

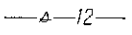
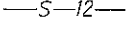
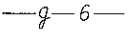
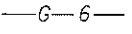
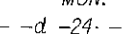
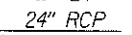
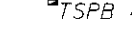
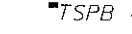
GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 3	34

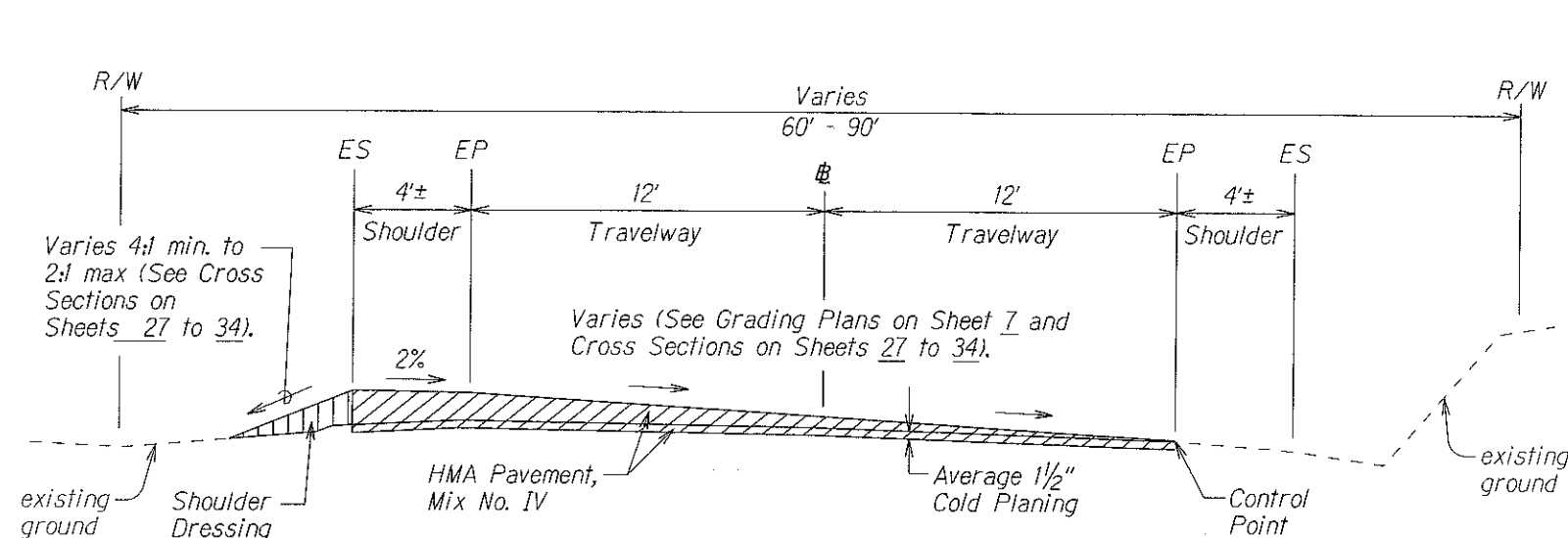
1. The scope of work for this project consists of constructing HMA pavement, installing guardrail, milled pavement rumble strip, pavement marking and signing.
2. The Contractor is reminded of the requirements of Subsection 108.01 - Subletting of Contract, which requires him to perform work to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
3. The Contractor's attention is directed to the following Sections: Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; and Section 645 - Work Zone Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for the exact locations and depths of all underground facilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, traffic signal conduits, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for separately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
6. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.
7. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
8. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to any culvert work or the various contract items and will not be paid for separately.
9. Earth swale shall be graded to drain. This work shall be considered incidental to various contract items.
10. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to asphalt concrete and will not be paid for separately.
11. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to bulk of work or the various contract items and will not be paid for separately.
12. Removal and disposal of existing curb and gutter, curb, sidewalk and asphalt concrete pavement, curb, sidewalk and any debris shall be considered incidental to their respective bid items.
13. All saw cutting work shall be considered incidental to Roadway Excavation or Asphalt Concrete or Various Contract Items or their respective bid items.

14. Prior to placement of new aggregate subbase course, the existing subbase shall be compacted to a relative compaction greater than or equal to 95%.
15. The top of the Plant Mix Glassphalt Concrete Base Course prior to placement of the new A.C. Pavement, Mix No. IV shall comply with the ten-foot straight edge requirement. The variation of the surface from a straight edge with two contacts with the surface, shall not exceed 3/16."
16. Concrete sidewalk shall be reinforced with 6x6 W1.4xW1.4 welded wire fabric.
17. Dressing of sidewalk shall consist of clearing and grubbing, grading, reshaping and compacting with suitable material the area adjacent to the improvement as shown on the plans and/or as directed by the Engineer and shall be considered incidental to Sidewalk.
18. All curbing angle points within the curb ramps shall be rounded with R-6."
19. All guardrail post shall be 6.0 feet long except as noted on plans.
20. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes, and side streets and cross streets at all times. This work shall be considered incidental to curb ramps, or sidewalk, or the various contract items and will not be paid for separately.
21. The Contractor shall provide and maintain a temporary pedestrian-safe and easily accessible route or detour with barricades in or near the work zone. This temporary route or detour shall be paved at least an inch of Asphalt Concrete Pavement, Mix No V or steel and/or wood planks and shall be American With Disabilities Act (ADA) compliant [This is only applicable if existing surface is dirt and/or if existing surface is non-ADA compliant.]. This work shall be incidental to curb ramps, or sidewalk, or the various contract items and will not be paid for separately.
22. Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk. Transition shall not be steeper than 2% cross and longitudinal slopes and not less 6.0 feet long or as specified on the plans. This work shall be considered incidental to curb ramps, or sidewalk, or the various contract items and will not be paid for separately.
23. The Contractor shall remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tapes, and epoxy adhesives prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately.
24. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designed in writing and approved by the Engineer.
25. The Contractor shall provide and maintain a smooth transition with no drop offs between travel lanes during non-working hours. If pavement is not complete, a 6:1 wedge may be used for transition, at no increase in contract price or contract time.
26. The Contractor must shield shoulder drop offs with Type II Barricades if exposed during non-working hours.

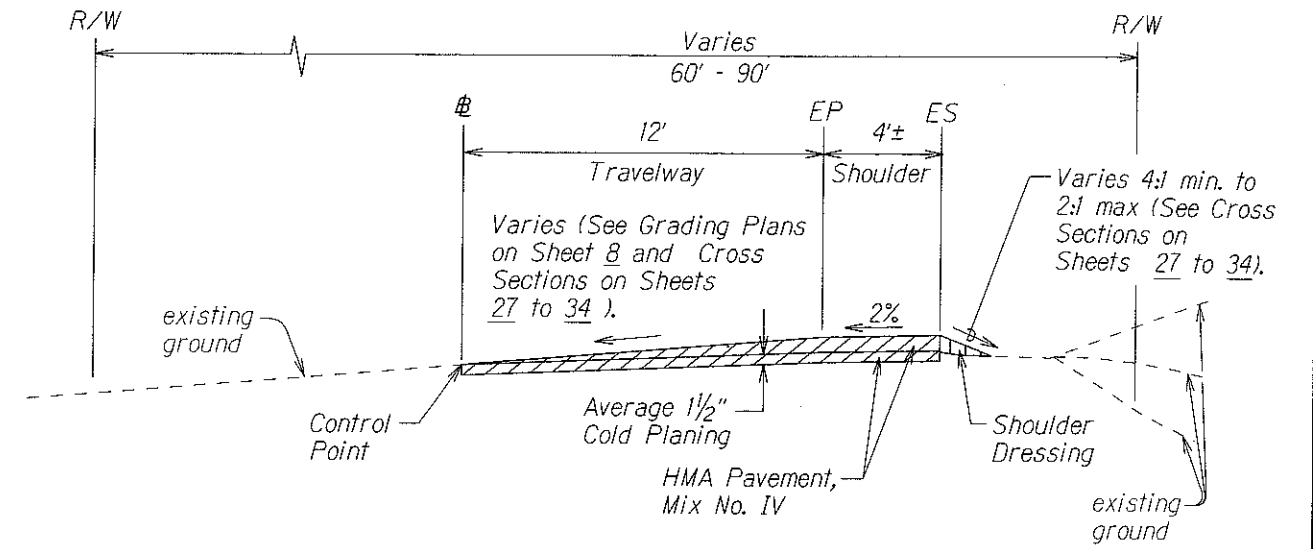
LEGEND

	Reconstruction Areas		Existing Sewer Line
	Leveling Areas		New 12" Sewer Line
	Cold Planing Areas		Existing Sewer Manhole
	Resurfacing Limits		Adjusted Sewer MH Frame/Cover
	Existing Electrical Line		New Sewer Manhole
	New Electrical Line		Existing 6" Gas Line
	Existing Joint Pole		New 6" Gas Line
	Existing Power Pole		Existing Gas Valve Box
	Existing Electric Manhole		Adjusted Gas Valve Box
	Adjusted Elec. MH Frame/Cover		New Gas Valve Box
	New Electric Manhole		Existing Gas Manhole
	Existing Telephone Line		Adjusted Gas MH Frame/Cover
	New Telephone Line		New Gas Manhole
	Existing Telephone Pole		Existing Monument
	Existing Telephone Manhole		Adjusted Monument
	Adjusted Tele. MH Frame/Cover		New Monument
	New Telephone Manhole		Existing 24" Drain Line
	Existing Signal Corps Line		New 24 " RCP Drain Line
	New Signal Corps Line		Existing Storm Drain Manhole
	Existing TV Cable		Adjusted Storm Drain MH Frame/Cover
	New TV Cable		New Storm Drain Manhole
	Existing Sandwich Isles Communication Line		Existing Grated Drop Inlet
	Existing 12" Water Line		Existing Catch Basin
	New 12" Water Line		Existing Traffic Sign
	Existing Water Manhole		Existing Highway Lighting Standard
	Adjusted Water MH Frame/Cover		Existing Highway Lighting Pullbox
	New Water Manhole		Existing Traffic Signal Pole
	Existing Water Air Valve		New Traffic Signal Pole
	Adjusted Water Air Valve		Existing Traffic Signal Pullbox
	New Water Air Valve		Adjusted Traffic Signal Pullbox
	Existing Water Valve Box		New Traffic Signal Pullbox
	Adjusted Water Valve Box		Existing Metal Guardrail
	New Water Valve Box		New Metal Guardrail
	Existing Water Meter		
	Adjusted Water Meter		
	New Water Meter		
	Existing Fire Hydrant		
	New Fire Hydrant		

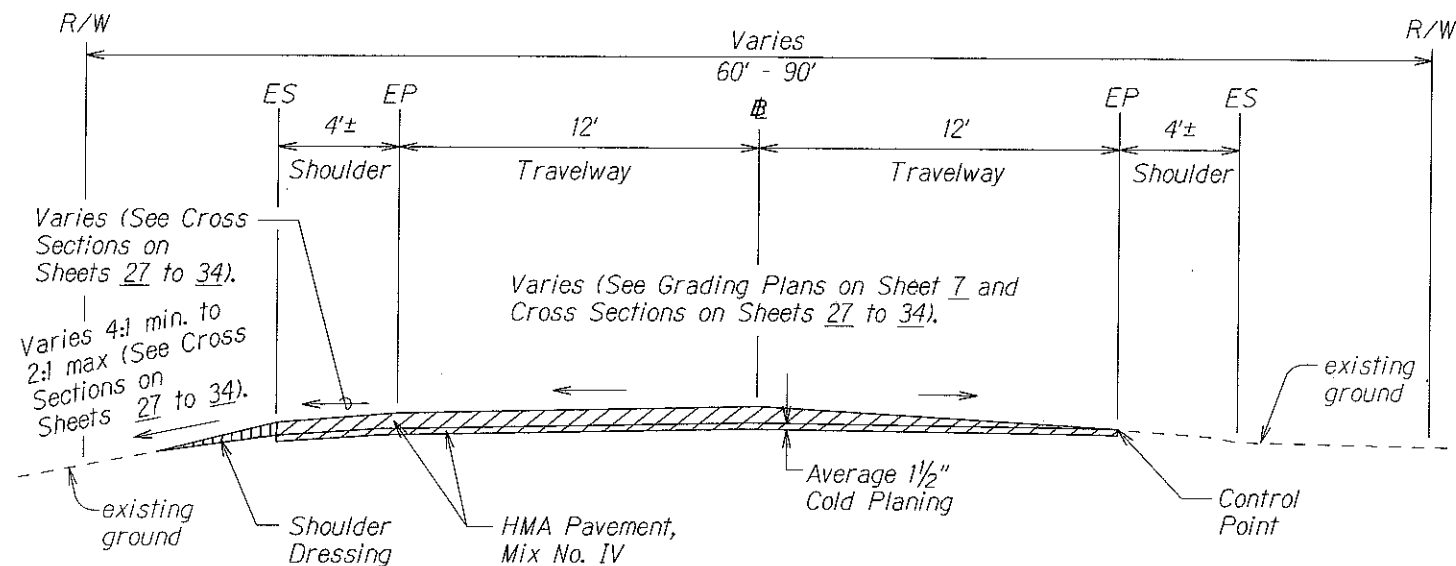
9/15/09	Revised General Note 19, Added Notes 25 and 26.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GENERAL NOTES & LEGEND	
MAMALAHOA HIGHWAY	
SAFETY IMPROVEMENTS	
Vicinity of Kiolakaa Homestead	
Federal Aid Project No. HSIP-011-2(37)	
Date: September 2009	
SHEET No. 1 OF 1 SHEETS	



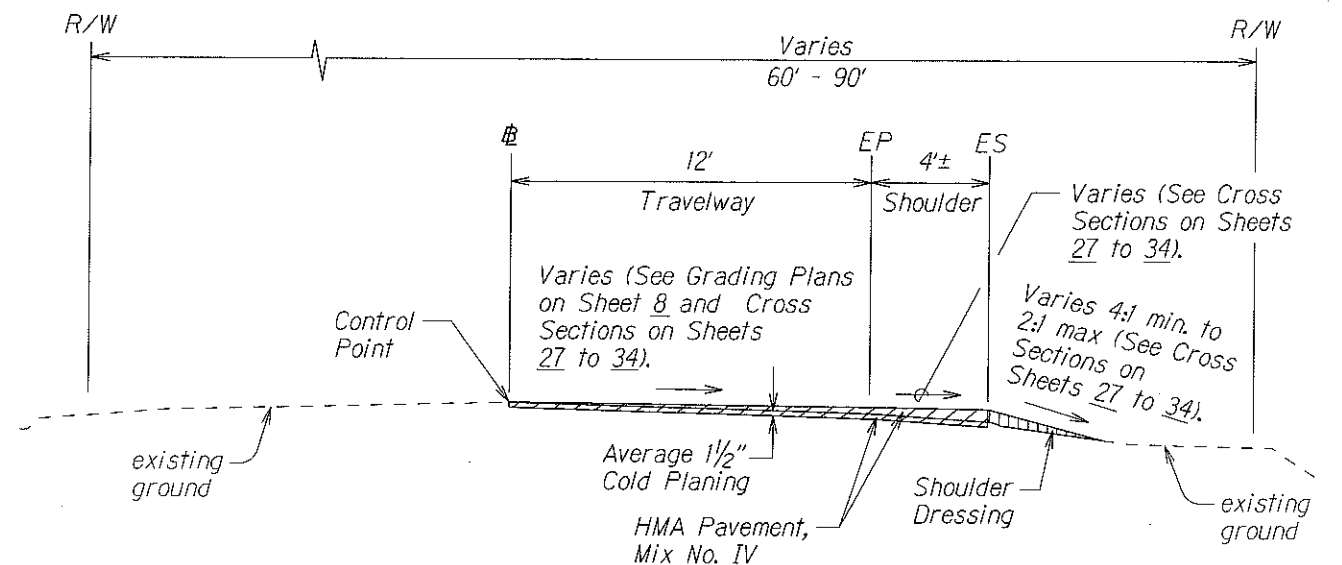
TYPICAL SECTION "B"
 @ STA. 248+19.87 to @ STA. 252+70.00
 Not To Scale



TYPICAL SECTION "D"
 @ STA. 266+94.44 to @ STA. 271+25
 Not To Scale



TYPICAL SECTION "A"
 @ STA. 246+00 to @ STA. 248+19.87
 @ STA. 252+70.00 to @ STA. 254+50
 Not To Scale



TYPICAL SECTION "C"
 @ STA. 265+50 to @ STA. 266+94.44
 @ STA. 271+25 to @ STA. 272+00
 Not To Scale

Notes:

1. Shoulder dressing shall be considered incidental to Item No. 401.0100 - HMA Pavement, Mix No. IV.
2. The Contractor shall provide and maintain a smooth transition with no drop offs between travel lanes during non-working hours. If pavement is not completed, a 6:1 wedge may be used for transition, at no increase in contract price or contract time.
3. The Contractor must shield shoulder drop offs with Type II Barricades if exposed during non-working hours.

9/15/09	Added Notes. Revised Shoulder Slope. Revised Stationing for each Typical Section.
DATE	REVISION

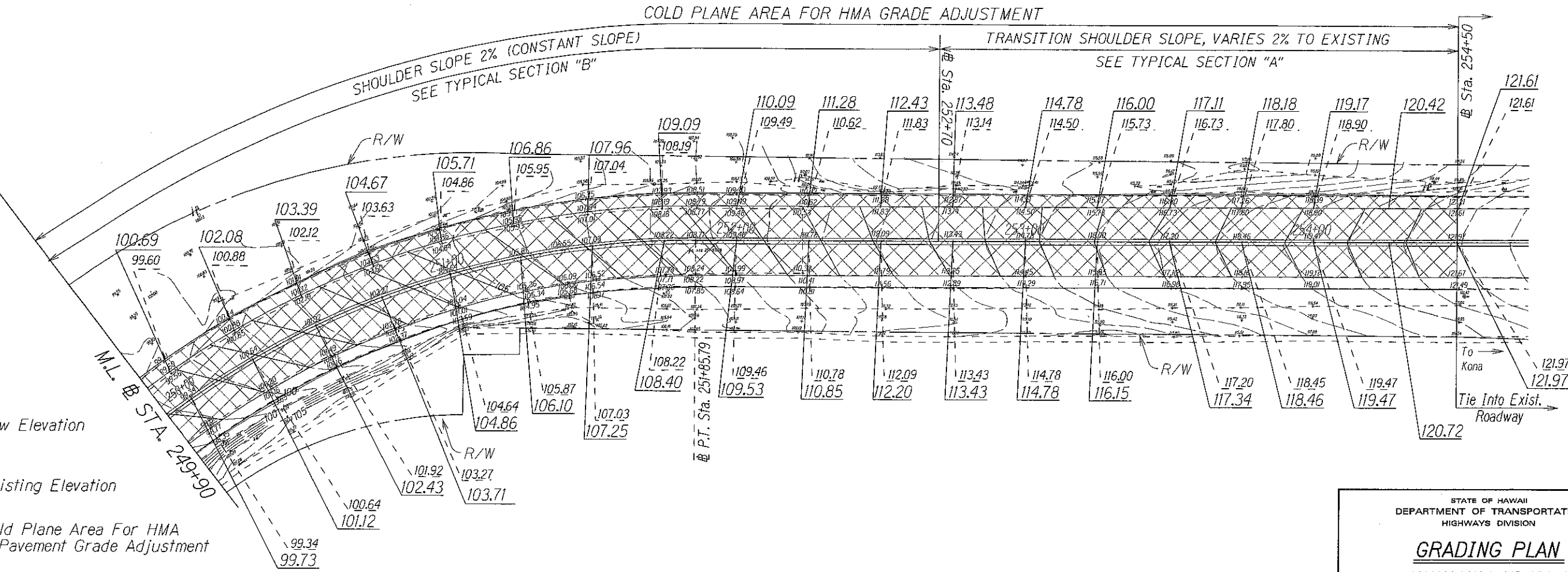
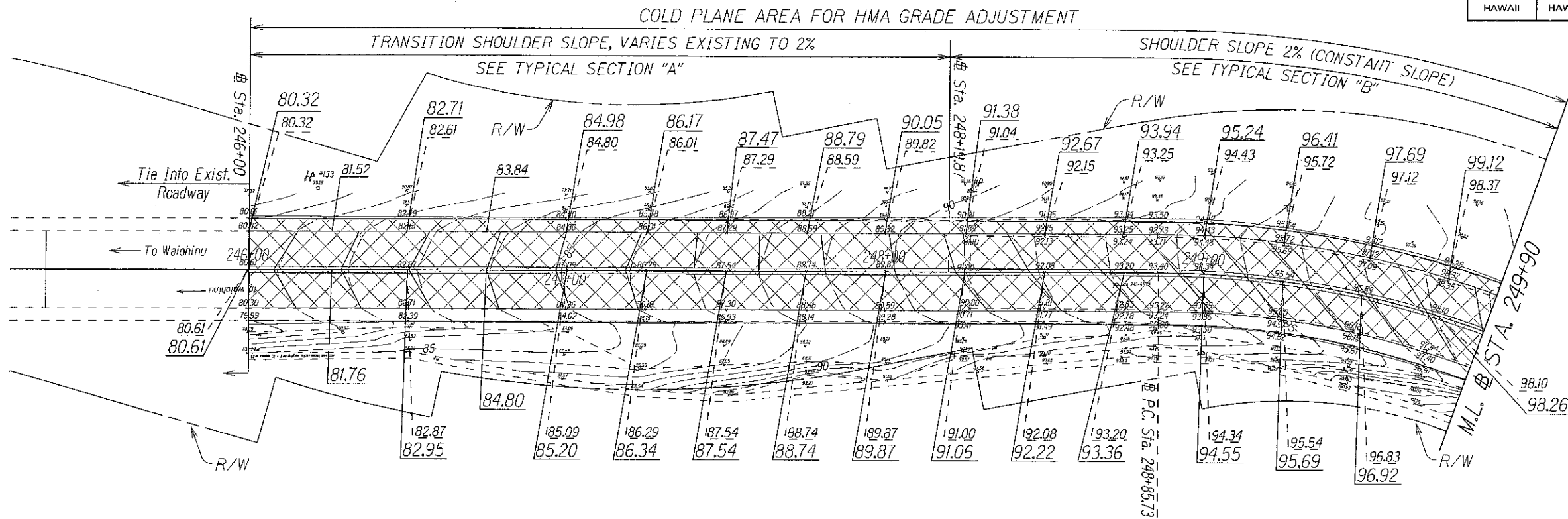
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS
MAMALAHOA HIGHWAY
SAFETY IMPROVEMENTS
Vicinity of Kiolakaa Homestead Road
Federal-Aid Project No. HSIP-011-2(37)

Scale: NTS
Date: September 2009

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-K37	2009	ADD. 7	34



LEGEND

1502.48 New Elevation

1503.77 Existing Elevation

Cold Plane Area For HMA Pavement Grade Adjustment

NOTE:

Shoulder Dressing Shall Be Considered Incidental to Item No. 401.0100 - HMA Pavement, Mix No. IV.

9/15/09	Revised Shoulder Slope. Revised Shoulder Slope Stationing. Deleted Right Shoulder Hatching.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

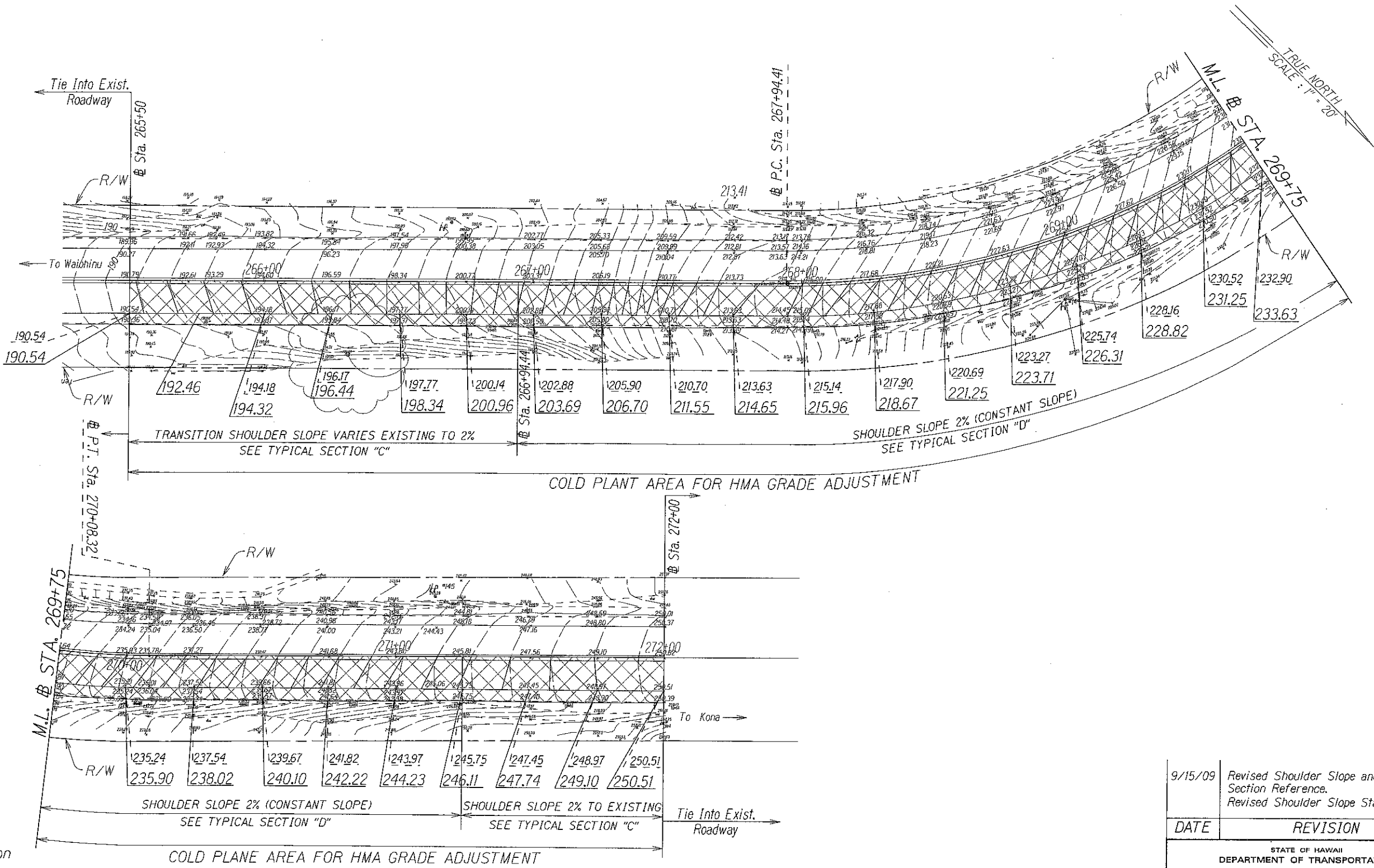
GRADING PLAN

MAMALAHOA HIGHWAY
SAFETY IMPROVEMENTS
Vicinity of Kiolakaa Homestead Road
Federal Aid Project No. HSIP-011-K37

Scale: 1"=20' Date: September 2009

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-K(37)	2009	ADD. 8	34



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

Legend

1502.48 New Elevation

1503.77 Existing Elevation

Cold Plane Area For HMA Pavement Grade Adjustment

NOTE:
Shoulder Dressing Shall Be Considered
Incidental to Item No. 401.0100 - HMA
Pavement, Mix No. IV.

9/15/09	Revised Shoulder Slope and Typical Section Reference. Revised Shoulder Slope Stationing.
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DATE	REVISION
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING PLAN

MAMALAHOA HIGHWAY
SAFETY IMPROVEMENTS
Vicinity of Kiolakaa Homestead Road
Federal Aid Project No. HSIP-011-K(37)

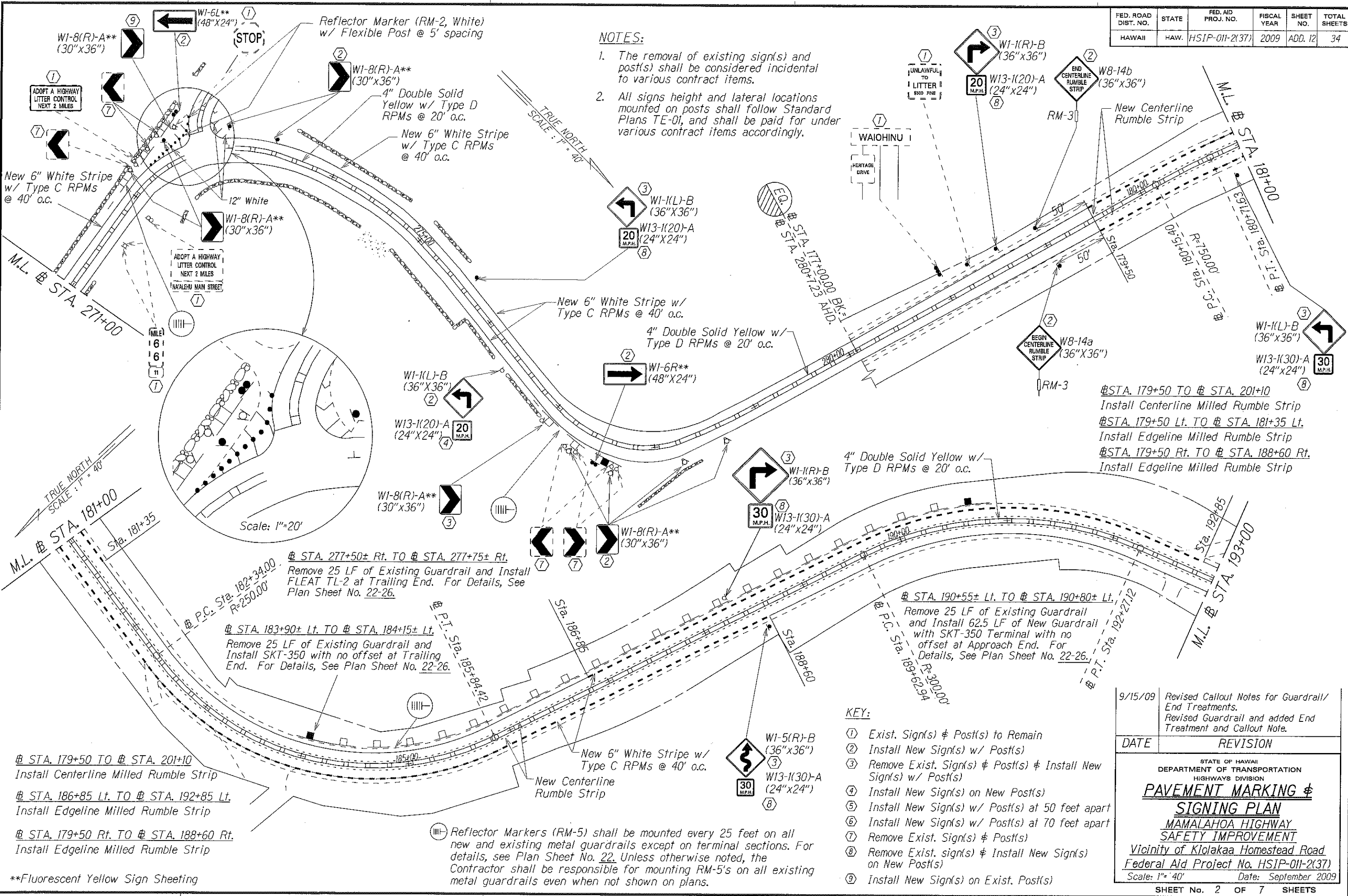
Scale: 1"=20' Date: September 2009

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 12	34

SURVEY PLANNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DESIGNED BY	
APPROVED BY	

ORIGINAL PLAN	DATE
NOTED BY	
QUANTITIES BY	
DESIGNED BY	
APPROVED BY	



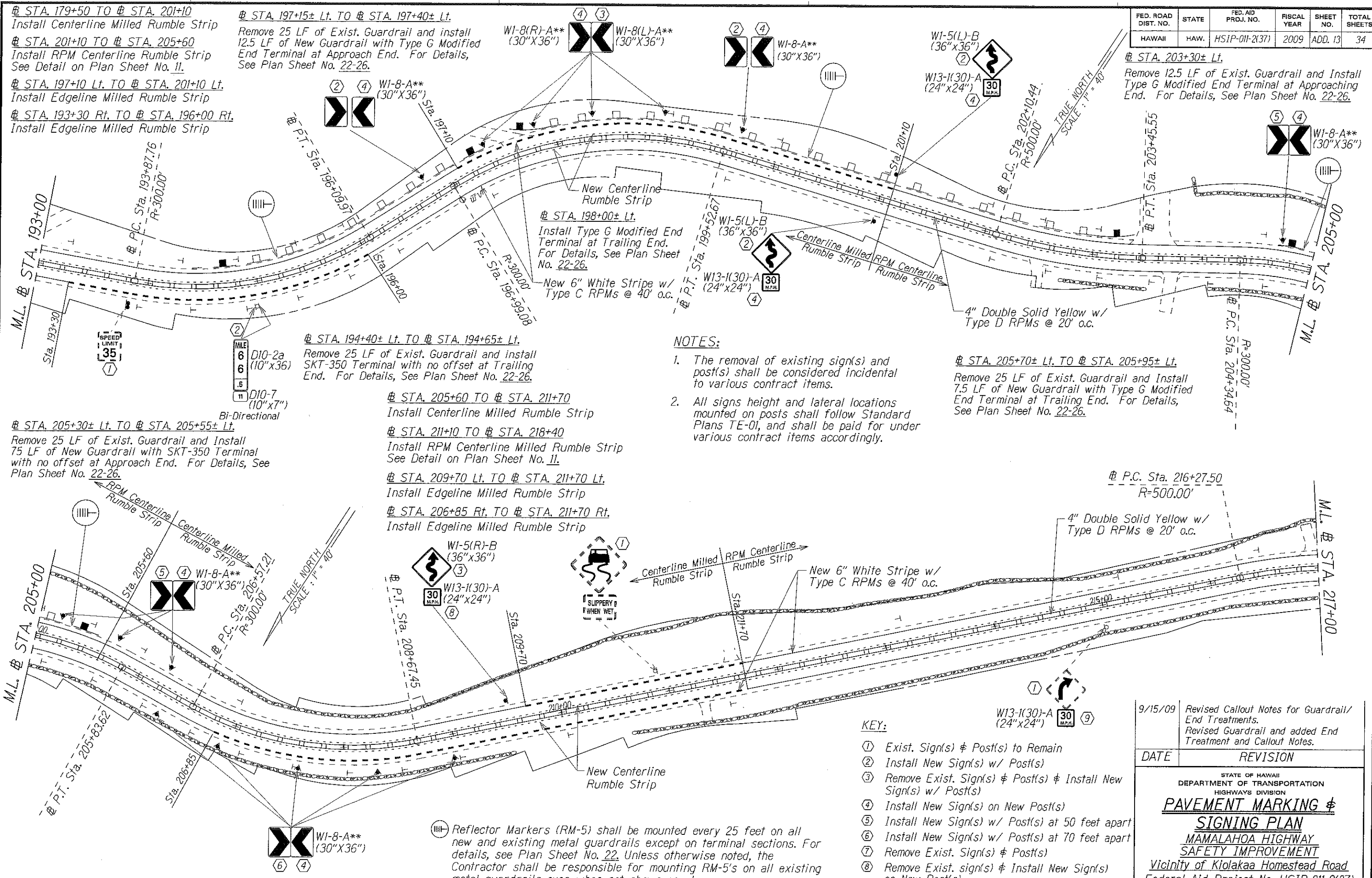
NOTES:

1. The removal of existing sign(s) and post(s) shall be considered incidental to various contract items.
2. All signs height and lateral locations mounted on posts shall follow Standard Plans TE-01, and shall be paid for under various contract items accordingly.

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Install New Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/ Post(s)
 - ④ Install New Sign(s) on New Post(s)
 - ⑤ Install New Sign(s) w/ Post(s) at 50 feet apart
 - ⑥ Install New Sign(s) w/ Post(s) at 70 feet apart
 - ⑦ Remove Exist. Sign(s) & Post(s)
 - ⑧ Remove Exist. sign(s) & Install New Sign(s) on New Post(s)
 - ⑨ Install New Sign(s) on Exist. Post(s)

9/15/09	Revised Callout Notes for Guardrail/End Treatments. Revised Guardrail and added End Treatment and Callout Note.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT MARKING & SIGNING PLAN MAMALAHOA HIGHWAY SAFETY IMPROVEMENT Vicinity of Koloakaa Homestead Road Federal Aid Project No. HSIP-011-2(37) Scale: 1" = 40' Date: September 2009	
SHEET No. 2 OF 7 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 13	34



- NOTES:**
1. The removal of existing sign(s) and post(s) shall be considered incidental to various contract items.
 2. All signs height and lateral locations mounted on posts shall follow Standard Plans TE-01, and shall be paid for under various contract items accordingly.

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Install New Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/ Post(s)
 - ④ Install New Sign(s) on New Post(s)
 - ⑤ Install New Sign(s) w/ Post(s) at 50 feet apart
 - ⑥ Install New Sign(s) w/ Post(s) at 70 feet apart
 - ⑦ Remove Exist. Sign(s) & Post(s)
 - ⑧ Remove Exist. sign(s) & Install New Sign(s) on New Post(s)
 - ⑨ Install New Sign(s) on Exist. Post(s)

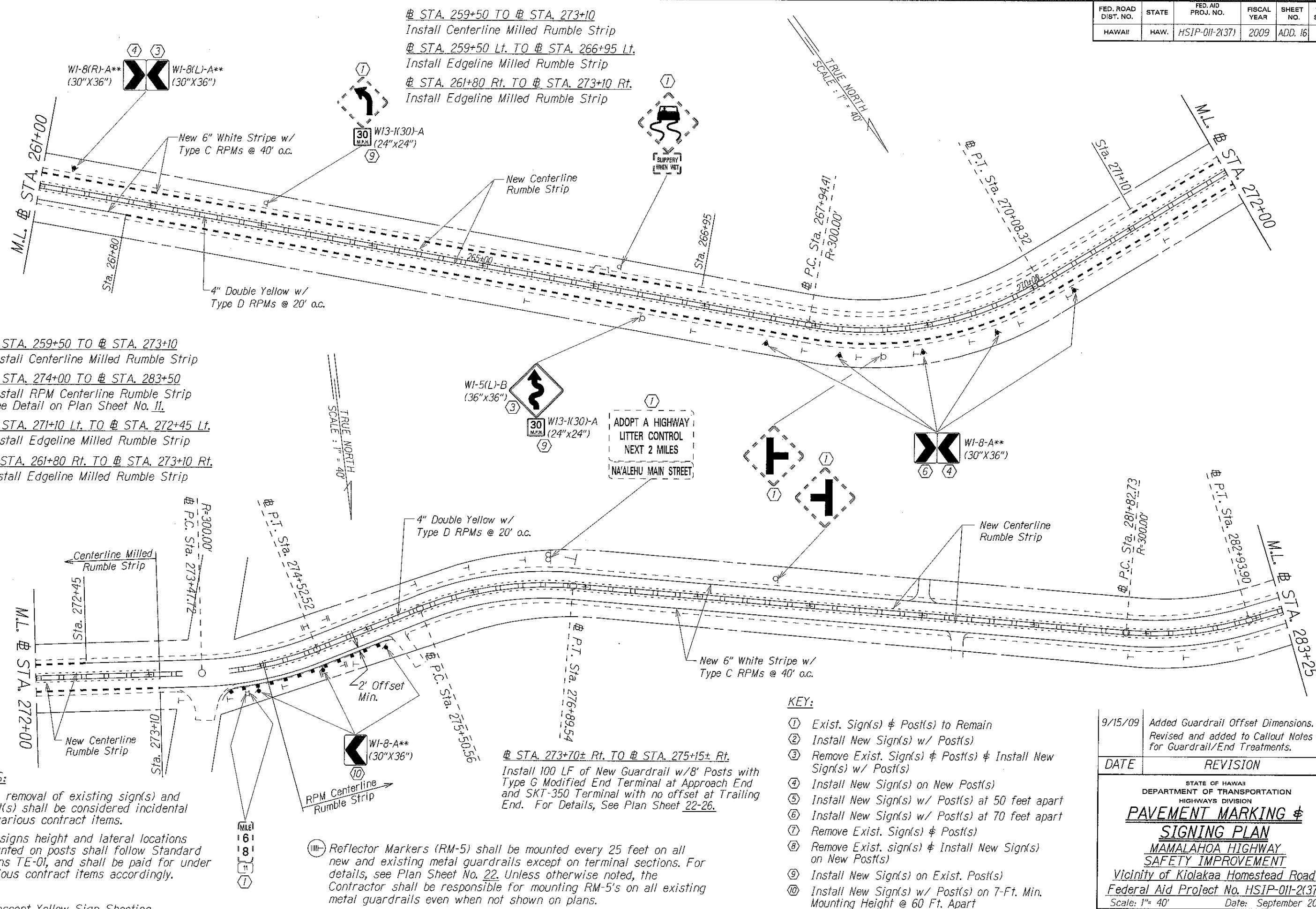
⊙ Reflector Markers (RM-5) shall be mounted every 25 feet on all new and existing metal guardrails except on terminal sections. For details, see Plan Sheet No. 22. Unless otherwise noted, the Contractor shall be responsible for mounting RM-5's on all existing metal guardrails even when not shown on plans.

**Fluorescent Yellow Sign Sheeting

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

9/15/09	Revised Callout Notes for Guardrail/End Treatments. Revised Guardrail and added End Treatment and Callout Notes.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT MARKING & SIGNING PLAN MAMALAHOA HIGHWAY SAFETY IMPROVEMENT Vicinity of Kioiakea Homestead Road Federal Aid Project No. HSIP-011-2(37) Scale: 1"= 40' Date: September 2009 SHEET No. 3 OF 7 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 16	34



@ STA. 259+50 TO @ STA. 273+10
 Install Centerline Milled Rumble Strip
 @ STA. 274+00 TO @ STA. 283+50
 Install RPM Centerline Rumble Strip
 See Detail on Plan Sheet No. 11.
 @ STA. 271+10 Lt. TO @ STA. 272+45 Lt.
 Install Edgeline Milled Rumble Strip
 @ STA. 261+80 Rt. TO @ STA. 273+10 Rt.
 Install Edgeline Milled Rumble Strip

@ STA. 273+70± Rt. TO @ STA. 275+15± Rt.
 Install 100 LF of New Guardrail w/ 8' Posts with
 Type G Modified End Terminal at Approach End
 and SKT-350 Terminal with no offset at Trailing
 End. For Details, See Plan Sheet 22-26.

- NOTES:**
- The removal of existing sign(s) and post(s) shall be considered incidental to various contract items.
 - All signs height and lateral locations mounted on posts shall follow Standard Plans TE-01, and shall be paid for under various contract items accordingly.

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Install New Sign(s) w/ Post(s)
 - ③ Remove Exist. Sign(s) & Post(s) & Install New Sign(s) w/ Post(s)
 - ④ Install New Sign(s) on New Post(s)
 - ⑤ Install New Sign(s) w/ Post(s) at 50 feet apart
 - ⑥ Install New Sign(s) w/ Post(s) at 70 feet apart
 - ⑦ Remove Exist. Sign(s) & Post(s)
 - ⑧ Remove Exist. sign(s) & Install New Sign(s) on New Post(s)
 - ⑨ Install New Sign(s) on Exist. Post(s)
 - ⑩ Install New Sign(s) w/ Post(s) on 7-Ft. Min. Mounting Height @ 60 Ft. Apart

(RM-5) Reflector Markers (RM-5) shall be mounted every 25 feet on all new and existing metal guardrails except on terminal sections. For details, see Plan Sheet No. 22. Unless otherwise noted, the Contractor shall be responsible for mounting RM-5's on all existing metal guardrails even when not shown on plans.

9/15/09	Added Guardrail Offset Dimensions. Revised and added to Callout Notes for Guardrail/End Treatments.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN

MAMALAHOA HIGHWAY

SAFETY IMPROVEMENT

Vicinity of Kiolaakaa Homestead Road

Federal Aid Project No. HSIP-011-2(37)

Scale: 1"= 40' Date: September 2009

SHEET No. 6 OF 7 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

**Fluorescent Yellow Sign Sheetting

GENERAL NOTES

- All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM02b, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
- The Recycled Plastic Block or Offset Block shall be approved by the State.
- All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
- After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
- When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
- New A.C. pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
- Reflector Markers (RM-5) mounted on new guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to the adjacent guardrail system.
- Reflector Markers (RM-5) mounted on existing guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to Item No. 632.0200 - Reflector Marker (RM-5, White) Mounted on Existing Guardrail.

GUARDRAIL TYPE	DIMENSION	
	H	A
Strong Post W-Beam	1'-9 ⁵ / ₈ "	1'-6"
Strong Post Rubrail (W-Beam)	2'-0"	1'-6"
Modified or Strong Post Thrie Beam	2'-0"	2'-0"

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GUARDRAIL DETAILS & NOTES

MAMALAHOA HIGHWAY

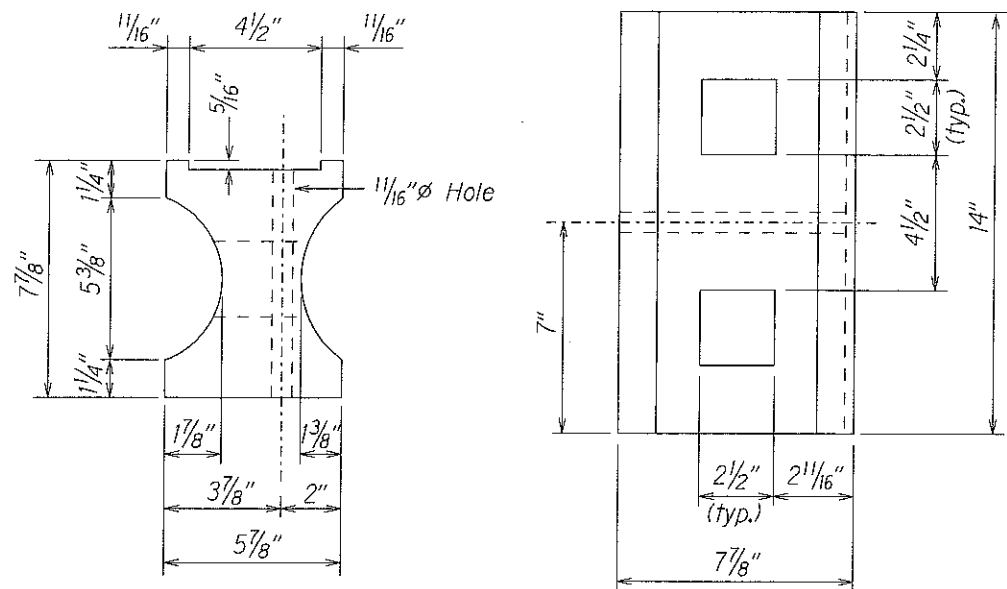
SAFETY IMPROVEMENT

Vicinity of Kiolakaa Homestead Road

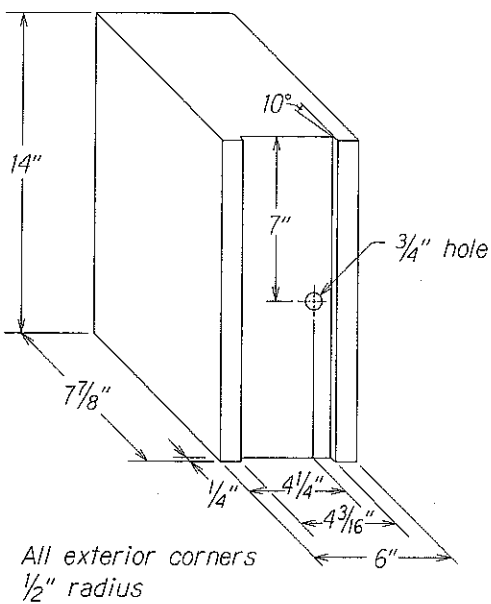
Federal Aid Project No. HSIP-011-2(37)

Not to Scale

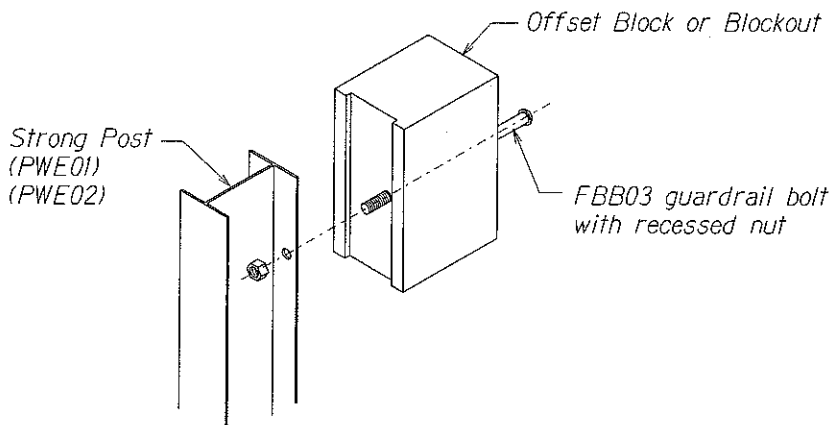
Date: September 2009



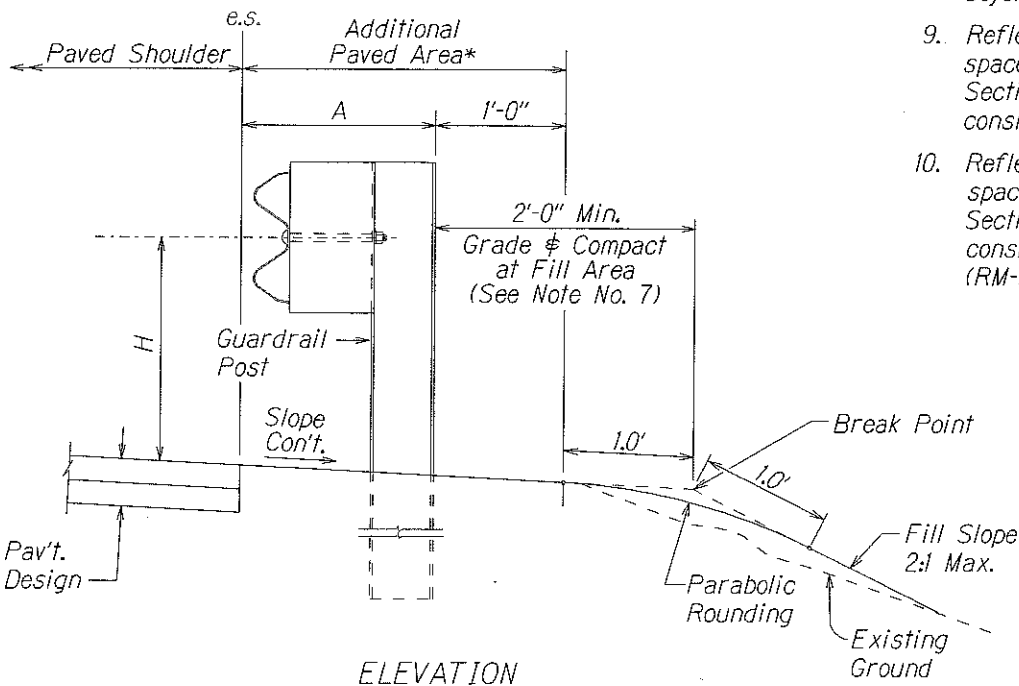
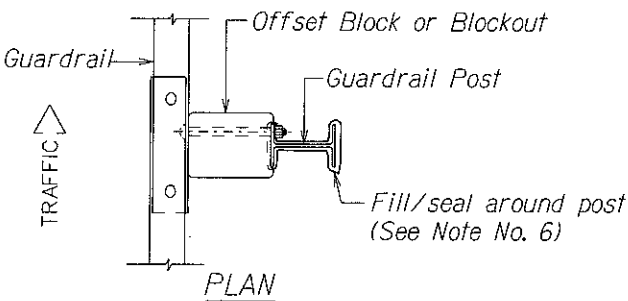
TOP
SIDE
RECYCLED PLASTIC BLOCKOUT (TYPE I)



RECYCLED POLYETHYLENE
OFFSET BLOCK (TYPE II)

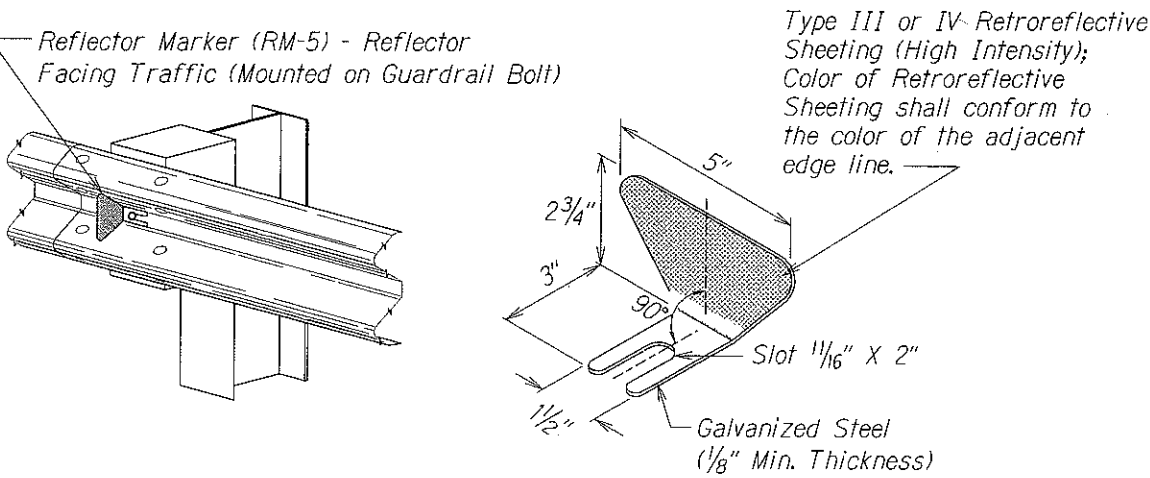


Exploded View
(Rail and washer not shown)
STEEL POST AND BLOCK DETAIL



TYPICAL GUARDRAIL INSTALLATION

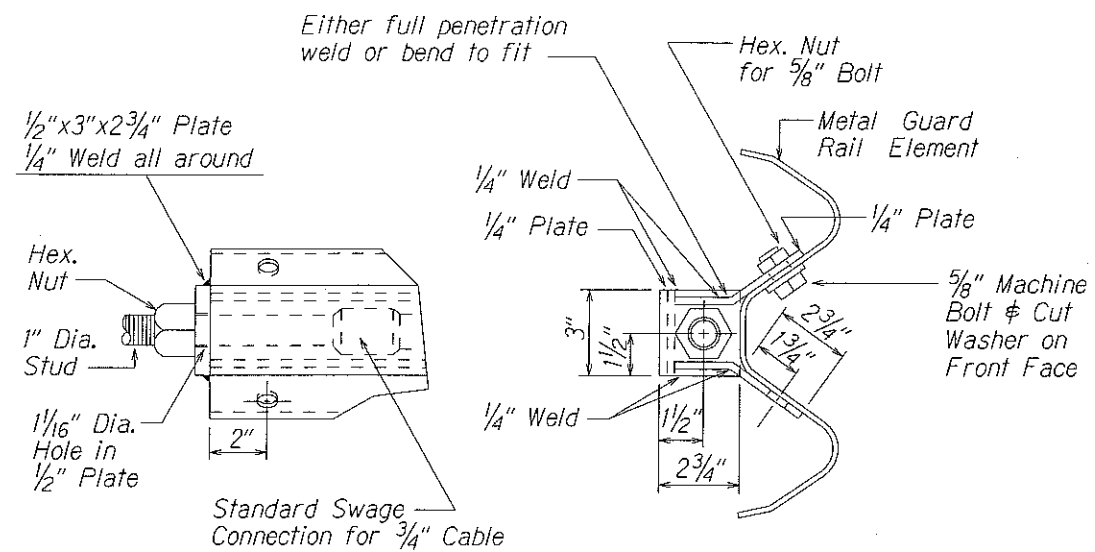
9/15/09	Revised Typical Guardrail Installation (Elevation).
DATE	REVISION



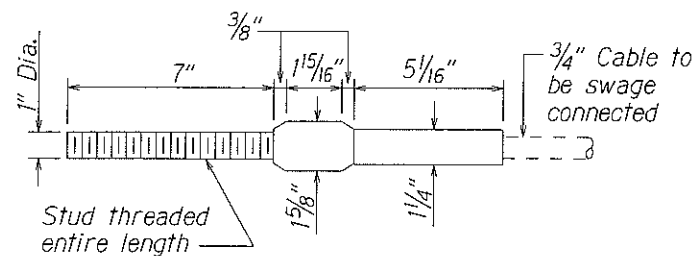
REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION

DESIGNED BY	DATE
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE: ROAD	
1/2" = 1'	
1/4" = 1'	
1/8" = 1'	
1/16" = 1'	

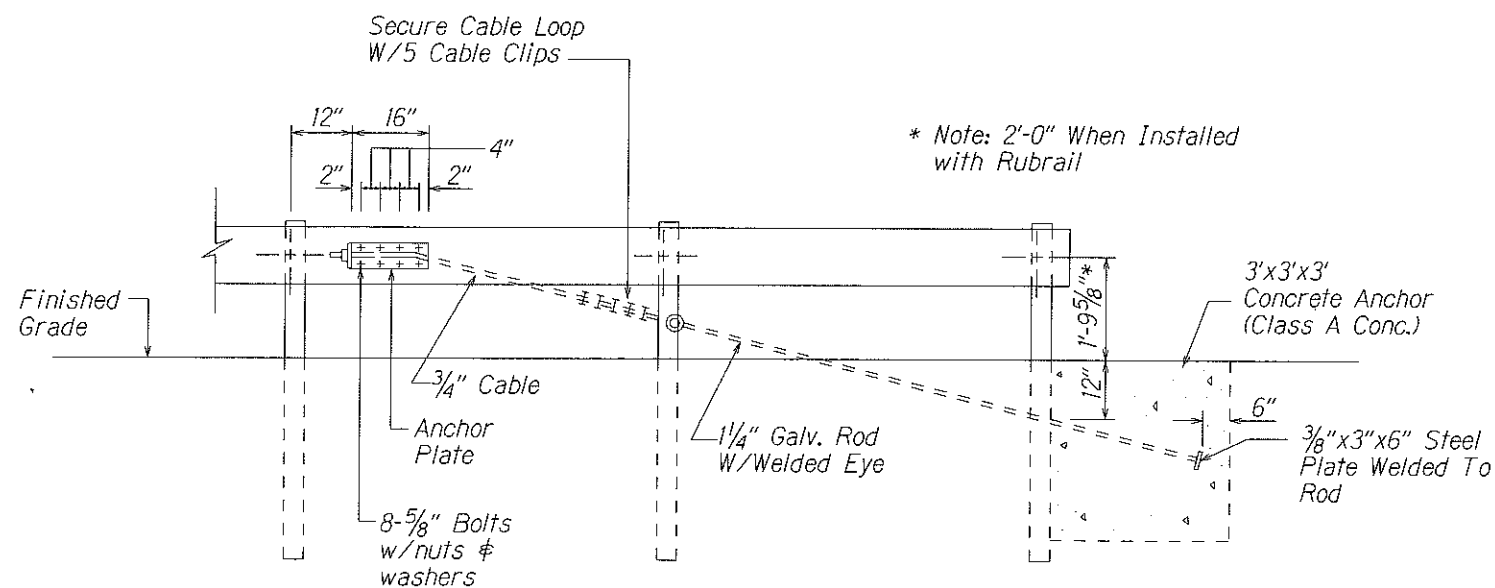
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 24	34



ANCHOR PLATE DETAILS

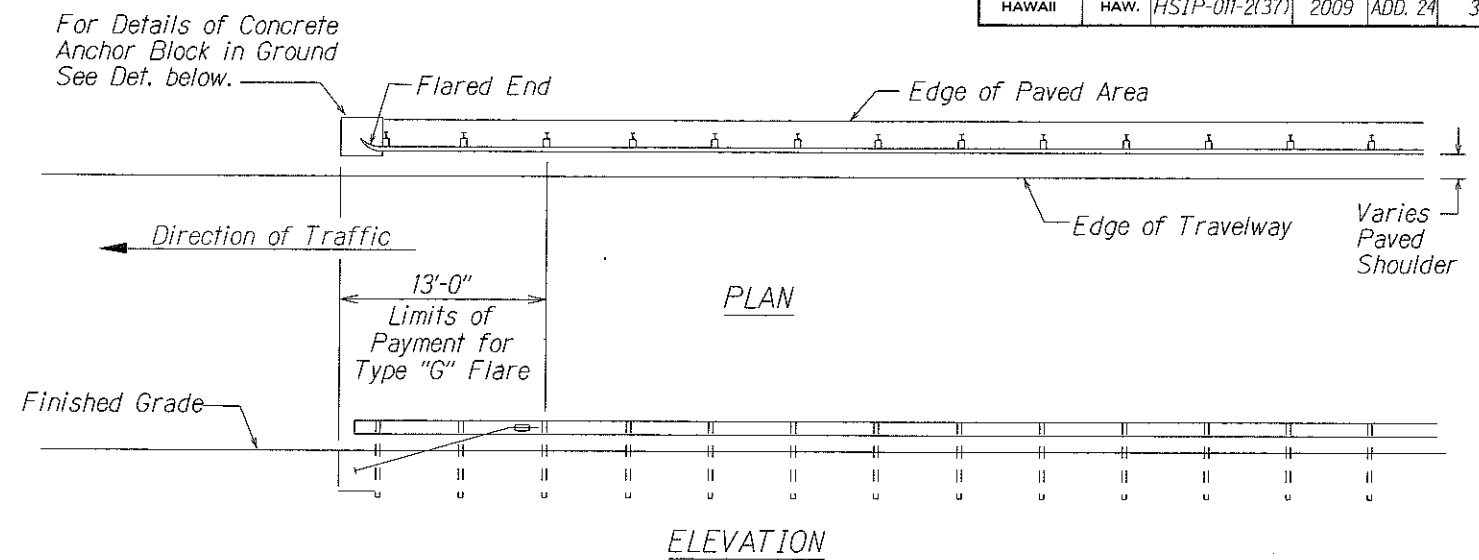


STANDARD SWAGED FITTING AND STUD



ANCHOR BLOCK DETAIL

1. Concrete, G.R.P., excavation, anchor rod and miscellaneous appurtenances necessary to anchor the guardrail ends shall be incidental to metal guardrail.



TYPE "G" FLARE END TERMINAL

NOTE:

Type "G" Modified End Terminal is a site specific end terminal with a taper and radial termini. A site specific detailed drawing is required for all Type "G" Modified End Terminal and must receive Engineer's approval.

The taper (flare rate) of the guardrail shall follow the latest edition of AASHTO'S Roadside Design Guide (currently, Table 5.6 - Suggested Flare Rate for Barrier Design, page 5-21, Jan. 1996 edition).

The radius of the radial termini is an Engineer's judgement based on the site evaluation. The Engineer shall consider safety (minimize the spearing & blunt end situation); degree and potential seriousness of the hazard; bicycle and pedestrian accessibility; maintenance equipment accessibility; Right-of-Way availability; the smallest radii the metal w-beam/thrie-beam railing can be constructed (check with supplier/contractor); posted speed limit; angle of vehicle impact; and aesthetics when designing the Type "G" Modified End Terminal.

During construction, the Contractor shall layout the proposed Type "G" Modified End Terminal and receive approval from the Construction Engineer prior to installation.

ORIGINAL PLAN

SURVEY PLOTTED BY _____ DATE _____

DRAWN BY X _____

DESIGNED BY _____

NOTED BY _____

NOTE BOOK
102 may

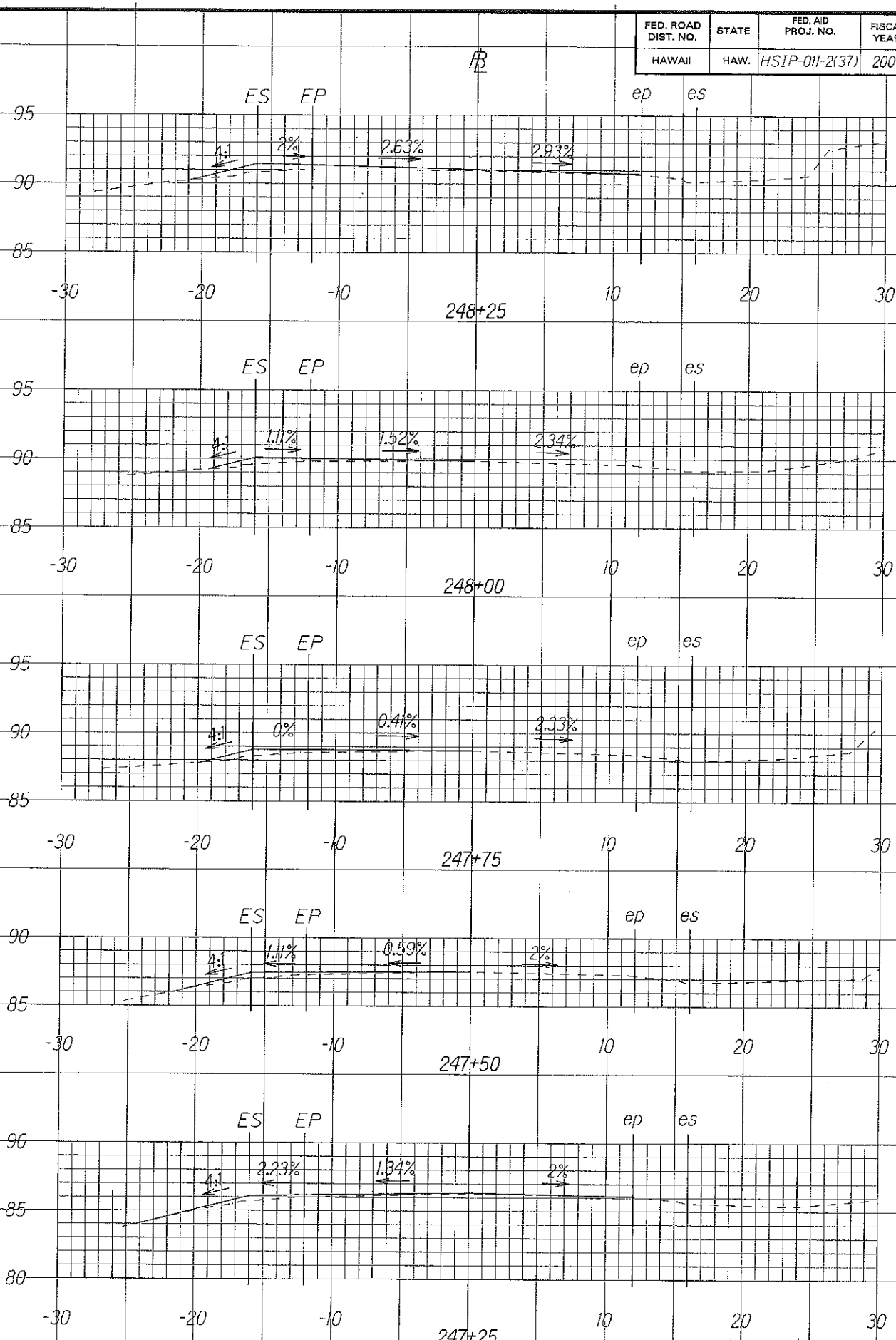
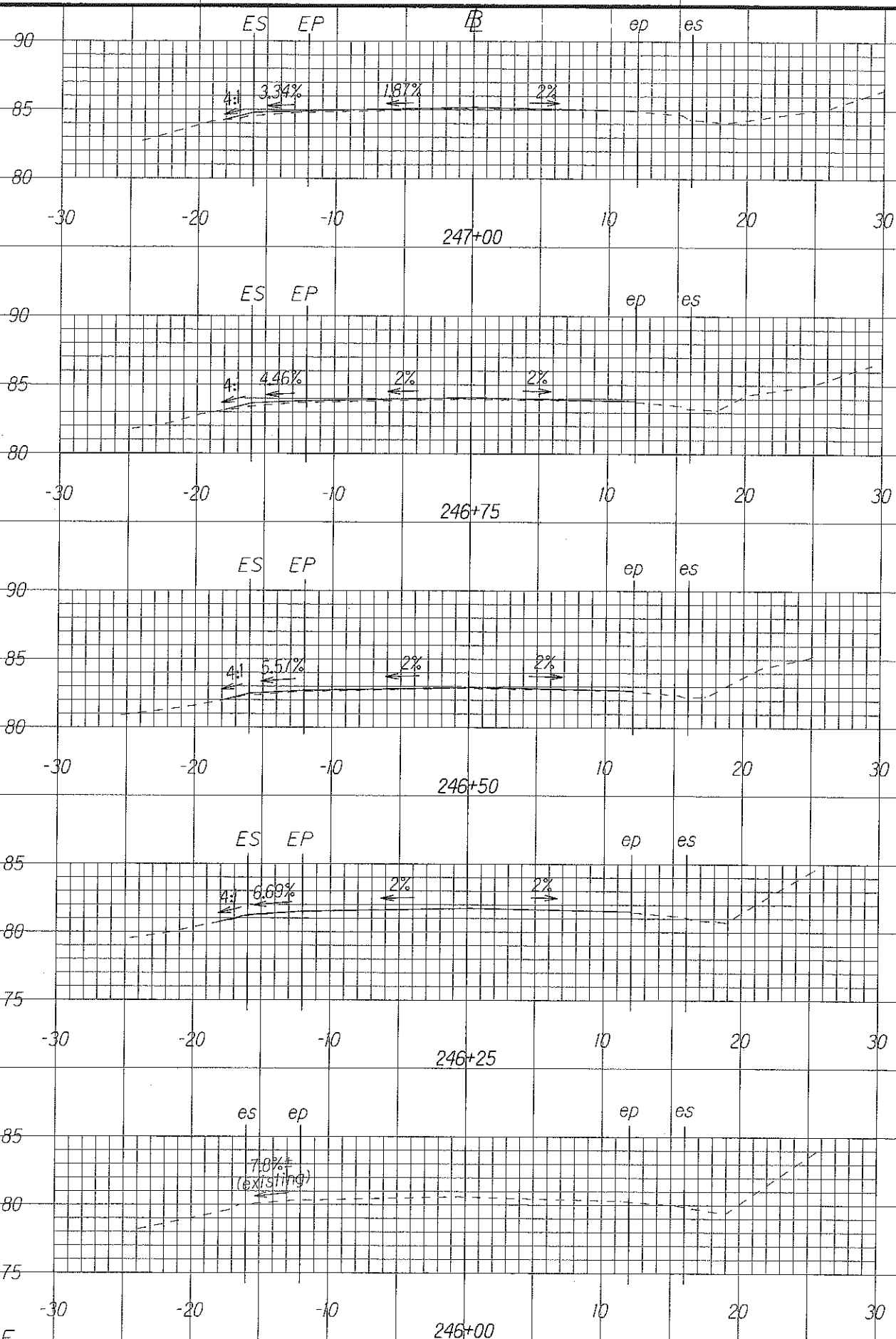
QUANTITIES BY _____

CHECKED BY _____

9/15/2009	Revised Type "G" Flare End Terminal Elevation and Plan Drawings.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>GUARDRAIL DETAILS</u> <u>MAMALAHOA HIGHWAY</u> <u>SAFETY IMPROVEMENT</u> <u>Vicinity of Kiolakaa Homestead Road</u> <u>Federal Aid Project No. HSIP-011-2(37)</u> Scale: NTS Date: September 2009	
SHEET No. 3 OF 5 SHEETS	

ADD. 24

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-21(37)	2009	ADD. 27	34

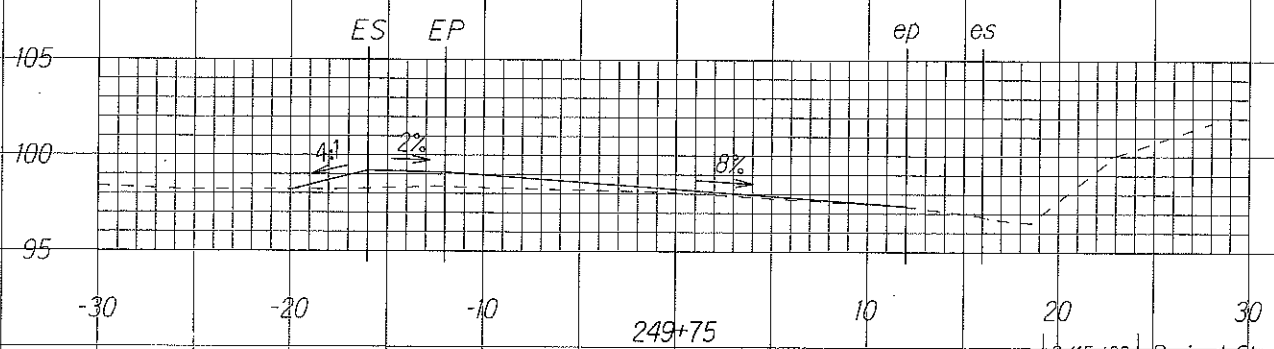
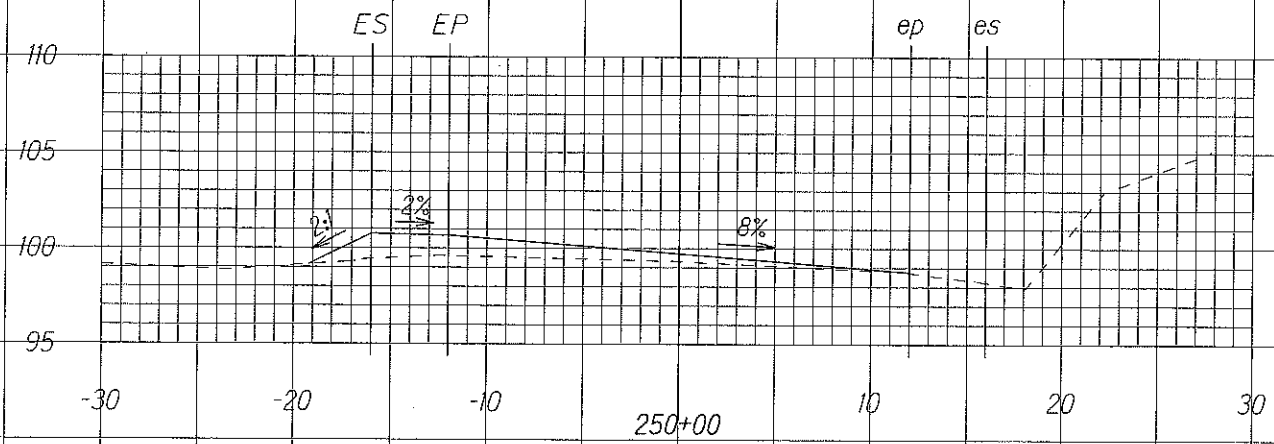
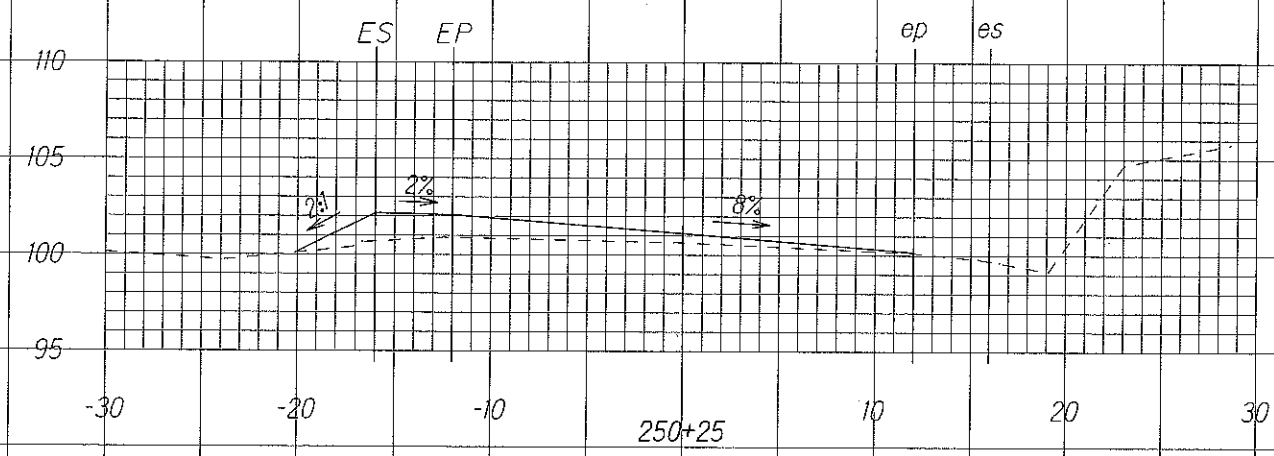
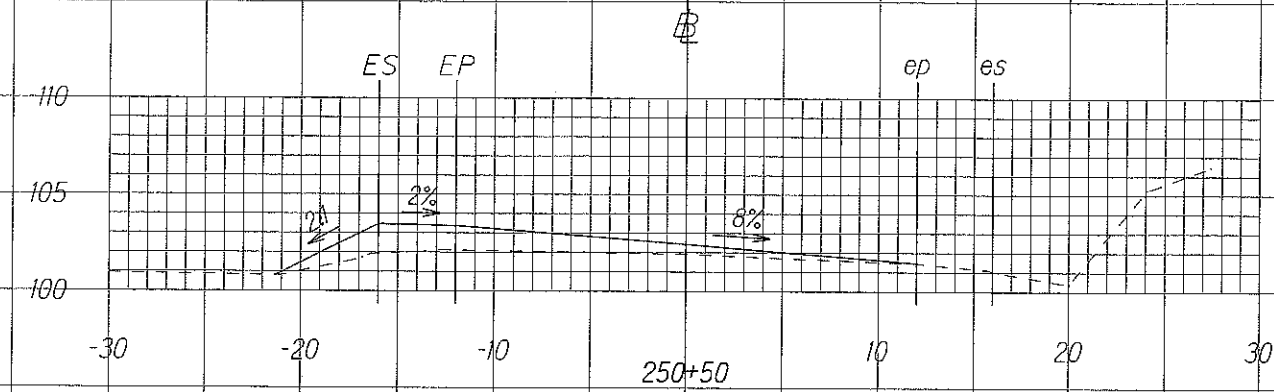
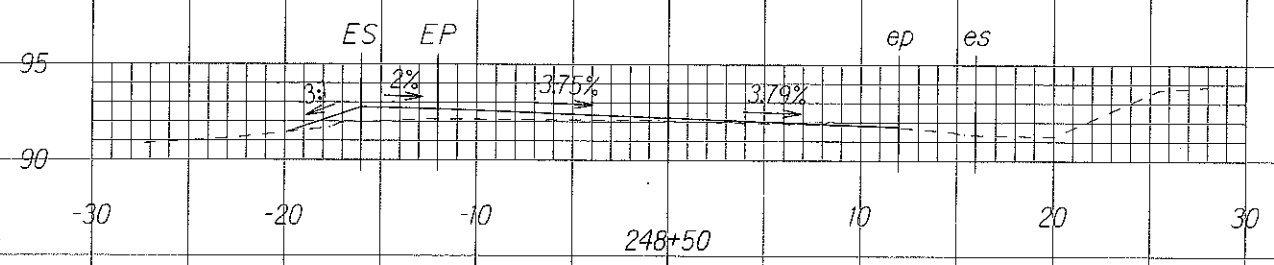
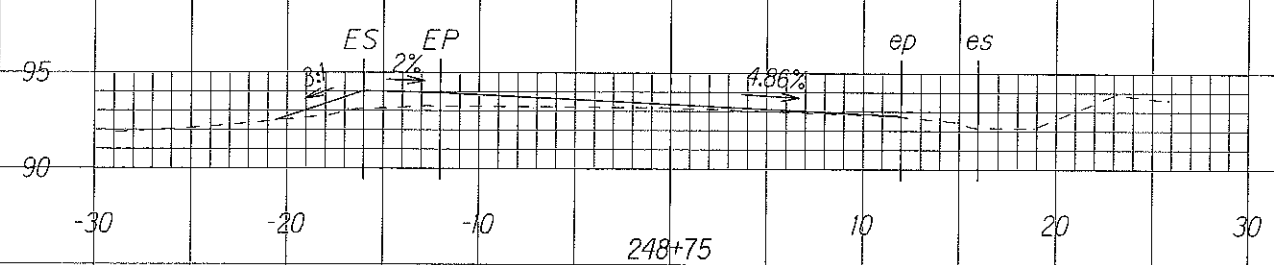
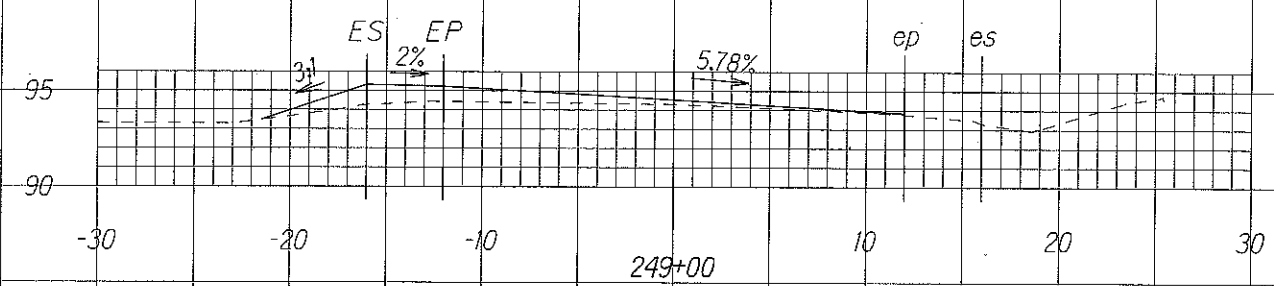
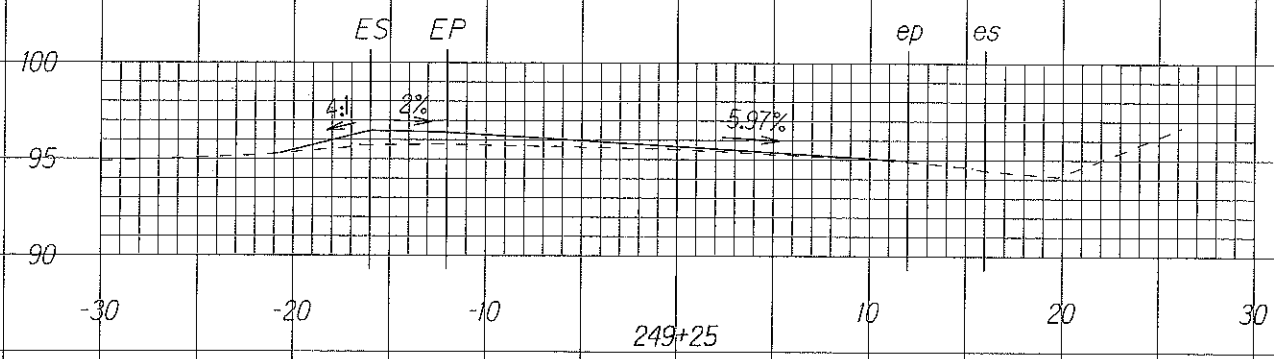
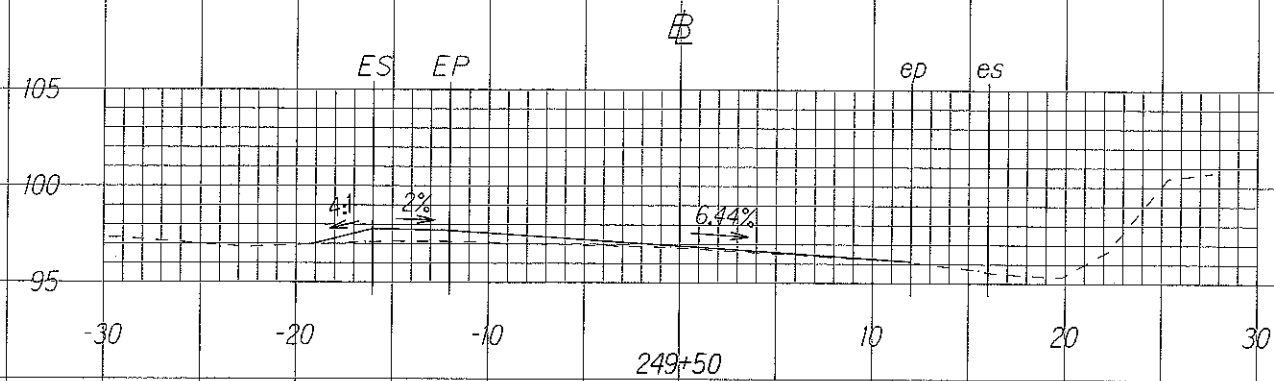


ORIGINAL PLAN
 SURVEY PLOTTED BY
 DATE
 TRACED BY
 DESIGNED BY
 QUANTITIES BY
 CHECKED BY

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 1	OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 28	34

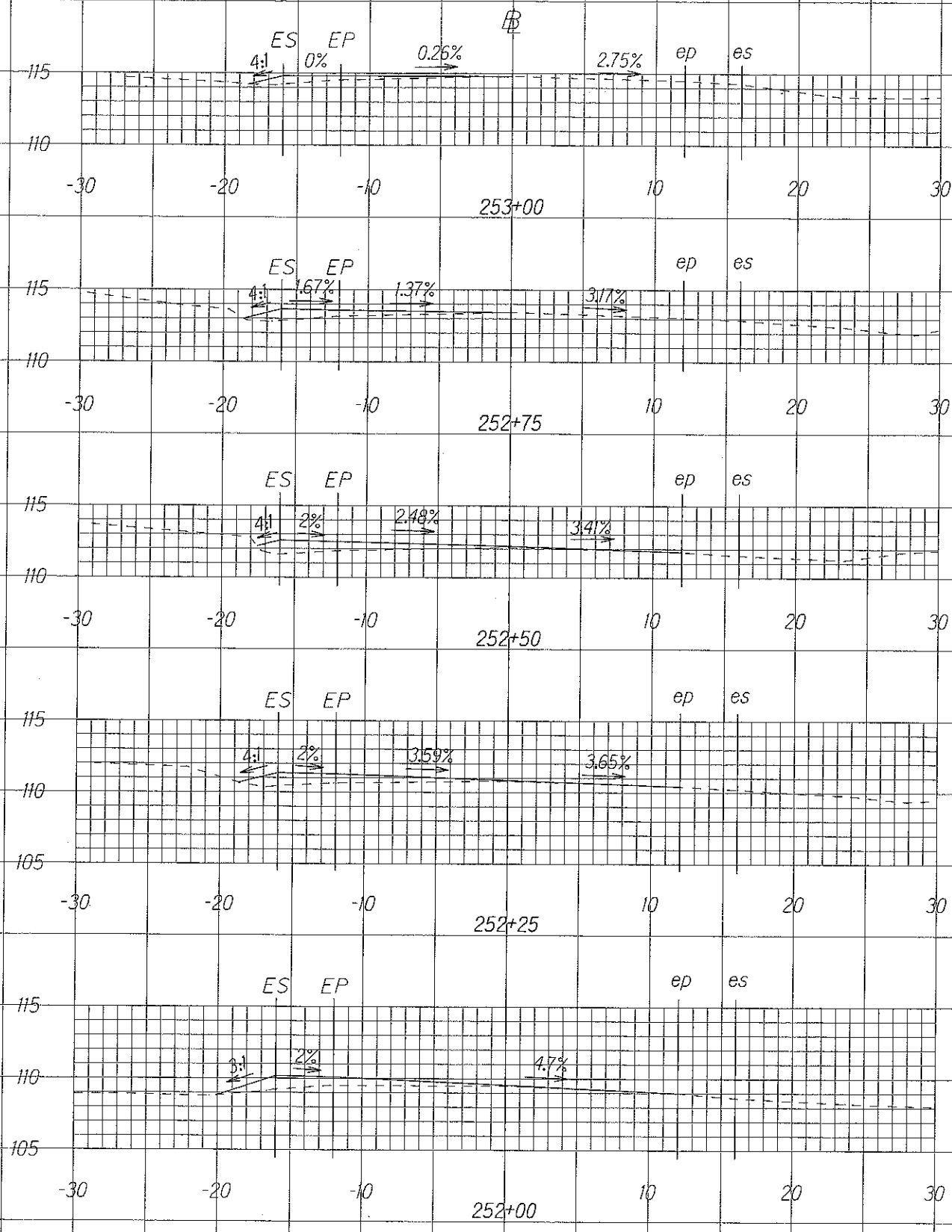
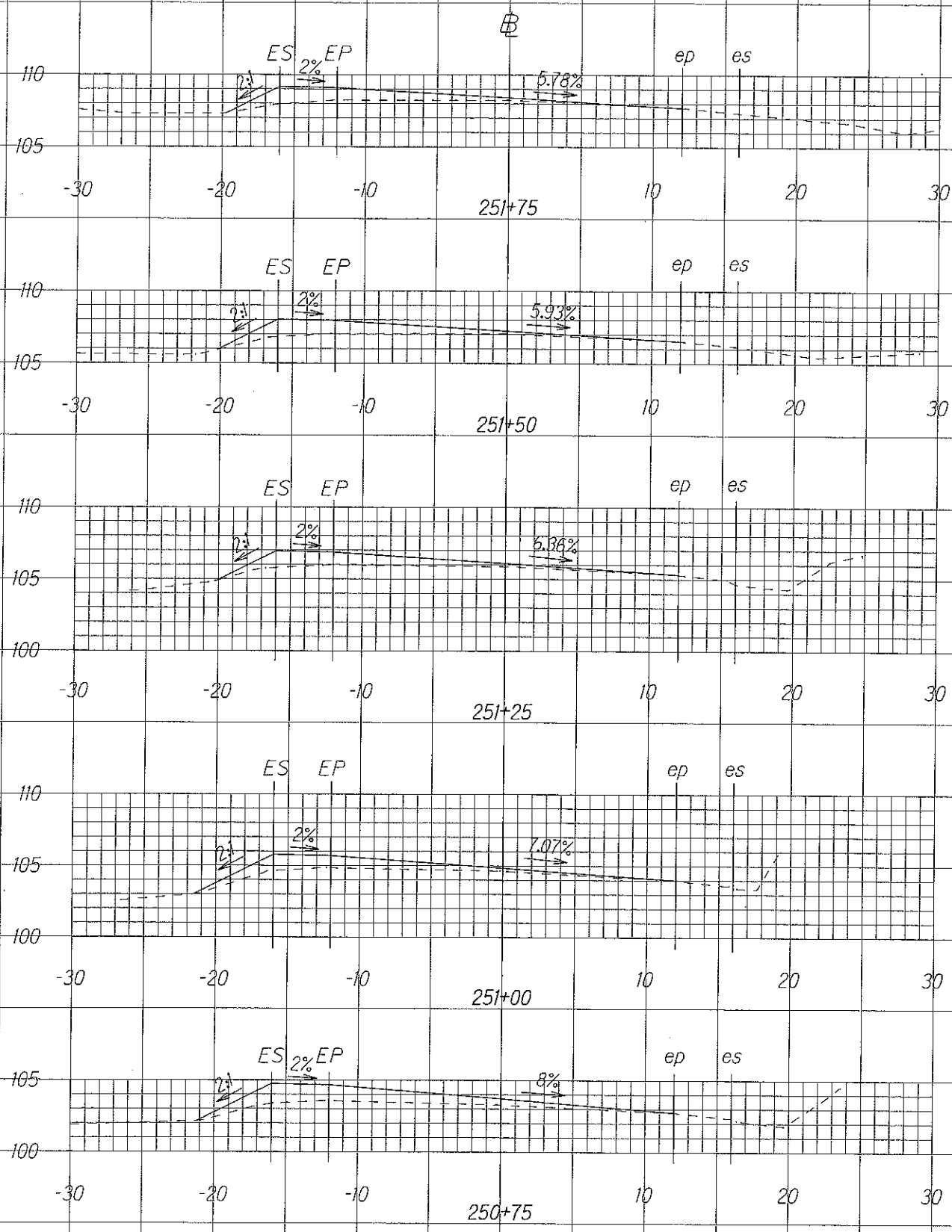


SURVEY PLOTTED BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 DATE: _____
 SCALE: _____
 HORIZONTAL: 1"=5'
 VERTICAL: 1"=5'

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09 Revised Shoulder Slopes.
 DATE REVISION
 SHEET No. 2 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 29	34

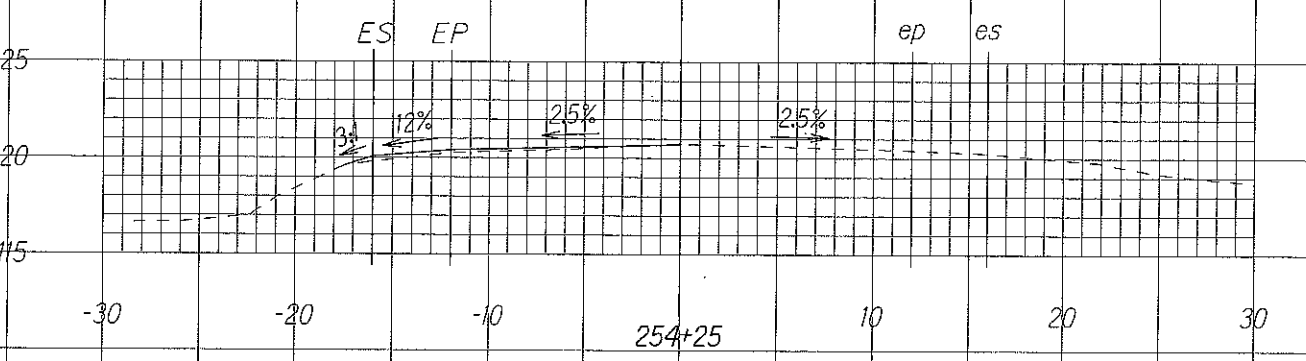
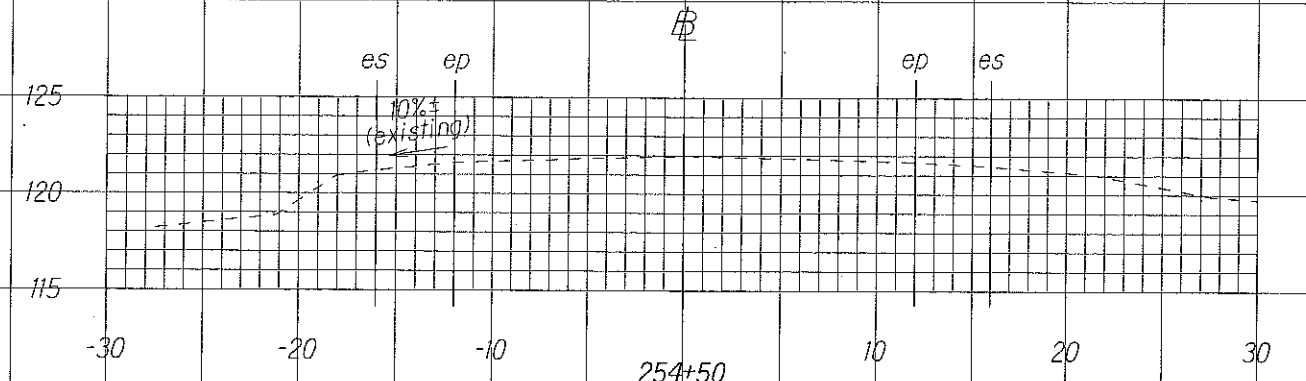
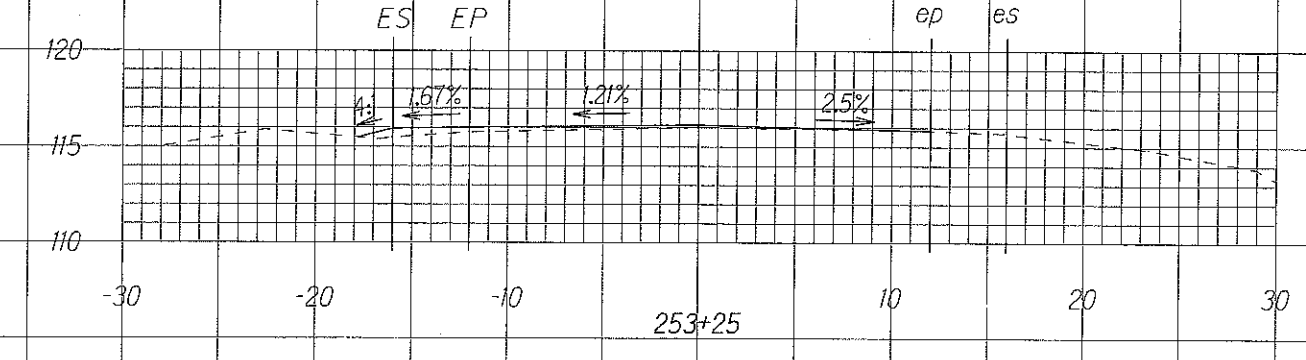
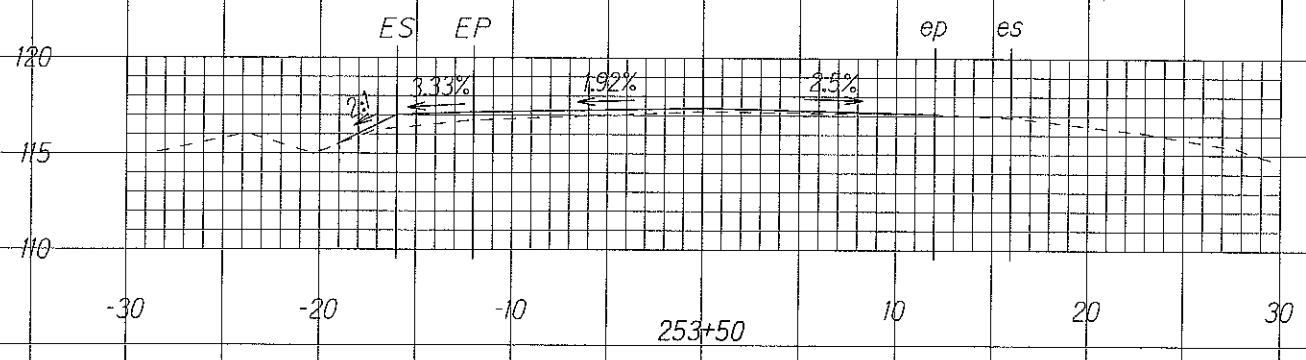
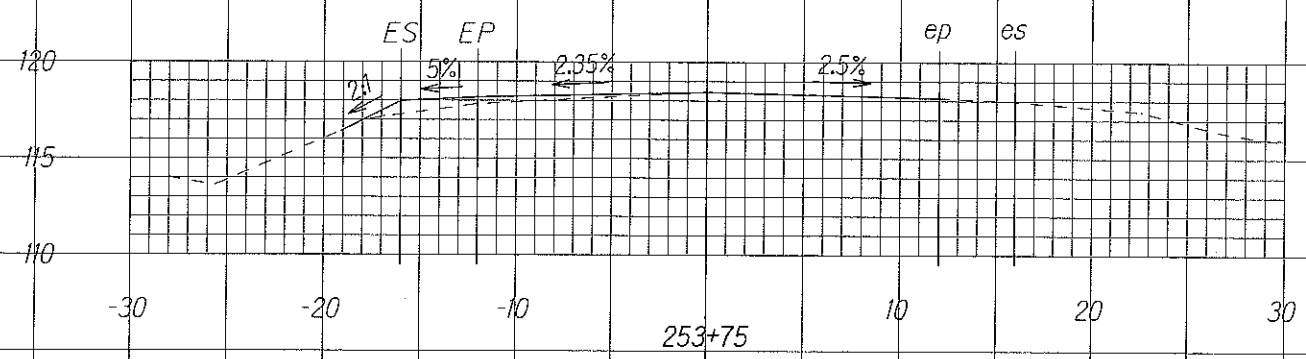
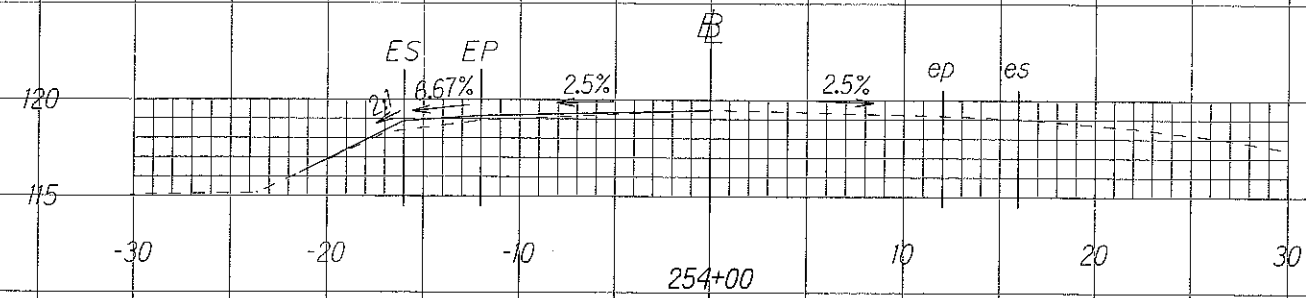


SURVEY PLATTED BY: _____ DATE: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 3	OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 30	34



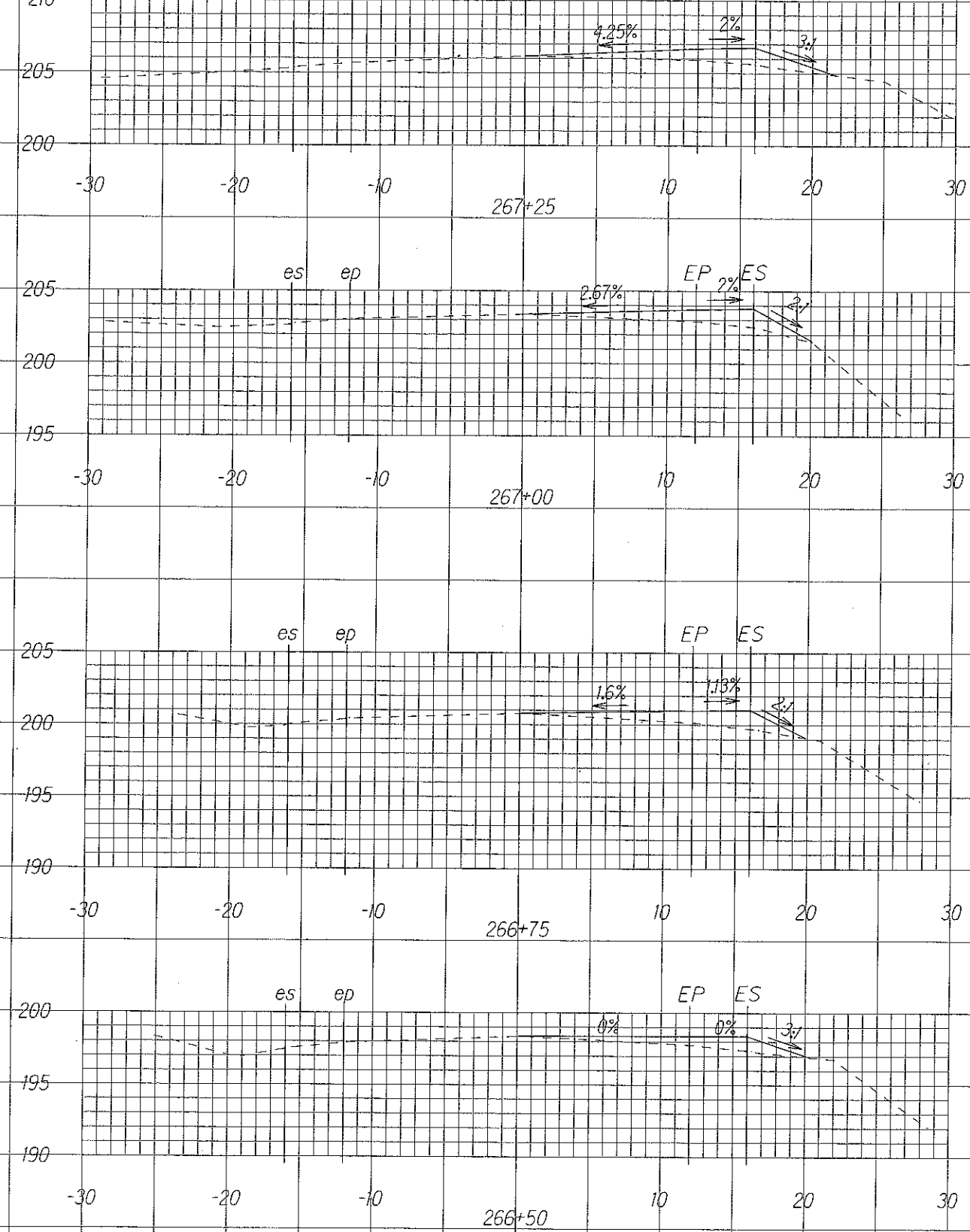
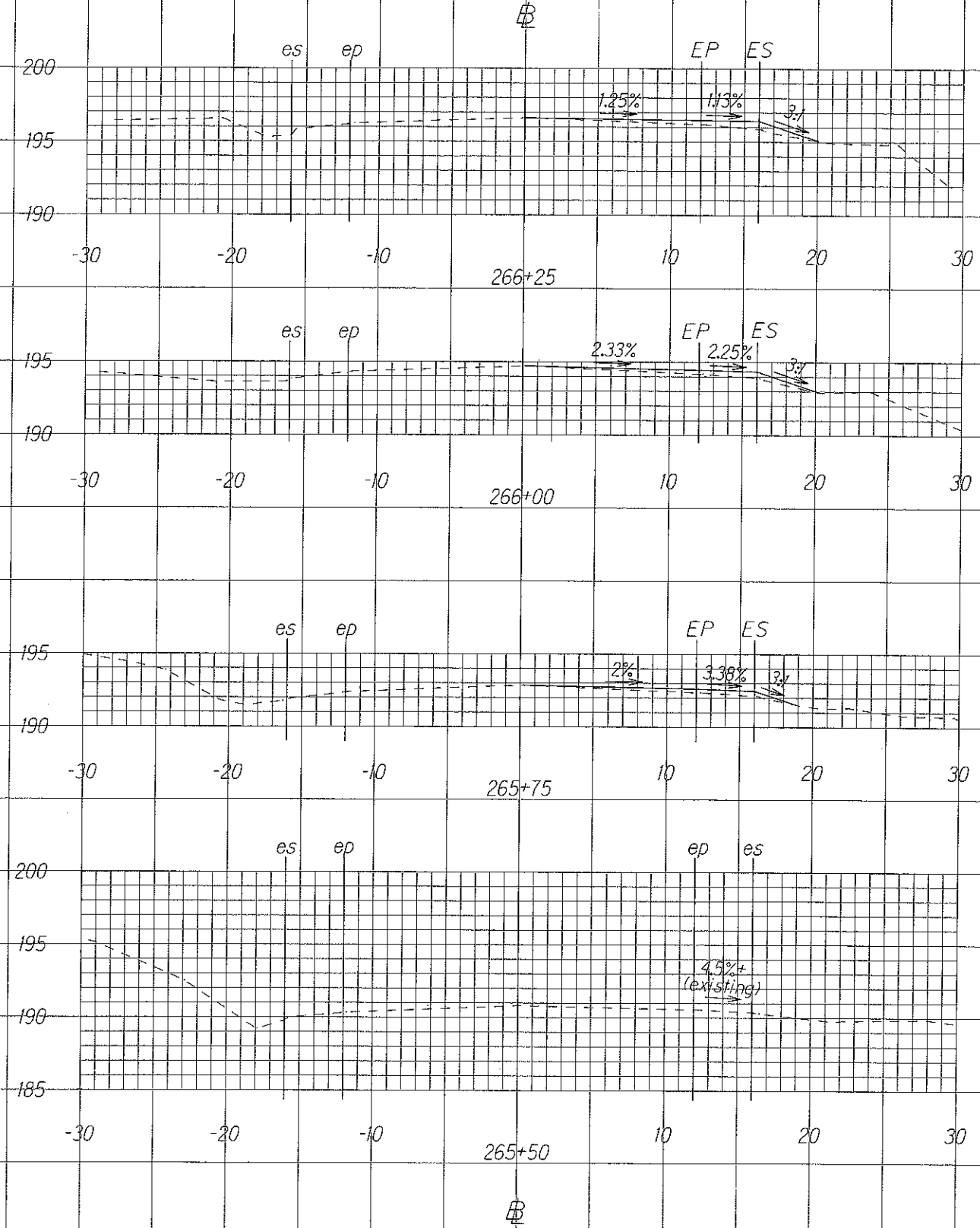
ORIGINAL PLAN
 SURVEY PLotted BY
 DATE
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 TRACED BY
 NOTED BY
 DESIGNED BY
 QUANTITIES BY
 CHECKED BY

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 4	OF 8 SHEETS

ADD. 30

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 31	34

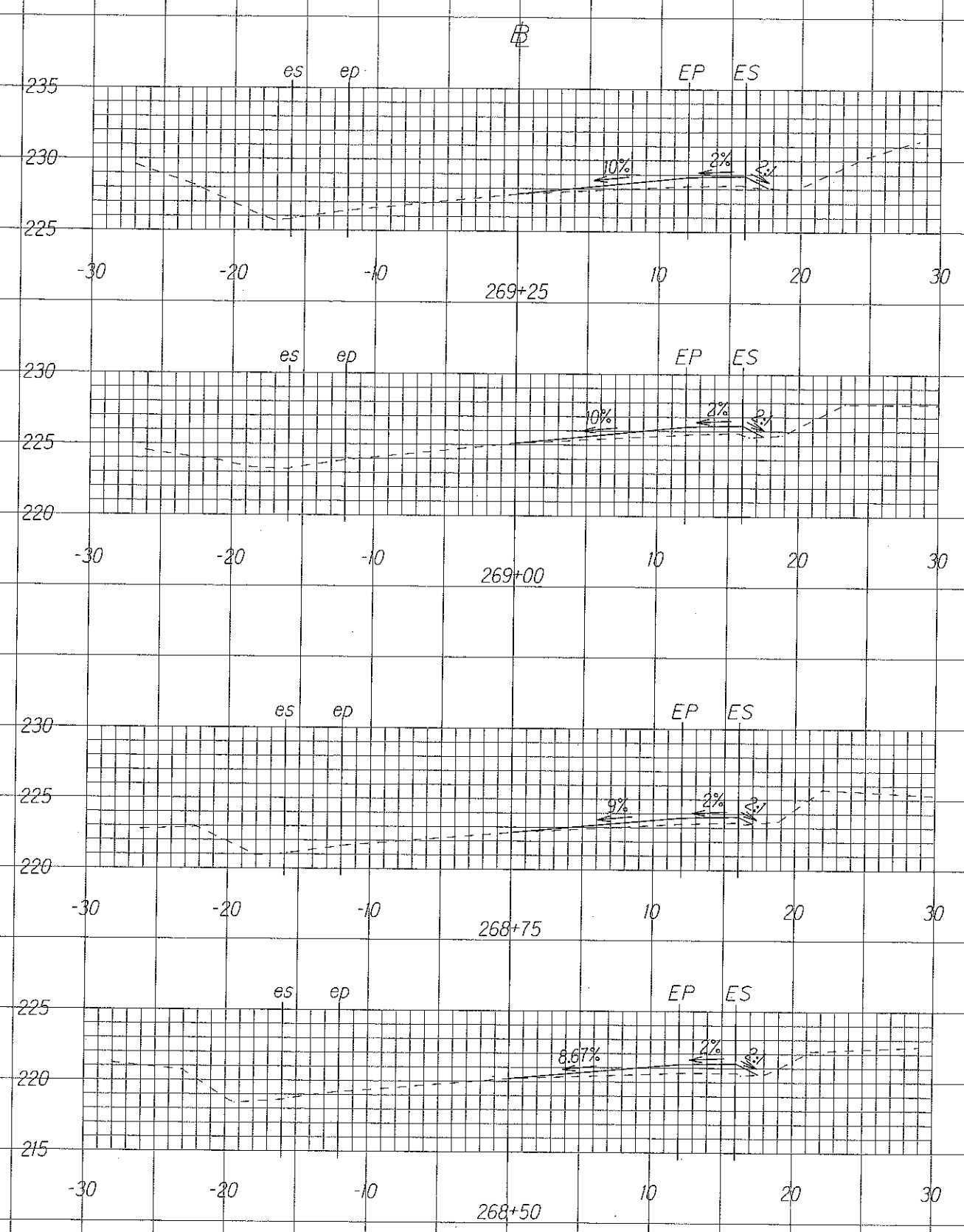
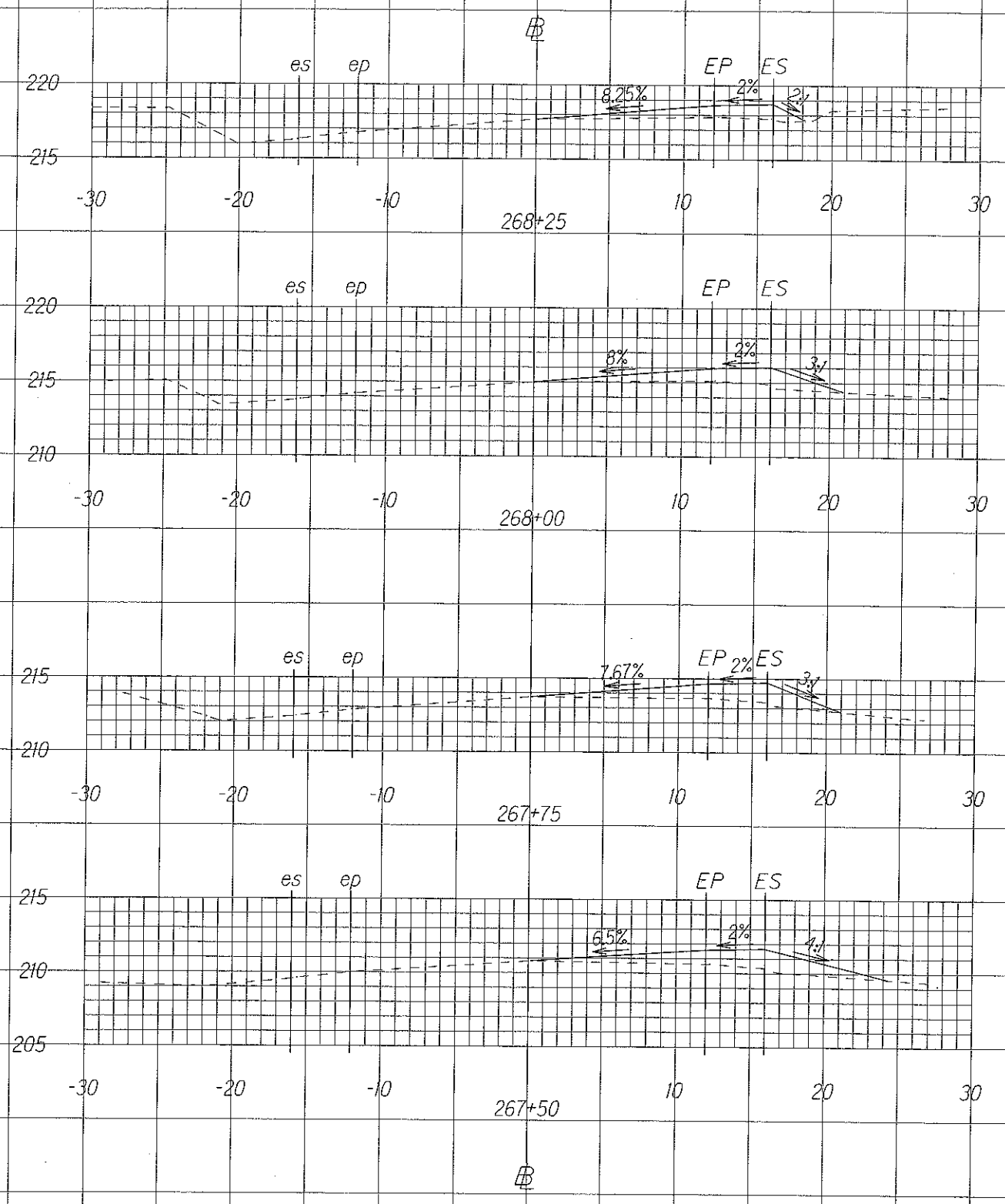


ORIGINAL SURVEY PLANNED BY: _____ DATE: _____
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 QUANTITIES BY: _____
 CHECKED BY: _____

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 5	OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2137	2009	ADD. 32	34

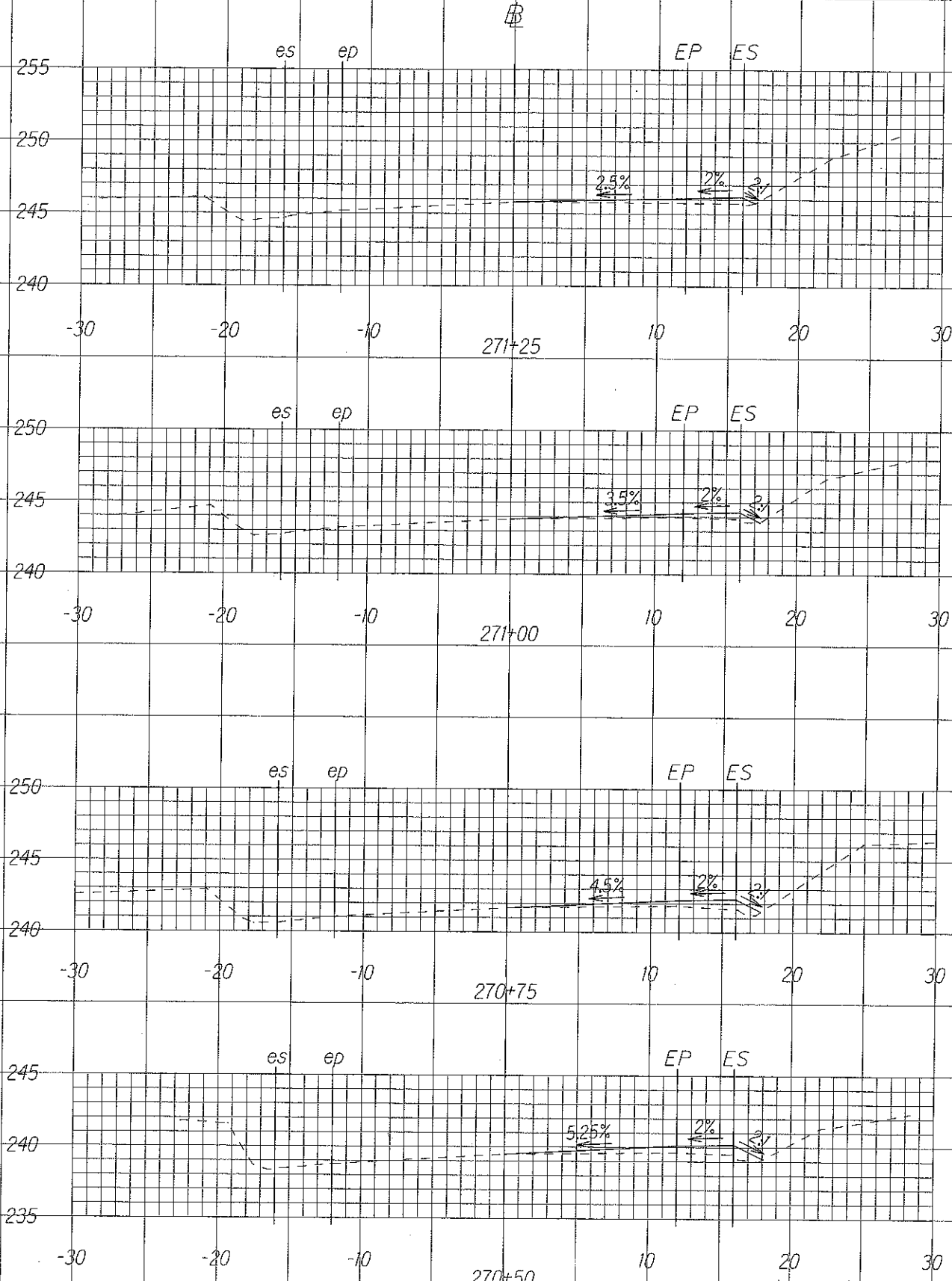
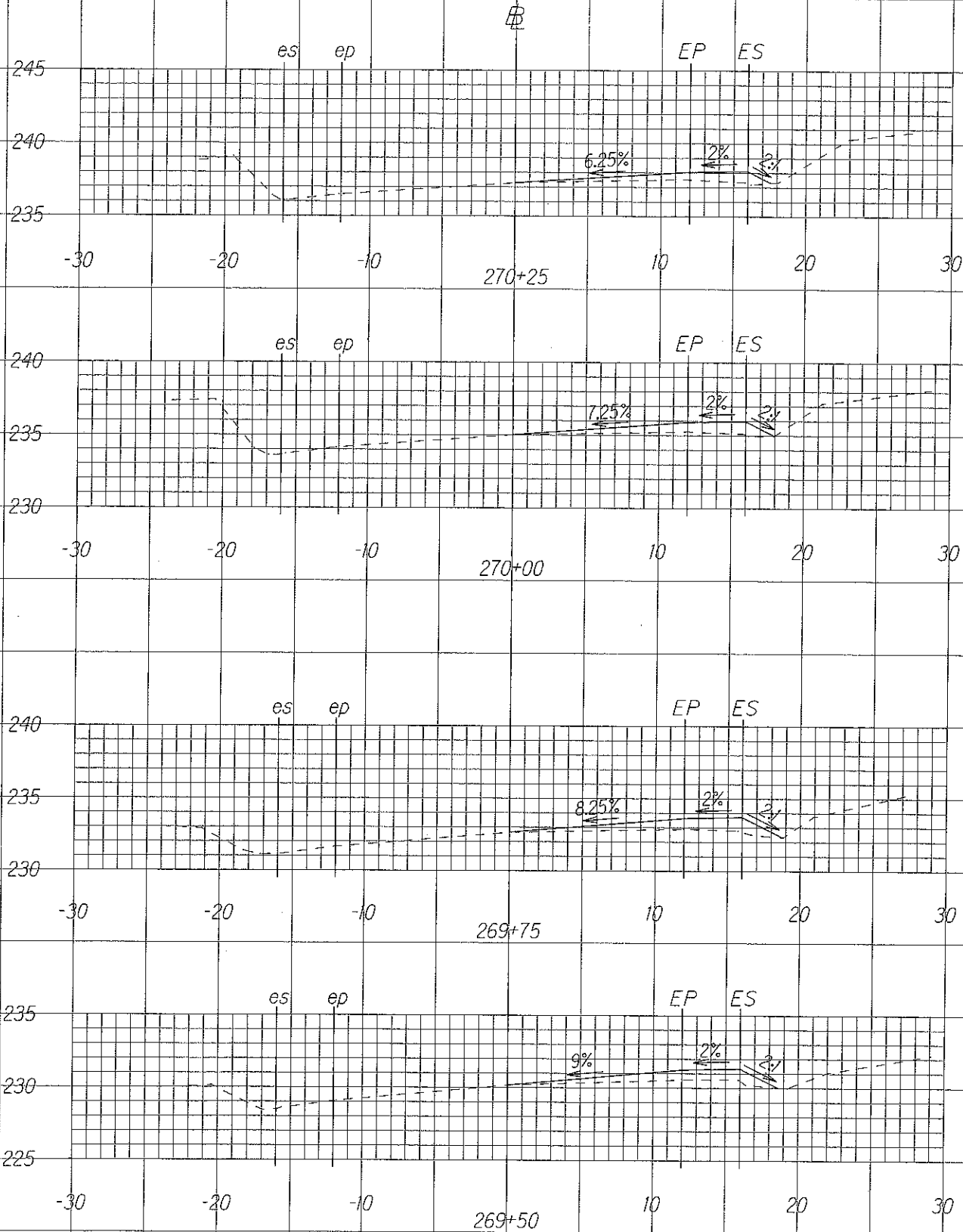


ORIGINAL SURVEY PLOTTED BY _____ DATE _____
 SURVEY BY _____
 TRACED BY _____
 NOTE BOOK DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____

SCALE
 Horizontal: 1"=5'
 Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 6	OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-1137	2009	ADD. 33	34

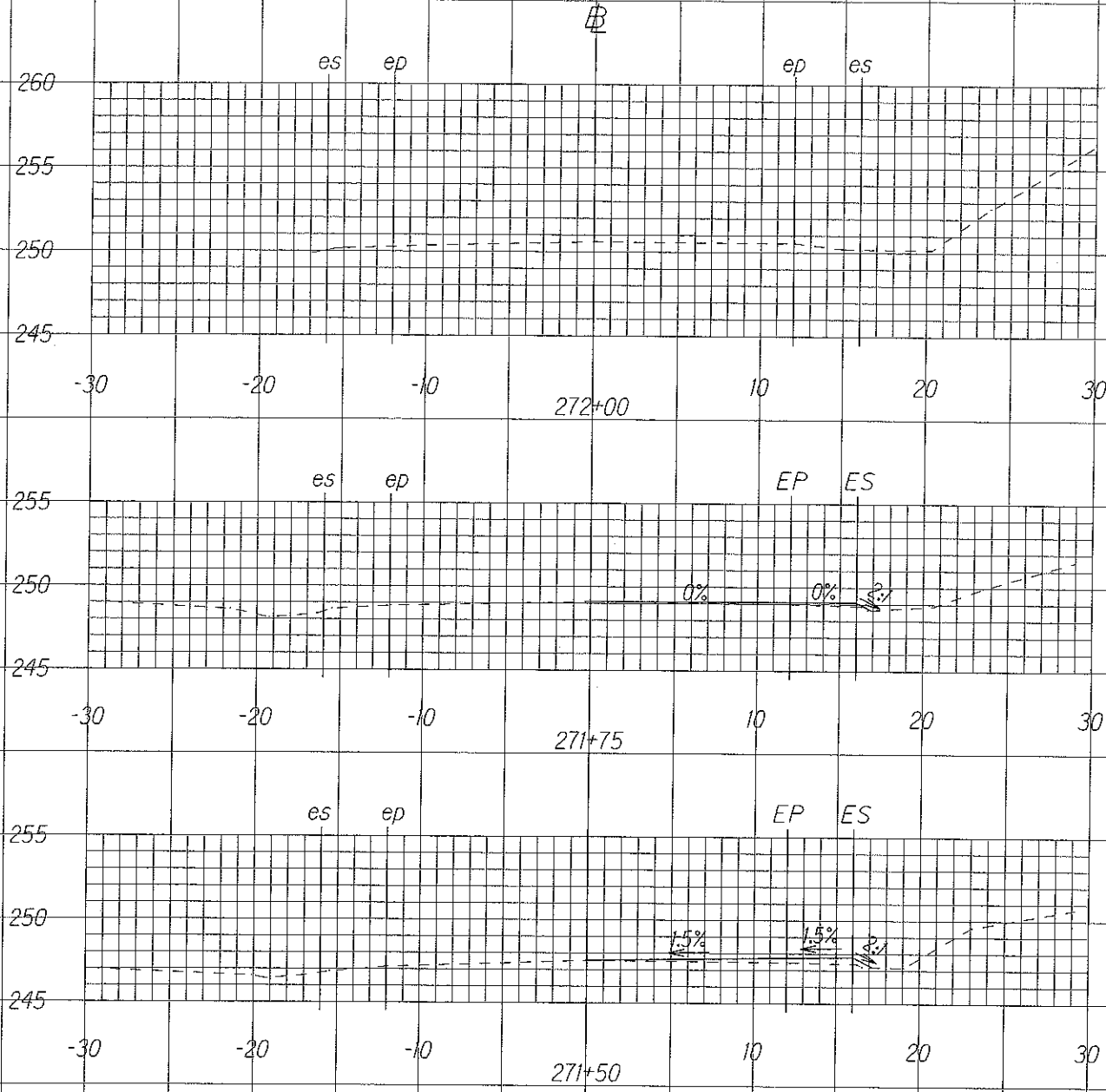


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CHECKED BY		
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QUANTITIES BY		
BY		

SCALE
Horizontal: 1"=5'
Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 7	OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-2(37)	2009	ADD. 34	34



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
10/2/09	DESIGNED BY	
10/2/09	QUANTITIES BY	
10/2/09	CHECKED BY	

SCALE
Horizontal: 1"=5'
Vertical: 1"=5'

9/15/09	Revised Shoulder Slopes.
DATE	REVISION
SHEET No. 8	OF 8 SHEETS