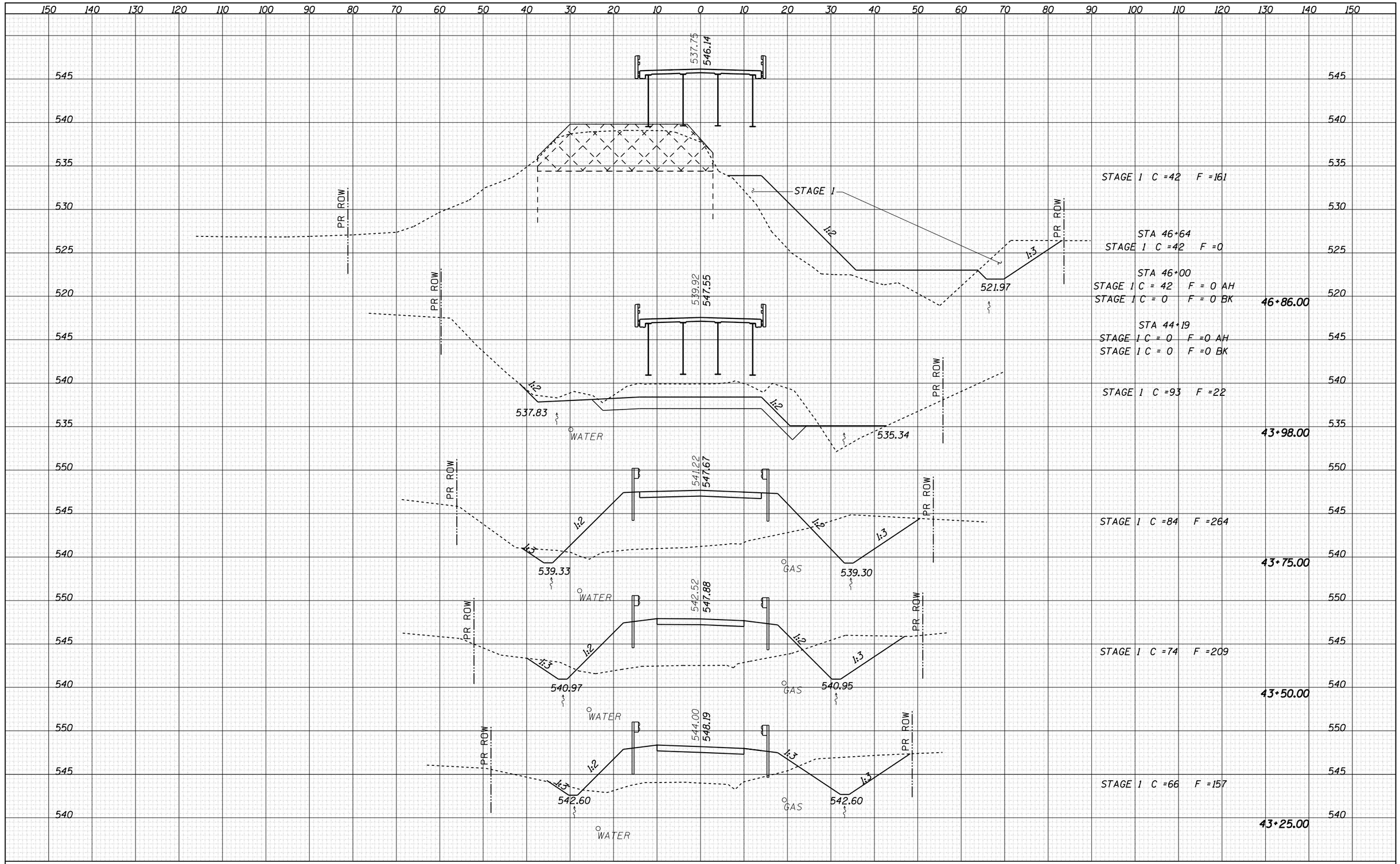


CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	CROSS SECTIONS
	FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -		STA. 41+50.00 TO STA. 43+00.00
	PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -		

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	39
		CONTRACT NO. 93654		
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



DATE	BY		
		SURVEYED	
		PLOTTED	
		TEMPLATE	
		AREAS	
		AREAS CHECKED	

FINAL SURVEY — NOTE BOOK — NO.

DATE	BY		
		SURVEYED	
		PLOTTED	
		TEMPLATE	
		AREAS	
		AREAS CHECKED	

ORIGINAL SURVEY — NOTE BOOK — NO.

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -
PLOT DATE = 1/18/2024	DATE - 9/06/2012	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

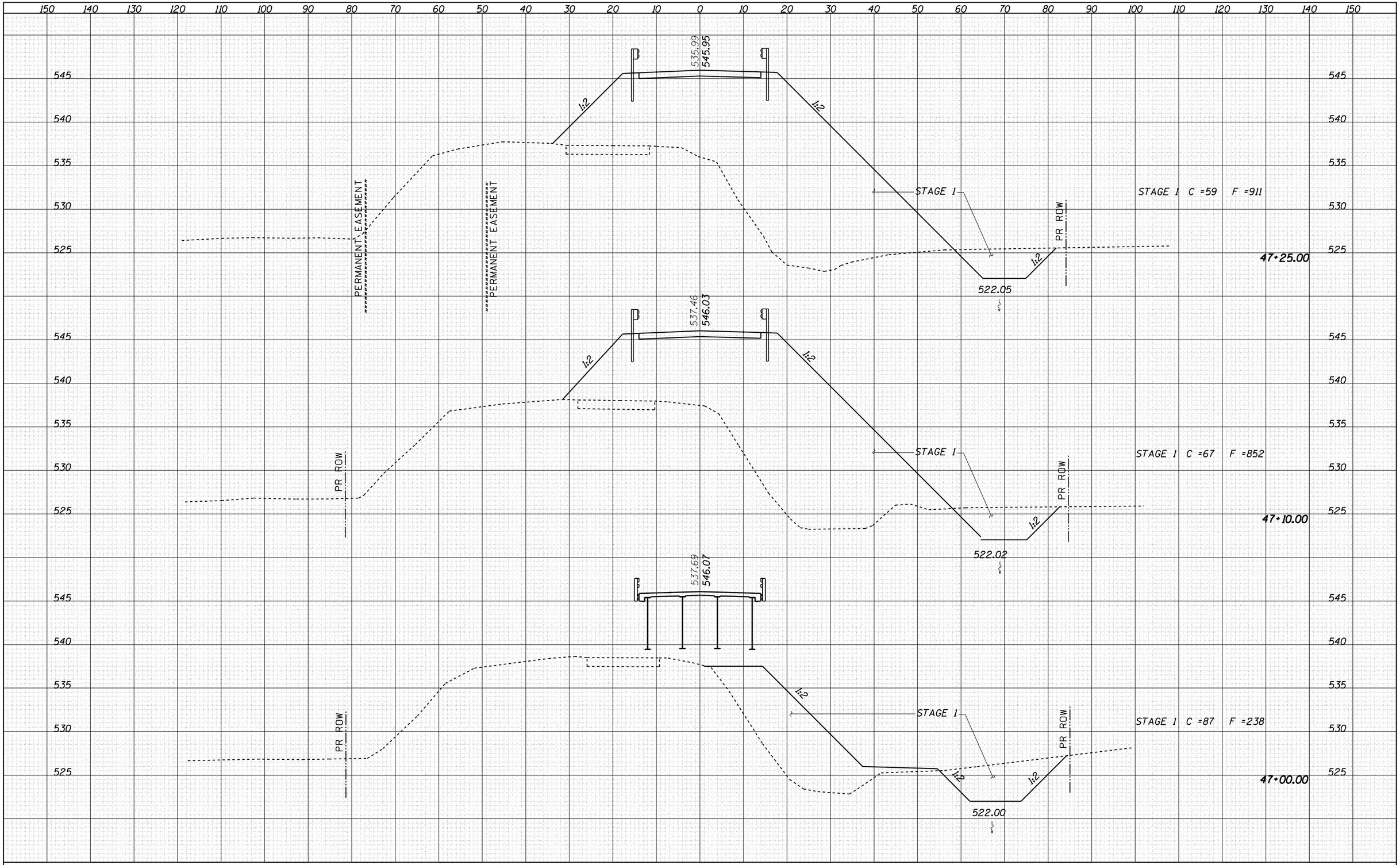
CROSS SECTIONS

STA. 43+25.00 TO STA. 46+86.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	40
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

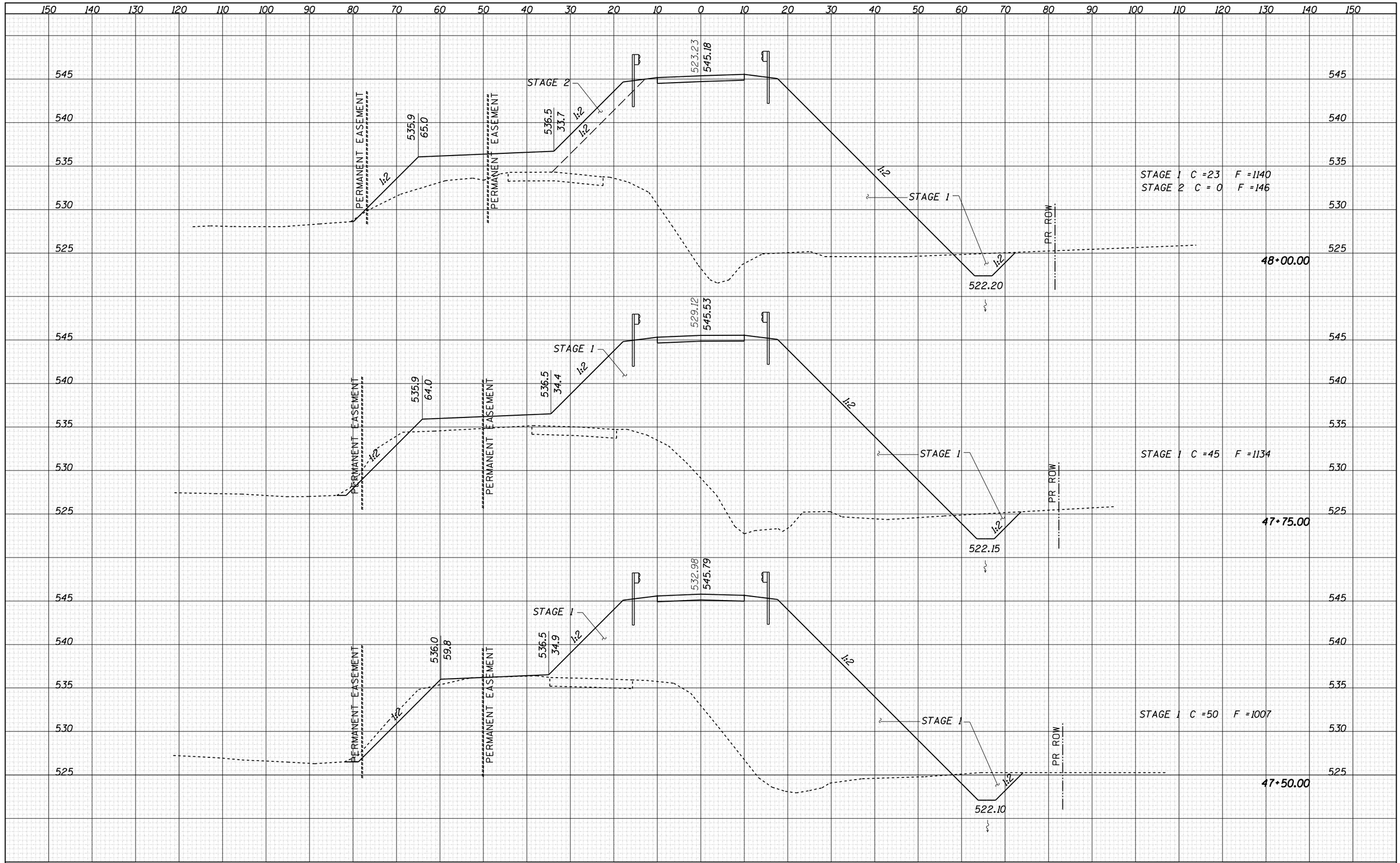


CEC Cummins Engineering Corporation ENGINEERS & SURVEYORS	JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	CROSS SECTIONS
	FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -		
	PLOT DATE = 1/18/2024	DATE - 9/06/2012	REVISED -		STA. 47+00.00 TO STA. 47+25.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	41
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

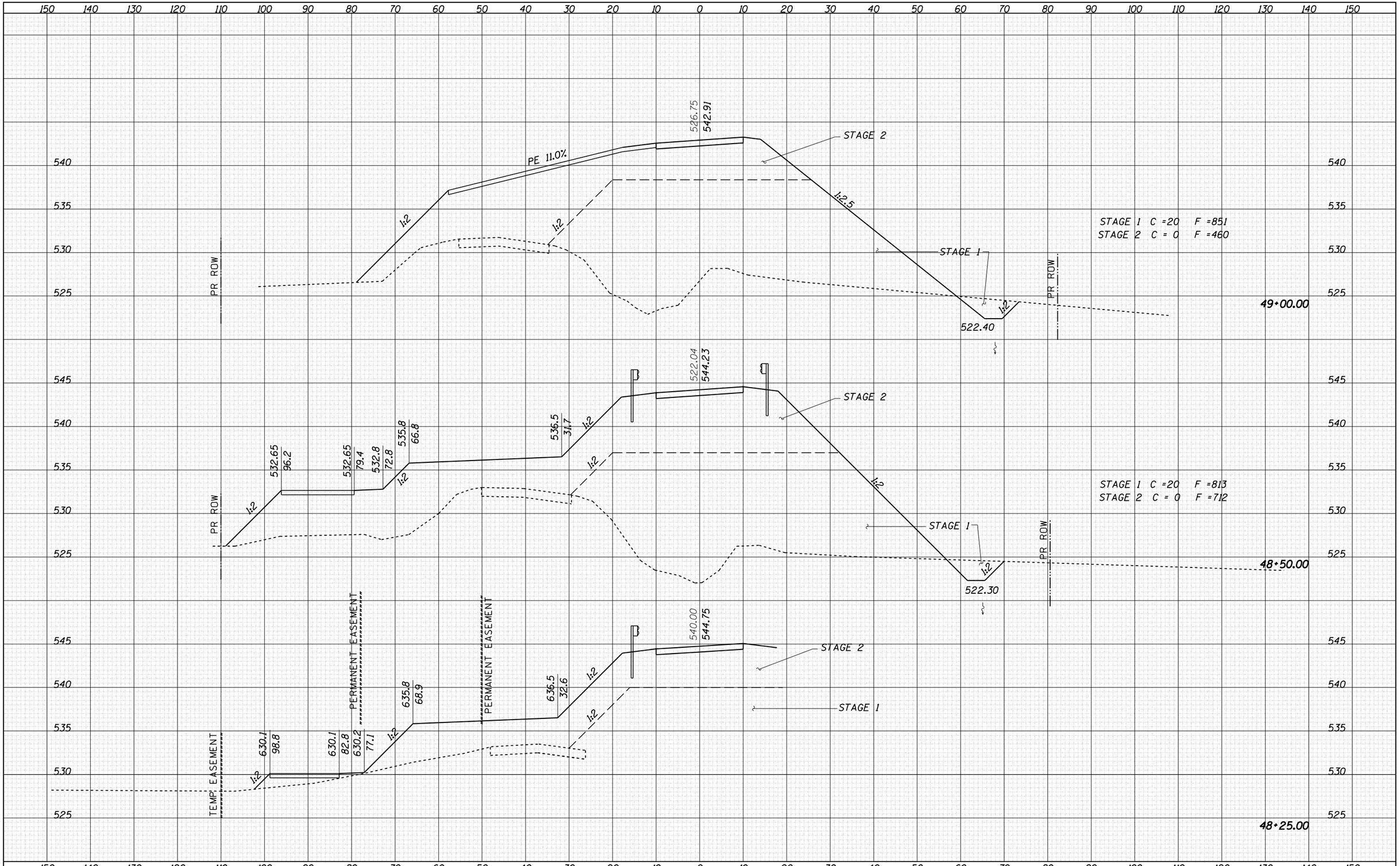


CEC Cummins Engineering Corporation — ENGINEERS & SURVEYORS					
JOB = 2262	DESIGNED - NAK	REVISED -	CLEAR LAKE TOWNSHIP TR 171 IMPROVEMENTS	CROSS SECTIONS	
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -			
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -			
PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -		STA. 47+50.00 TO STA. 48+00.00	

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	42
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



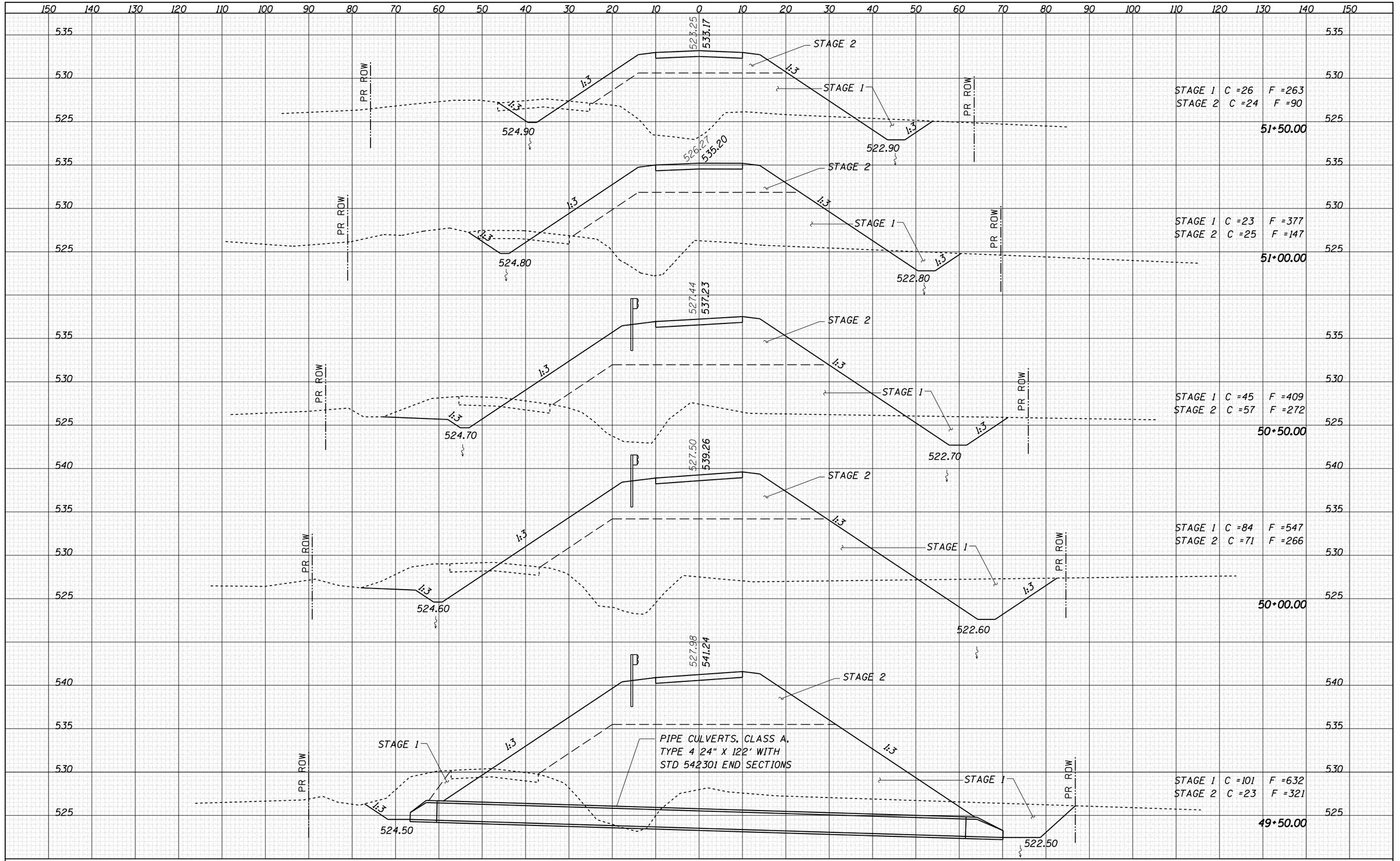
CEC Cummins Engineering Corporation — ENGINEERS & SURVEYORS			
JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

CROSS SECTIONS

STA. 48+25.00 TO STA. 49+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	43
		CONTRACT NO. 93654		
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
ENGINEERS & SURVEYORS

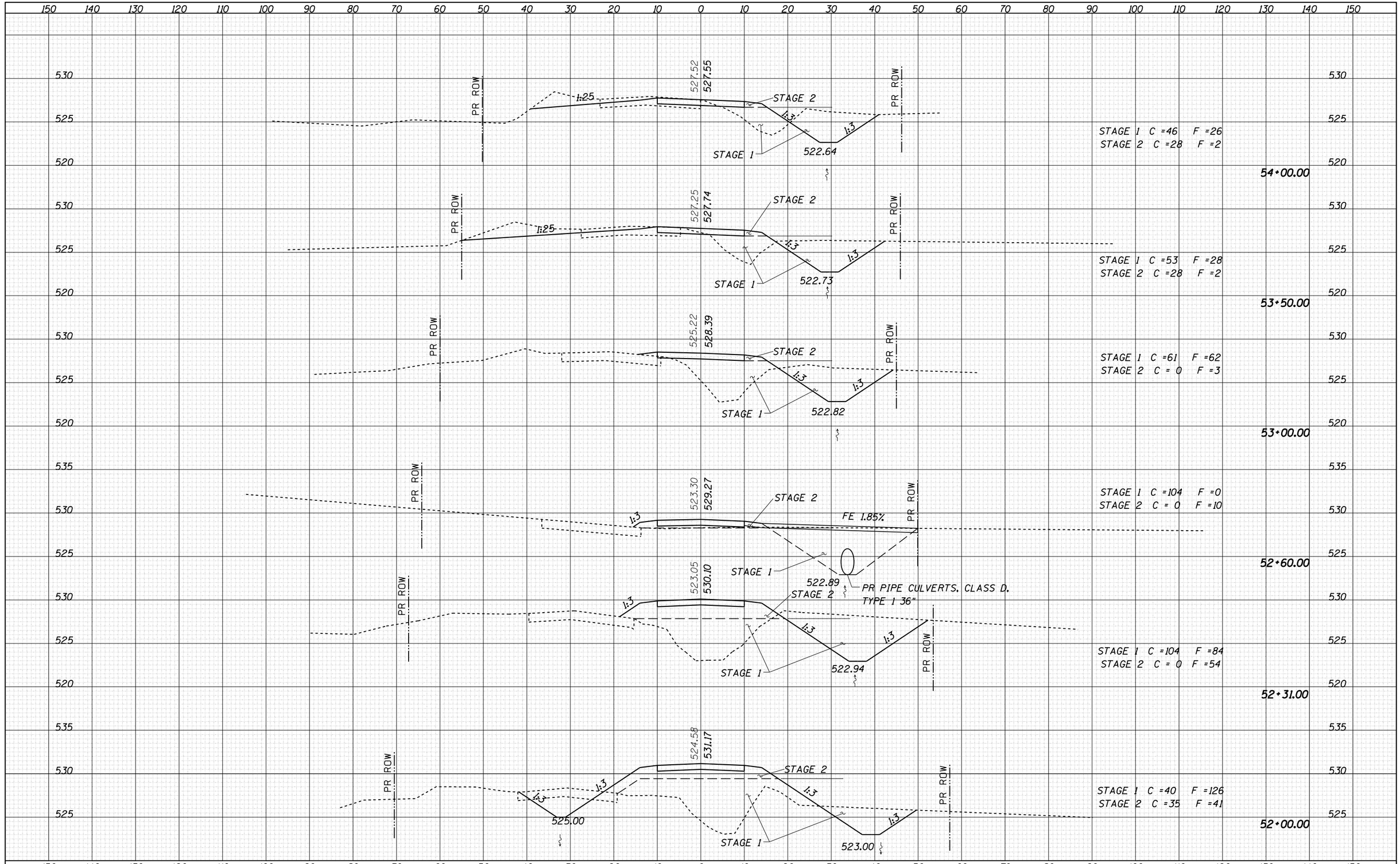
JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -	

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

CROSS SECTIONS

STA. 49+50.00 TO STA. 51+50.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	44
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -	
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -	
PLOT DATE = 1/15/2024	DATE - 9/06/2012	REVISED -	

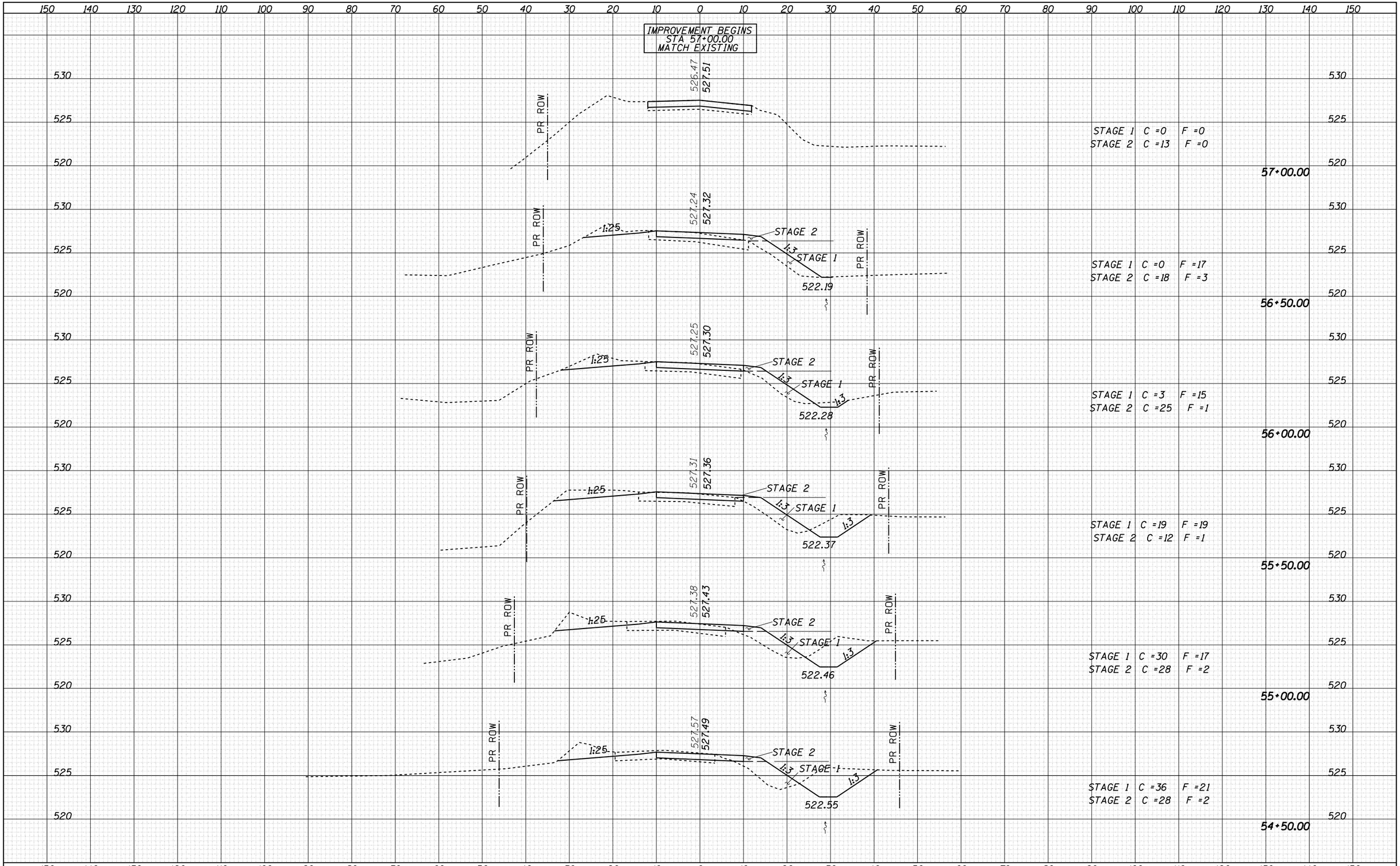
CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

CROSS SECTIONS

STA. 52+00.00 TO STA. 54+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	45
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

IMPROVEMENT BEGINS
STA 57+00.00
MATCH EXISTING



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

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

CEC Cummins Engineering Corporation
ENGINEERS & SURVEYORS

JOB = 2262	DESIGNED - NAK	REVISED -
FILE NAME = 2262 xsec.dgn	DRAWN - SJS	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - KSC	REVISED -
PLOT DATE = 2/20/2024	DATE - 9/06/2012	REVISED -

CLEAR LAKE TOWNSHIP
TR 171 IMPROVEMENTS

CROSS SECTIONS

STA. 54+50.00 TO STA. 55+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
171	08-07116-00-BR	SANGAMON	46	46
		CONTRACT NO. 93654		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		