

STATE OF ILLINOIS
WINNEBAGO COUNTY HIGHWAY DEPARTMENT
 PLANS FOR PROPOSED FEDERAL AID URBAN IMPROVEMENT

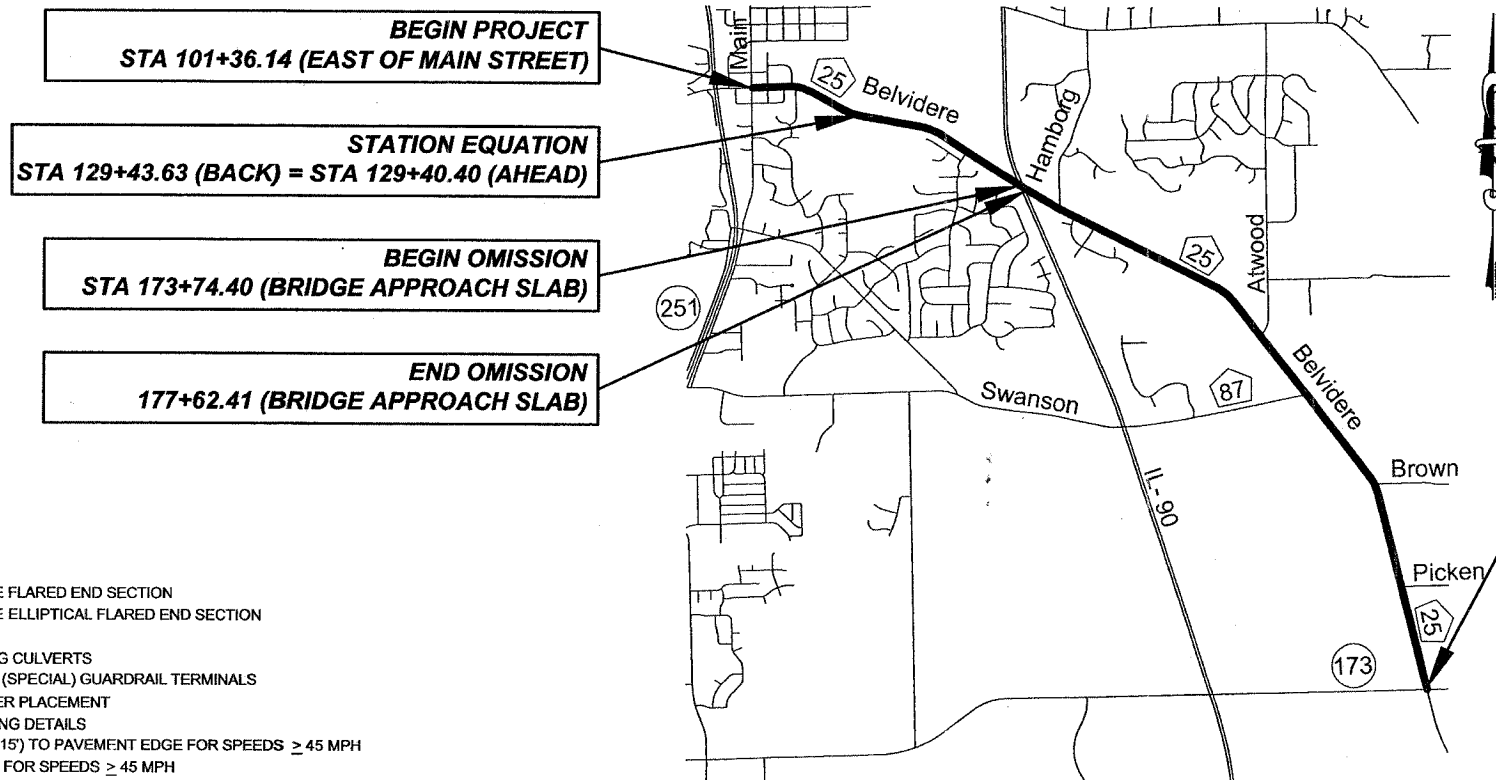
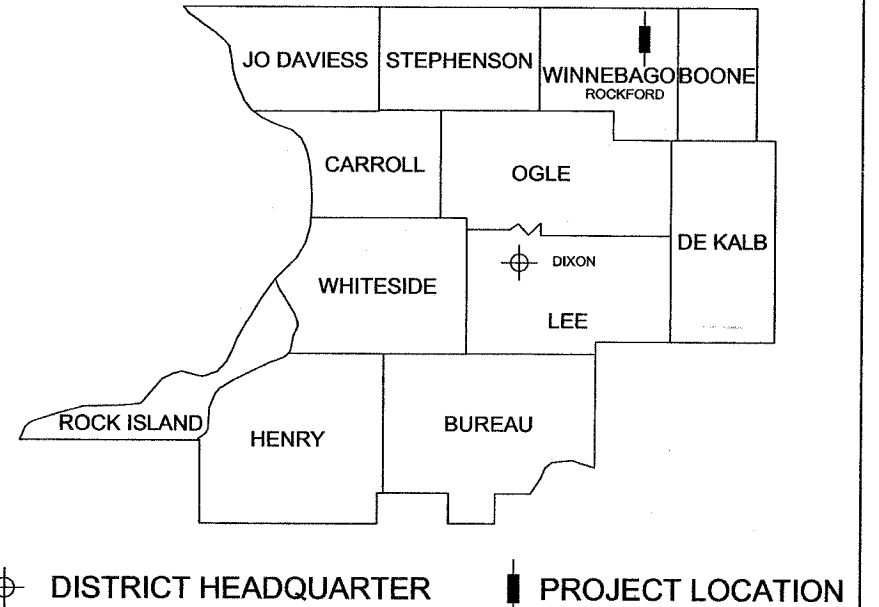


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FAU ROUTE 9884
FAS ROUTE 2043
SECTION: 04-00338-00-RS
PROJECT NO.: AC-RS-2043(103)

RESURFACING ON BELVIDERE ROAD (C.H. 25)
 JOB NO.: C-92-076-05
 CONTRACT NO.: 85400



STANDARDS

STAND. NO. STAND. NAME

542301-01	PRECAST REINFORCED CONCRETE FLARED END SECTION
542306-01	PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION
630001-07	STEEL PLATE BEAM GUARDRAIL
630101-07	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701006-02	OFF-RD OPERATIONS 2L, 2W 4.5M (15') TO PAVEMENT EDGE FOR SPEEDS ≥ 45 MPH
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701501-03	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
702001-06	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
B.L.R. 23-1	TRAFFIC BARRIER TERMINAL TYPE 1
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001	TELESCOPING STEEL SIGN SUPPORT
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

ADT: 3,200 (2007) 10% TRUCKS
COLLECTOR
DESIGN SPEED: 35 MPH & 55 MPH
3R POLICY

SCALES:	
CROSS-SECTIONS	PLAN & PROFILE
FULL SIZE	FULL SIZE
HORIZONTAL: 1" = 20'	HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'	VERTICAL: 1" = 10'
1/4 SIZE	1/4 SIZE
HORIZONTAL: 1" = 40'	HORIZONTAL: 1" = 100'
VERTICAL: 1" = 20'	VERTICAL: 1" = 20'

BELVIDERE ROAD: 25,009.22 FT = 4.74 MILES
 BELVIDERE ROAD OMISSION (I-90 OVERPASS): 388.01 FT = 0.07 MILES
 TOTAL LENGTH OF IMPROVEMENTS = 24,621.21 FT = 4.66 MILES

CALL J.U.L.I.E.
BEFORE YOU DIG
 1-800-892-0123

ROSCOE TWP (T46N- R2E)
 SEC. - 33
 HARLEM TWP (T45N - R2E)
 SEC. 02, 03, 04, 11, 12, 13

THESE PLANS PREPARED BY:
WINNEBAGO COUNTY HIGHWAY DEPARTMENT

APPROVED: *Joseph A. Vandeweyer* 20 06
 WINNEBAGO COUNTY ENGINEER

PASSED: *Joseph E. Crowe* 20 06
 DISTRICT 2 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW: *Joseph E. Crowe* 20 06
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER

GENERAL NOTES

GENERAL NOTES AND CONDITIONS

The scale shown on the drawings applies only to the full size plans and not reduced size plans.

The Contractor shall field verify the elevations of the benchmarks prior to commencing work. The Contractor shall also field verify location, elevation and size of existing work. The contractor shall field verify horizontal control by referencing shown coordinates to known property lines. Notify the Engineer of discrepancies in either vertical or horizontal control prior to proceeding with work.

UTILITIES

Exact horizontal and vertical locations of existing utilities shall be determined by the Contractor at no additional cost to the contract. Locations and depths shown on these plans are only schematic representation.

Abandoned underground utilities that conflict with construction or have the potential for creating future problems shall be disposed of outside the limits of the right-of-way according to Article 202.03 of the standard specifications and as directed by the Engineer. This work will not be paid for separately but shall be considered incidental no additional compensation will be allowed.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. The phone number for J.U.L.I.E. is 800-892-0123. The utilities located within the project limits or immediately adjacent to the project construction limits are members of J.U.L.I.E.

ComEd
123 Energy Avenue
Rockford, IL 61109
Phone - (815) 490-2869

North Park Water District
1350 Turret Drive
Machesney Park, IL 61115
Phone - (815) 633-5461

Charter Communications
1348 Plainfield Ave.
Janesville, WI 53547
Phone - (608) 373-7537

Rock River Water Reclamation Dist.
3333 Kishwaukee
Rockford, IL 61109
Phone - (815) 387-7663

McCleod USA
900 Commerce Drive
Oakbrook, IL 60523
Phone - (630) 570-5174

SBC
301 E. Milwaukee St.
Janesville, WI 53545
Phone - (608) 755-5589

Nicor
300 West Terra Cotta
Crystal Lake, IL 60014
Phone - (815) 455-0271

Verizon
2239 Newburg Road
Belvidere, IL 61008
Phone - (815) 544-3721

PAVING AND DRAINAGE NOTES

The Contractor is responsible for maintaining positive drainage at the conclusion of each working day.

The Contractor shall use care in grading or excavating near any and all existing items which are not indicated to be removed. Any damage done to existing items by the Contractor's operations shall be repaired at no additional expense to the owner.

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be a cohesive soil capable of supporting vegetation.

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, monuments and right-of-way pins until the owner, an authorized surveyor, or agent has been witnessed or otherwise referenced their location.

To help avoid excess drop offs at the edge of pavement, the existing aggregate wedge or shoulder, including all private entrances and gravel side road approaches shall be pulled up and rolled to match the edge of the pavement, as directed by the Engineer, prior to placing any Hot-Mix Asphalt. All costs associated with pulling up shoulders and rolling shall be considered to be included in the contract unit price per TON for INCIDENTAL HOT-MIX ASPHALT SURFACING.

SEEDING

The Contractor shall seed all disturbed areas within the project limits. The cost of this work will be considered incidental to the various drainage items and no additional compensation will be allowed.

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: I000

ITEM NUMBER	ITEMS	UNIT	QUANTITY
20400400	BORROW EXCAVATION FURNISHED BY THE CONTRACTOR	CY	1,200.00
20800150	TRENCH BACKFILL	CY	35.00
21400100	GRADING AND SHAPING DITCHES	FT	691.00
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	35.10
40600300	AGGREGATE (PRIME COAT)	TON	197.50
40600525	LEVELING BINDER (HAND METHOD), N50	TON	100.00
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	814.30
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SY	1,406.70
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	7,572.60
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	6,453.20
40600990	TEMPORARY RAMP	SY	279.70
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	893.60
48101200	AGGREGATE SHOULDERS, TYPE B	TON	9,672.90
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1.00
54200469	PIPE CULVERTS, TYPE 1 RCCP 54"	FT	64.00
54205065	PIPE CULVERTS, SPECIAL 30"	FT	19.00
54205071	PIPE CULVERTS, SPECIAL 36"	FT	16.00
54213675	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EA	2.00
54213699	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 54"	EA	2.00
54214725	PRECAST REINFORCED CONCRETE FLARED END SECTIONS - ELLIPTICAL, EQUIVALENT ROUND-SIZE 30"	EA	2.00
54214731	PRECAST REINFORCED CONCRETE FLARED END SECTIONS - ELLIPTICAL, EQUIVALENT ROUND-SIZE 36"	EA	4.00
54247200	GRATING FOR CONCRETE FLARED END SECTION 54"	EA	2.00
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FT	450.00
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EA	8.00
63200310	GUARDRAIL REMOVAL	FT	548.00
63301000	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	FT	562.50
67100100	MOBILIZATION	L SUM	1.00
70103700	TRAFFIC CONTROL COMPLETE	L SUM	1.00
70300100	SHORT-TERM PAVEMENT MARKING	FT	6,800.00
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SF	2,267.00
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FT	81,889.00
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FT	168.00
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EA	320.00
78201000	TERMINAL MARKER - DIRECT APPLIED	EA	8.00
78200455	BIDIRECTIONAL GUARD RAIL REFLECTORS	EA	16.00
Z0055500	RUMBLE STRIP	SF	825.00

* SPECIALTY ITEMS

NOTE:

A quantity for leveling binder (hand method), N50 has been included in the summary of quantities. The Engineer will determine in the field any locations where this item is necessary.

A quantity for borrow excavation furnished by the contractor has been included to be used from STA 109+07 to STA 116+04. This material is to be used to adjust the roadside slope on the low side of the superelevation correction. The final four inches of this material shall be topsoil. This quantity is not intended to be used at the culvert extensions. See the special provisions.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		TREE
		UTILITY POLE
		ELECTRIC LINE
		ELECTRIC PED/TRANS
		GAS LINE
		GAS VALVE
		TELEPHONE LINE
		TELEPHONE PEDESTAL
		TELEPHONE VAULT
		WATER LINE
		WATER VALVE
		FIRE HYDRANT
		SANITARY SEWER
		GUARD RAIL
		CONCRETE END SECTION
		METAL END SECTION
		RIGHT-OF-WAY
		DITCH FLOW
		INLET PROTECTION
		PERIMETER EROSION BARRIER
		TEMPORARY DITCH CHECK
		SIGN
		SIGNAL POST
		MAST ARM
		HANDHOLE
		HEAVY DUTY HANDHOLE
		SIGNAL CONTROLLER



BITUMINOUS MATERIALS (PRIME COAT)

BELVIDERE ROAD

STA	AREA (SY)	RATE (GAL/SY)	DENSITY (LB/GAL)	NUMBER APPLICATIONS	BIT MATLS PR CT (TONS)
101+36 - 173+74	19,310.60	0.06	8.40	2.00	9.7
177+62 - 351+42	46,537.91	0.06	8.40	2.00	23.5
DRIVES & STREETS	7,704.96	0.06	8.40	1.00	1.9
Total					35.1

AGGREGATE (PRIME COAT)

BELVIDERE ROAD

STA	AREA (SY)	RATE (LB/SY)	NUMBER APPLICATIONS	BIT MATLS PR CT (TONS)
101+36 - 173+74	19,310.60	3.00	2.00	57.9
177+62 - 351+42	46,537.91	3.00	2.00	139.6
Total				197.5

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT (SY)

BELVIDERE ROAD

STA	O/S	TYPE	BITUM SURF REMOV (SY)
101+36.14	N/A	MAINLINE	100.0
101+61	Rt	P.E.	11.1
102+71	Rt	P.E.	5.6
104+02	Rt	STREET	24.4
104+07	Lt	STREET	28.9
107+25	Lt	P.E.	10.0
108+12	Rt	STREET	17.8
110+16	Lt	STREET	24.4
111+24	Rt	STREET	25.6
127+21	Rt	P.E.	5.6
128+23	Rt	P.E.	6.7
144+80	Rt	P.E.	5.6
148+00	Lt	P.E.	5.6
152+41	Lt	P.E.	10.0
158+72	Rt	STREET	26.7
159+75	Lt	P.E.	11.1
162+16	Lt	P.E.	13.3
164+57	Rt	P.E.	8.9
173+74.40	N/A	MAINLINE	160.0
177+62.41	N/A	MAINLINE	160.0
186+38	Rt	P.E.	4.4
186+44	Lt	STREET	53.3
191+06	Rt	STREET	26.7
194+90	Lt	P.E.	5.6
196+76	Rt	STREET	26.7
200+66	Lt	P.E.	5.6
201+68	Lt	P.E.	21.7
205+25	Lt	P.E.	5.6
207+62	Lt	P.E.	5.6
217+25	Rt	P.E.	6.7

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT (SY)

BELVIDERE ROAD

STA	O/S	TYPE	BITUM SURF REMOV (SY)
241+73	Lt	P.E.	8.3
248+82	Lt	STREET	41.1
267+92	Rt	STREET	51.1
284+21	Rt	P.E.	6.7
286+97	Lt	P.E.	6.7
287+82	Lt	P.E.	6.7
292+84	Lt	P.E.	6.7
296+51	Rt	P.E.	6.7
297+29	Lt	STREET	28.9
299+40	Rt	P.E.	6.7
301+54	Lt	P.E.	6.7
303+05	Lt	P.E.	6.7
305+17	Lt	P.E.	6.7
306+91	Rt	P.E.	6.7
310+77	Lt	P.E.	6.7
315+25	Lt	P.E.	6.7
324+41	Lt	STREET	26.7
326+95	Rt	P.E.	6.7
329+89	Rt	P.E.	7.8
351+42.13	N/A	MAINLINE	333.3
Total			1,406.7

LEVELING BINDER (MACHINE METHOD), N50

BELVIDERE ROAD

STA	LEV BIND MM N50 (TON)
109+07.79 TO 116+04.67	587.7
123+17.33 TO 130+78.40	0.0
143+74.74 TO 152+44.11	0.0
182+86.99 TO 188+34.03	125.8
230+28.63 TO 239+48.41	0.0
292+86.71 TO 301+62.90	100.8
Total	814.3

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

BELVIDERE ROAD

STA	HMA BC IL-19.0 N50 (TON)
101+36.14 TO 173+74.40	2,220.7
177+62.41 TO 351+42.13	5,351.9
Total	7,572.6

HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50

BELVIDERE ROAD

STA	HMA SC "D" N50 (TON)
101+36.14 TO 173+74.40	1,892.4
177+62.41 TO 351+42.13	4,560.7
Total	6,453.2

TEMPORARY RAMP

BELVIDERE ROAD

STA	O/S	TYPE	TEMPORARY RAMP (SY)
101+36.14	N/A	MAINLINE	10.7
104+02	Rt	STREET	9.8
104+07	Lt	STREET	11.6
108+12	Rt	STREET	7.1
110+16	Lt	STREET	9.8
111+24	Rt	STREET	10.2
158+72	Rt	STREET	10.7
173+74.40	N/A	MAINLINE	21.4
177+62.41	N/A	MAINLINE	21.4
186+44	Lt	STREET	21.3
191+06	Rt	STREET	10.7
196+76	Rt	STREET	10.7
248+82	Lt	STREET	16.4
267+92	Rt	STREET	20.4
297+29	Lt	STREET	11.6
324+41	Lt	STREET	10.7
351+42.13	N/A	MAINLINE	65.3
Total			279.7

INCIDENTAL BITUMINOUS SURFACING (TONS)

BELVIDERE ROAD

STA	O/S	TYPE	INCIDENTAL BIT SURF (TONS)
101+61	Rt	P.E.	15.7
102+71	Rt	P.E.	6.1
104+02	Rt	STREET	12.9
104+07	Lt	STREET	16.3
105+90	Lt	P.E.	7.7
107+25	Lt	P.E.	10.8
108+12	Rt	STREET	11.8
110+16	Lt	STREET	15.3
110+24	Rt	P.E.	7.0
111+24	Rt	STREET	14.7
114+21	Rt	P.E.	7.5
115+70	Rt	P.E.	9.4
115+72	Lt	F.E.	8.6
116+32	Rt	P.E.	8.6
127+11	Lt	F.E.	10.4
127+21	Rt	P.E.	7.8
128+23	Rt	P.E.	7.0
130+66	Lt	P.E.	8.3
131+62	Lt	P.E.	11.1
135+47	Lt	F.E.	7.1
142+58	Rt	P.E.	7.2
143+27	Lt	P.E.	12.9
144+66	Lt	MAILBOX	6.6
144+80	Rt	P.E.	7.2
148+00	Lt	P.E.	10.4
151+15	Rt	F.E.	7.2
152+41	Lt	P.E.	19.7
158+72	Rt	STREET	18.4
158+76	Lt	P.E.	11.8
159+75	Lt	P.E.	10.0
162+16	Lt	P.E.	24.9
164+64	Lt	MAILBOX	7.2
164+57	Rt	P.E.	11.7
166+54	Lt	MAILBOX	7.1
186+38	Rt	P.E.	9.1
186+44	Lt	STREET	25.4
191+06	Rt	STREET	13.6

INCIDENTAL BITUMINOUS SURFACING (TONS)

BELVIDERE ROAD

STA	O/S	TYPE	INCIDENTAL BIT SURF (TONS)
194+90	Lt	P.E.	9.9
196+76	Rt	STREET	14.3
200+66	Lt	P.E.	11.0
201+68	Lt	P.E.	15.3
205+25	Lt	P.E.	12.0
207+62	Lt	P.E.	9.8
211+73	Rt	F.E.	8.6
213+67	Lt	P.E.	10.9
217+25	Rt	P.E.	10.5
224+09	Rt	F.E.	7.2
225+10	Lt	F.E.	7.2
241+73	Lt	P.E.	12.9
241+96	Rt	F.E.	7.2
247+18	Rt	P.E.	7.2
248+82	Lt	STREET	25.4
262+00	Rt	F.E.	7.2
263+42	Lt	F.E.	7.1
267+92	Rt	STREET	26.5
267+93	Lt	P.E.	7.2
275+32	Rt	F.E.	7.2
280+40	Rt	P.E.	13.6
282+80	Lt	P.E.	7.9
282+90	Rt	MAILBOX	6.6
284+21	Rt	P.E.	7.2
285+78	Rt	MAILBOX	6.6
286+97	Lt	P.E.	7.2
287+77	Rt	MAILBOX	6.6
287+82	Lt	P.E.	7.2
292+84	Rt	MAILBOX	6.6
296+51	Rt	P.E.	15.1
296+70	Lt	F.E.	7.2
297+29	Lt	STREET	16.3
299+40	Rt	P.E.	10.1
301+54	Lt	P.E.	7.2
302+89	Rt	MAILBOX	6.6
303+05	Lt	P.E.	7.2
304+99	Rt	MAILBOX	6.6
305+17	Lt	P.E.	7.2
306+88	Rt	MAILBOX	6.6
306+91	Rt	P.E.	7.2
309+75	Lt	F.E.	7.2
310+75	Rt	MAILBOX	6.6
310+77	Lt	P.E.	7.2
315+25	Lt	P.E.	7.2
315+27	Rt	MAILBOX	6.6
316+37	Rt	F.E.	7.2
324+41	Lt	STREET	13.7
326+95	Rt	P.E.	7.3
329+90	Rt	P.E.	10.7
340+29	Lt	F.E.	7.2
Total			893.6

AGGREGATE SHOULDERS, TYPE B

BELVIDERE ROAD

STA	AGGREGATE SHOULDERS, TYPE B (TON)
101+36.14 TO 104+02	51.7
104+02 TO 156+72 (Applegate Road)	2,049.4
156+72 TO 191+06 (Hawthorne Ridge)	1,335.4
191+06 TO 248+82 (Atwood Road)	2,246.2
248+82 TO 267+92 (Swanson Road)	742.8
267+92 TO 297+29 (Brown Road)	1,142.2
297+29 TO 351+42.13 (IL-RTE 173)	2,105.1
Total	9,672.9



**REMOVAL OF EXISTING STRUCTURES
NO. 1**

BELVIDERE ROAD		
STA	OFFSET	EACH
296+18	X-OVER	1.00
Total		1.00

PIPE CULVERTS, TYPE 1 RCCP 34"

BELVIDERE ROAD		
STA	OFFSET	FT
296+18	X-OVER	64.00
Total		64.00

**PRECAST REINFORCED CONCRETE
FLARED END SECTIONS 54"**

BELVIDERE ROAD		
STA	OFFSET	EA
296+13.81	RT	1.00
296+21.11	LT	1.00
Total		2.00

PIPE CULVERTS, SPECIAL 30"

BELVIDERE ROAD			
STA	OFFSET	30" RCCP (FT)	30" RC-EQRS (FT)
112+00.64	RT		3.00
112+00.64	LT		4.00
117+10.39	RT	4.00	
117+10.40	LT	8.00	
Total		12.00	7.00

**PRECAST REINFORCED CONCRETE
FLARED END SECTIONS 30"**

BELVIDERE ROAD		
STA	OFFSET	EA
117+10.39	RT	1.00
117+10.39	LT	1.00
Total		2.00

**PRECAST REINFORCED CONCRETE
FLARED END SECTIONS - ELLIPTICAL,
EQUIVALENT ROUND-SIZE 30"**

BELVIDERE ROAD		
STA	OFFSET	EA
112+00.64	RT	1.00
112+00.64	LT	1.00
Total		2.00

PIPE CULVERTS, SPECIAL 36"

BELVIDERE ROAD		
STA	OFFSET	36" RC-EQRS (FT)
337+55.72	RT	4.00
337+55.25	LT	4.00
346+61.04	RT	4.00
346+59.72	LT	4.00
Total		16.00

**PRECAST REINFORCED CONCRETE
FLARED END SECTIONS - ELLIPTICAL,
EQUIVALENT ROUND-SIZE 36"**

BELVIDERE ROAD		
STA	OFFSET	EA
337+55.72	RT	1.00
337+55.25	LT	1.00
346+61.04	RT	1.00
346+59.72	LT	1.00
Total		4.00

**STEEL PLATE BEAM GUARD RAIL,
TYPE A**

BELVIDERE ROAD		
STA	OFFSET	FT
212+78 TO 213+78	RT	87.50
215+83 TO 216+58	LT	68.75
320+82 TO 321+82	RT	175.00
322+96 TO 323+59	LT	118.75
Total		450.00

**TRAFFIC BARRIER TERMINAL
TYPE 1, SPECIAL (TANGENT)**

BELVIDERE ROAD		
STA	OFFSET	EA
212+43 TO 212+93	RT	1.00
213+87 TO 214+37	LT	1.00
215+40 TO 215+90	RT	1.00
216+47 TO 216+97	LT	1.00
320+14 TO 320+64	RT	1.00
320+82 TO 321+32	LT	1.00
323+45 TO 323+95	RT	1.00
323+59 TO 324+09	LT	1.00
Total		8.00

GUARDRAIL REMOVAL

BELVIDERE ROAD		
STA	OFFSET	FT
111+78 TO 112+36	LT	58.0
111+60 TO 112+18	RT	58.0
116+95 TO 117+48	LT	53.0
116+70 TO 117+23	RT	53.0
295+96 TO 296+53	LT	57.0
295+79 TO 296+38	RT	59.0
337+32 TO 337+85	LT	53.0
337+21 TO 337+74	RT	53.0
346+41 TO 346+93	LT	52.0
346+25 TO 346+77	RT	52.0
Total		548.0

**REMOVE AND RE-ERECT STEEL PLATE
BEAM GUARD RAIL**

BELVIDERE ROAD		
STA	OFFSET	FT
213+78 TO 215+51	RT	175.00
214+10 TO 215+83	LT	175.00
321+82 TO 322+90	RT	106.25
321+88 TO 322+96	LT	106.25
Total		562.5

**TERMINAL MARKER - DIRECT
APPLIED**

BELVIDERE ROAD		
STA	OFFSET	EA
212+43	RT	1.00
213+87	LT	1.00
215+90	RT	1.00
216+97	LT	1.00
320+14	RT	1.00
320+82	LT	1.00
323+95	RT	1.00
324+09	LT	1.00
Total		8.00

**BIDIRECTIONAL GUARD RAIL
REFLECTORS**

BELVIDERE ROAD		
STA	OFFSET	EA
212+43 TO 215+90	RT	4.00
213+87 TO 216+97	LT	4.00
320+14 TO 323+95	RT	4.00
320+82 TO 324+09	LT	4.00
Total		16.00

**THERMOPLASTIC PAVEMENT
MARKING - LINE 4"**

BELVIDERE ROAD	
STA	FT
101+36.14 TO 173+74.40	28,953.00
177+62.41 TO 351+42.13	52,936.00
Total	81,889.00

**THERMOPLASTIC PAVEMENT
MARKING - LINE 24"**

BELVIDERE ROAD	
STA	FT
PEARL STREET	24.00
VINE STREET	12.00
THOMPSON DRIVE	12.00
GENEVA DRIVE	12.00
APPLEGATE ROAD	12.00
HAMBORG ROAD	12.00
HAWTHORNE RIDGE	12.00
COUNTRY KNOLLS DRIVE	12.00
ATWOOD ROAD	12.00
SWANSON ROAD	12.00
BROWN ROAD	12.00
PICKEN ROAD	12.00
IL-173	12.00
Total	168.00

**RAISED REFLECTIVE PAVEMENT
MARKER**

BELVIDERE ROAD	
STA	EA
101+36.14 TO 173+74.40	91.00
177+62.41 TO 351+42.13	229.00
Total	320.00

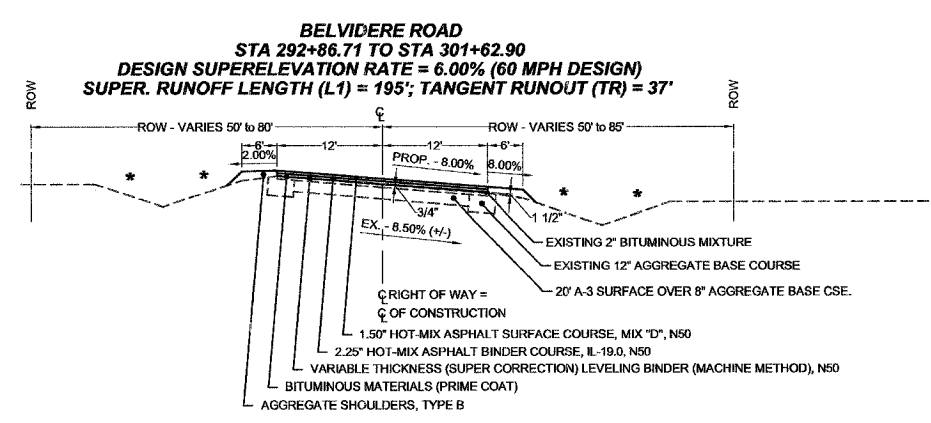
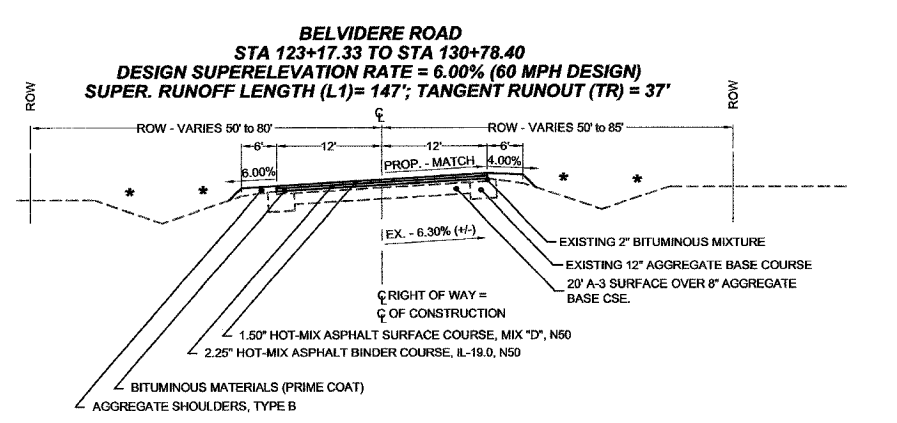
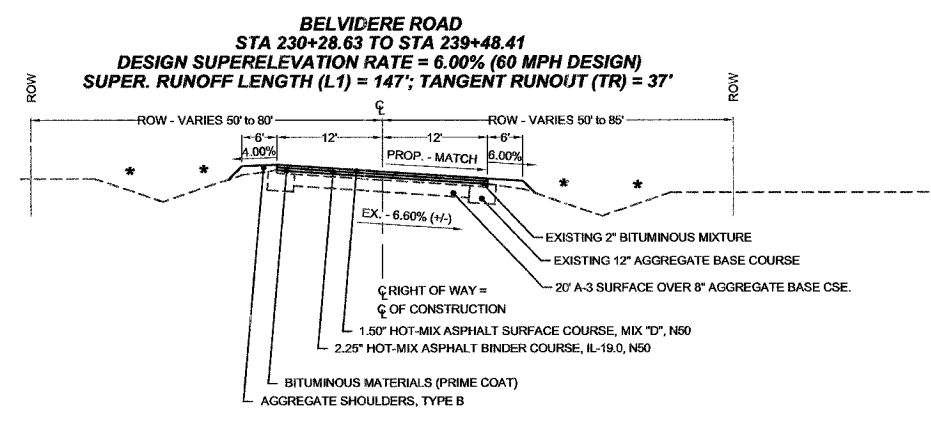
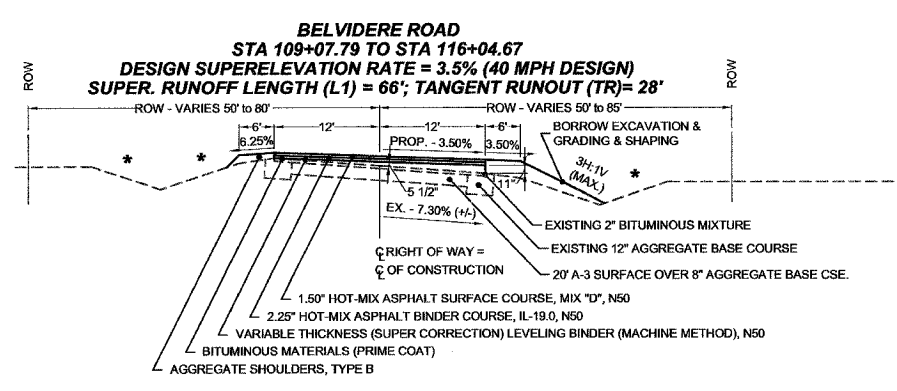
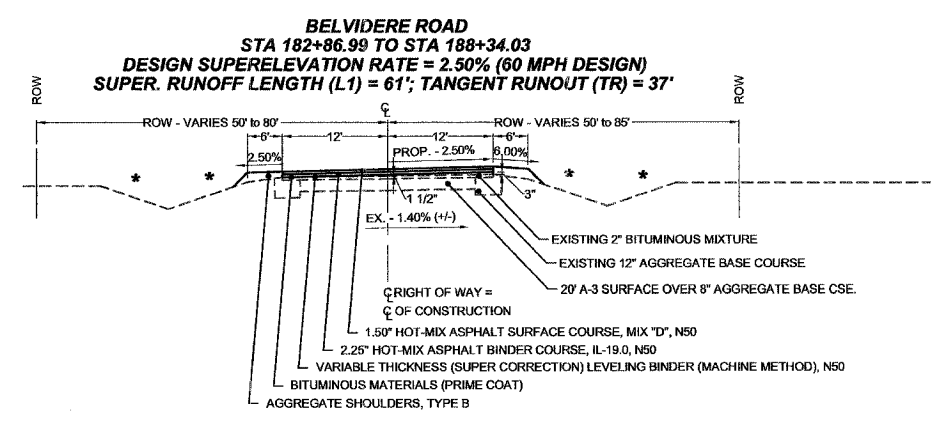
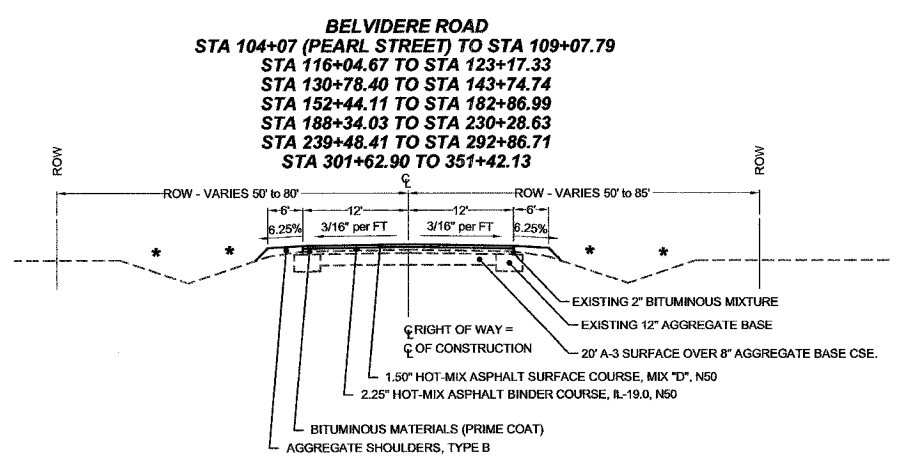
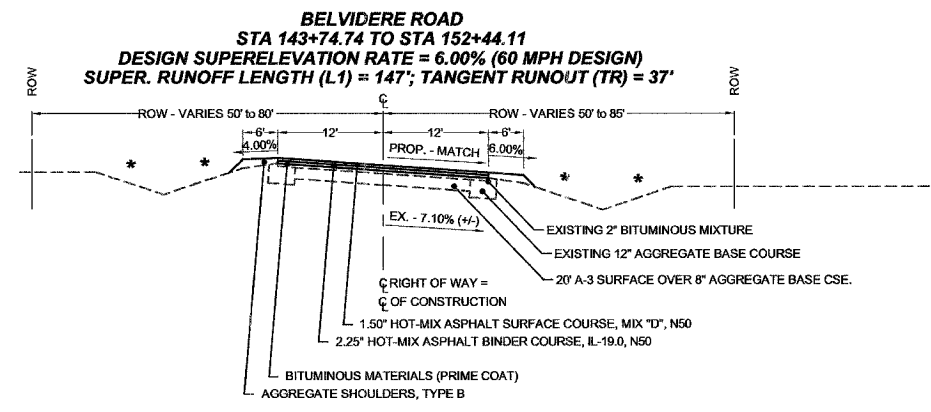
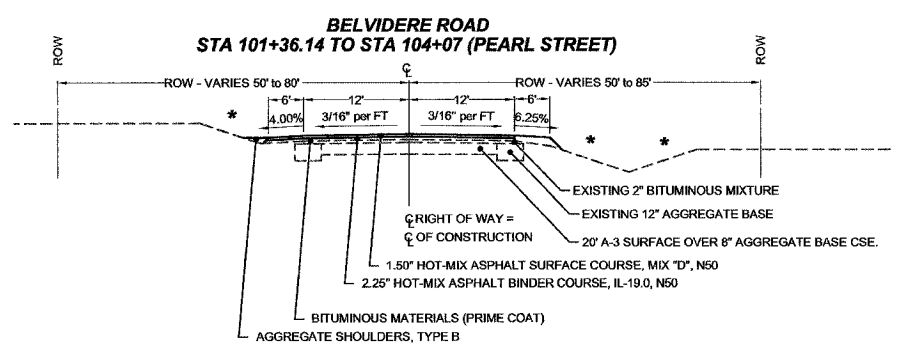
RUMBLE STRIP

BELVIDERE ROAD		
STA	O/S	AREA (SF)
341+98	RT	275.0
346+29	RT	275.0
348+29	RT	275.0
Total		825.0



TYPICAL SECTIONS

PAVEMENT DESIGN

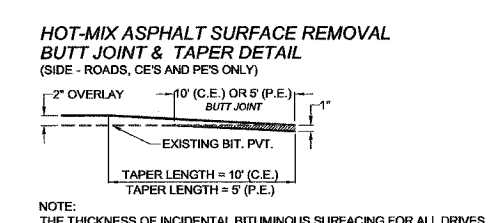
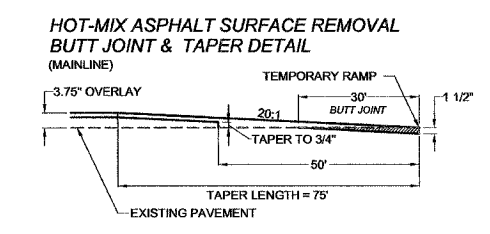


DATE: July 11, 2006
CALCULATIONS BY: Testing Engineers, Inc.
CHECKED BY:
CLASS: II **ROADS AND STREETS**
LIMITS OF ANALYSIS:
STATION: 101+36.14 **TO:** 351+42.13
LENGTH: 25,005.99 FT 4.74 MILES
STRUCTURAL DESIGN TRAFFIC:
ADT: 5500
PV: 4,950
SU: 385
MU: 165

ROUTE: C.H. 25 (Belvidere Road)
SECTION: 04-00338-00-RS
COUNTY: Winnebago
LOCATION: From Main Street (Roscoe) & IL-173
PAVEMENT DESIGN:
SUBGRADE SUPPORT RATING (SSR): Poor (FAIR, POOR, OR GRANULAR)
FLEXIBLE TRAFFIC FACTOR: 1.075
SELECTED DESIGN PG BINDER: PG 58-28
DESIGN PAVEMENT HMA TEMP.: 77 °F
DESIGN HMA MODULUS (E_{AC}): 534 ksi
DESIGN HMA MICROSTRAIN: 105
PAVEMENT THICKNESS: 3.75" in
SUBGRADE: No subgrade improvements expected.
COMMENTS: None

MIXTURE USE (S):	SURFACE	LEVEL BINDER	BINDER
PG:	PG 58-28	PG 58-28	PG 58-22
RAP% (MAX):	15	25	25
DESIGN AIR VOIDS:	4.2 @ N50	4.2 @ N50	4.2 @ N50
MIXTURE COMPOSITION (GRADATION MIXTURE):	IL 9.5 or 12.5	IL 9.5	IL 19.0
FRICTION AGGREGATE:	D	N/A	N/A
20 YEAR ESAL:	1.1	1.1	1.1

DETAILS



NOTE:
THE THICKNESS OF INCIDENTAL BITUMINOUS SURFACING FOR ALL DRIVES SHALL BE 2" MINIMUM UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.
EXISTING AGGREGATE DRIVEWAYS SHALL BE PREPARED USING AGGREGATE BASE, TYPE B TO BRING THE DRIVEWAY TO PROPER WIDTH AND GRADE BEFORE PLACING THE INCIDENTAL BITUMINOUS SURFACING.

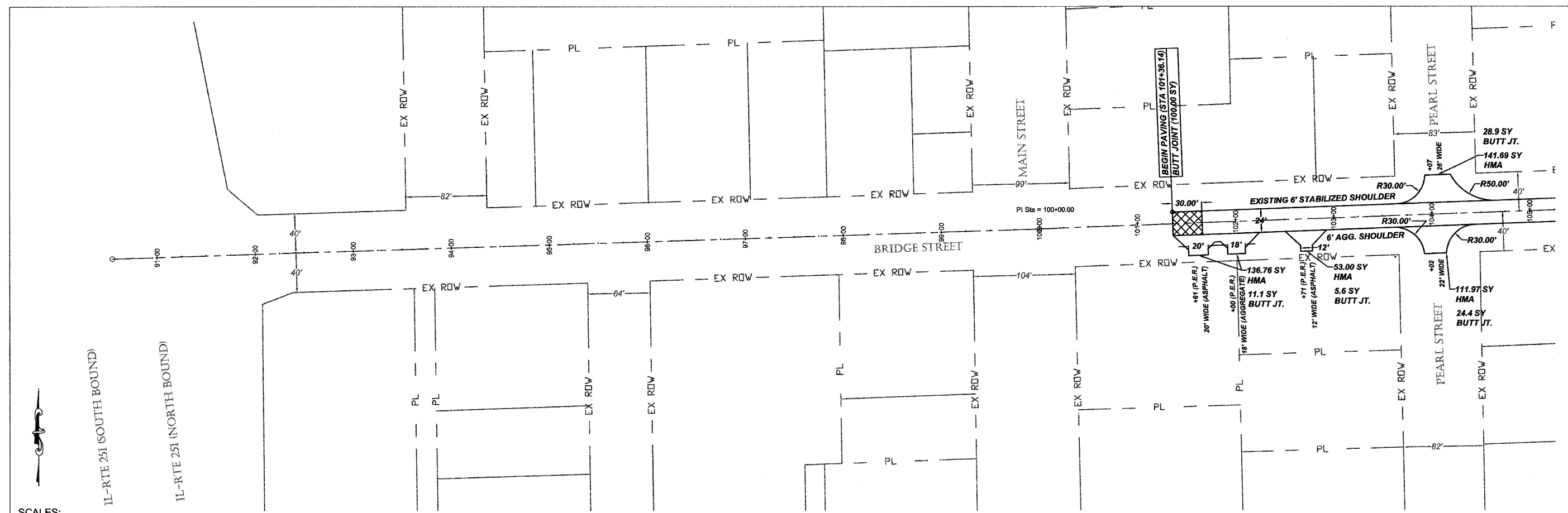
NOTE: * - MAINTAIN EXISTING ROADSIDE SLOPES. EXISTING SLOPES ESTIMATED BETWEEN 3:1 AND 4:1.

BELVIDERE ROAD
TYPICAL SECTIONS

K:\Projects\04-00338-00-RS (Belvidere Road)\Plan\Typical Sections.dwg, 11/11/2006 11:32:29 AM, V:\Users\jdoe\Documents\04-00338-00-RS (Belvidere Road)\Plan\Typical Sections.dwg, 11/11/2006 11:32:29 AM, V:\Users\jdoe\Documents\04-00338-00-RS (Belvidere Road)\Plan\Typical Sections.dwg, 11/11/2006 11:32:29 AM

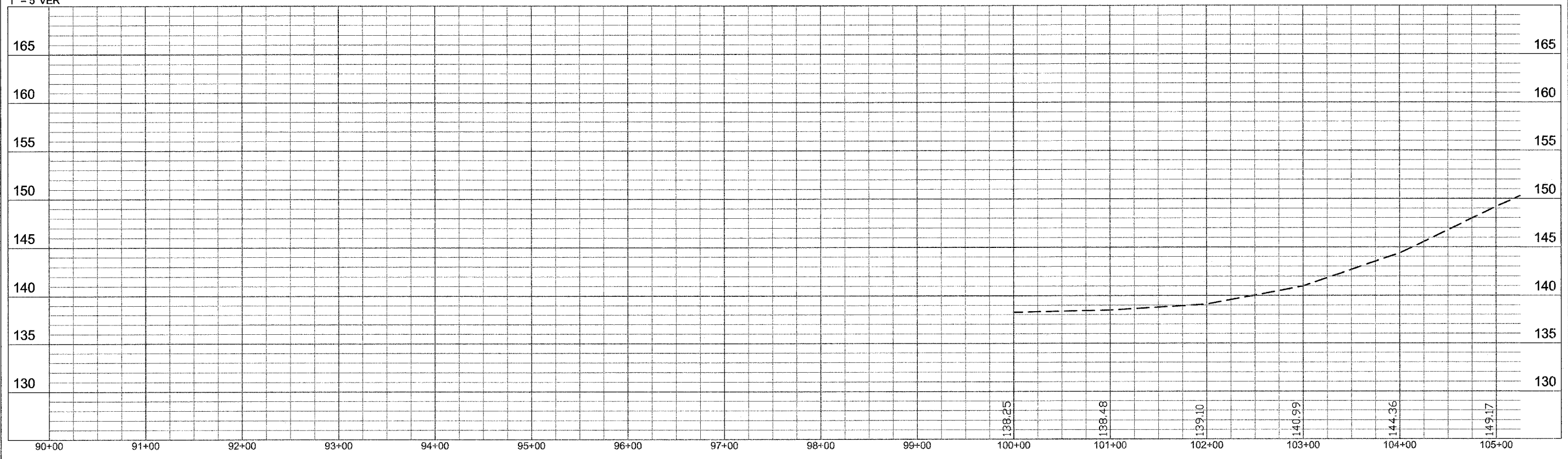


BELVIDERE ROAD, STA 90+00 - STA 105+25

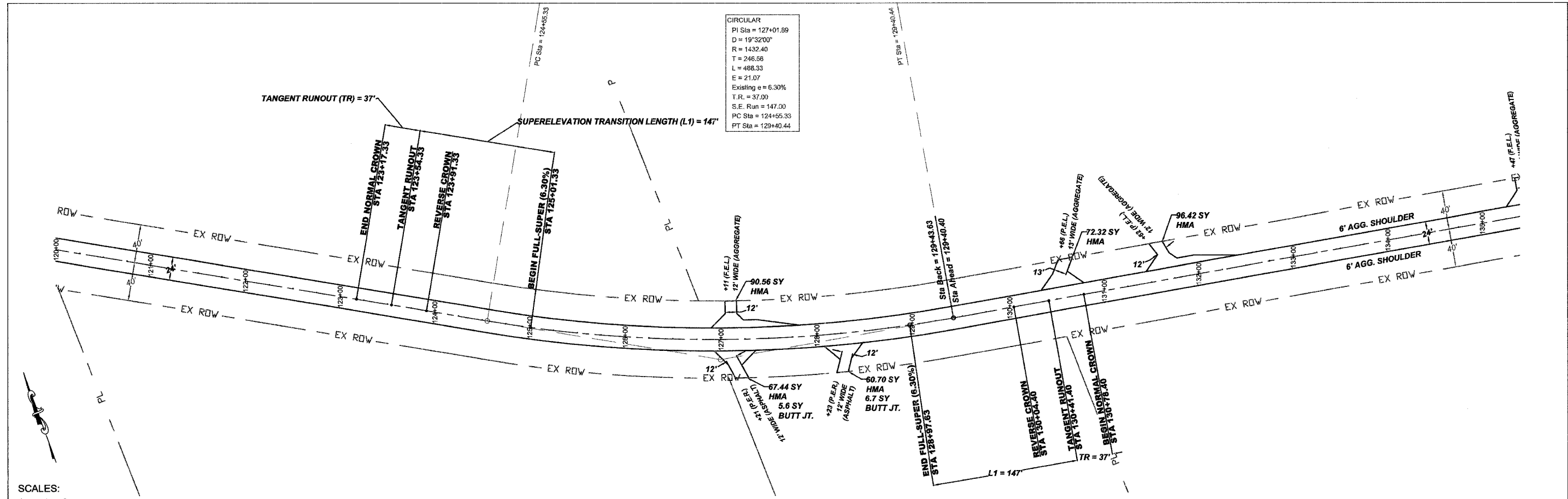


IL-RTE 251 (SOUTH BOUND)
IL-RTE 251 (NORTH BOUND)

SCALES:
1" = 50' HOR
1" = 5' VER

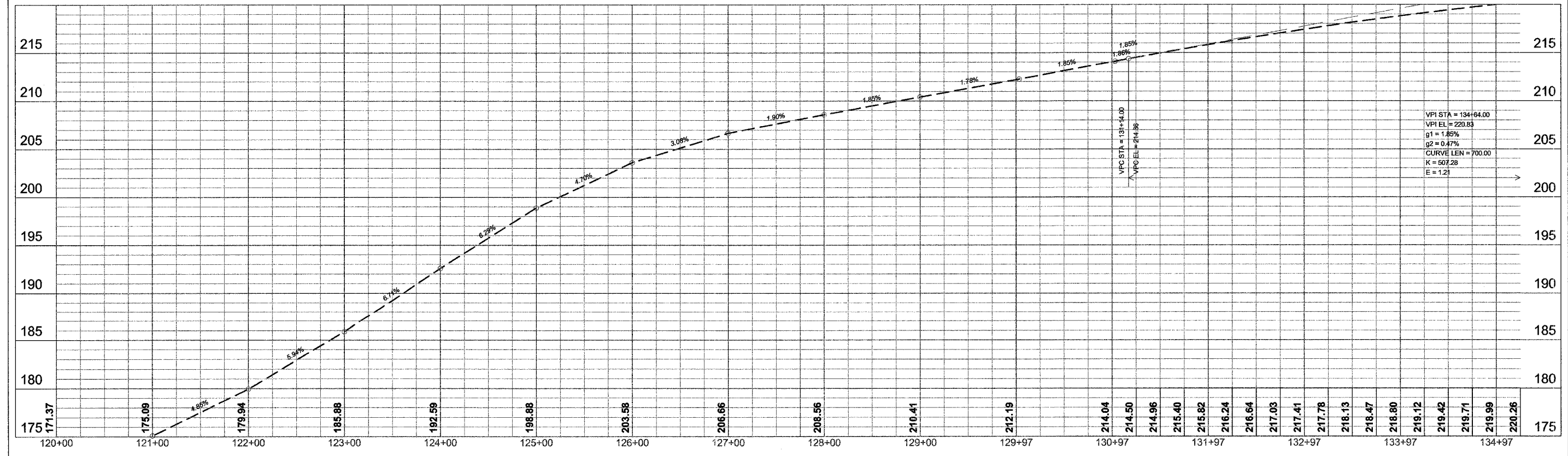


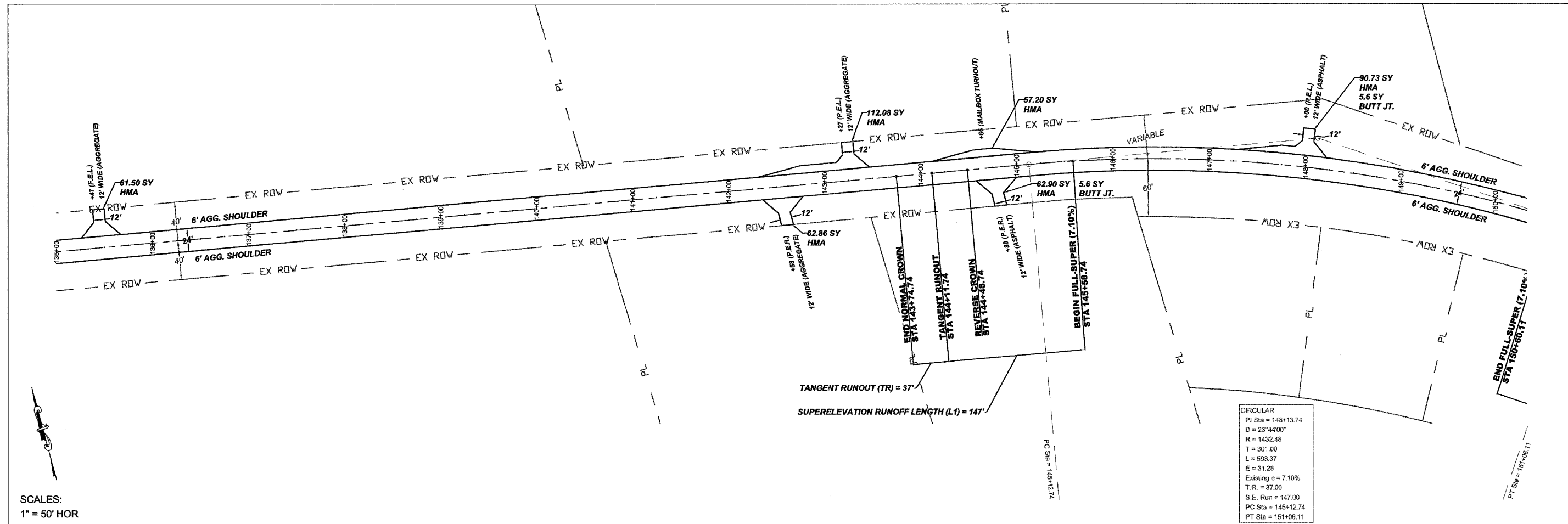
BELVIDERE ROAD
PLAN



CIRCULAR
 PI Sta = 127+01.69
 D = 19°32'00"
 R = 1432.40
 T = 246.56
 L = 488.33
 E = 21.07
 Existing e = 6.30%
 T.R. = 37.00
 S.E. Run = 147.00
 PC Sta = 124+55.33
 PT Sta = 129+40.44

SCALES:
 1" = 50' HOR
 1" = 5' VER

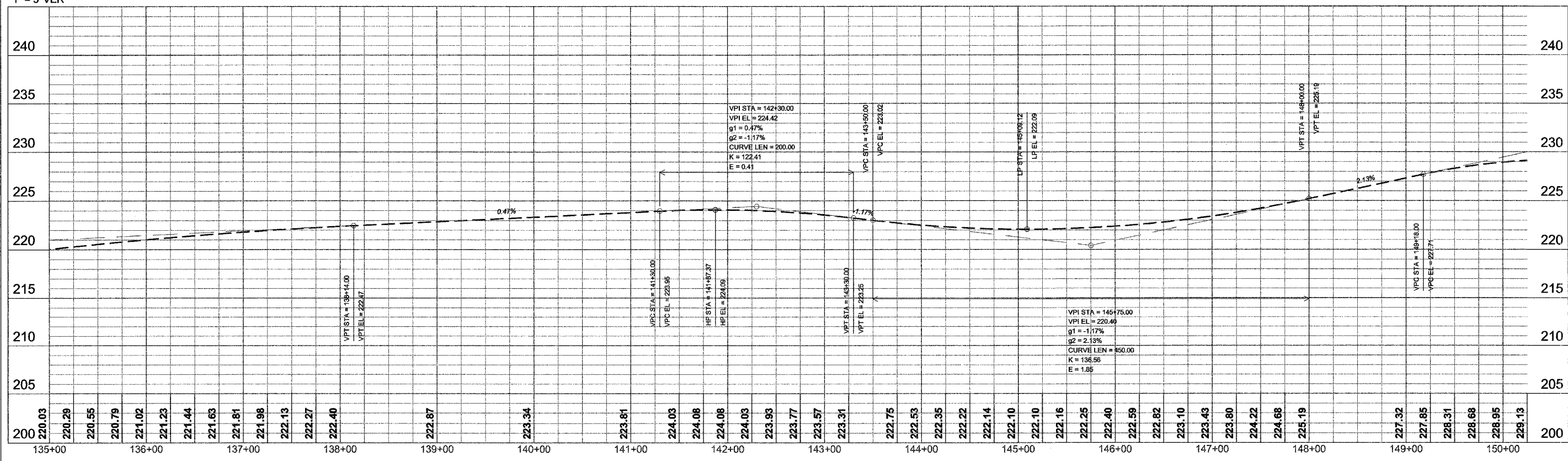


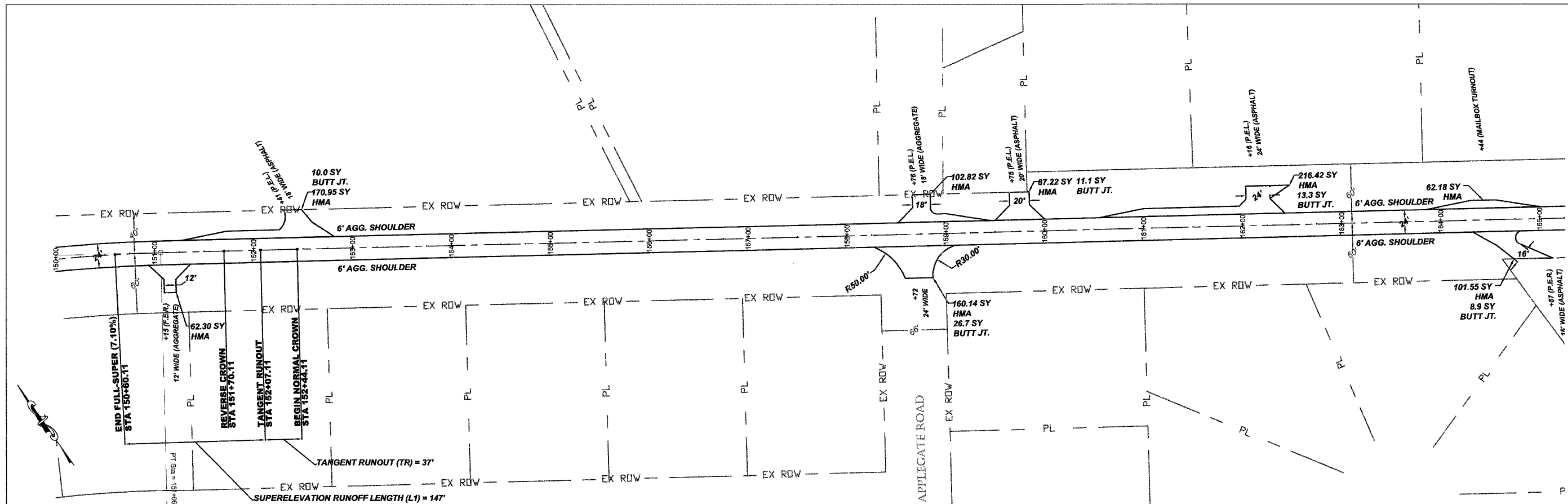


CIRCULAR

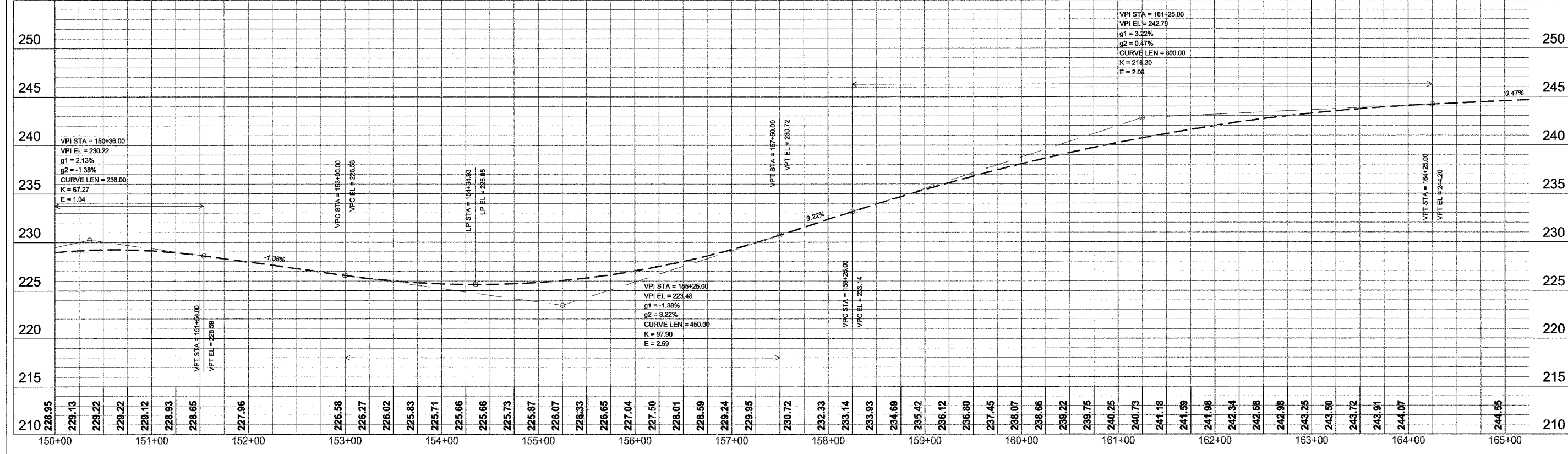
PI Sta = 148+13.74
D = 23°44'00"
R = 1432.48
T = 301.00
L = 593.37
E = 31.28
Existing e = 7.10%
T.R. = 37.00
S.E. Run = 147.00
PC Sta = 145+12.74
PT Sta = 151+06.11

SCALES:
 1" = 50' HOR
 1" = 5' VER

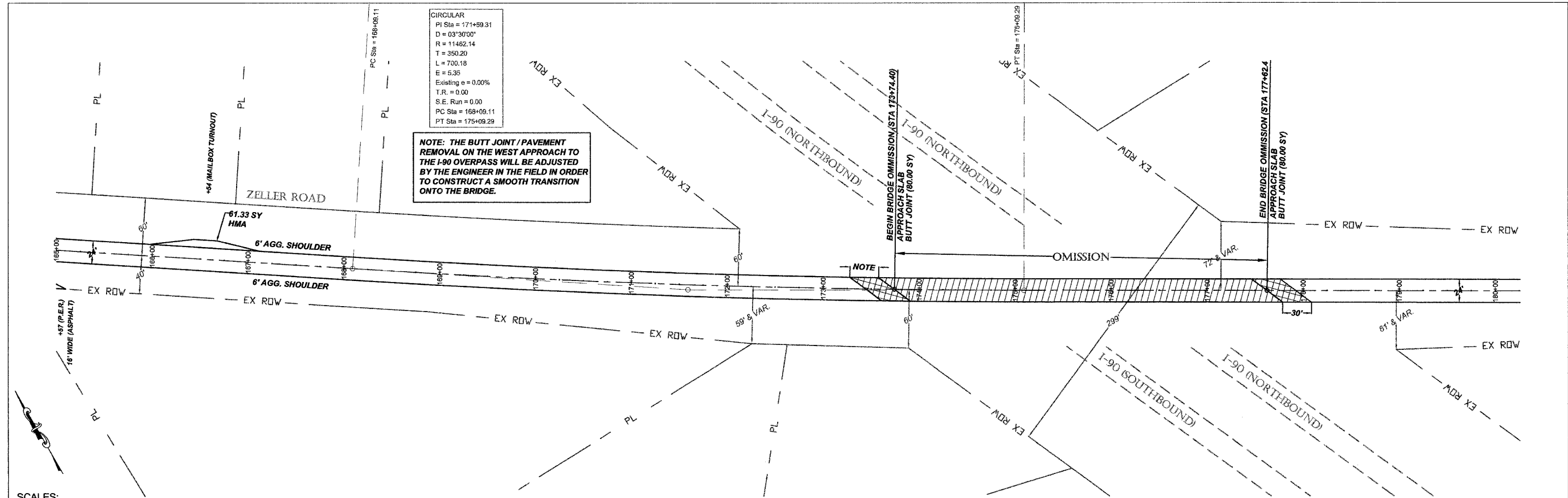




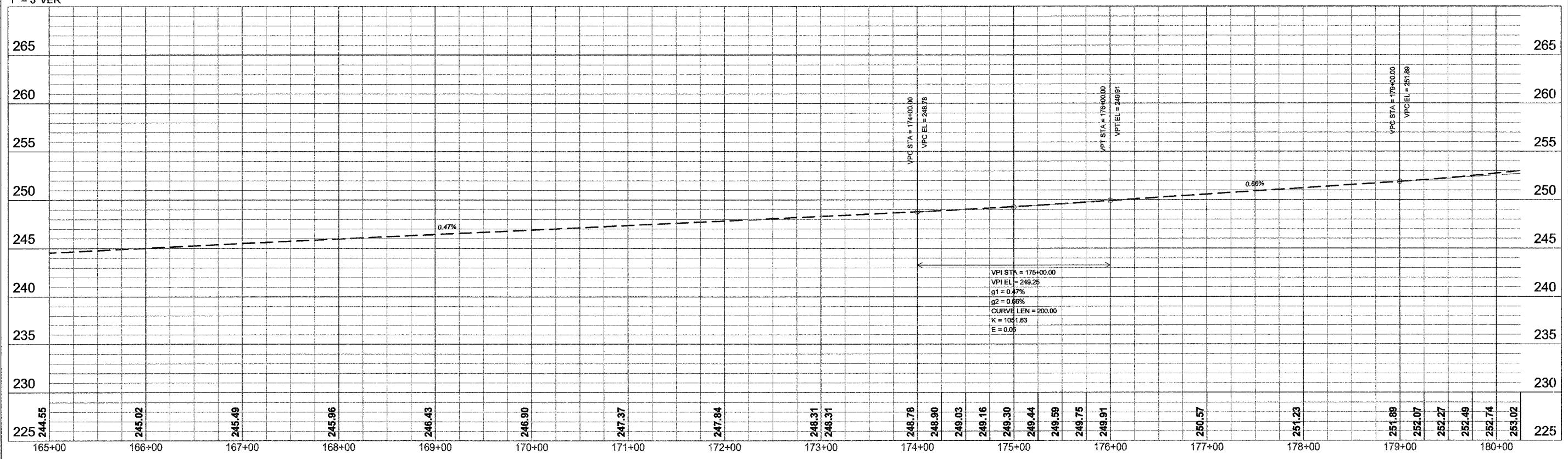
SCALES:
 1" = 50' HOR
 1" = 5' VER

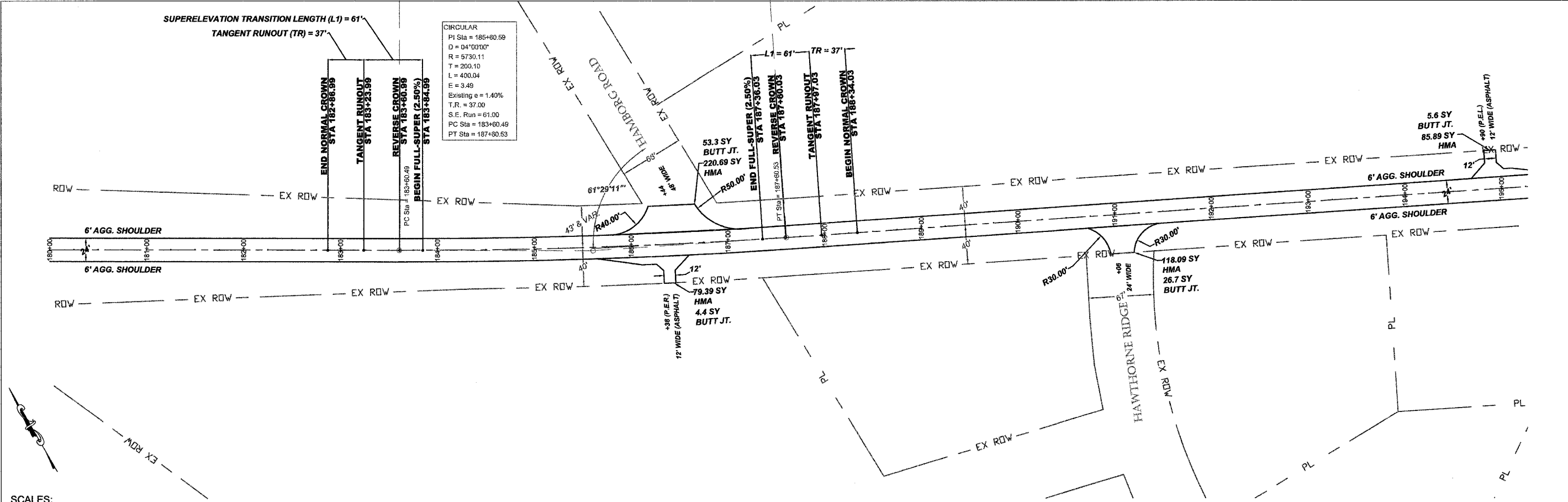


BELVIDERE ROAD PLAN

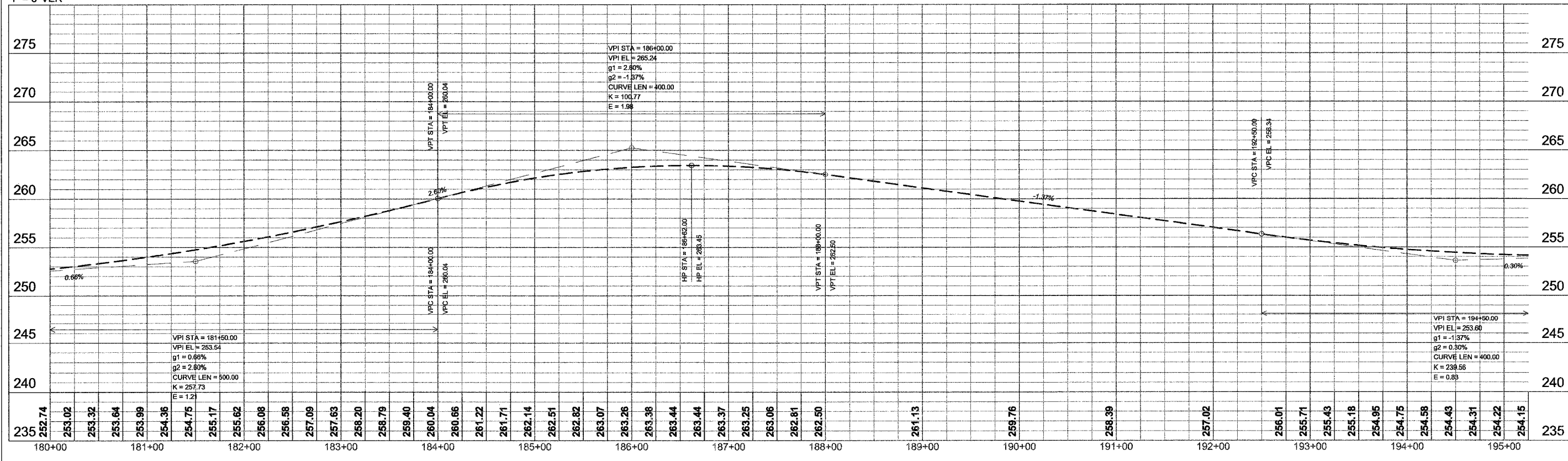


SCALES:
 1" = 50' HOR
 1" = 5' VER

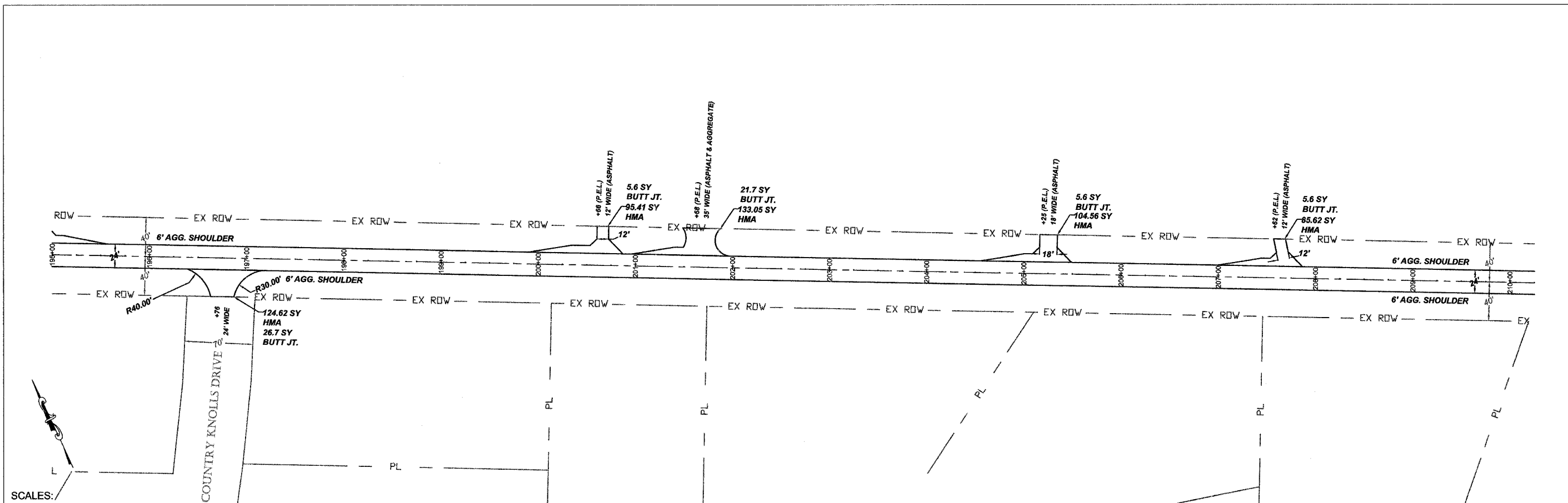




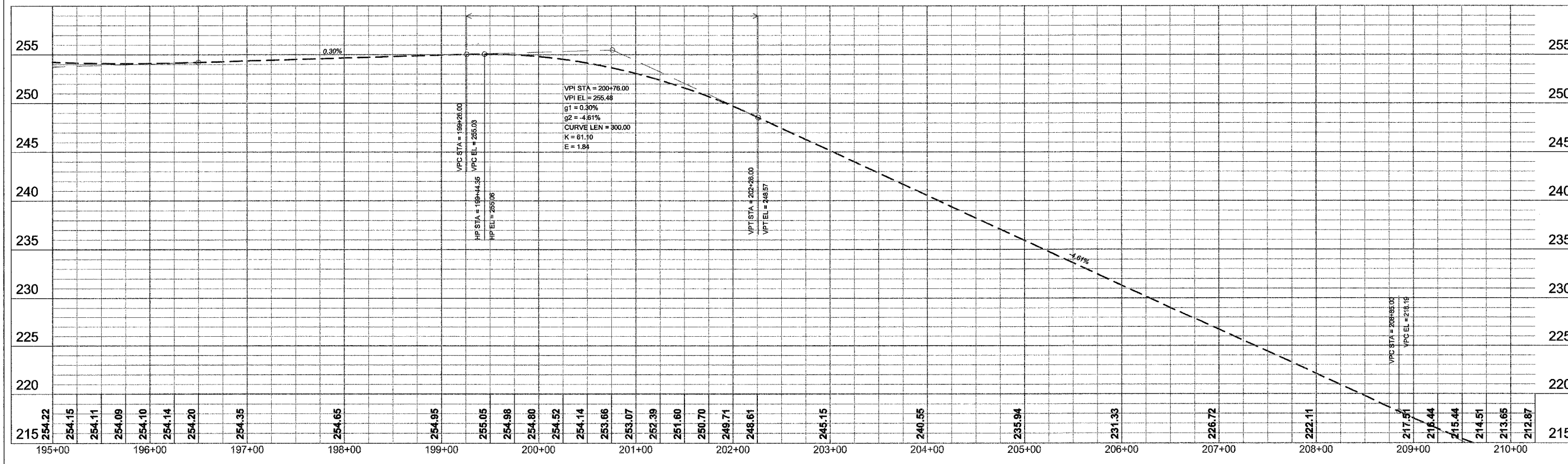
SCALES:
 1" = 50' HOR
 1" = 5' VER



BELVIDERE ROAD
 PLAN

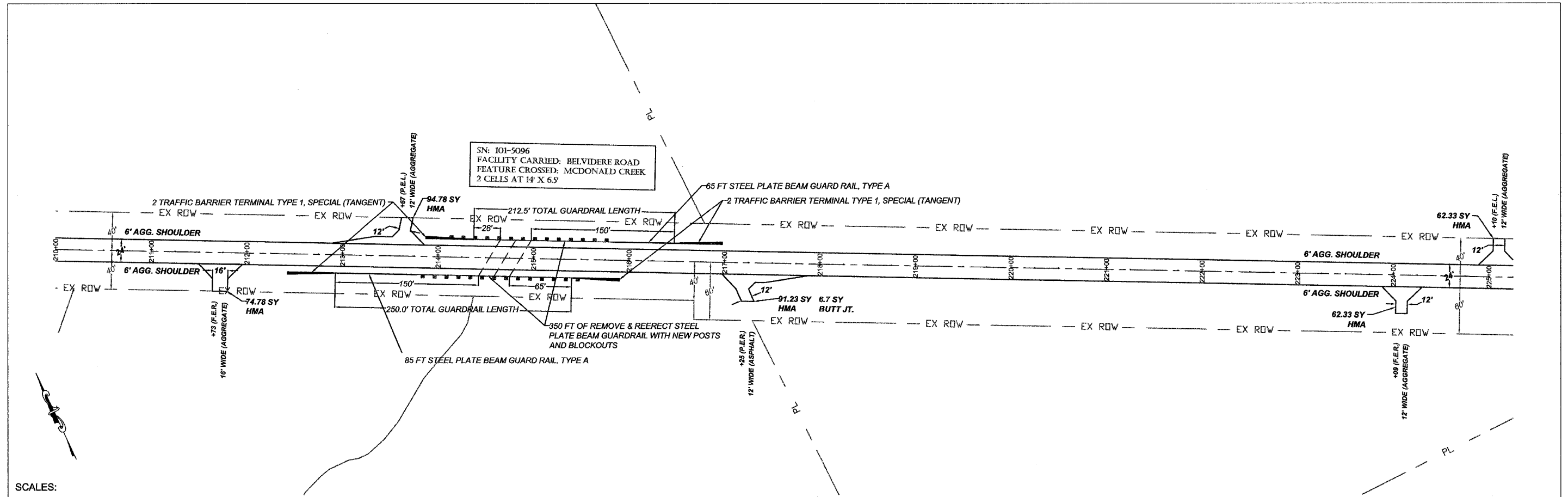


SCALES:
1" = 50' HOR
1" = 5' VER

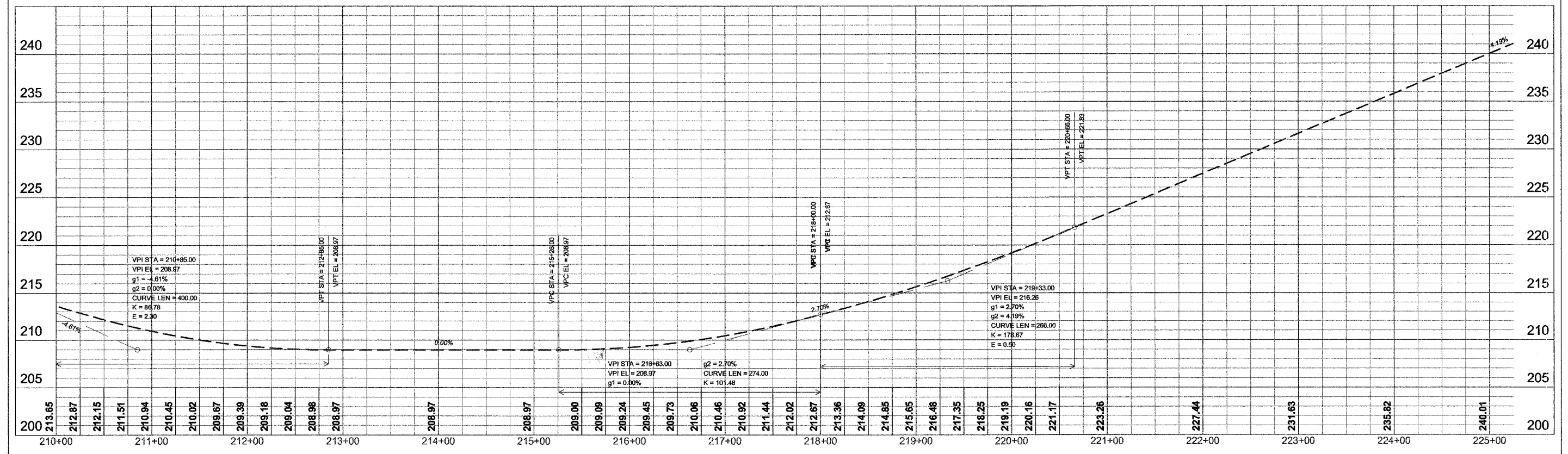




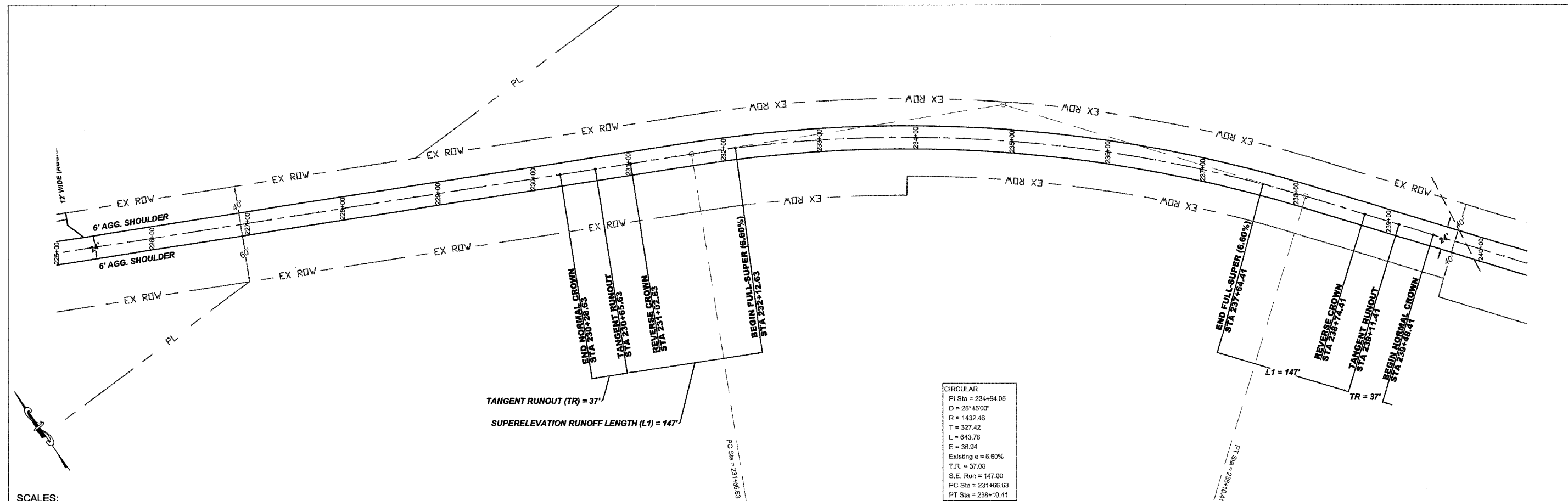
BELVIDERE ROAD, STA 210+00-STA 225+25



SCALES:
1" = 50' HOR
1" = 5' VER

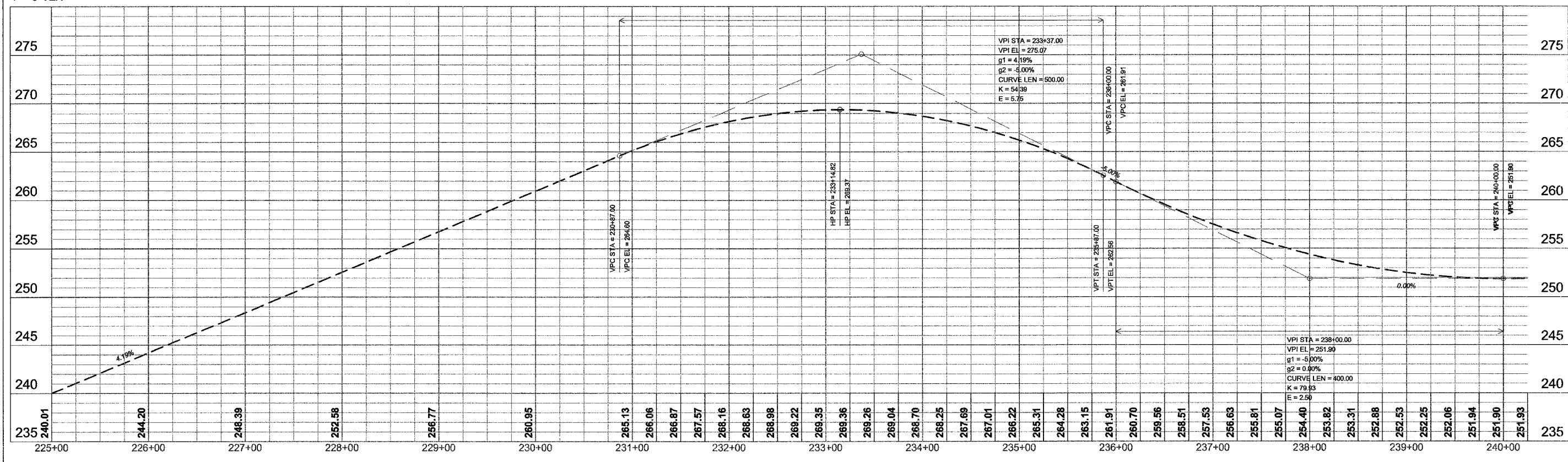


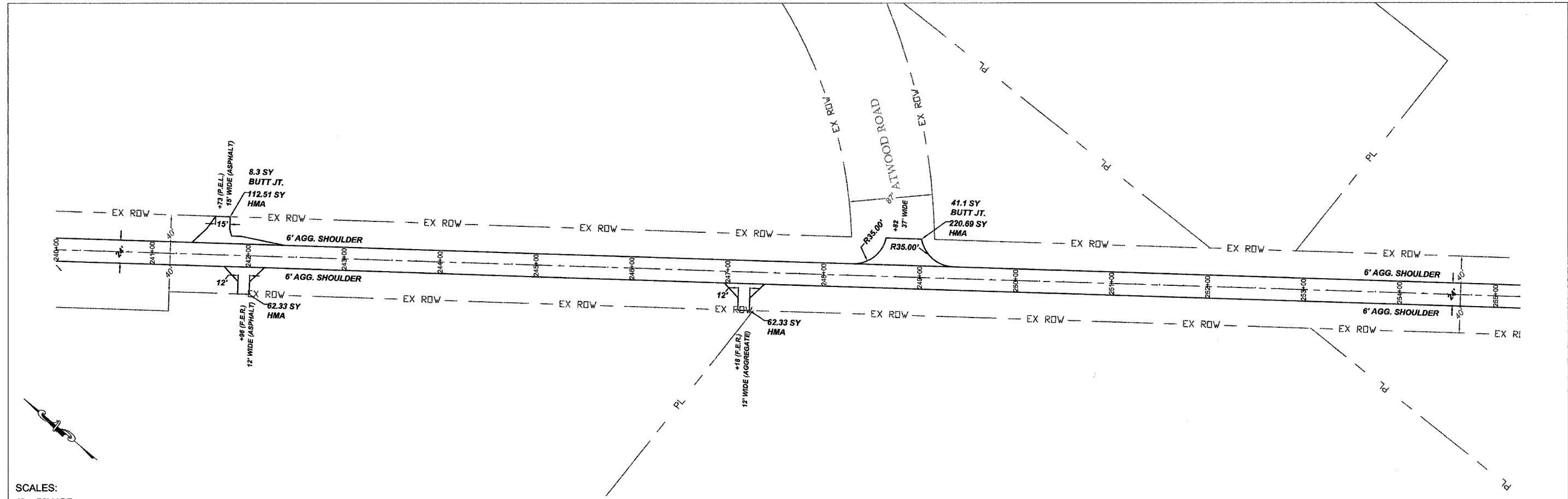
BELVIDERE ROAD
PLAN



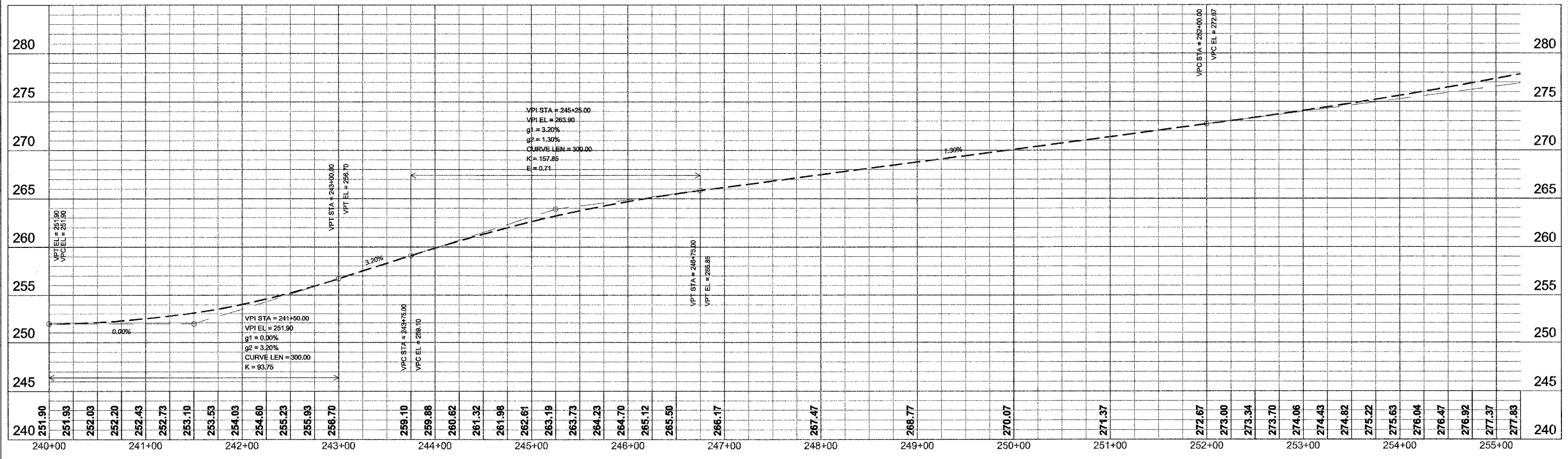
CIRCULAR
 PI Sta = 234+94.05
 D = 25'4500"
 R = 1432.46
 T = 327.42
 L = 643.78
 E = 39.94
 Existing e = 6.60%
 T.R. = 37.00
 S.E. Run = 147.00
 PC Sta = 231+66.63
 PT Sta = 238+10.41

SCALES:
 1" = 50' HOR
 1" = 5' VER

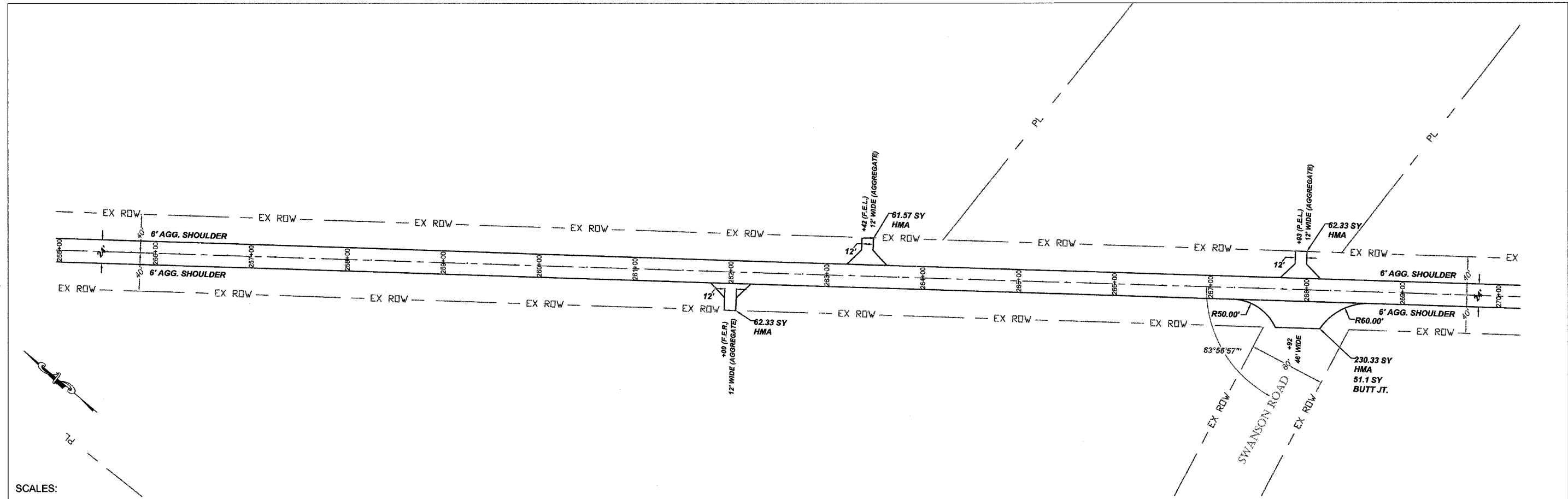




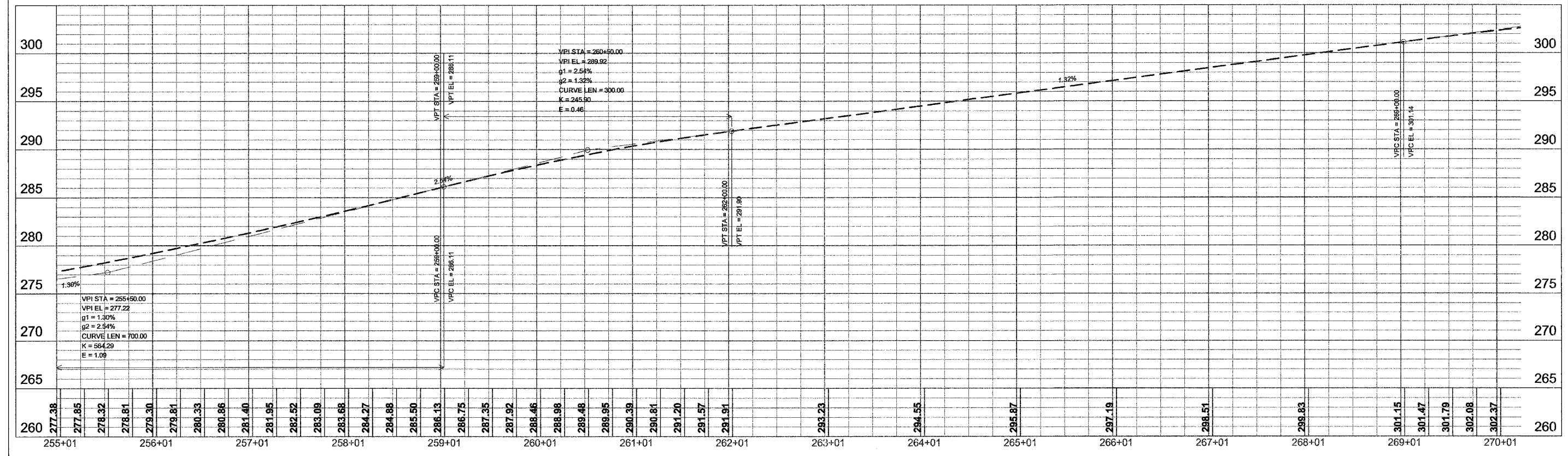
SCALES:
 1" = 50' HOR
 1" = 5' VER



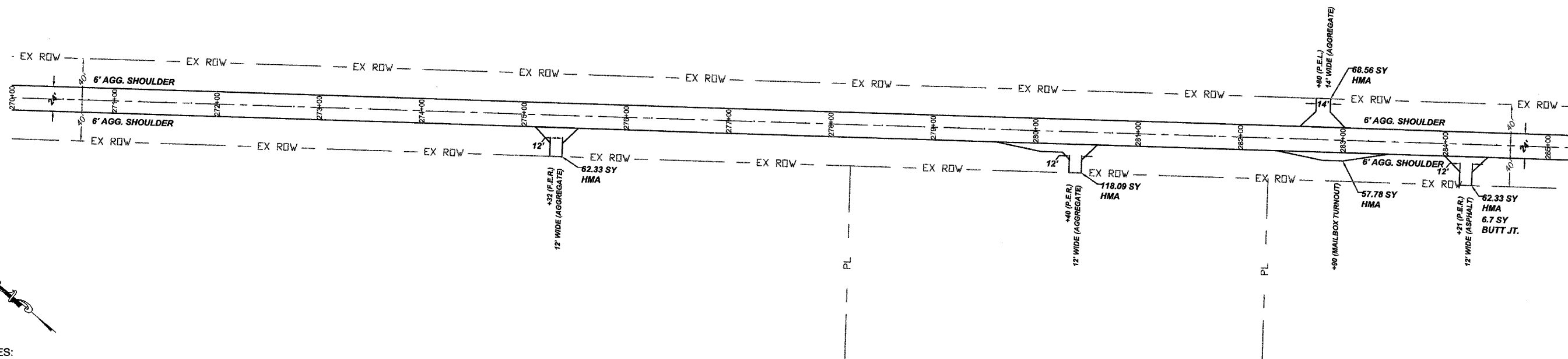
BELVIDERE ROAD
 PLAN



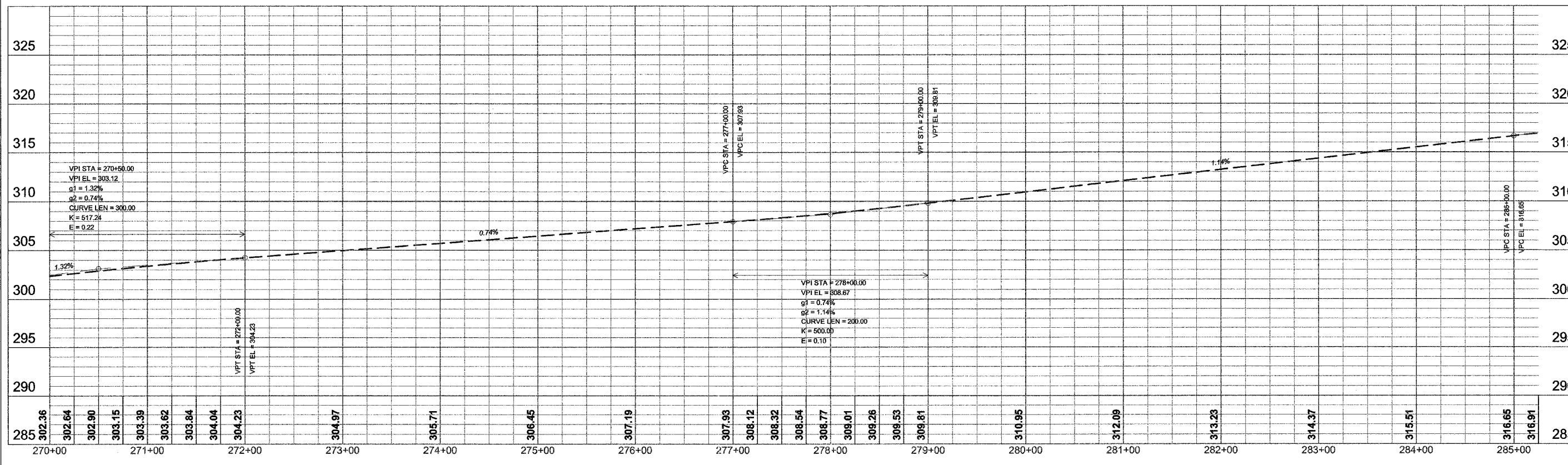
SCALES:
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 1" = 5' VER

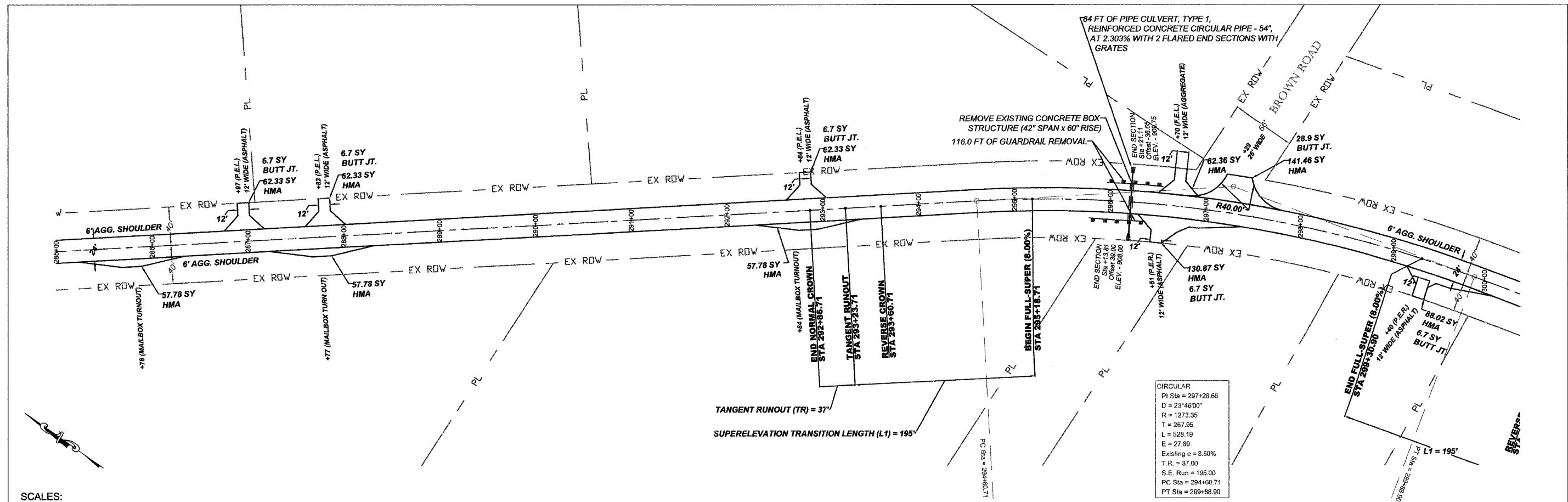


BELVIDERE ROAD
 PLAN



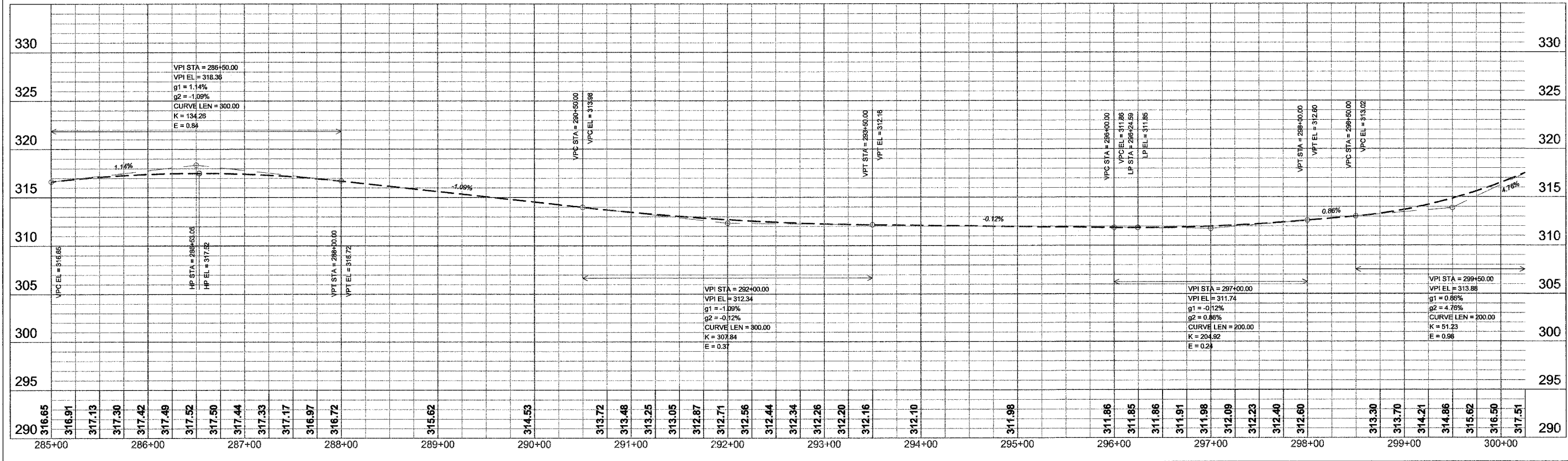
SCALES:
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 1" = 5' VER

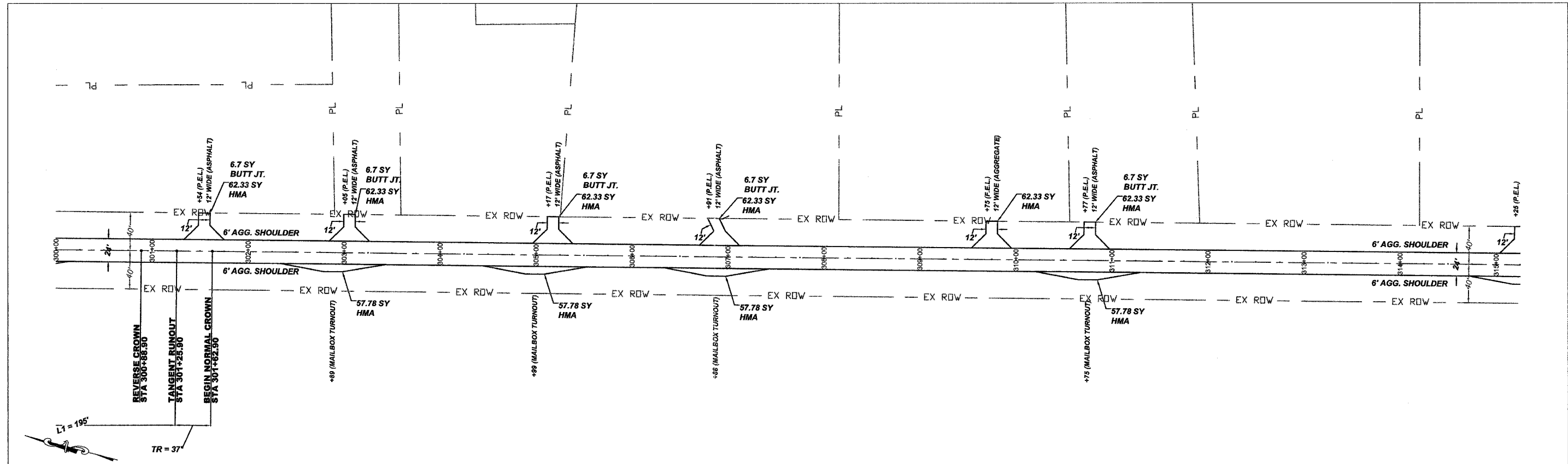




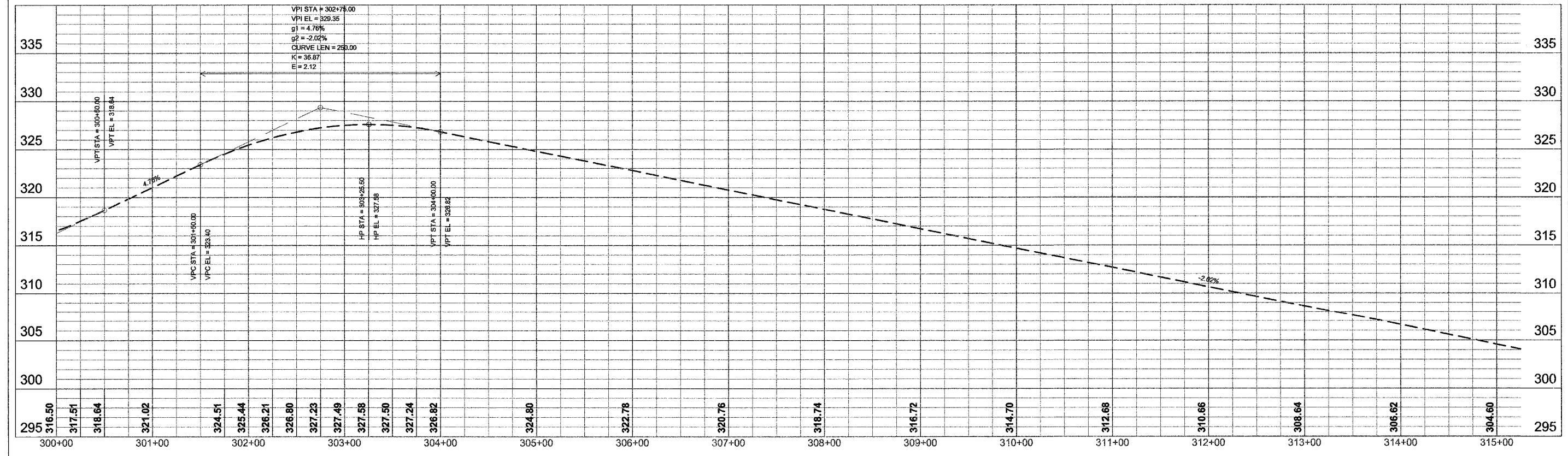
CIRCULAR
 PI Sta = 297+28.66
 D = 23°46'00"
 R = 1273.35
 T = 267.95
 L = 528.19
 E = 27.89
 Existing e = 8.50%
 T.R. = 37.00
 S.E. Run = 195.00
 PC Sta = 294+60.71
 PT Sta = 299+88.90

SCALES:
 1" = 50' HOR
 1" = 5' VER

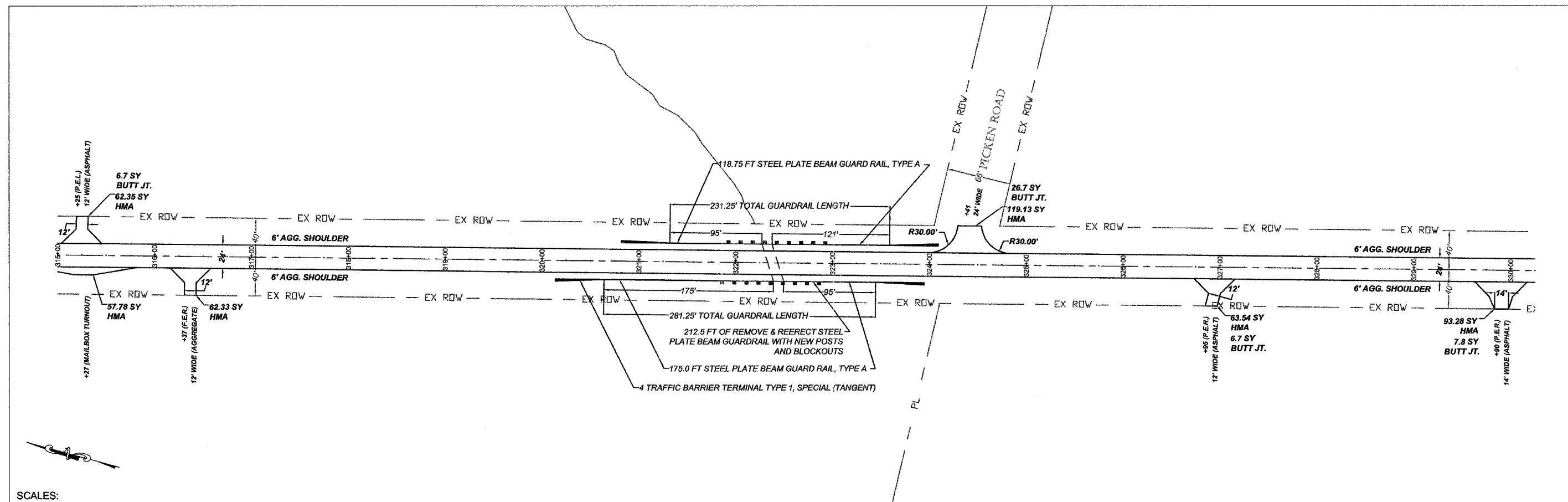




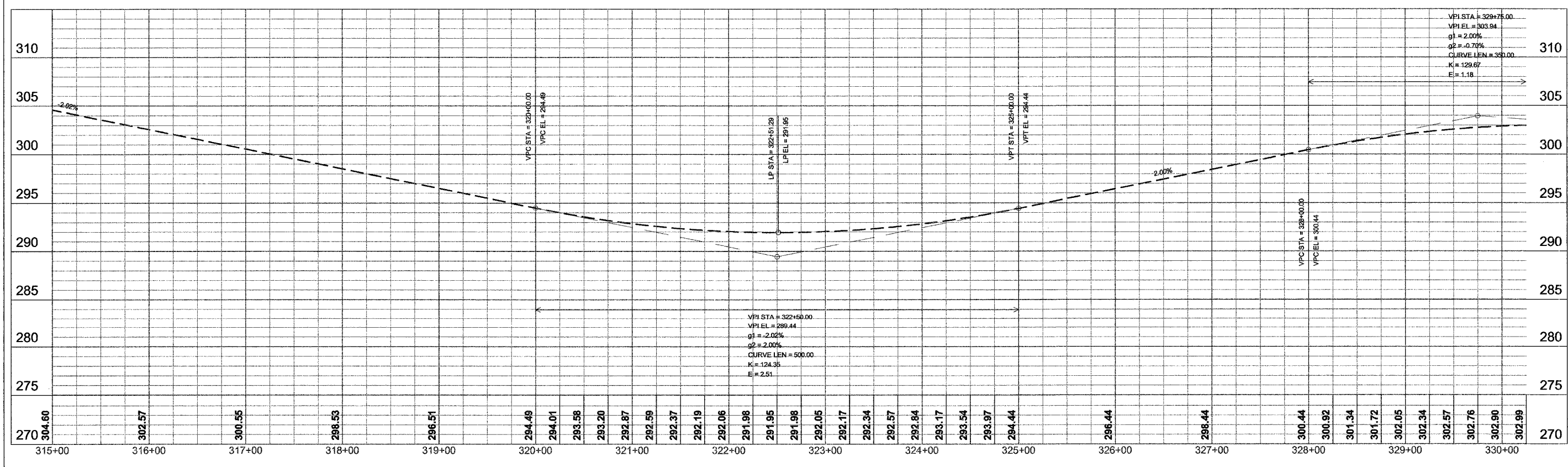
SCALES:
 1" = 50' HOR
 1" = 5' VER



BELVIDERE ROAD
 PLAN



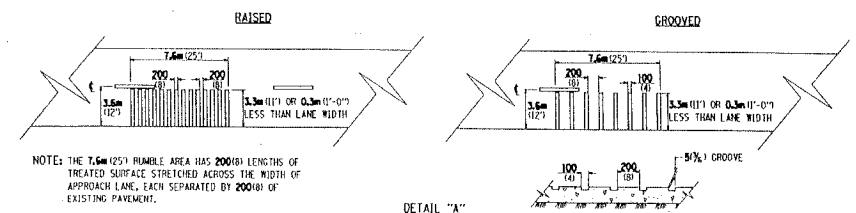
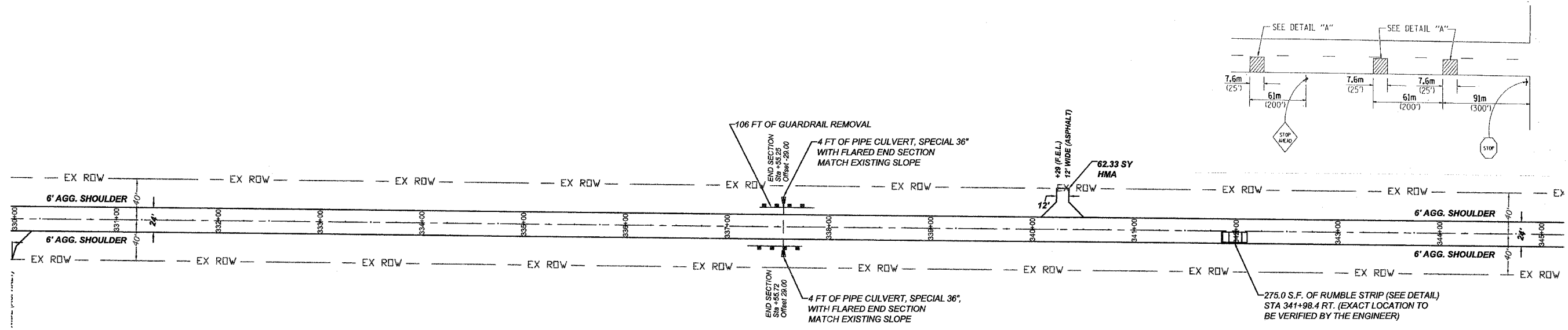
SCALES:
 1" = 50' HOR
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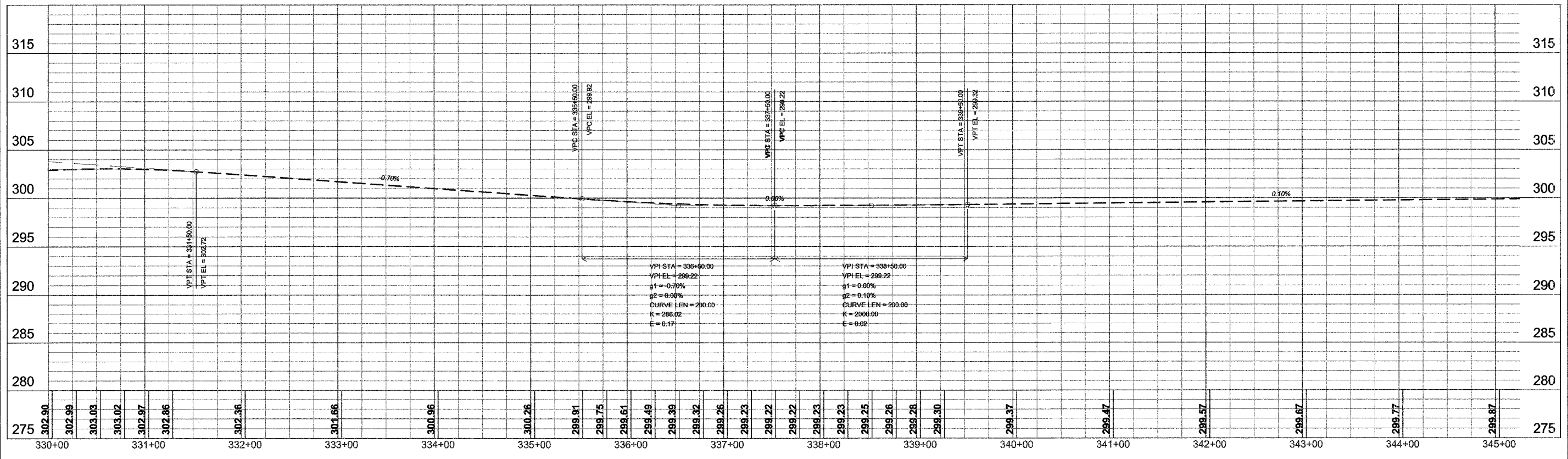
BELVIDERE ROAD
 PLAN

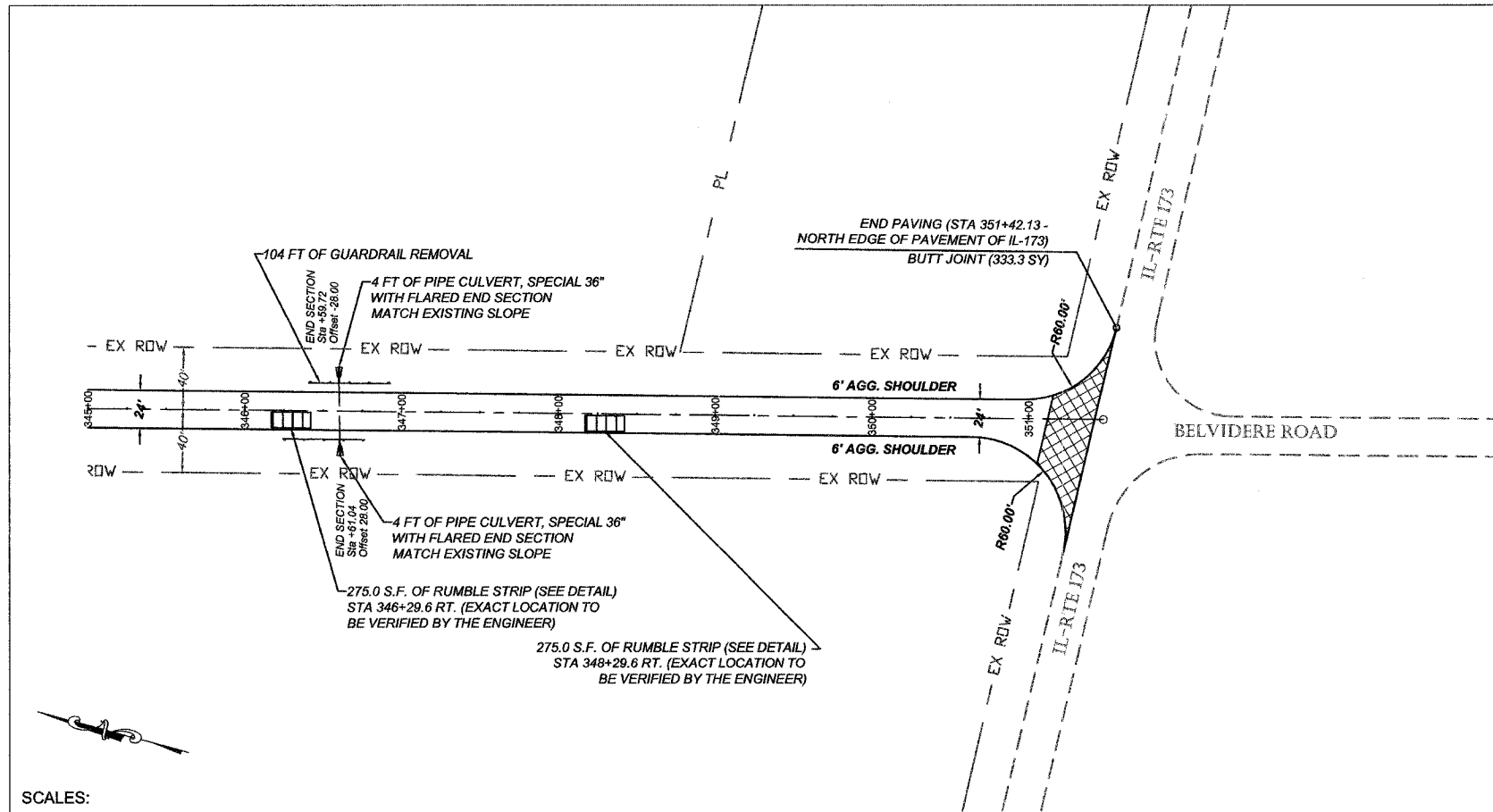


RUMBLE RESURFACING

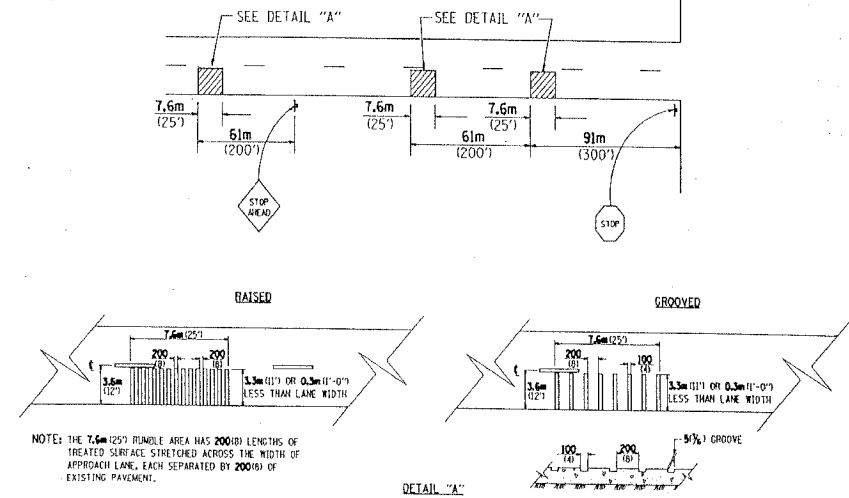


SCALES:
 1" = 50' HOR
 1" = 5' VER





RUMBLE RESURFACING

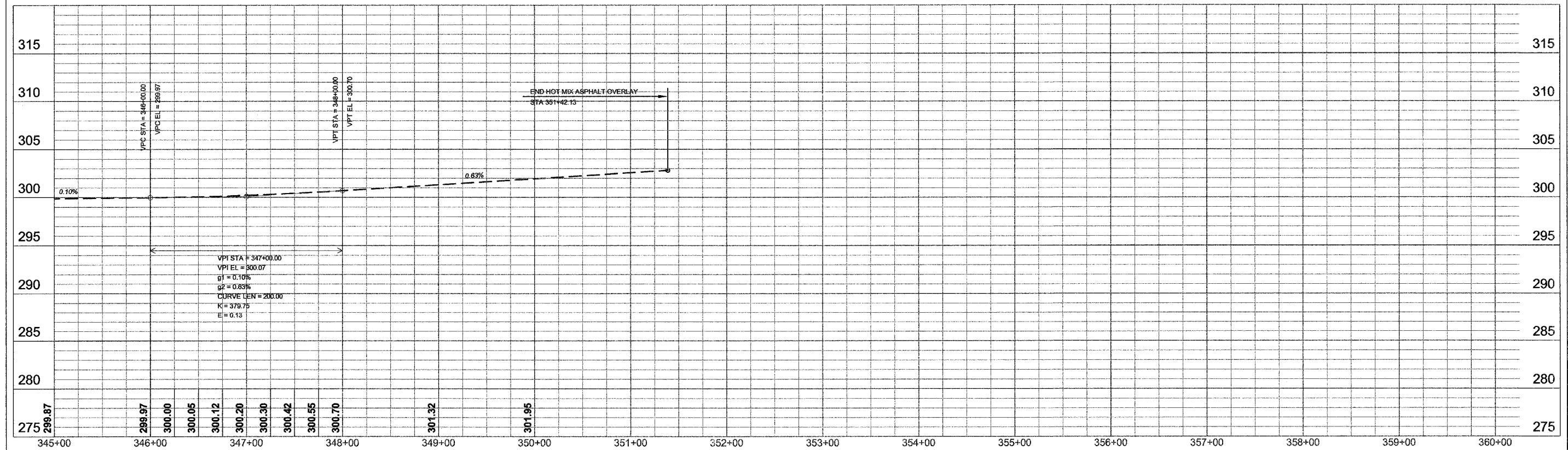


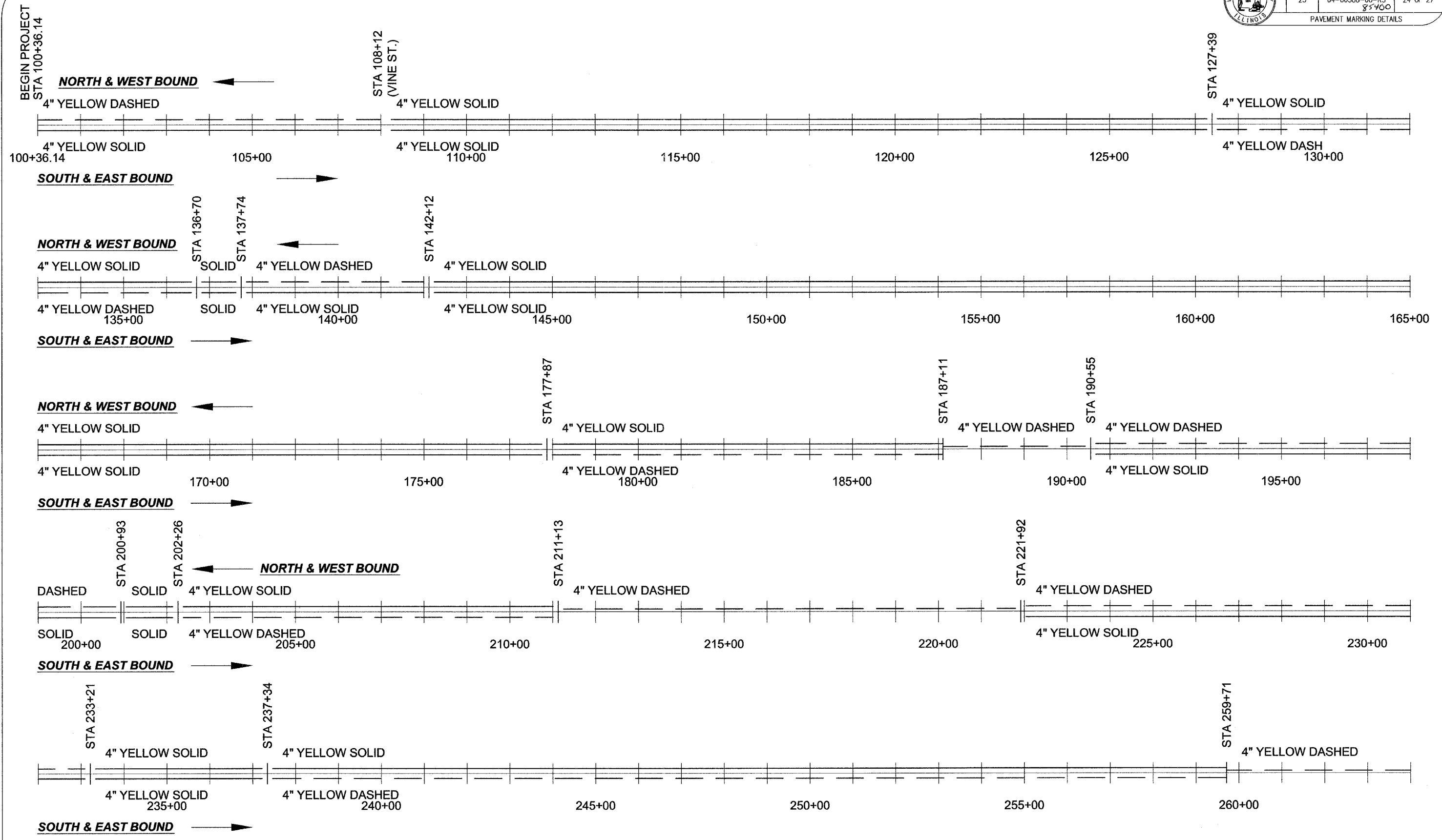
NOTE: THE 7.6m (25') RUMBLE AREA HAS 200(80) LENGTHS OF TREATED SURFACE STRETCHED ACROSS THE WIDTH OF APPROACH LANE, EACH SEPARATED BY 200(80) OF EXISTING PAVEMENT.

DETAIL "A"

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

SCALES:
1" = 50' HOR
1" = 5' VER

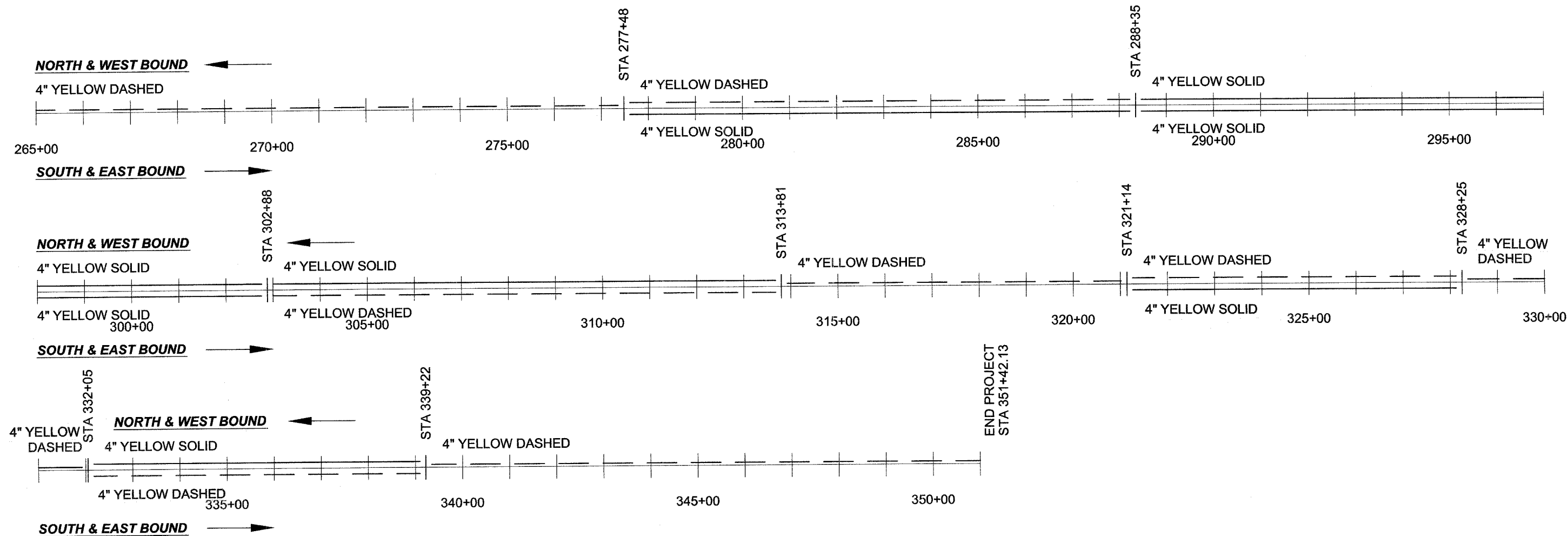




NOTE: STATIONING TO BE FIELD VERIFIED BY THE ENGINEER PRIOR TO PLACING THE STRIPING AND SHALL BE IN ACCORDANCE WITH THE MUTCD.

NOTE: 4" WHITE EDGE STRIPING TO BE INCLUDED.
 NOTE: 24" WHITE STOP BARS TO BE PLACED AT ALL INTERSECTING ROADS.

I:\projects\04-00388-00-RS\04-00388-00-RS_Plan\04-00388-00-RS_Plan.dwg, 12/2008 12:03:38 PM, NAD
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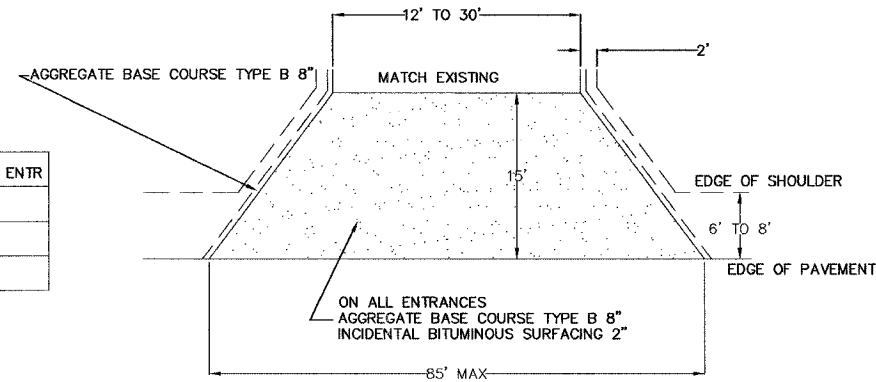
NOTE: STATIONING TO BE FIELD VERIFIED BY THE ENGINEER PRIOR TO PLACING THE STRIPING AND SHALL BE IN ACCORDANCE WITH THE MUTCD.

NOTE: 4" WHITE EDGE STRIPING TO BE INCLUDED.
NOTE: 24" WHITE STOP BARS TO BE PLACED AT ALL INTERSECTING ROADS.



BITUMINOUS APPROACHES & MAILBOX RETURNS

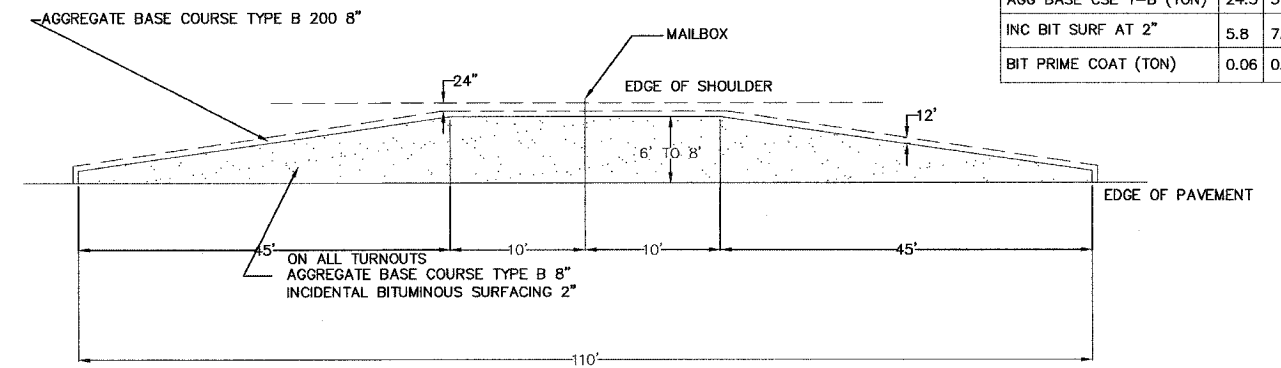
FIELD ENTRANCE



35' FIELD ENTRANCE

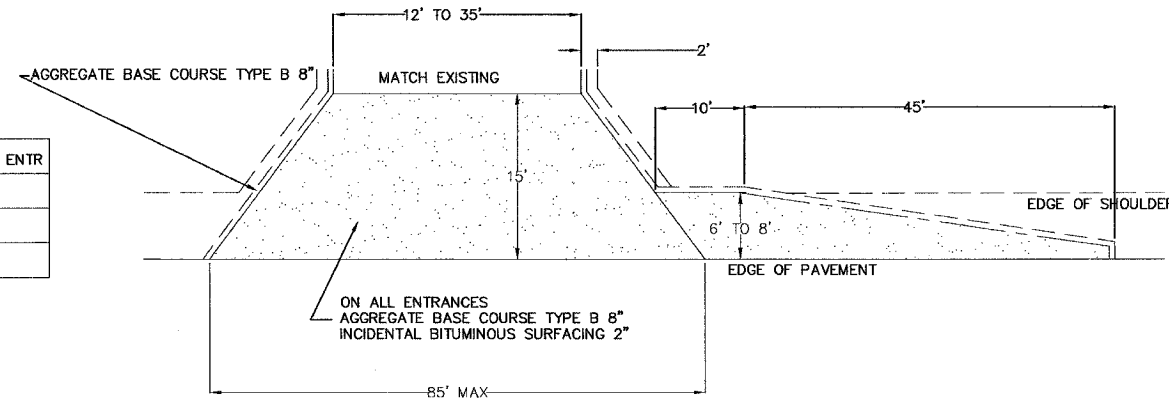
	6'	8'	PER FOOT ENTR
AGG BASE CSE T-B (TON)	65.9	68.5	1.87
INC BIT SURF AT 2"	20.5	21.2	0.54
BIT PRIME COAT (TON)	0.19	0.20	0.006

MAILBOX TURNOUT



	6'	8'
AGG BASE CSE T-B (TON)	24.5	31.1
INC BIT SURF AT 2"	5.8	7.8
BIT PRIME COAT (TON)	0.06	0.08

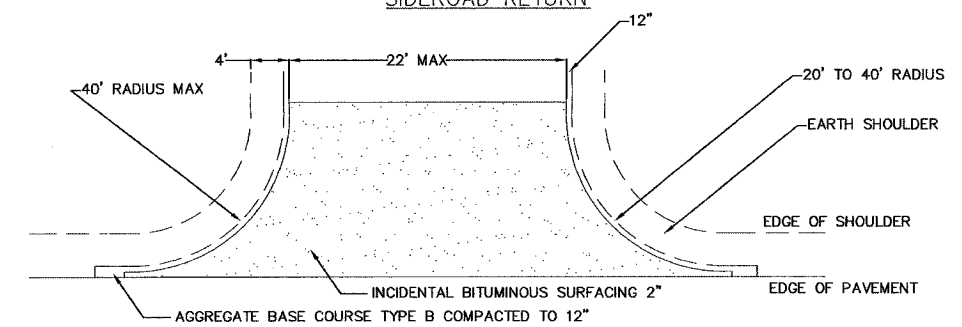
FARM OR SMALL COMERCIAL ENTRANCE



35' COMMERCIAL ENTRANCE

	6'	8'	PER FOOT ENTR
AGG BASE CSE T-B (TON)	65.9	68.5	1.87
INC BIT SURF AT 2"	20.5	21.2	0.54
BIT PRIME COAT (TON)	0.19	0.20	0.006

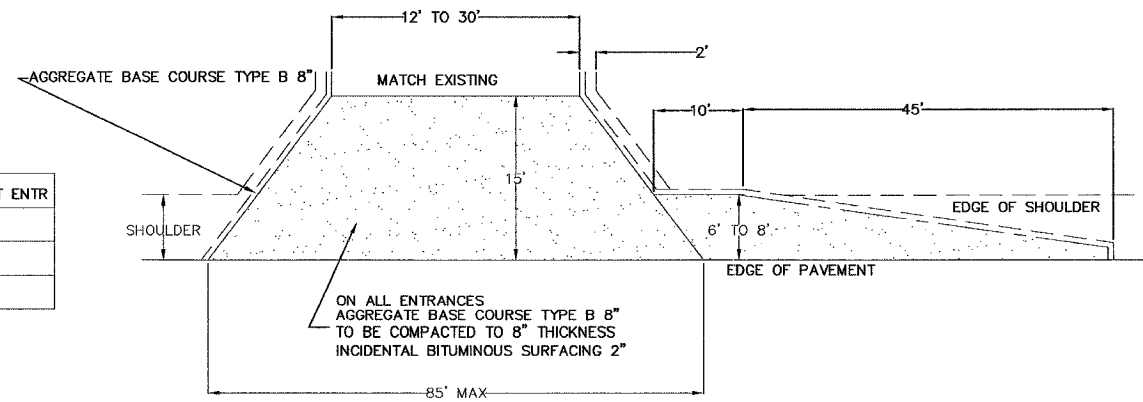
SIDEROAD RETURN



	RADIUS 20'			RADIUS 30'			RADIUS 40'			RADIUS 50'		
	18'	20'	22'	18'	20'	22'	18'	20'	22'	18'	20'	22'
AGG BASE CSE T-B (TON)	45.1	48.2	51.2	77.5	82.0	86.6	116.3	122.4	128.5	161.5	169.1	179.9
INC BIT SURF AT 2"	6.6	7.2	7.6	11.6	12.2	13.0	17.6	18.6	19.8	24.6	25.8	27.0
BIT PRIME COAT (TON)	0.08	0.09	0.10	0.15	0.16	0.17	0.22	0.24	0.25	0.31	0.33	0.35

NOTE: USE 2" INC BIT SURF ON EXISTING RETURNS

PRIVATE ENTRANCE

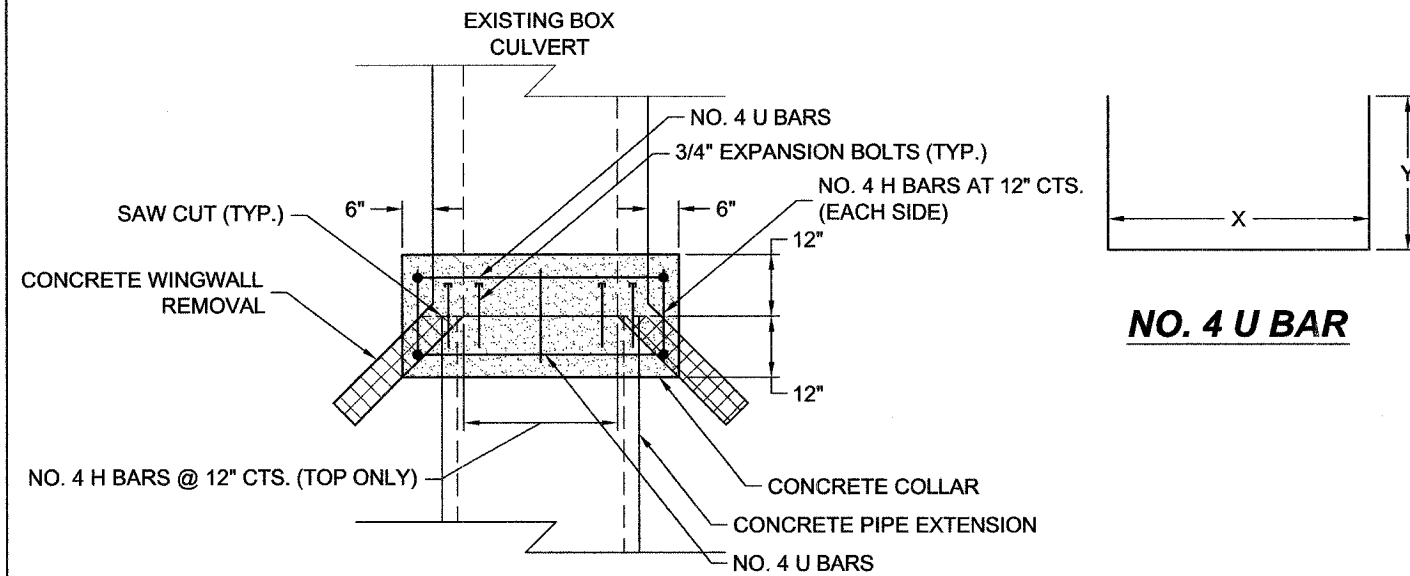


12' PRIVATE ENTRANCE

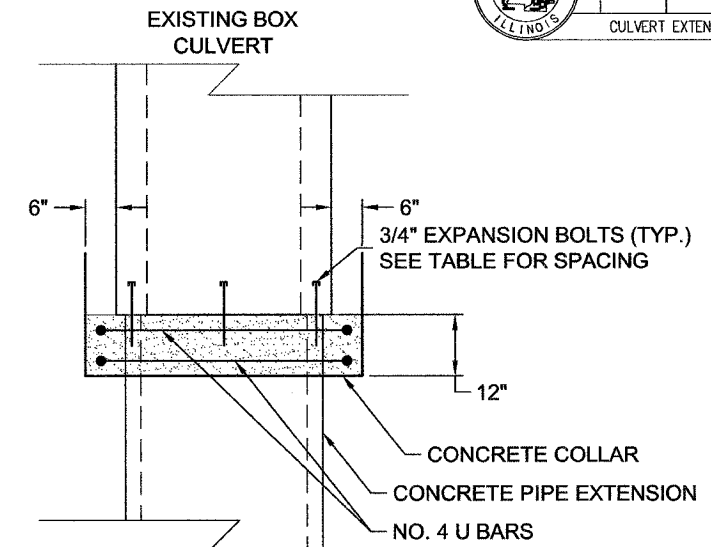
	6'	8'	PER FOOT ENTR
AGG BASE CSE T-B (TON)	43.8	48.3	0.71
INC BIT SURF AT 2"	13.5	14.4	0.19
BIT PRIME COAT (TON)	0.12	0.13	0.002

NOTES

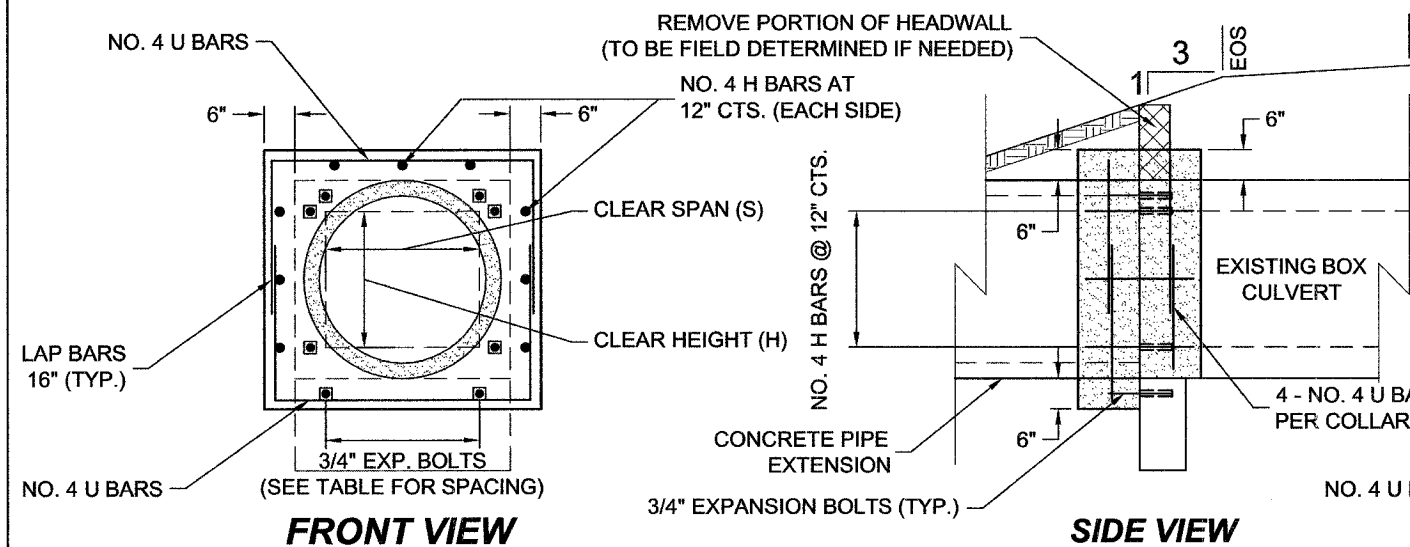
1. ALL PE & CE ARE TO BE SURFACED TO RIGHT OF WAY LINE.
2. EXISTING APPROACHES MAILBOX RETURNS SHALL BE WIDENED TO CONFORM WITH STANDARD.
3. LARGE COMMERCIAL ENTRANCES ARE TO BE DESIGNED INDIVIDUALLY AND TO BE APPROVED BY THE WINNEBAGO COUNTY HIGHWAY DEPARTMENT
4. DRIVE PROFILES SHALL BE CONSTRUCTED WITH A 20' VERTICAL CURVE BEGINNING AT THE EDGE OF SHOULDER TO PROVIDE A SMOOTH TRANSITION FROM THE DRIVE PROFILE TO THE SHOULDER.
5. WHEN RESURFACING EXISTING SIDEROAD RETURN PRIVATE ENTRANCE MAILBOX TURNOUT AND MAIN LINE SURFACING IS GREATER THAN 2" TAPER BITUMINOUS FROM EDGE OF PAVEMENT TO 2" IN 4'. RESURFACING OF EXISTING SIDEROAD, PRIVATE ENTRANCE AND FIELD ENTRANCE SHALL CONFORM TO EXISTING CONFIGURATION.



PLAN OF CULVERT WITH ANGLED WING WALLS

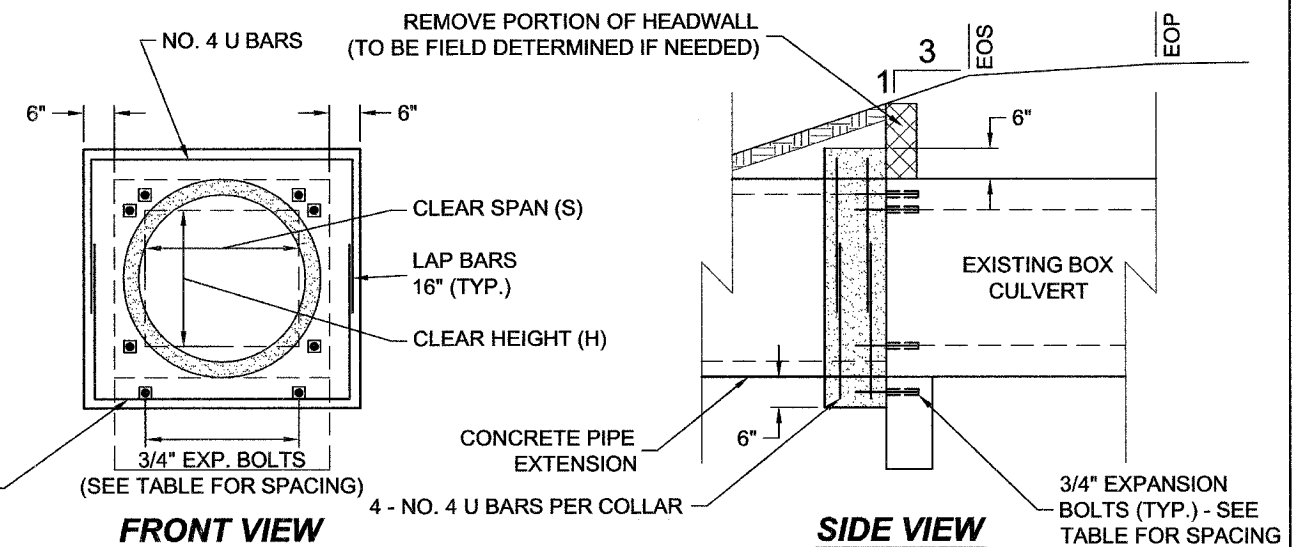


PLAN OF CULVERT WITH STRAIGHT HEADWALL



FRONT VIEW

SIDE VIEW



FRONT VIEW

SIDE VIEW

PLACEMENT DETAILS FOR EXPANSION BOLTS				
H or S (IN)	EXTENSIONS < 15'		EXTENSIONS > 15'	
	Number	Spacing (IN)	Number	Spacing (IN)
24	*		*	
30	2	18	2	18
36	2	24	2	24
48	3	18	3	18
60	4	16	3	24
72	5	15	4	20
84	5	18	4	24
96	6	15	5	21
108	6	19	5	24
120	7	18	6	21
132	8	17	6	24
144	8	19	7	22

BILL OF MATERIALS (FOR ESTIMATING PURPOSES ONLY - SEE NOTE 6)									
STA	PIPE EXT. DIA.	H BAR		U BAR DIMENSIONS			EXP. BOLTS NO.	CONC. COLLAR C.Y.	
		NO.	LENGTH	NO.	X	Y			LENGTH
112+01	30" EQRS	20	18"	8	44"	24"	92"	12	.5 CY
117+10	30"	10	18"	8	36"	26"	88"	16	.4 CY
296+21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
337+55	36" EQRS	28	18"	8	51"	26"	103"	20	.5 CY
346+60	36" EQRS	28	18"	8	51"	26"	103"	20	.5 CY

NOTE: DUE TO UNKNOWN CHARACTERISTICS OF THE EXISTING CULVERTS, SUCH AS WALL AND SLAB THICKNESS, THIS CHART IS INTENDED ONLY FOR ESTIMATING PURPOSES. FIELD CONDITIONS MAY CAUSE DIMENSIONS AND QUANTITIES TO BE ADJUSTED AS DETERMINED BY THE ENGINEER.

GENERAL NOTES:

- 1) CONCRETE COLLARS SHALL BE CONSTRUCTED OF CLASS SI CONCRETE IN ACCORDANCE WITH SECTION 503 OF THE STANDARD SPECIFICATIONS.
- 2) REINFORCEMENT BARS SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
- 3) EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS AND 3/4" DIA. HOOK BOLTS.
- 4) HOOKED BOLTS SHALL EXTEND A MINIMUM OF 9" INTO NEW CONCRETE.
- 5) ALL H BARS SHALL BE 18" LONG.
- 6) COST OF ALL LABOR AND MATERIALS IS INCIDENTAL TO THE CONTRACT UNIT PRICE PER FOOT OF PIPE CULVERTS OR STORM SEWER, OF THE TYPE AND SIZE SPECIFIED.