FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	1	50

INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STANDARD PLANS SUMMARY
3 – 4	GENERAL NOTES AND LEGEND
5 – 6	UTILITY NOTES
7 – 9	WATER POLLUTION & EROSION CONTROL NOTES
10	TYPICAL SECTION
11 – 12	RECONSTRUCTION SCHEDULE
13 – 24	ROADWAY PLANS
25 – 30	TRAFFIC COUNTING SYSTEM PLANS
31 – 50	TRAFFIC PLANS

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

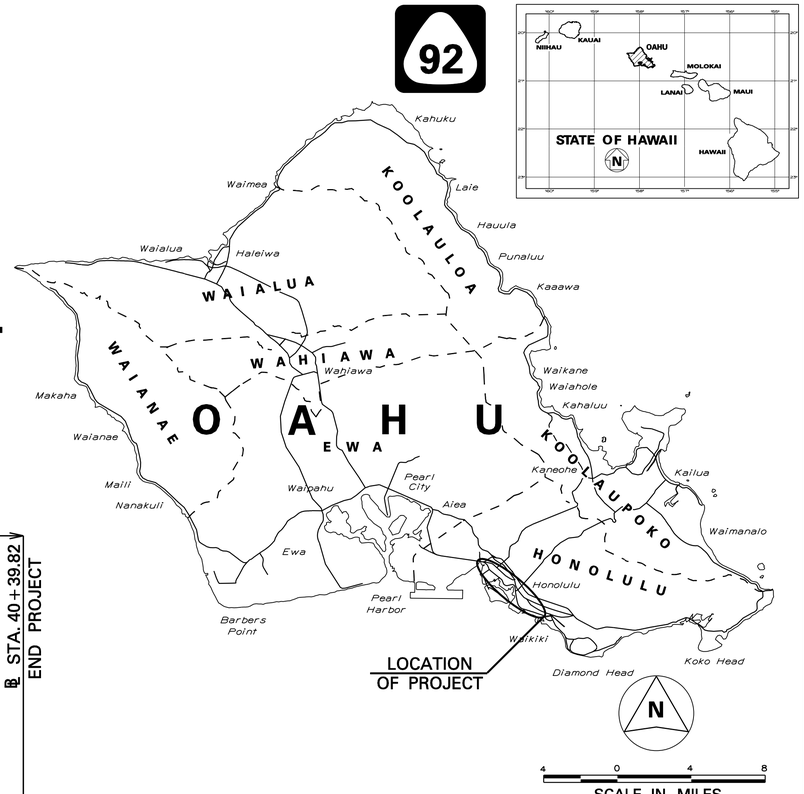
HONOLULU, HAWAII

PLANS FOR

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

DISTRICT OF HONOLULU

ISLAND OF OAHU



MILE POST 3.99 TO MILE POST 8.16

NIMITZ HIGHWAY, ROUTE 92

DESIGN DESIGNATION	KALIHI STREAM BRIDGE TO SAND ISLAND ACCESS ROAD, (MP 3.66 TO 3.99)	SAND ISLAND ACCESS ROAD TO WAIAKAMILO ROAD, (MP 3.99 TO 4.68)	WAIAKAMILO ROAD TO BISHOP STREET, (MP 4.68 TO 6.38)
ADT (2018)	82,200	68,200	75,700
ADT (2028)	86,200	71,600	79,400
DHV	6,900	5,730	6,750
K	8.0	8.0	8.5
T	7.5	10.0	11.0
T_{24}	10.0	11.5	9.0

ALA MOANA BOULEVARD, ROUTE 92

DESIGN DESIGNATION	BISHOP STREET TO WARD AVENUE, (MP 6.38 TO 7.39)	WARD AVENUE TO PIIKOI STREET, (MP 7.39 TO 8.10)	PIIKOI STREET TO ATKINSON DRIVE (MP 8.10 TO 8.53)
ADT (2018)	64,700	56,300	51,600
ADT (2028)	67,900	59,100	54,200
DHV	5,430	4,730	4,340
K	8.0	8.0	8.0
T	11.0	8.0	8.0
T_{24}	11.0	9.5	9.0

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

Jan 14, 2021

DIR. OF TRANSPORTATION — DATE

HWY-D DESIGNED BY

692-7570 PHONE

HWY-DD MANAGED BY

November, 2020 DATE

LIMITS OF PROJECT

BEGIN PROJECT
NIMITZ CONNECTOR (EB)
℄ STA. 50+00.00

NIMITZ CONNECTOR (WB)
℄ STA 60+54.18 (BK) = EQ.
NIMITZ CONNECTOR (EB)
℄ STA 57+89.39 (BK) = EQ.
℄ STA 17+66.47 (AH)

℄ STA 54+95.17 (BK) = EQ.
℄ STA 55+13.09 (AH)

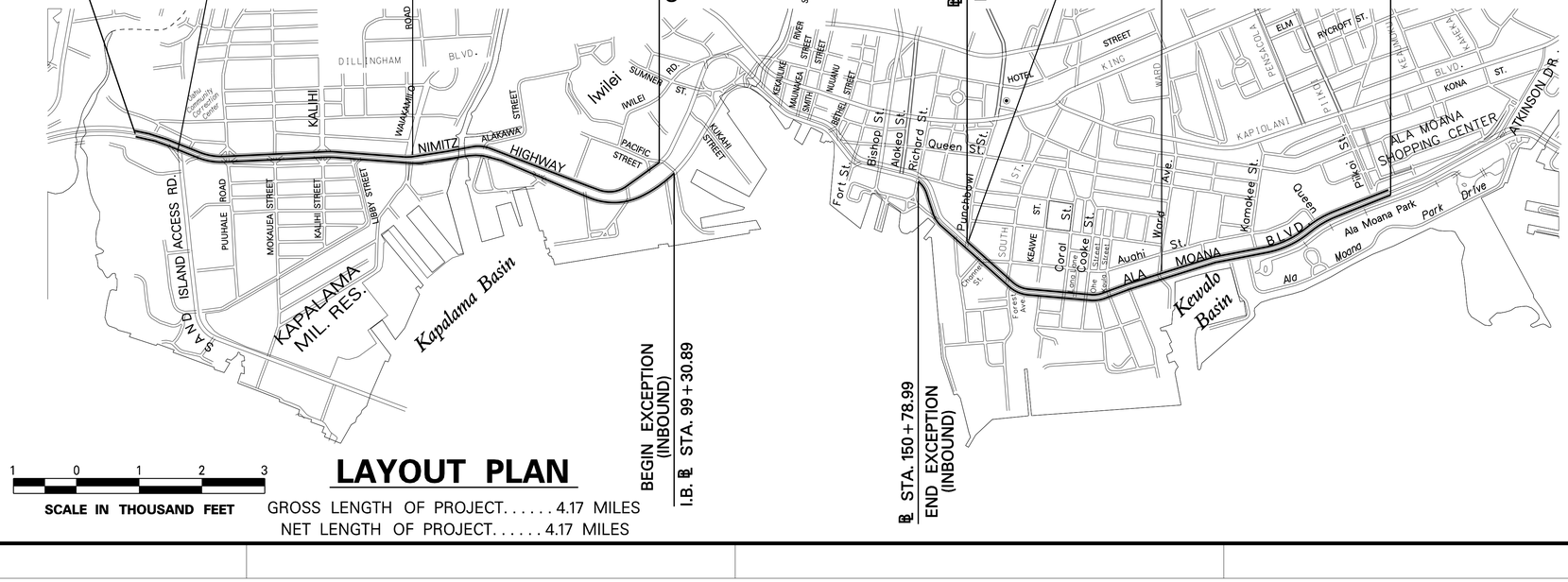
BEGIN EXCEPTION (OUTBOUND)
O.B. ℄ STA. 97+31.66

℄ STA. 163+04.45
END EXCEPTION (OUTBOUND)

℄ STA 164+05.43 (BK) = EQ.
℄ STA 11+05.82 (AH)

℄ STA 44+76.99 (BK) = EQ.
℄ STA 0+00.00 (AH)

℄ STA. 40+39.82
END PROJECT



BEGIN EXCEPTION (INBOUND)
I.B. ℄ STA. 99+30.89

℄ STA. 150+78.99
END EXCEPTION (INBOUND)

1 0 1 2 3
SCALE IN THOUSAND FEET

LAYOUT PLAN

GROSS LENGTH OF PROJECT..... 4.17 MILES
NET LENGTH OF PROJECT..... 4.17 MILES

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	2	50

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	CANTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTION	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C	SPREAD FOOTING	05/31/07
TE-19D	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E	ANCHORAGE DETAILS	05/31/07
TE-19F	ANCHORAGE DETAILS	05/31/07
TE-19G	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07
TE-19J	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
TE-19K	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19L	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19M	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-20	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20A	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20B	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20C	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-21A	SIGN BREAKAWAY MOUNTS	05/31/07
TE-21B	SIGN BREAKAWAY MOUNTS	05/31/07
TE-22	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
TE-23	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
TE-24	SOLID ALUMINUM EXTRUDED SIGN PANEL AND	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 ●)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

SHEET No. *1* OF *1* SHEETS

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY *X*
TRACED BY
DESIGNED BY *X*
QUANTITIES BY
CHECKED BY
DATE *X*
NOTE BOOK *plandrdgn*

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	3	50

GENERAL NOTES

1. The scope of work for this project consists of cold planing, resurfacing, reconstructing weakened pavement areas, adjusting existing monuments and utility manholes, replacing existing loop detectors and traffic counting stations, replacing existing curb ramps with new concrete sidewalk, installing new curbs, installing signs, pavement markings, striping, and traffic signal head backplates.

2. Contractor staging and storage areas identified in the environmental documents have been permitted for NPDES and Noise Variance, but the Contractor shall obtain permission to use the areas prior to construction.

3. 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 be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.

4. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the Standards and Specifications of the affected utility company at no cost to the State.

5. The Contractor shall verify the presence of existing aerial and underground utilities which may conflict with construction activities and shall coordinate with the utility company for temporary relocations, as necessary. All costs associated with temporary relocations shall be borne by the Contractor.

6. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

7. Prior to resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone, and cable utilities to be adjusted to the new finished grade.

8. The exact locations and limits of areas to be reconstructed and cold planed shall be determined in the field by the Engineer.

9. The Contractor shall notify the Department of Transportation Services Transportation Mobility Division (DTS-TMD) no less than 30 days prior to the start date of work, DTS-TMD shall review and approve the scope of work, location, and duration of any work that affects bus operations, routes or stops. Notification is required to all of the following phone numbers and emails: DTS-TMD - (808) 768-8396, TheBusStop@honolulu.gov, handivan@honolulu.gov; Oahu Transit Services Bus Operations - (808) 768-9520, (808) 848-4565, John.Donovan@thebus.org, Spaio@thebus.org, FIELD-OPS-MGR@thebus.org; Oahu Transit Services Para-transit Operations - (808) 454-5006.

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

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

12. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete.

13. All holes, depressions and wheel ruts shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V prior to resurfacing.

14. The existing drainage system shall be kept functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow.

15. Smooth riding connections shall be constructed at all limits of resurfacing including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.

16. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement.

17. Existing facilities and/or pavement to remain which has been damaged by the Contractor shall be restored to its original condition at no cost to the State.

18. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.

19. Contractor shall dispose or deliver any removed material at no cost to the State.

20. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks, ADA access routes complying with 2010 ADAAG Section 206.1, side streets, and cross streets at all times. This work shall be considered incidental to various contract items and will not be paid for separately.

21. After completion of resurfacing, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.

22. The Contractor is to take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if a dust nuisance is created.

23. The vertical riding surface drop-off between adjacent surfaces shall not exceed 3-inches. This shall include differences in height between adjacent pavement surfaces, cold planed surfaces, bridge decks and new concrete slabs. If a vertical riding surface drop-off exists at the end of each day's work, the Contractor shall provide temporary transition tapers with maximum slopes of 48:1 for travel in the longitudinal direction and 6:1 for transverse movements.

24. The Contractor shall not perform any construction work during periods of heavy rainfall.

25. The Contractor shall use the Traffic Control setup included in the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645, and/or develop a site specific Traffic Control Plan where warranted.

26. The Contractor shall coordinate with the Honolulu Police Department Special Duty Section to hire police officers for traffic control operations and transporting of project equipment to ensure minimal delay due to lane closures.

27. Any Survey Monuments that are disturbed shall be restored under the supervision of a licensed land surveyor registered in the State of Hawaii at no cost to the State. All survey data shall be certified by the surveyor and submitted to the Engineer.

PAVING AROUND MANHOLES

1. The Contractor shall first lower manholes more than cold planing thickness indicated on typical sections prior to cold planing. The work shall be considered incidental to the various paving contract items. Upon final paving, the manhole shall be raised and paid under the various contract items pertaining to manhole adjustments.

2. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.

3. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.

4. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot out the area if the fog is too heavy.

TRAFFIC SIGNAL NOTES

1. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihira @ 564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of the actual work, including pavement cold planing and removing the existing loop detector.

2. Contractor shall perform all traffic signal-related work following field instructions from DTS Signal Shop personnel. Such field instructions shall include, but is not limited to, the final location and quantity of the temporary microwave sensors and permanent detector loops. DTS Signal Shop personnel will be responsible for traffic signal controller programming at the traffic signal cabinet to accommodate the temporary and permanent operations.

3. Contractor shall promptly take down and turnover the temporary microwave sensors to DTS when the permanent detector loops are in place and operational. Contractor shall perform all necessary work to restore traffic signal system back to a neat appearance of the electrical trade.

ORIGINAL PLANS
NOTE BOOK
NO.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	4	50

NO POTENTIAL TO AFFECT HISTORIC PROPERTIES

1. This Project shall have no potential to cause effects to historic properties. Therefore, the Contractor shall ensure the following:

   a. No part of this project shall penetrate below the sub-base course of the roadway or disturb any subgrade soils.
      i. In the event a pothole is found that is deeper than subgrade, repairs must be made without disturbing the soil. Use of geotextile fabric is encouraged. Make a note of the repairs and the GPS location so that reoccuring potholes may be addressed in a future project.

   b. No signposts in this Project require new ground disturbance. Any signpost replacements shall be done in their existing locations.

   c. Guardrail repairs shall be done within the existing right-of-way, shall not disturb previously undisturbed soils, and shall not penetrate below the sub-base course of the roadway.

   d. Vegetation maintenance shall be limited to activities that do not penetrate the sub-base course of the roadway, or roadway shoulders.

   e. No part of this Project, including staging, shall occur outside of the right-of-way, unless it is on a paved surface.

   f. Staging areas must be within existing asphalt paving or previously graded areas.

   g. Bridgework shall be limited to repaving activities only.

   h. Any special conditions shall be documented in the general notes.

   In the event of any conflict between this section and any other sections, plans, and or specifications of the Project, this section shall prevail.

ENDANGERED SPECIES ACT SECTION 7 NOTES

1. All work lights shall be shielded so the bulb can only be seen from below bulb height and only used when construction is occuring in the area illuminated by the light.

2. On all islands, except Oahu, nightime construction shall not occur during the seabird fledgign period, September 15 through December 15.

3. Above-ground utilites shall not be moved or realigned.

4. Highway lighting shall not be installed or replaced.

5. 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.

MAGNUSON - STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT SECTION 305(B) NOTES

A. Waste Management.
Concrete wastes, solid wastes, and any sanitary/septic wastes shall be located away from and managed to assure no contamination to the critical habitats.

B. Vehicle and Equipment Management.
All vehicle and equipment cleaning, maintenance, and refueling shall be located away from and managed to assure no contamination to the critical habitats.

C. Storm Water Management and Erosion Control.
The Contractor will be required to obtain an NPDES permit for storm water discharge from a construction site and will be required to follow standard BMPs to control storm water discharge. The BMPs may include silt barriers and fabric bags at catch basins.

D. Other construction BMPs.
The use of barriers and regular wetting down of problem areas will minimize the potential air quality impacts, during construction, within the project area. Management of hazardous materials, if encountered, shall be coordinated with applicable State and private agencies.

E. The HDOT Standard Specifications for Road and Bridge Construction Section 209 Temporary Water Pollution, Dust, and Erosion Control, as amended, shall be followed.

DIVISION OF FORESTRY AND WILDLIFE NOTES

1. The following Best Management Practices (BMPs) shall be implemented to avoid and minimize potential adverse effects to Essential Fish Habitat (EFH) during the project:

   A. The State endangered White Tern (Gygis alba) or Manu o Ku has been recorded nesting around the proposed project site. The Contractor shall obtain a qualified biologist to survey for the presence of White Terns prior to any action that could disturb the trees. White Tern pairs lay their single egg in a branch fork with no nest. The eggs and chicks can be easily dislodged by construction equipment that nudges the trees. If a nest is discovered, please notify DOFAW staff at (808) 587-0166 for assistance.

   B. The State listed Hawaiian Hoary Bat or 'Ope'ape'a (Lasiurus cinereus semotus) has the potential to occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). If this cannot be avoided, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed without consulting DOFAW.

   C. For nighttime lighting that might be required, all lights shall be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawai'i, please visit: https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.

   D. The Contractor shall minimize the movement of plant or soil material between worksites, such as in fill. Soil and plant material may contain invasive fungal pathogens, vertebrate and invertebrate pests (e.g. Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. Consult the O'ahu Invasive Species Committee at (808) 266-7994 to learn of any high-risk invasive species in the area and ways to mitigate spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

LEGEND

	Resurfacing Exception
	Reconstruction Areas
	Existing Concrete
	Resurfacing Limits
e	Existing Electrical Line
jp	Existing Joint Pole
pp	Existing Power Pole
emh	Existing Hawaiian Electric Manhole
EMH	Adjusted Hawaiian Electric Manhole
hecohh	Existing Hawaiian Electric Hand Hole
hecopb	Existing Hawaiian Electric Pullbox
t(u)	Existing Underground Telephone Line
t(o)	Existing Overhead Telephone Line
tp	Existing Telephone Pole
tmh	Existing Telephone Manhole
thh	Existing Telephone Hand Hole
htcomh	Existing Hawaiian Telcom Manhole
HTCOMH	Adjusted Hawaiian Telcom Manhole
htcopb	Existing Hawaiian Telcom Pullbox
sc	Existing Signal Corps Line
tv	Existing TV Cable
w 30	Existing 30" Water Line
w 24	Existing 24" Water Line
w 12	Existing 12" Water Line
w 8	Existing 8" Water Line
w 6	Existing 6" Water Line
w 4	Existing 4" Water Line
w 2½	Existing 2½" Water Line
w 2	Existing 2" Water Line
w 1½	Existing 1½" Water Line
w 1	Existing 1" Water Line
wmh	Existing Water Manhole
WMH	Adjusted Water MH Frame/Cover
av	Existing Water Air Valve
AV	Adjusted Water Air Valve
wv	Existing Water Valve Box
WV	Adjusted Water Valve Box
wm	Existing Water Meter
fh	Existing Fire Hydrant
arv	Existing Air Relief Valve
42" rcp	Existing 42" Reinforced Concrete Pipe
30" rcp	Existing 30" Reinforced Concrete Pipe
mw	Existing IDPP Monitoring Well
s 30	Existing 30" Sewer Line
s 18	Existing 18" Sewer Line
s 12	Existing 12" Sewer Line
s 10	Existing 10" Sewer Line
s 8	Existing 8" Sewer Line
smh	Existing Sewer Manhole
SMH	Adjusted Sewer MH Frame/Cover
g 6	Existing 6" Gas Line
g 4	Existing 4" Gas Line
g 2	Existing 2" Gas Line
g 1	Existing 1" Gas Line
g ¾	Existing ¾" Gas Line
gv	Existing Gas Valve Box
gmh	Existing Gas Manhole
mon.	Existing Monument
MON.	Adjusted Monument
d 24	Existing 24" Drain Line
sdmh	Existing Storm Drain Manhole
SDMH	Adjusted Storm Drain MH Frame/Cover
gdi	Existing Grated Drop Inlet
cb	Existing Catch Basin
sl	Existing Highway Lighting Standard
slpb	Existing Highway Lighting Standard Pullbox
tsp	Existing Traffic Signal Pole
tspb	Existing Traffic Signal Pullbox
UMH	Adjusted Utility MH Frame/Cover
	Replace Accusense Mag In-Pavement Sensor

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS Date
(For work affecting BWS Facilities in City/State R/W and BWS easements only)

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE 06-29-99
NOTE BOOK
No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	5	50

SEWER NOTES:

1. All sewer construction shall be performed in accordance with the City's Standard Specifications, Sept. 1986, the Department of Public Works Standard Details, Sept. 1984, Current City Practices And Revised Ordinances of Honolulu, 1990, as Amended, and Design Standards of the Department of Wastewater Management Vol. 1, July 1993.

2. The underground pipes, cables, or ductlines known to exist by the Engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the Wastewater Inspector and exercise proper care in excavating the area. The Contractor shall be responsible and shall pay for all damaged utilities.

3. The Contractor shall be responsible for the protection of all sewer lines and maintaining continuous sewer service to all affected areas during construction.

4. The Contractor shall be responsible for any sewage spills caused during construction. The Contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures. The Contractor shall be responsible for all public notifications and press releases.

5. Maintain 3'-0" min. horizontal clear separation between all sewer systems and nearest street lighting ductlines, pullboxes, and handholes paralleling the sewer system at no cost to the city.

6. Maintain 5'-0" horizontal clear separation between street lighting and traffic signal standards (including any modular units) and nearest sewer line system. The Contractor shall field verify for conflicts at each street lighting and traffic signal standard location. Where conflicts occur, the Contractor shall coordinate with the Project Engineer to revise the street lighting and traffic signal standard to provide the required clearances at no cost to the city.

7. At the electrical/signal ductline sewer crossings, adjust all electrical/signal ductline elevations to maintain 24' vertical clear separation from all sewer lines or provide reinforced concrete jackets on sewer lines at no cost to the city.

8. For sewer manhole (SMH) adjustments upward less than 3", see City Std. Detail S-25. For SMH adjustments upward greater than 3" or for any adjustments downward, reconstruct SMH top from below the cone section.

9. The Contractor shall adjust all manhole frames within the resurfaced area prior to resurfacing. The Contractor shall be responsible for "referencing" these manholes to facilitate the adjustments.

10. The Contractor shall notify the Inspection Section, Wastewater Branch, DDC, At 527-5855 or 523-4345 to arrange for inspection services. Submit 4 sets of approved construction plans. Call 7 days prior to commencement of sewer work. The contractor shall pay for all inspection costs.

11. Sewer manhole frame and covers shall be adjusted and reinstated within 60 calendar days of adjacent repaving completion, to allow City maintenance trucks to regain access to manholes to perform sewer maintenance.

BOARD OF WATER SUPPLY NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 1994, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.

2. The Contractor shall notify BWS Capital Projects Division, Construction Section in writing and submit six (6) sets of approved construction plans one week prior to commencing work on the water system.

3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply.

4. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water line tees and bends wherever there is a possibility of water line movement due to removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying their construction methods.

5. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles and shall pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.

6. Reapproval shall be required if this project is not under construction within a period of two years.

7. The Contractor shall verify all existing service lateral locations, whether or not shown on the plans, prior to commencing with any of the work and shall not assume that, where no services are shown, none exists.

8. Prior to any excavation, the Contractor shall verify in the field the location of existing water mains and appurtenances.

9. Maintain 3'-0" minimum cover for all existing waterlines from new finish grade. The Contractor shall probe the waterline and service laterals and submit the probing data to BWS Capital Projects Division, Construction Section. Any adjustments to the existing water system required during construction, to meet the minimum cover and the requirements of the BWS standards, whether shown on plans or not, shall be done by the Contractor at no cost to BWS.

10. The contractor shall adjust all manhole frames/valve boxes/meter boxes within the reconstructed areas. The Contractor shall be responsible for "referencing" these manholes/valve boxes/meter boxes to facilitate the adjustments.

11. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. Mefer and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor and at no cost to the BWS.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS Date

(For work affecting BWS Facilities in City/State R/W and BWS easements only)

ORIGINAL PLANS
NOTE BOOK
No.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	6	50

HAWAIIAN TELCOM (HTCO) NOTES:

1. All applicable construction work shall be done in accordance with the "Verizon Hawaii Inc." Standard Specifications for Placing Underground Telephone Systems", dated March 1999, all subsequent amendments and additions, and all other pertinent standards for telephone construction. The Contractor shall familiarize his personnel by obtaining applicable specifications.

2. The location of HTCO existing facilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity to HTCO facilities. The Contractor shall verify their locations and shall be liable for any damages to HTCO facilities. Any damages shall be report immediately to HTCO's Repair Section at #611 (24 hours) or to the Excavation Permit Section at 840-1444 during normal work day hours, Monday through Friday, except holidays.

3. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative.

4. The Contractor shall take necessary precautions not to damage any existing cables or ducts. Any work involving existing HTCO's cables or ducts shall be done in the presence of a HTCO Inspector or designated representative.

5. The Contractor shall obtain an excavation permit and toning request from HTCO Excavation Permit Section, located at 3239 Ualena Street third floor, two weeks prior to the start of construction. Hours of business are 7:00 a.m. to 10:45 a.m. and 11:30 a.m. to 2:45 p.m., Monday through Friday, except holidays.

6. The Contractor shall notify HTCO Inspector or designated representative 72 hours prior to excavation, bracing or backfilling of HTCO structures or facilities.

7. When excavation is adjacent to or beneath HTCO existing structures or facilities, the Contractor shall :
   A. Sheet and/or brace the excavation to prevent slides, cave-ins or settlements to ensure no movement to HTCO structures or facilities.
   B. Protect existing structures and/or facilities with beams, struts or underpinning while excavating beneath them to ensure no movement to HTCO structures or facilities.

8. Should it become necessary to relocate any HTCO facilities, the work shall be done by HTCO. The Contractor shall be responsible for all coordination and costs associated with the relocation.

9. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Duct shall be adjusted in the field in order to clear reinforcing.

10. All construction must be inspected and approved by HTCO prior to the installation of any of its facilities and the energizing of its systems. HTCO will commence installation only after the construction has been approved and no sooner than thirty working days thereafter.

11. The Contractor shall pump all manholes dry during final inspection.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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UTILITY NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
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WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

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

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

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

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

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

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

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

B. WASTE DISPOSAL:

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

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

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

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

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

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

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

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

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

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

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

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

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

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

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

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WATER POLLUTION & EROSION CONTROL NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
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WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

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

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

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

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

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

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

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

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

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

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

   b. Fertilizers:
      Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.
   c. Paints:
      Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.
   d. Concrete Trucks:
      Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan
   a. Post a spill prevention plan to include measures to prevent and clean up each spill.
   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
   e. Clean up all spills immediately after discovery.
   f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
   g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 5 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

ORIGINAL PLAN
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	9	50

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

E. PERMIT REQUIREMENTS:

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

2. Comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:
   a. NPDES Permit for Construction Activities

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

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

Follow the requirements below:

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

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

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

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

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

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

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

ORIGINAL PLAN
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

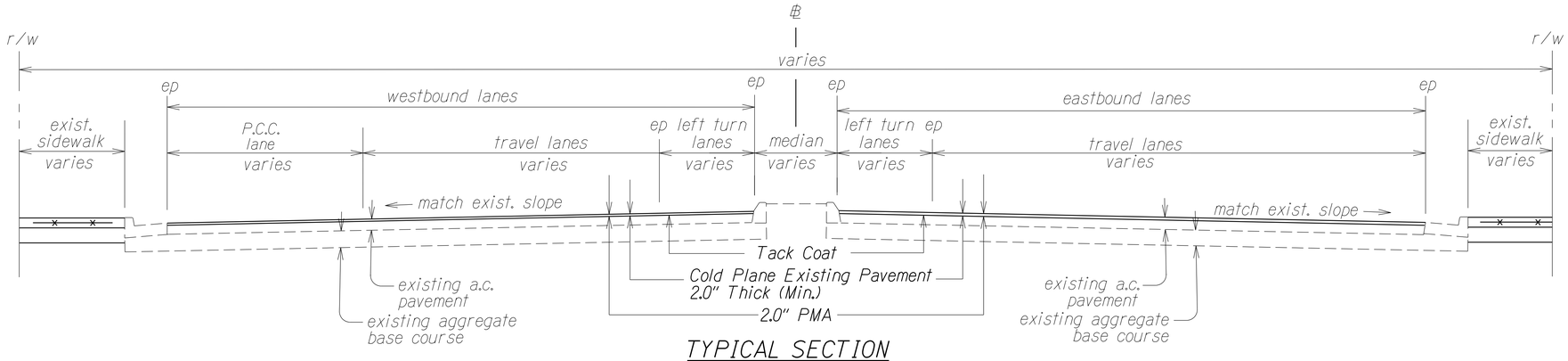
WATER POLLUTION & EROSION CONTROL NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

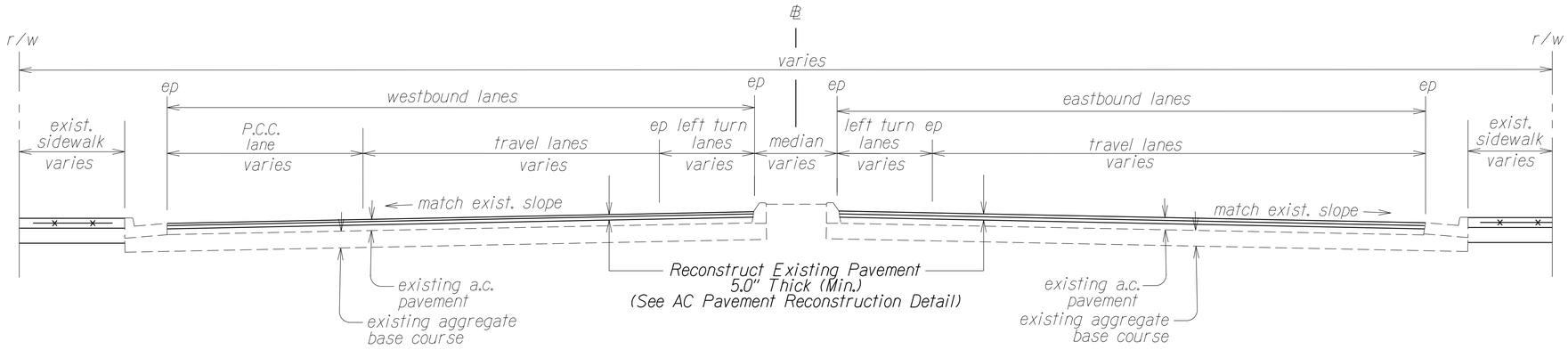
SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	10	50



TYPICAL SECTION
NH ℄ STA 17+66.47 (SAND ISLAND ACCESS ROAD) TO ℄ AMB Sta. 40+39.82± (VICINITY OF PIIKOI STREET)

Scale: N.T.S.



TYPICAL SECTION
AMB ℄ STA 22+38.00± TO AMB ℄ Sta. 7+15.00±
AMB ℄ STA 18+65.00± TO AMB ℄ Sta. 23+12.50±
AMB ℄ STA 27+87.50± TO AMB ℄ Sta. 32+07.50±

Scale: N.T.S.

ORIGINAL PLANS
SURVEY PLOTTED BY
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DATE
NOTE BOOK
No.

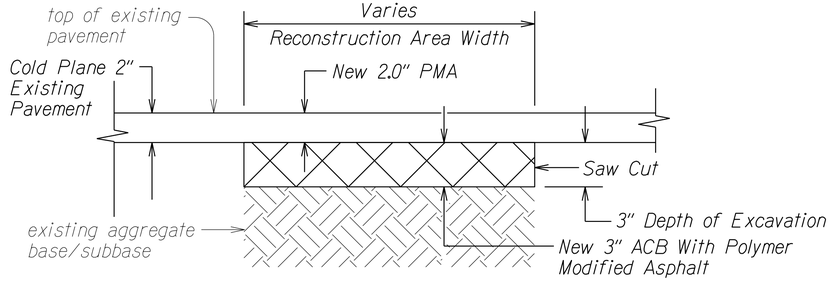
Notes:

a. See plans for locations of existing PCC pavement. Existing PCC pavement shall remain and not be cold planed or overlaid with AC pavement. Adjacent newly paved surfaces shall match existing elevation of existing PCC pavement edge.

b. For reconstruction area schedule, see Plan Sheet Nos. 11 - 12

c. Prior to placement of the Hot Mix Asphalt Base Course, the exposed subbase or subgrade should be recompacted to a dense and unyielding condition.

d. Reconstructed pavement from in this area should consist of the removal of the surface asphaltic concrete down to the underlying base material and replacement with pavement section above.



AC PAVEMENT RECONSTRUCTION DETAIL

Scale: N.T.S.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	11	50

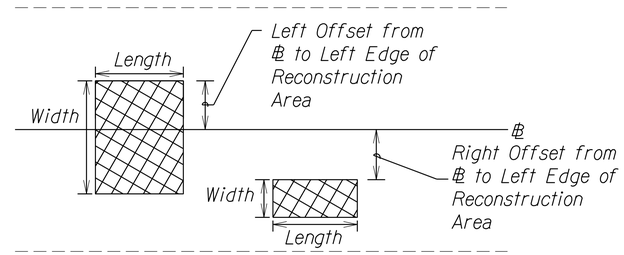
Reconstruction Area Schedule (To Waikiki)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
NH 22+51.2±	NH 75+72.0±	39.7 Rt.	35.7 Rt.	5302.8	11.0	58,331.3
NH 33+46.4±	NH 33+86.4±	9.7 Rt.	9.7 Rt.	40.0	22.0	880.0
NH 38+16.2±	NH 38+27.2±	10.7 Rt.	10.7 Rt.	11.0	20.0	220.0
NH 54+07.7±	NH 54+23.2±	44.6 Rt.	44.6 Rt.	15.5	15.0	232.5
NH 54+28.0±	NH 54+55.0±	44.6 Rt.	44.6 Rt.	27.0	15.0	405.0
NH 54+54.7±	NH 54+79.7±	18.1 Rt.	18.1 Rt.	25.0	13.5	337.5
EQUATION STATION: NH ℄ STA. 54+95.17 (BK) = NH ℄ STA. 55+13.09 (AH)						
NH 58+26.0±	NH 58+46.0±	24.8 Rt.	24.8 Rt.	20.0	11.0	220.0
NH 59+25.0±	NH 59+65.0±	26.0 Rt.	26.0 Rt.	40.0	11.0	440.0
NH 60+92.0±	NH 61+32.0±	23.1 Rt.	23.1 Rt.	40.0	11.0	440.0
NH 64+30.0±	NH 65+00.0±	23.6 Rt.	23.6 Rt.	70.0	11.0	770.0
NH 66+86.0±	NH 70+86.0±	25.5 Rt.	24.7 Rt.	400.0	11.0	4,400.0
NH 71+62.0±	NH 72+12.0±	14.5 Rt.	14.5 Rt.	50.0	11.0	550.0
NH 72+12.0±	NH 73+12.0±	25.4 Rt.	25.4 Rt.	100.0	11.0	1,100.0
NH 74+62.0±	NH 74+92.0±	14.8 Rt.	14.8 Rt.	30.0	20.0	600.0
NH 76+86.0±	NH 77+36.0±	24.2 Rt.	24.2 Rt.	50.0	22.0	1,100.0
NH(IB) 83+97.0±	NH(IB) 84+47.0±	25.6 Rt.	25.6 Rt.	50.0	11.0	550.0
NH(IB) 95+37.0±	NH(IB) 99+37.0±	22.9 Lt.	22.9 Lt.	400.0	11.0	4,400.0
NH 151+00.0±	NH 152+00.0±	43.6 Rt.	43.6 Rt.	100.0	11.0	1,100.0
NH 153+28.0±	NH 153+78.0±	43.5 Rt.	43.5 Rt.	50.0	11.0	550.0
NH 154+90.0±	NH 155+50.0±	43.4 Rt.	43.4 Rt.	60.0	11.0	660.0
NH 156+50.0±	NH 157+30.0±	27.1 Rt.	27.1 Rt.	80.0	11.0	880.0
NH 162+00.0±	NH 162+60.0±	1.9 Rt.	1.9 Rt.	60.0	33.0	1,980.0
NH 163+34.4±	NH 164+05.4±	24.9 Rt.	24.9 Rt.	71.0	11.0	781.0
EQUATION STATION: NH ℄ STA 164+05.43 (BK) = AMB ℄ STA 11+05.82 (AH)						
AMB 11+05.8±	AMB 12+34.8±	24.9 Rt.	24.9 Rt.	129.0	11.0	1,419.0
AMB 14+60.0±	AMB 16+10.0±	25.1 Rt.	25.1 Rt.	150.0	11.0	1,650.0
AMB 17+41.0±	AMB 18+41.0±	25.1 Rt.	25.1 Rt.	100.0	11.0	1,100.0
AMB 21+99.5±	AMB 22+37.5±	19.6 Rt.	19.6 Rt.	38.0	11.0	418.0
EQUATION STATION: AMB ℄ STA 44+76.99 (BK) = AMB ℄ STA 0+00.00 (AH)						
AMB 8+50.0±	AMB 9+00.0±	9.8 Rt.	9.8 Rt.	50.0	10.0	500.0
AMB 9+50.0±	AMB 9+75.0±	9.0 Rt.	9.0 Rt.	25.0	20.0	500.0
AMB 11+00.0±	AMB 13+00.0±	11.0 Rt.	11.0 Rt.	200.0	20.0	4,000.0
AMB 17+83.0±	AMB 18+65.0±	0.0 Rt.	0.0 Rt.	82.0	10.0	820.0
AMB 18+65.0±	AMB 23+12.5±	0.7 Lt.	3.2 Lt.	447.5	31.3 avg.	14,023.2
AMB 25+31.0±	AMB 26+31.0±	7.0 Rt.	7.0 Rt.	100.0	10.0	1,000.0

Reconstruction Area Schedule (To Waikiki)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
AMB 26+31.0±	AMB 27+41.0±	4.0 Lt.	4.0 Lt.	110.0	30.0	3,300.0
AMB 27+75.0±	AMB 27+87.5±	8.0 Rt.	8.0 Rt.	10.0	10.0	100.0
AMB 27+87.5±	AMB 30+90.3±	3.7 Lt.	0.7 Lt.	302.8	31.9 avg.	9,646.9
AMB 31+23.8±	AMB 32+07.5±	3.7 Lt.	0.7 Lt.	83.7	31.9 avg.	2,666.4
AMB 33+75.0±	AMB 34+25.0±	26.0 Rt.	26.0 Rt.	50.0	10.0	500.0
AMB 39+00.0±	AMB 40+30.0±	26.0 Rt.	26.0 Rt.	130.0	10.0	1,300.0
				Subtotal (To Waikiki)		123,870.8

Station Abbreviations:
NH = Nimitz Highway
NH(IB) = Nimitz Highway (Inbound)
NH(OB) = Nimitz Highway (Outbound)
AMB = Ala Moana Boulevard



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RECONSTRUCTION SCHEDULE

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

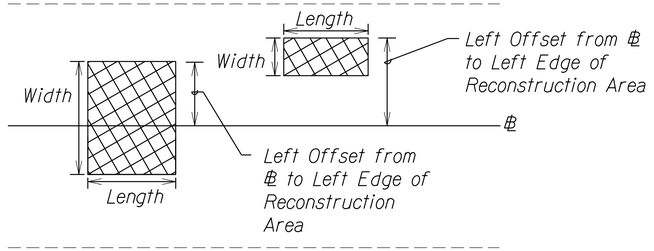
SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	12	50

Reconstruction Area Schedule (To Airport)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
NH 18+90.7±	NH 54+38.1±	53.5 Lt.	42.7 Lt.	3548.0	11.0	39,028.0
NH 33+96.2±	NH 37+36.2±	22.0 Lt.	22.0 Lt.	340.0	22.0	7,480.0
NH 40+30.8±	NH 40+55.8±	32.0 Lt.	32.0 Lt.	25.0	62.9 avg.	1,572.3
NH 40+90.9±	NH 41+15.9±	32.0 Lt.	32.0 Lt.	25.0	63.4 avg.	1,584.9
NH 43+43.1±	NH 43+83.1±	11.2 Lt.	11.2 Lt.	40.0	11.0	440.0
NH 52+83.4±	NH 53+83.4±	22.1 Lt.	22.1 Lt.	100.0	11.0	1,100.0
NH 53+83.4±	NH 54+08.4±	31.8 Lt.	31.8 Lt.	25.0	63.6 avg.	1,589.2
NH 54+10.8±	NH 54+37.8±	58.7 Lt.	58.7 Lt.	27.0	15.0	405.0
NH 54+78.1±	NH 75+72.0±	44.0 Lt.	42.7 Lt.	2076.0	11.0	22,836.0
EQUATION STATION: NH ℄ STA. 54+95.17 (BK) = NH ℄ STA. 55+13.09 (AH)						
NH 63+75.0±	NH 64+75.0±	38.1 Lt.	38.1 Lt.	100.0	11.0	1,100.0
NH 66+31.0±	NH 66+51.0±	37.0 Lt.	37.0 Lt.	20.0	71.0	1,420.0
NH 76+46.0±	NH 76+86.0±	42.0 Lt.	42.0 Lt.	40.0	90.0	3,600.0
NH(OB) 87+13.0±	NH(OB) 88+63.0±	8.0 Lt.	8.0 Lt.	150.0	16.0	2,400.0
EQUATION STATION: NH ℄ STA 164+05.43 (BK) = AMB ℄ STA 11+05.82 (AH)						
AMB 18+27.0±	AMB 18+77.0±	43.3 Lt.	43.3 Lt.	50.0	33.0	1,650.0
AMB 22+38.0±	AMB 44+77.0±	42.8 Lt.	49.9 Lt.	2239.0	73.1 avg.	163,571.8
EQUATION STATION: AMB ℄ STA 44+76.99 (BK) = AMB ℄ STA 0+00.00 (AH)						
AMB 0+00.0±	AMB 7+15.0±	42.8 Lt.	49.9 Lt.	715.0	82.0 avg.	58,631.6
AMB 7+35.0±	AMB 7+65.0±	50.3 Lt.	50.3 Lt.	30.0	30.0	900.0
AMB 7+65.0±	AMB 8+40.0±	40.1 Lt.	40.1 Lt.	75.0	20.0	1,500.0
AMB 8+40.0±	AMB 13+90.0±	30.2 Lt.	30.2 Lt.	550.0	10.0	5,500.0
AMB 9+00.0±	AMB 9+50.0±	50.3 Lt.	50.3 Lt.	50.0	10.0	500.0
AMB 18+65.0±	AMB 23+12.5±	50.2 Lt.	53.1 Lt.	447.5	28.1 avg.	12,553.6
AMB 26+38.0±	AMB 26+63.0±	55.0 Lt.	55.0 Lt.	25.0	30.0	750.0
AMB 27+42.0±	AMB 27+67.0±	55.0 Lt.	55.0 Lt.	25.0	30.0	750.0
AMB 27+87.5±	AMB 30+87.7±	43.0 Lt.	42.0 Lt.	300.2	20.4 avg.	6,126.1
AMB 31+18.3±	AMB 32+07.5±	43.0 Lt.	42.0 Lt.	89.2	20.4 avg.	1,820.7
AMB 37+91.0±	AMB 39+91.0±	46.0 Lt.	46.0 Lt.	200.0	10.0	2,000.0
				Subtotal (To Airport)		340,809.2

Station Abbreviations:
NH = Nimitz Highway
NH(IB) = Nimitz Highway (Inbound)
NH(OB) = Nimitz Highway (Outbound)
AMB = Ala Moana Boulevard



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No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

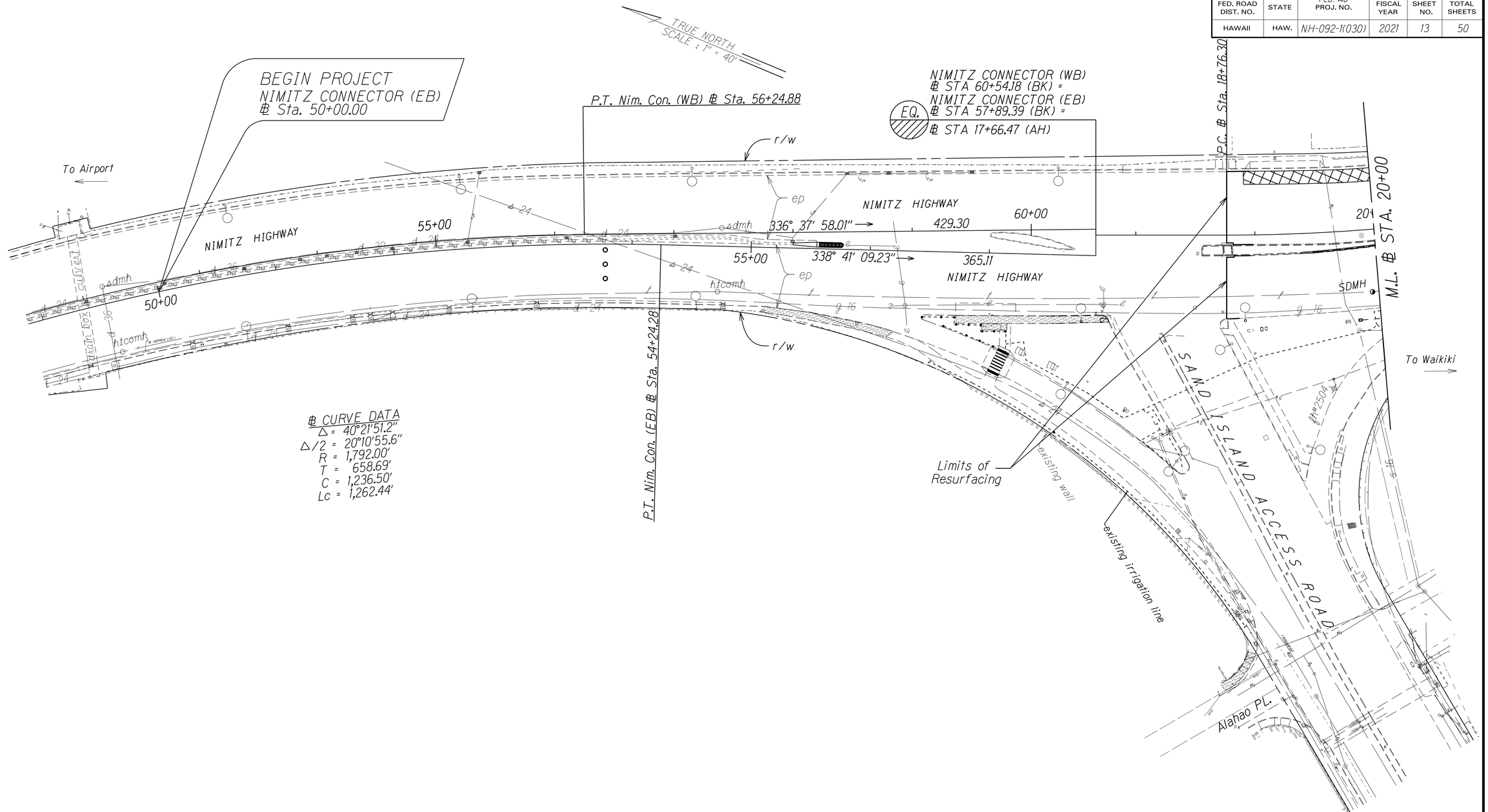
RECONSTRUCTION SCHEDULE

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	13	50



℄ CURVE DATA
△ = 40°21'51.2"
△/2 = 20°10'55.6"
R = 1,792.00'
T = 658.69'
C = 1,236.50'
Lc = 1,262.44'

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

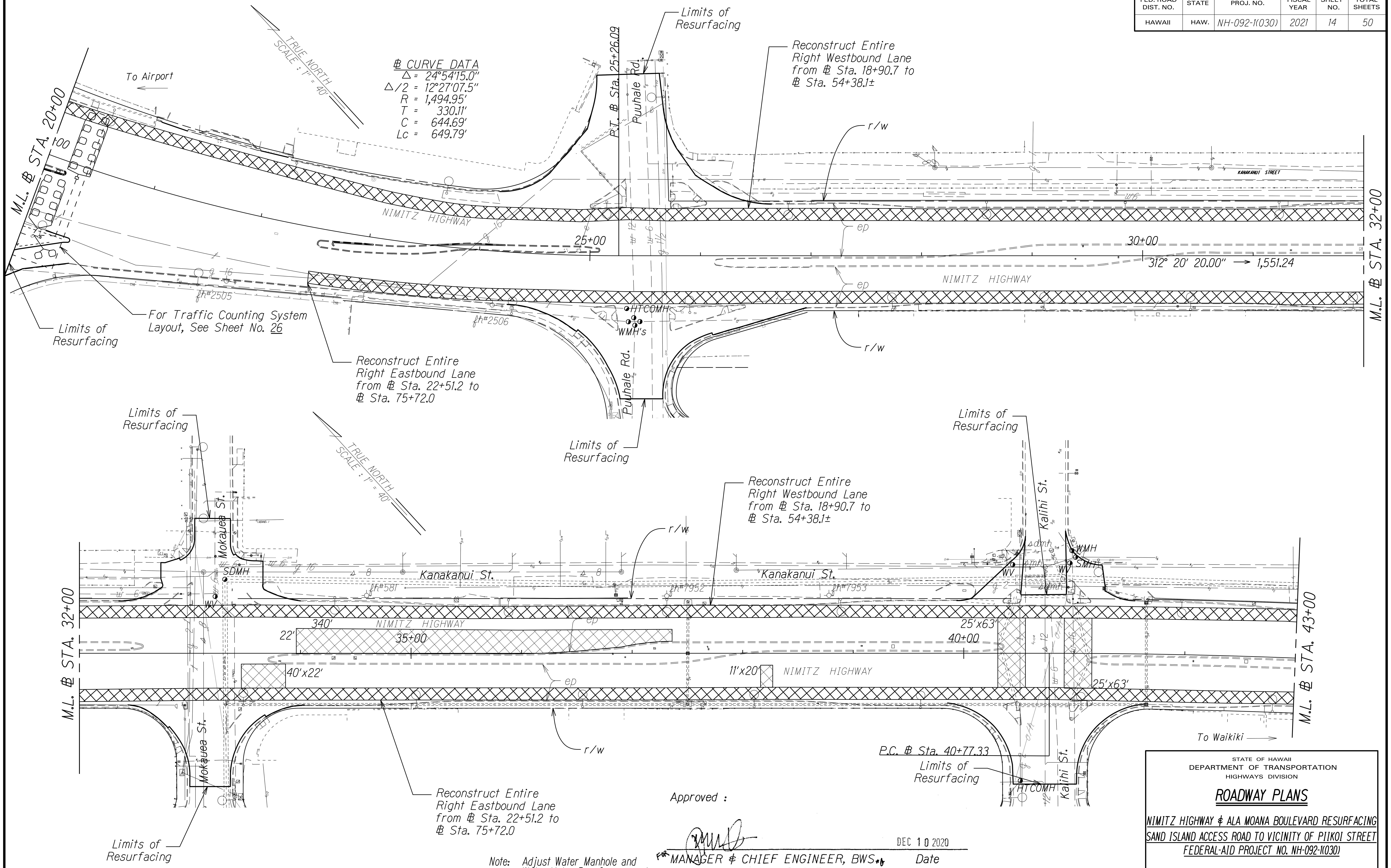
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 1 OF 13 SHEETS

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	14	50



TRUE NORTH
SCALE : 1" = 40'
To Airport
℄ CURVE DATA
Δ = 24°54'15.0"
Δ/2 = 12°27'07.5"
R = 1,494.95'
T = 330.11'
C = 644.69'
Lc = 649.79'
Limits of Resurfacing
Reconstruct Entire Right Westbound Lane from ℄ Sta. 18+90.7 to ℄ Sta. 54+38.1±
P.T. ℄ Sta. 25+26.09
Puuhale Rd.
r/w
NIMITZ HIGHWAY
25+00
30+00
312° 20' 20.00" → 1,551.24
ep
M.L. ℄ STA. 20+00
M.L. ℄ STA. 32+00
HTCOMH
WMH's
For Traffic Counting System Layout, See Sheet No. 26
Reconstruct Entire Right Eastbound Lane from ℄ Sta. 22+51.2 to ℄ Sta. 75+72.0
Mokauea St.
SDMH
WV
Kanakanui St.
340'
22'
35+00
40'x22'
11'x20'
25'x63'
40+00
Kalihi St.
WMH
SMH
M.L. ℄ STA. 43+00
To Waikiki
P.C. ℄ Sta. 40+77.33

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS — Date
(For work affecting BWS Facilities in City/State R/W and BWS easements only)

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

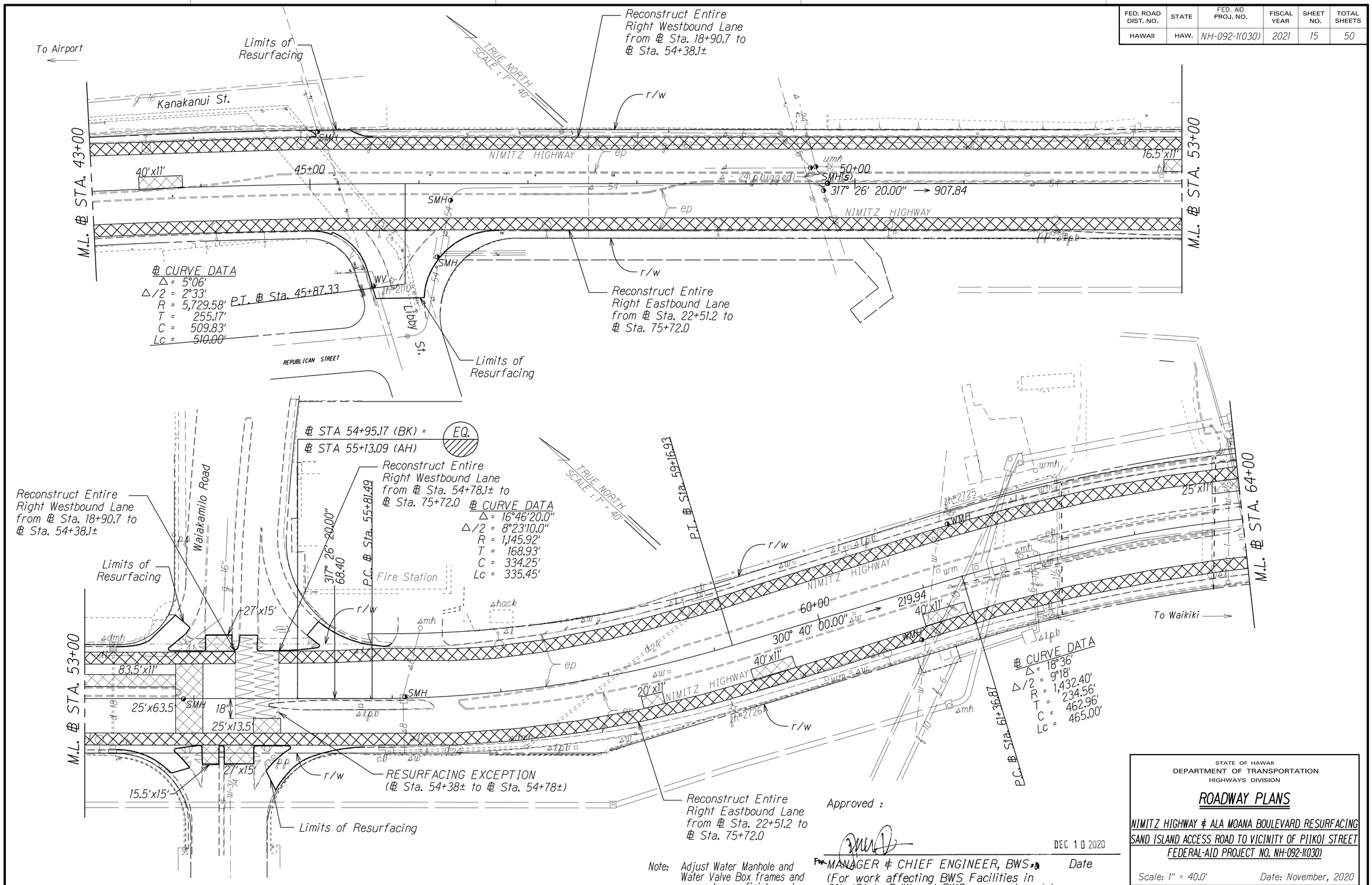
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 2 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	15	50



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

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

For MANAGER & CHIEF ENGINEER, BWS Date

(For work affecting BWS Facilities in City/State R/W and BWS easements only)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

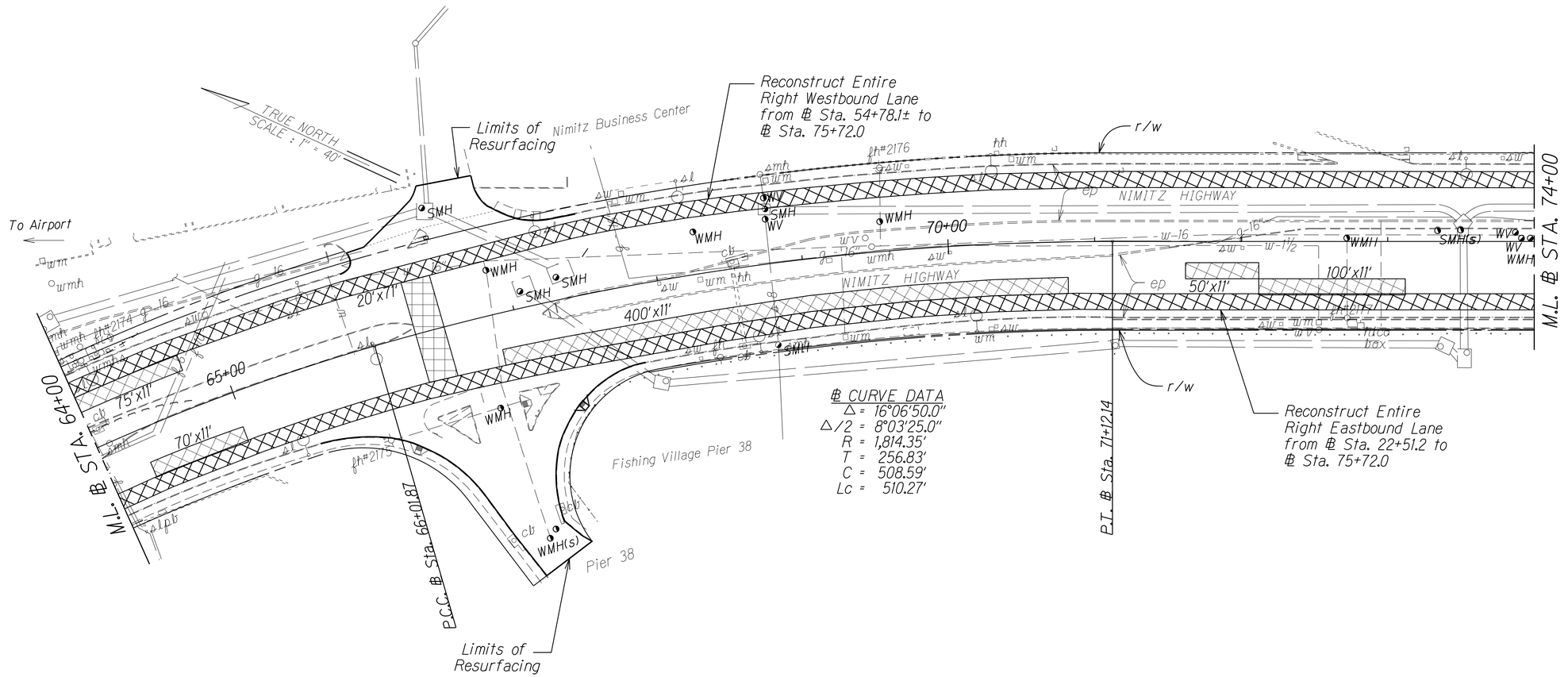
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 3 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	16	50



Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

For MANAGER & CHIEF ENGINEER, BWS Date
(For work affecting BWS Facilities in City/State R/W and BWS easements only)

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

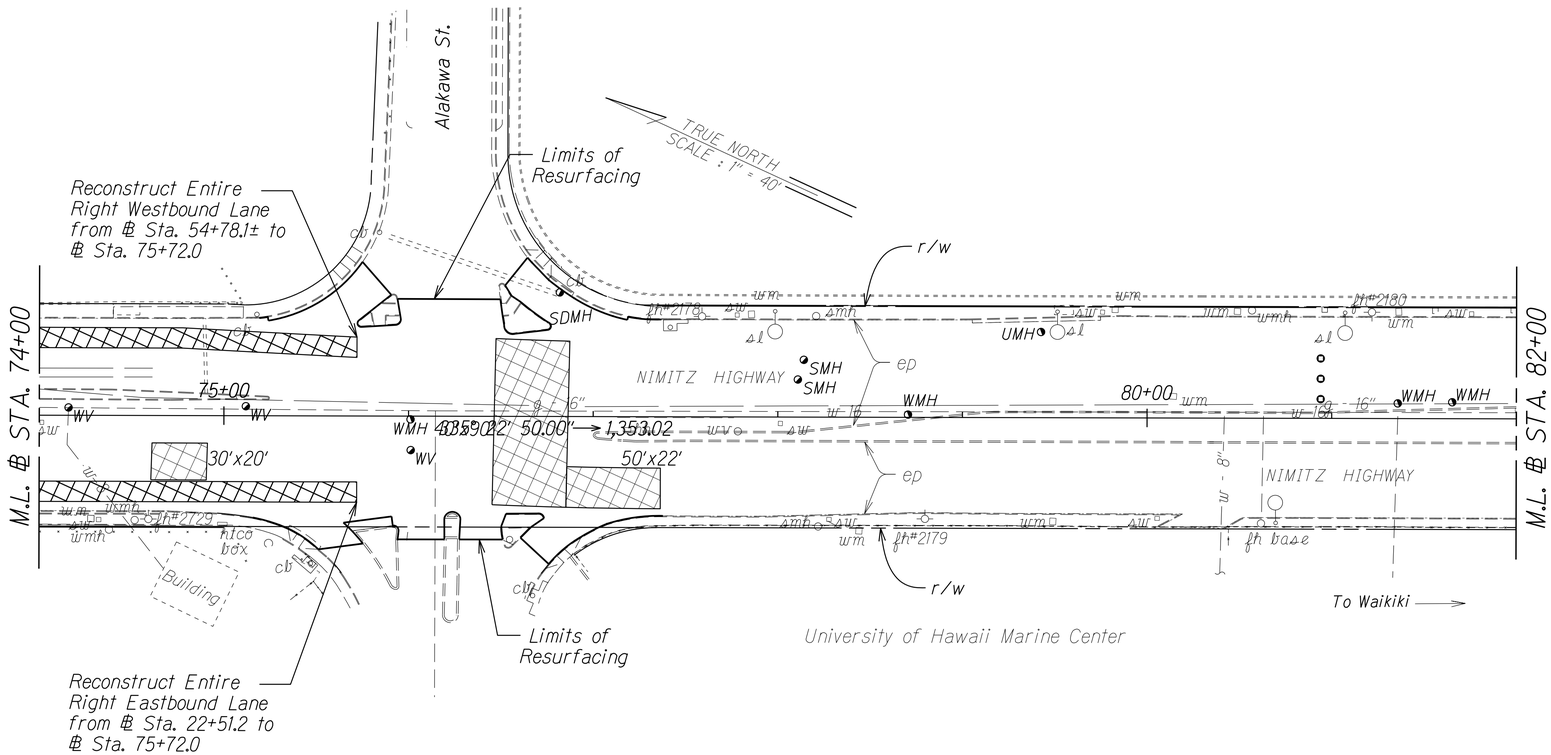
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 4 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	17	50



ORIGINAL PLAN
NOTE BOOK
N.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS Date

(For work affecting BWS Facilities in City/State R/W and BWS easements only)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

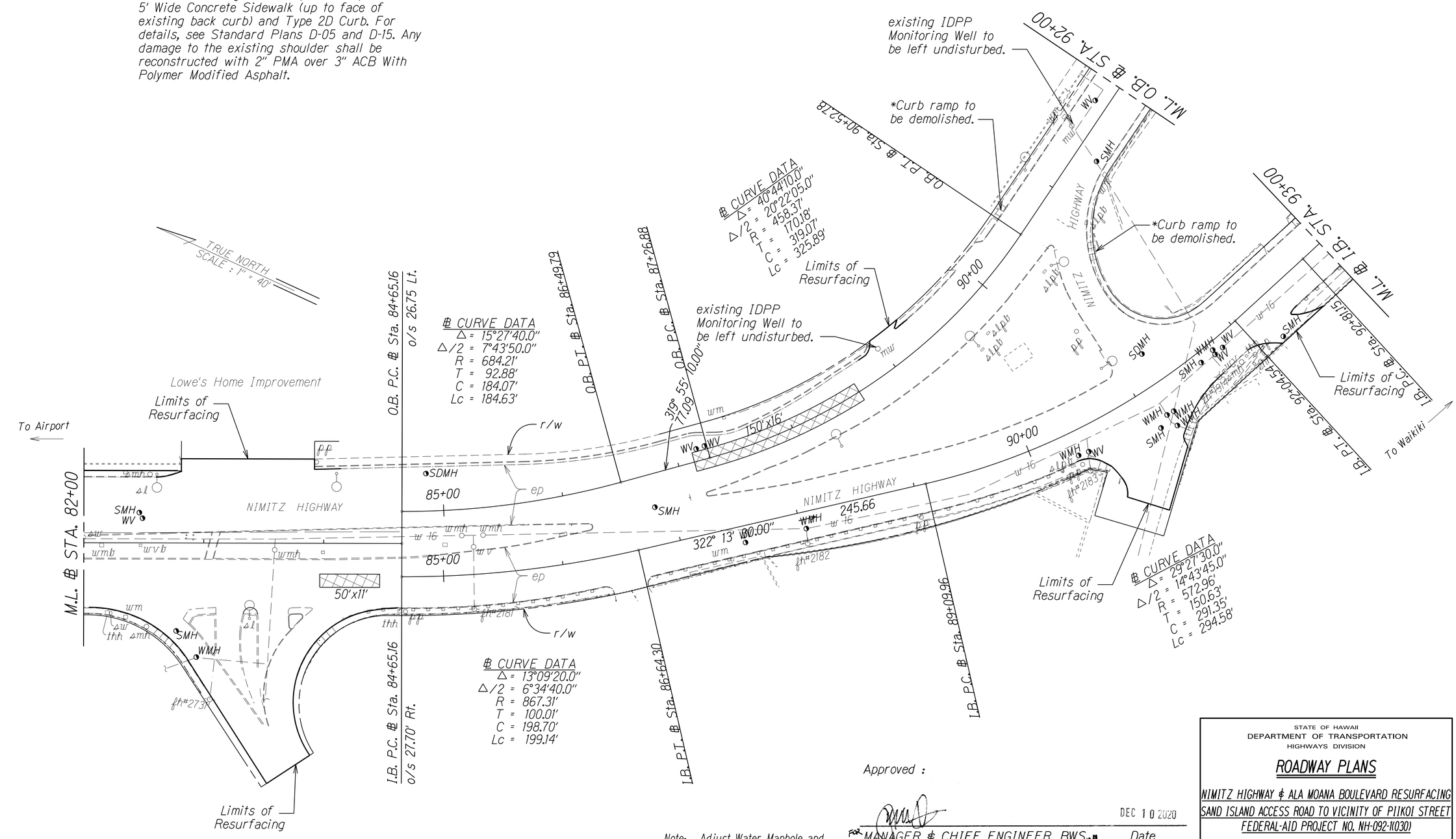
Scale: 1" = 40.0' Date: November, 2020

SHEET No. 5 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	18	50

O.B. ℄ Sta. 90+51± to O.B. ℄ Sta. 90+64±, o.s. 22.57'± Lt.
O.B. ℄ Sta. 90+67± to O.B. ℄ Sta. 90+82±, o.s. 60.28'± Rt.

*Demolish existing curb ramps and replace with 5' Wide Concrete Sidewalk (up to face of existing back curb) and Type 2D Curb. For details, see Standard Plans D-05 and D-15. Any damage to the existing shoulder shall be reconstructed with 2" PMA over 3" ACB With Polymer Modified Asphalt.



Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

for MANAGER & CHIEF ENGINEER, BWS (For work affecting BWS Facilities in City/State R/W and BWS easements only) Date

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

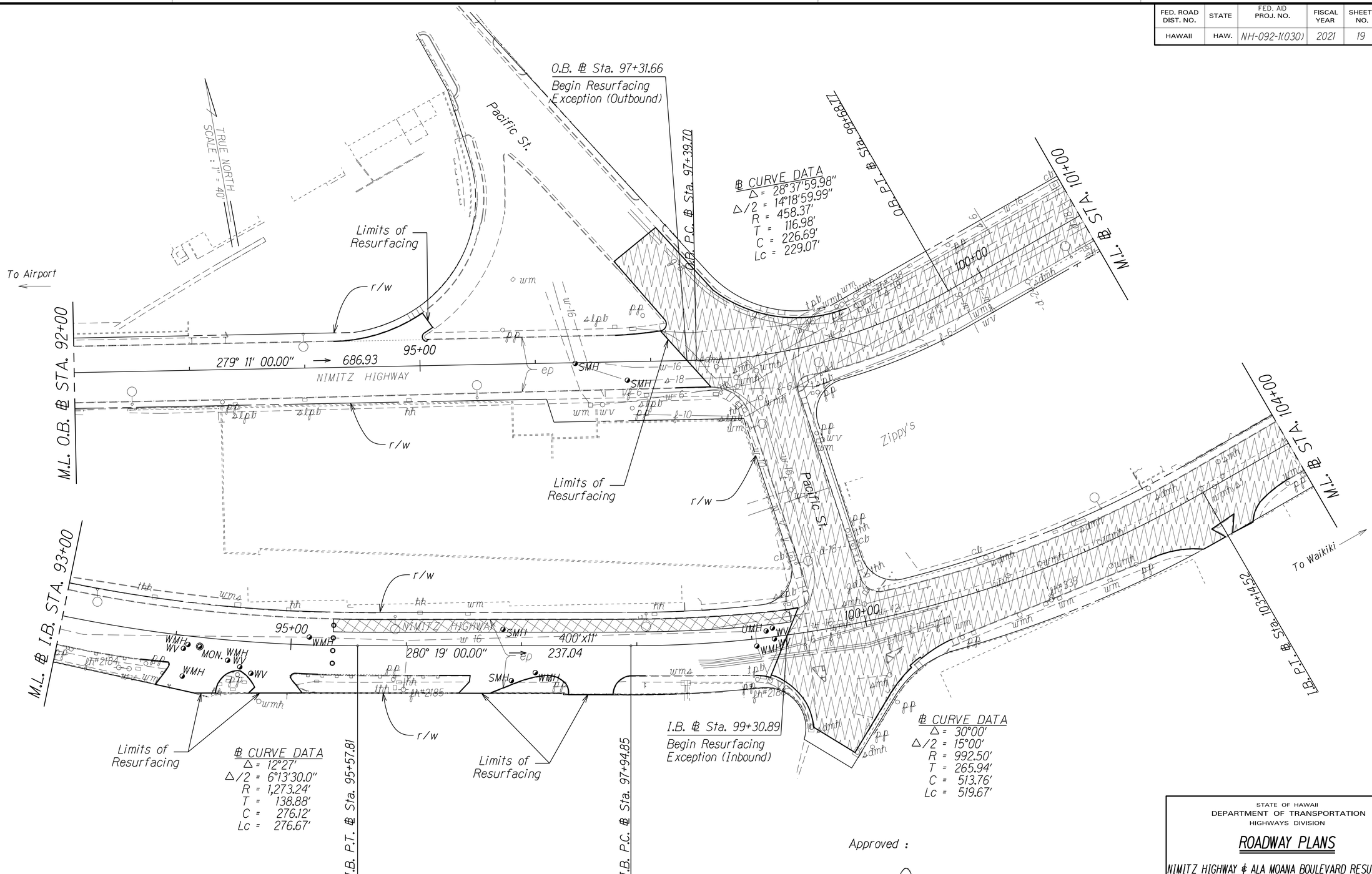
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	19	50



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

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

FOR MANAGER & CHIEF ENGINEER, BWS
(For work affecting BWS Facilities in City/State R/W and BWS easements only)

DEC 10 2020
Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

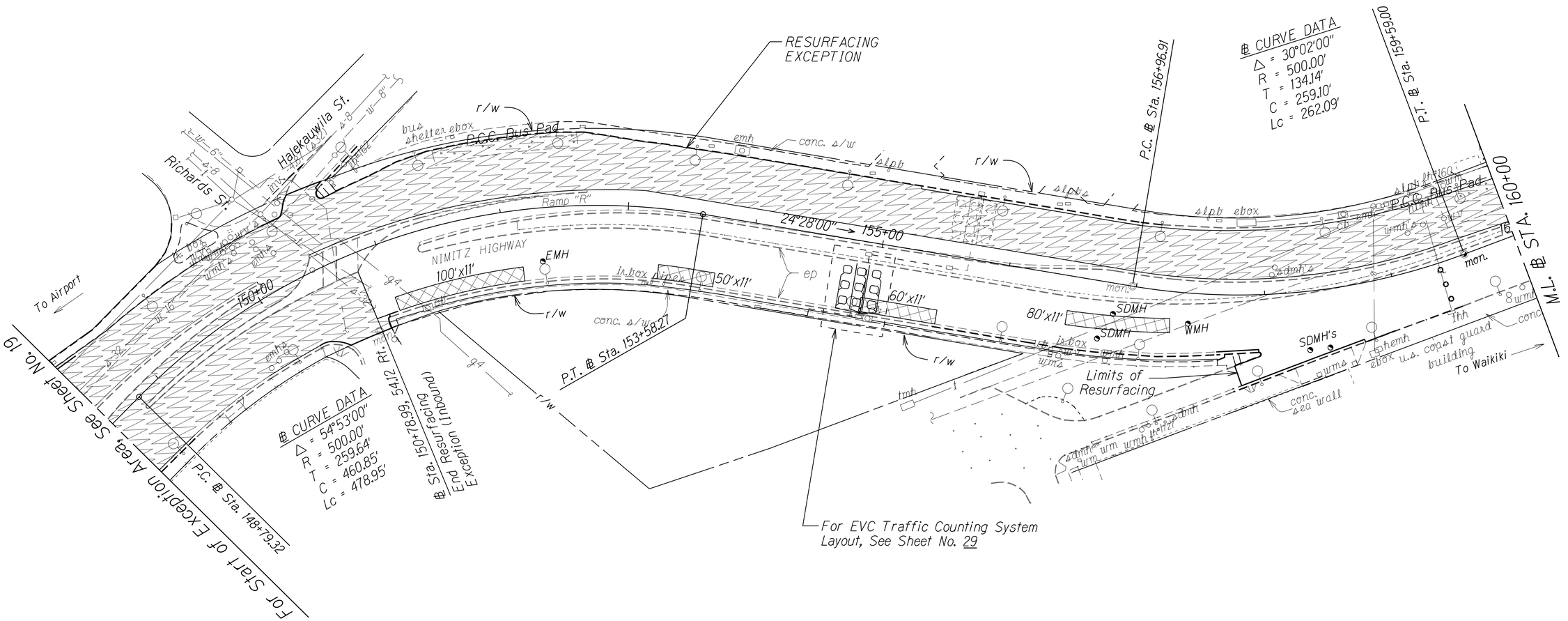
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0'
Date: November, 2020

SHEET No. 7 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	20	50



ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
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NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS (For work affecting BWS Facilities in City/State R/W and BWS easements only) Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

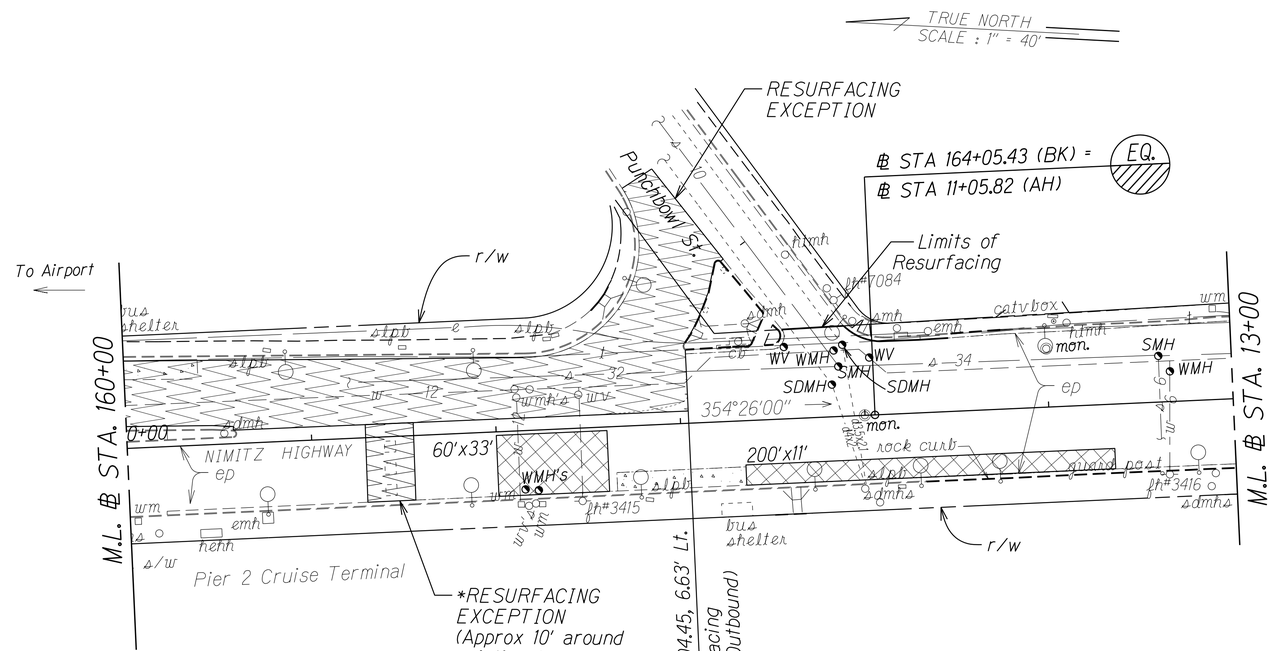
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

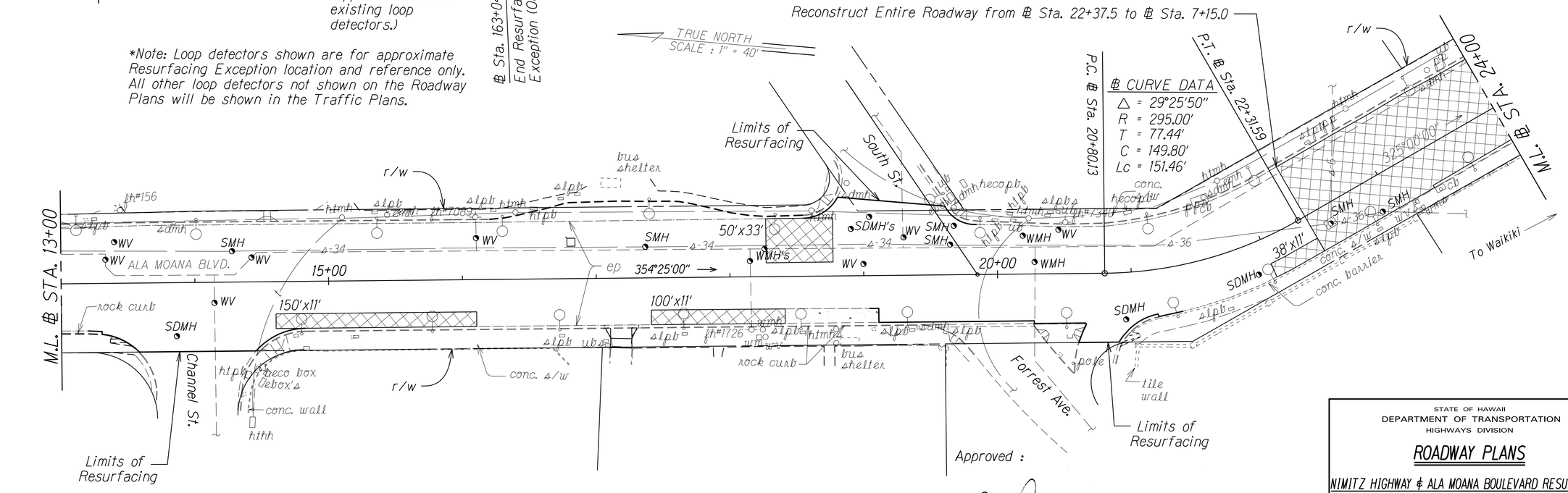
Scale: 1" = 40.0' Date: November, 2020

SHEET No. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	21	50



*Note: Loop detectors shown are for approximate Resurfacing Exception location and reference only. All other loop detectors not shown on the Roadway Plans will be shown in the Traffic Plans.



Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS (For work affecting BWS Facilities in City/State R/W and BWS easements only) Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

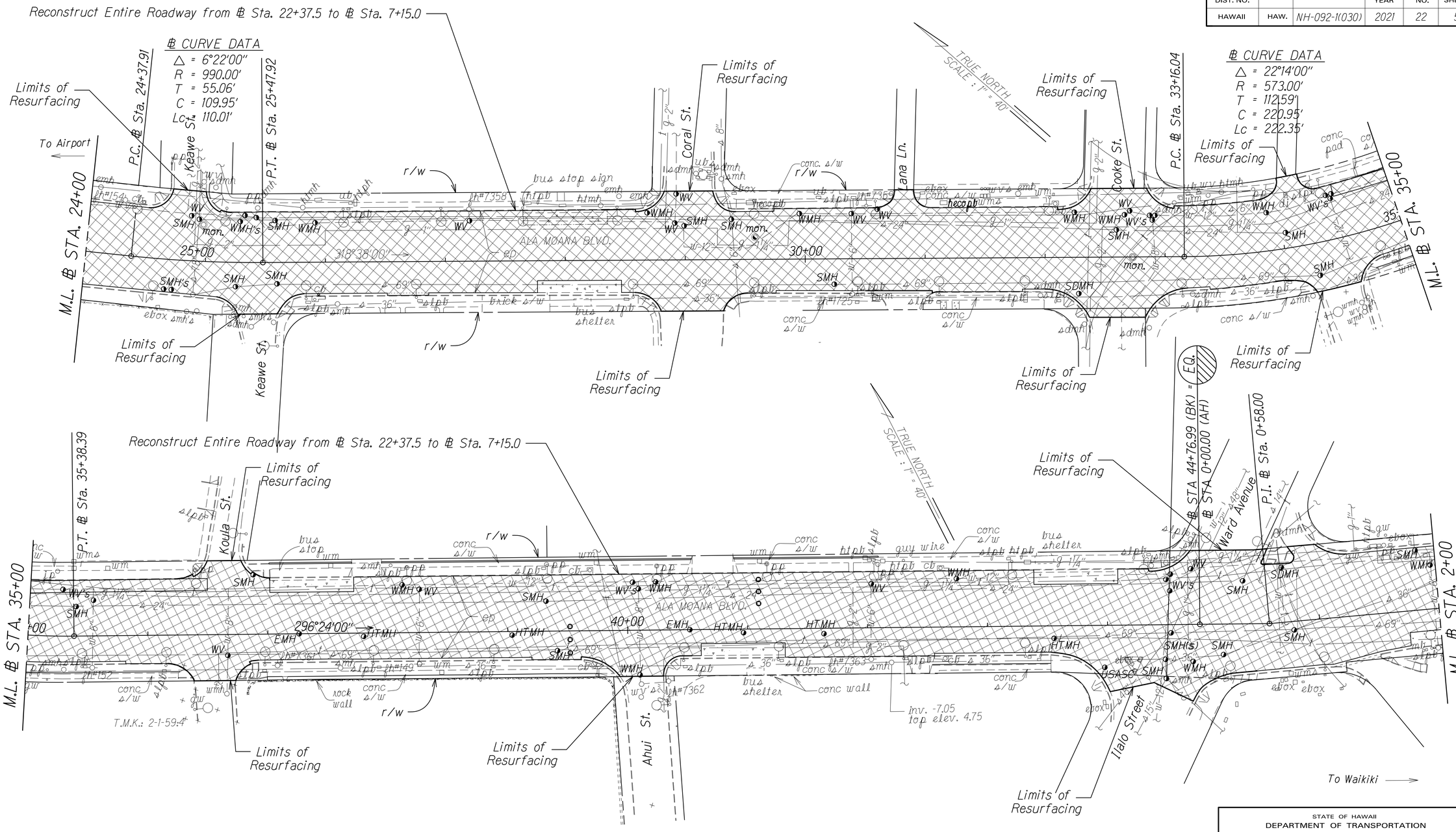
Scale: 1" = 40.0' Date: November, 2020

SHEET No. 9 OF 12 SHEETS

ORIGINAL PLAN
NOTE BOOK dated
No. 6ambdp02

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	22	50



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

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

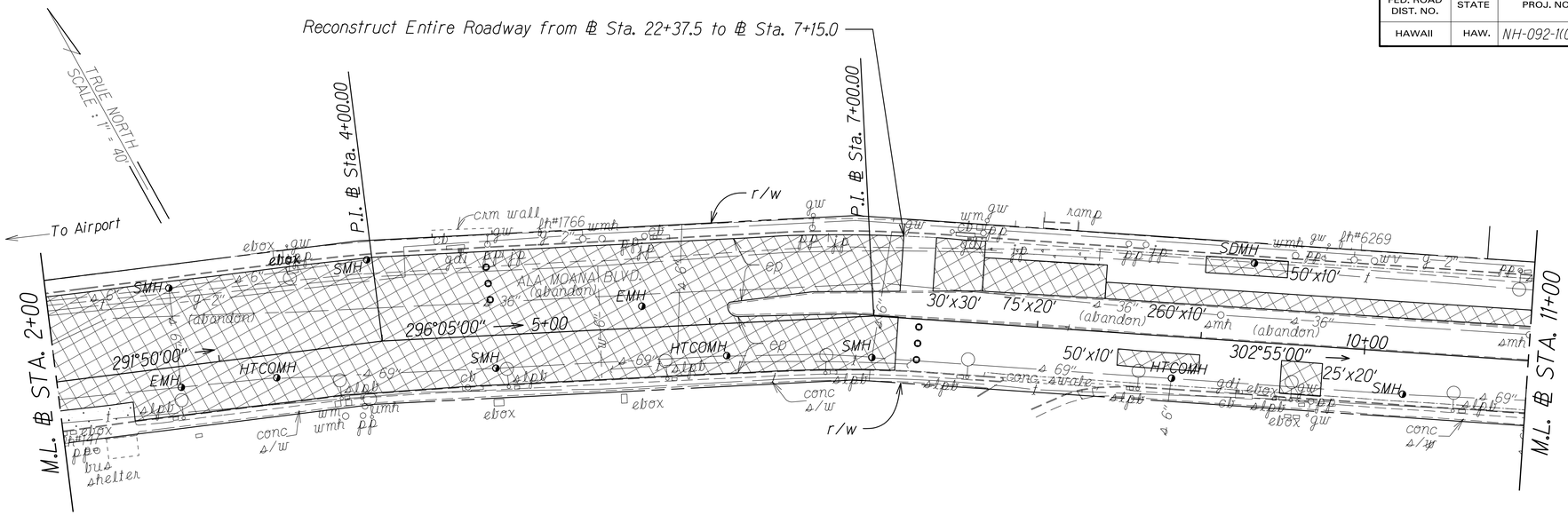
ROADWAY PLANS

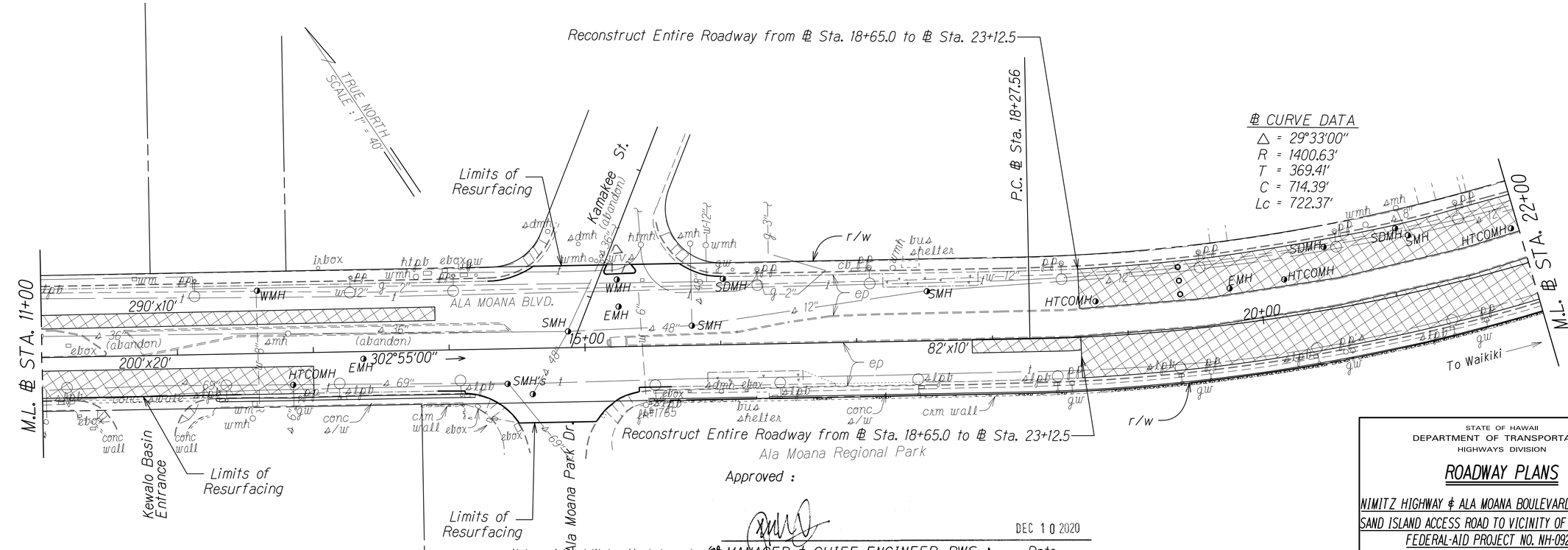
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	23	50





Approved :

DEC 10 2020

MANAGER & CHIEF ENGINEER, BWS Date

(For work affecting BWS Facilities in City/State R/W and BWS easements only)

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

o Accusense Mag In-Pavement Sensor replacement work to be done by others.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

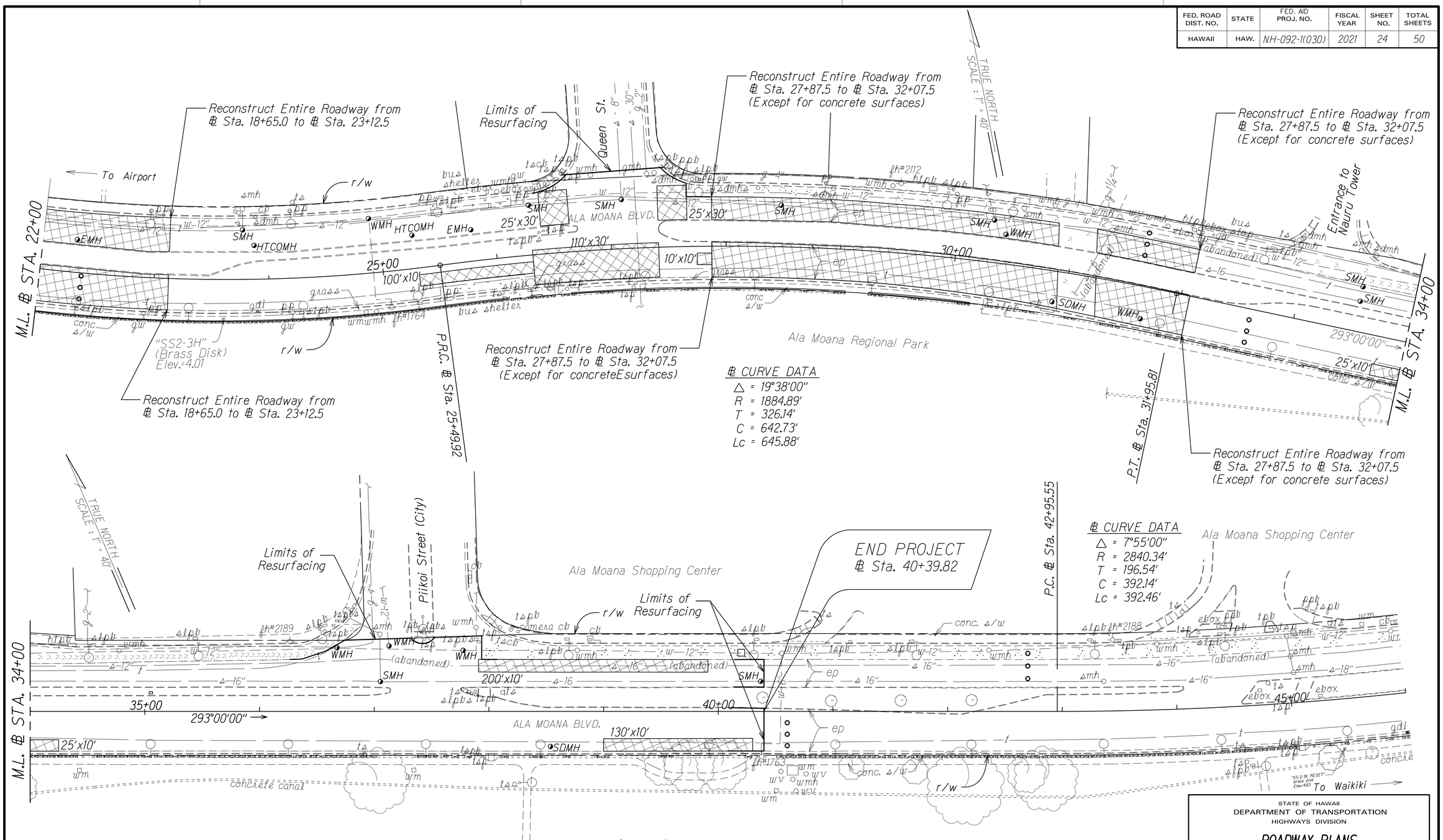
ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 11 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	24	50



ORIGINAL PLAN

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TRACED BY .....
NOTE BOOK DESIGNED BY .....
QUANTITIES BY .....
CHECKED BY .....
No. .....

○ Accusense Mag In-Pavement Sensor replacement work to be done by others.

Note: Adjust Water Manhole and Water Valve Box frames and covers to new finish grade.

Approved :

DEC 10 2020

FOR MANAGER & CHIEF ENGINEER, BWS Date

(For work affecting BWS Facilities in City/State R/W and BWS easements only)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: 1" = 40.0' Date: November, 2020

SHEET No. 12 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	25	50

TRAFFIC COUNTING SYSTEM NOTES

1. The location of new loop sensors shall be staked out in the field by the Contractor and approved by the Engineer prior to installation.
2. The Contractor shall inform the Engineer at least three days prior to saw cutting pavement and installing loop sensors.
3. Pull loop sensor lead cables into conduit where indicated. Cables shall be tested for acceptance before and after installation into conduit.
4. The Contractor shall restore all affected areas to their original condition. This item of work shall not be paid for separately, but shall be considered incidental to work of other paid items.
5. The Contractor shall verify the location of the existing utilities and underground structures whether or not shown on the plans.
6. The Contractor shall assume that underground utilities not shown on the plans may exist. The Contractor shall be responsible for contacting the different utility companies for information and toning.
7. The Contractor shall be held liable for any damages incurred to the existing utilities and underground structures as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.
8. Changes to the contract plans and specifications will not be permitted, unless approved by the Engineer in writing.
9. All cables are to be terminated within the TCS controller cabinet and shall have a minimum 12" additional slack.
10. Highway crossing conduit shall be provided with 36" cover per Standard Plan TE-36..
11. Saw cuts shall be made by wet cutting only.
12. Clean away collected dust, dirt, and refuse after saw cutting is done. The saw cuts shall be cleared by water applied by pressure washer. Residual water within the saw cuts shall be vacuumed by use of a wet/dry vacuum. The saw cuts shall then be dried by air compressor.
13. After saw cuts are dried, any remaining debris stuck within the cut shall be removed. The saw cuts must be completely clean and dry before inserting the sensors and filling the voids with Loop Sealant.
14. The collected slurry shall be disposed of appropriately (i.e., either placed in a Filter Fabric Lined Filtration Box or in a Filter Fabric Lined Dug Up Retention/Percolation Basin, and after Filtration/Percolation, the Filter Fabric and the retained sediments, disposed of appropriately).
15. Poles for solar panel assemblies and excavation warning signs shall be no more than 20 feet from EVC cabinets.

LOOP SENSOR LAYOUT NOTES

1. Loop sensors shall consist of four turns of 1C #14 cable (meeting IMSA Spec 51-3 or equivalent) embedded in a 3/8" wide by 4" deep saw cut, except as noted. Loop sensors shall be provided a minimum 2" cover.
2. After laying the loop sensor cable in four (4) turns within the 4" deep cut, press 1"-long pieces of backer rod in each foot of the loop and the loop lead saw cut, to anchor the cables in the bottom of the cut before applying the Loop Sealant. Backer rod shall be embedded at least 2" below the top of pavement. The backer rod shall be placed into the saw cut with a blunt object, such as a wooden paint stir stick. No sharp objects (such as a screw driver) shall be used to place the backer rod into the saw cuts.
3. Loop sensor and lead cable shall be one continuous wire. Lead cables from the same loop shall be twisted in pairs, five twists per foot, from the edge of paved shoulder to the pull box. Do not twist one loop pair with another loop pair.
4. Continuity of loop sensors and lead cables shall be tested and warrantied for one year from the date of acceptance by the Engineer.
5. Loop sensor lead cables shall be spliced only at the closest pull box to the loops. Splice points of cables shall be suspended near the top of the pull box with a j-hook.
6. Splices shall be made by use of a splice kit.
7. Stagger loop sensors on roadways with lanes that are less than 12 feet in width, as shown on contract plans or by direction of the Engineer.
8. The Contractor shall label the loop sensor leads clearly to identify traffic direction, lane number, and sequence of loop sensors in each lane per direction.
9. The left-most lane in the direction of traffic flow is designated as Lane 1, and the next lane to its right as Lane 2, and so on as indicated on plans.

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
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QUANTITIES BY
CHECKED BY
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

SHEET No. 1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	26	50

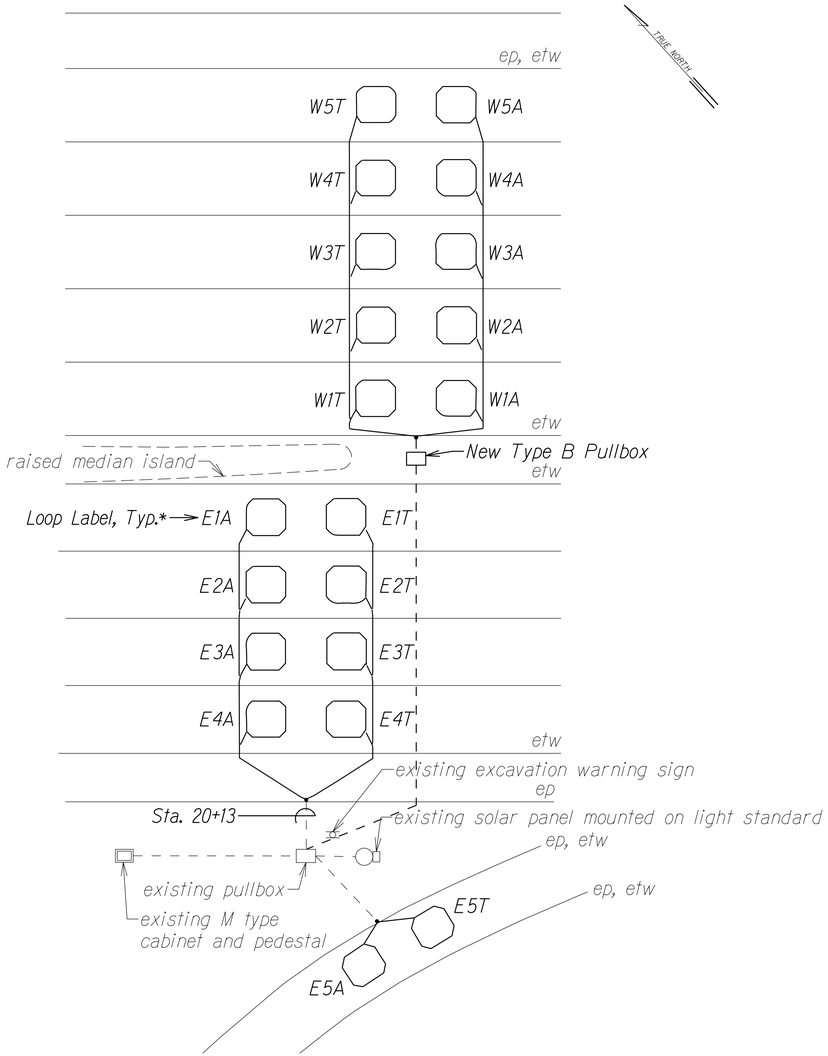
BOUNDARY LABEL LEGEND

etw = Edge of travelway
ep = Edge of pavement
es = Edge of shoulder
eos = Edge of sidewalk
r/w = Right of Way

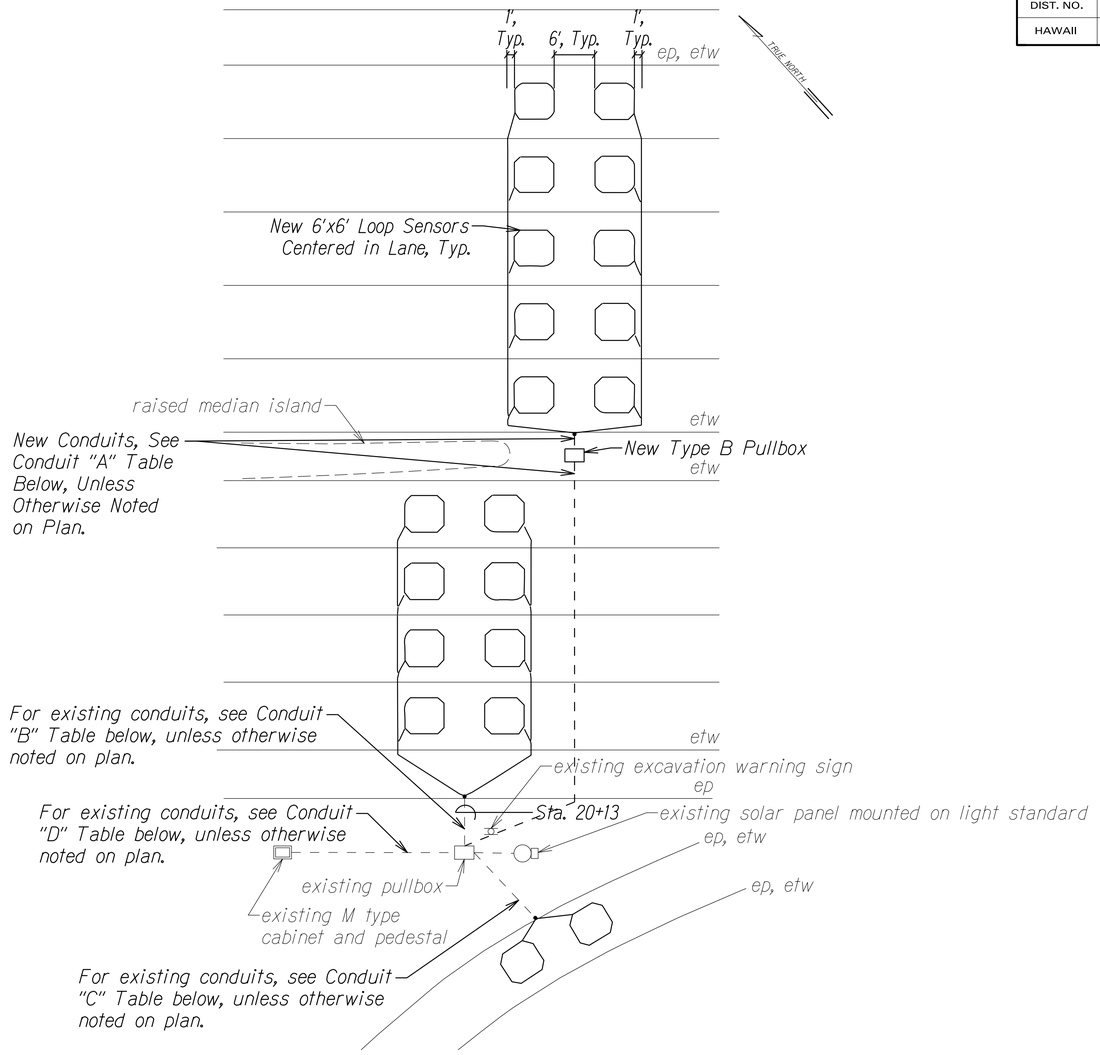
LOOP LABEL LEGEND

E = East
W = West
A = Approaching
T = Trailing

E 2 T
- T — Indicates approaching or trailing loop
- 2 — Indicates lane number
- E — Indicates directions*



LABELING OF LOOPS
Not to Scale



Conduit "A" Table:

Conduit* #-Size	2C #14 Loop Sensor Cable
2 - 2"	10

Conduit "B" Table:

Conduit* #-Size	2C #14 Loop Sensor Cable
Existing	18

Conduit "C" Table:

Conduit* #-Size	2C #14 Loop Sensor Cable
Existing	2

Conduit "D" Table:

Conduit* #-Size	2C #14 Loop Sensor Cable
Existing	8

*Conduits under pavement and at utility crossings shall be concrete encased.

TRAFFIC COUNTING SYSTEM LAYOUT DETAIL
VICINITY OF SAND ISLAND ACCESS ROAD, TCS 228
Not to Scale

*NOTES:

1. All dimensions and callouts are typical unless otherwise noted on plan.
2. Contractor shall coordinate service agreements and connections to electrical and communication service. Contractor shall also contact the appropriate State Dept. of Transportation Representative for service agreement. (Highway Planning, Contact, Goro Sulijoadikusumo, P.E., at 587-1839).

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM LAYOUT

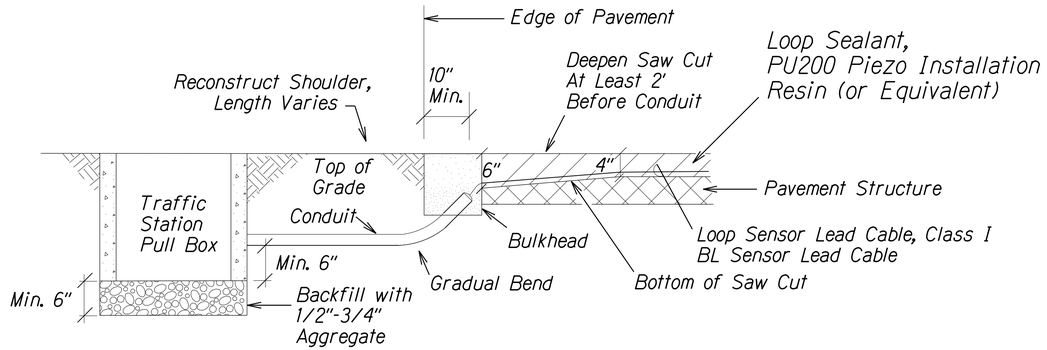
TCS 228, @ STA. 20+13

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 2 OF 6 SHEETS

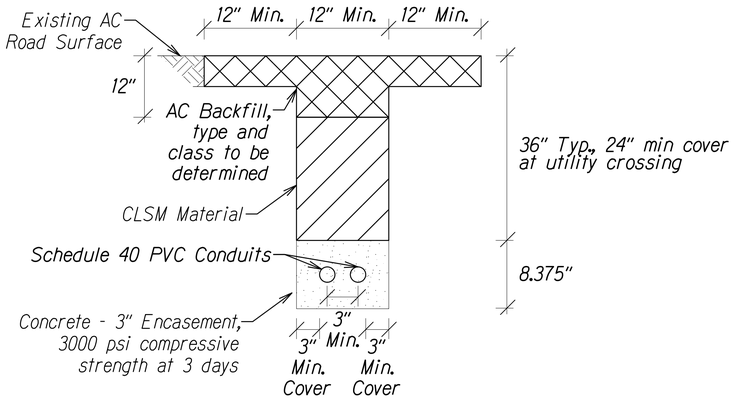
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	27	50



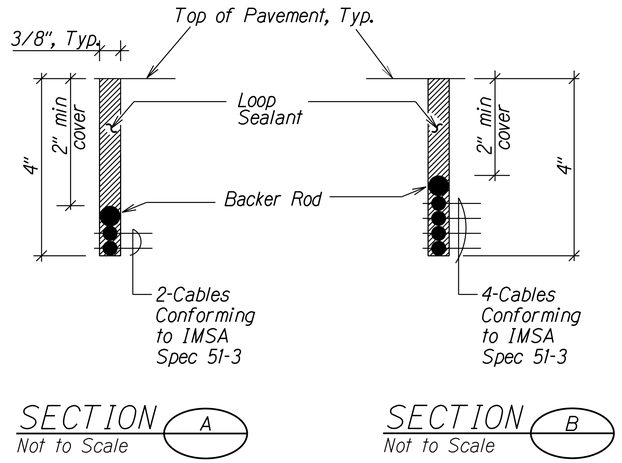
EDGE OF ROADWAY DETAILS
Not to Scale

NOTES ON CONSTRUCTION AT END OF SAW CUT:

1. Seal roadway end of conduit with duct seal compound after installation of conductor.
2. Install bulkhead across saw cut to keep sealant in saw cut as it is placed..
3. Place Loop Sealant, PU200 Piezo Installation Resin (or Equivalent) in saw cut.
4. Place sand to cover exposed lead cables and protect and separate them from backfill.
5. Backfill over sand with new A.C. cold mix.
6. Reconstruct shoulder, curb, and gutter as required.
7. Conduit should be installed at least 10 inches from the edge of pavement. If the depth of pavement is 4 inches or less at the edge, conduit should be installed at least 12 inches from the edge of pavement.

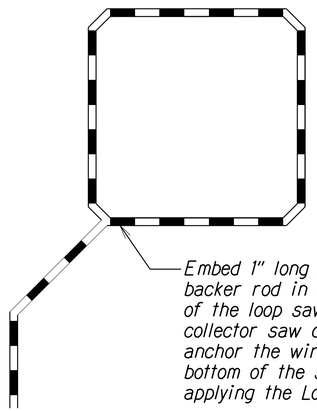


TYPICAL BACKFILL SECTION WITH CONCRETE ENCASED DUCTS
Not to Scale

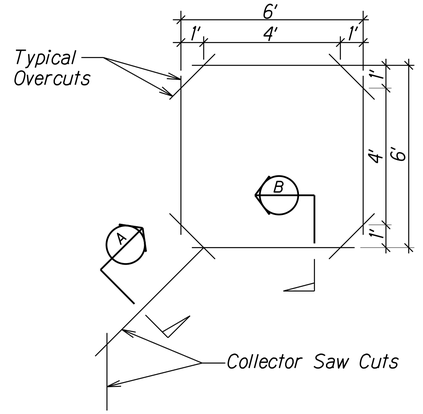


TYPICAL SECTIONS LOOP SENSORS
Not to Scale

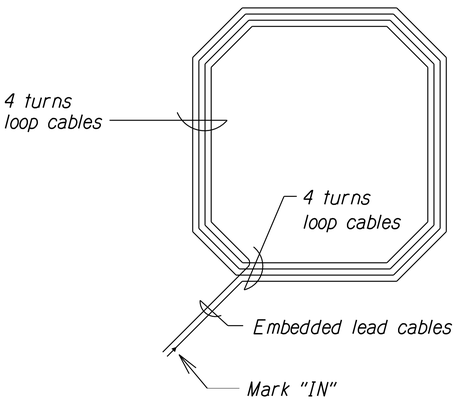
LOOP SENSOR SAW CUT NOTES:
Length of overcuts shall be kept to a minimum.
All overcuts shall bebackfilled with Loop Sealant.
Saw cuts containing 10 or more cables shall be 4 1/2" deep.



TYPICAL LOOP SENSOR BACKER ROD PLACEMENT DIAGRAM
Not to Scale



TYPICAL LOOP SENSOR SAW CUT DETAIL
Not to Scale



PLAN

TYPICAL LOOP SENSOR WIRING DIAGRAM
Not to Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
N.	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM SENSOR DETAILS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	28	50

ENHANCED VEHICLE CLASSIFICATION (EVC) SYSTEM NOTES

1. The location of new loop sensors and piezo sensors shall be staked out in the field by the Contractor and approved by the Engineer prior to installation.
2. The Contractor shall inform the Engineer at least three days prior to saw cutting pavement and installing loop sensors and piezo sensors.
3. Pull loop sensor cables and piezo sensor lead cables into conduit where indicated. Cables shall be tested for acceptance before and after installation into conduit.
4. Piezo lead cables shall be continuous with no splices.
5. The Contractor shall restore all affected areas to their original condition. This item of work shall not be paid for separately, but shall be considered incidental to work of other paid items.
6. The Contractor shall verify the location of the existing utilities and underground structures whether or not shown on the plans.
7. The Contractor shall assume that underground utilities not shown on the plans may exist. The Contractor shall be responsible for contacting the different utility companies for information and toning.
8. The Contractor shall be held liable for any damages incurred to the existing utilities and underground structures as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.
9. Changes to the contract plans and specifications will not be permitted, unless approved by the Engineer in writing.
10. All cables are to be terminated within the EVC cabinet and shall have a minimum 12" additional slack.
11. Highway crossing conduit shall be provided with 36" cover per Standard Plan TE-36..
12. Saw cuts shall be made by wet cutting only.
13. Clean away collected dust, dirt, and refuse after saw cutting is done. The saw cuts shall be cleared by water applied by pressure washer. Residual water within the saw cuts shall be vacuumed by use of a wet/dry vacuum. The saw cuts shall then be dried by air compressor.
14. After saw cuts are dried, any remaining debris stuck within the cut shall be removed. The saw cuts must be completely clean and dry before inserting the sensors and filling the voids with Loop Sealant (for loop sensors) or PU200 Piezo Installation Resin or equivalent (for piezo sensors).
15. The collected slurry shall be disposed of appropriately (i.e., either placed in a Filter Fabric Lined Filtration Box or in a Filter Fabric Lined Dug Up Retention/Percolation Basin, and after Filtration/Percolation, the Filter Fabric and the retained sediments, disposed of appropriately).
16. Poles for solar panel assemblies and excavation warning signs shall be no more than 20 feet from EVC cabinets.

LOOP SENSOR LAYOUT NOTES

1. Loop sensors shall consist of four turns of 1C #14 cable (meeting IMSA Spec 51-3 or equivalent) embedded in a 3/8" wide by 4" deep saw cut, except as noted. Loop sensors shall be provided a minimum 2" cover.
2. After laying the loop sensor cable in four (4) turns within the 4" deep cut, press 1"-long pieces of backer rod in each foot of the loop and the loop lead saw cut, to anchor the wire in the bottom of the cut before applying the Loop Sealant. Backer rod shall be embedded at least 2" below the top of pavement. The backer rod shall be placed into the saw cut with a blunt object, such as a wooden paint stir stick. No sharp objects (such as a screw driver) shall be used to place the backer rod into the saw cuts.
3. Loop sensor and lead cable shall be one continuous wire. Lead wires from the same loop shall be twisted in pairs, five twists per foot, from the edge of paved shoulder to the pull box. Do not twist one loop pair with another loop pair.
4. Continuity of loop sensors and lead-in wires shall be tested and warrantied for one year from the date of acceptance by the Engineer.
5. Loop sensor lead cables shall be spliced only at the closest pull box to the loop. Splice points of cables shall be suspended near the top of the pull box with a j-hook.
6. Splices shall be made by use of a splice kit.
7. Stagger loop sensors on roadways with lanes that are less than 12 feet in width, as shown on contract plans or by direction of the Engineer.
8. The Contractor shall label the loop and piezo sensor leads clearly to identify traffic direction, lane number, and sequence of loop and piezo sensors in each lane per direction.
9. The left-most lane in the direction of traffic flow is designated as Lane 1, and the next lane to its right as Lane 2, and so on as indicated on plans.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Date: November, 2020

SHEET No. 4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	29	50

BOUNDARY LABEL LEGEND

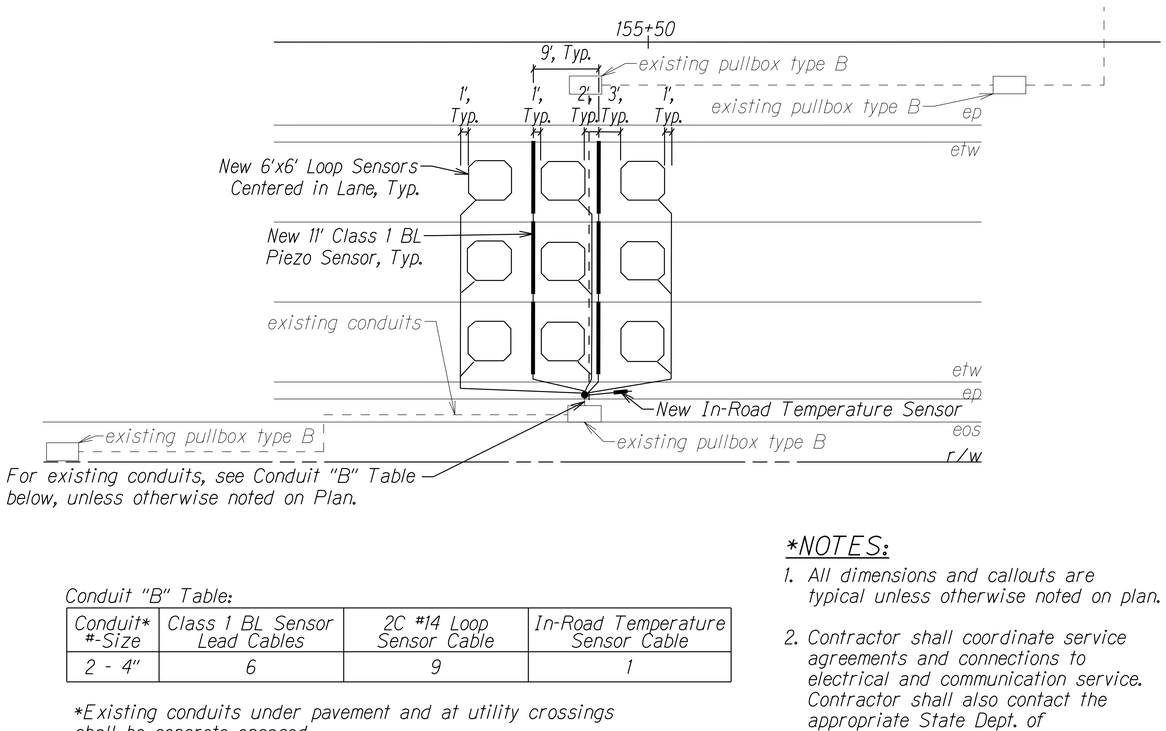
etw = Edge of travelway
ep = Edge of pavement
es = Edge of shoulder
eos = Edge of sidewalk
r/w = Right of Way

LOOP LABEL LEGEND

E = East
W = West
A = Approaching
C = Center
T = Trailing

E 2 T
- T — Indicates approaching, center, or trailing loop
- 2 — Indicates lane number
- E — Indicates directions*

LABELING OF LOOPS AND PIEZOS
Not to Scale



Conduit "B" Table:

Conduit* #-Size	Class 1 BL Sensor Lead Cables	2C #14 Loop Sensor Cable	In-Road Temperature Sensor Cable
2 - 4"	6	9	1

*Existing conduits under pavement and at utility crossings shall be concrete encased.

*NOTES:

1. All dimensions and callouts are typical unless otherwise noted on plan.
2. Contractor shall coordinate service agreements and connections to electrical and communication service. Contractor shall also contact the appropriate State Dept. of Transportation Representative for service agreement. (Highway Planning, Contact, Goro Sulijoadikusumo, P.E., at 587-1839).

EVC TRAFFIC COUNTING SYSTEM LAYOUT DETAIL
BETWEEN HALEKAUWILA STREET & ALOHA TOWER DRIVE, TCS 438
Not to Scale

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

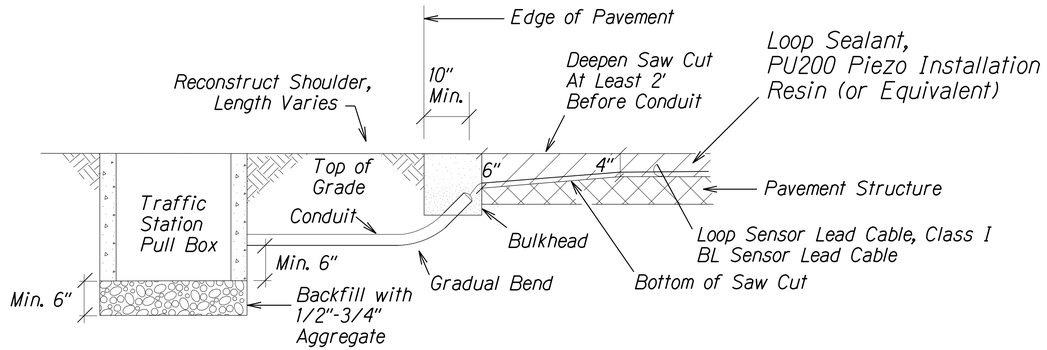
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM LAYOUT
TCS 438, ℄ STA. 155+50
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 5 OF 6 SHEETS

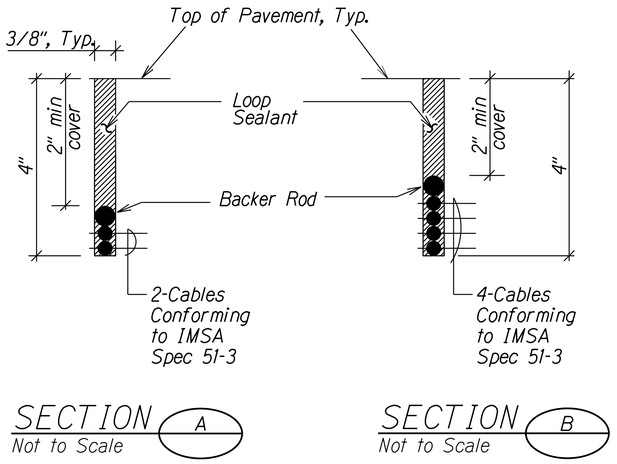
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	30	50



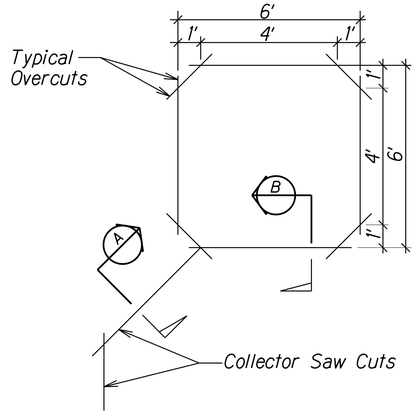
EDGE OF ROADWAY DETAILS
Not to Scale

NOTES ON CONSTRUCTION AT END OF SAW CUT:

1. Seal roadway end of conduit with duct seal compound after installation of conductor.
2. Install bulkhead across saw cut to keep sealant in saw cut as it is placed..
3. Place Loop Sealant, PU200 Piezo Installation Resin (or Equivalent) in saw cut.
4. Place sand to cover exposed lead cables and protect and separate them from backfill.
5. Backfill over sand with new A.C. cold mix.
6. Reconstruct shoulder, curb, and gutter as required.
7. Conduit should be installed at least 10 inches from the edge of pavement. If the depth of pavement is 4 inches or less at the edge, conduit should be installed at least 12 inches from the edge of pavement.

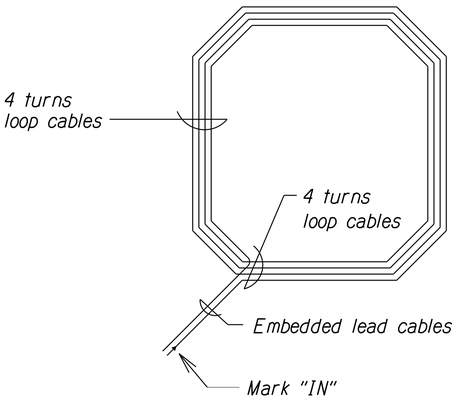


TYPICAL SECTIONS LOOP SENSORS
Not to Scale

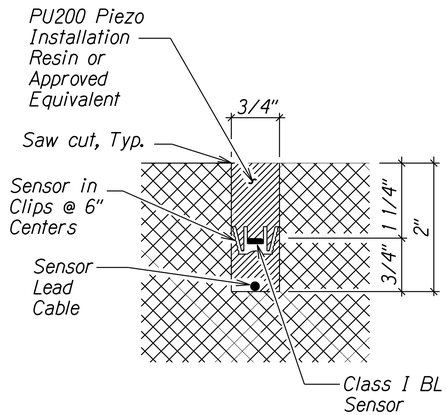


TYPICAL LOOP SENSOR SAW CUT DETAIL
Not to Scale

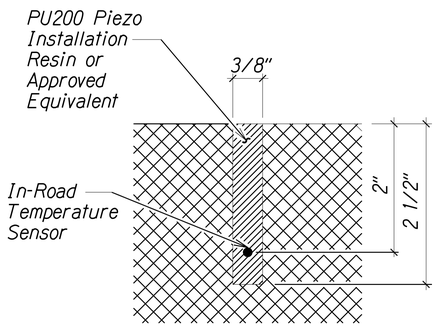
LOOP SENSOR SAW CUT NOTES:
Length of overcuts shall be kept to a minimum. All overcuts shall be backfilled with Loop Sealant.



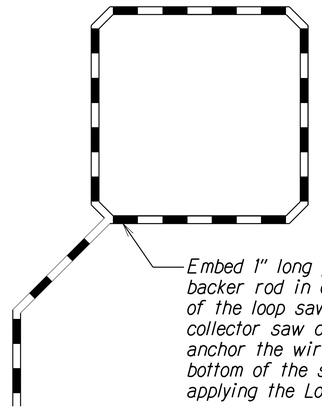
PLAN
TYPICAL LOOP SENSOR WIRING DIAGRAM
Not to Scale



PIEZO SENSOR SAW CUT SECTION DETAIL
Not to Scale



TEMPERATURE SENSOR SAW CUT SECTION DETAIL
Not to Scale



TYPICAL LOOP SENSOR BACKER ROD PLACEMENT DIAGRAM
Not to Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM SENSOR DETAILS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: November, 2020

SHEET No. 6 OF 6 SHEETS

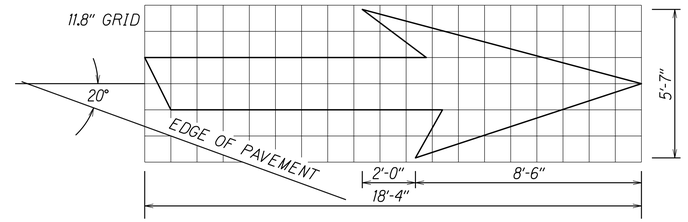
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	31	50

LEGEND

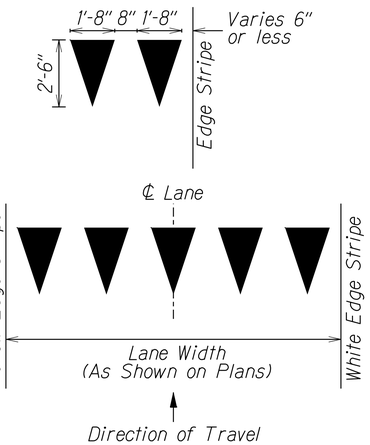
- 10' White Profiled Thermoplastic Stripe
  Type C Raised Pavement Markers @ 40'-0" o.c.
- 10' Yellow Profiled Thermoplastic Stripe
  Type D Raised Pavement Markers @ 40'-0" o.c.
- 8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow with Type D Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion))
- 4" Double Solid Yellow Stripes with Type H Raised Pavement Markers @ 20'-0" o.c. (Tape, Type II or Thermoplastic Exrusion))
- 6" Yellow Edge Stripe with Type H Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion))
- 4" Double Solid White Stripes with Type C Raised Pavement Markers @ 20'-0" o.c. (Tape, Type I or Thermoplastic Extrusion)
- Lane Change Restriction Marking
  10' White Profiled Thermoplastic Stripe
  Type C Raised Pavement Markers @ 20'-0" o.c.
  4" White Stripe (Tape, Type I or Thermoplastic Extrusion)
- 6" or 8" White Edge Stripe with Type C Raised Pavement Markers @ 40'-0" o.c. (Tape, Type II or Thermoplastic Extrusion)
- 4" White Guide Line (Tape, Type III or Thermoplastic Extrusion except for bus bays)
- Transverse Median Marking (Tape, Type II or Thermoplastic Extrusion)
- Transverse Shoulder Marking (Tape, Type II or Thermoplastic Extrusion)
- Channelizing Island or Deceleration Lane Gore (Tape, Type II or Thermoplastic Extrusion)
- Crosswalk and Stop Line. All Stop Lines shall be 10'-0" from Crosswalk unless otherwise noted. The circled number indicates the number of lanes for payment (Tape, Type III or Thermoplastic Extrusion)
- Pavement Arrow (Tape, Type III or Thermoplastic Extrusion)
- STOP
  Pavement Word (Tape, Type III or Thermoplastic Extrusion)
- 10' Yellow Profiled Thermoplastic Stripe
  Type D Raised Pavement Markers @ 40'-0" o.c.
  Type H Raised Pavement Markers (Reflective Surface facing no-passing direction)
  4" Single Solid Yellow Stripe (Tape, Type I or Thermoplastic Extrusion)
- 10' 10' 10' 10'
  Extension of Edge Line, 4" Wide x 2'-0" Long White Stripe @ 10'-0" o.c. w/Type C Markers @ 40'-0" o.c. (Tape, Type III or Thermoplastic Extrusion)

NOTES

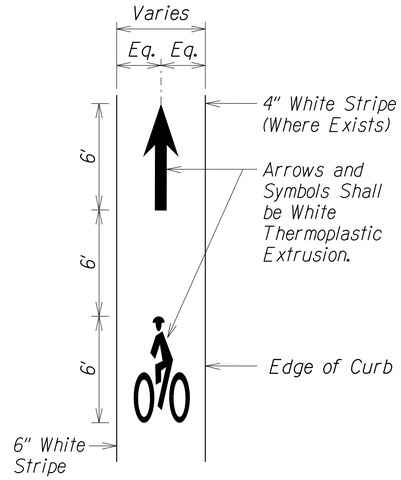
1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. 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.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All pavement striping shall be as noted on the legend or plans.
8. 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.
9. All pedestrian warning signs with supplemental sign shall be on a fluorescent yellow-green retroreflective background with a black legend and border.



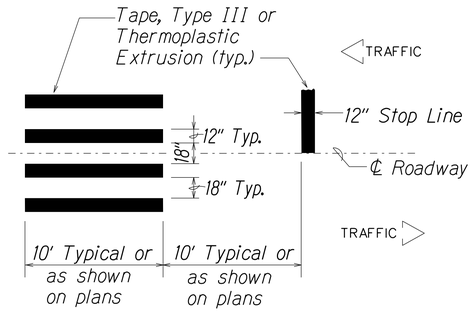
TYPE VI ARROW
RIGHT LANE DROP ARROW
(FOR LEFT LANE, USE MIRROR IMAGE)



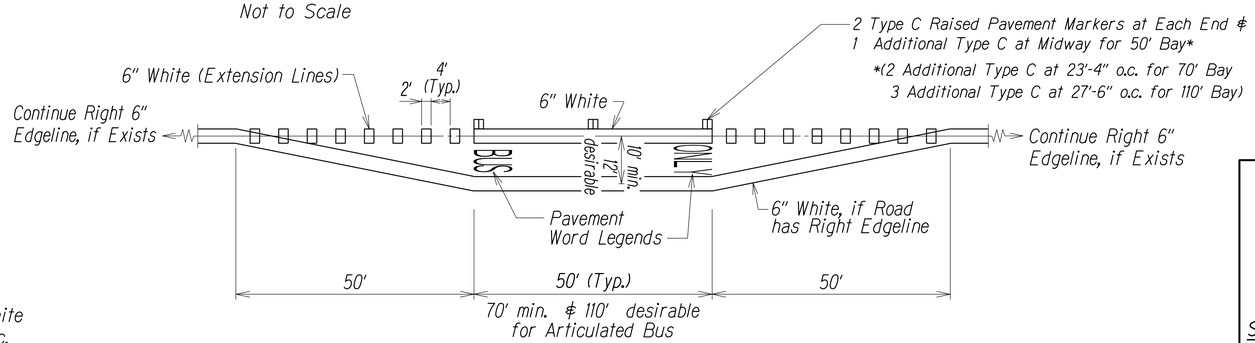
YIELD LINE
Not to Scale



BIKE LANE PAVEMENT MARKING DETAIL
Not to Scale



CROSSWALK STRIPING DETAIL
Not to Scale



BUS BAY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING LEGEND, DETAILS & NOTES

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. T1 OF 20 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK
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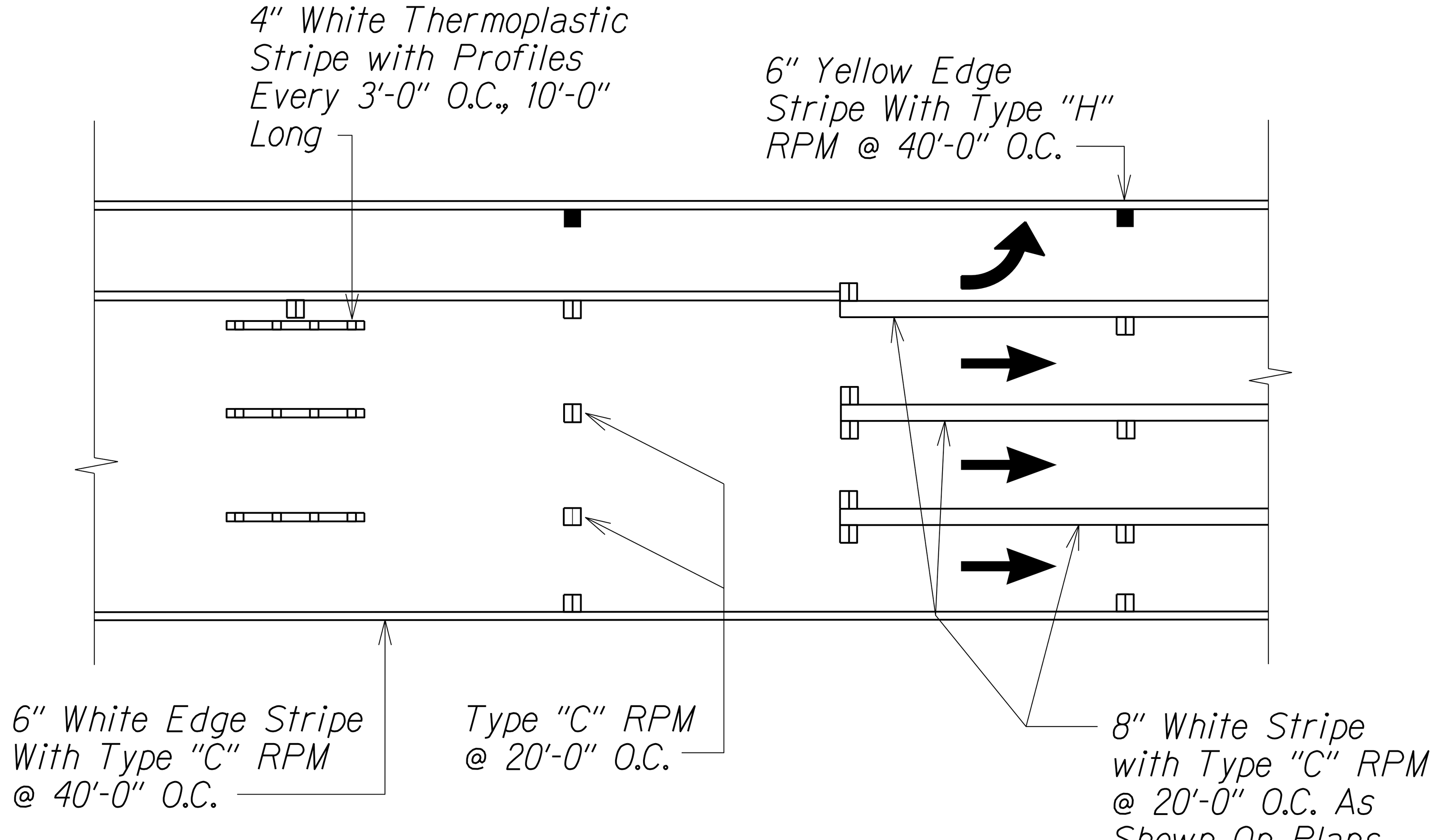
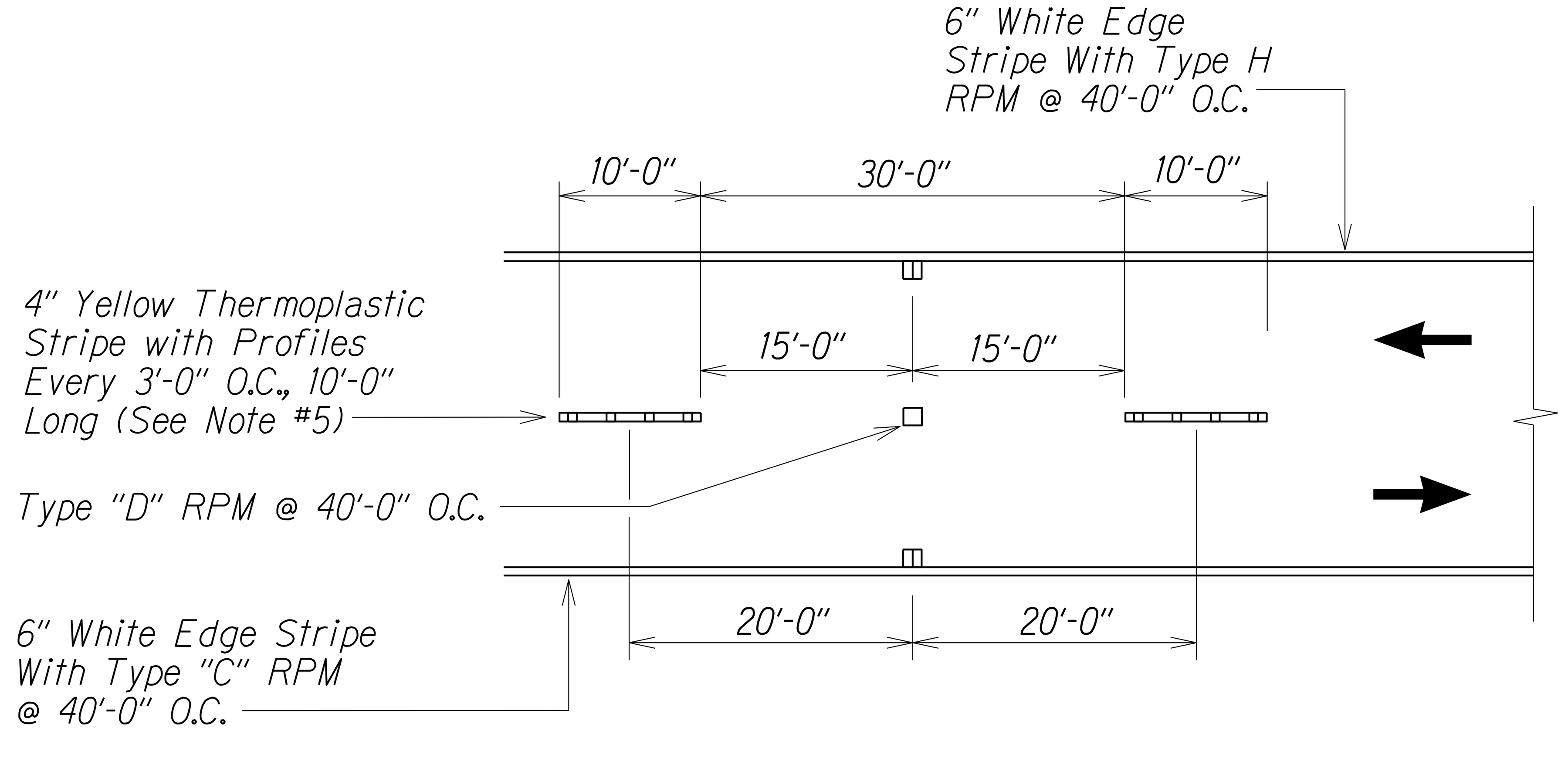
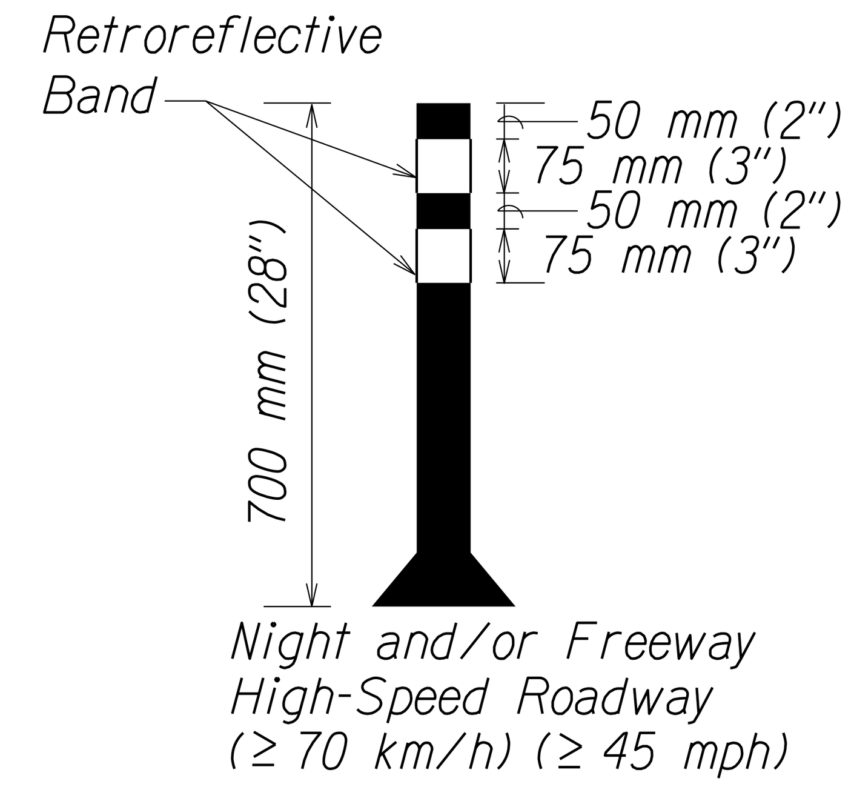
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	32	50



LANE LINE

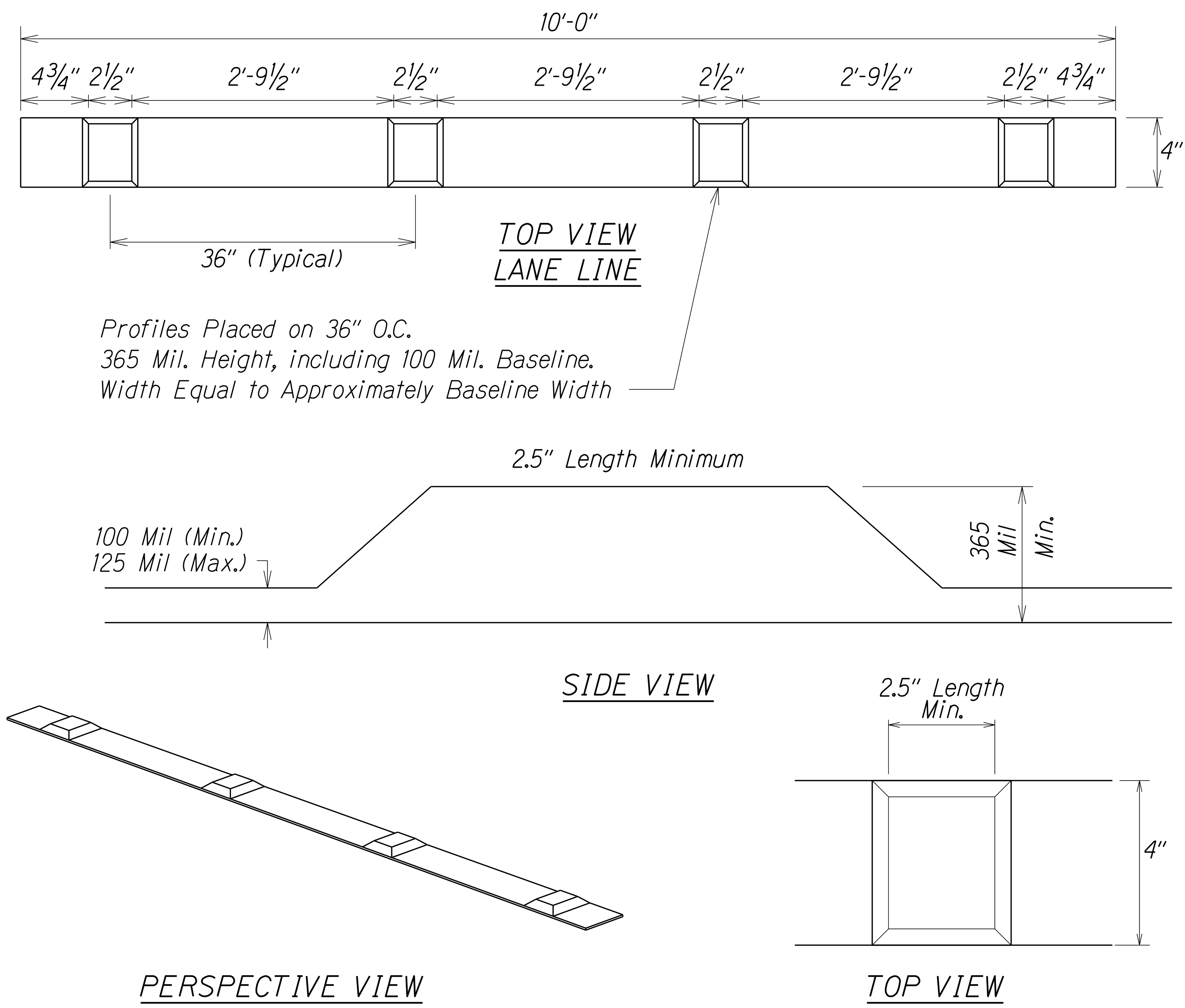


PASSING ZONE



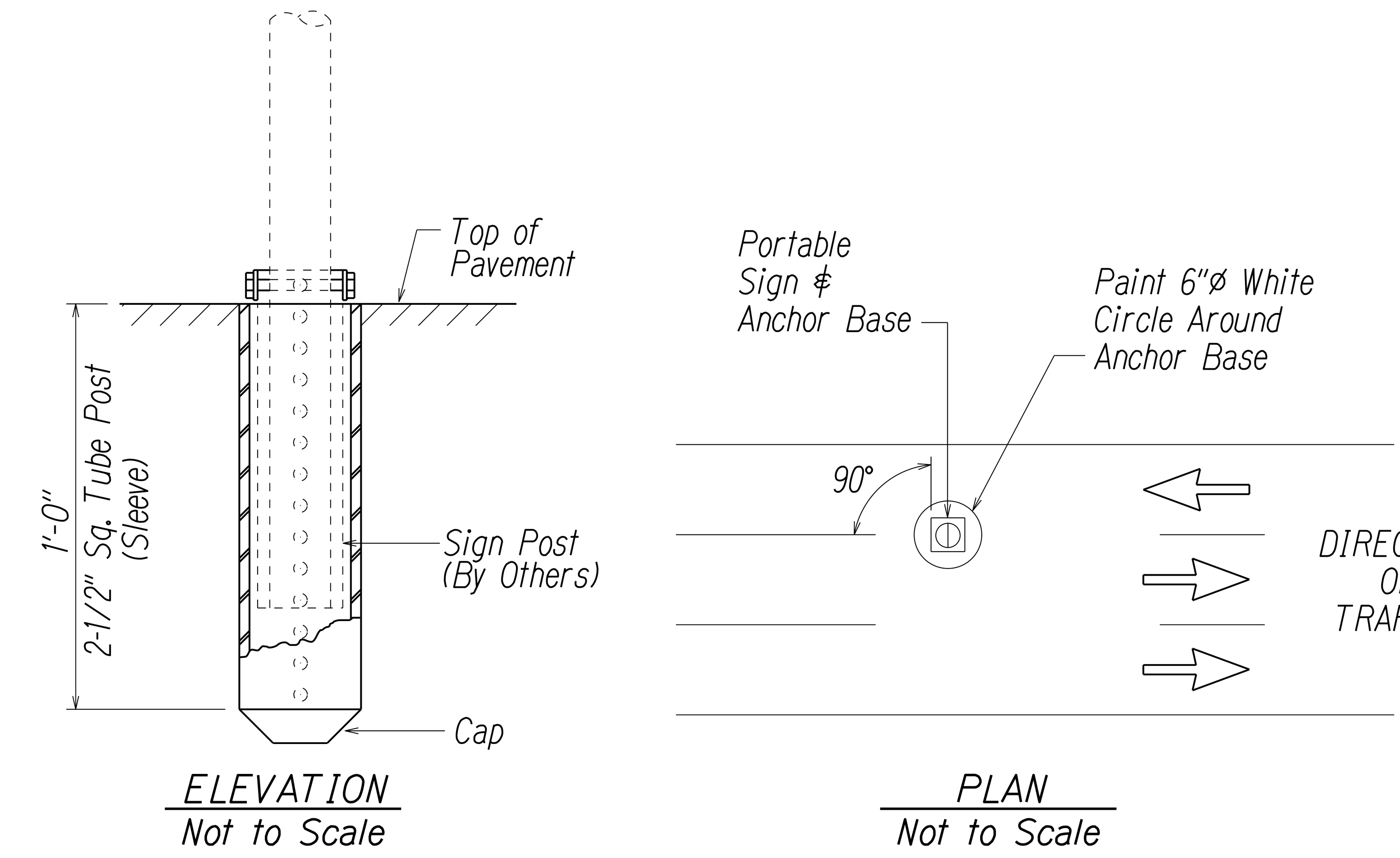
TUBULAR DELINEATOR

Not to Scale

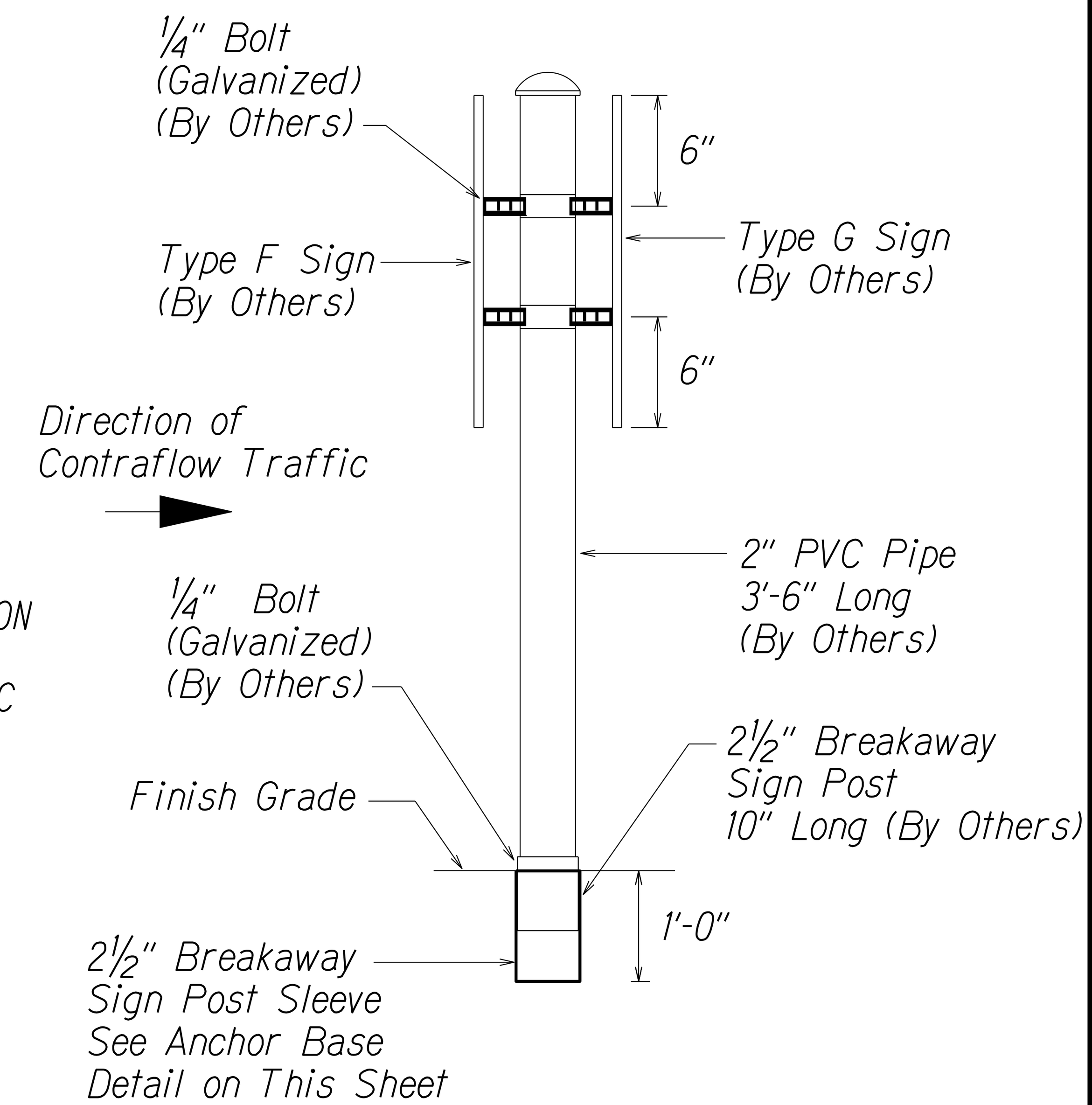


PROFILED THERMOPLASTIC STRIPING

Not to Scale



ANCHOR BASE FOR PORTABLE CONTRA-FLOW SIGN



DROP-IN SIGN DETAIL

Not to Scale

NOTES:

1. The thermoplastic material shall be a alkyd-based compound formulated for profiled pavement marking. See specs subsection 629.03 for additional requirements
2. The Engineer will include the longitundinal gaps for skip striping, up to thirty (30) feet long, in the measurement for payment.
3. Install white profiled thermoplastic stripes as lane line.
4. Install yellow profiled thermoplastic stripes for centerlline passing zone.
5. In areas with centerline milled rumble strips, install standard yellow thermoplastic stripes without raised profiles

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING DETAILS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

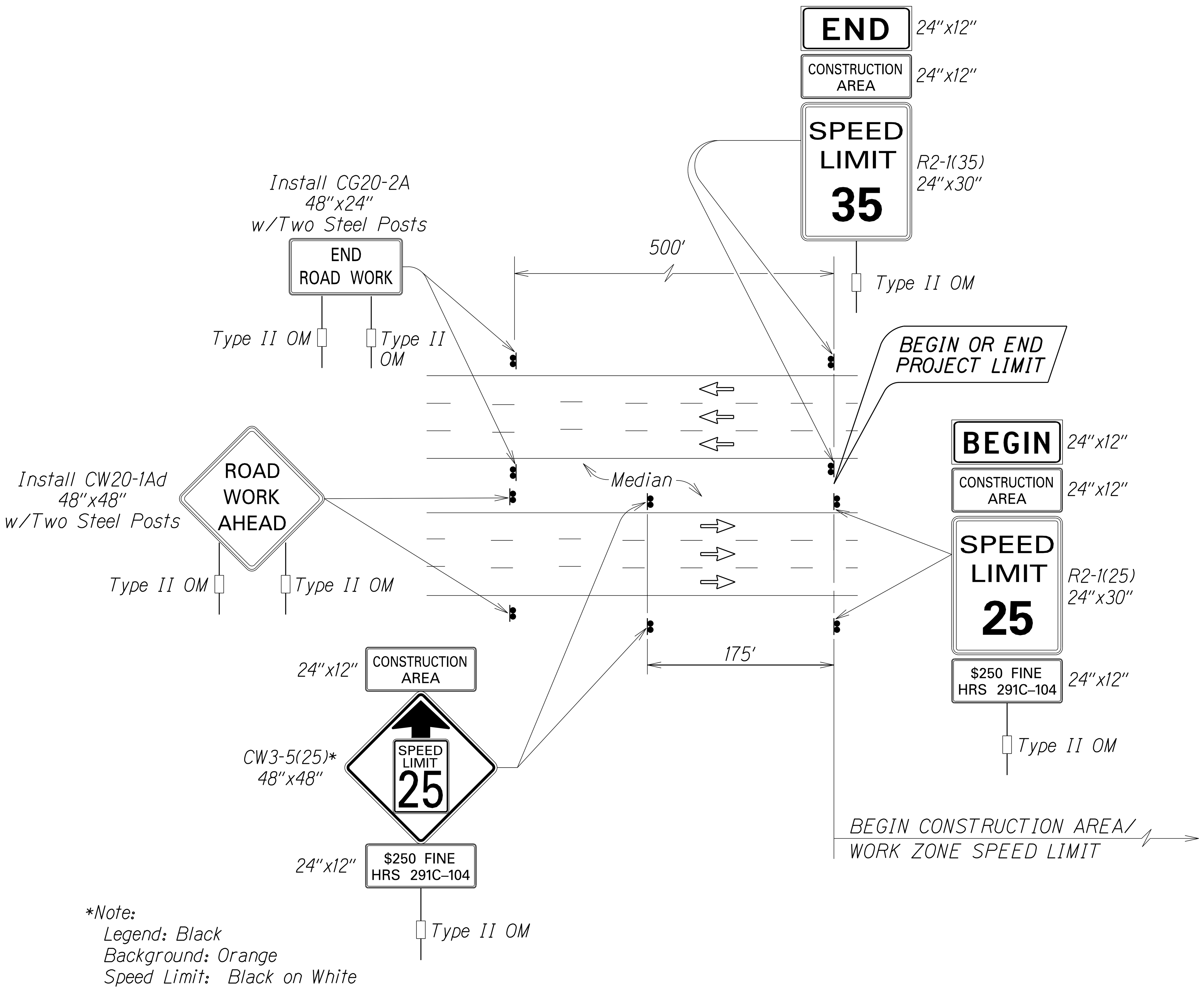
Sand Island Access Rd. to Vic. of Piikoi St.

Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. T2 OF 20 SHEETS

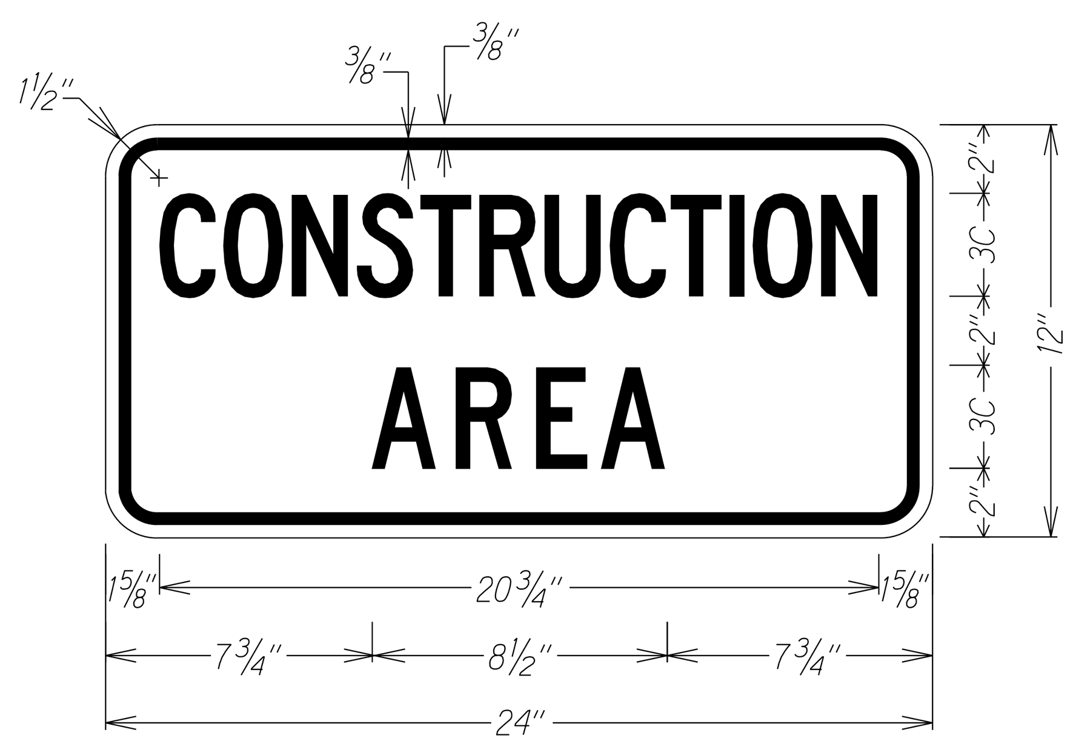
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	33	50



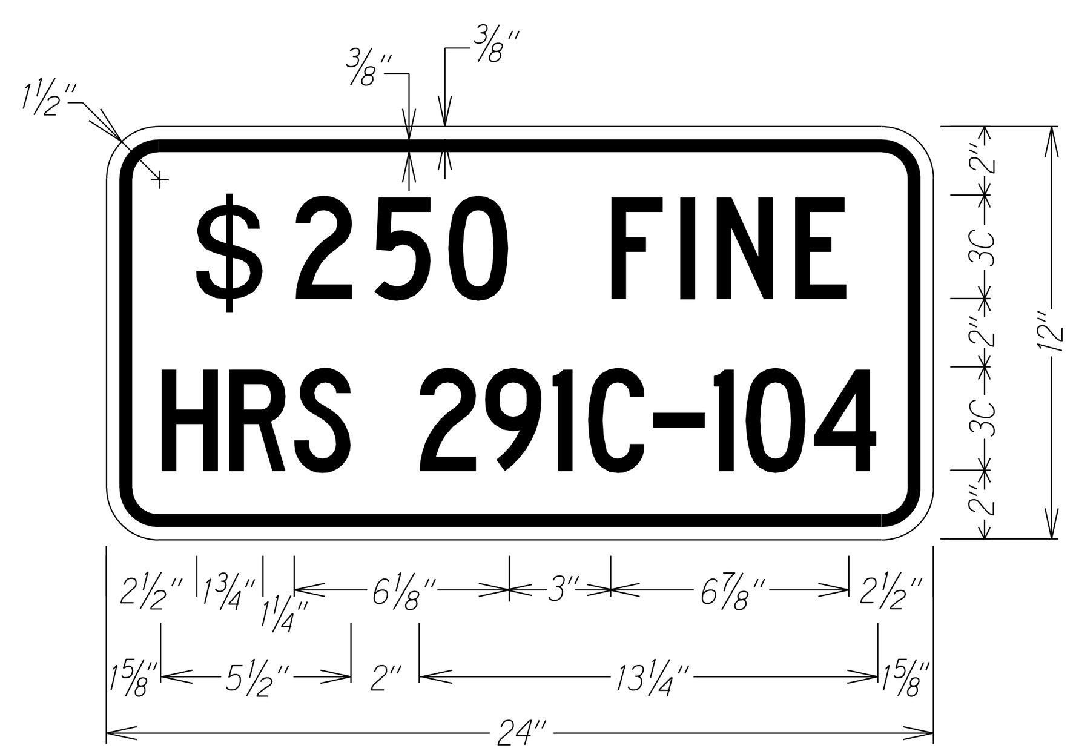
TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON MULTILANE DIVIDED LOW SPEED HIGHWAY

Work Zone Notes:

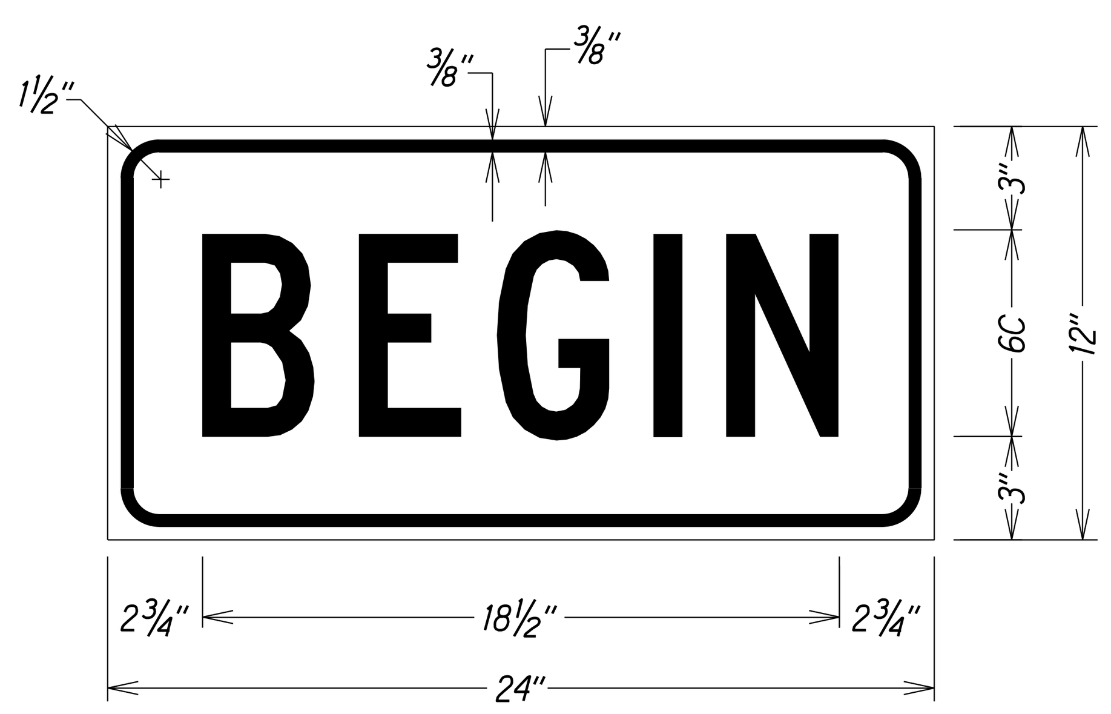
1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Standard Specifications and/or Special Provisions.
2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and "$250 FINE HRS 291C-104" Supplemental Signs).
3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
4. Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.0100 - Traffic Control.
5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
7. The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.0100 - Traffic Control.



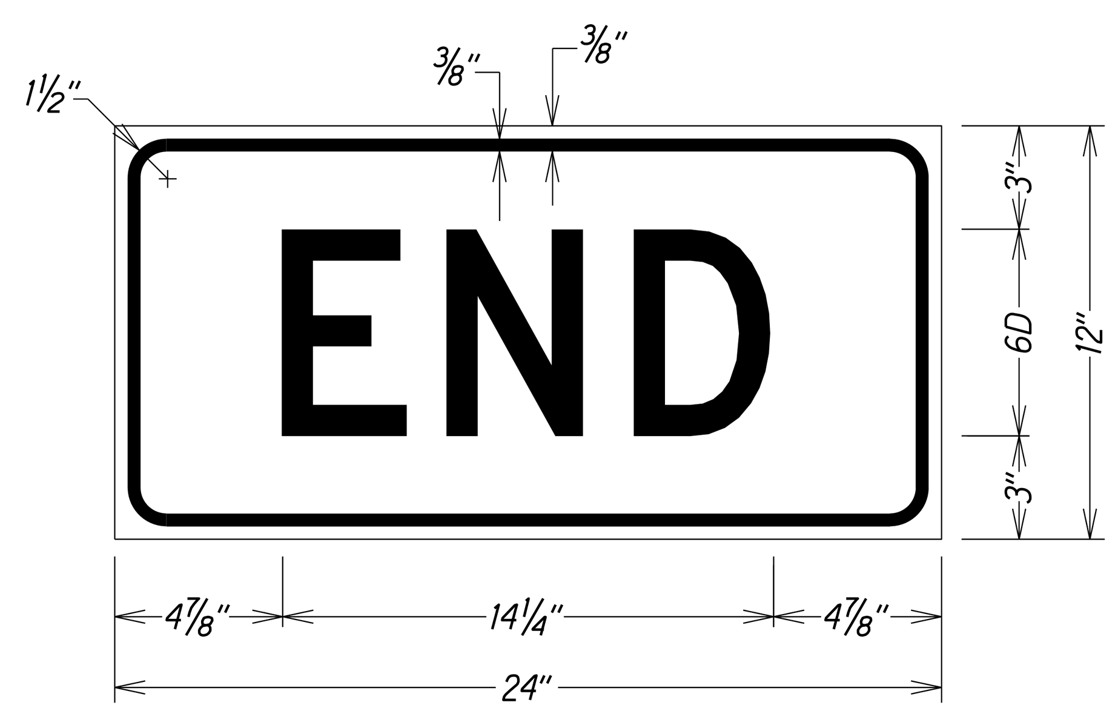
LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | NOTE BOOK | DATE

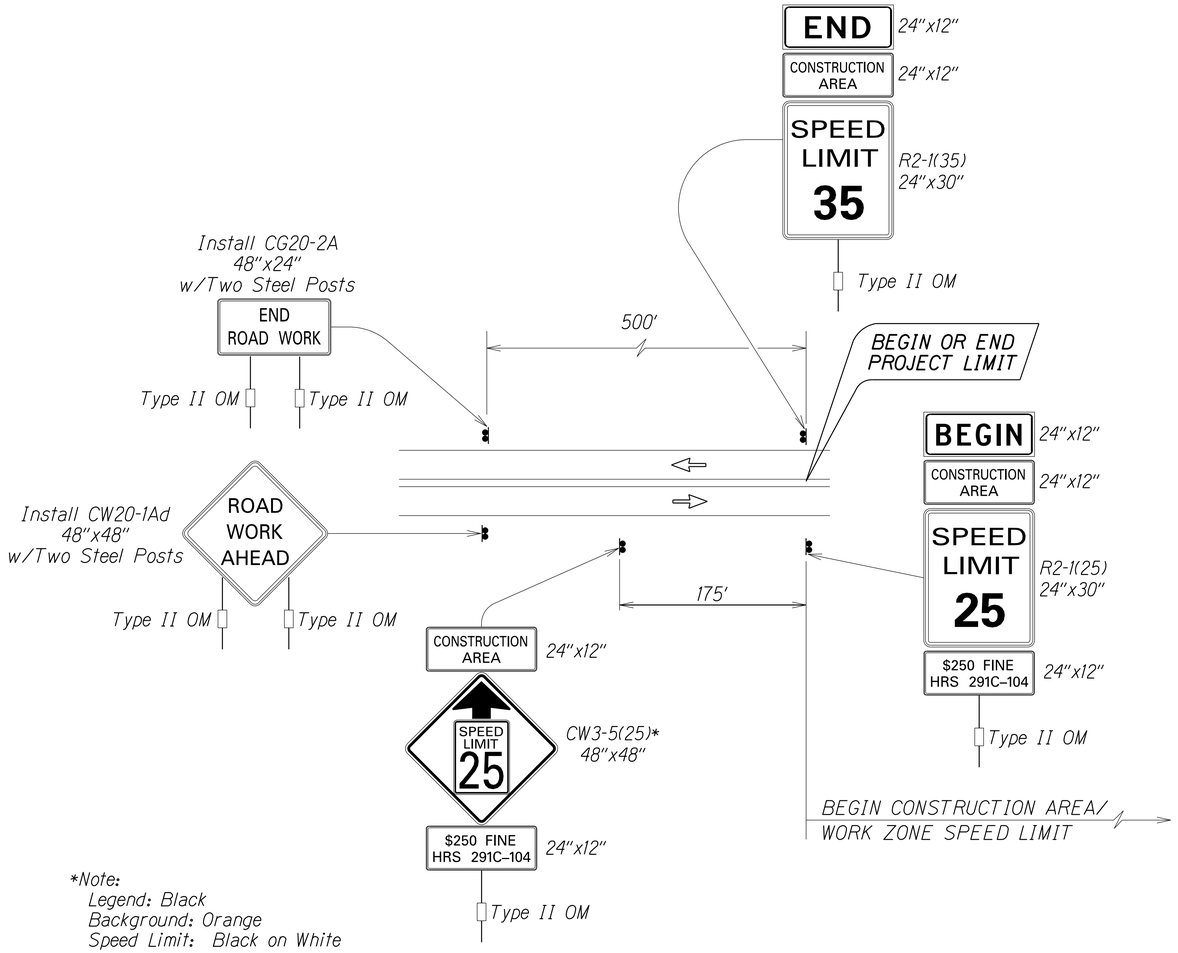
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOW SPEED DIVIDED HIGHWAY
WORK ZONE SIGNING PLAN, NOTES & DETAILS

NIMITZ HIGHWAY & ALA MOANA
BOULEVARD RESURFACING
Sand Island Access Rd. to Vic of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

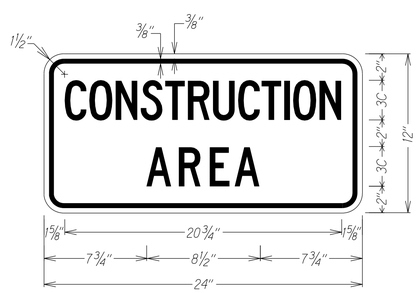
Scale: As Shown Date: August, 2020
SHEET No. T3 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	34	50

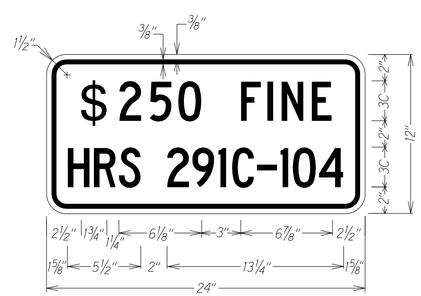


*Note:
Legend: Black
Background: Orange
Speed Limit: Black on White

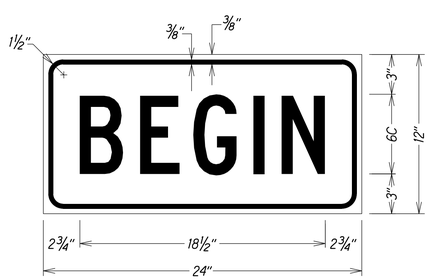
TYPICAL DETAIL FOR CONSTRUCTION SIGNS ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY



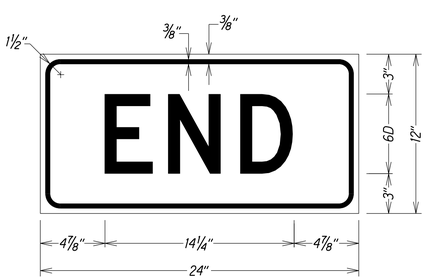
LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

Work Zone Notes:

1. *This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Standard Specifications and/or Special Provisions.*
2. *All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and "$250 FINE HRS 291C-104" Supplemental Signs).*
3. *Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.*
4. *Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.0100 - Traffic Control.*
5. *Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.*
6. *Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.*
7. *The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.0100 - Traffic Control.*

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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NOTE BOOK	TRACED BY	
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	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

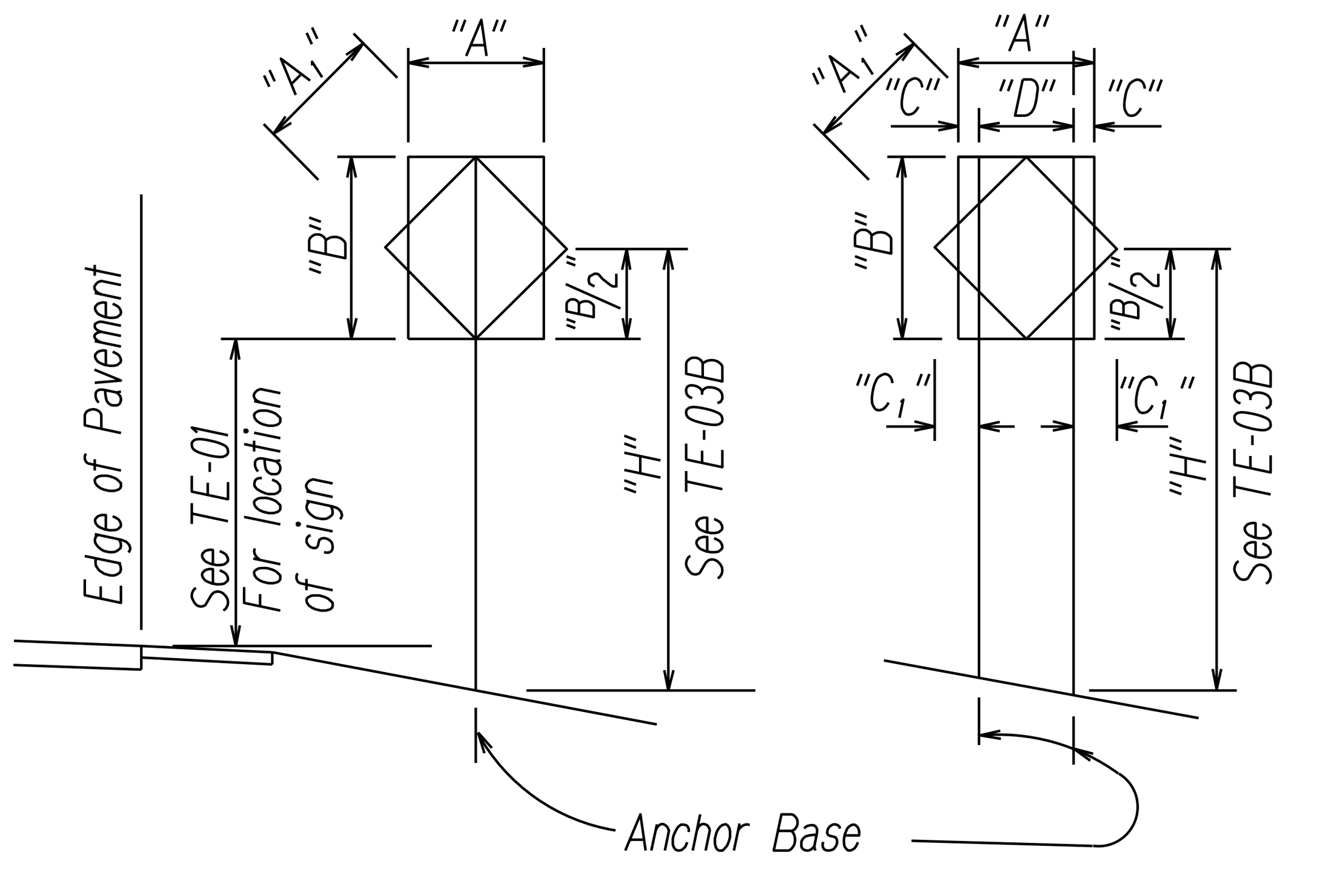
LOW SPEED UNDIVIDED HIGHWAY
WORK ZONE SIGNING PLAN, NOTES&DETAILS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. T4 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	35	50



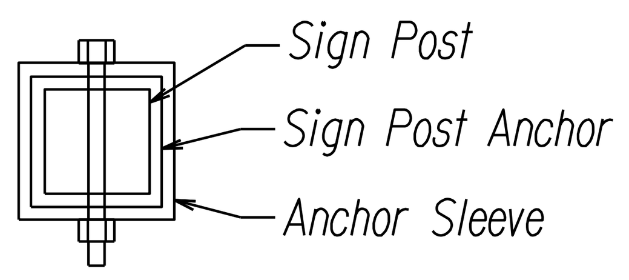
1 - POST
"A" or "A1" less than 36"

2 - POST
"A" or "A1" less than 60"

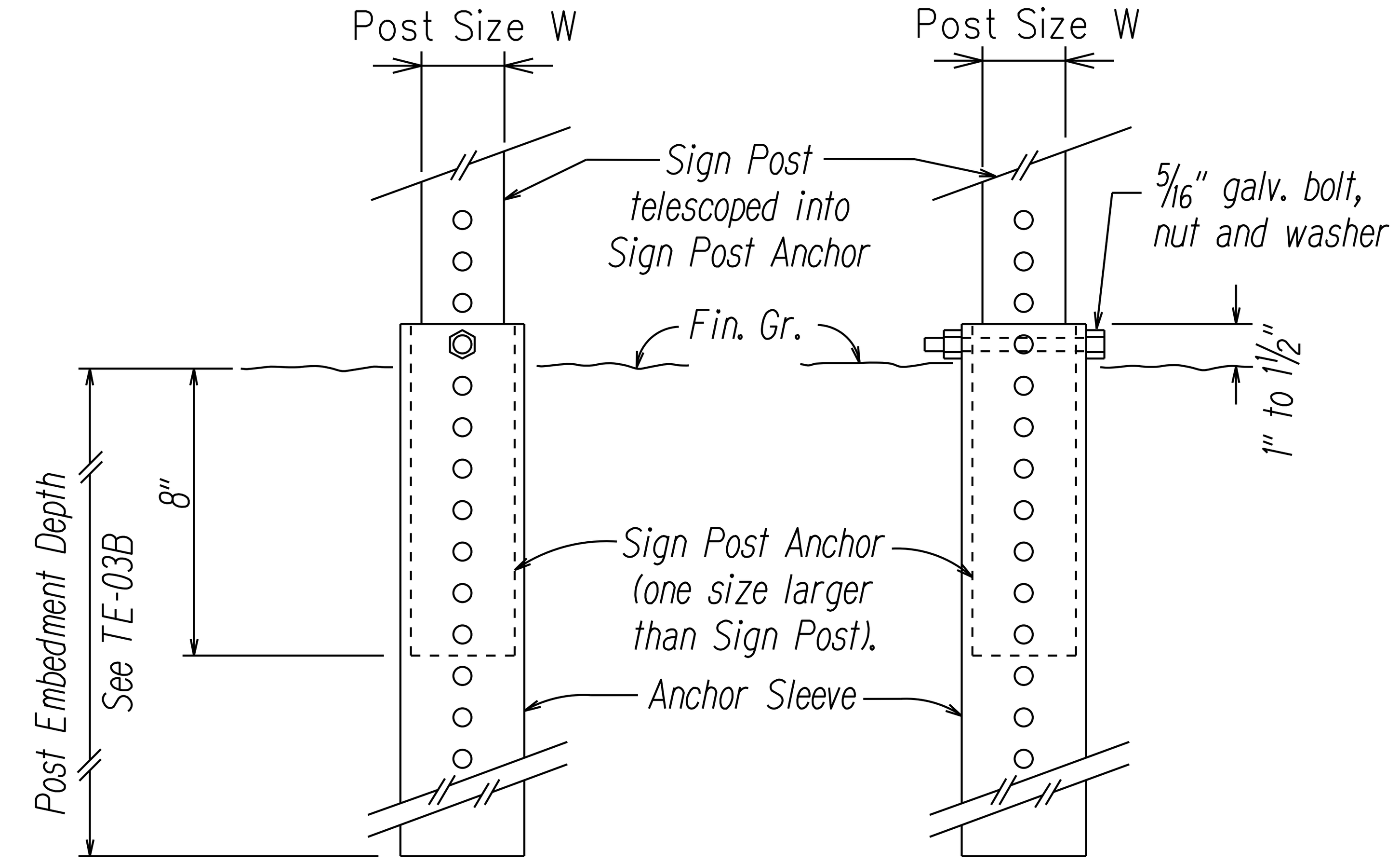
"A" or "A1"	"C"	"C1"
Less than 36"	6"	-
Greater than 36" and less than 48"	9"	19"
Greater than 48"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24" See General Notes.

TYPICAL INSTALLATION



TOP VIEW



BACK VIEW

SIDE VIEW

SIGN POST INSTALLATION

ANCHOR BASE DETAIL

GENERAL NOTES

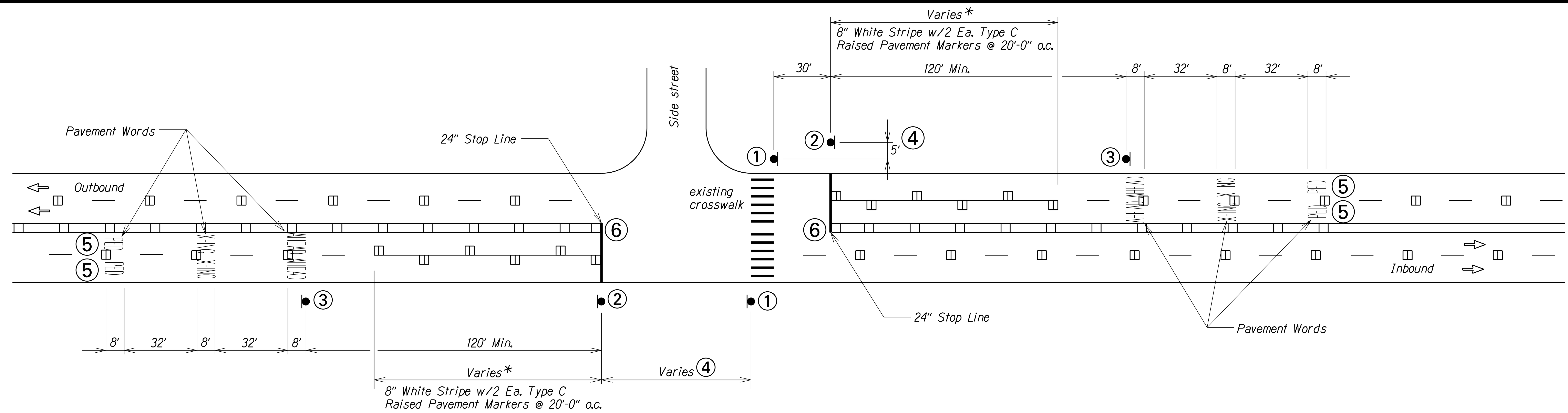
1. Design Specifications:
   (A) Design shall conform w/ the latest AASHTO Standard Specifications for the Structural Supports for Highway Signs, Luminaires & Traffic Signals and its interim supplements and modifications by the Highways Division, Department of Transportation State of Hawaii.
   (B) Latest HDOT Memorandum with subject title "Design Criteria for Bridges and Structures."
2. Loads:
   (A) Basic Wind Speed: 105 mph.
   (B) Recurrence Interval of 10 years.
3. Materials:
   (A) Post shall conform to the Standard Specifications.
   (B) All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
   (C) Lap splice nuts and bolts shall be M180, with an ultimate tensile strength of 180 ksi, min.
   (D) Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.
4. General:
   (A) See General Notes on B-01, TE-01, and TE-03B for additional information.
   (B) All square tube posts shall be 12 gauge unless otherwise specified or shown on the plans.
   (C) Square tube posts shall be perforated with 7/16"Ø holes, 1" o.c., 4 sides, along entire length of post.
   (D) All accessories, fittings and stiffener details (as required) shall be submitted to the Engineer for approval 20 days prior to installation.
   (E) Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered structural engineer of the State of Hawaii and submitted to the Engineer for approval.
   (F) All sign support posts without break away anchor base shall be outside of the clear zone or shielded by an appropriate traffic barrier system. The traffic barrier system shall be submitted to the Engineer for his approval.
   (G) The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
   (H) Excavation and backfill shall be considered incidental to the cost of the sign foundation.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GALVANIZED SQUARE TUBE SIGN POST MOUNTING

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)
Scale: As Shown Date: August, 2020
SHEET No. T5 OF 20 SHEETS

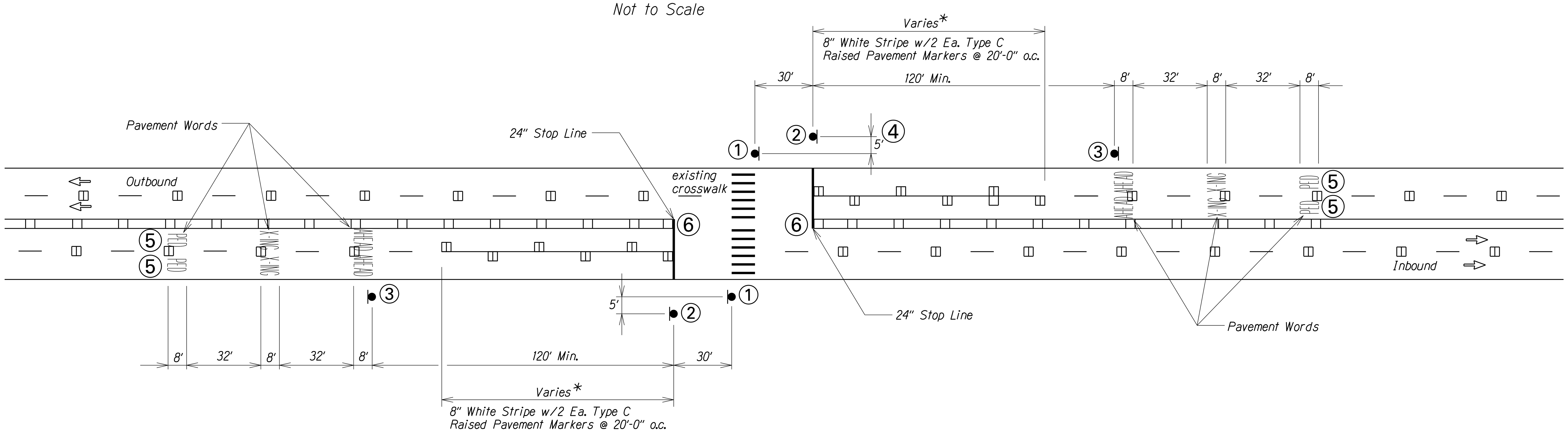
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	36	50



TYPICAL UNSIGNALIZED INTERSECTION MARKINGS (A)

(NO LEFT TURN STORAGE LANES)

Not to Scale



TYPICAL MIDBLOCK CROSSWALK MARKINGS (B)

Not to Scale

R1-5c(L)

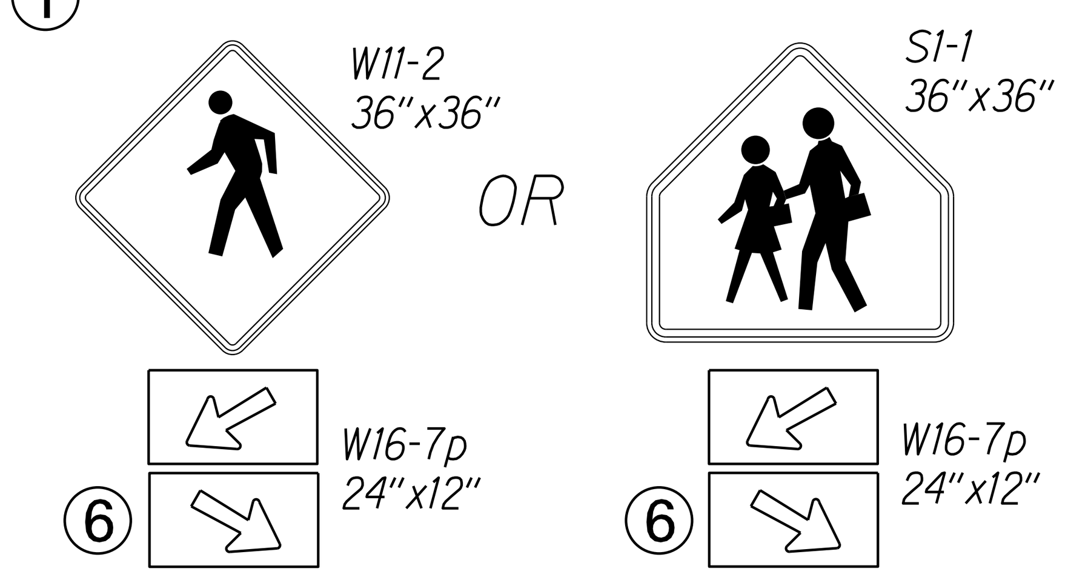
Colors: Black on White

R1-5c(R)

Colors: Black on White

* See Project Pavement Marking Plans

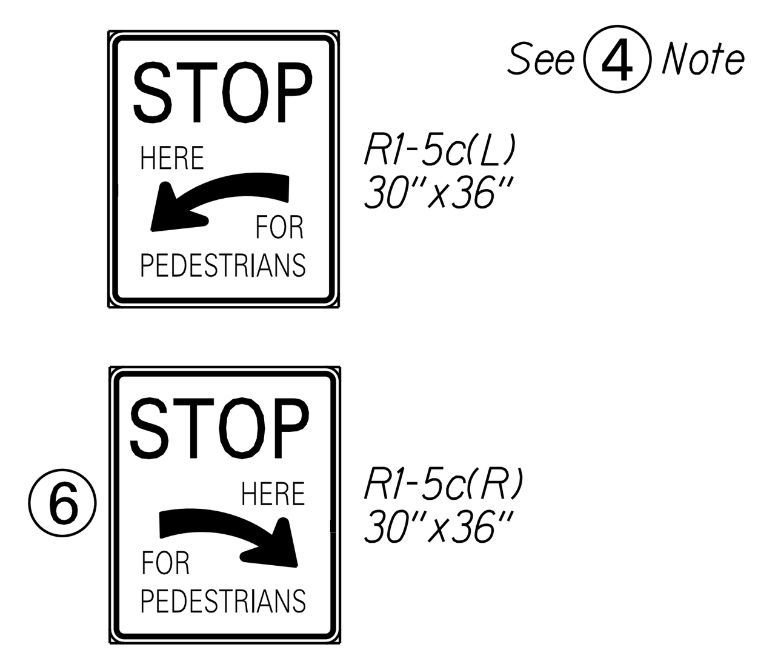
①



Black legend on flourescent yellow green background

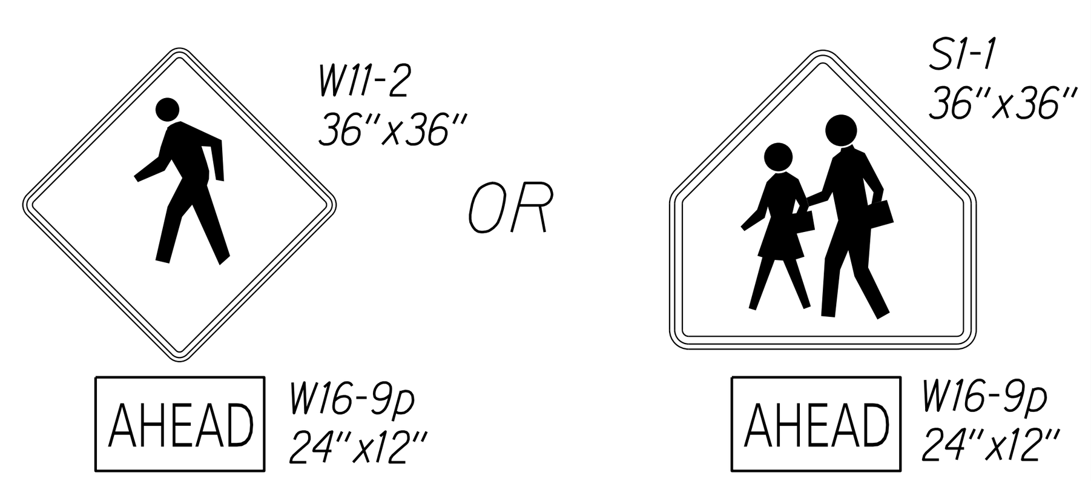
②

See ④ Note



Black legend on white background
See detail on this sheet.

③



Black legend on flourescent yellow green background

④

NOTE:

If Distance is <50', Offset "STOP HERE FOR PEDESTRIANS" sign 5' horizontally with crossing sign. If insufficient space to offset, install sign as directed by the Engineer.

⑤

NOTE:

When school crosswalk warning assembly used install "SCHOOL" pavement word. See Standard Plan TE-31 for detail.

⑥

If the roadway is separated by a raised median supplementary signs ①, ②, ③ shall also be installed on the left-hand side of the roadway.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MIDBLOCK CROSSWALK SIGNING & MARKINGS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

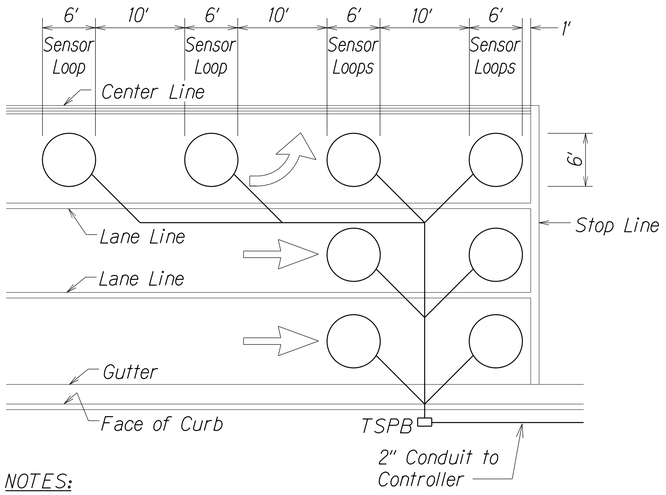
Sand Island Access Rd. to Vic. of Piikoi St.

Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. T6 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	37	50

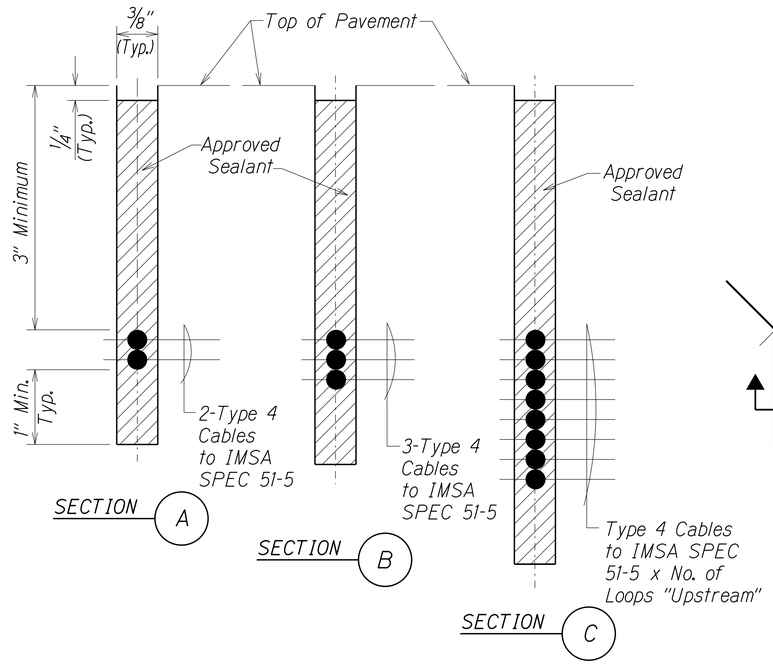


NOTES:

1. Center sensor loops in lanes.
2. Collector cables shall be twisted 2 turns per foot.
3. Number of loops and locations vary. See project plans.
4. Number and locations of collector sawcuts may be varied in the field to suit.

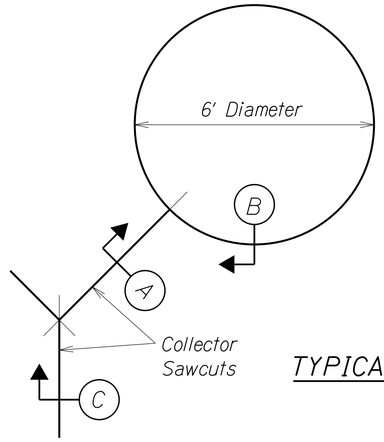
TYPICAL SENSOR LOOP LAYOUT

Not To Scale



TYPICAL SENSOR LOOP SECTION (HMA PAVEMENT)

Not to Scale

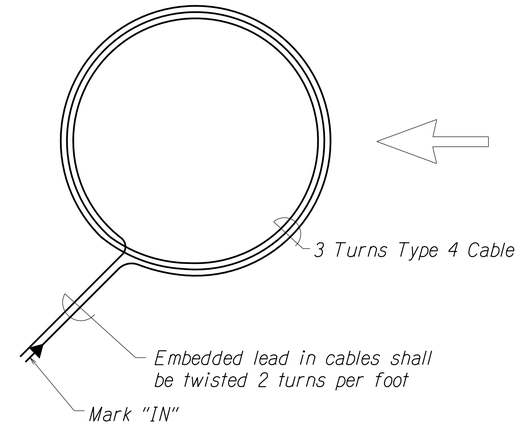


NOTES:

1. Round corners of acute angle saw cuts to prevent damage to loop sensor cables
2. Length of overcuts shall be kept to a minimum. All overcuts shall be back filled with hot tar.

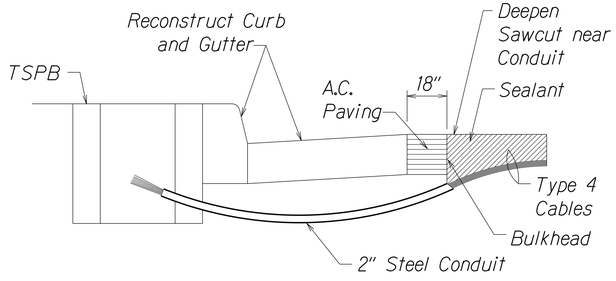
TYPICAL SENSOR LOOP SAWCUT DETAIL

Not To Scale



TYPICAL SENSOR LOOP WIRING DIAGRAM

Not To Scale

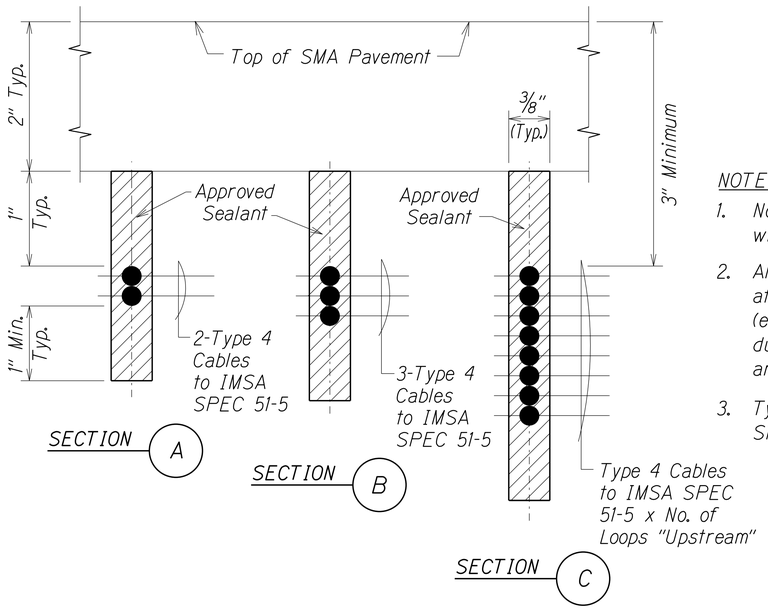


NOTES ON CONSTRUCTION AT END OF SAWCUT

1. Seal roadway end of conduit after installation of conductors.
2. Install bulkhead across conduit trench.
3. Place hot tar in sawcut.
4. Backfill over conduit with new A.C.
5. Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY

Not To Scale



TYPICAL SENSOR LOOP SECTION (SMA PAVEMENT)

Not to Scale

NOTES:

1. No saw-cutting in Stone Matrix Asphalt (SMA) Pavement allowed. Install loop sensor within underlying a.c. pavement prior to placement of SMA Layer.
2. All saw-cutting slurry shall be wet vacuumed, either simultaneously with or immediately after the saw-cutting operations, and the collected slurry disposed of appropriately (e.g. either placed in a filter fabric lined filtration box or in a filter fabric lined dug up retention/percolation basin) After filtration/percolation the filter fabric and the retained sediments shall be disposed of appropriately.
3. Type 4 loop sensor cable 12 AWG stranded THHN conductor in polyethylene tube, IMSA SPEC 51-5 certified

ORIGINAL PLANS

SURVEY PLOTTED BY	DATE X
PLANS PREPARED BY X	
TRACED BY	
DESIGNED BY X	
NOTE BOOK	QUANTITIES BY
No. Initial	CHECKED BY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. 77 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	38	50

TRAFFIC SIGNAL NOTES

1. The locations of the Traffic Signal Standards, Traffic Signal Standards w/Mast Arms, Pedestrian Push Buttons, Traffic Controller, Pullboxes, Conduits and Loop Detectors shall be staked out in the field by the Contractor and approval of the locations shall be obtained from the Engineer prior to construction and installation.

2. All splicing shall be done in the pullboxes.

3. Furnishing and installing the conduit stubouts (pullboxes to edge of pavement) will not be paid for separately but shall be considered incidental to the various contract items.

4. A solid #8 bare copper wire shall be pulled with the traffic signal control cable for equipment ground. Cost shall be incidental to the installation of the control cable.

5. All Traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the plans.

6. The loop amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the plans. Cost for the loop amplifier shall be incidental to the installation of the loop detector.

7. Should any defect be encountered during the warranty period, the manufacturer will be notified and he shall promptly correct such defect. Service call (by factory qualified representative) during the warranty period for repairs or other maintenance shall be answered within 24 hours and shall be done at no expense to the State. All repairs shall be done as soon as possible.

8. All traffic signal work shall conform to the requirements of the "Manual On Uniform Traffic Control Devices For Streets And Highways", Federal Highway Administration (1988) and Amendments.

9. Locations of traffic markings and markers (lane lines, Stop lines, crosswalk, etc.) shown on the plans shall be verified with the Engineer prior to the installation of the traffic signal system.

10. All Conduits between pullboxes and Traffic Signal/Highway Lighting Standards shall not be paid for separately but shall be considered incidental to the various contract items.

11. All Signal-Drop Cables (Type 5 Cables) from the various Types of Traffic Signal Head on the traffic signal standards and mast arms to the pullboxes shall not be paid for separately but considered incidental to the Traffic Signal Head.

12. After installing all the traffic signal cables, the Contractor shall duct seal all conduits in the pullboxes, traffic signal standards and traffic signal controller cabinet concrete base. The duct seal material shall be approved by the Traffic Signal Inspector/Engineer and shall not be paid for separately but considered incidental to the direct buried and/or concrete encased conduits.

13. After installing the Traffic Signal System, the Contractor shall apply grease to all parts of the Traffic Signal System (i.e. fittings, brackets, nipples, elbows, screws, signal head assemblies, bolts, hinges, etc.) as directed by the Traffic Signal Inspector, to prevent rust and corrosion. The grease material shall be approved by the Signal Inspector.

14. Connecting into existing traffic signal system and making all necessary adjustments shall not be paid for separately, but considered incidental to the various traffic signal contract items.

15. The Contractor shall notify the Traffic Control Branch, Department of Transportation Services, City & County of Honolulu, (Phone No. 768-8388) two weeks prior to commencing any work on the traffic signal system.

TRAFFIC SIGNAL LEGEND

NEW	EXISTING	
		Traffic Signal Conduit
1 2 3	1 2 3	Conduit Run Numbers
A B C	A B C	Equipment description, installation or item no.
M	M	Traffic Signal Master Controller Door Indicates Front of Cabinet
C	C	Traffic Signal Controller Door Indicates Front of Cabinet
		Meter Pedestal
		12" RYG Traffic Signal Head
		12" ↑ R↑Y↑G Traffic Signal Head
		12" ← R←Y←G Traffic Signal Head
		12" ← R←Y←G Traffic Signal Head (Programmed Visibility)
		12" RYG ←G/Y Fiber Optic Traffic Signal Head
		Type I Standard and Attached Signals
24' 12'		Type II Standard with Signal Mast Arm and Attached Signals (Nos. indicates mast arm length & distance between signal heads as specified on plans)
8' 24' 12'		Type III Standard with Luminaire and Signal Mast Arm and Attached Signals (Nos. indicates mast arm lengths & distance between signal heads as specified on plans)
Y	Y	Flashing Beacon, One Signal Section, "Y" indicates 12" Yellow Lens
		Opticom Receiver (Arrow indicates direction detector faces)
		Pipe Guard
		Pedestrain Signal Head
	tspb	Type A Pullbox
	tspb	Type B Pullbox
	tspb	Type C Pullbox
		Loop Detectors

HIGHWAY LIGHTING LEGEND

NEW	EXISTING	
HL	hl	Highway Lighting Conduit
	hl	Type A Pullbox (Hwy. Ltg.)
		Highway Lighting Standard

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
Sr. fnlmtsnl

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL NOTES & LEGEND

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

Sand Island Access Rd. to Vic of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: As Shown Date: August, 2020

SHEET No. T8 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	39	50

Nimitz Highway Traffic Signal Backplate Retrofit

Sand Island Access Road to Vicinity of Bishop Street

NEW TRAFFIC SIGNAL ASSEMBLY W/ LED SIGNAL LIGHTS & TRAFFIC SIGNAL BACK PLATE (1)					
STREET NAME/INTERSECTION	IN BOUND (IB)		OUT BOUND (OB)		
	Left-Turn P-V (2)	Thru	Left-Turn P-V (2)	Thru	Contra-Flow P-V (2)
Sand Island Access Road		3	2	2	
Puuhale Road		2		2	2
Mokauea Street		2		2	2
Kalihi Street		2		3	2
Waiakamilo Road		2		2	2
Fishing Village/Pier 36-38		2		3	2
Alakawa Street	2	2	1	2	2
Pacific Street		2		2	
River Street				3	
Smith Street				3	
Nuuanu Avenue	2	2		3	
Bethel Street				2	
Fort Street				1 (PV)	
Bishop Street		2			
Sub-Total:	**4 (P-V)**	**21**	**3 (P-V)**	**29, 1 (P-V)**	**12 (P-V)**

1. Replace existing mast arm mounted traffic signal head with new traffic signal head with LED optical units and traffic signal back plate.
2. P-V: Programmed Visibility traffic signal head

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTE BOOK 1d2
fnimtsn2

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL NOTES & LEGEND

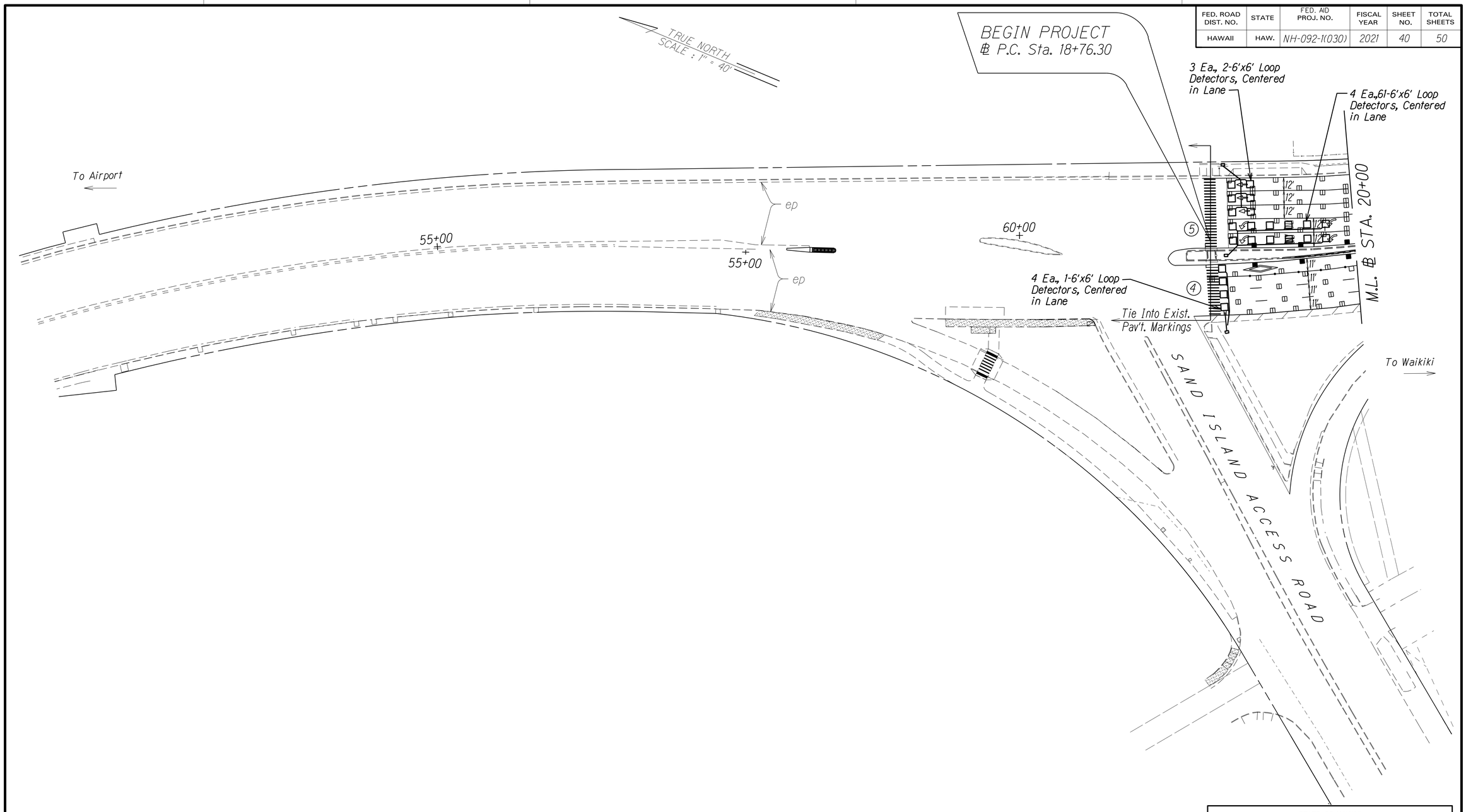
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

Sand Island Access Rd. to Vic of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: As Shown   Date: August, 2020

SHEET No. T9 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	40	50



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

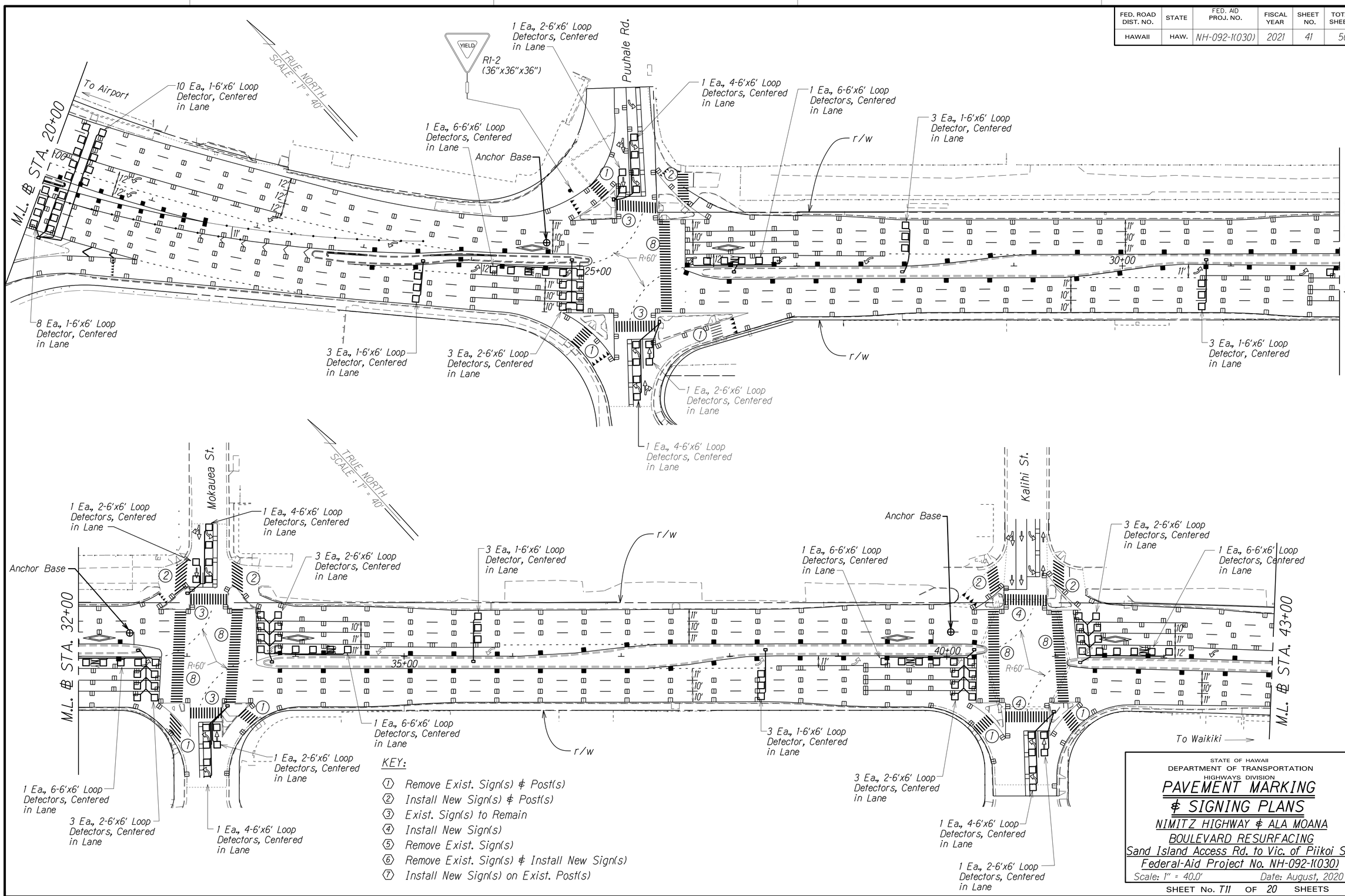
PAVEMENT MARKING & SIGNING PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T10 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	41	50



KEY:

1. Remove Exist. Sign(s) & Post(s)
2. Install New Sign(s) & Post(s)
3. Exist. Sign(s) to Remain
4. Install New Sign(s)
5. Remove Exist. Sign(s)
6. Remove Exist. Sign(s) & Install New Sign(s)
7. Install New Sign(s) on Exist. Post(s)

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

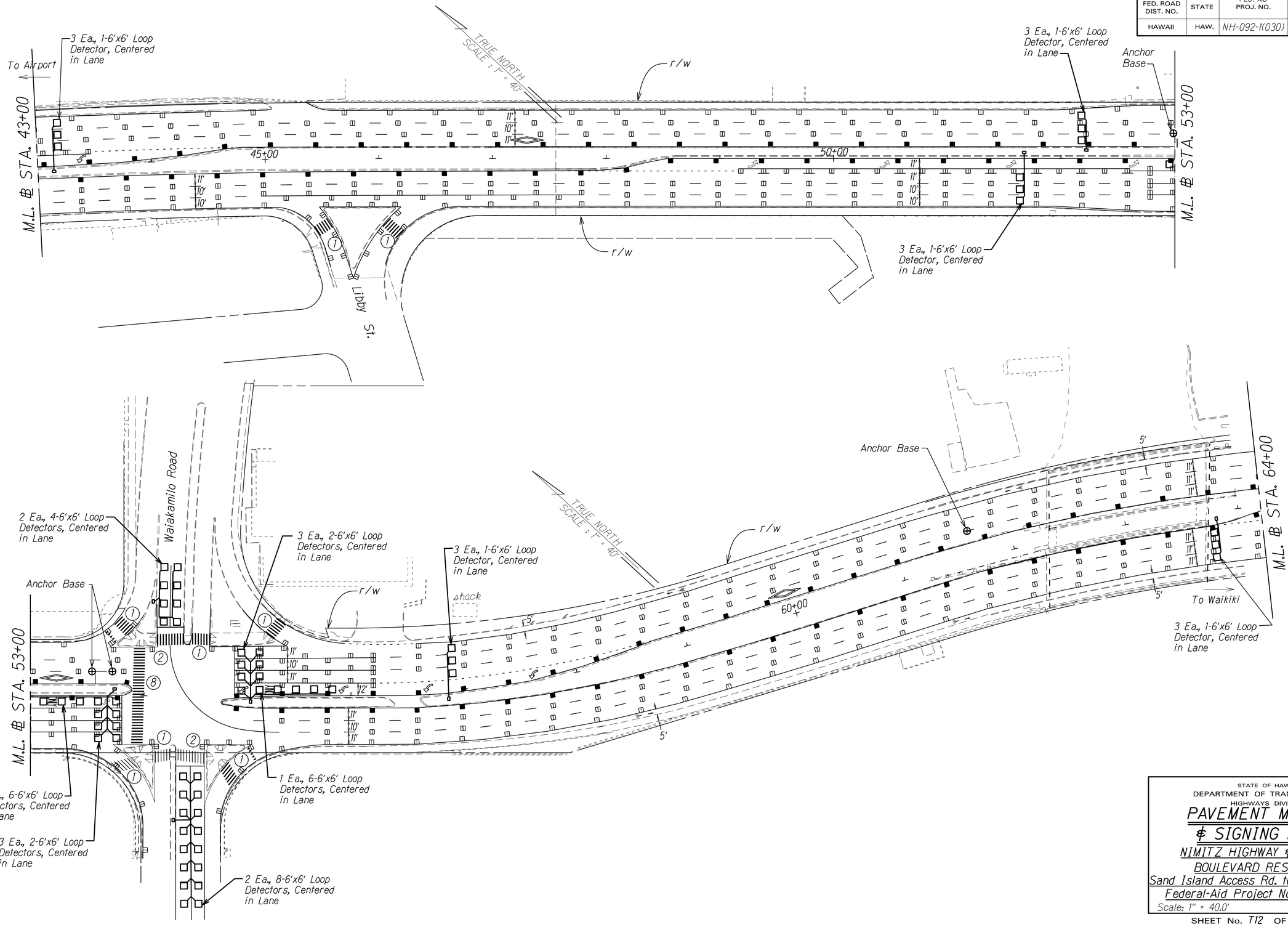
PAVEMENT MARKING & SIGNING PLANS

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T11 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	42	50



ORIGINAL PLANS	SURVEY PLOTTED BY	DATE X
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NOTE BOOK	DESIGNED BY X	
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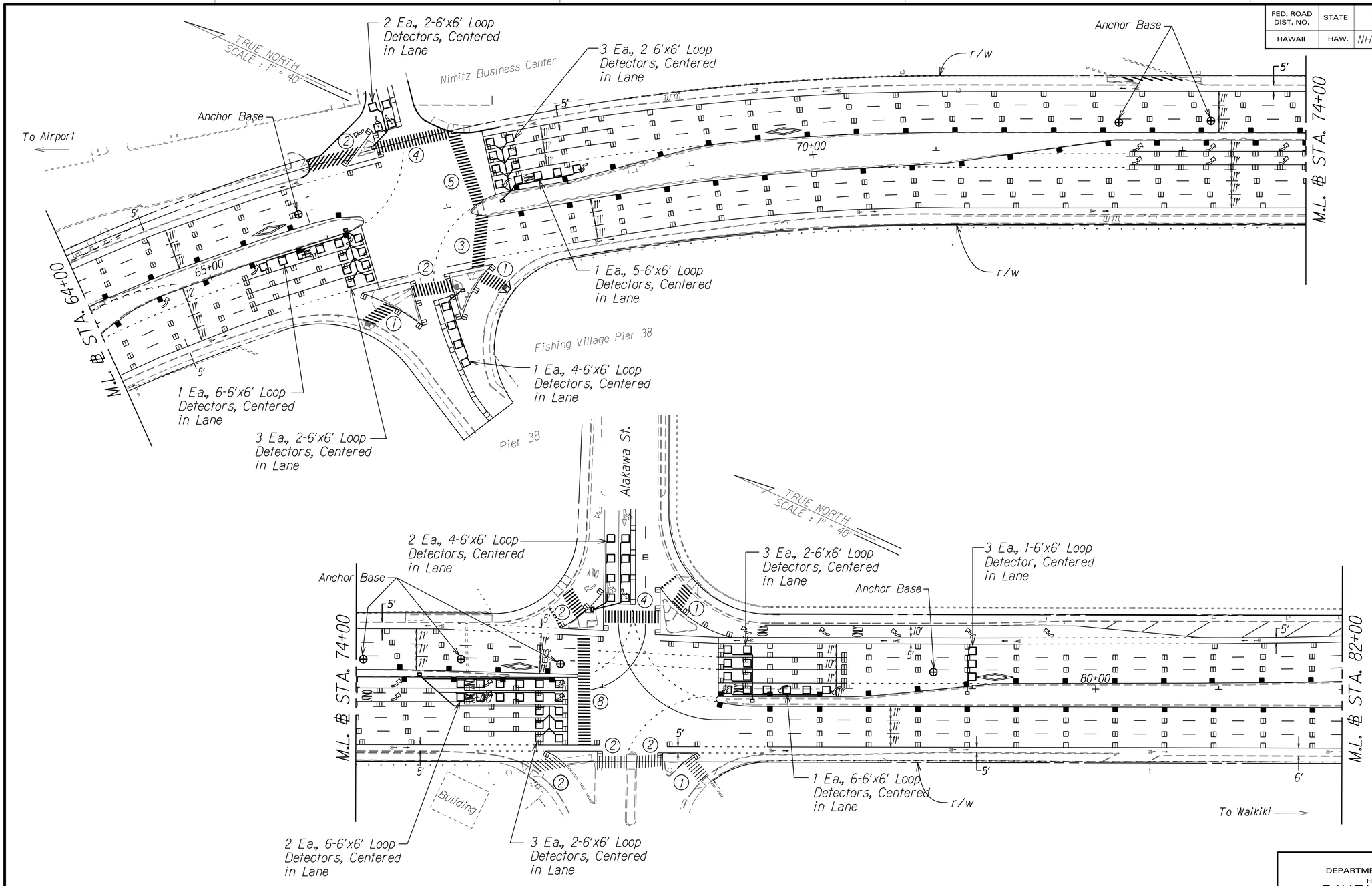
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T12 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	43	50



ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
	DRAWN BY	
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STATE OF HAWAII
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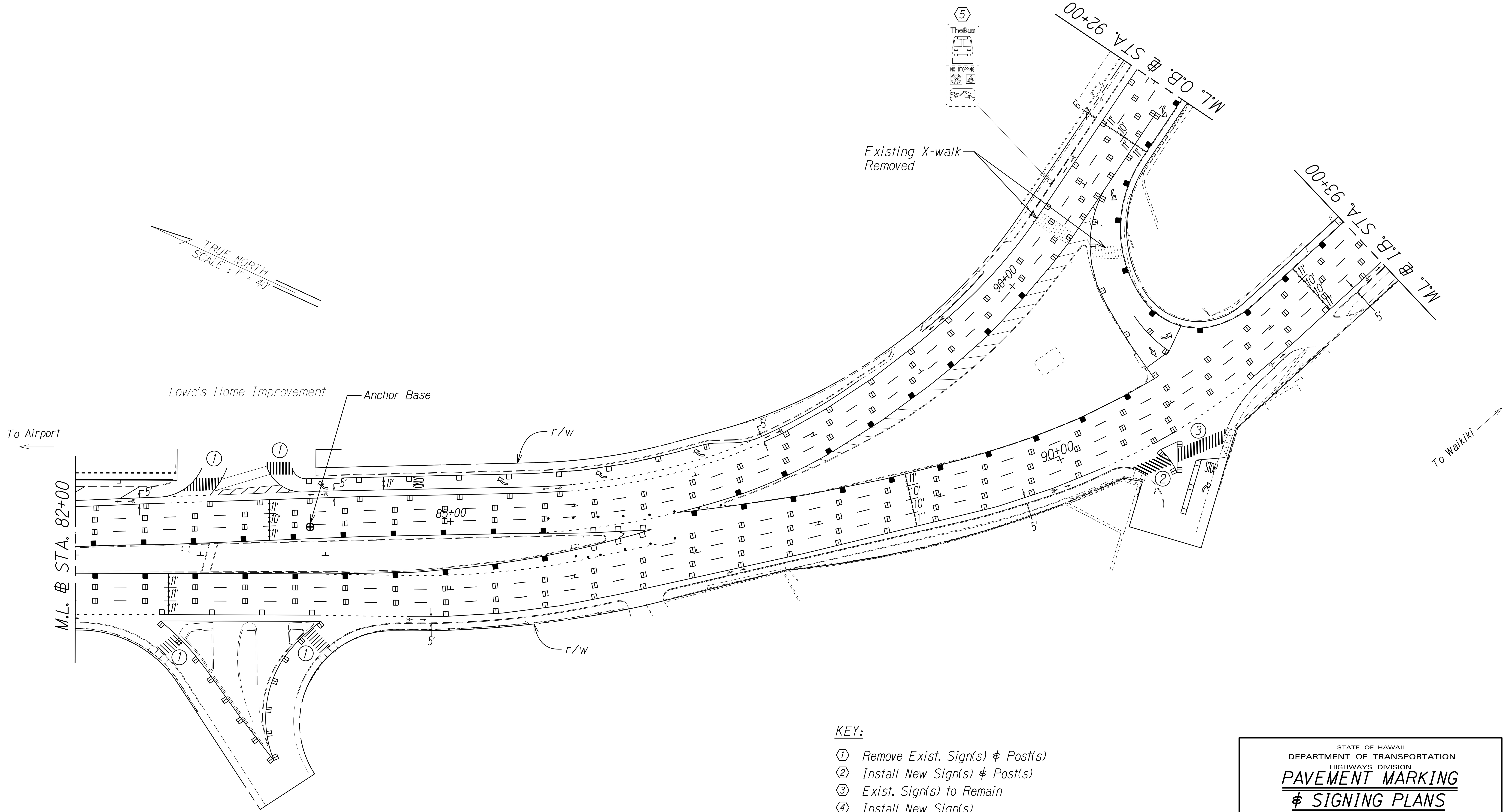
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T13 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	44	50



KEY:

1. Remove Exist. Sign(s) & Post(s)
2. Install New Sign(s) & Post(s)
3. Exist. Sign(s) to Remain
4. Install New Sign(s)
5. Remove Exist. Sign(s)
6. Remove Exist. Sign(s) & Install New Sign(s)
7. Install New Sign(s) on Exist. Post(s)

STATE OF HAWAII
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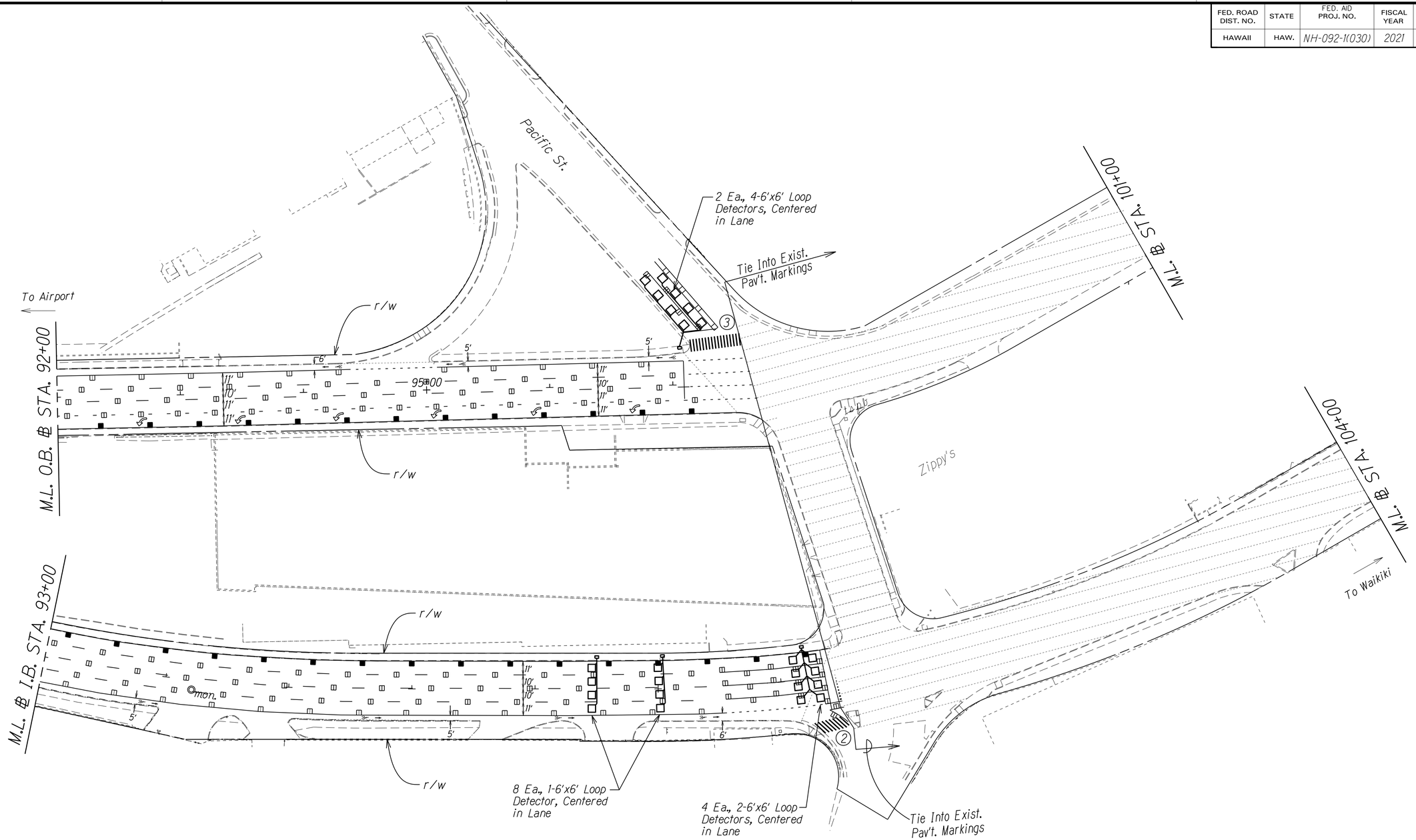
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T14 OF 20 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	45	50



ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
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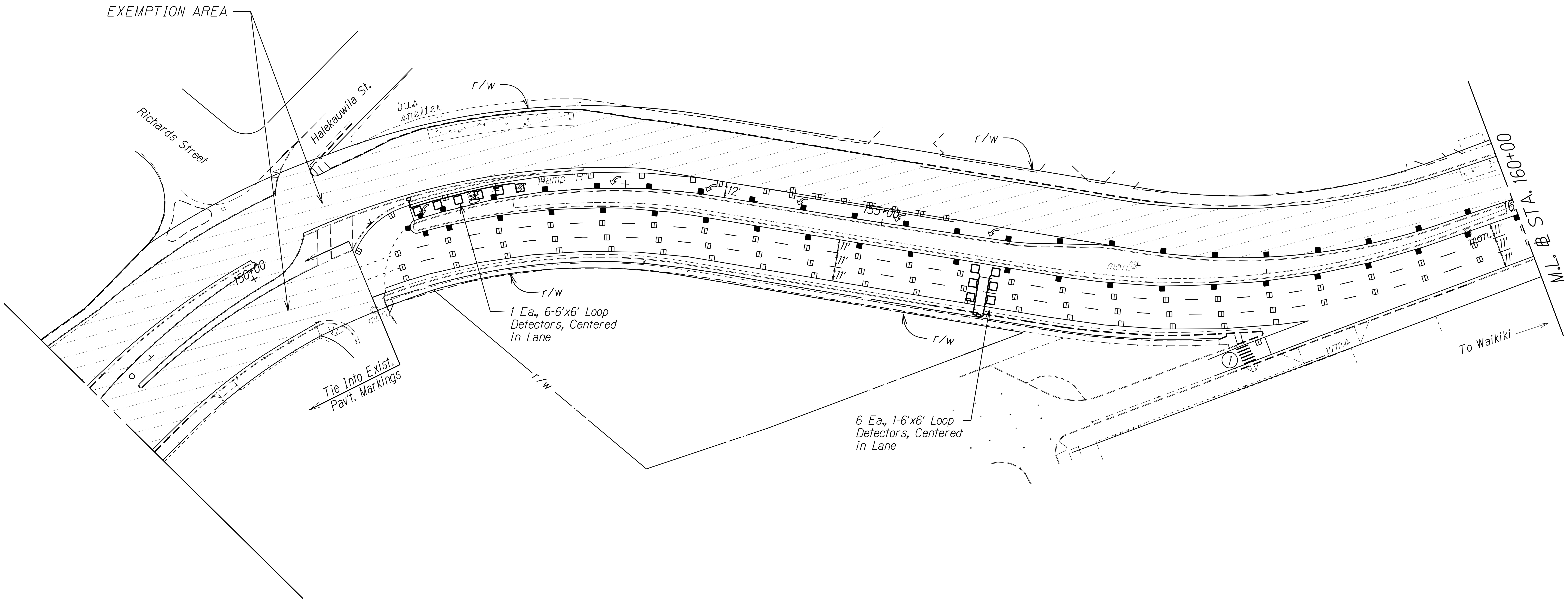
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T15 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	46	50



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STATE OF HAWAII
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NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING

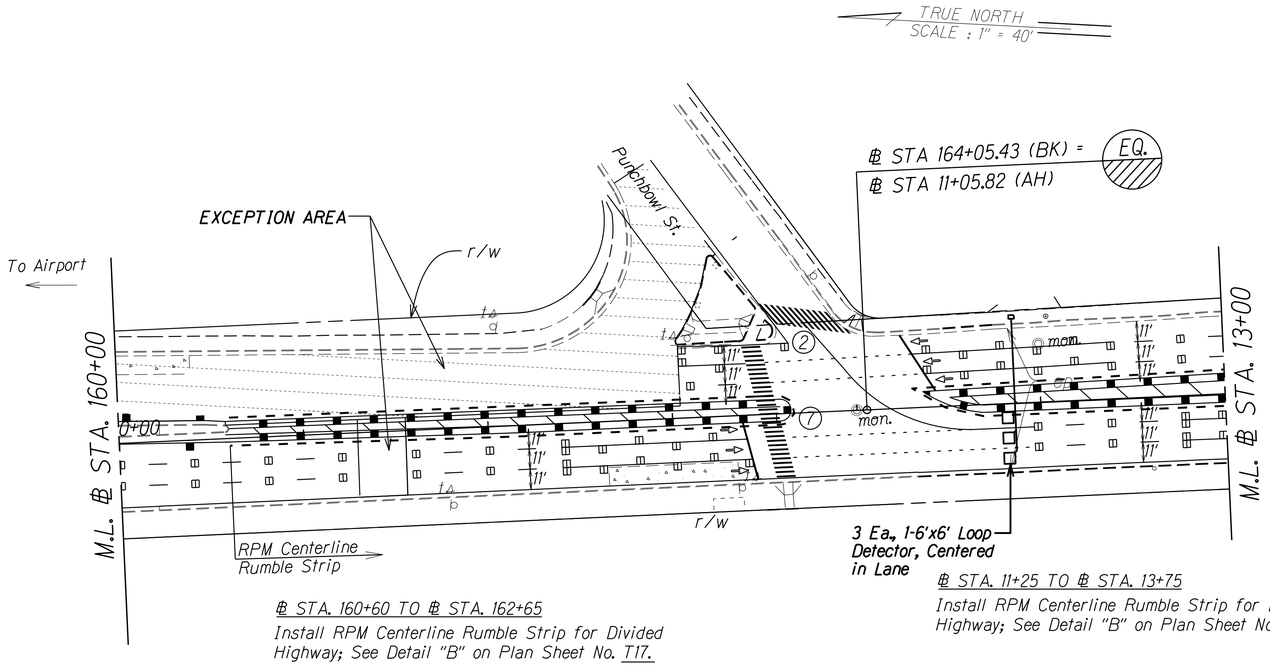
Sand Island Access Rd. to Vic. of Piikoi St.

Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0'   Date: August, 2020

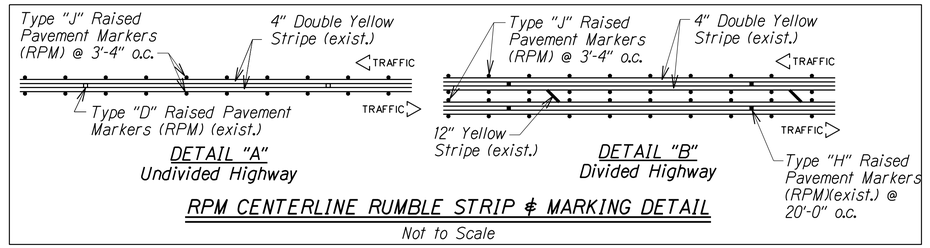
SHEET No. T16 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	47	50

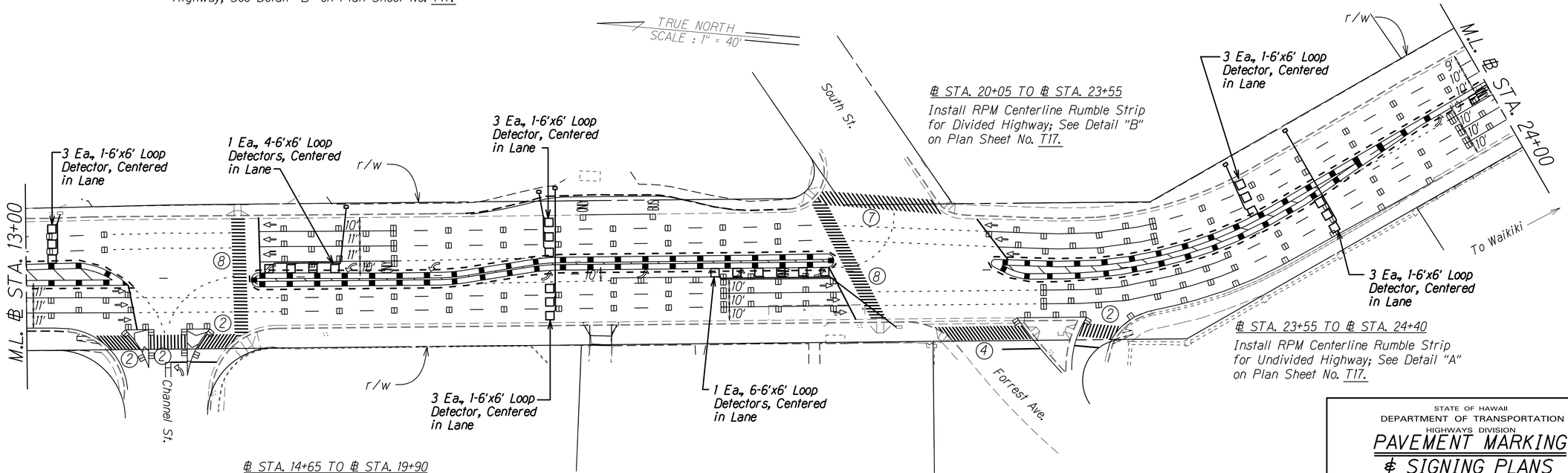


℄ STA. 160+60 TO ℄ STA. 162+65
Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T17.

℄ STA. 11+25 TO ℄ STA. 13+75
Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T17.



RPM CENTERLINE RUMBLE STRIP ℄ MARKING DETAIL
Not to Scale



℄ STA. 14+65 TO ℄ STA. 19+90
Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T17.

℄ STA. 20+05 TO ℄ STA. 23+55
Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T17.

℄ STA. 23+55 TO ℄ STA. 24+40
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
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PAVEMENT MARKING ℄ SIGNING PLANS

NIMITZ HIGHWAY ℄ ALA MOANA BOULEVARD RESURFACING
Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T17 OF 20 SHEETS

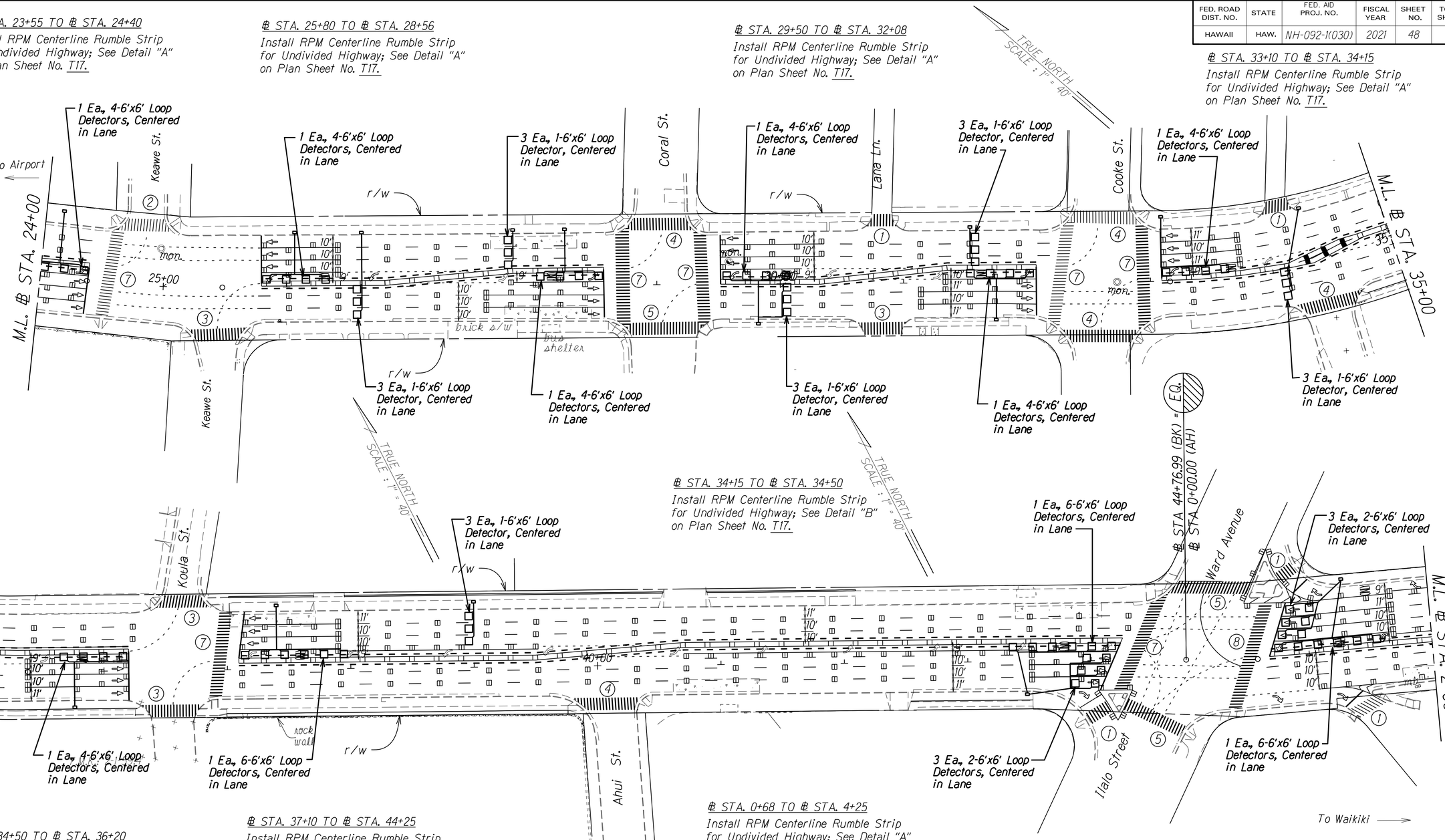
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	48	50

℄ STA. 23+55 TO ℄ STA. 24+40
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 25+80 TO ℄ STA. 28+56
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 29+50 TO ℄ STA. 32+08
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 33+10 TO ℄ STA. 34+15
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.



℄ STA. 34+50 TO ℄ STA. 36+20
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 37+10 TO ℄ STA. 44+25
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 0+68 TO ℄ STA. 4+25
Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

ORIGINAL PLAN
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Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

Scale: 1" = 40.0' Date: August, 2020

SHEET No. T18 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	49	50

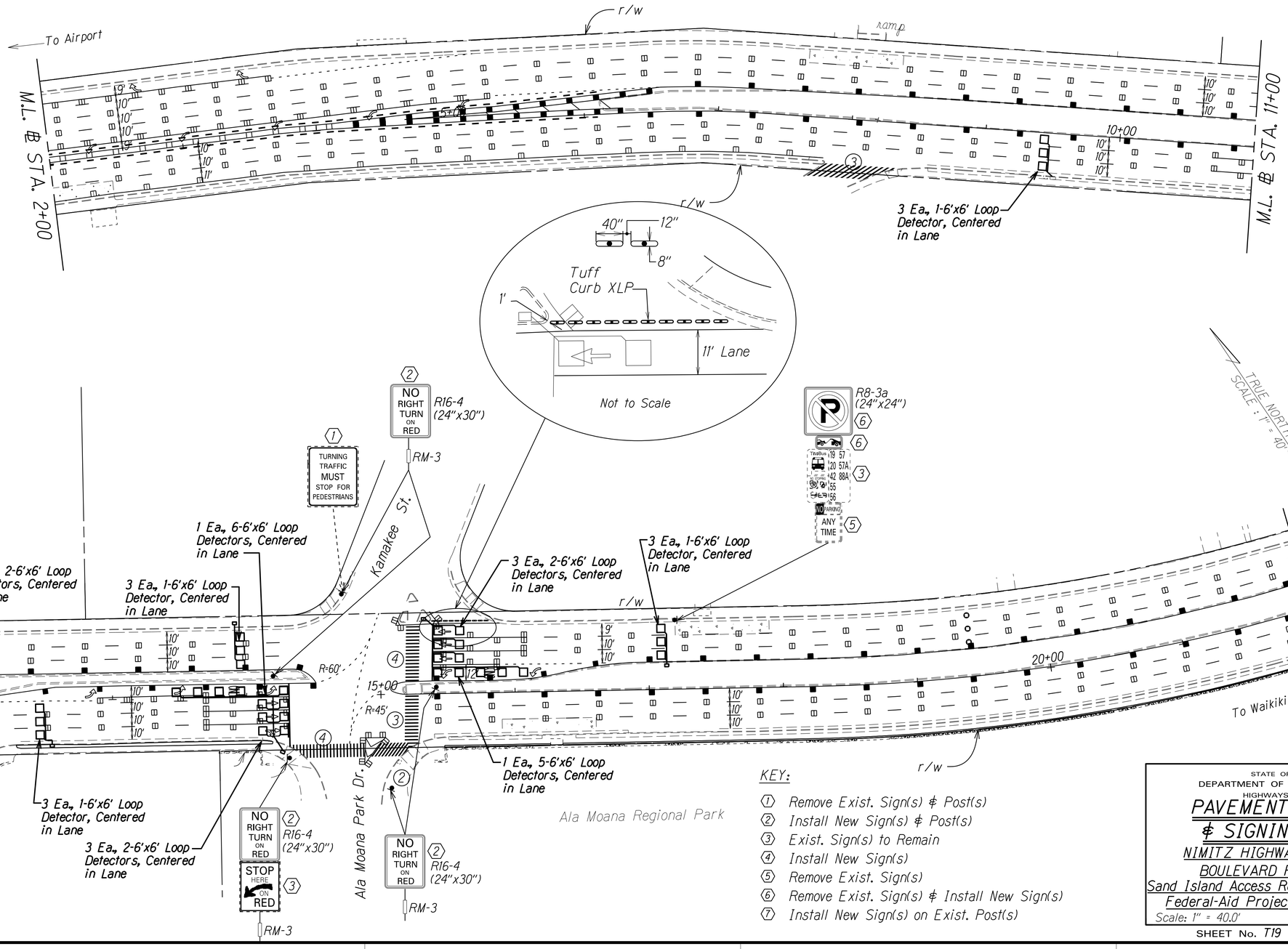
℄ STA. 0+68 TO ℄ STA. 4+25

Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T17.

℄ STA. 4+25 TO ℄ STA. 6+10

Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "B" on Plan Sheet No. T17.

TRUE NORTH
SCALE : 1" = 40'



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	TRACED BY	
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Sand Island Access Rd. to Vic. of Piikoi St.
Federal-Aid Project No. NH-092-1(030)

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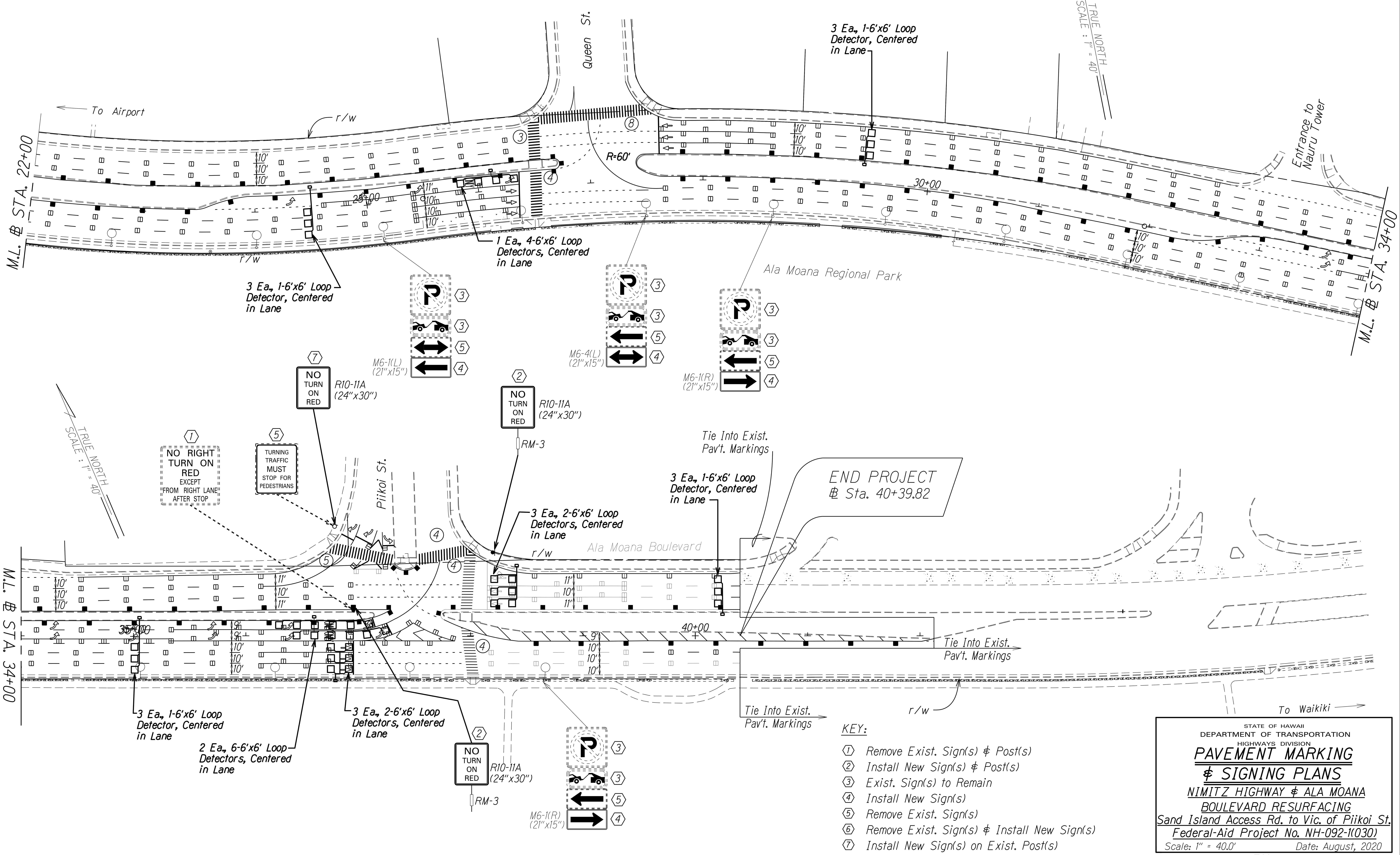
SHEET No. T19 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(030)	2021	50	50



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SHEET No. T20 OF 20 SHEETS