

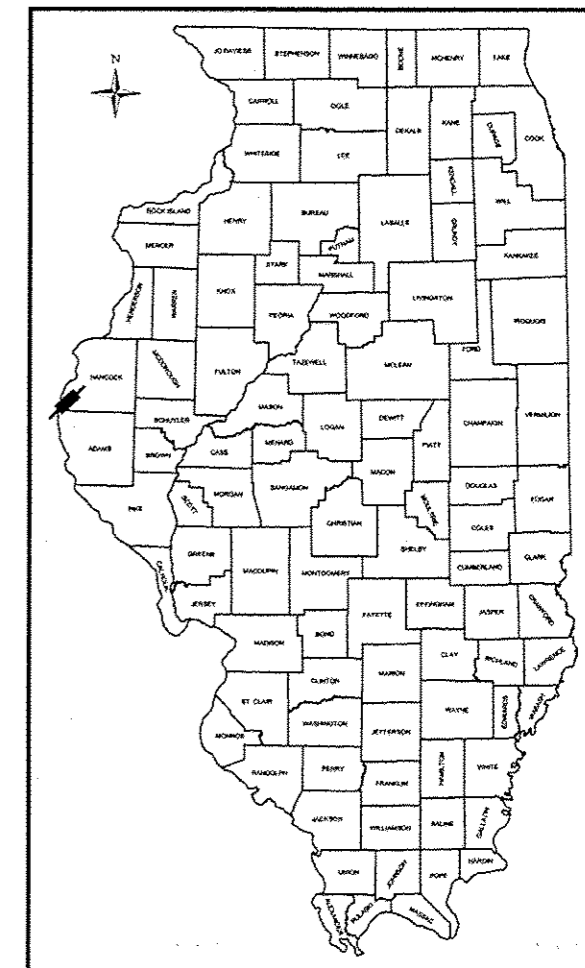
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
SURFACE TRANSPORTATION/RURAL PROGRAM W/ TARP
HANCOCK COUNTY
F.A.S. 1600 (C.H. 32)
SECTION 15-00128-00-RS
JOB NO. C-96-211-16
PROJECT NO. RS-1600(122)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600 C.H. 32	15-00128- 00-RS	HANCOCK	15	1
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

CONTRACT NO. 93703

SHEET NO.	TITLE
1	COVER SHEET
2	SUMMARY OF QUANTITIES, GENERAL NOTES, & ROAD QUANTITIES
3 - 5	TYPICAL SECTIONS
6	PAINT STRIPING & GUARDRAIL SCHEDULES
7 - 8	BUTT - JOINT, ENTRANCE, & SIDE ROAD DETAILS
9	STEEL RAILING, TYPE 2399
10 - 15	PLAN AND PROFILE



LOCATION OF SECTION INDICATED THIS:

UTILITIES

AMEREN/CIPS	618-236-6281
CITY OF WARSAW	217-256-4512
CITY OF HAMILTON	309-224-8234
DALLAS RURAL WATER DISTRICT	309-337-3718
FRONTIER COMM.	815-895-1515
MEDIACOM	319-753-6589
NICOR GAS	630-388-2362

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
TELEPHONE NUMBER 1-800-892-0123

HIGHWAY STANDARDS

630001-11	701201-04
631011-10	701301-04
631032-09	701306-03
635001-02	701311-03
701001-02	701901-06
701006-05	725001-01
701011-04	780001-05
	782006

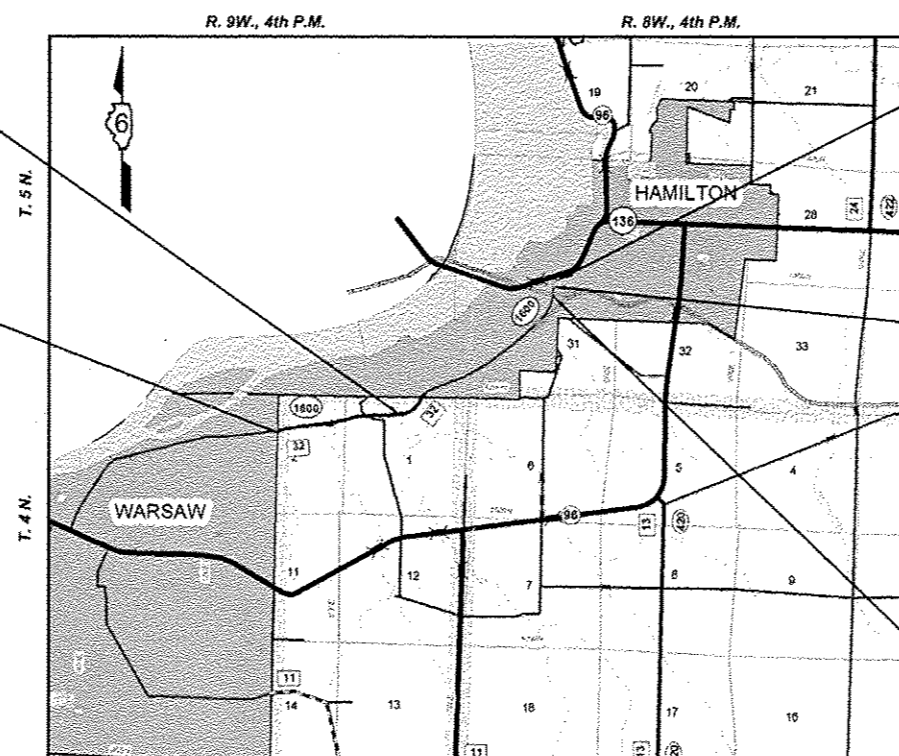
SCALES

FULL SIZE (22" X 34") PLANS

PLAN	
PROFILE HOR.	
PROFILE VERT.	
SIDE ROAD	
PROFILE HOR.	
SIDE ROAD	
PROFILE VERT.	

BRIDGE OMISSION: S.N. 034-3320
STA. 160+33.37 TO STA. 161+80.87

IMPROVEMENT BEGINS
STA. 109+18.56



IMPROVEMENT ENDS
STA. 256+88

BRIDGE OMISSION: S.N. 034-6001
STA. 254+17.18 TO STA. 254+99.18

RAILROAD OMISSION
STA. 248+61.43 TO STA. 248+83.43

LOCATION PLAN

GROSS LENGTH = 14,769.44 FT. = 2.797 MI.

NET LENGTH = 14,517.94 FT. = 2.750 MI.

HIGHWAY CLASS: MAJOR COLLECTOR (NON-URBAN)

DESIGN GUIDELINES: 3R

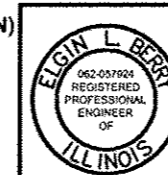
DESIGN SPEEDS:

STATION: 109+18.56 - 225+00, 55 M.P.H.

STATION: 225+00 - 236+00, 35 M.P.H.

STATION: 236+00 - 256+88, 25 M.P.H.

CURRENT ADT: 2,600



I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE LAWS OF THE STATE OF ILLINOIS.

Elgin Berry 2/16/17

ELGIN L. BERRY LICENSE # 062-057924 EXPIRES 11/30/2017

APPROVED 2/16 2017
Elgin Berry
COUNTY ENGINEER

PASSED March 31 2017
Subj. [Signature]
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

PASSED March 31 2017
[Signature]
DISTRICT SIX ENGINEER OF CONSTRUCTION

Releasing For Bid Based on Limited Review March 31 2017
[Signature]
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 93703

101 S. FIRST ST. (P.O. BOX 379)
CARTHAGE, IL 62321
(217) 357-3155

HANCOCK COUNTY
HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES

CODE	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU. YD.	135
35101400	AGGREGATE BASE COURSE, TYPE B	TON	136
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	181
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	448
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	34,253
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	1,776
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ. YD.	587
40600990	TEMPORARY RAMP	SQ. YD.	135
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	1,051
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	3,176
44000166	HOT-MIX ASPHALT SURFACE REMOVAL, 4 1/4"	SQ. YD.	962
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ. YD.	54
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	1,504
Δ 50900200	STEEL RAILING, TYPE 2399	FOOT	168
Δ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	3,000
Δ 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	8
Δ 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	3
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	7
63200310	GUARDRAIL REMOVAL	FOOT	2,500
67100100	MOBILIZATION	L SUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	4,356
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ. FT.	480
Δ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	7
Δ 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ. FT.	62.4
Δ 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	54,476
Δ 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	957
Δ 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	82
Δ 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	115
Δ 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	12
Δ 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	34
* LR400005	CIR-FDR EMULSIFIED ASPHALT	GALLON	51,890
* LR400740	COLD IN-PLACE RECYCLING, 4.0"	SQ. YD.	37,064
Δ * X6310188	TRAFFIC BARRIER TERMINAL, TYPE 6A, MODIFIED	EACH	1
* X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
* Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

* SEE SPECIAL PROVISIONS
 # Z0076600 Trainees
 # Z0076604 Trainees Training Program Graduate

CONSTRUCTION TYPE CODE:
 Hour 500
 Hour 500

Δ SPECIALTY ITEMS
 # 0042

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

ITEM	AGGREGATE COMPOSITION	ASPHALT GRADE	VOIDS
LEVELING BINDER (MACHINE METHOD), N50	IL 9.5	PG 64-22	4.0% @ N50
HOT-MIX ASPHALT BINDER COURSE	IL 19.0	PG 64-22	4.0% @ N50
HOT-MIX ASPHALT SURFACE COURSE	IL 9.5 Mix "C"	PG 64-22	4.0% @ N50

APPLICATION RATES USED IN QUANTITY CALCULATIONS

AGGREGATE BASE COURSE, TYPE B = 2.05 TON / CY
 AGGREGATE SURFACE COURSE, TYPE B = 2.05 TON / CY
 AGGREGATE SHOULDERS, TYPE B = 2.05 TON / CY
 BITUMINOUS MATERIALS (TACK COAT) = 0.05 LB. / SQ. FT.
 BITUMINOUS MATERIALS (PRIME COAT) = 0.25 LB. / SQ. FT.
 HOT-MIX ASPHALT (SURFACE & BINDER) = 0.056 TONS / SQ. YD. / IN.

ROAD QUANTITIES

LOCATION	AGG BSE CSE B	AGG SURF CSE B	BIT MATLS PR COAT	BIT MATLS TACK COAT	LEVEL BIND MM N50	HMA BC IL-19.0 N50	HMA SC "C" N50	HMA SURF REM 4 1/4"	AGG WEDGE SHLD TYPE B	HMA SURF REM BUTT JOINT	DRIVE PAVEMENT REM	TEMP RAMP	COLD IN-PLACE RECYC 4"	CIR-FDR EMULS ASPHALT
UNIT	TON	TON	POUND	POUND	TON	TON	TON	SY	TON	SY	SY	SY	SY	GALLON
ROADWAY STA. 109+18.56 TO STA. 234+50				28,173	1,773		2,601		1,185				31,648	44,307
ROADWAY STA. 234+50 TO STA. 248+61			3,211			555	296		228				3,607	5,050
ROADWAY STA. 248+83 TO STA. 254+17				1,615		279	149		86				1,809	2,533
ROADWAY STA. 254+99 TO STA. 256+88				866		148	81	962				34		
7 HMA BUTT-JOINT TRANSITIONS										587		101		
19 ENTRANCES		170		48	3		5				54			
2 SIDE ROADS	136	11	448	340		69	44		5					
TOTALS	136	181	448	34,253	1,776	1,051	3,176	962	1,504	587	54	135	37,064	51,890

GENERAL NOTES

1. THE NOMINAL THICKNESS FOR BASE AND SURFACE COURSES ARE SHOWN ON THE TYPICAL SECTIONS, STANDARDS, SCHEDULES, OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESS OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PERCENT OF THE NOMINAL THICKNESS AT ANY LOCATION.
2. THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
3. 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 PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
4. THE NOTED APPLICATION RATES ARE FOR QUANTITY CALCULATIONS ONLY. THE APPLICATION RATE TO BE APPLIED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF PLACEMENT.
5. THE CONTRACTOR SHALL KEEP ONE TRAFFIC LANE OPENED AT ALL TIMES. NO OVERNIGHT LANE CLOSURE SHALL BE PERMITTED.
6. ALL EXISTING ROAD SIGNS THAT CONFLICT WITH THE PROPOSED WORK ZONE TRAFFIC CONTROL MEASURES SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS PART OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. ALL EXISTING UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS.
8. ALL WASTE OR UNDESIRABLE MATERIALS AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES, REGULATIONS AND ORDINANCES PERTAINING TO WASTE DISPOSAL.
9. ALL ELEVATIONS SHOWN REFER TO AN U.S.G.S MEAN SEA LEVEL DATUM.

SUMMARY OF QUANTITIES & GENERAL NOTES
 SECTION 15-00128-00-RS
 F.A.S. 1600 (C.H. 32)
 HANCOCK COUNTY

101 S. FIRST ST. (P.O. BOX 379)
 CARTHAGE, IL 62321
 (217) 357-3155

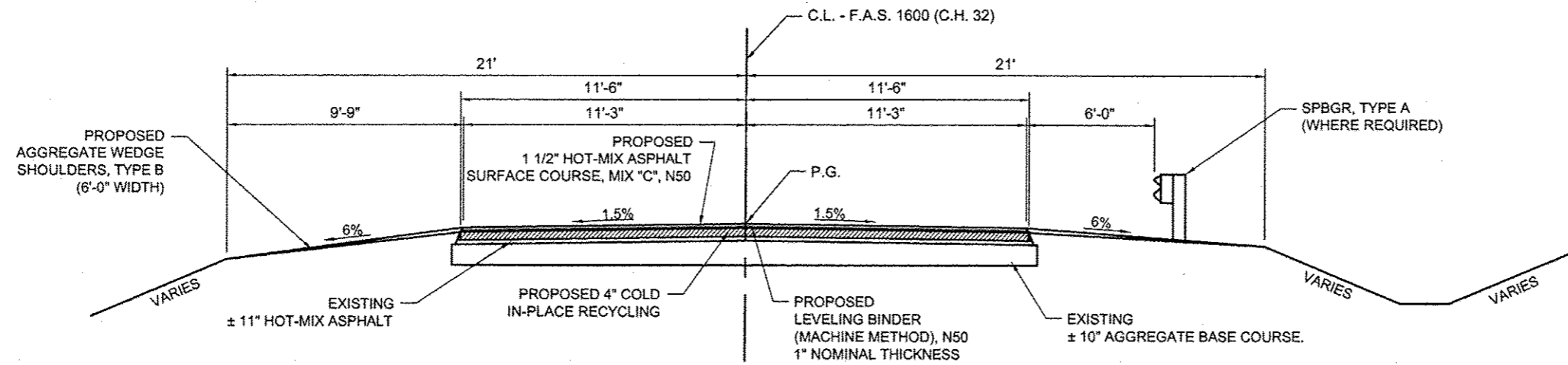
HANCOCK COUNTY
HIGHWAY DEPARTMENT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600 C.H. 32	15-00128 -00-RS	HANCOCK	15	2
F.H.W.A. REG. NO. 4		ILLINOIS		WARSAW - HAMILTON ROAD

CONTRACT NO. 93703

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128	HANCOCK	15	3
C.H. 32	-00-RS			
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

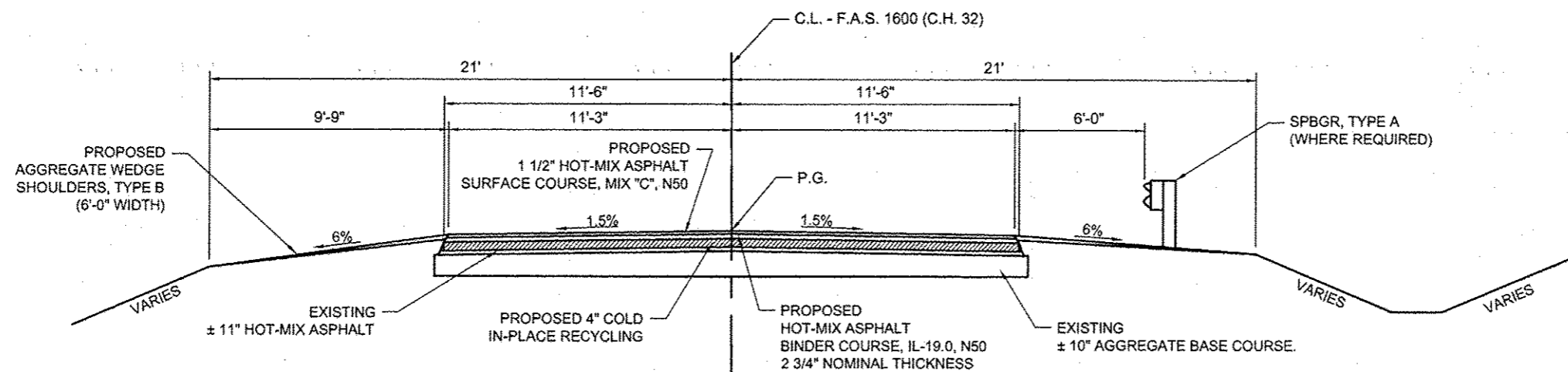
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TYPICAL PROPOSED ROADWAY CROSS SECTION

STA. 109+18.56 - 234+50

NOTE: TRANSITION LB. THICKNESS FROM 1" TO 2 3/4" AT STA. 234+00 - 234+50



TYPICAL PROPOSED ROADWAY CROSS SECTION

STA. 234+50 - 248+61.43

TYPICAL PROPOSED SECTIONS

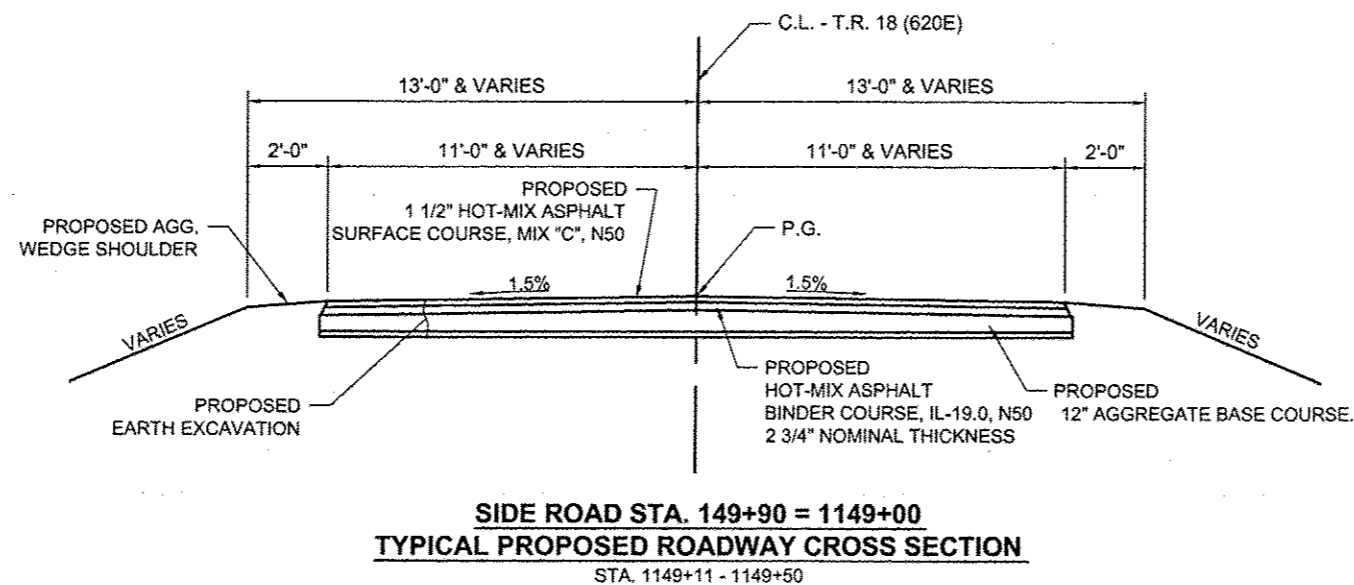
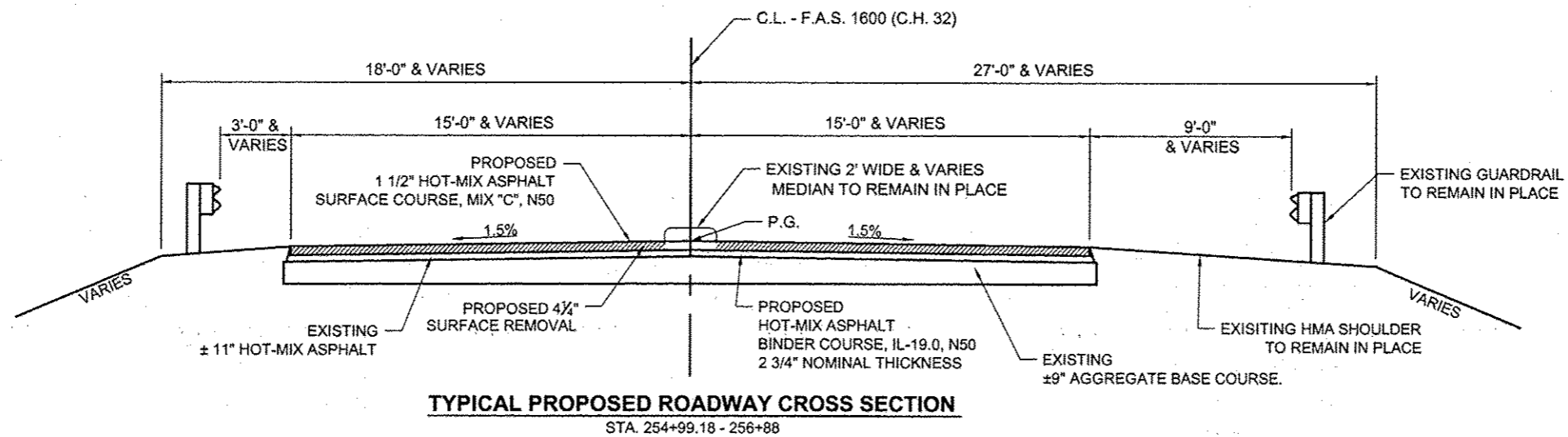
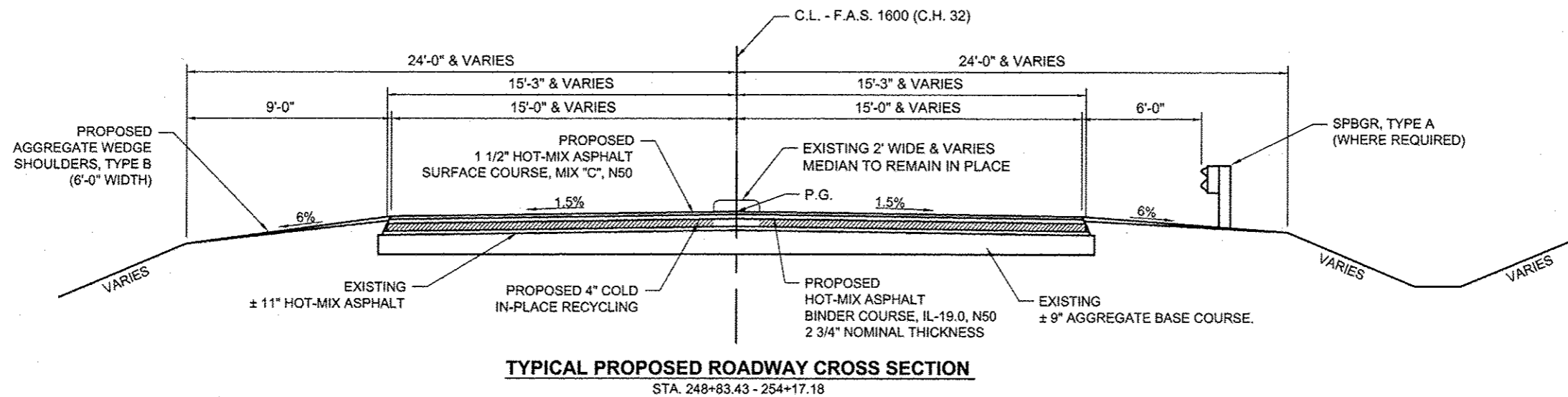
SECTION 15-00128-00-RS

F.A.S. 1600 (C.H. 32)

HANCOCK COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128	HANCOCK	15	4
C.H. 32	-00-RS			
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

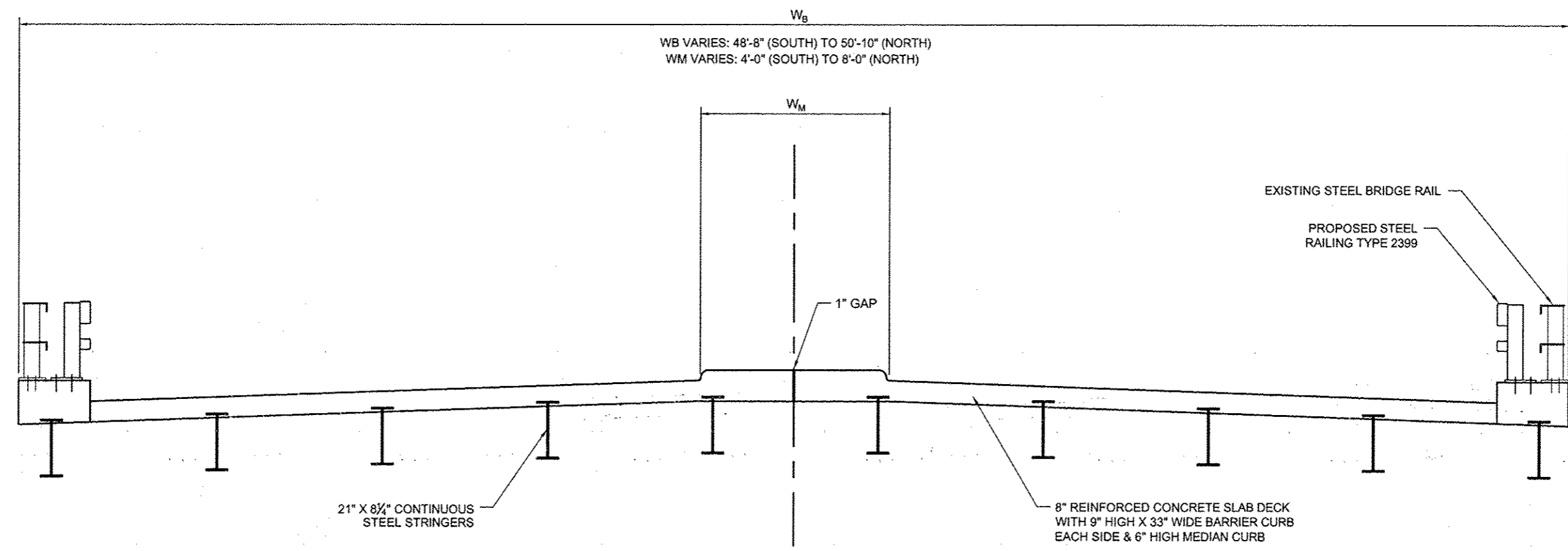
CONTRACT NO. 93703



TYPICAL PROPOSED SECTIONS
SECTION 15-00128-00-RS
F.A.S. 1600 (C.H. 32)
HANCOCK COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S 1600	15-00128	HANCOCK	15	5
C.H. 32	-00-RS			
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

CONTRACT NO. 93703

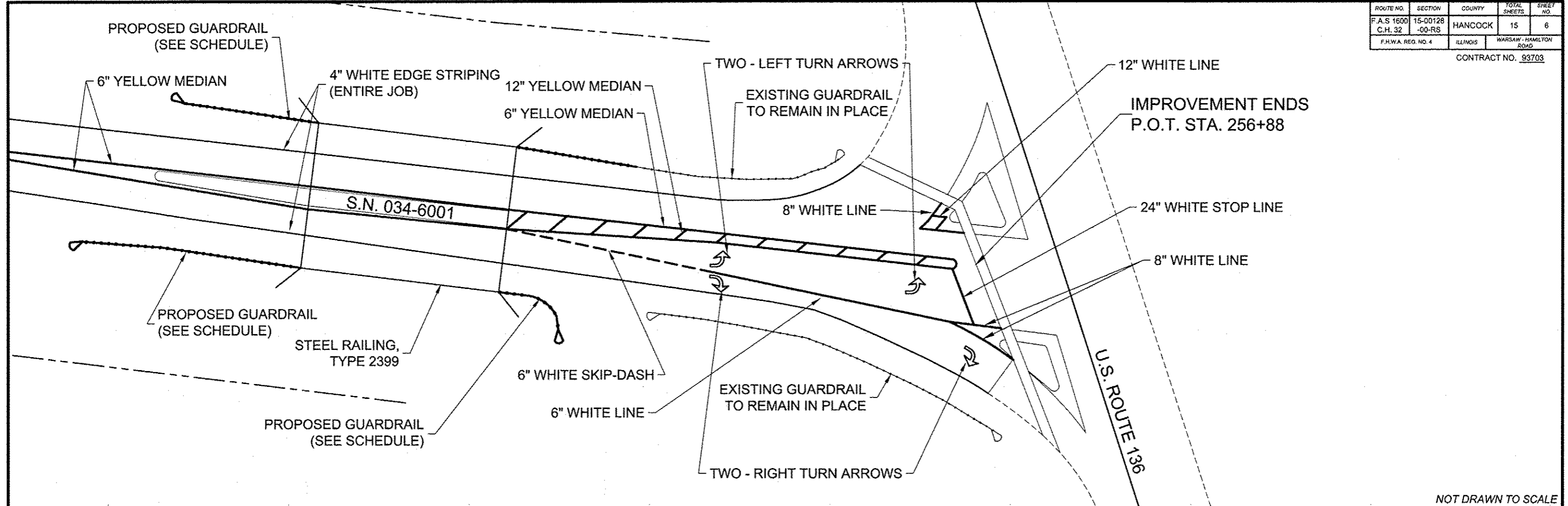


TYPICAL CROSS SECTION
S.N. 034-6001
BRIDGE RAIL RETROFIT
PROPOSED STEEL RAILING
TYPE 2399 - BOTH SIDES
 STA. 254+17.18 - 254+99.18 (82' CONC. DECK LENGTH)
 STA. 254+16.85 - 255+00.85 (84' PROPOSED STEEL RAILING)

TYPICAL CROSS SECTION
S.N. 034-6001
SECTION 15-00128-00-RS
F.A.S. 1600 (C.H. 32)
HANCOCK COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128	HANCOCK	15	6
C.H. 32	-00-RS			
F.H.W.A. REG. NO. 4	ILLINOIS	WARSAW - HAMILTON ROAD		

CONTRACT NO. 93703



NOT DRAWN TO SCALE

PAINT STRIPING SCHEDULE

LOCATIONS												
LOCATION		WHITE 4" SOLID	YELLOW 4" SOLID	YELLOW 4" SKIP-DASH	WHITE 6" SOLID	WHITE 6" SKIP-DASH	YELLOW 6"	WHITE 8"	WHITE 12"	YELLOW 12"	WHITE 24" STOP BAR	LETTERS & SYMBOLS
STATION TO STATION	SIDE	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SF
109+18.56 - 254+99	LT.	14,581										
109+18.56 - 254+99	RT.	14,581										
109+18.56 - 123+81	RT.			366								
109+18.56 - 123+81	LT.		1,432									
123+81 - 131+39	CL			190								
131+39 - 148+07	LT.			417								
131+39 - 252+65	RT.		12,126									
148+07 - 252+65	LT.		10,458									
254+99 - 256+40	LT.	152										
254+99 - 256+74	RT.	173										
255+21 - 256+09	RT.					22						
252+65 - 256+85	CL						871					
255+20 - 256+73	CL								95			
256+09	LT.											15.6
256+09	RT.											15.6
256+09 - 256+73	RT.				64							
256+65	LT.							40				
256+65	LT.											15.6
256+68	LT.								20			
256+85	RT.								42			
256+85	RT.										12	
256+88	RT.											15.6
TOTAL		29,487	24,016	973	64	22	871	82	20	95	12	62.4

*NOTE: NO PASSING ZONES TO BE LAID OUT BY ENGINEER

GUARDRAIL SCHEDULE

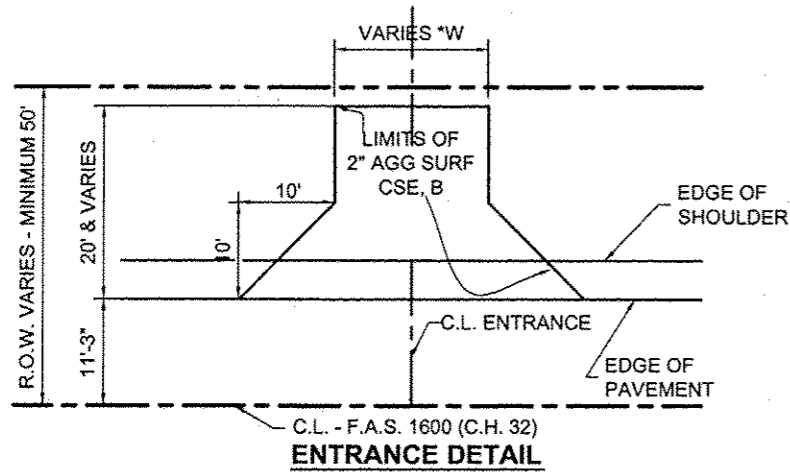
LOCATION	SPBGR - TYPE A LENGTH	TERMINAL SECTIONS			GUARDRAIL REMOVAL	GUARDRAIL REFLECTORS, TYPE A	TERMINAL MARKER - DA	
		TYPE 1 SPL (TAN)	TYPE 2	TYPE 6A				
STATION TO STATION	SIDE	FOOT	EACH	EACH	EACH	FOOT	EACH	EACH
129+28 - 134+40.5	RT.	450	1	1			3	1
129+63.5 - 134+76	LT.	450	1	1			3	1
174+30 - 184+05	LT.	912.5	1	1		950.0	10	1
174+63 - 183+88	RT.	862.5	1	1		900.0	10	1
247+95.5 - 248+58	LT.		1	1		62.5	1	1
249+27.5 - 253+15	LT.	325.0	1	1		387.5	3	1
253+66.85 - 254+16.85	LT.			1	1	50.0	1	
253+29.35 - 254+16.85	RT.		1		1	50.0	1	1
*255+00.85 - 255+27.79	RT.			1	1	25.0	1	
255+00.85 - 255+38.35	LT.				1	75.0	1	
TOTAL		3,000	7	8	4	2,500	34	7

*NOTE: TYPE 6A MODIFIED TRAFFIC BARRIER TERMINAL WITH SHOP-CURVED 16' RADIUS IN THE THRIE-BEAM PORTION OF THE RAIL

PAINT STRIPING & GUARDRAIL SCHEDULE
SECTION 15-00128-00-RS
F.A.S. 1600 (C.H. 32)
HANCOCK COUNTY

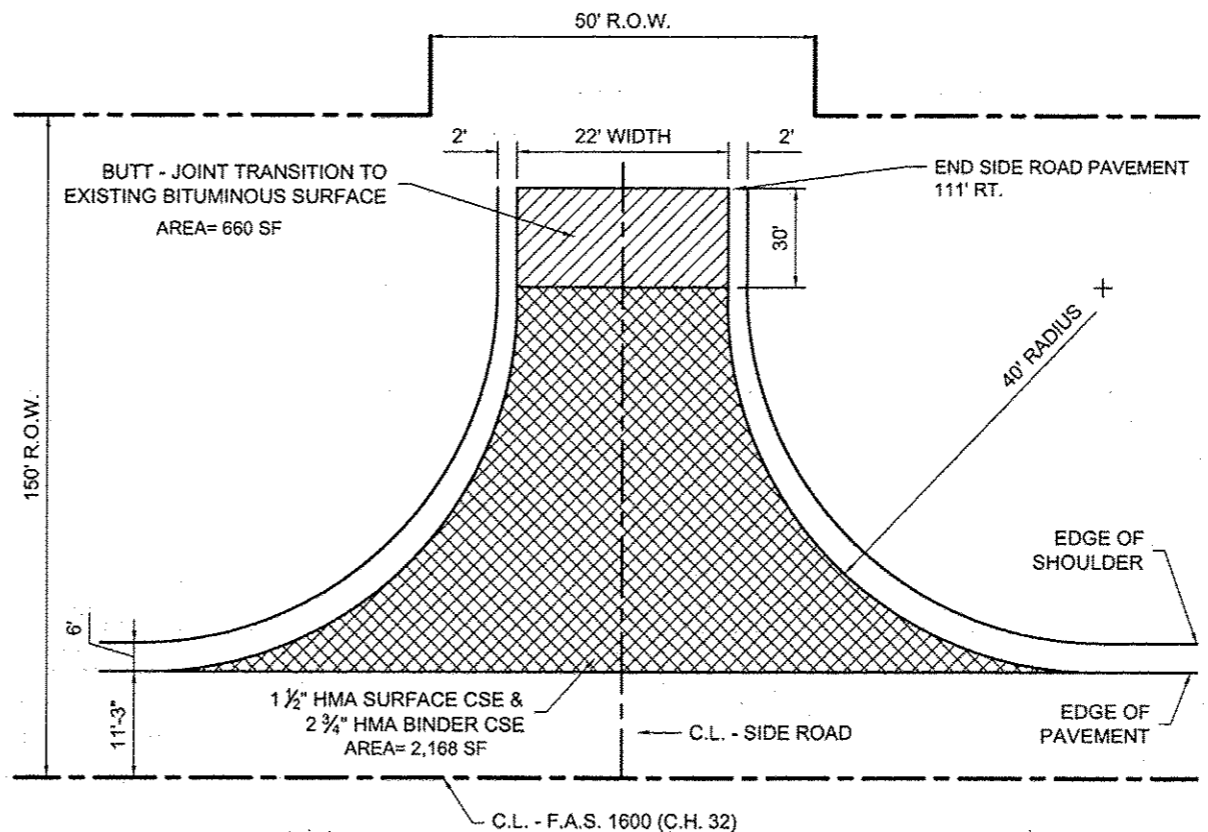
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**HANCOCK COUNTY
HIGHWAY DEPARTMENT**



ENTRANCE SCHEDULE

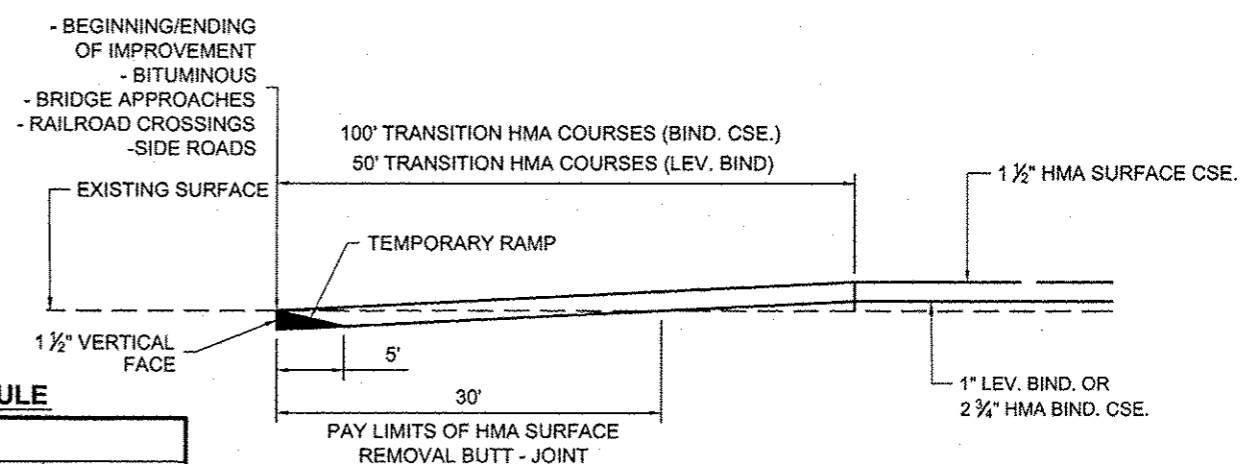
LOCATIONS							
STATION	SIDE	WIDTH	AGG SURF CSE B	BIT MATL TACK CT	LEV BIND MM N50	HMA SC "C" N 50	DRIVEWAY PAVEMENT REMOVAL
		FOOT	TON	POUND	TON	TON	SY
137+72	LT.	16	3				
147+32	LT.	14	3				
157+30	LT.	18	4				
*163+44	RT.	32		48	3	5	54
172+68	RT.	22	4				
173+73	LT.	15	3				
174+08	RT.	17	4				
227+32	RT.	16	3				
234+90	LT.	24	8				
236+32	LT.	48	14				
236+32	RT.	22	7				
241+90	LT.	55	16				
241+90	RT.	56	16				
247+23	LT.	108	30				
247+50	RT.	60	18				
249+48	RT.	37	11				
253+03	RT.	22	7				
253+42	LT.	40	12				
255+55	RT.	20	7				
TOTAL			170	48	3	5	54



WINDY HILLS SIDE ROAD DETAIL

WINDY HILLS SIDE ROAD SCHEDULE

LOCATION		
STATION	SIDE	SURFACE
235+11	RT	BITUMINOUS
MATERIALS		
BIT MATLS TACK CT		250 LBS
HMA BC IL-19.0 N50		38 TON
HMA SC "C" N50		27 TON

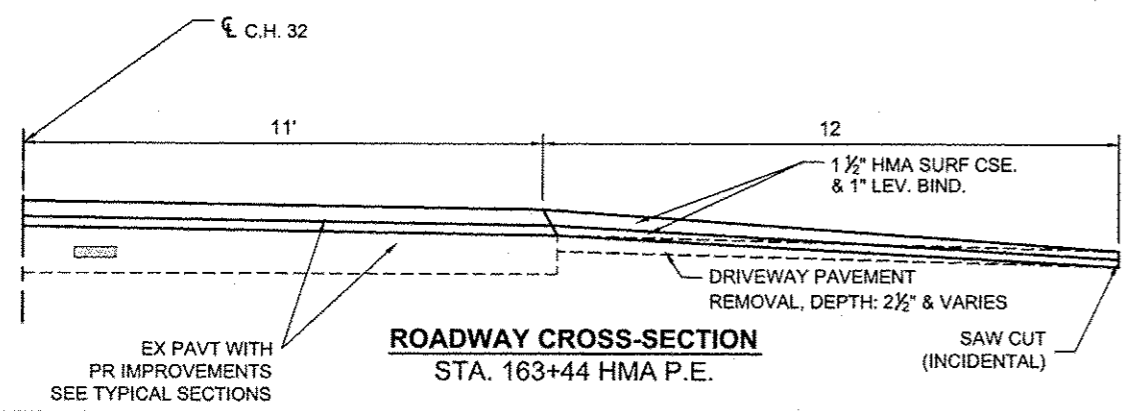


BUTT - JOINT SCHEDULE

LOCATIONS				
BEGIN/END STATION	SIDE	WIDTH	HMA SURF REM BUTT JT	TEMPORARY RAMP
		FOOT	SY	SY
109+18.56	C.L.	22.5	75	13
160+33.37	C.L.	22.5	75	13
161+80.87	C.L.	22.5	75	13
235+11.00	R.T.	22.5 & VAR.	75	13
248+61.43	C.L.	27.5	92	16
248+83.43	C.L.	28.5	95	16
254+17.18	C.L.	30.0	100	17
TOTAL			587	101

BUTT - JOINT DETAIL MAINLINE & SIDE ROADS

NOTE: LEVELING BINDER OR BINDER COURSE SHALL BE FEATHERED TO 0" THICKNESS.



ROADWAY CROSS-SECTION STA. 163+44 HMA P.E.

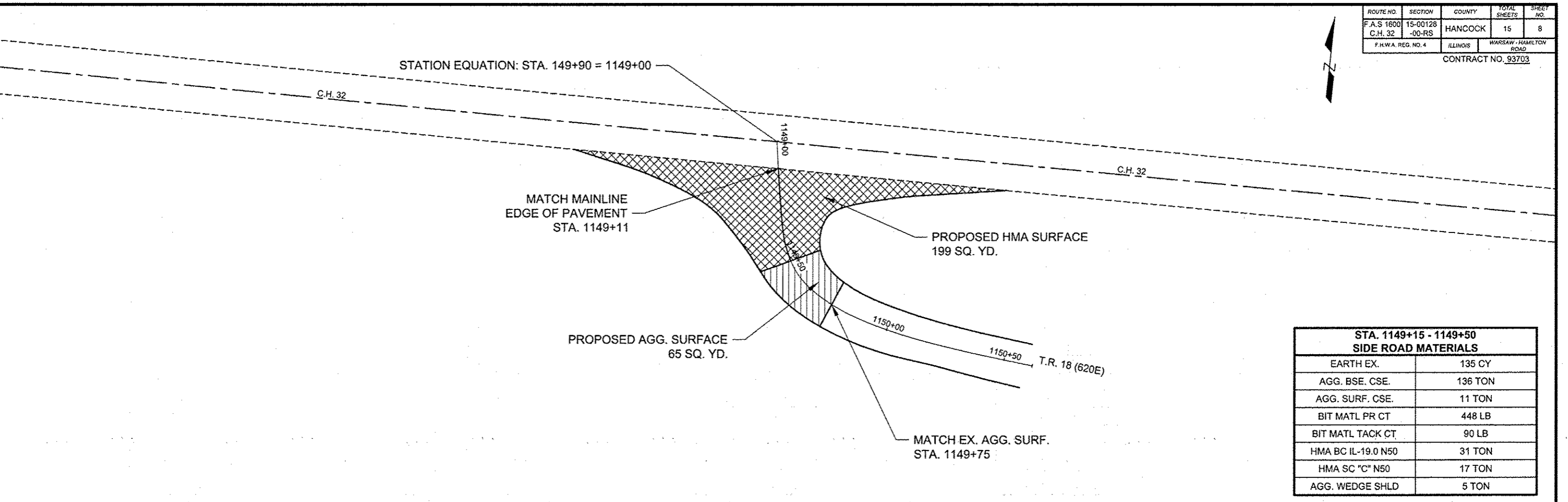
BUTT - JOINT, ENTRANCE, & SIDE ROAD DETAILS
SECTION 15-00128-00-RS
F.A.S. 1600 (C.H. 32)
HANCOCK COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S 1600	15-00128	HANCOCK	15	8
C.H. 32	-00-RS			
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

CONTRACT NO. 93703

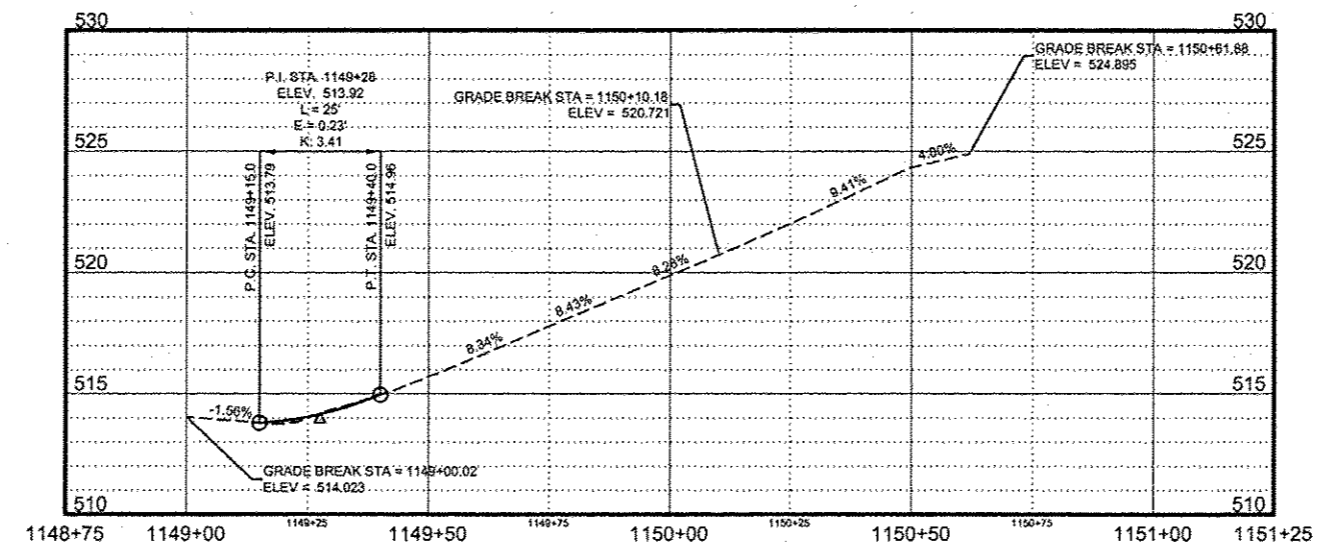


STATION EQUATION: STA. 149+90 = 1149+00



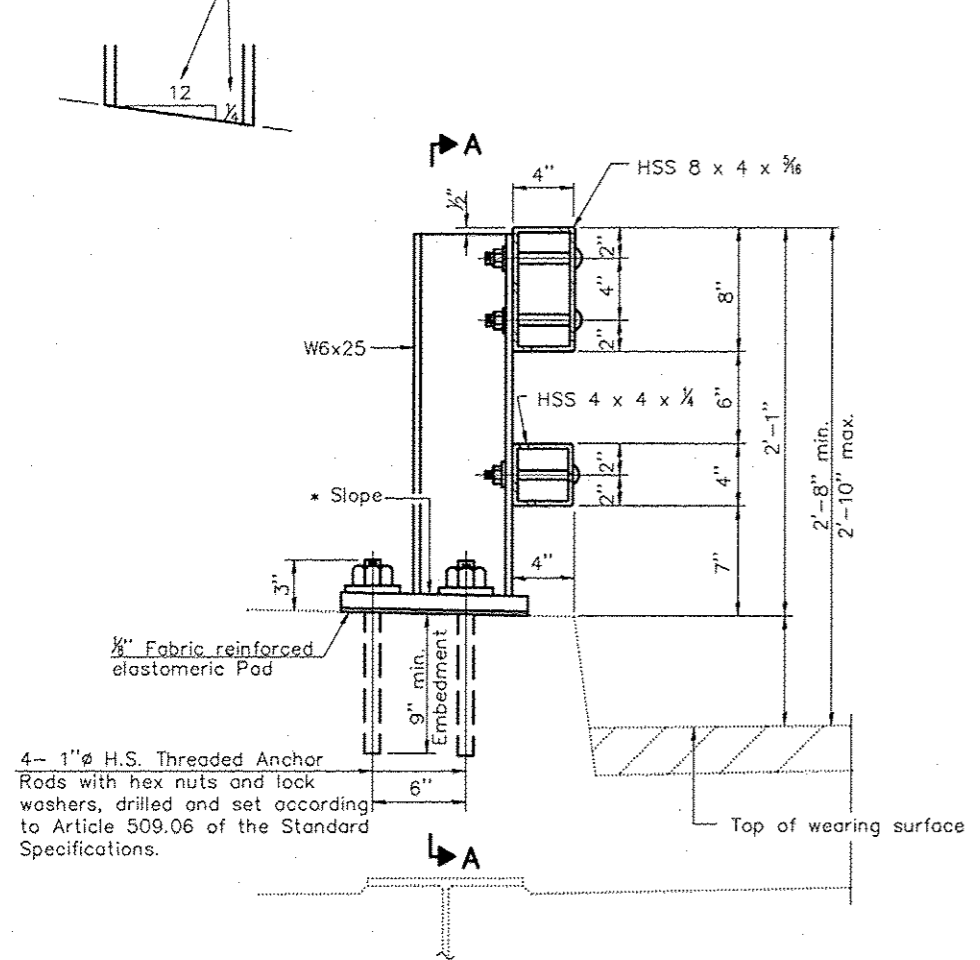
STA. 1149+15 - 1149+50 SIDE ROAD MATERIALS	
EARTH EX.	135 CY
AGG. BSE. CSE.	136 TON
AGG. SURF. CSE.	11 TON
BIT MATL PR CT	448 LB
BIT MATL TACK CT	90 LB
HMA BC IL-19.0 N50	31 TON
HMA SC "C" N50	17 TON
AGG. WEDGE SHLD	5 TON

Side Road 1149+00

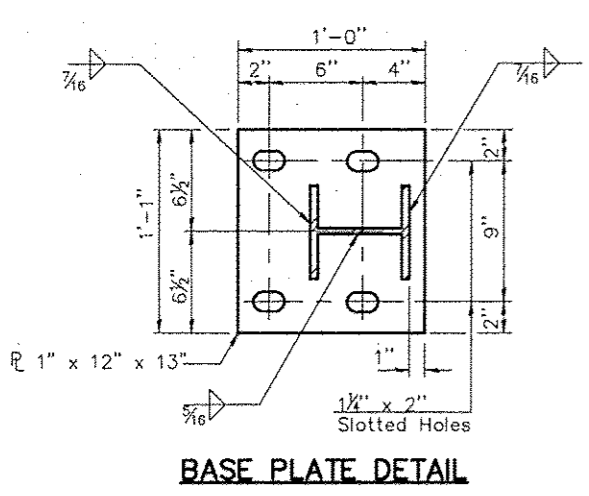


**SIDE ROAD STA. 1149+00
DETAILS**
SECTION 15-00128-00-RS
F.A.S. 1600 (C.H. 32)
HANCOCK COUNTY

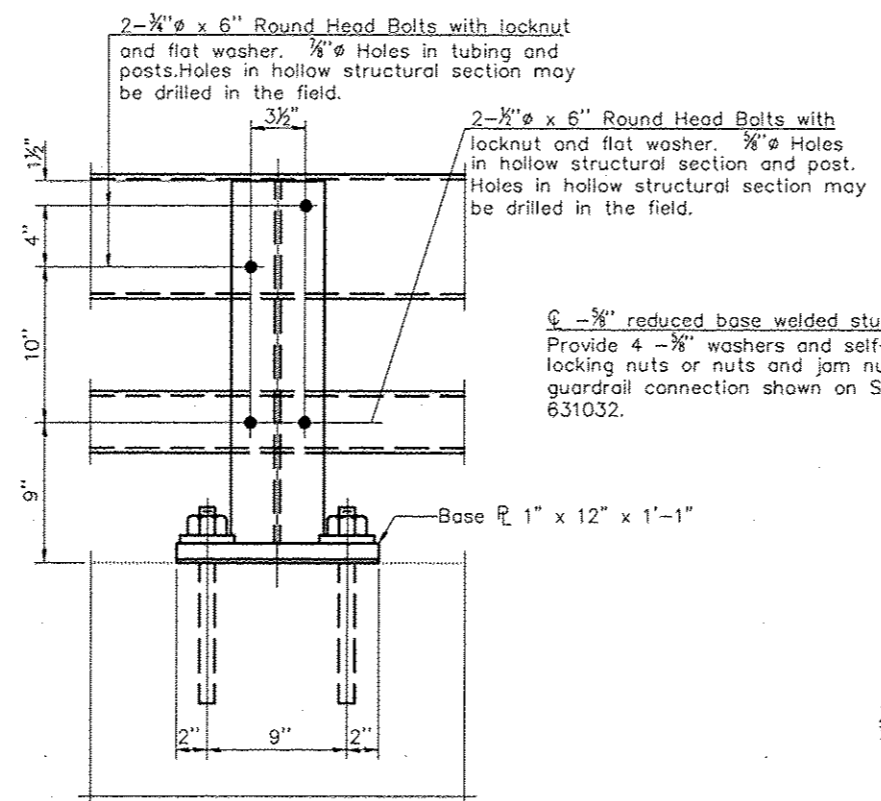
* Cut bottom end of post to curb slope.



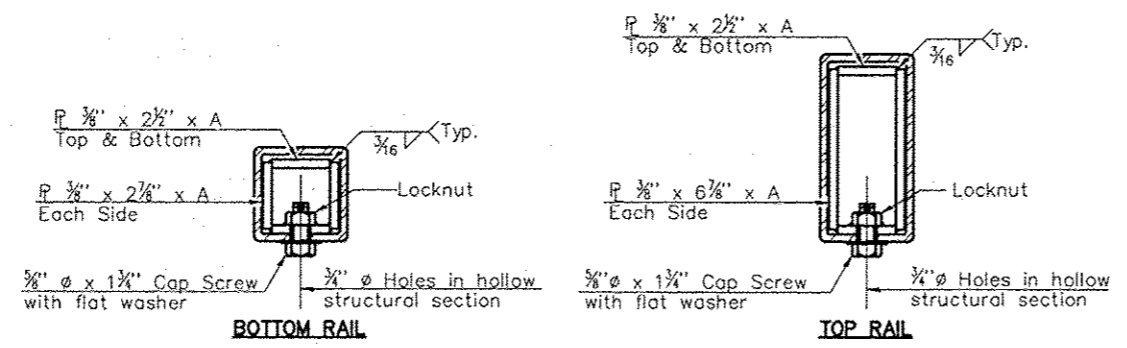
SECTION AT RAIL POST



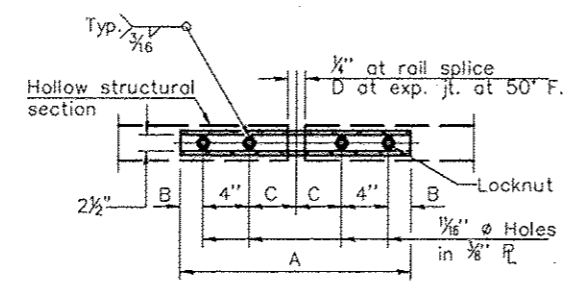
BASE PLATE DETAIL



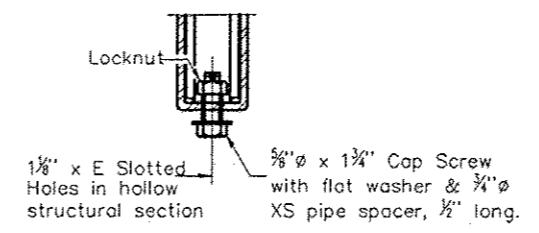
SECTION A-A



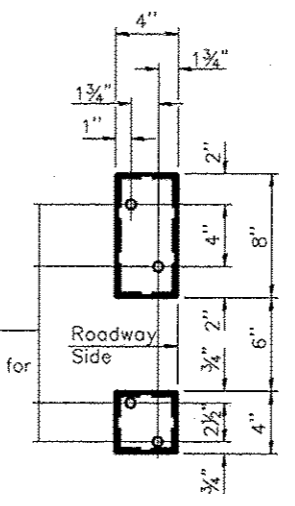
SECTIONS AT RAIL SPLICE



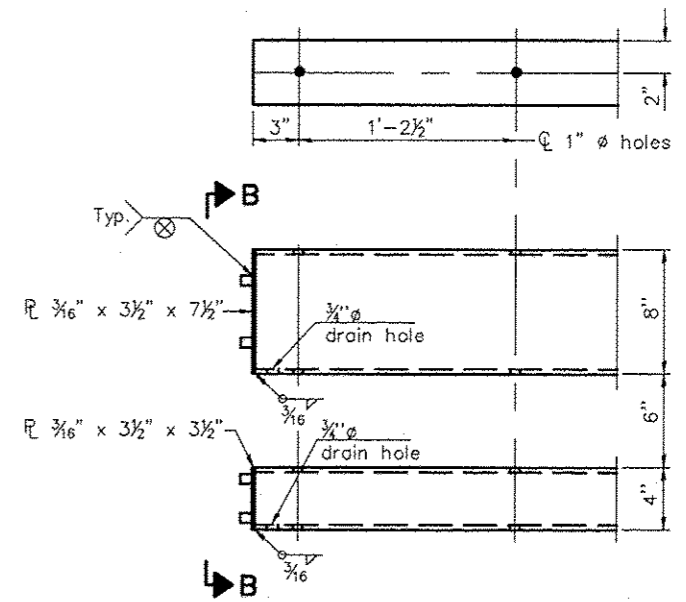
PLAN-BOTT. SPLICE R TYPICAL



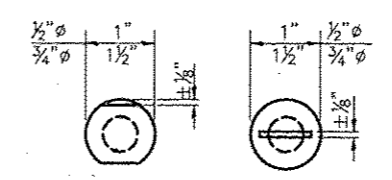
RAIL SPLICE CONNECTION AT EXPANSION JT.



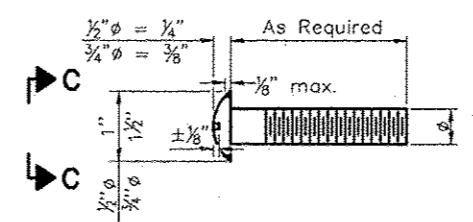
VIEW B-B



END OF RAIL DETAILS



VIEW C-C



DETAIL OF 1/2' & 3/4' ROUND HEAD BOLTS

Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	168

**STEEL RAILING, TYPE 2399
 STRUCTURE NO. 034-6001
 SECTION 15-00128-00-RS
 F.A.S. 1600 (C.H. 32)
 HANCOCK COUNTY**

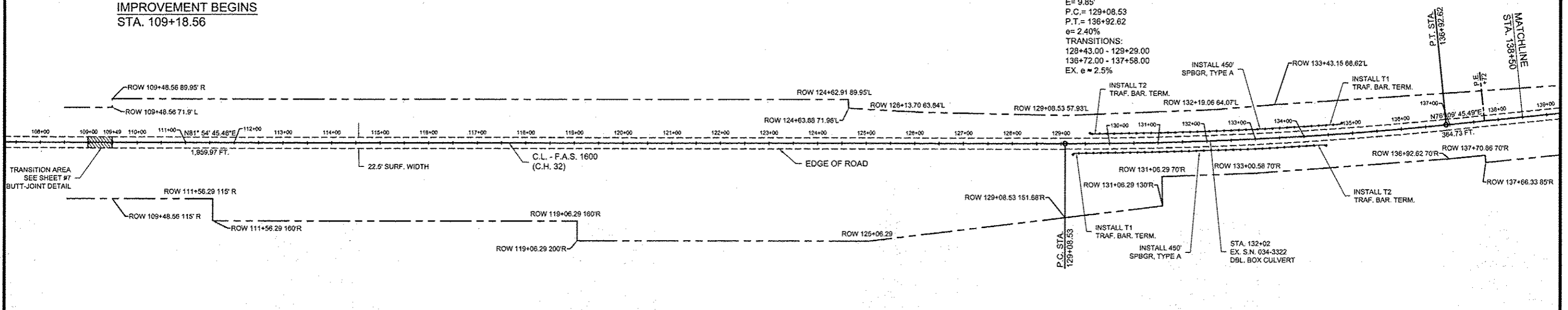
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128-00-RS	HANCOCK	15	10
F.H.W.A. REG. NO. 4	ILLINOIS	WARSAW - HAMILTON ROAD		

CONTRACT NO. 93703

CURVE DATA
 P.I. STA. 133+00.90
 D= 5°-45' LEFT
 R= 7813.06'
 T= 392.37'
 L= 784.09'
 E= 9.85'
 P.C.= 129+08.53
 P.T.= 136+92.62
 e= 2.40%
 TRANSITIONS:
 128+43.00 - 129+29.00
 136+72.00 - 137+58.00
 EX. e = 2.5%

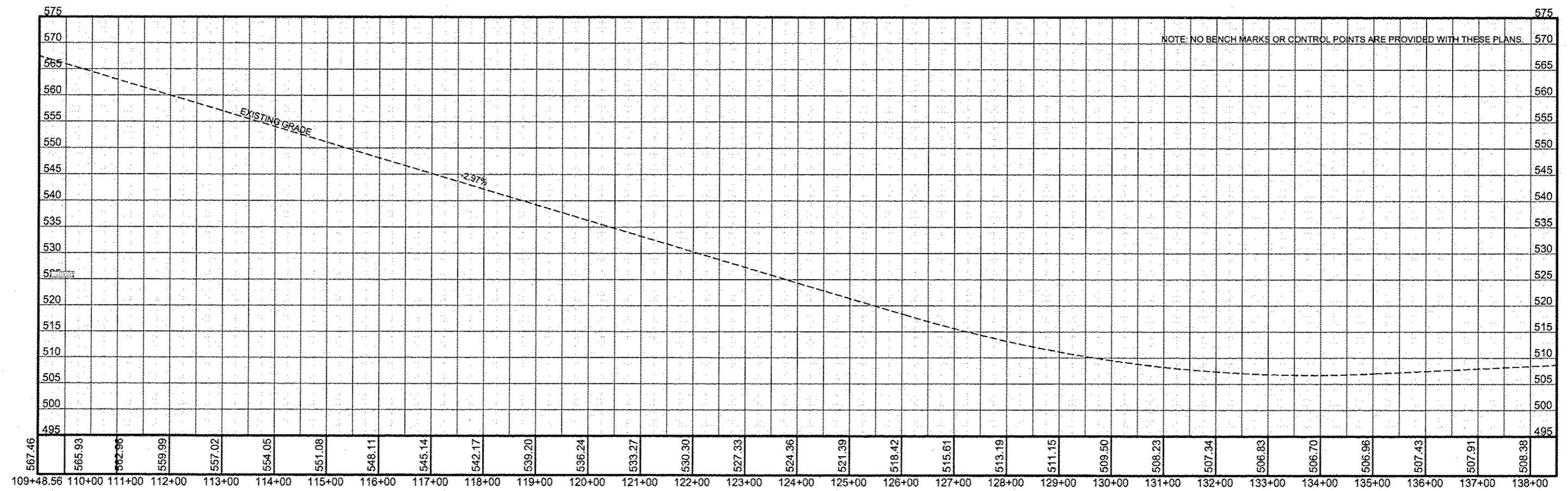


IMPROVEMENT BEGINS
STA. 109+18.56



ILLINOIS DEPARTMENT
OF NATURAL RESOURCES

SECTION 2, T. 4 N., R. 9 W., 4th P.M.



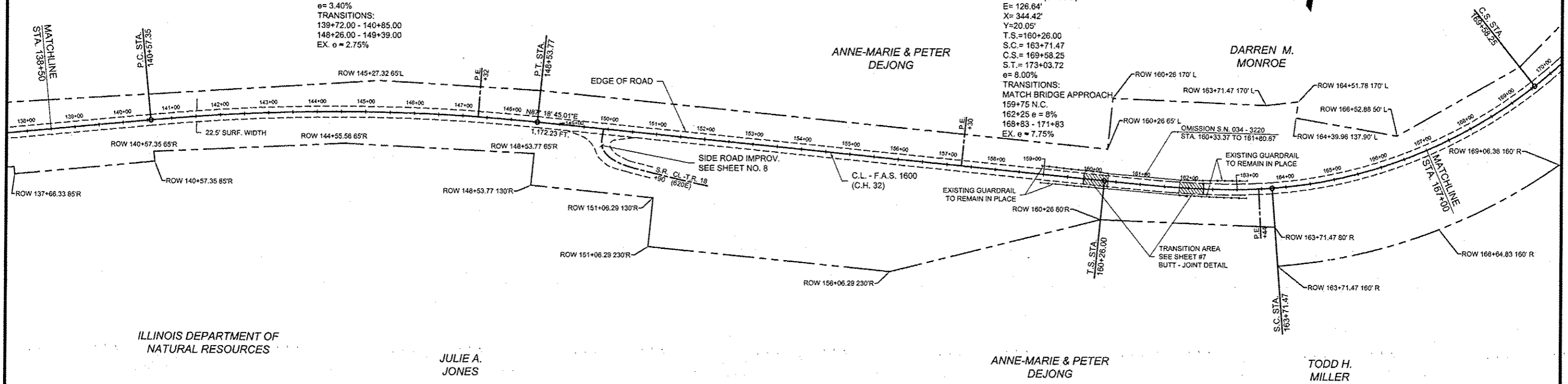
CURVE DATA
 P.I. STA. 144+56.82
 D= 11'- 09" RIGHT
 R= 4,092.56'
 T= 399.47'
 L= 796.42'
 E= 19.46'
 P.C.= 140+57.35
 P.T.= 148+53.77
 e= 3.40%
TRANSITIONS:
 139+72.00 - 140+85.00
 148+26.00 - 149+39.00
 EX. e = 2.75%

ILLINOIS DEPARTMENT OF CONSERVATION

CURVE DATA
 P.I. STA. 167+04.82
 D= 54'- 02" LEFT
 R= 34'- 02" (CURVE)
 Q= 10'- 00" (SPIRAL)
 R= 987.86'
 T= 678.82'
 L= 586.78' (CURVE)
 L= 345.47' (SPIRAL)
 E= 126.64'
 X= 344.42'
 Y= 20.05'
 T.S.= 160+26.00
 S.C.= 163+71.47
 C.S.= 169+58.25
 S.T.= 173+03.72
 e= 8.00%
TRANSITIONS:
 MATCH BRIDGE APPROACH
 159+75 N.C.
 162+25 e = 8%
 168+83 - 171+83
 EX. e = 7.75%

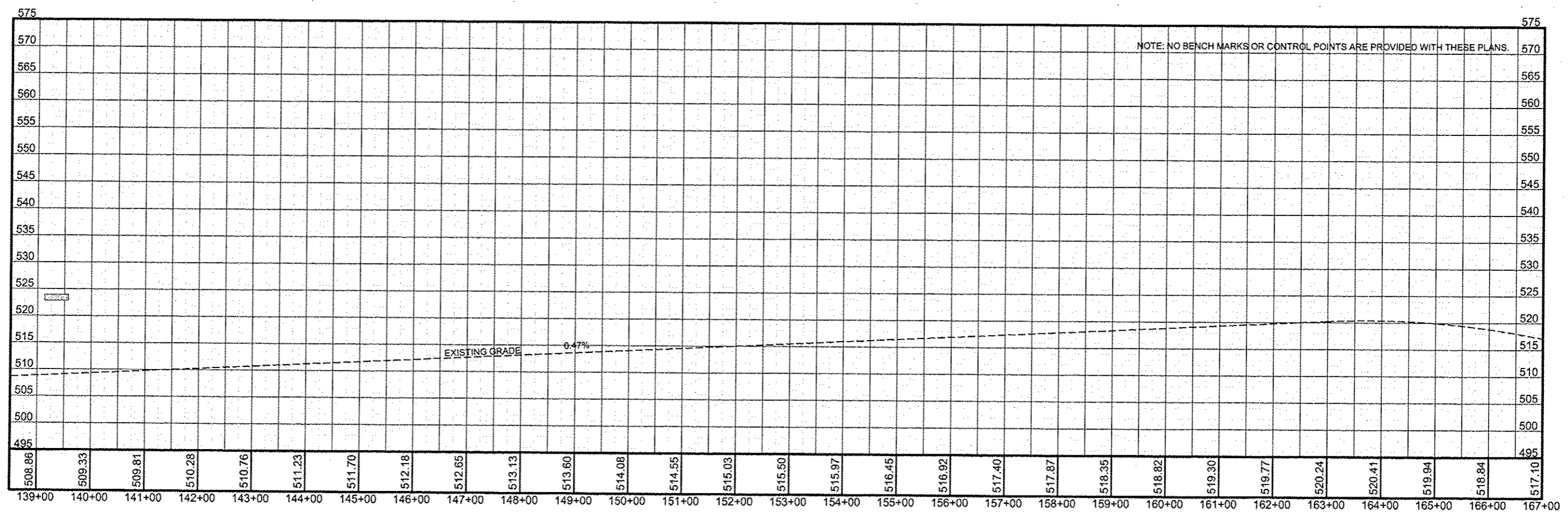
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128-00-RS	HANCOCK	15	11
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON BOARD	

CONTRACT NO. 93703



ILLINOIS DEPARTMENT OF NATURAL RESOURCES

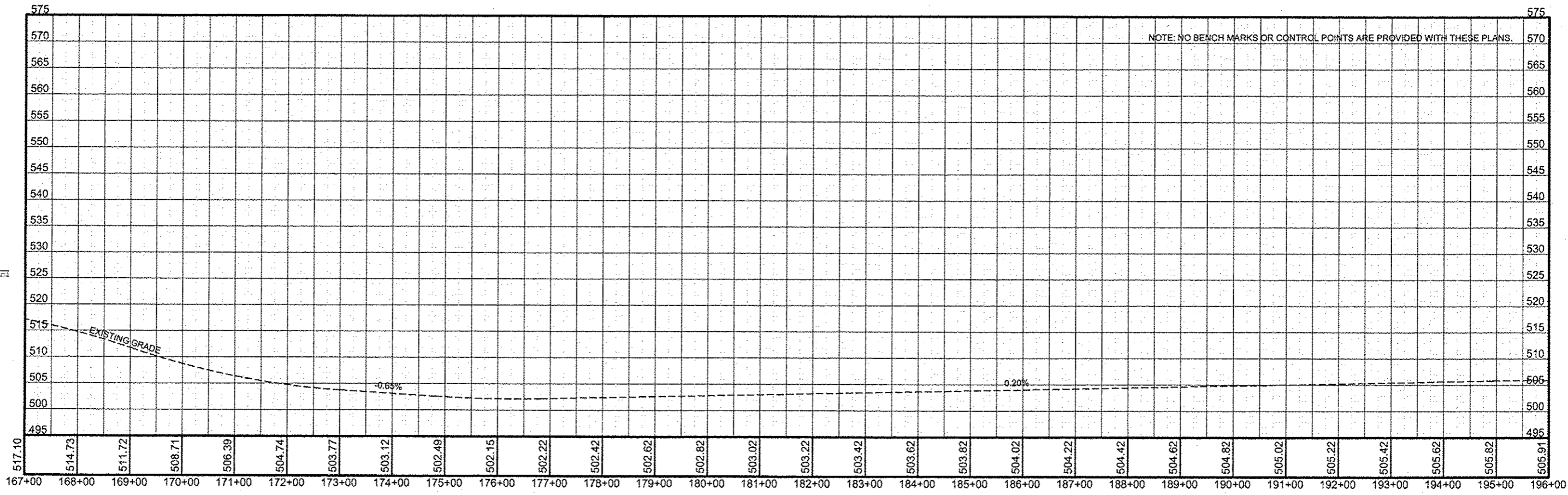
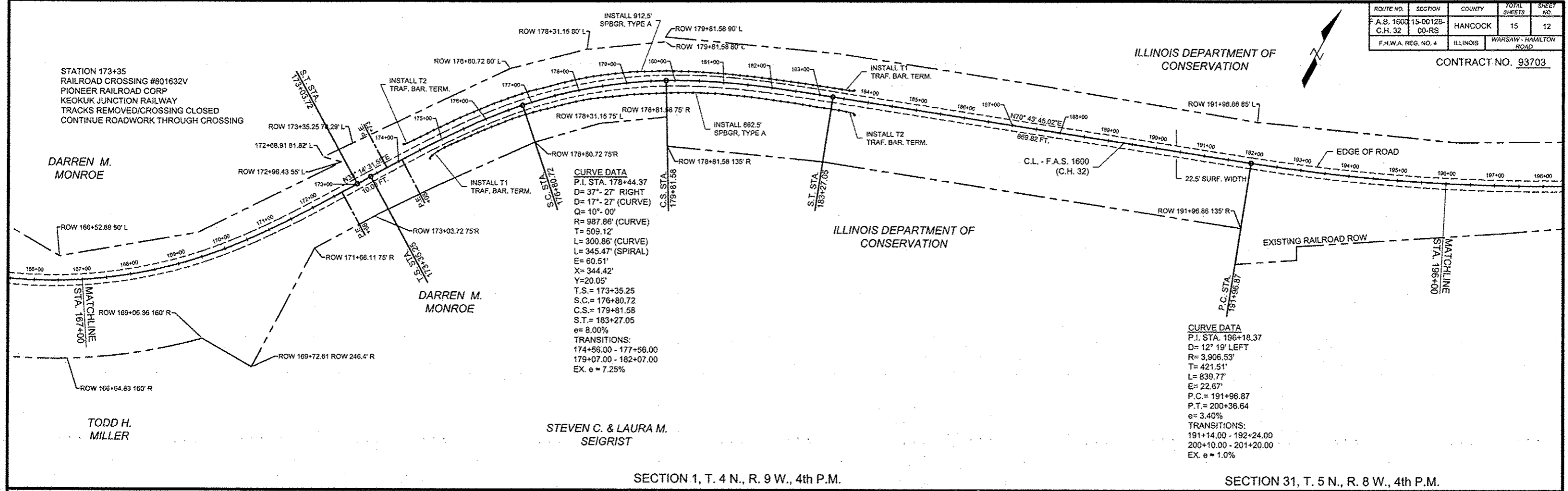
SECTION 2, T. 4 N., R. 9 W., 4th P.M.



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128-C.H. 32	HANCOCK	15	12
F.H.W.A. REG. NO. 4	ILLINOIS	WARSAW - HAMILTON ROAD		

CONTRACT NO. 93703

ILLINOIS DEPARTMENT OF CONSERVATION



ILLINOIS DEPARTMENT OF CONSERVATION

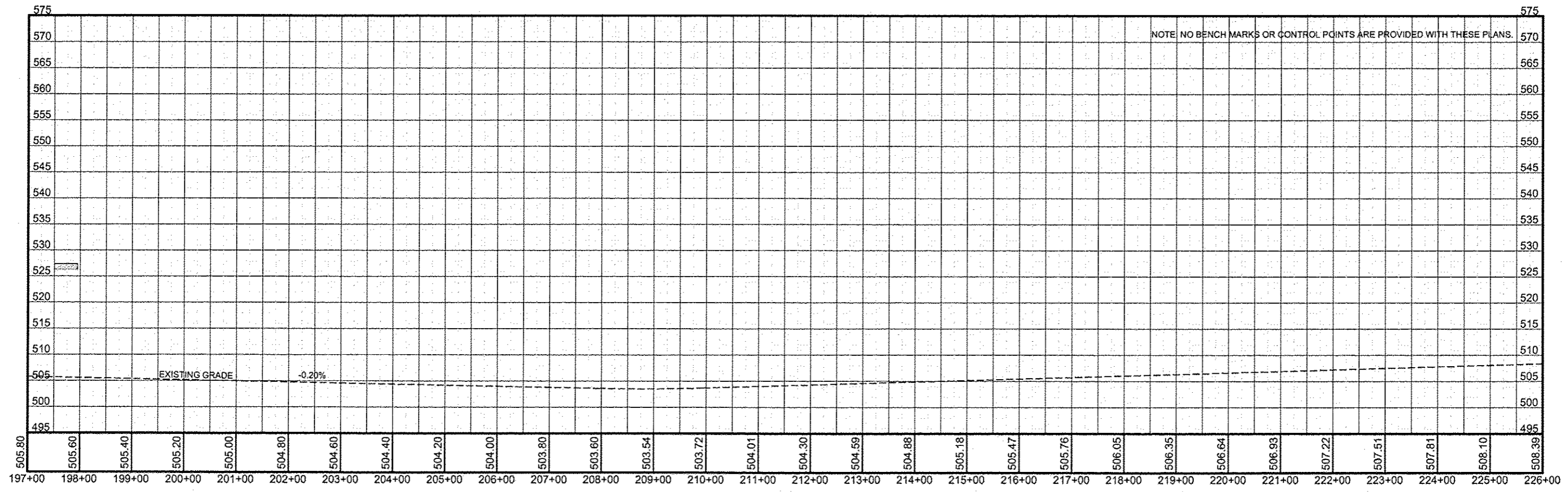
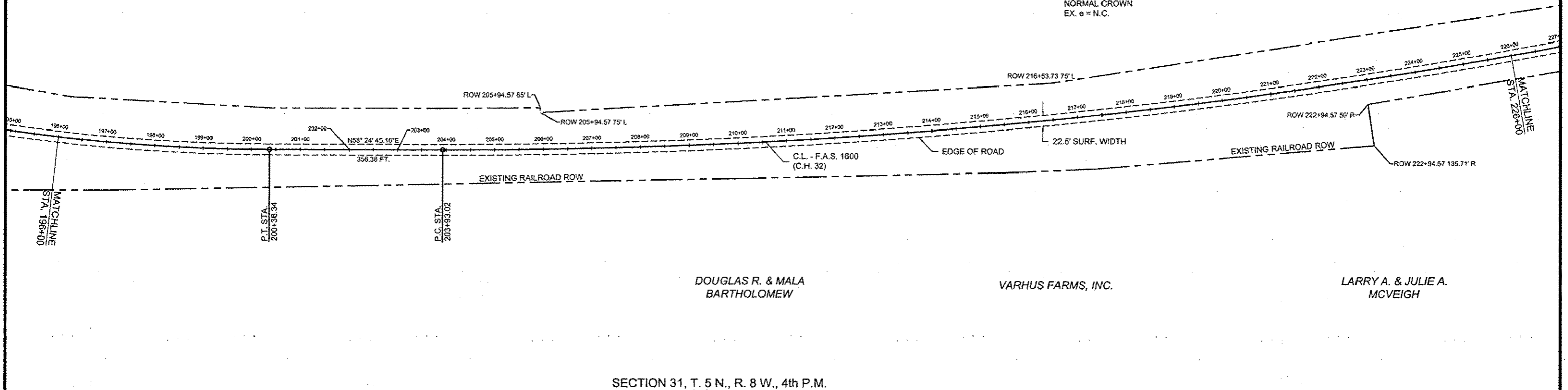
ILLINOIS DEPARTMENT OF NATURAL RESOURCES

CURVE DATA
 P.I. STA. 216+58.18
 D= 11° 46' LEFT
 R= 12,277.67'
 T= 1,265.16'
 L= 2,521.43'
 E= 65.01'
 P.C.= 203+93.02
 P.T.= 229+14.45
 NORMAL CROWN
 EX. @ = N.C.

GARY W. JACOBS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128-	HANCOCK	15	13
C.H. 32	00-RS			
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

CONTRACT NO. 93703

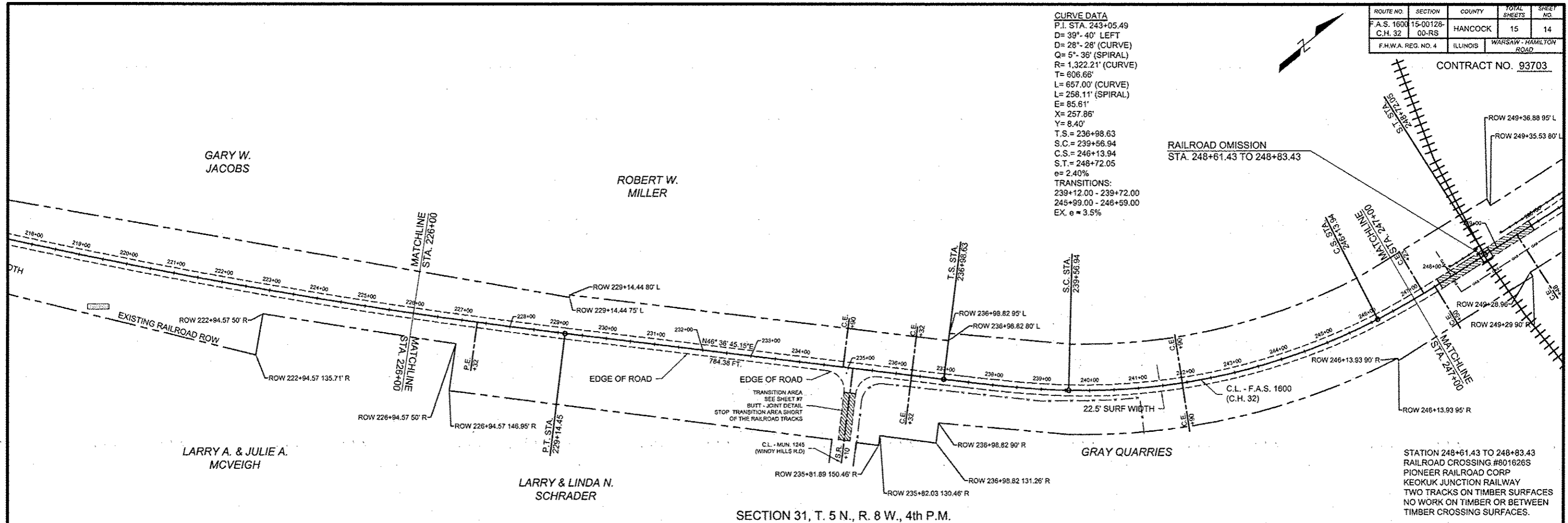


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128-00-RS	HANCOCK	15	14
F.H.W.A. REG. NO. 4		ILLINOIS	WARSAW - HAMILTON ROAD	

CONTRACT NO. 93703

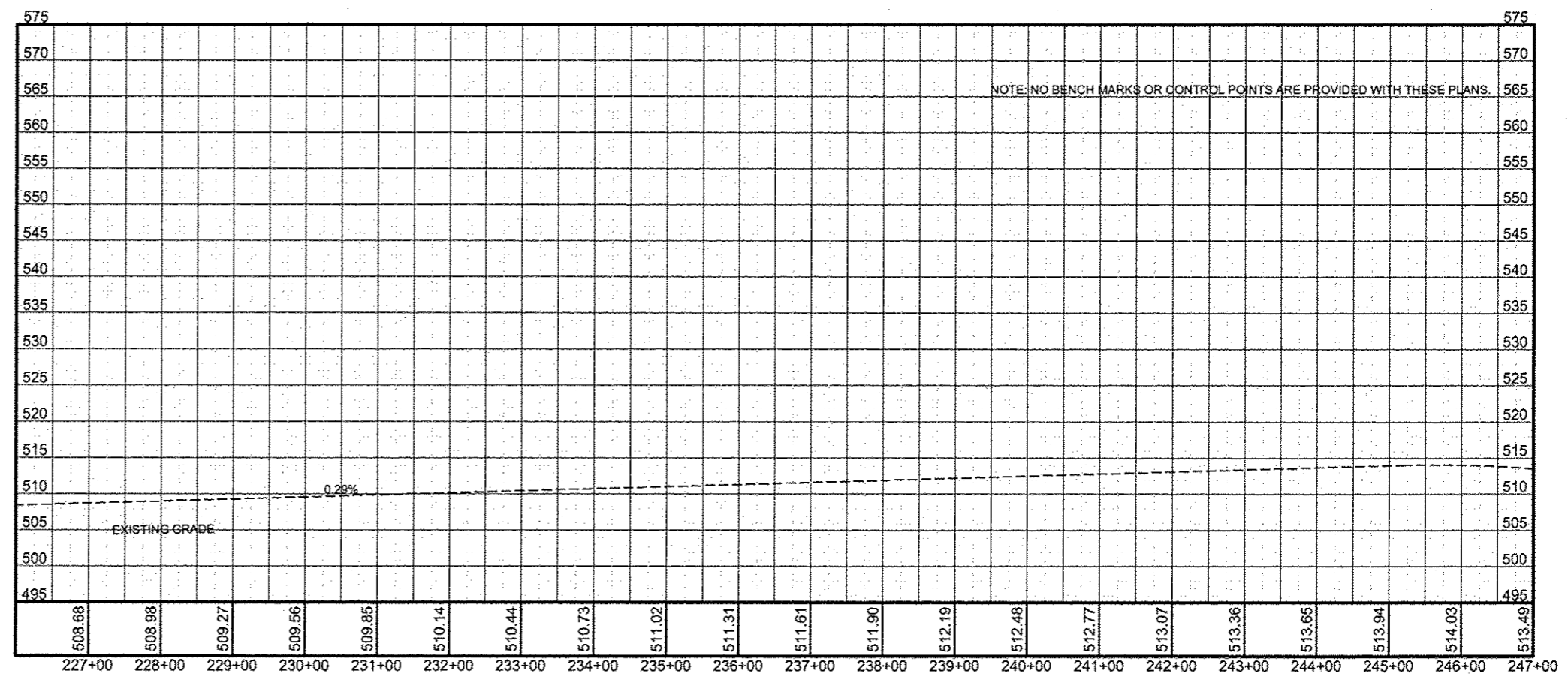
CURVE DATA
 P.I. STA. 243+05.49
 D= 39'- 40" LEFT
 D= 28'- 28" (CURVE)
 Q= 5'- 36" (SPIRAL)
 R= 1,322.21' (CURVE)
 T= 806.66'
 L= 657.00' (CURVE)
 L= 258.11' (SPIRAL)
 E= 85.61'
 X= 257.86'
 Y= 8.40'
 T.S.= 236+98.63
 S.C.= 239+56.94
 C.S.= 246+13.94
 S.T.= 248+72.05
 e= 2.40%
 TRANSITIONS:
 239+12.00 - 239+72.00
 245+99.00 - 246+59.00
 EX. e = 3.5%

RAILROAD OMISSION
 STA. 248+61.43 TO 248+83.43



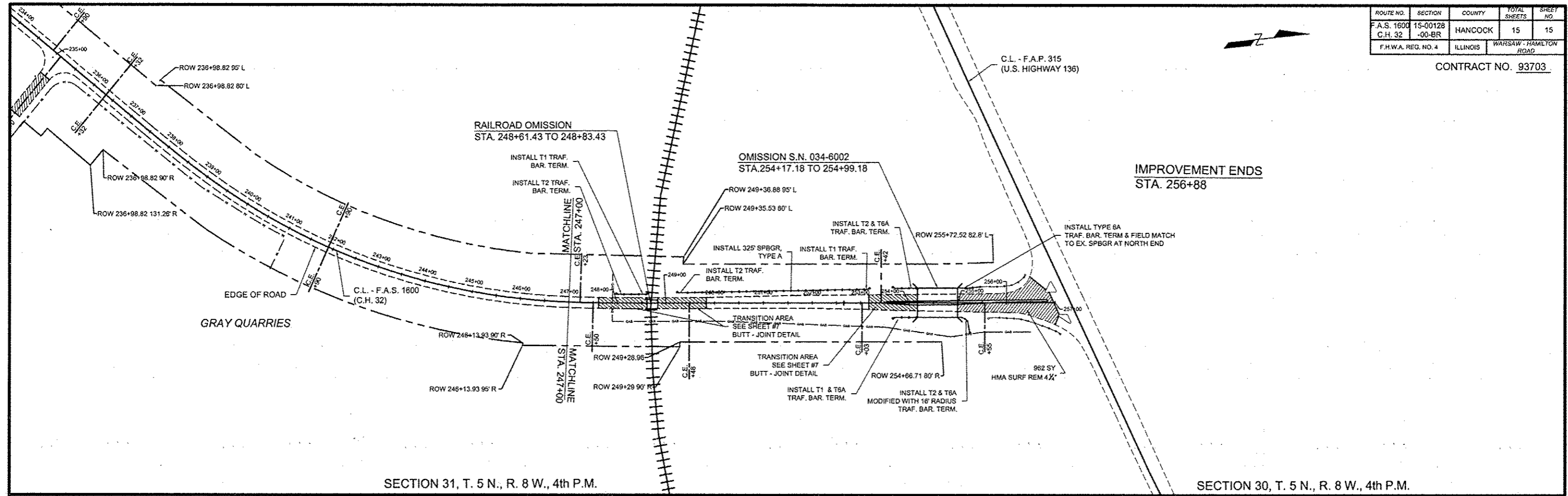
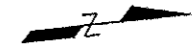
SECTION 31, T. 5 N., R. 8 W., 4th P.M.

STATION 248+61.43 TO 248+83.43
 RAILROAD CROSSING #801626S
 PIONEER RAILROAD CORP
 KEOKUK JUNCTION RAILWAY
 TWO TRACKS ON TIMBER SURFACES
 NO WORK ON TIMBER OR BETWEEN
 TIMBER CROSSING SURFACES.



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1600	15-00128	HANCOCK	15	15
C.H. 32	-00-BR			
F.H.W.A. REG. NO. 4	ILLINOIS	WARSAW - HAMILTON ROAD		

CONTRACT NO. 93703



SECTION 31, T. 5 N., R. 8 W., 4th P.M.

SECTION 30, T. 5 N., R. 8 W., 4th P.M.

