

CD	ROUTE	BEGIN	SECT LENGTH	END	MAP	COORD
6	CD 0055 STONE RD	01.01	00.59	01.60	A-11	793-658 798-657 781-662
6	CD 0055	03.85	00.76	04.61		
6	CD 0065 MAYBERRY RD	01.35	00.19	01.54	A10/A-11	772-659
6	CD 0112 BUCKER CH. RD	01.29	01.00	02.29	A-11	810-669
6	CD 0192 ALEXIA/LEWIS RD	01.20	00.42	01.62	A-11	844-674
6	CD 0218 Union Bridge Rd.	00.00	00.97	00.97	B-10	747-641
7	CD 0247 Uniontown RD* see MU sect.	03.86	00.70	04.56	B-11	780-639
6	CD 0257 Meadow Branch RD	00.12	01.14	01.26	B-11	799-648
6	CD 0257	01.26	00.84	02.10		797-643
6	CD 0257	02.10	00.20	02.30		794-641
11	CD 0285 Nicodemus RD.	02.46	00.42	02.88	B-11	789-614
12	CD 0289 stone chapel RD	01.22	00.67	01.89	B-11	788-619
13	CD 0289	02.01	00.07	02.08		789-622
14	CD 0289	02.08	00.30	02.38		789-624
15	CD 0289	02.38	00.03	02.41		789-624
16	CD 0289	02.41	00.69	03.10		790-625
17	CD 0367 Carroll St	00.32	00.16	00.48	B-11	801-637
18	CD 0368 Englar RD* see MU	00.00	00.08	00.08	B-11	802-636
19	CD 0368	00.09	00.11	00.20		802-637
20	CD 0523 Bollinger RD.	00.40	00.90	01.30	B-11	819-618
21	CD 0538 Deer Park RD.	04.89	00.62	05.51	B-11/C-11	825-598

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The manual process involves reviewing each entry individually, while the automated process uses software to identify patterns and anomalies.

The third part of the document focuses on the results of the analysis. It shows that there are several areas where the data deviates from the expected values. These deviations are likely due to human error or system malfunctions. The author provides a detailed breakdown of these errors and suggests ways to prevent them in the future.

Finally, the document concludes with a summary of the findings and a list of recommendations. The author suggests that regular audits should be conducted to catch errors early on. Additionally, investing in more robust software and training staff on proper data entry procedures are also recommended.

DATE : 05/13/92

HPMS SAMPLE SECTIONS
HIGHWAY INFORMATION SERVICES DIVISION

CO	ROUTE	BEGIN	SECT LENGTH	END	MAP	COORD
22	06 CO 0574 Billiz Falls RD	01.83	01.22	03.05	C-10	778-572
23	06 CO 0713 Mineral Hill RD.	00.00	00.57	00.57	C-11	829-576

11

DEPARTMENT OF THE ARMY
HEADQUARTERS, WASHINGTON, D. C.

MEMORANDUM FOR THE RECORD
SUBJECT: [Illegible]

[The main body of the document contains several paragraphs of text that are extremely faint and illegible due to the quality of the scan. The text appears to be a formal report or memorandum.]

DATE : 05/13/92

HPMS SAMPLE SECTIONS
HIGHWAY INFORMATION SERVICES DIVISION

CO	ROUTE	BEGIN	SECT LENGTH	END	MAP	COORD
24	06 MU 0070 155 <i>Center St</i>	00.27	00.20	00.47	B-11	803-635
25	06 MU 0070 155	00.47	00.03	00.50		803-635
26	06 MU 0250 155 <i>John St</i>	00.25	00.19	00.44	B-11	802-638
27	06 MU 0470 155 <i>Rover Rd</i>	00.21	00.18	00.39	B-11	791-639
28	06 MU 0470 155	00.39	00.08	00.47		791-639
29	06 MU 0540 155 <i>Uniontown Rd</i>	01.29	00.22	01.51		

ROAD INVENTORY SHEET

1

85-87
2-17-86 JE
MB

Party Chief T. LONDON
Recorder W. WARFIELD
Helper _____

Road No. Co. 55
Road Name STONE RD
Sheet No. 1 OF 7
Date 10-25-72
County Carroll - District - 3
State Coordinates 798-657

Map No. 3E2
REV. 2-2-74 ER

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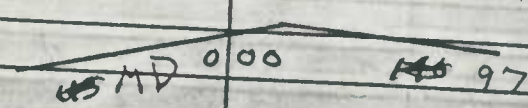
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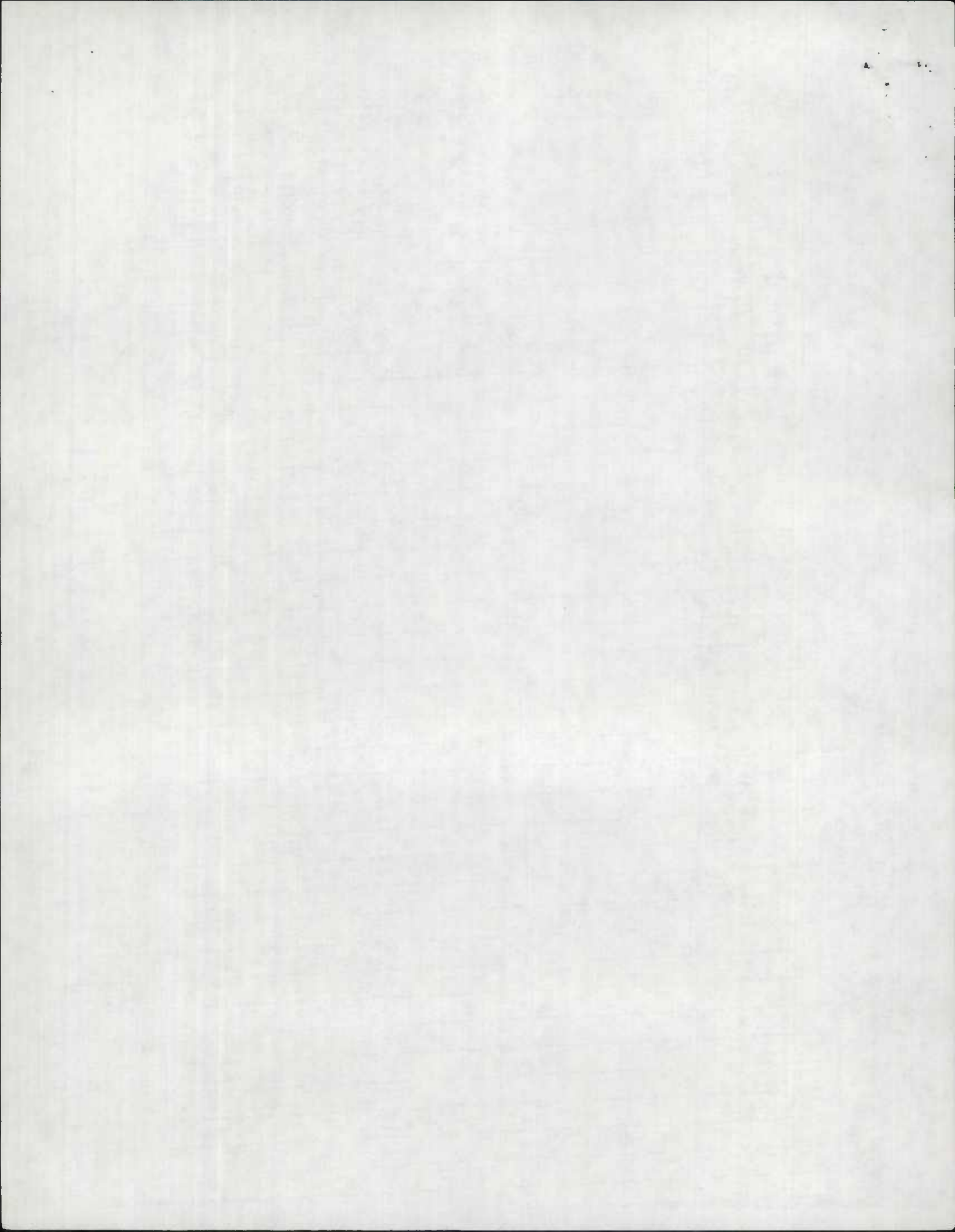
IPS.

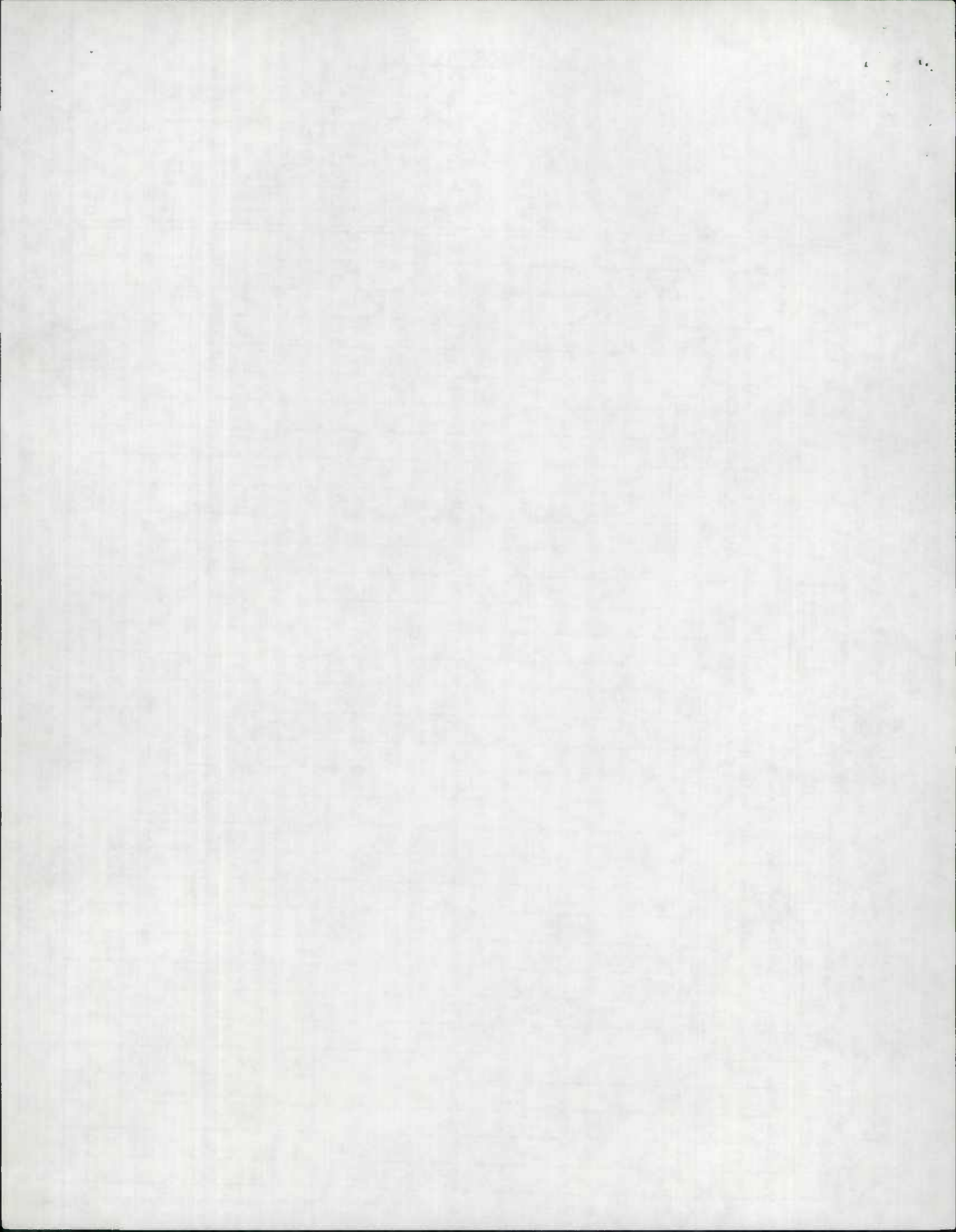
:hment

	HPMS	H	104		
				MURKLE RD.	19' E
				101 Co. 86	23' CW
					PTA
					70°
					PRC
		F	096		
75°			092		
			089		
		H	086		
		H	083		
		H	070	12 H	
		H	067		
		F-1000'	059		15' H
			036	F-800'	15' H
		F-900'	020		
		H-600'	015	F-600'	
		H	014		
40°			001	B-VAC.	20' E
					24' CW
					29.83
			000		
				97	

ROAD COLLECTOR







2

ROAD INVENTORY SHEET

Road No. Co. 55
 Road Name STONE RD.
 Sheet No. 4 of 7
 Date 10-25-72
 County Carroll - District
 State Coordinates _____

			432		25°↑
			427	F	
			425		24" CMP
			419		
			412		
			392		30°↑
			386	ARTERS	F
			385	Co. MILL	
			379	67 RD.	
		H	375		
		H	373		
			370	H	PRC
			362	H	45°
			355		PC
			347	Co. 84	
			344	F	
			335		10°↑
			318		

APT
45°
PC

HPMS

MAJOR COLLECTOR

PT

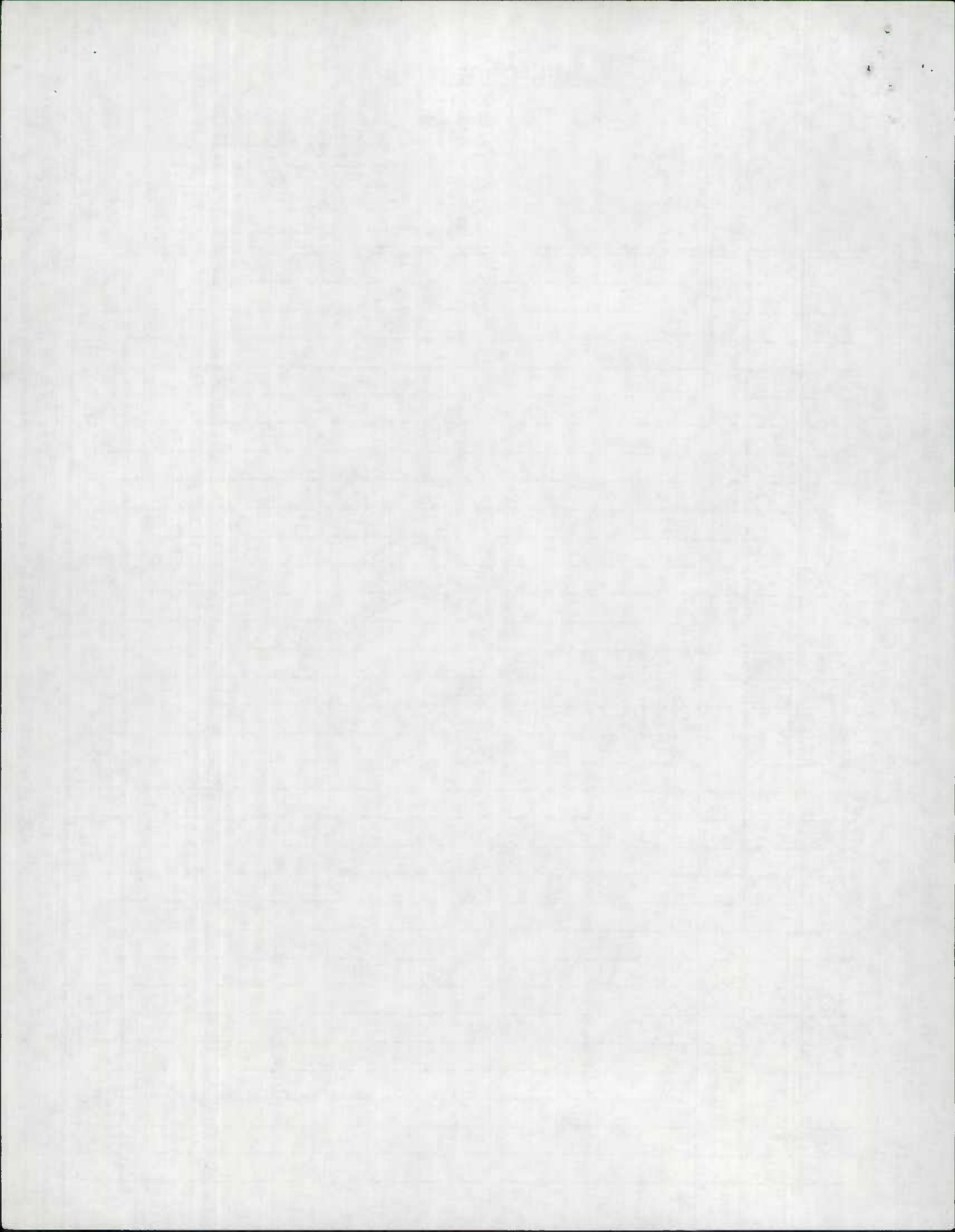
25°

PRC

FAS 11/18

STUDY RD.
Co. 84

SAME



SHA 51.3-8
11-15-72

STATE HIGHWAY ADMINISTRATION OF MARYLAND

11-15

ROAD INVENTORY SHEET

Party Chief T. LANDON
Recorder W. WARFIELD
Helper _____

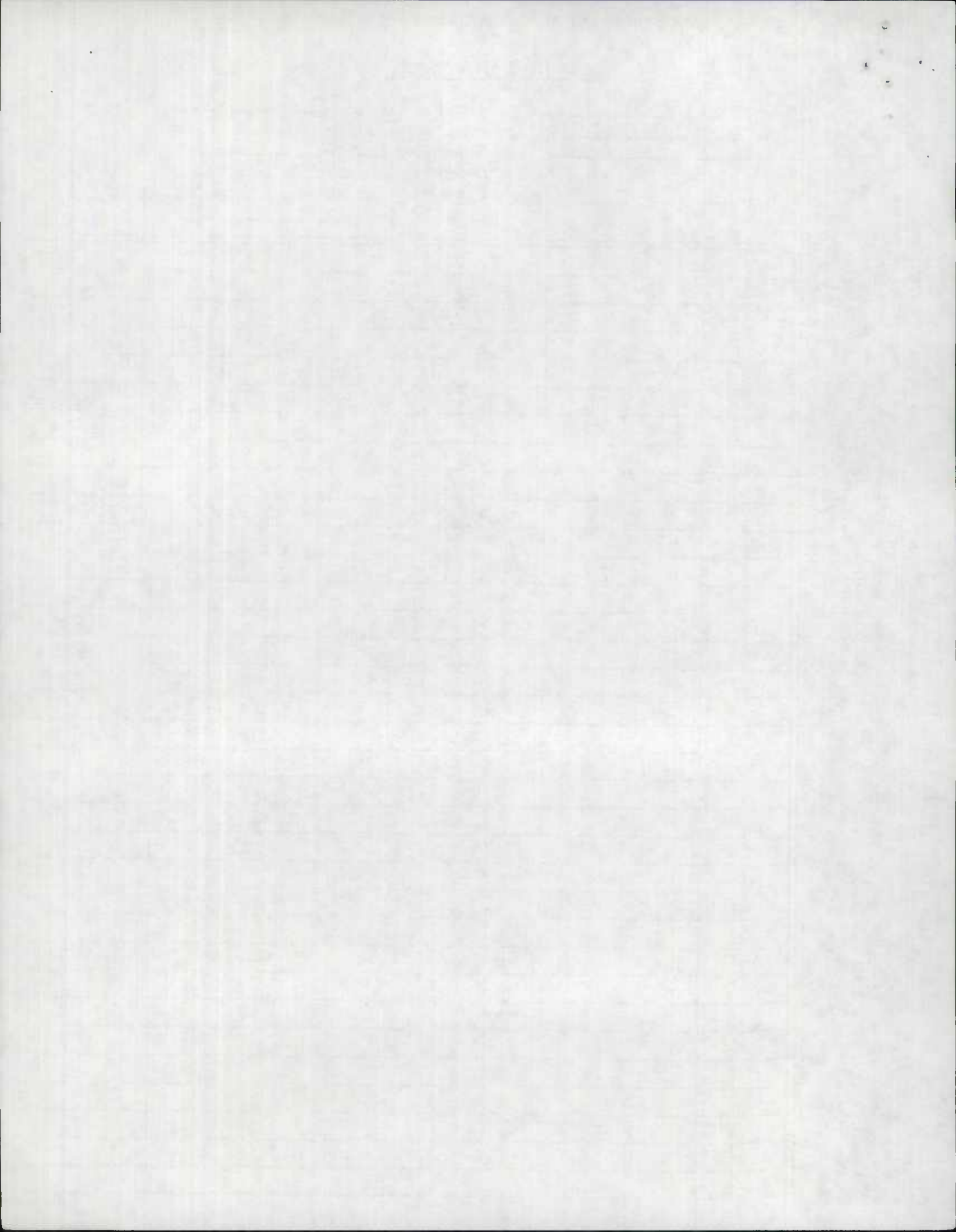
Road No. CO. 55
Road Name STONE RD
Sheet No. 5 OF 7
Date 10-25-72
County CARROLL-DISTRICT
State Coordinates _____

Map No. _____

REWRITTEN 8-20-84 PSP

			570		
			569	CREEK #CL 218	
			568	SEE BR. SH. 1-A	20' F 2-4' E SHLDS 30' CW
			566		30°↑
			555		X
			539		H-400'
			504		(91-75) 18' H (85-87) T/E
			497		16' E
			492	FLICKINGER RD. CO. 68	14' CW
			486		15°↑ X
			483		H 30°↑
			479		H
			466		F-900'
			461		H
			452		H
			448		H
			443	ROBERT ARTHUR RD. CO. 69	H
					SAME

CAM



ROAD INVENTORY SHEET

3

91-4748.47.66
DT/JS
1-9-92

Party Chief T. LONDON
Recorder W. WARFIELD
Inspector _____

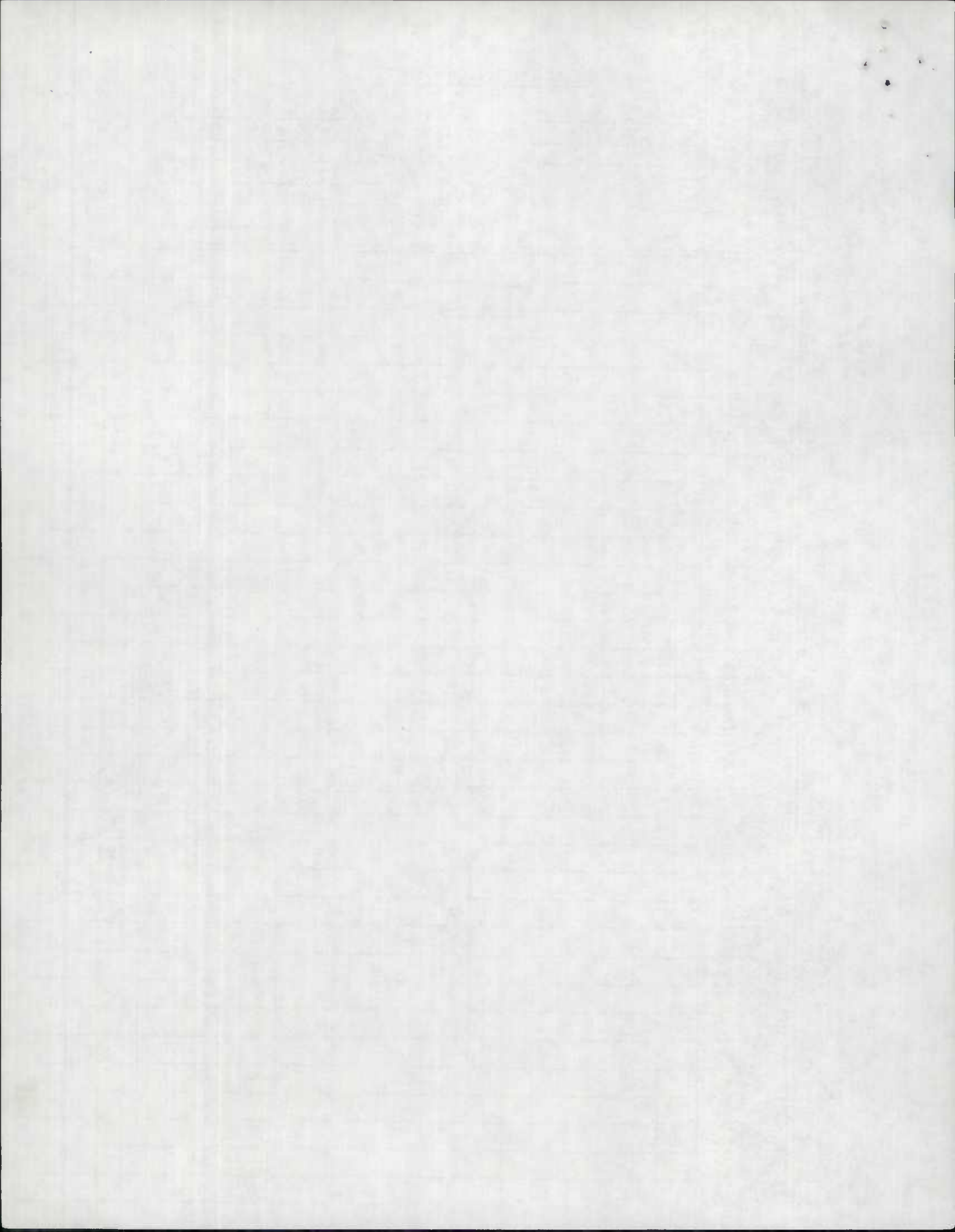
Road No. Co. 65
Road Name MAYBERRY RD.
Sheet No. 3 of 4
Date 10-24-72
County Carroll - District
State Coordinates _____

Map No. _____

			253	CBC L-5'xW-15'xD-2'	
		H	234		
			231		
			225		40°↑
			185		24"cmP
			179	TH-800 F-400'	
			177		
			166		20°↑
		H	164	ROBERT ARTHUR RD.	16'IG 15'IG 19'cut 79-95
			161	Co. 69	90°↑
			157	H	75°↑
		H	154		16'IG X
			150	H	
			143	F-800'	20'IG
			135		X
			134		
		4H	132		20'IG JCC
				11H	SAME

Minor Collector

16'IG
20'IG
20'
20'
20'
20'
20'
20'
4'IG
4'IG
20'



4

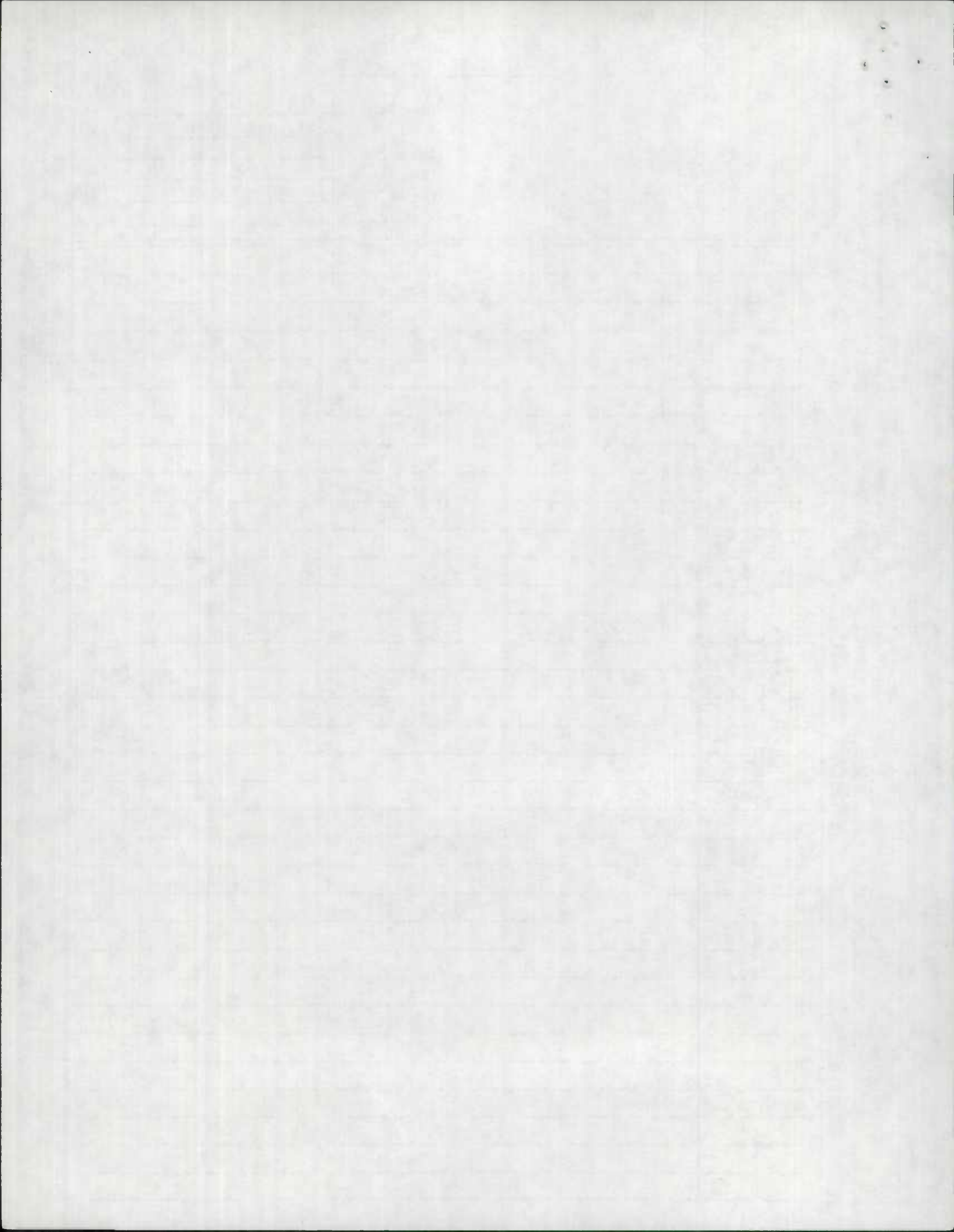
ROAD INVENTORY SHEET

Road No. Co. 112
 Road Name BIXLER CHURCH RD.
 Sheet No. 2 OF 3
 Date 11-21-72
 County Carroll - District
 State Coordinates _____

			208		40°↑
			195	F-800'	
			189		10°↑
↑15°			181		
↑PT 70° PC	HPMS		166		
			160		
		F-900'	153		
		F	139		
			137		15°↑
↑20°	↓		129		
			127		2-36" CMP
			121		15°↑
			118		#EL391C 36" CMP
		F-1000'	115		10°↑
			090		15°↑
↑15°			077		

DIST 6 X DIST 3
 MUDS
 HPMS
 F-900'
 F
 F-1000'

SAME

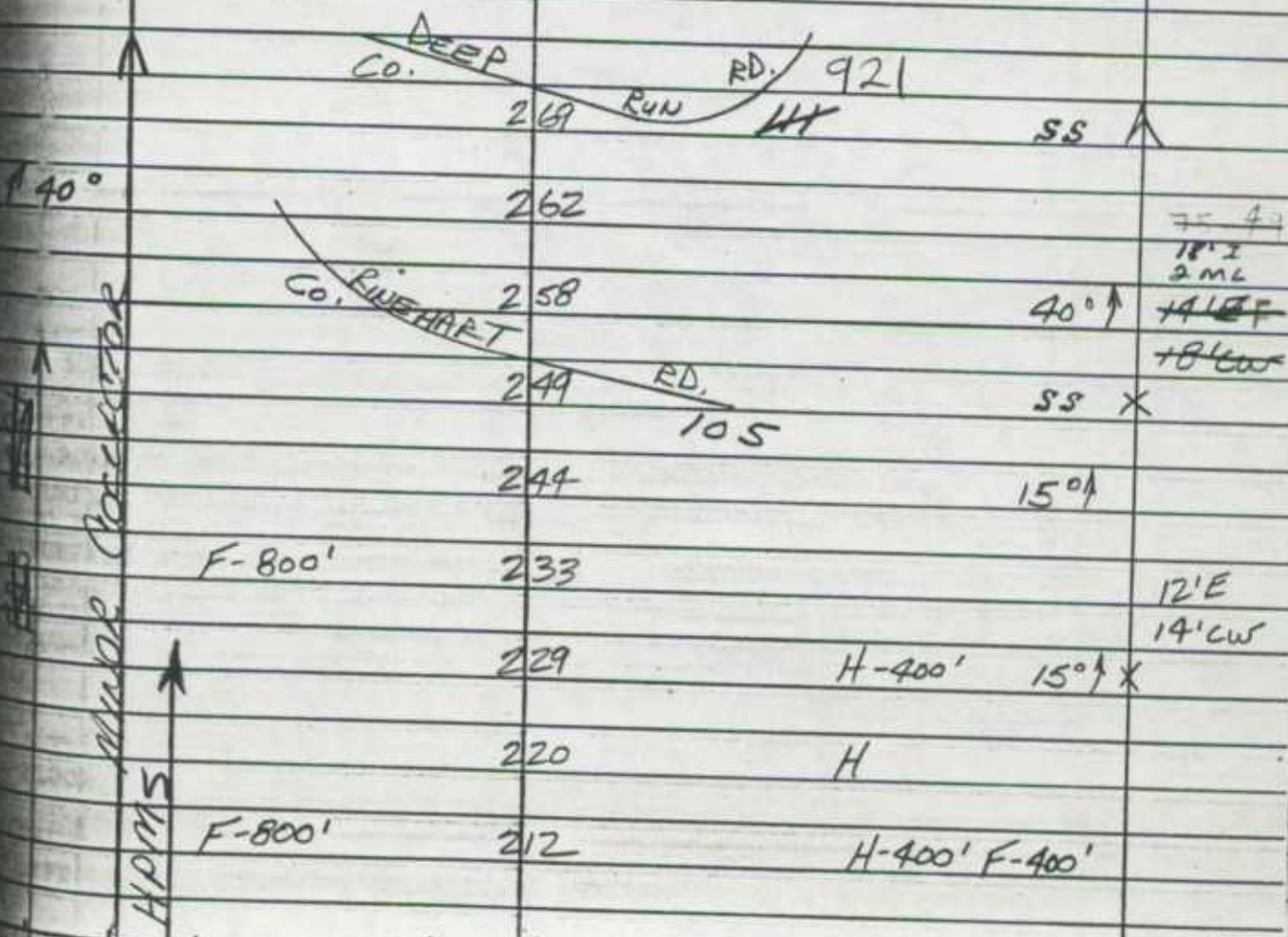


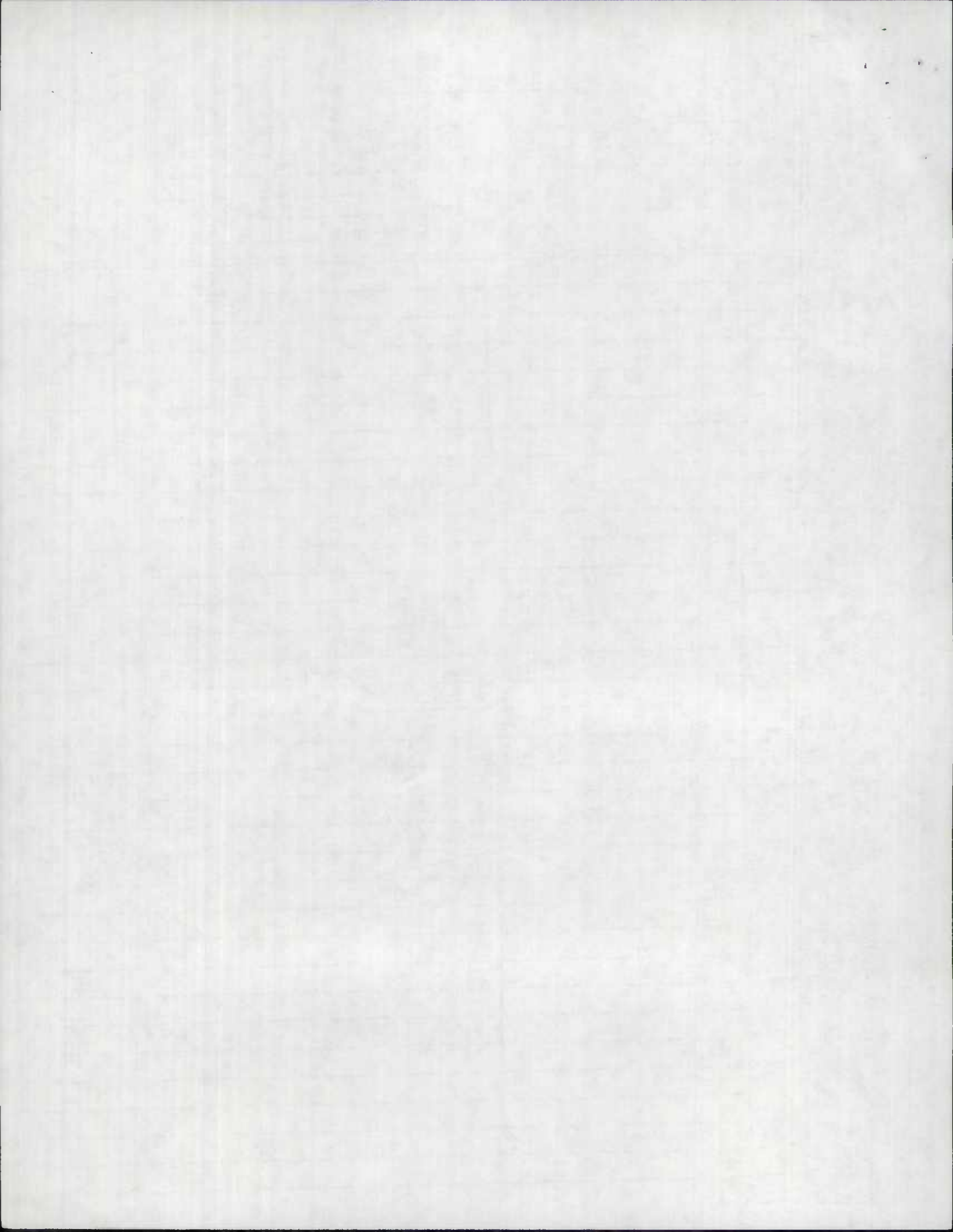
ROAD INVENTORY SHEET

Party Chief T. LANDON
 Recorder W. WARFIELD
 Helper _____

Road No. Co. 112
 Road Name BIXLER CHURCH RD.
 Sheet No. 3 OF 3
 Date 11-21-72
 County Carroll - District
 State Coordinates _____

Map No. A-11





ROAD INVENTORY SHEET

5

Road No. CO 192
 Road Name ALESIA TO LINGWOOD RD
 Sheet No. 20F3
 Date _____
 County CARROLL
 State Coordinates _____

Porty Chris
 Recorder
 Helper

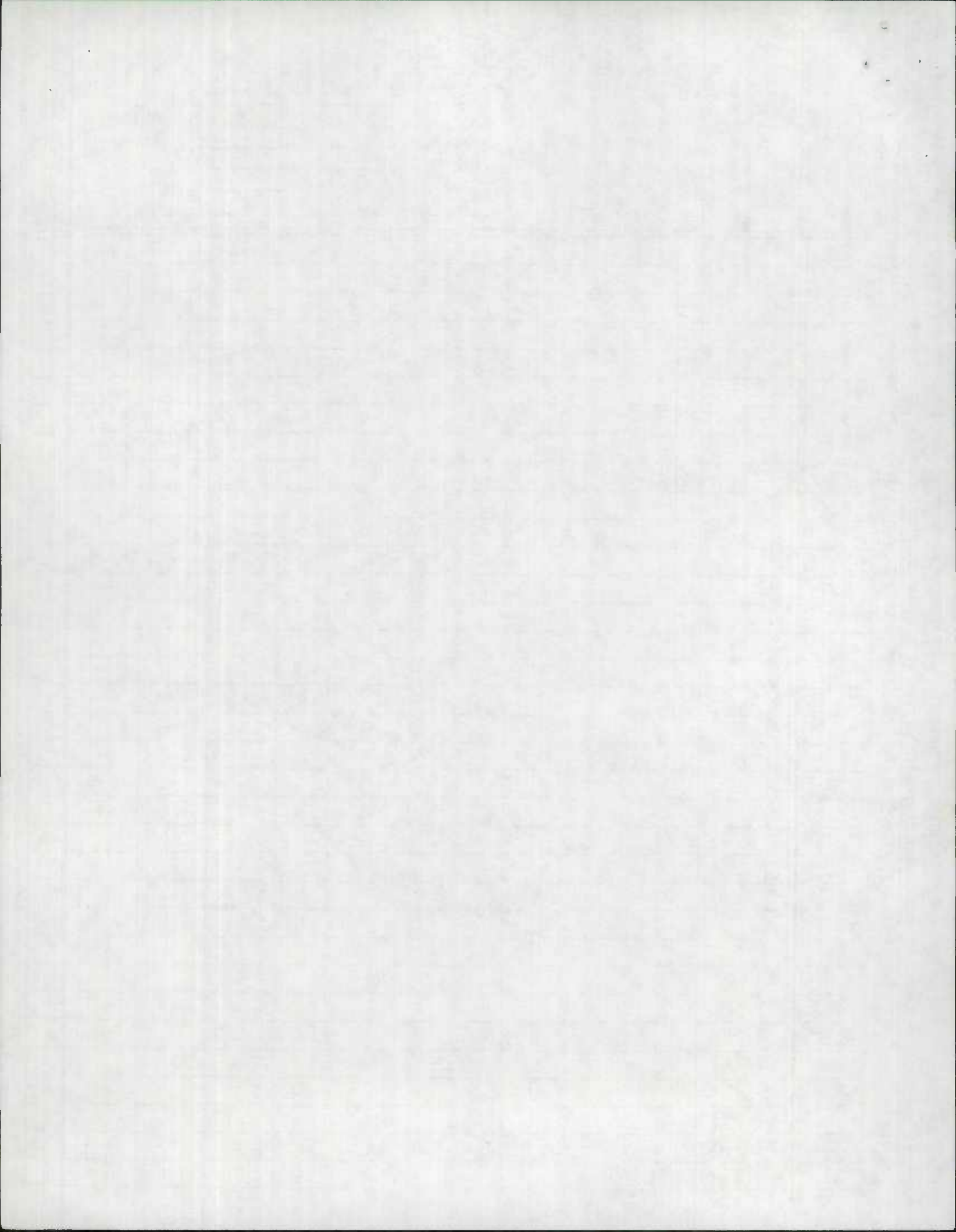
		223	75°
	F	218	
	↑150	216	
		212	30" CMP
	F 400°	199	30" ↗
		195	48" CMP
		192	15° ↗
	↑100	186	
		181	
	UNDERGROUND	172	SHALK RD #1 300° ↗
	H 300°	162	SHALK RD #1 CO 189 CABLE 188 189
	H	157	
	H	139	30° ↗
	HT	125	
	308	207	SCHOOLHOUSE RD
	CROSS RD	120	
			SAME

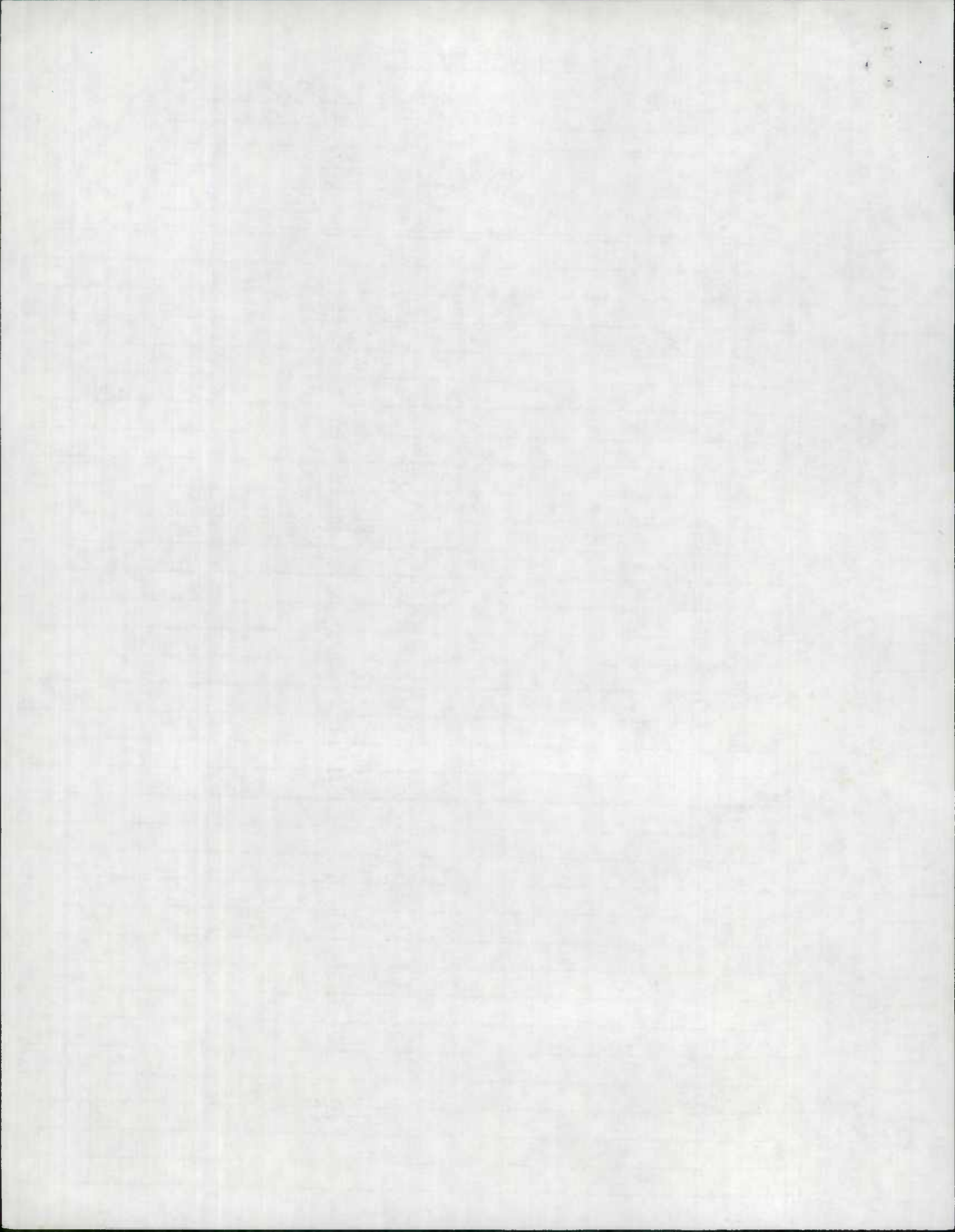
FAS 1125
 MAJOR COLLECTOR RURAL

HPD15

SHALK RD #1
 CO 188
 159
 186







ROAD INVENTORY SHEET

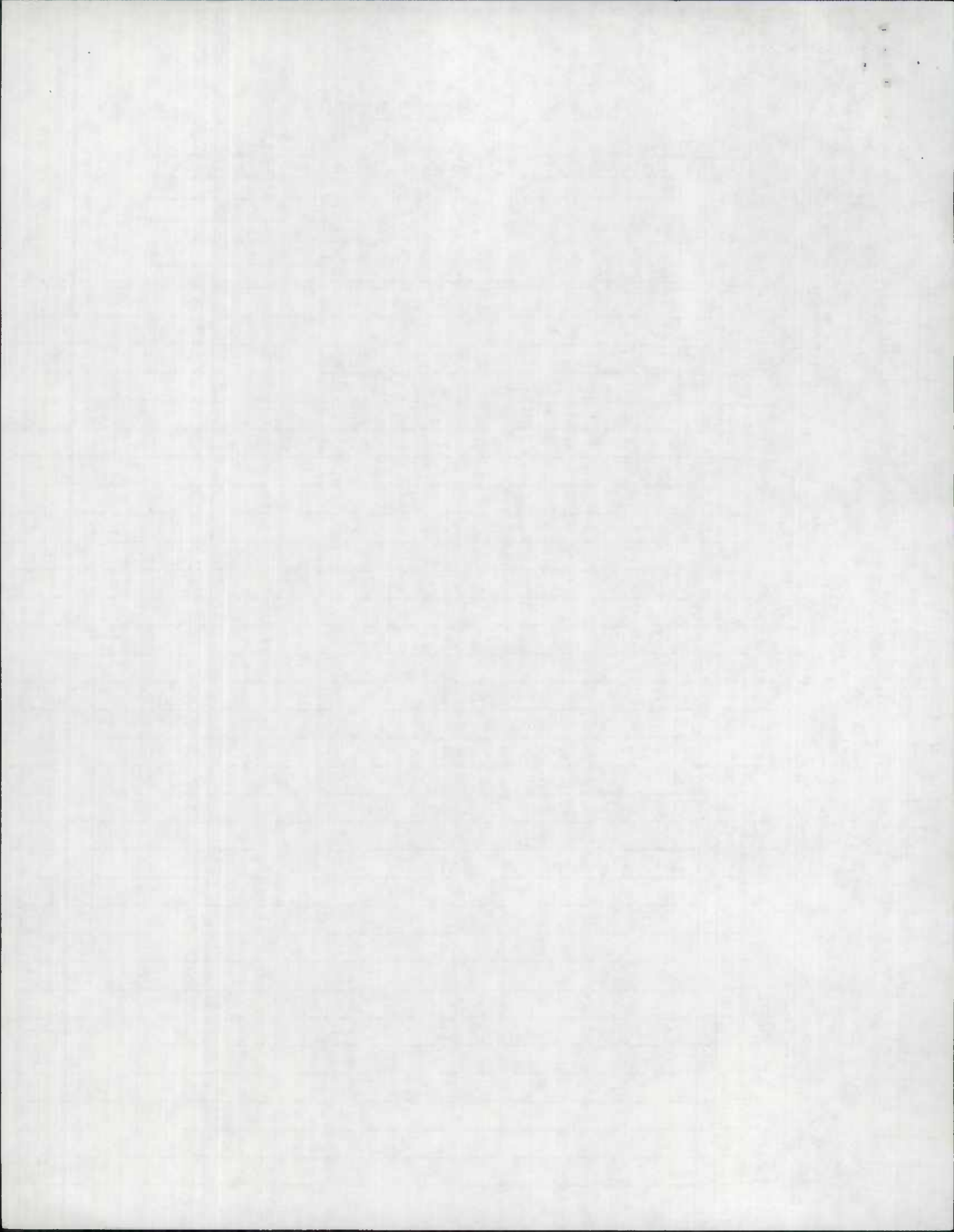
Party Chief T. LONDON
 Recorder W. WARFIELD
 Helper _____

Road No. Co. 247
 Road Name UNIONTOWN RD.
 Sheet No. 3 OF 6
 Date 3-19-73
 County Carroll - District
 State Coordinates _____

Map No. _____

			463		
		3 H	75-64		
			FRIZZELBURG RD	457	
			ECKART RD		22' H
			FRIZZELBURG RD.	F	
			Co. 250	456 Co. 249	X
		H	75-64	453	H
				451	H
				444	15° ↑
		F		426	
				423	36" CMP SQUASH
			(76-91)	393	H
			SPRINGDALE RD. NORTH		
			Co 245	386	
			F-1000'	369	
				367	48" CMP
				360	F 15° ↑
				342	22' H
		M	BUFFINGTON RD.		
			HORRUCK SCHOOCHOUSE RD.		
			OP 88	332 ← OP 251	
				(76-96)	
		H		331	

22' I
 22' I
 10' I
 15' I
 22' I
 15' I
 22' I
 20' I



W.D.A.M.

ROAD INVENTORY SHEET

Party Chief T. LONDON
 Recorder W. WARFIELD
 Helper _____

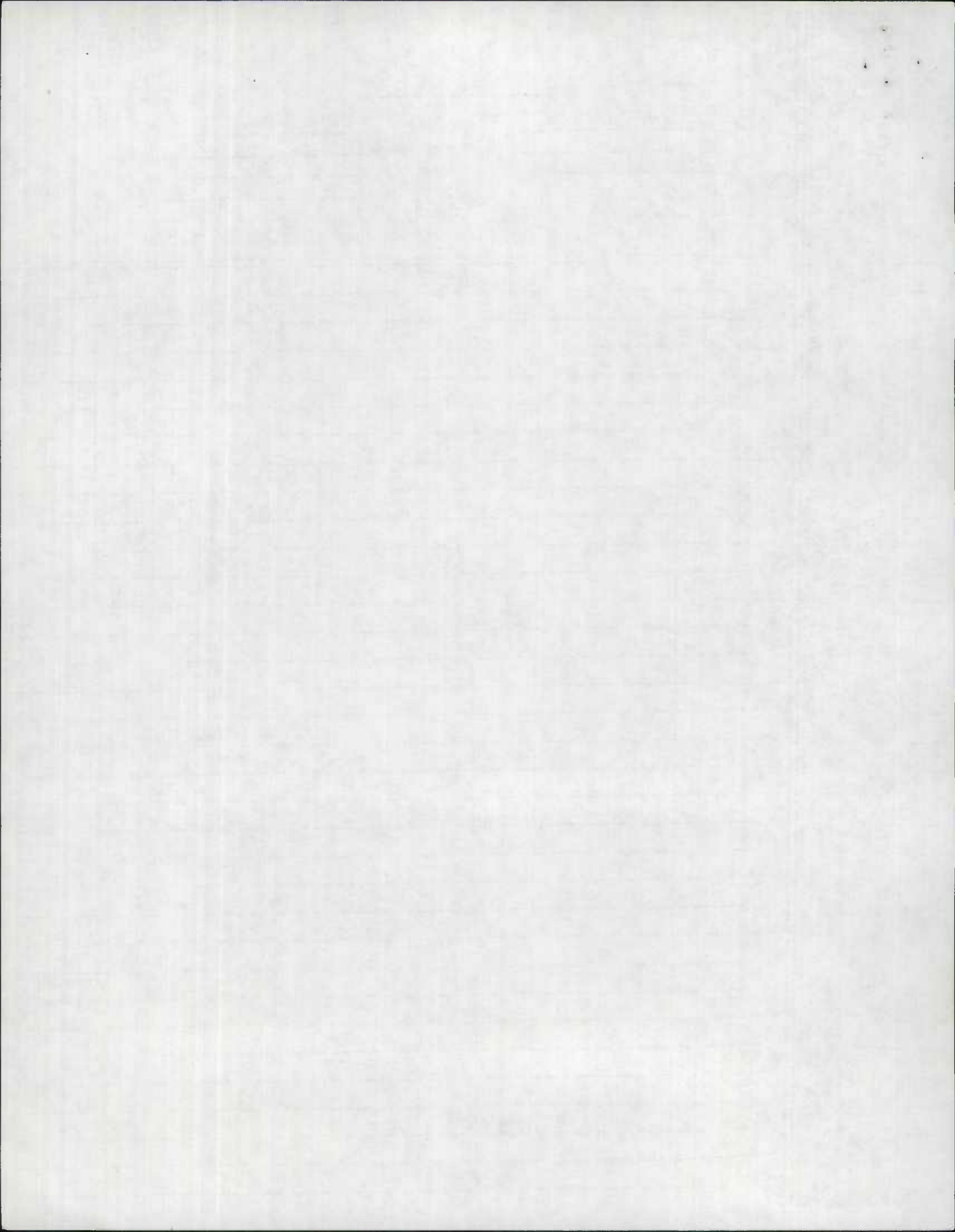
Road No. Co. 257
 Road Name MEADOW BRANCH RD.
 Sheet No. 1 OF 2
 Date 4-10-73
 County Carroll - District - 7
 State Coordinates 800-648

Map No. 9

	112			
			3H	
	107			
	105			
	097		F-800'	PTM
	094		H	
	090		10-TRAILERS	30°
	087		H	
	086			PC
	076		B-ASPHALT Co.	
	063	MAIL RTE 1	H	
	027	OP 183		PTM
	026		36" CMP	65°
	024			18'S
	012			22'cur
	007		H	X
		JOLEEN LA.		
	006	Co. 77		16'G
				20'cur
		MS MD 000 99		✓

40°
 HPIPS
 4 H
 30°

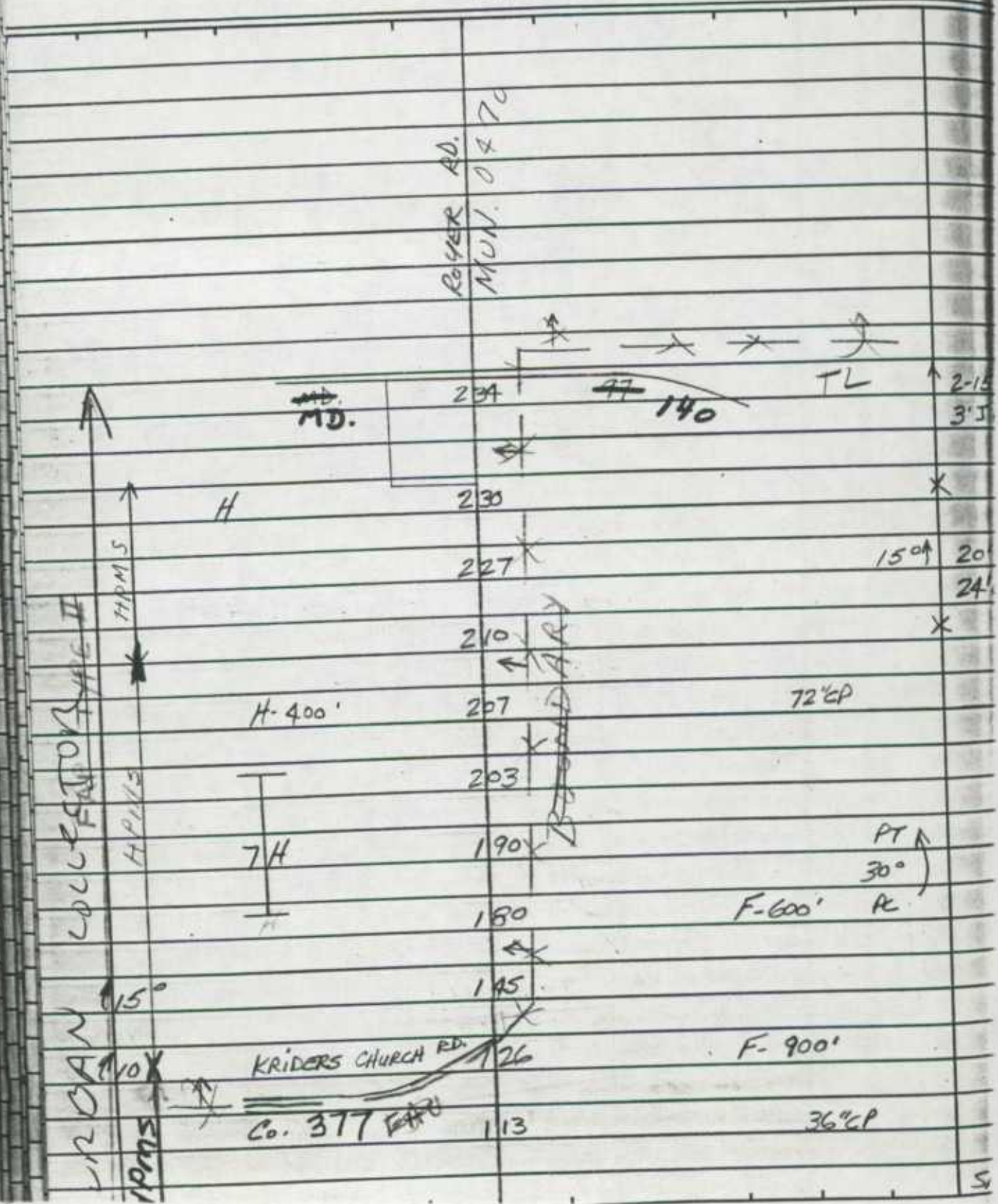
W.D.A.M.
 ↓
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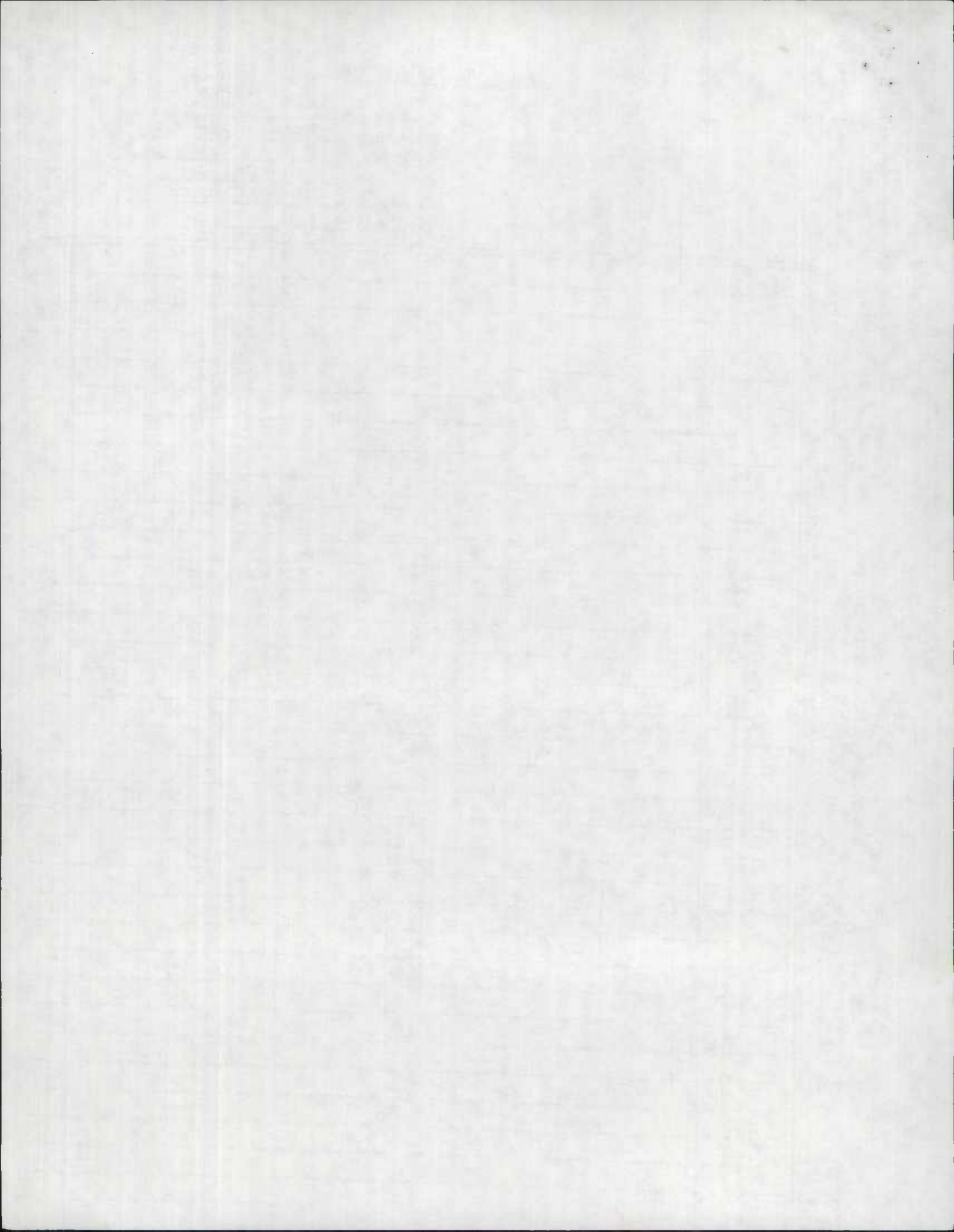


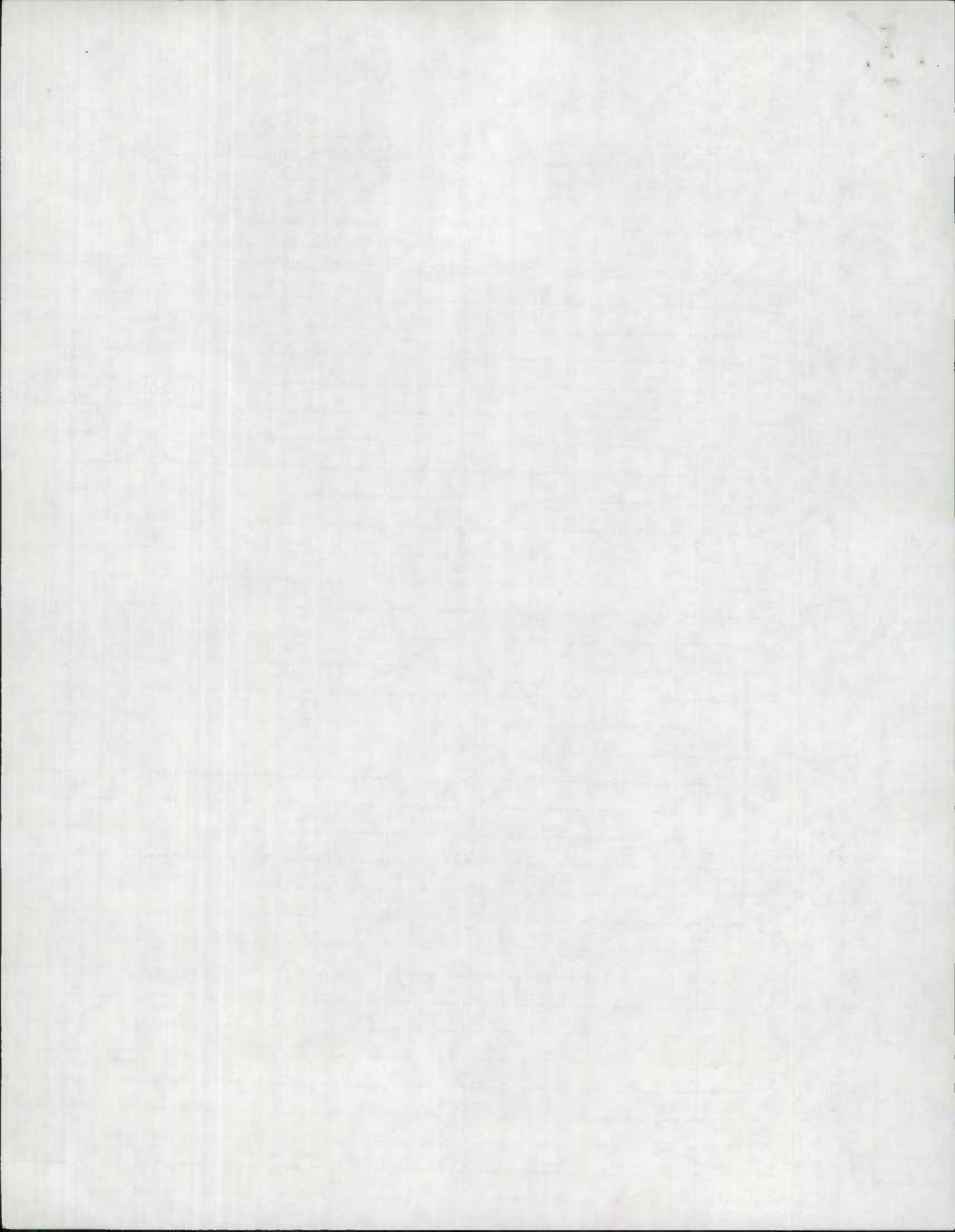
9+10

ROAD INVENTORY SHEET

Road No. Co. 257
 Road Name MEADOW BRANCH RD.
 Sheet No. 2 of 2
 Date 4-10-73
 County Carroll - District
 State Coordinates _____



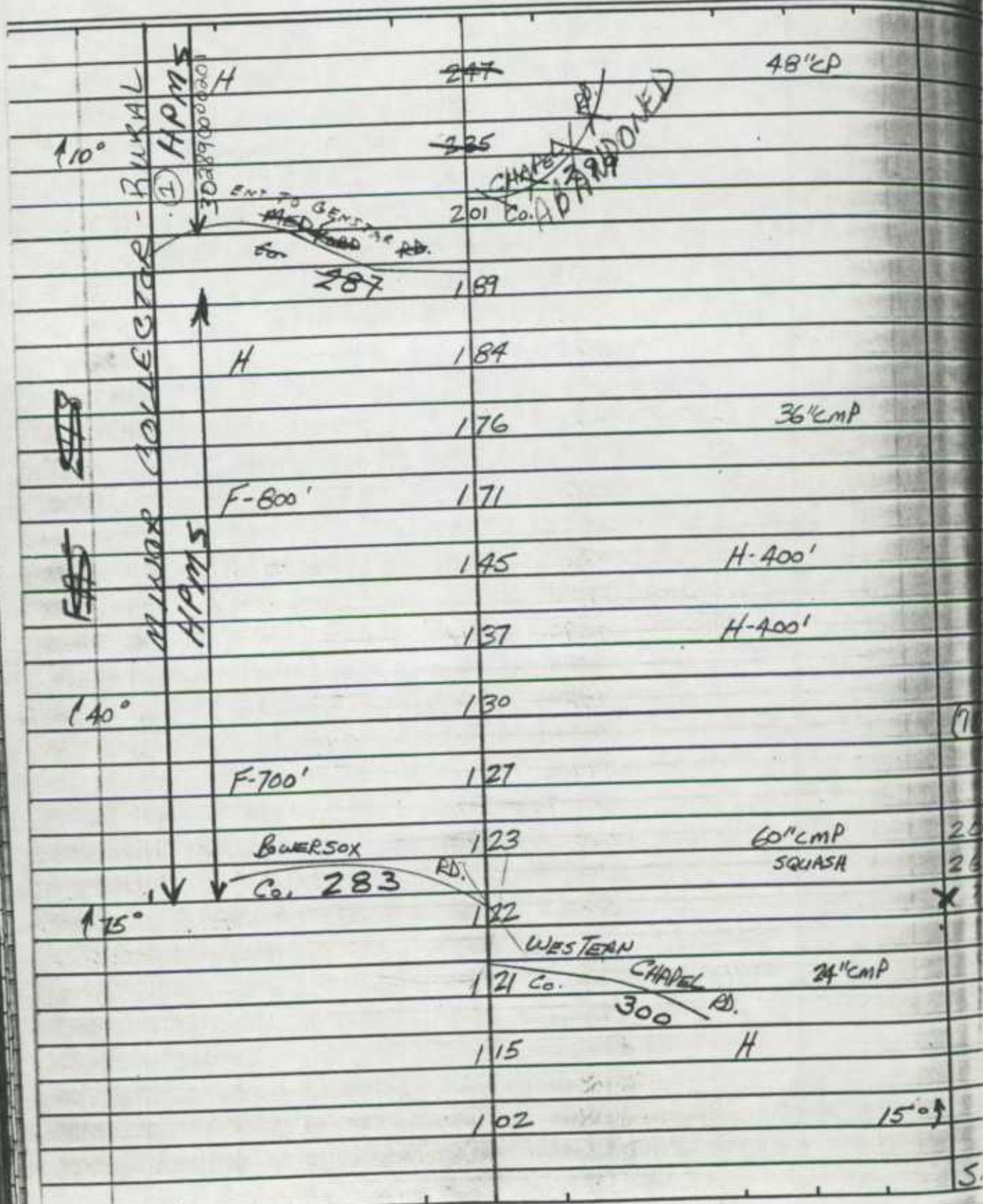


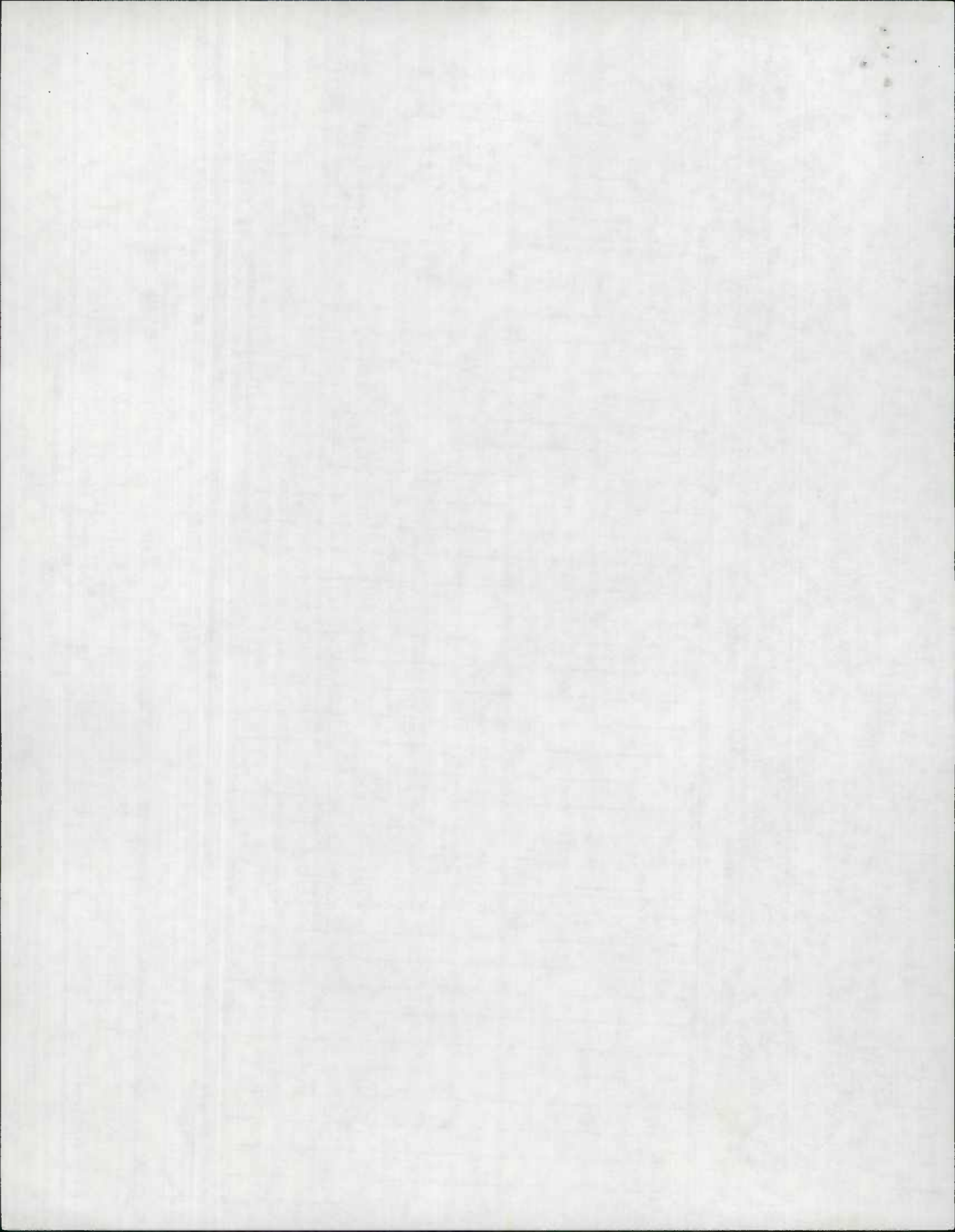


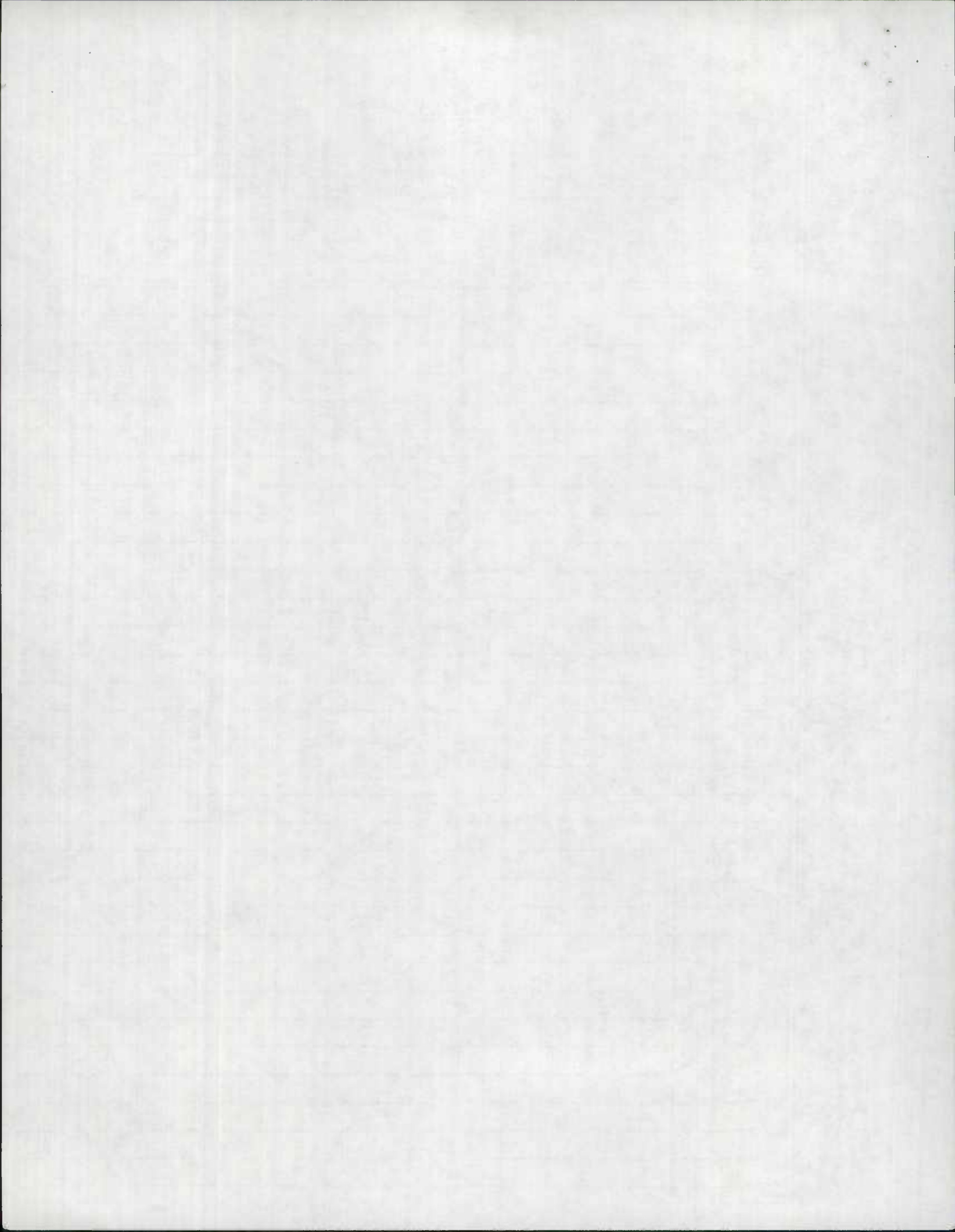
ROAD INVENTORY SHEET

12

Road No. Co. 289
 Road Name STONE CHAPEL RD.
 Sheet No. 2 of 34
 Date 4-10-73
 County Carroll - District
 State Coordinates _____







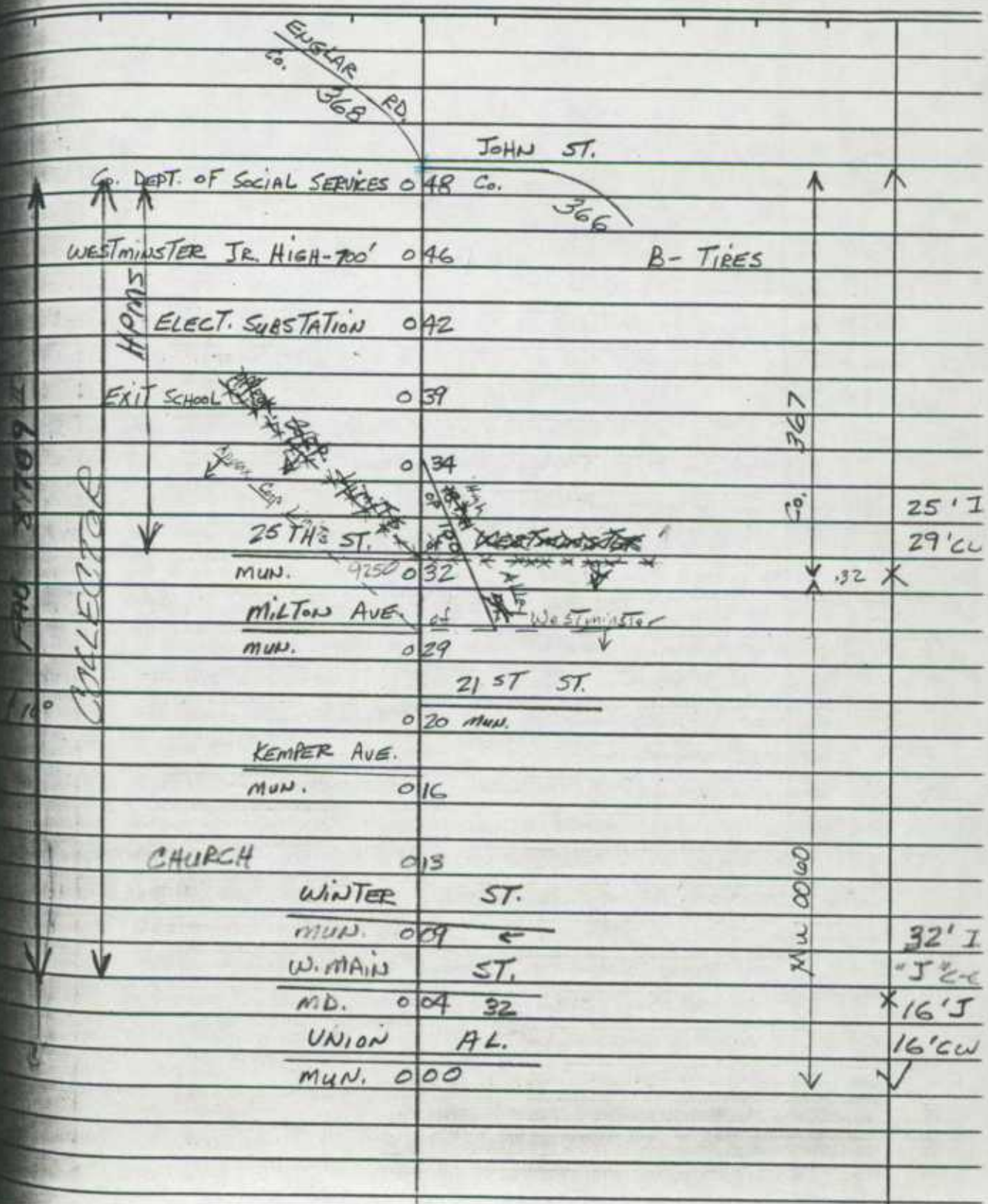
17

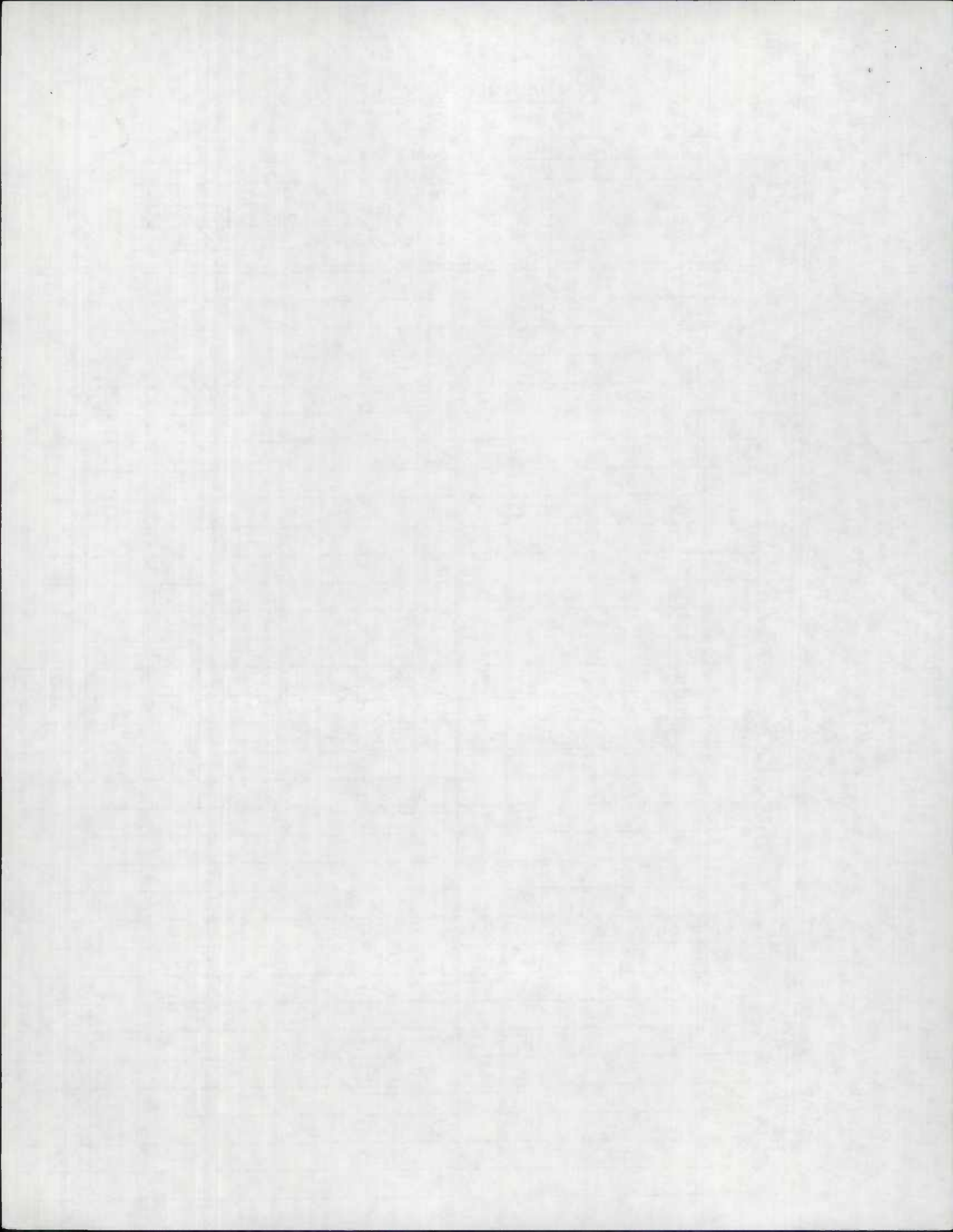
ROAD INVENTORY SHEET Co. 367

City Chief T. LANDON
 Recorder W. WARFIELD
 Helper _____

Road No. MUN. 0060
 Road Name CARROLL ST.
 Sheet No. 1 OF 1
 Date 4-24-73
 County Carroll - District - 7
 State Coordinates 801-635

Map No. 9 WESTMINSTER





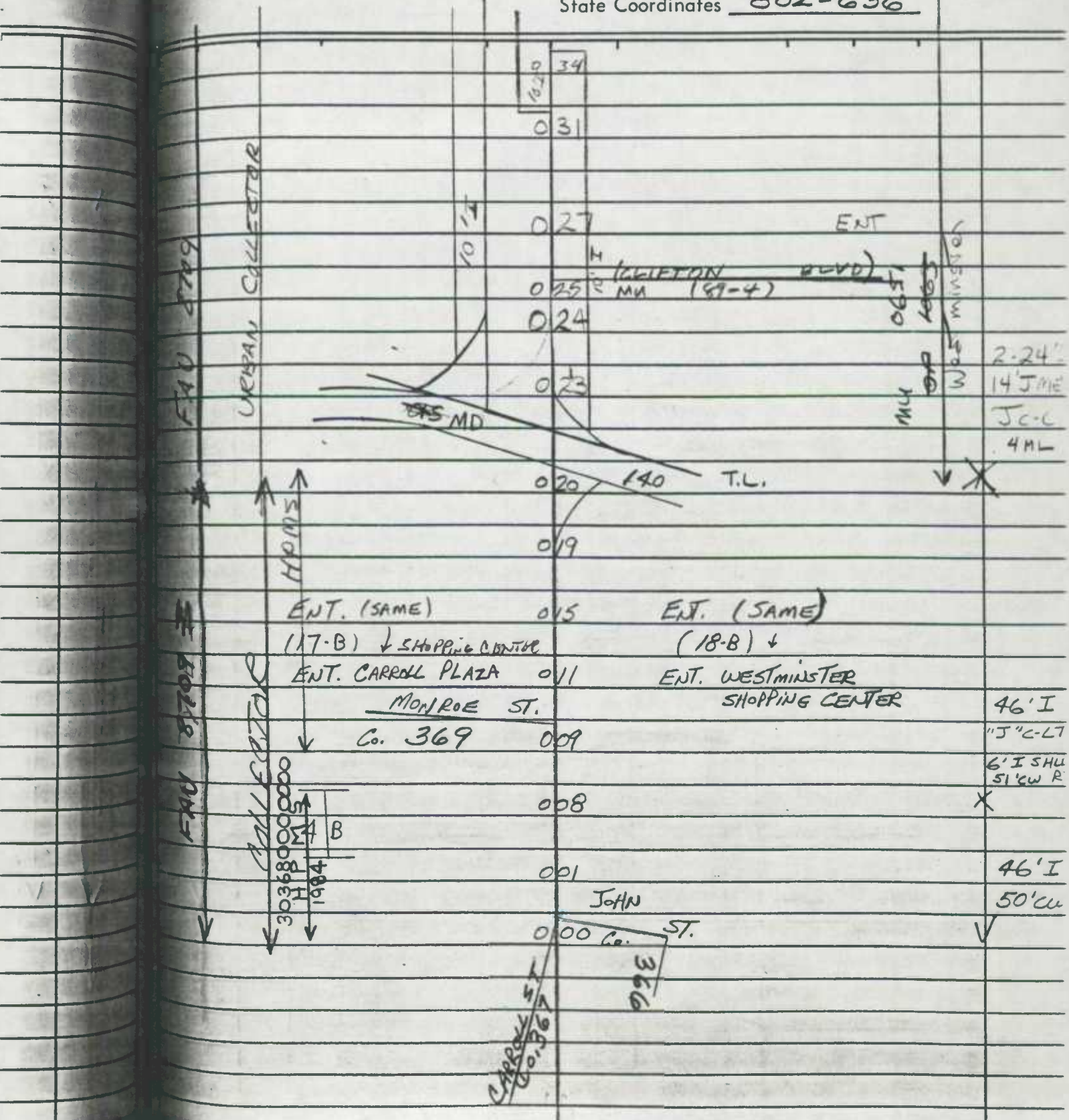
ROAD INVENTORY SHEET

Party Chief T. LANDON
 Recorder W. WARFIELD
 Helper _____

Road No. Co. 368 (66-106)
 Road Name ENGLAR ST. ROAD
 Sheet No. 1 OF 3 2
 Date 4-30-73
 County Carroll - District - 7
 State Coordinates 802-636

Map No. 7B-11

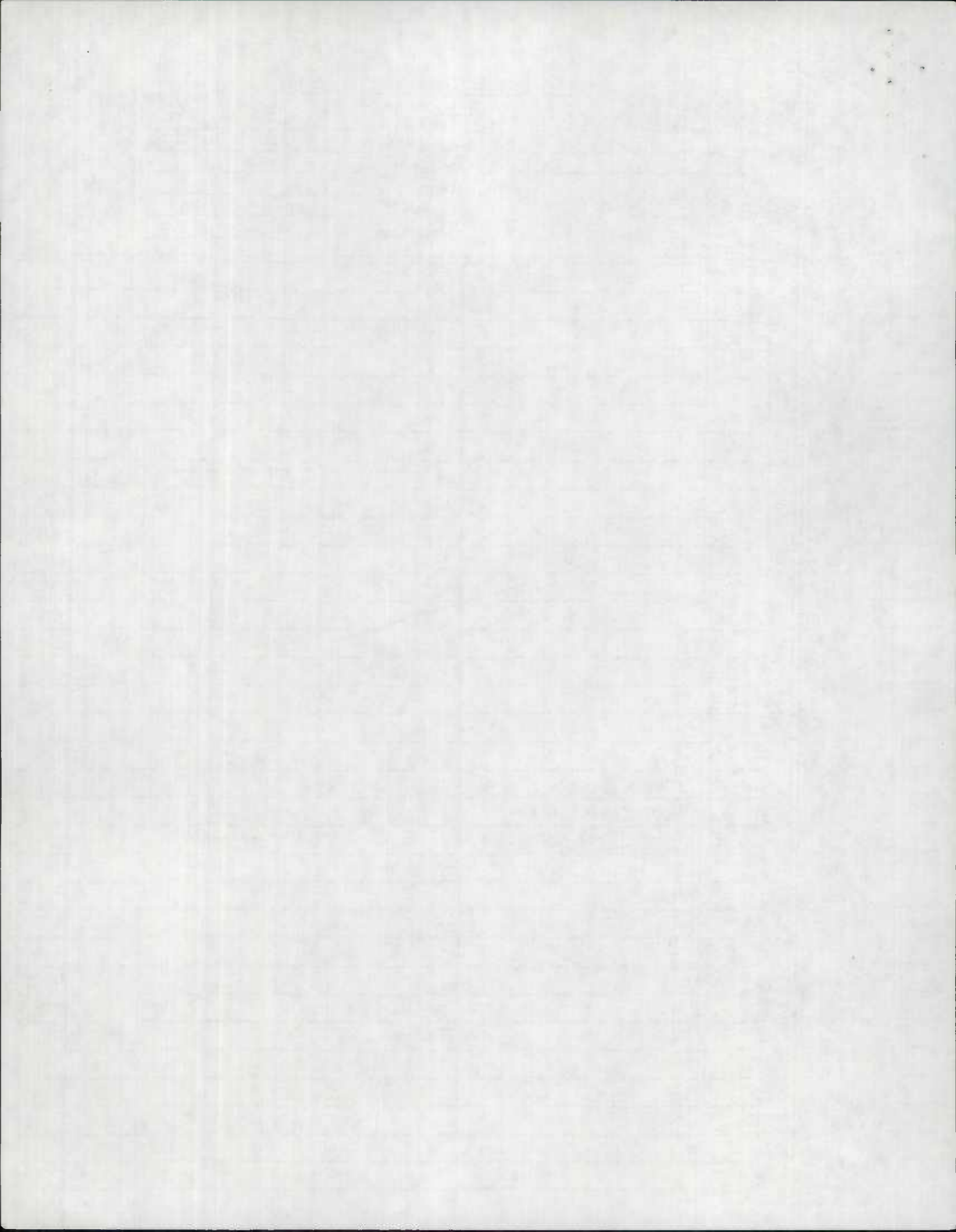
~~SP 1063~~ (86-1)
 mu 0651 (82-12) 8-EX1
 CB
 AL
 4/4/89
 DT. 6D
 (88-2)



2-24'
 14 JUNE
 J.C.C.
 4 ML

46' I
 "J" C-LT
 6' I SHU
 51' CW R

46' I
 50' CW



20

ROAD INVENTORY SHEET

Party Chief T. LANDON
 Recorder W. WARFIELD
 Helper _____

Road No. Co. 523
 Road Name BOLLINGER RD.
 Sheet No. 1 OF 2
 Date 5-4-73
 County Carroll - District - 4
 State Coordinates 820-619

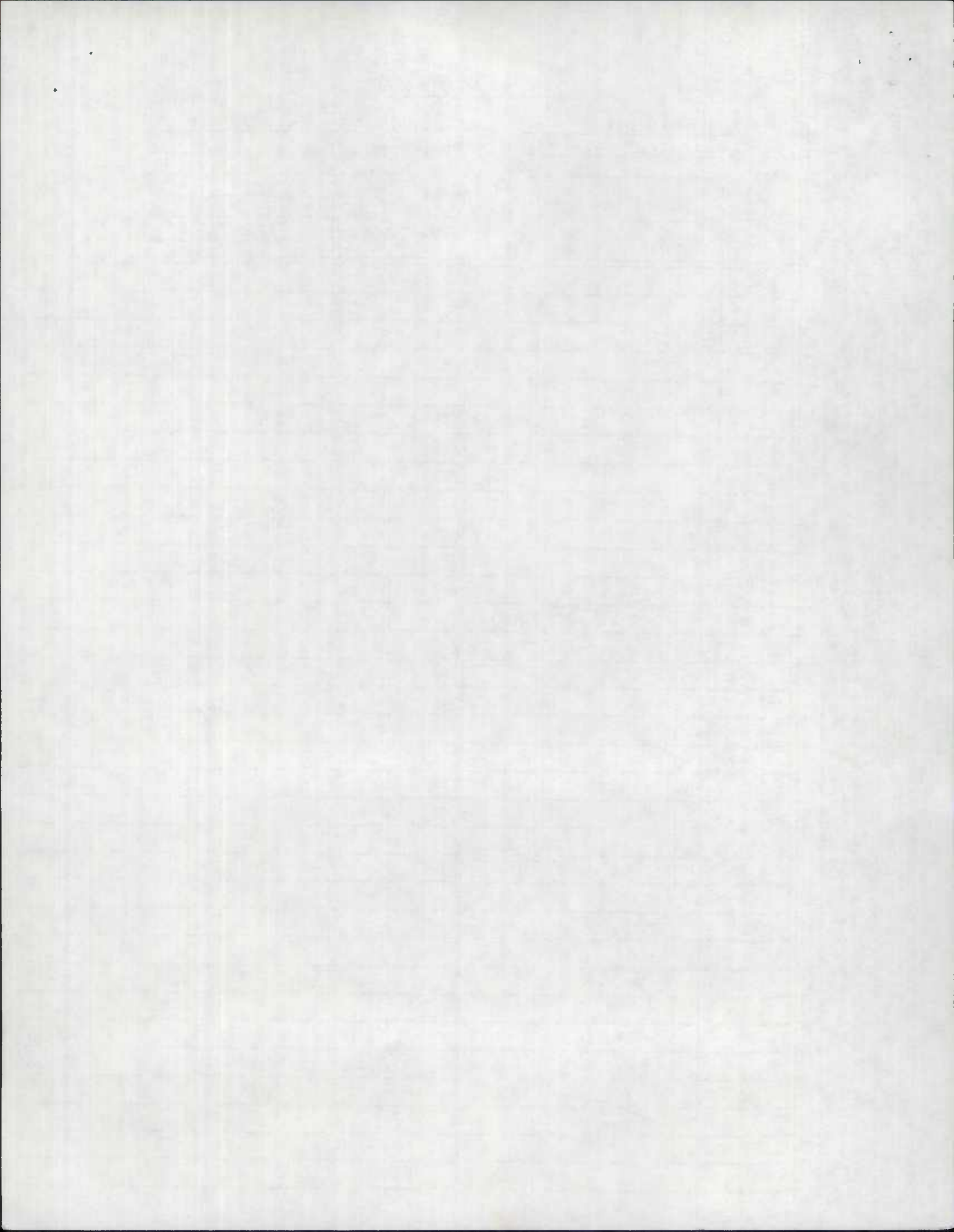
Map No. 9

			077		
		3 H			
			074		
			057	10 H	PT 66° PC
	H-800'		052		
		4 H			
			048		
			043		
		HORSESHOE BEND RD OP 163			
			040		
		MARIE CT (73-34) Co 799		034	
			033		
			030		25°
			023		
		H			
		WALTER AVE. Co. 522		021	10 H
			020		
		10 H			(42-8' 20'I 25'6 18'6
			007		
			002		
		OLD WESTMINSTER PIKE Co. 505		000	20'cur 79-13

H-800'

COLLECTOR
10°

MINOR



ROAD INVENTORY SHEET

Road No. Co. 523
 Road Name BOLLINGER RD
 Sheet No. 2 OF 2
 Date 5-4-73
 County Carroll - District
 State Coordinates _____

DEER PARK

λ	Co.	212	538	λ
↑20°		184		
↑10°		176		15°↑ 82-8 20'I
↑10°	F	172		20'G 18'G
↑10°		169	H	20'CW 79-133
↑10°		155		
		153		
		152		
		151		
		147		
	F	132		
		130		
		119		15°↑
	F	101		F-1000'
		097		TH-600'
		095		
		085		
		079		

MINOR COLLECTOR

20' W BOLLINGER
B.M.

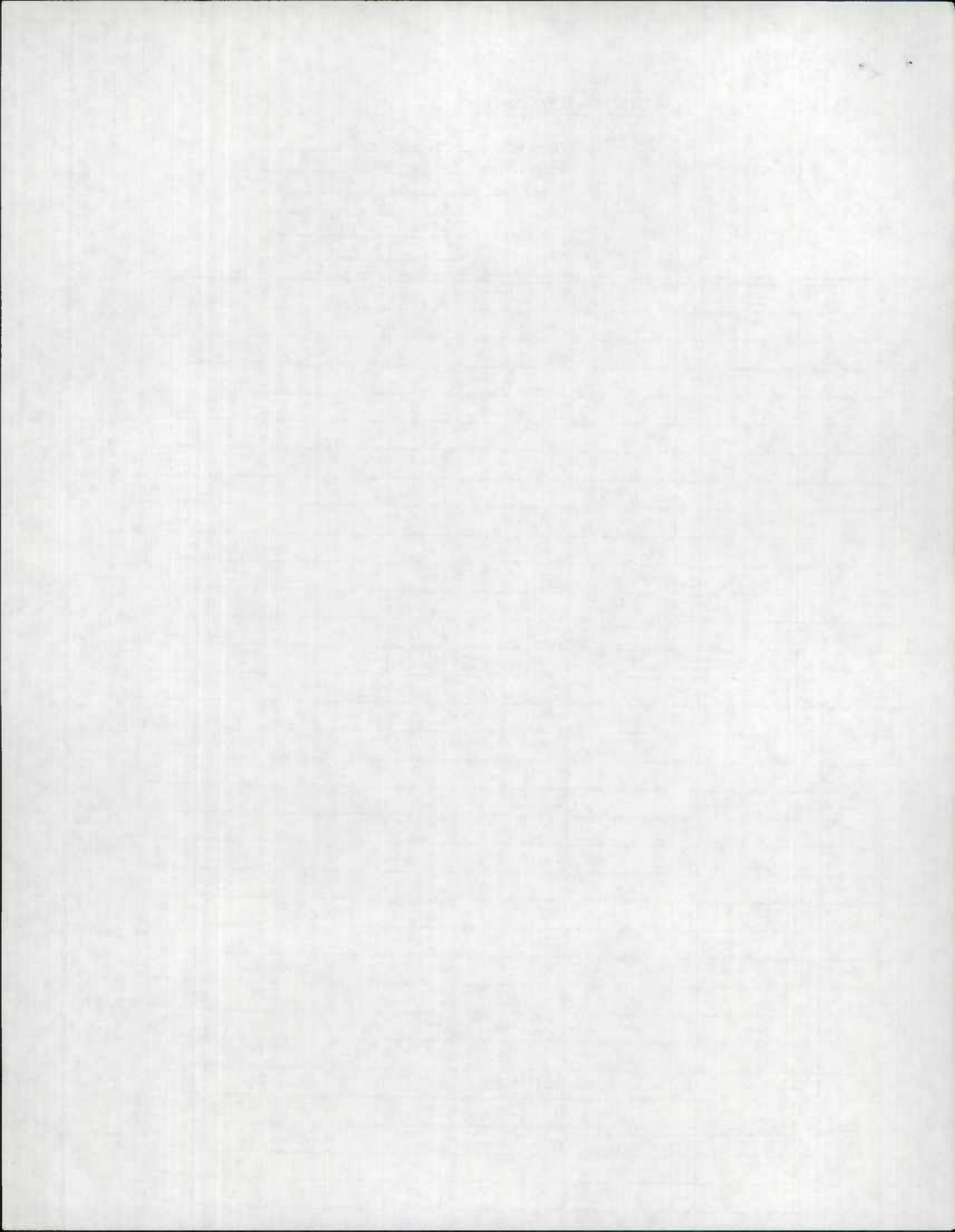


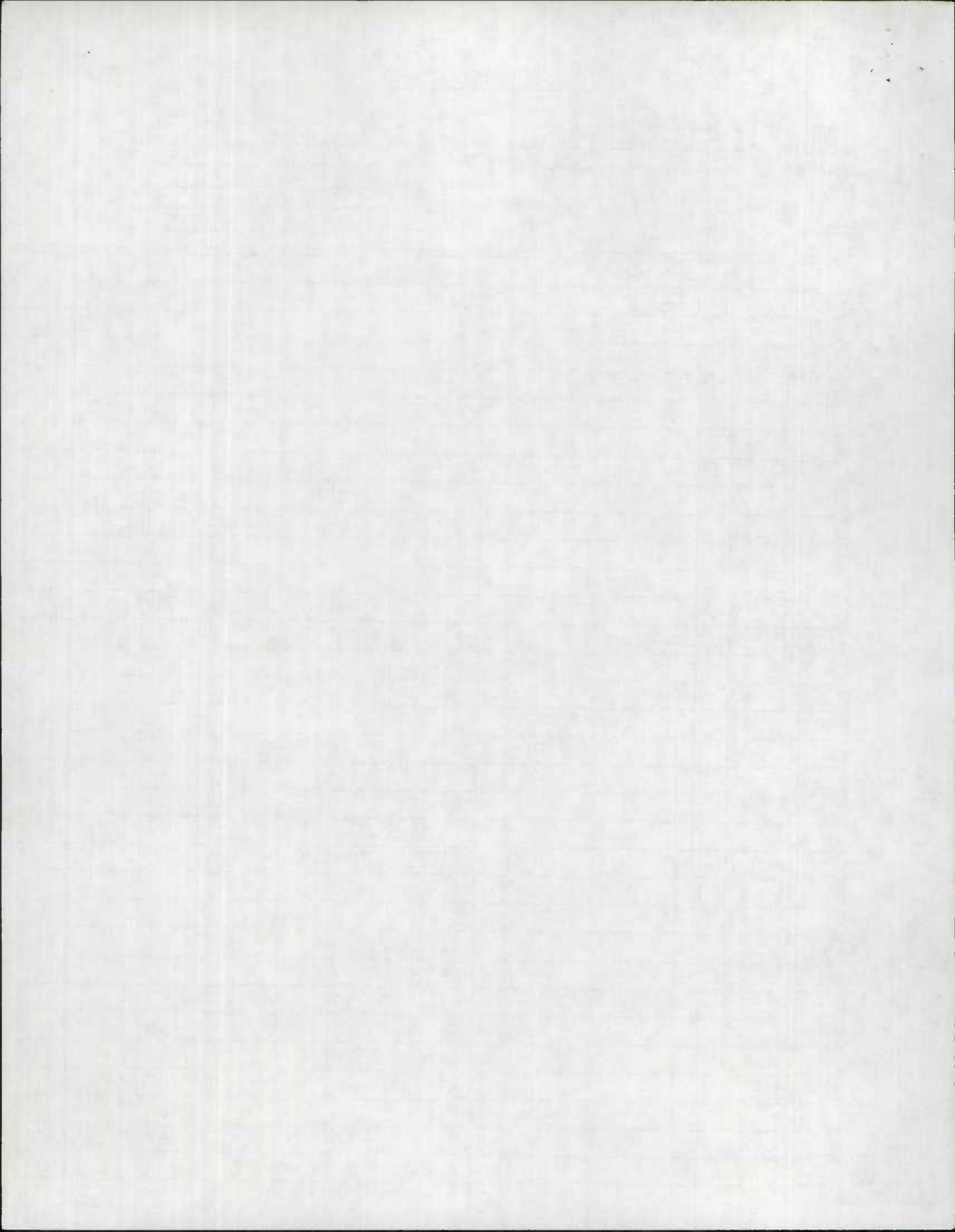
CL 407 } 095 - NOW ACBC
 per Carroll Co. 3-4-73
 96"CP & 48"CP SQUASH
 72"CP

LAUTERBACH RD (73-27)
 Co 795 PROP. 079

SAME

Form 5-HPS
 Revised
 MAP
 8
 TO
 MA
 CL
 SU
 TO
 SU
 CL
 PO
 GE
 SU
 FL
 SU
 PA
 TY



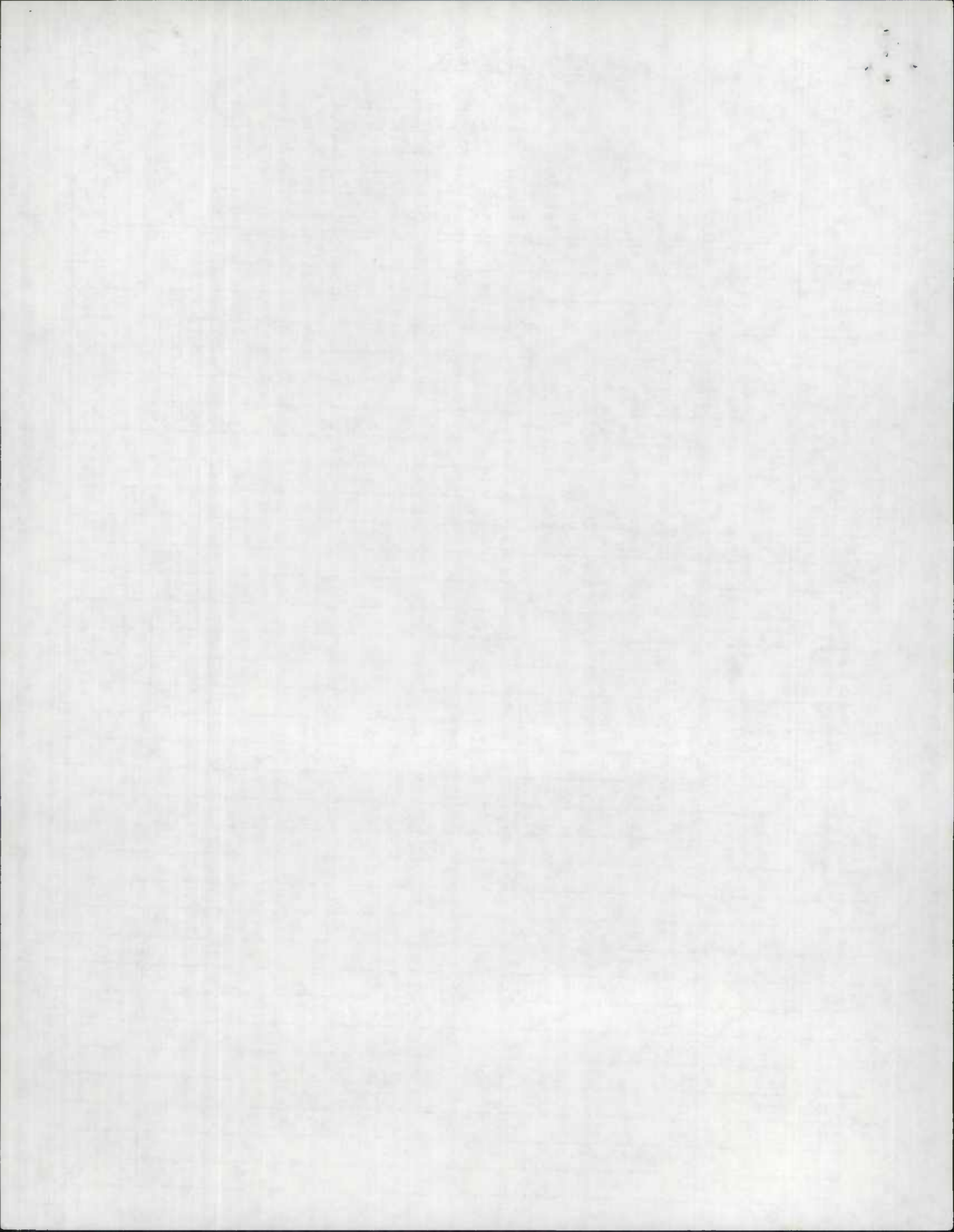


ROAD INVENTORY SHEET

(22)

Road No. Co. 574
 Road Name GILLIS FALLS RD
 Sheet No. 2 OF 4
 Date 5-18-73
 County Carroll - District
 State Coordinates _____

		235		
		228	PTA	
		219	40° PC	
	H-75' H			
	15°	UNDERSOUND	200 CABLE	
MINOR COLLECTOR FAS 250	H	191	H	
		DAVIS RD.		
		Co 183	573	
	H	181	15°↑	
	H	175	H	
		174	H	
		172	CHURCH CEM.	18" I 17" G 19" CW
		CABBAGE Co. 575 SPRING RD.	167	HALL *
	PT 60°		163	
	PC		158	10°↑
		152	H	
	F-800'	148	30" CMP	
		WATERSVILLE RD.		
		144 Co. 588		
			SAME	



ROAD INVENTORY SHEET

Party Chief T. LONDON
 Recorder W. WARFIELD
 Helper _____

Road No. Co. 574
 Road Name GILLIS FALLS RD
 Sheet No. 3 of 4
 Date 5-18-73
 County Carroll - District
 State Coordinates _____

Map No. _____

			373	F-400'	PC
			370	H	
			364	H	
			360		
				JOHN PICKETT RD.	
			357 Co.	601	
				F-400'	
			355		3-48"CP
				F-800'	
			343		F
			340		
				4 H	
			330		
			305		2-72" CMP SQUASHES # 48" CMP
			288		F-500'
			286		20°↑
			263		
			252	H	
			250		
					5 H
			244		
				3 H	

115°

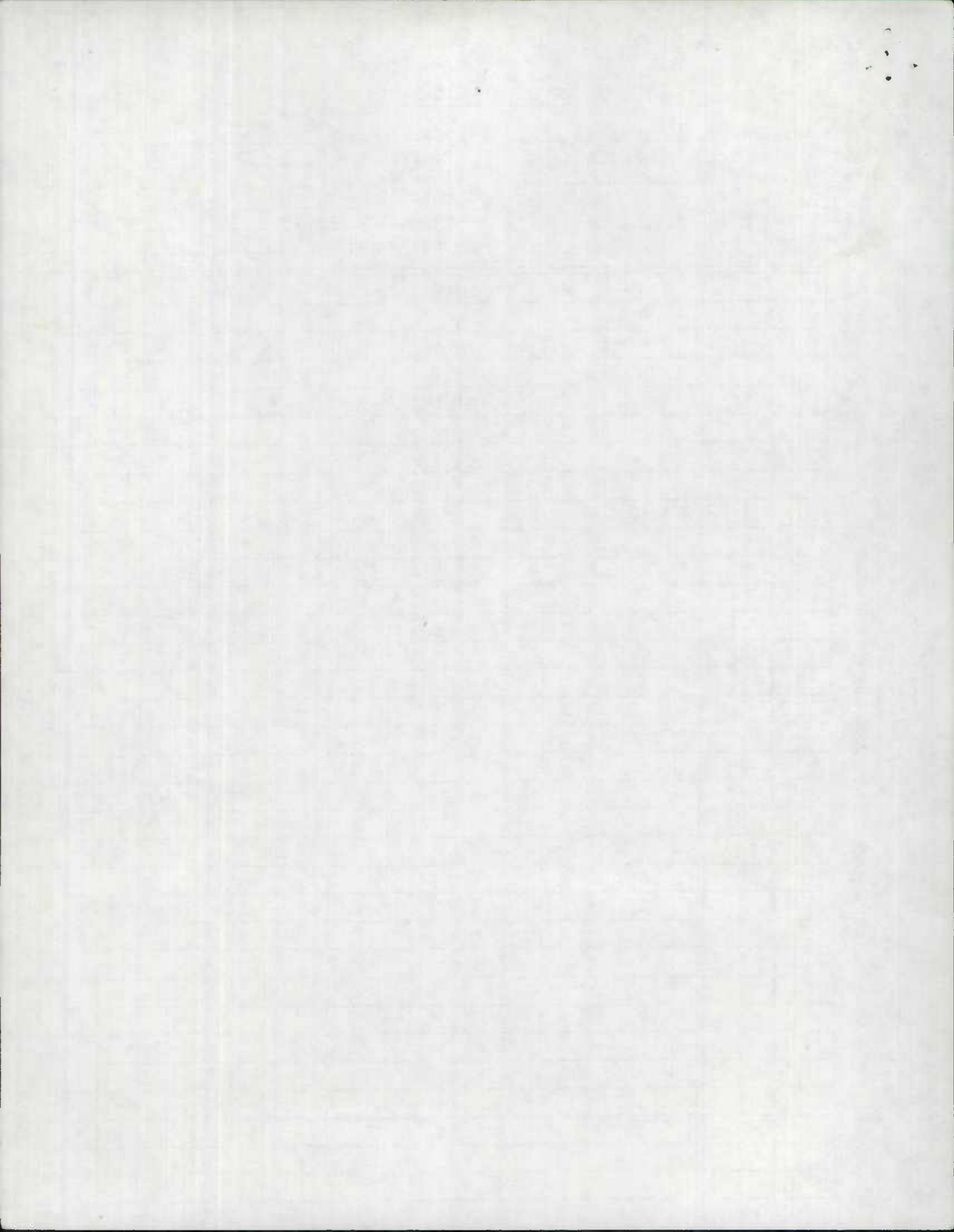
MINOR COLLECTOR

DIST. 14

DIST. 13

HPMS

20°↑



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

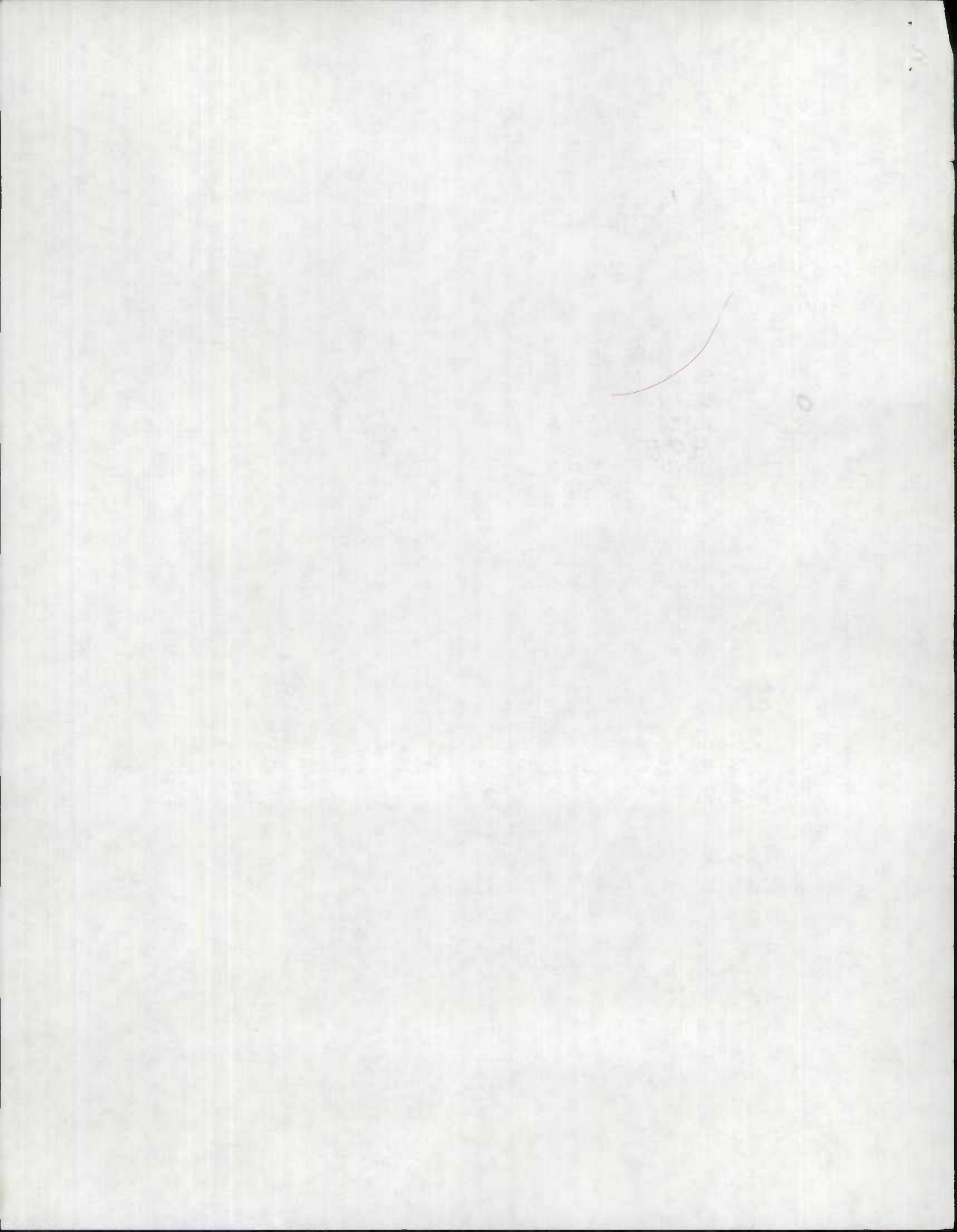
Route No: CO 055
Sample No: 1
County: Carroll

Starting Mile Pt: 1.01
Ending Mile Pt: 1.60

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>229</u>	<u>100</u>	<u>0</u>	-----
<u>L 239</u>	<u>208</u>	<u>99.5</u>	<u>0.6</u>	-----
<u>208</u>	<u>130.5</u>	<u>100</u>	<u>0</u>	-----
<u>R 130.5</u>	<u>2031</u>	<u>99.8</u>	<u>2</u>	-----
<u>2031</u>	<u>3110</u>	<u>100</u>	<u>0</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>3</u>	<u>.34</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	<u>1</u>	<u>.11</u>
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	<u>1</u>	<u>.14</u>
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	808	0%	
808	1487	-7%	
1487	2748	+2.0	
2748	3110	-2.6	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>.15</u>
b.	0.5-2.4	<u>1</u>	<u>.24</u>
c.	2.5-4.4	<u>1</u>	<u>.07</u>
d.	4.5-6.4	<u>—</u>	<u>—</u>
e.	6.5-8.4	<u>1</u>	<u>.13</u>
f.	8.5-	<u>—</u>	<u>—</u>

Handwritten scribbles in red ink on the left side of the page.

A single vertical red line drawn in the center of the page.

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0055
Sample No: 2
County: Carroll

Starting Mile Pt: 3.85
Ending Mile Pt: 4.61

~~0.76~~
0.76

Horizontal Curve Section

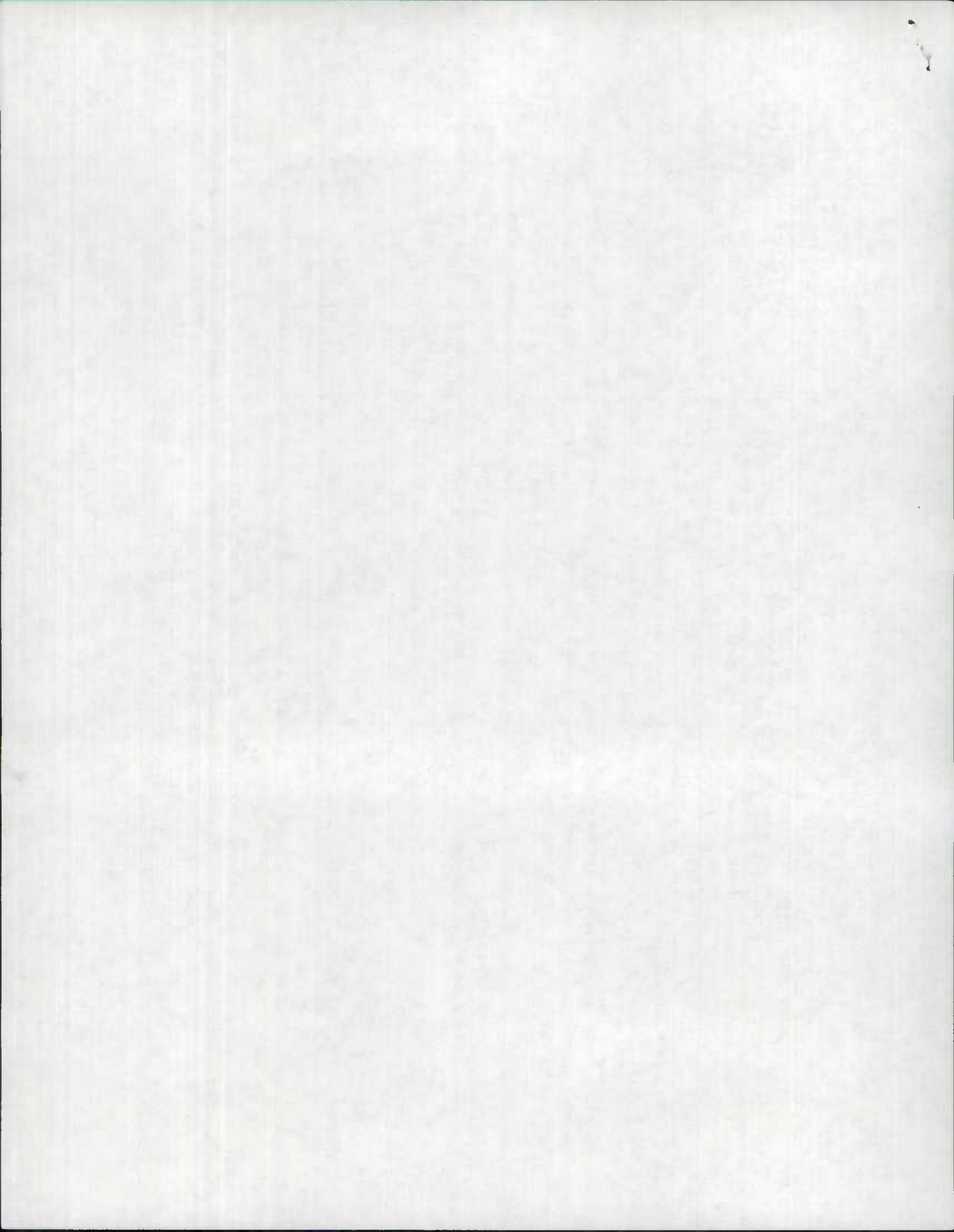
	<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
	<u>0</u>	<u>192</u>	<u>100</u>	<u>0</u>	
L	<u>192</u>	<u>465</u>	<u>99.75</u>	<u>2.4</u>	
	<u>465</u>	<u>1347</u>	<u>100</u>	<u>0</u>	
R	<u>1347</u>	<u>1801</u>	<u>99.4</u>	<u>4.6</u>	
	<u>1801</u>	<u>2317</u>	<u>100</u>	<u>0</u>	
L	<u>2317</u>	<u>2600</u>	<u>99.8</u>	<u>1.9</u>	
R	<u>2600</u>	<u>3325</u>	<u>99.8</u>	<u>1.8</u>	
*	<u>3325</u>	<u>4025</u>	<u>100</u>	<u>0</u>	

	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	
b.	0.5-1.4		
c.	1.5-2.4		
d.	2.5-3.4		
e.	3.5-4.4		
f.	4.5-5.4		
g.	5.5-6.9		
h.	7.0-8.4		
i.	8.5-10.9		
j.	11.0-13.9		
k.	14.0-19.4		
l.	19.5-27.9		
m.	23+		

Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	465	0%	
465	2055	-3.6	
2055	2985	+7.6	
2985	4025	0	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____



CURVE - GRADE DATA COLLECTION

UPDATE FORM - 1993

Route No: CO 112
 Sample No: 4
 County: (6) CARROLL

Starting Mile Pt: 1.29
 Ending Mile Pt: 1.71

.42 = 2218 ft

Horizontal Curve Section

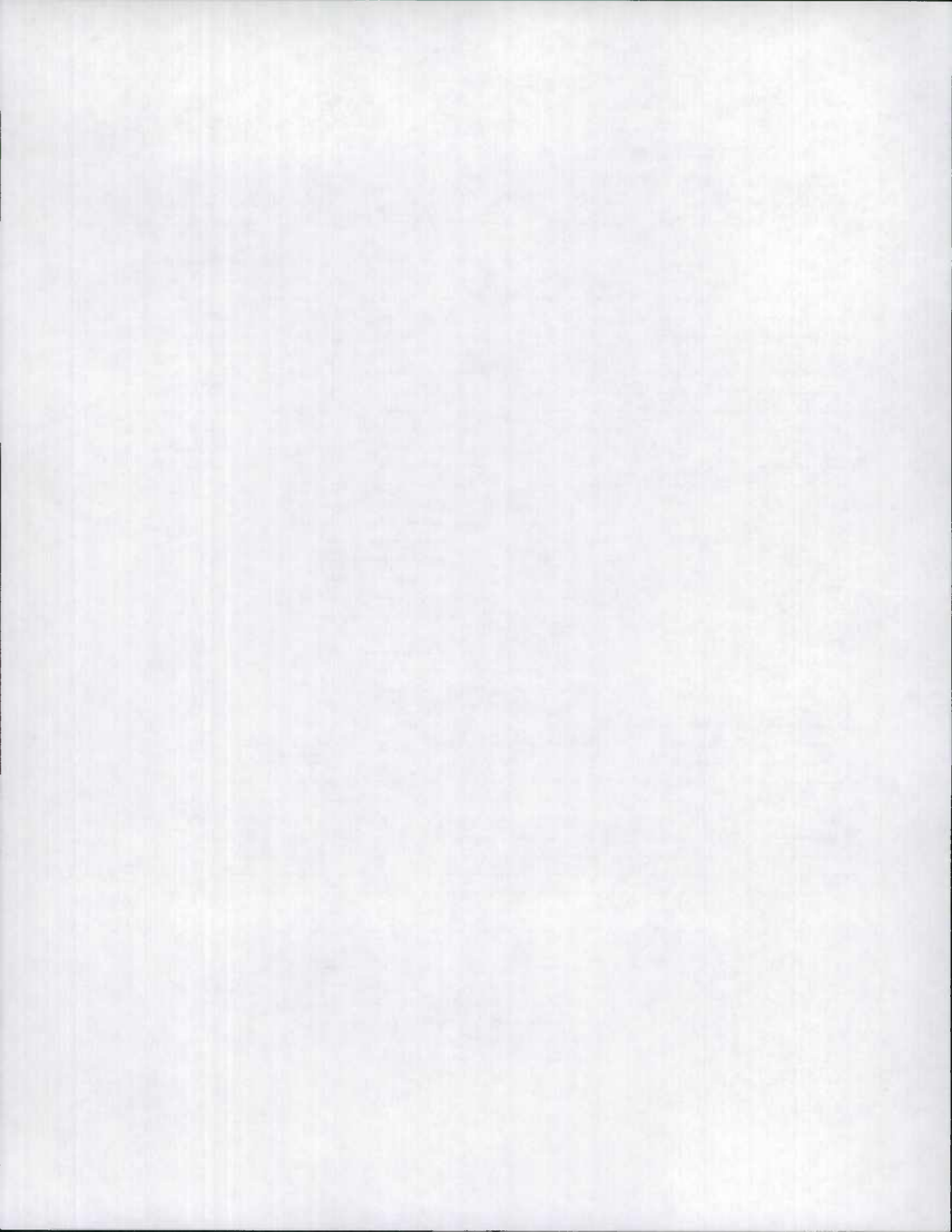
Start Pt. (in ft.)	End Pt. (in ft.)	Chord length (/100ft)	Central Ordi. Length (/100ft)	Length of Total Curve in(x.xxmile)
<u>0</u>	<u>910</u>	<u>100</u>	<u>0</u>	
<u>910</u>	<u>1155</u>	<u>99.8</u>	<u>2.0</u>	
<u>1155</u>	<u>2019</u>	<u>99.9</u>	<u>1.0</u>	
<u>2019</u>	<u>2218</u>	<u>99.85</u>	<u>1.6</u>	

- A. 0.0 - 0.4 1 .17
- B. 0.5 - 1.4 _____
- C. 1.5 - 2.4 _____
- D. 2.5 - 3.4 _____
- E. 3.5 - 4.4 _____
- F. 4.5 - 5.4 1 .07
- G. 5.5 - 6.9 _____
- H. 7.0 - 8.4 1 .04
- I. 8.5 - 10.9 1 .14
- J. 11.0 - 13.9 _____

Vertical Curve Section

Start Pt. (in ft.)	End Pt. (in ft.)	Gradient Percent	Length of Curve (in x.xx miles)
<u>0</u>	<u>588</u>	<u>0</u>	
<u>388</u>	<u>1155</u>	<u>11.8</u>	
<u>1155</u>	<u>2218</u>	<u>0</u>	

- A. 0.0 - 0.4 2 .18
- B. 0.5 - 2.4 _____
- C. 2.5 - 4.4 _____
- D. 4.5 - 6.4 _____
- E. 6.5 - 8.4 _____
- F. 8.5 - _____ 1 .24



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

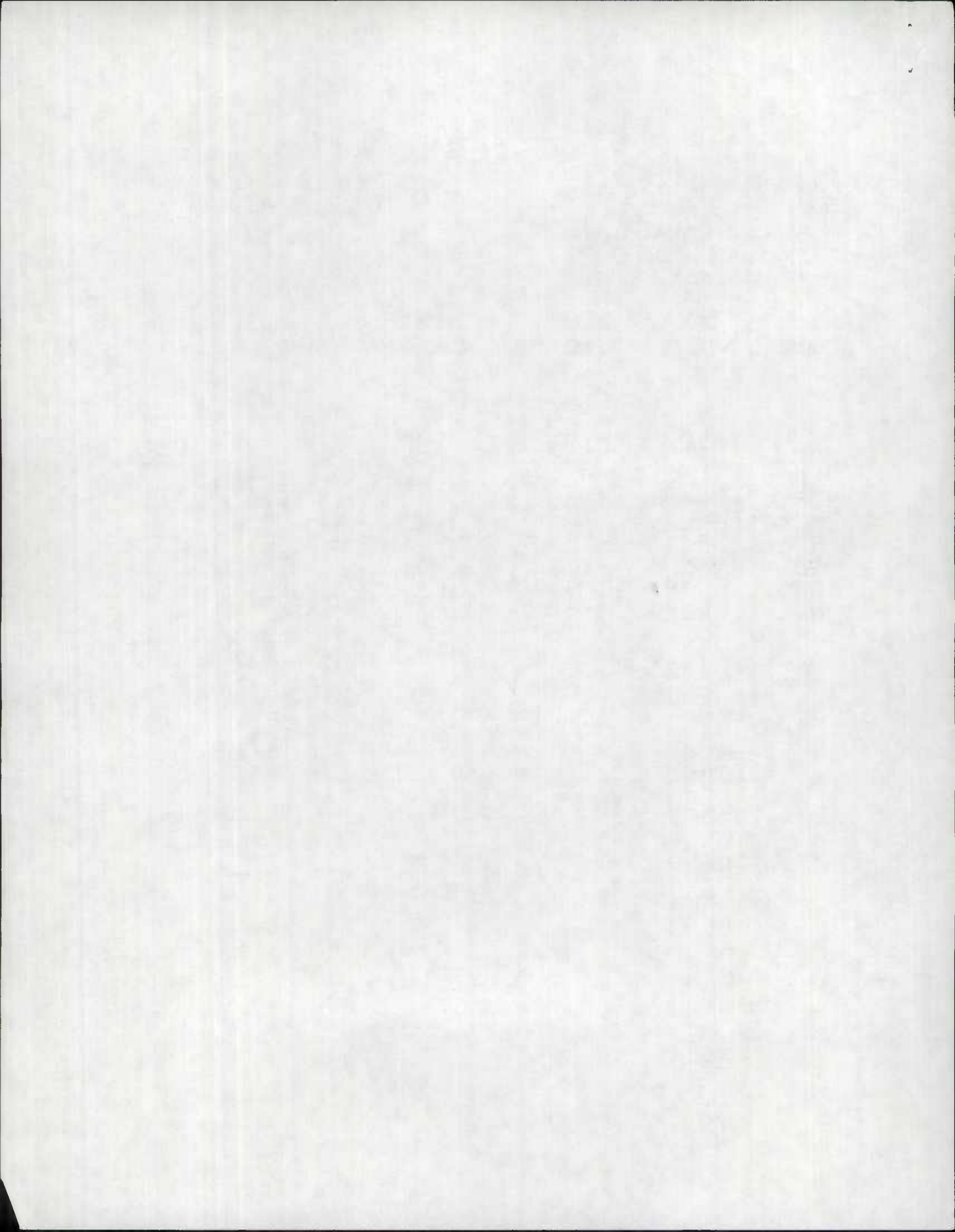
Route No: CO 0112
 Sample No: 4
 County: Carroll

Starting Mile Pt: 1.29
 Ending Mile Pt: 2.29

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
0	910	100	0	
R 910	1655	99.8	2.0	
L 1655	2019	99.9	1.0	
R 2019	2280	99.85	1.6	
2280	2154	8		
2280	2280 → 3530	100	0	
L 3530	3763	99.65	4.0	
3763	4676	100	0	
L 4676	4814	99.7	2.8	
4814	5275	100	0	

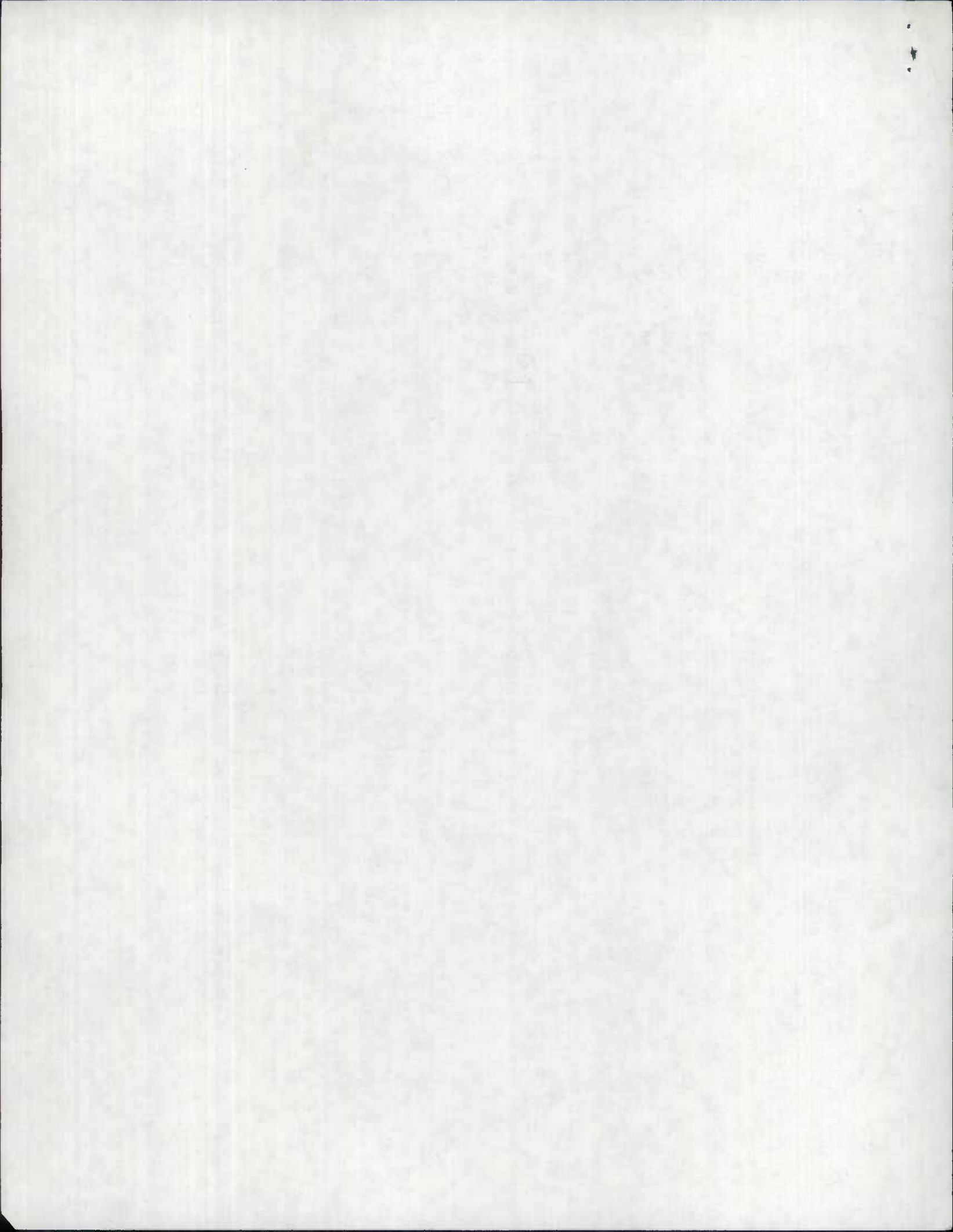
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-1.4	_____	_____
c.	1.5-2.4	_____	_____
d.	2.5-3.4	_____	_____
e.	3.5-4.4	_____	_____
f.	4.5-5.4	_____	_____
g.	5.5-6.9	_____	_____
h.	7.0-8.4	_____	_____
i.	8.5-10.9	_____	_____
j.	11.0-13.9	_____	_____
k.	14.0-19.4	_____	_____
l.	19.5-27.9	_____	_____
m.	28+	_____	_____



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	388	0	
388	1655	+11.8	
1655	2454	0	
2454	3096	-7.8	
3096	3763	-5.4	
3763	4275	+6.4	
4275	4676	0.7	
4676	4754	-8.9	
4754	5275	+9.8	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0192
 Sample No: 5
 County: Carroll

Starting Mile Pt: 1.20
 Ending Mile Pt: 1.62
0.42

Horizontal Curve Section

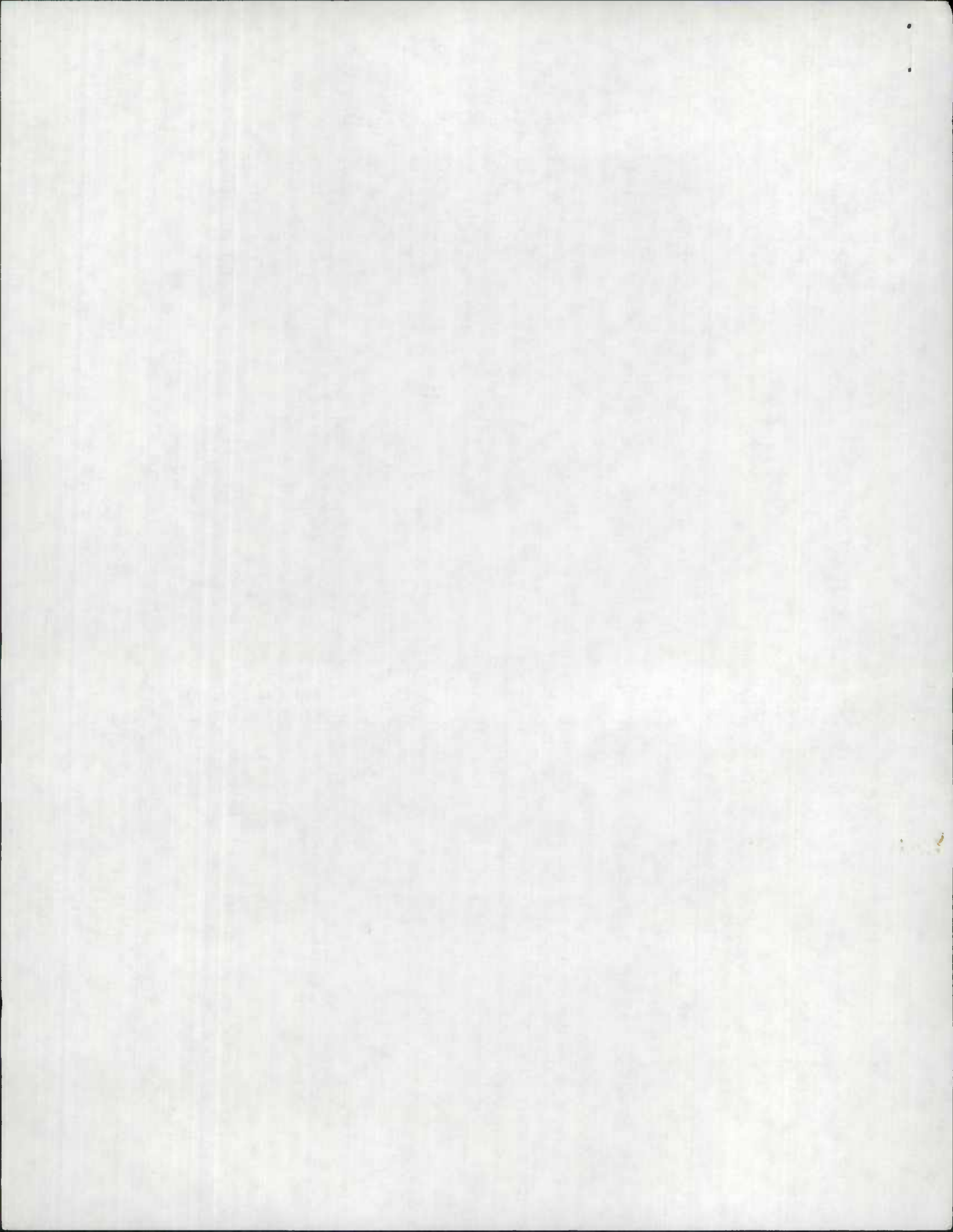
	<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
R	<u>0</u>	<u>154</u>	<u>100</u>	<u>0</u>	-----
	<u>154</u>	<u>415</u>	<u>99.9</u>	<u>0.9</u>	-----
	<u>415</u>	<u>916</u>	<u>100</u>	<u>0</u>	-----
L	<u>916</u>	<u>1180</u>	<u>99.65</u>	<u>3.3</u>	-----
	<u>1180</u>	<u>1920</u>	<u>100</u>	<u>0</u>	-----
R	<u>1920</u>	<u>2210</u>	<u>99.35</u>	<u>5.6</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	1180	+4.8	
1180	1920	0%	
1920	2210	0.8%	

	<u>Grade</u> <u>Classes</u> <u>by</u> <u>Gradient</u> <u>(Percent)</u>	<u>Number of</u> <u>Grades</u> <u>(Right-</u> <u>Justified)</u>	<u>Length of</u> <u>Grades in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0218
 Sample No: 6
 County: Carrut

Starting Mile Pt: 0.00
 Ending Mile Pt: 0.97

Horizontal Curve Section

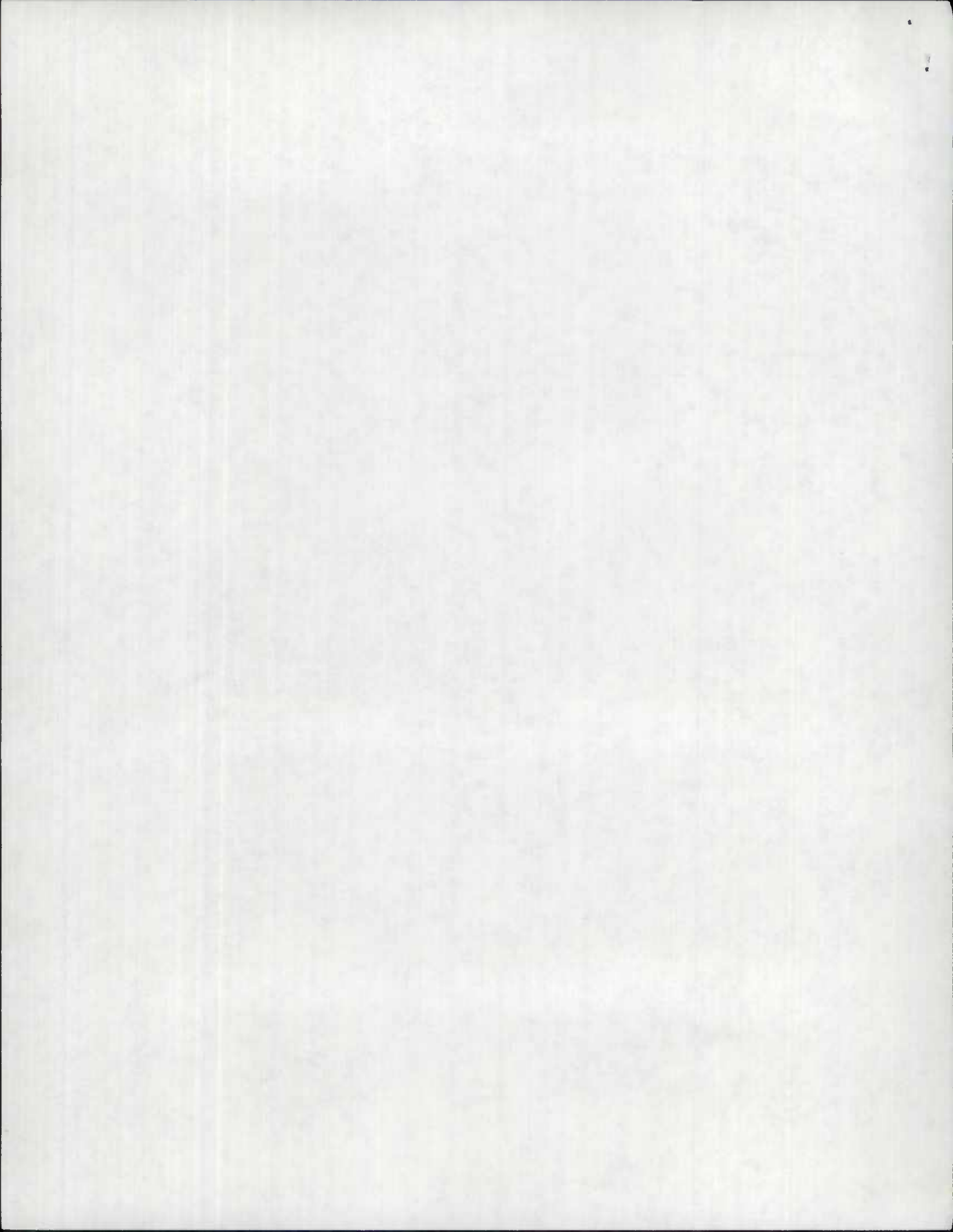
<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ordi. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>3465</u>	<u>100</u>	<u>0</u>	---
<u>R 346.5</u>	<u>4504</u>	<u>99.8</u>	<u>1.8</u>	---
<u>L 450.4</u>	<u>5140</u>	<u>99.7</u>	<u>2.7</u>	---
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	---	---
b.	0.5-1.4	---	---
c.	1.5-2.4	---	---
d.	2.5-3.4	---	---
e.	3.5-4.4	---	---
f.	4.5-5.4	---	---
g.	5.5-6.9	---	---
h.	7.0-8.4	---	---
i.	8.5-10.9	---	---
j.	11.0-13.9	---	---
k.	14.0-19.4	---	---
l.	19.5-27.9	---	---
m.	23+	---	---

Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	1140	+ 1.4	-----
# 1140	5140	- 3.0	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0247
 Sample No: 7
 County: Carroll

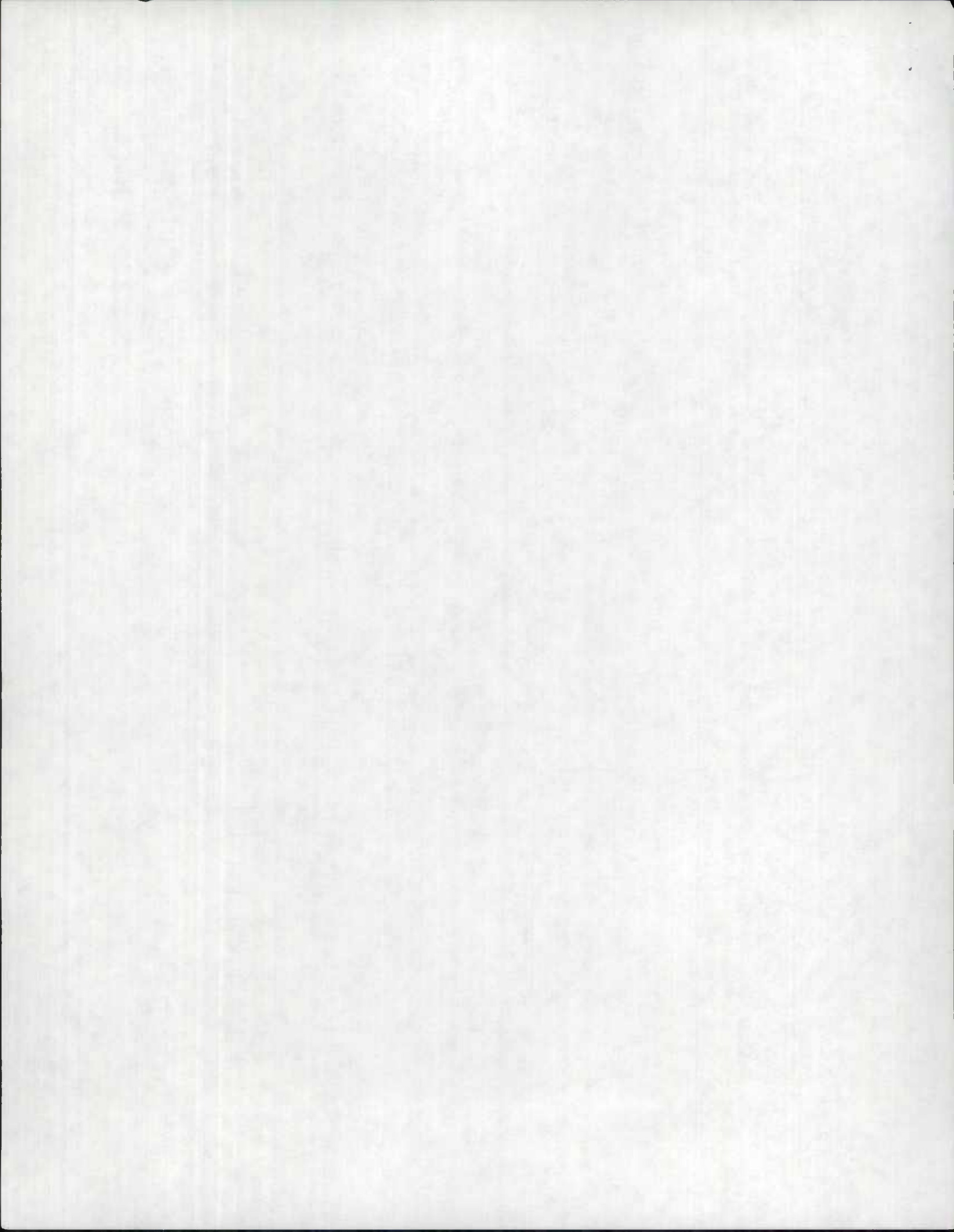
Starting Mile Pt: 3.26
 Ending Mile Pt: 4.56

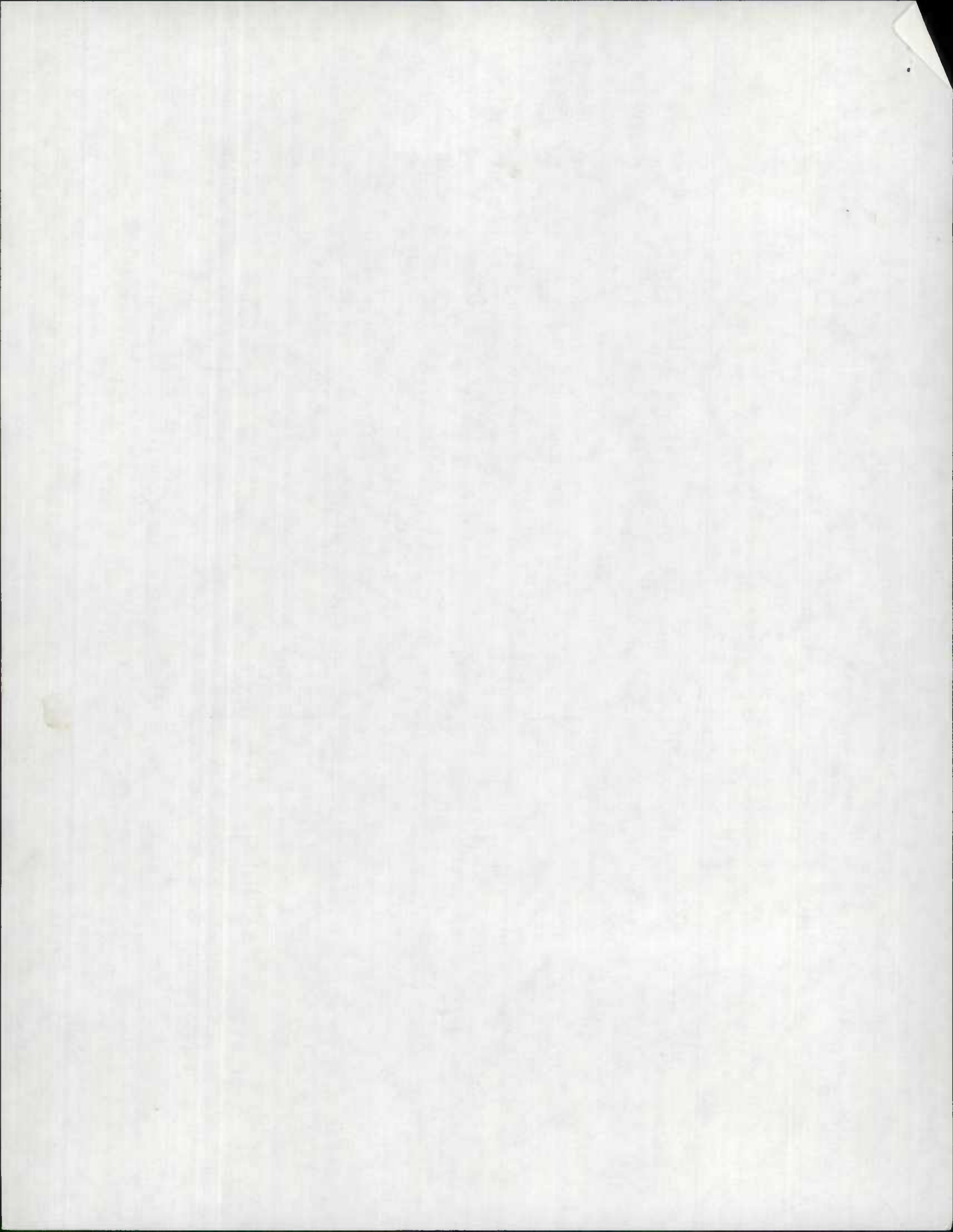
(0.70)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord1. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>3123</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>3123</u>	<u>3439</u>	<u>99.85</u>	<u>2.0</u>	<u>-----</u>
<u>3439</u>	<u>3710</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>

	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>-----</u>	<u>-----</u>
b.	0.5-1.4	<u>-----</u>	<u>-----</u>
c.	1.5-2.4	<u>-----</u>	<u>-----</u>
d.	2.5-3.4	<u>-----</u>	<u>-----</u>
e.	3.5-4.4	<u>-----</u>	<u>-----</u>
f.	4.5-5.4	<u>-----</u>	<u>-----</u>
g.	5.5-6.9	<u>-----</u>	<u>-----</u>
h.	7.0-8.4	<u>-----</u>	<u>-----</u>
i.	8.5-10.9	<u>-----</u>	<u>-----</u>
j.	11.0-13.9	<u>-----</u>	<u>-----</u>
k.	14.0-19.4	<u>-----</u>	<u>-----</u>
l.	19.5-27.9	<u>-----</u>	<u>-----</u>
m.	28+	<u>-----</u>	<u>-----</u>





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0257
 Sample No: 8
 County: Carroll

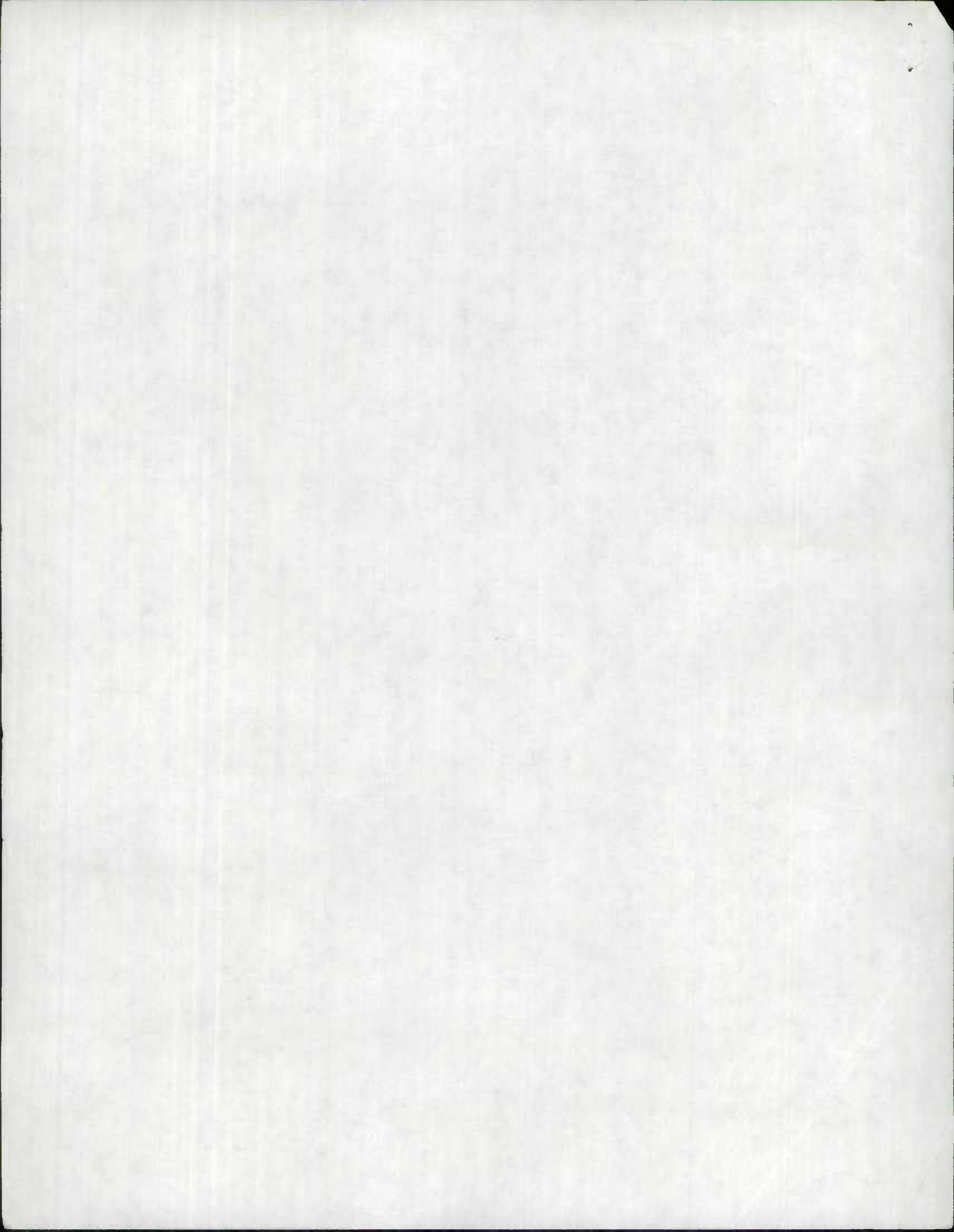
Starting Mile Pt: 0.12
 Ending Mile Pt: 1.20

1.14

Horizontal Curve Section

Start Pt. (in ft.)	End Pt. (in ft.)	Chord length (/100ft)	Central Ordi. Length (/100ft)	Length of Total Curve in(x.xxmile)
0	511	100	0	
L 511	839	99.6	3.1	
839	3903	100	0	
L 3903	4567	99.5	2.0	
R 4567	5060	99.8	2.0	
5060	6030	100	0	

Curve Classes by Degree of Curvature	Number of Curves (Right- Justified)	Length of Curves in Class (Implied Decimal) (xx.xxx miles)
a. 0.0-0.4	---	---
b. 0.5-1.4	---	---
c. 1.5-2.4	---	---
d. 2.5-3.4	---	---
e. 3.5-4.4	---	---
f. 4.5-5.4	---	---
g. 5.5-6.9	---	---
h. 7.0-8.4	---	---
i. 8.5-10.9	---	---
j. 11.0-13.9	---	---
k. 14.0-19.4	---	---
l. 19.5-27.9	---	---
m. 28+	---	---



Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	569	-9.2	
669	1323	+5.0	
1323	2074	-1.2	
2074	2463	+0.6	
2463	2992	-4.0	
2992	3486	+0.6	
3486	4567	-5.0	
4567	4910	+0.6	
4910	5287	-3.0	
5287	6030	+4.2	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0257
Sample No: 9
County: Carroll

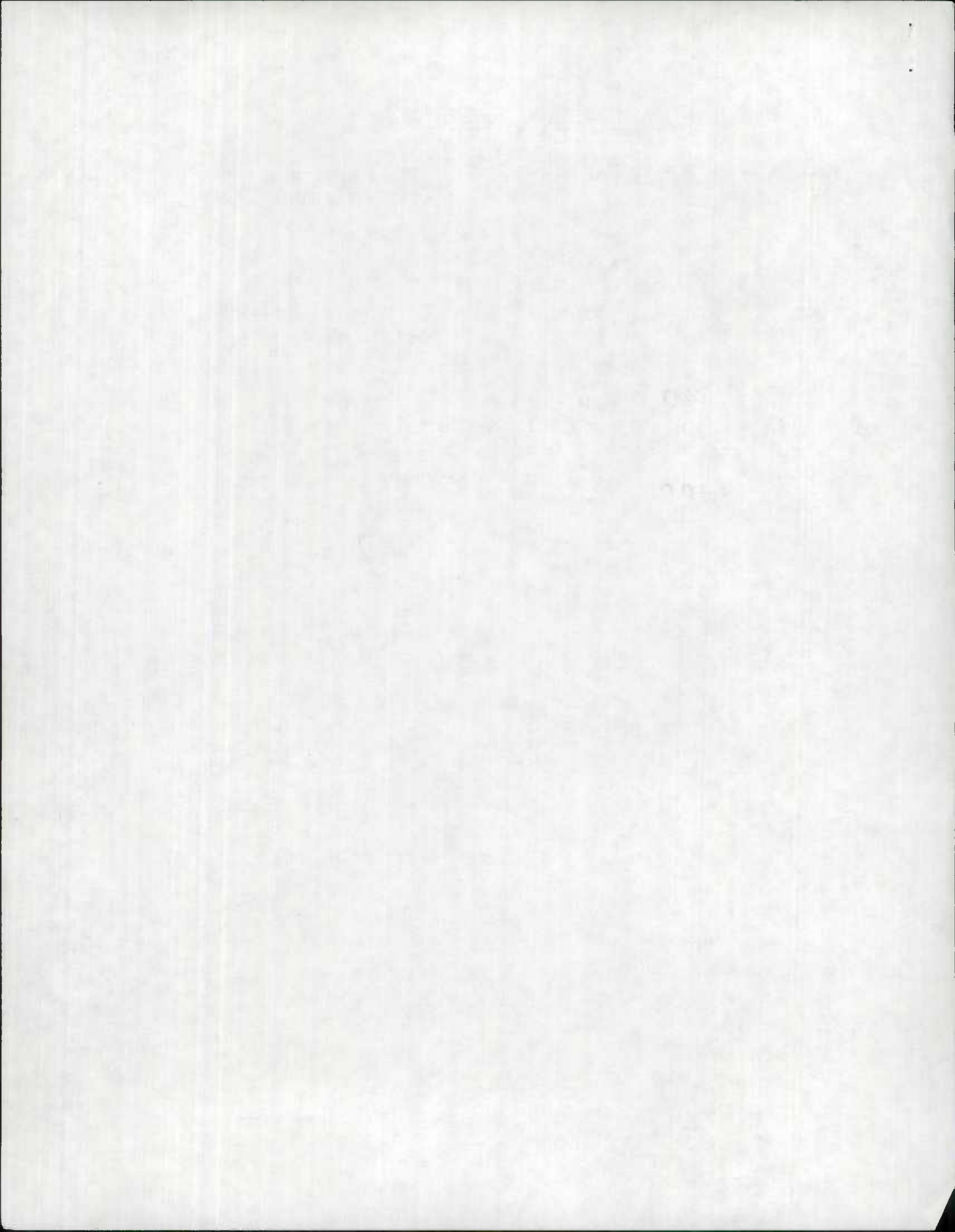
Starting Mile Pt: 1.26
Ending Mile Pt: 2.10

0.84

Horizontal Curve Section

	<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
R	<u>0</u>	<u>840</u>	<u>100</u>	<u>0</u>	-----
	<u>840</u>	<u>1330</u>	<u>999.9</u>	<u>1.7</u>	-----
	<u>1230</u>	<u>2682</u>	<u>100</u>	<u>0</u>	-----
L	<u>2680</u>	<u>3386</u>	<u>99.9</u>	<u>1.8</u>	-----
	<u>3886</u>	<u>4400</u>	<u>100</u>	<u>0</u>	-----
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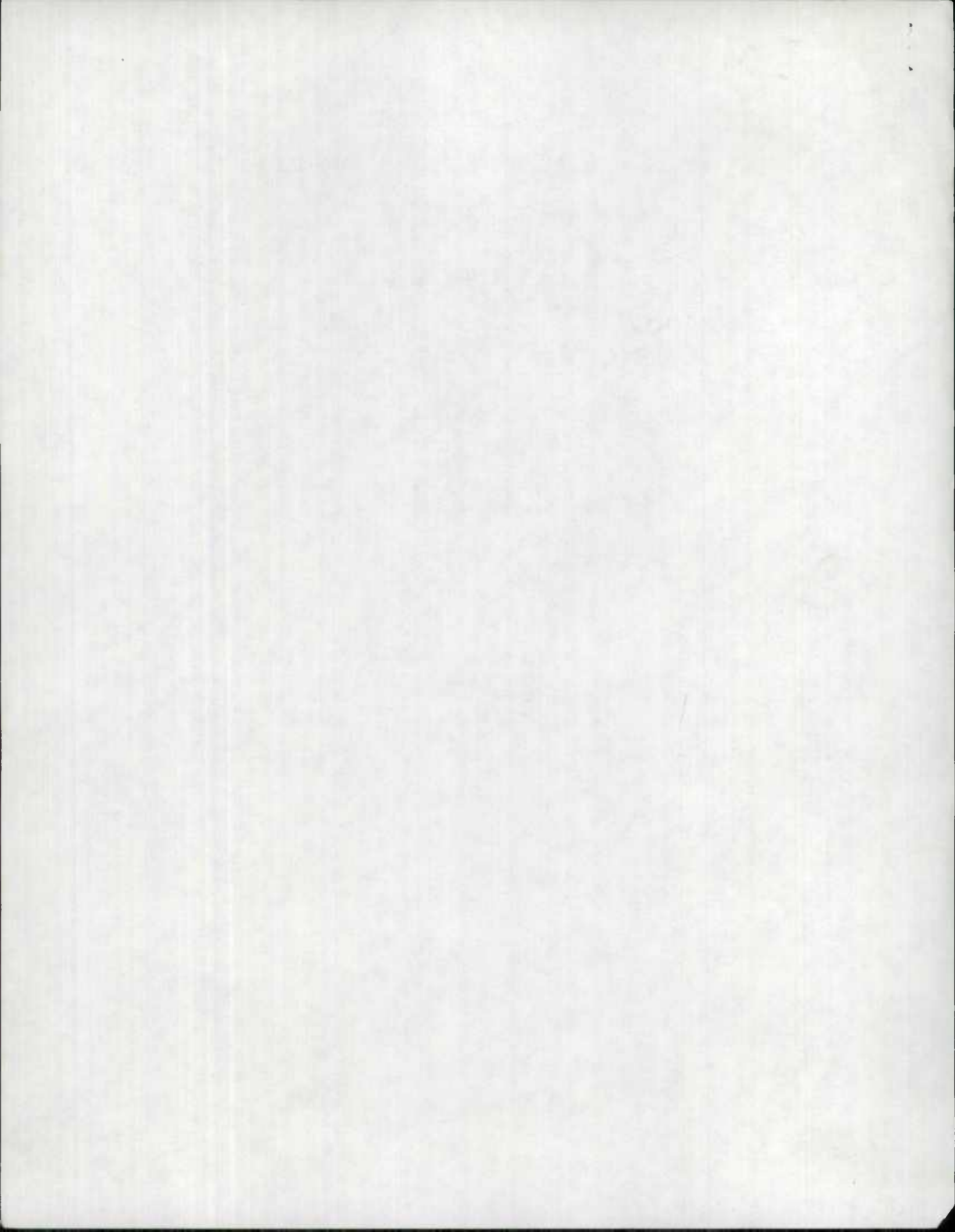
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

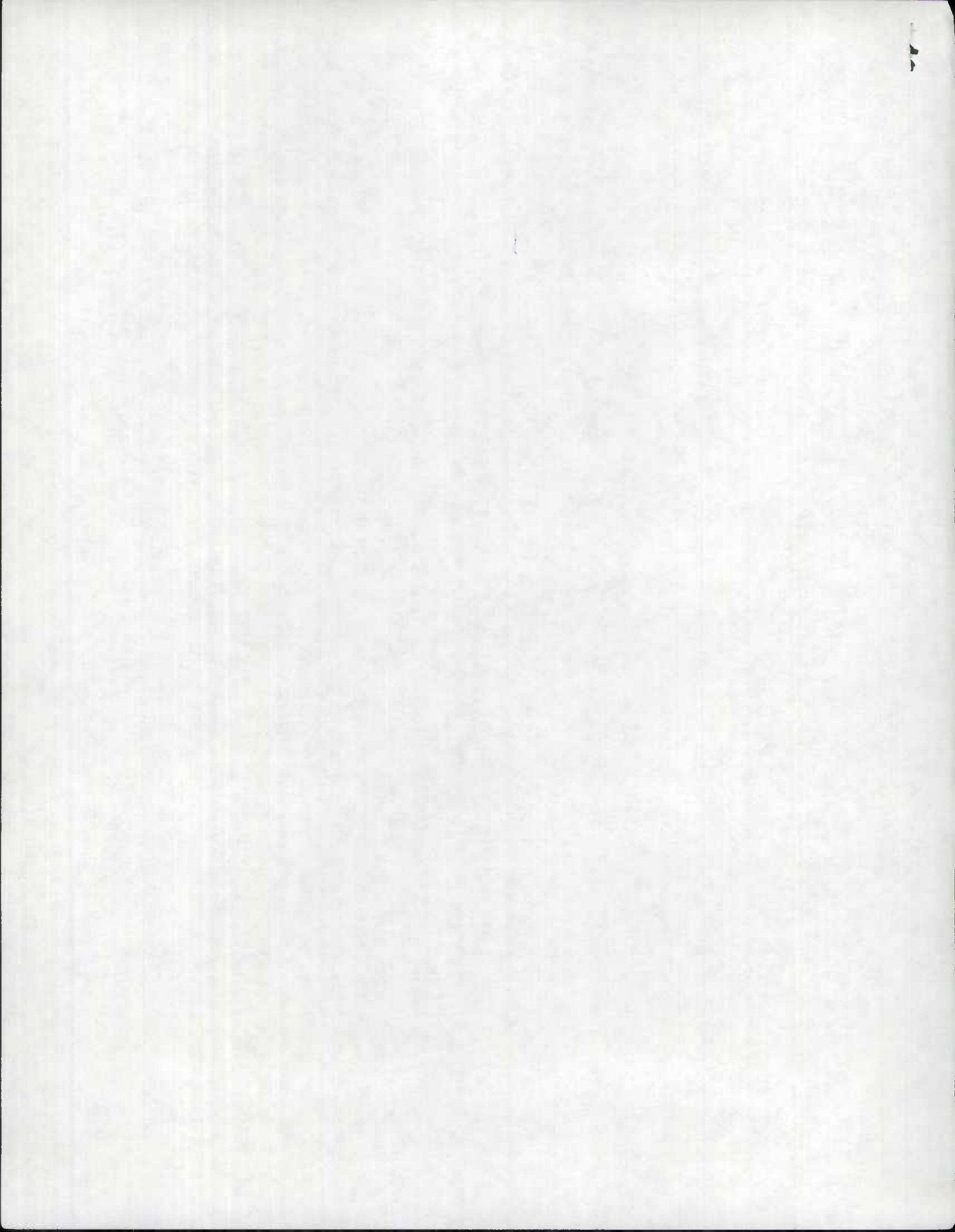


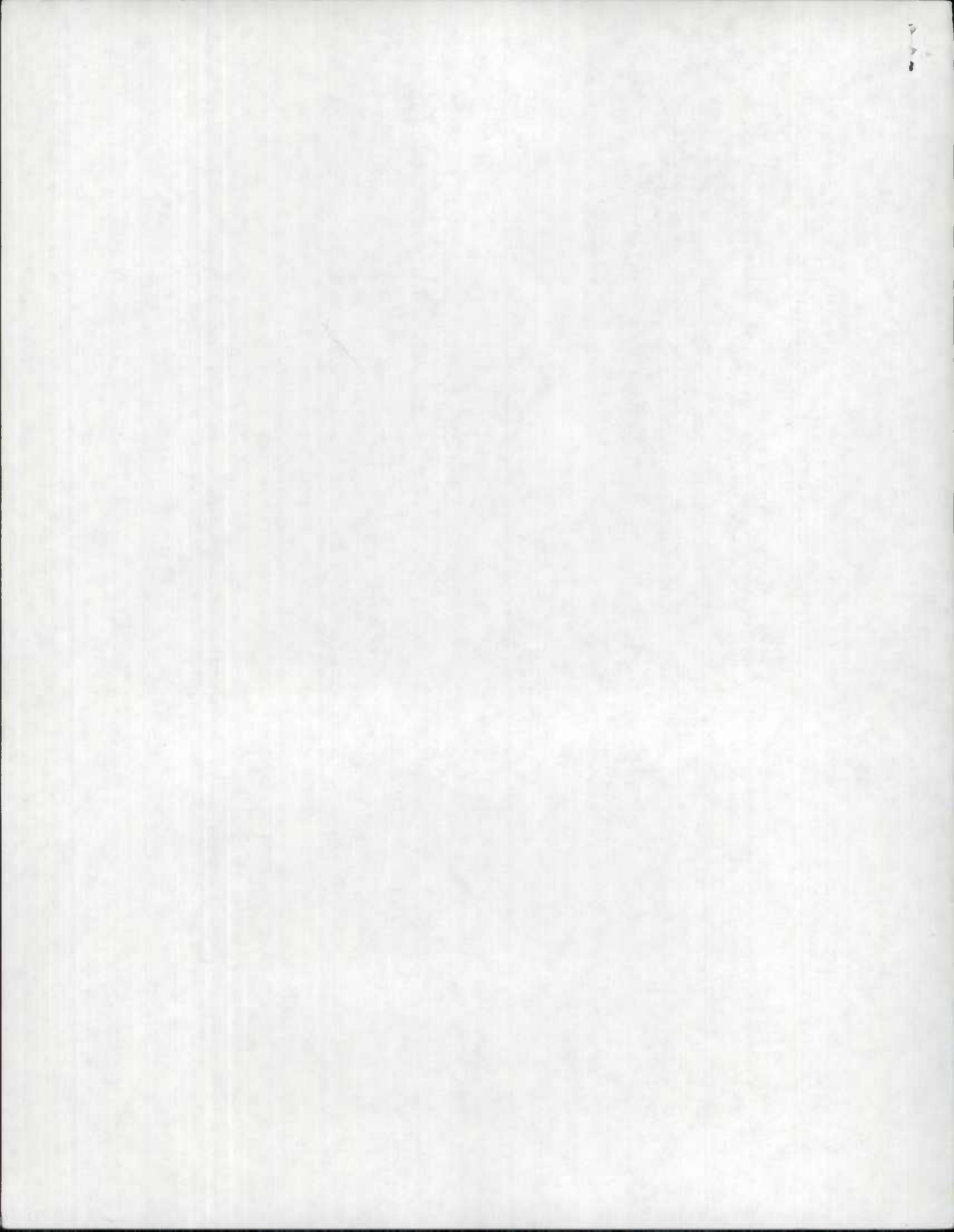
Vertical Curve Section

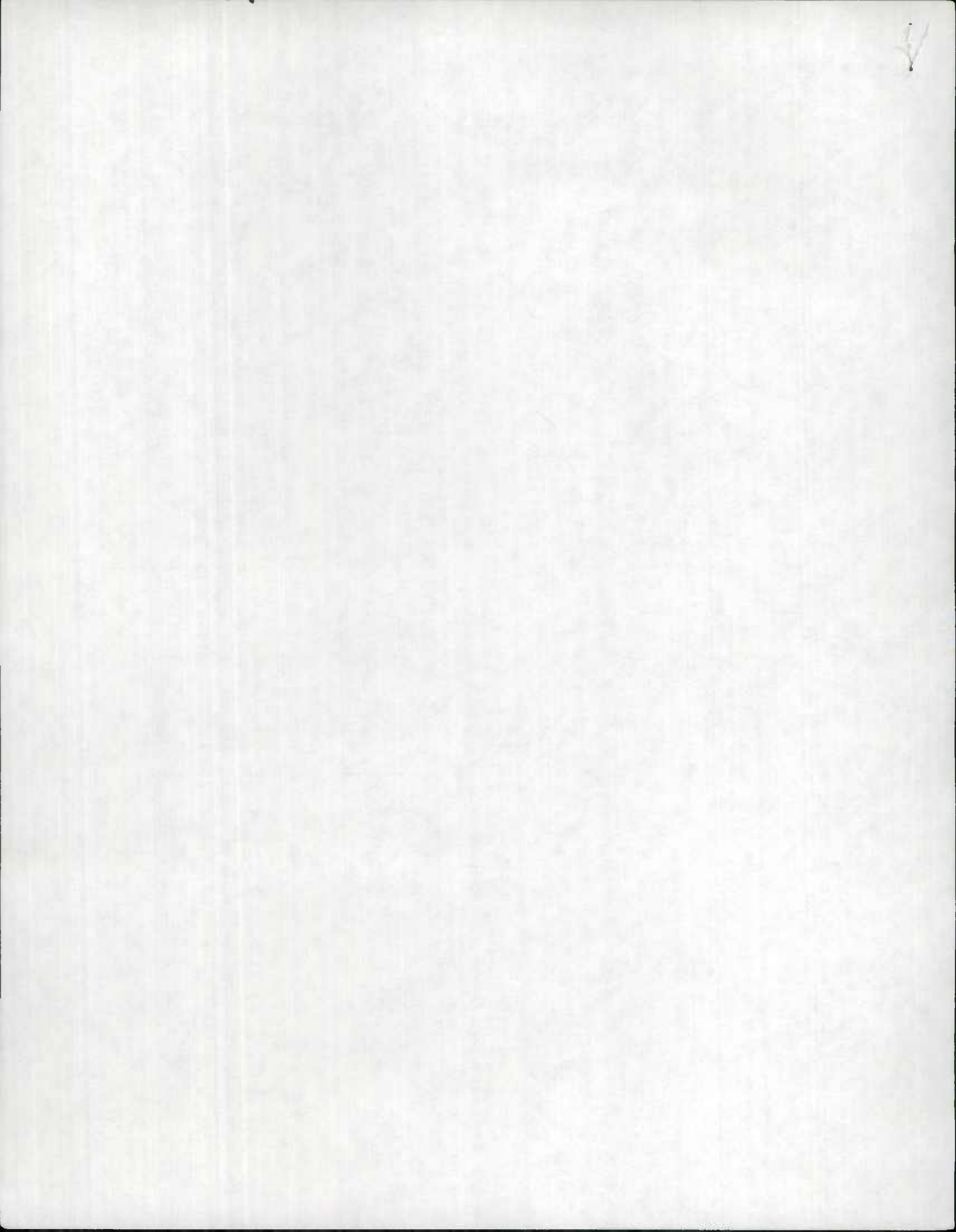
<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	381	-5.2	-----
381	1101	+1.0	-----
1101	2412	-3.4	-----
2412	3409	+0.6	-----
3484	4400	-2.0	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----









Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	498	-8.4%	-----
498	927	0%	-----
927	1129	+2.2%	-----
1129	2230	-8.4%	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

1.22

Route No: CO 0289
 Sample No: 12
 County: Cassell

Starting Mile Pt: ~~0.67~~
 Ending Mile Pt: 1.89

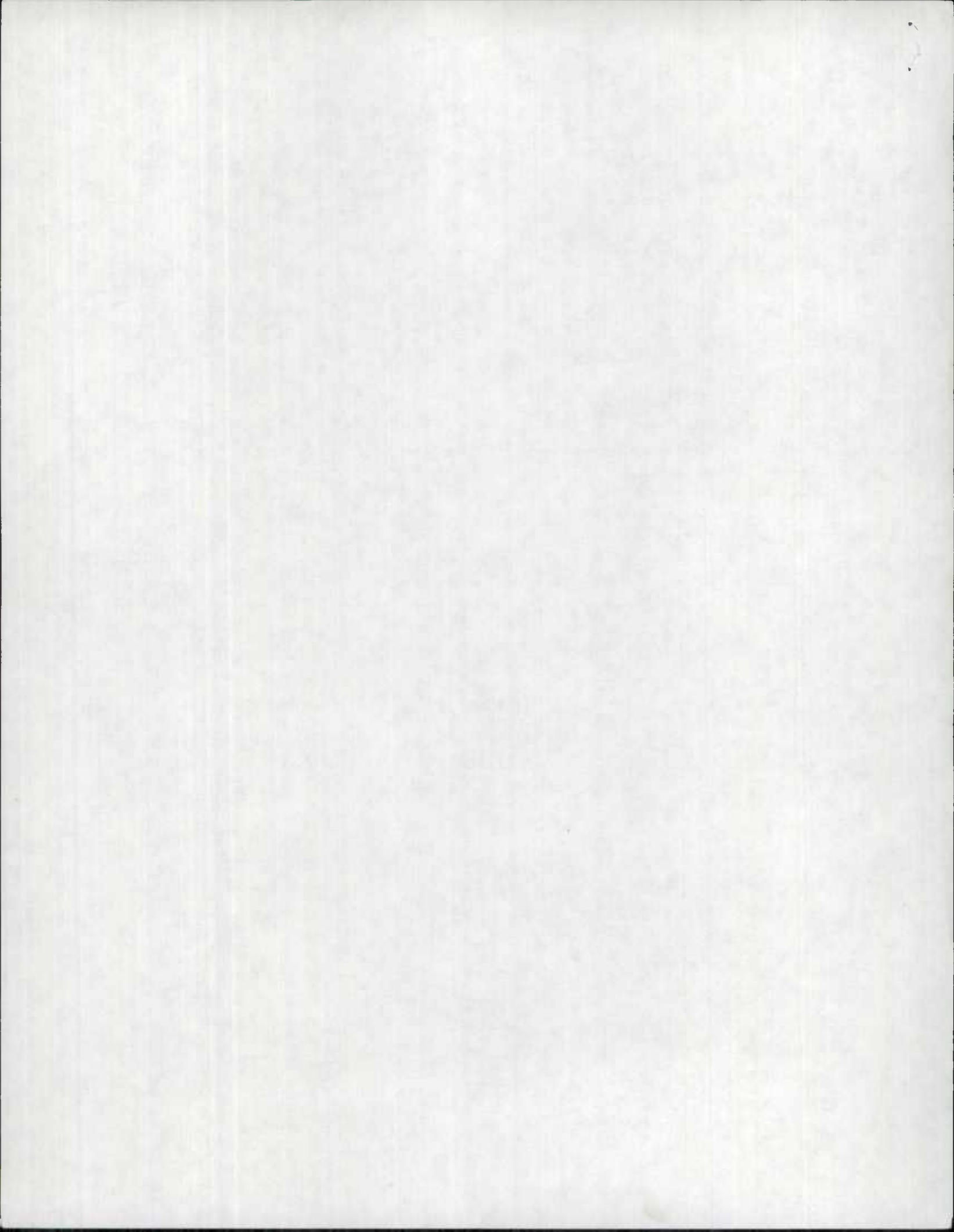
0.67

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> length (/100ft)	<u>Central</u> Ord. Length (/100ft)	<u>Length of Total</u> Curve in(x.xxmile)
<u>0</u>	230 <u>754</u>	<u>99.8</u>	<u>2.3</u>	
<u>230</u>	<u>3528</u>			
<u>754</u>				



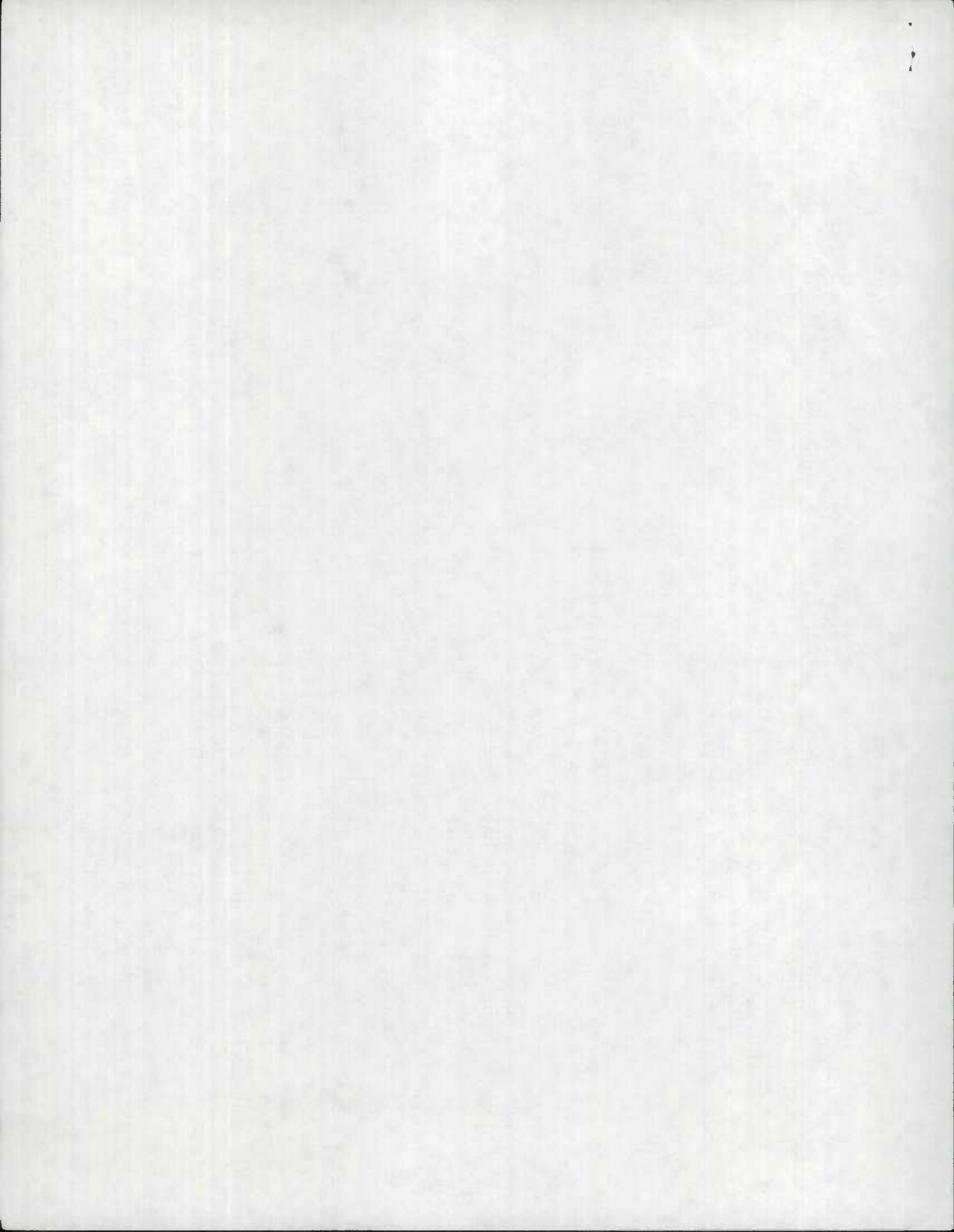
	<u>Curve</u> <u>Classes</u> by <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> (Right- Justified)	<u>Length</u> <u>of Curves</u> <u>in Class</u> (Implied Decimal) (xx.xxx miles)
a.	0.0-0.4	<u>2</u>	<u>0.57</u>
b.	0.5-1.4	---	---
c.	1.5-2.4	---	---
d.	2.5-3.4	---	---
e.	3.5-4.4	---	---
f.	4.5-5.4	---	---
g.	5.5-6.9	---	---
h.	7.0-8.4	---	---
i.	8.5-10.9	<u>1</u>	<u>0.10</u>
j.	11.0-13.9	---	---
k.	14.0-19.4	---	---
l.	19.5-27.9	---	---
m.	28+	---	---

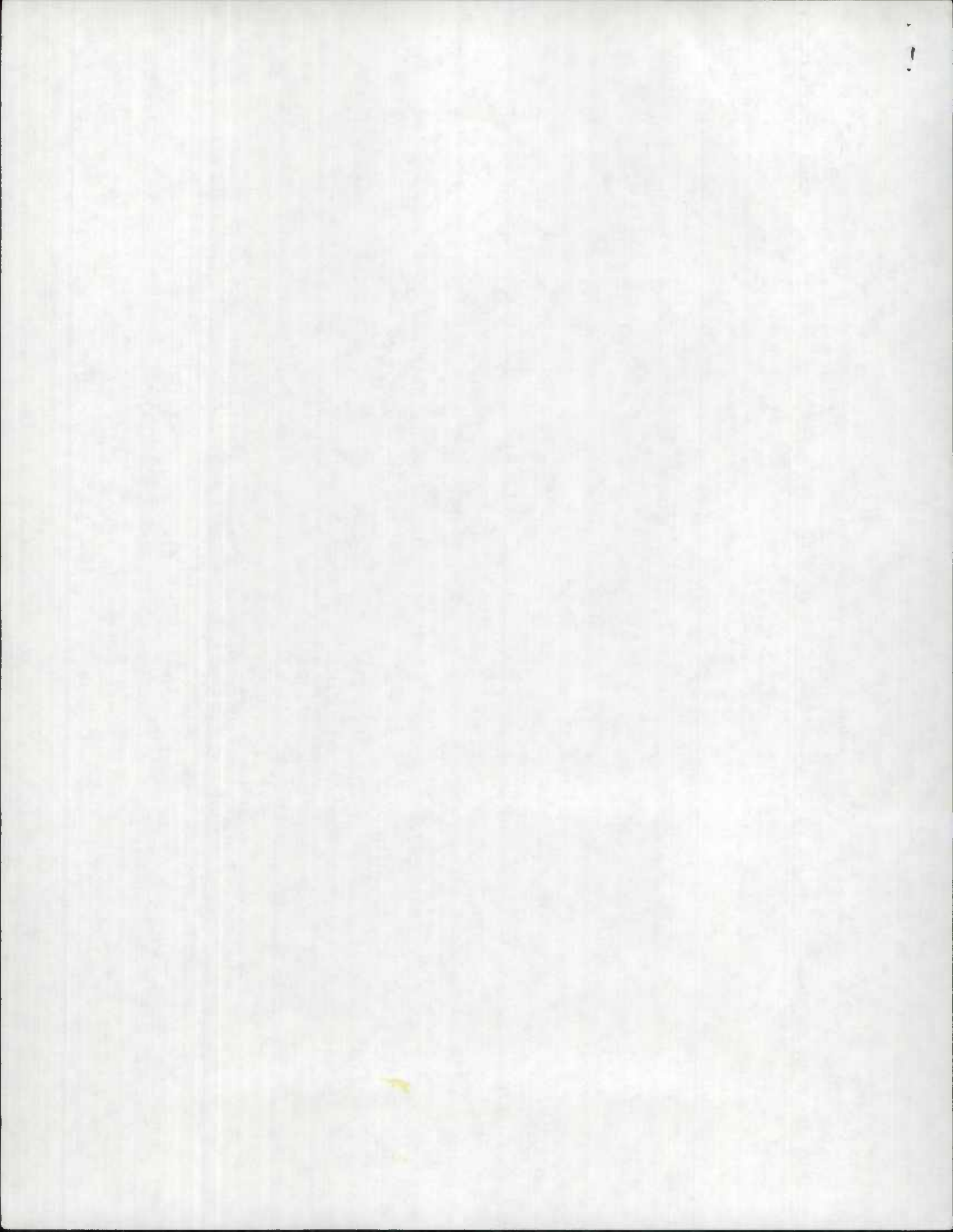


Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	1665	+ 6.0	-----
1665	2975	- 6.0	-----
2975	3528	+ 2.0	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	1	0.10
c.	2.5-4.4	-----	-----
d.	4.5-6.4	2	0.57
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: Cn 0289
 Sample No: 14
 County: Carroll

Starting Mile Pt: 2.08
 Ending Mile Pt: 2.38

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>115</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>115</u>	<u>355</u>	<u>99.7</u>	<u>3.0</u>	<u>-----</u>
<u>355</u>	<u>548</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>548</u>	<u>838</u>	<u>99.75</u>	<u>2.8</u>	<u>-----</u>
<u>838</u>	<u>1593</u>	<u>100</u>	<u>-----</u>	<u>-----</u>
<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>
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<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>

✓
R

	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>3</u>	<u>0.20</u>
b.	0.5-1.4	<u>-----</u>	<u>-----</u>
c.	1.5-2.4	<u>-----</u>	<u>-----</u>
d.	2.5-3.4	<u>-----</u>	<u>-----</u>
e.	3.5-4.4	<u>-----</u>	<u>-----</u>
f.	4.5-5.4	<u>-----</u>	<u>-----</u>
g.	5.5-6.9	<u>-----</u>	<u>-----</u>
h.	7.0-8.4	<u>-----</u>	<u>-----</u>
i.	8.5-10.9	<u>-----</u>	<u>-----</u>
j.	11.0-13.9	<u>2</u>	<u>0.10</u>
k.	14.0-19.4	<u>-----</u>	<u>-----</u>
l.	19.5-27.9	<u>-----</u>	<u>-----</u>
m.	28+	<u>-----</u>	<u>-----</u>

Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	548	-2.4%	
548	238	0	
238	1593	-3.8%	

	<u>Grade</u> <u>Classes</u> <u>by</u> <u>Gradient</u> <u>(Percent)</u>	<u>Number of</u> <u>Grades</u> <u>(Right-</u> <u>Justified)</u>	<u>Length of</u> <u>Grades in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.06</u>
b.	0.5-2.4	<u>1</u>	<u>0.10</u>
c.	2.5-4.4	<u>1</u>	<u>0.14</u>
d.	4.5-6.4	---	---
e.	6.5-8.4	---	---
f.	8.5-	---	---

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: 0 0289
 Sample No: 15
 County: Carroll

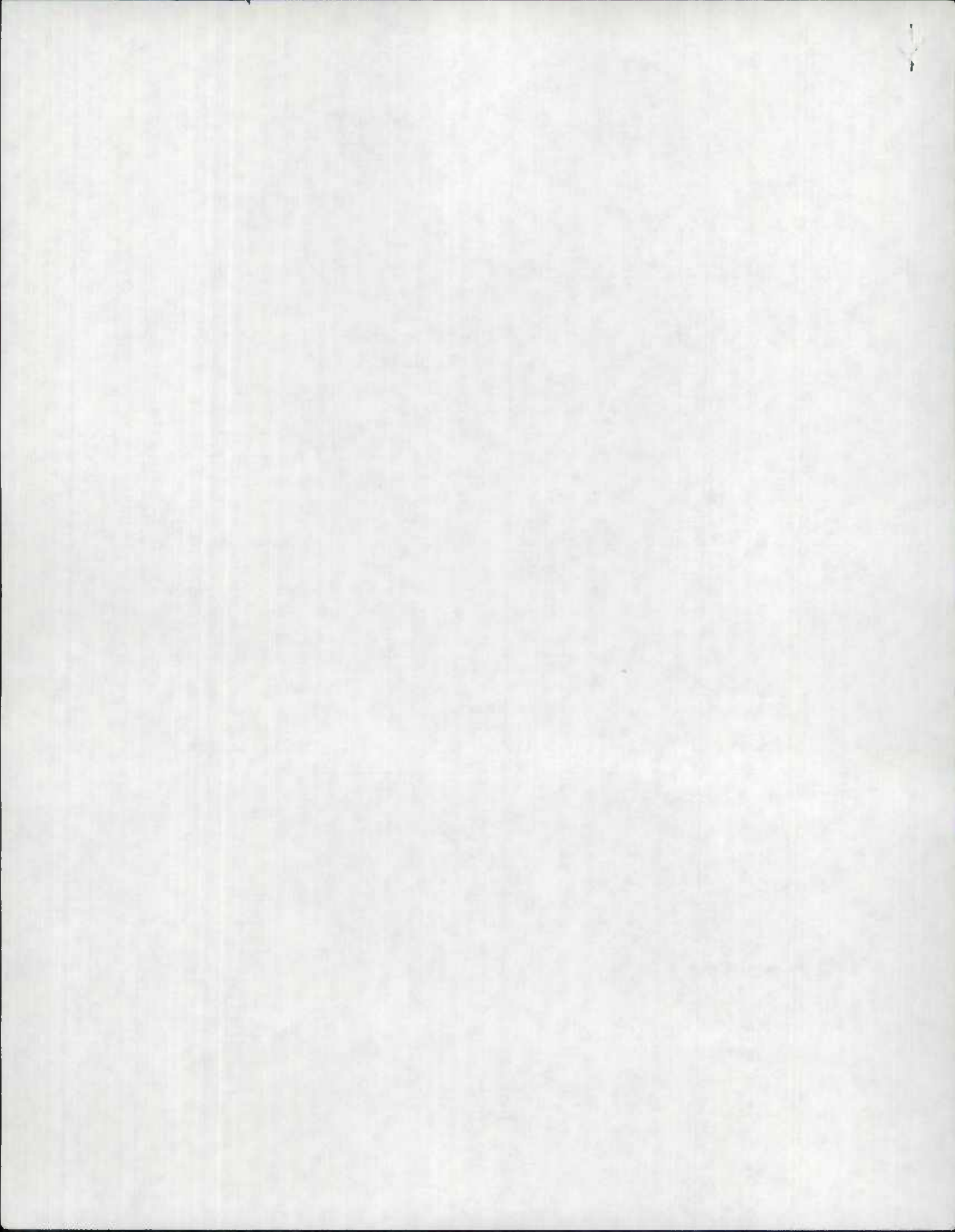
Starting Mile Pt: 2.38
 Ending Mile Pt: 2.41

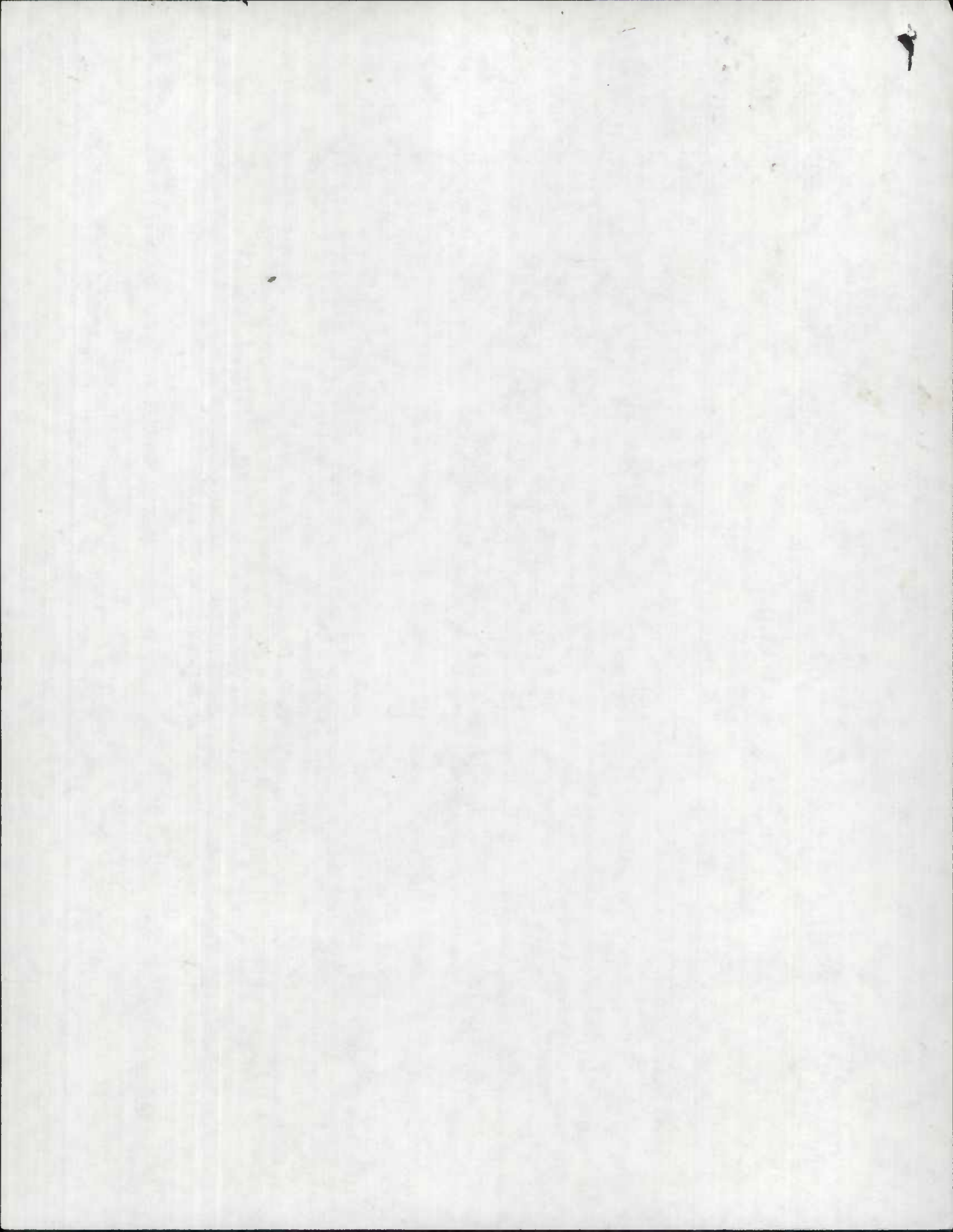
0.03

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>150</u>	<u>100</u>	<u>0</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.03</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: 00289
 Sample No: 16
 County: Cassell

Starting Mile Pt: 2.41
 Ending Mile Pt: 3.10

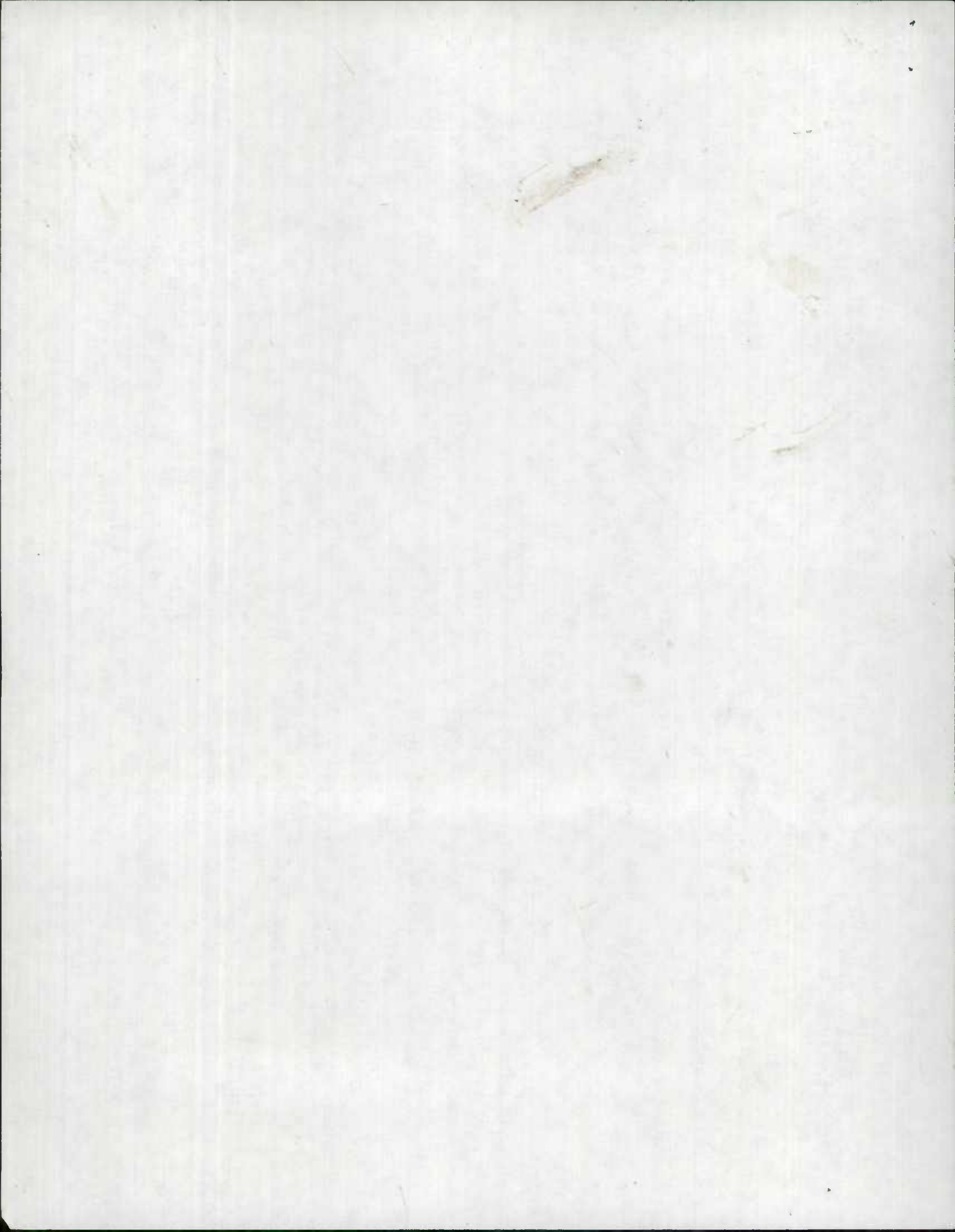
0.69

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>297</u>	<u>100</u>	<u>0</u>	-----
<u>397</u>	<u>100</u> <u>2071</u>	<u>99.9</u>	<u>0.9</u>	-----
<u>2071</u>	<u>3641</u>	<u>100</u>	<u>0</u>	-----
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<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
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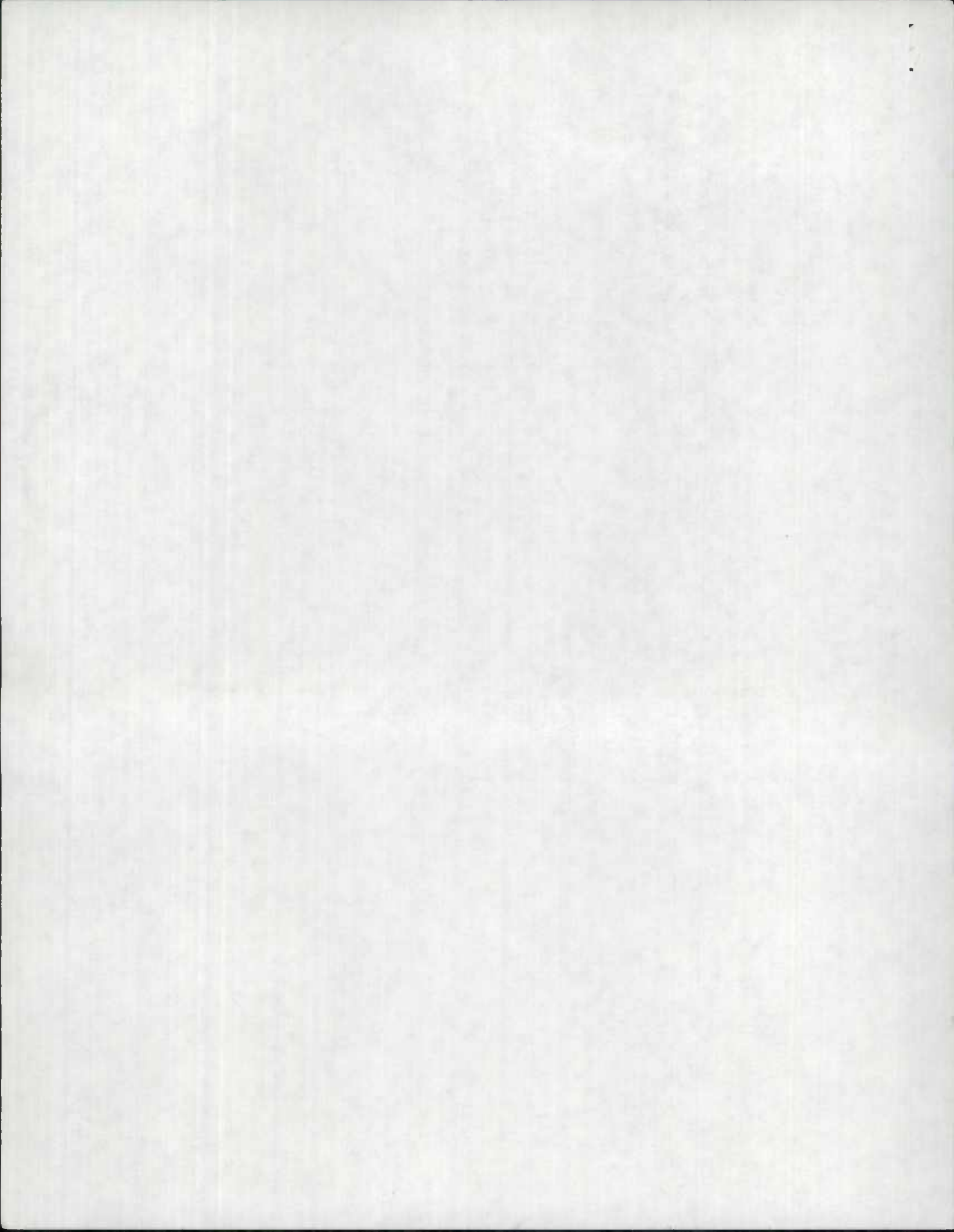
a.	0.0-0.4	-----	-----
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	397	-2.4	
397	1069	+6.6	
1069	1675	0.7	
1675	2833	-7.6%	
2833		0	

	<u>Grade</u> <u>Classes</u> <u>by</u> <u>Gradient</u> <u>(Percent)</u>	<u>Number of</u> <u>Grades</u> <u>(Right-</u> <u>Justified)</u>	<u>Length of</u> <u>Grades in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

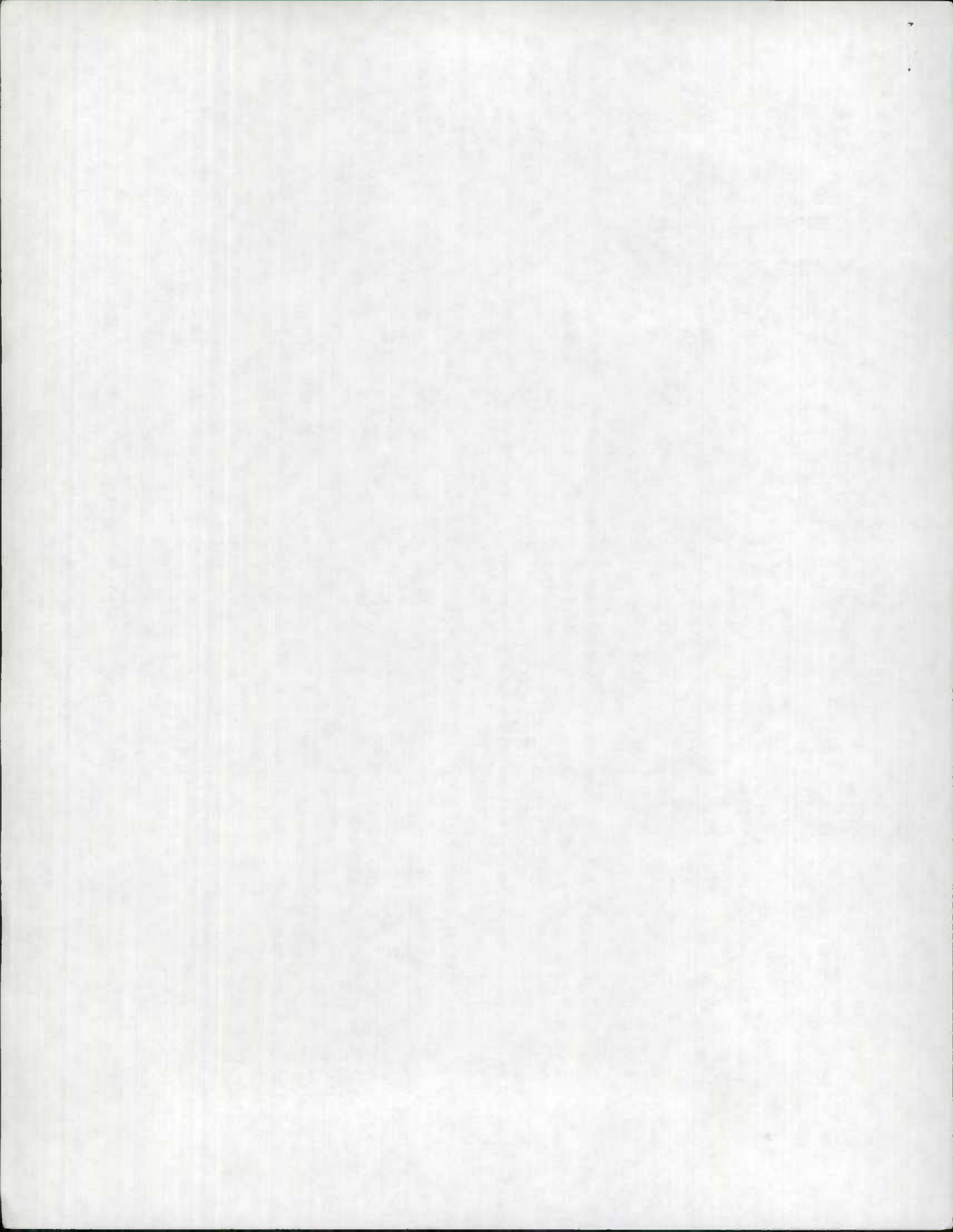
Route No: 0 ~~368~~ 367
 Sample No: 17
 County: Carroll

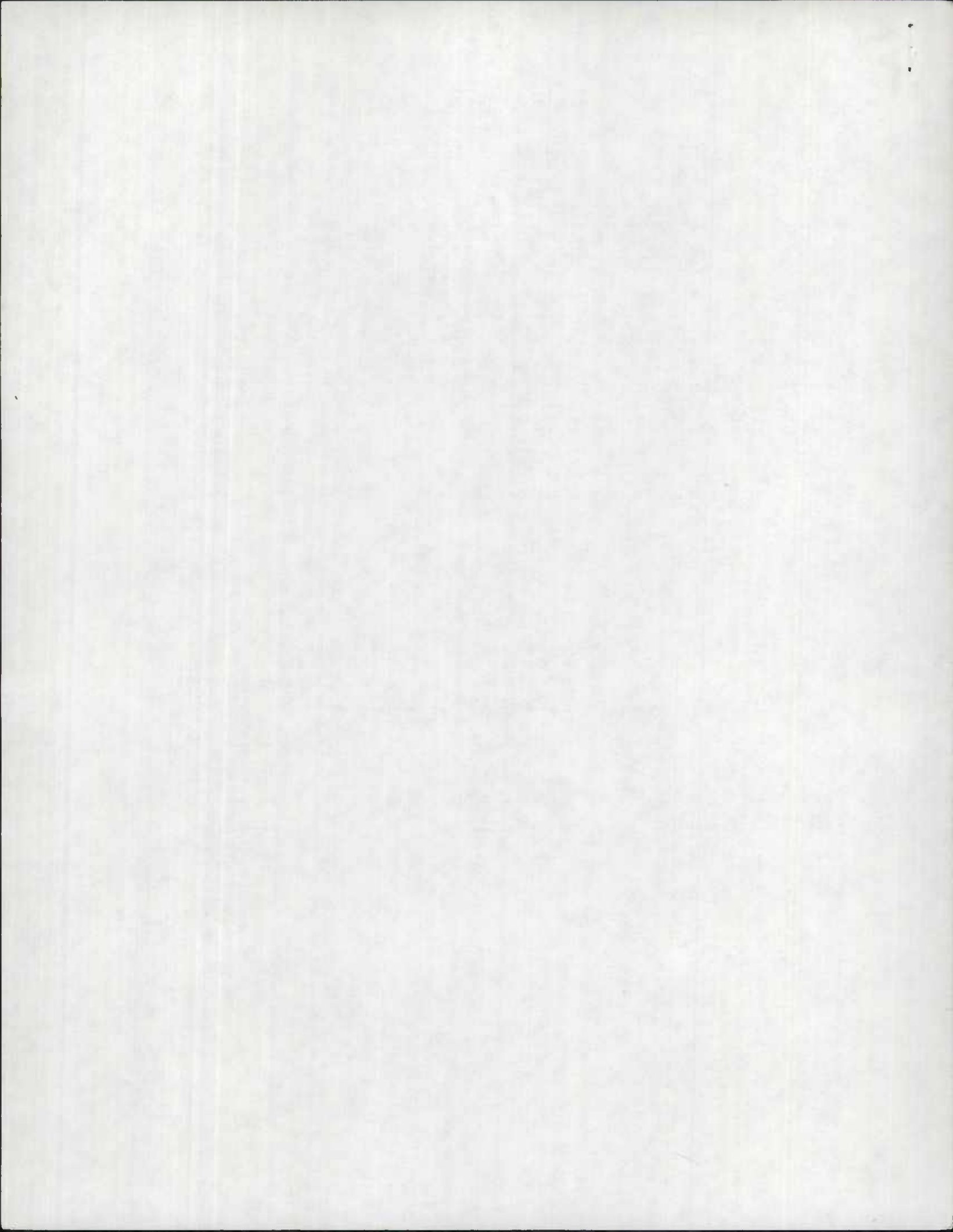
Starting Mile Pt: 0.32
 Ending Mile Pt: 0.48
0.16

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord1. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>860</u>	<u>100</u>	<u>6</u>	
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.16</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: Co 0368
 Sample No: 18
 County: Carroll

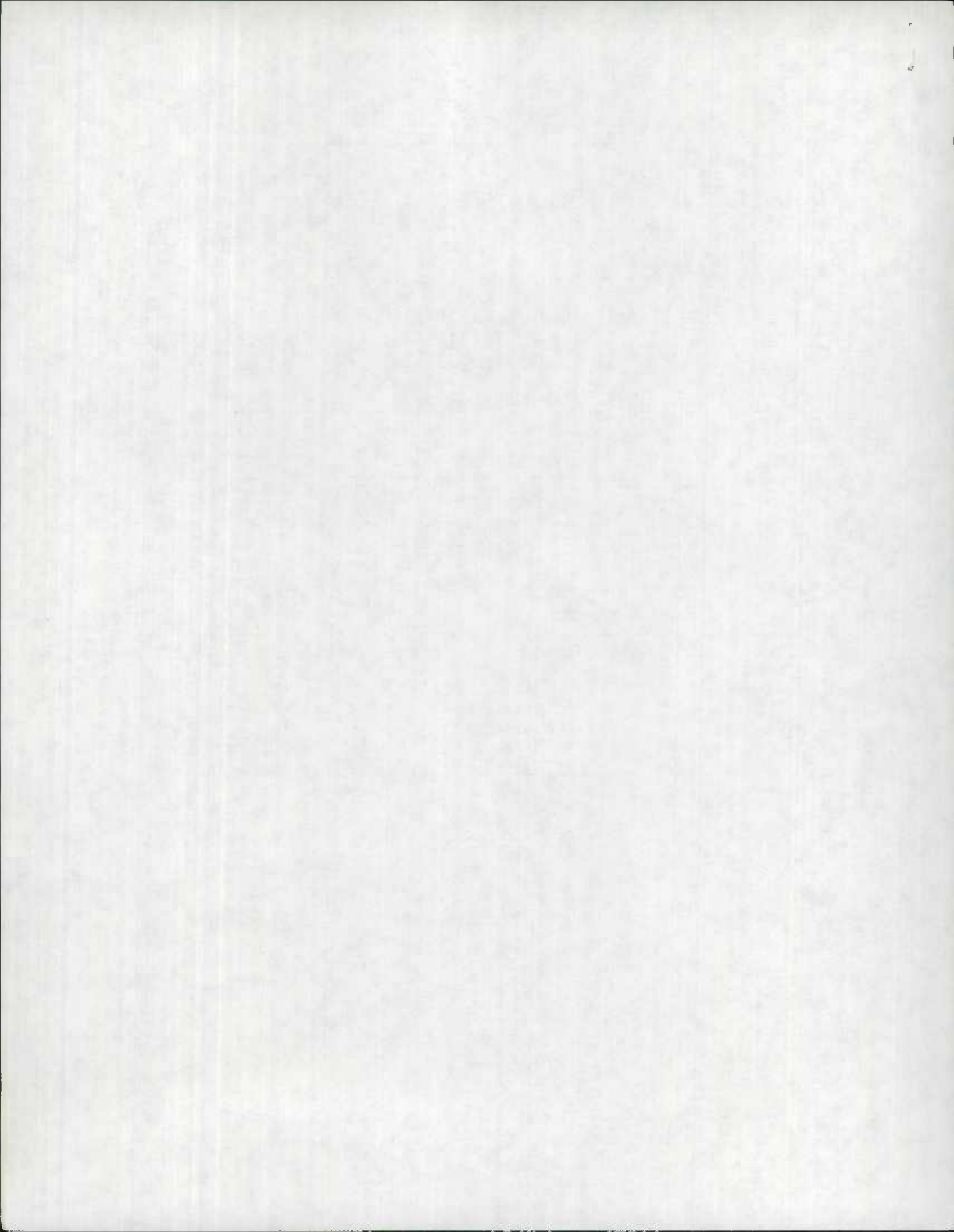
Starting Mile Pt: 0.00
 Ending Mile Pt: 0.08

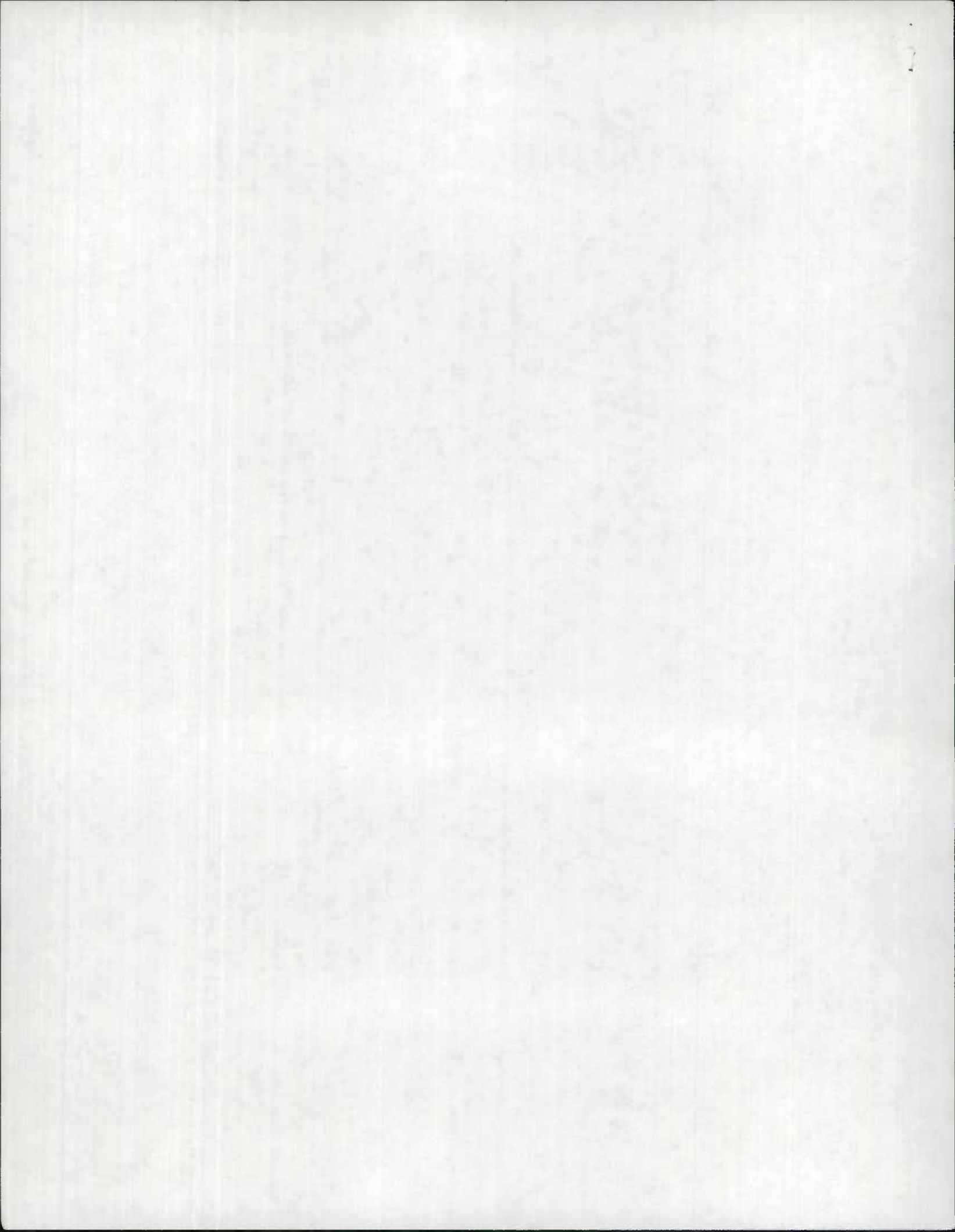
(0.08)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>425</u>	<u>425.100</u>	<u>0</u>	
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.08</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0368
 Sample No: 19
 County: Carroll

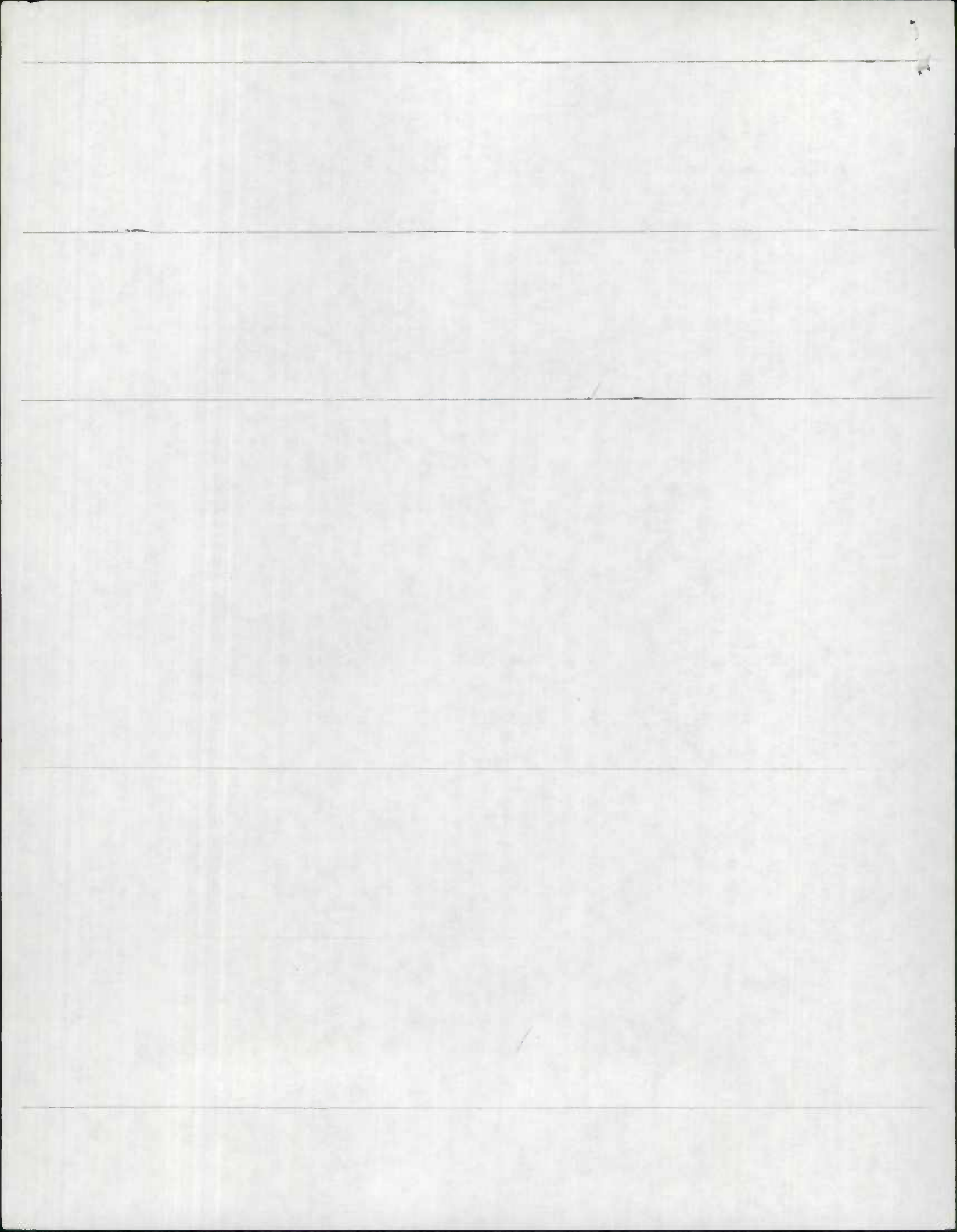
Starting Mile Pt: 0.09
 Ending Mile Pt: 0.20
0.11

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>590</u> 59	<u>100</u>	<u>0</u>	
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.11</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

[The page contains several horizontal lines, likely representing a table or a list of entries, but the text is illegible due to blurring and low resolution.]



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: 0523
 Sample No: 20
 County: Cassill

Starting Mile Pt: 0.40
 Ending Mile Pt: 1.20
(0.90)

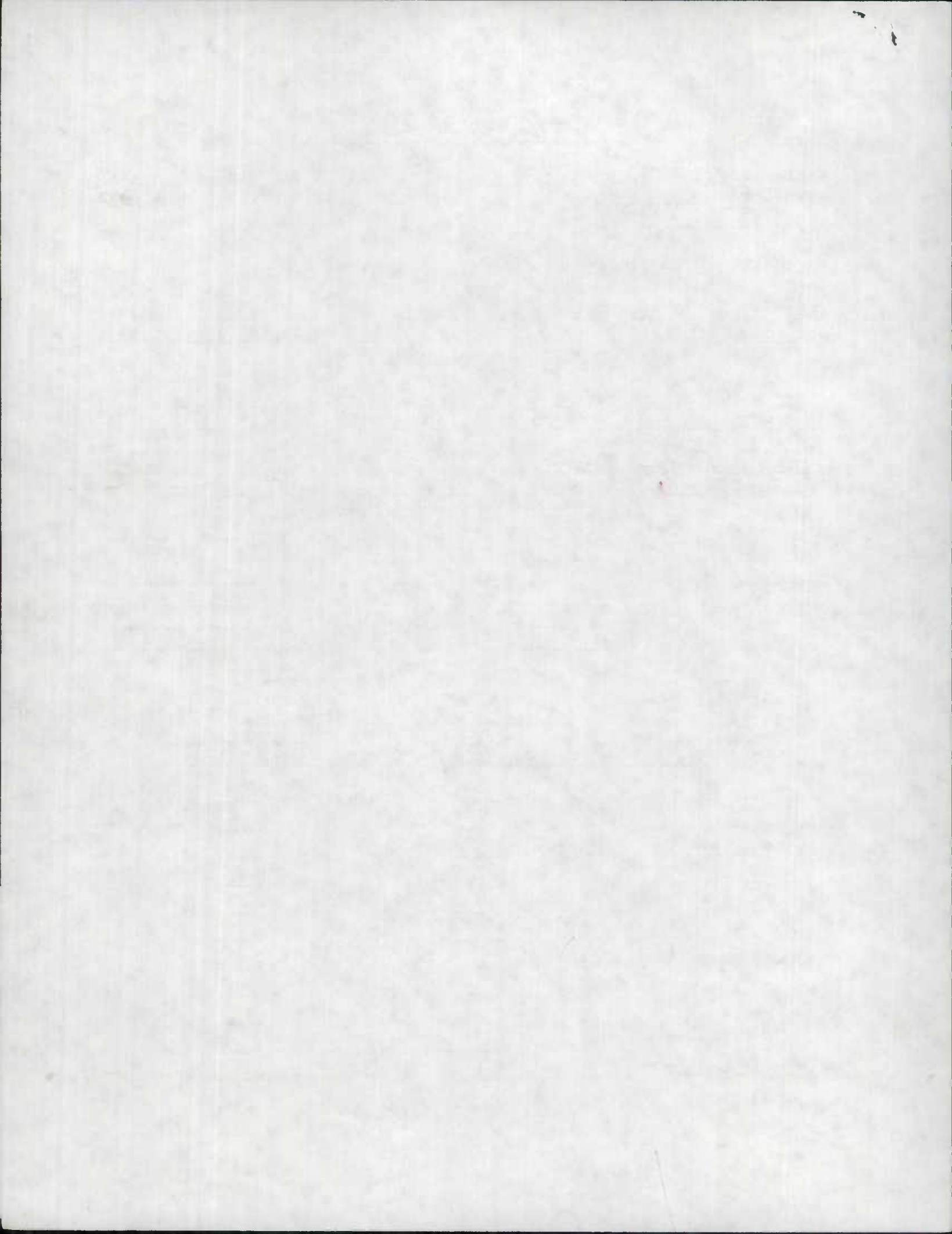
Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>673</u>	<u>100</u>	<u>0</u>	-----
L <u>673</u>	<u>939</u>	<u>99.6</u>	<u>3.4</u>	-----
<u>939</u>	1509 <u>4092</u>	<u>100</u>	<u>0</u>	-----
L <u>1509</u> <u>4092</u>	<u>4984</u>	<u>299.9</u>	<u>1.2</u>	-----
<u>4287</u> <u>4984</u>	<u>4704</u>	<u>100</u>	<u>0</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>3</u>	<u>0.81</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	<u>1</u>	<u>0.04</u>
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	<u>0.05</u>
k.	14.0-19.4	<u>1</u>	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

0.127
 0.597
 0.08

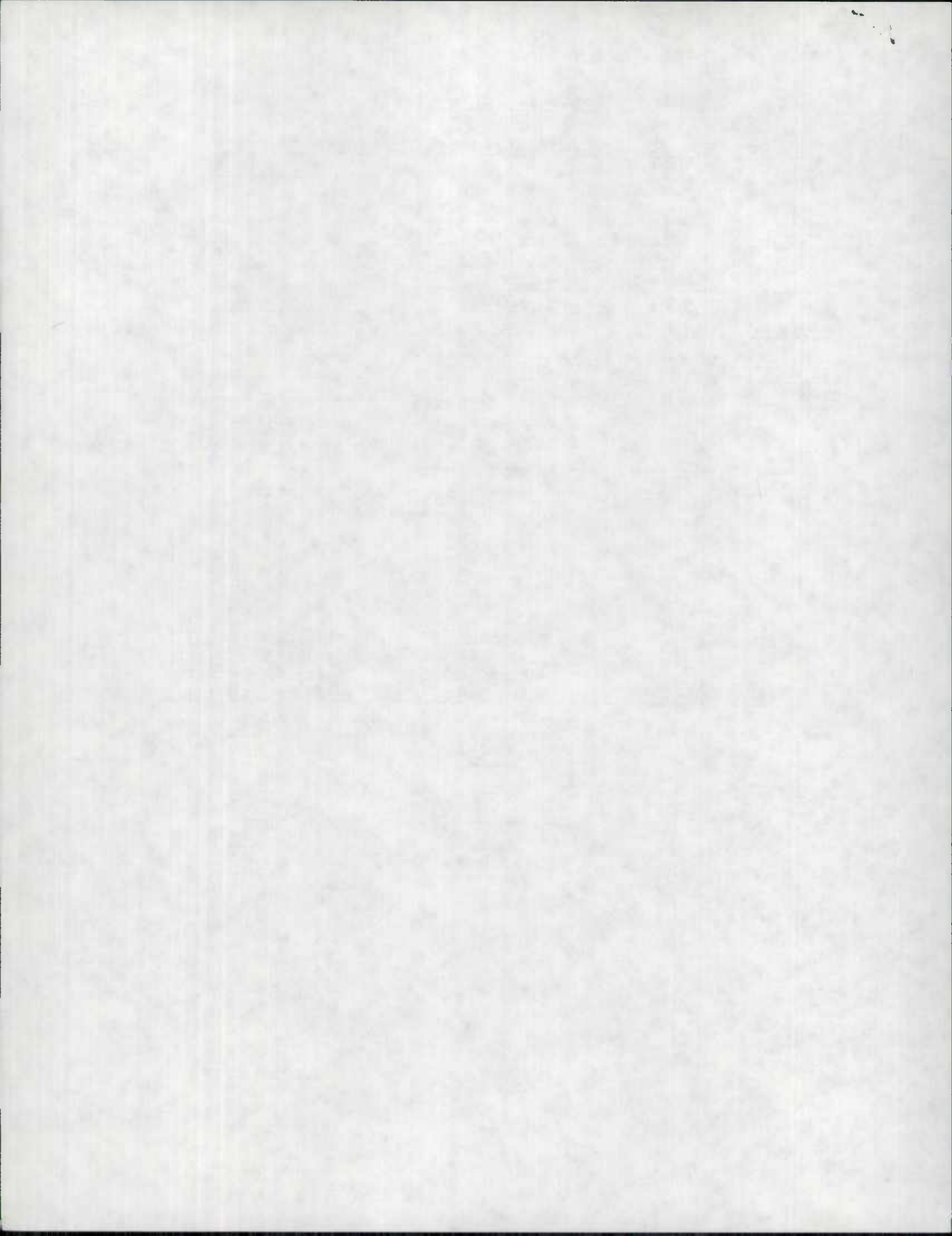
 0.801



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	673	0%	
673	1186	-42.8%	
1186	1509	0%	
1509	2223	-11.2%	
2223	4284	+9.8%	
4284	4784	-5.2%	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.19</u>
b.	0.5-2.4	—	—
c.	2.5-4.4	—	—
d.	4.5-6.4	<u>1</u>	<u>0.08</u>
e.	6.5-8.4	—	0.00
f.	8.5-	<u>3</u>	<u>0.63</u>



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: Co 538
Sample No: 21
County: Carroll

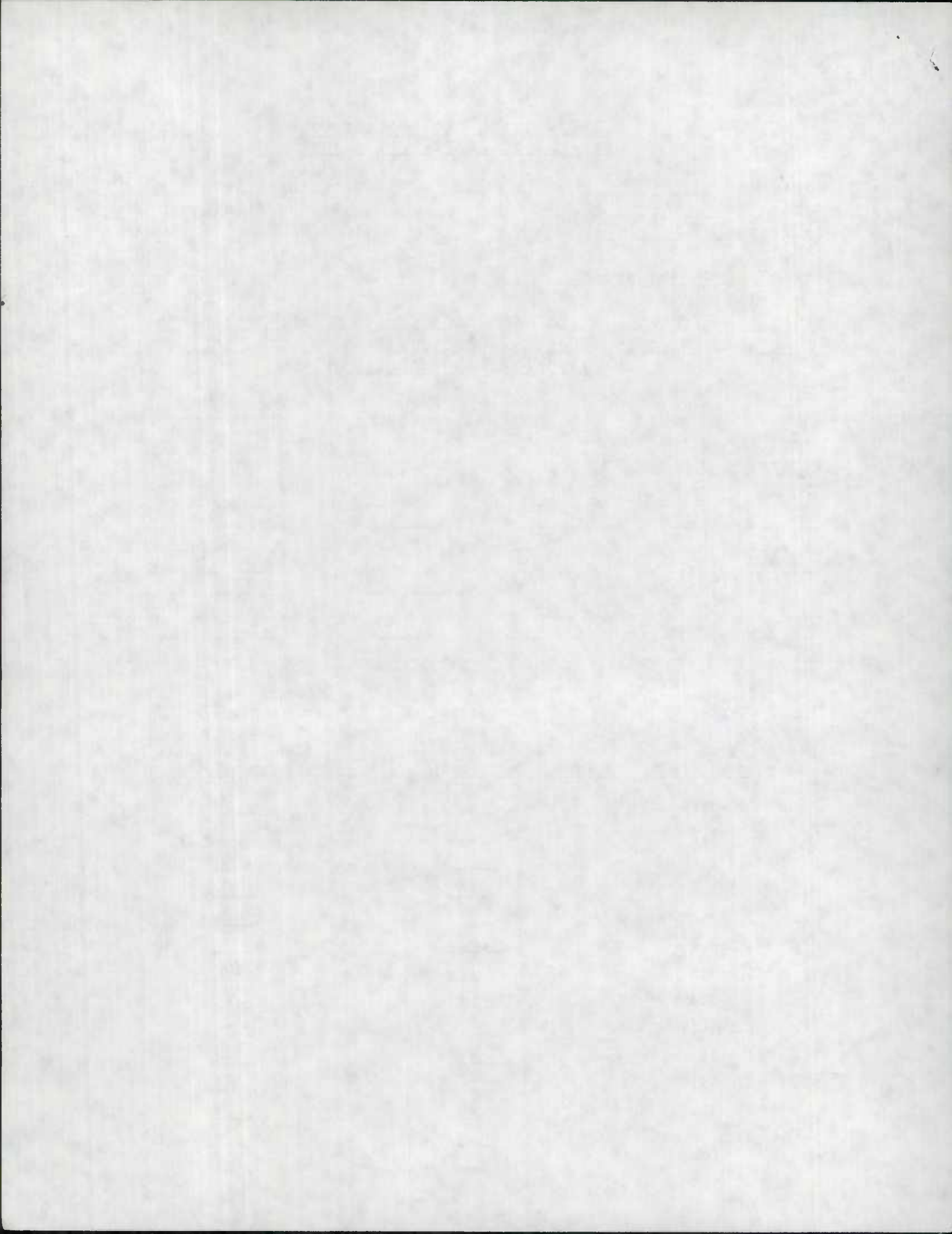
Starting Mile Pt: 4.89
Ending Mile Pt: 5.51
(0.62)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord1. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>1524</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>L 1524</u>	<u>2072</u>	<u>99.7</u>	<u>1.7</u>	<u>-----</u>
<u>2072</u>	<u>3048</u>	<u>100</u>	<u>0</u>	<u>-----</u>
<u>R 3048</u>	<u>3238</u>	<u>99.8</u>	<u>1.5</u>	<u>-----</u>
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>.48</u>
b.	0.5-1.4	<u>-----</u>	<u>-----</u>
c.	1.5-2.4	<u>-----</u>	<u>-----</u>
d.	2.5-3.4	<u>-----</u>	<u>-----</u>
e.	3.5-4.4	<u>-----</u>	<u>-----</u>
f.	4.5-5.4	<u>-----</u>	<u>-----</u>
g.	5.5-6.9	<u>1</u>	<u>.04</u>
h.	7.0-8.4	<u>1</u>	<u>.1</u>
i.	8.5-10.9	<u>-----</u>	<u>-----</u>
j.	11.0-13.9	<u>-----</u>	<u>-----</u>
k.	14.0-19.4	<u>-----</u>	<u>-----</u>
l.	19.5-27.9	<u>-----</u>	<u>-----</u>
m.	28+	<u>-----</u>	<u>-----</u>

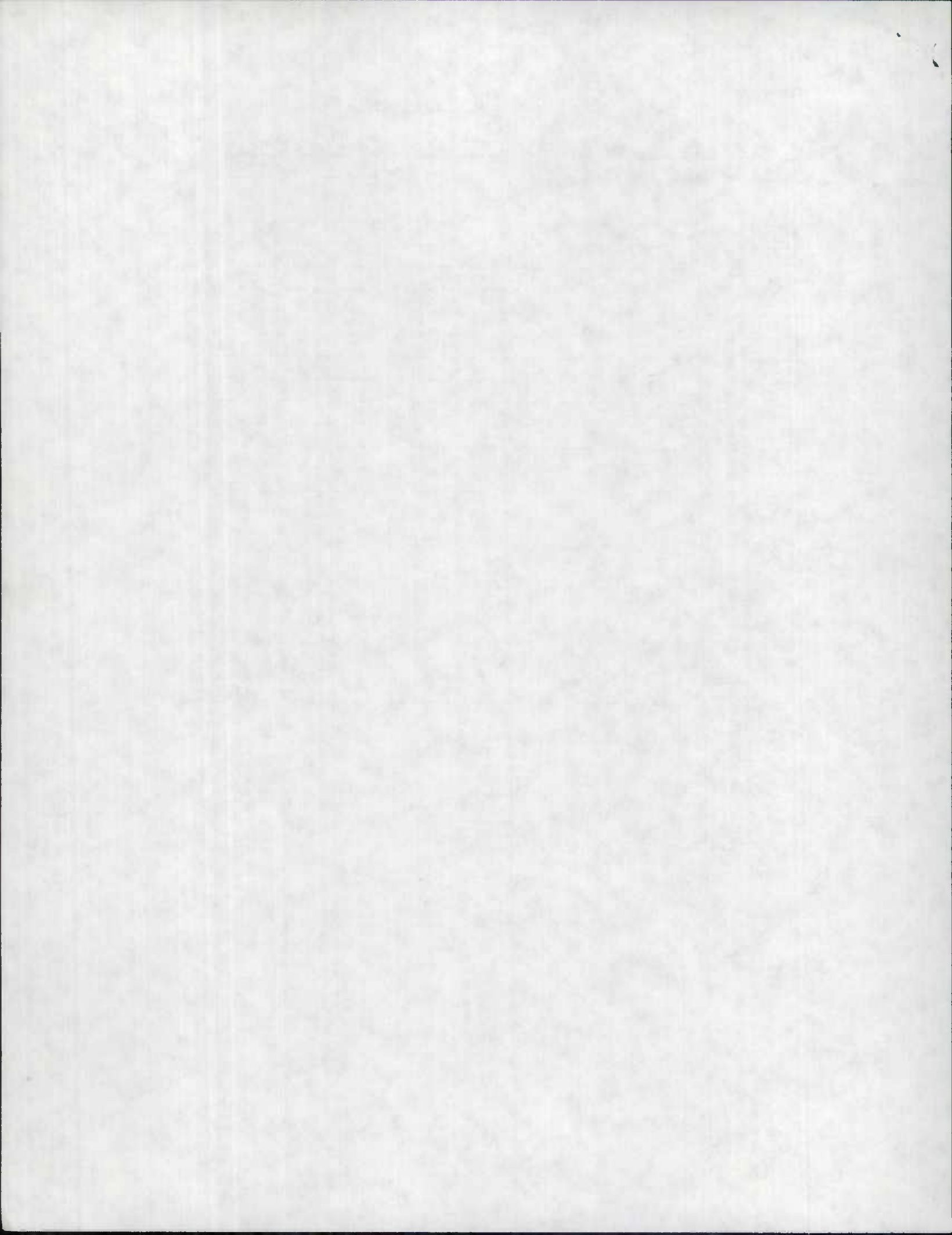




Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	1524	-3.4	
1524	2072	0.1	
2072	3048	+4.4	
3048	3238	-1.2	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>.1</u>
b.	0.5-2.4	<u>1</u>	<u>.04</u>
c.	2.5-4.4	<u>2</u>	<u>.48</u>
d.	4.5-6.4	<u> </u>	<u> </u>
e.	6.5-8.4	<u> </u>	<u> </u>
f.	8.5-	<u> </u>	<u> </u>



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

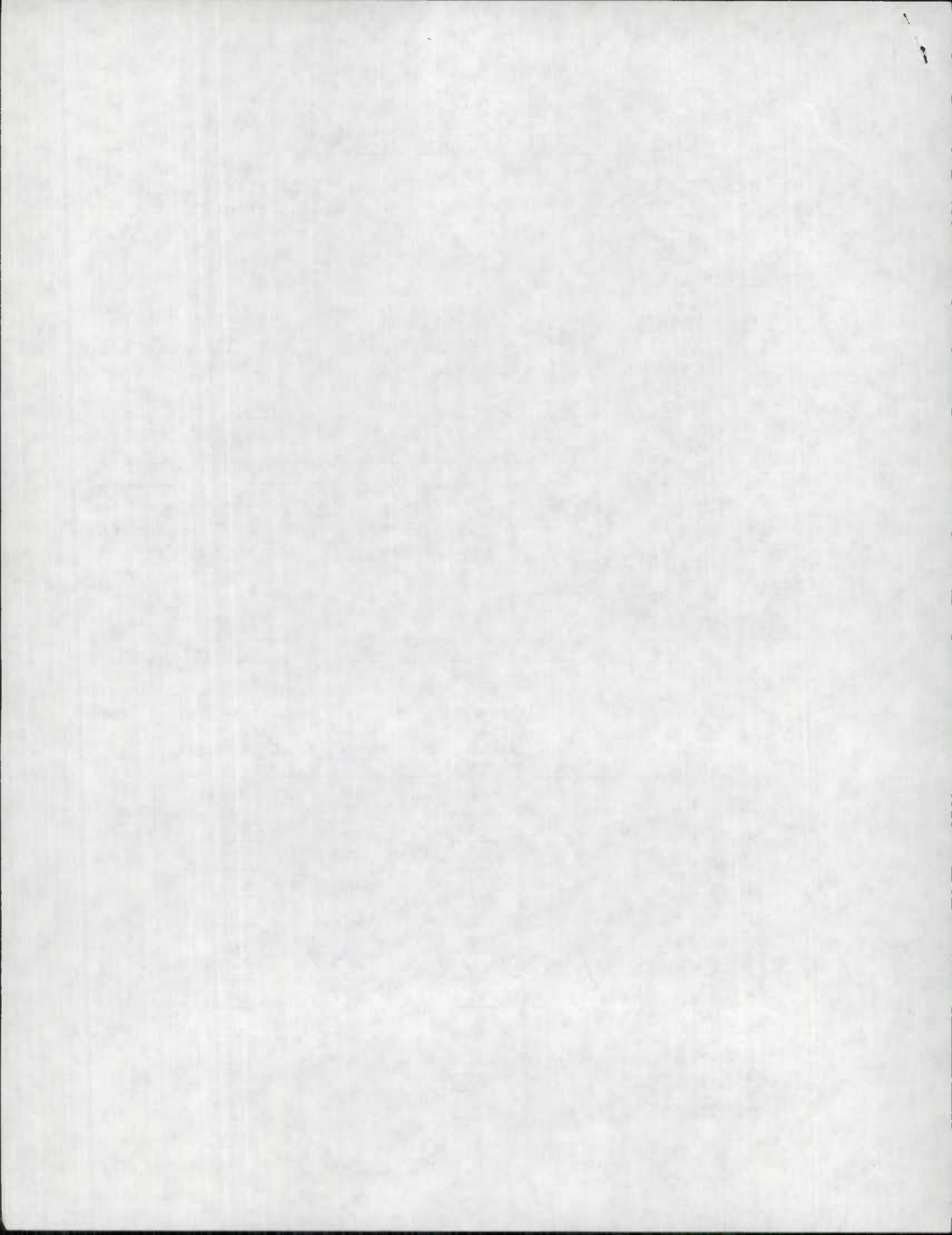
Route No: CO 0574
Sample No: 22
County: Carroll

Starting Mile Pt: 1.83
Ending Mile Pt: 3.05
1.22

Horizontal Curve Section

	<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> length (/100ft)	<u>Central</u> Ordi. Length (/100ft)	<u>Length of Total</u> Curve in(x.xxmile)
L	0	387	99.9	1.0	-----
R	387	1247	99.95	0.6	-----
B	1247	1875	100	0	-----
L	1875	2522	99.8	2.0	-----
	2522	2919	100	0	-----
R	3419	3627	99.85	1.5	-----
	3627	5356	100	0	-----
L	5356	5670 5670	99.9	1.1	-----
	5670	6438	100	0	-----
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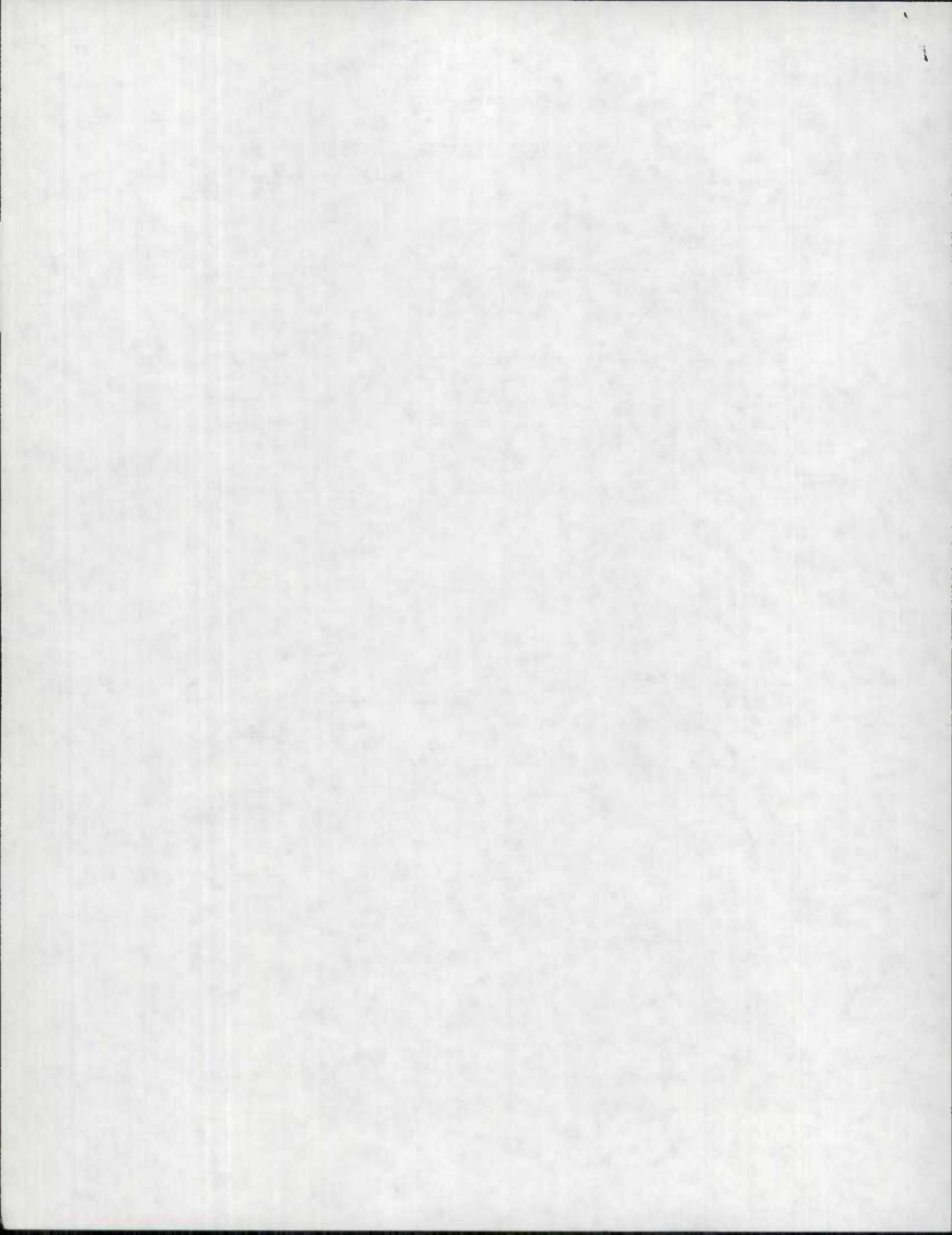
	<u>Curve</u> <u>Classes</u> by <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> (Right- Justified)	<u>Length</u> <u>of Curves</u> <u>in Class</u> (Implied Decimal) (xx.xxx miles)
a.	0.0-0.4	<u>.4</u>	<u>.77</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	<u>1</u>	<u>.16</u>
e.	3.5-4.4	-----	-----
f.	4.5-5.4	<u>2</u>	<u>.13</u>
g.	5.5-6.9	<u>1</u>	<u>.04</u>
h.	7.0-8.4	-----	-----
i.	8.5-10.9	<u>1</u>	<u>.12</u>
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	1247	-6.8%	
1247	1875	0%	
1875	3419	+9.4%	
3419	5670	-6.2%	
5670	6438	-10.6%	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>.12</u>
b.	0.5-2.4	—	—
c.	2.5-4.4	—	—
d.	4.5-6.4	<u>1</u>	<u>.42</u>
e.	6.5-8.4	<u>1</u>	<u>.24</u>
f.	8.5-	<u>2</u>	<u>.44</u>



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

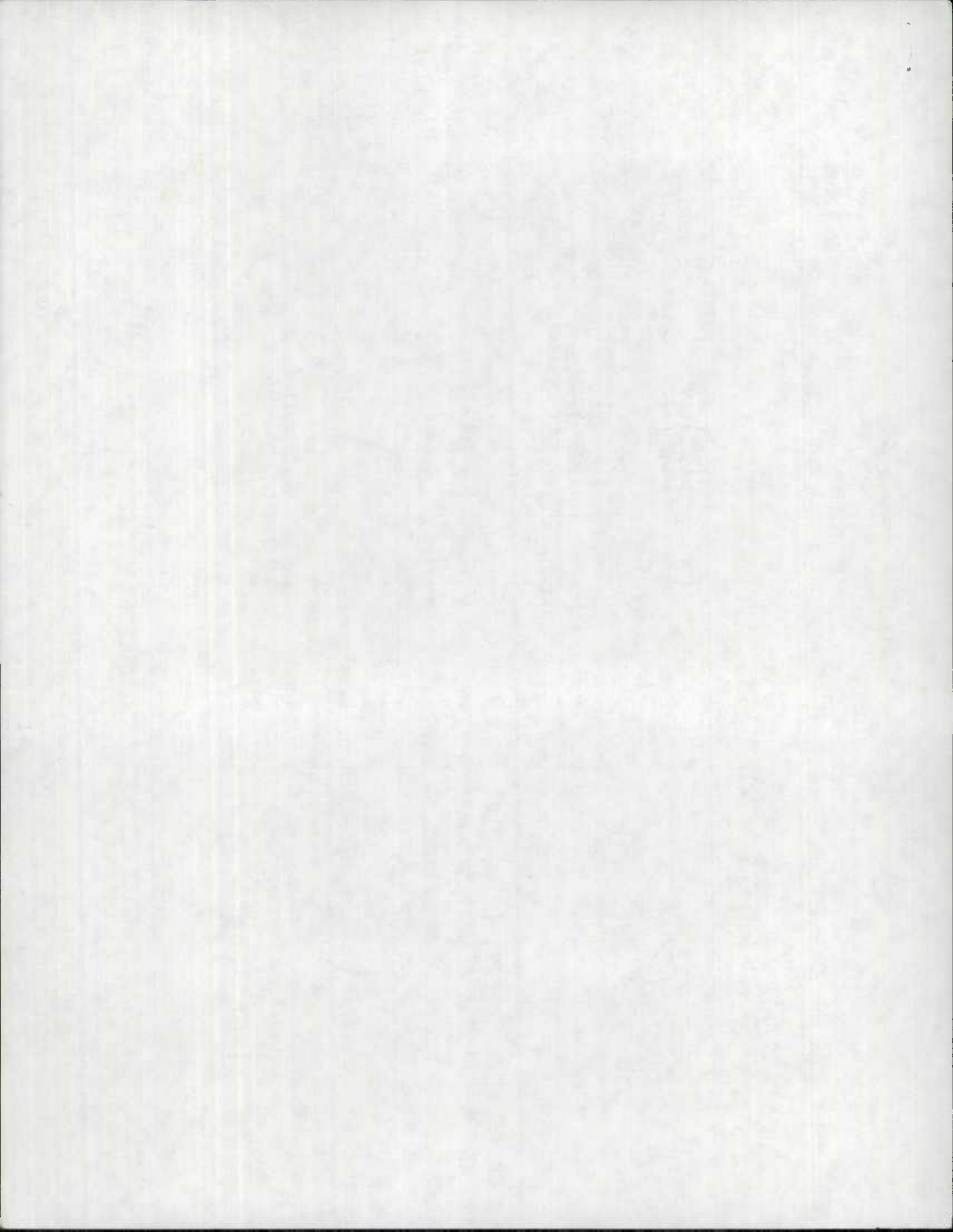
Route No: CO 1713
 Sample No: 23
 County: ~~Garfield~~ Carson

Starting Mile Pt: 0.00
 Ending Mile Pt: 0.57
 0.57

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
0	849	99.5	4.2	
849	1655	99.5 100	0	
1655	2230	99.8	1.8	
2230	2885	99.8	2.2	
2525 2885	2970		0	

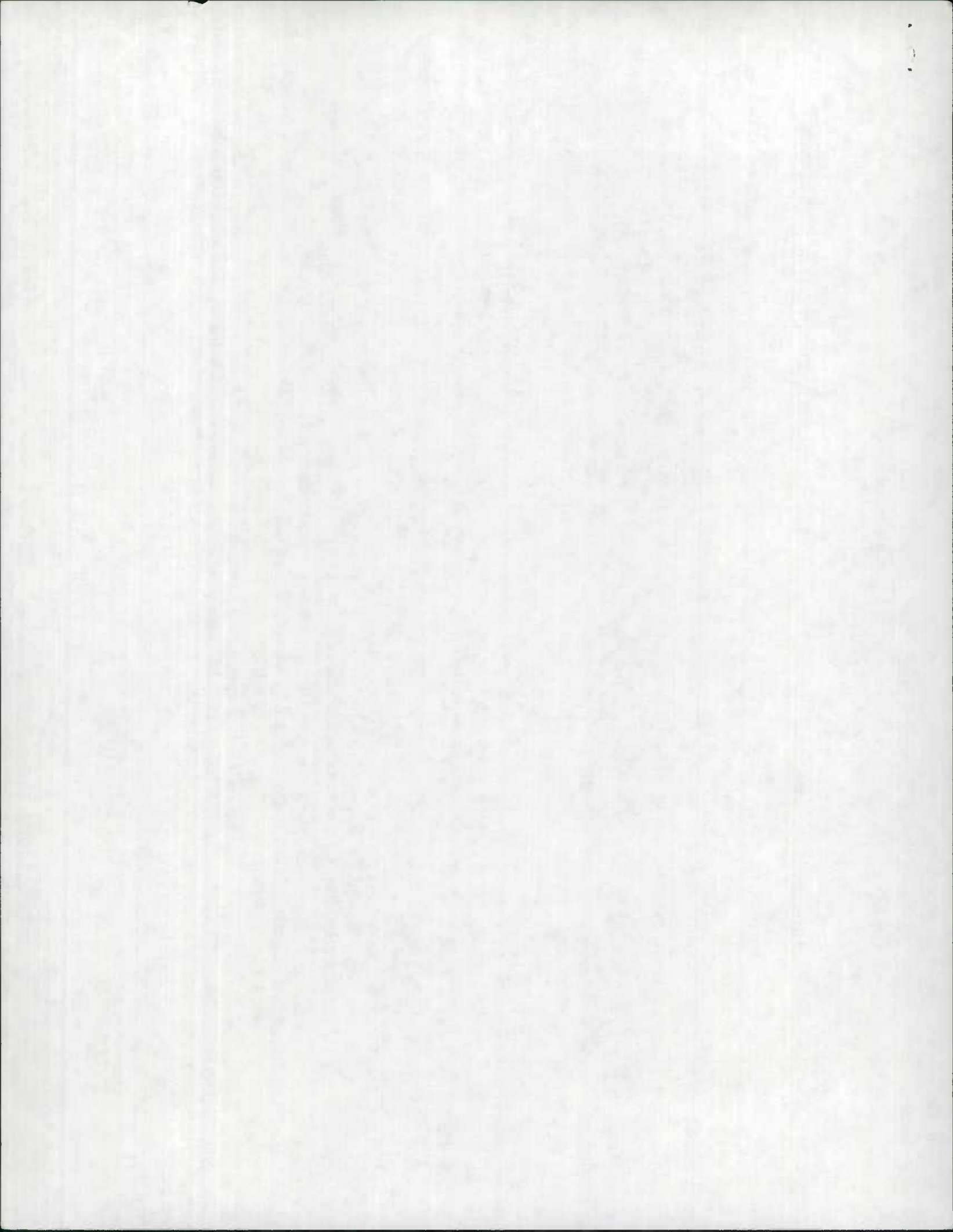
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-1.4	_____	_____
c.	1.5-2.4	_____	_____
d.	2.5-3.4	_____	_____
e.	3.5-4.4	_____	_____
f.	4.5-5.4	_____	_____
g.	5.5-6.9	_____	_____
h.	7.0-8.4	_____	_____
i.	8.5-10.9	_____	_____
j.	11.0-13.9	_____	_____
k.	14.0-19.4	_____	_____
l.	19.5-27.9	_____	_____
m.	28+	_____	_____



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	259	0	-----
259	626	+1.4	-----
626	1249	0	-----
1249	1655	-3.4	-----
1655	2058	+7.0	-----
2058	2347	-2.0	-----
2347	2825	+5.8%	-----
2825	2970	-----	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: MU 0070 155
 Sample No: 24
 County: Carroll

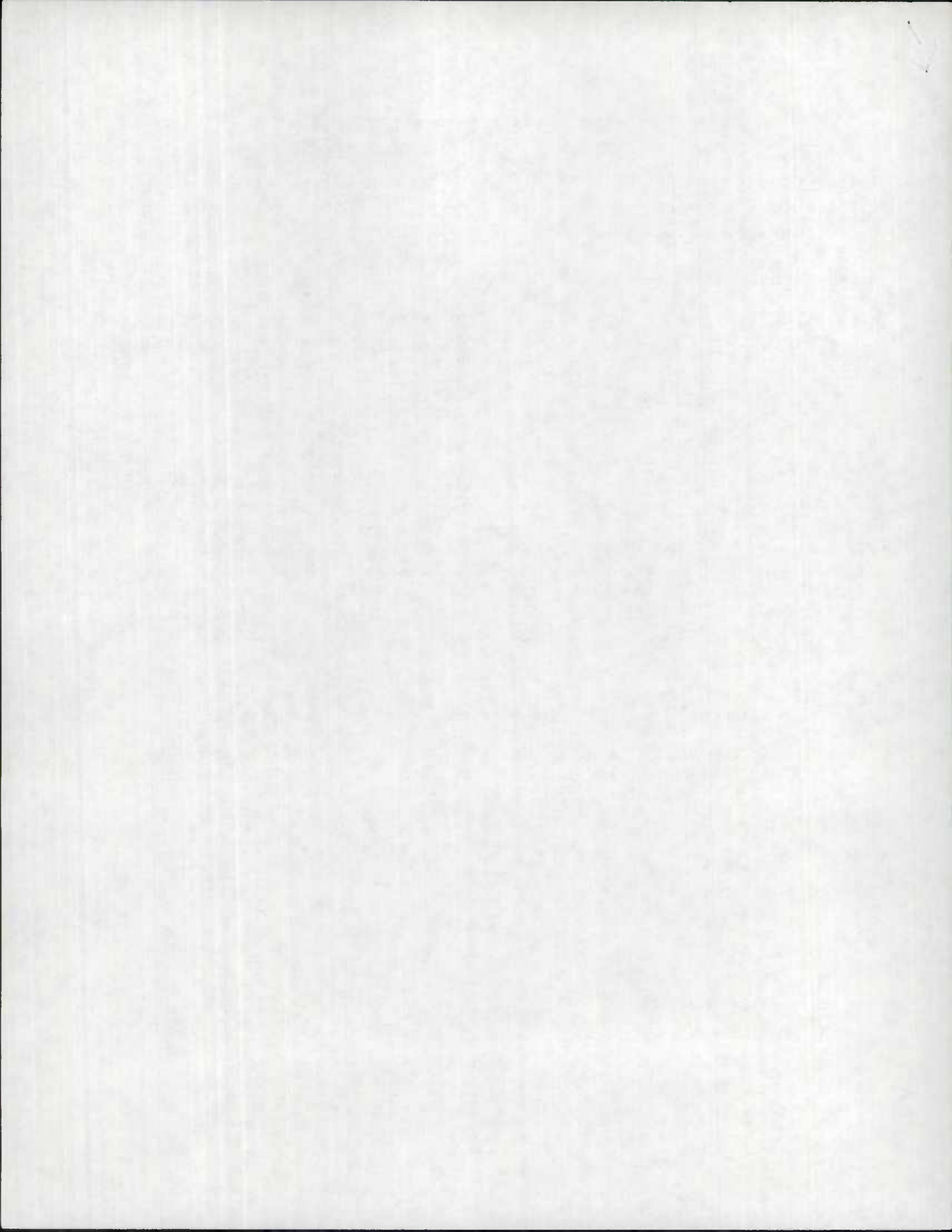
Starting Mile Pt: 0.27
 Ending Mile Pt: 0.47

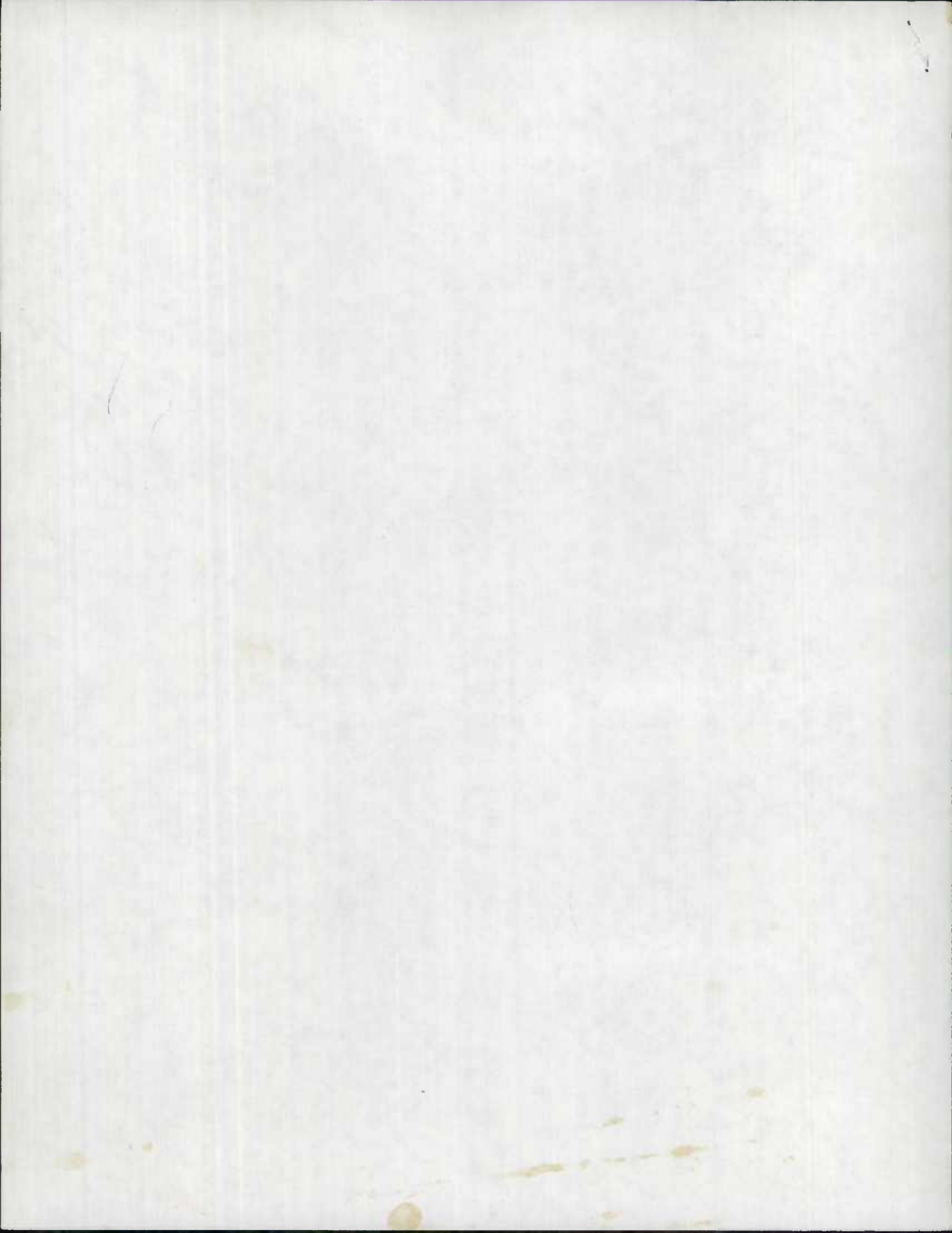
0.20

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>1050</u> 580	<u>100</u>	<u>6</u>	
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-1.4	_____	_____
c.	1.5-2.4	_____	_____
d.	2.5-3.4	_____	_____
e.	3.5-4.4	_____	_____
f.	4.5-5.4	_____	_____
g.	5.5-6.9	_____	_____
h.	7.0-8.4	_____	_____
i.	8.5-10.9	_____	_____
j.	11.0-13.9	_____	_____
k.	14.0-19.4	_____	_____
l.	19.5-27.9	_____	_____
m.	23+	_____	_____





CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: MD 0070 155
 Sample No: 25
 County: Carroll

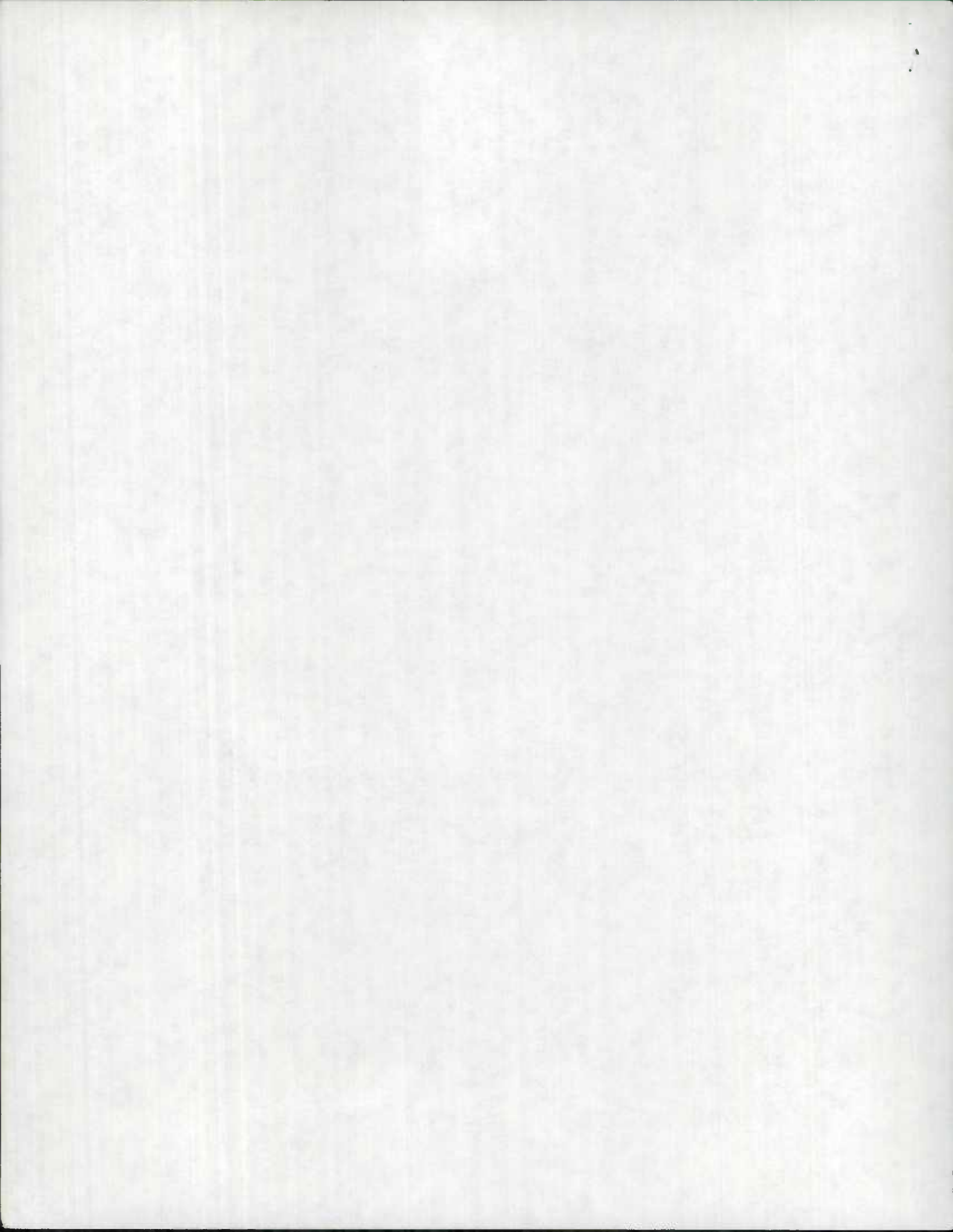
Starting Mile Pt: 0.47
 Ending Mile Pt: 0.50
 (0.03)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ordi. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>159</u>	<u>100</u>	<u>0</u>	
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Handwritten scribbles in blue ink.

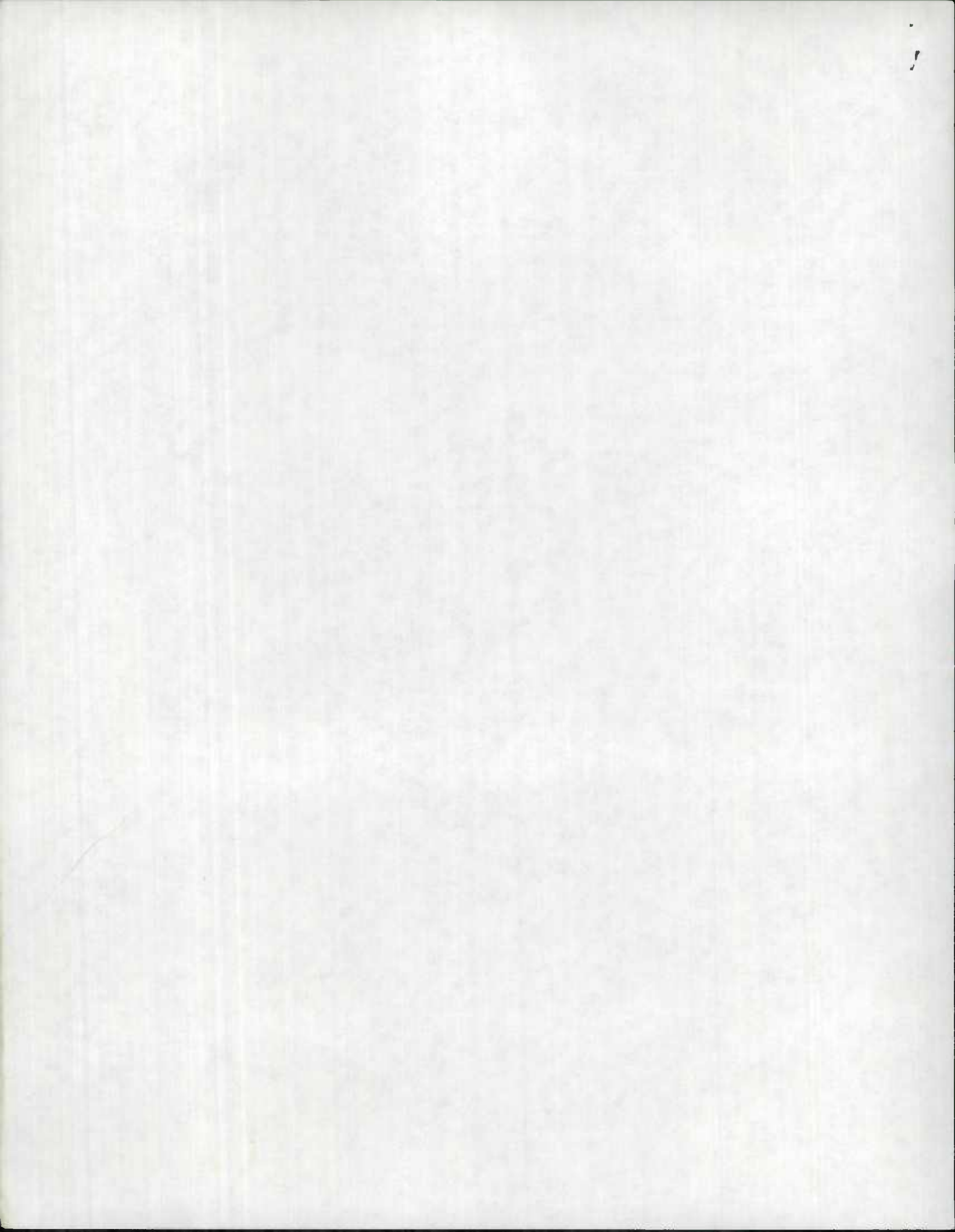
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.03</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	159	5.4 5.4%	
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	<u>Grade</u> <u>Classes</u> <u>by</u> <u>Gradient</u> <u>(Percent)</u>	<u>Number of</u> <u>Grades</u> <u>(Right-</u> <u>Justified)</u>	<u>Length of</u> <u>Grades in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	1	0.03
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

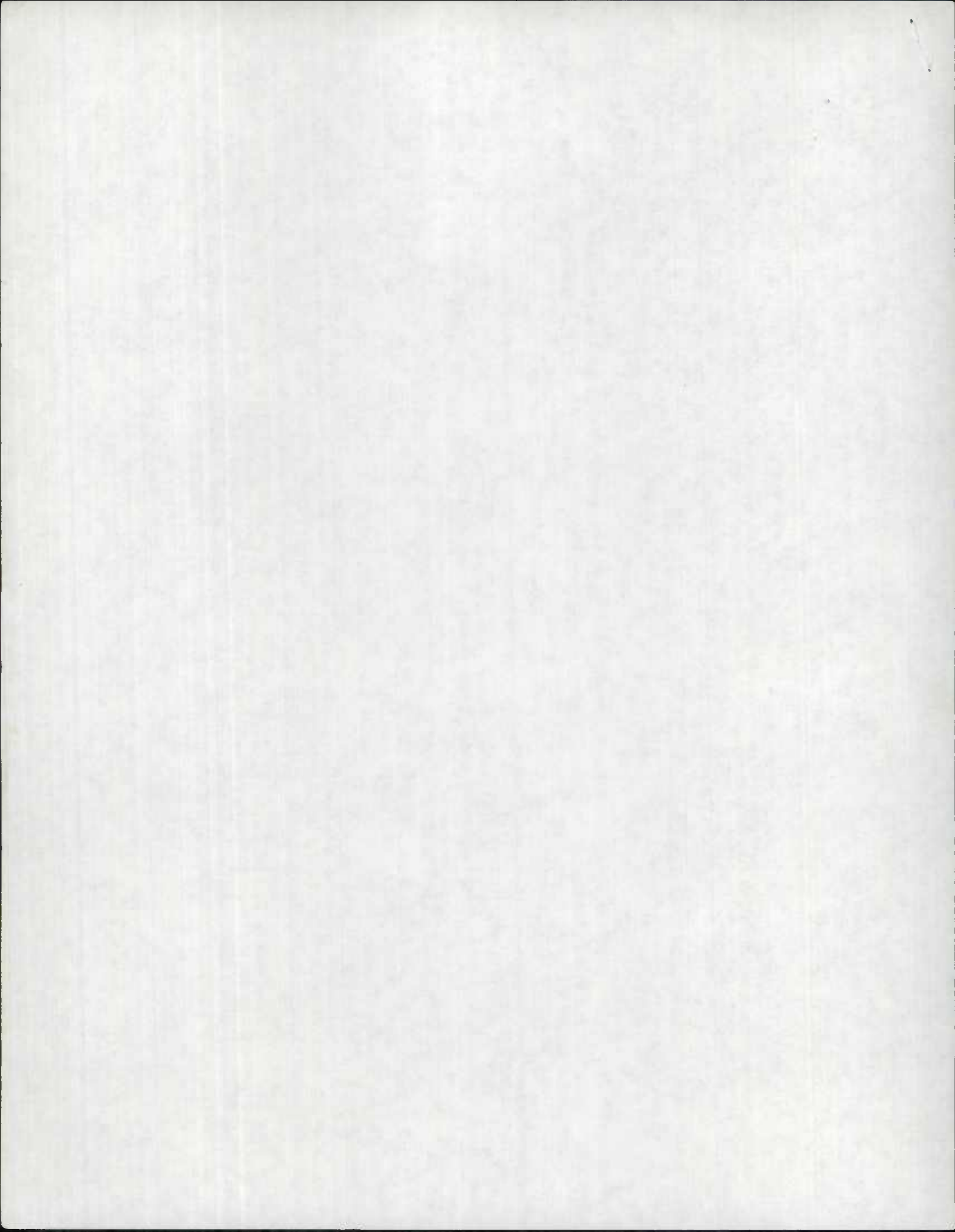
Route No: MU 0250 155
 Sample No: 28
 County: Carroll

Starting Mile Pt: 0.25
 Ending Mile Pt: 0.44
0.19

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>1000</u> 444	<u>100</u>	<u>0</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.19</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	23+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	407	0%	
407	847	-0.8%	
847	1000	0%	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.11</u>
b.	0.5-2.4	<u>1</u>	<u>0.08</u>
c.	2.5-4.4	---	---
d.	4.5-6.4	---	---
e.	6.5-8.4	---	---
f.	8.5-	---	---

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

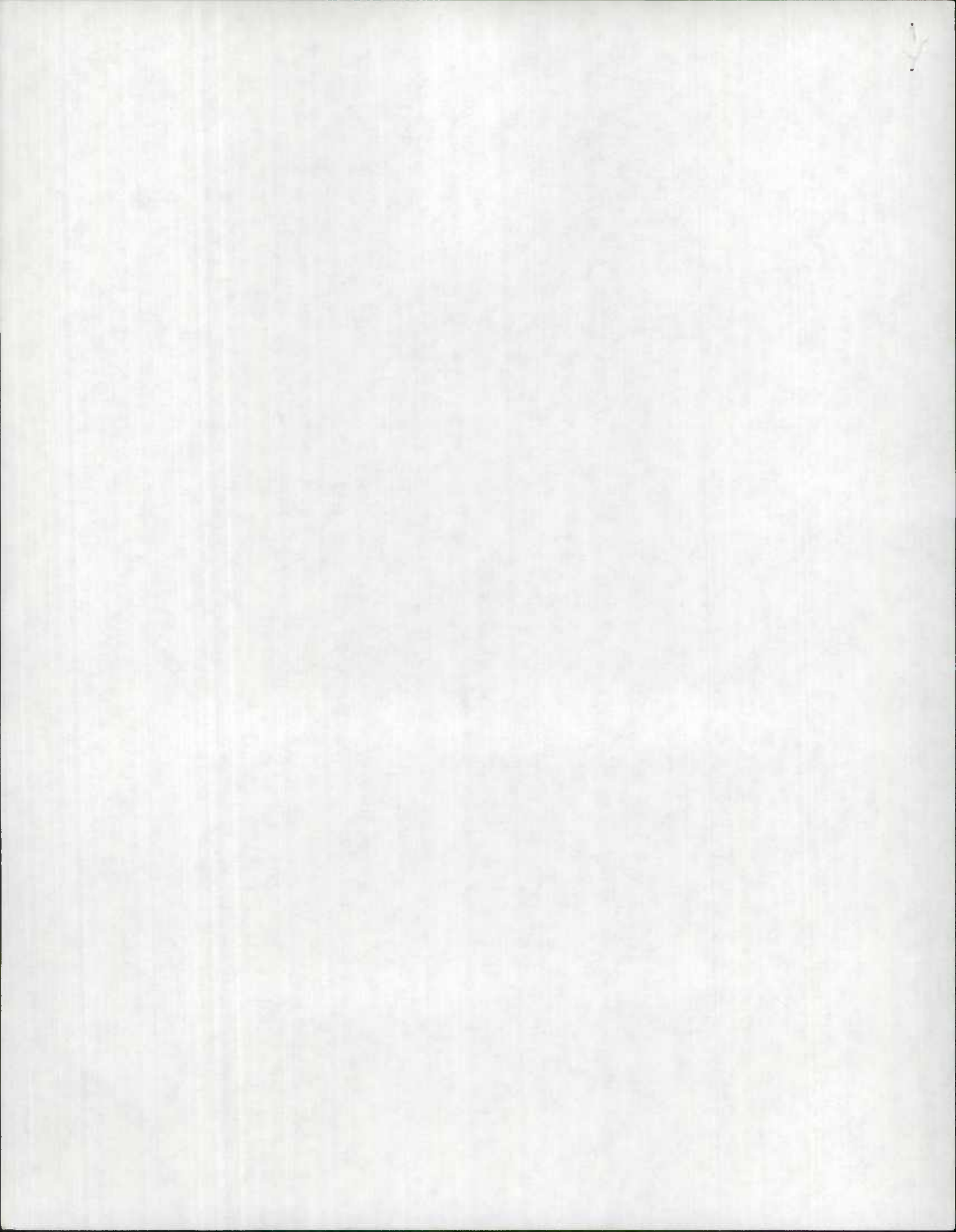
Route No: MO 0470 155
 Sample No: 27
 County: Carroll

Starting Mile Pt: 0.21
 Ending Mile Pt: 0.39
 0.18

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>980</u>	<u>100</u>	<u>0%</u>	-----
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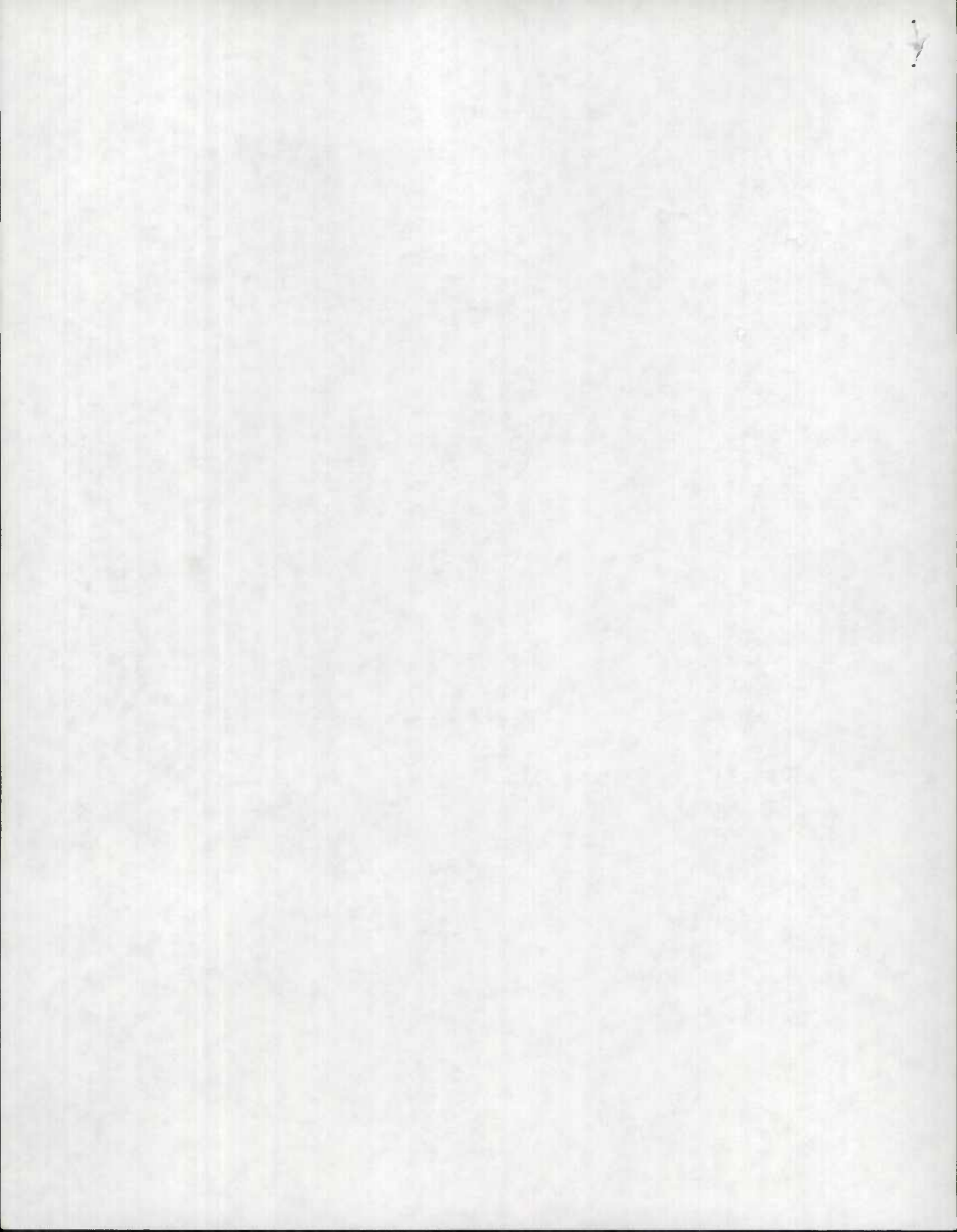
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.18</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	608	-1.8	
608	980	+5.4	
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	1	0.12
c.	2.5-4.4	-----	-----
d.	4.5-6.4	1	0.06
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: MU 0470 155
 Sample No: 28
 County: Carroll

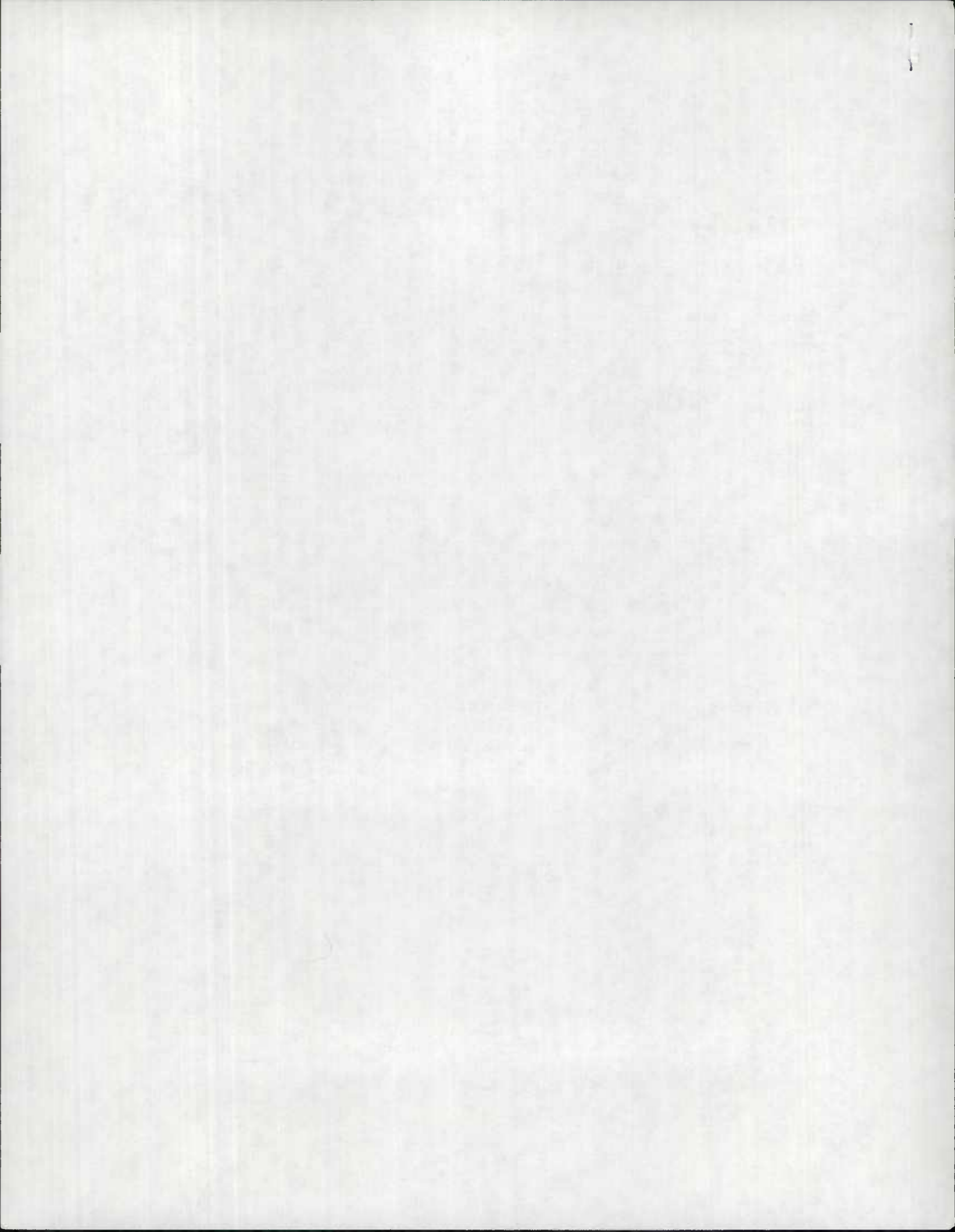
Starting Mile Pt: 0.39
 Ending Mile Pt: 0.47

0.08:

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>420</u>	<u>99.8</u>	<u>2.2</u>	-----
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<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a. 0.0-0.4	-----	-----
b. 0.5-1.4	-----	-----
c. 1.5-2.4	-----	-----
d. 2.5-3.4	-----	-----
e. 3.5-4.4	-----	-----
f. 4.5-5.4	-----	-----
g. 5.5-6.9	-----	-----
h. 7.0-8.4	-----	-----
i. 8.5-10.9	<u>1</u>	<u>0.08</u>
j. 11.0-13.9	-----	-----
k. 14.0-19.4	-----	-----
l. 19.5-27.9	-----	-----
m. 28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	420	+5.0	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	_____	_____
b.	0.5-2.4	_____	_____
c.	2.5-4.4	_____	_____
d.	4.5-6.4	1	0.00
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

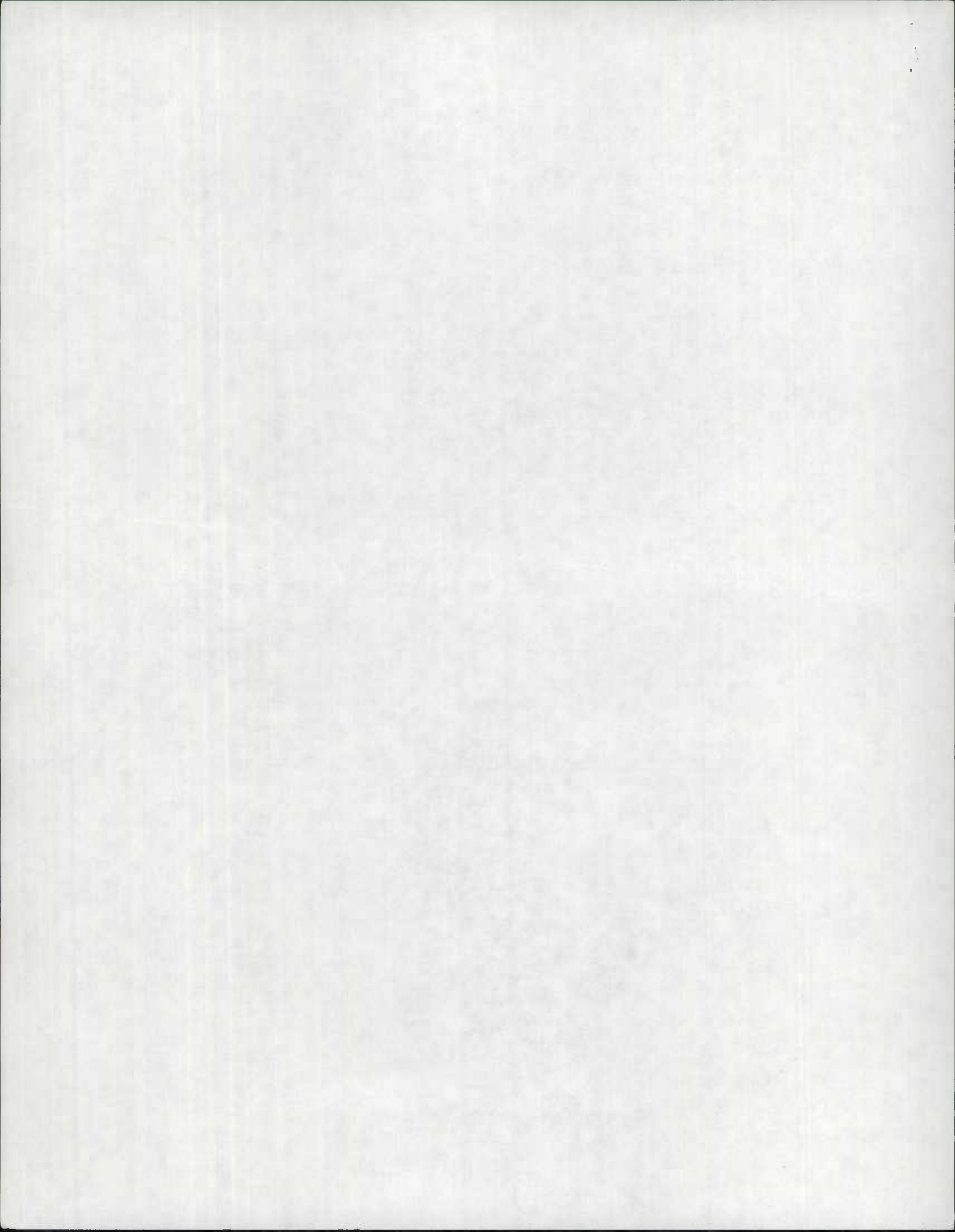
Route No: MU 0540 / 55
 Sample No: 29
 County: Carroll

Starting Mile Pt: 1.29
 Ending Mile Pt: 1.51
0.22

Horizontal Curve Section

	<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
R	<u>0</u>	<u>141</u>	<u>100</u>	<u>0</u>	
	<u>141</u>	<u>529</u>	<u>99.85</u>	<u>1.6</u>	
	<u>529</u>	<u>1137</u>	<u>100</u>	<u>0</u>	

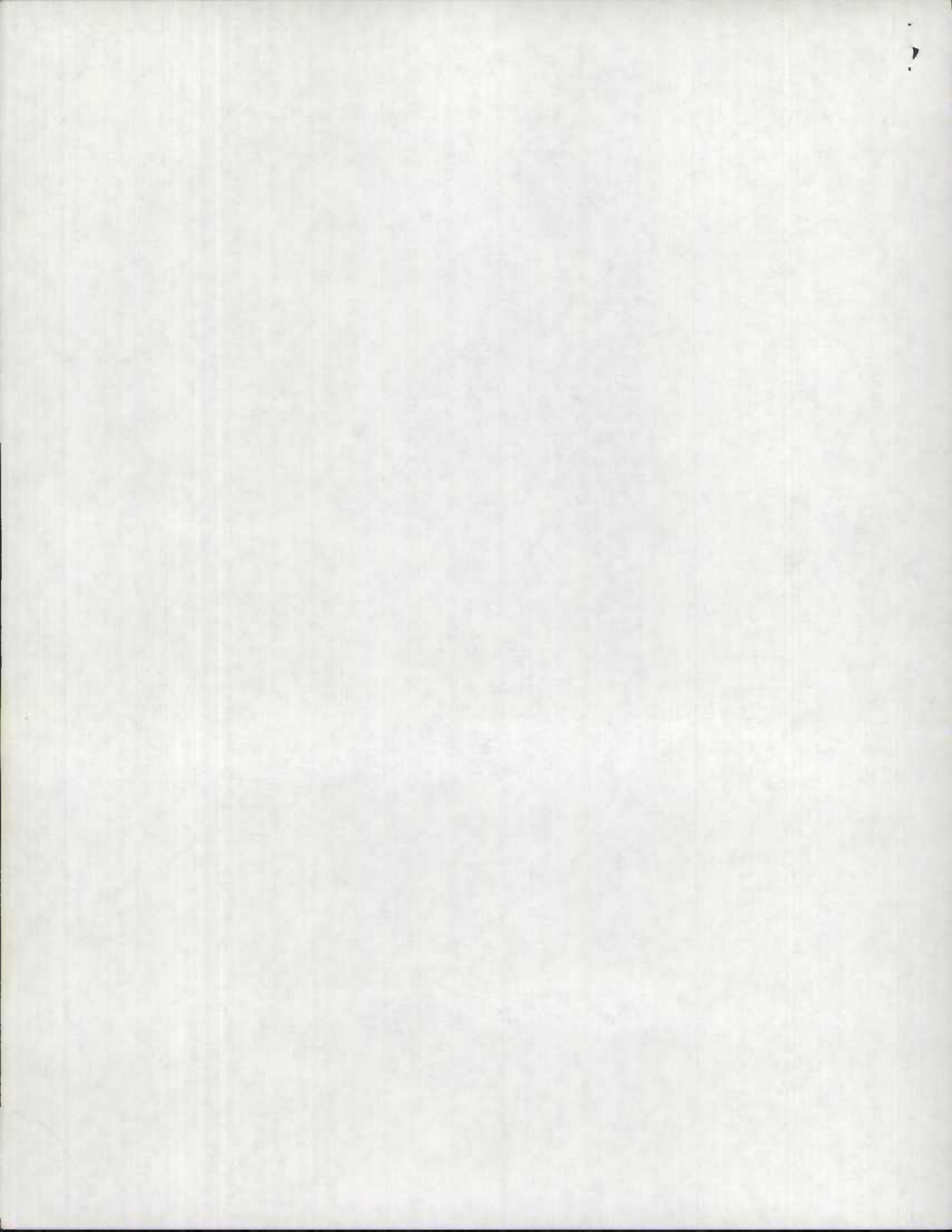
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.15</u>
b.	0.5-1.4	---	---
c.	1.5-2.4	---	---
d.	2.5-3.4	---	---
e.	3.5-4.4	---	---
f.	4.5-5.4	---	---
g.	5.5-6.9	---	---
h.	7.0-8.4	<u>1</u>	<u>0.07</u>
i.	8.5-10.9	---	---
j.	11.0-13.9	---	---
k.	14.0-19.4	---	---
l.	19.5-27.9	---	---
m.	28+	---	---



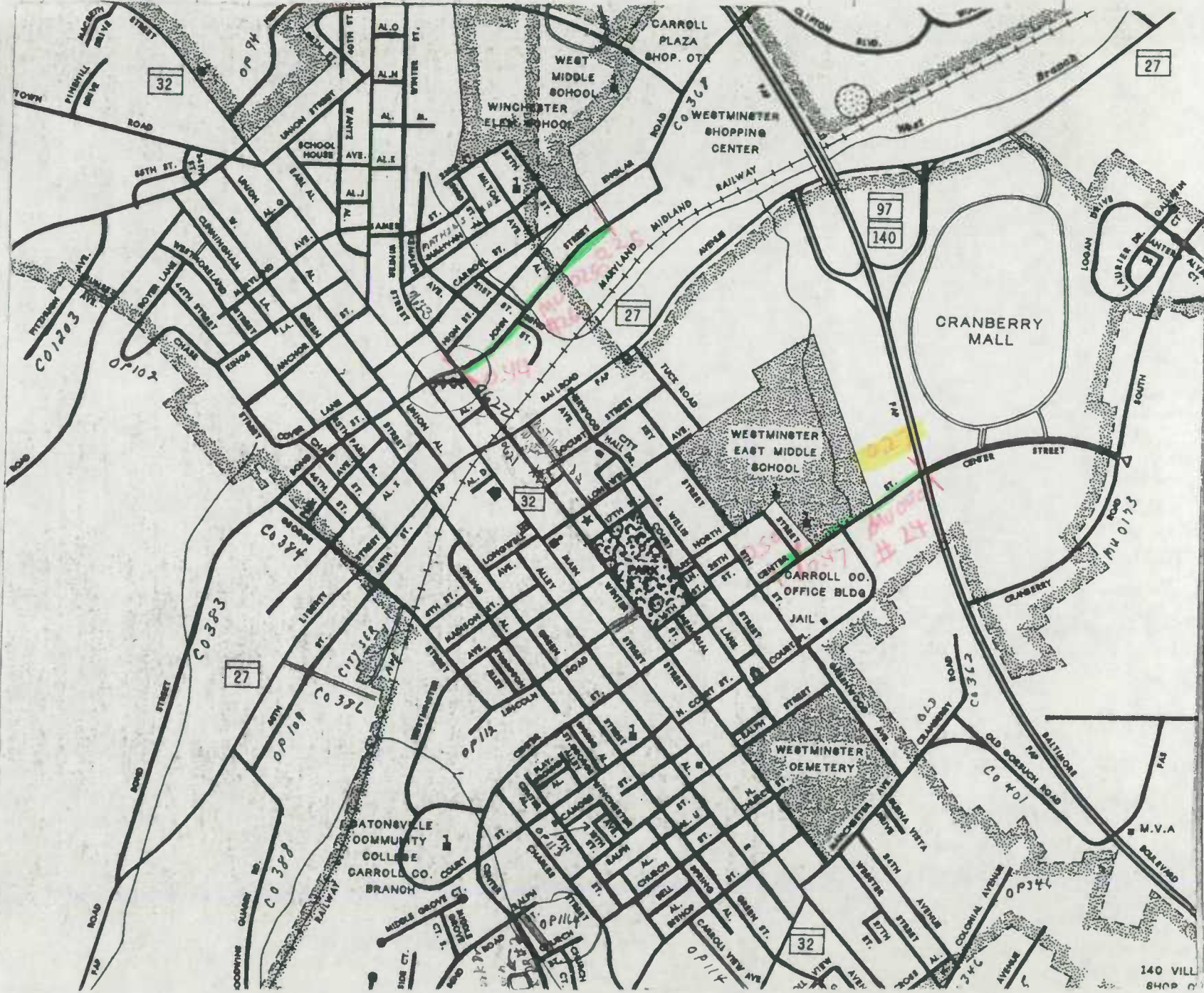
Vertical Curve Section

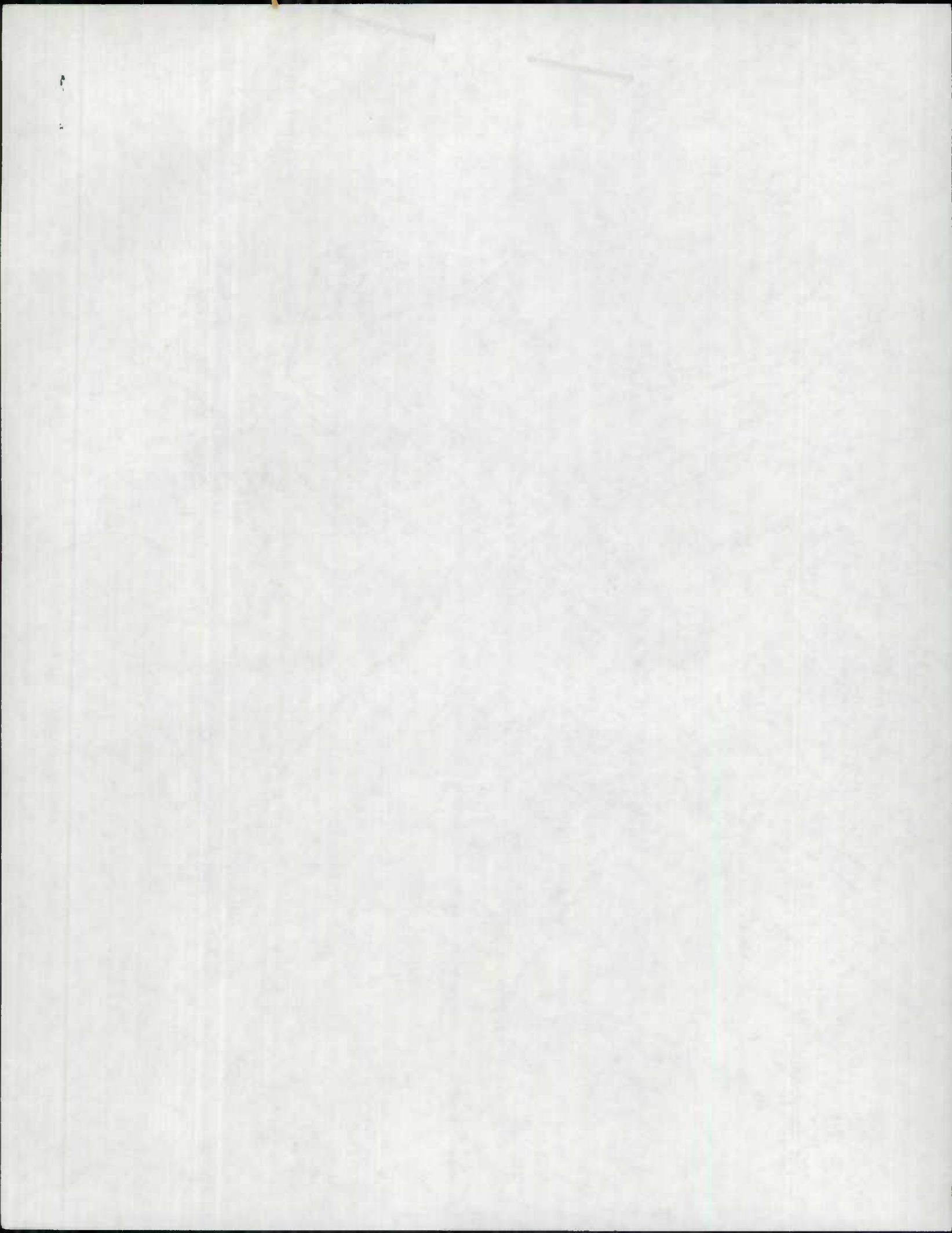
<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
6	529	0%	
529	1137	+0.8%	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.10</u>
b.	0.5-2.4	<u>1</u>	<u>0.12</u>
c.	2.5-4.4	_____	_____
d.	4.5-6.4	_____	_____
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____

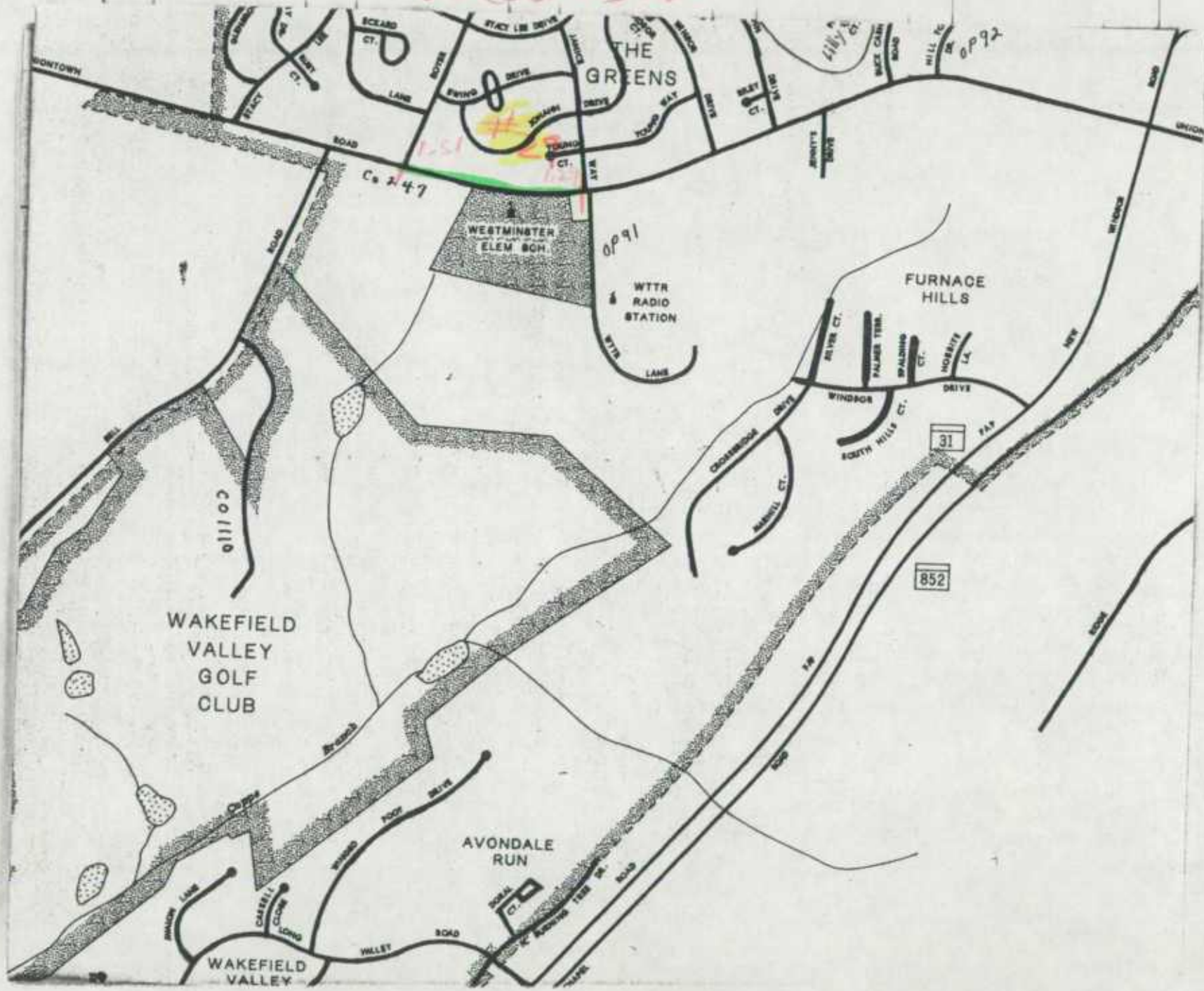


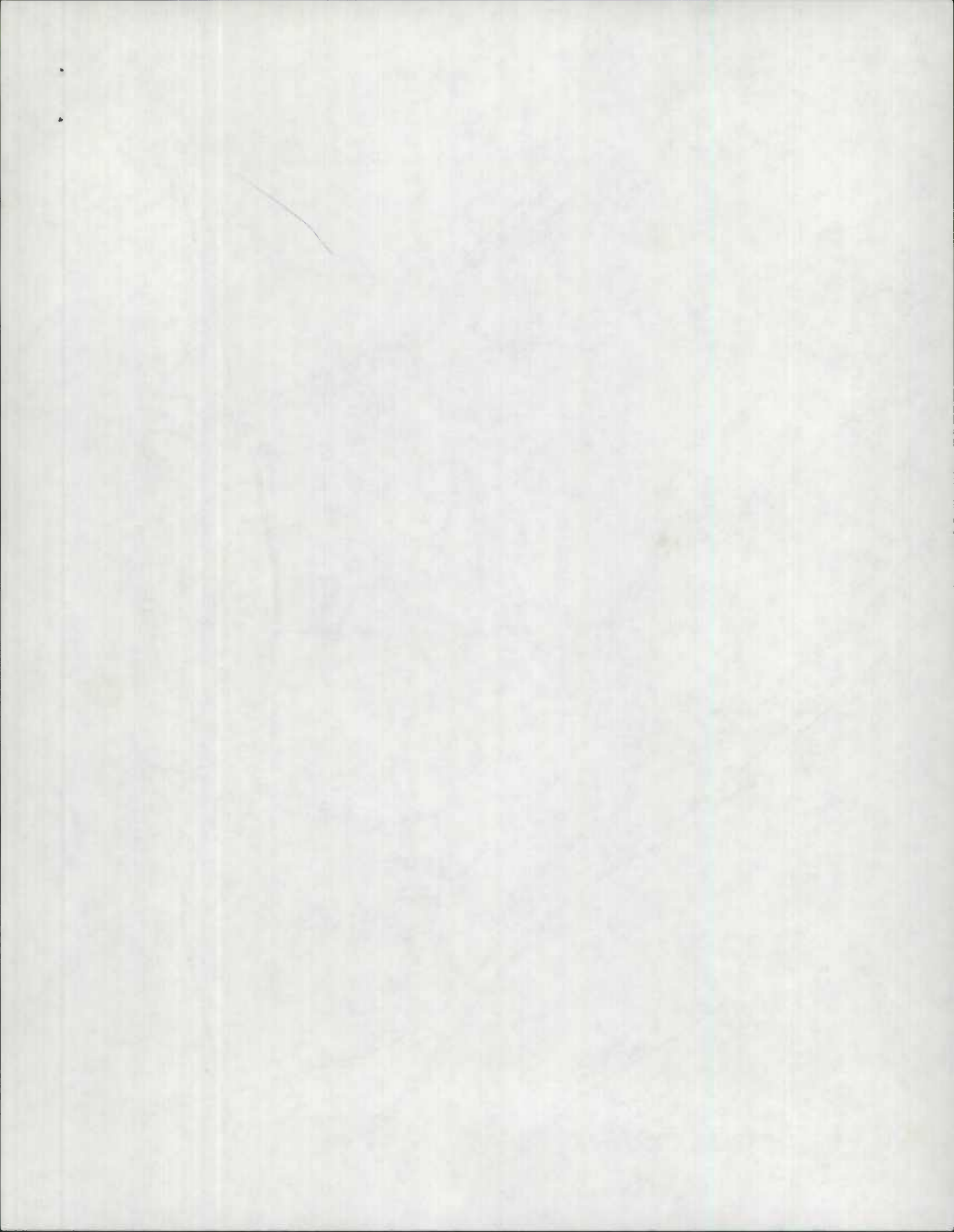
Westminster

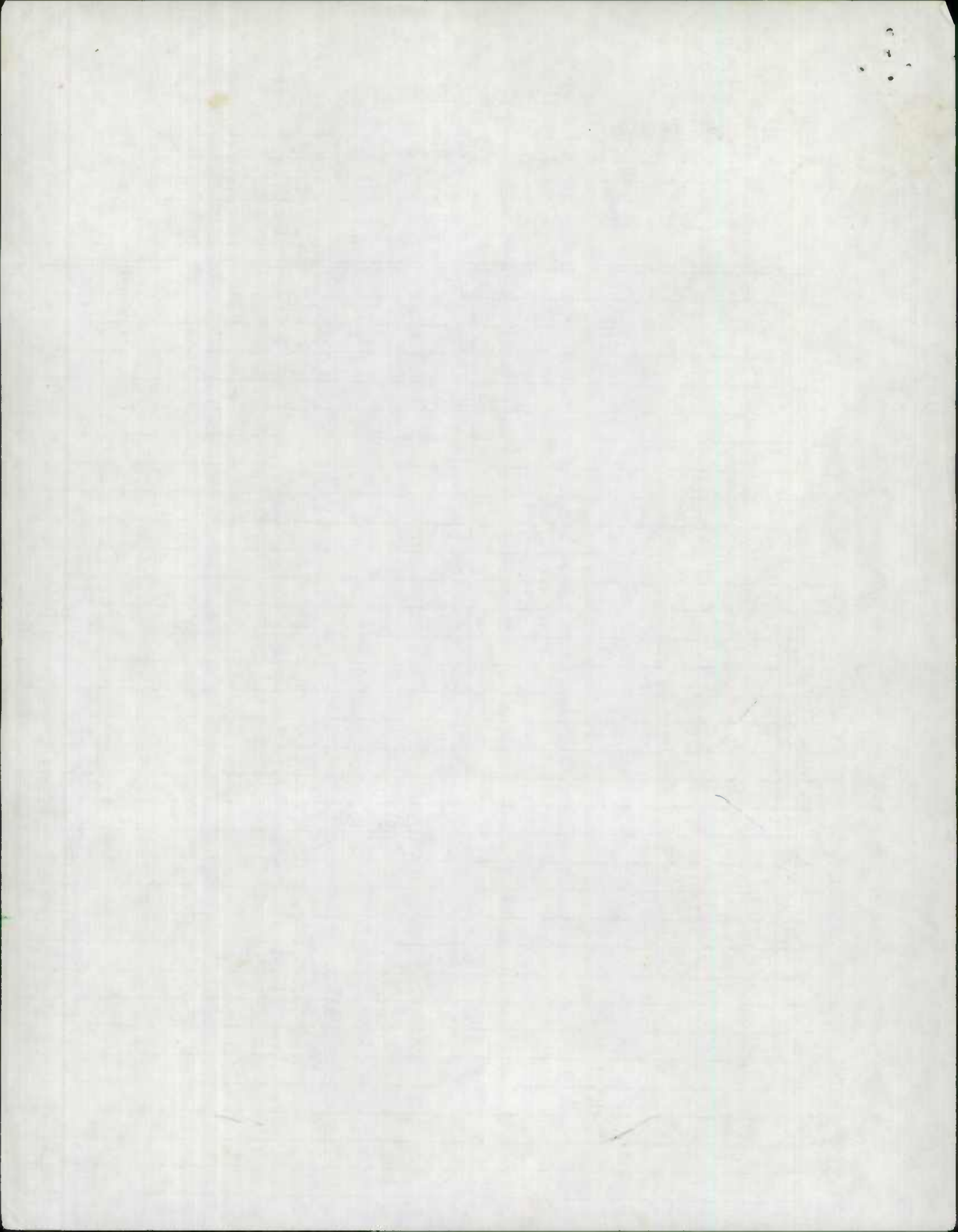




Westminster







ROAD INVENTORY SHEET

Chief CB
AL

Road No. MUN 0070
CO 359-

(86-4)

24+55

Road Name CENTER ST

County CARROLL

Date 1-16-87

No./Dir. B11 / W

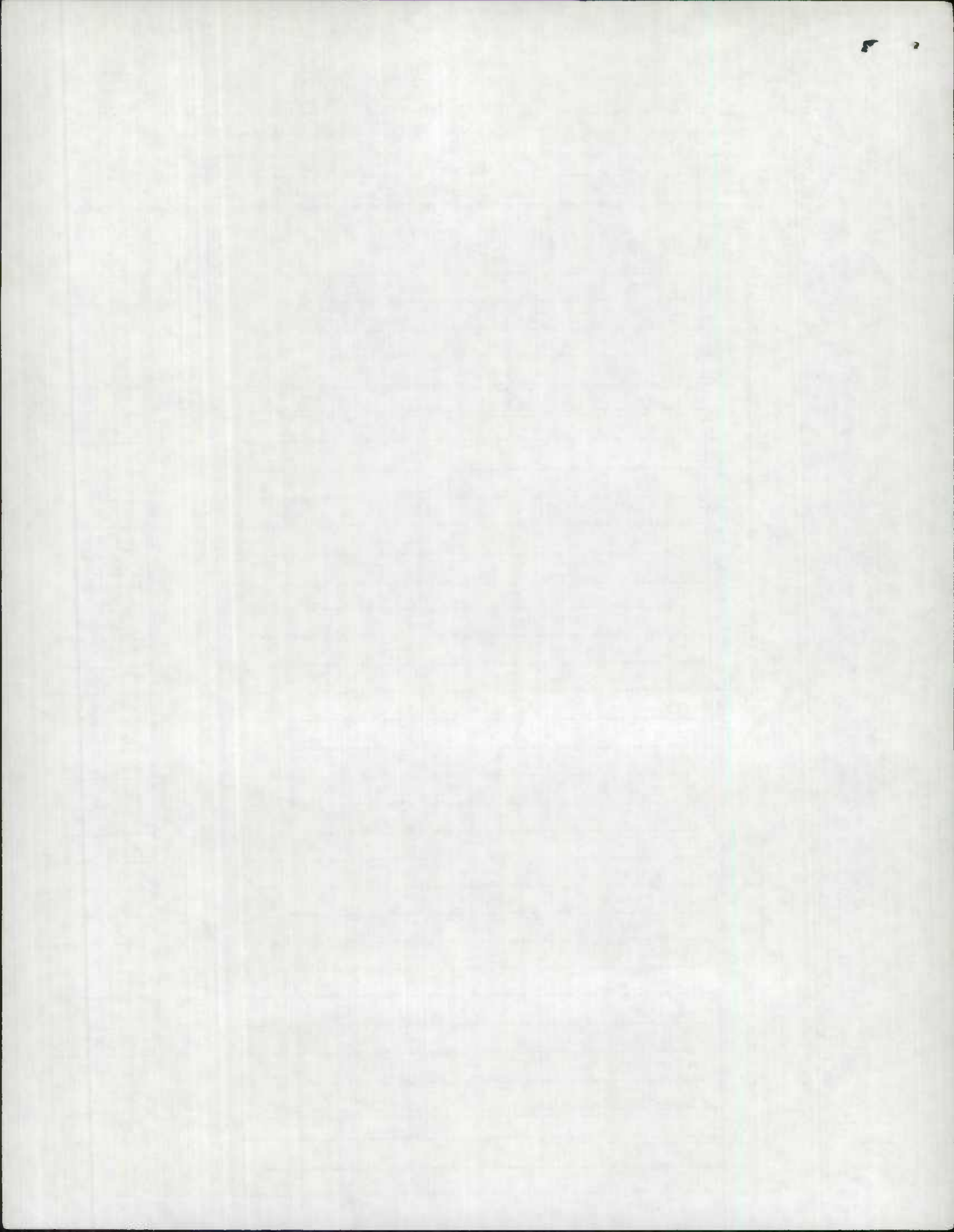
Coordinates 807-637

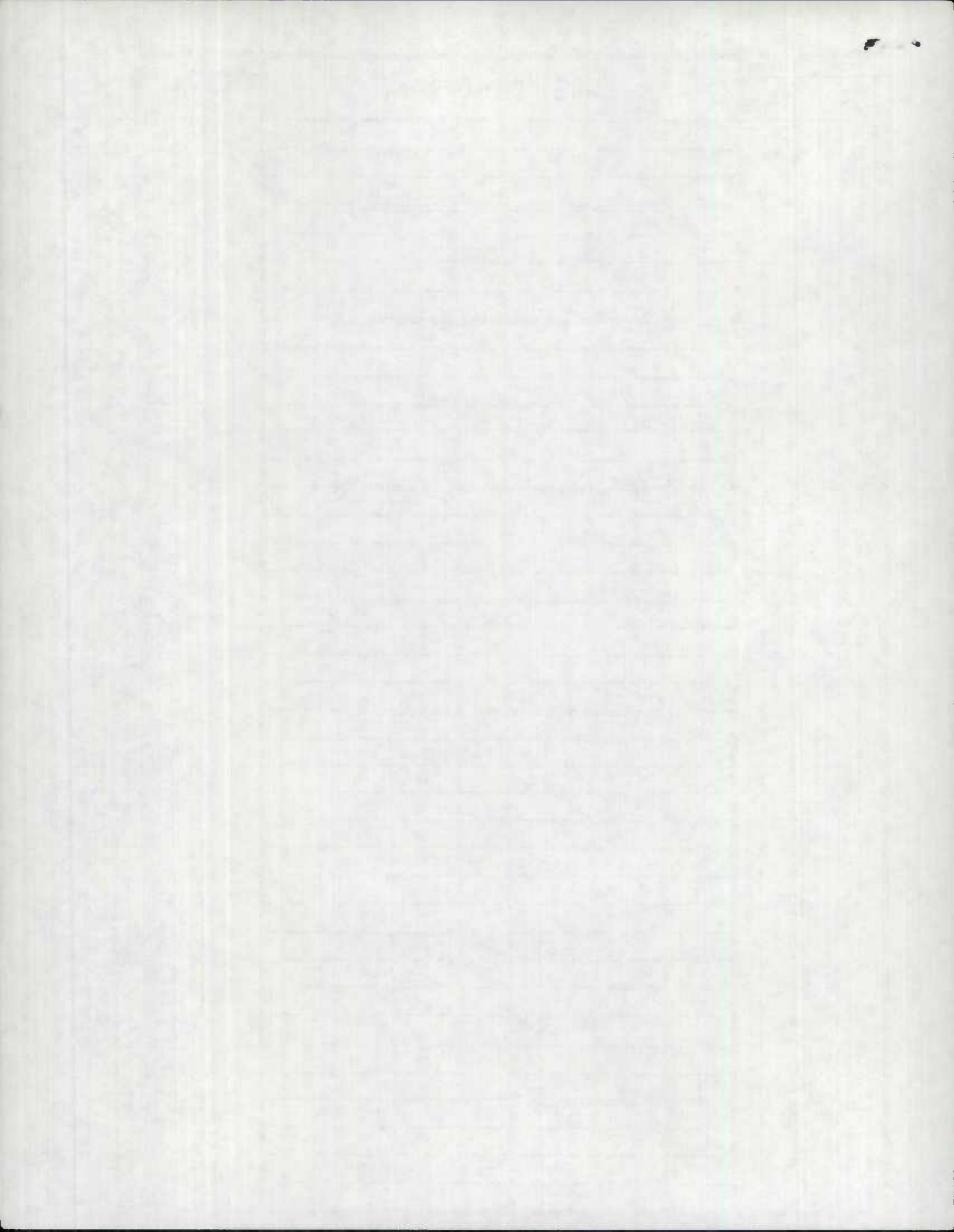
Sheet No. 1 OF

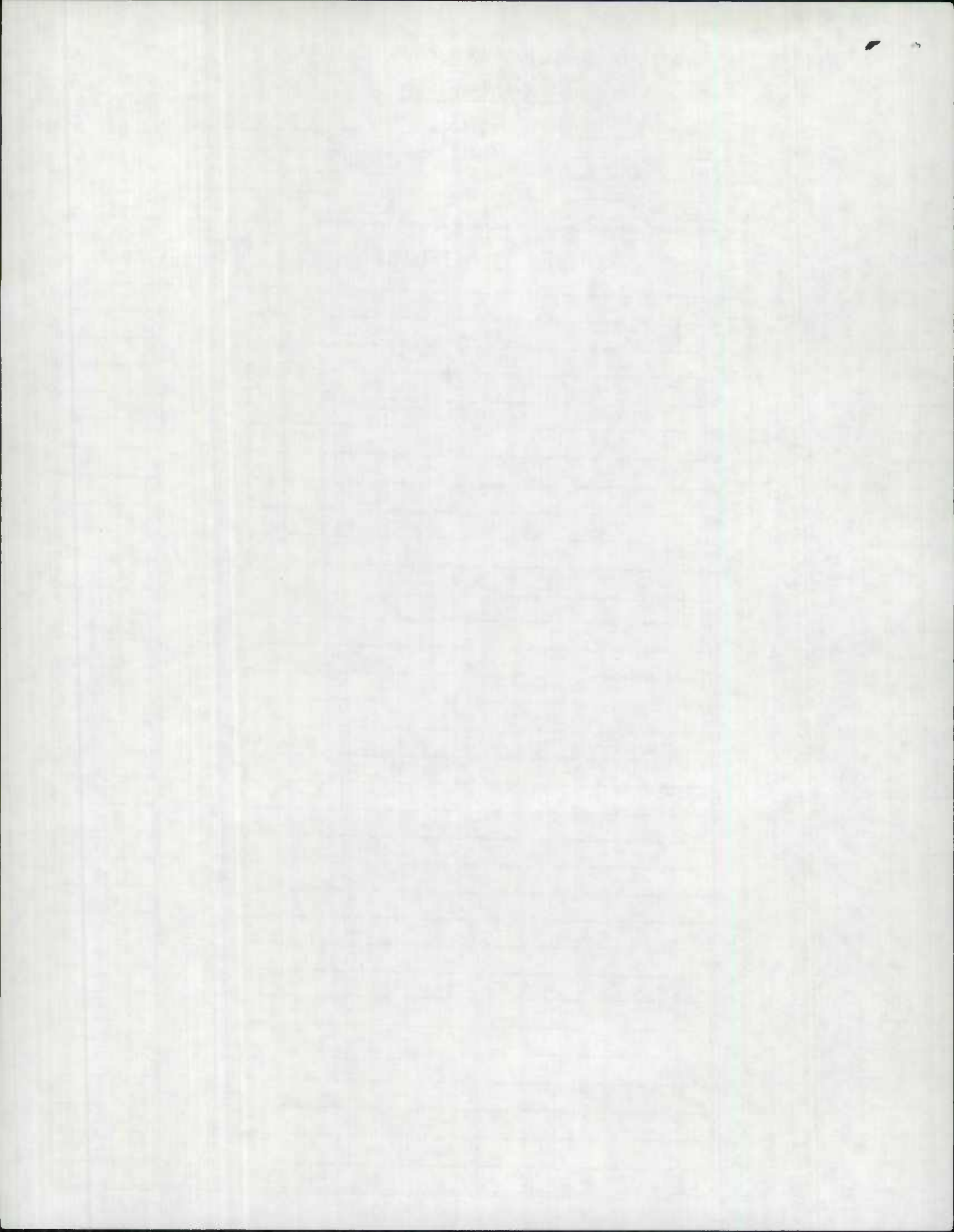
TRANS 88-5

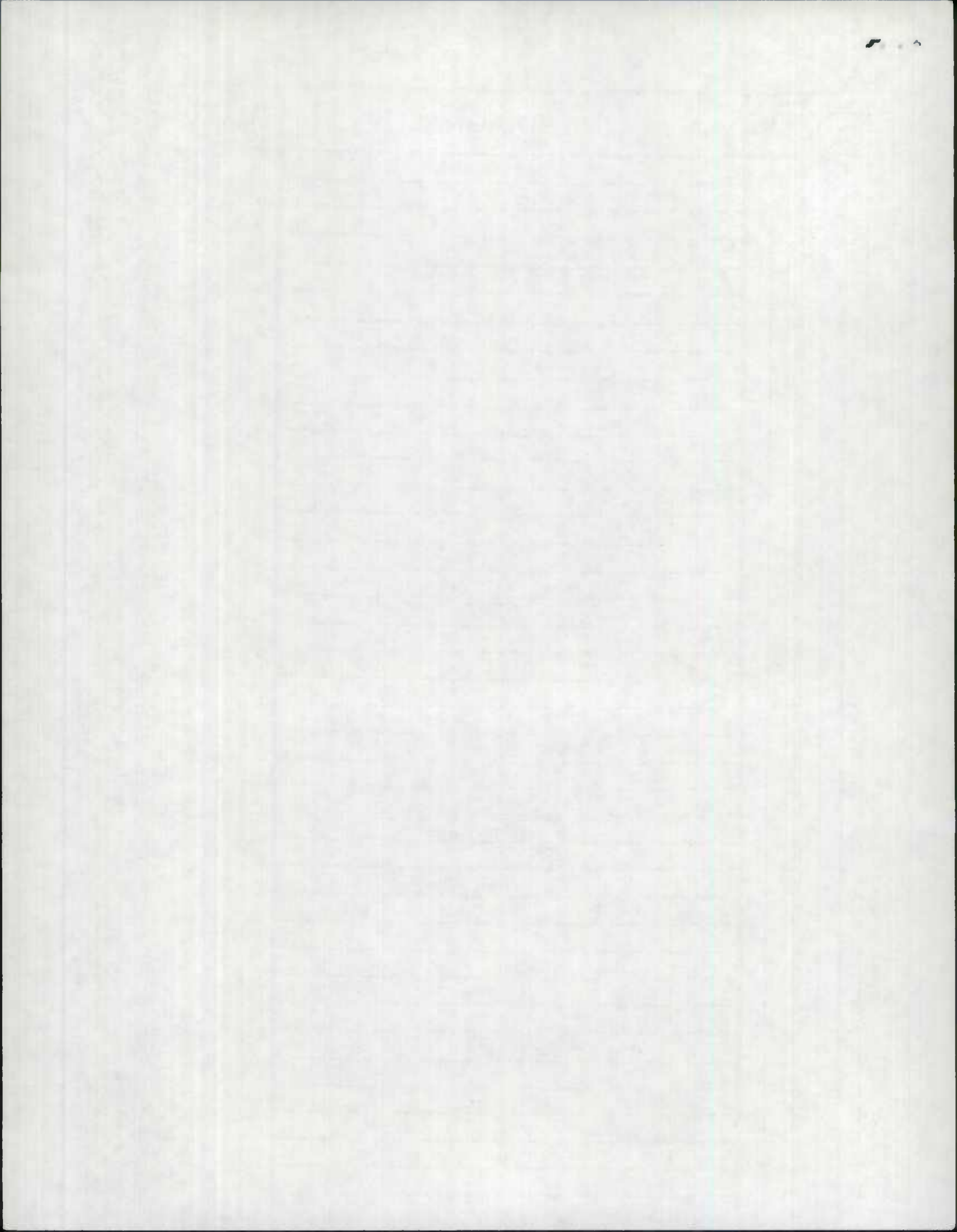
LINE DIAGRAM

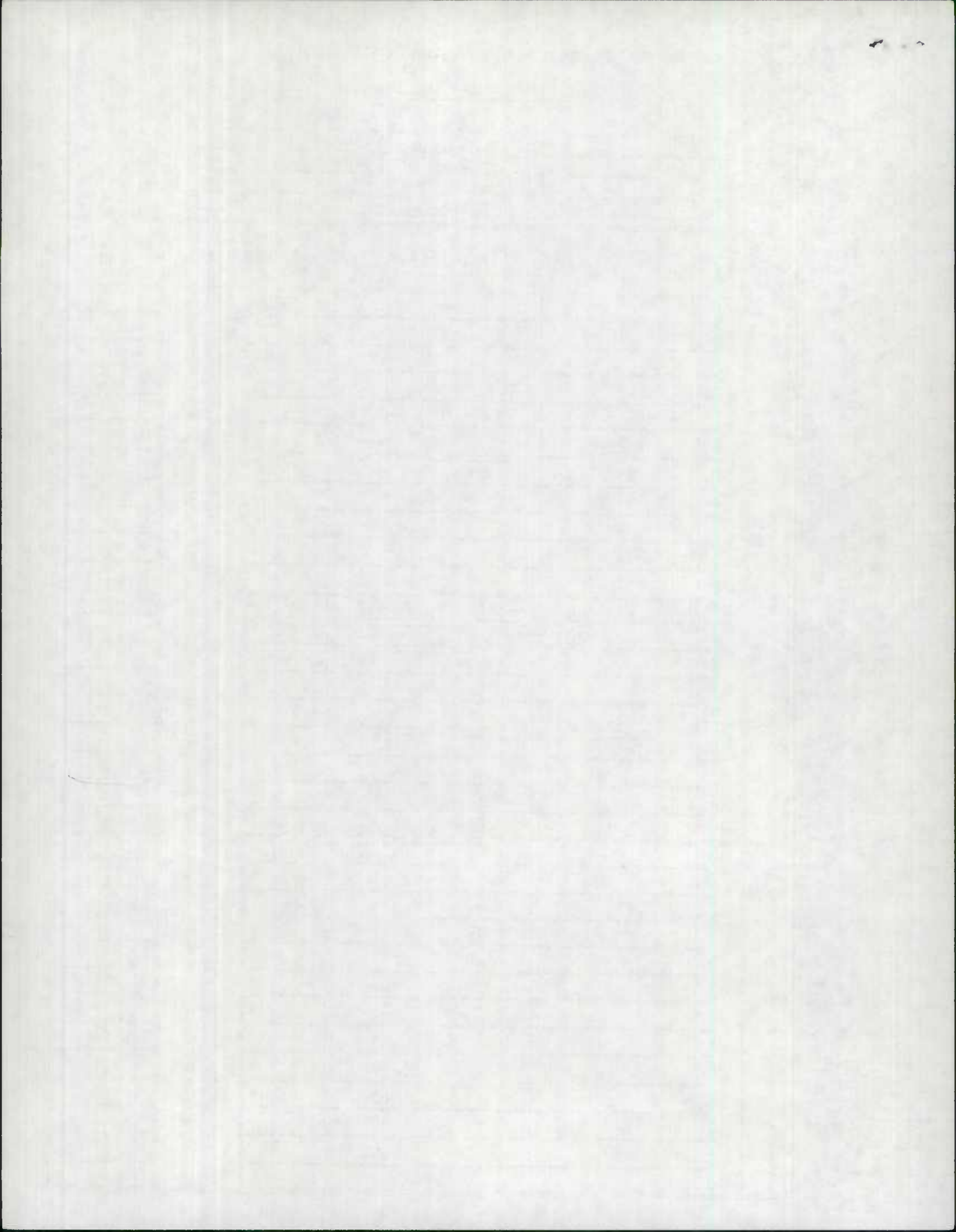
TRAFFIC		LINE DIAGRAM		TRAFFIC		PAVEMENT DATA
PKG. REST.	COM/IND. ACCESS			CONTROL	COM/IND. ACCESS	PKG. REST.
			0 33 B-AUTO REPAIR			34'I JC-C 2 ML
			MD 0 27 140	TL		X
			0 24			
			12'I			24'I LT 11'I RT
			0 21			5' CC 7' GR5 MED
			12'I			X 3 ML
			0 20			
			0 18 EXIT MALL CRANBERRY MALL			22'I LT 26'I RT
			0 17 ENT. MALL	SS E		5' C-C 16' GR5 MED
			0 16			X 4 ML
			0 10 ENT. CRANBERRY MALL	E		
			0 07 ENT. CHURCH	E		
			0 03 CHURCH			2-25'I 4' J MED
			CRANBERRY RO.			J' C-C
			CO. 0 00 399	SS.		4 ML
			(88-4)			











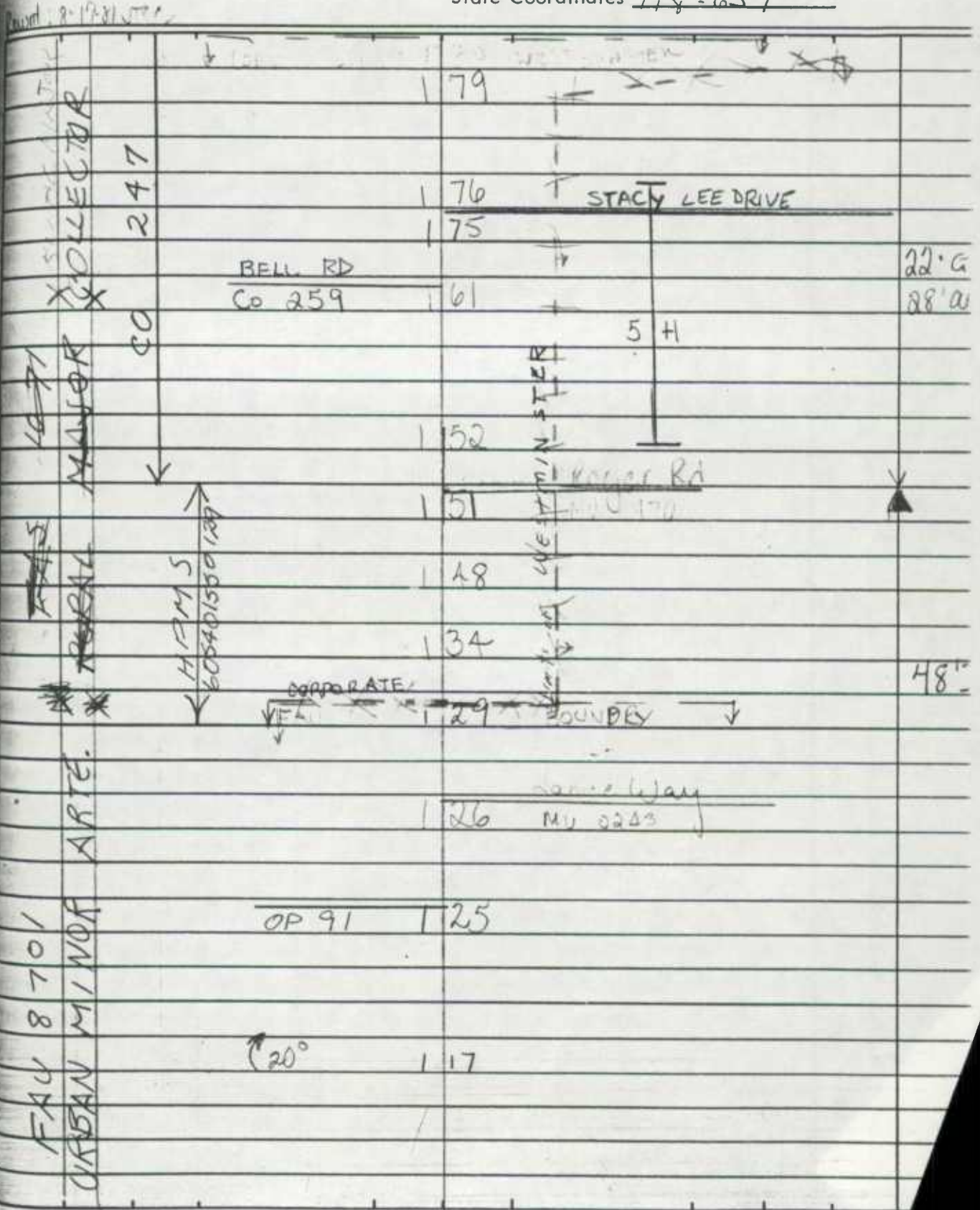
ROAD INVENTORY SHEET

Party Chief T LONDON
Recorder W WARFIELD
Helper _____

Road No. MU 540
Road Name UNIONTOWN RD
Sheet No. 3 OF 3
Date 3-19-73
County CARROLL DIST 7
State Coordinates 798-637

2-27-86 JE
MB

Map No. _____



48'I

X 24'I

27' 00"

35'I

J C-C

2 ML

X 24'I

31' 00"

31' 00"

31' 00"

2 ML

22' G

88' 00"

48' 00"

20°

COLLECTOR
 MAJOR
 MINOR
 ARTÉ.
 URBAN
 FAU

CO 247

CO

HFM 5 MCH
 608401550138
 481 055104503

BELL RD
Co 259

CORPORATE

MINISTER

STACY LEE DRIVE

5 H

Rogers Rd

BOUNDARY

MU 2243

OP 91

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148

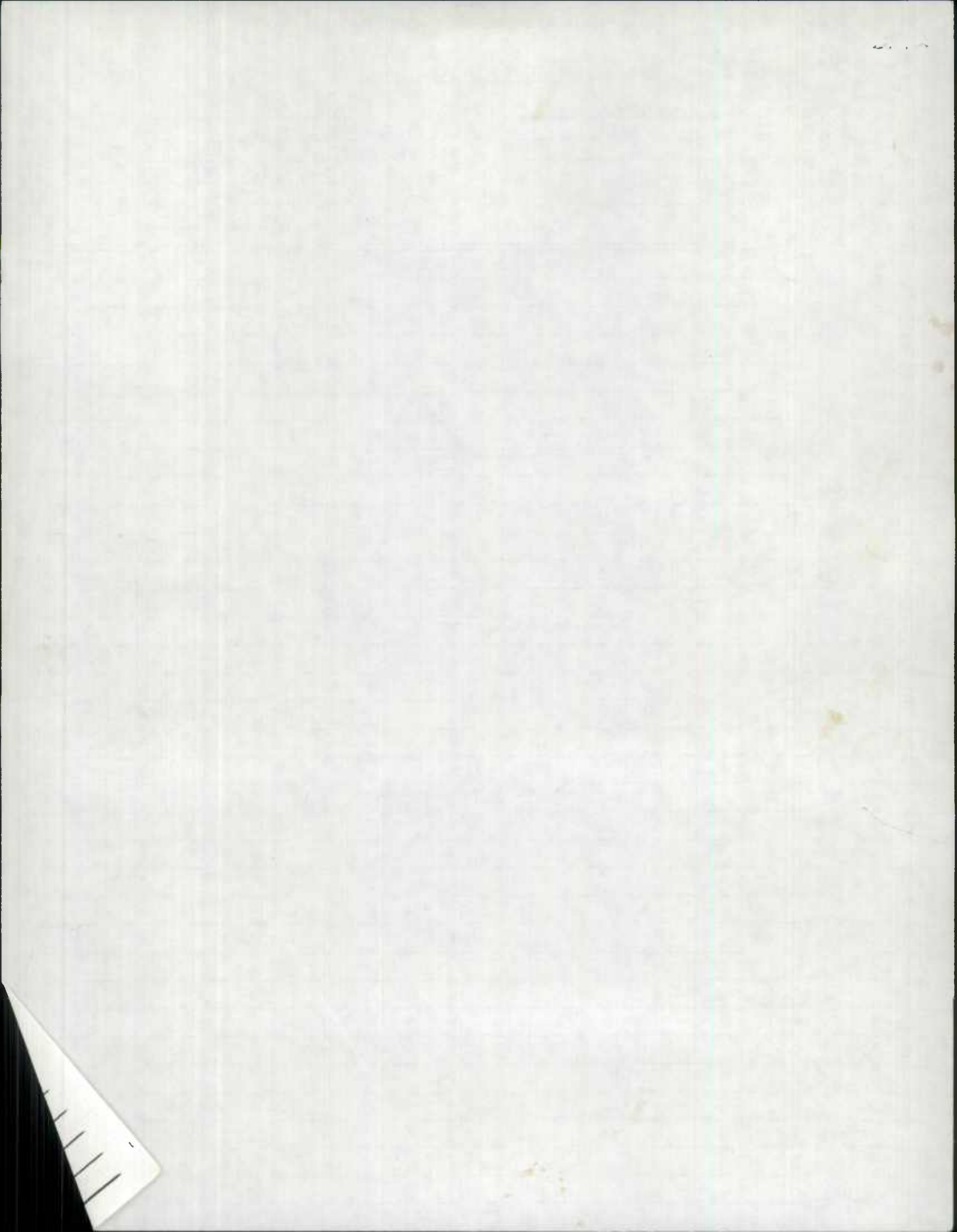
134

129

126

125

117

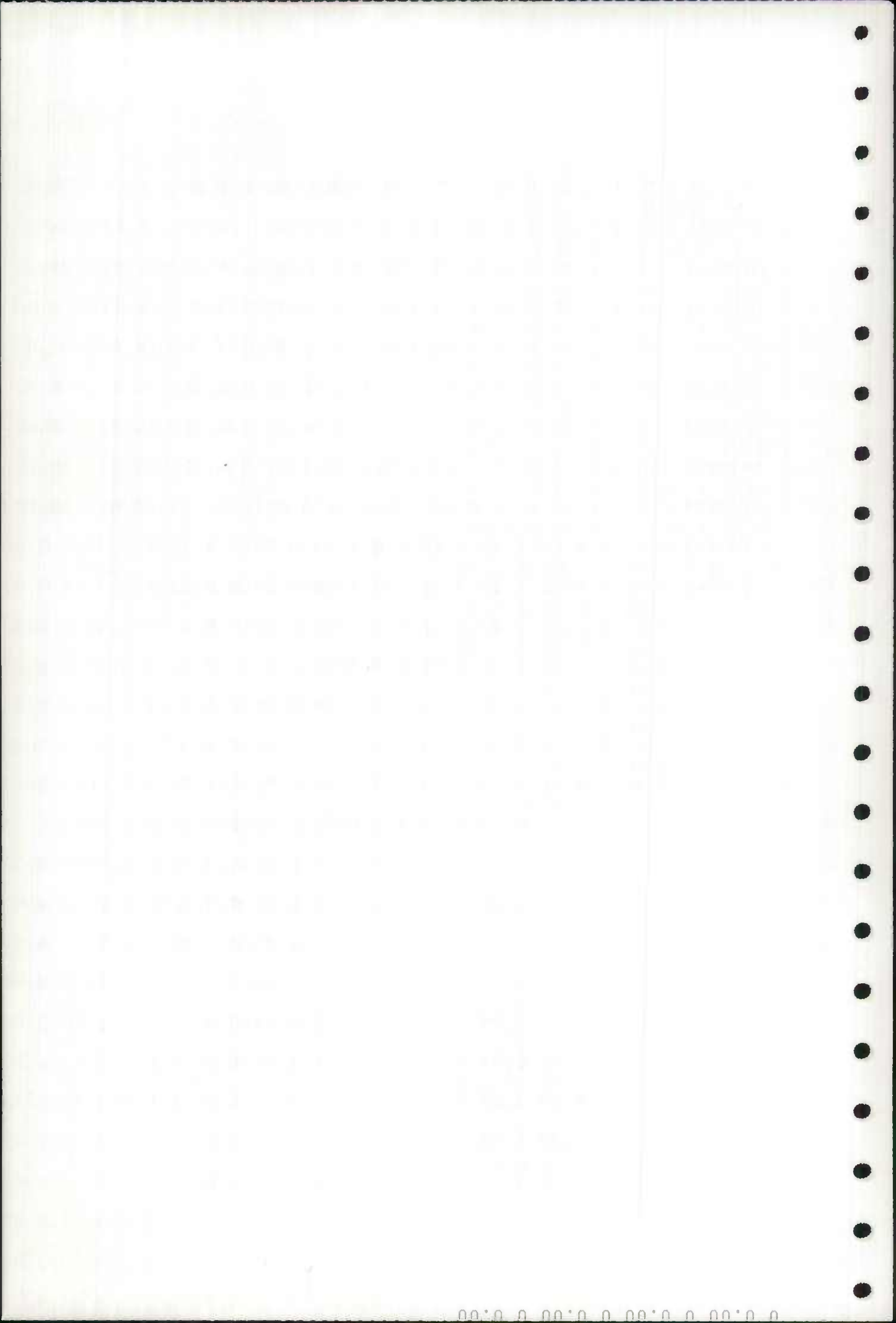


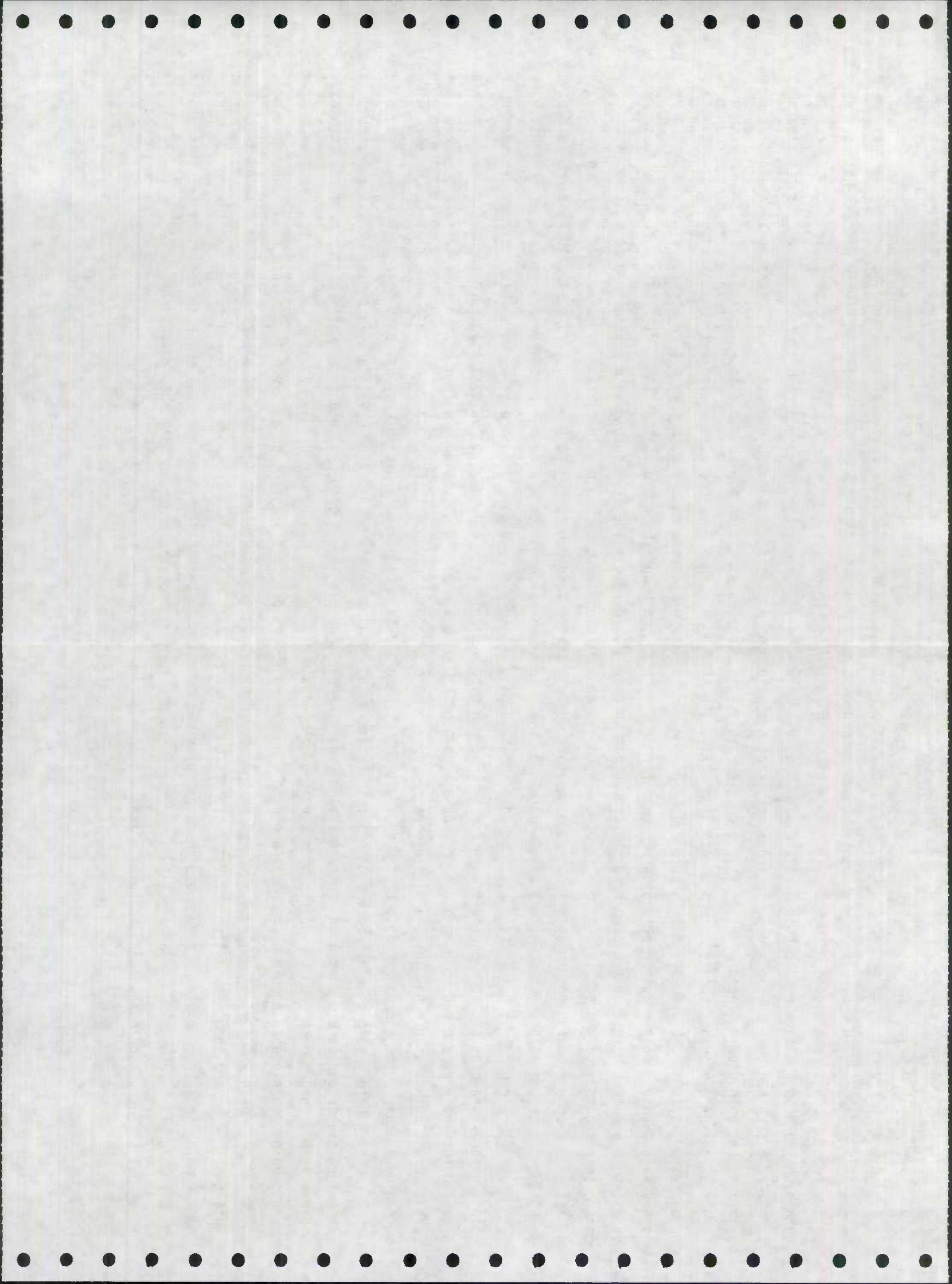
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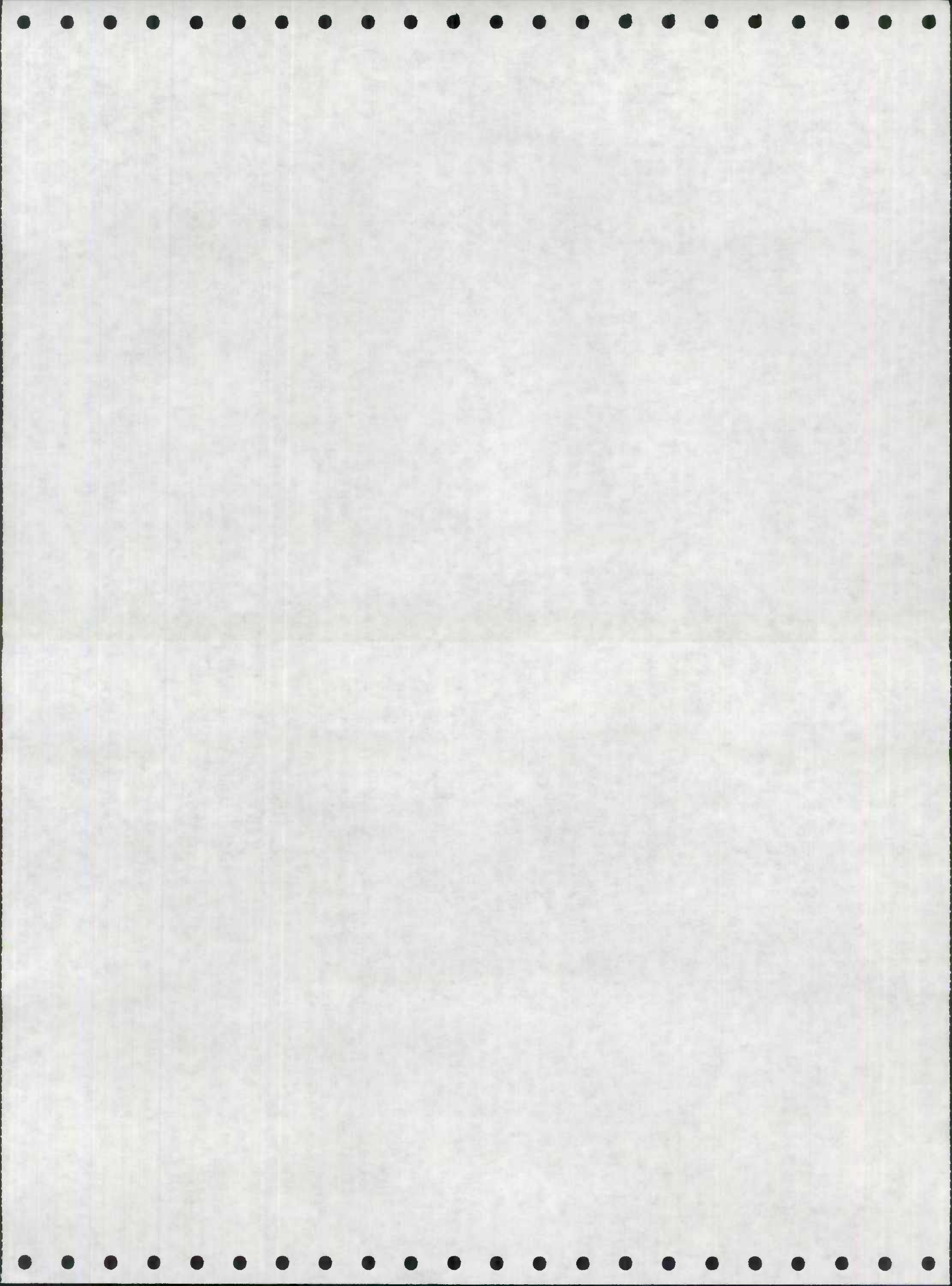
EXCISE FORMS

06

011 BUSINESS FORMS







DATE : 05/13/92

HPMS SAMPLE SECTIONS
HIGHWAY INFORMATION SERVICES DIVISION

Cecil

CO	ROUTE	BEGIN	SECT LENGTH	END	MAP	COORD
----	-------	-------	-------------	-----	-----	-------

1	07	CD 0076	03.15	00.89	04.04	A-15	1093-662
---	----	---------	-------	-------	-------	------	----------

2	07	CD 0145	00.00	01.03	01.03	A-16	1138-682
---	----	---------	-------	-------	-------	------	----------

3	07	CD 0145	01.03	01.02	02.05
---	----	---------	-------	-------	-------

Brewster Bridge Road

4	07	CD 0184	00.00	00.60	00.60	A-16	1127-669
---	----	---------	-------	-------	-------	------	----------

5	07	CD 0184	00.60	00.13	00.73
---	----	---------	-------	-------	-------

6	07	CD 0184	00.73	00.10	00.83
---	----	---------	-------	-------	-------

7	07	CD 0184	00.83	00.19	01.02
---	----	---------	-------	-------	-------

8	07	CD 0184	01.02	00.32	01.34
---	----	---------	-------	-------	-------

9	07	CD 0187	00.00	00.46	00.46	A-15,16	1123,5-653
---	----	---------	-------	-------	-------	---------	------------

10	07	CD 0187	00.46	00.29	00.75
----	----	---------	-------	-------	-------

11	07	CD 0410	02.00	00.75	02.75	A-15	1109-671
----	----	---------	-------	-------	-------	------	----------

DATE	DESCRIPTION	AMOUNT	BALANCE
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DATE : 05/13/92

HPMS SAMPLE SECTIONS
HIGHWAY INFORMATION SERVICES DIVISION

	CO	ROUTE	BEGIN	SECT LENGTH	END	MAP	COORD
✓12	07	MU 0052 052 <i>BLUEBALL RD</i>	00.00	00.06	00.06	A16	1128-648
✓13	07	MU 0300 052 <i>HIGH ST</i>	00.64	00.24	00.88	A16	1130-648
✓14	07	MU 0360 052	00.00	00.17	00.17	B16	1128-647
✓15	07	MU 0360 052 <i>LOCUST LA</i>	00.17	00.33	00.50	B16	1128-647
✓16	07	MU 0370 052	00.44	00.06	00.50	A-16	1131-651
✓17	07	MU 0370 052	00.50	00.03	00.53	"	"
✓18	07	MU 0575 052	00.00	00.31	00.31	B16	1134-647

052 - ELKTON

PHYSICS DEPARTMENT

PHYSICS 551

LECTURE 1

1.1

1.2

1.3

1.4

1.5

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1.10

1.11

1.12

1.13

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1.15

1.16

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1.19

1.20

ROAD INVENTORY SHEET

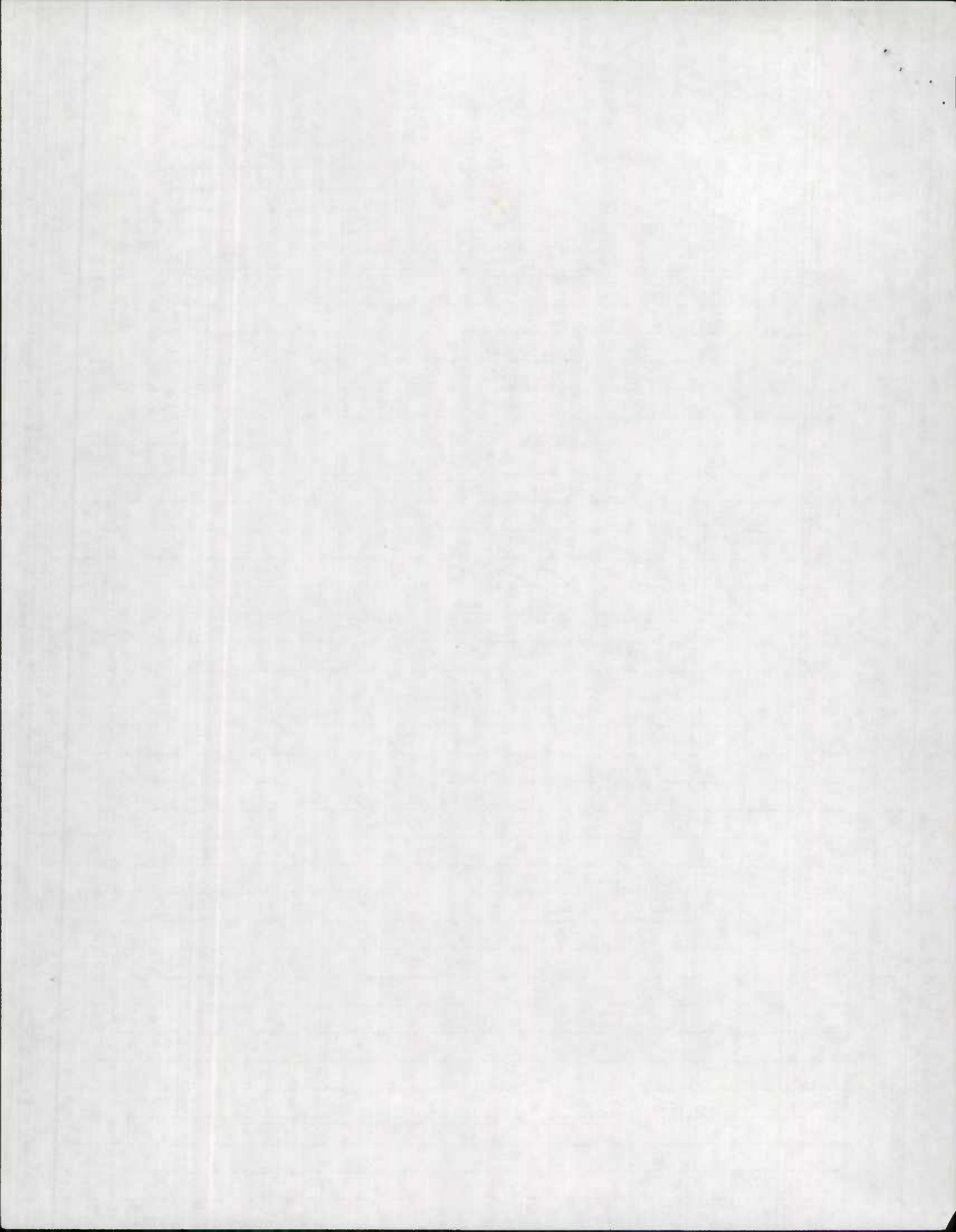
Road No. Co 76
 Road Name THEODORE RD
 Sheet No. 3 of 4
 Date 4-11-77
 County CECIL
 State Coordinates _____

↑
HPMS
↓

	F	459	
		408	F
		404	SEE BR SH. 1A
		398	JAMIES Rd H
		372	CO 832
		333	F
		329	
	RED	ROAD	Rd
	CO	315	79
		313	F
	H	293	H
		290	H
		278	F
	H	275	
		272	H
		262	DR
		260	F
	EBENEZER	CHURCH	Rd
	CO	247	92
		231	H
			same

HPMS
329
333
372
398

20' AT
30' CW



ROAD INVENTORY SHEET

Party Chief F SFTIAN
 Recorder FORREST
 Chairman

VER
4-12-77

Road No. CO. 145
 Name LITTLE EGYPT RD.
 Sheet No. 10F2
 Date 6-26-64
 County CECIL

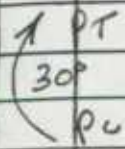
68-35
68-36

77-19+20 1138-682

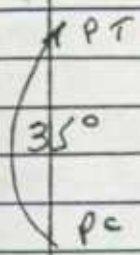
*REVISED 12-4-73 GLEN FARMS

89-18 AT

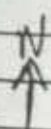
		080	DR.
		078	H
		075	
	F	071	H
			SMITH RD. CECIL DR
		066	Co. 153
		059	
		058	DR.
		056	
	H	054	RIDGE CREST H RD
		049	Co. 152 712 *
		041	H
		034	EX 1003 18-28-B WCE 026 RIVER
	CHRISTINA		SEE BR. SH 1-A
	BRENTON WAY		
	Co 361 68-40	028	
		019	H
	H	015	H
	H	007	
	H	004	
	MO	000	273



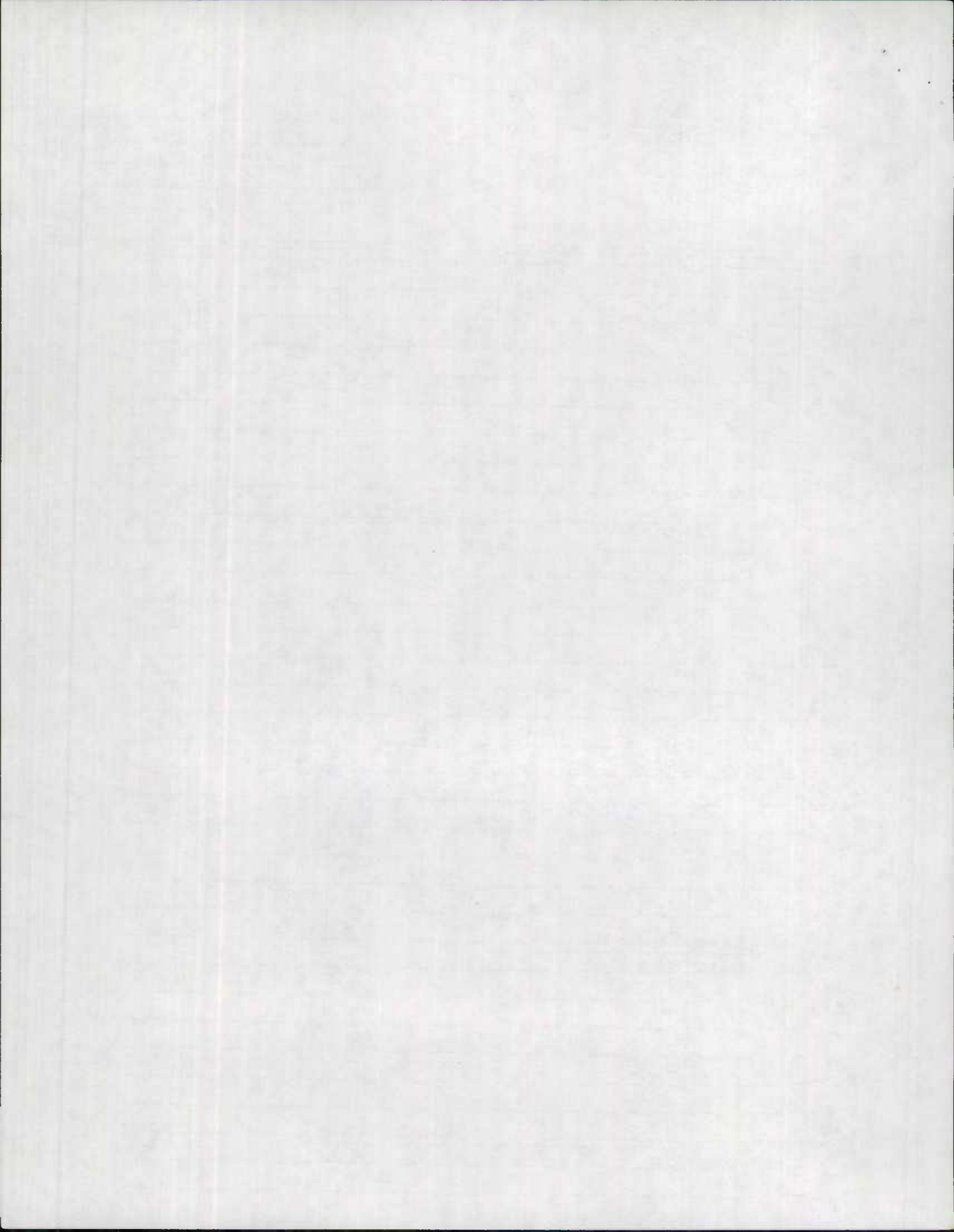
19.44



H 115



77-19
20' I
16' G
30' ew



ROAD INVENTORY SHEET

Party Chief STIAN FORREST
 Recorder C. FORREST
 Chairman _____

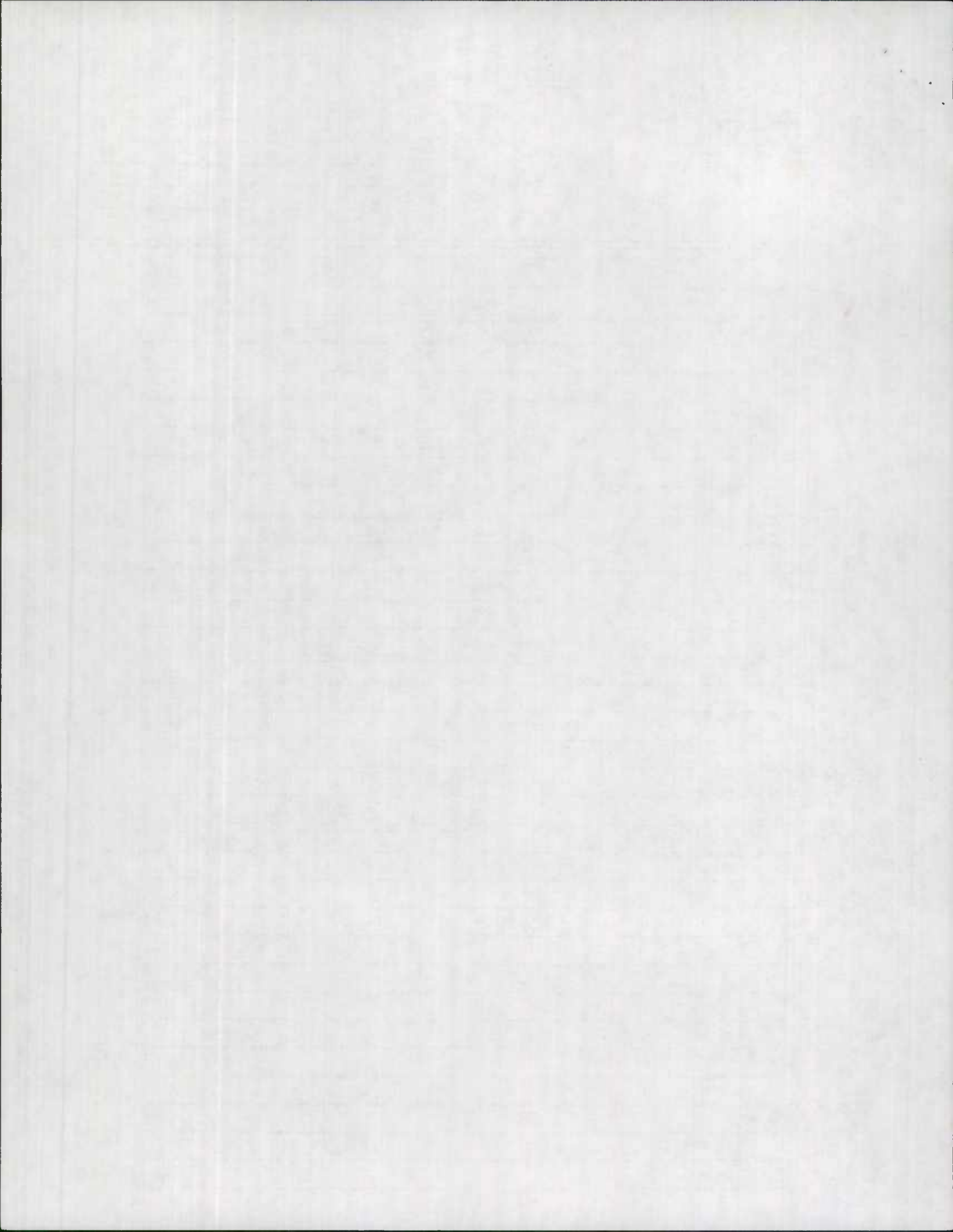
Road No. Co. 145
 Name _____
 Sheet No. 2 of 2
 Date 2-26-64
 County CECIL

68-35 Bridges
 68-36 _____

		A	↑	MD	205	896	↓	A
Collector	H.P.M.S.	30/1550/100/10/10	X		194	H		
					186	CE 0-5		
						BR. 34-1-B		
						SHARELESS DR		
					H	178	75-14 Co. 482	
					H	174	H	
						170	BLACK OAK F DR	
						162	75-15 Co. 483	
					F	160	H	
					H	156	H	
		153	H					
	F	144	CIRCLE EAST ROAD	H				
		UNION SCHOOL RD						
		BOB STREET RD	34	Co 363	68-46 WESTOVER			
		Co. 154	113					
			H	103				
				099	H			
			H	095				
				092	H			
				088	H			
				084	H			

18 G
 26 C-W

Same



ROAD INVENTORY SHEET

88-14
CG/AL
12-22-88

Party Chief F. SETTAN
Recorder C. FORREST
Helper _____

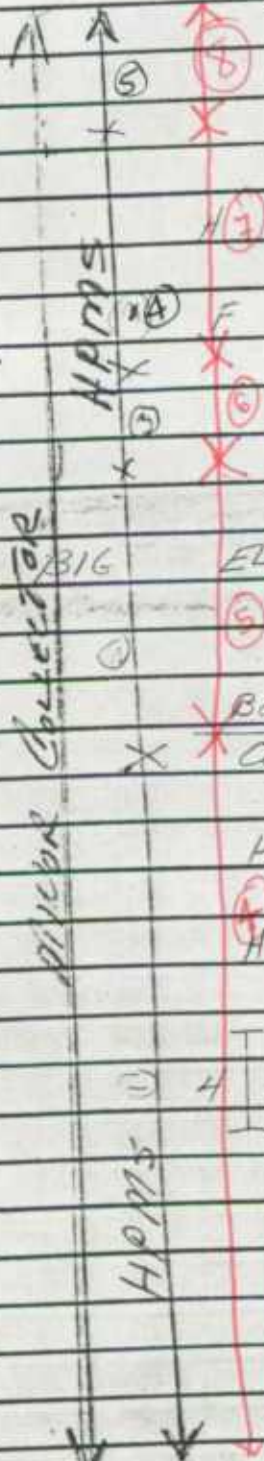
Road No. Co. 184
Road Name BREWSTER BRIDGE RD
Sheet No. 1 OF 1
Date 7-9-64
County CECIL
State Coordinates 1127-669

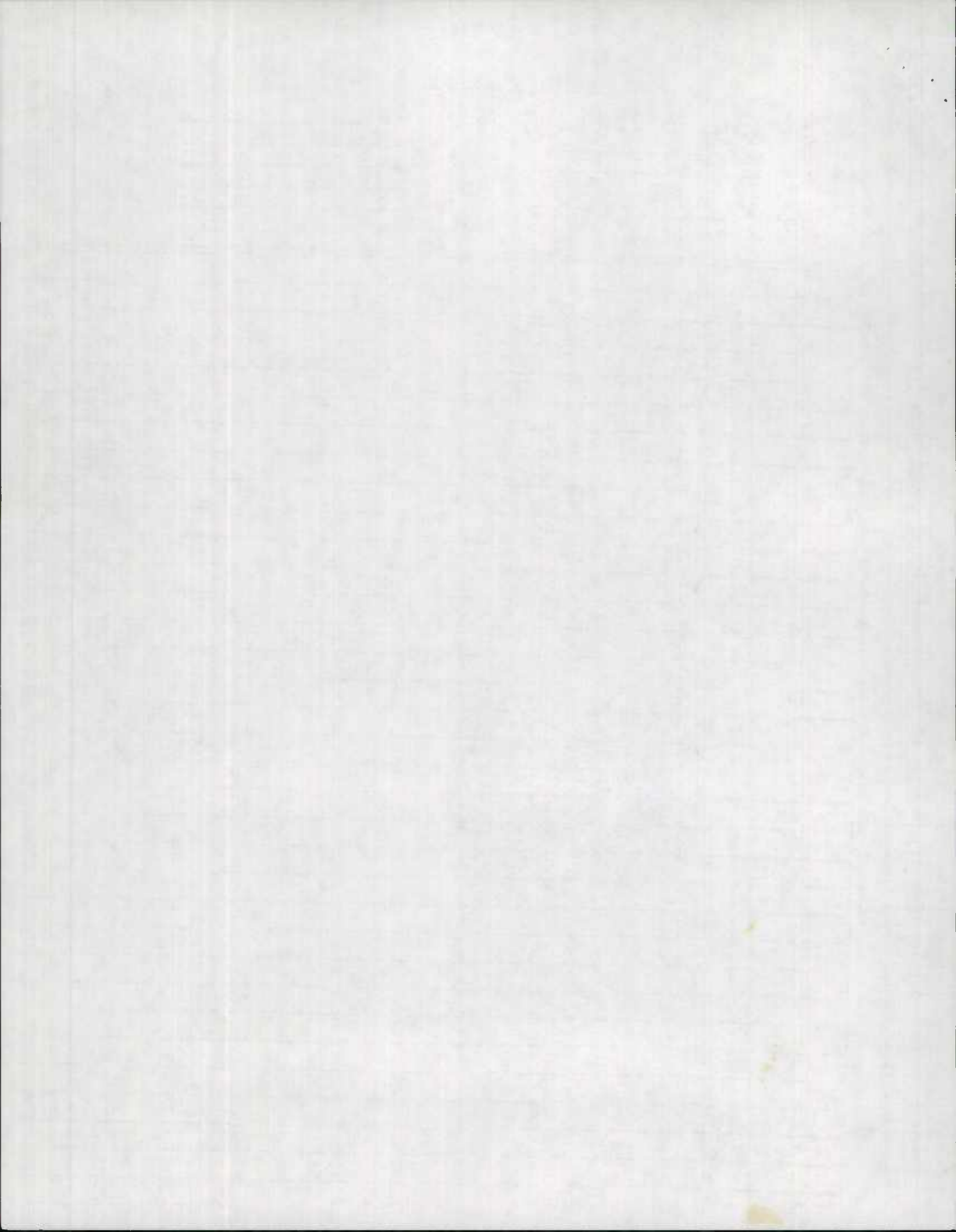
Map No. _____ +1-30-75
W.D+M.Z

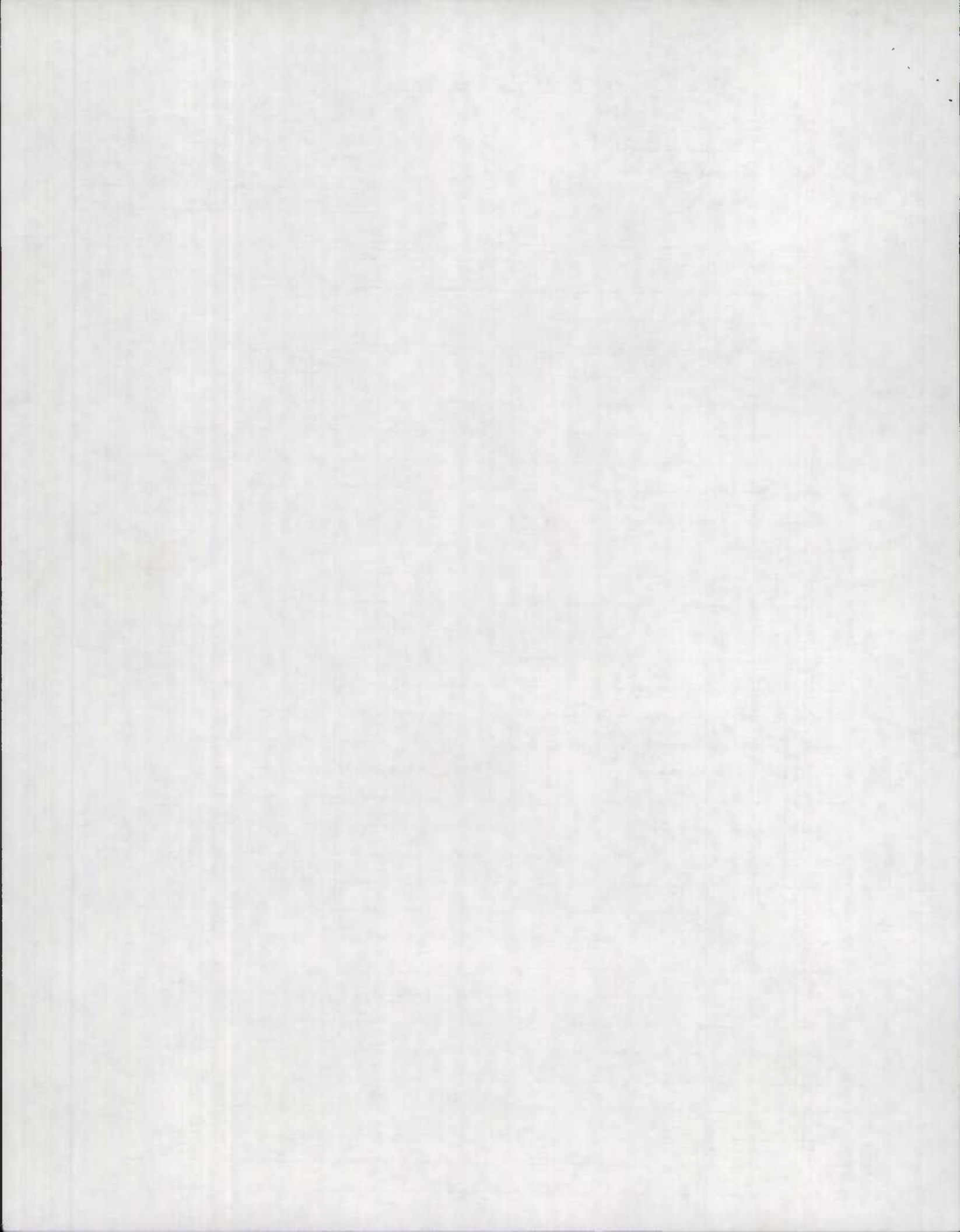
REVISED 12-7-73

Station	Notes	Remarks	Width
	Appleton Co. 134 144	Rd.	20' I 2ml
	102	H	22' I
	094		2ml 10' F
	086		30' I
	083		28' I 2-3' F 2ml
	074	H	2ml
	073	PCE079	
	071	CREEK BRUSH 1-A	24' I 2-3' F 34' CW
	Booth Rd Co. 182		
	060		
	H		
	050		
	H		
	046		
	038		
	030		
	009	F	
	006	H	16' F 30' CW
	ELK MILLS RD Co. 181		

HPMS
 HPMS
 BIG
 Collector
 HPMS








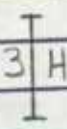
SHA 51.3-8
11-15-72

ROAD INVENTORY SHEET

Party Chief F. SETTAN
Recorder C. FORREST
Helper _____

Road No. Co. 410
Road Name UNION CHURCH RD
Sheet No. 3 of 4
Date 6-30-64
County CECIL
State Coordinates _____

Map No. _____

	H	258	
	F	247	
		230	F
	Flood 	225	
		210	
		207	CEX 354
	N.B.	206	LA.
	I-	205	95
	S.B.	204	LA.
		203	26' JG-C
		200	*
	Union Valley Rd		
	Co. 341	195	
		181	H
		179	H
		174	
			20'
			2n
	Co. 162 Co. #20 Leeds Rd	172	TONYS Rd.
	CHURCH	170	CEM
	HALL	168	

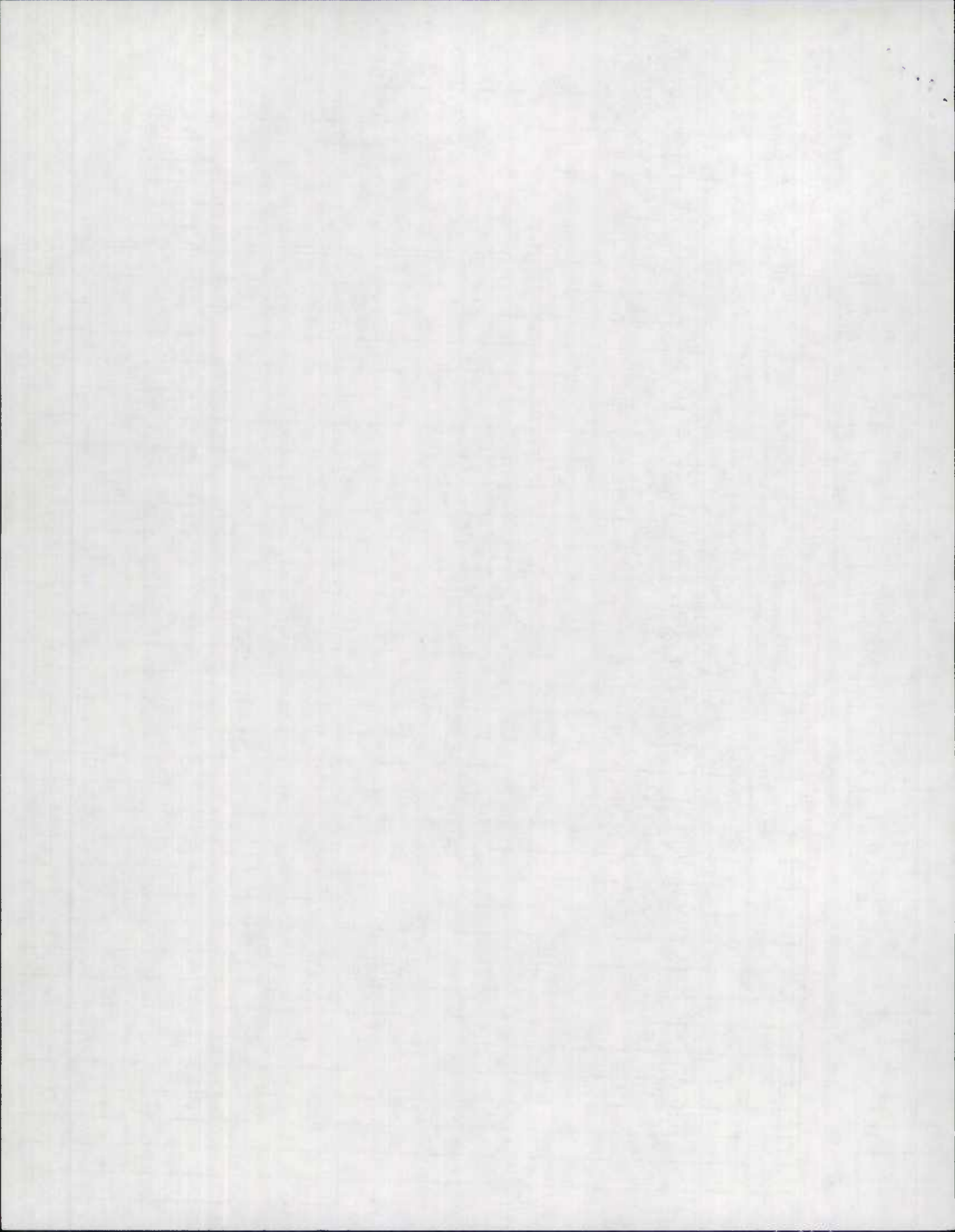
MURDER COLLECTOR

KMS
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489

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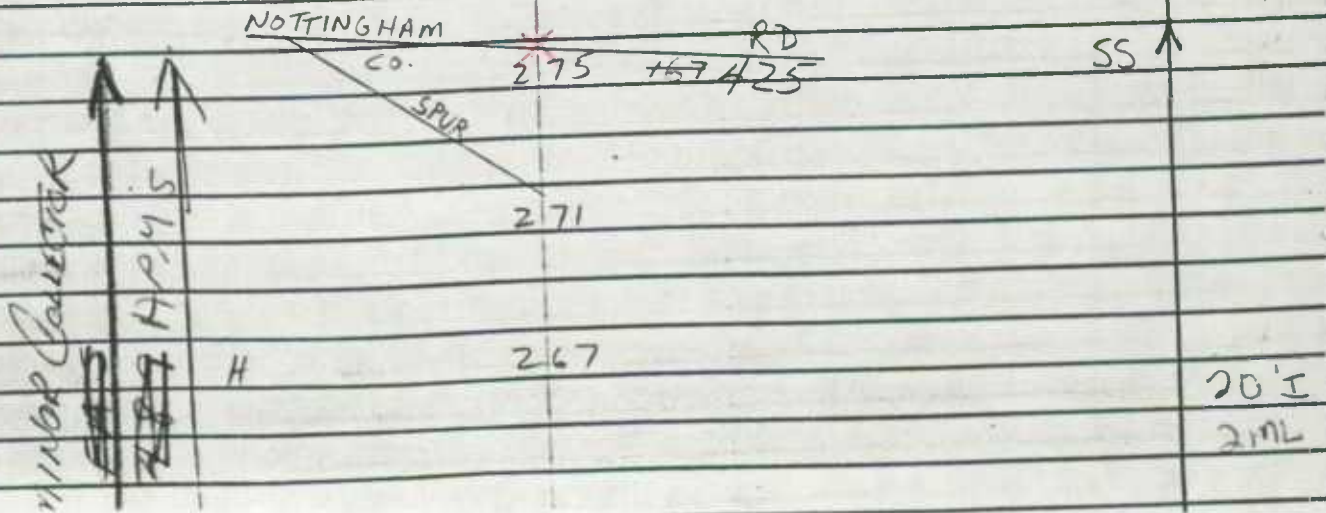
30' H
20' L



SHA 51.3-8
11-15-72

ROAD INVENTORY SHEET

Road No. Co. 410
Road Name UNION CHURCH RD
Sheet No. 4 OF 4
Date _____
County _____
State Coordinates _____



5

ROAD INVENTORY SHEET

by Chief F. SETTAN
Order C. FORREST
Person

Road No. 0052
Name BLUE BALL RD #2
Sheet No. 10F1
Date 8-6-64
County CECIL

VER
4-26-77

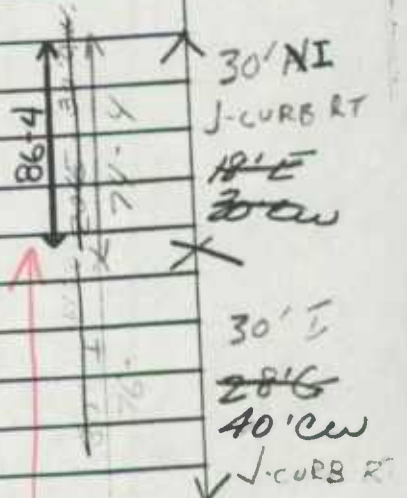
ELKTON

12

65 X

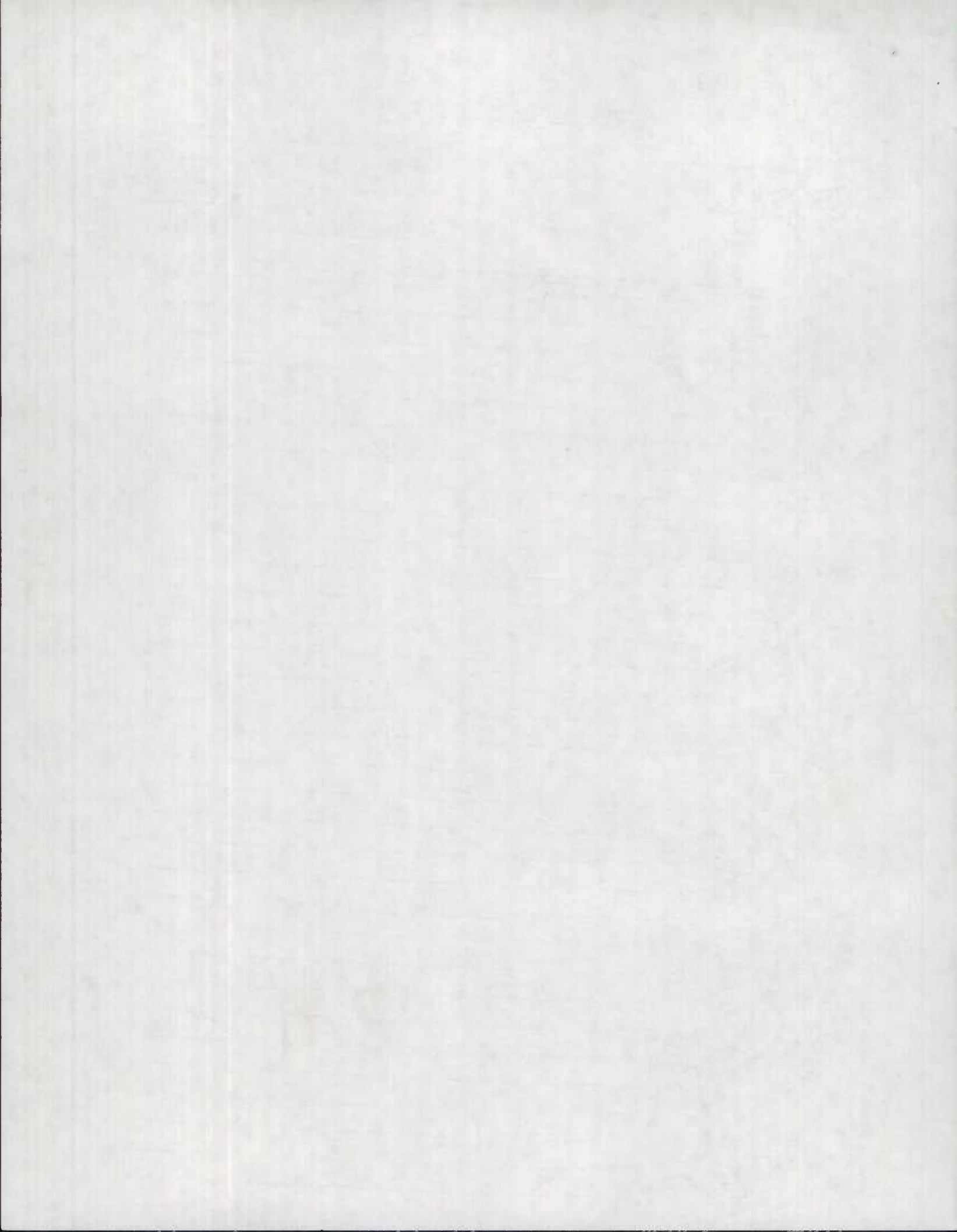
ROAD END
010

MUN 300
006 HIGH ST.



100 7D

AWING
LAW

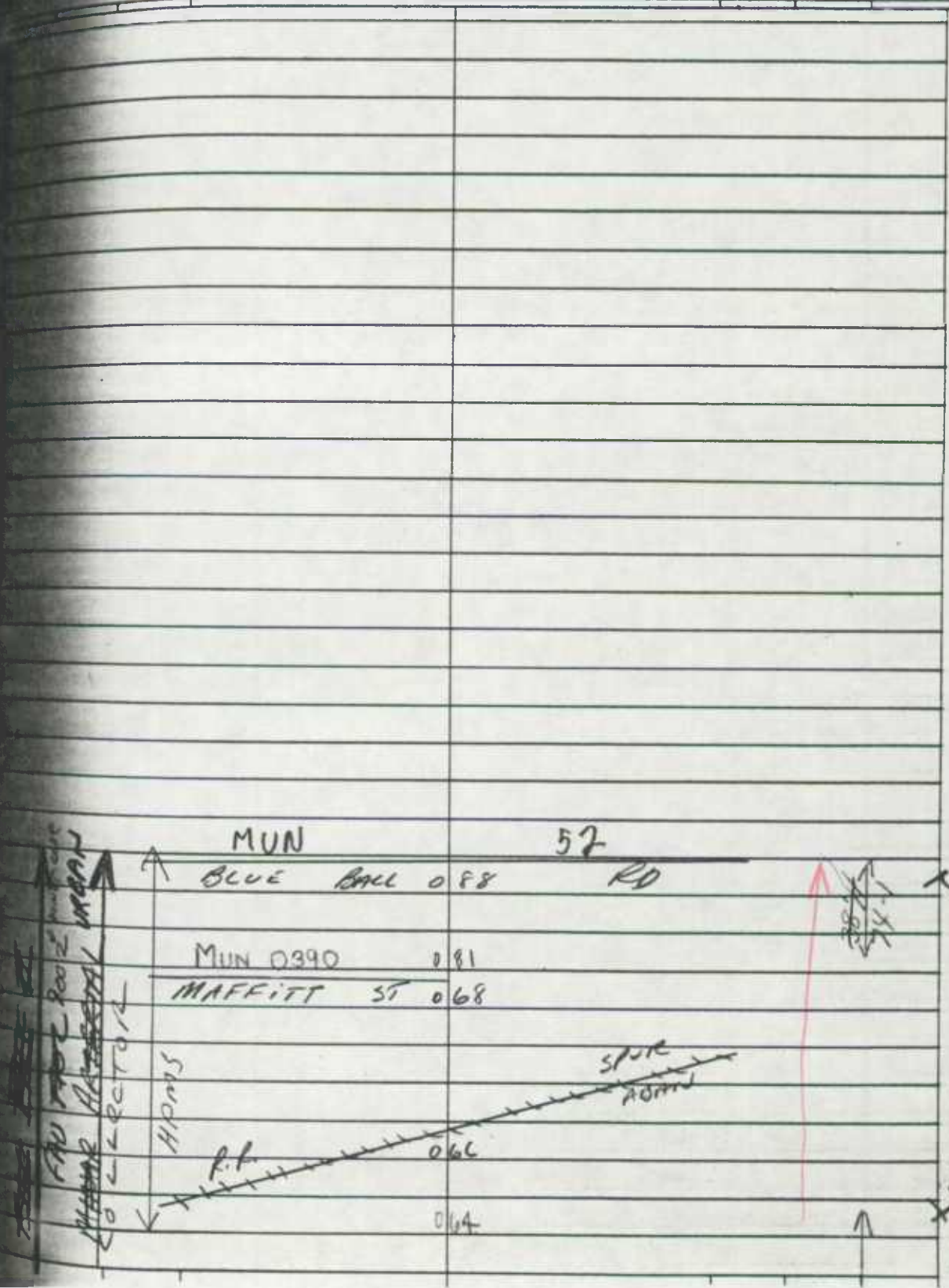


ROAD INVENTORY SHEET

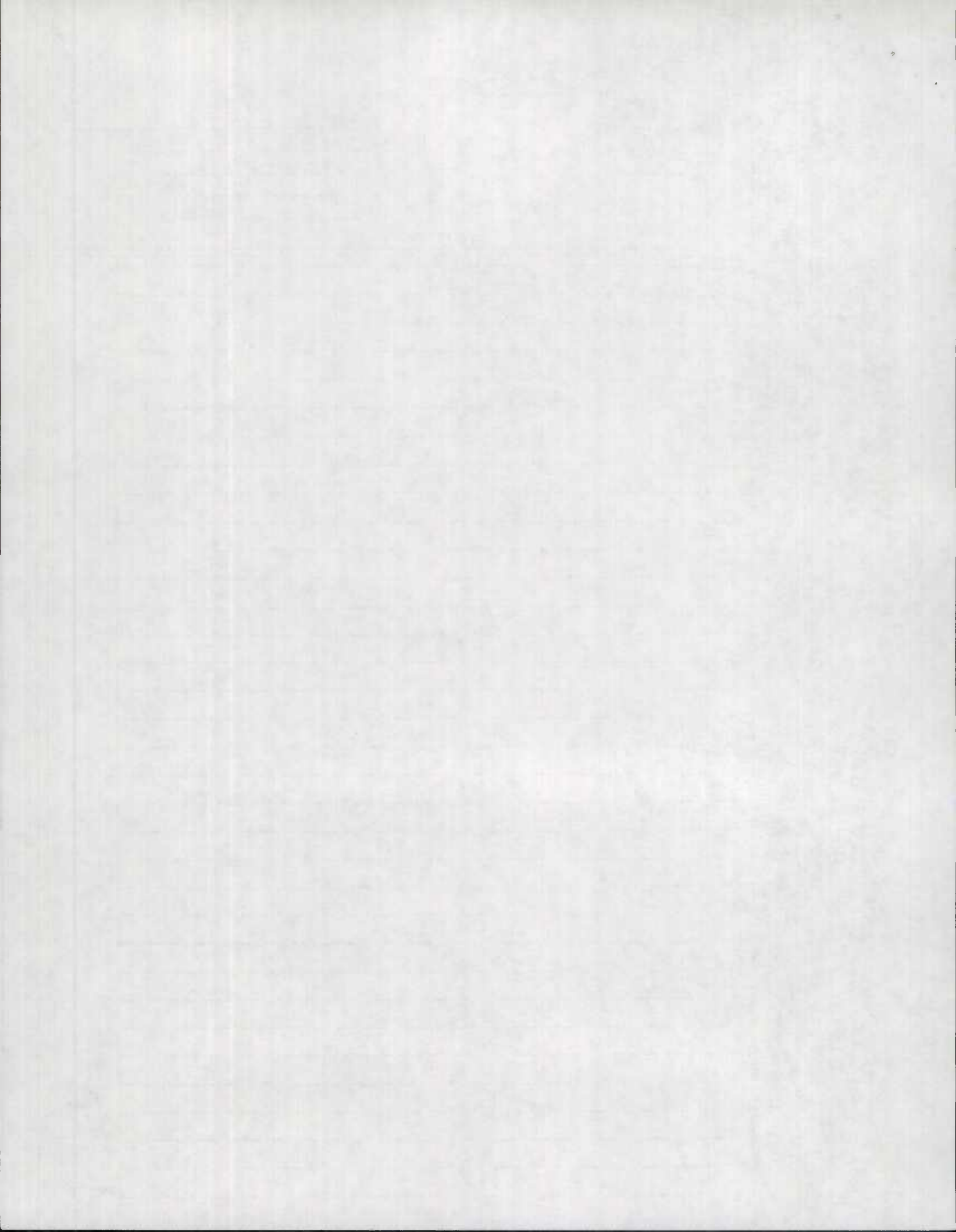
Chief F. SETTAN
C. FORREST

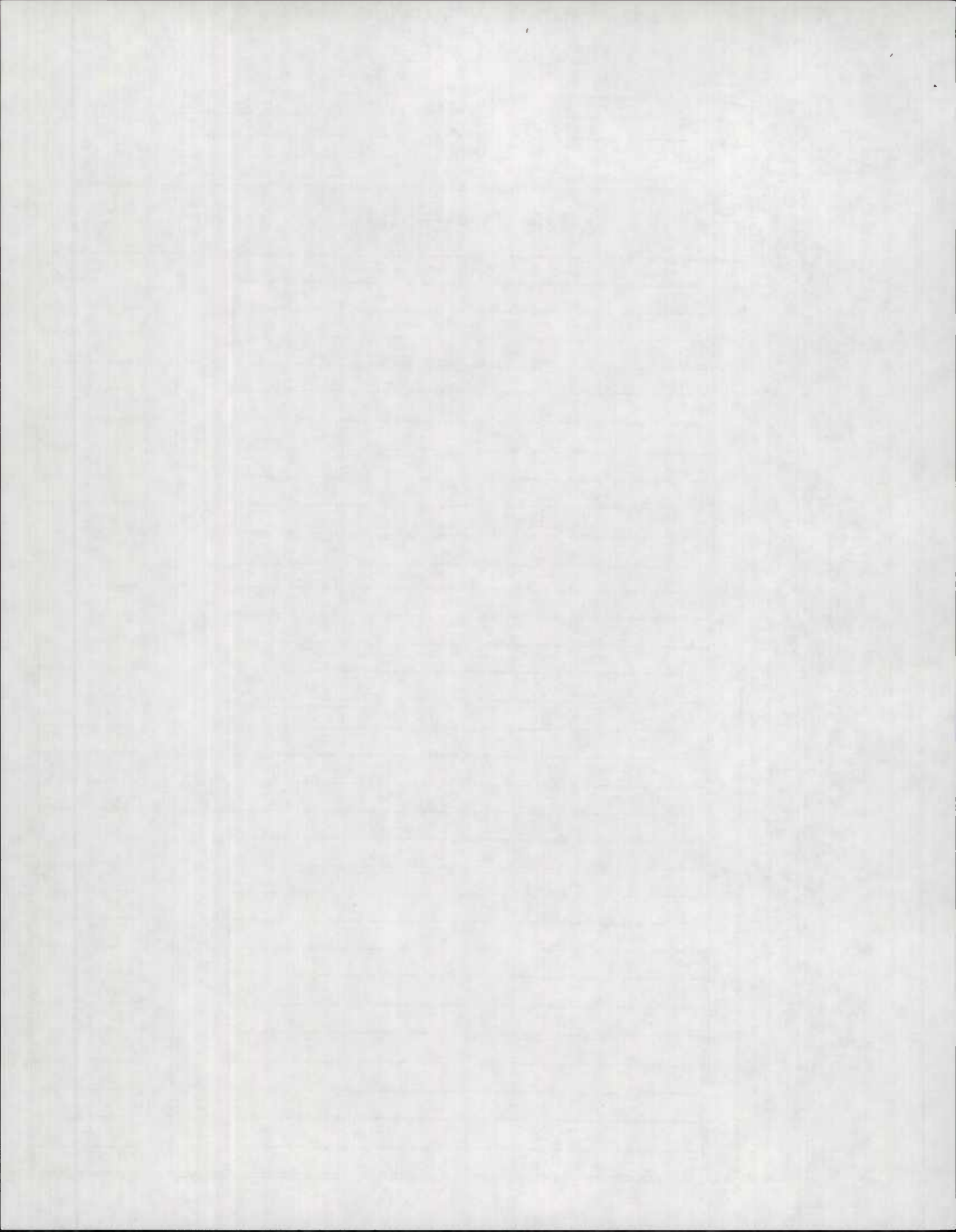
Road No. 0300
Name HIGH ST
Sheet No. 2 OF 2
Date 8-5-64
County CECIL

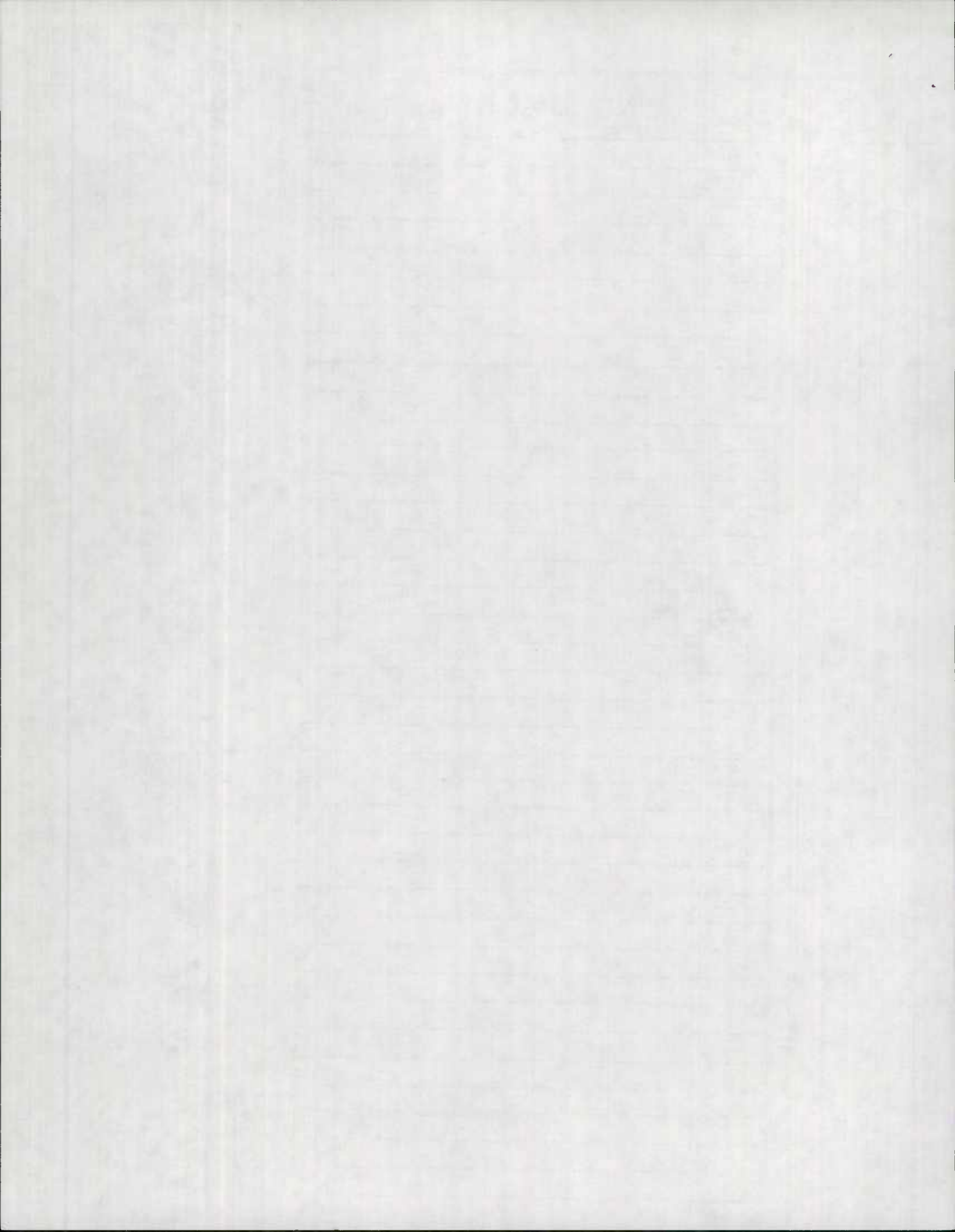
ELKTON



30'H
J.C.C
SAME







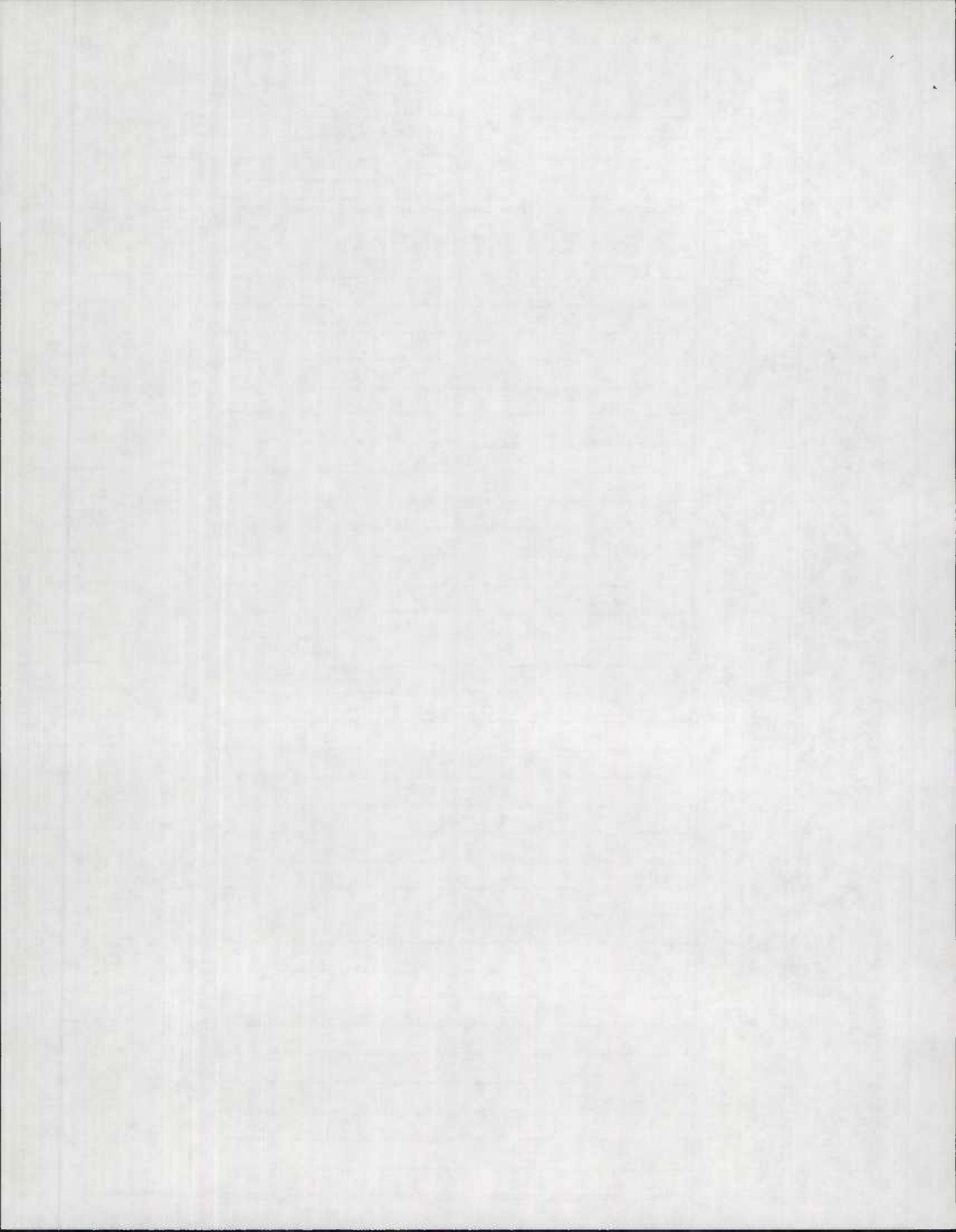
ROAD INVENTORY SHEET

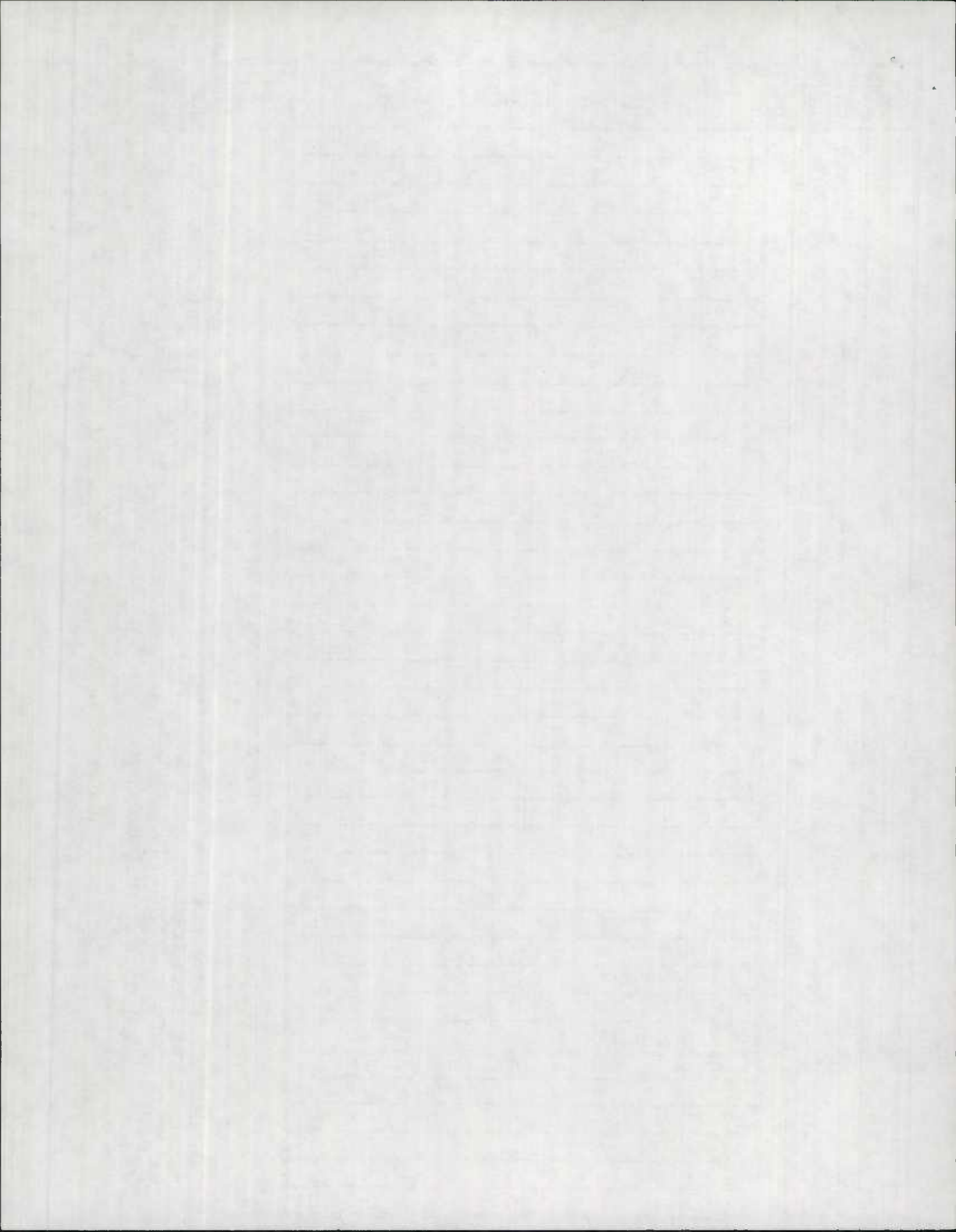
City Chief GD
 Recorder BB
 Assistant _____
 Map No./Dir. 15
 State Coordinates ELKTON

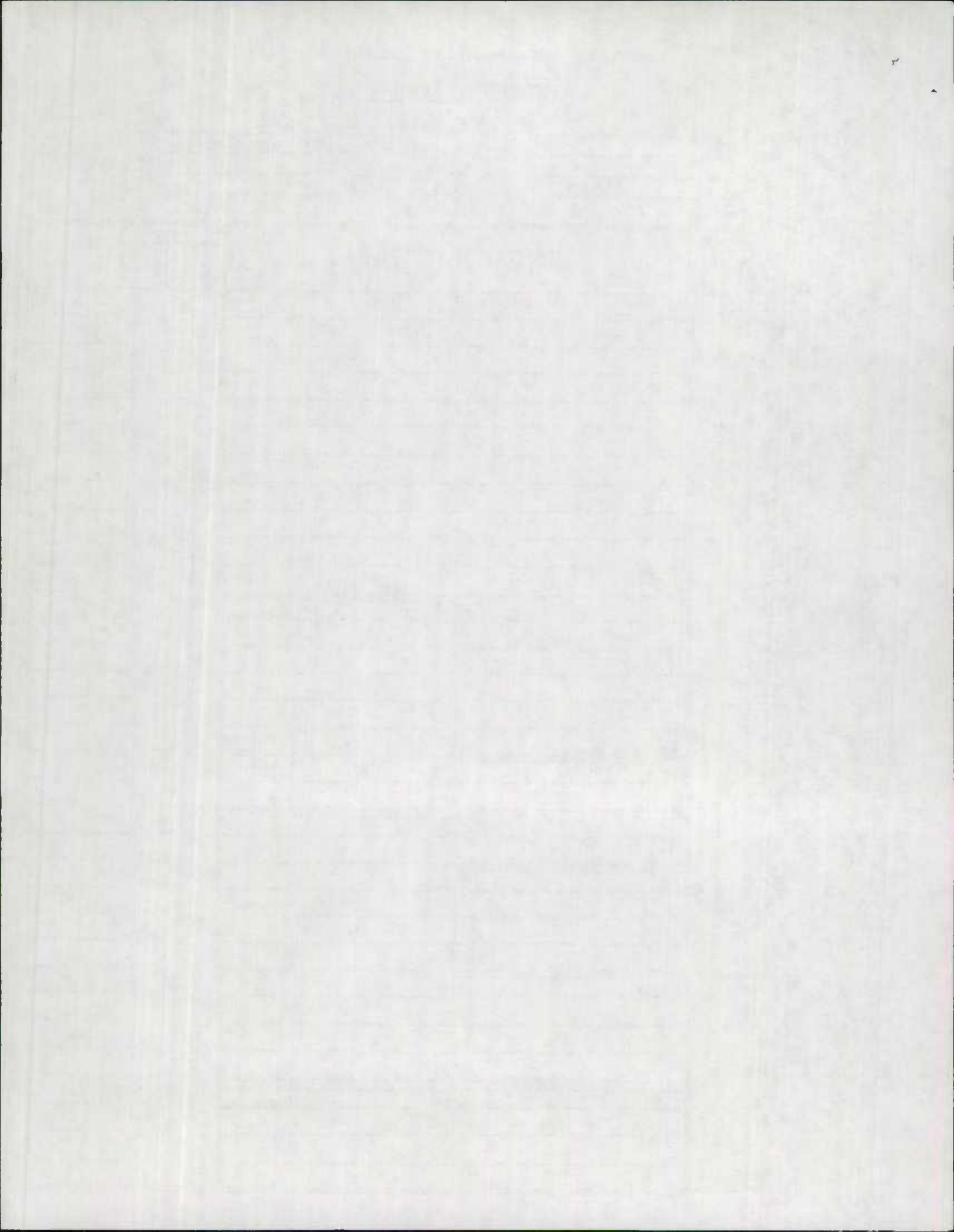
Road No. MU 0370
 Road Name LOCUST LA.
 County CECIL
 Date 1-7-92
 Sheet No. 1 OF 2

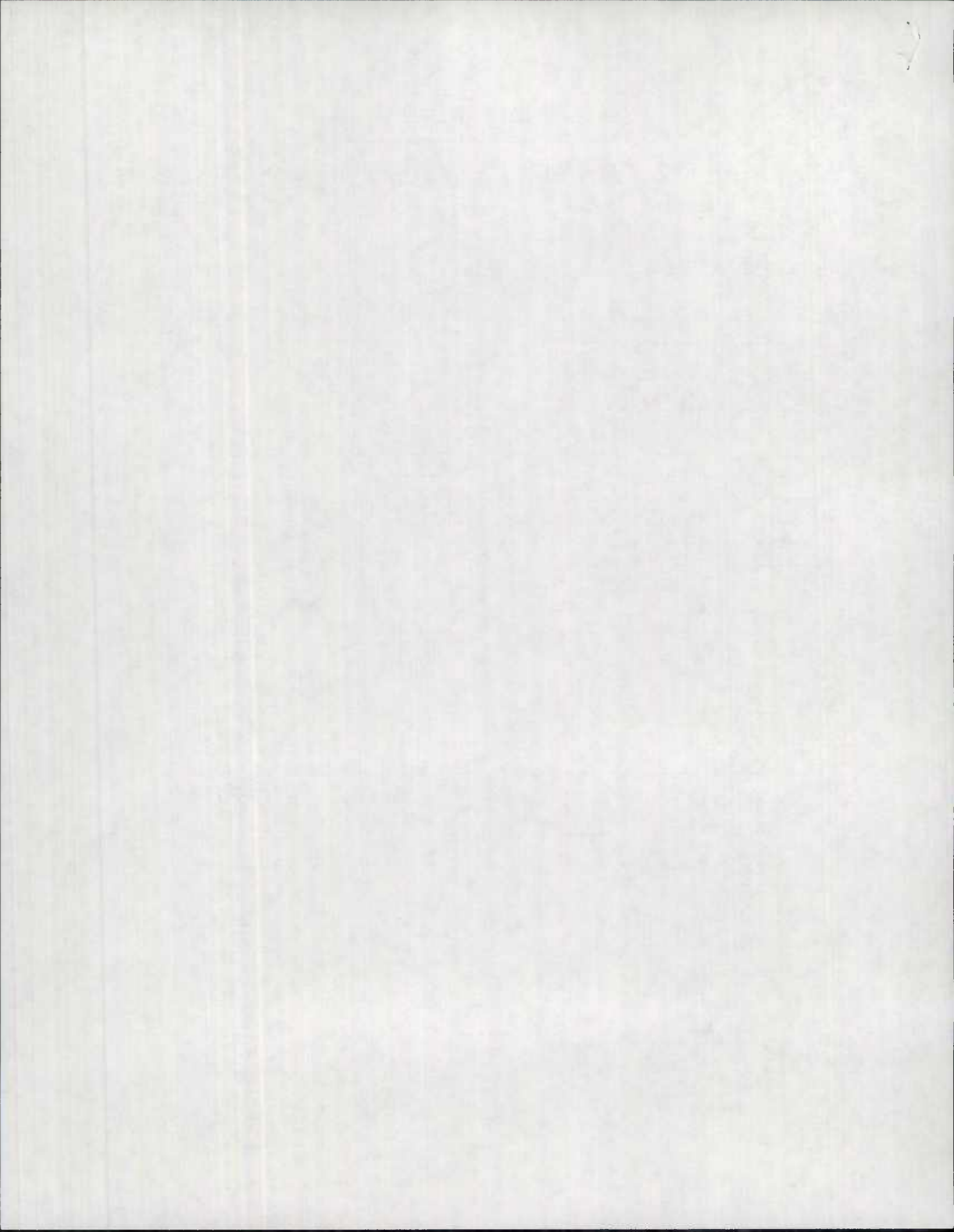
91-P
 78-10 91-4

SYSTEM	TRAFFIC		LINE DIAGRAM		TRAFFIC		PAVEMENT DATA
	PKG. REST.	COM/IND. ACCESS	CONTROL	COM/IND. ACCESS	PKG. REST.		
STATE ROAD SYSTEM NO. 6037005284 V							20'I JC-LT 2UML
				E. High St. ↓			X
			0.44	MU. 0300	SS		
				Hermitage Dr.			
			MU. 0290	0.41			33'I 2UML
				Booth La.			X
			MU. 039	0060			
				Mitchell St.			
			MU. 0450	0.36			
				0.33	PT 30°		
				0.25	PC		40'I JC-C 2UML
				Douglas St.			X
			MU. 013	220			36'I JC-C 2UML
				0.03			X
				FRIENDSHIP Rd. (#2)			28'I X-RT 2UML
		MU. 000	0272			✓	





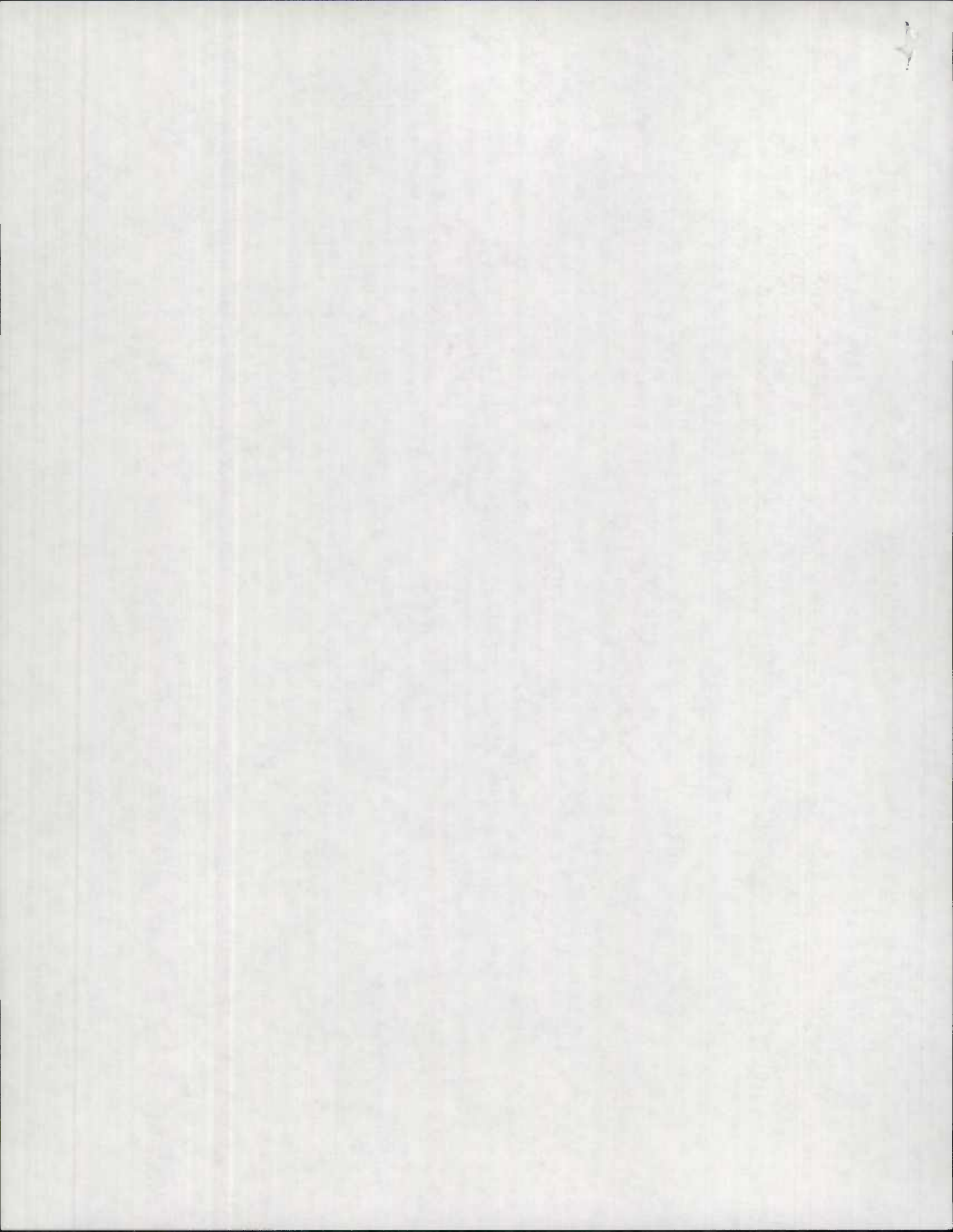




Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0		0%	
1323		- 3.5%	
2719		+ 3.2%	
2932		- 1.9%	
3131		+ 4.8%	
3430		0	
8857		+ 2.8%	
4546	4699	- 1.3%	
4699			

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.33</u>
b.	0.5-2.4	<u>2</u>	<u>0.07</u>
c.	2.5-4.4	<u>3</u>	<u>0.43</u>
d.	4.5-6.4	<u>4</u>	<u>0.06</u>
e.	6.5-8.4	_____	_____
f.	8.5-	_____	_____



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0145
 Sample No: 2
 County: Cecil

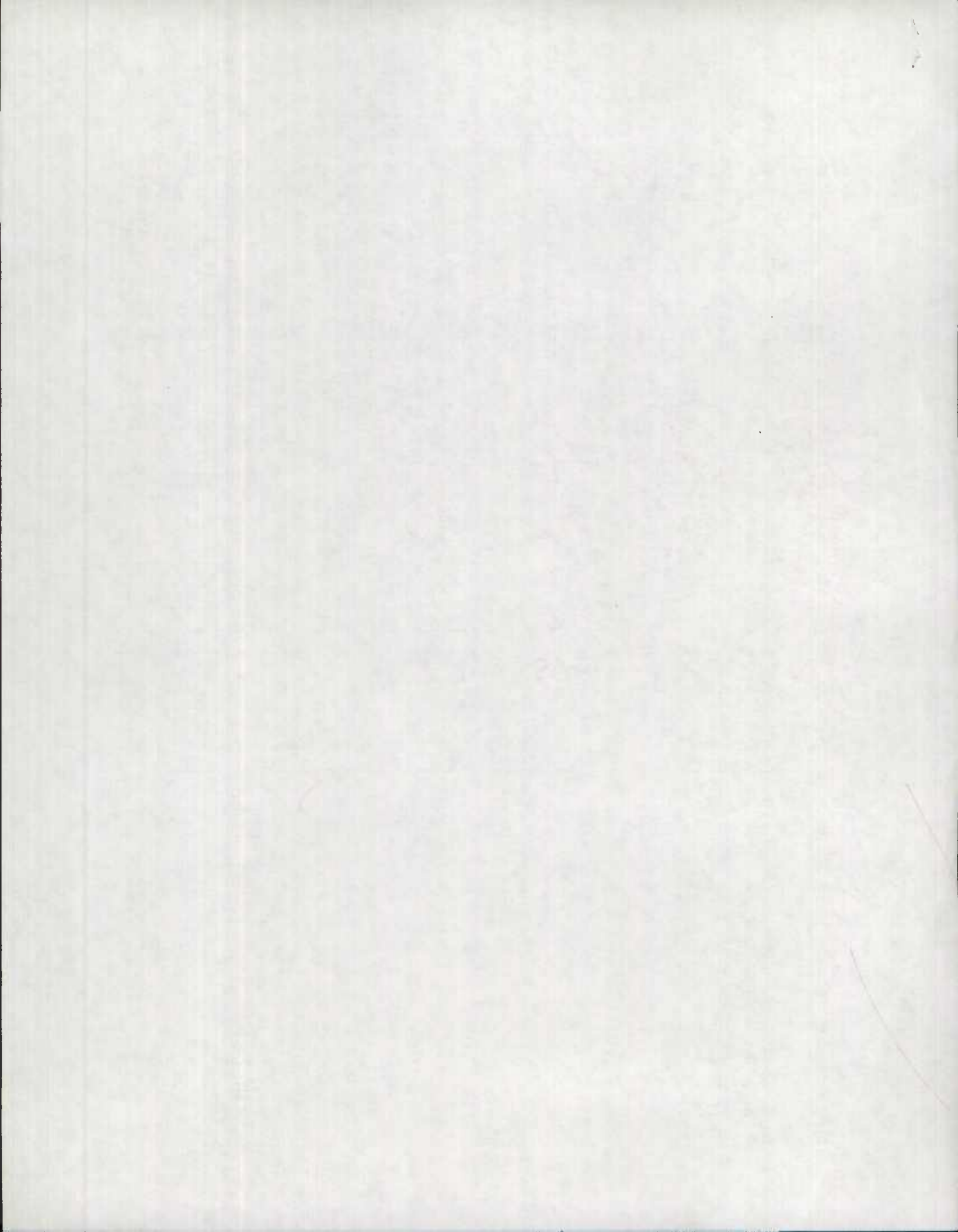
Starting Mile Pt: 0.00
 Ending Mile Pt: 1.03

(1.03)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord1. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>654</u>	<u>100</u>	<u>0</u>	-----
<u>L 654</u>	<u>792</u>	<u>99.8</u>	<u>2.3</u>	-----
<u>792</u>	<u>1037</u>	<u>100</u>	<u>0</u>	-----
<u>R 1037</u>	<u>1877</u>	-----	-----	-----
1877	<u>1927</u>	<u>99.5</u>	<u>4.2</u>	-----
<u>1927</u>	<u>2205</u>	<u>100</u>	<u>0</u>	-----
<u>R 2205</u>	<u>2702</u>	<u>99.5</u>	<u>3.7</u>	-----
<u>2702</u>	<u>2952</u>	<u>100</u>	<u>0</u>	-----
<u>R 2952</u>	<u>3301</u>	<u>98.9</u>	<u>5.8</u>	-----
<u>3301</u>	<u>3928</u>	<u>100</u>	<u>0</u>	-----
<u>R 3928</u>	<u>4196</u>	<u>99.6</u>	<u>4.0</u>	-----
<u>4196</u>	<u>4833</u>	<u>100</u>	<u>0</u>	-----
<u>L 4833</u>	<u>5312</u>	<u>99.8</u>	<u>2.4</u>	-----
<u>5312</u>	<u>5436</u>	<u>100</u>	<u>0</u>	-----
	<u>Curve Classes</u>		<u>Number of</u>	<u>Length</u>
	<u>by</u>		<u>Curves</u>	<u>of Curves</u>
	<u>Degree of</u>		<u>(Right-</u>	<u>in Class</u>
	<u>Curvature</u>		<u>Justified)</u>	<u>(Implied Decimal)</u>
				<u>(xx.xxx miles)</u>

a.	0.0-0.4	<u>7</u>	<u>0.53</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	<u>1</u>	<u>0.03</u>
j.	11.0-13.9	<u>1</u>	<u>0.09</u>
k.	14.0-19.4	<u>3</u>	<u>0.31</u>
l.	19.5-27.9	<u>1</u>	<u>0.07</u>
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	294	0%	
294	1927	-6.7	
1927	2265	+2.0	
2265	2703	-0.7	
2703	2952	+2.4 +2.4%	
2952	3301	-1.250%	
3301	3769	+1.2	
3769	4196	-3.4	
4196	5312	+5.1	
5312	5436	0%	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.08</u>
b.	0.5-2.4	<u>4</u>	<u>0.26</u>
c.	2.5-4.4	<u>1</u>	<u>0.08</u>
d.	4.5-6.4	<u>1</u>	<u>0.21</u>
e.	6.5-8.4	<u>1</u>	<u>0.31</u>
f.	8.5-	<u>1</u>	<u>0.09</u>

CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

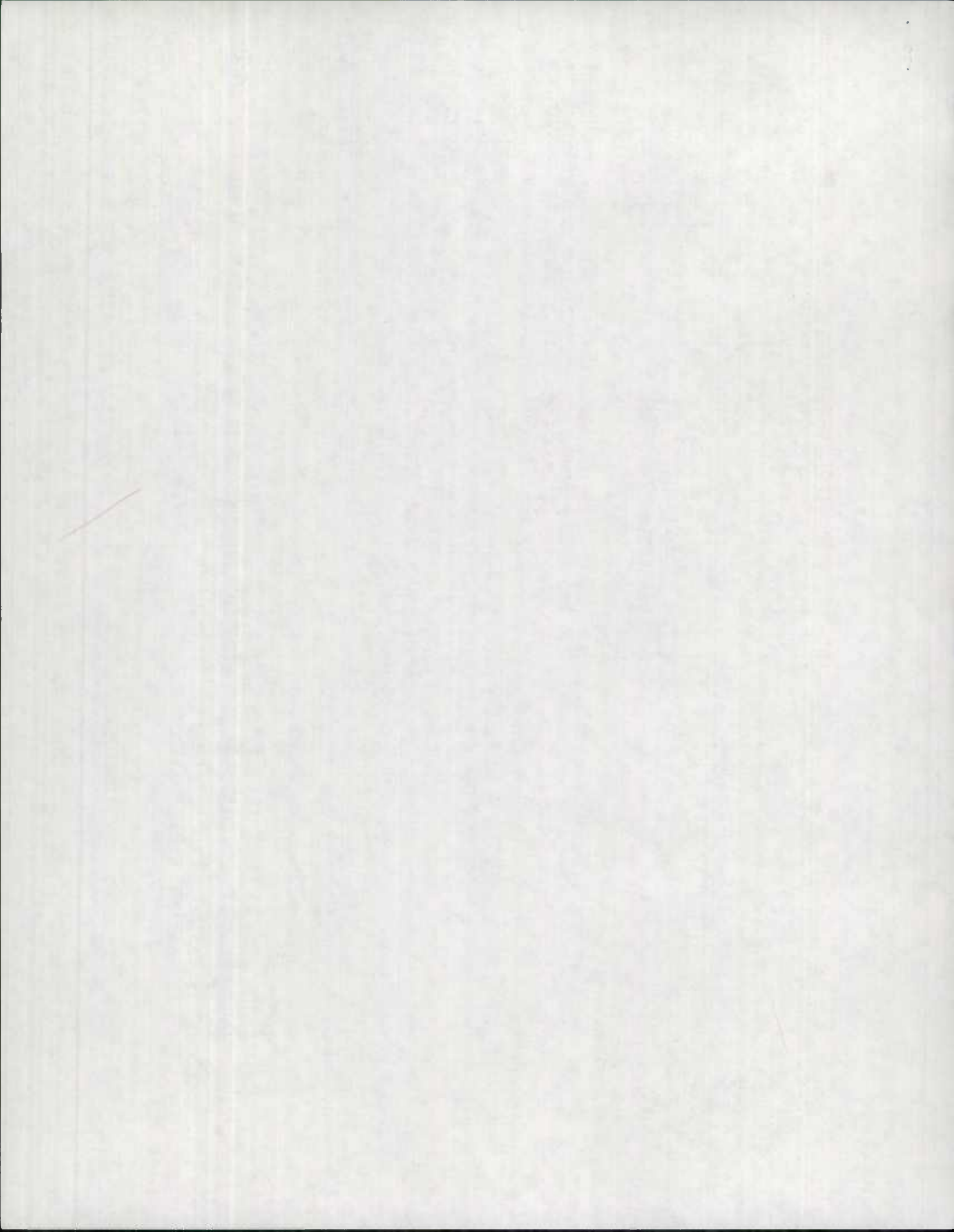
Route No: CO 0145
 Sample No: 3
 County: Cecil

Starting Mile Pt: 1.03
 Ending Mile Pt: 2.05
(1.02)

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
R 0	1220	100	0	
R 1220	1408	99.9	1.2	
1408	2593	100	0	
R 2593	2856	99.85	1.9	
2856	4076	100	0	
R 4076	4811	99.95	0.8	
4811	5334	100	0	

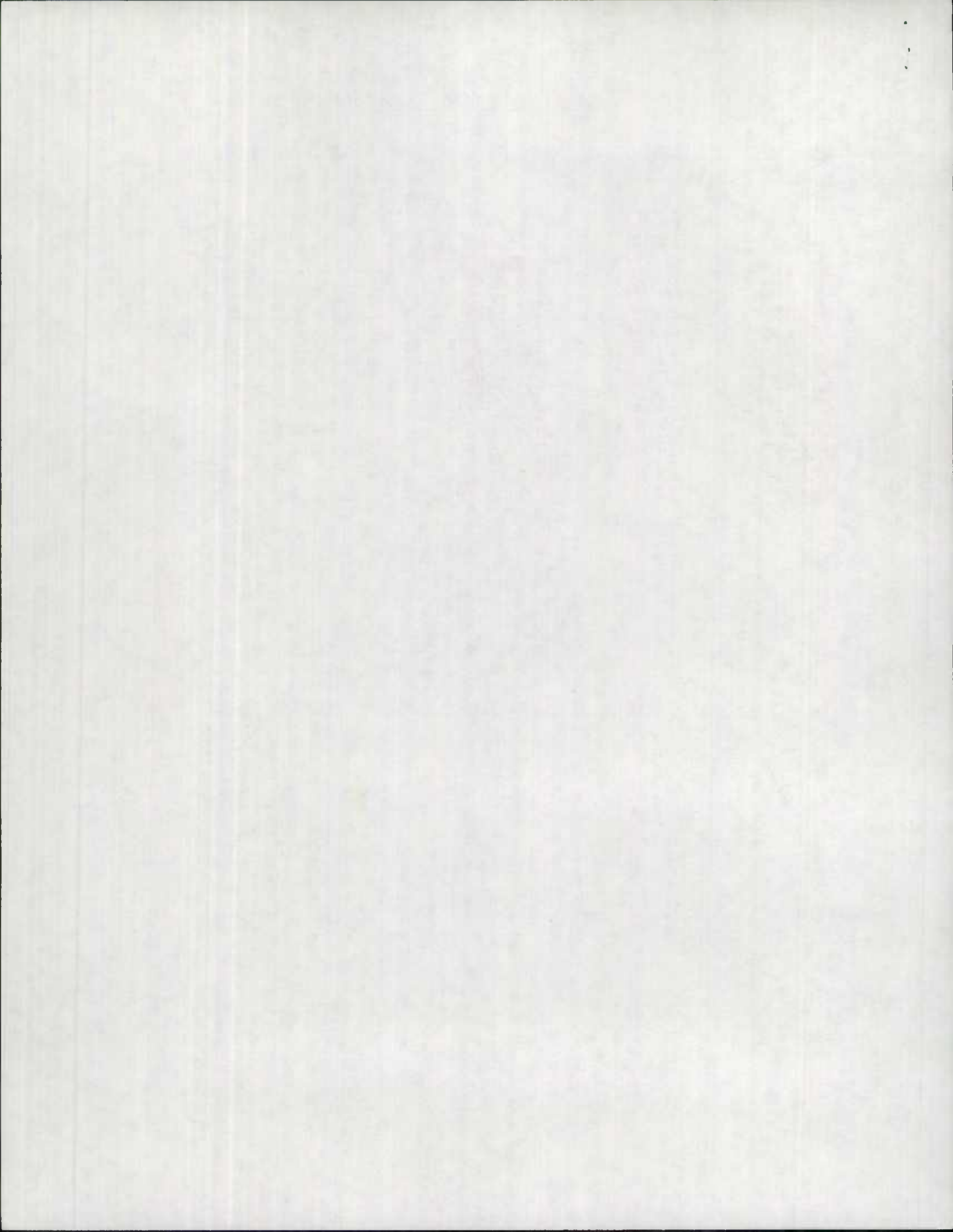
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>4</u>	<u>0.79</u>
b.	0.5-1.4	---	---
c.	1.5-2.4	---	---
d.	2.5-3.4	---	---
e.	3.5-4.4	<u>1</u>	<u>0.14</u>
f.	4.5-5.4	---	---
g.	5.5-6.9	<u>1</u>	<u>0.04</u>
h.	7.0-8.4	---	---
i.	8.5-10.9	<u>1</u>	<u>0.05</u>
j.	11.0-13.9	---	---
k.	14.0-19.4	---	---
l.	19.5-27.9	---	---
m.	28+	---	---



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	454	2%	
454	760	+4.9%	
760	1220	-0.7%	
1220	1408	+2.8%	
1408	1701	-3.4%	
1701	1941	0%	
1941	2169	+0.8%	
2169	2593	-2.4%	
2593	3038	+2.0%	
3038	3375	0%	
3375	4324	-9.4%	
4324	4811	0%	
4811	5384	+4.7%	

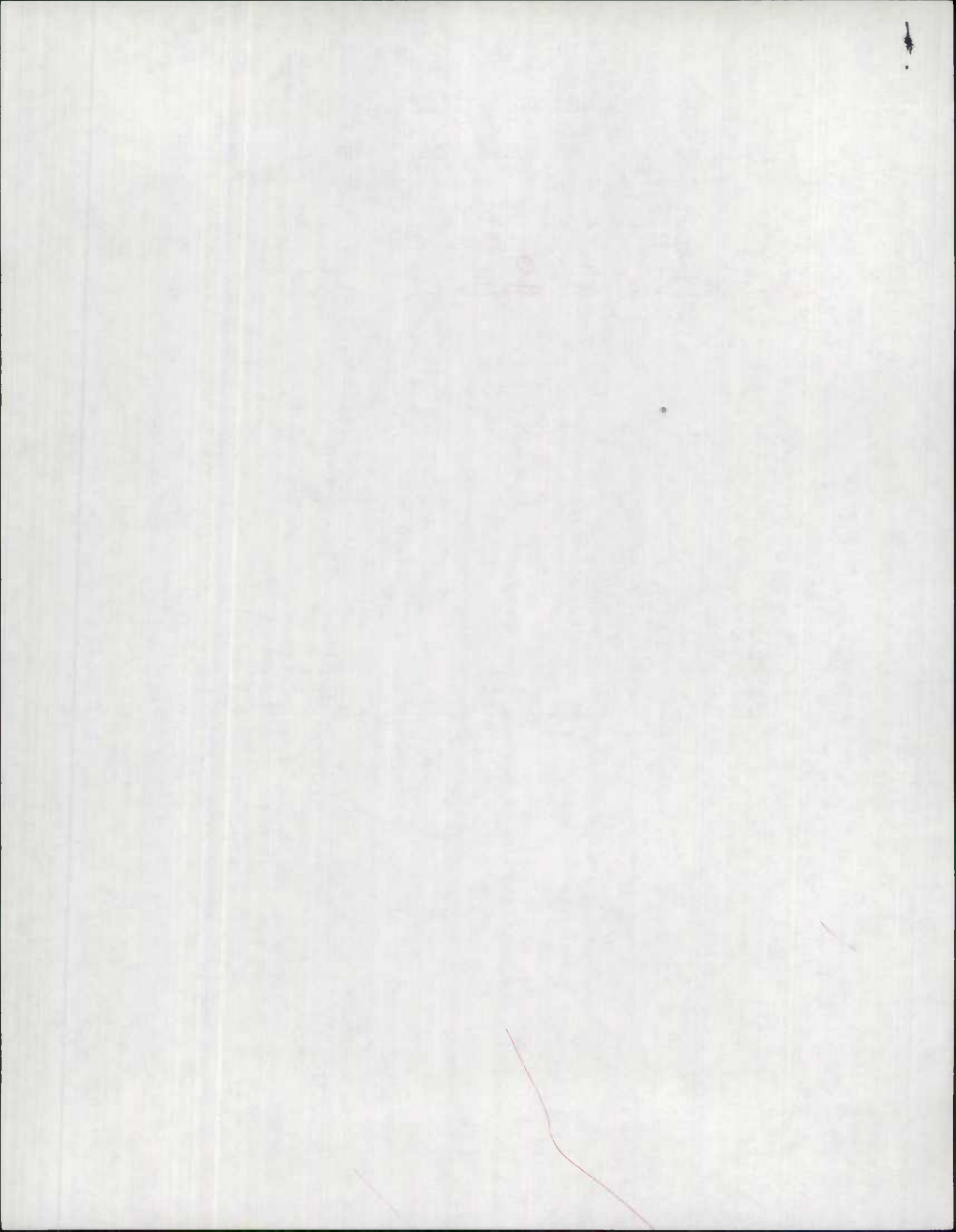
	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>5</u>	<u>0.35</u>
b.	0.5-2.4	<u>4</u>	<u>0.28</u>
c.	2.5-4.4	<u>2</u>	<u>0.10</u>
d.	4.5-6.4	<u>1</u>	<u>0.11</u>
e.	6.5-8.4	<u>—</u>	<u>—</u>
f.	8.5-	<u>1</u>	<u>0.18</u>

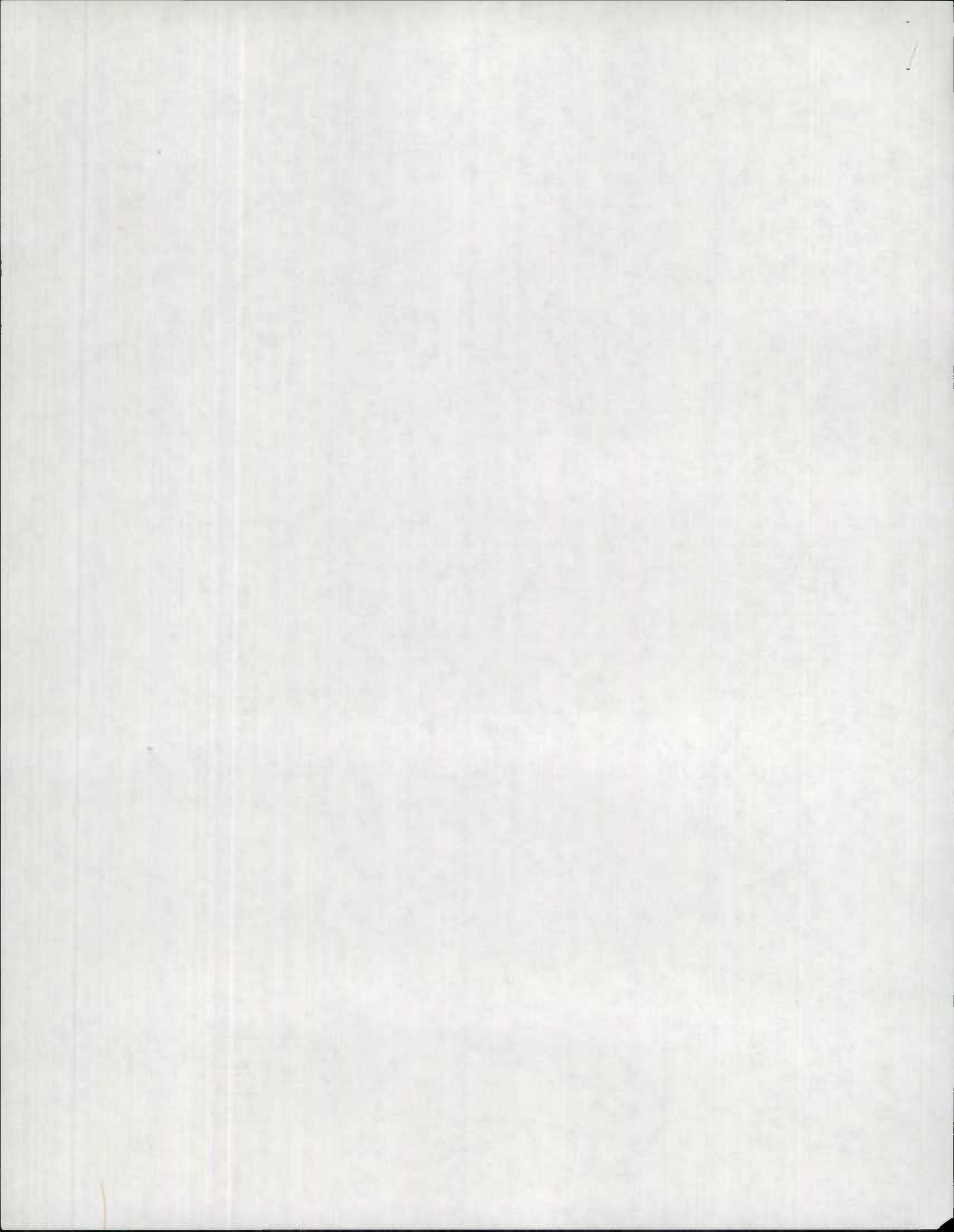


Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	577	+3.0	-----
577	925	-2.5	-----
925	2021	0	-----
2021 2021	2667	0 -2.0	-----
2667	3166	-5.4	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.21</u>
b.	0.5-2.4	<u>1</u>	<u>0.12</u>
c.	2.5-4.4	<u>2</u>	<u>0.18</u>
d.	4.5-6.4	<u>1</u>	<u>0.09</u>
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----

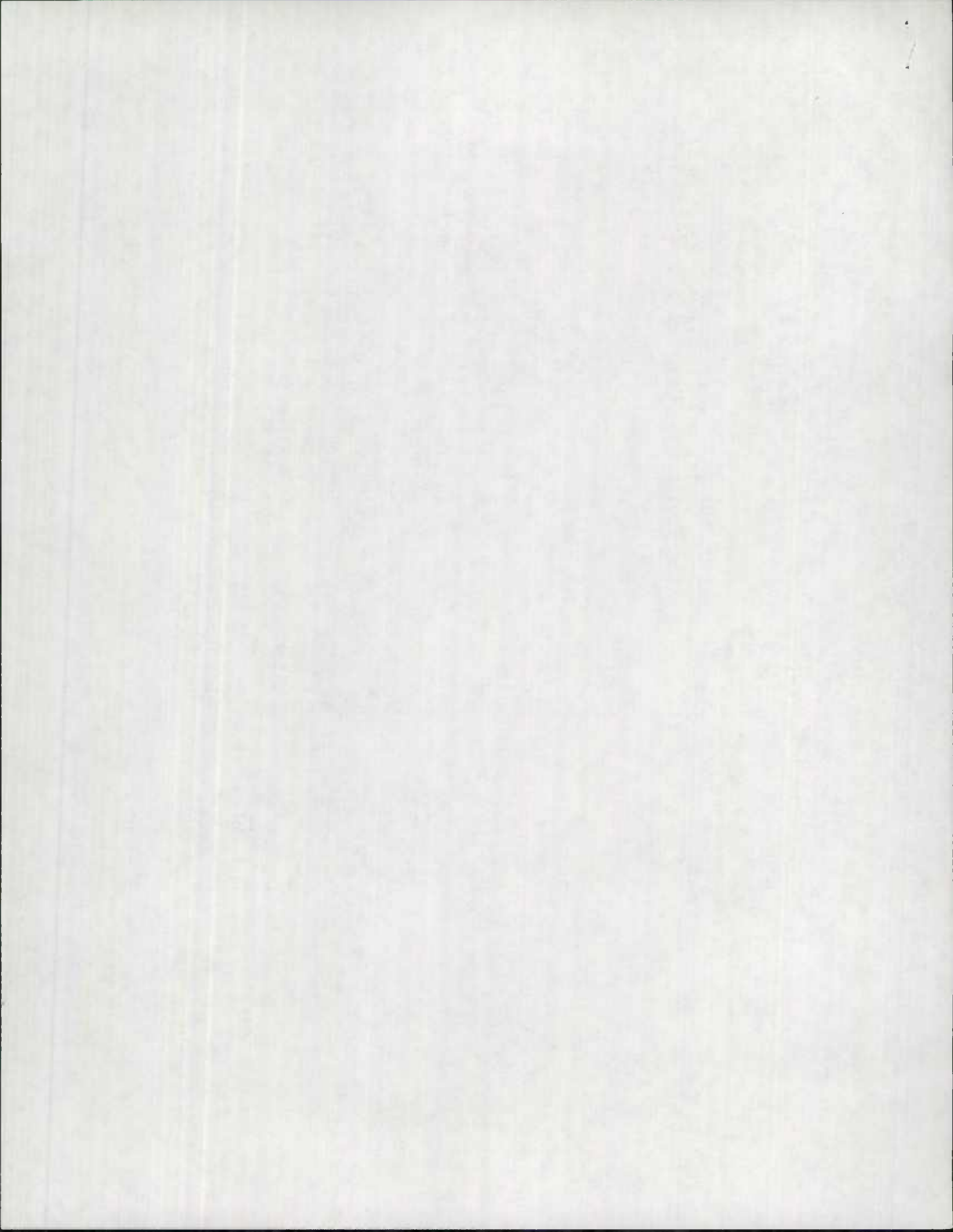


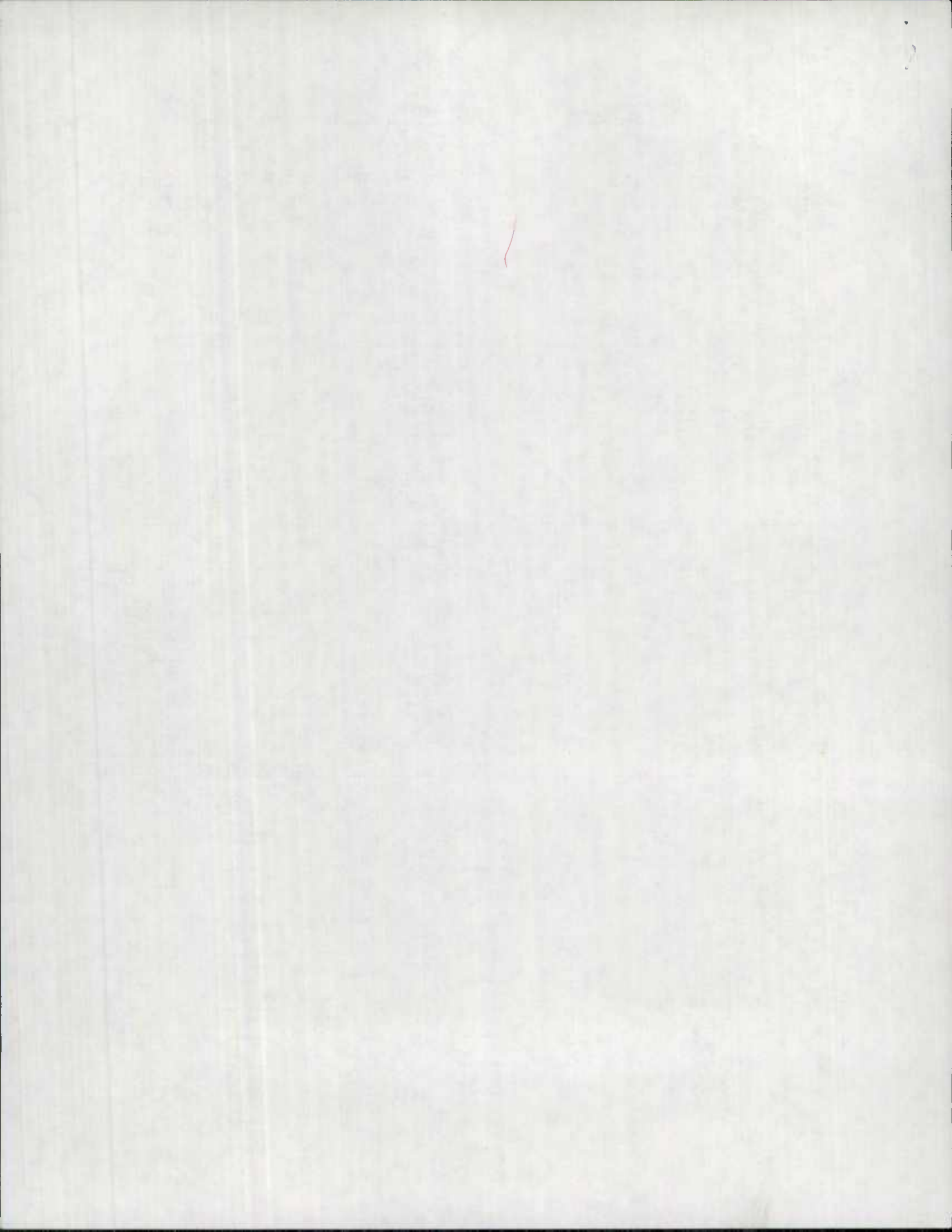


Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
<u>0</u>	<u>446</u>	<u>-5.4</u>	-----
<u>446</u>	<u>684</u>	<u>+5.7</u>	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	<u>2</u>	<u>0.13</u>
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----

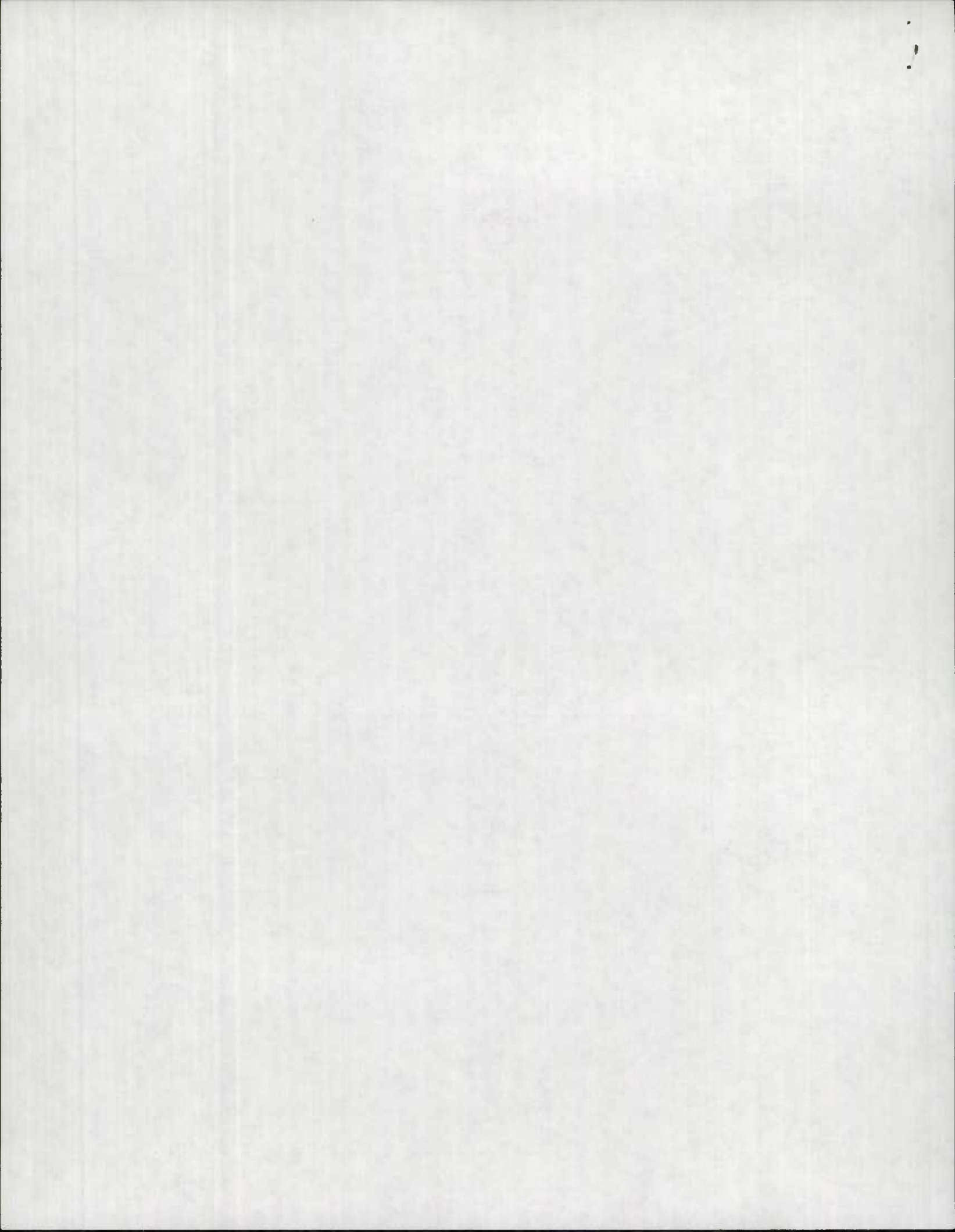


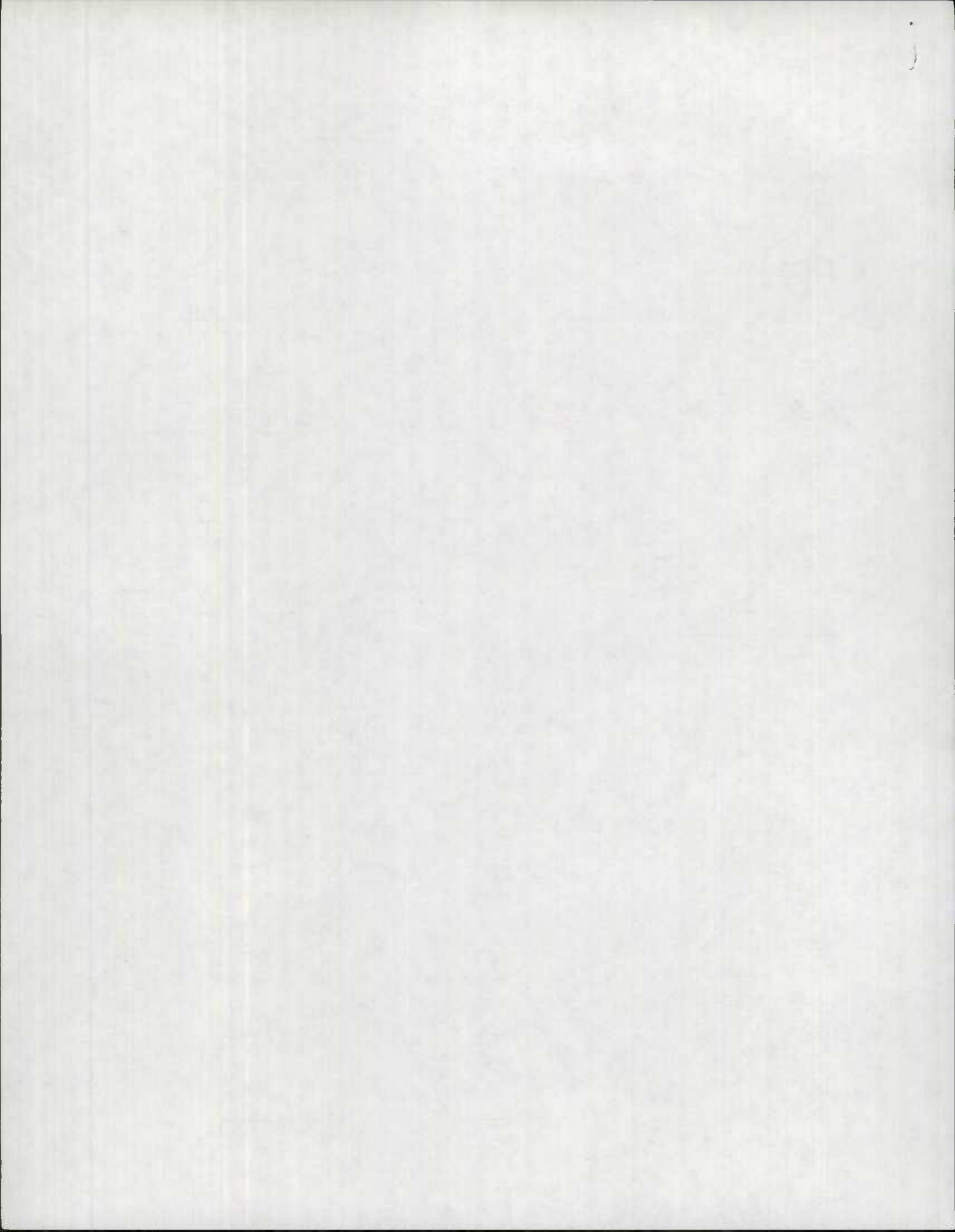


Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	500	+5.7	
500	500	+5.7	
		-0.6	

Grade Classes by Gradient (Percent)	Number of Grades (Right- Justified)	Length of Grades in Class (Implied Decimal) (xx.xxx miles)
a. 0.0-0.4	—	—
b. 0.5-2.4	1	0.02
c. 2.5-4.4	—	—
d. 4.5-6.4	1	0.08
e. 6.5-8.4	—	—
f. 8.5-	—	—

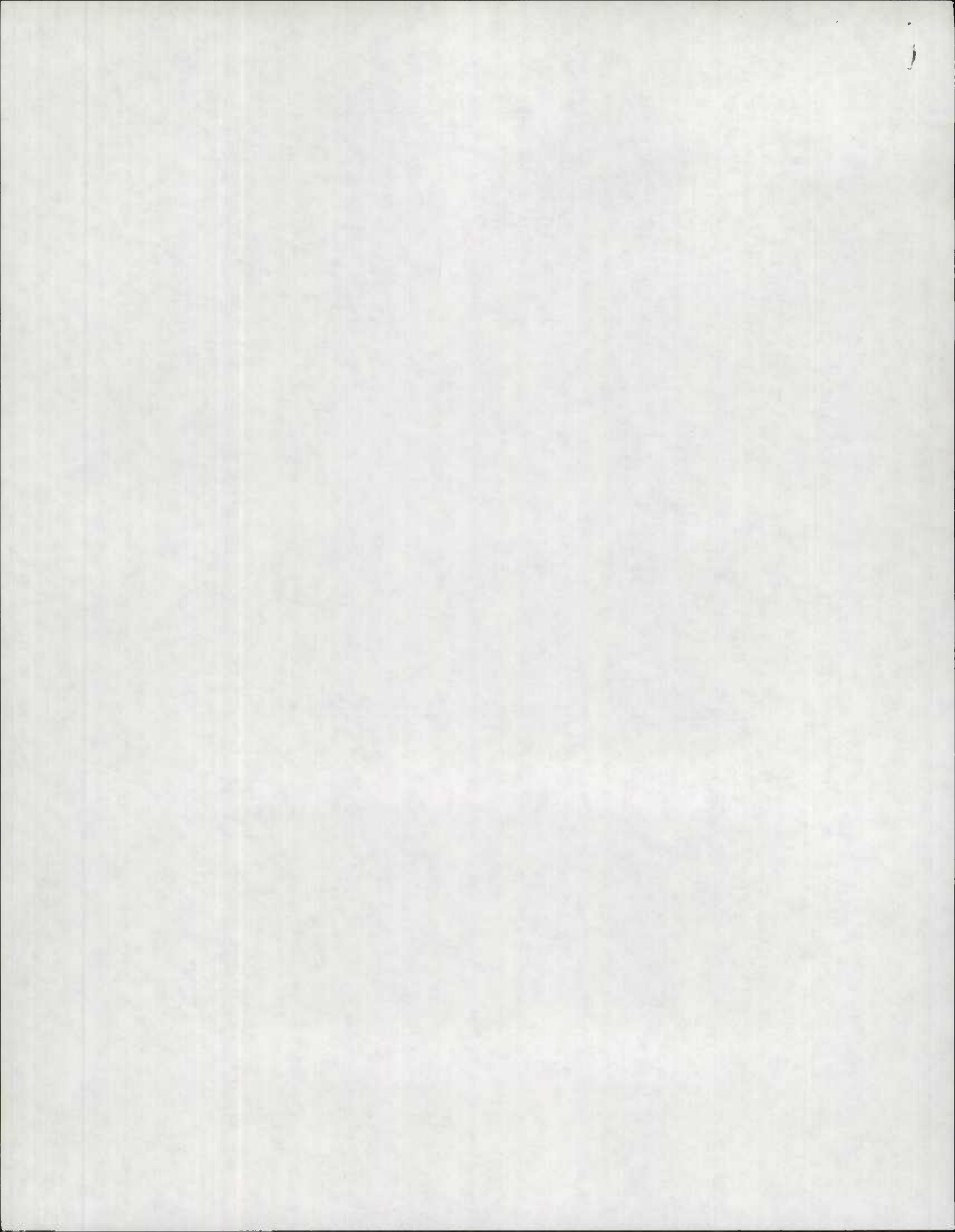




Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	529	-0.6	
529	1005	+6.0	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	—	—
b.	0.5-2.4	1	0.10
c.	2.5-4.4	—	—
d.	4.5-6.4	1	0.09
e.	6.5-8.4	—	—
f.	8.5-	—	—



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

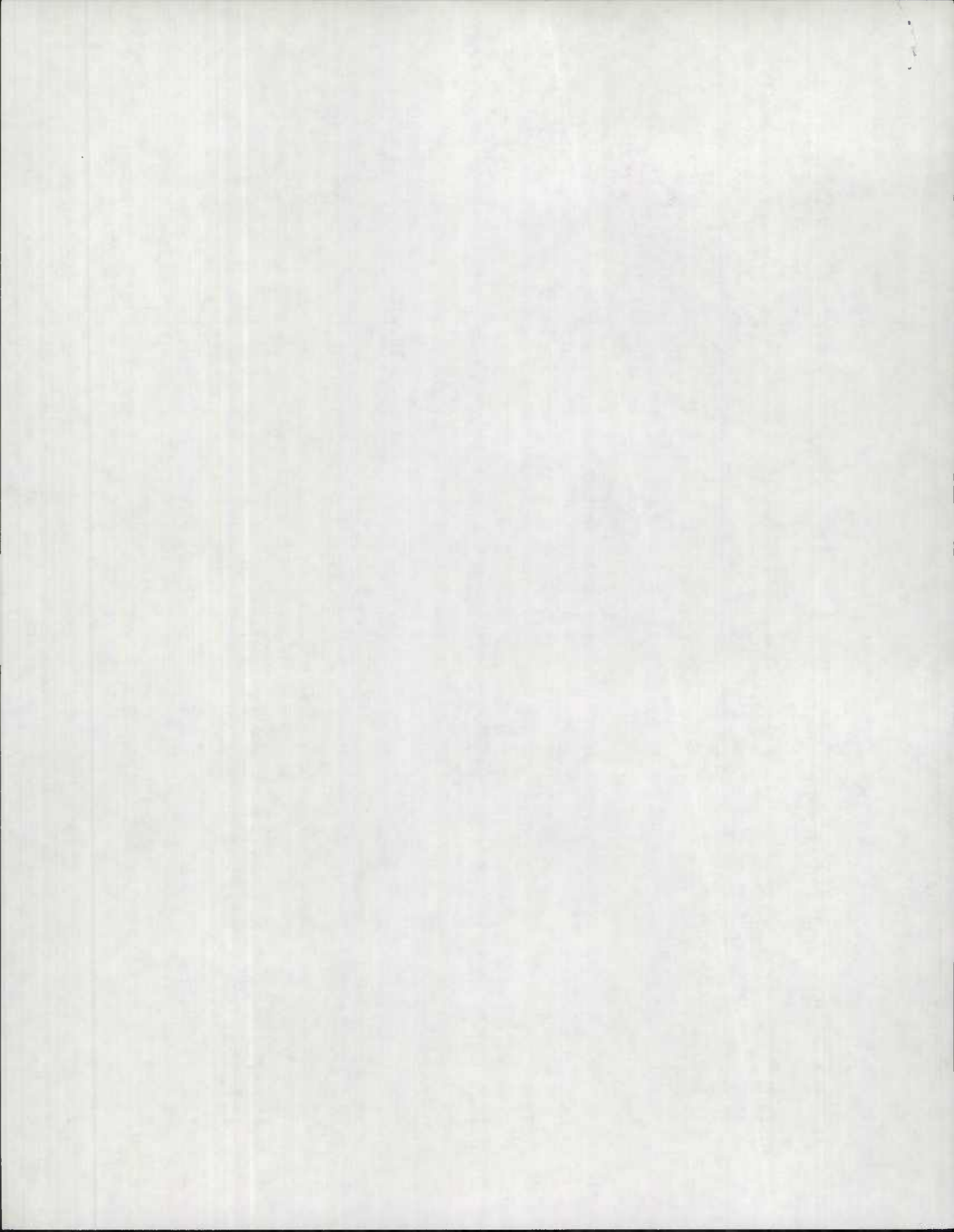
Route No: CO 0184
 Sample No: 8
 County: Cecil

Starting Mile Pt: 1.02
 Ending Mile Pt: 1.34
(0.32)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>1691</u>	<u>100</u>	<u>0</u>	-----
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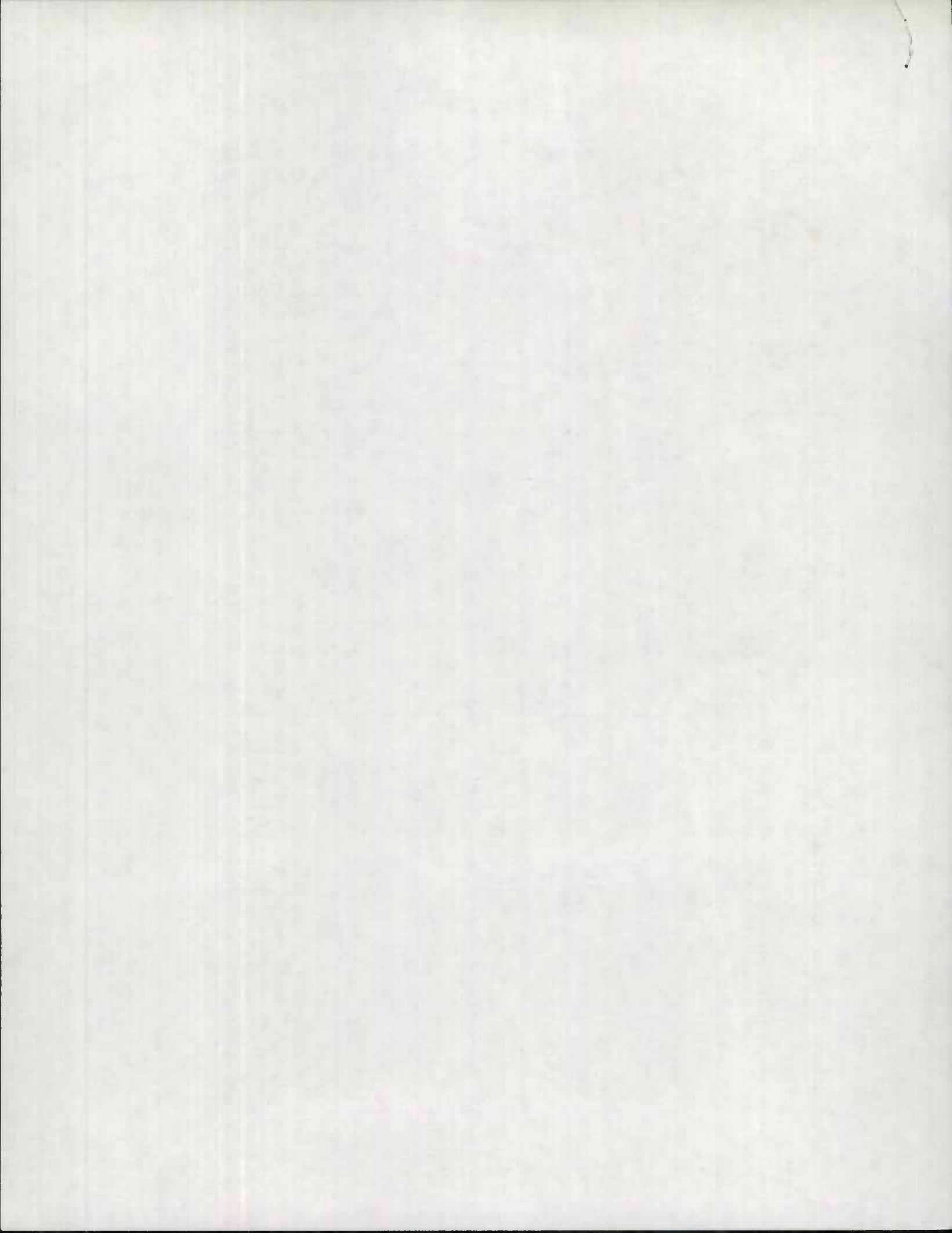
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.32</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

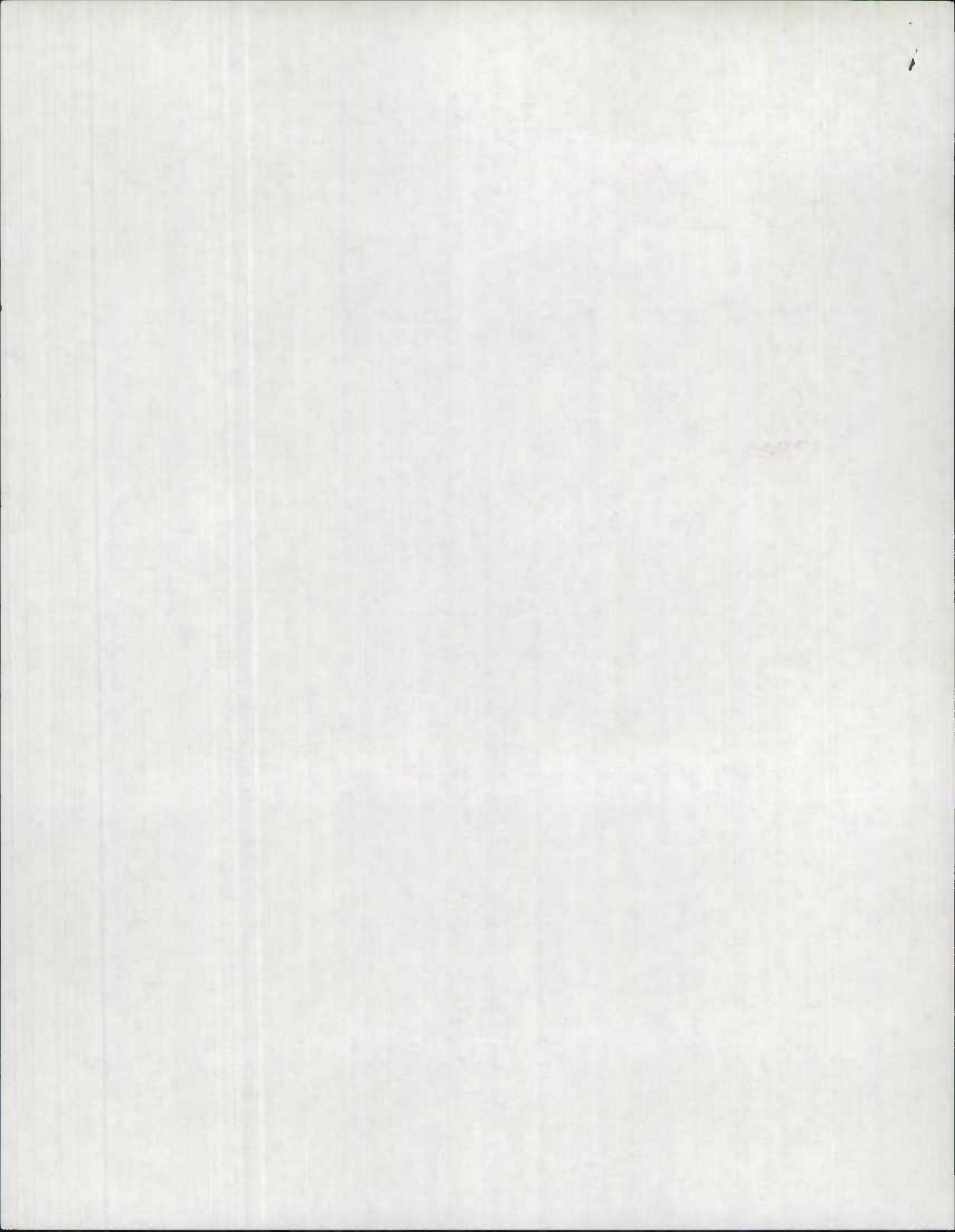


Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	239	+6.0	
239	925	0	
925	1691	+4.8	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.12</u>
b.	0.5-2.4	---	---
c.	2.5-4.4	---	---
d.	4.5-6.4	<u>2</u>	<u>0.20</u>
e.	6.5-8.4	---	---
f.	8.5-	---	---



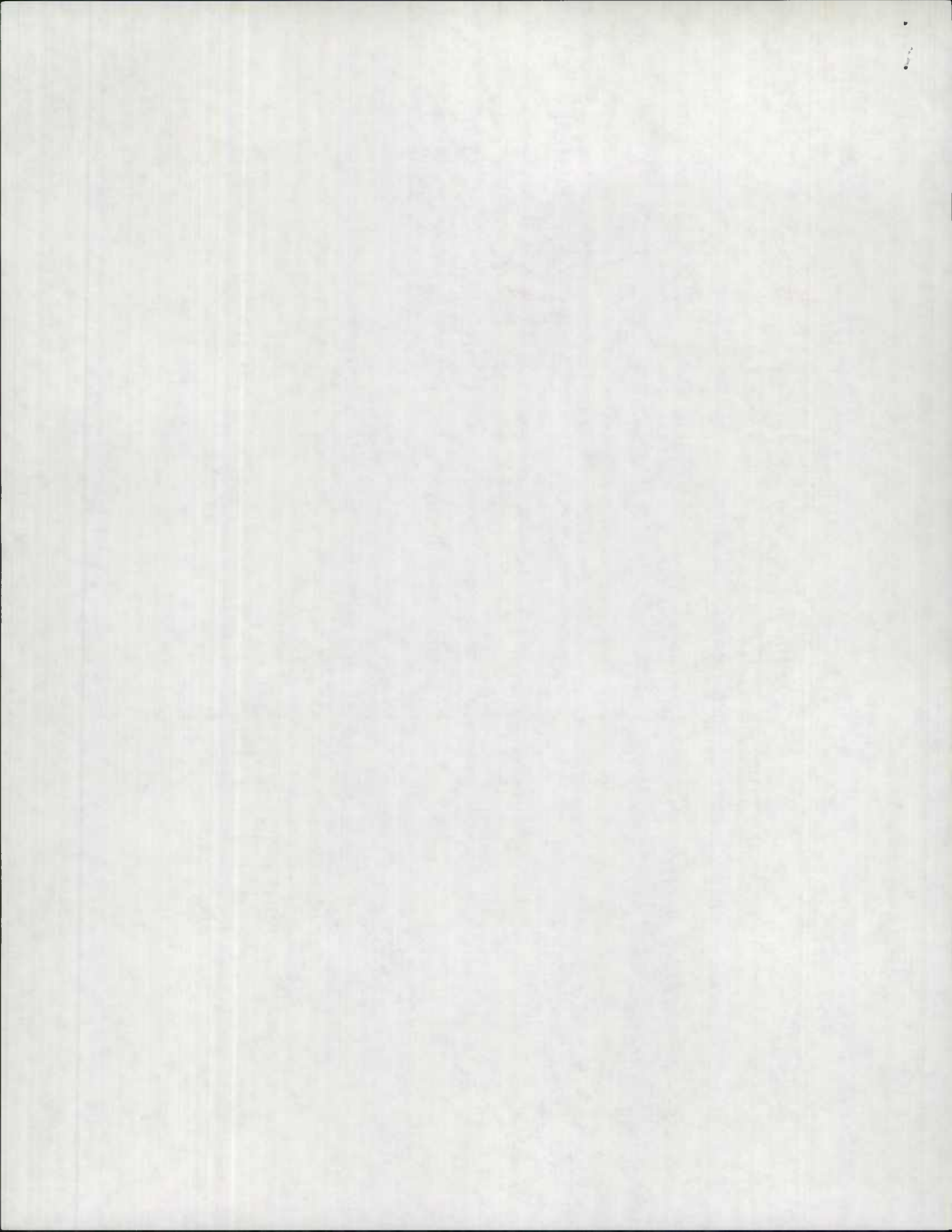


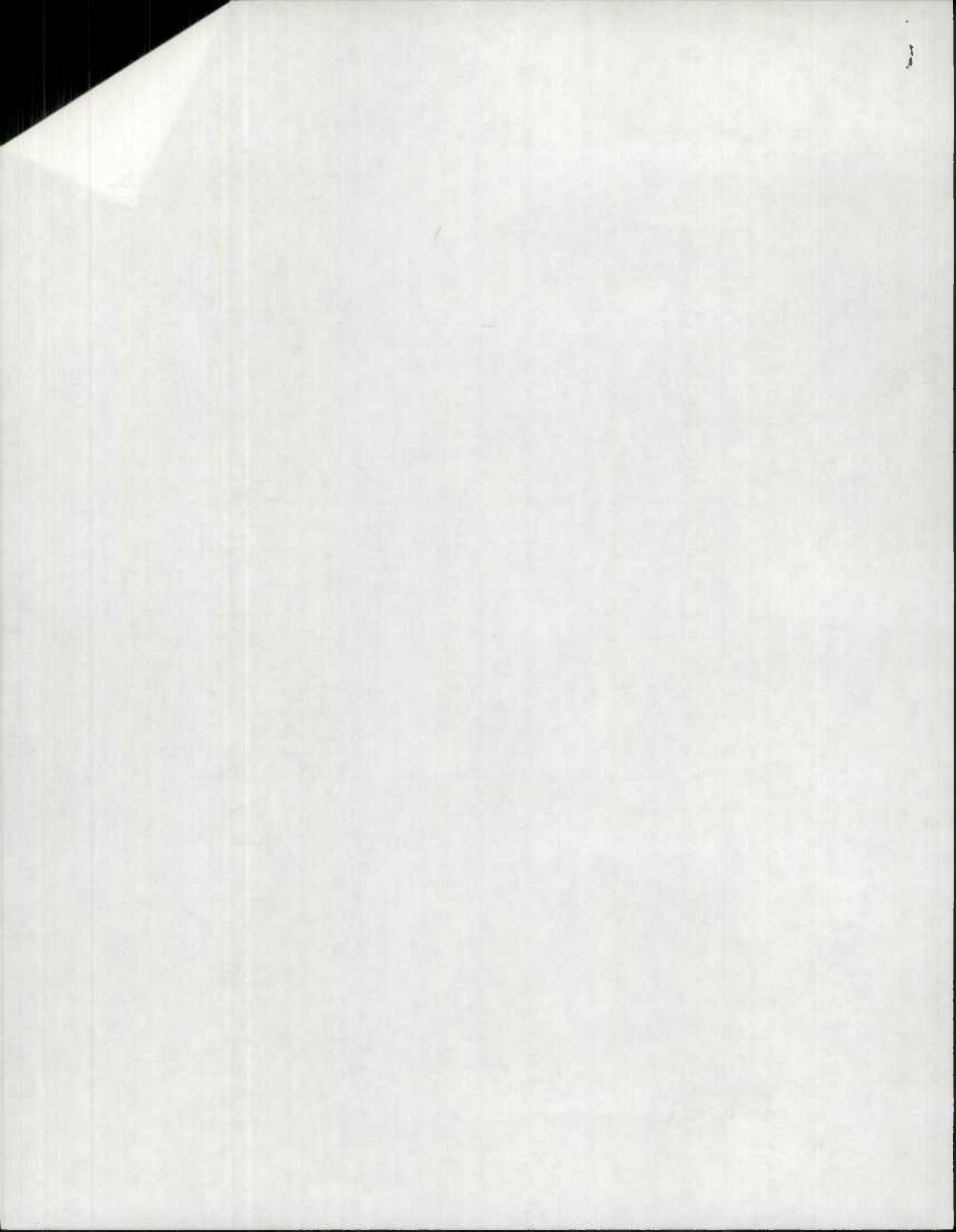
Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	828	+ 1.0	-----
828	1426	2 1/2	-----
1426	3429	- 5.2	-----
2426		---	-----
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.11</u>
b.	0.5-2.4	---	---
c.	2.5-4.4	---	---
d.	4.5-6.4	<u>1</u>	<u>0.19</u>
e.	6.5-8.4	---	---
f.	8.5-	---	---



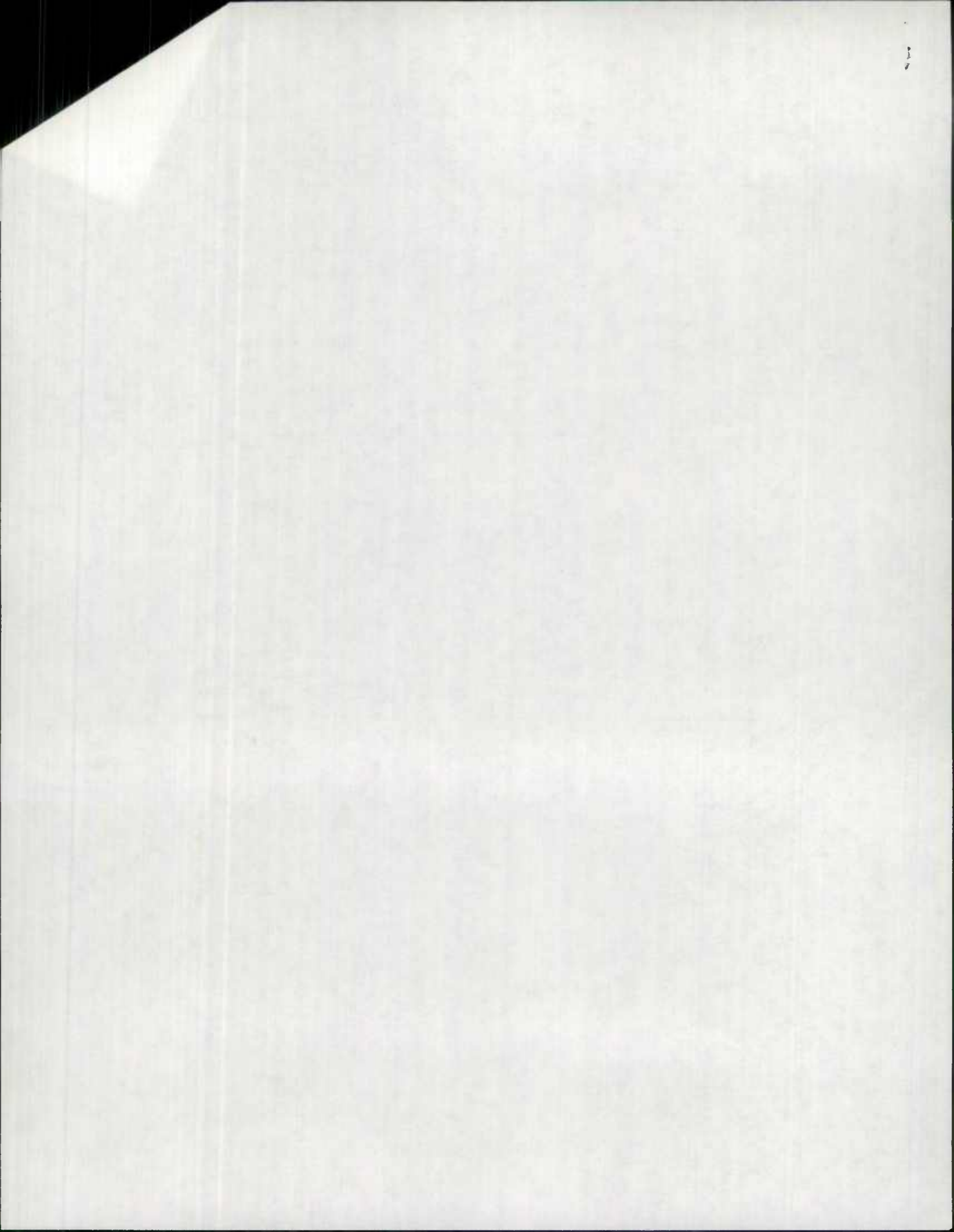




Vertical Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Gradient Percent</u>	<u>Length of Curve</u> <u>(in x.xx miles)</u>
0	1405	+ 4.0	
1425	1520	0%	

	<u>Grade</u> <u>Classes</u> <u>by</u> <u>Gradient</u> <u>(Percent)</u>	<u>Number of</u> <u>Grades</u> <u>(Right-</u> <u>Justified)</u>	<u>Length of</u> <u>Grades in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.02</u>
b.	0.5-2.4	<u> </u>	<u> </u>
c.	2.5-4.4	<u>1</u>	<u>0.27</u>
d.	4.5-6.4	<u> </u>	<u> </u>
e.	6.5-8.4	<u> </u>	<u> </u>
f.	8.5-	<u> </u>	<u> </u>



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: CO 0410
 Sample No: 11
 County: Cecil

Starting Mile Pt: 2.00
 Ending Mile Pt: 2.75

(0.75)

Horizontal Curve Section

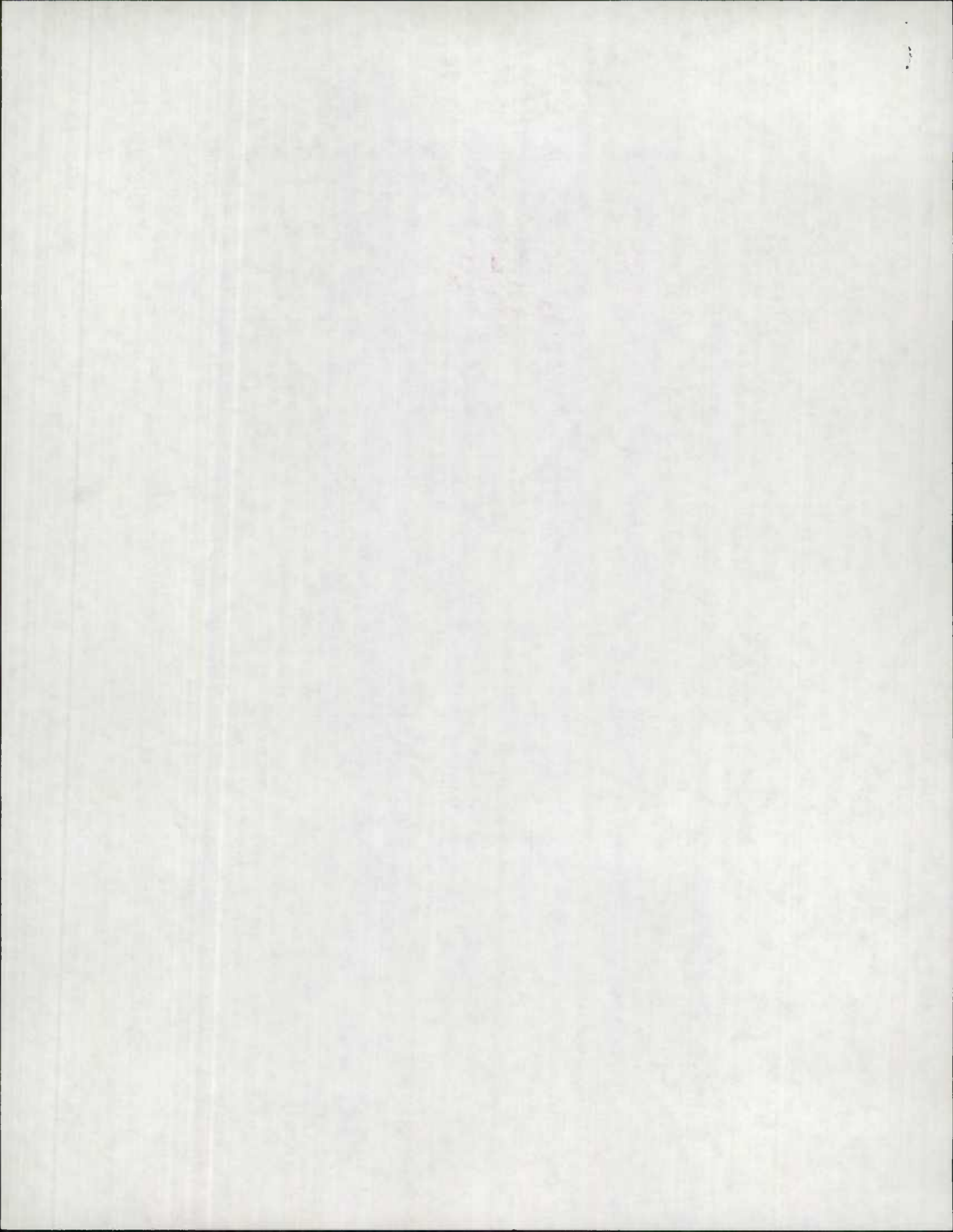
<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>3960</u>	<u>100</u>	<u>0</u>	-----
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.75</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	422	0%	
422	851	-2.9	
851	2335	+1.0	
2335	2566	-5.8	
2566	2990	0%	
2990	3960	-8.0	

	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right-Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	<u>2</u>	<u>0.16</u>
b.	0.5-2.4	<u>1</u>	<u>0.28</u>
c.	2.5-4.4	<u>1</u>	<u>0.08</u>
d.	4.5-6.4	<u>1</u>	<u>0.05</u>
e.	6.5-8.4	<u>1</u>	<u>0.18</u>
f.	8.5-	<u> </u>	<u> </u>



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

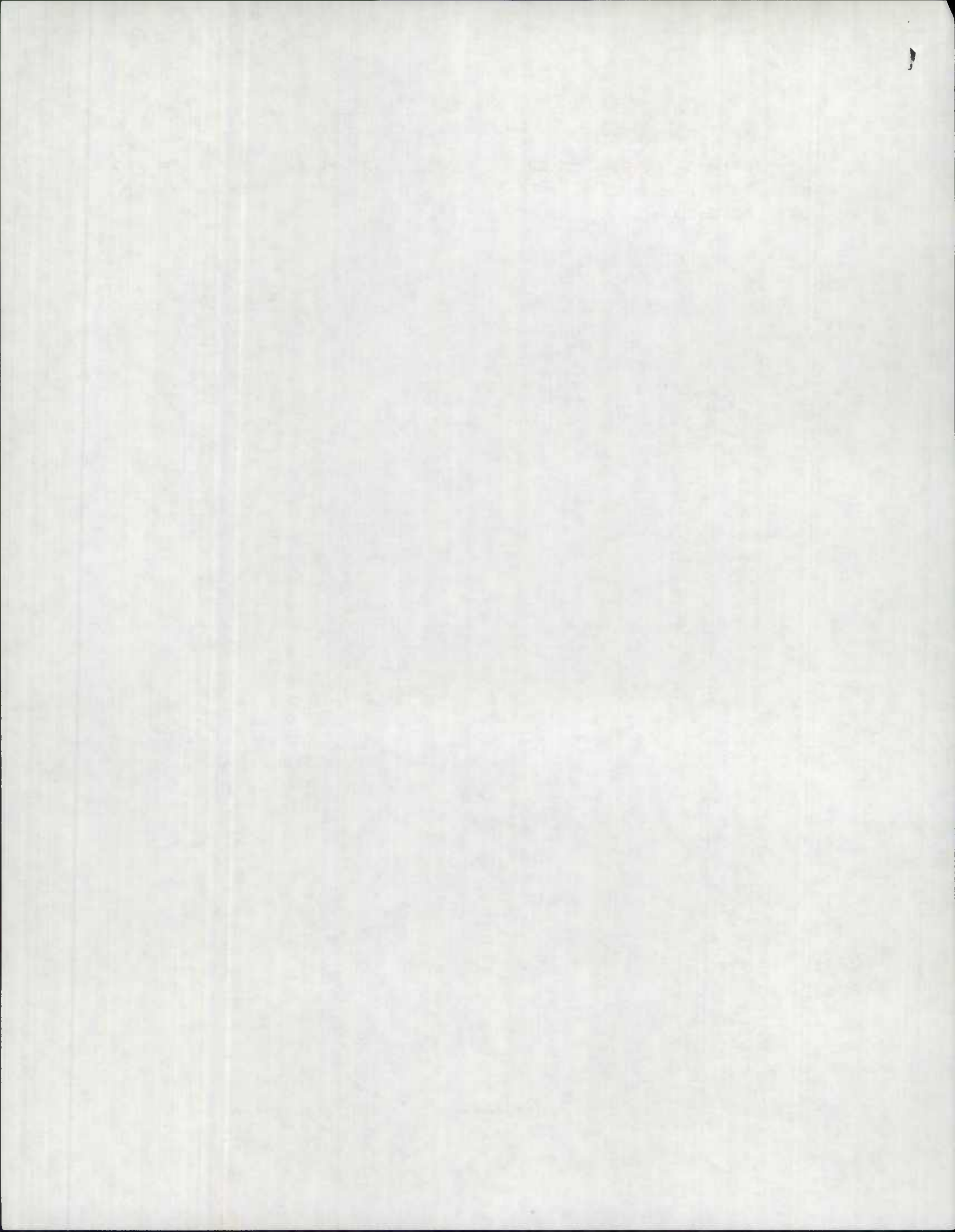
Route No: MU 0052 052
 Sample No: 12
 County: CECIL

Starting Mile Pt: 0.00
 Ending Mile Pt: 0.06

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>315</u>	<u>100</u>	<u>0</u>	-----
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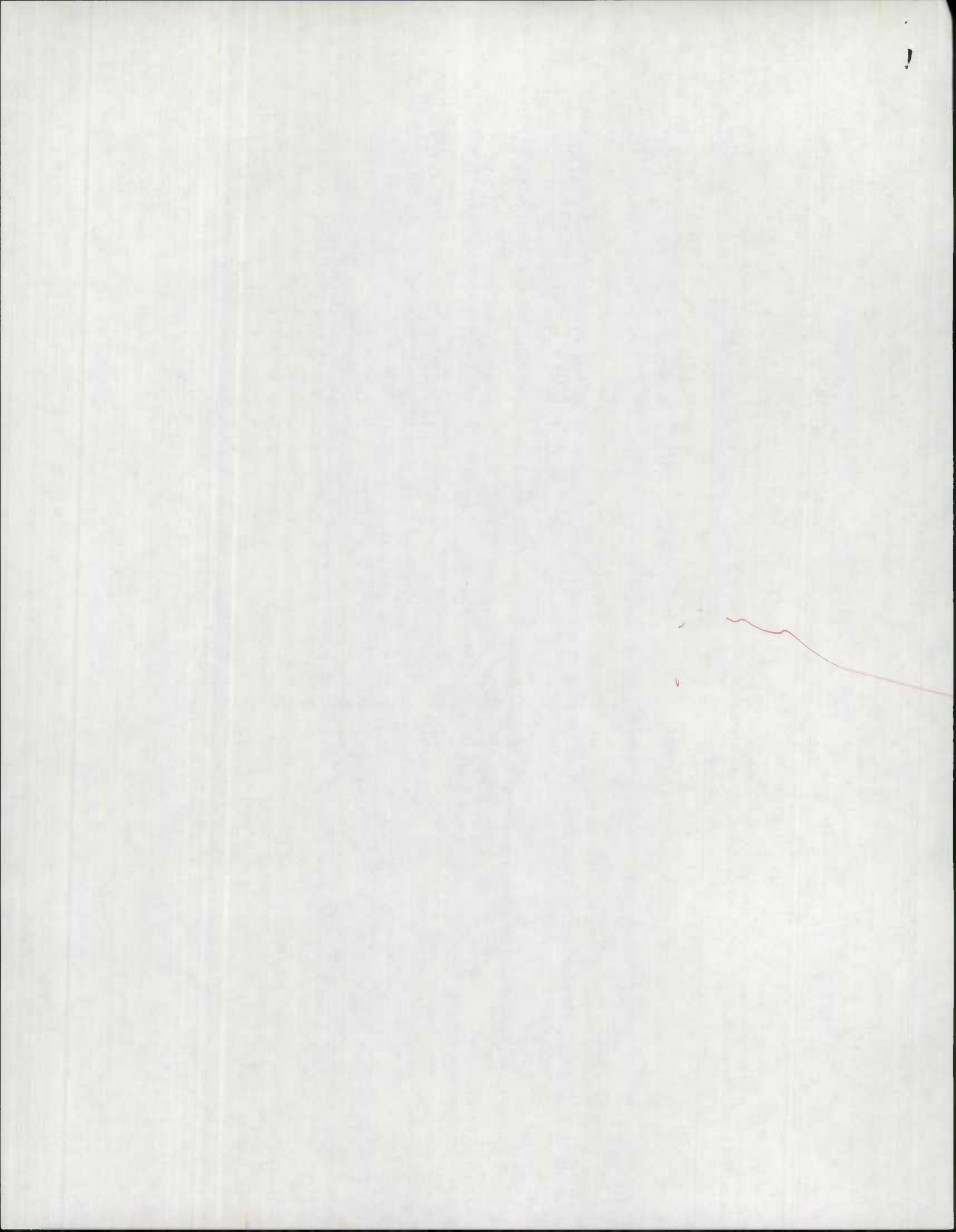
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.06</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	315	0%	
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	1	0.06
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

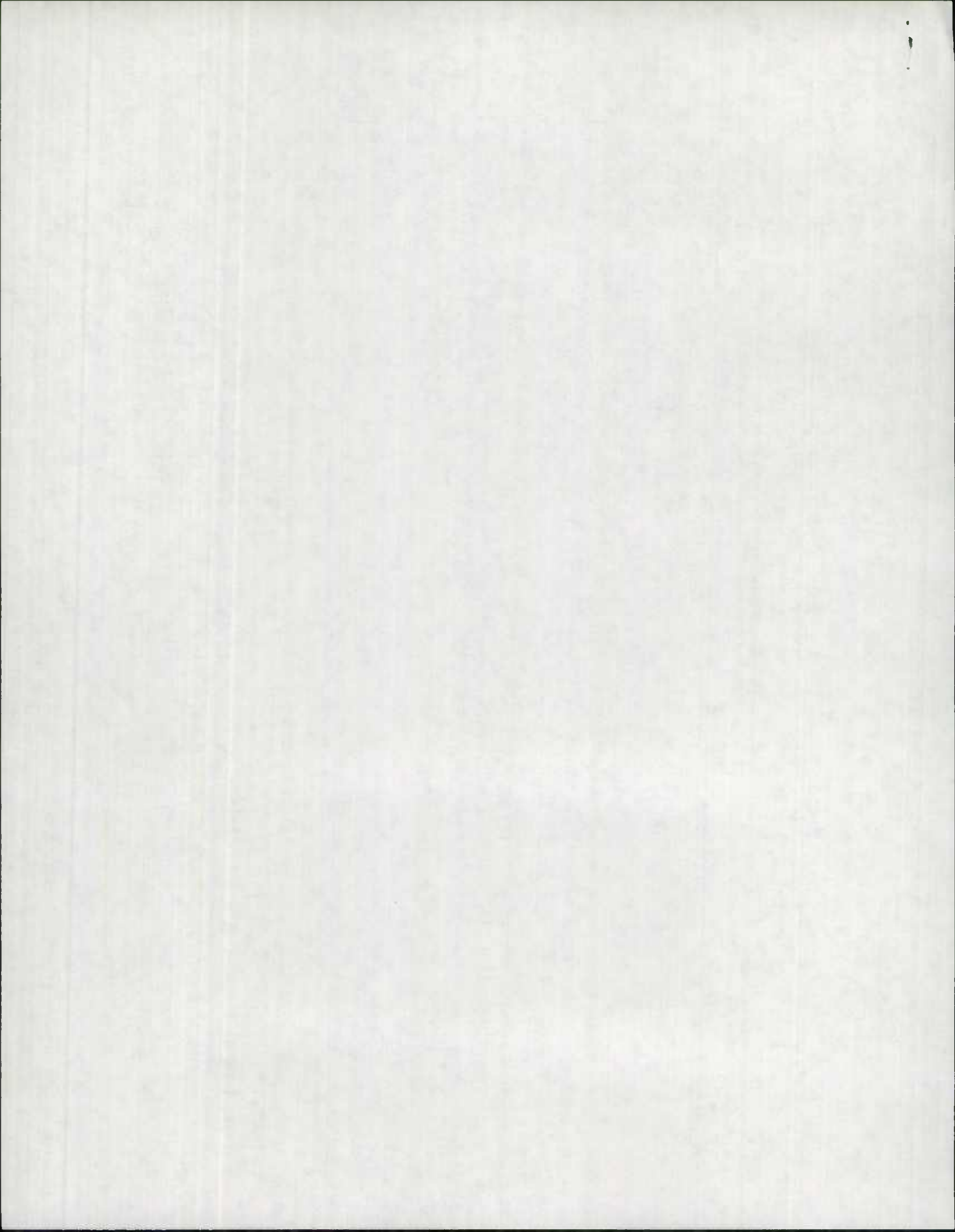
Route No: MU 0300 052
 Sample No: 13
 County: Cecile

Starting Mile Pt: 2.64
 Ending Mile Pt: 2.88
(0.24)

Horizontal Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Chord</u> <u>length</u> (/100ft)	<u>Central</u> <u>Ord1. Length</u> (/100ft)	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>1266</u>	<u>120</u>	<u>0</u>	-----
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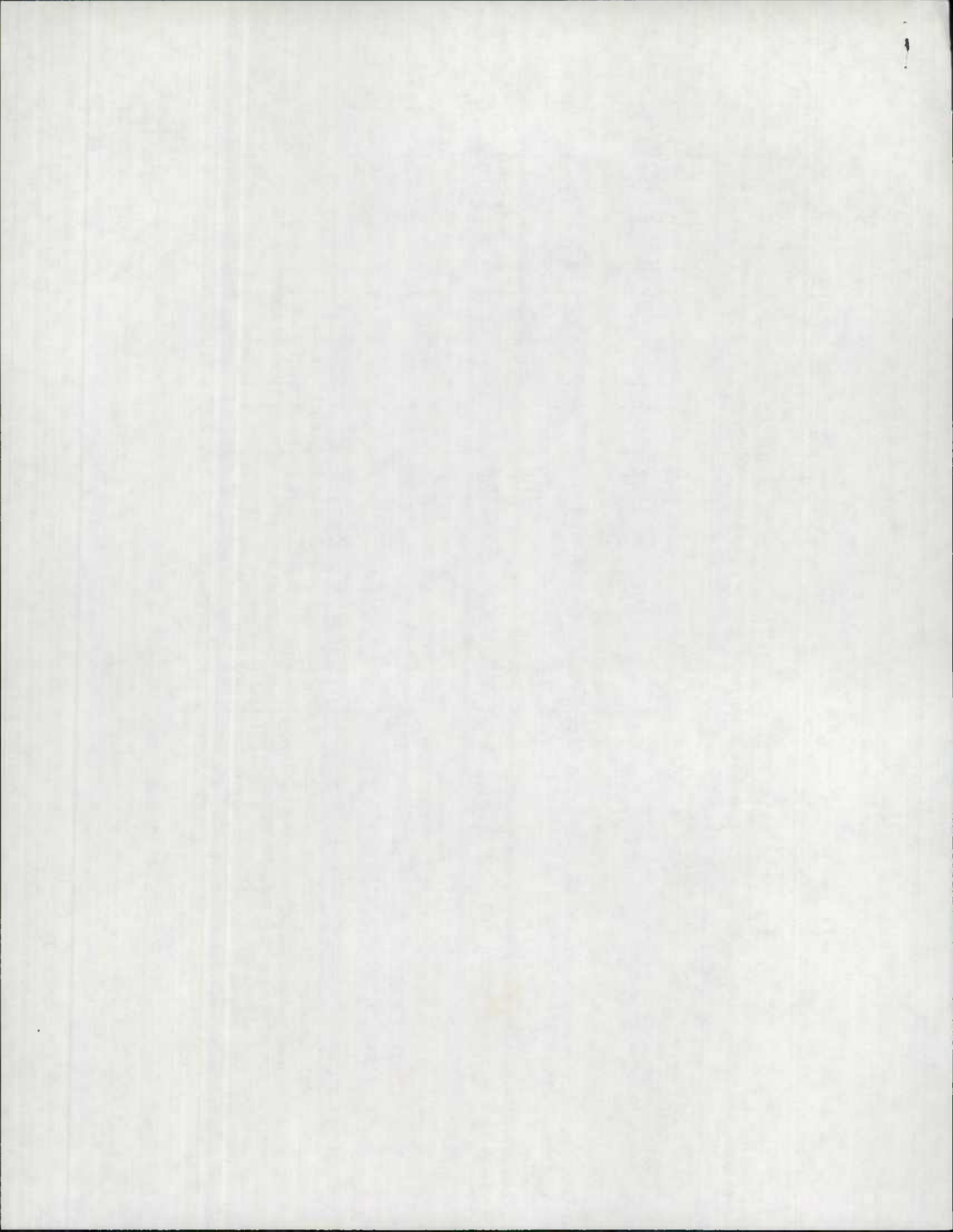
	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	<u>1</u>	<u>0.24</u>
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----



Vertical Curve Section

<u>Start Pt.</u> (in ft.)	<u>End Pt.</u> (in ft.)	<u>Gradient Percent</u>	<u>Length of Curve</u> (in x.xx miles)
0	1266	0%	
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	<u>Grade Classes by Gradient (Percent)</u>	<u>Number of Grades (Right- Justified)</u>	<u>Length of Grades in Class (Implied Decimal) (xx.xxx miles)</u>
a.	0.0-0.4	1	0.24
b.	0.5-2.4	-----	-----
c.	2.5-4.4	-----	-----
d.	4.5-6.4	-----	-----
e.	6.5-8.4	-----	-----
f.	8.5-	-----	-----



CURVE - GRADE DATA COLLECTION
NON - STATE ROADS - FY - 1992

Route No: MI 0360 052
 Sample No: 14
 County: Cecil

Starting Mile Pt: 0.00
 Ending Mile Pt: 0.17
(0.17)

Horizontal Curve Section

<u>Start Pt.</u> <u>(in ft.)</u>	<u>End Pt.</u> <u>(in ft.)</u>	<u>Chord</u> <u>length</u> <u>(/100ft)</u>	<u>Central</u> <u>Ord. Length</u> <u>(/100ft)</u>	<u>Length of Total</u> <u>Curve in(x.xxmile)</u>
<u>0</u>	<u>898</u>	<u>100</u>	<u>0</u>	
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	<u>Curve</u> <u>Classes</u> <u>by</u> <u>Degree of</u> <u>Curvature</u>	<u>Number of</u> <u>Curves</u> <u>(Right-</u> <u>Justified)</u>	<u>Length</u> <u>of Curves</u> <u>in Class</u> <u>(Implied Decimal)</u> <u>(xx.xxx miles)</u>
a.	0.0-0.4	-----	-----
b.	0.5-1.4	-----	-----
c.	1.5-2.4	-----	-----
d.	2.5-3.4	-----	-----
e.	3.5-4.4	-----	-----
f.	4.5-5.4	-----	-----
g.	5.5-6.9	-----	-----
h.	7.0-8.4	-----	-----
i.	8.5-10.9	-----	-----
j.	11.0-13.9	-----	-----
k.	14.0-19.4	-----	-----
l.	19.5-27.9	-----	-----
m.	28+	-----	-----

