STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.2	43

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	
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

STANDARD PLAN NO.	TITLE	DATE
TE-31 ●	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-32 ·	TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS	05/31/07
TE-33 ·	TYPE II TRAFFIC SIGNAL SYSTEM	08/16/06
TE-33A.1 ·	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.2 ·	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34	LOOP DETECTOR DETAILS	07/11/08
TE-35 ·	LOOP DETECTORS & DUCT DETAILS	07/11/08
TE-36 ·	TRAFFIC SIGNAL DETAILS	07/11/08
TE-37 ·	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 ●)

DATE	REVISION
4/21/23	1 – TE-03A Not in Use
4/21/23	1 – TE-47 in Use

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

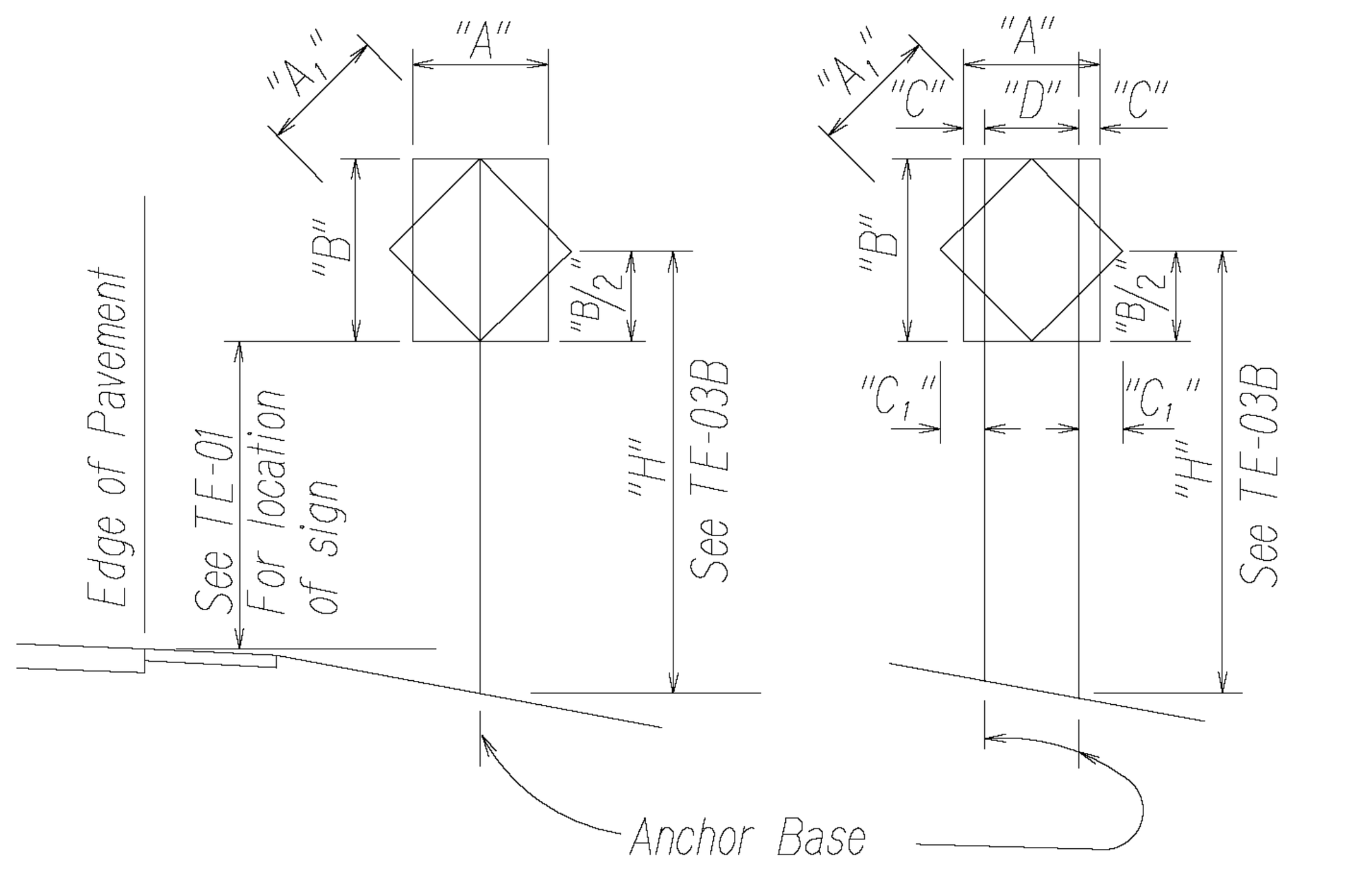
Date: April 2023

SHEET No. 1 OF 1 SHEETS

ADD.2

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.2S1	43



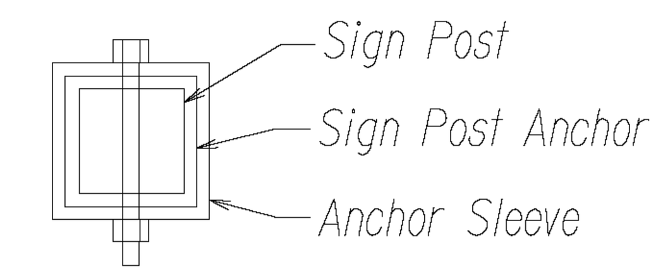
1 - POST
"A" or "A1" less than 36"

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

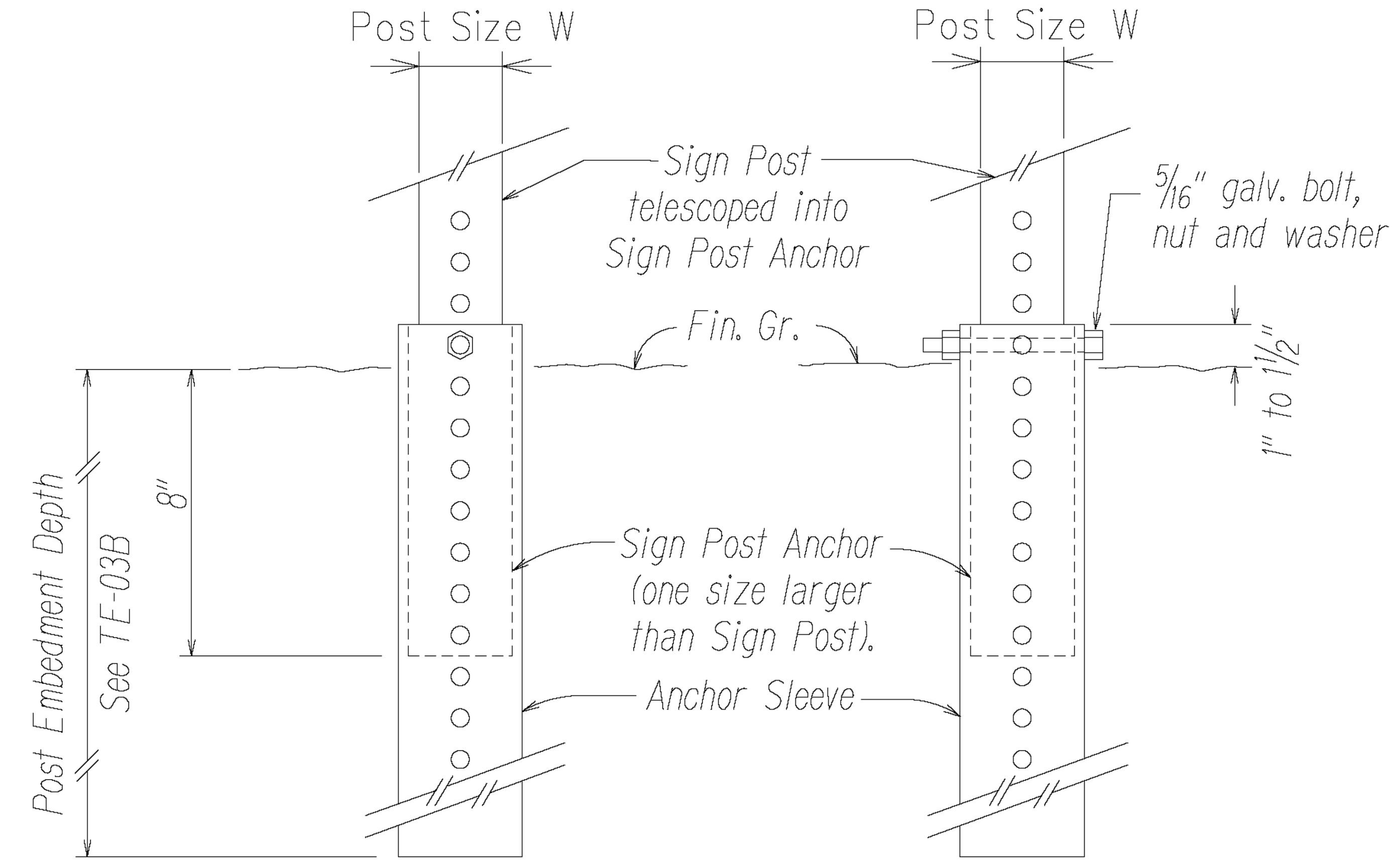
"A" or "A1"	"C"	"C1"
Less than 36"	6"	-
Greater than 36" and less than 48"	9"	19"
Greater than 48"	12"	24"

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

TYPICAL INSTALLATION
Not to Scale



TOP VIEW



BACK VIEW

SIDE VIEW

SIGN POST INSTALLATION

ANCHOR BASE DETAIL
Not to Scale

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 posts shall be 12 gage 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 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.

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

3/22/12 td2.may/steve/new det/gstspmount

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Scale: Not to Scale   Date: April 2023

SHEET No. 1 OF 1 SHEETS

ADD.2S1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.3	43

GENERAL NOTES

1. The scope of work for this project includes reconstructing weakened pavement areas; cold planing; resurfacing; removing and disposing of existing pavement markers, object markers and, traffic signs; installing new pavement markers, object markers, traffic signs and milled rumble strip; curb extensions.
2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts.
3. The Contractor's attention is directed to the following Sections of the Standard Specifications: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 104.11 - Utilities and Services; and Section 645 - Work Zone Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
6. The exact locations and limits or areas to be excavated, reconstructed and cold planed shall be determined in the field by the Engineer.
7. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
8. All lanes shall be open to traffic during the hours from 5:00 AM to 9:00 PM. Only one lane of highway shall be closed at any other time. Night working hours are specified in Section 107 of the Special Provisions. Failure of the contractor to open all lanes of traffic during the times specified above shall result in assessment of liquidated damages as specified in Section 108.09 of the Special Provisions.
9. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Item No. 401.0410 - PMA Pavement, Mix No. IV and will not be paid separately.
10. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans.
11. Trimming and dressing of shoulder, sidewalk and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. Suitable materials shall include materials from roadway excavation, including topsoil and base material therefrom, and if necessary, additional materials from borrow outside the limits of the right of way. Asphalt concrete removed from cold planing, reconstruction and roadway excavation shall not be used for dressing of shoulder, sidewalk or bus turnout. All graded and dressed shoulders shall be considered incidental to various contract items and will not be paid separately.
13. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
14. The Contractor shall provide for access to and from all existing driveways, sidewalks and ADA access routes, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items, and will not be paid for separately.
15. All saw cutting work shall be considered incidental to Item No. 401.0410 - PMA Pavement, Mix No. IV and will not be paid for separately.
16. Removal and disposal of existing raised pavement markers as directed by the Engineer or shown on the plans, shall be considered incidental to various contract items.
17. Prior to his resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility & 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.
18. After completion of resurfacing, the Contractor and the Engineer will test for, and determine ponding areas (i.e. low spots within the resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas.
19. Contractor shall exercise extreme caution to preserve BENCHMARKS (Survey Monuments). Whenever the center of a Survey Monument is less than three (3) feet from the edge of construction, the Contractor shall retain a Licensed Land Surveyor to reference the location of said Survey Monument.

    Benchmarks that are disturbed or destroyed shall be restored under a Licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the new benchmark shall be sent to the Department of Transportation, Highways Division, Cadastral Engineering Section, for review and approval prior to construction.
20. Any work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.
21. All asphalt concrete materials from cold planing, reconstruction and roadway excavation operations shall become the property of the Contractor. The Contractor shall remove and dispose these materials and shall be considered incidental to the various contract items.
22. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Highways Division at telephone no. 241-3000.
23. Prior to commencing his operations, the Contractor shall contact the County of Kauai, Department of Water Operations Division (Phone No. 245-5444) and make arrangements for the Department to locate and mark the existing water facilities within the project limits, such as waterlines, valve boxes and manhole frame/covers (including ones that may have been inadvertently paved over on previous resurfacing projects). The tops of the existing valve boxes, manhole frame/covers, etc., shall be adjusted to match the new finished grades noted on the construction plans.
24. All workers within the State right-of-way who are exposed to either vehicles using the roadway or to construction equipment shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of ANSI/ISEA 107-2004. "Workers" is defined as people on foot whose duties place them with the State right-of-way, such as, but not limited to construction and maintenance forces, equipment operators, survey crews, utility crews, responders to incidents (e.g., EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and obstructed roadways.
25. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find. The Contractor shall immediately notify the Planning Department at (808) 241-4050 and State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary.
26. Prior to construction, the contractor shall contact the various utility agencies for location of existing utilities within the project limits. The Contractor shall locate and protect all existing utilities whether or not shown on the plans, Any costs incurred by damages to existing utilities will be borne by the Contractor. Contractor shall request from One-Call Center, Ph: 1-866-423-7287. The Contractor shall also call the County of Kauai, Department of Water, Ph: 245-5444 and the Wastewater Division, Ph: 241-6642 for toning waterlines and sewerlines respectively.
27. In order to avoid impacts to Hawaiian geese, a biologist familiar with the nesting behavior of the Hawaiian goose survey the area prior to the initiation of any work, or after any subsequent delay in work of three or more days (during which birds may attempt nesting). If a nest is discovered, work should cease immediately and the Contractor shall immediataly notify the office of the U.S. Fish and Wildlife Service at (808) 792-9423 for further guidance. Furthermore, all on-site project personnel should be apprised that Hawaiian geese may be in the vicinity of the project at any time of the yrear. If a Hawaiian goose (or geese) apeears within 100 feet of ongoing work, all activities should be temporarily suspended until Hawaiian goose (or geese) leaves the area of its own accord. This work shall be cosidered incidental to Force Account Item No. 671.1000 - Protection of Seabirds and will not be paid separately.

LEGEND

	Reconstruction Areas		Existing Metal Guardrail
	Cold Planing Areas & Resurfacing Limits		New Metal Guardrail
			Adjusted and/or Relocated Metal Guardrail
pp	Existing Power Pole	fh	Existing Fire Hydrant
emh	Existing Electric Manhole	—s—12—	Existing Sewer Line
EMH	Adjusted Elec. MH Frame/Cover	—S—12—	New 12" Sewer Line
tspb	Existing Traffic Signal Pullbox	smh	Existing Sewer Manhole
tmh	Existing Telephone Manhole	SMH	Adjusted Sewer Manhole
TMH	Adjusted Tel. MH Frame/Cover	SMH	New Sewer Manhole
tpb	Existing Telephone Pullbox	mon.	Existing Monument
—w—12—	Existing 12" Water Line	MON.	Adjusted Monument
wmh	Existing Water Manhole	MON.	New Monument
WMH	Adjusted Water MH Frame/Cover	----d--24---	Existing 24" Drain Line
av	Existing Water Air Valve	sdmh	Existing Storm Drain Manhole
AV	Adjusted Water Air Valve	SDMH	Adjusted Storm Drain Manhole
wv	Existing Water Valve Box	gdi	Existing Grated Drop Inlet
WV	Adjusted Water Valve Box	GDI	New Grated Drop Inlet
wm	Existing Water Meter Box	GDI	Adjusted/Reconstructed Drain Inlet or Replaced Steel Grate
WM	Adjusted Water Meter Box		
WM	New Type "X" Water Meter Box		
	Existing Traffic Sign		
	New Traffic Sign		

DATE	REVISION
4/21/23	1 – Revise Note No. 21

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

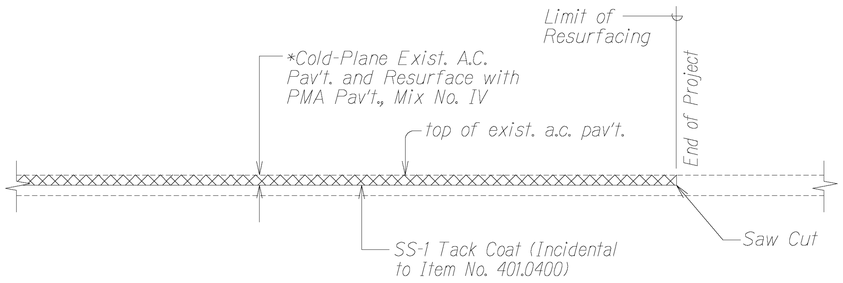
Date: April 2023

SHEET No. 1 OF 1 SHEETS

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

ADD.3

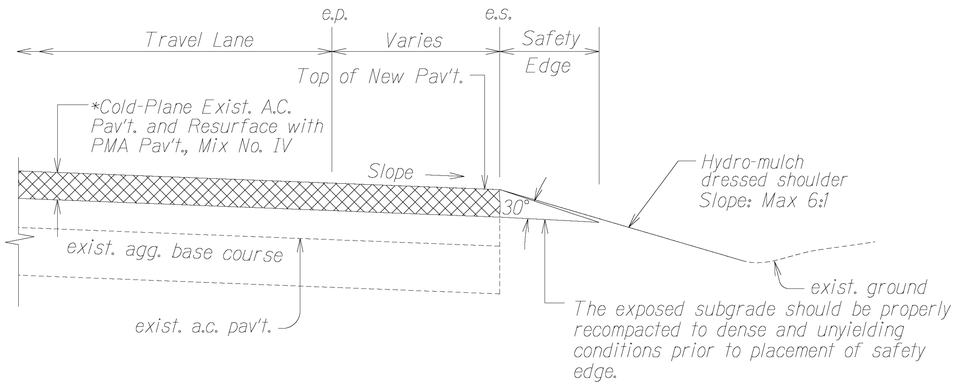
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.12	43



COLD PLANED TRANSITION TO EXISTING A.C. PAVEMENT AT BEGINNING AND END OF PROJECT

Not to Scale

*Depths for Cold-Plane and Resurfacing vary depending on the Stationing:
℄ Sta. 550+80 to ℄ Sta. 568+25 shall be 3".
℄ Sta. 568+25 to ℄ Sta. 605+38 shall be 2".



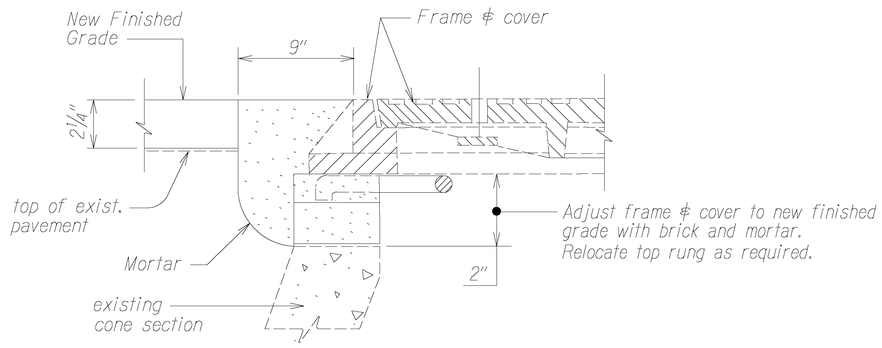
⚠ TYPICAL PAVEMENT EDGE DETAIL

Not to Scale

*Depths for Cold-Plane and Resurfacing vary depending on the Stationing:
℄ Sta. 550+80 to ℄ Sta. 568+25 shall be 3".
℄ Sta. 568+25 to ℄ Sta. 605+38 shall be 2".

⚠ Notes:

1. Contractor shall mount a device directly on the paver screed extension to provide a 30° beveled shoulder edge.
2. Construct safety edge at all edges of a.c. pavement. This work shall be considered incidental to Item No. 401.0410 - HMA Pavement Mix No. IV.



TYPICAL MANHOLE FRAME ℄ COVER ADJUSTMENT

(WATER, SEWER, STORM DRAIN ℄ UTILITY MANHOLES)

Not to Scale

NOTE: As an option, the Contractor may use an Adjus-to-Grade four-section extension ring with Safe-Tite seal, as manufactured by the National Utility Products Co. (NUPCO), or approved equal.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 11/04
	DRAWN BY X	
NOTE BOOK 63.def 4thfeb05.dgn	TRACED BY	
	DESIGNED BY X	
	QUANTITIES BY	
	CHECKED BY	

DATE	REVISION
4/21/23	⚠1 – Revise Typical Pavement Edge Detail
4/21/23	⚠1 – Additional Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS

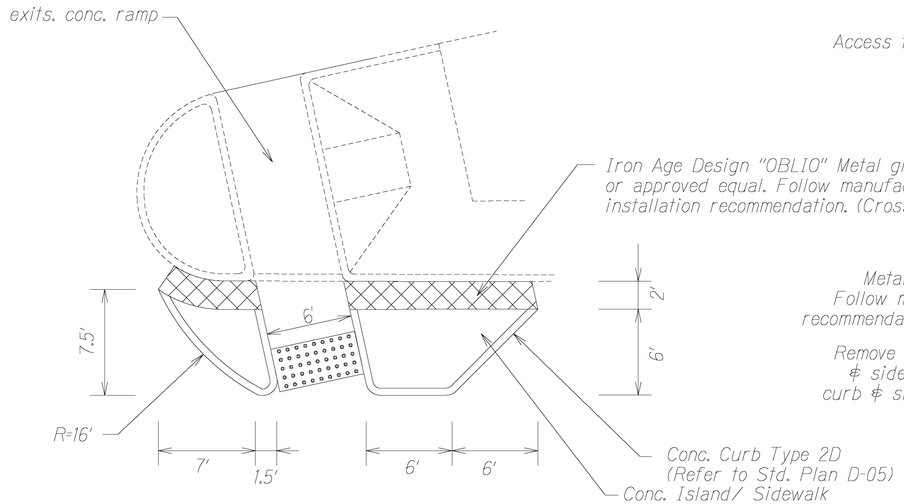
KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Scale: As Noted Date: April. 2023

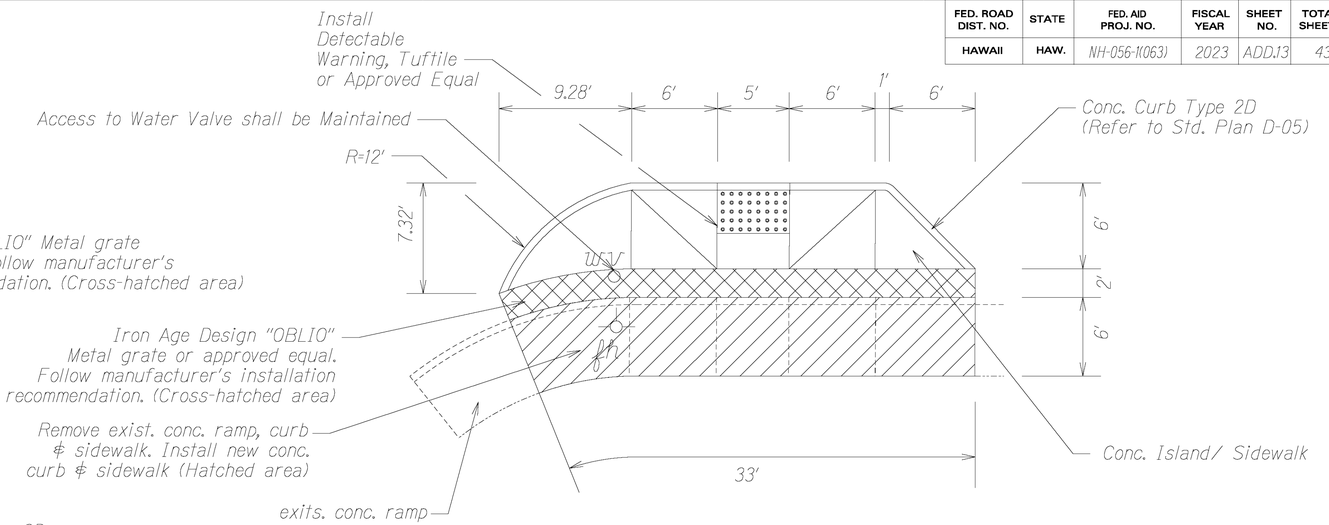
SHEET No. 5 OF 5 SHEETS

ADD.12

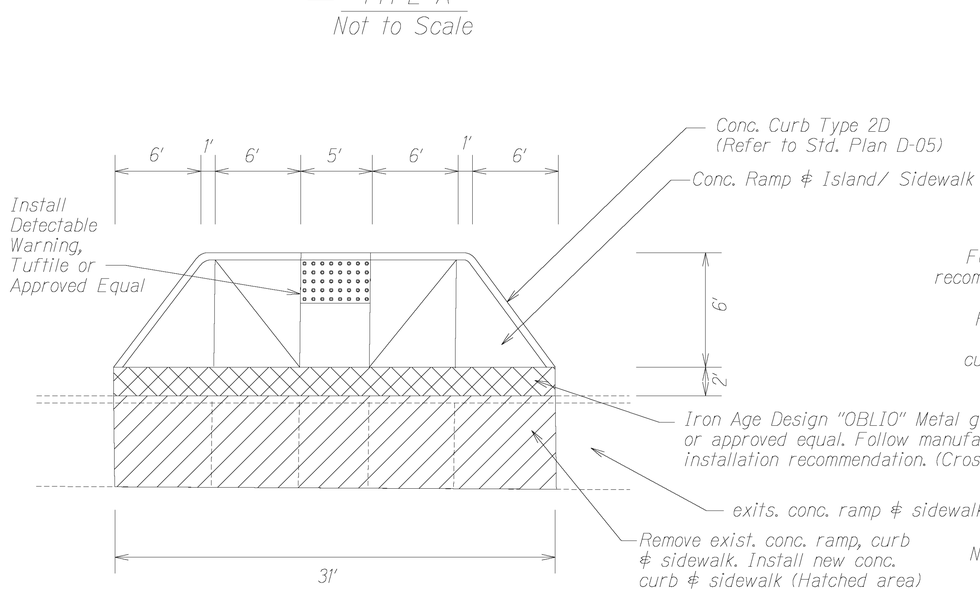
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.13	43



⚠1 TYPE A
Not to Scale



TYPE C
Not to Scale



TYPE B
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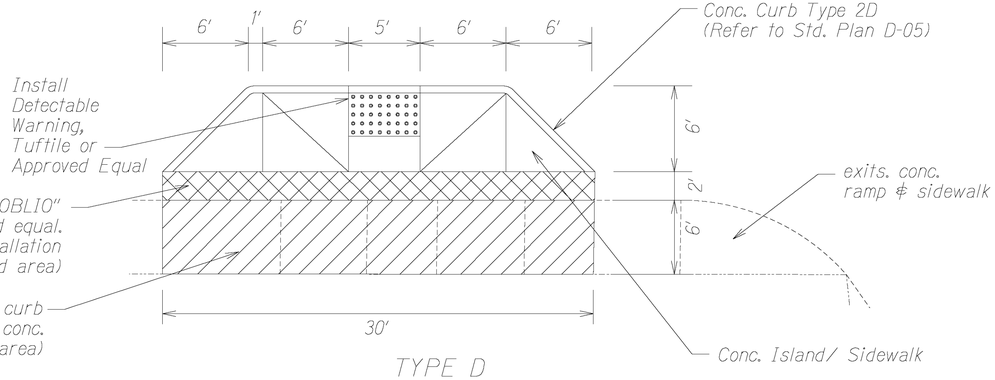


TYPE D
Not to Scale

Notes:

1. Additional details and notes on concrete island/sidewalk, refer to Std. Plan D-15.
2. Removal and disposal of existing concrete sidewalk curb and ramp shall be considered incidental to various contract items and will not be paid separately.
3. Metal Grate shall be cast grey iron, 100% recycled material, with a natural raw finish.
4. Finish grade at both ends of metal grate to flush with new or existing concrete.
5. Fabricate grates to comply with the ADA for maximum open size, offset of surfaces, and slip resistancet. Grates shall have a minimum slip resistance (Pendulum Test Value) of 5.5 or better, per ASTM E303.
   A. Maximum Space Between Adjacent Section: 1/4-inch
   B. Maximum Variation from Top Surface Plane of Adjacent Sections: 1/8-inch

DATE	REVISION
4/21/23	⚠1 – Revise Type A Detail

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAIL

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

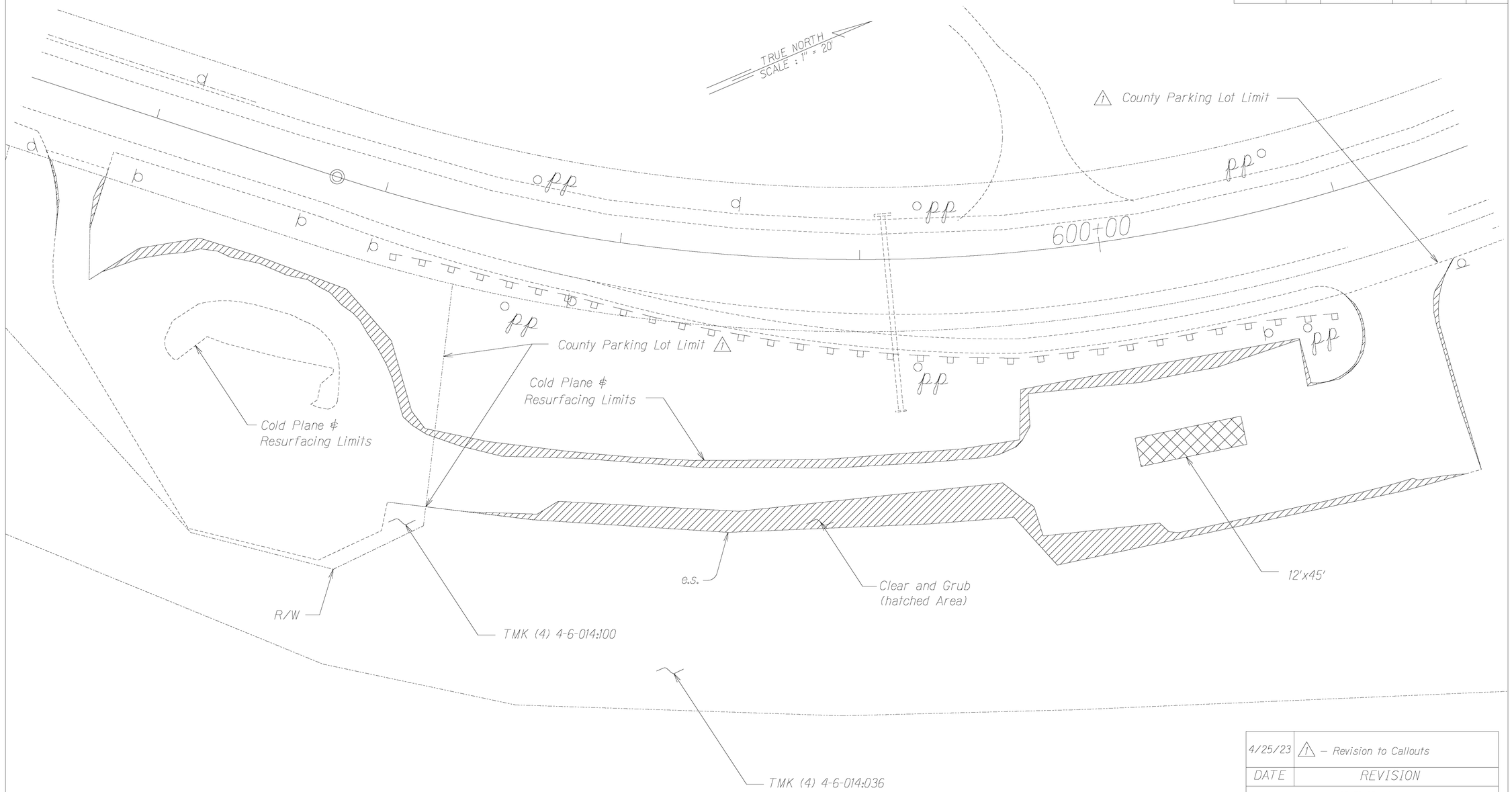
Scale: As Shown Date: April 2023

SHEET No. 1 OF 2 SHEETS

ADD.13

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
ea3.jef
&kuhiadd.dgn

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.20	43



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

0 10 20 40

DATE	REVISION
4/25/23	1 – Revision to Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Scale: 1" = 20' Date: Mar. 2023

SHEET No. 6 OF 6 SHEETS

ADD.20

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.23	43

1

A. STANDARD SPECIFICATIONS AND PLANS:

1. Hawaii Department of Transportation (HDOT), Hawaii Standard Specifications for Road and Bridge Construction, 2005.
2. HDOT Highways Division Design Branch - Standard Plans Dated 2008.

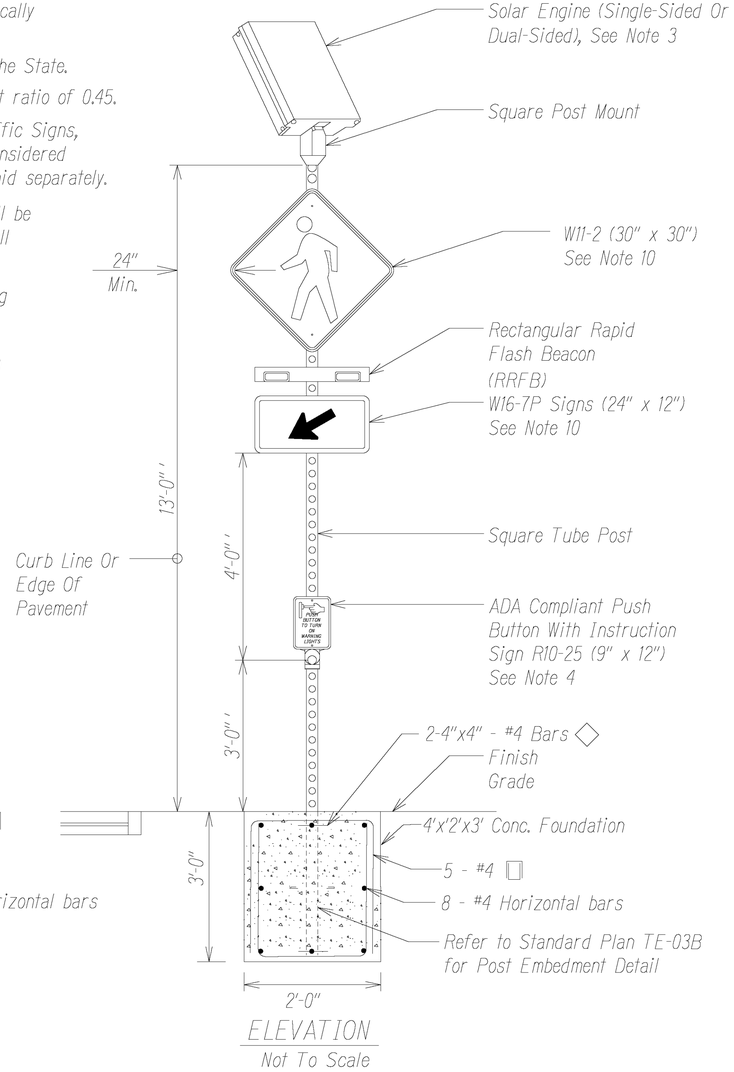
B. DESIGN SPECIFICATIONS

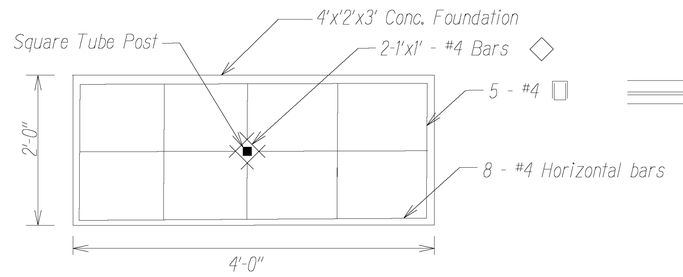
1. American Association of State Highway and Transportatrion Officials (AASHTO) 2020 "LRFD Bridge Design Specifications" 9th Edition as amended by HDOT document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures".
2. AASHTO LRFD Specifications for Structural Support for Highways Signs, Luminaires, and Traffic Signals, 1st Edition, including the 2017 interim Revisions.
3. HDOT document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures" and HDOT memorandum dated January 8, 2018 with subject title "Changes to Design Criteria for Bridges and Structures".

NOTES:

1. The Locations of The New Traffic Signal Standards with Rectangular Rapid Flashing Beacons (RRFB) And Pedestrian Push Buttons shall be staked out in the filed by the Contractor and approval of the locations shall be obtained from the Engineer prior to construction and installation.
2. RRFB System Shall Conform To The Requirements Of The 2009 Edition Of The "Manual On Uniform Traffic Control Devicies," Federal Highway Administration. The System Shall Conform To All Provisions Of The MUTCD, Interim Approval IA-21.
3. RRFB System Shall Be Solar-Powered With Spread Spectrum Wireless Communication. Solar Engine Shall Be Sized With Minimal Dimensions To Provide Sufficient Power Output To Operate the RRFB System.
4. Each Pushbutton Shall Be Installed With An Instruction Sign R10-25 (9" (9" x 12") That Reads, "Push Button To Turn On Warning Lights". See Sht. TS-4 For More Details.
5. RRFB Controller Equipment Shall Be Completely Self-Contained With No Connection To External Power Necessary.
6. The W16-7P Plaque And The Rapid-Flash LED Enclosure Shall Not Extend More Than 4" Horizontally Over Any Pedestrian Facility.
7. Contractor Shall Install Signs And Posts And Rectangular Rapid Flash Beacon And Push Button, Per The Manufacturer's Specifications.
8. Contractor Shall Submit Product Data For Review And Approval By The Engineer Prior To Purchasing And Installation.
9. The RRFB Installation Shall Comply With The Technical Conditions As Provided In The FHWA Technical Memorandum Regarding The Interim Approval For Optional Use Of Rectangular Rapid Flash Beacon.
10. Each Crossing Where There Is No Median Shall Have A Minimum Of Two Poles Each With Push Button Detection. Each Pole Shall Have Signs And Beacons Facing Both Sides (Double-Sided). At Locations With A Median, Provide Two Poles With Single-Sided Sign And Beacon And Provide A Third Pole In The Median With Double -Sided Signs And Beacons.
10. W11-2 Warning Signs And Supplemental Plaques W16-7P Shall Have A Fluorescent Yellow-Green Background With A Black Legend And Border. The Mixing Of Standard Yellow And Fluorescent Yellow-Green Backgrounds Is Not Allowed.
11. Contractor Shall Provide An On-Board User Interface (OBUI) To Locally Troubleshoot Or Reprogram the RRFB System.
12. All existing RRFB Assemblies to be replaced shall be returned to the State.
13. Concrete foundation shall be 4000 psi and a maximum water cement ratio of 0.45.
14. Furnishing and installation of Solar Panel, Square Tube Post, Traffic Signs, RRFB, ADA compliant push button and other hardwares shall be considered incidental to Item No. 631.0500 - RRFB Assembly and will not be paid separately.
15. Excavation, backfilling and construction of concrete foundation shall be considered incidental to Item No. 631.0500 - RRFB assembly and will not be paid separately.
16. Contractor shall provide shop drawings of RRFB Assembly including structural calculations that are stamped by a licensed Structural Engineer for review and approval by the Engineer. This work shall be considered incidental to Item No. 631.0500 - RRFB Assembly and will not be paid separately.
17. RRFB system shall be "Camarah R920-E" or approved equal.

Table 1	
Location	Height
(1)	20'-0"
(2)	20'-0"
(3)	20'-0"
(4)	15'-0"





PLAN
Not To Scale

ELEVATION
Not To Scale

1 RECTANGULAR RAPID FLASHING BEACON
Not To Scale

DATE	REVISION
4/21/23	1 – Revise Rectangular Rapid Flashing Beacon Details and Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING LEGEND, DETAILS, NOTES & SUMMARY

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)
Date: April 2023

SHEET No. 3 OF 4 SHEETS

ADD.23

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

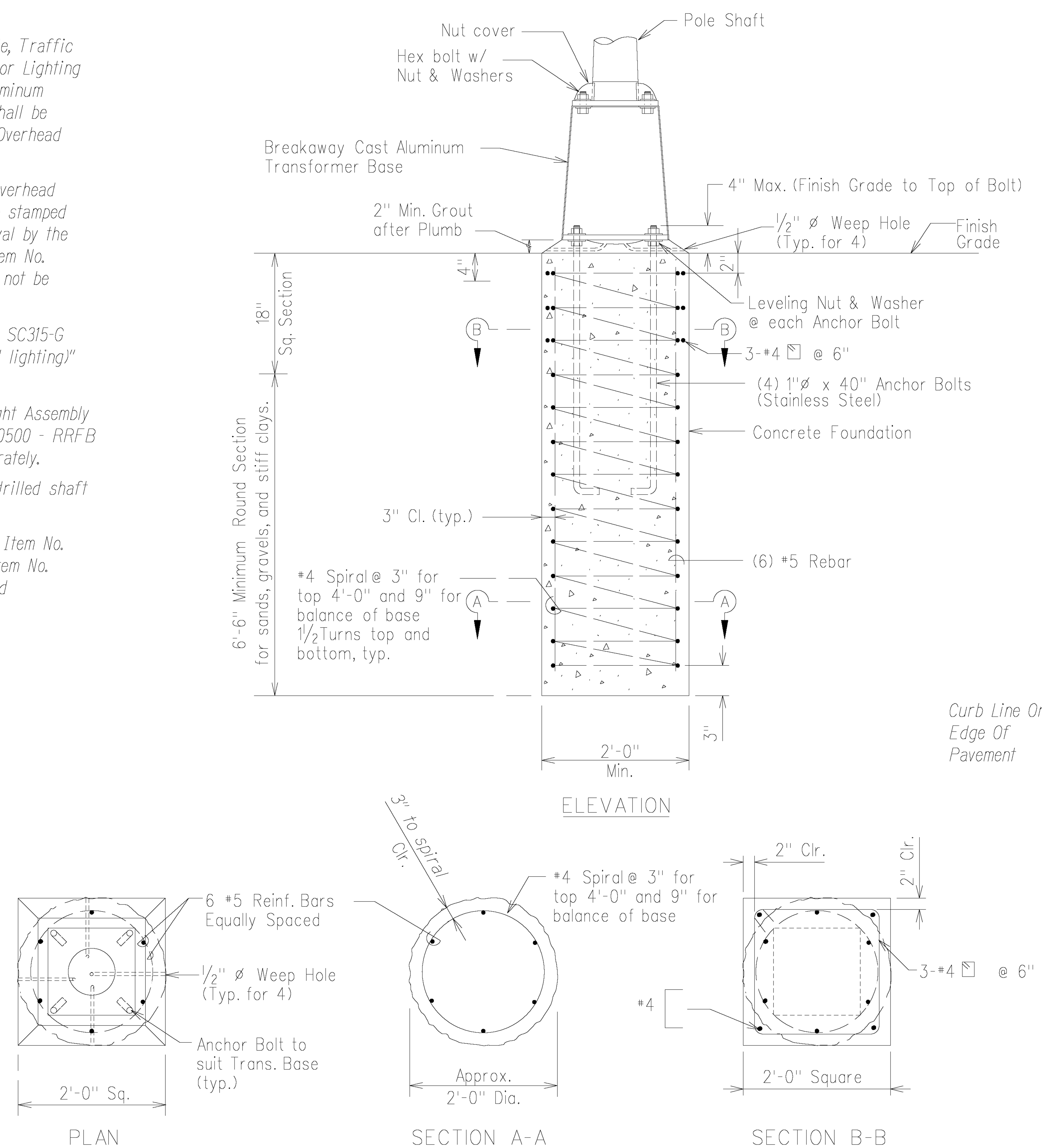
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.23S1	43

CONT. FROM PLAN SHEET. NO. AAD 23 NOTES:

18. Furnishing and installation of Solar panel, Aluminum Pole, Traffic Signs, RRFB, RRFB Controller Cabinet, Solar LED Outdoor Lighting Fixture, ADA compliant push button, Brakeaway Cast Aluminum Transformer Base, Anchor Bolts and other hardwares shall be considered incidental to Item No. 631.0510 - RRFB with Overhead Light Assembly and will not be paid separately.
19. Contractor shall provide shop drawings of RRFB with Overhead Light Assembly including structural calculations that are stamped by a licensed Structural Engineer for review and approval by the Engineer. This work shall be considered incidental to Item No. 631.0500 - RRFB with Overhead Light Assembly and will not be paid separately.
20. RRFB with overhead lighting systems shall be "Camarah SC315-G with 50 W solar panel and 35 Ah battery (with Overhead lighting)" or approved equal.
21. Furnishing and construction of RRFB with Overhead Light Assembly concrete foundation shall be paid under Item No. 511.631.0500 - RRFB with Overhead Light Assembly and will not be paid separately.
22. Refer to State Standard Specifications Section 511 for drilled shaft concrete properties.
23. Construction of concrete foundation shall be paid under Item No. 511.0100 - Furnishing Drilled Shaft drilling Equipment, Item No. 511.0200 - Drilled Shaft, and Item No. 511.0300 - Standard Excavation.
24. See Standard Plans TE-B01 for additional notes.

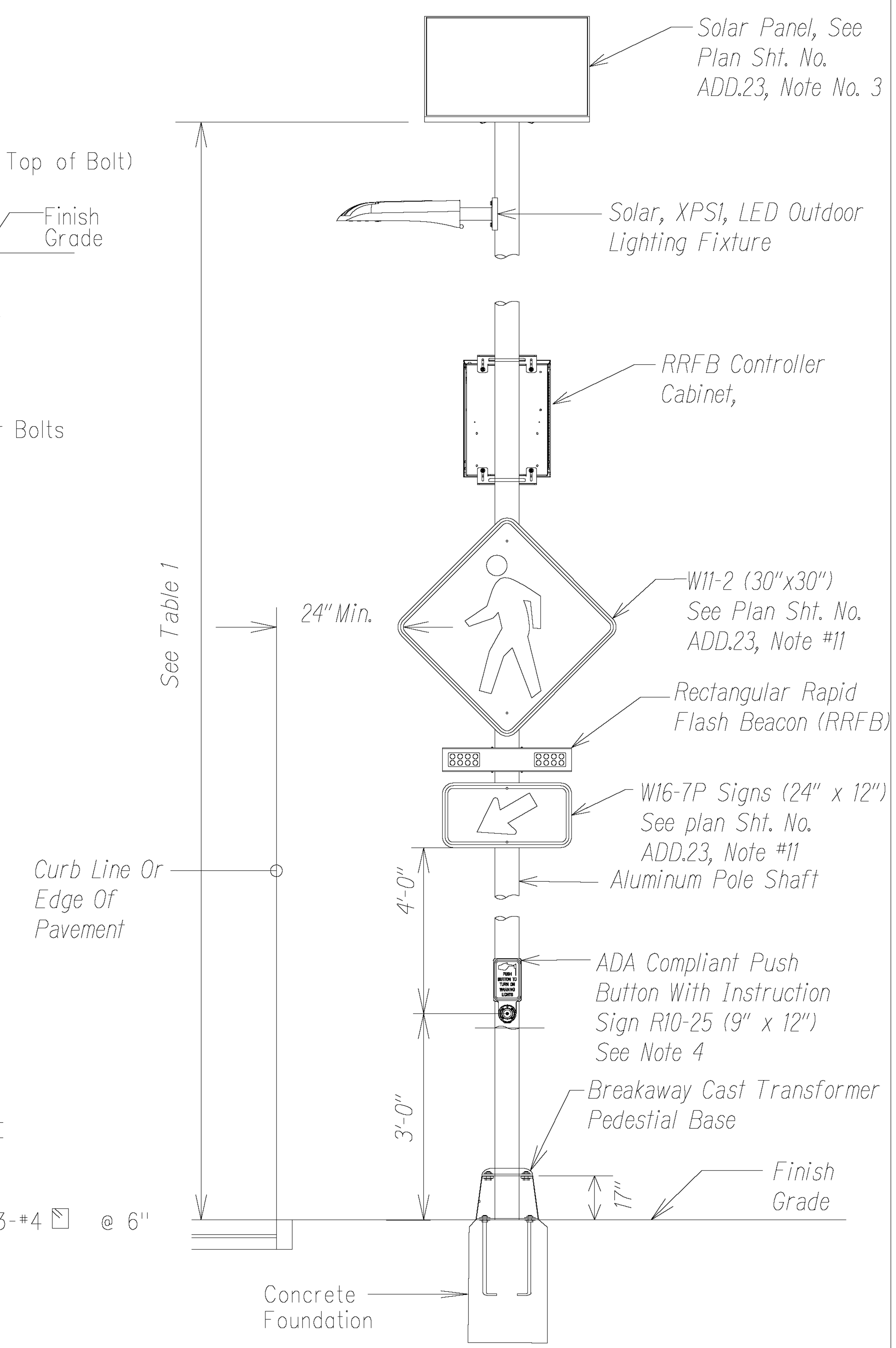
Table 1

Location	Height
1	20'-0"
2	20'-0"
3	20'-0"
4	15'-0"



TYPICAL CONCRETE FOUNDATION AND TRANSFORMER BASE DETAIL

Not To Scale



RECTANGULAR RAPID FLASHING BEACON WITH OVERHEAD LIGHT

Not To Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

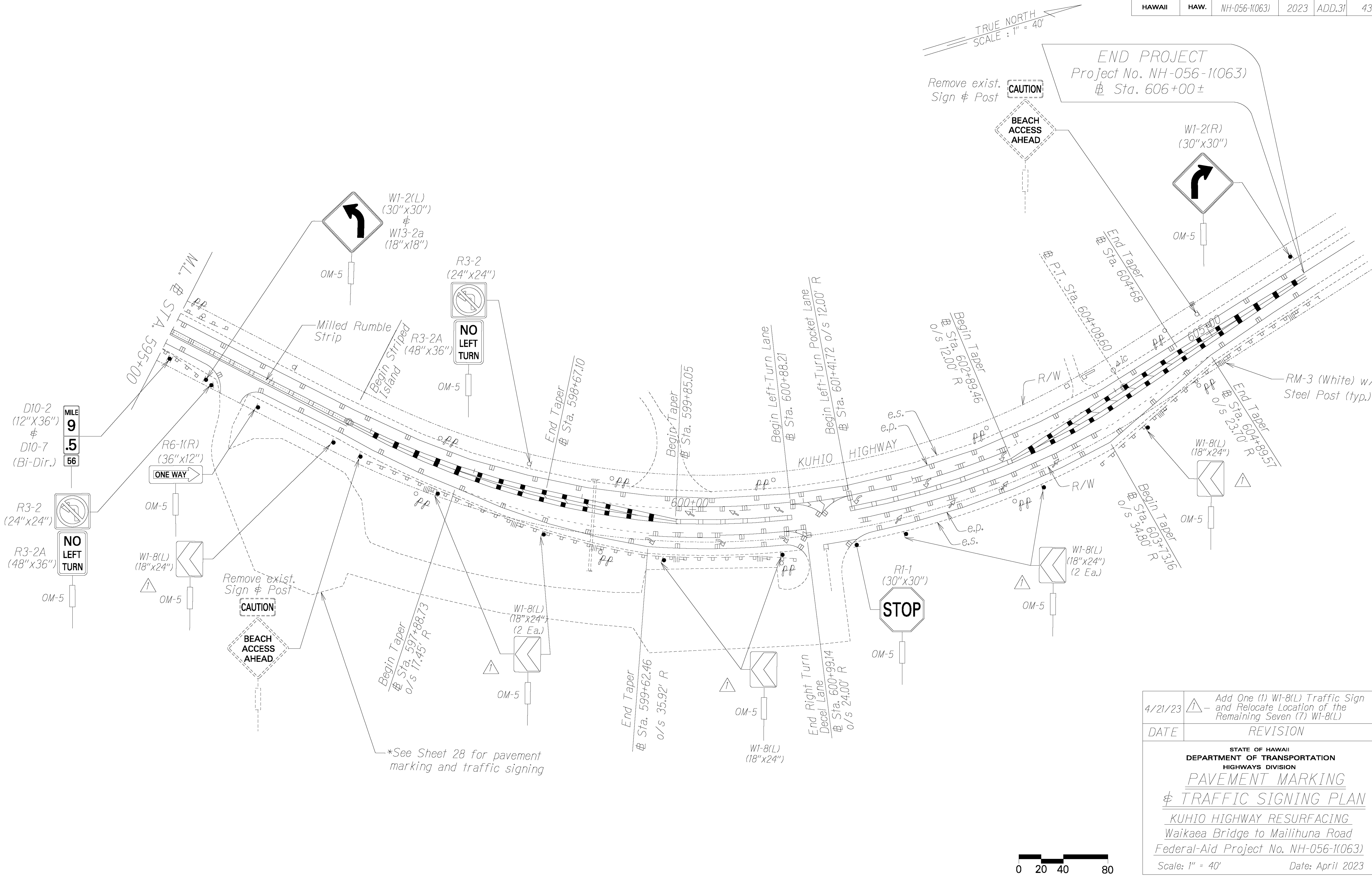
PAVEMENT MARKING LEGEND, DETAILS, NOTES & SUMMARY

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Date: April 2023

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.31	43



4/21/23	⚠ – Add One (1) W1-8(L) Traffic Sign and Relocate Location of the Remaining Seven (7) W1-8(L)
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & TRAFFIC SIGNING PLAN

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

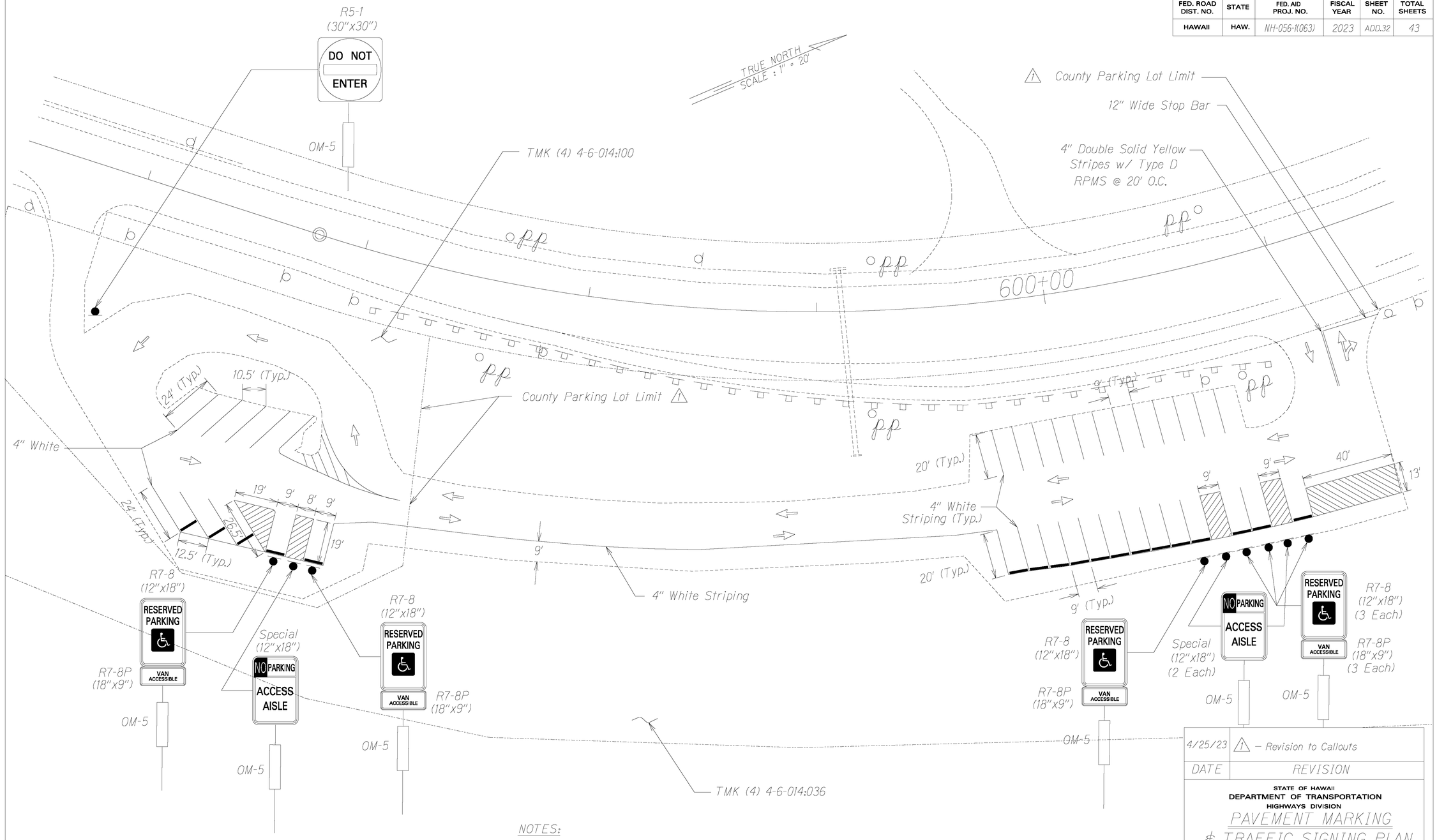
Scale: 1" = 40' Date: April 2023

SHEET No. 5 OF 6 SHEETS

ADD.31

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.32	43



NOTES:

1. Access aisles shall be at the same level as the parking spaces they serve.
2. Access aisle grades shall not exceed 2% slope in all directions.

0 10 20 40

DATE	REVISION
4/25/23	1 – Revision to Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & TRAFFIC SIGNING PLAN

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

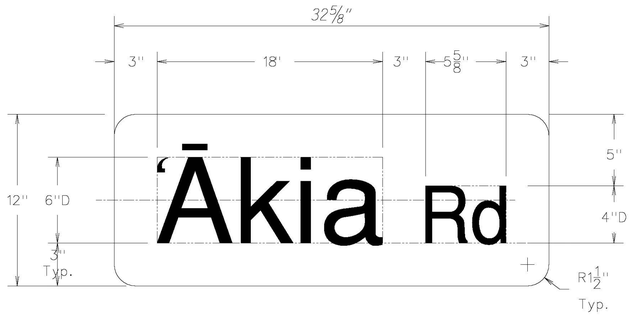
Scale: 1" = 20' Date: Mar. 2023

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
dd3.pdf	QUANTITIES BY	
khi1pb5.dgn	CHECKED BY	

SHEET No. 6 OF 6 SHEETS

ADD.32

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.34	43



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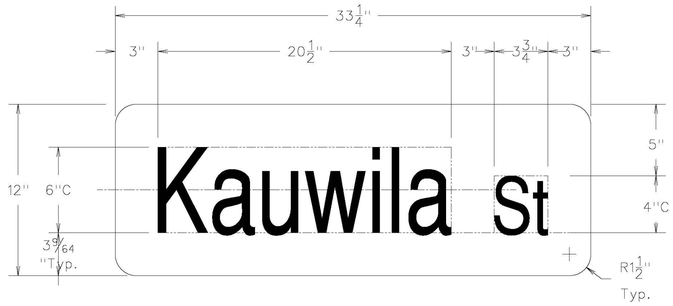
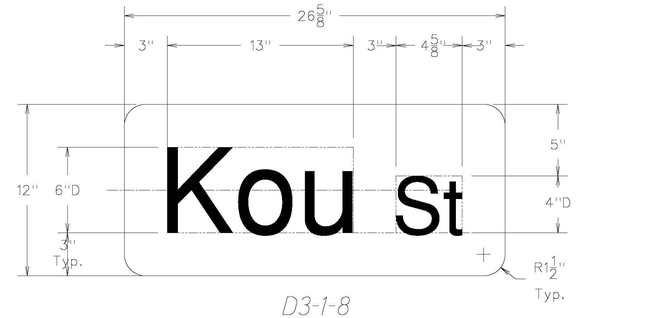


D3-1-5
Not to Scale



D3-1-8
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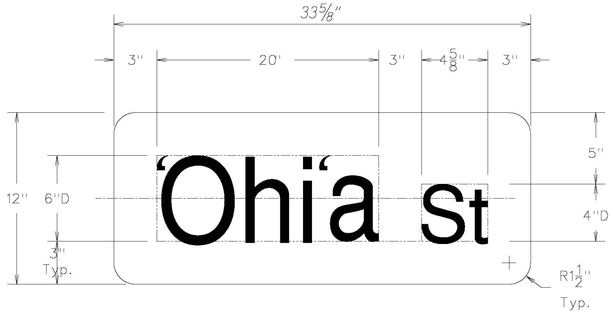

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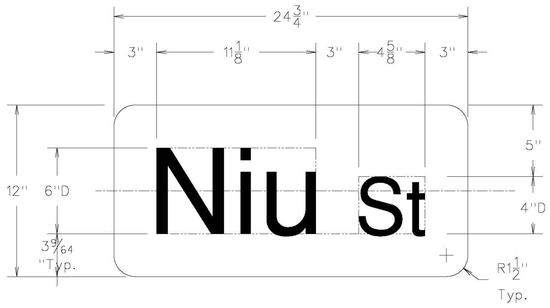
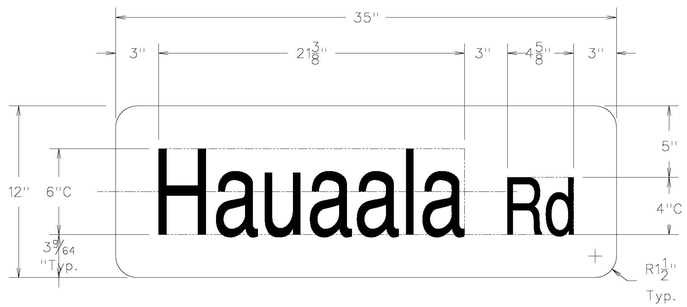
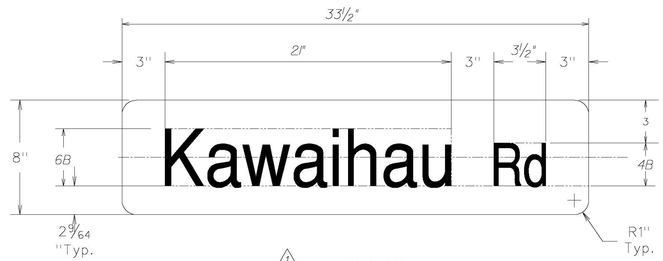


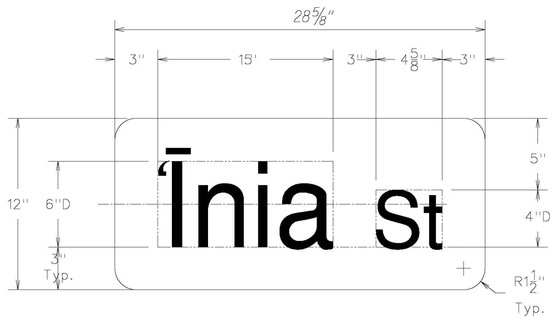
D3-1-6
Not to Scale



D3-1-9
Not to Scale



⚠1 D3-1-10
Not to Scale



D3-1-4
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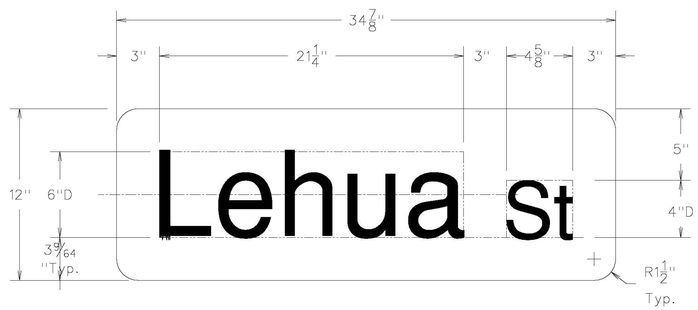


D3-1-7
Not to Scale

STREET NAME SIGN
Not to Scale

Lettering —— White
Background — Green

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY K	
NOTE BOOK ks3.pdf	TRACED BY	
	DESIGNED BY K	
QUANTITIES BY	CHECKED BY	
No. 4m1s6dl.dgn		

4/21/23	⚠1 – Revise D3-1-10
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN DETAIL

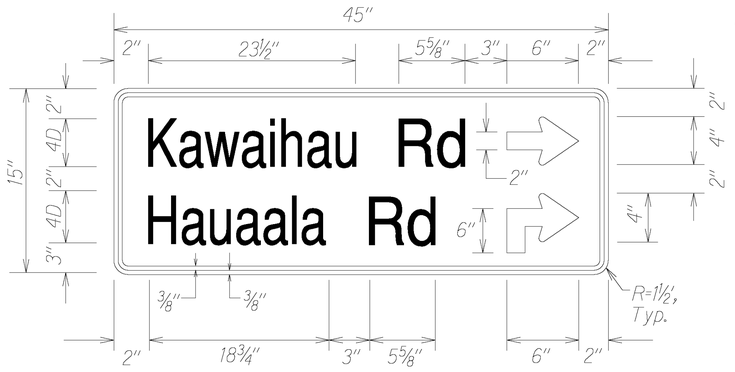
KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Scale: As Noted Date: April 2023

SHEET No. 1 OF 4 SHEETS

ADD.34

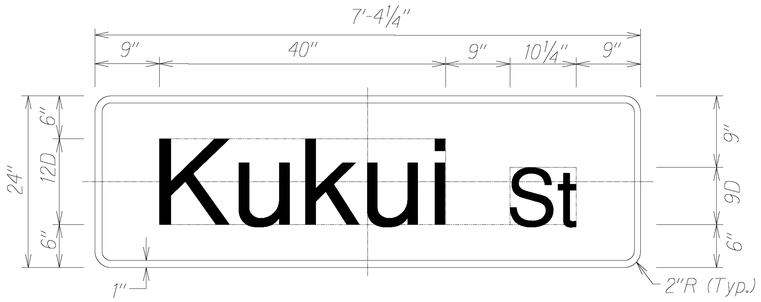
FED. ROAD DIST. NO.	STATE	FED.-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.35	43



W16-8-1
Not to Scale

ADVANCE STREET NAME SIGN
Not to Scale

Border —— Black
Lettering —— Black
Background — Yellow



D3-2-1
⚠1 Not to Scale

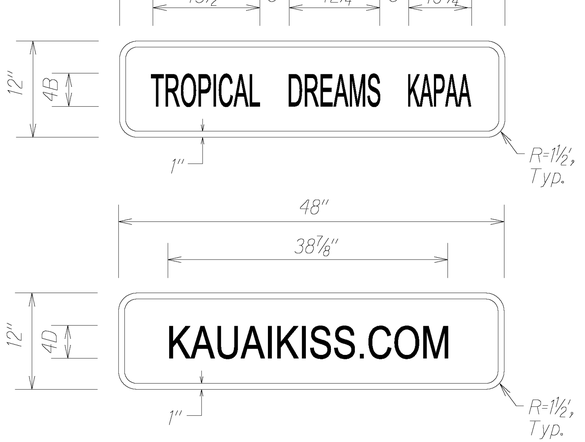
STREET NAME SIGN ON TRAFFIC SIGNAL MAST ARM
Not to Scale

Lettering —— White
Background — Green
Border —— White

Advance Street Name and Acknowledge sign shall be paid under Item No. 631.0400 - Supplemental Plaque and will not be paid separately.

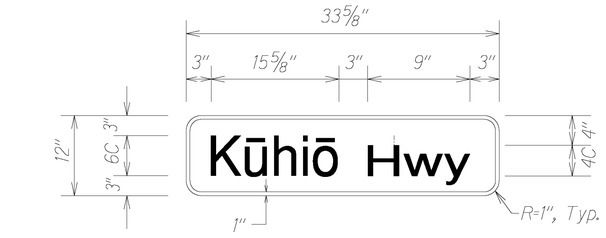
Sign Support: 2-2" Square Tube

D2-1
Not to Scale



Flat Panel:
Legend: Blue (Retroreflective)
Background: White (Retroreflective)

ACKNOWLEDGEMENT NAME SIGN
Not to Scale



D3-2-2
⚠1 Not to Scale

STREET NAME SIGN ON TRAFFIC SIGNAL POST
Not to Scale

Lettering —— White
Background — Green

Border —— Black
Lettering —— Black
Background — White

D2-2
Not to Scale

DATE	REVISION
4/21/23	⚠1 – Revise D3-2-2
4/21/23	⚠1 – Revise D3-2-1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN DETAIL

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Scale: As Noted Date: April 2023

SHEET No. 2 OF 4 SHEETS

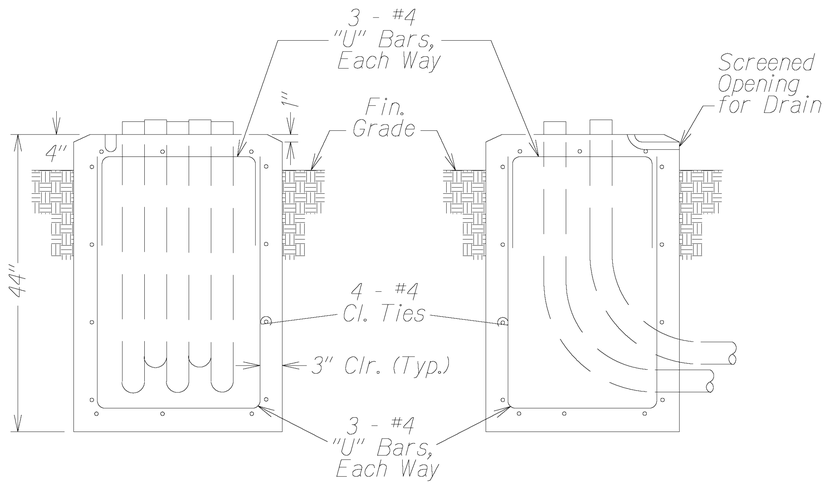
ADD.35

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.41	43

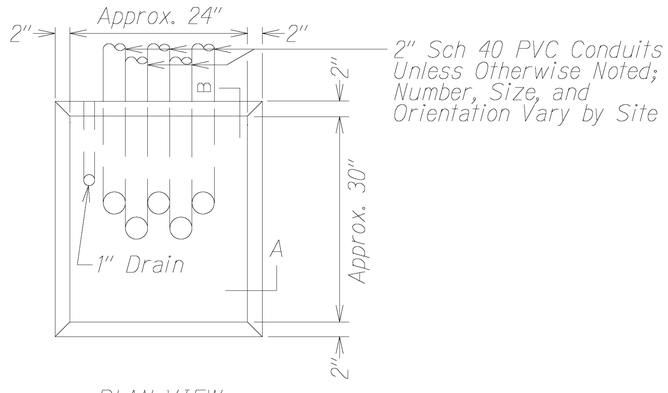
CONCRETE BASE NOTES:

1. Concrete shall be Class "B".
2. Conduit orientation and details are shown on Layout Plan.
3. Conduits shall have belled ends extending no more than 2" above the Base.
4. Conduit bends and drain are incidental to the Concrete Base.
5. All exposed surfaces of the Concrete Base shall have a Class 2, rubbed finish.



⚠1 SECTION "A"

SECTION "B"



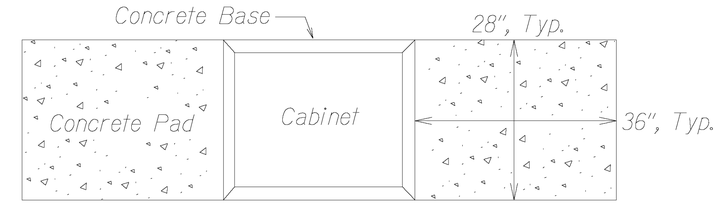
PLAN VIEW

TYPE "D" CONCRETE BASE

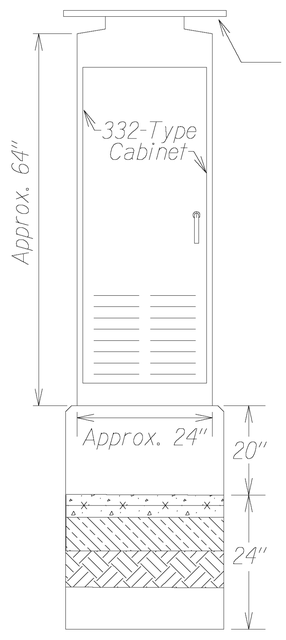
Not to Scale

CABINET NOTES:

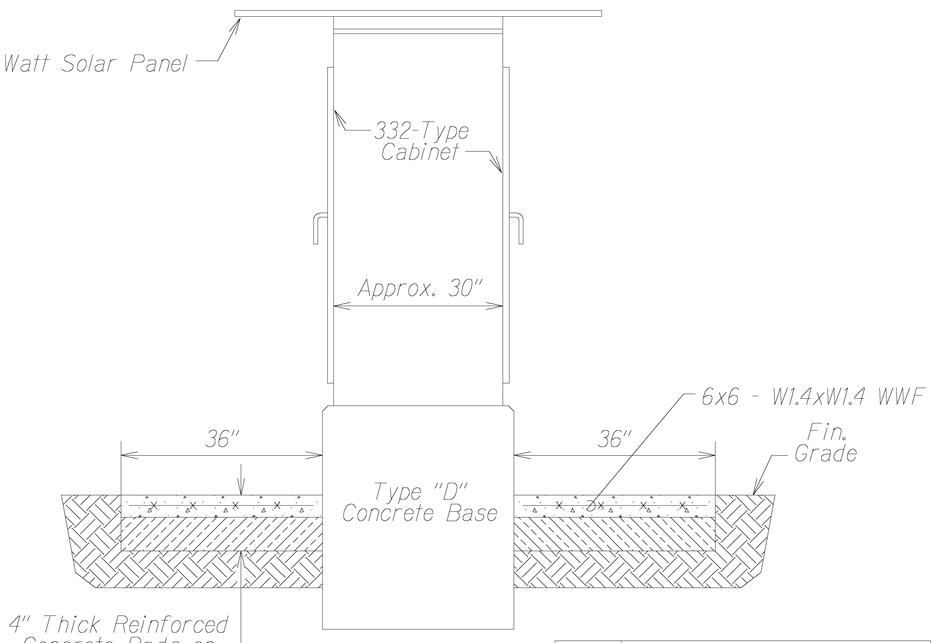
1. Cabinet shall be oriented so that closed doors are perpendicular to the road.
2. Work pads shall be Class "B" concrete and shall allow view of traffic with doors open.
3. Conduits shall have belled ends installed on their ends inside the Cabinet.
4. With belled ends installed, conduits shall extend no more than 2" above the Base.
5. Unused, spare conduits shall be provided with a pull line and be capped or sealed.
6. Stainless steel wedge anchors (1/2" X 4-1/2") shall be used to attach Cabinet to Base.
7. Grounding and bonding shall be provided that meets or exceeds the latest NEC requirements.
8. Solar power shall be connected to the DC power supply for the Cabinet electronics.
9. Surge protection and a power interrupt capability shall be provided for the Cabinet.
10. Silicone caulking compound shall be used to seal the Cabinet to the Base.
11. Key(s) to the Cabinet shall be provided to the State.



PLAN VIEW (Solar Panel not shown)



⚠1 FRONT VIEW



SIDE VIEW

332-TYPE CABINET

Not to Scale

DATE	REVISION
4/21/23	⚠1 – Revise Section "A"
4/21/23	⚠1 – Revise Front View

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM
CABINET AND FOUNDATION

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

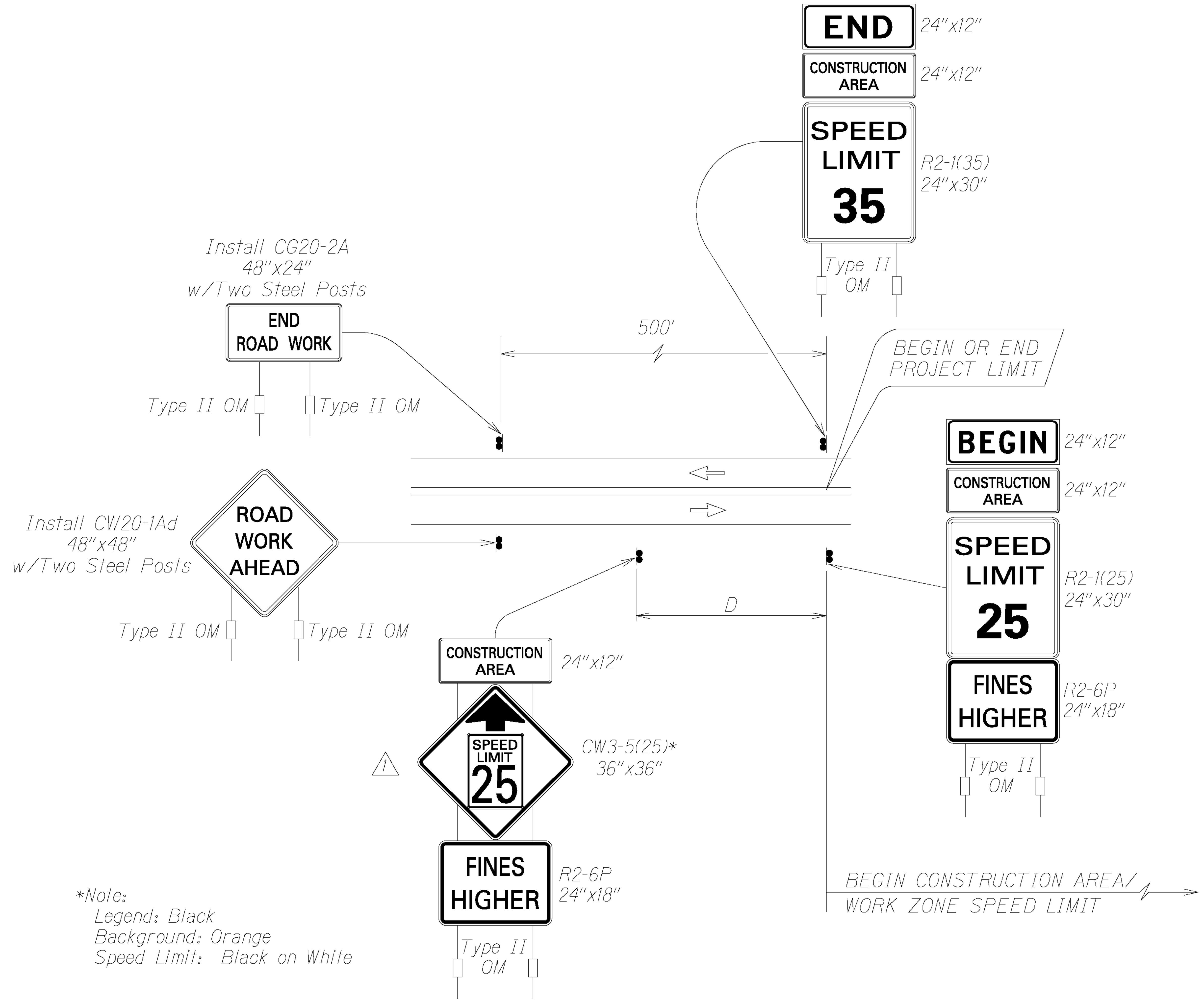
Scale: As Noted Date: April 2023

SHEET No. 4 OF 5 SHEETS

ADD.41

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
As Built
No. 4/16/2024

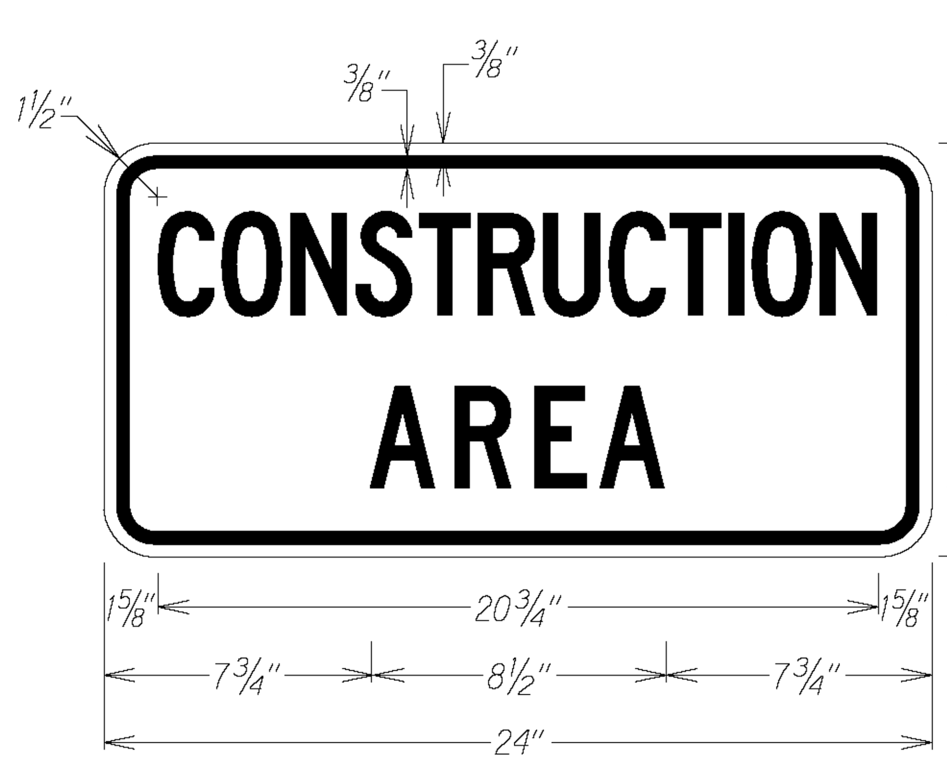
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-056-1(063)	2023	ADD.43	43



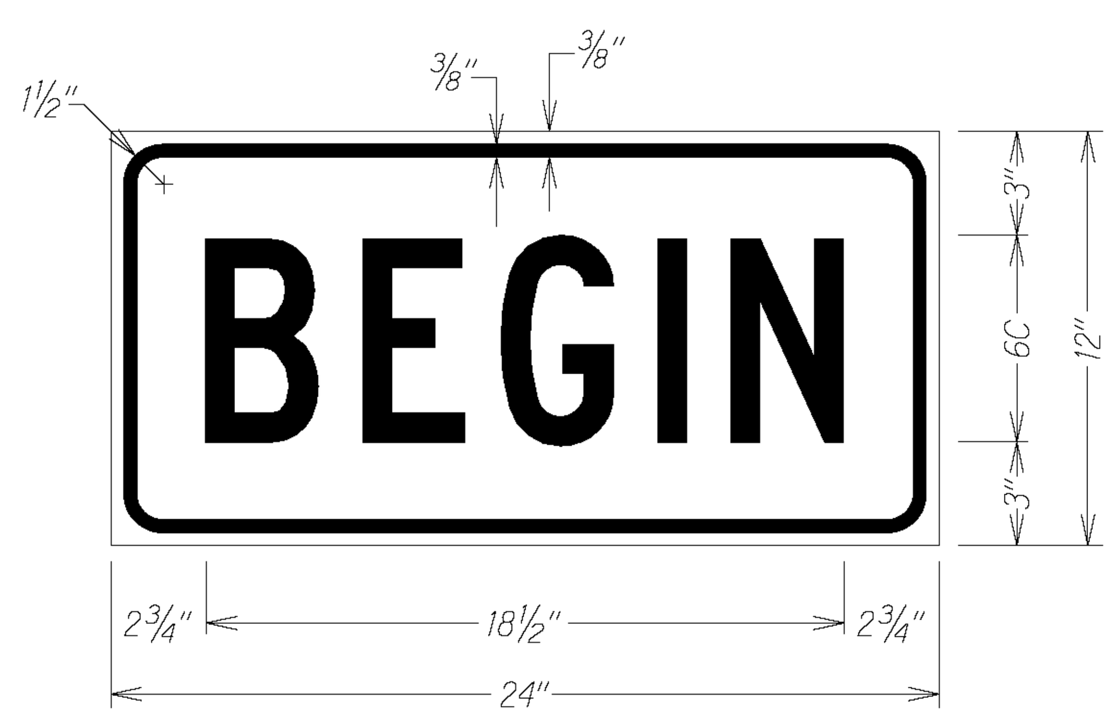
TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY

Work Zone Notes:

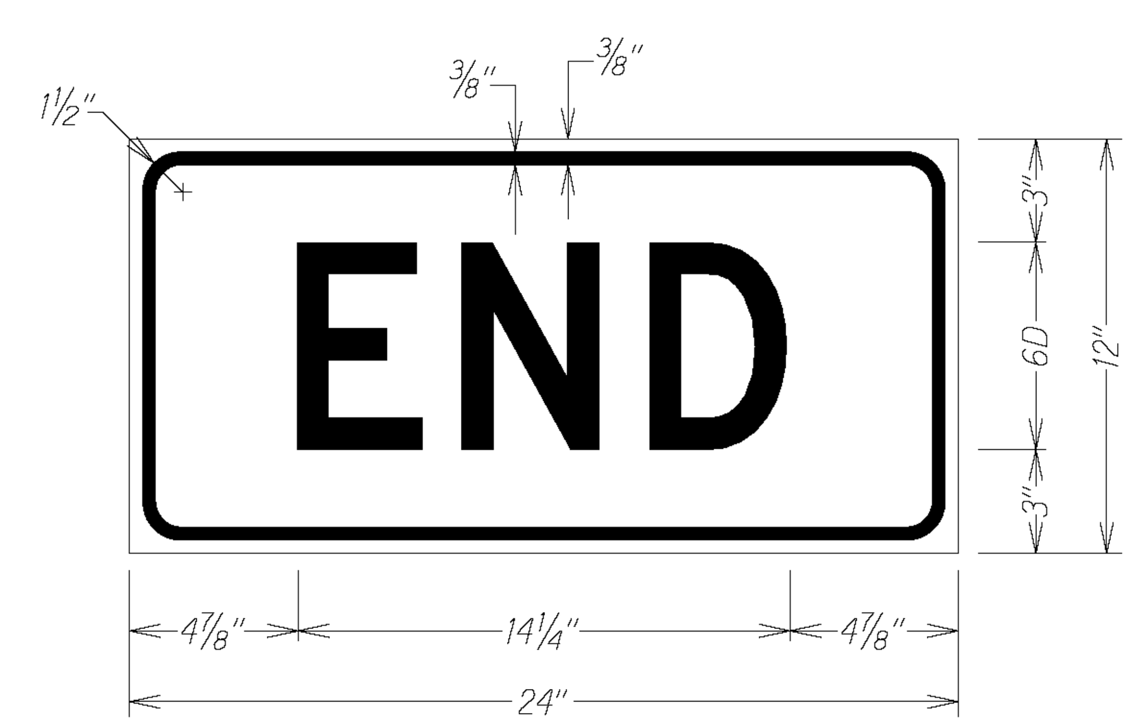
1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
2. All existing regulatory speed limit 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 R2-6P "FINES HIGHER" 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 and work zone speed limit assembly shall have a minimum of two (2) Type II OM. Installation of each Type II OM shall be considered incidental to various pay items and shall not be paid for separately.
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. Dates, times, locations and description of work for each sign location shall be provided to the engineer in writing.
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 various pay items and shall not be paid for separately.



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

DATE	REVISION
4/21/23	⚠ – Revise Typical Detail for Construction Signs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

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

KUHIO HIGHWAY RESURFACING
Waikaea Bridge to Mailihuna Road
Federal-Aid Project No. NH-056-1(063)

Not To Scale — Date: April 2023

SHEET No. 1 OF 1 SHEETS