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11-18	SITE PLANS
19-26	TRAFFIC CONTROL PLANS

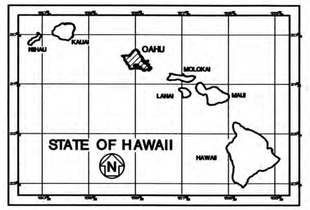
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	1	26

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

OAHU, HAWAII

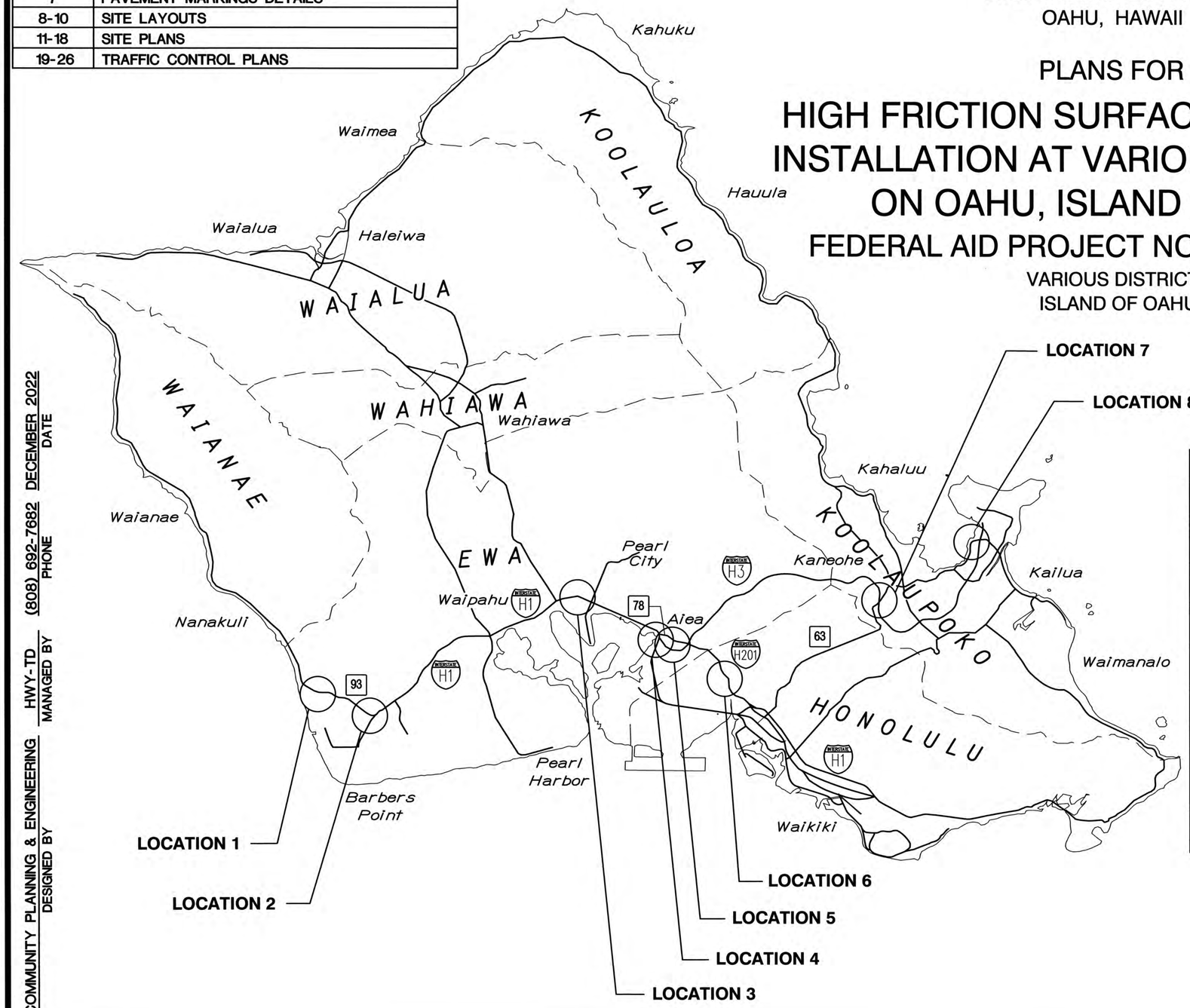


PLANS FOR

HIGH FRICTION SURFACE TREATMENT INSTALLATION AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

VARIOUS DISTRICTS
ISLAND OF OAHU



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SCALE IN MILES

PROJECT LOCATIONS				
REF#	INTERCHANGE	ROUTE	MILEPOST	RAMP NAME
1	KOOLINA	93	2.00	Rte 93 WB Off Ramp 2A > Aliinui Dr
2	PALAILAI	H-1	1.00	H1 WB Off Ramp 1E > Kalaeloa Blvd SB
3	WAIAU	H-1	10.00	Moanalua Rd WB On Ramp 10G > H1 WB
4	STADIUM	78	1.00	Aiea Access Rd On Ramp 1A > Rte 78 EB
5	HALAWA	H-1	13.00	H1 WB Off Ramp 13J > Moanalua WB
6	PUULOA	H-201	3.00	Puuloa Rd On Ramp 3K > H201 WB
7	KANEOHE	H-3	9.00	Likelike SB On Ramp 8B > H3 WB
8	MOKAPU	H-3	15.00	H3 EB Off Ramp 15A > Kaneohe Bay Dr

COMMUNITY PLANNING & ENGINEERING
DESIGNED BY

HWY-TD
MANAGED BY

(808) 692-7682
PHONE

DECEMBER 2022
DATE

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

Jan 4, 2023

for DIR. OF TRANSPORTATION — DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	2	26

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 Detail 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
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

STANDARD PLAN NO.	TITLE	DATE
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 Castings	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 And 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	05/31/07
	Frame And Grates	
H-16	Type 61614, 61614p, 61616, 61616p Steel Frame	05/31/07
	And Grates	
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
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-1A	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

STANDARD PLAN NO.	TITLE	DATE
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
TE-16	Mile Posts	07/11/08
TE-17A	Cantilever Overhead Sign Elevation & Details	05/31/07
TE-17B	Centilever Sign Frame Detail And Section	05/31/07
TE-17C	Cantilever Sign Frame Detail	05/31/07
TE-17D	Centilever Sign Frame Section	05/31/07
TE-17E	Centilever 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	05/31/07
	Accessory Details	
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
TE-29	Pavement Arrows And Symbols	07/11/08
TE-30	Pavement Alphabets, Numbers & Symbols	07/11/08
TE-31	Pavement Alphabets, Numbers & Symbols	07/11/08

STANDARD PLAN NO.	TITLE	DATE
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	Pullbox & 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 4 (rigid Barrier)	05/31/07
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 NO. (FOR EXAMPLE: D-07 ●)

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale:
Date: DECEMBER, 2022

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	3	26

GENERAL NOTES

1. The Hawaii Department of Transportation (HDOT) is installing High Friction Surface Treatment (HFST) on eight highway ramp locations on Oahu. The scope of work consists of removal of existing pavement markers and striping; HFST applied; pavement markers and striping reapplied; and other incidental items.

2. Construction and restoration of all existing highway facilities within State Right-of-Way shall be done in accordance with all applicable sections of the current Hawai'i Standard Specifications for Road and Bridge Construction , 2005, and the "Specification for Installation of Miscellaneous Improvements within State Highways" of the State Highways Division. Special attention to subsections 105.16, 107.02, 107.06, 107.12 and 645.

3. The Contractor shall notify in writing the Engineer and the Oahu Transit Services, Oahu District Engineer (831-6700) two (2) weeks prior to construction, informing them of location, scope of work, and closure of Name of Highway and/or traffic lanes and dates of closure.

4. The Contractor shall notify Emergency services 24-hours prior to starting construction operations of any lane closures, detours or other activities that could effect traffic and emergency access.

5. The Contractor shall obtain a Permit To Perform Work Upon State Highway from the HDOT Highways Division Oahu District Engineer, at 727 Kakoi Street, prior to commencing work within the State right-of-way.
   The Permit To Perform Work Upon State Highway may be revoked due to defaulting on contract requirements, including, but not limited to, the following:
   1. Performing work before or after permitted hours.
   2. Failure to maintain the roadway in a smooth and safe condition.
   3. Failure to clean up construction debris generated from project work.
   4. Failure to provide or maintain proper traffic control.
   5. Failure to replace damaged pavement markings and signs.
   6. Failure to maintain highway lighting and/or traffic signal systems.
   7. Failure to address public complaints to the satisfaction of the Engineer

   Any revocation of the permit shall be at the Contractor's expense and no additional cost to the State and no additional contract time will be added.

6. Due to the requirement of working at night a Community Noise Variance application has been submitted to the State Department of Health, Indoor and Radiation Health Branch at 99-945 Halawa Valley Street Aiea, HI 96701; Telephone No. 586-4700. The Noise Variance will be transferred to the Contractor after the project is awarded. The Contractor must adhere to all conditions and restrictions of the approved Variance. Failure to comply will result in additional restrictions, suspension of the variance, and/or fines.

7. The Contractor shall stop all work and contact the Fish and Wildlife Service (808-792-9400) if bats or birds are seen flying around the work area at night.

8. The Contractor shall place a "Notice to Motorists" announcement in the daily newspaper for at least three consecutive days, one week prior to start of construction. The notice shall submitted to the Construction and Maintenance Branch for approval, at least four (4) weeks before publishing in the newspaper. The notice shall include but shall not be limited to the following information.
   1. Date on which the closure will start.
   2. The number of the days of the closure.
   3. The hours and days of work.
   4. A diagram of the affected roadway.

9. 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 their operations.

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, at no additional cost to the State, and to the satisfaction of the Engineer. Damages to any existing facilities shall be immediately reported to the respective Utility Companies, City or State Agency.

11. The Contractor shall restore to their original condition or better, all items damaged as a result of the construction, including pavements, embankments, curbs, signs, landscaping, structures, utilities, walls, fences, etc. unless provided for specifically in the proposal. Demolition and restoration of existing items shall be incidental to the various contract items.

12. The Contractor shall be responsible for preserving all survey monuments on State property. All survey monuments disturbed or destroyed by the Contractor shall be reinstalled at no cost to the State. Only licensed State of Hawaii Land Surveyor shall reinstall monuments. Contractor shall coordinate with the state Construction Surveyor prior to construction.

13. The Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished grade. The Contractor shall submit a list of all items, water, drainage, sewer, gas, utilities, etc. to be adjusted to the new finished grade.

14. The Contractor must remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tapes, and epoxy adhesives including any debris generated by the removal of the pavement markings, tapes, adhesives, etc. prior to the overlaying of HFST. This work shall be considered incidental to HFST and will not be paid for separately.

15. Preformed Pavement Marking Tape shall be removed prior to resurfacing. Removal shall be by scraping, grinding, or other method approved by the Engineer. Payment shall be incidental to various pavement marking items.

16. Pavement restriping where required shall be done by Contractor and shall be replaced in kind or as required by the Contract Documents.

17. All work called for on the plans and not itemized in the proposal or all work not called for but required for the construction of this project, or both must be considered incidental.

18. Full compensation for all additional materials and labor, not specifically shown or called for which are necessary to complete the construction of the project, shall be considered incidental to the various contract items in the proposal and no additional compensation will be allowed therefor.

19. Material or equipment or both must not 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 Oahu District Office at telephone no: 831-6712.

20. No Contractor shall perform any activity so as to cause falling rock, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or water courses. Should such violations occur, the cost incurred for any remedial action shall be the responsibility of the Contractor at no additional cost to the State

21. The Contractor must remove all silt, debris, litter, etc. deposited on the project site or adjacent areas, e.g., drainage facilities, roadways and other areas. The costs for this work will be considered incidental to various items of work and not paid for separately. If the Contractor fails to keep the project site in satisfactory condition, in the sole opinion of the Engineer, the Engineer may suspend work or take remedial action. The costs incurred for any remedial action by the Engineer shall be payable by the Contractor or deducted from monthly payments.

22. The Contractor must clean and remove any accumulation of aggregates along the roadside. This work shall be considered incidental to bulk of work or the various contract items and will not be paid for separately.

23. The Contractor at their own expense, must keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health and Section 620 - Dust Control of the HDOT Standard Specifications.

24. The Contractor shall verify and check all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer for direction.

25. The Contractor must, to the satisfaction of the Engineer, reference all existing traffic signs, posts and pavement markings before the commencement of construction. The Contractor shall replace or repair all traffic signs, posts, and pavement markings disturbed by his activities, unless directed otherwise by the Engineer or their Representative.

26. Existing drainage system must be fully functional at all times during construction. The Contractor must furnish materials, equipment, labor, tools and incidentals necessary to maintain design flow. This work must be considered incidental to the various contract items and will not be paid for separately.

27. Smooth riding connections must be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways or as directed by the Engineer. This work must be considered incidental to asphalt concrete and will not be paid for separately.

28. The Contractor shall provide and maintain safe, passable and ADA complaint access to and from all existing driveways, sidewalks, crosswalks, access routes, side streets and cross streets at all times. The Contractor must maintain ADA compliant access to existing bus stops, bus routes, HandiVan operations and bicycle facilities during construction. Coordinate with The Bus and HandiVan as necessary. This work shall be considered incidental to the various contract items.

29. If depressions, e.g. holes, depressions or wheel ruts need to be filled, they shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V. All broken and fragmented pavement surface material shall be removed before filling with Hot Mix Asphalt Pavement, Mix No. V. A tack coat must be applied to all surfaces having a Hot Mix Asphalt Pavement applied to it. Fill all open joints and cracks with a crack sealer. Wait a minimum of 30 days after completion of repairs before the placement of the High Friction Surface Treatment unless otherwise required by the manufacturer of the Treatment and accepted in writing by the Engineer. This work shall be considered incidental to various contract items.

30. All lanes shall be opened to traffic during morning peak hours from 5:00 am to 8:30 am and the afternoon peak hours from 3:00 pm to 6:00 pm and during non-working hours except as specified in Specifications Section 645-Traffic Control.

31. At the end of each day's work, the Contractor shall remove all equipment, signs and other obstructions to permit free and safe passage of public traffic.

32. The Contractor with the Engineer, after completion of the application of the High Friction Surface Treatment will test for and determine if there are any areas of ponding or defective areas. The Contractor must do remedial repairs to the areas to bring them into compliance with the Contract Documents. All such areas must be repaired at no additional cost to the State.

33. Vendors shall not be considered as subcontractors. No work shall be performed by vendors under this contract.

34. Contractor shall contact Hawaii One-Call Center at 1-866-423-7287 (or 811) and allow for sufficient time for utility location before commencing any trenching or digging. Additional toning and utility location may be required at the Contractors own expense.

35. The Contractor must obtain all necessary permits prior to start of work at his own cost.

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES-1

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: Date: DECEMBER, 2022

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	4	26

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

1. The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawai'i 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 current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Street and Highways, Part VI-Traffic Control for Highway Construction and Maintenance Operations". If lane closures are required during construction, a traffic control plan shall be incorporated into the construction plans and must be approved by the Division prior to the issuance of the permit.
2. The Contractor shall make minor adjustments at intersections, driveways, bridges, structures, etc. to fit field conditions.
3. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
4. Traffic Control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
5. Regulatory and warning sign within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of the work.
6. Flaggers and/or police officers shall be in sight of each other or in direct communications at all times.
7. When required by the District Engineer, the Contractor shall install a flashing arrow signal as shown on the Traffic Control Plans.
8. Minimum sign spacings (L), taper lengths (T), and spacings of cones or delineators shall be as shown in Table 1 of Section 645 in the Specifications, unless otherwise noted on the Traffic Control Plans.
9. All open traffic lanes shall be free and clear of obstructions and maintained at their normal widths through the work zone.
10. All construction warning signs shall be properly removed or covered whenever the message is not applicable or not in use.
11. The backs of 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).
12. At the end of each day's work or as soon as the 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. Install both temporary and permanent pavement marking devices on new or reconstructed Federal aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004
13. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
14. All lane closures and other traffic pattern changes (detours) not shown on the plans shall be submitted to the Engineer for approval in accordance with Specifications Section 645 - Traffic Control. For restrictions on lane closures, detours, construction work during peak hours, and other requirements regarding maintaining vehicular and pedestrian traffic, see Section 645-Traffic Control.
15. All existing ramp lanes shall be open to traffic during non-working hours.
16. Longitudinal distance along the highway shall be maintained.
17. All regulatory guide, warning and construction signs and barricades must use only high-intensity reflective sheeting for its retroreflective sheeting.
18. The Contractor must reference to the satisfaction of the Engineer all existing traffic signs, posts, pavement markings, etc. before the commencement of construction. The Contractor must replace or repair all such objects, eg. traffic signs, posts, and pavements markings disturbed by their activities, or as directed otherwise by the Engineer.
19. The Contractor must provide and maintain ADA compliant, safe and passable access to, from and along with all existing permanent or temporary facilities, e.g. driveways, sidewalks, crosswalks, ADA access routes, side streets and cross streets at all times. The Contractor must also maintain the same level of access to existing bus stops, bus routes, HandiVan operations and bicycle facilities during construction of the project. Coordinate with The Bus and HandiVan organizations as necessary. This work will be considered incidental to the various contract items and not paid for separately.
20. At the end of each day's work, the Contractor shall remove all equipment, signs and other obstructions to permit free and safe passage of public traffic.
21. All lanes shall be opened to traffic during morning peak hours from 5:00 am to 8:30 am and the afternoon peak hours from 3:00 pm to 6:00 pm and during non-working hours except as specified in Specifications Section 645-Traffic Control.
22. The Contractor shall obtain all necessary permits prior to start of work at his own cost.

NO POTENTIAL TO AFFECT HISTORIC PROPERTIES

1. This Project shall have no potential to cause effects to historic properties
2. No part of this Project shall penetrate below the sub-base course of the roadway or disturb any subgrade soils.
3. No part of this Project shall occur outside of the right-of-way.

ENDANGERED SPECIES ACT SECTION 7 NOTES

1. All work lights shall be shielded so that the bulb can only be seen from below the bulb height and only used when construction is occurring in the area illuminated by the light.
2. The Contractor shall stop all work and contact the Fish and Wildlife Service (800-344-9453) if bats or birds are seen flying around the work area at night.
3. Woody plants greater than 15 feet tall shall not be disturbed, removed, or trimmed during the Hawaiian hoary bat birthing and pup rearing season, June 1 through September 15.

LEGEND

- HFST Application Areas
- —e— Existing Electrical Line
- ○jp Existing Joint Pole
- ○pp Existing Power Pole
- ○emh Existing Electric Manhole
- —t— Existing Telephone Line
- ○tp Existing Telephone Pole
- ○tmh Existing Telephone Manhole
- —sc— Existing Signal Corps Line
- —tv— Existing TV Cable
- —s.i.c.— Existing Sandwich Isles Communication Line
- —w—12— Existing 12" Water Line
- ○wmh Existing Water Manhole
- ○av Existing Water Air Valve
- ○wv Existing Water Valve Box
- ▭wm Existing Water Meter
- ⊹fh Existing Fire Hydrant
- —s—12— Existing 12" Sewer Line
- ○smh Existing Sewer Manhole
- —g—6— Existing 6" Gas Line
- ○gv Existing Gas Valve Box
- ○gmh Existing Gas Manhole
- ◎mon. Existing Monument
- —d—24— Existing 24" Drain Line
- ○sdmh Existing Storm Drain Manhole
- ⊟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
- Existing Metal Guardrail

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES-2

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: Date: DECEMBER, 2022

SHEET No. 2 OF 2 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	5	26

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 stale 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:

Non-compliance and/or failure to comply with local, State, and Federal waste management regulations shall be sufficient grounds for Termination of Contract per Special Provisions Subsection 108.11 - Termination of Contract for Cause, at the sole discretion of the Engineer.

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 (DOH) to receive solid waste to the Engineer within one week after disposal. Include documentation from any DOH permitted intermediary facility where solid waste is handled or processed as requested by the Engineer. Solid waste shall not be processed or stored offsite unless it is taken directly to a DOH permitted facility. Do not transport, store, or process solid waste generated onsite to any unpermitted facility, including, but not limited to, the Contractor's or Subcontractor's base yards.
   The Contractor shall not independently reclassify solid waste as inert material. If the Contractor elects to reclassify material as inert fill, the requirements of Section 219 - Determination and Characterization of Fill Material shall apply. No material generated from this project shall be classified as inert fill without prior testing and written approval from the Engineer. The Contractor is solely responsible for costs and time associated with, but not limited to, any sampling, testing, and analysis of material in consideration for reclassification. No additional compensation for time, labor, materials, or other costs shall be considered by HDOT. Violations may result in enforcement action by HDOT or referral to the appropriate State Agency.

2. Hazardous Waste
   Dispose all hazardous waste materials in the manner specified by local, State, and Federal 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 a 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 a 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 designed 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 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 manufacturer's instructions and local and State regulations.

3. Onsite and Offsite Products 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 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 drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROLS-1

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale:

Date: DECEMBER, 2022

SHEET No. 1 OF 2 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	6	26

WATER POLLUTION AND EROSION CONTROL NOTES

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 clean-up 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 manufacturer's recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of 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, spin, 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.

5. Provide copies of completed/executed documentation to HWY-OR/OU Construction field office

E. PERMIT REQUIREMENTS:

1. The calculated land disturbance area for this project based on the construction plans is < 1.0 contiguous acre 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:
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 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
   b. SC-2 Vegetated Filter Strips and Buffers
   c. SC-6 Compost Filter Berm
   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. SC-5 Earth Dike, Swales, and Ditches
4. Incorporate applicable Site Management BMP
   a. SM-1 Employee Training
   b. SM-2 Material Delivery and Storage
   c. SM-3 Stockpile Management
   d. SM-6 Solid Waste Management
   e. SM-7 Sanitary Waste Management
   f. SM-9 Hazardous Materials and Waste 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
5. Construction 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.

CONSTRUCTION BMPS NOTES

Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

The following special conditions apply to all land disturbance work conducted under the general permit:

A. CONSTRUCTION MANAGEMENT TECHNIQUES INCLUDE:

1. Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation.
2. Erosion and sediment control measures shall be in place and functional before earth moving operations begin and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but shall be replaced at the end of the work day.
3. All control measures shall be checked and repaired, as necessary, weekly in dry periods and within 24-hour period. During prolonged rainfall, daily checking is necessary. The permittee shall maintain records of checks and repairs.
4. A specific individual shall be designated to be responsible for erosion and sediment controls on each project site.

B. VEGETATION CONTROLS INCLUDE:

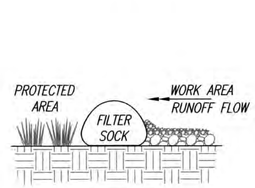
1. Pre-construction vegetative ground or mulch cover shall not be destroyed, removed or disturbed more than 20 calendar days prior to site disturbance.
2. Temporary soil stabilization with appropriate vegetation or mulch shall be applied on areas that will remain unfinished for more than 30 calendar days.
3. Permanent soil stabilization with perennial vegetation shall be applied as soon as practicable after final grading.

C. STRUCTURAL CONTROLS INCLUDE:

1. All surface water flowing toward the construction area shall be diverted by using berms, channels, sediment traps, and other appropriate control measures, as practical.
2. Erosion control measures shall be designed according to the size of disturbed or drainage areas, to detain runoff and trap sediment.
3. Water must be discharged through a pipe or lined channel so that the discharge does not cause erosion.
4. Storm drain inlet protection.

D. EROSION CONTROLS / BEST MANAGEMENT PRACTICE INCLUDE:

1. Good housekeeping shall be utilized to ensure protection of roadways from mud, dirt, and debris.
2. The Contractor shall ensure that all tires of construction vehicles are sufficiently cleaned off so that dirt or debris is not tracked off the construction site. Washing off tires with water will not be acceptable unless the runoff is contained and does not enter the storm drain system or onto the roadway.
3. At the end of grading operations and at the completion of project, Contractor shall inspect all catch basins, drain inlets and drain manholes surrounding the project site. Any accumulated sediment and debris found in the storm drain structures shall be removed. Please note that flushing into the drain structures are prohibited.
4. Any dirt or grassed area disturbed shall be restored by re-grassing the area or by seeded hydromulch. The grass shall be fully established at completion of project.



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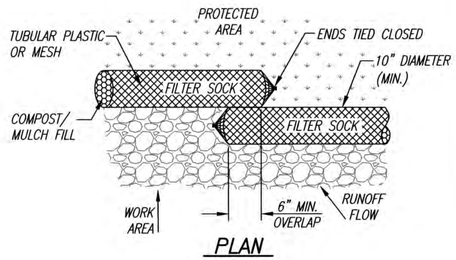

PLAN

DETAIL - FILTER SOCK
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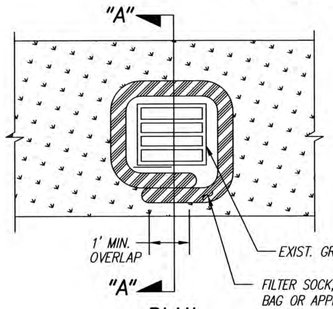

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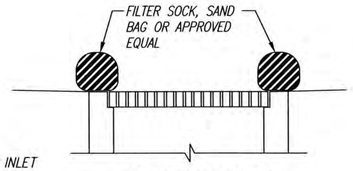

SECTION "A-A"

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HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROLS-2

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: Date: DECEMBER, 2022

SHEET No. 2 OF 2 SHEETS

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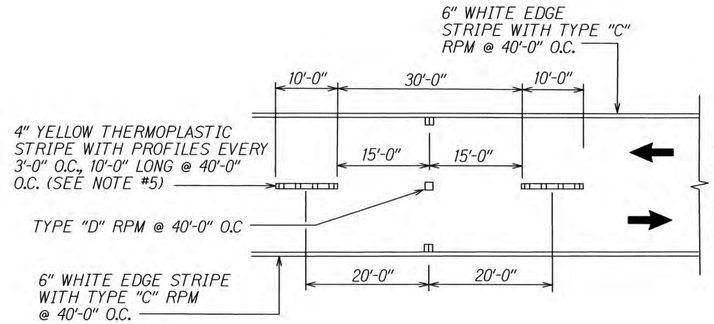
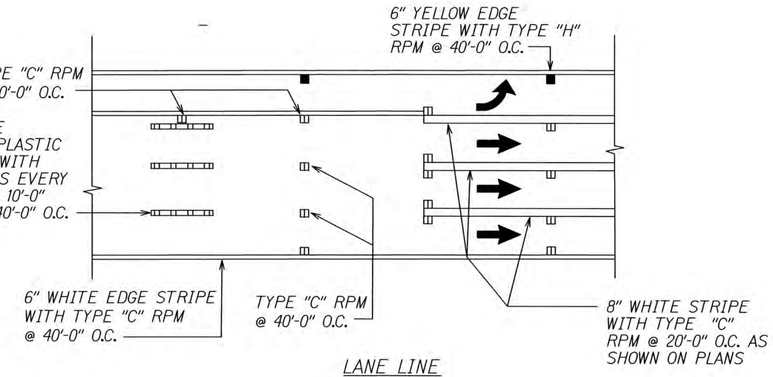
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	7	26

NOTES:

1. Effective 9-28-2020 HDOT, in compliance with the MUTCD, has implemented new requirements for edge and lane lines as well as discontinued usage of Type A markers for lane lines. The following details illustrate expected applicable changes. These do not encompass all revisions. It is the Contractor's responsibility to ensure compliance with all HDOT standards.
2. The thermoplastic material shall be a alkyd-based compound formulated for profiled pavement marking. See specs subsection 629.03 for additional requirements.
3. The Engineer will include the longitudinal gaps for skip striping, up to thirty (30) feet long, in the measurement for payment.
4. Install white profiled thermoplastic stripes as lane line.
5. Install yellow profiled thermoplastic stripes for centerline passing zone.
6. In areas with centerline milled rumble strips, install standard yellow thermoplastic stripes without raised profiles.
7. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
8. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
9. Raised pavement markers shall not be installed within crosswalks.
10. Final locations of all signs shall be approved by the Engineer prior to any installation work.
11. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
12. Final location of all Stop Lines shall be approved by the Engineer prior to installation.
13. All pavement striping shall be as noted on the legend or plans.
14. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
15. All pedestrian warning signs with supplemental sign shall be on a fluorescent yellow-green retroreflective background with a black legend and border.

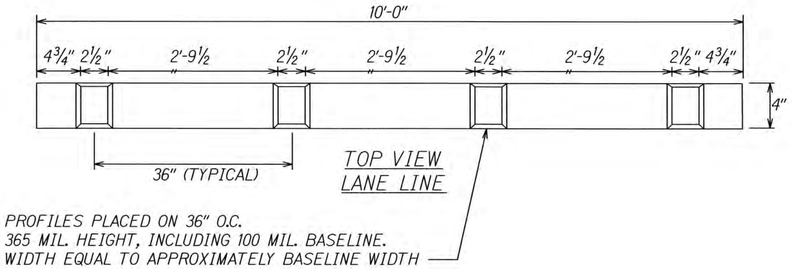


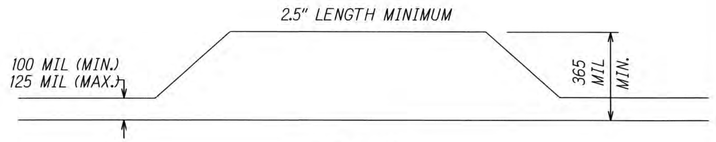
PASSING ZONE



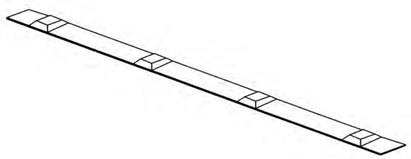
LANE LINE

DETAIL
NOT TO SCALE

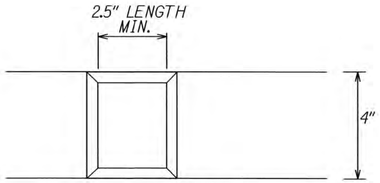




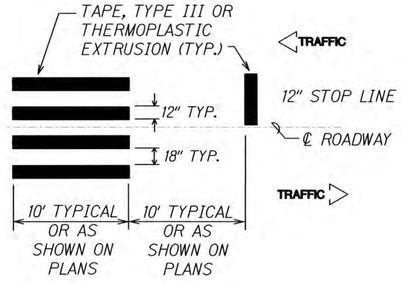
SIDE VIEW



PERSPECTIVE VIEW



TOP VIEW



CROSSWALK STRIPING DETAIL
NOT TO SCALE

PROFILED THERMOPLASTIC STRIPING
NOT TO SCALE

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKINGS DETAILS

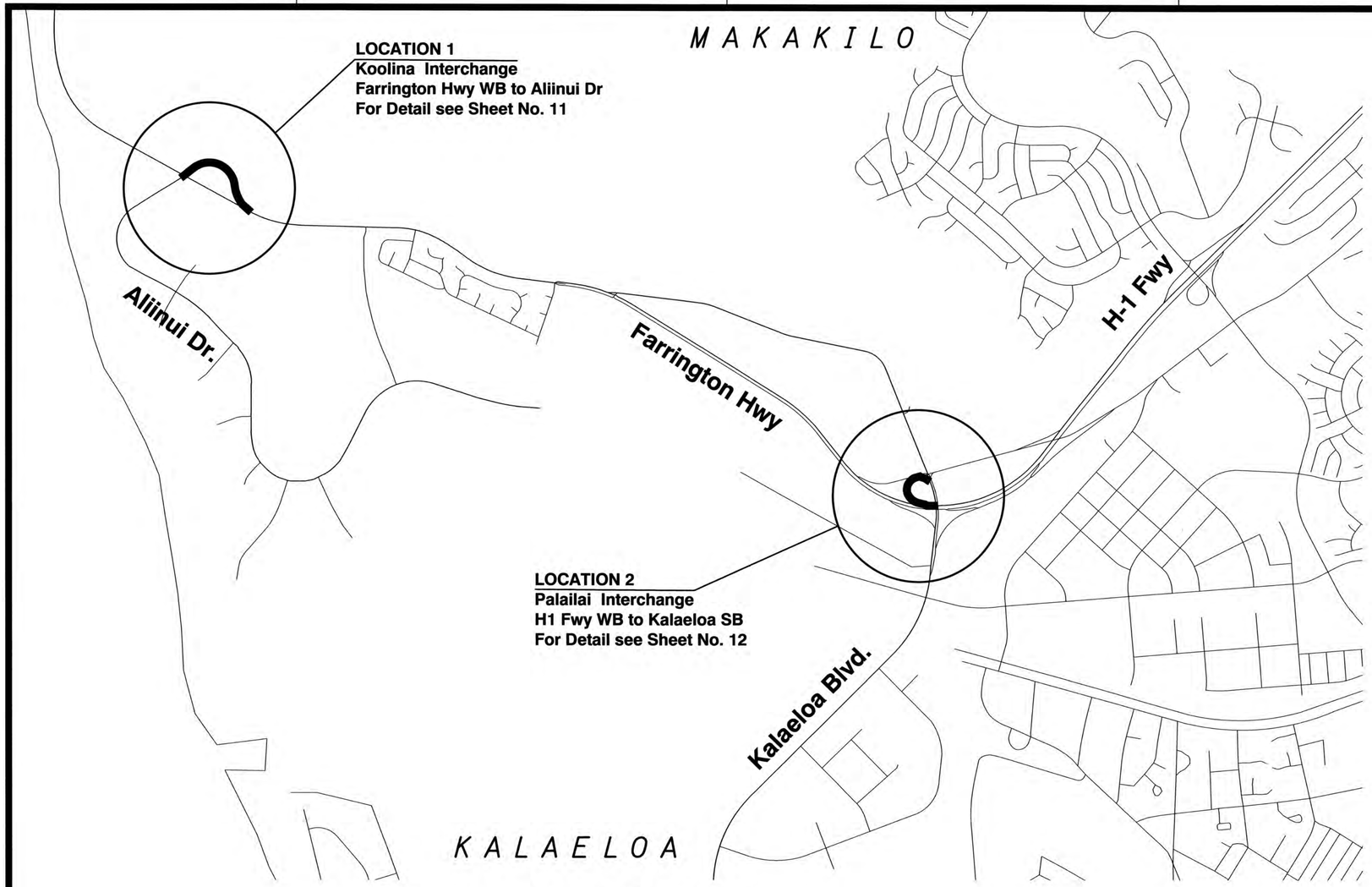
HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale:
Date: DECEMBER, 2022

SHEET No. 1 OF 1 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\07 Pavement Marking Details.dwg, 1/5/2023 1:36:40 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	8	26

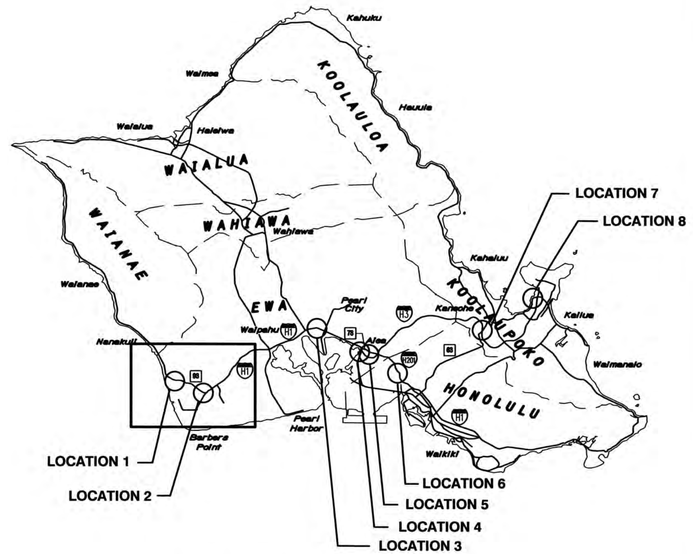


LOCATION MAP

N

1000 500 0 1000 2000

SCALE IN FEET



VICINITY MAP

N

4 2 0 4 8

SCALE IN MILES

DESIGN DESIGNATION

LOCATION 1 – KOOLINA INTERCHANGE

ADT(2021)	8,600
ADT(2031)	9,700
DHV	780
K(DES)	8.0
D(DES)	100/0
T(DES)	4.5
T24	4.5

LOCATION 2 – PALAILAI INTERCHANGE

ADT(2021)	13,300
ADT(2031)	15,700
DHV	1,490
K(DES)	9.5
D(DES)	100/0
T(DES)	7.5
T24	12.0

TOTAL LINEAR FEET RESURFACED = 2,200 FT

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOCATION LAYOUTS
WEST OAHU INTERCHANGES

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

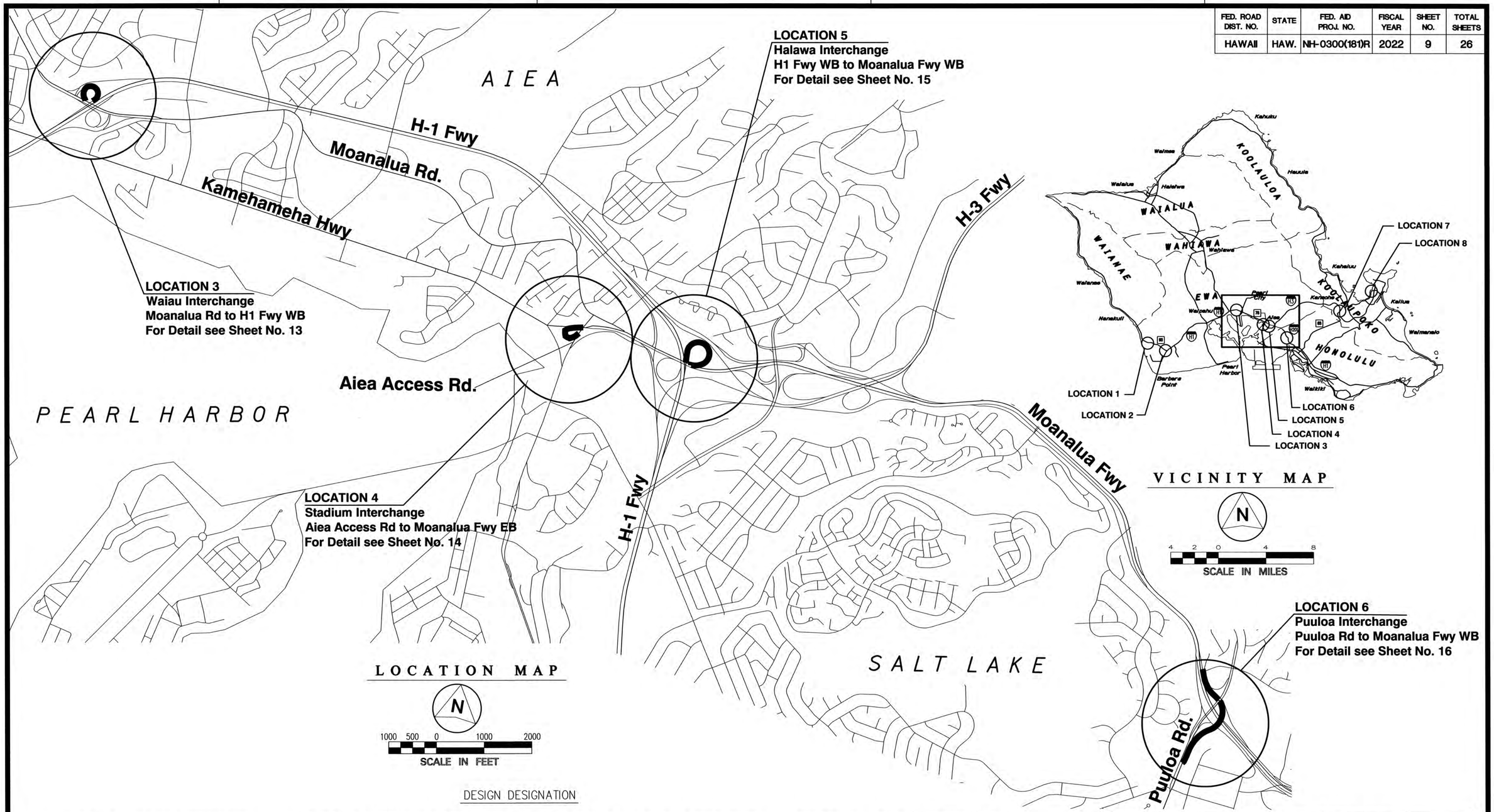
Scale:

Date: DECEMBER, 2022

SHEET No. 1 OF 3 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\08-10 Site Layouts.dwg, 1/5/2023 1:36:48 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	9	26



VICINITY MAP

N

4 2 0 4 8

SCALE IN MILES

LOCATION MAP

N

1000 500 0 1000 2000

SCALE IN FEET

DESIGN DESIGNATION

LOCATION 3 – WAIAU INTERCHANGE

ADT(2021)	17,800
ADT(2031)	19,000
DHV	1,620
K(DES)	8.5
D(DES)	100/0
T(DES)	3.5
T24	4.0

LOCATION 4 – STADIUM INTERCHANGE

ADT(2021)	9,700
ADT(2031)	10,100
DHV	1,110
K(DES)	11.0
D(DES)	100/0
T(DES)	4.0
T24	4.0

LOCATION 3 – HALAWA INTERCHANGE

ADT(2021)	8,100
ADT(2031)	8,700
DHV	780
K(DES)	9.0
D(DES)	100/0
T(DES)	5.5
T24	7.0

LOCATION 4 – PUULOA INTERCHANGE

ADT(2021)	19,600
ADT(2031)	19,900
DHV	1,990
K(DES)	10.0
D(DES)	100/0
T(DES)	3.0
T24	3.5

TOTAL LINEAR FEET RESURFACED = 3,477 FT

AMSON M. MURAYAMA
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No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOCATION LAYOUTS
CENTRAL OAHU INTERCHANGES

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

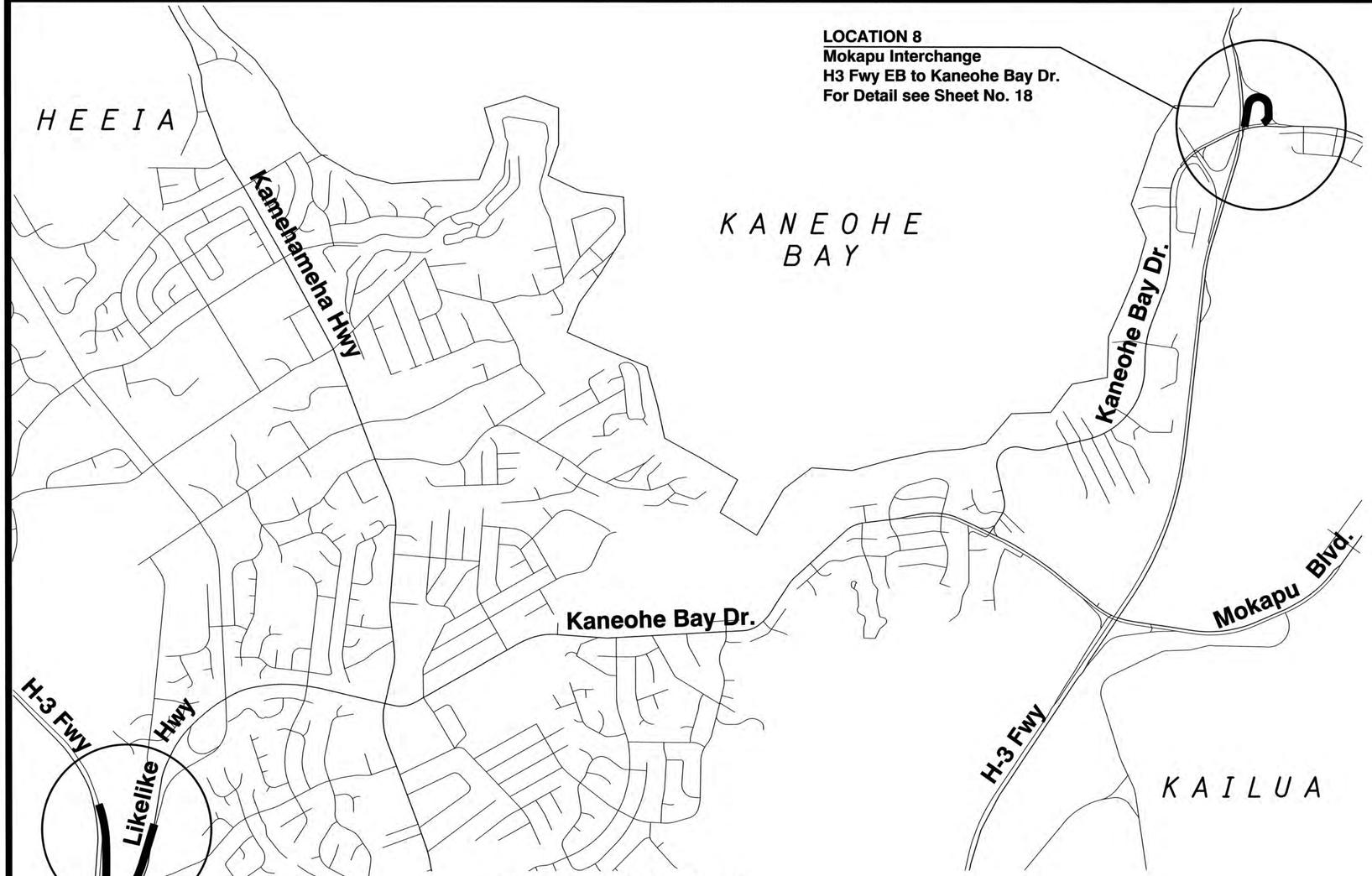
FEDERAL AID PROJECT NO. NH-0300(181)R

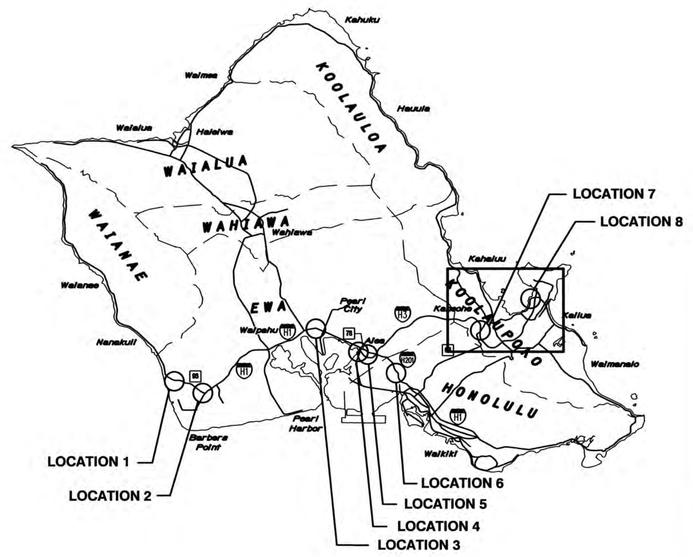
Scale: Date: DECEMBER, 2022

SHEET No. 2 OF 3 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT ID\C\hfst - rebid\drawings (current)\final submittal\08-10 Site Layouts.dwg, 1/5/2023 1:36:46 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	10	26





VICINITY MAP

N

4 2 0 4 8

SCALE IN MILES

DESIGN DESIGNATION

LOCATION 7 – KANEOHE INTERCHANGE

FADT(2021)	12,300
ADT(2031)	13,200
DHV	1,320
K(DES)	10.0
D(DES)	100/0
T(DES)	5.0
T24	4.5

LOCATION 8 – MOKAPU INTERCHANGE

ADT(2021)	2,100
ADT(2031)	2,300
DHV	250
K(DES)	11.0
D(DES)	100/0
T(DES)	2.5
T24	2.5

TOTAL LINEAR FEET RESURFACED = 1,221 FT

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOCATION LAYOUTS
EAST OAHU INTERCHANGES

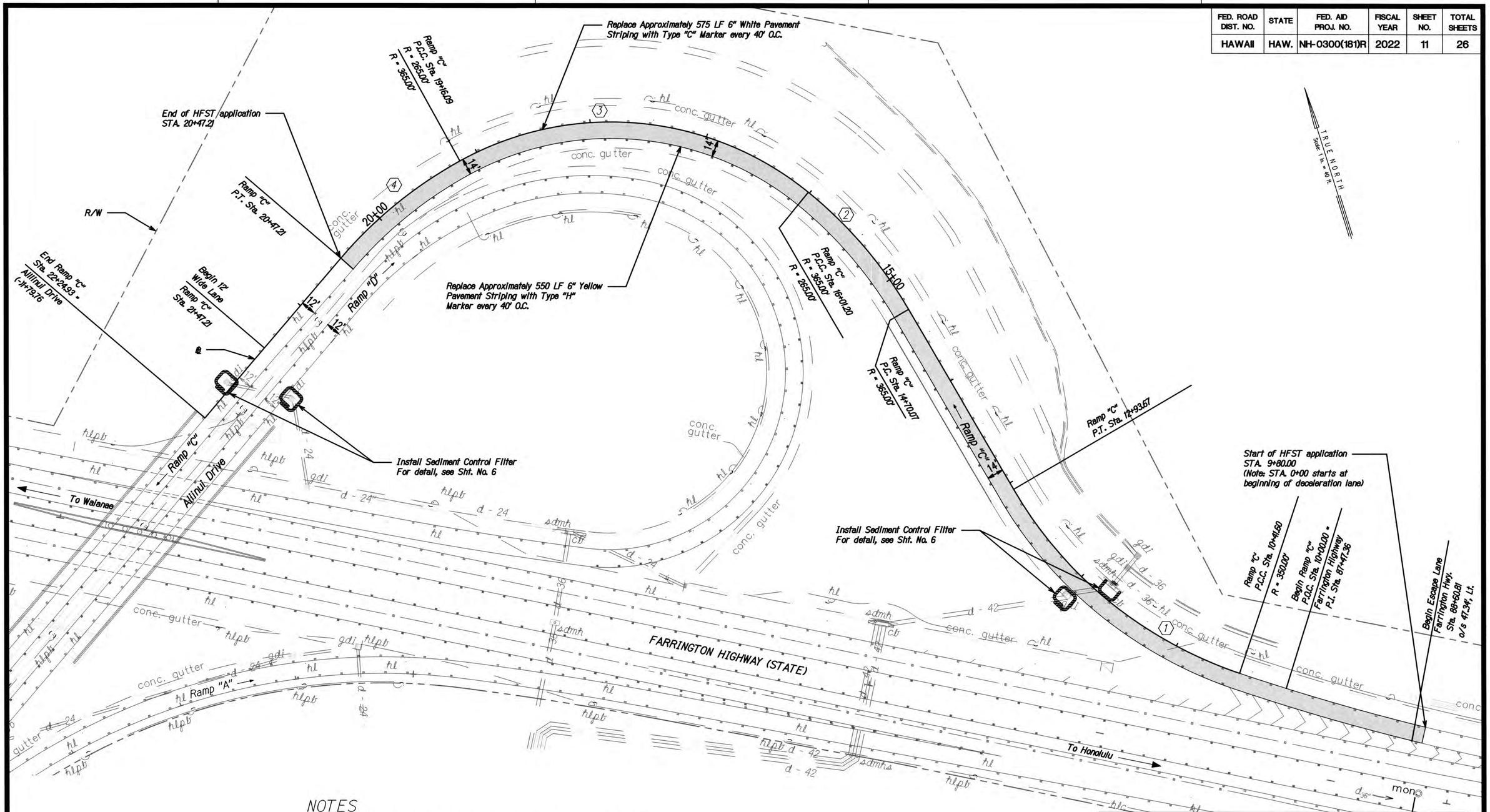
HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: Date: DECEMBER, 2022

SHEET No. 3 OF 3 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hlst - rebid\drawings (current)\final submittal\08-10 Site Layouts.dwg, 1/5/2023 1:36:47 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	11	26



CURVE DATA				
	①	②	③	④
Δ	23°45'00"	23°45'00"	68°05'00"	20°35'00"
R	279.58'	270.38'	265.00'	365.00'
L	252.07'	112.08'	314.89'	131.13'
T	58.79'	56.86'	179.03'	66.28'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Ramp "C"
Sta. 9+80.00 to Sta. 20+47.21
Apply HFST to existing lane.
Lane width = 14 ft., Typ.
Total area of HFST Application = 35,080 SF

Graphic Scale in Feet (40 20 0 40 80)

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-1
KO OLINA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

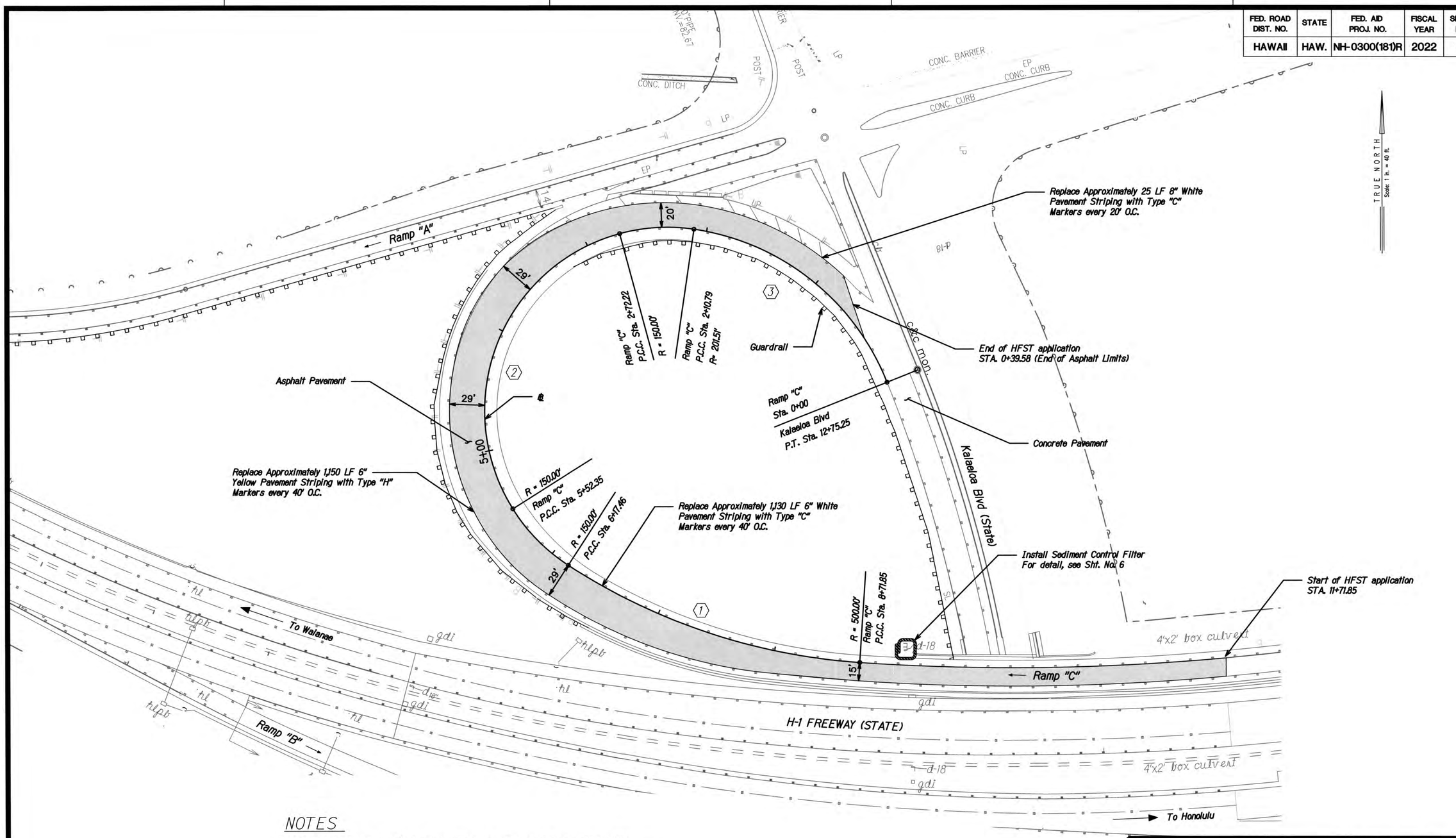
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 1 OF 8 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\11 SitePlan_Ko Olina Interchange.dwg, 1/5/2023 1:36:54 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	12	26



CURVE DATA			
	①	②	③
Δ	29°09'02"	155°20'35"	43°44'40"
R	500.00'	150.00'	201.51'
T	65.00	343.12	40.44
L	254.39'	406.68'	153.84'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Ramp "C"
Sta. 11+71.85 to End of Asphalt Limits
Apply HFST to existing lane.
Lane width = 15-29 ft., Typ.
Total area of HFST Application = 25,442 SF

40 20 0 40 80
Graphic Scale in Feet

AMSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-2
PALAILAI INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

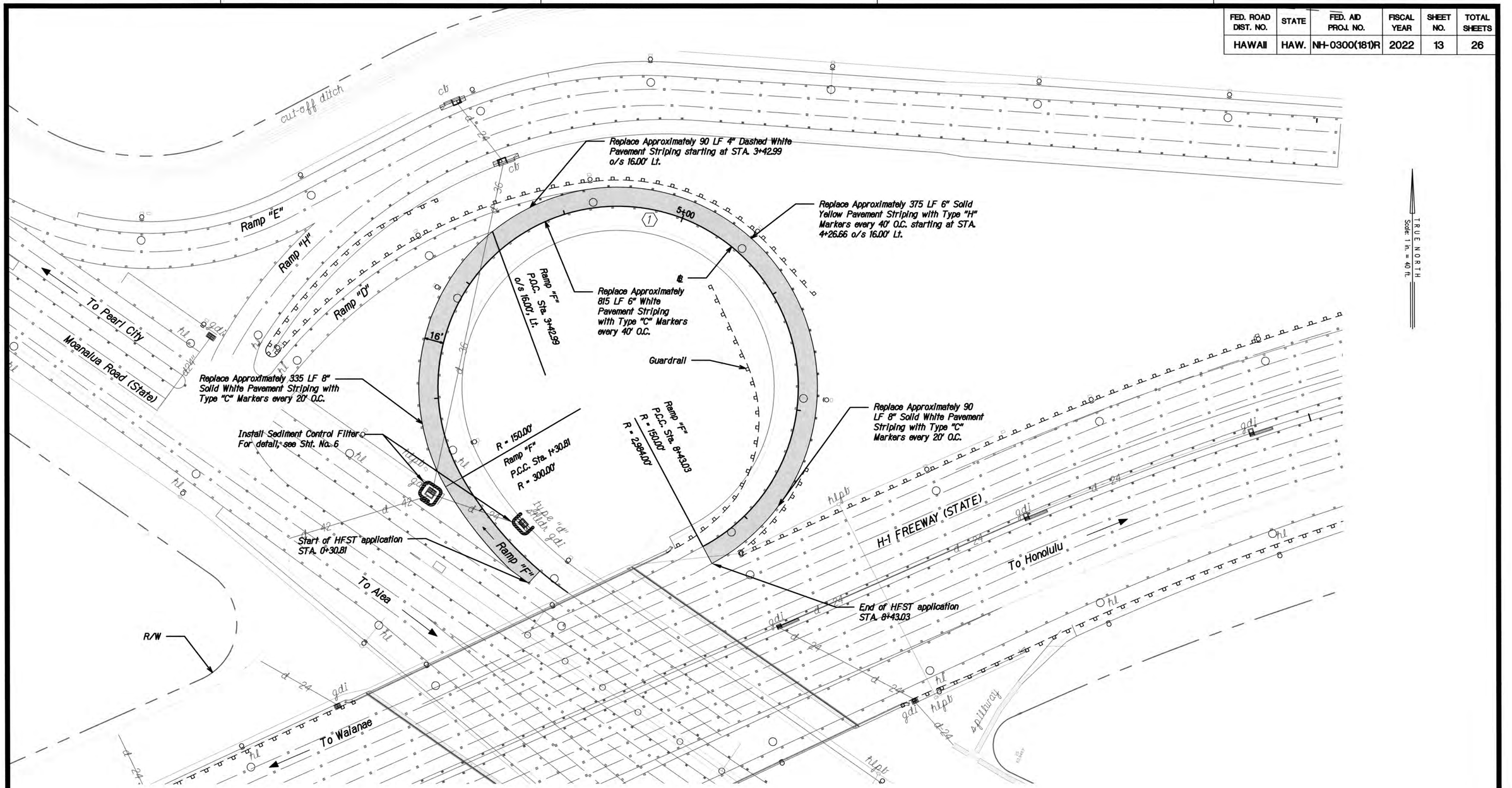
Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 2 OF 8 SHEETS

12

\\10.100.7.15\cpe\projects\land projects\DOT ID\Q\hfst - rebid\drawings (current)\final submittal\12 SitePlan_Palailai Interchange.dwg, 1/5/2023 1:37:01 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	13	26



CURVE DATA	
	①
△	272°00'00"
R	150.00'
T	144.85
L	712.00'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Ramp "F"
Sta. 0+30.81 to Sta. 8+43.03
Apply HFST to existing lane.
Lane width = 16 ft., Typ.
Total area of HFST Application = 13,602 SF

40 20 0 40 80
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-3
WAIAU INTERCHANGE

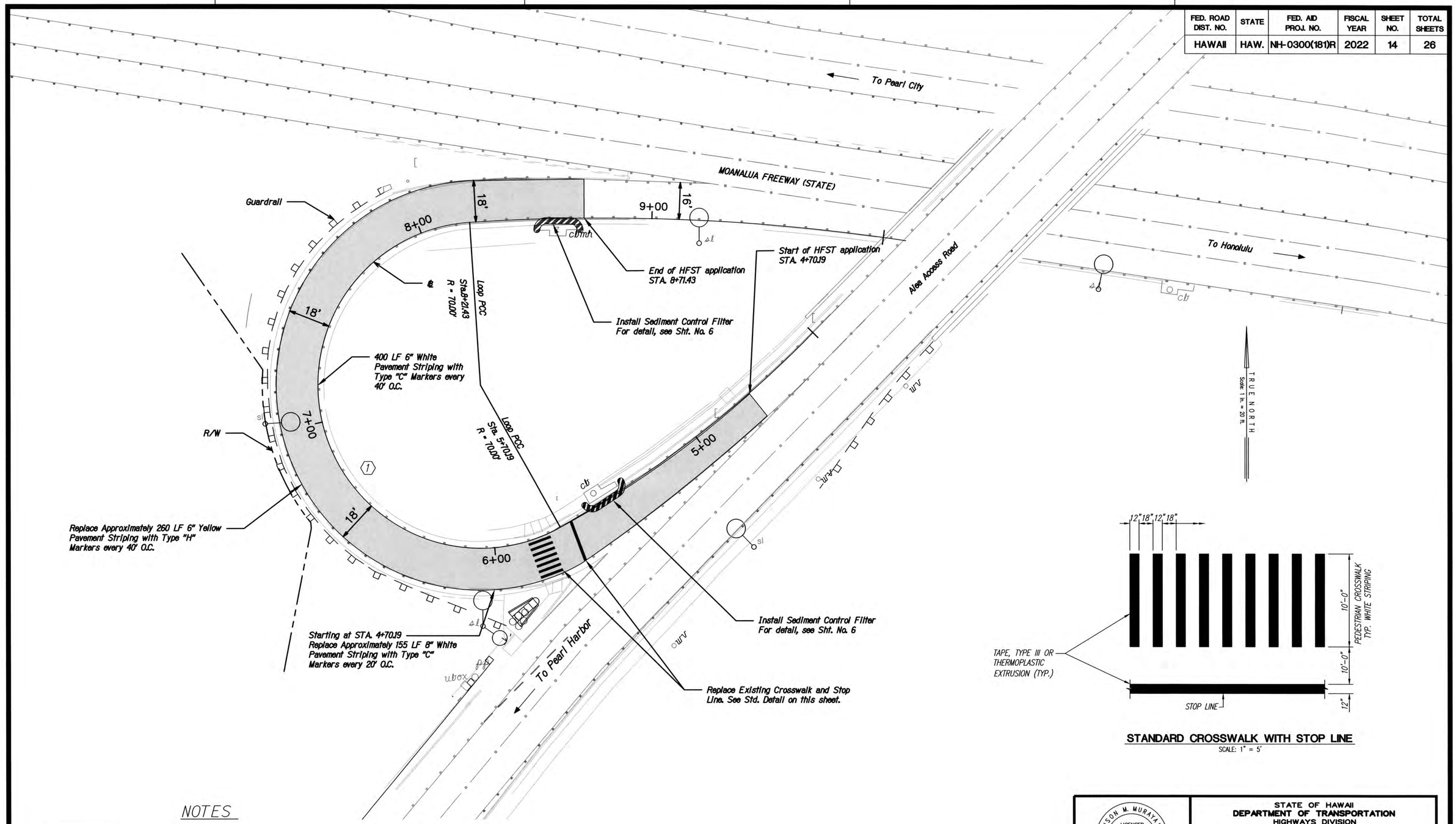
HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 3 OF 8 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\13 SitePlan_Waiau Interchange.dwg, 1/5/2023 1:41:28 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	14	26



STANDARD CROSSWALK WITH STOP LINE
SCALE: 1" = 5'

CURVE DATA	
	⟨1⟩
Δ	20°35'00"
R	70.00'
T	33.13
Ch	130.42'
Lc	136.00'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Loop
Sta. 4+70.19 to Sta. 8+71.43
Apply HFST to existing lane.
Lane width = 18 ft., Typ.
Total area of HFST Application = 7,540 SF

20 10 0 20 40
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-4
STADIUM INTERCHANGE

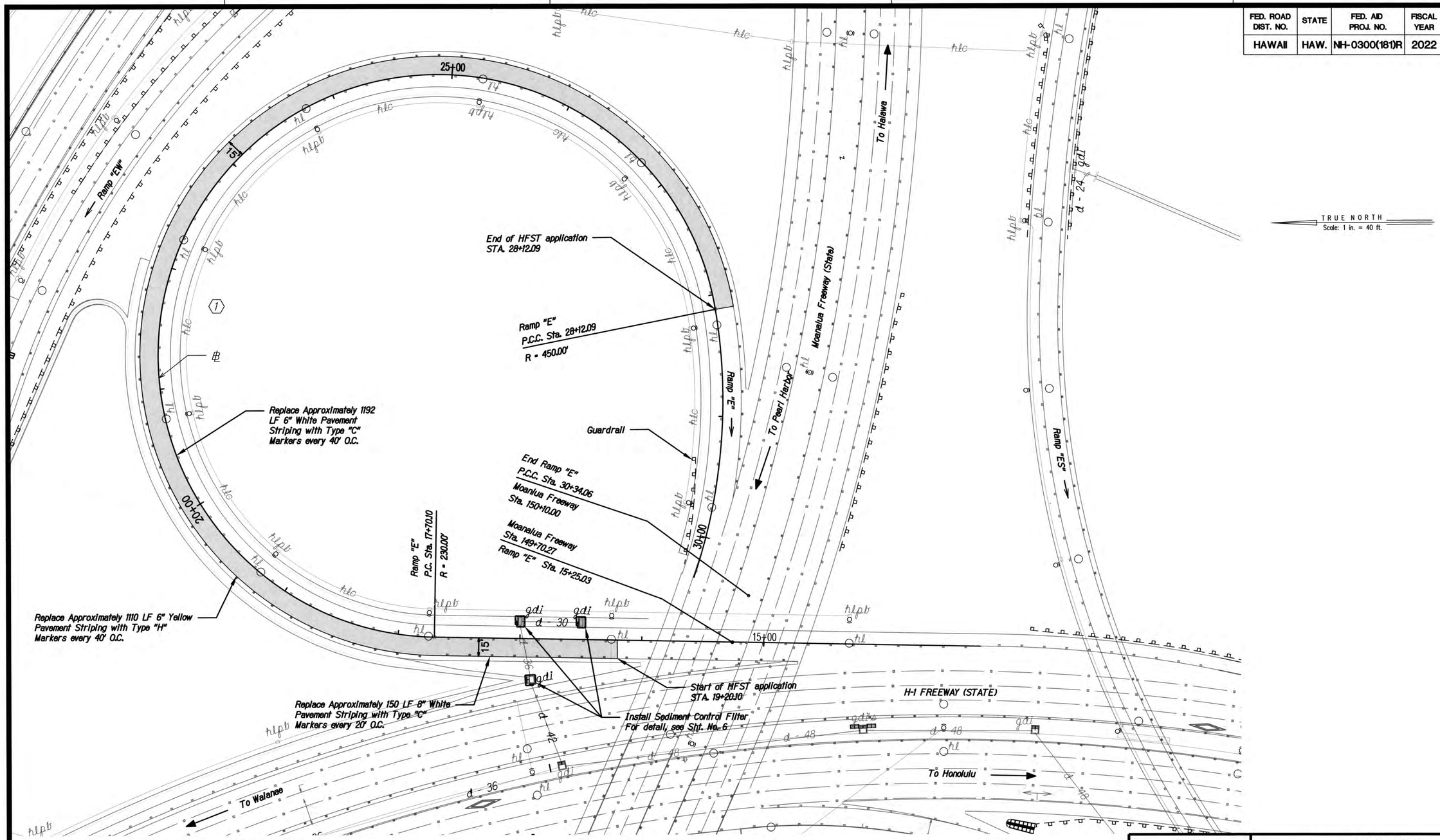
HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 20 Date: DECEMBER, 2022

SHEET No. 4 OF 8 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\14 SitePlan_Aiea Interchange.dwg, 1/5/2023 1:47:24 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	15	26



CURVE DATA	
	⟨1⟩
Δ	260°00'00"
R	230.00'
T	274.10
Ch	353.50'
Lc	1042.0'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Ramp "E"
Sta. 19+20.10 to Sta. 28+12.09
Apply HFST to existing lane.
Lane width = 15 ft., Typ.
Total area of HFST Application = 18,388 SF

40 20 0 40 80
Graphic Scale in Feet

AMSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-5
HALAWA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

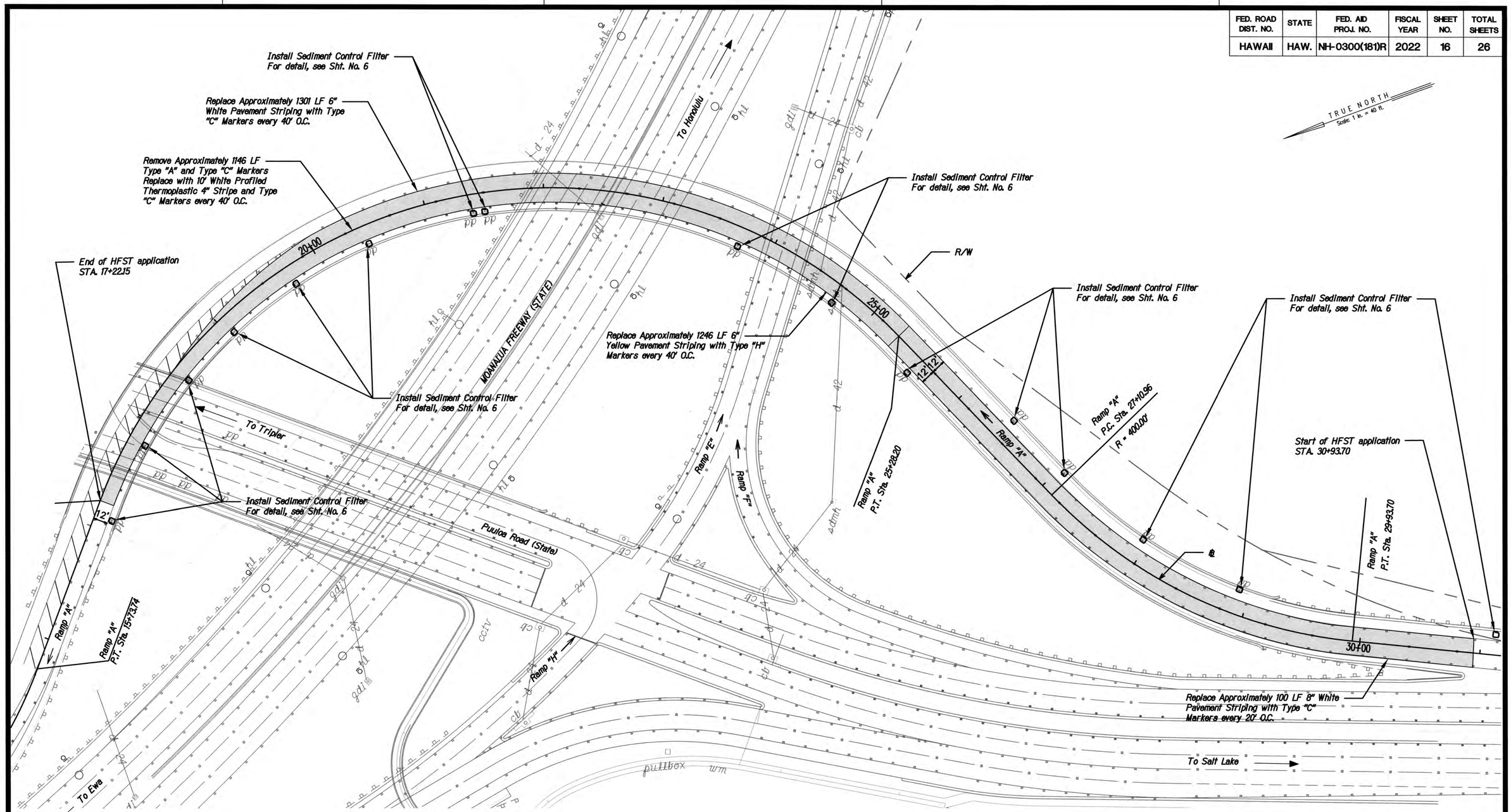
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 5 OF 8 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\15 SitePlan_Halawa Interchange.dwg, 1/5/2023 1:47:32 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	16	26



NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

CURVE DATA		
	①	②
Δ	40°39'66"	115°00'00"
R	400.00'	388.00'
T	147.16'	609.04'
L	282.67'	781.86'

Ramp "A"
Sta. 17+22.15 to Sta. 30+93.70
Apply HFST to existing lane.
Lane width = 12-24 ft., Typ.
Total area of HFST Application = 30,425 SF

40 20 0 40 80
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-6
PUULOA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 6 OF 8 SHEETS

\\10.100.7.15\cpe\projects\land projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\16 SitePlan_Puuloa Interchange.dwg, 1/5/2023 1:47:41 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	17	26

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

CURVE DATA	
	1
Δ	133°00'00"
R	230.00'
T	528.96
Ch	447.42'
Lc	614.75'

Ramp "D"
Sta. 1097+14.18 to Sta. 1101+78.85
Apply HFST to existing lane.
Lane width = 12 ft., Typ.
Total area of HFST Application = 19,134 SF

40 20 0 40 80
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-7
KANEOHE INTERCHANGE

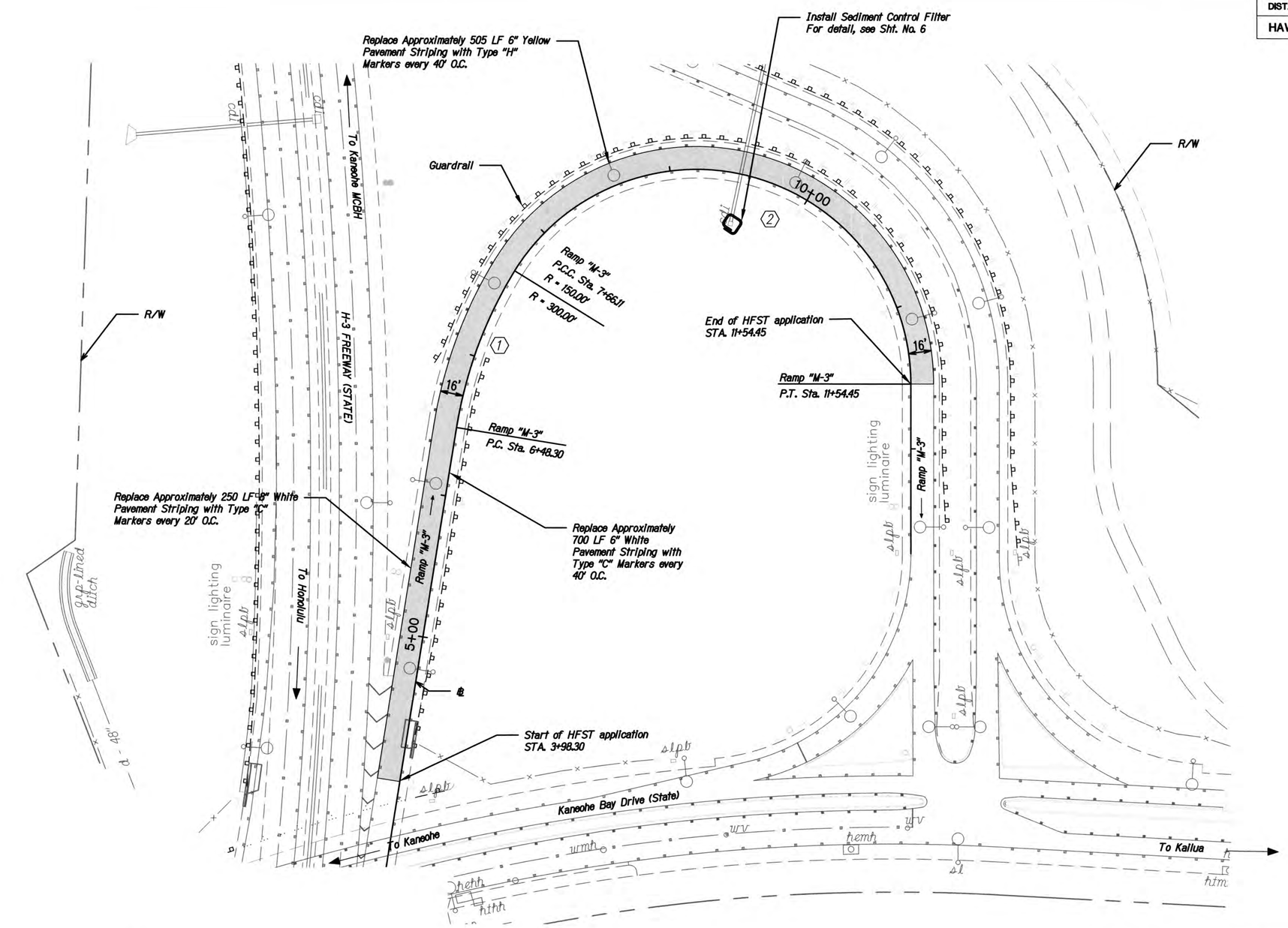
HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 7 OF 8 SHEETS

\\10.100.7.15\cpe\projects\and projects\DOT IDIQ\hfst - rebid\drawings (current)\final submittal\17 SitePlan_Kaneohe Interchange.dwg, 1/5/2023 1:47:51 PM, AutoCAD PDF (General Documentation).pc3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	18	26



TRUE NORTH
Scale: 1 in. = 40 ft.

CURVE DATA		
	①	②
△	22°30'00"	148°20'00"
R	300.00'	150.00'
T	59.67	528.91
Ch	117.05'	288.62'
Lc	117.81'	388.34'

NOTES

1. Remove all striping and RPMs within HFST applicable area before applying HFST.
2. HFST shall be applied within limits of existing edge striping, per lane widths specified in plans.
3. Asphalt and Concrete surfaces need to be properly prepared through use of appropriate abrasive cleaning and compressed air methods. Refer to ICRI standards for CSP and FHWA's Pavement Preservation Checklist Series #14 HFST.
4. Restore all striping & RPMs in accordance with DOT Std. Plans TE-26 to TE-28A, and DOT memo HWY-TD 20-2.0150
5. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute an acceptable and/or complete Sediment Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Ramp "M-3"
Sta. 3+98.30 to Sta. 11+54.45
Apply HFST to existing lane.
Lane width = 16 ft., Typ.
Total area of HFST Application = 12,495 SF

40 20 0 40 80
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE PLAN-8
MOKAPU INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION
AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 40 Date: DECEMBER, 2022

SHEET No. 8 OF 8 SHEETS

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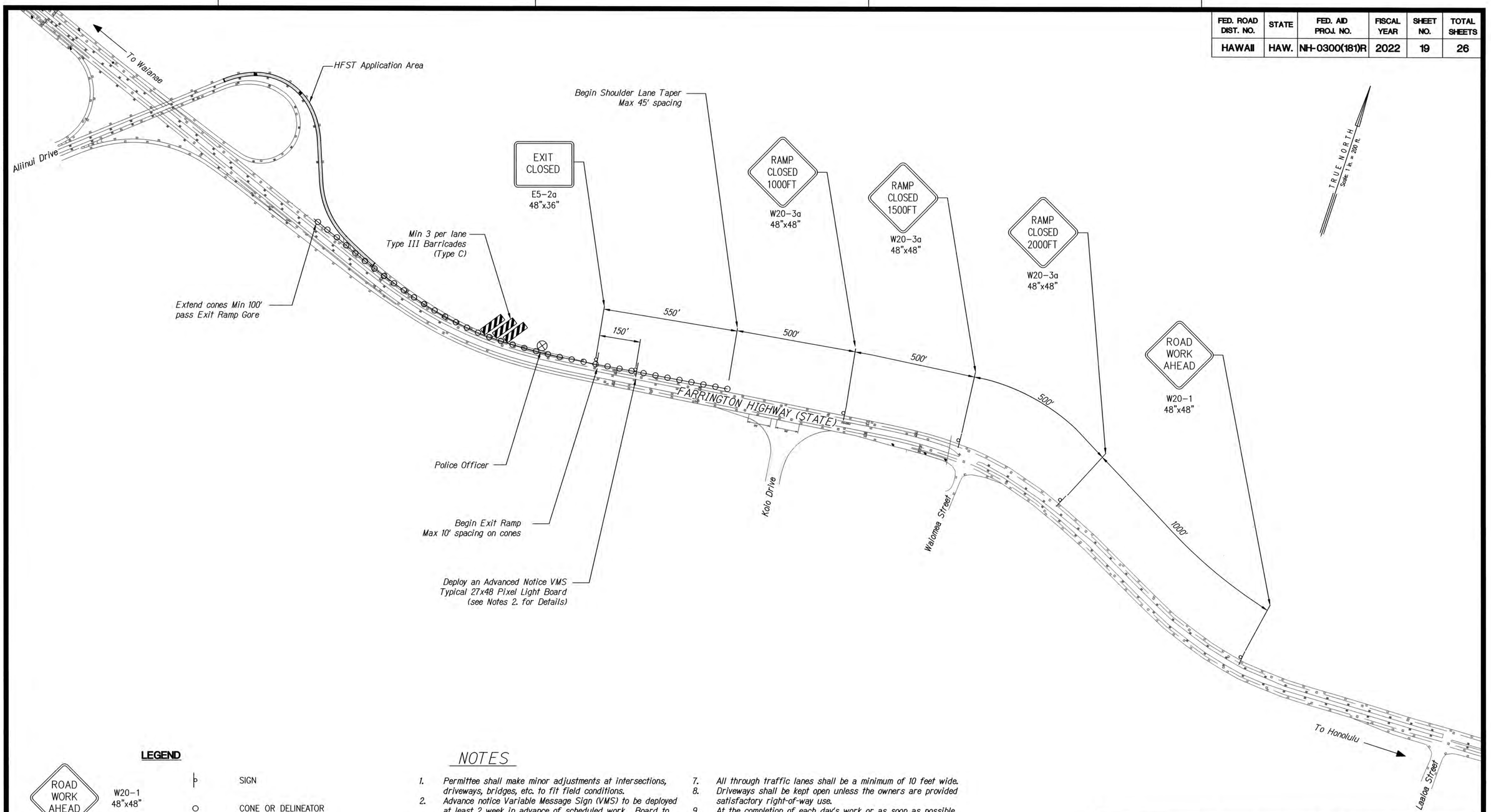
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	19	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
EXIT CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

200 100 0 200 400
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-1
KO OLINA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 200 Date: DECEMBER, 2022

SHEET No. 1 OF 8 SHEETS

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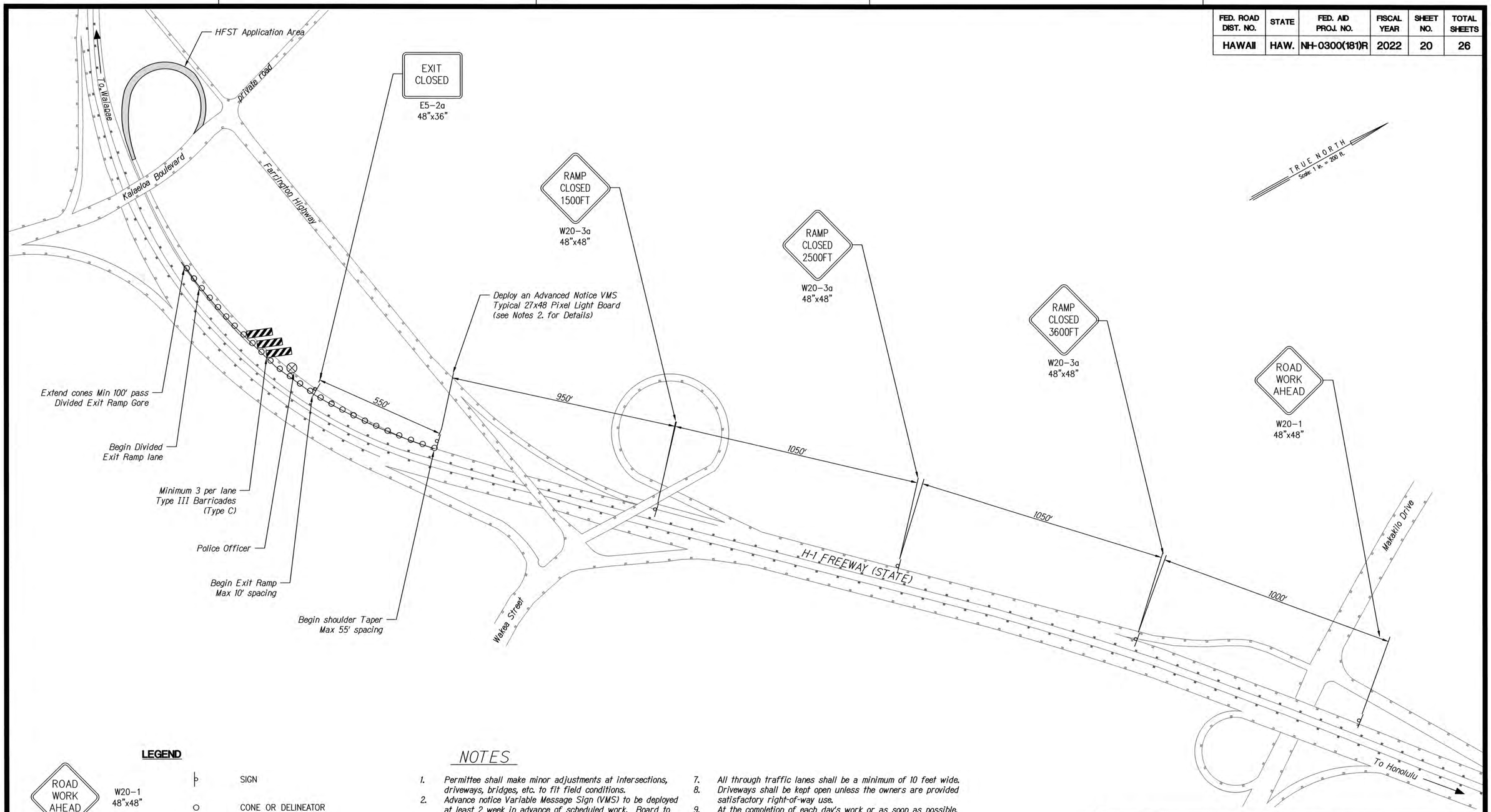
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	20	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
EXIT CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

200 100 0 200 400
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-2
PALAILAI INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 200 Date: DECEMBER, 2022

SHEET No. 2 OF 8 SHEETS

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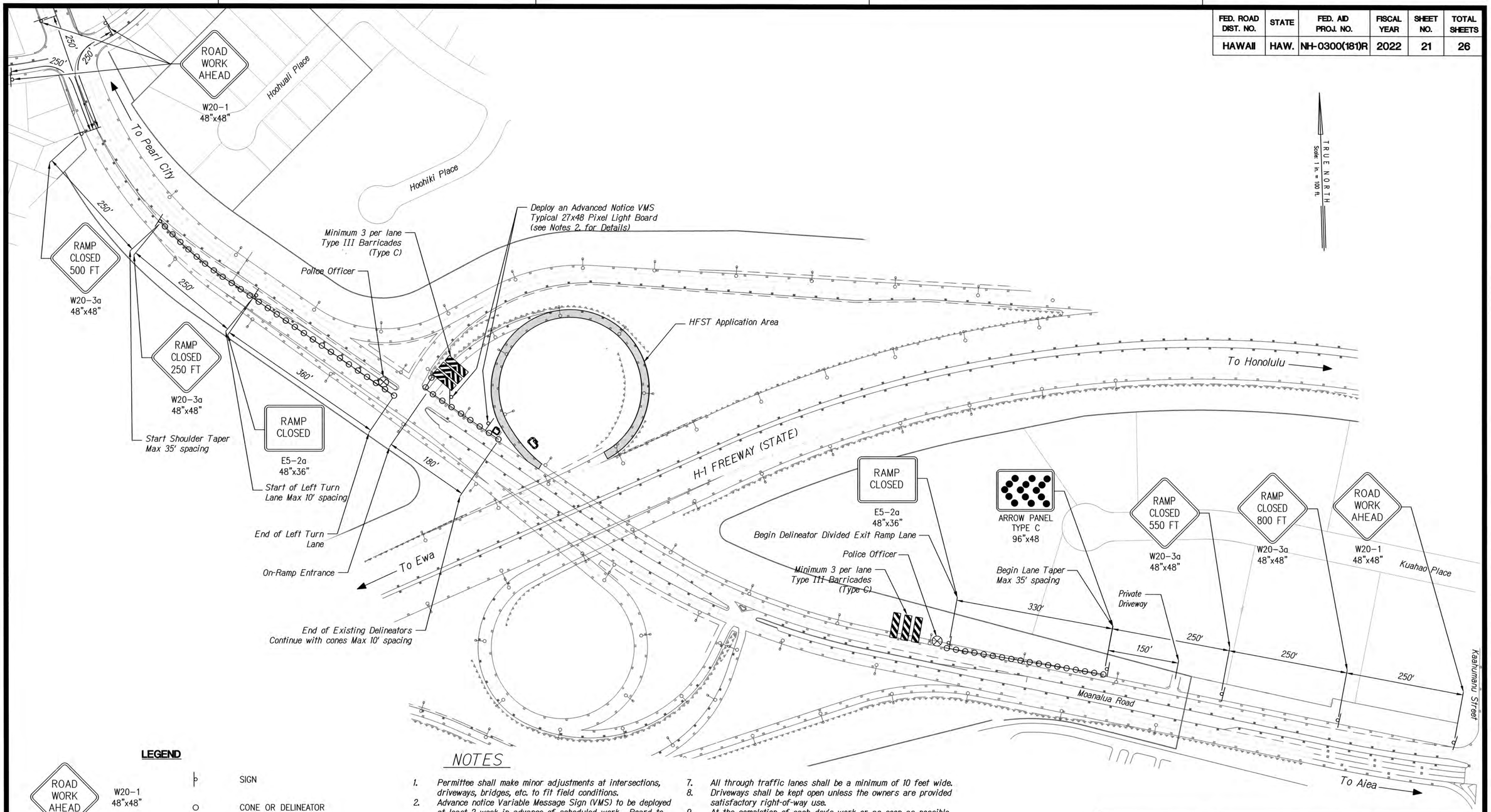
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	21	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"		SIGN
			CONE OR DELINEATOR
			TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"		POLICE OFFICER
			WORK AREA
RAMP CLOSED	E5-2a 48"x36"		ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

100 50 0 100 200
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-3
WAIAU INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 100 Date: DECEMBER, 2022

SHEET No. 3 OF 8 SHEETS

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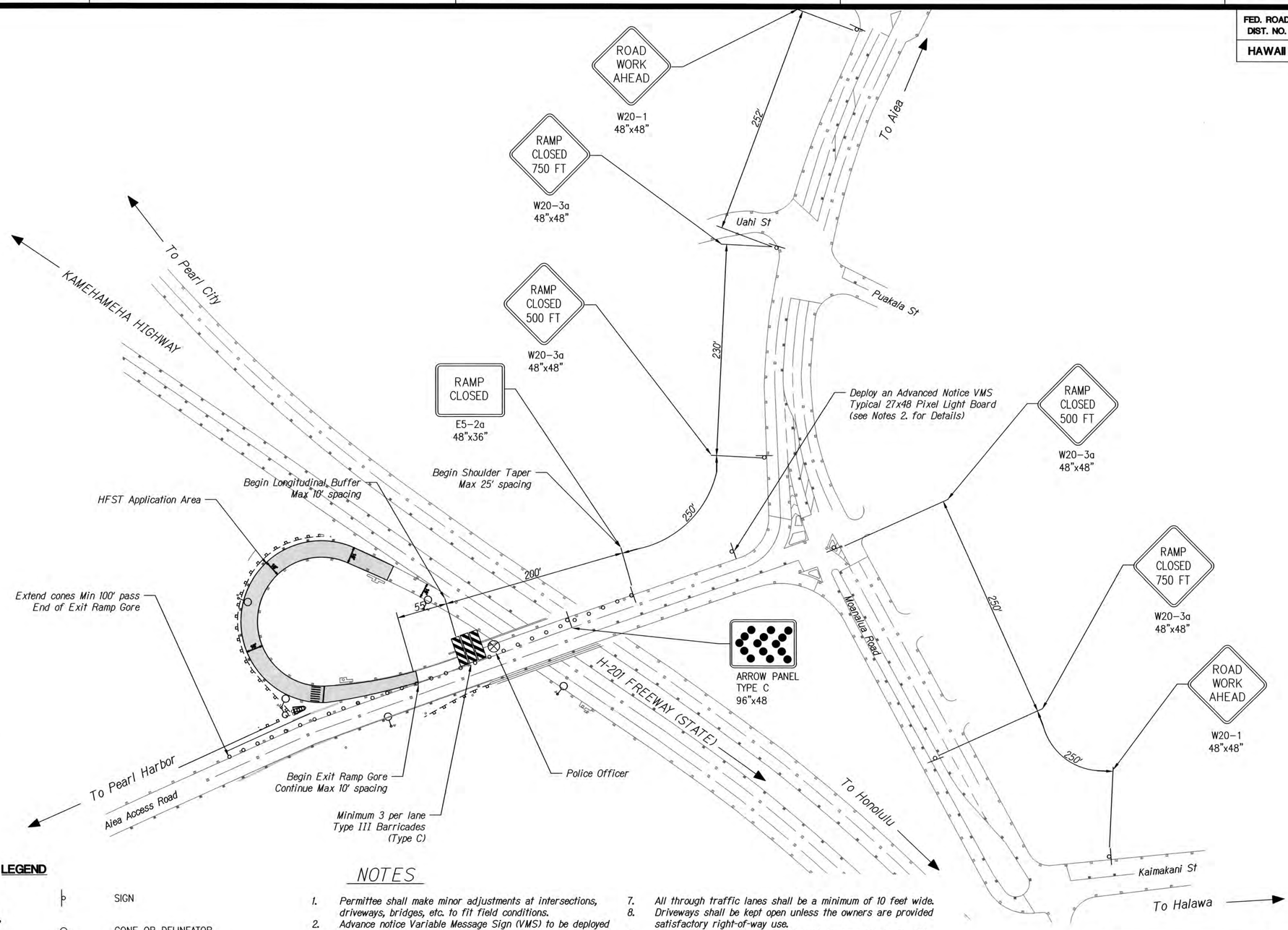
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	22	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
RAMP CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

60 30 0 60 120
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-4
STADIUM INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 60 Date: DECEMBER, 2022

SHEET No. 4 OF 8 SHEETS

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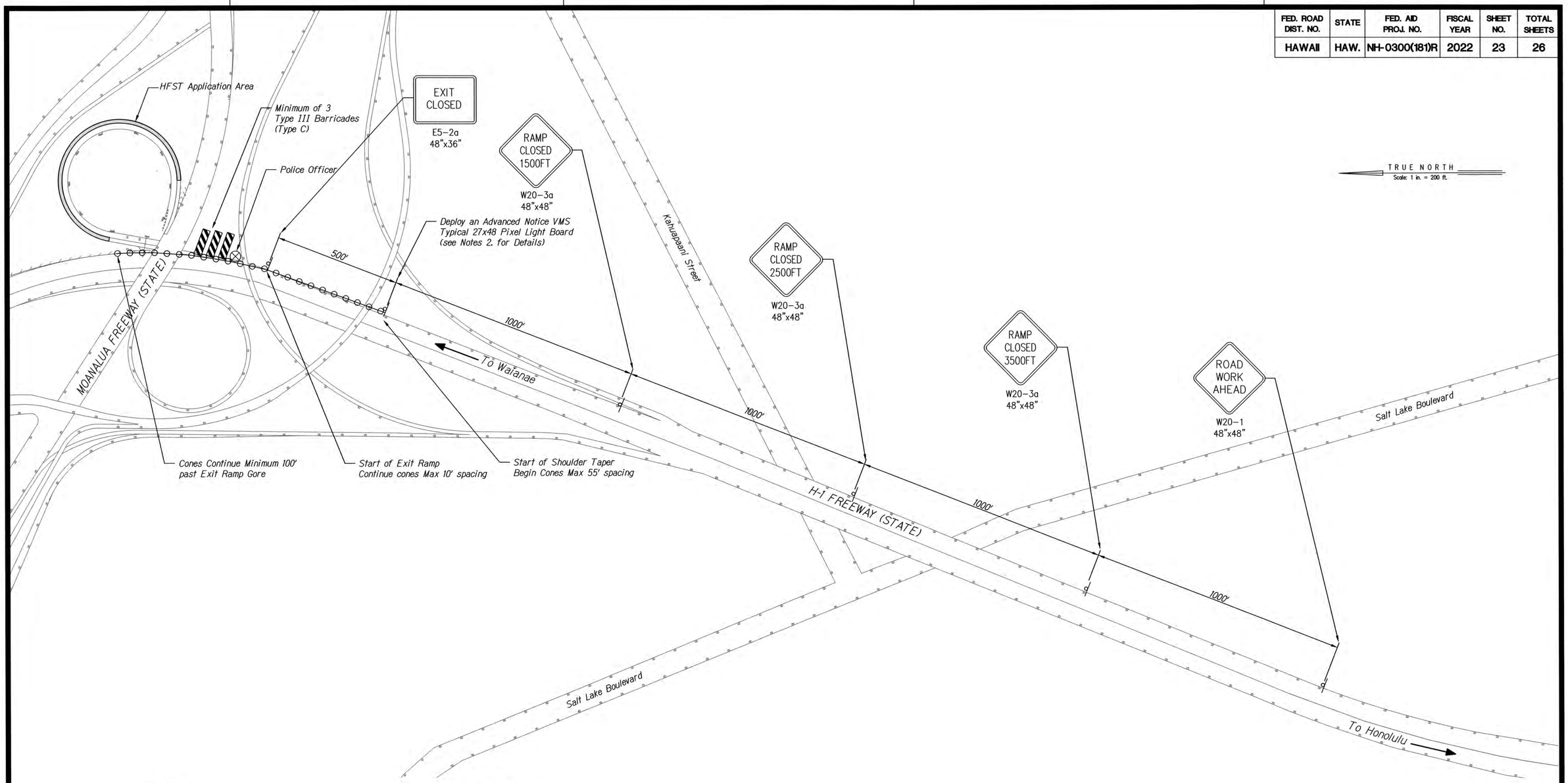
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	23	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
EXIT CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

200 100 0 200 400
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-5
HALAWA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 200 Date: DECEMBER, 2022

SHEET No. 5 OF 8 SHEETS

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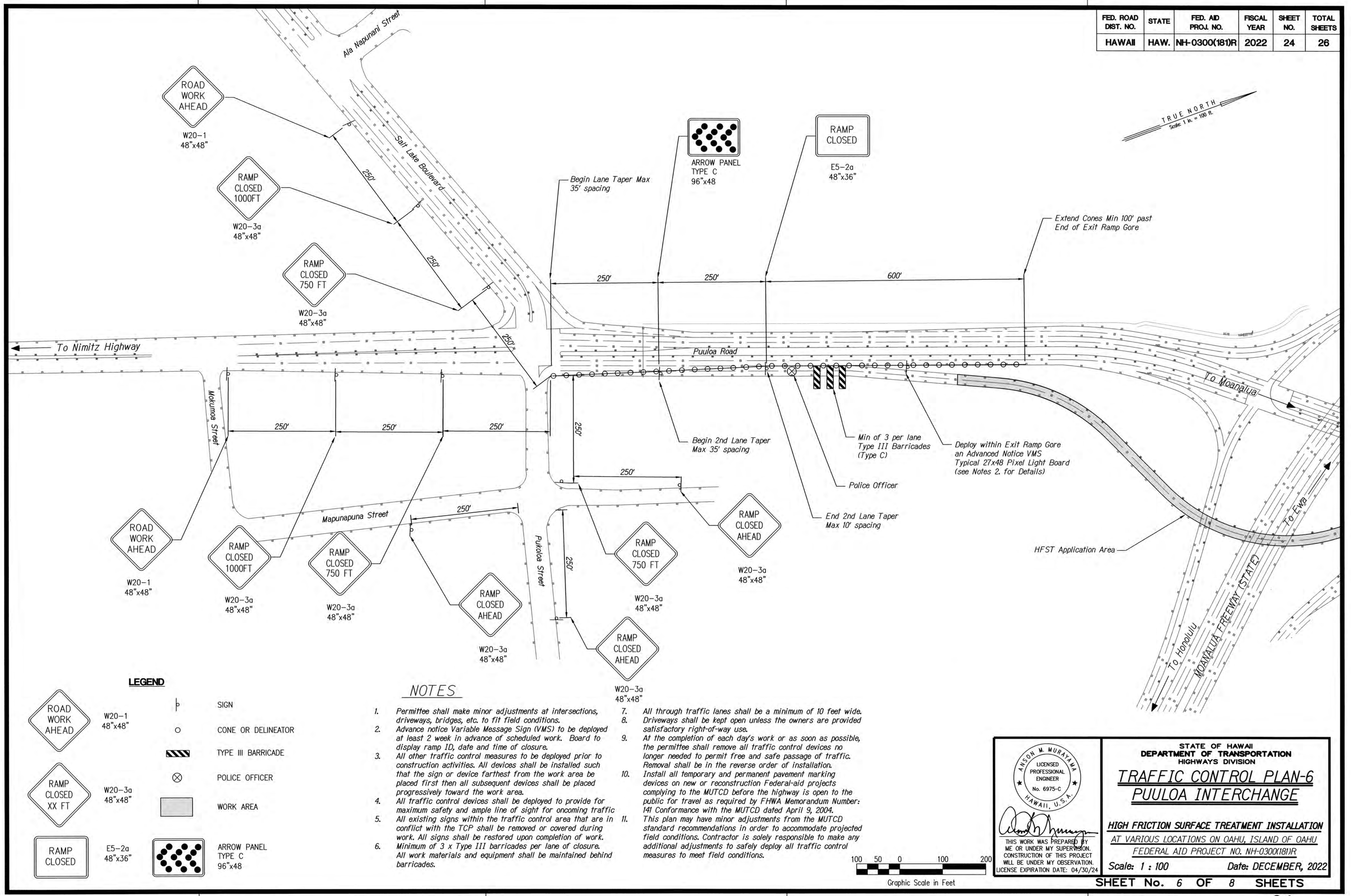
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	24	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
RAMP CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

100 50 0 100 200
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-6
PUULOA INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 100 Date: DECEMBER, 2022

SHEET No. 6 OF 8 SHEETS

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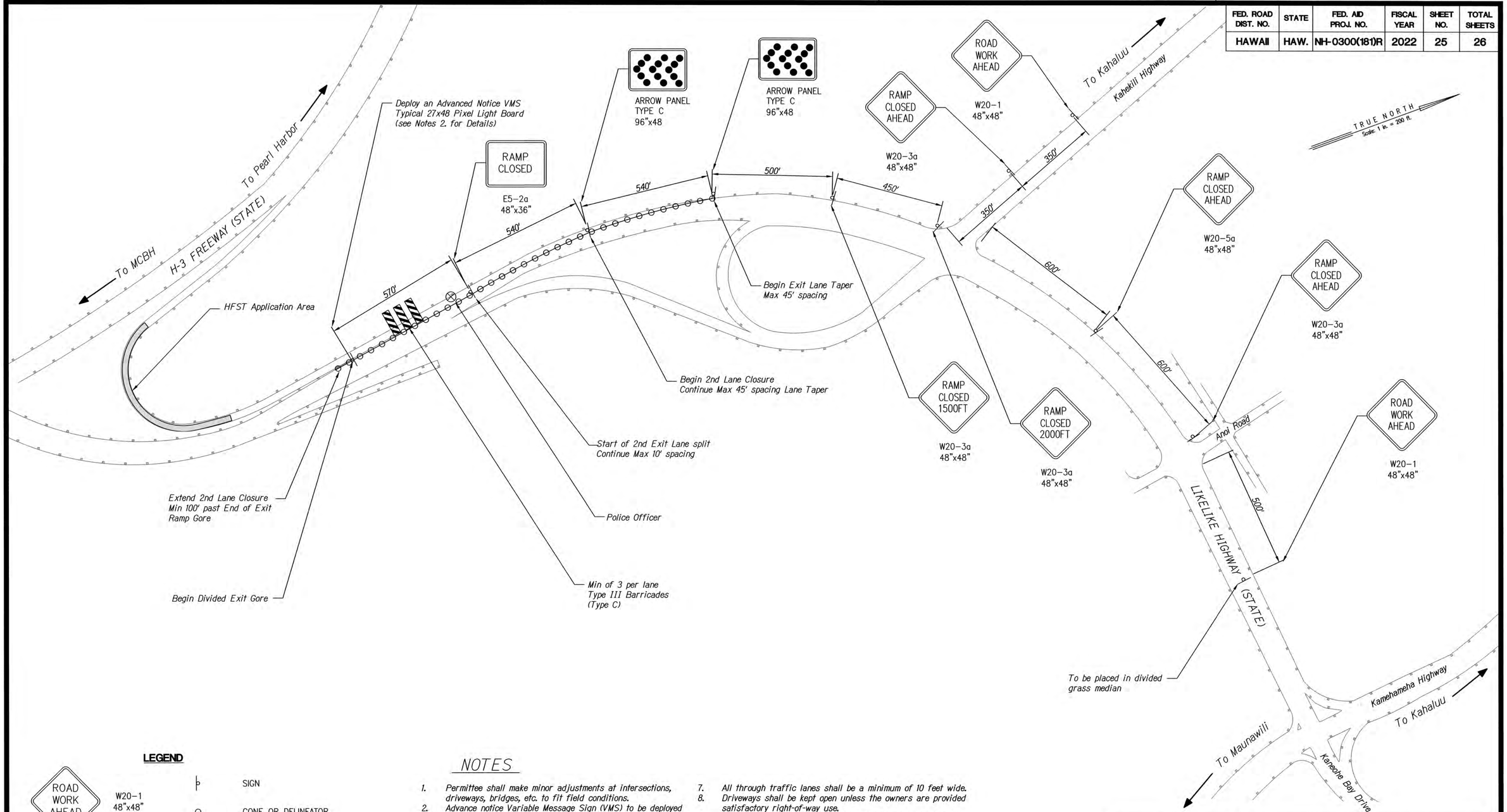
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	25	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
RAMP CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
3. All other traffic control measures to be deployed prior to construction activities. All devices shall be installed such that the sign or device farthest from the work area be placed first then all subsequent devices shall be placed progressively toward the work area.
4. All traffic control devices shall be deployed to provide for maximum safety and ample line of sight for oncoming traffic
5. All existing signs within the traffic control area that are in conflict with the TCP shall be removed or covered during work. All signs shall be restored upon completion of work.
6. Minimum of 3 x Type III barricades per lane of closure. All work materials and equipment shall be maintained behind barricades.
7. All through traffic lanes shall be a minimum of 10 feet wide.
8. Driveways shall be kept open unless the owners are provided satisfactory right-of-way use.
9. At the completion of each day's work or as soon as possible, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of traffic. Removal shall be in the reverse order of installation.
10. Install all temporary and permanent pavement marking devices on new or reconstruction Federal-aid projects complying to the MUTCD before the highway is open to the public for travel as required by FHWA Memorandum Number: 141 Conformance with the MUTCD dated April 9, 2004.
11. This plan may have minor adjustments from the MUTCD standard recommendations in order to accommodate projected field conditions. Contractor is solely responsible to make any additional adjustments to safely deploy all traffic control measures to meet field conditions.

200 100 0 200 400
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-7
KANEOHE INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU

FEDERAL AID PROJECT NO. NH-0300(181)R

Scale:1 : 200 Date: DECEMBER, 2022

SHEET No. 7 OF 8 SHEETS

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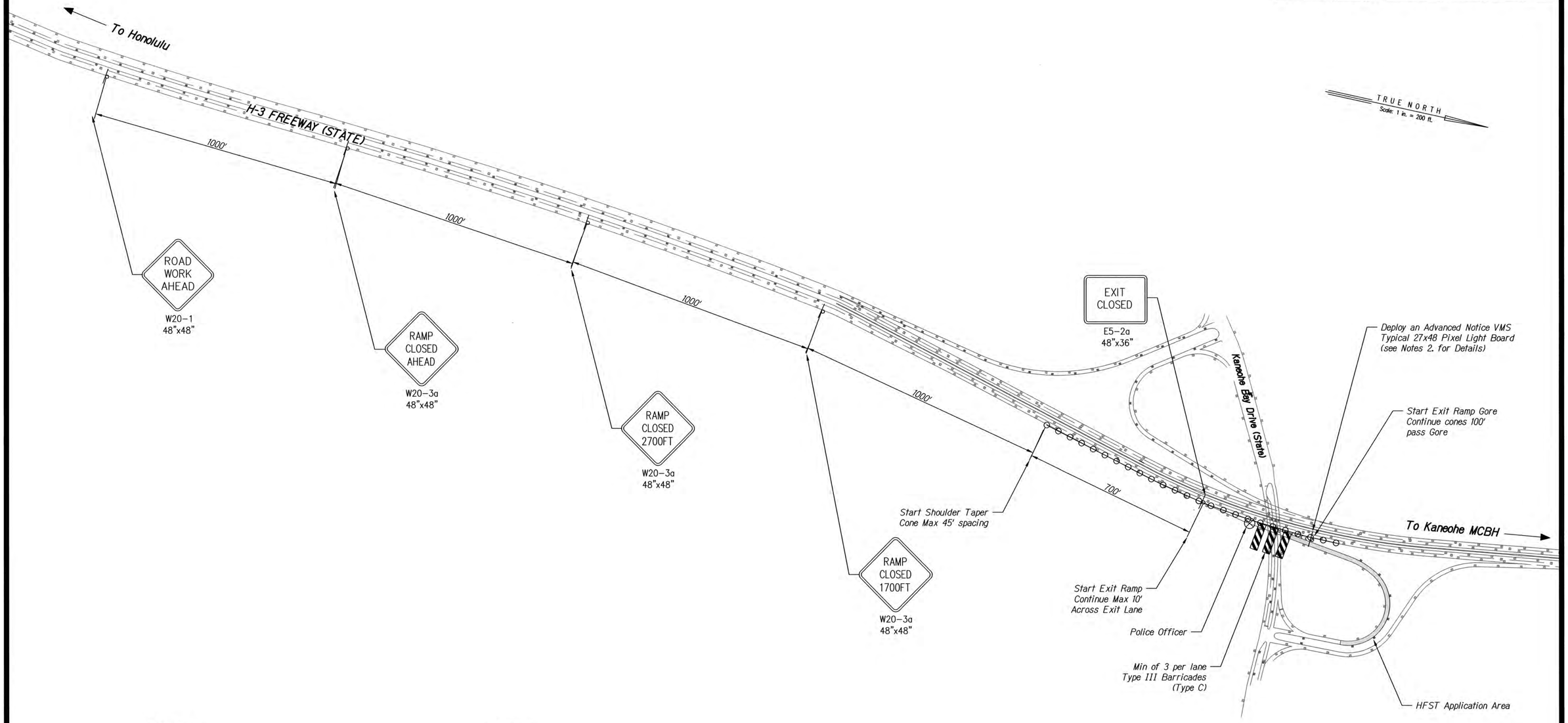
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(181)R	2022	26	26



LEGEND

ROAD WORK AHEAD	W20-1 48"x48"	SIGN
		CONE OR DELINEATOR
		TYPE III BARRICADE
RAMP CLOSED XX FT	W20-3a 48"x48"	POLICE OFFICER
		WORK AREA
EXIT CLOSED	E5-2a 48"x36"	ARROW PANEL TYPE C 96"x48

NOTES

1. Permittee shall make minor adjustments at intersections, driveways, bridges, etc. to fit field conditions.
2. Advance notice Variable Message Sign (VMS) to be deployed at least 2 week in advance of scheduled work. Board to display ramp ID, date and time of closure.
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200 100 0 200 400
Graphic Scale in Feet

ANSON M. MURAYAMA
LICENSED PROFESSIONAL ENGINEER
No. 6975-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN-8
MOKAPU INTERCHANGE

HIGH FRICTION SURFACE TREATMENT INSTALLATION

AT VARIOUS LOCATIONS ON OAHU, ISLAND OF OAHU
FEDERAL AID PROJECT NO. NH-0300(181)R

Scale: 1 : 200 Date: DECEMBER, 2022

SHEET No. 8 OF 8 SHEETS

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