Attachment A-6 Construction Drawings

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	1	47

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

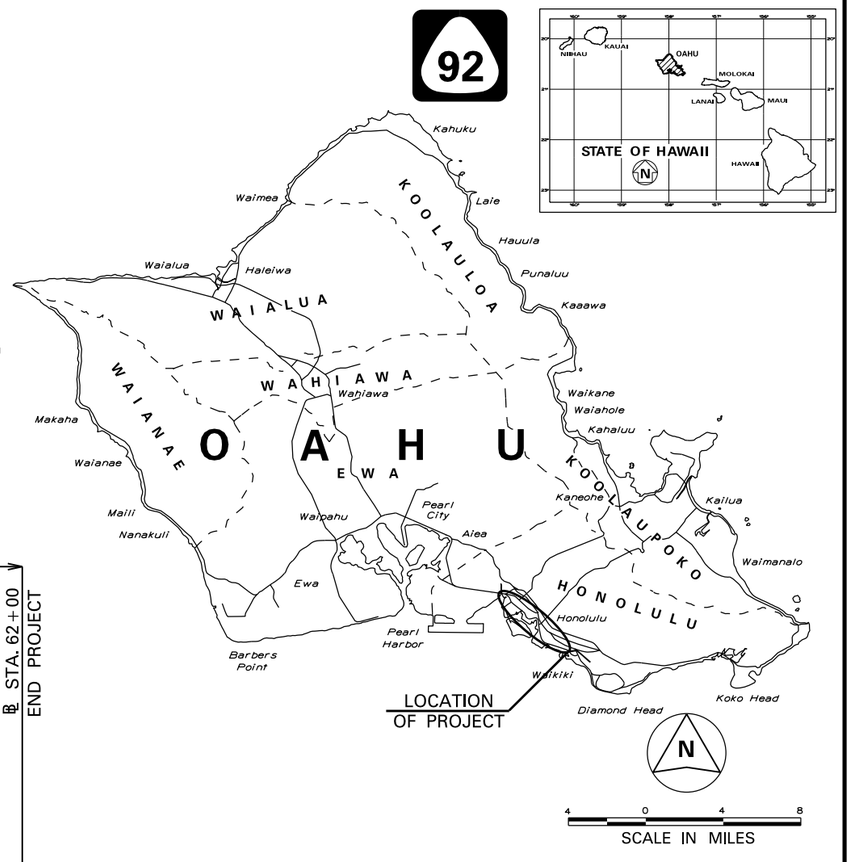
PLANS FOR

NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET

FEDERAL-AID PROJECT NO. NH-092-1(030)

DISTRICT OF HONOLULU

ISLAND OF OAHU



LIMITS OF PROJECT

BEGIN PROJECT
℄ P.C. STA. 18+76.30

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

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

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

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

℄ STA. 163+04.45
END EXCEPTION (OUTBOUND)

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

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

℄ STA. 62+00
END PROJECT

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

℄ STA. 150+78.99
END EXCEPTION (INBOUND)

1 0 1 2 3
SCALE IN THOUSAND FEET

LAYOUT PLAN

GROSS LENGTH OF PROJECT..... 4.61 MILES
NET LENGTH OF PROJECT..... x.xx MILES

HWY-DD DESIGNED BY
HWY-D MANAGED BY
692-X PHONE
X DATE

4 0 4 8
SCALE IN MILES

MILE POST 3.99 TO MILE POST 8.16

NIMITZ HIGHWAY, ROUTE 92

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

ALA MOANA BOULEVARD, ROUTE 92

DESIGN DESIGNATION	BISHOP STREET TO WARD AVENUE, (MP 6.38 TO 7.39)	WARD AVENUE TO PIIKOI STREET, (MP 7.39 TO 8.10)	PIIKOI STREET TO ATKINSON DRIVE (MP 8.10 TO 8.53)
ADT (2018)	64,700	56,300	75,700
ADT (2028)	67,900	59,100	79,400
DHV	5,430	4,730	6,750
K	8.0	8.0	8.5
T	11.0	8.0	11.0
T_{24}	11.0	9.5	9.0

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	2	47

GENERAL NOTES

1. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.

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

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

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

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

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

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

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

9. 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

24. Install temporary striping to new traffic pattern.

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

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

PAVING AROUND MANHOLES

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

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

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

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

TRAFFIC SIGNAL NOTES

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

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

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

DIVISION OF FORESTRY AND WILDLIFE NOTES

1. To avoid impacts to the Hawaiian hoary bat, no barbed wire shall be used, and woody plants greater than 15 feet tall shall not be disturbed, removed or trimmed during the bat birthing and pup rearing season (June 1 through September 15).

2. If nighttime lighting is required, any lights used shall be fully shielded to minimize impacts to native seabirds.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

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

Date: September, 2020

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	3	47

NO POTENTIAL TO AFFECT HISTORIC PROPERTIES

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

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

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

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

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

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

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

   g. Bridgework shall be limited to repaving activities only.

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

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

ENDANGERED SPECIES ACT SECTION 7 NOTES

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

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

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

4. Highway lighting shall not be installed or replaced.

5. Woody plants greater than 15 feet tall shall not be disturbed, removed, or trimmed during the Hawaiian hoary bat birthing and pup rearing season, June 1 through September 15.

LEGEND

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

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 6-29-99
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

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

Date: September, 2020

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	4	47

BOARD OF WATER SUPPLY NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", dated 2002, the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", Volume 3, dated 1991, and all subsequent amendments and additions.

2. The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the water system.

3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, etc., and drainage and other features of improvements shall not be the responsibility of the Board of Water Supply.

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

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

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

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

8. Prior to any excavation, the Contractor shall verify in the field the location of existing water mains and appurtenances. The Contractor shall have existing mains toned before construction of work in the vicinity of water mains, call the Investigation Section at 527-5296 for toning services. The Contractor shall pay for all toning services.

9. Maintain 3'-0" minimum cover for all existing waterlines (18" minimum for service laterals) from new finish grade. The Contractor shall probe the waterline and service laterals and submit the probing data to BWS Construction Section. Any adjustments to the existing water system to meet the minimum cover and the requirements of the BWS standards, whether shown on plans or not, shall be done by the Contractor at no cost to BWS and the State.

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

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

12. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment wil be effective when the project receives an approved building permit from the building department. All water commitments will be canceled in the event the building permit is canceled.

SEWER NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY NOTES

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

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	5	47

HAWAIIAN TELECOM (HTCO) NOTES:

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

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

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

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

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

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

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

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

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

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

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

ORIGINAL PLAN

NOTE BOOK No.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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UTILITY NOTES

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

A. GENERAL:

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

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

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

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

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

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

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

B. WASTE DISPOSAL:

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

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

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

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

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

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

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

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

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

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

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

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

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

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

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

ORIGINAL PLAN
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CHECKED BY
NOTE BOOK
No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

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

Date: September, 2020

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	7	47

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

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

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

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

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

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

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

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

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

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

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

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

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

Date: September, 2020

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	8	47

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

E. PERMIT REQUIREMENTS:

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

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

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

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

Follow the requirements below:

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

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

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

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

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

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

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

ORIGINAL PLAN
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No. ____ CHECKED BY ____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

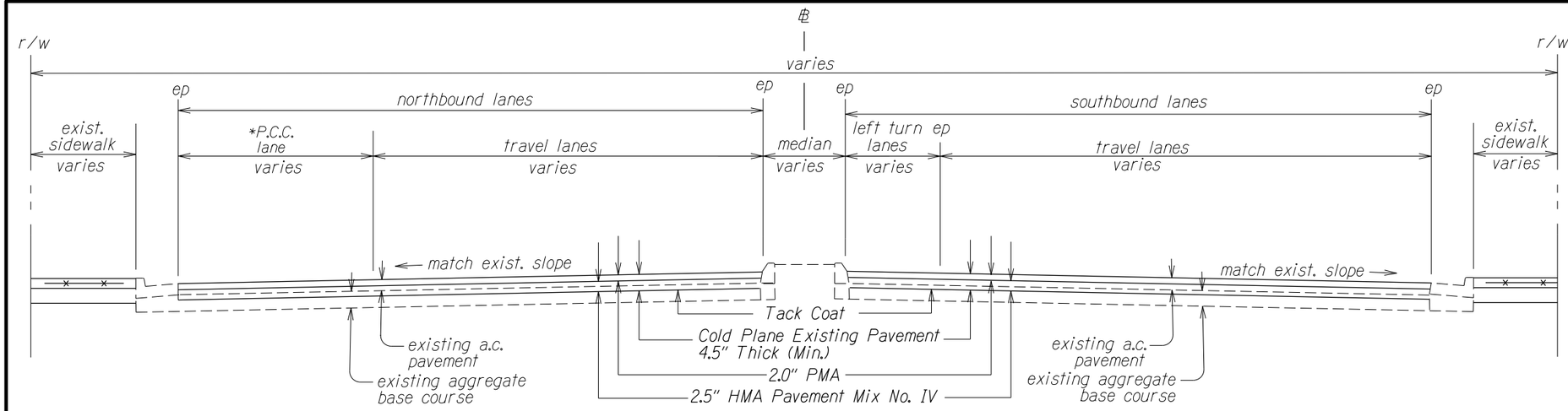
WATER POLLUTION & EROSION CONTROL NOTES

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

Date: September, 2020

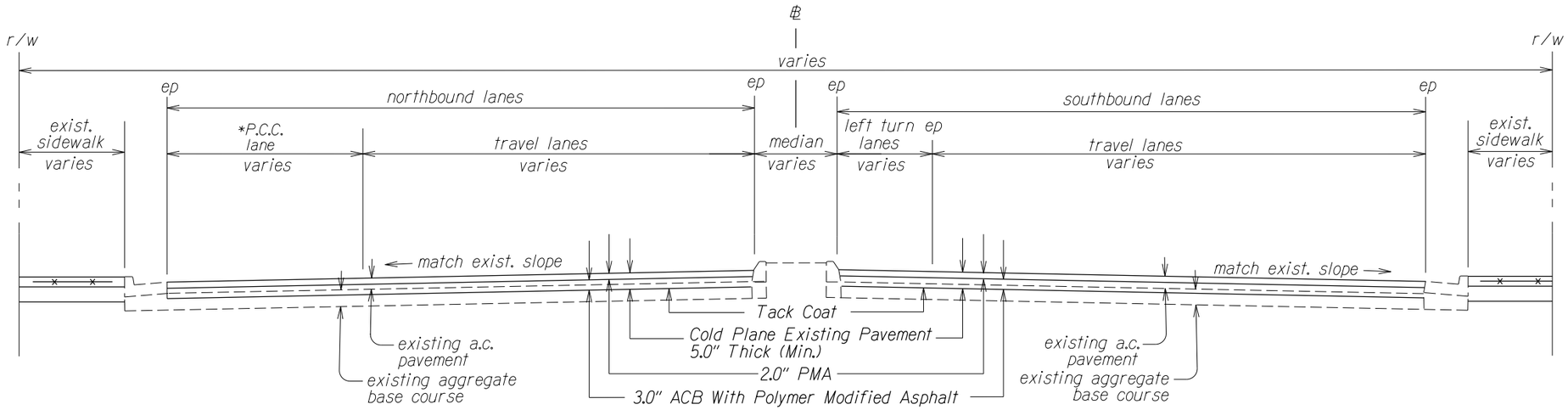
SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	9	47



TYPICAL SECTION
NIMITZ CONNECTOR WB ℄ STA. 45+04.23 (KALIHI STREAM BRIDGE) TO ℄ STA 17+66.47 (SAND ISLAND ACCESS ROAD)

Scale: N.T.S.

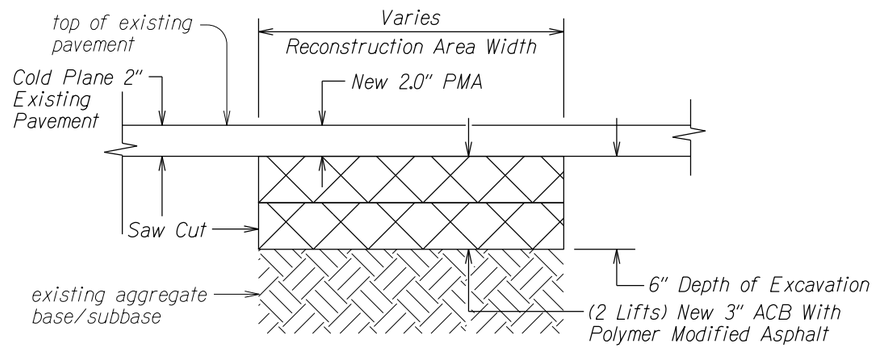


TYPICAL SECTION
℄ STA 17+66.47 (SAND ISLAND ACCESS ROAD) TO ℄ Sta. 62+50± (ATKINSON DRIVE)

Scale: N.T.S.

Notes:

a. For reconstruction area schedule, see Plan Sheet Nos. 10 - 11.
b. For AC Pavement Reconstruction for Traffic Counting System ℄ Loop Detector Locations, See Roadway Plans.
b. Prior to placement of the Hot Mix Asphalt Base Course, the exposed subbase or subgrade should be recompacted to a dense and unyeilding condition.
c. Reconstructed pavement from in this area should consist of the removal of the surface asphaltic concrete down to the underlying base material and replacement with pavement section above.



AC PAVEMENT RECONSTRUCTION DETAIL

Scale: N.T.S.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS

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

Scale: Not to Scale Date: September, 2020

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	10	47

*Reference: Nimitz Connector (WB) ℄

Reconstruction Area Schedule (To Waikiki)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
*52+61.8±	*52+72.8±	43.5 Rt.	43.5 Rt.	11.0	11.0	121.0
22+51.2±	75+72.0±	39.7 Rt.	35.7 Rt.	5302.8	11.0	58,331.3
33+46.4±	33+86.4±	23.0 Rt.	23.0 Rt.	40.0	22.0	880.0
38+16.2±	38+27.2±	10.7 Rt.	10.7 Rt.	11.0	20.0	220.0
40+30.8±	40+55.8±	0.0 Rt.	0.0 Rt.	25.0	31.4 avg.	786.2
40+90.9±	41+15.9±	0.0 Rt.	0.0 Rt.	25.0	31.7 avg.	792.4
53+83.4±	54+08.4±	0.0 Rt.	0.0 Rt.	25.0	31.8 avg.	794.6
54+07.7±	54+23.2±	44.6 Rt.	44.6 Rt.	15.5	15.0	232.5
54+28.0±	54+55.0±	44.6 Rt.	44.6 Rt.	27.0	15.0	405.0
54+54.7±	54+79.7±	18.1 Rt.	18.1 Rt.	25.0	13.5	337.5
58+26.0±	58+46.0±	24.8 Rt.	24.8 Rt.	20.0	11.0	220.0
59+25.0±	59+65.0±	26.0 Rt.	26.0 Rt.	40.0	11.0	440.0
60+92.0±	61+32.0±	23.1 Rt.	23.1 Rt.	40.0	11.0	440.0
64+30.0±	65+00.0±	23.6 Rt.	23.6 Rt.	70.0	11.0	770.0
66+86.0±	70+86.0±	25.5 Rt.	24.7 Rt.	400.0	11.0	4,400.0
71+62.0±	72+12.0±	14.5 Rt.	14.5 Rt.	50.0	11.0	550.0
72+12.0±	73+12.0±	25.4 Rt.	25.4 Rt.	100.0	11.0	1,100.0
74+62.0±	74+92.0±	14.8 Rt.	14.8 Rt.	30.0	20.0	600.0
76+86.0±	77+36.0±	24.2 Rt.	24.2 Rt.	50.0	22.0	1,100.0
84+97.0±	85+47.0±	25.6 Rt.	25.6 Rt.	50.0	11.0	550.0
95+37.0±	99+37.0±	22.9 Lt.	22.9 Lt.	400.0	11.0	4,400.0
111+35.0±	111+65.0±	23.8 Rt.	23.8 Rt.	30.0	11.0	330.0
151+00.0±	152+00.0±	43.6 Rt.	43.6 Rt.	100.0	11.0	1,100.0
153+28.0±	153+78.0±	43.5 Rt.	43.5 Rt.	50.0	11.0	550.0
154+90.0±	155+50.0±	43.4 Rt.	43.4 Rt.	60.0	11.0	660.0
156+50.0±	157+30.0±	27.1 Rt.	27.1 Rt.	80.0	11.0	880.0
162+00.0±	162+60.0±	1.9 Rt.	1.9 Rt.	60.0	33.0	1,980.0
163+34.0±	165+34.0±	24.9 Rt.	24.9 Rt.	200.0	11.0	2,200.0
14+60.0±	16+10.0±	25.1 Rt.	25.1 Rt.	150.0	11.0	1,650.0
17+41.0±	18+41.0±	25.1 Rt.	25.1 Rt.	100.0	11.0	1,100.0
22+00.0±	22+37.5±	19.6 Rt.	19.6 Rt.	37.5	11.0	412.5
22+37.5±	7+15.0±	0.0 Rt.	0.0 Rt.	2954.5	Entire Roadway	111,101.7
8+50.0±	9+00.0±	9.8 Rt.	9.8 Rt.	50.0	10.0	500.0
9+50.0±	9+75.0±	9.0 Rt.	9.0 Rt.	25.0	20.0	500.0
11+00.0±	13+00.0±	11.0 Rt.	11.0 Rt.	200.0	20.0	4,000.0
17+83.0±	18+65.0±	0.0 Rt.	0.0 Rt.	82.0	10.0	820.0

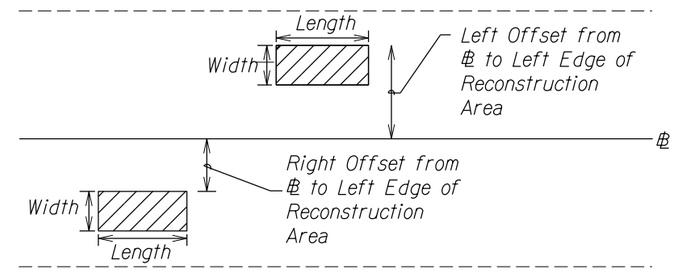
Equation Station Between Rows:
℄ STA 54+95.17 (BK) =
℄ STA 55+13.09 (AH)

Equation Station Between Rows:
℄ STA 164+05.43 (BK) =
℄ STA 111+05.82 (AH)

Equation Station Within Reconstruction Area:
℄ STA 44+76.99 (BK) =
℄ STA 0+00.00 (AH)

Reconstruction Area Schedule (To Waikiki)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
18+65.0±	23+12.5±	-0.7 Rt.	-3.2 Rt.	447.5	31.3 avg.	14,023.2
25+23.0±	26+23.0±	7.0 Rt.	7.0 Rt.	100.0	10.0	1,000.0
26+38.0±	27+48.0±	4.0 Lt.	4.0 Lt.	110.0	30.0	3,300.0
27+78.0±	27+87.5±	8.0 Rt.	8.0 Rt.	10.0	10.0	100.0
27+87.5±	32+07.5±	-3.7 Rt.	-0.7 Rt.	420.0	31.9 avg.	13,381.2
33+70.0±	34+20.0±	26.0 Rt.	26.0 Rt.	50.0	10.0	500.0
38+97.0±	40+27.0±	26.0 Rt.	26.0 Rt.	130.0	10.0	1,300.0
					Subtotal (To Waikiki)	238,859.1



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RECONSTRUCTION SCHEDULE

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

Scale: Not to Scale Date: September, 2020

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	11	47

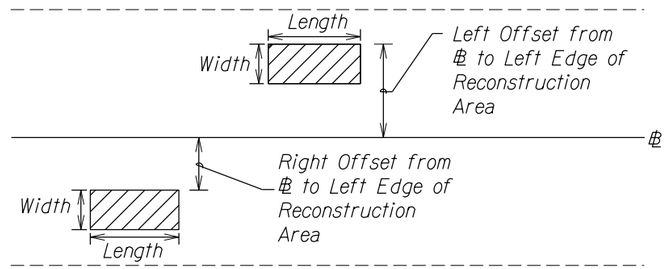
Reconstruction Area Schedule (To Airport)

Station		Offset from ℄ to Left Edge of Reconstruction Area (L.F.)		Length (Linear Feet)	Width (Linear Feet)	Approximate Area (Square Feet)
From	To	Begin	End			
18+90.7±	54+38.1±	53.5 Lt.	42.7 Lt.	3547.5	11.0	39,022.2
54+78.1±	75+72.0±	53.5 Lt.	42.7 Lt.	2075.9	11.0	22,835.2
33+96.2±	37+36.2±	11.4 Lt.	11.4 Lt.	340.0	22.0	7,480.0
40+30.8±	40+55.8±	46.0 Lt.	46.0 Lt.	25.0	31.4 avg.	786.2
40+90.9±	41+15.9±	45.8 Lt.	45.8 Lt.	25.0	31.7 avg.	792.4
43+43.1±	43+83.1±	11.2 Lt.	11.2 Lt.	40.0	11.0	440.0
52+83.4±	52+99.9±	22.1 Lt.	22.1 Lt.	16.5	11.0	181.5
53+00.0±	53+83.5±	22.1 Lt.	22.1 Lt.	83.5	11.0	918.5
53+83.4±	54+08.4±	43.7 Lt.	43.7 Lt.	25.0	31.8 avg.	794.6
54+10.8±	54+37.8±	58.7 Lt.	58.7 Lt.	27.0	15.0	405.0
63+72.0±	64+72.0±	38.1 Lt.	38.1 Lt.	100.0	11.0	1,100.0
66+31.0±	66+51.0±	57.9 Lt.	57.9 Lt.	20.0	71.0	1,420.0
76+46.0±	76+86.0±	42.1 Lt.	42.1 Lt.	40.0	90.0	3,600.0
87+13.0±	88+63.0±	8.0 Lt.	8.0 Lt.	150.0	16.0	2,400.0
101+94.0±	102+44.0±	0.0 Lt.	0.0 Lt.	50.0	11.0	550.0
108+96.0±	109+46.0±	0.0 Lt.	0.0 Lt.	50.0	11.0	550.0
18+27.0±	18+77.0±	43.3 Lt.	43.3 Lt.	50.0	33.0	1,650.0
22+37.5±	7+15.0±	42.8 Lt.	49.9 Lt.	2954.5	Entire Roadway	111,101.7
7+35.0±	7+65.0±	50.3 Lt.	50.3 Lt.	30.0	30.0	900.0
7+65.0±	8+40.0±	40.1 Lt.	40.1 Lt.	75.0	20.0	1,500.0
8+40.0±	13+90.0±	30.2 Lt.	30.2 Lt.	550.0	10.0	5,500.0
9+00.0±	9+50.0±	50.3 Lt.	50.3 Lt.	50.0	10.0	500.0
18+65.0±	23+12.5±	50.2 Lt.	53.1 Lt.	447.5	28.1 avg.	12,553.6
26+38.0±	26+63.0±	55.0 Lt.	55.0 Lt.	25.0	30.0	750.0
27+42.0±	27+67.0±	55.0 Lt.	55.0 Lt.	25.0	30.0	750.0
27+87.5±	32+07.5±	53.0 Lt.	51.7 Lt.	420.0	30.8 avg.	12,932.0
37+94.0±	39+94.0±	46.0 Lt.	46.0 Lt.	200.0	10.0	2,000.0
			Subtotal (To Airport)			233,413.0

Equation Station Between Rows:
℄ STA 54+95.17 (BK) =
℄ STA 55+13.09 (AH)

Equation Station Between Rows:
℄ STA 164+05.43 (BK) =
℄ STA 11+05.82 (AH)

Equation Station Within Reconstruction Area:
℄ STA 44+76.99 (BK) =
℄ STA 0+00.00 (AH)



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

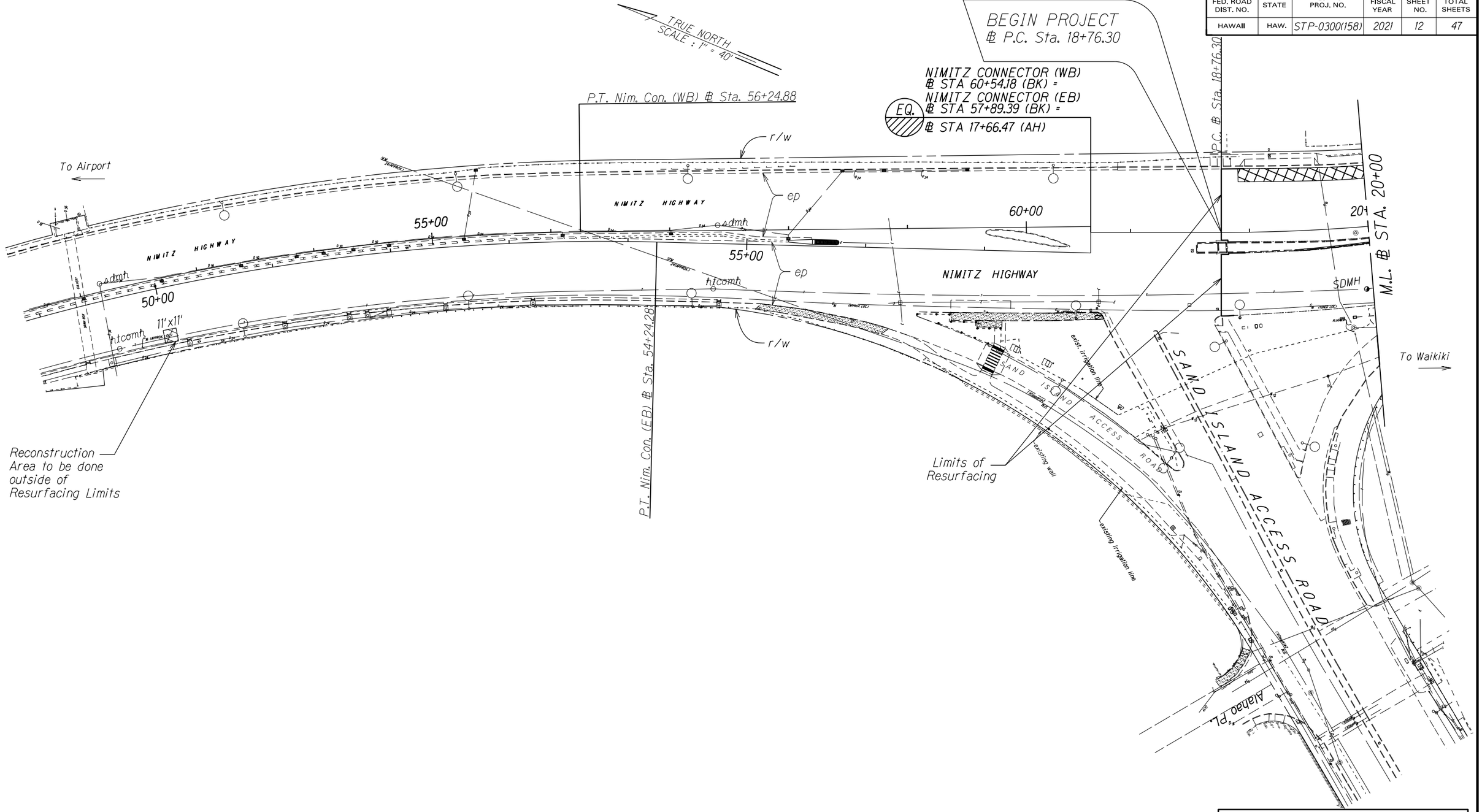
RECONSTRUCTION SCHEDULE

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

Scale: Not to Scale Date: September, 2020

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	12	47



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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

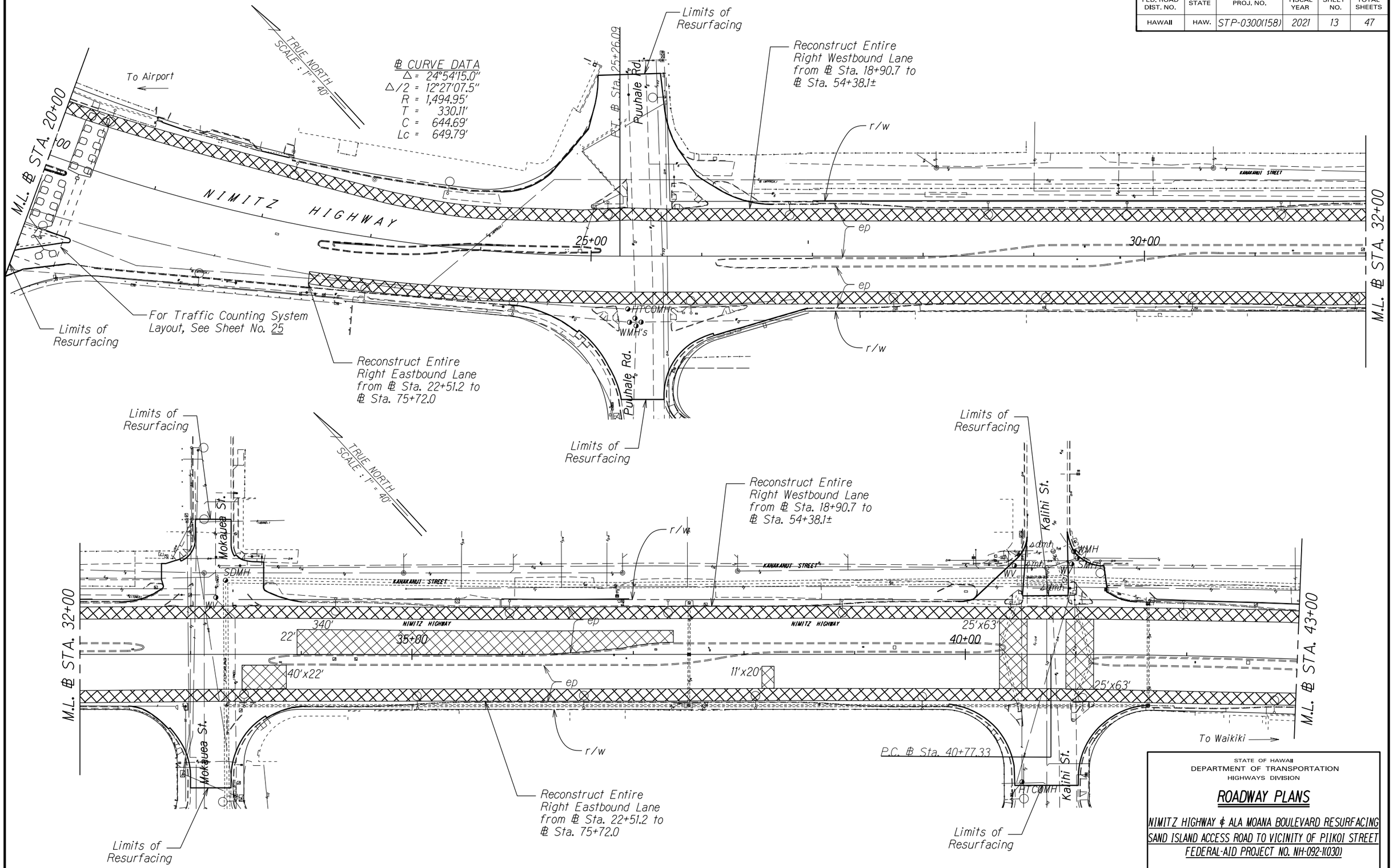
ROADWAY PLANS

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

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

SHEET No. 1 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	13	47



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

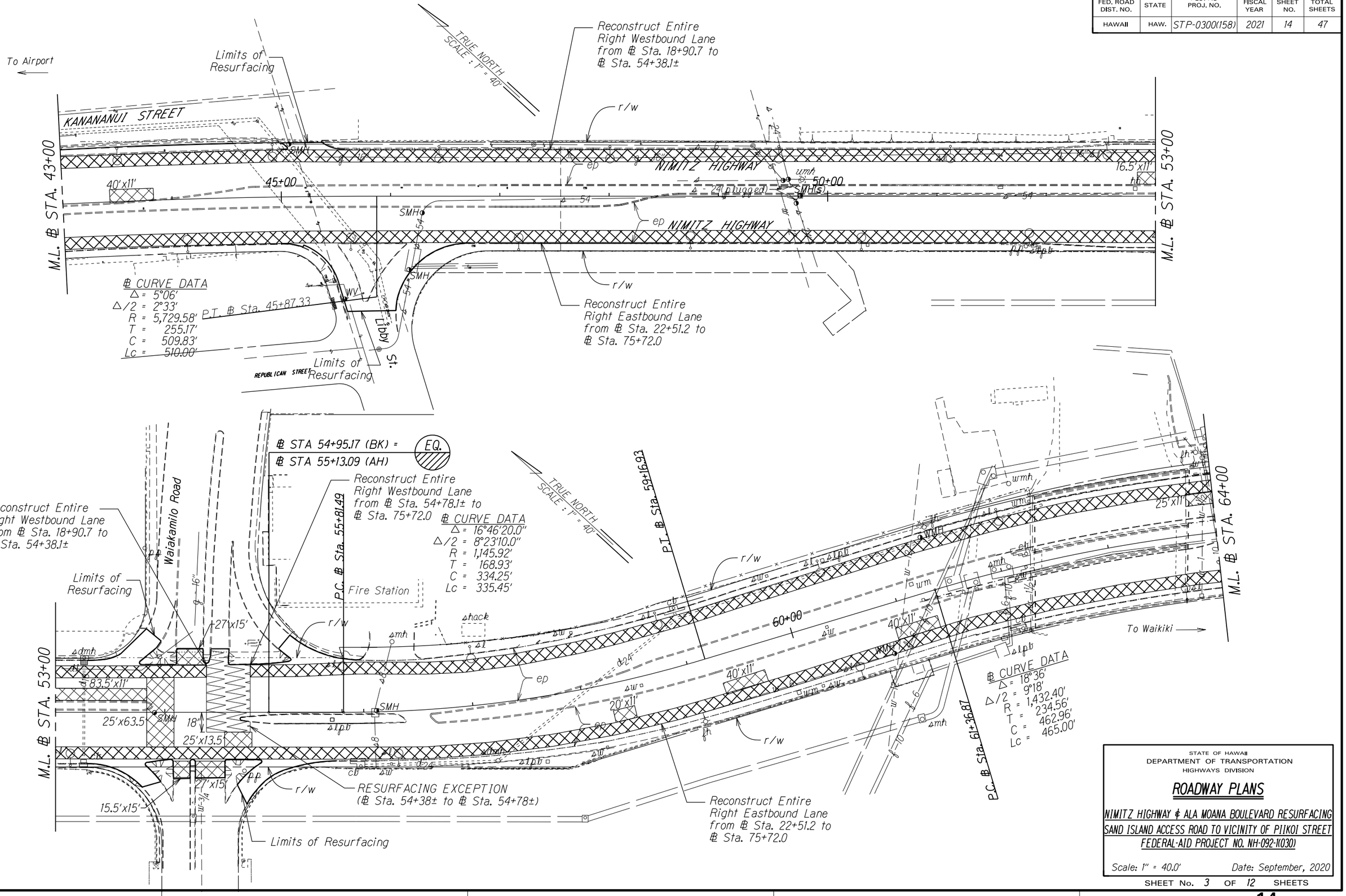
ROADWAY PLANS

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

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

SHEET No. 2 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	14	47



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

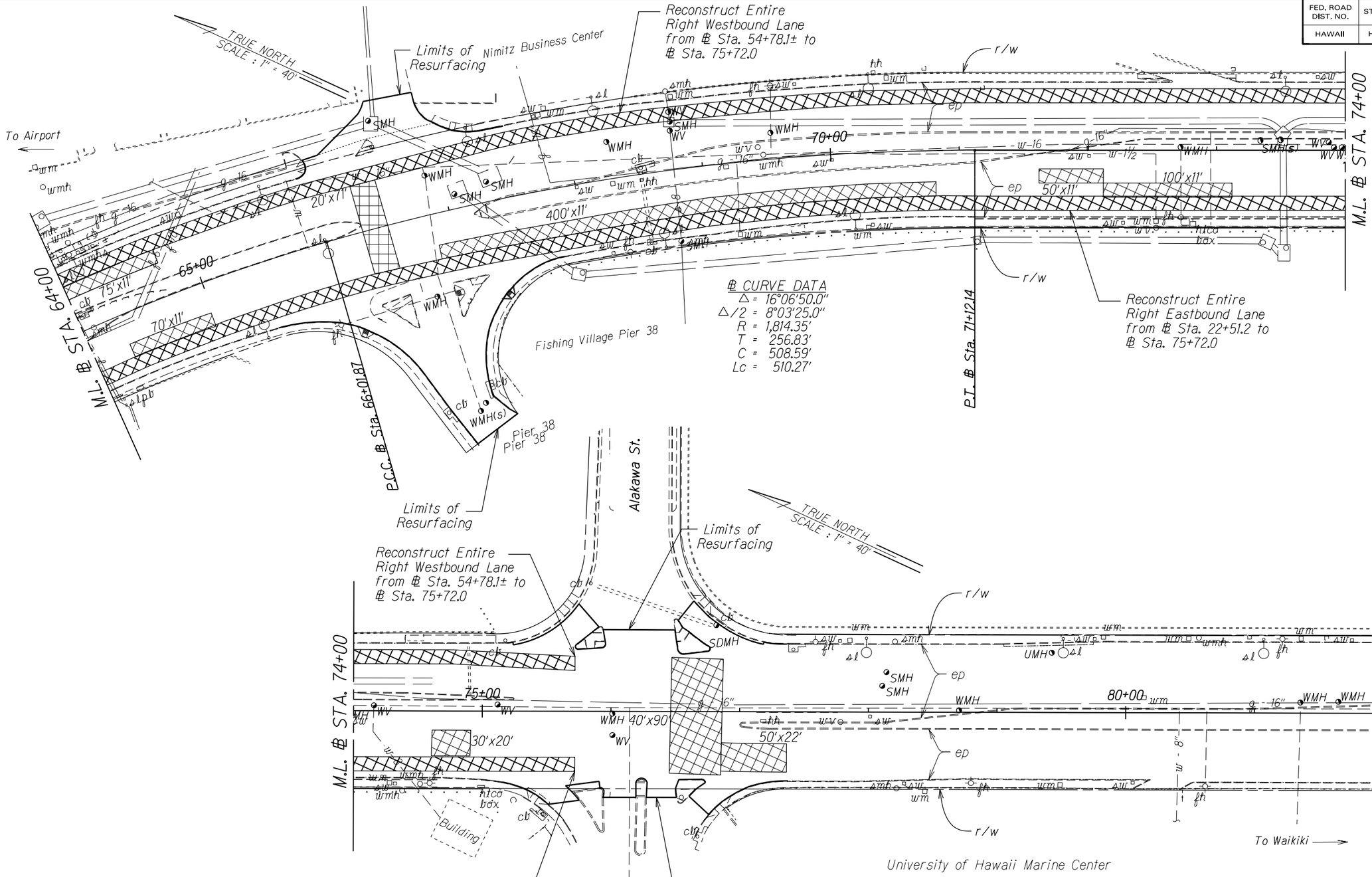
ROADWAY PLANS

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

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

SHEET No. 3 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	15	47



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

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

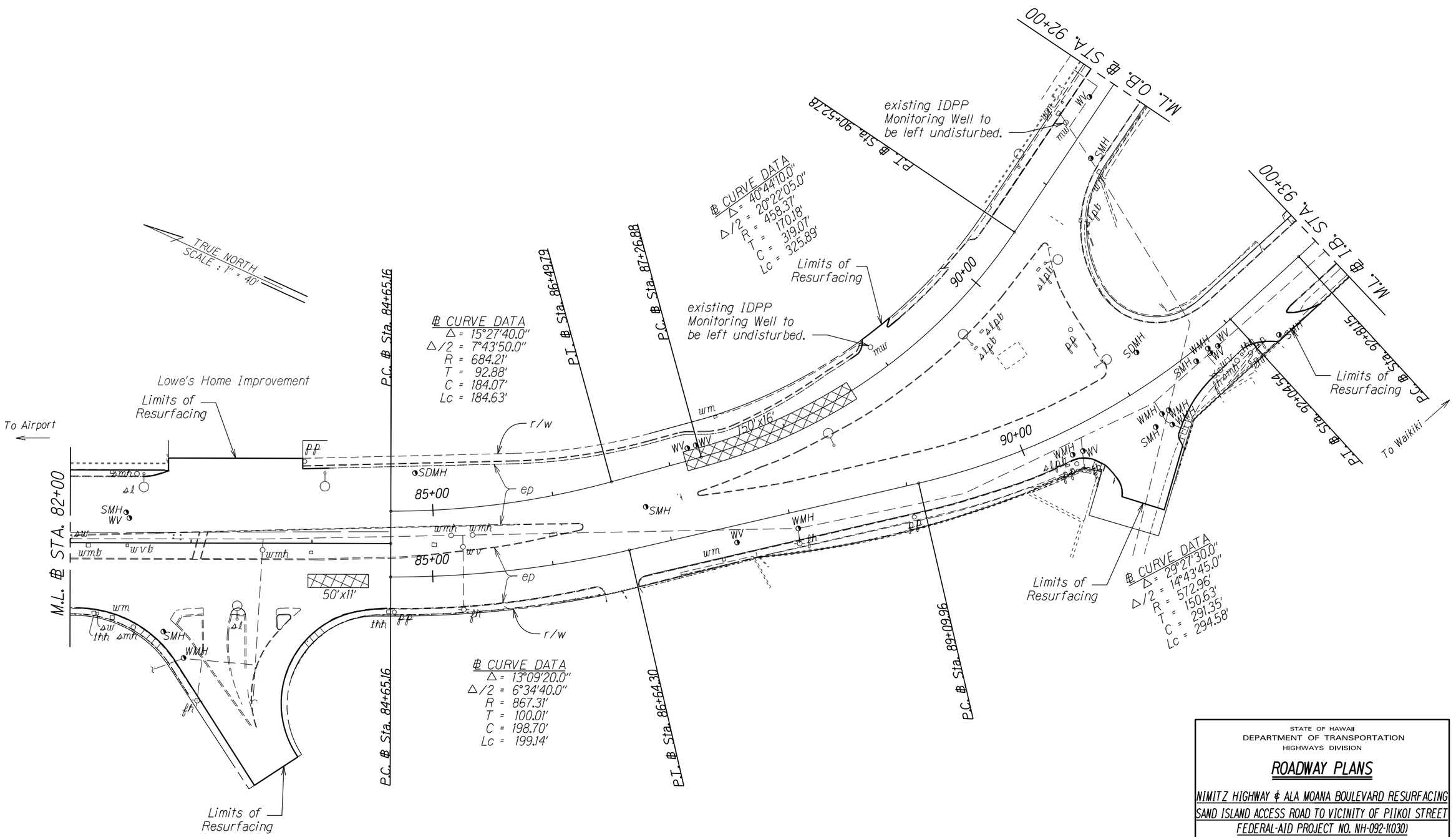
ROADWAY PLANS

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

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

SHEET No. 4 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	16	47



ORIGINAL PLAN

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

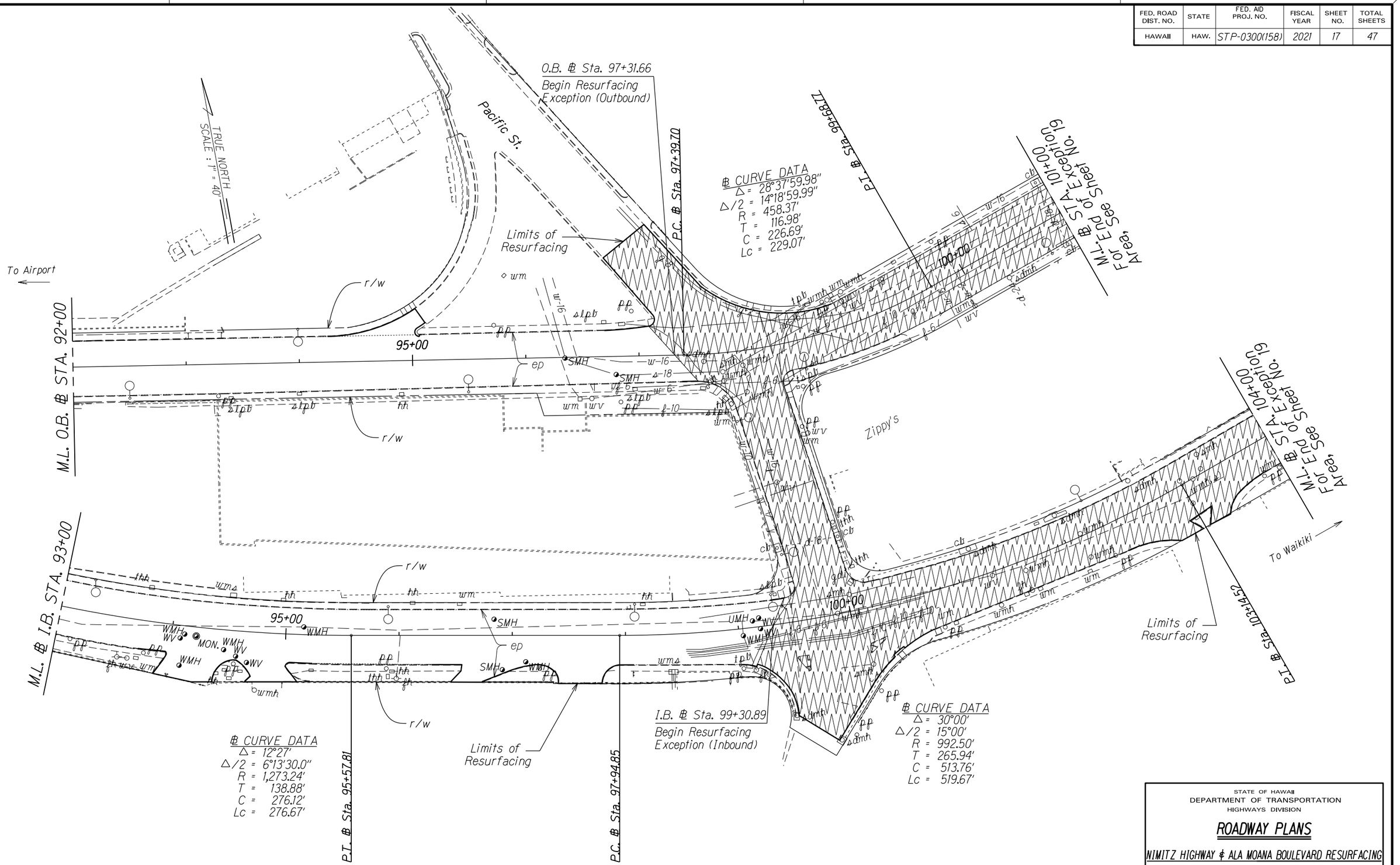
ROADWAY PLANS

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

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

SHEET No. 5 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	17	47



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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

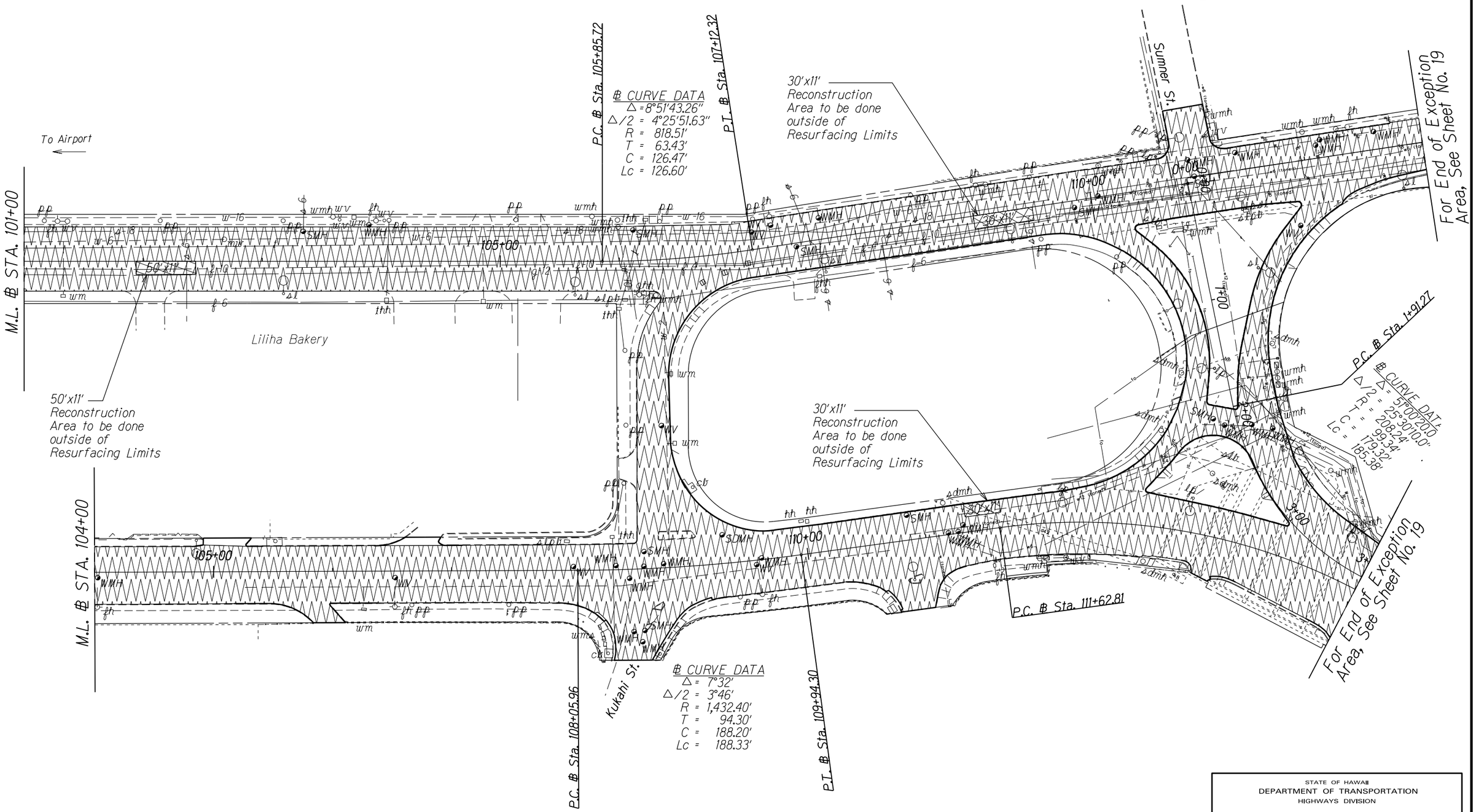
ROADWAY PLANS

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

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

SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	18	47



Note: Only Reconstruction shall be done in this area.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

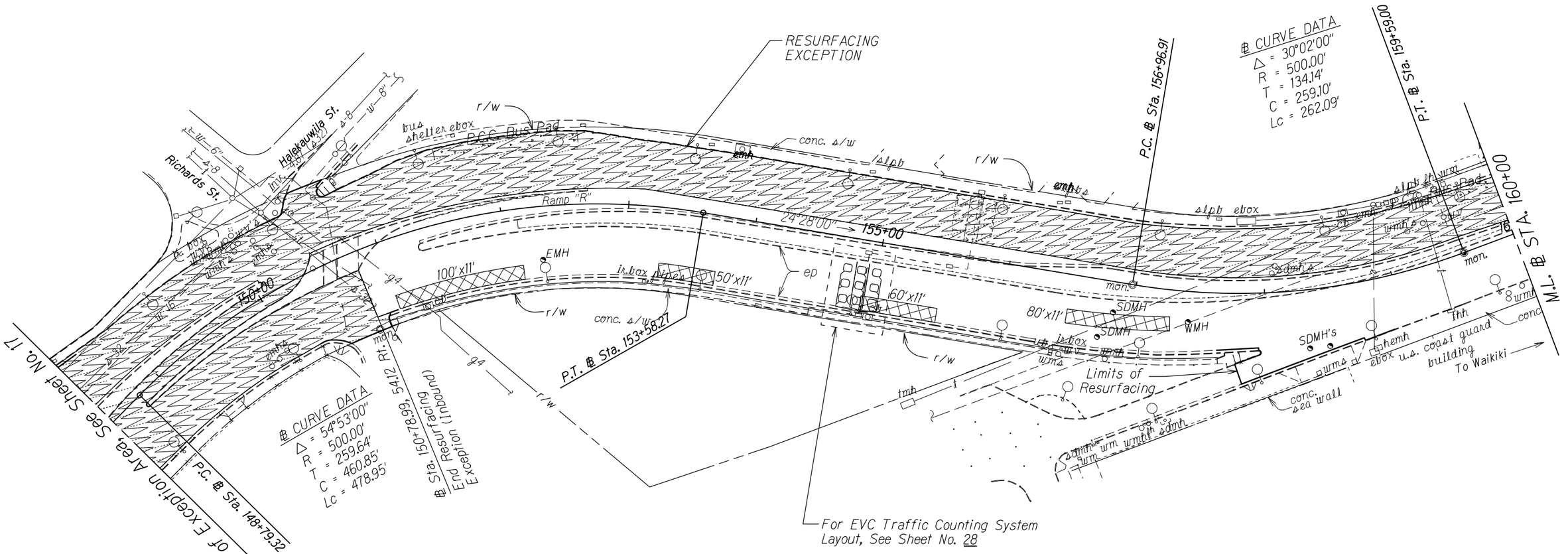
ROADWAY PLANS

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

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

SHEET No. 7 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	19	47



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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

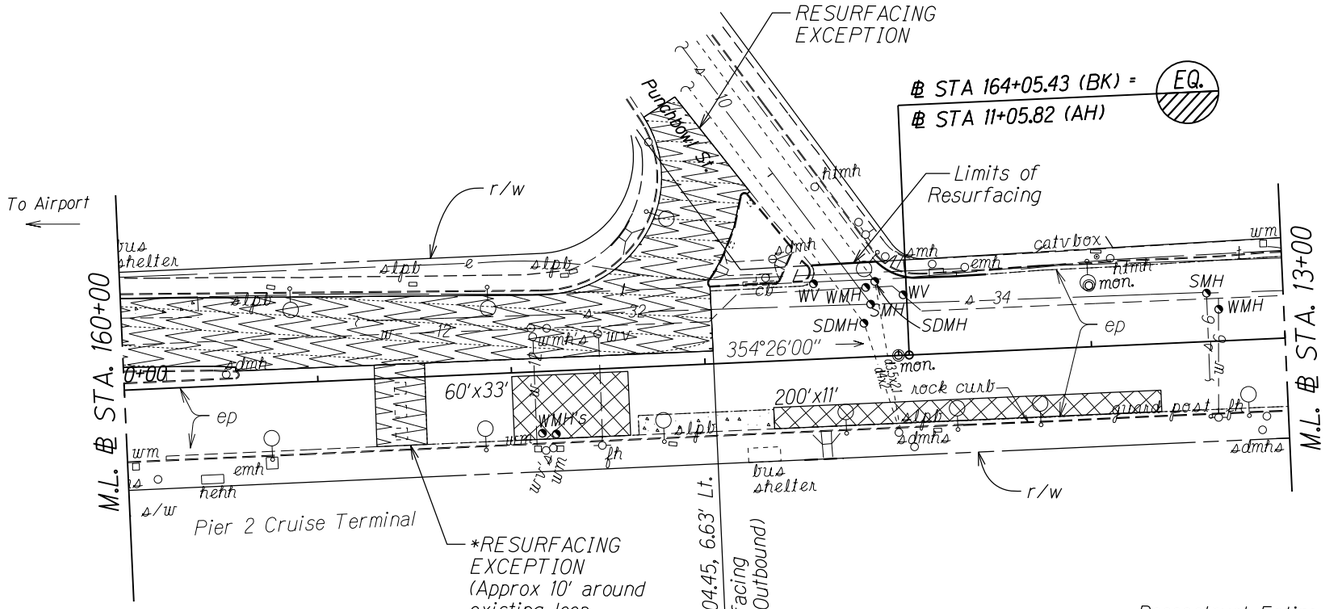
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

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

SHEET No. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	20	47

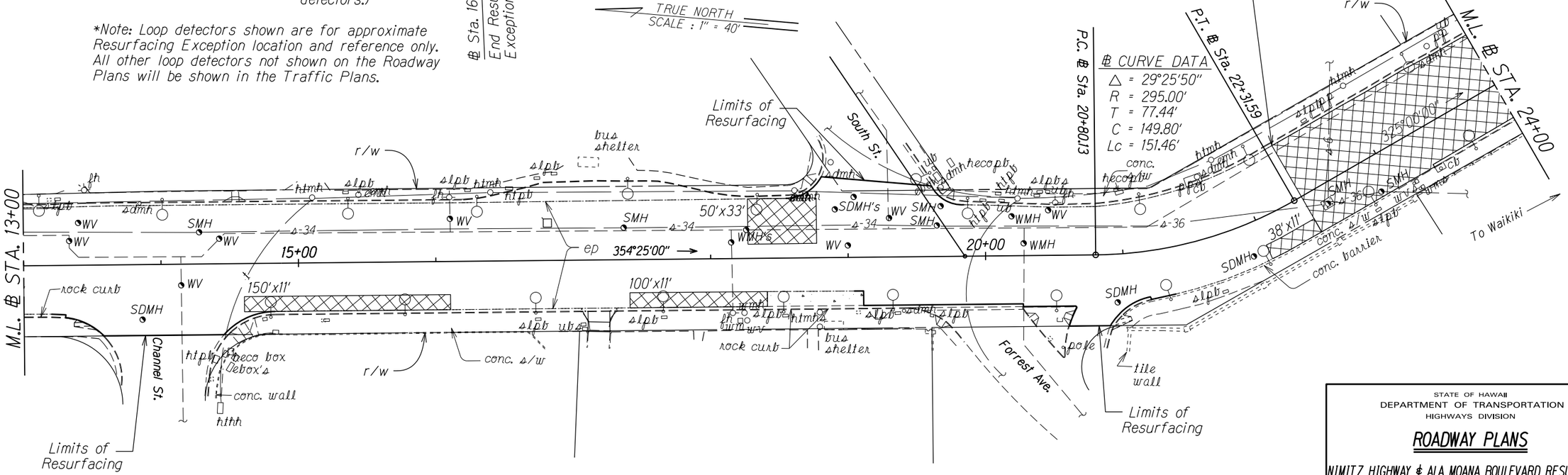
TRUE NORTH
SCALE : 1" = 40'



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

Reconstruct Entire Roadway from ℄ Sta. 22+37.5 to ℄ Sta. 7+15.0

TRUE NORTH
SCALE : 1" = 40'



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

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

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

SHEET No. 9 OF 12 SHEETS

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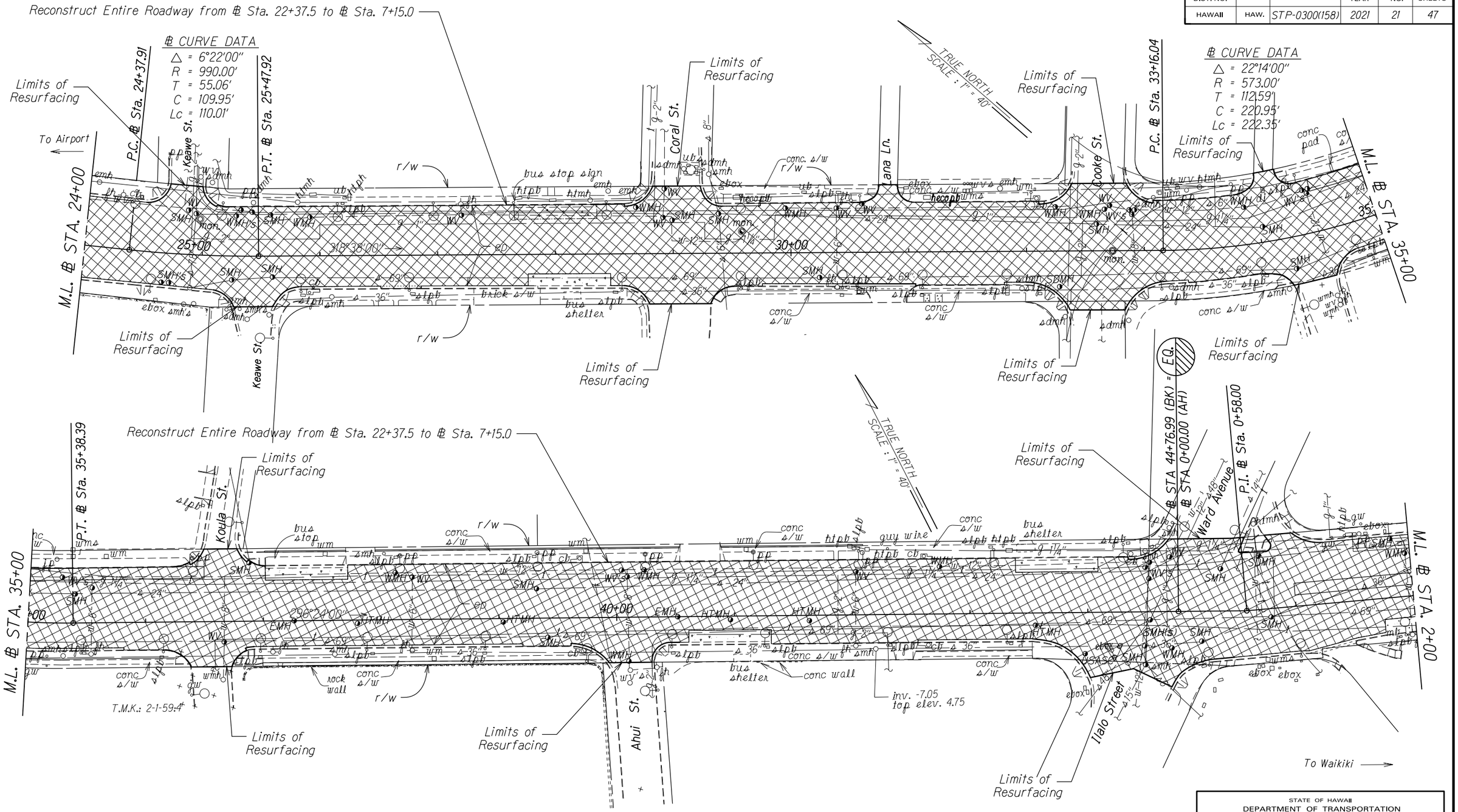
NOTE BOOK	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	21	47



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

ORIGINAL PLAN
NOTE BOOK ____ No. ____

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

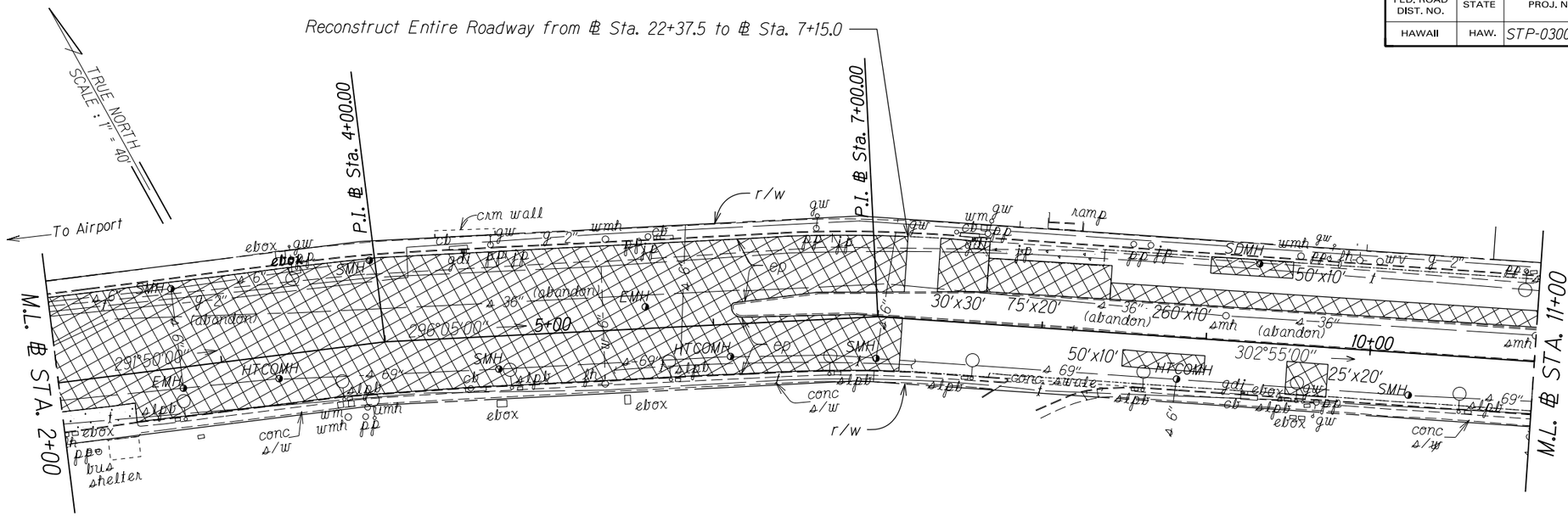
ROADWAY PLANS

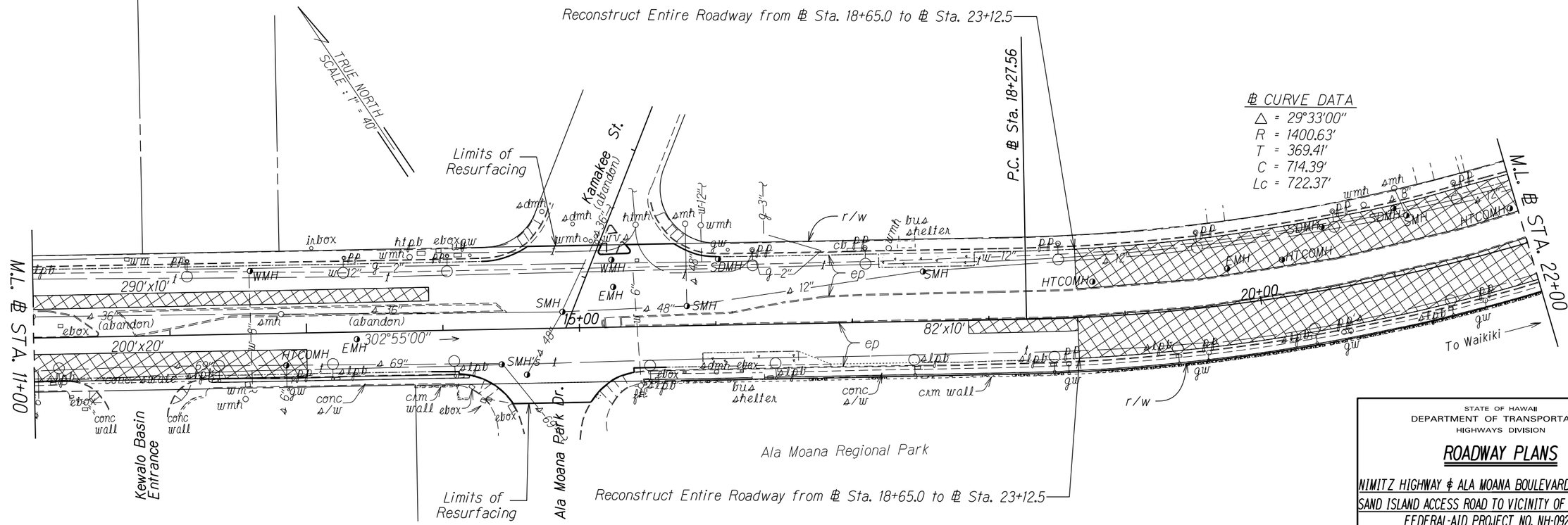
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

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

SHEET No. 10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	22	47





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

ORIGINAL PLAN
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

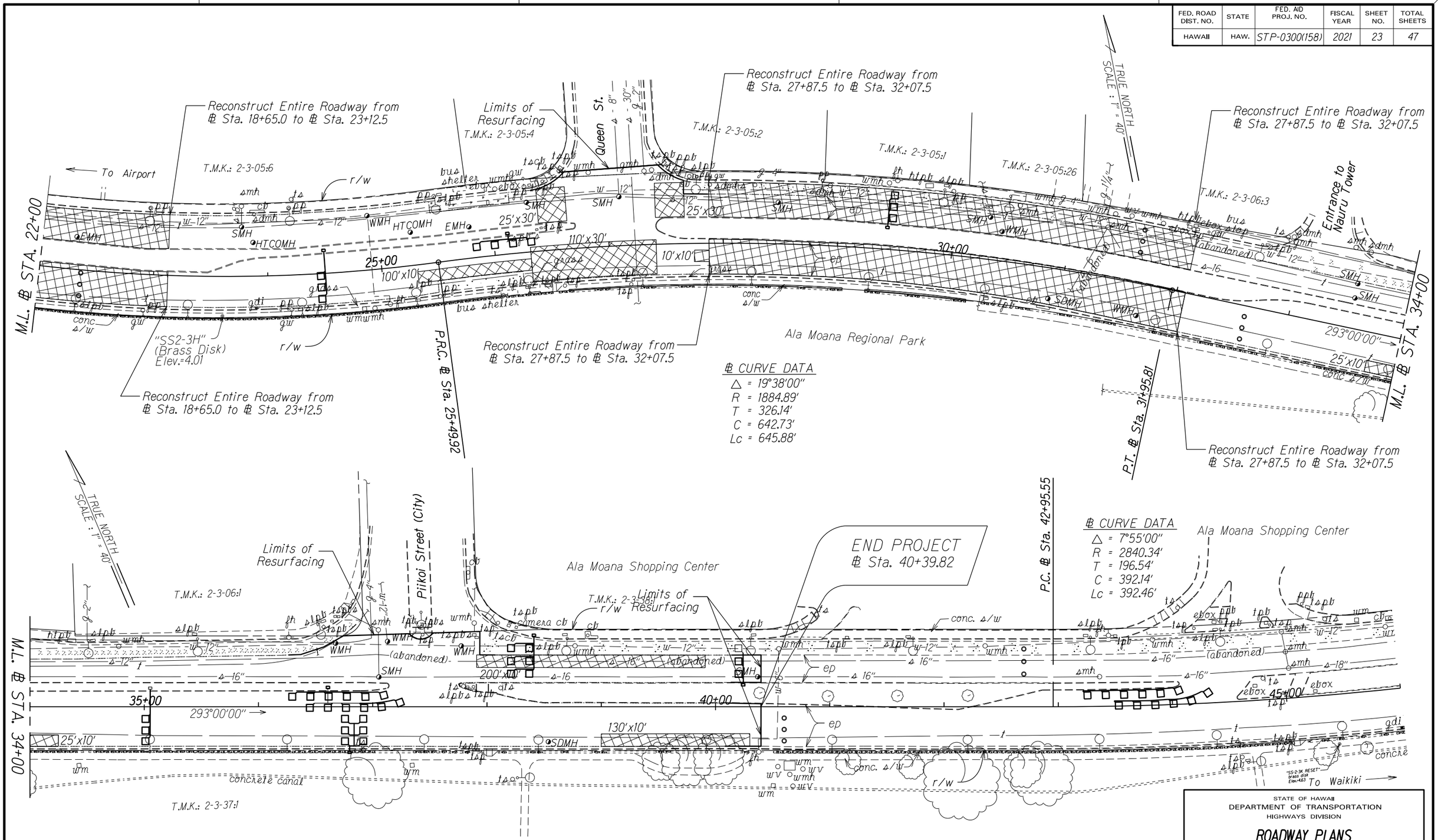
ROADWAY PLANS

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

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

SHEET No. 11 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	23	47



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ORIGINAL PLAN
NOTE BOOK
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- Accusense Mag In-Pavement Sensor replacement work to be done by others.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

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

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

SHEET No. 12 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	24	47

TRAFFIC COUNTING SYSTEM (TCS) NOTES

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

SENSOR LOOP LAYOUT NOTES

1. Detector loop shall consist of four turns of 1C #14 cable meeting IMSA Spec 51-3 or equivalent embedded in a 3/8" wide by 4" deep sawcut, except as noted. Detector loop shall be provided a minimum 2" cover.
2. After laying sensor loop 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 slot before applying the Epoxy Loop Sealant or Equivalent. 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 pavement.
3. Sensor loop 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 pullbox. Do not twist one loop pair with another loop pair.
4. Continuity of sensor loops and lead-in wires shall be tested and warranted for one year from the date of acceptance by the Engineer.
5. Sensor loop lead cables shall be spliced only at the final pullbox to the TCS cabinet. Splice point of cables must be suspended near the top of the pullbox with a j-hook.
6. Splices shall be made by use of a splice kit.
7. All sensor loop lead cables shall be crimped with open end lugs that will fit into the terminal board slots snugly.
8. Stagger sensor loops on roadways with lanes that are less than 12 feet in width.
9. The Contractor shall connect the sensor loop wires on each terminal slot, as shown on plans.
10. The left 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.
11. All sensor loop lead wires in the TCS cabinet and the pullboxes shall be identified and labeled by direction of traffic flow and lane number as shown on plans.
12. Only one sensor loop shall be placed per saw cut.

ORIGINAL PLAN
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QUANTITIES BY
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NOTE BOOK
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM NOTES

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

Date: September, 2020

SHEET No. 1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	25	47

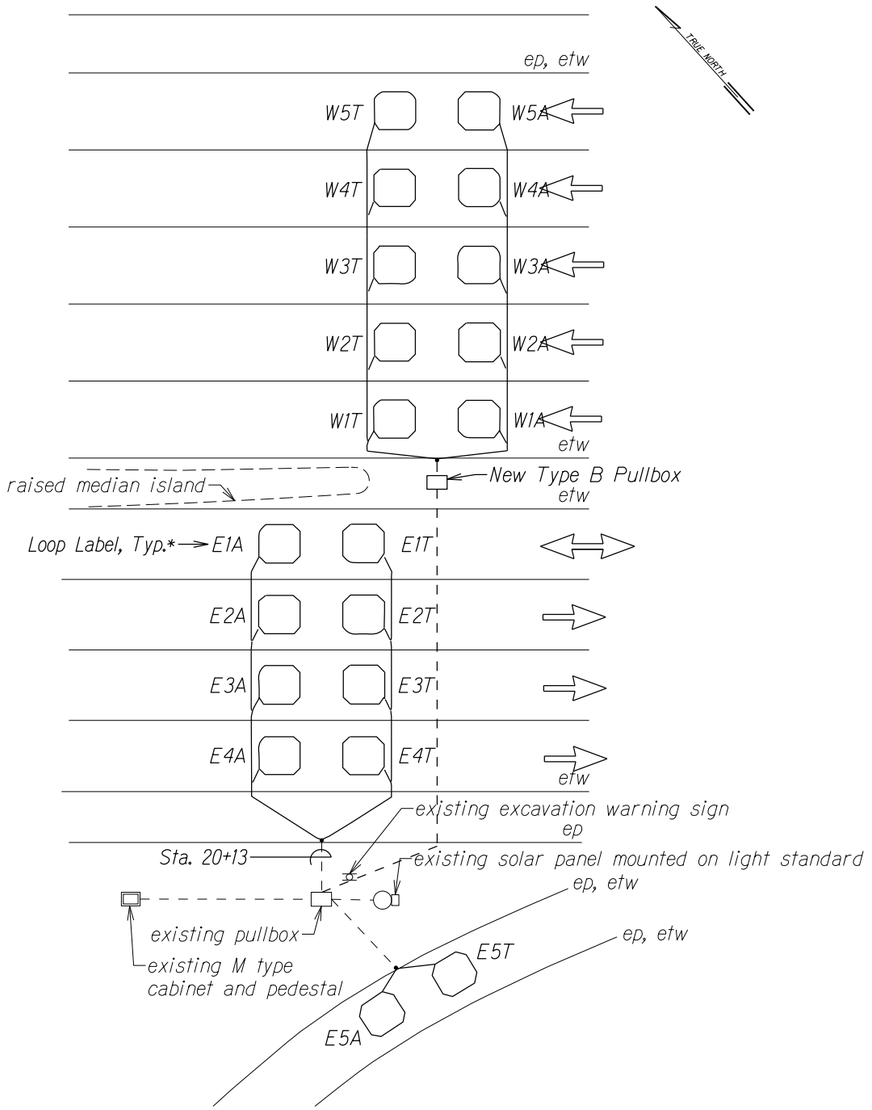
BOUNDARY LABEL LEGEND

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

LOOP LABEL LEGEND

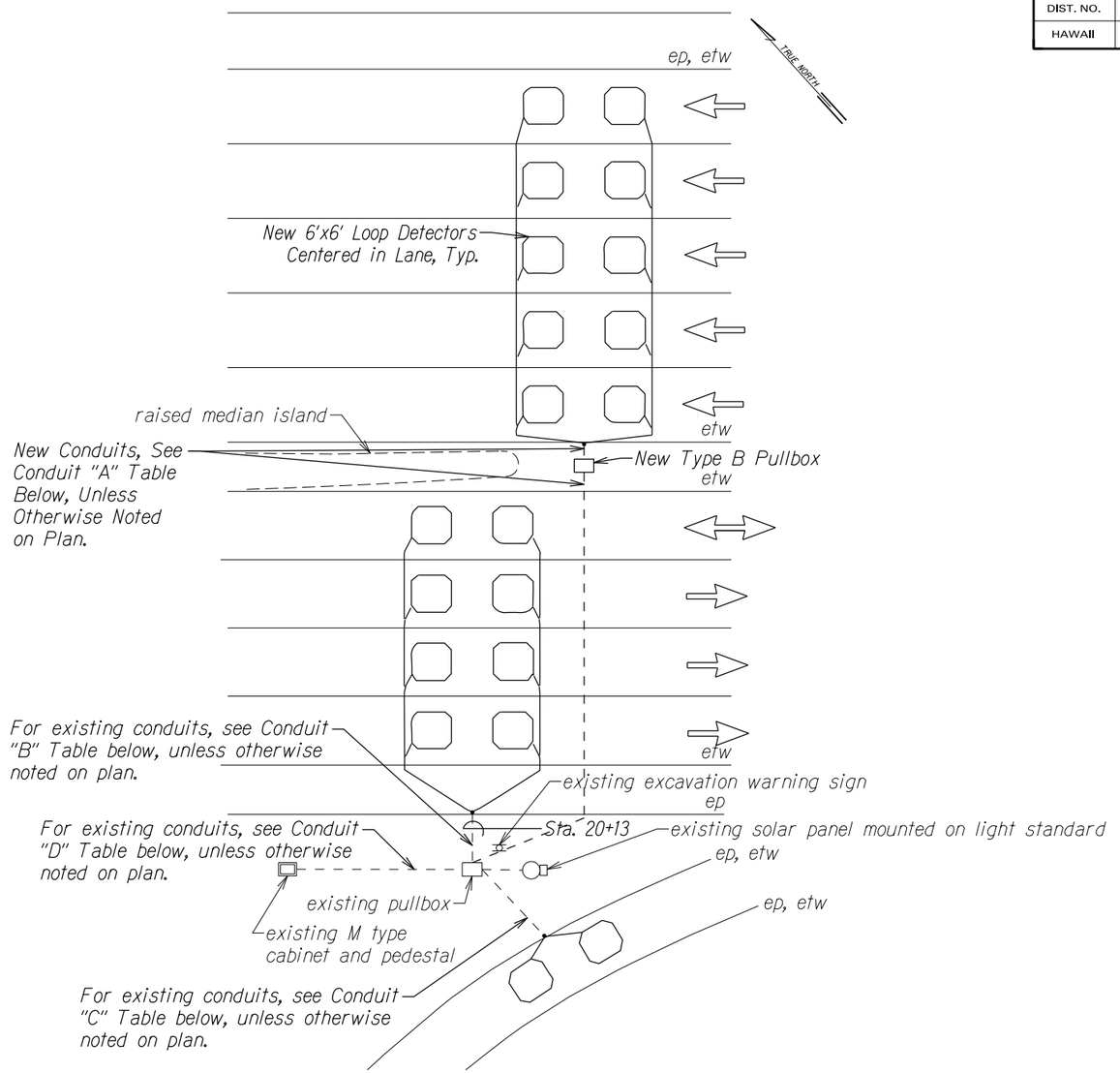
E = East
W = West
A = Approaching
T = Trailing

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



LABELING OF LOOPS AND PIEZOS

Not to Scale



Conduit "A" Table:

Conduit* #-Size	2C #18 Loop Detector Cable
2 - 2"	10

Conduit "B" Table:

Conduit* #-Size	2C #18 Loop Detector Cable
Existing	18

Conduit "C" Table:

Conduit* #-Size	2C #18 Loop Detector Cable
Existing	2

Conduit "D" Table:

Conduit* #-Size	2C #18 Loop Detector Cable
Existing	8

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

TRAFFIC COUNTING SYSTEM LAYOUT DETAIL VICINITY OF SAND ISLAND ACCESS ROAD, TCS 228

Not to Scale

*NOTES:

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM LAYOUT

TCS 228, @ STA. 20+13

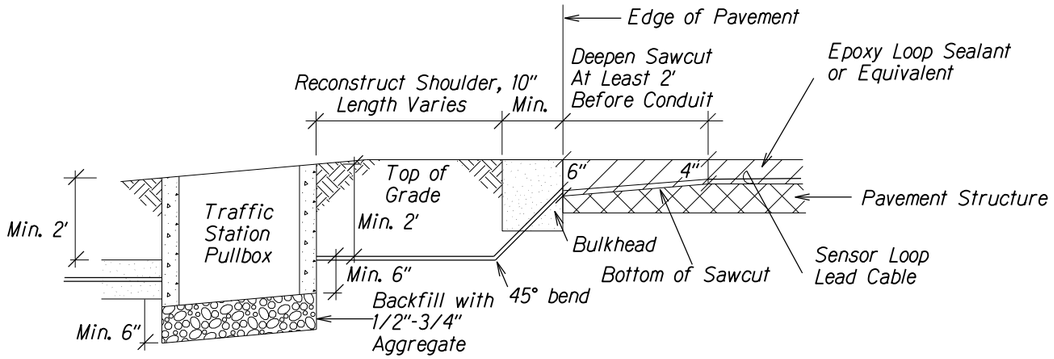
NIMITZ HIGHWAY & ALA MOANA BOULEVARD RESURFACING
SAND ISLAND ACCESS ROAD TO VICINITY OF PIIKOI STREET
FEDERAL-AID PROJECT NO. NH-092-1(030)

Scale: Not to Scale Date: September, 2020

SHEET No. 2 OF 6 SHEETS

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

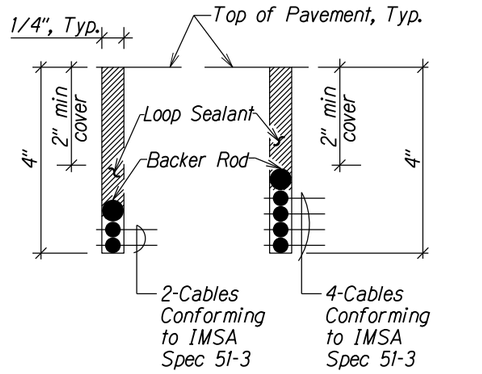
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	26	47



NOTES ON CONSTRUCTION AT END OF SAWCUT:

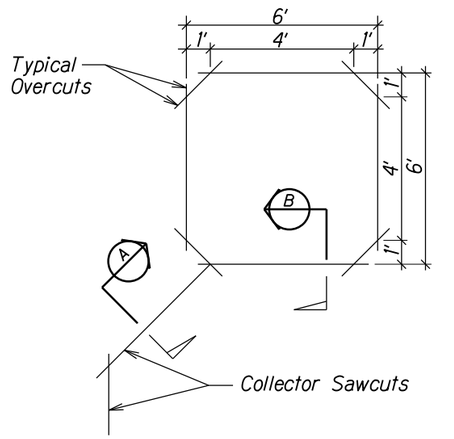
1. Seal roadway end of conduit after installation of conductor.
2. Install bulkhead across conduit trench.
3. Place Epoxy Loop Sealant or Equivalent in sawcut.
4. Backfill over conduit with new AC.
5. Reconstruct curb and gutter as required.
6. Conduit should be installed at least 10 inches from the edge of paved shoulder. If the depth of pavement is 4 inches or less at the shoulder, conduit should be installed at least 12 inches from the edge of paved shoulder.

DETAIL OF SENSOR LOOP AT EDGE OF ROADWAY
Not to Scale



SECTION A Not to Scale — SECTION B Not to Scale

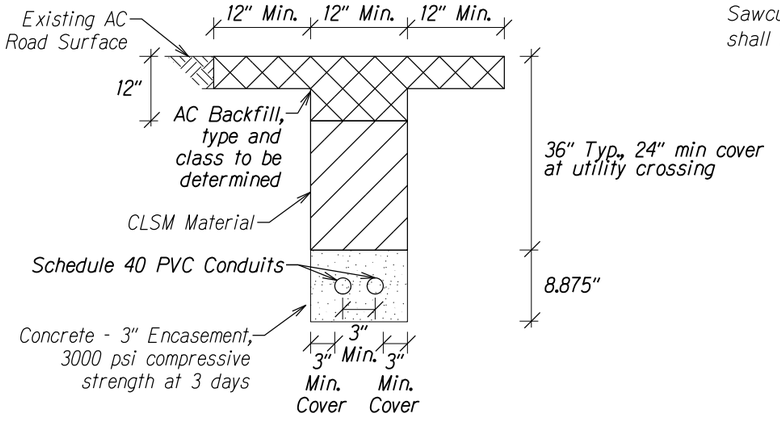
TYPICAL SECTION THROUGH SENSOR LOOP
Not to Scale



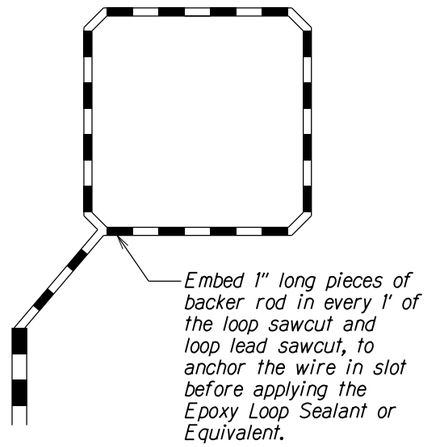
TYPICAL SENSOR LOOP SAWCUT DETAIL
Not to Scale

SENSOR LOOP SAWCUT NOTES:

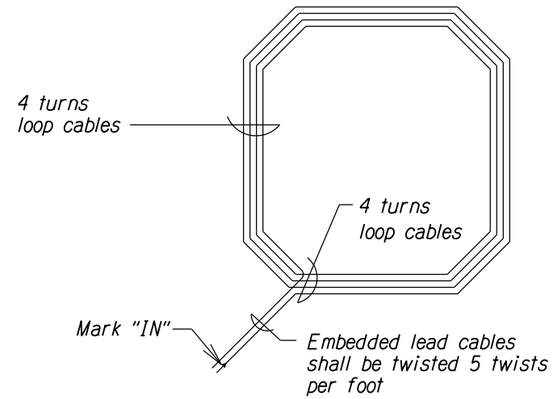
Length of overcuts shall be kept to a minimum. All overcuts shall be backfilled with Epoxy Loop Sealant or Equivalent. Sawcuts containing 10 or more cables shall be 4 1/2" deep.



TYPICAL BACKFILL SECTION WITH CONCRETE ENCASED DUCTS
Not to Scale



TYPICAL SENSOR LOOP BACKER ROD PLACEMENT DIAGRAM
Not to Scale



PLAN

TYPICAL SENSOR LOOP WIRING DIAGRAM
Not to Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM SENSOR DETAILS

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

Scale: Not to Scale Date: September, 2020

SHEET No. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	27	47

ELECTRONIC VEHICLE COUNTING (EVC) SYSTEM NOTES

1. The location of new sensor loops 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 sensor loops and piezo sensors.
3. Pull in in-bound lanes sensor loop cable 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 it is shown on the plans.
7. The Contractor shall assume that existing 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 cuys shall be vacuumed by use of a wet/dry vacuum. The saw cuts shall then be dried by air compressor.
14. After slots are dried, any remaining debris stuck within the slot shall be removed. The saw cuts must be completely clean and dry before inserting the sensors and filling the voids with Epoxy Loop Sealant or equivalent (for sensor loops) or PU200 Piezo Installation Resin (for piezo sensors).
15. The collected slurry shall be disposed of appropriately (i.e., either, placed in a Filter Fabric Lined Filtration Box or in a Filter Fabric Lined Dug Up Retention/Percolation Basin, and after Filtration/Percolation, the Filter Fabric and the retained sediments, disposed of appropriately).

SENSOR LOOP LAYOUT NOTES

1. Detector loop shall consist of four turns of 1C #14 cable meeting IMSA Spec 51-3 or equivalent embedded in a 3/8" wide by 4" deep sawcut, except as noted. Detector loop shall be provided a minimum 2" cover.
2. After laying sensor loop 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 slot before applying the Epoxy Loop Sealant or equivalent. 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 pavement.
3. Sensor loop 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 pullbox. Do not twist one loop pair with another loop pair.
4. Continuity of sensor loops and lead-in wires shall be tested and warranted for one year from the date of acceptance by the Engineer.
5. Sensor loop lead cables shall be spliced only at the final pullbox to the EVC cabinet. Splice point of cables must be suspended near the top of the pullbox with a j-hook.
6. Splices shall be made by use of a splice kit.
7. All sensor loop lead cables shall be crimped with open end lugs that will fit into the terminal board slots snugly.
8. Stagger sensor loops on roadways with lanes that are less than 12 feet in width.
9. The Contractor shall connect the sensor loop wires on each terminal slot, as shown on plans.
10. The left 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.
11. All sensor loop lead wires in the EVC cabinet and the pullboxes shall be identified and labeled by direction of traffic flow and lane number as shown on plans.
12. Only one sensor loop shall be placed per saw cut.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM NOTES

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

Date: September, 2020

SHEET No. 4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	28	47

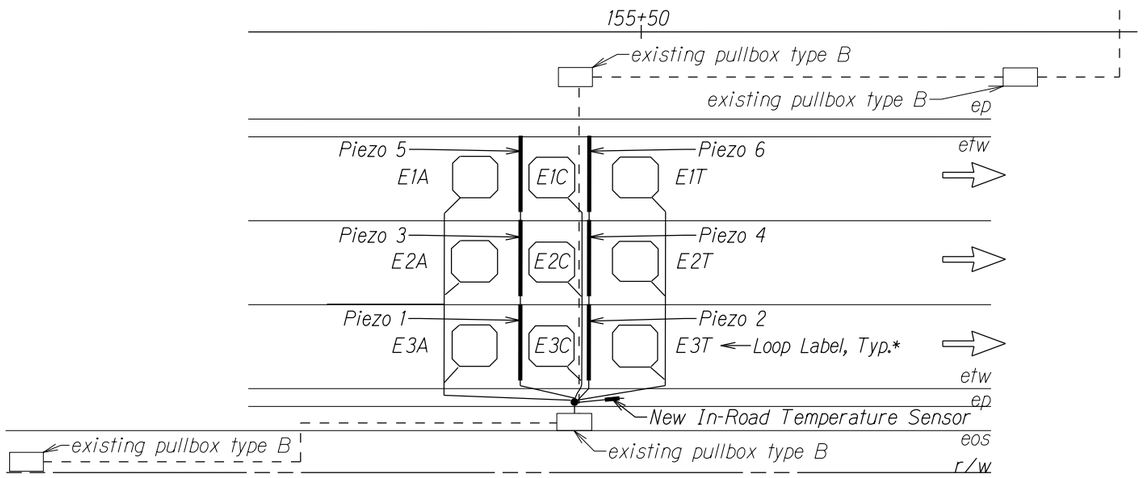
BOUNDARY LABEL LEGEND

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

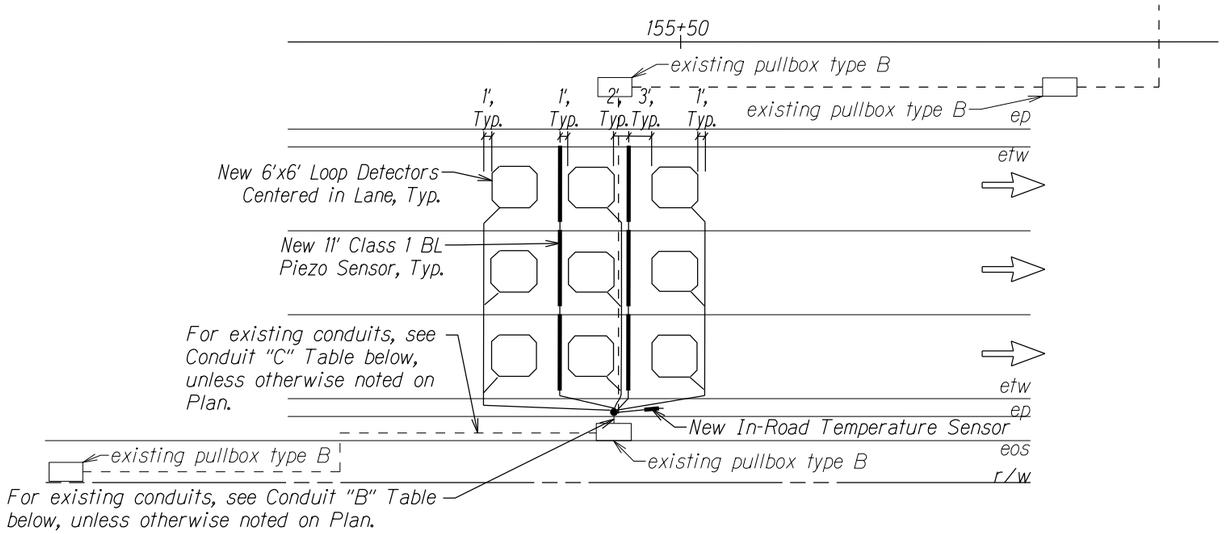
LOOP LABEL LEGEND

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

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



LABELING OF LOOPS AND PIEZOS
Not to Scale



Conduit "B" Table:

Conduit* #-Size	Class 1 BL Sensor Lead Cables	2C #18 Loop Detector Cable	In-Road Temperature Sensor Cable
2 - 4"	6	9	1

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

*NOTES:

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

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

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

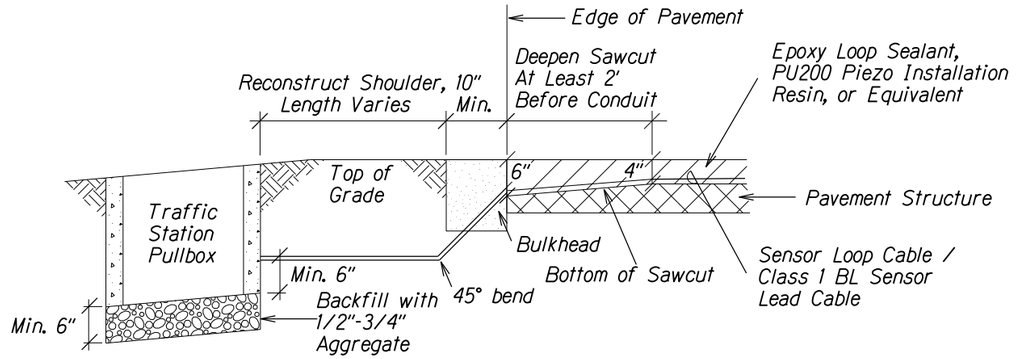
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

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

Scale: Not to Scale Date: September, 2020

SHEET No. 5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	29	47

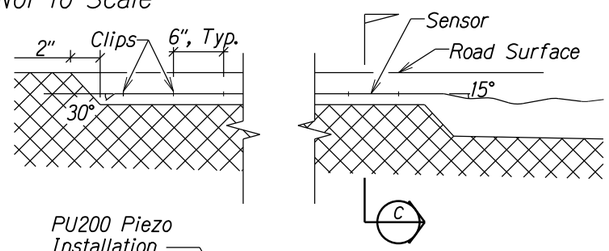


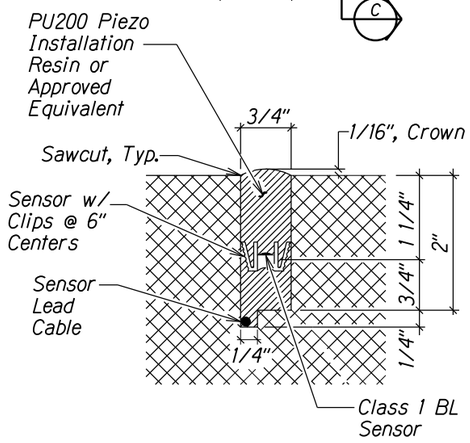
NOTES ON CONSTRUCTION AT END OF SAWCUT:

1. Seal roadway of conduit after installation of conductor.
2. Install bulkhead across conduit trench.
3. Place Epoxy Loop Sealant, PU200 Piezo Installation Resin or Equivalent in sawcut.
4. Backfill over conduit with new AC.
5. Reconstruct curb and gutter as required.
6. Conduit should be installed at least 10 inches from the edge of paved shoulder. If the depth of pavement is 4 inches or less at the shoulder, conduit should be installed at least 12 inches from the edge of paved shoulder.

DETAIL OF SENSOR LOOP/CLASS 1 BL SENSOR AT EDGE OF ROADWAY

Not to Scale





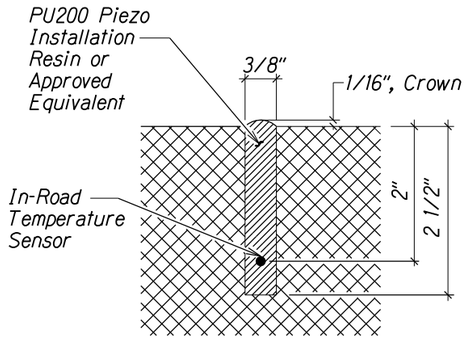
SECTION C
Not to Scale

PIEZOELECTRIC SENSOR INSTALLATION DETAIL

Not to Scale

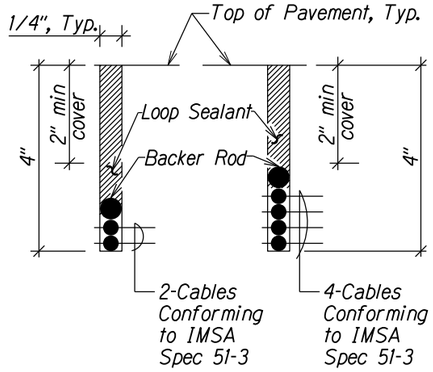
SENSOR LOOP SAWCUT NOTES:

Length of overcuts shall be kept to a minimum. All overcuts shall be backfilled with Epoxy Loop Sealant or Equivalent.



IN-ROAD TEMPERATURE SENSOR INSTALLATION DETAIL

Not to Scale



SECTION A
Not to Scale

SECTION B
Not to Scale

TYPICAL SECTION THROUGH SENSOR LOOP

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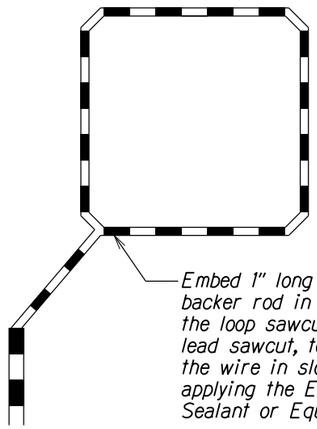
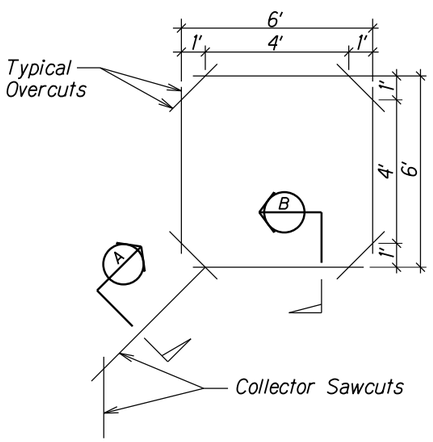


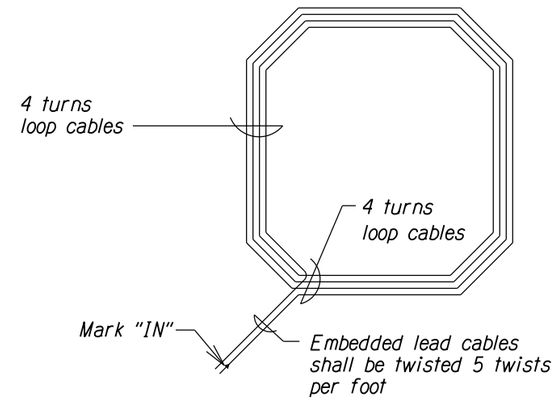
TYPICAL SENSOR LOOP BACKER ROD PLACEMENT DIAGRAM

Not to Scale



TYPICAL SENSOR LOOP SAWCUT DETAIL

Not to Scale



PLAN

TYPICAL SENSOR LOOP WIRING DIAGRAM

Not to Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM SENSOR DETAILS

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

Scale: Not to Scale Date: September, 2020

SHEET No. 6 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	1	33

INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 – 3	GENERAL NOTES AND LEGEND
4 – 5	UTILITY NOTES
6 – 8	WATER POLLUTION & EROSION CONTROL NOTES
9	TYPICAL SECTION
10 – 17	ROADWAY PLANS
18 – 20	TRAFFIC COUNTING SYSTEM PLANS
21 – 35	TRAFFIC PLANS

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

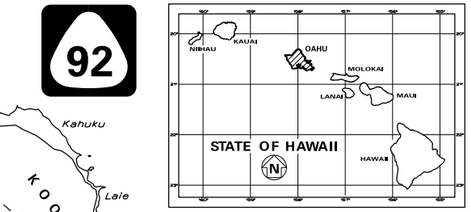
PLANS FOR

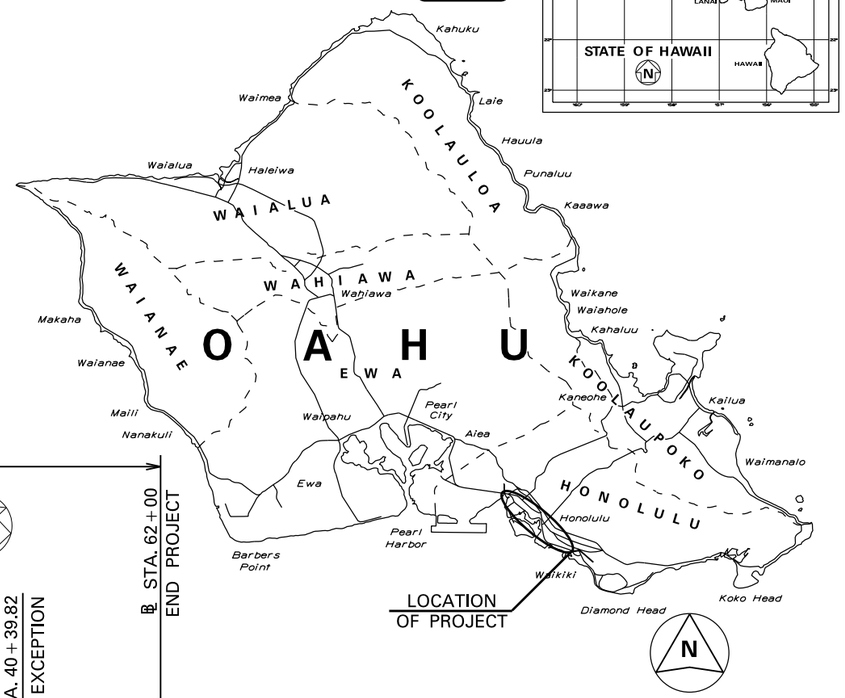
INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU

FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

DISTRICT OF HONOLULU

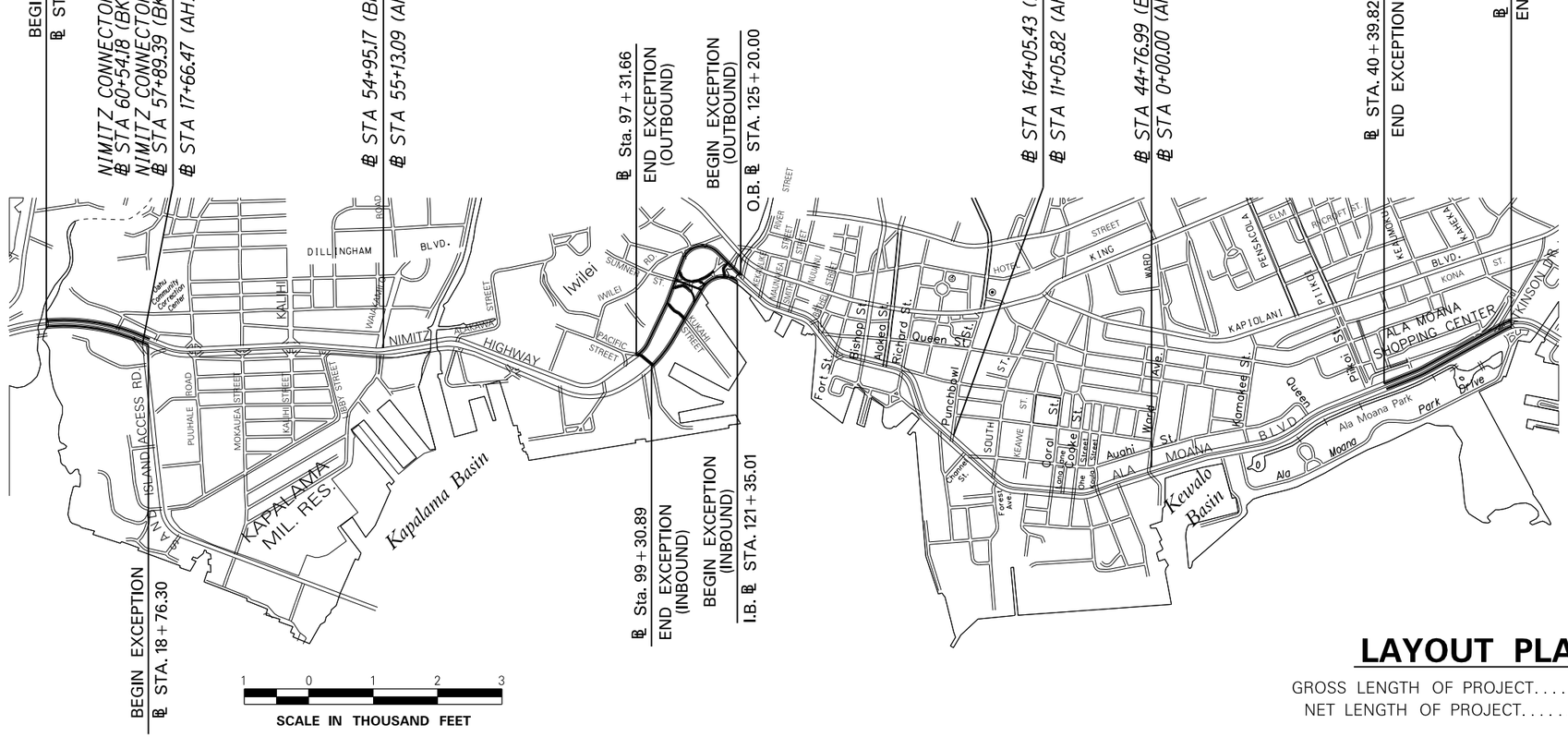
ISLAND OF OAHU





MILE POST 3.66 TO MILE POST 8.53

LIMITS OF PROJECT



HWY-DD DESIGNED BY | HWY-D MANAGED BY | 692-X PHONE | X DATE

LAYOUT PLAN

GROSS LENGTH OF PROJECT..... 4.61 MILES

NET LENGTH OF PROJECT..... x.xx MILES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	2	33

GENERAL NOTES

1. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.

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

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

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

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

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

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

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

9. 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

24. Install temporary striping to new traffic pattern.

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

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

PAVING AROUND MANHOLES

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

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

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

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

TRAFFIC SIGNAL NOTES

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

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

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

DIVISION OF FORESTRY AND WILDLIFE NOTES

1. To avoid impacts to the Hawaiian hoary bat, no barbed wire shall be used, and woody plants greater than 15 feet tall shall not be disturbed, removed or trimmed during the bat birthing and pup rearing season (June 1 through September 15).

2. If nighttime lighting is required, any lights used shall be fully shielded to minimize impacts to native seabirds.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	3	33

NO POTENTIAL TO AFFECT HISTORIC PROPERTIES

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

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

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

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

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

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

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

   g. Bridgework shall be limited to repaving activities only.

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

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

ENDANGERED SPECIES ACT SECTION 7 NOTES

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

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

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

4. Highway lighting shall not be installed or replaced.

5. Woody plants greater than 15 feet tall shall not be disturbed, removed, or trimmed during the Hawaiian hoary bat birthing and pup rearing season, June 1 through September 15.

LEGEND

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	4	33

BOARD OF WATER SUPPLY NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", dated 2002, the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", Volume 3, dated 1991, and all subsequent amendments and additions.

2. The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the water system.

3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, etc., and drainage and other features of improvements shall not be the responsibility of the Board of Water Supply.

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

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

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

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

8. Prior to any excavation, the Contractor shall verify in the field the location of existing water mains and appurtenances. The Contractor shall have existing mains toned before construction of work in the vicinity of water mains, call the Investigation Section at 527-5296 for toning services. The Contractor shall pay for all toning services.

9. Maintain 3'-0" minimum cover for all existing waterlines (18" minimum for service laterals) from new finish grade. The Contractor shall probe the waterline and service laterals and submit the probing data to BWS Construction Section. Any adjustments to the existing water system to meet the minimum cover and the requirements of the BWS standards, whether shown on plans or not, shall be done by the Contractor at no cost to BWS and the State.

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

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

12. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment wil be effective when the project receives an approved building permit from the building department. All water commitments will be canceled in the event the building permit is canceled.

SEWER NOTES:

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

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

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

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

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

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

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

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

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

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

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

SHEET No. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	5	33

HAWAIIAN TELECOM (HTCO) NOTES:

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

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

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

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

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

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

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

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

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

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

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

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STATE OF HAWAII
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UTILITY NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

SHEET No. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	6	33

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

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

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

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

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

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

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

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

B. WASTE DISPOSAL:

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

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

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

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

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

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

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

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

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

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

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

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

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

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

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

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STATE OF HAWAII
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WATER POLLUTION & EROSION CONTROL NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

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

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

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

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

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

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

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

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

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

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

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

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	8	33

WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):

E. PERMIT REQUIREMENTS:

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

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

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

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

Follow the requirements below:

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

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

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

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

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

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

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

ORIGINAL PLAN
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

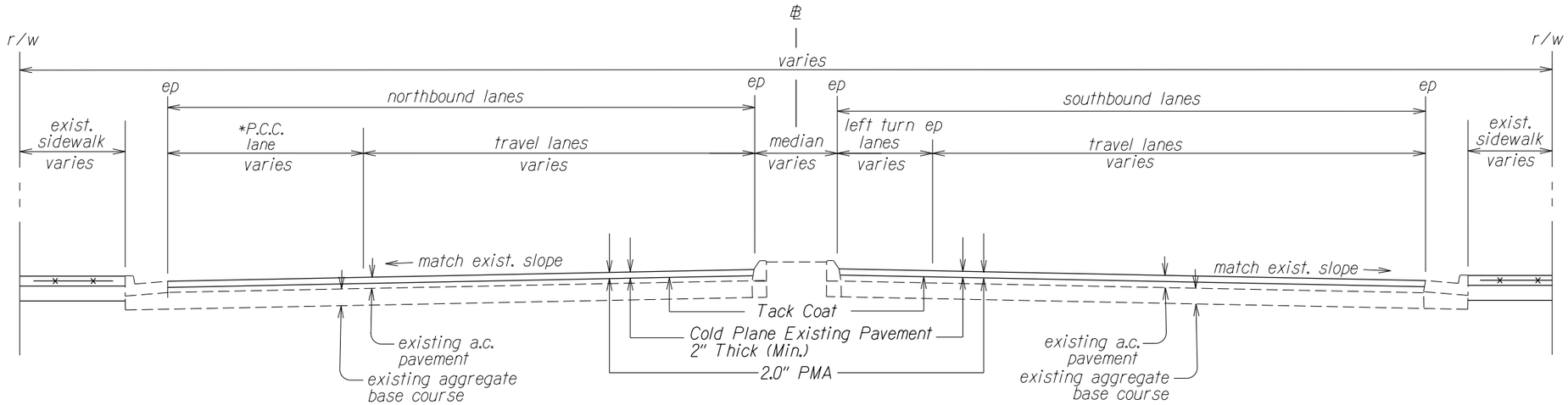
WATER POLLUTION & EROSION CONTROL NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	9	33



TYPICAL SECTION

Scale: N.T.S.

ORIGINAL PLAN

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

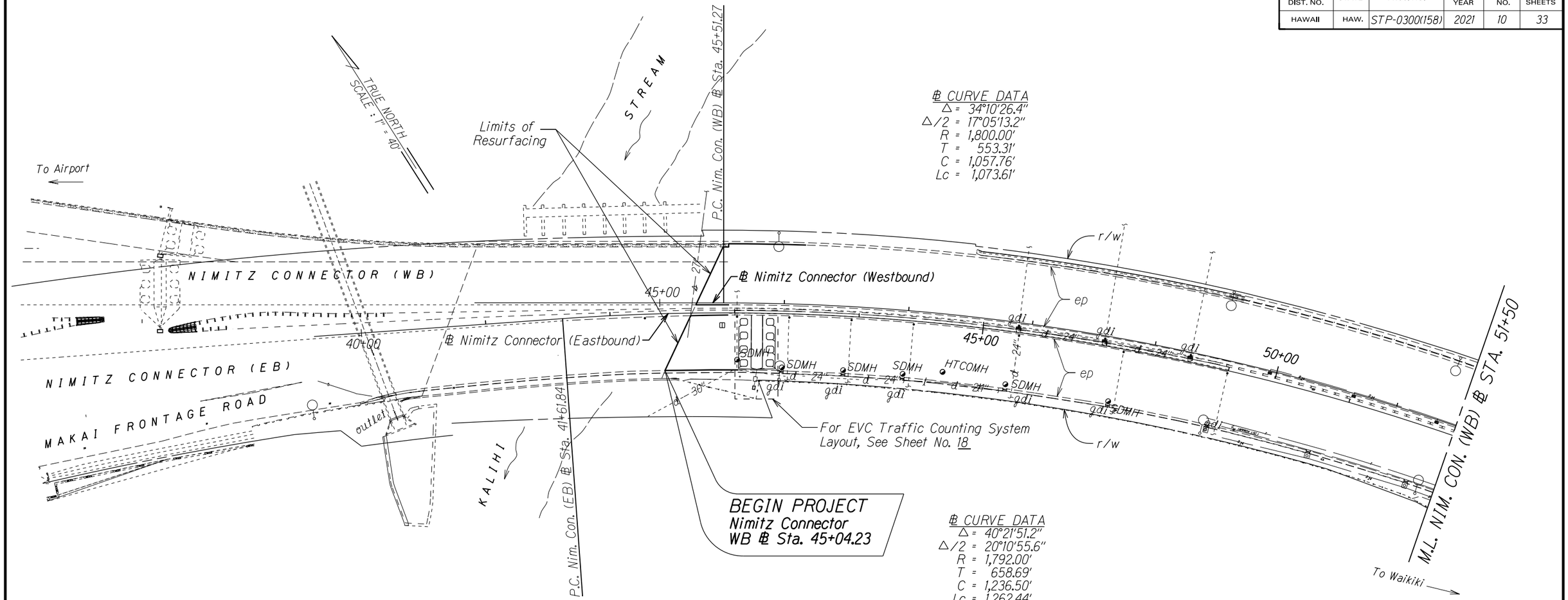
TYPICAL SECTIONS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Scale: Not to Scale Date: August, 2020

SHEET No. 1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	10	33



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DESIGNED BY ____
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ORIGINAL PLANS
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

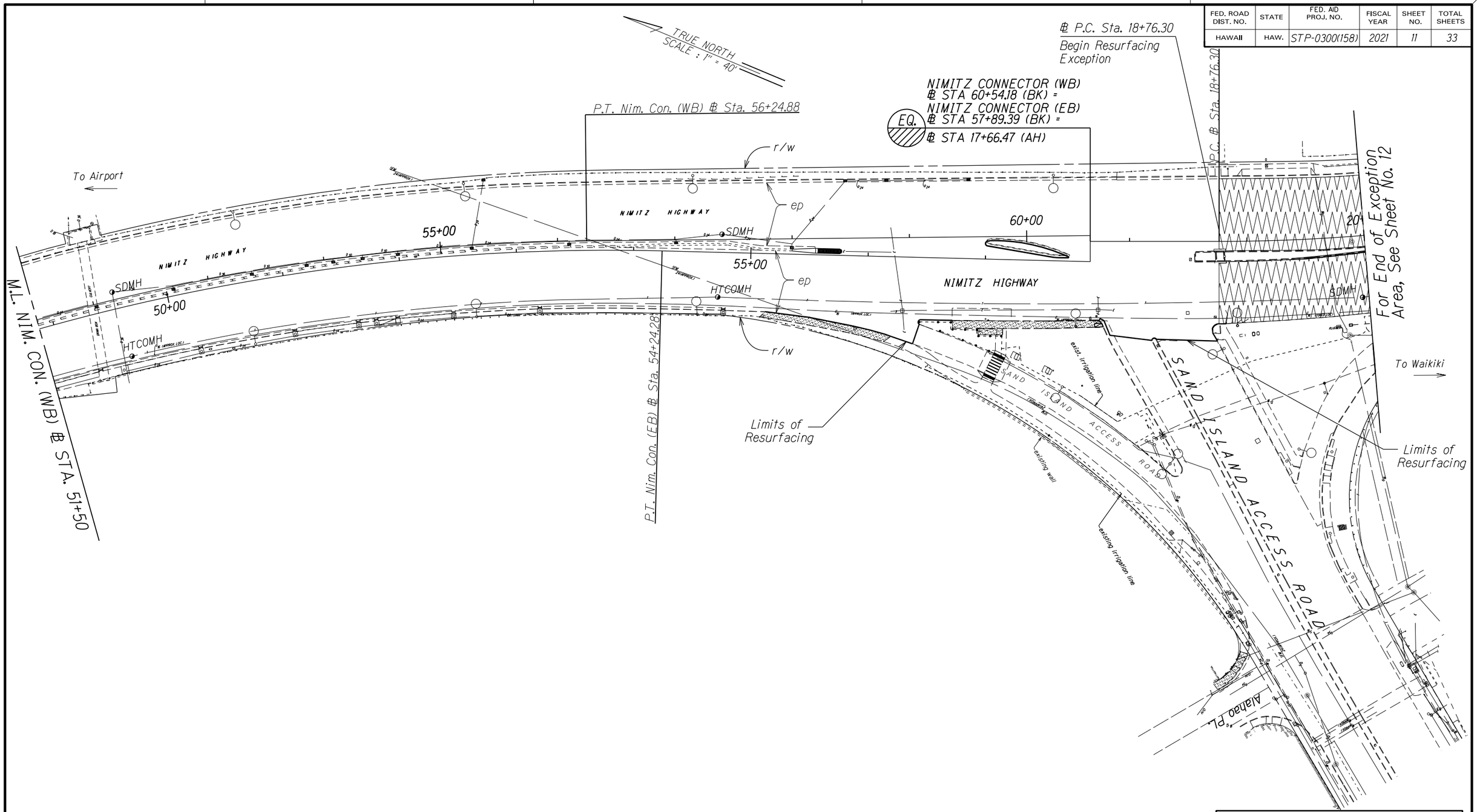
ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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

SHEET No. 1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	11	33



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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

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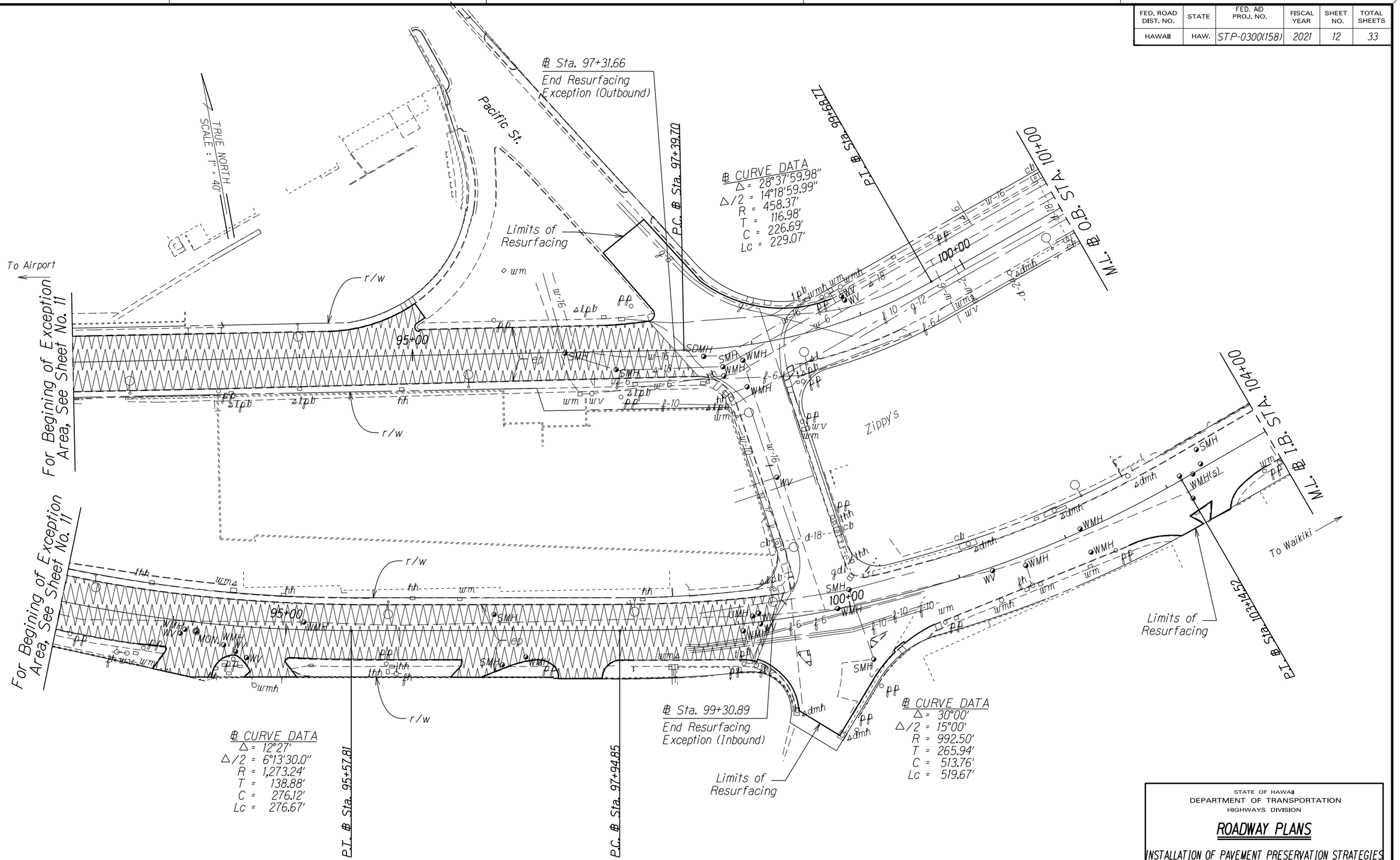
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	12	33



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

ORIGINAL PLAT | NOTE BOOK | No.

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STATE OF HAWAII
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ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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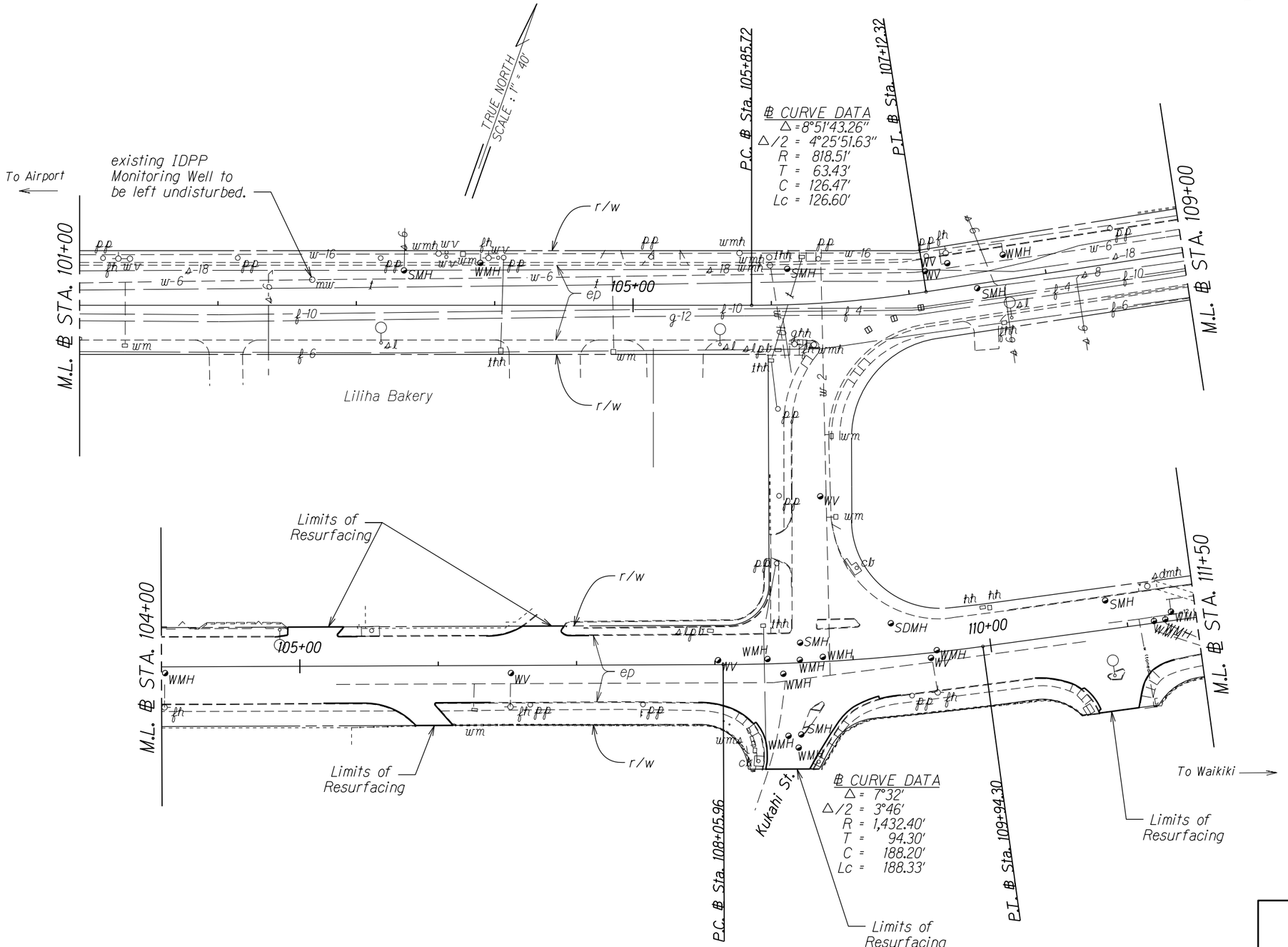
SHEET No. 3 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	13	33



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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

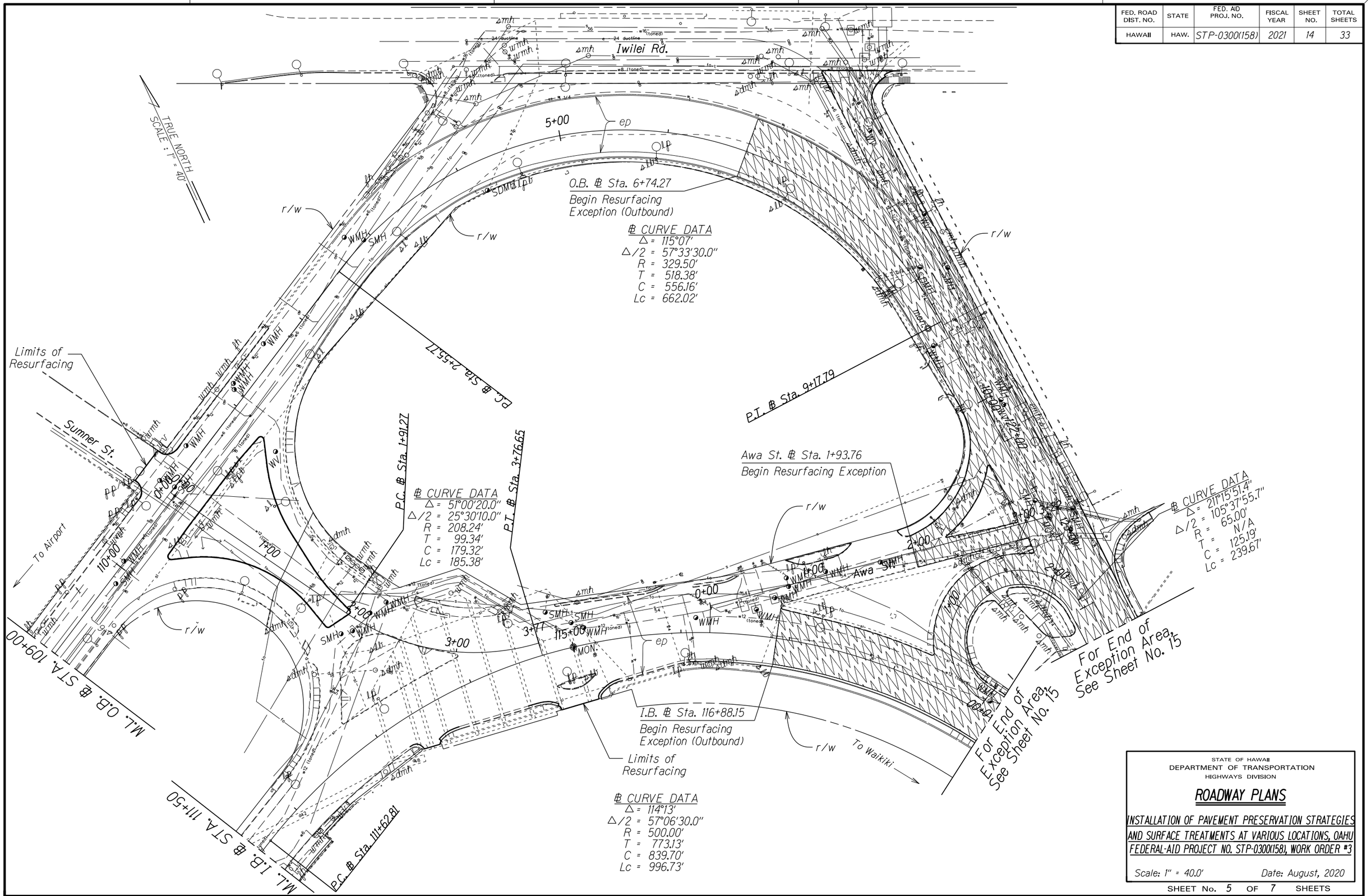
ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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

SHEET No. 4 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	14	33



ORIGINAL PLAN
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DESIGNED BY .....
QUANTITIES BY .....
CHECKED BY .....
NOTE BOOK ..... No. .....

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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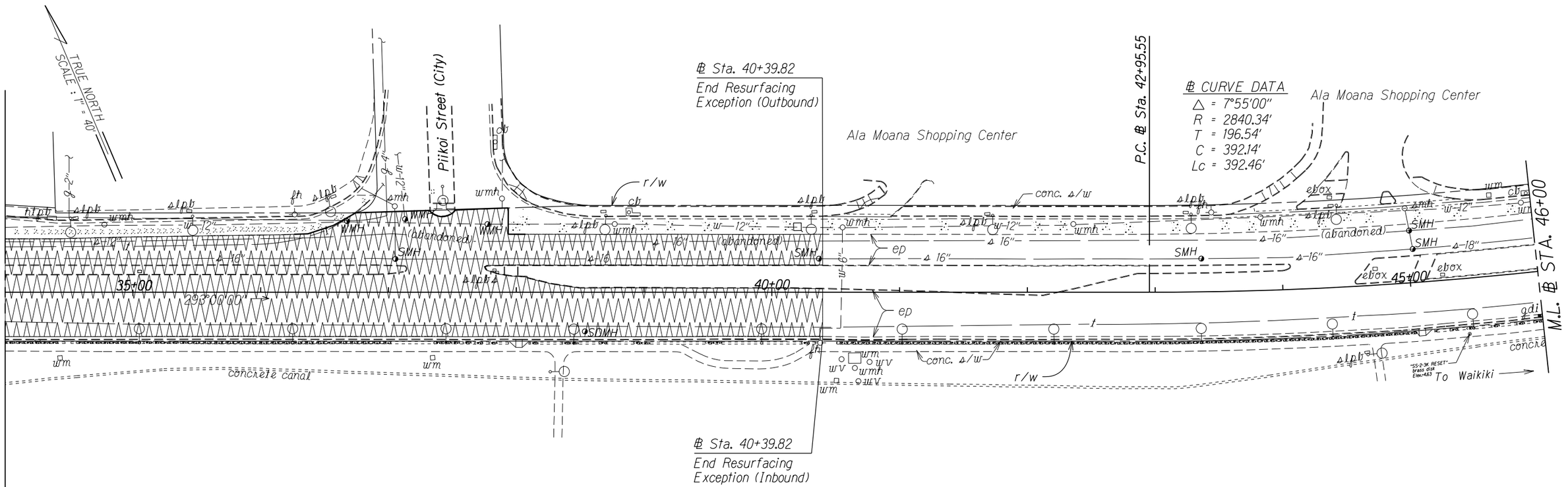
SHEET No. 5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	15	33



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

STATE OF HAWAII
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ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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SHEET No. 6 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	16	33

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

TRUE NORTH
SCALE : 1" = 40'

Ala Moana Shopping Center

To Airport

P.T. ℄ Sta. 46+88.0107

M.L. ℄ STA. 46+00

M.L. ℄ STA. 58+00

50+00

55+00

285°05'00"

Ala Moana Regional Park

Ala Moana Regional Park

END PROJECT
℄ Sta. 62+50±

Limits of Resurfacing

Limits of Resurfacing

Limits of Resurfacing

Ala Moana Shopping Center

Atkinson Drive (City)

60+00

65+00

℄ CURVE DATA
Δ = 62°54'00"
R = 446.29'
T = 272.95'
C = 465.71'
Lc = 489.94'

P.C. ℄ Sta. 61+03.01

P.T. ℄ Sta. 65+92.96

Ala Moana Blvd. ℄ Sta. 58+53.50=
Atkinson Drive ℄ Sta. 0+0.00

Ala Moana Park Dr.

M.L. ℄ STA. 58+00

To Waikiki

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

ROADWAY PLANS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

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

SHEET No. 7 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	17	33

ELECTRONIC VEHICLE COUNTING (EVC) SYSTEM NOTES

1. The location of new sensor loops 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 sensor loops and piezo sensors.
3. Pull in in-bound lanes sensor loop cable 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 it is shown on the plans.
7. The Contractor shall assume that existing 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 cuys shall be vacuumed by use of a wet/dry vacuum. The saw cuts shall then be dried by air compressor.
14. After slots are dried, any remaining debris stuck within the slot shall be removed. The saw cuts must be completely clean and dry before inserting the sensors and filling the voids with Epoxy Loop Sealant or equivalent (for sensor loops) or PU200 Piezo Installation Resin (for piezo sensors).
15. The collected slurry shall be disposed of appropriately (i.e., either, placed in a Filter Fabric Lined Filtration Box or in a Filter Fabric Lined Dug Up Retention/Percolation Basin, and after Filtration/Percolation, the Filter Fabric and the retained sediments, disposed of appropriately).

SENSOR LOOP LAYOUT NOTES

1. Detector loop shall consist of four turns of 1C #14 cable meeting IMSA Spec 51-3 or equivalent embedded in a 3/8" wide by 4" deep sawcut, except as noted. Detector loop shall be provided a minimum 2" cover.
2. After laying sensor loop 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 slot before applying the Epoxy Loop Sealant or equivalent. 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 pavement.
3. Sensor loop 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 pullbox. Do not twist one loop pair with another loop pair.
4. Continuity of sensor loops and lead-in wires shall be tested and warranted for one year from the date of acceptance by the Engineer.
5. Sensor loop lead cables shall be spliced only at the final pullbox to the EVC cabinet. Splice point of cables must be suspended near the top of the pullbox with a j-hook.
6. Splices shall be made by use of a splice kit.
7. All sensor loop lead cables shall be crimped with open end lugs that will fit into the terminal board slots snugly.
8. Stagger sensor loops on roadways with lanes that are less than 12 feet in width.
9. The Contractor shall connect the sensor loop wires on each terminal slot, as shown on plans.
10. The left 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.
11. All sensor loop lead wires in the EVC cabinet and the pullboxes shall be identified and labeled by direction of traffic flow and lane number as shown on plans.
12. Only one sensor loop shall be placed per saw cut.

ORIGINAL PLANS
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM NOTES

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Date: August, 2020

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	18	33

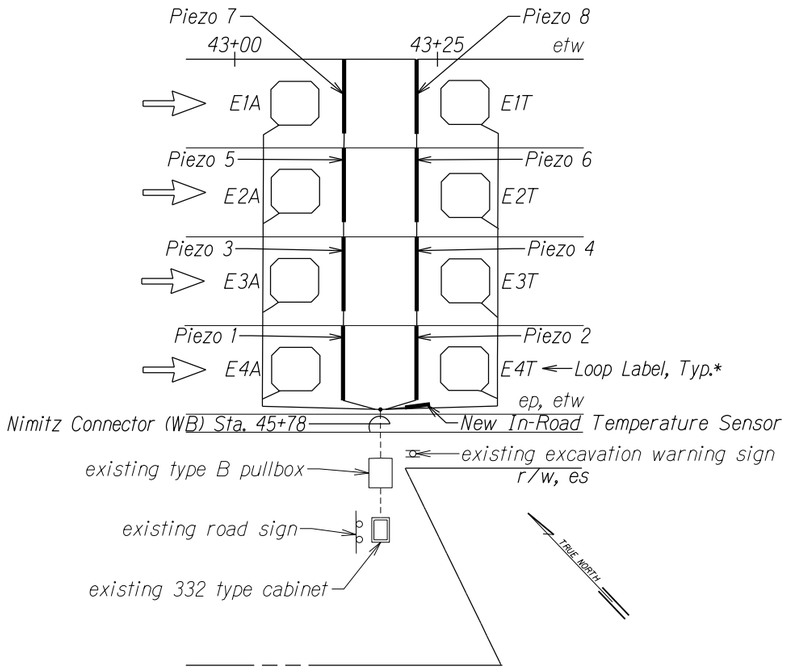
BOUNDARY LABEL LEGEND

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

LOOP LABEL LEGEND

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

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



LABELING OF LOOPS AND PIEZOS

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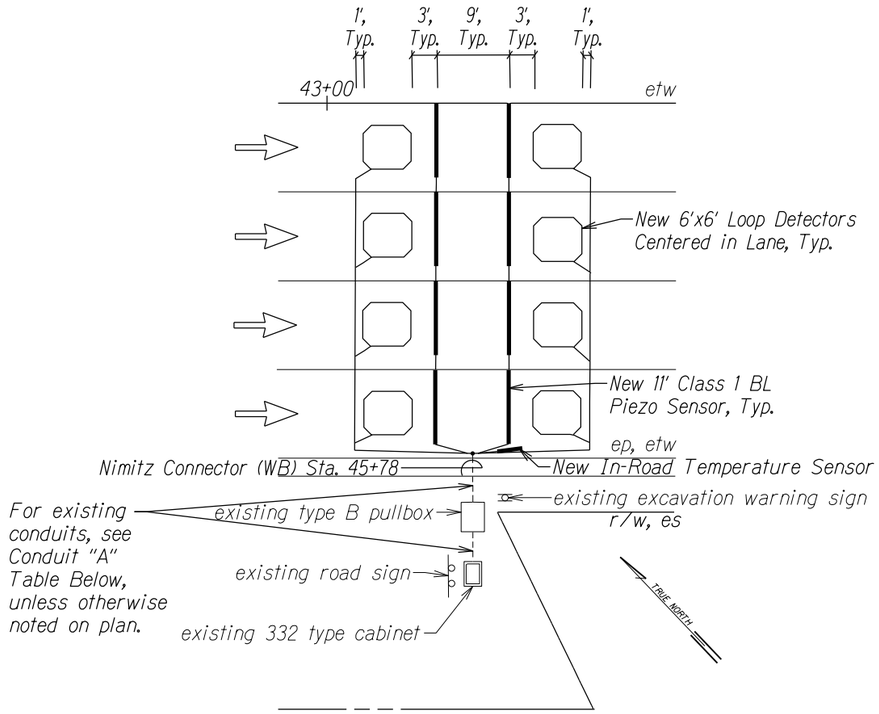

Conduit "A" Table:

Conduit* #-Size	Class 1 BL Sensor Lead Cables	2C #18 Loop Detector Cable	In-Road Temperature Sensor Cable
Existing	8	8	1

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

*NOTES:

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

EVC TRAFFIC COUNTING SYSTEM LAYOUT DETAIL VICINITY OF KALIHI STREAM, TCS 92038

Not to Scale

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QUANTITIES BY
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC COUNTING SYSTEM LAYOUT

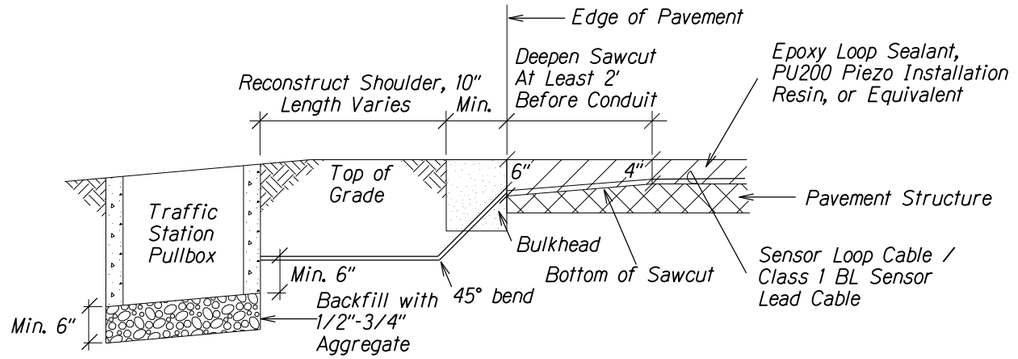
TCS 228, (WB) @ STA. 45+78

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Scale: Not to Scale Date: August, 2020

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(158)	2021	19	33

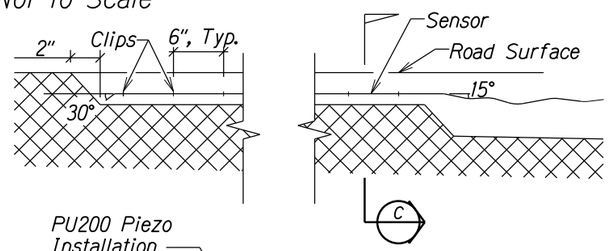


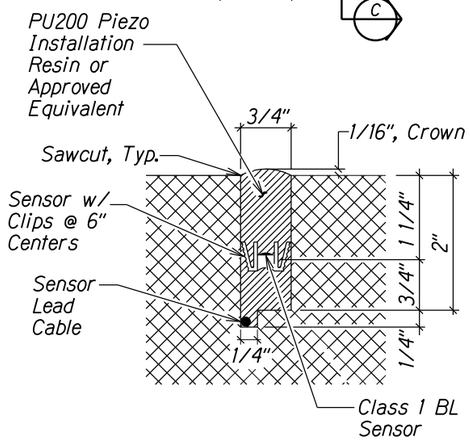
NOTES ON CONSTRUCTION AT END OF SAWCUT:

1. Seal roadway of conduit after installation of conductor.
2. Install bulkhead across conduit trench.
3. Place Epoxy Loop Sealant, PU200 Piezo Installation Resin or Equivalent in sawcut.
4. Backfill over conduit with new AC.
5. Reconstruct curb and gutter as required.
6. Conduit should be installed at least 10 inches from the edge of paved shoulder. If the depth of pavement is 4 inches or less at the shoulder, conduit should be installed at least 12 inches from the edge of paved shoulder.

DETAIL OF SENSOR LOOP/CLASS 1 BL SENSOR AT EDGE OF ROADWAY

Not to Scale





SECTION C
Not to Scale

PIEZOELECTRIC SENSOR INSTALLATION DETAIL

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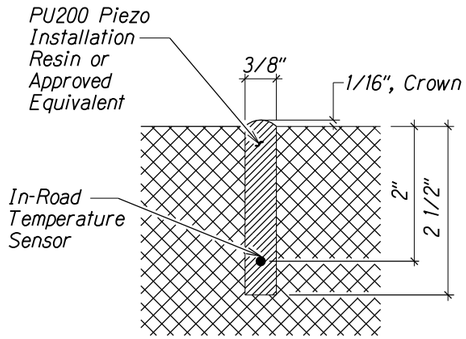
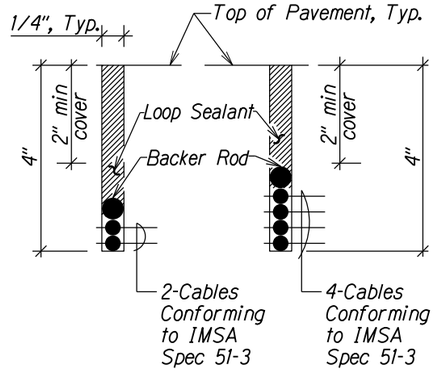
SENSOR LOOP SAWCUT NOTES:

Length of overcuts shall be kept to a minimum. All overcuts shall be backfilled with Epoxy Loop Sealant or Equivalent.



IN-ROAD TEMPERATURE SENSOR INSTALLATION DETAIL

Not to Scale

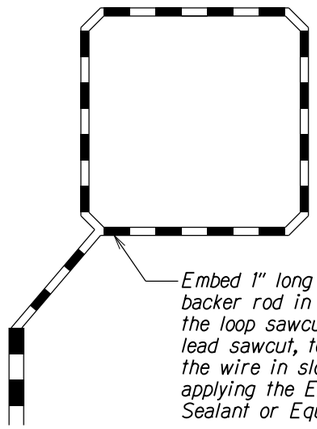


SECTION A
Not to Scale

SECTION B
Not to Scale

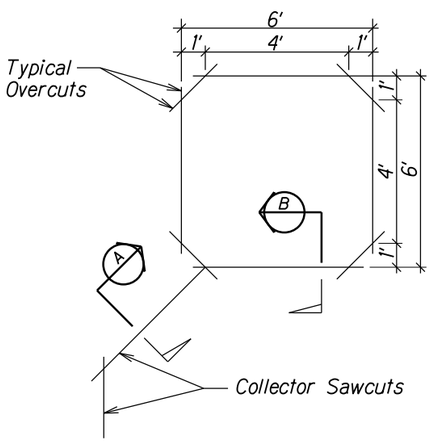
TYPICAL SECTION THROUGH SENSOR LOOP

Not to Scale



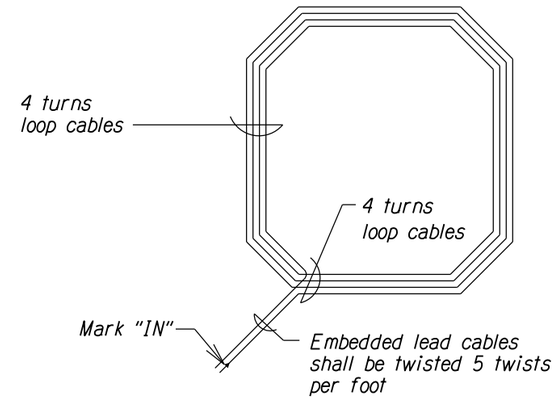
TYPICAL SENSOR LOOP BACKER ROD PLACEMENT DIAGRAM

Not to Scale



TYPICAL SENSOR LOOP SAWCUT DETAIL

Not to Scale



PLAN

TYPICAL SENSOR LOOP WIRING DIAGRAM

Not to Scale

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EVC TRAFFIC COUNTING SYSTEM SENSOR DETAILS

INSTALLATION OF PAVEMENT PRESERVATION STRATEGIES AND SURFACE TREATMENTS AT VARIOUS LOCATIONS, OAHU
FEDERAL-AID PROJECT NO. STP-0300(158), WORK ORDER #3

Scale: Not to Scale Date: August, 2020

SHEET No. 3 OF 3 SHEETS