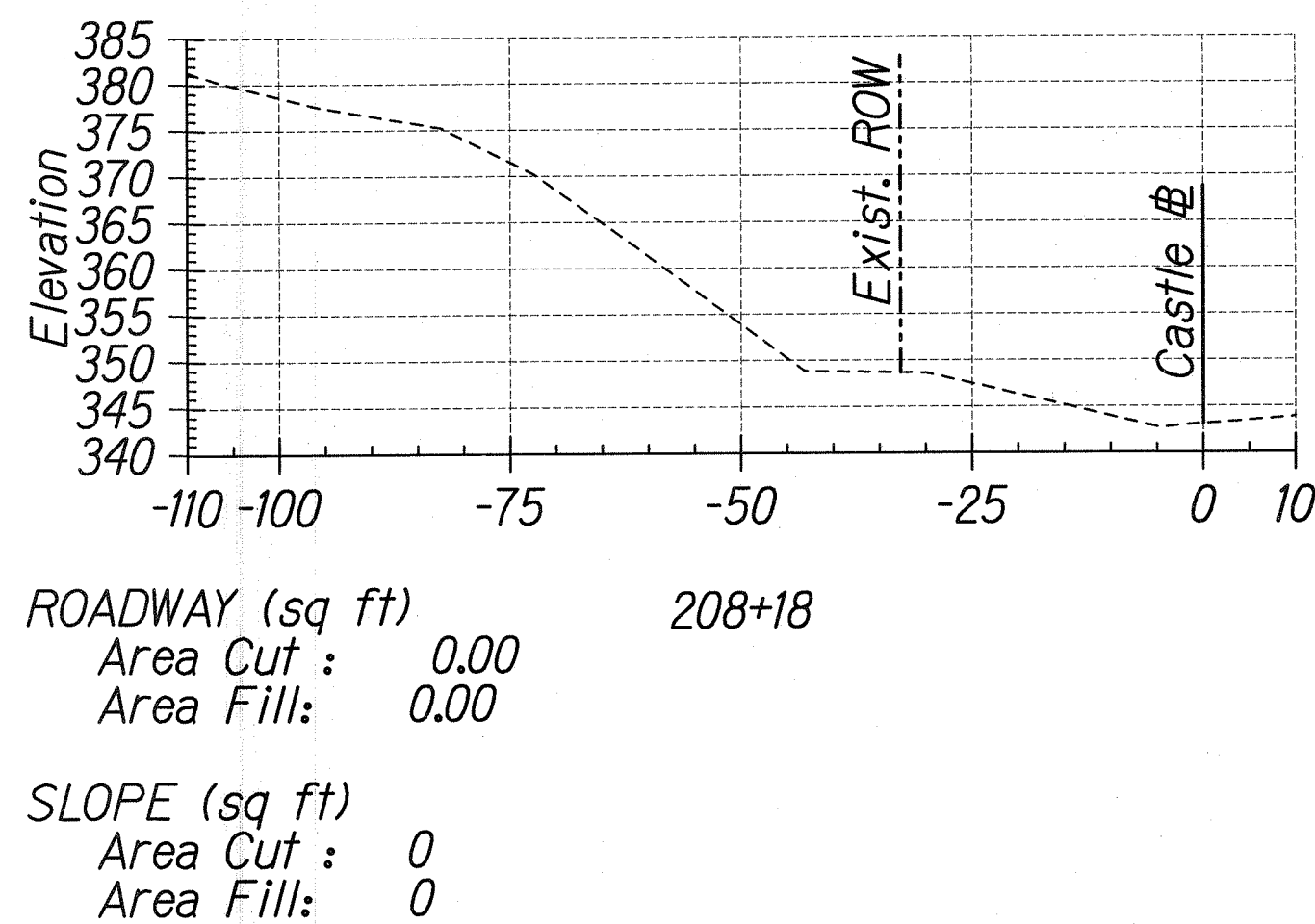
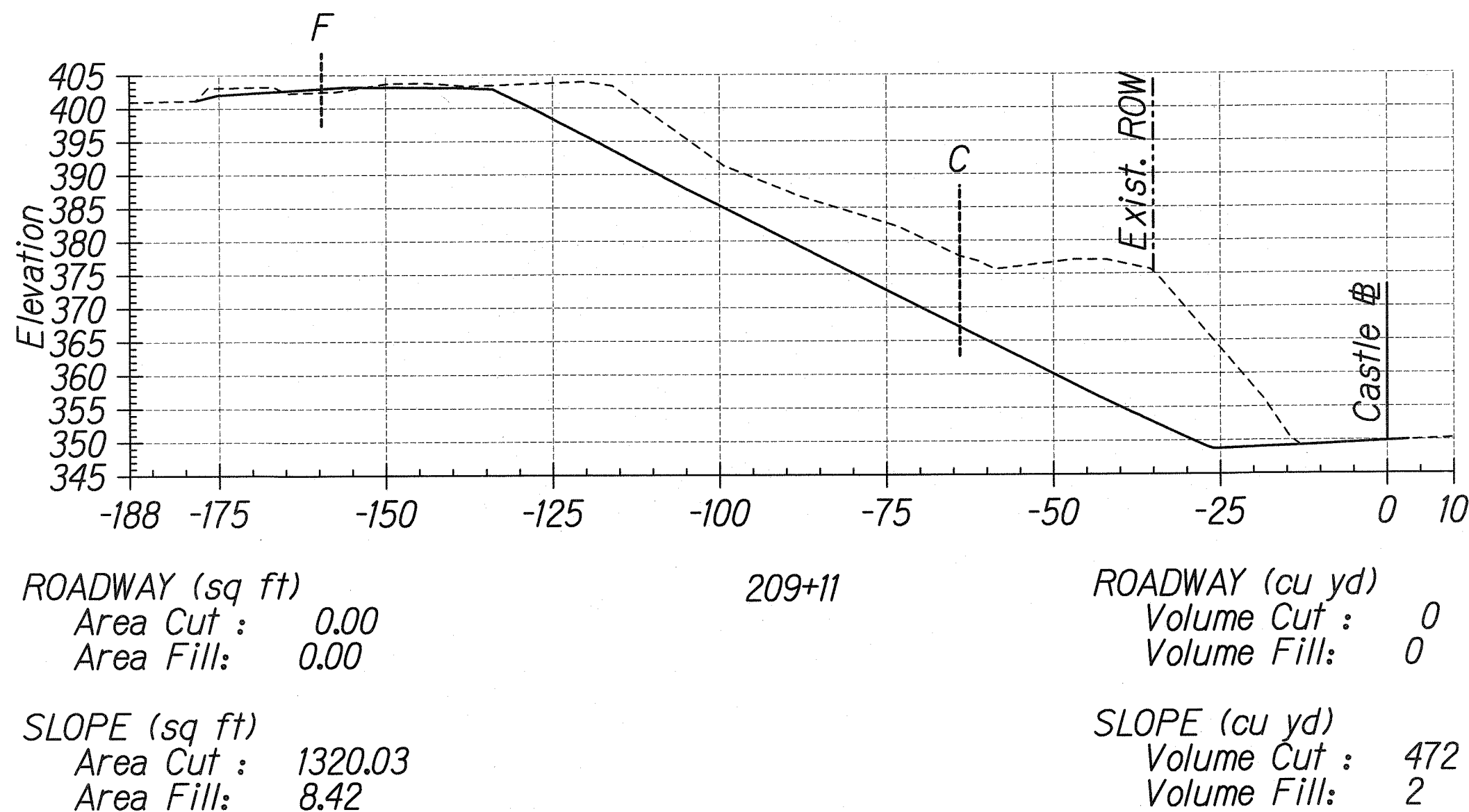
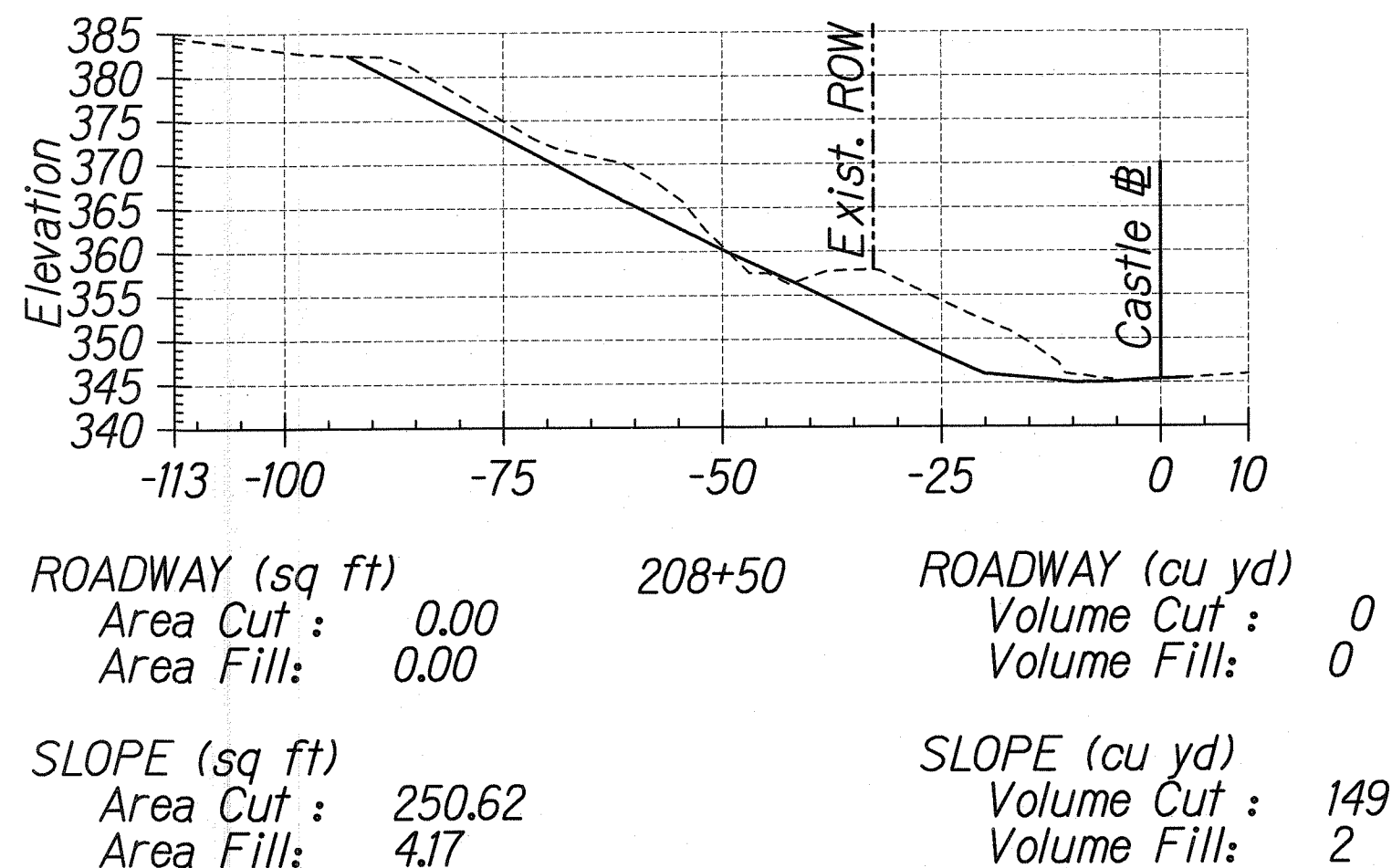
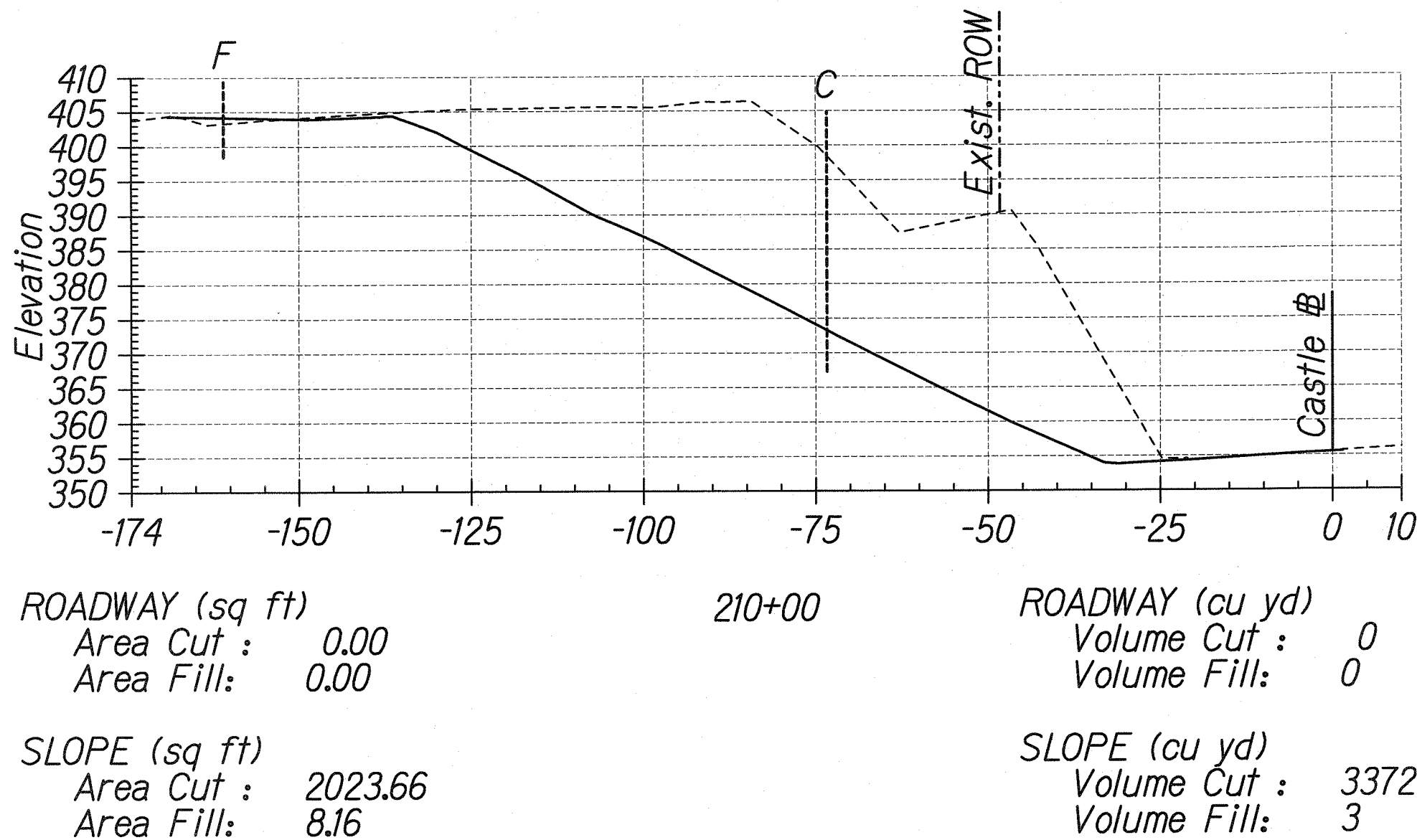
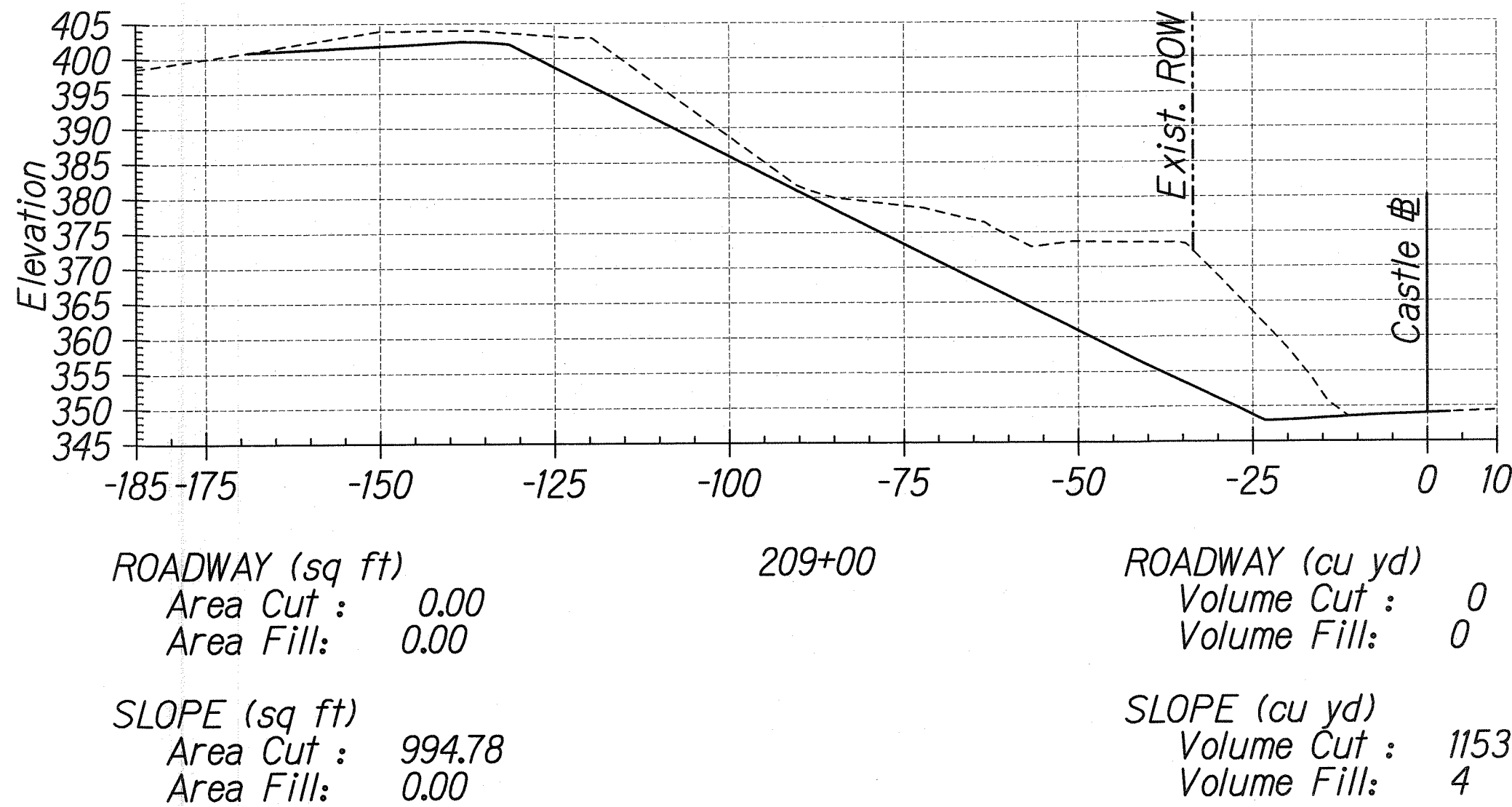


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	57	91

02-04



ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NO.	

J:\CASTLE JUNCTION\XSEC\XSEC-01.dgn

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R. Urasak

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

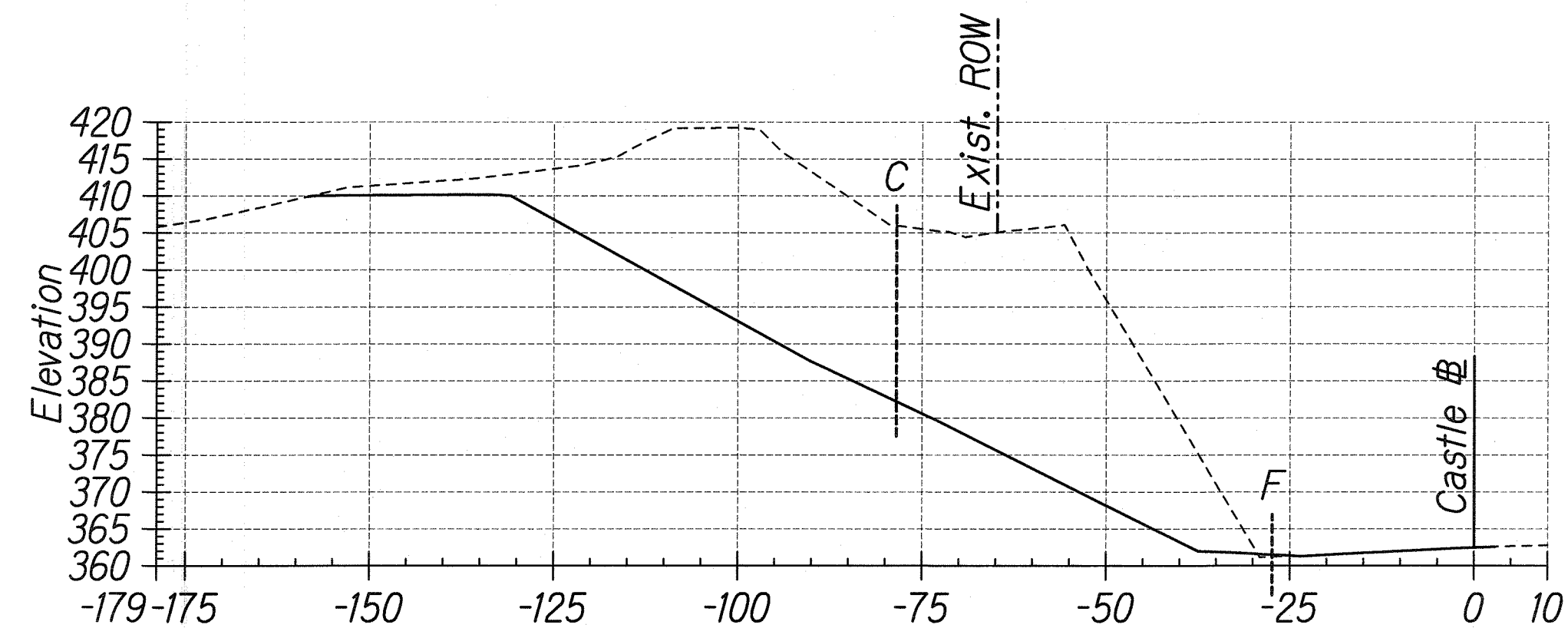
PROJECT NO. 61C-01-04# 02-04
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-3 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-0411	2004	58	91

02-04



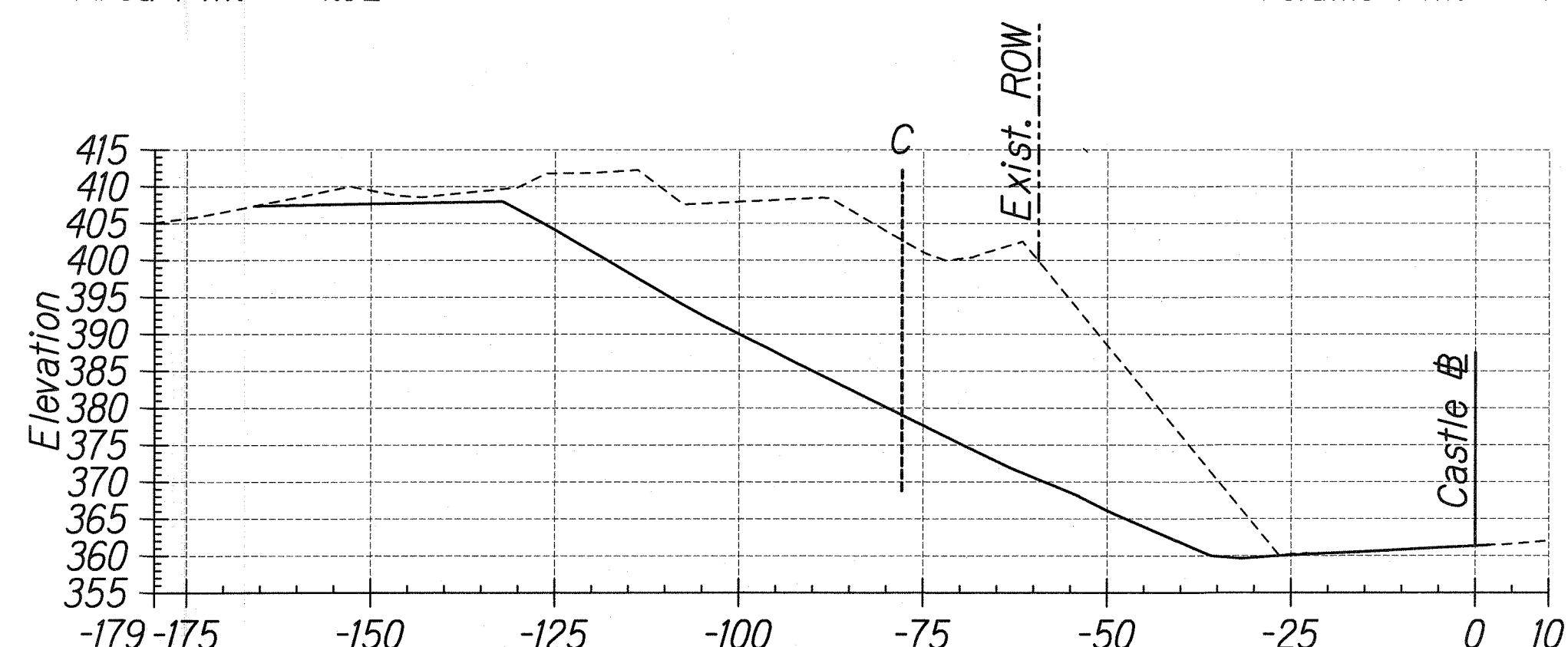
ROADWAY (sq ft)
Area Cut : 0.00
Area Fill: 0.00

211+50

ROADWAY (cu yd)
Volume Cut : 0
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 2182.69
Area Fill: 1.02

SLOPE (cu yd)
Volume Cut : 2383
Volume Fill: 1



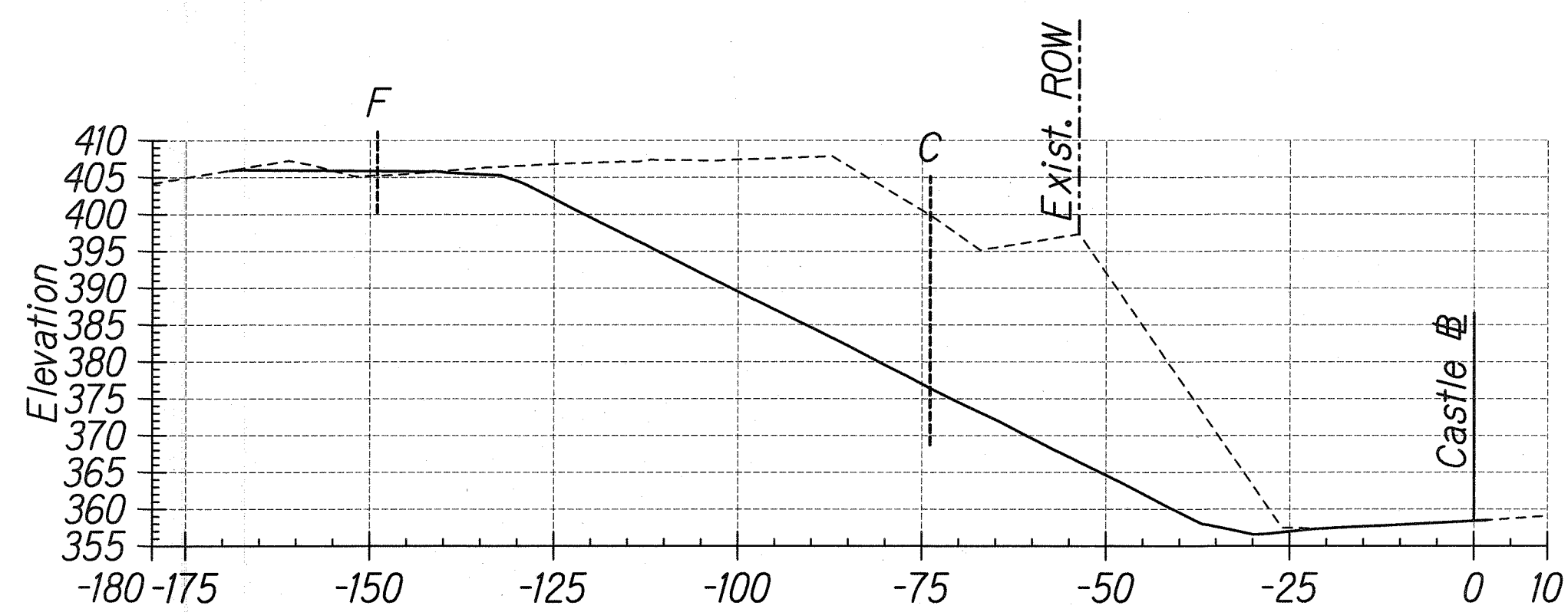
ROADWAY (sq ft)
Area Cut : 0.00
Area Fill: 0.00

211+00

ROADWAY (cu yd)
Volume Cut : 0
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 1922.62
Area Fill: 0.00

SLOPE (cu yd)
Volume Cut : 2259
Volume Fill: 2



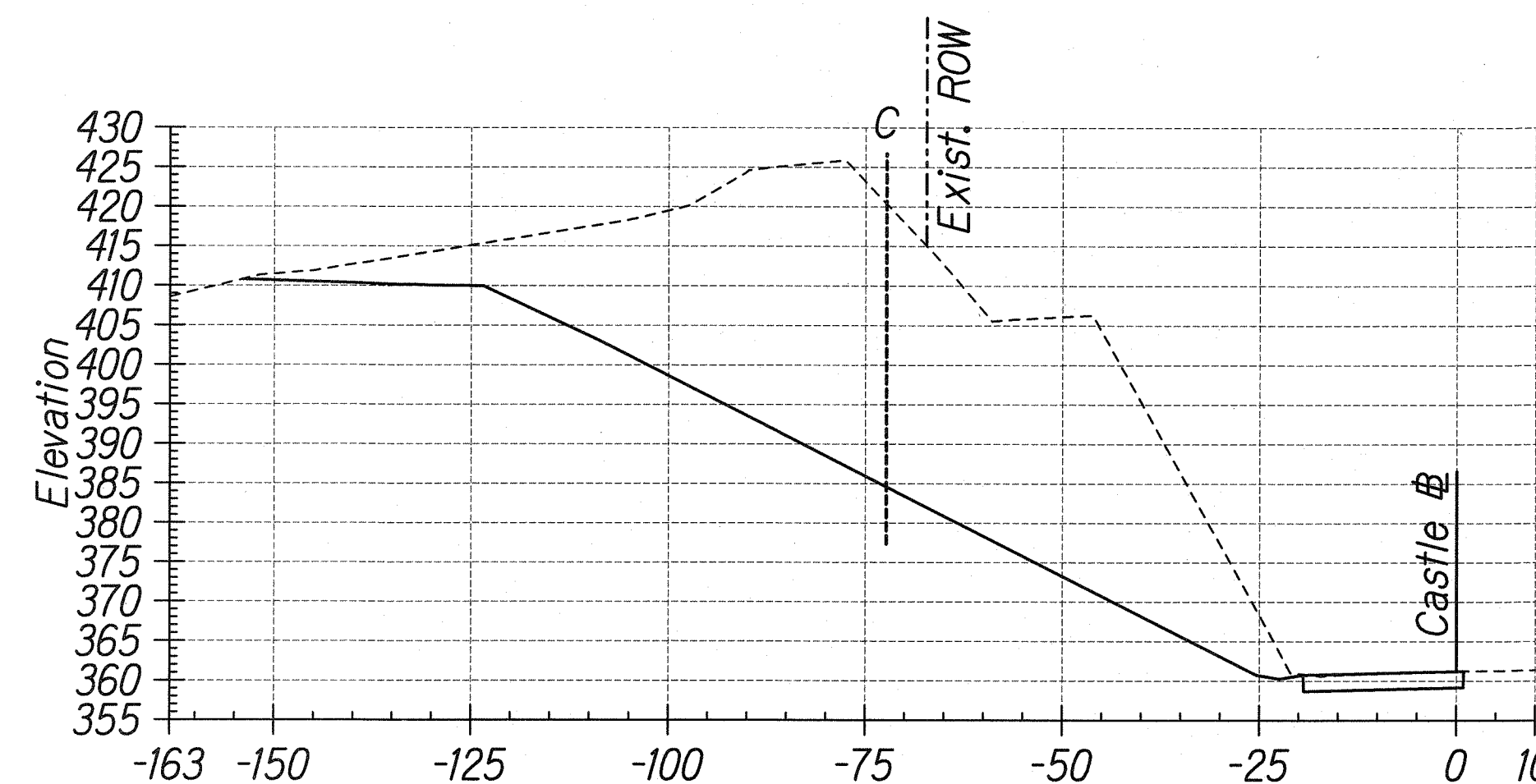
ROADWAY (sq ft)
Area Cut : 0.00
Area Fill: 0.00

210+50

ROADWAY (cu yd)
Volume Cut : 0
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 1895.72
Area Fill: 6.11

SLOPE (cu yd)
Volume Cut : 2344
Volume Fill: 3



ROADWAY (sq ft)
Area Cut : 38.24
Area Fill: 0.00

212+25

ROADWAY (cu yd)
Volume Cut : 50
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 2589.48
Area Fill: 1.02

SLOPE (cu yd)
Volume Cut : 3628
Volume Fill: 2

SURVEY PLOTTED BY	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

61CASTLE JUNCTION/SEC/XSEC-02.dgn

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R. Urasaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-0411 02-04

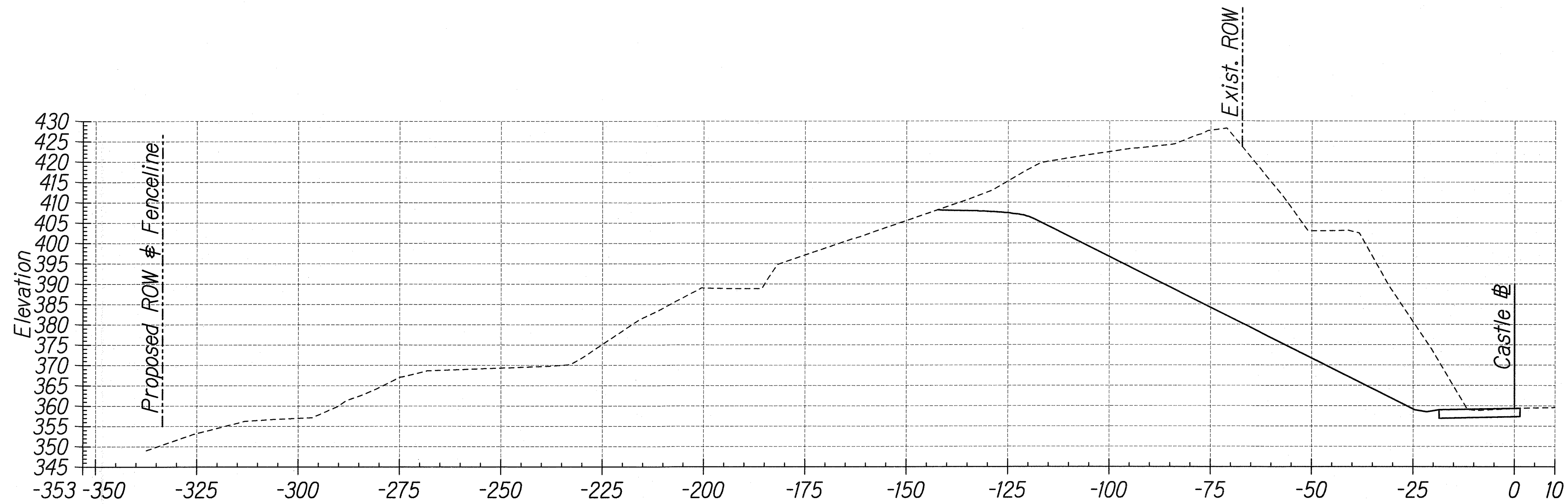
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-4 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	59	91

02-04



ROADWAY (sq ft)
Area Cut : 36.83
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 3253.95
Area Fill: 0.00

213+00

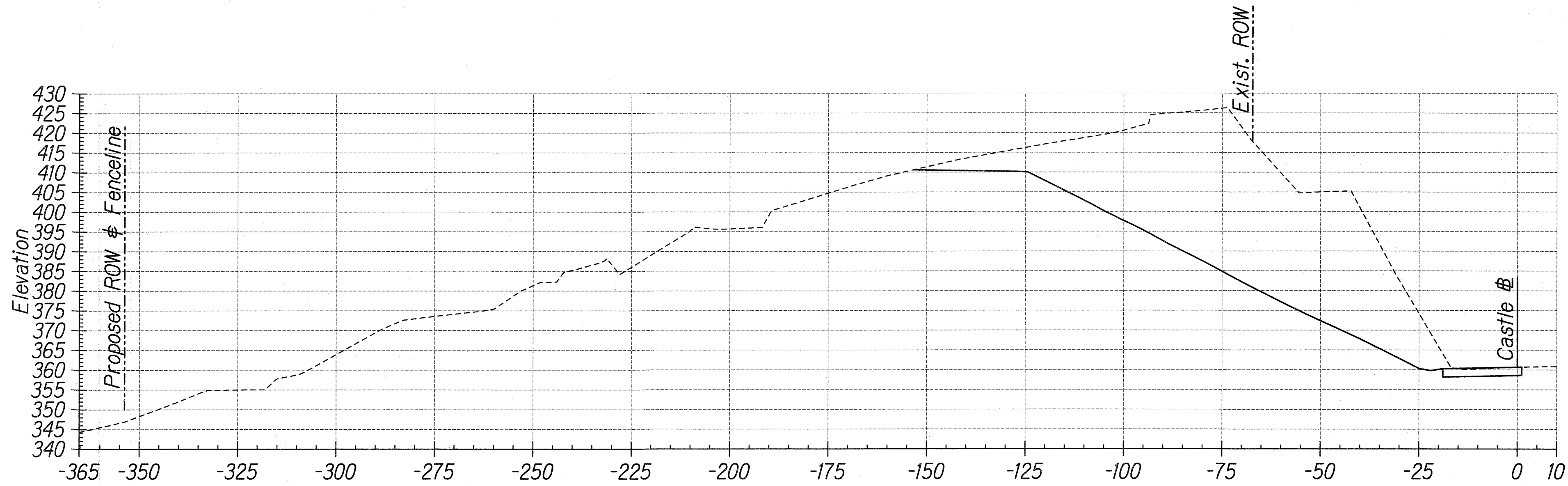
ROADWAY (cu yd)
Volume Cut : 68
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 5696 - 326 = 5370
Volume Fill: 0

(By Others)

NOTE:

HECO will remove approximately 326 cu yds of slope excavation to relocate Overhead Electric Line as shown on Sht. E-1.



ROADWAY (sq ft)
Area Cut : 36.83
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 2897.41
Area Fill: 0.00

212+50

ROADWAY (cu yd)
Volume Cut : 35
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 2540
Volume Fill: 0

DESIGNED BY	DATE
TRACED BY	
NOTED BY	
CHECKED BY	
IN CHARGE	
APPROVED BY	
DATE	

J:\CASTLE JUNCTION\XSEC\XSEC-03.dgn

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

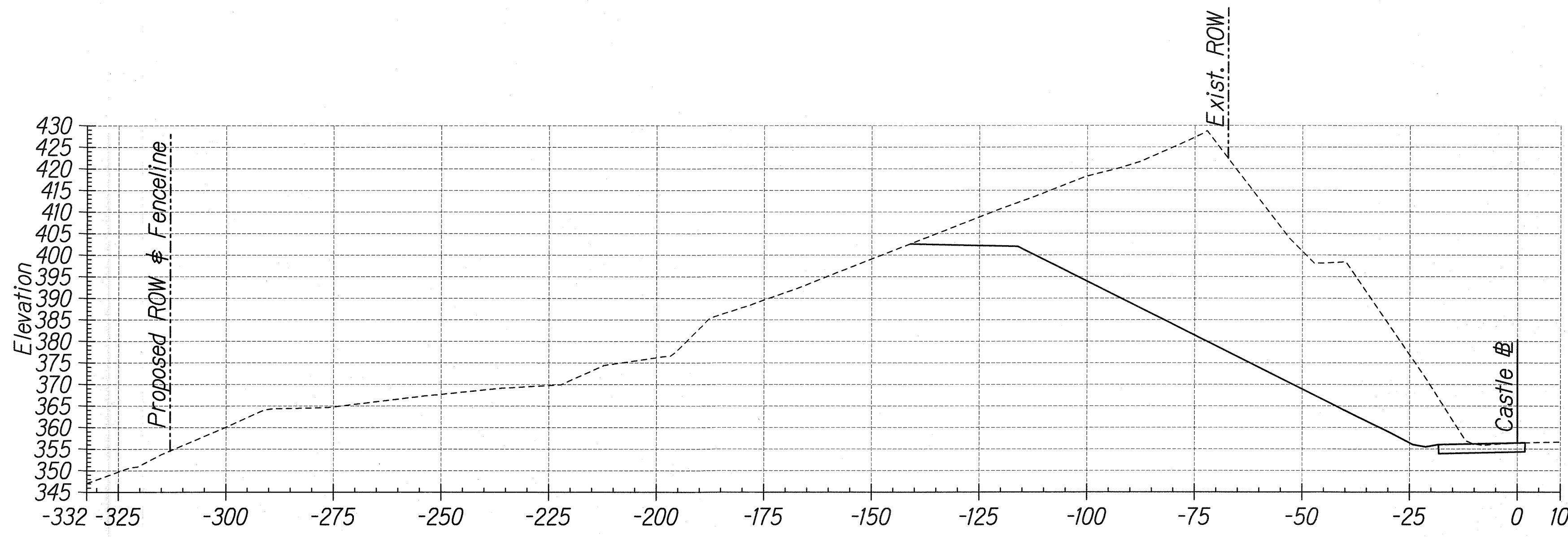
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-5 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	60	91

02-04

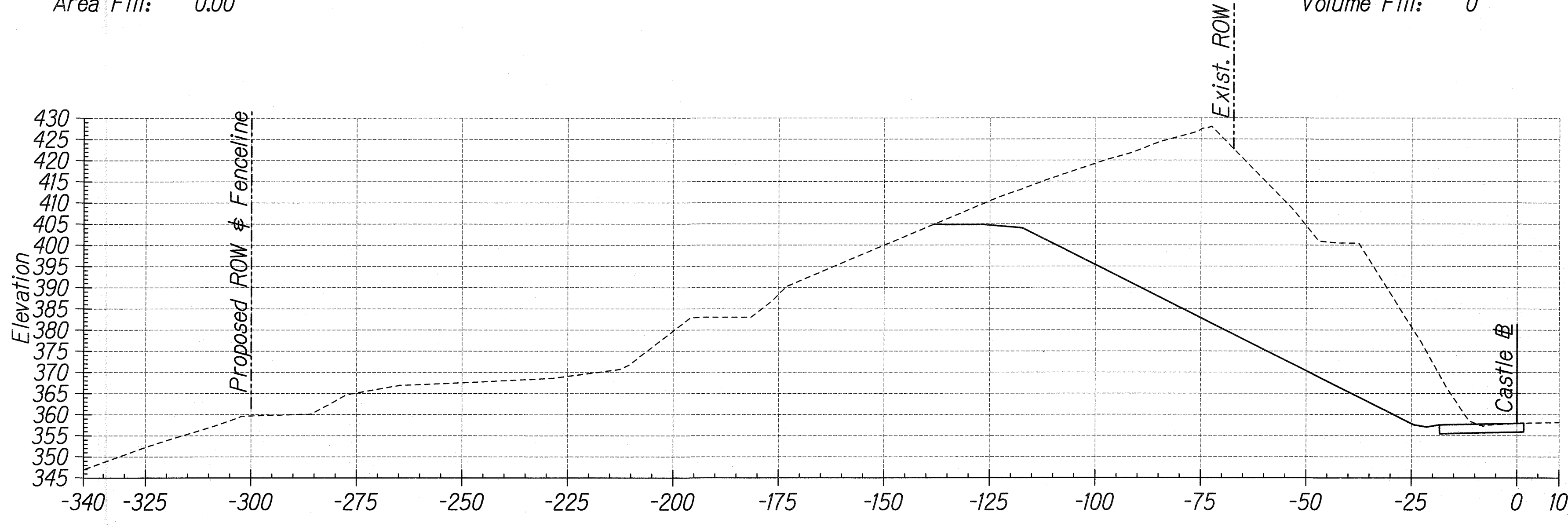


ROADWAY (sq ft)
Area Cut : 37.54
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 3166.63
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 69
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 5908
Volume Fill: 0



ROADWAY (sq ft)
Area Cut : 37.18
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 3214.17
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 69
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 5989
Volume Fill: 0

DESIGNED BY	DATE
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

J:\CASTLE JUNCTION\XSEC\XSEC-04.dgn

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

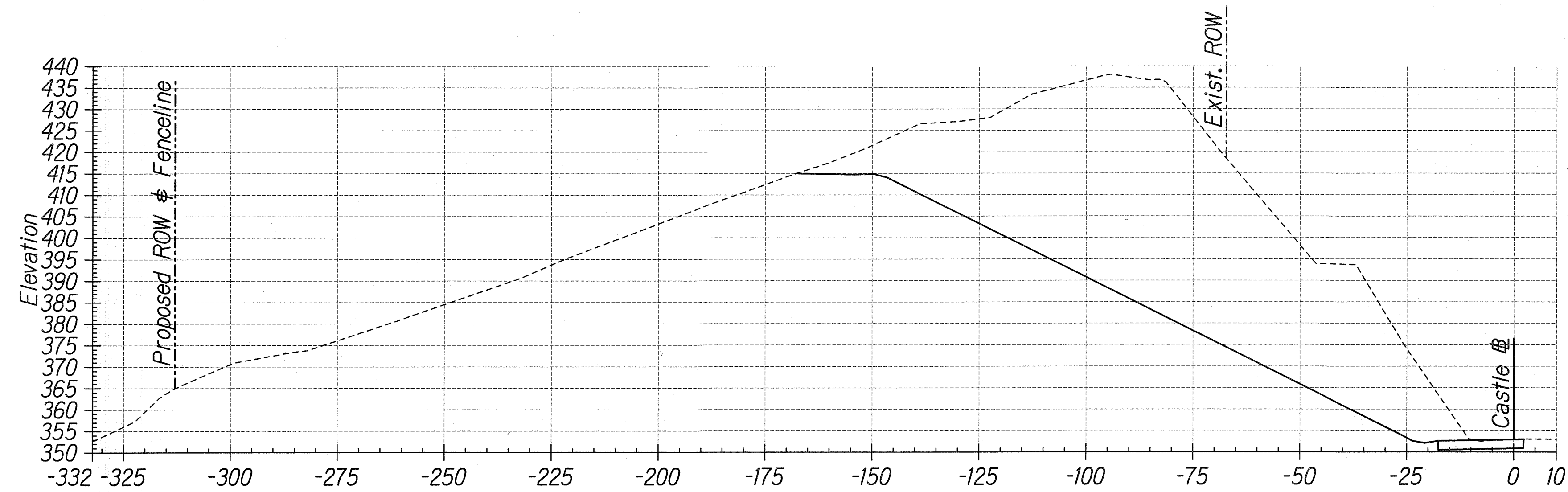
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

Scale: 1"=20' Date: Sept. 26, 2003

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	61	91

02-04



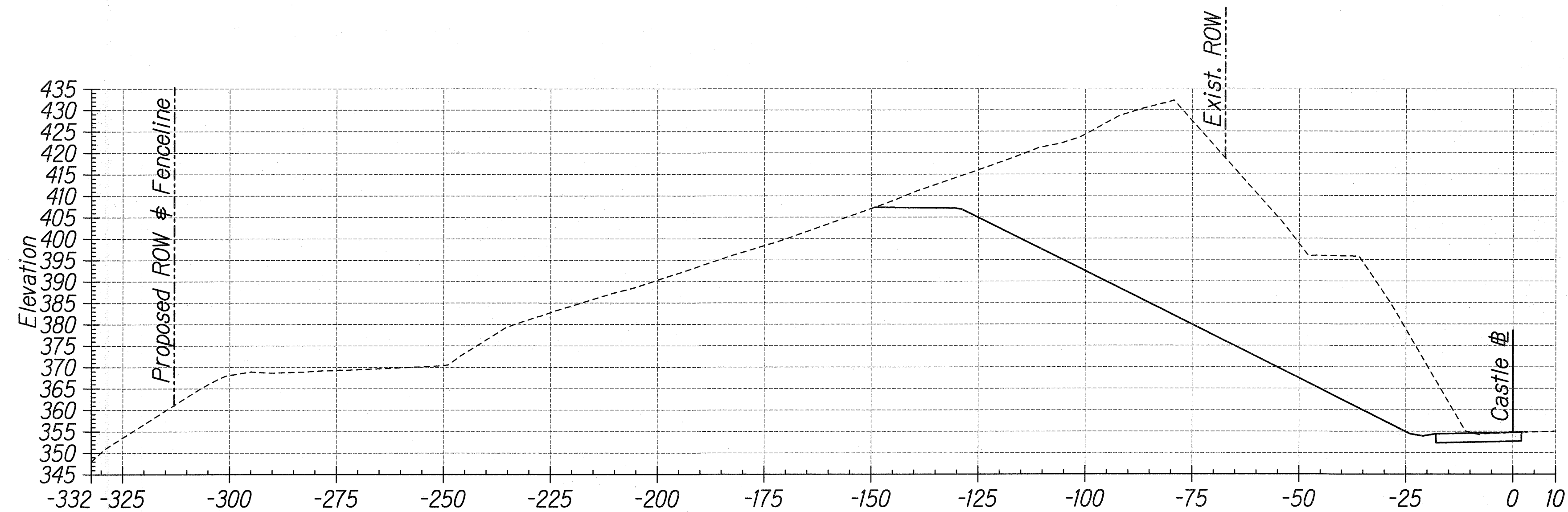
ROADWAY (sq ft)
Area Cut : 37.96
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 4563.81
Area Fill: 0.00

215+00

ROADWAY (cu yd)
Volume Cut : 70
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 7629
Volume Fill: 0



ROADWAY (sq ft)
Area Cut : 37.63
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 3675.02
Area Fill: 0.00

214+50

ROADWAY (cu yd)
Volume Cut : 70
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 6334
Volume Fill: 0

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
NOTE BOOK	
N.	

U:\CASTLE JUNCTION\XSEC\XSEC-05.dgn

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R. Urashima

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

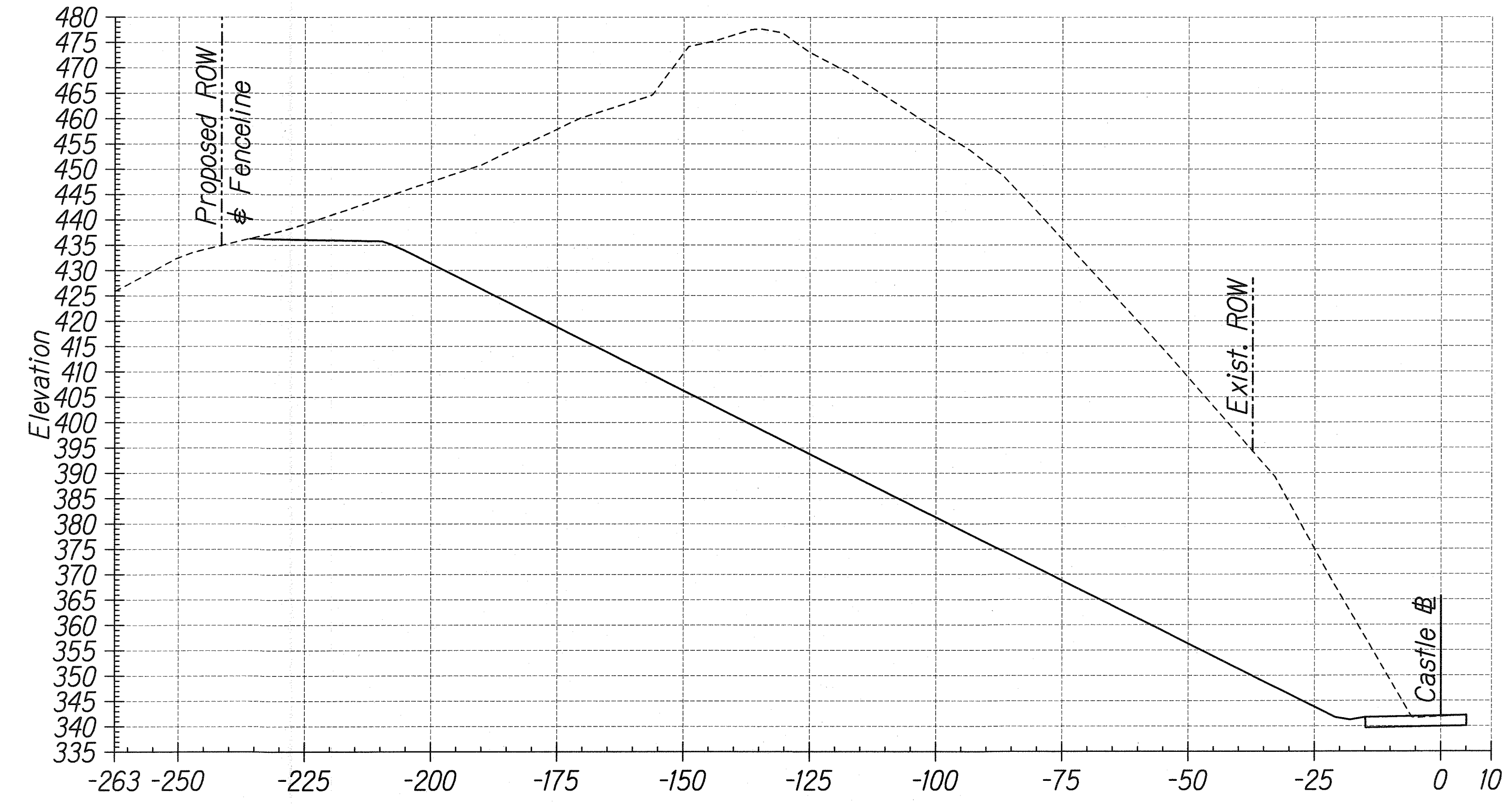
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-7 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	63	91

02-04

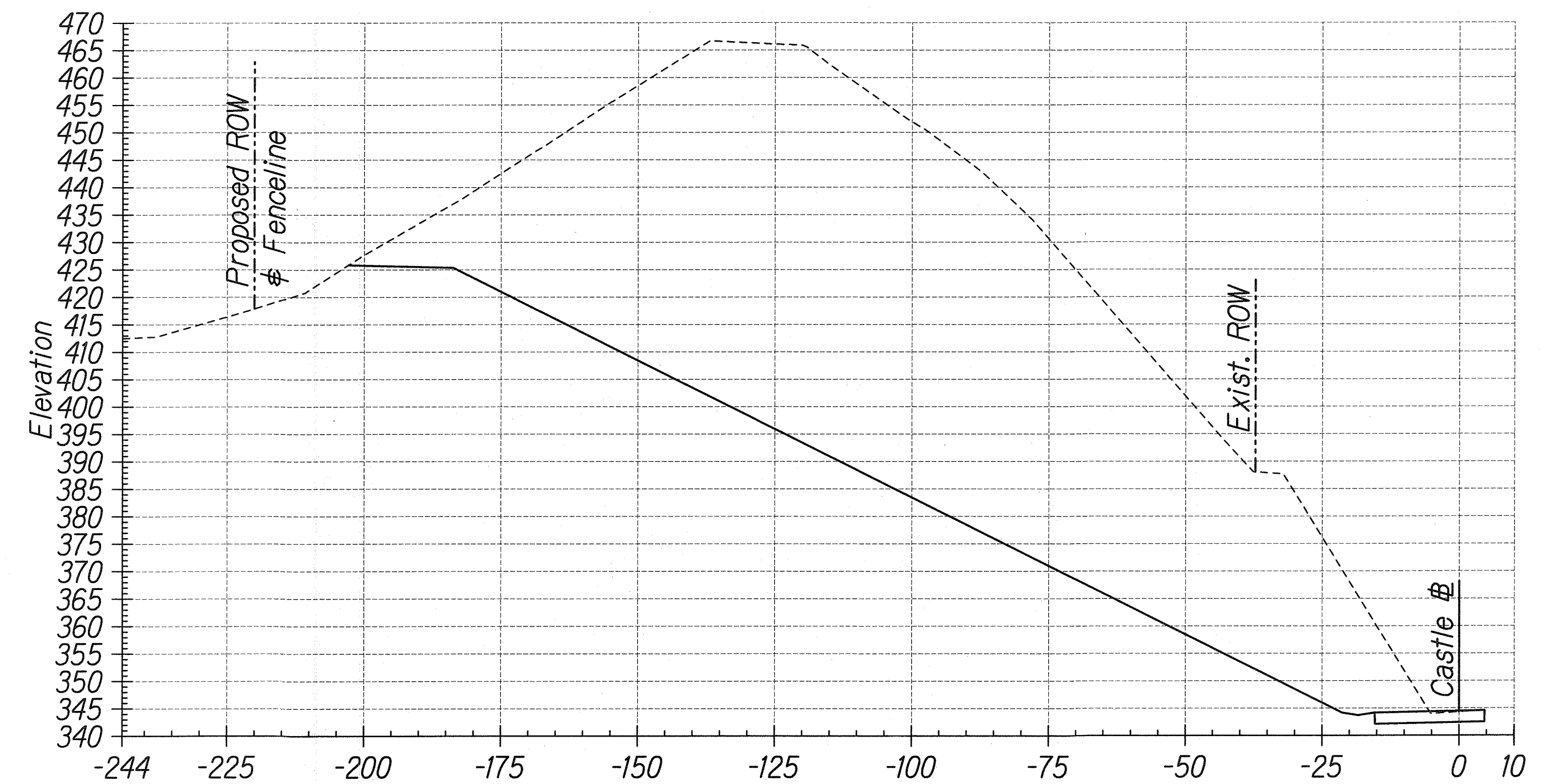


ROADWAY (sq ft)
Area Cut : 37.28
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 69
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 10763.73
Area Fill: 0.00

SLOPE (cu yd)
Volume Cut : 17962
Volume Fill: 0

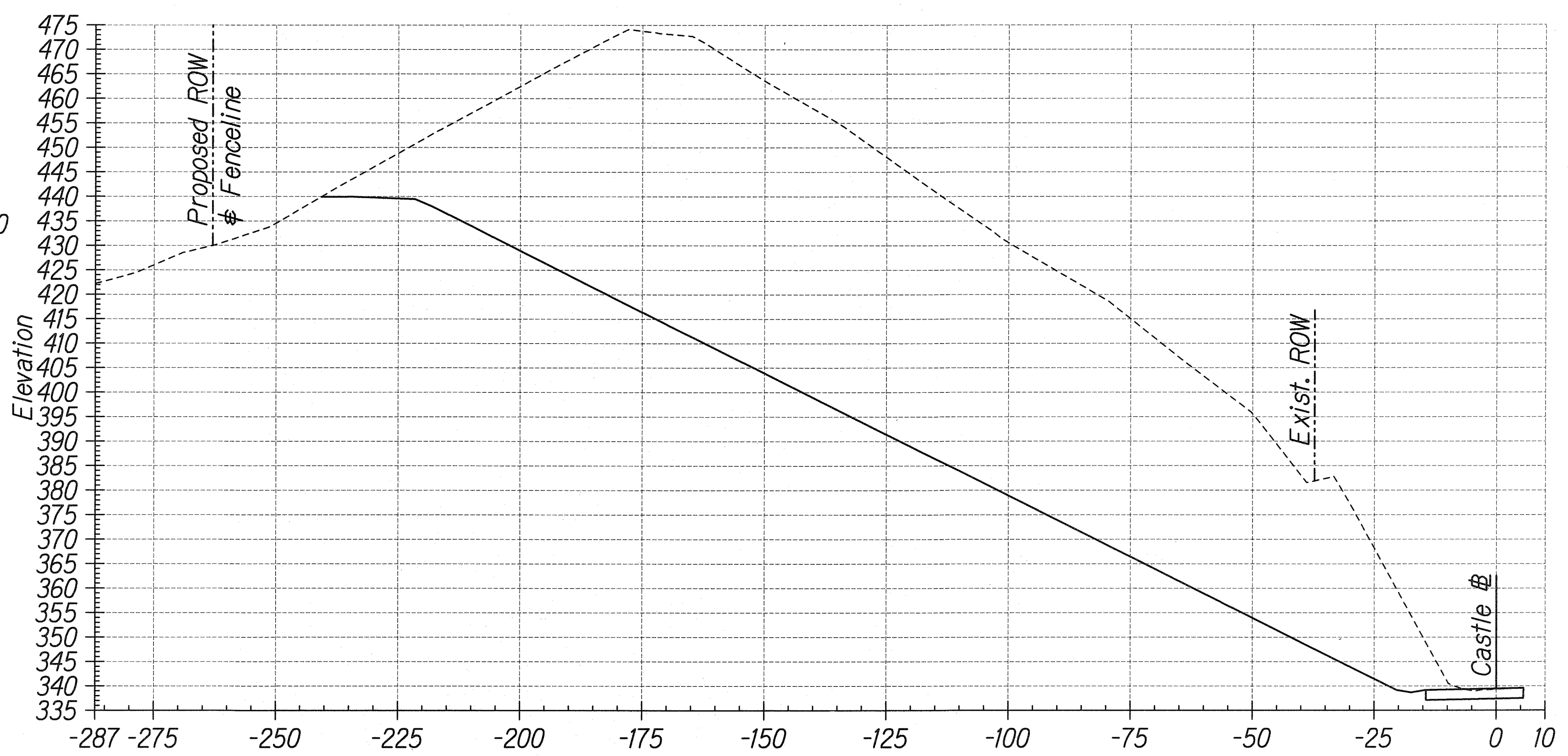


ROADWAY (sq ft)
Area Cut : 37.25
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 70
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 8635.37
Area Fill: 0.00

SLOPE (cu yd)
Volume Cut : 14522
Volume Fill: 0



ROADWAY (sq ft)
Area Cut : 37.30
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 69
Volume Fill: 0

SLOPE (sq ft)
Area Cut : 9560.24
Area Fill: 0.00

SLOPE (cu yd)
Volume Cut : 18818
Volume Fill: 0

ORIGINAL PLAN	DATE
NOTED BOOK	DESIGNED BY
	QUANTITIES BY
	CHECKED BY

J:\CASTLE JUNCTION\XSEC\XSEC-07.dgn

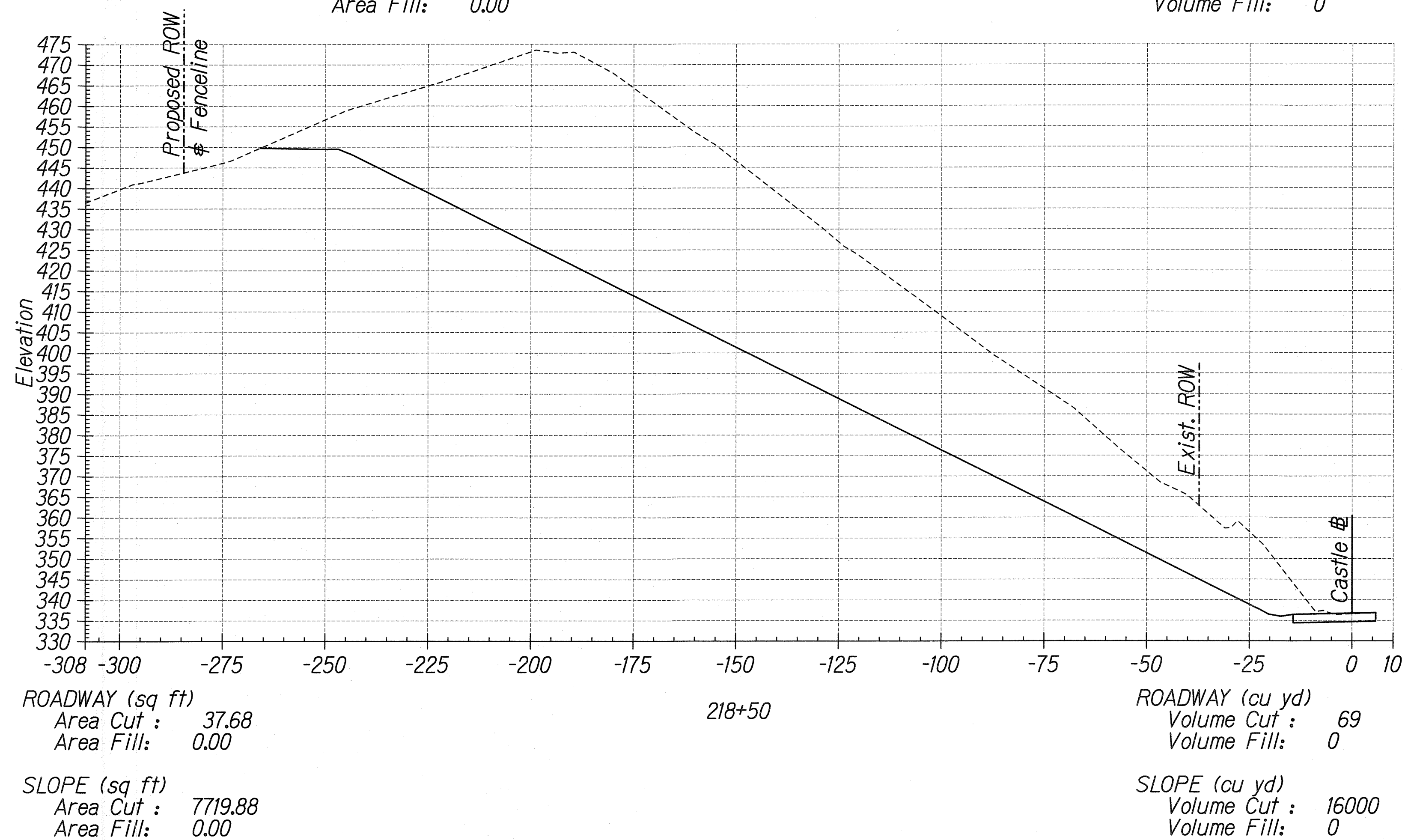
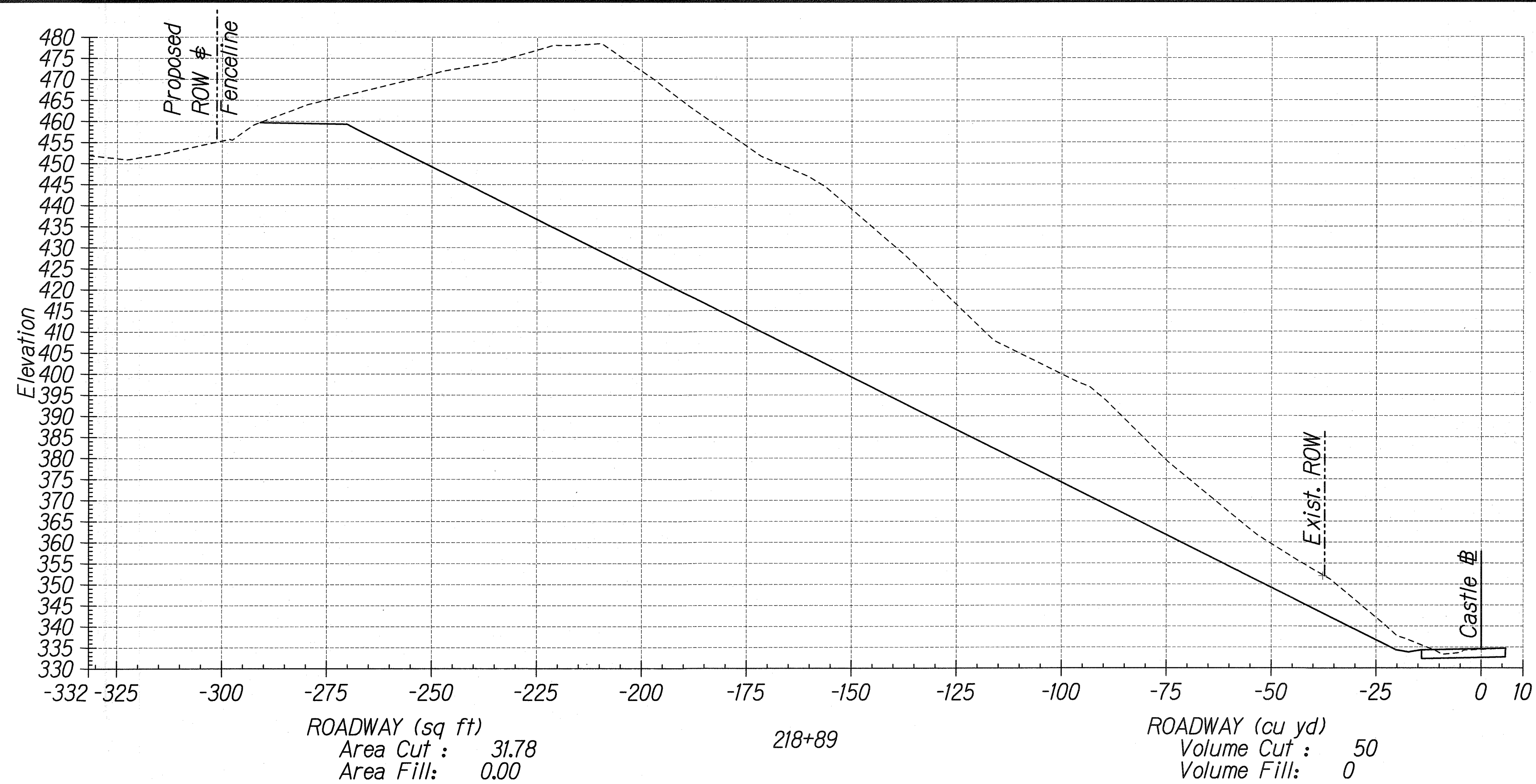
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Rumille

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
CROSS SECTIONS
KALANIANA'OLE HIGHWAY
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION
PROJECT NO. 61C-01-04# 02-04
Scale: 1"=20' Date: Sept. 26, 2003

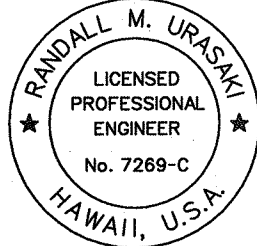
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	64	91

02-04



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

6/CASTLE JUNCTION/XSEC/XSEC-08.dgn



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R. M. Urasak

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

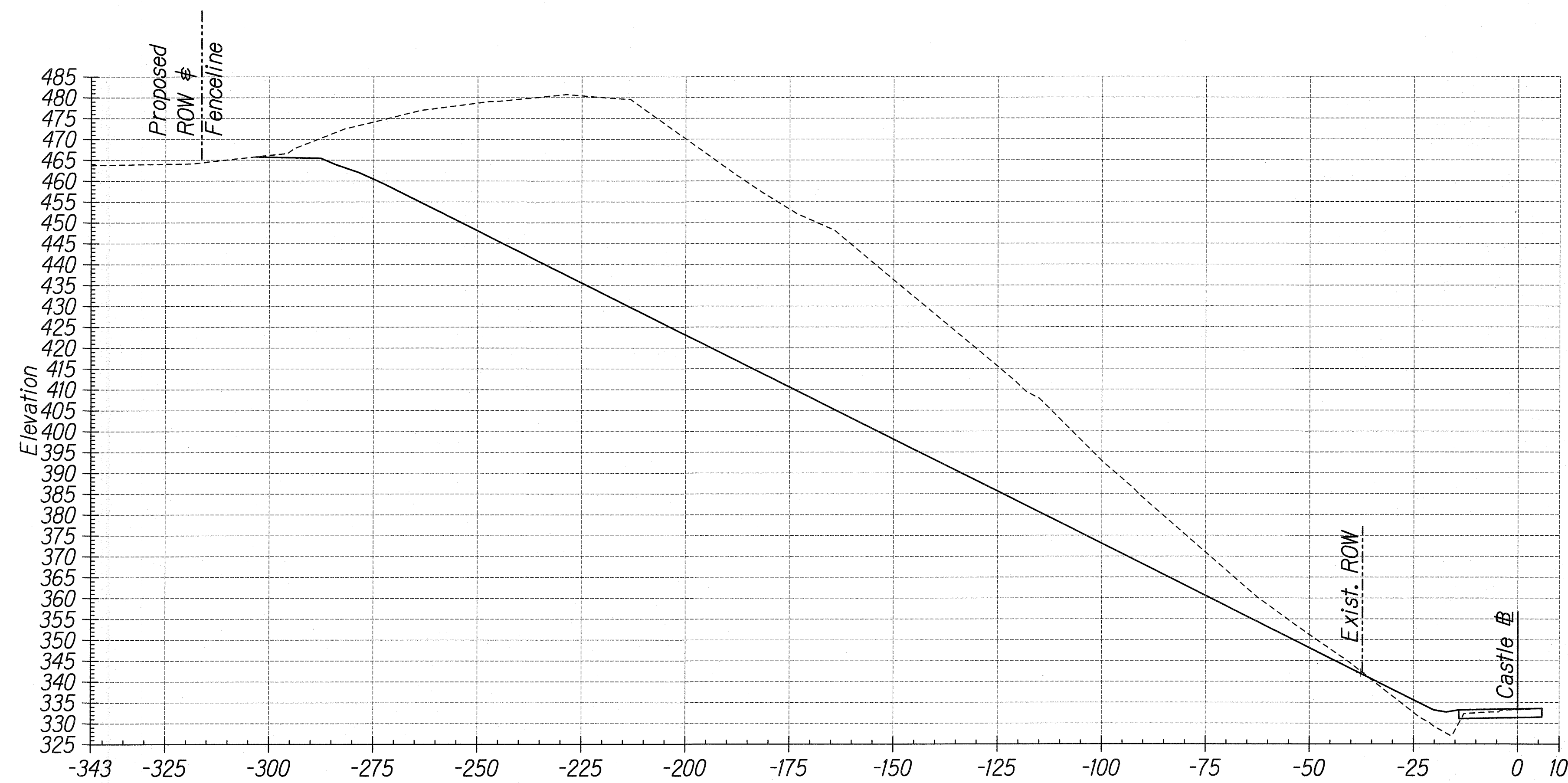
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-10 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C- 01-0411	2004	65	91

02-04



ROADWAY (sq ft)
Area Cut : 28.77
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 7093.43
Area Fill: 61.73

ROADWAY (cu yd)
Volume Cut : 24
Volume Fill: 0

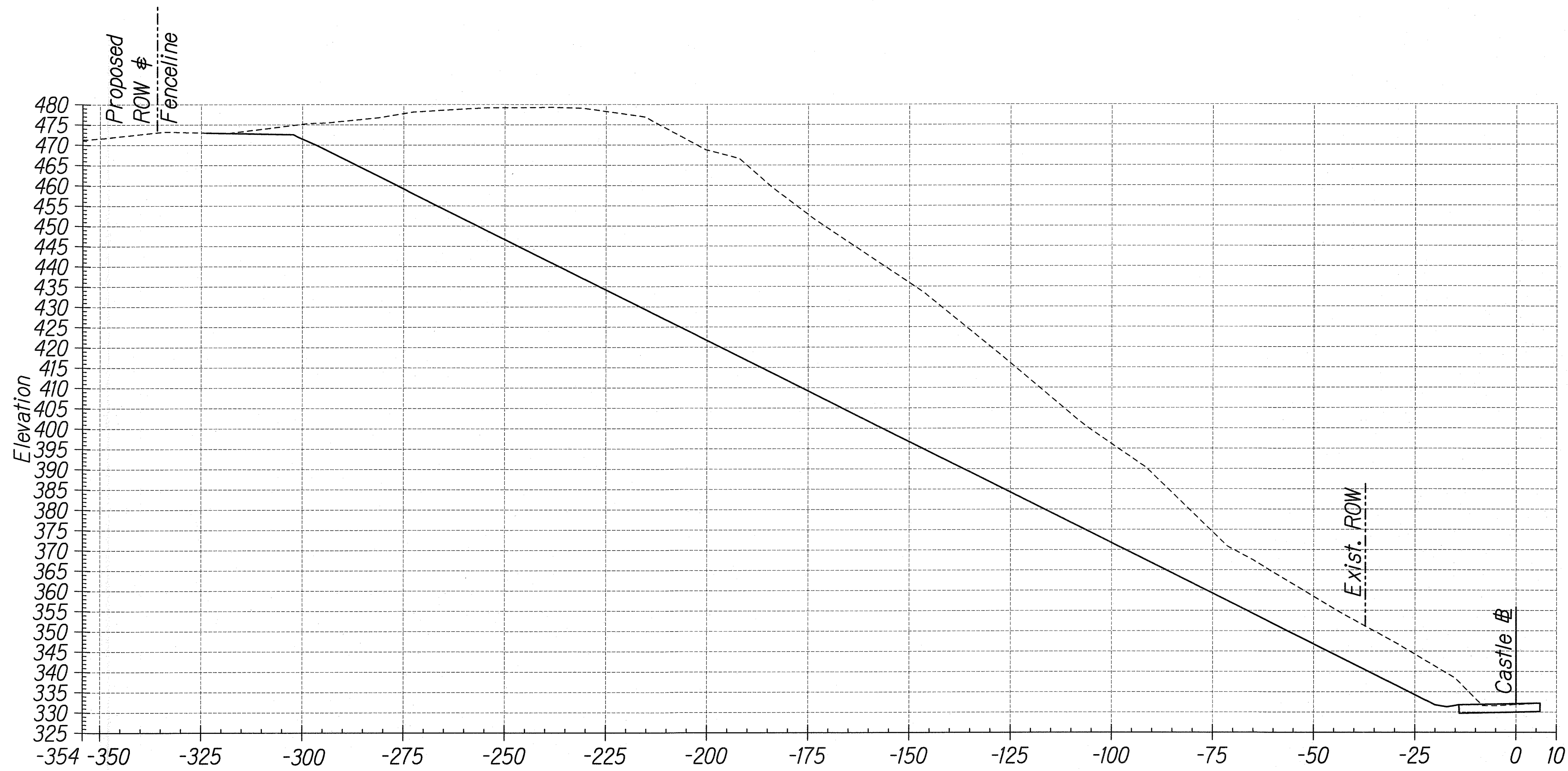
SLOPE (cu yd)
Volume Cut : 5564
Volume Fill: 24

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	SHEET No. <u>X-11</u> OF <u>17</u> SHEETS
	DATE: <u>SEP 26 2003</u>
	BY: <u>RD</u>

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	66	91

02-04



ROADWAY (sq ft)
Area Cut : 35.69
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 8155.35
Area Fill: 0.00

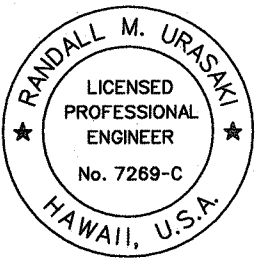
219+35

ROADWAY (cu yd)
Volume Cut : 30
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 7060
Volume Fill: 29

ORIGINAL PLAN	DATE
DRAWN BY	
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CHECKED BY	
NOTED BY	
NO.	

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Ram M. Ura

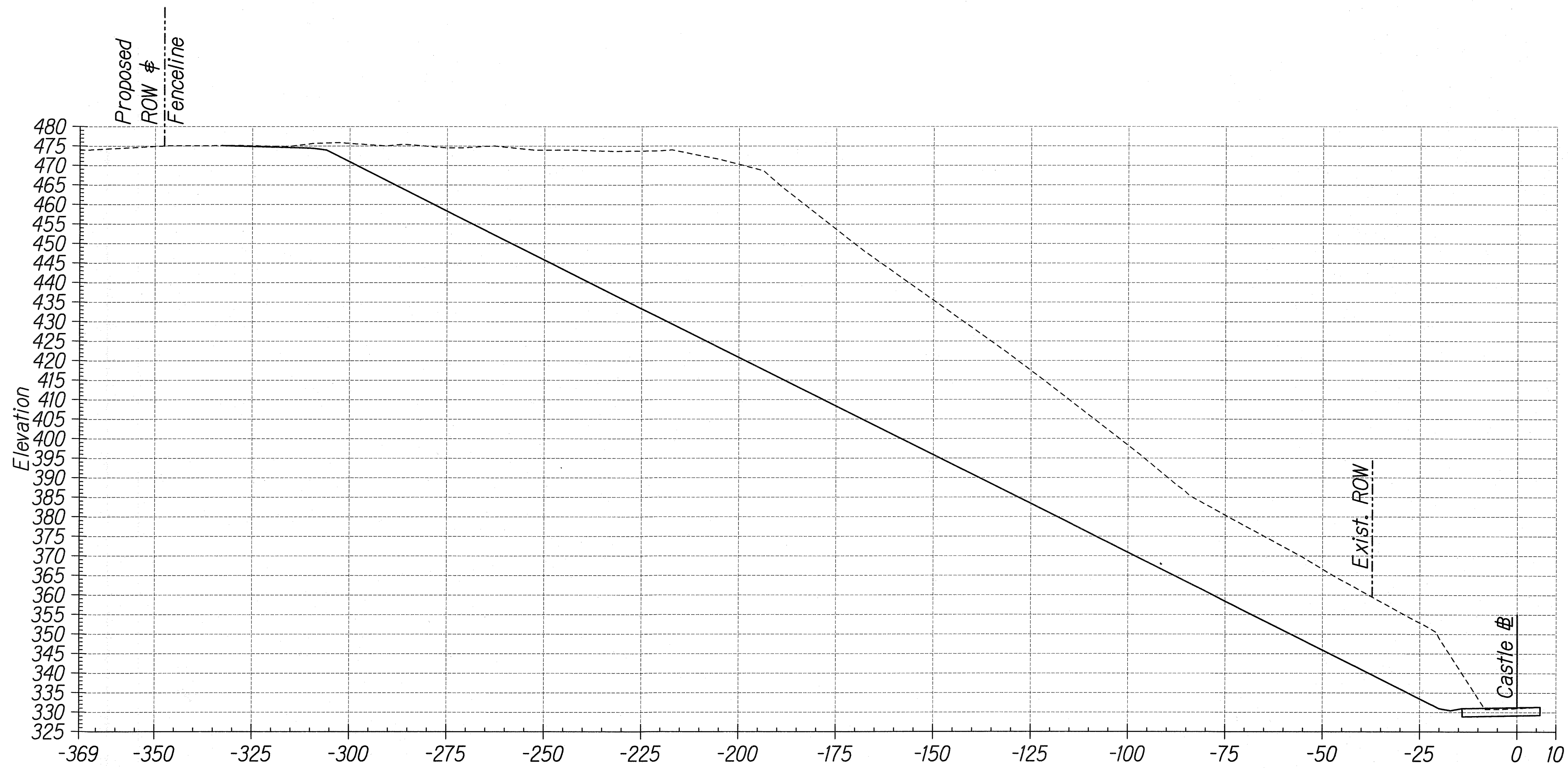
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
CROSS SECTIONS
KALANIANA'OLE HIGHWAY
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION
PROJECT NO. 61C-01-04# 02-04
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-12 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	67	91

02-04



ROADWAY (sq ft)
Area Cut : 35.99
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 8652.57
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 20
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 4669
Volume Fill: 0

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
QUANTITIES BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

J:\CASTLE JUNCTION\XSEC\XSEC-11.dgn

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Ram Urashki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

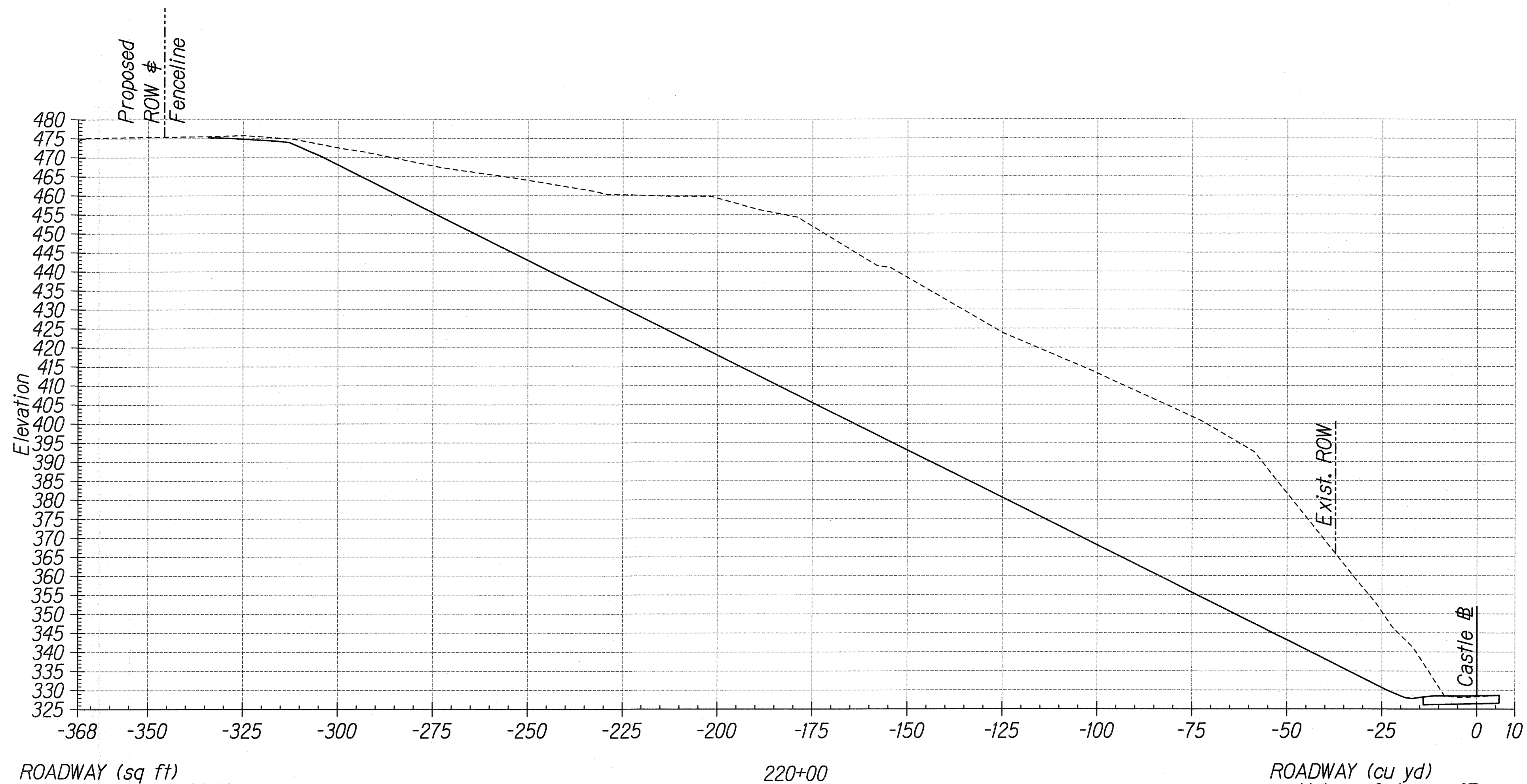
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-13 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C-01-04#	2004	68	91

02-04



ROADWAY (sq ft)
Area Cut : 36.28
Area Fill: 0.00

SLOPE (sq ft)
Area Cut : 9824.71
Area Fill: 0.00

ROADWAY (cu yd)
Volume Cut : 67
Volume Fill: 0

SLOPE (cu yd)
Volume Cut : 17109
Volume Fill: 0

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	

J:\CASTLE JUNCTION\XSEC\XSEC-12.dgn

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R. Urasaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

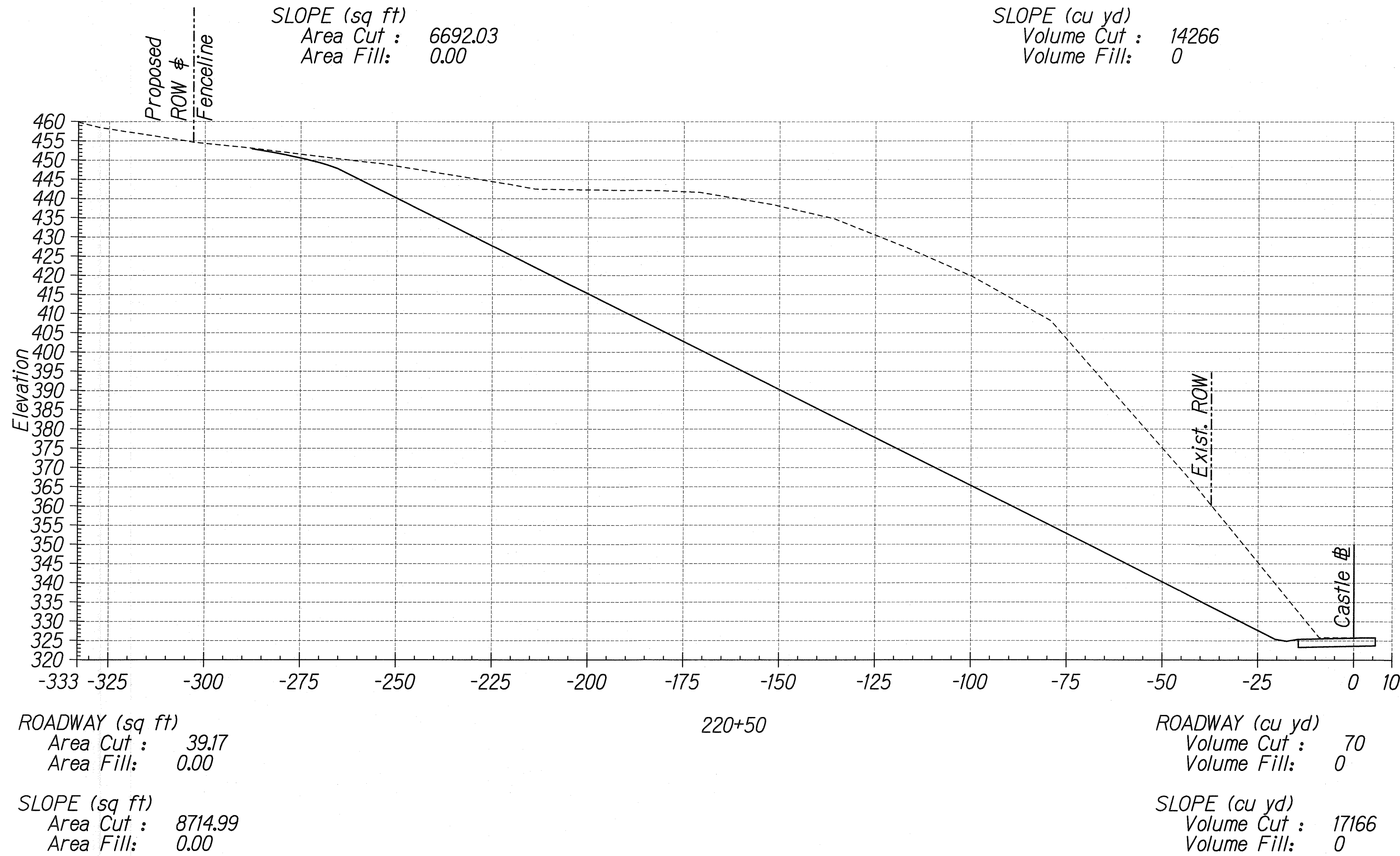
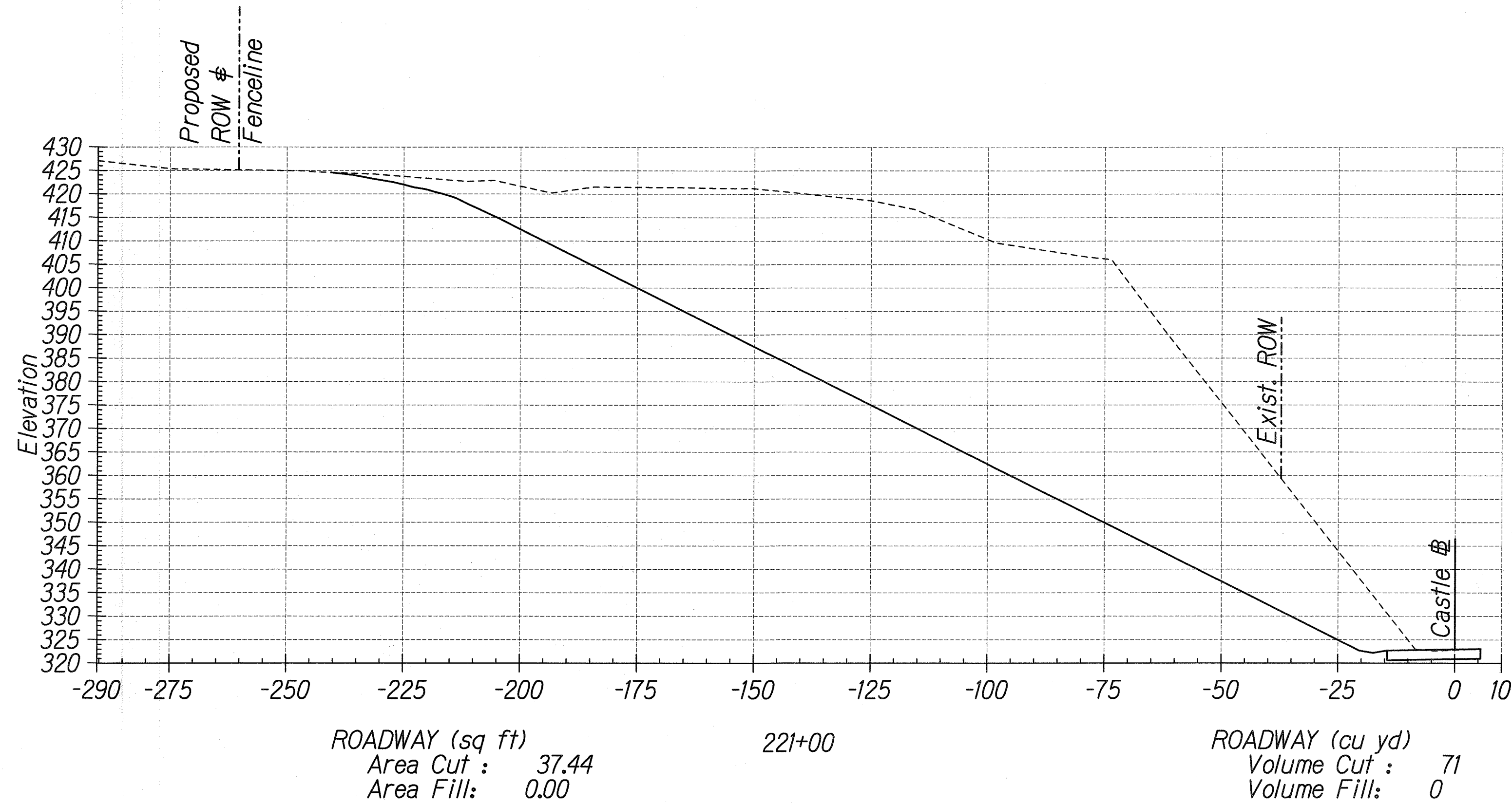
EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-01-04# 02-04

Scale: 1"=20' Date: Sept. 26, 2003

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C- 01-04	2004	69	91

02-04



ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	

J:\CASTLE JUNCTION\XSEC\XSEC-13.dgn

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R. M. Urasaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-~~01-04~~ 02-04

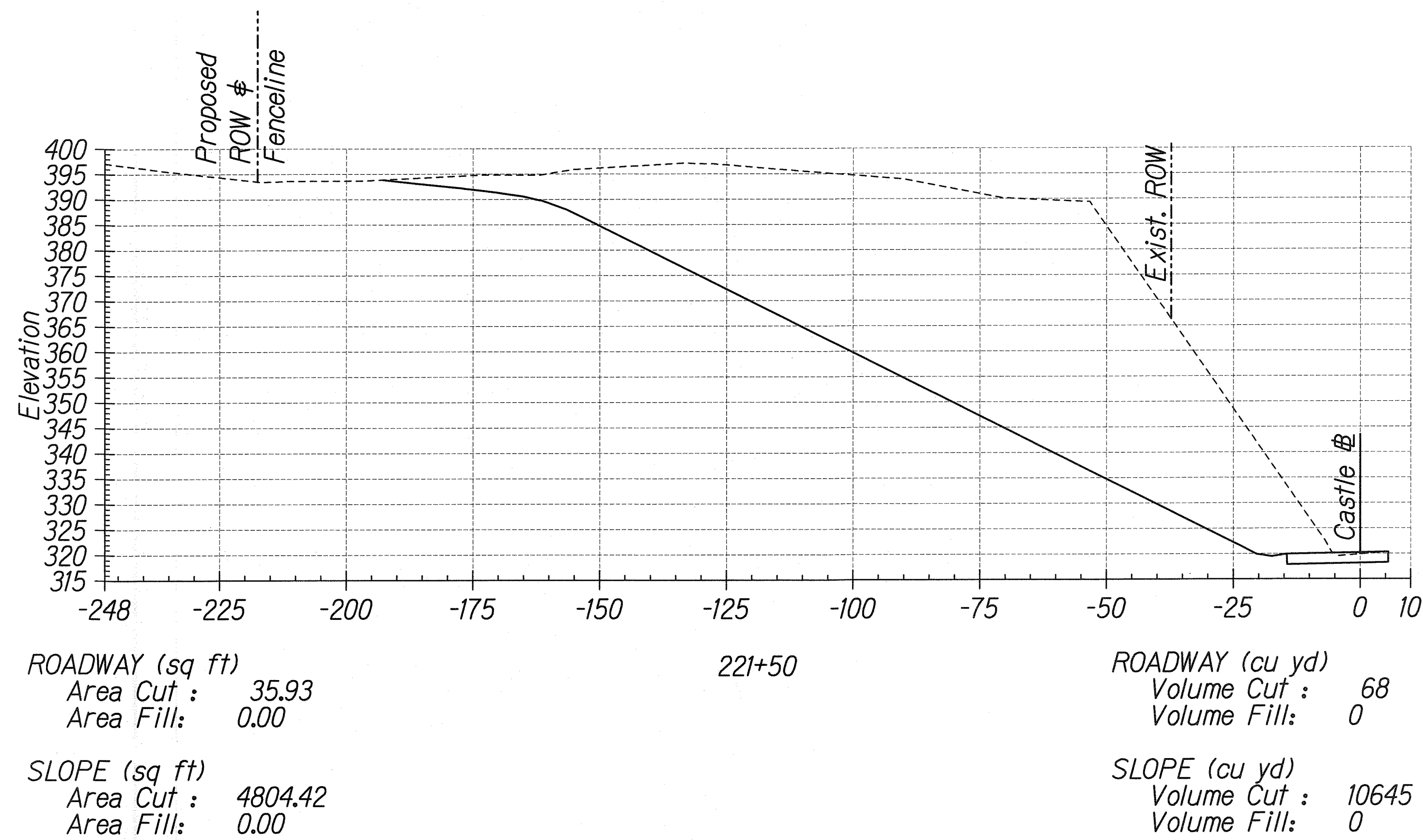
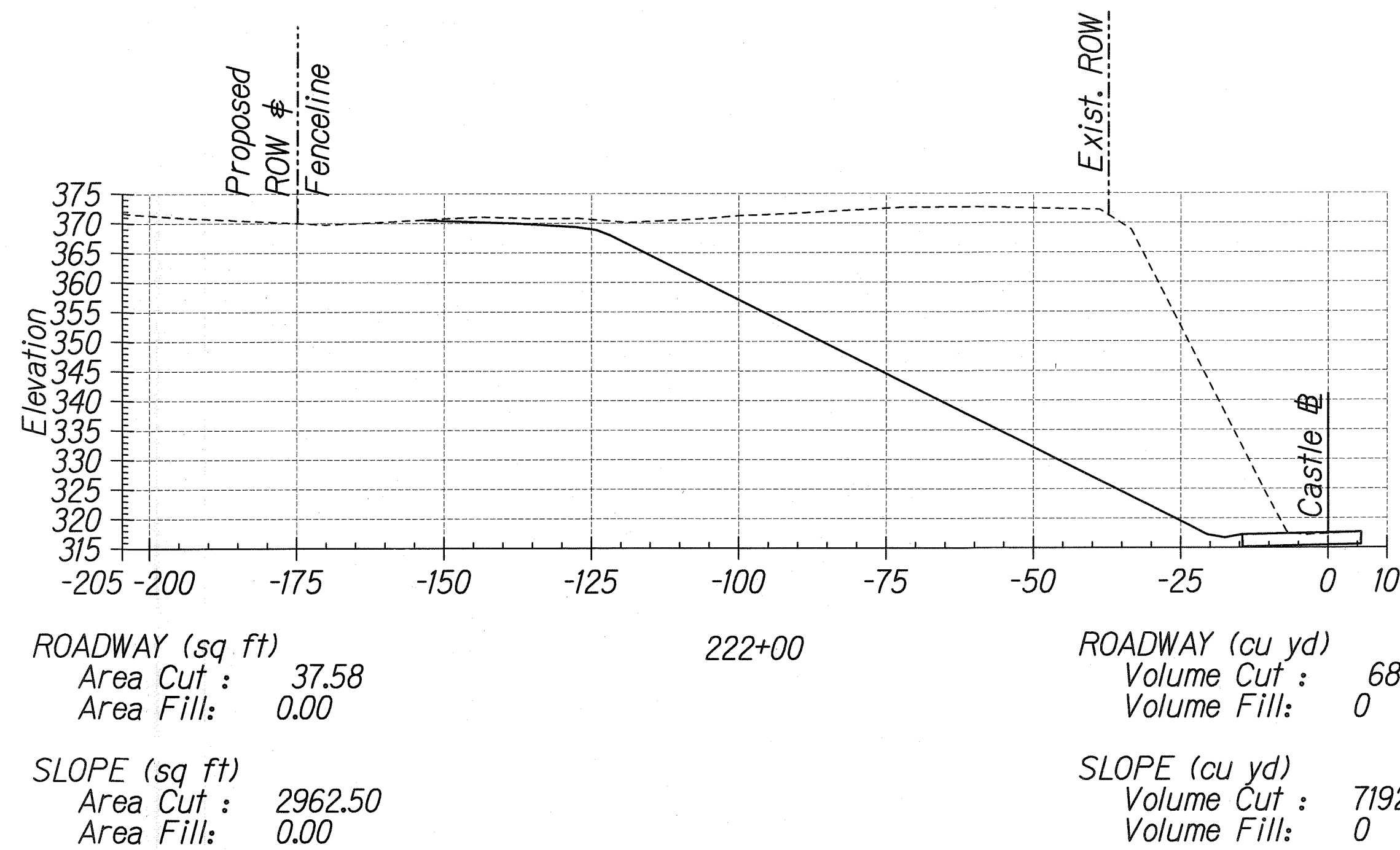
Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-15 OF 17 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C- 01-04	2004	70	91

02-04



ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	

1/2 CASTLE JUNCTION/SEC/XSEC/H4gn

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R. M. Urakami

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-~~01-04~~ 02-04

Scale: 1"=20' Date: Sept. 26, 2003

SHEET No. X-16 OF 17 SHEETS

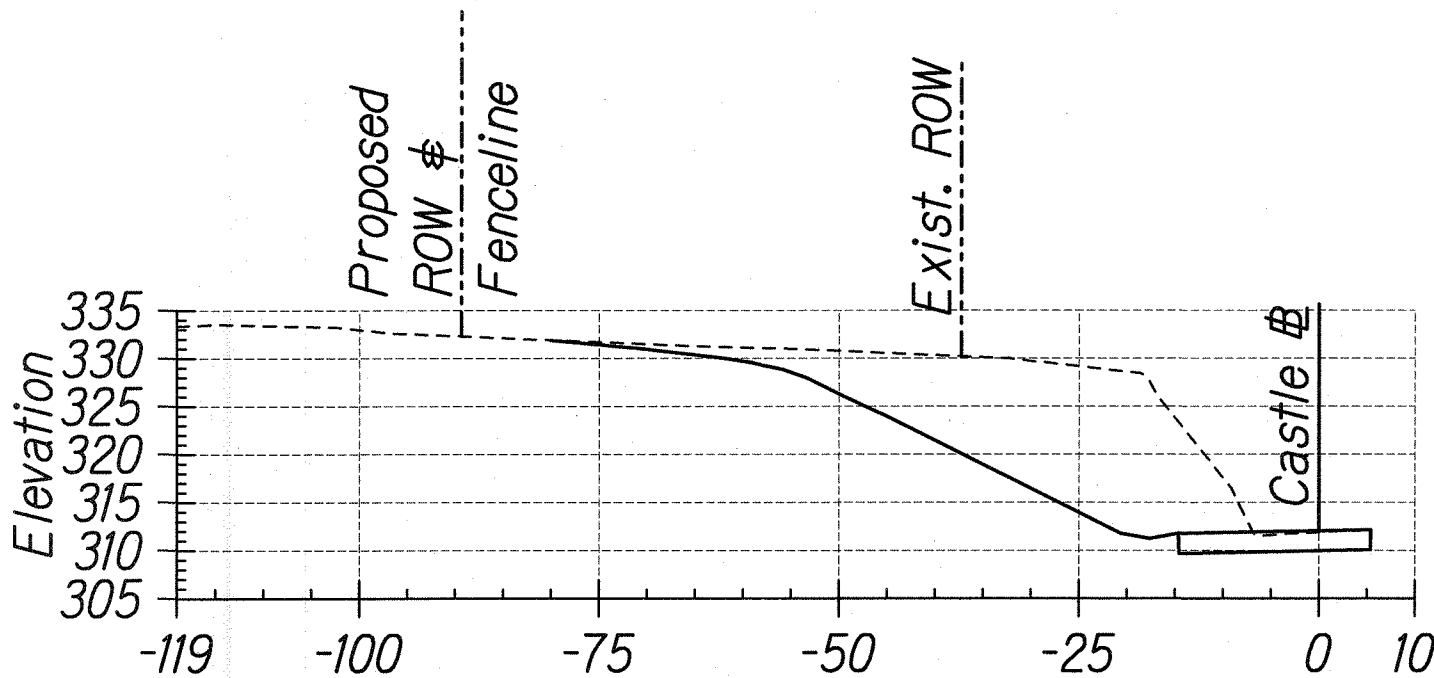
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	61C- 01-04	2004	71	91

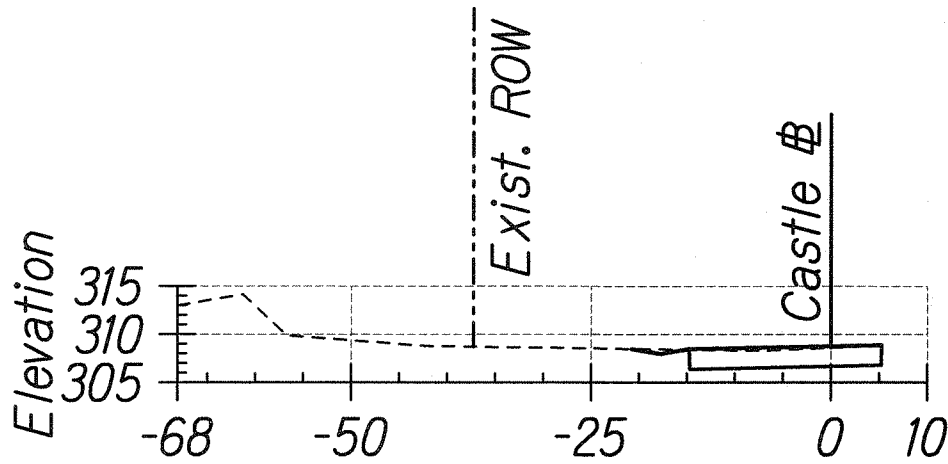
02-04

SLOPE EXCAVATION AND EMBANKMENT SUMMARY (CU. YD.)		
	EXC.	EMB.
TOTAL	249,734	74
ROUNDED TOTAL	249,750	75

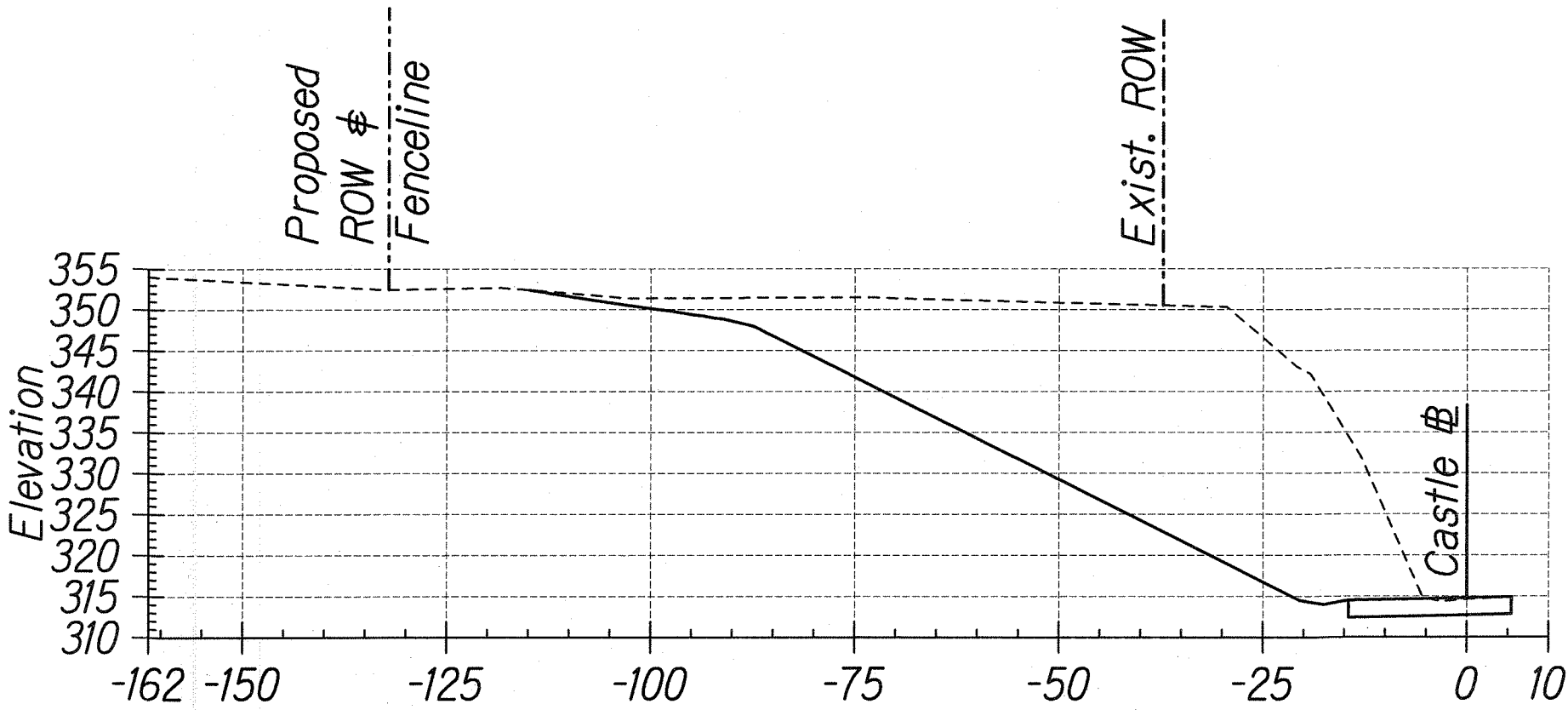
ROADWAY EXCAVATION AND EMBANKMENT SUMMARY (CU. YD.)		
	EXC.	EMB.
TOTAL	1,599	0
ROUNDED TOTAL	1,600	0



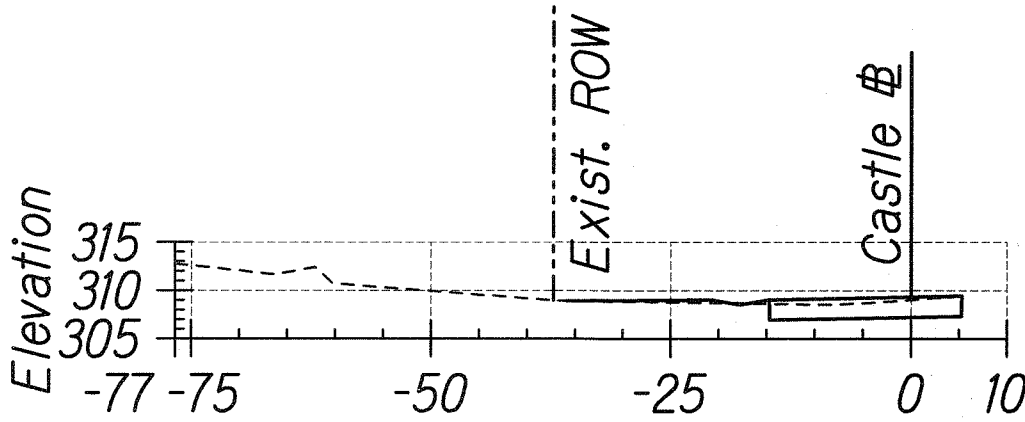
ROADWAY (sq ft)	223+00	ROADWAY (cu yd)
Area Cut : 36.99		Volume Cut : 69
Area Fill: 0.00		Volume Fill: 0
SLOPE (sq ft)		SLOPE (cu yd)
Area Cut : 499.80		Volume Cut : 1912
Area Fill: 0.00		Volume Fill: 0



ROADWAY (sq ft)	223+60	ROADWAY (cu yd)
Area Cut : 35.81		Volume Cut : 12
Area Fill: 0.00		Volume Fill: 0
SLOPE (sq ft)		SLOPE (cu yd)
Area Cut : 0.00		Volume Cut : 0
Area Fill: 0.00		Volume Fill: 0



ROADWAY (sq ft)	222+50	ROADWAY (cu yd)
Area Cut : 37.59		Volume Cut : 70
Area Fill: 0.00		Volume Fill: 0
SLOPE (sq ft)		SLOPE (cu yd)
Area Cut : 1565.27		Volume Cut : 4192
Area Fill: 0.00		Volume Fill: 0



ROADWAY (sq ft)	223+50	ROADWAY (cu yd)
Area Cut : 30.13		Volume Cut : 62
Area Fill: 0.00		Volume Fill: 0
SLOPE (sq ft)		SLOPE (cu yd)
Area Cut : 0.11		Volume Cut : 463
Area Fill: 2.4		Volume Fill: 2

ORIGINAL PLAN	DATE
NOTED BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

J:\CASTLE JUNCTION\XSEC\XSEC-15.dgn

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Rumblu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CROSS SECTIONS

KALANIANA'OLE HIGHWAY

EMERGENCY LANDSLIDE REPAIRS AT CASTLE JUNCTION

PROJECT NO. 61C-~~01-04~~ 02-04

Scale: 1"=20' Date: Sept. 26, 2003