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X	SUPERELEVATION SCHEDULE
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP–0250(007)	2017	1	X

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

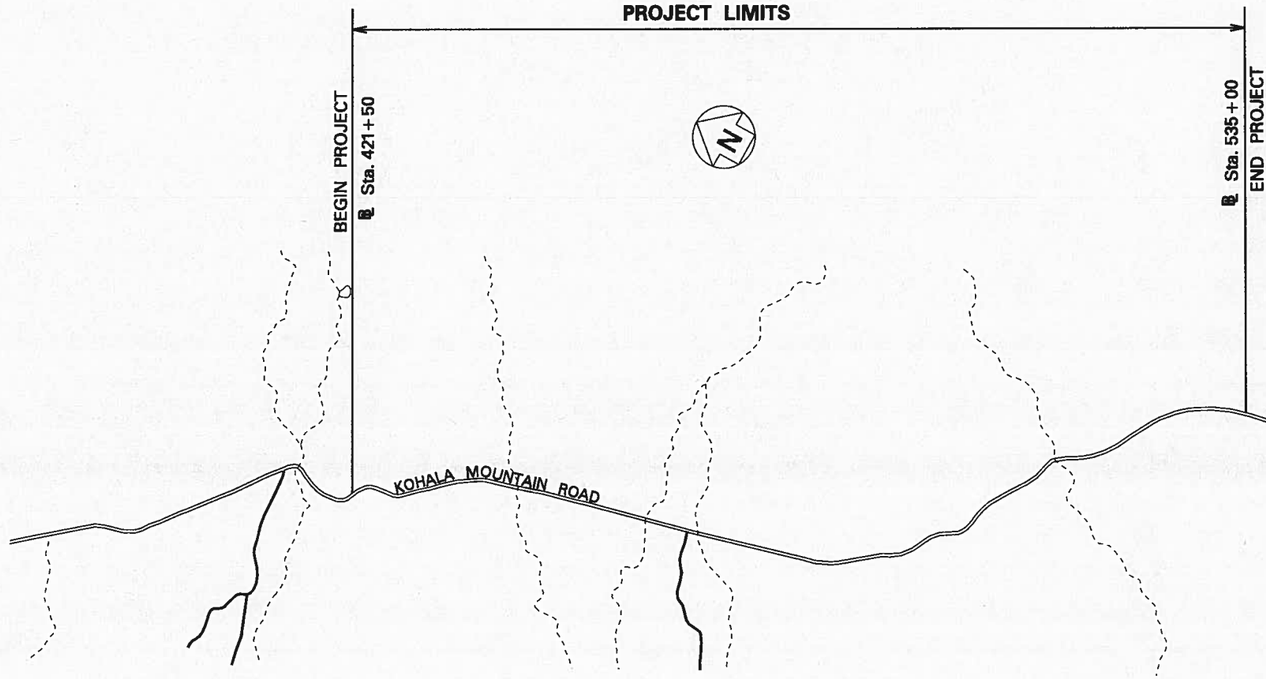
PLANS FOR

Kohala Mountain Road Safety Improvements

FEDERAL–AID PROJECT NO. HSIP–0250(007)

DISTRICT OF SOUTH KOHALA

ISLAND OF HAWAII



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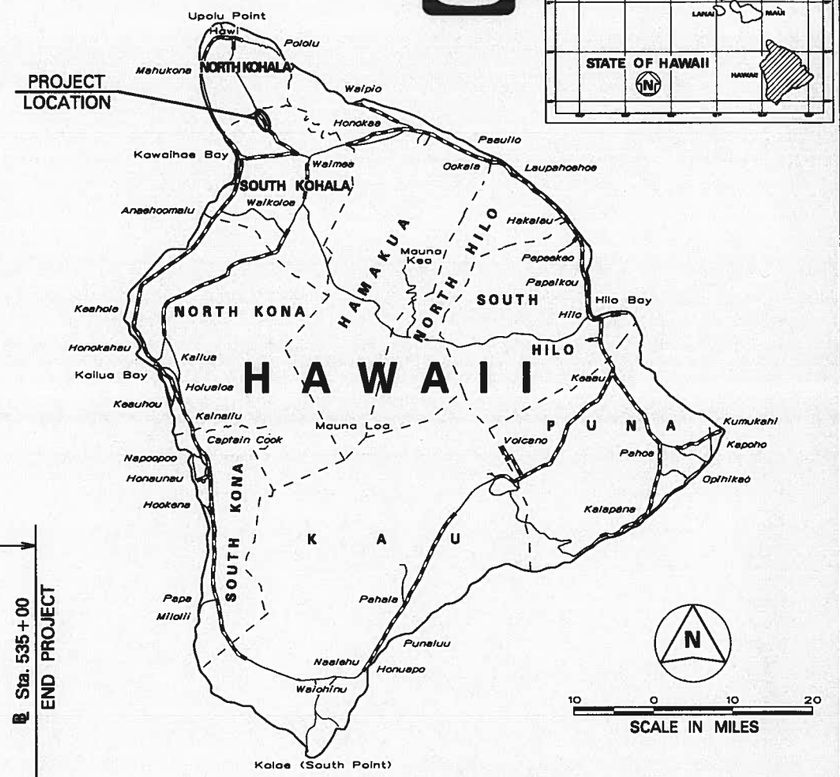
SCALE IN THOUSAND FEET



FEDERAL AID PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION

MILE POST 7.20 TO MILE POST 9.20

DESIGN DESIGNATION	KOHALA MOUNTAIN ROAD M.P. 4.56 TO SOUTH OF KAWAIHAE UKA BRIDGE (M.P. 4.56 – M.P. 6.56)
ADT (2016)	2,700
ADT (2026)	3,300
DHV	390
D	55/45
T	6.0%
V	35 M.P.H.

LAYOUT PLAN

GROSS LENGTH OF PROJECT..... 2.0 MILES

NET LENGTH OF PROJECT..... 2.0 MILES

HWY–D
DESIGNED BY

HWY–DD
MANAGED BY

692–7570
PHONE

X
DATE

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

DIR. OF TRANSPORTATION DATE

GENERAL NOTES

1. The scope of work for this project consists of cold planing and resurfacing of existing pavement; construction of pavement shoulder pullouts, grouted rubble paving structure; installation of centerline rumble strips, curve ahead signs, flashing beacons, chevrons, guardrails, pavement markings and signing; hydromulch seeding.

2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracting, 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 may affect these properties. Toning shall be considered incidentalto the various contract items and will not be paid for seperately. 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 paid for under Item No. 209.0100 Installation, Maintenance, Monitoring, and Removal of BMP.

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 resurfacing and reconstruction, including the beginning and end of project, connecting approaches, 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 guardrail and post, asphalt concrete pavement, 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%.

18. The Contractor shall provide and maintain for access to and from all existing driveways, and side streets and cross streets at all times; shall coordinate with adjacent property owners including possible unavoidable closure of access to/from businesses/homes and notify users and adjacent property owners at least 5 workings days in advance prior to reconstruction/paving the driveways/roadways. This work shall be considered incidental to various contract items and will not be paid for separately.

20. 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. III and will not be paid for separately.

21. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Highways Right-of-Way Branch at telephone no. 692-7332.

22. During non-working hours, the trenches on all streets shall be covered using 1-inch thick steel plates with non-skid surfaces and all lanes maintained for traffic.

23. The Contractor shall be responsible for all Highway Monuments and State Survey Disk in the project area. If any of the Highway Monuments or Survey Disks are disturbed or removed, the contractor will be responsible to reset the monuments at no cost to the State Highways Division. The contractor shall hire a State of Hawaii Licensed Land Surveyor to reset the monuments at the cost of the contractors.

24. The contractor shall obtain all necessary permits prior to start of work at his own cost.

25. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.

LEGEND

Symbol	Description
	Existing Concrete
	New Concrete/Bus Pad
	Sidewalk Reconstruction
	Reconstruction Areas
	Cold Planing Resurfacing Limits
—e—	Existing Electrical Line
jp	Existing Joint Pole
emh	Existing Electric Manhole
EMH	Adjusted Elec. MH Frame/Cover
—t—	Existing Telephone Line
tp	Existing Telephone Pole
tmh	Existing Telephone Manhole
tpb	Existing Telephone Pull Box
TMH	Adjusted Tele. MH Frame/Cover
—w—12—	Existing 12" Water Line
wmh	Existing Water Manhole
WMH	Adjusted Water MH Frame/Cover
wv	Existing Water Valve Box
WV	Adjusted Water Valve Box
wm	Existing Water Meter
WM	Adjusted Water Meter
fh	Existing Fire Hydrant
(TI)	Technical Infeasibility
(1A)	Ramp Number
—s—12—	Existing Sewer Line
smh	Existing Sewer Manhole
SMH	Adjusted Sewer MH Frame/Cover
—g—6—	Existing 6" Gas Line
gv	Existing Gas Valve Box
GV	Adjusted Gas Valve Box
gmh	Existing Gas Manhole
GMH	Adjusted Gas MH Frame/Cover
mon.	Existing Monument
MON.	Adjusted Monument
---d--24---	Existing 24" Drain Line
sdmh	Existing Storm Drain Manhole
SDMH	Adjusted Storm Drain MH Frame/Cover
gdi	Existing Grated Drop Inlet
cb	Existing Catch Basin
sign	Existing Traffic Sign
hl	Existing Highway Lighting Standard
hlpb	Existing Highway Lighting Pullbox
tsp	Existing Traffic Signal Pole
tspb	Existing Traffic Signal Pullbox
TSPB	Adjusted Traffic Signal Pullbox
	Existing Metal Guardrail
	New Metal Guardrail
—x—	Existing Chain Link Fence
	New Chain Link Fence

ORIGINAL PLAN — SURVEY PLOTTED BY; DRAWN BY X; TRACED BY; DESIGNED BY X; QUANTITIES BY; CHECKED BY; NOTE BOOK; DATE X

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

KOHALA MOUNTAIN ROAD
SAFETY IMPROVEMENTS
Federal Aid Project No. HSIP-0250(007)

Date: April, 2017

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	4	X

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. See Special Provisions Section 209 - Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.

2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.

3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.

4. The Engineer may assess liquidated damages of up to $27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.

5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.

6. If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.

7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 30 calendar days of contract execution. The Site-Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com.

B. WASTE DISPOSAL:

1. Waste Materials
   Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 30 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.

2. Hazardous Waste
   Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

3. Sanitary Waste
   Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.

4. Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.

5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.

9. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

REDUCED PLAN (HALF SIZE)
0 1 2 3
3 INCHES OF ORIGINAL PLAN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

KOHALA MOUNTAIN ROAD
SAFETY IMPROVEMENTS
Federal Aid Project No. HSIP-0250(007)

Date: April, 2017

SHEET No. 1 OF 3 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY X | TRACED BY | DESIGNED BY X | QUANTITIES BY | CHECKED BY | NOTE BOOK | DATE 10/5/15

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	5	X

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

12. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.

13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

14. For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan
   a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
   c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
   d. Keep products in their original containers with the original manufacturer's label.
   e. Do not mix substances with one another unless recommended by the manufacturer.
   f. Whenever possible, use a product up completely before disposing of the container.
   g. Follow manufacturer's recommendations for proper use and disposal.
   h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan
   a. Keep products in original containers unless they are not resealable.
   b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
   c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan
   The following product specific practices shall be followed onsite:

   a. Petroleum Based Products:
   Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

   b. Fertilizers:
   Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

   c. Paints:
   Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

   d. Concrete Trucks:
   Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan
   a. Post a spill prevention plan to include measures to prevent and clean up each spill.
   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
   e. Clean up all spills immediately after discovery.
   f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

   g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

REDUCED PLAN
(HALF SIZE)
0 1 2 3
3 INCHES OF ORIGINAL PLAN

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY X | TRACED BY | DESIGNED BY X | QUANTITIES BY | CHECKED BY | NOTE BOOK | DATE 10/5/15

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

KOHALA MOUNTAIN ROAD
SAFETY IMPROVEMENTS
Federal Aid Project Nos. HSIP-0250(007)

Date: April, 2017

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	6	X

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:

   a. NPDES Permit for Construction Activities

F. SITE-SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.stormwaterhawaii.com/resources/contractors-and-consultants/ under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/ under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-2).

2. Contain on-site runoff using Perimeter Sediment Controls
   a. SC-1 Silt Fence
   b. SC-5 Vegetated Filter Strips and Buffers
   c. SC-8 Compost Filter Berm
   d. SC-13 Sandbag Barrier
   e. SC-14 Brush or Rock Filter

3. Control offsite runoff from entering construction area
   a. EC-8 Run-On Diversion
   b. SC-6 Earth Dike
   c. SC-7 Temporary Drains and Swales

4. Incorporate applicable Site Management BMP
   a. SM-1 Employee Training
   b. SM-2 Material Delivery and Storage
   c. SM-3 Material Use
   d. SM-4 Protection of Stockpiles
   e. SM-6 Solid Waste Management
   f. SM-7 Sanitary/Septic Waste Management
   g. SM-9 Hazardous Waste Management
   h. SM-10 Spill Prevention and Control
   i. SM-11 Vehicle and Equipment Cleaning
   j. SM-12 Vehicle and Equipment Maintenance
   k. SM-13 Vehicle and Equipment Refueling
   l. SM-14 Scheduling
   m. SM-15 Location of Potential Sources of Sediment
   n. SM-16 Preservation of Existing Vegetation
   o. SM-18 Dust Control

5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (EC-2) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste including installing a Concrete Washout Area (SM-5) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

REDUCED PLAN
(HALF SIZE)
0 1 2 3
3 INCHES OF ORIGINAL PLAN

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY X | TRACED BY | DESIGNED BY X | QUANTITIES BY | CHECKED BY | DATE 10/5/15

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

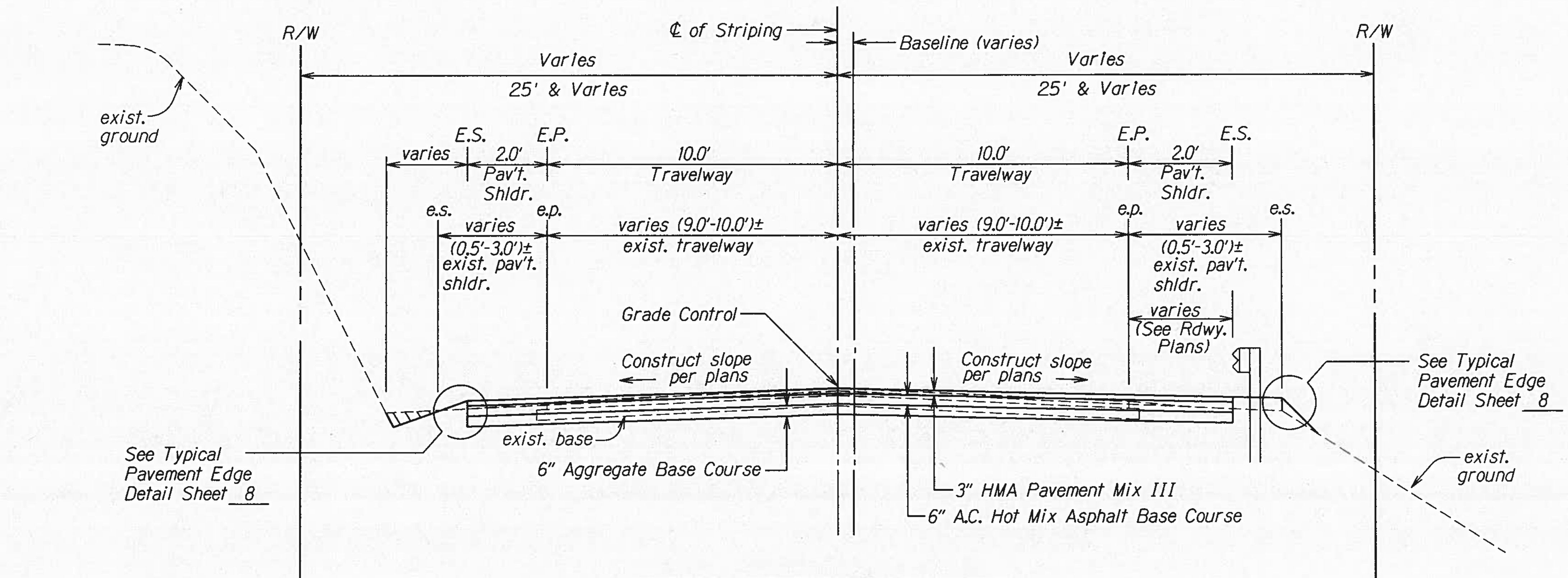
WATER POLLUTION & EROSION CONTROL NOTES

KOHALA MOUNTAIN ROAD
SAFETY IMPROVEMENTS
Federal Aid Project Nos. HSIP-0250(007)

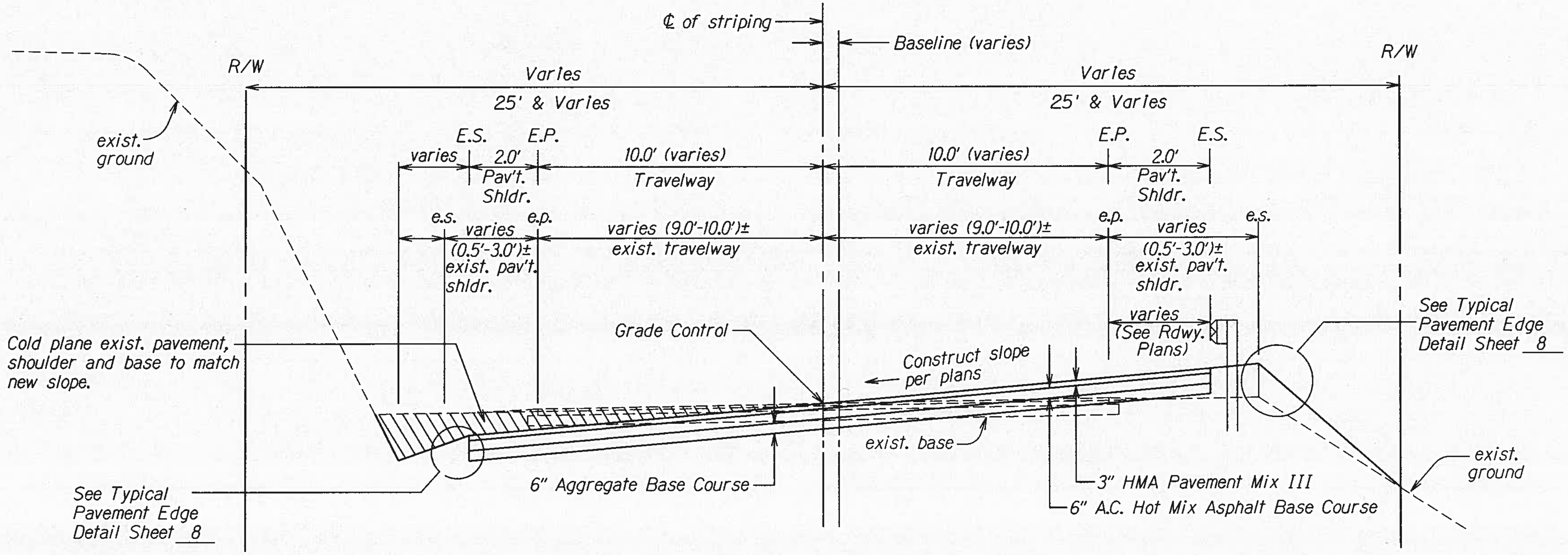
Date: April, 2017

SHEET No. 3 OF 3 SHEETS

DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	8	xx



TYPICAL SECTION ON TANGENT
Not To Scale



TYPICAL SECTION ON CURVE
Not To Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

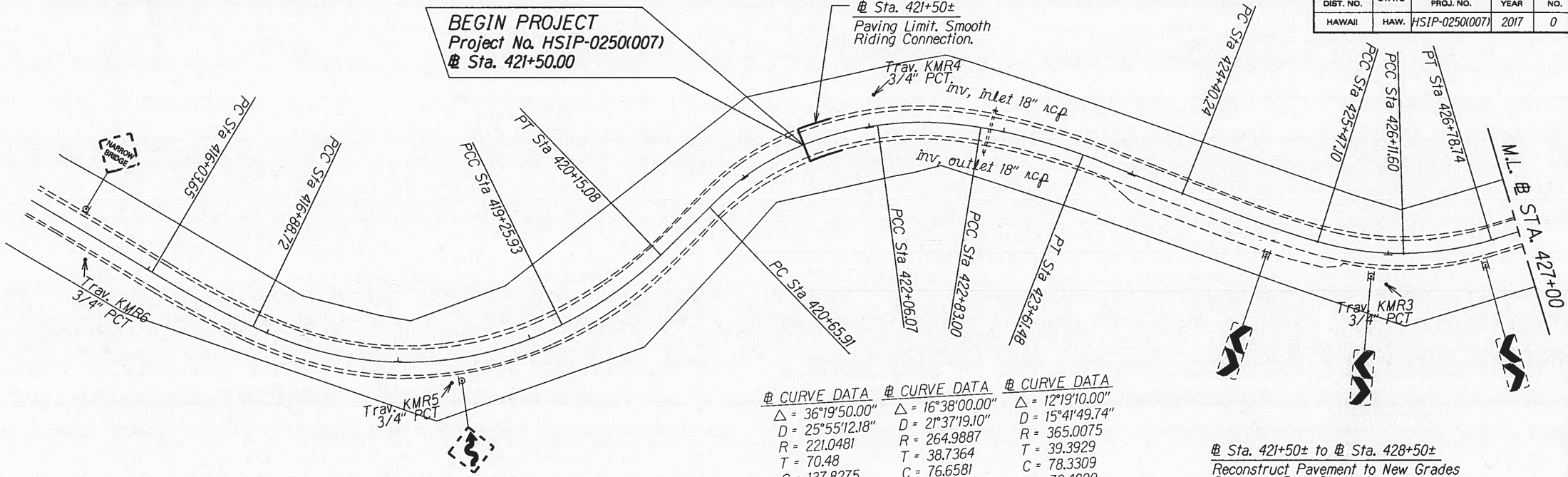
TYPICAL SECTIONS

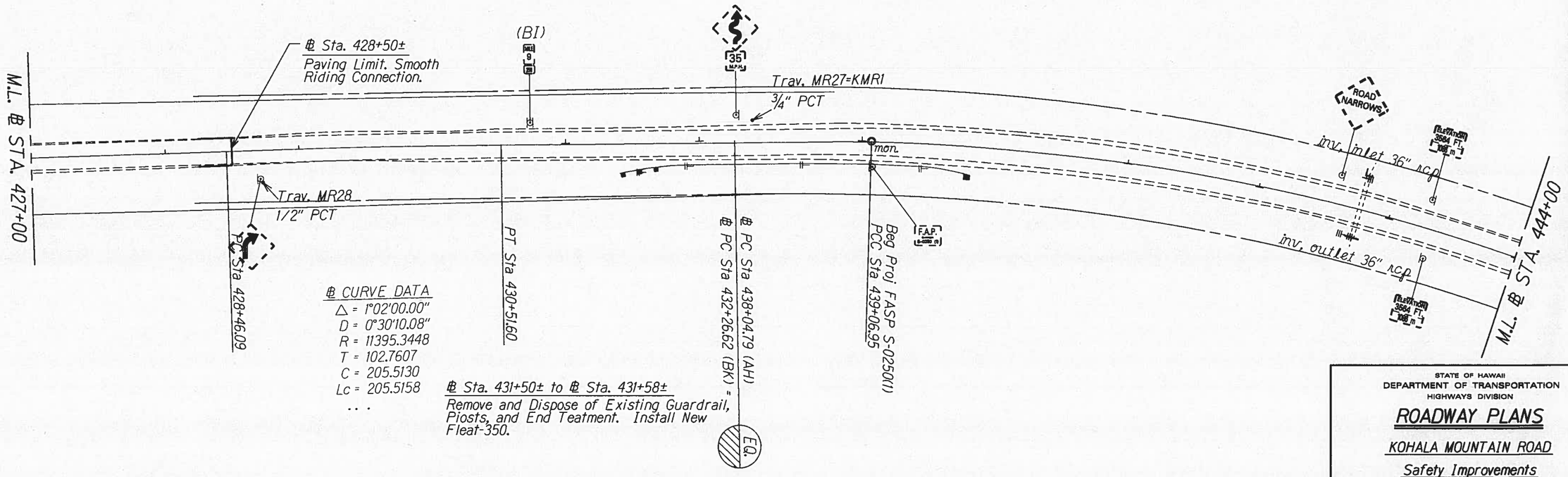
KOHALA MOUNTAIN ROAD
Safety Improvements
Federal Aid Project No. HSIP-0250(007)

Scale: Not to Scale   Date: March, 2017

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0





ORIGINAL PLAN

SURVEY PLOTTED BY _____ DATE
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TRACED BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____
NOTE BOOK _____ pp. _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

KOHALA MOUNTAIN ROAD

Safety Improvements

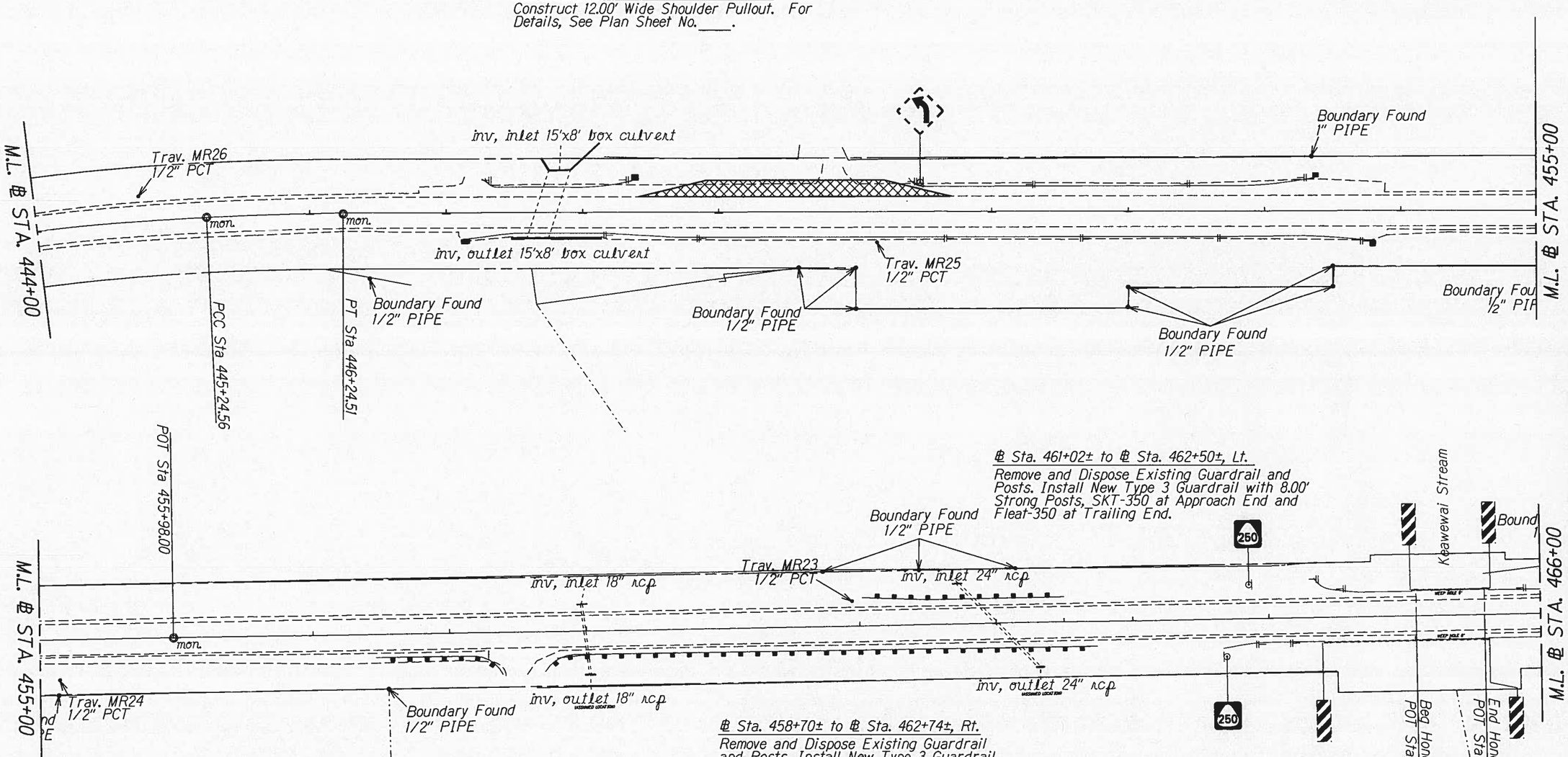
Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: March, 2017

SHEET No. 1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0

℄ Sta. 448+40± to ℄ Sta. 450+70±, Lt.
Construct 12.00' Wide Shoulder Pullout. For Details, See Plan Sheet No.___.



℄ Sta. 461+02± to ℄ Sta. 462+50±, Lt.
Remove and Dispose Existing Guardrail and Posts. Install New Type 3 Guardrail with 8.00' Strong Posts, SKT-350 at Approach End and Fleat-350 at Trailing End.

℄ Sta. 458+70± to ℄ Sta. 462+74±, Rt.
Remove and Dispose Existing Guardrail and Posts. Install New Type 3 Guardrail with New Modified Type G Radius = 25.00' at Approach End and Fleat-350 at Trailing End. Begin 25.00' Radius New Type 3 Guardrail From ℄ Sta. 458+91± and Connect to Modified Type G.

℄ Sta. 457+46± to ℄ Sta. 458+36± o/s 17.50', Rt.
Istall New Type 3 Guardrail With New Fleat-350 at Approach End and New Modified Type G, Radius = 25'.00 at Trailing End. Begin 25'.00 Radius New Type 3 Guardrail From ℄ Sta. 458+15± and Connect to Modified Type G.

ORIGINAL PLAN
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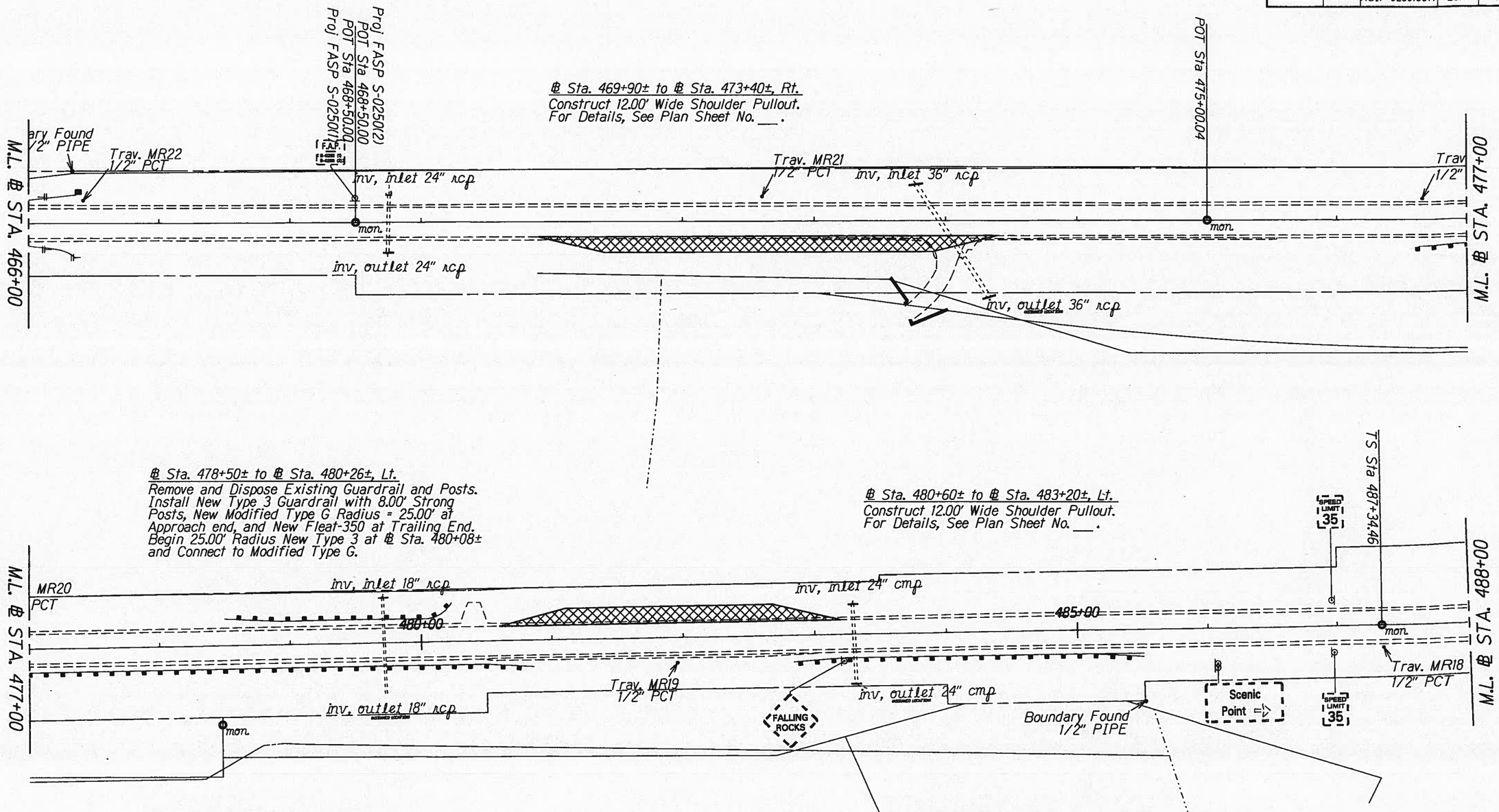
ROADWAY PLANS

KOHALA MOUNTAIN ROAD
Safety Improvements
Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: March, 2017

SHEET No. 2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

HOHALA MOUNTAIN ROAD

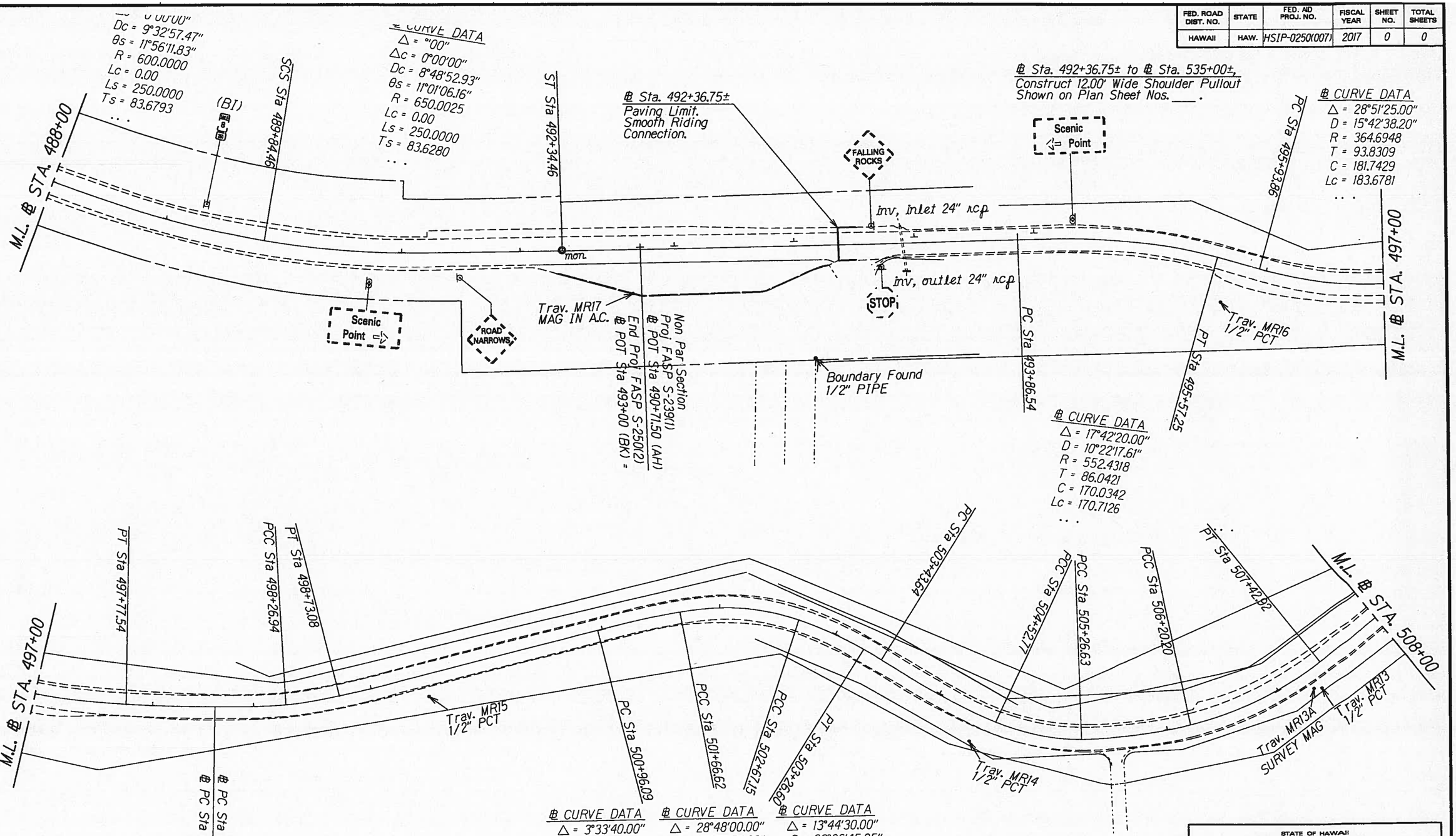
Safety Improvments

Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: January, 2013

SHEET No. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

KOHALA MOUNTAIN ROAD

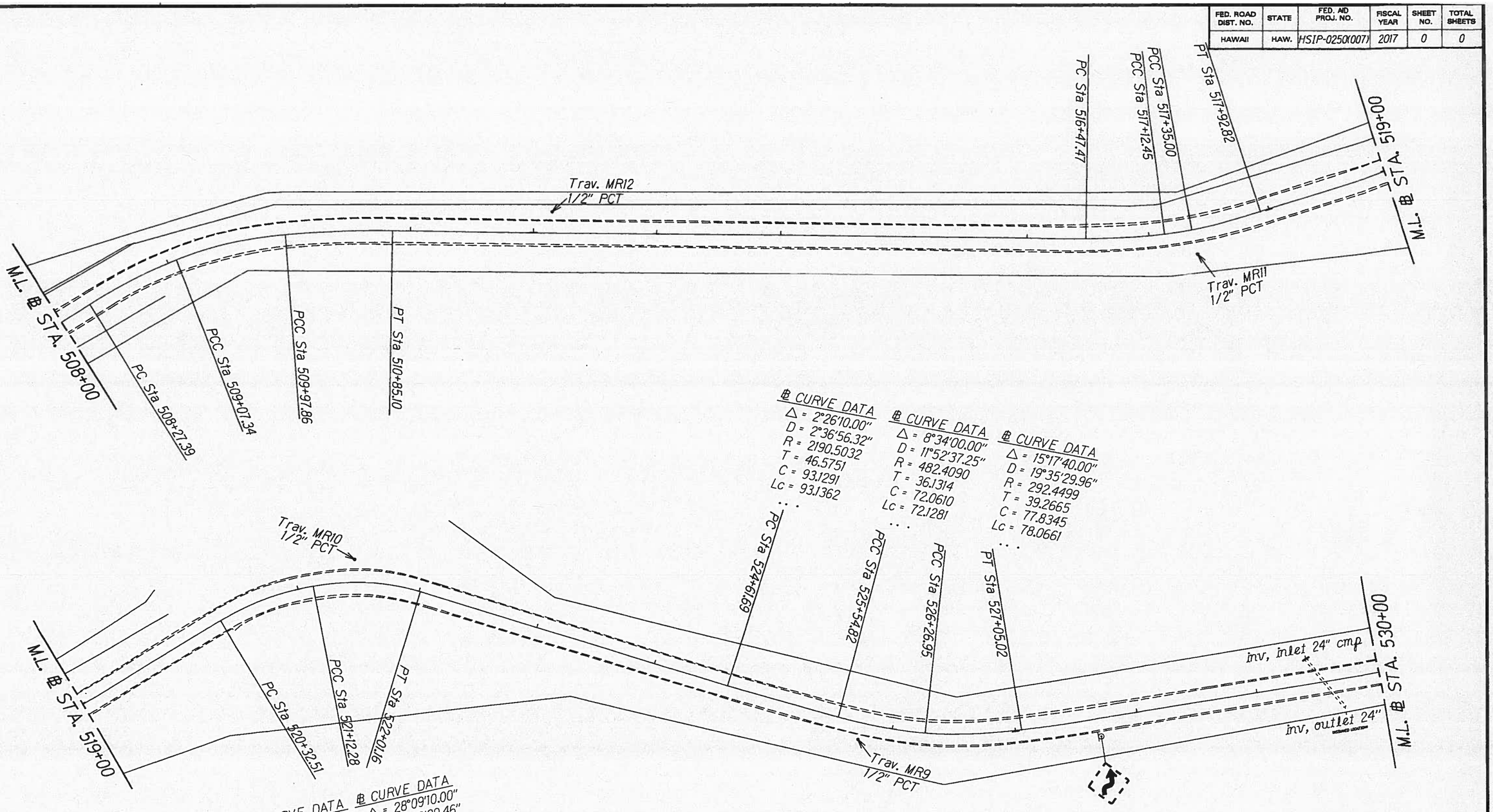
Safety Improvments

Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: January, 2013

SHEET No. 4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0



ORIGINAL PLAN
SURVEY PLOTTED BY _____ DATE
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No. _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

KOHALA MOUNTAIN ROAD

Safety Improvments

Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: January, 2013

SHEET No. 5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0250(007)	2017	0	0

END OF PROJECT
Project No. HSIP-0250(007)
℄ Sta. 535+00

M.L. ℄ STA. 530+00

PC Sta 530+79.82

PT Sta 532+01.90

Paving Limit. Smooth Riding Connection.

(250)

mon.

cmp

Trav. MR8 1/2" PCT

Beg Proj FASP S-239(1) Sect 2-A
℄ PC Sta 533+37.54 (AH)
End Rehab. Section
℄ PC Sta 532+10.27 (BK)

EQ.

(250)

℄ CURVE DATA
Δ = 19°47'30.00"
D = 5°59'09.72"
R = 957.1575
T = 166.9790
C = 328.9893
Lc = 330.6307
S. E. = 0.10 ft/ft

PT Sta 536+69.17

mon.

PC Sta 537+55.96

PCC Sta 538+57.13

℄ CURVE DATA
Δ = 2°41'00.00"
D = 2°40'43.41"
R = 2138.9209
T = 50.0952
C = 100.1629
Lc = 100.1721
S. E. = 0.06 ft/ft

Trav. MR7 1/2" PCT

ROAD NARROWS

(BI)

ADOPT A HIGHWAY LITTER CONTROL NEXT 2 MILES

inv, inlet 24" cmp

inv, outlet 24" cmp

M.L. ℄ STA. 542+00

inv, inlet 48" rcp

Trav. MR5 1/2" PCT

Trav. MR6 1/2" PCT

inv, outlet 48" rcp

M.L. ℄ STA. 542+00

Trav. MR4 1/2" PCT

inv

mon.

PCC Sta 549+78.60

PT Sta 549+78.27

℄ CURVE DATA
Δ = 2°37'30.00"
D = 2°38'29.97"
R = 2168.9326
T = 49.6934
C = 99.3607

ORIGINAL PLAN
SURVEY PLOTTED BY ____ DATE
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DESIGNED BY ____
QUANTITIES BY ____
CHECKED BY ____
NOTE BOOK ____
M. ____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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ROADWAY PLANS

KOHALA MOUNTAIN ROAD
Safety Improvments
Federal Aid Project No. HSIP-0250(007)

Scale: 1" = 40' Date: January, 2013

SHEET No. 6 OF 6 SHEETS