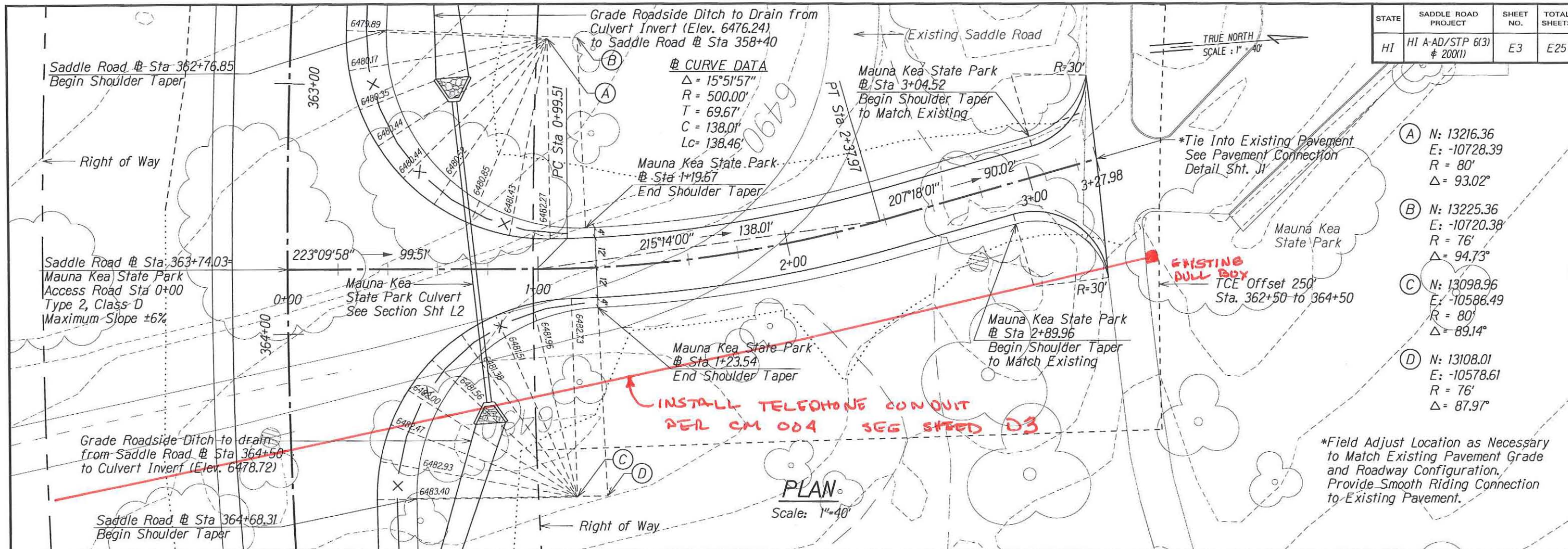
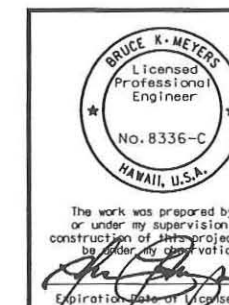
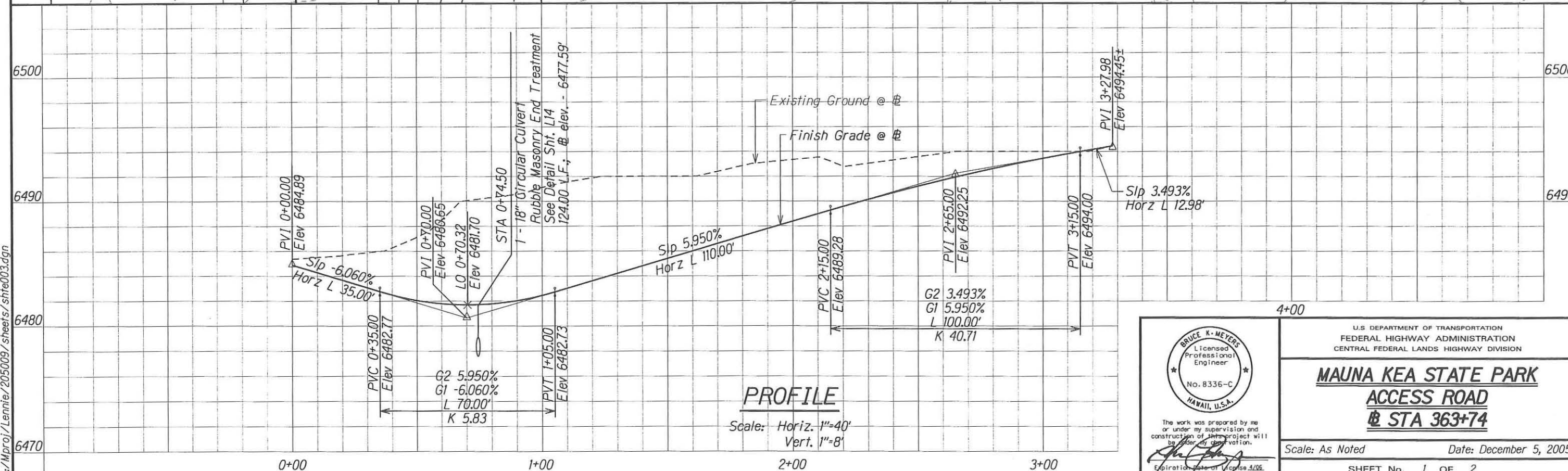


| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E3        | E25          |



- (A) N: 13216.36  
E: -10728.39  
R = 80'  
 $\Delta = 93.02^\circ$
- (B) N: 13225.36  
E: -10720.38  
R = 76'  
 $\Delta = 94.73^\circ$
- (C) N: 13098.96  
E: -10586.49  
R = 80'  
 $\Delta = 89.14^\circ$
- (D) N: 13108.01  
E: -10578.61  
R = 76'  
 $\Delta = 87.97^\circ$

\*Field Adjust Location as Necessary to Match Existing Pavement Grade and Roadway Configuration, Provide Smooth Riding Connection to Existing Pavement.



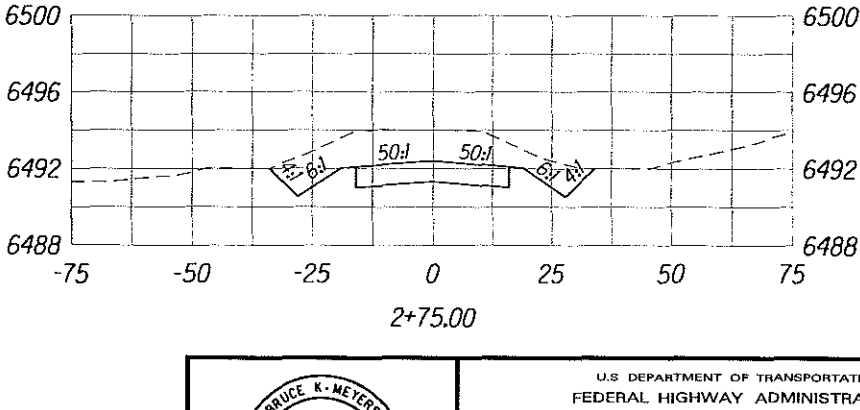
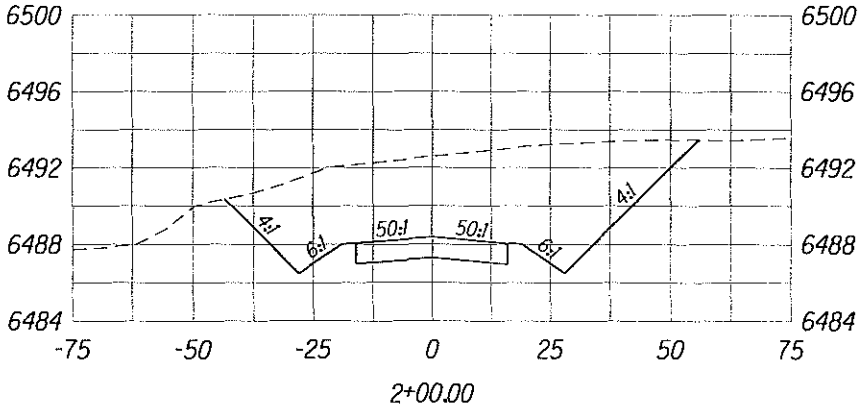
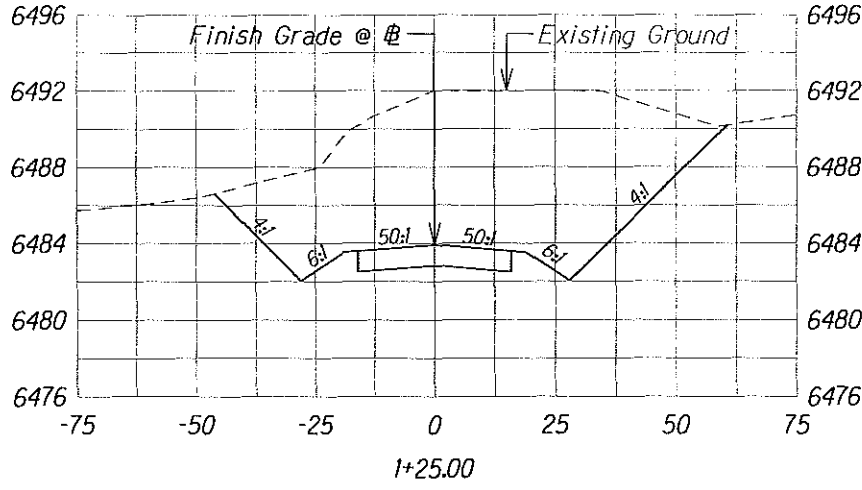
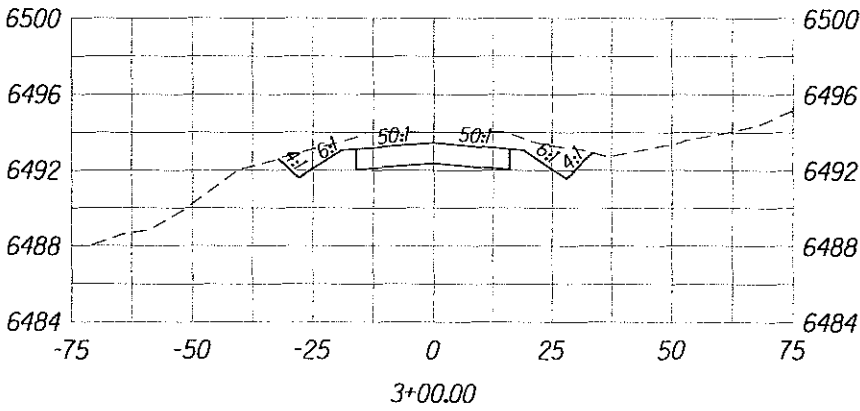
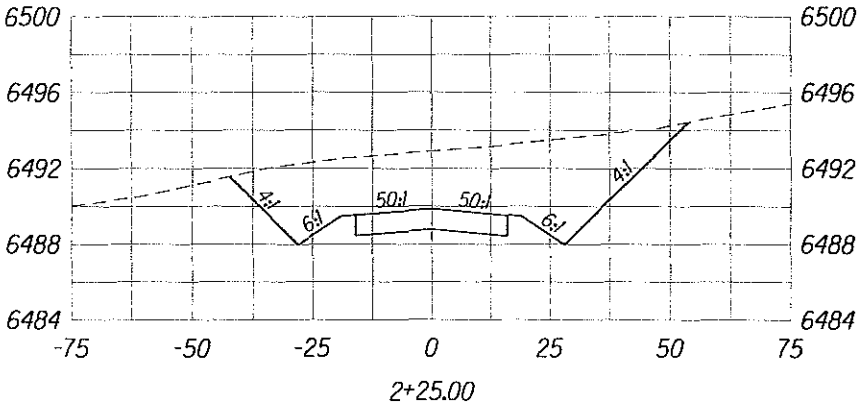
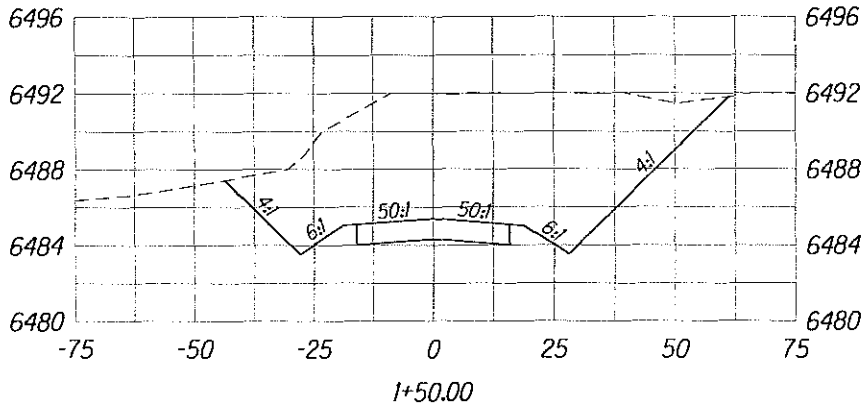
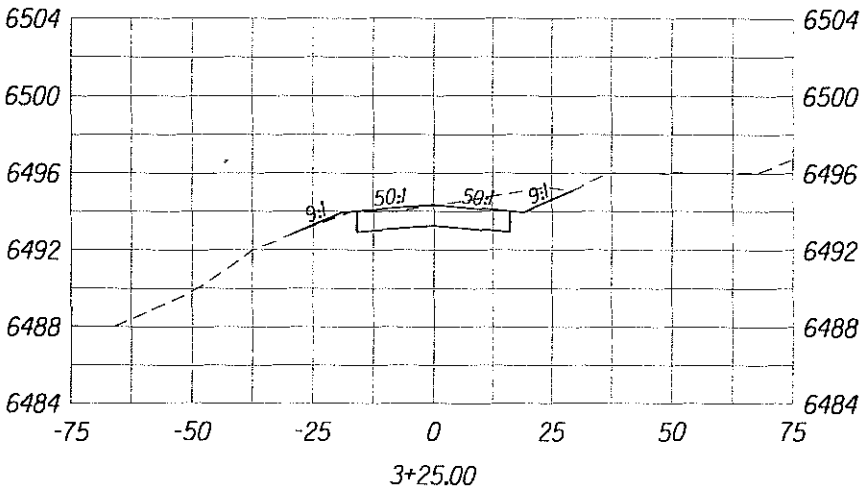
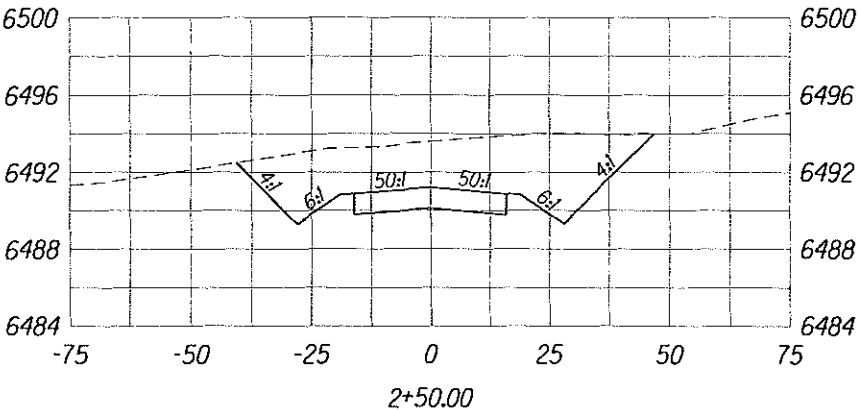
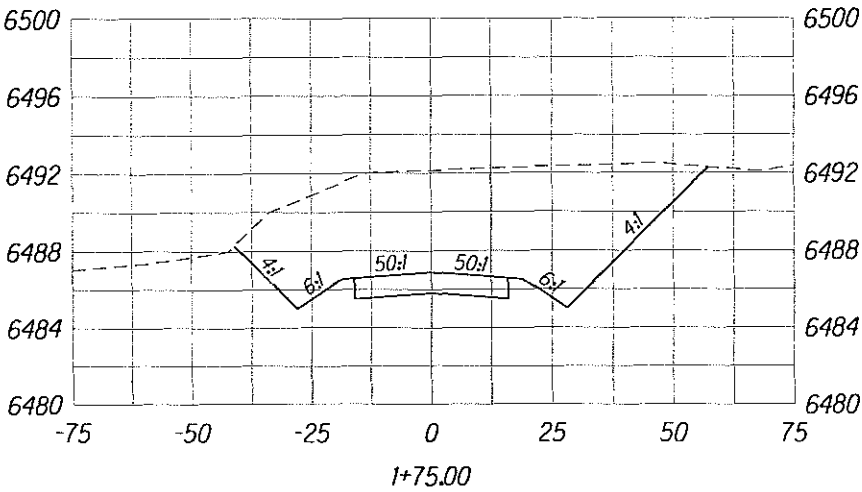
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**MAUNA KEA STATE PARK  
ACCESS ROAD  
@ STA 363+74**

Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 2

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) § 200(1) | E4        | E25          |



CROSS SECTIONS

Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 4967.62 CY  
Fill: 0.25 CY

BRUCE K. METERS  
Licensed Professional Engineer  
No. 8336-C  
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my observation.  
Expiration Date of License 12/05

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

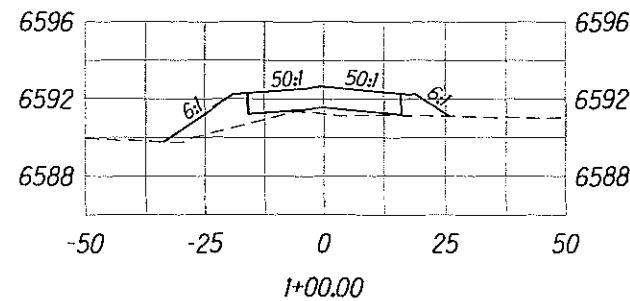
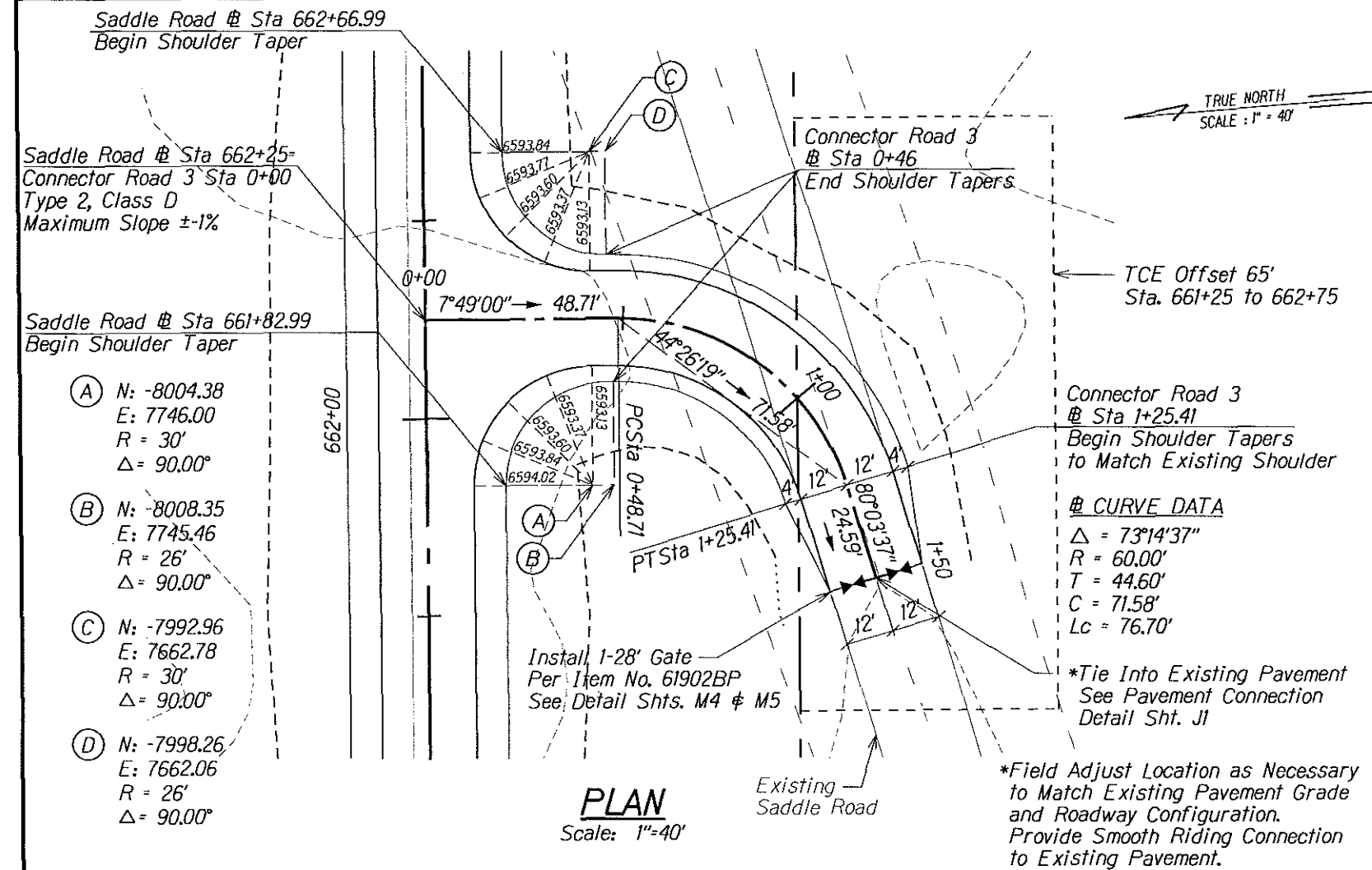
**MAUNA KEA STATE PARK  
ACCESS ROAD  
@ STA 363+74**

Scale: As Noted Date: December 5, 2005

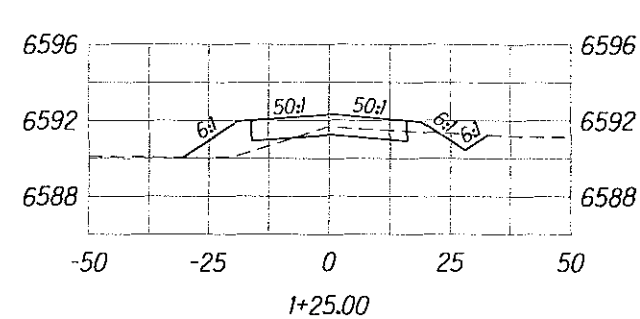
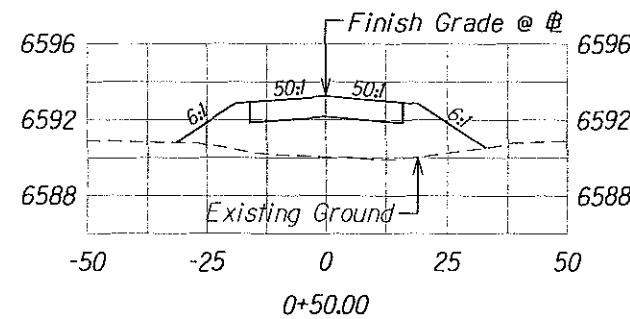
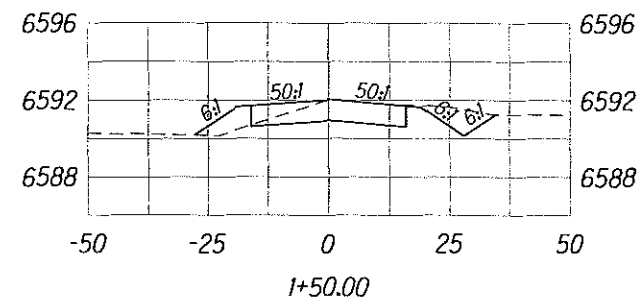
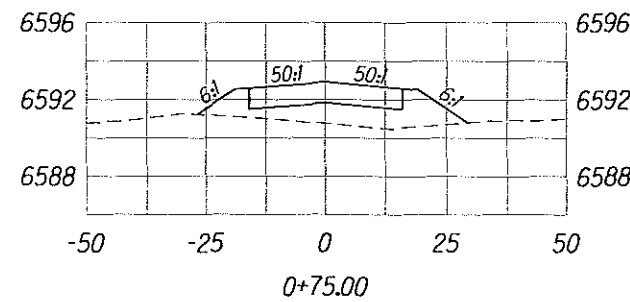
SHEET No. 2 OF 2

M:\Mproj\Lenzie\205009\sheets\site004.dgn

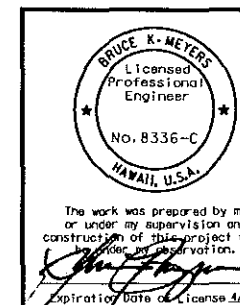
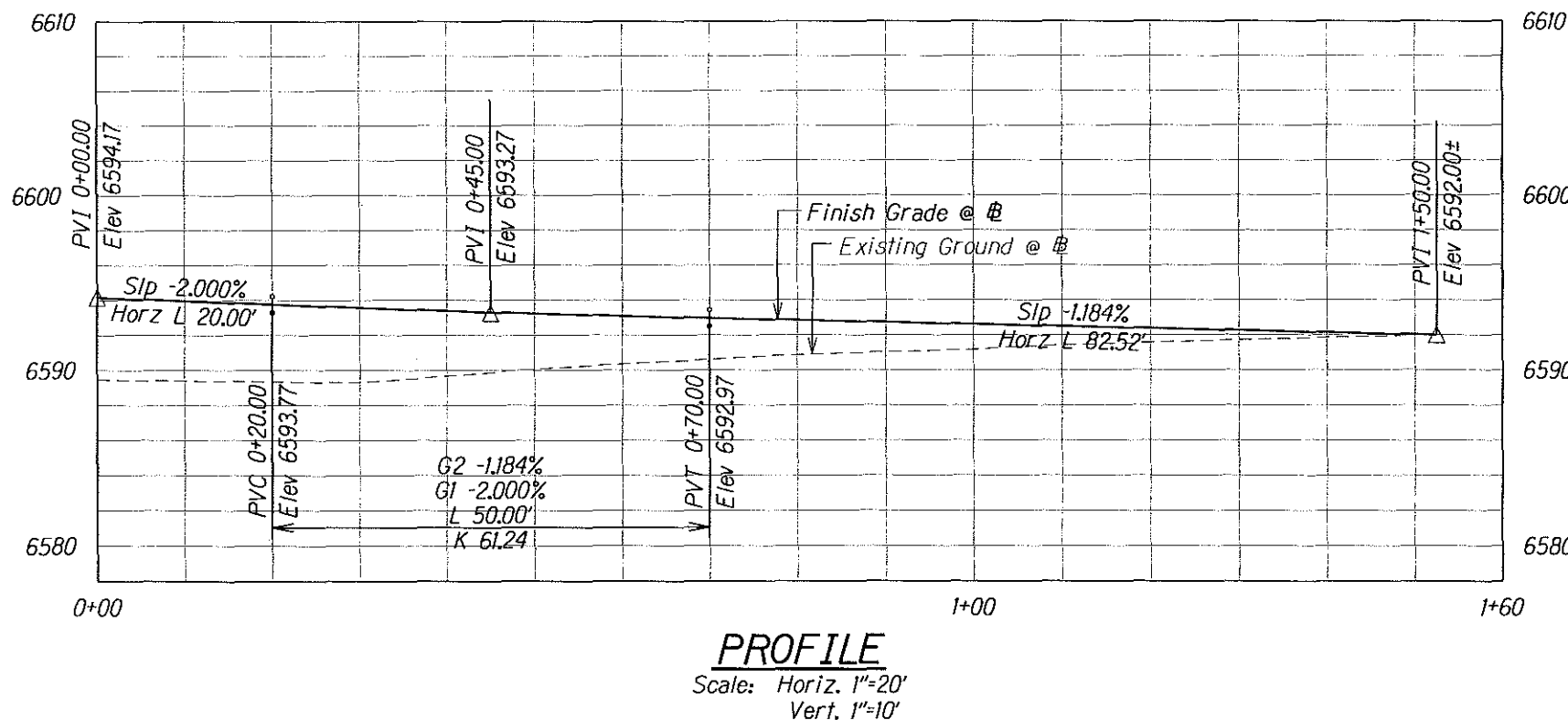
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E5        | E25          |



Earthwork Quantities:  
Cut: 37.81 CY  
Fill: 257.30 CY



**CROSS SECTIONS**  
Scale: Horiz. 1"=40'  
Vert. 1"=10'



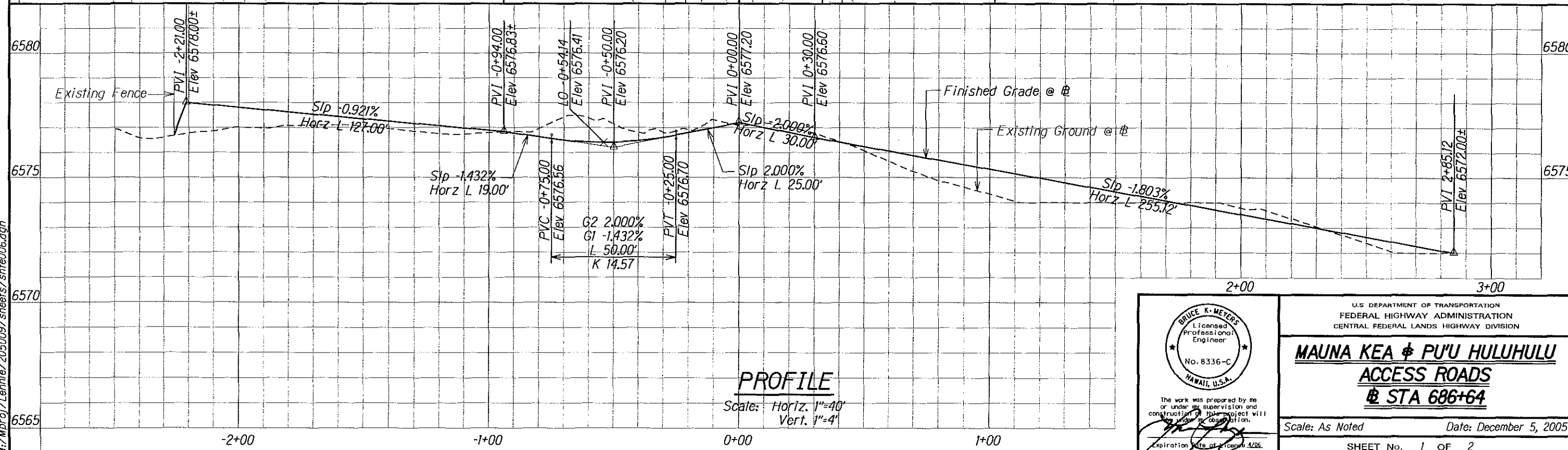
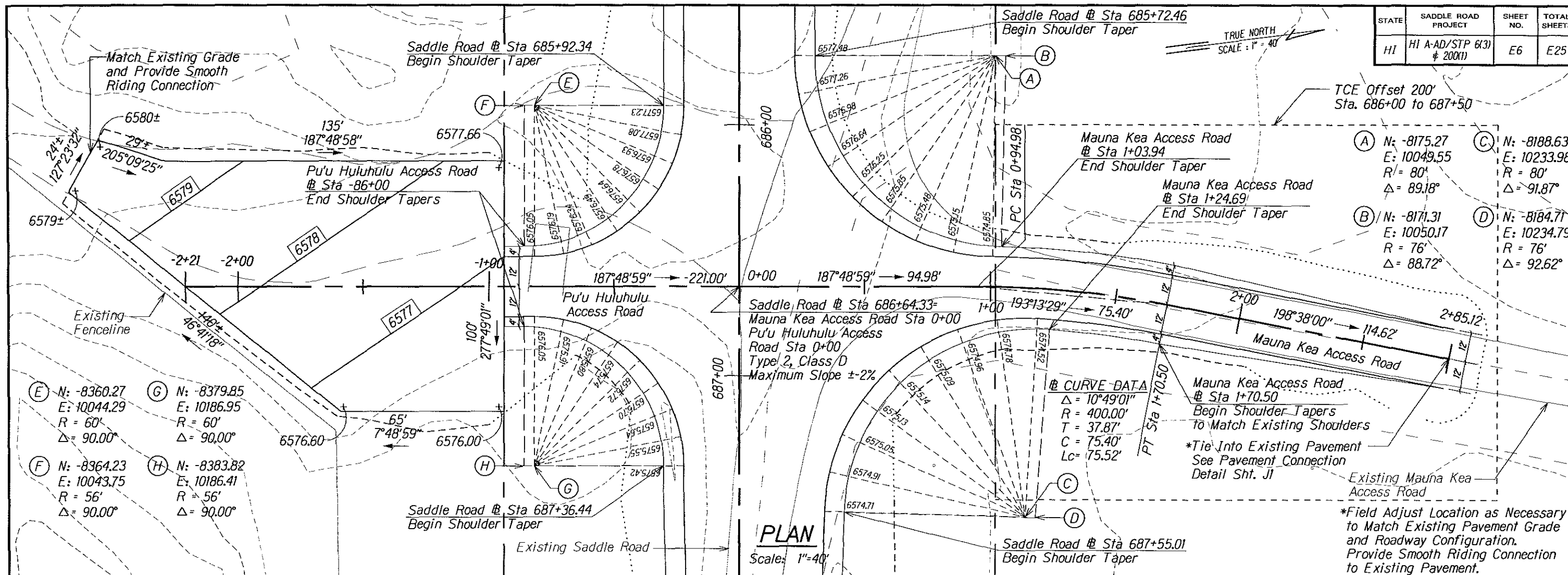
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**CONNECTOR ROAD 3**  
**@ STA 662+25**

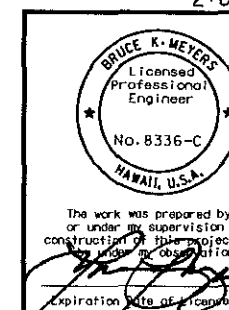
Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

| STATE | SADDLE ROAD PROJECT        | SHEET NO. | TOTAL SHEETS |
|-------|----------------------------|-----------|--------------|
| HI    | HI A-AD/STP (6.3) # 200X11 | E6        | E25          |



M:\Mproj\Lenzie\205009\sheet\shite006.dgn



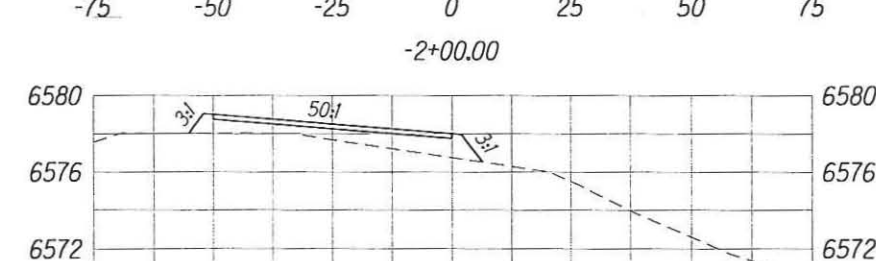
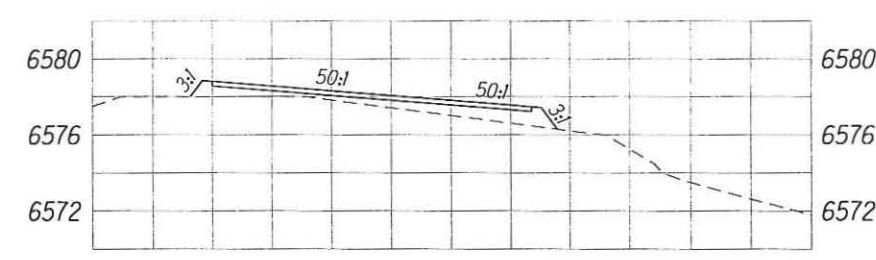
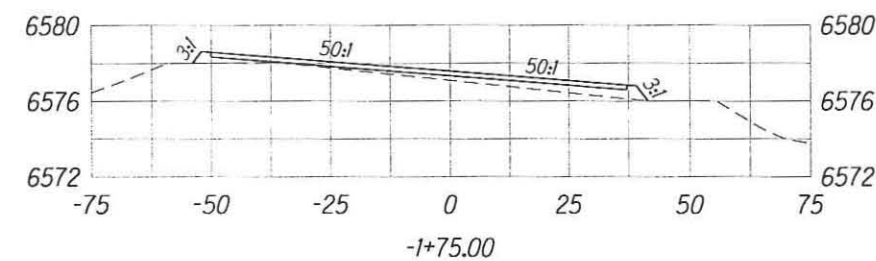
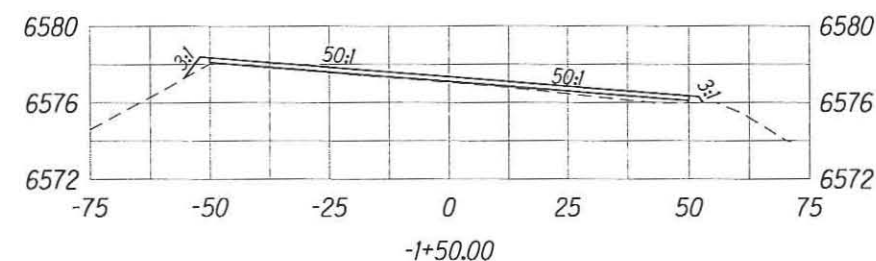
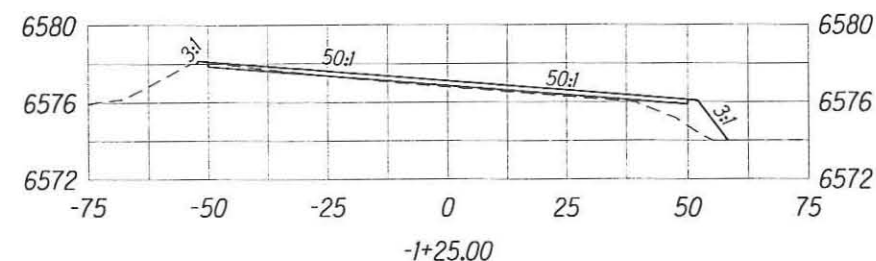
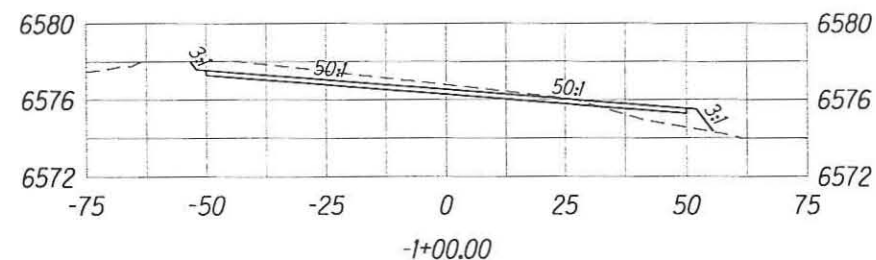
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**MAUNA KEA & PU'U HULUHULU  
ACCESS ROADS  
@ STA 686+64**

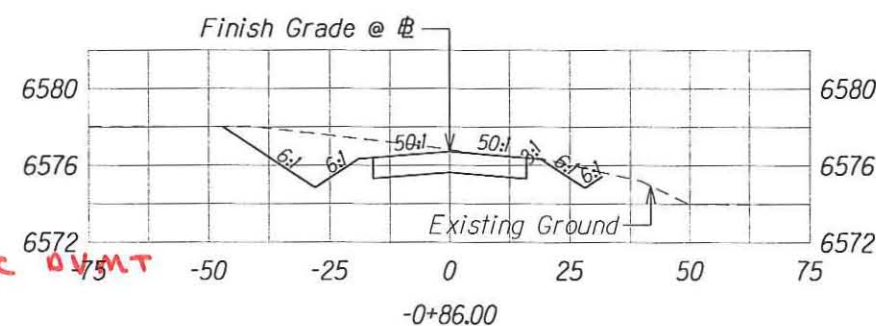
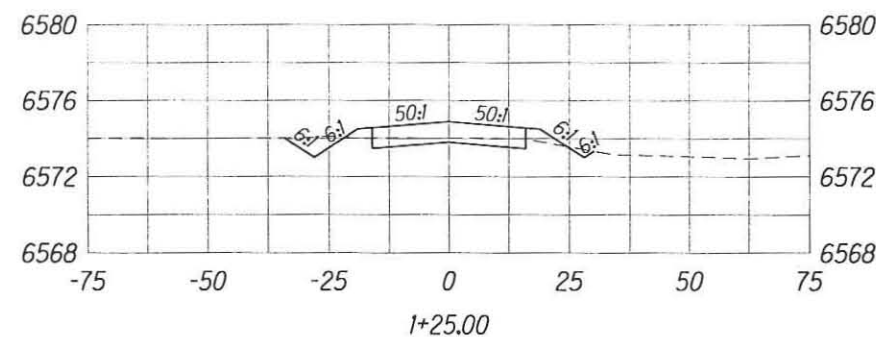
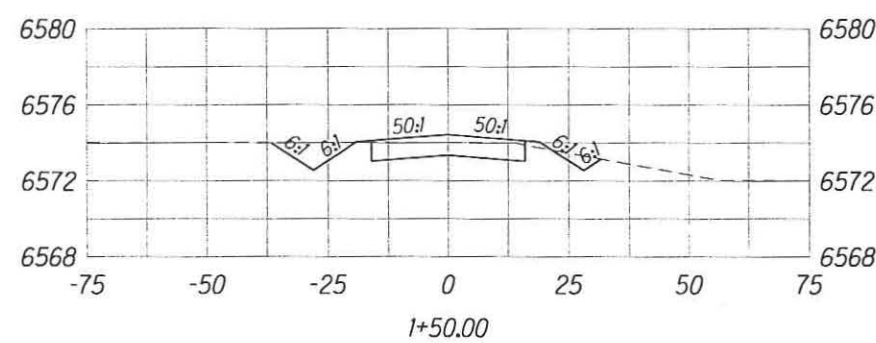
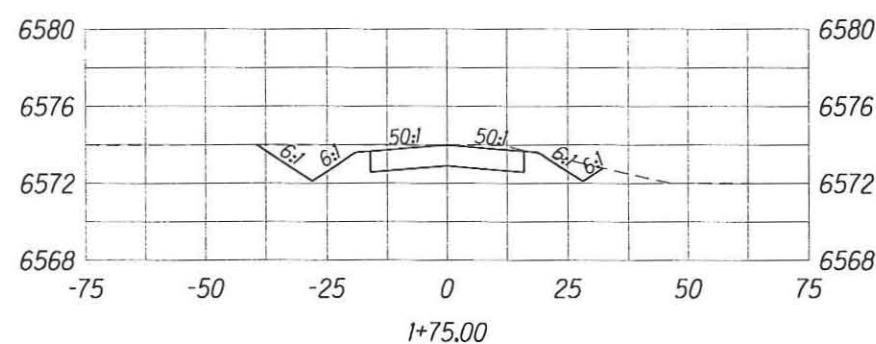
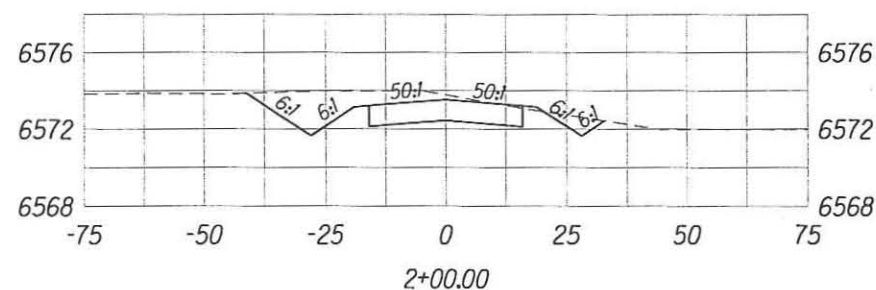
Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 2

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E7        | E25          |



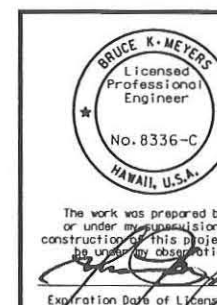
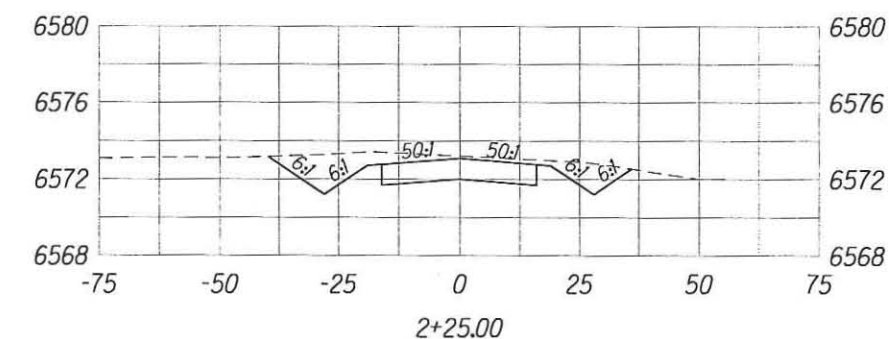
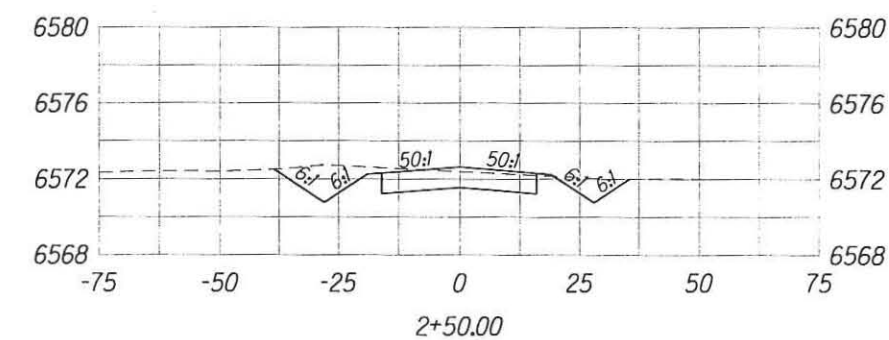
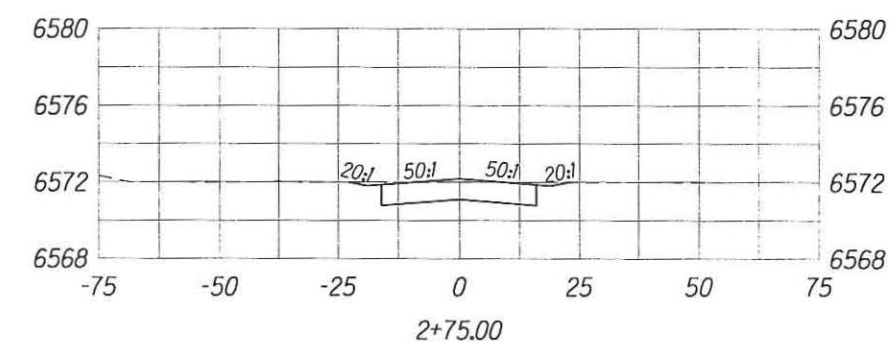
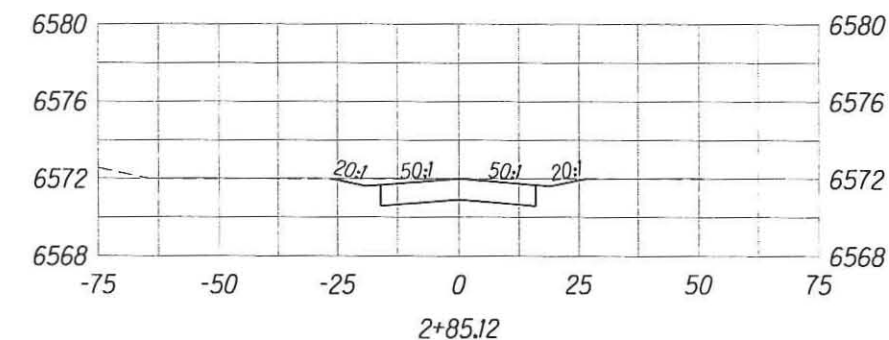
**2" SUPERPAVE A-C DMT**  
 6" Subbase,  
 Government Furnished  
 Item No. 30106GF  
 2% Max. Slope  
 Existing Ground  
**TYPICAL SECTION PU'U HULUHULU  
 STA. -0+94 TO -2+21**



## CROSS SECTIONS

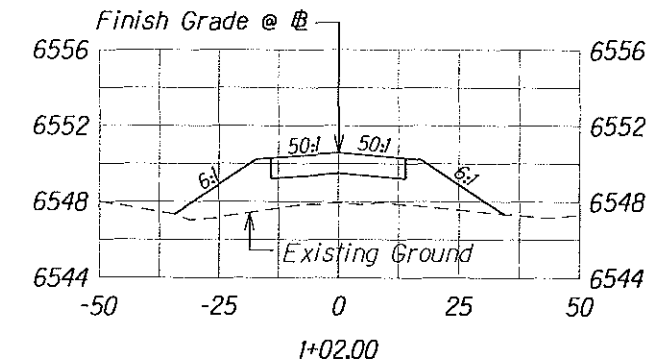
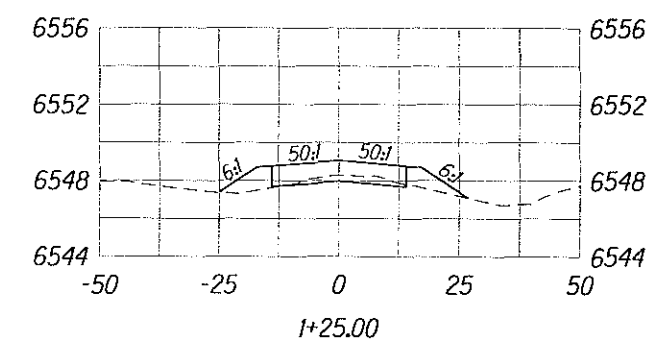
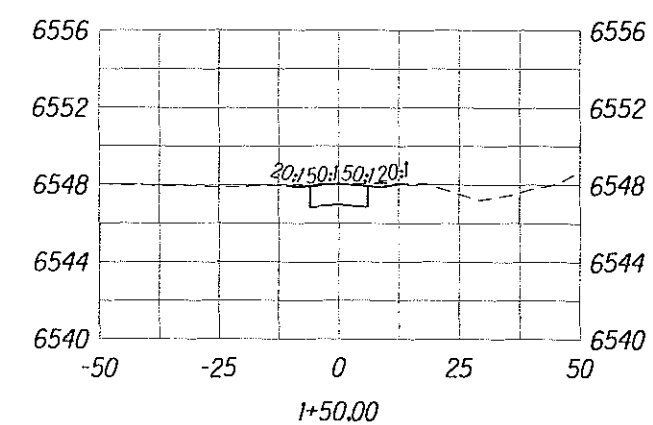
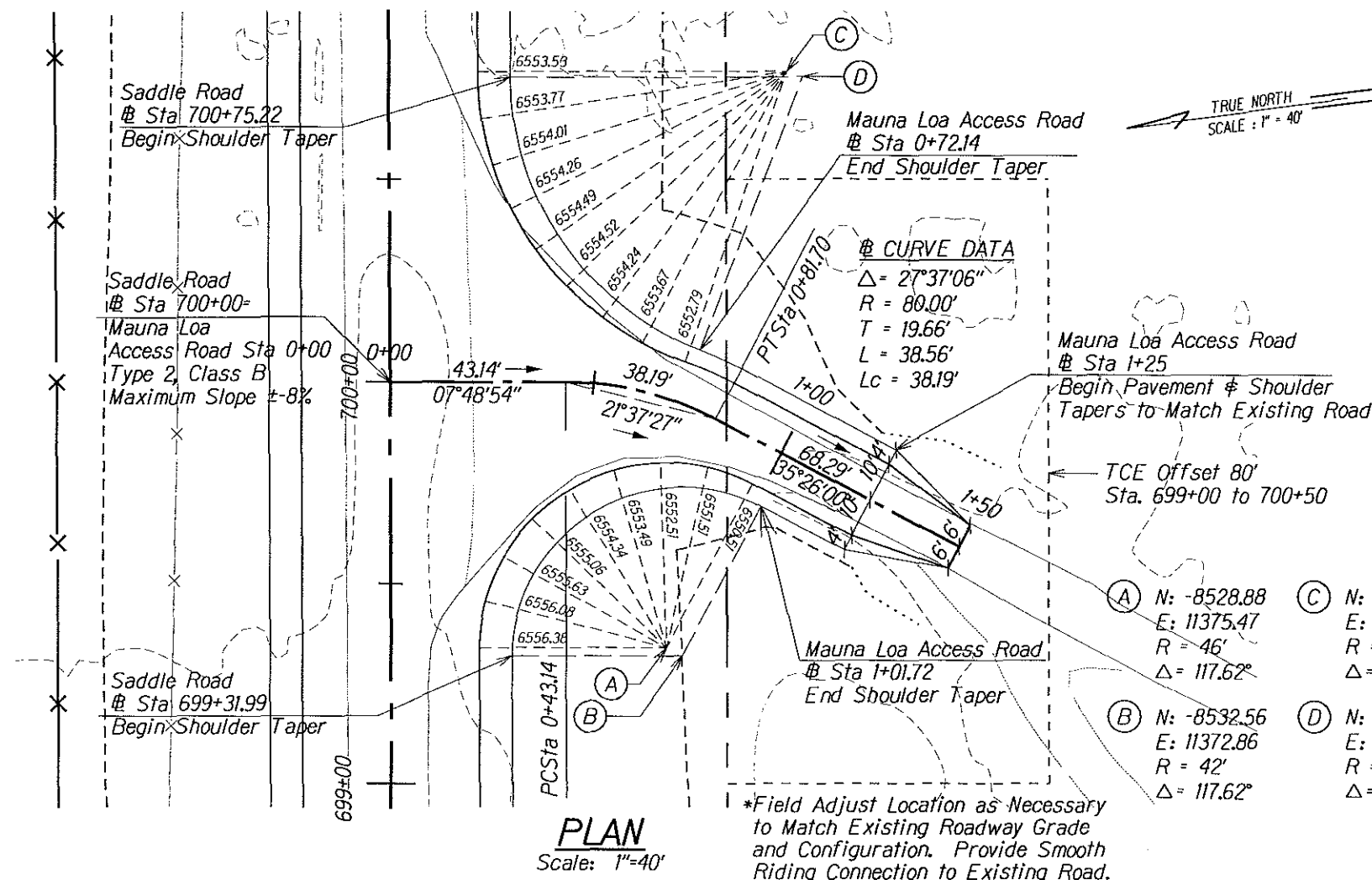
Scale: Horiz. 1"=40'  
 Vert. 1"=10'

Earthwork Quantities:  
 Cut: 774.63 CY  
 Fill: 26.01 CY



|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>MAUNA KEA &amp; PU'U HULUHULU<br/>ACCESS ROADS<br/>@ STA 686+64</b>                                        |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 2 OF 2                                                                                              |                        |

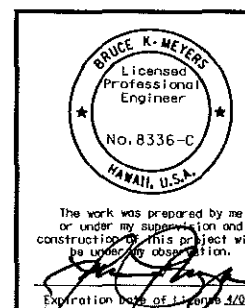
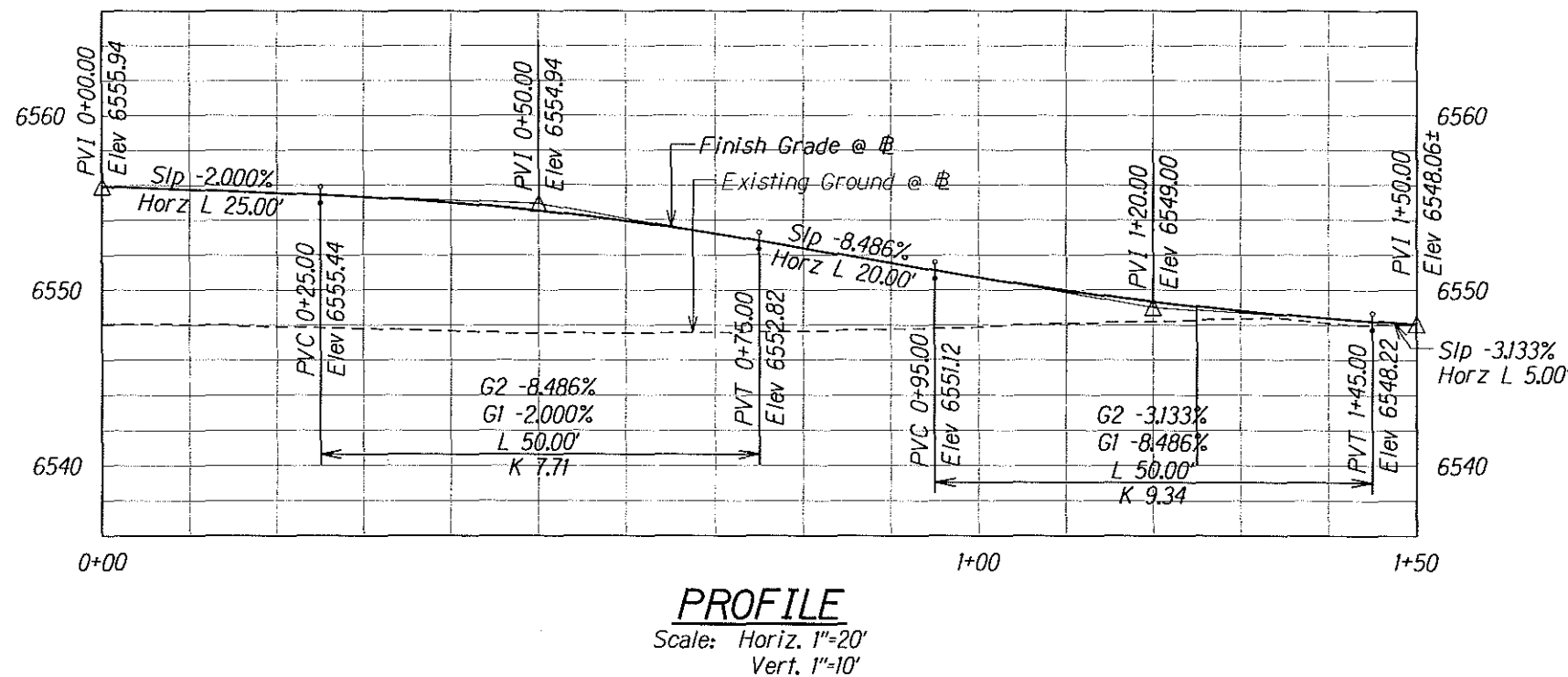
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP (63) # 200(1) | E8        | E25          |



### CROSS SECTIONS

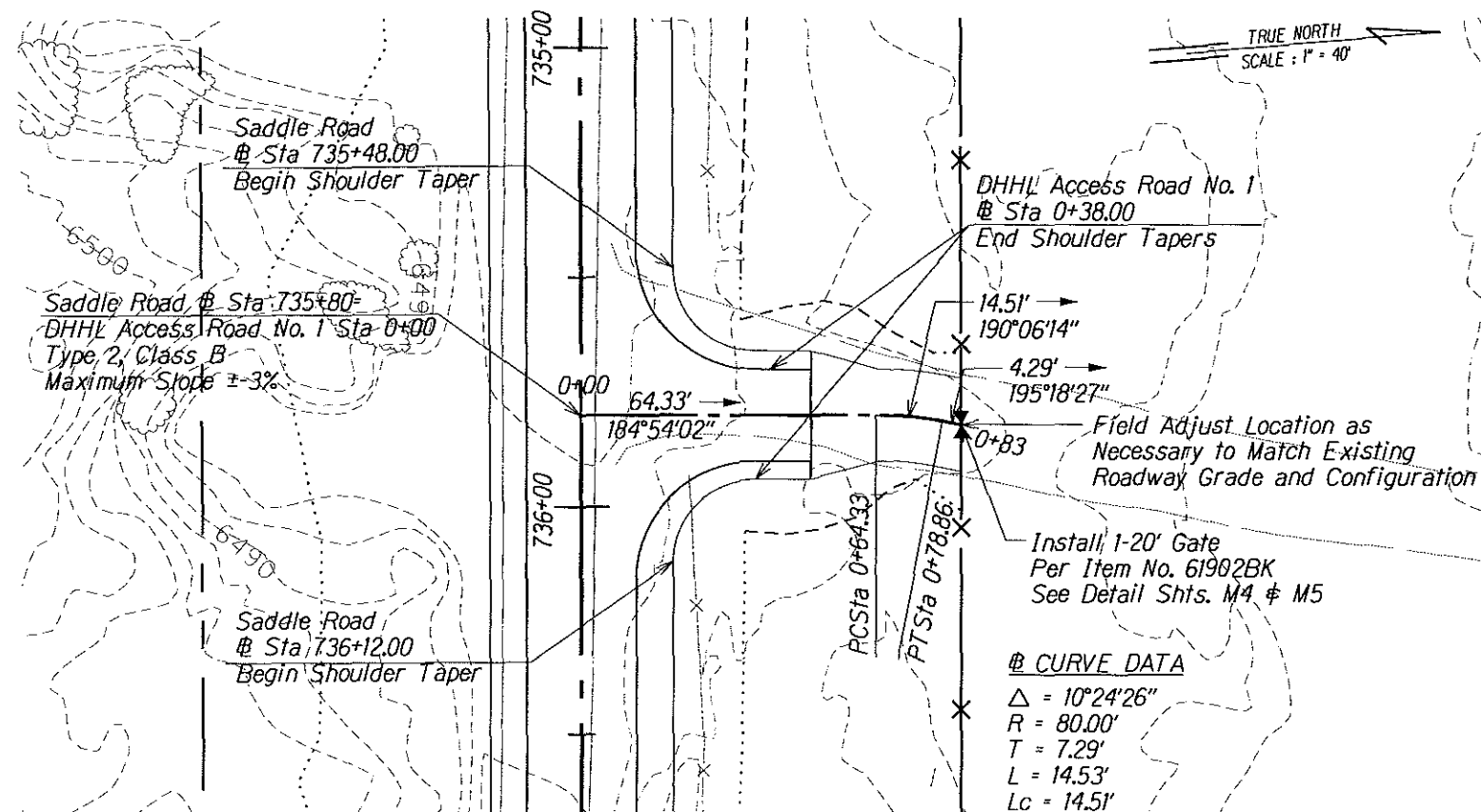
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 46.81 CY  
Fill: 652.32 CY

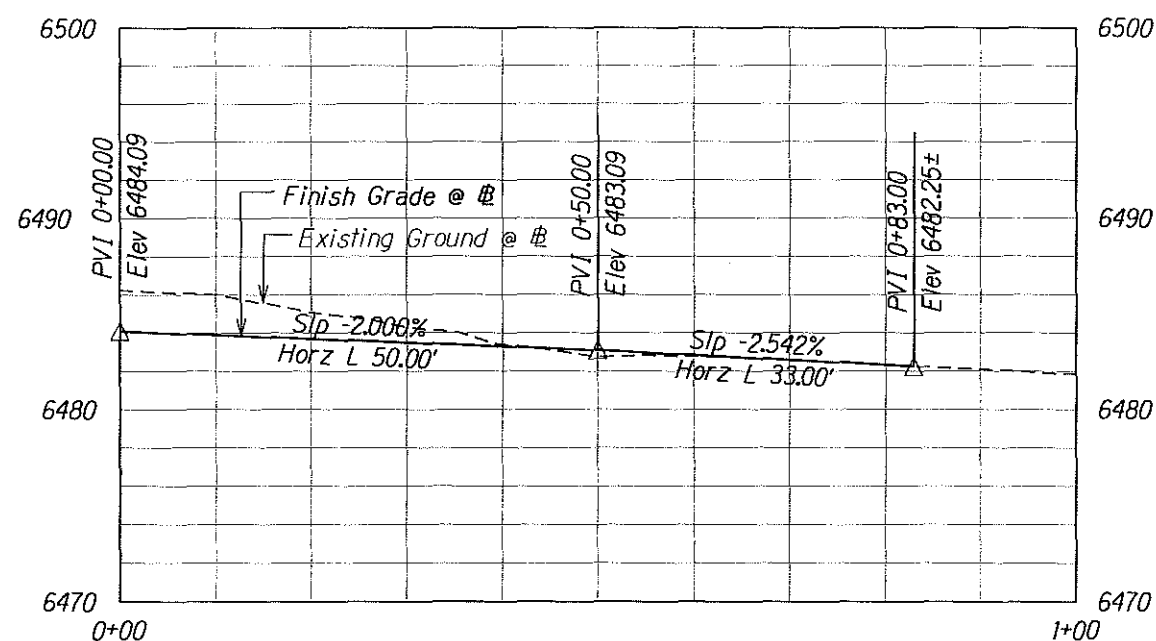


|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>MAUNA LOA ACCESS ROAD</b><br><b>Sta 700+00</b>                                                             |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 1                                                                                              |                        |

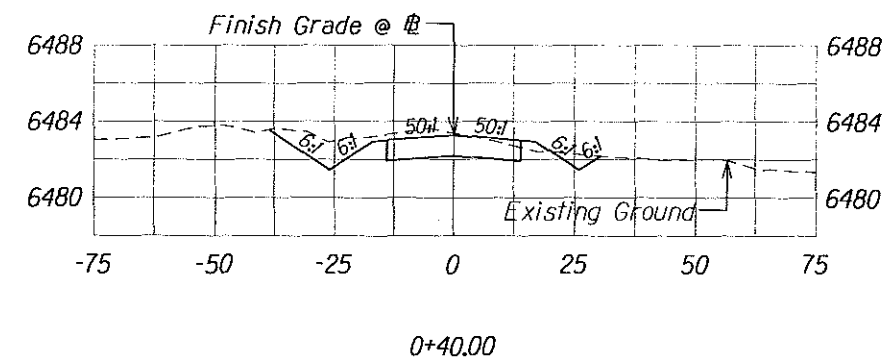
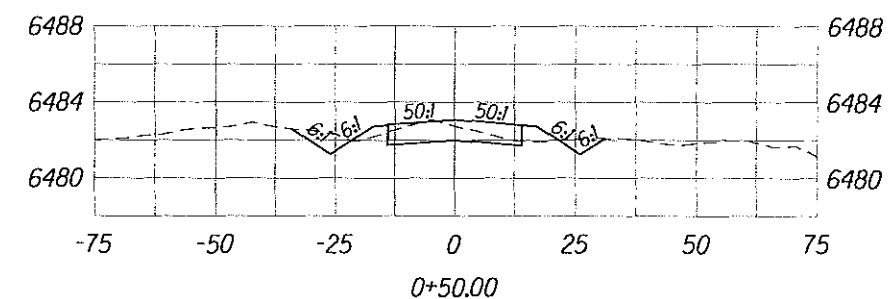
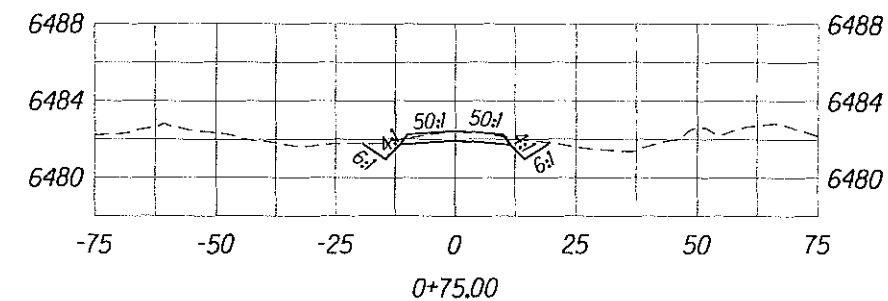
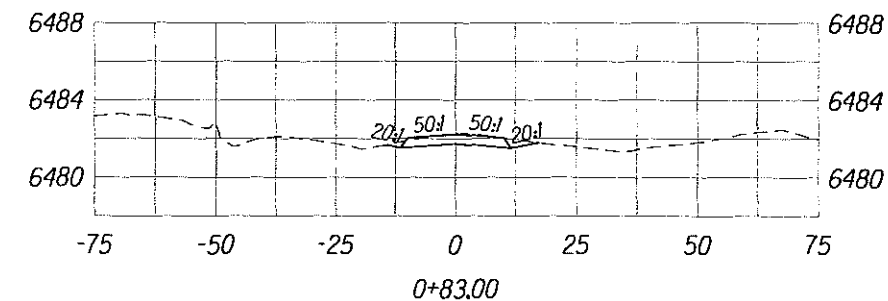
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E9        | E25          |



**PLAN**  
Scale: 1"=40'

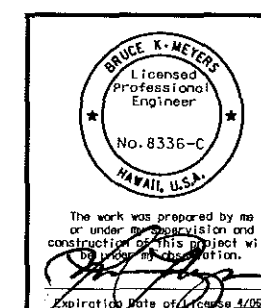


**PROFILE**  
Scale: Horiz. 1"=20'  
Vert. 1"=10'



**CROSS SECTIONS**  
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 104.91 CY  
Fill: 6.65 CY



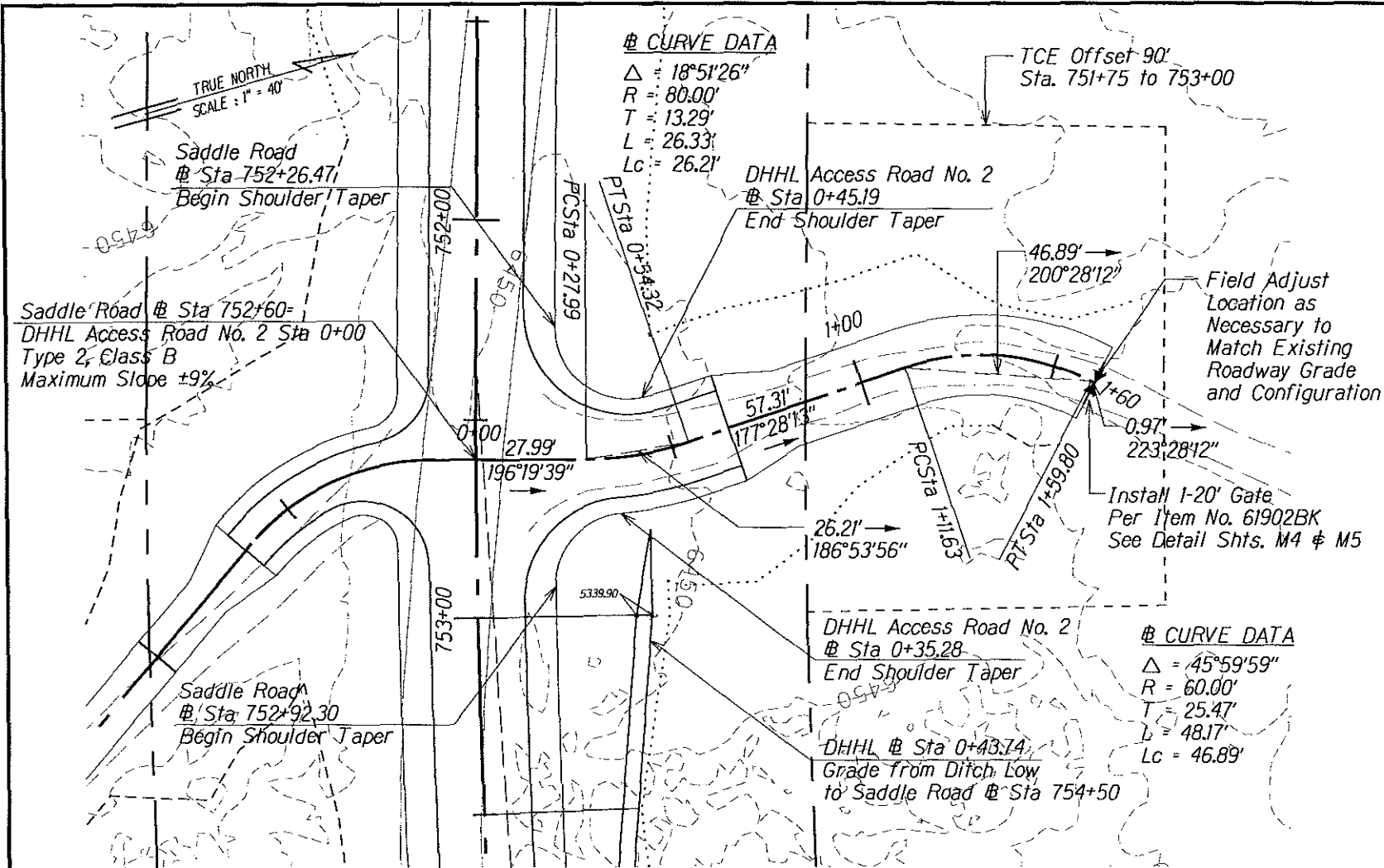
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**DHHL ACCESS ROAD NO. 1**  
**# STA 735+80**

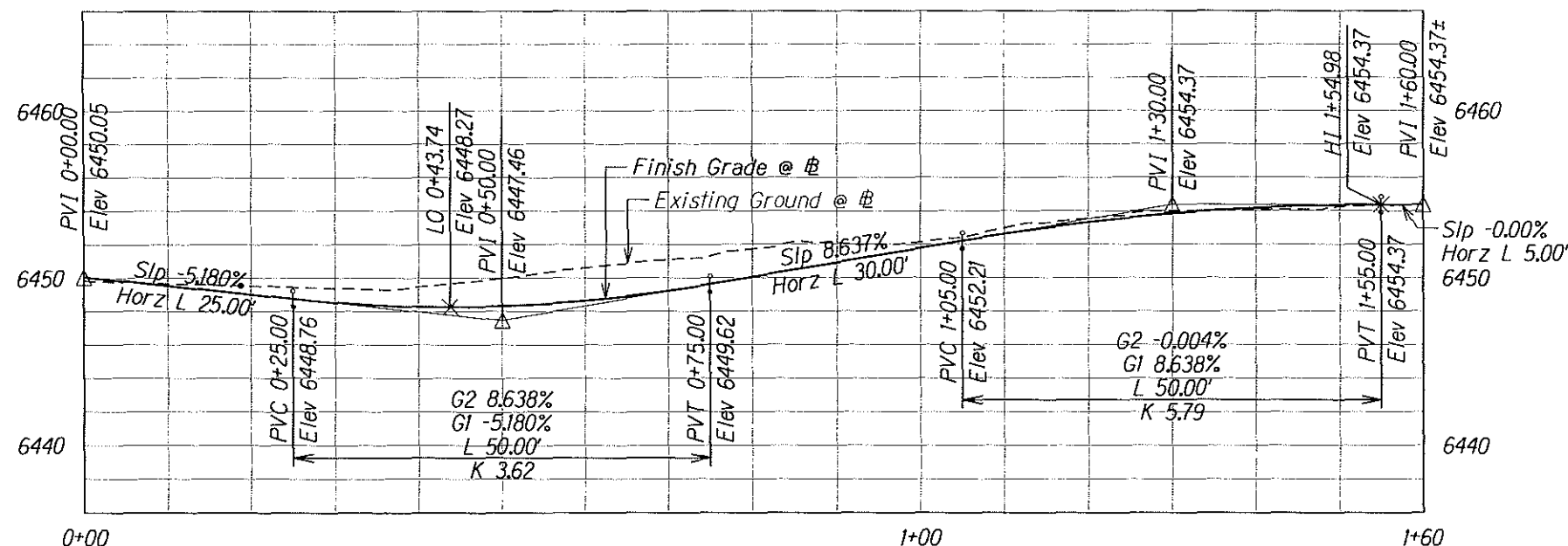
Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

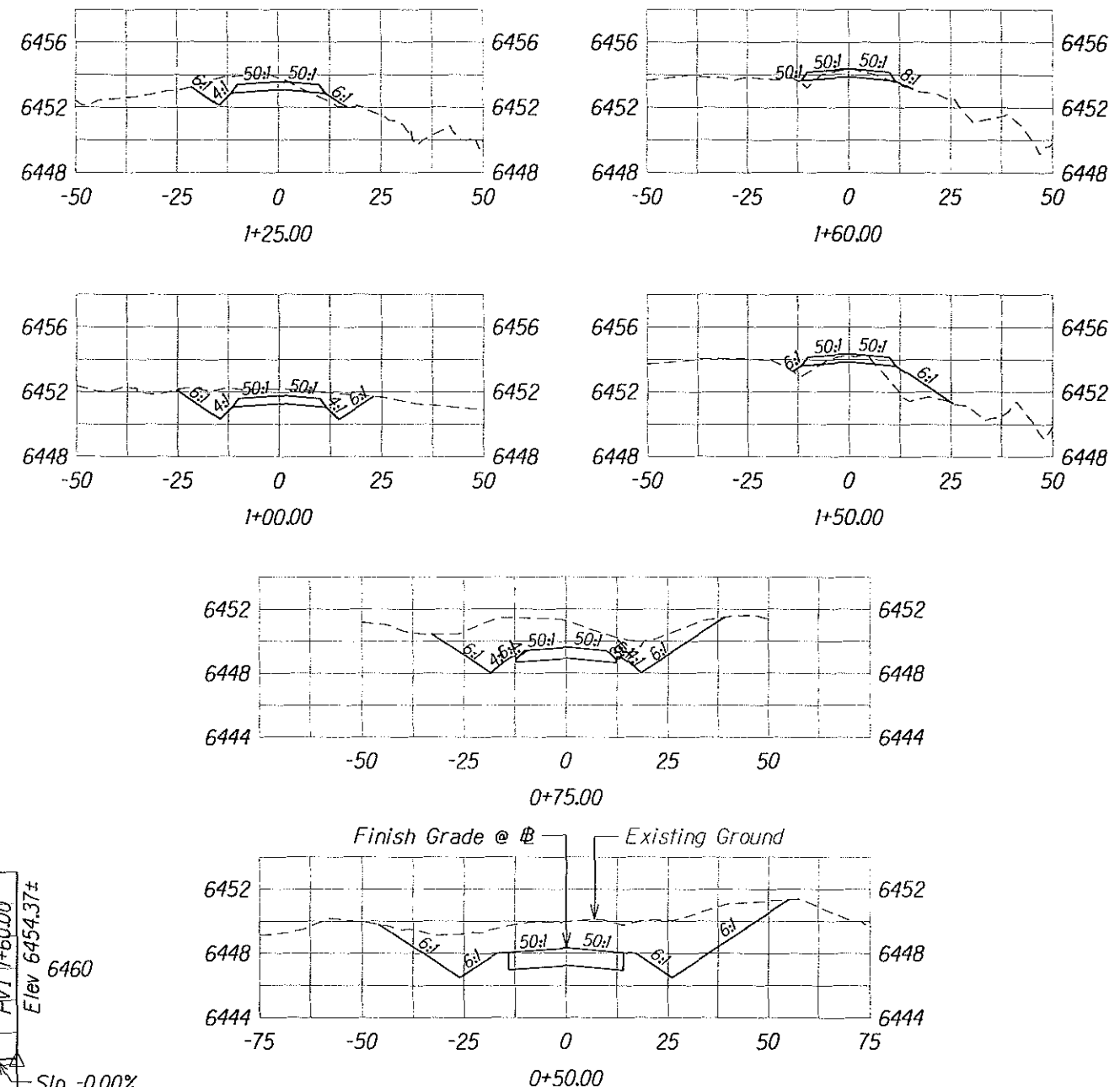
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E10       | E25          |



**PLAN**  
Scale: 1"=40'



**PROFILE**  
Scale: Horiz. 1"=20'  
Vert. 1"=10'



**CROSS SECTIONS**  
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 515.32 CY  
Fill: 12.03 CY

The work was prepared by me or under my supervision and construction of this project will be under my direction.  
Expiratory Date of License 4/06.

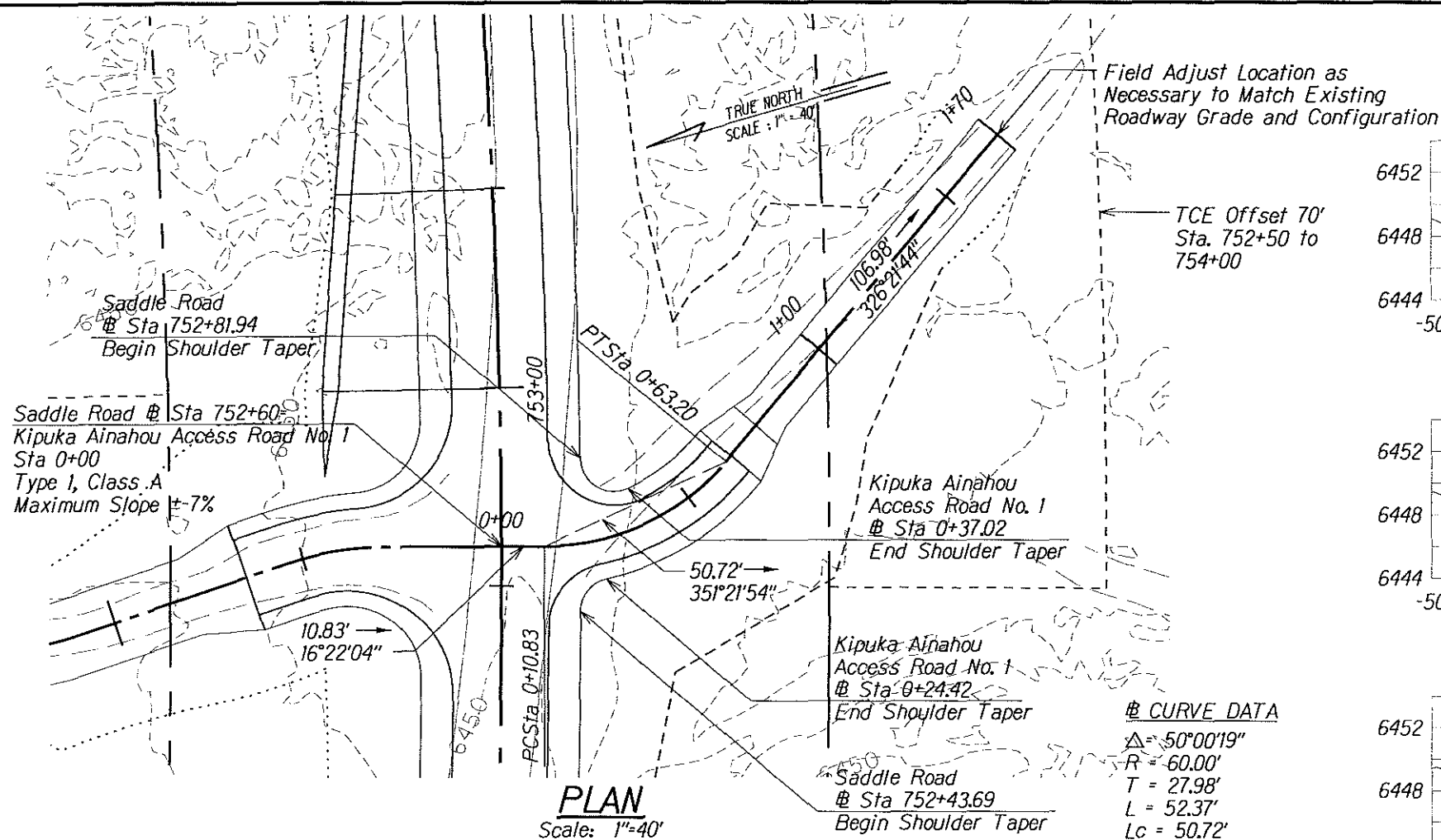
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**DHHL ACCESS ROAD NO. 2**  
**@ STA 752+60**

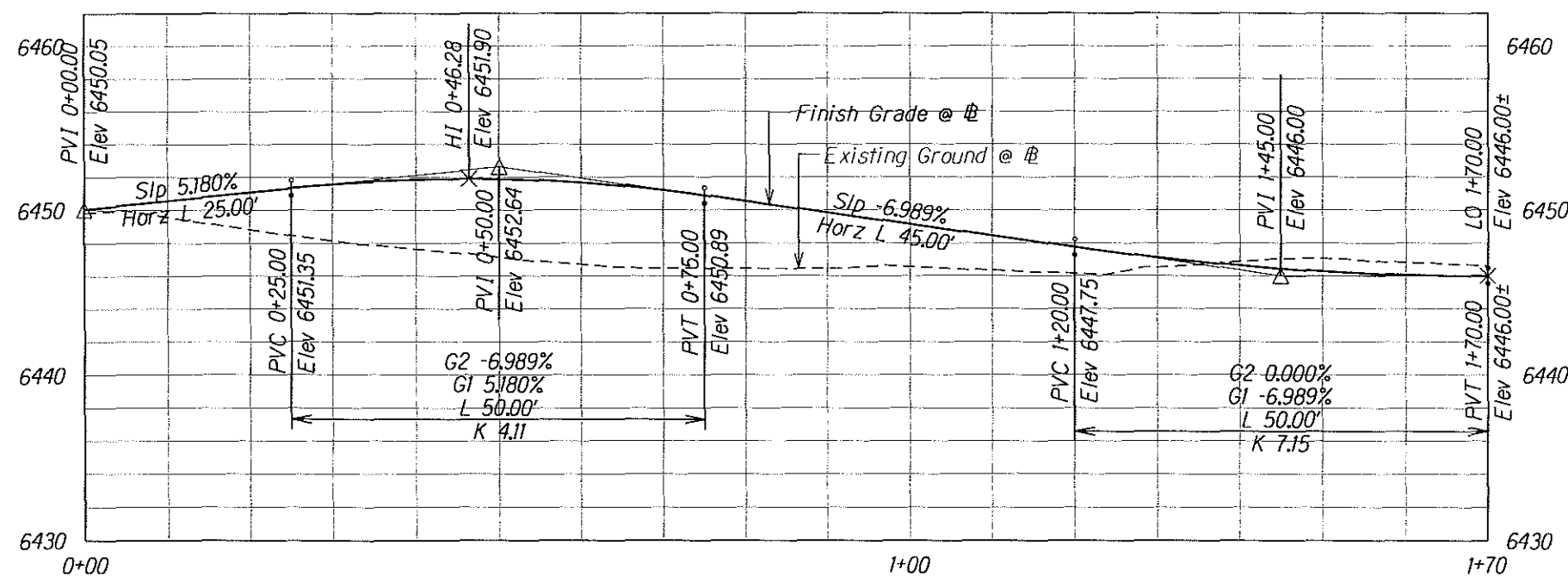
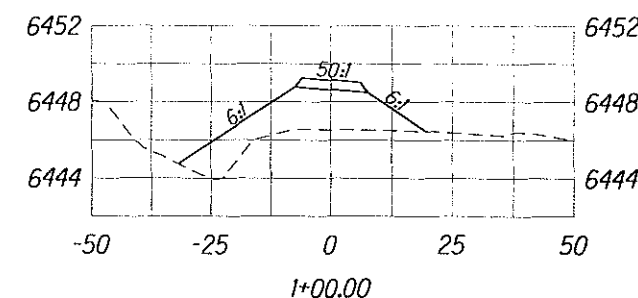
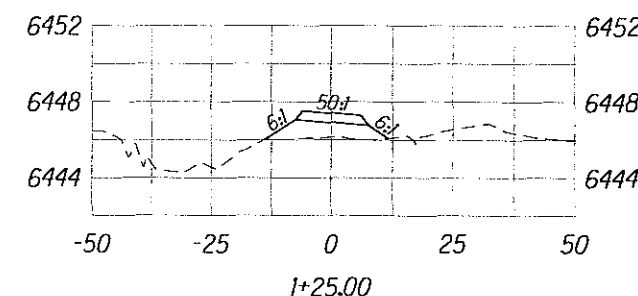
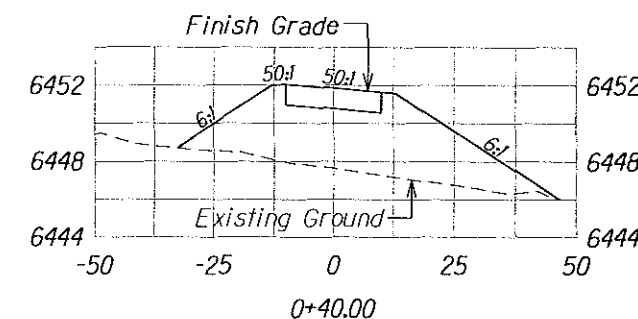
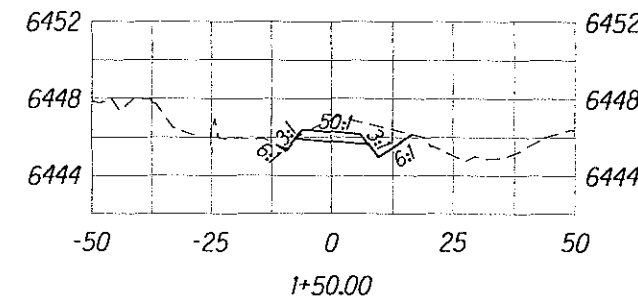
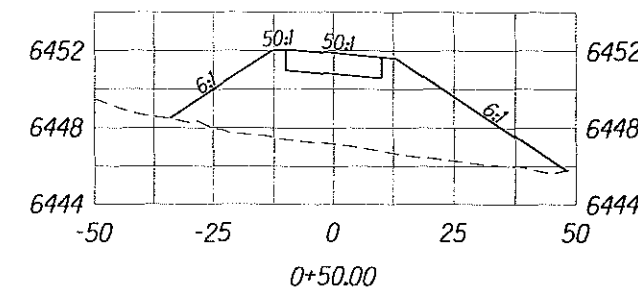
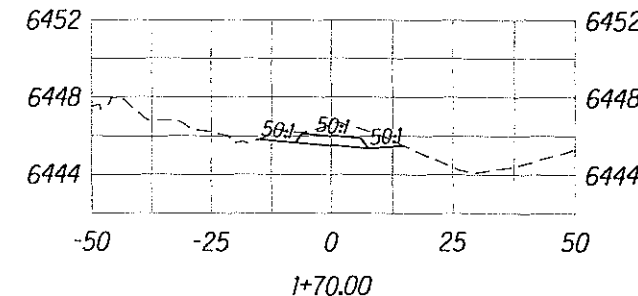
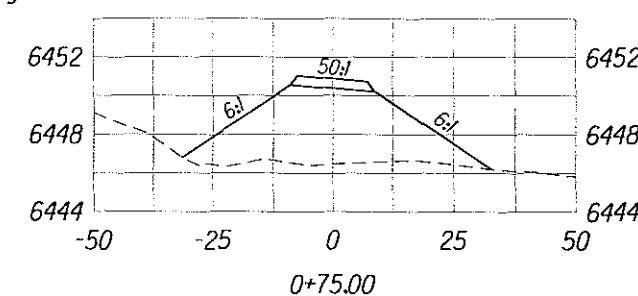
Scale: As Noted  
Date: December 5, 2005

SHEET No. 1 OF 1

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200X1) | E11       | E25          |

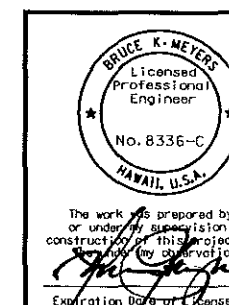


**CURVE DATA**  
 $\Delta = 50^{\circ}00'19''$   
 $R = 60.00'$   
 $T = 27.98'$   
 $L = 52.37'$   
 $L_c = 50.72'$



**CROSS SECTIONS**  
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 30.20 CY  
Fill: 528.64 CY



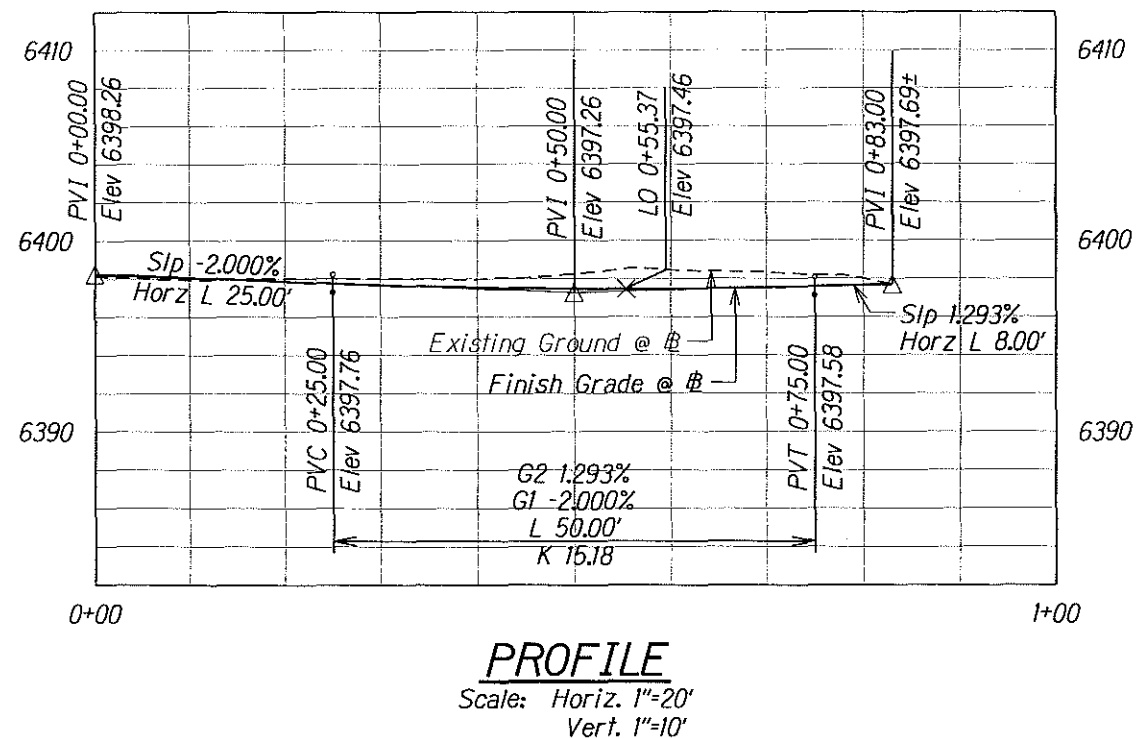
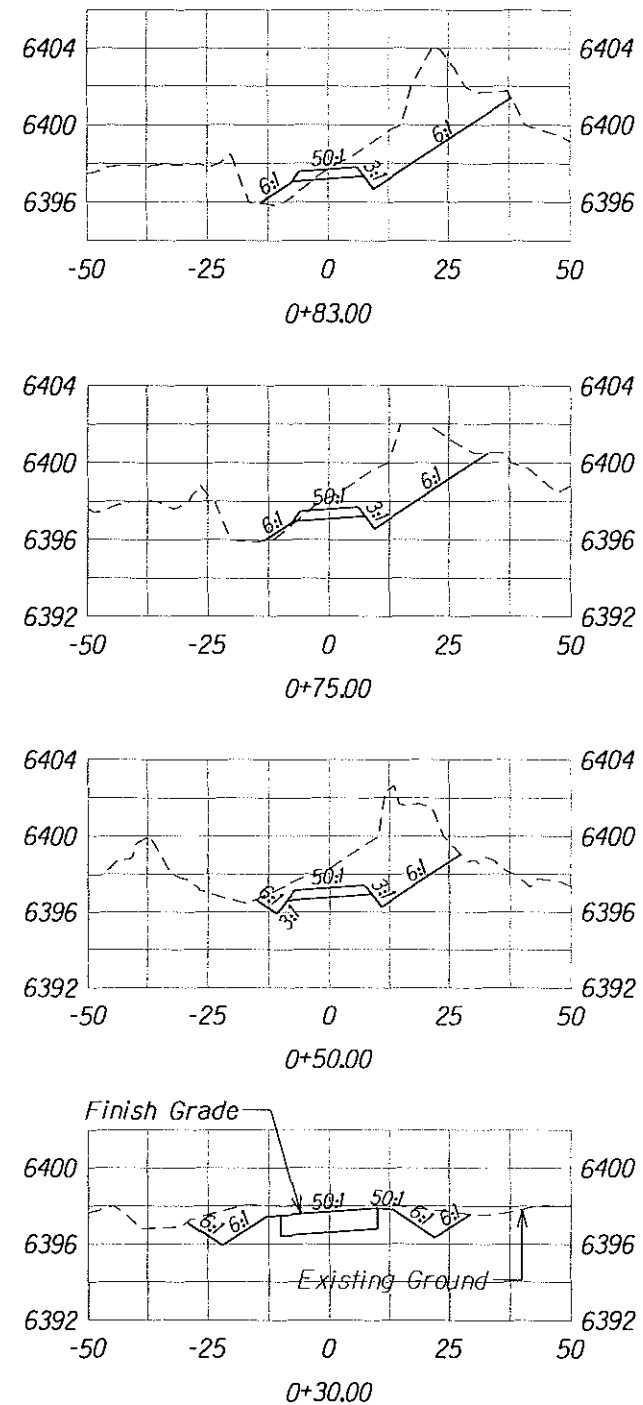
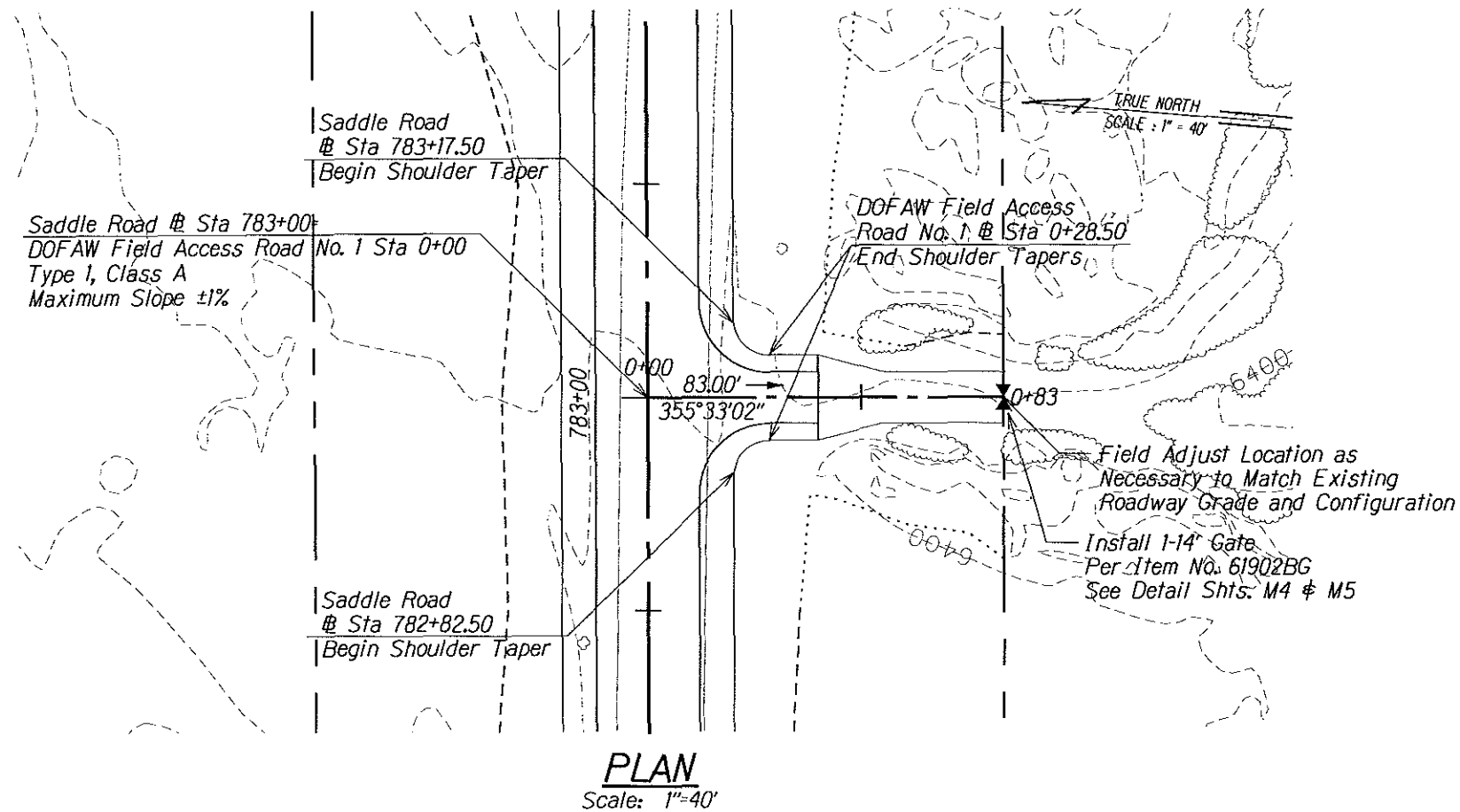
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**KIPUKA AINAHOU ACCESS ROAD NO. 1**  
**@ STA 752+60**

Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

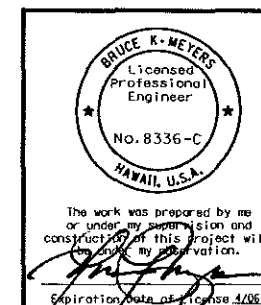
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) & 200(1) | E12       | E25          |



### CROSS SECTIONS

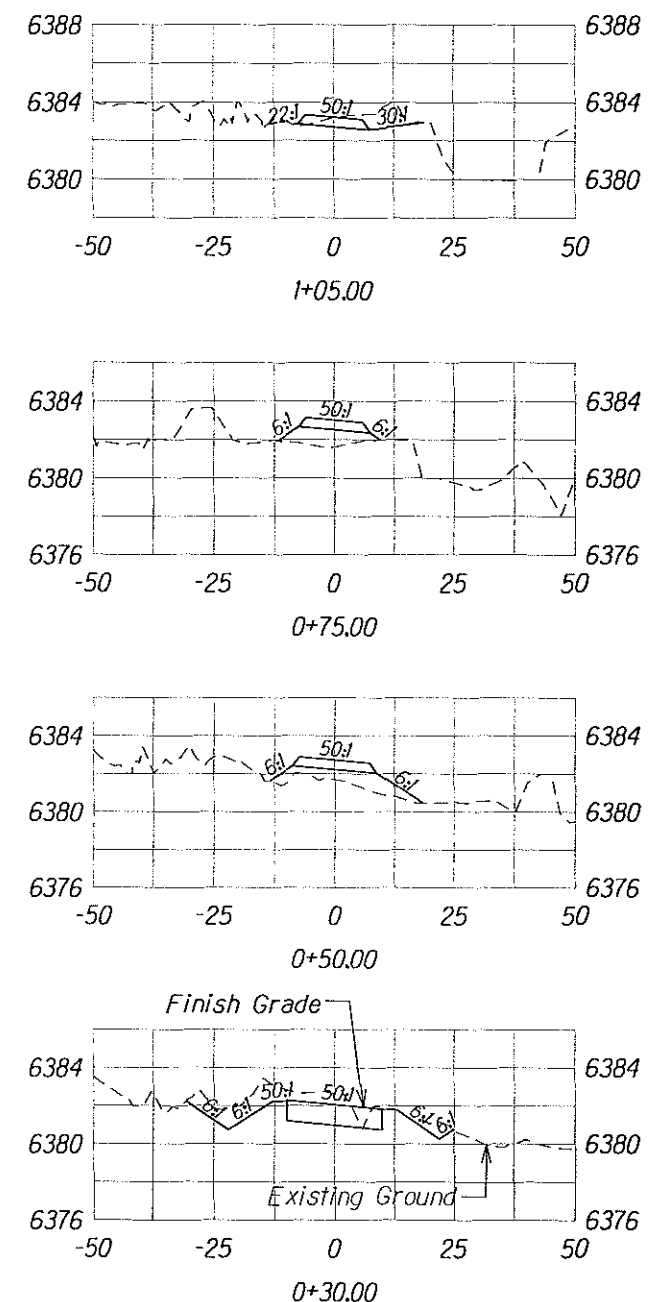
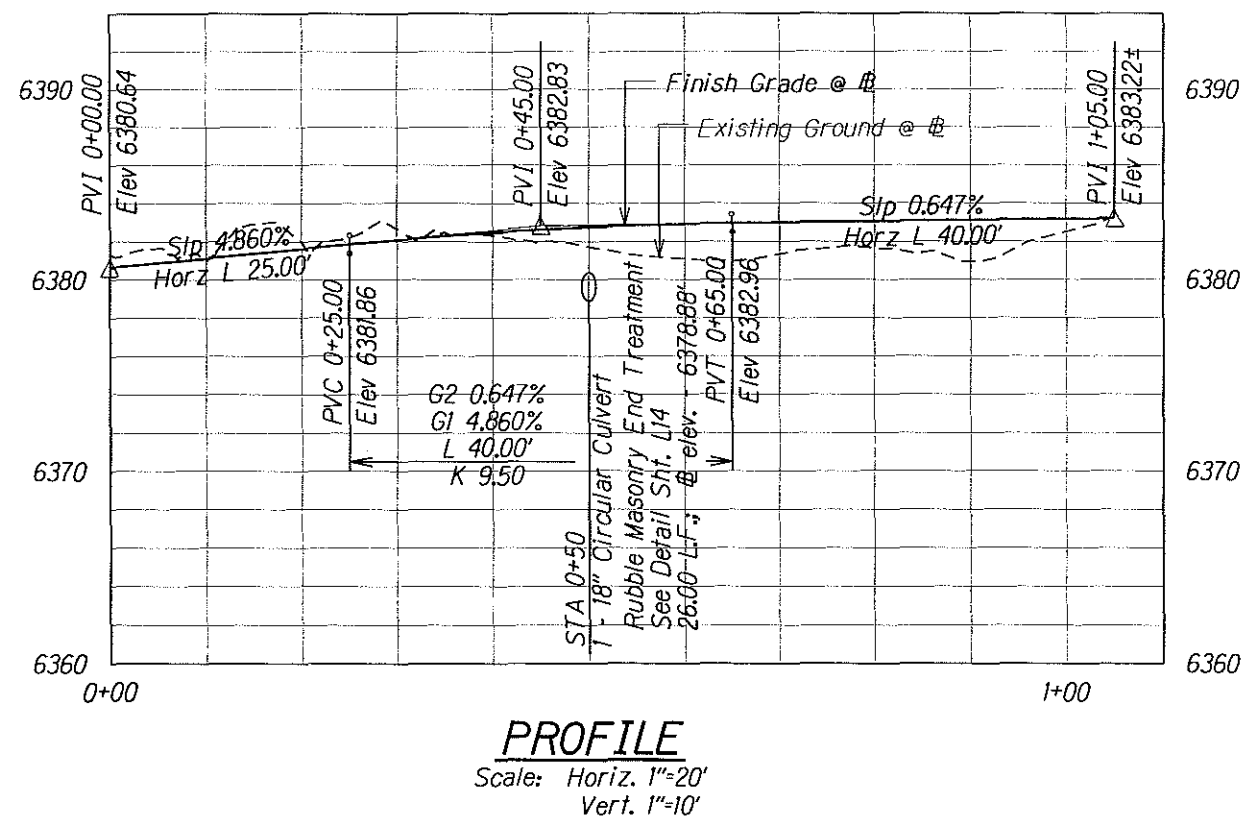
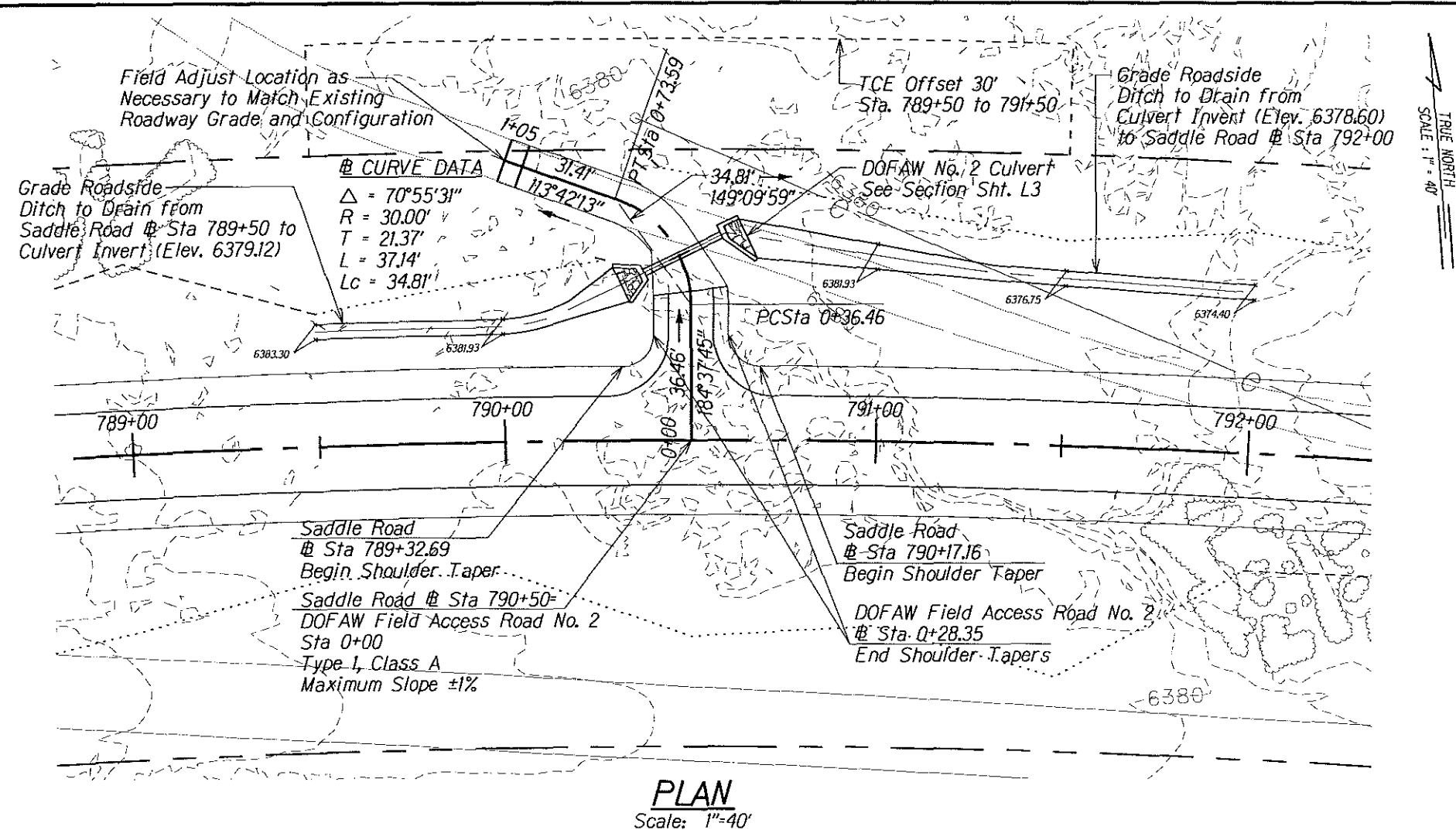
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 211.08 CY  
Fill: 3.00 CY



|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>DOFAW FIELD ACCESS ROAD NO. 1</b><br><b>@ STA 783+00</b>                                                   |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 1                                                                                              |                        |

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E13       | E25          |



CROSS SECTIONS

Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 61.98 CY  
Fill: 9.25 CY

BRUCE K. MEYERS  
Licensed Professional Engineer  
No. 8336-C  
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my direction.  
Expiration Date of License 4/06

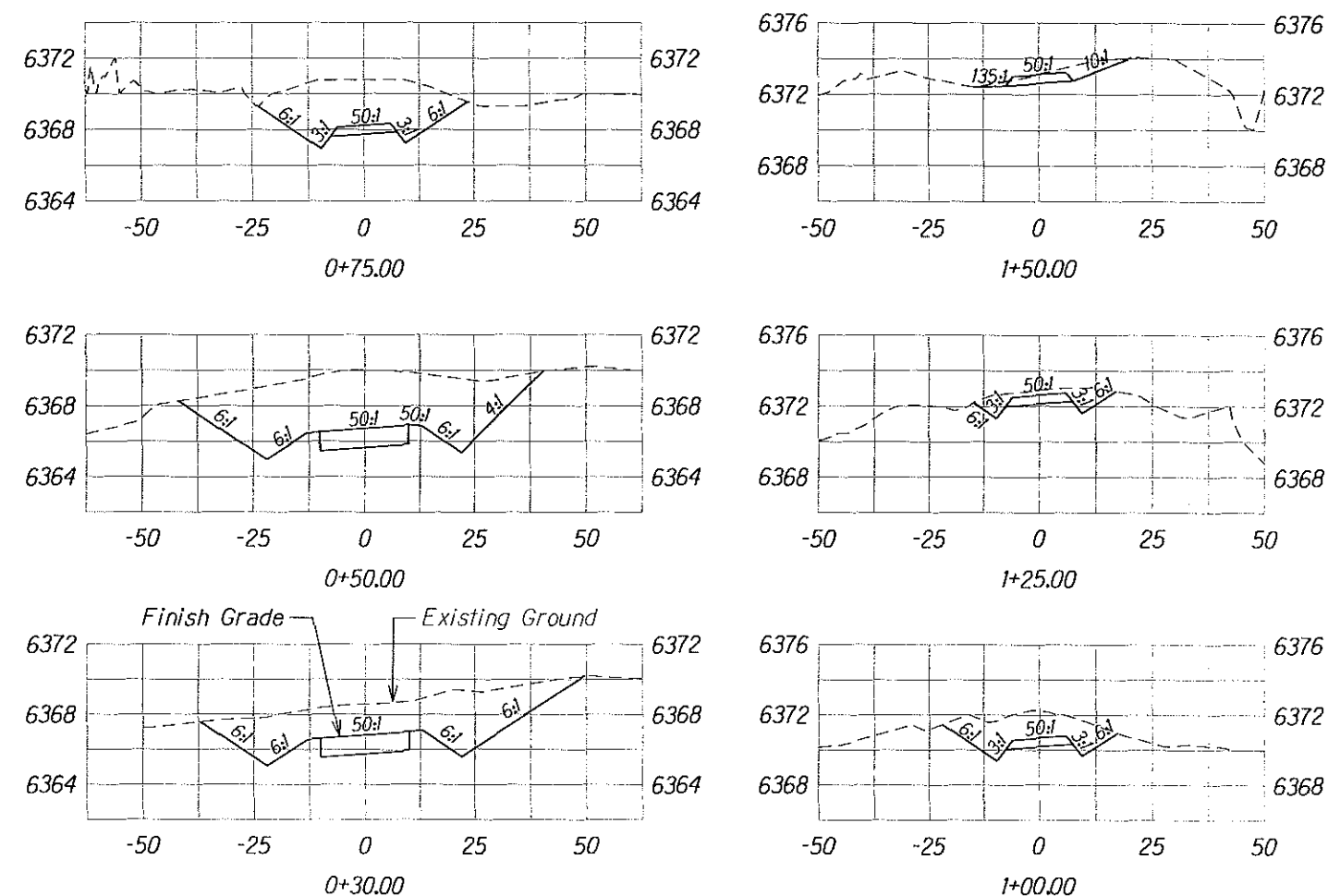
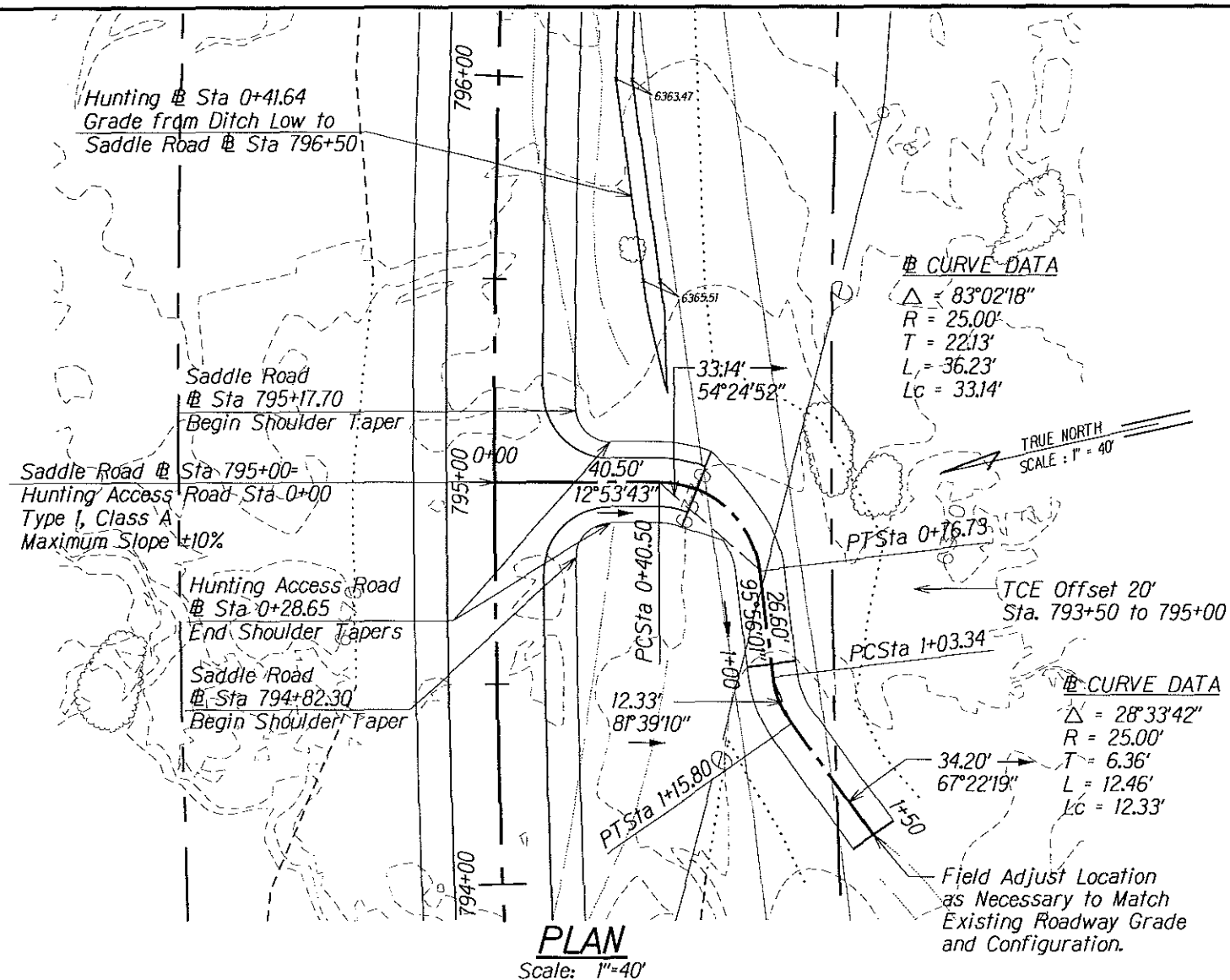
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**DOFAW FIELD ACCESS ROAD NO. 2**  
**@ STA 790+50**

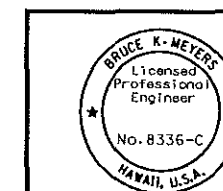
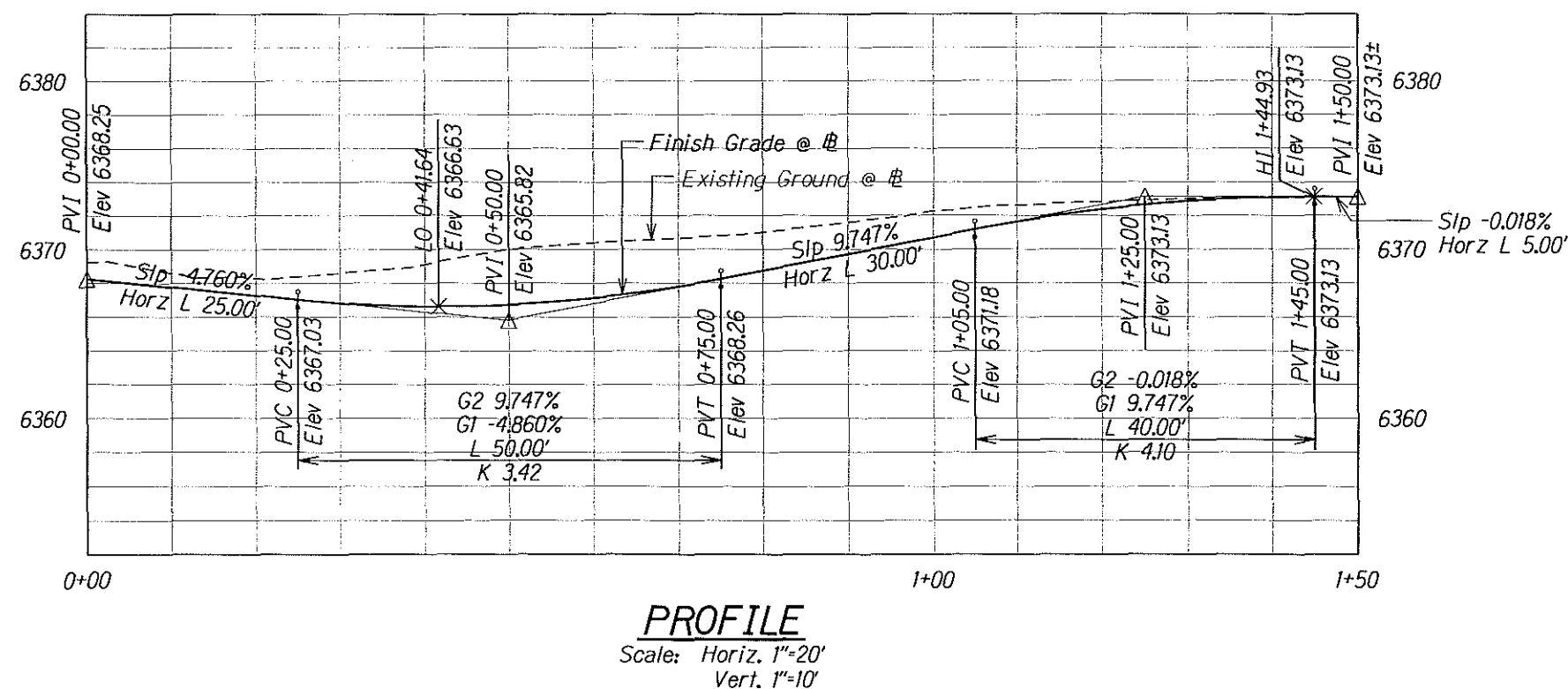
Scale: As Noted  
Date: December 5, 2005

SHEET No. 1 OF 1

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(X) | E14       | E25          |



Earthwork Quantities:  
Cut: 593.33 CY  
Fill: 1.82 CY



The work was prepared by me or under my supervision and construction of this project will be in accordance with the provisions of the Hawaii Engineering Law.  
 Bruce K. Meyers  
 Expiration Date: 12/31/2006

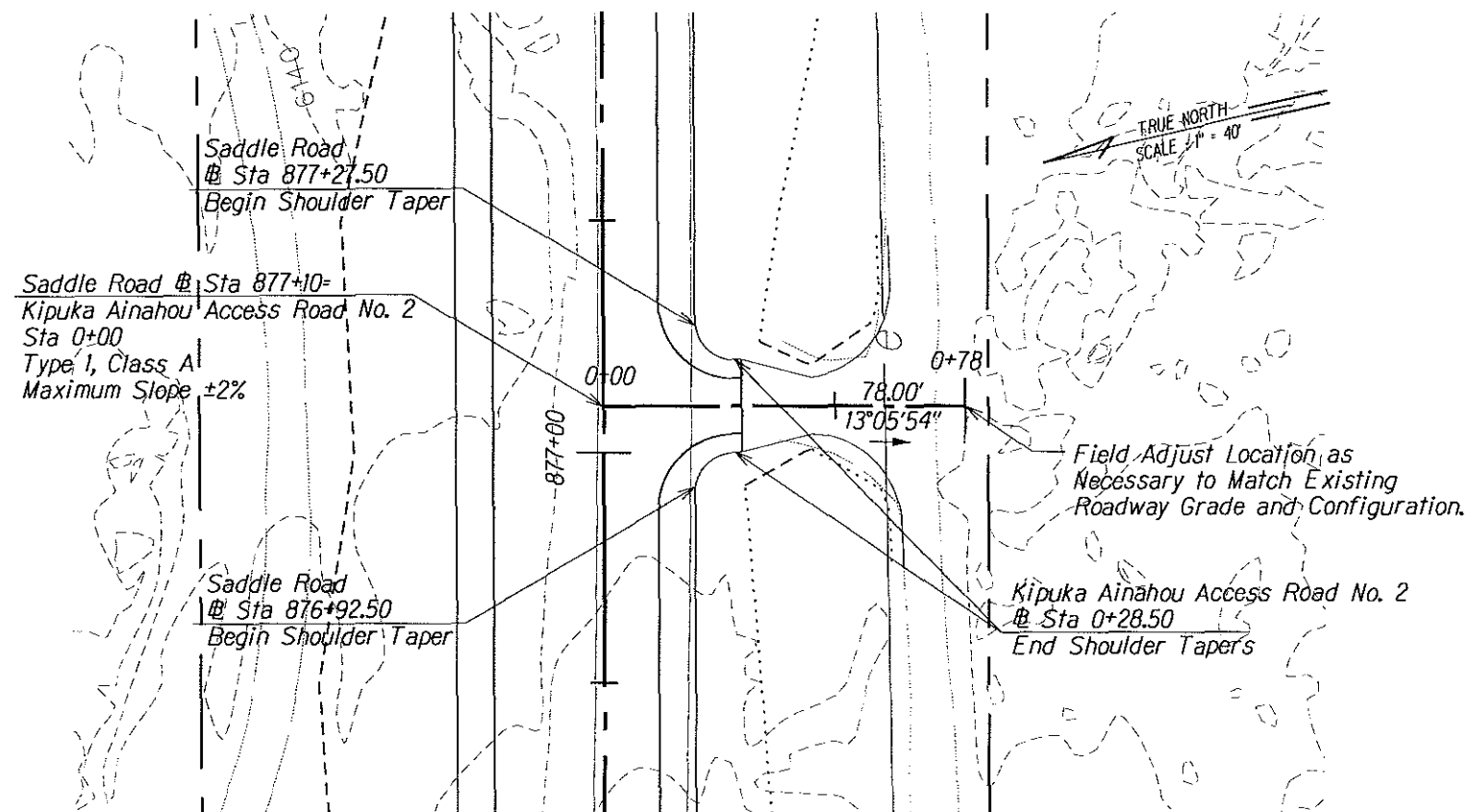
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**HUNTING ACCESS ROAD**  
**Sta 795+00**

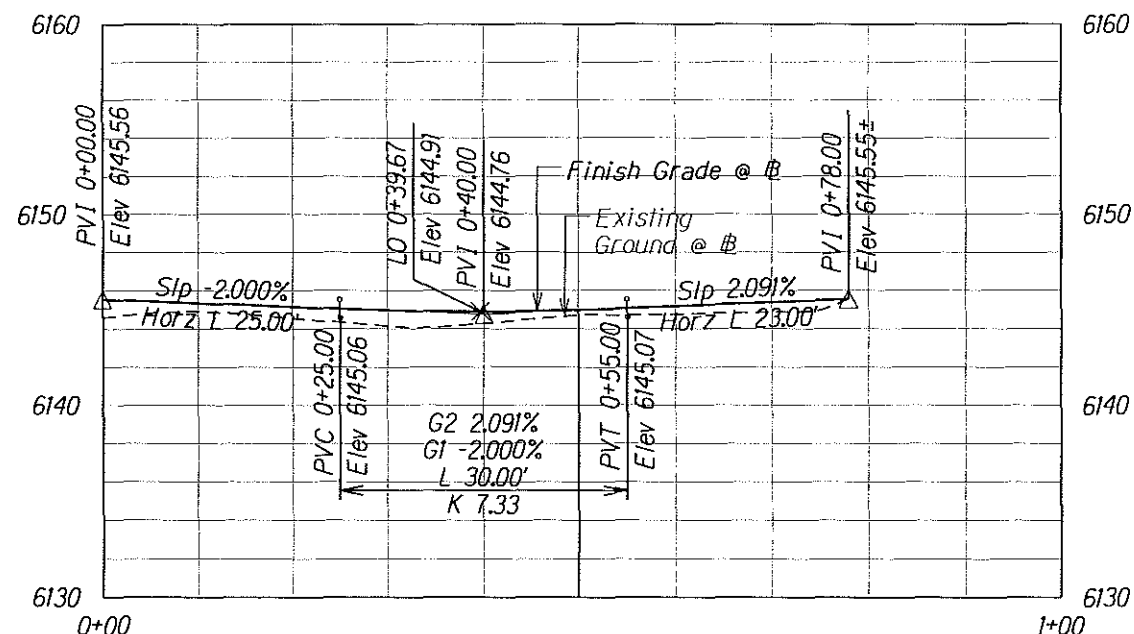
Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

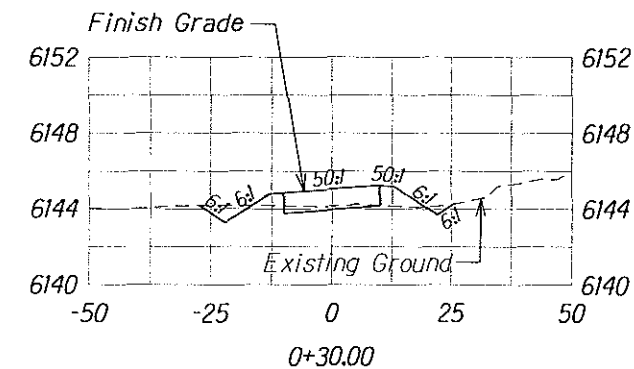
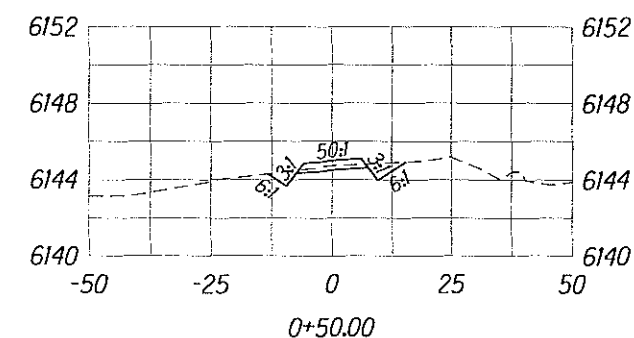
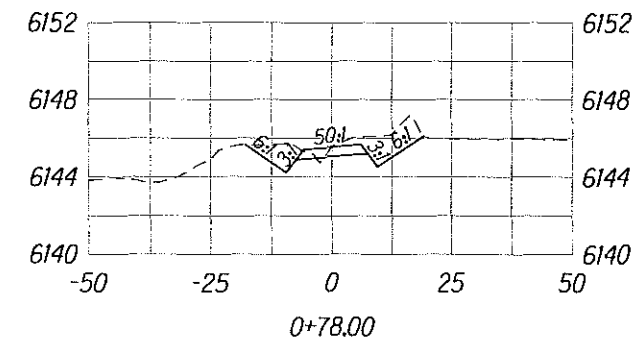
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E15       | E25          |



**PLAN**  
Scale: 1"=40'



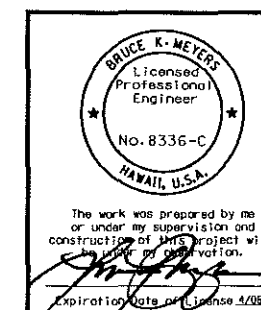
**PROFILE**  
Scale: Horiz. 1"=20'  
Vert. 1"=10'



### CROSS SECTIONS

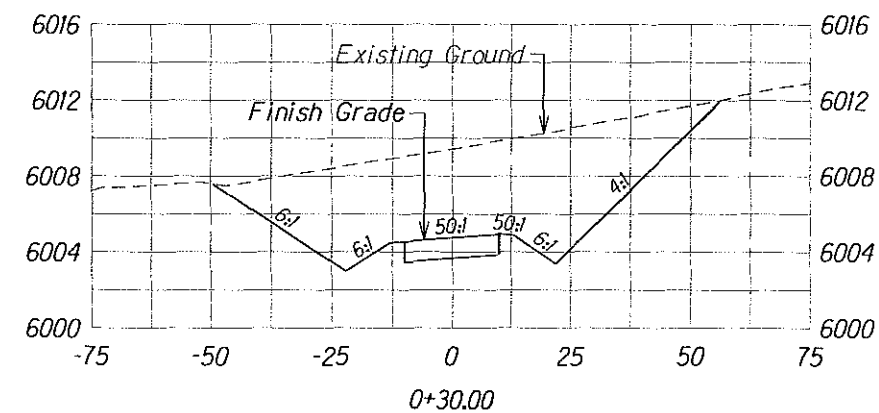
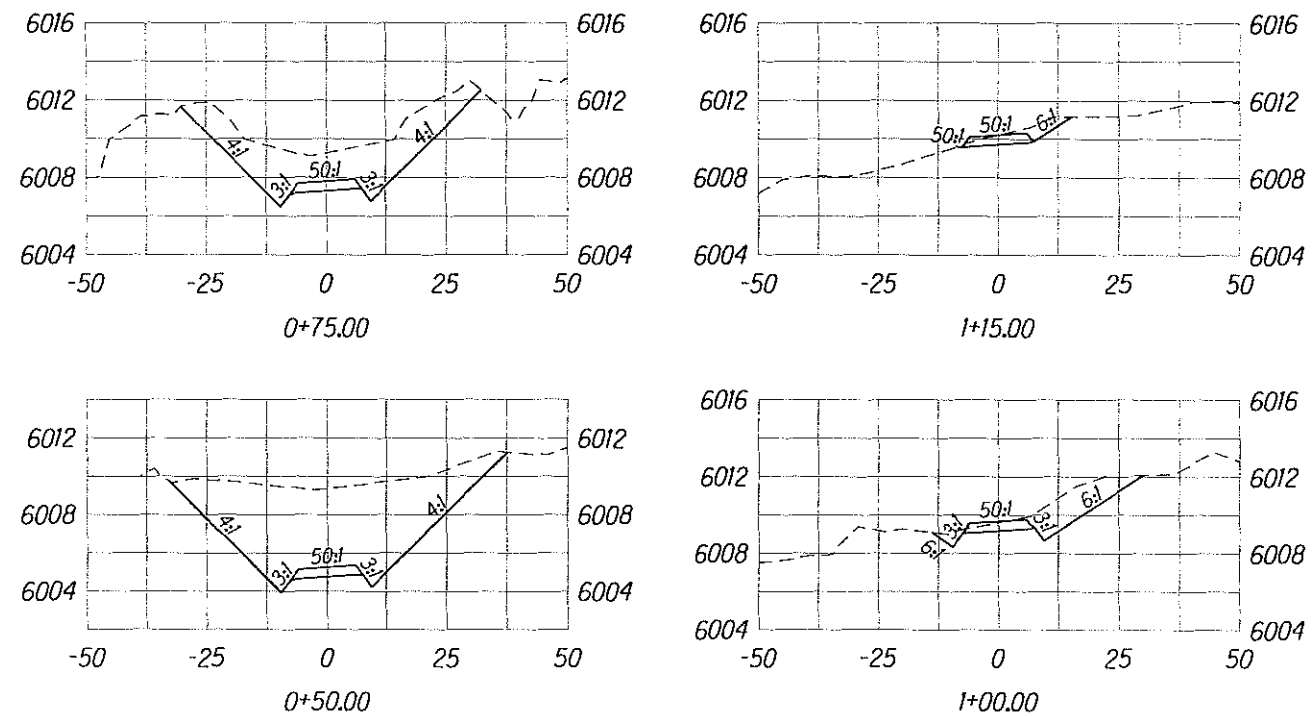
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 48.01 CY  
Fill: 3.48 CY



|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>KIPUKA AINAHOU ACCESS ROAD NO. 2</b><br><b>STA 877+10</b>                                                  |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 1                                                                                              |                        |

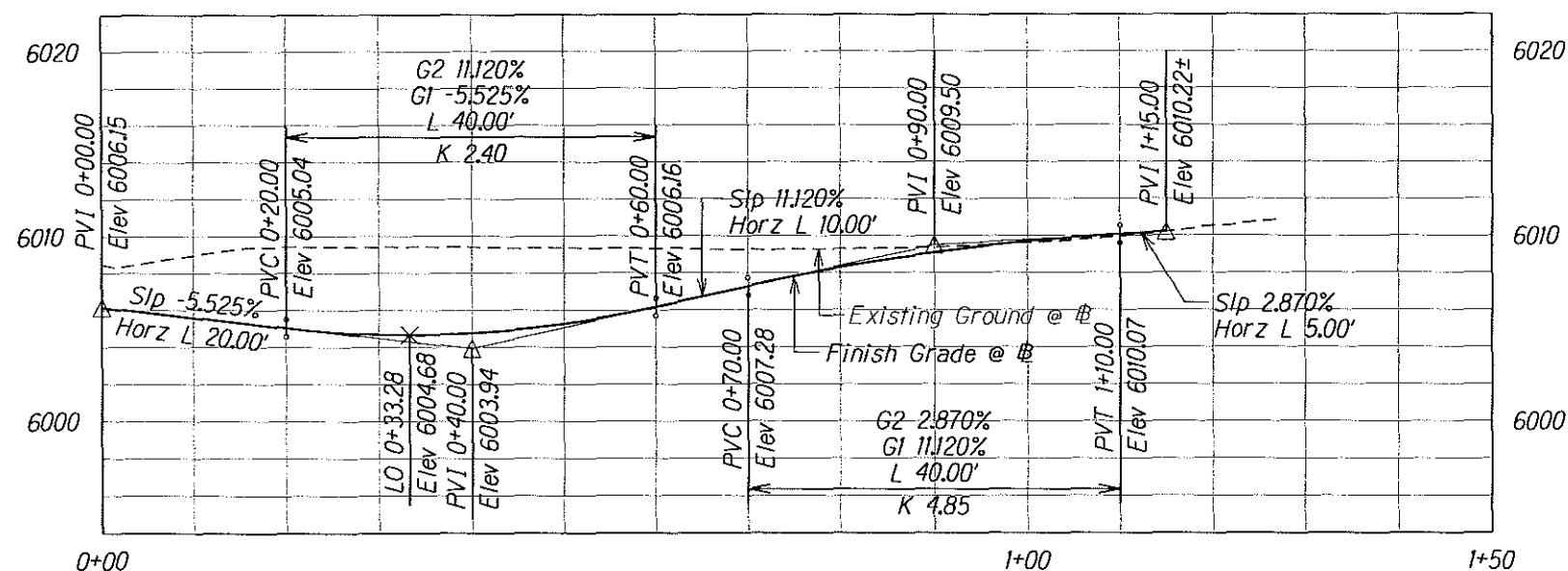
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E16       | E25          |



### CROSS SECTIONS

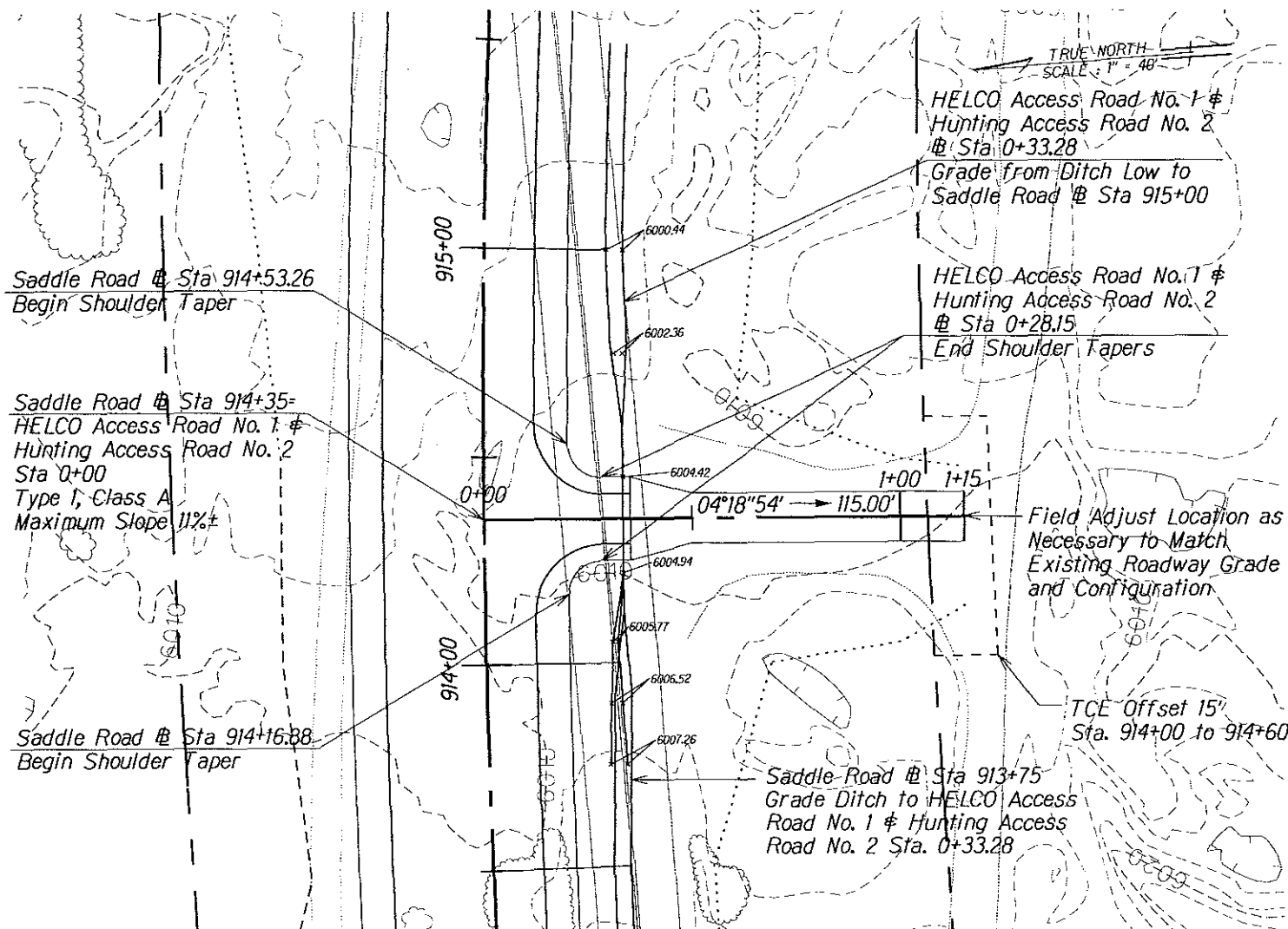
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 890.30 CY  
Fill: 0.29 CY



### PROFILE

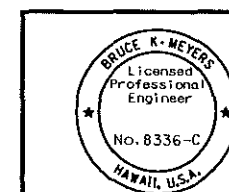
Scale: Horiz. 1"=20'  
Vert. 1"=10'



### PLAN

Scale: 1"=40'

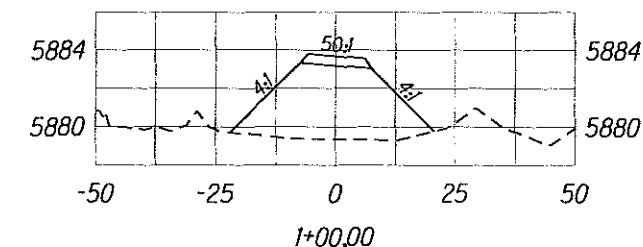
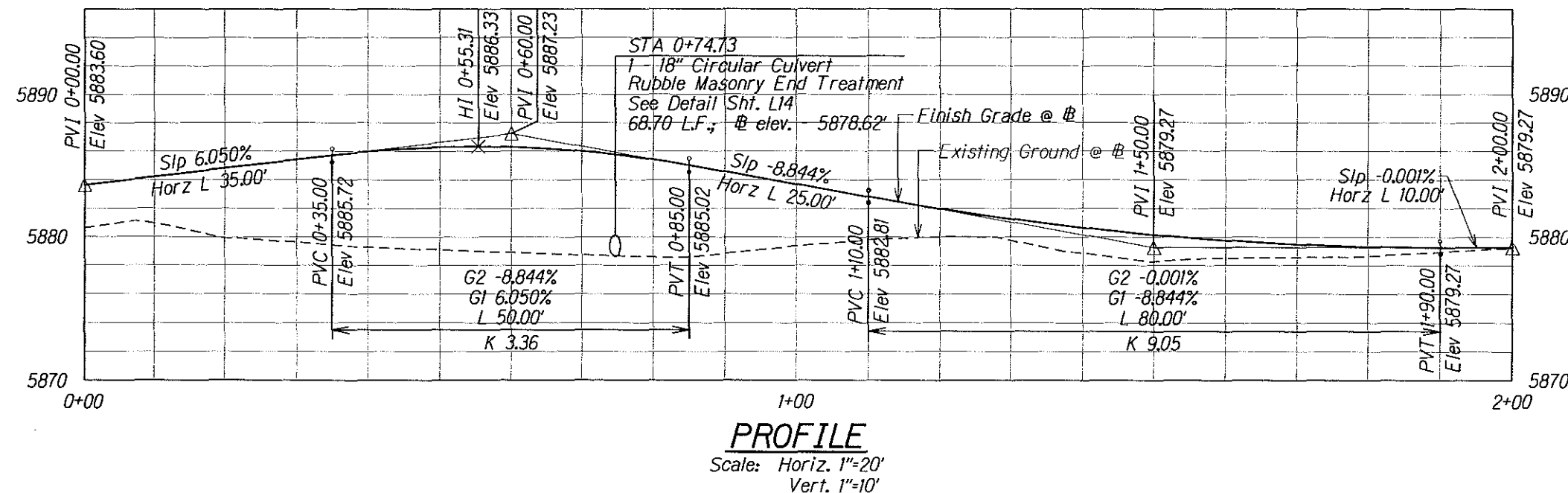
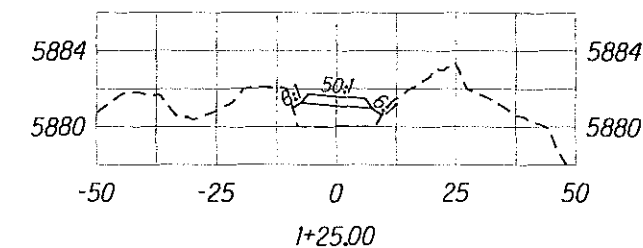
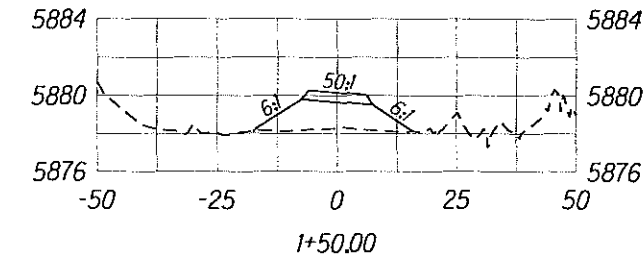
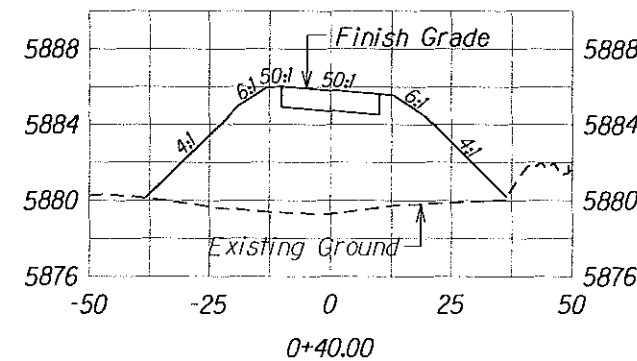
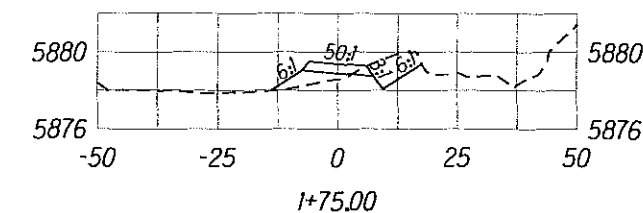
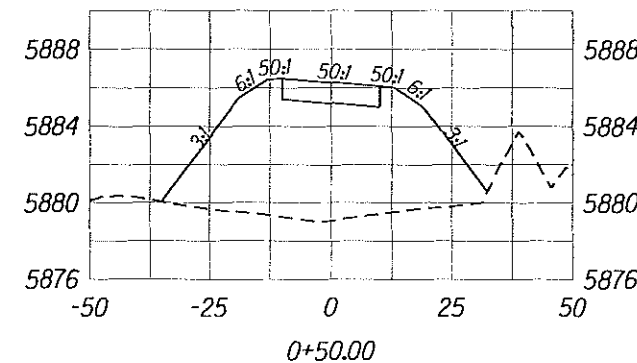
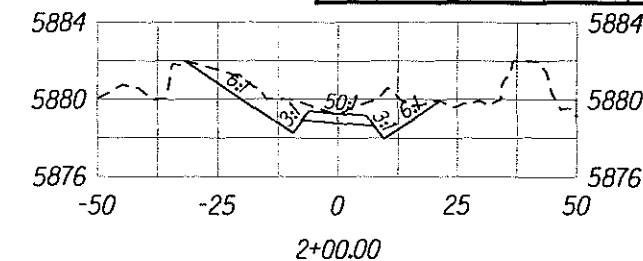
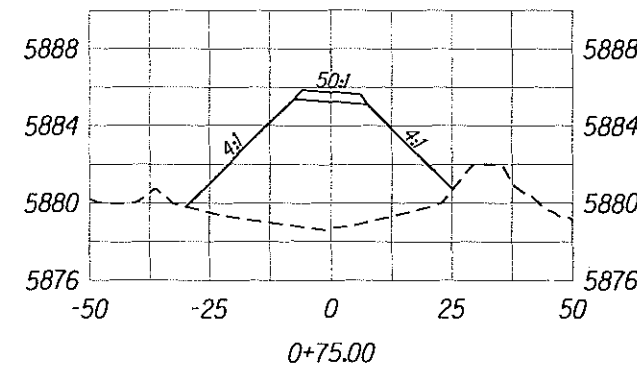
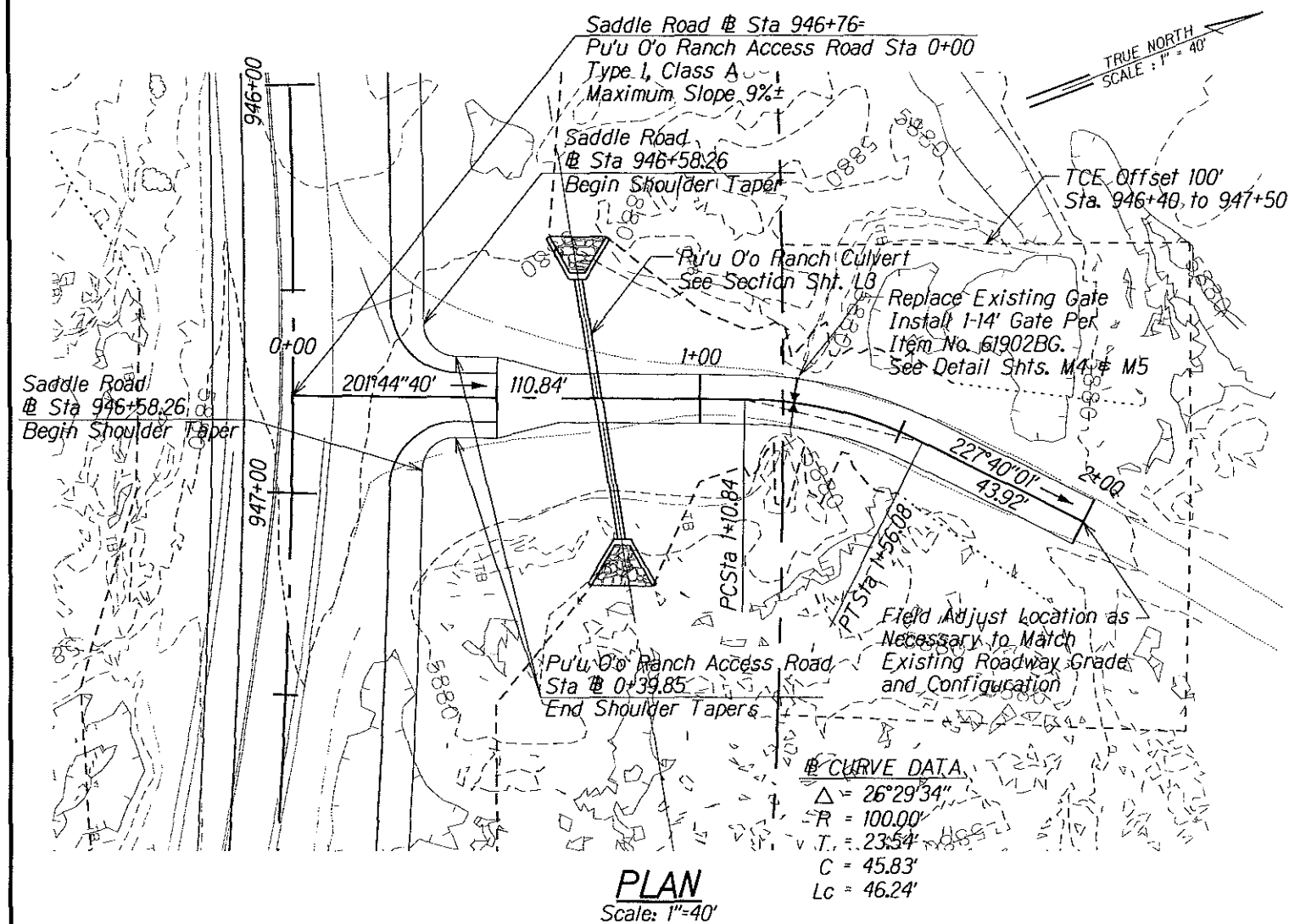
M:\proj\Lenzie\205009\sheet\shre016.dgn



The work was prepared by me or under my supervision and construction of this project will be under my observation.  
Expiration Date of License 4/06.

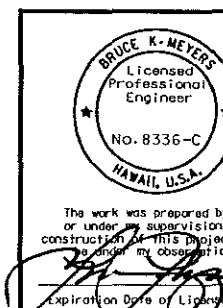
|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>HELCO ACCESS ROAD NO. 1 &amp;<br/>HUNTING ACCESS ROAD NO. 2<br/>@ STA. 914+35</b>                          |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 1                                                                                              |                        |

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) & 200X11 | E17       | E25          |



Earthwork Quantities:  
Cut: 23.80 CY  
Fill: 873.79 CY

**CROSS SECTIONS**  
Scale: Horiz. 1"=40'  
Vert. 1"=10'



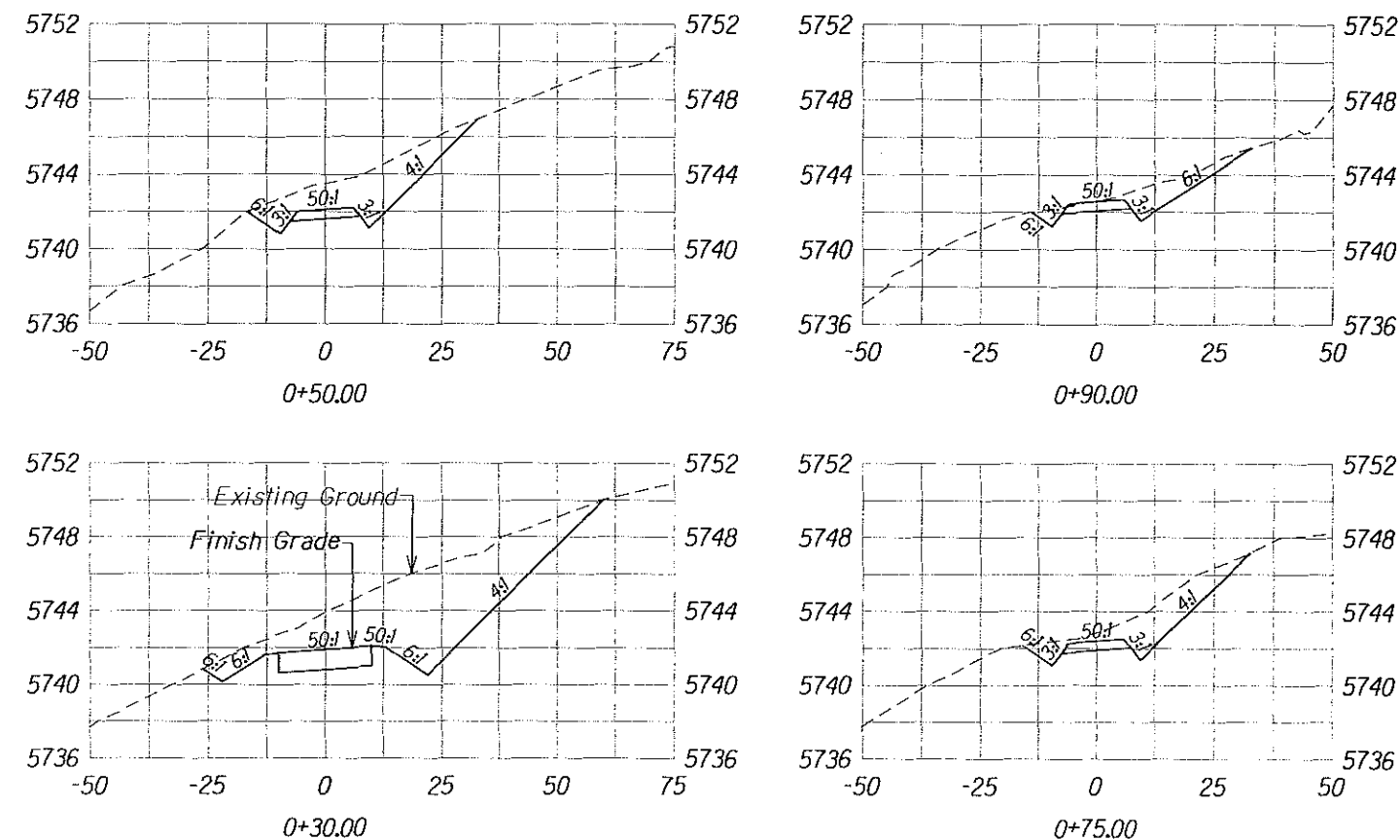
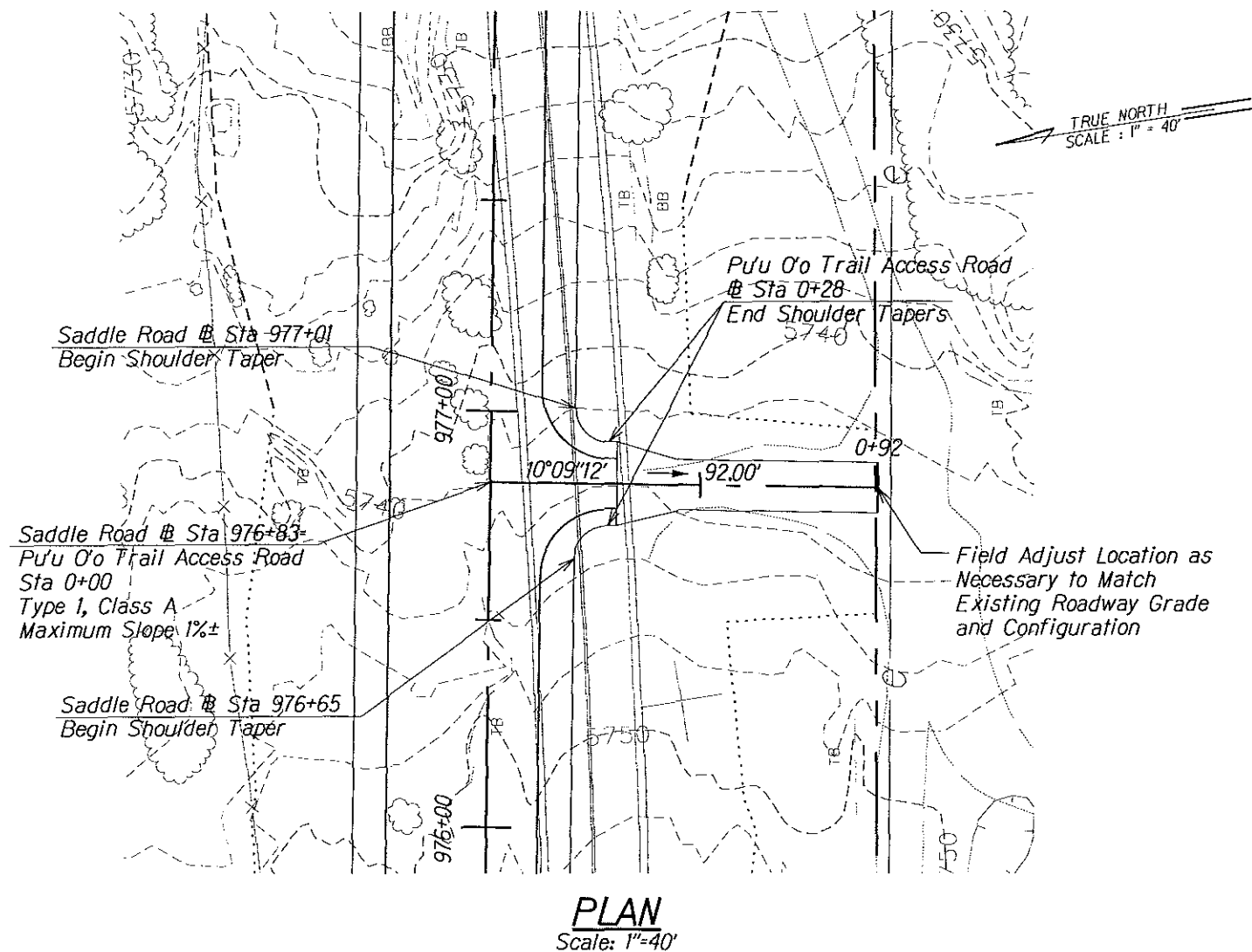
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**PU'U O'O RANCH ACCESS ROAD**  
**@ STA. 946+76**

Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

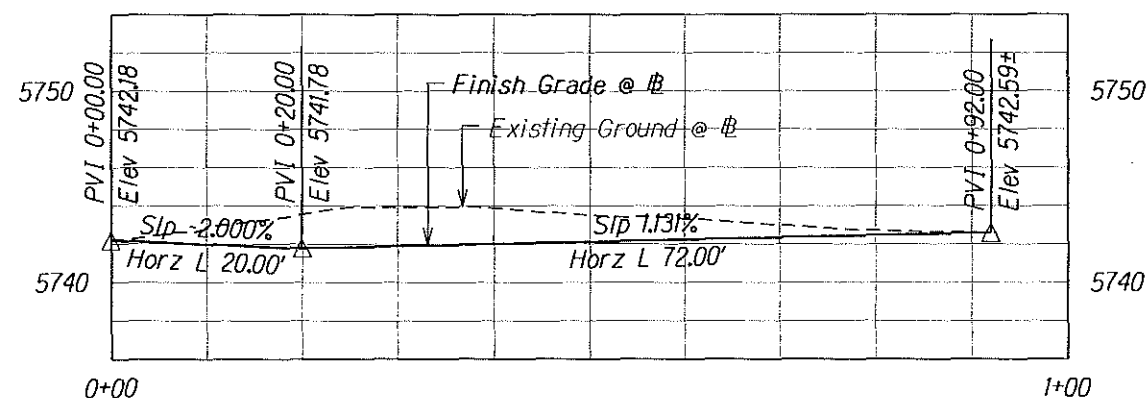
| STATE | SADDLE ROAD PROJECT          | SHEET NO. | TOTAL SHEETS |
|-------|------------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3)<br># 200(1) | E18       | E25          |



## CROSS SECTIONS

Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 380.02 CY  
Fill: 0.46 CY

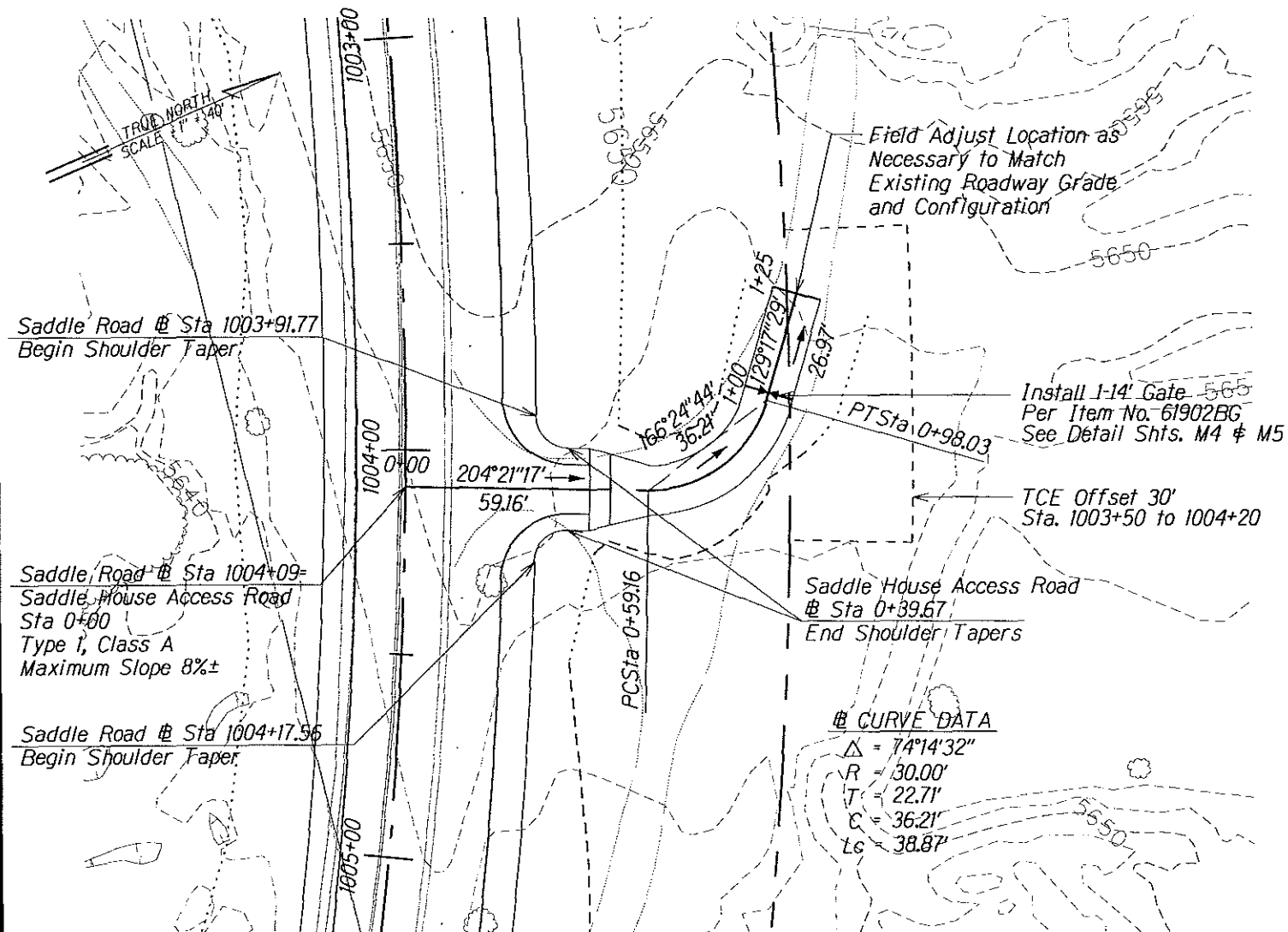


## PROFILE

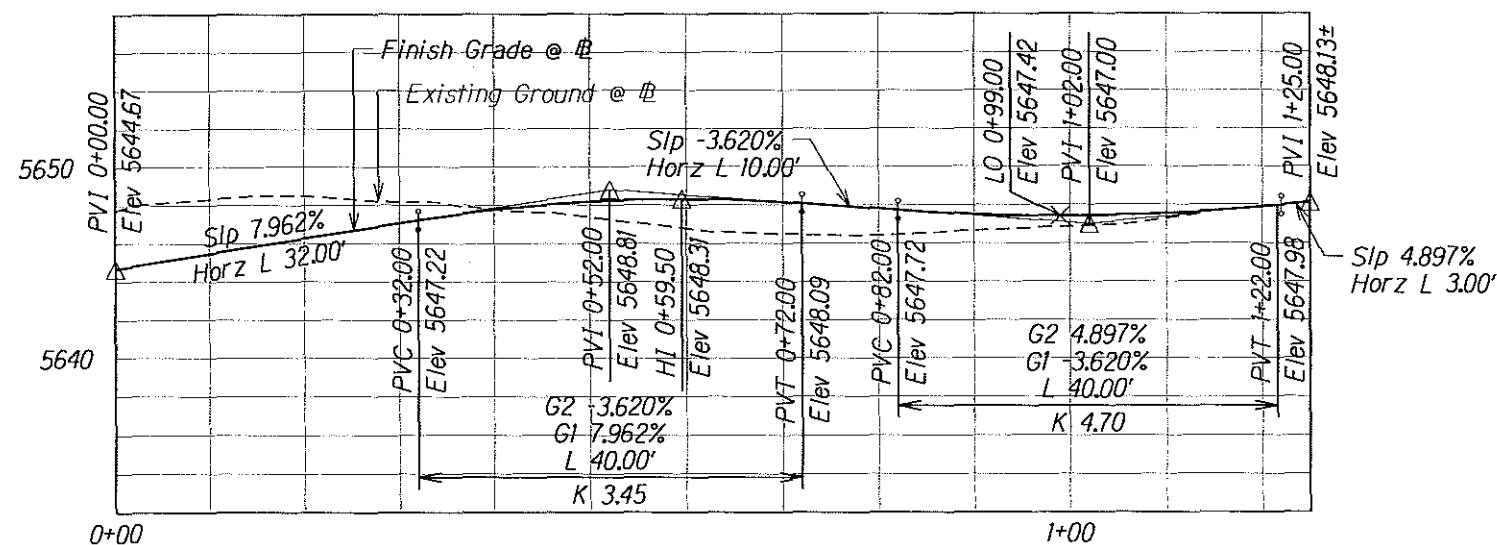
Scale: Horiz. 1"=20'  
Vert. 1"=10'

|                                                                                                                                                                                                                                                               |                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------|
| <p>BRUCE K. MEYERS<br/>Licensed Professional Engineer<br/>No. 8336-C<br/>HAWAII, U.S.A.</p> <p>The work was prepared by me or under my supervision and construction of this project will be under my supervision.</p> <p>Expiration Date of License: 3/26</p> | U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
|                                                                                                                                                                                                                                                               | <b>PU'U O'O TRAIL ACCESS ROAD</b><br><b>@ STA. 976+83</b>                                                     |                        |
|                                                                                                                                                                                                                                                               | Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 1                                                                                                                                                                                                                                              |                                                                                                               |                        |

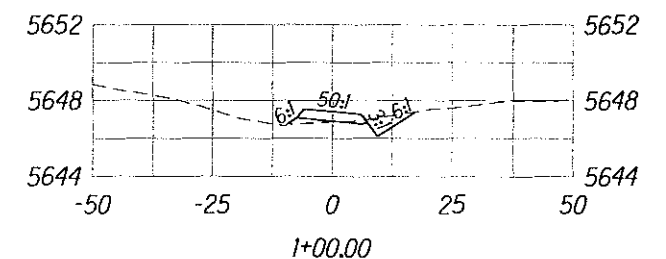
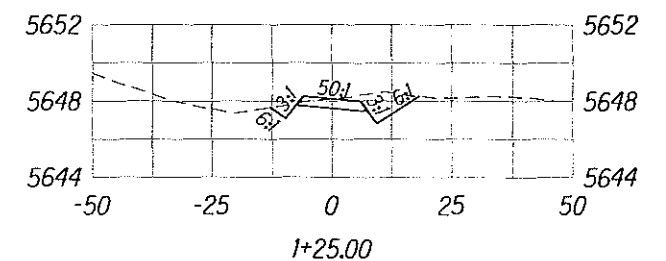
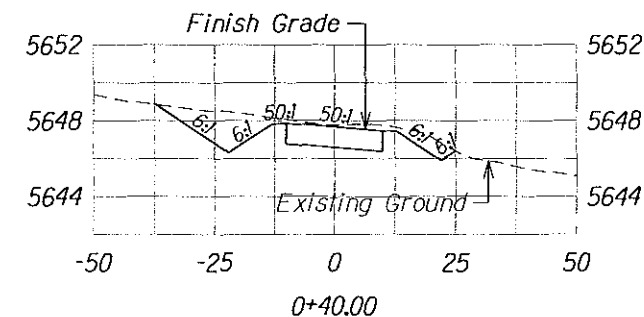
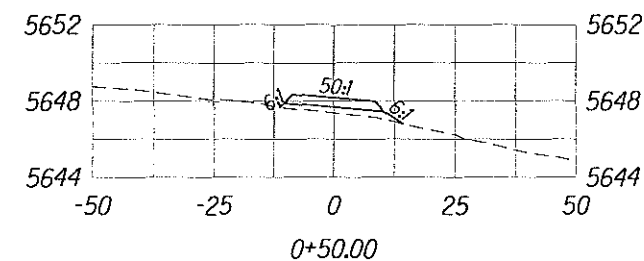
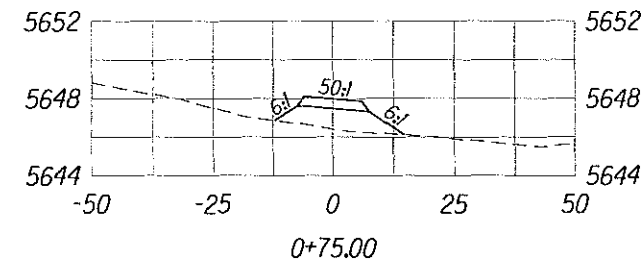
| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E19       | E25          |



**PLAN**  
Scale: 1"=40'



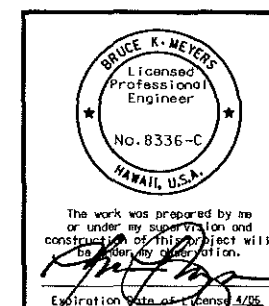
**PROFILE**  
Scale: Horiz. 1"=20'  
Vert. 1"=10'



**CROSS SECTIONS**

Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 308.66 CY  
Fill: 29.56 CY



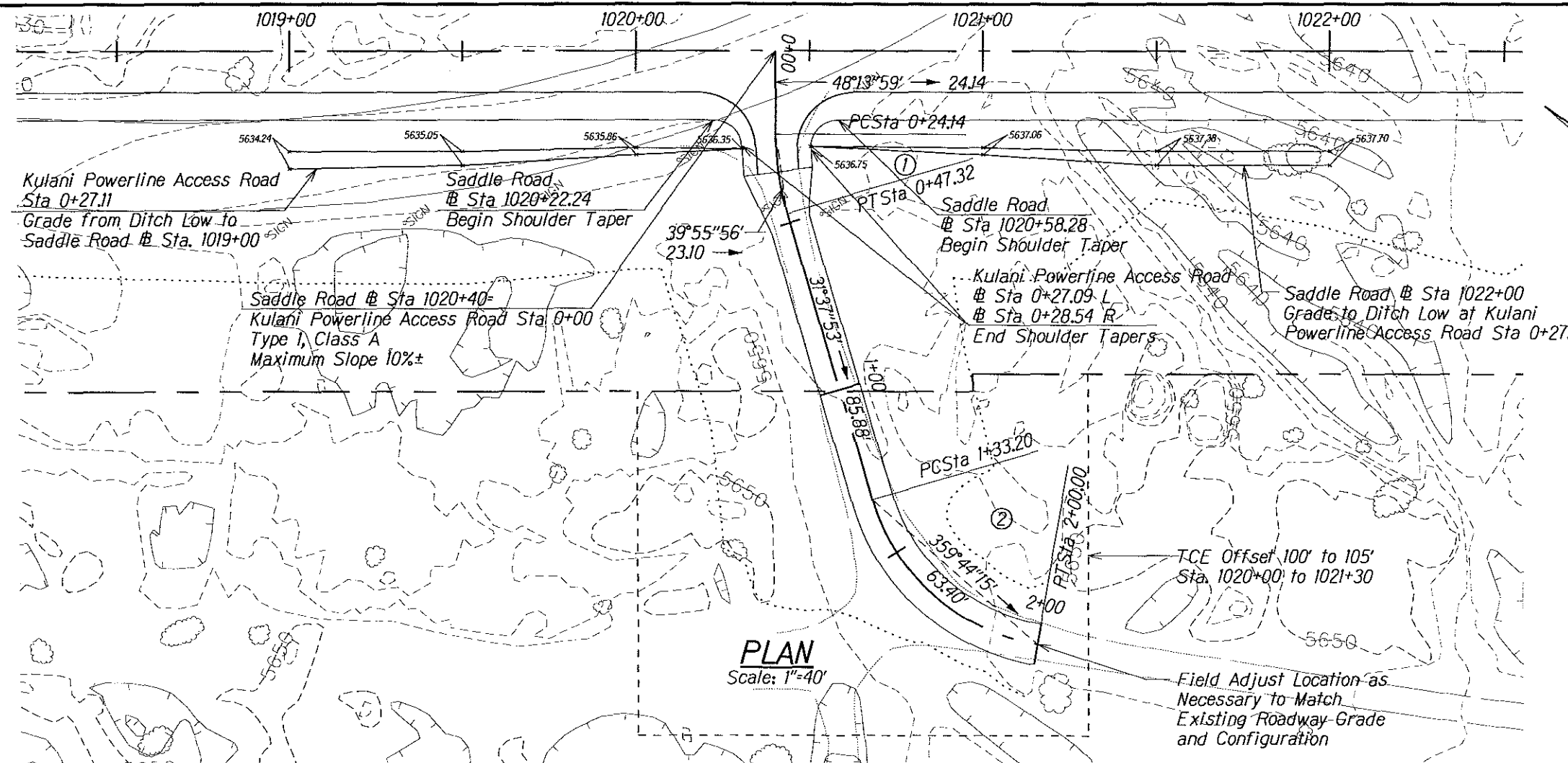
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**SADDLE HOUSE ACCESS ROAD**  
**@ STA. 1004+09**

Scale: As Noted Date: December 5, 2005

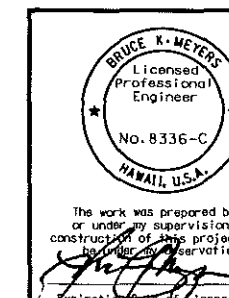
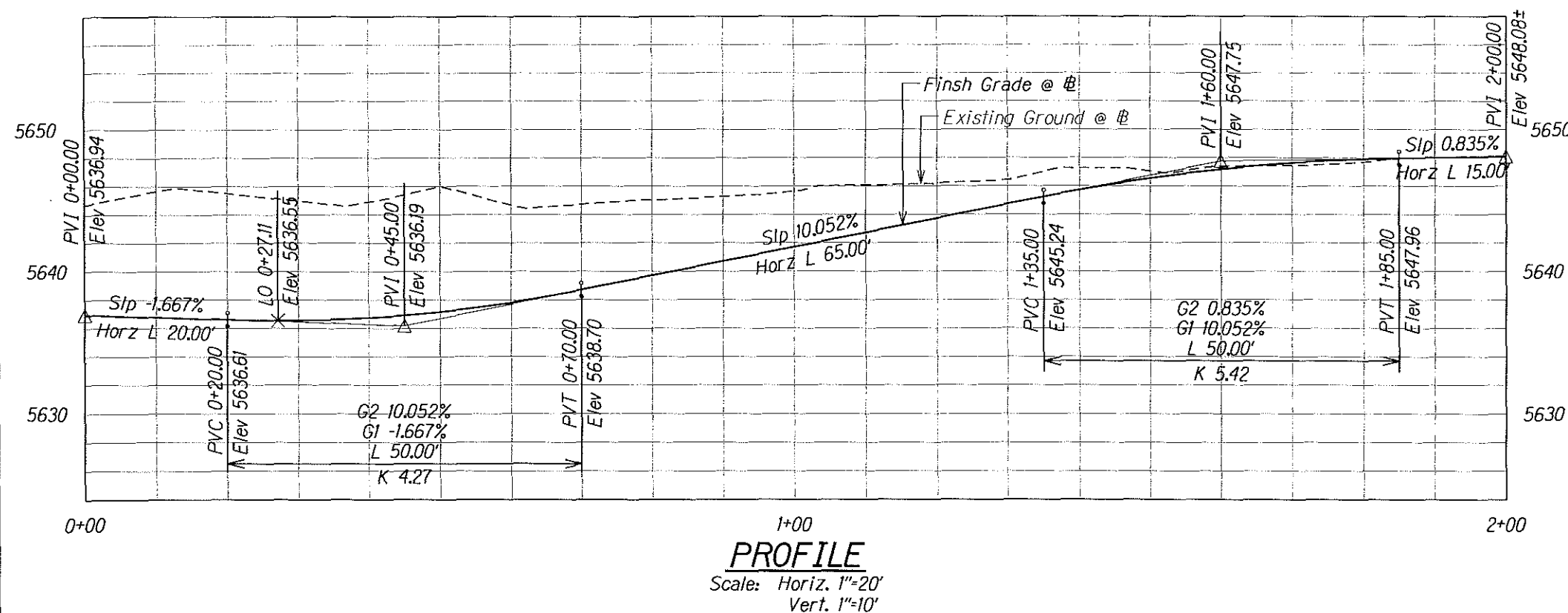
SHEET No. 1 OF 1

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E20       | E25          |



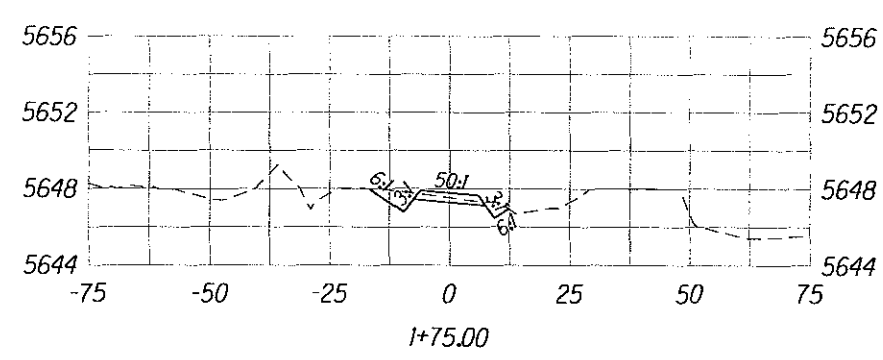
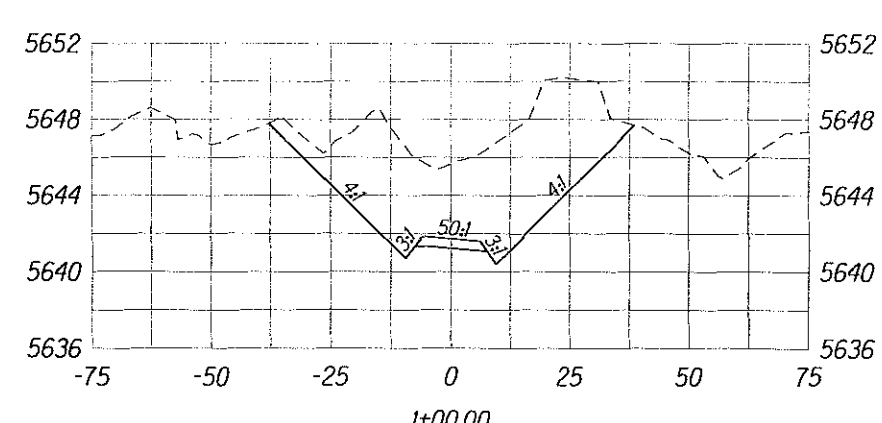
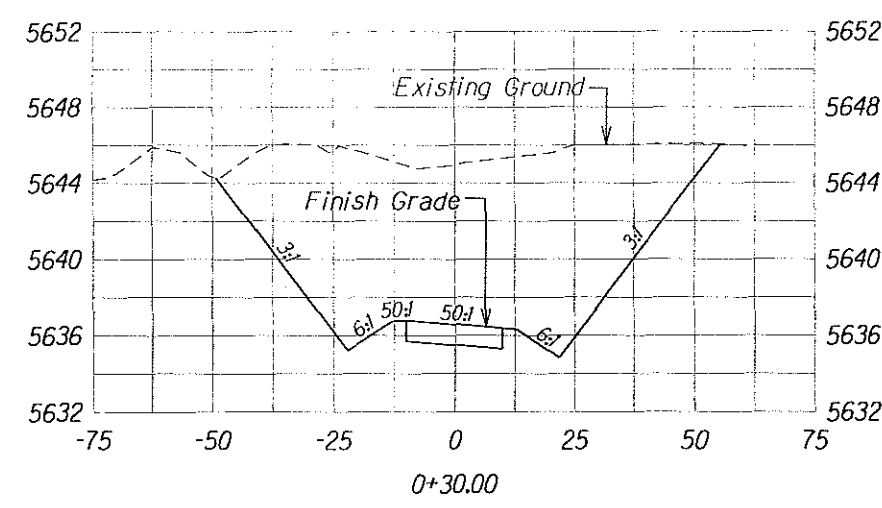
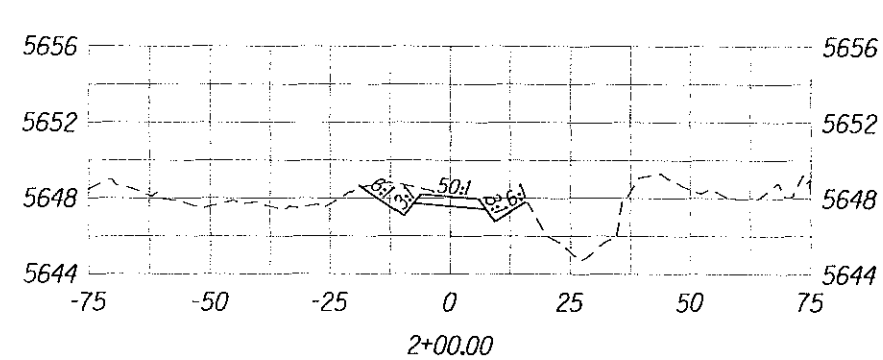
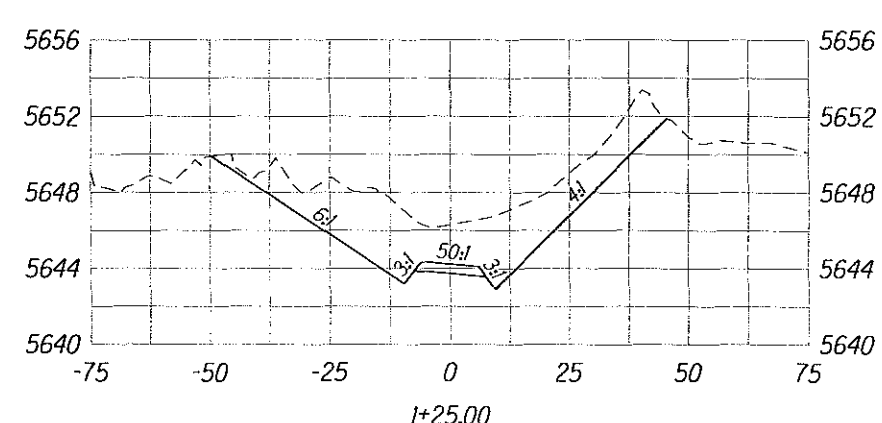
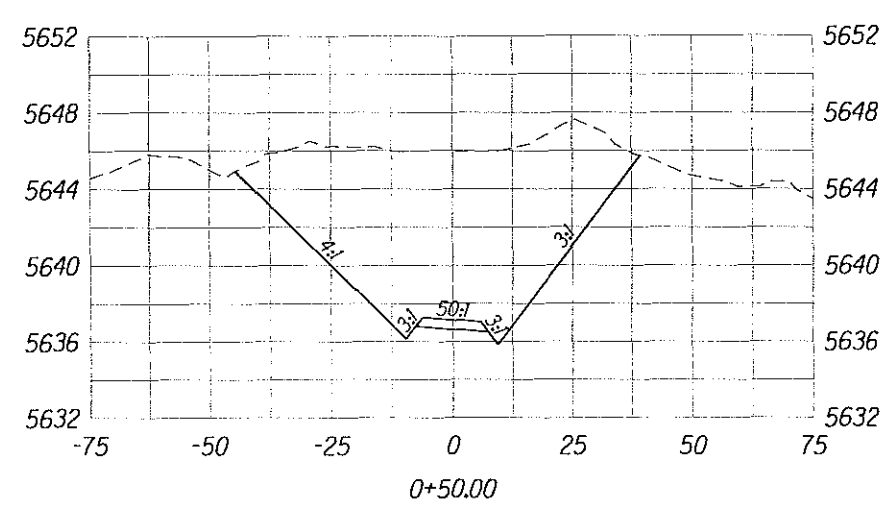
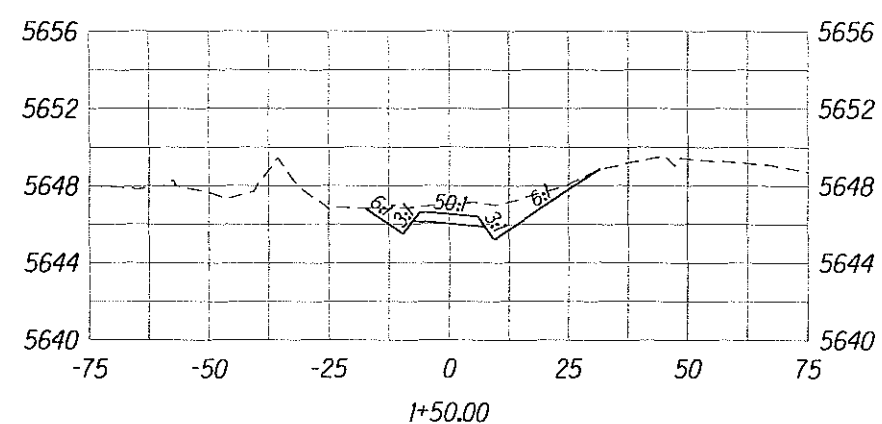
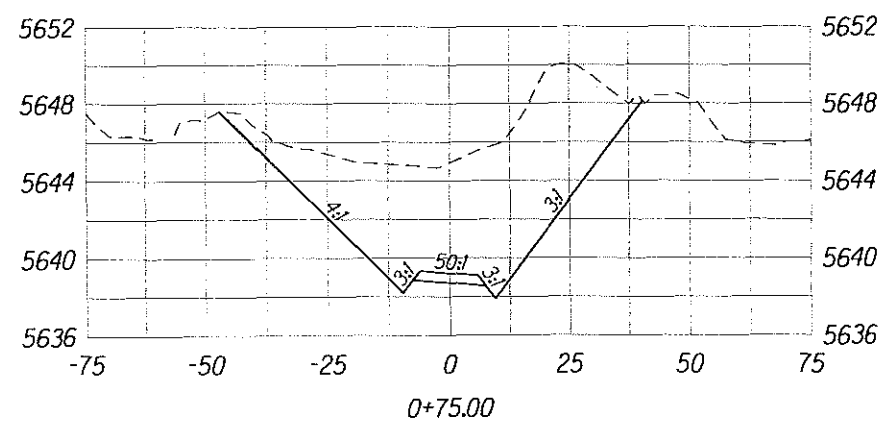
**CURVE DATA ①**  
 $\Delta = 16^{\circ}36'06''$   
 $R = 80.00'$   
 $T = 11.67'$   
 $C = 23.10'$   
 $Lc = 23.18'$

**CURVE DATA ②**  
 $\Delta = 64^{\circ}47'05''$   
 $R = 60.00'$   
 $T = 37.34'$   
 $C = 63.40'$   
 $Lc = 66.80'$



|                                                                                                               |                        |
|---------------------------------------------------------------------------------------------------------------|------------------------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>CENTRAL FEDERAL LANDS HIGHWAY DIVISION |                        |
| <b>KULANI POWERLINE ACCESS ROAD<br/>@ STA. 1020+40</b>                                                        |                        |
| Scale: As Noted                                                                                               | Date: December 5, 2005 |
| SHEET No. 1 OF 2                                                                                              |                        |

| STATE | SADDLE ROAD PROJECT          | SHEET NO. | TOTAL SHEETS |
|-------|------------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3)<br># 200(1) | E21       | E25          |



# **CROSS SECTIONS** Scale: Horiz. 1"=40' Vert. 1"=10'

Earthwork Quantities:  
Cut: 2407.31 CY  
Fill: 0.62 CY

BRUCE K. MEYERS  
Licensed Professional Engineer  
No. 8336-C  
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my observation.

*[Signature]*

Expiration Date of License 4/06.

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**KULANI POWERLINE ACCESS ROAD**  
**# STA. 1020+40**

Scale: As Noted      Date: December 5, 2005

SHEET No. 2 OF 2

M:\Mproj\Lenzie\205009\sheets\site021.dgn

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E22       | E25          |

- (A) N: -8581.76  
E: 11510.67  
R = 72'  
Δ = 69.23°
- (B) N: -8581.76  
E: 11510.67  
R = 72'  
Δ = 69.23°
- (C) N: -8581.76  
E: 11510.67  
R = 72'  
Δ = 69.23°
- (D) N: -8581.76  
E: 11510.67  
R = 72'  
Δ = 69.23°

\*Field Adjust Location as Necessary to Match Existing Pavement Grade and Roadway Configuration. Provide Smooth Riding Connection to Existing Pavement.

TRUE NORTH  
SCALE: 1" = 40'

Kipuka 21 Access Road  
Sta 0+56.44  
Grade Ditch Low to  
Saddle Road @ Sta 1051+50

Saddle Road @ Sta 1049+52.10  
Begin Shoulder Taper

Saddle Road @ Sta 1049+00-  
Kipuka 21 Access Road Sta 0+00  
Type 2, Class C  
Maximum Slope 7%±

Install 1-30" Pipe Gate  
Per Item No. 61902BQ  
See Shts. M4 & M5

CURVE DATA

Δ = 69°54'47"  
R = 87.50'  
T = 61.17'  
C = 100.27'  
Lc = 106.77'

Saddle Road @ Sta 1048+47.72  
Begin Shoulder Taper

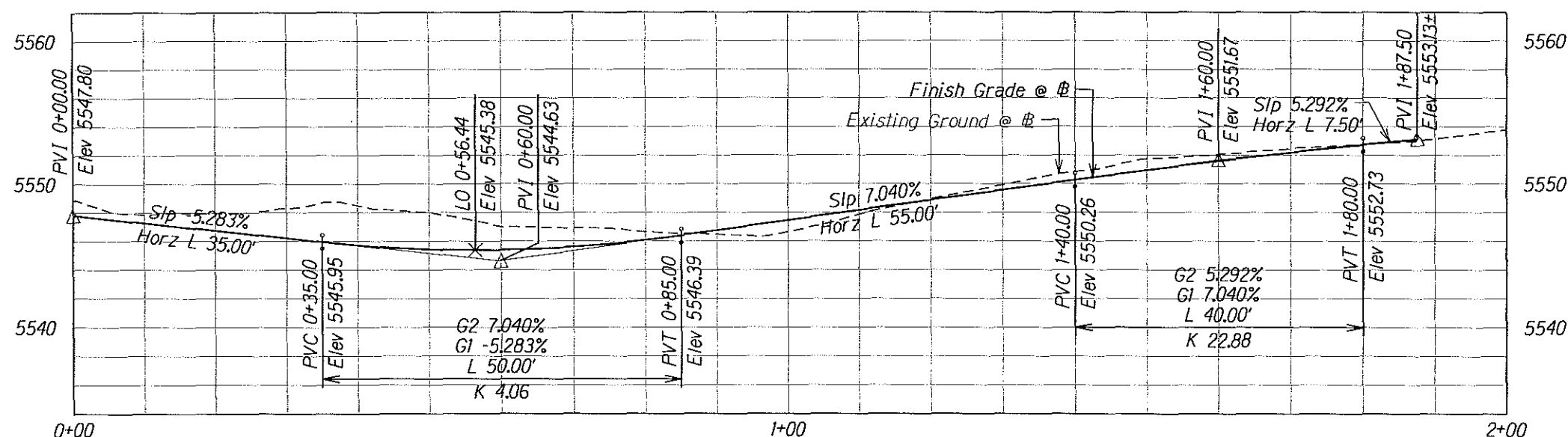
PC Sta 0+80.73  
Kipuka 21 Access Road  
@ Sta 0+68.48  
End Shoulder Tapers

TCE Offset 50' to 100'  
Sta 1048+00 to 1054+00

\*Tie Into Existing Pavement  
See Pavement Connection  
Detail Sht. J1

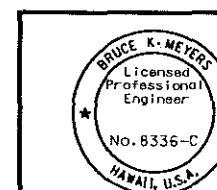
PLAN

Scale: 1" = 40'



PROFILE

Scale: Horiz. 1" = 20'  
Vert. 1" = 10'



The work was prepared by me  
or under my supervision and  
construction of this project will  
be under my observation.  
Expiration Date of License 1/06

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FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**KIPUKA 21 ACCESS ROAD**  
**@ STA. 1049+00**

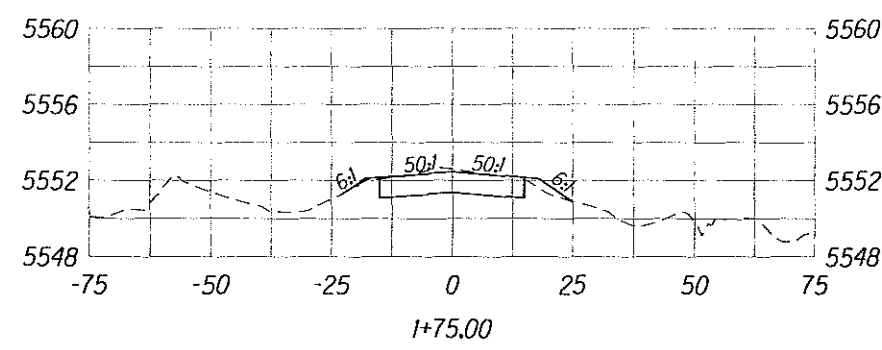
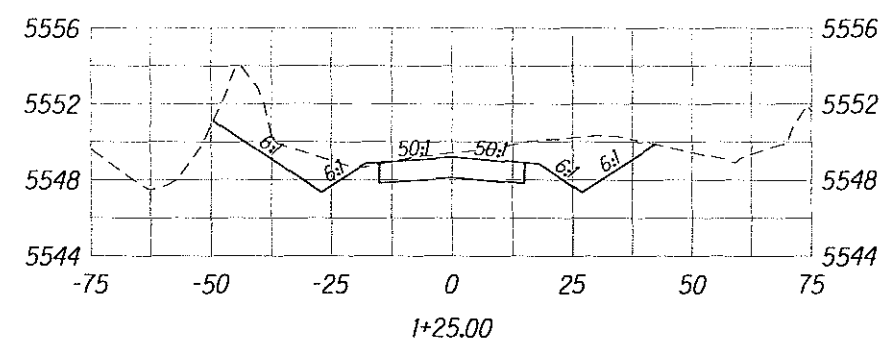
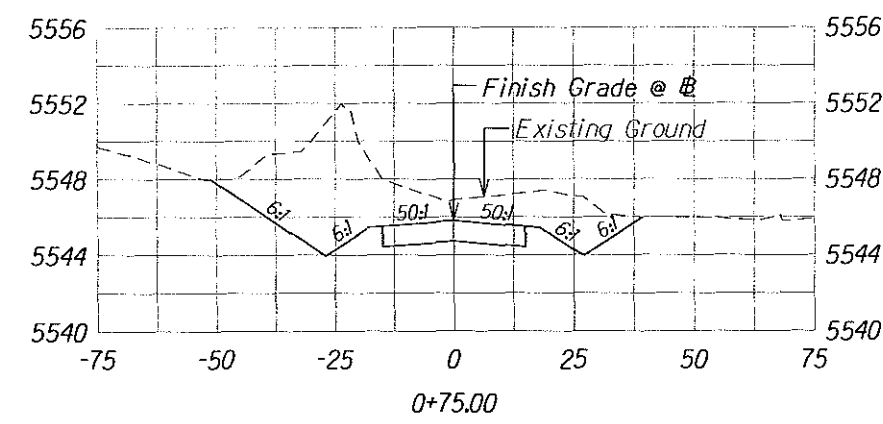
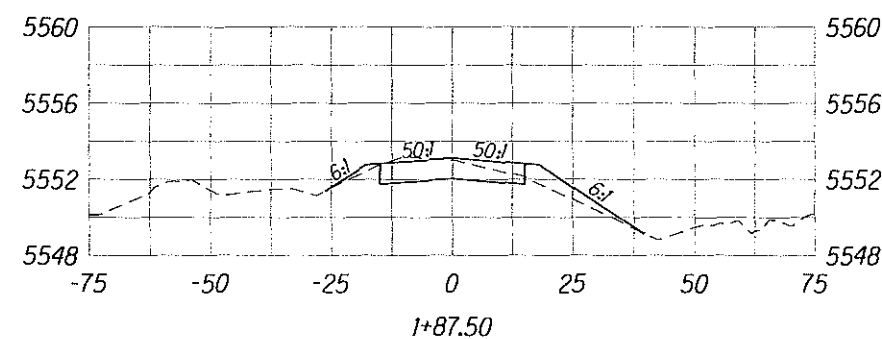
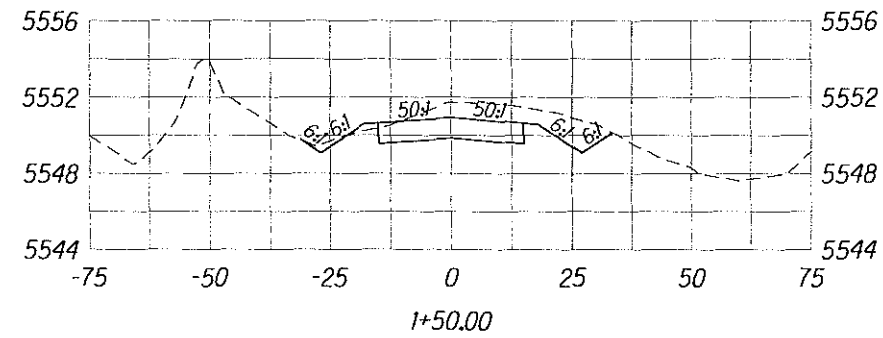
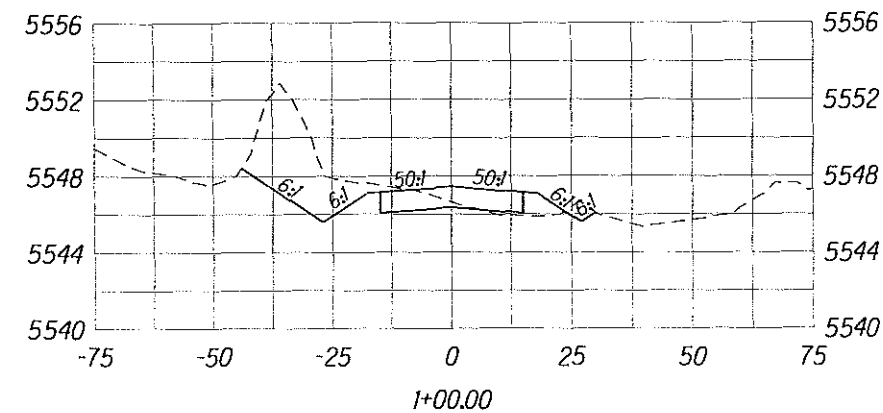
Scale: As Noted

Date: December 5, 2005

SHEET No. 1 OF 2

E22

| STATE | SADDLE ROAD PROJECT           | SHEET NO. | TOTAL SHEETS |
|-------|-------------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3)<br># 200X(1) | E23       | E25          |



# **CROSS SECTIONS** Scale: Horiz. 1"=40' Vert. 1"=10'

Earthwork Quantities:  
Cut: 859.09 CY  
Fill: 11.23 CY

BRUCE K. MYERS  
Licensed Professional Engineer  
No. 8336-C  
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my observation.  
Expiration Date of License: 1/06

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CENTRAL FEDERAL LANDS HIGHWAY DIVISION

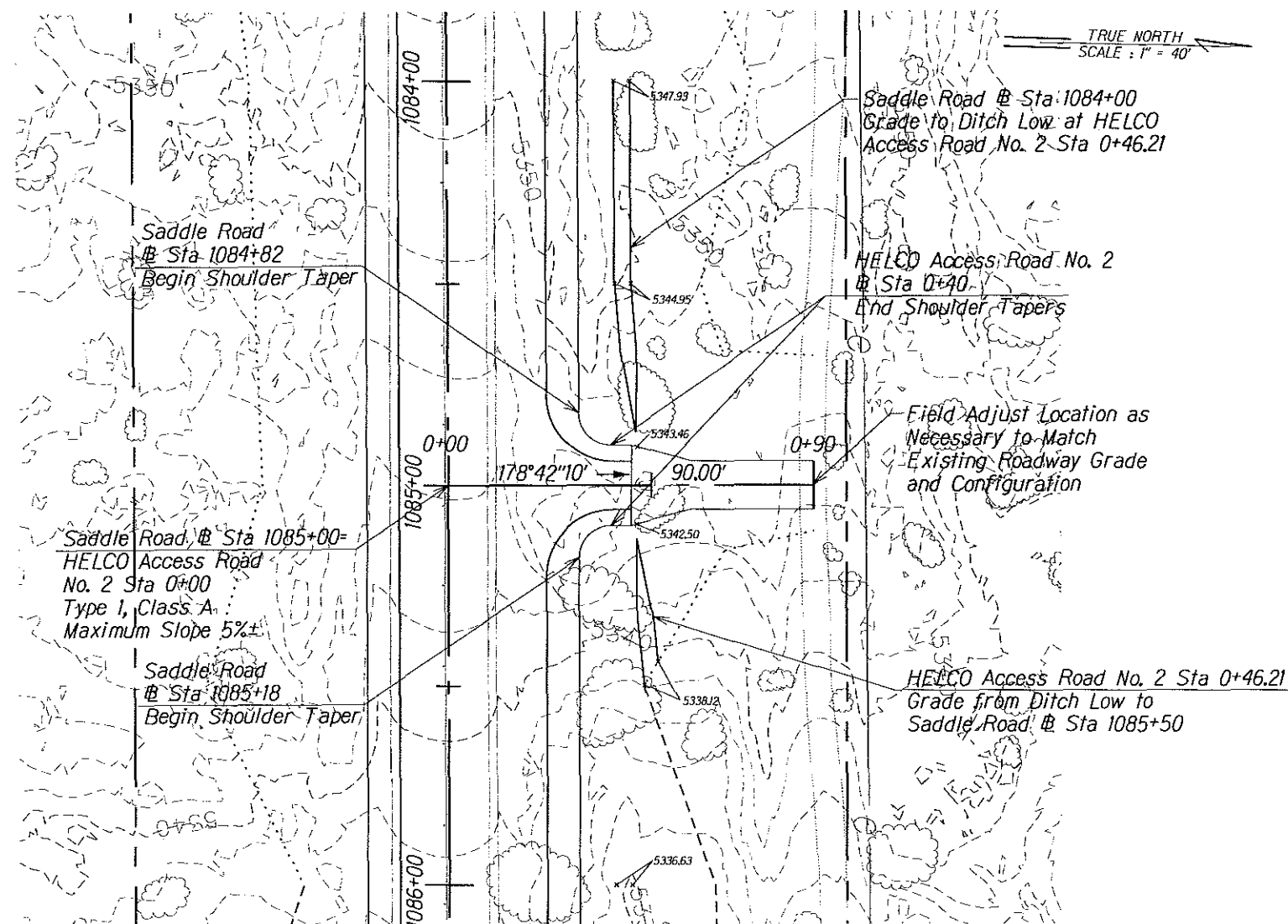
**KIPUKA 21 ACCESS ROAD**  
**# STA. 1049+00**

Scale: Hor: 1"=60'; Vert: 1"=12' Date: December 5, 2005

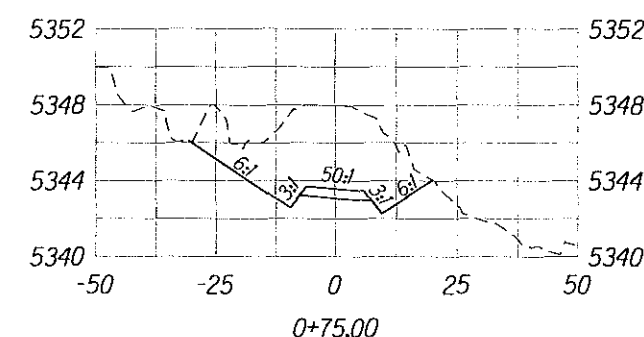
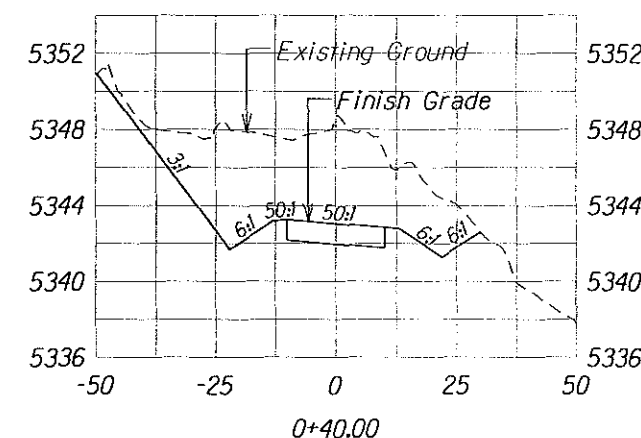
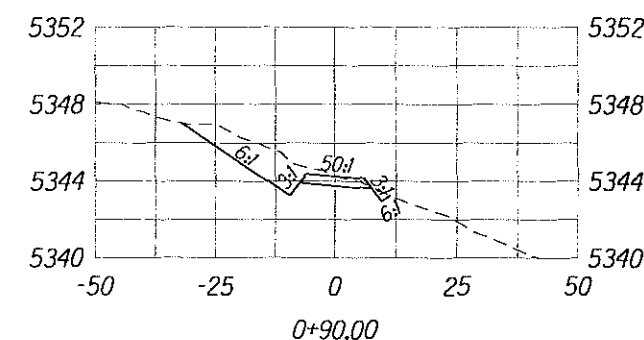
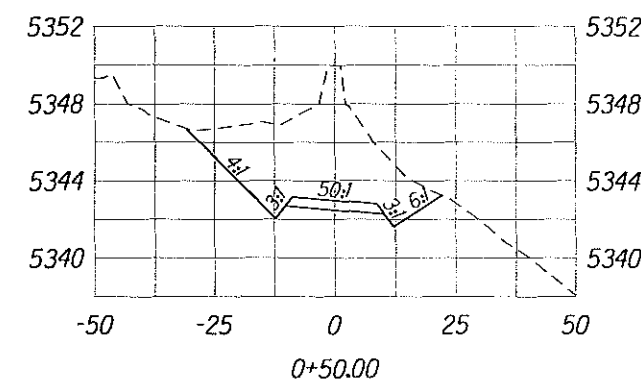
SHEET No. 2 OF 2

M:\Mproj\Lenzie\205009\Sheets\shite023.dgn

| STATE | SADDLE ROAD PROJECT          | SHEET NO. | TOTAL SHEETS |
|-------|------------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3)<br># 200(1) | E24       | E25          |



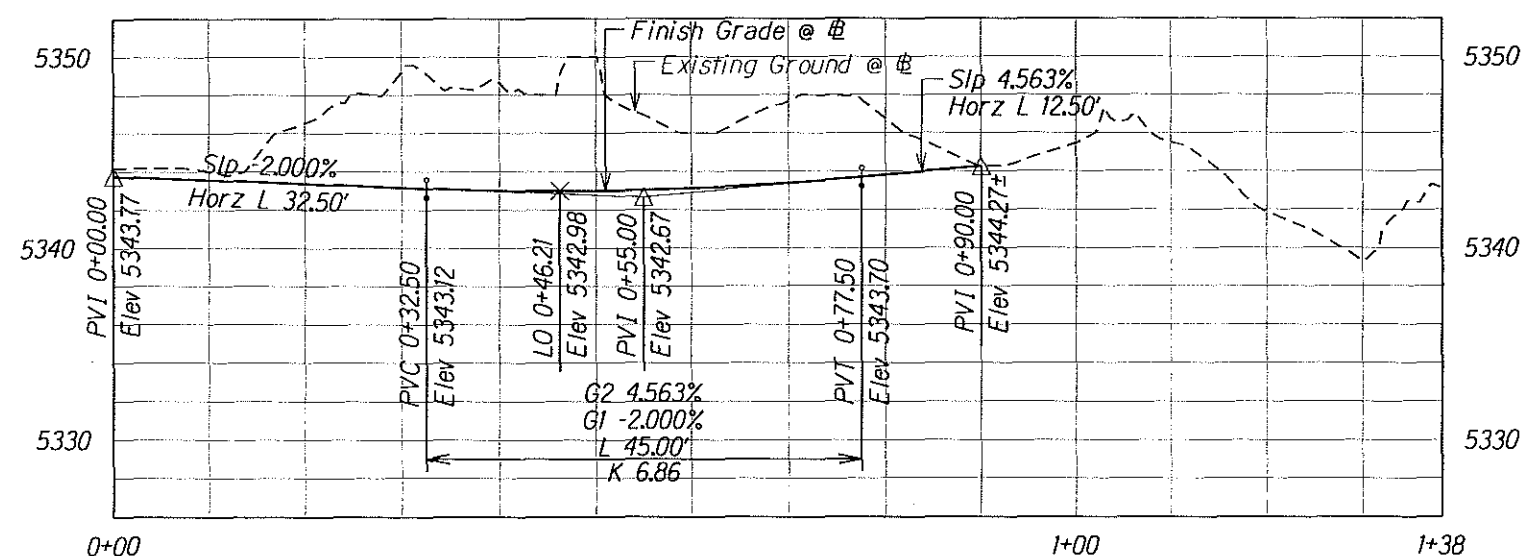
**PLAN**  
Scale: 1"=40'



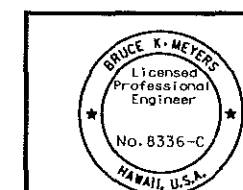
### CROSS SECTIONS

Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 609.89 CY  
Fill: 9.59 CY



**PROFILE**  
Scale: Horiz. 1"=20'  
Vert. 1"=10'



The work was prepared by me or under my supervision and construction of this project will be under my direction.  
Expiration Date of License 3/06.

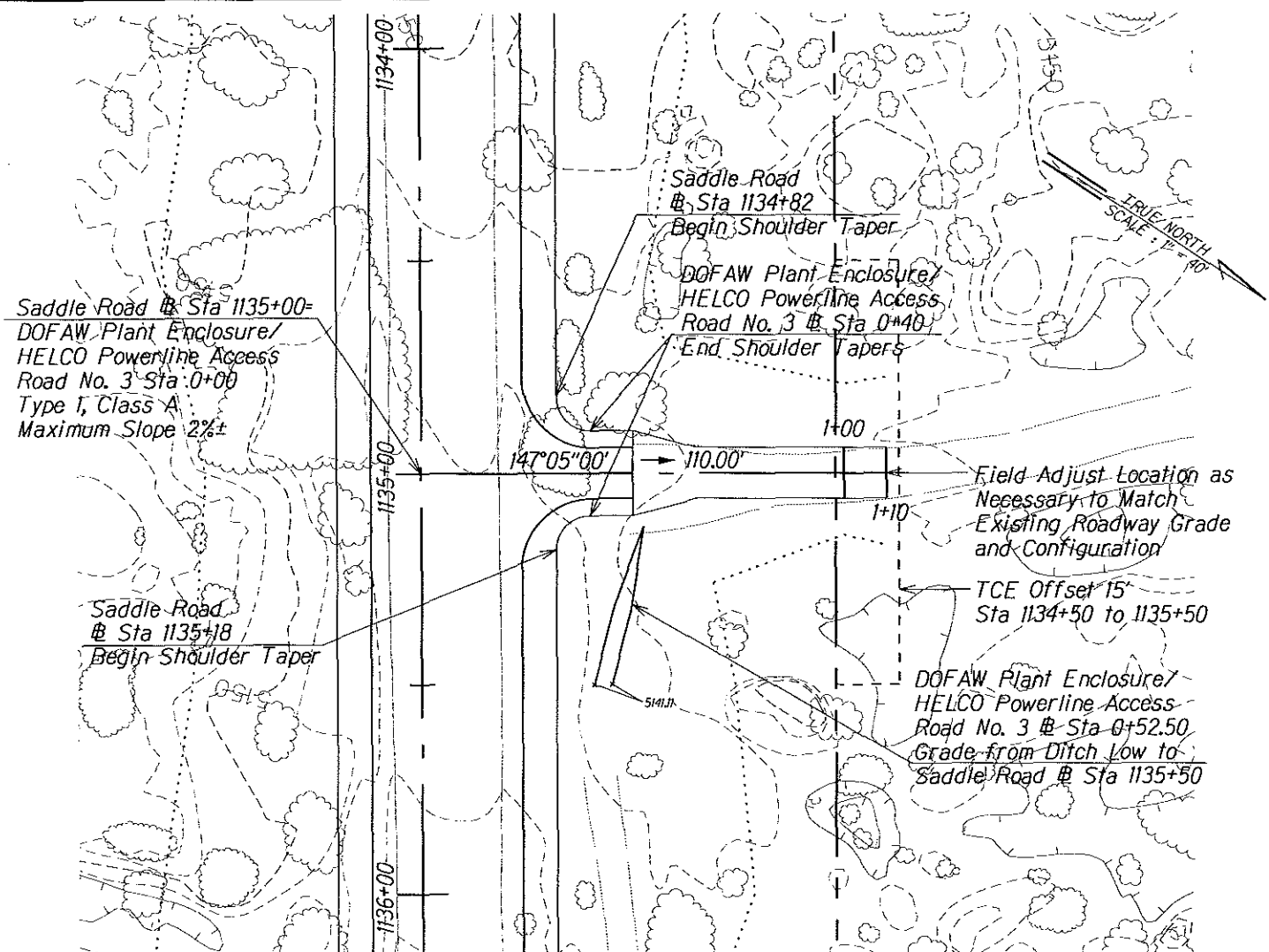
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CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**HELCO ACCESS ROAD NO. 2**  
**@ STA. 1085+00**

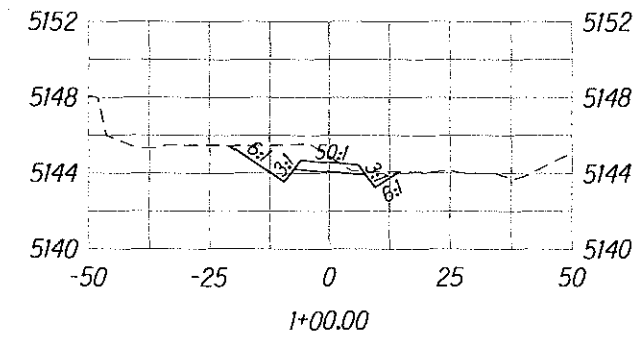
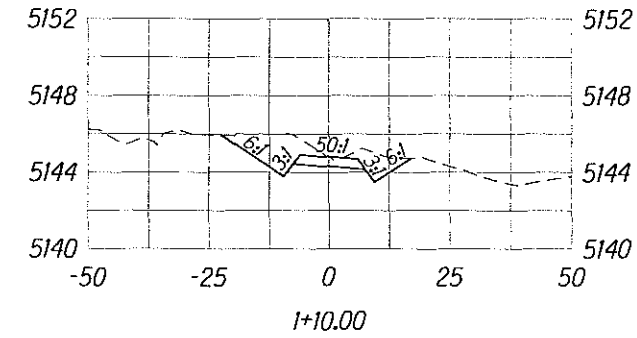
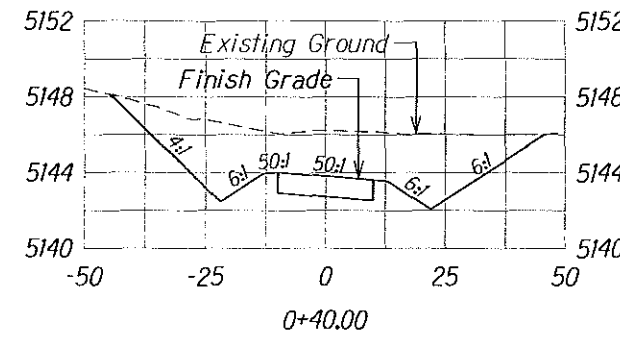
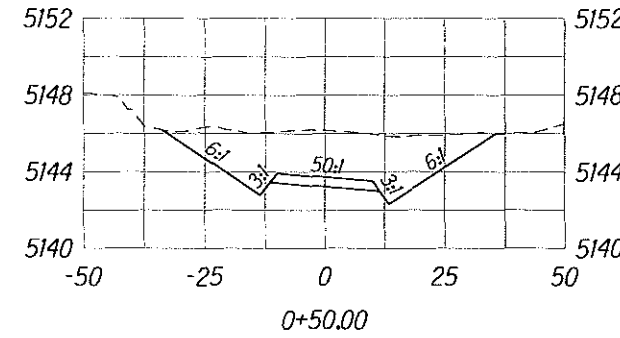
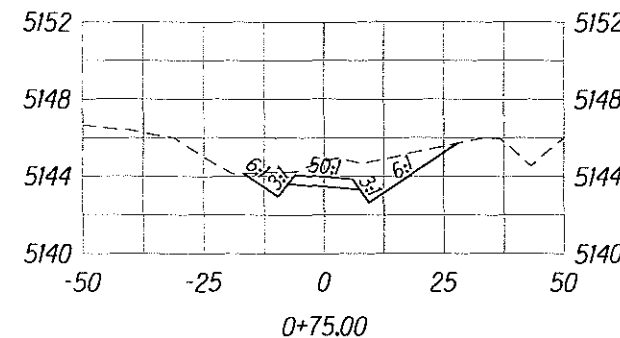
Scale: As Noted Date: December 5, 2005

SHEET No. 1 OF 1

| STATE | SADDLE ROAD PROJECT       | SHEET NO. | TOTAL SHEETS |
|-------|---------------------------|-----------|--------------|
| HI    | HI A-AD/STP 6(3) # 200(1) | E25       | E25          |

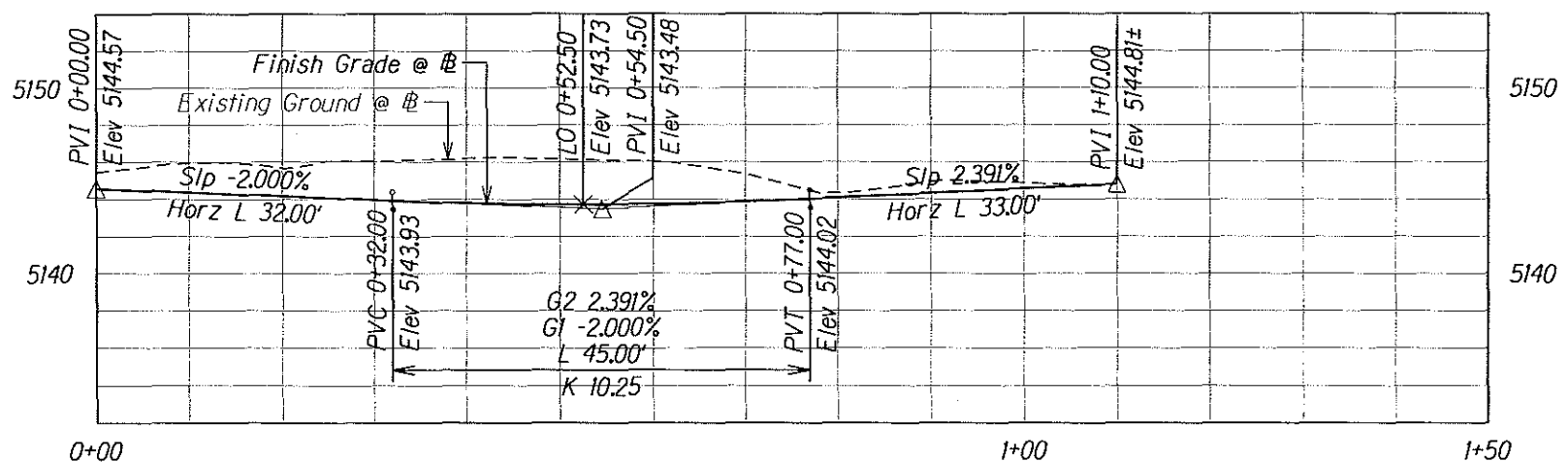


PLAN  
Scale: 1"=40'



CROSS SECTIONS  
Scale: Horiz. 1"=40'  
Vert. 1"=10'

Earthwork Quantities:  
Cut: 487.14 CY  
Fill: 4.99 CY



PROFILE  
Scale: Horiz. 1"=20'  
Vert. 1"=10'

The work was prepared by me or under my supervision and construction of this project will be under my supervision.

*Bruce K. Meyers*  
Expiration Date of License 4/06

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**DOFAW PLANT ENCLOSURE/  
HELCO ACCESS ROAD NO. 3  
@ STA. 1135+00**

Scale: As Noted      Date: December 5, 2005

SHEET No. 1 OF 1