STATE DEPARTMENT OF HIGHWAYS
DIVISION OF HIGHWAYS — STATE OF COLORADO

PE AND UTILITIES UNDER IXFU 470-1(2) AND IXFU 470-1(42)
R.O.W. UNDER IXFU 470-1(2) AND IXFU 470-1(58)

FEDERAL ROAD REGION NO	DIVISION	PROJECT NO	SHEET NO
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	13

AS CONSTRUCTED

NO REVISIONS ☐ REVISED 10-16-87 VOID ☐

PLAN AND PROFILE OF ~~PROPOSED~~ AS CONSTRUCTED

COMBINED FEDERAL AID PROJECT NO. IXFU 470-1(54) & IXM 1115(22)

STATE HIGHWAY NO. 470

JEFFERSON COUNTY

REVISIONS		
R-1	9-23-86, 9, 10, 17, 26, 28, 34, 42	L.E.G.

SCALES OF ORIGINAL DRAWINGS
AS SHOWN ON PLAN AND PROFILE

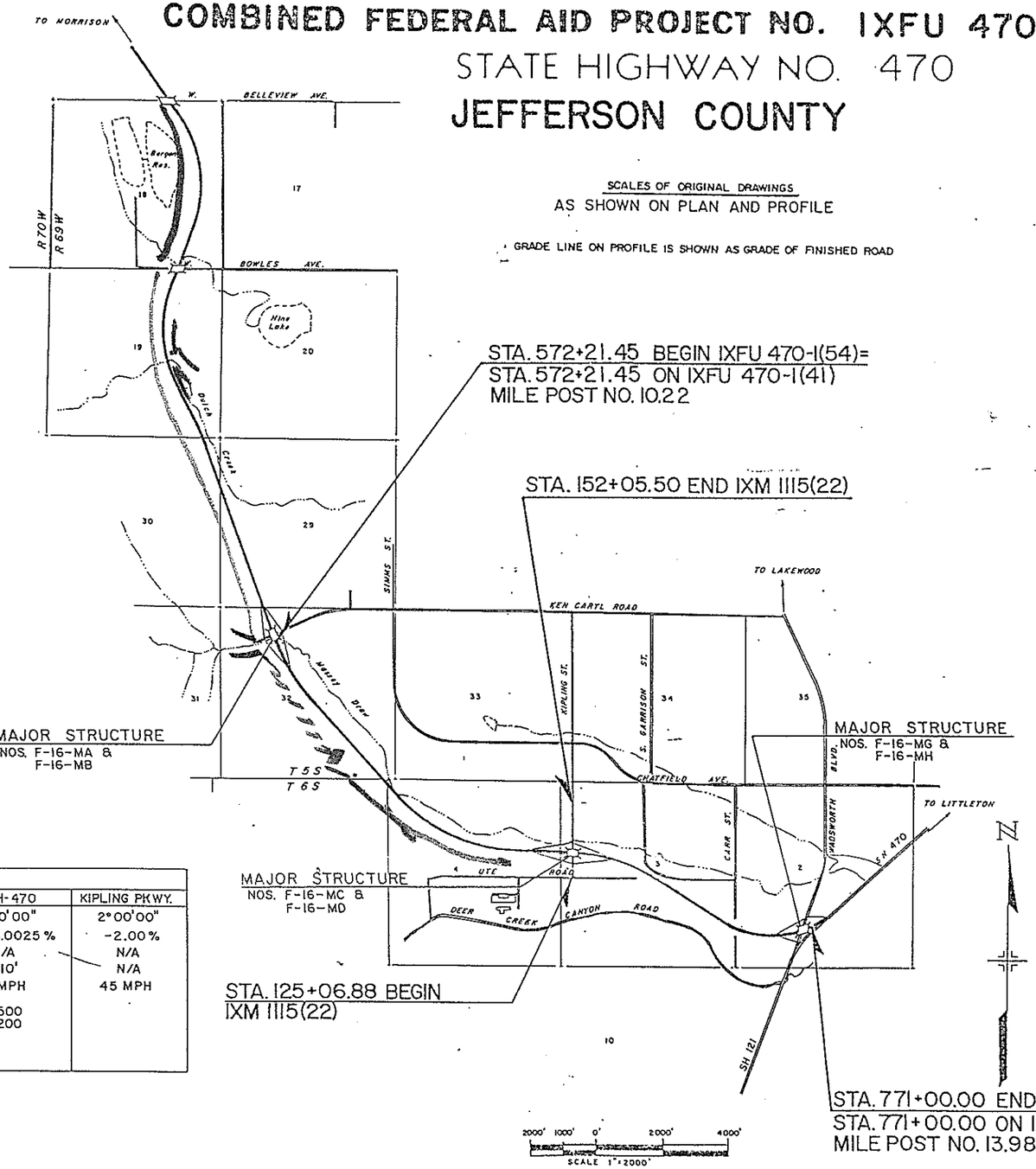
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

TABULATION OF LENGTH

STATION	LIN. FT. ROADWAY	LIN. FT. MAJOR STRUCTURE
572+21.45 BEGIN IXFU 470-1(54) = 572+21.45 ON IXFU 470-1(41) MILE POST NO. 10.22	19,878.55	
771+00.00 END IXFU 470-1(54) =771+00.00 ON IXFU 470-1(42) MILE POST NO. 13.98		
SUBTOTAL 470	19,878.55	
KIPLING PKWY. 125+06.88 BEGIN IXM 1115(22)	2,698.62	
152+05.50 END IXM 1115(22)		
SUBTOTAL KIPLING PKWY.	2,698.62	
COMBINED PROJECT NET LENGTH	22,577.17	

SUMMARY	LIN. FT.	MILES
ROADWAY IXFU 470-1(54) (NET LENGTH)	19,878.55	3.765
ROADWAY IXM 1115(22) NET LENGTH	2,698.62	0.511
COMBINED PROJECTS TOTAL LENGTH	22,577.17	4.276

DESIGN DATA	SH-470	KIPLING PKWY.
MAXIMUM DEGREE OF CURVE	2°00'00"	2°00'00"
MAXIMUM GRADE	-4.0025 %	-2.00 %
MINIMUM SSD HORIZONTAL	N/A	N/A
MINIMUM SSD VERTICAL	610'	N/A
MINIMUM DESIGN SPEED	70 MPH	45 MPH
2004 DESIGN TRAFFIC VOLUME DHV	4,500	
2004 DESIGN TRAFFIC VOLUME ADT	37,200	



LEG-DIST. VI/GWO

SHEET NO.	INDEX OF SHEETS	DWG.
1	TITLE SHEET	TS-1
2	STD. PLANS LIST	SP-1
3	TYPICAL SECTIONS--SH 470	TY-1
4	TYPICAL SECTIONS--KEN CARYL INTERCHANGE RAMPS WADSWORTH INTERCHANGE RAMPS	TY-2
5	TYPICAL SECTIONS--KIPLING INTERCHANGE RAMPS	TY-3
6	TYPICAL SECTIONS--KEN CARYL ROAD	TY-4
7, 8	TYPICAL SECTIONS--KIPLING PARKWAY	TY-5,6
9- 14	SUMMARY OF APPROXIMATE QUANTITIES	QS-1-6
15	SUMMARY OF EARTHWORK, GENERAL NOTES	TG-1
16	TABULATION OF SURFACING QUANTITIES	TG-2
17, 18	TABULATION OF SIDEWALK, CURBRAMP, CURB & GUTTER, MEDIAN COVER, BIKEWAY, GUARDRAIL	TG-3,4
19	TABULATION OF STORM SEWER SYSTEM	TG-5
20	TABULATION OF REMOVE, ADJUST, AND RESET ITEMS	TG-6
21	TABULATION OF DELINEATORS AND FENCING	TG-7
22	APPROACH SLAB DETAILS	B-1
23	GENERAL BRIDGE LAYOUT--STR.NOS. F-16-MC & F-16-MD	B-2
24	GENERAL BRIDGE LAYOUT--STR.NOS. F-16-MG & F-16-MH	B-3
25	MISCELLANEOUS DETAILS	DS-1
26	PLAN AND ELEVATION OF CONCRETE BOX CULVERT	CB-1
27	WINGWALL DETAILS	CB-2
28	BIKEWAY RAIL AND POST DETAILS	CB-3
29- 39	PLAN AND PROFILE--SH 470 AND RAMPS	PP-1-11
40, 41	PLAN AND PROFILE--KEN CARYL ROAD	PP-12,13
42, 43	PLAN AND PROFILE--KIPLING PARKWAY	PP-14,15
44, 45	STORM SEWER SYSTEM PROFILES	DP-1,2
46- 53	BIKEPATH PLAN AND PROFILES	BP-1-8
54	WOOD SOUND BARRIER DETAILS	DF-1
55- 57	PROFILES--SOUND BARRIER WALLS	DF-2-4
58	LANDSCAPE SLOPE MOLDING	G-1
59- 62	LANDSCAPE SUMMARY AND PLAN	L-1-4
63- 68	IRRIGATION PLAN AND DETAILS	I-1-6
69- 73	TRAFFIC SIGNAL PLAN	TP-1-5
74- 77	LIGHTING PLAN	LP-1-4
78-107	SIGNING AND STRIPING/CONSTRUCTION SIGNING PLANS	SS-1-30
108,109	STD. M-607-1 SPECIAL THIS PROJECT	

REVISED M AND S STANDARDS

M-606-12 GUARDRAIL TYPE 4 CONCRETE BARRIER (9 SHEETS) 2-18-83

DeLeuw, Cather & Co.
Denver, Colorado

DAVID J. KELLER REGISTERED 13935 PROFESSIONAL ENGINEER STATE OF COLORADO

DIVISION OF HIGHWAYS

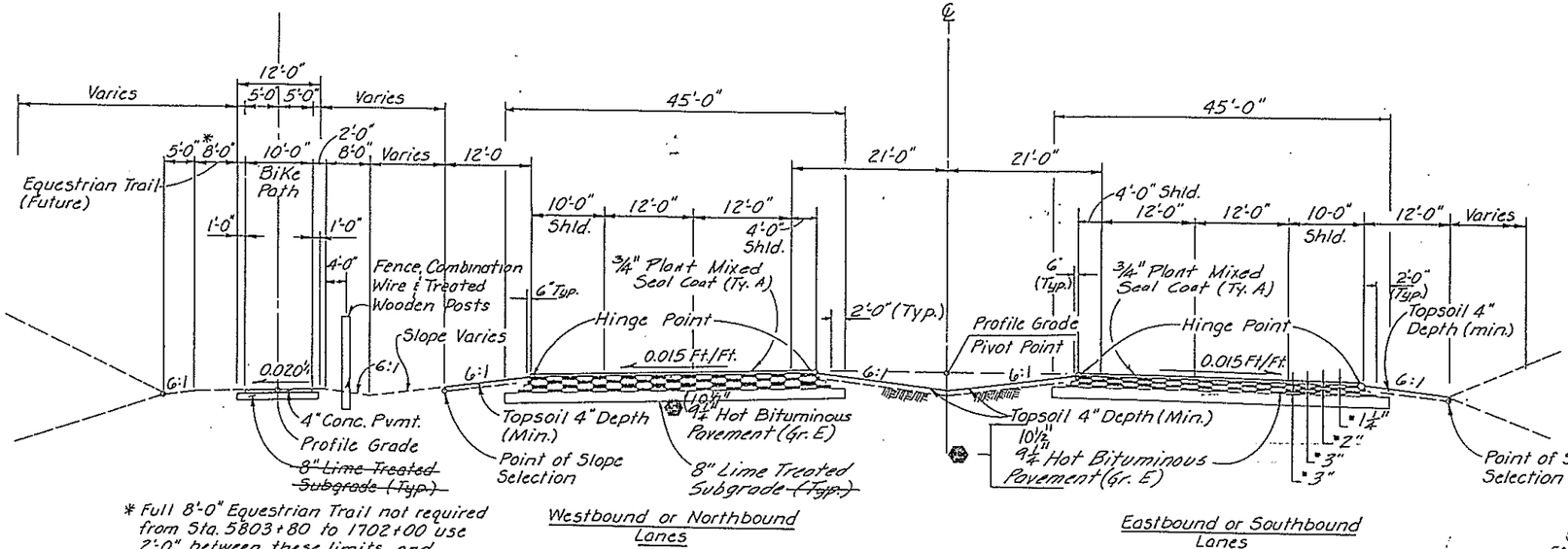
APPROVED: Robert L. Clevenger 9/17/86
CHIEF ENGINEER DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR STERLING PAVING CO.
RES. ENGINEER R.L. MCKENZIE (Project or Resident)
PROJECT STARTED 5-11-87
PROJECT COMPLETED 10-16-87
AS CONSTRUCTED PLANS APPROVED [signature]
Const Engr. 5-18-88
TITLE DATE

AS CONSTRUCTED							
NO REVISIONS		REVISED	10-16-87	VOID			

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1 (54) IXM 1115 (22)	3	109

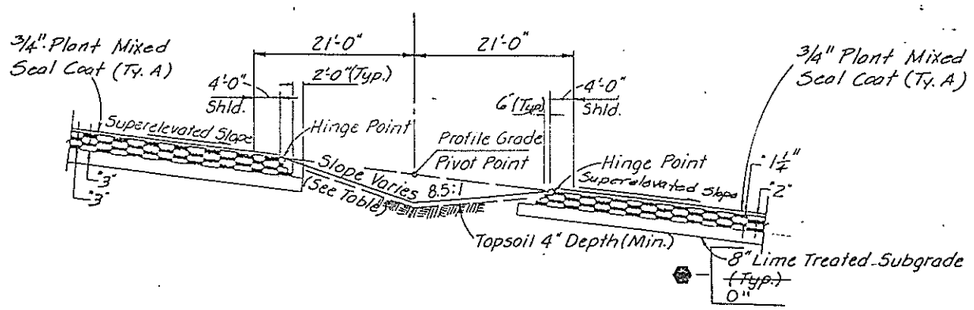


* Full 8'-0" Equestrian Trail not required from Sta. 5803+80 to 1702+00 use 2'-0" between these limits and transition as shown on plans.

"Approximate Thickness"

MEDIAN SLOPE		
Baseline	Superelev.	Slope
0°45'00"	.029%	5.69:1
1°00'00"	.038%	5.16:1
1°30'00"	.053%	4.47:1
2°00'00"	.065%	4.04:1

TYPICAL SECTION - S.H. 470



TYPICAL SECTION - S.H. 470 (SUPERELEVATED)

Typical Section Notes:

1. It is anticipated that the existing Subgrade is approximately 1" higher than as shown.

   It is anticipated that excess material may be generated during the Hydrated Lime Treatment. These operations shall be considered subsidiary to the work.

   Excess material shall be used as shouldering or as directed by the Engineer.

2. Break points on slopes and in bottoms of ditches shall be rounded on construction for a pleasing appearance. See Standards.

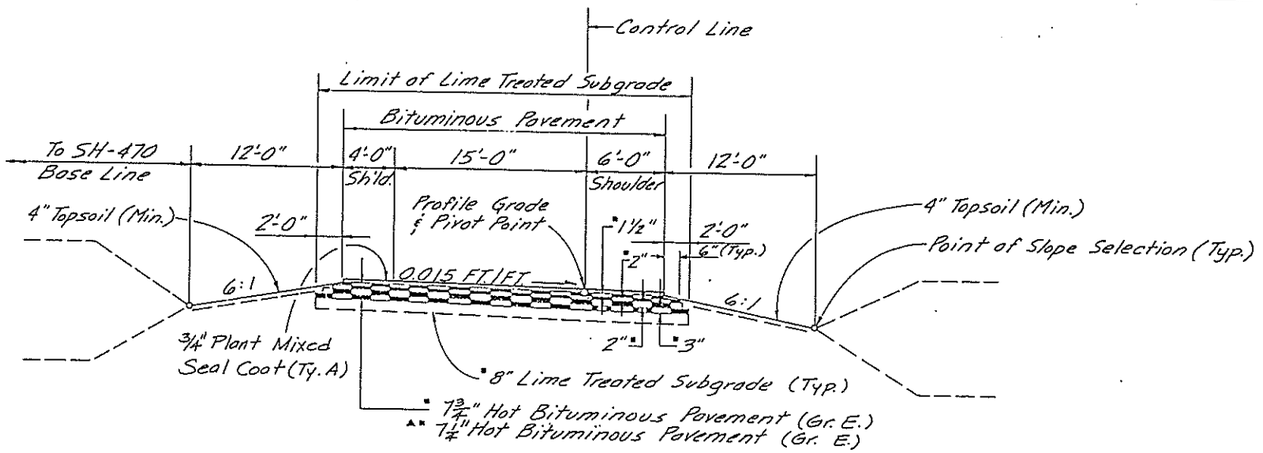
3. The contractor will be required to place 4 inches of topsoil as shown.

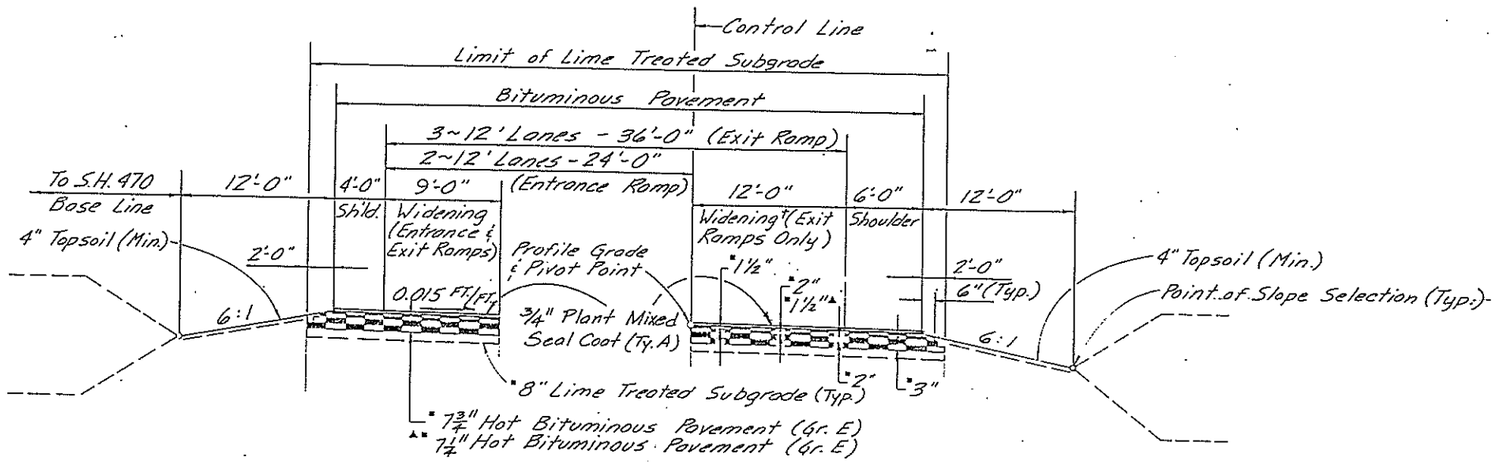
   Any additional material required for shouldering will be measured and paid for as "Topsoil (Haul)"

AS CONSTRUCTED TYPICAL SECTIONS CM0125

STA.	LIME TREATED SUBGRADE	H.B.P. (GR. E)
EAST-BOUND		
	KEN CARYL STR.	
572+47.49	8"	9¼"
583+00	0"	10½"
689+15.77		
691+70.77	KIPLING STR.	
715+50	8"	9¼"
721+25	0"	9½"
765+20.02	8"	9¼"
	WADS. STR.	
WEST BOUND		
	KEN CARYL STR.	
572+47.49	8"	9¼"
583+00	0"	10½"
689+12.15		
691+67.15	KIPLING STR.	
714+50	8"	9¼"
722+00	0"	9½"
765+20.02	8"	9¼"
	WADS. STR.	

AS CONSTRUCTED.					
NO REVISIONS 10-16-87 REVISED ____ VOID ____	FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
	VIII	COLO.	IXFU 470-1(54) IXM 1115(22)	4	109





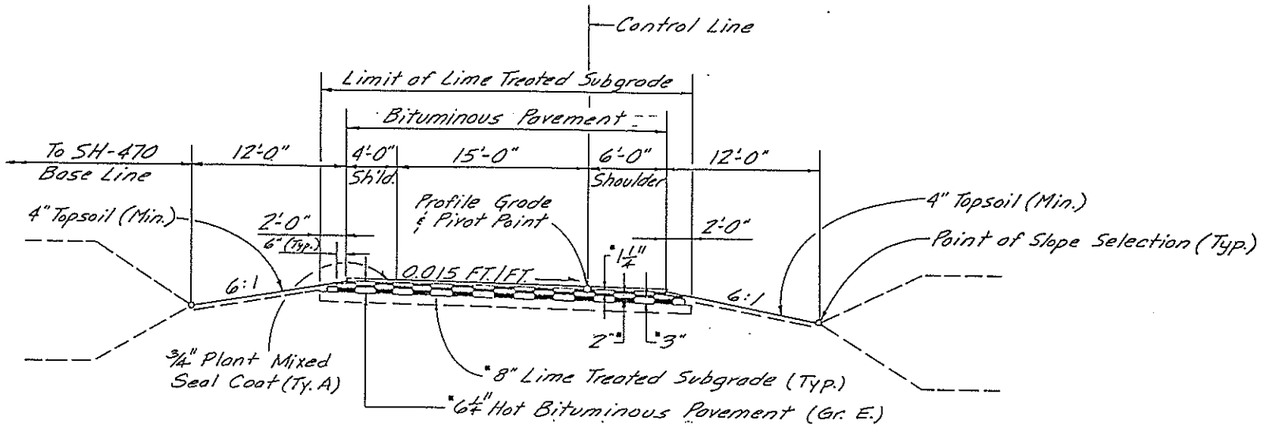
*Approximate Thickness

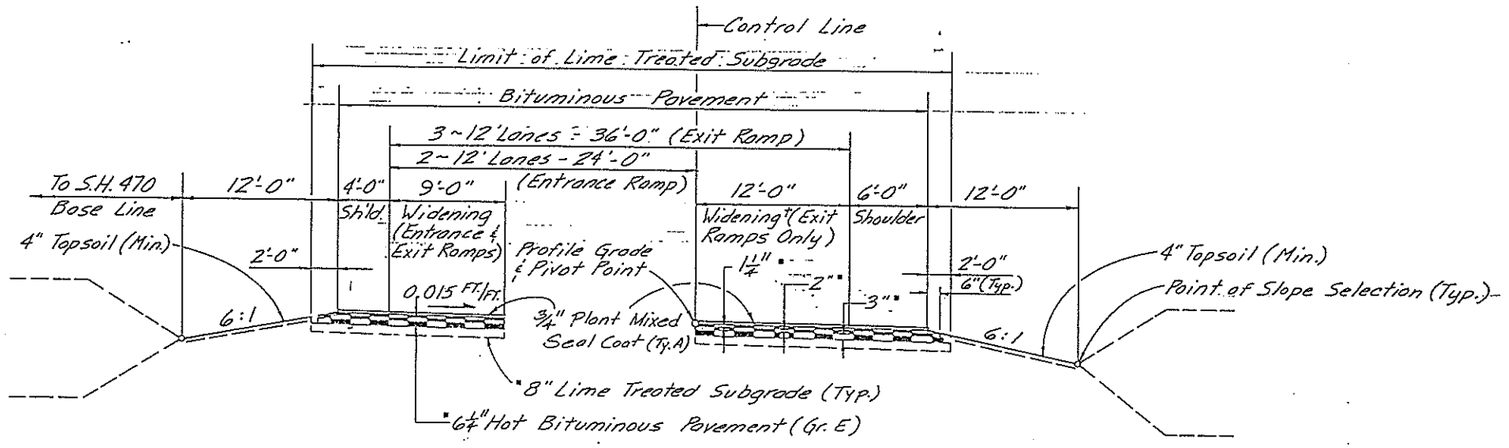
† See Plan Sheets for Location of Widening tapers & Widened Sections.

S.H. - 470 RAMPS.
TYPICAL SECTIONS

WADSWORTH INTERCHANGE
▲ KEN CARYL INTERCHANGE

AS CONSTRUCTED						
NO REVISIONS 10-16-87 REVISED	VOID	FED.ROAD REGION	DMSION	PROJ. NO.	SHEET NO.	SHEET TOTALS
		VIII	COLO.	IXFU 470-1(54) IXM 1115(22)	5	109





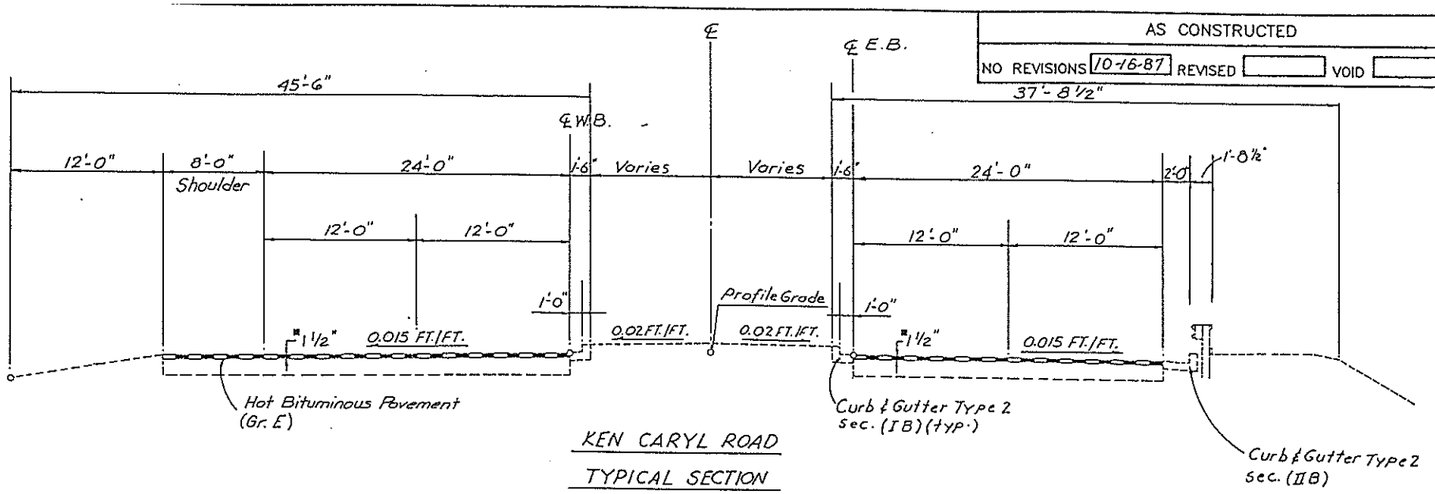
*Approximate Thickness

† See Plan Sheets for Location of Widening tapers & Widened Sections.

S.H. - 470 RAMPS
TYPICAL SECTIONS
KIPLING INTERCHANGE

AS CONSTRUCTED					
NO REVISIONS 10-16-87 REVISED		VOID			

FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(54) IXM 1115(22)	6	109

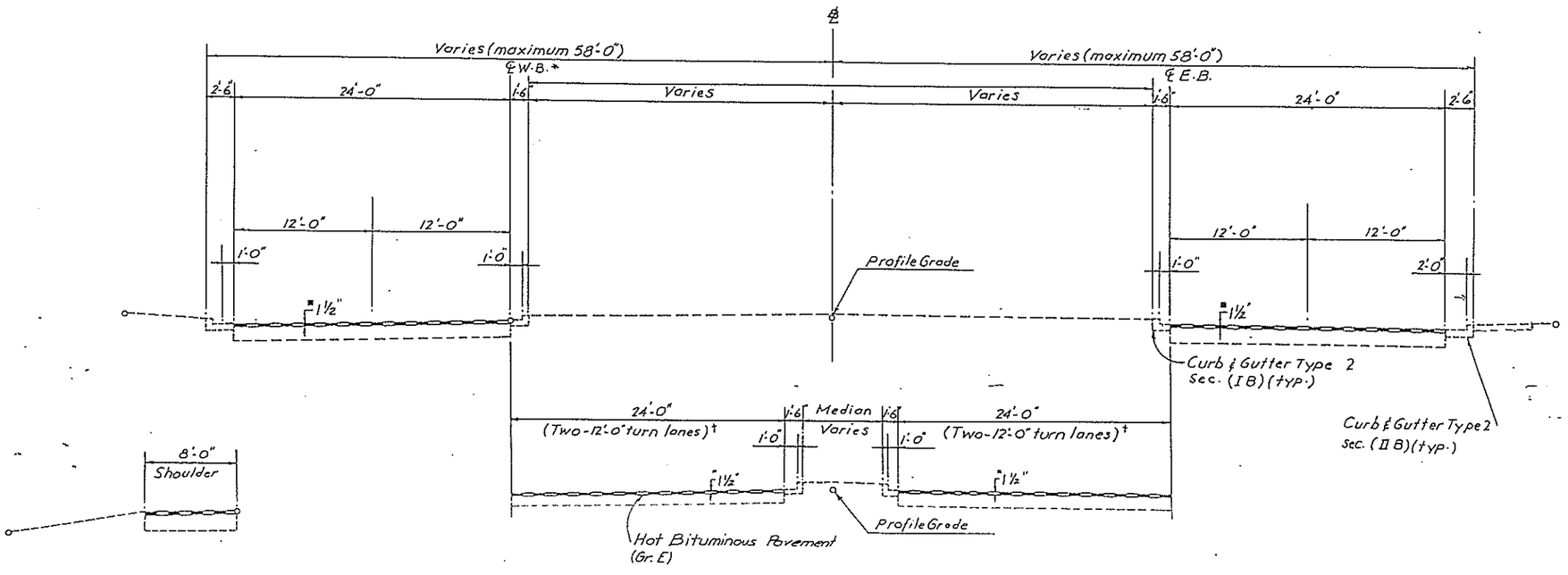


KEN CARYL ROAD

TYPICAL SECTION

Sta. 9+90.00 to Sta. 15+74.00

* Approximate Thickness



Sta 15+74.00 to Sta K+85.00

* West bound control line ends at sta. 22+25.00

† See Plan & Profile Sheets PP-12 & PP-13 for location of turn Lanes.

KEN CARYL ROAD

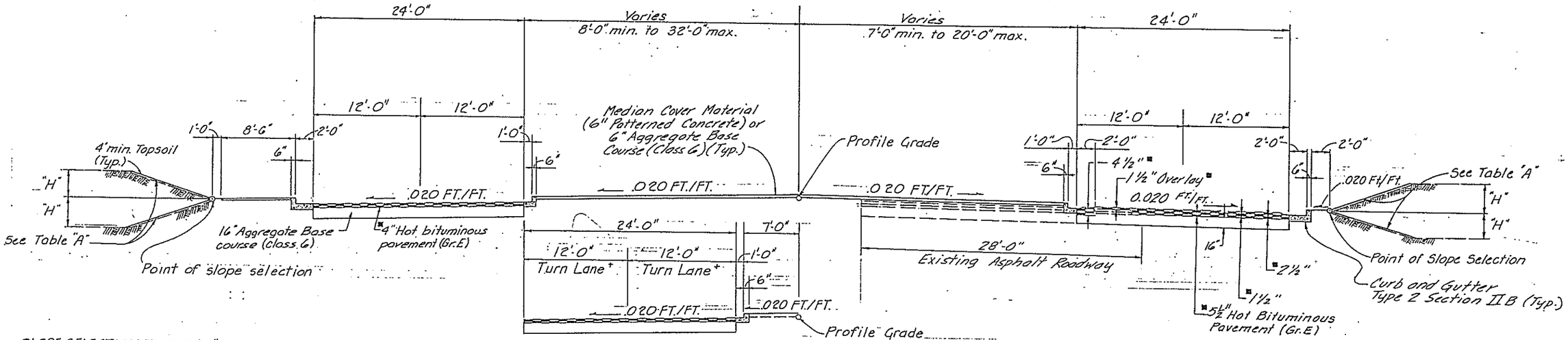
TYPICAL SECTION

Sta. 15+74.00 TO Sta. 34+00.00

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	7	109

AS CONSTRUCTED

NO REVISIONS ☐ REVISED 10-16-87 VOID ☐



+ Sta. 135+65.00 to Sta. 139+00.00

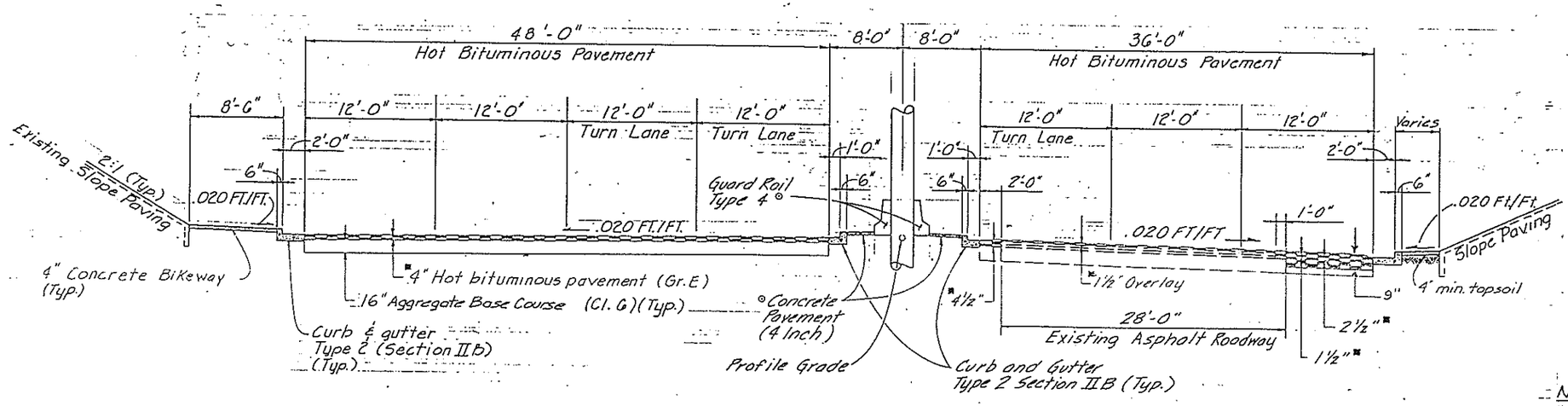
SLOPE SELECTION TABLE "A"

SLOPE	"H" HEIGHT OF CUT	"H" HEIGHT OF FILL
6:1	0' - 10'	0' - 10'
4:1	10' - 15'	10' - 25'
3:1	OVER 15'	OVER 25'

In special cases, slope may be steepened.

KIPLING PKWY - TYPICAL SECTION

Sta. 125+06.88 to Sta. 130+70.00
Sta. 135+20.00 to Sta. 141+80.00 Southbound
Sta. 135+20.00 to Sta. 142+60.00 Northbound



KIPLING PKWY - TYPICAL SECTION

Sta. 130+70.00 to Sta. 135+20.00

NOTE:

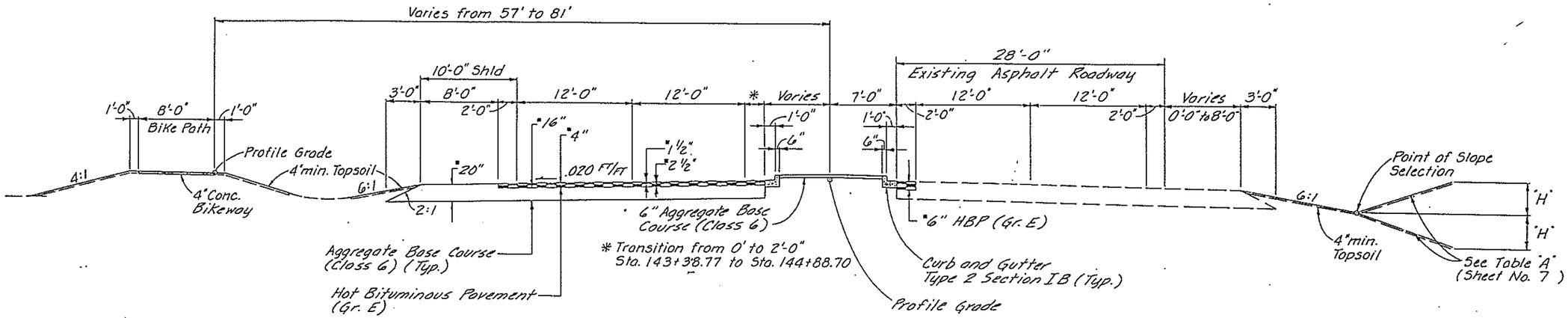
* The pavement cross slope will transition from .020 FT./FT. to .015 FT./FT. with a 50' transition (Sta. 144+50.00 to Sta. 145+00.00).

■ - Approximate Thickness

⊙ - Tan Color Coating Finish (No. 30219) (See Project Special Provision 601)

AS CONSTRUCTED					
NO REVISIONS 10-16-87	REVISED		VOID		

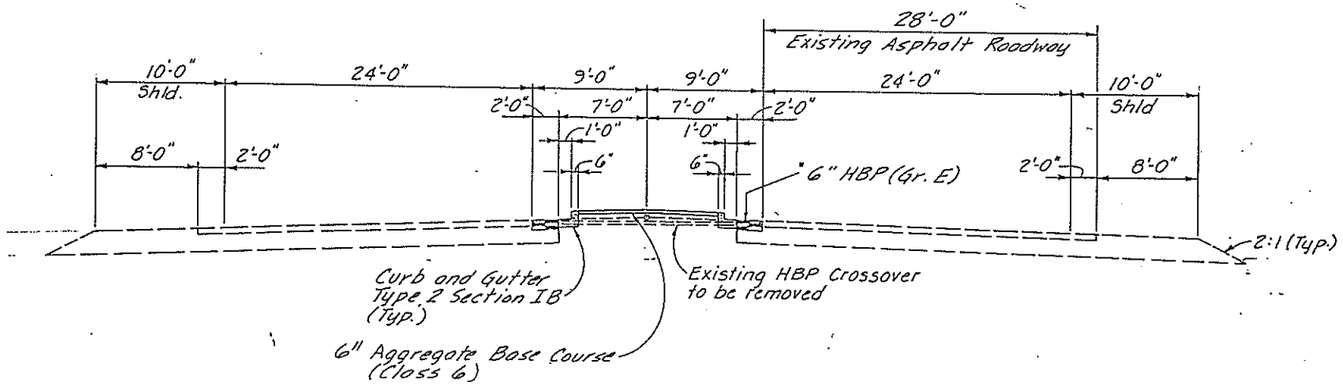
FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(54) IXM 1115(22)	8	109



* Approximate Thickness

KIPLING PKWY - TYPICAL SECTION

Sta. 141+80.00 to Sta. 145+00.00 Southbound
Sta. 142+60.00 to Sta. 143+00.00 Northbound



KIPLING PKWY - TYPICAL SECTION

Sta. 145+00 to 152+05.50 Southbound
Sta. 143+00 to 152+05.50 Northbound

NOTE:

The pavement cross slope will transition from .020 FT./FT. to .015 FT./FT. with a 50' transition (Sta. 144+50.00 to Sta. 145+00.00).

AS CONSTRUCTED							
NO REVISIONS		REVISED	10-16-87	VOID			

FEDERAL ROAD REGION NO	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	29	109

ilities
blic Service Co. Gas and Electric
untain Bell
n Coryl Water and Sanitation District
nver Water Board

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

S.H. 470 - STA. 555+00 TO 585+00

Jefferson County
T5S, R69W, Sec. 32

R=175'

565

560

570

575

580

410

405

Sta. 400+86.02 Ramp 'D'
Sta. 22+75.00 Ken Coryl Road

RAMP 'C'

KEN CARYL RD.

T.S. Sta. 572+40.74
REBAR WITH CAP

S.C. Sta. 574+40.74
REBAR WITH CAP

S10°34'22"E

200' Taper

P.C. Sta. 406+87.91

P.T. Sta. 413+00.00 Ramp 'D'
Sta. 583+00 S.H. 470
Offset 81' Lt.

New Fence

RAMP 'D'

Bikepath

Fence to be Removed

Guard Rail Type 4

Str. No. F-16-MB

P.I. Sta. 409+95.79 Ramp D

1.1 cu.yd. Con. S.ID. PAV.

S19°45'37"E

Sta. 585+00

Existing Fence

Sta. 571+13.02 S.H. 470
Sta. 20+00.00 Ken Coryl Rd.

Guard Rail Type 3

Str. No. F-16-MA

300' Taper

RAMP 'A'

S33°23'18"E

RAMP 'B'

205

210

P.C. Sta. 211+84.01

P.T. Sta. 213+00.00 Ramp 'B'
Sta. 583+00 S.H. 470
Offset 76' Rt.

P.I. 584+66.04

Match Line

Benchmarks

575 - 'D' N.E. Foot Power Tower
315' Rt. Sta. 574+33 El. 5904.62

578 - #5 Rebar 205' Rt Sta. 578+50
El. 5897.96

BEGIN PROJECT IXFU 470-1(54) STA. 572+21.45
= 572+21.45 PROJECT IXFU 470-1(41)

Sta. 201+07.11 Ramp 'B'
Sta. 17+25 Ken Coryl Road

R=175'

① Curve Data C-470

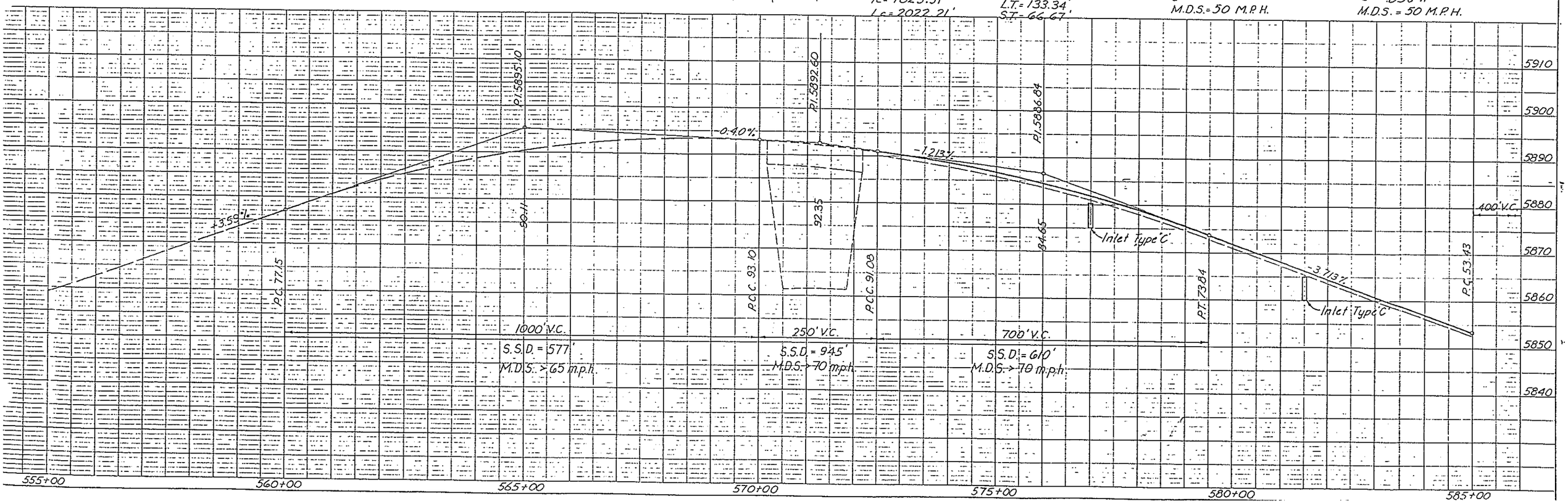
Δ = 22°13'19.5"	Rc = 5729.58'
Ts = 1225.30'	e = .038 ft/ft
Es = 109.44'	M.D.S. = 70 M.P.H.
Δc = 20°13'20"	S.S.D. > 600
Dc = 1°00'00"	ϕ = 1°00'00"
Tc = 1025.31'	Ls = 200'
Lc = 2022.21'	L.T. = 133.34'
	S.T. = 66.67'

Curve Data - Ramp 'B'

Δ = 2°53'59"	
Dc = 2°30'00"	
T = 58.01'	
L = 115.99'	
R = 2291.83'	
e = —	
M.D.S. = 50 M.P.H.	

Curve Data - Ramp 'D'

Δ = 15°18'09"	
Dc = 2°30'00"	
T = 307.88'	
L = 612.10'	
R = 2291.83'	
e = .038 ft/ft	
M.D.S. = 50 M.P.H.	



Original Scale 1"=100' Horiz.
1"=10' Vert.

AS CONSTRUCTED					
NO REVISIONS	10-16-87	REVISED		VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115 (22)	30	109

KEN CARYL RAMP PROFILES

RAMP B

Sta. 201+07.11 Ramp 'A'
Sta. 17+25 Ken Caryl Rd.
71.93
P.C. 70.95
300' V.C.
P.I. Sta. 207+75
EL. 5881.93
P.T. 72.45
-2.92%
-2.0%
2.92
76.65
6" CSP
18" RCPS
P.C.C. 72.45
P.I. 68.07
650' V.C.
S.S.D. = 345'
M.D.S. > 50 M.P.H.
P.T. 70.32
3.58%
63.16
Sta. 213+00 Ramp 'B' C-470, 74' Rt.
Sta. 583+00
Sta. 400+86.02 Ramp 'D'
Sta. 22+75 Ken Caryl Rd.
74.40
+8.40%
0.015% Normal
Trans. 0.015% To 0.01%
10'X10' C.B.C.

200+00 205+00 210+00 213+00 400+00

RAMP D

P.C. 68.12
-2.0%
400' V.C.
9.79
4.79
0.015% Normal
Trans. 0.015% To 0.038%
e = 0.038%
P.T. 65.30
65.47
P.I. 64.12
6" CSP
18" RCPS
P.C.C. 65.50
500' V.C.
S.S.D. = 394'
M.D.S. > 50 M.P.H.
+0.69%
P.I. 58.24
64.56
18" RCPS
3.60%
P.T. 58.24
Sta. 413+00 Ramp 'D' C-470, 81' Lt.
Sta. 583+00
10'X10' C.B.C.

405+00 410+00 413+00

5900
5890
5880
5870
5860
5850

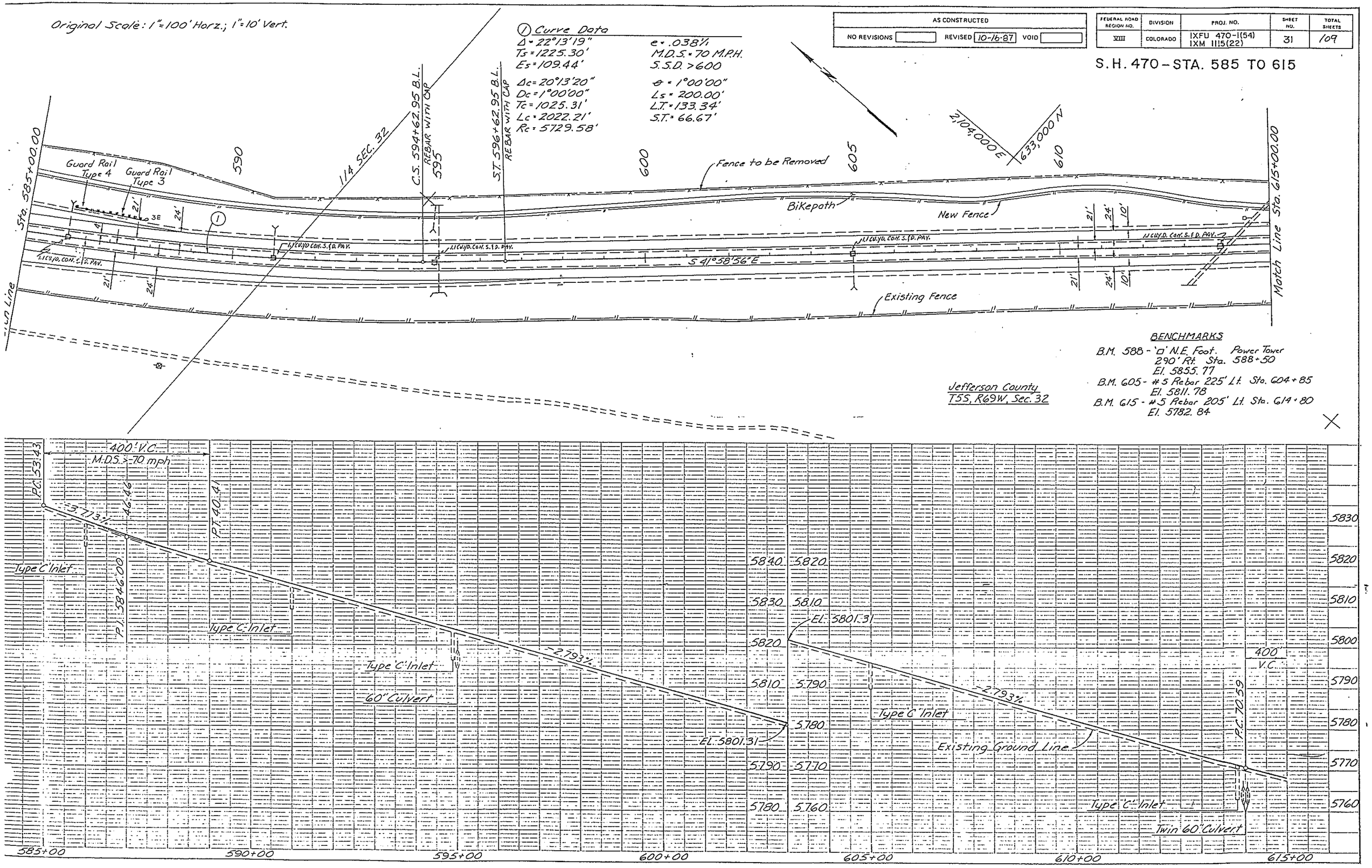
PLATE 3 FULL CROSS SECTION

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	31	109

S.H. 470 – STA. 585 TO 615

Original Scale: 1"=100' Horz.; 1"=10' Vert.



Jefferson County
T5S, R69W, Sec. 32

BENCHMARKS

B.M. 588 - 'D' N.E. Foot. Power Tower
290' Rt. Sta. 588+50
El. 5855.77

B.M. 605 - #5 Rebar 225' Lt. Sta. 604+85
El. 5811.78

B.M. 615 - #5 Rebar 205' Lt. Sta. 614+80
El. 5782.84

Original Scale: 1"=100' Horz.; 1"=10' Vert.

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	32	109

S.H. 470 - STA. 615 TO 645

(2) Curve Data

Δ = 46°12'18"	e = .038 ft
Ts = 2544.29'	M.D.S. = 70 M.P.H.
Es = 499.55'	S.S.D. > 850'
Δc = 44°12'18"	ø = 1°00'00"
Dc = 1°00'00"	Ls = 200.00'
Tc = 2344.29'	L.T. = 133.34'
Lc = 4420.49'	S.T. = 66.67'
Rc = 5729.58'	

Sta. 615+00.00

Match Line

Jefferson County
T5S, R69W, Sec.32

Jefferson County
T5S, R69W, Sec.33

Jefferson County
T6S, R69W, Sec.5

Jefferson County
T6S, R69W, Sec.4

T5S
T6S

620

625

630

635

640

Bikepath

24' 4" 12' 10'

24' 4" 21' 10'

S 41°58'56" E

11 CY/YD. CON. S. & GUTTER

T.S. 628+87.43
REBAR WITH CAP

S.C. 630+87.43
REBAR WITH CAP

INLET TYPE C

Grade Raised 1.5' From 618+50 to 632+25 Due to Unstable Conditions of Embankment on Project Exem 470-1 (43)

Guard Rail Type 3

Guard Rail Type 4

2-20' 18" RCP

Fence To Be Removed

New Fence

Existing Fence

Sta. 645+00.00

Match Line

GUARD RAIL TYPE 3

3F

GUARD RAIL TYPE 4

BENCHMARKS

B.M. 620 - #5 Rebar 220' Lt. Sta. 620+20
El. 5757.90

B.M. 630 - #5 Rebar 170' Lt. Sta. 630+00
El. 5736.53

B.M. 640 - #5 Rebar 175' Lt. Sta. 640+00
El. 5715.66

400' V.C.
M.D.S. > 70 mph
6.55%
PI 5763.00
-2.793%
PT 61.62

48" Culvert

Twin 60" Culverts

Type 'C' Inlet

Type 'C' Inlet

Type 'C' Inlet

30" Culvert

Existing Ground Line

Type 'C' Inlet

30" Culvert

400' V.C.
PC 19.38
1.6.22

Type 'C' Inlet

36" Culvert

PI 5716.00

-1.69%

5770
5760
5750
5740
5730
5720
5710

615+00
620+00
625+00
630+00
635+00
640+00
645+00

AS CONSTRUCTED			
NO REVISIONS ☐	REVISED 10-16-87	VOID ☐	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	33	

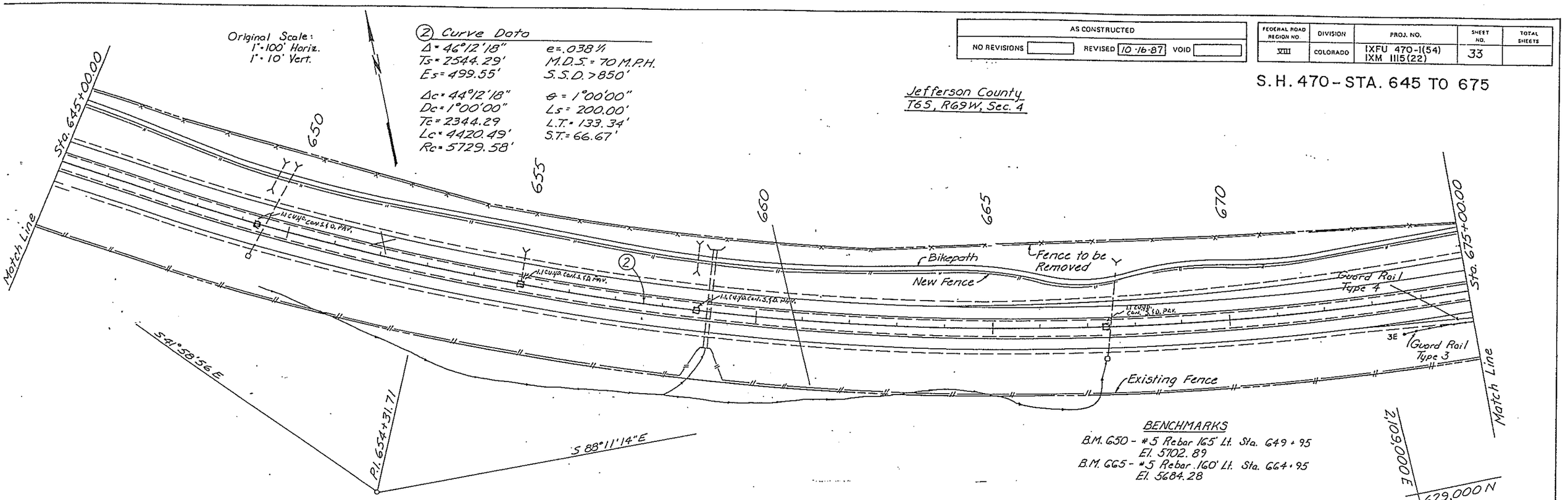
S.H. 470 - STA. 645 TO 675

Original Scale:
1"=100' Horiz.
1"=10' Vert.

Jefferson County
T65, R69W, Sec. 4

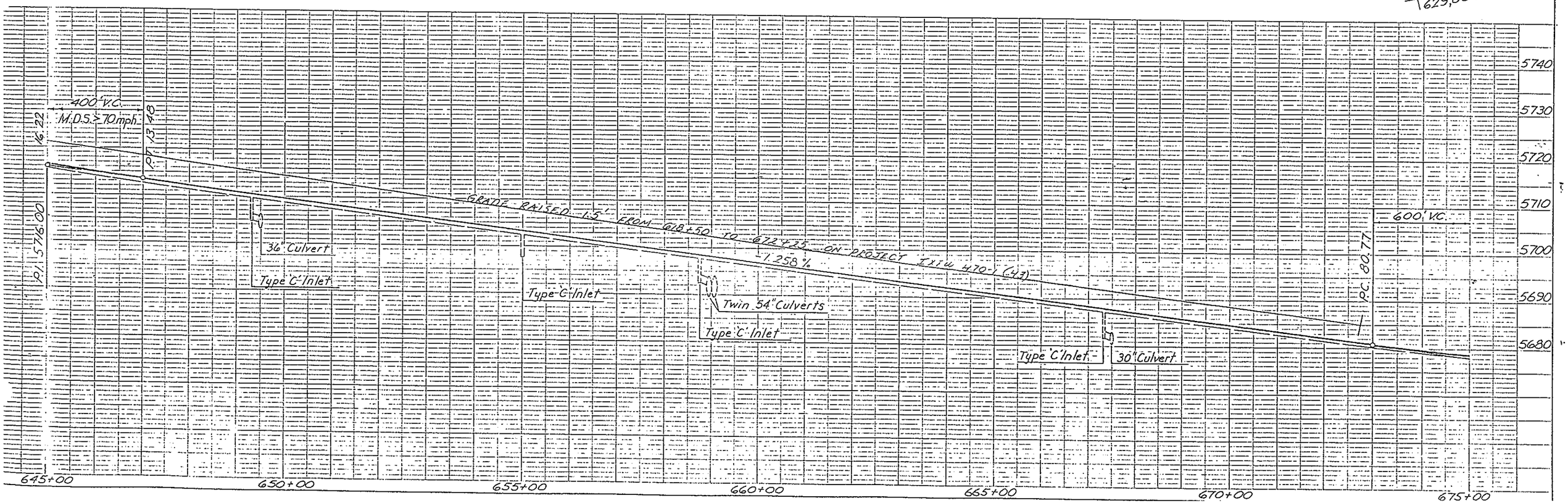
② Curve Data

Δ = 46°12'18"	e = .038 ft
Ts = 2544.29'	M.D.S. = 70 M.P.H.
Es = 499.55'	S.S.D. > 850'
Δc = 44°12'18"	θ = 1°00'00"
Dc = 1°00'00"	Ls = 200.00'
Tc = 2344.29	L.T. = 133.34'
Lc = 4420.49'	S.T. = 66.67'
Rc = 5729.58'	



BENCHMARKS

B.M. 650 - #5 Rebar 165' Lt. Sta. 649+95
El. 5702.89
B.M. 665 - #5 Rebar 160' Lt. Sta. 664+95
El. 5684.28



inal Scale : 1" = 100' Horiz.
1" = 10' Vert.

AS CONSTRUCTED			
NO REVISIONS	REVISED 10-16-87	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	34	109

(R-1) 9-23-86 Changed Skew Angles and Lengths of Wingwalls ~ LEG

S.H. 470 - STA. 675 TO 705

Jefferson County
T.6S., R.69W, Sec.4

Match Line Sta. 675+00.00

C.S. 675+07.92 B.L.
REBAR WITH CAP

Sta. 677+07.92 B.L.
REBAR WITH CAP

Sta. 678+50.00 Ramp 'C'
Offset 76'

Sta. 678+51.52 S.H.470 Offset 76'

P.C. Sta. 379+07.12 Ramp 'C'

Sta. 380+55.00 Begin Taper Lt.

P.I. Sta. 381+00.05 Ramp 'C'

P.T. Sta. 382+92.08 Ramp 'C'

Sta. 383+55.00 End Taper Lt.

Massey Draw

Fence to be Removed

Bikepath

New Fence

Ramp 'C'

N 81° 2' 35" E

S 89° 19' 59" E

S 88° 11' 14" E

S 84° 45' 13" E

S 77° 10' 33" E

Guard Rail Type 4

Guard Rail Type 3

Curb & Gutter Type 2 (Sec IIB)

T.S. 689+62.39 B.L.

S.C. 691+62.39 B.L.
REBAR WITH CAP

Structure No. F-16-MD

Structure No. F-16-MC

Sta. 690+43.92 S.H.470
Sta. 133+04.74 Kipling

Sta. 390+50.36 Ramp 'C'
Sta. 389+89.47 Ramp 'D'
Sta. 135+63.74 Kipling

Sta. 393+60.00 Begin Taper Lt. Rt.

Sta. 395+60 End Taper Lt. Rt.

Ramp 'D'
S 74° 18' 21" E

Sta. 402+50.00 Ramp 'D'
Sta. 702+50 S.H. 470
Offset 81'

Match Line Sta. 705+00.00

11" Un'd. Con. S.F.D. PAV.

Ramp 'A'

Ramp 'B'

N 82° 13' 19" E

Existing Fence

Existing Pavement

KIPLING

N 10° 16' 45" W

Sta. 190+71.01 Ramp 'A' =
Sta. 190+67.45 Ramp 'B' =
Sta. 130+29.74 Kipting St.

P.C. Sta. 195+72. Ramp 'B'

Sta. 197+50.00 Begin Taper Lt.

P.I. Sta. 199+15.08 Ramp 'B'

Sta. 200+50.00 End Taper Lt.

P.T. Sta. 202+50.00 Ramp 'B'
Sta. 702+50 S.H. 470
Offset 76'

Jefferson County
T.6S. R.69 W. Sec. 3

Sta. 178+50.00 Ramp 'A'
Sta. 678+50.00 S.H.470 Offset 81'

P.C. Sta. 179+98.77 Ramp 'A'

Sta. 181+40.00 Begin Widening Taper Lt.

P.I. Sta. 181+50.54 Ramp 'A'

P.T. Sta. 183+01.87 Ramp 'A'

Sta. 183+40.00 End Widening Taper Lt.

Begin Widening Taper

Turn Lane

Sta. 185+40.00 End Widening Taper Rt.

Turn Lane

Guard Rail Type 4

Guard Rail Type 3

Existing Fence

Benchmarks
B.M. 685 - "5 Rebar 180' Lt.
Sta. 685+00 El. 5682.17
B.M. 704 - "5 Rebar 140' Lt.
Sta. 709+40 El. 5636.19

'KIPLING' INTERCHANGE LAYOUT PLAN

Curve Data							
(3) Curve S.H. 470				Curve	Ramp 'A'	Ramp 'B'	Ramp 'C'
Δ =	31°35'19"	e =	.038%	Δ =	7°34'39"	20°18'39"	9°37'27"
Ts =	1720.78'	M.D.S.	70 m.p.h.	Dc =	2°30'00"	3°00'00"	2°30'00"
Es =	224.81	S.S.D.	> 850'	T =	151.77'	342.10'	192.93'
Δc =	29°35'19"	θs =	1°00'00"	L =	303.10'	677.02'	384.96'
Dc =	1°00'00"	Ls =	200'	R =	2291.83'	1909.86'	2291.83'
Tc =	1520.78	L.T. =	133.34'	e =	.046	.053%	.046
Lc =	2958.87'	S.T. =	66.67'	M.D.S. =	50 m.p.h.	50 m.p.h.	50 m.p.h.
Rc =	5729.58						

600' V.C.
MDS = 70 Mph.

P.T. 81.58

79.09

P.I. 5677.00

Type 'C' Inlet

30" Culvert

-1.526%

P.I. 5690.73

-1.129%

690+43.92 S.H.470 =
133+04.74 KIPLING

Structure Nos. F-16-MC & F-16-MD

P.I. 5684.52

-1.884%

P.I. 5676.04

88.08

84.24

84.63

P.C. 86.21

Gas Line

P.C.C. 81.69

74.45

Type 'C' Inlet

P.T. 64.03

-4.0025%

800' V.C.
SSD = 632 FT.
MDS ≥ 70 MPH.

300' V.C.

8" San. Sewer

SSD = 1030 Ft.
MDS > 70 M.P.H.

600' V.C.
SSD = 613 FT.
MDS > 70 MPH.

60" Culvert

12" Water

36" Water

8" San. Sewer

Type 'C' Inlet

5660
5650
5640
5630

675+00 680+00 685+00 690+00 695+00 700+00 705+00

AS CONSTRUCTED			
NO REVISIONS	10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO.	SHEET NO	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	35	109

KIPLING RAMP PROFILES

Original Scale: HORZ. SCALE 1" = 100'
VERT. SCALE 1" = 10'

RAMP "A"

Sta. 178+50 Ramp "A"
Sta. 678+50 SH 470 81' Rt.
e = 0.015%
125'
R = 2291.81
MDS = 50 MPH
125'
50'
PC. Sta. 179+98.77
e = 0.046
PT. 5682.38
50'
e = 0.046%
PT. Sta. 183+08.87
e = 0.015%
+1.09%
79.23
PC. 7966
-3.985%
PT. 72.52
500' V.C.
SSD = 362'
MDS = 51 M.P.H.
500' V.C.
MDS > 50 M.P.H.
PC. 66.60
PT. 62.41
Sta. 190+71.01 Ramp "A"
Sta. 130+29.74 Kipling
60.62
Exist. 8" G.
PT. 5654.74
+2.27%
Exist. 12" Water
64.03
60" Culvert
Inv. El. 5652.07
Exist. 36" Water
64.05
Sta. 190+67.45 Ramp "B"
Sta. 130+29.74 Kipling
-2.17%
PC. 5790
54.39
PT. 52.54
PT. 5651.60
0.512%
Sta. 202+50 Ramp "B"
Sta. 702+50 SH 470 76' Rt.
e = 0.0053%
76'
3.925%
24" Culvert
Inv. El. 5646.2
18" Culvert
Inv. El. 5642.89
PT. 5653.56
Exist. 8" San Sewer
49.29
e = 0.015%
190
e = 0.0053%
PC. 52.02
SSD = 395'
MDS = 54 M.P.H.
400' V.C.
PT. 43.15
e = 0.0038%

RAMP "C"

Sta. 378+50 Ramp "C"
Sta. 678+51.52 SH 470 76' Lt.
e = 0.015%
180
R = 2291.83
MDS = 50 M.P.H.
75
30'
e = 0.046%
PC. 379+07.12
PT. 5683.18
125'
e = 0.046%
50
PT. 382+92.08
e = 0.015%
+1.15%
79.73
79.94
PC. 80.31
-4.024%
500' V.C.
SSD = 358'
MDS = 51 M.P.H.
PT. 73.12
PC. 61.05
300' V.C.
MDS > 35 MPH
PT. 5655.01
57.27
PT. 5801 Ramp "C"
Sta. 390+50.36 Kipling
Sta. 135+63.74
+2.00%
Exist. 8" G.
59.02
60" Culvert
Inv. El. 50.26
Exist. 36" Water
Exist. 12" Water
59.02
Sta. 389+89.47 Ramp "D"
Sta. 135+63.74 Kipling
PC. 56.81
300' V.C.
MDS > 45 M.P.H.
PT. 56.86
55.32
2.00%
PI. 5665.00
+2.035%
64.44
24" Culvert
Inv. El. 5645.95
8" San Sewer
18" Culvert
Inv. El. 5644.73
PC. 59.91
PT. 55.85
PI. 53.81
Exist. 8" San Sewer
500' V.C.
SSD = 341'
MDS = 49 M.P.H.
3.66%
Sta. 402+50 Ramp "D"
Sta. 702+50 SH 470 81' Lt.
e = 0.0053%
e = 0.0038%
e = 0.015%
50
76
48.53
Ex. 4575'

RAMP "D"

5680
5670
5660
5650
5640
5630
380
385
390
395
400

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	36	109

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

S. H. 470 - STA. 705 TO 735

③ Curve Data

Δ = 31°35'19" e = 0.38 %
Ts = 1720.78' M.D.S. = 70 M.P.H.
Es = 224.81' S.S.D. > 850'

Δc = 29°35'19" θ = 1°00'00"
Dc = 1°00'00" Ls = 200'
Tc = 1520.78 L.T. = 133.34'
Lc = 2958.87' S.T. = 66.67'
Rc = 5729.58'

Sta. 705+00.00
P.I. 706+83.17 B.L.
Match Line
1/4 Sec. 3
Fence to be Removed
Guard Rail Type 4
Guard Rail Type 3
3E
GARRISON ST.
21'
W
UTE RD.
1/4 SEC. 3
3E x G
Bikepath
New Fence
Existing Fence
Fence to be Removed
Bikepath
Guard Rail Type 4
S. 56° 33' 34" E.
Guard Rail Type 3
Sta. 735+00.00
Match Line
③
Underground Conf. S. & D. Pav.
32"
16"
715
710
720
725
730
C.S. 721+21.26 B.L.
REBAR WITH CAP
S.T. 723+21.26 B.L.
REBAR WITH CAP
3F
GUARD RAIL TYPE 3
GUARD RAIL TYPE A
3F

Benchmarks
B.M. 706 - #5 Rebar 180' Lt.
Sta. 705+80 El. 5629.45
B.M. 712 - #5 Rebar 205' Lt.
Sta. 712+40 El. 5610.81

600' V.C.
M.D.S. = 70 Mph.
- 4.0025 %
P.C. 124.01
14.02
P.T. 08.03
P.I. 5612.00
Type 'C' Inlet
54" CSP
- 1.3153 %
36" Water
Type 'C' Inlet
54" RCP
24" RCP

5610
5600
5590
5580
5570
5560

705+00
710+00
715+00
720+00
725+00
730+00
735+00

F COLORADO
EPARTMENT OF HIGHWAYS
N OF HIGHWAYS:
I. FORM NO. 126
EB. 1984

AS CONSTRUCTED					
NO REVISIONS	REVISED 10-16-87	VOID			

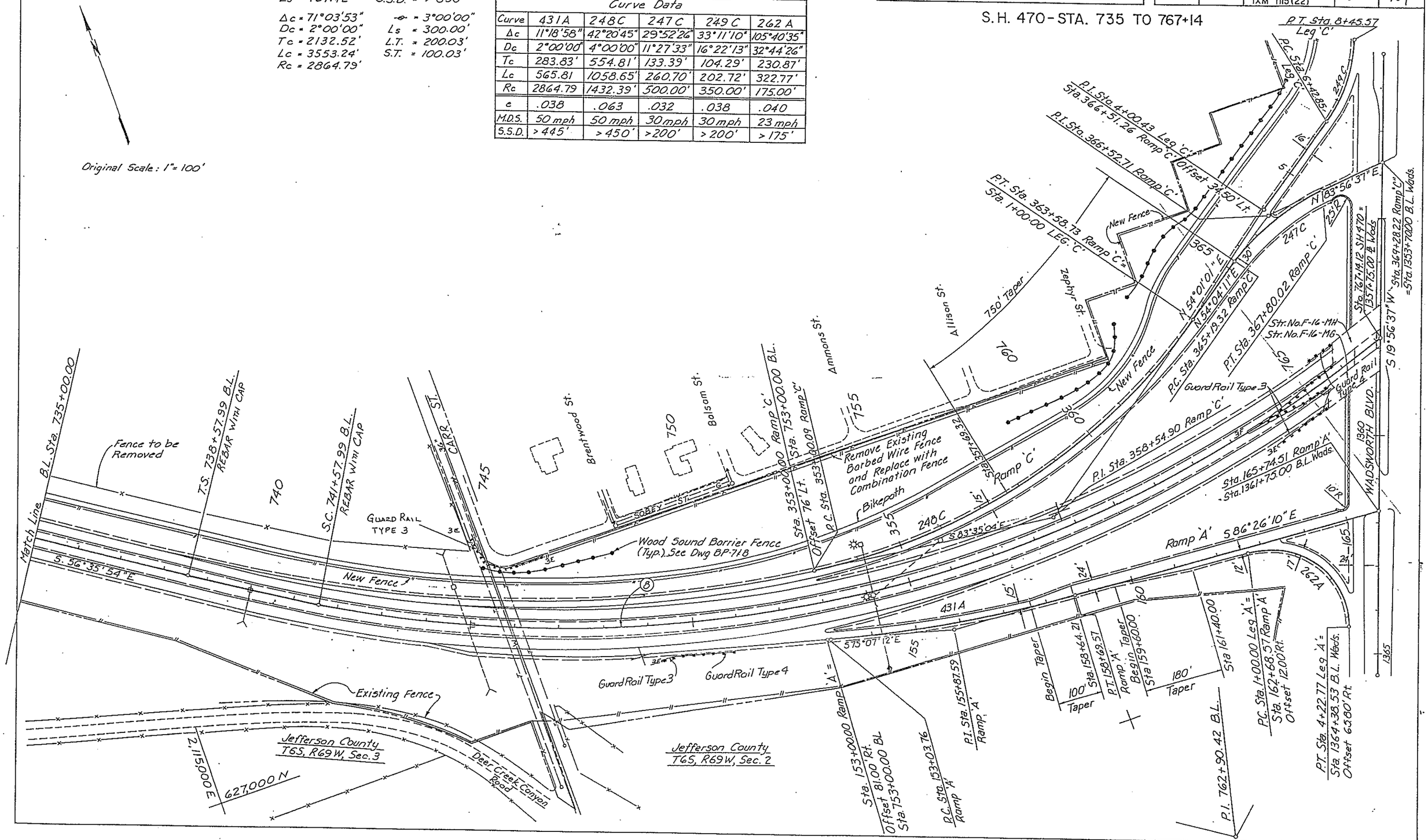
FED.ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTALS
VIII	COLO.	IXFU 470-1(54) IXM 1115(22)	37	109

S.H. 470 - STA. 735 TO 767+14

Original Scale: 1" = 100'

⑧ Curve Data
Δ = 77°03'53" e = 0.065 ft
Ts = 2432.43' M.D.S. = 70 M.P.H.
Es = 797.42' S.S.D. = > 850'
Δc = 71°03'53" = 3°00'00"
Dc = 2°00'00" Ls = 300.00'
Tc = 2132.52' L.T. = 200.03'
Lc = 3553.24' S.T. = 100.03'
Rc = 2864.79'

Curve Data					
Curve	431A	248C	247C	249C	262A
Δc	11°18'58"	42°20'45"	29°52'26"	33°11'10"	105°40'35"
Dc	2°00'00"	4°00'00"	11°27'33"	16°22'13"	32°44'26"
Tc	283.83'	554.81'	133.39'	104.29'	230.87'
Lc	565.81	1058.65'	260.70'	202.72'	322.77'
Rc	2864.79	1432.39'	500.00'	350.00'	175.00'
e	.038	.063	.032	.038	.040
M.D.S.	50 mph	50 mph	30 mph	30 mph	23 mph
S.S.D.	> 445'	> 450'	> 200'	> 200'	> 175'



AS CONSTRUCTED			
NO REVISIONS 10-16-87	REVISED	VOID	

FEDERAL ROAD REGION NO	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	38	109

Original Scale:
1"=100' Horiz.
1"=10' Vert.

WADSWORTH RAMPS

RAMP "A"

RAMP "C"

S.H. 470 - 735 TO 765

AS CONSTRUCTED					
NO REVISIONS	10-16-87	REVISED		VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	39	109

S.H. 470 - STA. 767+14 TO 790

Original Scale
1" = 100' Horiz.
1" = 10' Vert.

⑧ Curve Data

Δ	77°03'53"	θs	3°00'00"
Tr	2432.43'	Ls	300.00'
Es	797.42'	LT	200.03'
		S.T.	100.03'
Δc	71°03'53"	e	.065 ft
Dc	2°00.00'	MDS	70 M.P.H.
Tc	2132.52'	SSD	>850'
Lc	3553.24'		
Rc	2864.79'		

Benchmarks
B.M. 783 - Power Pole @ N.R.O.W. Fence
Sta. 783+90 El. 5544.47
B.M. 791 - N.W. Inside Corner 'C' Inlet
Sta. 791+22 El. 5517.71

Sta. 767+14.12 S.H. 470 =
Sta. 1357+75.00 ℄ Wods

STA. 771+00.00 END
PROJECT IXFU 470-1(54) =
STA. 771+00.00 ON PROJECT
IXFU 470-1(42)

Wadsworth Blvd.
℄ 1250
1355
Str. No. F-16-MH
770
Guard Rail Type 3
3E
3T
℄ SH 470
Match Line
Str. No. F-16-MG
Guard Rail Type 4
1250
C.S. 777+11.22 B.L.
775
S.T. 780+11.22 B.L.
780
785
Sta. 787+15.60 Match Grade
Sta. 788+83.33 Match Shoulder
790
480
275
280
N46°20'13"E
⑧

PT. 5581.80
+0.6600%
776'
2.6947%
PT. 68.33
1000' V.C.
SSD: 629' MDS > 70 M.P.H.
200' V.C.
MDS > 70 M.P.H.
PC. 32.88
30.36
PT. 28.22
Type 'C' Inlet
1.9605%
PT. 786+15.60
ET. 5530.18

5550
5540
5530
5520
5510

765+00
770+00
775+00
780+00
785+00
790+00

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	40	109

Original Scale 1" = 50' Horiz.
1" = 5' Vert.

KEN CARYL RD.

Sta. 9+90 to Sta. 20+50

LIMITS OF KEN CARYL OVERLAY

STA. 17+25 KEN CARYL ℄
STA. 201+07.11 RAMP 'B'

℄ RAMP 'A'

STA. 571+13.02 SH 470℄
STA. 20+00 KEN CARYL ℄

LIMITS OF FULL DEPTH RAMP PAVING & KEN CARYL OVERLAY

SH 470

8' BIKEPATH

15" S

24"

MH

W

G

T

Sta. 9+90.00 Next Existing Pvmt.

200' V.C.
MDS > 50 MPH

2.20%

PC 8200

79.98

PT 78.30

5872.80

PI

1.50%

PC 71.55

70.24

500' V.C.
MDS > 50 MPH

6" CSP

2.6% CSP

18" RCPS

30" C.S.P.

24" RCPS

PI 5867.80

5880
5875
5870
5865

10+00
15+00
20+00

Original Scale: 1" = 50' Horiz.
1" = 5' Vert.

AS CONSTRUCTED			
NO REVISIONS	10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	41	109

KEN CARYL RD.
Sta. 20+50 to 34+00

Jefferson County
T5S, R69W, Sec 32

LIMITS OF KEN CARYL OVERLAY

℄ BIKEPATH (FUTURE)

℄ Ramp "C"

Notch Line Sta. 20+50.00 ℄

Sta. 22+75 K-Caryl ℄ =
Sta. 320+95.33 Ramp C =
Sta. 900+84.02 Ramp D

5' Sidewalk (Future)

ABANDONED

PAST (EAST)

MH

24"

16"

18"

W.V.

LIMITS OF FULL DEPTH RAMP PAVING & KEN CARYL OVERLAY

℄ Ramp "D"

Bikepath ℄

BM #24 - Elev. 5889.40
Rebar 78' ± Lt. 29+09

BM #34 - Elev. 5869.13
Rebar 80' ± 33+75

2,103,000 N

636,500 N

Sta. 34+00.00 ℄
Meet Existing Pvmt.

500' V.C.

PT. 73.80

+2.40%

6" CSP

18" RCPS

PC. 79.58

PI 5886.78
Sta. 127+91

82.73

600' V.C.

PT. 77.78

S.S.D. = 384'
M.P.S. = 50 MPH

-3.00%

EL. 68.51

End Project
Ken Caryl Road

5890
5885
5880
5875
5870
5865
5860
5855
5850

25+00

30+00

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	42	109

KIPLING PKWY
125+00 TO 138+50

(R-1) 9-23-86 ~ Changed Skew Angles and Lengths of Wingwalls ~ LEG

Original Scale: 1" = 50' Horiz
1" = 5' Vert.

KEY
- 6" Median Cover Material (Patterned Concrete)
- Concrete Pvmt. (4") (Colored Coating Finish) (No. 30219)

NOTES:
1. All roadway widths are dimensioned to Pon lines.
2. All radius dimensions are to ℄.

NW¼ Cor. Sec. 3, T6S, R69W of 6th. P.M.

2,110,500 E

629,000 N

Section Line

Sec. 4

Sec. 3

60' Ken Caryl Ranch Water & Sanitation Dist. Easmt.

Slope Easmt.

Curb Ramp Type 3E

8' Sidewalk

6' ABC CL 6

Curb & Gutter, Type 2 (Sec. I-B) Typ.

N00°16'45"W

See Dwg. DS-1 for Lane Taper Detail

Curb & Gutter Type 2 (Sec. I-B) Typ.

Guard Rail Type 4

Curb & Gutter, Type 2 (Sec. II-B) Typ.

Curb Ramp Special See Detail DWG DS-1

Existing 10'x10' DBL. C.B.C.

6' ABC CL 6

Curb and Gutter Type 2 (Sec. I-B) Typ.

Existing Type 3 Guard Rail To Be Removed

Slope Easmt.

Curb Ramp Type 3E

Riprap

20' Ken Caryl Ranch Water & Sanitation Dist. Easmt.

Trans. Sidewalk 10' to 8'

Sta. 390+50.36 (Ramp 'C') =
Sta. 389+89.97 (Ramp 'D') =
Sta. 135+63.74 (Kipling)

Sta. 190+71.01 (Ramp 'A') =
Sta. 190+67.45 (Ramp 'B') =
Sta. 130+29.74 (Kipling)

Abandoned Sanitary Sewer

See Island Detail DWG DS-1

Sta. 130+25 & Kipling 56' Lt. 130L to 131B
Req'd Type 'R' inlet L5(5)
Req'd 18" x 118' R.C.P.

Sta. 130+50 & Kipling 190' Rt. 130R to 131B
Req'd Type 'R' inlet L5(5)
Req'd 18" x 218' R.C.P.

Sta. 131+10 & Kipling 304' 131B to 135B
Req'd manhole (10')
Req'd 18" x 370' R.C.P.

Sta. 133+04.74 (Kipling St.) Sta 690+43.92 (SH.470) 688

Sta. 134+86 & Kipling 56' Lt. 135L to 135B
Req'd Type 'R' inlet L5(5)
Req'd 18" x 26' R.C.P.

Sta. 134+86 & Kipling 44' Rt. 135R to 135B
Req'd Type 'R' inlet L5(10)
Req'd 24" x 116' R.C.P. Cut Flush with retaining wall.

Sta. 134+86 & Kipling 302' Lt.
Req'd manhole (5')
Req'd 24" x 70' R.C.P.

Sta. 135+68 & Kipling 130' Lt. 135L to 136L
Req'd Type 'R' inlet L5(5)
Req'd 18" x 30' R.C.P. with end section and 1.5 cu yd riprap. (D50 = 12")

Sta. 136+40.00 Kipling
Req'd Extend Double 10'x10' C.B.C. 40' Lt. & 65' Rt.; with wingwalls, headwall, concrete apron and riprap Lt and Rt. (See Details Dwgs. CB-1-3)

Sta. 136+50 & Kipling 30' Lt.
Req'd Manhole (Special) and adjust Gate Valve.

Sta. 136+50 to 137+75 & Kipling 90' Lt.
Req'd. 12"x75' D.I.P. (Class 50) & 36"x75' welded steel pipe casing (Include removal of 12"x75' existing C.A. pipe)

Sta. 392+50 Ramp 'D' 12' Lt
Req'd Type 'R' Inlet L5(5)
Req'd 18" x 20' RCP w/ end section and 1.5 cu. yd. riprap (D50 = 12")

MATCH LINE Sta. 138+50

S.H. 470 W.B.

S.H. 470

S.H. 470 E.B.

Str. No. F-16-MD

Str. No. F-16-MC

Sta. 125+00 EL. 5711.06

50' V.C. MDS = 45 MPH

12" CMP 123

-1.31%

12" RCP 56

GB 5666.62

-1.44%

12" RCP 86

18" R.C.P.S.

5907

12" RCP 39

+0.74%

24" RCP.S.

10'x10' DBL C.B.C.

100' V.C. MDS = 45 MPH

Sta. 138+50 MATCH LINE EL. 5660.94

5675
5670
5665
5660
5655
5650

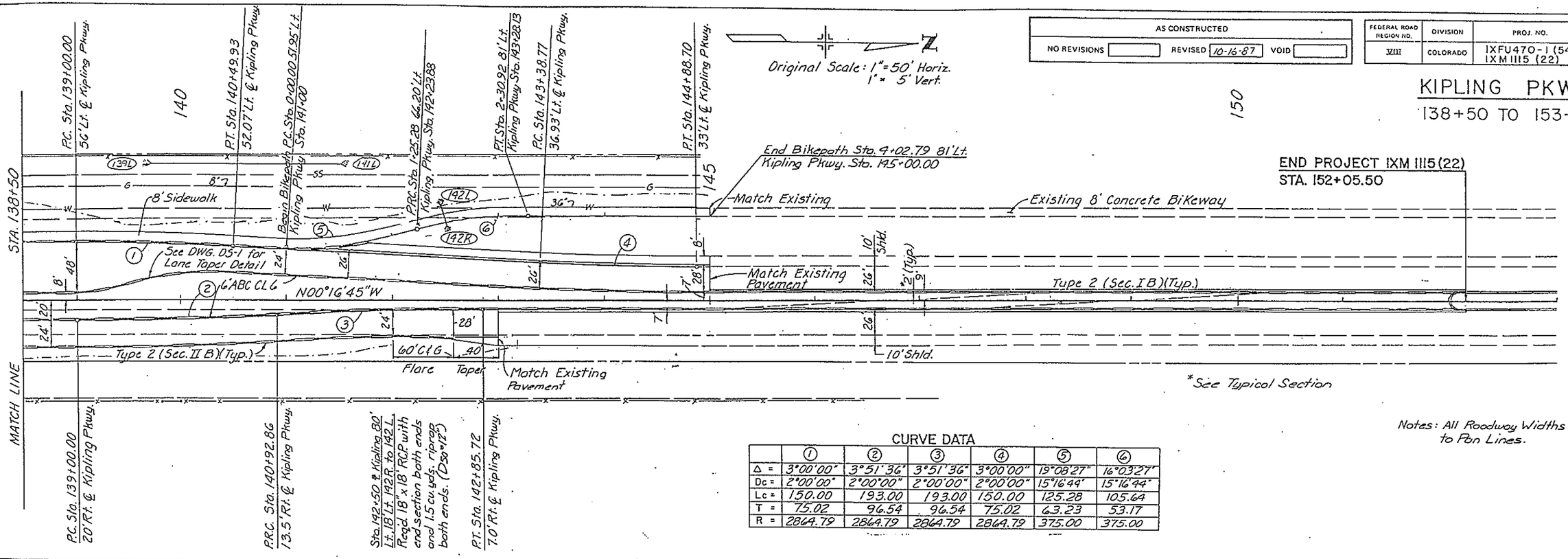
125+00
130+00
135+00

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU470-1(54) IXM 1115(22)	43	109

KIPLING PKWY
138+50 TO 153+00

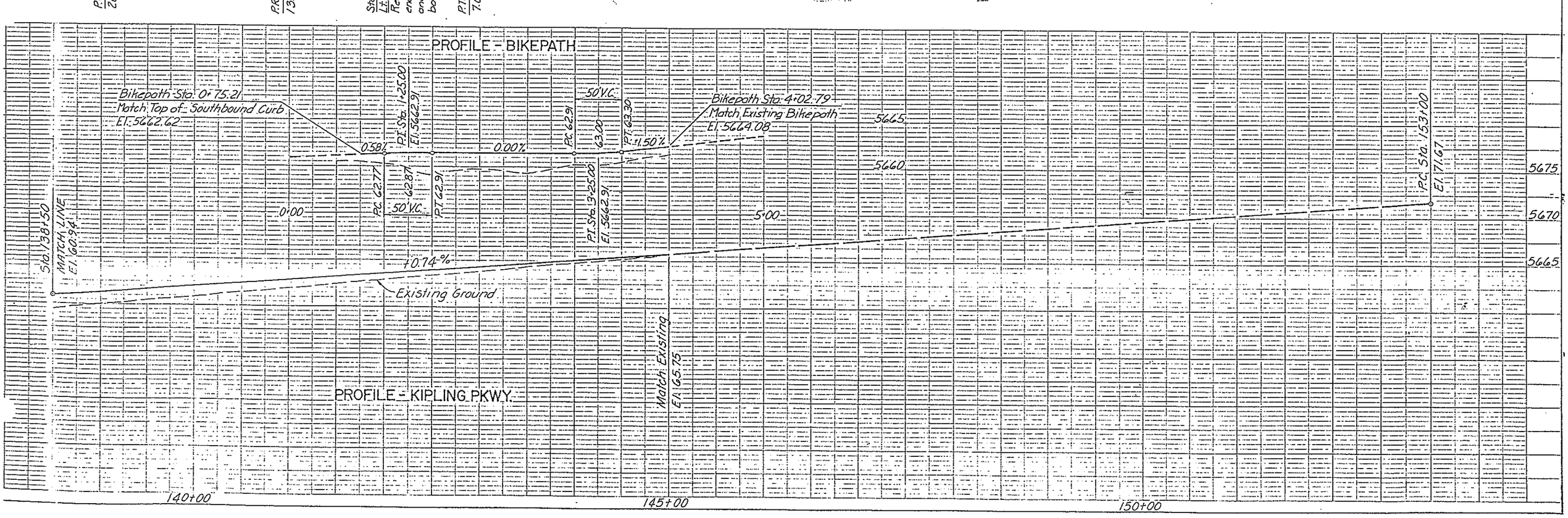
Original Scale: 1" = 50' Horiz.
1" = 5' Vert.



Notes: All Roadway Widths are Dimensioned to Pan Lines.

CURVE DATA

	①	②	③	④	⑤	⑥
Δ =	3°00'00"	3°51'36"	3°51'36"	3°00'00"	19°08'27"	16°03'27"
Dc =	2°00'00"	2°00'00"	2°00'00"	2°00'00"	15°16'49"	15°16'44"
Lc =	150.00	193.00	193.00	150.00	125.28	105.64
T =	75.02	96.54	96.54	75.02	63.23	53.17
R =	2864.79	2864.79	2864.79	2864.79	375.00	375.00



AS CONSTRUCTED			
NO REVISIONS 10-16-87	REVISED	VOID	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	46	109

BIKEPATH PLAN AND PROFILE

STA. 571+77.62 TO 5705.00

635,957.166 N
2,102,117.360 E

Begin Bikepath Paving
Sta. 571+77.62

RAMP 'C'

RAMP 'A'

RAMP 'B'

RAMP 'D'

KEN CARYL RD.

571+13.02 C-470
20+00.00 Ken Caryl

635,168.880 N
2,102,258.011 E

635,511.704 N
2,102,094.030 E

S22°47'42"E

S19°45'37"E

Sta. 585+00.00

P.I. 584+66.04

Match Line

637000 N

2,101,000 E

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

(158)
CURVE DATA
Δ = 65°59'53.2"
D = 44°04'25.2"
T = 84.42'
L = 149.745
R = 130.00'
P.C. = 571+79.02
P.I. = 572+63.44
P.T. = 573+28.77

(159)
CURVE DATA
Δ = 28°35'46.7"
D = 05°13'29.5"
T = 279.482'
L = 547.313'
R = 1096.60'
P.C. = 574+11.49
P.I. = 576+90.97
P.T. = 579+58.80

(160)
CURVE DATA
Δ = 02°48'25.1"
D = 01°24'14"
T = 100.00'
L = 199.959'
R = 4081.574'
P.C. = 579+58.80
P.I. = 580+58.80
P.T. = 581+56.76

(161)
CURVE DATA
Δ = 22°09'26.1"
D = 01°29'59.6"
T = 747.974'
L = 1477.259'
R = 3820.00'
P.C. = 5701+72.34
P.I. = 5709+20.31
P.T. = 5716+49.59

Begin Bikepath Paving
Sta. 571+77.62

500' V.C.

100' V.C.

Match Line Sta. 5705+00

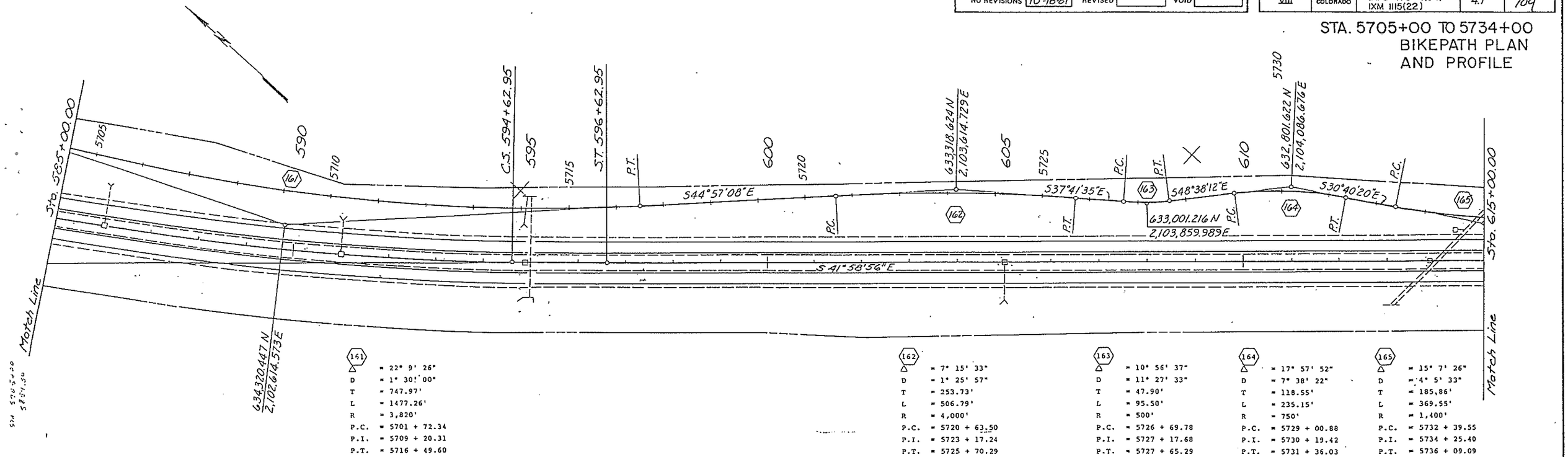
572+00
575+00
580+00
5701+00

Original Scale : 1" = 100' Horiz.
1" = 10' Vert.

AS CONSTRUCTED		
NO REVISIONS 10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	4.7	109

STA. 5705+00 TO 5734+00 BIKEPATH PLAN AND PROFILE



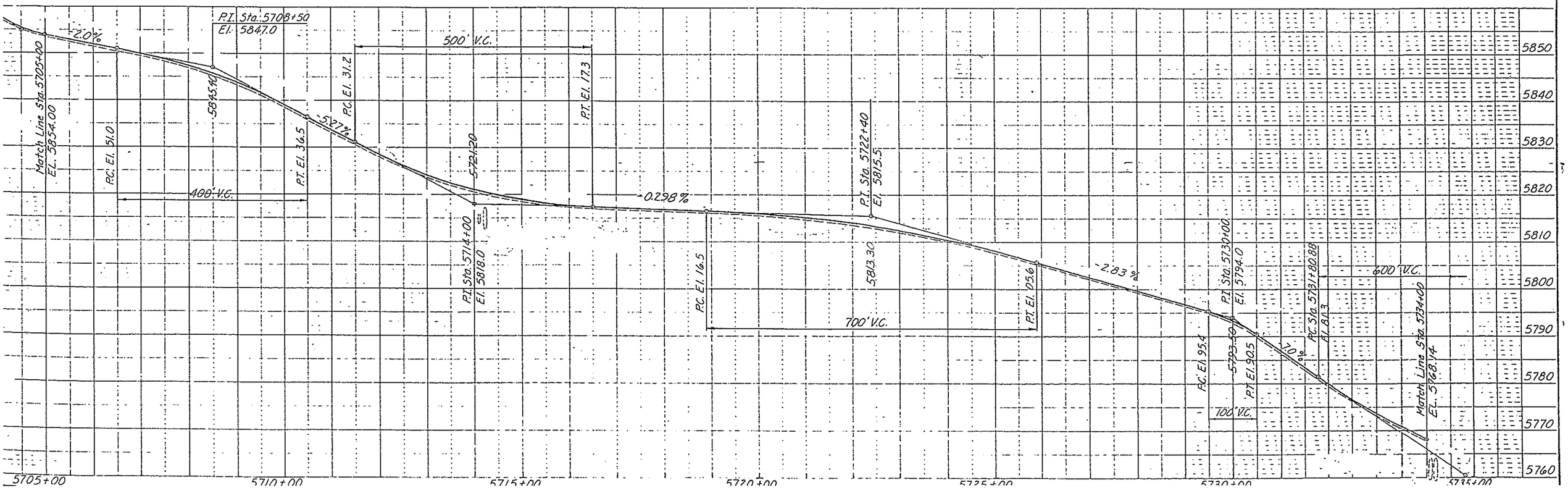
(161)
- Δ = 22° 9' 26"
- D = 1° 30' 00"
- T = 747.97'
- L = 1477.26'
- R = 3,820'
- P.C. = 5701 + 72.34
- P.I. = 5709 + 20.31
- P.T. = 5716 + 49.60

(162)
- Δ = 7° 15' 33"
- D = 1° 25' 57"
- T = 253.73'
- L = 506.79'
- R = 4,000'
- P.C. = 5720 + 63.50
- P.I. = 5723 + 17.24
- P.T. = 5725 + 70.29

(163)
- Δ = 10° 56' 37"
- D = 11° 27' 33"
- T = 47.90'
- L = 95.50'
- R = 500'
- P.C. = 5726 + 69.78
- P.I. = 5727 + 17.68
- P.T. = 5727 + 65.29

(164)
- Δ = 17° 57' 52"
- D = 7° 38' 22"
- T = 118.55'
- L = 235.15'
- R = 750'
- P.C. = 5729 + 00.88
- P.I. = 5730 + 19.42
- P.T. = 5731 + 36.03

(165)
- Δ = 15° 7' 26"
- D = 4° 5' 33"
- T = 185.86'
- L = 369.55'
- R = 1,400'
- P.C. = 5732 + 39.55
- P.I. = 5734 + 25.40
- P.T. = 5736 + 09.09

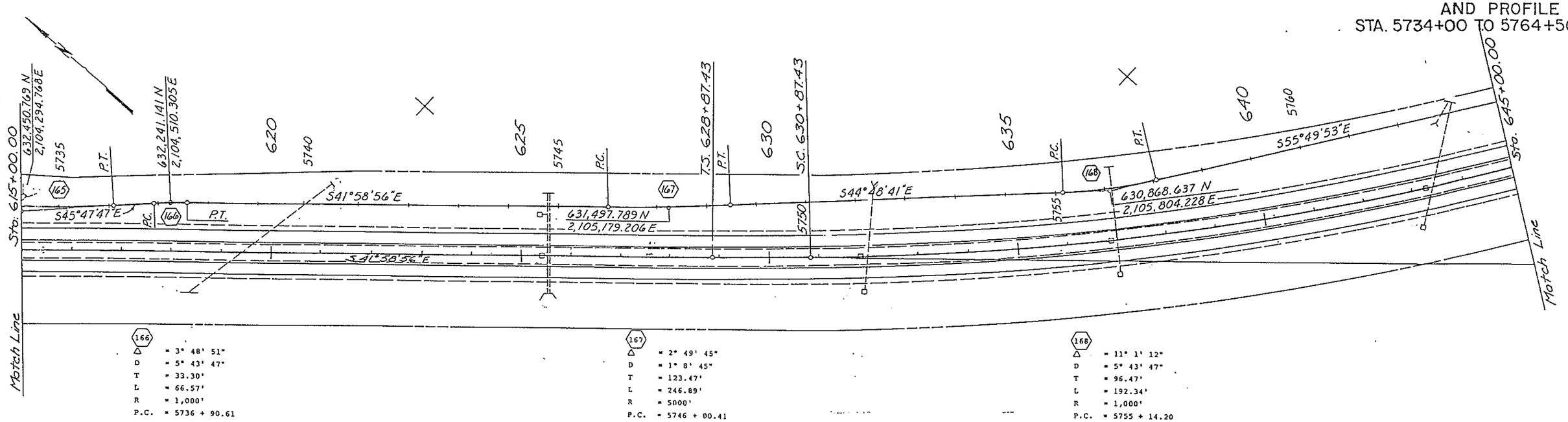


Original Scale : 1"=100' Horiz.
1"=10' Vert.

AS CONSTRUCTED			
NO REVISIONS	10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	48	109

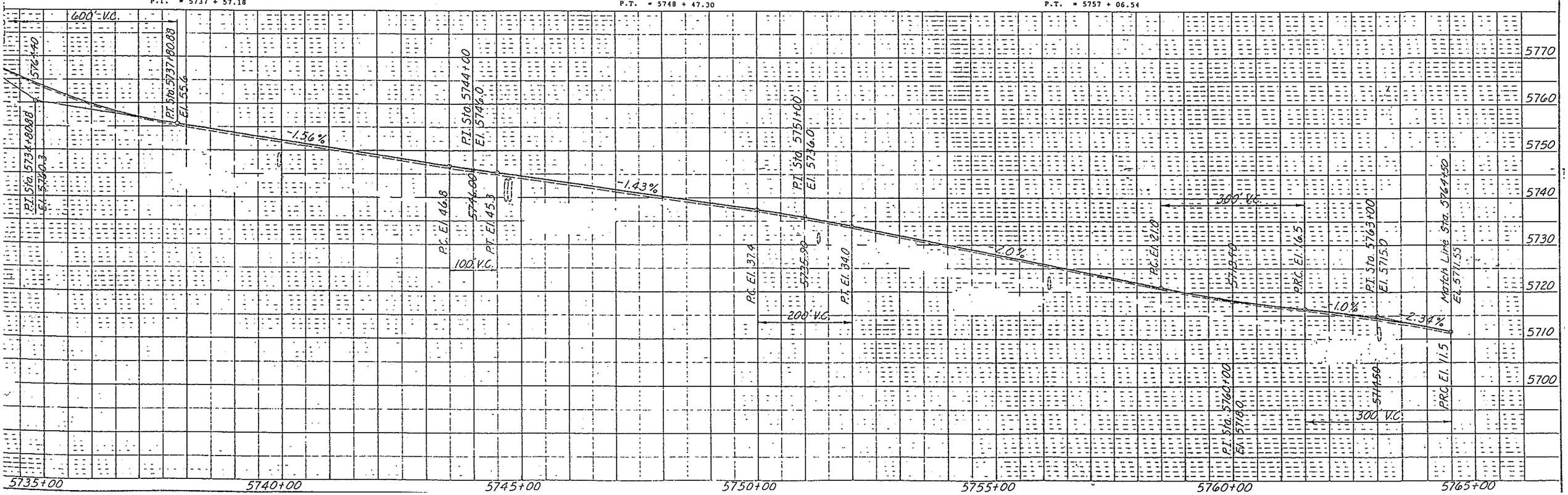
BIKEPATH PLAN AND PROFILE
STA. 5734+00 TO 5764+50



166
- Δ = 3° 48' 51"
- D = 5° 43' 47"
- T = 33.30'
- L = 66.57'
- R = 1,000'
- P.C. = 5736 + 90.61
- P.I. = 5737 +23.91
- P.T. = 5737 + 57.18

167
- Δ = 2° 49' 45"
- D = 1° 8' 45"
- T = 123.47'
- L = 246.89'
- R = 5000'
- P.C. = 5746 + 00.41
- P.I. = 5747 + 23.88
- P.T. = 5748 + 47.30

168
- Δ = 11° 1' 12"
- D = 5° 43' 47"
- T = 96.47'
- L = 192.34'
- R = 1,000'
- P.C. = 5755 + 14.20
- P.I. = 5756 + 10.67
- P.T. = 5757 + 06.54



AS CONSTRUCTED			
NO REVISIONS	10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	49	109

BIKEPATH PLAN AND PROFILE
STA. 5764+50 TO 5793+50

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

Sta. 645+00.00

Match Line

S 41°59'56" E

P.I. 654+31.71

S 88°11'14" E

Sta. 675+00.00

Match Line

629,586.305 N
2,108,423.902 E

N 88°22'04" E
S 66°35'01" E

629,665.861 N
2,108,240.203 E

629,592.007 N
2,108,624.007 E

S 78°33'06" E

S 87°55'22" E

629,546.267 N
2,108,849.870 E

S 78°41'22" E

629,762.212 N
2,107,758.471 E

630,153.111 N
2,106,858.334 E

S 66°31'35" E

S 55°49'53" E

P.C.

P.T.

(169)
- Δ = 10° 41' 42"
- D = 2° 51' 53"
- T = 187.21
- L = 373.32'
- R = 2,000'
- P.C. = 5766 + 96.89
- P.I. = 5768 + 84.09
- P.T. = 5770 + 70.21

(170)
- Δ = 12° 9' 47"
- D = 1° 54' 36"
- T = 319.63'
- L = 636.86'
- R = 3,000'
- P.C. = 5775 + 44.72
- P.I. = 5778 + 64.35
- P.T. = 5781 + 81.58

(171)
- Δ = 12° 6' 21"
- D = 9° 32' 58"
- T = 63.62'
- L = 126.77'
- R = 600'
- P.C. = 5782 + 89.60
- P.I. = 5783 + 53.22
- P.T. = 5784 + 16.37

(172)
- Δ = 25° 2' 55"
- D = 19° 5' 55"
- T = 66.64'
- L = 131.15'
- R = 300'
- P.C. = 5784 + 86.30
- P.I. = 5785 + 52.94
- P.T. = 5786 + 17.45

(173)
- Δ = 13° 4' 50"
- D = 9° 32' 58"
- T = 68.79'
- L = 136.98'
- R = 600'
- P.C. = 5786 + 82.20
- P.I. = 5787 + 50.99
- P.T. = 5788 + 19.18

(174)
- Δ = 9° 22' 16"
- D = 5° 43' 47"
- T = 81.96'
- L = 163.56'
- R = 1,000'
- P.C. = 5788 + 98.88
- P.I. = 5789 + 80.84
- P.T. = 5790 + 62.44

P.R.C. Match Line Sta 5764+50
El. 5711.53

400' V.C.

5708.20

+0.5%

P.I. Sta. 5766+50
El. 5706.8

P.R.C. El. 07.8

5707.80

P.T. El. 06.8

100' V.C.

P.I. Sta. 5769+00
El. 5708.0

-2.5%

P.C. El. 01.8

100' V.C.

5700.70

P.T. El. 00.1

P.I. Sta. 5772+00
El. 5700.5

-0.82%

P.I. Sta. 5777+50
El. 5696.10

5695.20

P.C. El. 96.4

P.C. El. 92.7

100' V.C.

P.T. El. 94.4

5691.30

P.T. El. 90.6

P.I. Sta. 5779+00
El. 5691.0

100' V.C.

-0.71%

P.I. Sta. 5786+00
El. 5686.0

P.C. El. 84.4

5685.80

P.T. El. 84.7

100' V.C.

-1.66%

P.C. El. 79.3

5678.60

P.T. El. 79.2

100' V.C.

+2.4%

P.I. Sta. 5789+00
El. 5678.0

P.C. El. 82.8

5683.50

P.T. El. 83.0

100' V.C.

-2.0%

P.I. Sta. 5791+50
El. 5684.0

Match Line Sta. 5793+50
El. 5680.00

5720
5710
5700
5690
5680
5670

5765+00
5770+00
5775+00
5780+00
5785+00
5790+00
5795+00

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

AS CONSTRUCTED			
NO REVISIONS	10-16-67	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	50	109

BIKEPATH PLAN AND PROFILE
STA. 5793+50 TO 1705+50

Sta. 675+00.00
C.S. 675+07.92
S.T. 677+07.92
Match Line
S87°55'22"E
S88°11'14"E
629,695.761 N
2,110,308.729 E
S64°39'05"E
629,511.653 N
2,109,804.234 E
N75°06'49"E
629,573.929 N
2,110,460.356 E
T.S. 689+62.39
629,608.362 N
2,110,678.817 E
629,598.403 N
2,110,862.903 E
629,578.135 N
2,110,935.039 E
S.C. 691+62.39
629,449.613 N
2,111,523.111 E
S72°26'36"E
Sta. 690+43.92 C-470
Sta. 133+04.74 Kipling
KIPLING PKWY.
Ramp "A"
Ramp "B"
Ramp "C"
Ramp "D"
18" M.H.
8' M.H.
5795
5800
5805
680
685
690
695
1695
1700
1705

(176)
Δ	= 40° 14' 6"
D	= 32° 44' 26"
T	= 64.10'
L	= 122.89'
R	= 175.00'
P.C.	= 5803+91.20
P.I.	= 5804+55.30
P.T.	= 5805+14.09

(177)
Δ	= 34° 18' 20"
D	= 22° 52' 57"
T	= 77.28'
L	= 149.92'
R	= 250.39'
P.C.	= 5805+40.49
P.I.	= 5806+17.77
P.T.	= 5806+90.41

(178)
Δ	= 81° 19' 20"
D	= 34° 12' 23"
T	= 143.88'
L	= 237.74'
R	= 167.50'
P.C.	= 5806+90.41
P.I.	= 5808+34.28
P.T.	= 5809+28.15

(175)
Δ	= 16° 57' 49"
D	= 5° 43' 47"
T	= 149.13'
L	= 296.07'
R	= 1000.00'
P.C.	= 5797+86.34
P.I.	= 5799+35.47
P.T.	= 5800+82.41

(97)
Δ	= 37° 00' 41"
D	= 24° 02' 45"
T	= 56.33'
L	= 108.71
R	= 168.29
P.C.	= 1691+01.22
P.I.	= 1691+57.55
P.T.	= 1692+09.93

(98)
Δ	= 3° 21' 58"
D	= 9° 03' 03"
T	= 18.60'
L	= 37.19'
R	= 633.05'
P.C.	= 1692+09.93
P.I.	= 1692+28.53
P.T.	= 1692+47.12

(45)
Δ	= 05° 13' 43"
D	= 02° 51' 53"
T	= 91.32'
L	= 182.52'
R	= 2000.00'
P.C.	= 1697+39.15
P.I.	= 1698+30.48
P.T.	= 1699+21.67

Match Line Sta 5793+50
Sta 5680.00 El. 5680.00
200' V.C.
-2.09%
P.C. 76.00
74.75
P.T. 75.00
+1.00%
P.I. 5796+50 El. 5674.00
P.C. 78.00
77.08
P.T. 72.33
P.I. 5801+50 El. 5679.00
P.C. 65.66
6.6% V
60.45
P.T. 58.14
-0.86%
P.I. 5804+50 El. 5659.00
Sta. 5808+01.57 El. 5656.± (Match Grade of Ramp 'C' Shoulder)
Sta 1692+26.72 El. 5665.40
P.I. 1693+00 El. 5654.71
P.C. 55.18
55.06
P.T. 55.65
100' V.C.
-0.93%
+1.893%
P.I. 1695+00 El. 5658.50
P.C. 56.61
37.65
P.T. 51.00
200' V.C.
-1.50%
P.I. 1700+00 El. 5651.00
P.C. 52.50
50.94
P.T. 49.29
P.C. 46.71
44.18
P.T. 40.00
-1.71%
P.I. 1703+50 El. 5645.00
-5.00%
Match Line Sta 1705+50 El. 5635.00
200' V.C.
200' V.C.
5795
5800
5805
1695
1700
1705
5680
5670
5660
5650
5640
5630

Original Scale: 1" = 100' Horiz.
1" = 10' Vert.

AS CONSTRUCTED			
NO REVISIONS		REVISED 10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	51	109

BIKEPATH PLAN AND PROFILE
STA. 1705+50 TO 1735+00

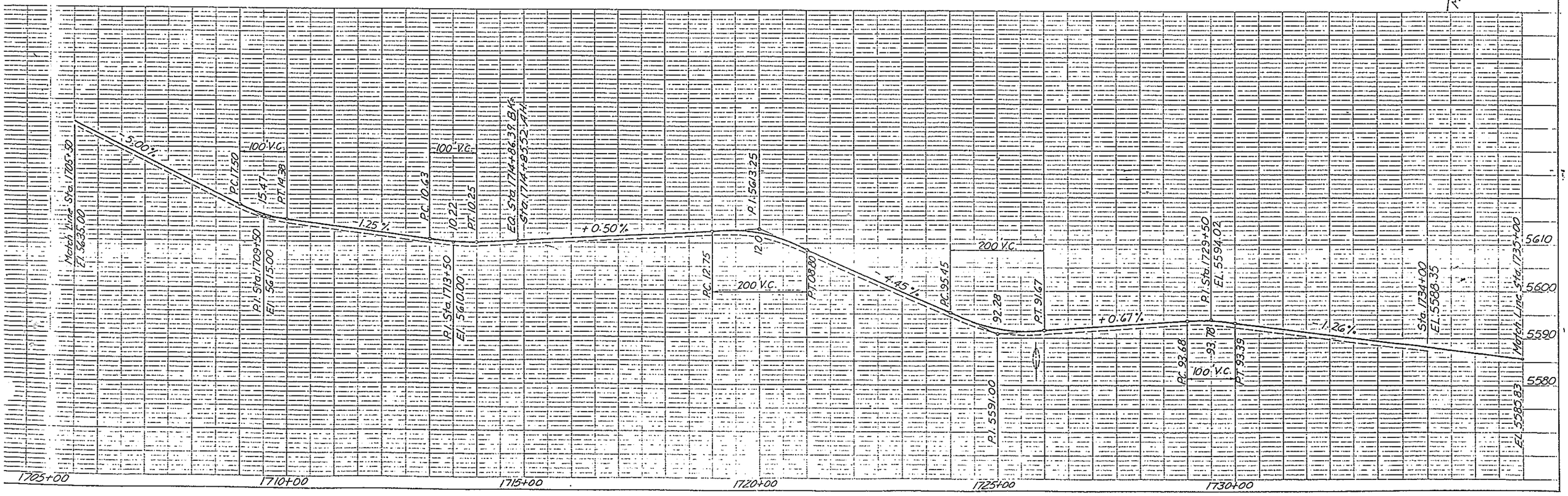
Sta. 93+25.00 Match Existing
S 2°02'22" E
℄ Garrison Relocation
PC. 94+54.08 ℄ Garrison = Sta. 11+21.08 S.L.
N-629,312.981
E-2,113,170.239
1/4 SEC. 3
EQ. PT. Sta. 1714+86.39 BK. = P.T. Sta. 1714+85.82 AH.
P.I. 706+83.17 BL.
629,300.000 N
2,112,382.000 E
628,985.795 N
2,112,989.085 E
628567.054 N
2113688.921 E
N 89°18'23" E
Sta. 107+40.00 Match Existing
℄ BIKEPATH
S 72°26'36" E
S 58°48'20" E
S 54°13'06" E
S 59°27'39" E
S 54°27'03" E
S 56°58'54" E
S 56°35'54" E
628240.216 N
2114198.052 E
628443.730 N
2113853.092 E
628007.492 N
2114523.728 E
Sta. 705+00.00
Match Line
Sta. 735+00.00
Match Line
C.S. 721+21.26 BL.
S.T. 723+21.26 BL.

Curve Data Bikepath					
Curve	(47)	(48)	(49)	(55)	(56)
Δ =	13°38'15"	04°35'14"	05°14'33"	05°00'36"	02°31'51"
D =	05°43'47"	05°43'47"	05°43'47"	02°51'53"	02°51'53"
T =	119.58'	40.05'	45.78'	87.50'	44.18'
L =	238.02'	80.06'	91.50'	174.88'	88.34'
R =	1000.00'	1000.00'	1000.00'	2000.00'	2000.00'
P.C. =	1712+48.37	1721+44.02	1723+40.61	1726+99.35	1731+42.84
P.I. =	1713+67.95	1721+84.07	1723+86.39	1727+86.85	1731+87.02
P.T. =	1714+86.39 Bk.	1722+24.08	1724+32.11	1728+74.23	1732+31.18
	=1714+85.52 Ahd.				

⑦ Curve Data

Δ = 31°35'19" e = 0.38%
Ts = 1720.78' H.D.S. = 70 M.P.H.
Es = 225.11' S.S.D. 850'

Ac = 29°35'19" = 1°00'00"
Dc = 1°00'00" Ls = 200'
Tc = 1513.22' L.T. = 133.34'
Lc = 2958.87' S.T. = 66.67'
Rc = 5729.58'



AS CONSTRUCTED			
NO REVISIONS	10-16-87	REVISED	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115(22)	52	109

Note: 1. For Sound Barrier Details And Profiles See Dwgs. DF-1-4.
2. * Wood Sound Barrier Wall 10'-0" Clearance Required Between Face of Wall and R.O.W.
3. All Offsets are to Bikepath ℄.

STA. 1735+00 TO 1765+00 BIKEPATH PLAN AND PROFILE

Original Scale:
1"=100' Horiz.
1"=10' Vert.

Match Line Sta. 735+00

S 56°58'54"E

T.S. 738+57.99 B.L.

S.C. 741+57.99 B.L.

P.C.

1740

740

1745

745

Begin Wall 'A' B.P. Sta 1745+80 Offset 28'-0" Lt.

L.A.=260'

B.P. Sta 1747+20 Offset 25'-0" Lt.

Wood Sound Barrier Wall 'A' See Dwgs. DF-1-4

End Wall 'A' B.P. Sta 1748+88 Offset 60'-0" Lt.

750

1750

1755

P.C.C.

P.T.

355

62

627249.521N
2115690.070E

627090.746N
2116453.039E

End Wall 'B' B.P. Sta 1762+38 Offset 60'-0" Lt.

B.P. Sta 1761+90 Offset 40'-0" Lt.

B.P. Sta 1761+40 Offset 22'-0" Lt.

B.P. Sta 1759+80 Offset 38'-0" Lt.

Begin Wall 'B' B.P. Sta 1759+58 Offset 50'-0" Lt.

Wood Sound Barrier Wall 'B' See Dwgs. DF-1-4

755

760

1760

R=80'

63

R=250'

P.C.

290

627240.801N
2117258.230E

EQ. P.T. 17 G2+98.23 BK=
627417.633N
2117377.774E

EQ. Pt. 17 G2+98.23 BK=
Sta. 1762+73.34 Ah

Wood Sound Barrier Wall 'C' See Dwgs. DF-1-4

N 54°39'15" E

R=200'

P.T.

65

P.C.

B.P. Sta 1764+60 Offset 40'-0" Lt.

B.P. Sta 1763+60 Offset 40'-0" Lt.

Begin Wall 'C' B.P. Sta 1762+80 Offset 55' Lt.

Match Line Sta. 765+00

165

160

155

1735+00

1740+00 P.I.

1745+00

1750+00

Match Line Sta 1735+00
El. 5587.09

1-2.6%

Sta 1740+60 P.I.
El. 5580.03

P.C. 80.66

79.60

P.T. 77.70

467

P.C. 746.7

200' V.C.

100' V.C.

0%

Sta 1752+50
El. 5570.00

5590

5580

5570

18" RCP

Sta 1742+75 P.I.
El. 5570.00

Sta. 1752+50
El. 5570.00

100' V.C.

300' V.C.

Sta. 1758+00 P.I.
El. 5580.00

+3.20%

-2.18%

+2.0%

-3.27%

P.T. 70.4

P.C. 70.8

+0.80%

Sta 1753+00 P.I.
El. 5570.00

Sta 1755+50 P.I.
El. 5572.00

P.C. 76.8

P.T. 77.82

200' V.C.

Sta 1760+75 P.I.
El. 5574.00

P.C. 75.09

P.T. 1750

Sta. 1762+74.89 P.I.
El. 5578.00

EQ. Sta. 1762+98.23 BK.

Sta. 1762+73.34 AH.

P.C. El. 77.00

EQ. Sta. 1762+98.23 BK.

Sta. 1762+73.34 AH.

P.T. El. 74.37

100' V.C.

Match Line Sta 1765+00
El. 5570.69

5580

5570

5560

5550

1750+00

1755+00

1760+00

1763+00

1763+00

1765+00

61
CURVE DATA
Δ = 21°15'45"
D = 02°15'00"
T = 477.10'
L = 945.00'
R = 2546.48'
P.C. = 1741+00
P.I. = 1745+78
P.T. = 1750+45

62
CURVE DATA
Δ = 22°18'45"
D = 03°45'00"
T = 301.32'
L = 595.00'
R = 1527.89'
P.C. = 1750+45
P.I. = 1753+46.32
P.T. = 1756+40

64
CURVE DATA
Δ = 45°23'00.3"
D = 15°15'00"
T = 157.09'
L = 297.60'
R = 375.71'
P.C. = 1760+00.64
P.I. = 1761+57.74
P.T. = 1762+73.34

66
CURVE DATA
Δ = 20°35'39.1"
D = 19°05'55"
T = 54.50'
L = 107.83'
R = 300.00'
P.C. = 1762+75.19
P.I. = 1763+29.69
P.T. = 1763+83.02

1. For Sound Barrier Details and Profiles See Dwgs. DF-1-4.
2. * Wood Sound Barrier Wall 10'-0" Clearance Required Between Face of Wall and R.O.W.
3. * * Wall 'D'
4. 4'-0" Clearance Required Between Face of Wall and House
5. All Offsets are to Bikepath ℄.

AS CONSTRUCTED				
NO REVISIONS		REVISED	10-16-87	VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IXFU 470-1(54) IXM 1115 (22)	53	109

STA. 1765+00 TO 1783+1497
BIKEPATH PLAN AND PROFILE

Original Scale:
1"=100' Horiz.
1"= 10' Vert.

Wood Sound Barrier Wall 'C' See Dwgs. DF-1-4

B.P. Sta. 1765+40 Offset 23'0" Lt.

New Fence

B.P. Sta. 1768+30 Offset 22'-0" Lt. 627744.498 N 2117866.840 E

B.P. Sta. 1768+50 Offset 45'-0" Lt. End Wall 'C'

B.P. Sta. 1769+80 Offset 30'-0" Lt.

End Comb. Wire Fence

Begin Wall 'D' B.P. Sta. 1771+40 Offset 67'-0" Lt.

Wood Sound Barrier Wall 'D'

End Wall 'D' B.P. Sta. 1773+04 Offset 170'

Sta. 1774+36.32 Stene Drive ℄

160'-0" (On R.O.W. Line)

Wood Sound Barrier Wall 'E' See Dwgs. DF-1-4

Sta. EQ. P.T. 1778+35.68 AH
P.T. 1778+26.00 BK

628442.206 N
2118238.629 E

Sta. 1781+36.87 End Bikepath Paving

10'x10' CBC

6' CHAINLINK FENCE CMO 128

BIKEWAY

Sta. 1783+1497

COMBINATION FENCE (W.T.P.) (SPECIAL) CMO 126

428518.344 N
2118238.831 E

Wood Sound Barrier Wall 'F' See Dwgs. DF-1-4

Begin Wall 'F' B.P. Sta. 1772+38 Offset 40'-0" Rt.

End Wall 'F' B.P. Sta. 1775+83 Offset 40'-0" Rt.

EXTENDED TO STRUCTURE F-16-HY

Match Line Sta. 765+00

Sta. 767+14.12 SH 470 ℄
Sta. 1357+75.00 ℄ Wads.

Wadsworth Blvd.

SH 470

N 54°34'15" E

N 26°15'52" E

N 2°52'08" E

N 79°27'06" E

R=200'

R=140'

R=2442

1765 1770 1775 1780 1785

1365 1360 1355 1350 1345

460 30 33

CURVE DATA
Δ = 23°23'44"
D = 19°05'55"
T = 62.12'
L = 122.50'
R = 300.00'
P.C. = 1777+03.60
P.I. = 1777+65.61
P.T. = 1778+26.00 BK
1778+35.68 AH

CURVE DATA
Δ = 67°32'58"
D = 45°50'12"
T = 83.60'
L = 147.37'
R = 125.00'
P.C. = 1779+64.03
P.I. = 1780+47.63
P.T. = 1781+11.40

CURVE DATA
Δ = 28°23'23"
D = 19°05'55"
T = 75.88'
L = 148.65'
R = 300.00'
P.C. = 1768+52.22
P.I. = 1769+28.10
P.T. = 1770+00.87

Match Line Sta. 1765+00
EL. 5570.64

3.27%
P.C. 1766.60
100' V.C.
60.18
P.T. 59.02
Sta. 1768+00 P.I.
EL. 5560.02

-2.00%
P.C. 50.02
49.16
P.T. 48.58
Sta. 1773+50 P.I.
EL. 5549.02

-0.87%
Sta. 1774+91.33
EL. 5547.80 (North E Pavement Stene Drive Culdesac.)

-0.80%
P.C. 47.56
46.28
100' V.C.
P.T. 45.23
Sta. 1774+26.08
EL. 5548.36 (North Pavement Stene Drive Culdesac)
Sta. 1775+71.33 P.I.
EL. 5547.16

Sta. EQ. P.T. 1778+26.00 BK
P.T. 1778+35.68 AH

1.86%
P.C. 10.70
50' V.C.
9.13
P.T. 10.37
Sta. 1780+70 P.I.
EL. 5508.73

1.45%
End Bikepath Paving
Sta. 1781+36.87
EL. 5507.76

5560 5550 5540 5530 5520 5510

1765+00 1770+00 1775+00 1780+00 1785+00

DWG. BP-8