STANDARD PLANS SUMMARY

HAWAII	HAW	NH-083-1(082)	2022	ADD. 2	99
FED. ROAD DIST. N O.	STATE	PROJ. N O.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

STANDARD PLAN NO.		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
	TRESTRESSED CONCRETE TILE DOTED OF DETRIES	03/31/01
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	01/27/17
D-05	TYPICAL DETAILS OF CURBS AND/OR GUTTERS	01/27/17
D-06 ·	TYPICAL DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY	01/27/17
D-07	CENTERLINE AND REFERENCE SURVEY MONUMENTS	05/31/07
D-08 ·	STREET SURVEY MONUMENT	05/31/07
D-06 D-15	CONCRETE SIDEWALK	11/01/21
D-15 D		01/27/17
4977-04 ME V2-05 1996 -20 44	P.C.C. BUS PAD	0564 85 B4 B4C 262556256 000 BV
D-17 •	P.C.C. BUS PAD	01/27/17
D-18 •	P.C.C. PAVEMENT LAYOUT	01/27/17
D-19 ·	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	01/27/17
D-20 ·	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	01/27/17
D-21 ·	P.C.C. LONGITUDINAL JOINT DETAILS	01/27/17
D-22	P.C.C. CONNECTION TO CURBS AND GUTTERS	05/31/07
D-23 •	JOINTS	01/27/17
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 -		Q1 40
3350 MA =	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.		DATE
H-01A	TYPE A CATCH BASIN	05/31/0
H-01B ·	TYPE B CATCH BASIN	05/31/0
H-01C ·	TYPE C CATCH BASIN	05/31/0
H-01D ·	TYPE D CATCH BASIN	05/31/0
H-01E	CATCH BASIN SECTIONS	05/31/0
H-02A ·	TYPE A1 CATCH BASIN	05/31/0
H-02B	TYPE B1 CATCH BASIN	05/31/0
H-02C	TYPE C1 CATCH BASIN	05/31/0
H-02D ·	TYPE D1 CATCH BASIN	05/31/0
H-02E	CATCH BASIN SECTIONS	05/31/0
H-03	TYPE A.B. AND C STORM DRAIN MANHOLE	05/31/0
H-04 ·	TYPE D STORM DRAIN MANHOLE	05/31/0
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/0
H-06	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/0
H-07	CATCH BASIN AND MANHOLE CASTINGS	05/31/0
H-08 ·	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/0
H-09 ·	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/0
H-10	TYPE A-9 OR A-9P STEEL FRAMES	05/31/0
H-11 ·	TYPE A-9 AND A-9P STEEL GRATES	05/31/0
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/0
H-13 ·	TYPE 61616P AND 1211214P GRATED DROP INLET	05/31/0
H-14 ·	TYPE 61214P GRATED DROP INLET	05/31/0
7.55.0 (15) (5)	THE BOAR BUTTER TOO SECTION SECTION SECTION SECTION OF THE SECTION OF THE PROPERTY OF THE SECTION OF THE SECTIO	05/31/0
H-15 ·	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL	03/31/0
II 4C	FRAME AND GRATES	OF /74 /O
H−16 ●	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME	05/31/0
11 47	AND GRATES TYPE CASAA CTEEL EDAMES AND SPATES	OF /74 /0'
H-17 ·	TYPE 61214 STEEL FRAMES AND GRATES TYPE 61214P STEEL GRATES	05/31/0
H-18 ·	TYPE 61614B STEEL FRAME AND GRATES	05/31/0
11 1 3	CEMENT RUBBLE MASONRY STRUCTURES	05/31/0
H-20	CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES	05/31/0
H-21 ·		05/31/0
H-23 ·	INLET/OUTLET STRUCTURE	
	INLET/OUTLET STRUCTURE	05/31/0
H-24 ·	FLARED END SECTION FOR CULVERTS	05/31/0
H-25 ·	FLARED END SECTION FOR CULVERTS	05/31/0
H-26 ·	CONCRETE SPILLWAY INLET	05/31/0
H-27 ·	CAP COUPLING DETAILS STANDARD JOINT	05/31/0
H-28 ·	REINFORCED CONCRETE COLLAR & JACKET	05/31/0
H-29 ·	UNDERDRAIN CLEANOUT STEEL FRAME AND COVER	05/31/0
H-30 ·	UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE	05/31/0
TE-01 •	SIGN HEIGHT AND LOCATION	07/11/0
TE-1A	SIGN INSTALLATION	07/11/0
TE-02A	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/0
TE-02B	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/0
TE-02C ●	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/0
TE-03A	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/0
TE-03B	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/0
TE-04 •	REGULATORY SIGNS	07/11/0
TE-05	WARNING SIGNS	07/11/0
TE-06	MISCELLANEOUS SIGNS	07/11/0
TE-07 •	CONSTRUCTION SIGNS	07/11/0
TE OO	MICCELLANDOUG INTERCECTION CIONS	07/11/0

MISCELLANEOUS INTERSECTION SIGNS

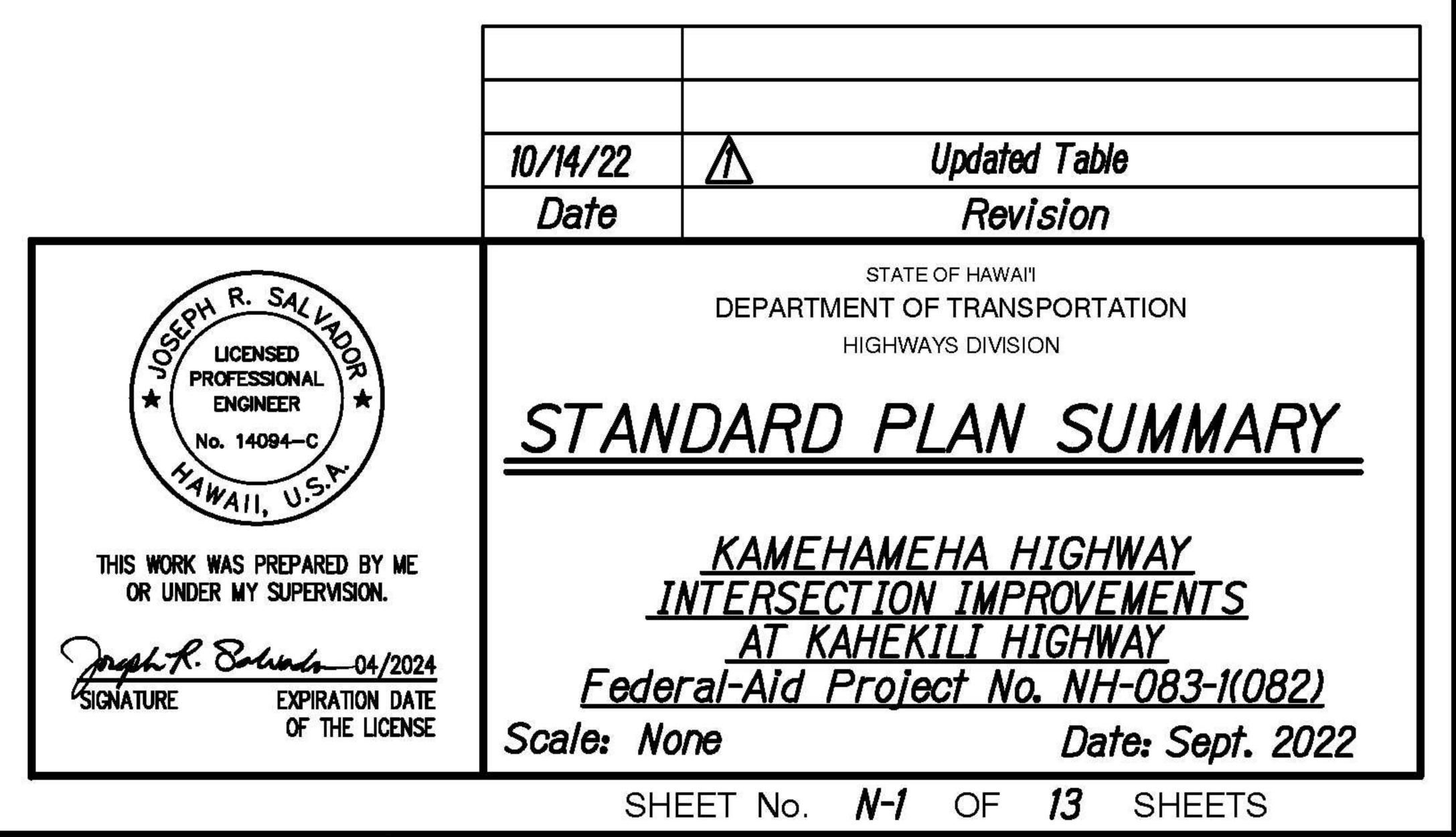
07/11/08

	DATE	STANDARD PLAN NO.		DATE
\dashv	05/31/07	TE-09 -	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	07/11/08
	05/31/07	TE-10 -	INTERSTATE ROUTE MARKER	07/11/08
	05/31/07	TE-11 •	STATE ROUTE MARKER AND AUXILIARY MARKERS	07/11/08
	05/31/07	TE-12	STATE ROUTE MARKER AND BORDER DETAIL FOR	07/11/08
	05/31/07		GUIDE SIGNS	
	05/31/07	TE-12A	ROUTE SIGN ASSEMBLIES	07/11/08
	05/31/07	TE-13 -	STREET NAME SIGN ON MAST ARM	07/11/08
	05/31/07	TE-14 •		07/11/08
	05/31/07	TE-15	OBJECT MARKERS	07/11/08
	05/31/07	TE-16 -	MILE POSTS	07/11/08
	05/31/07	TE-17A ·	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
	05/31/07	TE-17B -	CENTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
S	05/31/07	TE-17C -	CANTILEVER SIGN FRAME DETAIL	05/31/07
5	05/31/07	TE-17D -	CENTILEVER SIGN FRAME SECTION	05/31/07
850	05/31/07	TE-17E -	CENTILEVER SIGN FRAME DETAILS	05/31/07
	05/31/07	TE-18A -	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
	05/31/07	TE-18B -	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
	05/31/07	TE-18C -	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
	05/31/07	TE-18D -	TWO POST SIGN FRAME DETAILS	05/31/07
	05/31/07	TE-18E -	TWO POST SIGN FRAME DETAILS	05/31/07
	05/31/07	TE-10E -	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
	05/31/07	TE-19B -	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
				05/31/07
	05/31/07	TE-19C - TE-19D -	SPREAD FOOTING	05/31/07
	OF /74 /07		SIGN FRAME FOUNDATION SCHEDULE	
	05/31/07	TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
	OF /74 /07	TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
	05/31/07	TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
	05/31/07	TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
	05/31/07	TE-19D.5 ·	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
	05/31/07	TE-19E -	ANCHORAGE DETAILS	05/31/07
	05/31/07	TE-19F ·	ANCHORAGE DETAILS	05/31/07
	05/31/07	TE-19G -	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
	05/31/07	TE-19H -	LUMINAIRE WALKWAY SUPPORT	05/31/07
	05/31/07	TE-19J -	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
	05/31/07	TE-19K -	MISCELLANEOUS SIGN DETAILS	05/31/07
	05/31/07	TE-19L -	MISCELLANEOUS SIGN DETAILS	05/31/07
	05/31/07	TE-19M -	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
	05/31/07	TE-20 -	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
	05/31/07	TE-20A -	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
	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
	07/11/08	TE-22 -	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
	07/11/08	TE-23 ·	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
	05/31/07	TE-24 ·	SOLID ALUMINUM EXTRUDED SIGN PANEL AND	05/31/07
	05/31/07		ACCESSORY DETAILS	
	05/31/07	TE-25 -	GUIDE SIGNS LUMINAIRE MOUNTINGS	05/31/07
	05/31/07	TE-26 -	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
	05/31/07	TE-27 -	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
	07/11/08	TE-28	ENTRANCE AND EXIT PAVEMENT MARKINGS	07/11/08
	07/11/08	TE-28A	MISCELLANEOUS PAVEMENT MARKINGS	07/11/08
	07/11/08	TE-29	PAVEMENT ARROWS AND SYMBOLS	07/11/08
	07/11/08	TE-30	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
	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 ●)



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(082)	2022	ADD. 4	99

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES:

- 1. The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.
- 2. The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution standards and regulations of the State Department of Health. The City may require supplementary measures as necessary.
- 3. The Contractor's attention is directed to Chapter 448, Public Health Regulations, Department of Health, State of Hawaii, "Community Noise Control for Oahu" in which maximum allowable noise levels have been set. If the construction activities for this project will exceed the allowable noise levels, the Contractor will be required to obtain a permit from the Director of the Department of Health. The Contractor shall obtain a copy of Chapter 448 and become familiar with the noise level restrictions and the procedures for obtaining a Permit for construction activities.
- 4. The Contractor is to comply with the directions of the State of Hawaii Occupation Safety and Health Law (DOSH).

CITY & COUNTY OF HONOLULU GRADING NOTES:

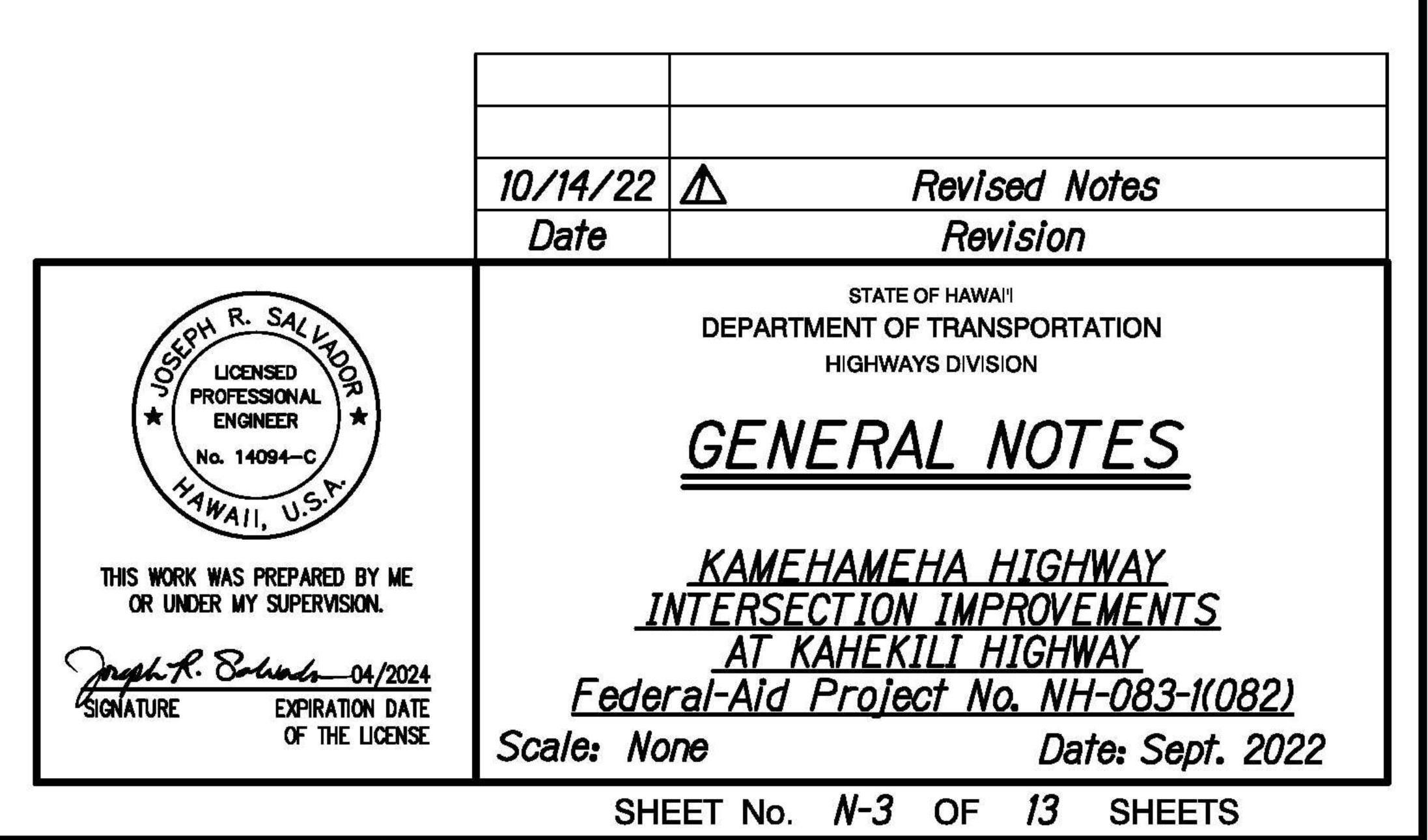
- 1. All grading work shall be done in accordance with Chapter 14, Articles 13, 14, 15 and 16, as related to Grading, Soil Erosion and Sediment Control of the Revised Ordinances of Honolulu, 1990, as amended, and Geotechnical Report by Geolabs, Inc. dated August 4, 2021.
- 2. No Contractor shall perform any grading operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
- 3. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the air pollution control standards contained in the Hawaii Administrative Rules, Title 11, Chapter 60.1, "Air Pollution Control".
- 4. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
- 5. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
- 6. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.


CITY & COUNTY OF HONOLULU GRADING NOTES, CON'T:

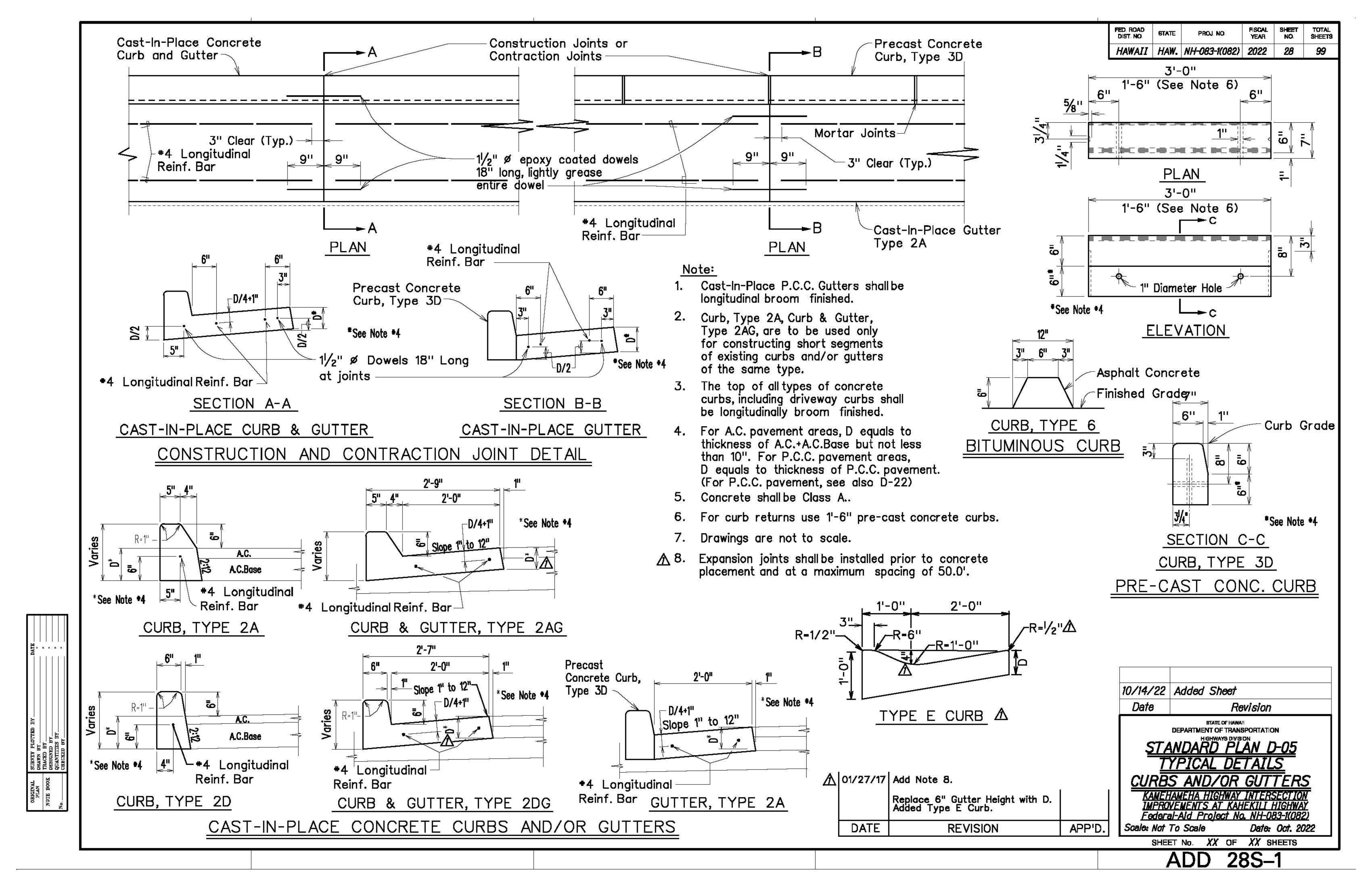
- 7. Fills on slopes steeper than 5:1 shall be keyed.
- 8. The City shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
- 9. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Director, D.P.P., provided such grading work is also in conformance with the community noise control standards contained in the Hawaii Administrative Rules, Title 11, Chapter 46, "Community Noise Control".
- 10. The limits of the area to be graded shall be flagged before the commencement of the grading work.
- 11. All grading operations shall be performed in conformance with the applicable provisions of the water quality and water pollution control standards contained in Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards", and Title 11, Chapter 55, "Water Pollution Control", and if applicable, the NPDES permit for the project.
- 12. Where applicable and feasible the measures to control erosion and other pollutants shall be in place before any earth moving phase of the grading is initiated.
- 13. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.
- 14. Temporary Erosion Control Procedures shall be submitted for approval prior to application for grading permit.
- 15. If the grading work involves contaminated soil, then all grading work shall be done in conformance with applicable State and Federal requirements.
- 16. The Contractor shall notify the Civil Engineering Branch, D.P.P. at 768-8084 to arrange for inspectional services and submit three (3) sets of approved Construction Plans seven (7) days prior to commencement of construction work. For City projects, the Contractor shall coordinate inspectional services with the responsible City agency.
- 17. Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Engineer, the Honolulu Police Department, the State Department of Land and Natural Resources-Historic Preservation Division (692-8015). In addition, for non-City projects, the Contractor shall inform the Civil Engineering Branch, D.P.P. (768-8084); and for City Projects, notify the responsible City agency.

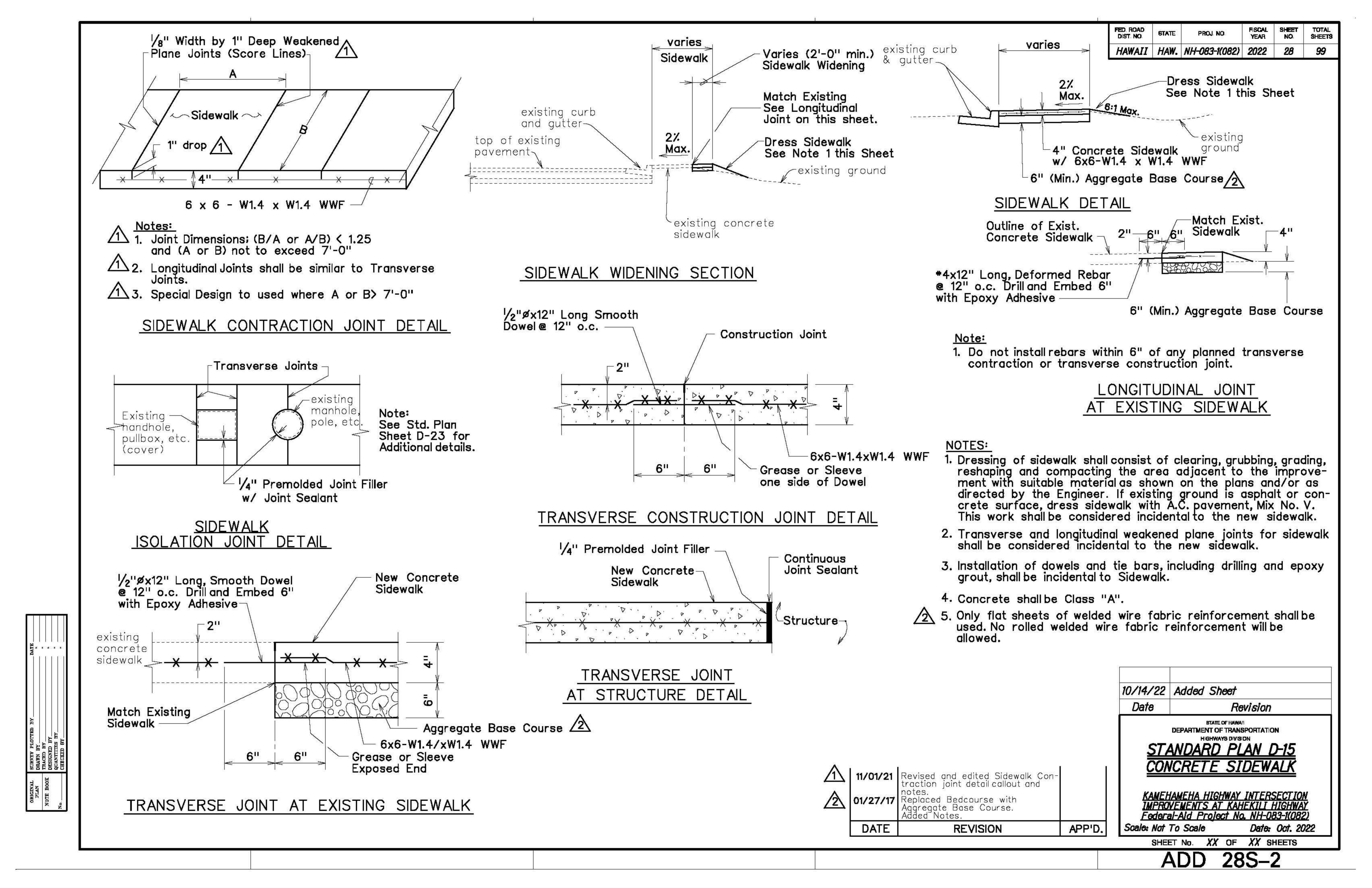
CITY & COUNTY OF HONOLULU GRADING NOTES, CON'T:

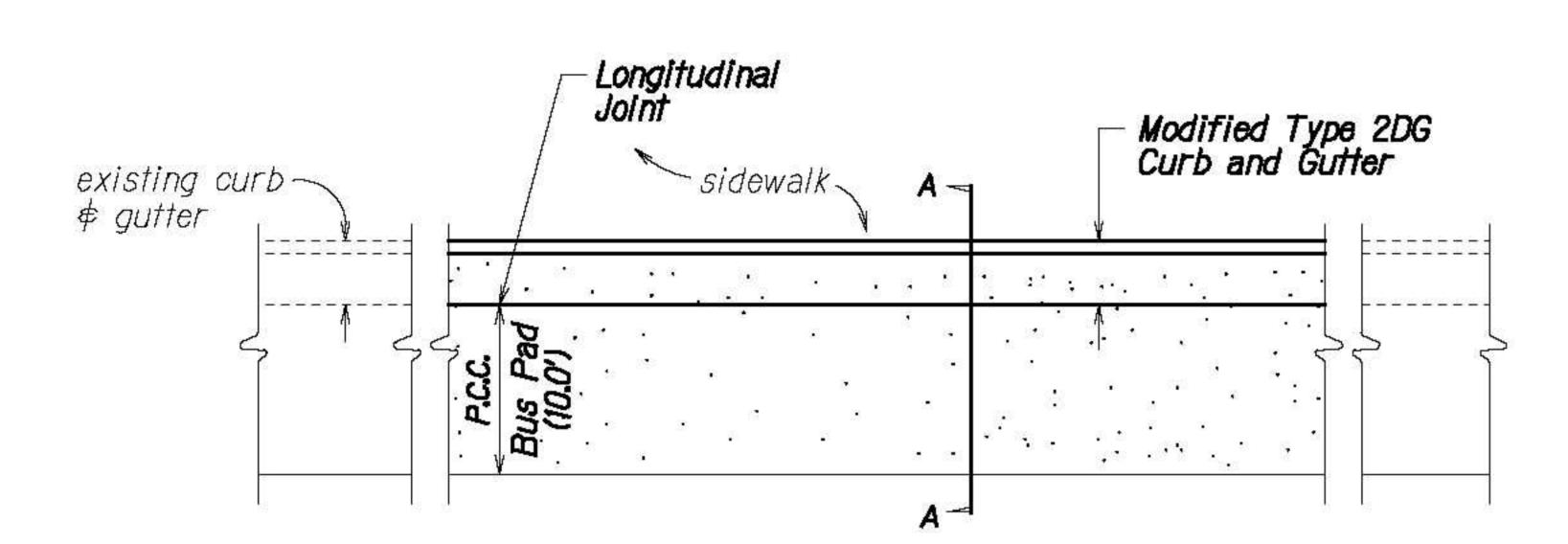
- 18. For all projects, which will disturb one (1) acre or more of land, the Contractor shall not start construction until a Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawaii, and has satisfied any other applicable requirements of the NPDES permit program. Also, for non-City and other non-governmental agency projects, the Contractor shall provide a written copy of the NGPC to the Permitting and Inspection Section, Civil Engineering Branch, D.P.P., at least seven (7) calendar days before the start of the construction. For City or other governmental projects, the Contractor should provide a written copy of the NGPC to the appropriate City department or governmental agency per their requirements.
- 19. All grading and construction work shall implement measures to ensure that the discharge of pollutants from the construction site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality standards.
- 20. Non-compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work shall commence immediately. All costs incurred shall be billed to the violator. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.







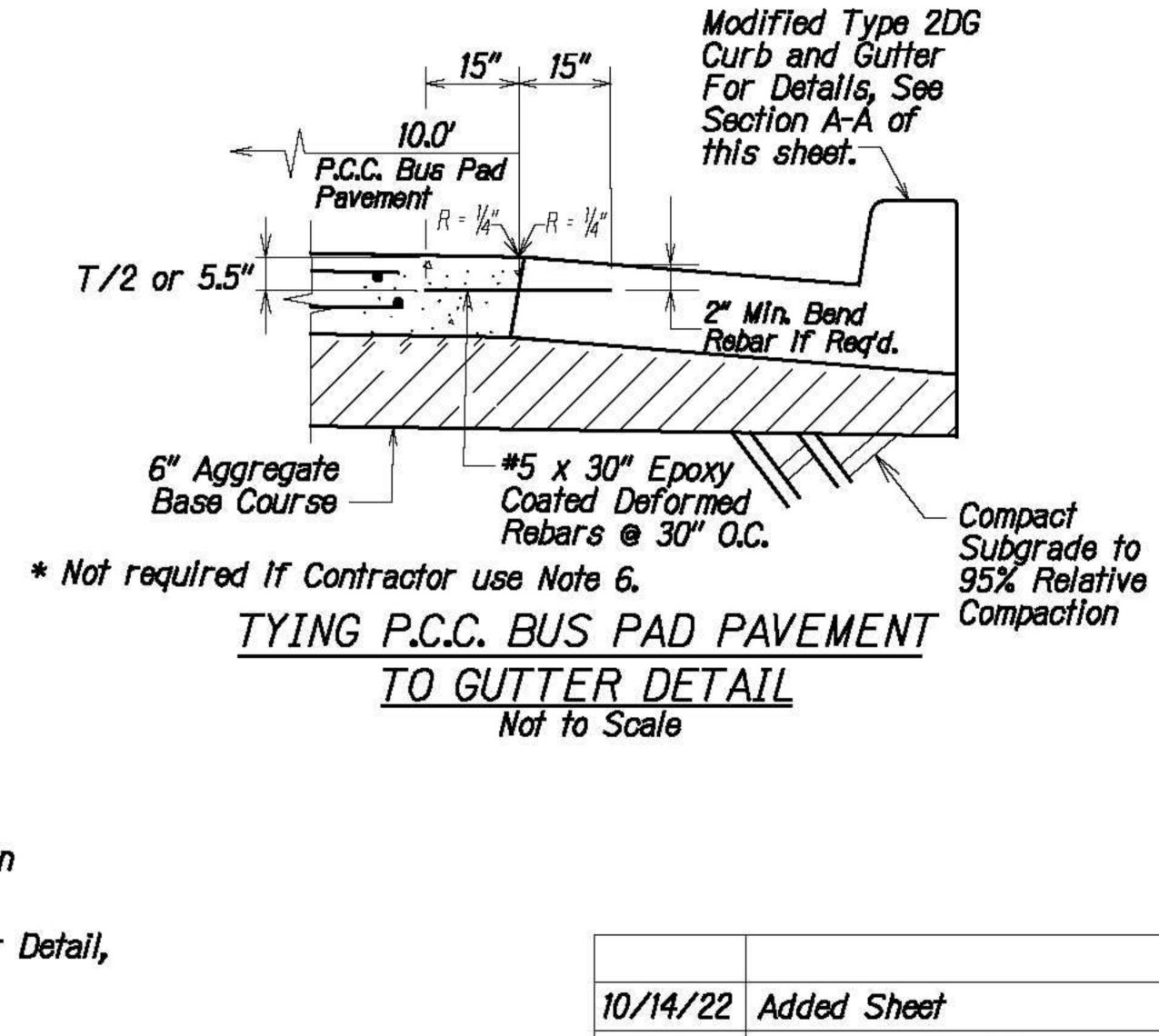




TYPICAL JOINT LOCATION AND LAYOUT PLAN FOR P.C.C. BUS PAD PAVEMENT Not to Scale

Notes:

- 1. Provide continuously reinforced Bus Pad without transverse construction joints. Transverse construction joints with load transfer devices or dowels are required for P.C.C. Bus Pad Pavement greater than 70 feet in length. Provide 3" clearance between the rebar and the edge of pavement.
- 2. Provide a constant grade match roadway cross slope (2% min.) on the New P.C.C. Bus Pad Pavement and match existing A.C. Pavement to the New Bus Pad within the transition area.
- 3. Epoxy coated reinforcement shall conform to AASHTO M 284, (ASTM A775).
- 4. Concrete shall attain a minimum 14-day flexural strength, fr-650 psi.
- 5. Roadway excavation pavement required for the installation of P.C.C. Bus Pad Pavement and disposal of excavated materials shall be considered incidental to P.C.C. Bus Pad and will not be paid for separately.
- 6. P.C.C. Bus Pad can be poured monolithically together with the Curb and Gutter and the rebar pattern can continue from the bus pad into the Curb and Gutter (Same rebar arrangement) provided the plan details and slopes are met.
- 7. Removal and Demolishing of existing Type 2DG Curb and Gutter shall be considered incidental to New Modified Type 2DG Curb and Gutter.
- 8. Forms shall be used for the concrete bus pad, and the A.C. should not be used as a form. Following the setting of the concrete, the forms should be removed and filled with properly compacted HMA Pavement Mix No. IV.



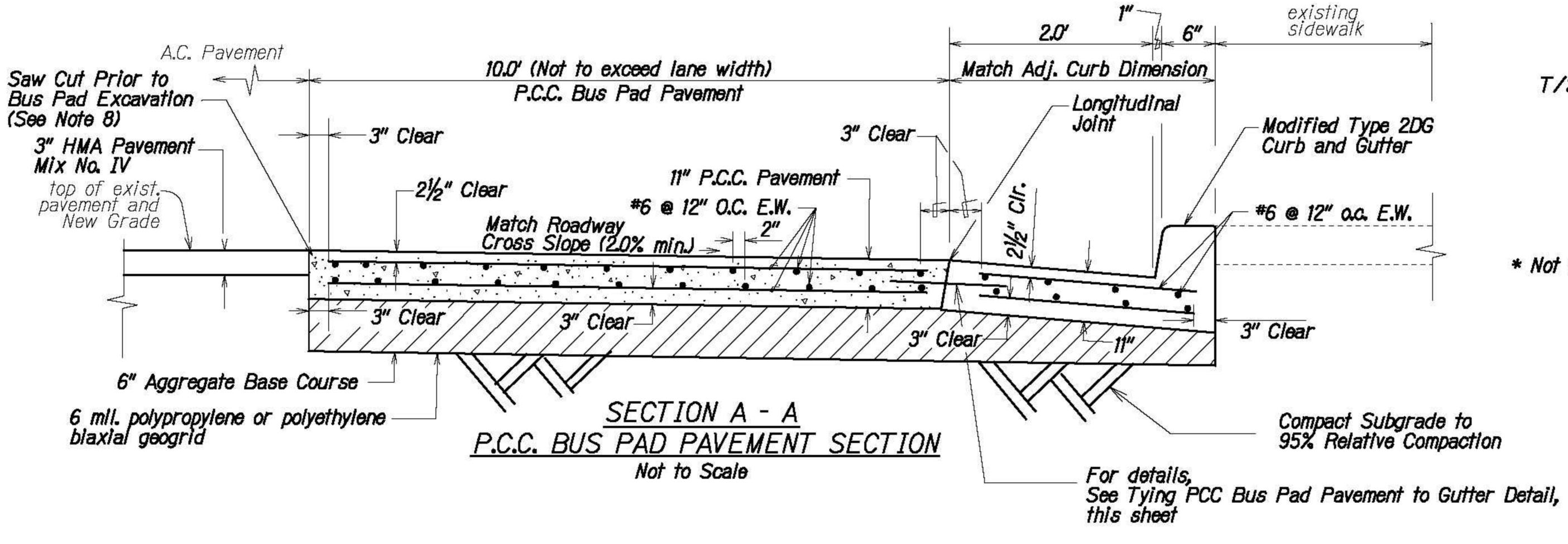
FED. ROAD DIST. NO.

PROJ. NO.

HAWAII HAW. NH-083-1(082) 2022

SHEETS

28



| 01/27/17 | Superceed Standard Plan D-16 | dated 05/31/07 |
| DATE | REVISION | APP'D.

10/14/22 Added Sheet

Date Revision

BETATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

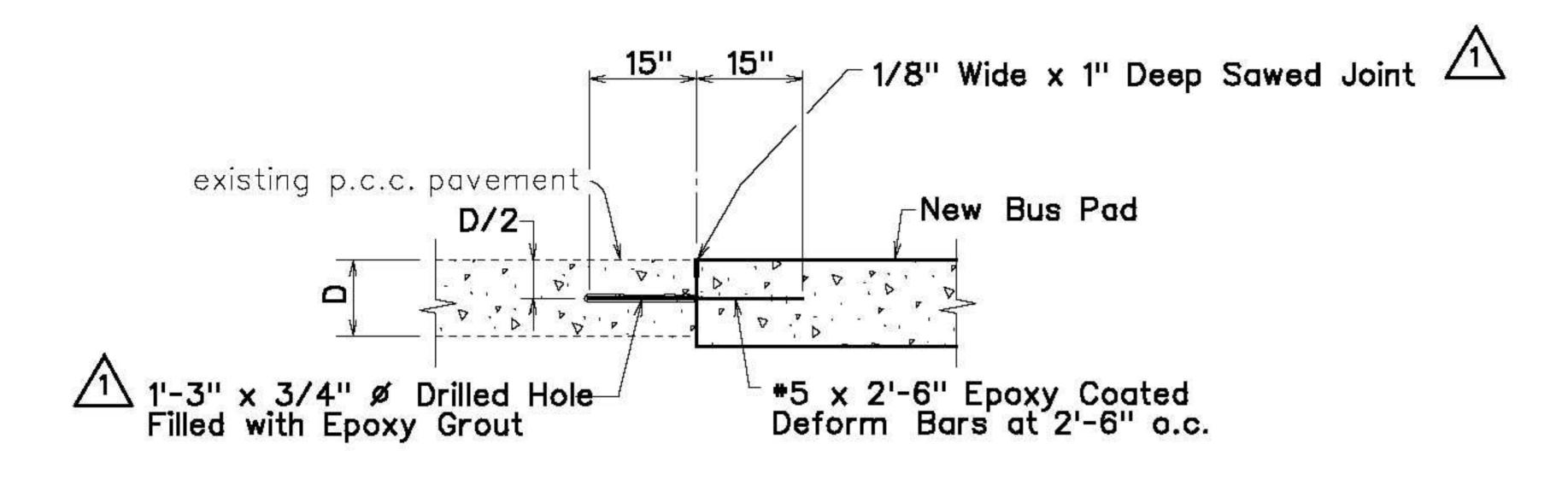
STANDARD PLAN D-16
P.C.C. BUS PAD

KAMEHAMEHA HIGHWAY INTERSECTION
IMPROVEMENTS AT KAHEKILI HIGHWAY
Federal-Ald Project No. NH-083-1(082)
Scale: Not To Scale Date: Oct. 2022

ADD 28S-3

FED. ROAD STATE PROJ. NO. FISCAL SHEET TOTAL SHEETS

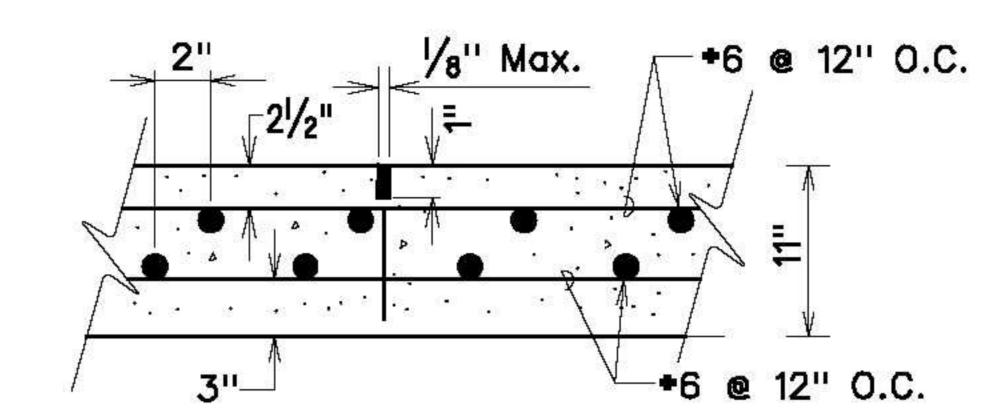
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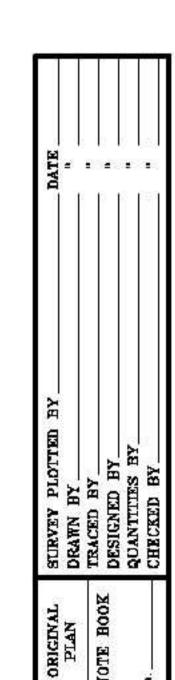
NOTE:

- 1. Epoxy Coated Deformed Bars shall Conform to AASHTO M284 (ASTM A 775).
- 2. Transverse Construction Joints shall be located at a Minimum Distance of 10 Feet from the Nearest Transverse Contraction Joint.

LONGITUDINAL CONSTRUCTION JOINT AT EXISTING P.C.C. PAVEMENT



TRANSVERSE WEAKENED PLANE JOINT
FOR P.C.C. BUS PAD
(SAWED CONTRACTION)



O1/27/17 Revised Width Thickness for Sawed Joint.
Revised drilled hole diameter.

DATE REVISION APP'D.

10/14/22 Added Sheet

Date Revision

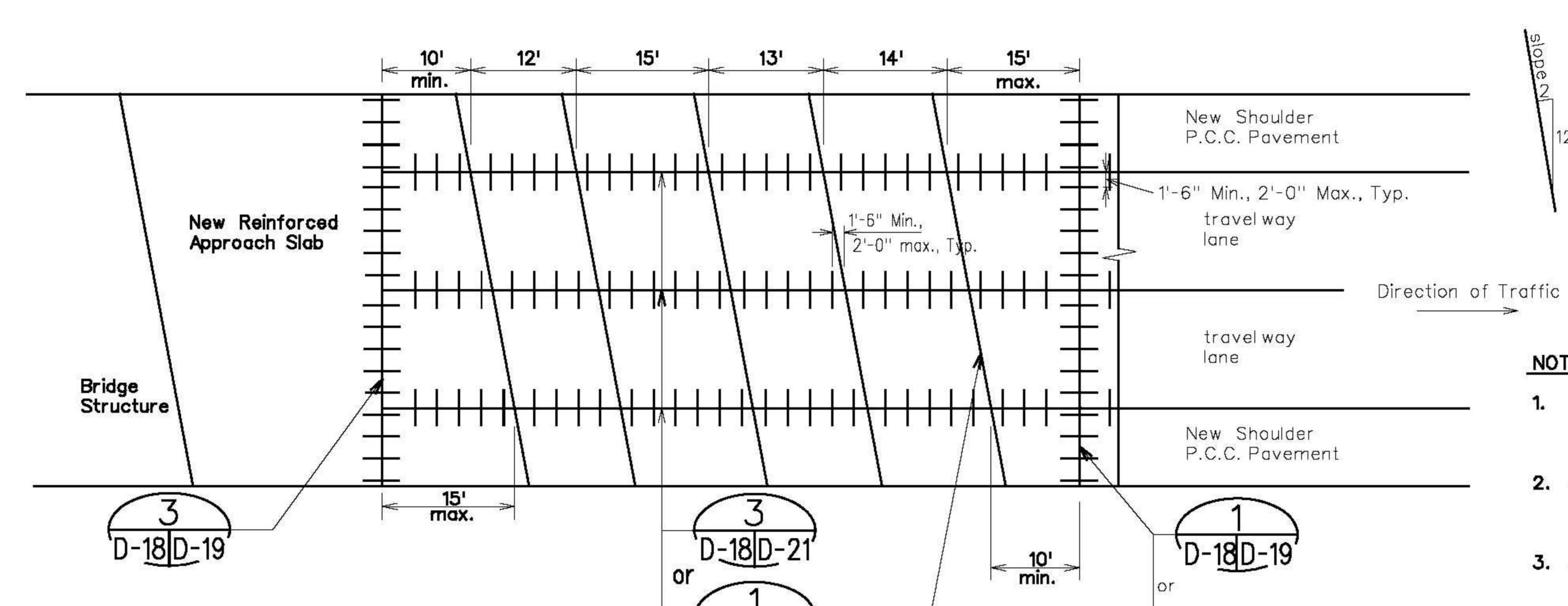
BETATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLAN D-17
P.C.C. BUS PAD

KAMEHAMEHA HIGHWAY INTERSECTION
IMPROVEMENTS AT KAHEKILI HIGHWAY
Federal-Ald Project No. NH-083-1(082)
Scale: Not To Scale

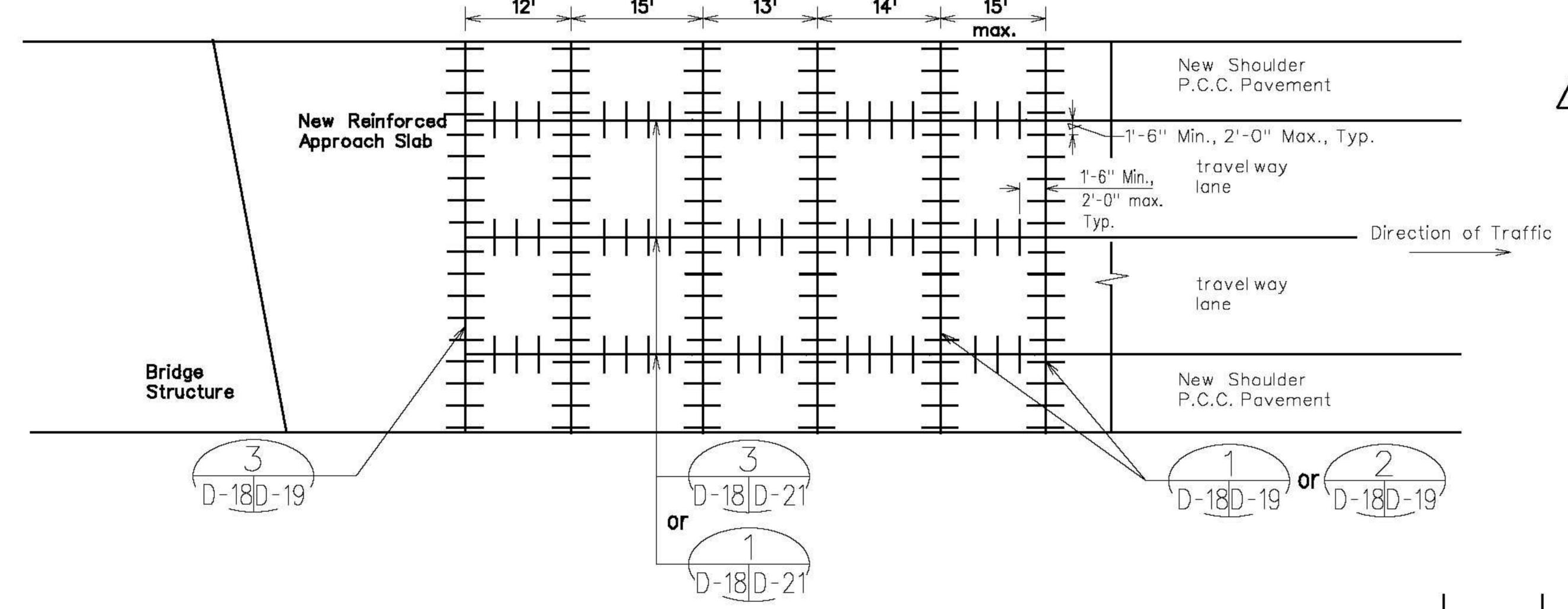
Date: Oct. 2022
SHEET No. XX OF XX SHEETS

ADD 28S-4



TYPICAL JOINT LAYOUT PLAN WITH SKEWED JOINTS Not ot Scale

D-18 D-2



TYPICAL JOINT LAYOUT PLAN

WITH PERPENDICULAR JOINTS

Not to Scale

FED. ROAD DIST. NO. FISCAL YEAR SHEET NO. PROJ. NO. SHEETS HAWAII HAW. NH-083-1(082) 2022 28

NOTES:

01/27/17 Added note •9

REVISION

D-18D-19

D-18D-19

- The dimensions shown are for a 12 foot wide travelway lane width. For other lane widths adjust the transverse joint spacing to obtain a length to width ratio of not greater than 1.25 for the travelway lane slabs.
- 2. Skew the typical transverse joint with a 2 foot offset counter clockwise from a perpendicular to the edge of pavement for every 12 feet along that perpendicular.
- 3. Space transverse joint at successive intervals at 12', 15', 13', and 14' in the direction of travel. Repeat for the remaining joints.
- 4. For travel way lanes, reinforce odd shaped slabs and slabs with mismatched joints. Odd shaped slabs are slabs with length to width ratios greater than 1.25, and other nonsquare shaped slabs. See sheet D-20. Triangular shaped slabs are considered odd-shaped slabs.
- 5. For the shoulder, reinforcing is not required for slabs that exceed the length to width ratio of 1.25. Triangular shaped slabs shall have reinforcing.
- 6. Locate transverse construction joints at a minimum distance of ten (10) feet and a maximum of fifteen (15) feet from the nearest planned contraction joint.
- 7. Provide shop drawings for joint layout where obstructions such as manholes are encountered, and at intersections with other streets.
- 8. Portland cement concrete pavement shall attain a minimum 14-day flexural strength, fr - 650 psi.
- For four or more paving lanes (including shoulders) use smooth dowelbars instead of deformed bars at the longitudinal joints shown on the Project Plans.

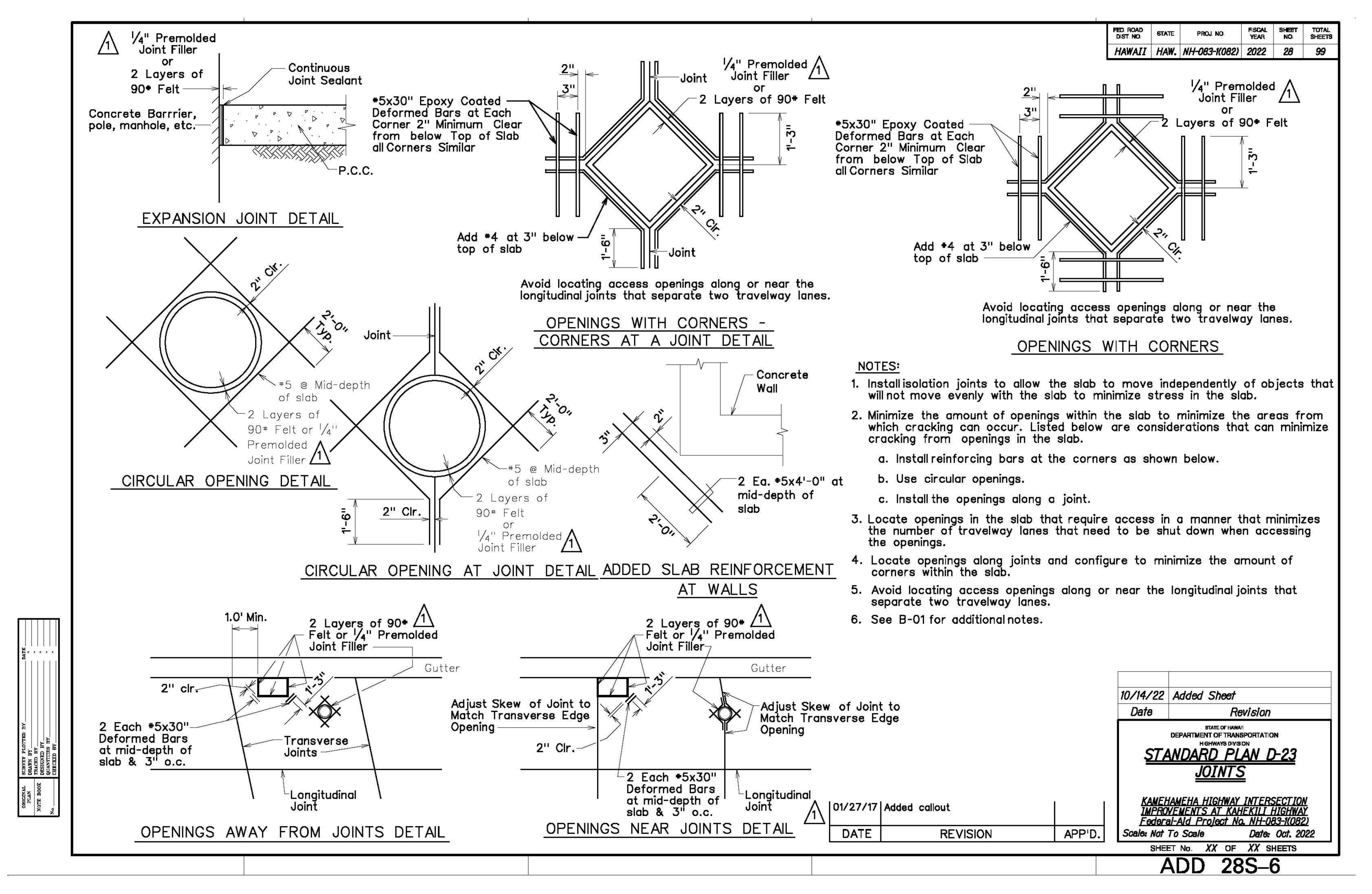
10/14/22 Added Sheet Revision BTATE OF HAWA! DEPARTMENT OF TRANSPORTATION STANDARD PLAN D-18 P.C.C. PAVEMENT LAYOUT KAMEHAMEHA HIGHWAY INTERSECTION IMPROVEMENTS AT KAHEKILI HIGHWAY Federal-Ald Project No. NH-083-1(082)


> SHEET No. XX OF XX SHEETS ADD 28S-5

Date: Oct. 2022


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APP'D







ADD. 35



ADD. 37



ADD 51



ADD. 52

SIGNING NOTES:

- 1. All sign panels shall conform to Section 630, 631 and 632 of the specifications, DOT standard plans, and the latest editions and amendments of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Highway Signs" and "Standard Alphabets for Highway Signs".
- 2. For Miscellaneous Sign Details, see Standard Plan TE-01 to TE-18.
- 3. Existing Signs to be removed shall be disposed of by the Contractor. Removal of signs shall also include the removal of post and foundation to a minimum height of 1-foot below the ground. Payment for the removal of such signs shall be incidental to the various contract items.
- 4. The Contractor shall backfill all holes, depressions and pits left by the removal of the existing signs with embankment material.
- 5. The cost of trimming existing vegetation for installation of signs to provide a clear view of the sign(s) shall be considered incidental to the sign(s).
- 6. Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
- 7. Final locations of all signs shall be approved by the Engineer prior to any installation work.
- 8. 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.
- 9. All existing sign post(s) to remain within the sidewalk area shall meet the minimum clear width of 48 inches from the sidewalk edge. Where necessary, the existing sign post(s) shall be relocated to meet the minimum clear width. This work shall not be paid for separately but shall be considered incidental to the various contract items.
- 10. The Contractor shall erect advanced construction warning signs at the beginning and at the end of the project site. Construction warning signs shall be placed as indicated on the plans or as directed by the Engineer. The signs shall be kept in place for the duration of the project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645 Work Zone Traffic Control.
- 11. Backing for all new regulatory and warning signs shall not be spliced.
- ⚠ 12. Install Yellow Reflector Marker RM-2 on new sign posts per Standard Plan TE-14.

PAVEMENT MARKING NOTES:

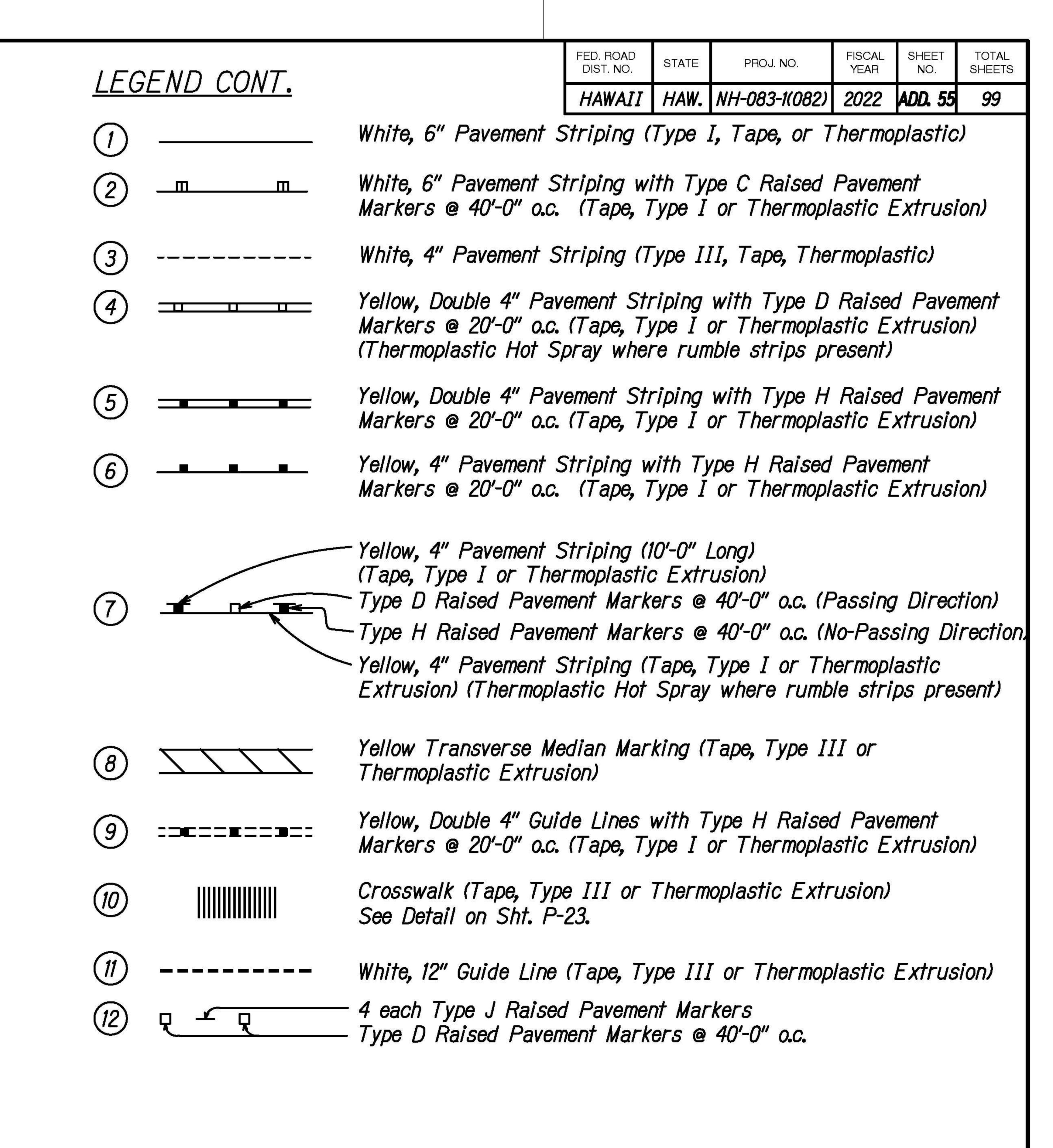
- Location of pavement markers is shown schematically. For exact location of markers in relation to stripe, see Standard Plans T-7, T-8, T-9 ▼ T-10.
- 2. All pavement striping, legends and symbols shall be retroreflective thermoplastic compound pavement markings.
- 3. Removal of existing pavement markings shall be considered incidental to the various contract items.
- 4. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- 5. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The costs shall be incidental to the various pavement marking items.
- 6. Raised pavement markers shall not be installed within crosswalks.
- 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's manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- 9. Contractor shall verify locations of fire hydrants prior to installation of Type DB Raised Pavement Markers.

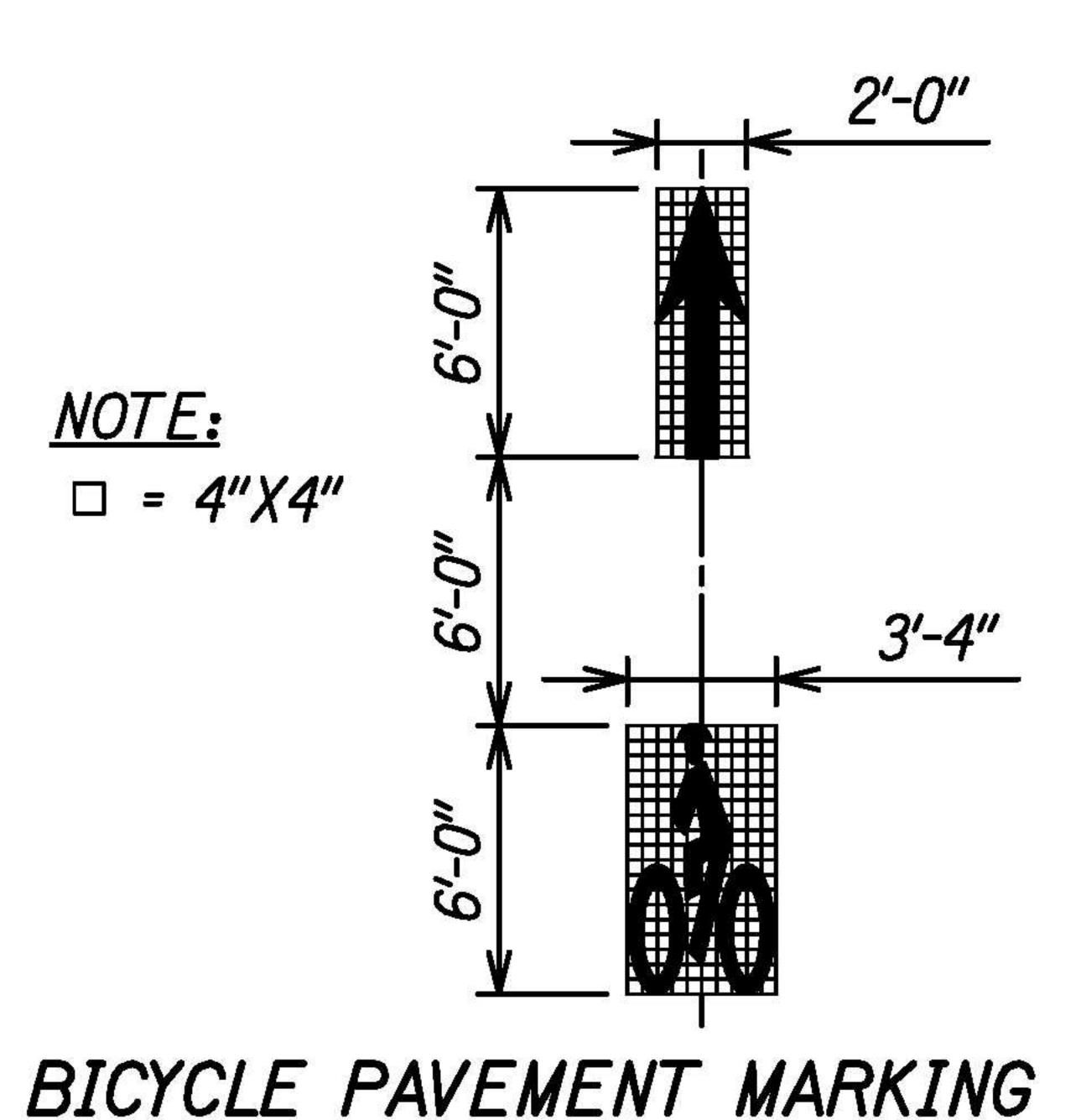
<u>LEGEND</u>

4	i aromoni ruron intermopiacino Emitacion	
	Type DB Raised Pavement Marker (See Note 9)	
d d	Existing Sign	
	New Sign	
	New Destination Sign	
	Type II (OM2-2V) Object Marker	
4-8	Bicycle Pavement Markings (Thermoplastic Extrusion)	
	Pavement Word (Thermoplastic Extrusion)	
(A)	Install new sign(s) and post(s)	
(B)	Remove existing sign(s) and post(s)	
(C)	Replace existing sign(s) with new sign(s)	
(D)	Install new sign(s) on existing post(s)	
(E)	Remove existing sign(s)	
(F)	Existina Sian(s) to Remain	

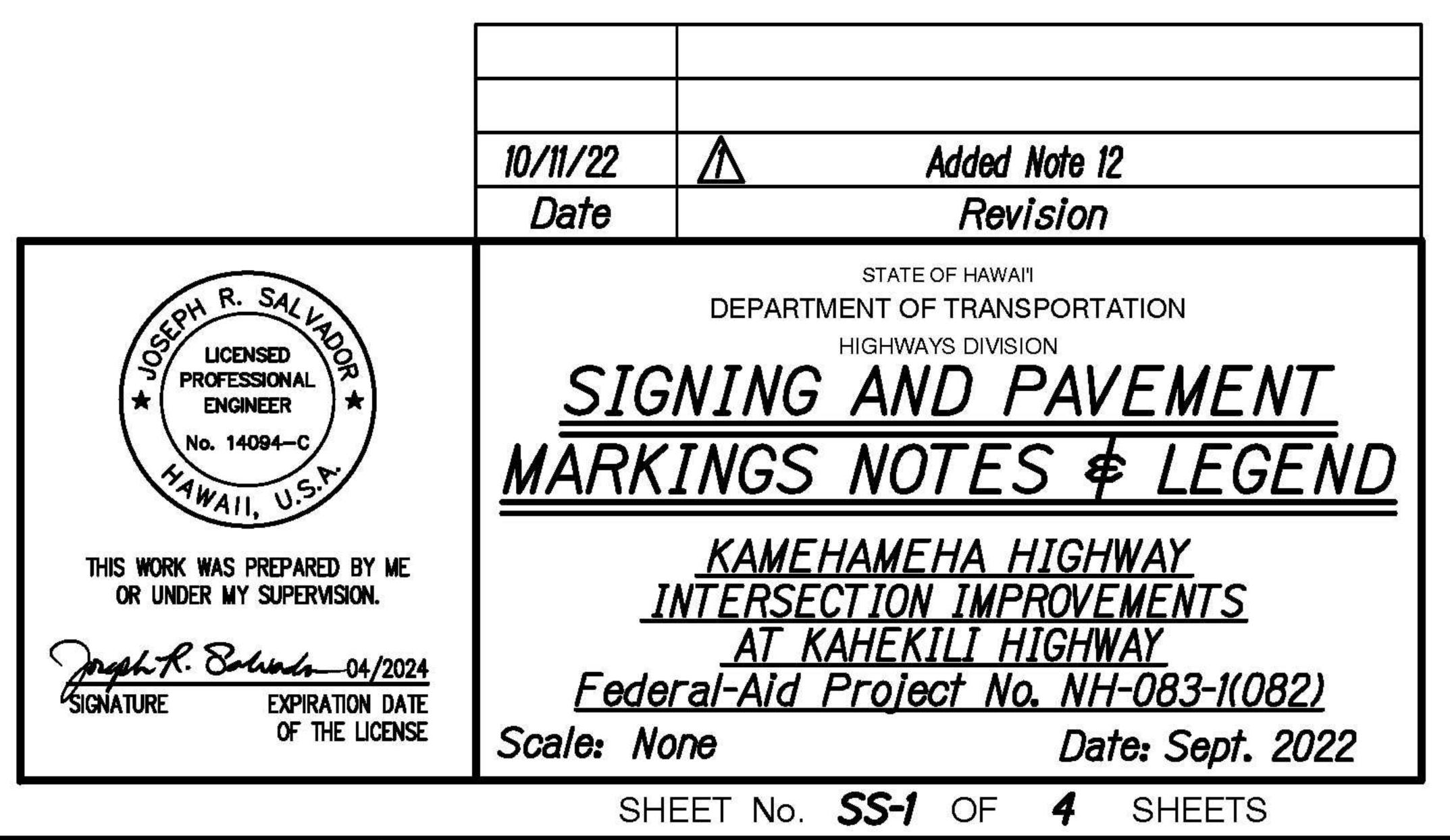
Relocate existing sign(s) on new post(s)

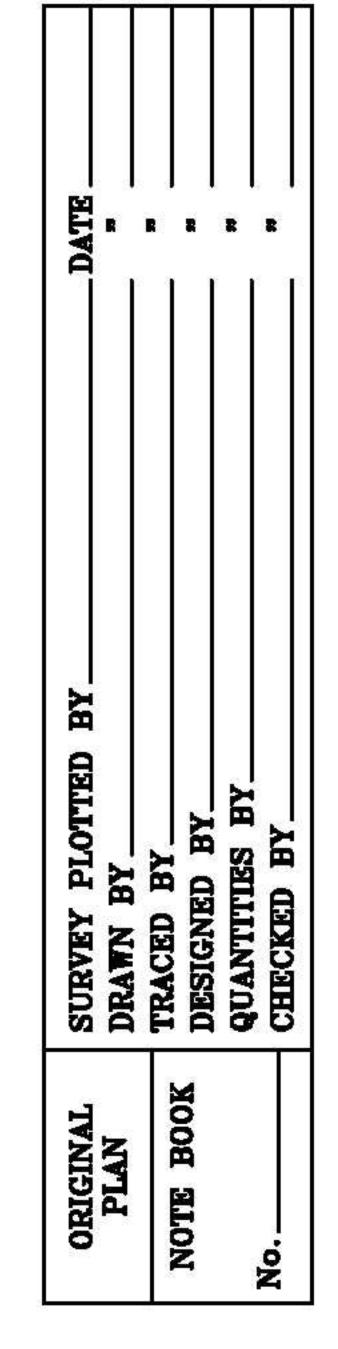
Pavement Arrow (Thermoplastic Extrusion)







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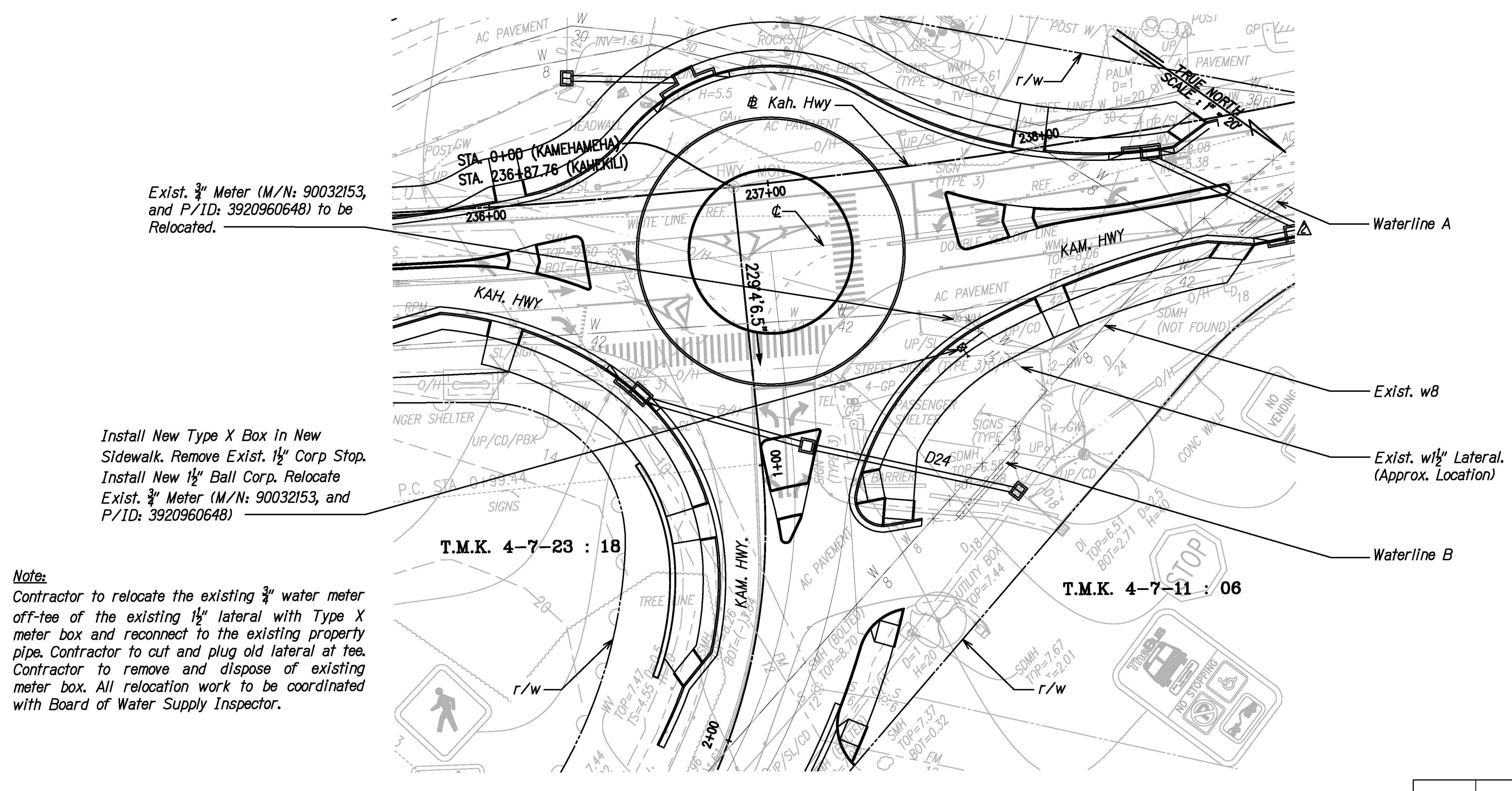








HAWAII	HAW.	NH-083-1(082)	2022	ADD 79	99
FED. ROAD DIST. N O.	STATE	PROJ. N O.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



 SURVEY PLOTTED BY
 DATE

 DRAWN BY
 "

 TRACED BY
 "

 QUANTITIES BY
 "

 CHECKED BY
 "

 CHECKED BY
 "

APPROVED:

MANAGER & CHIEF ENIGINEER, BWS
(For Work Affecting BWS Facilities in
City/State Right-of-Way and BWS Easement only

DATE

WATER METER RELOCATION PLAN

Scale 1"=20"

THIS WORK WAS PREPAREI
OR UNDER MY SUPERM

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE

ENGINEER

No. 14094-C

No. 14094-C

SIGNATURE

EXPIRATION DATE
OF THE LICENSE

10/11/2022 A Revised Background Information

08/31/2022 A Added BWS Signature

Date Revision

STATE OF HAWAI!

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER METER

RELOCATION PLAN

KAMEHAMEHA HIGHWAY

INTERSECTION IMPROVEMENTS

AT KAHEKILI HIGHWAY

Federal-Aid Project No. NH-083-1(082)

Scale: As Shown Date: Sept. 2022

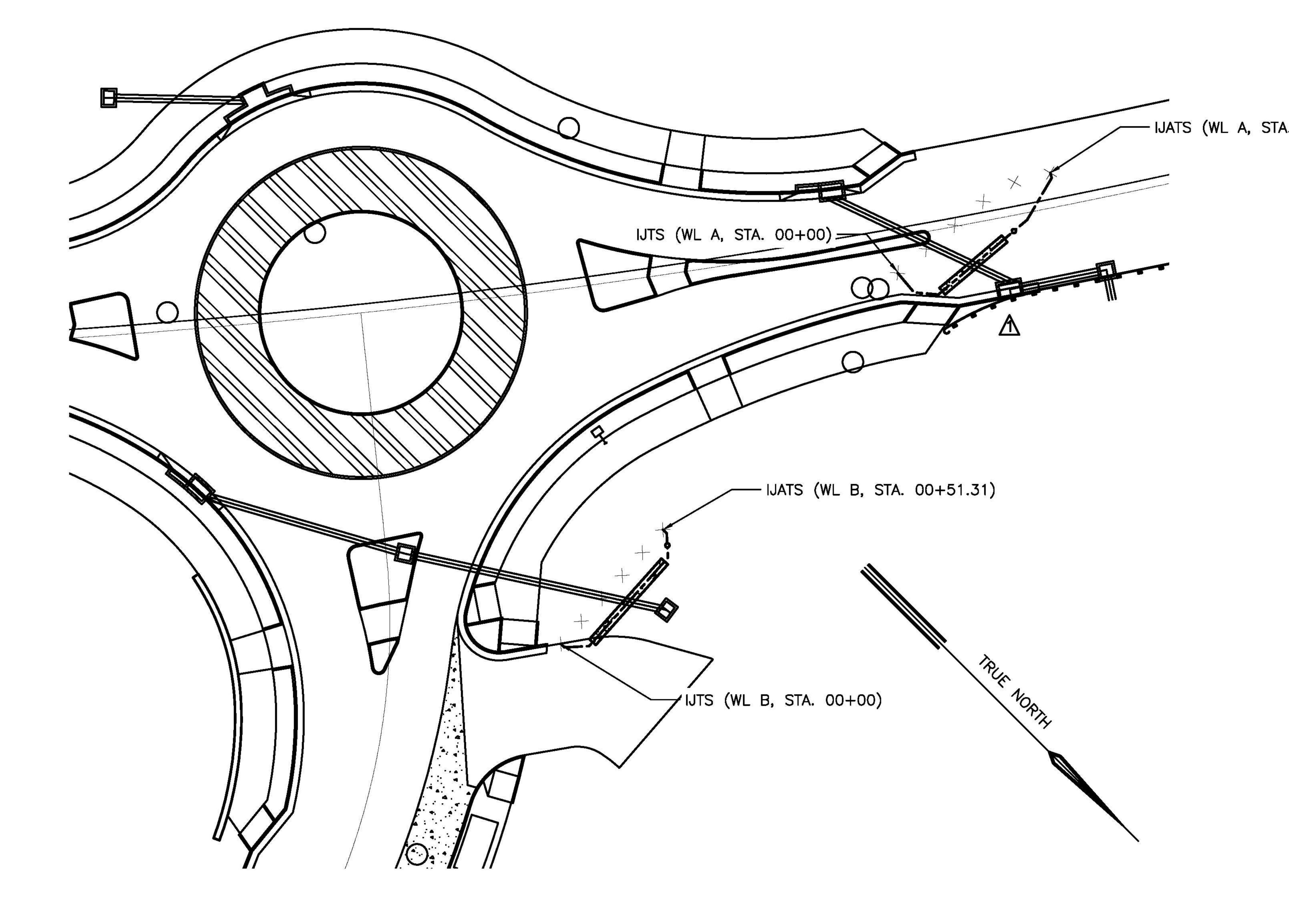
SHEET No. *U-3* OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL
HAWAII	HAW.	NH-083-1(082)	2022	ADD. 81	99

7.4	TEST STATION SCHEDULE							
NO.	PIPELINE/STREET NAME	STATION	TEST STATION TYPE	NUMBER OF ANODES	TYPE OF ANODES	REFERENCE DETAILS		
1	Waterline A	00.00	IJTS	N/A	N/A	3/U-6, B/U-6, 1/U-7, 2/U-7, 3/U-7, 1/U-8, 2/U-8, 3/U-8		
2	Waterline A	00+63.37	IJATS	4	HIGH-POTENTIAL MAGNESIUM (60 LB)	1/U-6, A/U-6, 2/U-6, 2/U-7, 3/U-7, 1/U-8, 2/U-8, 3/U-8		
3	Waterline B	00.00	IJTS	N/A	N/A	3/U-6, B/U-6, 1/U-7, 2/U-7, 3/U-7, 1/U-8, 2/U-8, 3/U-8		
4	Waterline B	00+51.31	IJATS	4	HIGH-POTENTIAL MAGNESIUM (60 LB)	1/U-6, A/U-6, 2/U-6, 2/U-7, 3/U-7, 1/U-8, 2/U-8, 3/U-8		

NOTES:

- 1. ALL TEST STATIONS TO BE LOCATED BEHIND NEAREST CURB.
- 2. IJTS STATIONING TAKEN FROM INSULATING JOINT, PLACE TEST STATION BEHIND CLOSEST CURB.
- 3. IJATS STATIONING TAKEN FROM INSULATING JOINT, PLACE TEST STATION BEHIND CLOSEST CURB.
- 4. ELECTRICALLY ISOLATE ALL METALLIC LATERAL PIPING (INCLUDING ARVs) FROM PROJECT PIPELINES. IF METALLIC LATERAL PIPING IS NOT PROPERLY ISOLATED FROM THE PROJECT PIPELINES, THEN THE CATHODIC PROTECTION SYSTEM COULD BE PREMATURELY DEPLETED.
- 5. THE CATHODIC PROTECTION SYSTEM DESIGN IS DEPENDENT ON THE DIP HAVING A BONDED DIELECTRIC COATING PER THE BWS WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS. IF THE DIP DOES NOT HAVE A BONDED DIELECTRIC COATING, THEN THE CATHODIC PROTECTION SYSTEM COULD BE PREMATURELY DEPLETED.



TEST STATION LOCATION PLAN VIEW

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

OF THE LICENSE

10/14/2022 Revised Background Information Revision STATE OF HAWAI'I DEPARTMENT OF TRANSPORTATION

KAMEHAMEHA HIGHWAY Date: Aug 2022

SHEET No. *U-5* OF 8 SHEETS