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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–099–1(031)	2020	ADD.1	125

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

PLANS FOR

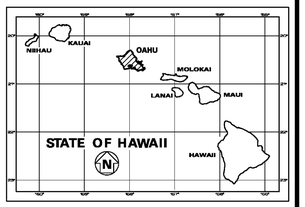
KAMEHAMEHA HIGHWAY, KAMANANUI ROAD AND WILIKINA DRIVE REHABILITATION

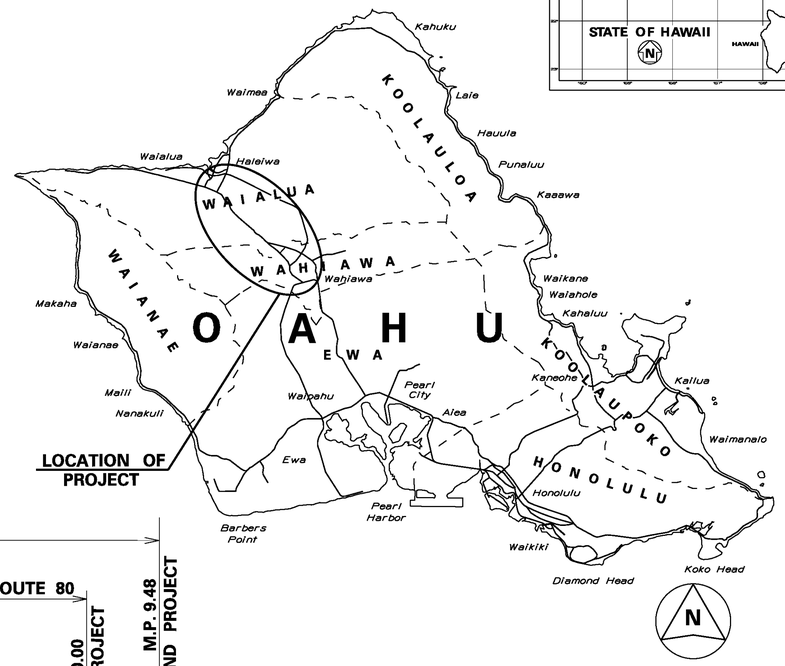
VICINITY OF WEED CIRCLE TO H–2

FEDERAL–AID PROJECT NO. NH–099–1(031)

DISTRICTS OF WAHIAWA AND WAIALUA

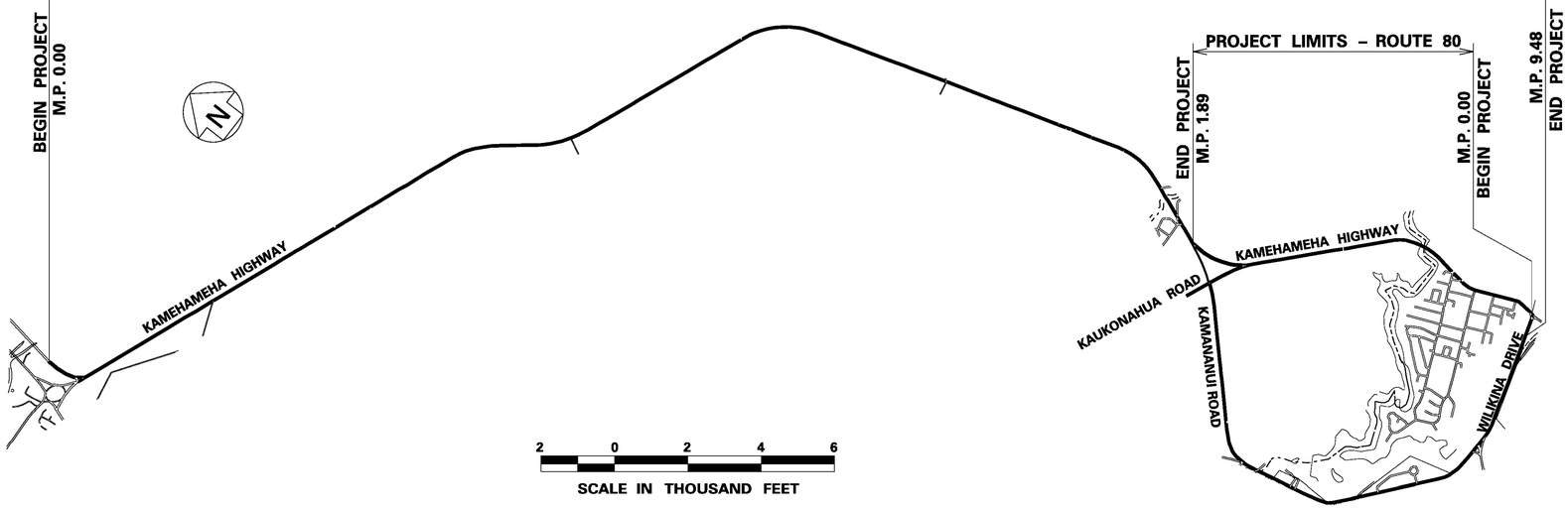
ISLAND OF OAHU





ROUTE 80: MILE POST 0.00 TO MILE POST 1.89

ROUTE 99: MILE POST 0.00 TO MILE POST 9.48



DESIGN DESIGNATION	ROUTE 80			ROUTE 99						
	M.P. 0.00 TO M.P. 0.33	M.P. 0.33 TO M.P. 1.10	M.P. 1.10 TO M.P. 1.89	M.P. 0.00 TO M.P. 5.66	M.P. 5.66 TO M.P. 6.56	M.P. 6.56 TO M.P. 6.77	M.P. 6.77 TO M.P. 7.70	M.P. 7.70 TO M.P. 8.36	M.P. 8.36 TO M.P. 9.08	M.P. 9.08 TO M.P. 9.48
ADT (2020)	62,100	29,100	16,400	23,600	24,500	11,100	15,100	24,600	31,000	55,200
ADT (2040)	73,800	34,000	19,200	31,000	30,300	14,000	19,600	26,800	33,800	60,300
DHV	5,170	2,550	1,440	2,480	2,270	1,120	1,670	2,280	2,700	4,820
K	7.0	7.5	7.5	8.0	7.5	8.0	8.5	8.5	8.0	8.0
D	55/45	55/45	55/45	55/45	55/45	55/45	55/45	60/40	55/45	55/45
T	5.0	7.0	7.0	4.0	4.0	4.5	4.0	3.0	4.0	4.5
T_{24}	4.5	5.0	6.0	4.5	4.5	5.0	4.5	4.5	4.5	4.5

MITSUNAGA & ASSOCIATES — DESIGNED BY

HWY-DS — MANAGED BY

692-7548 — PHONE

AUGUST 2020 — DATE

DATE	REVISION
8/19/20	Revised Fed. Road Dist. No. from Oahu to Hawaii

DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

APPROVED:

Sep 11, 2020

DIR. OF TRANSPORTATION — DATE

ADD. 1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.4	125

GENERAL NOTES CONTINUED

32. All materials shall be new and free of defects, such as rust, damage, or corrosion. The Engineer will determine acceptability. Requests for payment for materials that are not accepted by the Engineer will not be accepted. Removed signs or guardrails shall not be reused.

33. The Contractor shall be responsible for coordinating with the HDOT Surveyor and referencing monuments before disturbance of survey monuments. All survey monuments disturbed or destroyed by the Contractor shall be reconstructed and/or reinstalled at no cost to the State. Only licensed State of Hawaii Land Surveyors shall reinstall monuments.

34. Cold planing of adjacent travel ways shall be completed on the same day. Temporary pavement markings shall be installed prior to the end of each work day.

35. If night work is approved, the contractor shall stop all work and contact the Fish and Wildlife Service (541-3441) if bats or birds are seen flying around the work area at night.

36. Contractors may enter into subcontracts, only with subcontractors listed in the proposal or with non-listed joint contractors/subcontractors permitted under Subsection 102.06 - Preparation of Proposal. This also applies to second tier subcontracts.

    In the event that the work is performed by companies, entities, and/or subcontractors not listed in the proposal or with non-listed joint contractors/subcontractors, the contract may be terminated in accordance with Subsection 108.11 - Termination of Contract for Cause at the sole discretion of the Engineer. Furthermore, the State may debar or suspend the Contractor from bidding on future projects.

37. Vendors are not subcontractors. No labor or work shall be performed by a vendor to execute the work under the terms of the contract with the State

38. The Contractor shall notify in writing, the Oahu Transit Services, Inc. (Tel. No. 848-4571) two (2) weeks prior to construction, informing them of location, scope of work, closure of the name of the highway and/or traffic lanes, and dates of closure

39. 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 locations is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the Oahu District Office at telephone no. 831-6712.

40. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to the various contract items.

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

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

3. The Contractor shall notify BWS Capital Projects Division, Construction Section in writing one week prior to commencing work on the water system.

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

5. The contractor shall be responsible for the protection of all waterlines during construction. The contractor shall be especially careful when excavating behind waterlines, tees, and bends wherever there is a possibility of waterline movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the waterlines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.

6. Re-approval shall be required if this project is not under construction within a period of two (2) years.

   Prior to any excavating, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.

7. Any adjustments to the existing water system required during construction, to meet the requirements of the BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.

WATER NOTES CONTINUED

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

9. Two-way blue reflective hydrant markers Type DB shall be installed at all fire hydrant locations.

10. The Contractor and ("utility owner") shall notify BWS Capital Projects Division, Construction Section (748-5730) sixty (60) days prior to construction at or near areas in conflict with the BWS project (Job No. 18-064 Wahiawa Water System Improvements – Part 1A) to avoid delays and conflict during construction. The Contractor shall allow BWS's contractor to install new water mains prior to any resurfacing work at areas in conflict. BWS shall not be liable for any delays due to contractor's failure to coordinate the construction schedule for this project.

LEGEND

^ ^	Right-of-Way
°pp	Power Pole
°wmh	Water Manhole
°wv	Water Valve Box
⊟gdi	Grated Drop Inlet
⊦	Traffic Sign With 1 Post
⊧	Traffic Sign With 2 Posts
□pb	Elec. Pullbox
-⊓-⊓-	Single Metal Guardrail

1 Approved:

AUG 27 2020

FOR Manager and Chief Engineer, BWS Date
(For work affecting BWS facilities in City/State R/W and BWS Easements only)

DATE	REVISION
8/25/20	⚠ BWS signature block added.

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. C02 OF 125 SHEETS

ADD.4

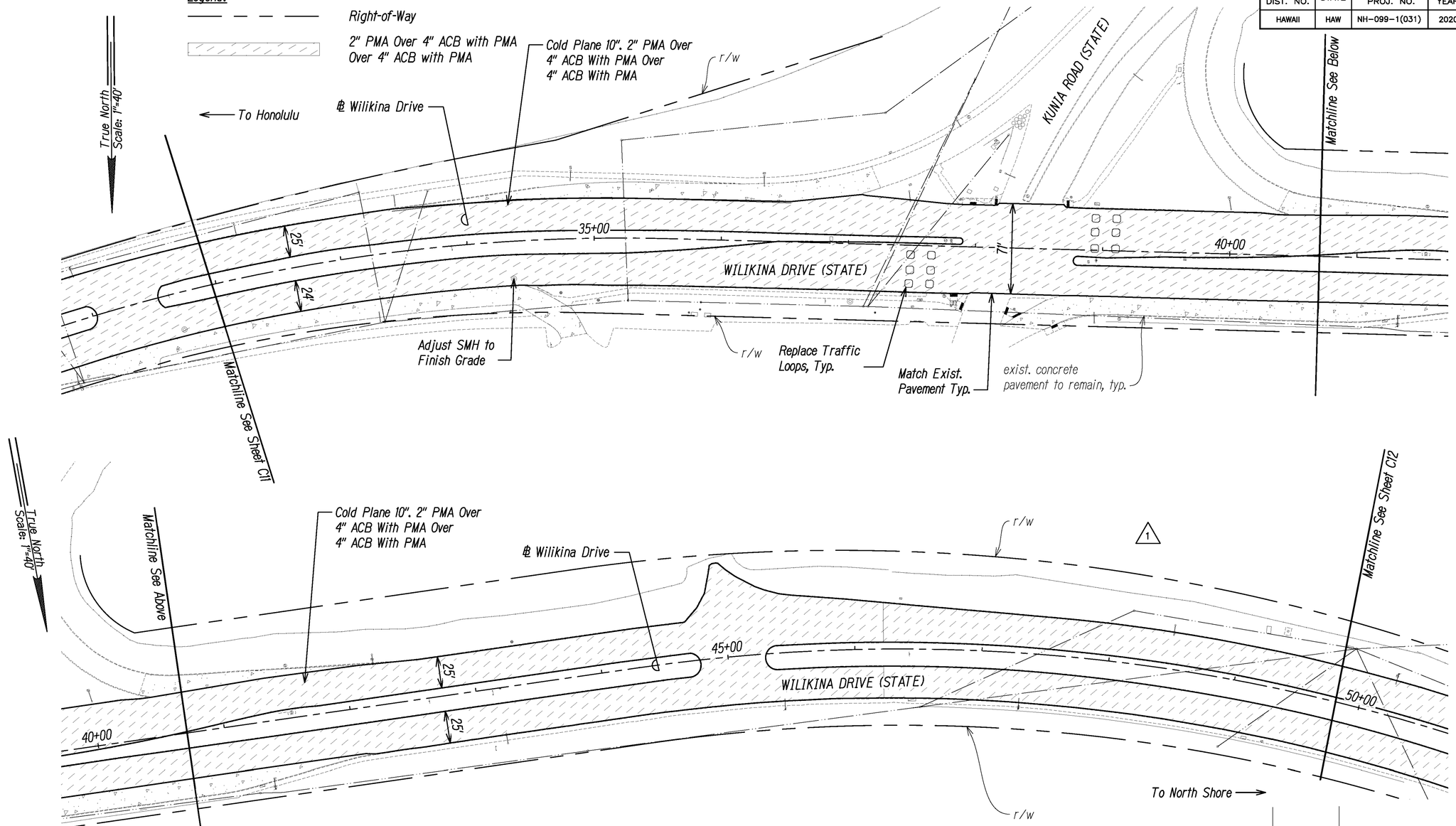
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.13	125

Legend:

Right-of-Way

2" PMA Over 4" ACB with PMA Over 4" ACB with PMA

Cold Plane 10". 2" PMA Over 4" ACB With PMA Over 4" ACB With PMA



DATE	REVISION
9/09/20	⚠1 Deleted MH callout

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. C11 OF 125 SHEETS

ADD.13

SCALE: 1"= 40'

CHAD M MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

MITSUNAGA & ASSOCIATES, INC. 4/30/2022 EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

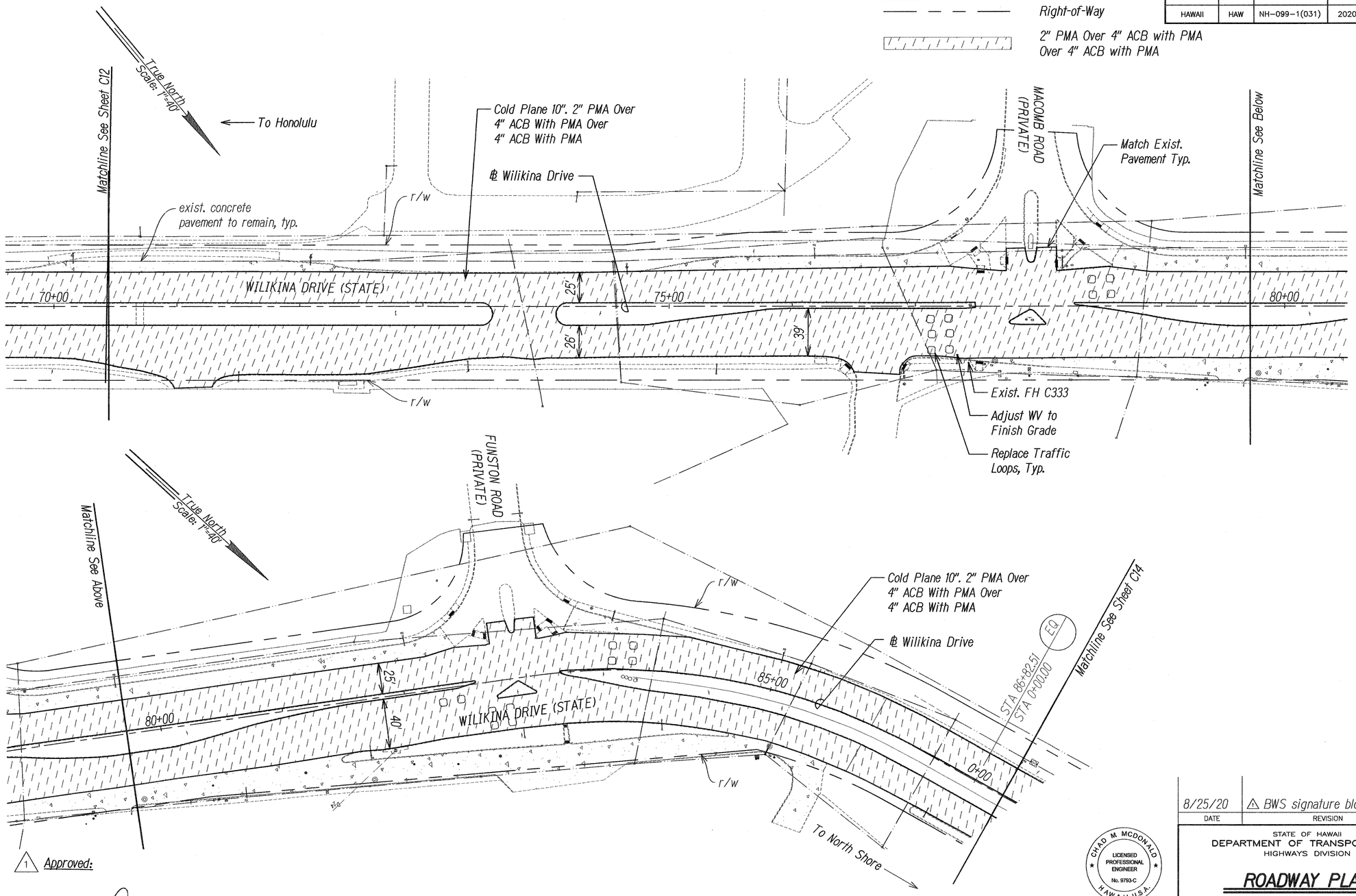
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.15	125

Legend:

Right-of-Way

2" PMA Over 4" ACB with PMA Over 4" ACB with PMA



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DRAWN BY ____ " "
TRACED BY ____ " "
DESIGNED BY ____ " "
QUANTITIES BY ____ " "
CHECKED BY ____ " "

ORIGINAL PLAN

NOTE BOOK

No.

1 Approved:

AUG 2 7 2020

FOR Manager and Chief Engineer, BWS Date
(For work affecting BWS facilities in City/State R/W and BWS Easements only)

40' 20' 0 40' 80'

SCALE: 1"= 40'

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

MITSUNAGA & ASSOCIATES, INC. 4/30/2022 EXP. DATE

NOTE: Contractor to check and verify dimensions of job before proceeding with work.

DATE	REVISION
8/25/20	⚠ BWS signature block added.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

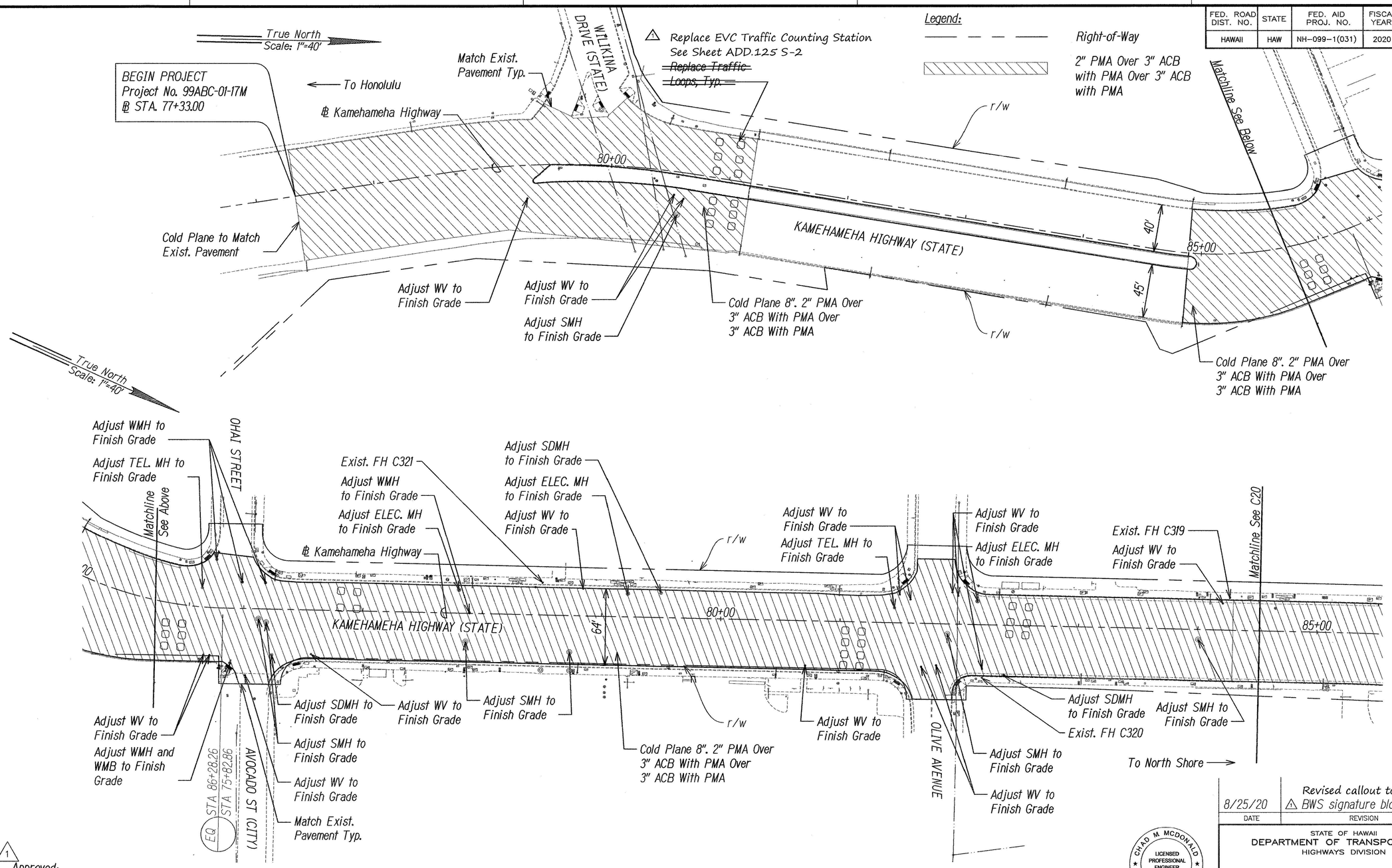
Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. C13 OF 125 SHEETS

ADD.15

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.21	125



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

1 Approved:

AUG 27 2020

FOR Manager and Chief Engineer, BWS (For work affecting BWS facilities in City/State R/W and BWS Easements only) Date

40' 20' 0 40' 80'

SCALE: 1"= 40'

DATE	REVISION
8/25/20	Revised callout to EVC detail.
	⚠ BWS signature block added.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

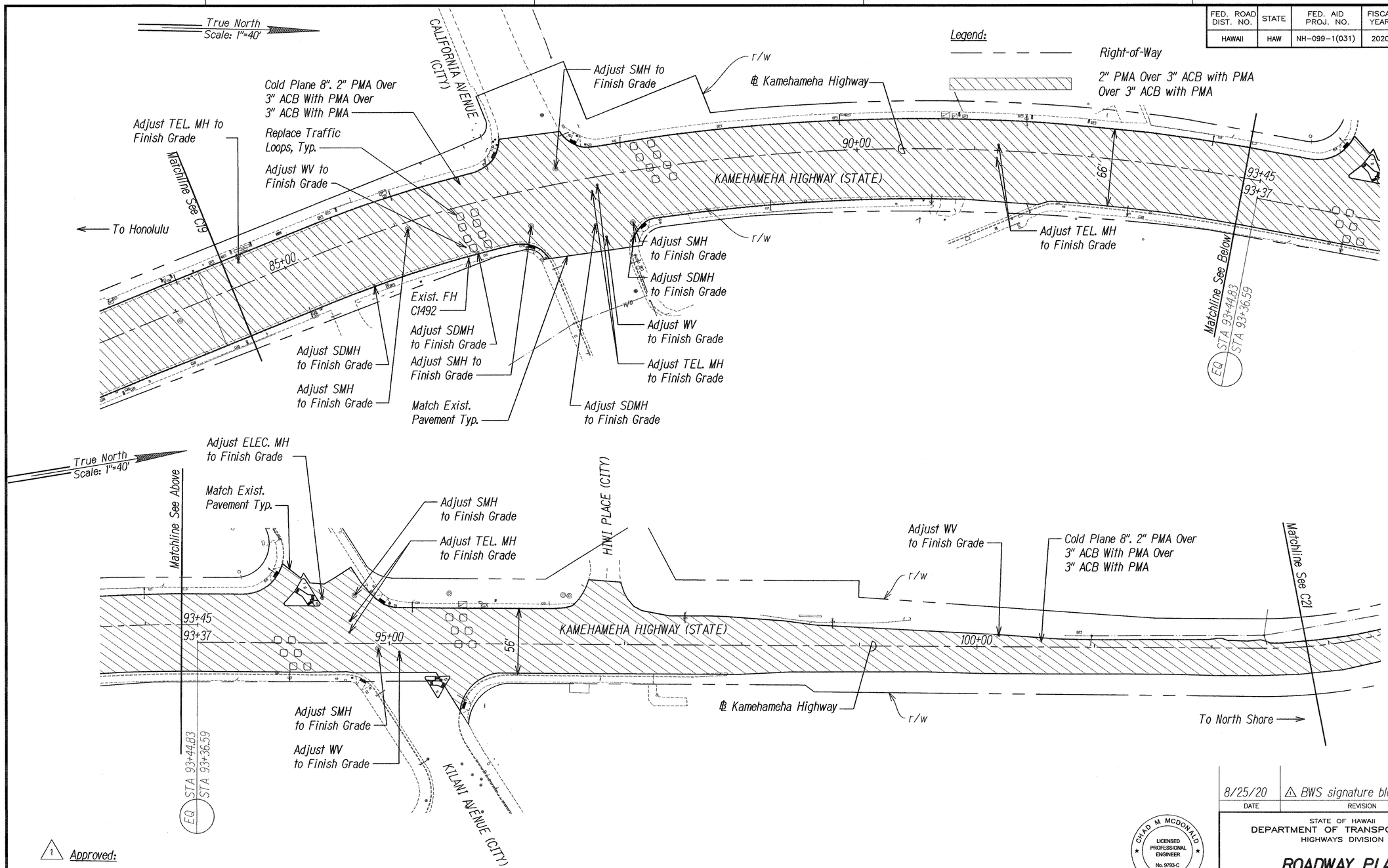
4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

SHEET No. C19 OF 125 SHEETS

ADD.21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.22	125



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

ORIGINAL PLAN
NOTE BOOK
No.

1 Approved:

AUG 27 2020

for Manager and Chief Engineer, BWS — Date
(For work affecting BWS facilities in City/State R/W and BWS Easements only)

40' 20' 0 40' 80'
SCALE: 1"= 40'

CHAD M MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

DATE	REVISION
8/25/20	⚠ BWS signature block added.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

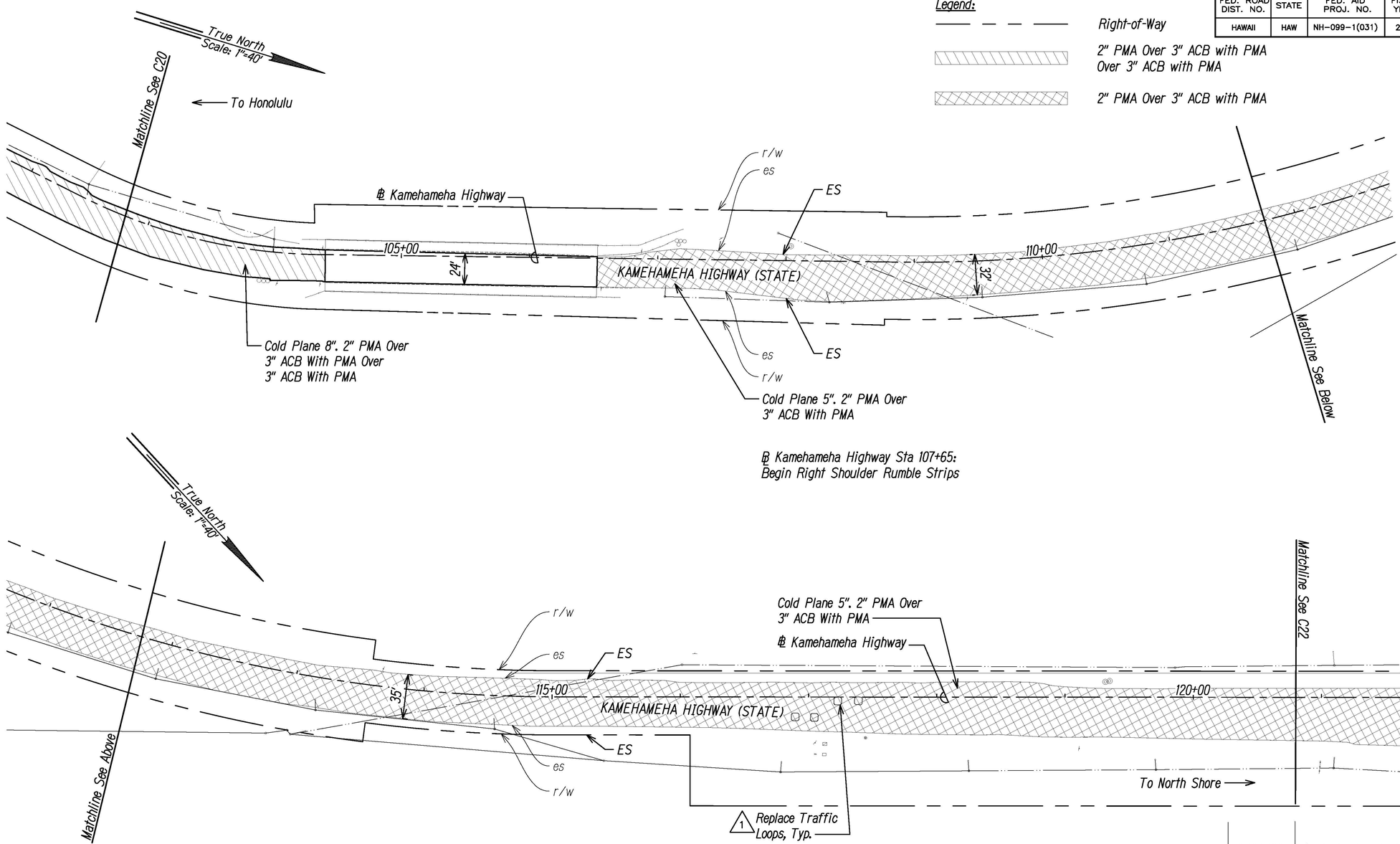
Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. C20 OF 125 SHEETS

ADD.22

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.23	125



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

40' 20' 0 40' 80'

SCALE: 1"= 40'

DATE	REVISION
9/09/20	⚠ Revised callout to EVC Station

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. **C21** OF **125** SHEETS

ADD.23

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.125 S-1	125

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.
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).

ENHANCED VEHICLE CLASSIFICATION (EVC) SYSTEM NOTES CONTINUED

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).

LOOP SENSOR LAYOUT NOTES

1. Loop sensors shall consist of four turns of IC #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 PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

9/09/20 — ⚠ New Sheet added
DATE — REVISION

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

4/30/2020
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM NOTES

STATION 080000, 080008 REPAIRS

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. --- OF 125 SHEETS

ADD.125 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.125 S-2	125

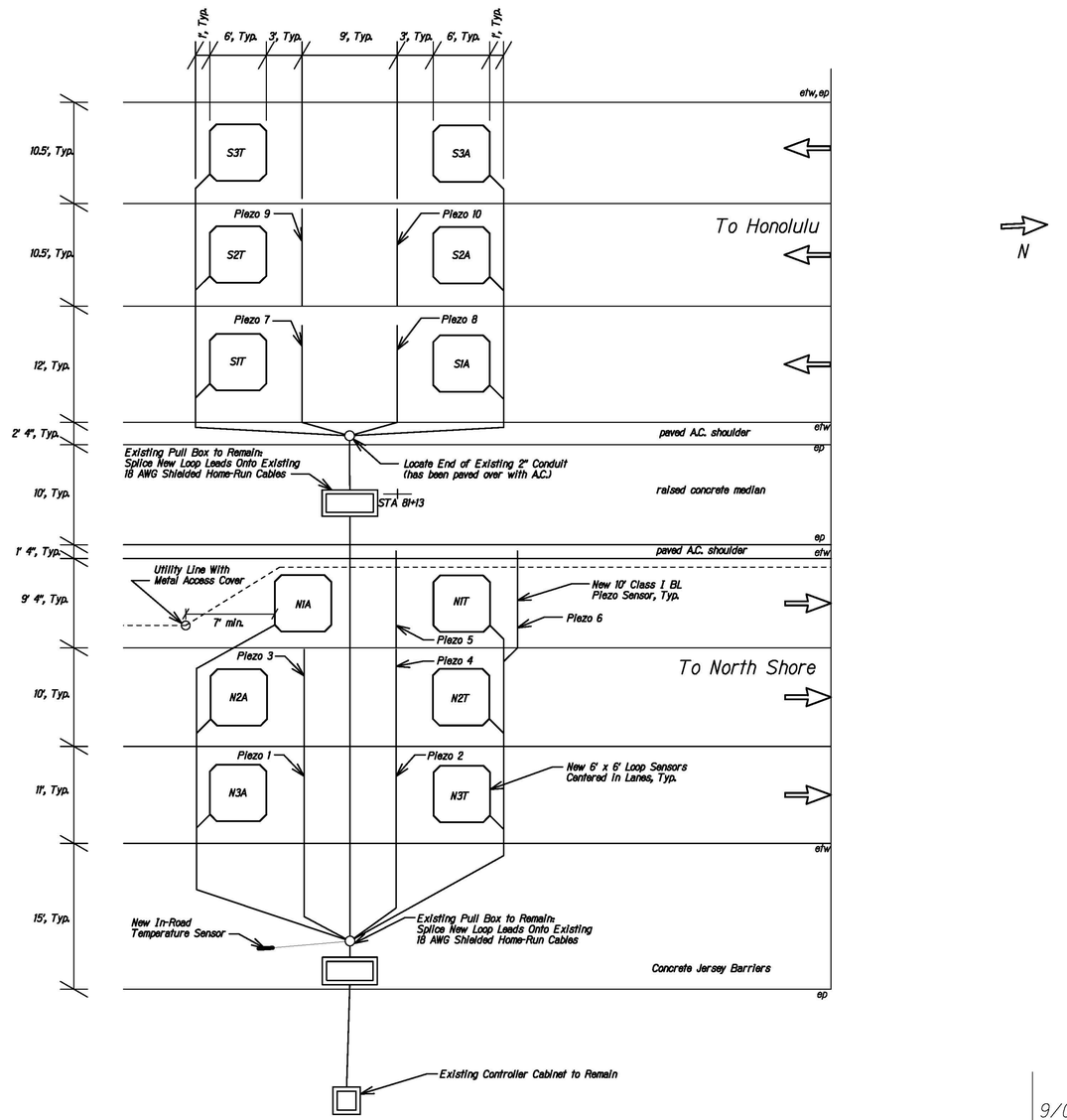
BOUNDARY LABEL LEGEND

ep = Edge of pavement
etw = Edge of travelway

LOOP LABEL LEGEND

N = North
S = South
A = Approaching
T = Trailing

N 2 T
- T — Indicates approaching or trailing loop
- 2 — Indicates lane number
- N — Indicates direction



NOTES:

1. All dimensions and callouts are typical unless otherwise noted on plan.
2. Contractor shall not disturb existing connections to electrical and communication service.
3. Contractor shall confirm location of buried utilities and obtain clearance from utility companies prior to installation of new sensors.

EVC TRAFFIC COUNTING SYSTEM LAYOUT DETAIL

Not to Scale

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

9/09/20 — ⚠ New Sheet added
DATE — REVISION

CHAD M. MCDONALD — LICENSED PROFESSIONAL ENGINEER — No. 9793-C — HAWAII, U.S.A.

This work was prepared by me or under my supervision

Chad M. McDonald 4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING STATION 080000 REPAIR

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. --- OF 125 SHEETS

ADD.125 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.125 S-3	125

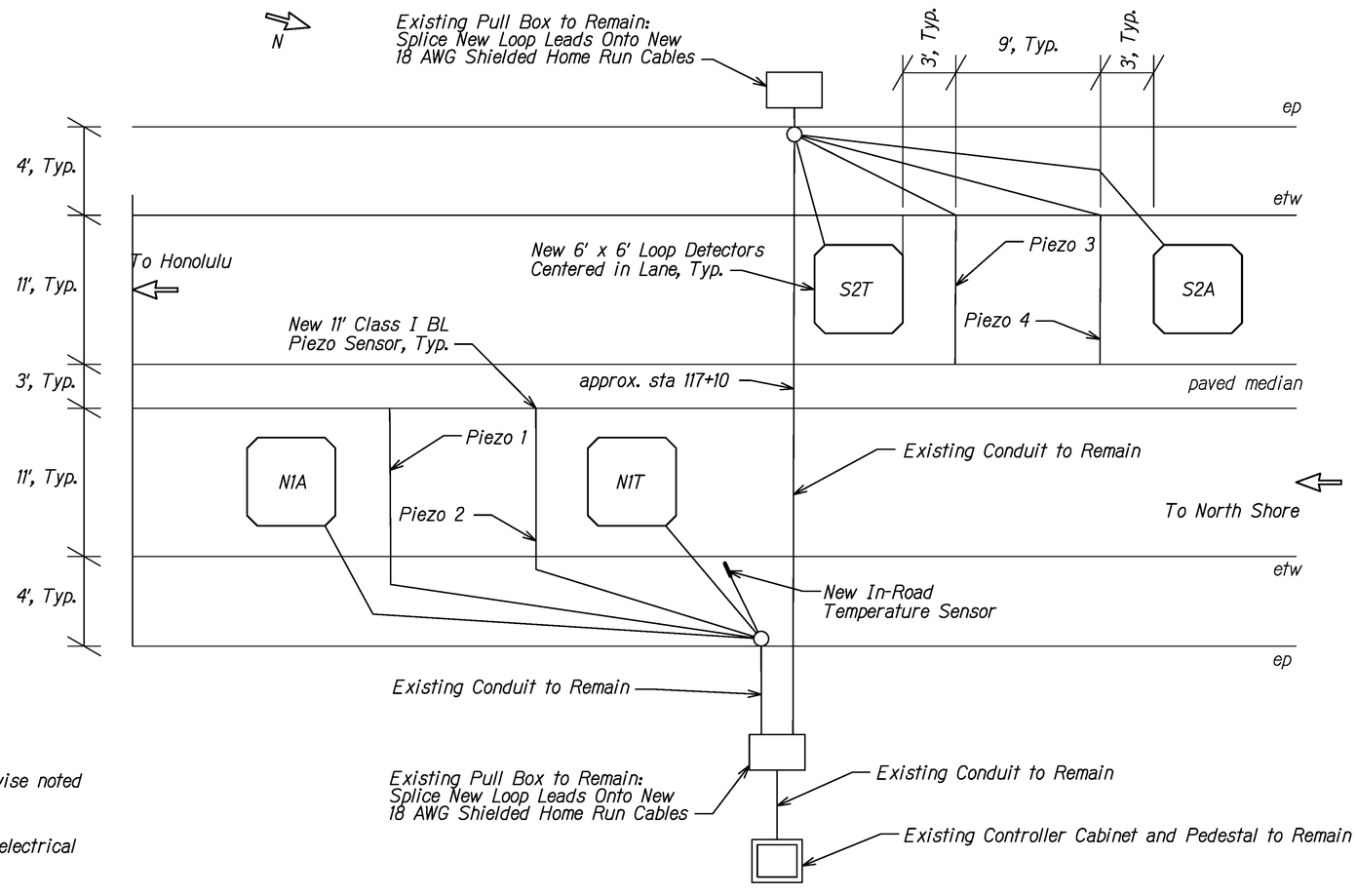
BOUNDARY LABEL LEGEND

ep = Edge of pavement
etw = Edge of travelway

LOOP LABEL LEGEND

N = North
S = South
A = Approaching
T = Trailing

N 2 T
- T — Indicates approaching or trailing loop
- 2 — Indicates lane number
- N — Indicates direction



NOTES:

1. All dimensions and callouts are typical unless otherwise noted on plan.
2. Contractor shall not disturb existing connections to electrical and communication service.
3. Contractor shall confirm location of buried utilities and obtain clearance from utility companies prior to installation of new sensors.

EVC TRAFFIC COUNTING SYSTEM LAYOUT DETAIL

Not to Scale

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

CHAD M. MCDONALD
LICENSED PROFESSIONAL ENGINEER
No. 9793-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision

Chad M. McDonald 4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

DATE	REVISION
9/09/20	⚠ New Sheet added

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING STATION 080008 REPAIR

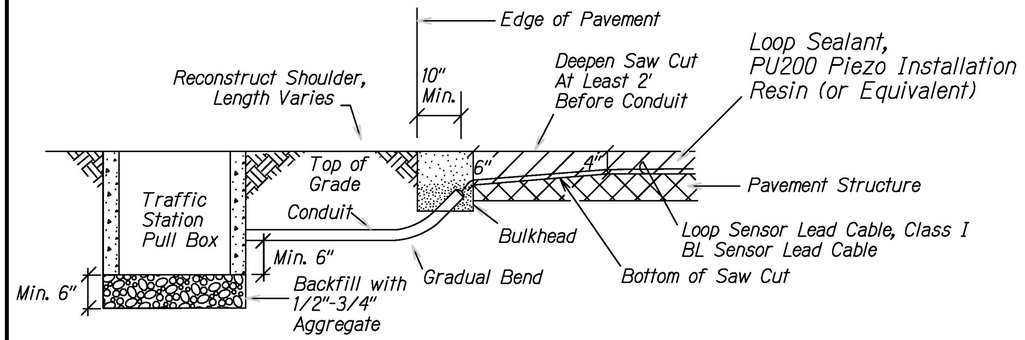
Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

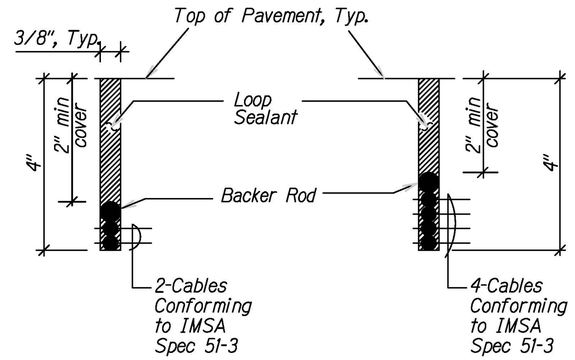
SHEET No. --- OF 125 SHEETS

ADD.125 S-3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NH-099-1(031)	2020	ADD.125 S-4	125



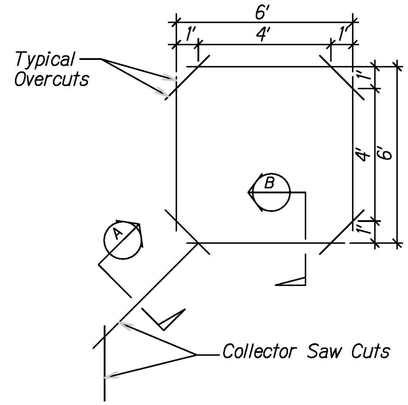
EDGE OF ROADWAY DETAILS
Not to Scale



SECTION A
Not to Scale

SECTION B
Not to Scale

TYPICAL SECTIONS LOOP SENSORS
Not to Scale

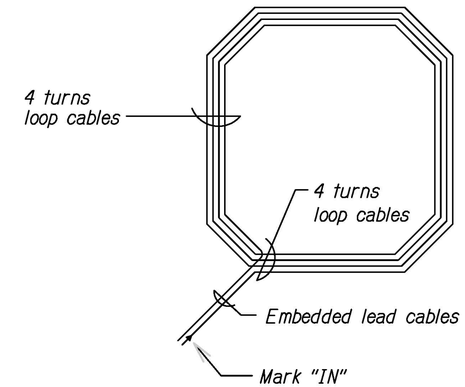


TYPICAL LOOP SENSOR SAW CUT DETAIL
Not to Scale

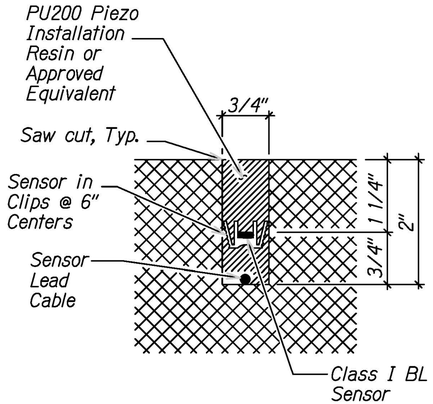
NOTES ON CONSTRUCTION AT END OF SAW CUT:

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.

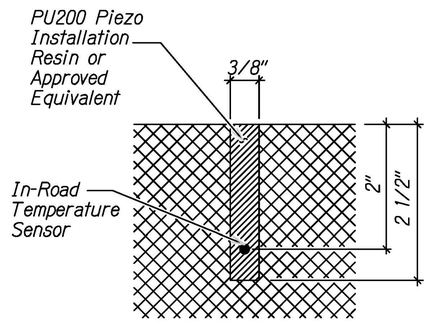
LOOP SENSOR SAW CUT NOTES:
Length of overcuts shall be kept to a minimum. All overcuts shall be backfilled with Loop Sealant.



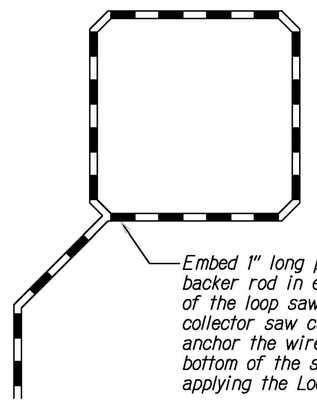
PLAN
TYPICAL LOOP SENSOR WIRING DIAGRAM
Not to Scale



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

9/09/20	⚠ New Sheet added
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM SENSOR DETAILS

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

CHAD M. MCDONALD
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Chad M McDonald 4/30/2022
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

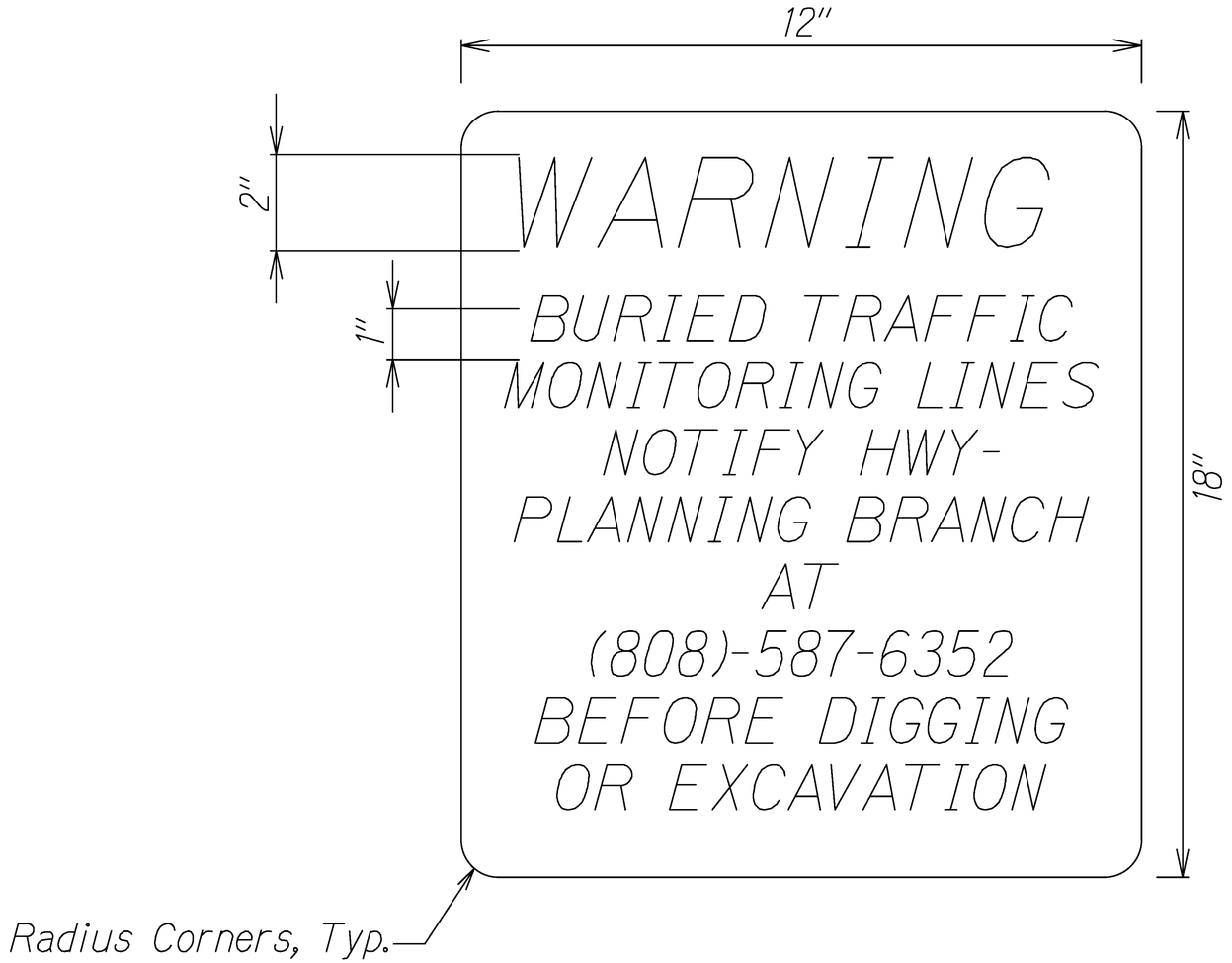
NOTE: Contractor to check and verify dimensions at job before proceeding with work.

SHEET No. --- OF 125 SHEETS

ADD.125 S-4

ORIGINAL PLAN	DATE
NOTE BOOK	SURVEY PLOTTED BY
No.	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-099-1(031)	2020	A00.125 S-5	125



EXCAVATION WARNING SIGN DETAIL
Not to Scale

NOTES:

1. For sign post detail, see State Standard Plans TE-03A and TE-03B.
2. Two (2) warning signs shall be placed on each sign post "Back-to-Back".
3. Text on sign shall be centered both ways and shall be black text on yellow background.
4. Bottom edge of sign shall be 8' above grade.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM

REPLACEMENT WARNING SIGN DETAILS

Kamehameha Hwy, Kamananui Rd and Wilikina Dr
Rehabilitation Weed Circle to Interstate Route H-2
Project No. NH-099-1(031)

Scale: As Noted Date: August 2020

SHEET No. --- OF 125 SHEETS

ADD.125 S-5