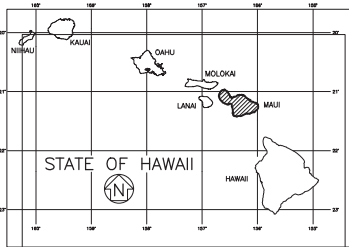


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5	NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY
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10	TYPICAL PAVEMENT SECTION
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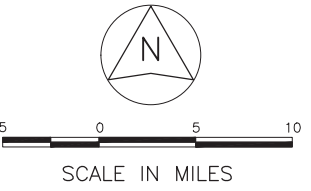
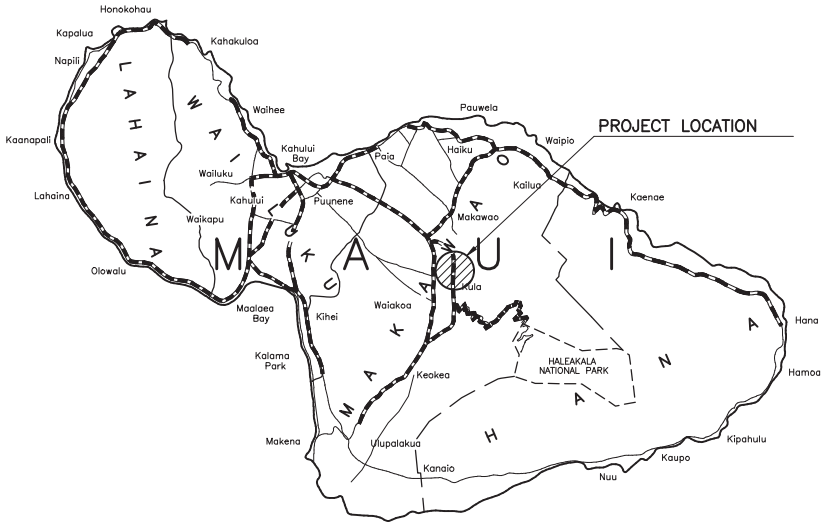
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	1	22



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 MAUI DISTRICT

PLANS FOR  
**HALEAKALA HIGHWAY**  
**SLOPE AND SHOULDER REPAIR**  
**VICINITY OF AINAKULA ROAD TO KULALANI DRIVE**  
**PROJ. NO. 377A-01-22M**

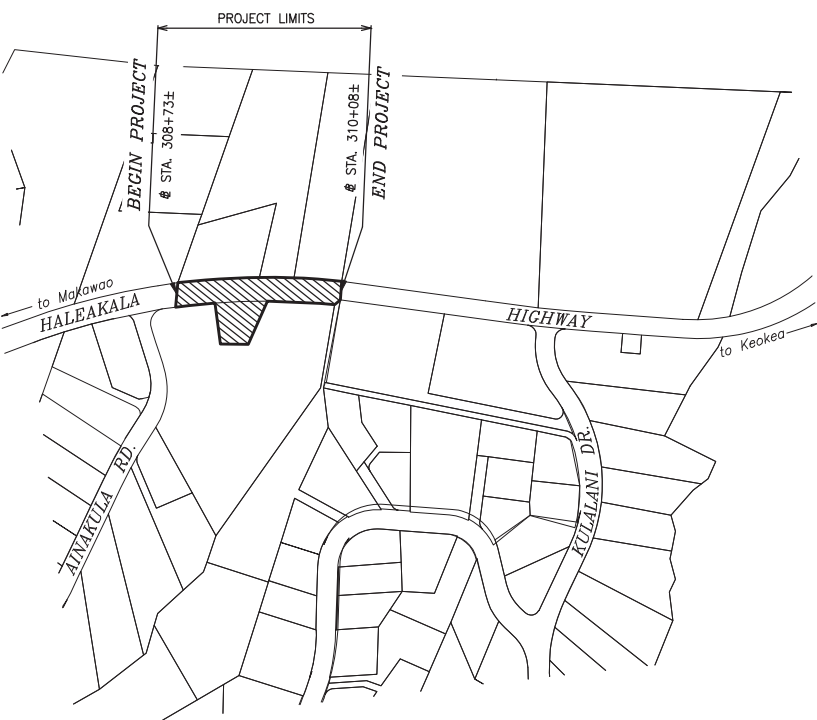
DISTRICT OF MAKAWAO  
 ISLAND OF MAUI



----- FEDERAL AID PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION

MILE POST 5.40 TO MILE POST 5.58 (RTE. 377)

True North  
 Scale: NTS



**LAYOUT PLAN**  
 NOT TO SCALE

GROSS LENGTH OF PROJECT ..... 0.18 MILES  
 NET LENGTH OF PROJECT ..... 0.03 MILES

DEPARTMENT OF TRANSPORTATION  
 STATE OF HAWAII

APPROVED: Jun 26, 2024  
 DIR. OF TRANSPORTATION      DATE

Austin Tsutsumi and Associates, Inc. DESIGNED BY  
 X 244-8044 PHONE  
 MAR., 2024 DATE  
 MANAGED BY

**STANDARD PLANS SUMMARY**

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	2	22

Standard Plan No.	Title	Date
B-01	Notes & Miscellaneous Details	05/31/07
B-03	Backfill Details At Earth Retaining Structures	05/31/07
B-12	Prestressed Concrete Piles & Compression Splice	05/31/07
	Can Details	
B-12A	Prestressed Concrete Piles, Pile & Compression	05/31/07
	Splice Can Details & Notes	
B-12B	Pile Interaction Diagram	05/31/07
B-13	Prestressed Concrete Pile Build-up Details	05/31/07

D-01	Cattle Gate	05/31/07
D-02	Chain Link Fence With Toprail	05/31/07
D-03	Chain Link Fence Without Toprail	05/31/07
D-04	Wire Fence With Metal Posts	05/31/07
D-05	• Typical Details Of Curbs And/or Gutters	05/31/07
D-06	Typical Details Of Reinforced Concrete Drop Driveway	05/31/07
D-07	Centerline And Reference Survey Monuments	05/31/07
D-08	Street Survey Monument	05/31/07
D-15	Concrete Sidewalk	05/31/07
D-16	P.c.c Bus Pad	05/31/07
D-17	P.c.c Bus Pad	05/31/07
D-18	P.c.c Pavement Layout	05/31/07
D-19	P.c.c Pavement W/ Permeable Base Joint Details	05/31/07
D-20	P.c.c Pavement W/ Permeable Base Joint Details	05/31/07
D-21	P.c.c Longitudinal Joint Details	05/31/07
D-22	P.c.c Connection To Curbs And Gutters	05/31/07
D-23	Joints	05/31/07

L-01	Tree Planting	08/16/06
L-02	Tree Planting	08/16/06
L-03	Tree Transplanting	08/16/06
L-04	Palm Planting	08/16/06
L-05	Shrub Planting	08/16/06
L-06	Landscape Details	08/16/06
L-07	Landscape Details	08/16/06
L-08	Landscape Details	08/16/06
L-09	Landscape Details	08/16/06
L-10	Landscape Details	08/16/06
L-11	Planting Notes	08/16/06
L-12	Irrigation Details	08/16/06
L-13	Irrigation Details	08/16/06

Standard Plan No.	Title	Date
L-14	Irrigation Details	08/16/06
L-15	Irrigation Details	08/16/06
L-16	Irrigation Details	08/16/06
L-17	Irrigation Details	08/16/06
L-18	Irrigation Details	08/16/06
L-19	Irrigation Details	08/16/06
L-20	Irrigation Details	08/16/06
L-21	Irrigation Details	08/16/06
L-22	Irrigation Details	08/16/06
L-23	Irrigation Details	08/16/06
L-24	Irrigation Notes	08/16/06

H-01A	Type A Catch Basin	05/31/07
H-01B	Type B Catch Basin	05/31/07
H-01C	Type C Catch Basin	05/31/07
H-01D	Type D Catch Basin	05/31/07
H-01E	Catch Basin Sections	05/31/07
H-02A	Type A1 Catch Basin	05/31/07
H-02B	Type B2 Catch Basin	05/31/07
H-02C	Type C1 Catch Basin	05/31/07
H-02D	Type D1 Catch Basin	05/31/07
H-02E	Catch Basin Section	05/31/07
H-03	Type A, B And C Storm Drain Manhole	05/31/07
H-04	Type D Storm Drain Manhole	05/31/07
H-05	Typical Reinforcing Details For Drainage Structures	05/31/07
H-06	Typical Reinforcing Details For Drainage Structures	05/31/07
H-07	Catch Basin And Manhole Casting	05/31/07
H-08	Type 1a-9 And 1a-9p Grated Drop Inlet	05/31/07
H-09	Type 2a-9 And 2a-9p Grated Drop Inlet	05/31/07
H-10	Type A-9 Or A-9p Steel Frames	05/31/07
H-11	Type A-9 Or A-9p Steel Grates	05/31/07
H-12	Type 61614p And 1211214p Grated Drop Inlet	05/31/07
H-13	Type 61616p And 1211216p Grated Drop Inlet	05/31/07
H-14	Type 61214p Grated Drop Inlet	05/31/07
H-15	Type 1211214, 1211214p, 1211216, 1211216p Steel Frame	05/31/07
	And Grates	
H-16	Type 61614, 61614p, 61616, 61616p Steel Frame And Grates	05/31/07
H-17	Type 61214 Steel Frames And Grates	05/31/07
H-18	Type 61214p Steel Grates	05/31/07
H-19	Type 61614b Steel Frame And Grates	05/31/07
H-20	Cement Rubble Masonry Structures	05/31/07
H-21	Concrete And Cement Rubble Masonry Structures	05/31/07
H-22	Inlet/outlet Structure	05/31/07
H-23	Inlet/outlet Structure	05/31/07
H-24	Flared End Section For Culverts	05/31/07
H-25	Flared End Section For Culverts	05/31/07

Standard Plan No.	Title	Date
H-26	Concrete Spillway Inlet	05/31/07
H-27	Cap Coupling Details Standard Joint	05/31/07
H-28	Reinforced Concrete Collar & Jacket	05/31/07
H-29	Underdrain Cleanout Steel Frame And Cover	05/31/07
H-30	Underdrain Connection To Drainage Structure	05/31/07
TE-01	Sign Height And Location	07/11/08
TE-01A	Sign Installation	07/11/08
TE-02A	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-02B	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-02C	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-03A	Galvanized Square Tube Sign Post Mounting	05/31/07
TE-03B	Galvanized Square Tube Sign Post Mounting	05/31/07
TE-04	Regulatory Signs	07/11/08
TE-05	Warning Signs	07/11/08
TE-06	Miscellaneous Signs	07/11/08
TE-07	• Construction Signs	07/11/08
TE-08	Miscellaneous Intersection Signs	07/11/08
TE-09	Bike Route Sign & Supplementary Plates	07/11/08
TE-10	Interstate Route Marker	07/11/08
TE-11	State Route Marker And Auxiliary Markers	07/11/08
TE-12	State Route Marker And Border Detail For	07/11/08
	Guide Signs	
TE-12A	Route Sign Assemblies	07/11/08
TE-13	Street Name Sign On Mast Arm	07/11/08
TE-14	Miscellaneous Reflector Markers	07/11/08
TE-15	Object Markers	07/11/08

Note:  
Standard Plans Applicable To This Project Are Indicated By A " • " Next To The Standard Plan Number. (for Example: D-07 • )

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Deanna M.R. Hayashi*  
APRIL 30, 2024  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD PLANS SUMMARY-1**

*Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

SHEET No. 1 OF 2 SHEETS

**STANDARD PLANS SUMMARY**

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	3	22

Standard Plan No.	Title	Date
TE-16	Mile Posts	07/11/08
TE-17A	Cantilever Overhead Sign Elevation & Details	05/31/07
TE-17B	Cantilever Sign Frame Detail And Section	05/31/07
TE-17C	Cantilever Sign Frame Detail	05/31/07
TE-17D	Cantilever Sign Frame Section	05/31/07
TE-17E	Cantilever Sign Frame Details	05/31/07
TE-18A	Two Post Overhead Sign Frame Elevations	05/31/07
TE-18B	Two Post Sign Framing Plan Section	05/31/07
TE-18C	Two Post Sign Framing Sections And Details	05/31/07
TE-18D	Two Post Sign Frame Details	05/31/07
TE-18E	Two Post Sign Frame Details	05/31/07
TE-19A	Overhead Sign Framing Schedule	05/31/07
TE-19B	Sign Post Drilled Shaft Foundation	05/31/07
TE-19C	Spread Footing	05/31/07
TE-19D	Sign Frame Foundation Schedule	05/31/07
TE-19D.1	Sign Frame Foundation Schedule	05/31/07
TE-19D.2	Sign Frame Foundation Schedule	05/31/07
TE-19D.3	Sign Frame Foundation Schedule	05/31/07
TE-19D.4	Sign Frame Foundation Schedule	05/31/07
TE-19D.5	Sign Frame Foundation Schedule	05/31/07
TE-19E	Anchorage Details	05/31/07
TE-19F	Anchorage Details	05/31/07
TE-19G	Miscellaneous Sign Frame Details	05/31/07
TE-19H	Luminaire Walkway Support	05/31/07
TE-19J	Fixed Message Luminaire Support	05/31/07
TE-19K	Miscellaneous Sign Details	05/31/07
TE-19L	Miscellaneous Sign Details	05/31/07
TE-19M	Miscellaneous Sign Frame Details	05/31/07
TE-20	Supports For Ground Mounted Guide Sign	05/31/07
TE-20A	Supports For Ground Mounted Guide Sign	05/31/07
TE-20B	Supports For Ground Mounted Guide Sign	05/31/07
TE-20C	Supports For Ground Mounted Guide Sign	05/31/07
TE-21A	Sign Breakaway Mounts	05/31/07
TE-21B	Sign Breakaway Mounts	05/31/07
TE-22	Laminated Aluminum Sign Panels (overhead)	05/31/07
TE-23	Laminated Aluminum Sign Panels (ground Mounted)	07/11/08
TE-24	Solid Aluminum Extruded Sign Panel And Accessory Details	05/31/07
TE-25	Guide Signs Luminaire Mountings	05/31/07
TE-26 ●	Raised Pavement Markers And Striping	07/11/08
TE-27 ●	Raised Pavement Markers And Striping	07/11/08
TE-28	Entrance And Exit Pavement Markings	07/11/08
TE-28A	Miscellaneous Pavement Markings	07/11/08

Standard Plan No.	Title	Date
TE-29	Pavement Arrows And Symbols	07/11/08
TE-30	Pavement Alphabets, Numbers And Symbols	07/11/08
TE-31	Pavement Alphabets , Numbers And Symbols	07/11/08
TE-32	Type I & II Traffic Signal System Misc. Details	05/31/07
TE-33	Type II Traffic Signal System	08/16/06
TE-33A.1	Type II Traffic Signal Standard	05/31/07
TE-33A.2	Type II Traffic Signal Standard	05/31/07
TE-34	Loop Detector Details	07/11/08
TE-35	Loop Detectors & Duct Details	07/11/08
TE-36	Traffic Signal Details	07/11/08
TE-37	Pull Box & Cover Details	07/11/08
TE-37A	Type "A" Traffic Pullbox	05/31/07
TE-37B	Type "A" Traffic Pullbox Reinforcing	05/31/07
TE-37C	Type "B" Traffic Pullbox	05/31/07
TE-37D	Type "B" Traffic Pullbox Reinforcing	05/31/07
TE-37E	Type "B" Traffic Pullbox Foundation	05/31/07
TE-37F	Type "C" Traffic Pullbox	05/31/07
TE-37G	Type "C" Traffic Pullbox Reinforcing	05/31/07
TE-37H	Type "C" Traffic Pullbox Foundation	05/31/07
TE-37J	Traffic Pullbox Cover And Details	05/31/07
TE-38	Type III Traffic Signal Standard	05/31/07
TE-38A.1	Type III Traffic Signal Standard	05/31/07
TE-38A.2	Type III Traffic Signal Standard	05/31/07
TE-39	Metal Guardrail Connection To Concrete Barrier	07/11/08
TE-40	Concrete Barrier Transition	05/31/07
TE-40A	Concrete Barrier Transition Sections	05/31/07
TE-41	Guardrail Type 6 (Rigid Barrier)	05/19/21
TE-41A	Guardrail Type 6 (Rigid Barrier)	05/19/21
TE-41B	Guardrail Type 6G (Rigid Barrier W/Glare Screen)	05/19/21
TE-41C	Guardrail Type 6G (Rigid Barrier W/Glare Screen)	05/19/21
TE-41D	Guardrail Type 6 & 6G (Rigid Barrier)	05/19/21
TE-42	Portable Concrete Barrier	05/31/07
TE-43	Portable Concrete Barrier	05/31/07
TE-44	Guardrail Type 4 Miscellaneous Details	07/11/08
TE-45	Barricades	07/11/08
TE-46	Delineation & Pavement Markings At Narrow Bridges	07/11/08
TE-47	Highway Light Standard	05/31/07

*Note:*  
Standard Plans Applicable To This Project Are Indicated By A " ● " Next To The Standard Plan Number. (for Example: D-07 ● )

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Denma M. R. Hayashi*  
APRIL 30, 2024  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD PLANS SUMMARY-2**

*Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

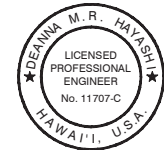
SHEET No. 2 OF 2 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	4	22

**GENERAL NOTES:**

1. The Scope of Work for this project includes: pavement resurfacing of Haleakala Hwy; replacement of guardrails; installation of a drainage chute, permanent curbing, and slope protection. All roadway and other work required to complete the project shall meet current Federal, State, and County Standards.
2. The Contractor shall perform all applicable construction work in accordance with the "Department of Transportation, Highways Division, Standard Plans", as amended and "Hawaii Standard Specifications for Road and Bridge Construction, 2005", as amended for the State of Hawaii.
3. The Contractor shall verify the location of all existing utilities, whether shown on the plans or not, and shall be responsible for the repair or replacement of the same in the event of damages due to his construction practices, at no cost to the State.
4. All dimensions and details shown on the drawings shall be checked and verified prior to the start of construction, and any discrepancies shall be immediately brought to the attention of the Engineer for clarification.
5. The Contractor's Attention Is Directed To The Following Sections Special Provisions: Section 107 - Legal Relations and Responsibility to Public; and Section 645 - Work Zone Traffic Control.
6. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts, which requires him to perform work to not less than 30 percent of the total contract cost less deductible items. Non-compliance with the Subsection may be grounds for rejection of bid.
7. 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.
8. 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.
9. When excavating near utility poles, the Contractor shall protect, support, secure and take all other precautions to prevent damage to or leaning of these poles. The Contractor is responsible for all costs associated to repair and/or straighten pole.
10. 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 and to the satisfaction of the Engineer.
11. 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.
12. 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.
13. 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.
14. Removal and disposal of existing asphalt concrete pavement, and any debris shall be considered incidental to their respective bid items.
15. All saw cutting work shall be considered incidental to Roadway Excavation or Asphalt Concrete or various contract items or their respective bid items.
16. The Contractor shall remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tape, and epoxy adhesives prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. V and will not be paid for separately.
17. The Contractor shall make his own arrangements for, and pay for all temporary utilities required for his work.
18. The Contractor shall remove and dispose of all existing guardrail and guardrail posts. This work shall be considered incidental to Guardrail Type MGS W-Beam and Type MGS Transition, and will not be paid for separately.
19. The Contractor shall remove and dispose all silt and debris deposited in drainage facilities, roadways and other areas resulting from his work. The cost incurred for any necessary remedial action ordered by the Engineer shall be paid for by the Contractor.

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



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.  
*Deanna M.R. Hayashi*  
APRIL 30, 2024  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**GENERAL NOTES FOR  
CONSTRUCTION**

*Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

SHEET No. 1 OF 4 SHEETS

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	5	22

1. The Contractor shall obtain a Permit to Perform Work upon State Highways from the Maui District Engineer, State Highways, at 650 Palapala Drive, prior to commencement of work within the State's highway right-of-way.
2. Construction and restoration of all existing highway facilities within the State's right-of-way, including the legal relations and responsibility to the public, shall be in accordance with the current Hawaii Standard Specifications for Road and Bridge Construction, and the Specifications for Installation of Miscellaneous Improvements within State Highways, of the State Highways Division.
3. Work may not be performed between the peak hours of 6:30 a.m. to 8:30 a.m. and from 3:00 p.m. to 5:00 p.m., Monday through Friday, except State holidays, unless when otherwise approved in writing by the District Engineer. If the traffic is too heavy, the contractor may have to work at night.  
  

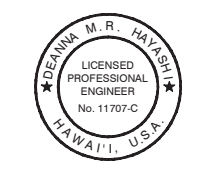
*During work hours, only one lane of traffic shall be closed, unless otherwise approved in writing by the District Engineer. All lane closures must be approved by HDOT fifteen (15) working days in advance. All lane closures and detours shall require advisory signs and an advertisement per section 645.03 of the Standard Specifications.*

*At certain locations, "NO LANE CLOSURE" will be allowed during the "Back To School Jam", Thanksgiving weekend, Christmas / New Year Period and at other times as directed by the Highways Division.*
4. The Contractor shall provide, install, and maintain all necessary signs, lights flares, barricades, markers, cones, and other protective facilities, and shall take all necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", adopted by the Director of Transportation, and the "U.S. Federal Highway Administration MUTCD - Manual on Uniform Traffic Control Devices, Part VI - Temporary Traffic Control, 2009 Edition".
5. 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 District Engineer.
6. Compaction tests shall be taken in accordance with the Specifications for Installation of Miscellaneous Improvements within State Highways, as follows:
  - a. Subbase: One (1) compaction test per lift per 200 lineal feet of roadway.

- b. Base Course: One (1) compaction test per lift per 200 lineal feet of roadway.
  - c. One (1) compaction test per lift per 300 lineal feet of trench.
  - d. A copy of the test results shall be submitted to the District Engineer.
7. The Contractor shall provide an adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic. Bridging materials shall not be used on high speed roadways, which are roads with a design speed of 50 MPH or higher. Smooth riding connection between roadway surfaces and bridging material shall be provided. Should complaints be received due to noise generated from this work, the Contractor shall immediately address those complaints.
  8. The Contractor shall make every effort to minimize the use and the duration of use of steel plates. The State may require the backfilling and patches of trenches due to the excessive usage of steel plates.
  9. Existing drainage systems shall be functional at all times.
  10. The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the District Engineer.
  11. Approval of permit construction plans shall be valid for a period of one (1) year from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to resubmit the construction plans for the Division's review and re-approval.
  12. All regulatory, guide, and construction signs and barricades shall have a high-intensity Type III or IV retroreflective background.
  13. The Contractor shall inform the State Highway's Permit Office (873-3535) by noon Wednesday the week ahead prior to closing any lanes.
  14. Driveways shall be kept open unless the owners of the properties using these rights-of-way are otherwise provided for satisfactorily.
  15. The Contractor shall reference, to the satisfaction of the District Engineer, all existing traffic signs, posts, and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts, and pavement markings disturbed by his activities, at his expense, unless directed by the District Engineer or his representative.

16. The Contractor shall exercise care when performing work in or adjacent to the State highway right-of-way. Damages to the existing facilities shall be immediately reported to the respective utility companies, and/or City or State agencies. The repair work shall be done at the Contractor's expense.
17. Highway lights shall be operational during construction. Should work be necessary, the contractor shall notify the State Highways' Highway Lighting Supervisor (873-3535), three (3) working days prior to commencing work.
18. Traffic signals shall be kept operational during construction. Temporary operational microwave or other approved detection devices shall be installed three (3) working days prior to any signalized intersection excavation work. All work shall be done in accordance to the requirements of the Department of Transportation, Highways Division, Maui District, and paid for by the Contractor.
19. The Permit to Perform Work upon State Highway may be revoked because of default in any of the following, but not limited to, conditions:
  - a. Work performed before of after permitted hours.
  - b. Failure to maintain roadway surfaces in a smooth and safe condition.
  - c. Failure to clean up construction debris generated from project work.
  - d. Failure to provide proper traffic control.
  - e. Failure to replace damaged pavement markings and signs.
  - f. Failure to maintain highway lights and traffic signals systems.
  - g. Failure to address public complaints to the satisfaction of the District Engineer.
20. The contractor shall provide the District Engineer with as-built plans upon completion of the work done in the State Right-of-Way. This shall be done prior to the department's release of the performance bond.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Denma M. R. Hayashi*  
 APRIL 30, 2024  
 LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**NOTES FOR CONSTRUCTION WITHIN STATE ROW**

*Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M*

Scale: As Noted Date: March 2024

SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	6	22

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 On-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>. Site-Specific BMP Plan Shall Include Placing A Sandbag Barrier Inside The Culvert For Temporary Sediment Control (Refer To SC-8 In The Construction Best Management Practices Field Manual).
8. The Contractor Shall Consider And Install BMP Measures Which Take Into Account High Intensity And Prolonged Rainfall, And To Address The Potential Problems That May Result.
9. All Areas Used In Support Of Construction Activities Disturbed Or Damaged By The Contractor Including But Not Limited To, Staging Areas, Construction Entrance/Exit, And Travel Routes, Shall Be Temporarily Stabilized During Construction In Accordance With Section 209 Of The 2005 Standard Specifications For Road And Bridge Construction. These Areas Shall Be Restored To Their Original Condition Or Better Upon Completion Of Construction. Disturbed And Exposed Areas Shall Be Permanently Stabilized Using Vegetative Cover, Pavement, Or Equivalent To Match Pre Existing Or Better Condition As Approved By The State.
10. Final Stabilization And Restoration Of Disturbed Or Damaged Areas Shall Begin Immediately As Soon As Construction Is Completed And The Construction Support Areas Are No Longer Used.
11. The State Reserves The Right To Determine The Appropriateness And Adequacy Of Proposed And/Or Implemented BMPs. Additional BMP Measures Required By The State Shall Not Be Paid For By The State.
12. The Contractor Shall Be Responsible For All Damages And/Or Injuries Resulting From The BMPs.
13. The Contractor Shall Be Responsible For Any Citations Or Fines That May Be Levied As Related To The NPDES Program On This Permit, Whether Directly Levied Against The Contractor Or The Department Of Transportation.
14. The Contractor May Discuss Proposed And Implemented BMP Measures And The Adequacy Of Them, With District Engineer.

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 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, Federal 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.

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 Hour After Each Inspection.

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 Inspections Are Only Required During The Project's Normal Working Hours. The Discharge Point Water Classification May Be Found In The SWPPP.

SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	DESIGNED BY _____
CHECKED BY _____	NO. _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*Deanna M.R. Hayashi*  
APRIL 30, 2024  
LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WATER POLLUTION AND EROSION CONTROL NOTES**

*Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

SHEET No. 1 OF 3 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	7	22

WATER POLLUTION AND EROSION CONTROL NOTES (Cont):

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.
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 Or 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 A 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 The Risk 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, Local, State Or Federal 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:
 

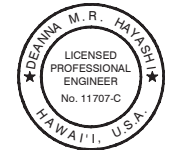
Apply Fertilizers Used Only In The Minimum Amounts Recommended By The Manufacturer And Federal, State, And Local Requirements. Avoid Applying Just Before A Heavy Rain Event. Apply At The Appropriate Time Of Year For The Location, And Preferably Timed To Coincide As Closely As Possible To The Period Of 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 Storm water. 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. 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. Note That The Reportable Quantity For Oil And Fuel Products Is A Spill Of 25 Gallons Or More, A Spill Not Cleaned Within 72 Hours, Or A Spill That Threatens Ground Or Surface Waters. The Engineer Will Notify The National Response Center (NRC) At (800) 424-8802, The Clean Water Branch During Regular Business Hours At (808) 586-4309, The Clean Water Branch (DOH-CWB) Via Email At [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov) During Non-Business Hours, The DOH Hazard Evaluation And Emergency Response Office At (808) 586-4249, The Coast Guard Maui Station At (808) 986-0023 And The Local Emergency Planning Committee At (808) 720-7285. The Contractor Shall Also Provide To The Engineer Within 1 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.

ORIGINAL PLAN NO. _____	DATE _____
SURVEY PLOTTED BY _____ DRAWN BY _____ DESIGNED BY _____ CHECKED BY _____	NO. _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Deanna M.R. Hayashi*  
 APRIL 30, 2024  
 LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

WATER POLLUTION AND  
EROSION CONTROL NOTES

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted      Date: March 2024

SHEET No. 2 OF 3 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	8	22

WATER POLLUTION AND EROSION CONTROL NOTES (Cont):

**E. PERMIT REQUIREMENTS:**

1. The Calculated Land Disturbance Area For This Project Based On The Construction Plans Is 0.073 Acres Not Including Contractor Staging And Storage Areas. If The Total Of The Disturbed Area And The Contractor Staging And Storage Area Is One Acre Or Greater, The Contractor Shall Obtain The NPDES Construction Activities Permit Using HDOT's Latest SWPPP Template. See Hawaii Administrative Rules Chapter 11-55, Appendix C For The Definition Of Land Disturbance. The Contractor Shall Be Responsible For Obtaining The Required NPDES Construction Activities Permit And Complying With The Requirements Of Har 11-55 Including, But Not Limited To:
  - a. Deadlines For Initiating And Completing Initial Stabilization
  - b. Increased Inspection Frequency And Installation Of Rain Gage If Applicable
  - c. Deadlines To Initiate And Complete Repairs To BMPs
  - d. Reporting Requirements And Corrective Action Reports
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
  - b. NPDES Permit For Construction Dewatering
  - c. NPDES Permit For Hydrotesting Waters
  - d. Water Quality Certification
  - e. Stream Channel Alteration Permit
  - f. Section 404 Army Corps Of Engineer Permit

**F. Site-specific BMP Requirements:**

1. 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> Under Construction Best Management Practices Field Manual. Supplemental BMP Sheets Are Located At [http://stormwaterhawaii.com/contractors/contractors\\_bmpmanual.aspx](http://stormwaterhawaii.com/contractors/contractors_bmpmanual.aspx) 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-1).
2. Contain On-site Runoff Using Perimeter Sediment Controls
  - a. SC-7 Silt Fence Or Filter Fabric Fence
  - b. SC-2 Vegetated Filter Strips And Buffers
  - c. SC-6 Compost Filter Berm/Sock
  - d. SC-8 Sandbag Barrier
  - e. SC-9 Brush Or Rock Filter
3. Control Offsite Runoff From Entering Construction Area
  - a. EC-3 Run-on Diversion
  - b. EC-5 Earth Dikes, Swales, And Ditches
4. Incorporate Applicable Site Management BMP
  - a. SM-1 Construction BMP Training
  - b. SM-2 Material Storage And Handling
  - c. SM-3 Stockpile Management
  - d. SM-6 Solid Waste Management
  - e. SM-7 Sanitary Waste Management
  - f. SM-9 Hazardous Materials And Management
  - g. SM-10 Spill Prevention And Control
  - h. SM-11 Vehicle And Equipment Cleaning
  - i. SM-12 Vehicle And Equipment Maintenance
  - j. SM-13 Vehicle And Equipment Refueling
  - k. SM-14 Scheduling
  - l. SM-15 Location Of Potential Sources Of Sediment
  - m. SM-16 Staging Area
  - n. SM-17 Preservation Of Existing Vegetation
  - o. SM-19 Dust Control
  - p. SM-20 Paving Operations
  - q. SM-21 Structure Construction And Painting
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 (SC-11) 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-4) 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.

**Erosion Control/Best Management Practices Notes**

1. The Contractor, At His Own Expense, Shall Keep The Project Areas And Surrounding Areas Free From Dust Nuisance. The Work Shall Be Done In Conformance With Air Pollution Control Standards Contained In Hawaii Administrative Rules: Chapter 11-60, "Air Pollution Control".
2. Measures To Control Erosion And Other Pollutants Shall Be In Place Before Any Grading Work Is Initiated. These Measures Shall Be Properly Constructed And Maintained Throughout The Construction Period Of Each Site.
3. Construction Shall Be Sequenced To Avoid Disturbance At All Project Sites At One Time And Minimize Exposure Time Of The Demolition And Reconstruction Areas.
4. The Contractor Shall Observe And Comply With The State Department Of Health Regulations Regarding Storm Water Discharge.
5. Inlet Protection Shall Be Implemented At All Storm Drain Inlets And Catch Basins As Indicated To Prevent Any Sediment Laden Runoff From Leaving The Site. Inlet Protection Devices Shall Be Removed During Any Event Where Flooding Could Occur If Devices Remain In Place And Replaced After The Event Has Passed.
6. Good Housekeeping Shall Be Utilized To Ensure Protection Of Roadways From Mud, Dirt, And Debris.
7. The Contractor Shall Provide Erosion Control Measures For Their Construction, Staging, And Storage Areas And Shall Inspect And Monitor His Construction, Staging, And Storage Areas To Ensure That No Non-storm Water Discharges Are Emitted. If Such Sources Are Identified The Contractor Shall Provide Immediate Mitigative Measures.
8. No Sediment Laden Runoff Shall Leave The Site.
9. Water Trucks Shall Be Utilized To Minimize The Amount Of Airborne Dust.
10. Contractor Shall Ensure The Proper Working Order And Conduct Regular Maintenance Of All Construction Equipment. All Construction Equipment Shall Be Serviced Off-site, And No Oil Or Fuel Shall Be Stored On The Site.

11. The Contractor Shall Dispose Of Equipment And Hydraulic Oils Off-site And In Accordance With County, State, And Federal Regulations.
12. At The End Of The Construction, Existing Catch Basins And Drain Inlets Surrounding The Project Site Shall Be Inspected And Any Accumulated Sediment And Debris Found Shall Be Removed. Flushing Into The Catch Basins Or Drain Inlets Is Prohibited.
13. Construction Shall Be Staged And Phased For Large Projects. Areas Of One Phase Shall Be Stabilized Before Another Phase Is Initiated. Stabilization Shall Be Accomplished By Temporary Or Permanent Protecting The Disturbed Soil Surface From Rainfall Impacts And Runoff.
14. Storm Water Flowing Toward The Construction Area Shall Be Diverted By Using Appropriate Control Measures, As Practical.
15. Water Must Be Discharged In A Manner That The Discharge Shall Not Cause Or Contribute To A Violation Of The Basic Water Quality Criteria As Specified In The Hawaii Administrative Rules, Section 11-54-04.
16. All Grading Work Shall Conform To Maui County Code Chapter 20.08 "Soil Erosion And Sediment Control", As Amended And Applicable Provisions Of Chapter 54, Water Quality Standards And Chapter 55, Water Pollution Control, Title II Administrative Rules Of The State Department Of Health.
17. The Contractor Shall Schedule Construction During The Dry Weather Periods And Shall Be Prepared In Case Of Rainfall Events. The Contractor Shall Provide For Temporary Bypass Or Detention Of Storm Water Flows Or Other Measures To Avoid Flooding Of Properties Upstream Or Adjacent To The Site.

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



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*Deanna M.R. Hayashi*  
 APRIL 30, 2024  
 LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**WATER POLLUTION AND EROSION CONTROL NOTES**

*Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

SHEET No. 3 OF 3 SHEETS



DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	9	22

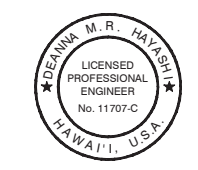
**ABBREVIATIONS**

△	Delta	FφC	Frame φ Cover	ℙ	Property Line
φ	And	FH	Fire Hydrant	PP	Power pole
@	At	FIN	Finished	PT	Point of Tangency
A.C. OR A/C	Asphalt Concrete	FL	Flow Line	PVC	Polyvinyl Chloride
ADJ.	Adjust	FT	Feet	R	Radius
ARV	Air Relief Valve	GA	Guy Anchor	R.C.	Reinforced Concrete
ASSY.	Assembly	G.C.	Grade Control Line	RCP	Reinforced Concrete Pipe
AZ	Azimuth	G.D.I.	Grated Drop Inlet	RD.	Road
ℙ	Baseline	G.I.	Galvanized Iron	REFL.	Reflector
BC	Bottom Curb	GRD.	Grade	REINF.	Reinforced or Reinforcement
BCT	Breakaway Cable Terminal	GRP	Grouted Rubble Paving	RP	Radius Point
BEG	Begin	G.V.	Gate Valve	RPM	Reflective Pavement Marker
BLDG.	Building	HT/HTCO	Hawaiian Telephone Co.	RT	Right
BLK.	Block	HT.	Height	R.O.W. OR R/W	Right-Of-Way
BOTT	Bottom	HB	Hose Bibb	RSGV	Resilient Seated Gate Valve
BVC	Begin Vertical Curve	HGL	Hydraulic Grade Line	S	Slope
CATV	Cable Television	HORIZ	Horizontal	SDMH	Storm Drain Manhole
C.B.	Catch Basin	HP	High Point	Se	Super Elevation
C.C.P.	Concrete Cylinder Pipe	INTER.	Intersection	SF	Square Foot
CH	Chord length	INV	Invert Elevation	SHT	Sheet
☒	Centerline	LAT.	Lateral	SPR.	Sprinkler
C.I.	Cast Iron	LC	Length of Curve	ST.	Street
CL	Class	LEN	Length	STA	Station
C.L.	Chain Link	LF	Lineal Feet	STD	Standard
CLR.	Clear	LP	Light Pole	STRUCT	Structure
CLVRT.	Culvert	LP	Low Point	SVC.	Service
CMP	Corrugated Metal Pipe	LT	Left	S/W	Sidewalk
CMU	Concrete Masonry Unit	MAX	Maximum	T	Tangent
CONC	Concrete	MB	Mailbox	TBOX	Telephone Box
CONT	Continuation or Continuous	MH	Manhole	TC	Top Curb
CRM	Concrete Rubble Masonry	MECO	Mauie Electric Co.	TEL	Telephone
COL.	Column	MON	Monument	TEMP	Temporary
C.O.	Clean Out	NO.	Number	THH	Telephone Handhole
∅, D	Diameter	NP	Non Potable	THK	Thick
DBL.	Double	O.C.	On Center	TM	Transmission main
DET.	Detail	O.D.	Outside Diameter	TRAV	Traverse
DI	Ductile Iron	O/S	Offset	TRM	Turf Reinforcement Mat
D.I.	Drain Inlet	PAVT	Pavement	TYP	Typical
D/L	Drain Line	PC	Point of Curvature	VB	Valve box
DMH	Drain Manhole	PCC	Point of Compound Curve	VC	Vertical curve
DWY. OR D/W	Driveway	PED	Pedestrian	VCP	Vitrified Clay Pipe
EA	Each	PI	Point of Intersection	VERT	Vertical
EHH	Electric Handhole	PIVC	Point of Intersection on Vertical Curve	VPI	Vertical Point of Intersection
ELEC.	Electric	PL	Place	W	Wide
ELEV. OR EL	Elevation			W/	With
EQ	Equal			W/L OR WL	Water Line
EXIST.	Existing			WM	Water Meter
EP	Edge of Pavement or Electric Pole			WV	Water Valve
EVC	End Vertical Curve				

**LEGEND**

— e —	existing electrical line
○ <sub>pp</sub>	existing power pole
○ <sub>up</sub>	existing utility pole
— gw —	existing guide wire
▭ <sub>ebx</sub>	existing electric box
▭ <sub>tebx</sub>	existing telephone box
▭ <sub>tvbx</sub>	existing tv cable box
— EW6 —	existing 6" waterline
° <sub>gv</sub>	existing gate valve
• <sub>wv</sub>	existing water valve box
▭ <sub>ivc</sub>	existing irrigation control valve box
* <sub>spr</sub>	existing sprinkler head
⊕ <sub>fh</sub>	existing fire hydrant
⊙ <sub>mon.</sub>	existing monument
— D36 —	existing 36" drain line
→	Drainage Flow Arrow
▭ <sub>sign</sub>	existing traffic sign
▭	New Traffic Sign
— gate	existing gate posts
▭	New Pavement
—	existing guardrail
—	New Guardrail

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



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*Deanna M.R. Hayashi*  
 APRIL 30, 2024  
 LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

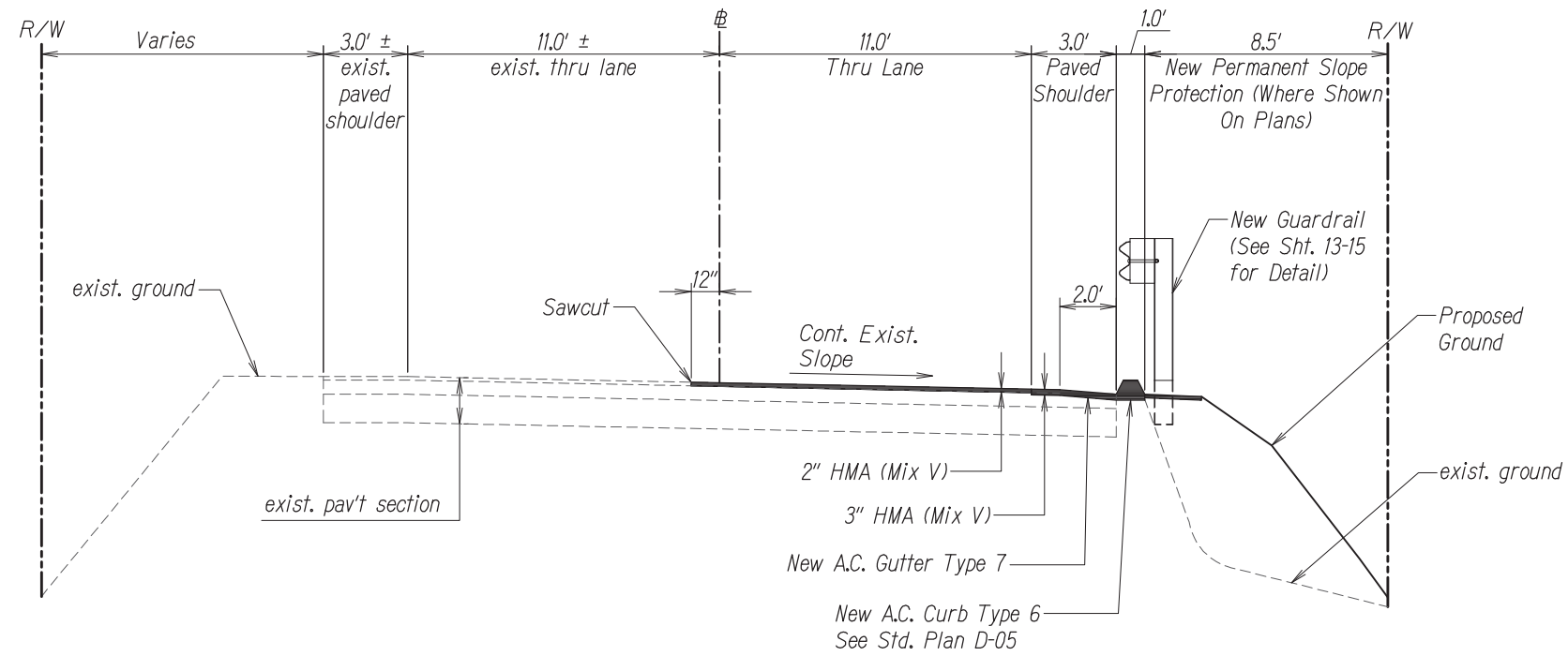
**LEGEND & ABBREVIATIONS**

*Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

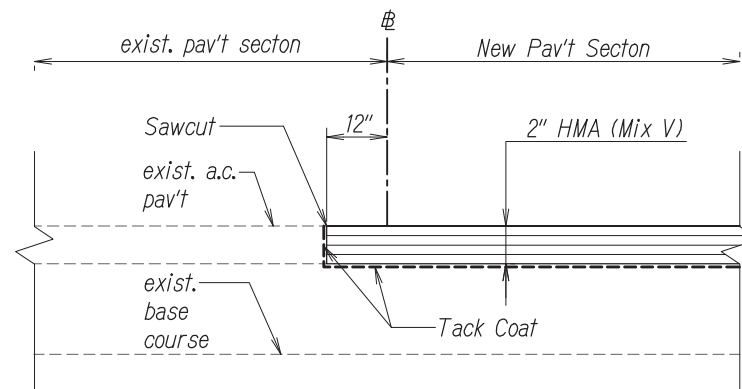
SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	10	22



**TYPICAL SECTION - HALEAKALA HIGHWAY**

Not to Scale



**A.C. PAVEMENT CONNECTION DETAIL**

Not to Scale

SURVEY PLOTTED BY	DATE
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ORIGINAL PLAN	
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**TYPICAL PAVEMENT SECTION**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

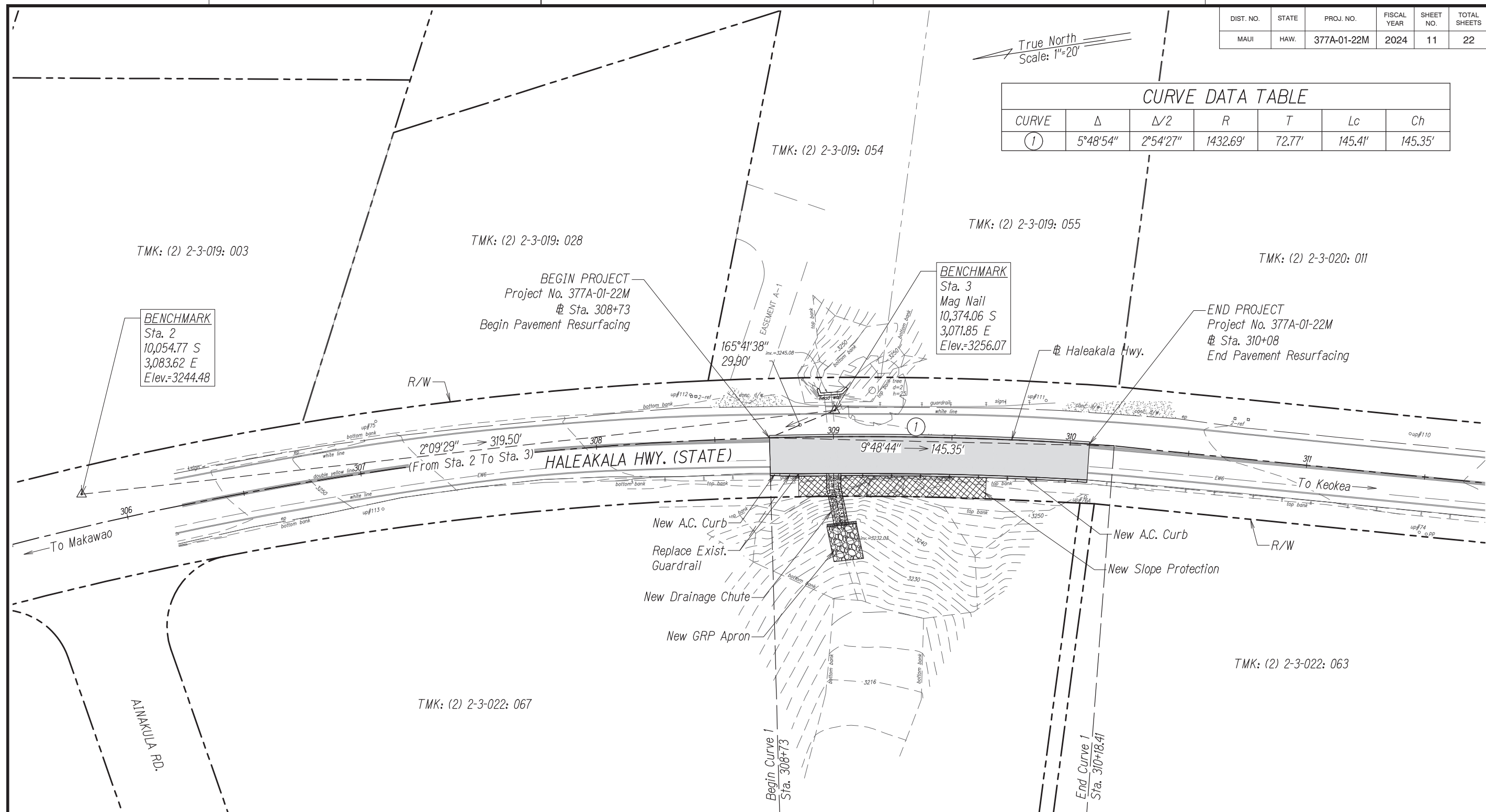
Scale: As Noted Date: March 2024

SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	11	22

True North  
Scale: 1"=20'

CURVE	Δ	Δ/2	R	T	Lc	Ch
①	5°48'54"	2°54'27"	1432.69'	72.77'	145.41'	145.35'



**BENCHMARK**  
Sta. 2  
10,054.77 S  
3,083.62 E  
Elev.=3244.48

**BENCHMARK**  
Sta. 3  
Mag Nail  
10,374.06 S  
3,071.85 E  
Elev.=3256.07

BEGIN PROJECT  
Project No. 377A-01-22M  
@ Sta. 308+73  
Begin Pavement Resurfacing

END PROJECT  
Project No. 377A-01-22M  
@ Sta. 310+08  
End Pavement Resurfacing

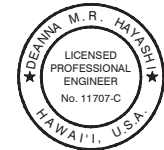
**NOTE:**  
1. The Baseline And Baseline Stations Shown Are Approximate And Shall Be Used As A Guide For This Project Only.

- LEGEND:**
- New A.C. Pavement Resurfacing
  - New Slope Protection
  - New GRP Apron
  - New Drainage Chute

**GRAPHIC SCALE:**  
20' 10' 0 20' 40'  
**SCALE:** 1" = 20'

**GENERAL SITE PLAN**  
Scale : 1" = 20'

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
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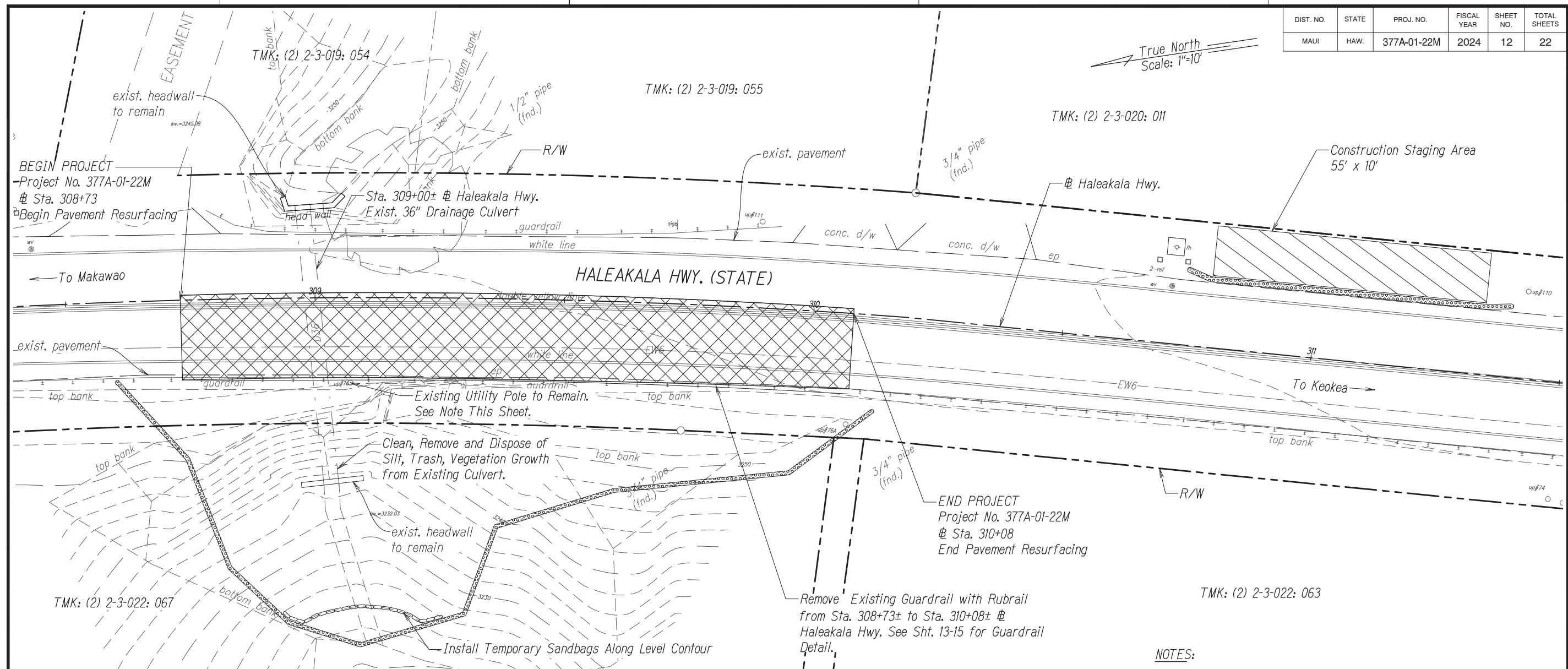
**GENERAL SITE PLAN**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted Date: March 2024

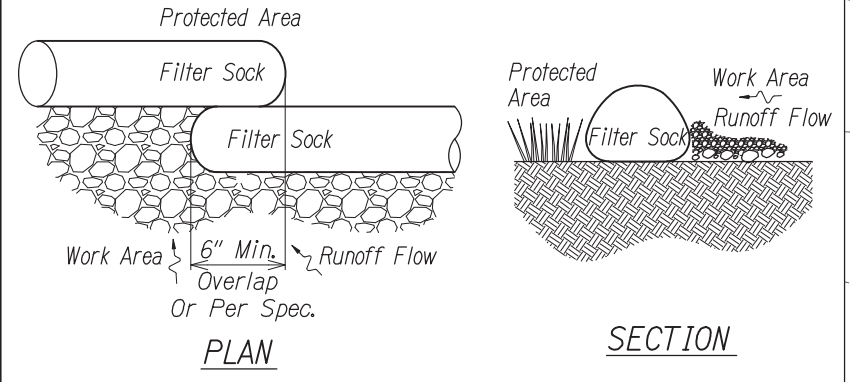
SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	12	22



- NOTES:**
- The Baseline And Baseline Stations Shown Are Approximate And Shall Be Used As A Guide For This Project Only.
  - Contractor To Protect Existing Utility Pole During Construction.

- LEGEND:**
- Resurfacing Area (2" Min. Cold Plane)
  - Temporary Filter Sock
  - Temporary Sandbag

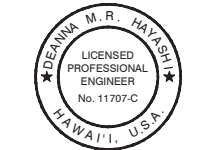
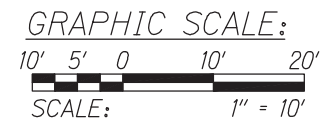


**NOTE:**

- Stagger Each Row Of Filter Socks So That Connection Points Meet 6" Minimum Overlap With Adjacent Connection Point.

**12" FILTER SOCK DETAIL**  
Not To Scale

**DEMOLITION AND EROSION CONTROL PLAN**  
Scale : 1" = 10'



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STATE OF HAWAII  
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HIGHWAYS DIVISION

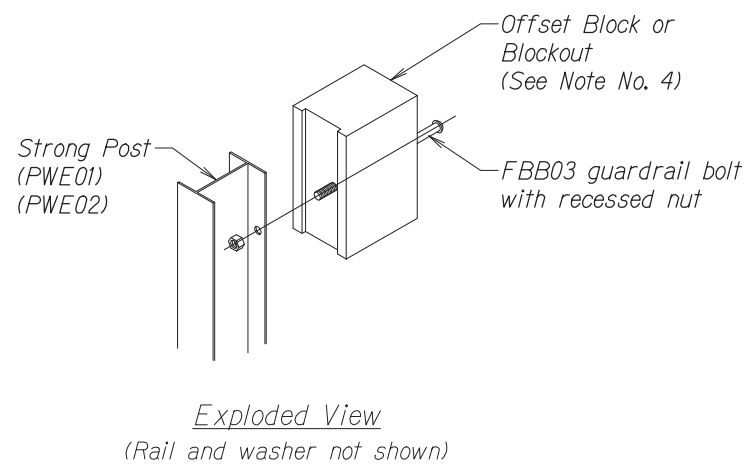
**DEMOLITION AND EROSION CONTROL PLAN**  
Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted Date: March 2024  
SHEET No. 1 OF 1 SHEETS

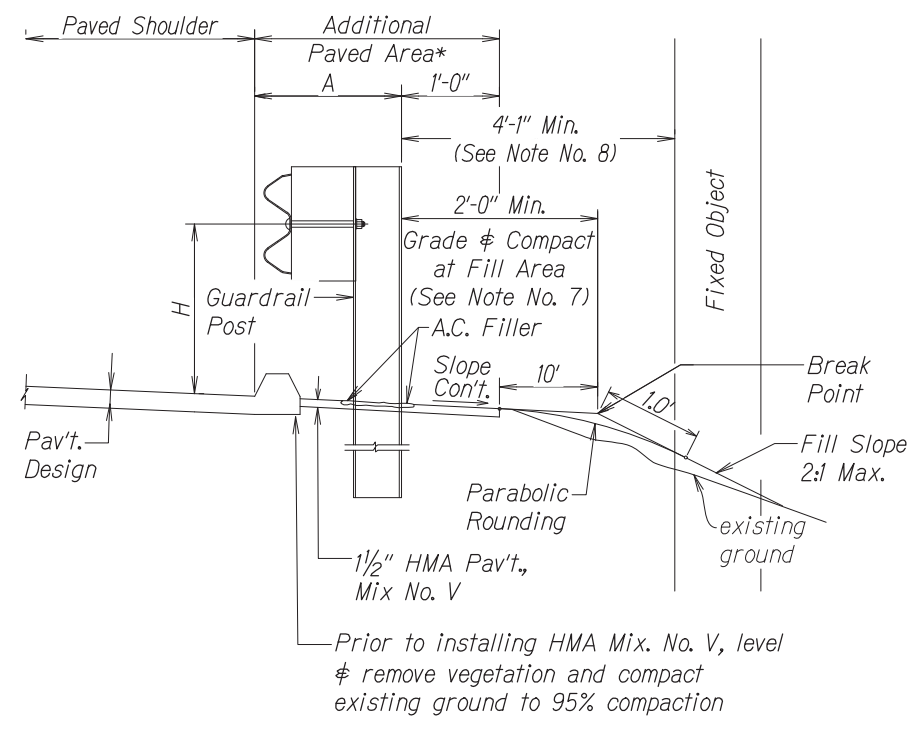
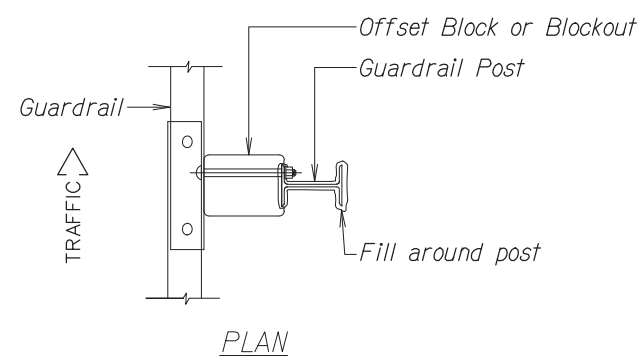
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	13	22

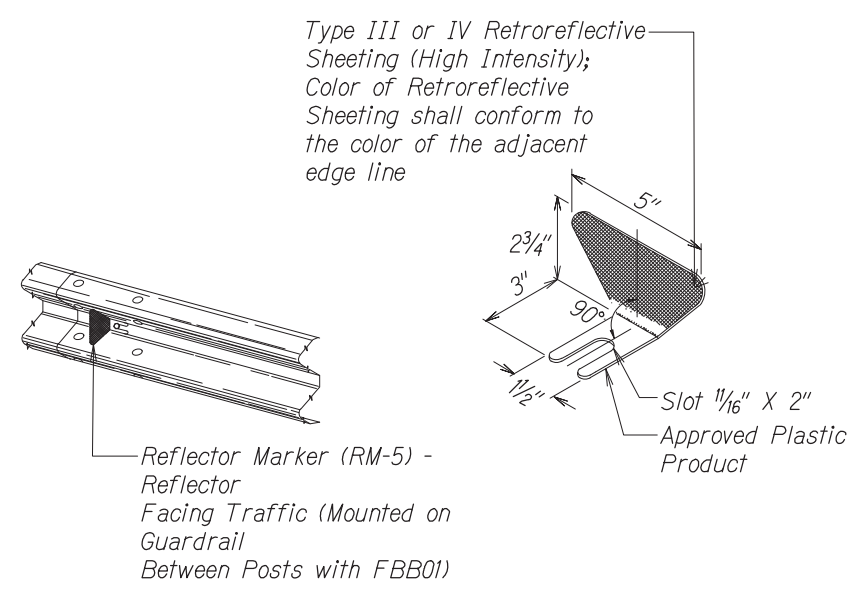
GUARDRAIL TYPE	DIMENSION	
	H	A
MGS w/ Standard 8" Offset Block	2'-1"	1'-6"



**STEEL POST AND BLOCK DETAIL**



**TYPICAL GUARDRAIL INSTALLATION**



**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 By The Engineer.
- All Fasteners, Posts, And Rail Elements (i.e. FBB03, PWE01, RWM04B, 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 Blockout 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.
- Minimum Working Width (Clear Distance) Between Back Of MGS Post To Any Fixed Object Is 4'-1" (49").
- New Hot Mix Asphalt (hma) Pavement At Guardrails Shall Extend 6 Feet Longitudinally Beyond Terminal Ends.
- Reflector Markers (RM-5) Mounted On 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 Guardrail System.

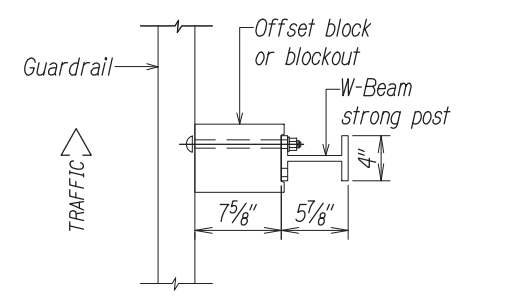
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
QUANTITIES BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....



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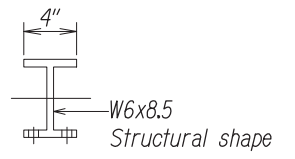
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**GUARDRAIL DETAILS AND NOTES-1**  
*Haleakala Hwy. Slope and Shoulder Repair*  
*Vicinity of Ainakula Road to Kulalani Drive*  
 Project No. 377A-01-22M  
 Scale: As Noted Date: March 2024  
 SHEET No. 1 OF 3 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	14	22

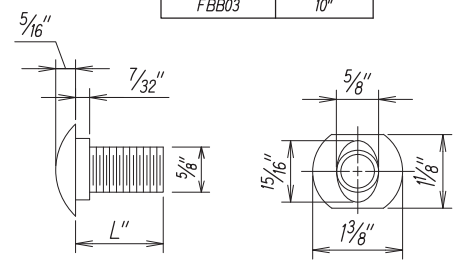


PLAN

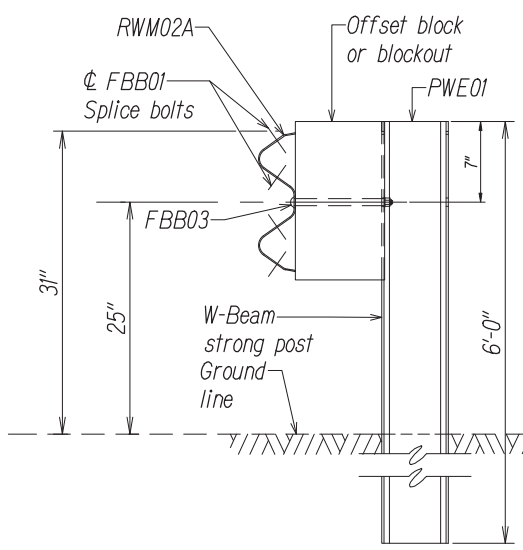
Note:  
All holes are 3/4" Dia.



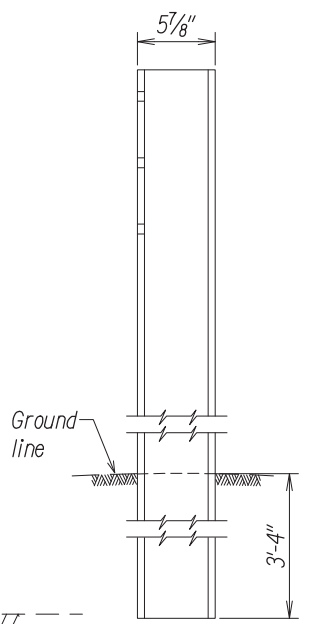
Designator	L
FBB01	1 3/8"
FBB02	2"
FBB03	10"



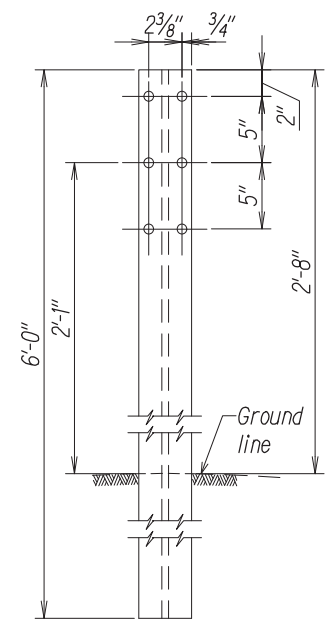
GUARDRAIL BOLTS AND RECESSED NUT



SECTION A-A



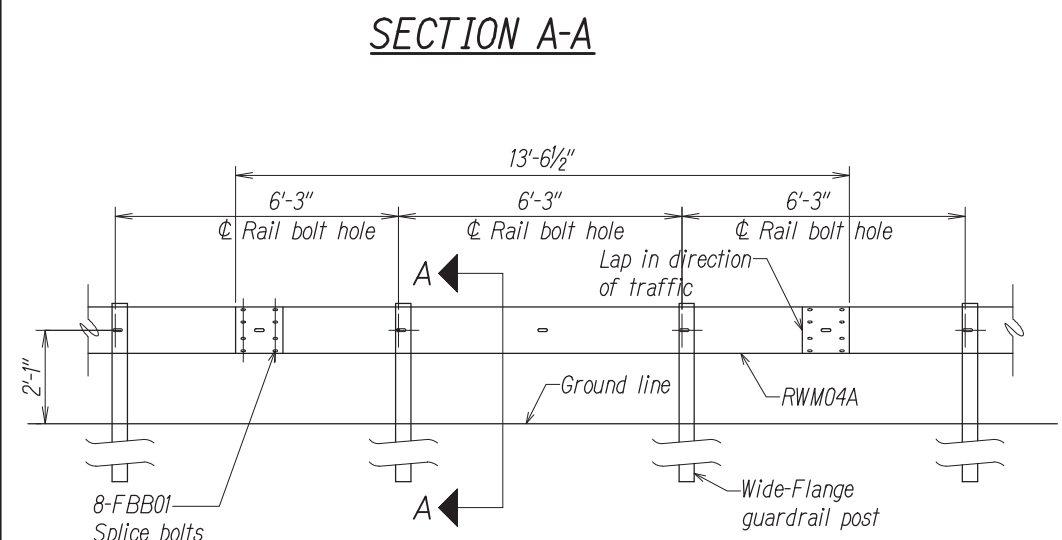
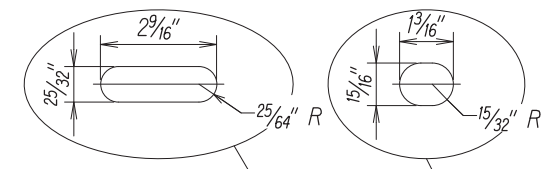
SIDE



FRONT

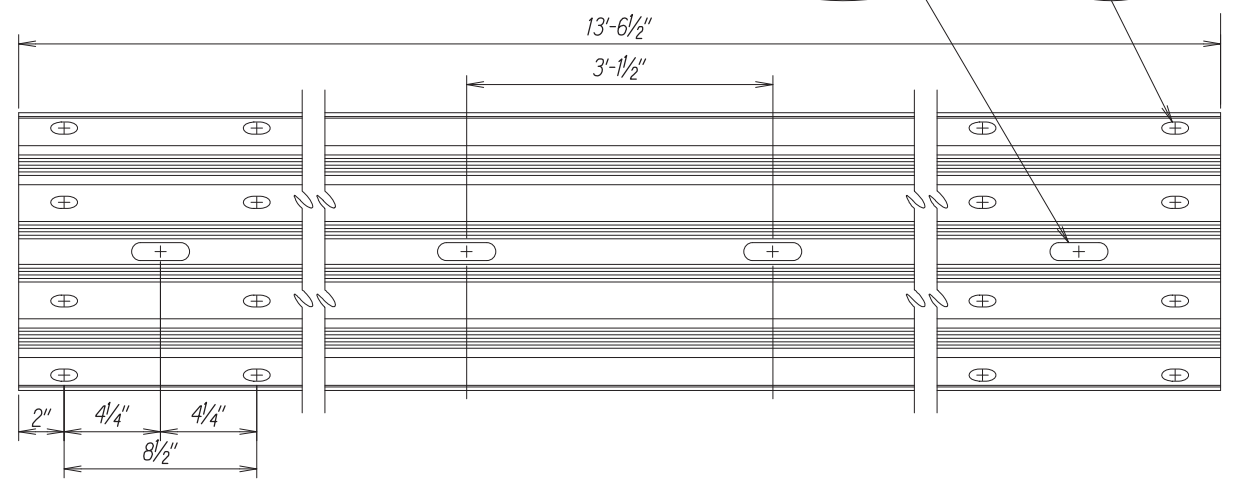
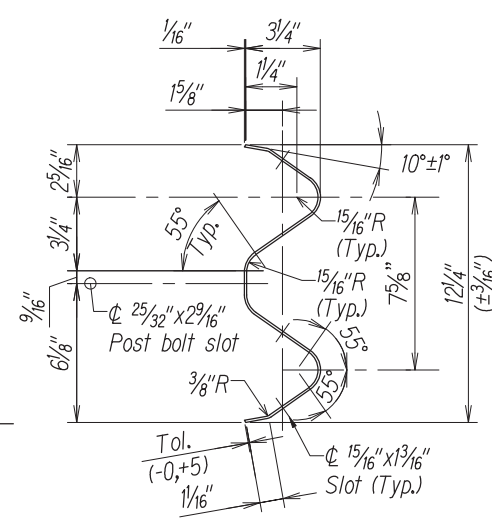
W-BEAM STRONG POST (PWE01)

Designator	Base metal thickness
RWM04A	12 Gauge



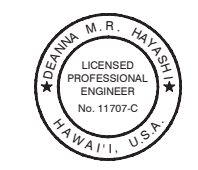
ELEVATION

MIDWEST GUARDRAIL SYSTEM WITH STANDARD 8" OFFSET BLOCK (SGR47)



4 SPACE W-BEAM GUARDRAIL (RWM04A)

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



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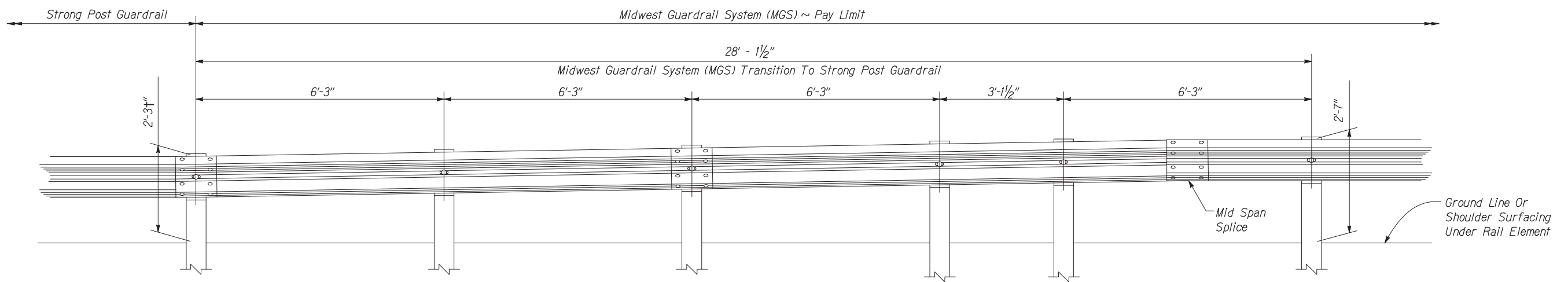
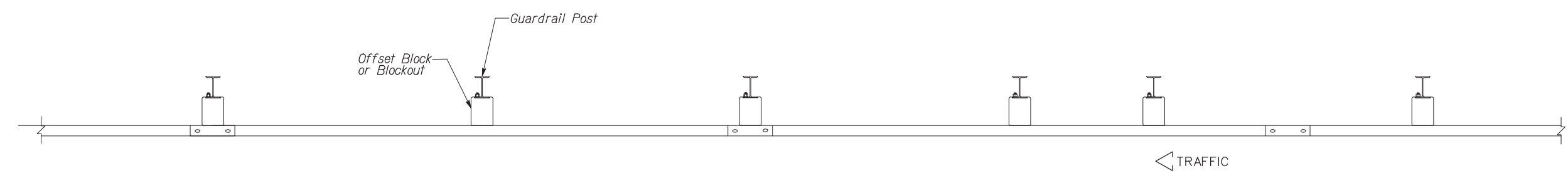
**GUARDRAIL DETAILS-2**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted Date: March 2024

SHEET No. 2 OF 3 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	15	22



**MIDWEST GUARDRAIL SYSTEM (MGS)  
TRANSITION TO STRONG POST GUARDRAIL**

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



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STATE OF HAWAII  
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 HIGHWAYS DIVISION

**GUARDRAIL DETAILS-3**

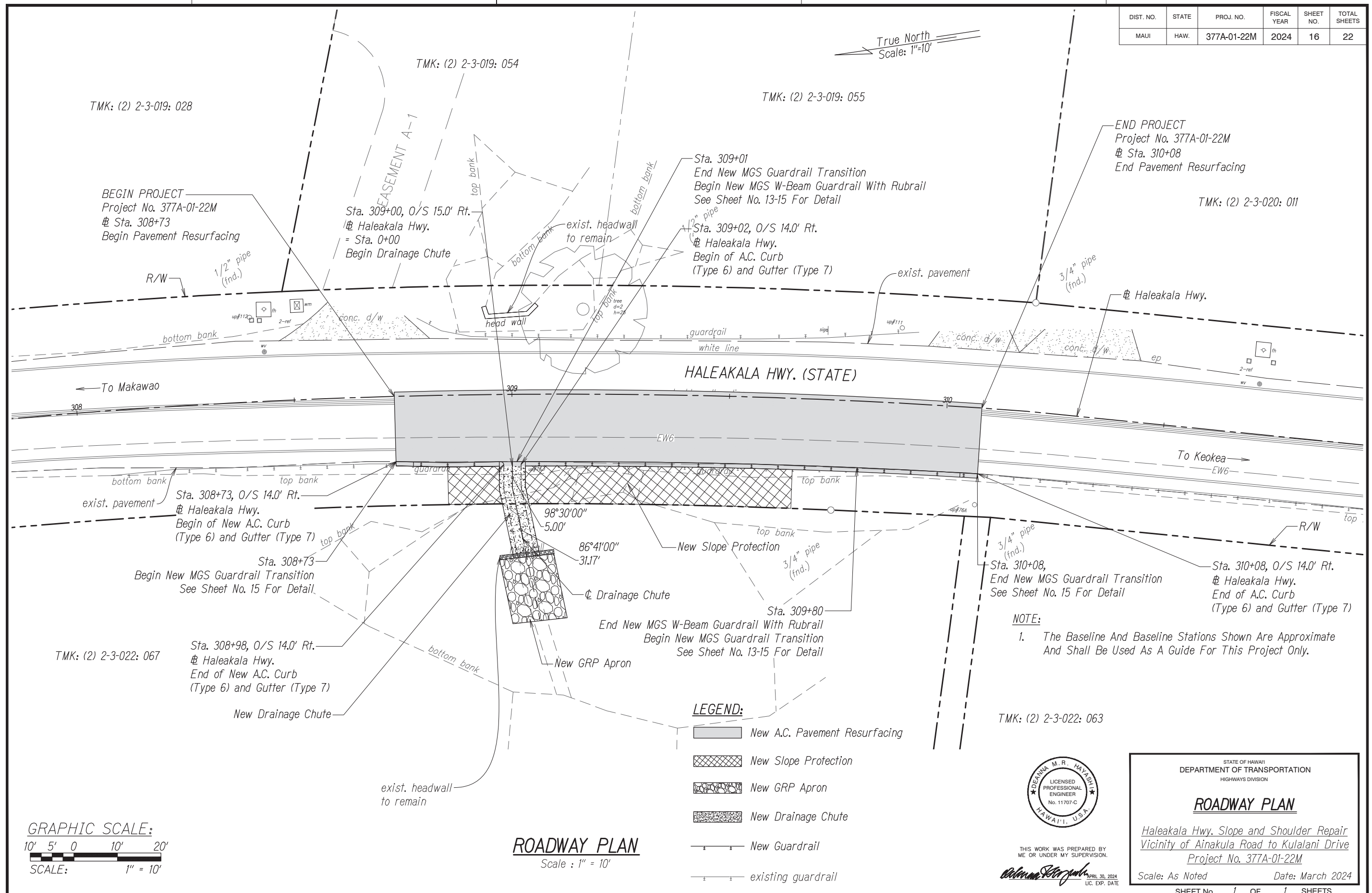
*Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M*

Scale: As Noted Date: March 2024

SHEET No. 3 OF 3 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	16	22

True North  
Scale: 1"=10'



TMK: (2) 2-3-019: 028

TMK: (2) 2-3-019: 054

TMK: (2) 2-3-019: 055

END PROJECT  
Project No. 377A-01-22M  
@ Sta. 310+08  
End Pavement Resurfacing

TMK: (2) 2-3-020: 011

BEGIN PROJECT  
Project No. 377A-01-22M  
@ Sta. 308+73  
Begin Pavement Resurfacing

Sta. 309+00, O/S 15.0' Rt.  
@ Haleakala Hwy.  
= Sta. 0+00  
Begin Drainage Chute

Sta. 309+01  
End New MGS Guardrail Transition  
Begin New MGS W-Beam Guardrail With Rubrail  
See Sheet No. 13-15 For Detail

Sta. 309+02, O/S 14.0' Rt.  
@ Haleakala Hwy.  
Begin of A.C. Curb  
(Type 6) and Gutter (Type 7)

@ Haleakala Hwy.

HALEAKALA HWY. (STATE)

To Makawao

To Keokea

Sta. 308+73, O/S 14.0' Rt.  
@ Haleakala Hwy.  
Begin of New A.C. Curb  
(Type 6) and Gutter (Type 7)

Sta. 308+73  
Begin New MGS Guardrail Transition  
See Sheet No. 15 For Detail

Sta. 308+98, O/S 14.0' Rt.  
@ Haleakala Hwy.  
End of New A.C. Curb  
(Type 6) and Gutter (Type 7)

New Drainage Chute

98°30'00"

5.00'

Ø Drainage Chute

Sta. 309+80  
End New MGS W-Beam Guardrail With Rubrail  
Begin New MGS Guardrail Transition  
See Sheet No. 13-15 For Detail

New GRP Apron

Sta. 310+08,  
End New MGS Guardrail Transition  
See Sheet No. 15 For Detail

Sta. 310+08, O/S 14.0' Rt.  
@ Haleakala Hwy.  
End of A.C. Curb  
(Type 6) and Gutter (Type 7)

NOTE:

- The Baseline And Baseline Stations Shown Are Approximate And Shall Be Used As A Guide For This Project Only.

TMK: (2) 2-3-022: 063

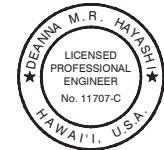
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	

GRAPHIC SCALE:  
10' 5' 0 10' 20'  
SCALE: 1" = 10'

ROADWAY PLAN  
Scale: 1" = 10'

LEGEND:

- New A.C. Pavement Resurfacing
- New Slope Protection
- New GRP Apron
- New Drainage Chute
- New Guardrail
- existing guardrail



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**ROADWAY PLAN**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

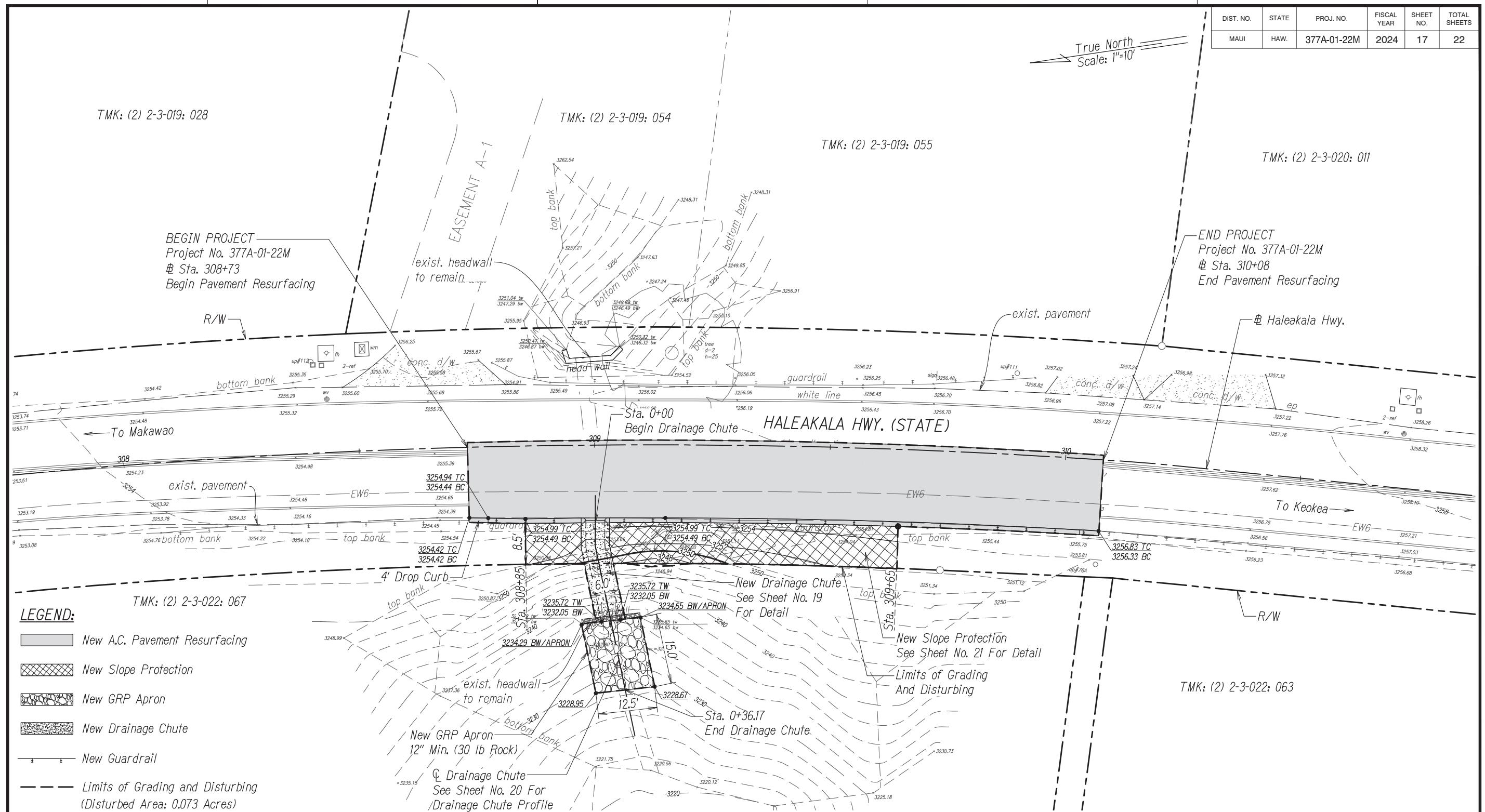
Scale: As Noted Date: March 2024

SHEET No. 1 OF 1 SHEETS



DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	17	22

True North  
Scale: 1"=10'



- LEGEND:**
- New A.C. Pavement Resurfacing
  - New Slope Protection
  - New GRP Apron
  - New Drainage Chute
  - New Guardrail
  - Limits of Grading and Disturbing (Disturbed Area: 0.073 Acres)

**GRAPHIC SCALE:**  
10' 5' 0 10' 20'  
SCALE: 1" = 10'

**NOTE:**  
1. The Baseline And Baseline Stations Shown Are Approximate And Shall Be Used As A Guide For This Project Only.

**GRADING PLAN**  
Scale : 1" = 10'

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



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STATE OF HAWAII  
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HIGHWAYS DIVISION

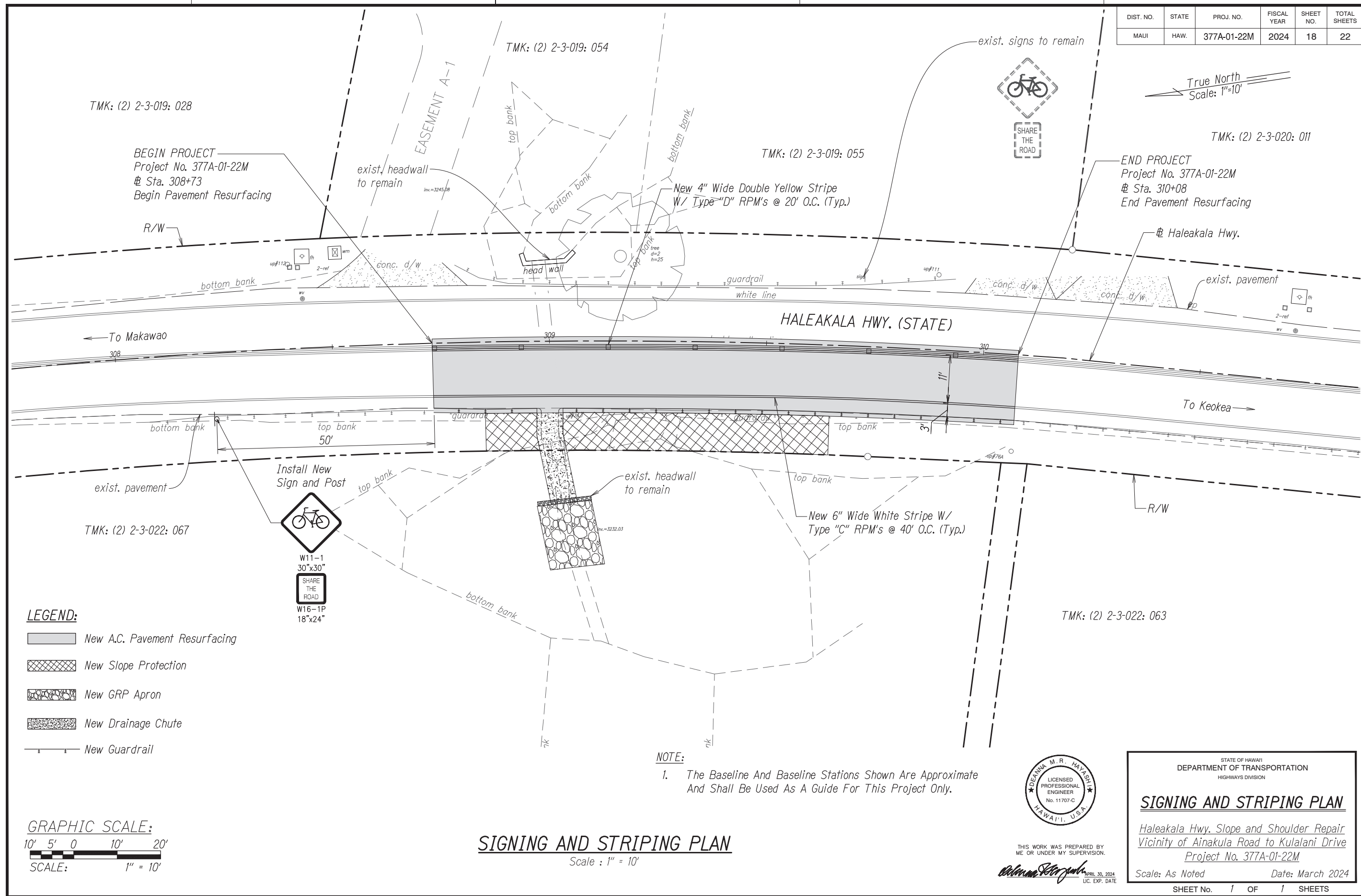
**GRADING PLAN**






Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted Date: March 2024

SHEET No. 17 OF 22 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	18	22



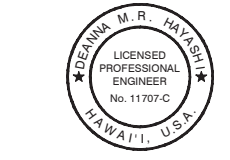
- LEGEND:**
-  New A.C. Pavement Resurfacing
  -  New Slope Protection
  -  New GRP Apron
  -  New Drainage Chute
  -  New Guardrail

**GRAPHIC SCALE:**  
 10' 5' 0 10' 20'  
 SCALE: 1" = 10'

**SIGNING AND STRIPING PLAN**  
 Scale : 1" = 10'

**NOTE:**  
 1. The Baseline And Baseline Stations Shown Are Approximate And Shall Be Used As A Guide For This Project Only.

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



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*Deanna M.R. Hayashi*  
 APRIL 30, 2024  
 LIC. EXP. DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

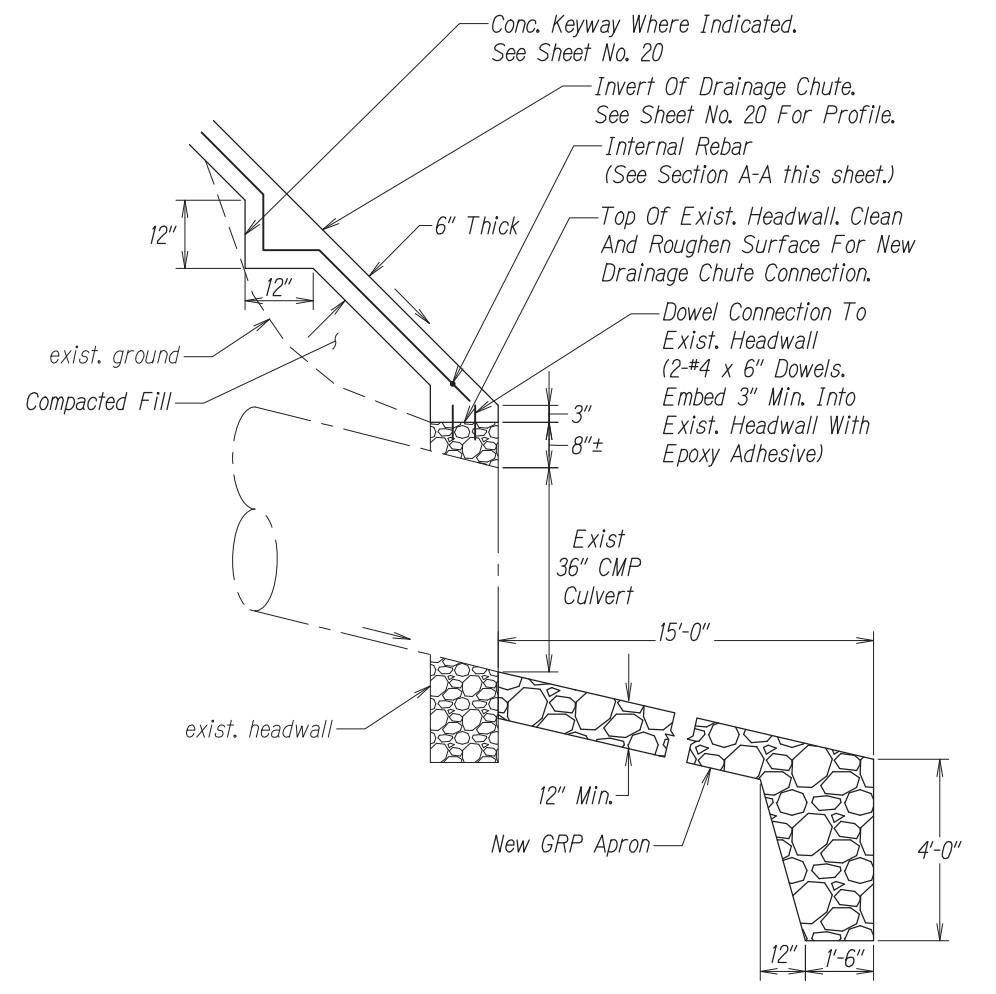
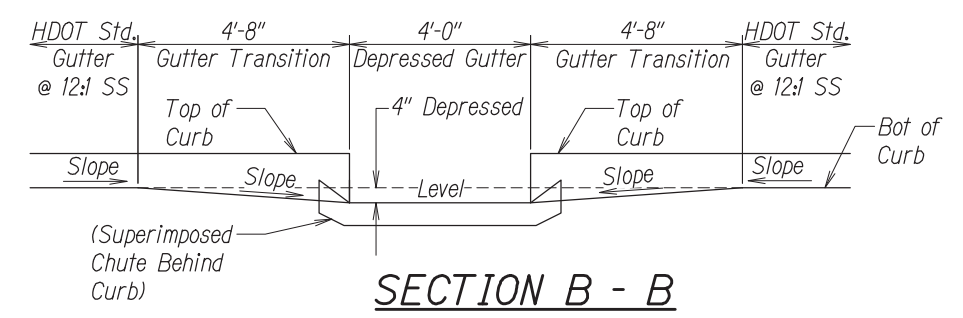
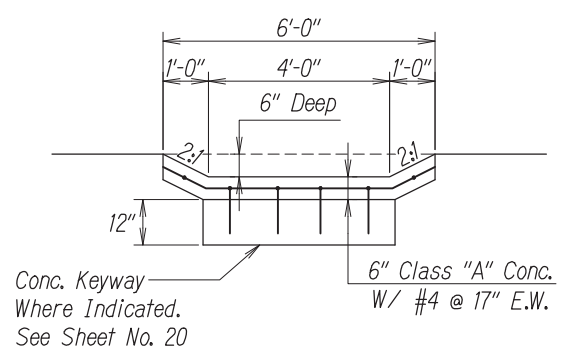
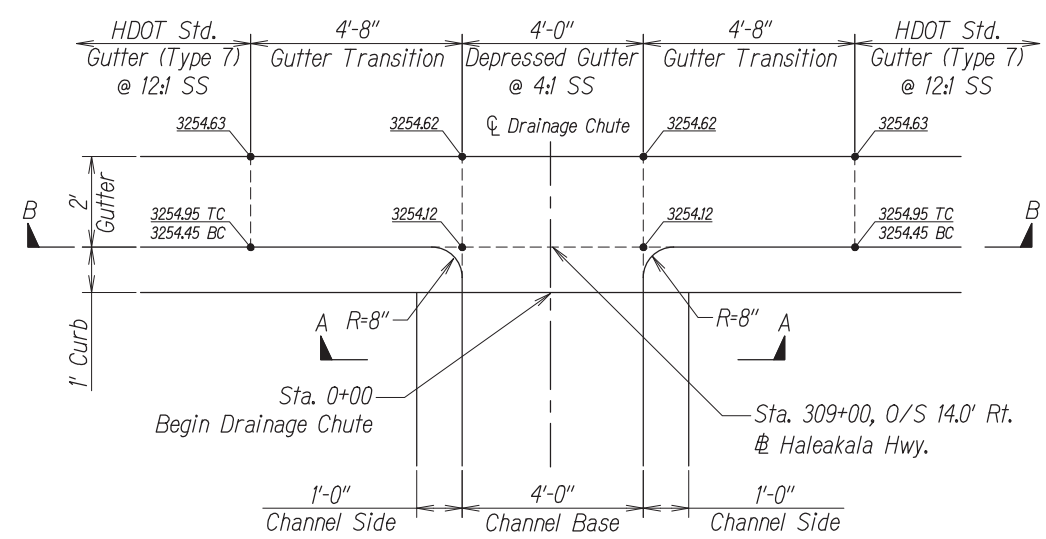
**SIGNING AND STRIPING PLAN**

*Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M*

Scale: As Noted      Date: March 2024

SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	19	22



**DRAINAGE CHUTE @ STA. 309+00 O/S 14.0' RT.**  
Scale: As Noted

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



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HIGHWAYS DIVISION

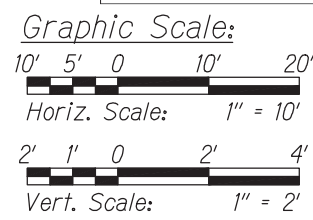
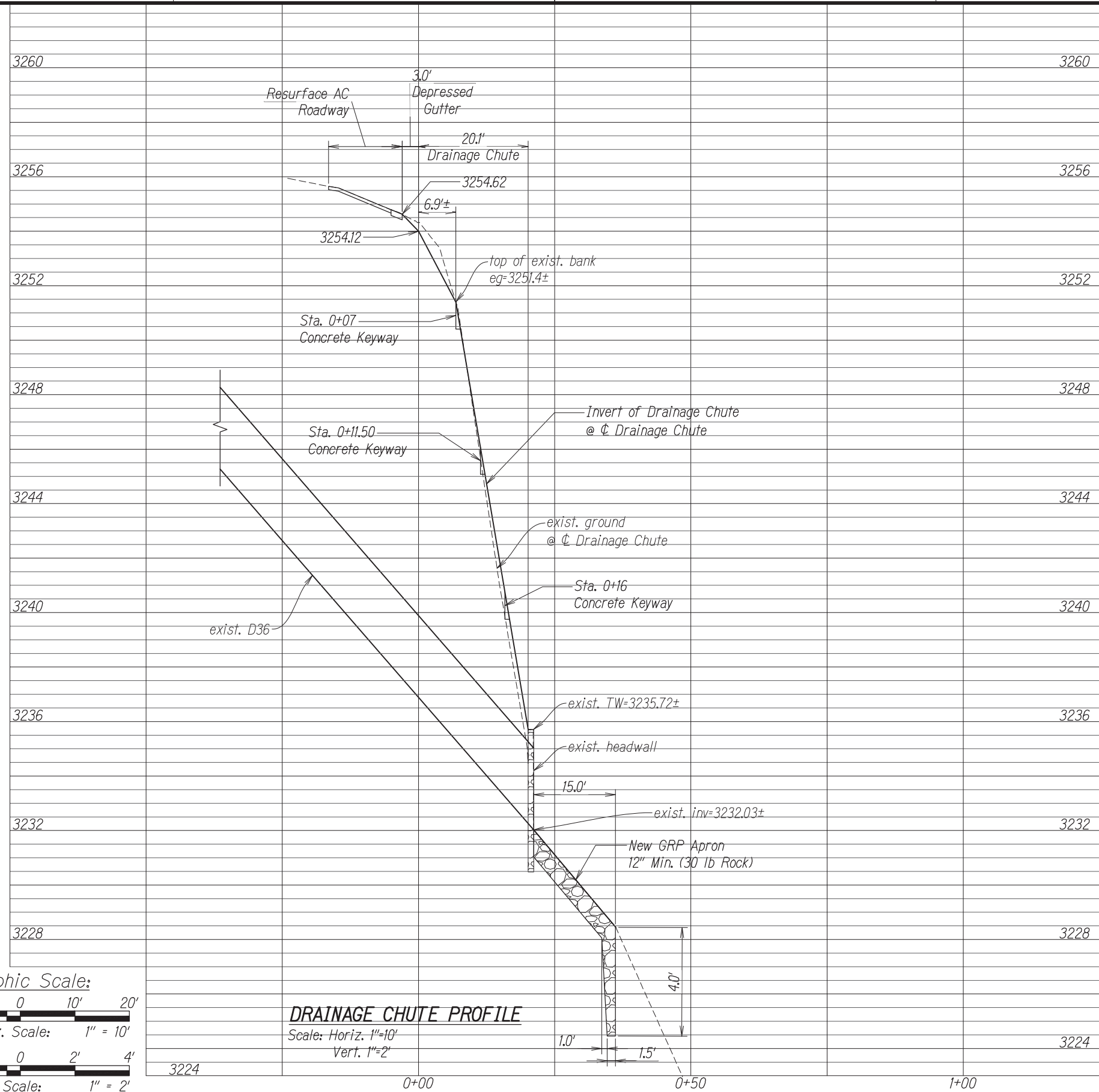
**DRAINAGE DETAILS**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

Scale: As Noted Date: March 2024

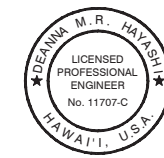
SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	20	22



**DRAINAGE CHUTE PROFILE**  
 Scale: Horiz. 1"=10'  
 Vert. 1"=2'

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**DRAINAGE CHUTE PROFILE**

Haleakala Hwy. Slope and Shoulder Repair  
 Vicinity of Ainakula Road to Kulalani Drive  
 Project No. 377A-01-22M

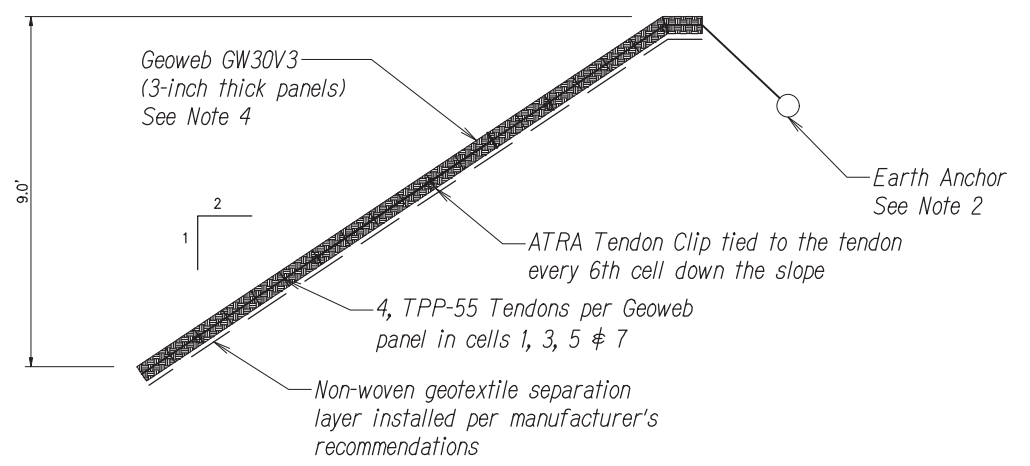
Scale: As Noted Date: March 2024

SHEET No. 1 OF 1 SHEETS

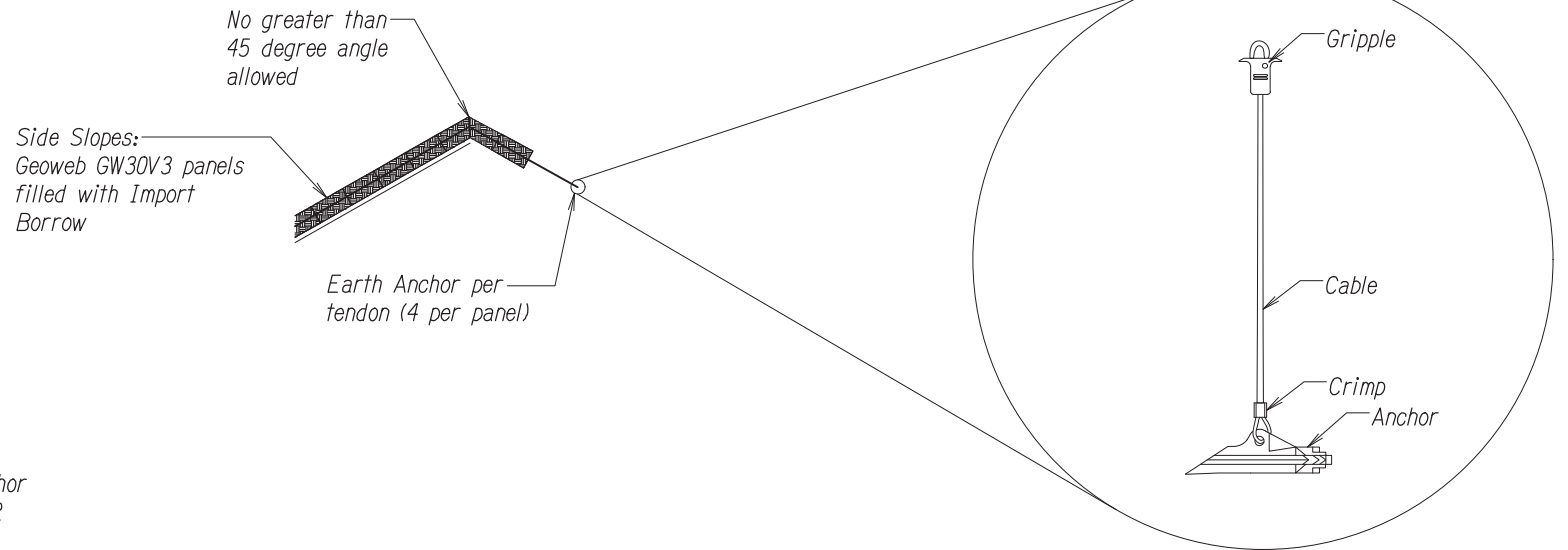
DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	21	22

**Notes:**

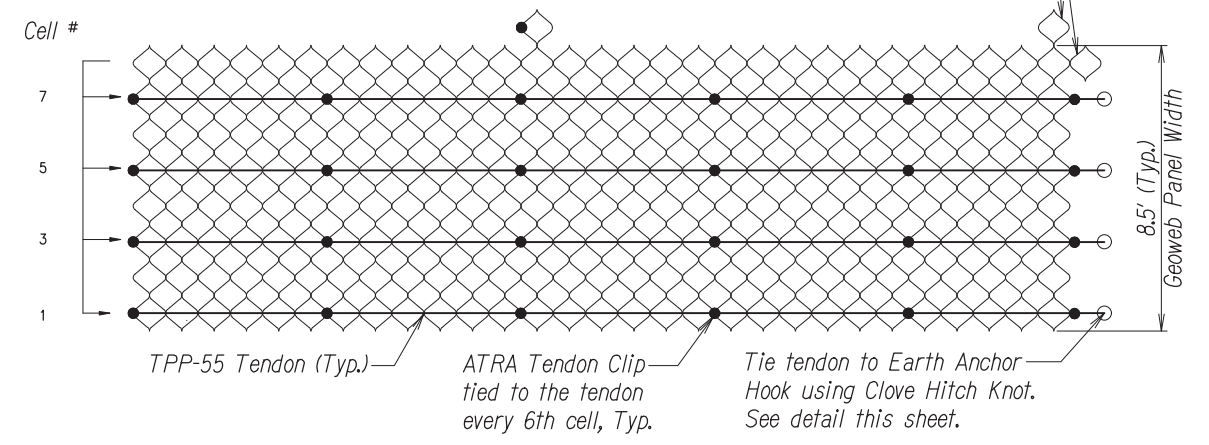
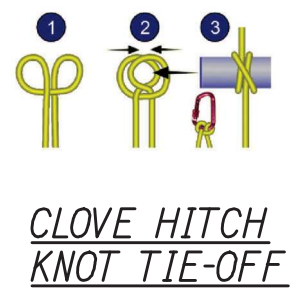
1. Geoweb, Tendons, ATRA Keys, and ATRA Tendon Clips to be manufactured by Presto Geosystems.
2. Tie earth anchor to each tendon with a minimum pull-out resistance of 650 lbs (302 lbs/ft x 8.5 ft/panel ÷ 4 tendon/panels) plus manufacturer recommended factor of safety based on site soil conditions, as determined by the Engineer.
3. The Geoweb panels shall be connected with ATRA Keys at each interleaf and end to end connection.
4. Geoweb infill shall be import borrow.



**TYPICAL SECTION - GEOWEB SLOPE PROTECTION**  
Scale: Not To Scale



**EARTH ANCHOR DETAILS**  
Scale: Not To Scale



**ANCHORING DETAILS**  
Scale: Not To Scale

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**SLOPE PROTECTION DETAIL**  
Scale: Not To Scale

DEANNA M. R. HAYASHI  
LICENSED PROFESSIONAL ENGINEER  
No. 11707-C  
HAWAII, U.S.A.

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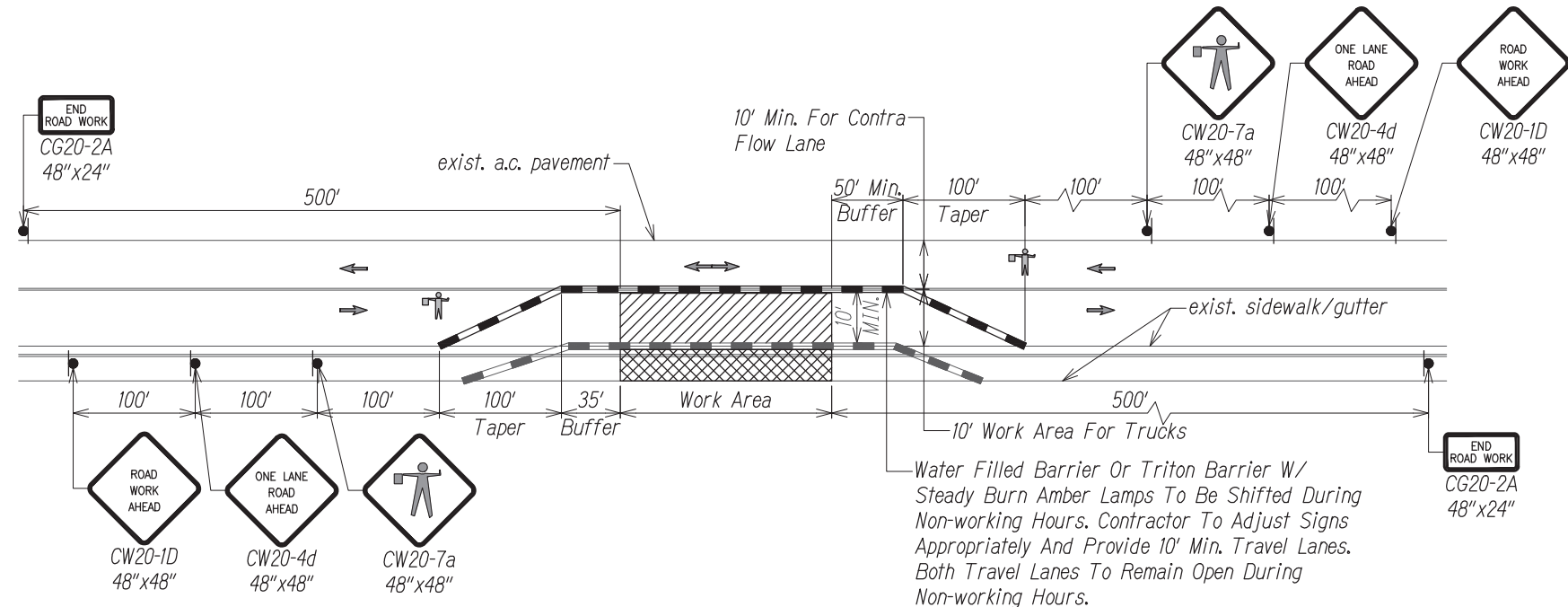
**SLOPE PROTECTION DETAIL**

Haleakala Hwy. Slope and Shoulder Repair  
Vicinity of Ainakula Road to Kulalani Drive  
Project No. 377A-01-22M

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SHEET No. 1 OF 1 SHEETS

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	377A-01-22M	2024	22	22



- LEGEND:**
- Sign
  - Cone With Retroreflective Tape
  - Direction Of Traffic
  - ▨ Work Area
  - ▩ Work Area (non-working Hours)
  - ⚠ Flagger
  - ▬ Water Filled Barrier Or Triton Barrier W/ Steady Burn Amber Lamps (Working Hours)
  - ▬ Triton Barrier W/ Steady Burn Amber Lamps (Non-Working Hours)

**TRAFFIC CONTROL PLAN (TYPE I) -  
TWO LANE ROADWAY - ONE LANE CLOSED**

**GENERAL TRAFFIC CONTROL NOTES**

1. The Permittee Shall Make Minor Adjustments At Intersections, Driveways, Bridges, Structures, Etc., To Fit Field Conditions.
2. Cones Or Delineators Shall Be Extend To Point Where They Are Visible To Approaching Traffic.
3. Traffic Control Devices Shall Be Installed Such That The Sign Or Device Farthest From The Work Area Is Placed First. The Others Shall Then Be Placed Progressively Toward The Work Area.
4. Regulatory And Warning Signs Within The Construction Zone That Are In Conflict With The Traffic Control Plans Shall Be Removed Or Covered.
5. Flaggers And/or Police Officers Shall Be In Sight Of Each Other Or In Direct Communication At All Times.
6. When Required By The Issuing Office, The Permittee Shall Install A Flashing Arrow Signal As Shown On The Traffic Control Plans.
7. All Traffic Lanes Shall Be A Minimum Of 10 Feet Wide.
8. All Construction Warning Signs Shall Be Promptly Removed Or Covered Whenever The Message Is Not Applicable Or Not In Use.
9. The Backs Of All Signs Used For Traffic Control Shall Be Appropriately Covered To Preclude The Display Of Inapplicable Sign Messages (i.e., When Signs Have Messages On Both Faces).
10. Lane Closure Shall Be Limited To The Requirements Stated In The Project Specifications/Special Provisions. As Soon As Each Day's Work Is Completed, The Permittee Shall Remove All Traffic Control Devices No Longer Needed To Permit Free And Safe Passage Of Public Traffic. Removal Shall Be In The Reverse Order Of Installation. Existing Faded Or Obliterated Pavement Markings That Are Necessary For Safe Traffic Flow In The Construction Area Shall Be Replaced With Temporary Or Permanent Markings Before Opening The Roadway To Public Traffic Each Day.
11. Permanent Pavement Markings And Traffic Signs Shall Be Replaced Upon Completion Of Each Phase Of Work.
12. Driveways Shall Be Kept Open Unless The Owners Of The Property Using The Driveway Are Otherwise Provided For Satisfactorily. Further, The Permittee Shall Control Traffic Going Into And Out Of Driveways.
13. Cones And Delineators Shall Be Spaced At A Maximum Distance Of 20 Feet Apart. A Minimum Of Six Channelizing Devices Shall Be Used For Each Taper Length.
14. Buffer And Taper Area On Approach To Any Work Area Shall Be Kept Clear Of Vehicles And Equipment.
15. A High Level Warning Device (flag Tree) Shall Be Installed On Approach To All Work Areas.
16. Coordinate With Maui Police, Fire Department And Emergency Medical Personnel To Allow Emergency Vehicles To Pass Through Work Area.
17. The Contractor Is Responsible For Providing All Sign Supports And/or Posts For Construction Warning Signs.
18. All Temporary Traffic Control Measures Shall Conform To The Latest Edition Of Fhwa Publication, "manual On Uniform Traffic Control Devices For Streets And Highways (mutcd), 2009", And Current Revisions, "standard Alphabets For Highway Signs", "standard Highway Signs", And Section 645 Of The Hawaii Standard Specifications, 2005.
19. Damage To Signs, Temporary Pavement Markers, And Delineators Caused By The Public Or Contractor's Negligence Shall Be Repaired Or Replaced By The Contractor.
20. Lane Closures With Contra-flow Traffic And Flagmen Are Allowed During The Week Per Standard Specifications Section 645.03(f). Work That Does Not Require Any Lane Closures Is Allowable During Normal Working Hours Per Standard Specifications Section 107.03.

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**TRAFFIC CONTROL PLAN**  
Scale: Not To Scale

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HAWAII, U.S.A.

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**TRAFFIC CONTROL PLAN**

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SHEET No. 1 OF 1 SHEETS