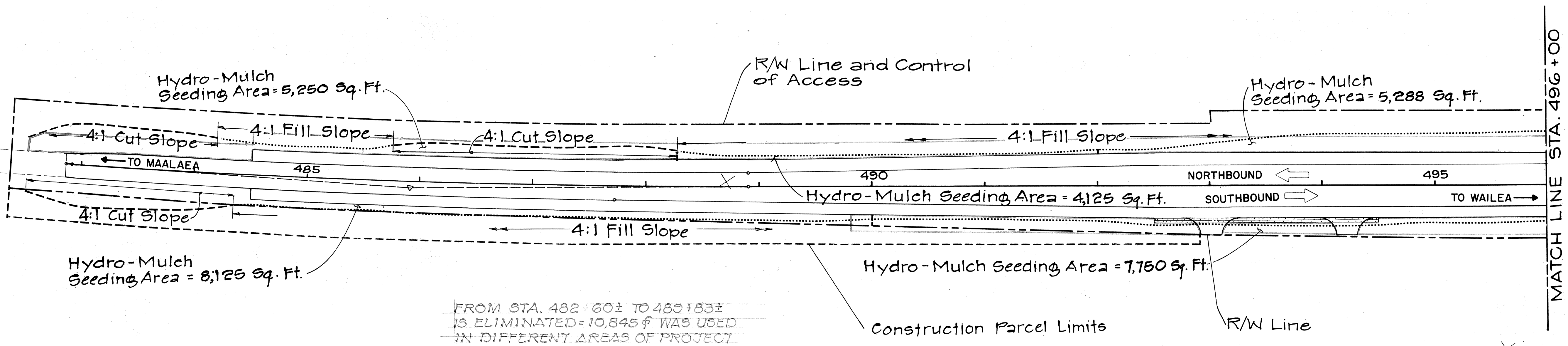


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	205	262

TRUE NORTH
SCALE 1" = 50'

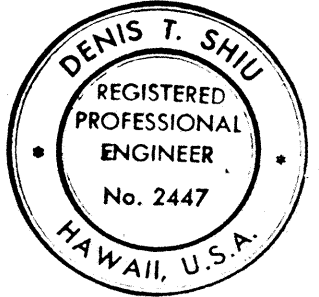


GENERAL NOTES

- ALL FILL AND CUT SLOPES SHALL BE HYDRO-MULCHED (WITH BERMUDA SEED) EXCEPT WHERE CONDITION DOES NOT PERMIT HYDRO-MULCHING SUCH AS ON ROCK SLOPES. THE ROCK LIMITS (HATCHED AREAS) AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE ENGINEER SHALL DETERMINE WHERE HYDRO-MULCHING IS NOT REQUIRED.
- ALL ERODED SLOPES SHALL BE FILLED AND DRESSED BEFORE HYDRO-MULCHING.
- FOR ADDITIONAL REQUIREMENTS, SEE SECTION 641-HYDRO-MULCH SEEDING OF THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1976.
- THE ROCK FILL AREAS SHOWN ON THESE PLANS SHALL BE CONSIDERED AS SUGGESTED LOCATIONS ONLY. THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER MAY USE ROCK FILL AT OTHER AREAS TO THE EXTENT OF USING EXCAVATED MATERIALS FROM THIS JOB.

LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



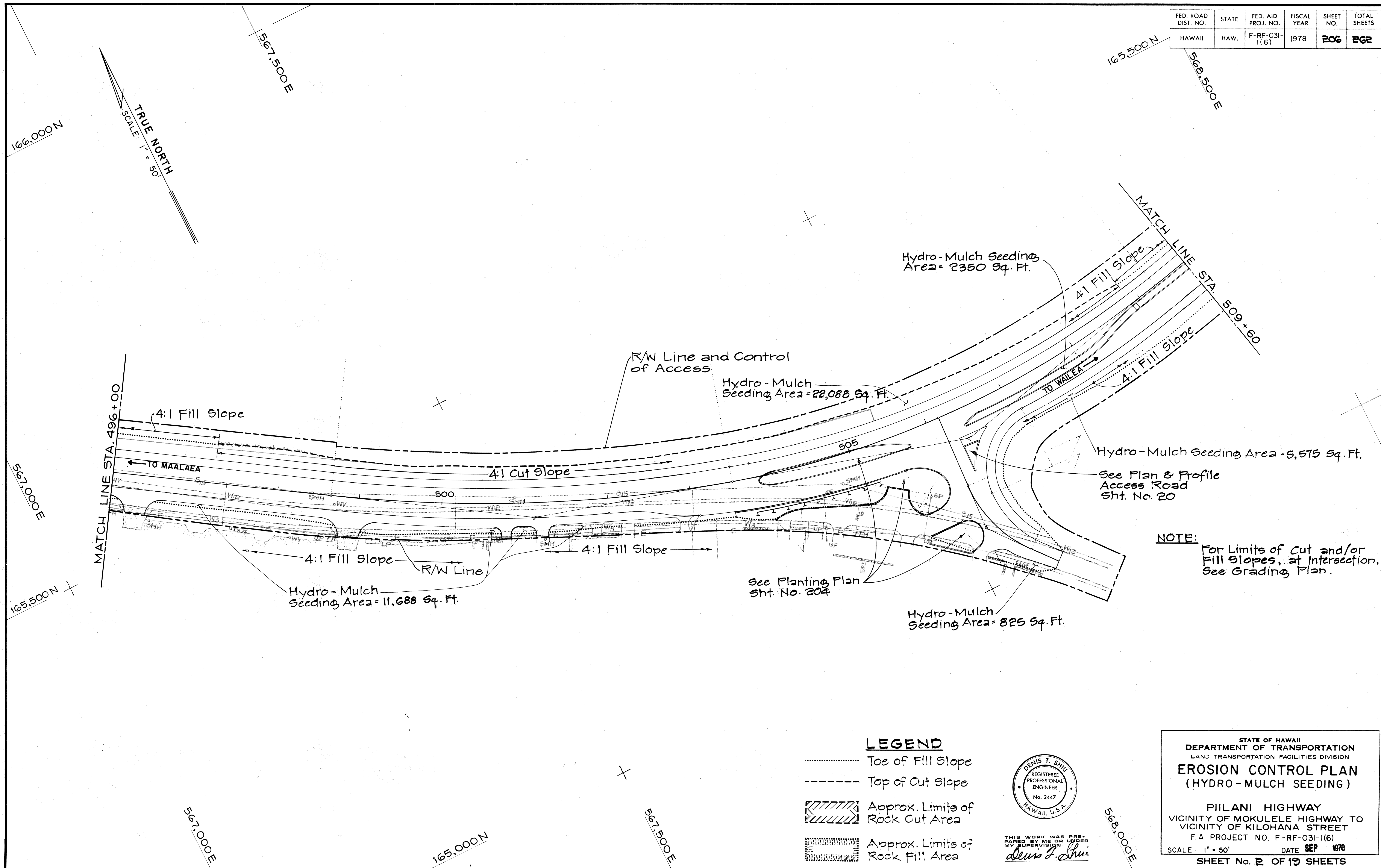
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Denis T. Shiu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

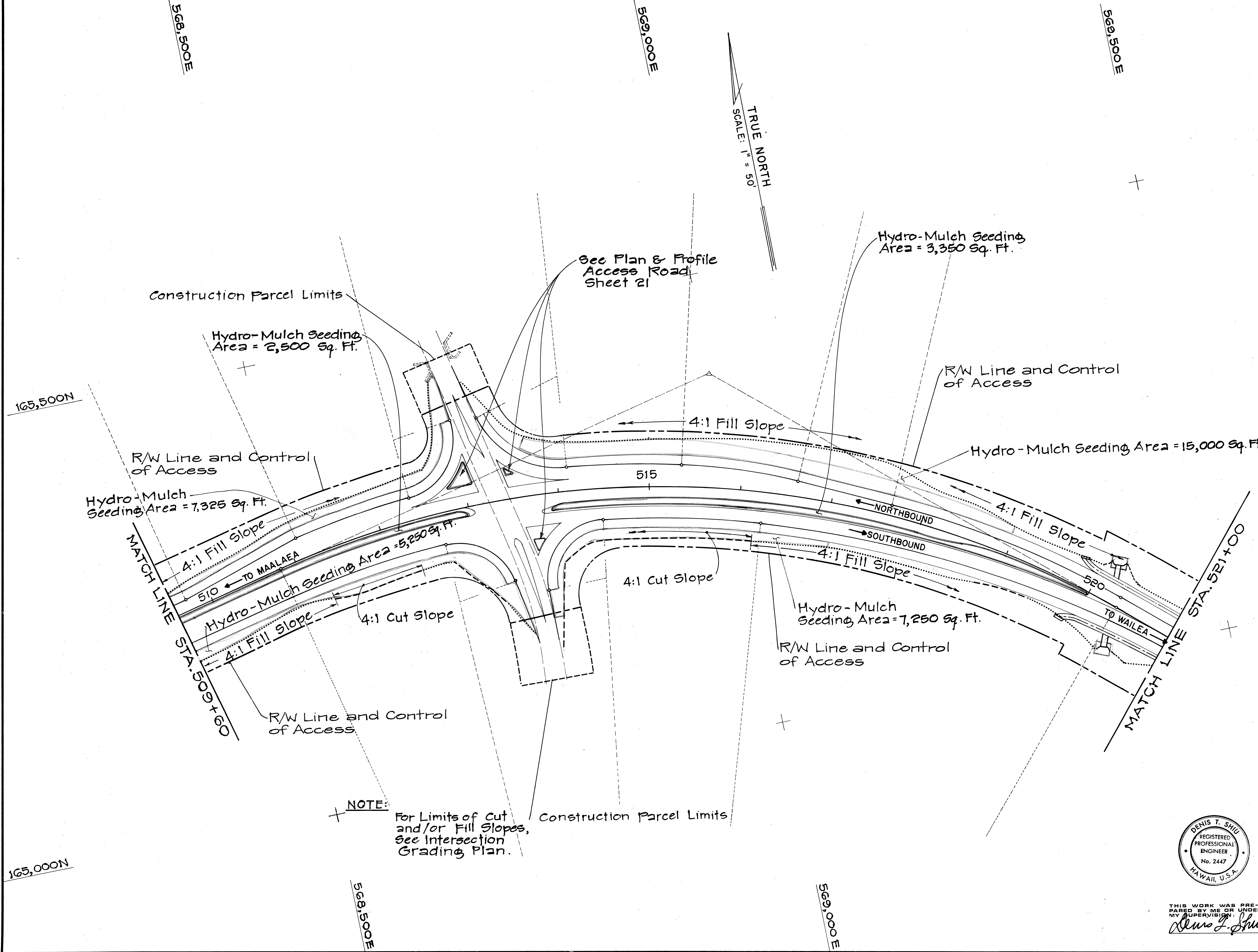
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 1 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	206	262



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

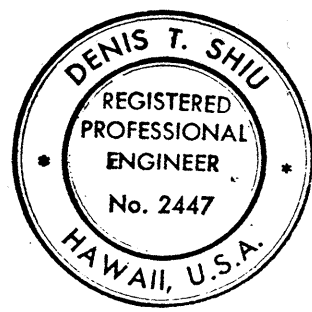
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	207	262



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

NOTE: For Limits of Cut and/or Fill Slopes, See Intersection Grading Plan.

- LEGEND**
- Toe of Fill Slope
 - Top of Cut Slope
 - [Hatched Box] Approx. Limits of Rock Cut Area
 - [Dotted Box] Approx. Limits of Rock Fill Area



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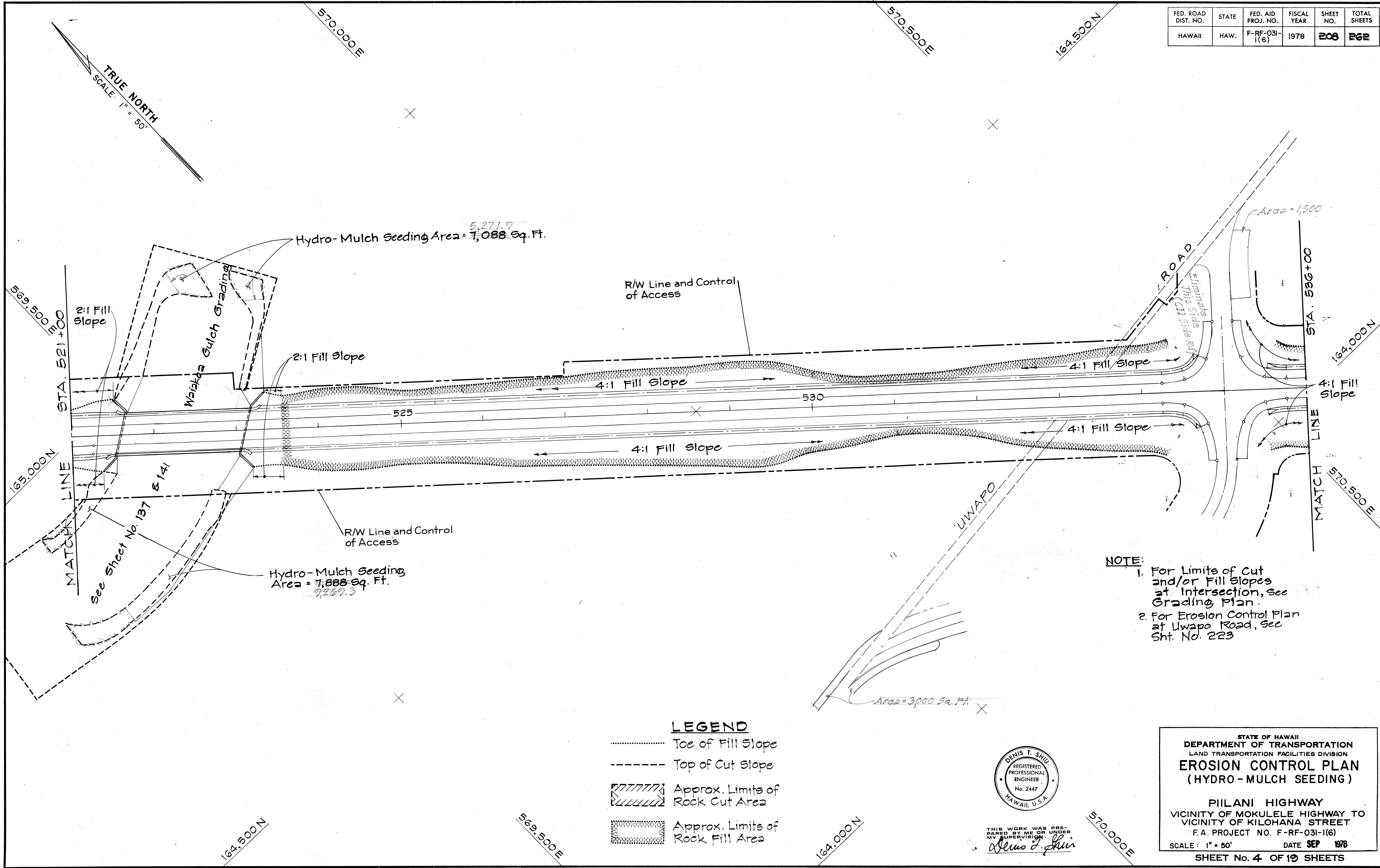
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 3 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	208	262

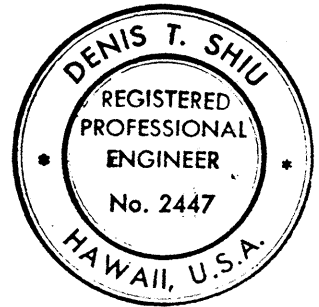
TRUE NORTH
SCALE 1" = 50'

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	



LEGEND

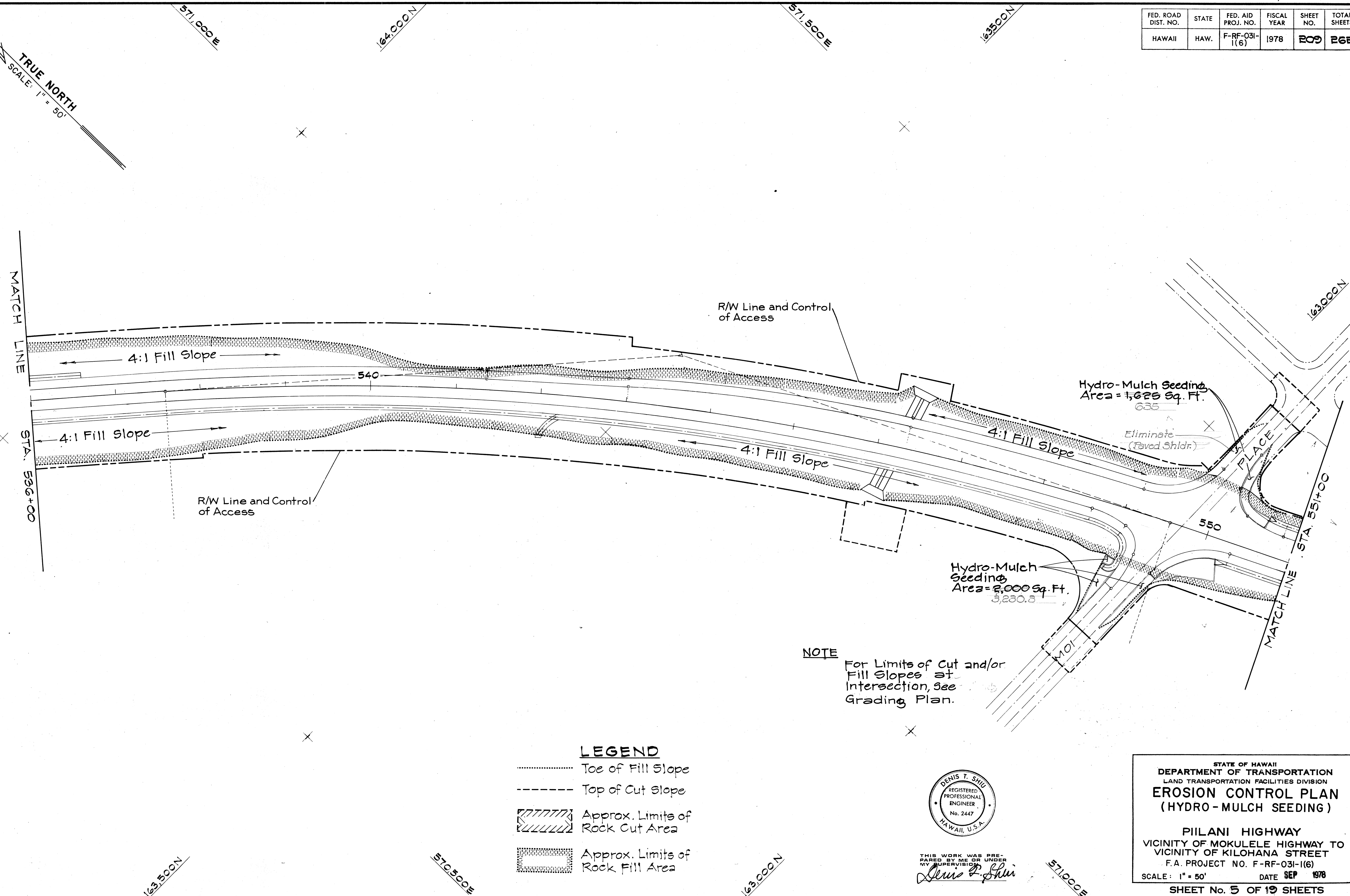
- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
 (HYDRO-MULCH SEEDING)
 PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978
 SHEET No. 4 OF 10 SHEETS

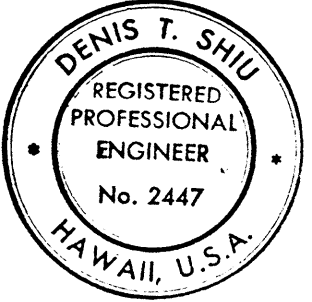
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	209	262



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

- LEGEND**
- Toe of Fill Slope
 - Top of Cut Slope
 - ////// Approx. Limits of Rock Cut Area
 - ||||| Approx. Limits of Rock Fill Area

NOTE
For Limits of Cut and/or Fill Slopes at Intersection, See Grading Plan.

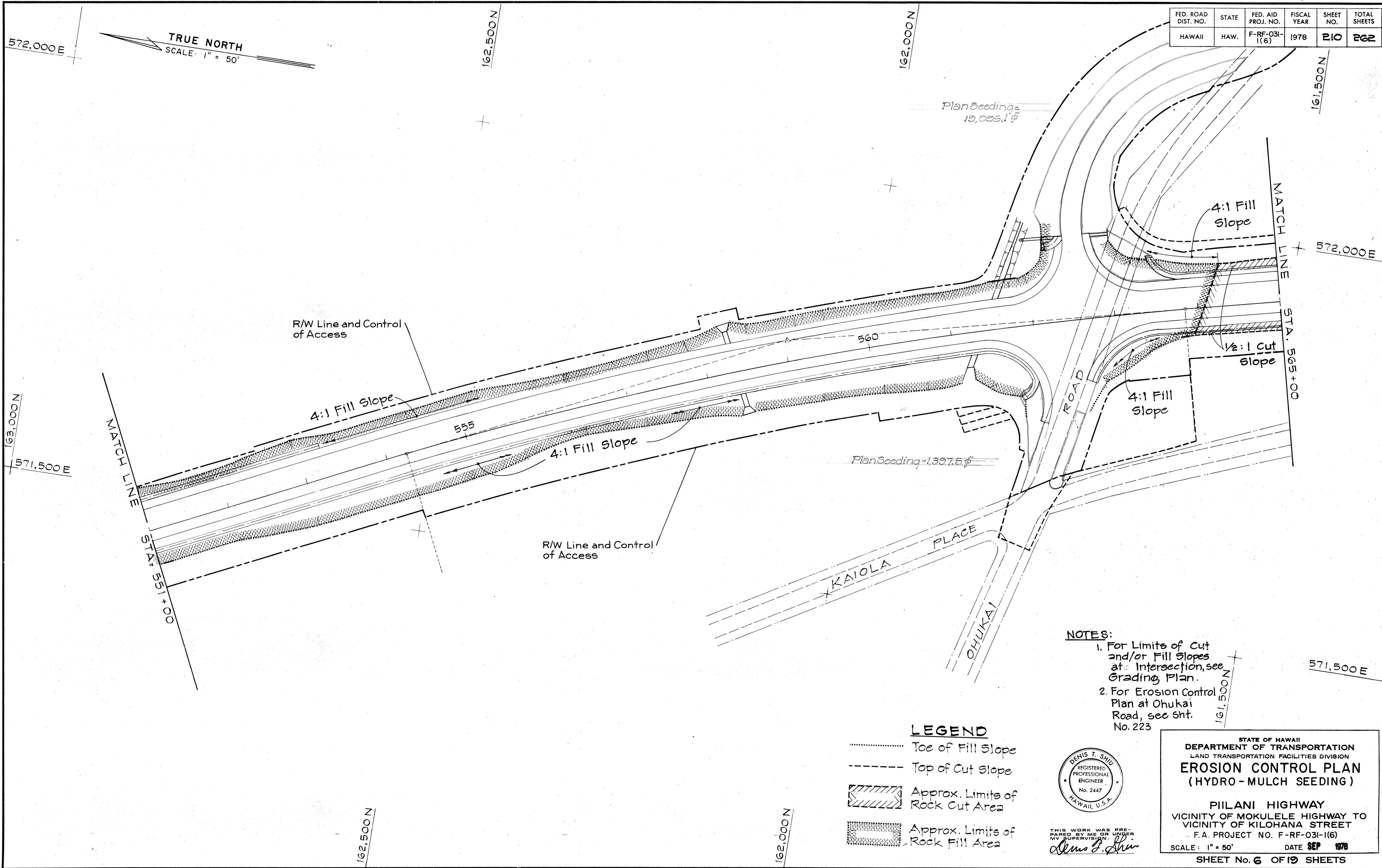


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 5 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	210	262

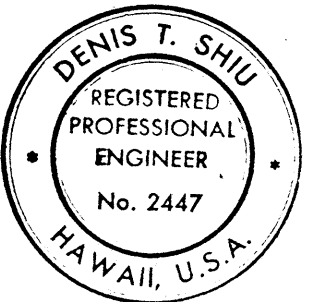


SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	No.

- NOTES:**
1. For Limits of Cut and/or Fill Slopes at Intersection, see Grading Plan.
 2. For Erosion Control Plan at Ohukai Road, see Sht. No. 223

LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



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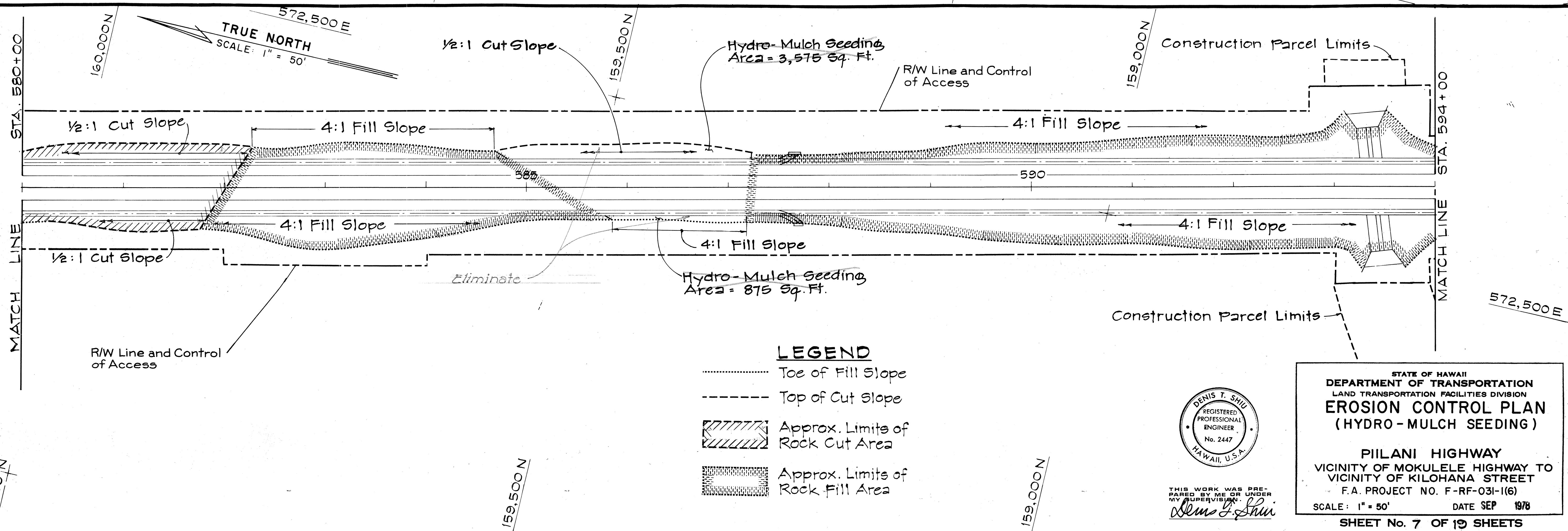
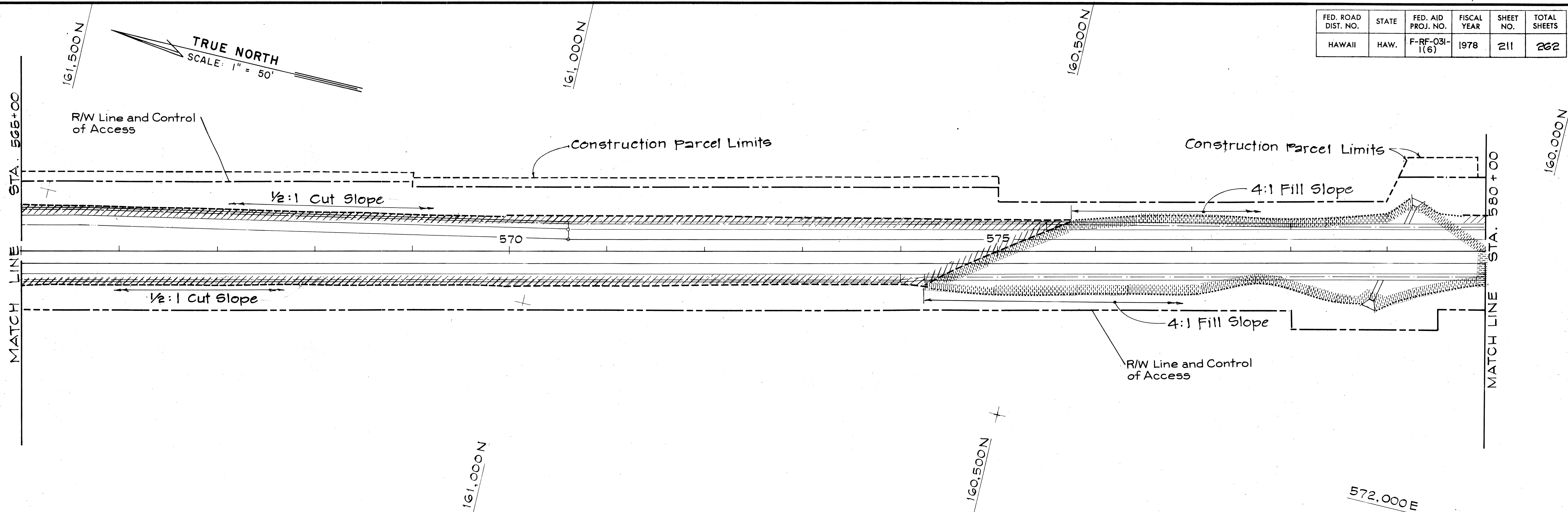
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
 (HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE SEP 1978

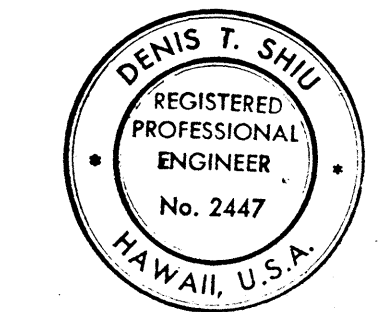
SHEET No. 6 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	211	262



LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



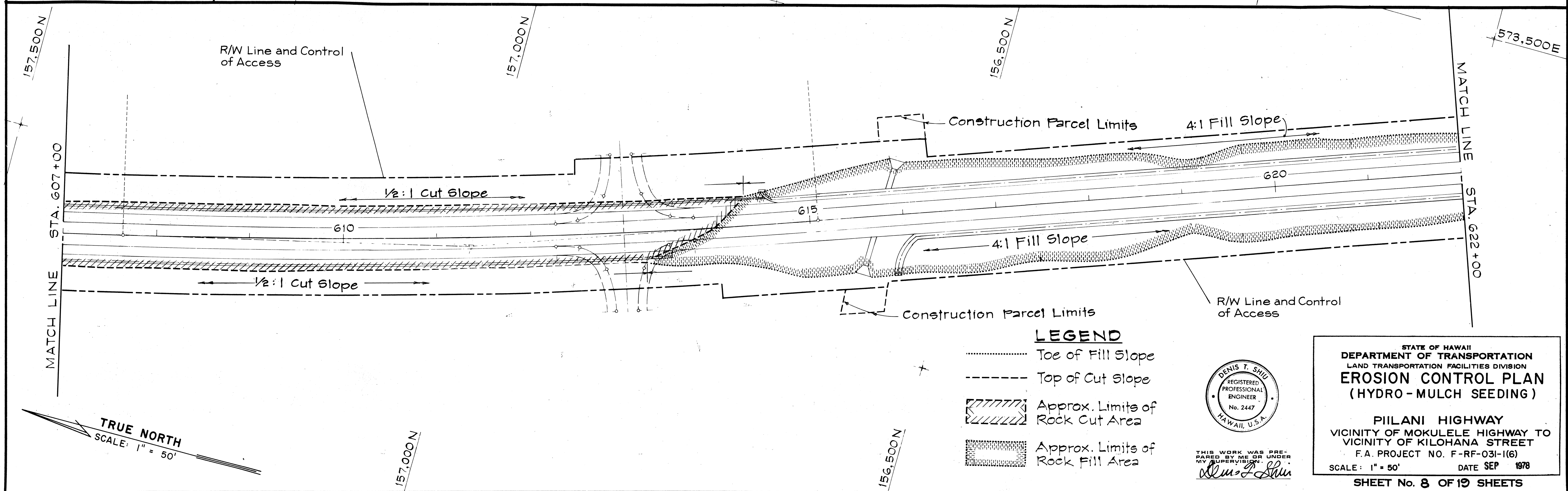
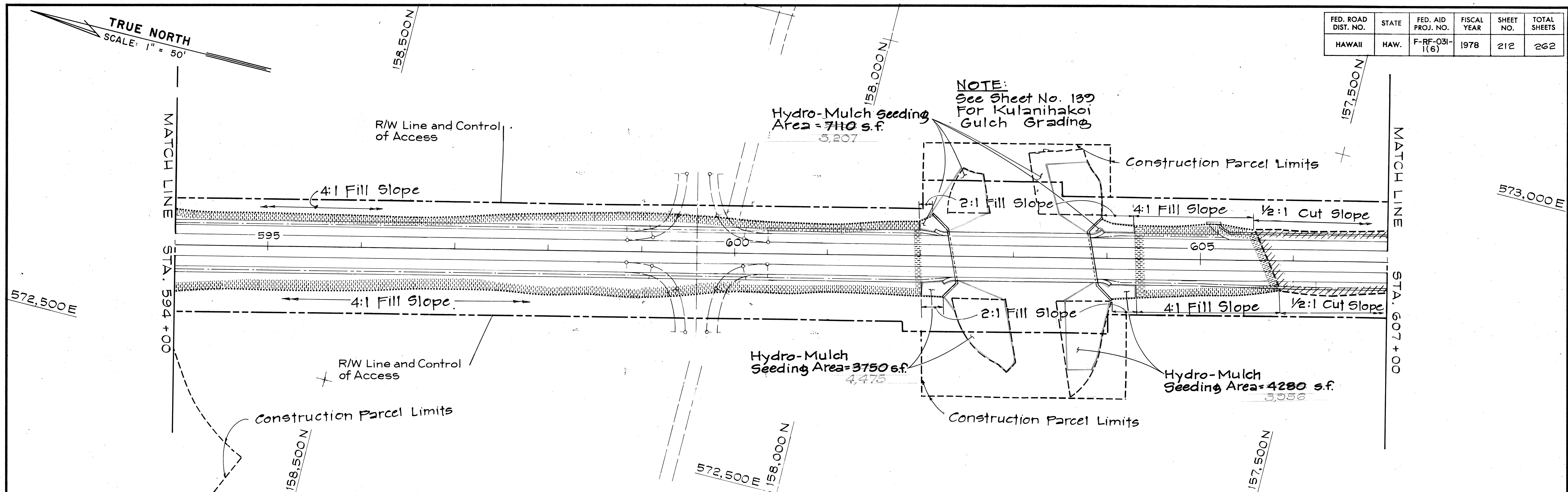
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
 (HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978
 SHEET No. 7 OF 10 SHEETS

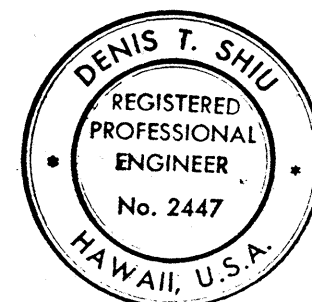
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	212	262



LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area

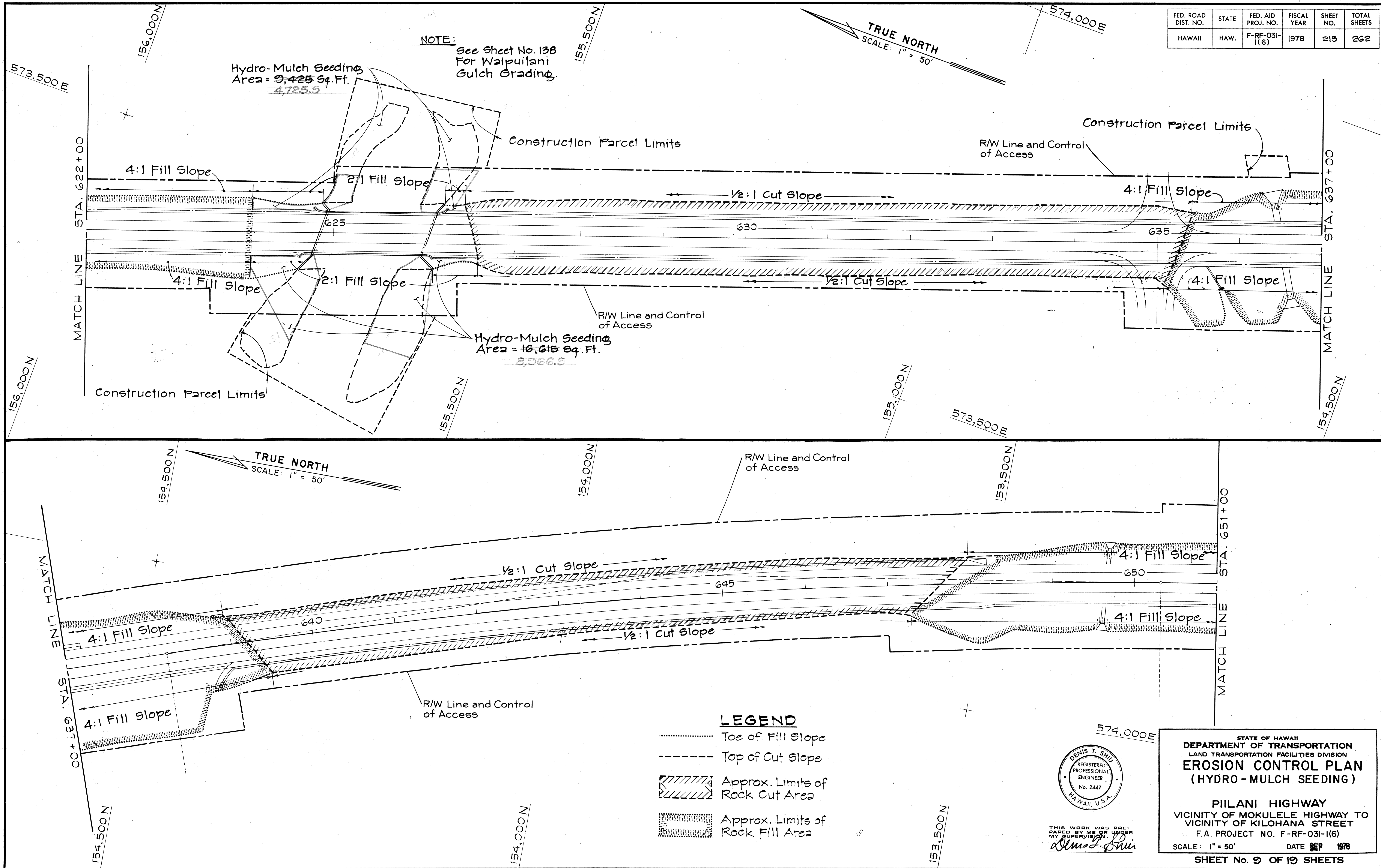


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

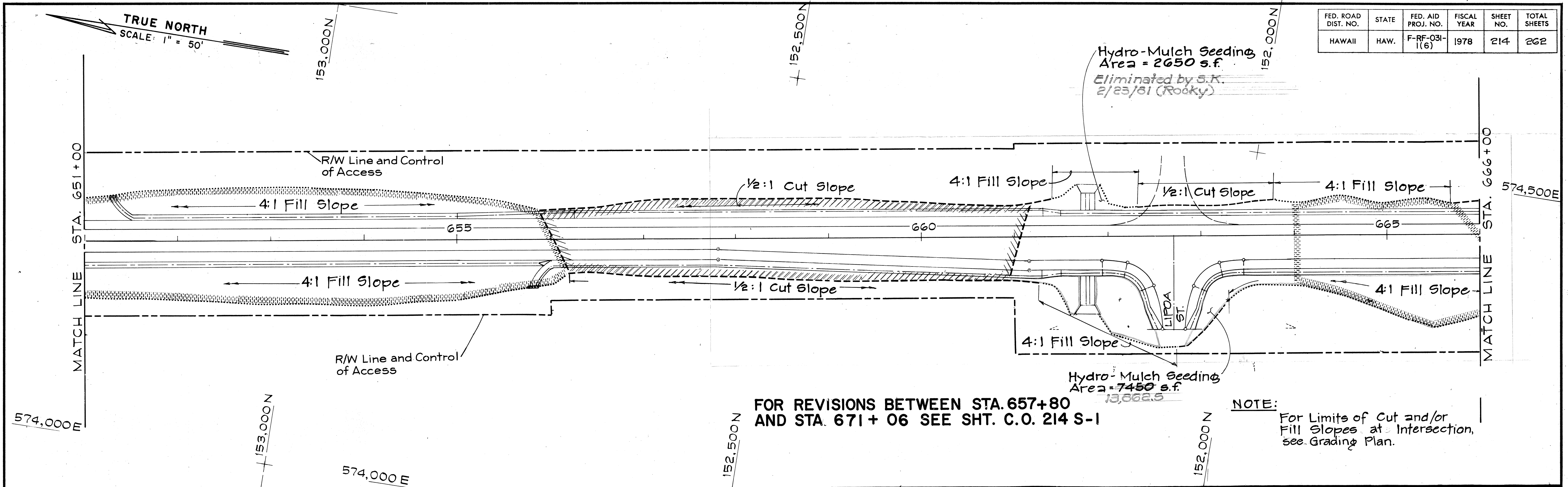
PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 8 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	213	262



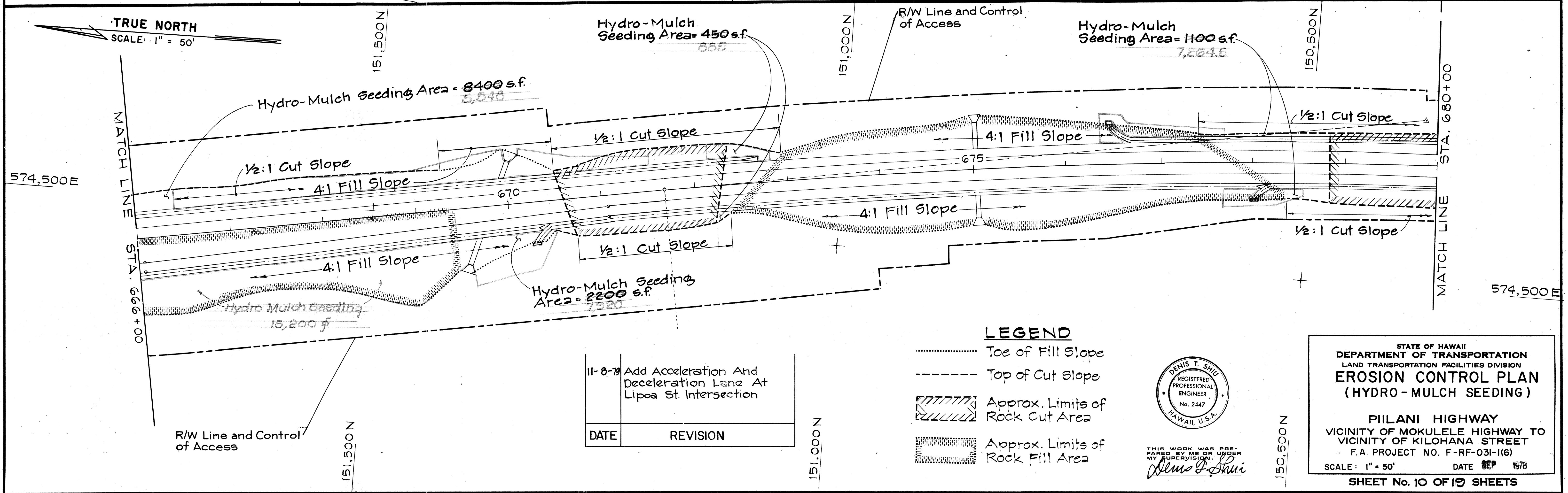
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	214	262



FOR REVISIONS BETWEEN STA. 657+80
AND STA. 671+06 SEE SHT. C.O. 214 S-1

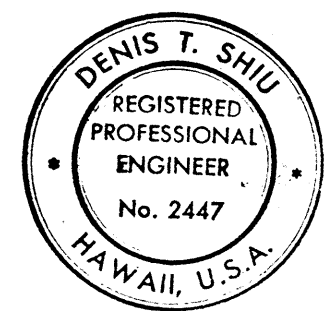
NOTE:
For Limits of Cut and/or
Fill Slopes at Intersection,
see Grading Plan.



11-8-79	Add Acceleration And Deceleration Lane At Lipoa St. Intersection
DATE	REVISION

LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of
Rock Cut Area
- Approx. Limits of
Rock Fill Area

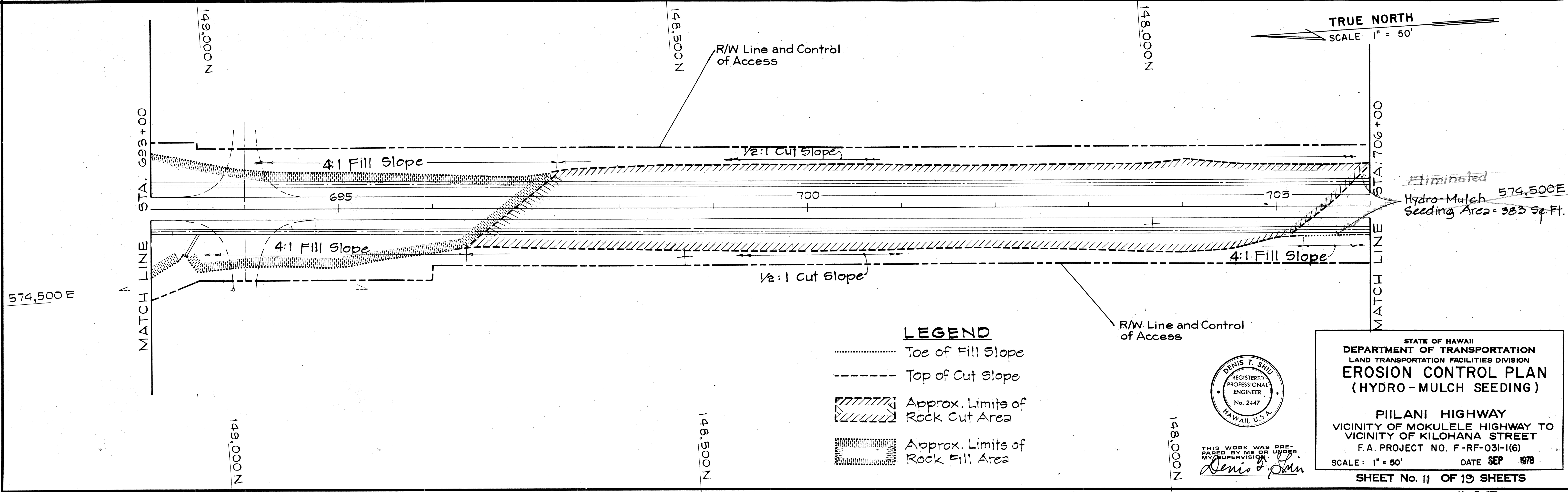
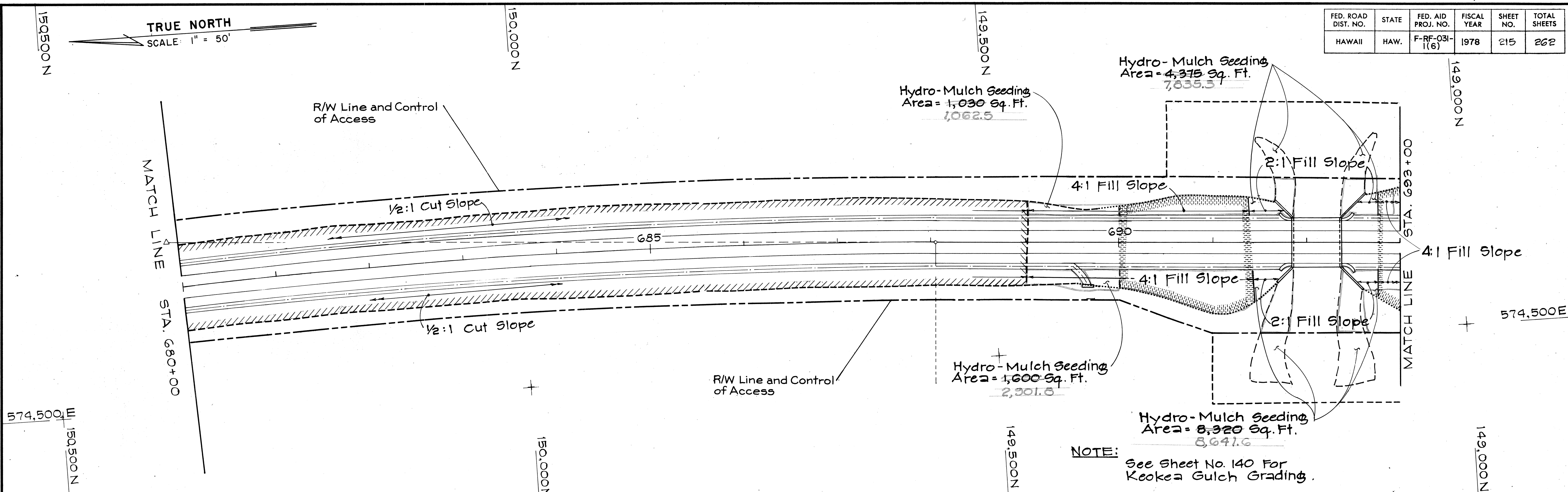


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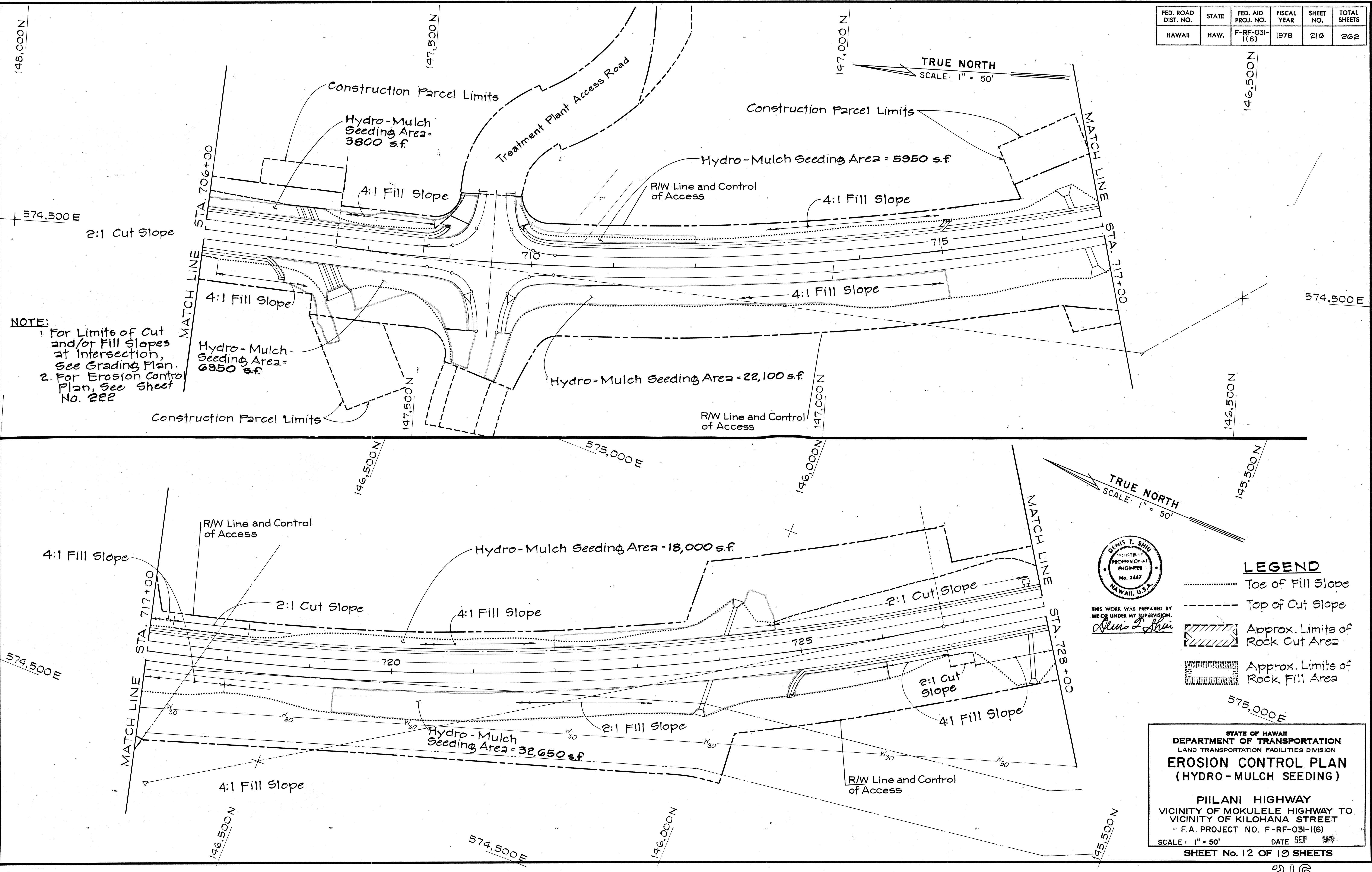
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 10 OF 19 SHEETS

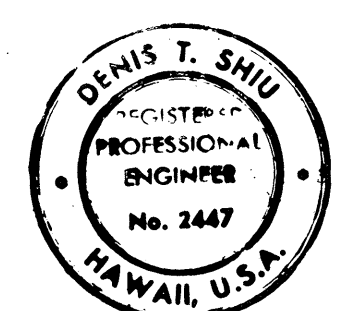
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	215	262



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	210	202



NOTE:
 1. For Limits of Cut and/or Fill Slopes at Intersection, See Grading Plan.
 2. For Erosion Control Plan, See Sheet No. 222



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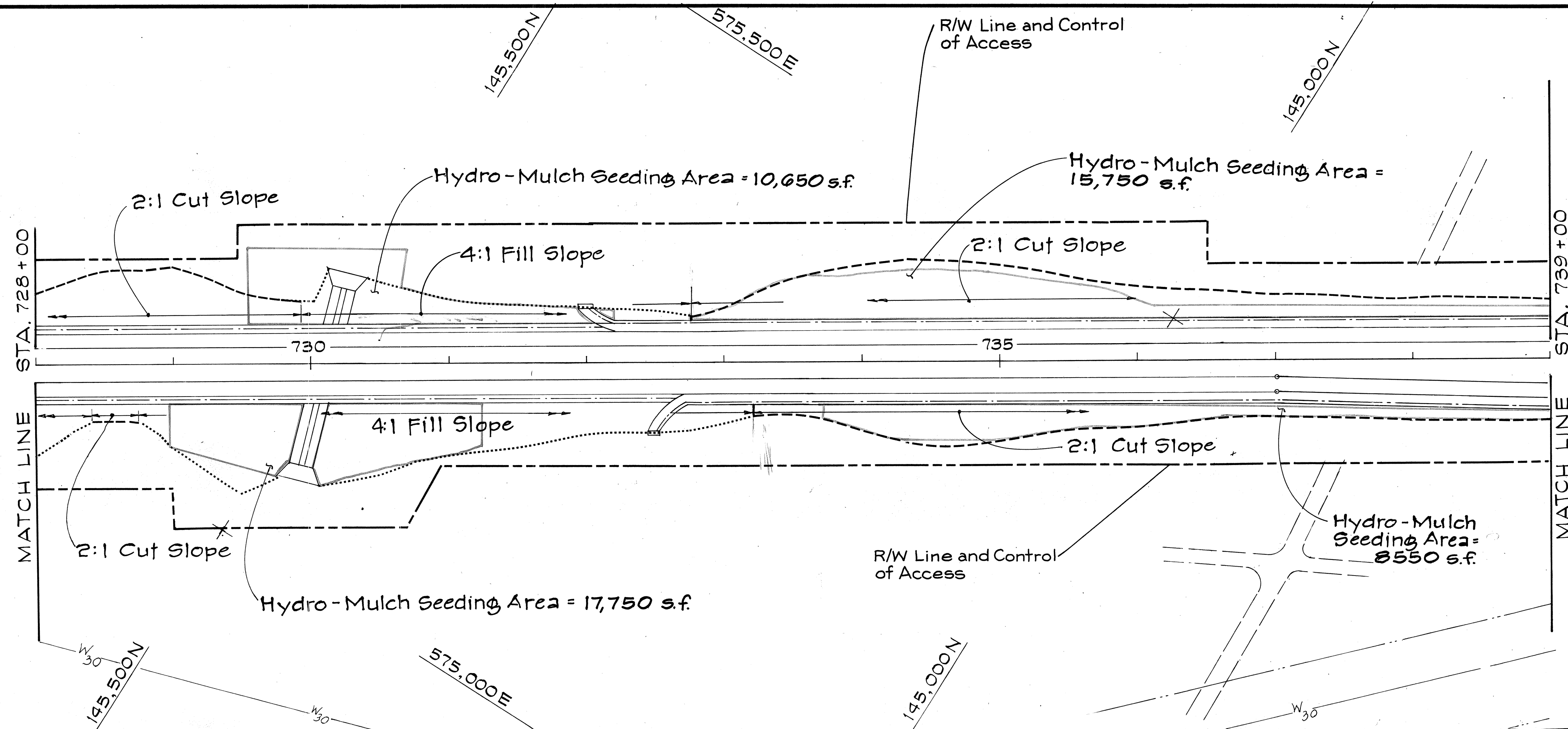
- LEGEND**
- Toe of Fill Slope
 - Top of Cut Slope
 - [Hatched Box] Approx. Limits of Rock Cut Area
 - [Dotted Box] Approx. Limits of Rock Fill Area

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
 (HYDRO-MULCH SEEDING)
 PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)
 SCALE: 1" = 50' DATE SEP 1978
 SHEET No. 12 OF 19 SHEETS

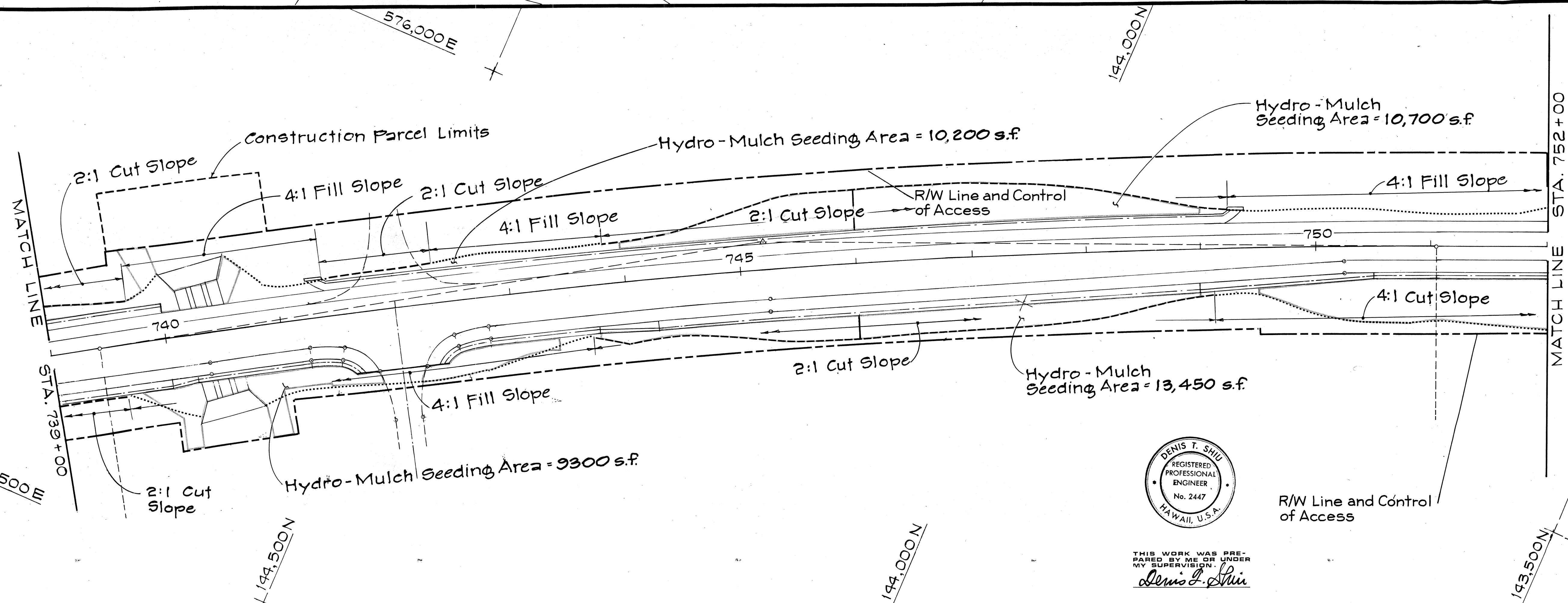
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	217	262

TRUE NORTH
SCALE: 1" = 50'

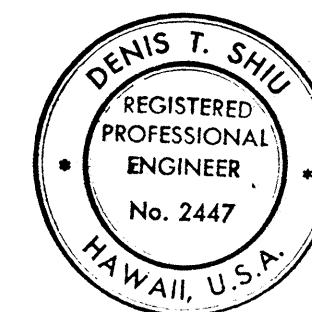


TRUE NORTH
SCALE: 1" = 50'



LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



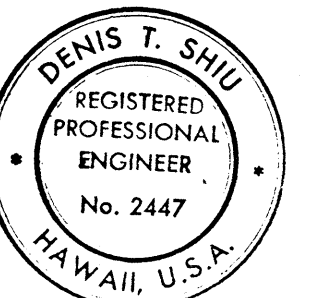
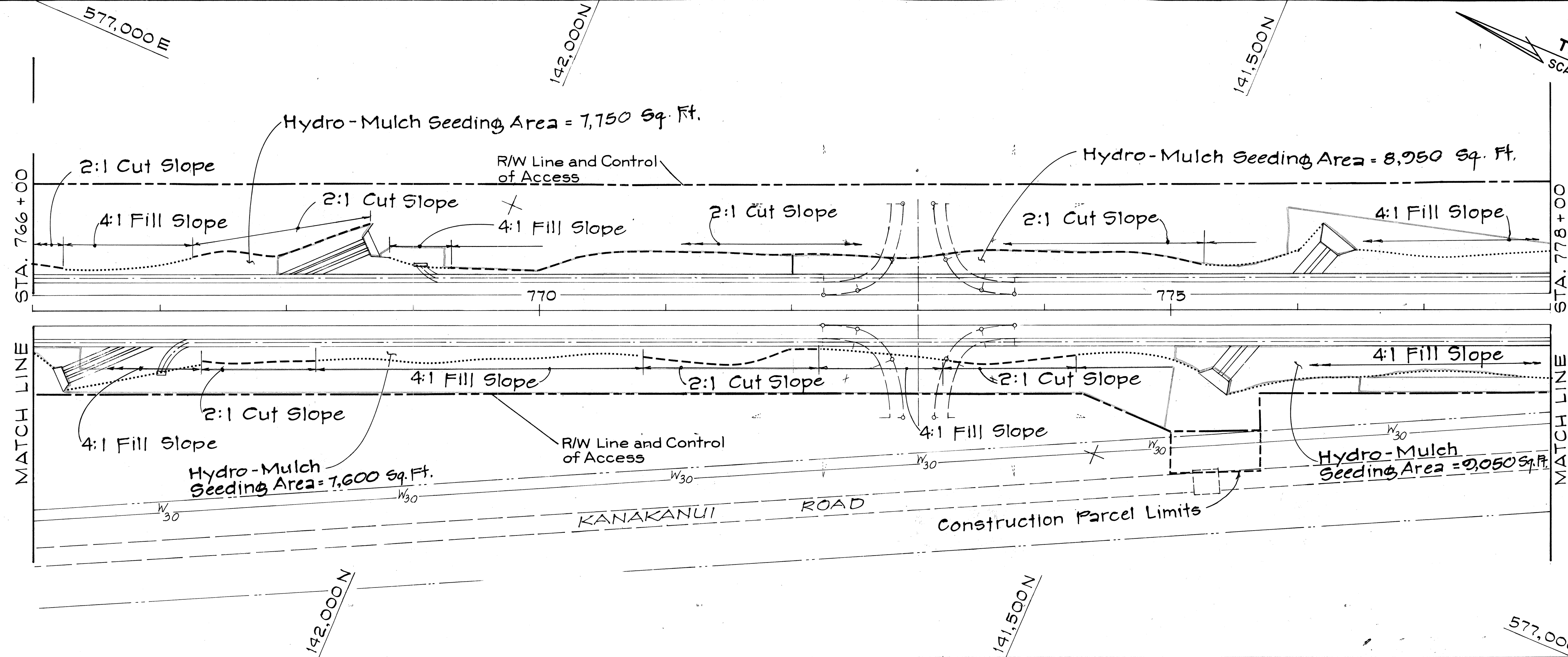
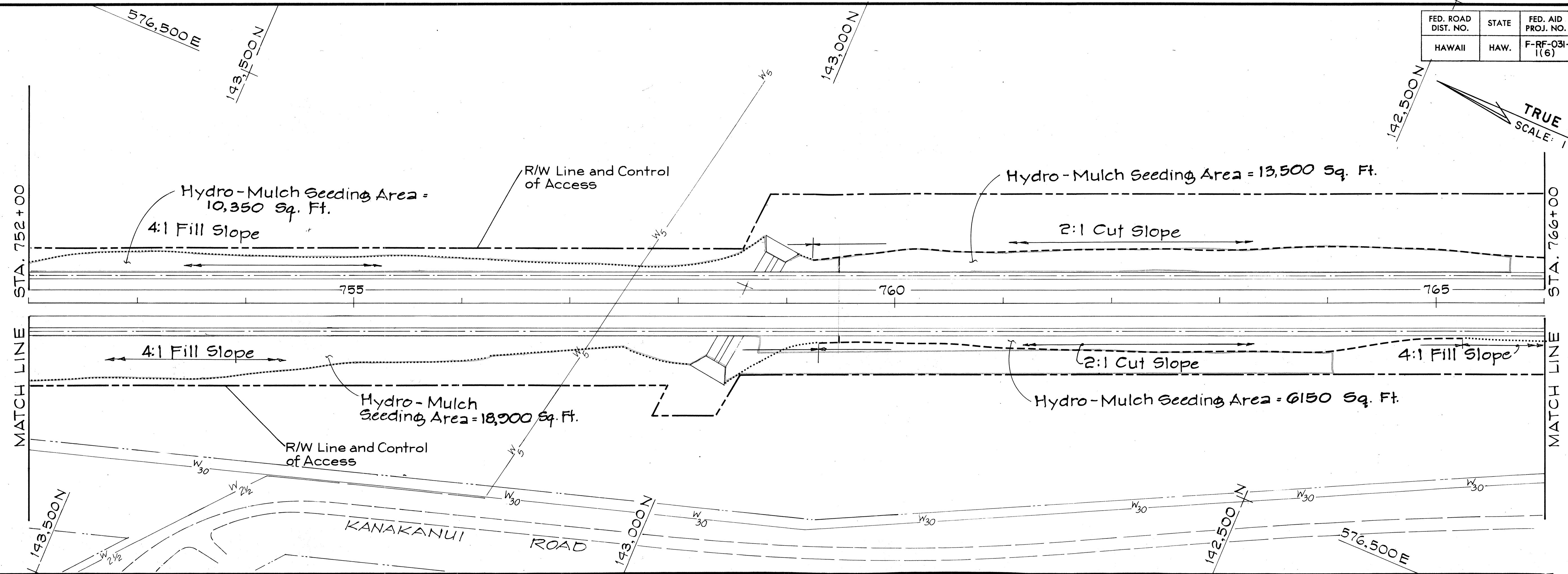
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Denis T. Shiu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)
PILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 13 OF 19 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	218	222

TRUE NORTH
SCALE: 1" = 50'



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LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

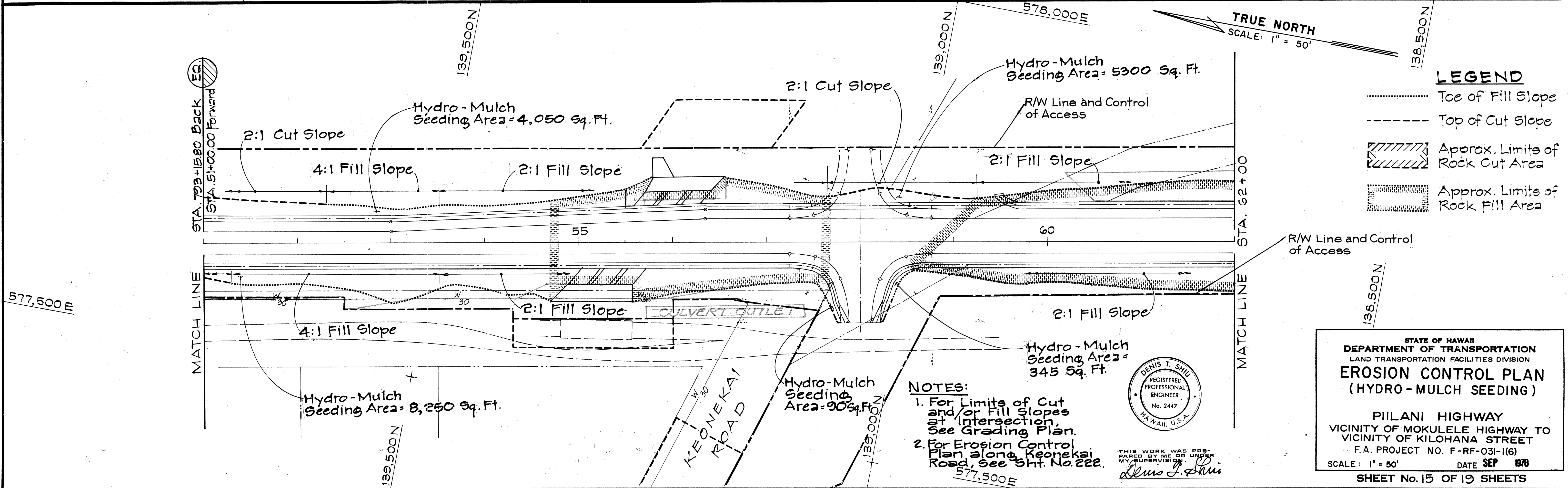
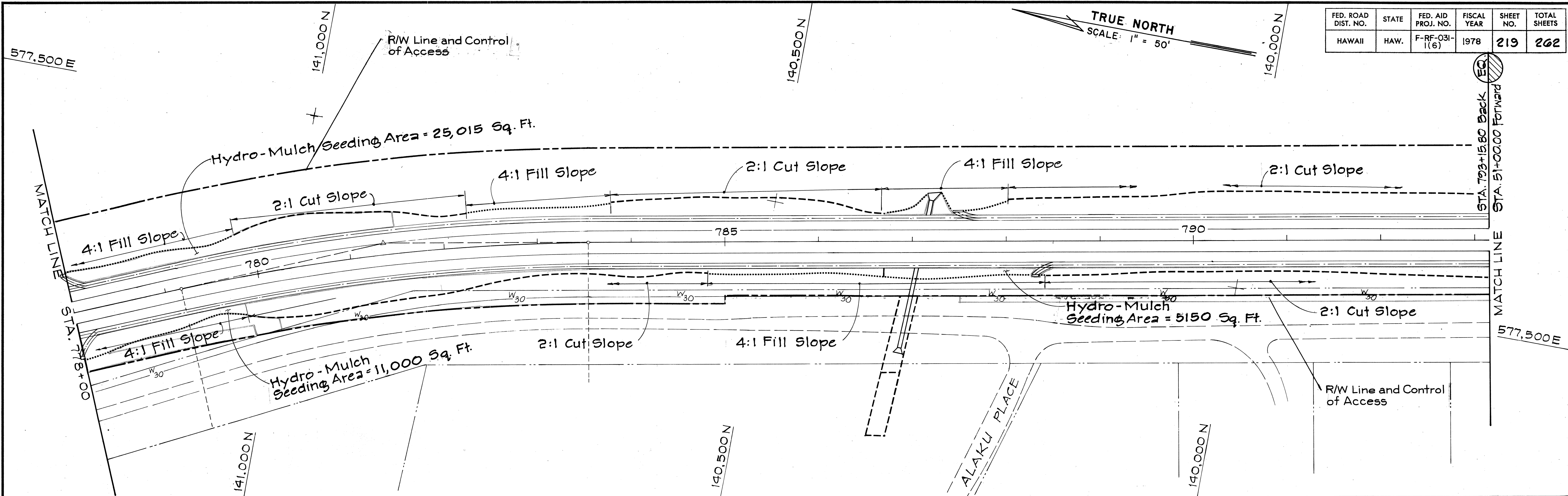
PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE SEP 1978

SHEET No. 14 OF 17 SHEETS

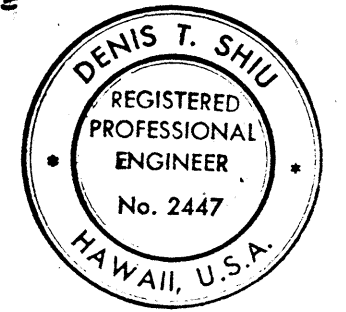
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	219	262



- LEGEND**
- Toe of Fill Slope
 - Top of Cut Slope
 - Approx. Limits of Rock Cut Area
 - Approx. Limits of Rock Fill Area

- NOTES:**
1. For Limits of Cut and/or Fill Slopes at Intersection, See Grading Plan.
 2. For Erosion Control Plan along Keonekai Road, See Sht. No. 222.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 15 OF 19 SHEETS

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	220	262

TRUE NORTH
SCALE: 1" = 50'

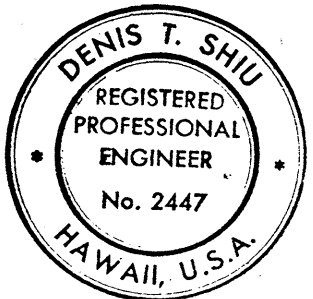
NOTE:
For Limits of Cut and/or Fill Slopes at Access Road, See Grading Plan Sht. No. 61

R/W Line and Control of Access

R/W Line and Control of Access

LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)

SCALE: 1" = 50' DATE SEP 1978
SHEET No. OF SHEETS

DATE	
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

578.000E

MATCH LINE

STA. 62+00

Hydro-Mulch Seeding Area = 1400 s.f.

2:1 Cut Slope

2:1 Fill Slope

2:1 Cut Slope

Hydro-Mulch Seeding Area = 1200 s.f.

2:1 Fill Slope

2:1 Fill Slope

2:1 Fill Slope

1/2:1 Cut Slope

1/2:1 Cut Slope

578.000E

STA. 68+00

MATCH LINE

138.000N

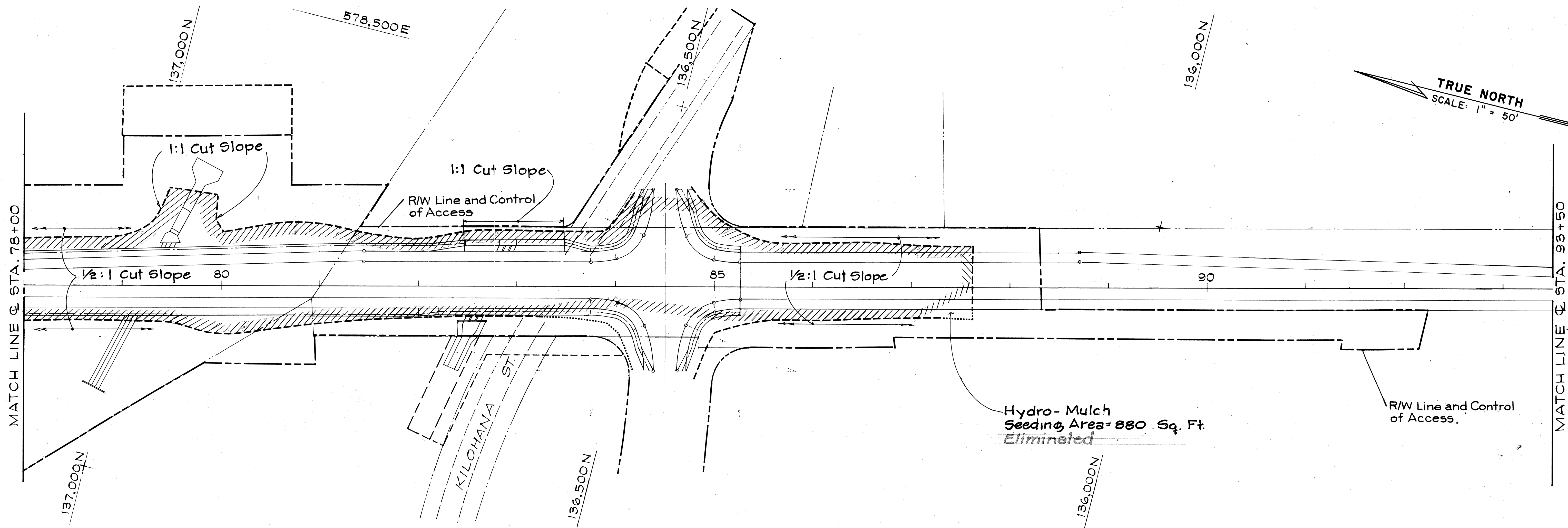
137.500N

137.000N

138.500N

138.000N

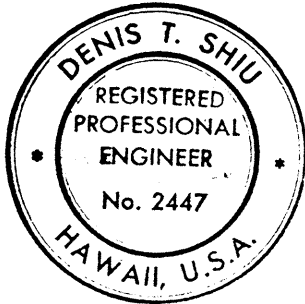
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	221	262



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

NOTE: For Limits of Cut and/or Fill Slopes, See Intersection Plan.

- LEGEND**
- Toe of Fill Slope
 - Top of Cut Slope
 - [Hatched Box] Approx. Limits of Rock Cut Area
 - [Dotted Box] Approx. Limits of Rock Fill Area



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Denis T. Shiu

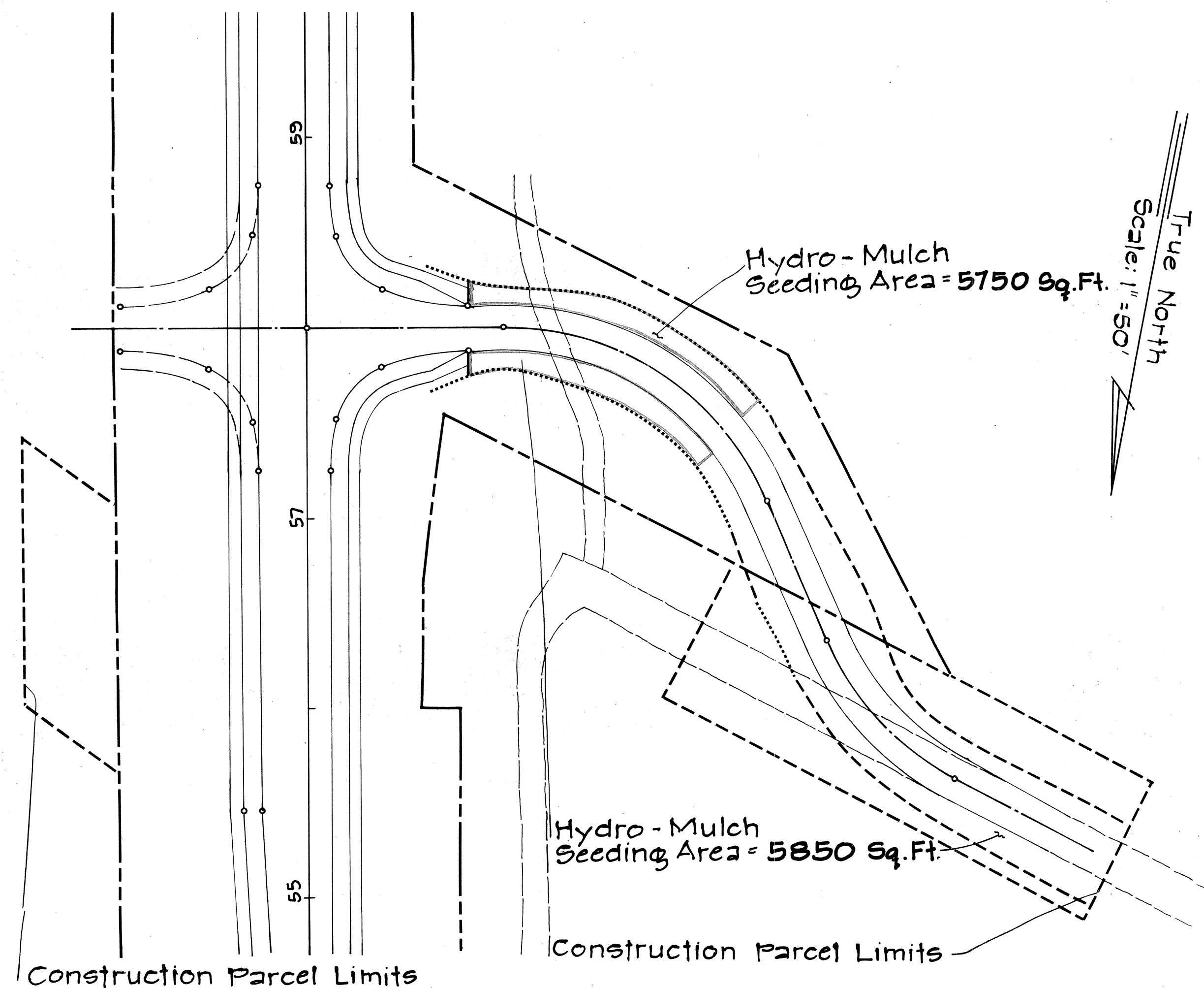
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
 (HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
 VICINITY OF MOKULELE HIGHWAY TO
 VICINITY OF KILOHANA STREET
 F.A. PROJECT NO. F-RF-031-1(6)

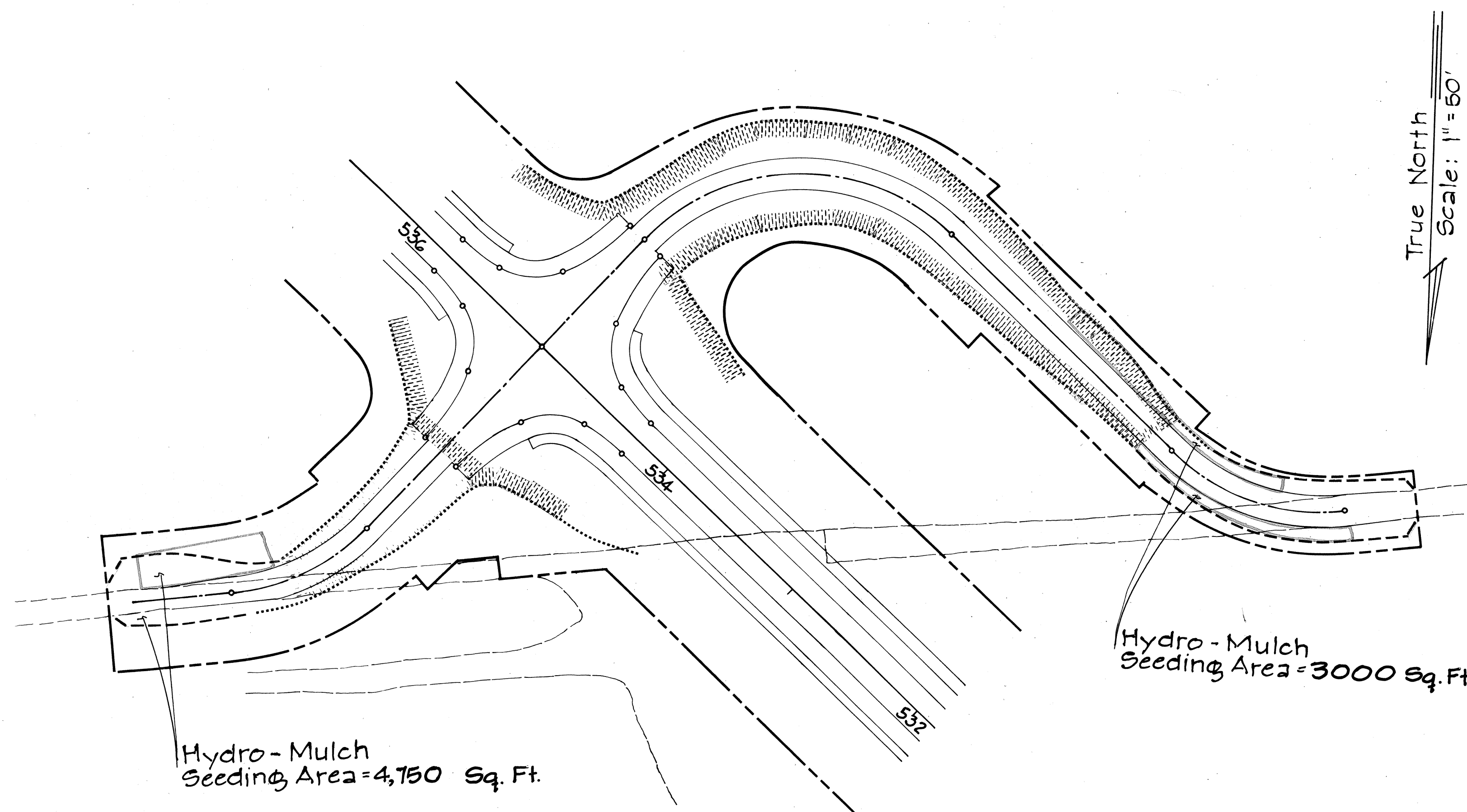
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 17 OF 19 SHEETS

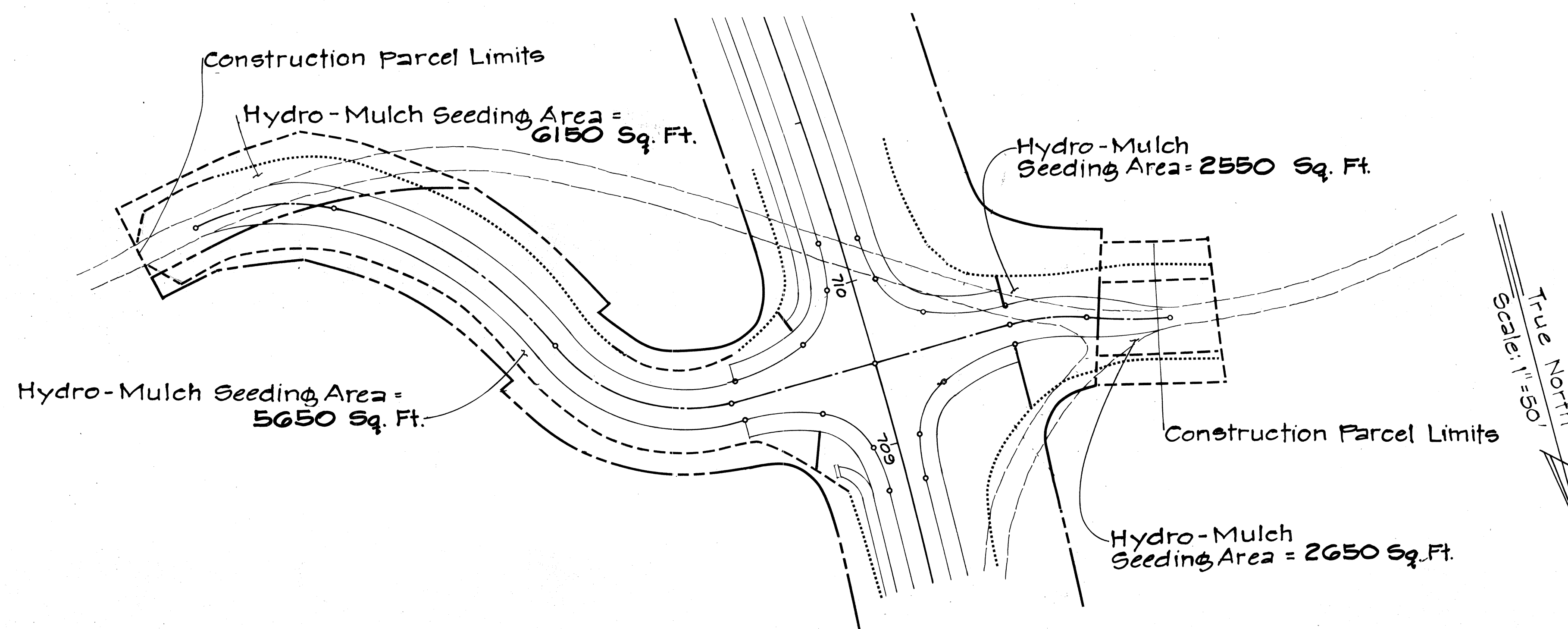
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HAWAII	HAW.	F-RF-031-1(6)	1978	222	262



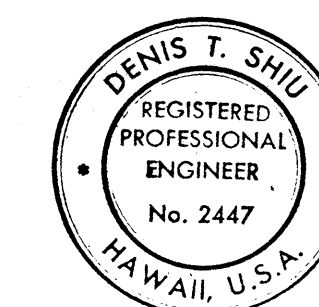
ROAD N (KEONEKAI ROAD)
Scale: 1" = 50'



ROAD C (UWAPU ROAD)
Scale: 1" = 50'



ROAD K (TREATMENT PLANT ROAD)
Scale: 1" = 50'



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Denis T. Shiu

LEGEND

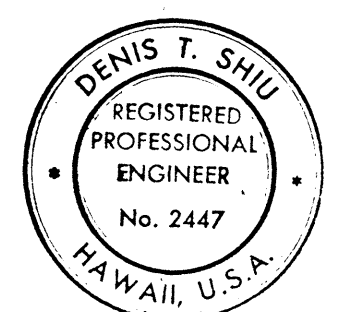
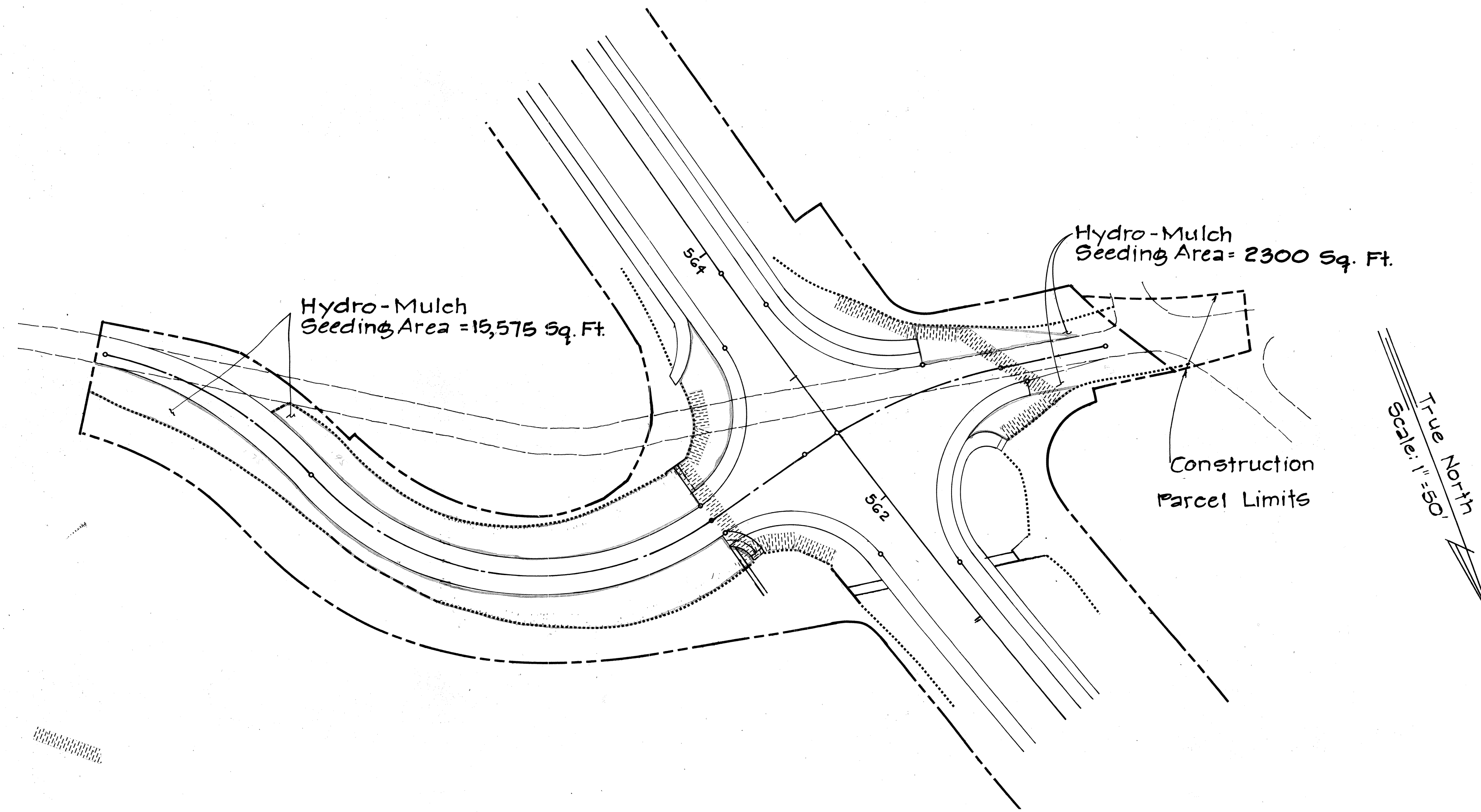
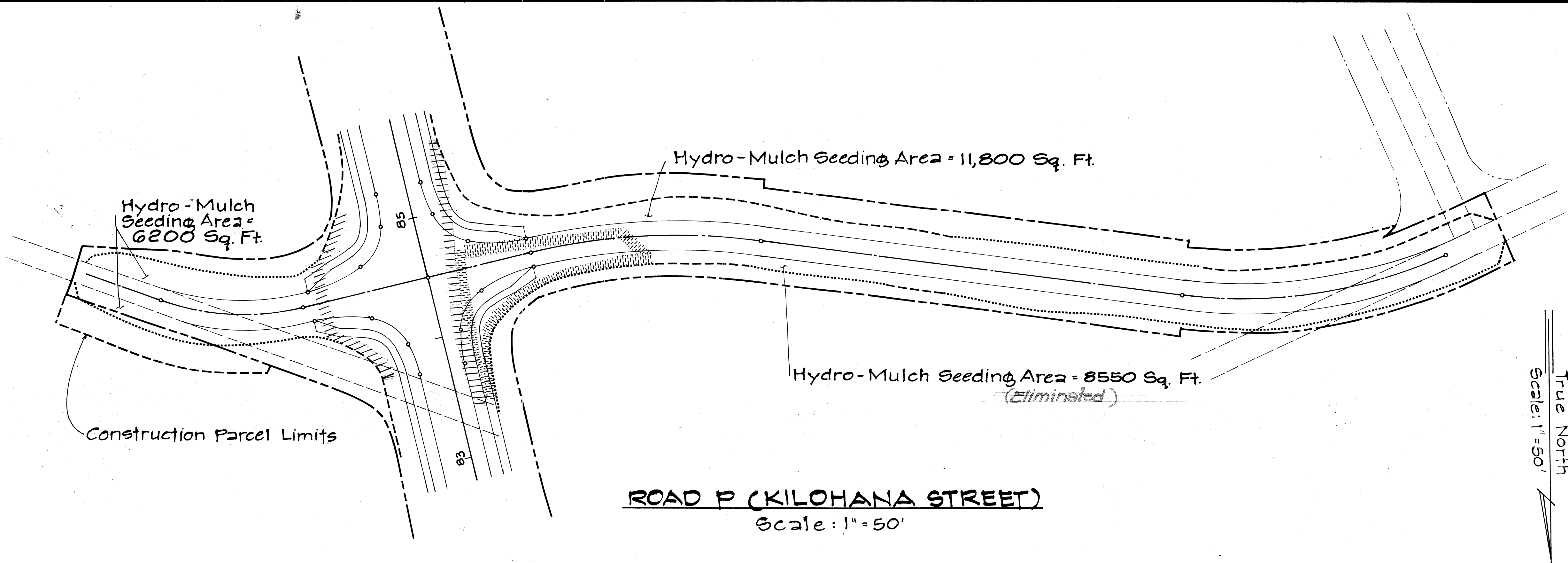
- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
EROSION CONTROL PLAN
(HYDRO-MULCH SEEDING)

PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978
SHEET No. 18 OF 19 SHEETS

ORIGINAL PLAN	DATE
NOTE BOOK	
DESIGNED BY	
TRACED BY	
CHECKED BY	
QUANTITIES BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-RF-031-1(6)	1978	223	262



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LEGEND

- Toe of Fill Slope
- Top of Cut Slope
- Approx. Limits of Rock Cut Area
- Approx. Limits of Rock Fill Area

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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EROSION CONTROL PLAN
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PIILANI HIGHWAY
VICINITY OF MOKULELE HIGHWAY TO
VICINITY OF KILOHANA STREET
F.A. PROJECT NO. F-RF-031-1(6)
SCALE: 1" = 50' DATE SEP 1978

SHEET No. 19 OF 19 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	