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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

FARRINGTON HIGHWAY WIDENING
KAPOLEI GOLF COURSE ROAD TO
FORT WEAVER ROAD

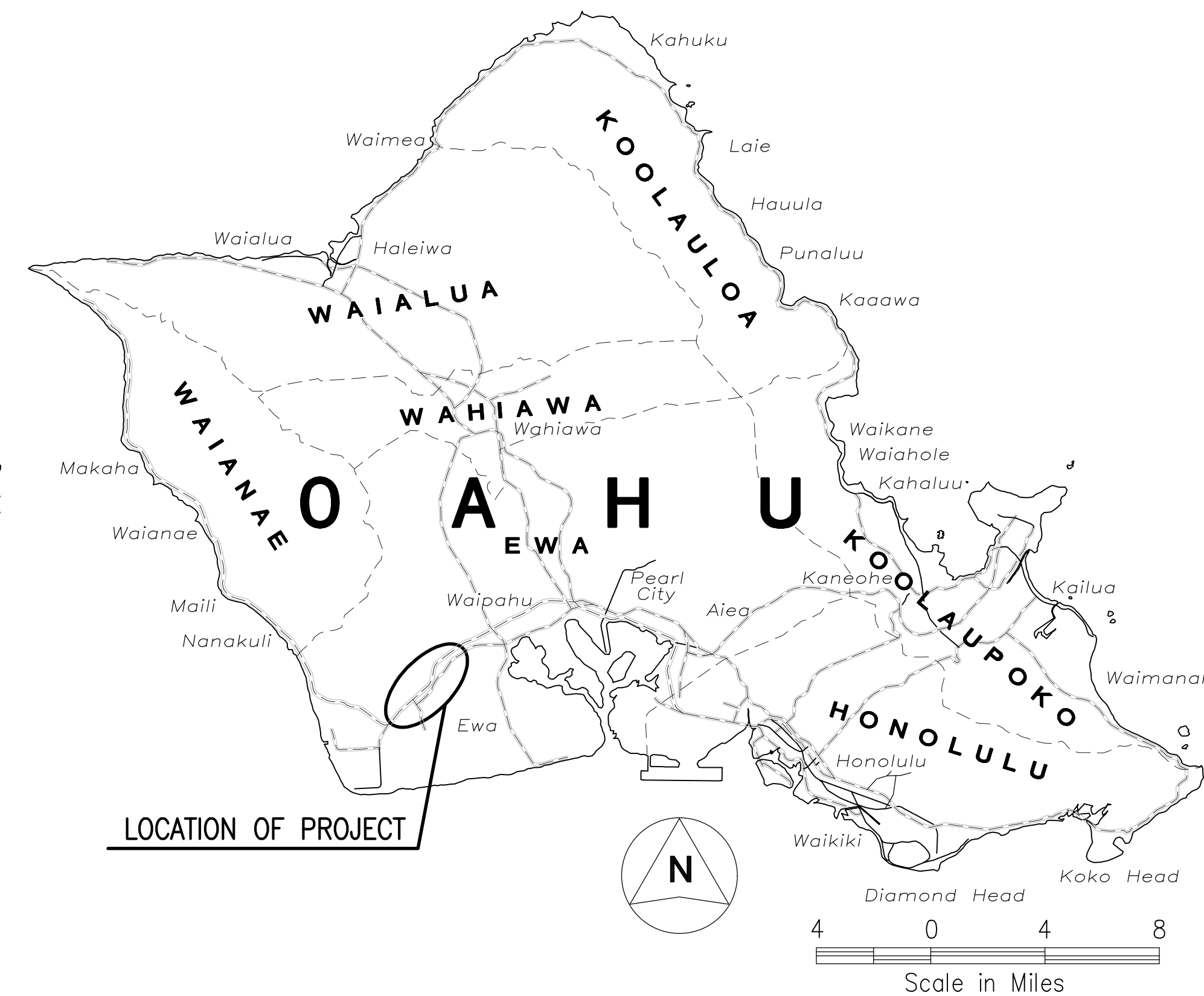
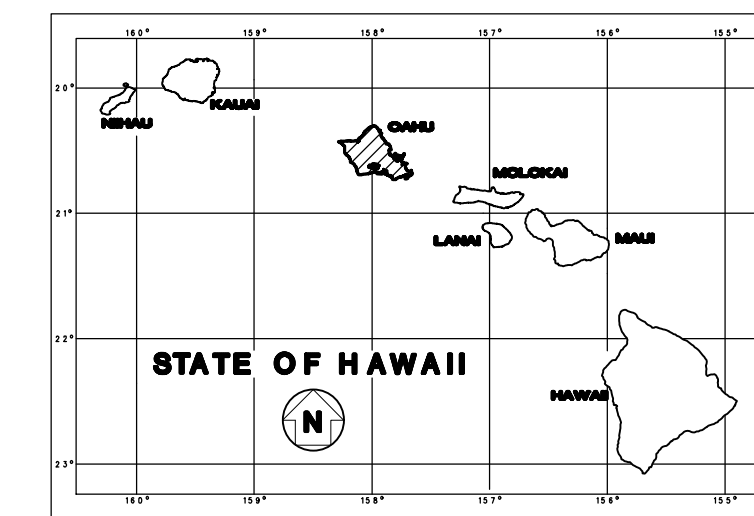
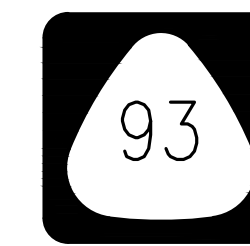
PROJECT NO. 7101A-01-20

DISTRICT OF EWA
ISLAND OF OAHU

TMK: 9-1-016: 004, 007, 008, 179, 182, 183, 220,
 221; 9-1-017: 043, 070, 097, 099, 172; 9-1-018:
 006, 007, 008, 009, 012, 013, 014, 015, 016, 018;
 9-1-081: 006, 022

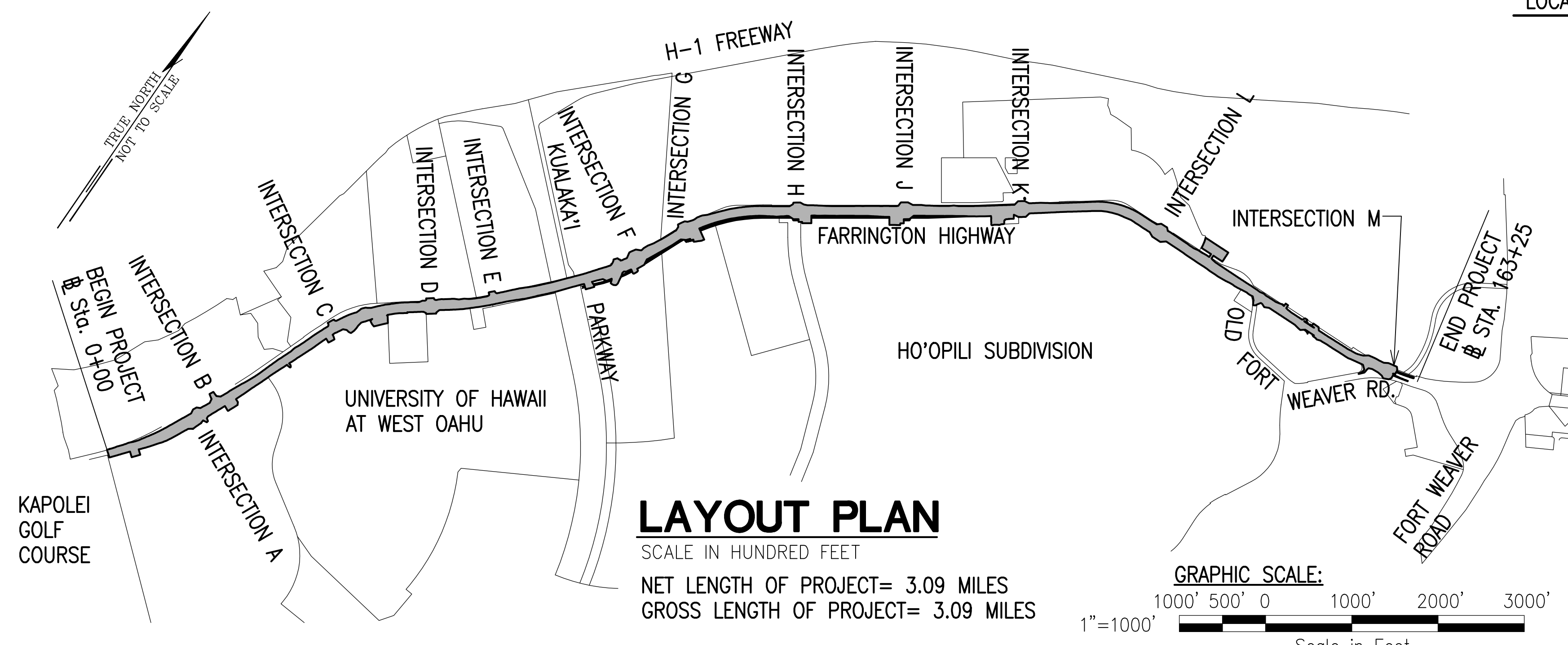
APRIL 21, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	1	



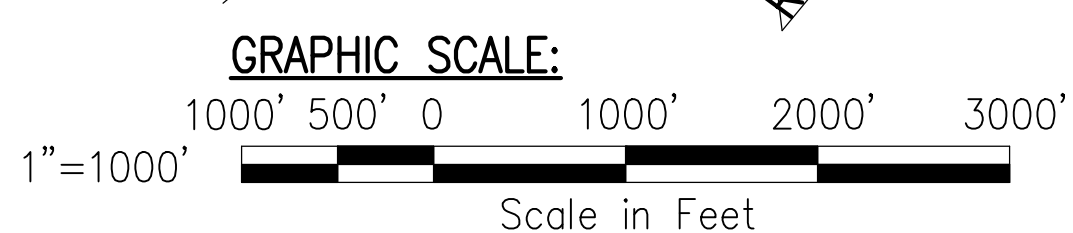
DATE	_____
DESIGNED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

DESIGNED BY: R.M. TOWILL CORP.
 MANAGED BY: HWY-DD
 PHONE: 692-8431
 DATE: APRIL 2022



LAYOUT PLAN

SCALE IN HUNDRED FEET
 NET LENGTH OF PROJECT= 3.09 MILES
 GROSS LENGTH OF PROJECT= 3.09 MILES



----- FEDERAL AID PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION

DESIGN DESIGNATION	
DESIGN ADT (2040)	17,100
DHV	1,710
K	10.0
D (DESIGN)	75/25
T (DESIGN)	5.5%
T 24	5.0%
V	30 MPH (WEST OF KUALAKAI PKWY.) 30 MPH (EAST OF KUALAKAI PKWY.)

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
DIR. OF TRANSPORTATION	DATE

Construction Notes

GENERAL

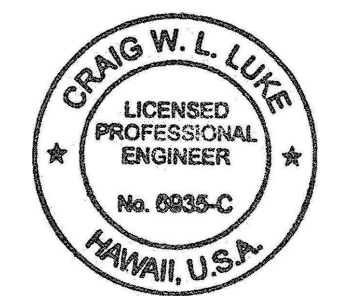
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	3	767

1. The Project Scope of Work includes the widening of the Farrington Highway; Construction of drainage structures and culverts, asphalt and concrete pavements, concrete curbs, gutters and sidewalks, gas lines, water system and sewer system, street lighting, traffic signals, and landscaping; relocation of water mains; relocation of overhead and underground electrical and telecommunications infrastructure; reconstruction of the Kaloi Stream Bridge and Honouliuli Stream Bridge; demolition and removal of structures, clearing, grading; and pavement marking and sign installation.
2. Construction and restoration of all existing highway facilities within State Highway Right-of-Way shall be done in accordance with all applicable sections of "Hawaii Standard Specifications For Road and Bridge Construction, 2005" and "Specification for Installation of Miscellaneous Improvements Within State Highways" of the State Highways Division, and the Project Plans and Special Provisions.
3. All Contractor operations shall be confined to be within existing Right-of-Ways, easements, and Right-of-Entry areas.
4. In the event that a conflict occurs between State and City and County of Honolulu Standards, Specifications, and/or Notes, the more stringent requirement shall govern.
5. The Contractor shall only take direction from the State Department of Transportation Engineer and shall not perform any work at the direction of the City and County of Honolulu or City Engineer, without the approval of the State Department of Transportation Engineer.
6. 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 tone for all utility lines before starting any work. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
7. Smooth riding connections shall be constructed at the limits of new road construction, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
8. All saw cutting work shall be considered incidental to Roadway Excavation. The Contractor shall clean up any cuttings and shall not wash down material into the storm drain or sewer systems.
9. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.
10. All work to remove temporary facilities by the Contractor shall be considered incidental to the various contract items in the proposal.
11. For geologic inspection refer to report titled, "Geotechnical Engineering Exploration - Farrington Highway Improvements", dated November 23, 2020 prepared by Geolabs, Inc.
12. The Contractor shall adjust all Utility (water, sewer, power, gas, fuel, communication) structures (manholes, handholes, etc.) to match the finish grade.
13. Topographic and boundary survey information shown herein was provided by ControlPoint Surveying Inc. The topographic survey was done July 13, 2012.
14. The Contractor shall comply with utility coordination requirements per Standard Specification Section 104.11. As part of coordination requirements, the Contractor shall include carbon copy the Engineer in all correspondences with utilities.
15. All materials shall be new and free of defects, such as rust, damage, or corrosion. The Engineer will determine acceptability. No payment will be made for material that is not accepted by the Engineer.
16. The Contractor shall allow access to all materials that will be used in the project for inspection and/or testing (this includes but is not limited to access to Contractor or subcontractor's base yards, manufacturer yard, production plant, separate storage areas). The Engineer reserves the right to reject any material or work for which access or inspection is not allowed.
17. The Contractor shall inform the Engineer of all scheduled work. See schedule requirements in Specification Section 108.06 and 108.07. If the Engineer is not informed of work and unable to inspect the work, the Engineer reserves the right to reject the work.
18. The Contractor shall be responsible for preserving all survey monuments on State property. All survey monuments disturbed or destroyed by the Contractor shall be reinstalled at no cost to the State. Only licensed State of Hawaii Land Surveyors shall reference, locate, adjust or reinstall monuments. The Contractor shall coordinate with the State Construction Surveyor prior to construction to locate and verify all monuments. Adjusted or reset monuments shall comply with Standard Plan D-07 or D-08 where applicable. Following the completion of the monuments, their locations shall be checked. The monuments must check within a tolerance of the smaller of and error ratio of 0.03 feet. Failure to meet the tolerance will require the Contractor to reset the monuments. All costs associated with coordination, referencing, preserving, adjusting, installation, and verification of survey monuments is included in the various contract pay items.
19. Traffic control plans shown in the Contract Documents are minimum requirements and do not constitute a complete traffic control plan. The Contractor shall provide any traffic control plan (not shown in the plans) that is needed to accomplish the work based on contractor's means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable Manual Uniform Traffic Control Devices (MUTCD) requirements. All lane closures or traffic pattern changes (detours) not shown on the plan shall be submitted to the Engineer for approval in accordance with Specifications Section 645 - Work Zone Traffic Control. For restrictions on lane closures, detours, construction work during peak hours, and other requirements regarding maintaining vehicular and pedestrian traffic, see Section 107.06 - Contractor Duty Regarding Public Convenience, and Section 645 - Work Zone Traffic Control. All traffic control related costs shall be included in the lump sum traffic control pay item and shall not be paid for separately.
20. All material generated by the project and taken off-site shall be considered solid waste. The Contractor shall dispose of material at an approved Department of Health waste management facility as an incidental cost to the work. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer by the last day of the month. Provide documentation from any intermediary facility where solid waste is handled or processed, haul tags, or any documentation as requested by the Engineer. If the Contractor elects to reclassify material as inert fill, DOH HEER testing guidance shall be followed. No material generated from this project shall be classified as inert fill material for reuse without testing, obtaining required approvals/permits, providing disposal locations/quantities, and obtaining prior written approval from the Engineer. The Contractor shall indemnify the State of all violations of solid waste handling and disposal. Failure to comply with these requirements may result in fines/liquidated damages in accordance with Special Provisions Section 209 and HDOT's Enforcement Response Plan.
21. If the traffic control plan or any traffic control device is not installed per manufacturer's recommendation, plan, specification, or is deemed unsafe, the Engineer reserves the right to shut down the work at no additional cost and time or to withhold payment from Contractor. Lane closures that are unauthorized or not approved will not be allowed and shall be subject to rental fees in accordance with Specification Section 108.09.
22. The Contractor shall provide oversight for quality control of work. The Contractor shall submit copies of all measurements, test results, and reports to the Engineer on a weekly basis. This includes compaction, density, smoothness testing, and pavement core thickness results.
23. All public notices and advertisements shall be incidental to lump sum traffic control item 645.1000 - Traffic Control, and shall not be paid for separately.
24. The exact locations and limits of areas to be excavated or cleared shall be located in the field by the Contractor and accepted by the Engineer. The Contractor shall not begin any work until the Engineer verifies and accepts the location and limits of the area.
25. The Contractor shall verify the presence of existing utilities which may conflict with activities and shall coordinate with the utility company for temporary relocation, as necessary. All costs associated with the temporary relocation shall be borne by the Contractor.
26. 30 days prior to excavation. Provide written notice of scheduled toning and specific locations to the Engineer at least one week ahead of toning. If there is a potential conflict, contractor shall inform DOT within 24 hours of discovery. Contractor shall probe around area and take precautions to not damage utilities. This work shall be incidental to various contract items and shall not be paid for separately.
27. The Contractor shall be responsible for removal of all hazardous materials attributed to their Operation/Activities. All contaminates from the Contractor's Operations shall be completely removed from the project site to the written satisfaction of the State. Cleaning and/or removal of the contaminated material caused by the Contractor's Operation/Activities shall be documented in the form of a report completed by and environmental professional qualified by the State to test contaminant. The approved Environmental profession shall test and document that area of contamination caused by the Contractor's Operation/Activities and ensure that the area is clear of contamination. All costs related to the repair, replacement, cleanup, and documentation of the contaminated area shall be paid for by the Contractor at no cost to the State.

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

27. The Contractor shall be responsible for removal of all hazardous materials attributed to their Operation/Activities. All contaminates from the Contractor's Operations shall be completely removed from the project site to the written satisfaction of the State. Cleaning and/or removal of the contaminated material caused by the Contractor's Operation/Activities shall be documented in the form of a report completed by and environmental professional qualified by the State to test contaminant. The approved Environmental profession shall test and document that area of contamination caused by the Contractor's Operation/Activities and ensure that the area is clear of contamination. All costs related to the repair, replacement, cleanup, and documentation of the contaminated area shall be paid for by the Contractor at no cost to the State.

06/08/22	Added note
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. L. Luke* April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes - 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jung\Construction Docs\C-2 Construction Notes - 1.dwg saved May 31, 2022

Construction Notes

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	4	767

NOTIFICATION

- All necessary permits for work within the jurisdiction of the City and County of Honolulu shall be obtained by the Contractor at his own cost.
- The Contractor shall obtain a Permit to Perform Work Upon State Highways from the Oahu District Engineer, State Highways, at 831-6700, prior to commencement of work within the State's Highway Right-of-Way.
- The Contractor shall notify the Engineer in writing, three (3) weeks prior to starting Construction.
- The Contractor shall notify the Engineer and City and County of Honolulu, including Utilities, Bus Transportation, Hospitals, Police Department, Fire Department, Emergency Medical Services, and Department of Health in writing at least three (3) weeks before start of construction.
- The Permit to Perform Work Upon State Highways may be revoked because of default in any of the following, but not limited to, conditions:
 - Work performed before or after permitted hours.
 - Failure to maintain roadway surfaces in a smooth and safe condition.
 - Failure to clean up construction debris generated from project work.
 - Failure to provide and maintain proper traffic control.
 - Failure to replace damaged pavement markings and signs.
 - Failure to provide and maintain erosion control devices in proper condition.
 - Failure to comply with noise permit and law requirements.
- The Contractor shall inform the Oahu District Engineer 831-6700 at least three (3) weeks prior to closing any lanes or performing any trench restoration work. This work shall include any backfilling and compacting of trench material; placing and compacting of base course material; and any paving operations. Any trench restoration work performed by the Contractor that is not witnessed by State Representative or not constructed in compliance with the requirements of the contract documents will be required to be removed. It shall be removed with a State Representative present and in compliance with the requirements of the contract documents. All restoration work will be at the Contractor's expense.
- All workers within the State Right-of-Way who are exposed either to vehicles using the roadway or to construction equipment within the work area, shall wear high-visibility safety apparel that meets the Performance Class 3 requirements of ANSI/ISEA 107-2004 publication entitled "American National Standards for High-Visibility Safety Apparel and Headwear". "Workers" means people on foot whose duties place them within the State Right-of-Way, such as but not limited to, Contractor construction and maintenance forces, equipment operators, survey crews, utility crews and law enforcement personnel when directing traffic, investigating incidents, handling lane closures or obstructed roadways within the State Right-of-Way.

PRECAUTION:

- The Contractor shall exercise care when performing work in or adjacent to the State Highway Right-of-Way. Damages to the existing facilities shall be immediately reported to the Engineer and respective utility company, or City and County or State agency. The repair work shall be done at the Contractor's expense.
- Contractor shall take proper precautions when working near overhead lines.

WORK EXECUTION

- No material and/or equipment shall be stockpiled or otherwise stored within the Highway Right-of-Way except at locations designated in writing and accepted by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a Use & Occupancy Permit to use the property within the Highway Right-of-Way from the State Highways District Office (831-6700).
- Lane closures are allowed only from 8:30 a.m. to 3:00 p.m. Monday through Friday except on Holidays. Exceptions to lane closure hours specified require written acceptance and must be coordinated in advance with the Engineer.
- All work zone regulatory, guide and construction signs and barricades shall be of high intensity Type IV retroreflective sheeting. Portable concrete barriers shall be reflectorized in accordance to the "Standard Plans", State of Hawaii, Department of Transportation. On the back of each sign install a sticker with 1-inch high letters stating Project Number, Contractor Name and Date Installed. Date installed may be hand written.
- All construction signs shall be left in place until all construction items have been completed unless otherwise directed by the Engineer. The Contractor shall obtain prior approval from the Engineer to remove construction signs.
- After the project is completed, all areas disturbed by the Contractor, but not incorporated into the final grades or work plan, shall be restored to a condition equal to or better than the existing condition prior to disturbance. This work will be considered incidental to the various pay items under Section 209.
- Normal working hours shall be from 7:00 a.m. to 3:30 p.m., Monday through Friday, excluding holidays. Work performed between 3:30 p.m. and 7:00 a.m. of the following day is "night work".
- Failure of the Contractor to open all lanes of traffic during the times specified above shall result in the assessment of liquidated damages as specified in Section 108.08 of the Special Provisions.

TRENCHING

- Prior to commencing trench excavation work, the Contractor shall take a pavement profile along the centerline of the proposed utility trench. This information shall be used in the verification of restoring the roadway to its original or better condition. A copy of the pavement profile taken before trenching and after restoration shall be submitted to the Engineer for acceptance.
- The Contractor shall provide and maintain an adequate, safe and non-skid bridging material, including shoring over trenches in pavement areas.
- The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non-skid surface. The State may require the backfilling of patches of trenches due to the excessive usage of steel plates at no additional cost.
- Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two (2) weeks, and shall be a minimum of 2-inches thick. All temporary patches shall be placed over properly placed and compacted backfill and base course layers. The Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours. If a pothole develops that in the opinion of the Engineer will become a hazard to the public, the repairs shall be made immediately, no later than four (4) hours after notification.
- At the end of each day's work, the Contractor shall remove all work zone signs and barricades not in use, equipment and other obstruction from the roadway to permit free and safe passage of traffic.

ACCESS TO FARM LOTS

(Cost shall be considered incidental to various items of work)

- The Contractor shall provide continuous access to the farm lots along the mountain and ocean sides of the project.
- Temporary access provided to farm lots shall be coordinated with farmers.
- Upon removal of earth berms, the contractor shall provide a temporary concrete barrier to prevent unauthorized vehicles from accessing the farm lots.
- The Contractor shall relocate all farmer access gates impacted by construction and provide roadway transition to existing access roadways.
- The Contractor shall relocate all irrigation lines impacted by construction and ensure farmers continuous irrigation.

ACCESS TO HOOPILI CONSTRUCTION SITES

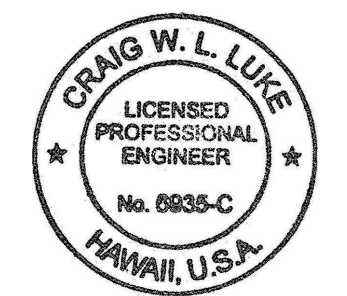
(Cost shall be considered incidental to various items of work)

- The Contractor shall provide continuous access to construction sites along the project limit.
- The Contractor shall coordinate access along the project limit with the affected land owners their contractors. Continuous access shall be provided.
- Upon removal of earth berms, the contractor shall immediately provide a temporary concrete barrier to any affected construction sites to prevent unauthorized vehicles from accessing adjacent properties.

WORK NEAR KAHI MOHALA

- Work from Station 143+00 to 152+00 will not be allowed during night hours. All work within Station 143+00 to 152+00 shall be done during normal daytime work hours.
- Grading along the makai shoulder between Old Fort Weaver Road (West) and Honouliuli Stream Bridge, and construction of Retaining Wall must be completed within four months of receiving Notice to Proceed. The Contractor shall coordinate work with HECO.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE: April 30, 2022 OF THE LICENSE

06/08/22	Revised notes, added notes
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Construction Notes - 2 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-3 Construction Notes - 2.dwg saved June 3, 2022

Construction Notes (Cont'd)

ACCESS:

- Where pedestrian walkways exist, they shall be maintained in a safe and passable ADA condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.
- A minimum of 36-inches clear width and 80-inches headroom clearance height shall be maintained along existing and potential sidewalk and walkways.
- The Contractor shall provide for access to and from all existing side streets, driveways and adjacent properties at all times.

DRAINAGE:

- Existing drainage systems will be functional at all times during construction of proposed drainage structures and bridges. The Contractor shall be responsible for any storm runoff damage caused by their operation. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow. The cost shall be incidental to the various Contract Items.
- The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
- The Contractor shall remove all silt and debris deposited in drainage facilities, on roadways and in other areas during the duration of the project. This work shall be incidental to various contract items. The costs incurred for any necessary remedial action by the Engineer due to the Contractor's non-compliant work shall be payable by the Contractor.

American With Disabilities Act Note

- All new sidewalk and walkway running slopes shall be defined as the direction parallel to the prevalent pedestrian flow of travel.
- All new sidewalk and walkway cross slopes shall be defined as the direction perpendicular to the prevalent pedestrian flow of travel.
- The running slope of an accessible route shall not exceed 1:20 and the cross slope of an accessible route shall not exceed 1:48.
- If the running slope of an accessible route exceeds 1:20, it shall be considered a ramp, and shall meet the requirements of ADAAG 405.
- Curb ramps shall have a running slope not steeper than 1:12 and cross slope not steeper than 1:48.
- The clear width of a ramp run shall be 36 inches minimum.
- Landings subject to wet conditions shall be designed to prevent the accumulation of water.
- Curb ramp flares shall not be steeper than 1:10.
- Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.
- Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.
- Temporary pedestrian access shall comply with the requirements of ADAAG 201.3 and 206.1.

American With Disabilities Act Note (Cont'd)

- Curb ramp run surfaces shall be stable, firm, and slip resistant. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

General Notes For Traffic Control Plan

- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
- When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
- All traffic lanes shall be a minimum of ten (10) feet wide.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 645-1, unless otherwise noted on the Traffic Control Plans.

Posted Speed Limit (M.P.H.)	Sign Spacing (D) (Feet)	Taper Length (T) (Feet)		Longitudinal Buffer Space (B) (Feet)	Spacing of Cones or Delineators (Feet)		
		W = 12' Or Less	W > 12'		Taper	Tangent	Work Area
25	250	200	W X 17	55	25	25	10

W = Width of Lane, Shoulder, or Offset

- Contractor to provide access and/or directional signs to reroute pedestrian traffic.
 - An advertisement shall be placed in the newspaper by the Contractor for any lane closures. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
 - Map of the Traffic Change Limits;
 - Notice of starting and ending dates, times and duration;
 - Map to show Lane Closure;
 - Explanation of the Lane Closure, "NOTICE TO MOTORIST".
 - Newspaper advertisement shall be a minimum size of 5-inches by 8-inches.
- Proof or copy of newspaper ad needs to be submitted to both the City and County of Honolulu, and State engineer for acceptance before being printed. The Contractor shall be required to have any lane closures announced daily over the radio two (2) days before the starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the Hospital, Ambulatory Services, Police Department and Fire Department of lane closures.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	5	767

General Notes For Traffic Control Plan (Cont'd)

- All workers who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of "ANSI/ISEA 107-2004". "Workers" is defined as people on foot whose duties place them within the project limits, e.g., State Right-of-Way, City and County Right-of-Way, adjacent properties. Workers as such are but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents e.g., EMT and firemen, and law enforcement personnel. Use of high visibility safety apparel that complies with ANSI/ISEA-207-2015 and are of comparable ANSI/SEA 107-2004 class will be acceptable.
- Flaggers and/or police officers shall be insight of each other or in direct communications at all times.
- The permittee shall make minor adjustments at intersections, driveways, structures, etc., to fit field conditions.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.

Public Health, Safety And Convenience Notes (State)

- The Contractor shall observe and comply with all Federal, State and local laws required for the protection of public health and safety and environmental quality.
- The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the Air Pollution Standards of the State Department of Health. The State may require supplementary measures as necessary.

Historical Preservation Notes

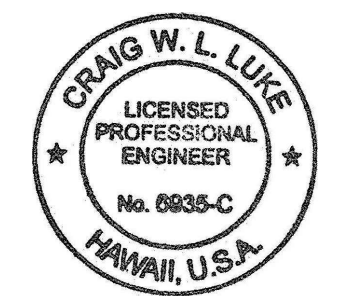
- Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find protected from further damage. The Contractor shall immediately cordon off the area and notify the Planning Department at (808) 241-4050 and the State Historic Preservation Division at (808) 692-8015, which will access the significance of the find and recommend the appropriate mitigation measures, if necessary.

DATE

06/08/22

REVISION

△ Note Removed



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE: *Craig W. Luke* EXPIRATION DATE: April 30, 2022 OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes - 3

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-4 OF 767 SHEETS

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

Project Bench Mark

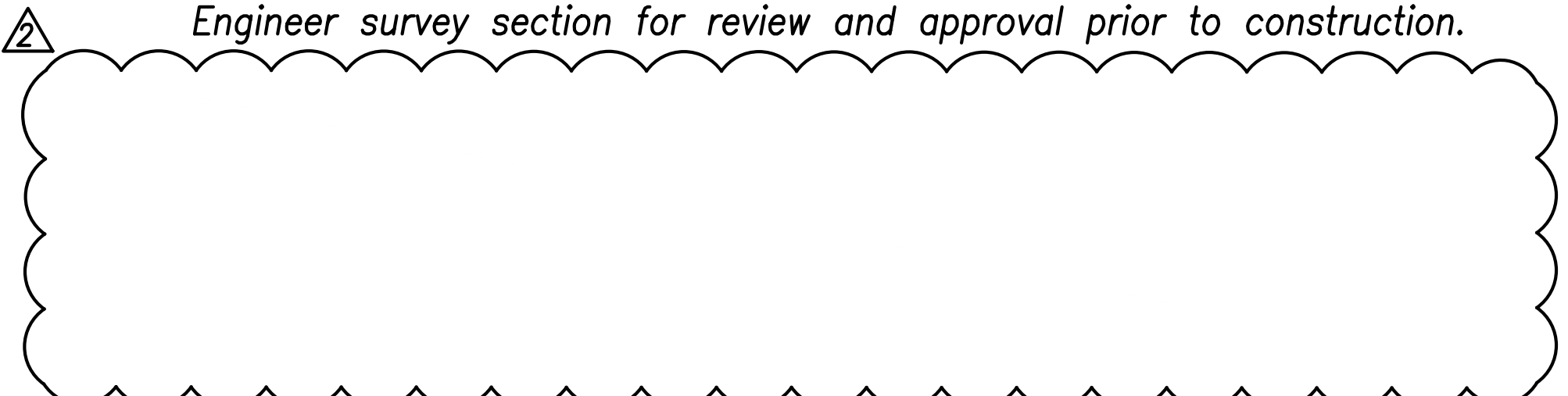
The project bench mark is referenced to the City traverse station "Street Monument A" located in the vicinity of Farrington Highway, near the intersection of Kapolei Golf Course Road. The elevation of "Street Monument A" is 112.95-feet mean sea level (msl). Benchmark provided by ControlPoint Surveying Inc.

Notes for Construction

1. The Contractor shall provide, install, maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of the public traffic. All such protective facilities and precautions to be taken shall conform with rules and regulations governing the use of traffic control devices at work sites on or adjacent to public streets and highways adopted by the Highway Safety Coordinator and U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways", dated 2009 and its amendments.
2. The Contractor shall, whenever necessary, properly sheet and brace all excavations to render it secure and shall remove all such sheeting and bracing before completion of the backfill for storm drains. The minimum cover requirements (from top of pipe to finished grade over pipe) is three (3) feet.
 - A. A permit shall be obtained by the Contractor from the Department of Planning and Permitting, at the Contractor's expense.
 - B. Driveways shall be kept open at all times.
 - C. Damaged shoulders shall be restored to a condition equal to or better than existing condition.
 - D. Work on a public street area may be performed only between the hours of 8:00 A.M. to 3:30 P.M. Monday through Friday, except on holidays recognized by the State of Hawaii, unless otherwise permitted by the Department of Planning and Permitting, City and County of Honolulu.
 - E. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be opened to public vehicular and pedestrian traffic.
 - F. No material and/or equipment shall be stockpiled or otherwise stored within Right-of-Way except at locations designated in writing and approved by the County Engineer.
 - G. The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.
 - H. All existing drainage flow conditions shall be maintained at all times. Any drainage resulted from blockage of drainages shall be at the responsibility of the contractor.

5. The Contractor shall retain the services of Hawaii licensed professional Engineer(s) for quality control. All sample control and testing shall be done by a person certified in the material test method. Utilize multiple engineers if the area of expertise for an engineer does not cover the type of work being done. The Contractor shall submit the qualifications of the Contractor's Engineer to the State Engineer for approval. Certification of the work done from the Hawaii licensed Engineer(s) shall be submitted to the State Engineer at the completion of the construction work Hawaii registered Engineer(s) shall certify that the construction work meets "Standard Specifications". The Hawaii licensed Engineer(s) shall also submit stamped and signed test results as requested by the State Engineer.

6. All pavement shall be restored to its original or better condition in accordance with City and County of Honolulu, Hawaii Standard Specifications for Road and Bridge Construction, (2005)", and its amendments with a minimum of 3-inches A.C. and 6-inches base course or match the existing pavement structure whichever is greater.
7. Benchmarks that are disturbed or destroyed shall be restored under a Hawaii Licensed Land Surveyor's direction. Copies of field notes, descriptions and new values of the benchmark shall be sent to the Engineer survey section for review and approval prior to construction.



9. When required by the City and County of Honolulu or State, an advertisement shall be placed in the newspaper by the Contractor for any lane closures. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
 - A. Map of the Traffic Change Limits;
 - B. Notice of starting and ending dates, times and duration;
 - C. Map to show Lane Closure;
 - D. Explanation of the Lane Closure, "NOTICE TO MOTORIST".
 - E. Newspaper advertisement shall be a minimum size of 5-inches by 8-inches.

Proof copy of newspaper ad needs to be submitted to both the City and County of Honolulu, and State engineer for acceptance before being printed. The Contractor shall be required to have any lane closures announced daily over the radio two (2) days before the starting date until the work is completed. Both advertisements in the newspaper and over the radio shall be paid for by the Contractor. The Contractor shall also notify the Hospital, Ambulatory Services, Police Department and Fire Department of lane closures.

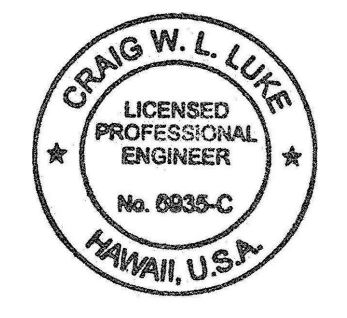
10. All workers who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 3 requirements of ANSI/ISEA 107-2004. "Workers" is defined as people on foot whose duties place them within the project limits, e.g., State Right-of-Way, City and County Right-of-Way, adjacent properties. Workers are such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents e.g., EMT and firemen, and law enforcement personnel. Use of high visibility safety apparel that complies with ANSI/ISEA-207-2015 and are of comparable ANSI/ISEA 107-2004 class will be acceptable.
11. The Contractor shall make every effort to minimize the use and duration of steel plates. All steel plates shall have a non-skid surfacing which shall be maintained during the steel plates use. In locations where more than one steel plate is used, all the plates shall be welded together to minimize the movement of the plate. If this proves insufficient to prevent movement, other methods shall be used, e.g., anchors or pinning. The County or State may require the backfilling and patching of trenching due to the excess use of steel plates or they in the sole opinion of the engineer are a safety hazard. Steel plates shall not be used where the original posted speed limit exceeds 35 mph.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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Notes for Construction (Cont'd)

12. The Contractor shall exercise extreme caution to preserve benchmarks (survey monuments) whenever the center of a survey monument is less than three (3) feet from the edge of construction. The Contractor shall retain a Hawaii Licensed Surveyor to reference the location of said survey monument.
13. The Contractor shall provide an adequate non-slip bridging material, including shoring over trenches in pavement areas. The bridging shall be able to support all types of vehicular and pedestrian traffic.
14. Where pedestrian walkways exist, they shall be maintained in a safe and ADA compliant and passable condition or other facilities for pedestrian shall be provided. Passages between walkways at intersections shall likewise be provided.
15. All construction work shall be done in accordance with the Standard Plans and Specifications of the State Department of Transportation as amended, unless otherwise specified by the contract plans and specifications.
16. Confined Space
For entry by HDOT, Department of Water Supply and Contractor personnel, including inspectors, into a permit required confined space as defined in 29 CFR part 1910.146(b), the Contractor shall be responsible for providing:
 - A. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:
 - i. Full body harnesses for up to two (2) personnel.
 - ii. Lifeline and associated clips.
 - iii. Ingress/egress and full protection equipment.
 - iv. Two-way radios (walkie-talkies) if out of line-of-sight.
 - v. Emergency (escape) respirator (10 minute duration).
 - vi. Cellular telephone to call for emergency assistance.
 - vii. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammable (capable of monitoring at a distance at least 20-feet away).
 - viii. Personal multi-gas detector to be carried by the HDOT and Contractor Personnel.
 - B. Continuous forced air ventilation adequate to provide safe entry conditions.
 - C. Qualified attendant/rescue personnel at each entry/exit point.

DATE	REVISION
06/08/22	Deleted note, revised note



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Construction Notes - 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-5 OF 767 SHEETS

SURVEY PLOTTED BY: _____	DATE: _____
DRAWN BY: _____	DATE: _____
TRACED BY: _____	DATE: _____
QUANTITIES BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
ORIGINAL PLAN NO. _____	
NOTE BOOK No. _____	

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Water Pollution And Erosion Control Notes

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	8	767

A. GENERAL:

- 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 pollutants.
- 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.
- 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 Oahu.
- 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, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- 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.
- 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.
- 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>.

8. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMP requirements and do not constitute a complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Costs shall be included in lump sum Pay Item No. 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP and shall not be paid for separately.

B. WASTE DISPOSAL:

- 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 40 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

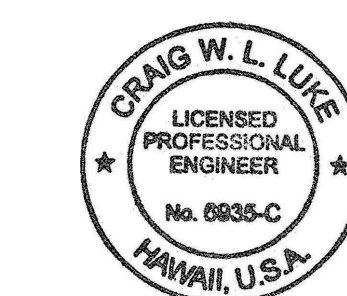
Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- 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 a week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharged 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.
- For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.
- 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 days.
- Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.
- 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.
- Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
- Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.
- 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-planned 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.

- Include designated Concrete Washout Areas(s) in the Water Pollution, Dust, and Erosion Control submittals.
- Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- 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.
- 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.
- 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.

DATE
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TRACED BY
NOTED BY
QUANTITIES BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
No.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 Signature: _____
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Note added
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<h3>Construction Notes – 6</h3>	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
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Water Pollution And Erosion Control Notes (Cont'd)

F. (Continued)
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.
8. Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.0100, Installation, Maintenance, Monitoring, and Removal of BMP.

Sewer Notes

1. All sewer construction shall be performed in accordance with the city's "Standard Specifications," Sept. 1986, the Department of Environmental Services "Wastewater System Design Standards," July 2017, and "Wastewater System Standard Details," July 2017, Current City Practices and Revised Ordinances of Honolulu, 1990 as amended.

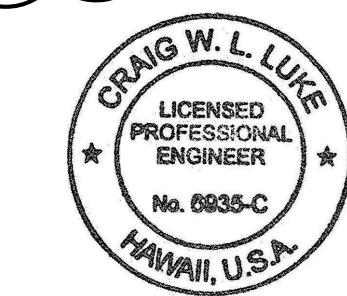
Sewer Notes (Cont'd)

2. In the event that any change in alignment or grade for the proposed sewers are required due to unforeseen conflicts with other facilities, the engineer in charge or the maker of the plans shall be responsible for the required changes which are to be presented to the Department of Planning and Permitting (DPP) for approval.
3. The contractor shall notify the Civil Engineering Branch, DPP at phone no. 768-8084 to arrange for inspectional services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of construction work. The contractor shall pay for all inspection costs.
4. Crushed rock cradle is permitted where soil is stable. In areas of unstable soil, the maker of the plans and the construction engineer will determine the pipe support required.
5. 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 DPP inspector and exercise proper care in excavating the area. The contractor shall be responsible and shall pay for all damaged utilities.
6. Sewer laterals shall be clear of and not conflicting with any other utility. Minimum horizontal and vertical clearances shall be strictly observed and followed.
7. Slope for sewer laterals shall be a minimum of 2.00% unless otherwise noted.
8. Building plumbing facilities shall be controlled by sewer lateral inverts.
9. The contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
10. The consulting engineer shall submit to the Wastewater Branch, DPP "As-Built" tracings and electronic files of the construction plans as actually constructed, showing all changes from the original plans.
11. 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.
12. The contractor shall install "Rainstopper" manhole inserts in all sewer manholes with type "SA" frame and cover.
13. The contractor shall obtain approval for advance sewer riser agreement at the DPP and obtain building permit for plumbing work before any advance riser is made.
14. S4C pipe cradle seals shall be installed 10 feet from all sewer manholes to prevent soil migration.
15. Confined Space

For entry by city personnel, including inspectors, into a permit-required confined space as defined in 29 CFR Part 1910.146(b), the contractor shall be responsible for providing:

- l. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:
 - a. Full body harnesses for up to two personnel.
 - b. Lifeline and associated clips.
 - c. Ingress/egress and fall protection equipment.
 - d. Two-way radios (walkie-talkies) if out of line-of-sight.
 - e. Emergency (escape) respirator (10 minute duration).
 - f. Cellular telephone to call for emergency assistance.

APPROVED:
Chief Wastewater Branch, WWB DATE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: [Signature] April 30, 2022
EXPIRATION DATE OF THE LICENSE

23. Contractor shall provide wrap seal on all adjusted or reconstructed sewer manholes.

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Sewer Notes (Cont'd)

- g. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance of at least 20-feet away).
- h. Personal multi-gas detector to be carried by inspector.
- II. Continuous forced air ventilation adequate to provide safe entry conditions.
- III. One attendant/rescue personnel topside (two, if conditions warrant it).
16. When connecting to a live sewer line, the contractor shall abide by all conditions that the department of health sets forth to mitigate any wastewater spill that may occur. The contractor shall inform the city inspector five (5) working days prior to the actual connection. The contractor shall be responsible for any fines and penalties due to any spills resulting from the connection.
17. No rungs shall be installed inside new sewer manholes.
18. For sewer manhole adjustments upward less than 3", see Std. Detail S-28. for SMH adjustments upward greater than 3" or for any adjustments downward, reconstruct SMH top from below the cone section.
19. If contractor encounters flow monitoring devices, such as special sewer manhole cover embedded with solar panels, contact Collection System Maintenance (CSM) at 768-7272 to coordinate temporary removal.
20. Contractor shall maintain visibility and maintenance access to live sewer manhole locations at all times, including during non-work hours and paving operations.
21. Contractor shall use manhole debris catching device when performing manhole height adjustment work and remove any construction debris that has fallen into the manhole. Disposal of construction debris in the sewer system is strictly prohibited.
22. For precast sewer manholes, the consulting engineer shall submit four (4) sets of shop drawings to the Wastewater Branch, DPP for approval. After the shop drawings are approved, the manufacturer shall notify the Construction Management Branch, Wastewater Engineering and Construction Division, Env, at 768-8785, 768-8769, or 765-8755 to arrange for inspection services for concrete pours made at its plant seven (7) days prior to pour.

06/08/22	Added note
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <h2 style="text-align: center;">Construction Notes - 8</h2> FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20 Scale: As Shown Date: April 2022	
SHEET No. C-9 OF 767 SHEETS	

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Water Notes (Board of Water Supply)

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
2. No deviation to the Board of Water Supply 2002 Water System Standards shall be allowed without the manager and Chief Engineer's approval.
3. All ductile iron pipe and fittings, including sections requiring reinforced concrete jacketing shall be ductile iron pipe class 53, with a bonded dielectric coating per the Board of Water Supply 2002 System Standards as amended.
4. Test pressure shall be 200 psi. During the 30-minute pressure test, the pressure shall not drop more than 10 psi.
5. The Contractor shall notify Board of Water Supply Capital Projects Division, Construction Section in writing or call (808) 748-5730, and submit six (6) sets of 24" x 36" approved construction drawings, one week prior to commencing construction activities.
6. The contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (for connection only).
7. The contractor shall be responsible for the protection of all water lines during construction. The contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
8. 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 during the course of the work. The contractor shall be responsible and shall pay for all damages to existing utilities. The contractor shall not assume that where no utilities are shown, that none exist.
9. Prior to installation, the contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.
10. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job to job basis.
11. Re-approval shall be required if this project is not under construction within a period of two (2) years.
12. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. 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.

Water Notes (Board of Water Supply) (Continued)

13. The contractor/developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Capital Projects Division, Construction Section.
14. Soil resistivity for the site has a corrosion rating of Moderately to Severely Corrosive as reported by Geolabs, Inc. in their report entitled "Geotechnical Engineering Exploration, Farrington Highway Improvements, Kapolei Golf Course Road to Fort Weaver Road, Ewa, Oahu, Hawaii, Dated August 4, 2021. All required electrical isolation procedures and corrosion control requirements shall apply.
15. Pipe cushion shall be of high resistivity material. The contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 ohm-cm. Remainder of the backfill material shall be as specified in volume 1 of the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls (PCB).
16. Upon completion of the project, the developer shall provide the BWS with a certificate from a registered soils engineer certifying that the road prism has been constructed in accordance to City and County road standards.
17. Two-way blue reflective hydrant markers type DB shall be installed at all new fire hydrant installations. Contractor shall verify the exact locations of hydrant markers with the nearest Honolulu Fire Department battalion chief.
18. Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. Bare foam "pigs" shall be used to swab piping clean as each length of the pipeline is installed. The type, density, size, diameter and length of the pig shall be submitted for review and approval by the Manager prior to pigging work. "Pig" shall be used per manufacturer's specifications. Prior to use, the "pig" shall be submerged in a chlorine solution of 1 oz. of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of the new pipeline. Manual sweeping, hand cleaning or swabbing may be allowed in lieu of "pigging" as approved by the Board of Water Supply Manager.
19. The contractor shall install electronic markers to all mains and test the electronic markers prior to installations to verify proper operation. BWS personnel shall verify the number and locations of placed electronic markers before final paving of the project.
20. The Board of Water Supply will not send a completion notice to the Department of Planning and Permitting until easement documents are submitted to the Board of Water Supply and recorded.
21. Prior to any excavating, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.
22. Any adjustments to the existing water system required during construction, to meet the requirements of the BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board of Water Supply.
23. After installation of tapping sleeve and tapping valve and prior to tapping the existing water main, the assembly shall be pressure tested at 200 psi on both sides of the valve and in accordance with the Water System Standards, dated 2002.

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Water Notes (Board of Water Supply) (Continued)

24. Maintain 3'-0" minimum cover for all existing waterlines from new finish grade. The contractor shall probe the waterline and service laterals and submit the probing data to BWS Capital Projects Division, Construction Section.
25. The contractor shall furnish and install an insulating corporation stop and petrolatum wax tape at all taps (for DI pipe and copper lateral combination only).
26. All ductile iron pipe, fittings and valves shall be coated with a bonded dielectric coating and wrapped with petrolatum wax tape.
27. At the electrical/cable/signal ductline and water crossings, adjust all electrical/cable/signal ductline elevations to maintain the required vertical clear separation from all water mains. Conformance to the Board of Water Supply 2002 Water System Standards as amended shall be at no cost and adhered to.
28. Maintain the required minimum horizontal clear separation between electrical/cable/signal appurtenances, (including any modular units) and the nearest water mains or water appurtenance. Contractor shall field verify for any conflicts at each electrical/cable/signal appurtenance location. Where conflicts occur, the contractor shall coordinate with the project engineer to revise the electrical/cable/signal appurtenance to provide the required clearances. Conformance to the Board of Water Supply, Water System Standards, dated 2002, as amended, shall be at no cost and adhered to.
29. All reinforced concrete jackets and concrete support blocks shown on the structural drawings shall develop a minimum compressive strength of 4,000 psi.

29. All reinforced concrete jackets and concrete support blocks shown on the structural drawings shall develop a minimum compressive strength of 4,000 psi.

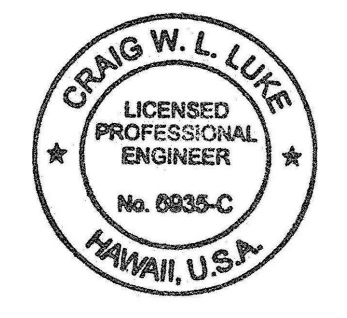


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SURVEY PLOTTED BY	DATE
DRAWN BY	DATE
TRACED BY	DATE
INSTRUMENTED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE
NOTE BOOK	
No.	

APPROVED:

Manager and Chief Engineer, BWS _____ DATE _____
(for work affecting BWS facilities in City/State R/W & BWS easements only)

06/08/22	△ Note Added
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Craig W. Luke
SIGNATURE

April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Construction Notes - 11

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	14	767

Water Notes (Board of Water Supply) (Continued)

30. Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "caution water line buried below".
31. 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 will 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.
32. When a utility (gas, sewer, electrical duct line, fiber optic, drainage, etc.) crosses below a Board of Water Supply water main, the designer of record and their construction engineer shall be responsible for determining the adequate water main structural support and submit the construction method and shop drawing, stamped by a licensed engineer and reviewed and accepted by the designer of record, to the Board of Water Supply for review and approval. All work shall be at no cost to the Board of Water Supply.
33. At utility crossings where proper compaction under a water main is difficult to achieve, CLSM shall be installed in place of backfill material and pipe cushion material. CLSM mixture to be furnished shall be in accordance with Division 200 - Materials, Section 209.06 Controlled Low Strength Material (CLSM) of the Water System Standards, as amended.

Chlorination and Hydrotesting Effluent Note

1. The contractor shall only use dechlorinated hydrotesting effluent for dust control, irrigation and/or other purposes that do not involve discharges to waters of the State of Hawaii.

Trenchless Installation Work

1. For trenchless utility work (micro-tunneling, directional drilling, pipe ramming/jacking of new utilities such as electrical duct lines, sewer lines or drain lines) crossing or paralleling existing waterlines, provide the required minimum horizontal and vertical clearance to existing waterlines. No deviation shall be allowed without the Manager and Chief Engineer's approval. The utility owner or contractor shall make adjustments to meet the minimum clearances should the utility line be installed closer to the existing waterlines, at no cost to the Board of Water Supply. The contractor shall submit as-built plans of the new utility lines after inspection of the project.

Waterline Chlorination and Testing Procedures

1. The contractor shall follow the following revised chlorination and water sampling procedures:

The following chlorination and water sample collection procedure shall apply to all water pipeline projects (all work to be coordinated through BWS inspector):

Chlorination of Water Systems

- A. The contractor shall provide a 4-week advance notice, in writing, to the Officer-In-Charge for proposed flushing filling and bacterial testing of the new pipeline.

Waterline Chlorination and Testing Procedures (Continued)

- B. The Contractor shall hire a State of Hawaii - Department of Health certified laboratory to provide water sampling services and to deliver water samples to the Micro Lab for analysis. Water samples for bacterial testing shall be delivered no later than 2:30 p.m. on the day the samples are taken to the Board of Water Supply Micro Lab located at 630 S. Beretania St., Honolulu, HI 96843. The Micro Lab shall perform analysis and provide their results to the Officer-In-Charge by 4:30 p.m. on the following day (in some cases, final results notification may take up to 48 hours).
- C. Water mains shall be disinfected in accordance with the Board of Water Supply Water System Standards (2002), as amended, Section 302.29.

Step 1 - Preliminary Flushing (Prior to Chlorination):

The mains shall be flushed with maximum available pressure and velocity. Adequacy of turnover shall be determined by the absence of particles. Turbidity shall be less than 1.0 NTU before chlorination. During all flushing operations, the Manager or the Manager's authorized representative shall determine the rate of water use.

Step 2 - Chlorination:

The Contractor shall submit to the Manager, for approval, a sketch showing locations of sampling points and a plan or schedule delineating the method or steps the Contractor proposes to use to accomplish the work. The following methods for chlorination shall be used:

1. The following chlorination and water sample collection procedure shall apply to all water pipeline projects:
 - a. Step 1: Chlorinate main by filling with water and introducing chlorine in sufficient quantity to obtain a minimum chlorine concentration of 50 parts per million. Leave chlorinated water in main overnight.
 - b. Step 2: Flush main with fresh water until all chlorine has been flushed out as evidenced by the N, N-diethyl-p-phenylenediamine (DPD) test, then collect a water sample while continuing to flush the main.
 - c. Step 3: Repeat Steps 1 and 2. After collecting the second water sample, stop flushing and allow the water to stand in the main overnight.
 - d. Step 4: Thoroughly flush the main with fresh water until all water that had been standing in the main overnight has been flushed out. Stop flushing and let the water stand in the main for one hour. Collect a water sample.
2. The main is deemed acceptable and certified when (I) the three consecutive water samples, collected 24 hours apart under Steps 1 and 2, show no TC (Total Coliform bacteria), no E. Coli, less than 200 CFU/ml (Colony Forming Units per ml) of HPC (Heterotrophic Plate Count bacteria) or less than 202 HPC using the MPN (Most Probable Number) method and Turbidity <1.0 NTU and (II) the sample of water held in the main for one hour, collected under Step 4, also shows no TC, no E. coli, less than 200 CFU/ml of HPC or less than 202 HPC using the MPN method and Turbidity <1.0 NTU.

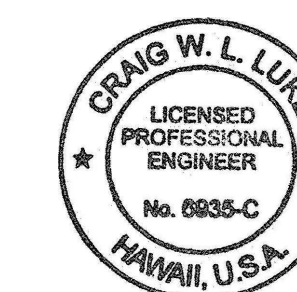
Waterline Chlorination and Testing Procedures (Continued)

3. Chlorination, flushing, sampling and testing will be extended should unsatisfactory results be encountered. Any sample that shows positive TC, E. coli, HPC>200 CFU/ml, HPC>202 MPN or Turbidity > 1.0 NTU is unsatisfactory.
4. Steps 1 and 2 may be repeated before collecting the one hour hold sample specified in Step 4. Repeating Steps 1 and 2 is recommended in the event samples show the presence of TC and/or E. coli and/or increasing total bacterial results from one sample to the next.
5. Water samples that show the presence of atypical results, debris, high turbidity or results inconsistent with existing water are subject to reconfirmation. The Manager reserves the right to request and test additional water samples in the interest of safeguarding public health and safety at no additional cost to the Department.
6. Liquid chlorine, chlorine based liquid disinfectants or calcium hypochlorite that has been tested and certified as meeting the specifications of the ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects, shall be used for the chlorination of the water mains.

DATE
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APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

06/08/22	Numbering Revised
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Construction Notes - 12
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20
 Scale: As Shown Date: April 2022

Water Meter Installations (For Meters 3-In. and Larger) (Continued)

13. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (For connection only).
14. All ductile iron pipe, fittings, and valves shall be coated with a bonded dielectric coating and wrapped with petrolatum wax tape.
15. All ductile iron pipe and fittings, including sections requiring reinforced concrete jacketing, shall be ductile iron Class 53, and bonded dielectric coated as per the Board of Water Supply 2002 Water System Standards, as amended.
16. The project shall pay the applicable water system facilities and/or one-time service charge and for the meter which will be furnished by Board of Water Supply and installed by the Contractor when the lateral is installed.
17. Contractor shall cut and plug and remove 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.
18. After installation of tapping sleeve and tapping valve and prior to tapping the existing water main, the assemble shall be pressure tested at 200 psi on both sides of the valve and in accordance with the WATER SYSTEM STANDARDS, dated 2002.
19. For meters 3 inches and larger (Compound, F.M., and Detector Check), Contractor shall notify Customer Care Division – Service Engineering Section in writing after the plan is approved, no later than 120 days, prior to withdrawing meter from Board of Water Supply storeyard. Such notice shall indicate number, size, and type of meter (Compound, F.M., or Detector Check) and approximate month and year meter is anticipated to be drawn out. If the approved plan is allowed to lapse, the 120-day notice will be voided.
20. 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 will 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.
21. The project shall be subject to the Board of Water Supply's Cross-Connection Control requirements prior to issuance of the Building Permit.
22. Easement documents must be submitted to Board of Water Supply and recorded before meter is issued.
23. The installation, chlorination, and testing of the water main and facilities after the property line shall not be the responsibility of the Board of Water Supply.
24. Prior to installation, the Contractor shall submit for approval by the Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Board of Water Supply Water System Standards, dated 2002 and addendums.
25. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job-to-job basis.
26. The backflow preventer device must be installed before meter is issued.
27. Pipe cushion shall be of high resistivity material. The Contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 OHM-CM. Remainder of the backfill material shall be as specified in the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls (PCB).

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Water Meter Installations (For Meters 3-In. and Larger) (Continued)

28. The Contractor shall install electronic markers to all mains and test the electronic markers prior to installations to verify proper operation. Board of Water Supply personnel shall verify the number and locations of placed electronic markers before final paving of the project.
29. The Contractor shall furnish and install an insulting corporation stop and petrolatum wax tape at all taps (for D.I. pipe and copper lateral combination only).
30. Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "CAUTION WATER LINE BURIED BELOW".

Honolulu Board of Water Supply Right-of-Entry

1. The Contractor shall be fully responsible for all costs related to the processing and obtaining of the Consent of Entry (COE) and Release and Waiver (R&W) with the Honolulu Board of Water Supply (BWS). Any delays caused by obtaining the COE and R&W will be at the cost of the Contractor. The Contractor shall coordinate all COE and R&W work with Mr. Michael Matsuo, BWS Land Division, Land Administrator, phone number: (808) 748-5951.

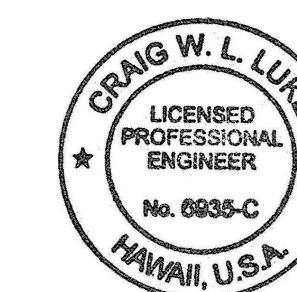
Honolulu Board of Water Reinforced Concrete Jackets on Existing Waterlines Notes:

1. Reinforced concrete jackets on existing waterlines are based upon the as-built location of the pipe joints. The Contractor shall verify the pipe joint locations in the field and shall extend the reinforced concrete jackets as necessary to comply with BWS Std. Det. B1. Shortening of the reinforced concrete jacket is not allowed.
2. The Contractor shall obtain BWS approval of the means and methods to construct the reinforced concrete jackets on the existing waterlines. The Contractor shall provide a schematic shop drawing to BWS that details the materials and procedures necessary to safely encase the existing waterlines without a water shutdown.
3. In order to provide additional stability beneath the existing waterlines, the Contractor shall provide a CLSM cushion beneath the bell ends of the existing waterlines that are to be encased in a reinforced concrete jacket. The CLSM cushion shall be a minimum of 6" thick and shall extend 1' in each direction from the end of the reinforced concrete jacket.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	16	767

APPROVED:	
Manager and Chief Engineer, BWS (for work affecting BWS facilities in City/State R/W & BWS easements only)	DATE

06/08/22	Notes Added
DATE	REVISION



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Construction Notes - 14	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022

Additional Construction Notes


1. The Contractor shall contact Hawaii One Call Center to have respective utility companies and agencies mark where their underground utilities are located. The Contractor shall comply with all requirements of Hawaii One Call Law. The Contractor shall be liable for any damages if Hawaii One Call requirements are not strictly adhered to. In accordance with Hawaii State Law Section 269E-7, the Hawaii One Call Center (HOCC) shall provide an inquiry identification number for each location request provided by the Contractor. The inquiry identification number and utility marks shall remain valid for not more than twenty-eight (28) calendar days from the date of issuance and after that date shall require the Contractor to submit a new request for HOCC revalidation. The Contractor shall provide all inquiry identification numbers for each location request to the Engineer ②
2. Whenever connections of new utilities are shown on the plans, the contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavating. 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 or repaired and shall include all upgrades and betterments to the standards of the utility or agency.
3. No cold planed material or material containing silica shall be used to stabilize staging areas

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	19	767

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April 30, 2022
 EXPIRATION DATE OF THE LICENSE

06/08/22	② Notes added
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<h3>Construction Notes - 17</h3>	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-18 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	20	767

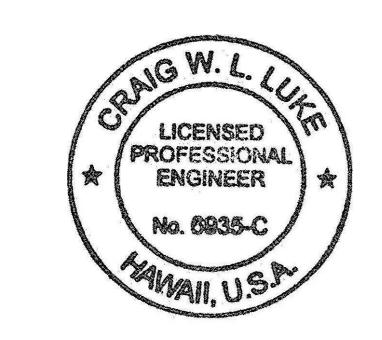
Traffic Control General Notes

1. The Contractor shall provide traffic control plans designed and reviewed by a professional Engineer to the State for review and approval for any changes to or deviations from the Traffic Control Plans provided.
2. Traffic control plans shall comply with the MUTCD and the State of Hawaii, Department of Transportation, Highway's Division, Section 645 – Work Zone Traffic Control. If there is a discrepancy between the MUTCD and Section 645, the Contractor shall follow the MUTCD.
3. The Contractor shall phase construction to provide one lane in each direction of traffic flow continuously along Farrington Highway during construction.
4. The Contractor shall phase work to keep all driveways open during business hours.

Traffic Control State Notes

1. The Contractor shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of work.
5. Flaggers and/or police officers shall be in sight of each other or in direct communications at all times.
6. When required by the issuing office, the Contractor shall install a flashing arrow signal as shown on the Traffic Control Plans.
7. All traffic lanes shall be a minimum of 10 ft wide.
8. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
9. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces)
10. At the end of each day's work or as soon as the work is completed, the Contractor shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
11. Replace permanent pavement markings and traffic signs upon completion of each phase of work.

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
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No. _____	TRACED BY _____	
	QUANTIFIED BY _____	
	CHECKED BY _____	



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	2 Revised Note 1 and Note 2
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

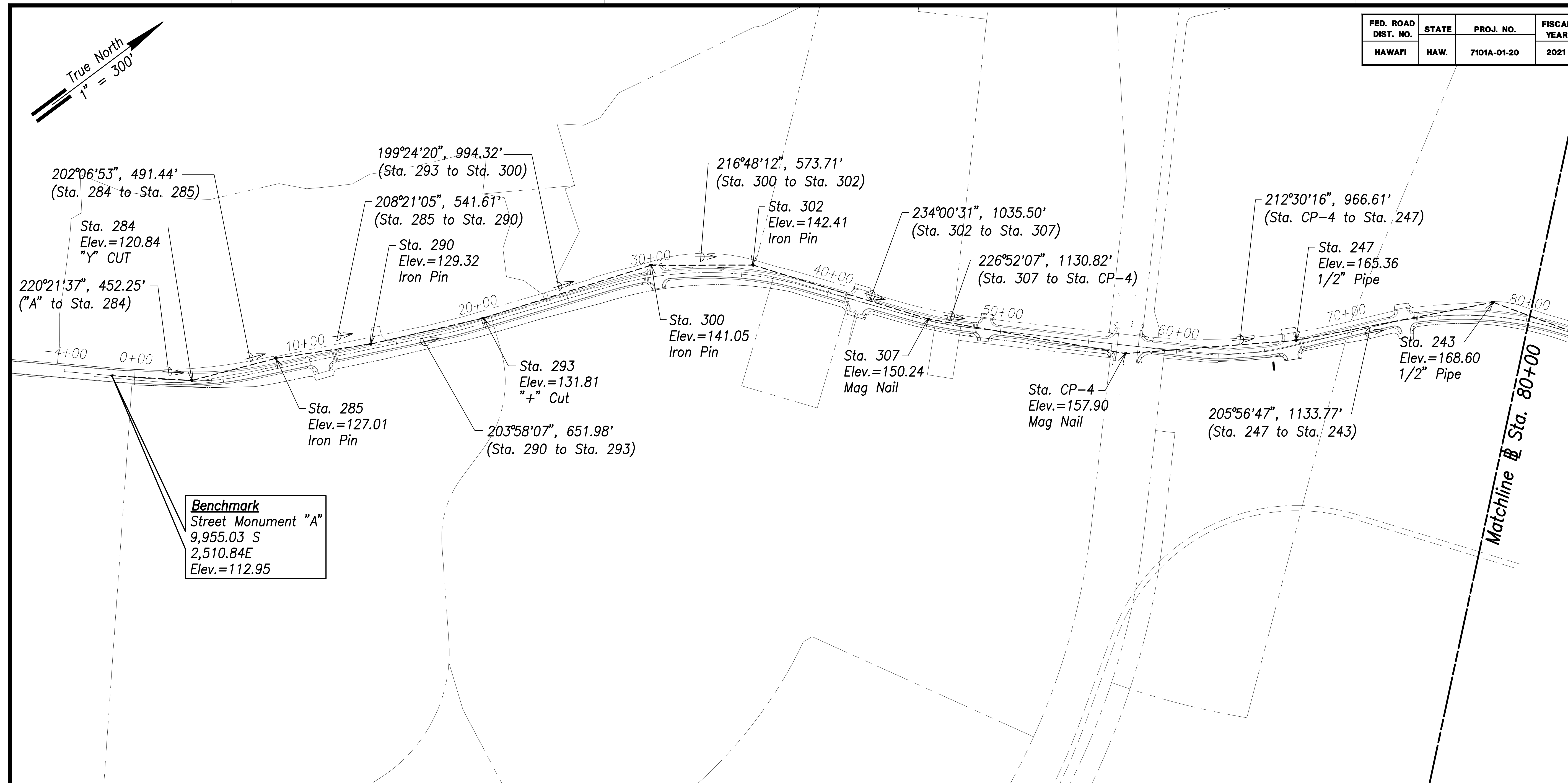
Traffic Control Notes

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FILE: K:\civil\23146 Farrington Hwy Widening\Draw\Construction\Draw\C-19 Traffic Control Notes.dwg saved June 6, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	24	767



General Survey Control Plan - 1

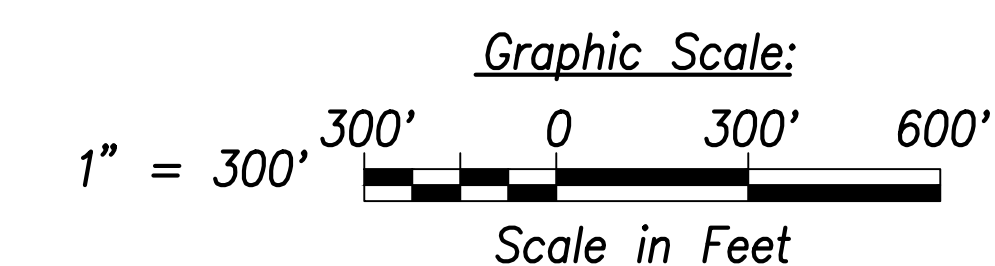
All Survey Traverse Station Shown from Control Point Survey, LLC.
Scale: 1" = 300'

Notes:

1. For General Roadway Geometrics, See Sheet C-25.
2. For General Drainage Plan, See Sheet C-26.
3. For General Water and Sewer Plan, See Sheet C-27.
4. For Overall Electrical System, See Sheet EA-3.

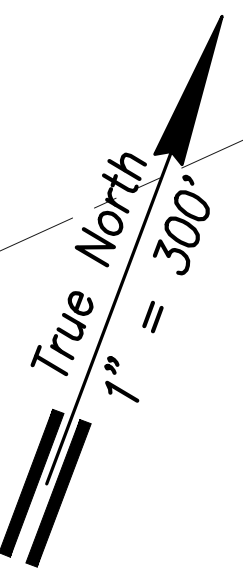
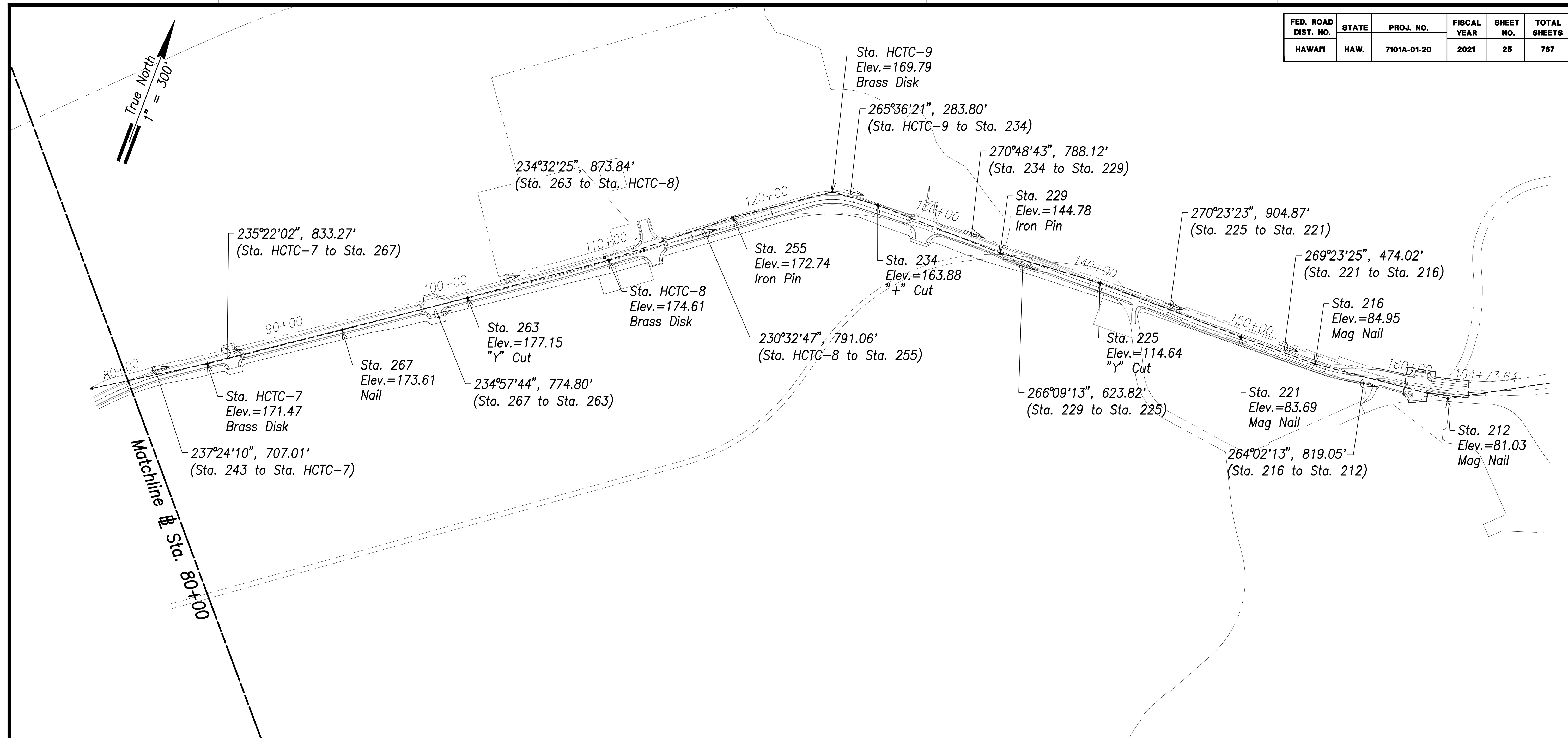
5. For Typical Roadway Sections, See Sheets C-28 through C-31.

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06/08/22	Revised Note 5
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION General Survey Control Plan - 1 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20 Scale: As Shown Date: April 2022 SHEET No. C-23 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	25	767



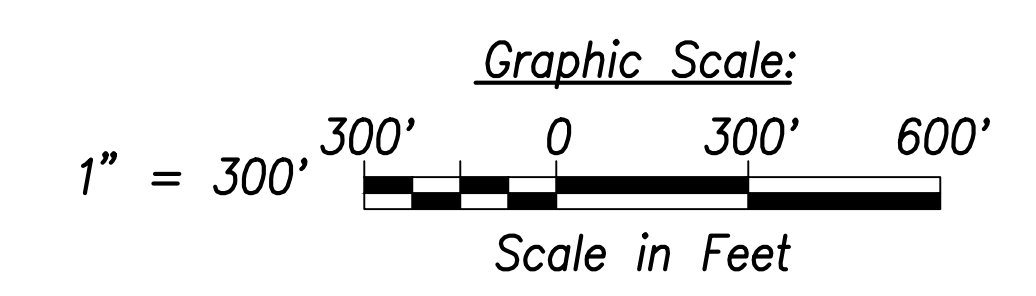
General Survey Control Plan - 2

All Survey Traverse Station Control Shown from Control Point Survey, LLC.
Scale: 1" = 300'

Notes:

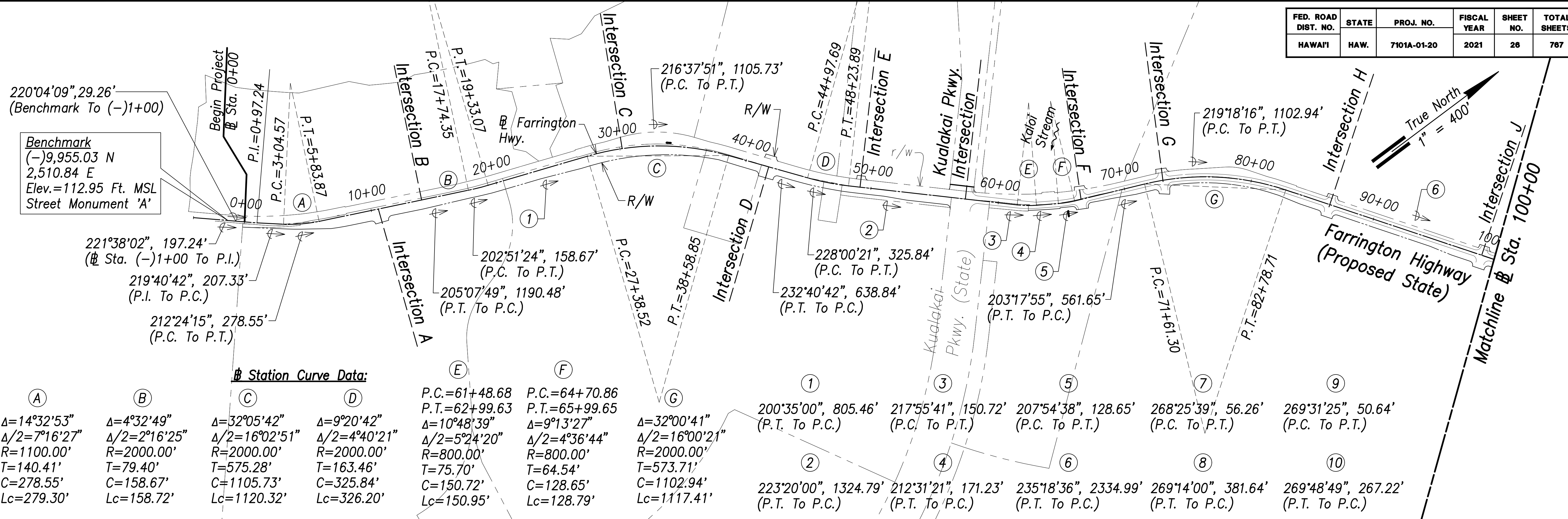
1. For General Roadway Geometrics, See Sheet C-25.
2. For General Drainage Plan, See Sheet C-26.
3. For General Water and Sewer Plan, See Sheet C-27.
4. For Overall Electrical System, See Sheet EA-3.
5. For Typical Roadway Sections, See Sheets C-28 through C-31.

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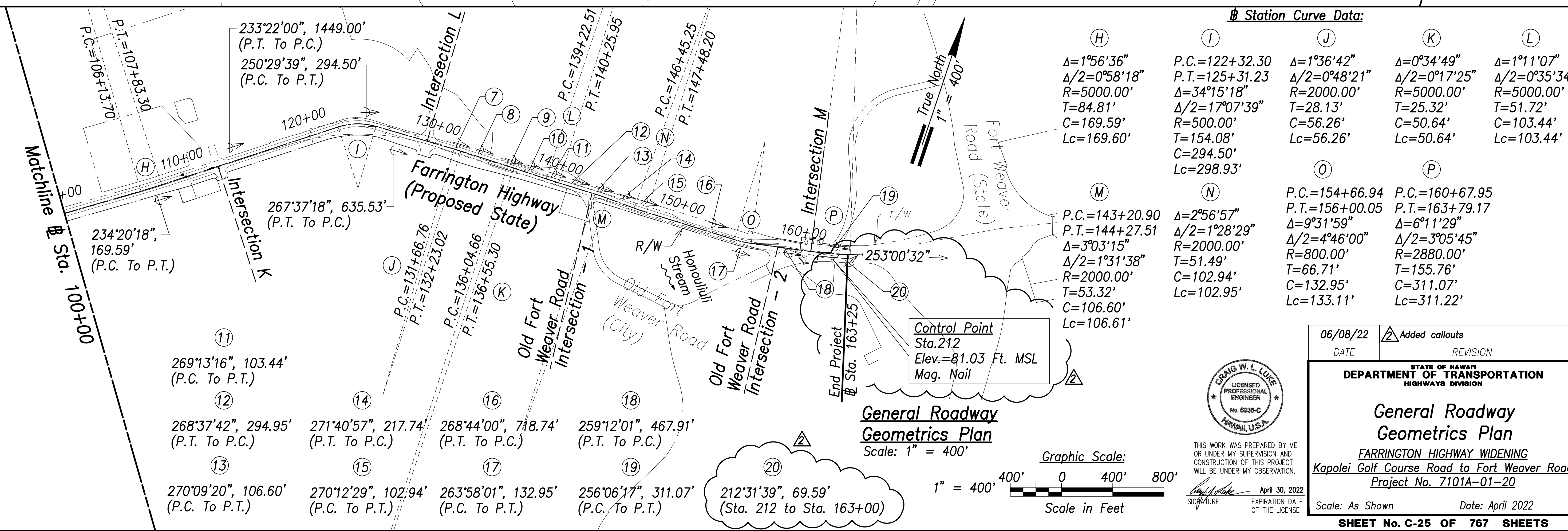
06/08/22	Revised Note 5
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION General Survey Control Plan - 2 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20 Scale: As Shown Date: April 2022	
SHEET No. C-24 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	26	767



Station Curve Data:

Station	Δ	Δ/2	R	T	C	Lc	P.C.	P.T.
A	14°32'53"	7°16'27"	1100.00'	140.41'	278.55'	279.30'	61+48.68	62+99.63
B	4°32'49"	2°16'25"	2000.00'	79.40'	158.67'	158.72'	64+70.86	65+99.65
C	32°05'42"	16°02'51"	2000.00'	575.28'	1105.73'	1120.32'	64+70.86	65+99.65
D	9°20'42"	4°40'21"	2000.00'	163.46'	325.84'	326.20'	64+70.86	65+99.65
E	10°48'39"	5°24'20"	800.00'	75.70'	150.72'	150.95'	64+70.86	65+99.65
F	9°13'27"	4°36'44"	800.00'	64.54'	128.65'	128.79'	64+70.86	65+99.65
G	32°00'41"	16°00'21"	2000.00'	573.71'	1102.94'	1117.41'	64+70.86	65+99.65
H	1°56'36"	0°58'18"	5000.00'	84.81'	169.59'	169.60'	122+32.30	125+31.23
I	1°36'42"	0°48'21"	2000.00'	28.13'	56.26'	56.26'	122+32.30	125+31.23
J	0°34'49"	0°17'25"	5000.00'	25.32'	50.64'	50.64'	122+32.30	125+31.23
K	0°34'49"	0°17'25"	5000.00'	25.32'	50.64'	50.64'	122+32.30	125+31.23
L	1°11'07"	0°35'34"	5000.00'	51.72'	103.44'	103.44'	122+32.30	125+31.23
M	2°56'57"	1°28'29"	2000.00'	51.49'	102.94'	102.95'	143+20.90	144+27.51
N	9°31'59"	4°46'00"	800.00'	66.71'	132.95'	133.11'	143+20.90	144+27.51
O	6°11'29"	3°05'45"	2880.00'	155.76'	311.07'	311.22'	154+66.94	160+67.95
P	3°05'45"	1°32'52"	2880.00'	155.76'	311.07'	311.22'	154+66.94	160+67.95

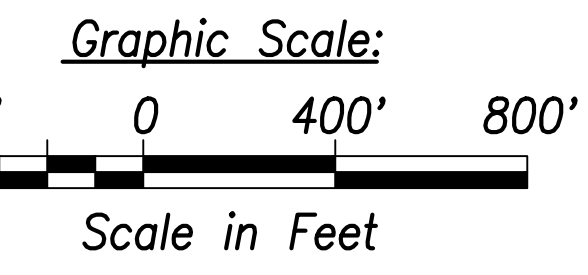


Station Curve Data:

Station	Δ	Δ/2	R	T	C	Lc	P.C.	P.T.
H	1°56'36"	0°58'18"	5000.00'	84.81'	169.59'	169.60'	122+32.30	125+31.23
I	1°36'42"	0°48'21"	2000.00'	28.13'	56.26'	56.26'	122+32.30	125+31.23
J	0°34'49"	0°17'25"	5000.00'	25.32'	50.64'	50.64'	122+32.30	125+31.23
K	0°34'49"	0°17'25"	5000.00'	25.32'	50.64'	50.64'	122+32.30	125+31.23
L	1°11'07"	0°35'34"	5000.00'	51.72'	103.44'	103.44'	122+32.30	125+31.23
M	2°56'57"	1°28'29"	2000.00'	51.49'	102.94'	102.95'	143+20.90	144+27.51
N	9°31'59"	4°46'00"	800.00'	66.71'	132.95'	133.11'	143+20.90	144+27.51
O	6°11'29"	3°05'45"	2880.00'	155.76'	311.07'	311.22'	154+66.94	160+67.95
P	3°05'45"	1°32'52"	2880.00'	155.76'	311.07'	311.22'	154+66.94	160+67.95

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

General Roadway Geometrics Plan
Scale: 1" = 400'



CRAG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *[Signature]*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22 Added callouts

DATE	REVISION

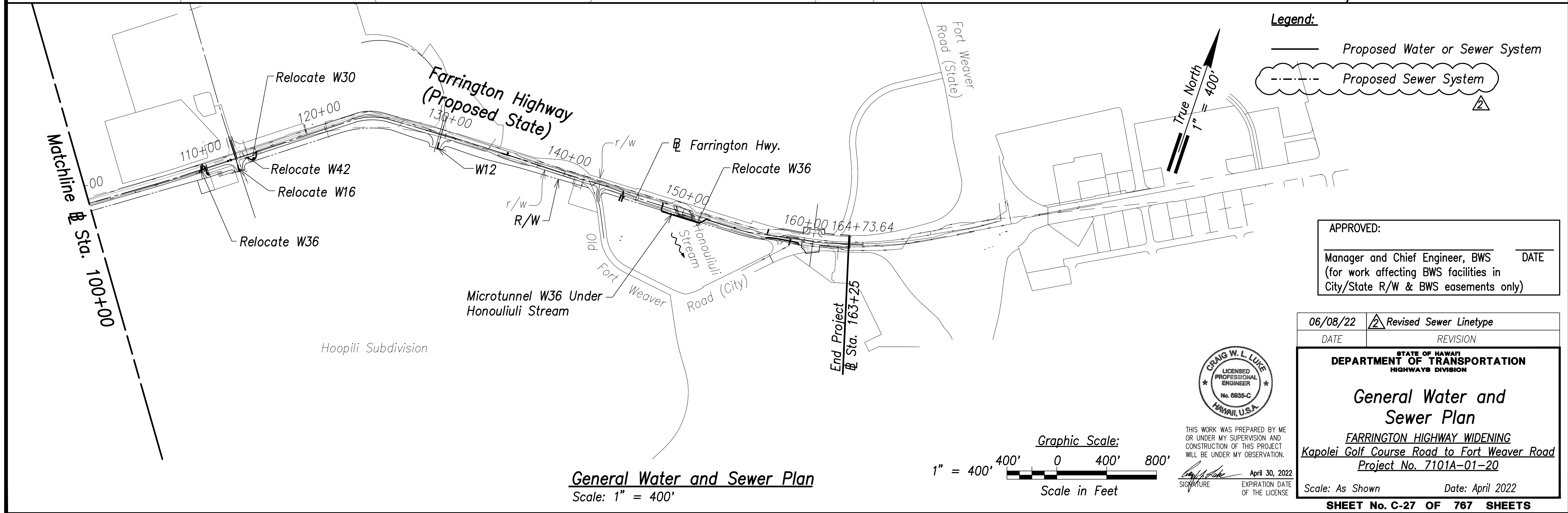
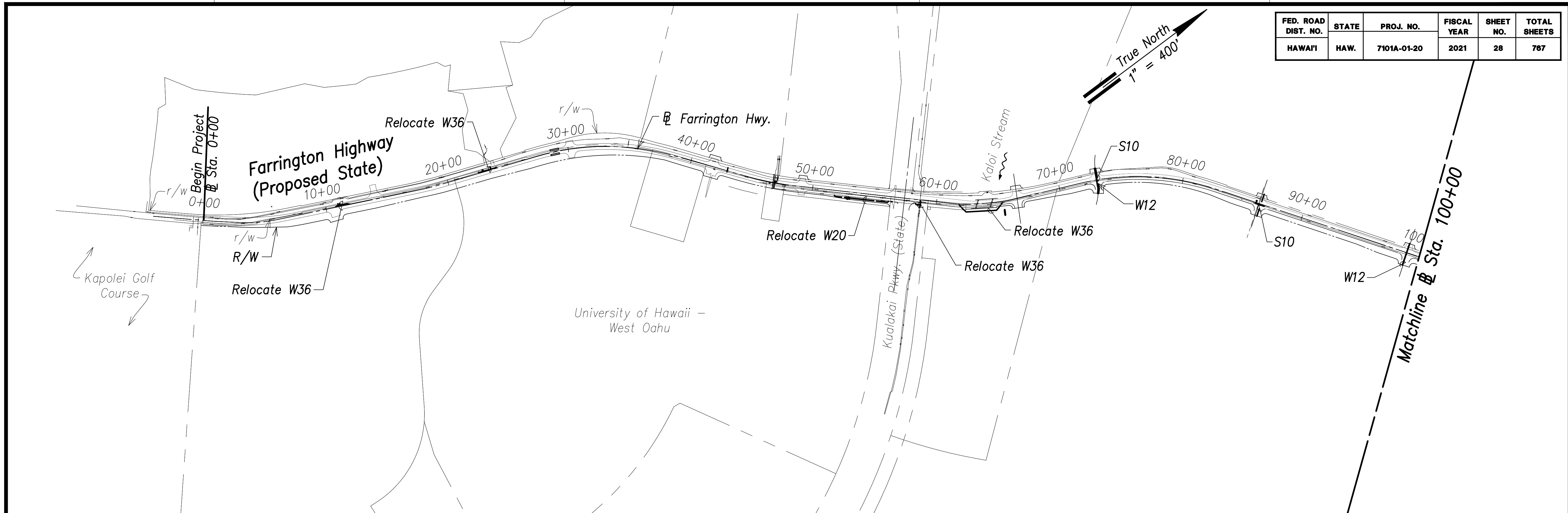
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

General Roadway Geometrics Plan
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-25 OF 767 SHEETS

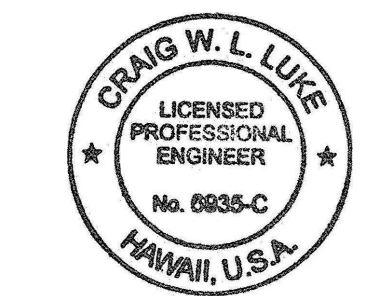
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	28	767



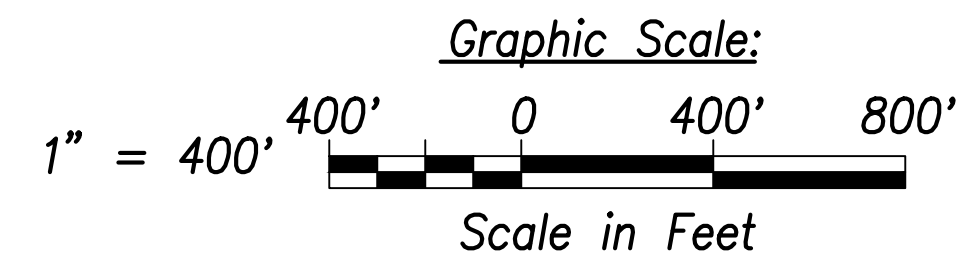
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN NOTE BOOK No.	

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

06/08/22	Revised Sewer Linetype
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022



General Water and Sewer Plan
 Scale: 1" = 400'

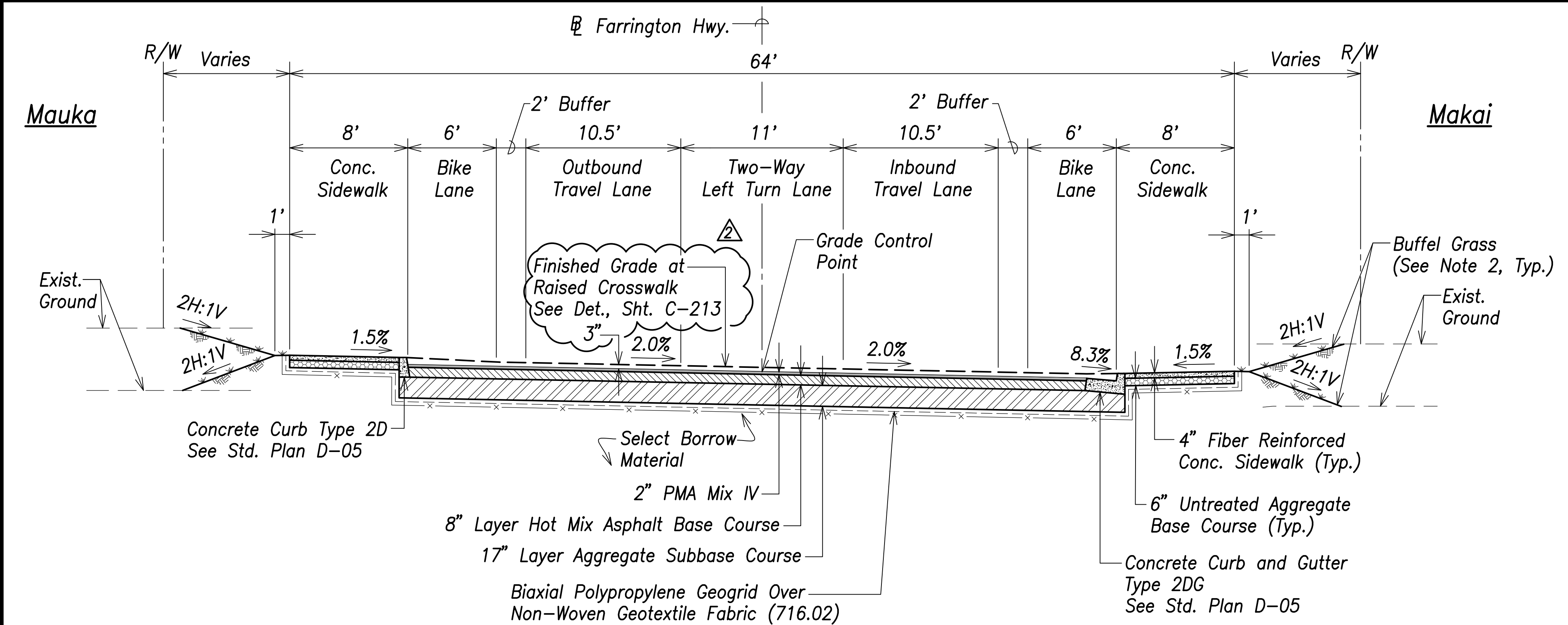
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

General Water and Sewer Plan
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

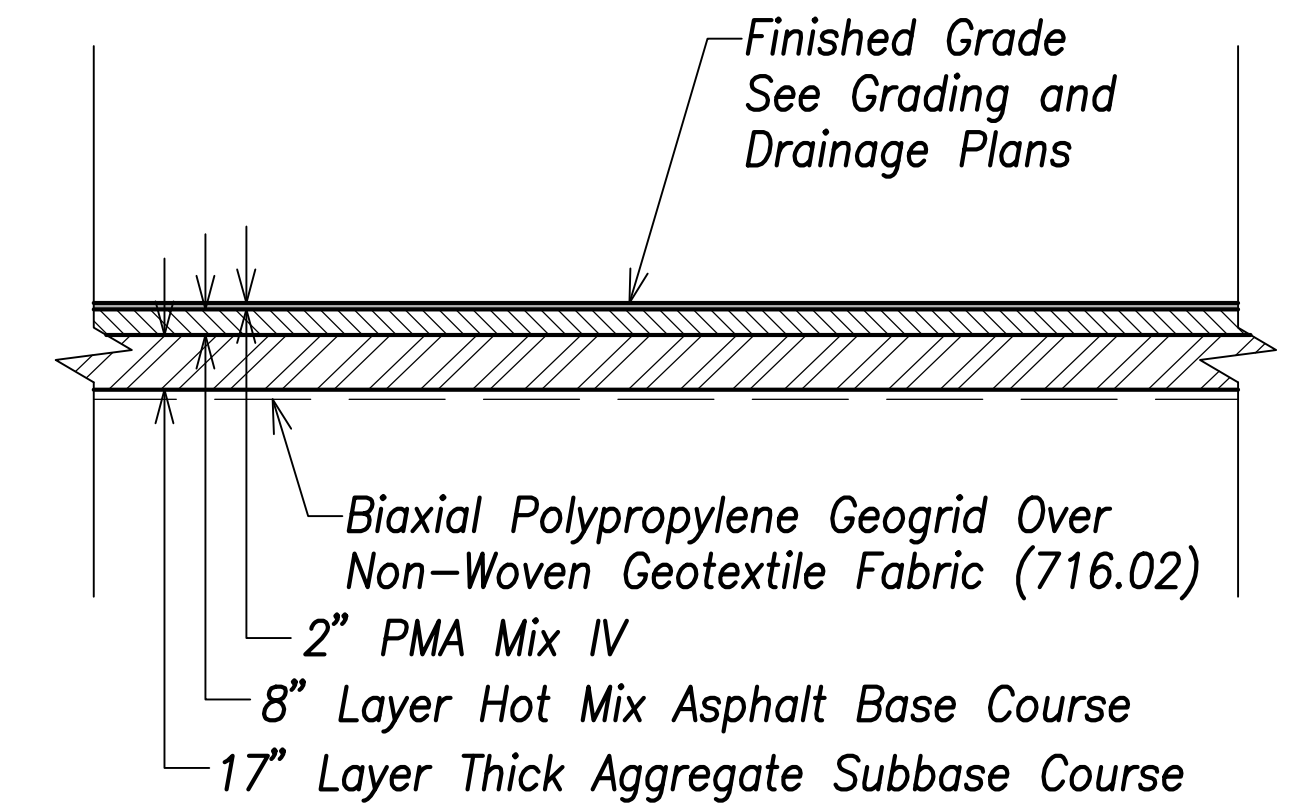
Scale: As Shown Date: April 2022

SHEET NO. C-27 OF 767 SHEETS

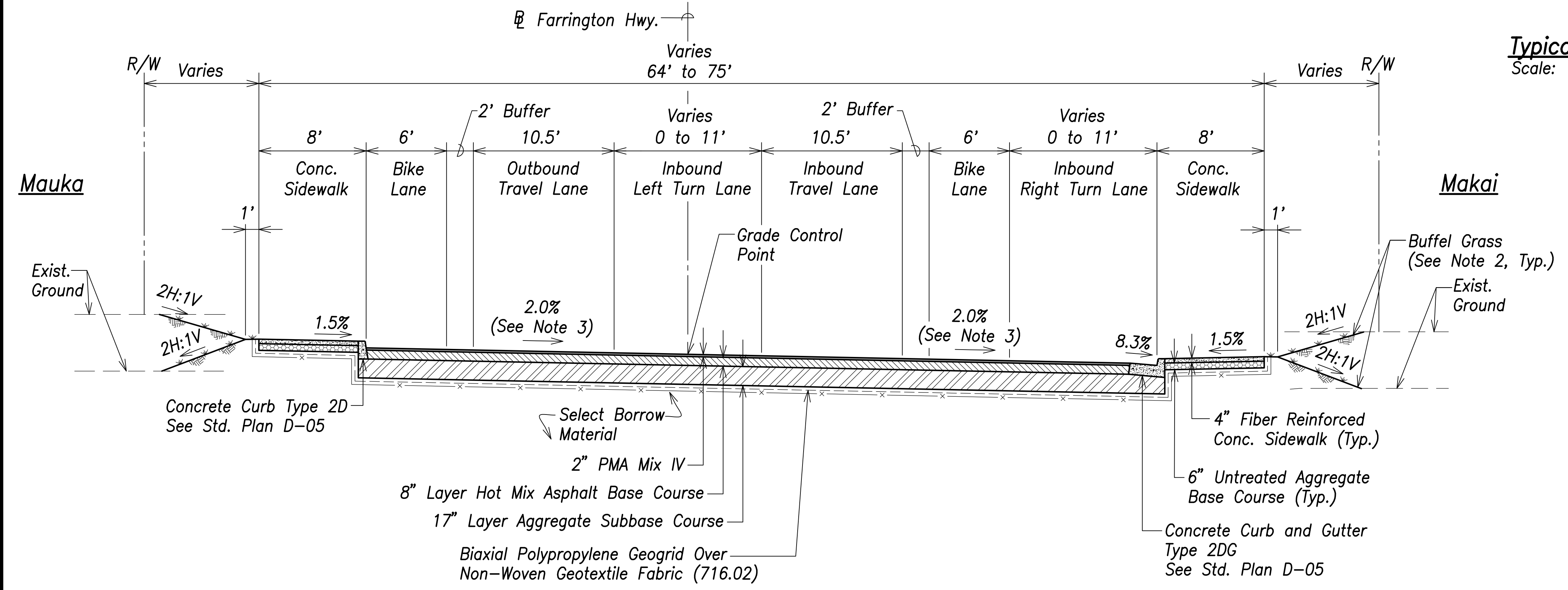
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	30	767



Typical Section - Farrington Highway
 (Intersection A to Sta. 51+24.16)
 (Sta. 62+93.64 to Sta. 133+77.55)
 (Sta. 138+70.68 to Sta. 154+50)
 Scale: 1" = 5'

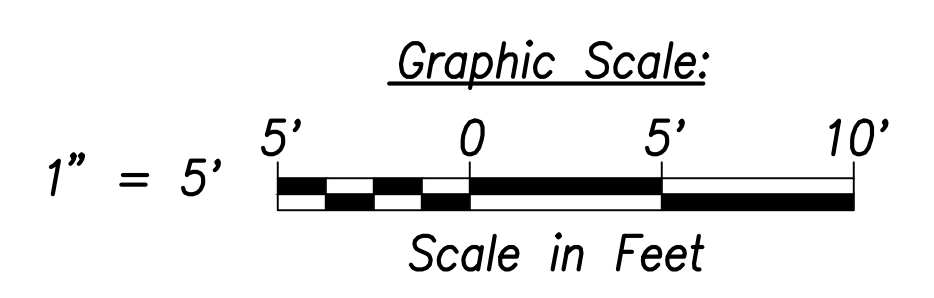


Typical Section - PMA Pavement (State)
 Scale: 1" = 5'

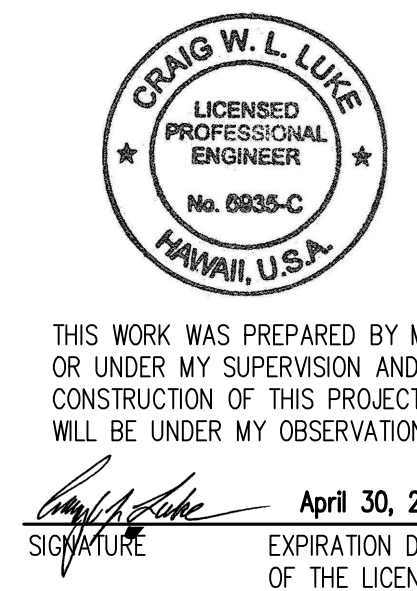


Typical Section - Farrington Highway (Sta. 51+24.16 to Kualakai Parkway)
 Scale: 1" = 5'

- Notes:**
- Farrington Highway is a low speed facility with a design speed of 30 MPH and Posted speed of 25 MPH.
 - All exposed surfaces shall be seeded with Buffel Grass (*Cenchrus Ciliaris 'Laredo'*). Seed at 2 lbs./1,000 SF w/Hydromulch at 30 lbs./1,000 SF.
 - Farrington Highway PMA pavement travel way transitions from 2% superelevated to matching the existing pavement at the connection to Kualakai Parkway.



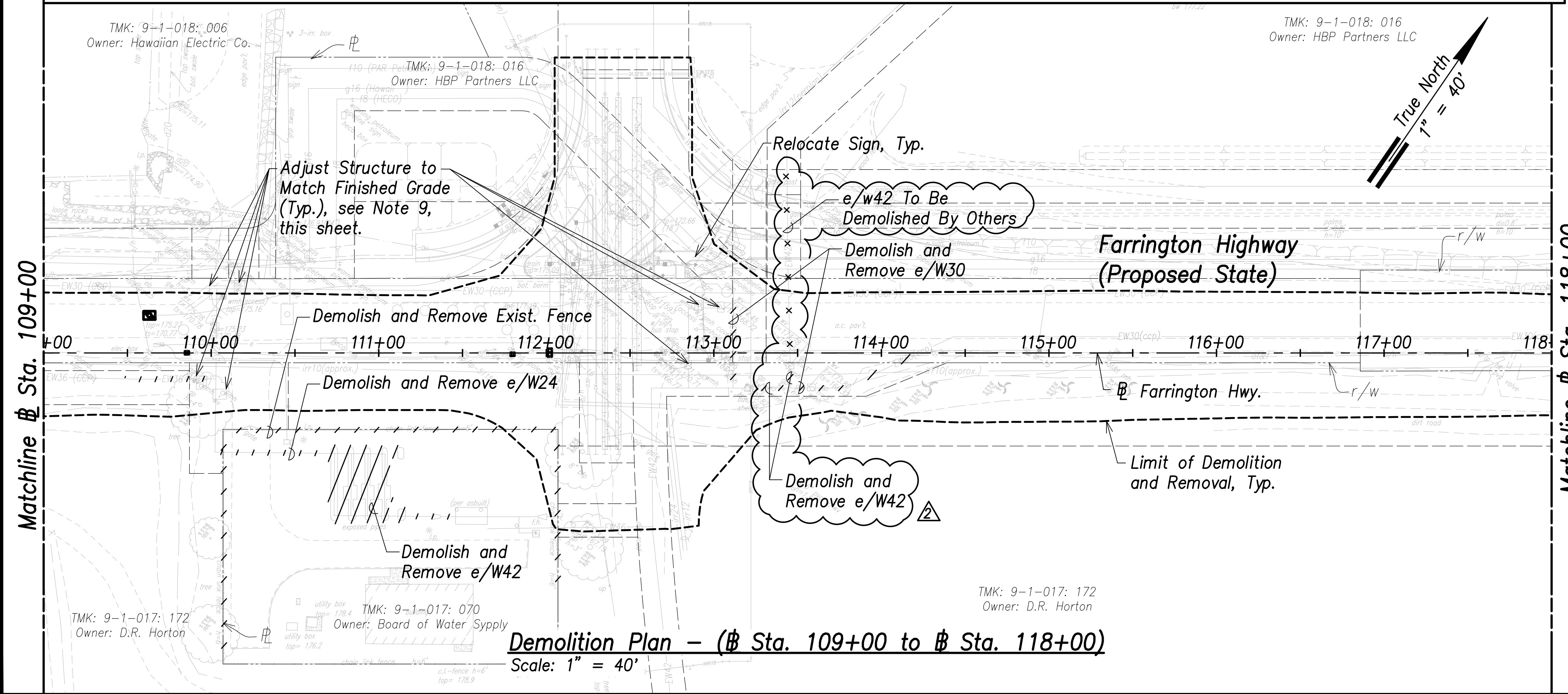
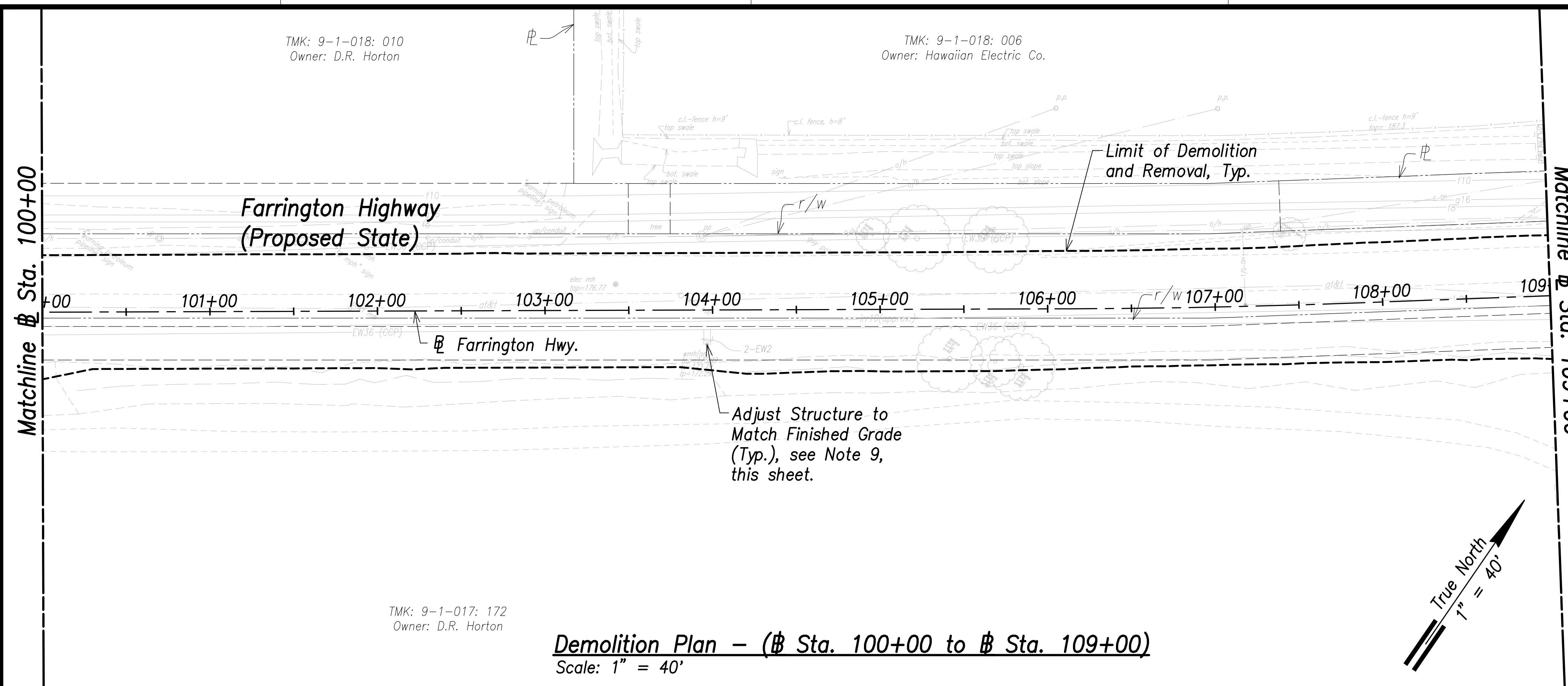
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
QUANTITIES BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....



06/08/22	Revised crosswalk height and callout
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Typical Sections - 2	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET NO. C-29 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	39	767

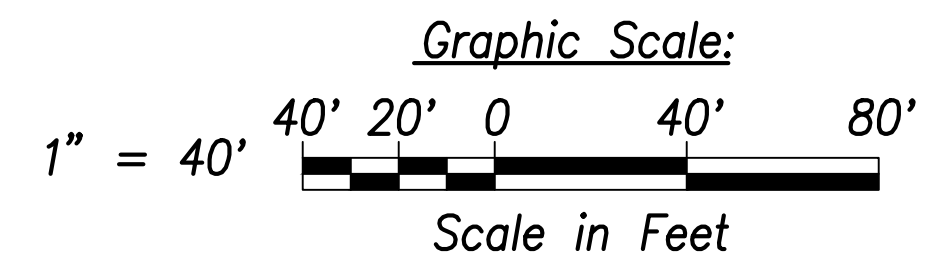
- Notes:**
- All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
 - See Structural Drawings for Demolition and Removal of Bridge Deck and Structural Members.
 - Remove by grinding pavement striping, to avoid conflicts with existing striping. See Signing and Marking Plans.
 - For Demolition of Electrical and Telecommunication Utilities and Structures, Refer to Electrical Site Demolition Plans. The Contractor is Responsible for Coordinating all Electrical Work with Respective Utility Companies.
 - The Contractor Shall Ensure Demolition and Removal Work of Contaminated Materials is Done in Compliance with the State Department of Health and Federal Environmental Protection Agency Guidelines.
 - The Contractor shall coordinate all work with impacted utility owners and ensure continuous access.
 - Service shall be maintained at all times to impacted utilities. No interruption in service will be allowed. The contractor shall phase work to allow for continuous utility service.
 - All Water, Sewer, Fuel, and Gas Systems Shall Remain Undisturbed Unless Indicated For Demolition.
 - The Contractor shall reconstruct tops of all existing utility manholes, valve boxes, meter boxes and structures that are remaining in service and contained within the project area flush with the finished grade.
 - The Contractor Shall Comply With Traffic Notes on Sht. C-19.



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

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities
State R/W & BWS easements only)



06/08/22	Added Waterline Demolition
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

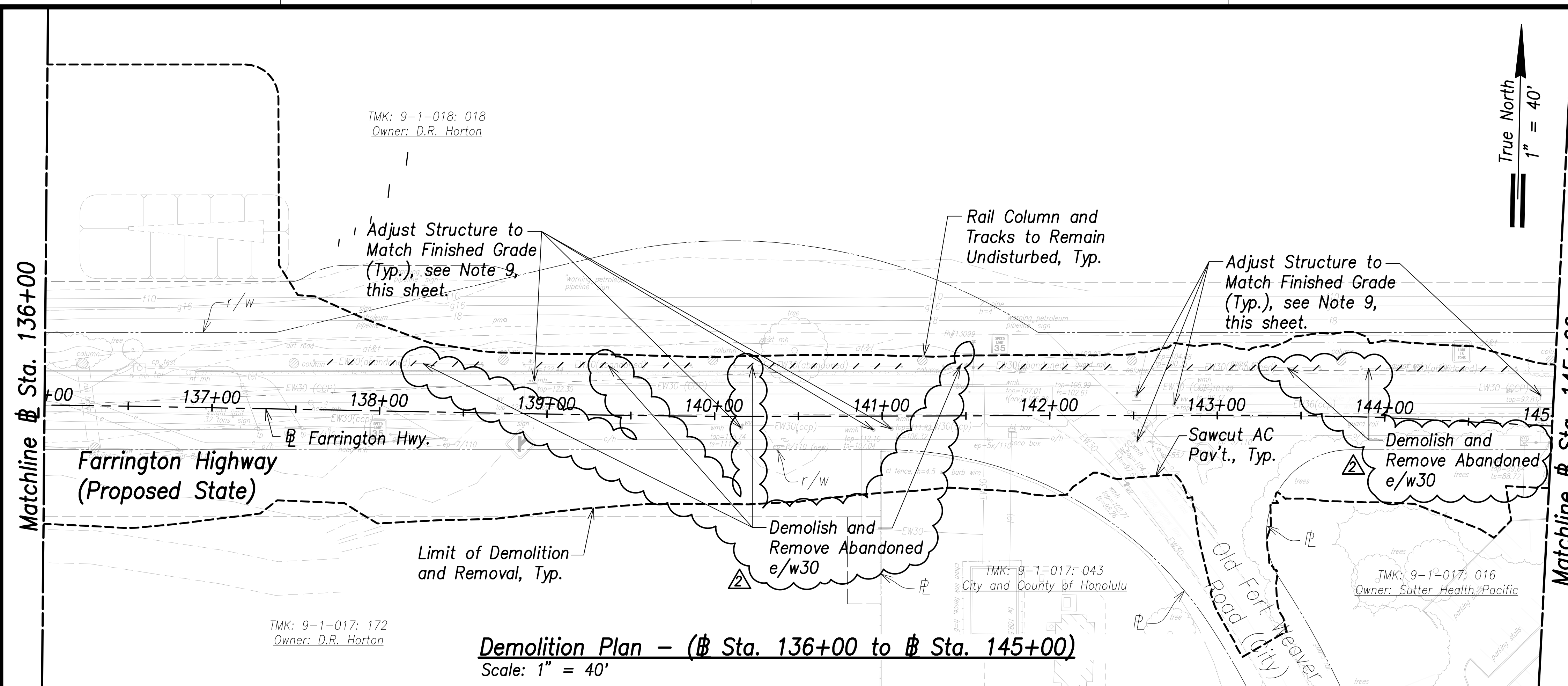
Demolition Plan
Sta. 100+00 to Sta. 118+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

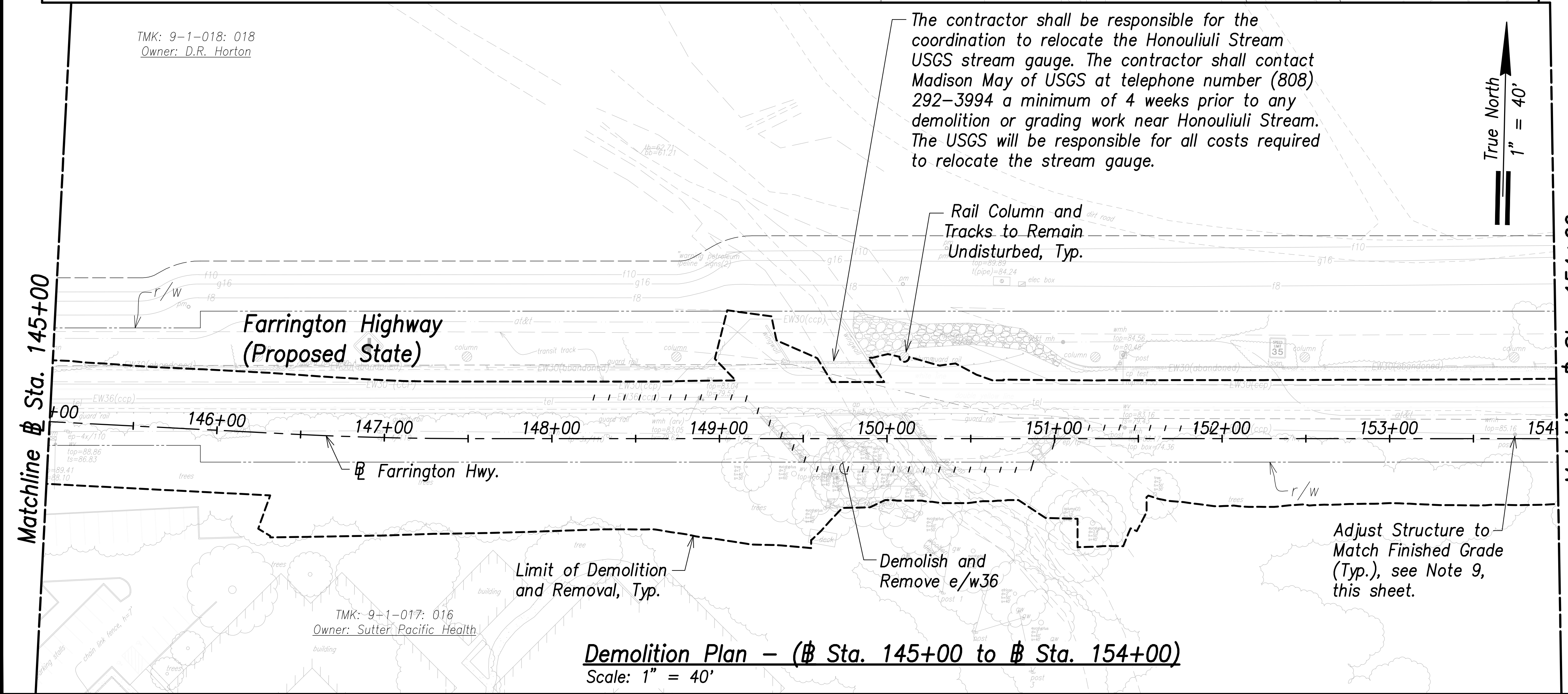
Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	41	767

- Notes:**
- All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
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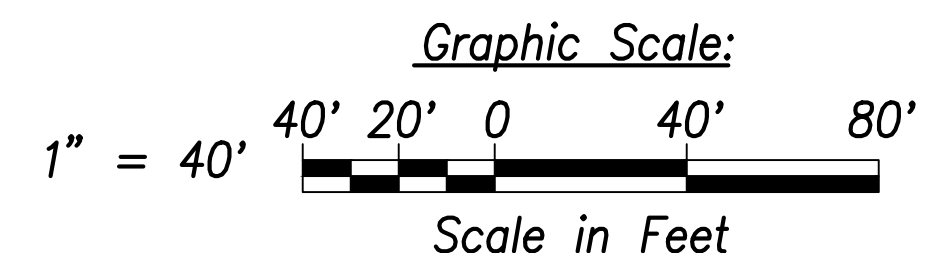
Demolition Plan - (Sta. 136+00 to Sta. 145+00)
Scale: 1" = 40'



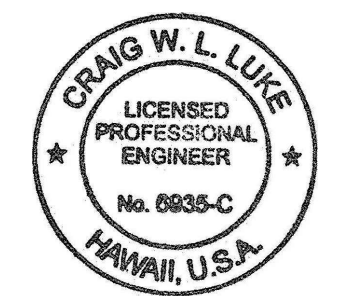
Demolition Plan - (Sta. 145+00 to Sta. 154+00)
Scale: 1" = 40'

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

APPROVED:
 Manager and Chief Engineer, BWS DATE
 (for work affecting BWS facilities
 State R/W & BWS easements only)



06/08/22	Added Waterline Demolition
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

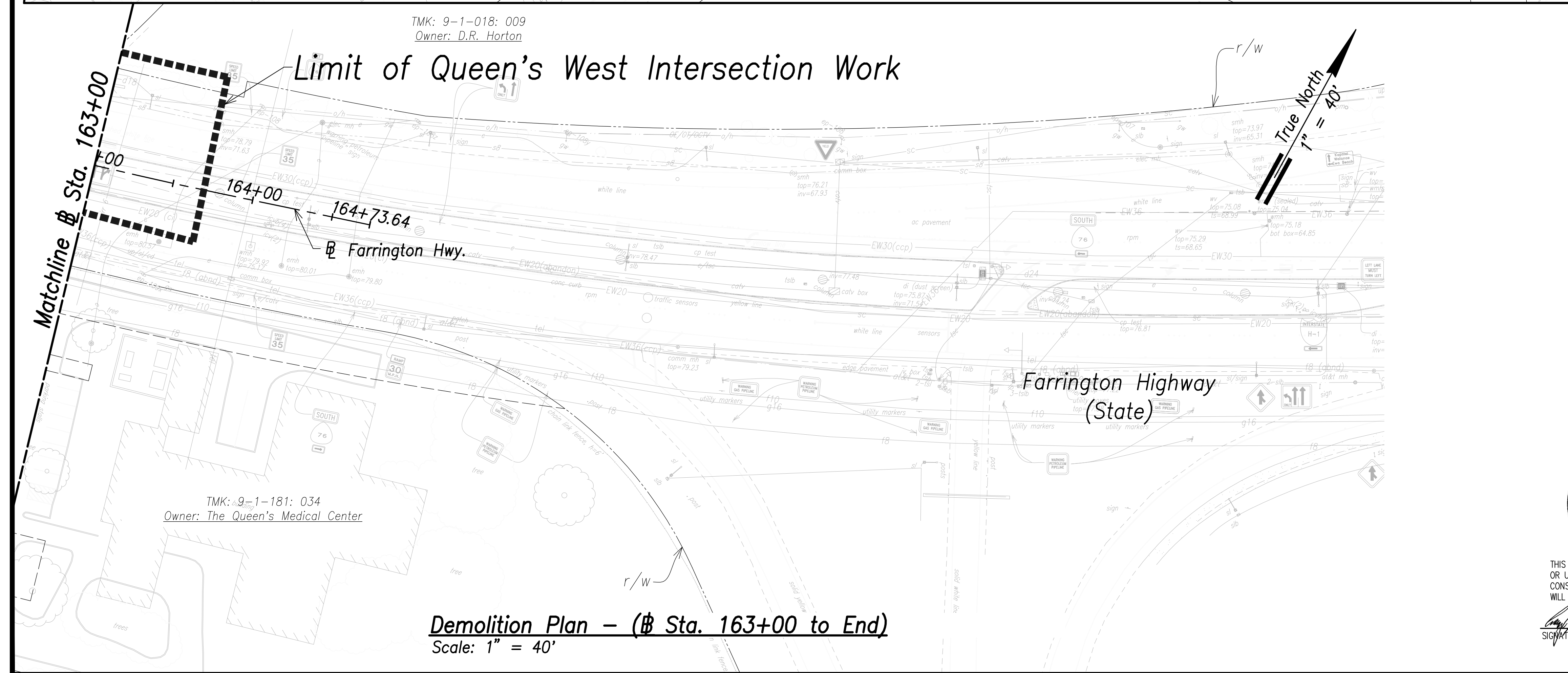
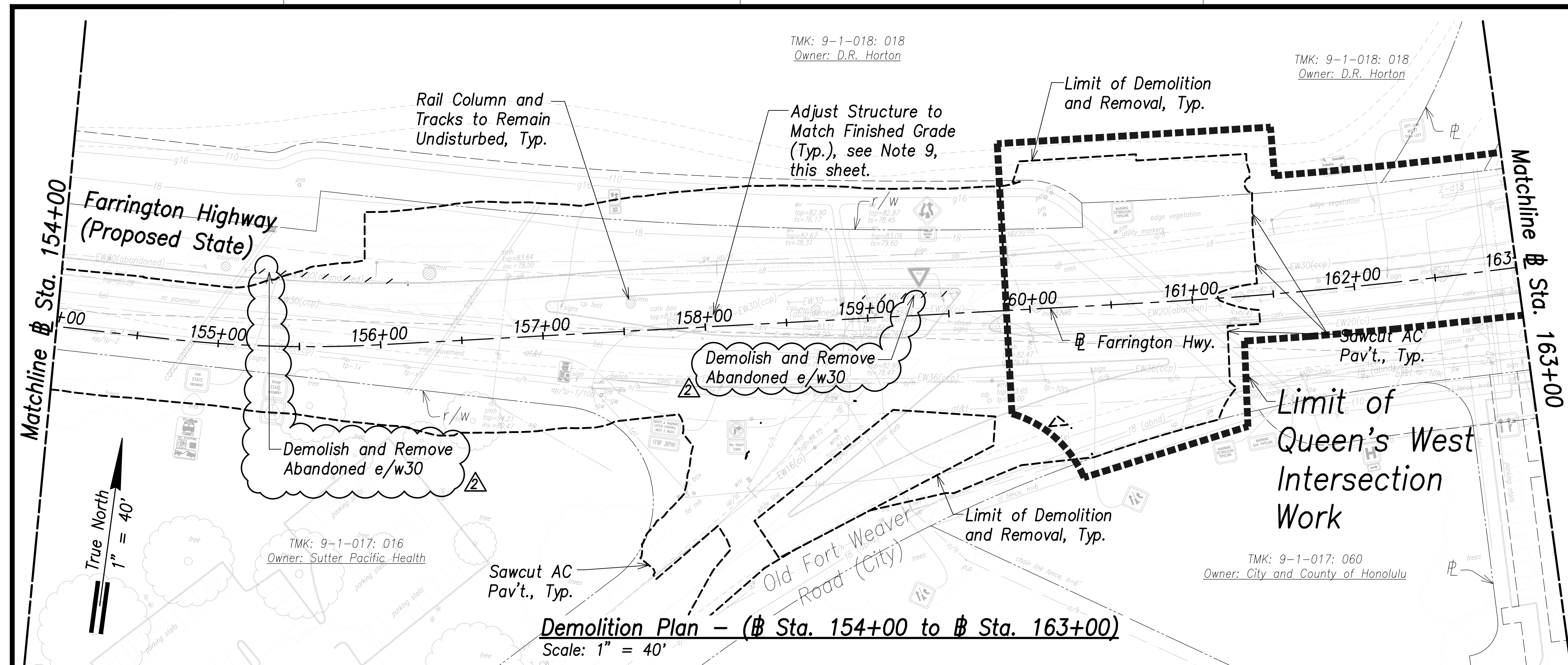
Demolition Plan
 Sta. 136+00 to Sta. 154+00
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-40 OF 767 SHEETS

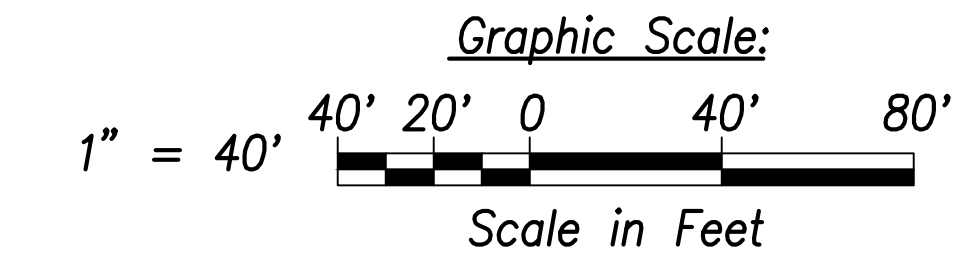
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	42	767

- Notes:**
- All drainage structures, curbs, gutters, sidewalks, pavement, guardrails, striping, vegetation, posts, and signing shall be removed within the limit of demolition and removal.
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 - For Demolition of Electrical and Telecommunication Utilities and Structures, Refer to Electrical Site Demolition Plans. The Contractor is Responsible for Coordinating all Electrical Work with Respective Utility Companies.
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 - The Contractor Shall Comply With Traffic Notes on Sht. C-19.

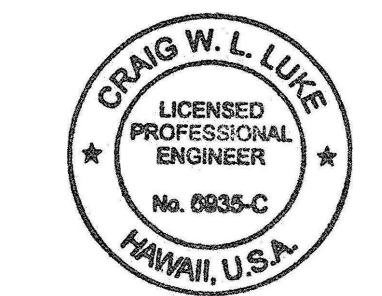


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities
 State R/W & BWS easements only)



06/08/22	Added Waterline Demolition
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

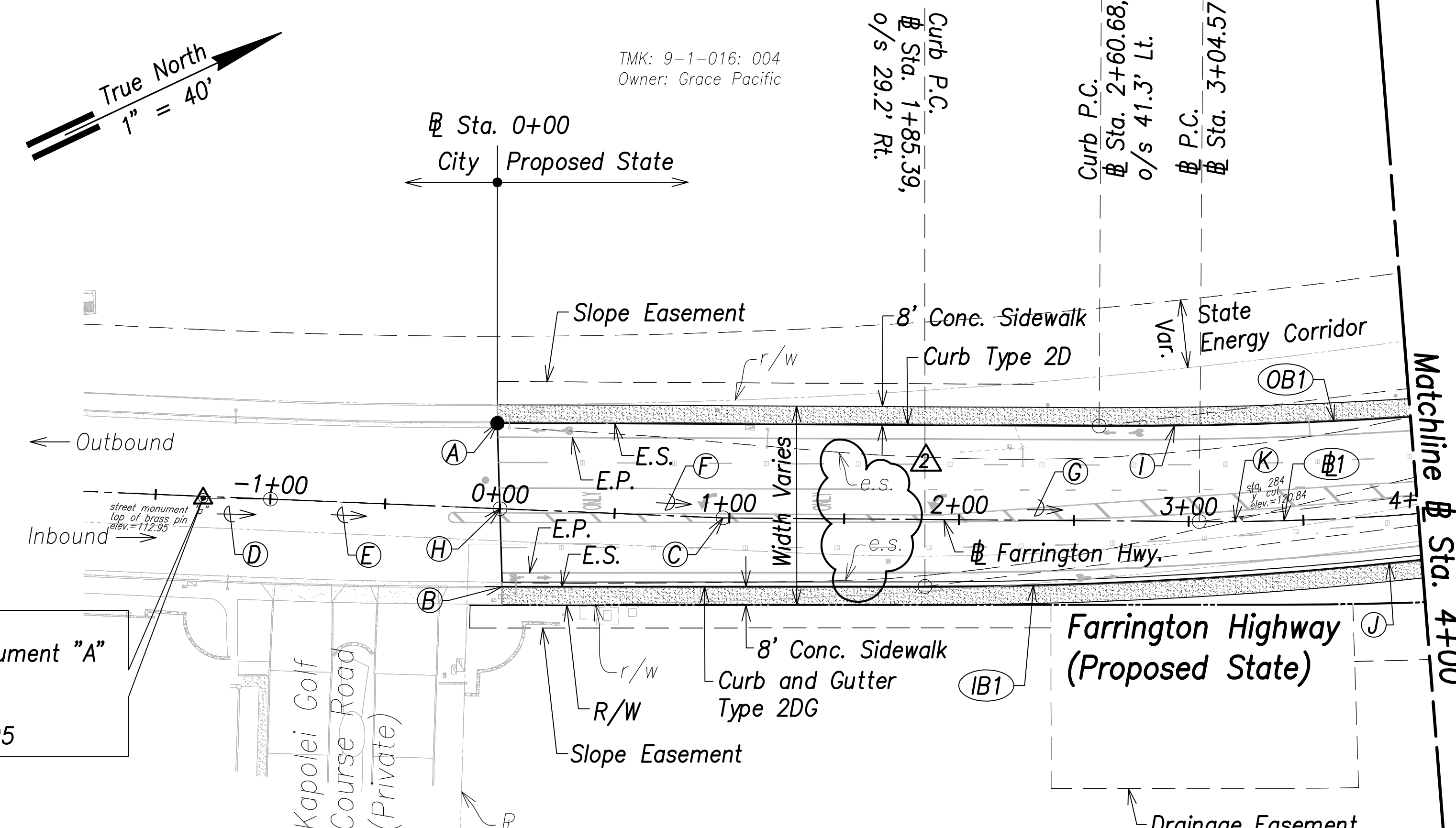
Demolition Plan
 @ Sta. 154+00 to End

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

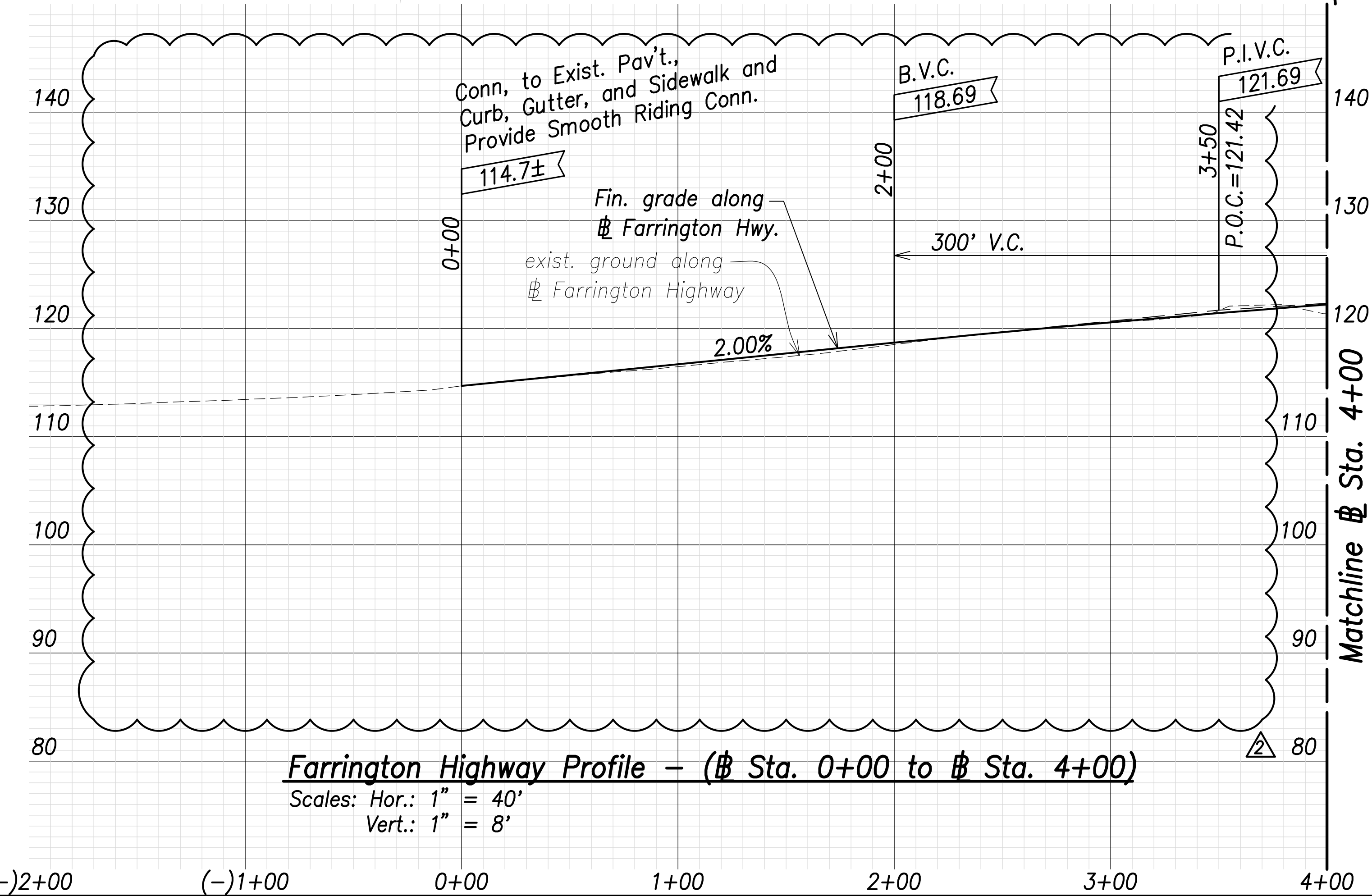
Scale: As Shown Date: April 2022

SHEET No. C-41 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	51	767



Farrington Highway Plan - (Sta. 0+00 to Sta. 4+00)
Scale: 1" = 40'

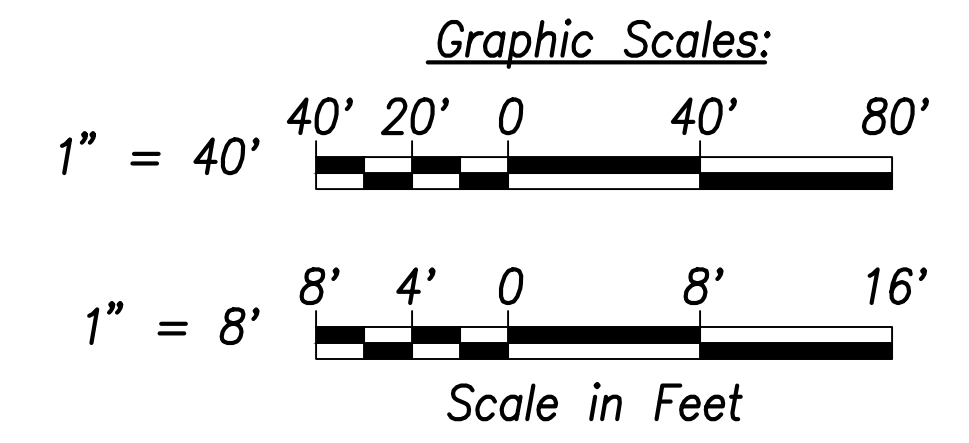


Farrington Highway Profile - (Sta. 0+00 to Sta. 4+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

- (A) Sta. (-)0+02.6, o/s 37.2' Lt. Conn. to Exist. Curb, Gutter, and Sidewalk
- (B) Sta. 0+02.4, o/s 33.9' Rt. Conn. to Exist. Curb, Gutter, and Sidewalk
- (C) Sta. 0+97.24 P.I.
- (D) 220°04'09", 29.26' (Benchmark to Sta. (-)1+00)
- (E) 221°38'02", 100.00' (Sta. (-)1+00 to Sta. 0+00)
- (F) 221°38'02", 97.24' (Sta. 0+00 to P.I.)
- (G) 219°40'42", 207.33' (P.I. to P.C.)
- (H) Sta. 0+00 Conn. to Exist. Pavement
- (I) 212°20'22", 495.95' (Curb P.C. to Curb P.T.)
- (J) 212°10'43", 496.73' (Curb P.C. to Curb P.T.)
- (K) 212°24'15", 278.55' (P.C. to P.T.)

Curve Data:	Face of Median Curve Data:
(B1)	(IB1)
$\Delta=14^\circ32'53"$	$\Delta=14^\circ05'49"$
$\Delta/2=7^\circ16'27"$	$\Delta/2=7^\circ02'54"$
$R=1100.00'$	$R=2024.00'$
$T=140.41'$	$T=250.25'$
$C=278.55'$	$C=496.73'$
$Lc=279.30'$	$Lc=497.98'$
	(OB1)
	$\Delta=14^\circ25'06"$
	$\Delta/2=7^\circ12'33"$
	$R=976.00'$
	$T=249.95'$
	$C=495.95'$
	$Lc=497.26'$

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NO. _____	

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22 Revised exist. ground; Added exist. edge of shoulder callouts

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

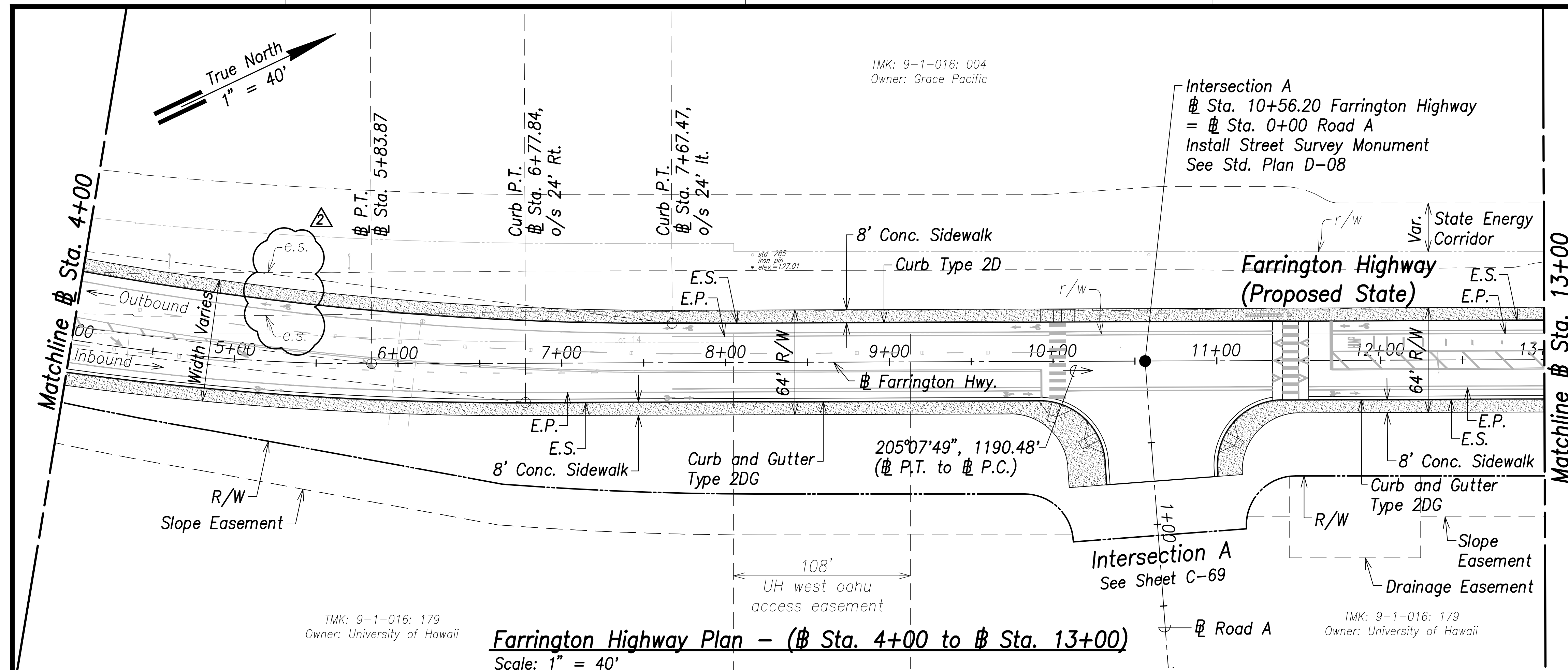
Roadway Plan and Profile
Sta. 0+00 to Sta. 4+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

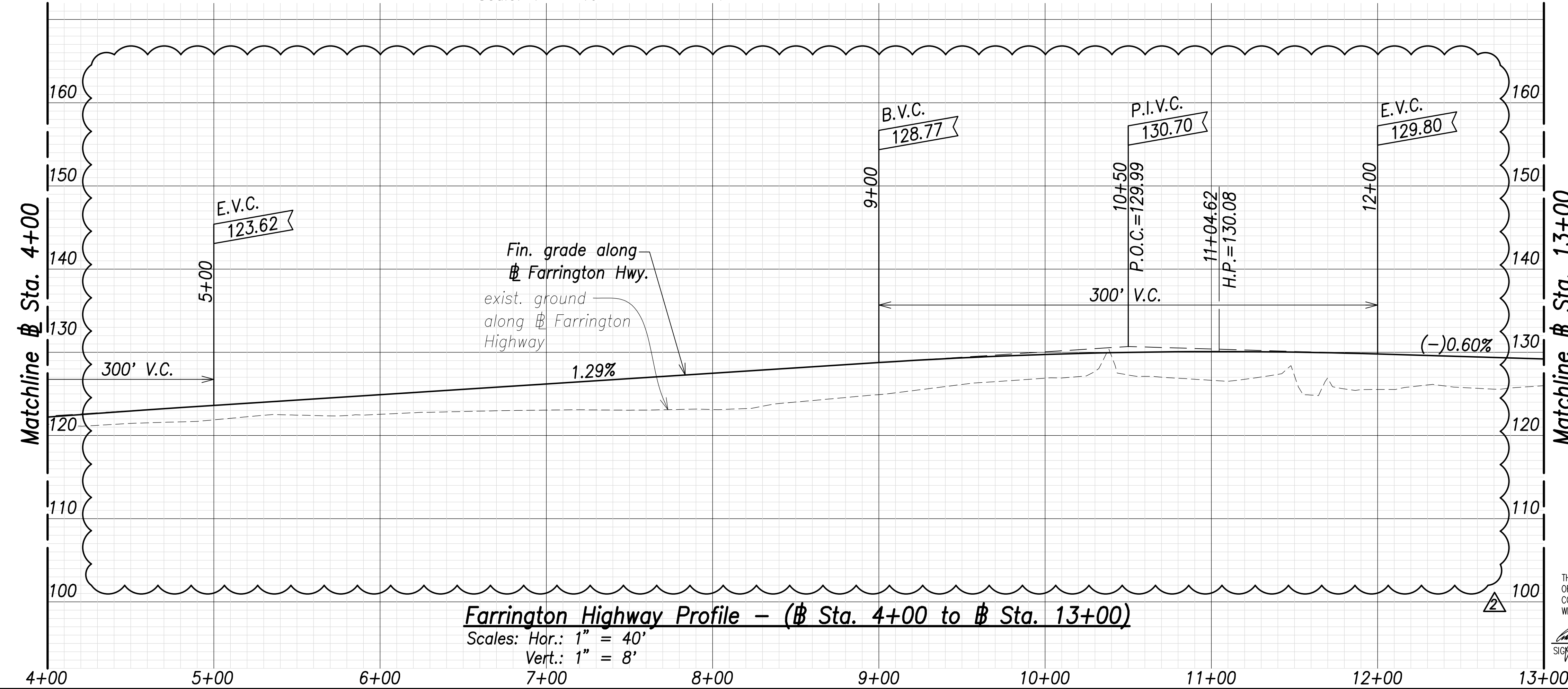
SHEET NO. C-50 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	52	767



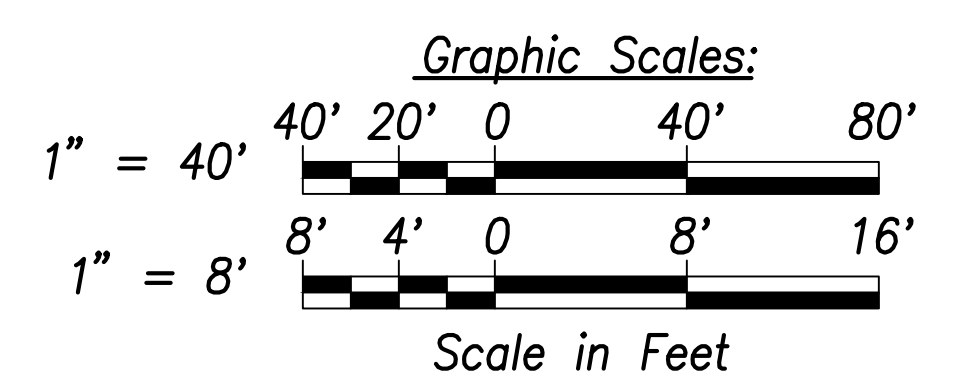
TMK: 9-1-016: 179
Owner: University of Hawaii

Farrington Highway Plan - (Sta. 4+00 to Sta. 13+00)
Scale: 1" = 40'

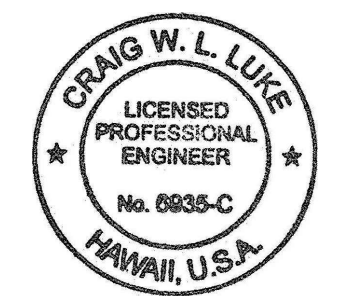


Farrington Highway Profile - (Sta. 4+00 to Sta. 13+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



DATE	BY
	SURVEY PLOTTED BY
	DRAWN BY
	TRACED BY
	CHECKED BY
	APPROVED BY
	DATE
	NO.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

DATE	REVISION
06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts

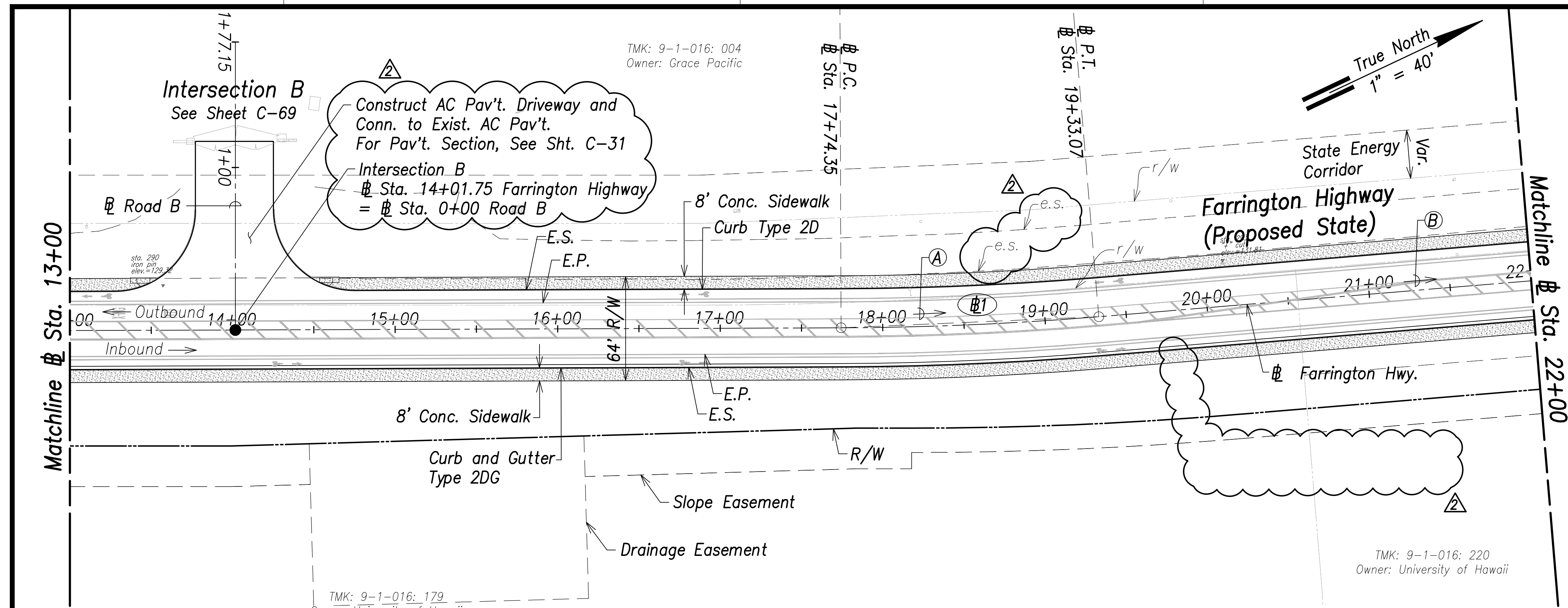
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 4+00 to Sta. 13+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

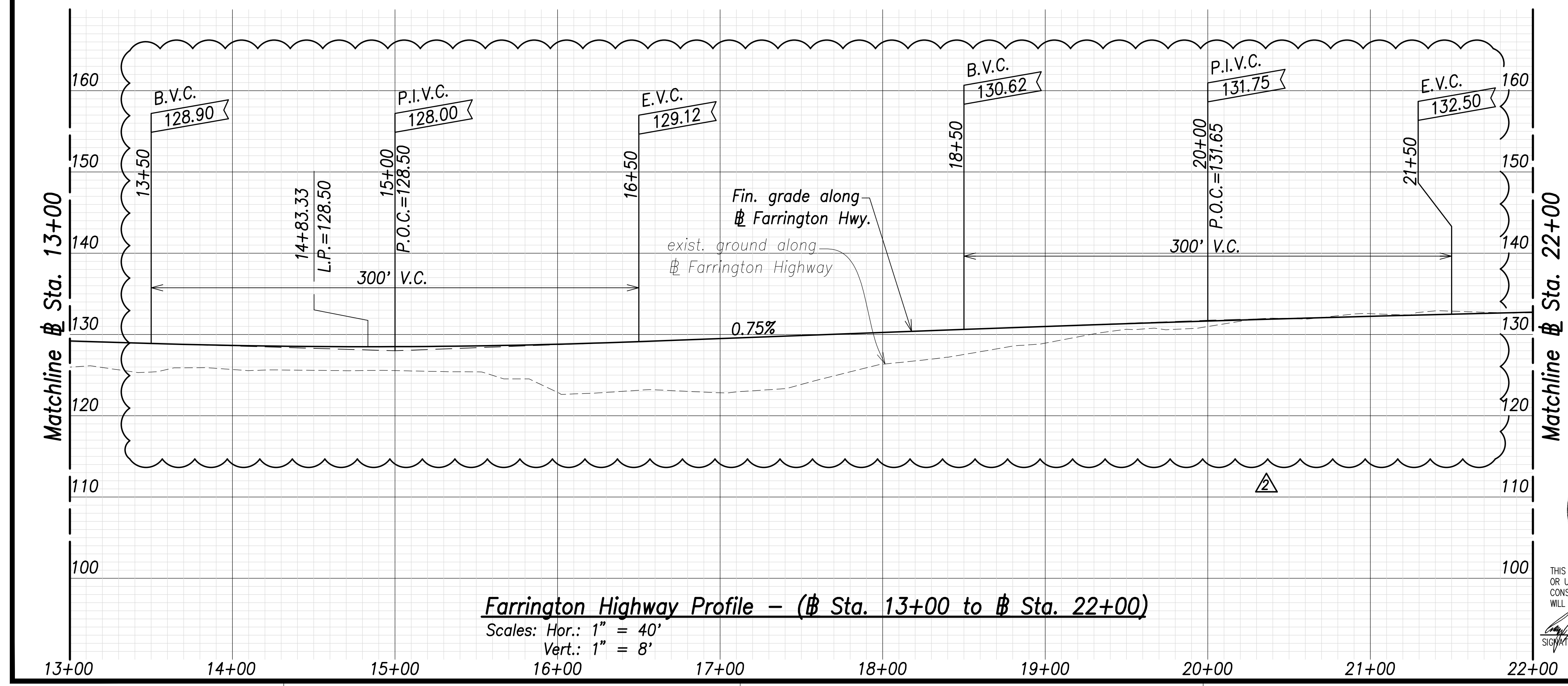
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	53	767



Farrington Highway Plan - (Sta. 13+00 to Sta. 22+00)
Scale: 1" = 40'

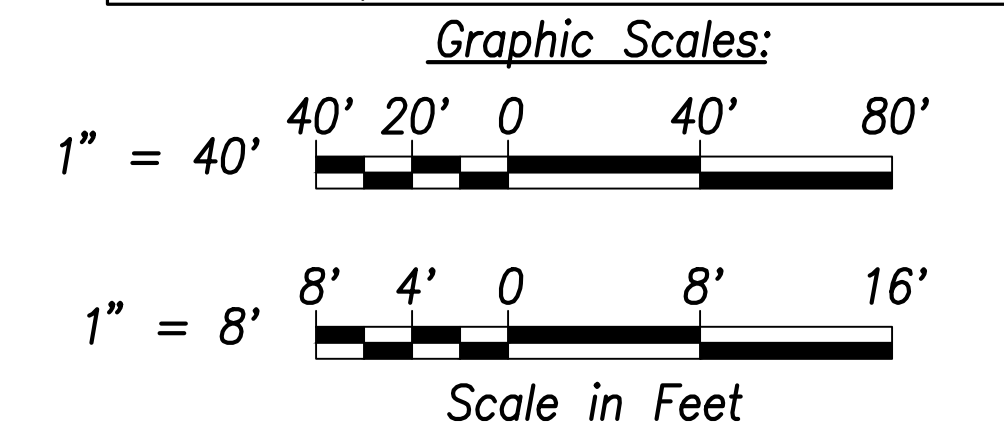
Curve Data:

- Ⓐ $202^{\circ}51'24"$, 158.67'
(P.C. to P.T.)
- Ⓑ $200^{\circ}35'00"$, 805.46'
(P.T. to P.C.)
- Ⓒ $\Delta=4^{\circ}32'49"$
 $\Delta/2=2^{\circ}16'25"$
 $R=2000.00'$
 $T=79.40'$
 $C=158.67'$
 $Lc=158.72'$

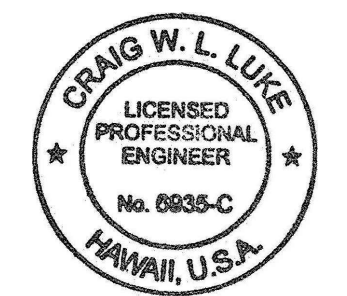


Farrington Highway Profile - (Sta. 13+00 to Sta. 22+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



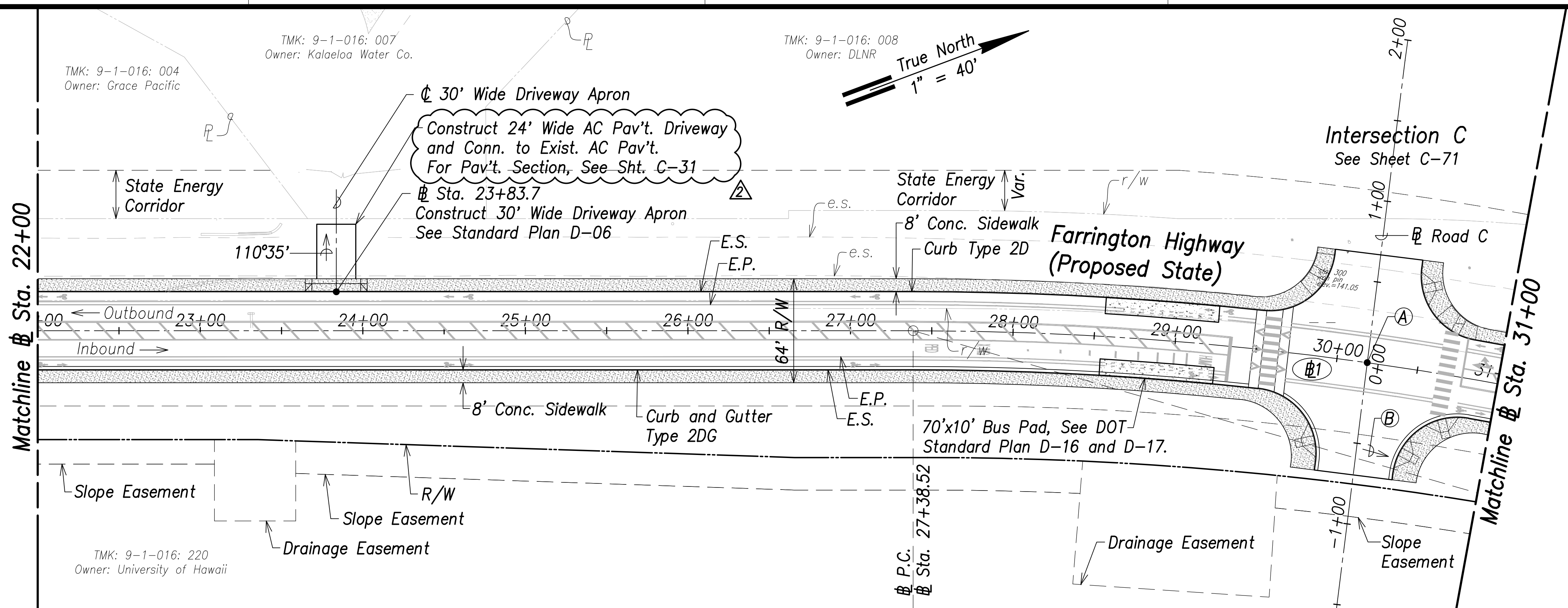
DATE	BY



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

DATE: 06/08/22	REVISION: Callout Revised, Removed Bus Pad; Revised exist. ground; Added exist. edge of shoulder callouts
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Roadway Plan and Profile Sta. 13+00 to Sta. 22+00	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	54	767



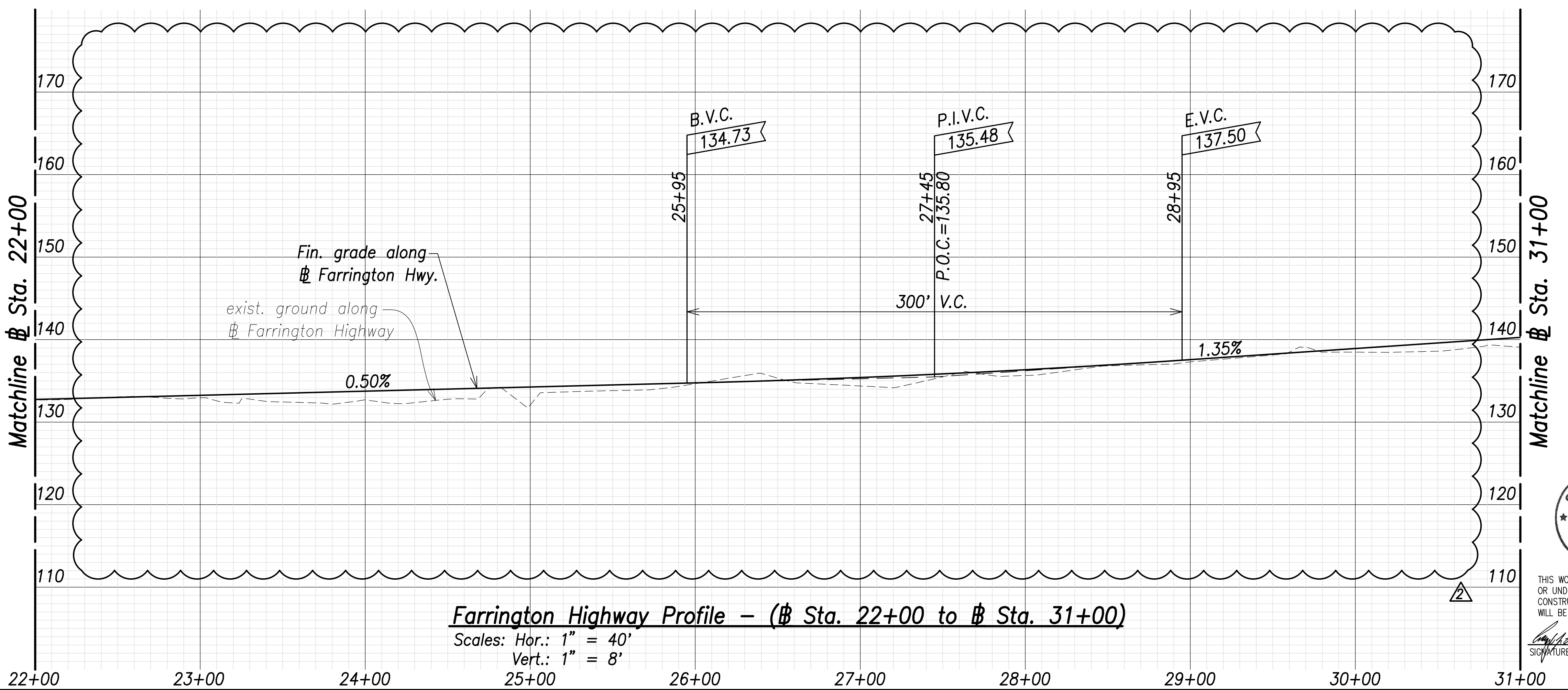
Farrington Highway Plan - (# Sta. 22+00 to # Sta. 31+00)
Scale: 1" = 40'

Ⓐ Intersection C
Sta. 30+18.81 Farrington Highway
= # Sta. 0+00 Road C
Install Street Survey Monument
See Std. Plan D-08

Ⓑ 216°37'51", 1105.73'
(# P.C. to # P.T.)

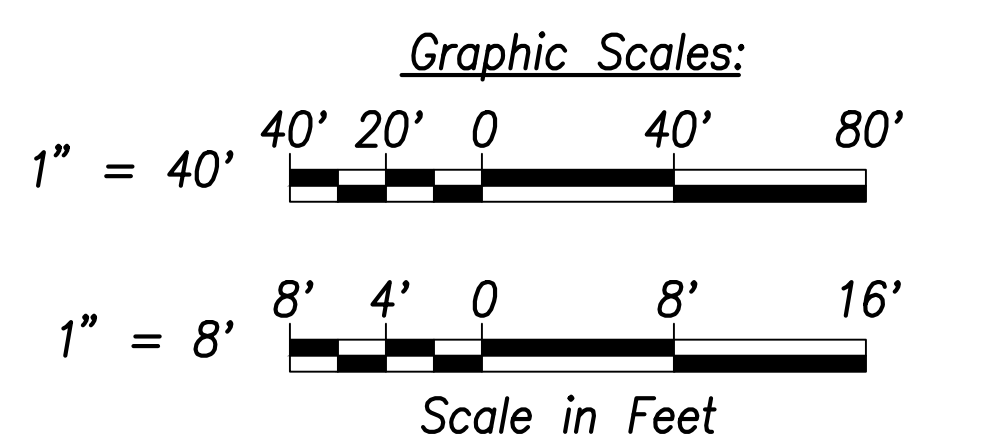
Ⓒ Curve Data:

Ⓒ1
Δ=32°05'42"
Δ/2=16°02'51"
R=2000.00'
T=575.28'
C=1105.73'
Lc=1120.32'

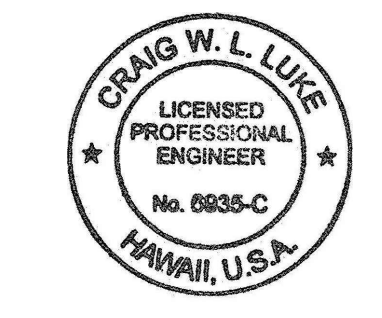


Farrington Highway Profile - (# Sta. 22+00 to # Sta. 31+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Callout Revised; Revised exist. ground
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 22+00 to # Sta. 31+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

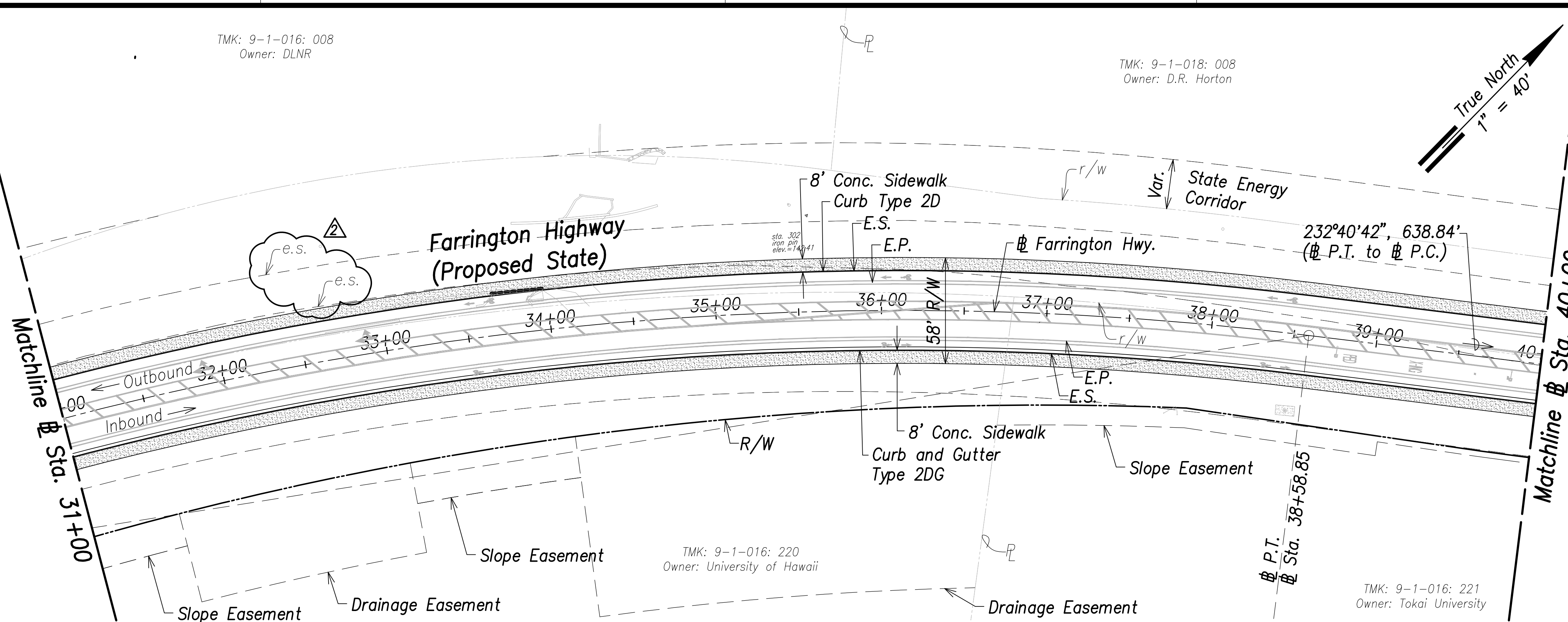
Scale: As Shown Date: April 2022

SHEET NO. C-53 OF 767 SHEETS

TMK: 9-1-016: 008
Owner: DLNR

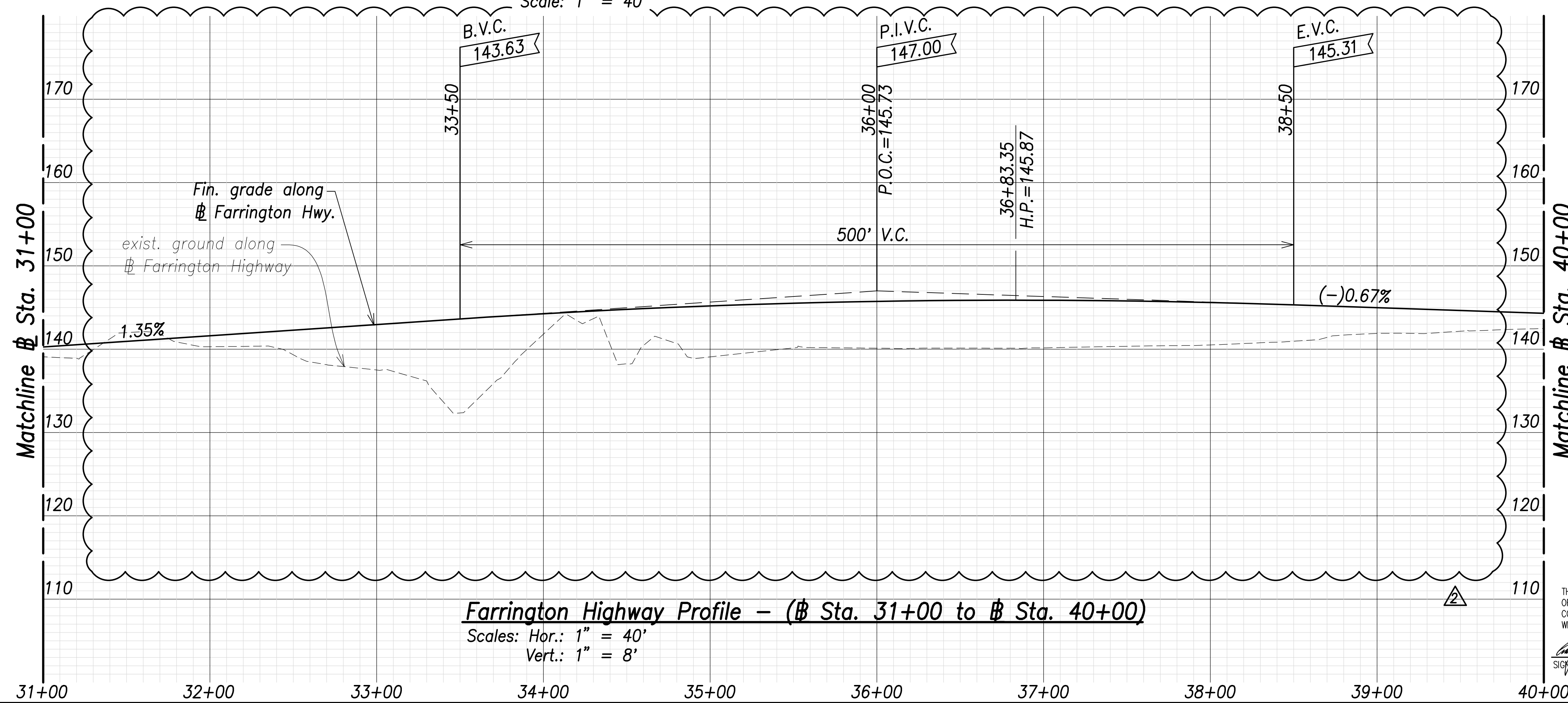
TMK: 9-1-018: 008
Owner: D.R. Horton

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	55	767



Farrington Highway Plan - (Sta. 31+00 to Sta. 40+00)

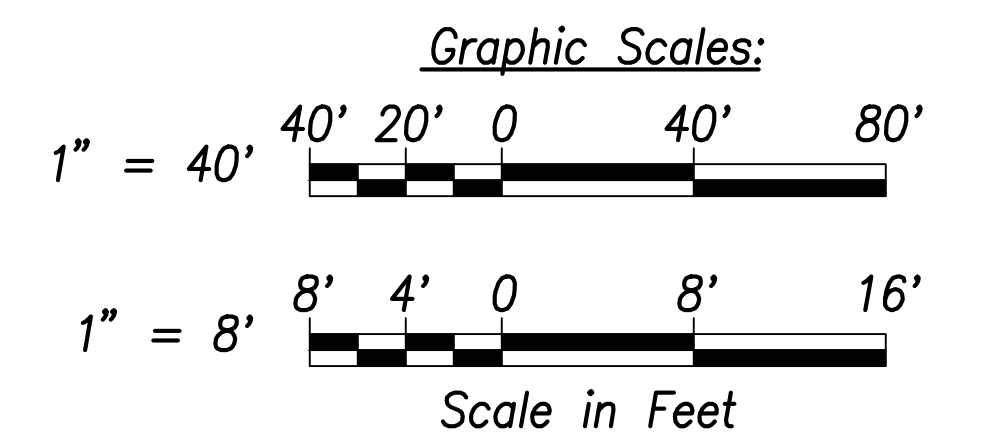
Scale: 1" = 40'



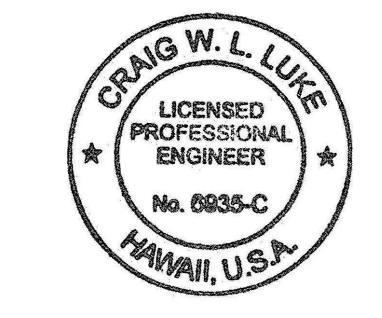
Farrington Highway Profile - (Sta. 31+00 to Sta. 40+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *[Signature]* April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 31+00 to Sta. 40+00

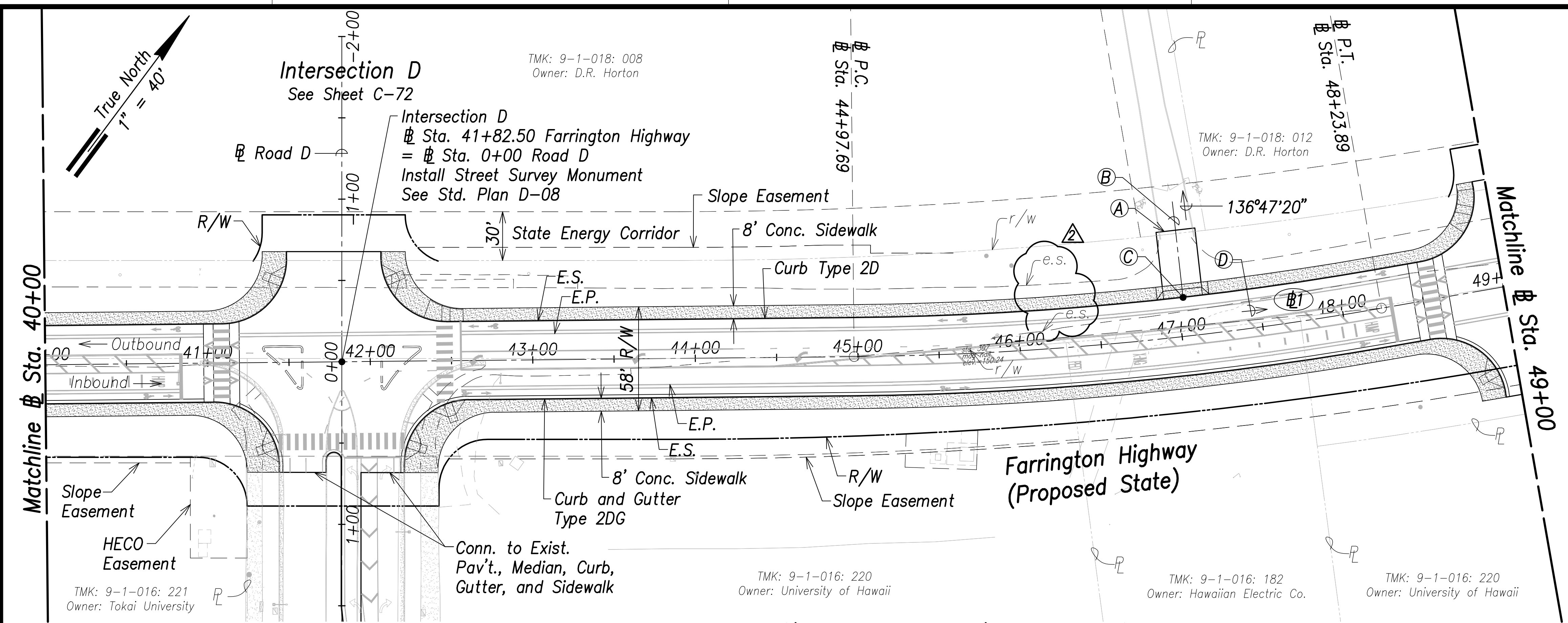
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SURVEY PLOTTED BY:	DATE:
DRAWN BY:	
TRACED BY:	
QUANTIFIED BY:	
CHECKED BY:	
ORIGINAL PLAN BOOK No.:	

FILE: \\NMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-54 Roadway Plan - Sta. 31+00 to 40+00 - PLAN.dwg saved June 7, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	56	767



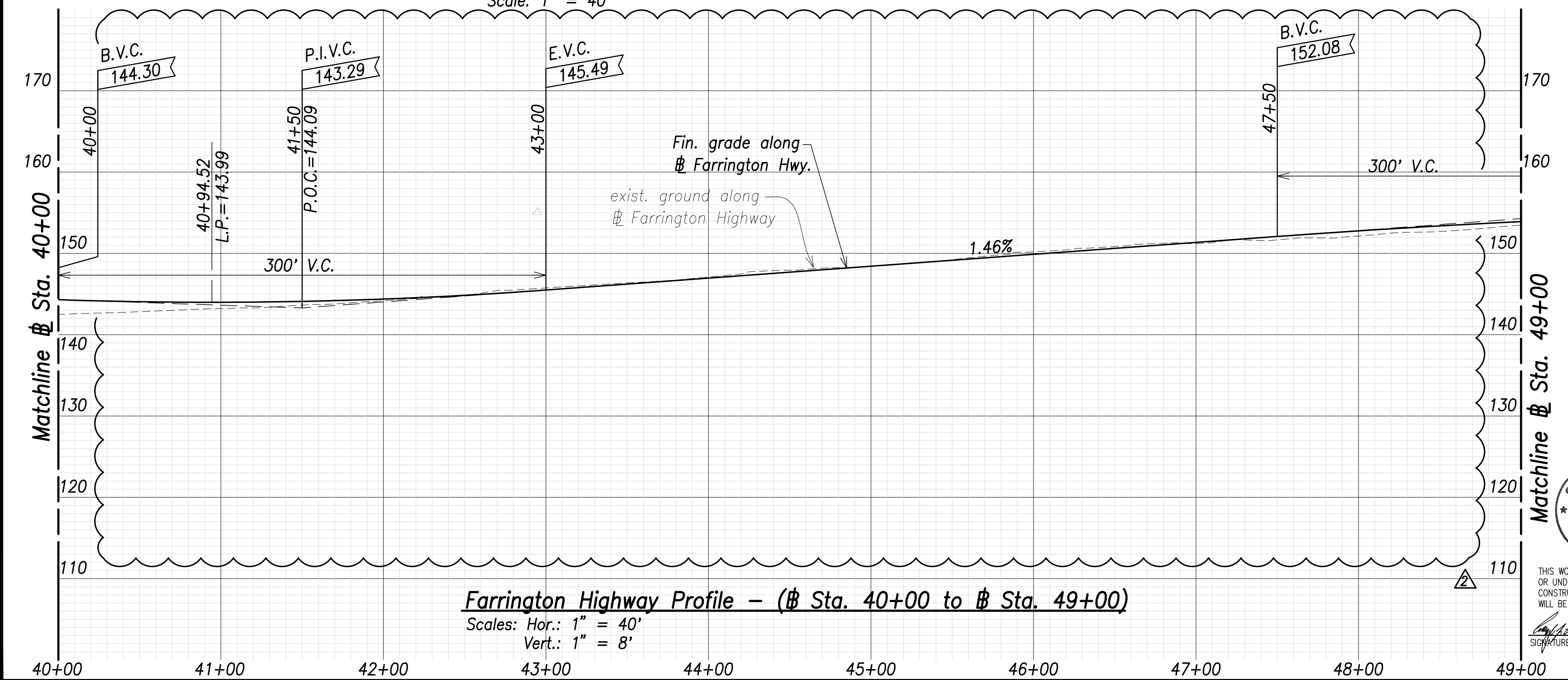
△ A
Construct 24' Wide AC Pav't. Driveway and Conn. to Exist. AC Pav't. For Pav't. Section, See Sht. C-31

- △ B
30' Wide Driveway Apron
- △ C
Sta. 47+03.3
Construct 24' Wide Driveway Apron
See Standard Plan D-06
- △ D
228°00'21", 325.84'
(P.C. to P.T.)

Curve Data:

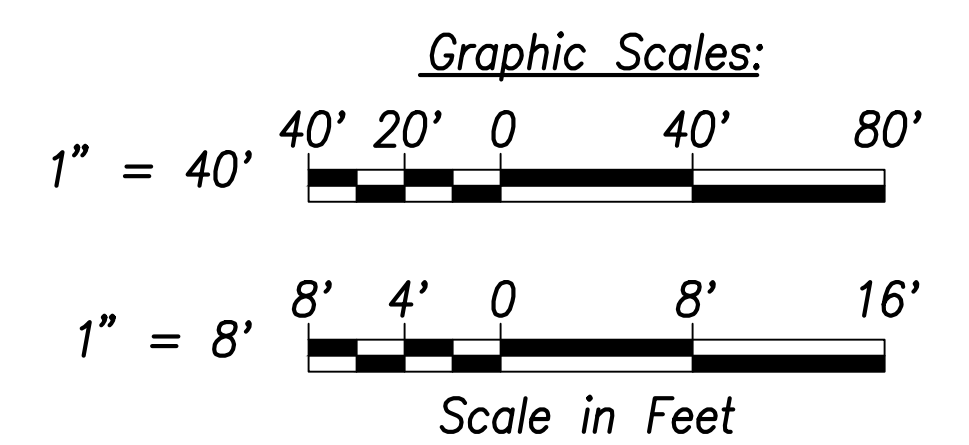
△ 1
 $\Delta = 9^\circ 20' 42''$
 $\Delta/2 = 4^\circ 40' 21''$
 $R = 2000.00'$
 $T = 163.46'$
 $C = 325.84'$
 $L_c = 326.20'$

Farrington Highway Plan - (Sta. 40+00 to Sta. 49+00)
Scale: 1" = 40'

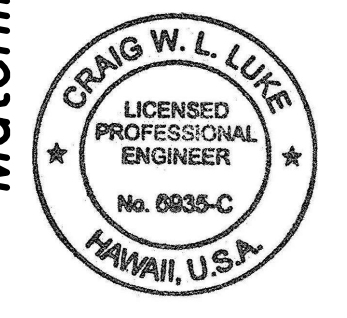


Farrington Highway Profile - (Sta. 40+00 to Sta. 49+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



DATE	REVISION
06/08/22	Callout Revised; Revised exist. ground; Added exist. edge of shoulder callout



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. L. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Roadway Plan and Profile
 Sta. 40+00 to Sta. 49+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-55 OF 767 SHEETS

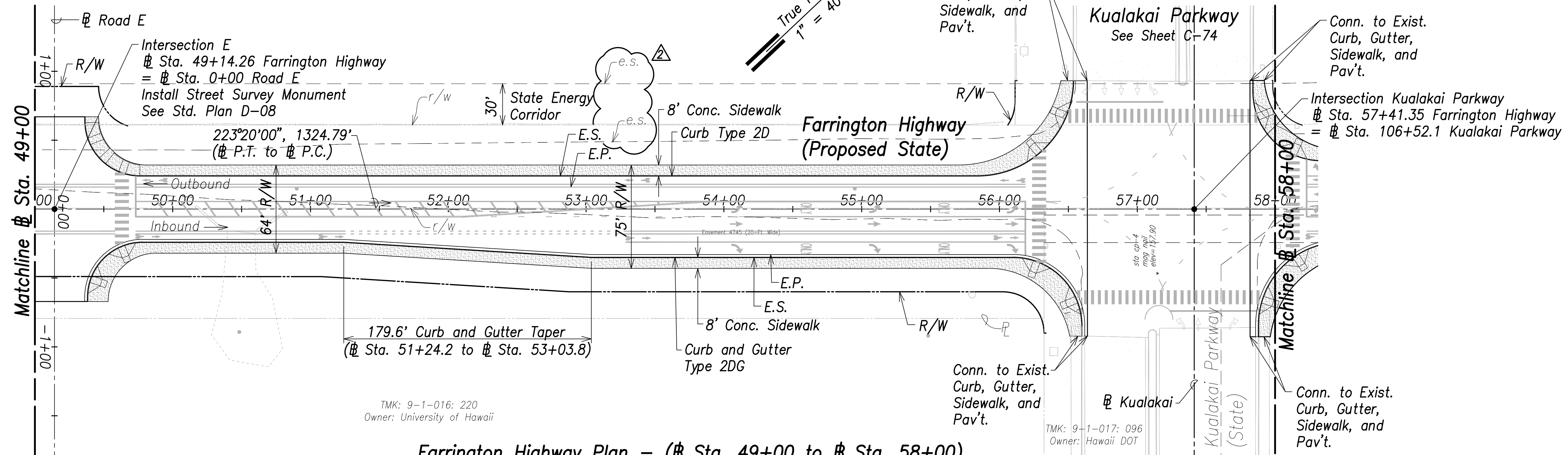
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

Intersection E
See Sheet C-73

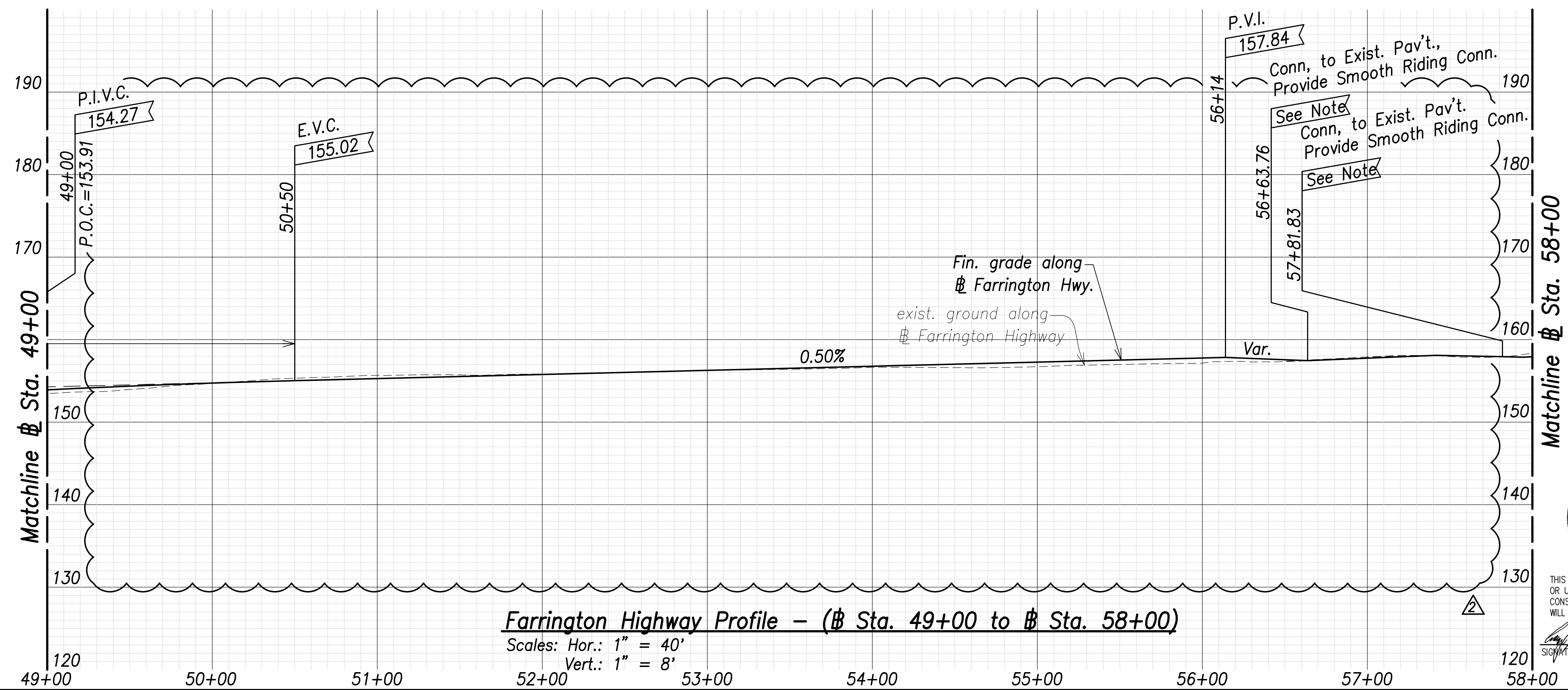
TMK: 9-1-018: 012
Owner: D.R. Horton

TMK: 9-1-018: 013
Owner: D.R. Horton

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	57	767

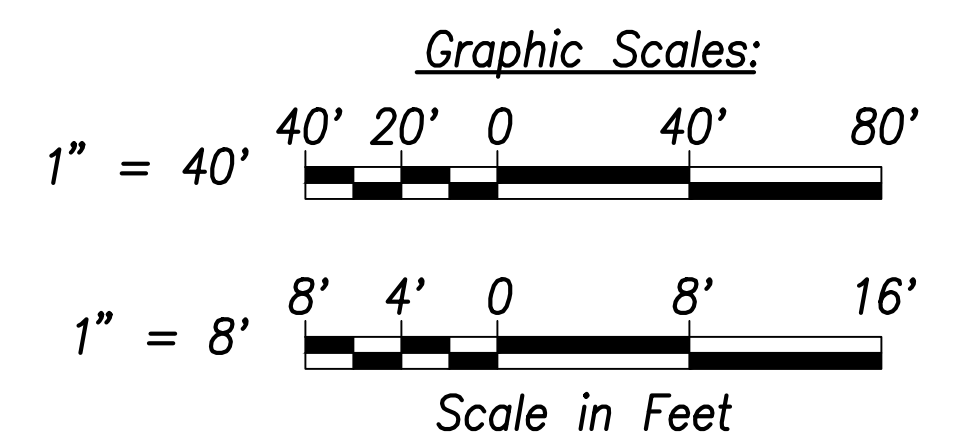


Farrington Highway Plan - (# Sta. 49+00 to # Sta. 58+00)
Scale: 1" = 40'

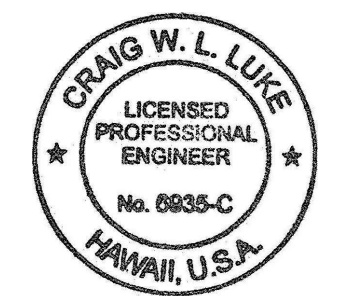


Farrington Highway Profile - (# Sta. 49+00 to # Sta. 58+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



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



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SIGNATURE: *Craig W. L. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION

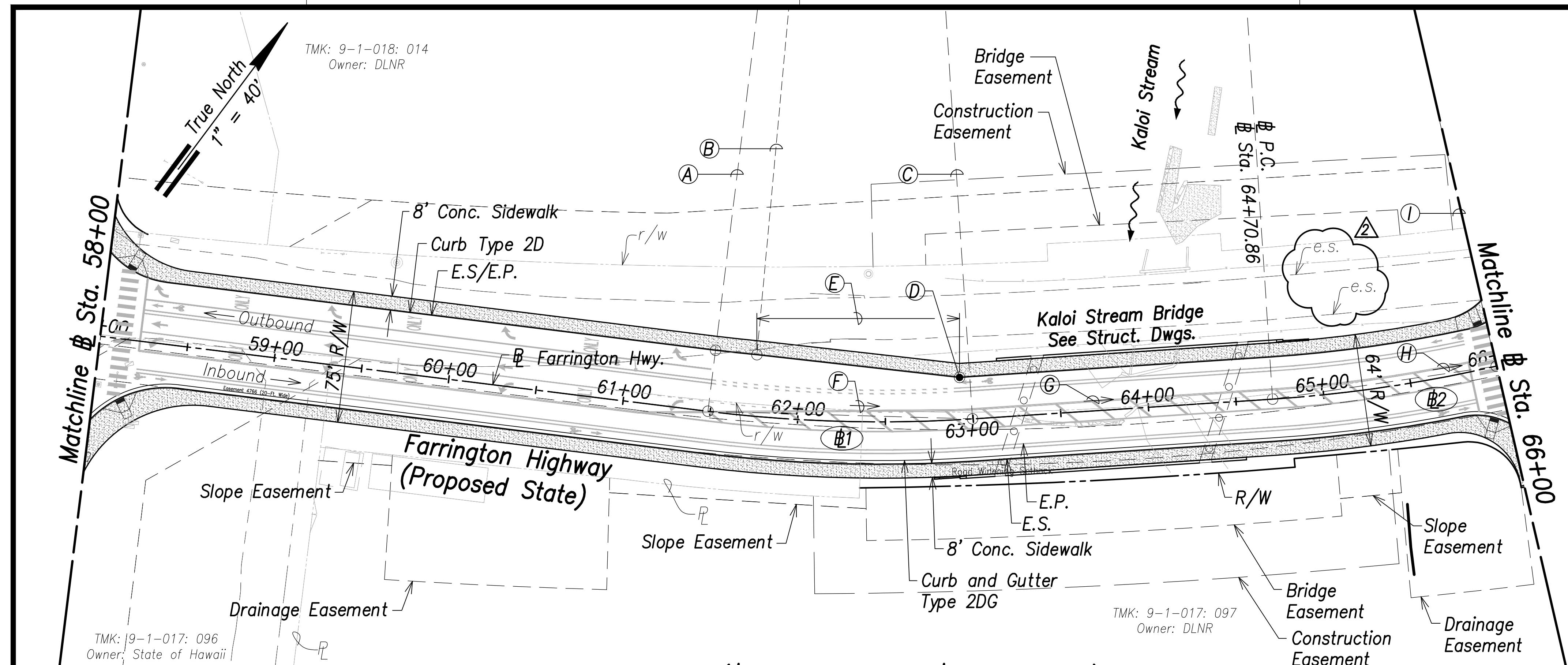
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 49+00 to # Sta. 58+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	58	767



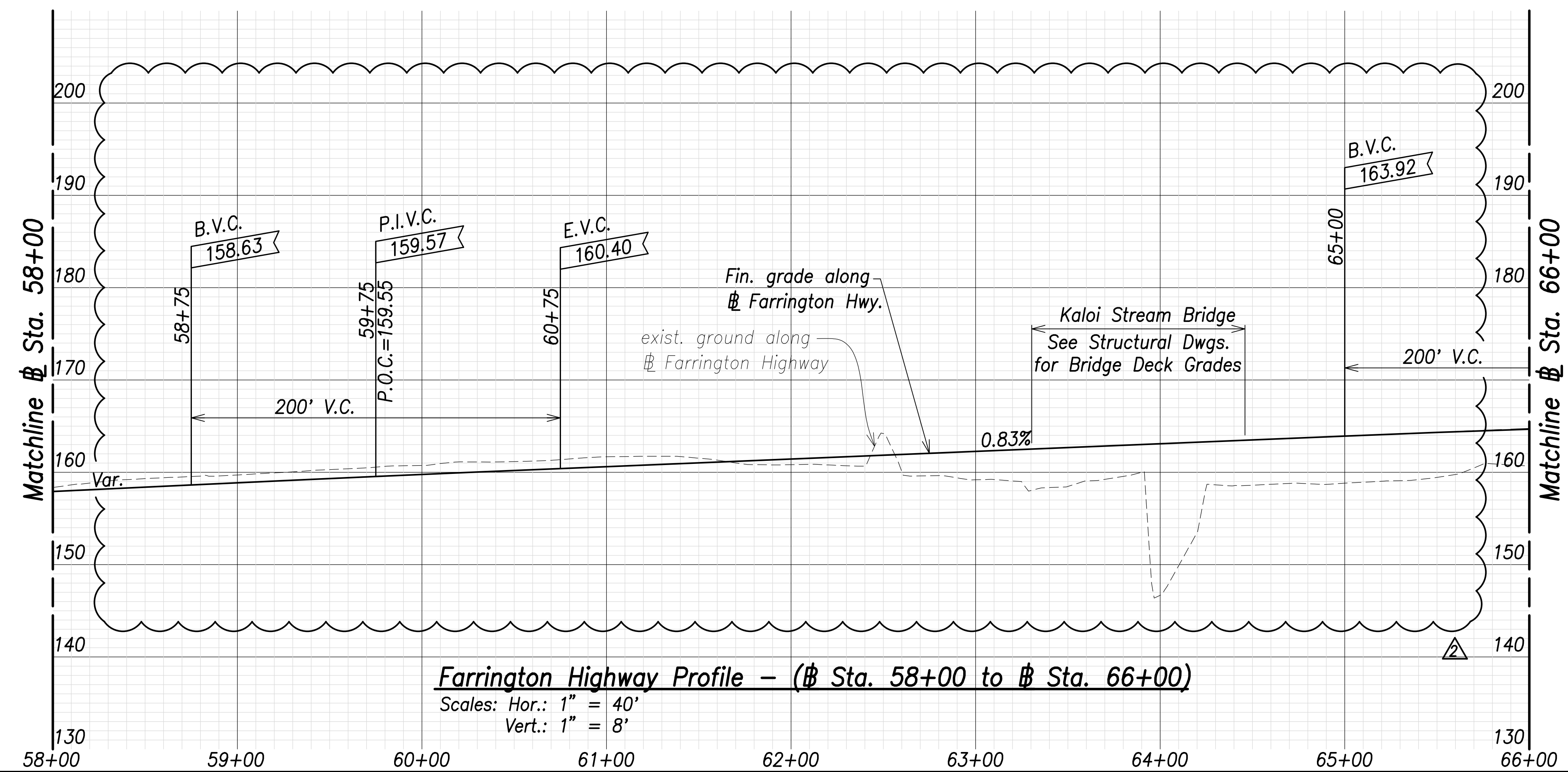
Farrington Highway Plan - (# Sta. 58+00 to # Sta. 66+00)
Scale: 1" = 40'

- (A) P.C.
Sta. 61+48.68
- (B) Curb P.T.
Sta. 61+73.50, o/s 35' Lt.
- (C) P.T.
Sta. 62+99.63
- (D) Curb P.I.
Sta. 62+93.64, o/s 24' Lt.
- (E) 115.4' Curb and Gutter Taper
(# Sta. 61+73.5 to # Sta. 62+93.6)
- (F) 217°55'41", 150.72'
(# P.C. to # P.T.)
- (G) 212°31'21", 171.23'
(# P.T. to # P.C.)
- (H) 207°54'38", 128.65'
(# P.C. to # P.T.)
- (I) P.T.
Sta. 65+99.65

Curve Data:

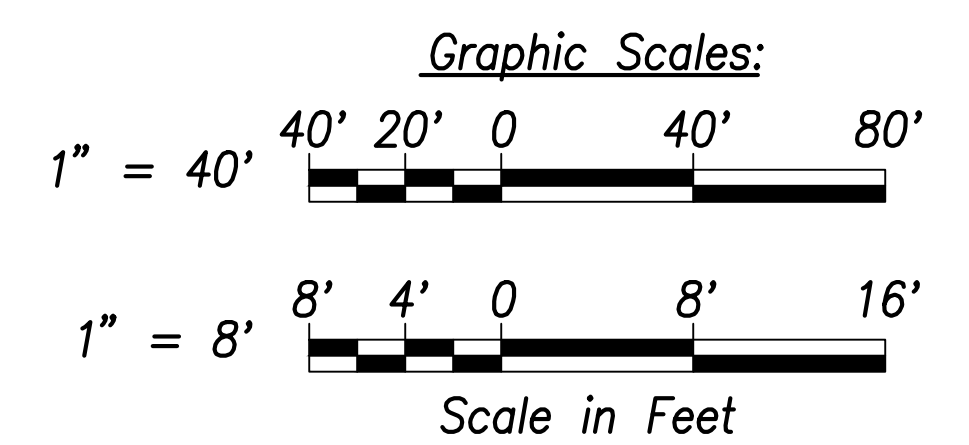
(#1)
 $\Delta = 10^\circ 48' 39''$
 $\Delta/2 = 5^\circ 24' 20''$
 $R = 800.00'$
 $T = 75.70'$
 $C = 150.72'$
 $Lc = 150.95'$

(#2)
 $\Delta = 9^\circ 13' 27''$
 $\Delta/2 = 4^\circ 36' 44''$
 $R = 800.00'$
 $T = 64.54'$
 $C = 128.65'$
 $Lc = 128.79'$



Farrington Highway Profile - (# Sta. 58+00 to # Sta. 66+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



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

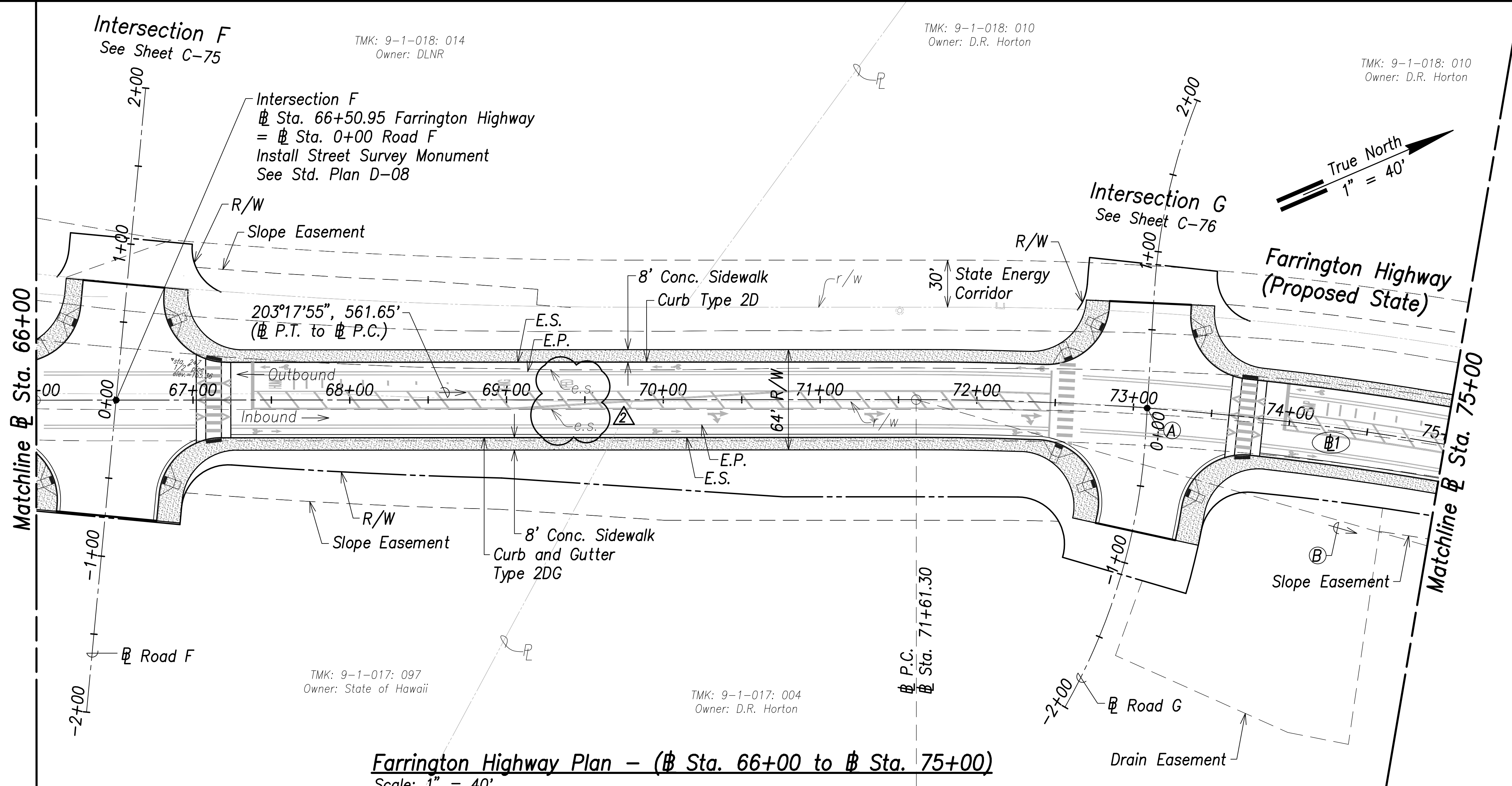
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

DATE	06/08/22
REVISION	Callout Revised; Revised exist. ground; Added exist. edge of shoulder callouts

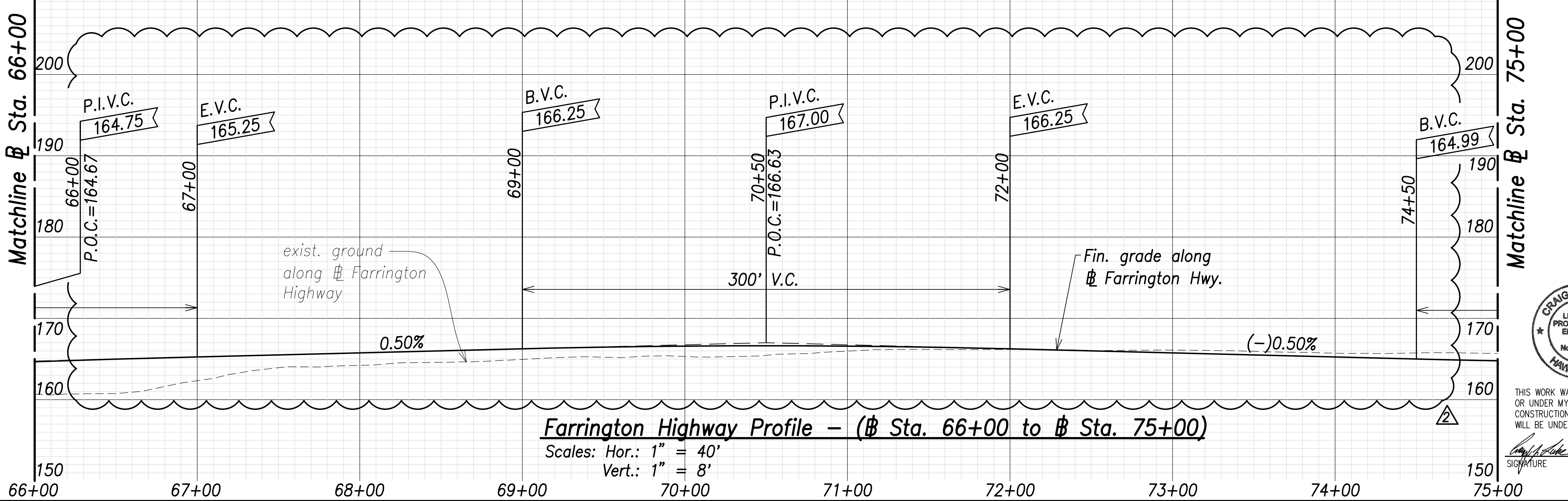
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Roadway Plan and Profile
Sta. 58+00 to # Sta. 66+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20
 Scale: As Shown Date: April 2022

SHEET No. C-57 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	59	767



Farrington Highway Plan - (# Sta. 66+00 to # Sta. 75+00)
Scale: 1" = 40'



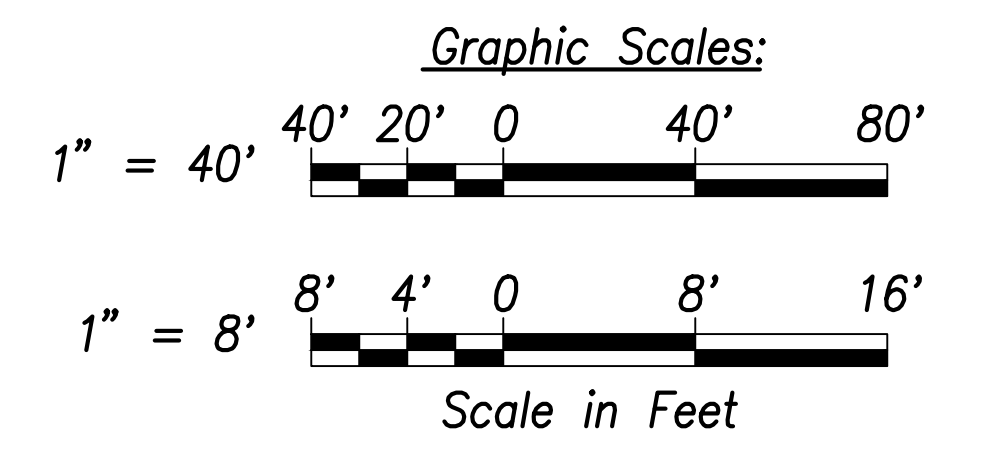
Farrington Highway Profile - (# Sta. 66+00 to # Sta. 75+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

- Ⓐ Intersection G
Sta. 73+08.82 Farrington Highway
= # Sta. 0+00 Road G
Install Street Survey Monument
See Std. Plan D-08
- Ⓑ 219°18'16", 1102.94'
(# P.C. to # P.T.)

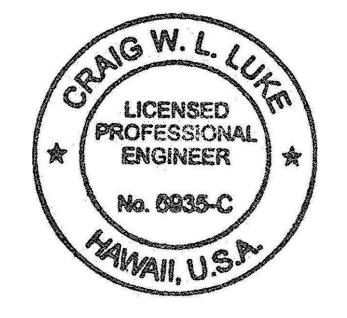
Ⓒ Curve Data:

- Ⓒ1
Δ=32°00'41"
Δ/2=16°00'21"
R=2000.00'
T=573.71'
C=1102.94'
Lc=1171.41'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 66+00 to # Sta. 75+00

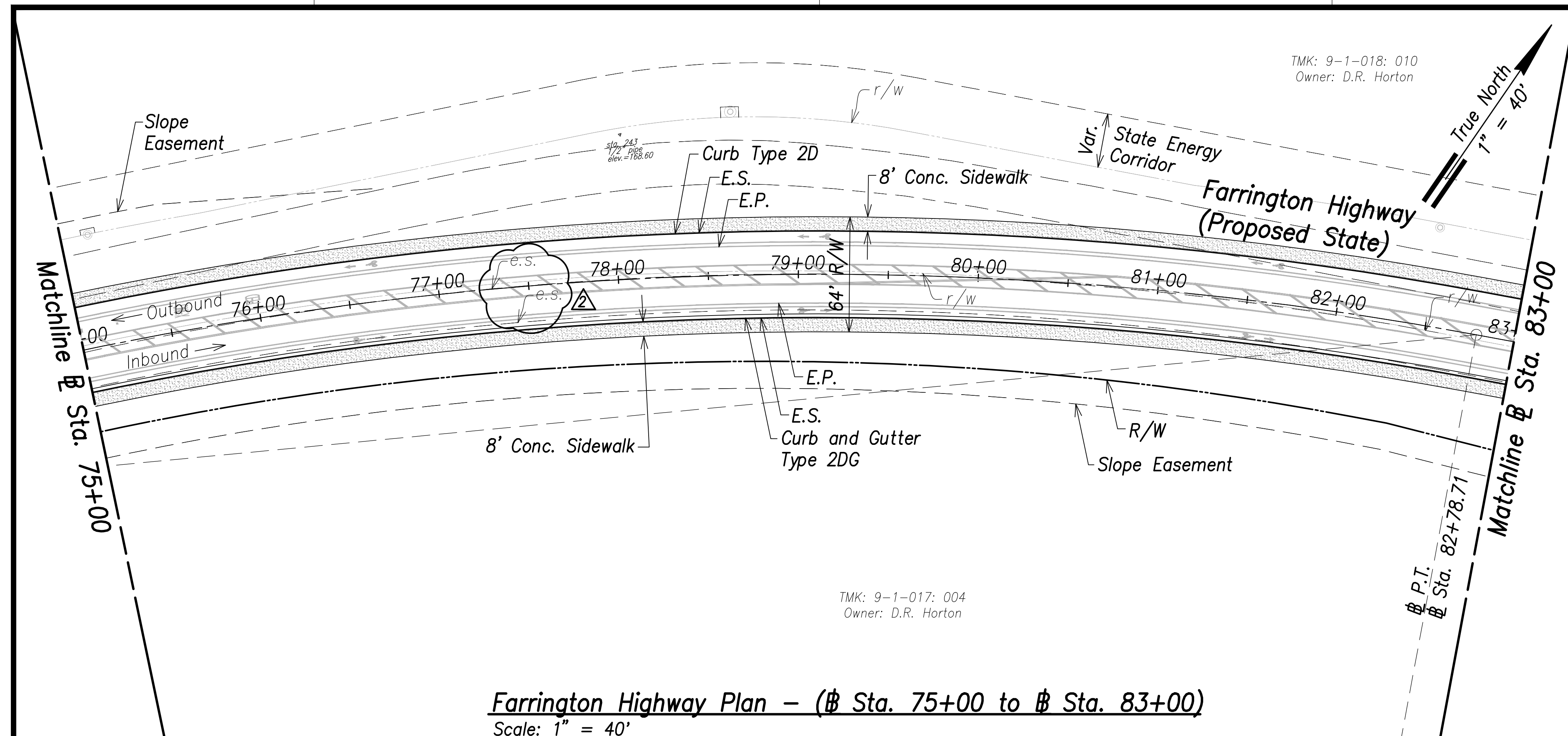
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

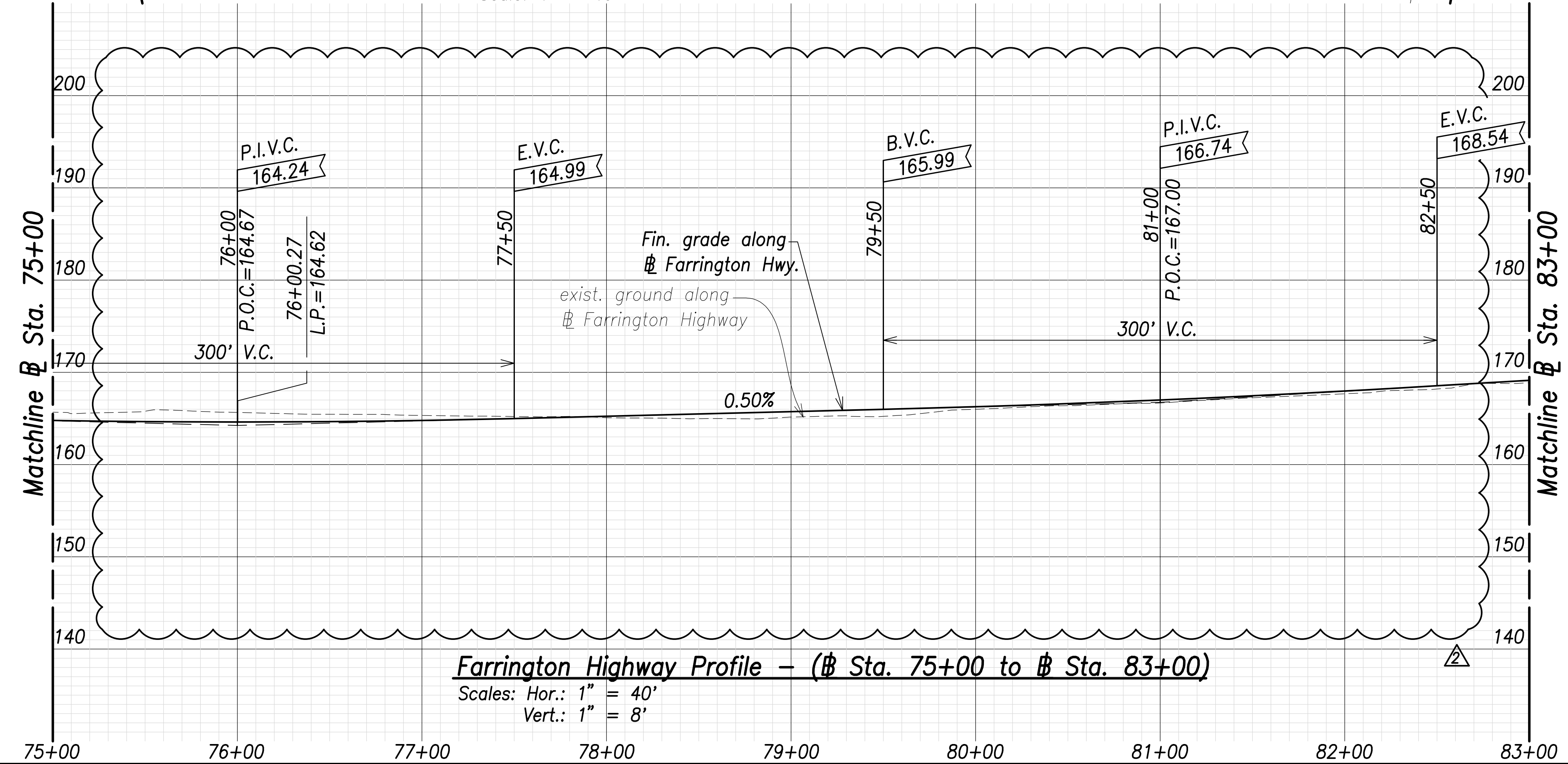
SHEET NO. C-58 OF 767 SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	60	767

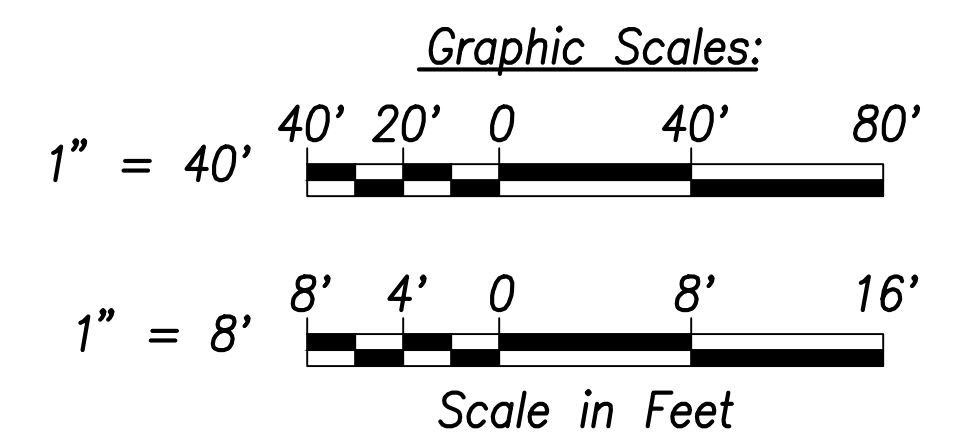


Farrington Highway Plan - (Sta. 75+00 to Sta. 83+00)
Scale: 1" = 40'

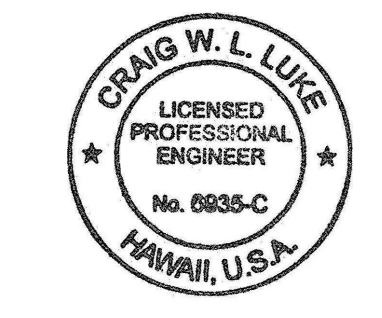


Farrington Highway Profile - (Sta. 75+00 to Sta. 83+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 75+00 to Sta. 83+00

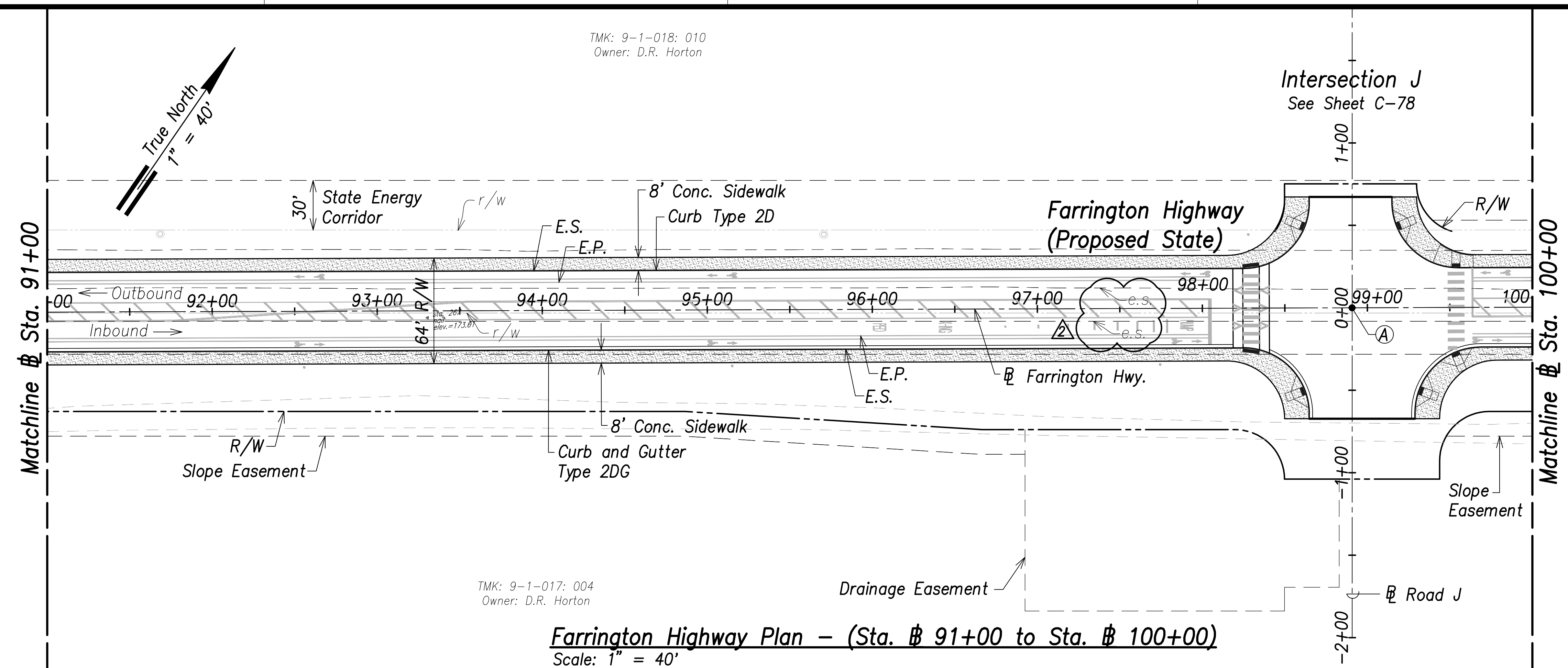
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

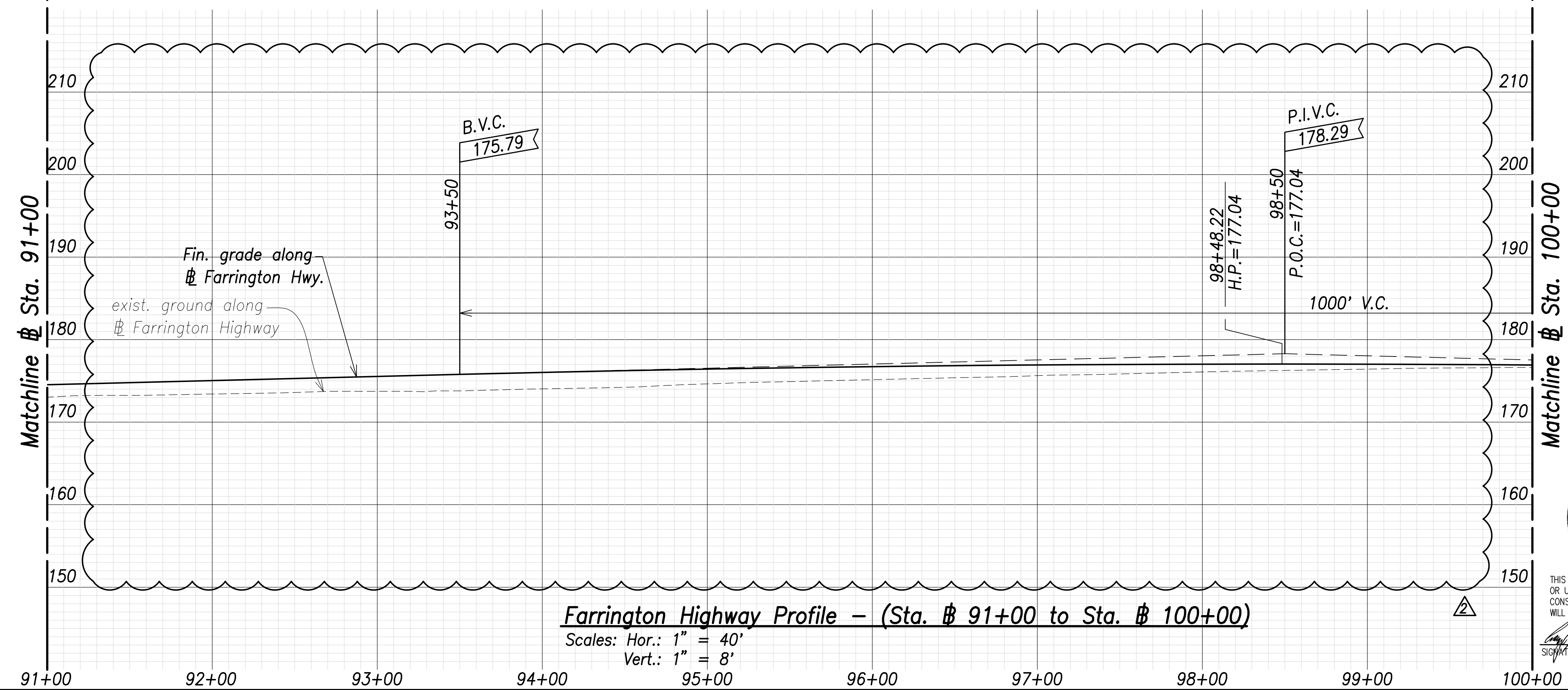
SHEET NO. C-59 OF 767 SHEETS

TMK: 9-1-018: 010
Owner: D.R. Horton

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	62	767



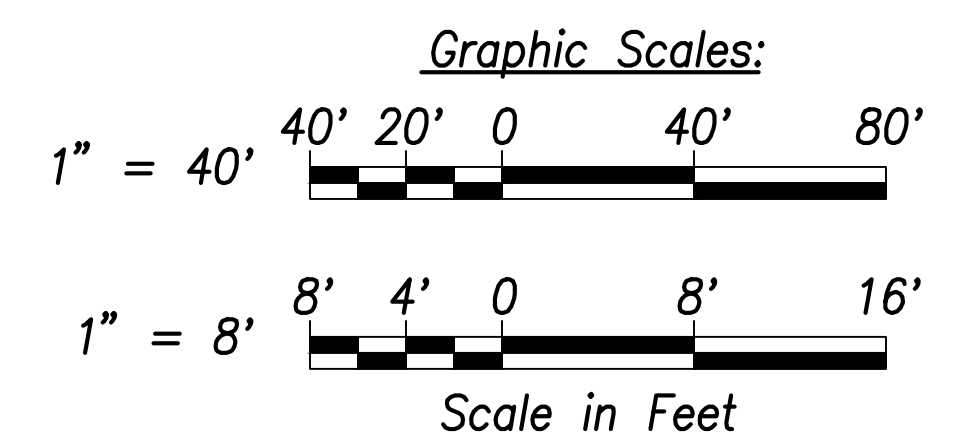
Farrington Highway Plan - (Sta. # 91+00 to Sta. # 100+00)
Scale: 1" = 40'



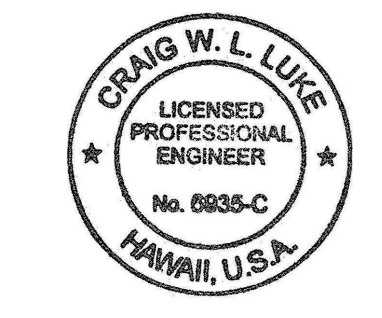
Farrington Highway Profile - (Sta. # 91+00 to Sta. # 100+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

(A)
Intersection J
Sta. 98+90.76 Farrington Highway
= # Sta. 0+00 Road J
Install Street Survey Monument
See Std. Plan D-08

Note:
The Contractor Shall Phase Construction to Ensure 1 Lane in Each Direction Remains Operational



06/08/22	Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke*
EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 91+00 to # Sta. 100+00

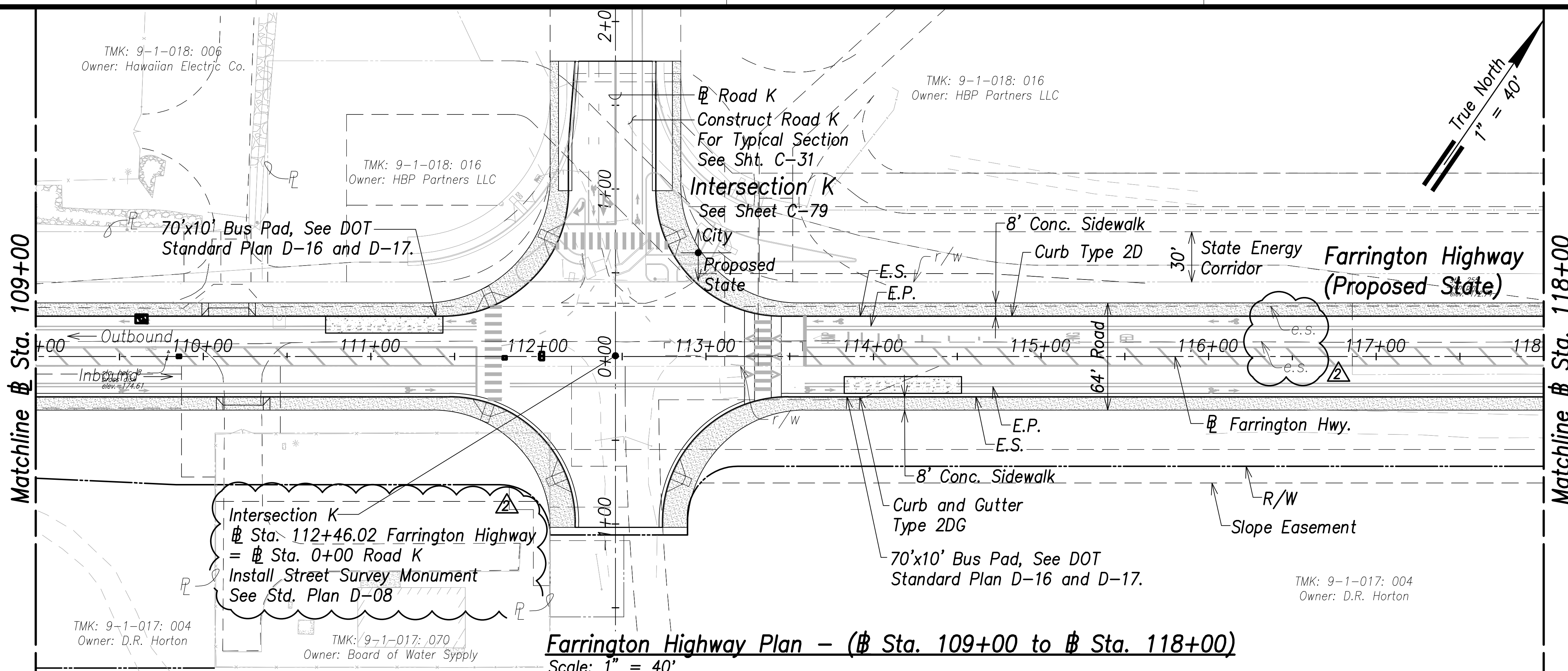
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

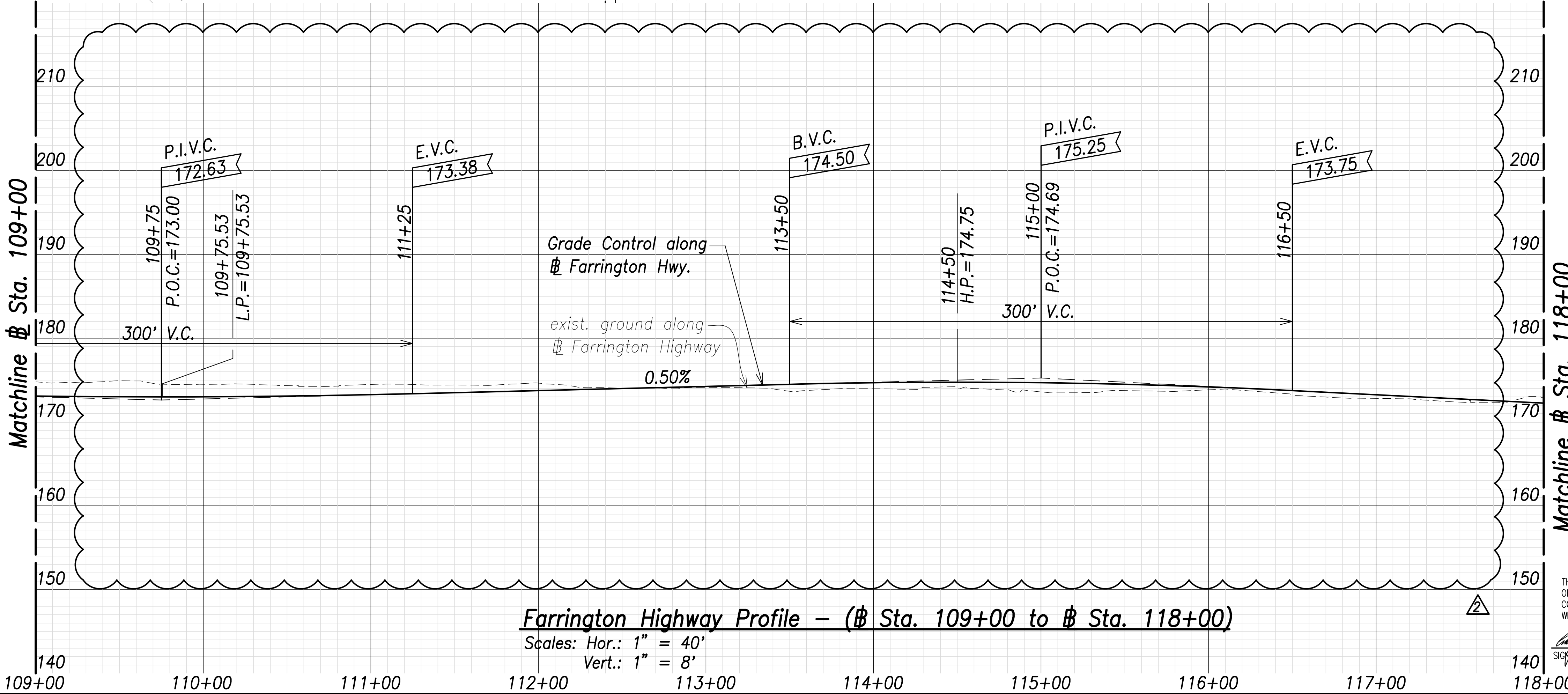
SHEET No. C-61 OF 767 SHEETS

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	64	767

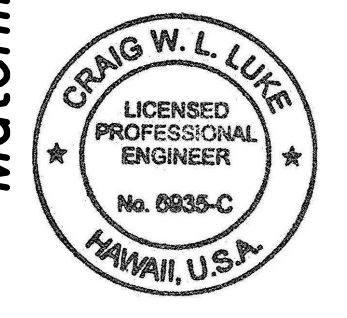
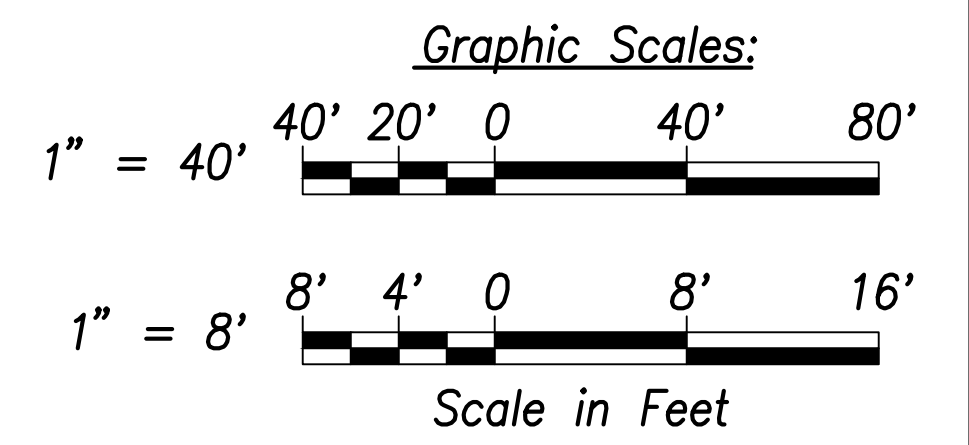


Farrington Highway Plan - (Sta. 109+00 to Sta. 118+00)
Scale: 1" = 40'



Farrington Highway Profile - (Sta. 109+00 to Sta. 118+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
NOTED BY	_____
QUANTIFIED BY	_____
CHECKED BY	_____
No.	_____

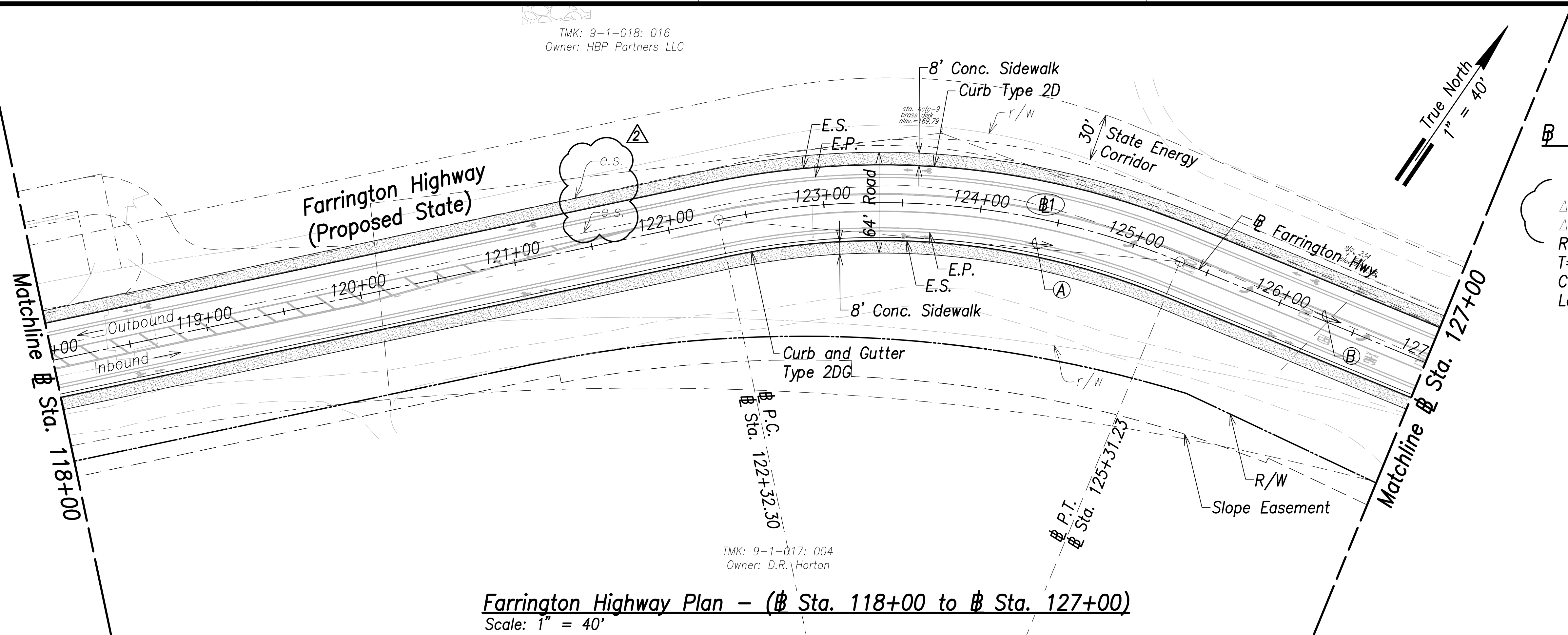


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

DATE	06/08/22	REVISION	Street Survey Monument Added; Revised exist. ground
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Roadway Plan and Profile Sta. 109+00 to Sta. 118+00 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20 Scale: As Shown Date: April 2022			

TMK: 9-1-018: 016
Owner: HBP Partners LLC

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	65	767

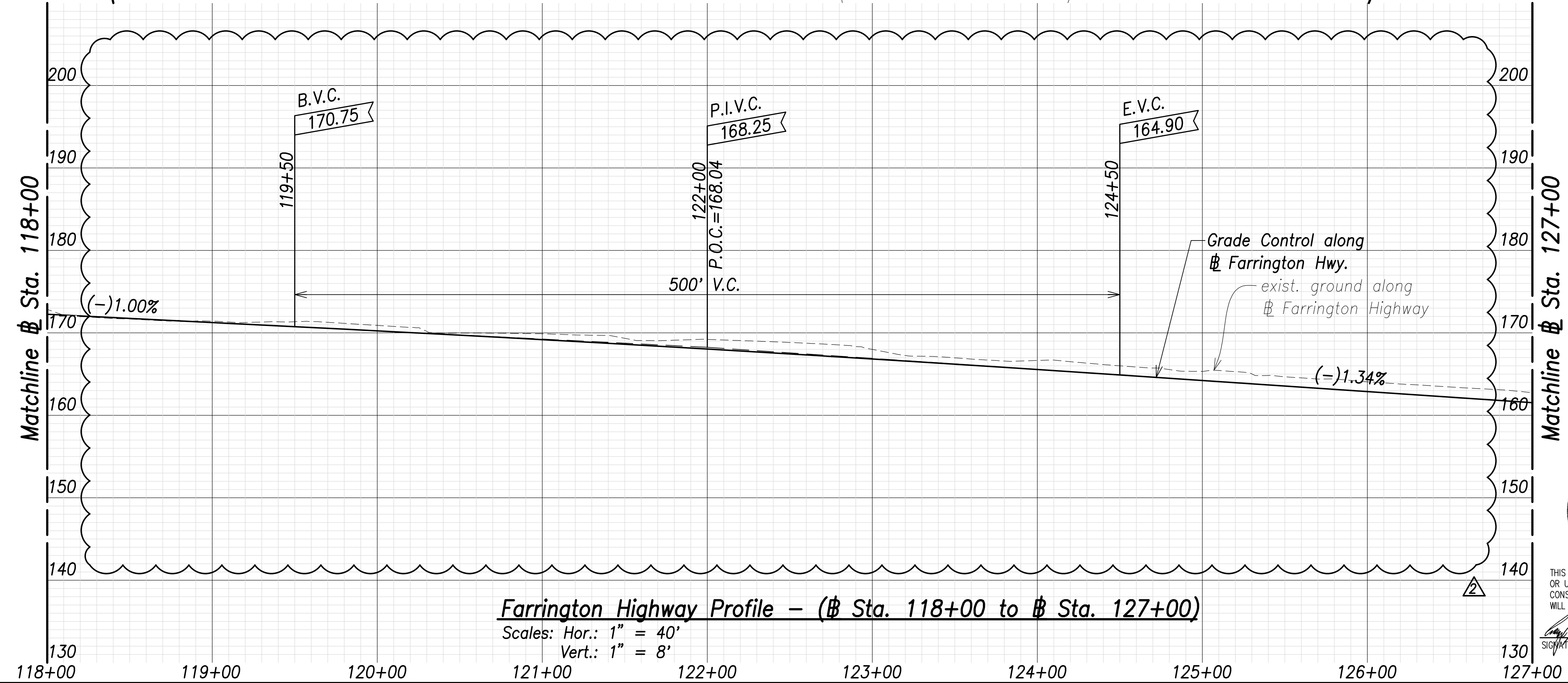


Curve Data:

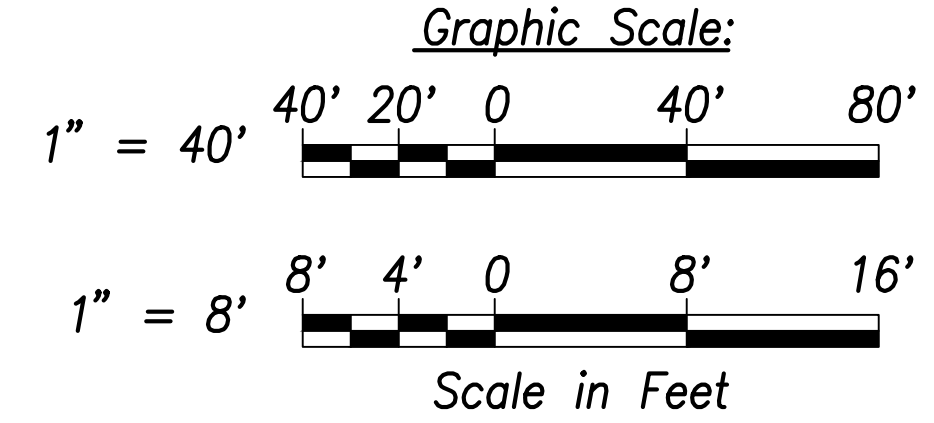
$\Delta = 34^\circ 15' 18''$ $\Delta/2 = 17^\circ 07' 39''$ $R = 500.00'$ $T = 154.08'$ $C = 294.50'$ $L_c = 298.93'$	<p>Ⓐ</p> <p>250°29'39", 294.50' (P.C. to P.T.)</p> <p>Ⓑ</p> <p>267°37'18", 635.53' (P.T. to P.C.)</p>
--	---

TMK: 9-1-017: 004
Owner: D.R. Horton

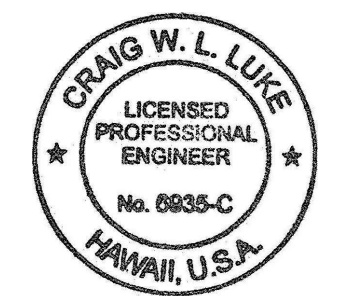
Farrington Highway Plan - (Sta. 118+00 to Sta. 127+00)
Scale: 1" = 40'



Farrington Highway Profile - (Sta. 118+00 to Sta. 127+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



DATE	BY
	SURVEY PLOTTED BY
	DRAWN BY
	TRACED BY
	QUANTIFIED BY
	CHECKED BY



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke* EXPIRATION DATE: April 30, 2022 OF THE LICENSE

DATE	REVISION
06/08/22	Revised callout; Revised exist. ground; Added exist. edge of shoulder callouts

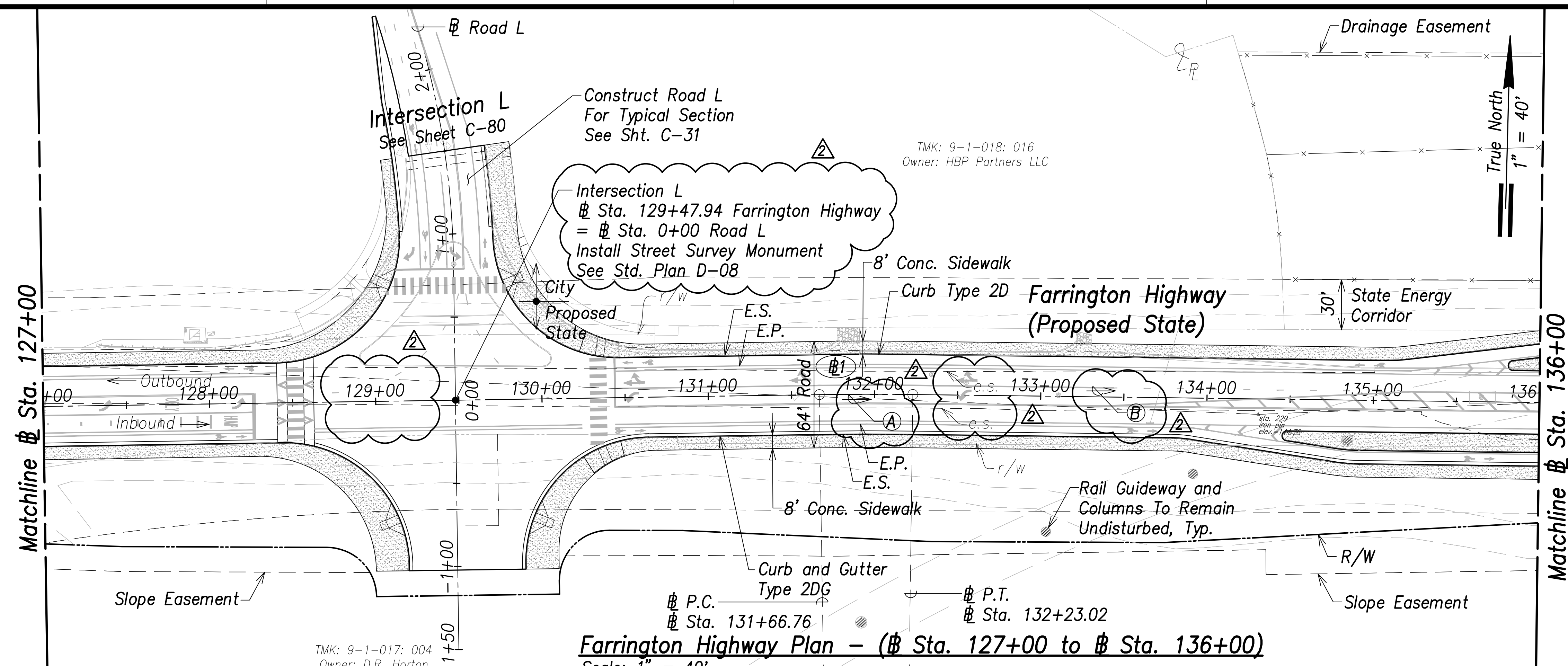
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 118+00 to Sta. 127+00

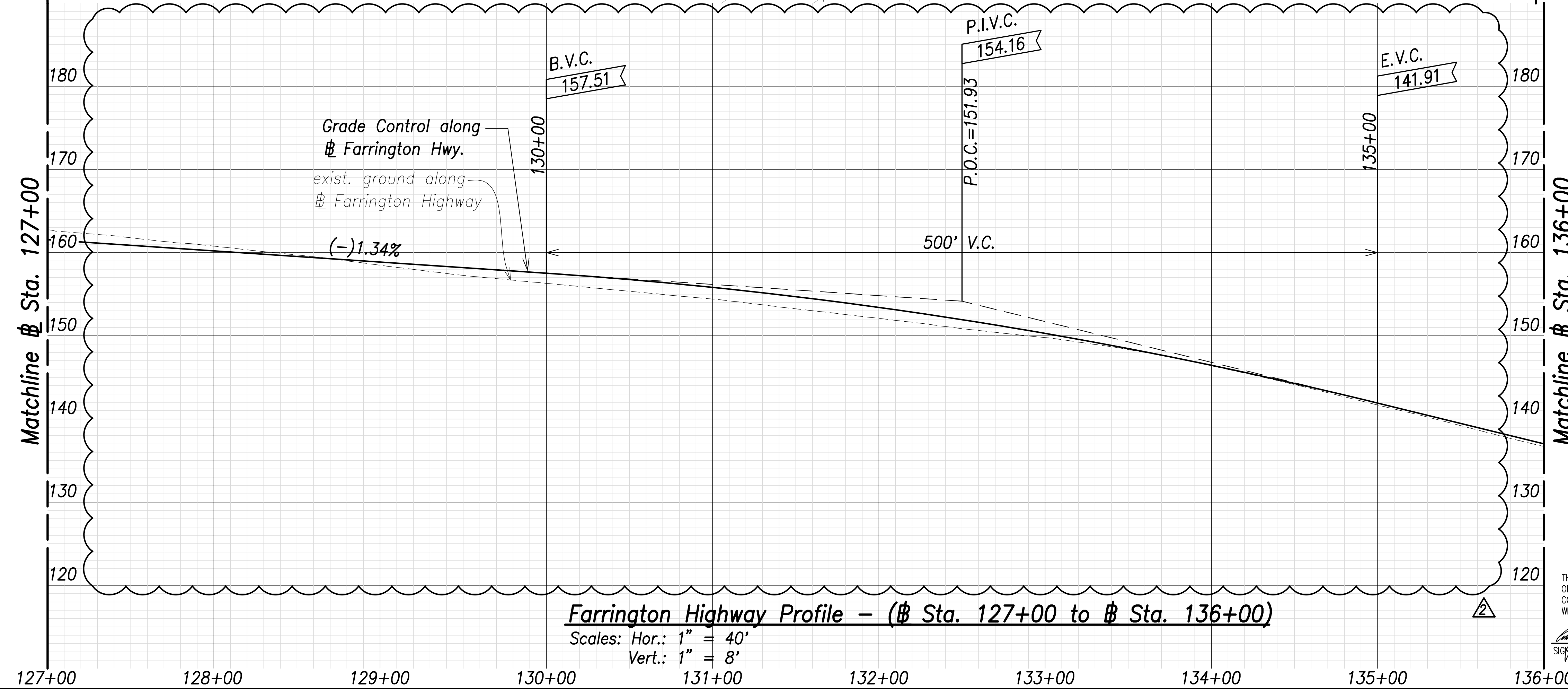
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	66	767



Farrington Highway Plan - (# Sta. 127+00 to # Sta. 136+00)
Scale: 1" = 40'



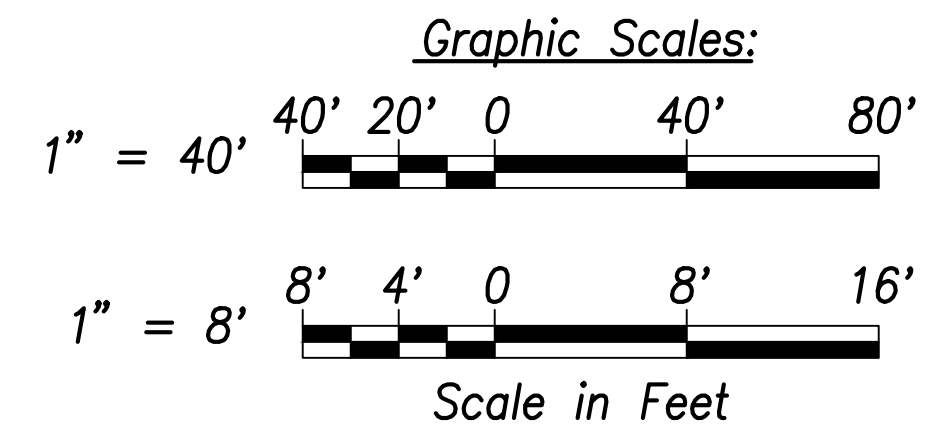
Farrington Highway Profile - (# Sta. 127+00 to # Sta. 136+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Curve Data:

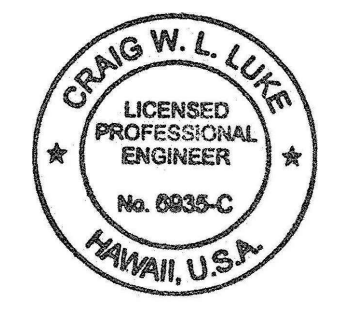
①
 $\Delta = 1^{\circ}36'42''$
 $\Delta/2 = 0^{\circ}48'21''$
 $R = 2000.00'$
 $T = 28.13'$
 $C = 56.26'$
 $L_c = 56.26'$

②
 $268^{\circ}25'39''$, 56.26'
 (# P.C. to # P.T.)

③
 $269^{\circ}14'00''$, 381.64'
 (# P.T. to # P.C.)



SURVEY PLOTTED BY:	DATE:
DRAWN BY:	
TRACED BY:	
CHECKED BY:	
NOTE BOOK:	
NO.:	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *[Signature]* April 30, 2022
 EXPIRATION DATE OF THE LICENSE

06/08/22	Added Street Survey Monument; Revised callout; Revised exist. ground; Added exist. edge of shoulder callouts
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Roadway Plan and Profile
 # Sta. 127+00 to # Sta. 136+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

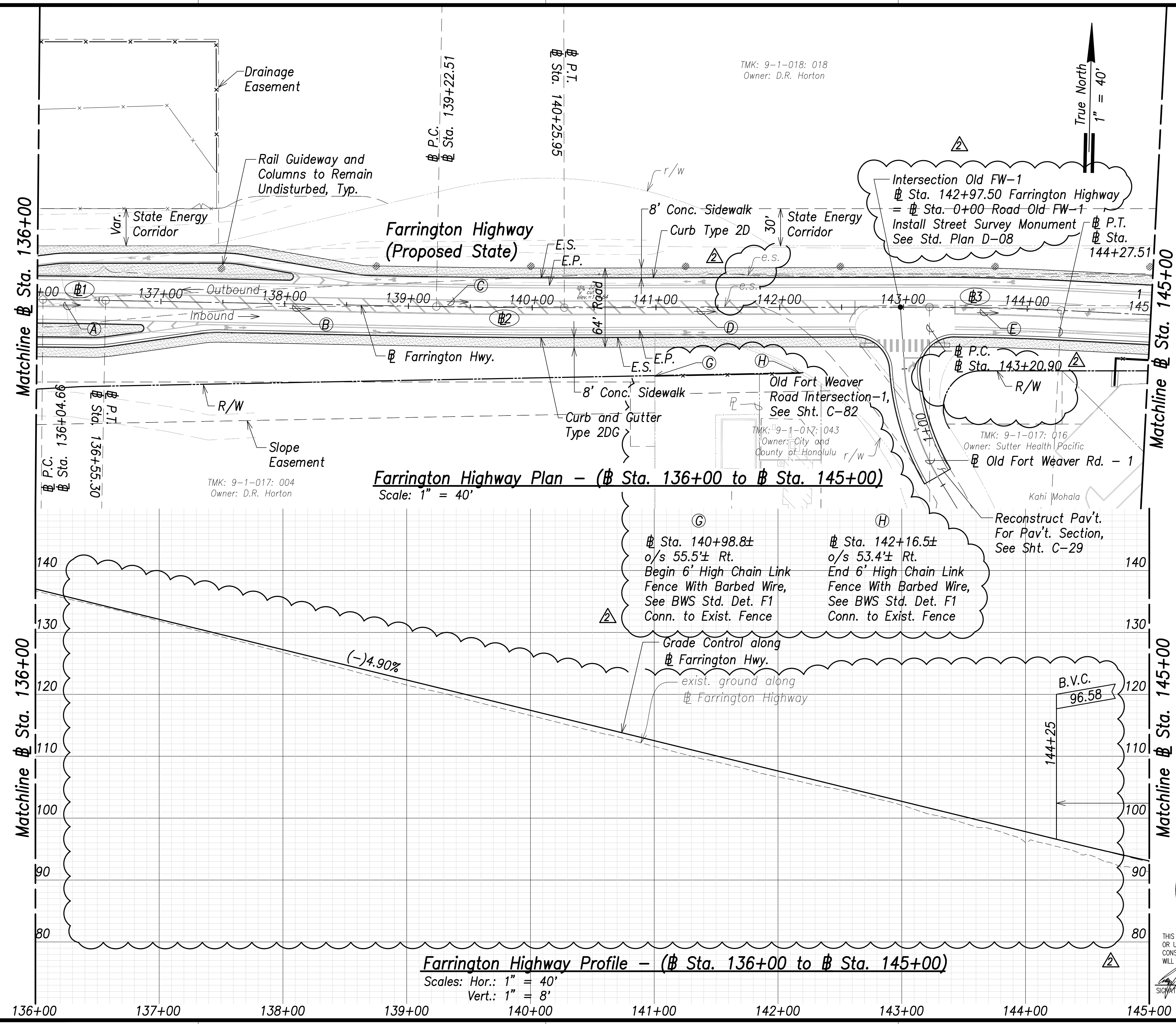
Scale: As Shown Date: April 2022

SHEET No. C-65 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	67	767

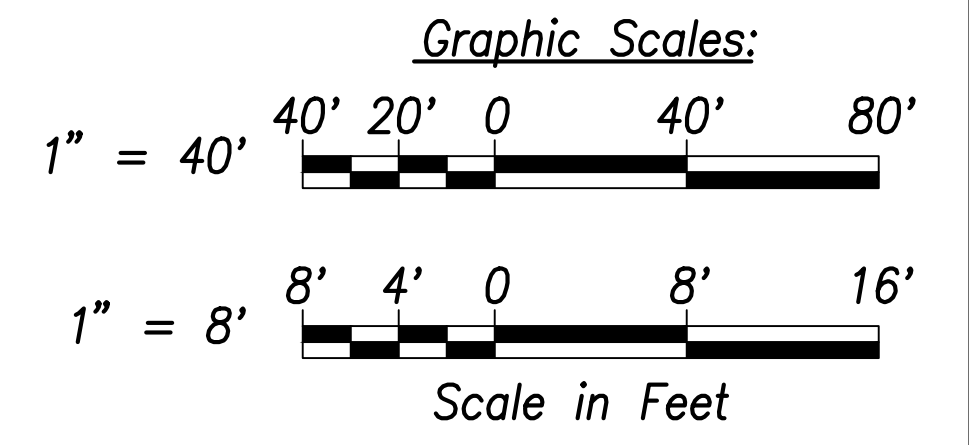
Curve Data:

Curve	Angle	Length
⊖1	$\Delta = 0^\circ 34' 49''$ $\Delta/2 = 0^\circ 17' 24.5''$ $R = 5000.00'$ $T = 25.32'$ $C = 50.64'$ $Lc = 50.64'$	ⓐ 269°31'25", 50.64' (⊖ P.C. to ⊖ P.T.)
⊖2	$\Delta = 1^\circ 11' 07''$ $\Delta/2 = 0^\circ 35' 33.5''$ $R = 5000.00'$ $T = 51.72'$ $C = 103.44'$ $Lc = 103.44'$	ⓑ 269°48'49", 267.22' (⊖ P.T. to ⊖ P.C.)
⊖3	$\Delta = 3^\circ 03' 15''$ $\Delta/2 = 1^\circ 31' 37.5''$ $R = 2000.00'$ $T = 53.32'$ $C = 106.60'$ $Lc = 106.61'$	ⓒ 269°13'16", 103.44' (⊖ P.C. to ⊖ P.T.)
		ⓓ 268°37'42", 294.95' (⊖ P.T. to ⊖ P.C.)
		ⓔ 270°09'20", 106.60' (⊖ P.C. to ⊖ P.T.)
		ⓕ 271°40'57", 217.74' (⊖ P.T. to ⊖ P.C.)

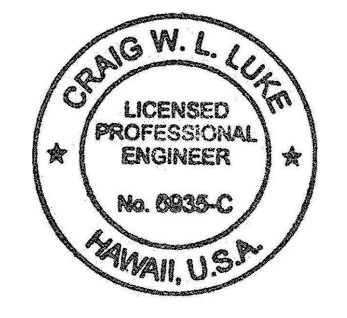


Farrington Highway Plan - (Sta. 136+00 to Sta. 145+00)
Scale: 1" = 40'

Farrington Highway Profile - (Sta. 136+00 to Sta. 145+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



DATE	REVISION
06/08/22	Added Street Survey Monument and Fence, Deleted callout; Revised exist. ground; Added exist. edge of shoulder callouts



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. L. Luke* EXPIRATION DATE: April 30, 2022 OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 136+00 to Sta. 145+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

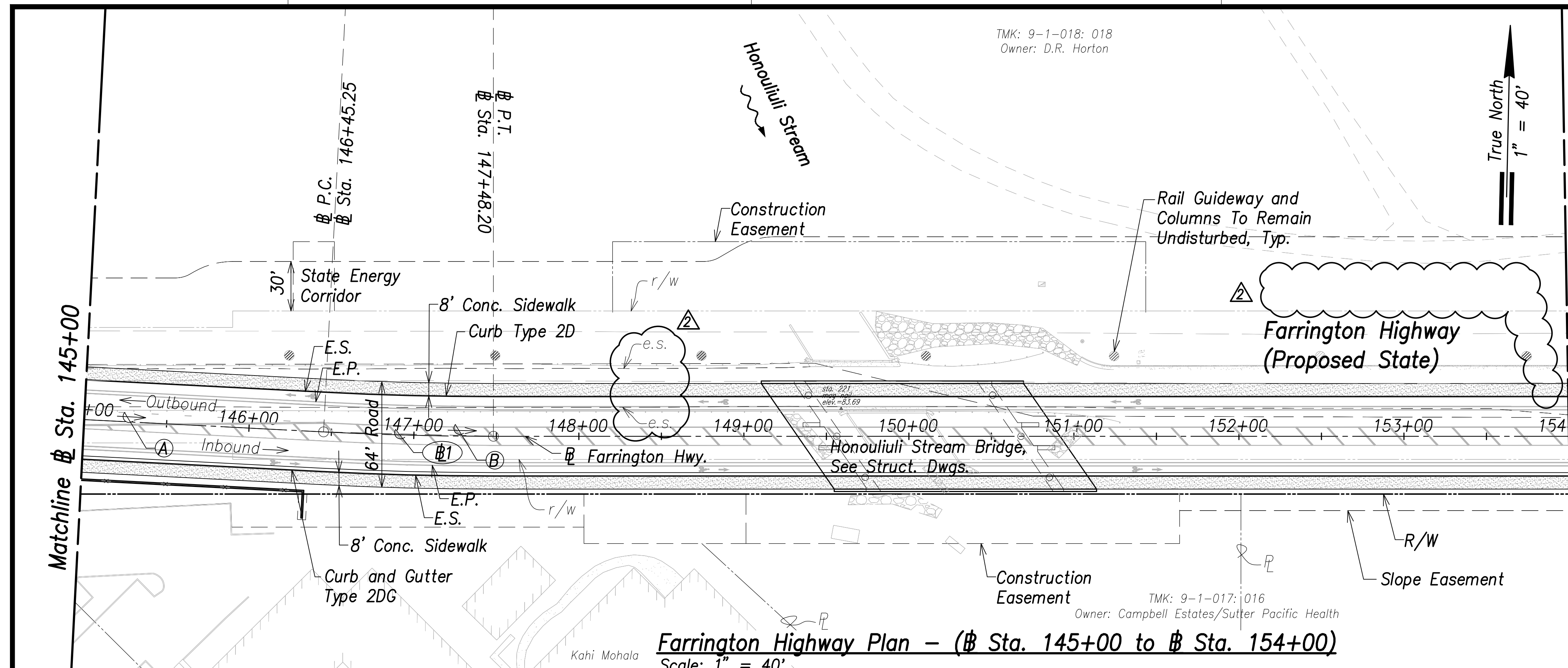
SHEET No. C-66 OF 767 SHEETS

SURVEY PLOTTED BY: _____	DATE: _____
DRAWN BY: _____	DATE: _____
TRACED BY: _____	DATE: _____
QUANTIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
ORIGINAL PLAN NO. _____	

FILE: \\MTC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-66 Roadway Plan - Sta. 136+00 to 145+00 - PLAN.dwg saved June 8, 2022

FILE: \\NMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-67 Roadway Plan - Sta. 145+00 to 154+00 - PLAN.dwg saved June 8, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	68	767



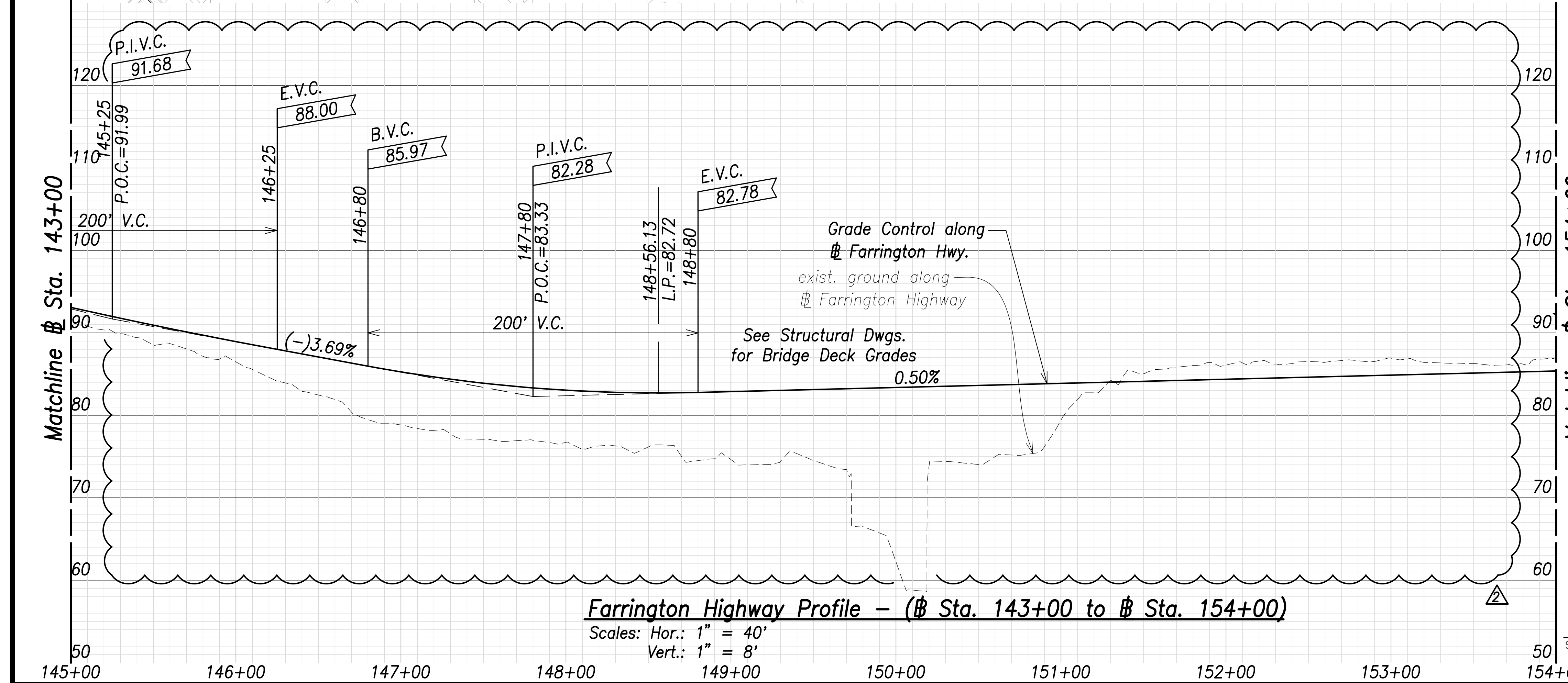
Farrington Highway Plan - (# Sta. 145+00 to # Sta. 154+00)
Scale: 1" = 40'

Curve Data:

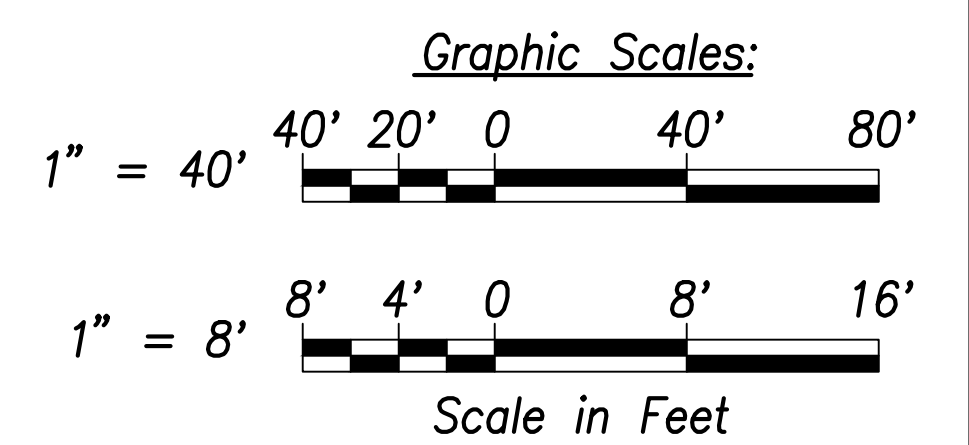
(A)
271°40'05", 217.74'
(# P.T. to # P.C.)

(B)
270°12'29", 102.94'
(# P.C. to # P.T.)

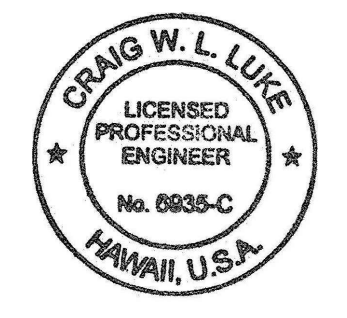
(#1)
Δ = 2°56'57"
Δ/2 = 1°28'28.5"
R = 2000.00'
T = 51.49'
C = 102.94'
Lc = 102.95'



Farrington Highway Profile - (# Sta. 143+00 to # Sta. 154+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



DATE	REVISION
06/08/22	Deleted callout, Removed Bus Pad; Revised exist. ground; Added exist. edge of shoulder callouts



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SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Roadway Plan and Profile
Sta. 145+00 to # Sta. 154+00

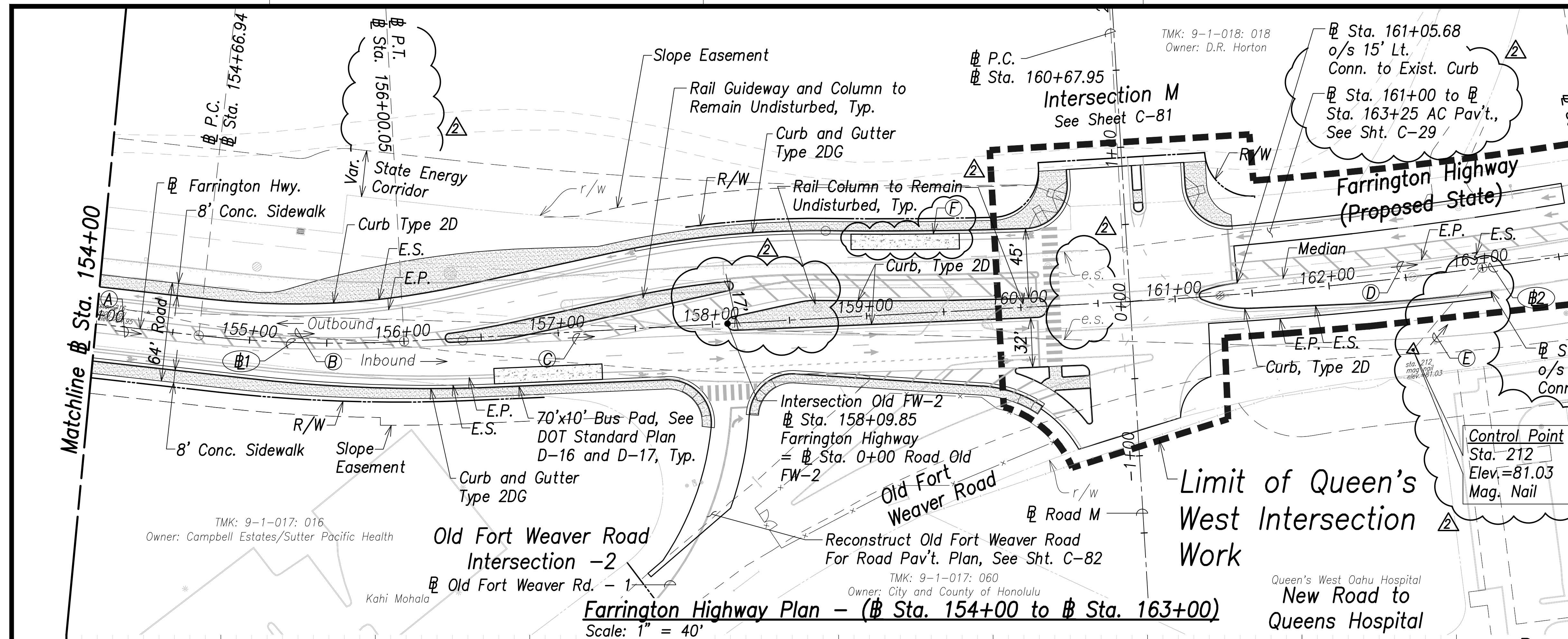
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-67 OF 767 SHEETS

DATE	BY
	SURVEY PLOTTED BY
	DRAWN BY
	TRACED BY
	CHECKED BY
	DATE
	NO.

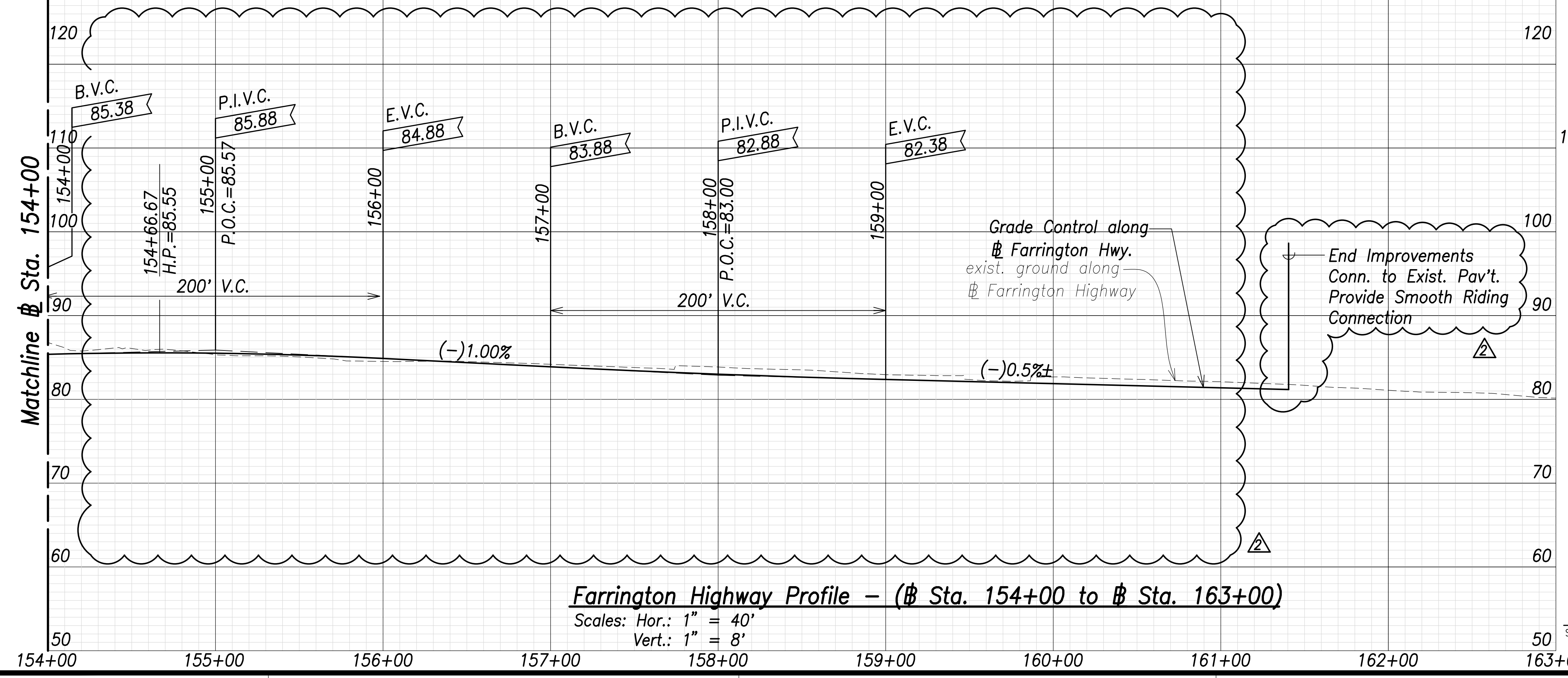
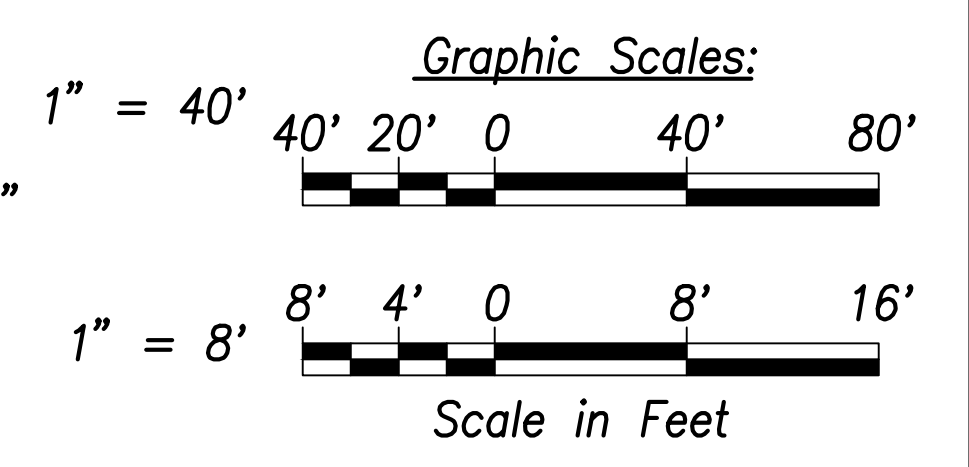
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	69	767



- True North
1" = 40'
- (A) 268°44'00", 718.74'
(# P.T. to # P.C.)
 - (B) 263°58'01", 132.95'
(# P.C. to # P.T.)
 - (C) 259°12'01", 467.91'
(# P.T. to # P.C.)
 - (D) 266°06'17", 311.07'
(# P.C. to # P.T.)
 - (E) 212°31'39", 69.59'
(Sta. 212 to Sta. 163+00)
 - (F) 70'x10' Bus Pad,
See DOT Standard Plan
D-16 and D-17

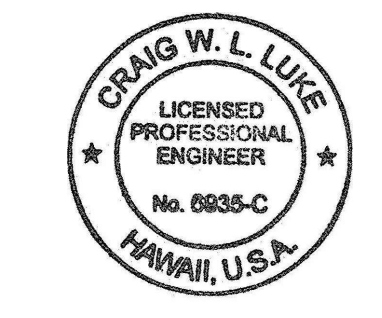
Curve Data:

- (#1)
 $\Delta = 9^\circ 31' 59"$
 $\Delta/2 = 4^\circ 45' 59.5"$
 $R = 800.00'$
 $T = 66.71'$
 $C = 132.95'$
 $Lc = 133.11'$
- (#2)
 $\Delta = 6^\circ 11' 29"$
 $\Delta/2 = 3^\circ 5' 44.5"$
 $R = 2880.00'$
 $T = 155.76'$
 $C = 311.07'$
 $Lc = 311.22'$



Farrington Highway Profile - (# Sta. 154+00 to # Sta. 163+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	REVISION
Median and Lane Revised; Added Tie; Revised callout; Revised profile callouts; Added bus pad; Revised exist. ground; Added exist. edge of shoulder callouts	

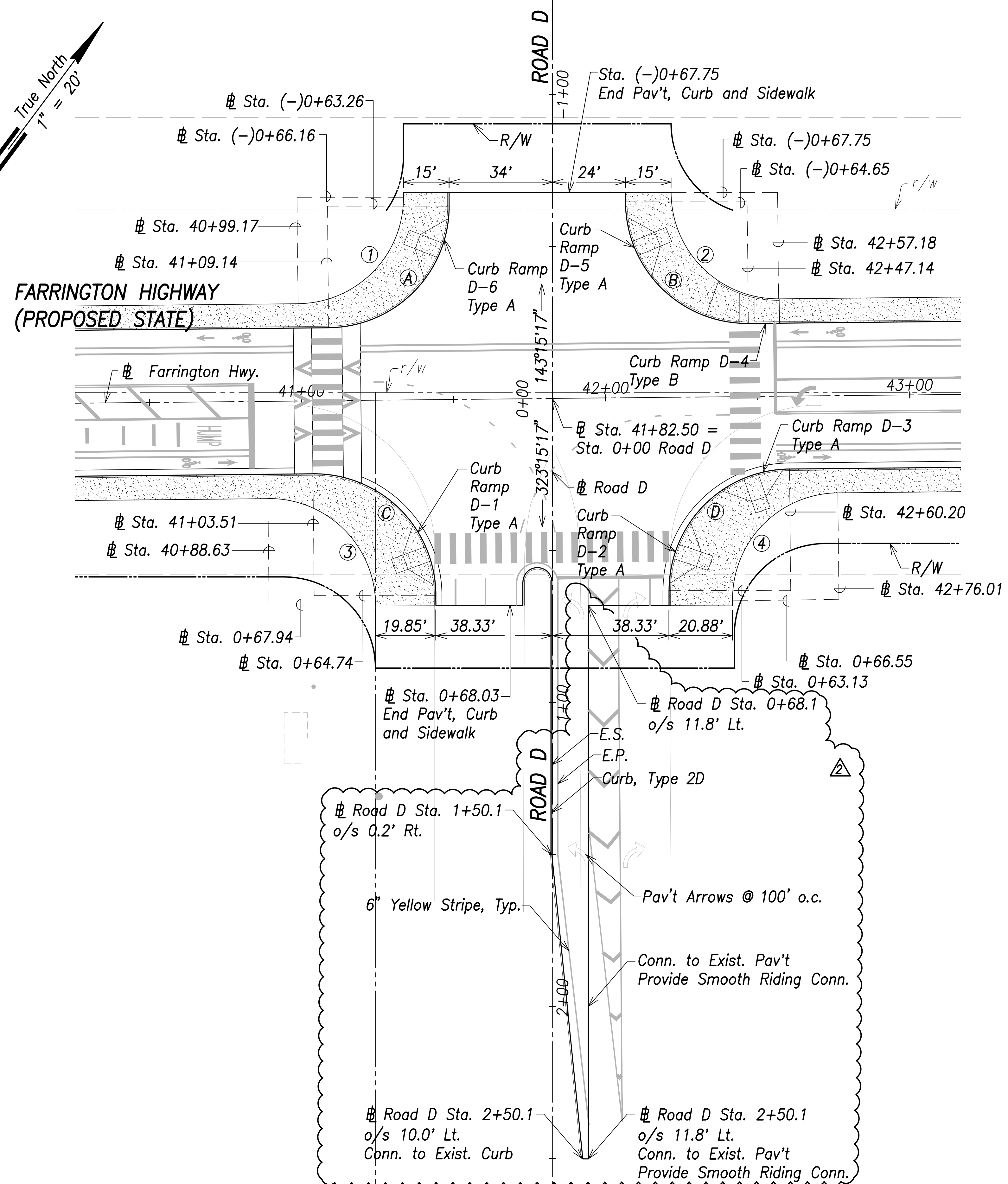
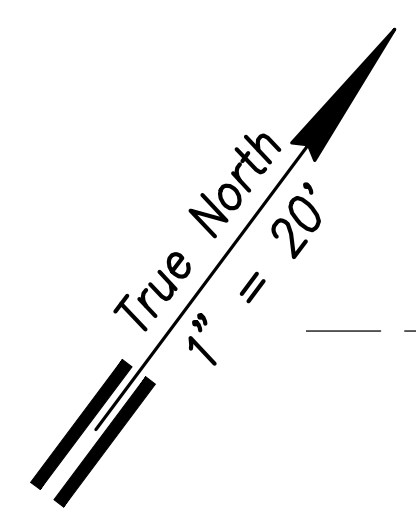
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Roadway Plan and Profile
 # Sta. 154+00 to # Sta. 163+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	73	767



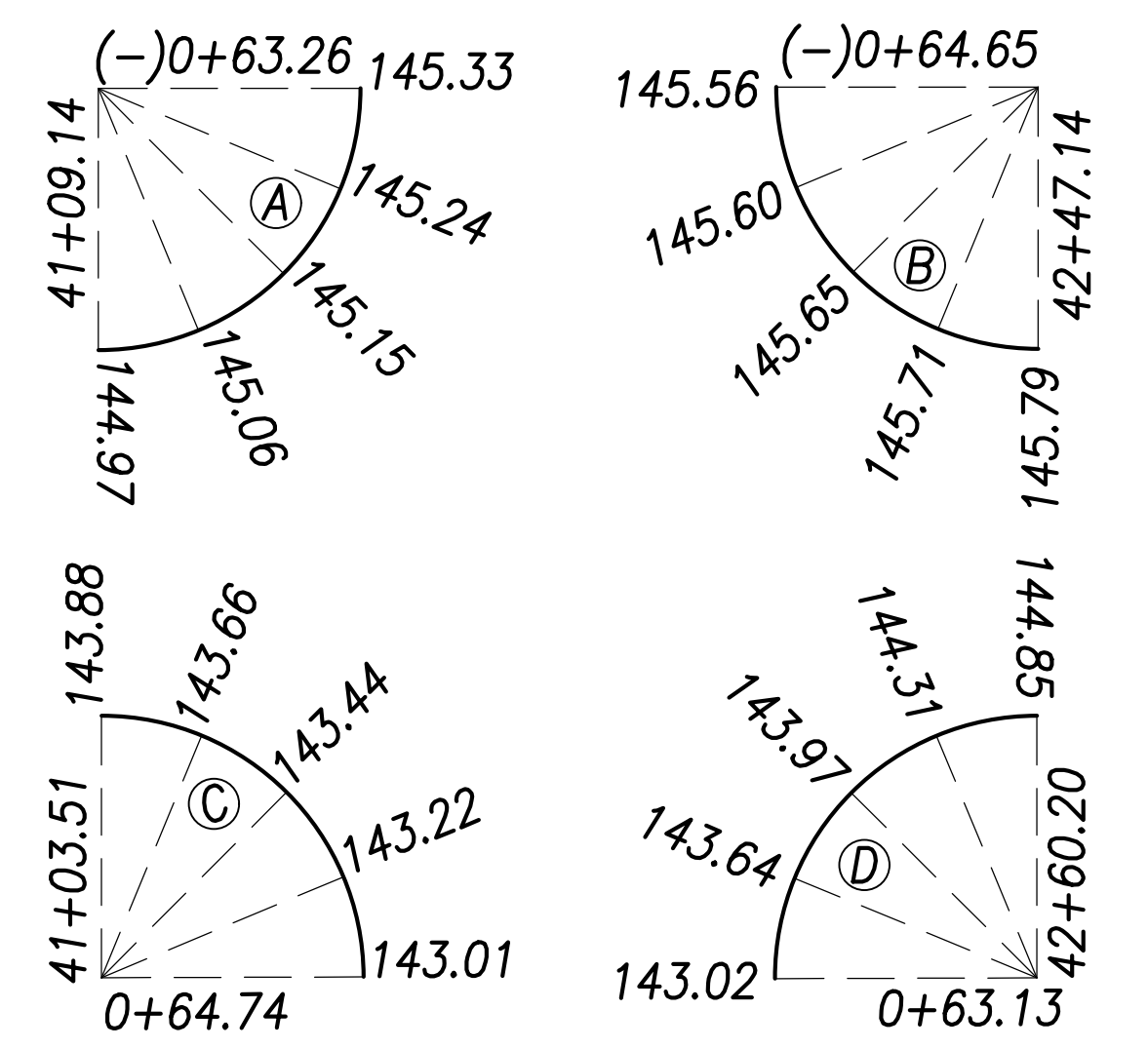
Curb Curve Data:

- ① $\Delta=89^{\circ}25'24''$
 $\Delta/2=44^{\circ}42'42''$
 $R=40.00'$
 $T=39.60'$
 $C=56.28'$
 $Lc=62.43'$
- ② $\Delta=90^{\circ}34'36''$
 $\Delta/2=45^{\circ}17'18''$
 $R=40.00'$
 $T=40.40'$
 $C=56.85'$
 $Lc=63.23'$
- ③ $\Delta=90^{\circ}30'09''$
 $\Delta/2=45^{\circ}15'4.5''$
 $R=40.00'$
 $T=40.35'$
 $C=56.82'$
 $Lc=63.18'$
- ④ $\Delta=89^{\circ}17'44''$
 $\Delta/2=44^{\circ}38'52''$
 $R=40.00'$
 $T=39.51'$
 $C=56.22'$
 $Lc=62.34'$

Curve Data:

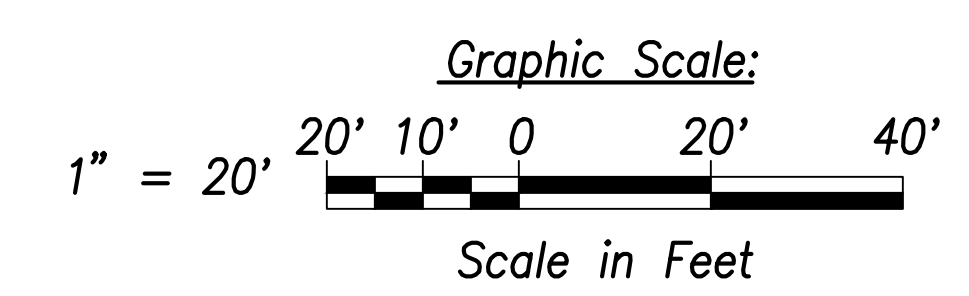
- ① $\Delta=89^{\circ}25'24''$
 $\Delta/2=44^{\circ}42'42''$
 $R=35.00'$
 $T=34.65'$
 $C=49.25'$
 $Lc=54.63'$
- ② $\Delta=90^{\circ}34'36''$
 $\Delta/2=45^{\circ}17'18''$
 $R=35.00'$
 $T=35.35'$
 $C=49.75'$
 $Lc=55.33'$
- ③ $\Delta=90^{\circ}34'18''$
 $\Delta/2=54^{\circ}17'9''$
 $R=35.00'$
 $T=35.35'$
 $C=49.74'$
 $Lc=55.33'$
- ④ $\Delta=90^{\circ}13'45''$
 $\Delta/2=40^{\circ}38'52''$
 $R=35.00'$
 $T=35.14'$
 $C=49.60'$
 $Lc=55.12'$

Curb Return Grades:
(Elevations refer to top of curb)



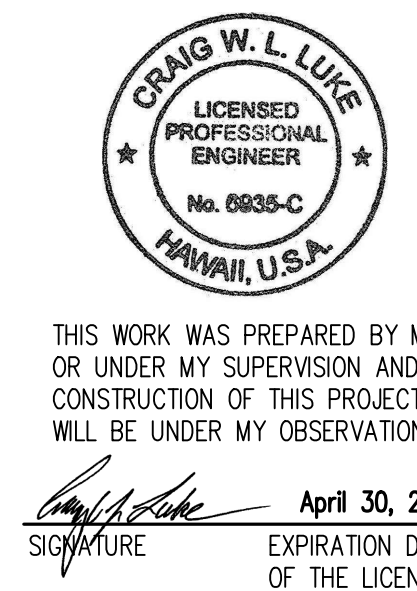
Notes:

1. For roadway plans and profiles, see sheets C-50 to C-68.
2. For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
3. For curb ramp layout and grading, see sheets C-183 to C-189.



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

Intersection Plan - Intersection D
Scale: 1" = 20'



06/08/22	Notes added
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

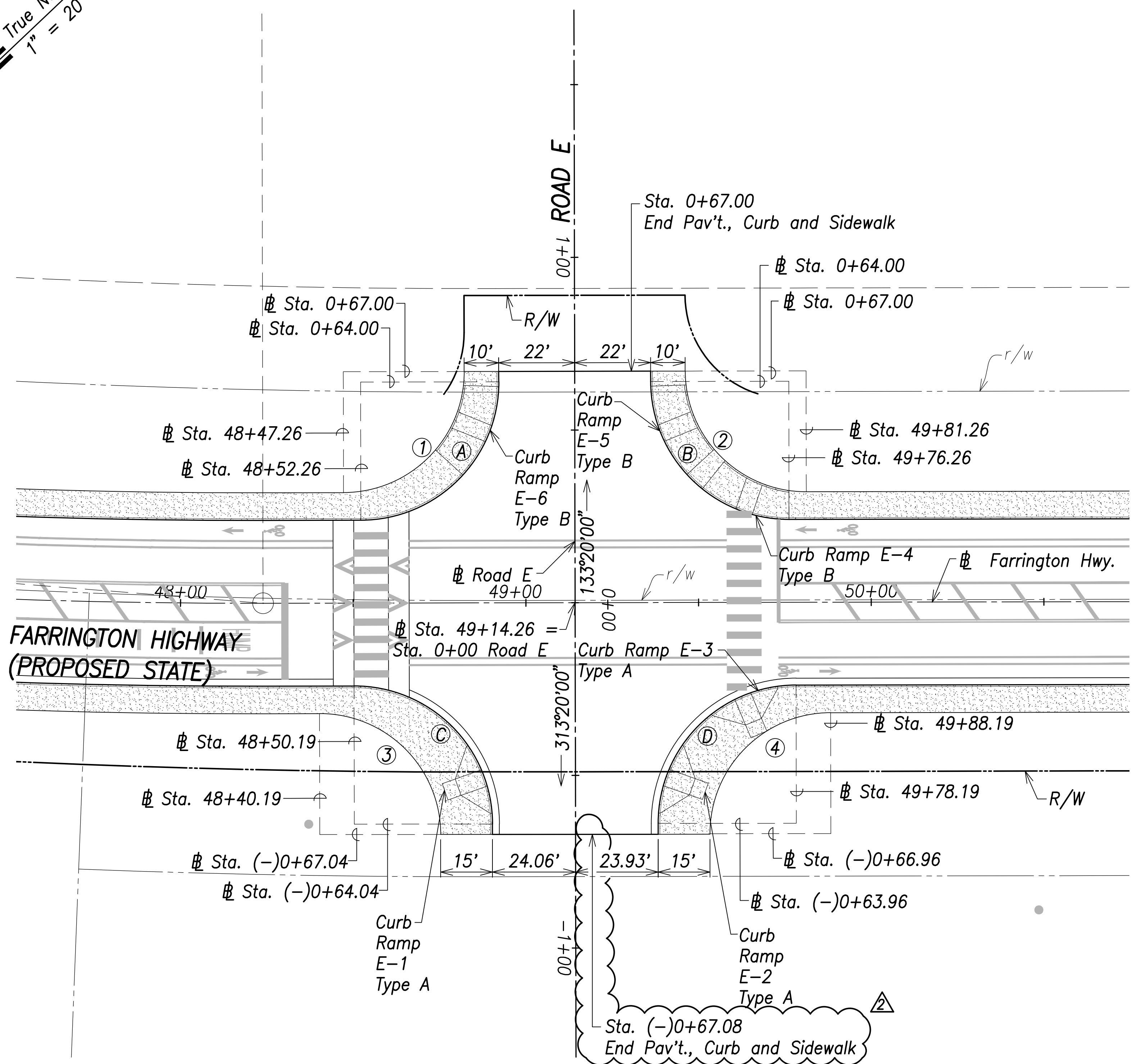
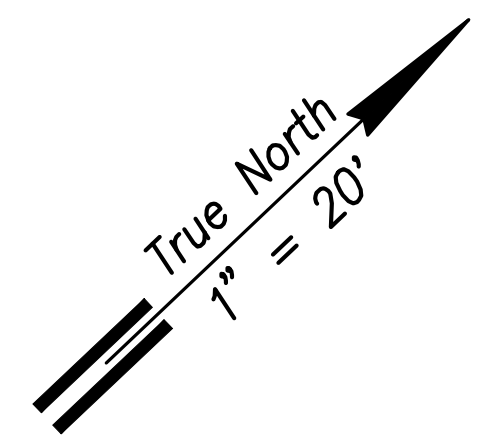
Intersection Plan
Intersection D

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-72 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	74	767



Intersection Plan - Intersection E
Scale: 1" = 20'

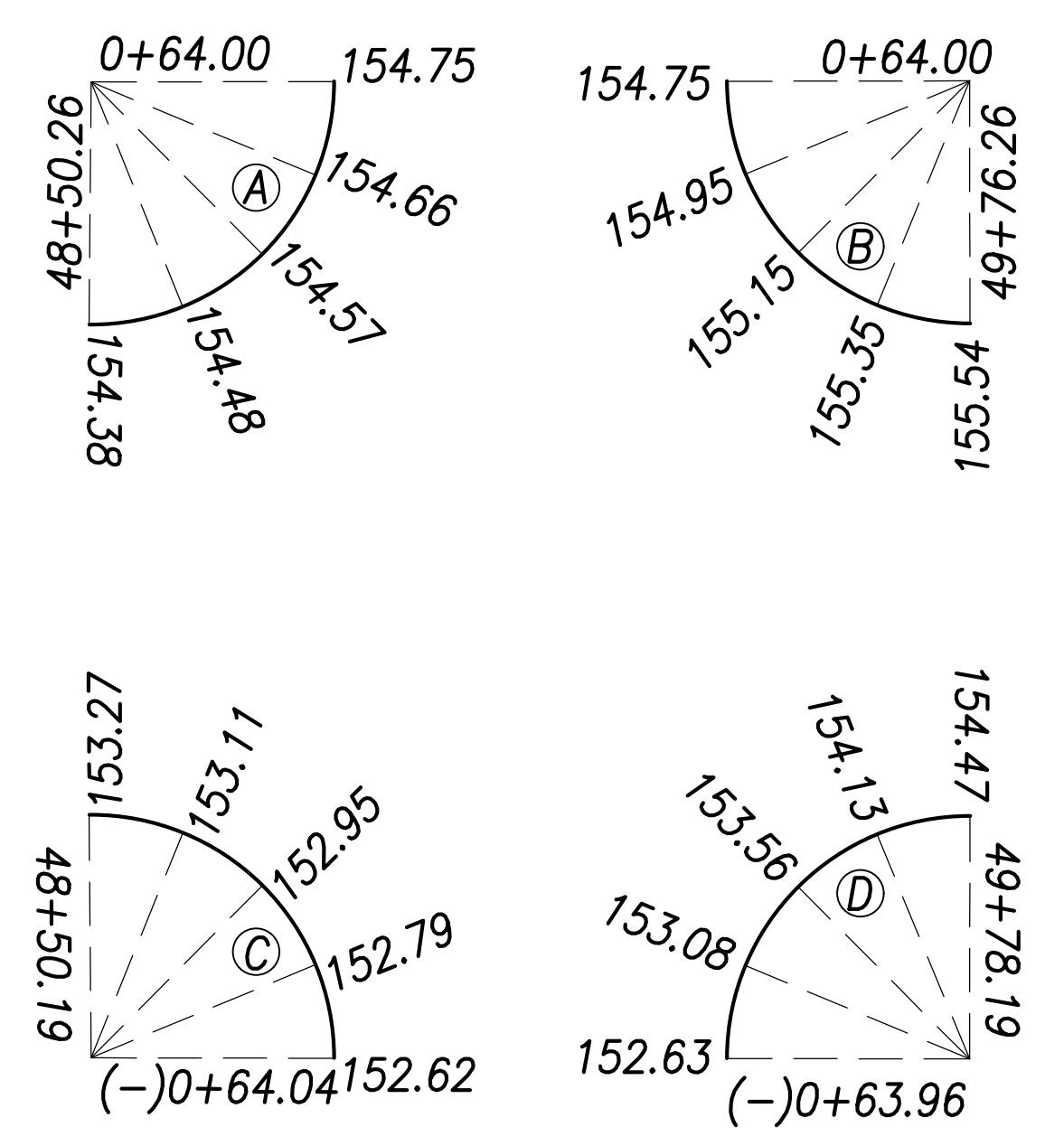
Curb Curve Data:

- ①
 $\Delta = 90^\circ 00' 00''$
 $\Delta/2 = 45^\circ 00' 00''$
 $R = 40.00'$
 $T = 40.00'$
 $C = 56.57'$
 $Lc = 62.83'$
- ②
 $\Delta = 90^\circ 00' 00''$
 $\Delta/2 = 45^\circ 00' 00''$
 $R = 40.00'$
 $T = 40.00'$
 $C = 56.57'$
 $Lc = 62.83'$
- ③
 $\Delta = 90^\circ 03' 29''$
 $\Delta/2 = 45^\circ 01' 44.5''$
 $R = 40.00'$
 $T = 40.04'$
 $C = 56.60'$
 $Lc = 62.87'$
- ④
 $\Delta = 89^\circ 56' 31''$
 $\Delta/2 = 44^\circ 58' 21''$
 $R = 40.00'$
 $T = 39.96'$
 $C = 56.54'$
 $Lc = 62.79'$

Back of Sidewalk Curve Data:

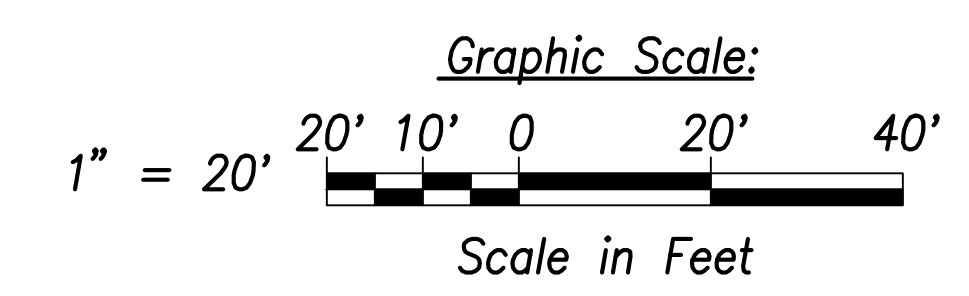
- ①
 $\Delta = 90^\circ 00' 00''$
 $\Delta/2 = 45^\circ 00' 00''$
 $R = 35.00'$
 $T = 35.00'$
 $C = 49.50'$
 $Lc = 54.98'$
- ②
 $\Delta = 90^\circ 00' 00''$
 $\Delta/2 = 45^\circ 00' 00''$
 $R = 35.00'$
 $T = 35.00'$
 $C = 49.50'$
 $Lc = 54.98'$
- ③
 $\Delta = 90^\circ 03' 29''$
 $\Delta/2 = 45^\circ 01' 44.5''$
 $R = 35.00'$
 $T = 35.04'$
 $C = 49.52'$
 $Lc = 55.01'$
- ④
 $\Delta = 89^\circ 56' 31''$
 $\Delta/2 = 44^\circ 58' 15.5''$
 $R = 35.00'$
 $T = 34.96'$
 $C = 49.47'$
 $Lc = 54.94'$

Curb Return Grades:
(Elevations refer to top of curb)

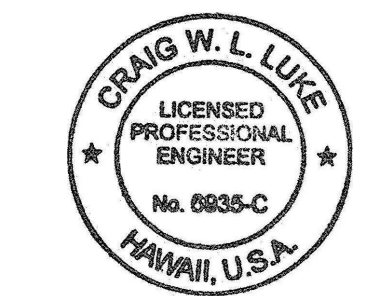


Notes:

1. For roadway plans and profiles, see sheets C-50 to C-68.
2. For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
3. For curb ramp layout and grading, see sheets C-183 to C-202.



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Added callout
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

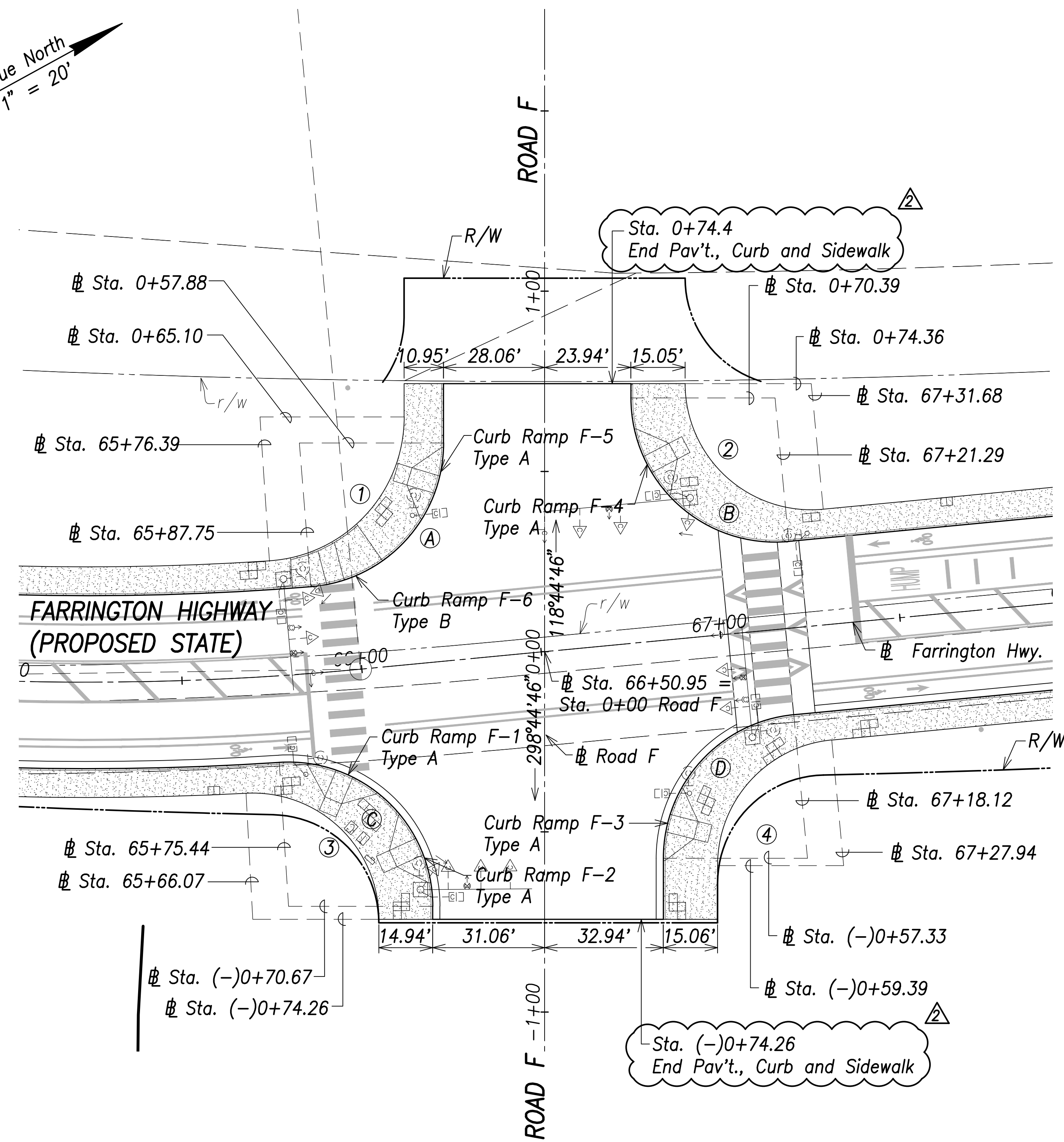
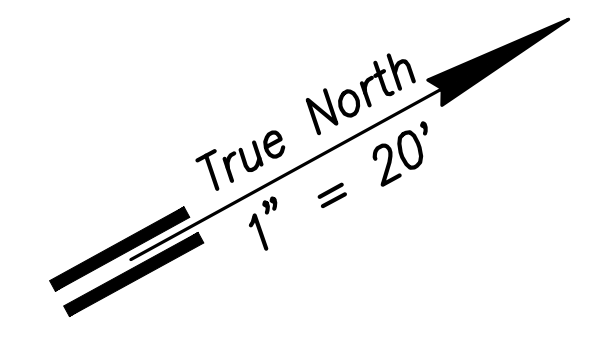
Intersection Plan
Intersection E

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-73 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	76	767



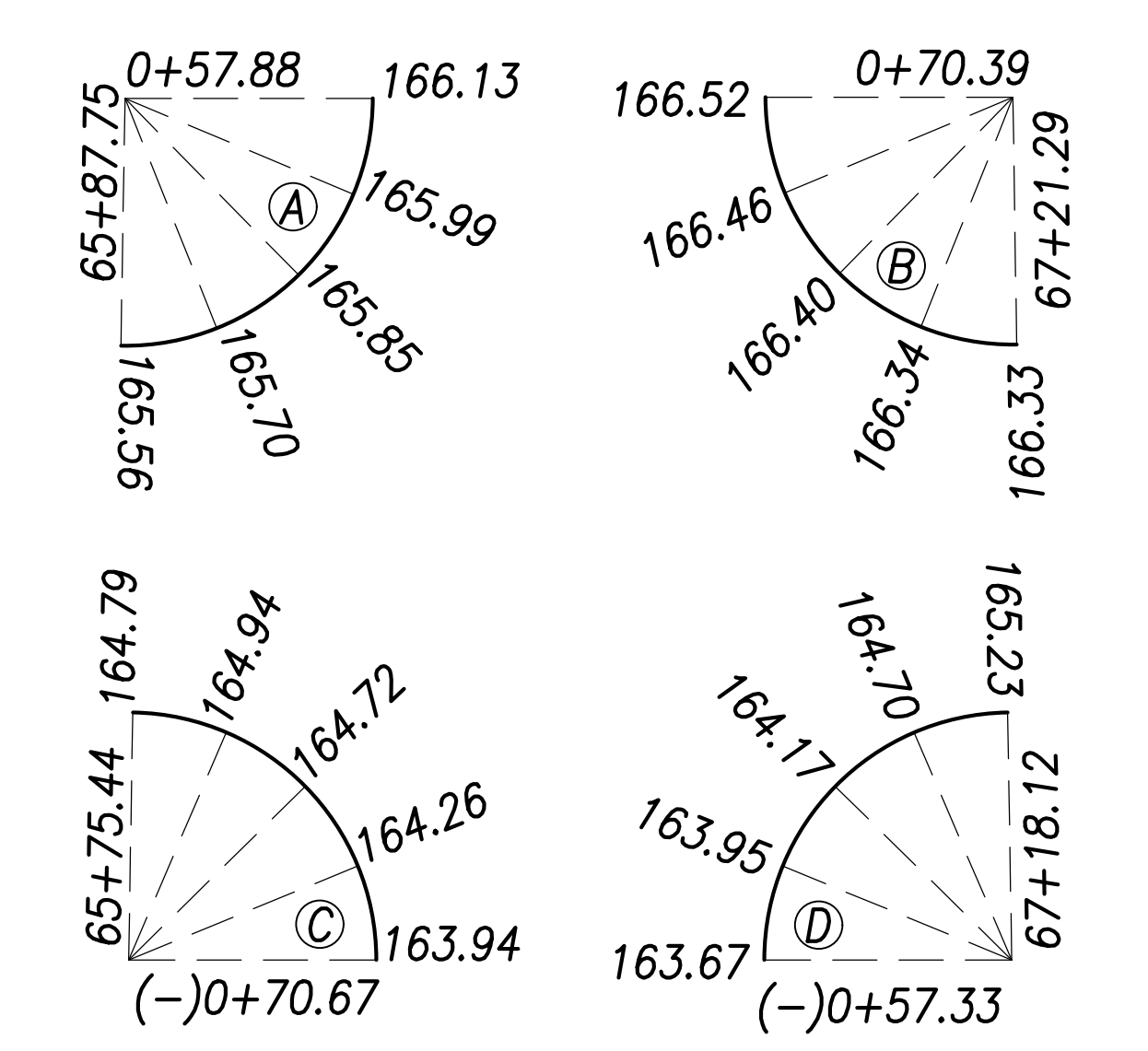
Curb Curve Data:

- (A) $\Delta=85^{\circ}24'18''$
 $\Delta/2=42^{\circ}42'09''$
 $R=40.00'$
 $T=36.91'$
 $C=54.26'$
 $Lc=59.62'$
- (B) $\Delta=95^{\circ}26'52''$
 $\Delta/2=47^{\circ}43'26''$
 $R=40.00'$
 $T=44.00'$
 $C=59.19'$
 $Lc=66.64'$
- (C) $\Delta=93^{\circ}42'50''$
 $\Delta/2=46^{\circ}51'25''$
 $R=40.00'$
 $T=42.68'$
 $C=58.37'$
 $Lc=65.42'$
- (D) $\Delta=84^{\circ}33'08''$
 $\Delta/2=42^{\circ}16'34''$
 $R=40.00'$
 $T=36.37'$
 $C=53.82'$
 $Lc=59.03'$

Back of Sidewalk Curve Data:

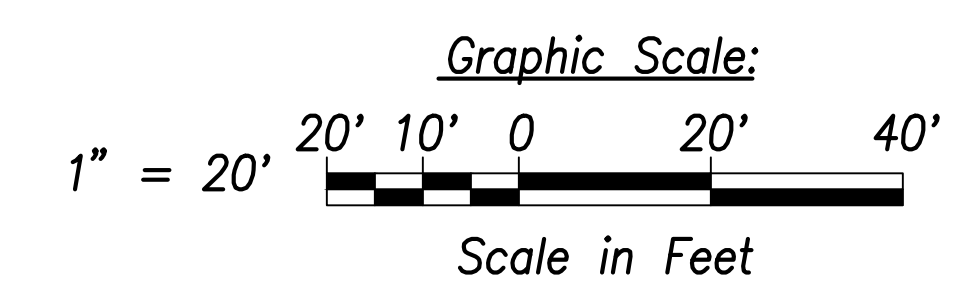
- (1) $\Delta=86^{\circ}13'05''$
 $\Delta/2=43^{\circ}06'33''$
 $R=40.00'$
 $T=37.44'$
 $C=54.67'$
 $Lc=60.19'$
- (2) $\Delta=95^{\circ}26'52''$
 $\Delta/2=47^{\circ}43'26''$
 $R=35.00'$
 $T=38.50'$
 $C=51.79'$
 $Lc=58.31'$
- (3) $\Delta=93^{\circ}02'31''$
 $\Delta/2=46^{\circ}31'16''$
 $R=35.00'$
 $T=36.91'$
 $C=50.79'$
 $Lc=56.84'$
- (4) $\Delta=84^{\circ}33'08''$
 $\Delta/2=42^{\circ}16'34''$
 $R=40.00'$
 $T=36.37'$
 $C=53.82'$
 $Lc=59.03'$

Curb Return Grades:
(Elevations refer to top of curb)



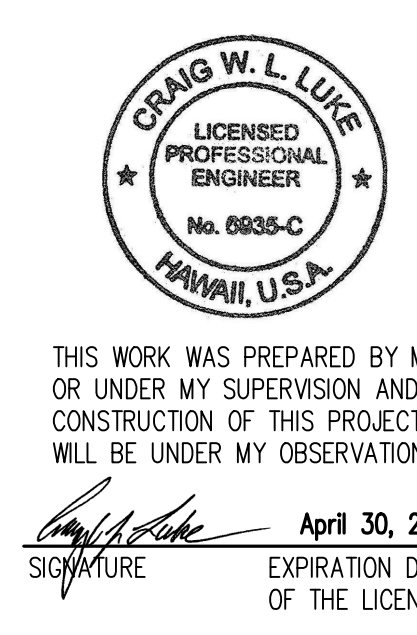
Notes:

1. For roadway plans and profiles, see sheets C-50 to C-68.
2. For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
3. For curb ramp layout and grading, see sheets C-184 to C-202.



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

Intersection Plan - Intersection F
Scale: 1" = 20'



06/08/22	Revised callouts
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

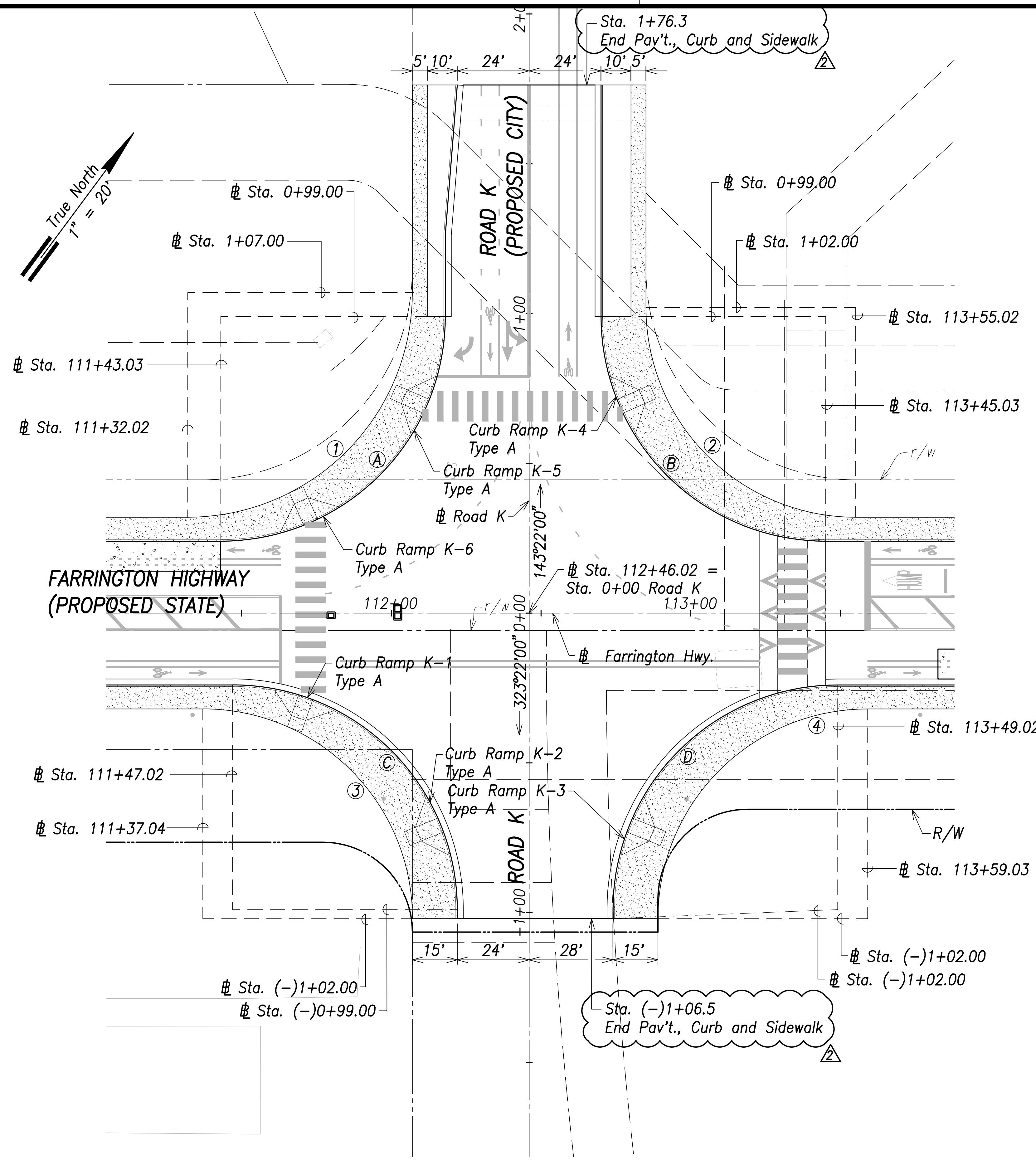
Intersection Plan
Intersection F

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-75 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	80	767



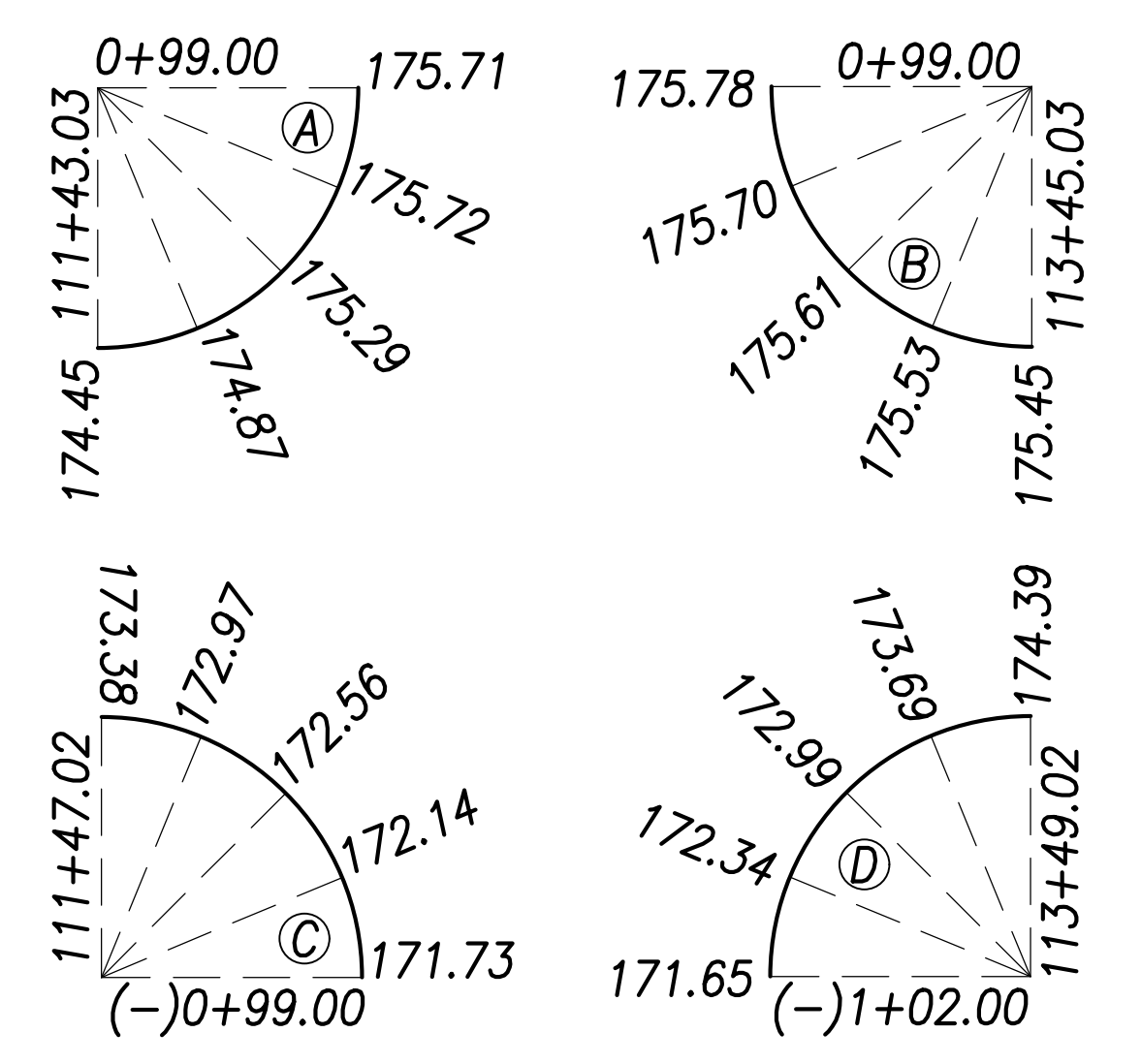
Curb Curve Data:

- ①
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=75.00'$
 $T=75.00'$
 $C=106.07'$
 $Lc=117.81'$
- ②
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=75.00'$
 $T=75.00'$
 $C=106.07'$
 $Lc=117.81'$
- ③
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=75.00'$
 $T=75.00'$
 $C=106.07'$
 $Lc=117.81'$
- ④
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=75.00'$
 $T=75.00'$
 $C=106.07'$
 $Lc=117.81'$

Back of Sidewalk Data:

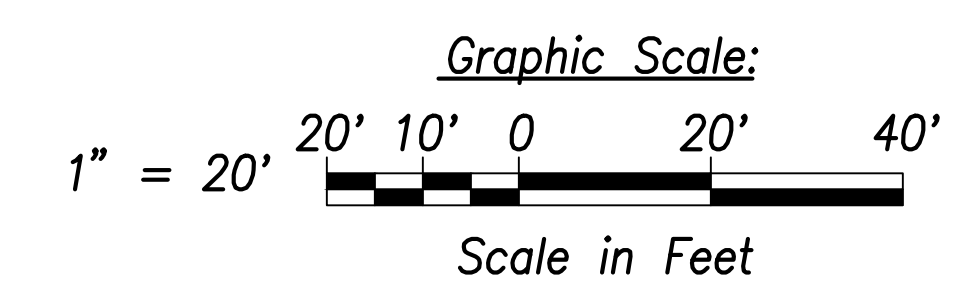
- ①
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=75.00'$
 $T=75.00'$
 $C=106.07'$
 $Lc=117.81'$
- ②
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=70.00'$
 $T=70.00'$
 $C=98.99'$
 $Lc=109.96'$
- ③
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=70.00'$
 $T=70.00'$
 $C=98.99'$
 $Lc=109.96'$
- ④
 $\Delta=90^{\circ}00'00''$
 $\Delta/2=45^{\circ}00'00''$
 $R=70.00'$
 $T=70.00'$
 $C=98.99'$
 $Lc=109.96'$

Curb Return Grades:
(Elevations refer to top of curb)



Notes:

1. For roadway plans and profiles, see sheets C-50 to C-68.
2. For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
3. For curb ramp layout and grading, see sheets C-184 to C-202.



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

Intersection Plan - Intersection K
Scale: 1" = 20'

CRAG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Added callouts
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

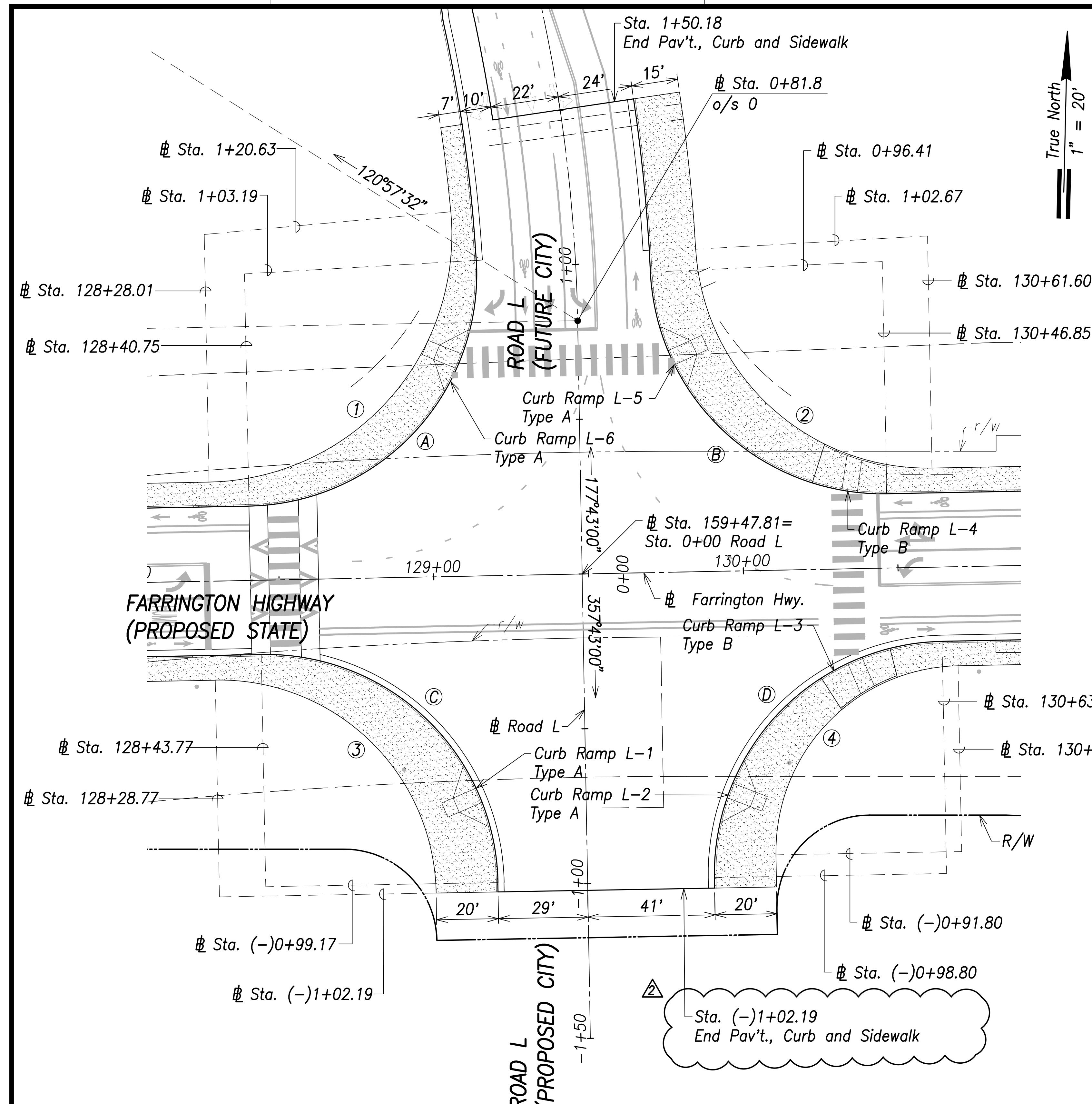
Intersection Plan
Intersection K

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-79 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	81	767



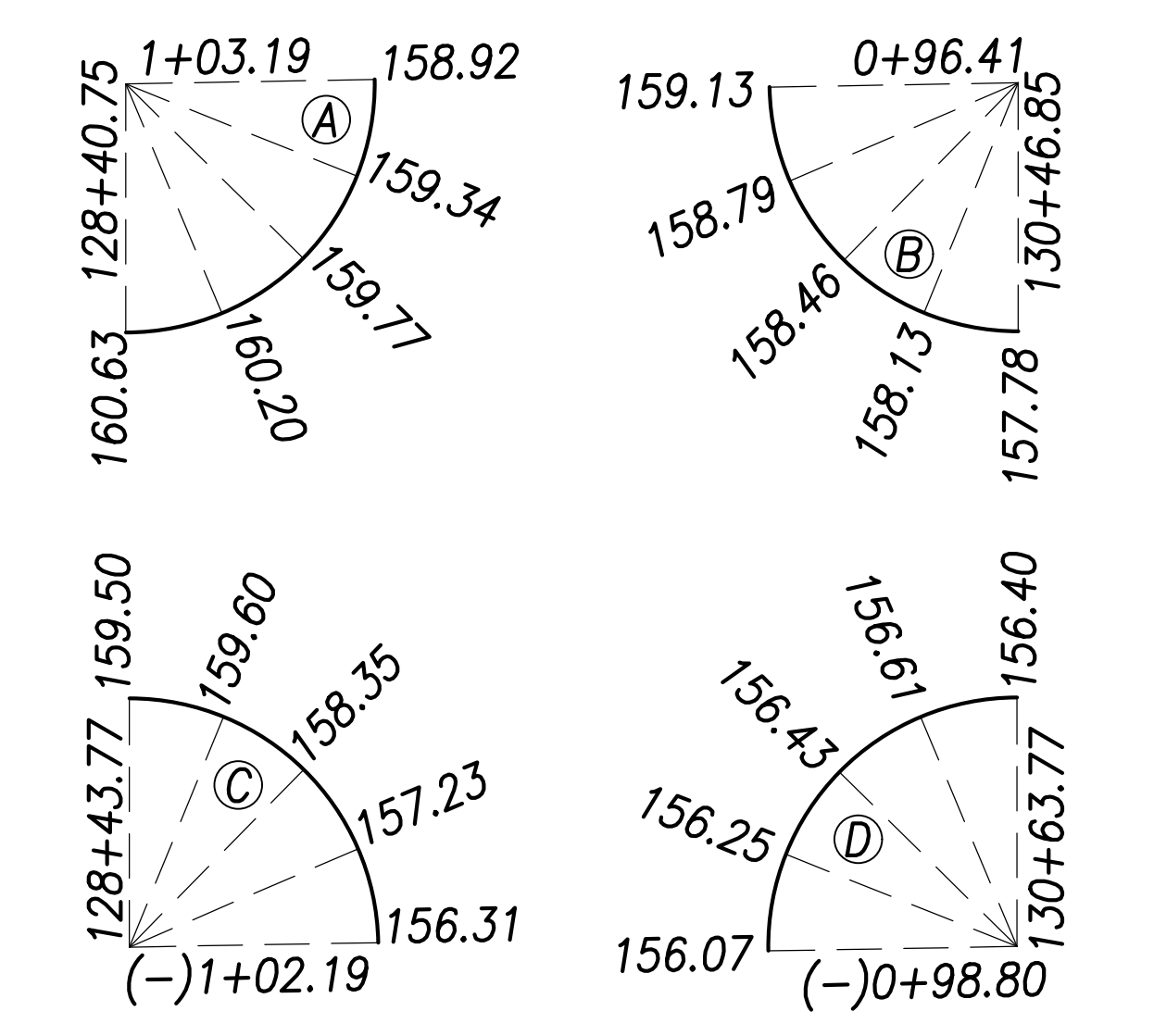
Curb Curve Data:

- (A) $\Delta=92^{\circ}14'18''$
 $\Delta/2=46^{\circ}07'14''$
 $R=75.00'$
 $T=77.99'$
 $C=108.12'$
 $Lc=120.74'$
- (B) $\Delta=88^{\circ}30'03''$
 $\Delta/2=44^{\circ}15'02''$
 $R=75.00'$
 $T=73.06'$
 $C=704.67'$
 $Lc=115.85'$
- (C) $\Delta=90^{\circ}05'42''$
 $\Delta/2=45^{\circ}02'51''$
 $R=75.00'$
 $T=75.12'$
 $C=106.15'$
 $Lc=117.93'$
- (D) $\Delta=89^{\circ}54'18''$
 $\Delta/2=44^{\circ}57'09''$
 $R=75.00'$
 $T=74.88'$
 $C=105.98'$
 $Lc=117.69'$

Back of Sidewalk Curve Data:

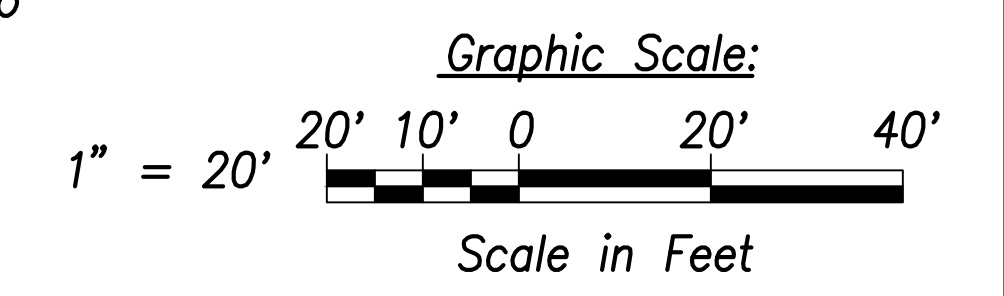
- (1) $\Delta=94^{\circ}08'32''$
 $\Delta/2=47^{\circ}04'16''$
 $R=80.00'$
 $T=86.00'$
 $C=117.15'$
 $Lc=131.45'$
- (2) $\Delta=87^{\circ}49'06''$
 $\Delta/2=43^{\circ}54'33''$
 $R=75.00'$
 $T=72.20'$
 $C=104.03'$
 $Lc=114.95'$
- (3) $\Delta=90^{\circ}05'42''$
 $\Delta/2=45^{\circ}02'51''$
 $R=70.00'$
 $T=70.12'$
 $C=99.08'$
 $Lc=110.07'$
- (4) $\Delta=89^{\circ}54'18''$
 $\Delta/2=44^{\circ}57'09''$
 $R=60.00'$
 $T=59.90'$
 $C=84.78'$
 $Lc=94.15'$

Curb Return Grades:
(Elevations refer to top of curb)



Notes:

- For roadway plans and profiles, see sheets C-50 to C-68.
- For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
- For curb ramp layout and grading, see sheets C-184 to C-202.



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

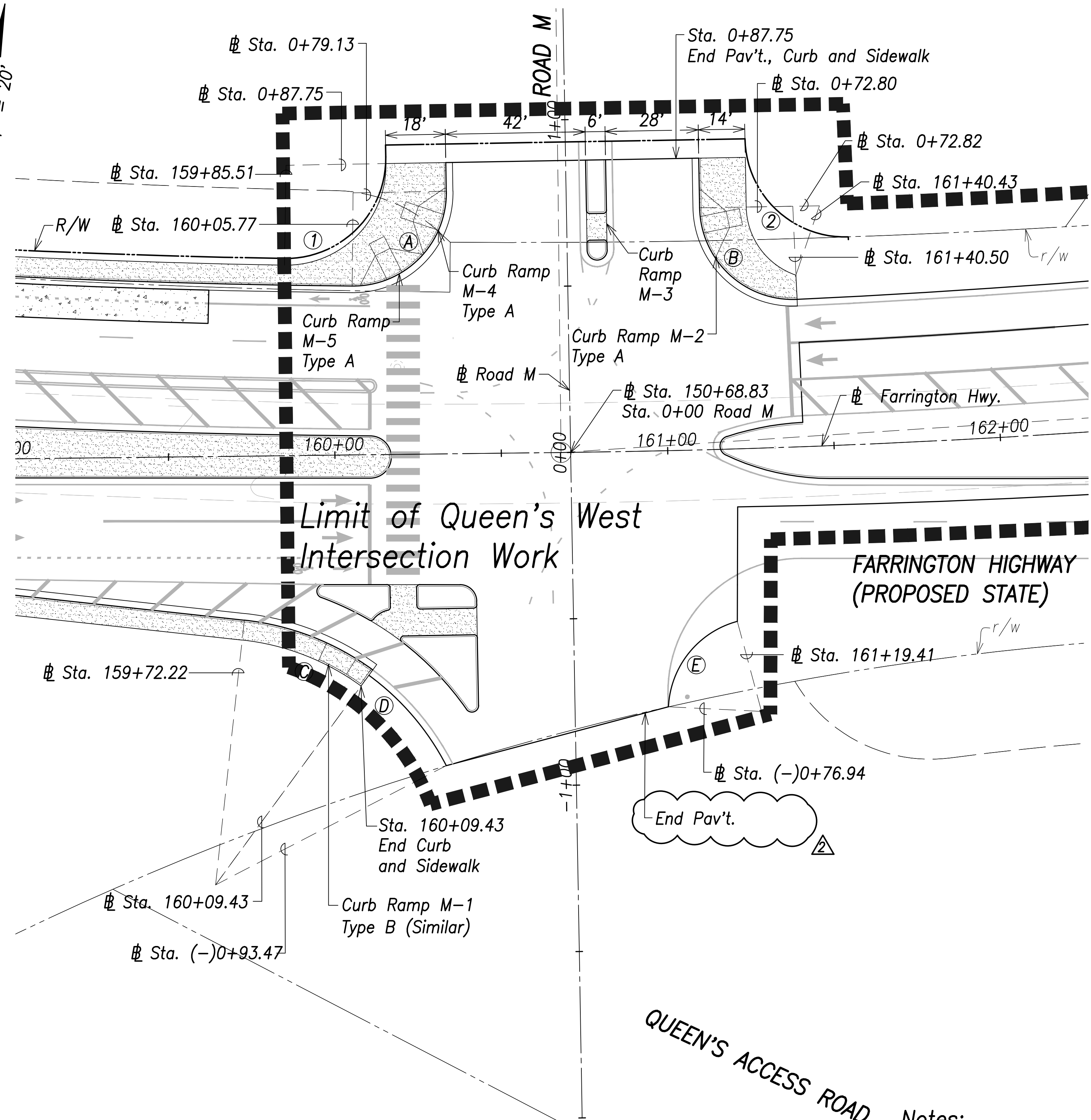
Intersection Plan - Intersection L
Scale: 1" = 20'

CRAG W. L. LUKE
 LICENSED PROFESSIONAL ENGINEER
 No. 6935-C
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised callout
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Intersection Plan Intersection L	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-80 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	82	767

True North
1" = 20'



Curb Curve Data:

①
 $\Delta=91^{\circ}32'42''$
 $\Delta/2=45^{\circ}46'21''$
 $R=28.00'$
 $T=28.77'$
 $C=40.13'$
 $Lc=44.74'$

②
 $\Delta=91^{\circ}40'23''$
 $\Delta/2=45^{\circ}50'12''$
 $R=28.00'$
 $T=28.83'$
 $C=40.17'$
 $Lc=44.80'$

③
 $\Delta=29^{\circ}58'43''$
 $\Delta/2=14^{\circ}59'21''$
 $R=80.00'$
 $T=21.42'$
 $C=41.38'$
 $Lc=41.86'$

EOP Curve Data:

④
 $\Delta=26^{\circ}29'15''$
 $\Delta/2=13^{\circ}14'37''$
 $R=78.00'$
 $T=18.36'$
 $C=35.74'$
 $Lc=36.06'$

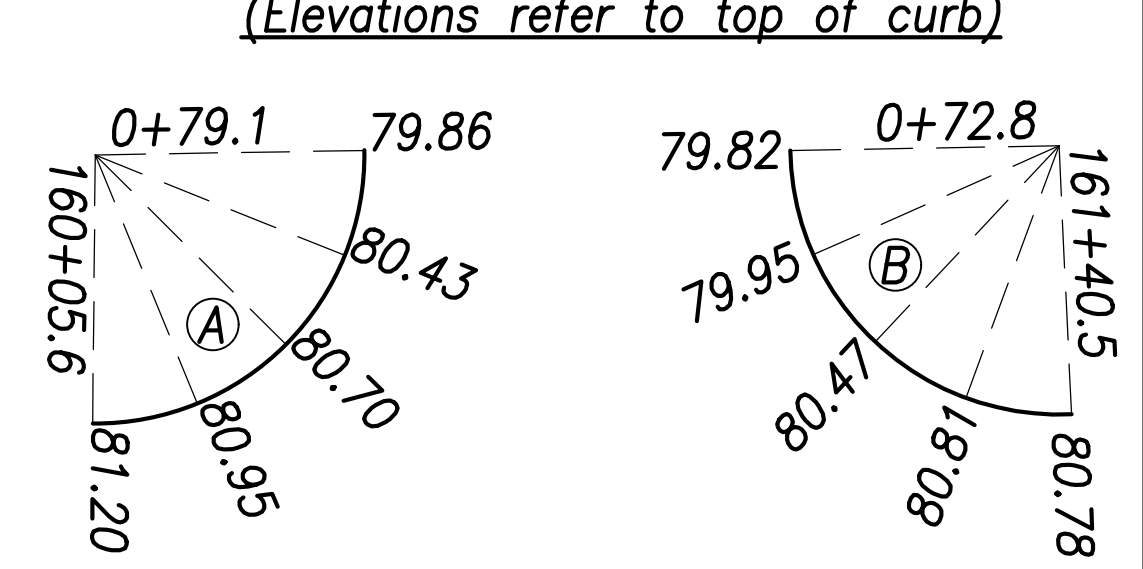
⑤
 $\Delta=72^{\circ}07'23''$
 $\Delta/2=36^{\circ}03'41''$
 $R=28.00'$
 $T=20.39'$
 $C=32.96'$
 $Lc=35.25'$

Back of Sidewalk Data:

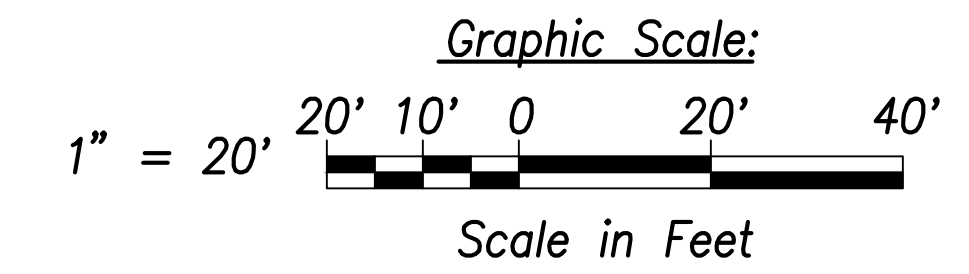
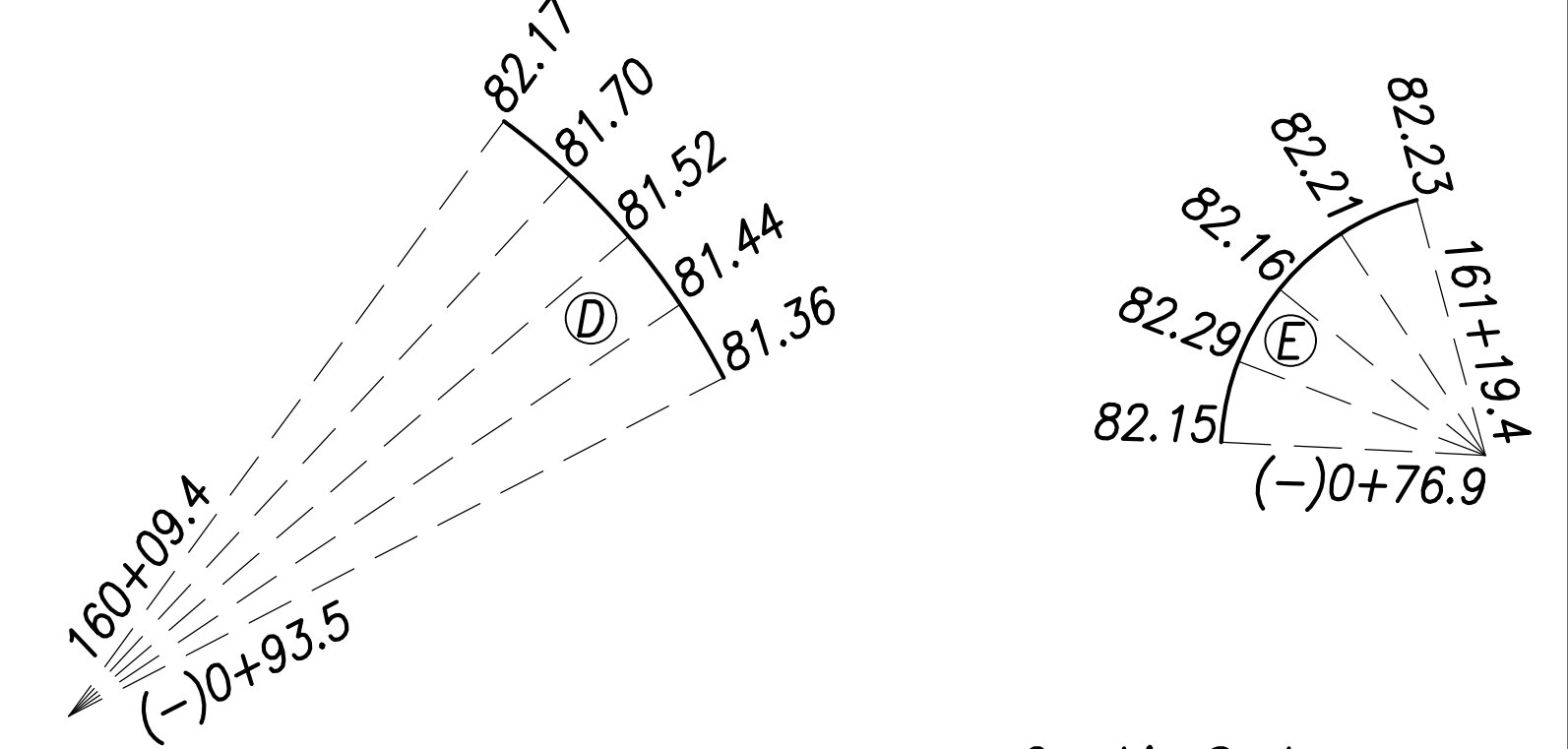
①
 $\Delta=91^{\circ}57'48''$
 $\Delta/2=45^{\circ}58'54''$
 $R=30.00'$
 $T=31.05'$
 $C=43.15'$
 $Lc=48.15'$

②
 $\Delta=70^{\circ}21'32''$
 $\Delta/2=35^{\circ}10'46''$
 $R=22.00'$
 $T=15.51'$
 $C=25.35'$
 $Lc=27.02'$

Curb Return Grades:
(Elevations refer to top of curb)



EOP Return Grades:

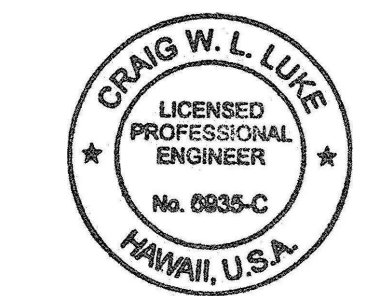


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

Intersection Plan - Intersection M
Scale: 1" = 20'

Notes:

- For roadway plans and profiles, see sheets C-50 to C-68.
- For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
- For curb ramp layout and grading, see sheets C-184 to C-202.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised callout
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

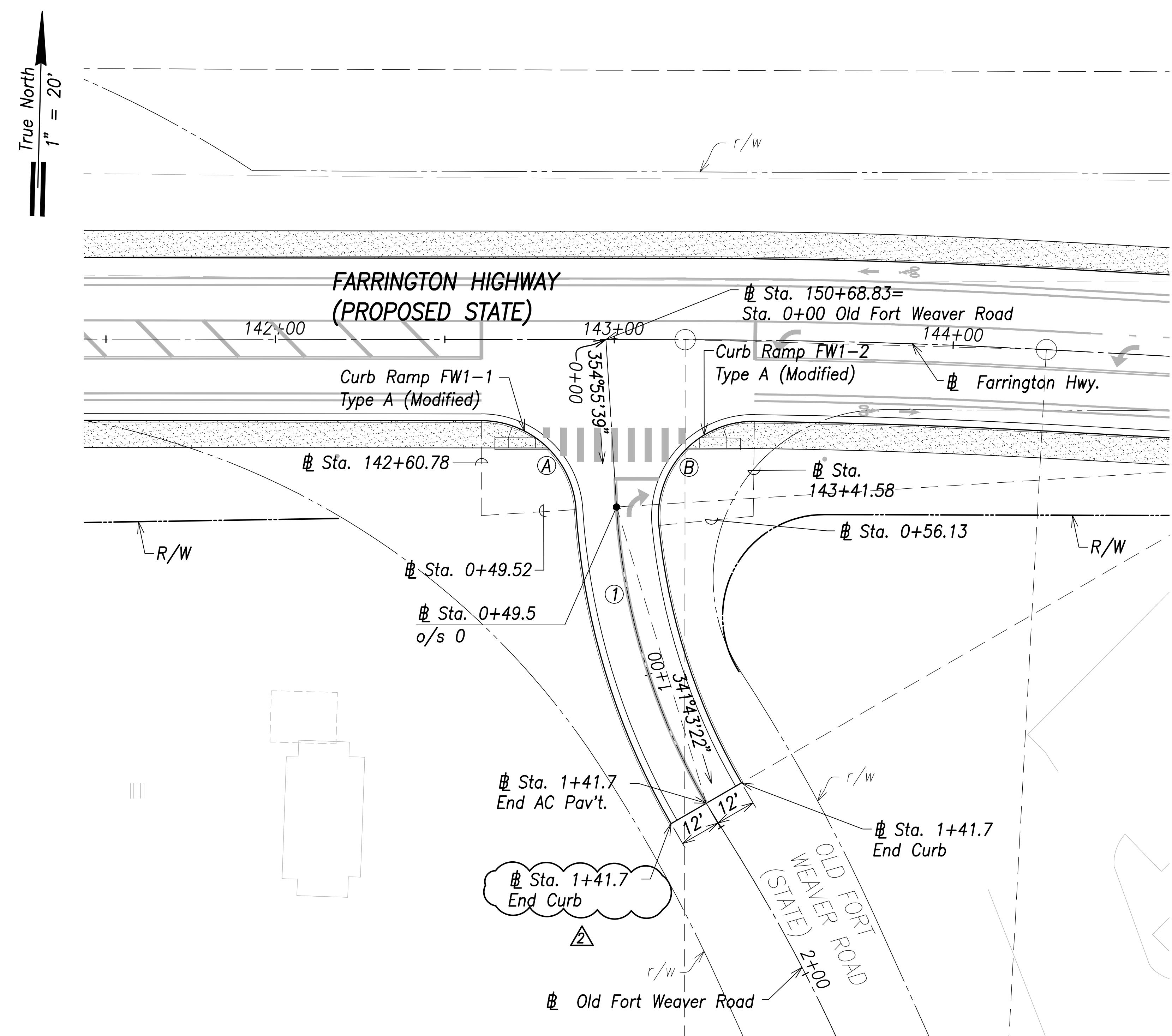
**Intersection Plan
 Intersection M**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-81 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	83	767



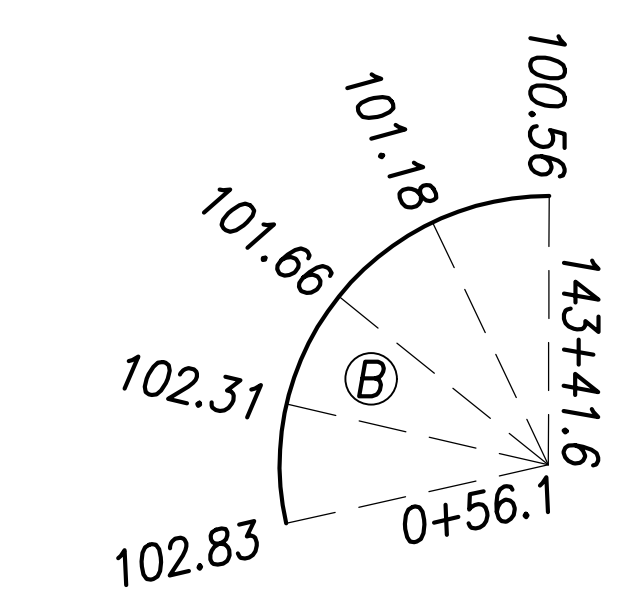
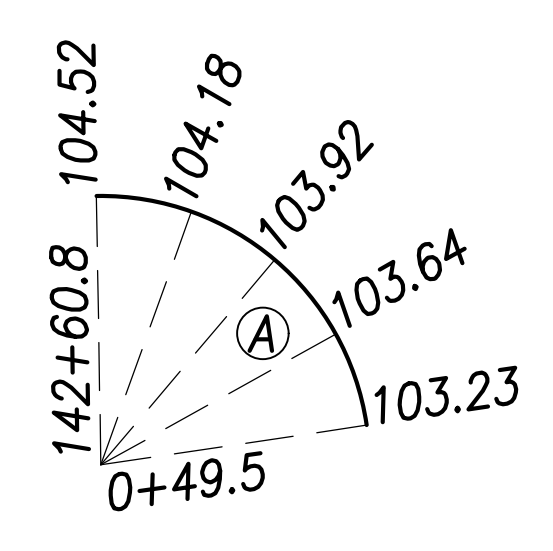
Intersection Plan - Old Fort Weaver Road-1
Scale: 1" = 20'

Curb Curve Data:

Ⓐ
 $\Delta=86^{\circ}17'57''$
 $\Delta/2=43^{\circ}08'59''$
 $R=28.00'$
 $T=26.25'$
 $C=38.30'$
 $Lc=42.17'$

Ⓑ
 $\Delta=96^{\circ}11'11''$
 $\Delta/2=48^{\circ}05'36''$
 $R=28.00'$
 $T=31.20'$
 $C=41.68'$
 $Lc=47.01'$

Curb Return Grades:
(Elevations refer to top of curb)

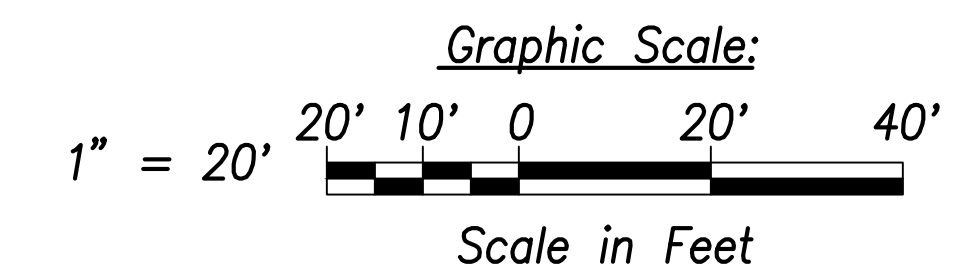


Ⓐ Curve Data:

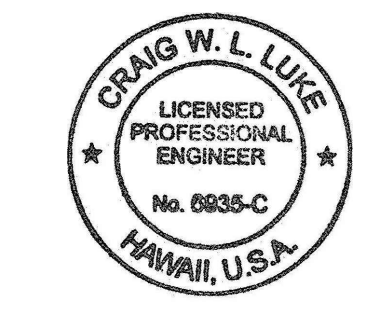
Ⓛ
 $\Delta=26^{\circ}24'33''$
 $\Delta/2=13^{\circ}12'16.5''$
 $R=200.00'$
 $T=46.93'$
 $C=91.37'$
 $Lc=92.19'$

Notes:

1. For roadway plans and profiles, see sheets C-50 to C-68.
2. For roadway grading, drainage, and stormwater quality, see sheets C-86 to C-103.
3. For curb ramp layout and grading, see sheets C-184 to C-202.



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised callout
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Intersection Plan
Old Fort Weaver Road-1

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

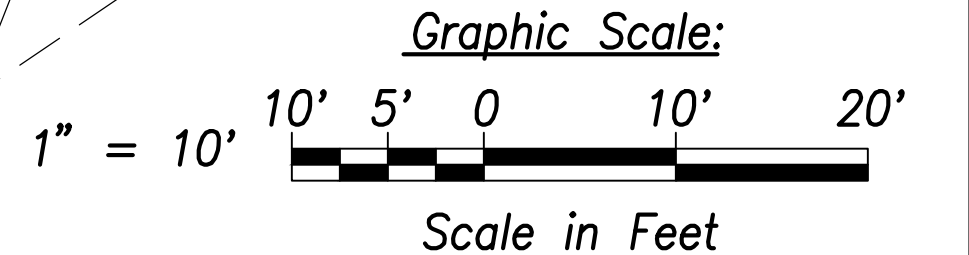
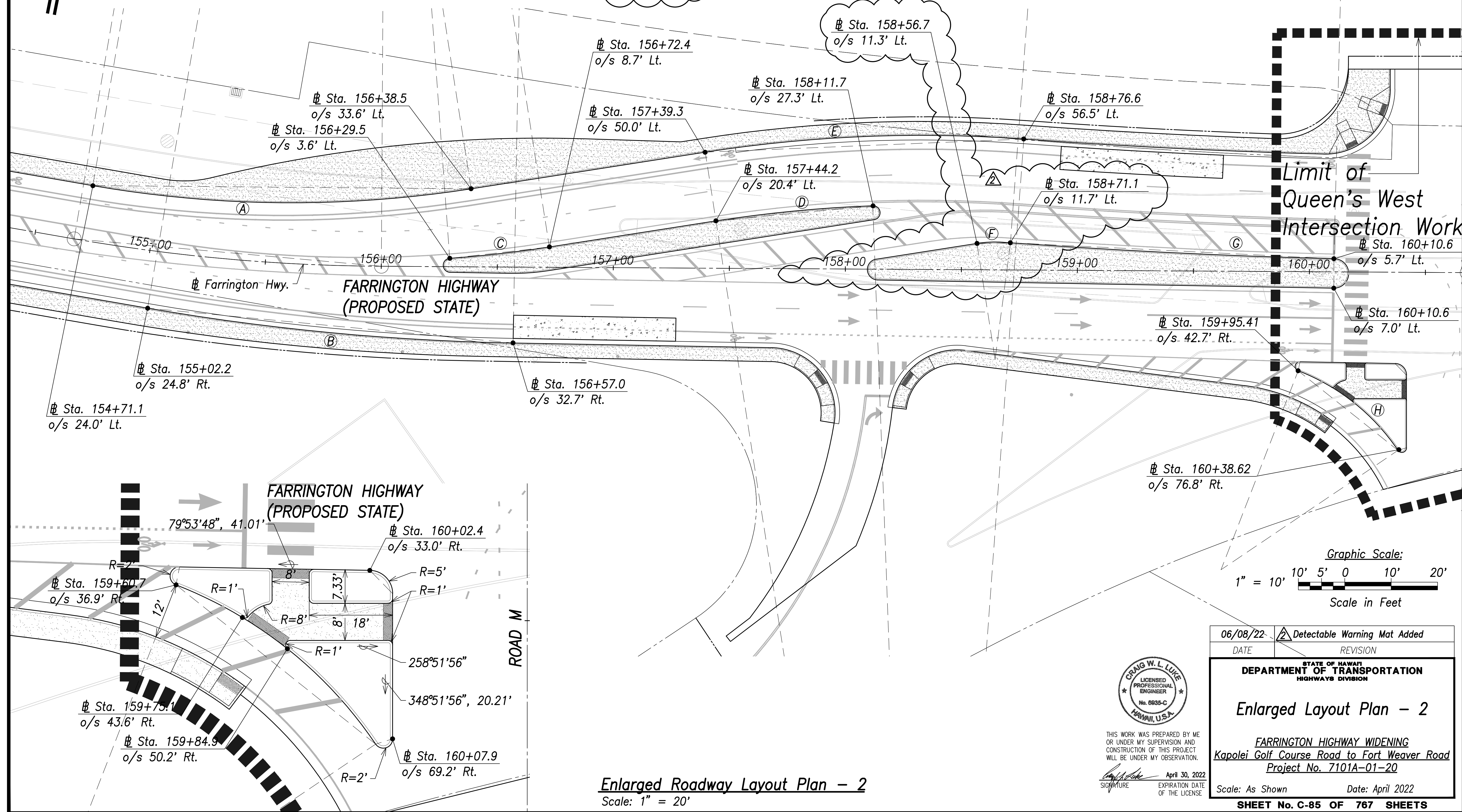
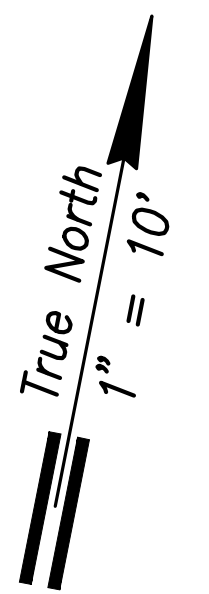
Scale: As Shown Date: April 2022

SHEET No. C-82 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	86	767

Curve Data:

A	B	C	D	E	F	G	H
$\Delta=18^{\circ}46'01''$	$\Delta=8^{\circ}50'12''$	$\Delta=4^{\circ}45'50''$	$\Delta=6^{\circ}47'30''$	$\Delta=13^{\circ}05'02''$	$\Delta=12^{\circ}46'05''$	$\Delta=2^{\circ}48'16''$	$\Delta=34^{\circ}34'37''$
$\Delta/2=9^{\circ}23'0.5''$	$\Delta/2=4^{\circ}25'6''$	$\Delta/2=2^{\circ}22'55''$	$\Delta/2=3^{\circ}23'45''$	$\Delta/2=6^{\circ}32'31''$	$\Delta/2=6^{\circ}23'2.4''$	$\Delta/2=1^{\circ}24'8''$	$\Delta/2=17^{\circ}17'18.5''$
R=500.00'	R=1027.00'	R=520.00'	R=573.00'	R=603.00'	R=50.50'	R=2852.30'	R=92.60'
T=82.63'	T=79.35'	T=21.63'	T=34.00'	T=69.15'	T=5.65'	T=69.82'	T=28.82'
C=163.04'	C=158.24'	C=43.22'	C=67.88'	C=137.40'	C=11.23'	C=139.59'	C=55.04'
Lc=163.77'	Lc=158.39'	Lc=43.24'	Lc=67.92'	Lc=137.70'	Lc=11.25'	Lc=139.61'	Lc=55.88'



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

06/08/22	1	Detectable Warning Mat Added
DATE	REVISION	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 Signature: *Craig W. L. Luke*
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Enlarged Layout Plan - 2

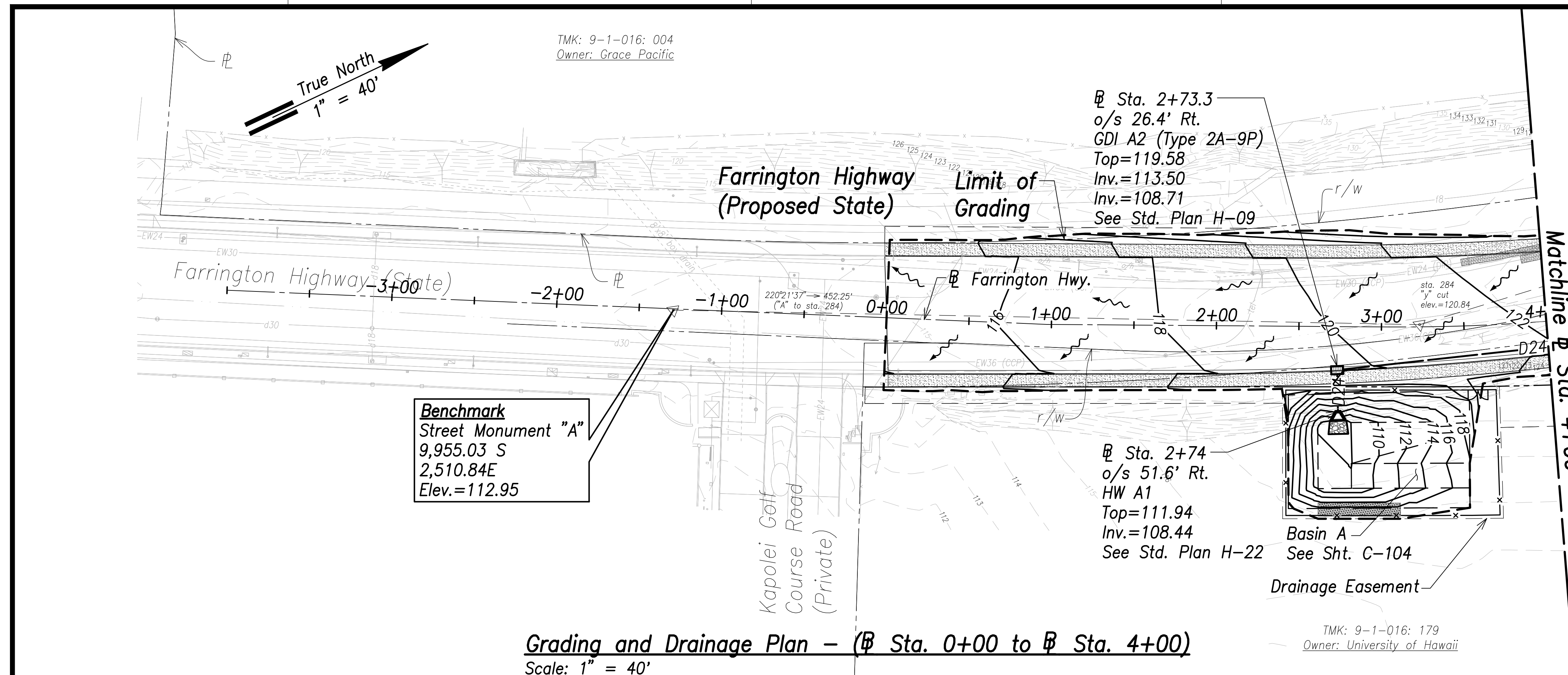
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-85 OF 767 SHEETS

Enlarged Roadway Layout Plan - 2
 Scale: 1" = 20'

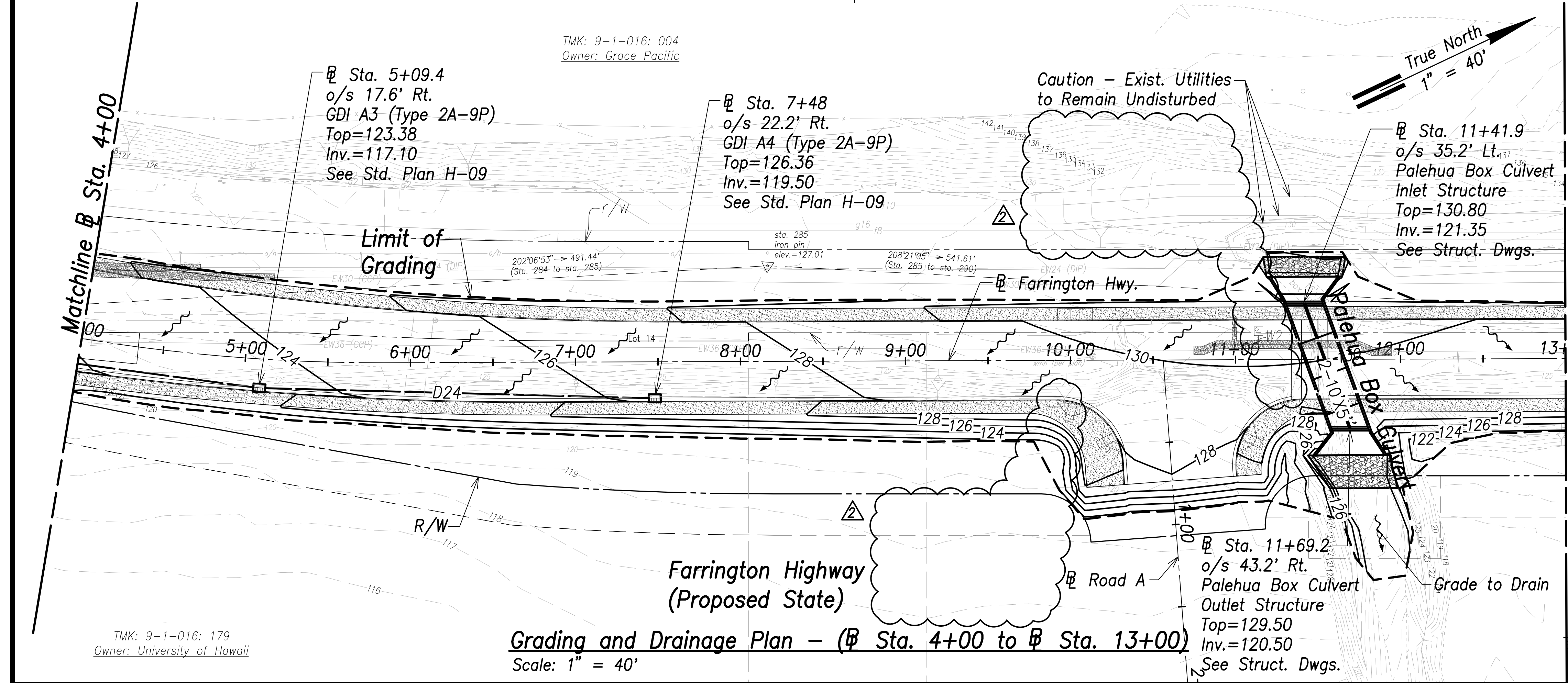
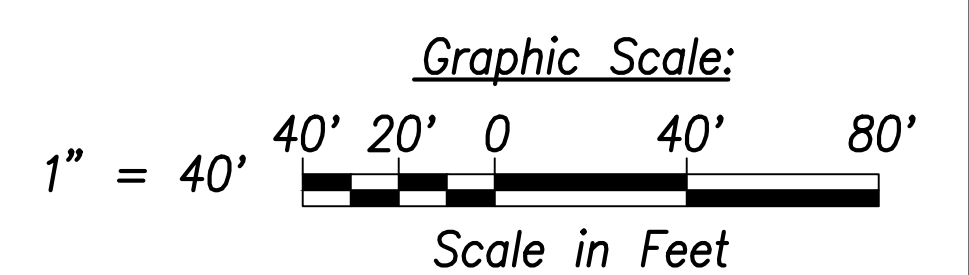
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	87	767



Grading and Drainage Plan - (Sta. 0+00 to Sta. 4+00)
Scale: 1" = 40'

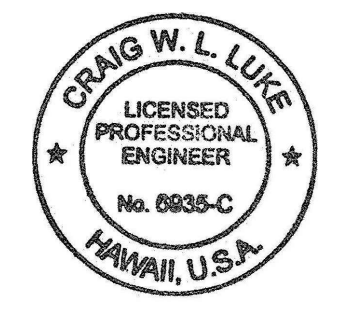
- Legend:**
- Existing Grade Contour
 - Finished Grade Contour
 - Limit of Grading
 - Drainage Flow Direction

- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3



Grading and Drainage Plan - (Sta. 4+00 to Sta. 13+00)
Scale: 1" = 40'

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

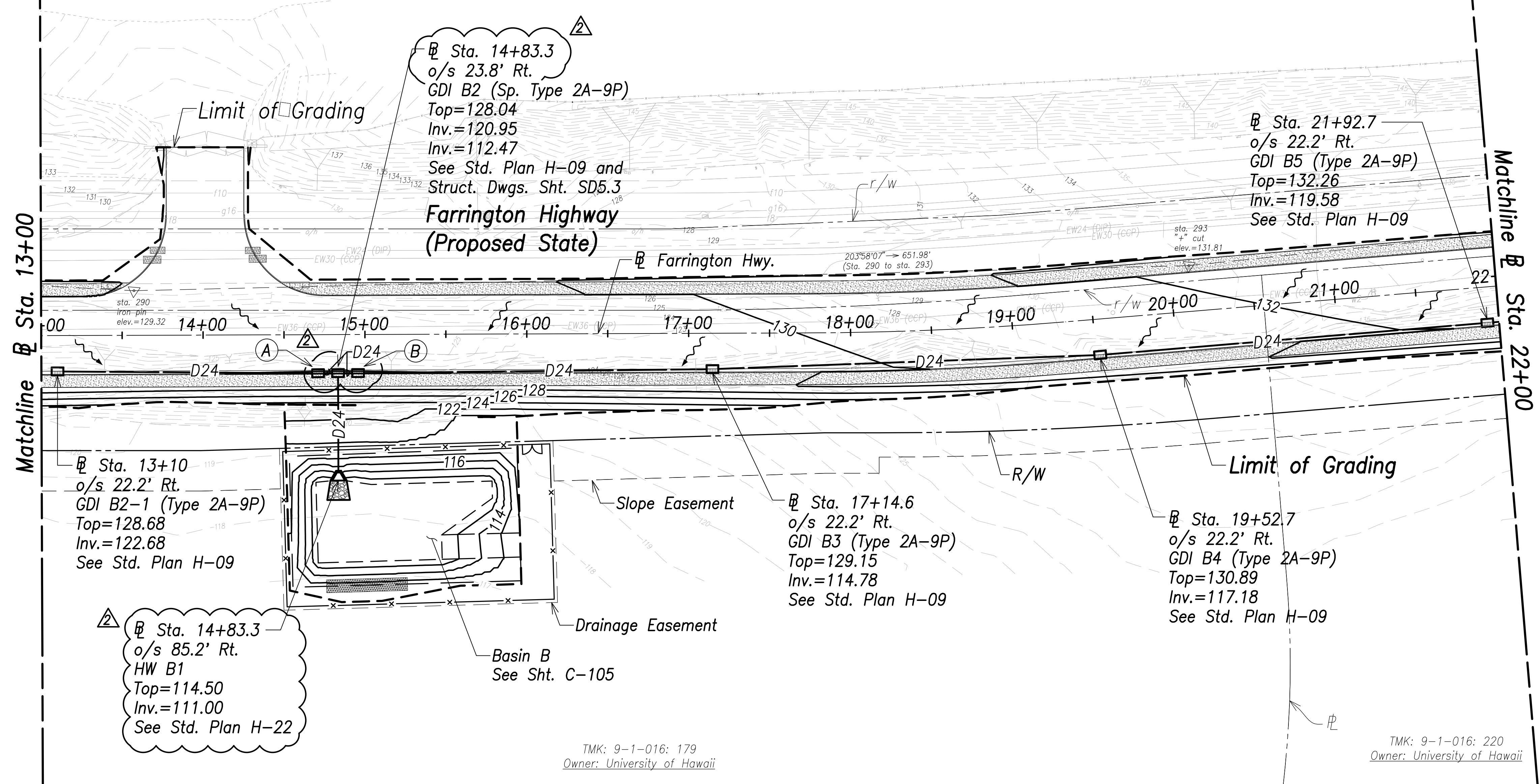
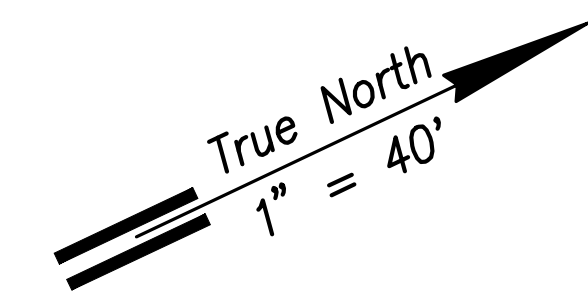


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *[Signature]* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Removed GDI A5 and A6
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Grading and Drainage Plan Sta. 0+00 to Sta. 13+00	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-86 OF 767 SHEETS	

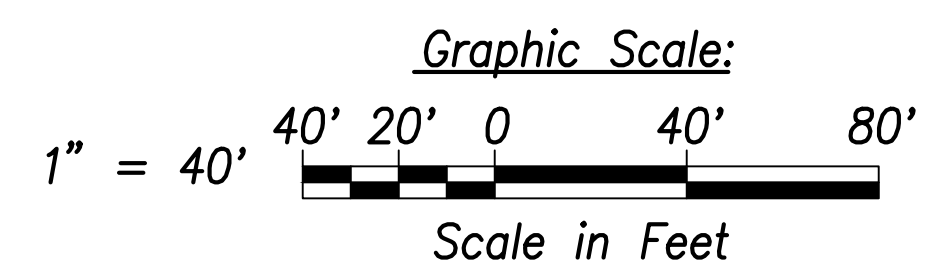
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	88	767

TMK: 9-1-016: 004
Owner: Grace Pacific



- Legend:**
- Existing Grade Contour
 - Finished Grade Contour
 - Limit of Grading
 - Drainage Flow Direction

- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3



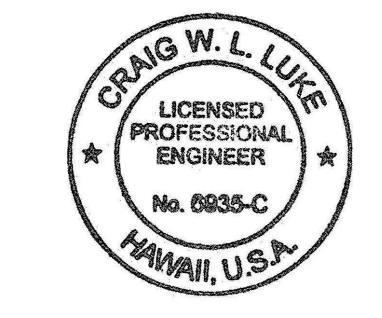
TMK: 9-1-016: 179
Owner: University of Hawaii

TMK: 9-1-016: 220
Owner: University of Hawaii

Grading and Drainage Plan - (Sta. 13+00 to Sta. 22+00)
Scale: 1" = 40'

- (A)** Sta. 14+71
o/s 23.8' Rt.
GDI B2-A (Type 2A-9P)
Top=128.05
Inv.=121.07
See Std. Plan H-09 and Struct. Dwgs. Sht. SD5.3
- (B)** Sta. 14+95.7
o/s 23.8' Rt.
GDI B2-B (Sp. Type 2A-9P)
Top=128.05
Inv.=112.59
See Std. Plan H-09 and Struct. Dwgs. Sht. SD5.3

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Revised HW B1; Revised GDI B2, B2-A, and B2-B
DATE	REVISION

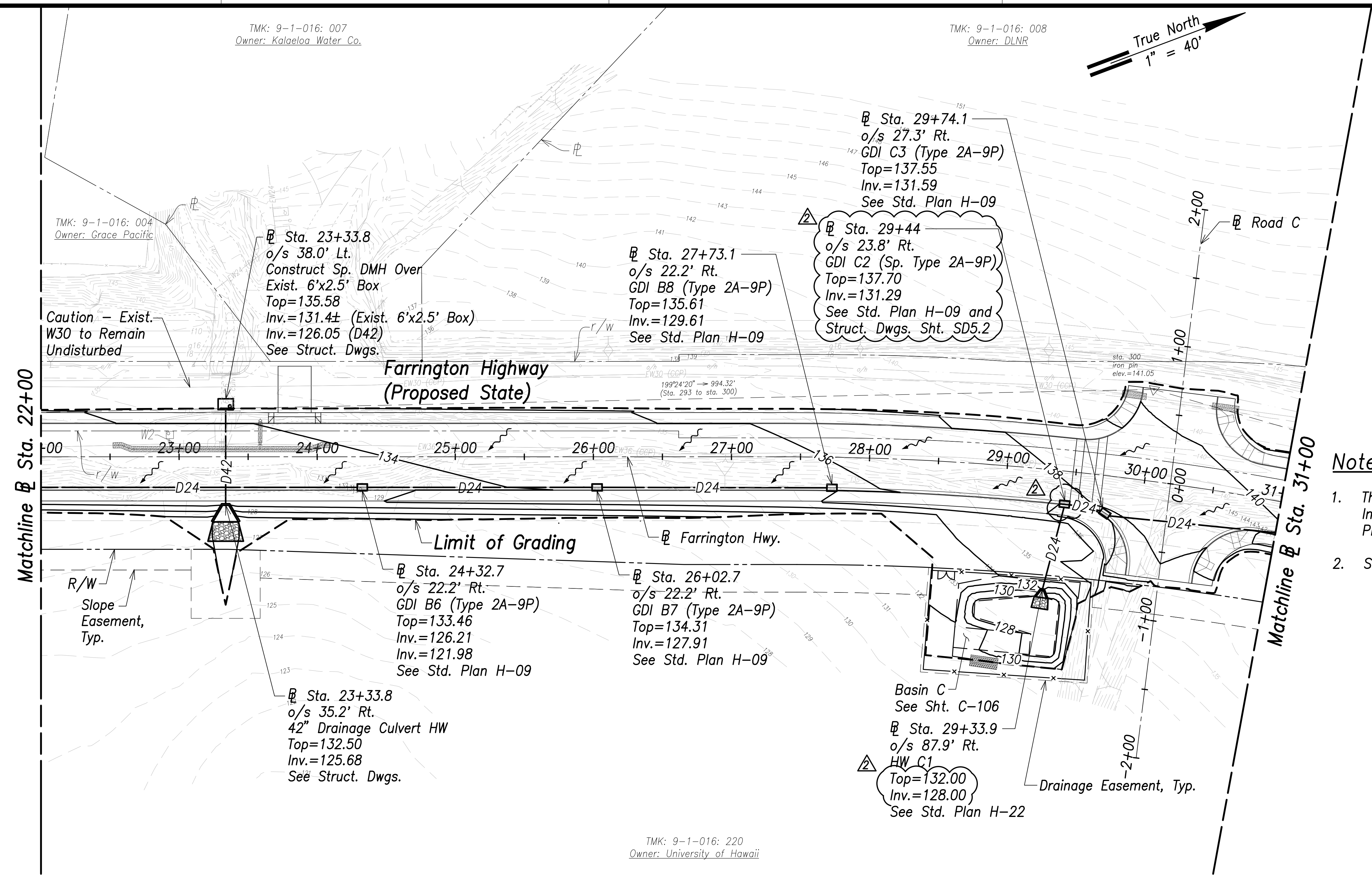
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
Sta. 13+00 to Sta. 22+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

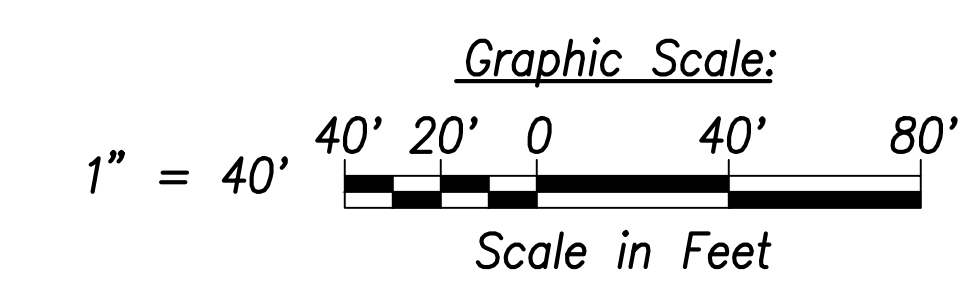
Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	89	767



- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3

- Legend:**
- 70- Existing Grade Contour
 - 100- Finished Grade Contour
 - - - - - Limit of Grading
 - ~ ~ ~ ~ ~ Drainage Flow Direction



Grading and Drainage Plan - (Sta. 22+00 to Sta. 31+00)
Scale: 1" = 40'

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

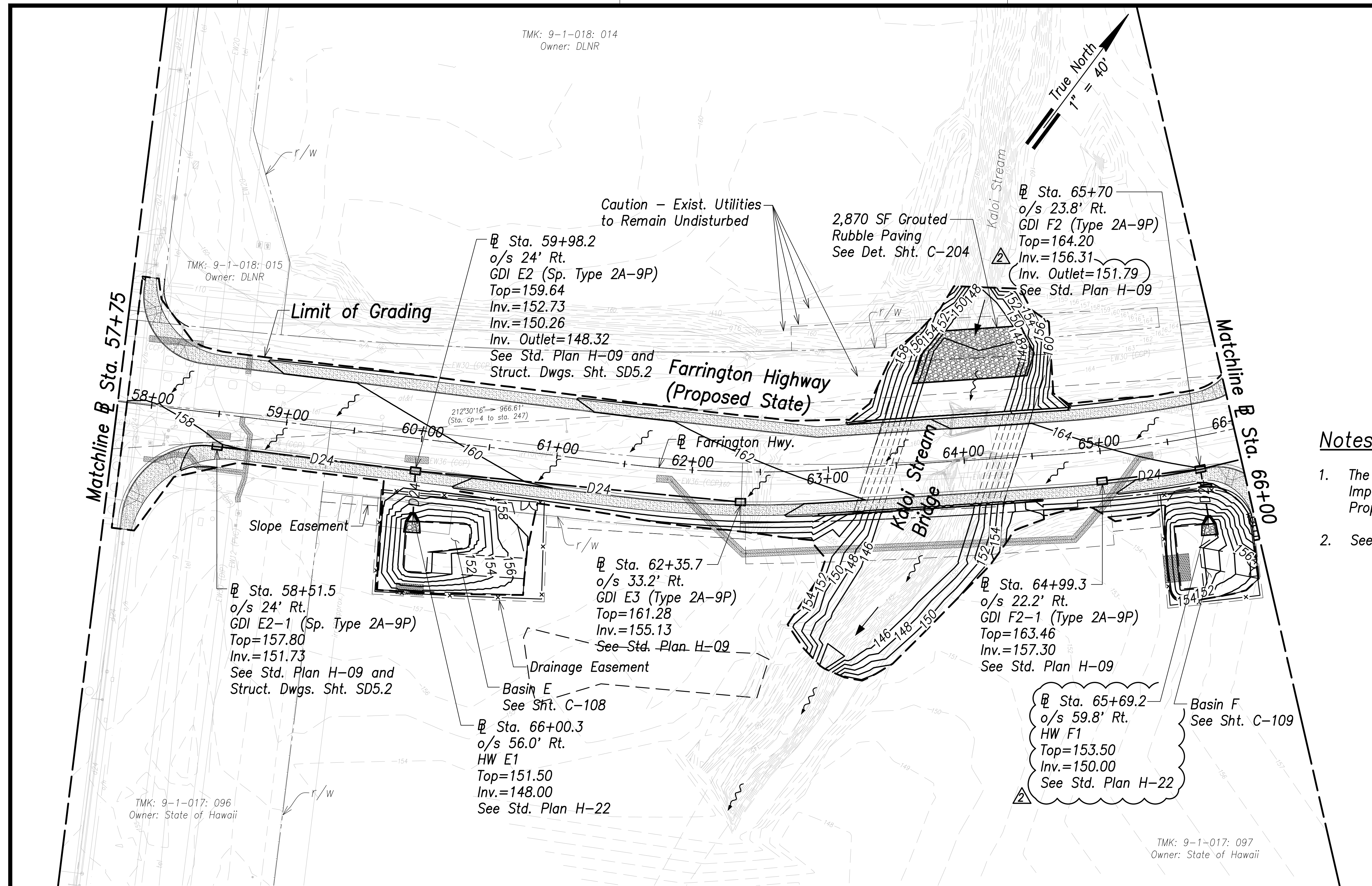
CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6835-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Revised HW C1 and GDI C2
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Grading and Drainage Plan Sta. 22+00 to Sta. 31+00	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-88 OF 767 SHEETS	

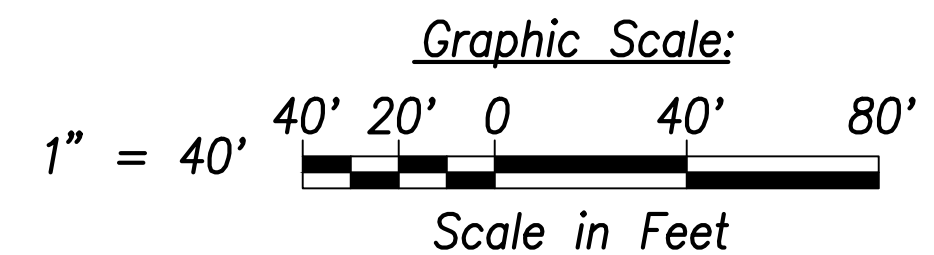
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	93	767



- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3

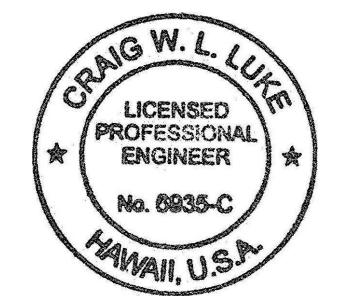
Legend:

- 70 --- Ground Contour
- 100 --- Finished Grade Contour
- 70 --- Finished Grade Contour (Under Bridge)
- Limit of Grading
- Existing Flow
- Proposed Flow



Grading and Drainage Plan - (Sta. 57+75 to Sta. 66+00)
 Scale: 1" = 40'

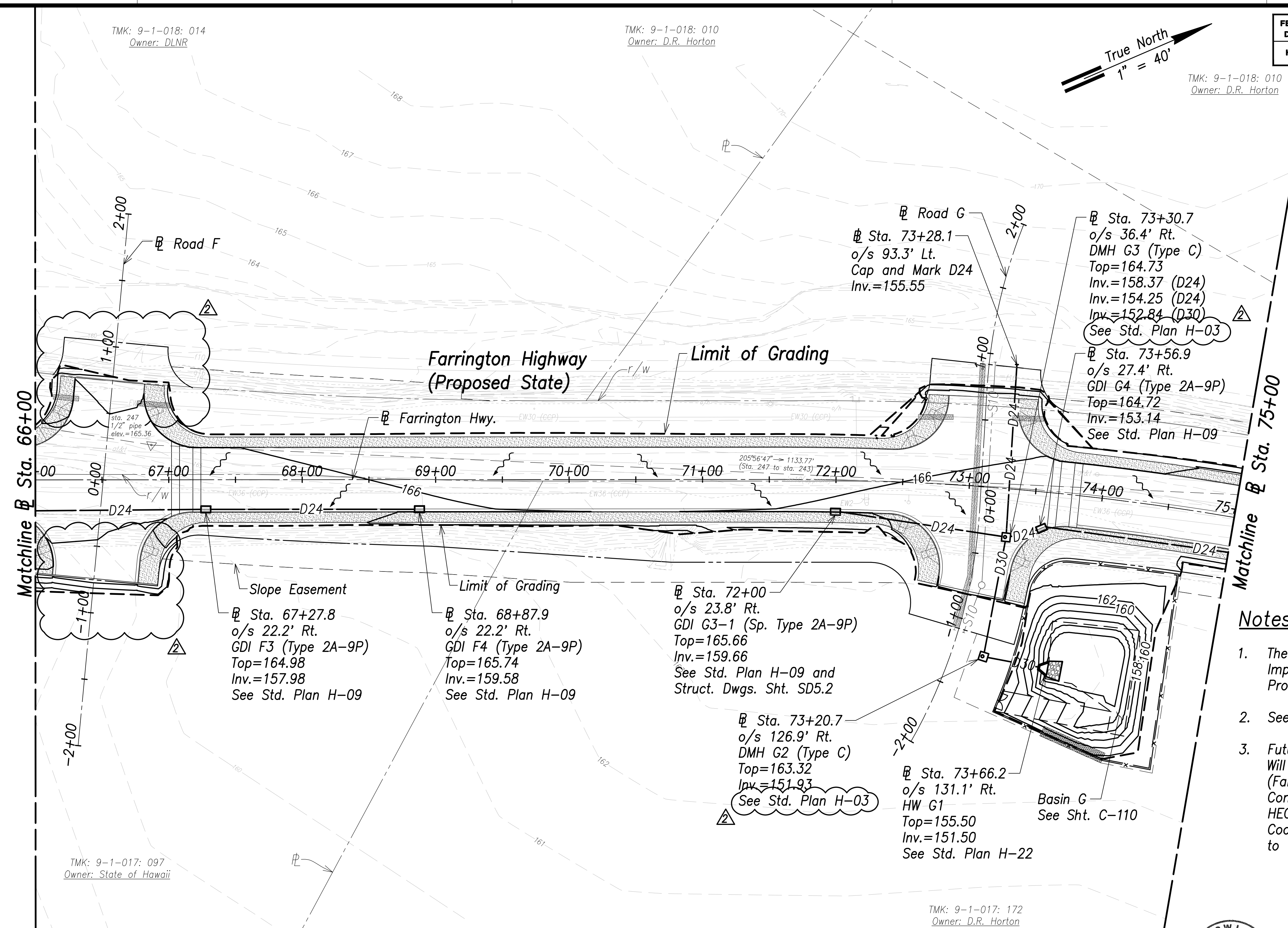
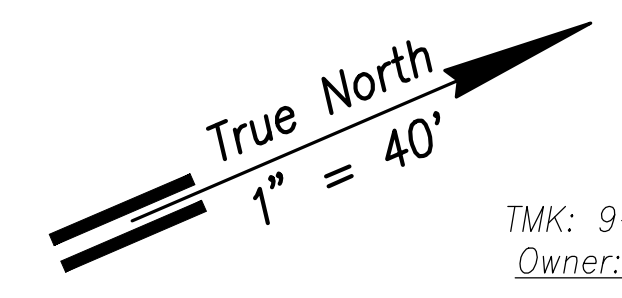
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. L. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised HW F1 and GDI F2
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Grading and Drainage Plan Sta. 57+75 to Sta. 66+00 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-92 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	94	767

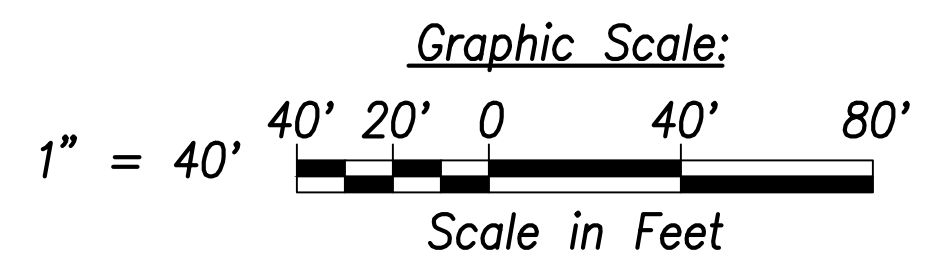


Legend:

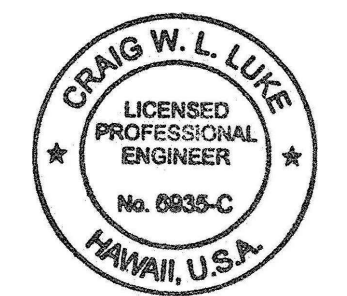
	Existing Grade Contour
	Finished Grade Contour
	Limit of Grading
	Drainage Flow Direction

- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3.
 - Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

Grading and Drainage Plan - (Sta. 66+00 to Sta. 75+00)
Scale: 1" = 40'



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

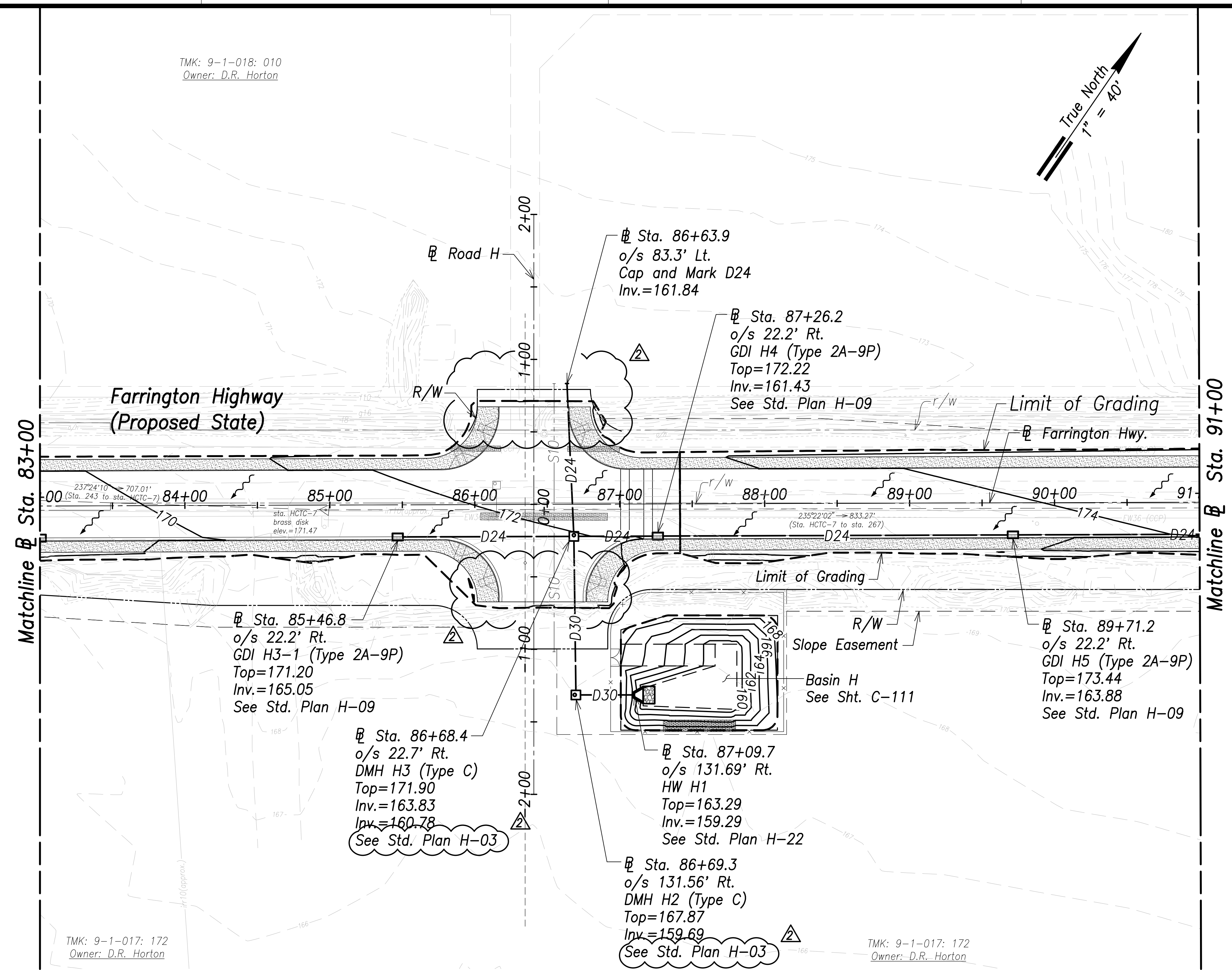
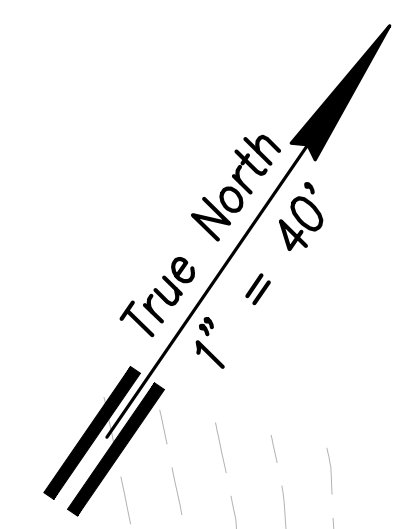
Craig W. Luke
SIGNATURE

APR 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Revised detail reference; Revised road stub grading
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Grading and Drainage Plan Sta. 66+00 to Sta. 75+00 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-93 OF 767 SHEETS	

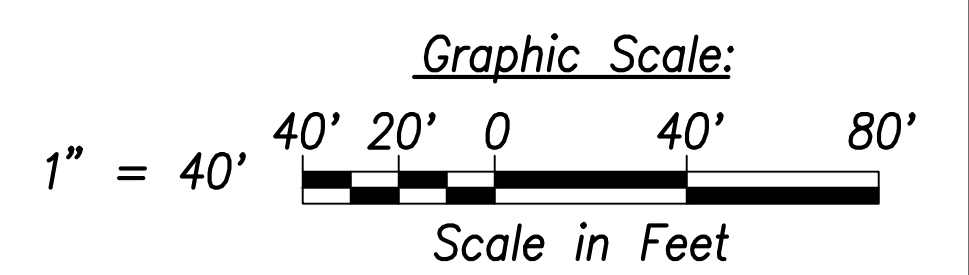
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	96	767

TMK: 9-1-018: 010
Owner: D.R. Horton



- Legend:**
- Existing Grade Contour
 - Finished Grade Contour
 - Limit of Grading
 - Drainage Flow Direction

- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3.
 - Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

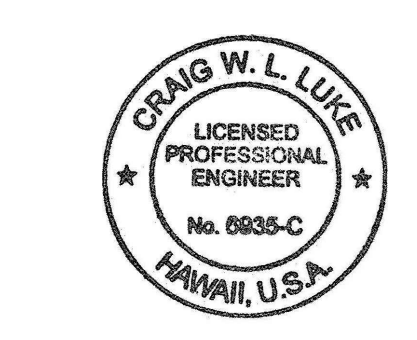


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
No.	

TMK: 9-1-017: 172
Owner: D.R. Horton

TMK: 9-1-017: 172
Owner: D.R. Horton

Grading and Drainage Plan - (Sta. 83+00 to Sta. 91+00)
Scale: 1" = 40'

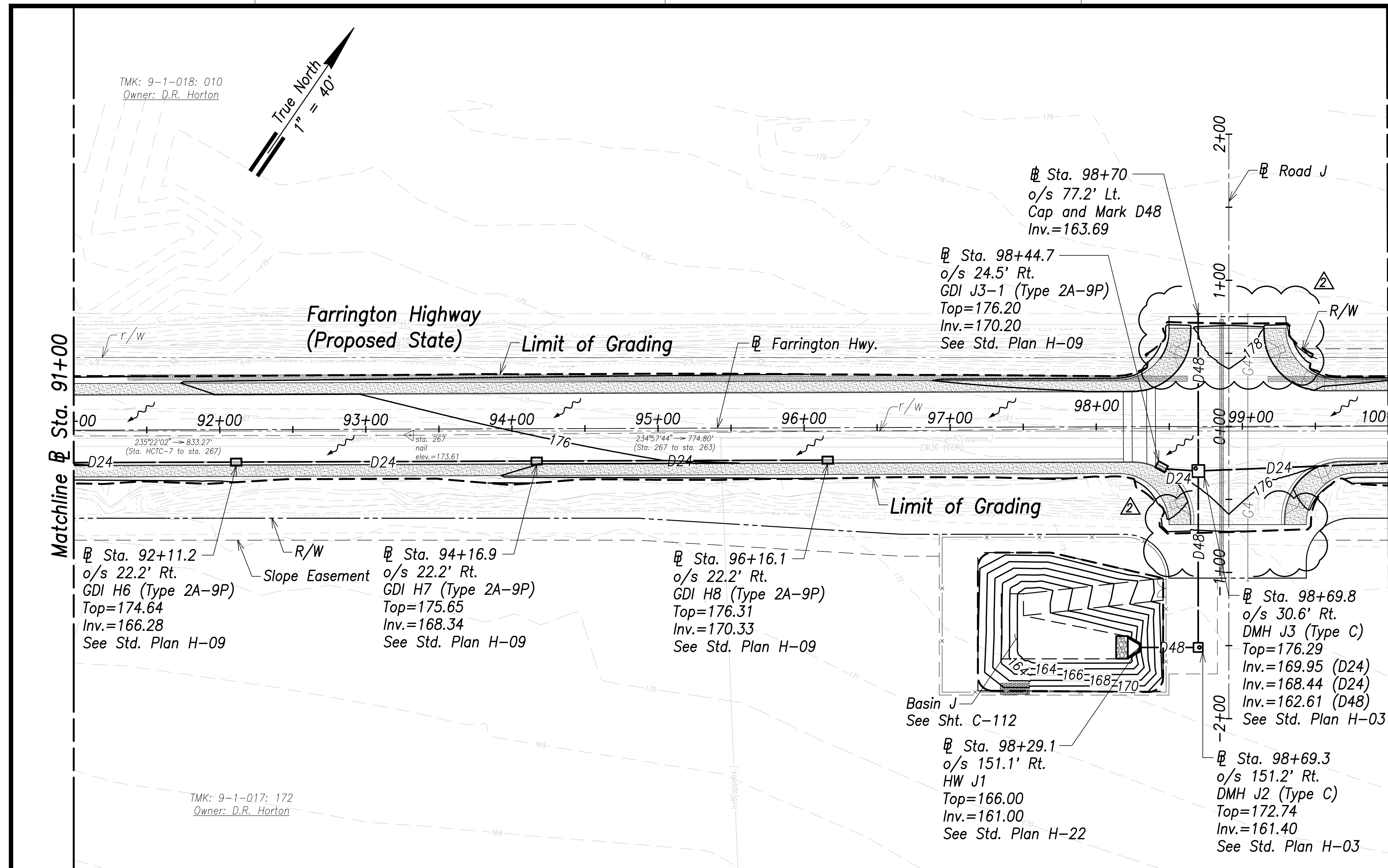


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised detail reference; Revised road stub grading
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Grading and Drainage Plan Sta. 83+00 to Sta. 91+00 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET No. C-95 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	97	767

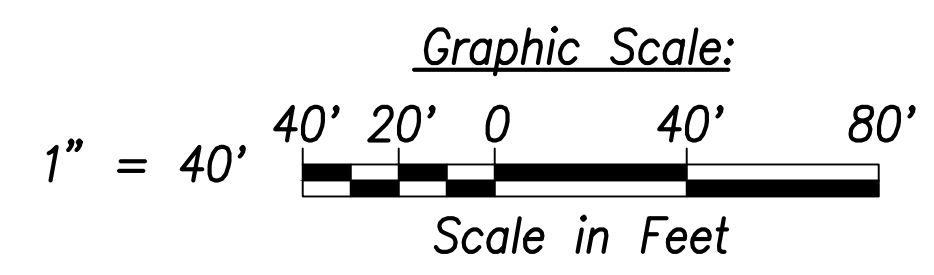


- Notes:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - See Access to Farm Lots notes on sheet C-3.
 - Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.

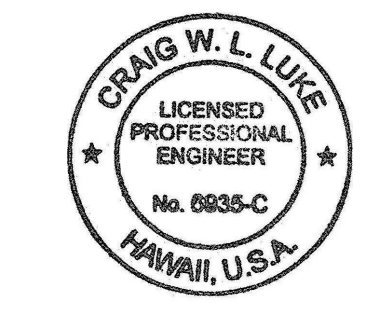
Legend:

	66	Ground Contour
	68	Finished Grade Contour
		Limit of Grading
		Flow Direction

Grading and Drainage Plan - (Sta. 91+00 to Sta. 100+00)
 Scale: 1" = 40'



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised road stub grading
DATE	REVISION

**STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION**

**Grading and Drainage Plan
 Sta. 91+00 to Sta. 100+00**

**FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20**

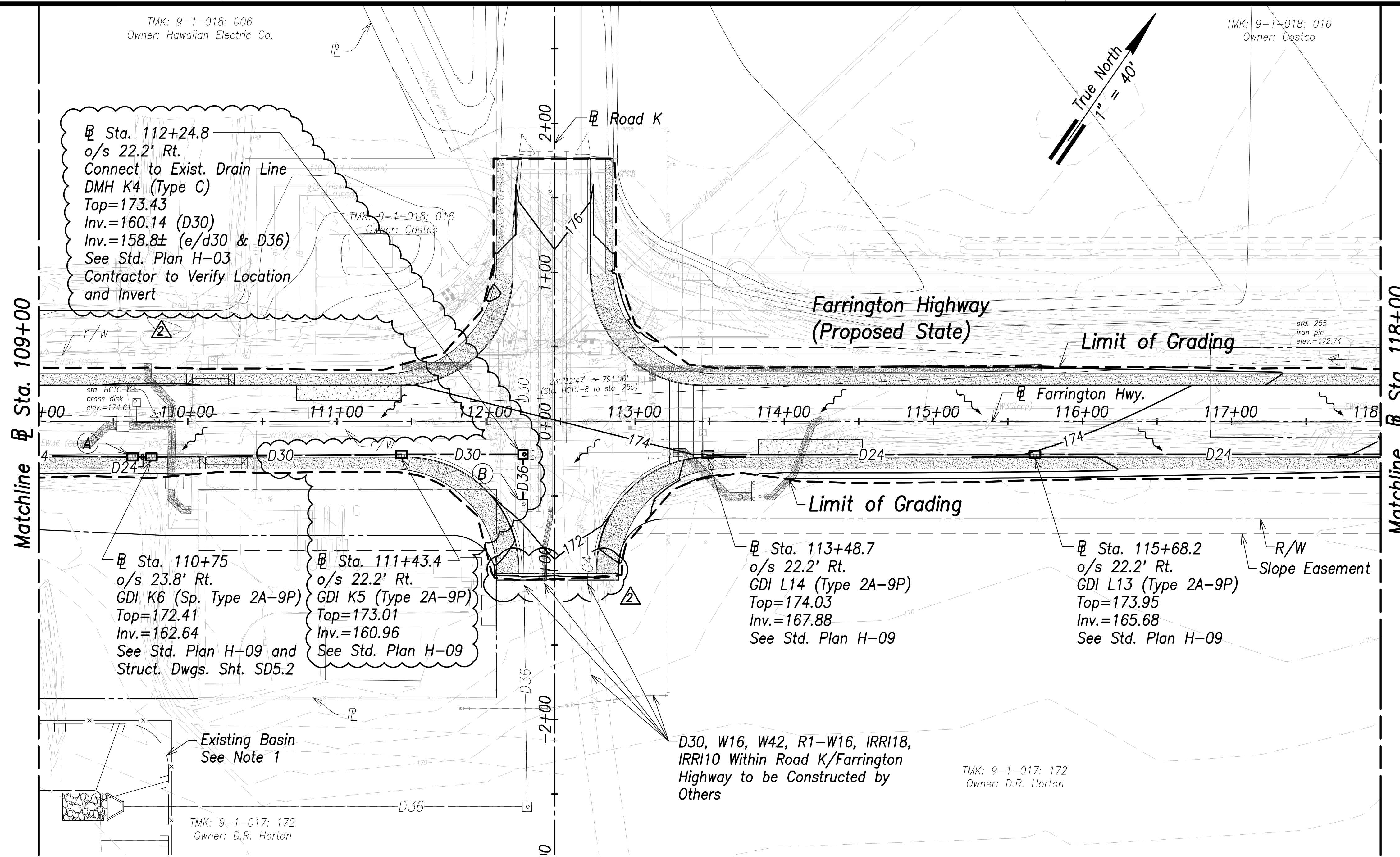
Scale: As Shown Date: April 2022

SHEET No. C-96 OF 767 SHEETS

TMK: 9-1-018: 006
Owner: Hawaiian Electric Co.

TMK: 9-1-018: 016
Owner: Costco

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	99	767



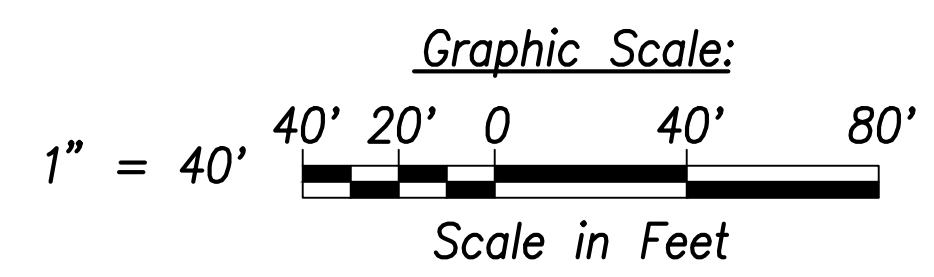
Notes:

1. Future drain line, manhole and basin improvements to be constructed by others under the project plans prepared by the R.M. Towill Corp., titled "Ho'opili Development - Industrial Mixed Use Intersection Improvements", Construction Plan File No. 2017/CP-307 (Subd. File No. 2018/SUB-187, 2018/SUB-201) and "Ho'opili Industrial Mixed Use (IMX) Subdivision Mass Grading and Infrastructure Improvements", Construction Plan File No. 2020/CP-66 (Subd. File No. 2019/SUB-162)
2. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
3. See Access to Farm Lots notes on sheet C-3.

Legend:

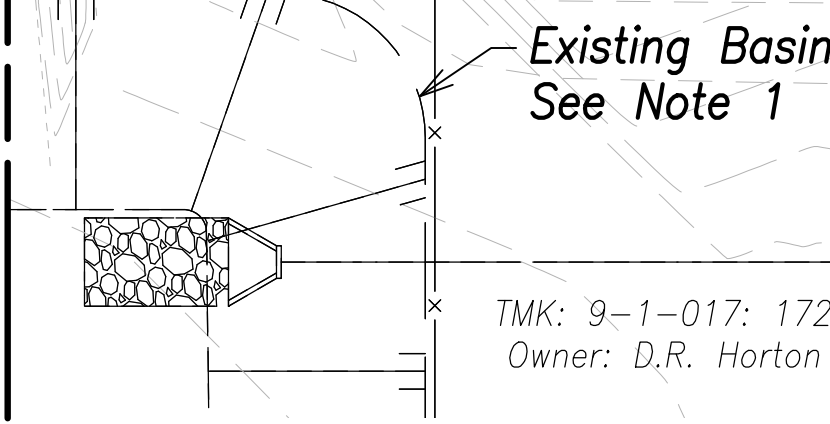
- - - 70 - - - Existing Grade Contour
- 100 — Finished Grade Contour
- - - - - Limit of Grading
- ~ ~ ~ Drainage Flow Direction

Grading and Drainage Plan - (Sta. 109+00 to Sta. 118+00)
Scale: 1" = 40'



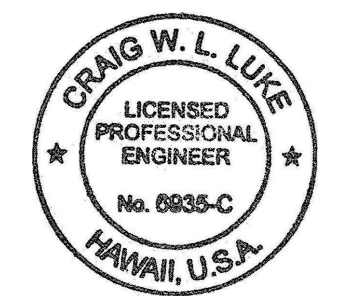
Ⓐ Sta. 109+63
o/s 23.8' Rt.
GDI K6-A (Sp. Type 2A-9P)
Top=172.41
Inv.=162.76
See Std. Plan H-09 and Struct. Dwgs. Sht. SD5.2

Ⓑ Sta. 112+24.8
o/s 55.5' Rt.
Conn. To Exist. DMH K3
Inv.=158.2± (e/D36 & D36)



D30, W16, W42, R1-W16, IRR118, IRR110 Within Road K/Farrington Highway to be Constructed by Others

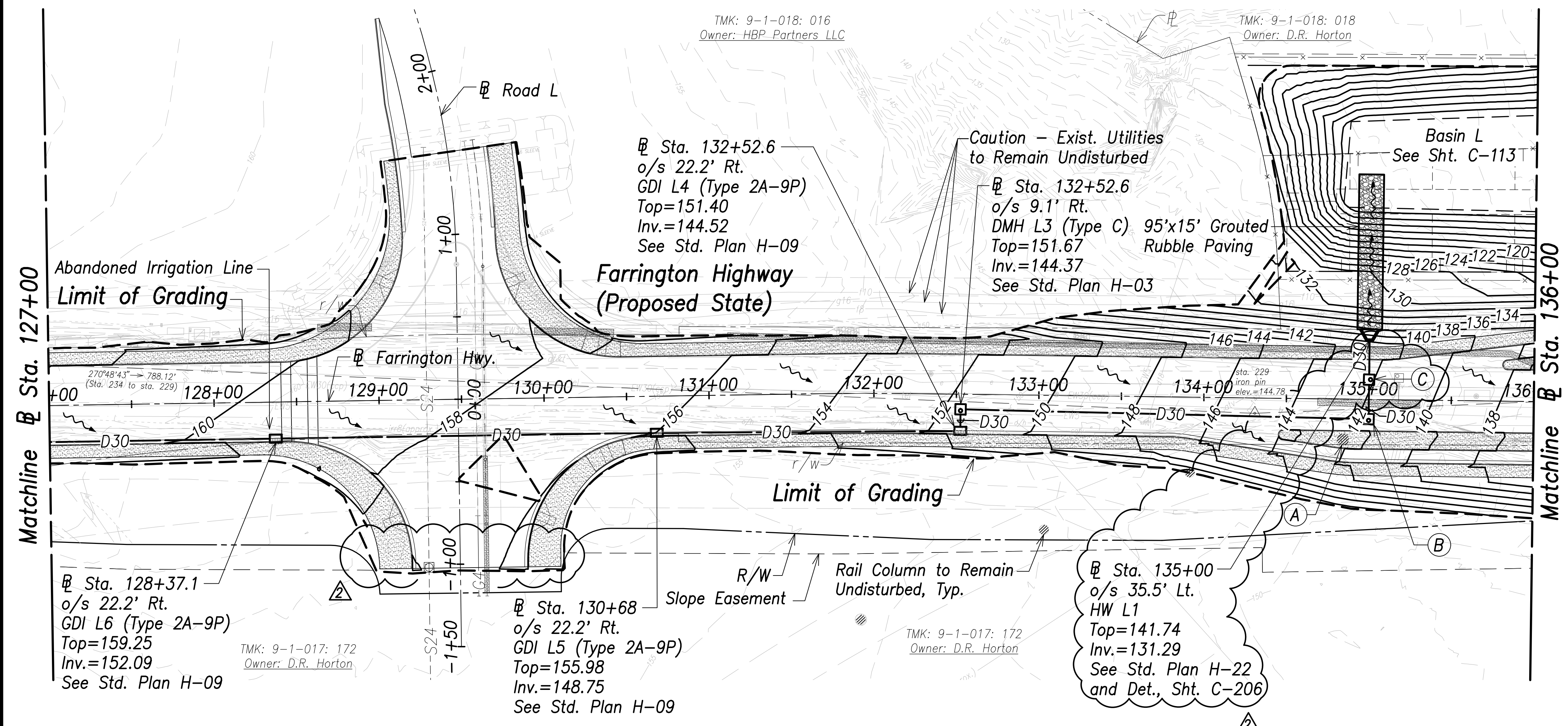
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised drain line; Revised road stub grading
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Grading and Drainage Plan Sta. 109+00 to Sta. 118+00 FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET NO. C-98 OF 767 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	101	767



Grading and Drainage Plan - (Sta. 127+00 to Sta. 136+00)
Scale: 1" = 40'

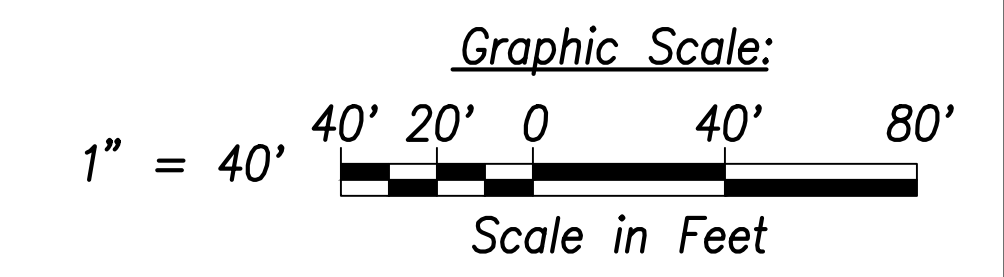
- (A) Conn. to Exist. Downspout See Det., Sht. C-205
- (B) Sta. 135+00 o/s 11.1' Rt. DMH L2 (Type C) Top=141.69 Inv.=135.69 See Std. Plan H-03
- (C) Sta. 135+00 o/s 12.0' Lt. DMH L1-1 (Type C) Top=142.15 Inv.=135.45 Inv. Outlet=131.52 See Det., Sht. C-205

Note:

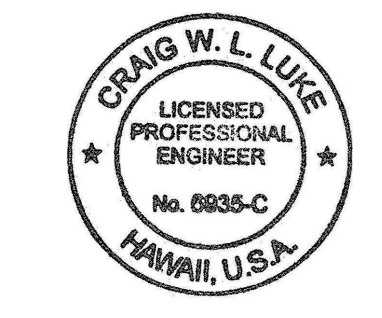
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
- Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities and Cleanout.

Legend:

- 70--- Existing Grade Contour
- 100— Finished Grade Contour
- - - - - Limit of Grading
- ~ ~ ~ ~ ~ Drainage Flow Direction



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Added DMH; Revised drain line; Revised road stub grading
DATE	REVISION

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

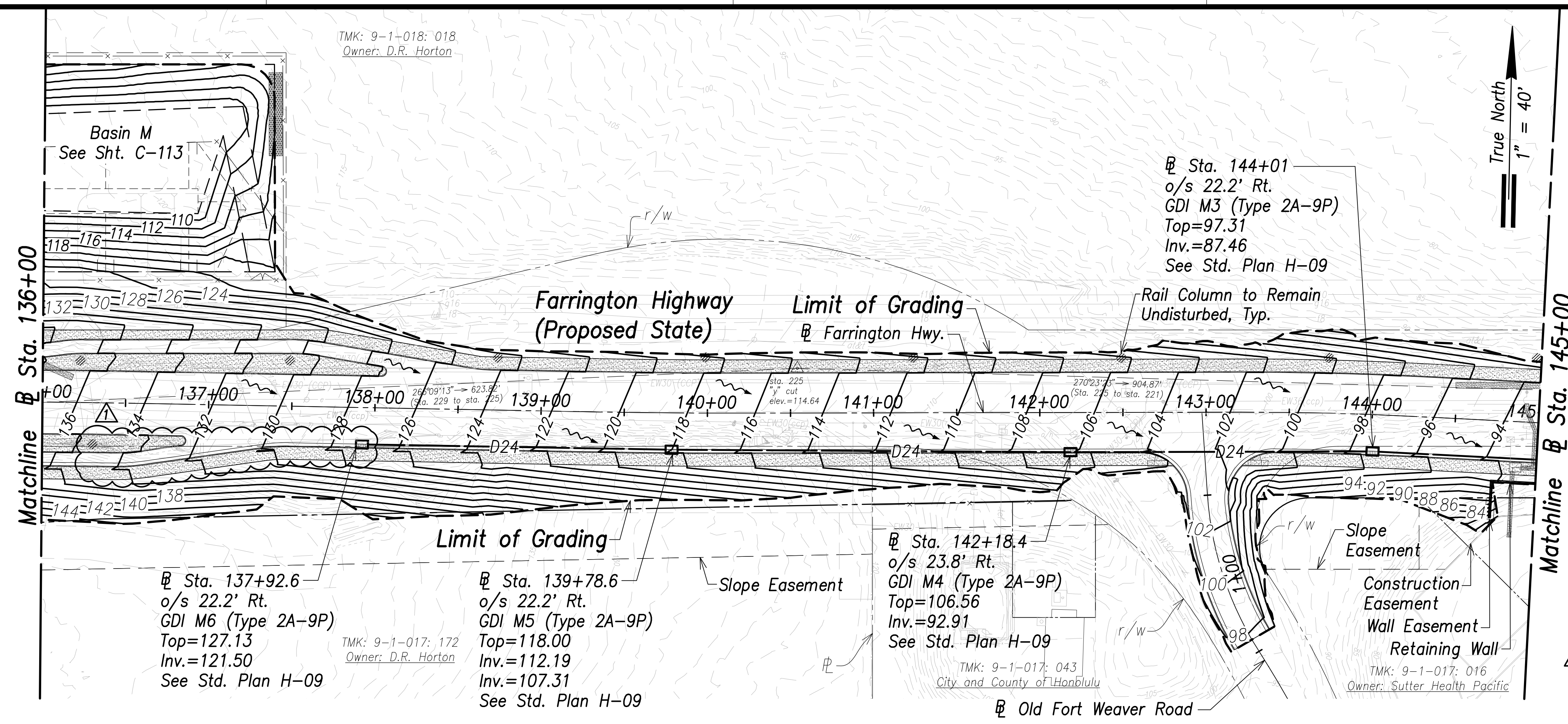
**Grading and Drainage Plan
Sta. 127+00 to Sta. 136+00**

**FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20**

Scale: As Shown Date: April 2022

SHEET No. C-100 OF 767 SHEETS

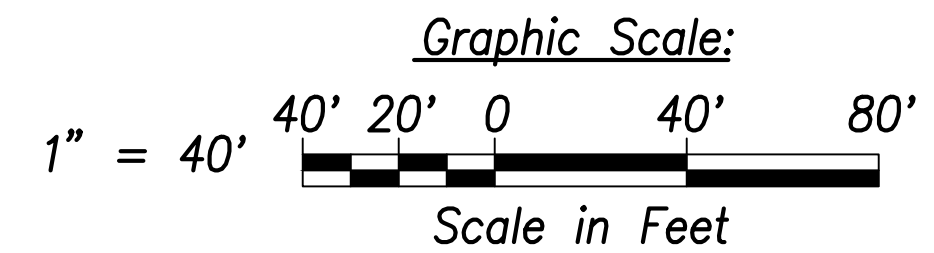
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	102	767



- Note:**
- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
 - Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities.
 - Grading along the makai shoulder between Old Fort Weaver Road (West) and Honouliuli Stream Bridge, and construction of Retaining Wall must be completed within four months of receiving Notice to Proceed. The Contractor shall coordinate work with HECO.

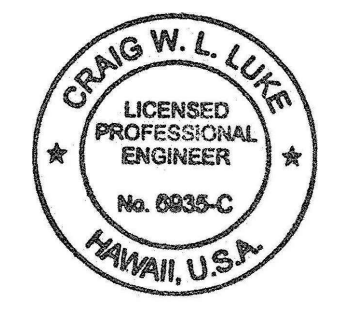
Grading and Drainage Plan - (Sta. 136+00 to Sta. 145+00)
Scale: 1" = 40'

- Legend:**
- - - - -70- - - - - Existing Grade Contour
 - 100————— Finished Grade Contour
 - - - - - Limit of Grading
 - ~~~~~ Drainage Flow Direction



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

06/08/22	Removed drain line and blocks, added notes
DATE	REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Grading and Drainage Plan
Sta. 136+00 to Sta. 145+00

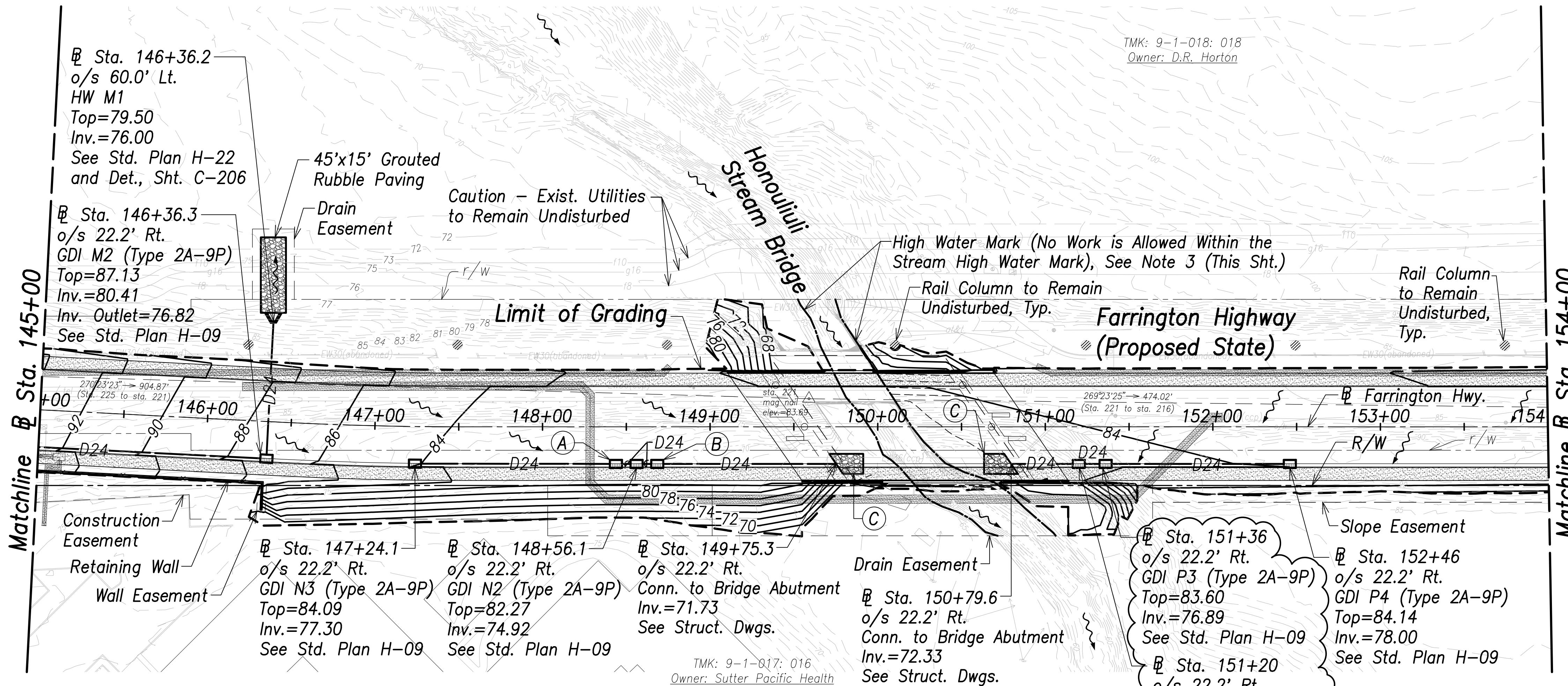
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-101 Grading and Drainage Plan - Sta. 136+00 to 145+00.dwg saved June 3, 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	103	767

True North
1" = 40'



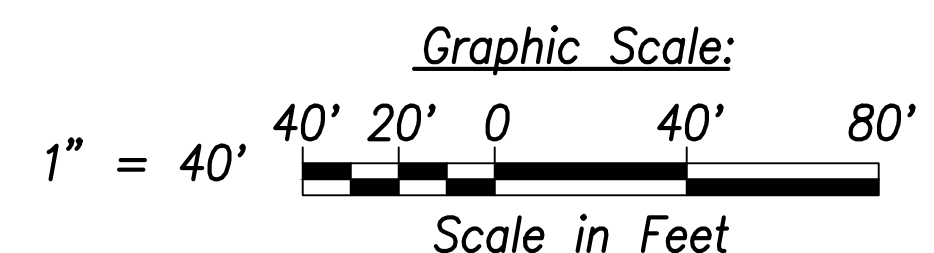
Grading and Drainage Plan - (Sta. 145+00 to Sta. 154+00)
Scale: 1" = 40'

Notes:

- The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
- See Access to Farm Lots notes on sheet C-3.
- Work Within Honouliuli Stream Up to High Water Mark is Prohibited.
- Grading along the makai shoulder between Old Fort Weaver Road (West) and Honouliuli Stream Bridge, and construction of Retaining Wall must be completed within four months of receiving Notice to Proceed. The Contractor shall coordinate work with HECO.

Legend:

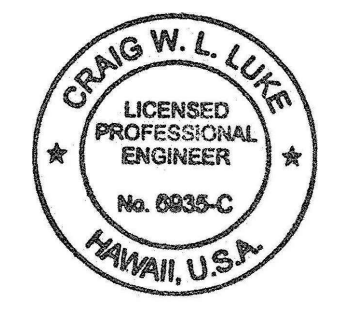
- 70 --- Ground Contour
- 100 — Finished Grade Contour
- 70 --- Finished Grade Contour (Under Bridge)
- --- Limit of Grading
- ~ ~ ~ Existing Flow



- | | | |
|--|--|--|
| (A) | (B) | (C) |
| <p>Sta. 148+43.8
o/s 22.2' Rt.
GDI N2-A (Type 2A-9P)
Top=82.28
Inv.=75.14
See Std. Plan H-09</p> | <p>Sta. 148+68.5
o/s 22.2' Rt.
GDI N2-B (Type 2A-9P)
Top=82.28
Inv.=74.59
See Std. Plan H-09</p> | <p>20'x12' Grouted
Rubble Paving</p> |

- Sta. 151+36
o/s 22.2' Rt.
GDI P3 (Type 2A-9P)
Top=83.60
Inv.=76.89
See Std. Plan H-09
- Sta. 151+20
o/s 22.2' Rt.
GDI P2 (Type 2A-9P)
Top=83.52
Inv.=76.73
Inv.=72.73
See Std. Plan H-09
- Sta. 152+46
o/s 22.2' Rt.
GDI P4 (Type 2A-9P)
Top=84.14
Inv.=78.00
See Std. Plan H-09

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Revised GDIs, added note
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

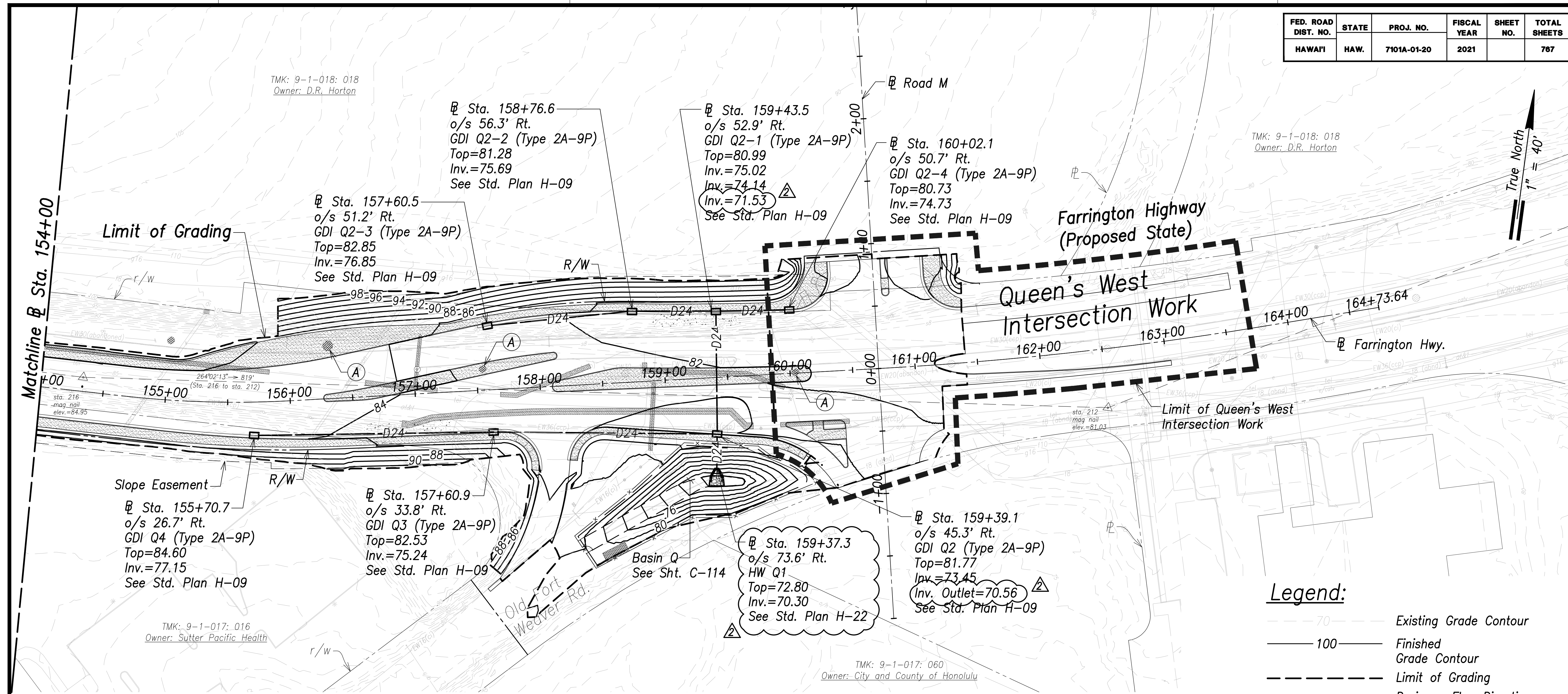
Grading and Drainage Plan
Sta. 145+00 to Sta. 154+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

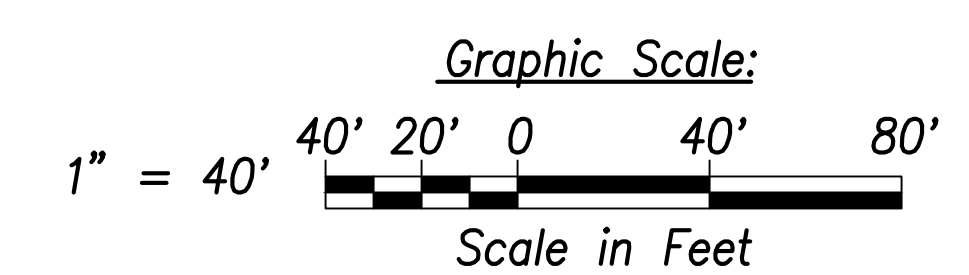
SHEET No. C-102 OF 767 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021		767



Legend:

	Existing Grade Contour
	Finished Grade Contour
	Limit of Grading
	Drainage Flow Direction



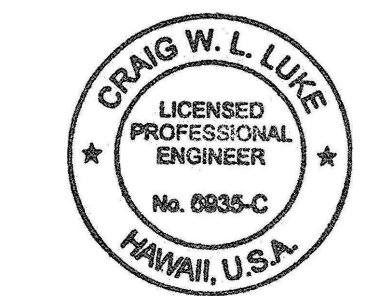
(A) Construct Splash Block
 See Det., Sht. C-205

Grading and Drainage Plan - (Sta. 154+00 to Sta. 165+00)
 Scale: 1" = 40'

Notes:

1. The Contractor Shall Construct/Phase Drainage Improvements to Avoid Flooding Adjacent Properties and Washout of Roadway.
2. Contractor Shall Locate Guardrail Posts to Provide 2' Min. Clear From Drain Utilities and Cleanout.
3. See Access to Farm Lots notes on sheet C-3.

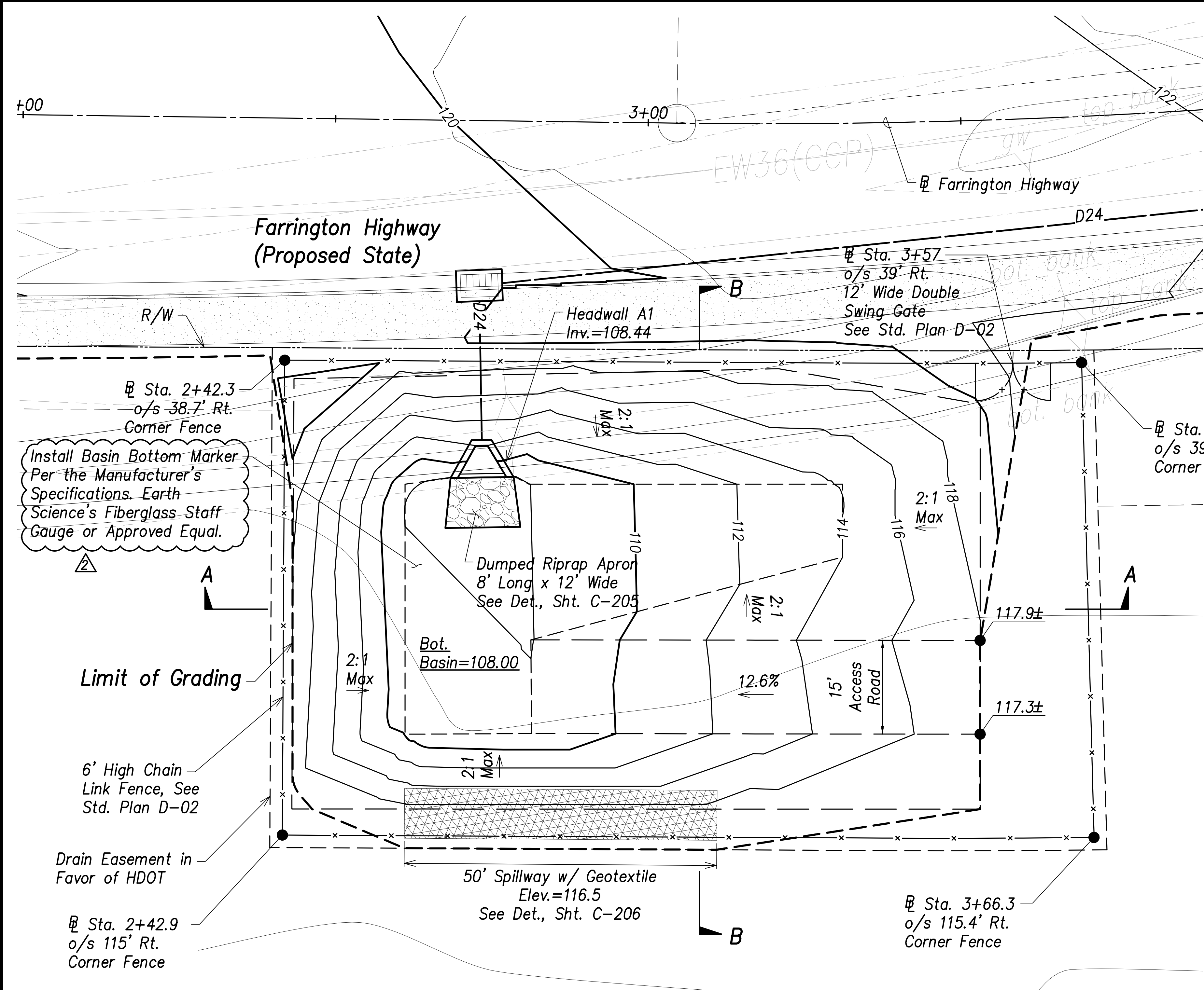
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE: April 30, 2022 OF THE LICENSE

06/08/22	Revised HW Q1 and GDI Q2
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Grading and Drainage Plan Sta. 154+00 to Sta. 165+00	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET NO. C-103 OF 767 SHEETS	

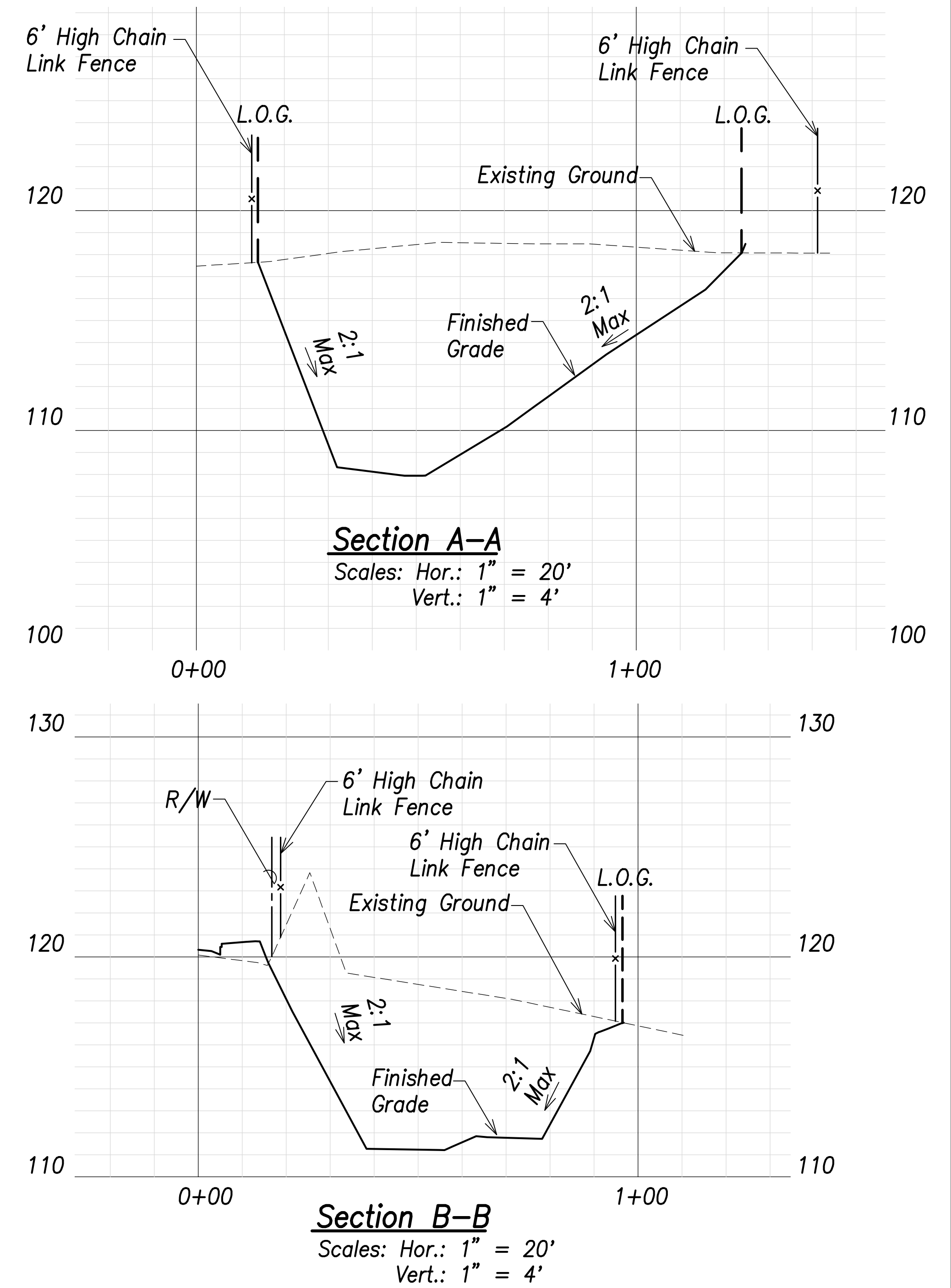
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	105	767



Basin A Grading and Fence Plan
Scale: 1" = 10'

- Legend:**
- - - 70 - - - Existing Grade Contour
 - 100 — Finished Grade Contour
 - - - - - Limit of Grading

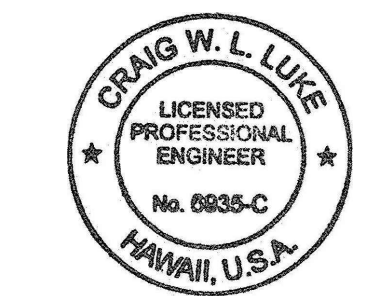
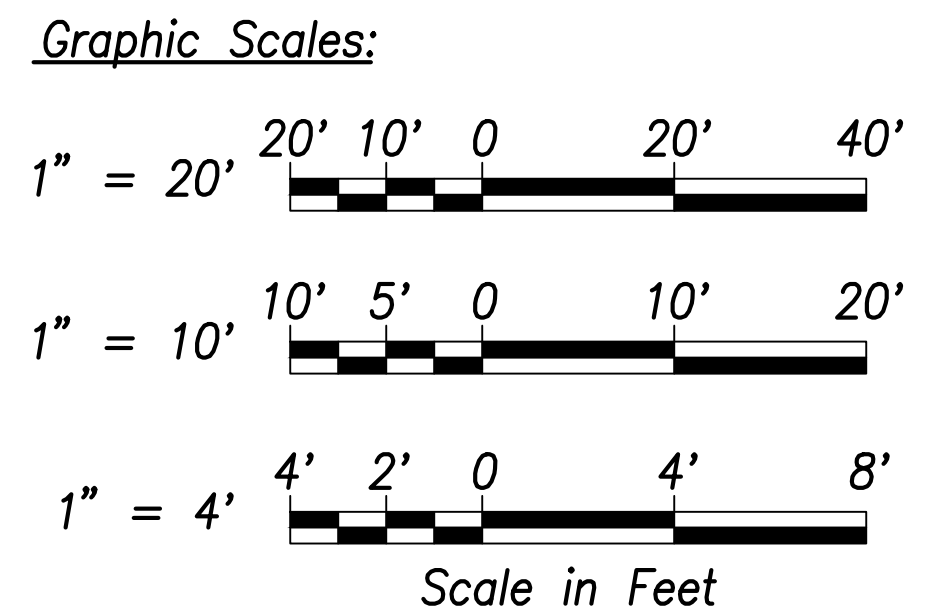
Basin A Summary
Capacity = 1,044 CY
Volume Req'd. (5 Yr., 24 Hr.) = 979 CY



Section A-A
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'

Section B-B
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'

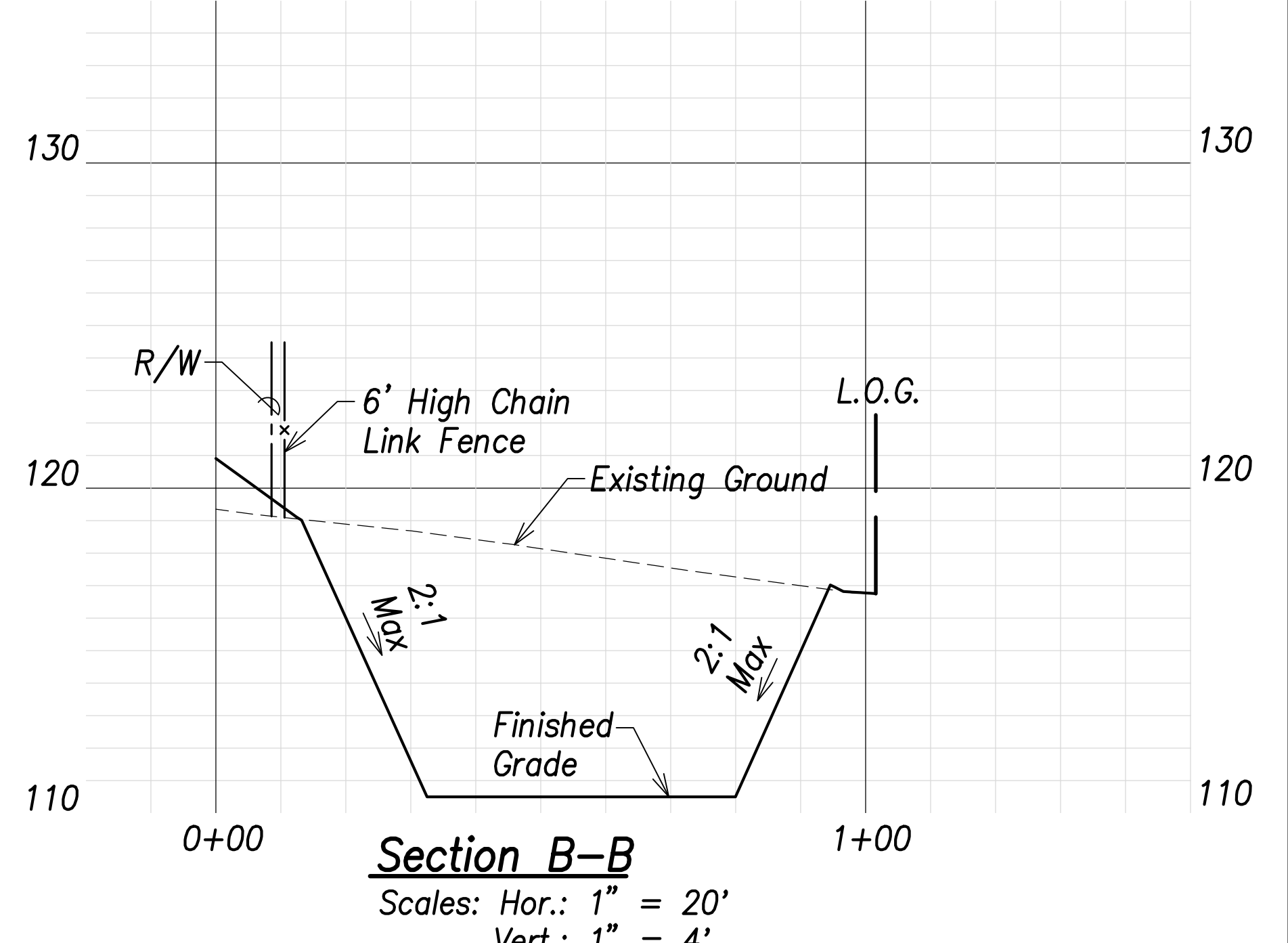
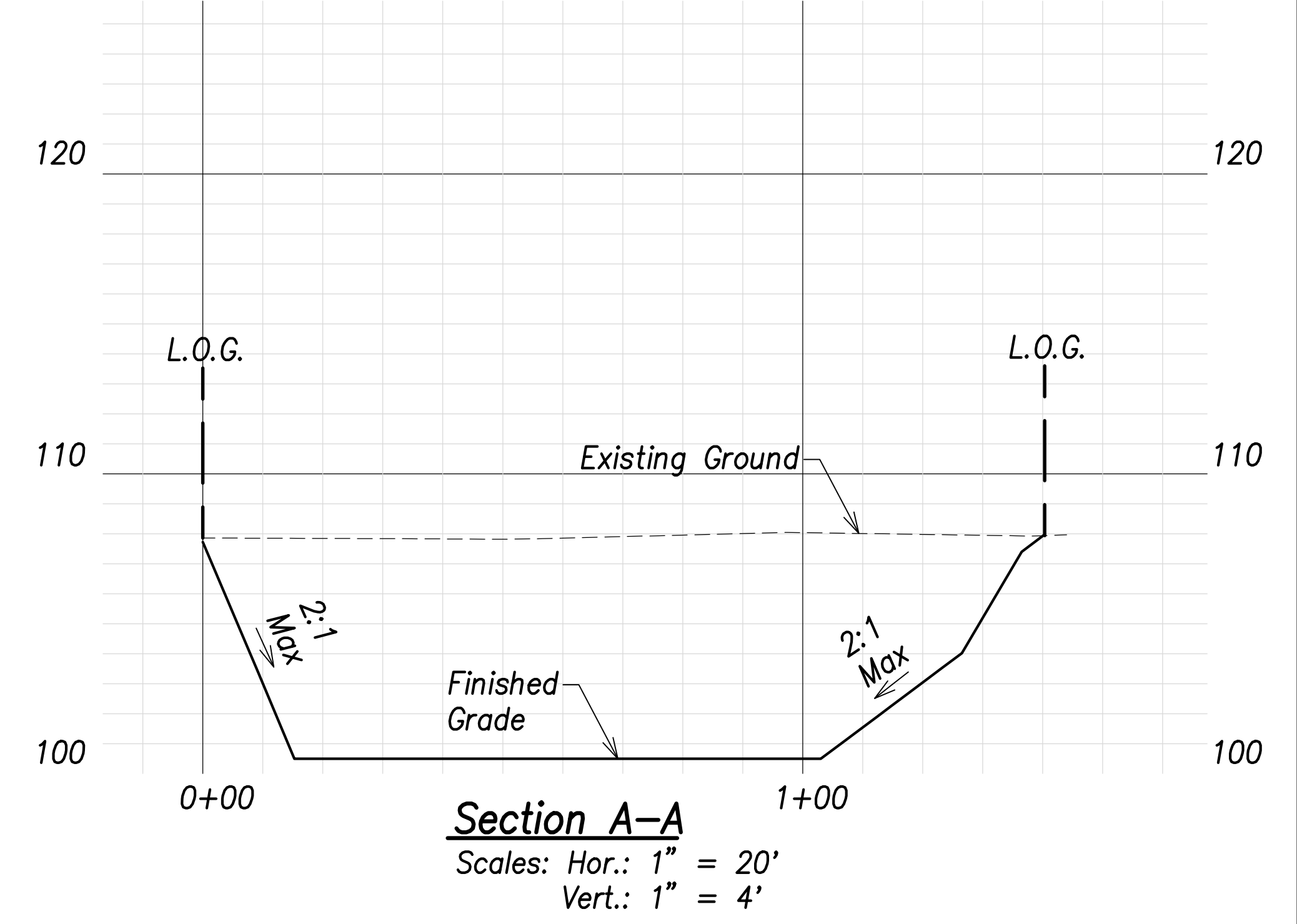
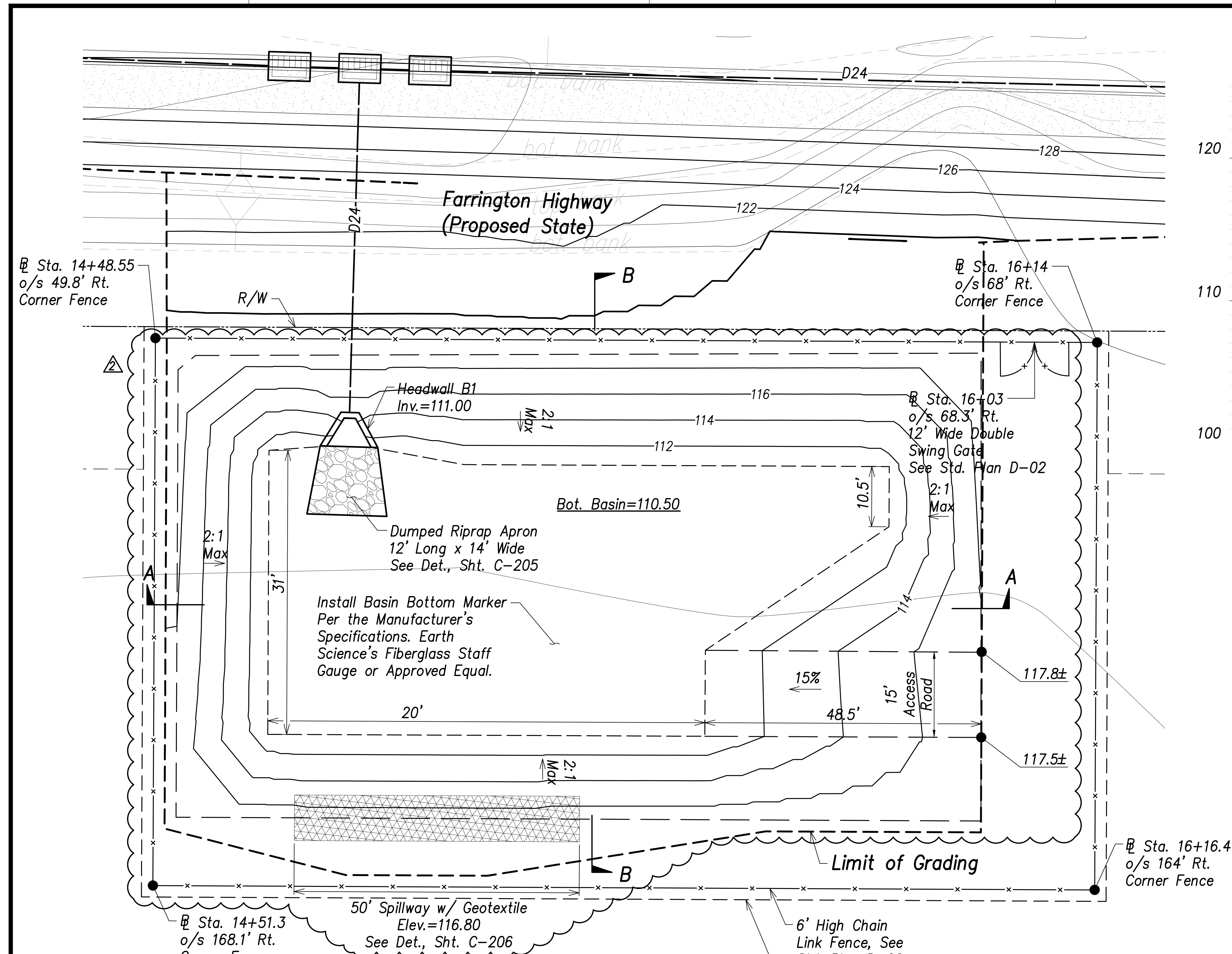
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
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ORIGINAL PLAN	
NOTE BOOK	
No.	



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SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

DATE	REVISION
06/08/22	Added basin marker; Revised basin summary
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
Basin A Grading and Fence Plan	
FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20	
Scale: As Shown	Date: April 2022
SHEET NO. C-104 OF 767 SHEETS	

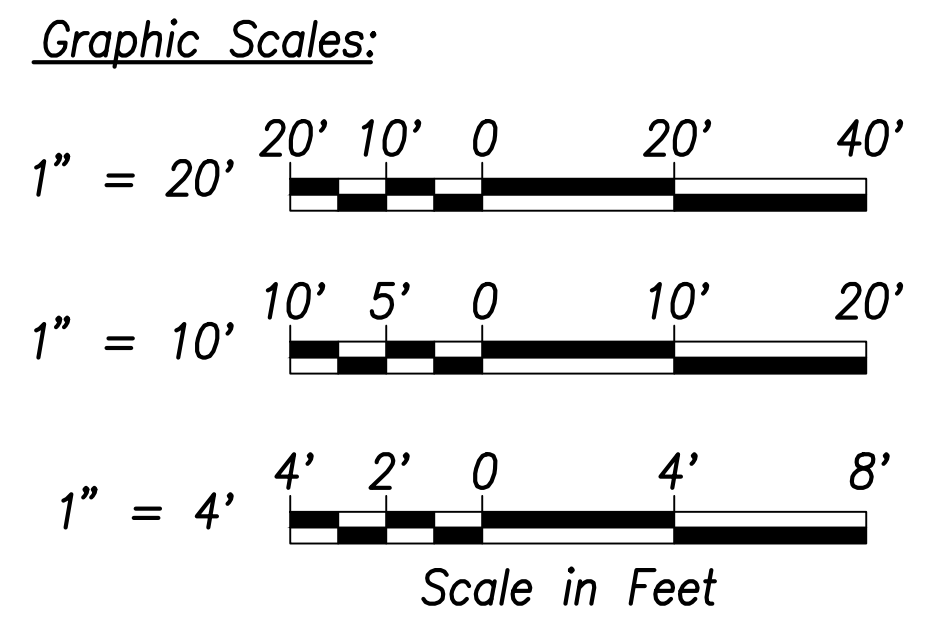
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	106	767



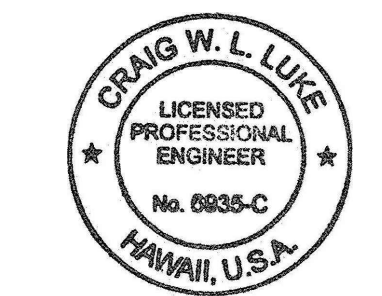
- Legend:**
- - - - - 70 - - - - Existing Grade Contour
 - - - - - 100 - - - - Finished Grade Contour
 - - - - - Limit of Grading

Basin B Grading and Fence Plan
Scale: 1" = 10'

Basin B Summary
Capacity = 2,115 CY
Volume Req'd. (5 Yr., 24 Hr.) = 2,052 CY



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



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Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22	Added basin marker, revised basin grading
DATE	REVISION

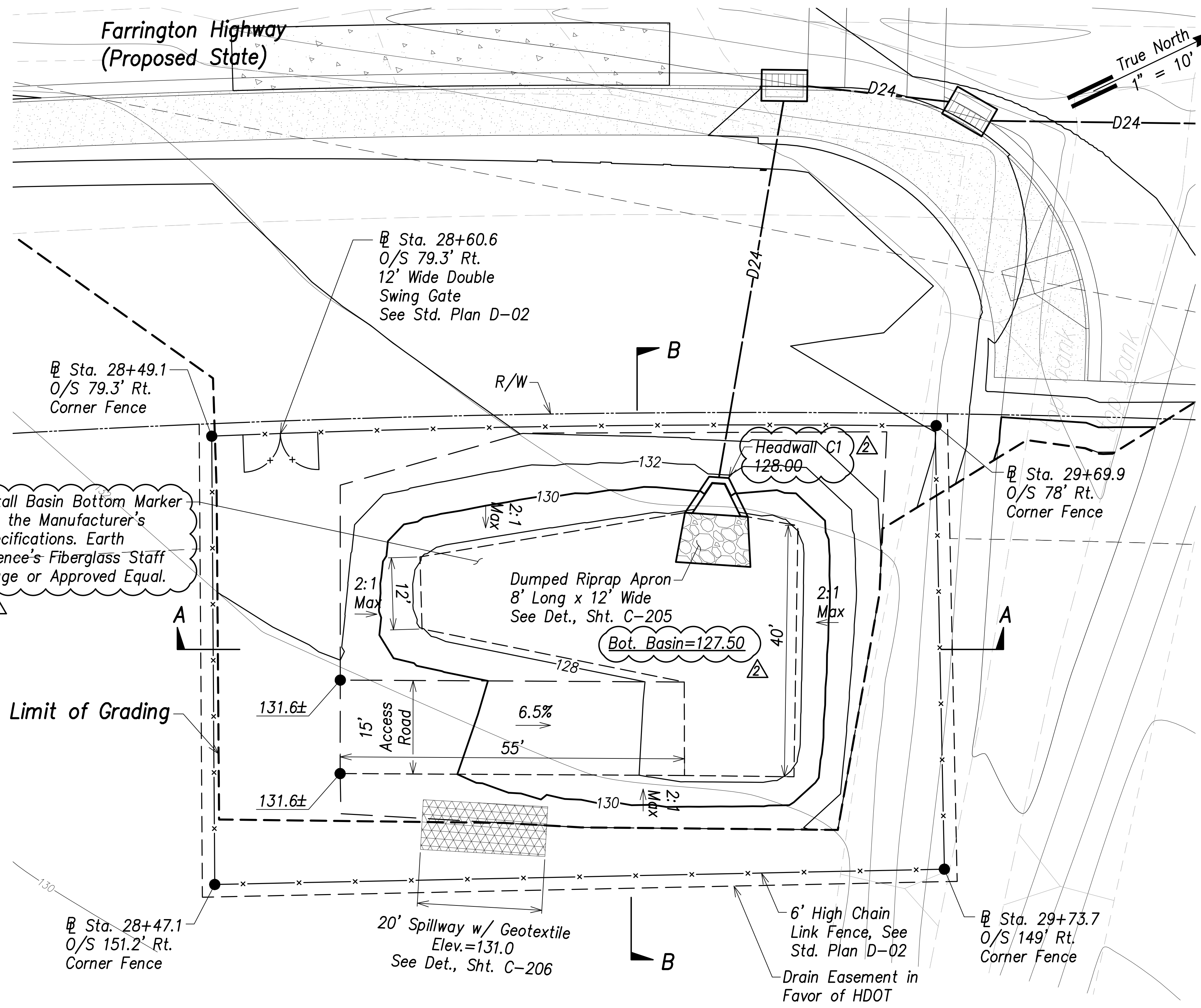
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Basin B
Grading and Fence Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	107	767

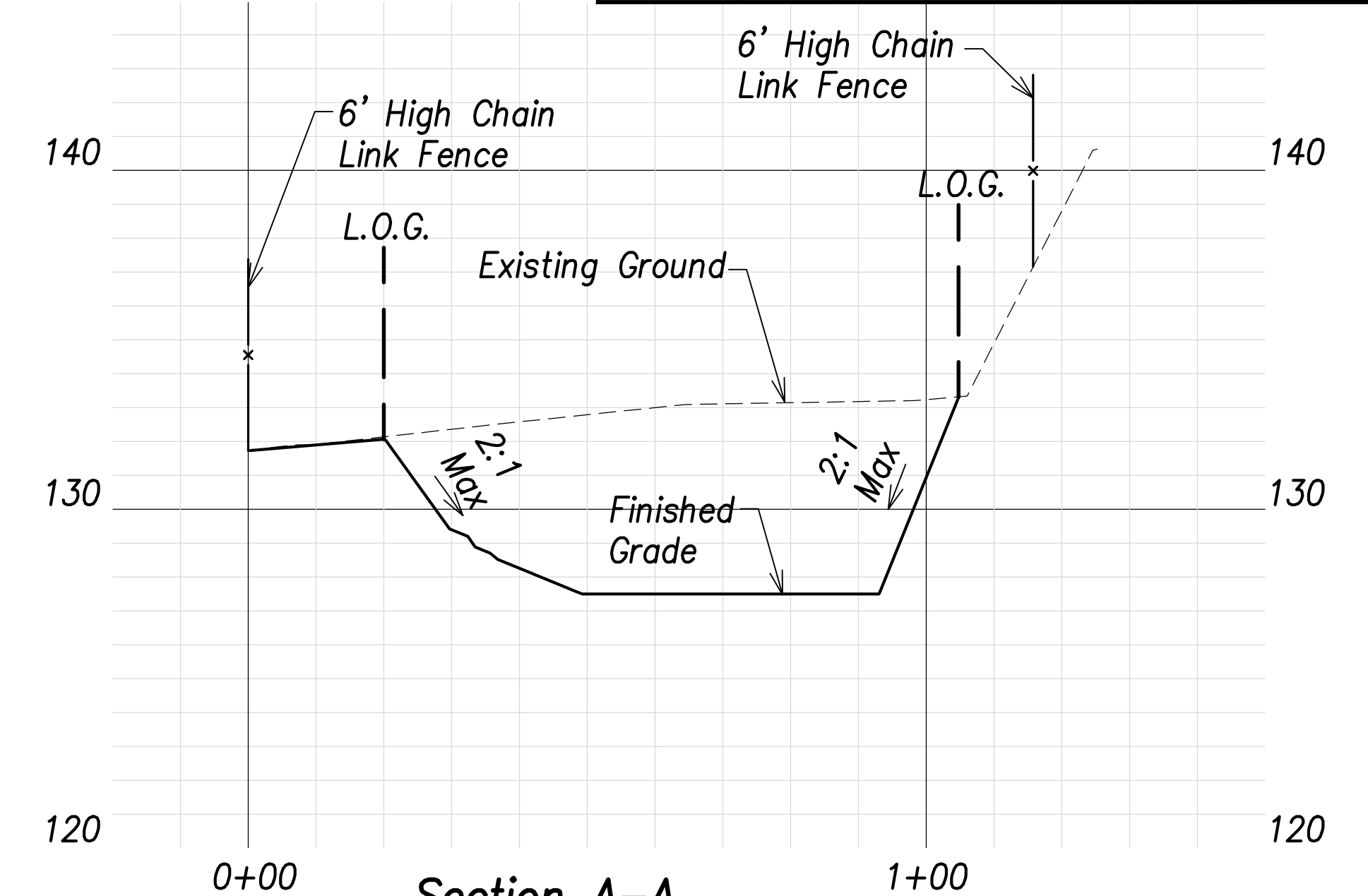


Install Basin Bottom Marker Per the Manufacturer's Specifications. Earth Science's Fiberglass Staff Gauge or Approved Equal.

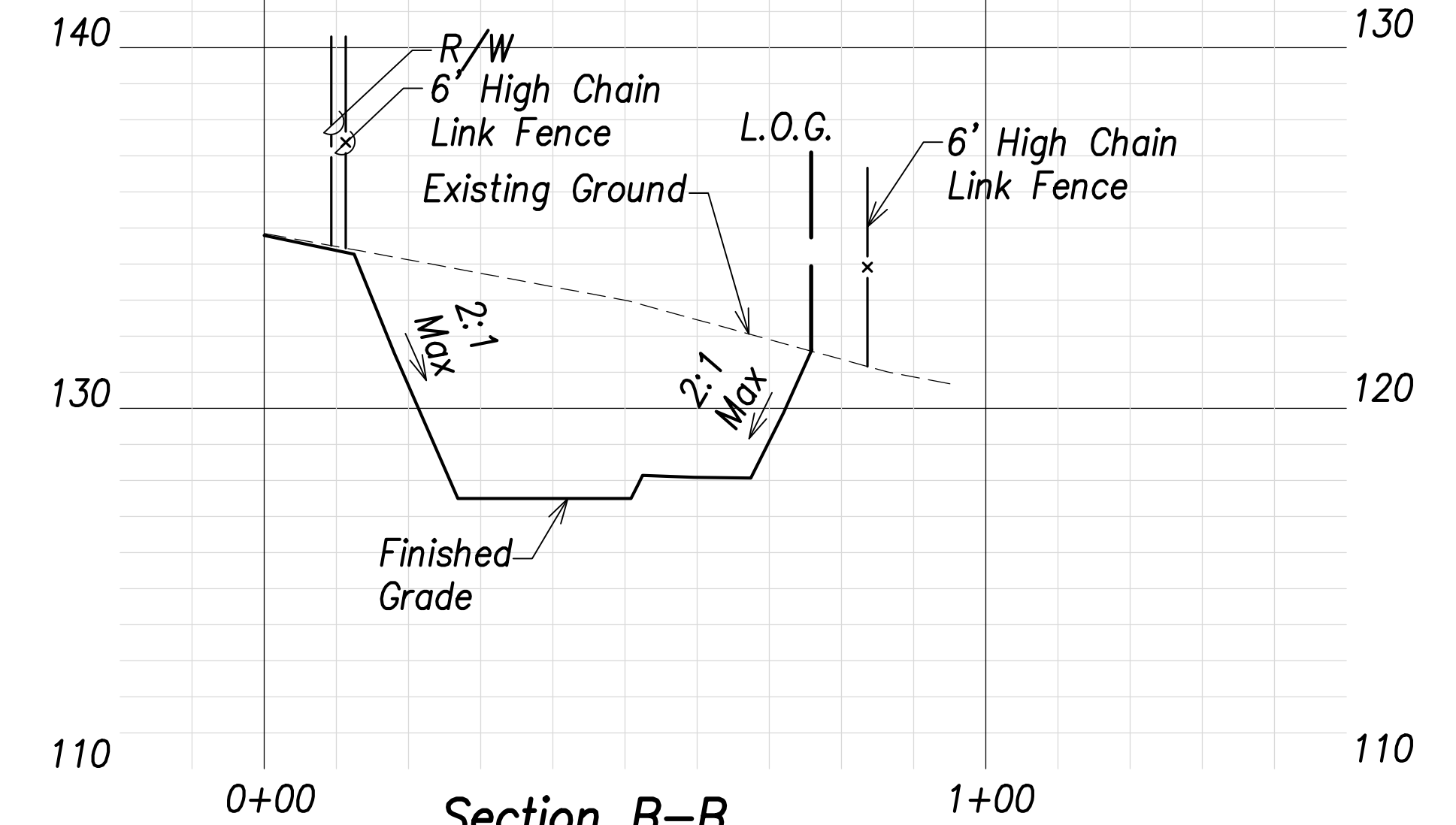
- Legend:**
- 70 Existing Grade Contour
 - 100 Finished Grade Contour
 - Limit of Grading

Basin C Grading and Fence Plan
Scale: 1" = 10'

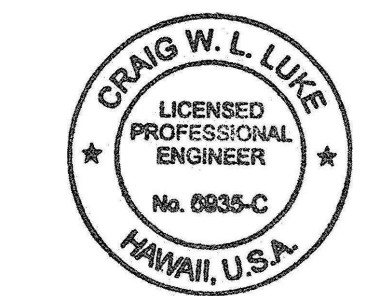
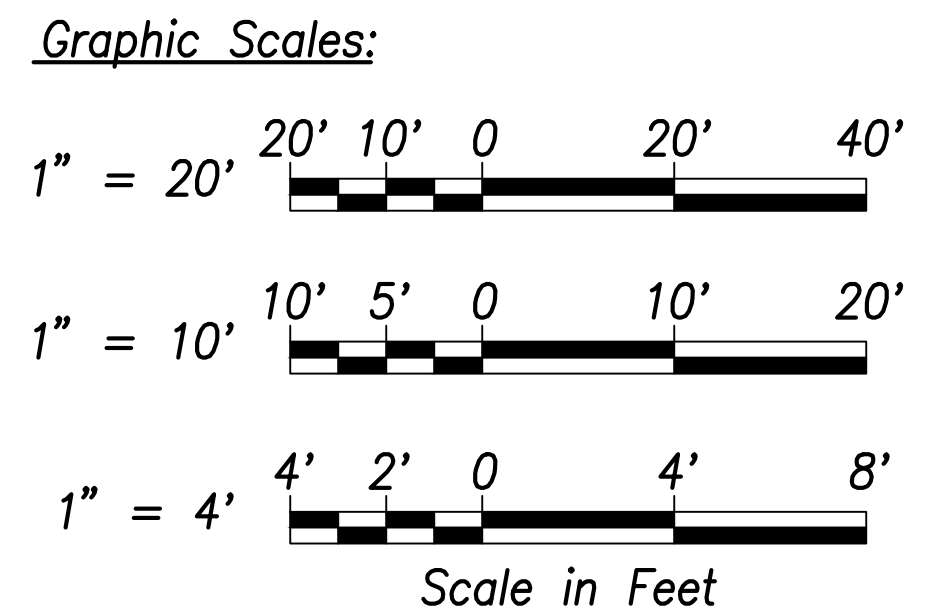
Basin C Summary
Capacity = 357 CY
Volume Req'd. (5 Yr., 24 Hr.) = 271 CY



Section A-A
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



Section B-B
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



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Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

DATE	REVISION
06/08/22	Added basin marker; Revised inverts and basin summary

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Basin C
Grading and Fence Plan

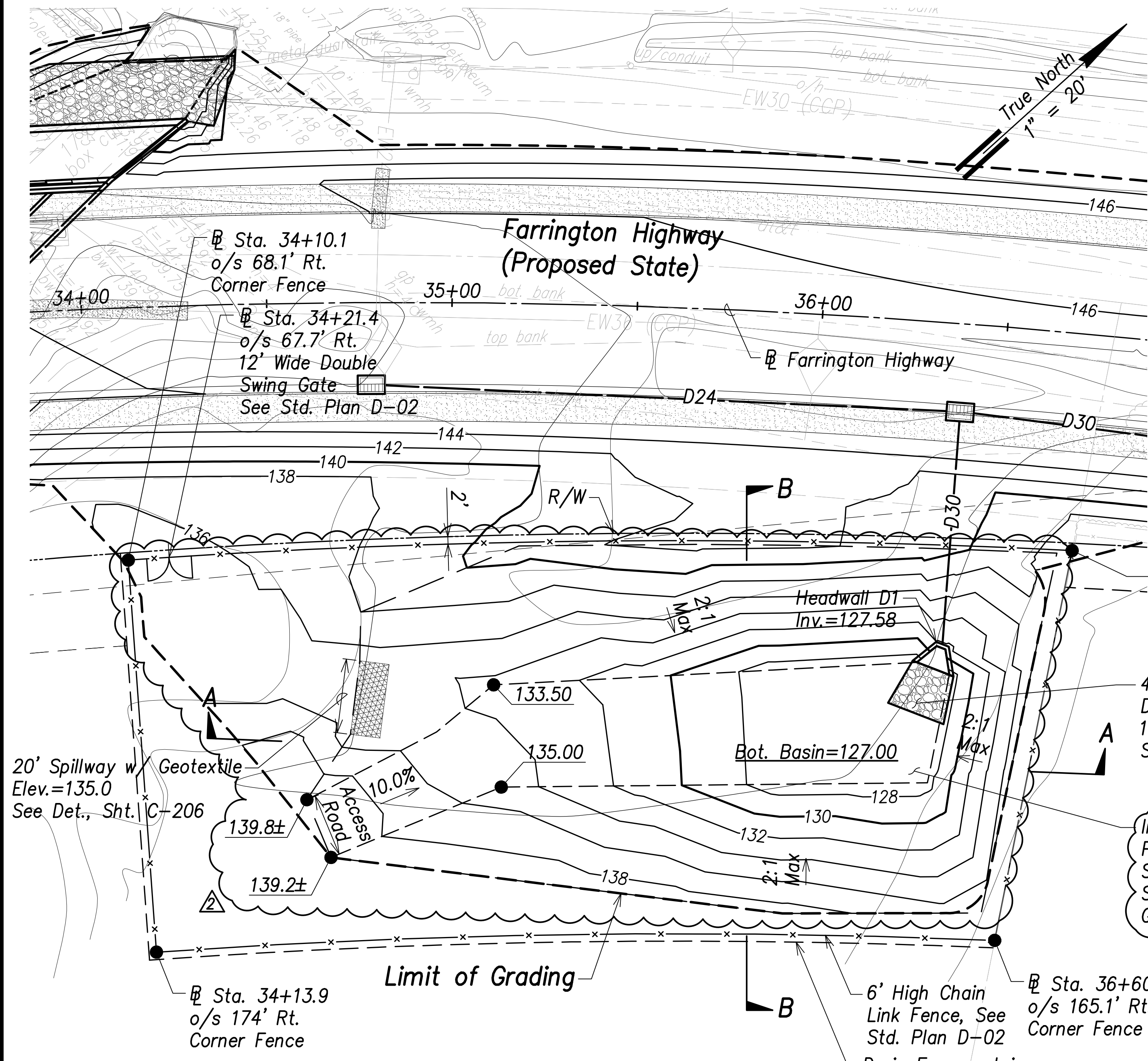
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022
SHEET NO. C-106 OF 767 SHEETS

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

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-106 - Basin C Grading and Fence Plan.dwg saved June 6, 2022

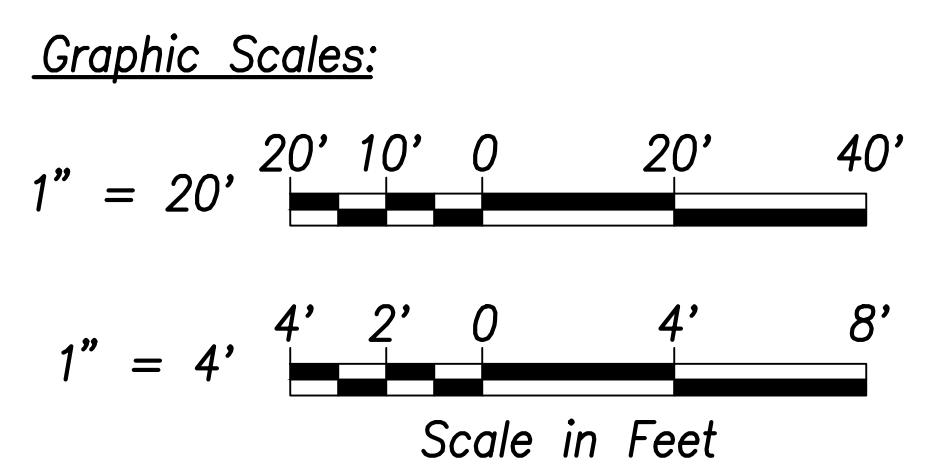
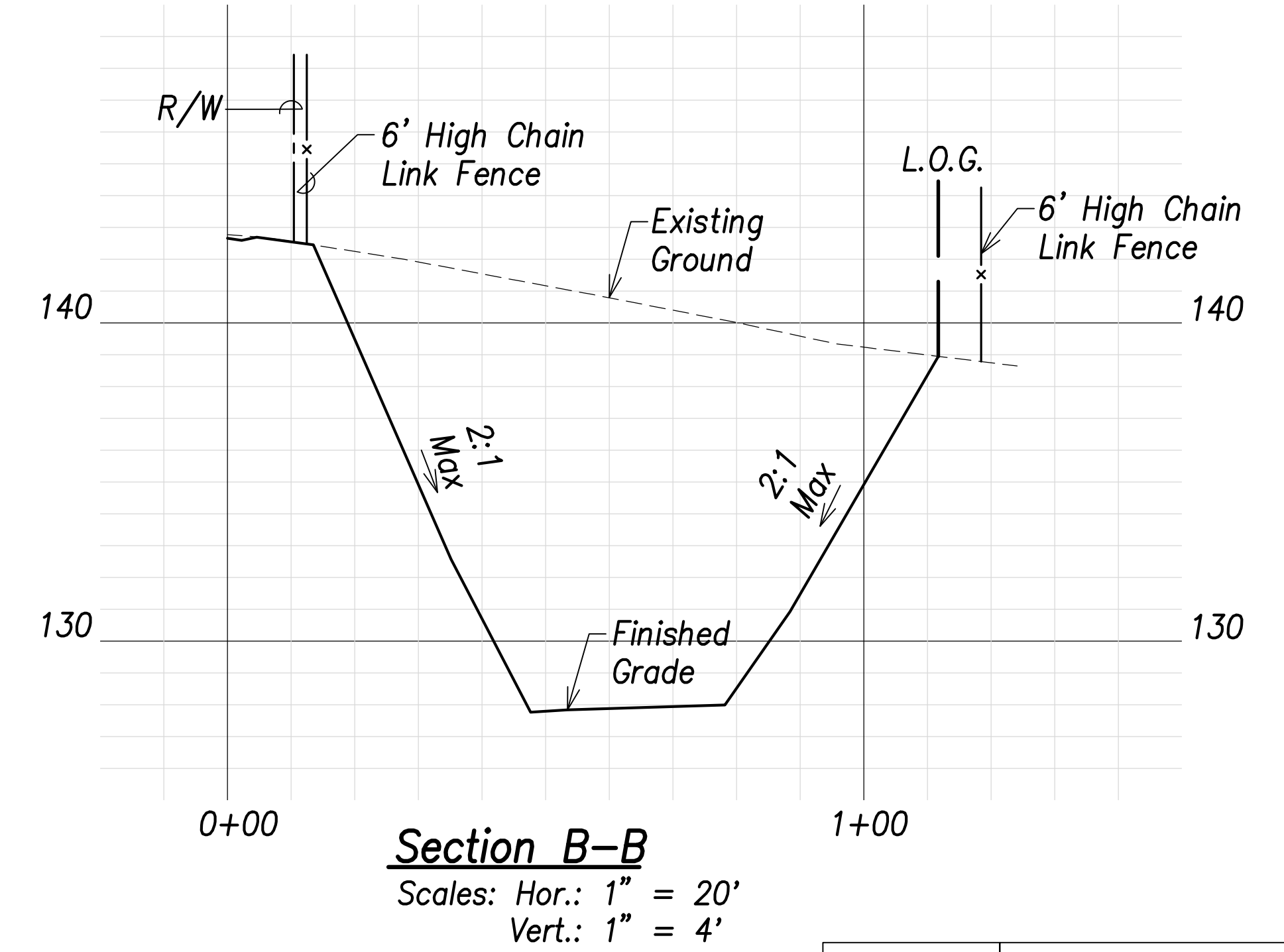
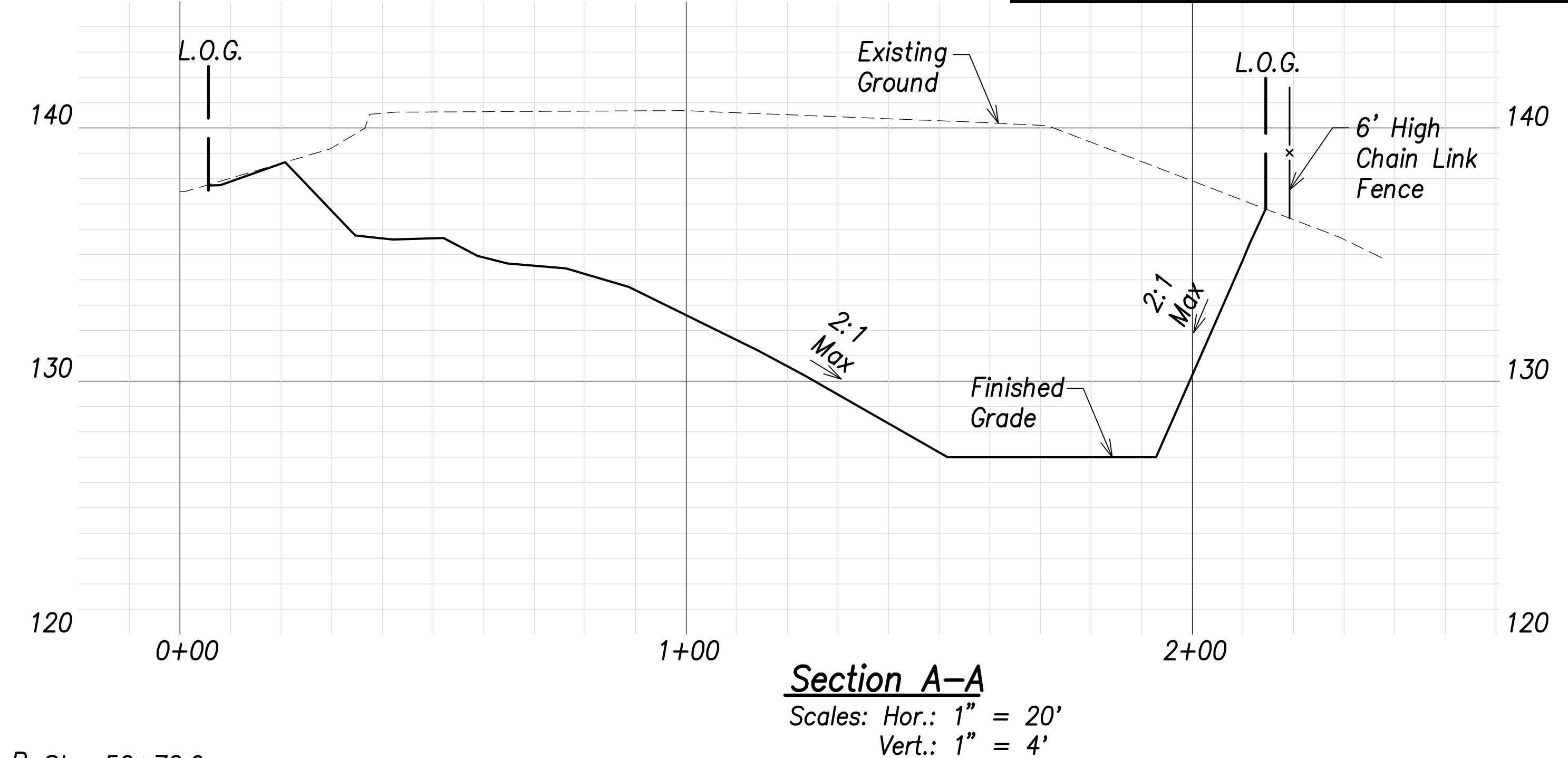
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	108	767



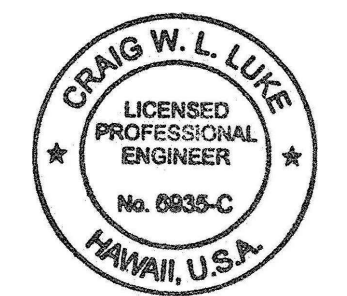
Basin D Grading and Fence Plan
Scale: 1" = 20'

- Legend:**
- - - - - 70 - - - - Existing Grade Contour
 - 100 ————— Finished Grade Contour
 - - - - - Limit of Grading

Basin D Summary
Capacity = 1,351 CY
Volume Req'd. (5 Yr., 24 Hr.) = 849 CY



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

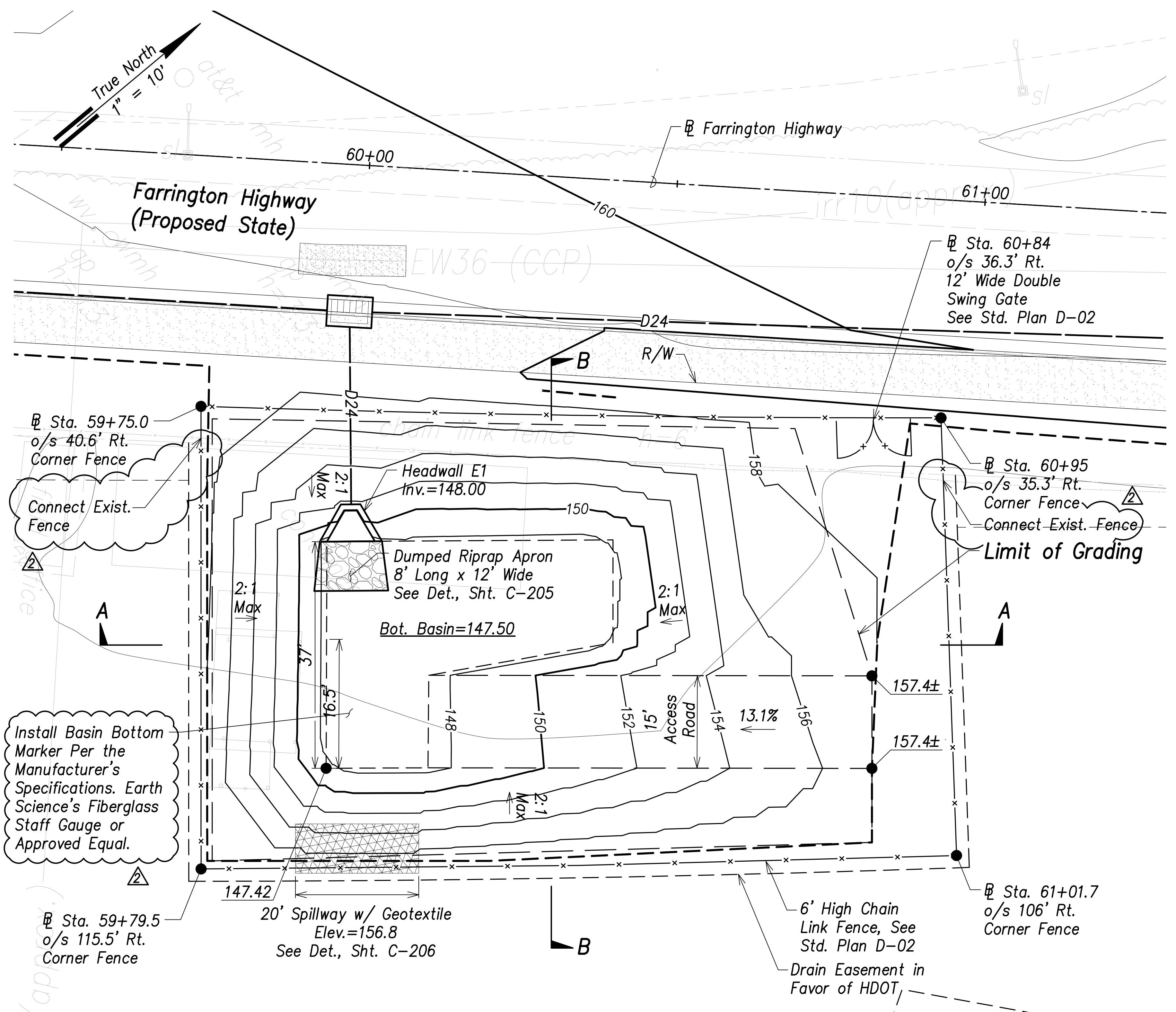


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Signature: *Craig W. Luke*
APR 30, 2022
EXPIRATION DATE OF THE LICENSE

DATE	06/08/22	REVISION	Added basin marker; Revised basin grading
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION Basin D Grading and Fence Plan FARRINGTON HIGHWAY WIDENING Kapolei Golf Course Road to Fort Weaver Road Project No. 7101A-01-20			
Scale: As Shown	Date: April 2022		
SHEET NO. C-107 OF 767 SHEETS			

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	109	767

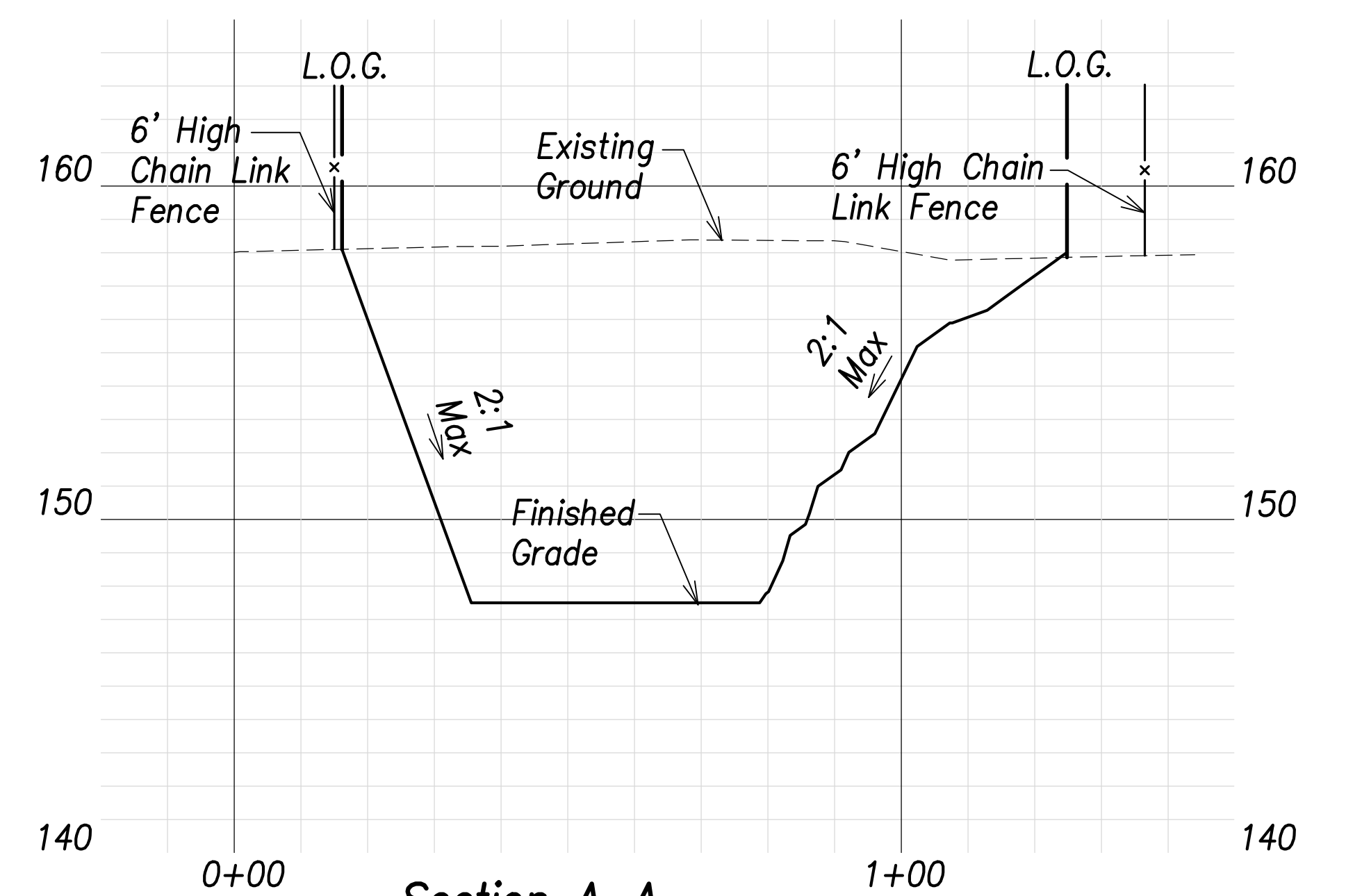


- Legend:**
- - - - - Existing Grade Contour
 - Finished Grade Contour
 - - - - - Limit of Grading

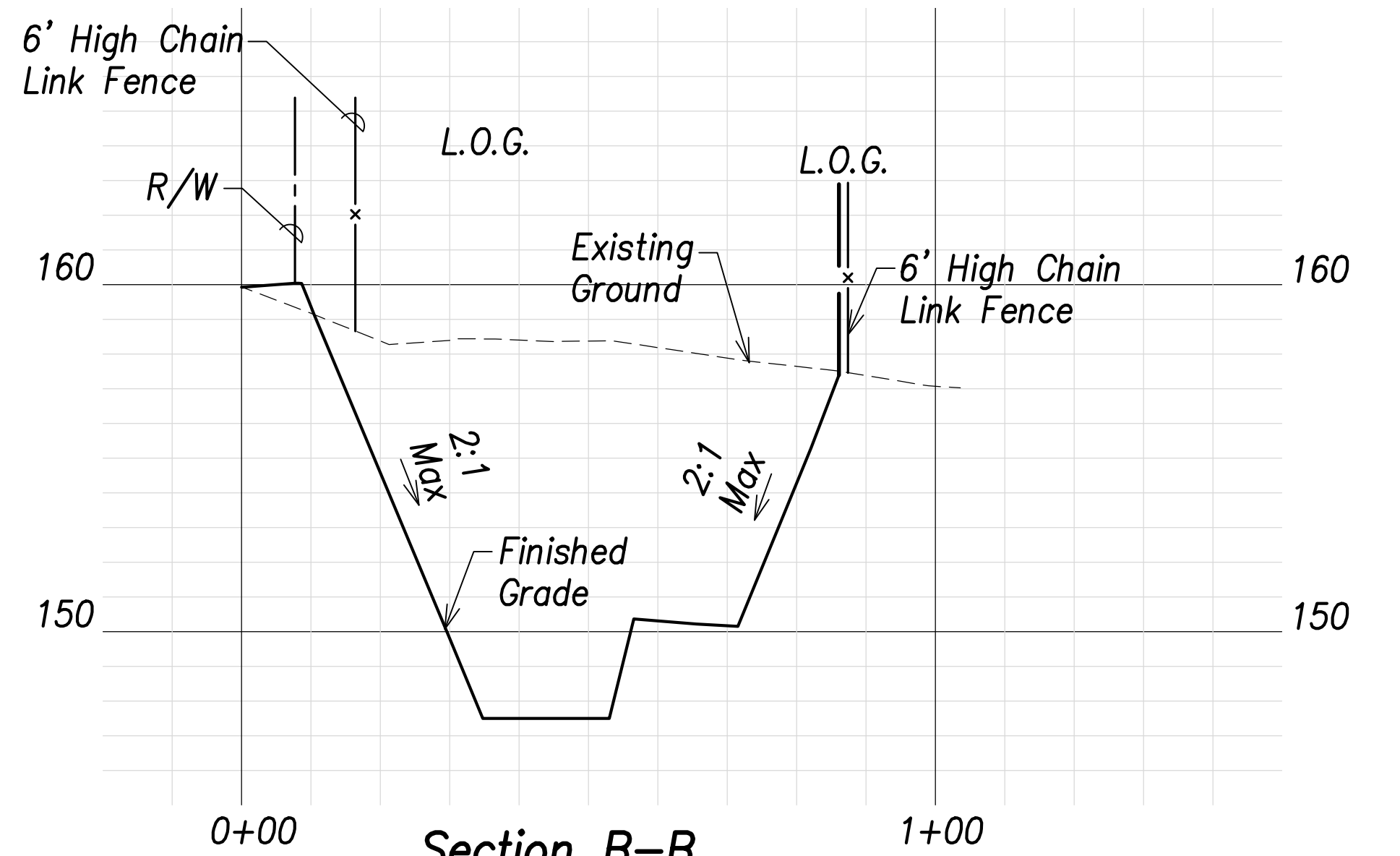
Basin E Grading and Fence Plan
Scale: 1" = 10'

Basin E Summary
Capacity = 614 CY
Volume Req'd. (5 Yr., 24 Hr.) = 369 CY

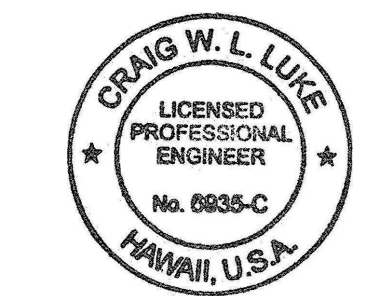
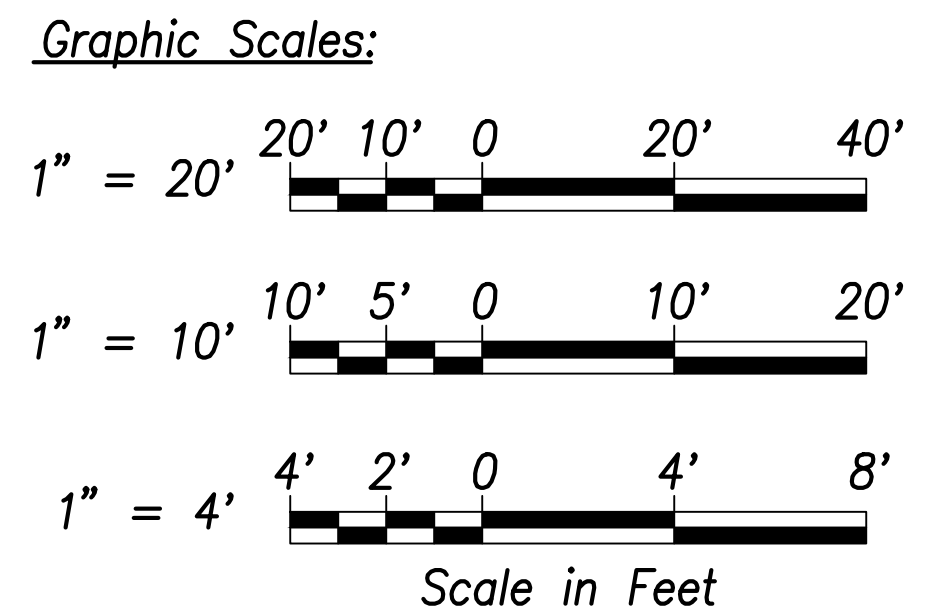
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
DESIGNED BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK
No.



Section A-A
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



Section B-B
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



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SIGNATURE: *Craig W. Luke*
EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22	Added basin marker; Revised summary Added fencing callouts
DATE	REVISION

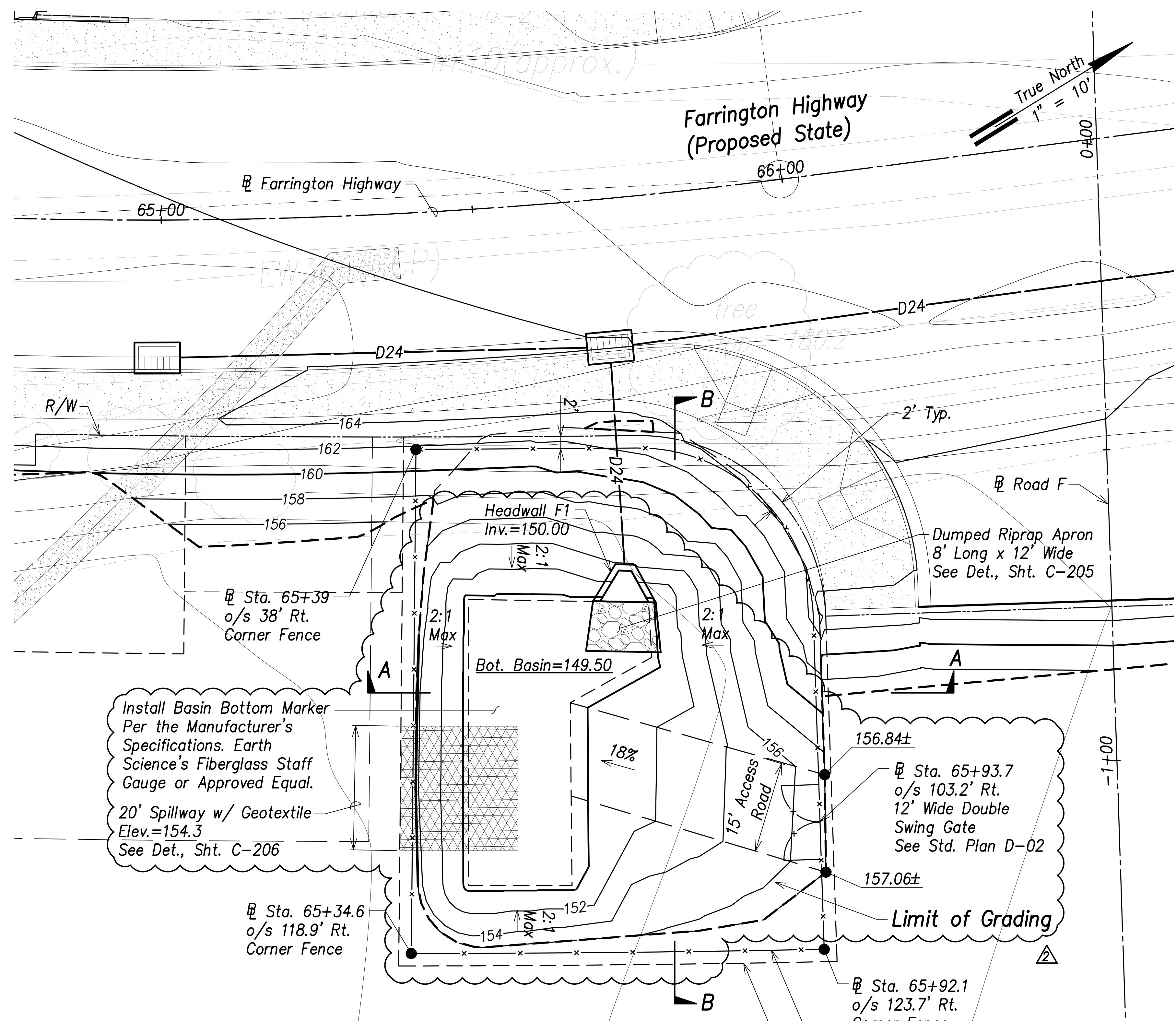
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Basin E
Grading and Fence Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

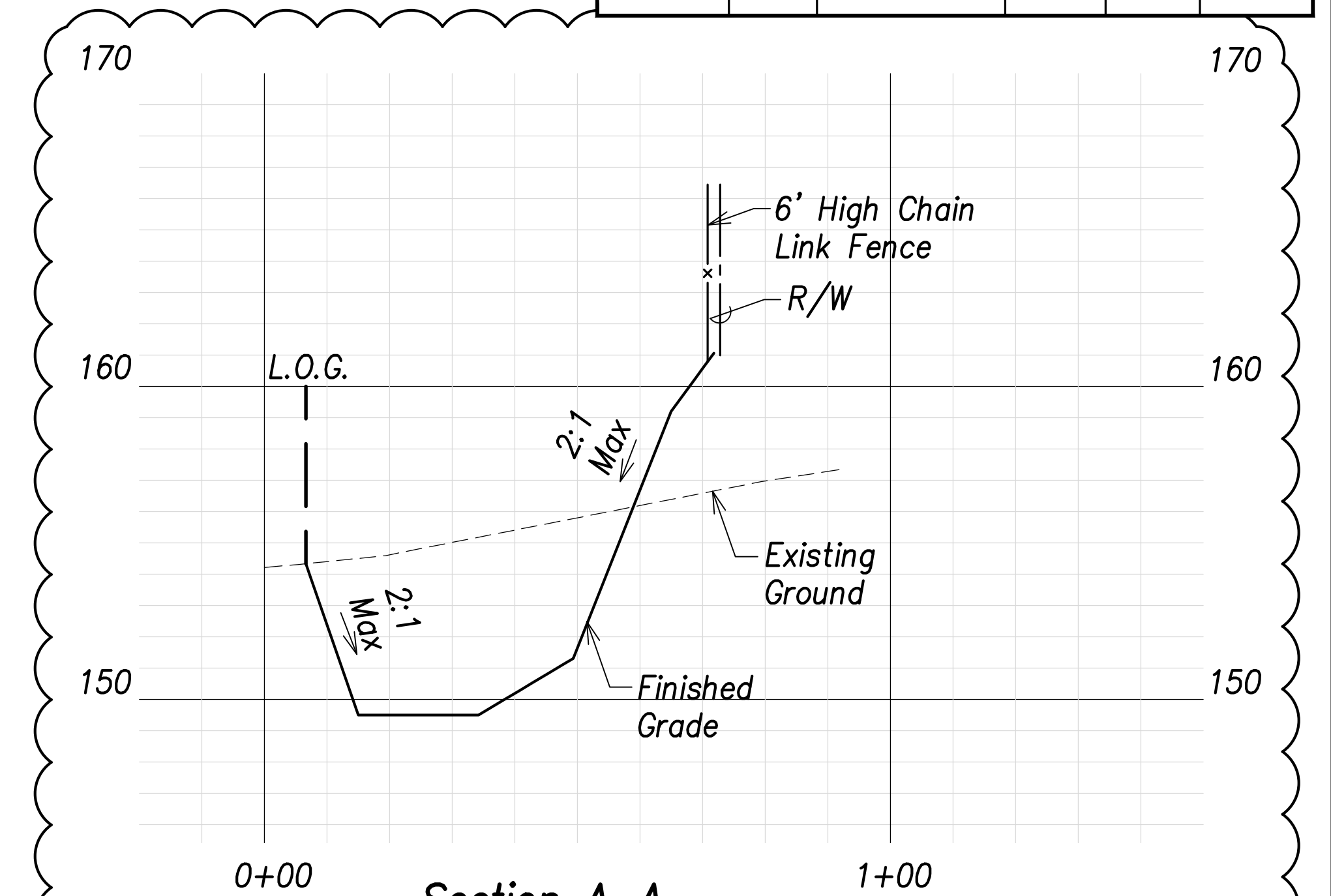
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7101A-01-20	2021	110	767



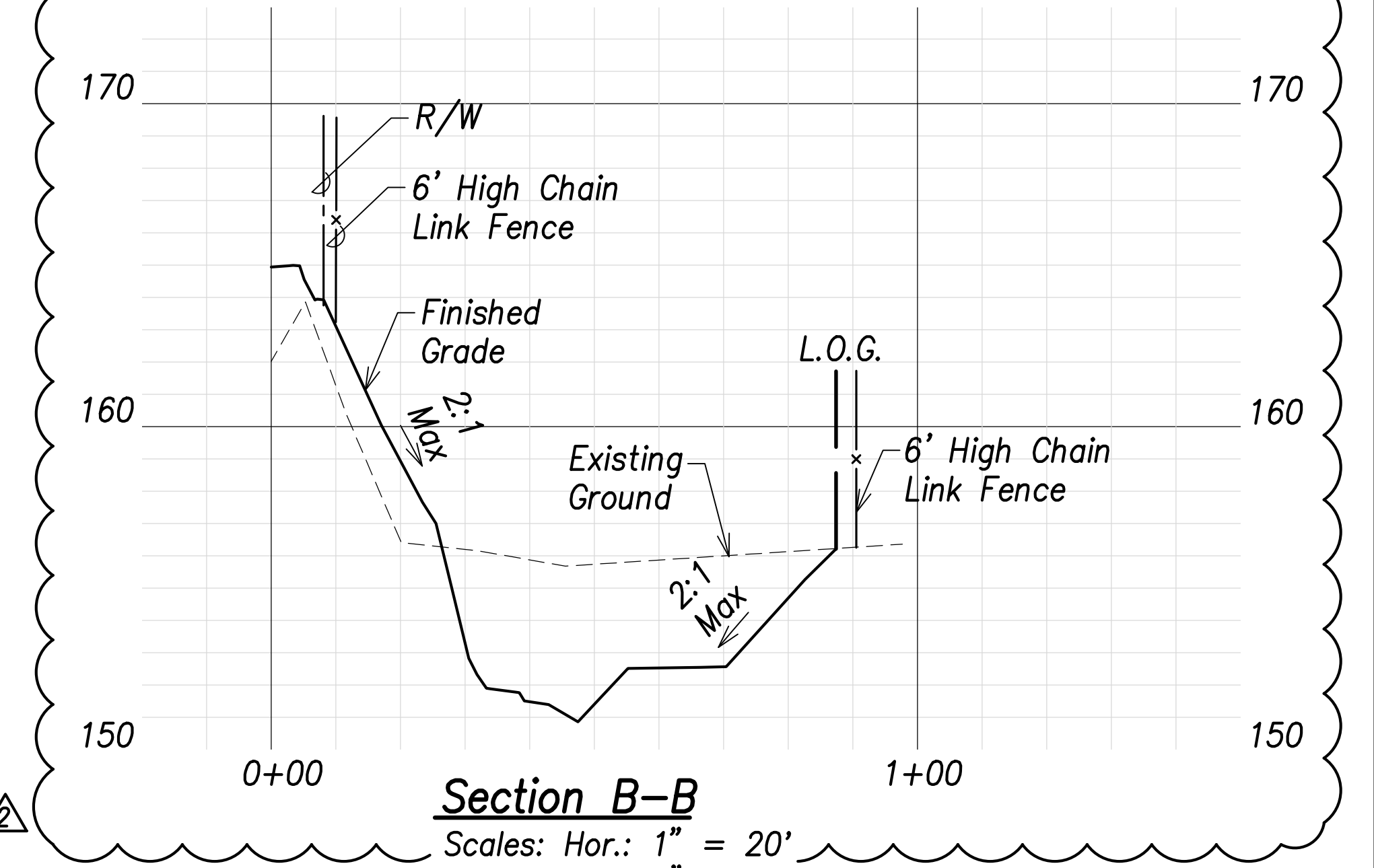
- Legend:**
- - - - - 70 - - - - Existing Grade Contour
 - - - - - 100 - - - - Finished Grade Contour
 - - - - - - - - - - Limit of Grading

Basin F Grading and Fence Plan
Scale: 1" = 10'

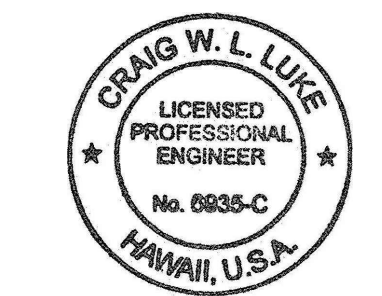
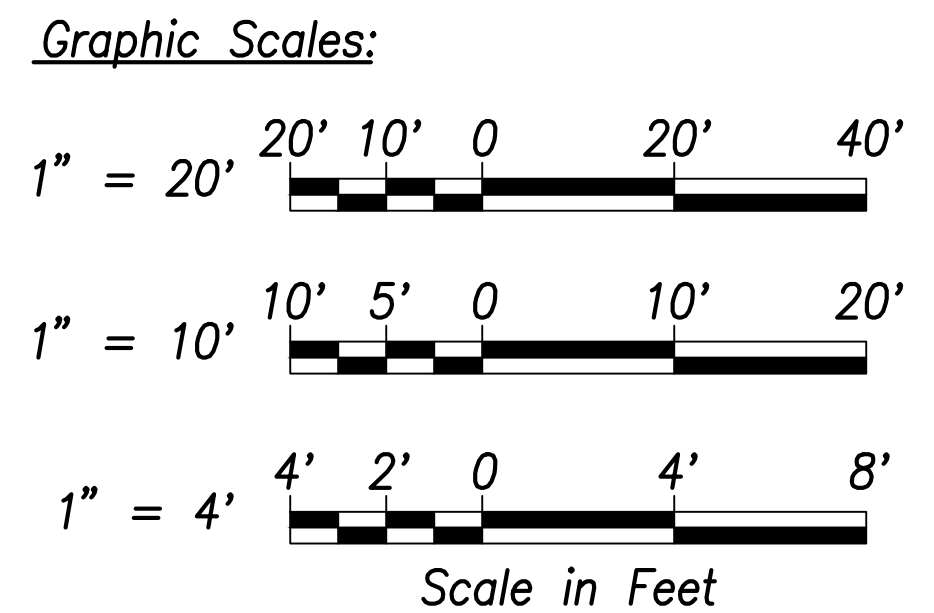
Basin F Summary
Capacity = 320 CY
Volume Req'd. (5 Yr., 24 Hr.) = 274 CY



Section A-A
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



Section B-B
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



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Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| DATE | REVISION |
|----------|---|
| 06/08/22 | Added basin marker; Revised basin grading |

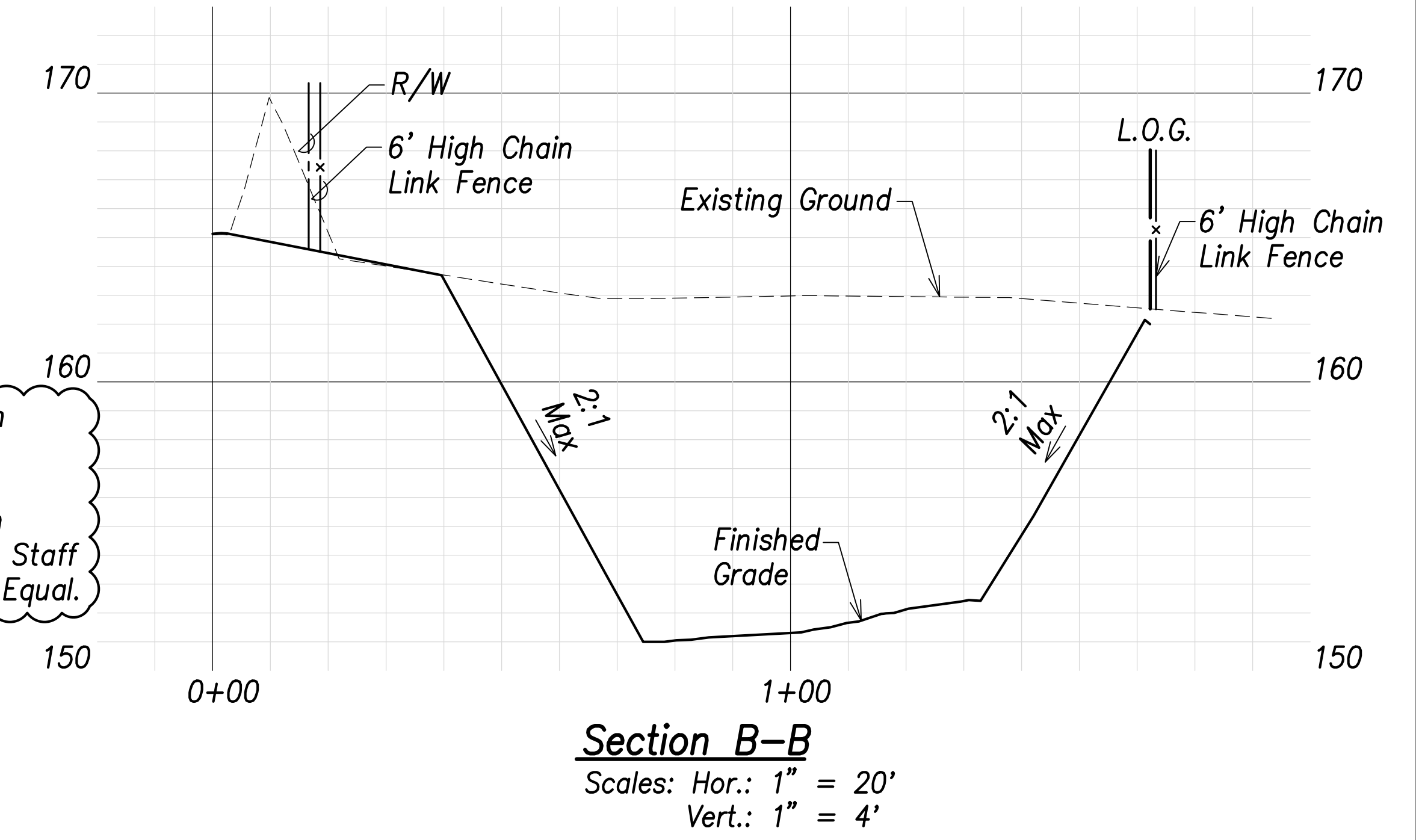
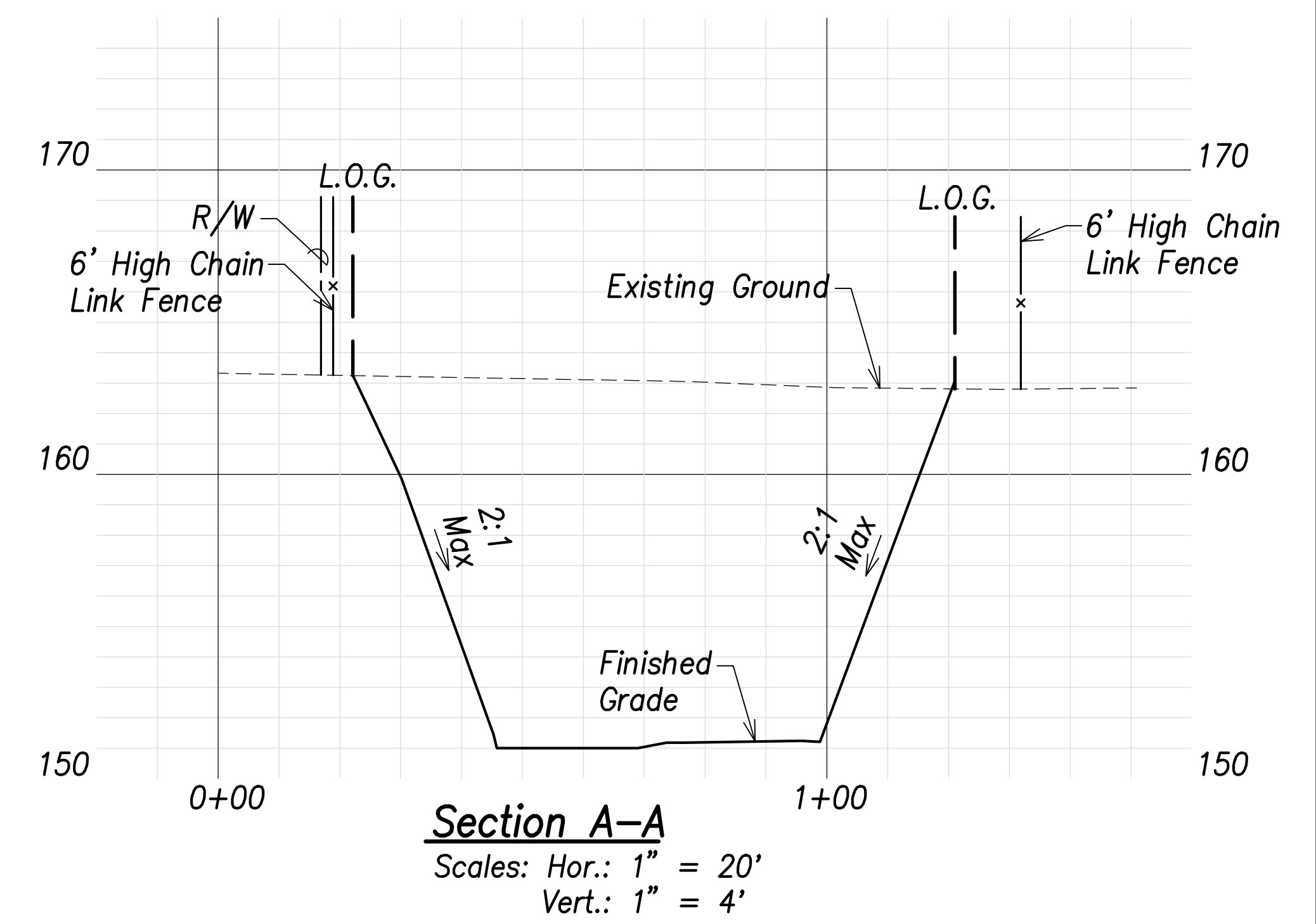
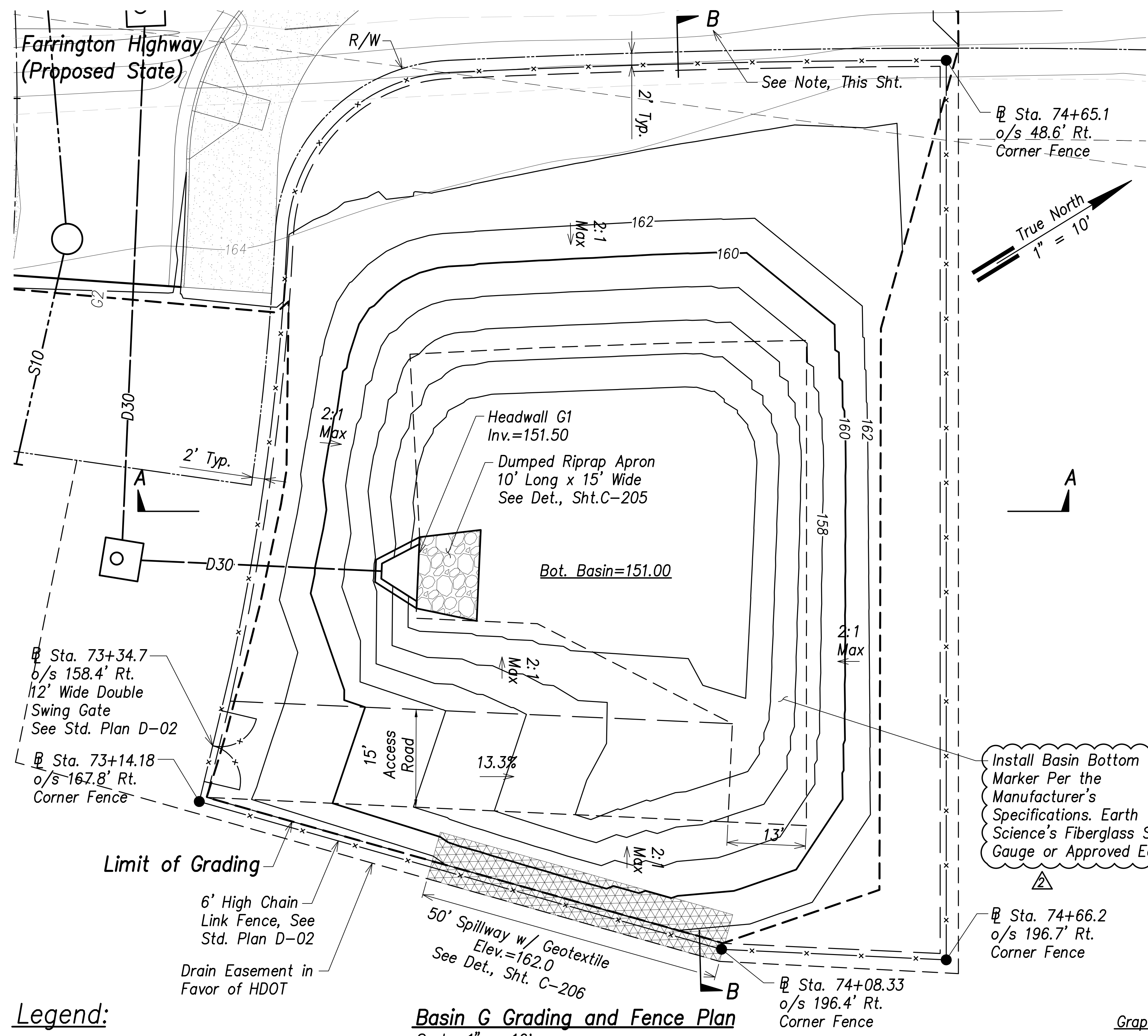
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Basin F
Grading and Fence Plan

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

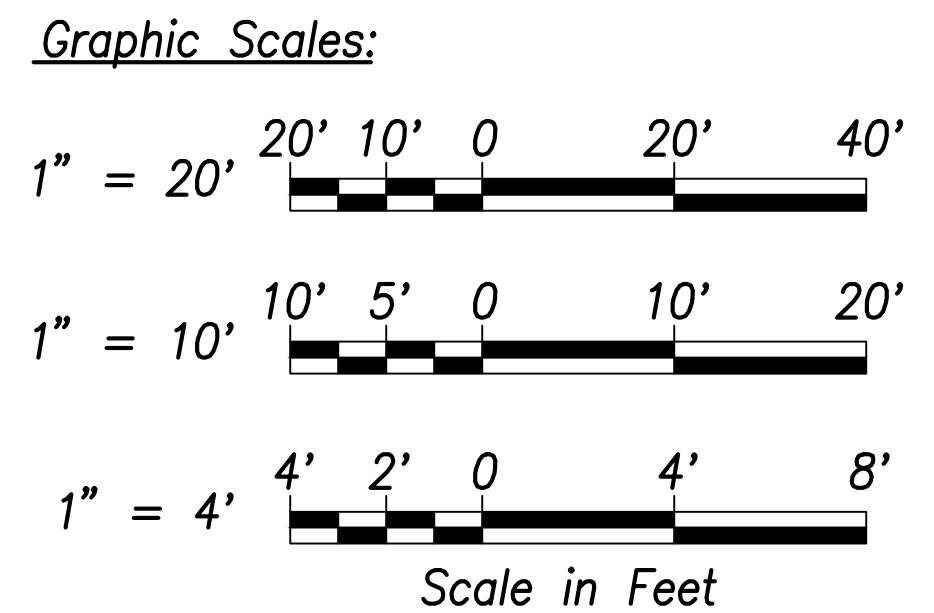
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 111 | 767 |



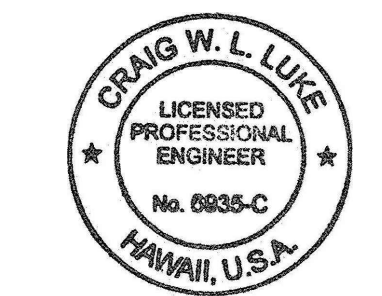
- Legend:**
- - - - - 70 - - - - Existing Grade Contour
 - 100 ————— Finished Grade Contour
 - - - - - Limit of Grading

Basin G Summary
 Capacity = 2,396 CY
 Volume Req'd. (5 Yr., 24 Hr.) = 733 CY

Note:
 Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|-------------------------------------|
| 06/08/22 | Added basin marker, revised summary |
| DATE | REVISION |

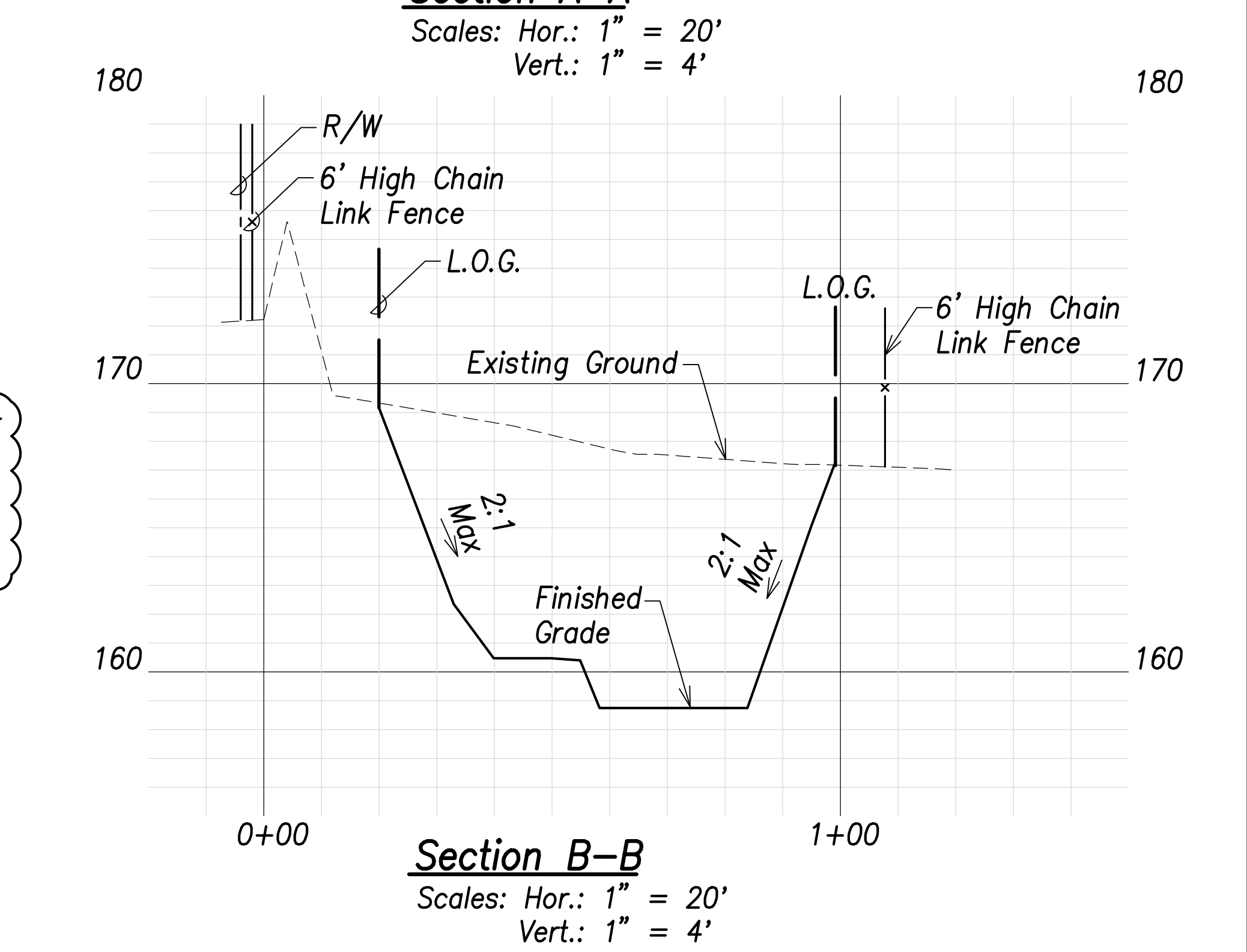
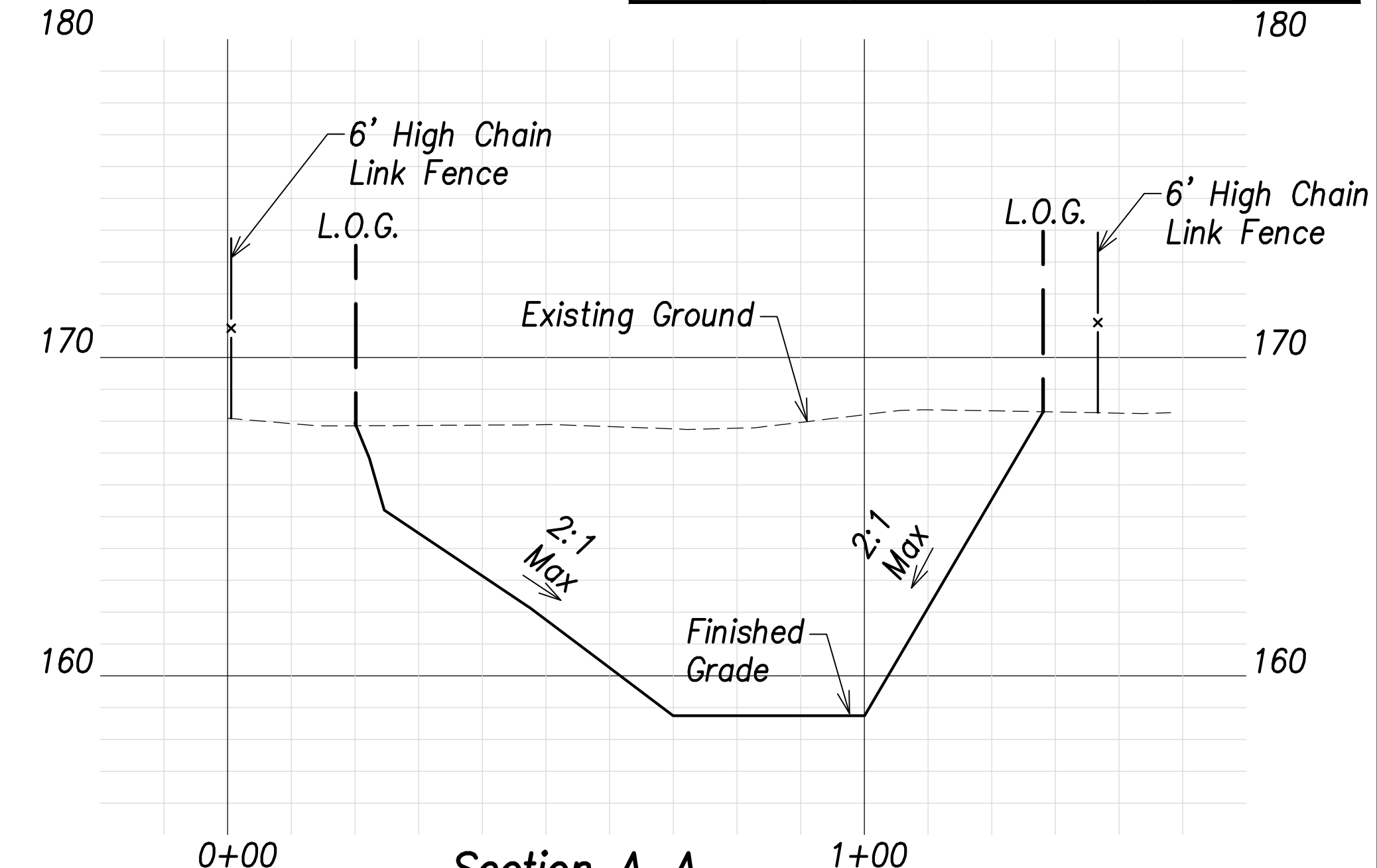
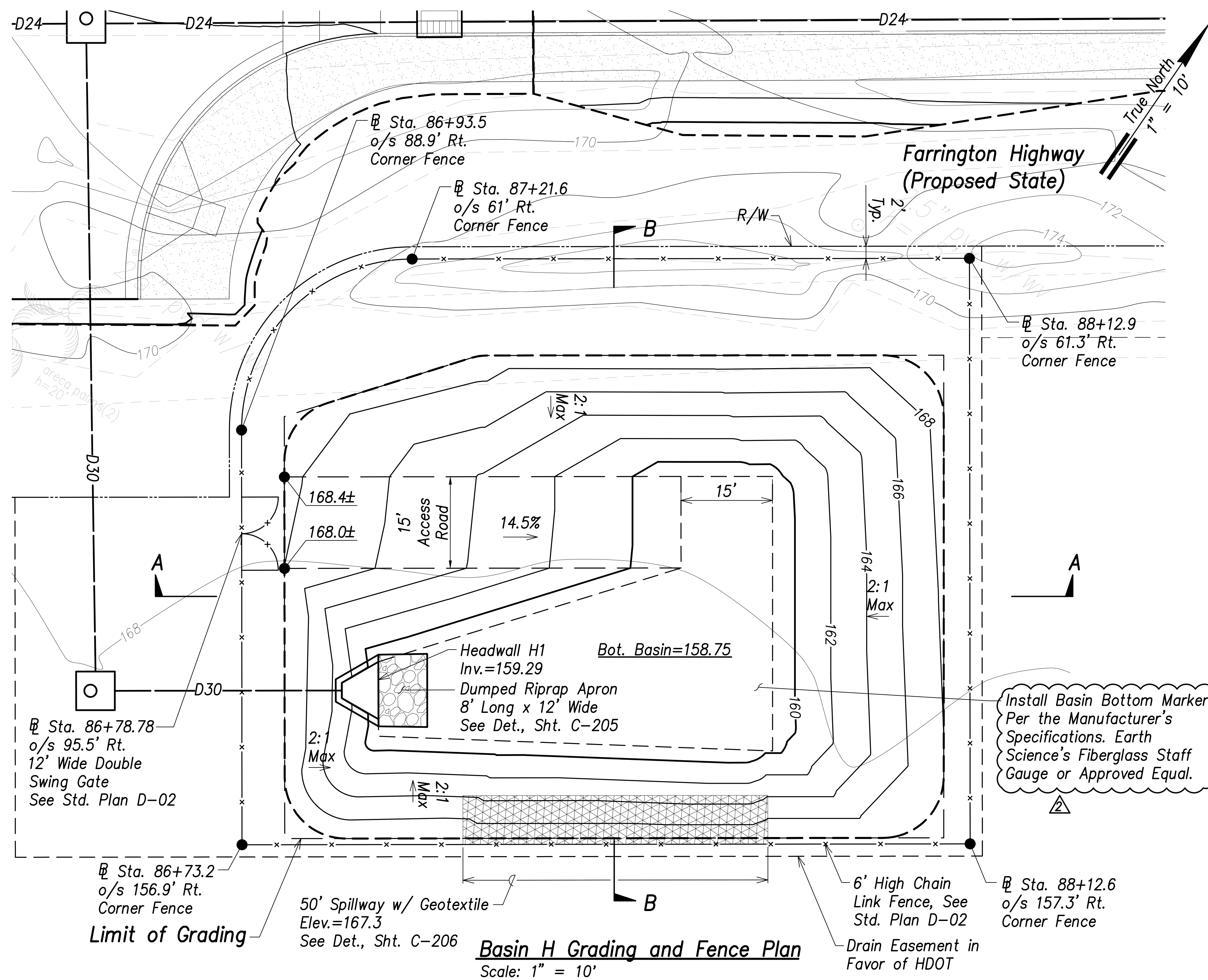
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**Basin G
 Grading and Fence Plan**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 112 | 767 |

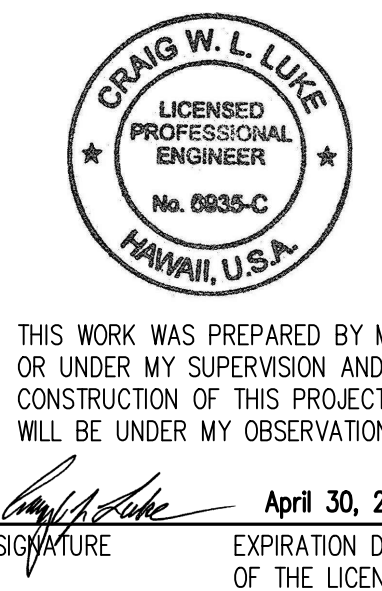
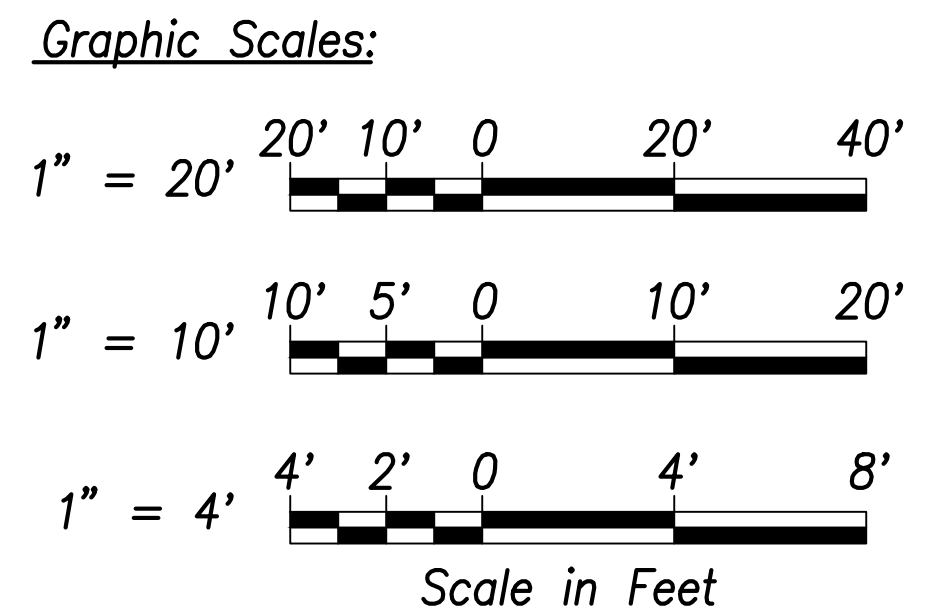


| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

- Legend:**
- - - 70 - - - Existing Grade Contour
 - 100 — Finished Grade Contour
 - - - - - Limit of Grading

Basin H Summary
 Capacity = 799 CY
 Volume Req'd. (5 Yr., 24 Hr.) = 575 CY

Note:
 Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.



| | |
|----------|-------------------------------------|
| 06/08/22 | Added basin marker, revised summary |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

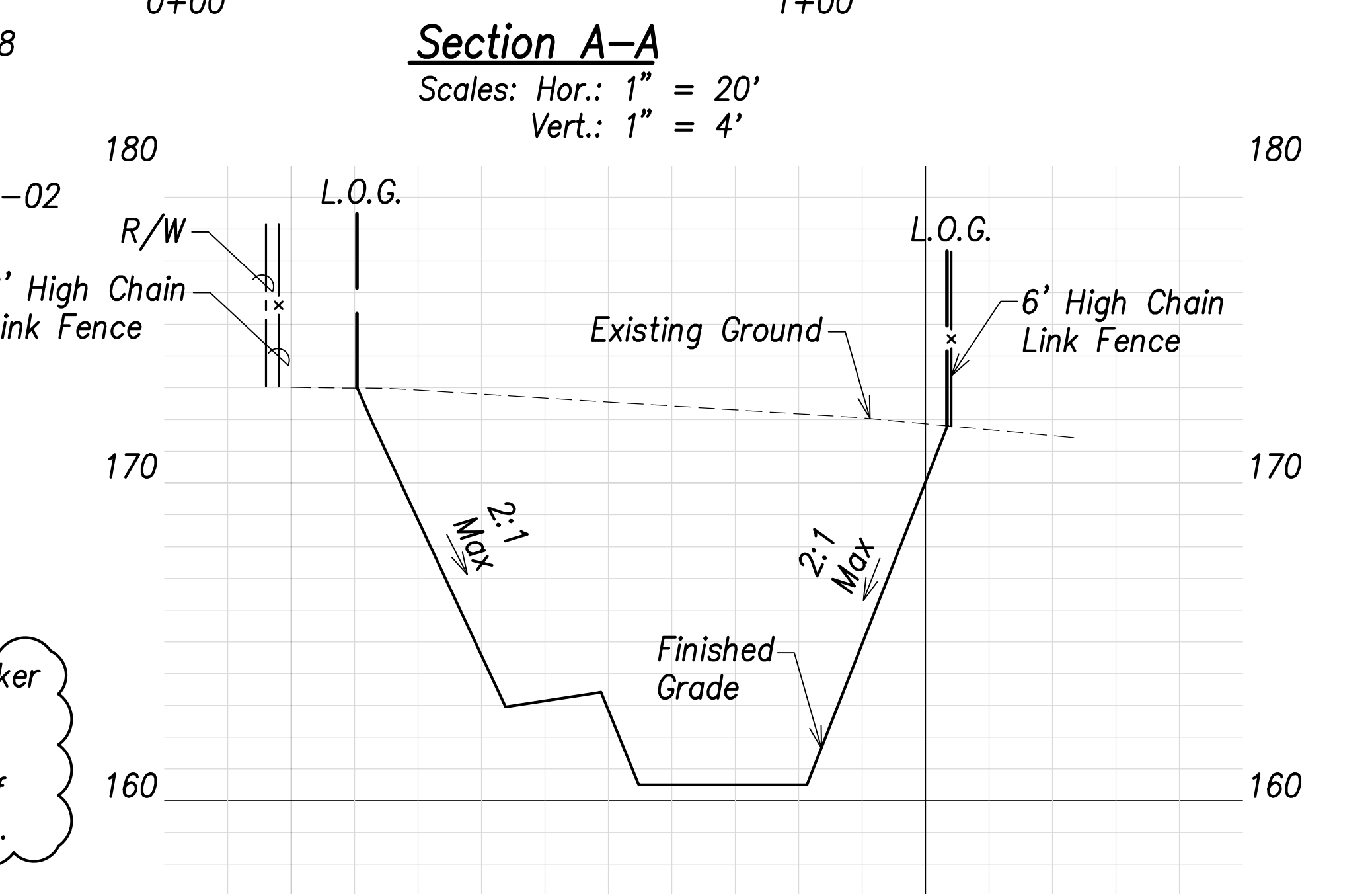
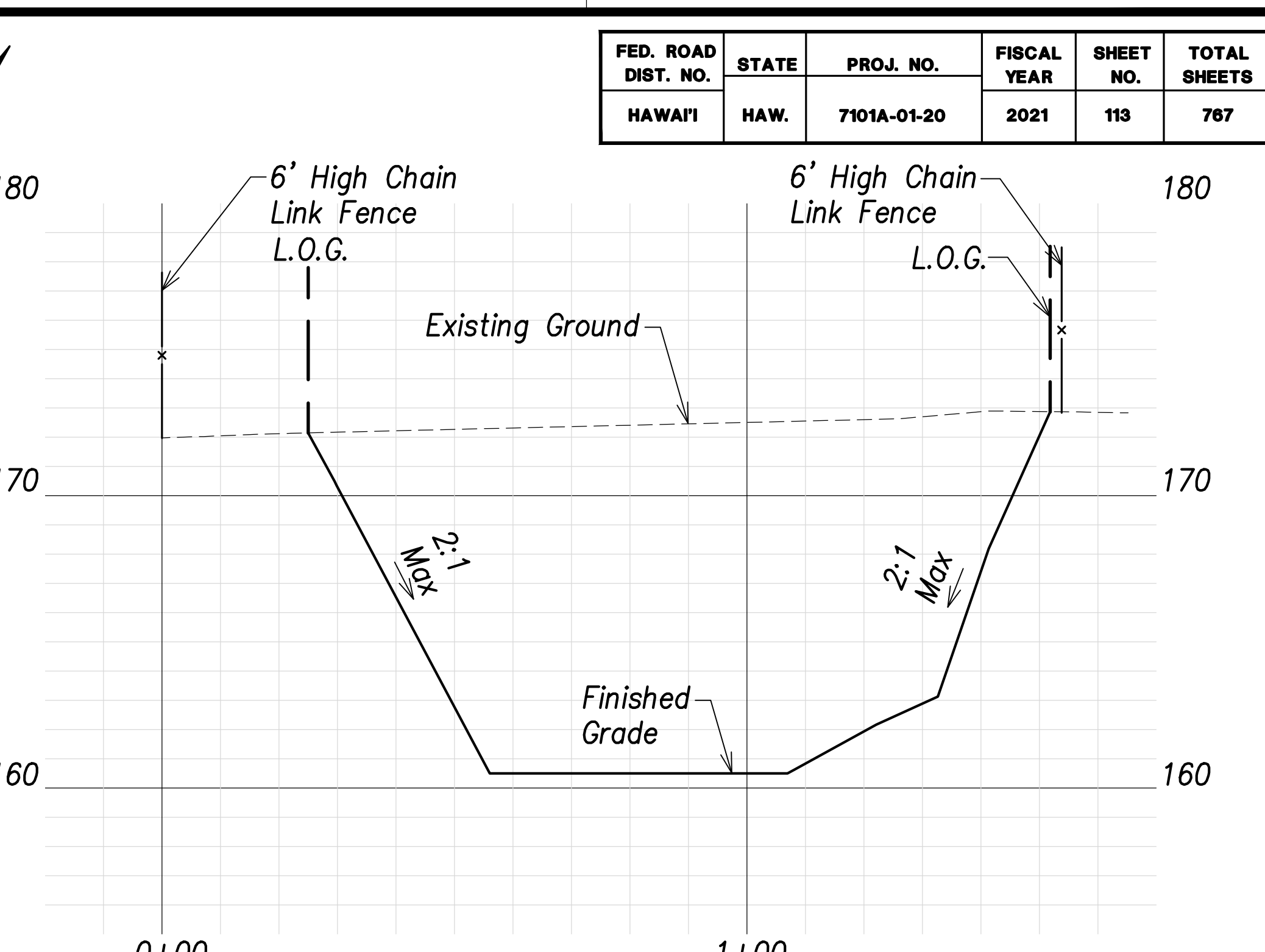
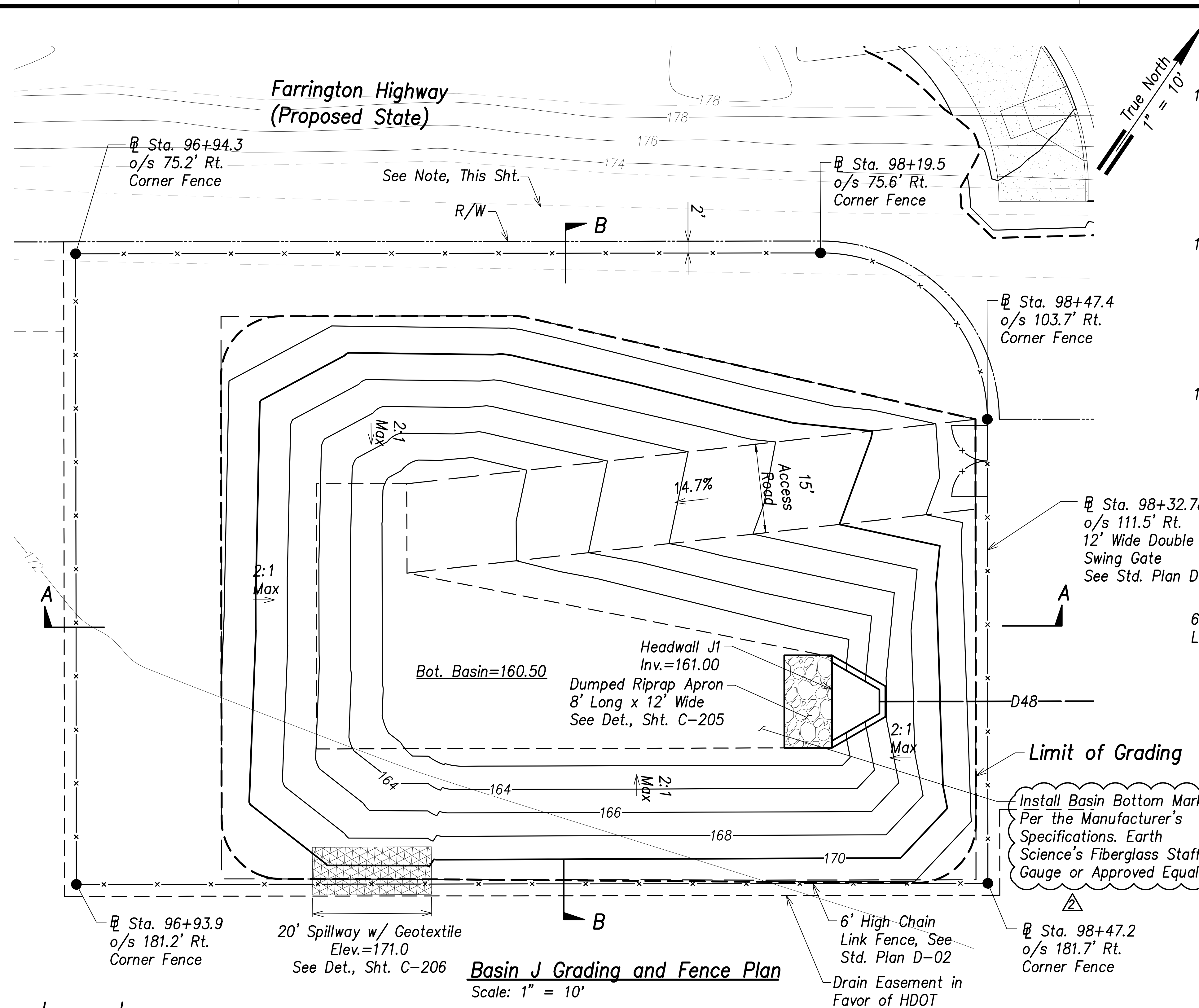
**Basin H
 Grading and Fence Plan**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-111 OF 767 SHEETS

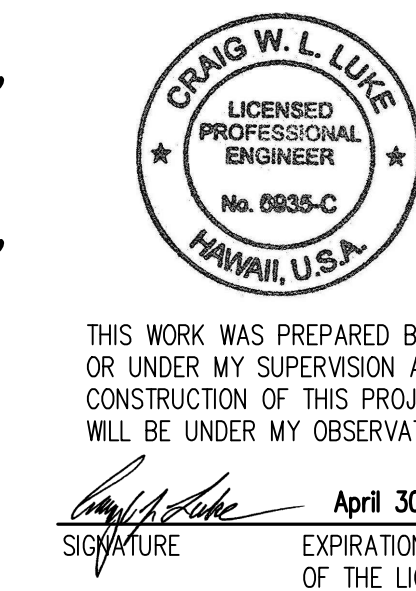
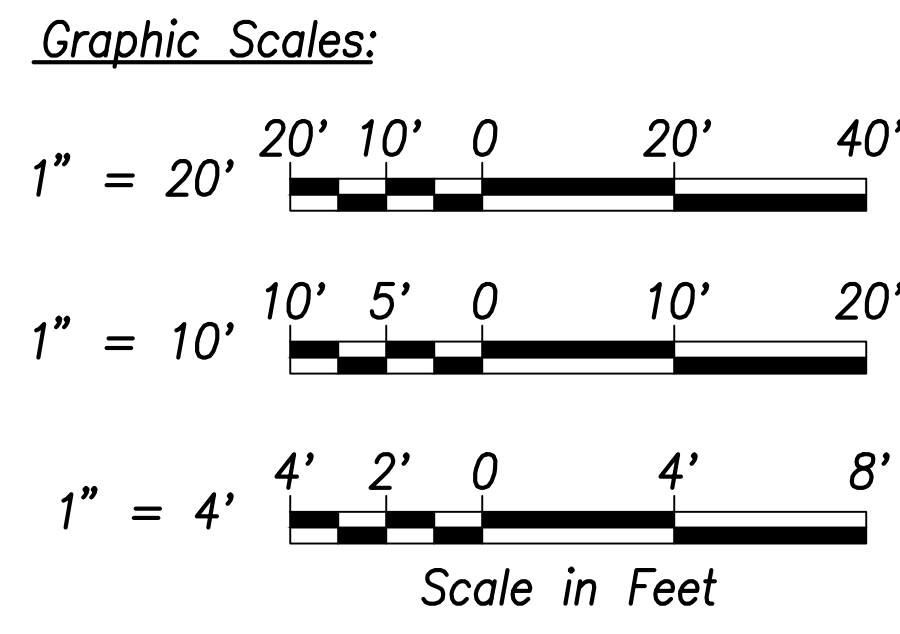
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 113 | 767 |



- Legend:**
- - - 70 - - - Existing Grade Contour
 - - - 100 - - - Finished Grade Contour
 - - - - - Limit of Grading

Basin J Summary
 Capacity = 2044 CY
 Volume Req'd. (5 Yr., 24 Hr.) = 181 CY

Note:
 Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.



| DATE | REVISION |
|----------|-------------------------------------|
| 06/08/22 | Added basin marker, revised summary |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

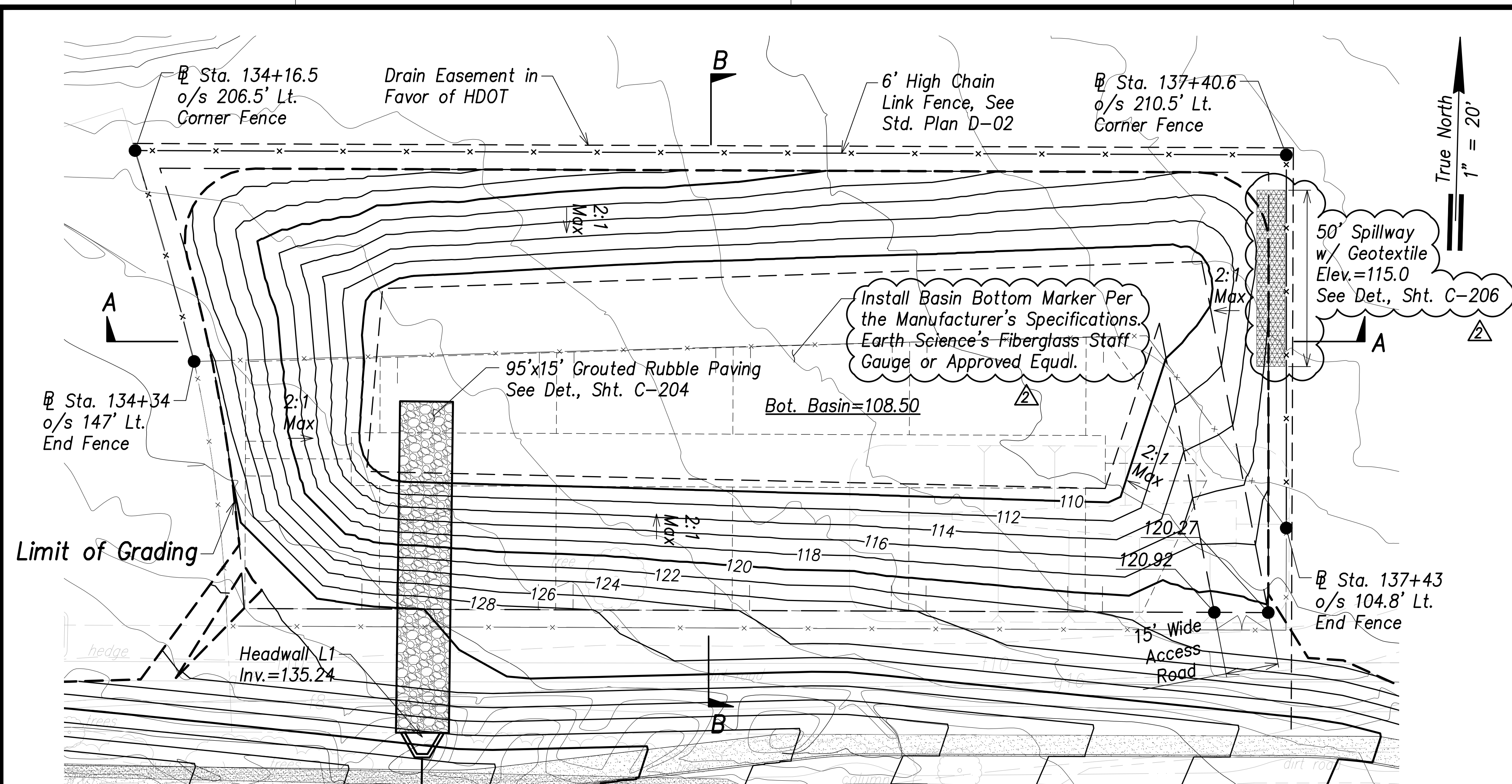
**Basin J
 Grading and Fence Plan**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

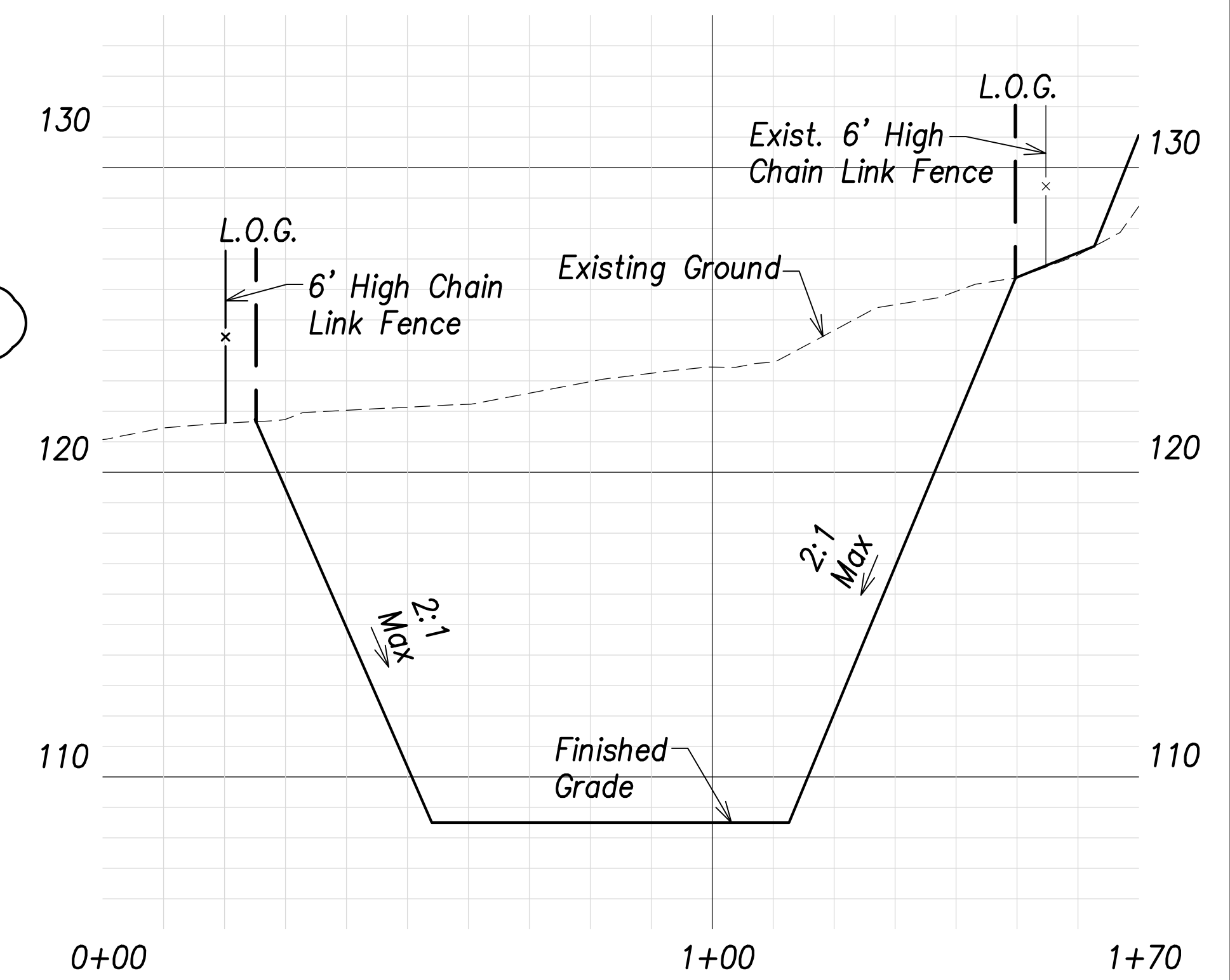
Scale: As Shown Date: April 2022

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

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 114 | 767 |



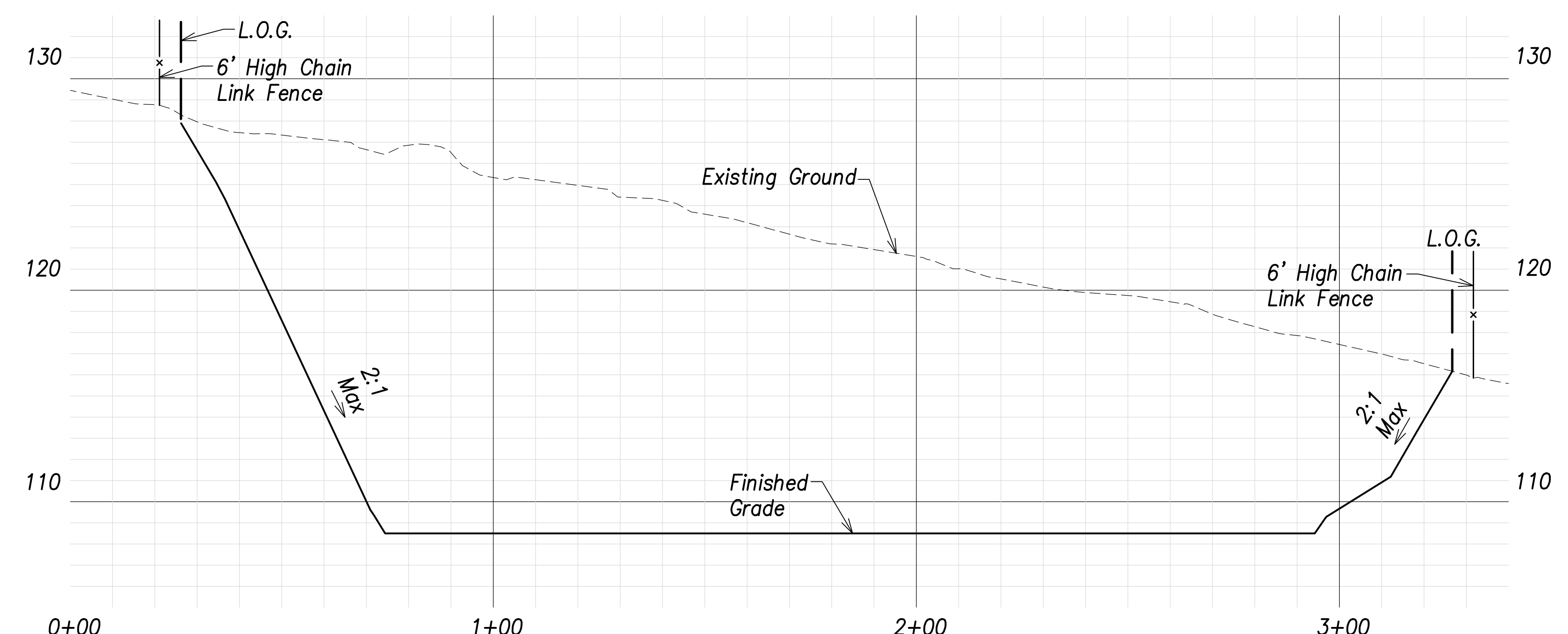
Basin L Grading and Fence Plan
Scale: 1" = 20'



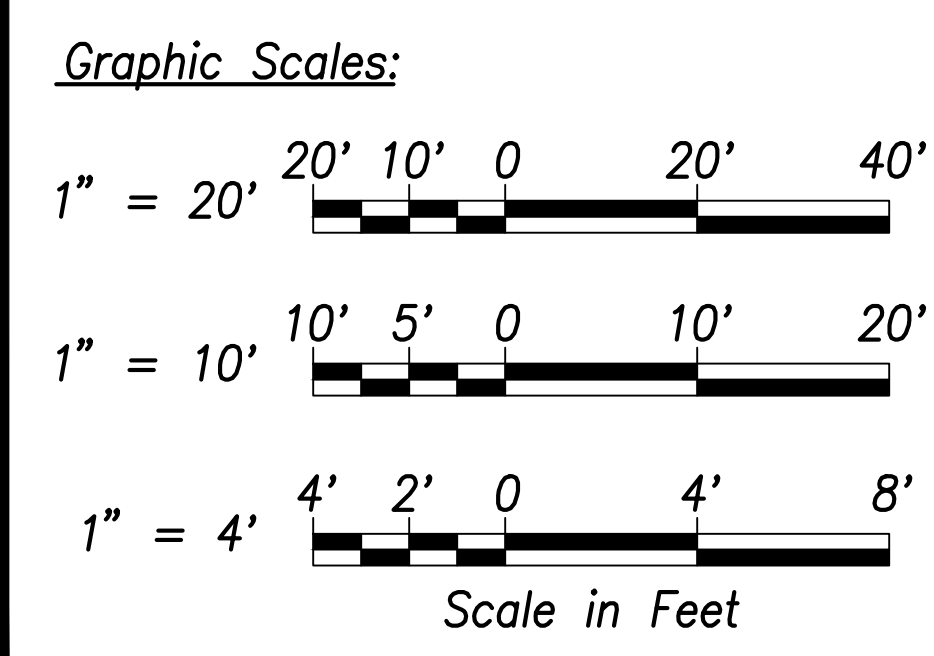
Section B-B
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'

Basin L Summary
Capacity = 4,250 CY
Volume Req'd. (50 Yr., 24 Hr.) = 1,112 CY

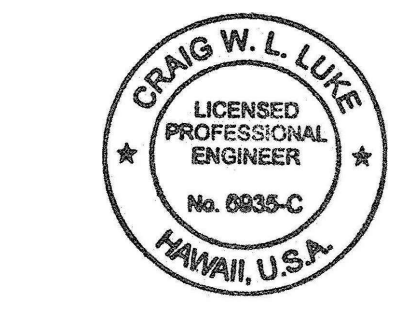
- Legend:**
- - - 70 - - - Existing Grade Contour
 - 100 — Finished Grade Contour
 - - - - - Limit of Grading



Section A-A
Scales: Hor.: 1" = 20'
Vert.: 1" = 4'



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|-------------------------------------|
| 06/08/22 | Added basin marker, revised summary |
| DATE | REVISION |

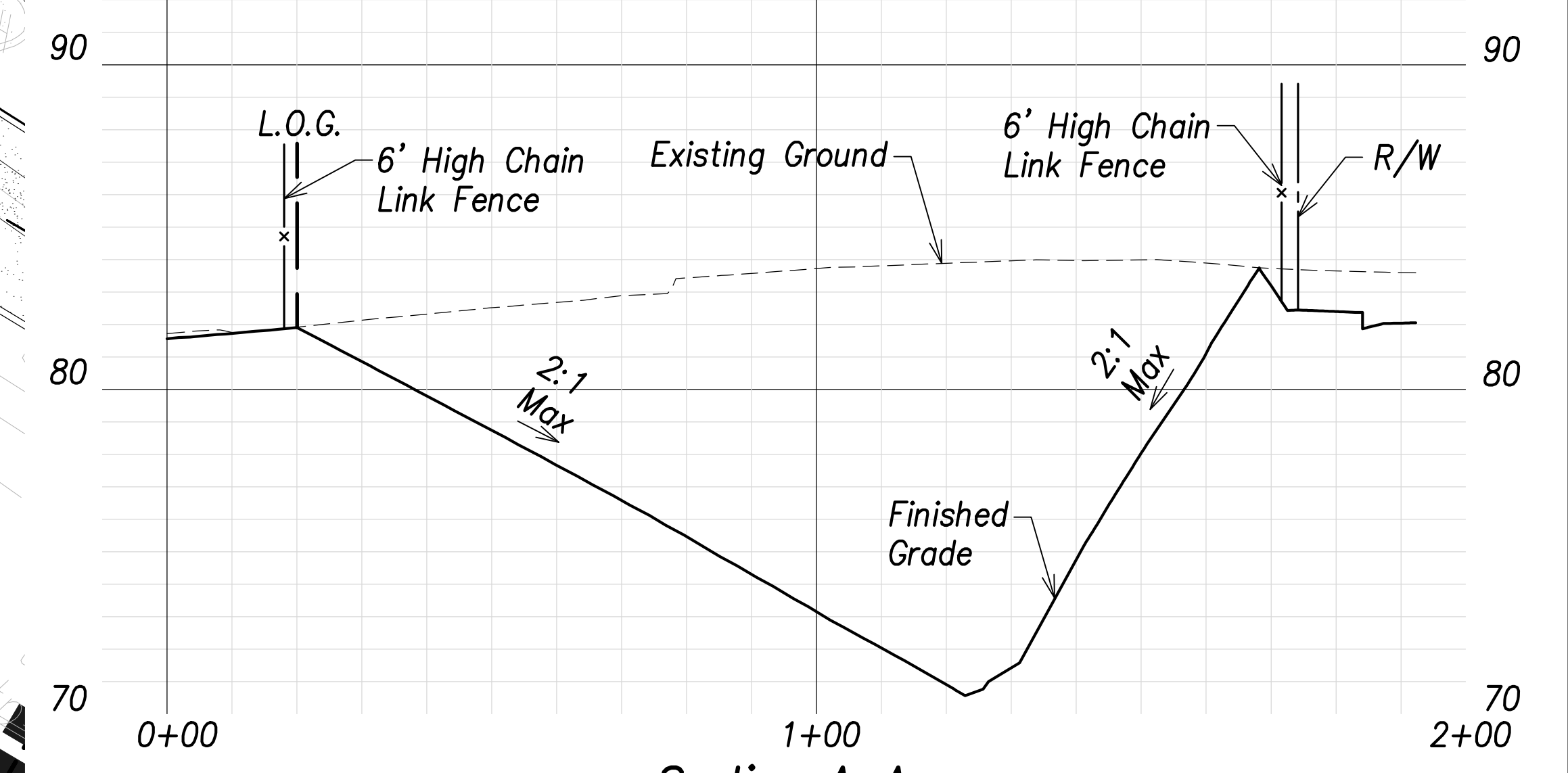
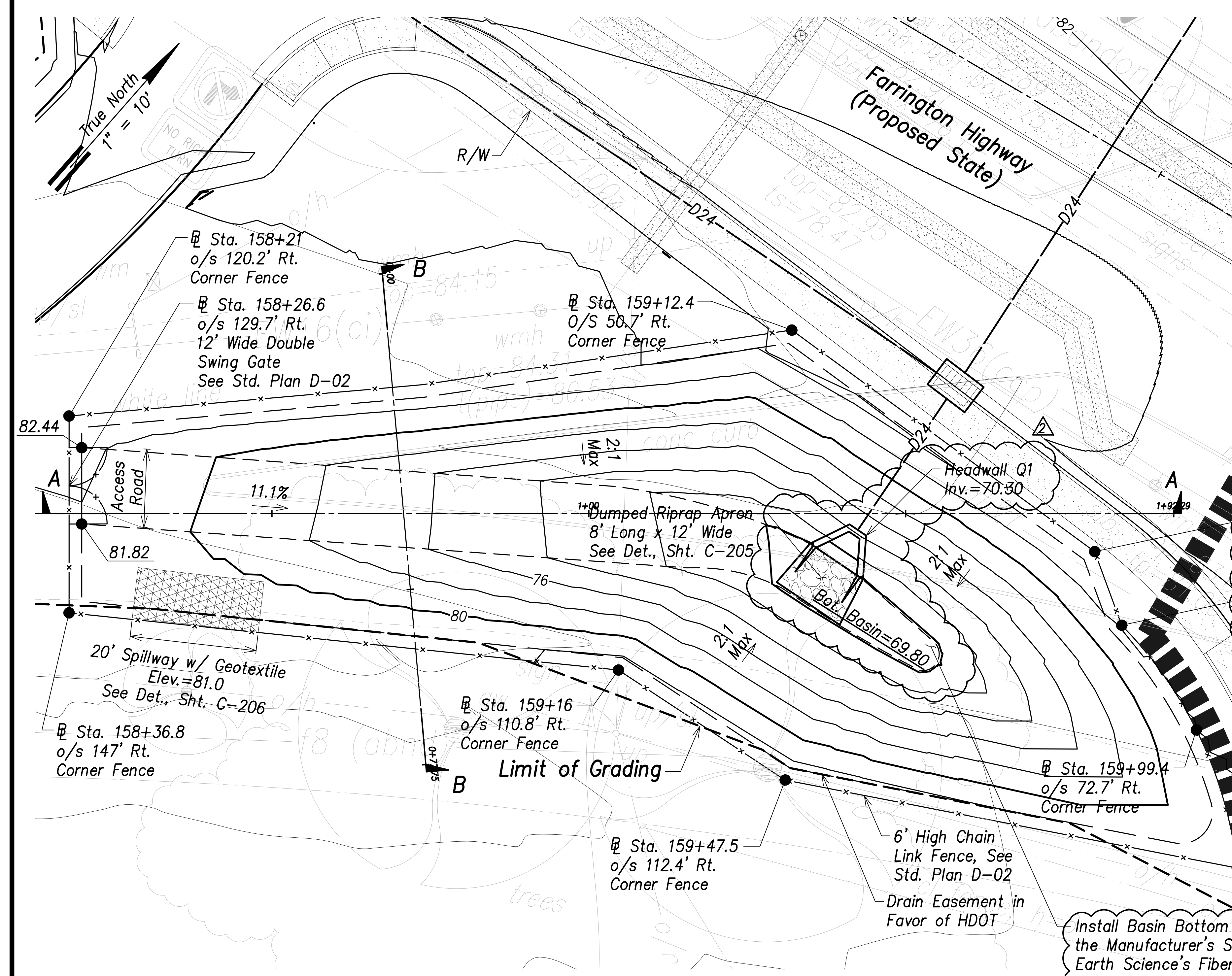
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Basin L
Grading and Fence Plan

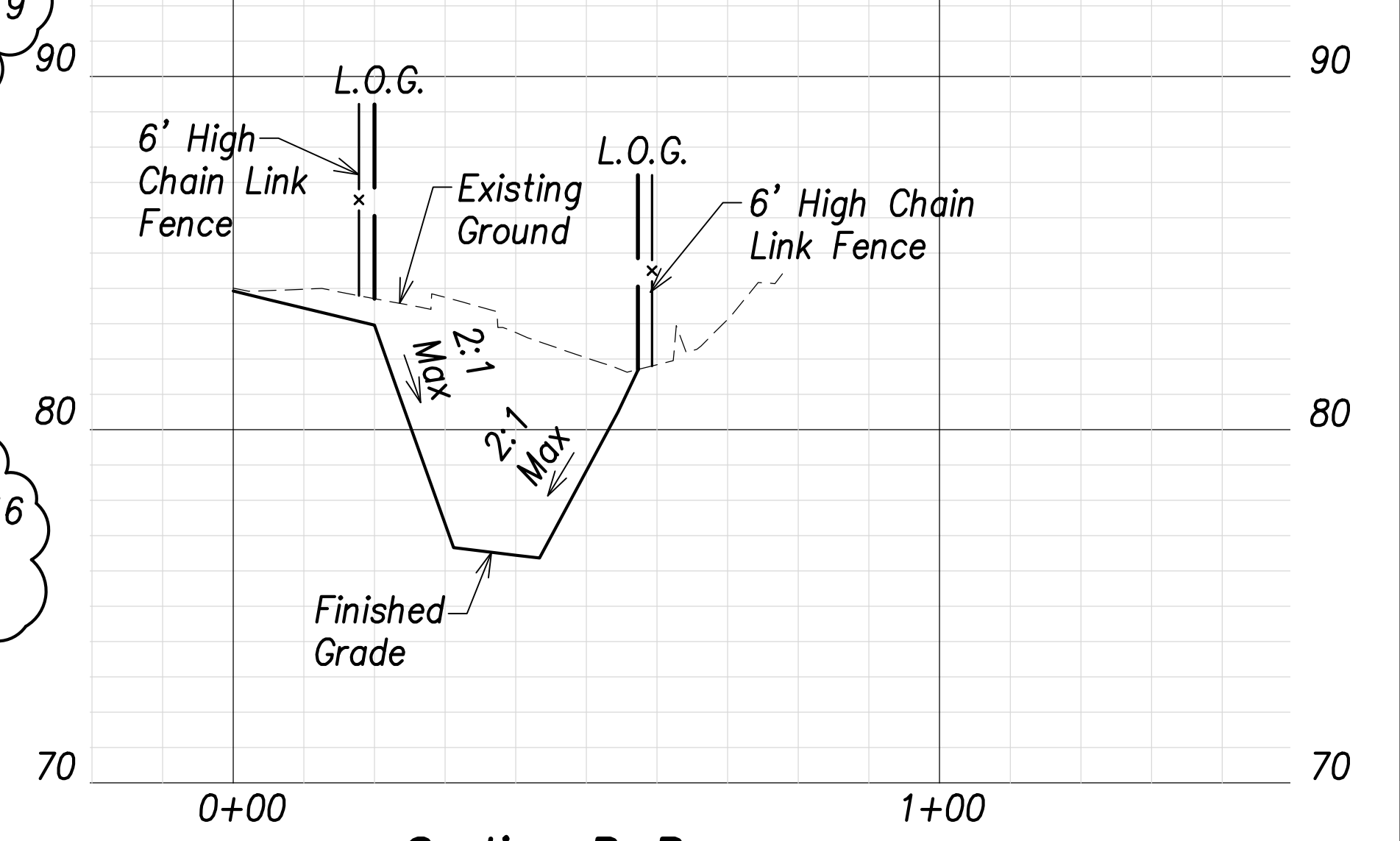
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 115 | 767 |



Section A-A
 Scales: Hor.: 1" = 20'
 Vert.: 1" = 4'



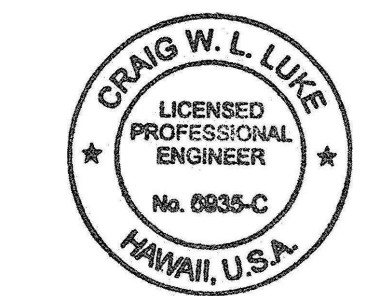
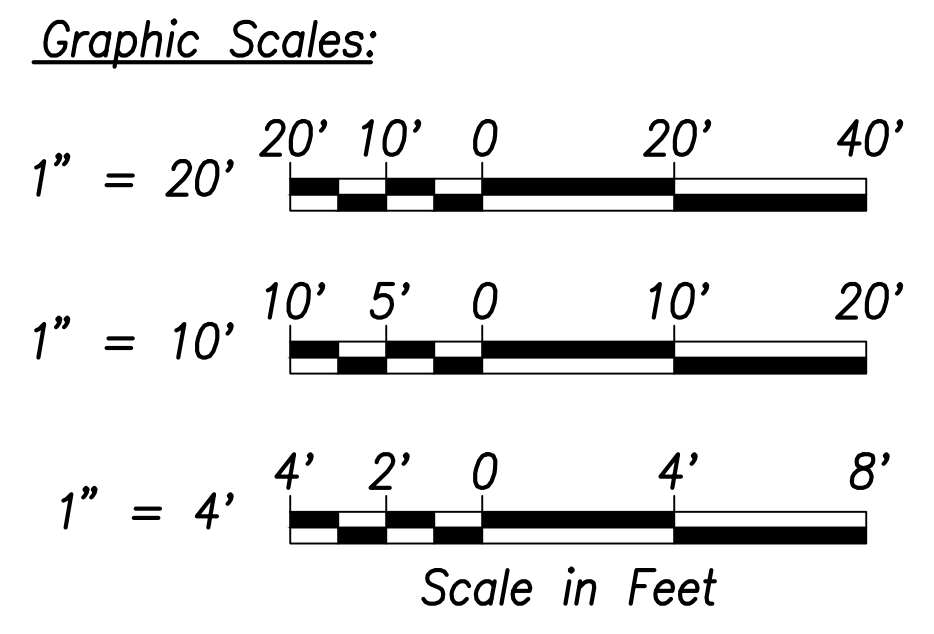
Section B-B
 Scales: Hor.: 1" = 20'
 Vert.: 1" = 4'

Basin Q Grading and Fence Plan
 Scale: 1" = 10'

- Legend:**
- - - 70 - - - Existing Grade Contour
 - - - 100 - - - Finished Grade Contour
 - - - - - Limit of Grading

Basin Q Summary
 Capacity = 976 CY
 Volume Req'd. (50 Yr., 24 Hr.) = 157 CY

Install Basin Bottom Marker Per the Manufacturer's Specifications. Earth Science's Fiberglass Staff Gauge or Approved Equal.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF LICENSE: April 30, 2022

| DATE | REVISION |
|----------|-------------------------------------|
| 06/08/22 | Added basin marker, revised grading |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Basin Q
 Grading and Fence Plan

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

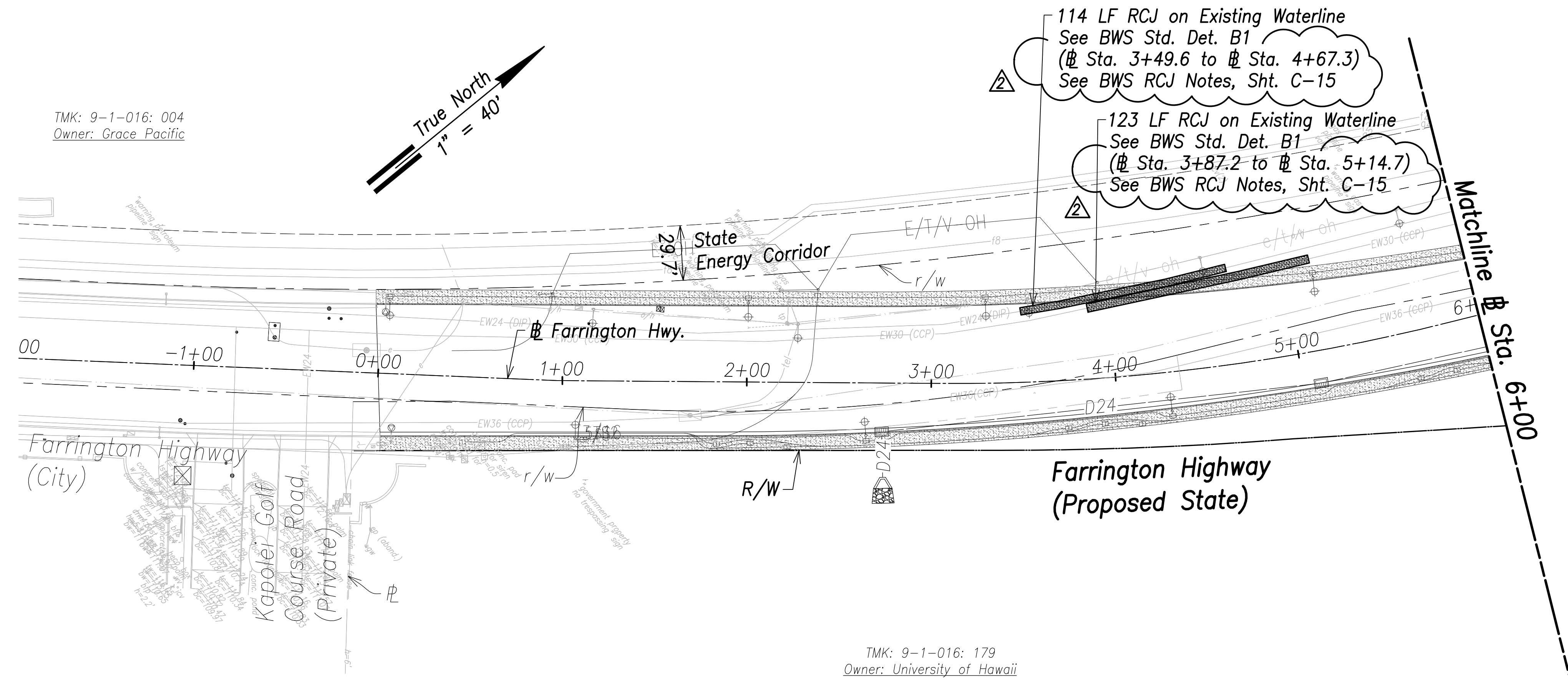
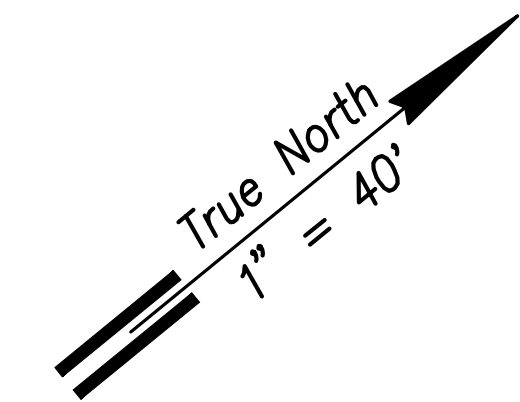
Scale: As Shown Date: April 2022

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-114 Basin Q Grading and Fence Plan.dwg saved June 8, 2022

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

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 116 | 767 |

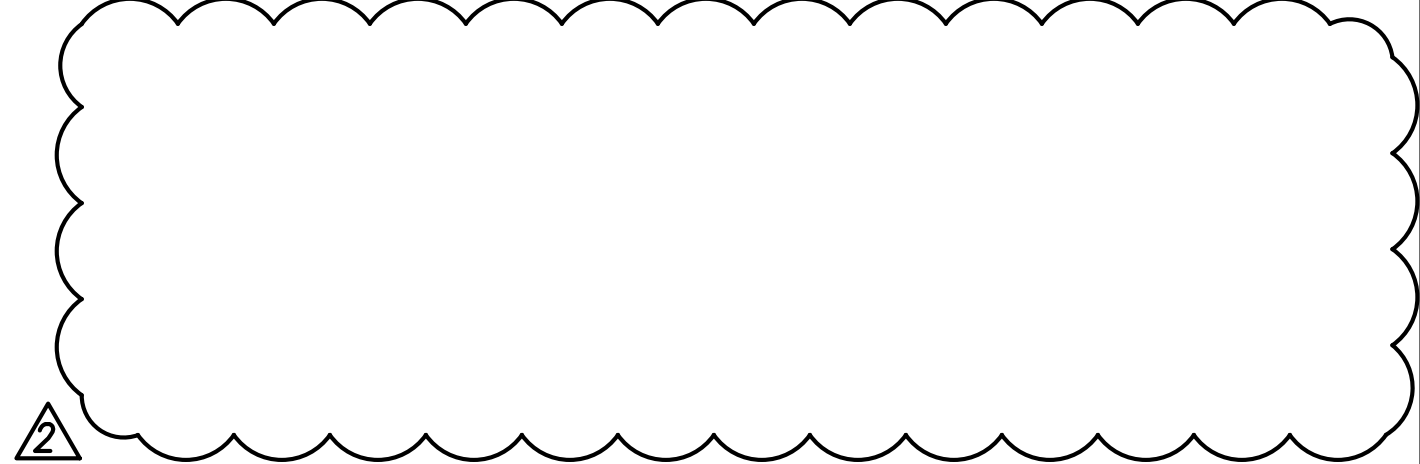
TMK: 9-1-016: 004
Owner: Grace Pacific



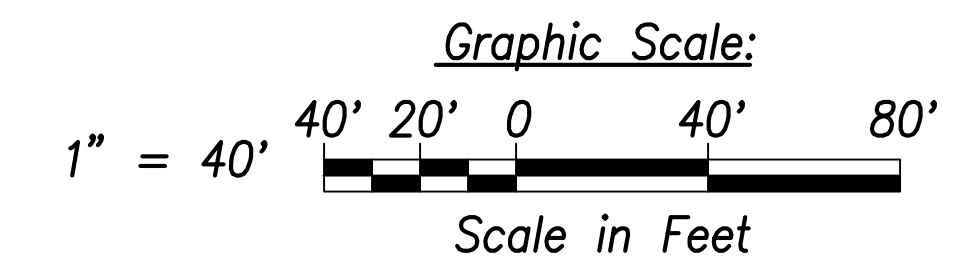
TMK: 9-1-016: 179
Owner: University of Hawaii

Utility Plan - (# Sta. 0+00 to # Sta. 6+00)
Scale: 1" = 40'

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.



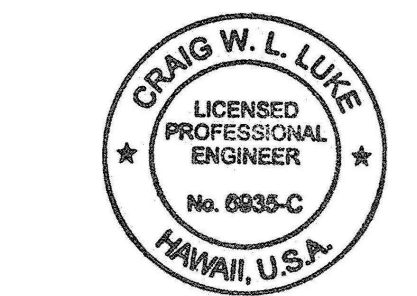
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|-----------------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN NOTE BOOK No. | |



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
APR 30, 2022
EXPIRATION DATE OF THE LICENSE

| DATE | REVISION |
|----------|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |

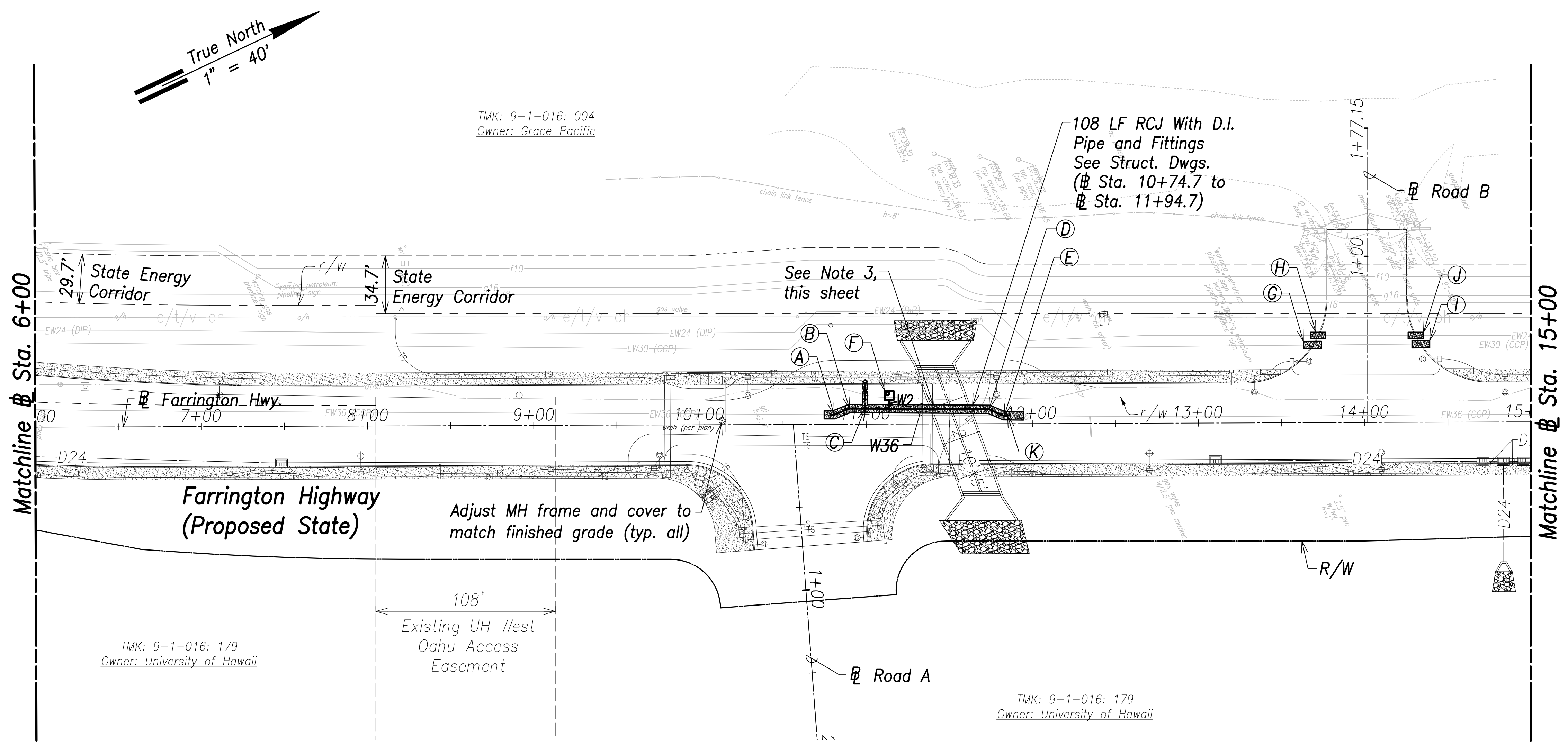
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 0+00 to # Sta. 6+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

FILE: K:\civil\23146 Farrington Hwy Widening\Draw\Construction\Draw\C-115 Utility Plan - Sta. 0+00 to 6+00.dwg saved June 8, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 117 | 767 |



- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
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Utility Plan - (# Sta. 6+00 to # Sta. 15+00)
Scale: 1" = 40'

- A**
Sta. 10+80.7, o/s 5.7' Lt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-168 For Temporary By-Pass Plan and Profile - 1
- B**
Sta. 10+90, o/s 9.4' Lt.
1-36" 1/16 Bend (H)

- C**
FH 1
Sta. 10+99.3, o/s 9.4' Lt.
1-36"x6" Tee, D.I.
1-6" G.V., 200#
1-Valve Box
1-FH (Ht.=10.1')
1-FH Extension
1-Conc. Block
16 LF 6" D.I.P., Cl. 53
1-Blue Type F FH Marker
See BWS Std. Det. FH4
- D**
Sta. 11+73.9 o/s 8.7' Lt.
1-36" 1/16 Bend (H)
- E**
Sta. 11+83.0, o/s 4.8' Lt.
1-36" 1/16 Bend (H)

- F**
Sta. 11+14, o/s 17.2' Lt.
Center MH
2-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21

- G**
11 LF RCJ on Existing Waterline
See BWS Std. Det. B1
(# Sta. 13+63.3 to # Sta. 13+74.2)
See BWS RCJ Notes, Sht. C-15

- H**
9 LF RCJ on Existing Waterline
See BWS Std. Det. B1
(# Sta. 13+67.6 to # Sta. 13+76.7)
See BWS RCJ Notes, Sht. C-15

- I**
11 LF RCJ on Existing Waterline
See BWS Std. Det. B1
(# Sta. 14+28.6 to # Sta. 14+39.3)
See BWS RCJ Notes, Sht. C-15

- J**
9 LF RCJ on Existing Waterline
See BWS Std. Det. B1
(# Sta. 14+26.3 to # Sta. 14+35.5)
See BWS RCJ Notes, Sht. C-15

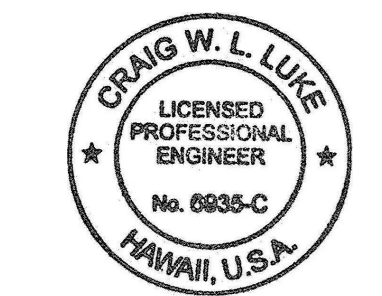
- E**
Sta. 11+87.1, o/s 4.8' Lt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-168 For Temporary By-Pass Plan and Profile - 1

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| SURVEY PLOTTED BY | DATE |
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| NOTE BOOK | |
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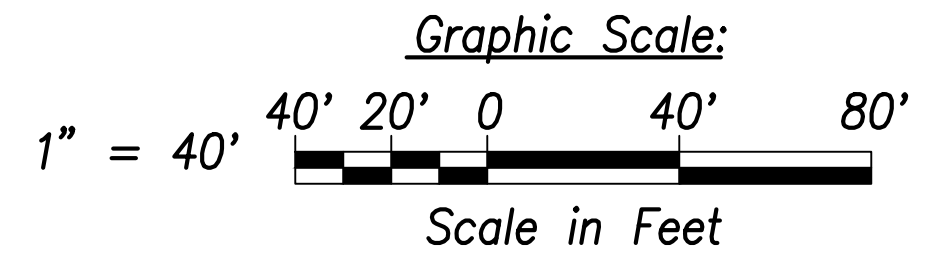
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE



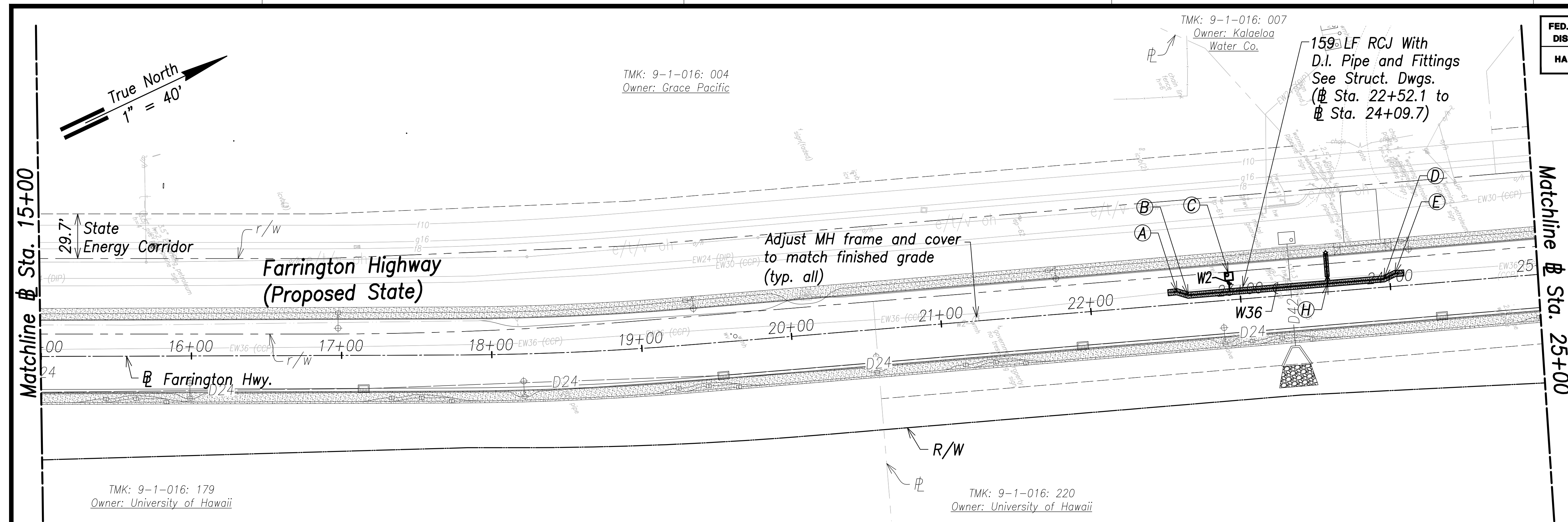
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE



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|--|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility Plan
Sta. 6+00 to # Sta. 15+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-116 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 118 | 767 |



Utility Plan - (# Sta. 15+00 to # Sta. 25+00)
Scale: 1" = 40'

(A)
Sta. 22+58.1, o/s 7.9' Lt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-168 For Temporary By-Pass Plan and Profile - 2

(B)
Sta. 22+65.4, o/s 5.5' Lt.
1-36" 1/16 Bend (H)

(C)
Sta. 22+93.4, o/s 15.8' Lt.
Center MH
2-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21

(D)
Sta. 23+97.5, o/s 30.5' Lt.
1-36" 1/16 Bend (H)

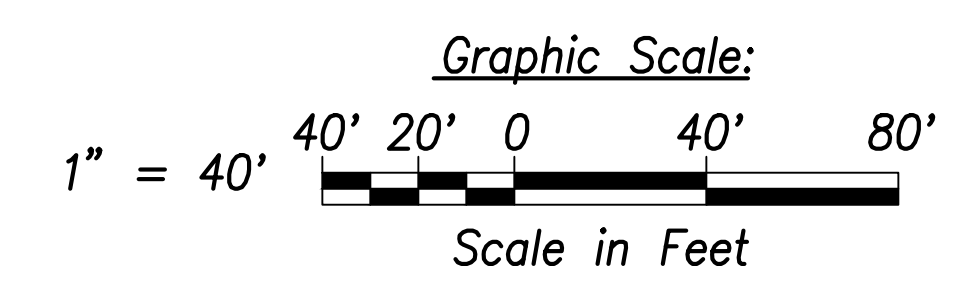
(E)
Sta. 24+05, o/s 33.6' Lt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-168 For Temporary By-Pass Plan and Profile - 2

(H)
FH 2
Sta. 23+60, o/s 29.7' Lt.
1-36"x6" Tee, D.I.
1-6" G.V., 200#
1-Valve Box
1-FH (Ht.=8.0')
1-FH Extension
1-Conc. Block
21 LF 6" D.I.P., Cl. 53
1-Blue Type F FH Marker
See Profile, Sht. C-162
See BWS Std. Det. FH4

Notes:

1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
2. The Contractor shall coordinate construction with utility companies.
3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
4. For electrical relocations, see electrical drawings.
5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

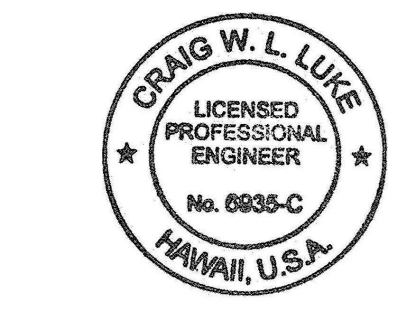
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| SURVEY PLOTTED BY | DATE |
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| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| NO. | |



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

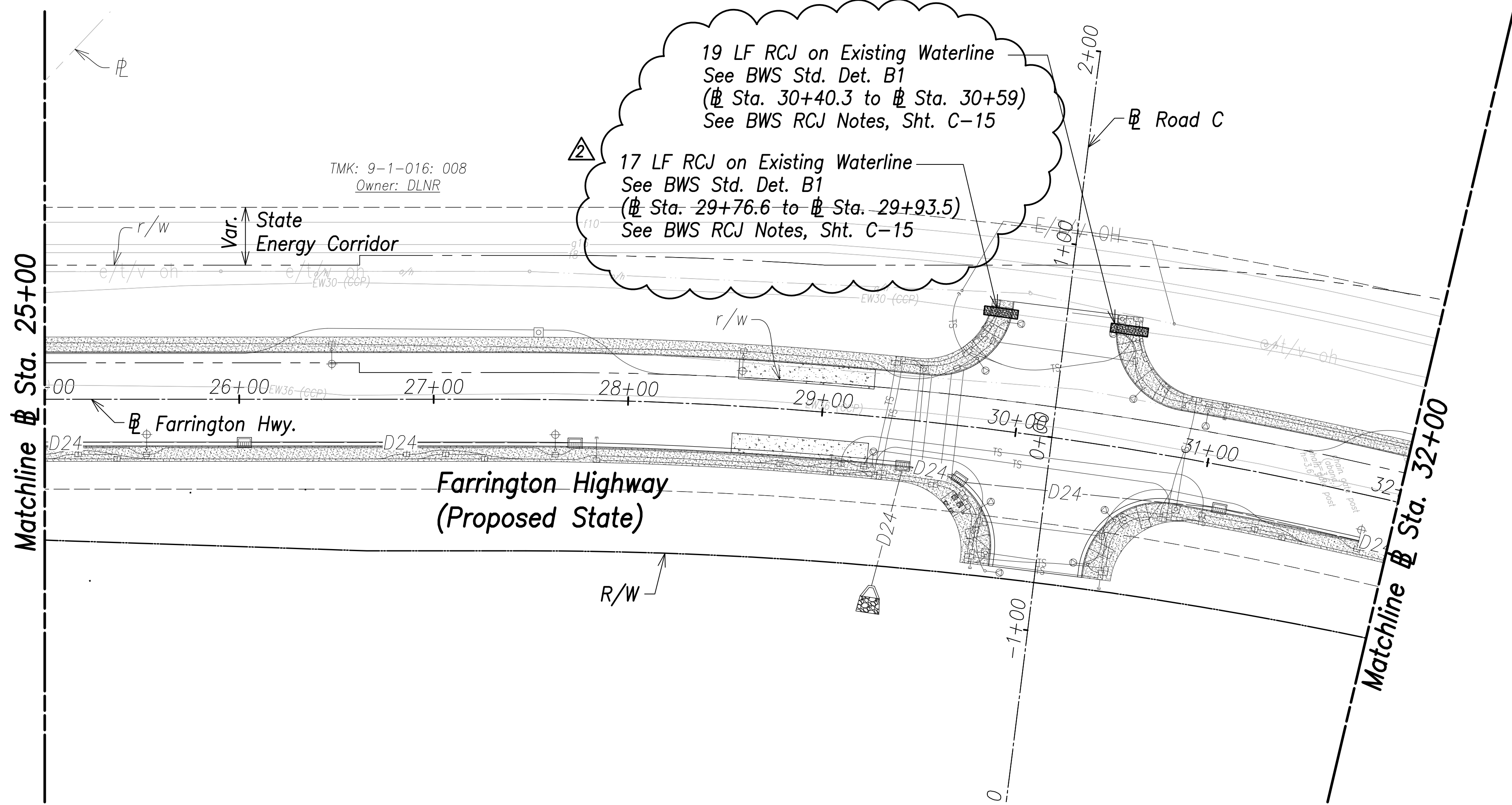
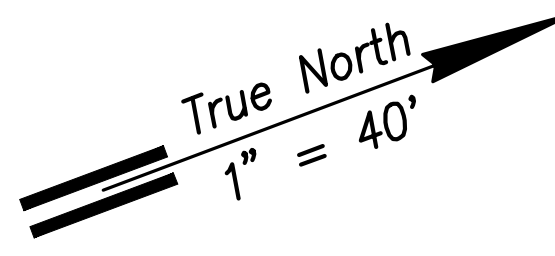
DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
APR 30, 2022
EXPIRATION DATE OF THE LICENSE

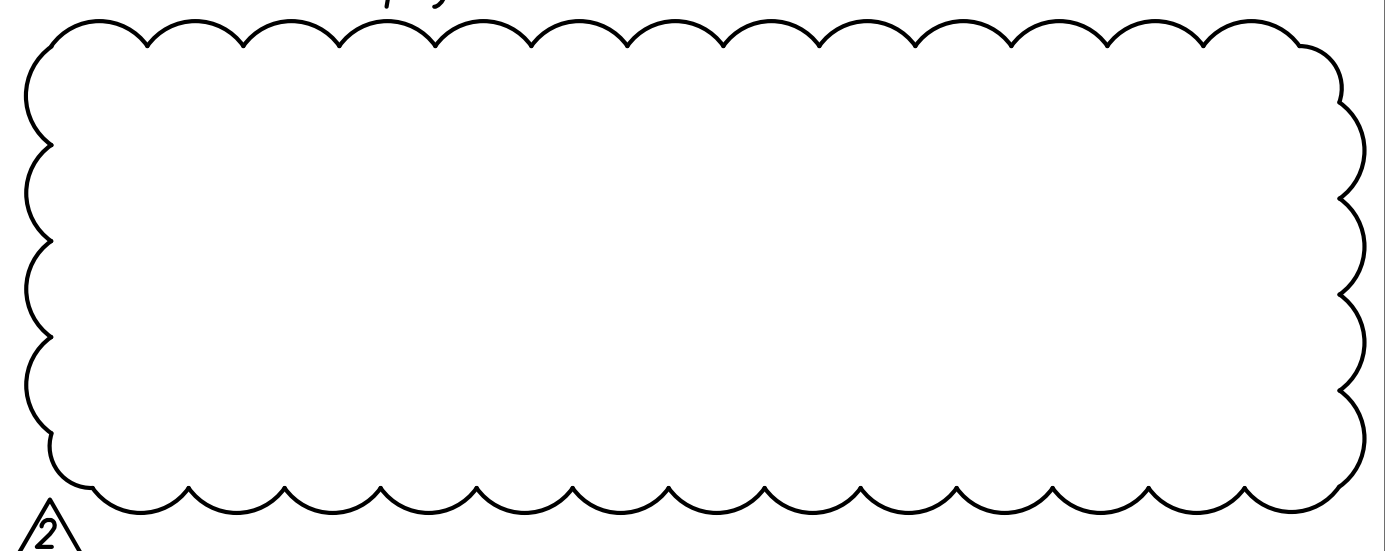
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| 06/08/22 | Deleted note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility Plan
Sta. 15+00 to # Sta. 25+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-117 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 119 | 767 |

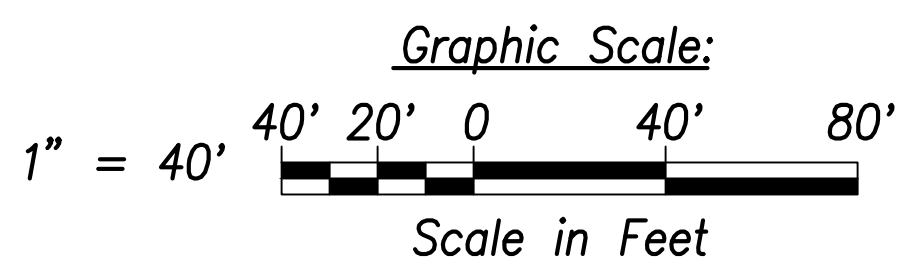


Utility Plan - (# Sta. 25+00 to # Sta. 32+00)
Scale: 1" = 40'

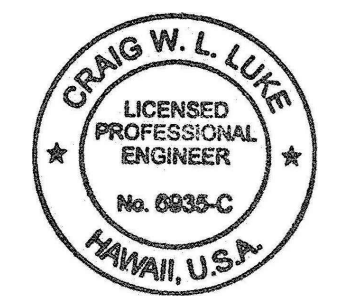
- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
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| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

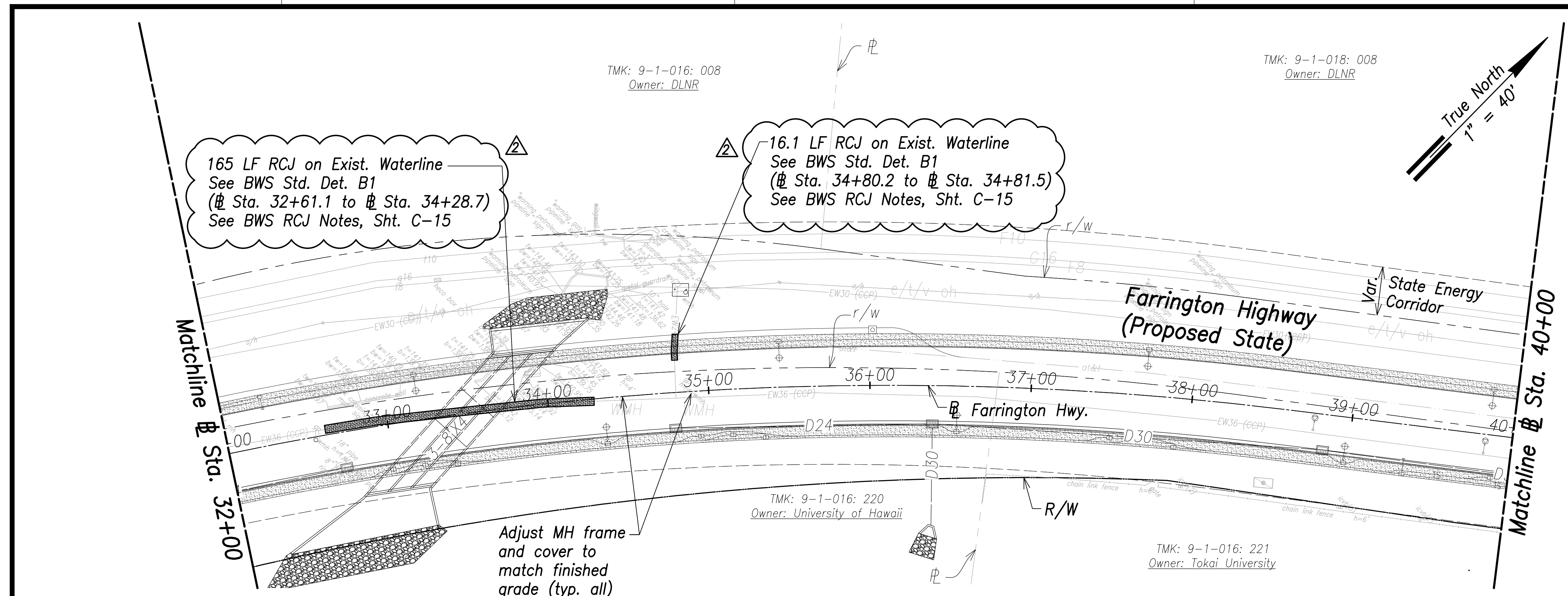
Utility Plan
 # Sta. 25+00 to # Sta. 32+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-118 OF 767 SHEETS

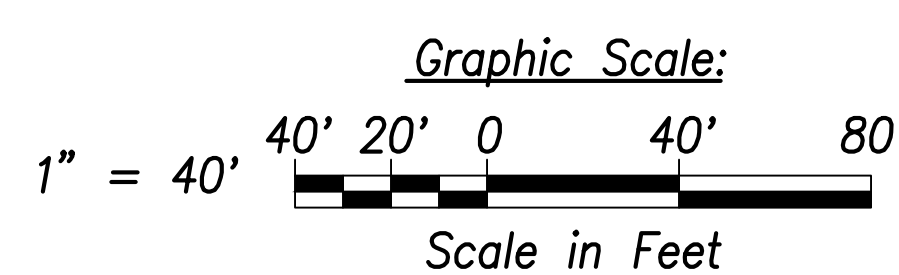
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 120 | 767 |



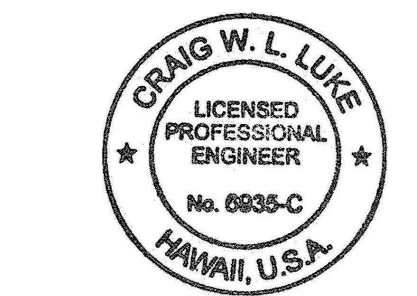
- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

Utility Plan - (# Sta. 32+00 to # Sta. 40+00)
Scale: 1" = 40'

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



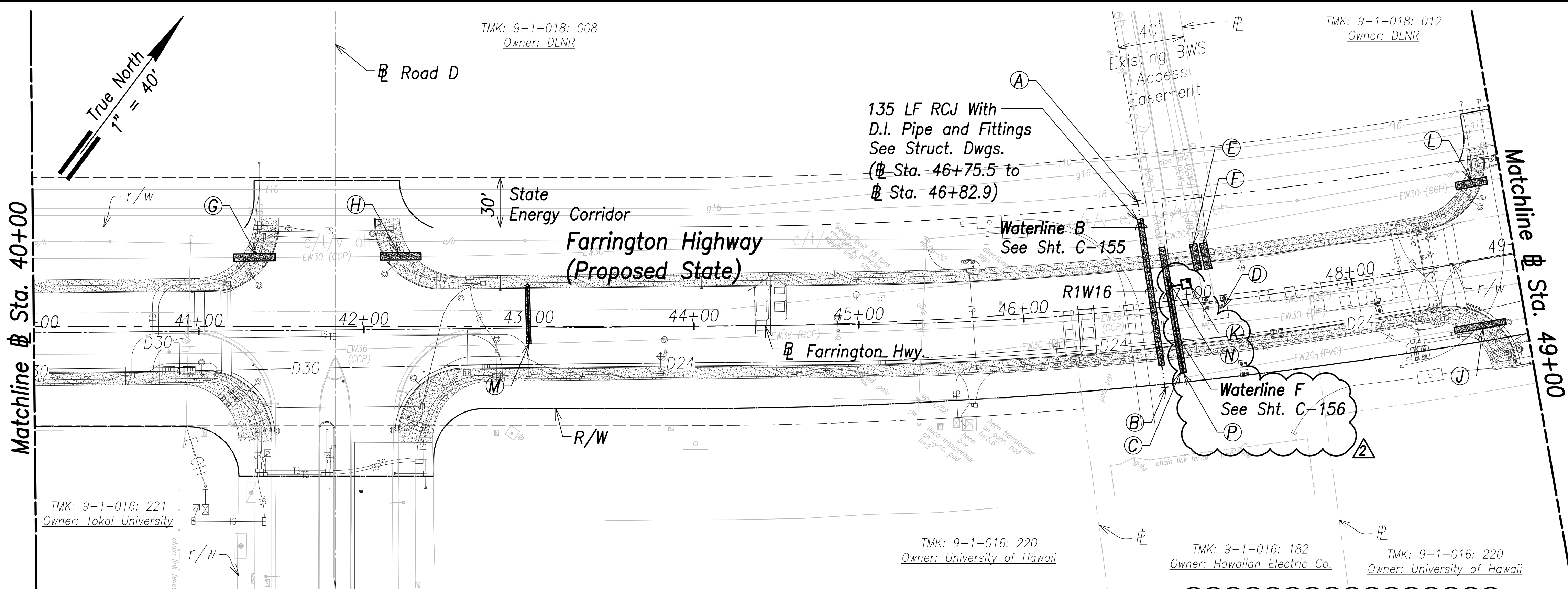
APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|---|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility Plan
Sta. 32+00 to # Sta. 40+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-119 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 121 | 767 |



Utility Plan - (Sta. 40+00 to Sta. 49+00)
Scale: 1" = 40'

- Notes:**
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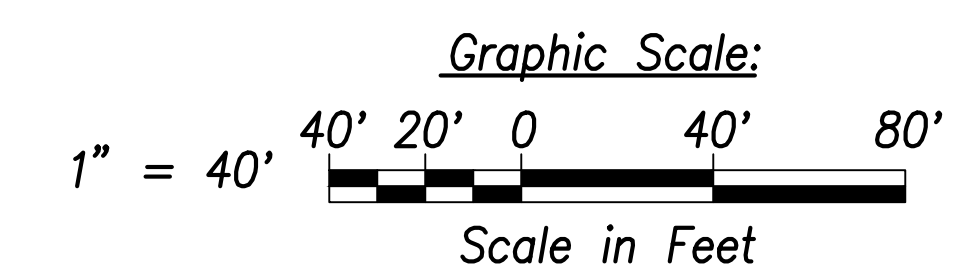
- (A)**
Sta. 46+75.4, o/s 65.5' Lt.
= Sta. 1+12.7 WL B
1-16" Cap w/4" Clean out
1- 4'x4' Square Concrete Slab
1-Valve Marker (Marked R1W16)
- (B)**
Sta. 46+81.7, o/s 48.5' Rt.
= Sta. 0+00 WL B
1-16" Cap w/4" Clean out
1- 4'x4' Square Concrete Slab
1-Valve Marker (Marked R1W16)
- (C)**
77 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 46+87.6 to Sta. 46+92.5)
- (D)**
Adjust MH frame and cover to match finished grade (typ. all)
- (E)**
16 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 47+07.1 to Sta. 47+08.3)
See BWS RCJ Notes, Sht. C-15

- (F)**
16 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 47+13.3 to Sta. 47+14.7)
See BWS RCJ Notes, Sht. C-15
- (G)**
26 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 41+21.6 to Sta. 41+47)
See BWS RCJ Notes, Sht. C-15
- (H)**
25 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 42+10.3 to Sta. 42+35.1)
See BWS RCJ Notes, Sht. C-15
- (J)**
32 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 48+56.3 to Sta. 48+87.8)
See BWS RCJ Notes, Sht. C-15
- (K)**
Sta. 47+00, o/s 12.6' Lt.
Center MH
1-2" Offset ARV, 200#
1-Type "D" MH
See Bws Std. Det. V5 and MH20-MH21

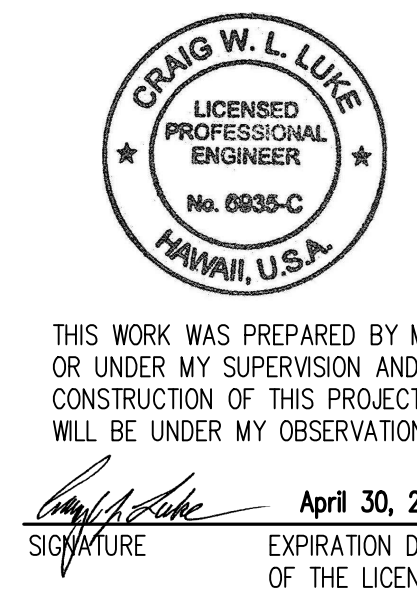
- (L)**
19 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 48+72.1 to Sta. 48+91.3)
See Note 6, This Sht.
- (M)**
FH 3
Sta. 43+00, o/s 9.4' Lt.
1-36"x6" Tapping Tee
1-6" Tapping Valve, 200#
1-Valve Box & Cover
1-6" Sleeve, 12" Long
1-Conc. Block w/ Struct. Struts
8± LF 6" D.I.P., Cl. 53
1-FH (Ht.=8.8')
1-FH Extension
1-Conc. Block
16 LF 6" D.I.P., Cl. 53
1-Blue Type F FH Marker
See Profile, Sht. C-162
See BWS Std. Det. FH4
Temp. for Testing:
1-6" Cap Tapped for 2-1/2" I.P.T.
1-2-1/2" C.O.
1-Conc. Block

- (N)**
Sta. 46+87.6, o/s 36' Lt.
Conn. to e/w20
Contractor to verify location and invert
Materials for Connection:
1-CCPxD.I. Adapter
1-20" Sleeve, 15" Long
8± LF 20" D.I.P., Cl. 53
Temp. for Testing:
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-178 For Temporary By-Pass Plan and Profile - 20
- (P)**
Sta. 46+92.8, o/s 40.1' Rt.
Conn. to e/w20
Contractor to verify location and invert
Materials for Connection:
1-CCPxD.I. Adapter
1-20" Sleeve, 15" Long
8± LF 20" D.I.P., Cl. 53
Temp. for Testing:
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-178 For Temporary By-Pass Plan and Profile - 20

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



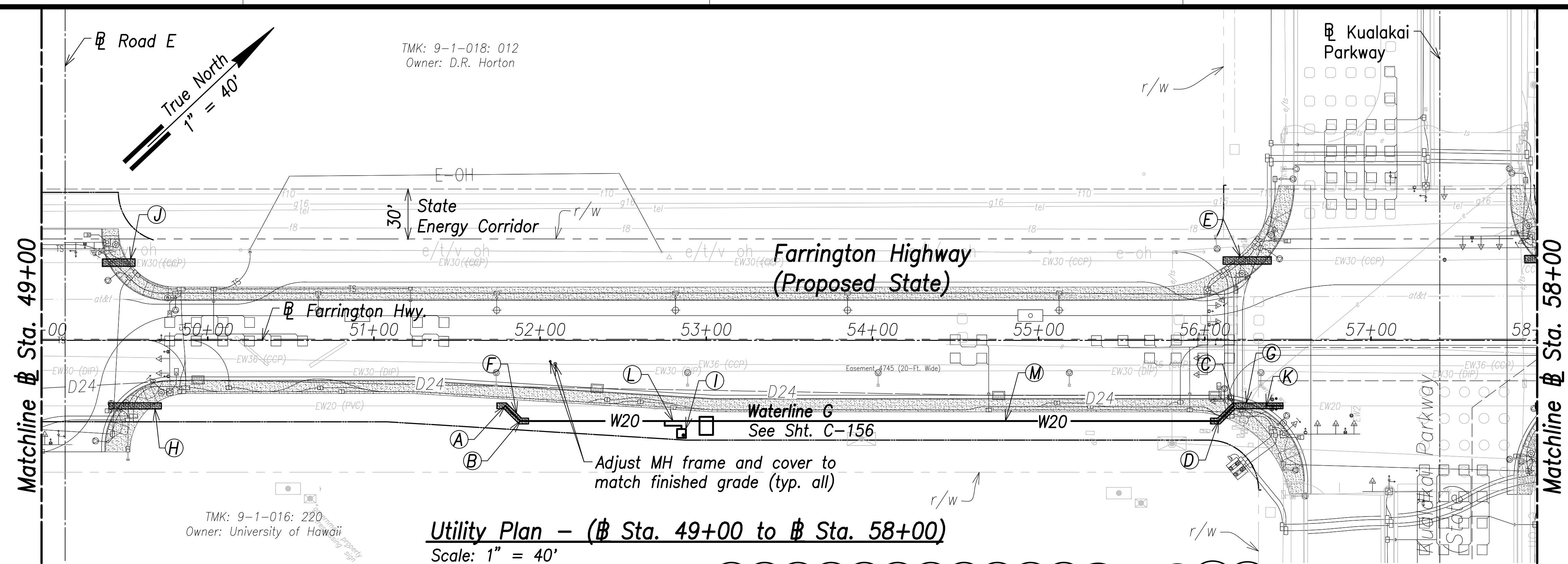
APPROVED: _____ DATE _____
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|--|---------------------------------|
| 06/08/22 | Added new W20; Revised callouts |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility Plan
Sta. 40+00 to Sta. 49+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-120 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 122 | 767 |



- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
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Utility Plan - (Sta. 49+00 to Sta. 58+00)
Scale: 1" = 40'

A

Sta. 51+79, o/s 39.4' Rt.
Conn. to e/w20
Contractor to verify location and invert
Materials for Connection:
1-20" 1/8 Bend (H)
1-20" Sleeve, 15" Long
1-20" B.G.G.V., 200#
1-Type "A" MH
1-Conc. Block w/ Struct. Struts
8± LF 20" D.I.P., Cl. 53
Provide Insulating Joint Test Station
See Shts. CP-1 to CP-4
Temp. for Testing:
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-176 For Temporary By-Pass Plan and Profile - 16

B

Sta. 51+88.1, o/s 48.5' Rt.
1-20" 1/8 Bend (H)

C

Sta. 56+17.5, o/s 39.4' Rt.
Conn. to e/w20
Contractor to verify location and invert
Materials for Connection:
1-20" 1/8 Bend (H)
1-20" Sleeve, 15" Long
1-Conc. Block w/ Struct. Struts
8± LF 20" D.I.P., Cl. 53
Temp. for Testing:
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-176 For Temporary By-Pass Plan and Profile - 17

D

Sta. 56+08.4, o/s 48.5' Rt.
1-20" 1/4 Bend (H)
Provide Insulating Joint Test Station
See Shts. CP-1 to CP-4

E

32 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 56+11 to Sta. 56+40)
See BWS RCJ Notes, Sht. C-15

F

23 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwgs.
(Sta. 51+74 to Sta. 51+93.1)

G

48 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwgs.
(Sta. 56+03.4 to Sta. 56+47)

H

32 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 49+40.6 to Sta. 49+72.1)
See BWS RCJ Notes, Sht. C-15

I

Sta. 52+85, o/s 56' Rt.
Center MH
1-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21

J

20 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(Sta. 49+36.6 to Sta. 49+56.3)
See BWS RCJ Notes, Sht. C-15

K

Sta. 56+37, o/s 39.4' Rt.
Conn. to e/w20
Contractor to verify location and invert
Demolish and remove exist. WMH and valve
1-20" Sleeve, 12" Long
1-20" Coupling
10± LF 20" D.I.P., Cl. 53

L

Sta. 52+80, o/s 48.5' Rt.
Provide Anode Test Station
See Shts. CP-1 to CP-4

M

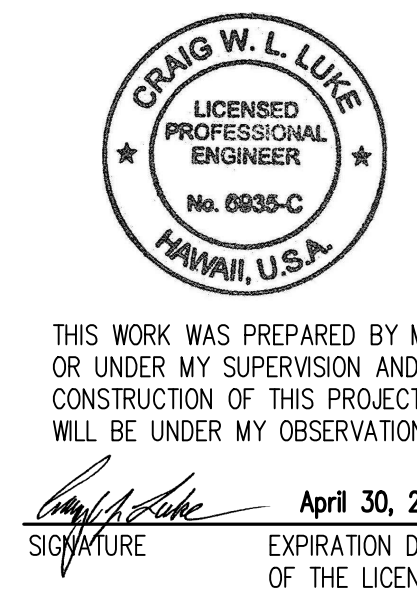
Sta. 54+80, o/s 48.5' Rt.
Provide Anode Test Station
See Shts. CP-1 to CP-4

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'
Scale in Feet

APPROVED: _____ DATE _____

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

| | |
|-----------------------------------|-------|
| SURVEY PLOTTED BY: | DATE: |
| DRAWN BY: | |
| TRACED BY: | |
| DESIGNED BY: | |
| CHECKED BY: | |
| ORIGINAL PLAN NOTE BOOK No. _____ | |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|--|
| 06/08/22 | Revised Callouts; Profile Sheet References Revised; Deleted note |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

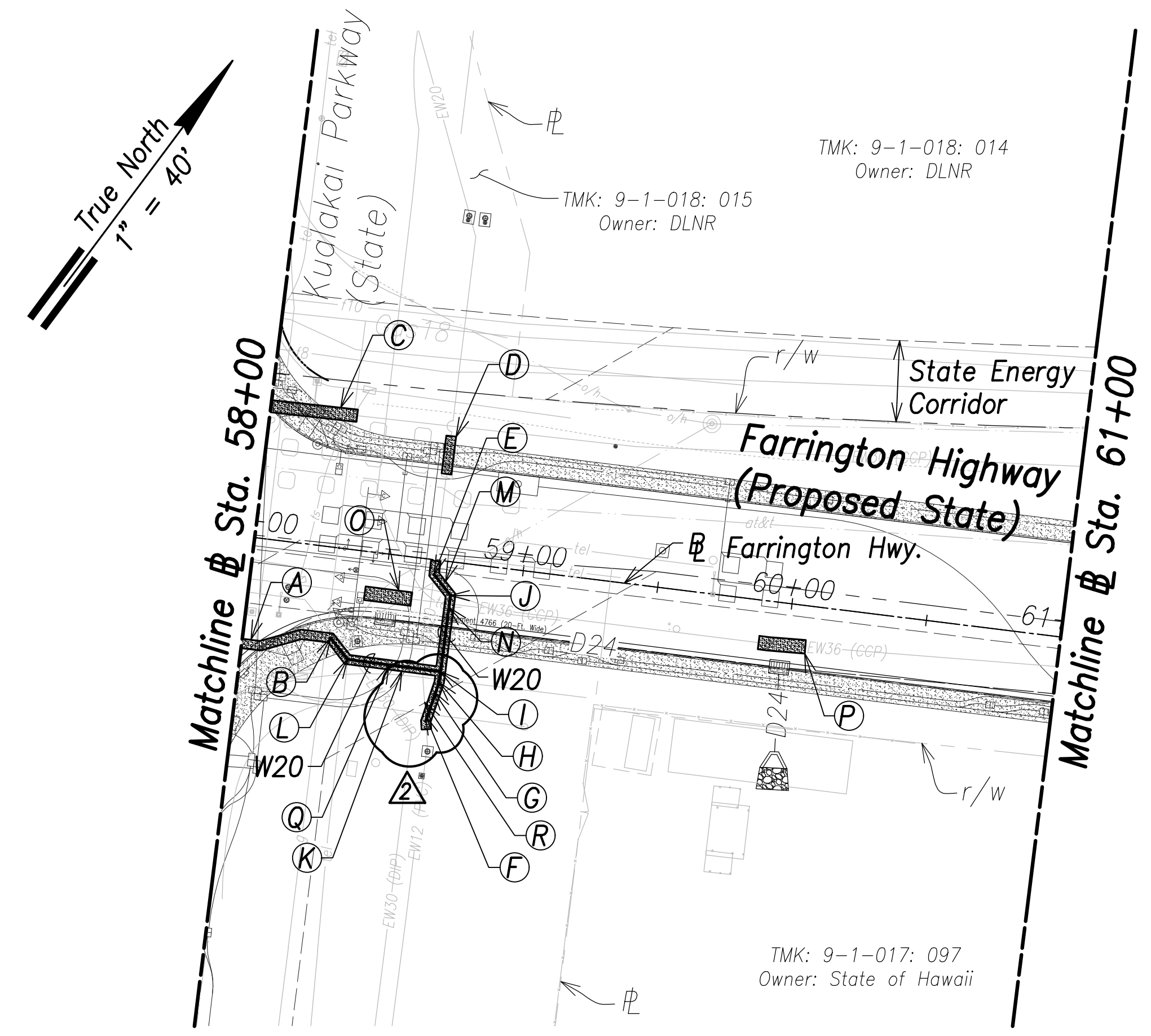
Utility Plan
Sta. 49+00 to Sta. 58+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-121 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 123 | 767 |



Utility Plan - (# Sta. 58+00 to # Sta. 61+00)
Scale: 1" = 40'

| | |
|--|---|
| <p>A</p> <p>35 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 57+99 to
Sta. 58+32.4)
See BWS RCJ Notes, Sht. C-15</p> <p>B</p> <p># Sta. 58+32.4, o/s 33.4' Rt.
=# Sta. 0+00 Waterline N
Conn. to e/w20
Contractor to verify location and invert
<u>Materials for Connection:</u>
1-20" 1/8 Bend (H)
1-Conc. Block w/ Struct. Struts
8± LF 20" D.I.P., Cl. 53
<u>Temp. for Testing:</u>
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-177 For Temporary By-Pass
Plan and Profile - 18</p> <p>C</p> <p>40 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 57+92.4 to
Sta. 58+32.1)
See BWS RCJ Notes, Sht. C-15</p> | <p>D</p> <p>14 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 58+67.4 to
Sta. 58+67.5)
See BWS RCJ Notes, Sht. C-15</p> <p>E</p> <p># Sta. 58+67.5, o/s 5.4' Lt.
=# Sta. 0+00 Waterline P
Conn. to e/w20
Contractor to verify location and invert
<u>Materials for Connection:</u>
1-20" 1/8 Bend (H)
1-Conc. Block w/ Struct. Struts
8± LF 20" D.I.P., Cl. 53
<u>Temp. for Testing:</u>
1-20" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-177 For Temporary By-Pass
Plan and Profile - 19</p> |
|--|---|

F

Sta. 58+70.7, o/s 57.6' Rt.
=# Sta. 0+56.4 Waterline P
Conn. to e/w12
Contractor to verify location and invert
Materials for Connection:
1-20"x12" Reducer
1-Conc. Block w/ Struct. Struts
5± LF 20" D.I.P., Cl. 53
Temp. for Testing:
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-177 For Temporary By-Pass
Plan and Profile - 19

G

Sta. 58+27.6, o/s 48.4' Rt.
1-20" 1/32 Bend (H)

H

Sta. 58+77.4, o/s 44.7' Rt.
1-20" 1/16 Bend (H)

I

Sta. 58+74.2, o/s 40.7' Rt.
=# Sta. 0+44.8 Waterline N
=# Sta. 0+38.2 Waterline P
1-20"x20" Tee

J

Sta. 58+74.4, o/s 12.4' Rt.
1-20" 1/8 Bend (H)

K

45 LF RCJ With
D.I. Pipe and Fittings
See Struct. Dwgs.
(# Sta. 58+32.4 to
Sta. 58+74.2)

L

Sta. 58+39.5, o/s 40.5' Rt.
1-20" 1/8 Bend (H)

M

67 LF RCJ With
D.I. Pipe and Fittings
See Struct. Dwgs.
(# Sta. 58+67.5 to
Sta. 58+71.6)

N

Waterline P
See Profile
Sht. C-159

O

17 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 58+42.9 to
Sta. 58+60.2)
See BWS RCJ Notes, Sht. C-15

P

17 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 59+89.5 to
Sta. 60+06.8)
See BWS RCJ Notes, Sht. C-15

Q

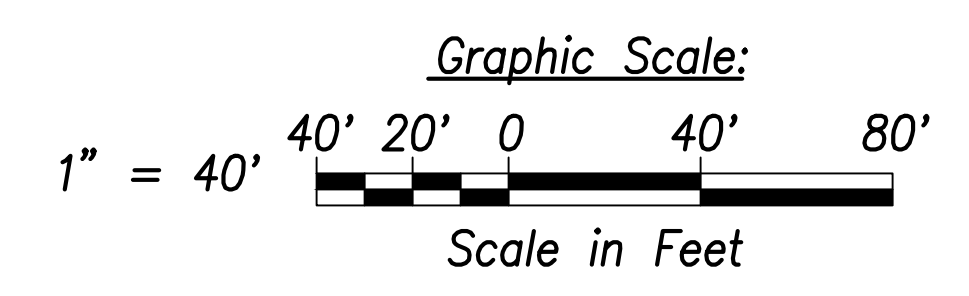
Waterline N
See Profile
Sht. C-159

R

Sta. 58+69.7, o/s 52.7' Rt.
1-20" 1/8 Bend (H)

- Notes:**
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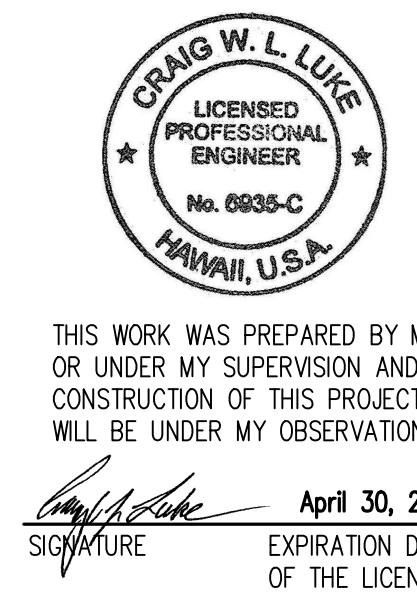
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



APPROVED:

Manager and Chief Engineer, BWS DATE

(for work affecting BWS facilities in City/State R/W & BWS easements only)



| | |
|----------|---|
| 06/08/22 | Revised Callouts; Profile Sheet
References Revised; Deleted Note |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

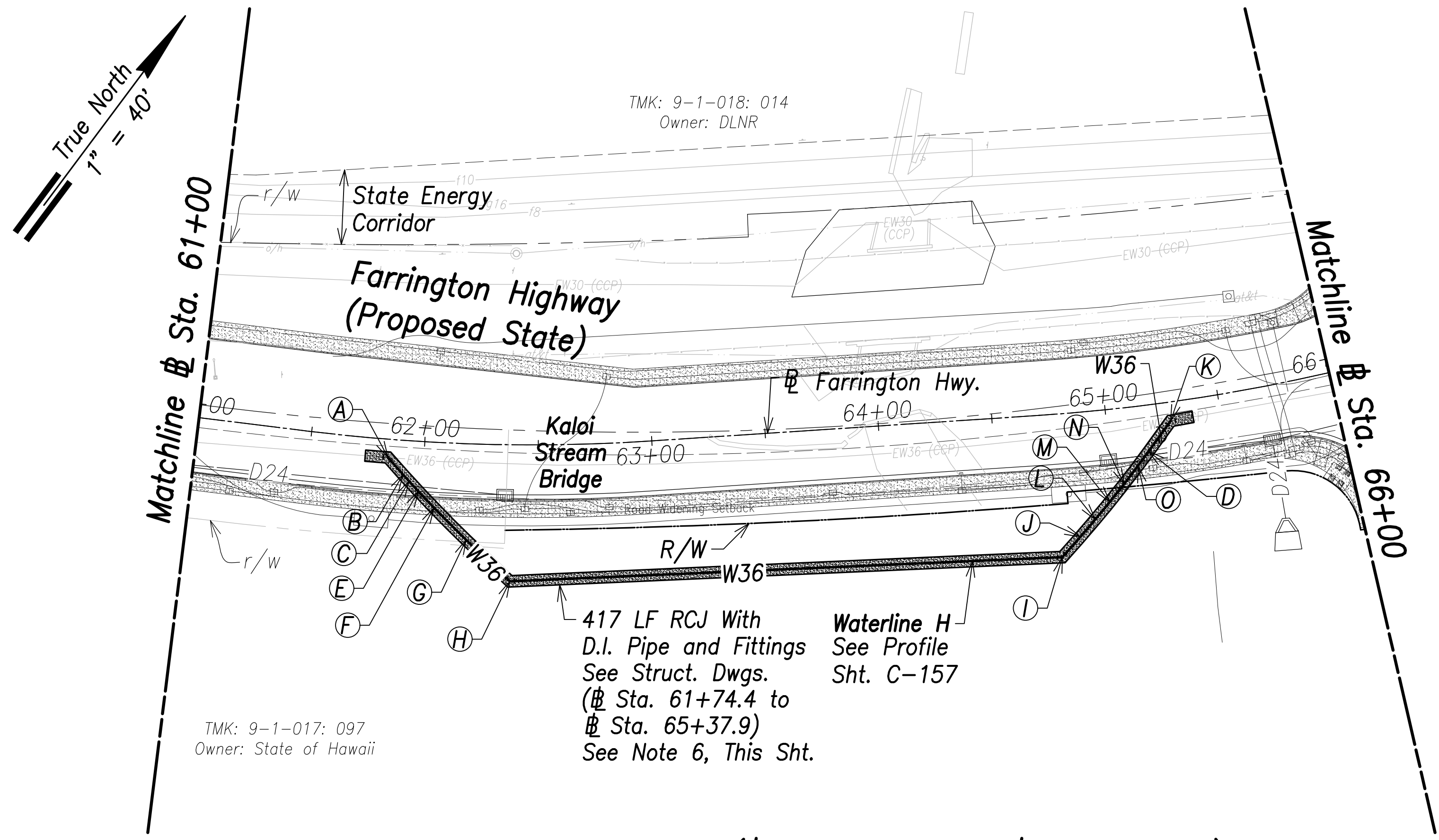
Utility Plan
Sta. 58+00 to # Sta. 61+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-122 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 124 | 767 |



- Notes:**
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Utility Plan - (# Sta. 61+00 to # Sta. 66+00)
Scale: 1" = 40'

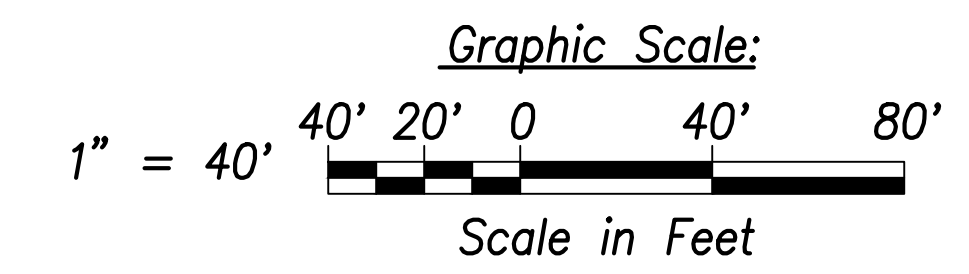
- (A)**
Sta. 61+84.3, o/s 8' Rt.
= # Sta. 0+00 WL H
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/8 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P, Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-169 For Temporary By-Pass Plan and Profile - 3
- (B)**
Sta. 61+91.4, o/s 15' Rt.
Deflect 1° (H)
- (C)**
Sta. 61+94.3, o/s 18' Rt.
Deflect 1° (H)

- (D)**
Sta. 65+16.8, o/s 20.4' Rt.
Deflect 1° (H)
- (E)**
Sta. 61+98.5, o/s 21.9' Rt.
Deflect 1° (H)
- (F)**
Sta. 62+05.5, o/s 28.7' Rt.
Deflect 1° (H)
- (G)**
Sta. 62+19.6 o/s 42.3' Rt.
Deflect 1° (H)
- (H)**
Sta. 62+38.1, o/s 60.1' Rt.
1-36" 1/8 Bend (H)
- (I)**
Sta. 64+76.6, o/s 62.9' Rt.
1-36" 1/8 Bend (H)

- (J)**
Sta. 64+84.6, o/s 54.7' Rt.
Deflect 1° (H)
- (K)**
Sta. 65+28.2, o/s 8.3' Rt.
= # Sta. 3+96.7 WL H
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/8 Bend (H)
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P, Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-169 For Temporary By-Pass Plan and Profile - 4
- (L)**
Sta. 64+91.4, o/s 47.7' Rt.
Deflect 1° (H)
- (M)**
Sta. 64+98.1, o/s 40.7' Rt.
Deflect 1° (H)

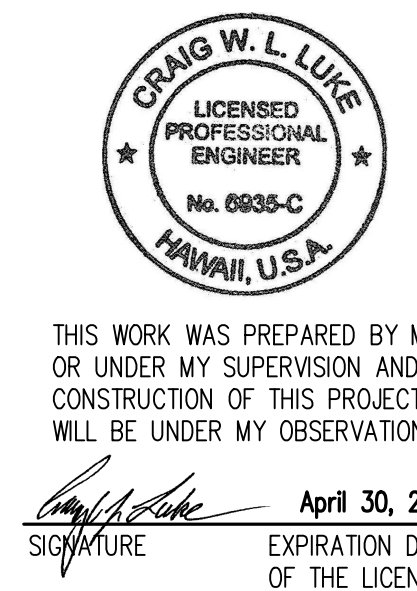
- (N)**
Sta. 65+04.8, o/s 33.6' Rt.
Deflect 1° (H)
- (O)**
Sta. 65+11.6, o/s 26.4' Rt.
Deflect 1° (H)
- (P)**
Sta. 65+12.6, o/s 35.5' Rt.
Deflect 1° (H)

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| NO. | |



APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|-------------------------------|
| 06/08/22 | Callout Revised; Deleted Note |
| DATE | REVISION |

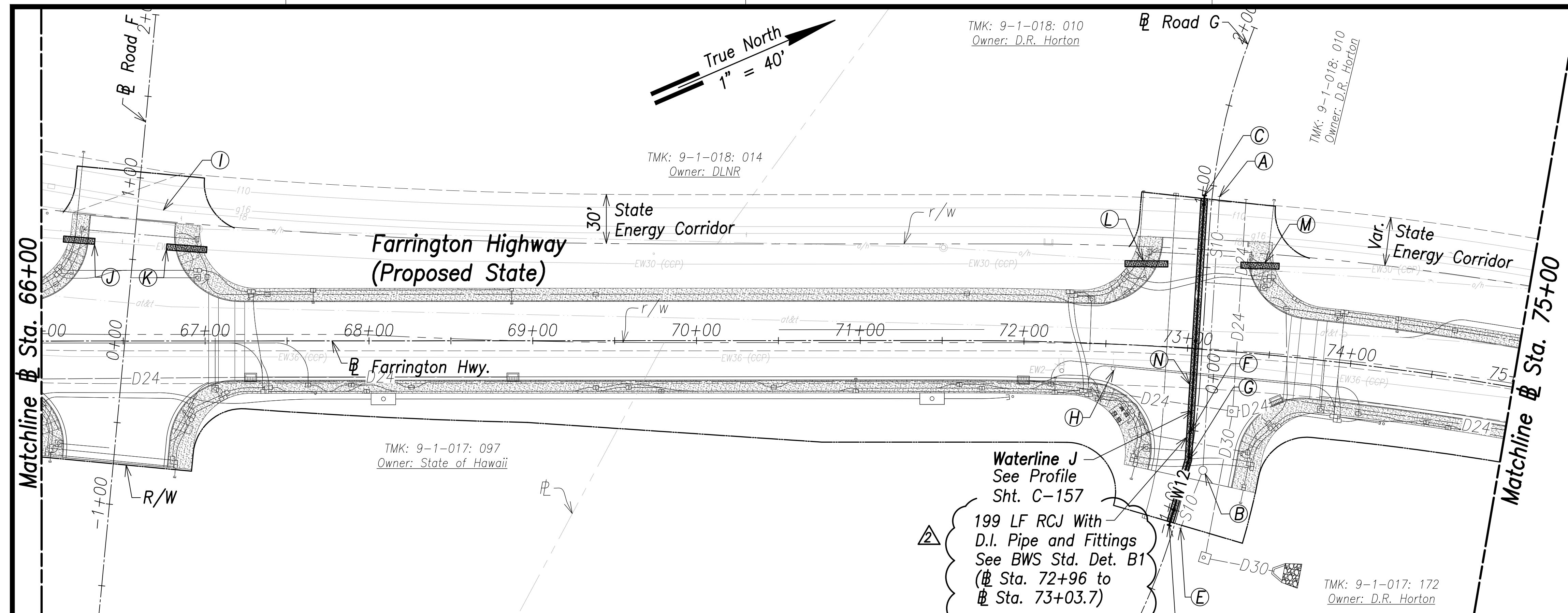
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 61+00 to # Sta. 66+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-123 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 125 | 767 |



Utility Plan - (# Sta. 66+00 to # Sta. 75+00)
Scale: 1" = 40'

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

- (A)**
Sta. 73+12.5, o/s 93.8' Lt.
Cap and Mark S10
Inv.=153.62
- (B)**
SMH 1
Sta. 73+14.9
o/s 73.7' Rt.
Top=166.93
Inv.=152.28
See City and County of Honolulu Std. Det. S-11
- (C)**
Sta. 73+03.7, o/s 93.8' Lt.
= # Sta. 0+00 WL J
End W12
1-12" G.V., 200#
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-G.V. Box & Cover
1-Conc. Block
1-Conc. Thrust Beam w/
Reverse Bell Pipe
See BWS Std. Det. B16, V2,
V14, and V22

- (D)**
Sta. 72+96, o/s 108.6' Rt.
= # Sta. 2+03.2 WL J
End W12
1-12" G.V., 200#
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-G.V. Box & Cover
1-Conc. Thrust Beam w/
Reverse Bell Pipe
See BWS Std. Det. B16, V2,
V14, and V22
- (E)**
Sta. 73+03.4
o/s 110' Rt.
Cap and Mark S10
Inv.=151.78
See Profile, Sht. C-167
- (F)**
Sta. 73+05.2, o/s 51.2' Rt.
1-3/4 ARV, 200#
(WP=121.0 PSI)
1-ARV Box & Cover

- (G)**
Sta. 73+05.3, o/s 67.9' Rt.
1-12" 1/32 Bend (H)
- (H)**
Adjust MH frame and cover to match finished grade (typ.)
- (I)**
Assist HECO with the relocation of Test Station TS-10W. The Contractor shall coordinate all work with HECO and grade down to expose the 8" fuel pipeline and zinc ribbon. HECO will install new Test Station and conductors to pipeline and zinc ribbon. The contractor shall backfill to finished grade. All work shall be considered incidental to the various items of work.

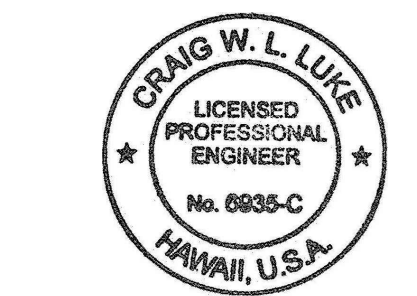
- (J)**
19 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 66+13.6 to # Sta. 66+32.6)
See BWS RCJ Notes, Sht. C-15
- (K)**
25 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 66+76.5 to # Sta. 67+01)
See BWS RCJ Notes, Sht. C-15
- (L)**
26 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 72+59.3 to # Sta. 72+84.8)
See BWS RCJ Notes, Sht. C-15
- (M)**
23 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 73+28.2 to # Sta. 73+50.9)
See BWS RCJ Notes, Sht. C-15

See Note 3, this sheet

APPROVED:

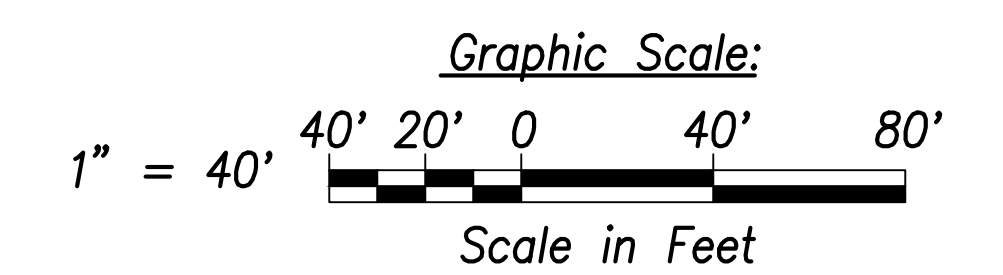
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE



| | |
|----------|---|
| 06/08/22 | Revised W.L. naming; added callout; Deleted note; Revised callout |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 66+00 to # Sta. 75+00

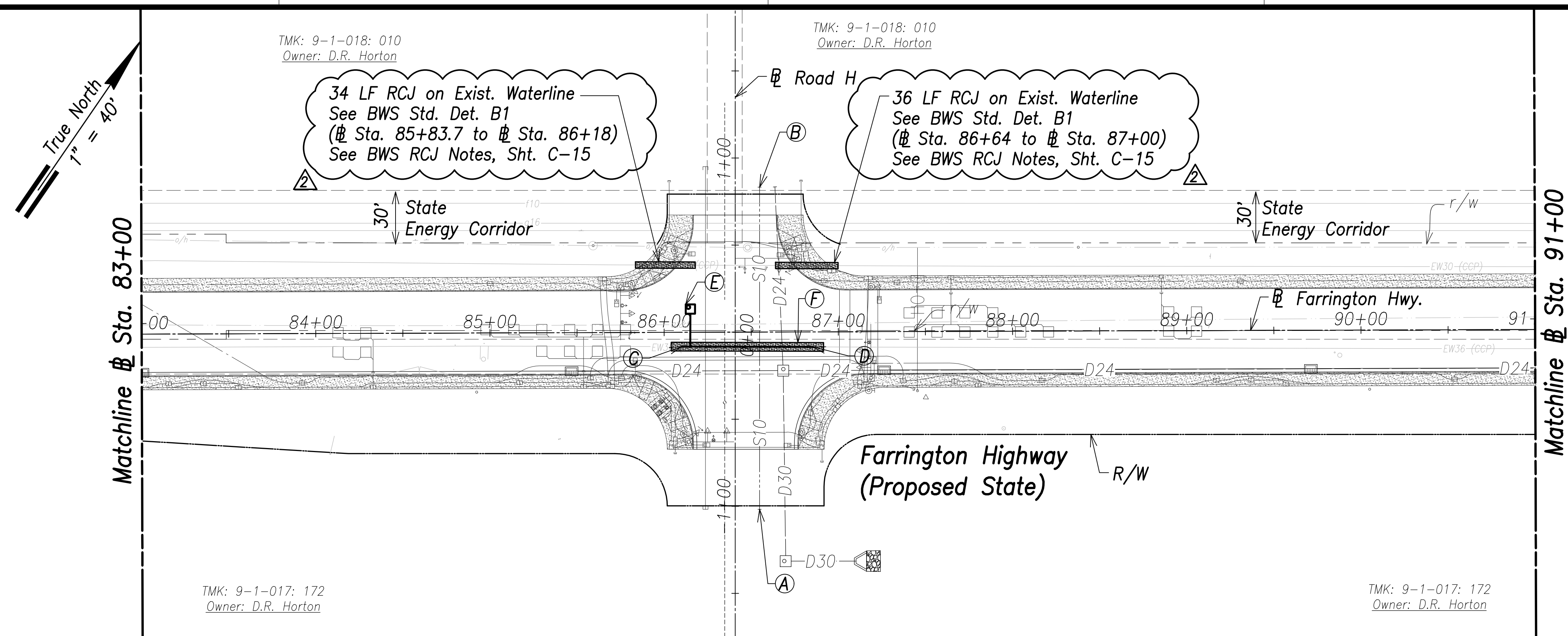
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| INSTRUMENTED BY | |
| QUANTIFIED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

FILE: K:\civil\23146 Farrington Hwy Widening\Draw\Construction\Draw\C-124 Utility Plan - Sta. 66+00 to 75+00.dwg saved June 8, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 127 | 767 |



- Notes:**
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Utility Plan - (@ Sta. 83+00 to @ Sta. 91+00)
Scale: 1" = 40'

A
@ Sta. 86+54.4, o/s 101.8' Rt.
Cap and Mark S10
Inv.=157.74

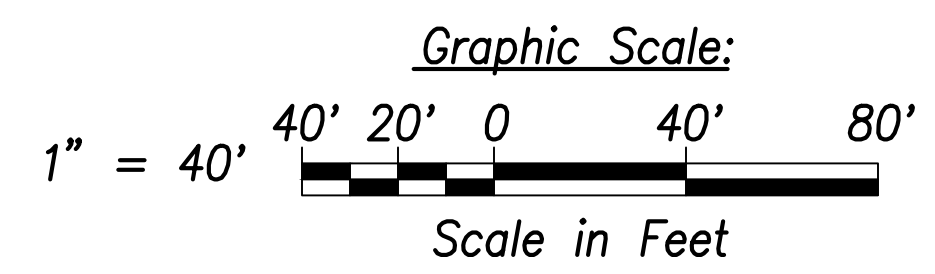
B
@ Sta. 86+55, o/s 83.2' Lt.
Cap and Mark S10
Inv.=160.39

C
@ Sta. 86+10, o/s 8.2' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-170 For Temporary By-Pass Plan and Profile - 5

E
@ Sta. 86+15.1, o/s 13.3' Lt.
Center MH
2-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21

F
88 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(@ Sta. 86+04 to @ Sta. 86+91.5)

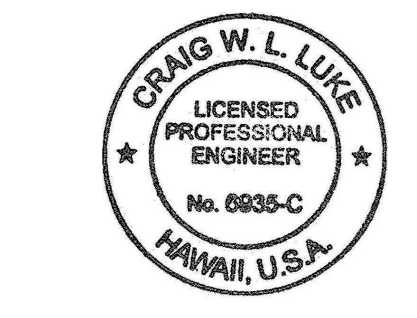
D
@ Sta. 86+85.5, o/s 8.7' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 4" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-170 For Temporary By-Pass Plan and Profile - 5



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|---|
| 06/08/22 | Callout Revised; Removed gas line; Deleted Note |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

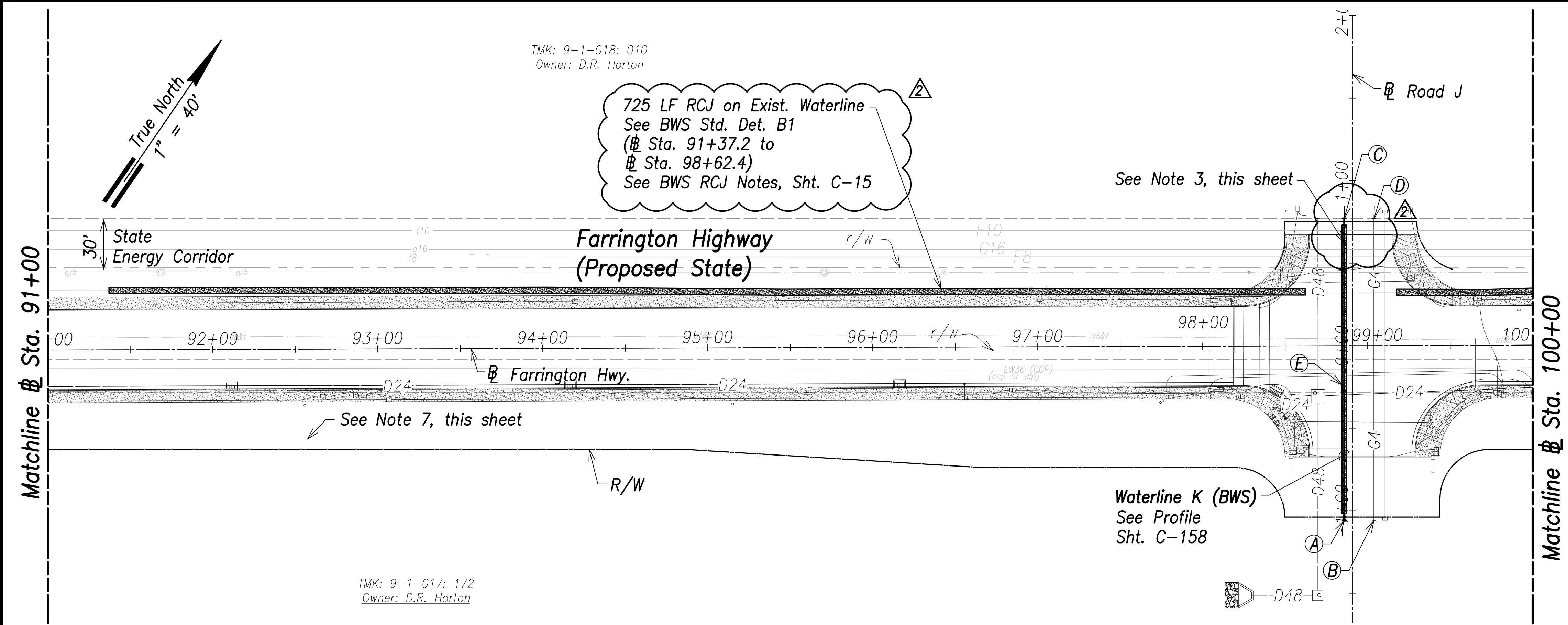
Utility Plan
@ Sta. 83+00 to @ Sta. 91+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| | |
|--------------------------|-------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | DATE: _____ |
| TRACED BY: _____ | DATE: _____ |
| CHECKED BY: _____ | DATE: _____ |
| ORIGINAL PLAN NO. _____ | |
| NOTE BOOK NO. _____ | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 128 | 767 |



TMK: 9-1-018: 010
Owner: D.R. Horton

725 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 91+37.2 to
Sta. 98+62.4)
See BWS RCJ Notes, Sht. C-15

See Note 3, this sheet

See Note 7, this sheet

Waterline K (BWS)
See Profile
Sht. C-158

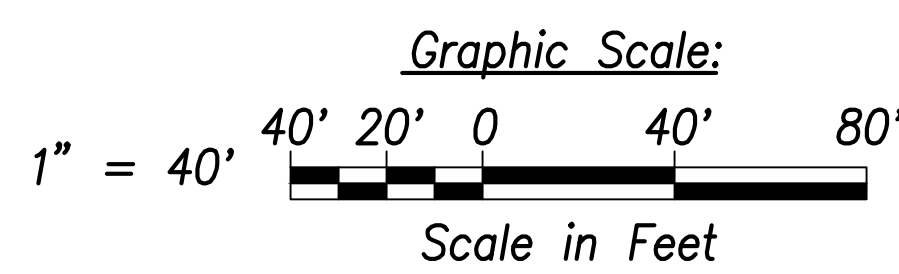
TMK: 9-1-017: 172
Owner: D.R. Horton

Utility Plan - (# Sta. 91+00 to # Sta. 100+00)
Scale: 1" = 40'

- (A)**
Sta. 98+85.4, o/s 105.9' Rt.
= # Sta. 1+83 WL K
End W12
1-12" G.V., 200#
1-3/4" ARV, 200#
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-G.V. Box & Cover
1-ARV Box & Cover
1-Conc. Block
1-Conc. Thrust Beam w/ Reverse Bell Pipe
See BWS Std. Det. B16, V2, V14, and V22
- (B)**
Sta. 99+03.4, o/s 105.9 Rt.
Cap and Mark G2
Provide 3' Min. Cover
See Profile, Sht. C-166
- (C)**
Sta. 98+86, o/s 77.1' Lt.
= # Sta. 0+00 WL K
End W12
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See BWS Std. Det. V22
- (D)**
Sta. 99+04, o/s 77.1' Lt.
Cap and Mark G2
Provide 3' Min. Cover
- (E)**
175 LF RCJ With D.I. Pipe and Fittings
See BWS Std. Det. B1
(# Sta. 98+85.4 to # Sta. 98+86)

- Notes:**
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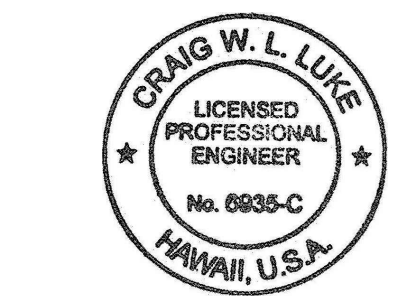
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|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in
City/State R/W & BWS easements only)

DATE _____



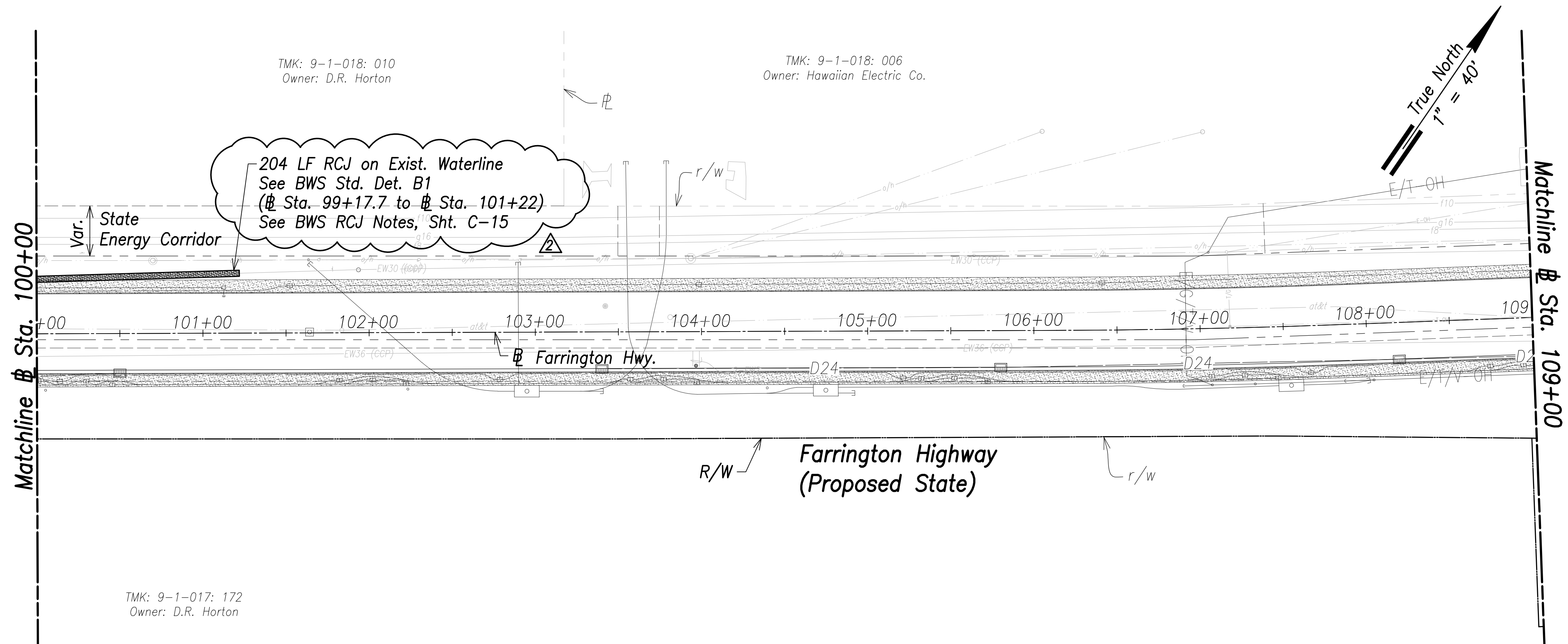
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|--|
| 06/08/22 | Revised callouts; removed gate valve; Deleted note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 91+00 to # Sta. 100+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20
Scale: As Shown Date: April 2022 | |
| SHEET No. C-127 OF 767 SHEETS | |

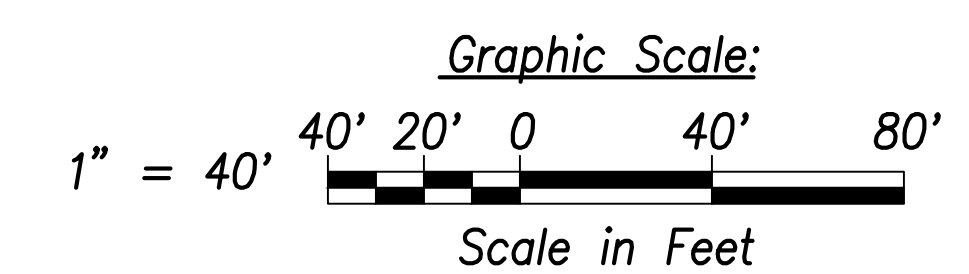
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 129 | 767 |



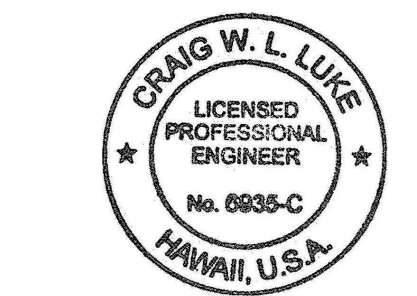
- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
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Utility Plan - (# Sta. 100+00 to # Sta. 109+00)
 Scale: 1" = 40'

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



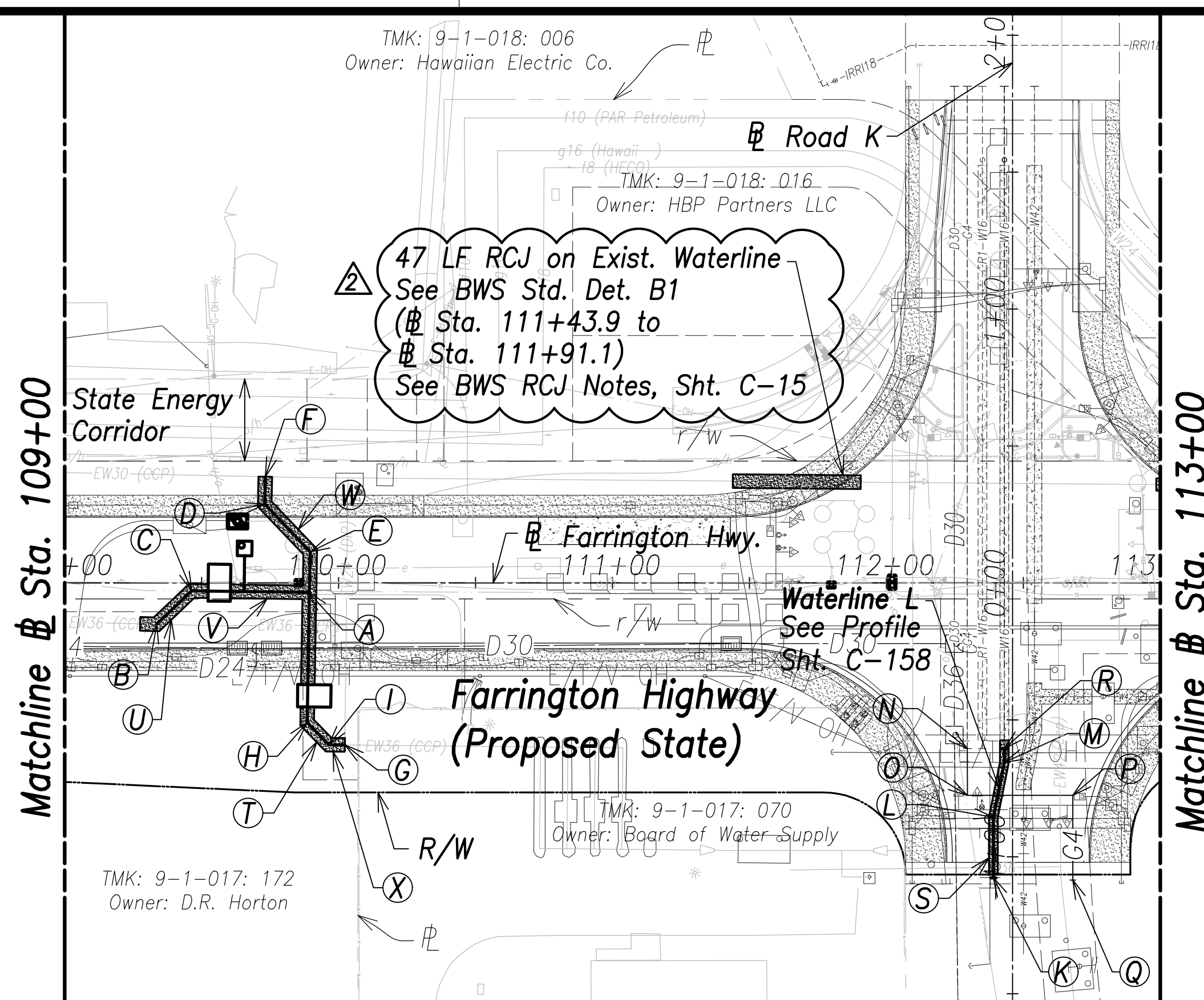
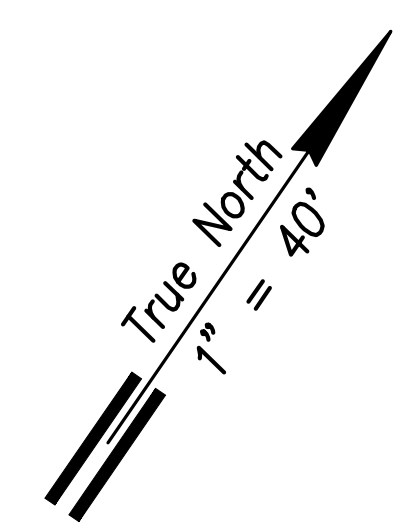
APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|--|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility Plan
Sta. 100+00 to # Sta. 109+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-128 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 130 | 767 |

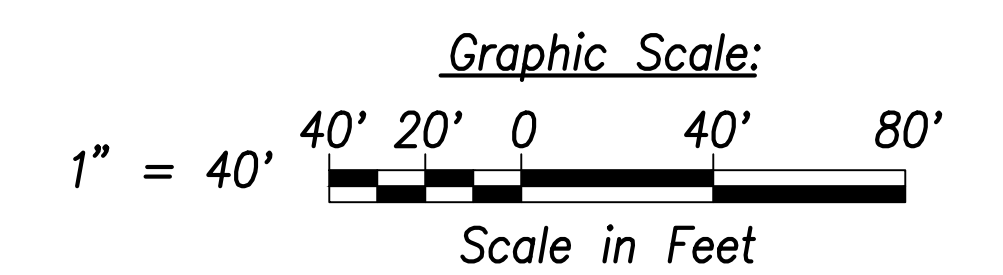


Utility Plan - (Sta. 109+00 to Sta. 113+00)
Scale: 1" = 40'

- (R) Sta. 112+43, o/s 60.5' Rt. = Sta. 0+00 WL L
Conn. to e/w16
Remove exist. cap, cleanout, and conc. block
Match exist. slope and invert
Materials for Connection:
1-16" Sleeve, 15" Long
8± LF 16" D.I.P., Cl. 53
Temp. for Testing:
1-16" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
Contractor to verify location and invert
- (S) 50 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 112+39 to Sta. 112+43)
- (T) **Waterline Q**
See Sht. C-160

- (U) 30 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 109+27.6 to Sta. 109+52.4)
- (V) 28 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 109+60.6 to Sta. 109+89.1)
- (W) 83 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 109+73.3 to Sta. 109+88.8)
- (X) 23 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(Sta. 109+88.6 to Sta. 110+02.3)

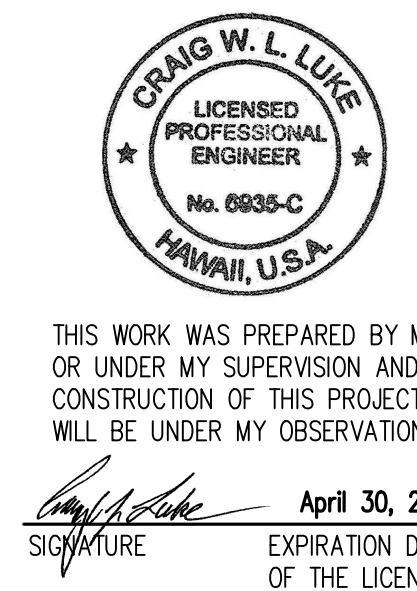
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- (A) Sta. 109+89.1, o/s 3.4' Rt.
1-36"x36" Tee
1-36"x24" Reducer
2-36" B.G.G.V., 200#
2-Type "A" MH
See BWS Std. Det. MH1-MH5
- (B) Sta. 109+33.6, o/s 15.1' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" CCPxD.I. Adapter
1-36" 1/8 Bend (H)
8± LF 36" D.I.P., Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
- (C) Sta. 109+46.4, o/s 29' Rt.
1-36" 1/8 Bend (H)
- (D) Sta. 109+73.1, o/s 28.8' Lt.
1-24" 1/8 Bend (H)
- (E) Sta. 109+89.6, o/s 11.4' Lt.
1-24" 1/8 Bend (H)
- (F) Sta. 109+73.3, o/s 38.8' Lt.
= Sta. 0+00 WL Q
Conn. to e/w30
Contractor to verify location and invert
Materials for Connection:
1-30"x24" Tee
1-30" CCPxD.I. Adapter
1-24" Sleeve, 15" Long
8± LF 24" D.I.P., Cl. 53
Temp for Testing:
1-24" Cap Tapped for 6" I.P.T.
1-6" C.O.
- (G) Sta. 110+02.3, o/s 59.2' Rt.
= Sta. 1+06.2 WL Q
Conn. to e/w36
Remove exist. 1/4 bend
Contractor to verify location and invert
Materials for Connection:
1-36" CCPxD.I. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
- (H) Sta. 109+88.5, o/s 51' Rt.
1-36" 1/8 Bend (H)
- (I) Sta. 109+96.4, o/s 59.1' Rt.
1-36" 1/8 Bend (H)
- (J) Sta. 109+65.7, o/s 12.6' Lt.
Center MH
2-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21
- (K) Sta. 112+39, o/s 107.7' Rt.
= Sta. 0+48.4 WL L
End W16
1-16" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Valve Box for C.O.
1-Conc. Block
See BWS Std. Det. B16 and V22
- (L) Sta. 112+39, o/s 85.6' Rt.
1-16" 1/32 Bend (W16), H
- (M) Sta. 112+43, o/s 65.6' Rt.
1-16" 1/32 Bend (W16), H
- (N) Sta. 112+29.5, o/s 60.5' Rt.
Conn. to e/g4
Match exist. slope and invert
Remove exist. cap and marker
Provide 3' Min. Cover
See Profile, Sht. C-166
- (O) Sta. 112+29.6, o/s 77.6' Rt.
1-4" Gas 1/4 Bend
- (P) Sta. 112+68, o/s 77.6' Rt.
1-4" Gas 1/4 Bend
- (Q) Sta. 112+68, o/s 108.5' Rt.
Cap and Mark G4
Provide 3' Min. Cover

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

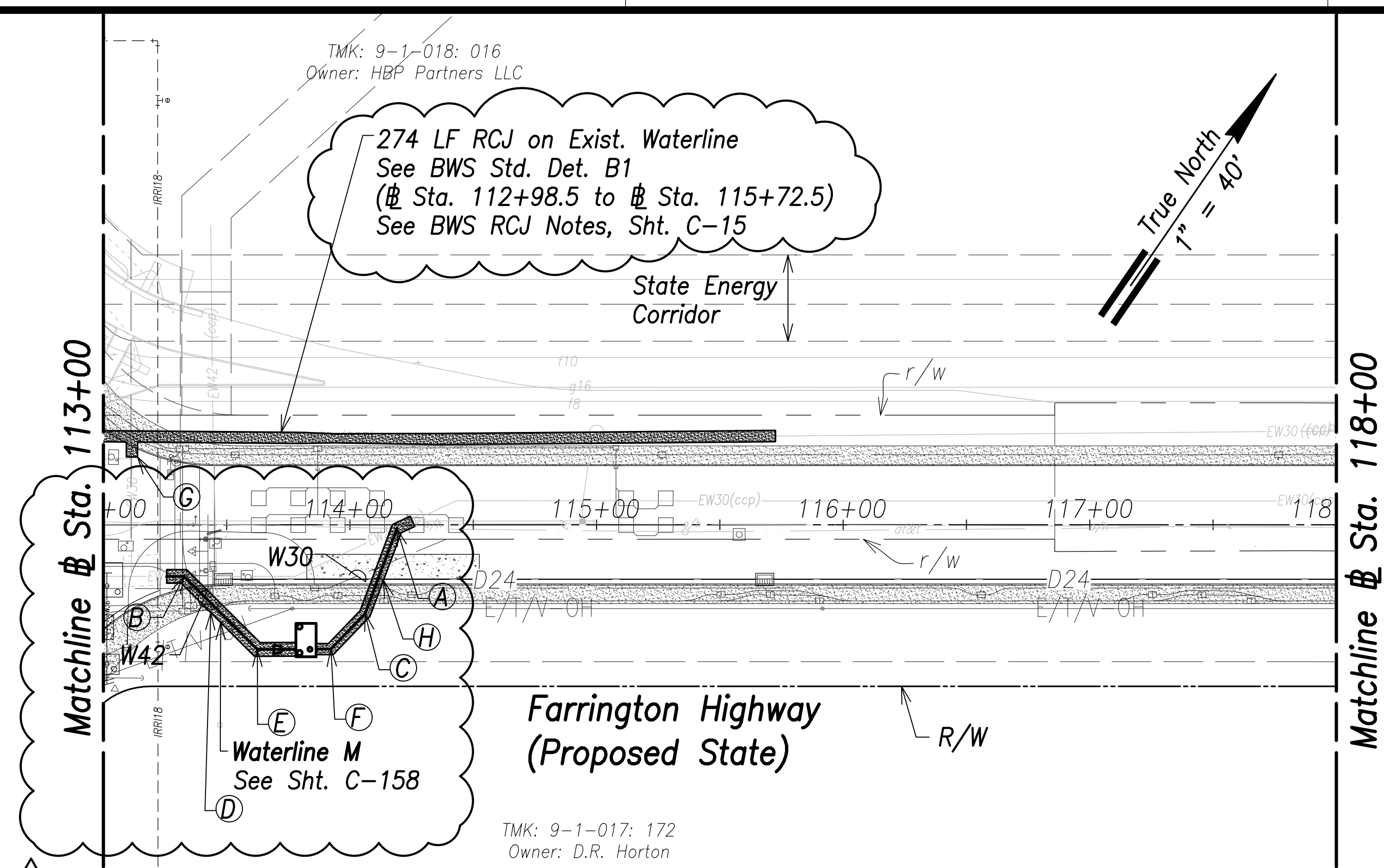
APPROVED: _____ DATE _____
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | | | |
|--|------------------|----------|---|
| DATE | 06/08/22 | REVISION | Removed thrust beam; Added callouts; Revised callouts; Deleted note |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility Plan
Sta. 109+00 to Sta. 113+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | | | |
| Scale: As Shown | Date: April 2022 | | |
| SHEET No. C-129 OF 767 SHEETS | | | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 131 | 767 |



Utility Plan - (# Sta. 113+00 to # Sta. 118+00)
 Scale: 1" = 40'

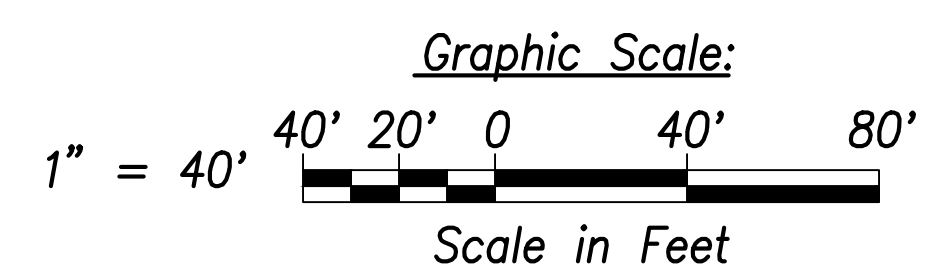
(A)
 # Sta. 114+19, o/s 1.6' Rt.
 =# Sta. 1+08.5 WL M
 Conn. to e/w30
 Contractor to verify location and invert
Materials for Connection:
 1-30" CCPxD.I. Adapter
 1-30" 1/16 Bend (H)
 Rotate bend to match exist. pipe slope
 8± LF 30" D.I.P., Cl. 53
Temp for Testing:
 1-30" Cap Tapped for 6" I.P.T.
 1-6" C.O.
 1-Conc. Block
 See Sht. C-172 For Temporary
 By-Pass Plan and Profile - 10

(B)
 # Sta. 113+32.7, o/s 20.9' Rt.
 =# Sta. 0+00 WL M
 Conn. to e/w42
 Contractor to verify location and invert
Materials for Connection:
 1-42" CCPxD.I. Adapter
 1-42" 1/8 Bend (H)
 1-42"x30" Reducer
 1-30" B.G.G.V., 200#
 1-Type "A" MH
 8± LF 42" D.I.P., Cl. 53
 See BWS Std. Det. MH1-MH5
Temp for Testing:
 1-42" Cap Tapped for 6" I.P.T.
 1-6" C.O.
 1-Conc. Block
 See Sht. C-172 For Temporary
 By-Pass Plan and Profile - 9

(C)
 # Sta. 114+06.1, o/s 36' Rt.
 1-30" 1/16 Bend (H)
(D)
 65 LF RCJ With D.I. Pipe and Fittings
 See Struct. Dwgs.
 (# Sta. 113+25.7 to # Sta. 113+72.1)

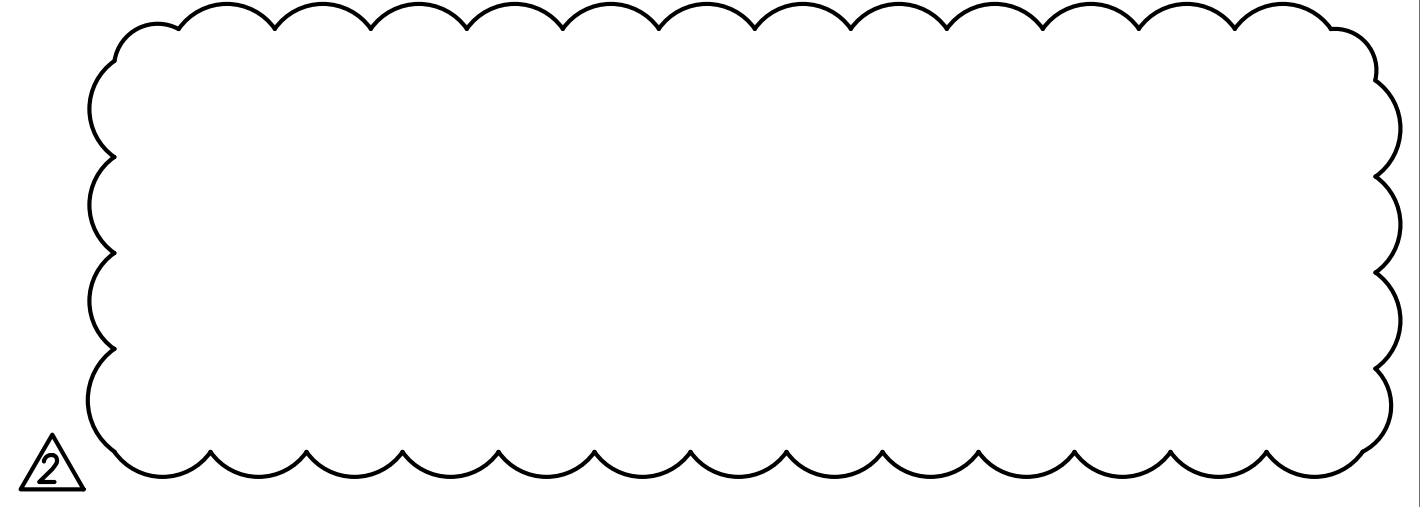
(E)
 # Sta. 113+62.4, o/s 50.5' Rt.
 1-42" 1/8 Bend (H)
(F)
 # Sta. 113+92.3, o/s 50.4' Rt.
 1-30" 1/8 Bend (H)

(G)
 9 LF RCJ on Exist. Waterline
 See BWS Std. Det. B1
 (# Sta. 113+11.6 to # Sta. 113+11.7)
 See BWS RCJ Notes, Sht. C-15
(H)
 63 LF RCJ With D.I. Pipe and Fittings
 See BWS Std. Det. B1
 (# Sta. 113+80.3 to # Sta. 114+15.3)

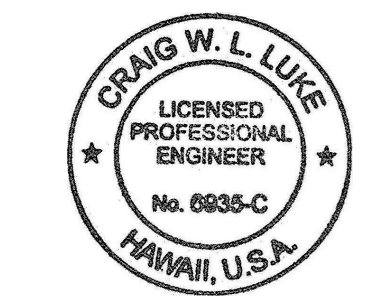


APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.



| | |
|--------------------------|-------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | |
| TRACED BY: _____ | |
| QUANTITIES BY: _____ | |
| CHECKED BY: _____ | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. _____ | |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---|
| 06/08/22 | Deleted note; Revised callouts; Revised waterline |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

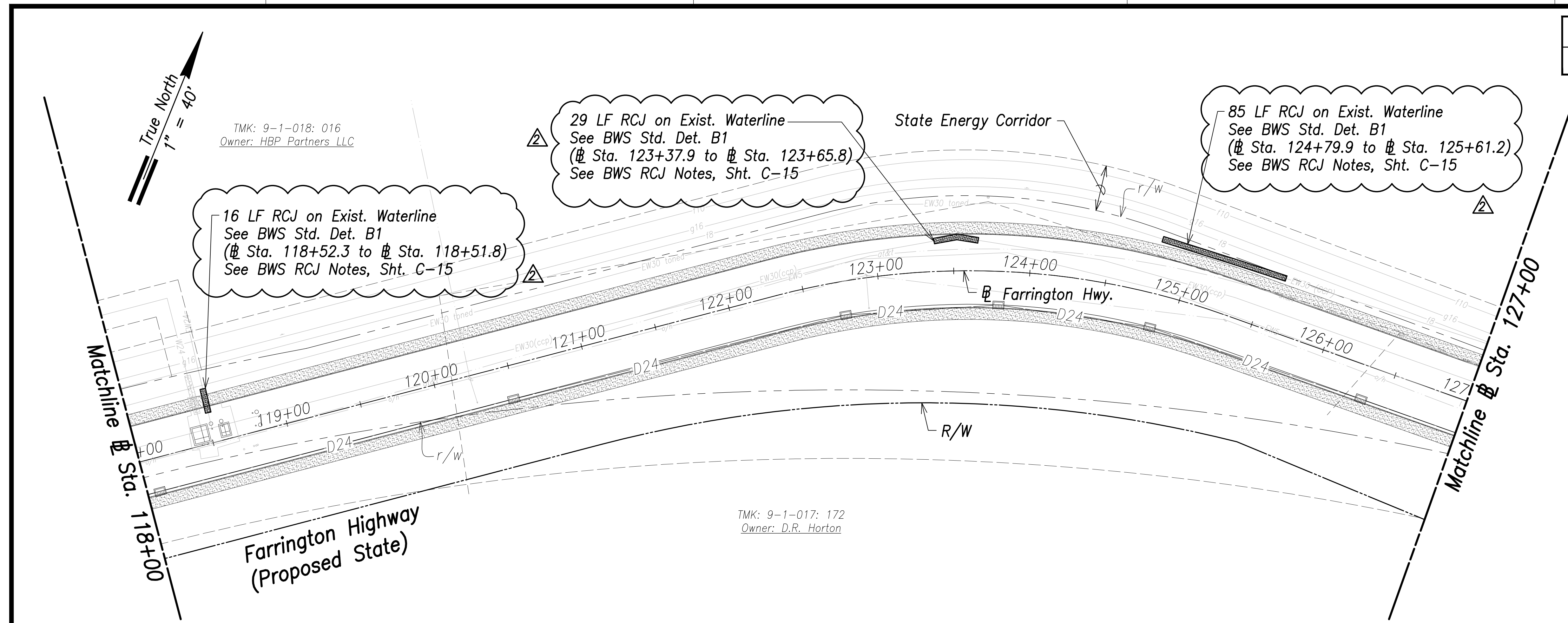
Utility Plan
 # Sta. 113+00 to # Sta. 118+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-130 OF 767 SHEETS

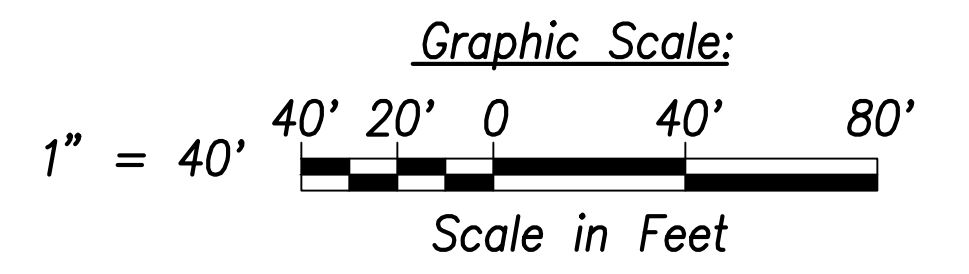
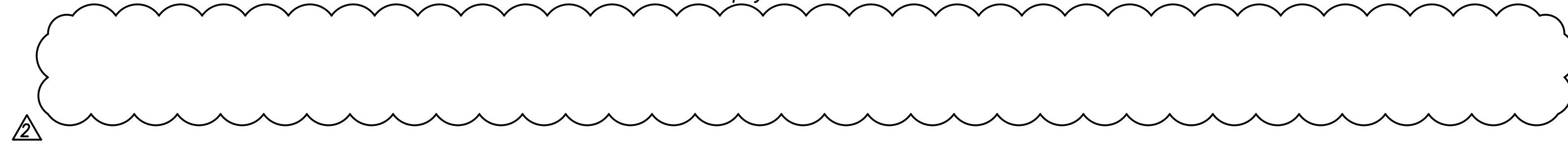
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 132 | 767 |



Utility Plan - (Sta. 118+00 to Sta. 127+00)
Scale: 1" = 40'

Notes:

1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
2. The Contractor shall coordinate construction with utility companies.
3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
4. For electrical relocations, see electrical drawings.
5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

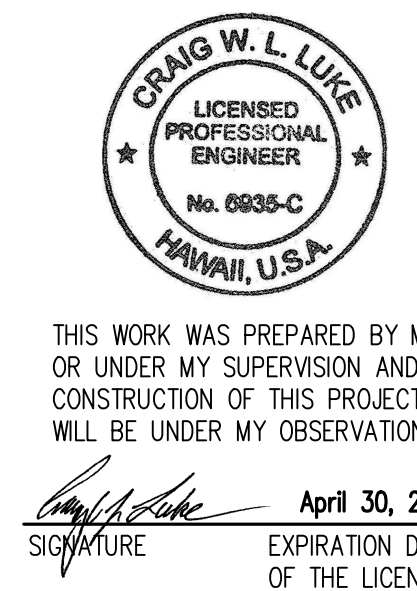


| | |
|----------|-------------------------------|
| 06/08/22 | Deleted note; Revised callout |
| DATE | REVISION |

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

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities in City/State R/W & BWS easements only)



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

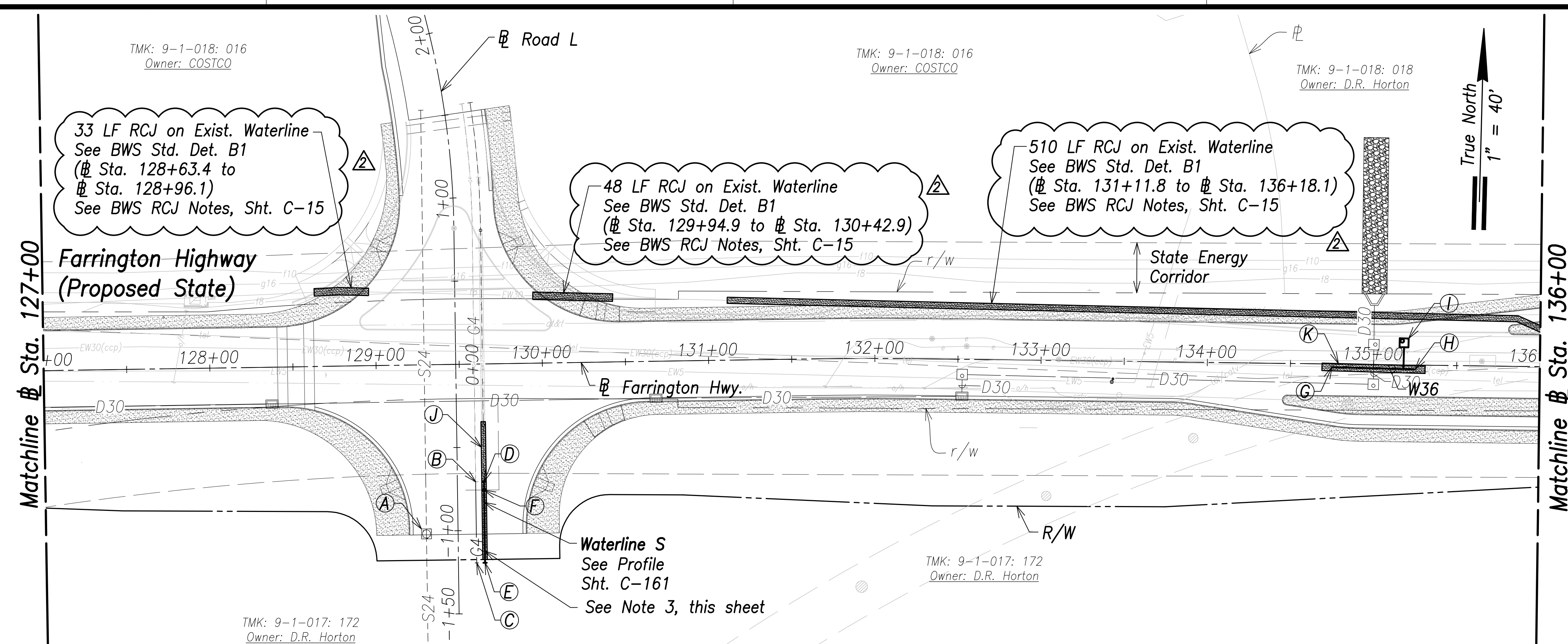
Utility Plan
Sta. 118+00 to Sta. 127+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

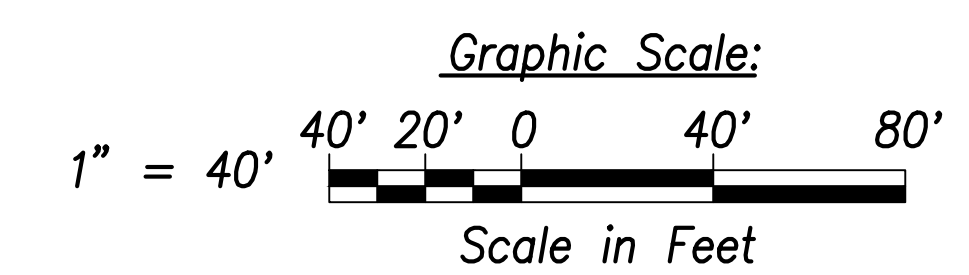
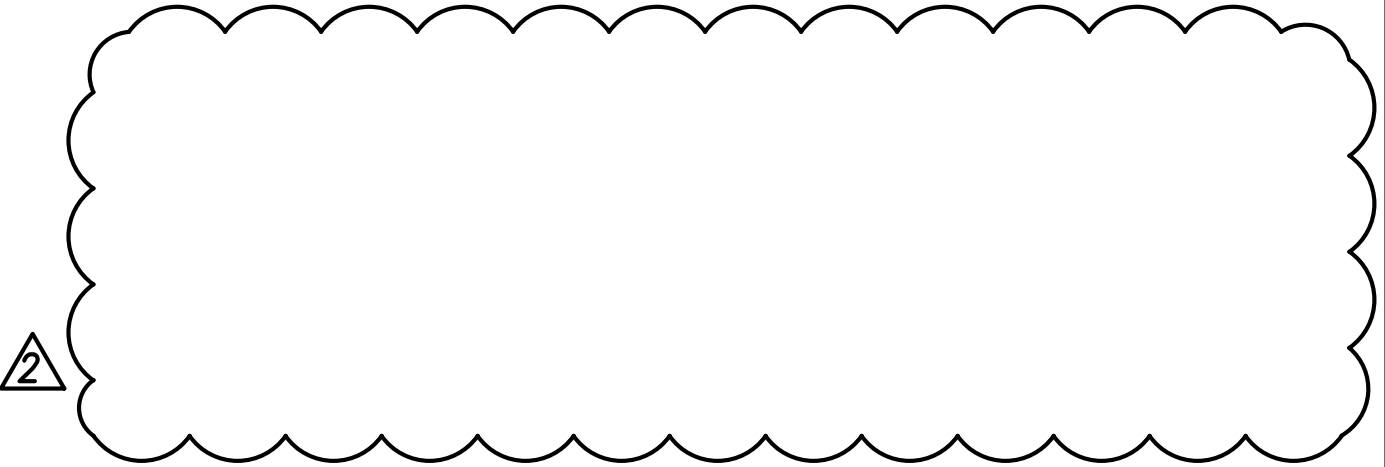
SHEET No. C-131 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 133 | 767 |



Utility Plan - (# Sta. 127+00 to # Sta. 136+00)
Scale: 1" = 40'

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.



A
Sta. 129+28.8, o/s 101.6' Rt.
Remove exist. conc. collar
Adjust top to match roadway finished grade

B
Sta. 129+58.8, o/s 70.8' Rt.
Conn. to e/g4
Match exist. slope and invert
Remove exist. cap and marker
Provide 3' Min. Cover

C
Sta. 129+58.7, o/s 119.5' Rt.
Cap and Mark G4
Provide 3' Min. Cover
See Profile, Sht. C-166

D
Sta. 129+63.8, o/s 70.8' Rt.
= # Sta. 0+00 WL S
Conn. to e/w12
Remove exist. cap, cleanout, and conc. block
Match exist. slope and invert
Materials for Connection:
1-12" Sleeve, 12" Long
8± LF 12" D.I.P., Cl. 53
Temp. for Testing:
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
Contractor to verify location and invert

E
Sta. 129+63.7, o/s 119.5' Rt.
= # Sta. 0+48.7 WL G
End W12
1-12" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Valve Box for C.O.
1-Conc. Thrust Beam w/ Reverse Bell Pipe
See BWS Std. Det. B16, V14, and V22

F
Sta. 129+63.8, o/s 75.8' Rt.
= # Sta. 0+05 WL G
1-12" G.V., 200#
1-G.V. Box and Cover
1-Conc. Block

G
Sta. 134+75, o/s 1.9' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-CCPxI. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-175 For Temporary By-Pass Plan and Profile - 15

H
Sta. 135+24.9, o/s 2.5' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-CCPxI. Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-175 For Temporary By-Pass Plan and Profile - 15

I
Sta. 135+18.2, o/s 13.3' Lt.
Center MH
2-2" Offset ARV, 200#
1-Type "D" MH
See BWS Std. Det. V5 and MH20-MH21

J
83 LF RCJ With D.I. Pipe and Fittings
See BWS Std. Det. B1
(# Sta. 129+63.7 to # Sta. 129+63.9)

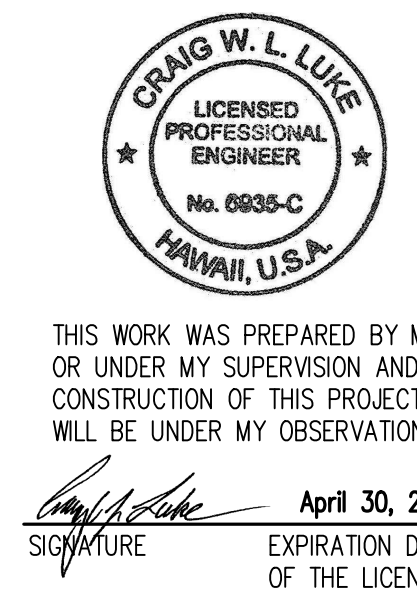
K
62 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(# Sta. 134+69 to # Sta. 135+30.9)

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

APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|---|
| 06/08/22 | Revised waterline; Revised callouts; Deleted note |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 127+00 to # Sta. 136+00

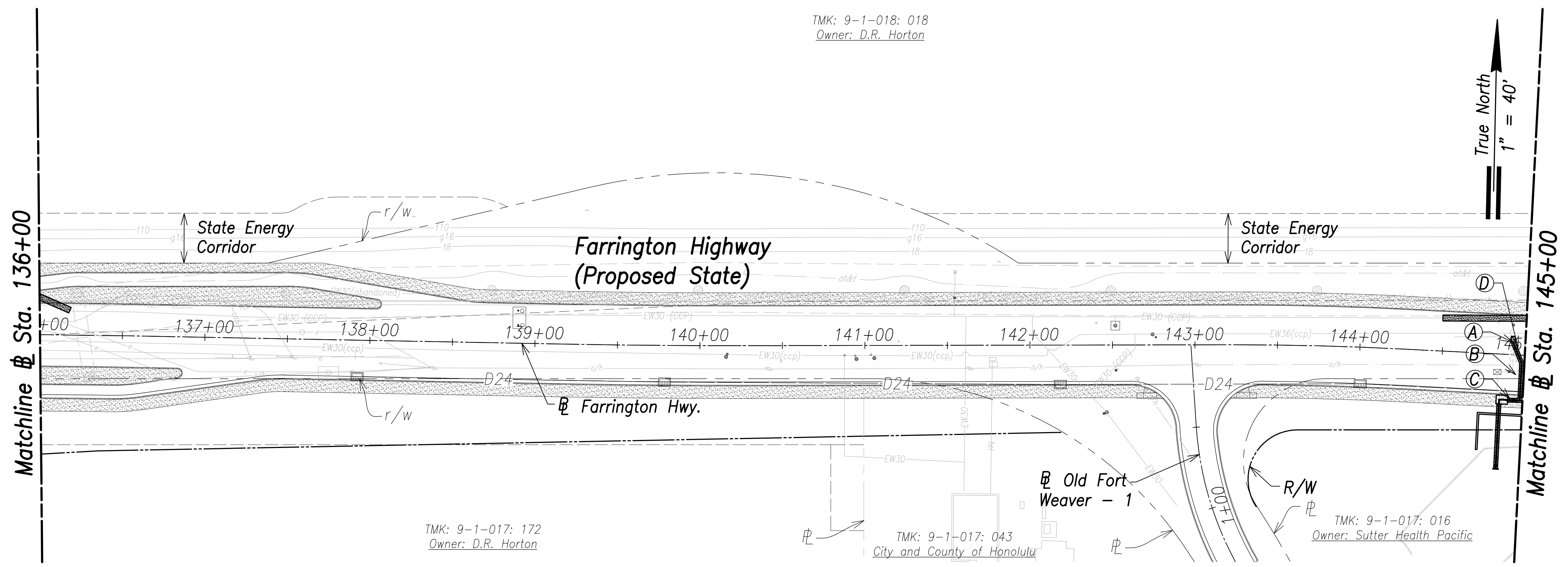
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-132 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 134 | 767 |

TMK: 9-1-018: 018
Owner: D.R. Horton



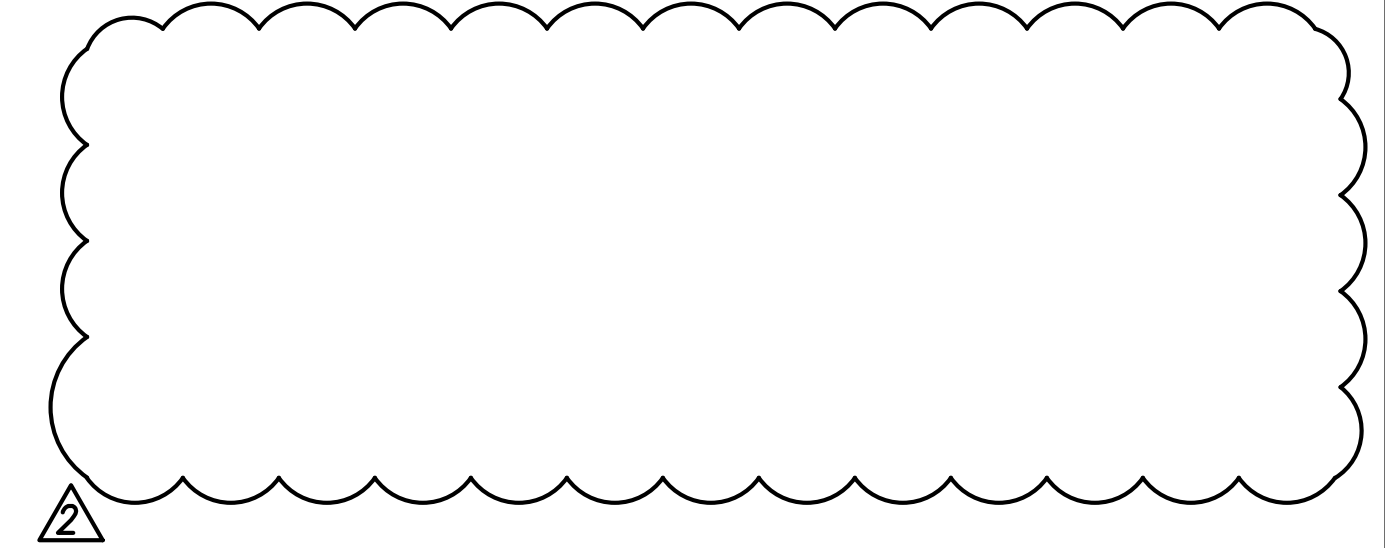
TMK: 9-1-017: 172
Owner: D.R. Horton

TMK: 9-1-017: 043
City and County of Honolulu

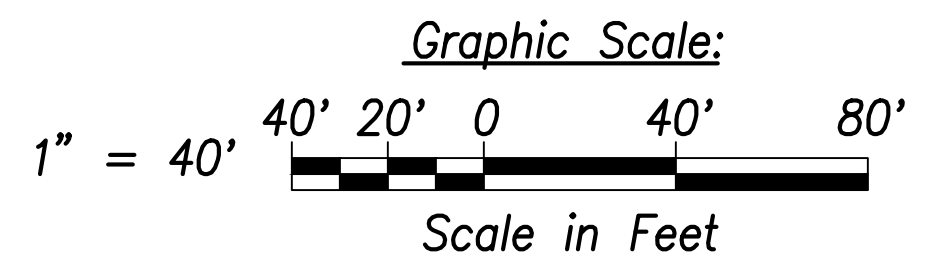
TMK: 9-1-017: 016
Owner: Sutter Health Pacific

Utility Plan - (# Sta. 136+00 to # Sta. 145+00)
Scale: 1" = 40'

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

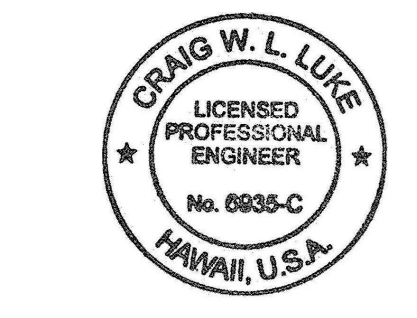


- (A)**
Sta. 144+92.6, o/s 7.5' Lt.
=# Sta. 0+00 DC Meter
Construct 8" Water Lateral Connection
Relocate exist. water meters and provide replacement water meter boxes.
Contractor shall connect to the existing water lateral and provide continuous water service to affected users.
See BWS Det. L16 and L22
Premise I/D: 7675805060
Meter No.: 11099411 (3" Compound)
Meter No.: 81189630 (8" Detector Check)
See Plan & Profile Sht. C-136
Materials for Connection:
1-8" 1/8 Bend (H)
1-8" Sleeve, 12" Long
1-Conc. Block w/ Struct. Struts
Temp. for Testing:
1-8" Cap Tapped for 2-1/2" I.P.T.
1-2-1/2" C.O.
1-Conc. Block
- (B)**
41 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwgs.
(# Sta. 144+92.4 to # Sta. 144+97)
- (C)**
10 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwgs.
(# Sta. 144+90 to # Sta. 144+99.8)
- (D)**
Sta. 144+95.7, o/s 4.5' Lt.
=# Sta. 0+04.3 DC Meter
1-8" 1/8 Bend



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only) DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| DATE | REVISION |
|----------|--------------|
| 06/08/22 | Deleted note |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 136+00 to # Sta. 145+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

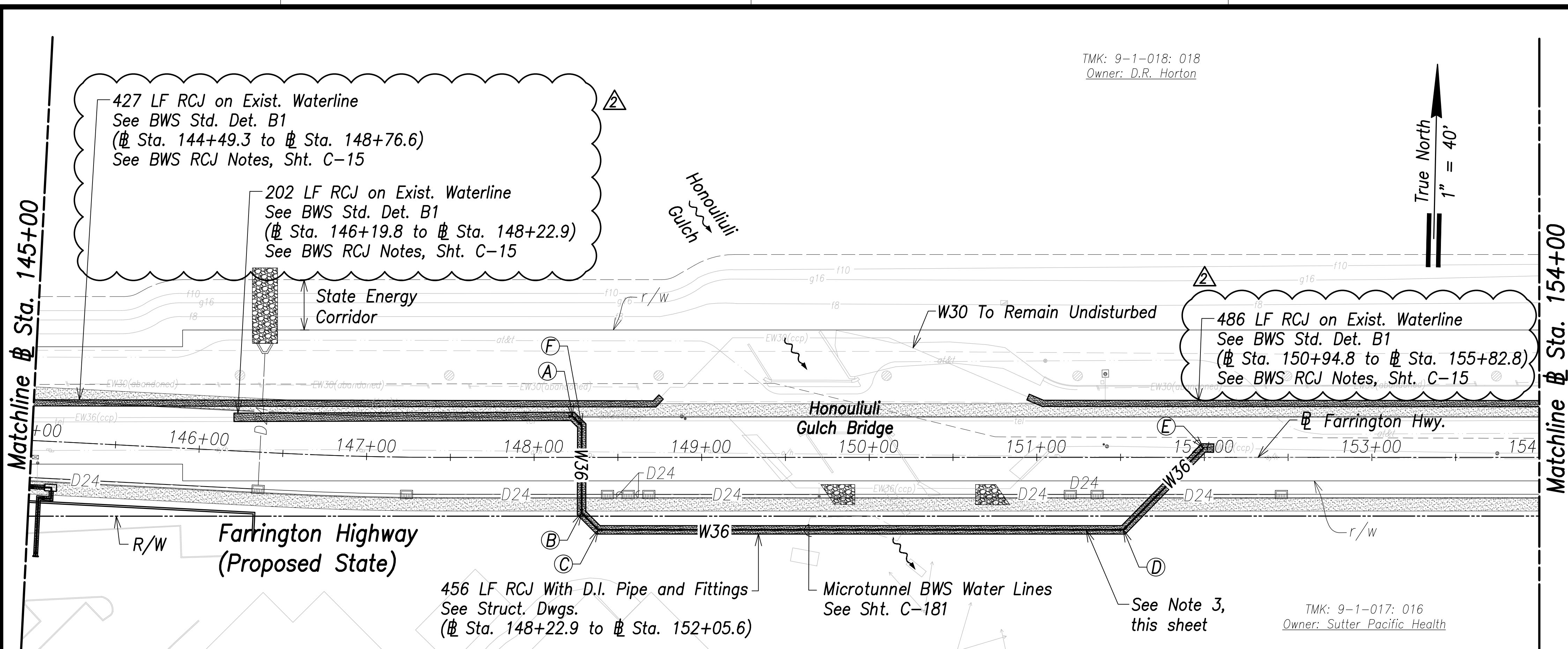
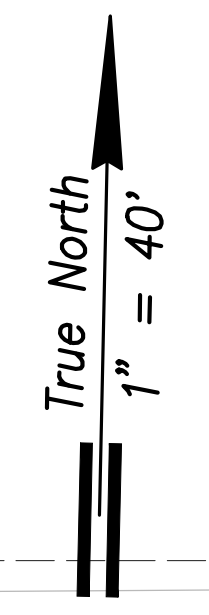
Scale: As Shown Date: April 2022

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

FILE: K:\civil\23146 Farrington Hwy Widening\Draw\Construction\Draw\133 Utility Plan - Sta. 136+00 to 145+00.dwg saved June 8, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 135 | 767 |

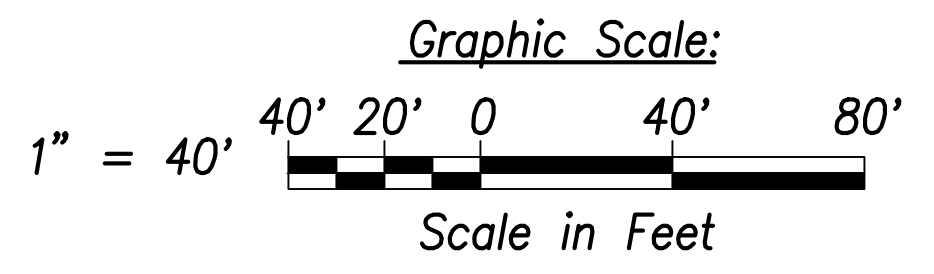
TMK: 9-1-018: 018
Owner: D.R. Horton



Utility Plan - (# Sta. 145+00 to # Sta. 154+00)
Scale: 1" = 40'

- (A)**
Sta. 148+22.9, o/s 24.5' Lt.
= # Sta. 0+00 36" Microtunnel WL
Open Trench
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/8 Bend (H)
1-36" CCPxDI Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-173 For Temporary By-Pass Plan and Profile - 11
- (B)**
Sta. 148+28.3, o/s 33.2' Rt.
Open Trench
1-36" 1/8 Bend (H)
- (C)**
Sta. 148+38.3, o/s 43.2' Rt.
Open Trench
1-36" 1/8 Bend (H)

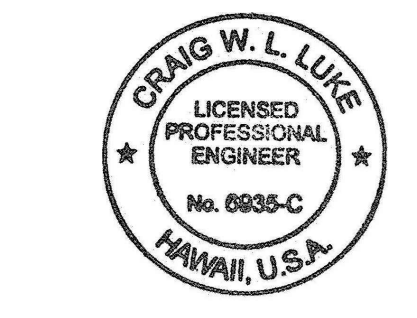
- (D)**
Sta. 151+51.7, o/s 43.2' Rt.
Open Trench
1-36" 1/8 Bend (H)
- (E)**
Sta. 152+05.6, o/s 5.7' Lt.
= # Sta. 4+16 36" Microtunnel WL
Open Trench
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/8 Bend (H)
1-36" CCPxDI Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-173 For Temporary By-Pass Plan and Profile - 12
- (F)**
Sta. 148+28.4, o/s 19' Lt.
Open Trench
1-36" 1/8 Bend (H)



APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

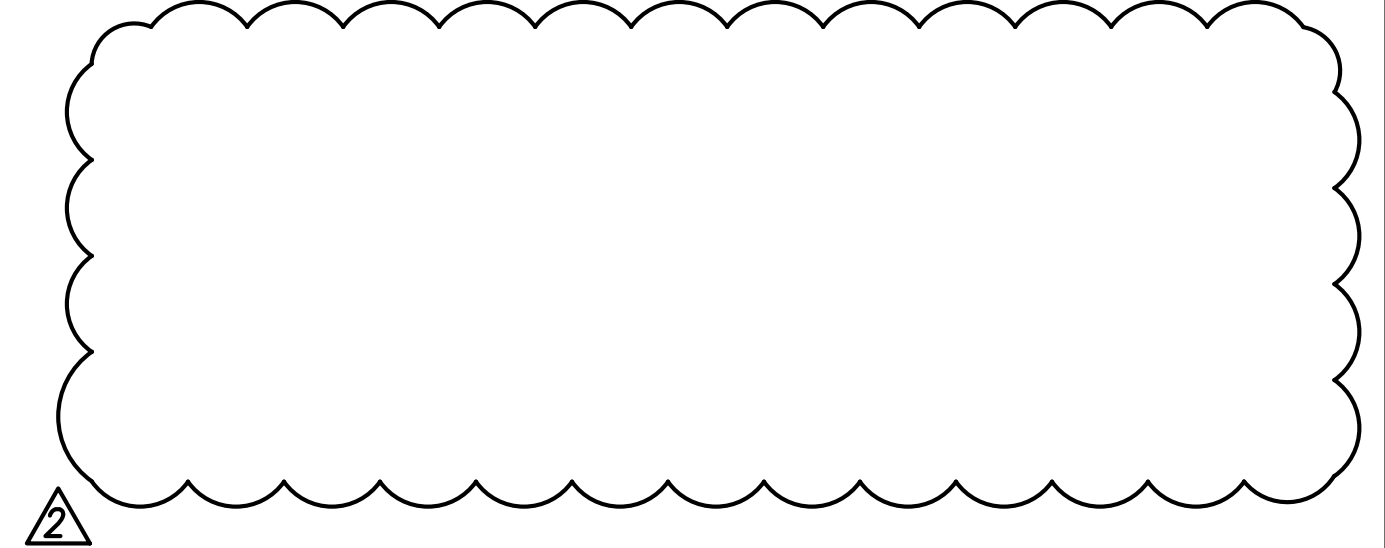
DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE

- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.



| DATE | REVISION |
|----------|--------------------------------|
| 06/08/22 | Deleted note; Revised callouts |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 145+00 to # Sta. 154+00

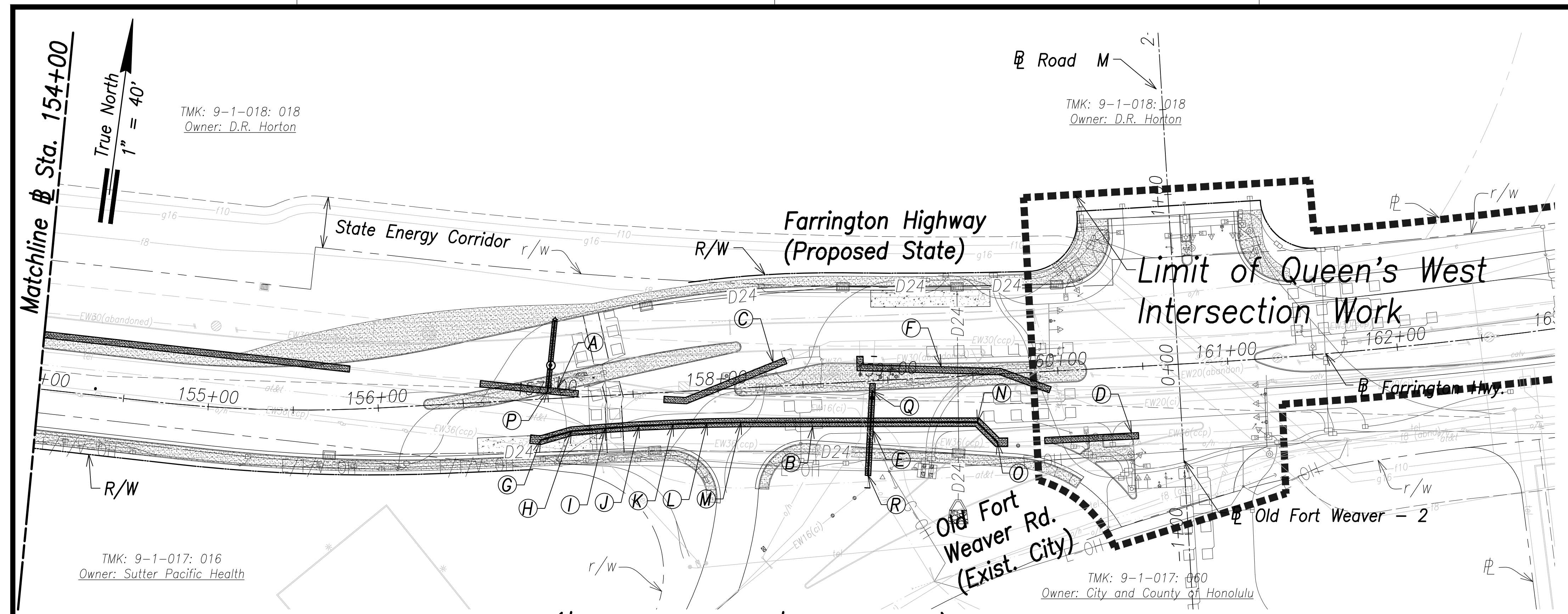
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

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

FILE: K:\civil\23146 Farrington Hwy Widening\Drawings\Construction\Drawings\C-134 Utility Plan - Sta. 145+00 to 154+00.dwg saved June 8, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 136 | 767 |



- Notes:**
1. Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 2. The Contractor shall coordinate construction with utility companies.
 3. All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 4. For electrical relocations, see electrical drawings.
 5. For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.

Utility Plan - (# Sta. 154+00 to # Sta. 165+00)
Scale: 1" = 40'

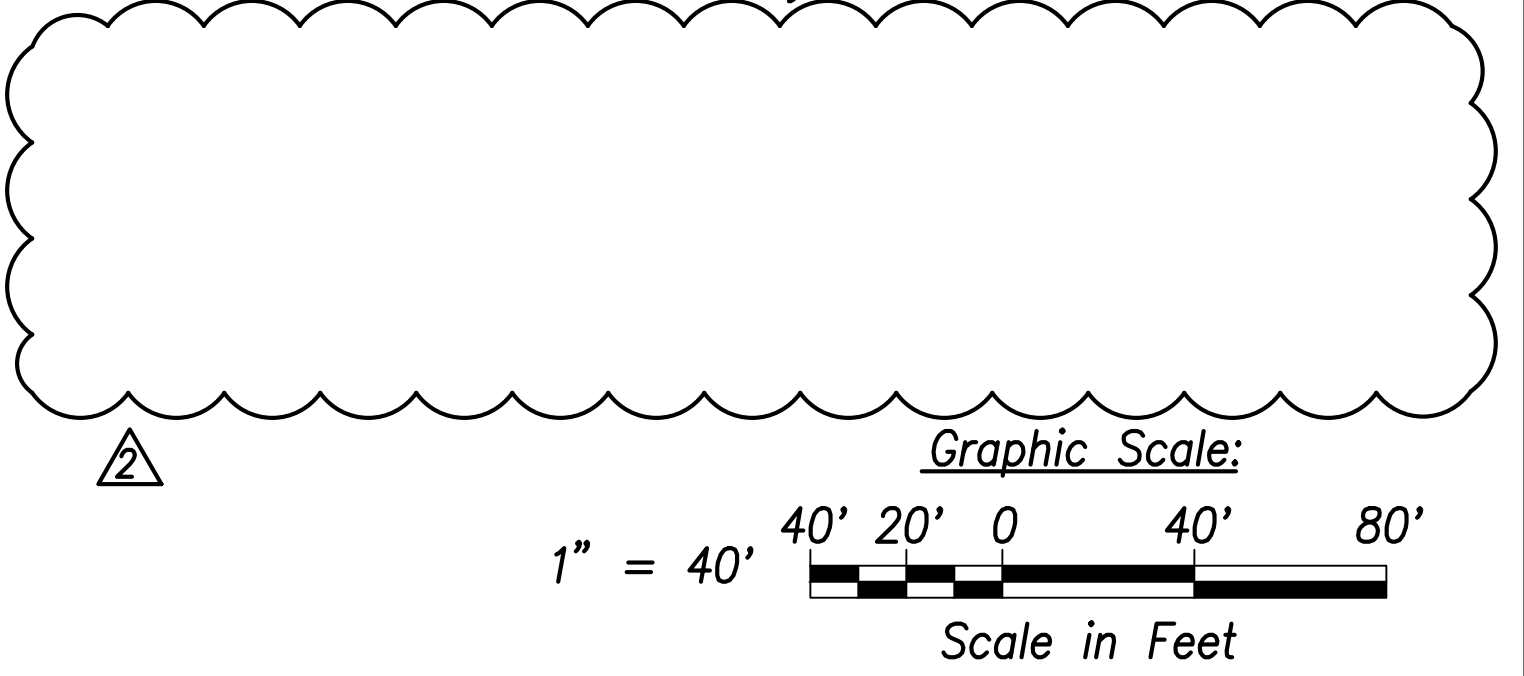
- A**
58 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 156+60 to # Sta. 157+17.3)
See BWS RCJ Notes, Sht. C-15
- B**
286 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(# Sta. 156+87.9 to # Sta. 159+67.8)
- C**
76 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 157+67.5 to # Sta. 158+40.1)
See BWS RCJ Notes, Sht. C-15
- D**
55 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 159+89.7 to # Sta. 160+44.8)
See BWS RCJ Notes, Sht. C-15
- E**
54 LF RCJ With D.I. Pipe and Fittings
See Struct. Dwg.
(# Sta. 158+90.9 to # Sta. 158+85.3)
- F**
120 LF RCJ on Exist. Waterline
See BWS Std. Det. B1
(# Sta. 158+83.9 to # Sta. 159+94.4)
See BWS RCJ Notes, Sht. C-15

- G**
Sta. 156+94.2, o/s 24.1' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxDI Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-174 For Temporary By-Pass Plan and Profile - 13
- H**
Sta. 157+12, o/s 19.8' Rt.
1-36" 1/32 Bend (H)
- I**
Sta. 157+32, o/s 19.2' Rt.
Deflect 1°
- J**
Sta. 157+52, o/s 18.9' Rt.
Deflect 1°
- K**
Sta. 157+72, o/s 19' Rt.
Deflect 1°
- L**
Sta. 157+92, o/s 19.4' Rt.
Deflect 1°

- M**
Sta. 158+12, o/s 20.1' Rt.
Deflect 1°
- N**
Sta. 159+50.6, o/s 27.5' Rt.
1-36" 1/8 Bend (H)
- O**
Sta. 159+62.3, o/s 40.0' Rt.
Conn. to e/w36
Contractor to verify location and invert
Materials for Connection:
1-36" 1/16 Bend (H)
1-36" CCPxDI Adapter
1-36" Sleeve, 15" Long
8± LF 36" D.I.P., Cl. 53
Temp. for Testing:
1-36" Cap Tapped for 6" I.P.T.
1-6" C.O.
1-Conc. Block
See Sht. C-174 For Temporary By-Pass Plan and Profile - 14

- P**
FH 4
Sta. 157+00, o/s 4.7' Lt.
1-30"x6" Tapping Tee
1-6" Tapping Valve, 200#
1-Type "C" Manhole and Cover, See BWS Std. Det. MH19
1-6" Sleeve, 12" Long
1-Conc. Block w/ Struct. Struts
1-FH (Ht.=9.3')
1-FH Extension
1-Conc. Block
42 LF 6" D.I.P., Cl. 53
42 LF RCJ
1-Blue Type F FH Marker
See Profile, Sht. C-162
See BWS Std. Det. FH4.
Temp. for Testing:
1-6" Cap Tapped for 2-1/2" I.P.T.
1-2-1/2" C.O.
1-Conc. Block

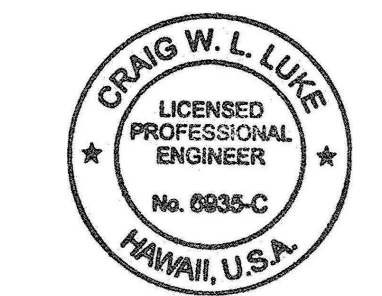
- Q**
Sta. 158+90.5, o/s 5.8' Rt.
=# Sta. 0+00 Waterline R
Conn. to e/w16
Contractor to verify location and invert
Materials for Connection:
1-16" Sleeve, 12" Long
1-3/4" ARV, 200#
1-ARV Box & Cover
8± LF 16" D.I.P., Cl. 53
Temp. for Testing:
1-16" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-178 For Temporary By-Pass Plan and Profile - 21
- R**
Sta. 158+85.3, o/s 54.3' Rt.
=# Sta. 0+49.8 Waterline R
Conn. to e/w16
Contractor to verify location and invert
Materials for Connection:
1-16" Sleeve, 12" Long
8± LF 16" D.I.P., Cl. 53
Temp. for Testing:
1-16" Cap Tapped for 4" I.P.T.
1-4" C.O.
1-Conc. Block
See Sht. C-178 For Temporary By-Pass Plan and Profile - 21



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

APPROVED: _____ DATE _____
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

| | |
|----------|--|
| 06/08/22 | Added Type "C" Manhole; Revised Callouts; Deleted Note |
| DATE | REVISION |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

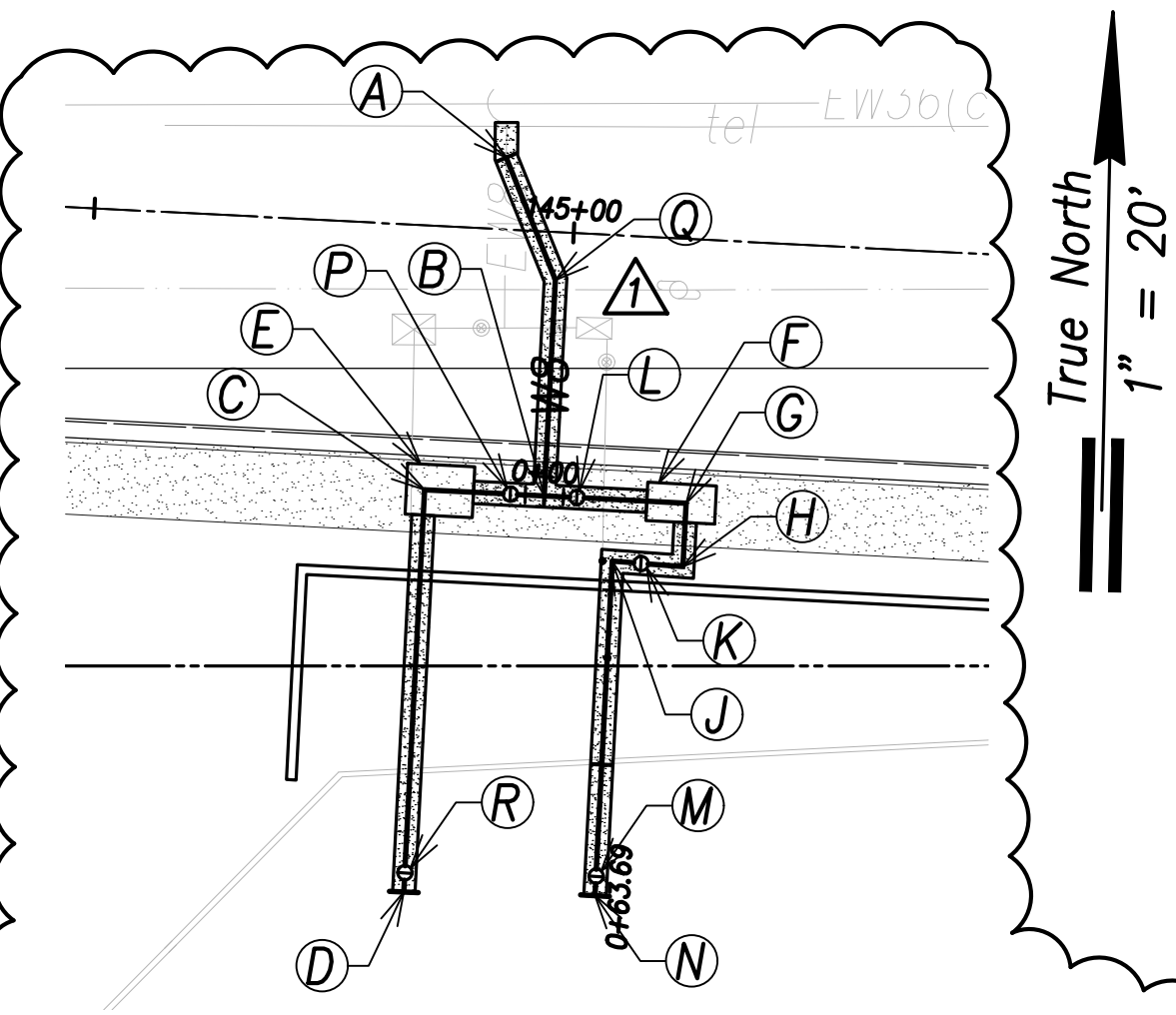
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility Plan
Sta. 154+00 to # Sta. 165+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

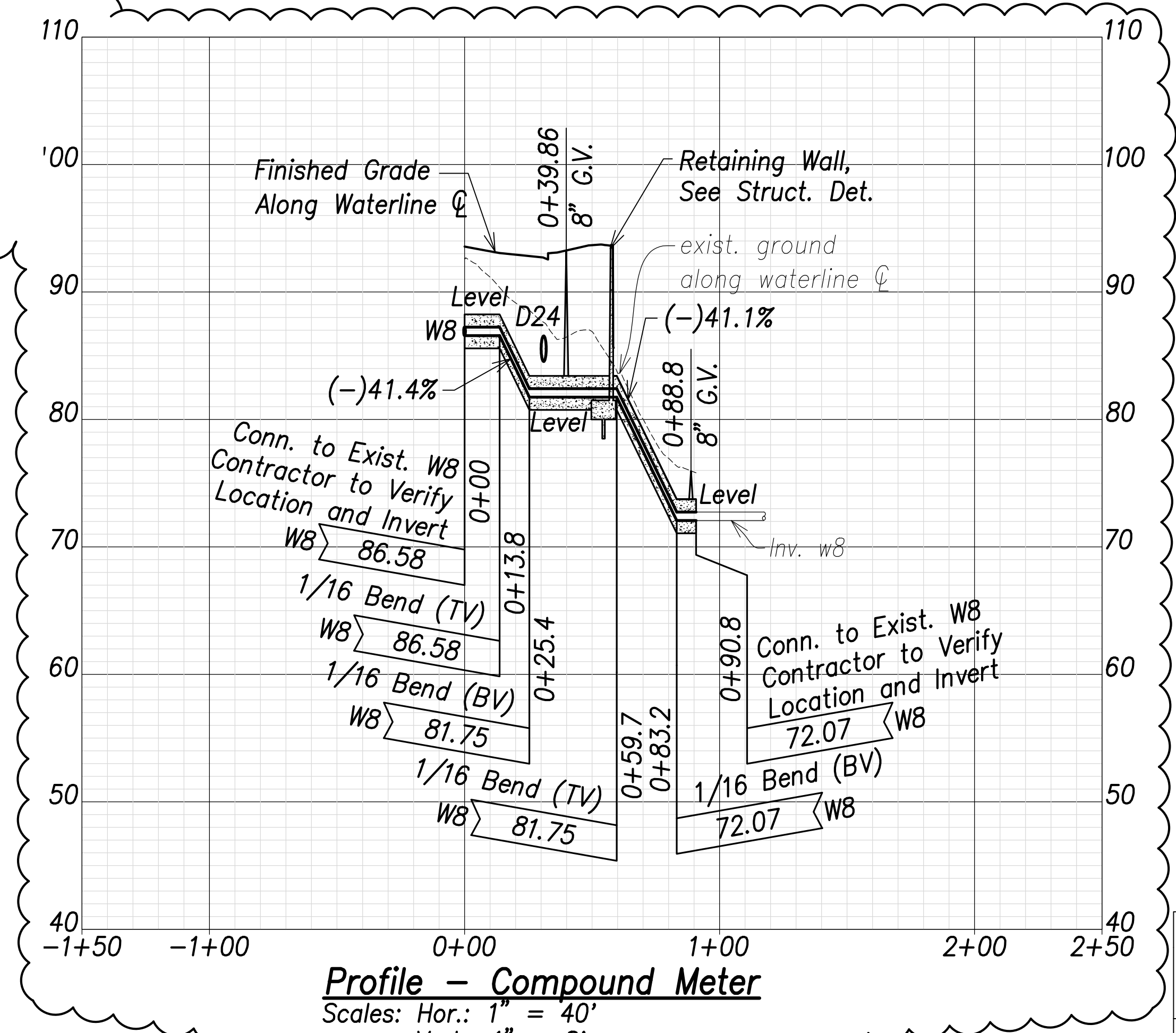
Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 137 | 767 |

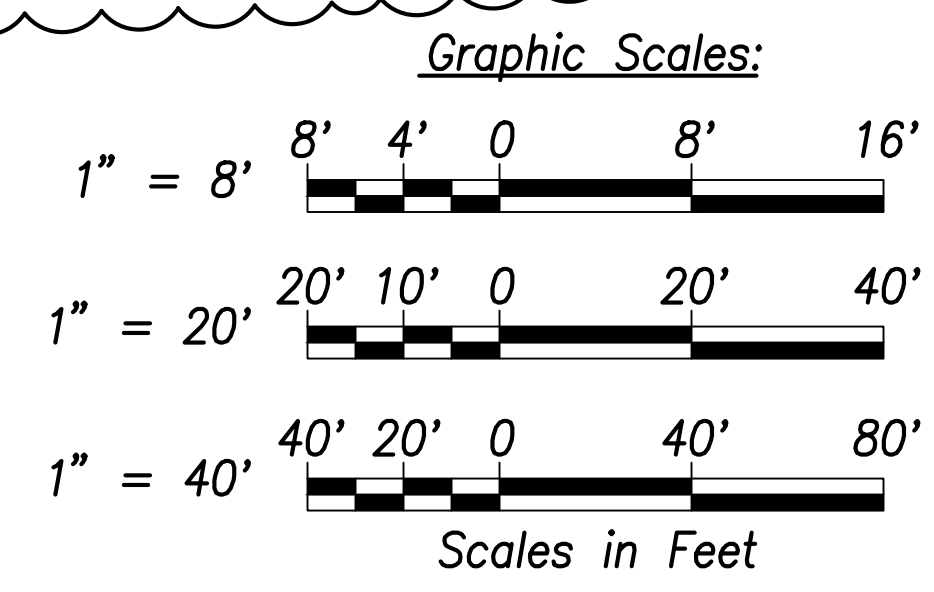
- Notes:**
- Location of existing utilities are from "as-built" drawings. The Contractor shall verify tie-in connection points prior to the ordering of materials and the start of construction.
 - The Contractor shall coordinate construction with utility companies.
 - All waterlines shall be ductile iron pipe, class 53 with ductile iron fittings and shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 2021, and all subsequent amendment and additions.
 - For electrical relocations, see electrical drawings.
 - For the portions of the water main to be concrete jacketed, a bell is to be installed in case there is a break on the line. This allows the removal of the compromised portion of the line without affecting the reinforced concrete jacketed segment of the existing water line. The installation of the bell shall be incidental to the various pay items under Section 624.
 - Reinforced concrete jackets on existing waterlines are based upon the as-built location of the pipe joints. The Contractor shall verify the pipe joint locations in the field and shall extend the reinforced concrete jackets as necessary to comply with BWS Std. Det. B1. Shortening of the reinforced concrete jacket is not allowed.



Plan - Compound Meter and DC Meter
Scale: 1" = 20'



Profile - Compound Meter
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



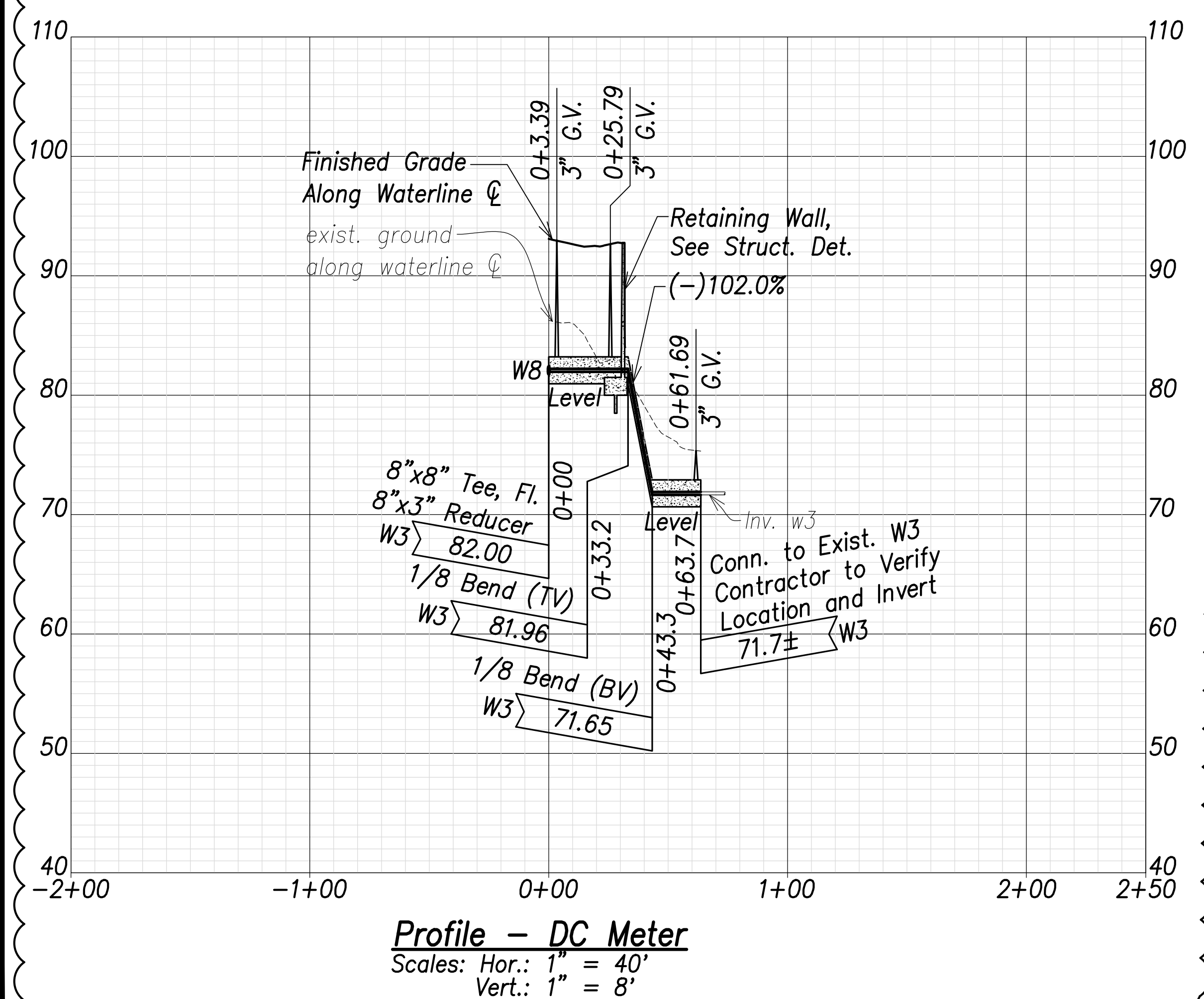
ORANG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Orang W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

APPROVED: _____ DATE _____
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

- (A)** Sta. 144+92.6, o/s 7.5' Lt.
= Sta. 0+00 DC Meter
Conn. to Exist. Water Lateral
For Callouts, See Sht. C-133
- (B)** Sta. 144+98.4, o/s 27.5' Rt.
= Sta. 0+36.3 DC Meter
= Sta. 0+00 Compound Meter
1-8"x8" Tee, Fl.
1-8"x3" Reducer
- (C)** Sta. 144+85.8, o/s 27.5' Rt.
= Sta. 0+48.8 DC Meter
1-8" 1/4 Bend, Fl. (H)
- (D)** Sta. 144+85.8, o/s 69.5' Rt.
= Sta. 0+90.8 DC Meter
Conn. to Exist. W8
Contractor to Verify Location and Invert
- (E)** 8" Detector Check Meter
See BWS Std. Det. M19, M30-M31
- (F)** 3" Compound Meter with Copper Bypass
See BWS Std. Det. M25-M31
- (G)** Sta. 145+13.2, o/s 27.5' Rt.
= Sta. 0+14.8 Compound Meter
1-3" 1/4 Bend, Fl. (H)
- (H)** Sta. 145+13.2, o/s 34.1' Rt.
= Sta. 0+21.4 Compound Meter
1-3" 1/4 Bend, Fl. (H)
- (J)** Sta. 145+05.8, o/s 34.0' Rt.
= Sta. 0+28.8 Compound Meter
1-3" 1/4 Bend, Fl. (H)
- (K)** Sta. 145+08.8, o/s 34.1' Rt.
= Sta. 0+25.8 Compound Meter
1-3" G.V., 200#
1-Valve Box & Cover
1-Conc. Block
- (L)** Sta. 145+01.7, o/s 27.5' Rt.
= Sta. 0+03.4 Compound Meter
1-3" G.V., 200#
1-Valve Box & Cover
1-Conc. Block
- (M)** Sta. 145+05.8, o/s 66.9' Rt.
= Sta. 0+61.7 Compound Meter
1-3" G.V., 200#
1-Valve Box & Cover
1-Conc. Block
- (N)** Sta. 145+05.8, o/s 68.9' Rt.
= Sta. 0+63.7 Compound Meter
Conn. to Exist. W3
Contractor to Verify Location and Invert
- (P)** Sta. 144+94.8, o/s 27.5' Rt.
= Sta. 0+39.9 DC Meter
1-8" G.V., 200#
1-Valve Box & Cover
1-Conc. Block
- (Q)** Sta. 144+98.4, o/s 5.0' Rt.
= Sta. 0+13.8 DC Meter
1-8" 1/16 Bend, Fl. (H)
- (R)** Sta. 144+85.8, o/s 67.5' Rt.
= Sta. 0+88.8 DC Meter
1-8" G.V., 200#
1-Valve Box & Cover
1-Conc. Block



Profile - DC Meter
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

| | |
|--------------------------|-------------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | TRACED BY: _____ |
| DESIGNED BY: _____ | CHECKED BY: _____ |
| NOTE BOOK No. _____ | |

FILE: \\NMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-136 Meter Plans and Profiles.dwg saved June 6, 2022

06/08/22 **△** Compound and DC Meter Alignments Revised, Profiled Revised, Connection Callouts Revised

DATE: _____ REVISION: _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

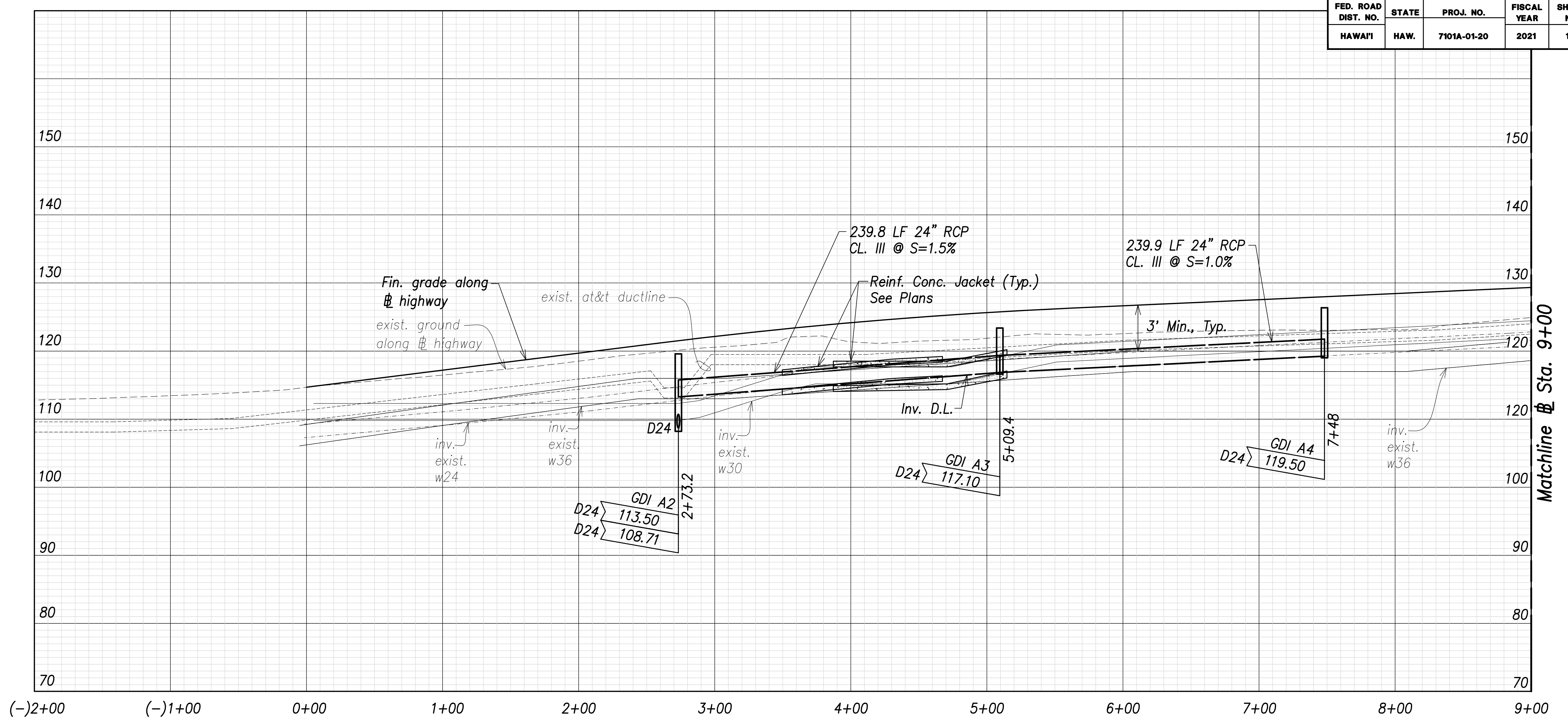
Plan & Profile
Compound Meter and DC Meter

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-136 OF 767 SHEETS

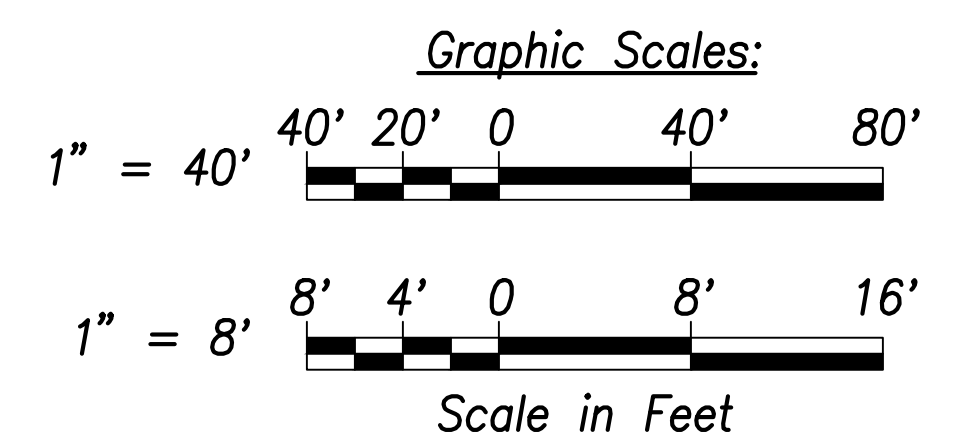
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 138 | 767 |



Utility and Drain Profiles - (Sta. 0+00 to Sta. 9+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

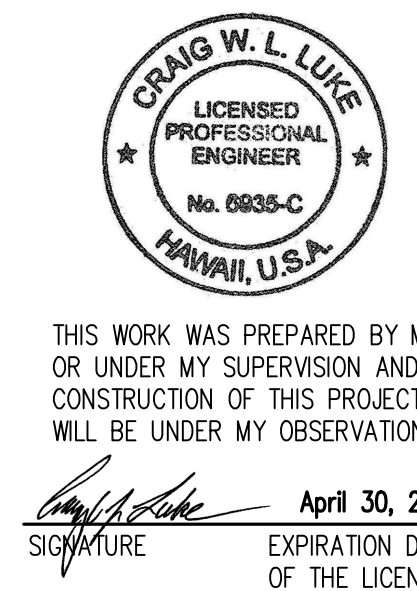
Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



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

APPROVED:

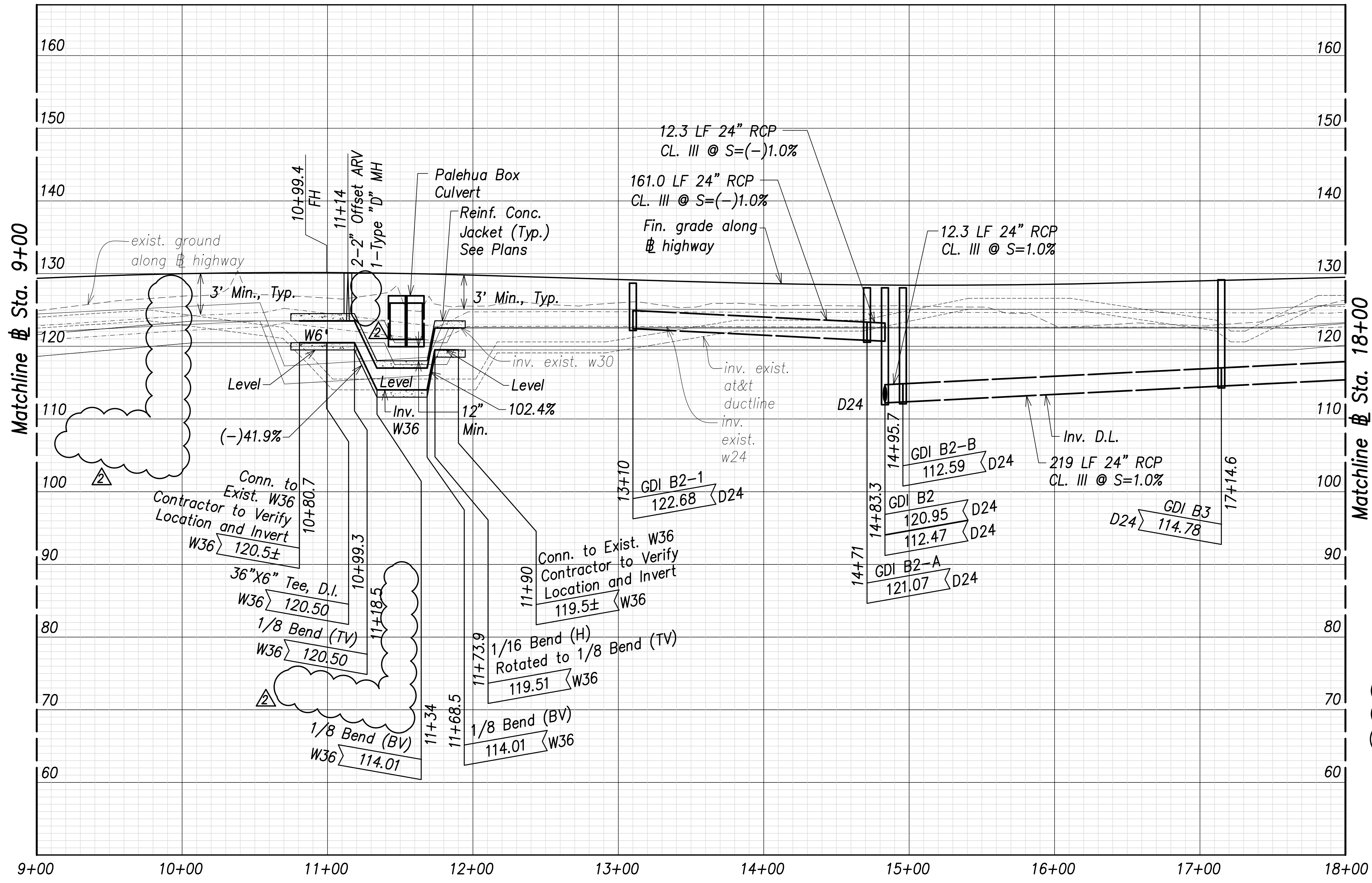
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)



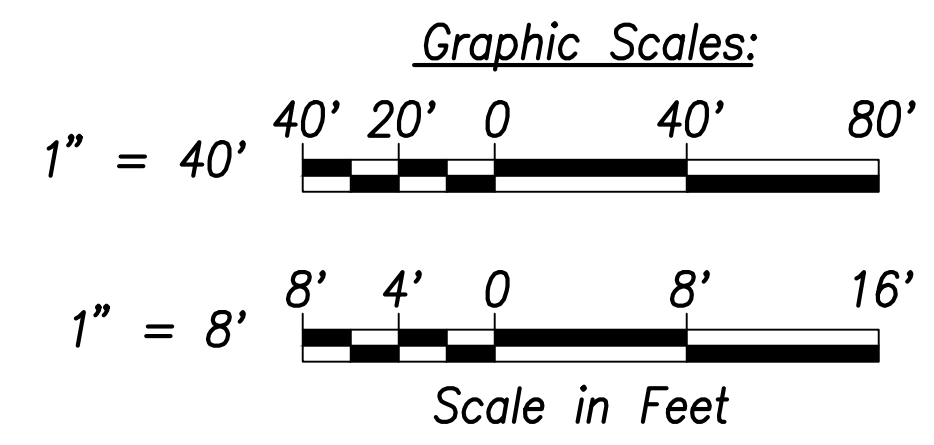
| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility and Drain Profiles
Sta. 0+00 to Sta. 9+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Utility\Utility and Drain Profiles - Sta. 0+00 to 9+00 - PLAN.dwg saved June 6, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 139 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



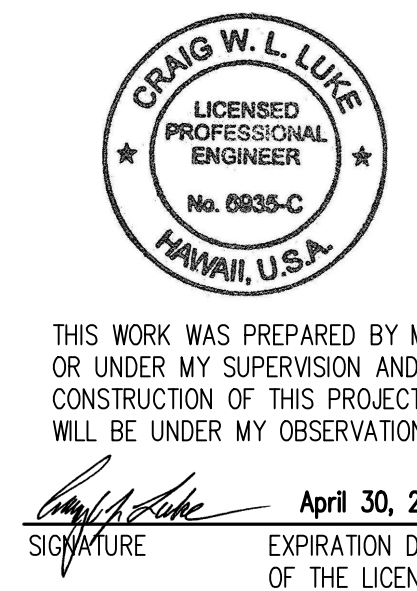
Utility and Drain Profiles - (Sta. 9+00 to Sta. 18+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NO. _____ | |

APPROVED:

 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

 SIGNATURE

April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|-----------------------------------|
| 06/08/22 | Removed GDI A5 and A6, added note |
| DATE | REVISION |

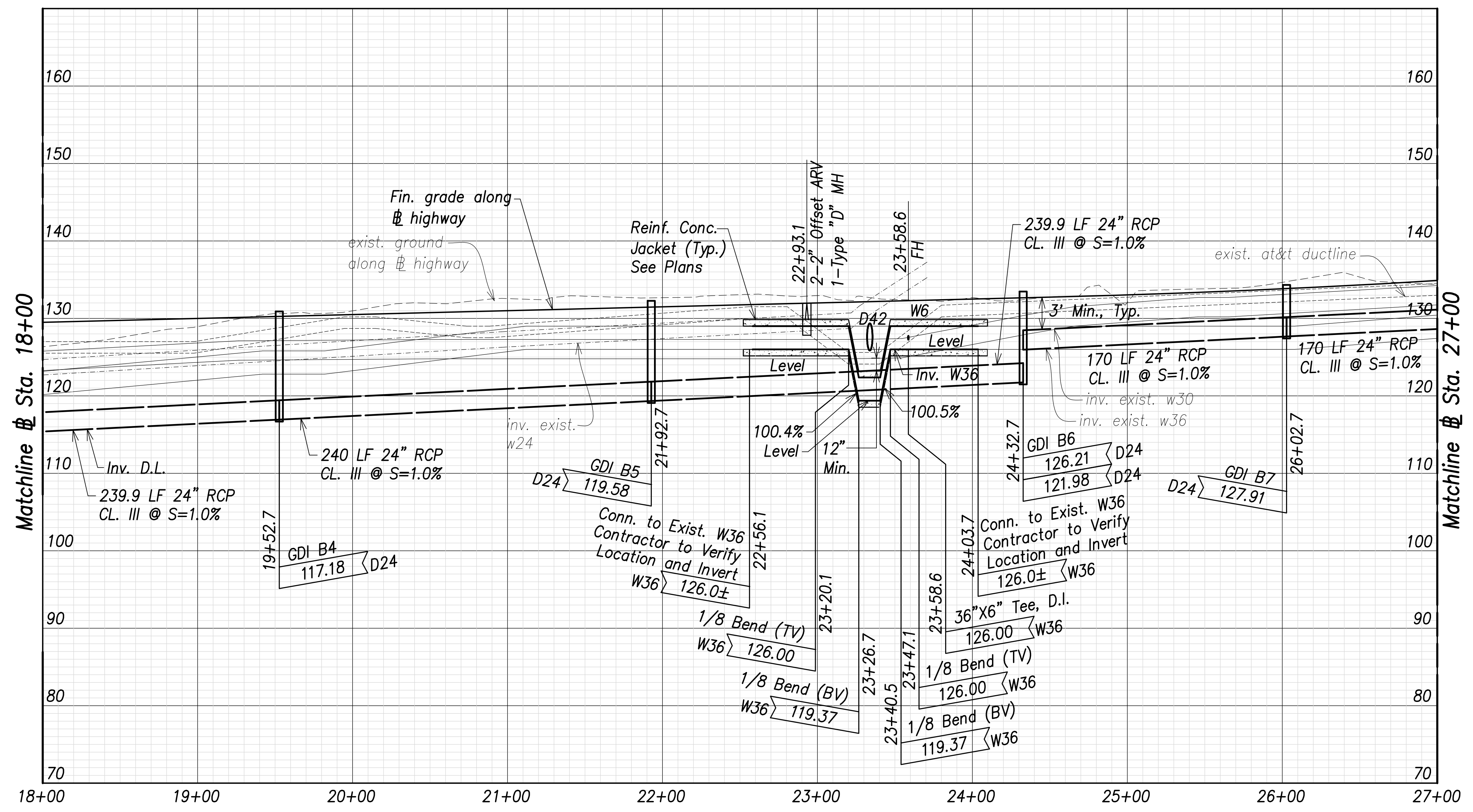
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Utility and Drain Profiles
 Sta. 9+00 to Sta. 18+00

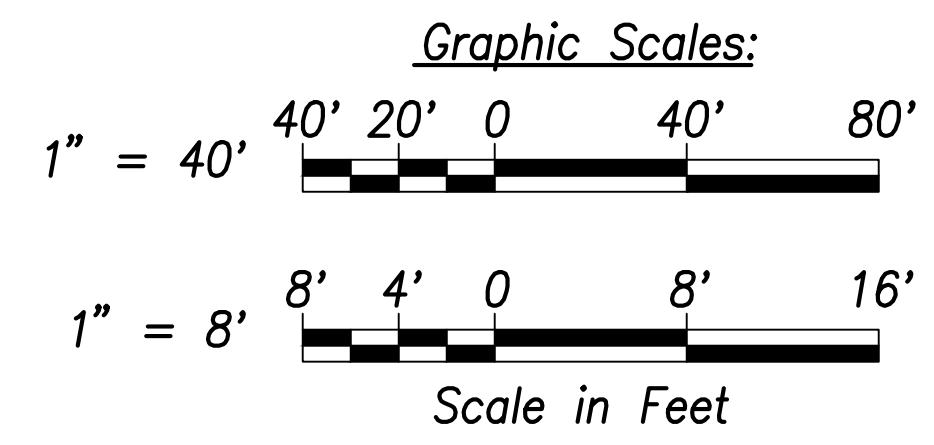
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 140 | 767 |



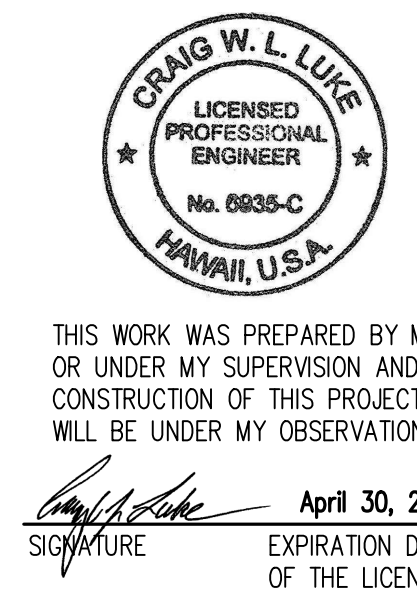
Utility and Drain Profiles - (Sta. 18+00 to Sta. 27+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

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| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| DATE | |
| NO. | |

APPROVED:
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)



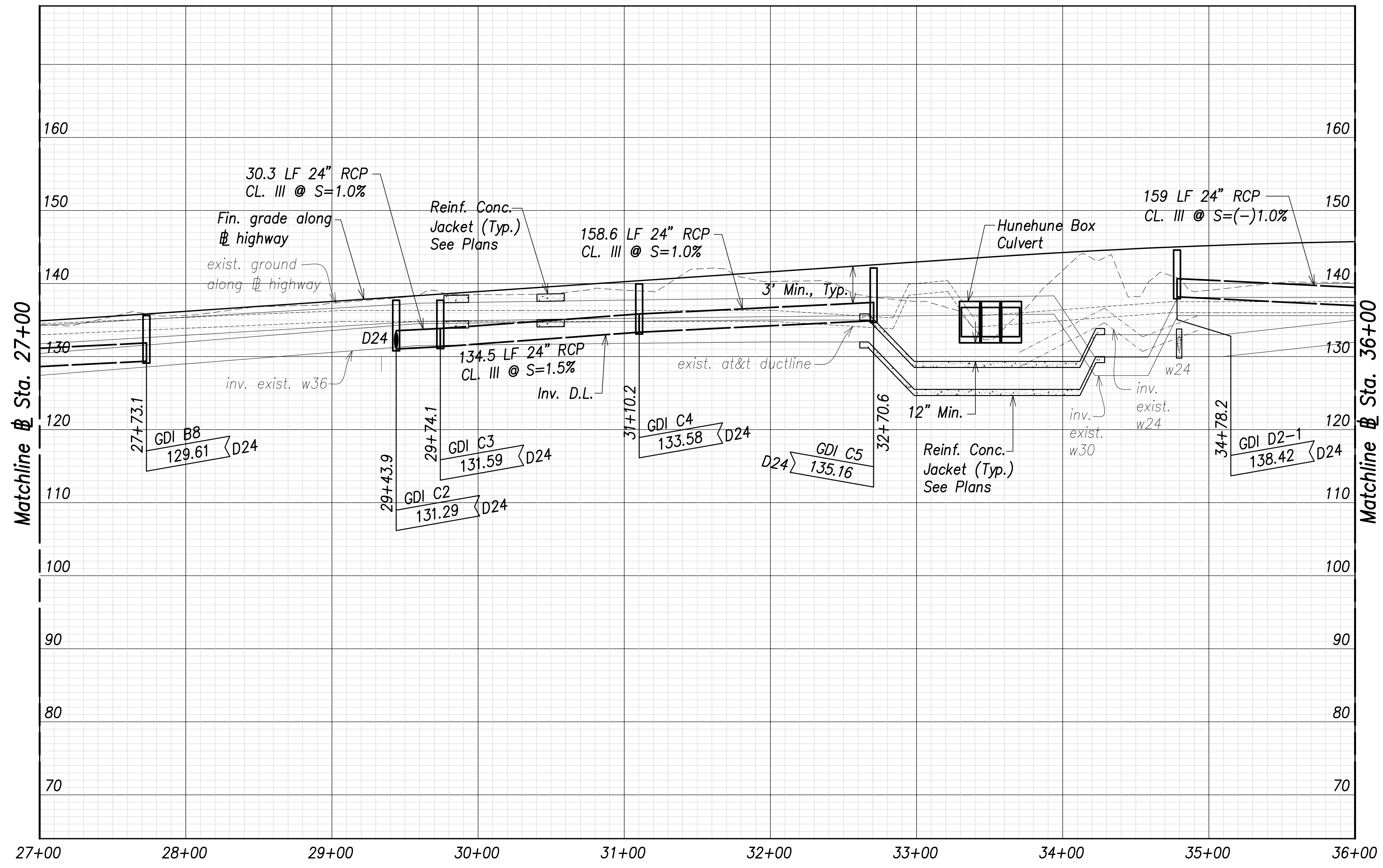
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 Signature: [Signature]
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|------------|
| 06/08/22 | Added note |
| DATE | REVISION |

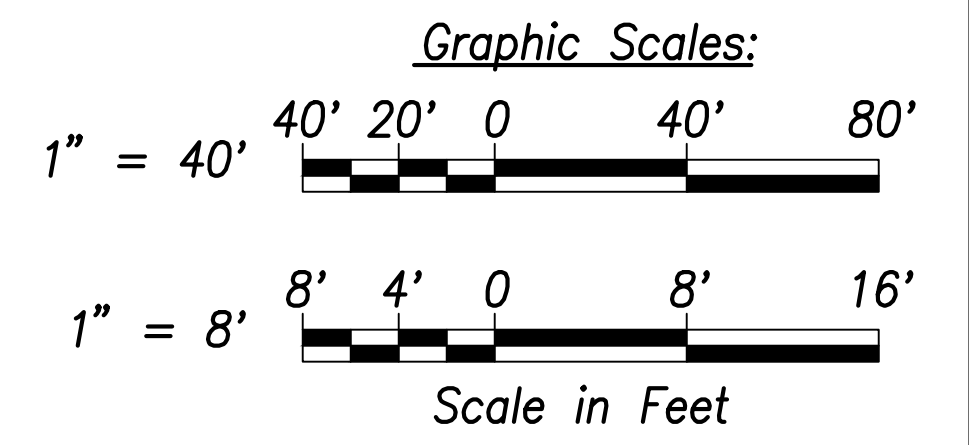
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Utility and Drain Profiles
 Sta. 18+00 to Sta. 27+00
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 141 | 767 |



Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



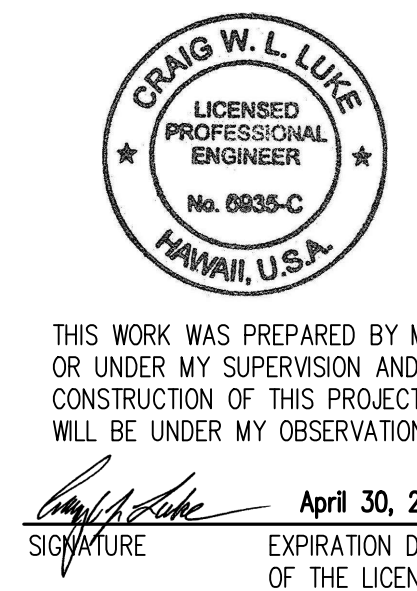
Utility and Drain Profiles - (Sta. 27+00 to Sta. 36+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

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

APPROVED:

Manager and Chief Engineer, BWS DATE

(for work affecting BWS facilities in City/State R/W & BWS easements only)

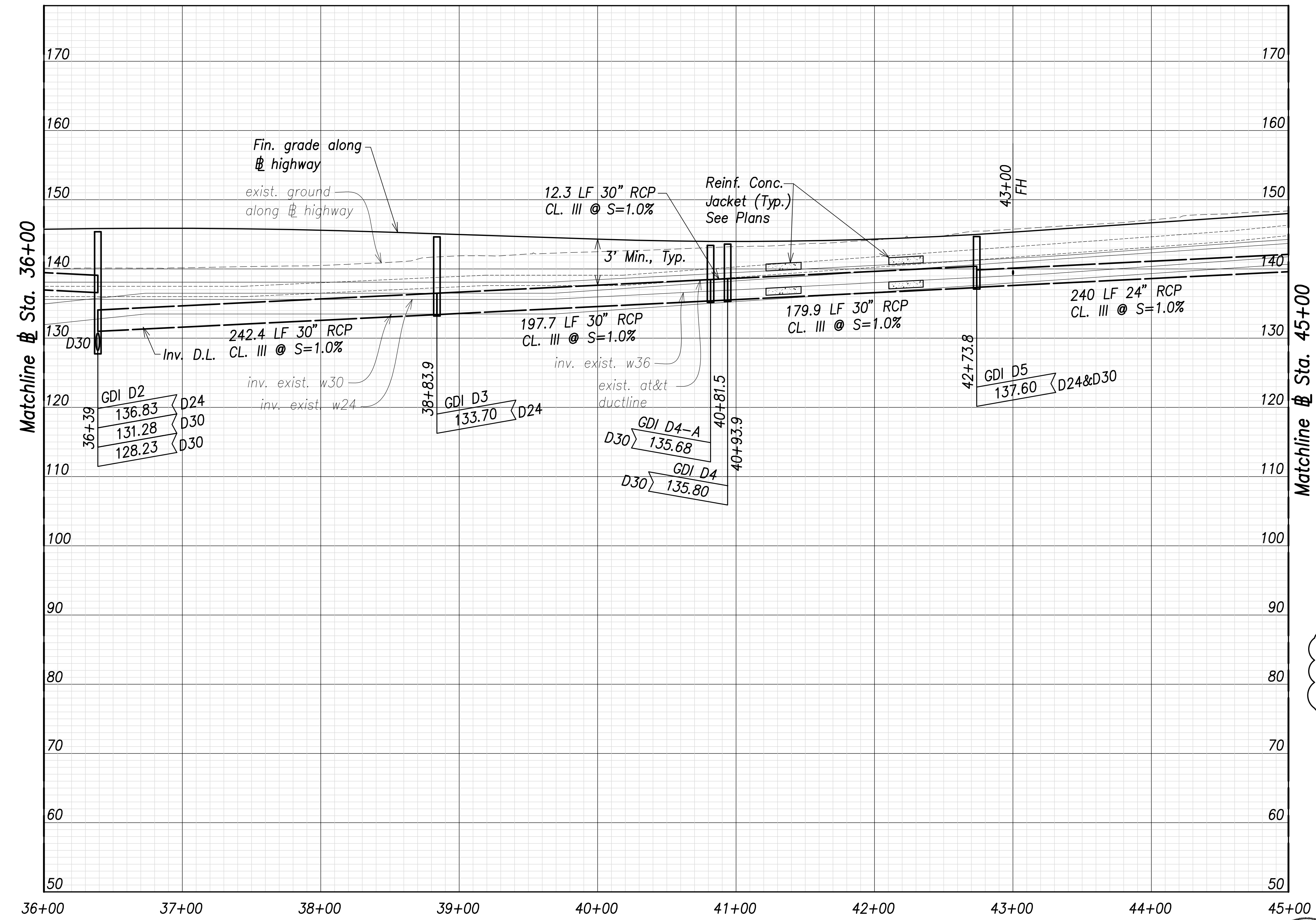


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 27+00 to
Sta. 36+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-140 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 142 | 767 |



Matchline @ Sta. 45+00

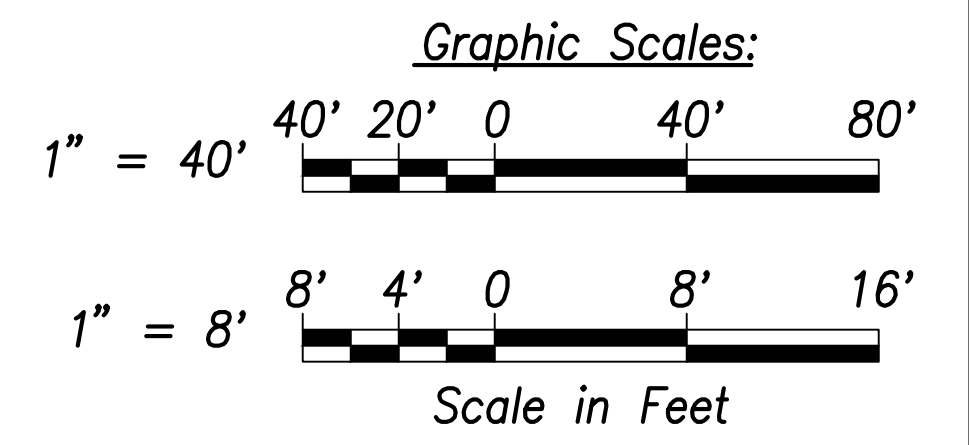
Matchline @ Sta. 36+00

Utility and Drain Profiles - (Sta. 36+00 to Sta. 45+00)

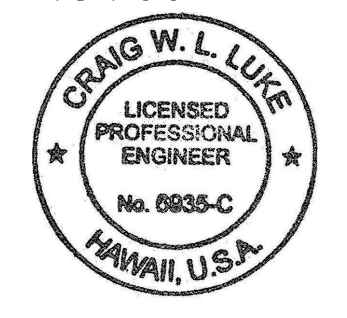
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

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

Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



| | |
|----------|------------|
| 06/08/22 | Added note |
| DATE | REVISION |



APPROVED:

Manager and Chief Engineer, BWS DATE

(for work affecting BWS facilities in City/State R/W & BWS easements only)

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke* April 30, 2022
EXPIRATION DATE OF THE LICENSE

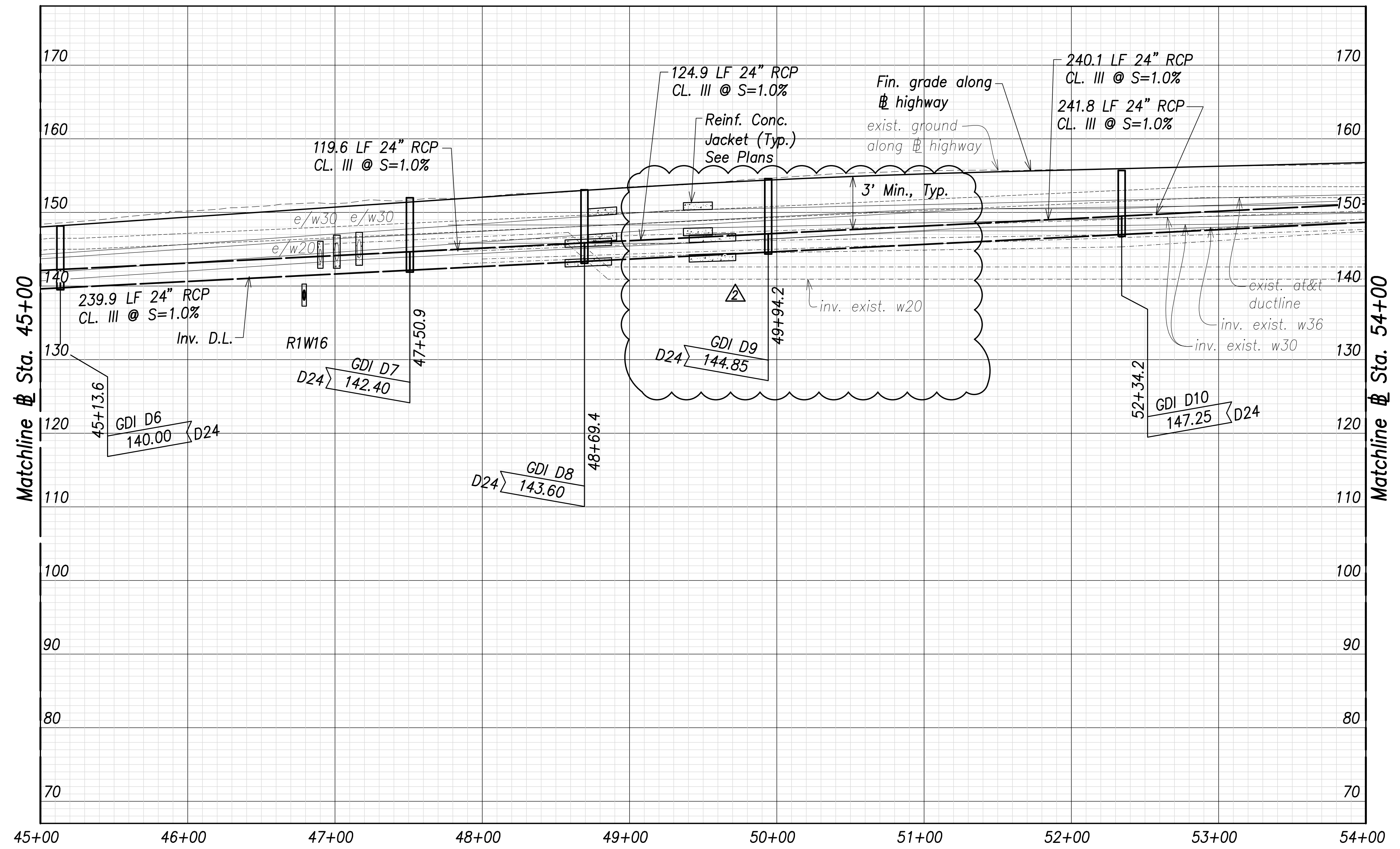
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility and Drain Profiles
@ Sta. 36+00 to
@ Sta. 45+00

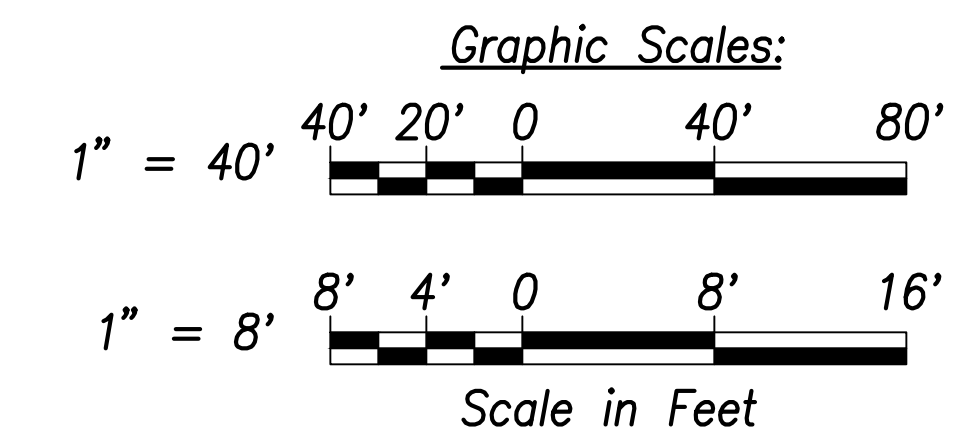
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 143 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



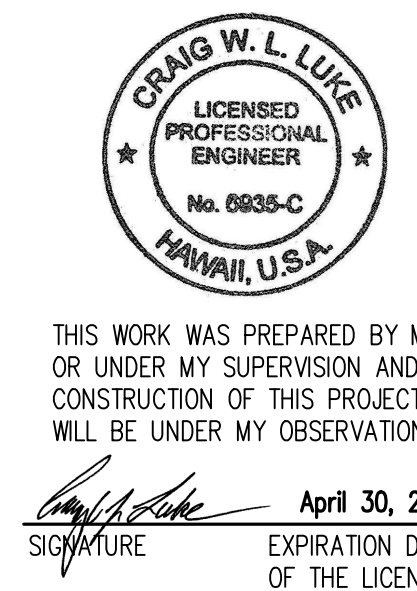
Utility and Drain Profiles - (Sta. 45+00 to Sta. 54+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| DATE | |
| NO. _____ | |

APPROVED:

 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



| | |
|----------|---|
| 06/08/22 | Sta. 49+65 Waterline and Jacket Removed, Added Note |
| DATE | REVISION |

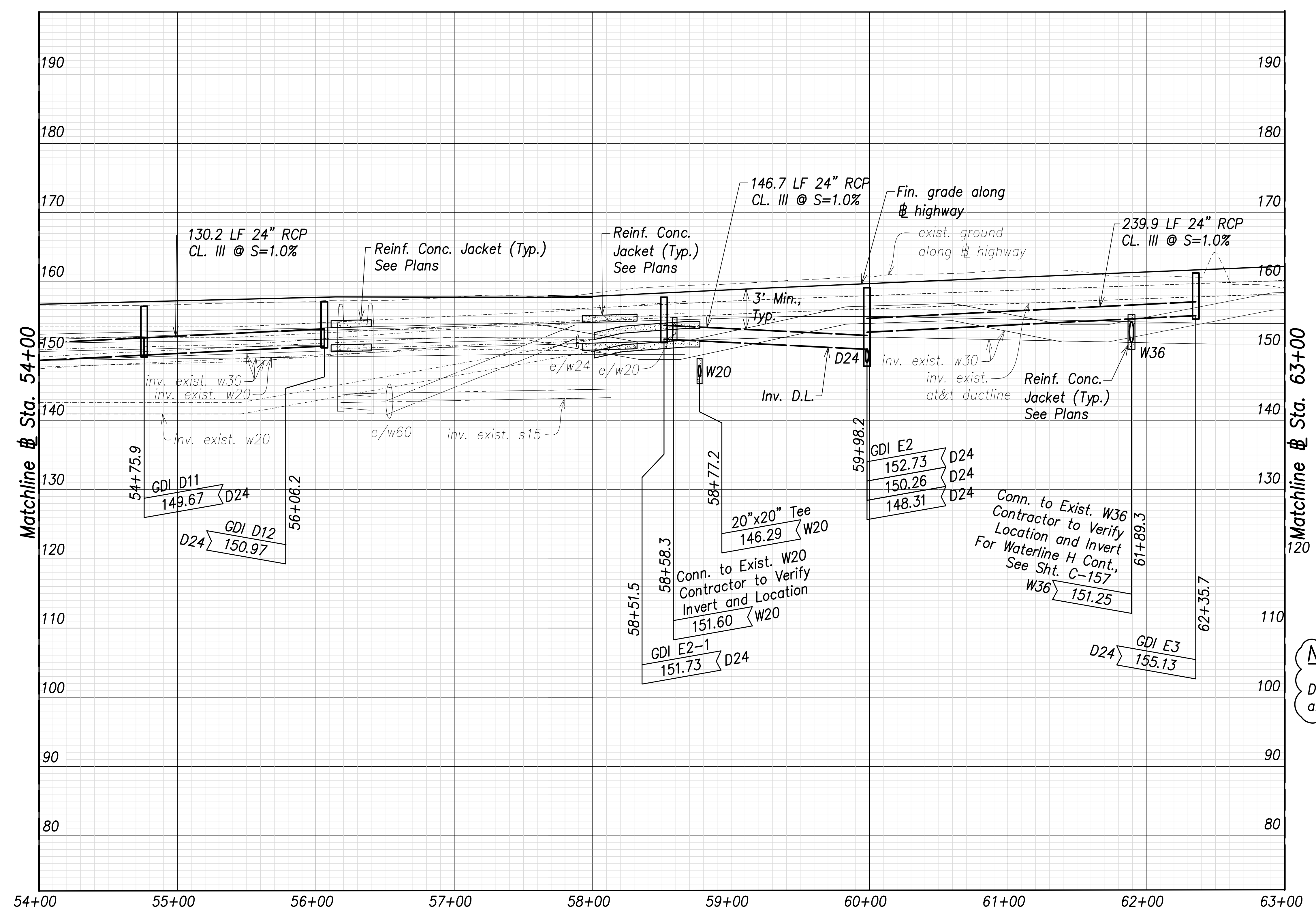
**DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION**

**Utility and Drain Profiles
 Sta. 45+00 to
 Sta. 54+00**

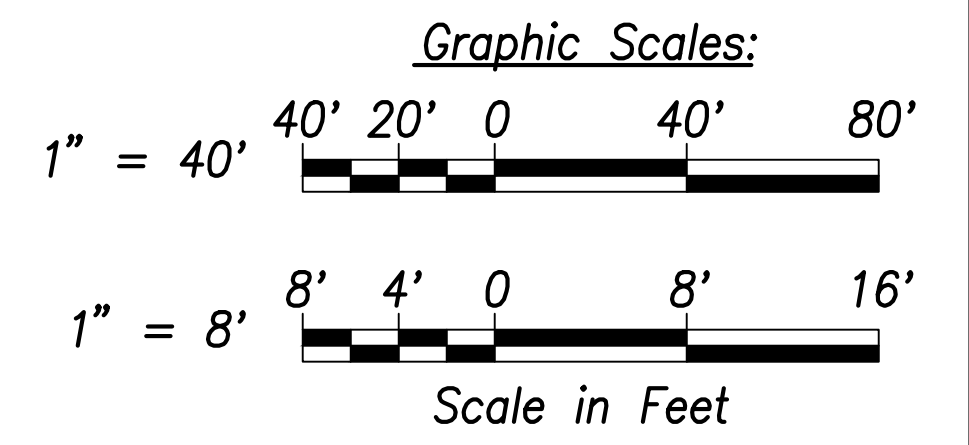
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 144 | 767 |



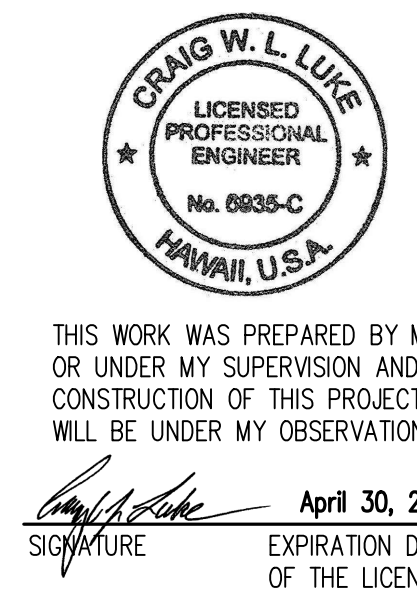
Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



Utility and Drain Profiles (Sta. 54+00 to Sta. 63+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| DATE | |
| NO. | |

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



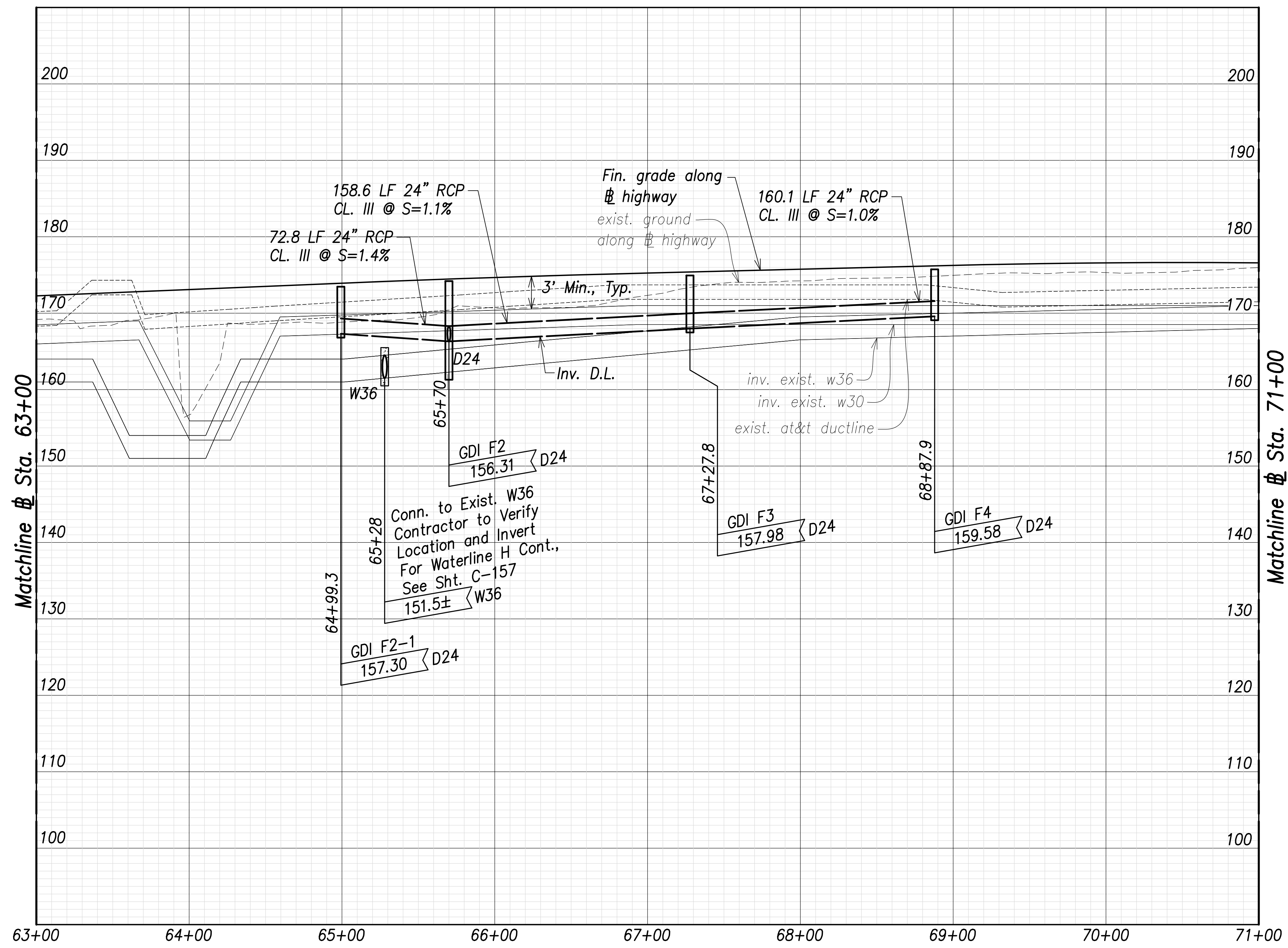
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ DATE: April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|------------|
| 06/08/22 | Added note |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Utility and Drain Profiles
 Sta. 54+00 to
 Sta. 63+00
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 145 | 767 |

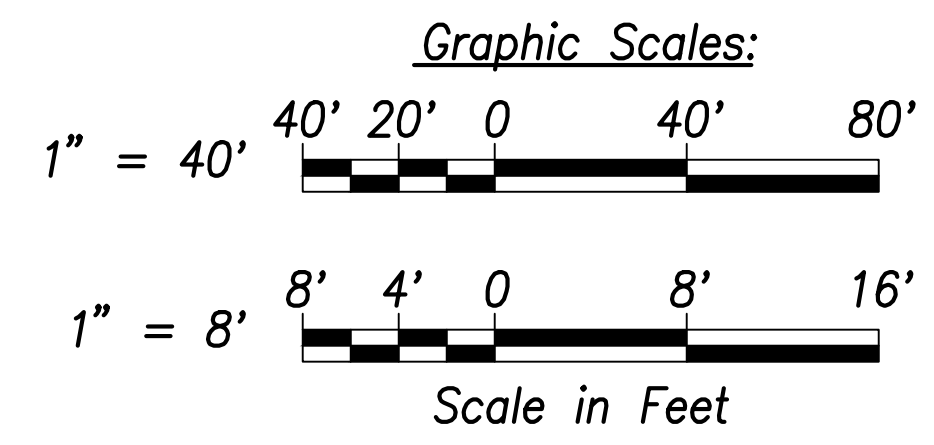


Matchline @ Sta. 71+00

Matchline @ Sta. 63+00

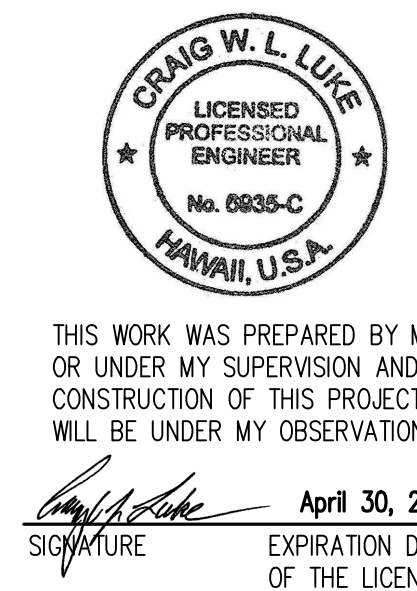
Utility and Drain Profiles - (Sta. 63+00 to Sta. 71+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



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

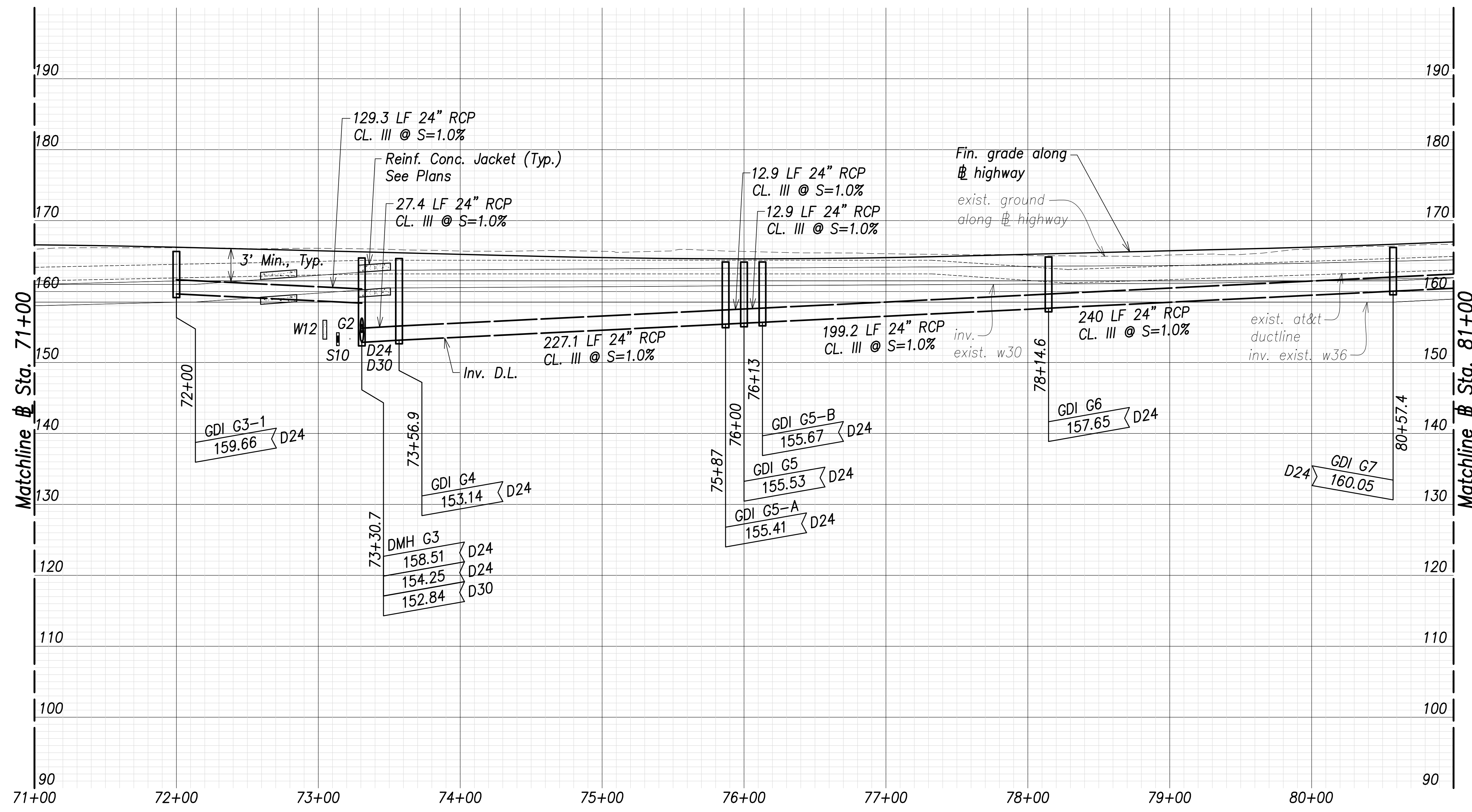
APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 63+00 to Sta. 71+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-144 OF 767 SHEETS | |

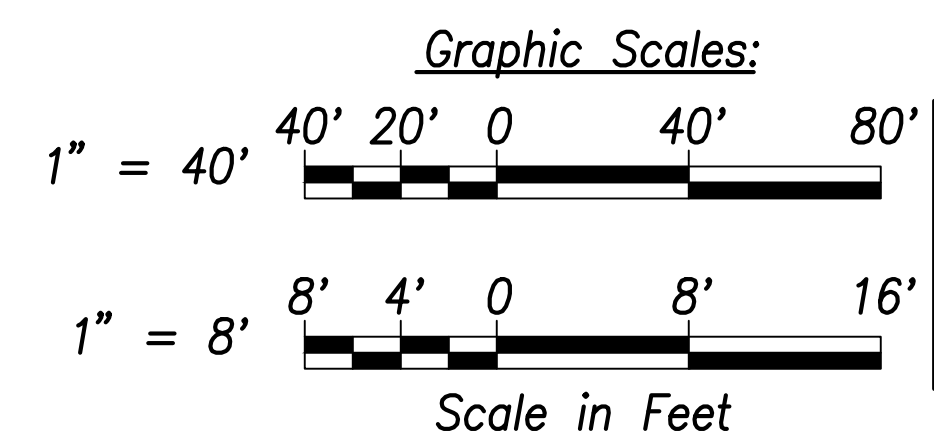
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 146 | 767 |



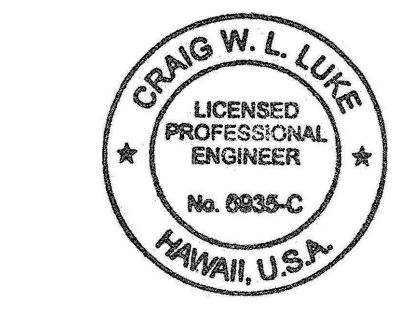
Utility and Drain Profiles - (Sta. 71+00 to Sta. 81+00)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



APPROVED: _____ DATE _____
Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|------------|
| 06/08/22 | Added note |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Utility and Drain Profiles
Sta. 71+00 to Sta. 81+00

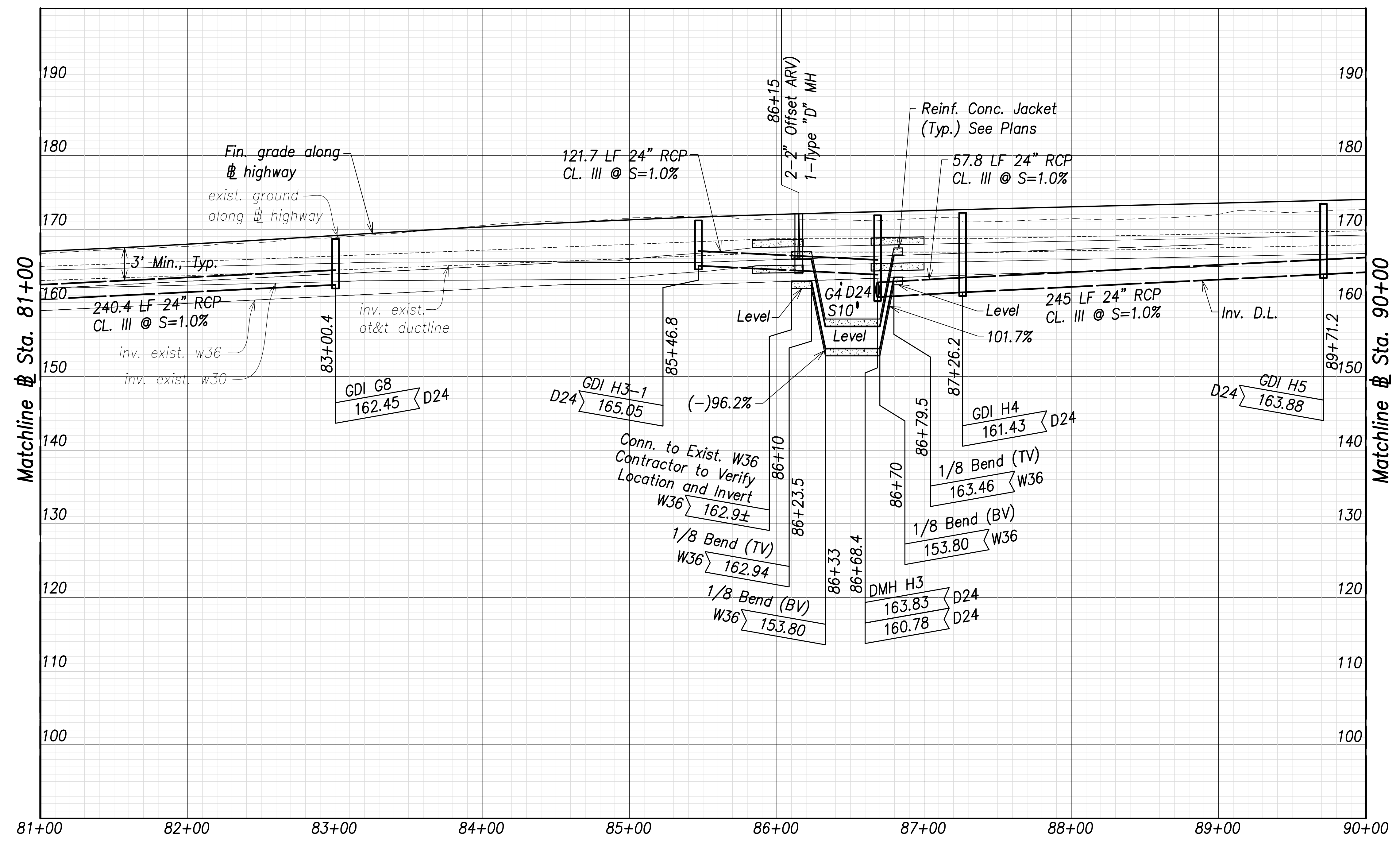
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

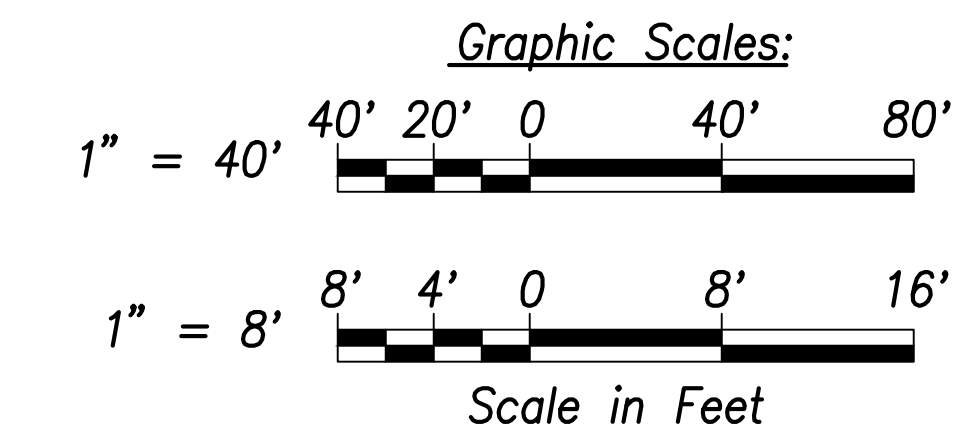
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|--------------------------|-------------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | TRACED BY: _____ |
| DESIGNED BY: _____ | CHECKED BY: _____ |
| NOTE BOOK No. _____ | |

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-145 Utility and Drain Profiles - Sta. 71+00 to 81+00 - PLAN.dwg saved May 25, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 147 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



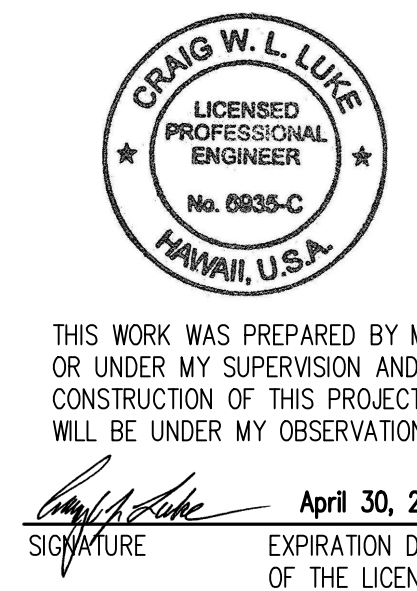
Utility and Drain Profiles - (Sta. 81+00 to Sta. 90+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED:

 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



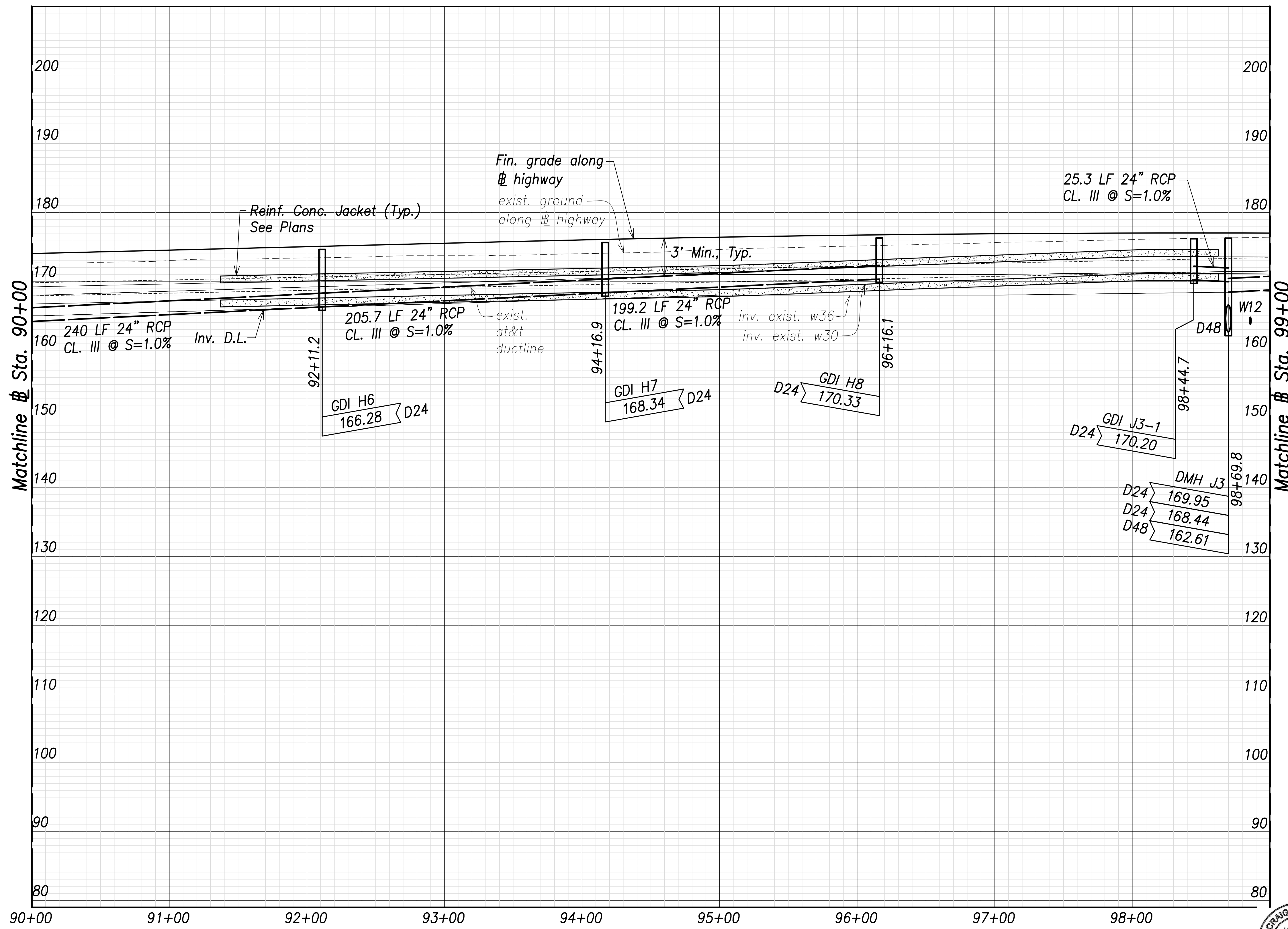
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

 SIGNATURE

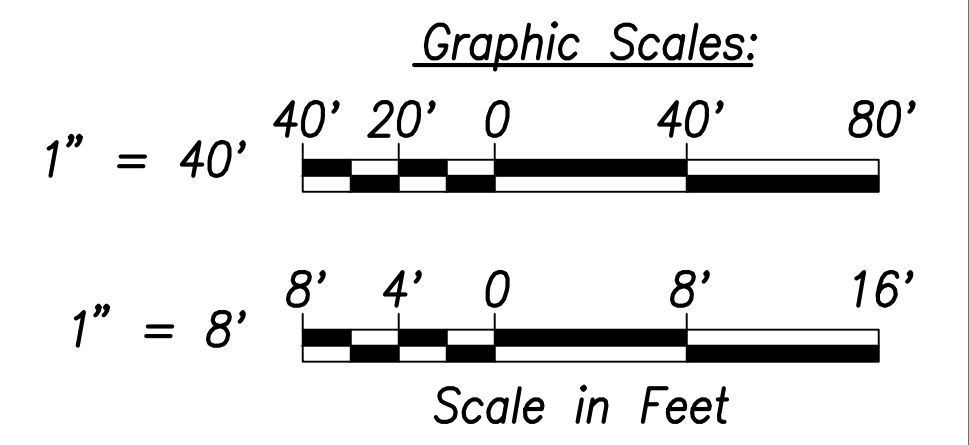
April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility and Drain Profiles
Sta. 81+00 to Sta. 90+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-146 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 148 | 767 |



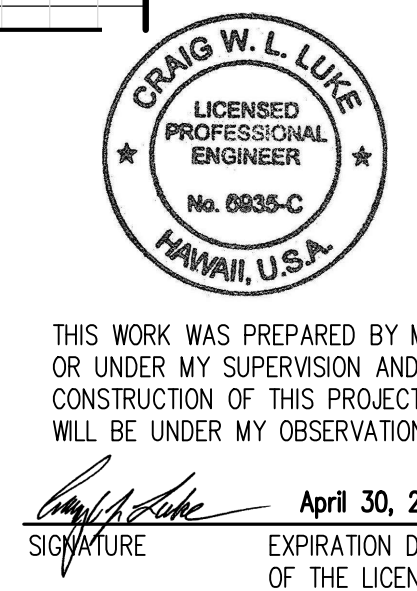
Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



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

Utility and Drain Profiles - (Sta. 90+00 to Sta. 99+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

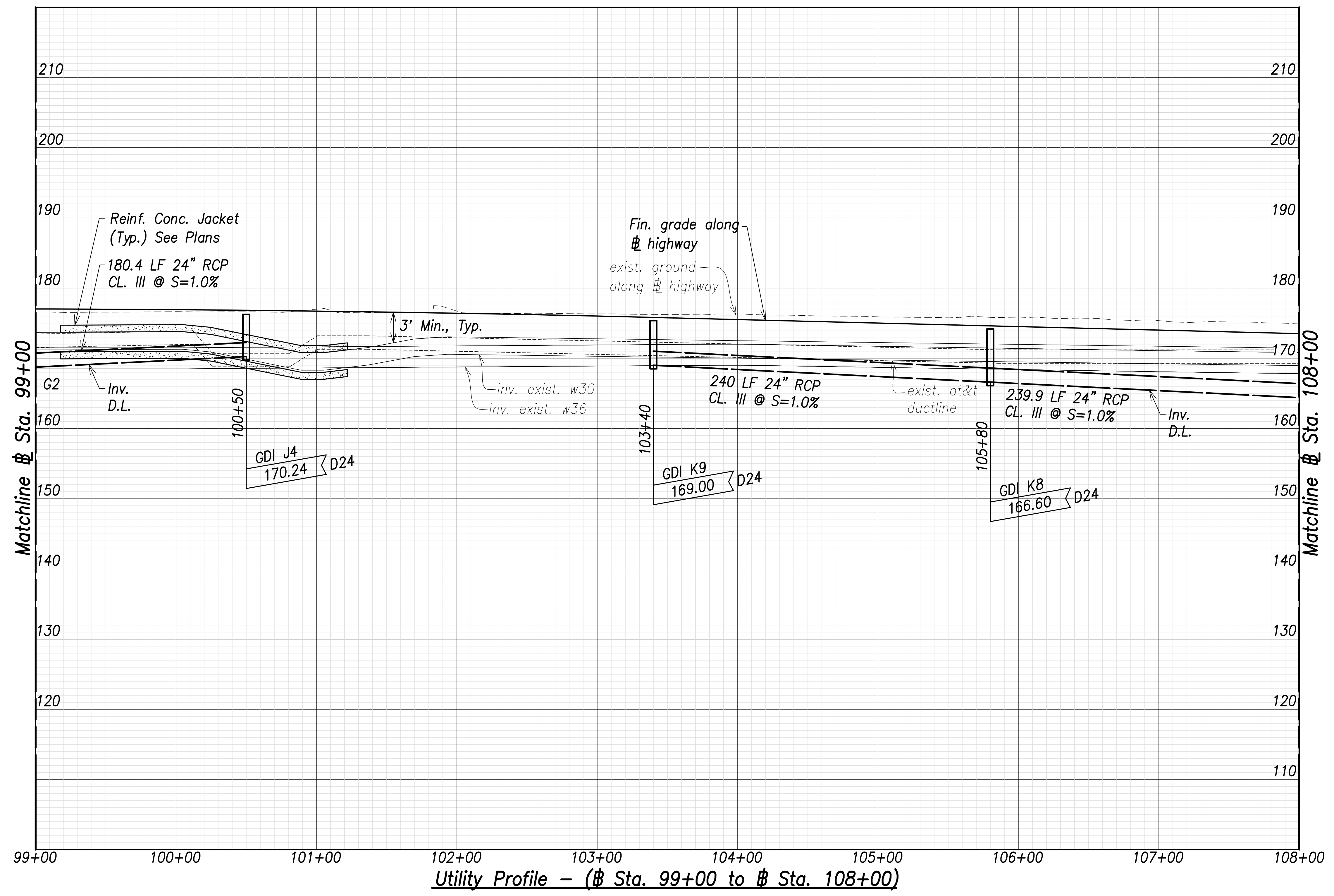
APPROVED:
 Manager and Chief Engineer, BWS DATE
 (for work affecting BWS facilities in City/State R/W & BWS easements only)



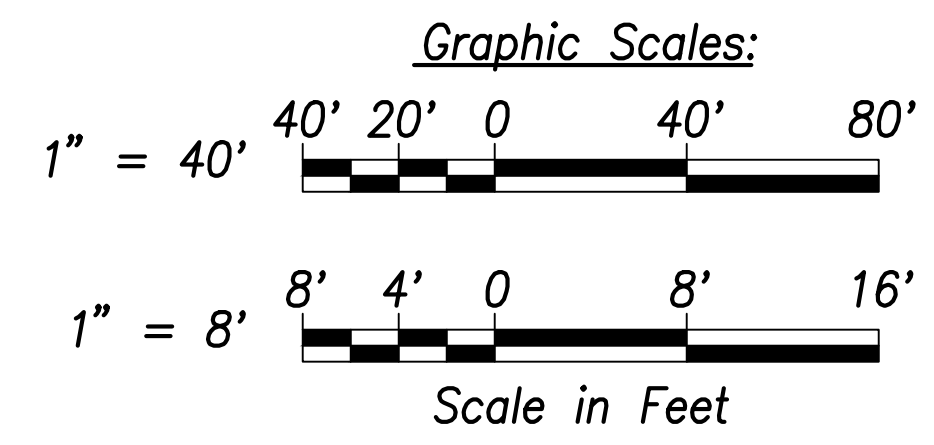
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 90+00 to Sta. 99+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-147 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 149 | 767 |



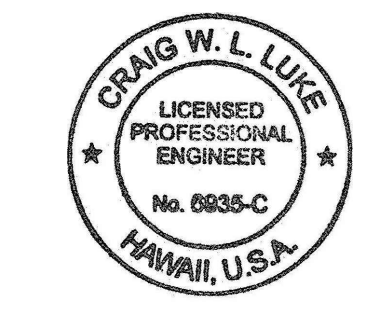
Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



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

APPROVED:

 Manager and Chief Engineer, BWS DATE _____
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

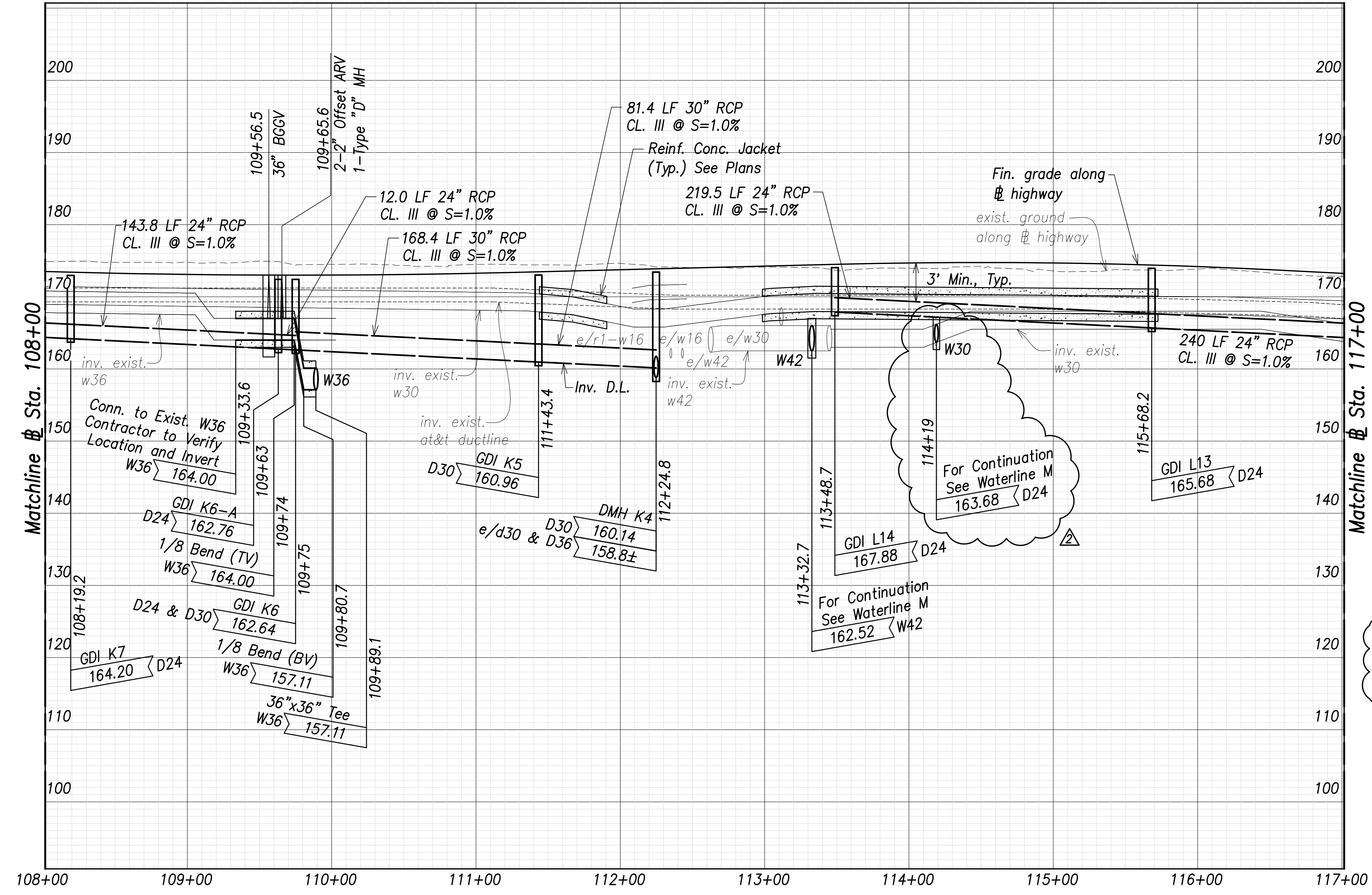


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

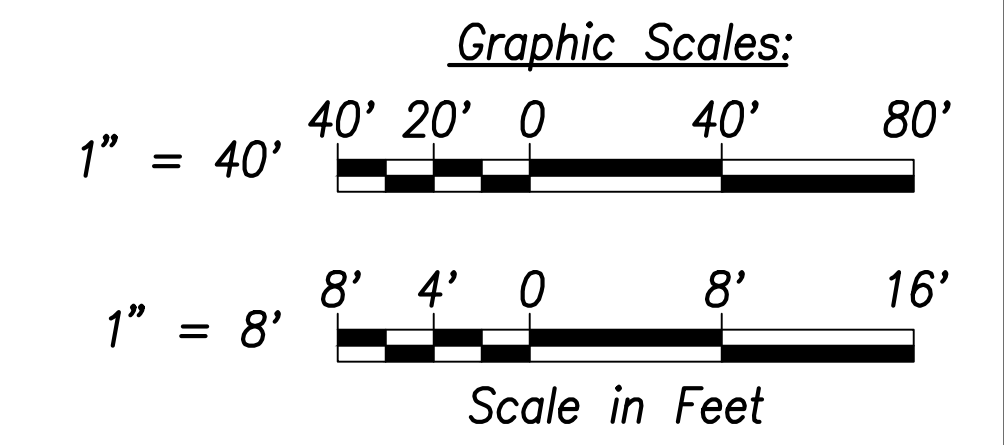
 SIGNATURE EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility Profile
Sta. 99+00 to Sta. 108+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-148 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 150 | 767 |



Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

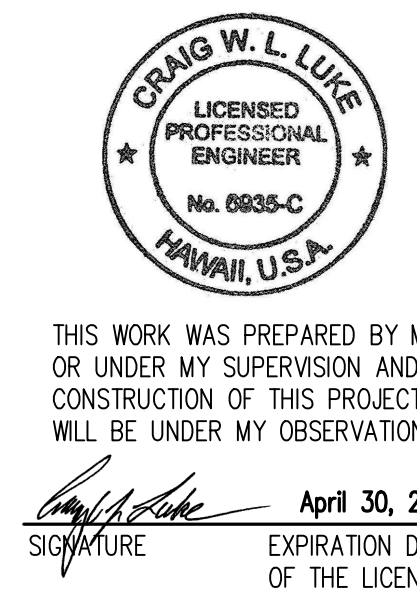


Utility and Drain Profiles (Sta. 108+00 to Sta. 117+00)
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

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

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities in
City/State R/W & BWS easements only)

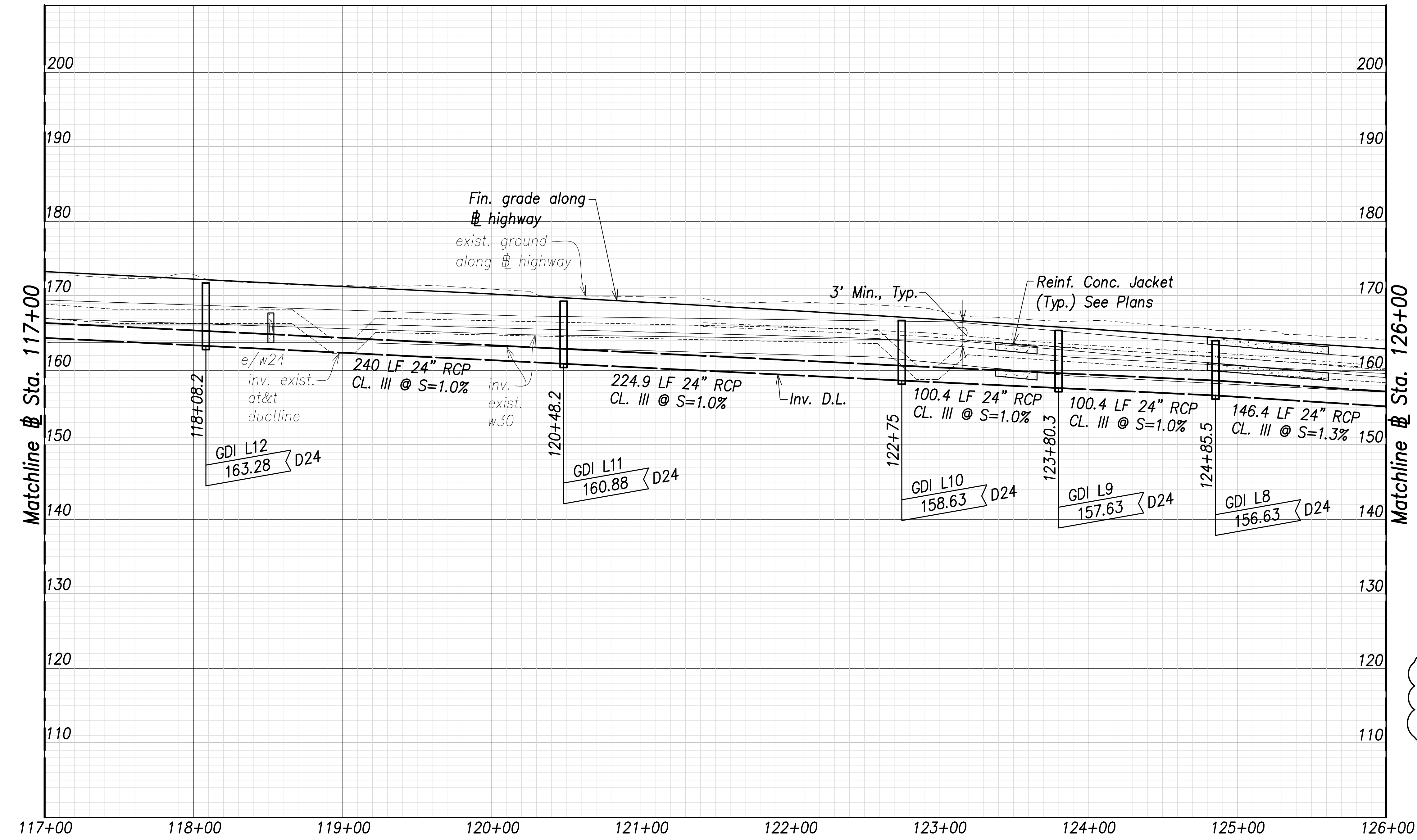


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

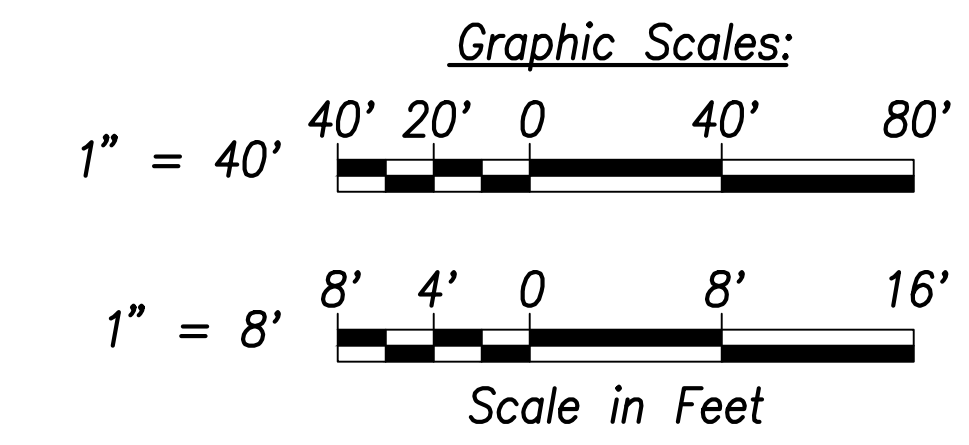
Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|---|--------------------------------|
| 06/08/22 | Added note; Revised connection |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 108+00 to Sta. 117+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-149 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 151 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



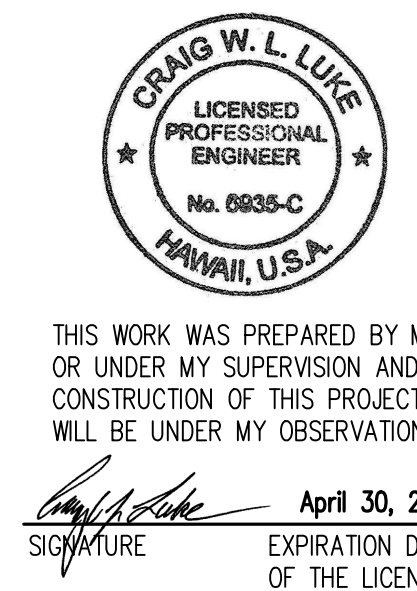
Utility Profile - (Sta. 117+00 to Sta. 126+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED:

 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



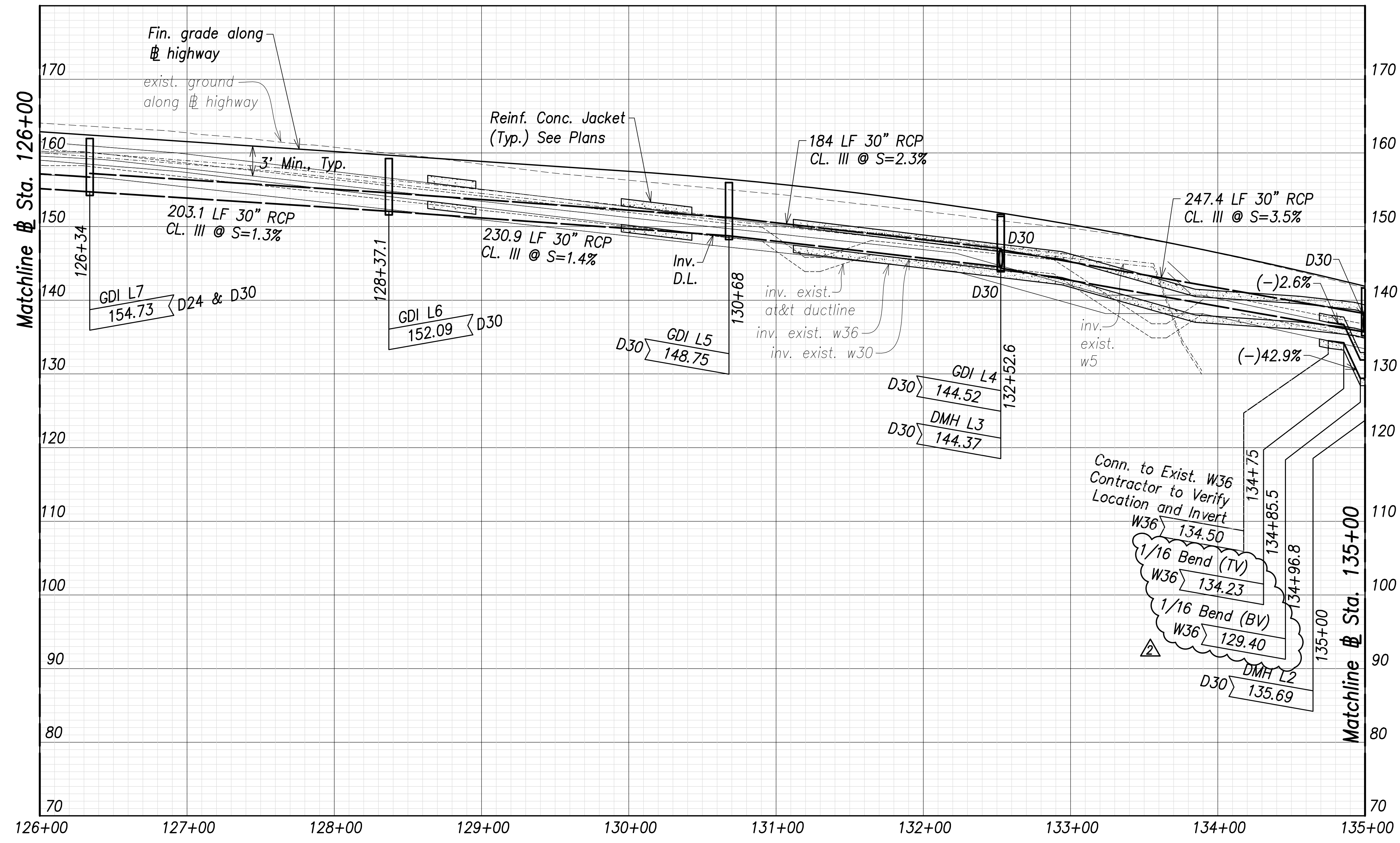
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

 SIGNATURE

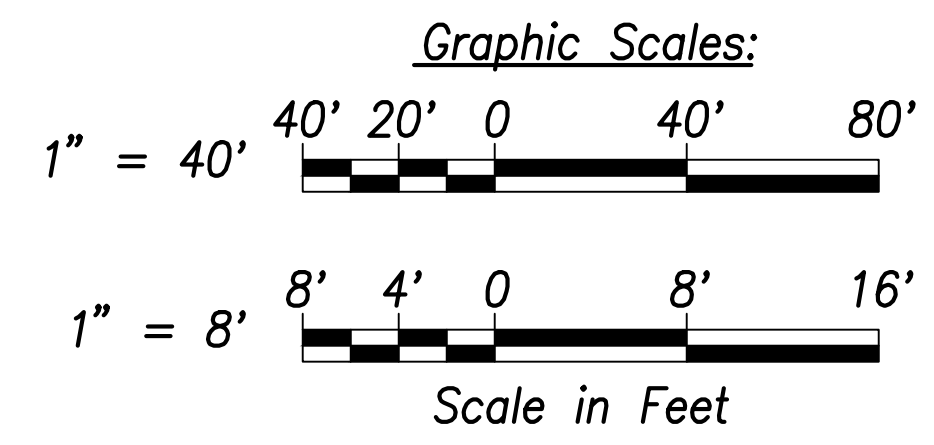
April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|--|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Utility Profile
Sta. 117+00 to Sta. 126+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-150 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 152 | 767 |



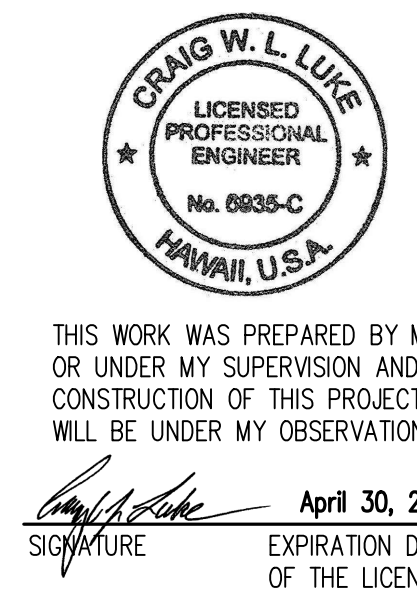
Utility and Drain Profiles – (# Sta. 126+00 to # Sta. 135+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



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

Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ DATE: April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|-----------------------------------|
| 06/08/22 | Revised bend callouts, added note |
| DATE | REVISION |

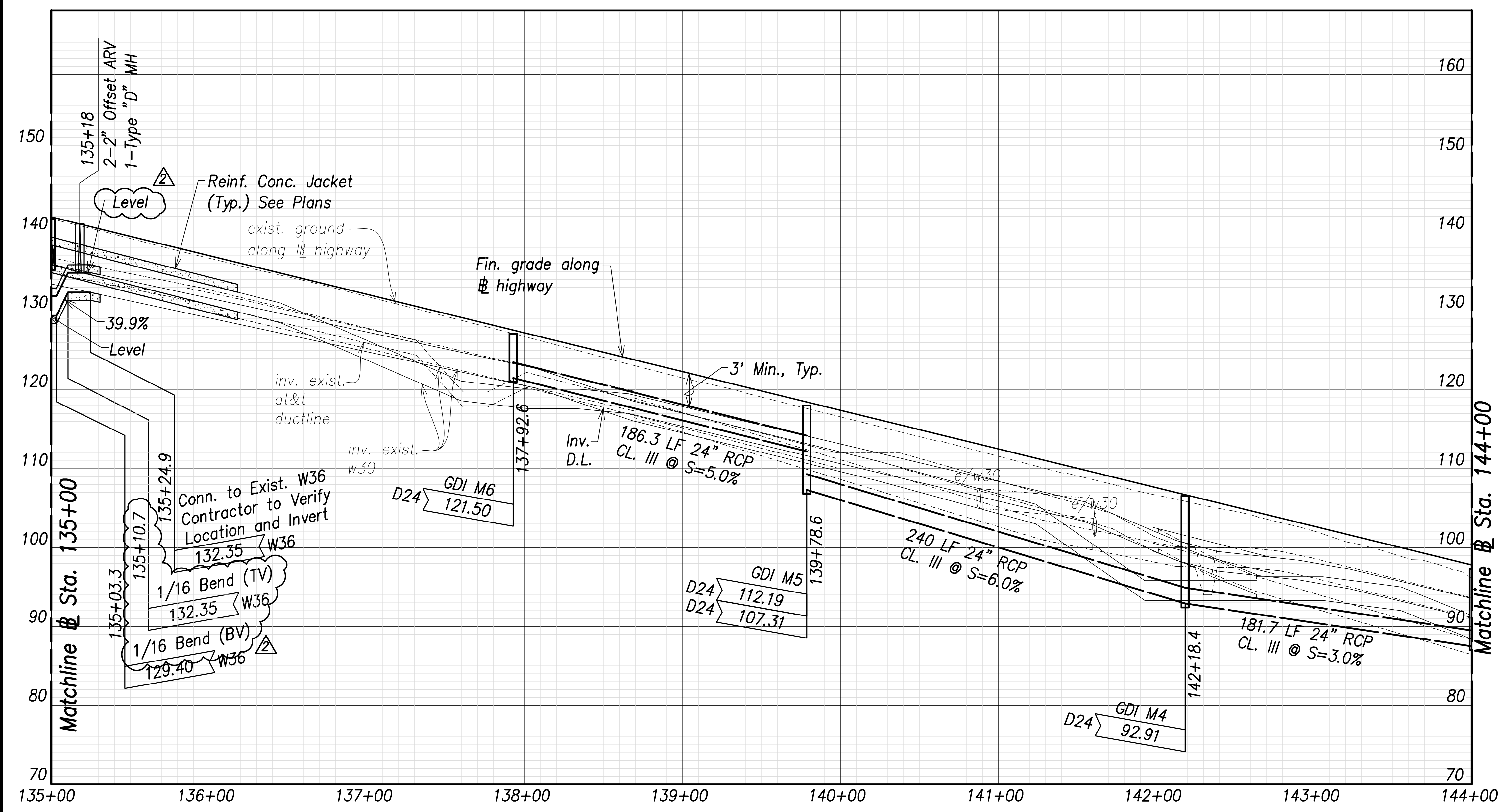
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Utility and Drain Profiles
 # Sta. 126+00 to # Sta. 135+00

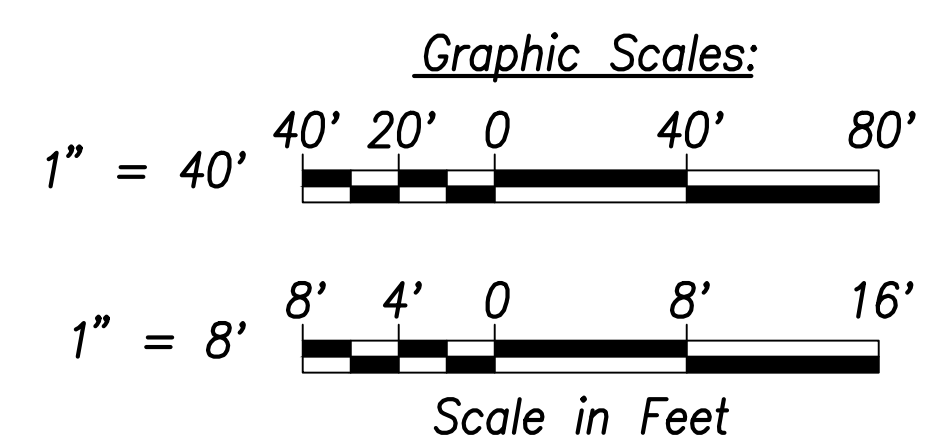
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 153 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



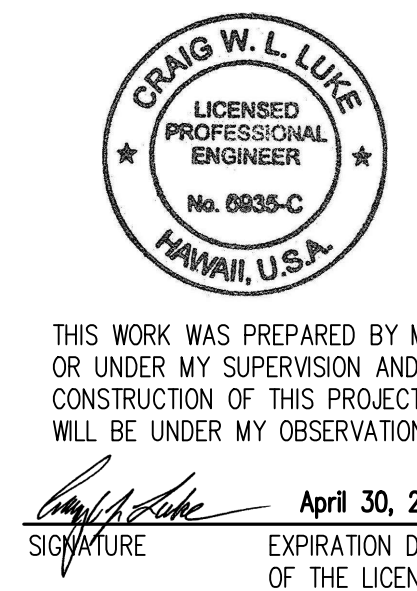
Utility and Drain Profiles - (Sta. 135+00 to Sta. 144+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED:

 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



| | |
|----------|--|
| 06/08/22 | Revised bend callouts, grid, and pipe layout, added note |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

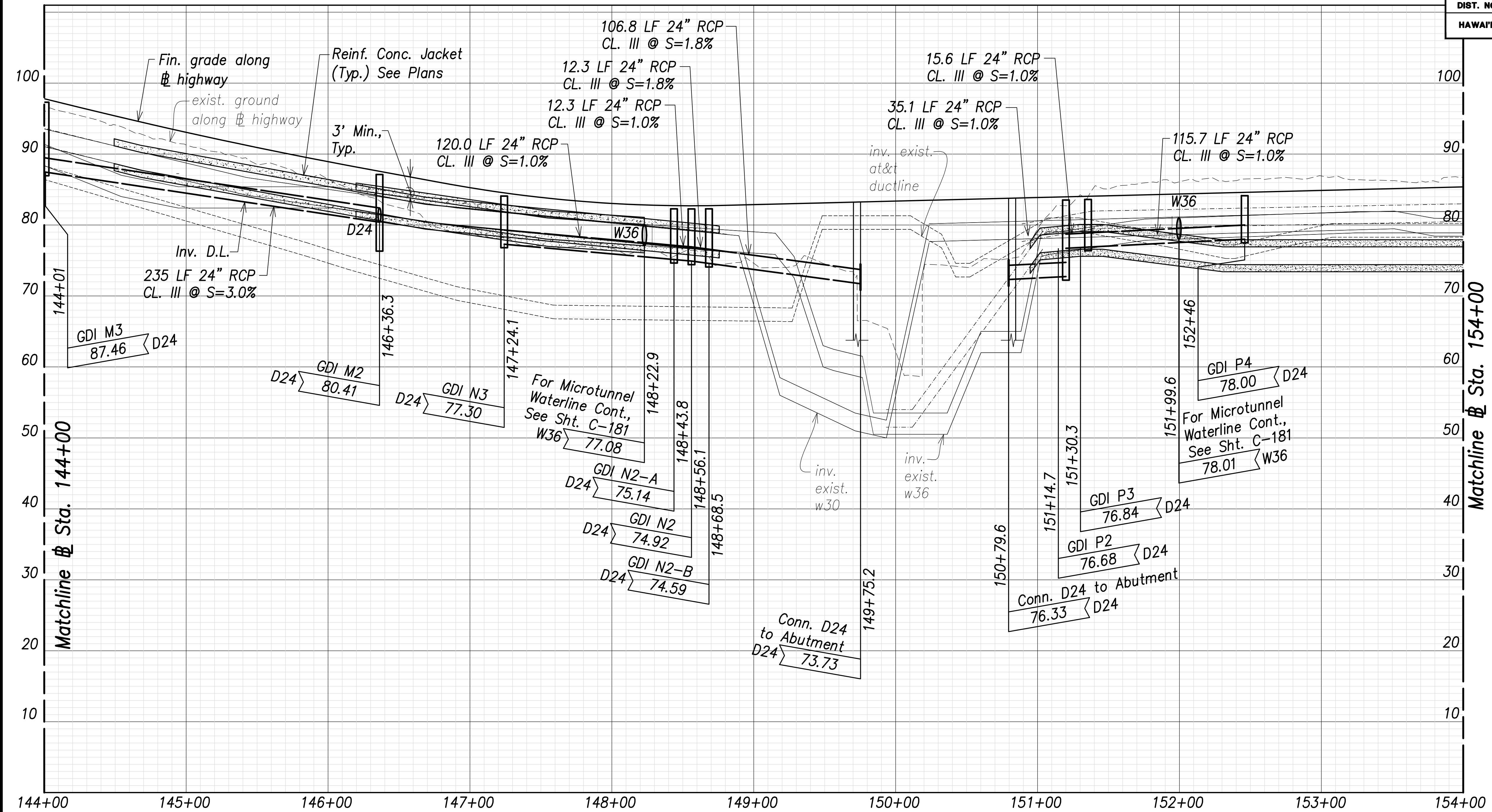
Utility and Drain Profiles
 Sta. 135+00 to Sta. 144+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

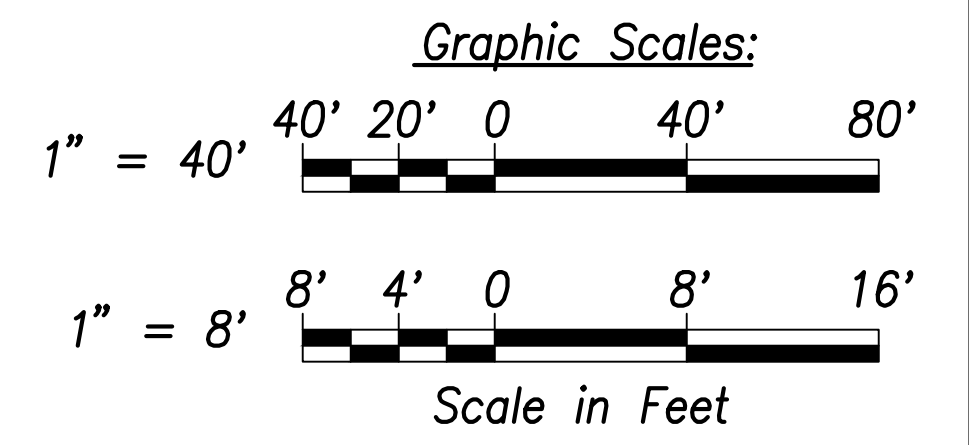
SHEET No. C-152 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 154 | 767 |



Utility and Drain Profiles (Sta. 144+00 to Sta. 153+00)

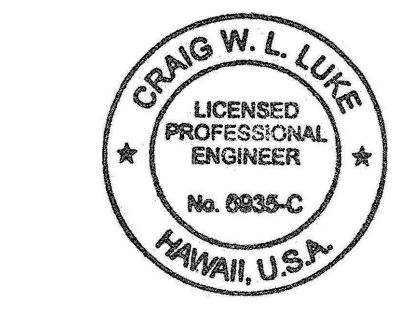
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



Note:
Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)



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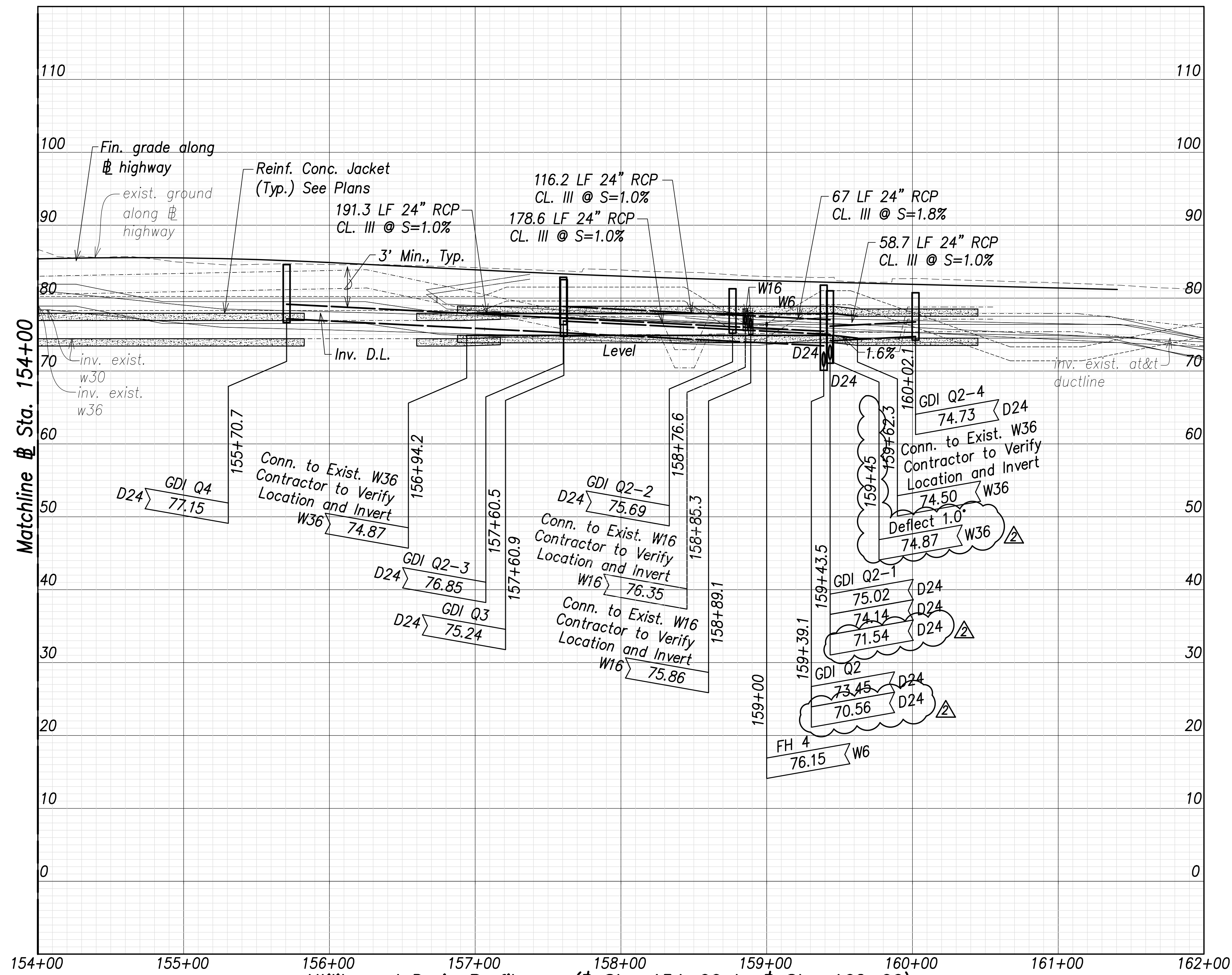
SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|---|------------------|
| 06/08/22 | Added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 144+00 to Sta. 153+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

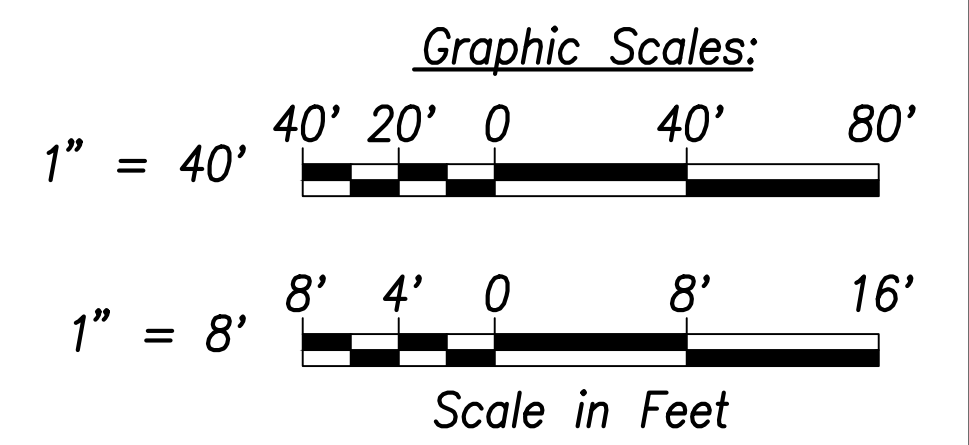
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Utility\Construction Dwg\C-153 Utility and Drain Profiles - Sta. 144+00 to 154+00 - PLAN.dwg saved May 25, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 155 | 767 |



Note:
 Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

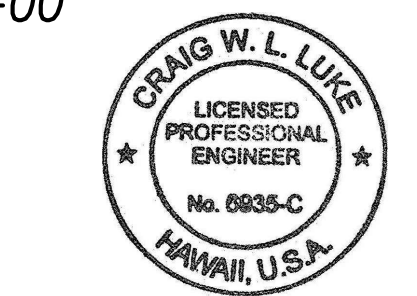


| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

Utility and Drain Profiles - (Sta. 154+00 to Sta. 162+00)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

APPROVED:

Manager and Chief Engineer, BWS _____ DATE _____
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

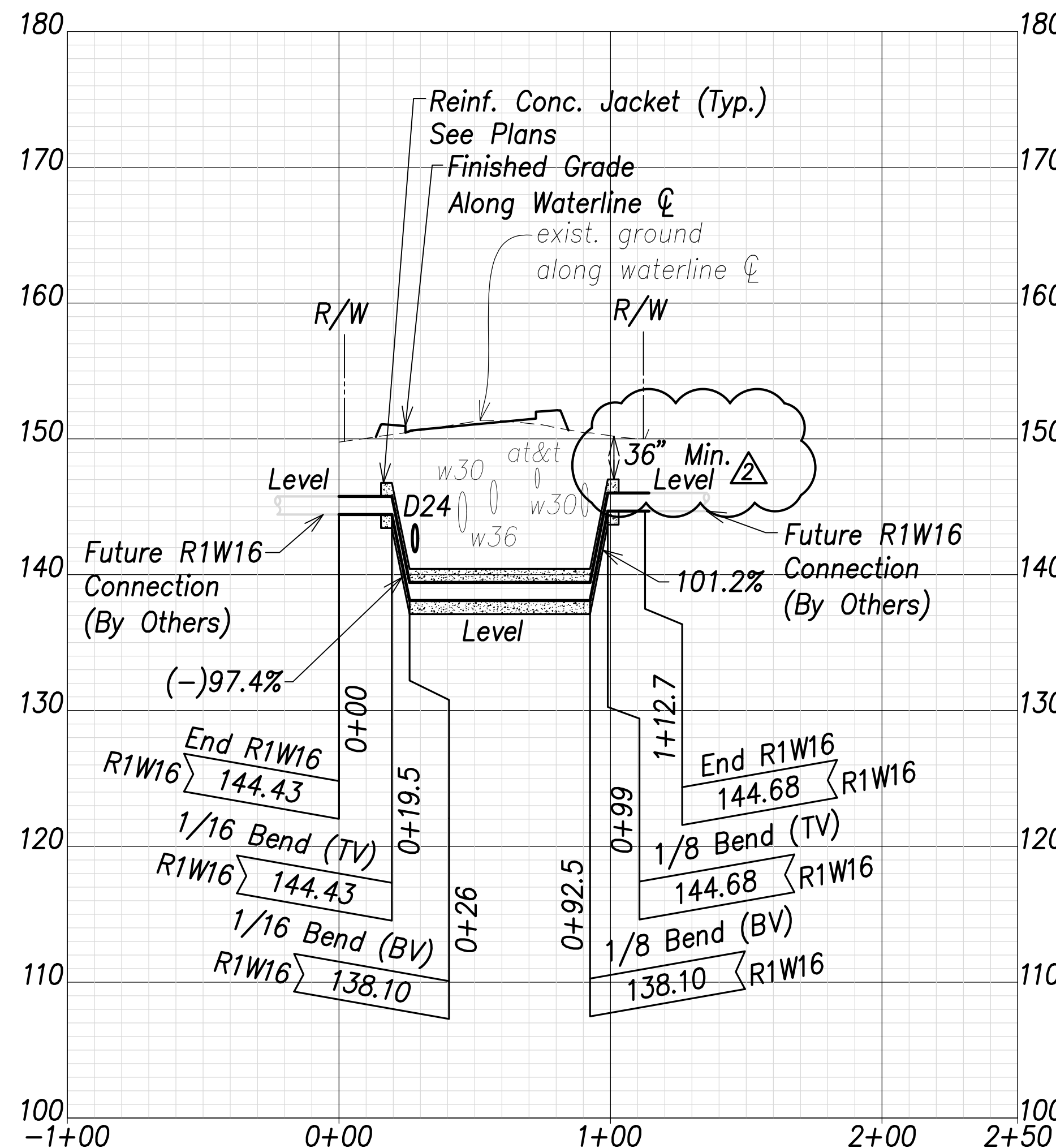


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Signature: _____
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

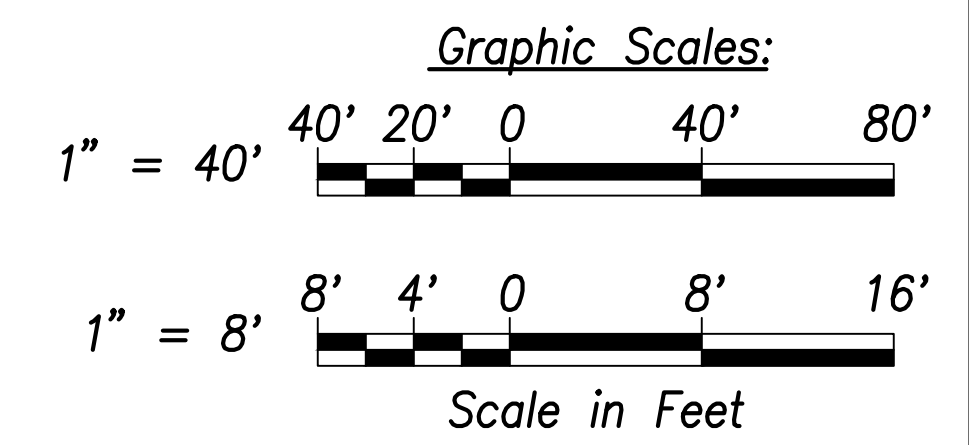
| | |
|---|--|
| 06/08/22 | Revised inverts and water line, added note |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Utility and Drain Profiles
Sta. 154+00 to Sta. 162+00
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 156 | 767 |



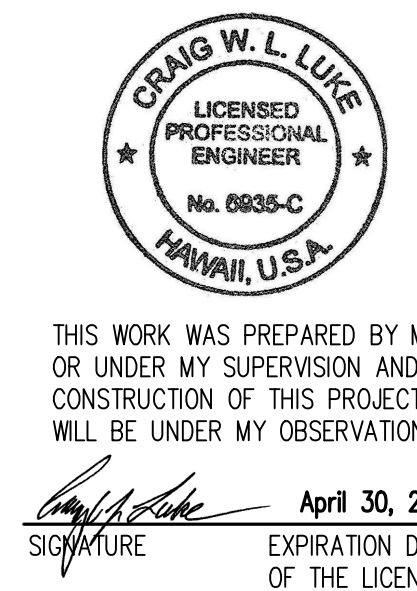
Waterline B Profile
(Sta. 46+71 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTIFIED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



APPROVED:

 Manager and Chief Engineer, BWS DATE
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

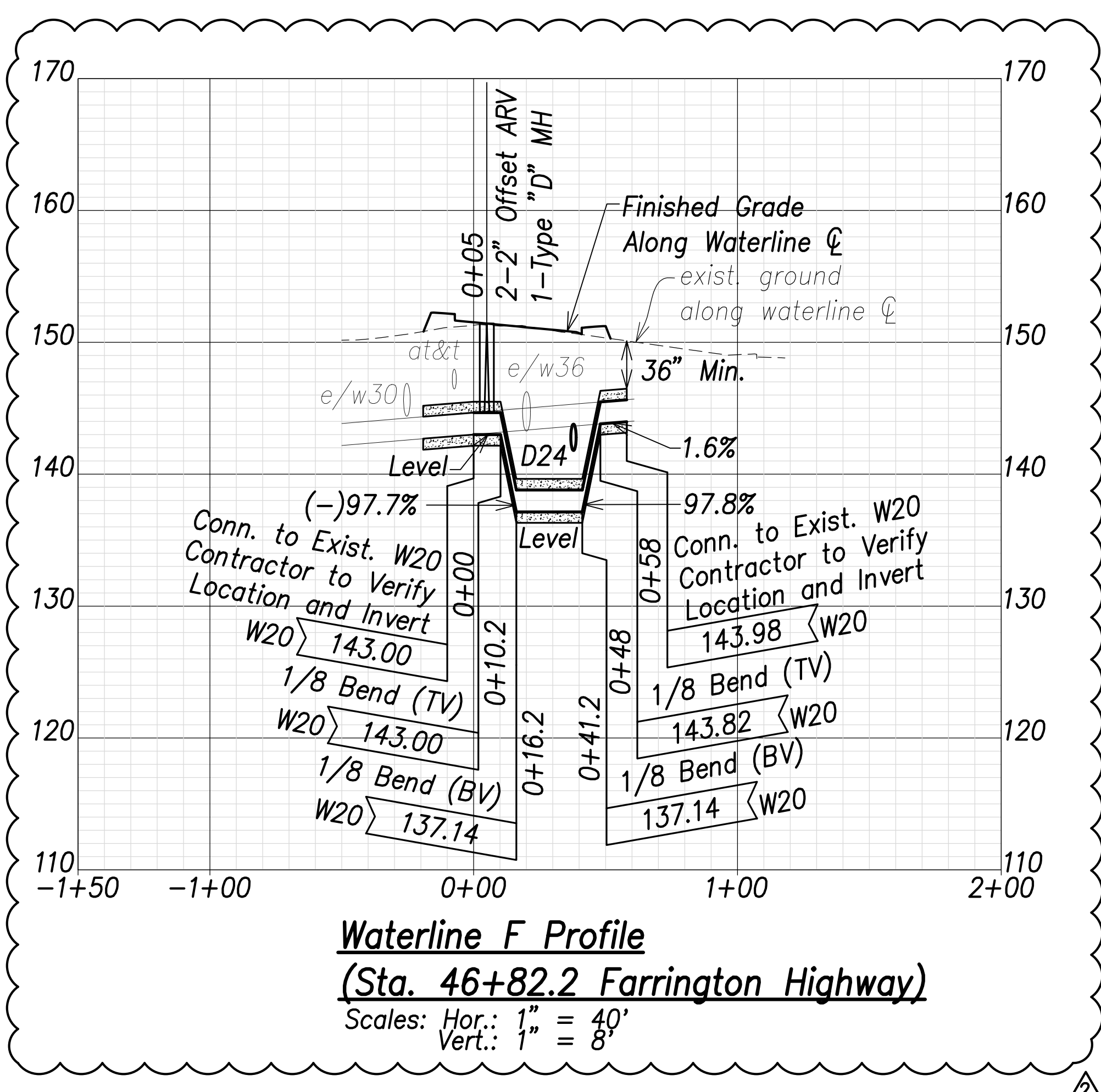


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|--|----------------------------|
| 06/08/22 | 2 Min. Cover Callout Added |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

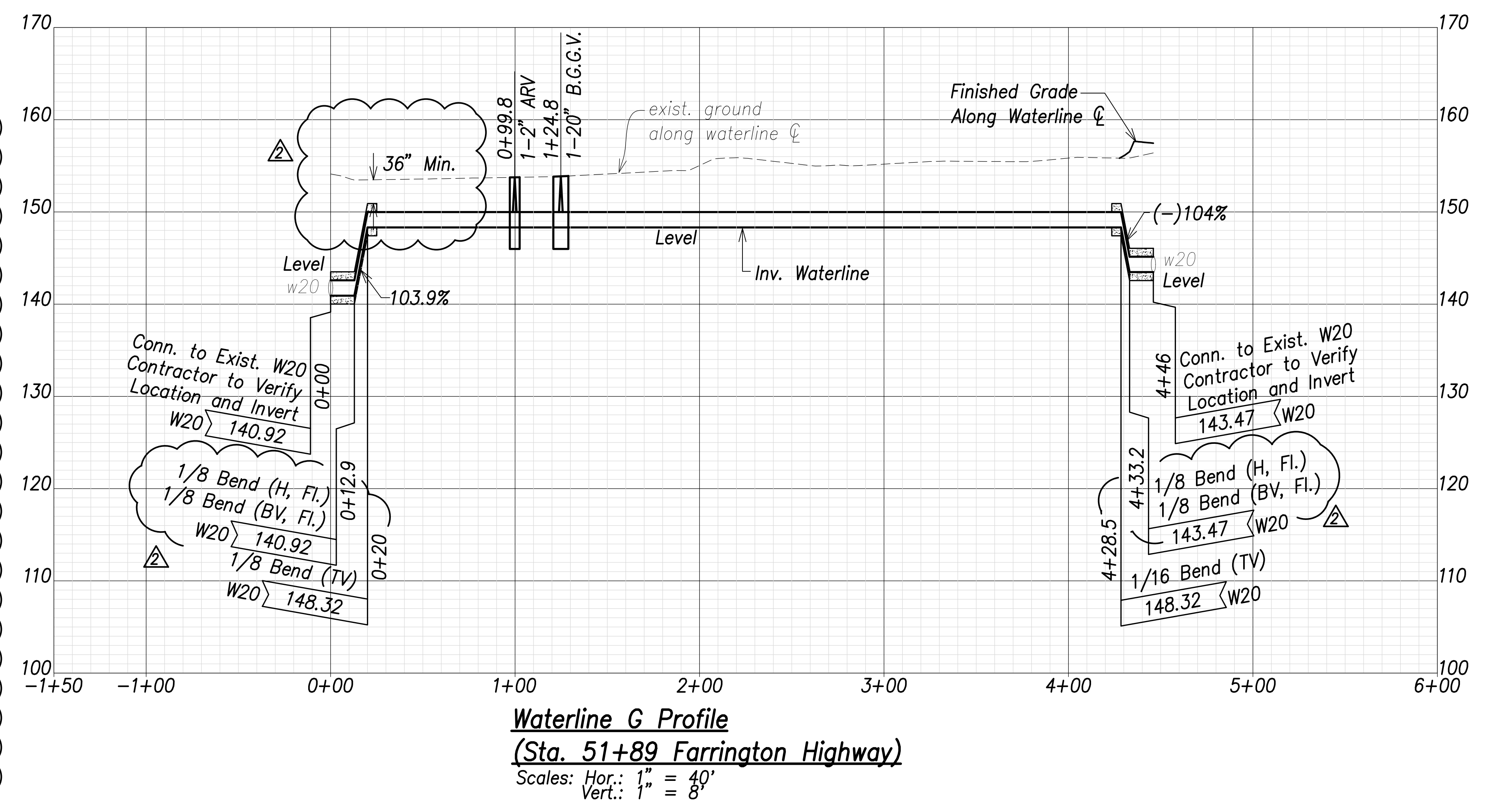
Waterlines Profile - 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 157 | 767 |



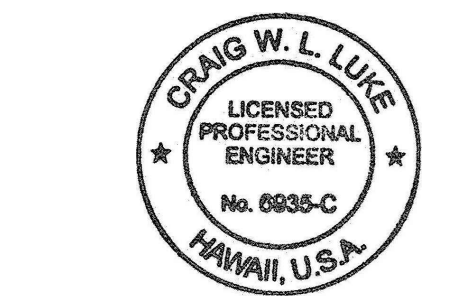
Waterline F Profile
 (Sta. 46+82.2 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



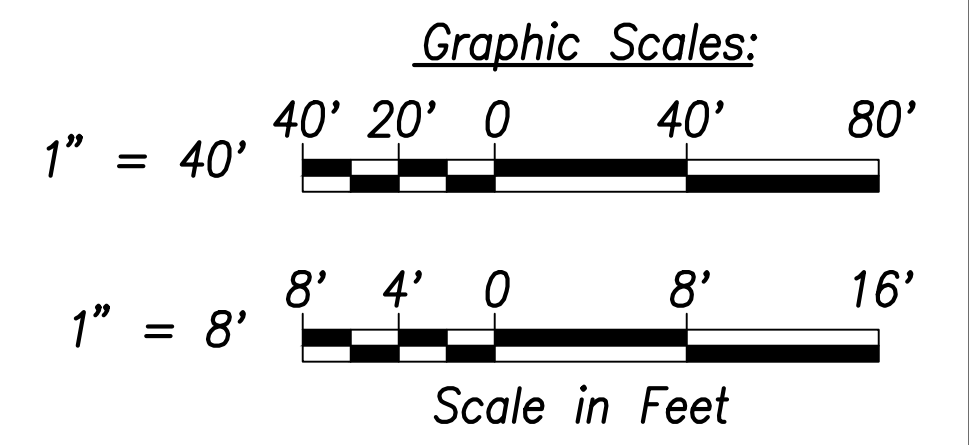
Waterline G Profile
 (Sta. 51+89 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022



| | |
|----------|------------------|
| 06/08/22 | Revised profiles |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Waterlines Profile - 2

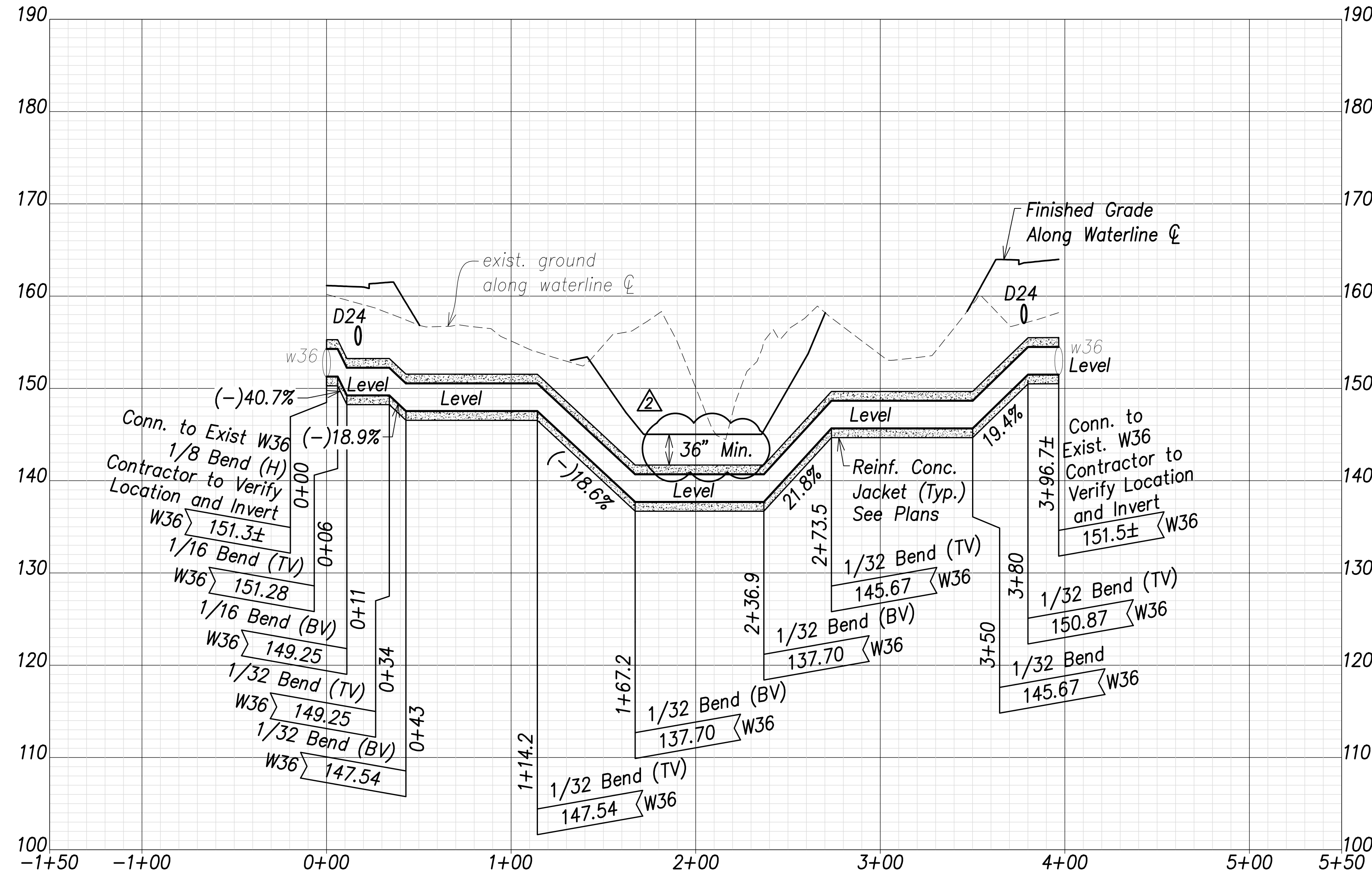
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

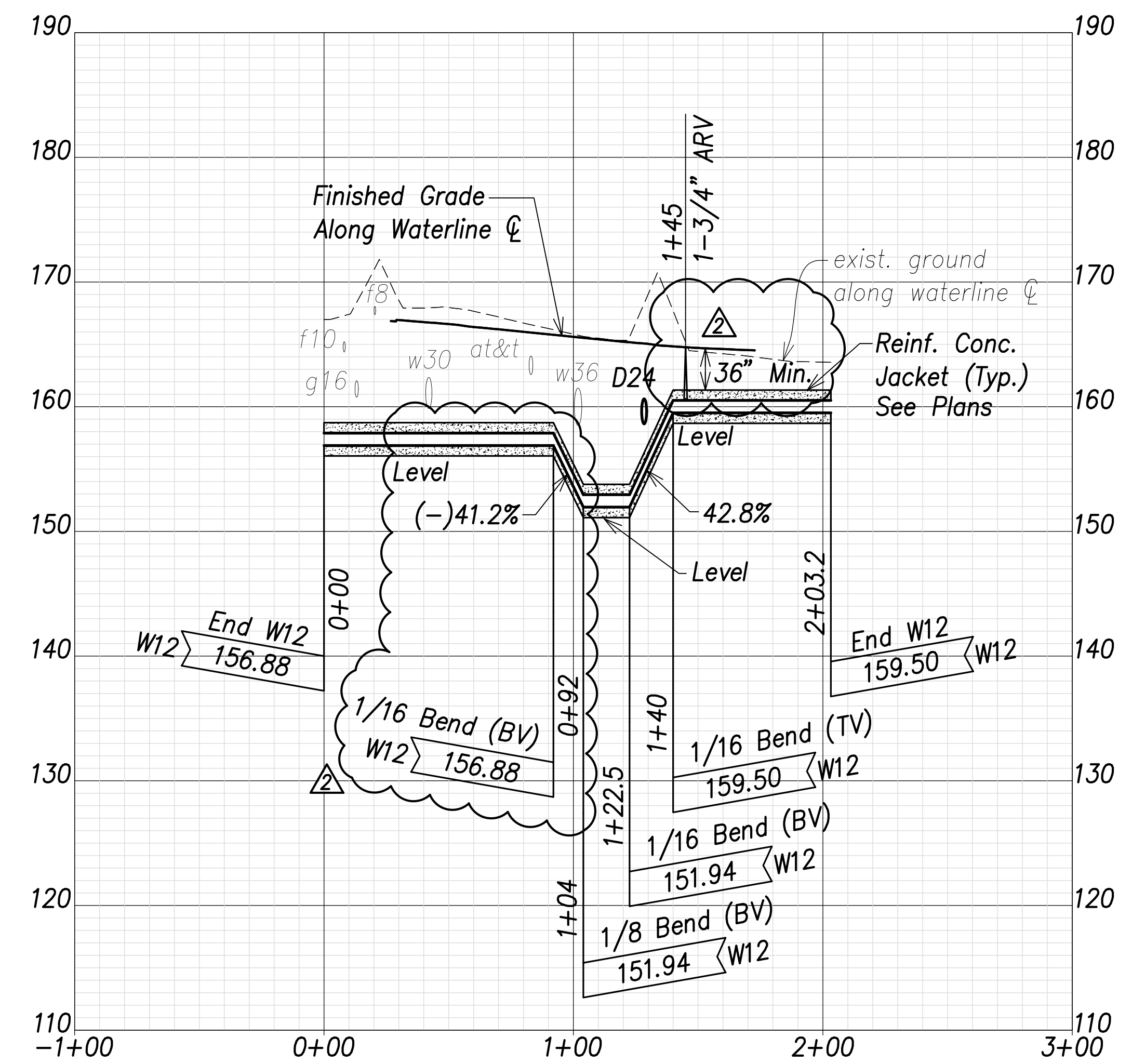
SHEET NO. C-156 OF 767 SHEETS

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

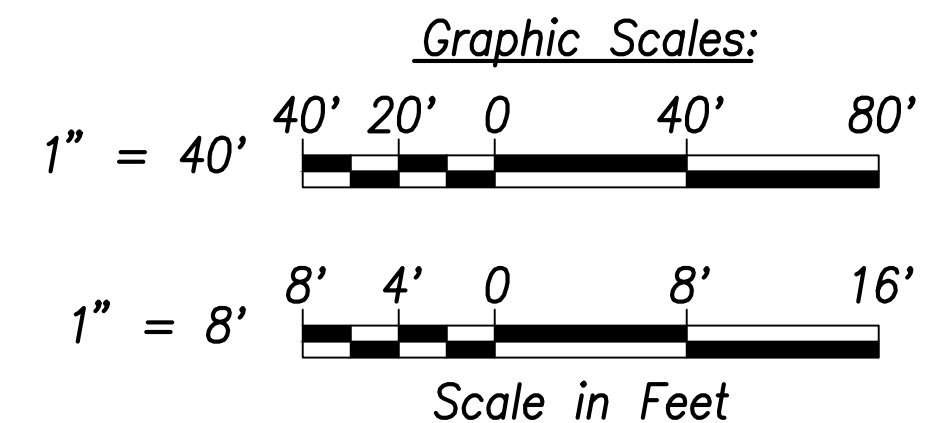
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 158 | 767 |



Waterline H Profile
 (Sta. 61+78.5 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

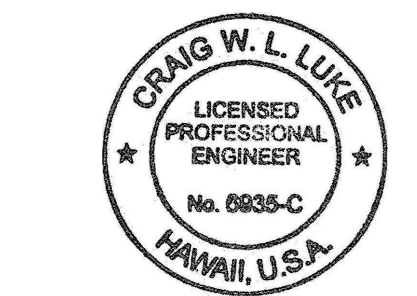


Waterline J Profile
 (Sta. 72+91 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



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

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

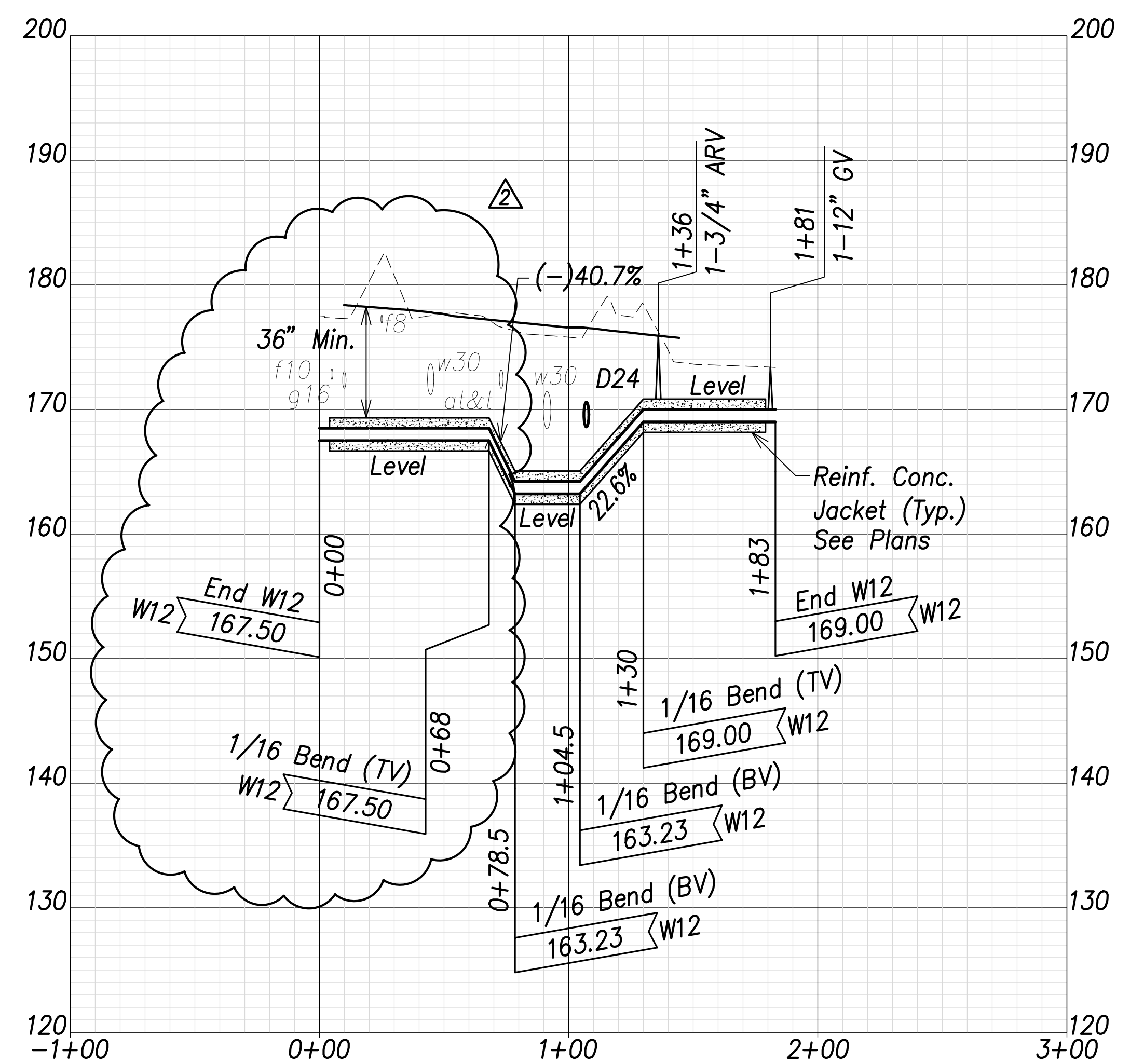


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 CONSTRUCTION OF THIS PROJECT
 WILL BE UNDER MY OBSERVATION.

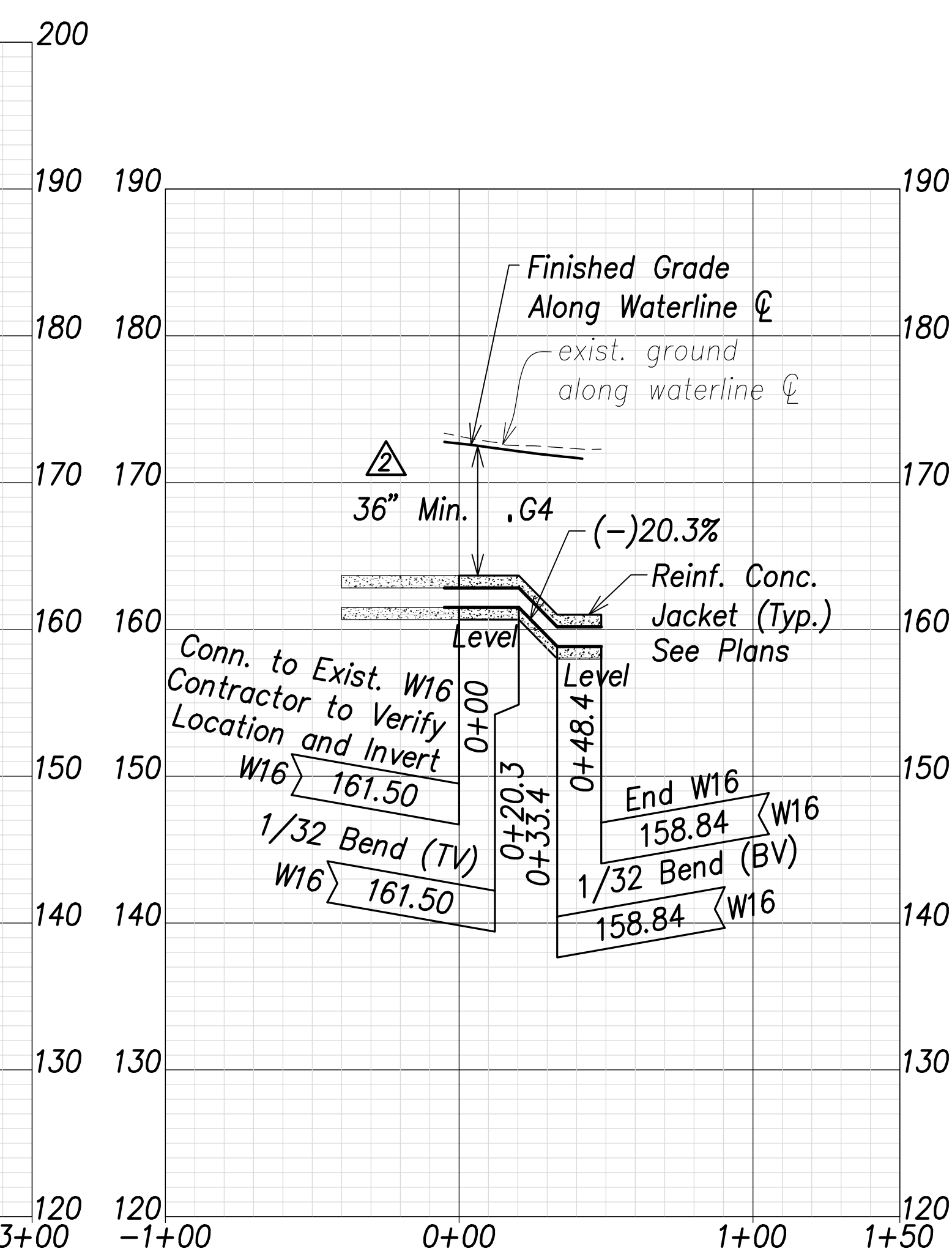
 SIGNATURE EXPIRATION DATE
 OF THE LICENSE April 30, 2022

| | |
|--|---|
| 06/08/22 | Min. Cover Callout Added, revised profile |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Waterlines Profile - 3 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-157 OF 767 SHEETS | |

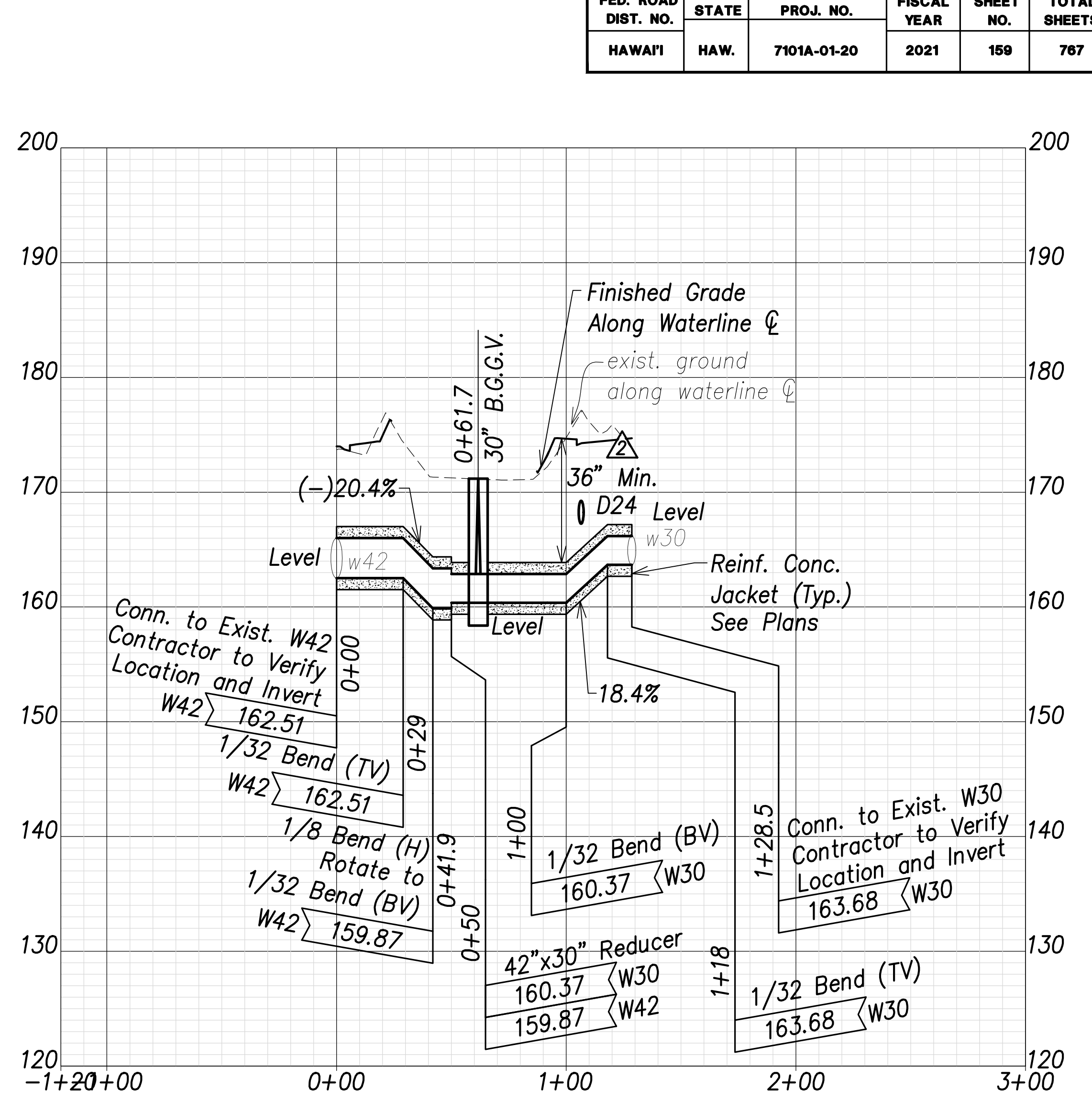
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 159 | 767 |



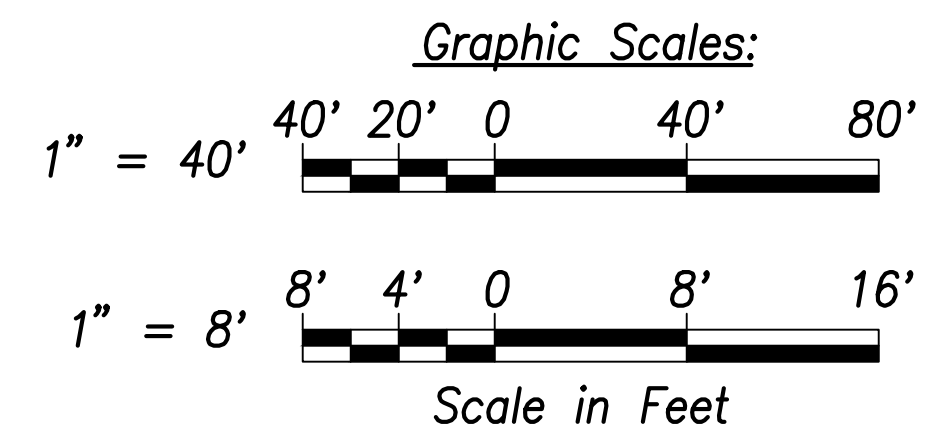
Waterline K Profile (Sta. 98+71 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Waterline L Profile (Sta. 112+29 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



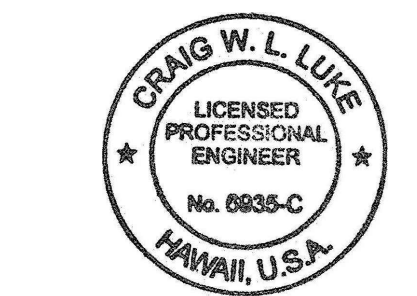
Waterline M Profile (Sta. 113+32.7 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



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| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NO. _____ | |

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

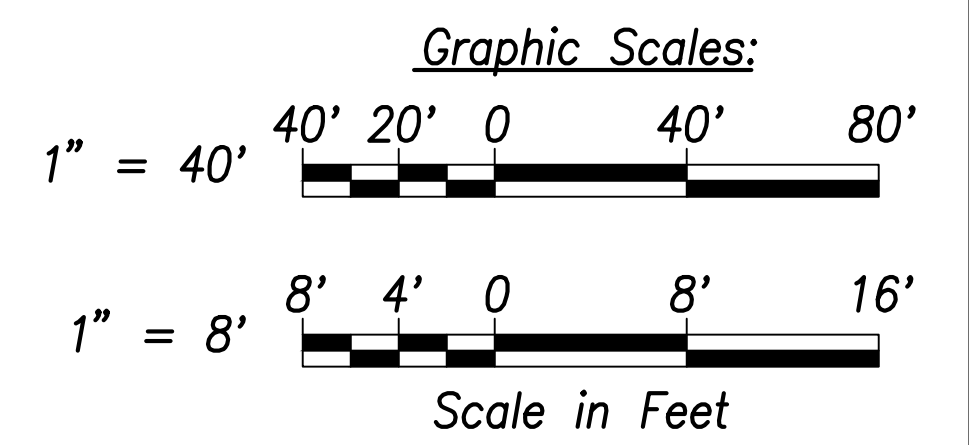
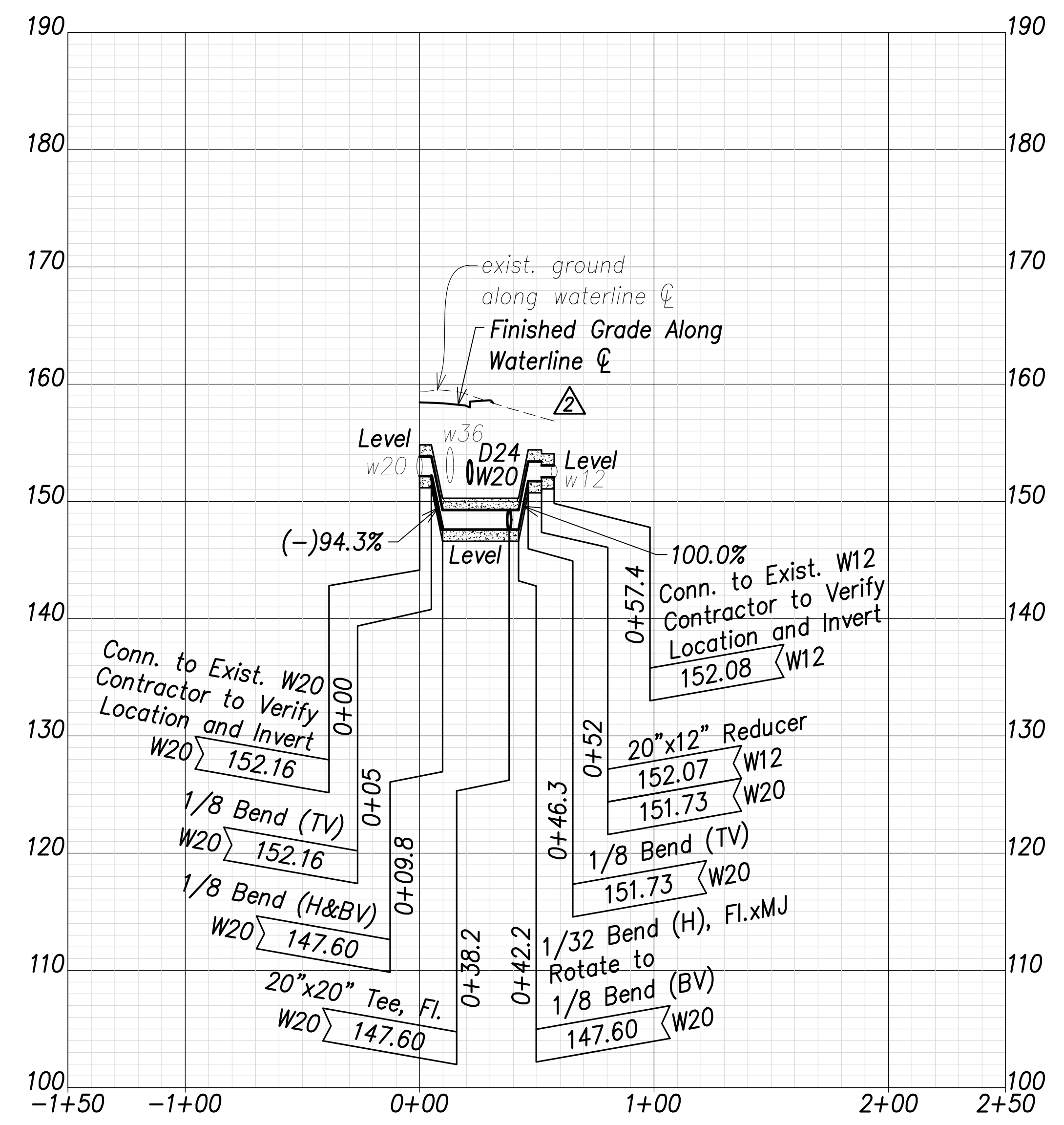
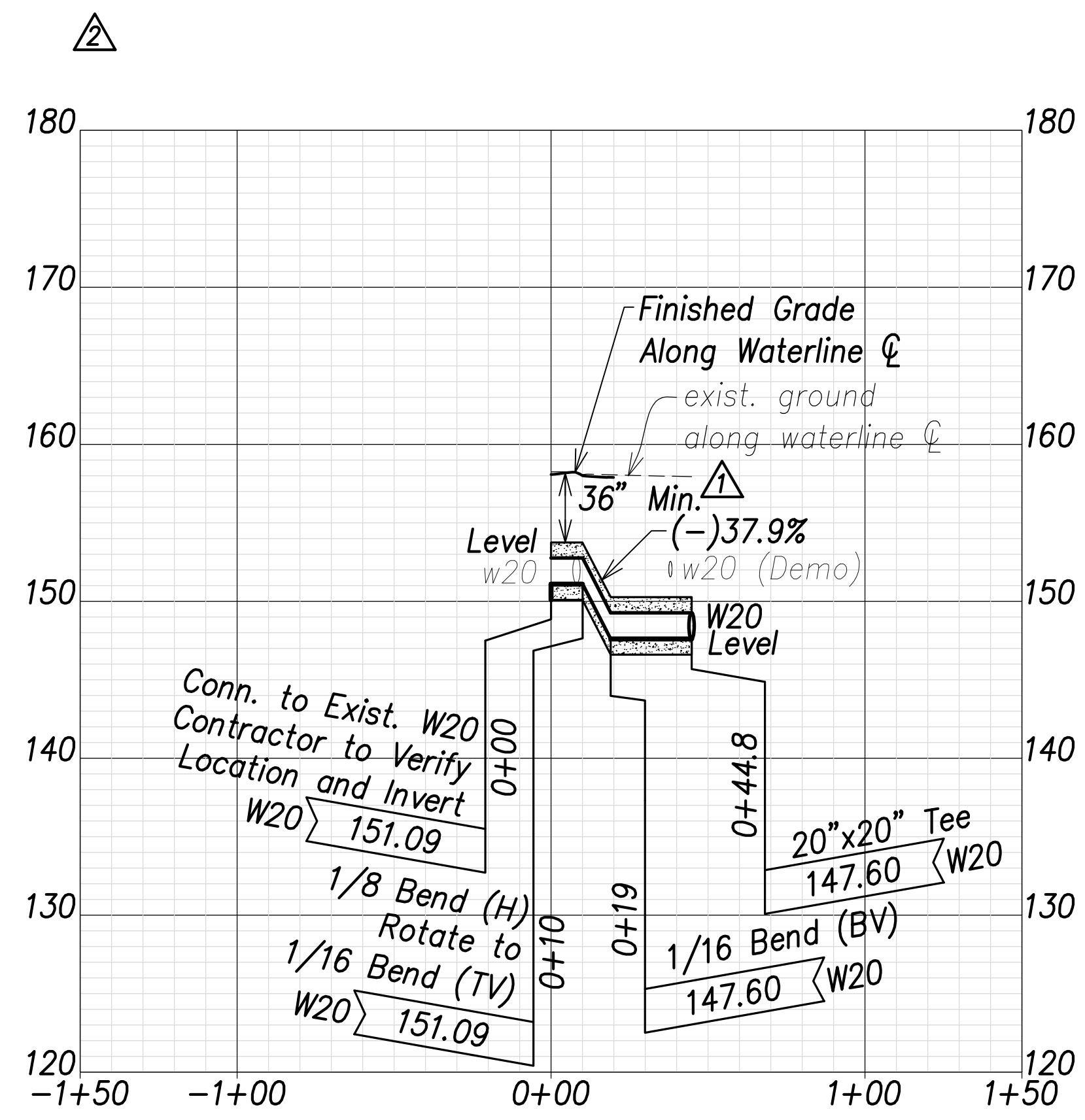
Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe



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 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|---|------------------|
| 06/08/22 | Revised profile |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Waterlines Profile - 4 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-158 OF 767 SHEETS | |

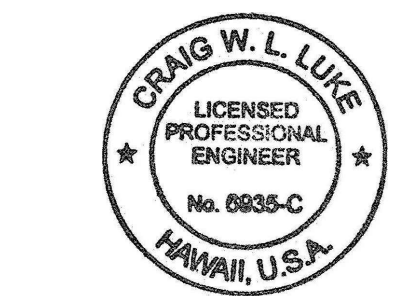
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 160 | 767 |



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

Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe

APPROVED:
 Manager and Chief Engineer, BWS DATE
 (for work affecting BWS facilities in City/State R/W & BWS easements only)



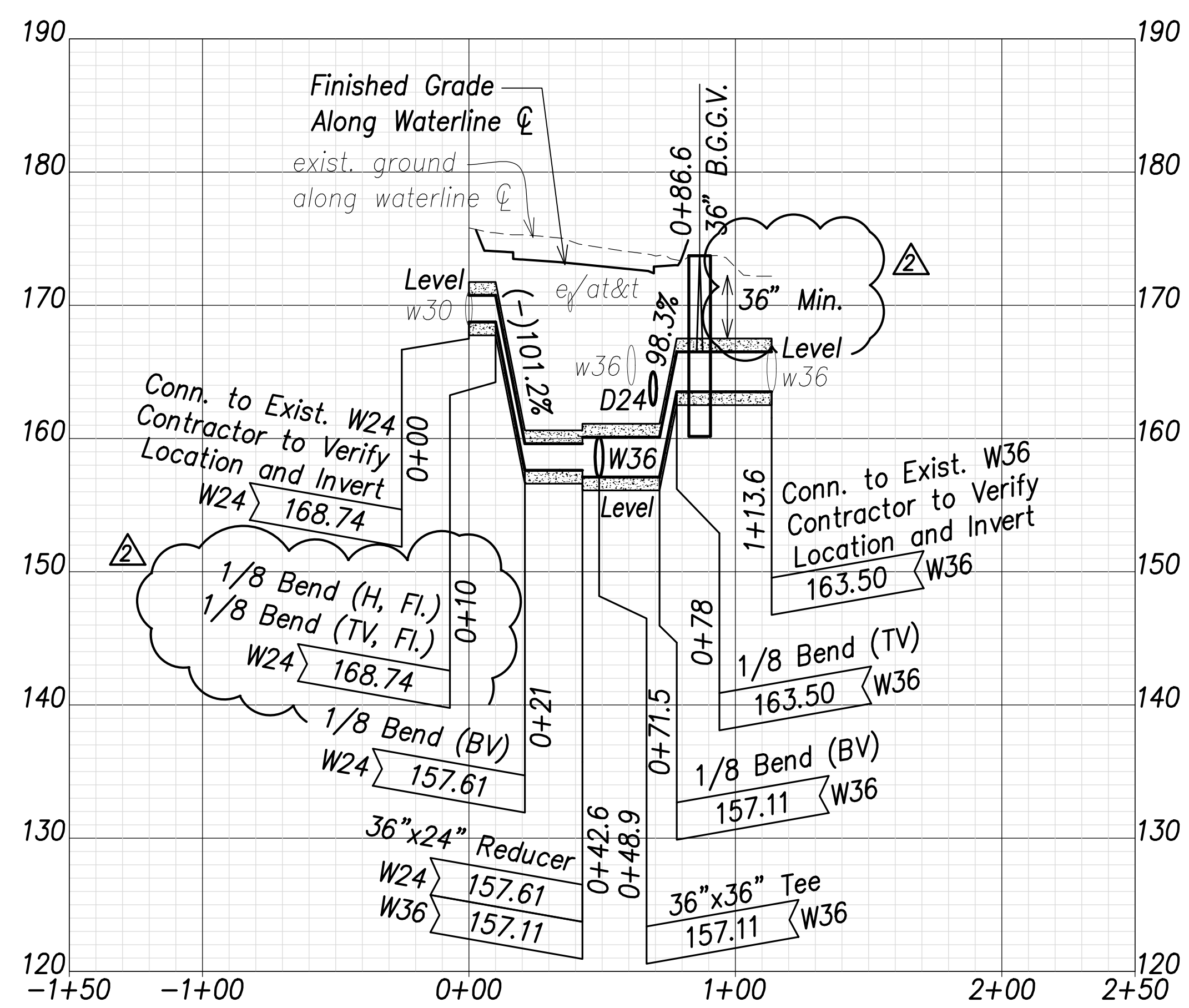
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|--|---|
| 06/08/22 | Min. Cover Callout Added, Waterline N Profile Added |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Waterlines Profile - 5

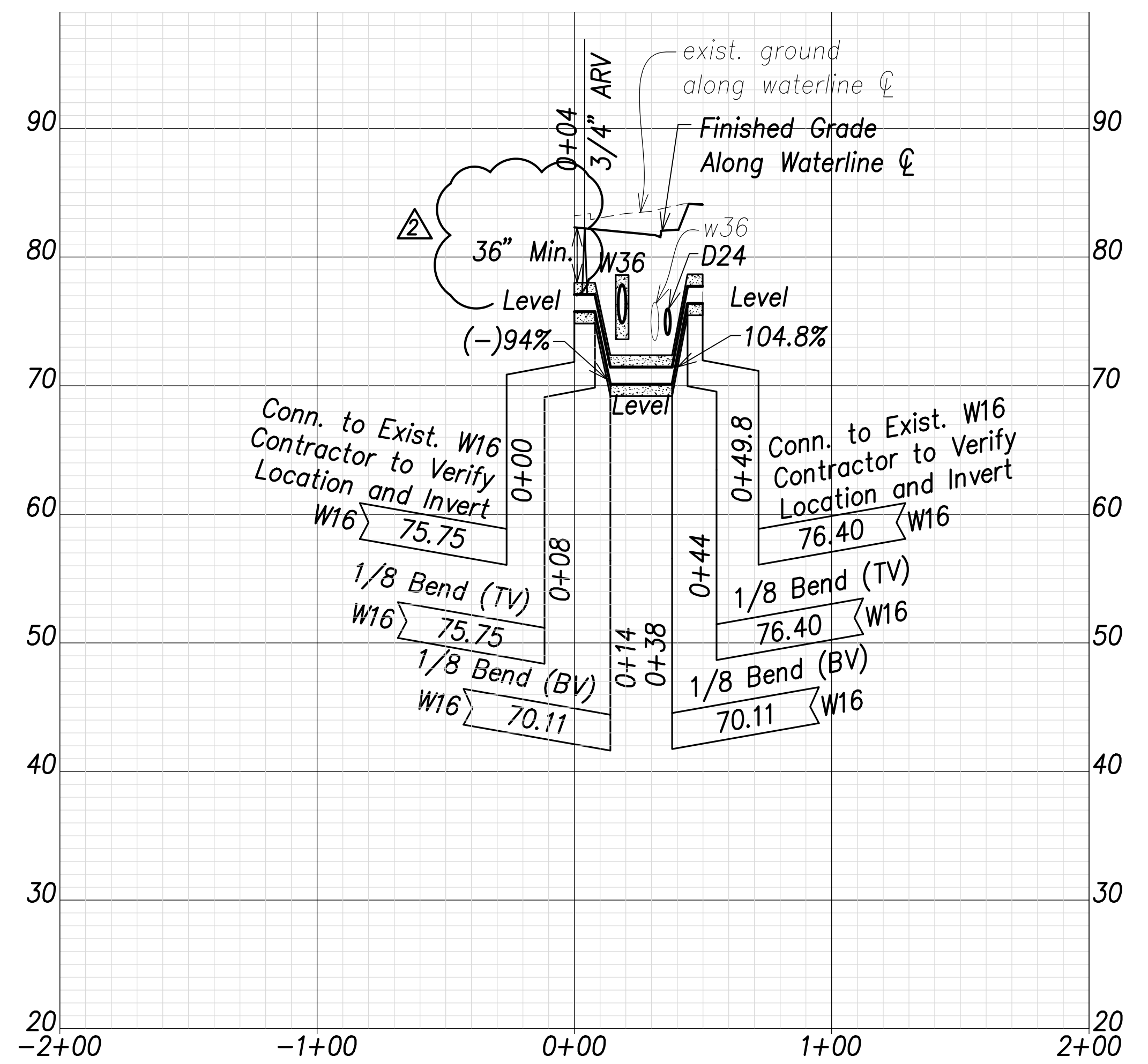
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 161 | 767 |



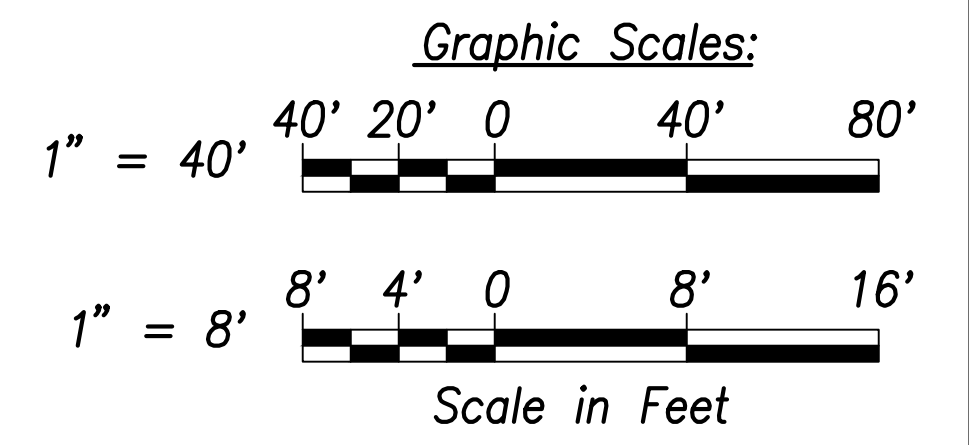
Waterline Q Profile (Sta. 110+03 Farrington Highway)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



Waterline R Profile (Sta. 158+90 Farrington Highway)

Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

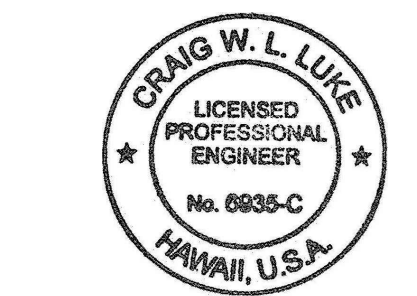


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|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

Note:
The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities in City/State R/W & BWS easements only)



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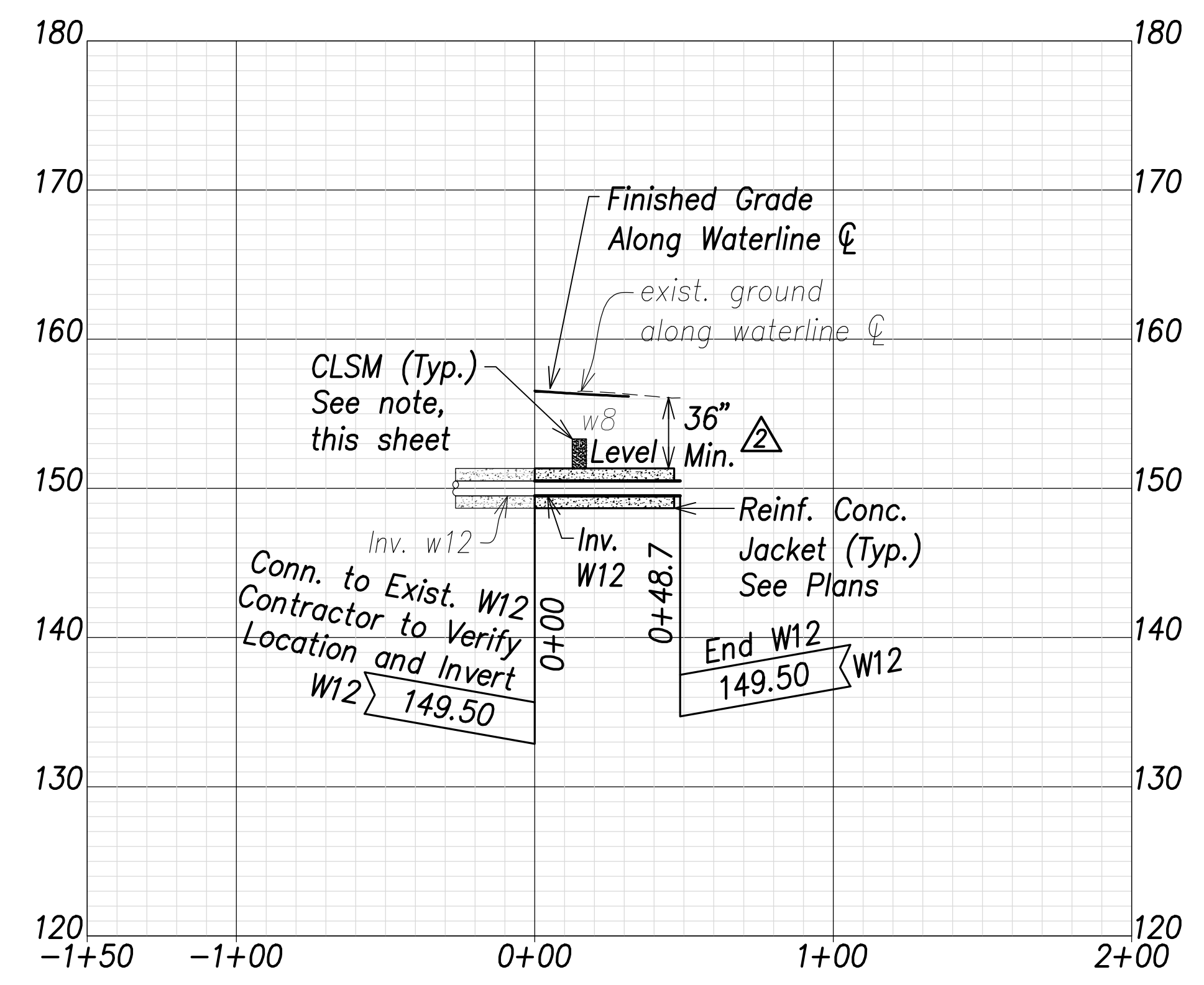
SIGNATURE
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|------------------|
| 06/08/22 | Revised Profiles |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Waterlines Profile - 6

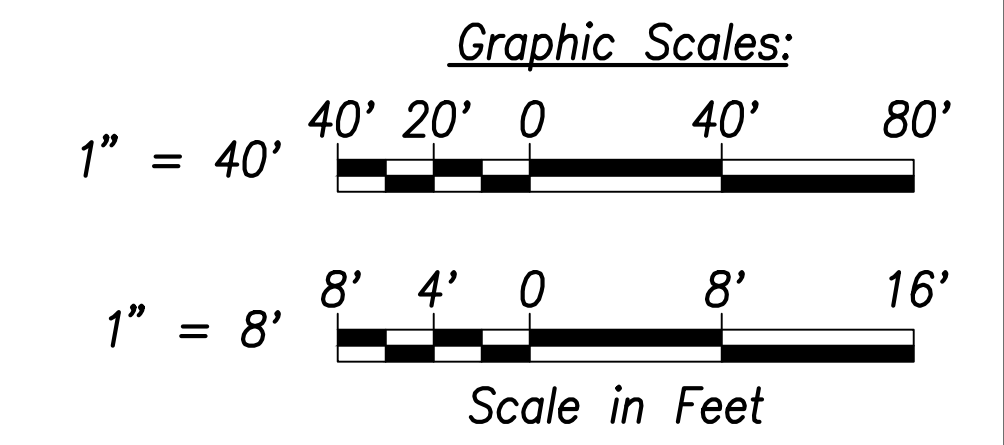
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-160 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 162 | 767 |



Waterline S Profile (Sta. 129+63.8 Farrington Highway)

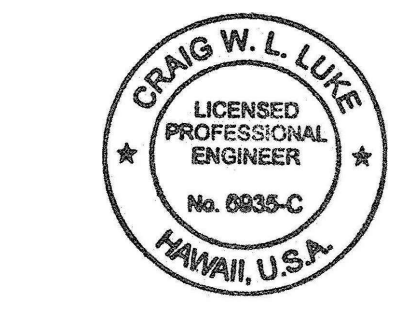
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



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

Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ DATE: April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|----------------------------|
| 06/08/22 | 2 Min. Cover Callout Added |
| DATE | REVISION |

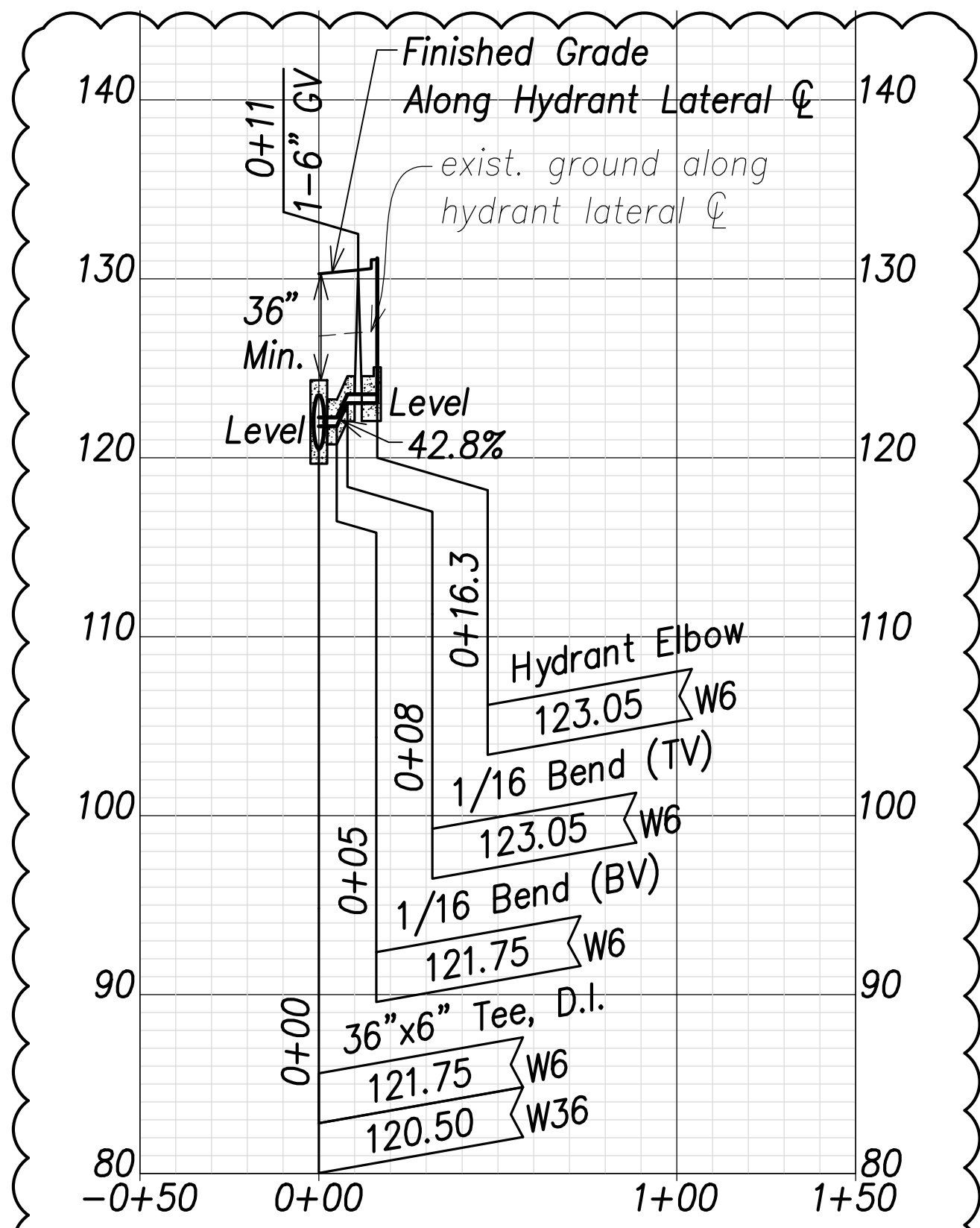
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Waterlines Profile - 7

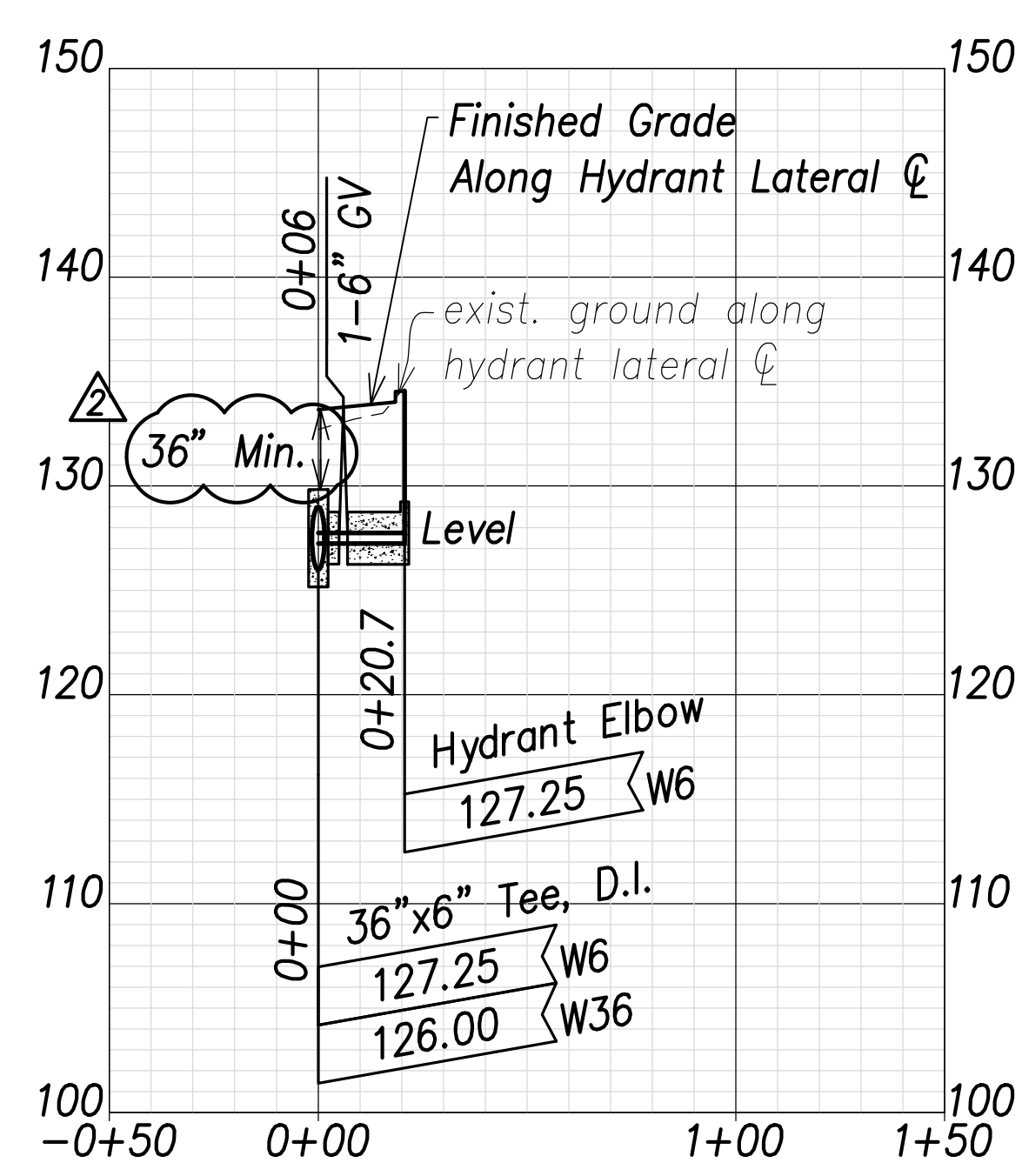
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

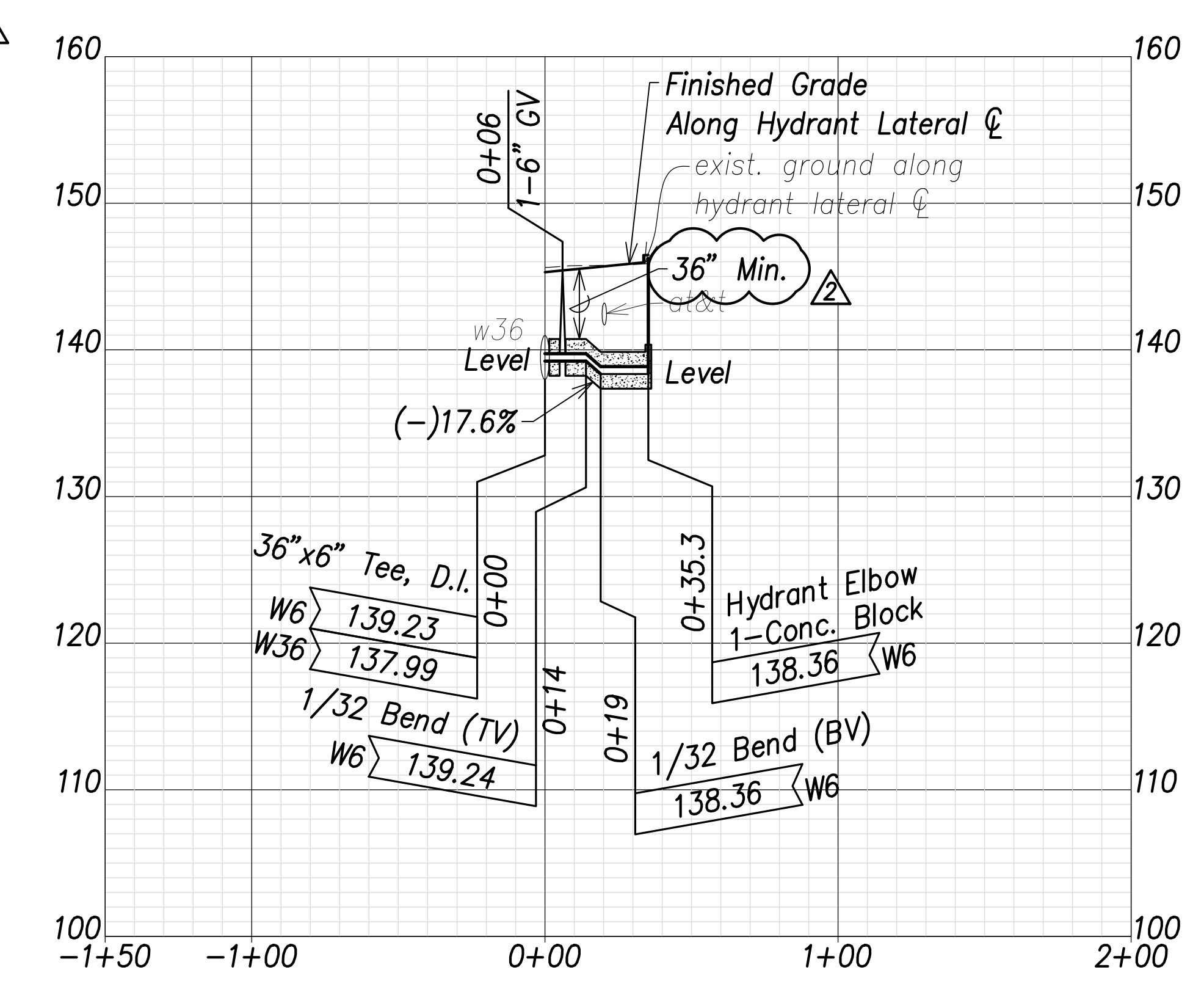
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 163 | 767 |



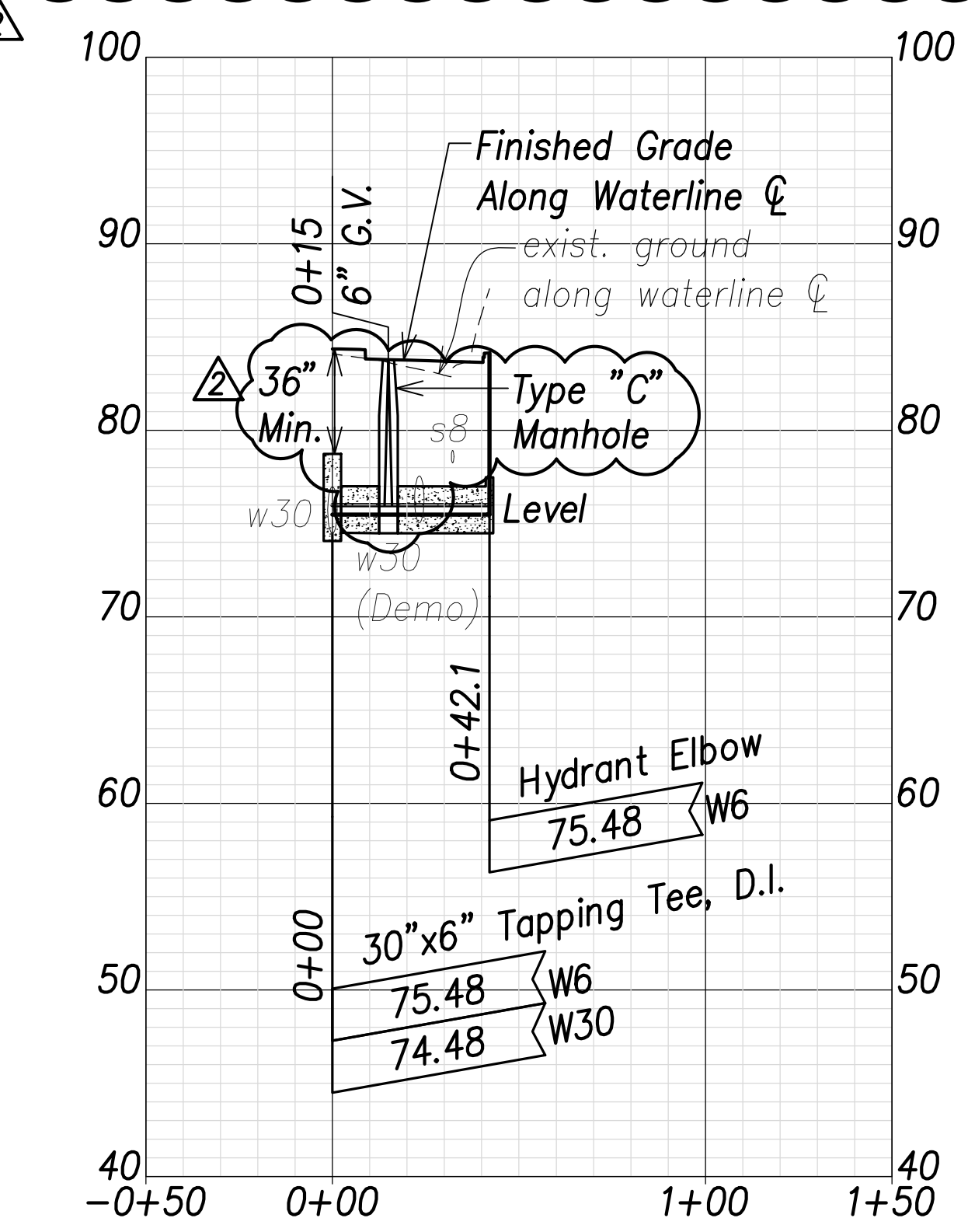
Fire Hydrant - 1
(Sta. 11+00 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



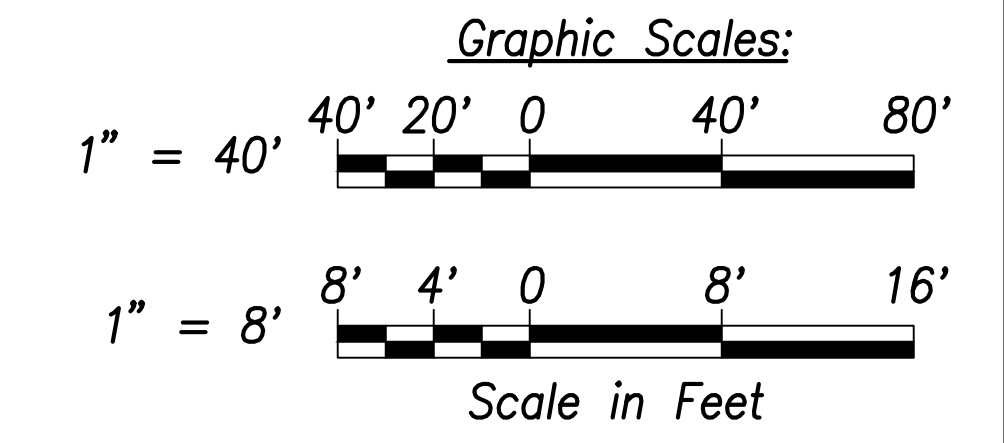
Fire Hydrant - 2
(Sta. 23+58.6 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Fire Hydrant - 3
(Sta. 43+00 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Fire Hydrant - 4
(Sta. 159+00 Farrington Highway)
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

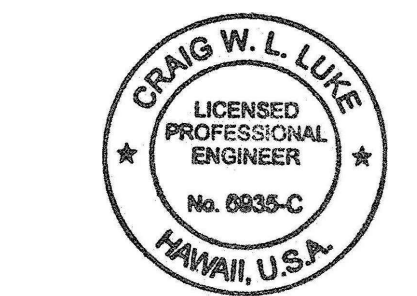


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|-------------------|-------|
| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | ..... |
| No. | ..... |

APPROVED:

Manager and Chief Engineer, BWS DATE

(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Craig W. Luke
 SIGNATURE EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|--|
| 06/08/22 | Min. Cover Callout Added, Revised FH1 Profile, Added MH to FH4 |
| DATE | REVISION |

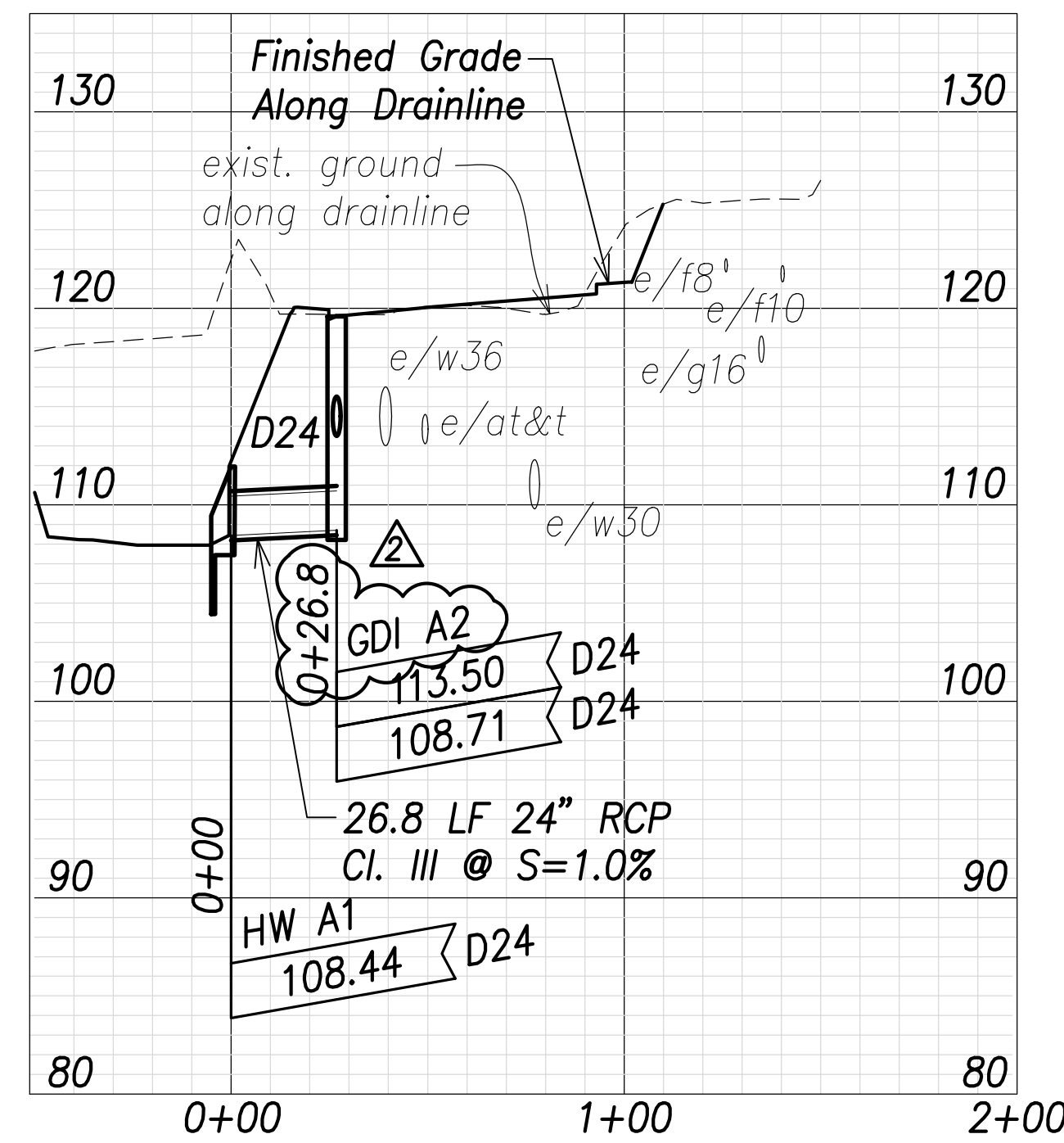
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Fire Hydrant Profiles

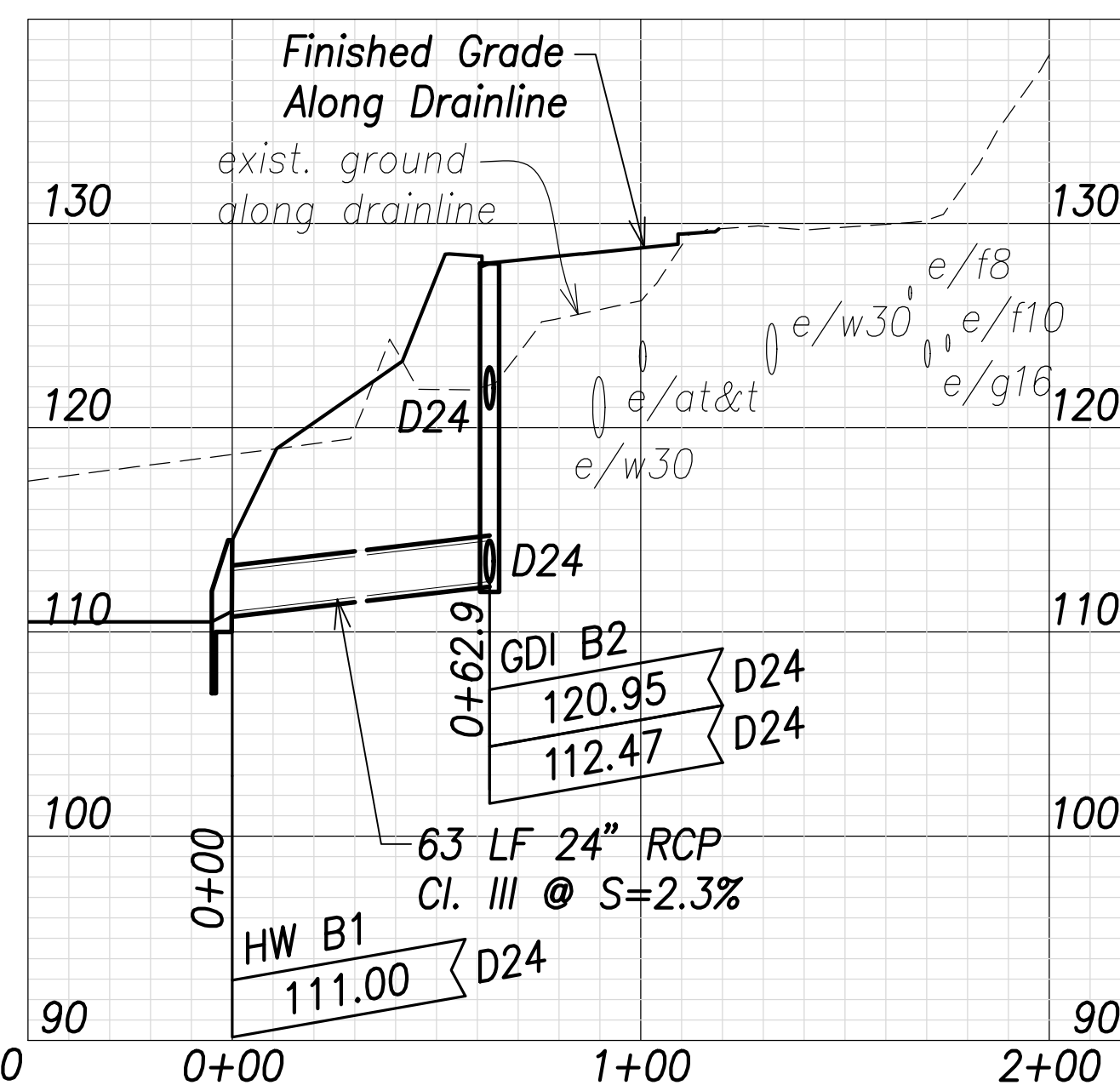
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

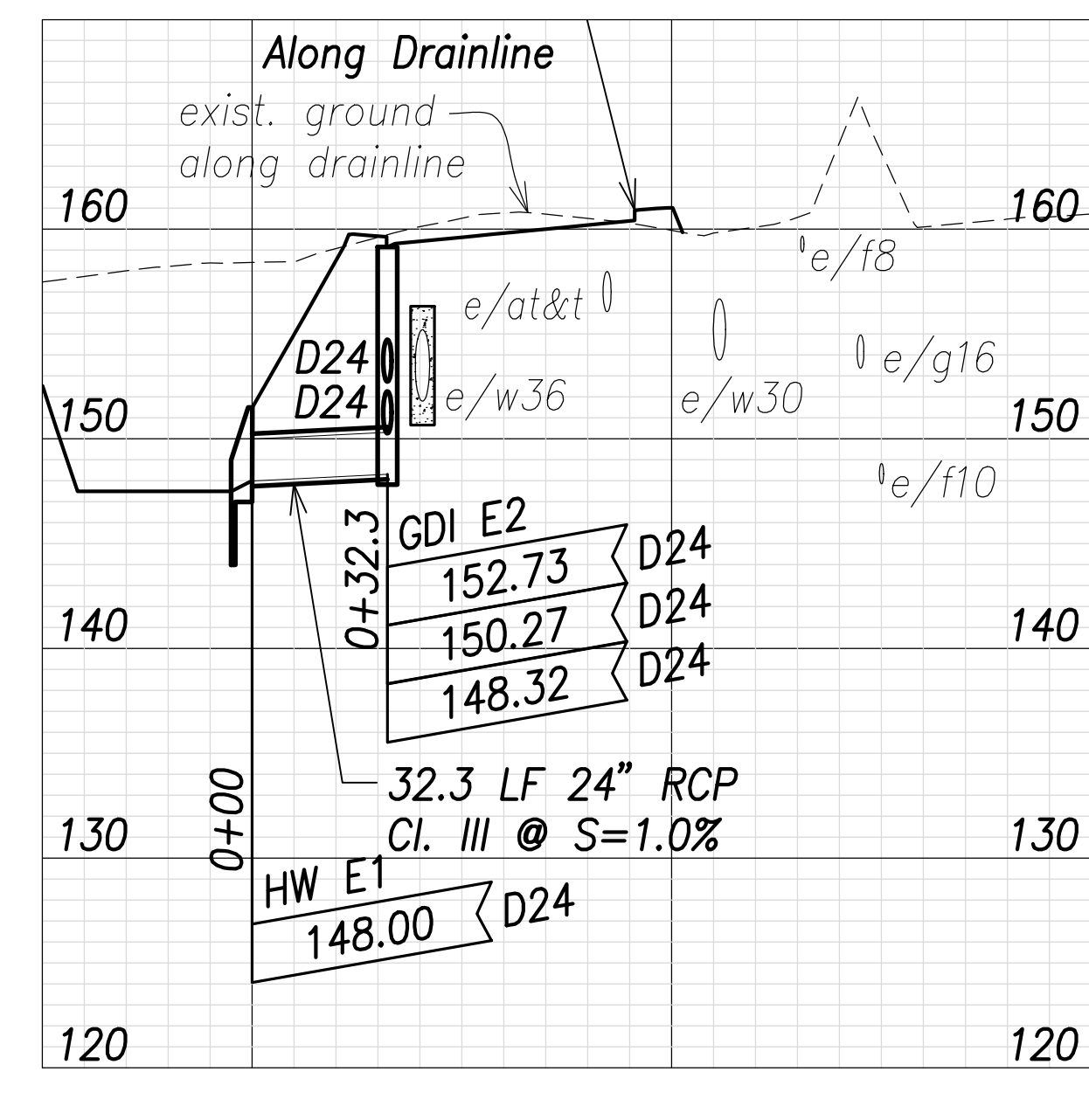
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 164 | 767 |



Drain Profile at 2+72.5
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



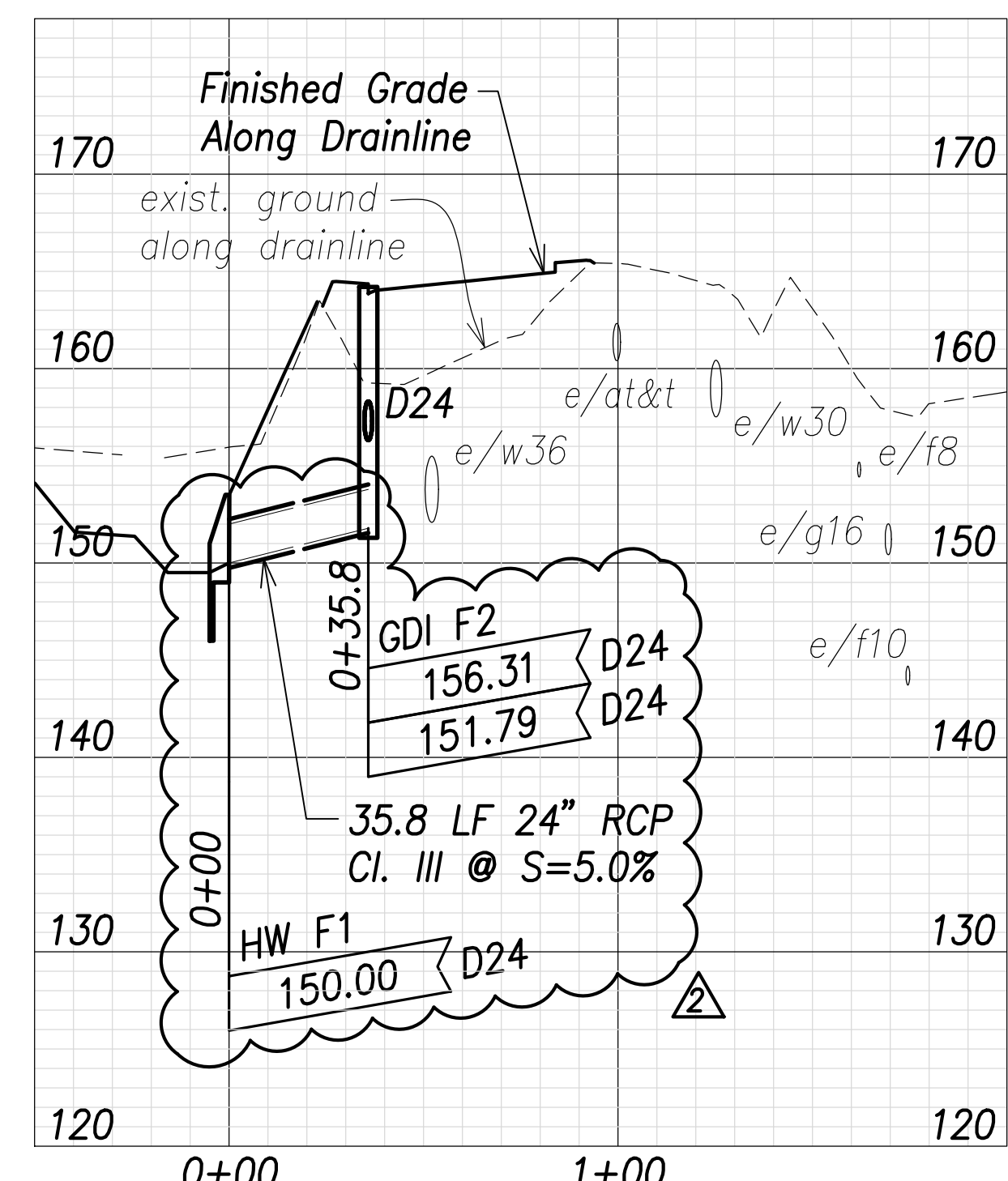
Drain Profile at 14+98
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



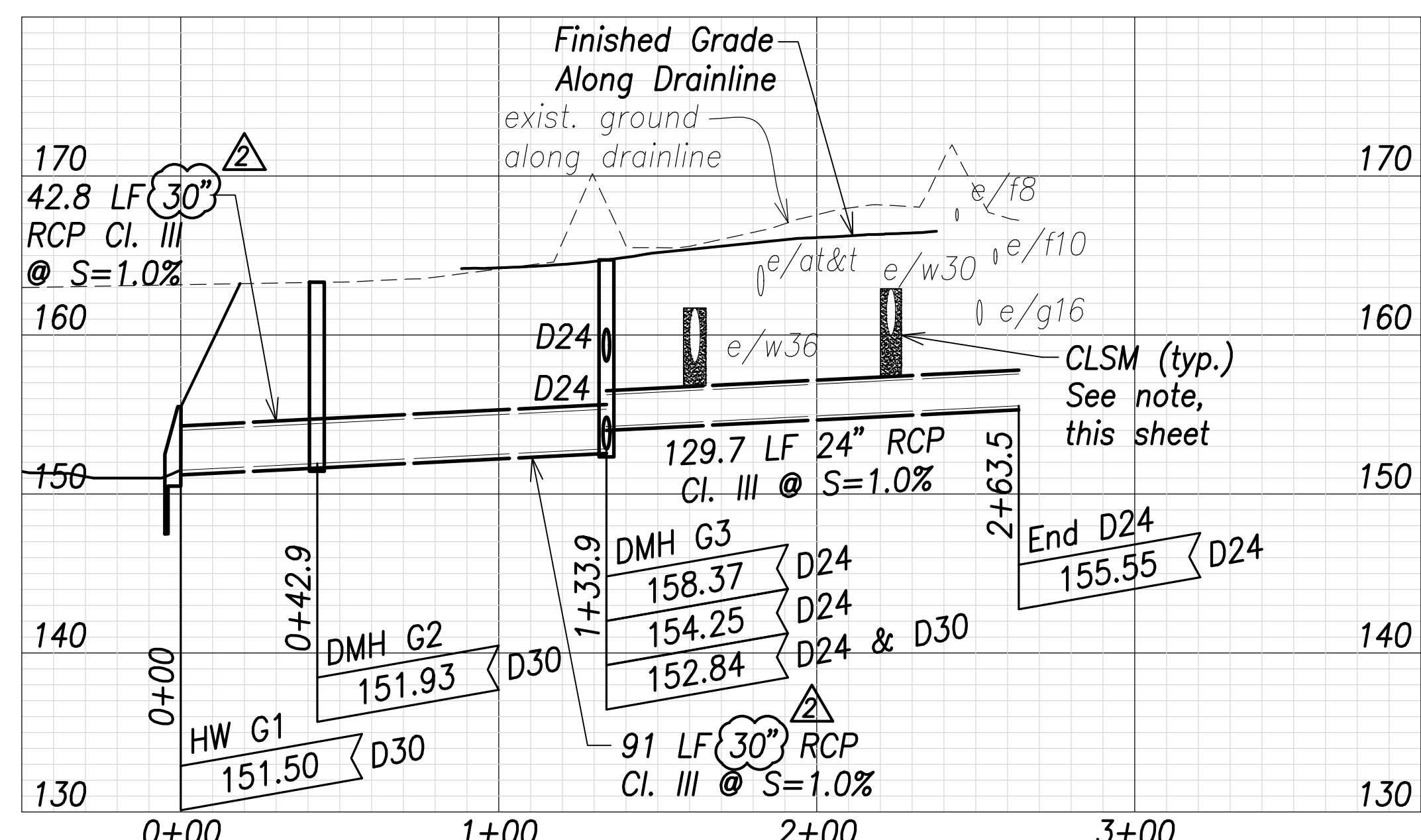
Drain Profile at 59+98.2
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

Notes:

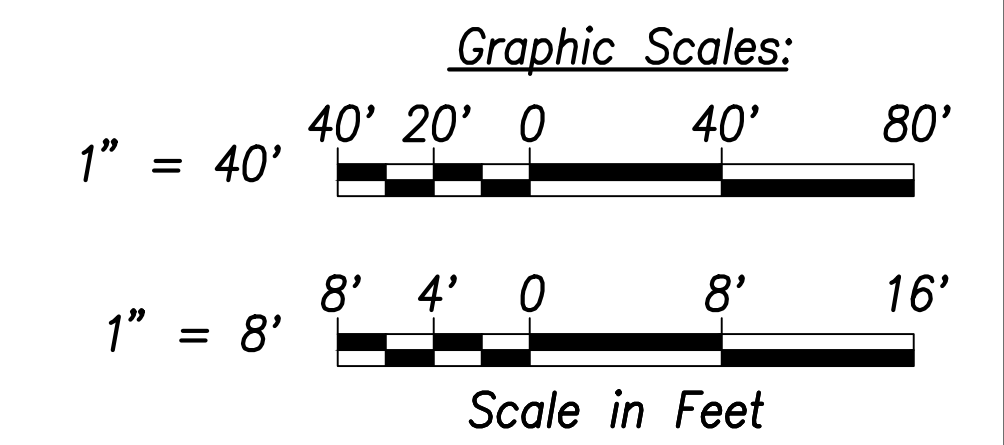
- The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe.
- Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



Drain Profile at 65+60.3
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'



Drain Profile at 73+30
Scales: Hor.: 1" = 40'
Vert.: 1" = 8'

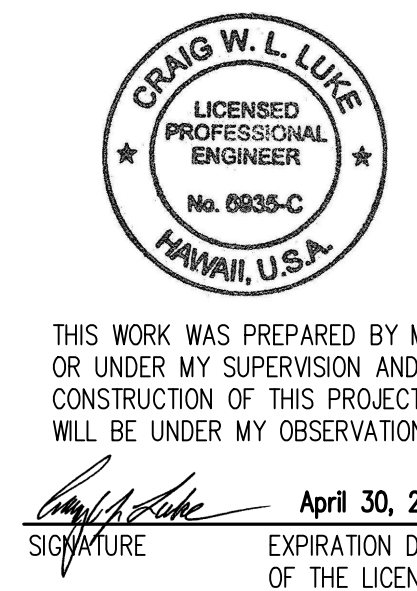


| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|--|
| DATE | REVISION |
| 06/08/22 | Added Note; Revised labels; Revised Profile At 65+60.3 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

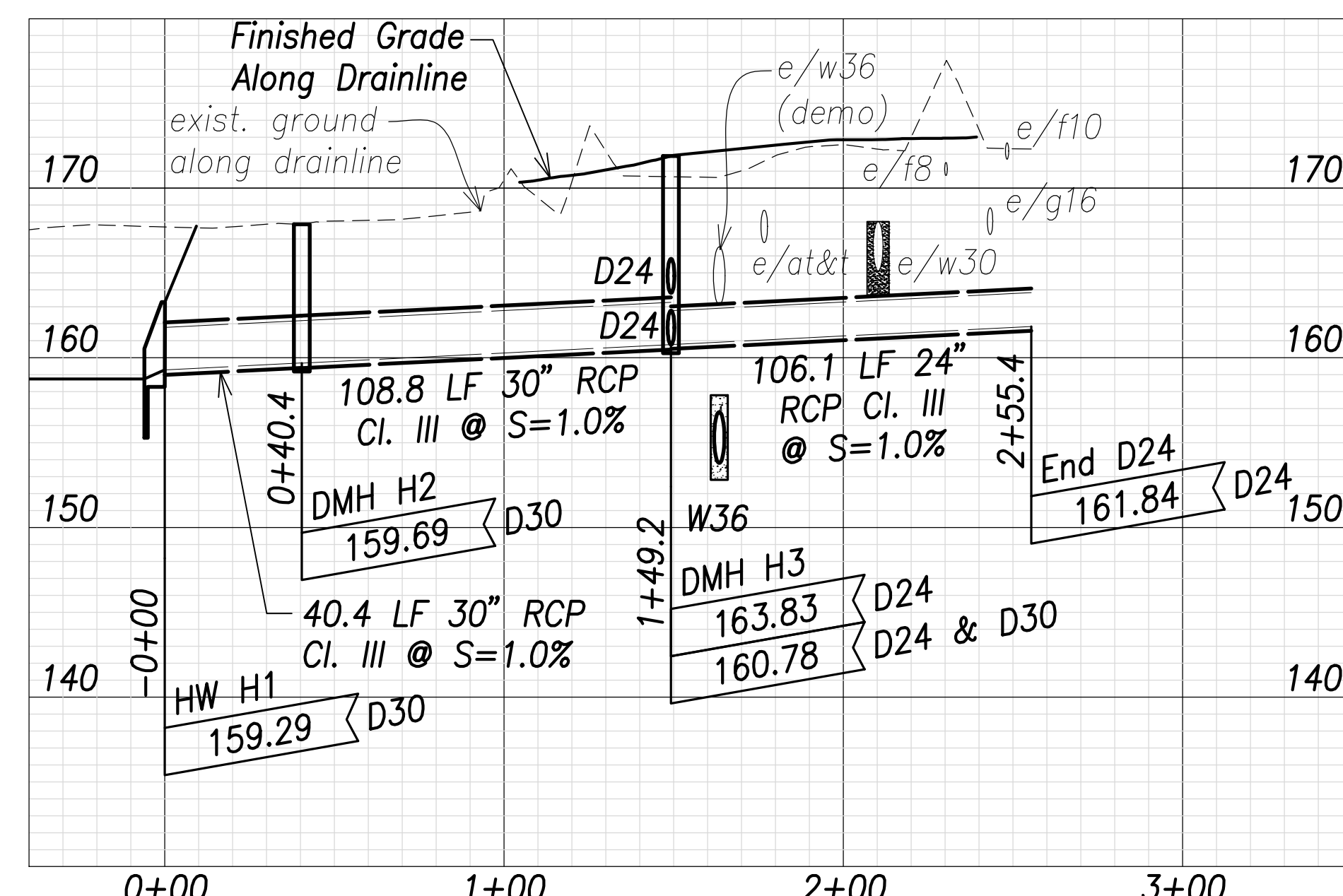
Drain Profiles - 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

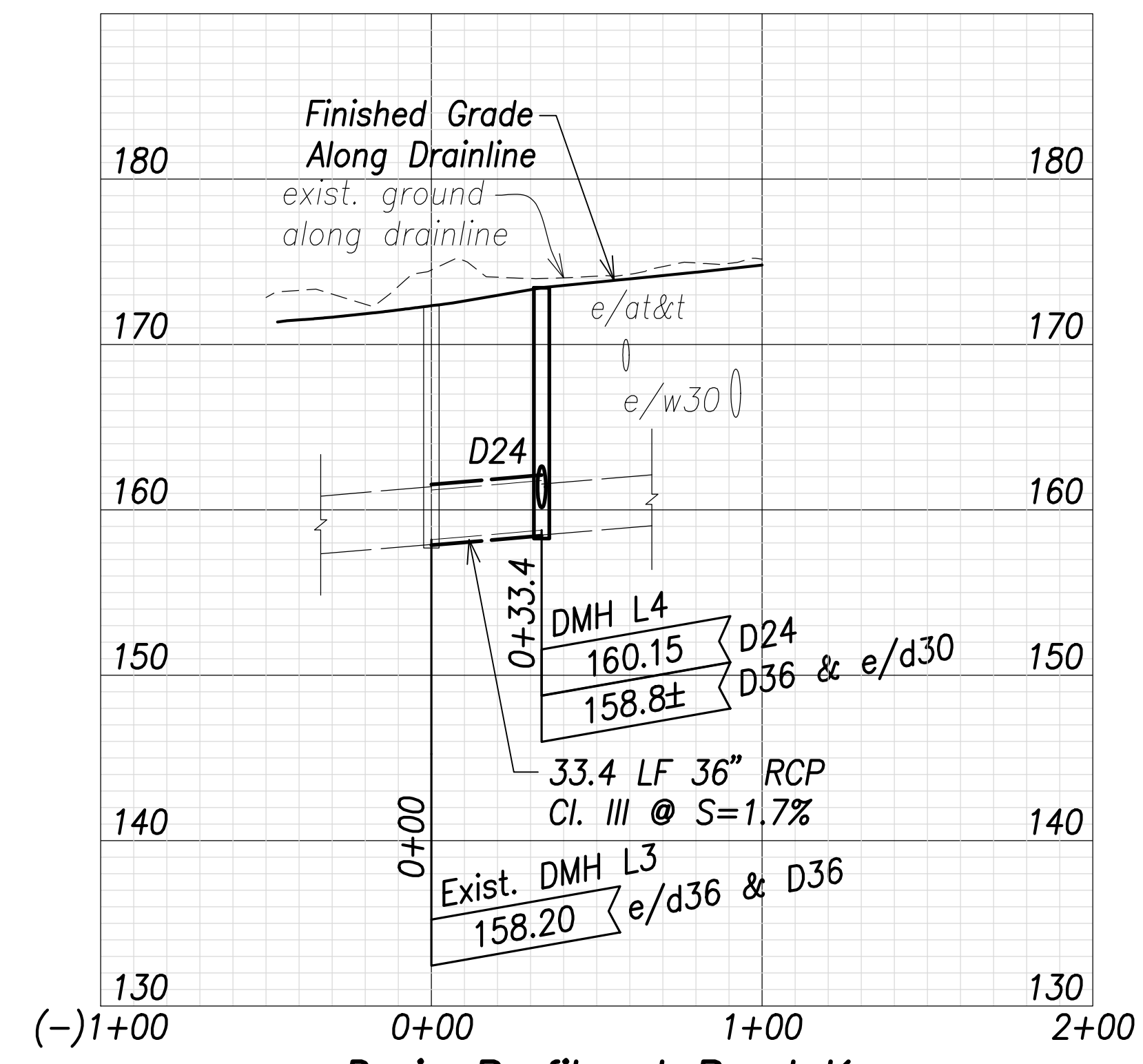
Scale: As Shown Date: April 2022

SHEET NO. C-163 OF 767 SHEETS

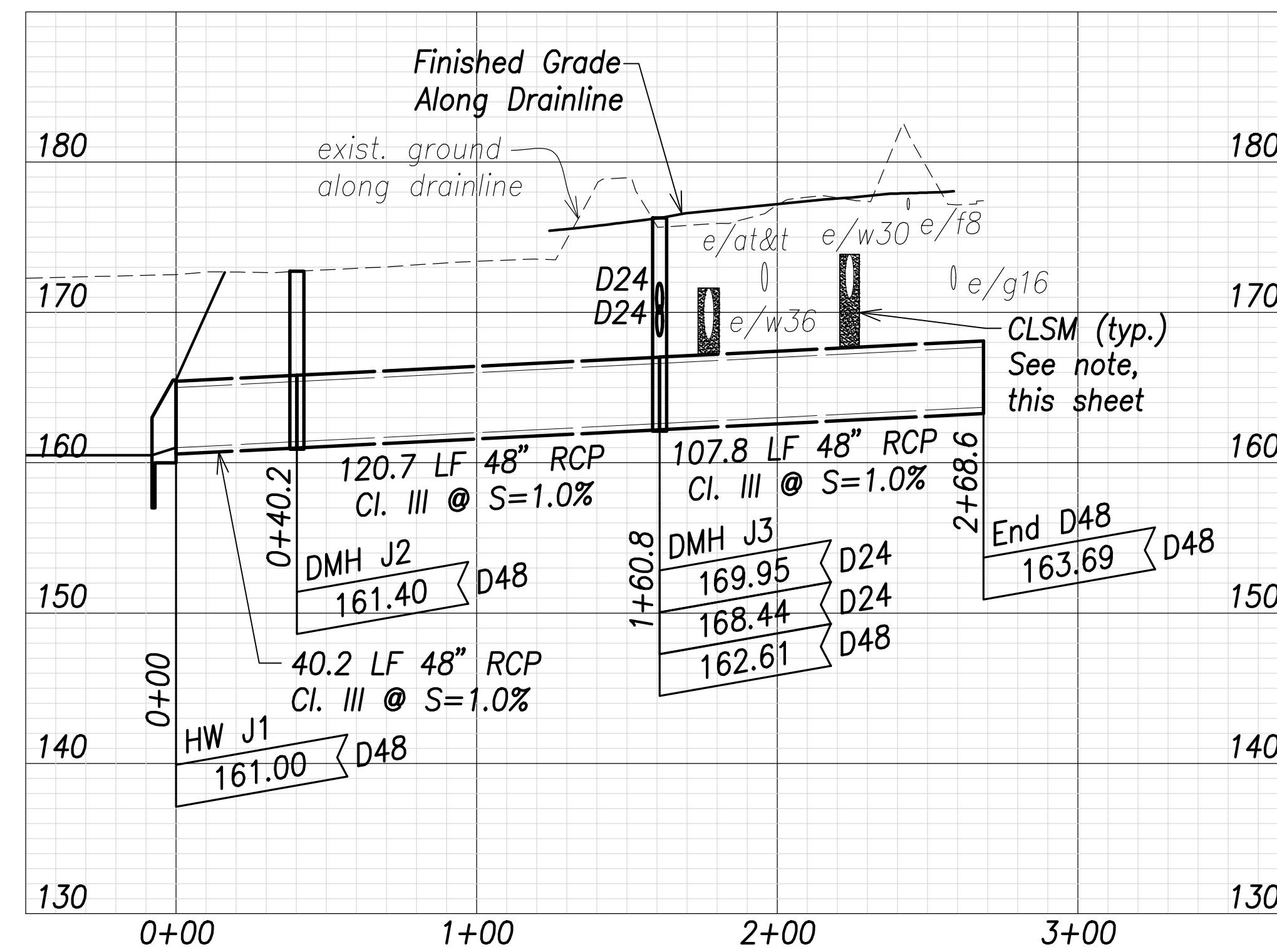
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 165 | 767 |



Drain Profile at HW H1 and at 86+68.5
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



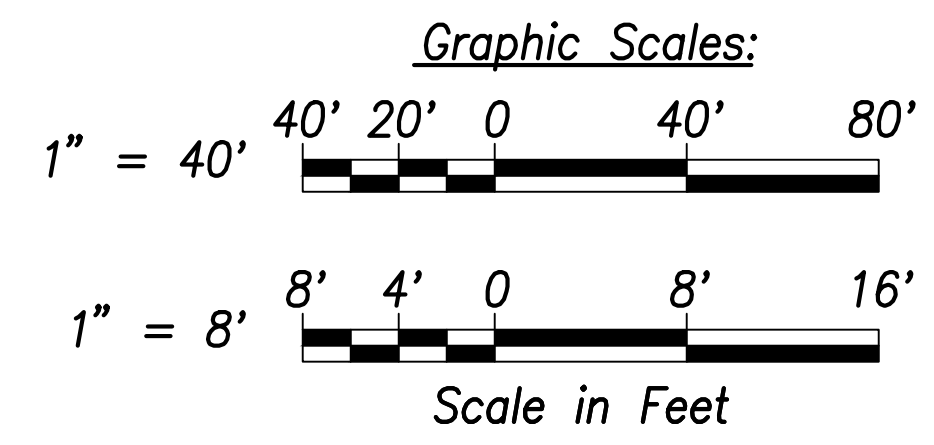
Drain Profile at Road K
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Drain Profile at 98+69.8
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

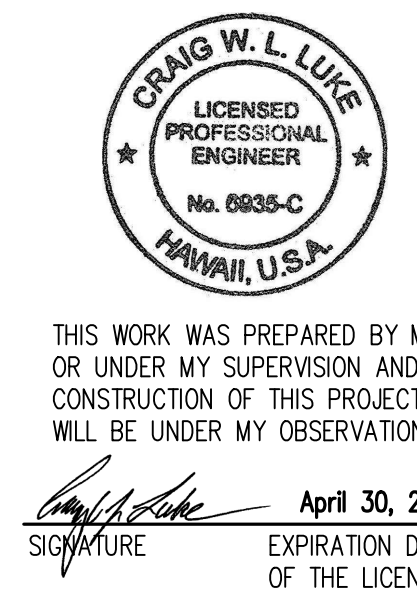
- Notes:**
- The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe.
 - Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.



APPROVED:

Manager and Chief Engineer, BWS DATE

(for work affecting BWS facilities in City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke* April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|------------|
| 06/08/22 | Added note |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

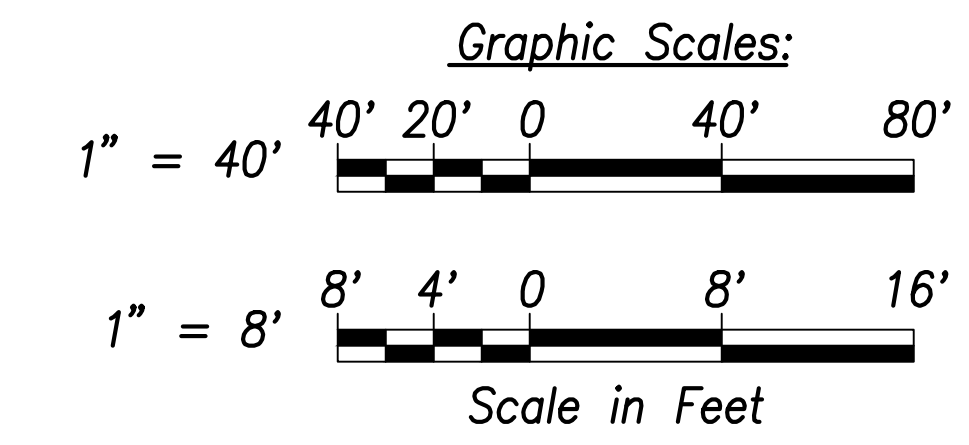
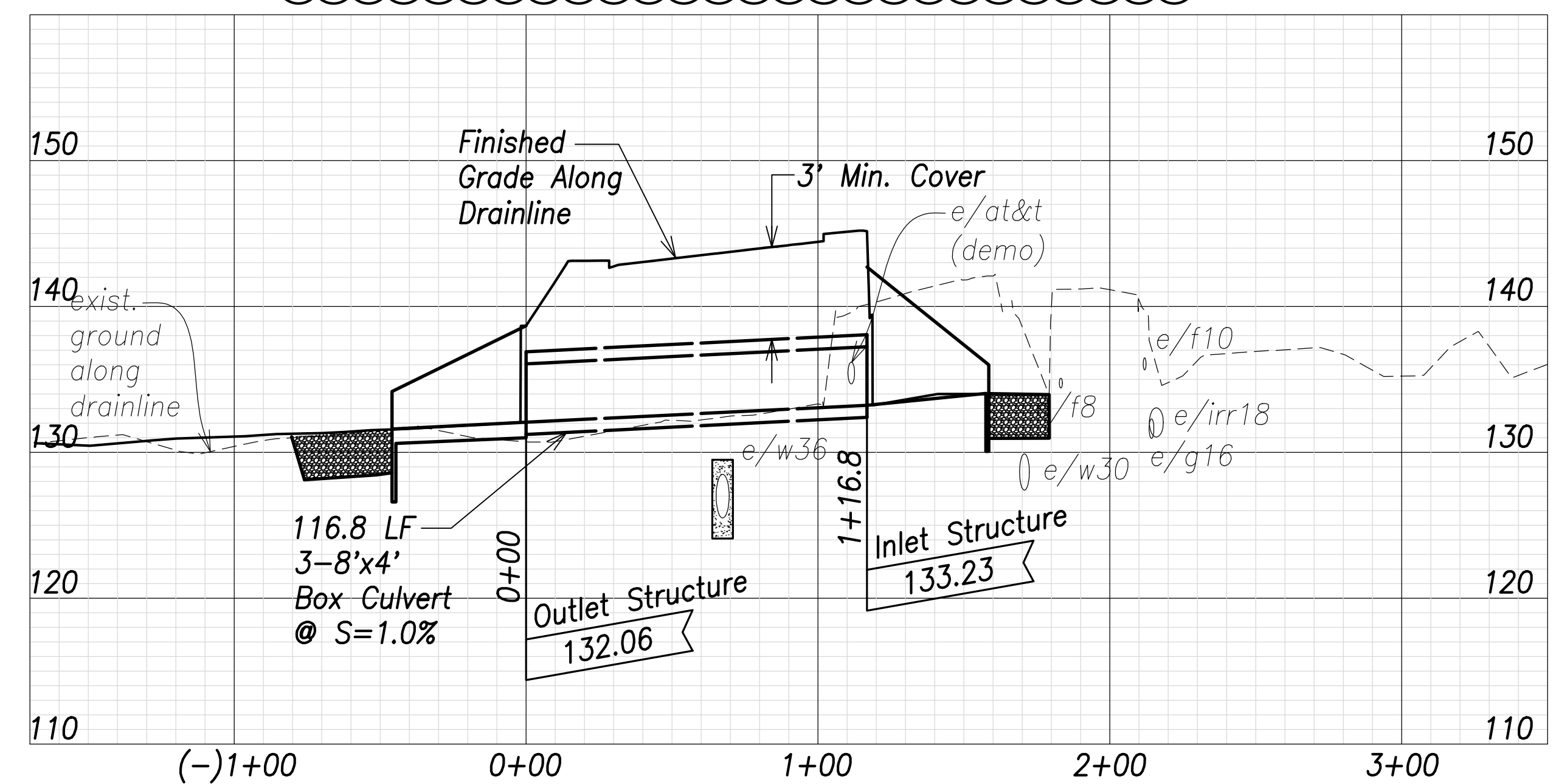
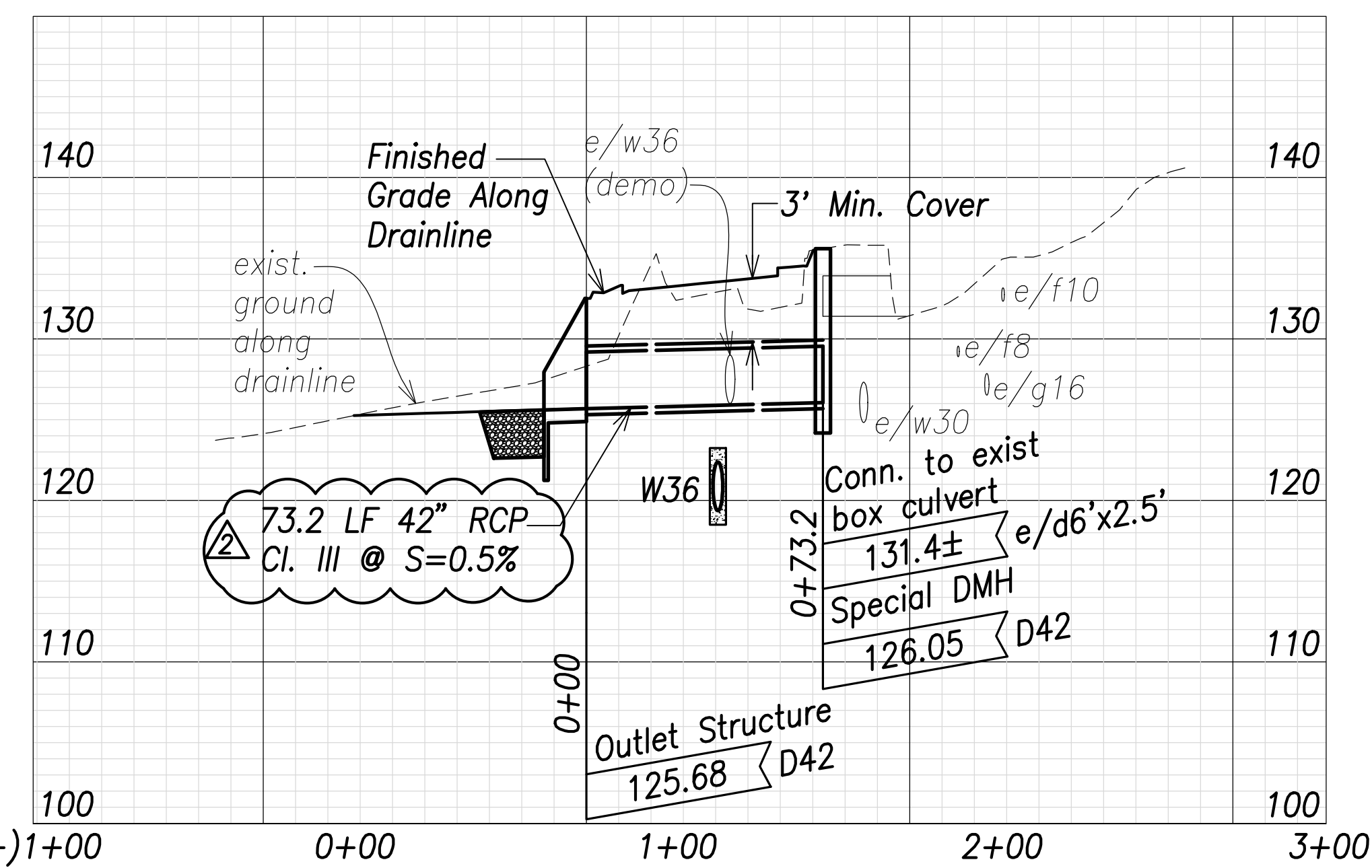
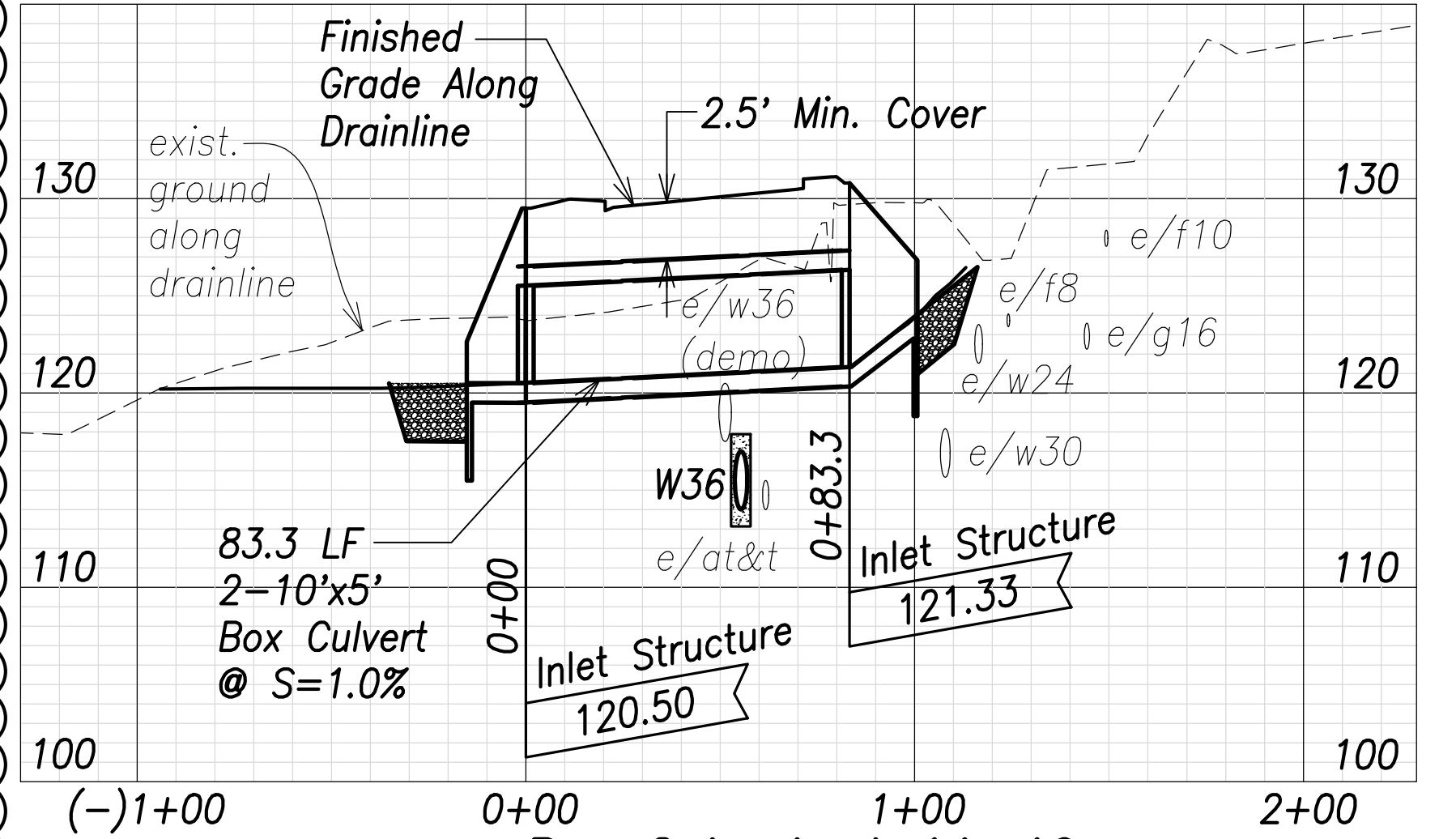
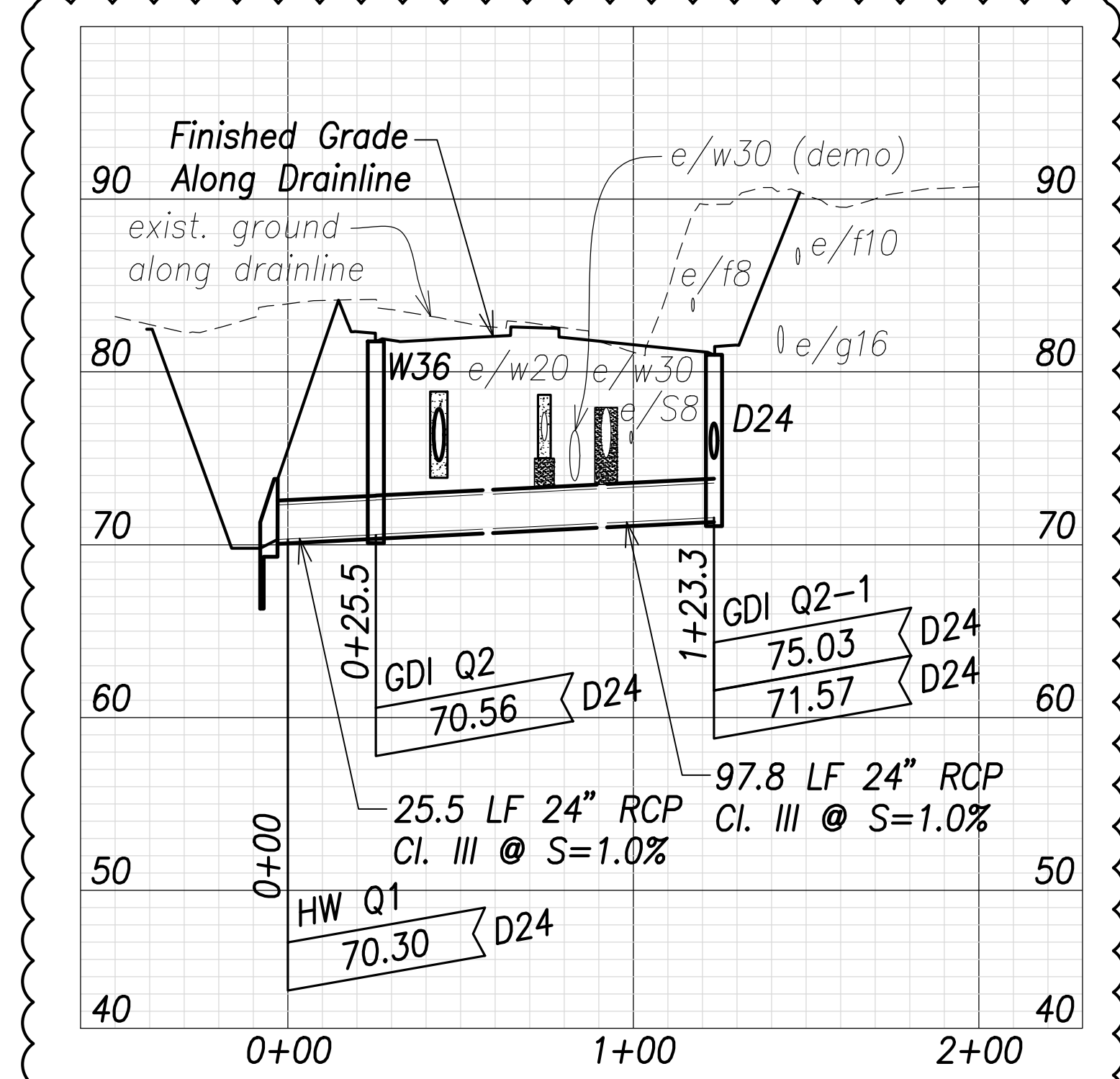
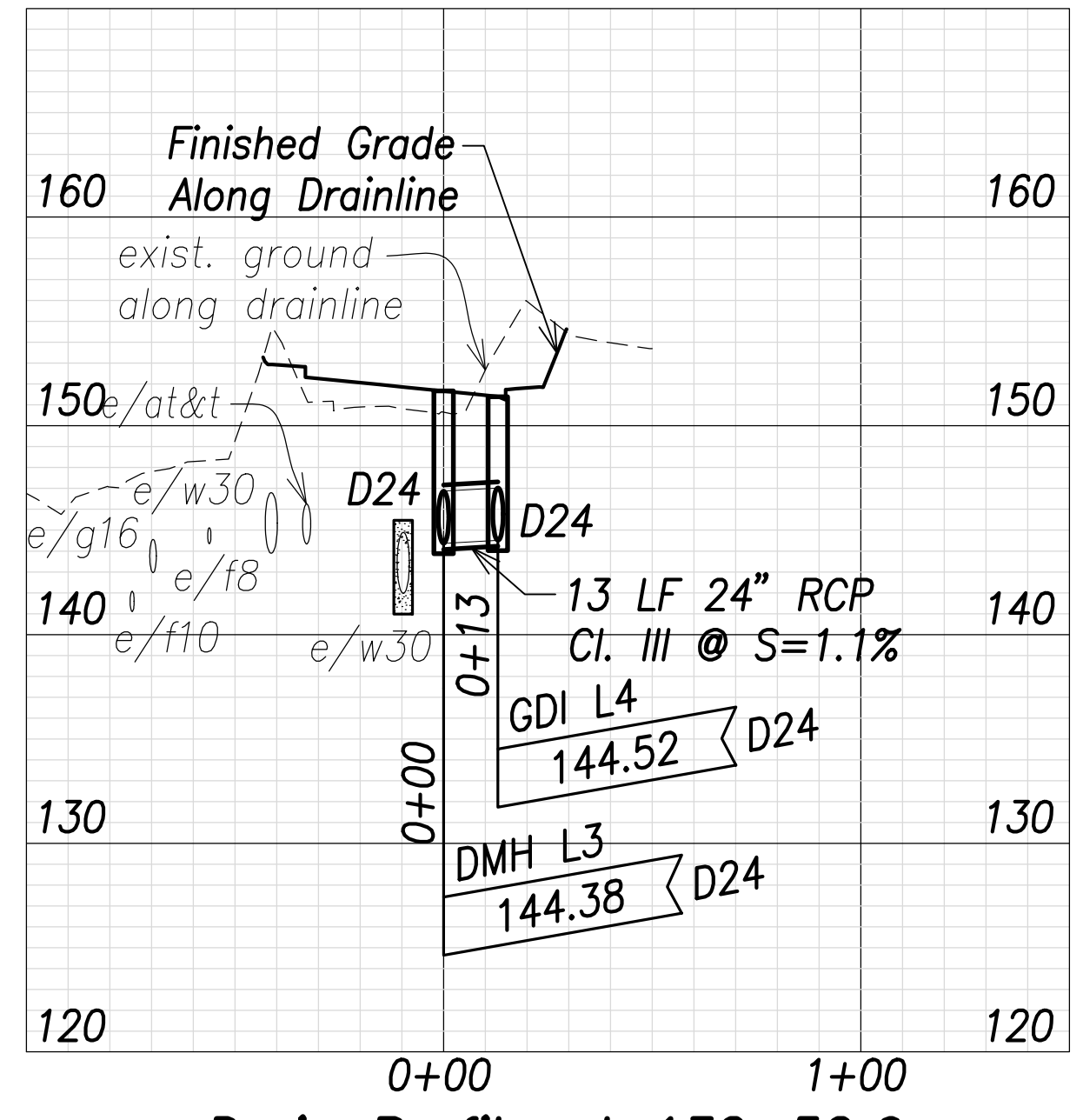
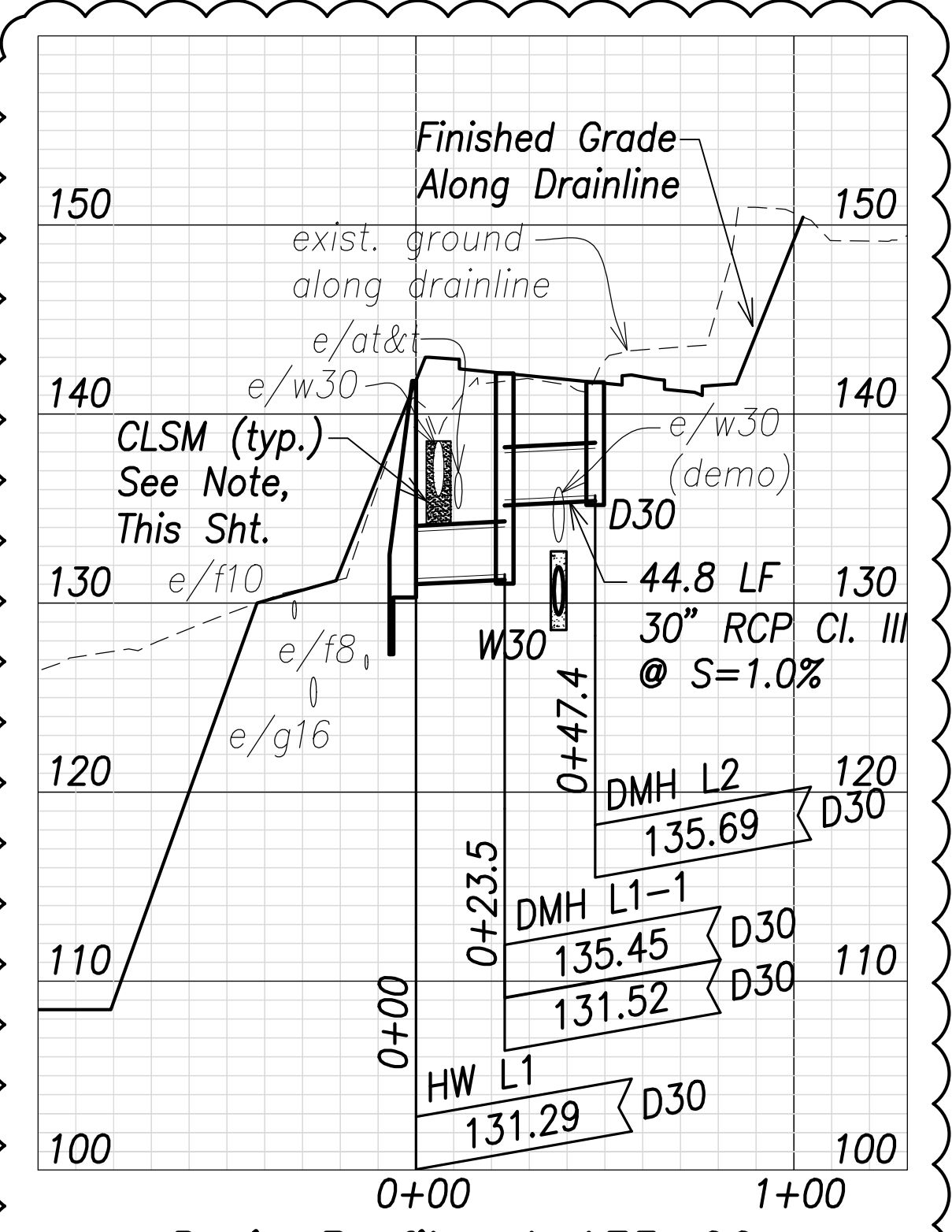
Drain Profiles - 2

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-164 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 166 | 767 |



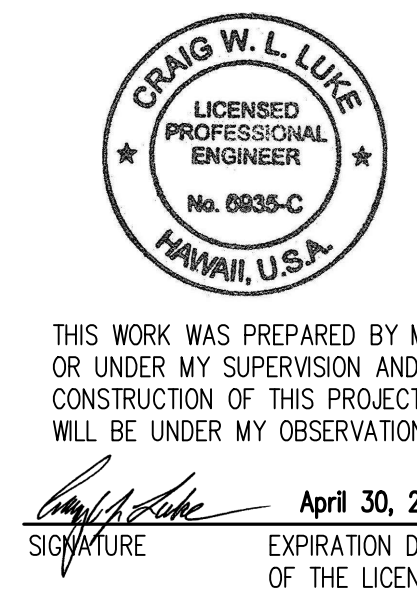
Notes:

- The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe.
- Drain pipe lengths and slopes shown on profiles are calculated from the center of structures.

APPROVED:

Manager and Chief Engineer, BWS
(for work affecting BWS facilities in City/State R/W & BWS easements only)

DATE _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

06/08/22 Revised profiles, added note
DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Drain Profiles - 3

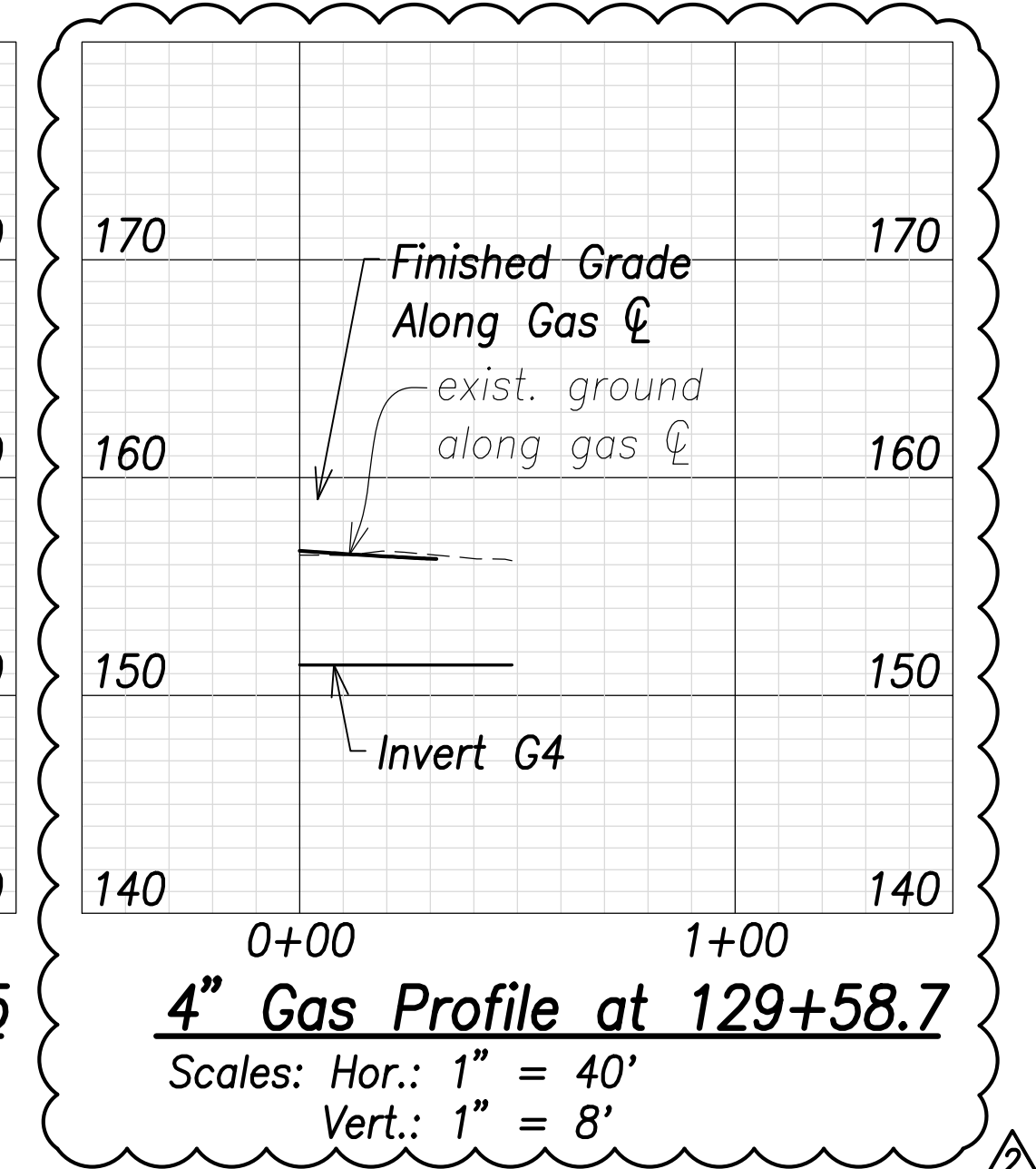
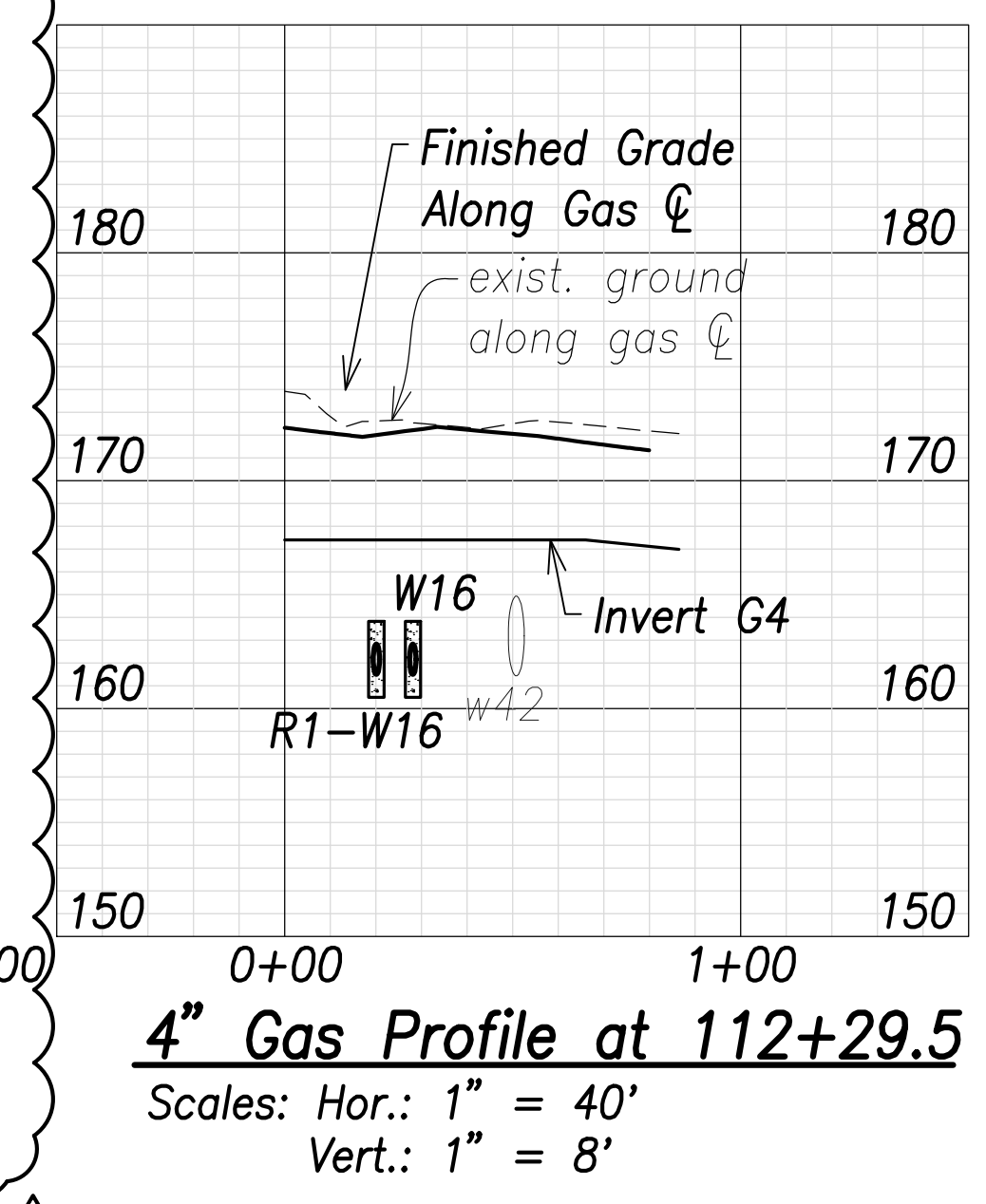
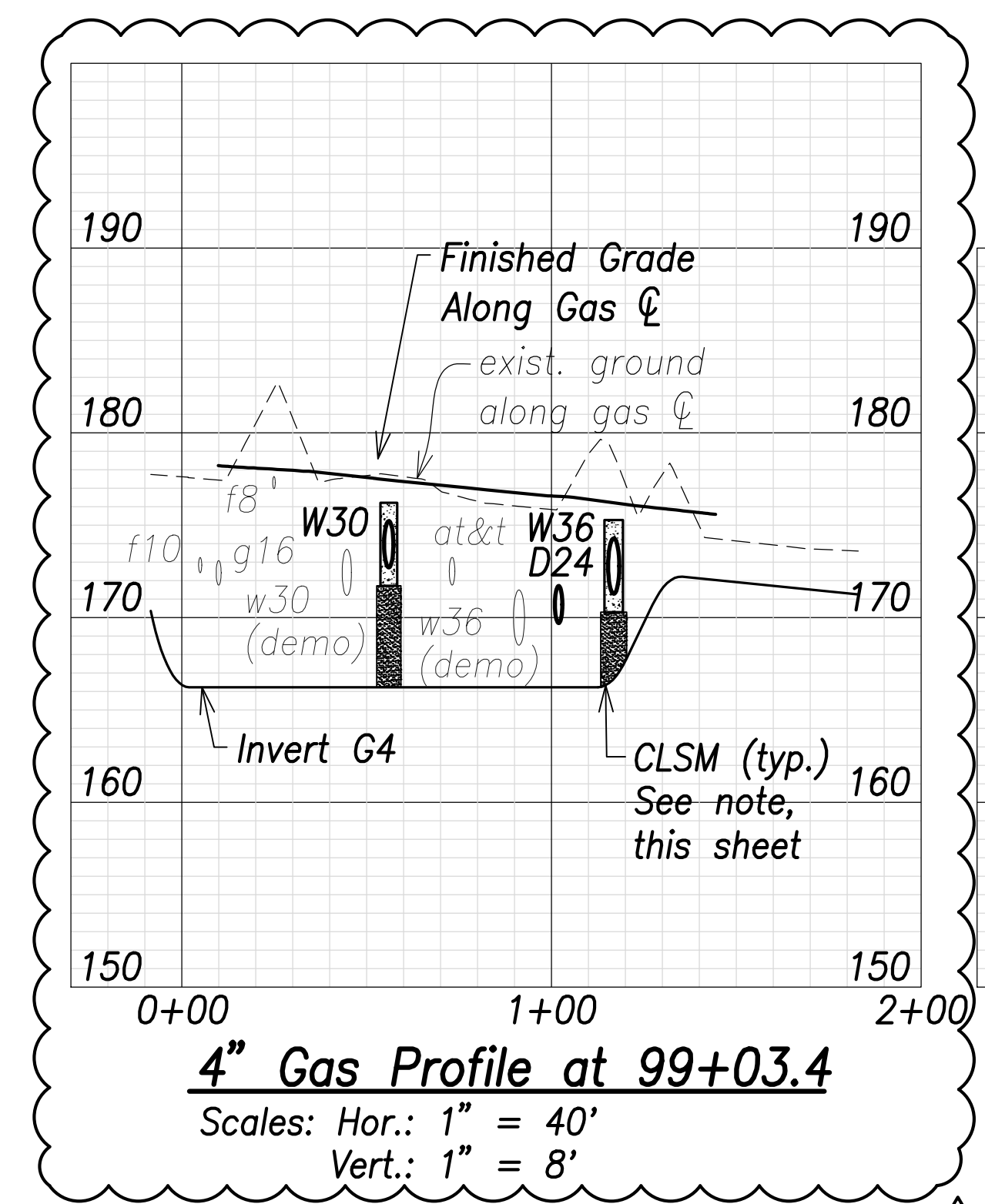
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

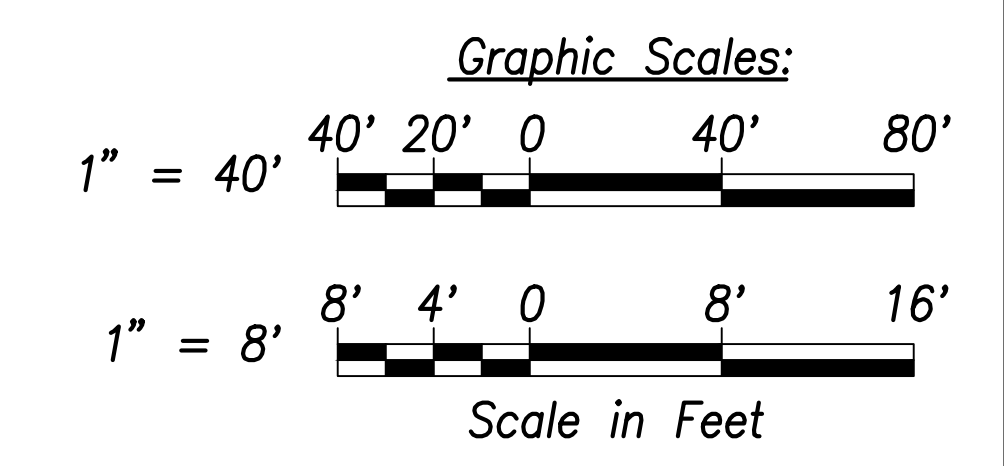
SHEET NO. C-165 OF 767 SHEETS

| | |
|--------------------------|-------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | DATE: _____ |
| TRACED BY: _____ | DATE: _____ |
| QUANTITIES BY: _____ | DATE: _____ |
| CHECKED BY: _____ | DATE: _____ |
| ORIGINAL PLAN NO. _____ | |
| NOTE BOOK No. _____ | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 167 | 767 |

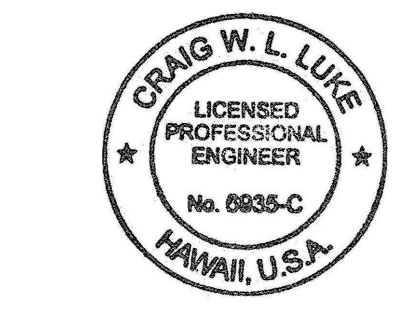


Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe



| | |
|-------------------|------|
| ORIGINAL PLAN | DATE |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NO. _____ | |

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



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 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---|
| 06/08/22 | Removed gas line at 73+07.6 and 86+28.8, revised gas line at 98+88.8 to 4", revised gas line location to 129+58.7 |
| DATE | REVISION |

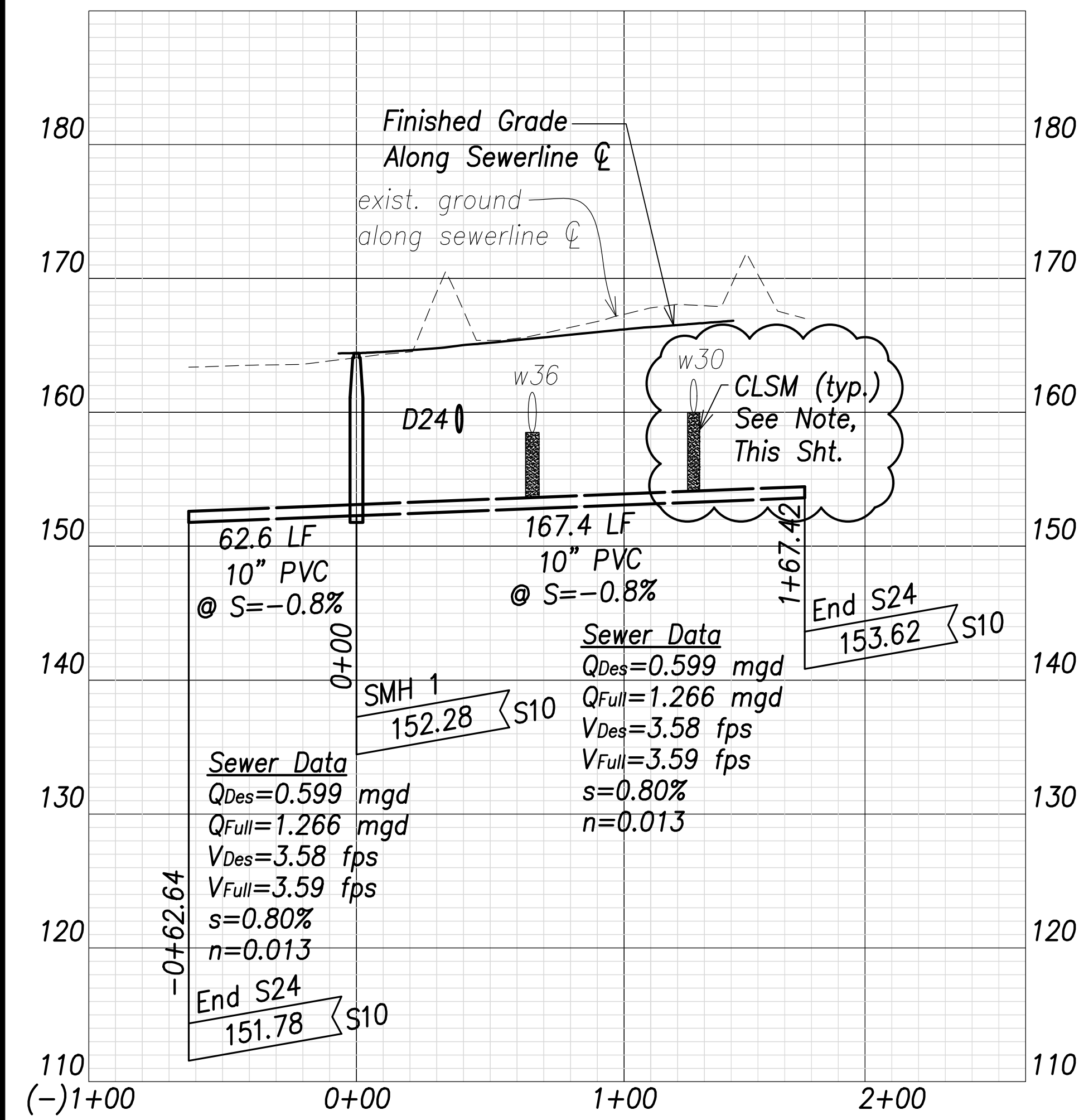
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Gas Profiles

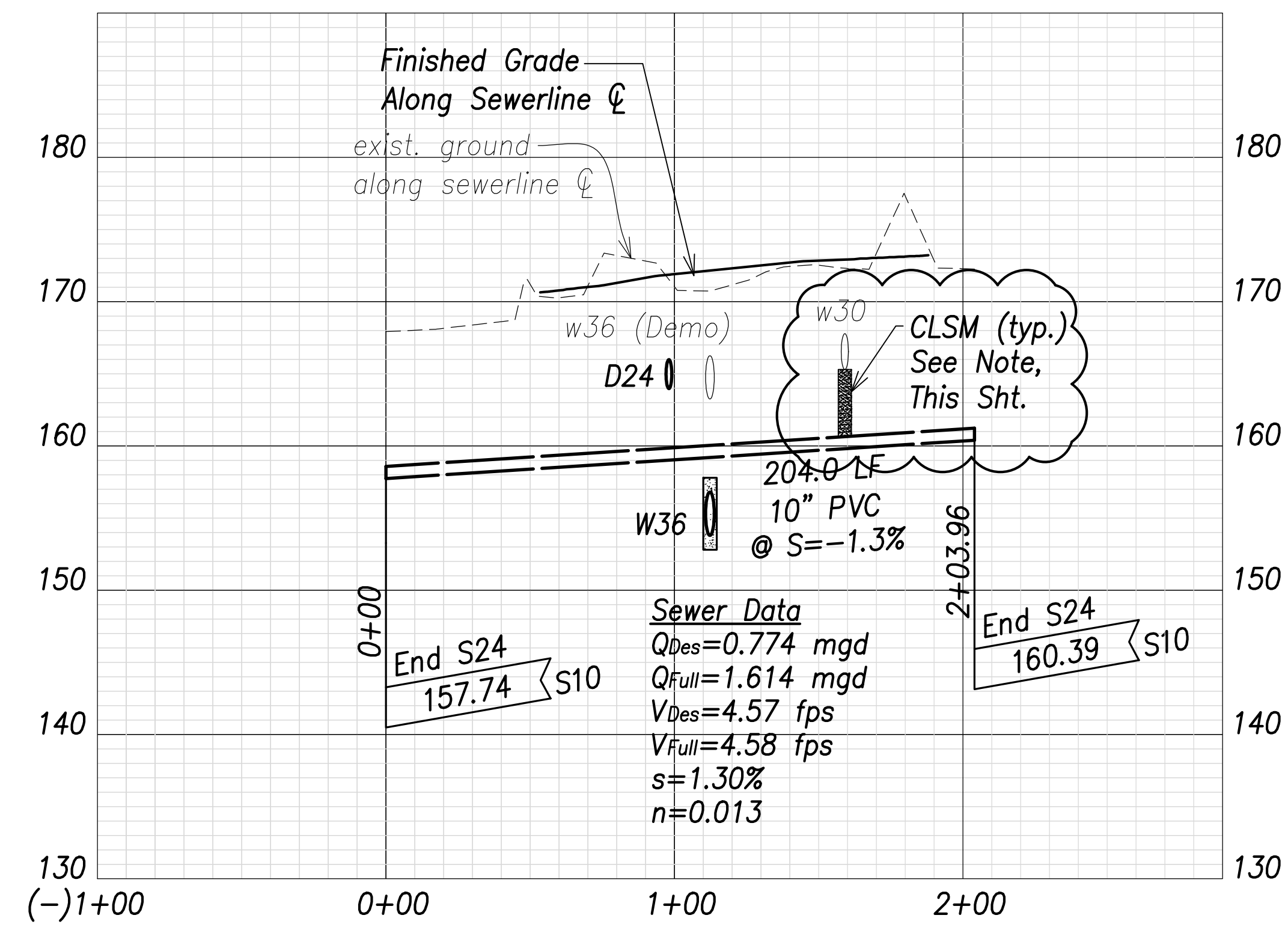
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 168 | 767 |



Sewer Profile at 73+00
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

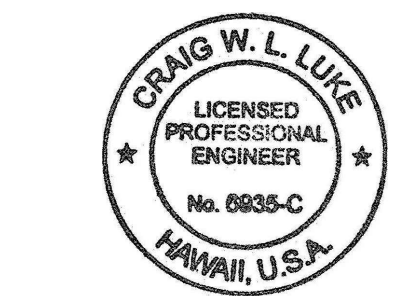


Sewer Profile at 86+39.8
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

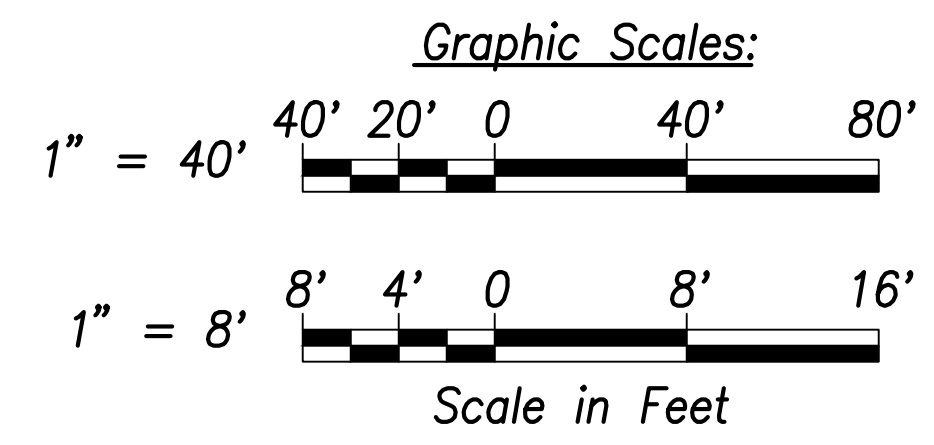
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

Note:
 The Contractor shall provide Controlled Low Strength Material (CLSM) in areas where required compaction cannot be met. CLSM shall be extend a minimum of 2' beyond the waterline at the crossing and shall extend to the top of the crossing pipe

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)

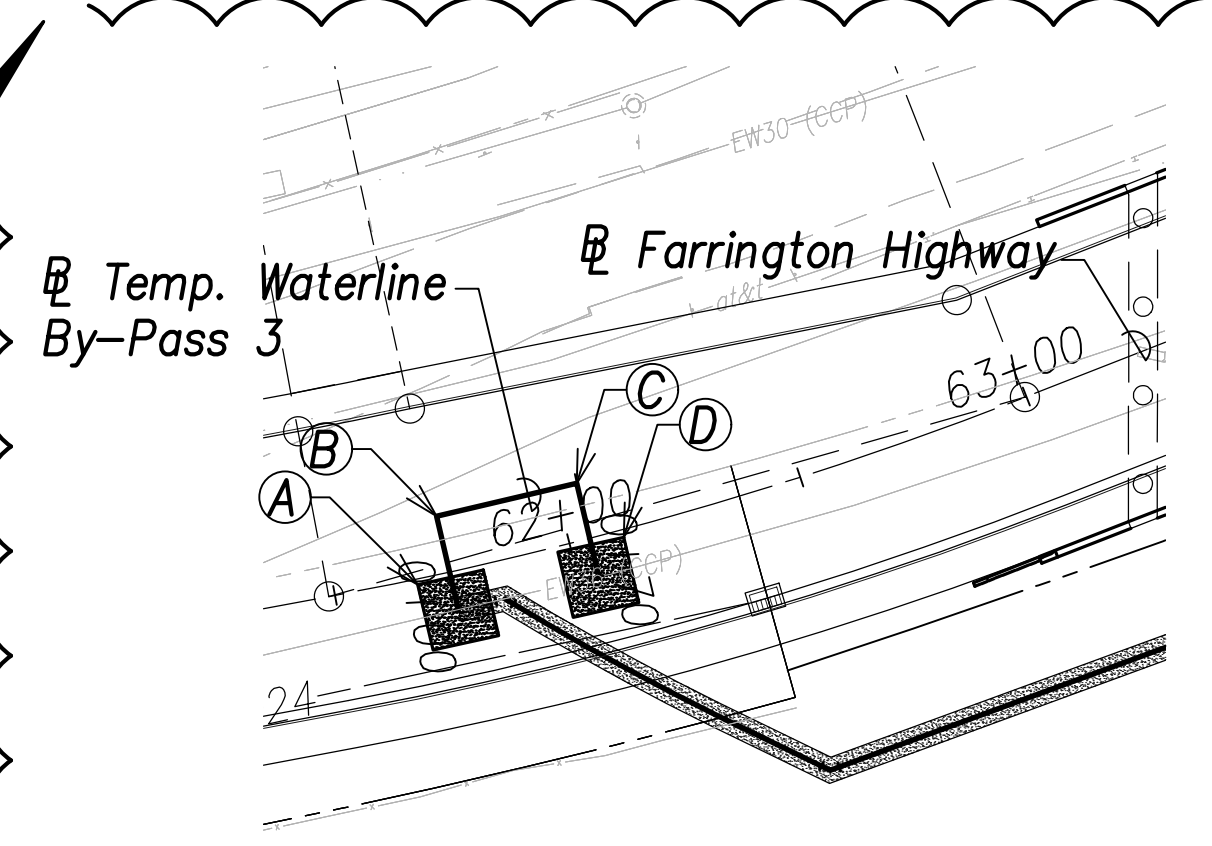
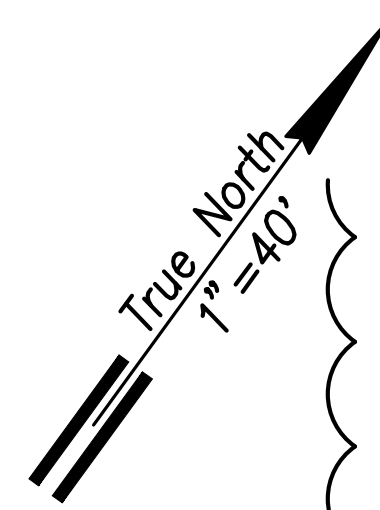


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ EXPIRATION DATE OF THE LICENSE: April 30, 2022



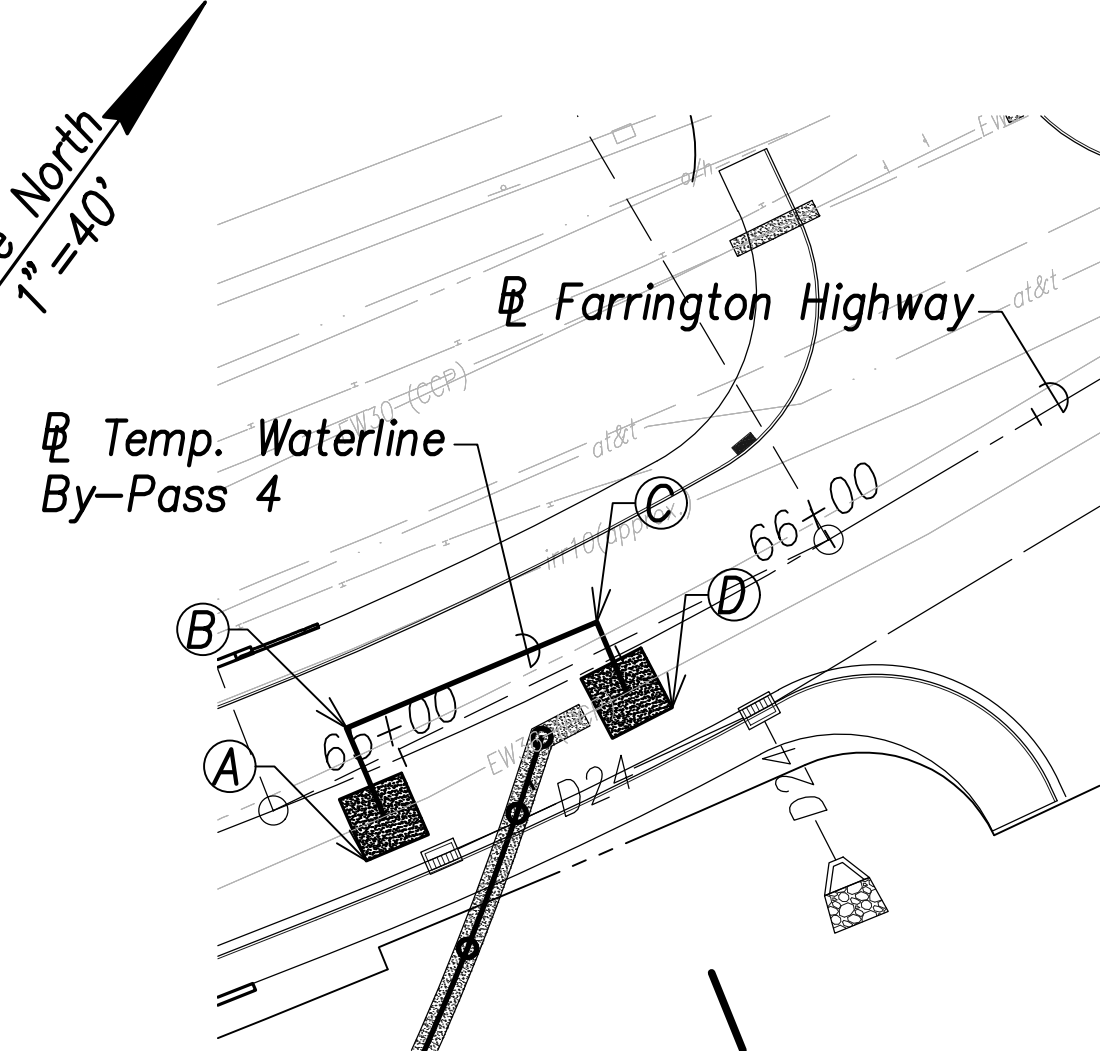
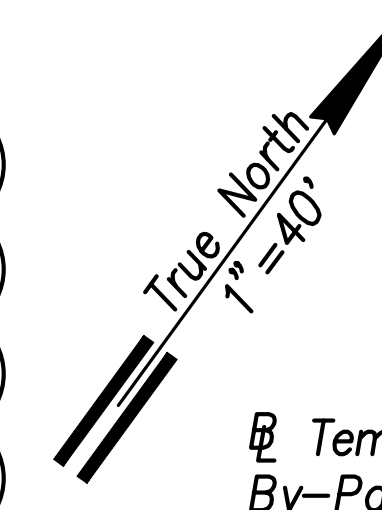
| | |
|--|------------------|
| 06/08/22 | Callout Added |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Sewer Profiles | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-167 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 170 | 767 |



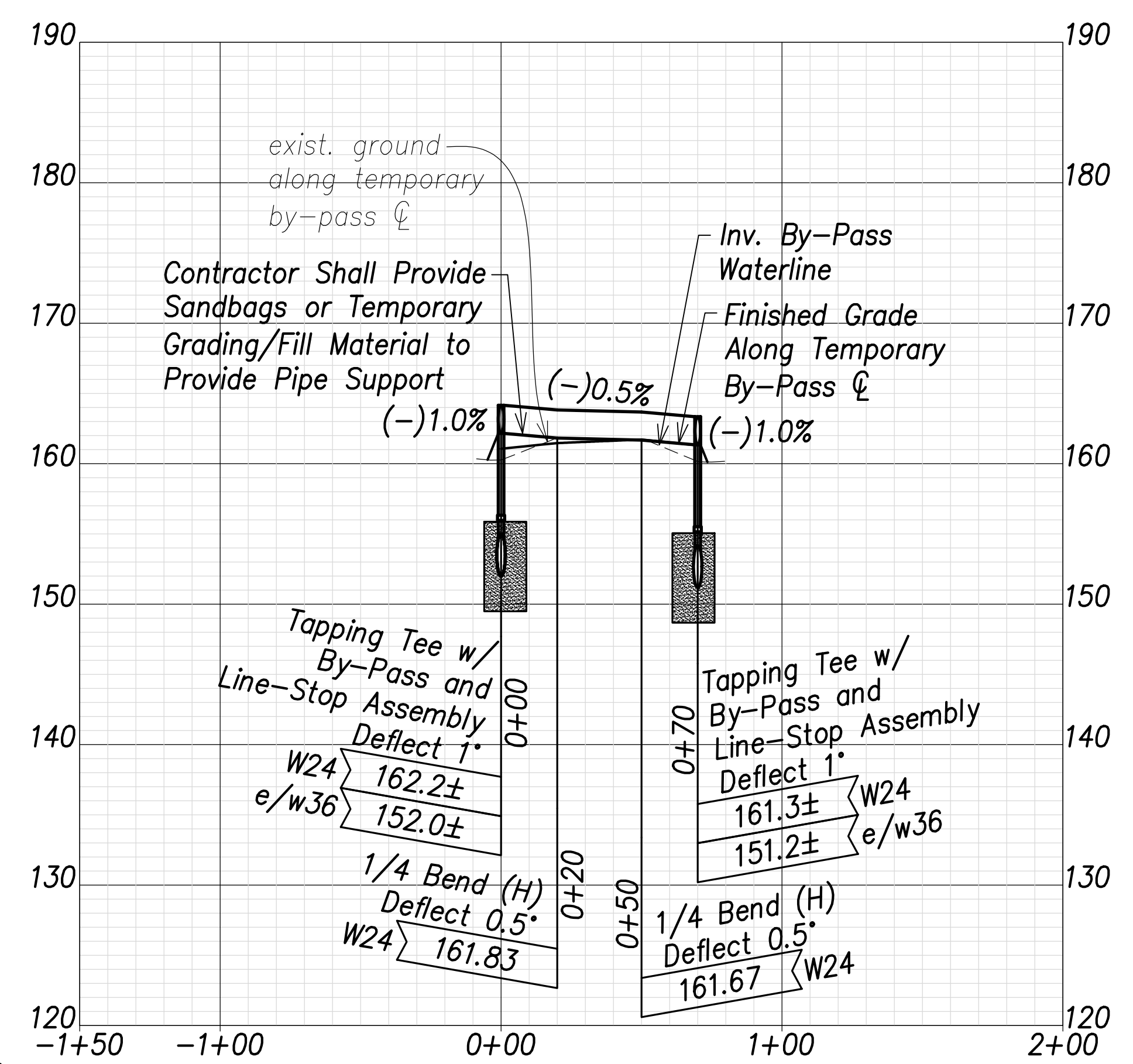
Temporary Waterline By-Pass 3 Plan
 (# Sta. 61+84.3 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 61+74.4, o/s 8.1' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 61+73.9, o/s 12' Lt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 62+04.7, o/s 11.8' Lt. Farrington Highway
 = Sta. 0+50 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) Sta. 62+04.1, o/s 8.2' Rt. Farrington Highway
 = Sta. 0+70 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)

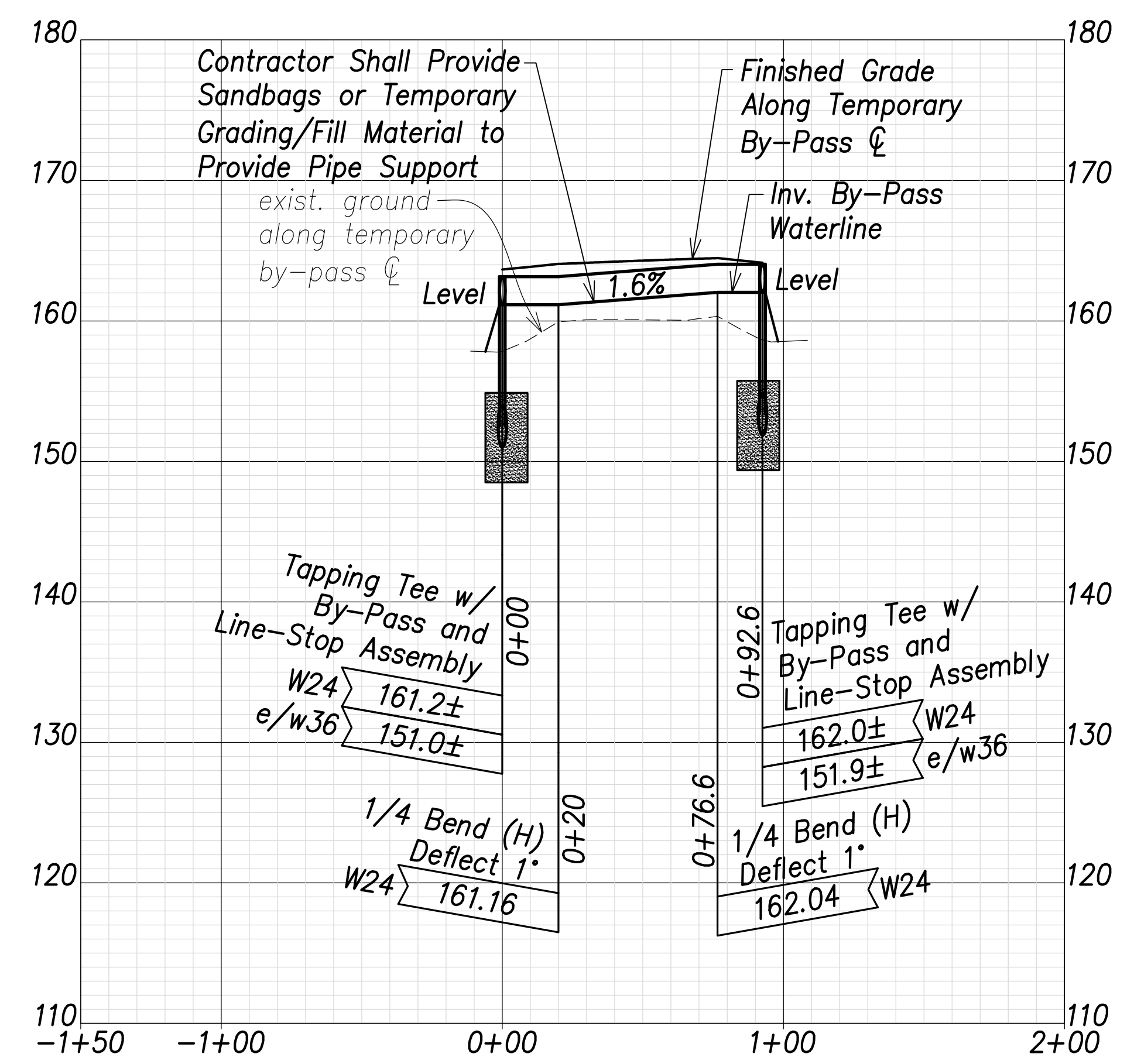


Temporary Waterline By-Pass 4 Plan
 (# Sta. 65+28.2 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 64+91.7, o/s 9.9' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 64+91.6, o/s 10.1' Lt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 65+48.9, o/s 8.2' Lt. Farrington Highway
 = Sta. 0+76.6 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) Sta. 65+47.8, o/s 7.7' Rt. Farrington Highway
 = Sta. 0+92.6 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)



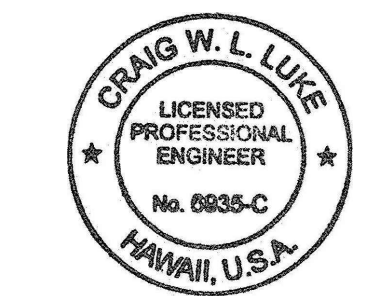
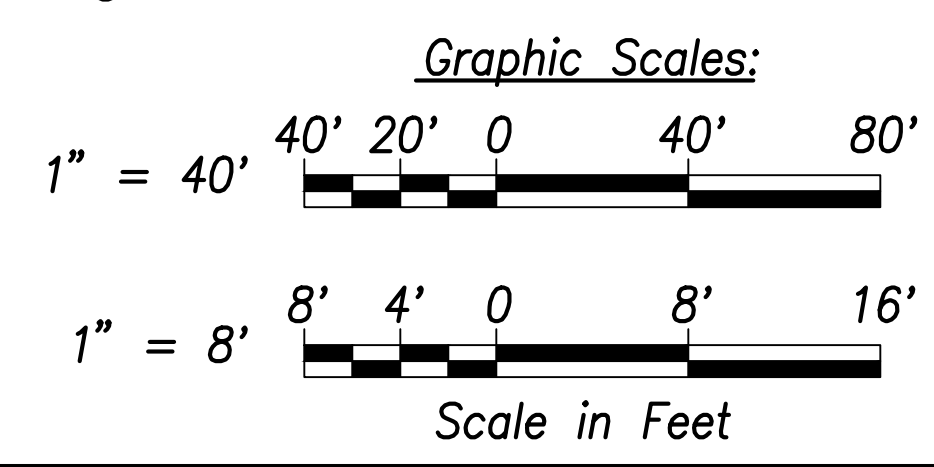
Temporary Waterline By-Pass 3 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Temporary Waterline By-Pass 4 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

| | |
|--------------------|-------|
| SURVEY PLOTTED BY: | DATE: |
| DRAWN BY: | DATE: |
| CHECKED BY: | DATE: |
| ORIGINAL PLAN: | |
| NOTE BOOK: | |
| NO.: | |

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



THIS WORK WAS PREPARED BY ME
 OR UNDER MY SUPERVISION AND
 CONSTRUCTION OF THIS PROJECT
 WILL BE UNDER MY OBSERVATION.
 SIGNATURE: _____ DATE: April 30, 2022
 EXPIRATION DATE OF THE LICENSE:

| | |
|----------|-----------------|
| 06/08/22 | Callout Revised |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

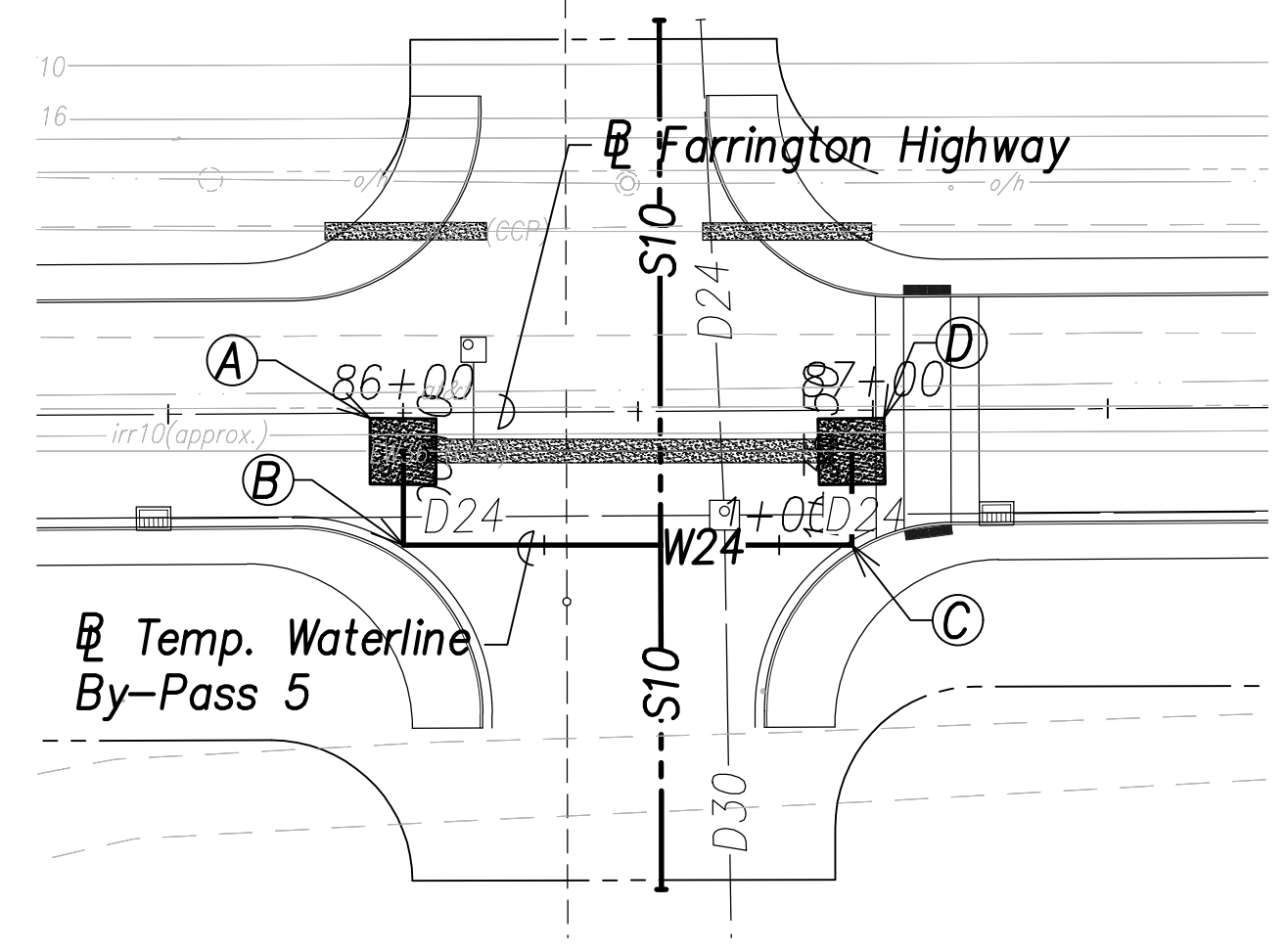
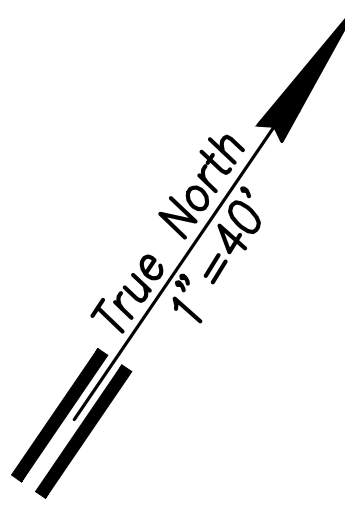
**Waterline Connection and
 Temporary By-Pass - 2**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

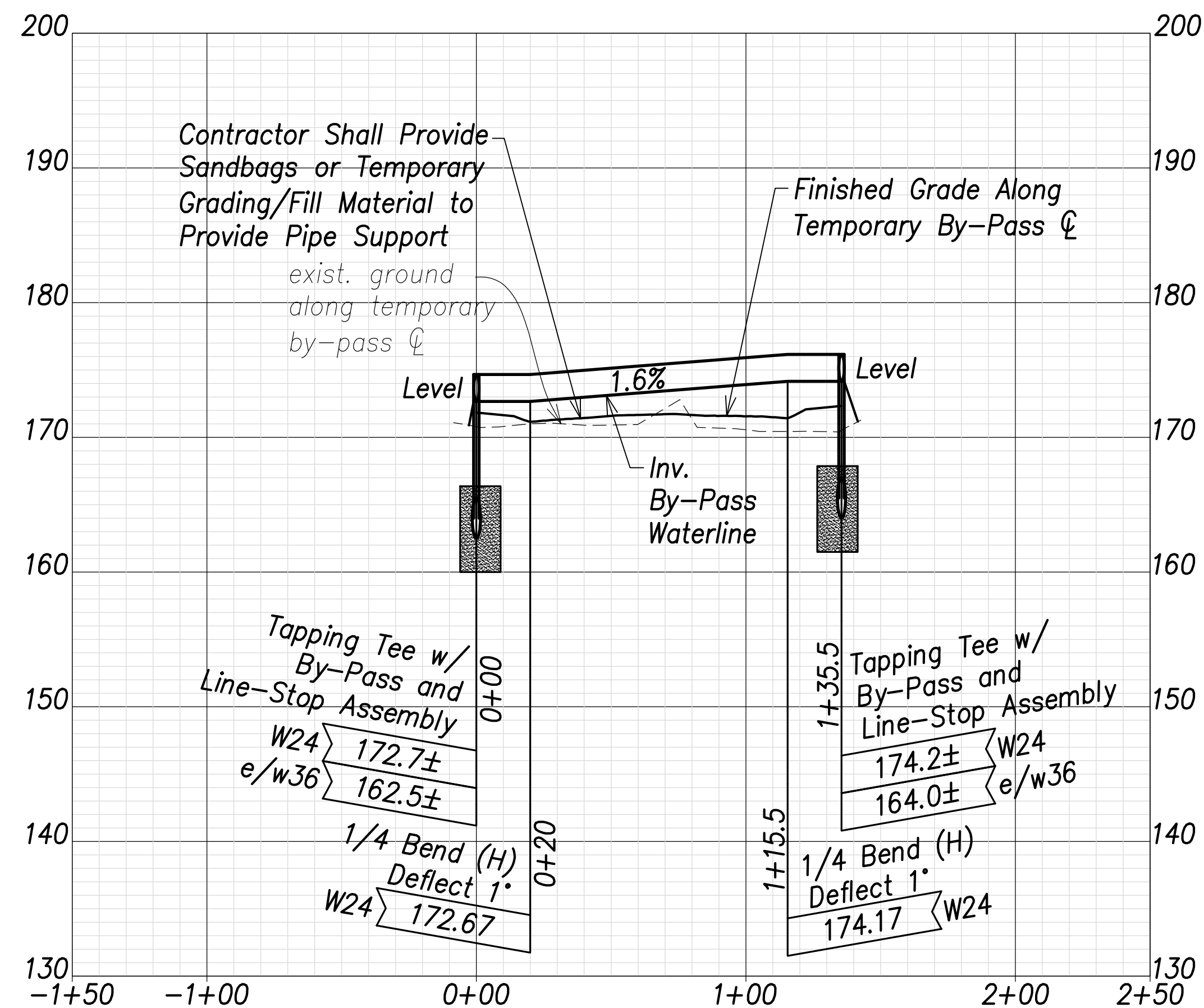
SHEET NO. C-169 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 171 | 767 |



Temporary Waterline By-Pass 5 Plan
 (Sta. 86+10 Farrington Highway)
 (Sta. 86+85.5 Farrington Highway)
 Scale: 1" = 40'

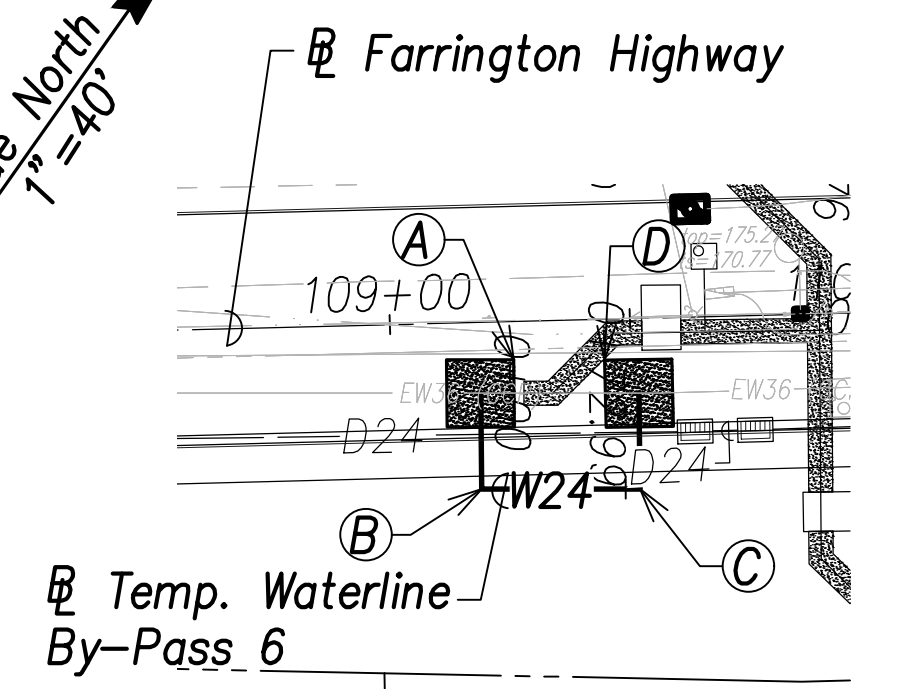
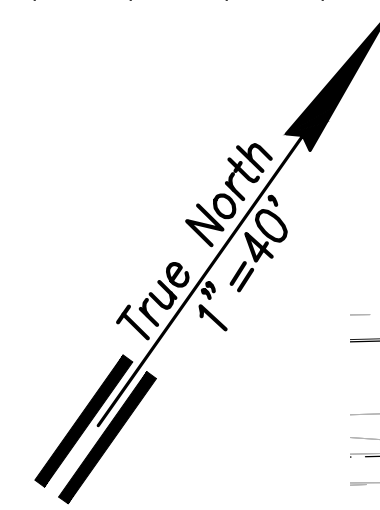
- (A) Sta. 86+00, o/s 8.1' Rt. Farrington Highway = Sta. 0+00 By-Pass
Temporary By-Pass Connection
See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 85+99.9, o/s 28.1' Rt. Farrington Highway = Sta. 0+20 By-Pass
1-24" 1/4 Bend, Fl.
- (C) Sta. 86+95.5, o/s 28.7' Rt. Farrington Highway = Sta. 1+15.5 By-Pass
1-24" 1/4 Bend, Fl.
- (D) Sta. 86+95.5, o/s 8.7' Rt. Farrington Highway = Sta. 1+35.5 By-Pass
Temporary By-Pass Connection
See Detail Shts. C-208 to C-211 (Typ.)



Temporary Waterline By-Pass 5 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

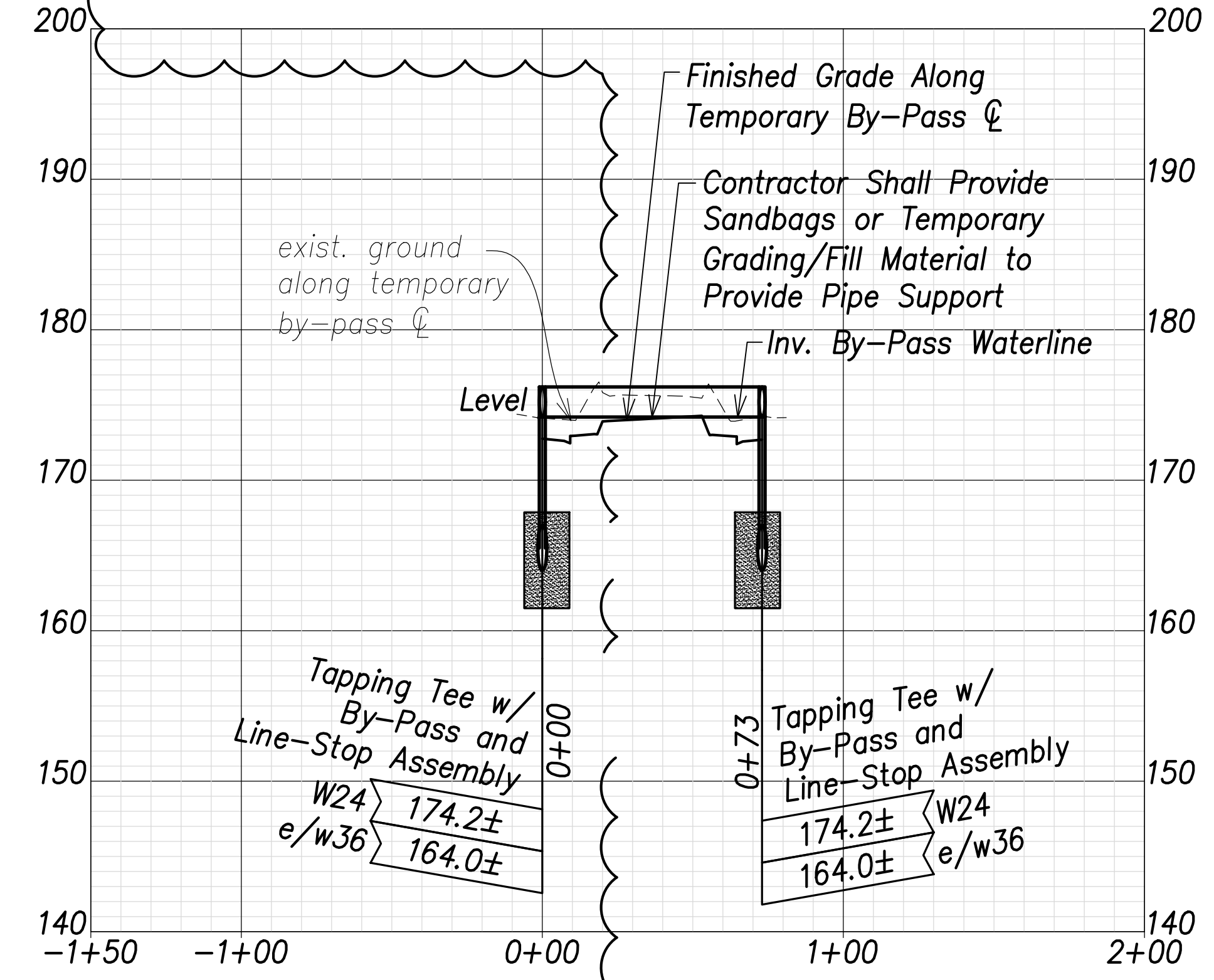
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

APPROVED:
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)
 DATE

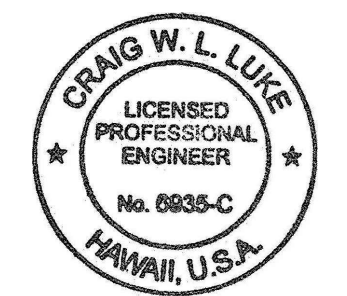
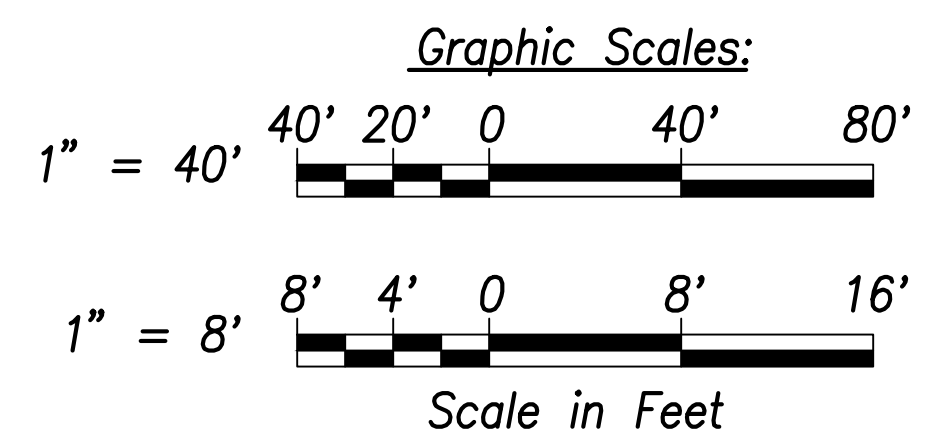


Temporary Waterline By-Pass 6 Plan
 (Sta. 109+33.6 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 109+18.6, o/s 15.6' Rt. Farrington Highway = Sta. 0+00 By-Pass
Temporary By-Pass Connection
See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 109+18.3, o/s 34.7' Rt. Farrington Highway = Sta. 0+20 By-Pass
1-24" 1/4 Bend, Fl.
- (C) Sta. 109+51.2, o/s 35.6' Rt. Farrington Highway = Sta. 0+53 By-Pass
1-24" 1/4 Bend, Fl.
- (D) Sta. 109+51.5, o/s 15.6' Rt. Farrington Highway = Sta. 0+73 By-Pass
Temporary By-Pass Connection
See Detail Shts. C-208 to C-211 (Typ.)



Temporary Waterline By-Pass 6 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|-------------------------------------|
| 06/08/22 | Revised By-Pass Alignment & Profile |
| DATE | REVISION |

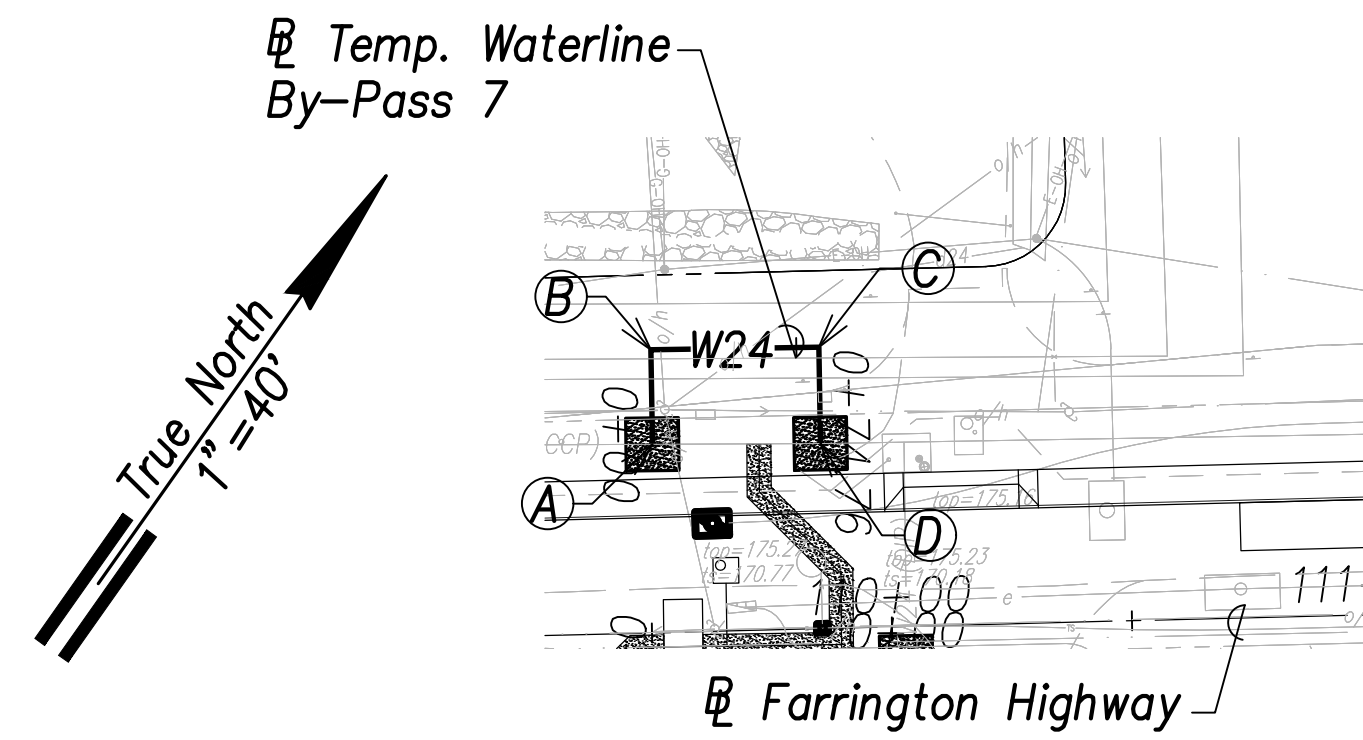
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Waterline Connection and Temporary By-Pass - 3

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

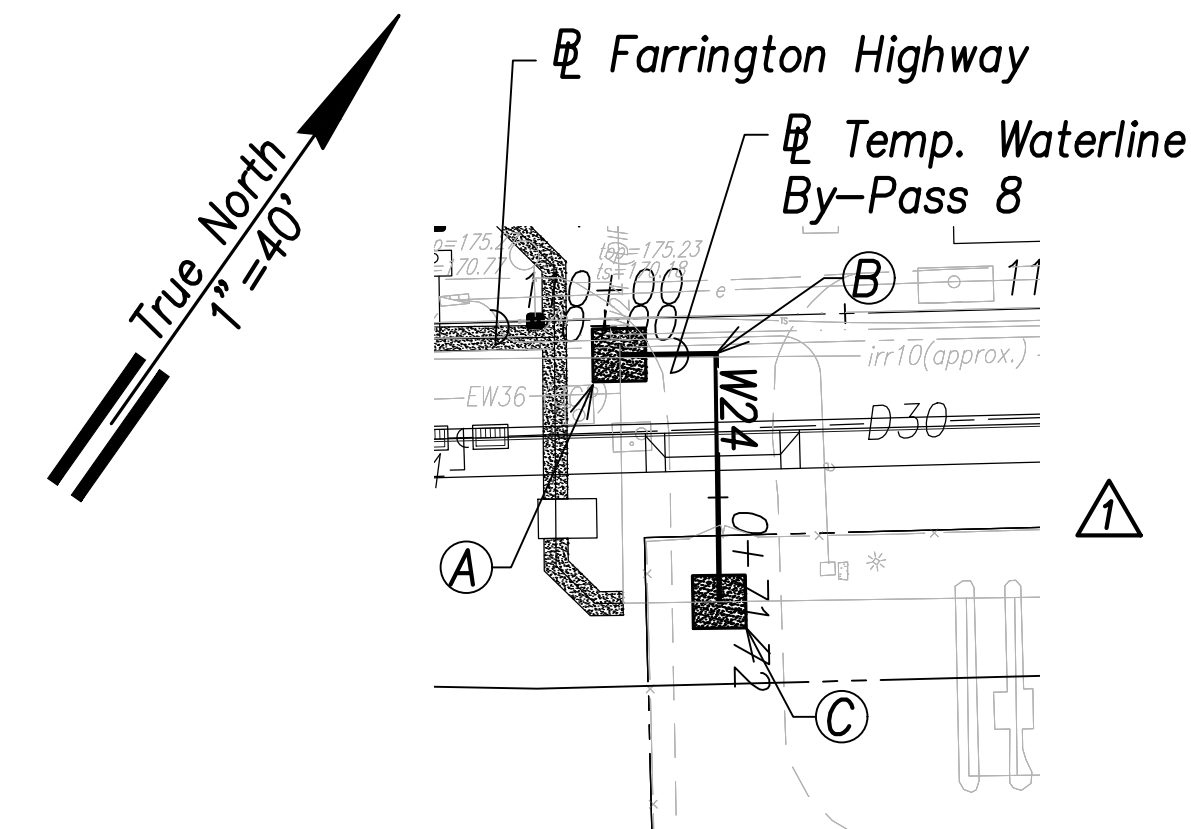
Scale: As Shown Expiration Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 172 | 767 |



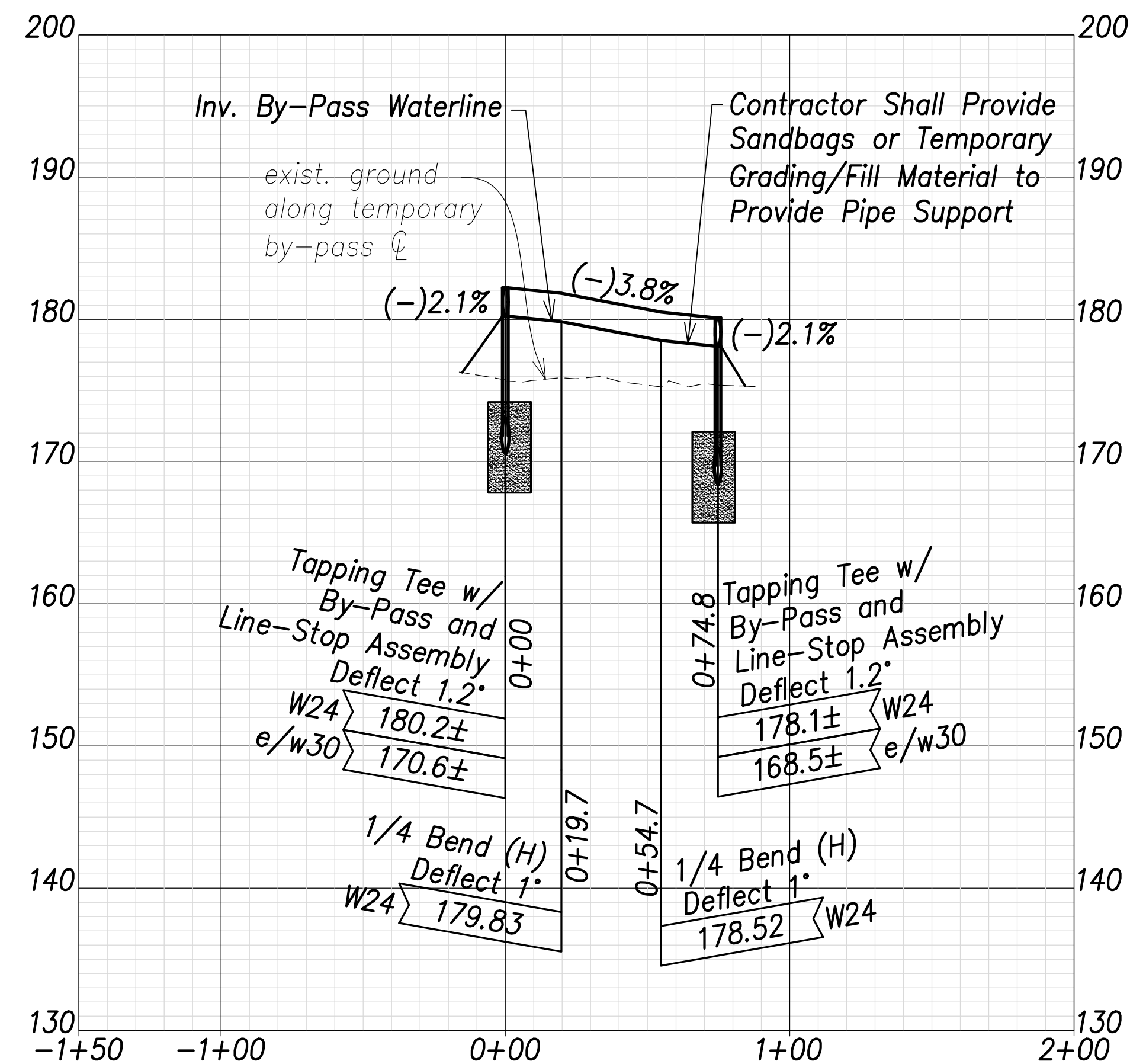
Temporary Waterline By-Pass 7 Plan
 (Sta. 110+03.4 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 109+51.1, o/s 39.3' Lt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 109+51.3, o/s 59' Lt. Farrington Highway
 = Sta. 0+19.7 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 109+86.3, o/s 58.6' Lt. Farrington Highway
 = Sta. 0+35 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) Sta. 109+86.1, o/s 38.5' Lt. Farrington Highway
 = Sta. 0+74.8 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)

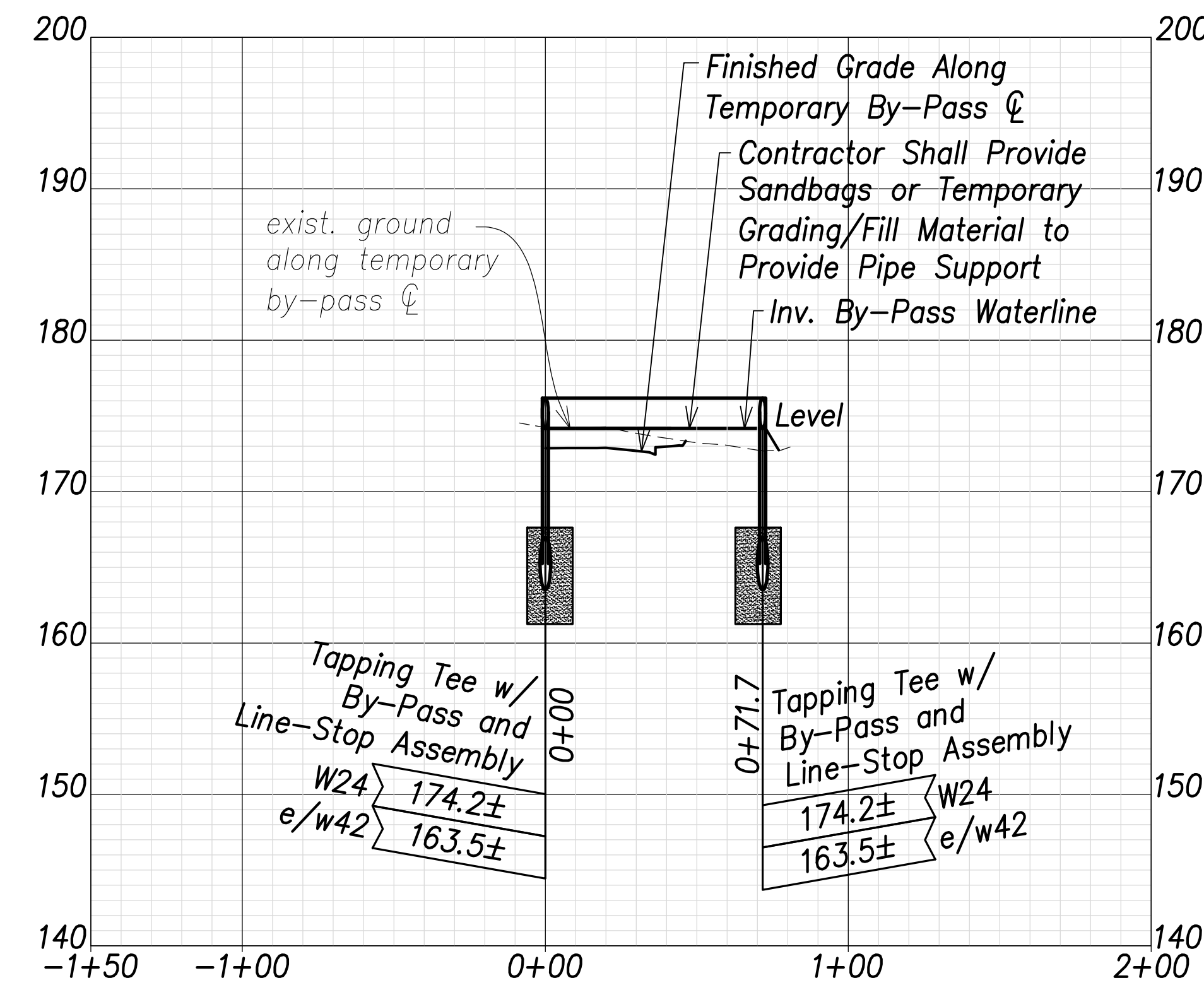


Temporary Waterline By-Pass 8 Plan
 (Sta. 110+02.3 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 110+02.9, o/s 7.4' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 110+22.9, o/s 7.7' Rt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 110+22.3, o/s 59.4' Rt. Farrington Highway
 = Sta. 0+71.7 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)



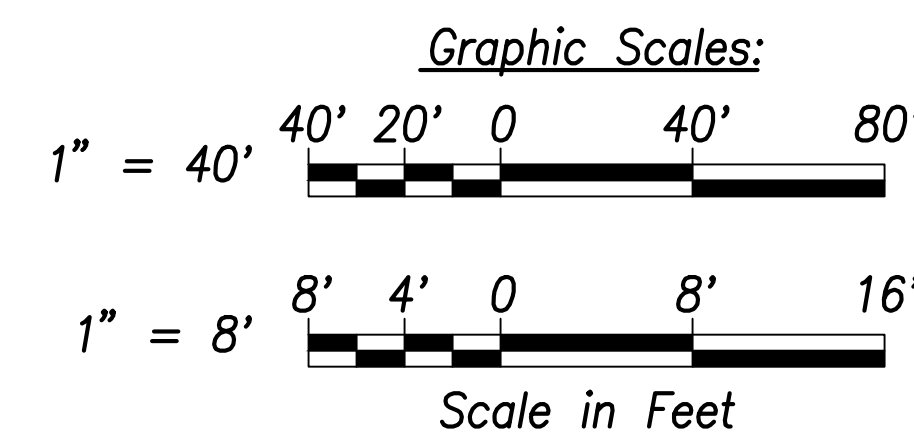
Temporary Waterline By-Pass 7 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Temporary Waterline By-Pass 8 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



CRAIG W. L. LUKE
 LICENSED PROFESSIONAL ENGINEER
 No. 6935-C
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

06/08/22 Revised By-Pass Alignment & Profile

DATE REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

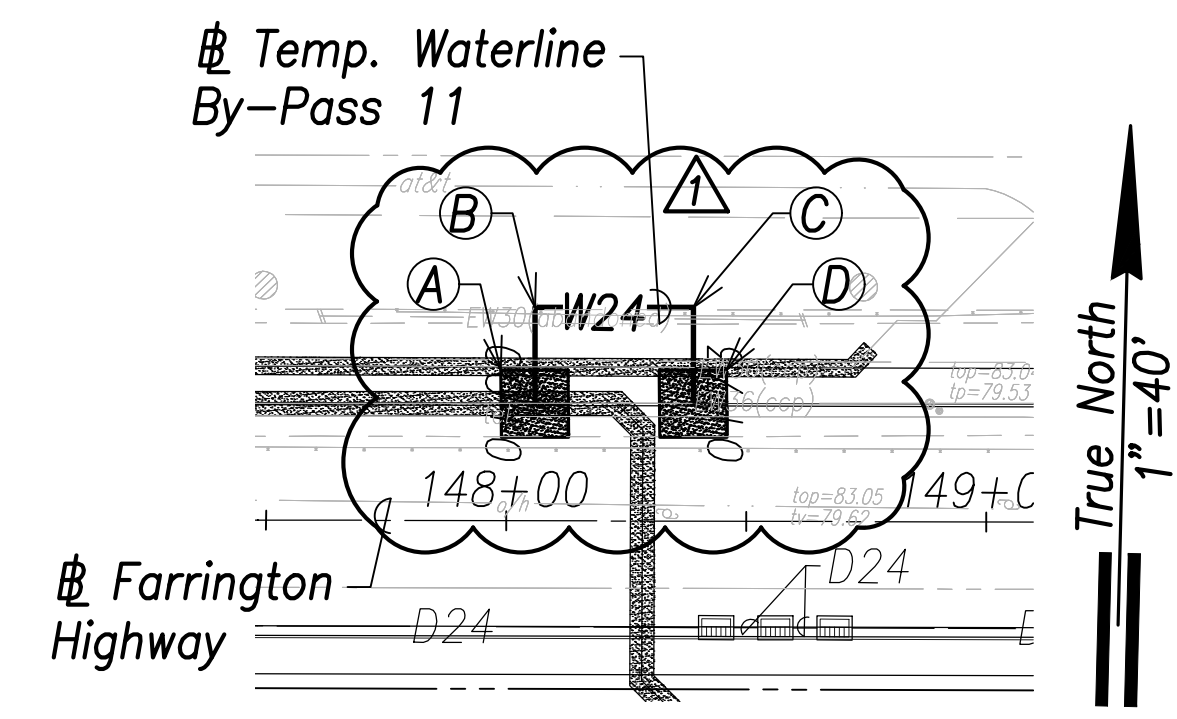
Waterline Connection and Temporary By-Pass - 4

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

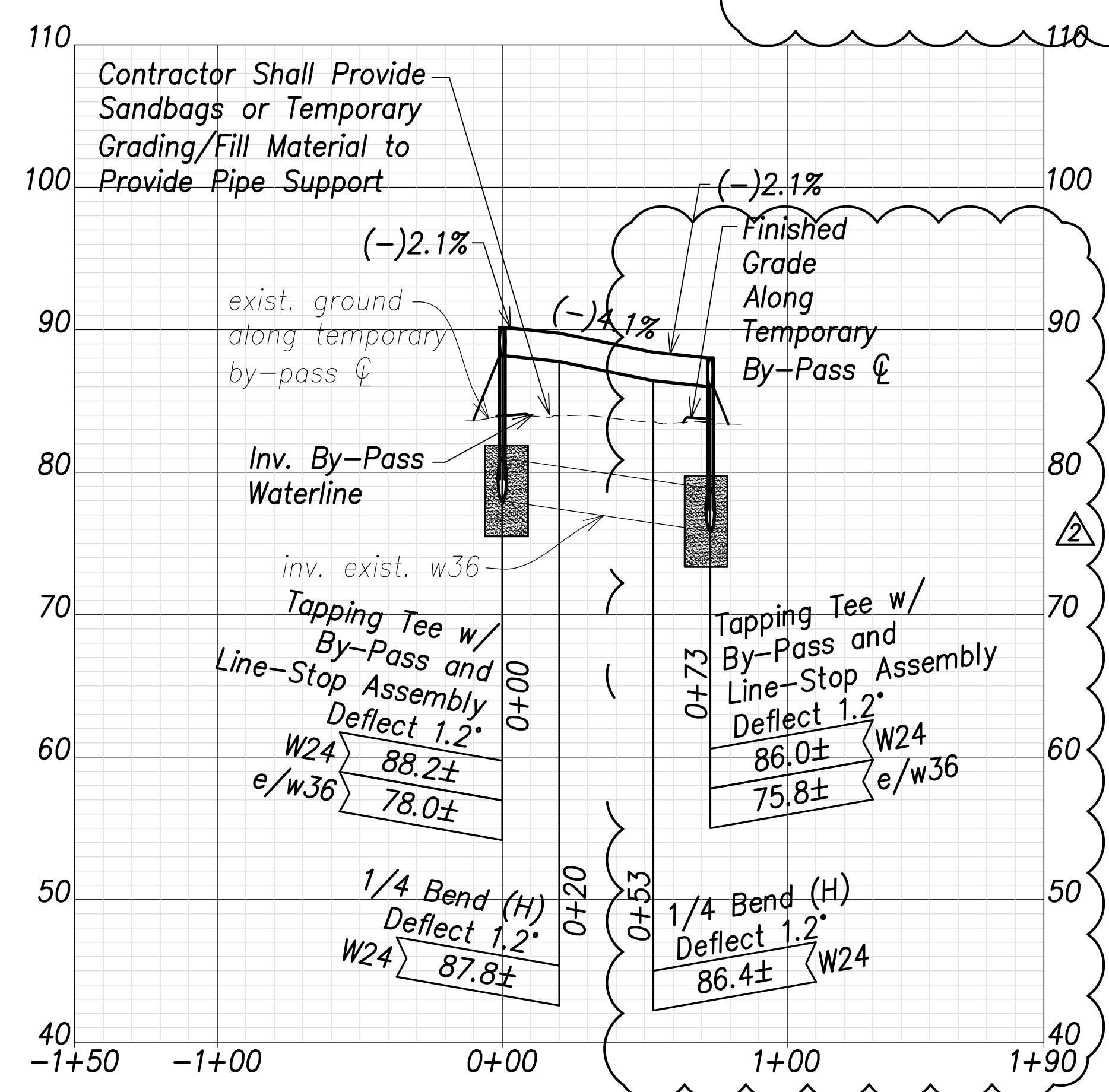
SHEET No. C-171 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 174 | 767 |

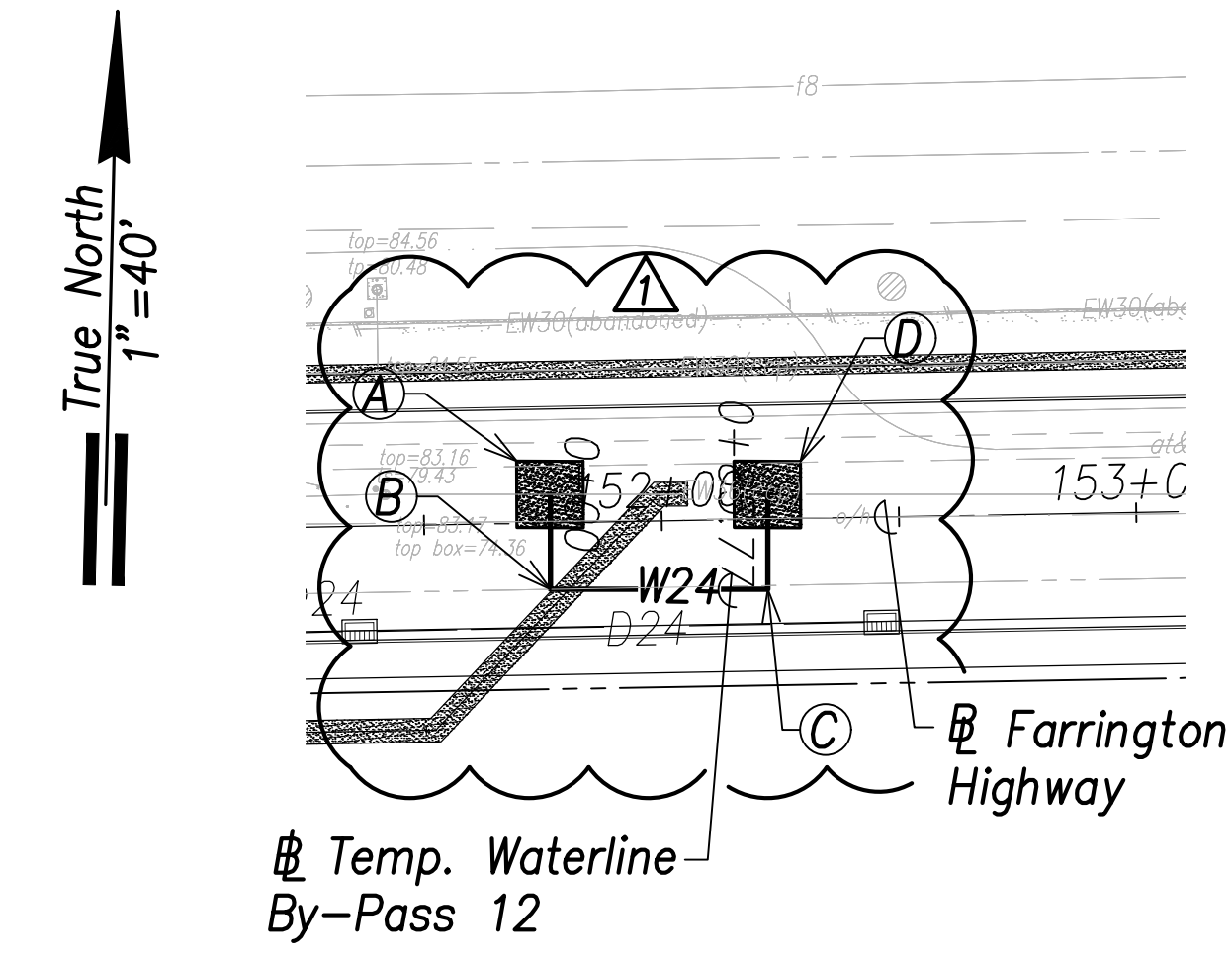


Temporary Waterline By-Pass 11 Plan
 (# Sta. 148+22.9 Farrington Highway)
 Scale: 1" = 40'

- (A) # Sta. 148+05.9, o/s 24.4' Lt. Farrington Highway
 =# Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) # Sta. 148+05.9, o/s 44.4' Lt. Farrington Highway
 =# Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) # Sta. 148+38.9, o/s 44.5' Lt. Farrington Highway
 =# Sta. 0+53 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) # Sta. 148+38.9, o/s 24.5' Lt. Farrington Highway
 =# Sta. 0+73 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)

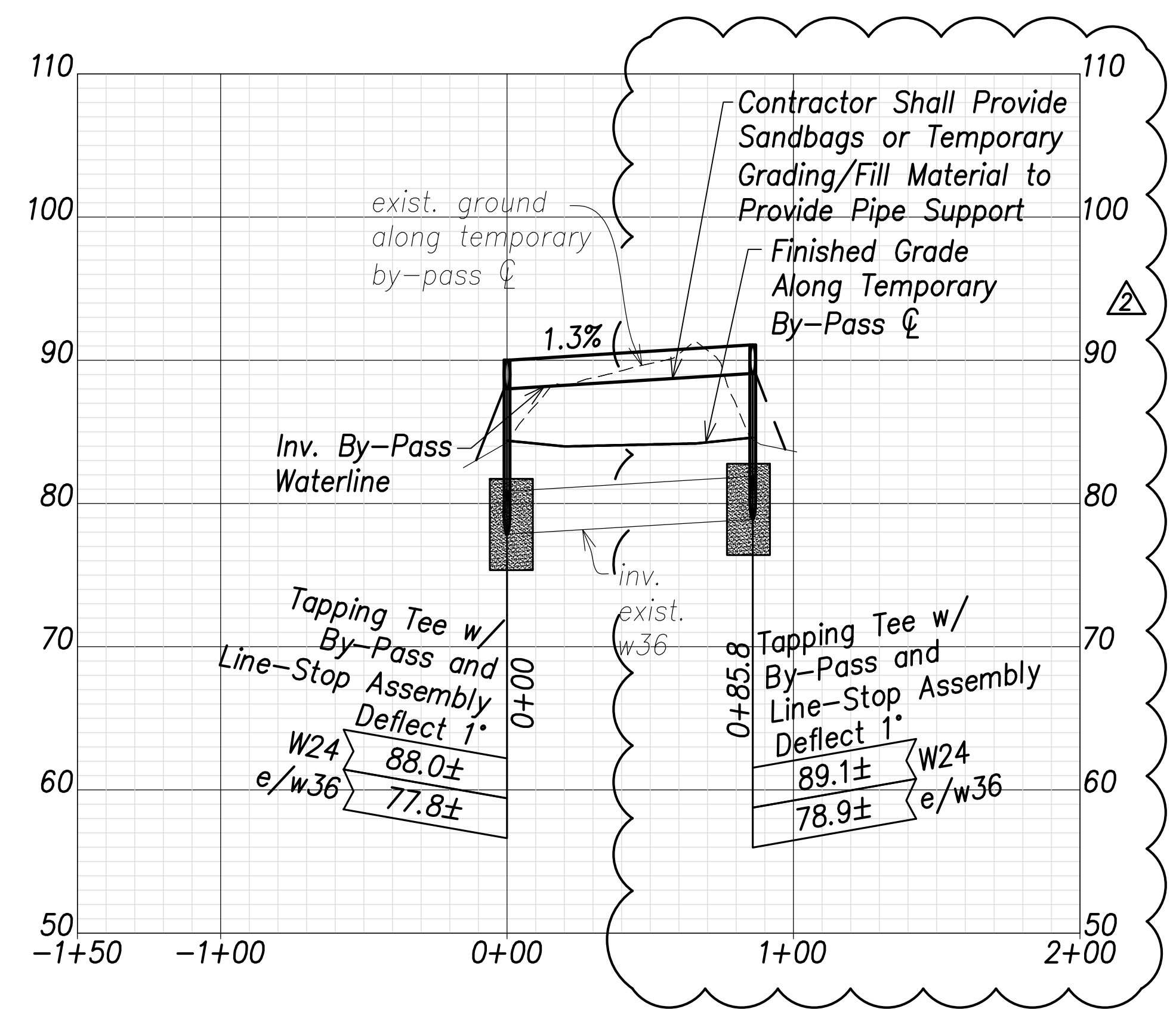


Temporary Waterline By-Pass 11 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Temporary Waterline By-Pass 12 Plan
 (# Sta. 152+05.6 Farrington Highway)
 Scale: 1" = 40'

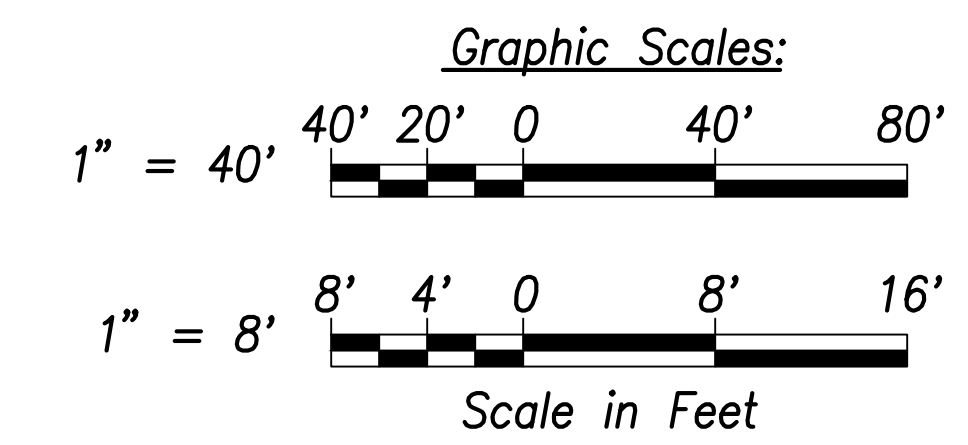
- (A) # Sta. 151+76.7, o/s 6.1' Lt. Farrington Highway
 =# Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) # Sta. 157+76.3, o/s 14' Rt. Farrington Highway
 =# Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) # Sta. 152+22.1, o/s 14.8' Rt. Farrington Highway
 =# Sta. 0+65.8 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) # Sta. 152+22.4, o/s 5.2' Lt. Farrington Highway
 =# Sta. 0+85.8 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)



Temporary Waterline By-Pass 12 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



CRAIG W. L. LUKE
 LICENSED PROFESSIONAL ENGINEER
 No. 6935-C
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: _____
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

06/08/22 Revised By-Pass Alignment & Profile

DATE REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

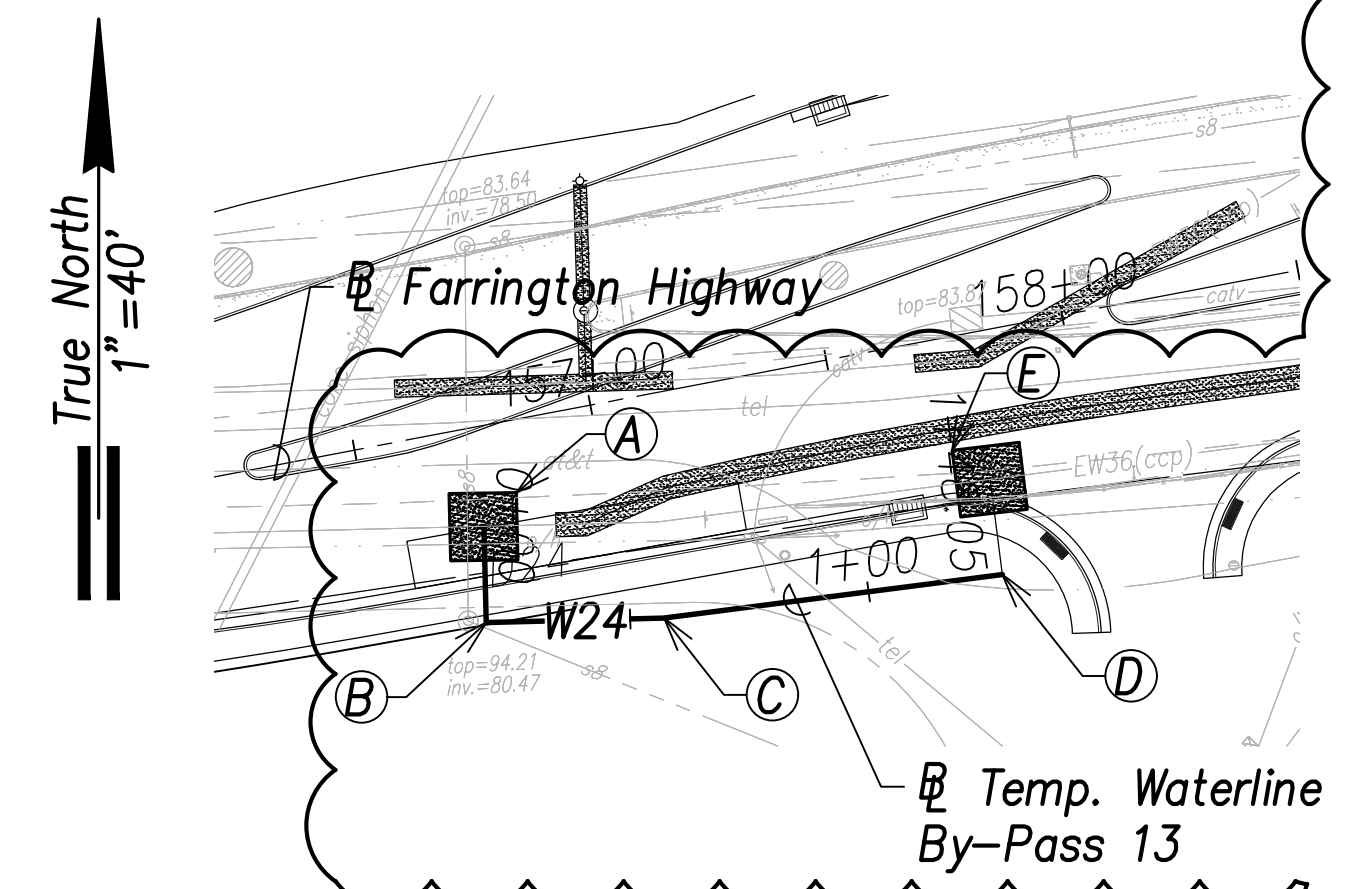
Waterline Connection and Temporary By-Pass - 6

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

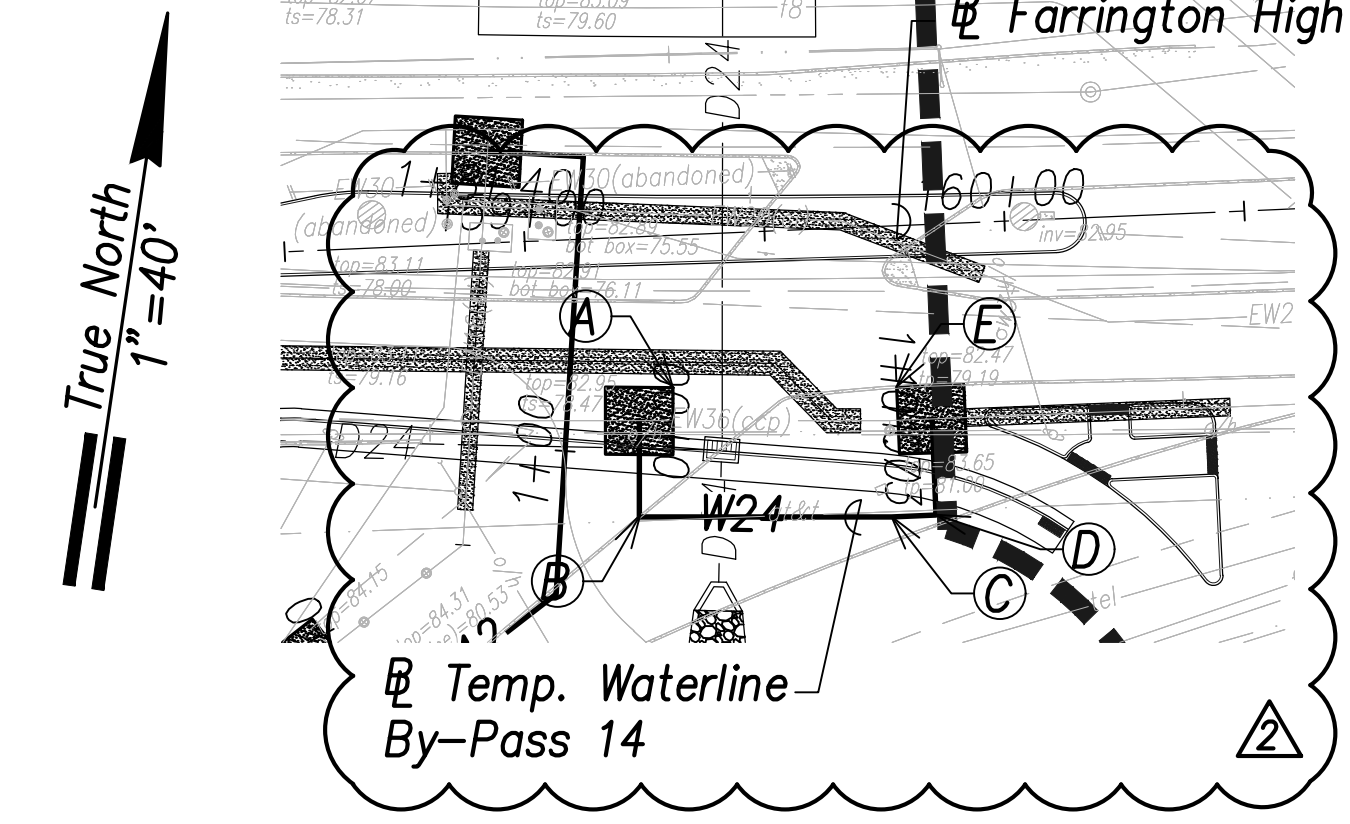
SHEET No. C-173 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 175 | 767 |



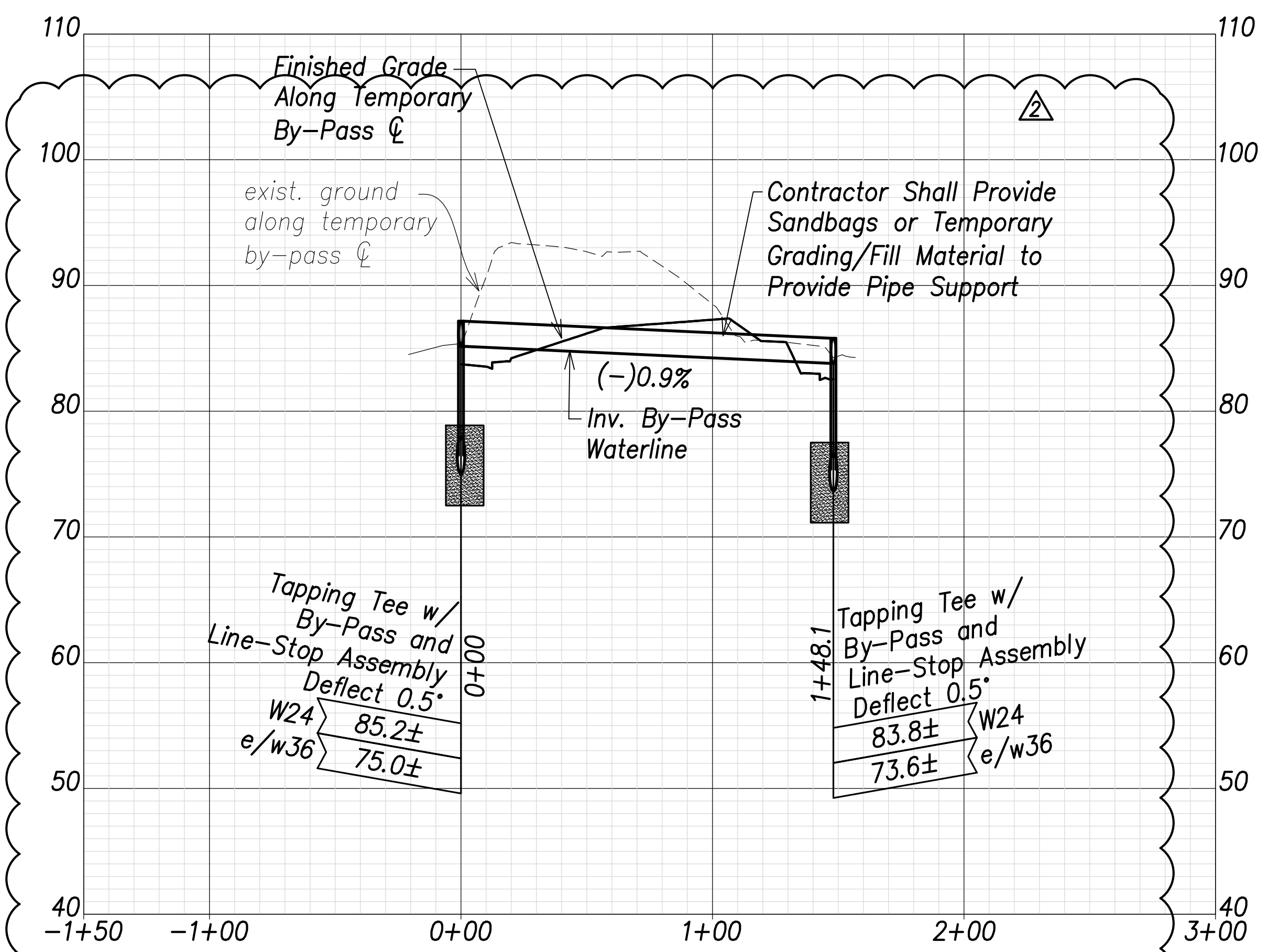
Temporary Waterline By-Pass 13 Plan
 (# Sta. 156+94.2 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 156+73.5, o/s 20.7' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 156+70.2, o/s 40.4' Rt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 157+06.7, o/s 46.5' Rt. Farrington Highway
 = Sta. 0+57 By-Pass
 1-24" 1/16 Bend, Fl.
- (D) Sta. 157+77.6, o/s 50.8' Rt. Farrington Highway
 = Sta. 1+28.1 By-Pass
 1-24" 1/4 Bend, Fl.
- (E) Sta. 157+78.8, o/s 30.8' Rt. Farrington Highway
 = Sta. 1+48.1 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)

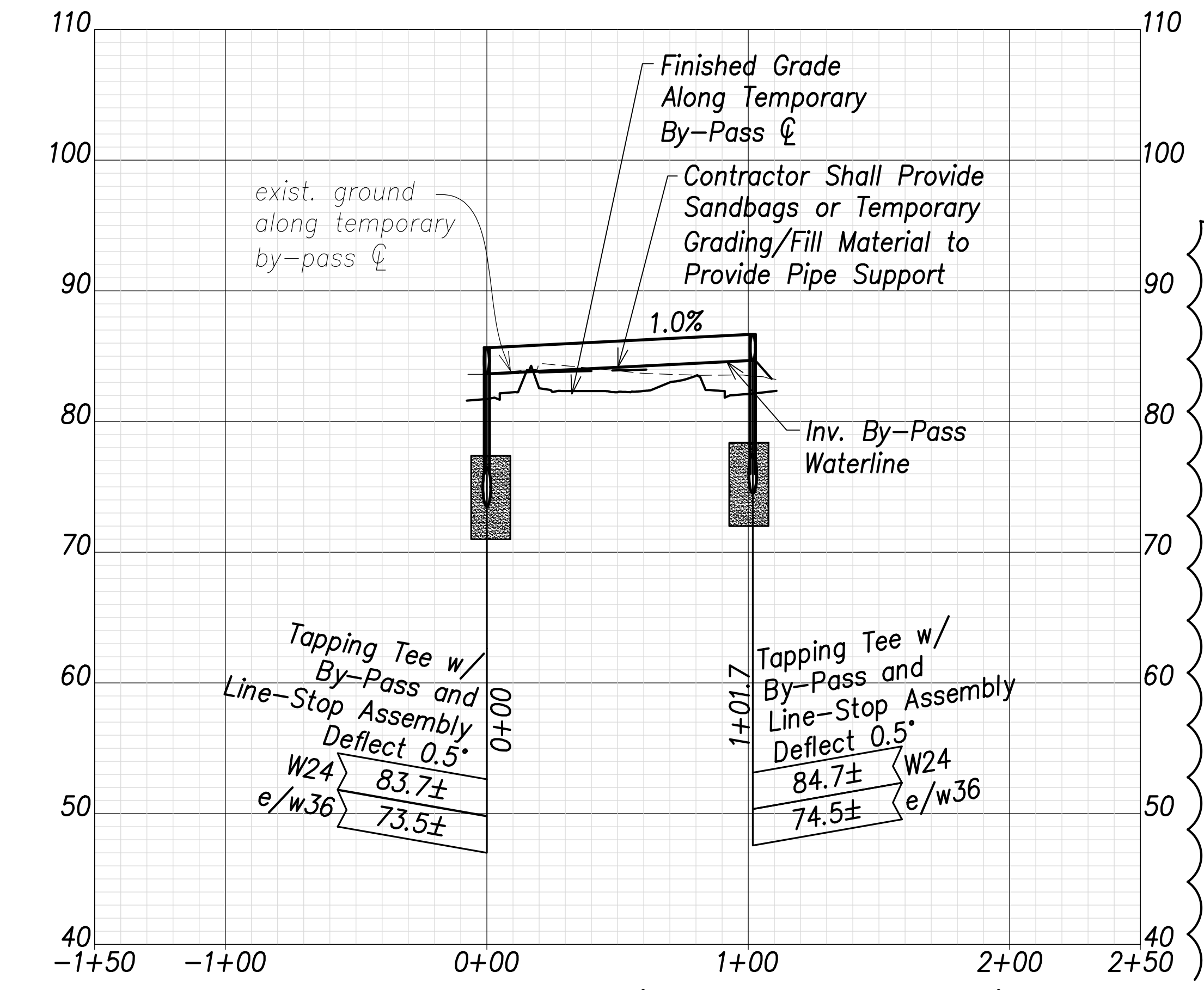


Temporary Waterline By-Pass 14 Plan
 (# Sta. 159+62.3 Farrington Highway)
 Scale: 1" = 40'

- (A) Sta. 159+22.3, o/s 38.3' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- (B) Sta. 159+21.5, o/s 58.3' Rt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- (C) Sta. 159+73.9, o/s 60.5' Rt. Farrington Highway
 = Sta. 0+472.5 By-Pass
 1-24" Deflection
- (D) Sta. 159+83.2, o/s 60.5' Rt. Farrington Highway
 = Sta. 0+81.7 By-Pass
 1-24" 1/4 Bend, Fl.
- (D) Sta. 159+83.2, o/s 40.5' Rt. Farrington Highway
 = Sta. 1+01.7 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)



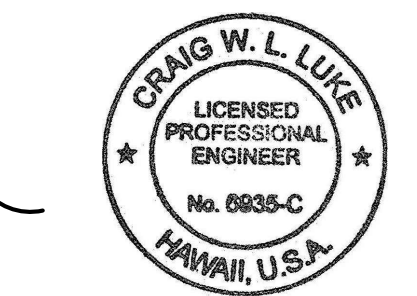
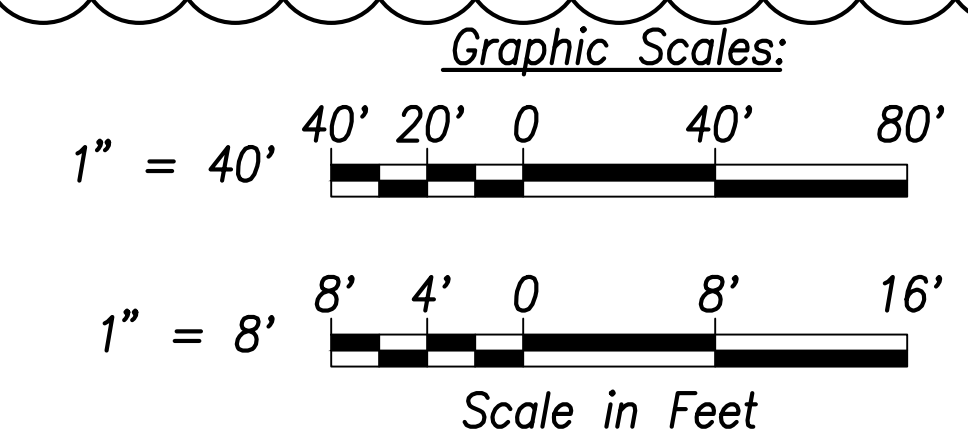
Temporary Waterline By-Pass 13 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



Temporary Waterline By-Pass 14 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'

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

APPROVED:
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)



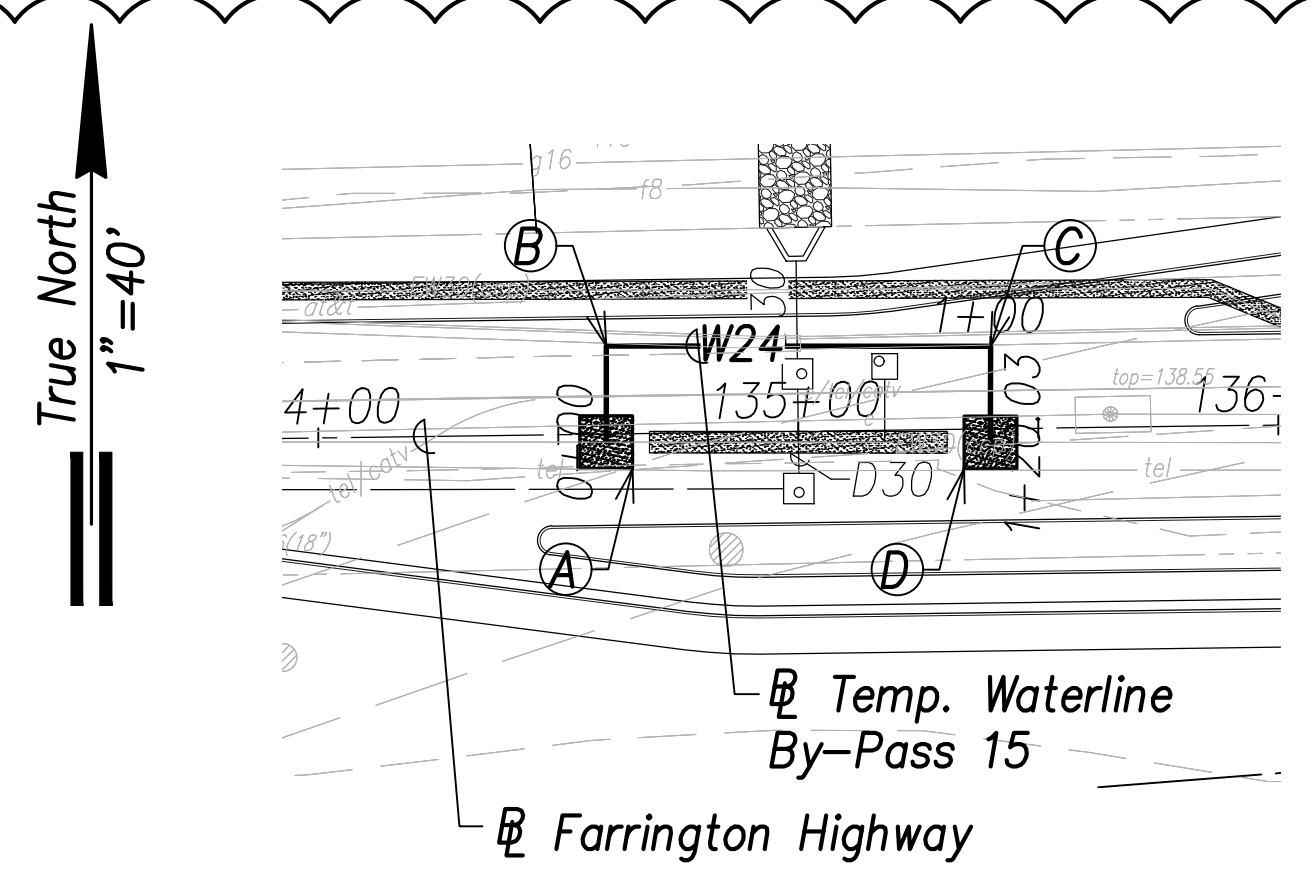
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: [Signature]
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|-------------------------------------|
| 06/08/22 | Revised By-Pass Alignment & Profile |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Waterline Connection and Temporary By-Pass - 7
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

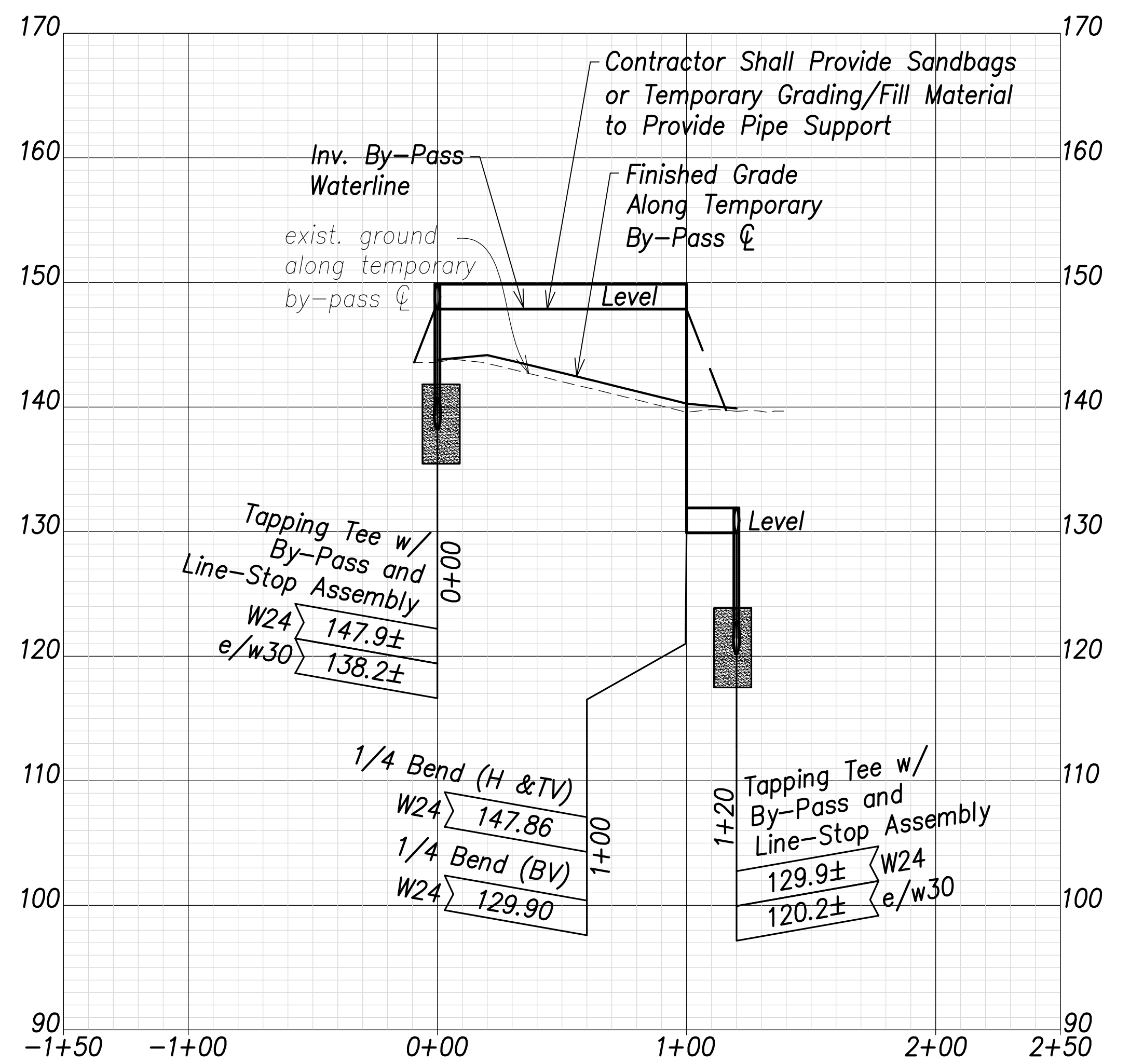
Scale: As Shown Date: April 2022
 SHEET No. C-174 OF 175 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 176 | 767 |

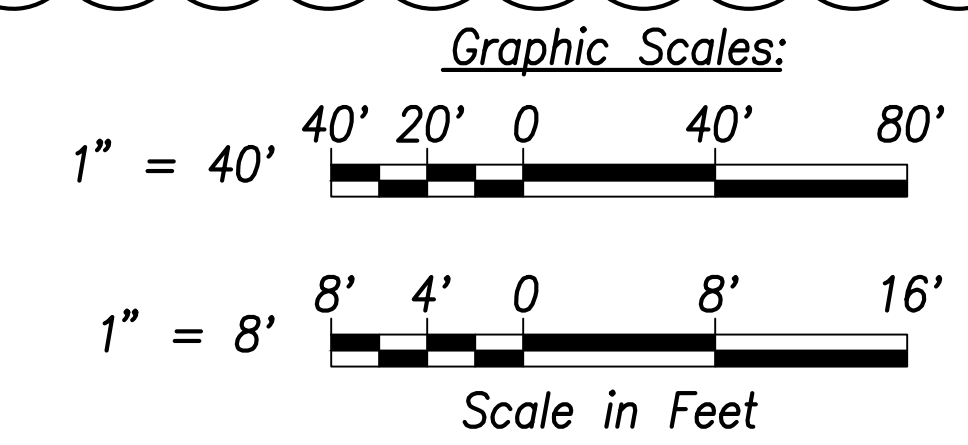


Temporary Waterline By-Pass 15 Plan
 (Sta. 134+75 Farrington Highway)
 (Sta. 135+24.9 Farrington Highway)
 Scale: 1" = 40'

- Ⓐ Sta. 134+60, o/s 1.7' Rt. Farrington Highway
 = Sta. 0+00 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)
- Ⓑ Sta. 134+60.3, o/s 18.3' Lt. Farrington Highway
 = Sta. 0+20 By-Pass
 1-24" 1/4 Bend, Fl.
- Ⓒ Sta. 135+40.3, o/s 17.2' Lt. Farrington Highway
 = Sta. 1+00 By-Pass
 1-24" 1/4 Bend, Fl.
- Ⓓ Sta. 135+40, o/s 2.8' Rt. Farrington Highway
 = Sta. 1+20 By-Pass
 Temporary By-Pass Connection
 See Detail Shts. C-208 to C-211 (Typ.)



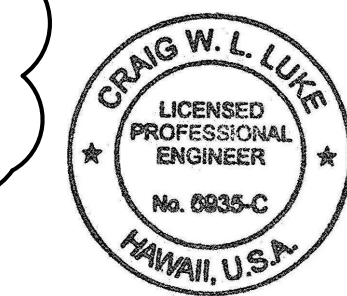
Temporary Waterline By-Pass 15 Profile
 Scales: Hor.: 1" = 40'
 Vert.: 1" = 8'



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

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

06/08/22 Revised By-Pass Alignment & Profile
 DATE REVISION



THIS WORK WAS PREPARED BY ME
 OR UNDER MY SUPERVISION AND
 CONSTRUCTION OF THIS PROJECT
 WILL BE UNDER MY OBSERVATION.
 SIGNATURE: EXPIRATION DATE: April 30, 2022
 OF THE LICENSE

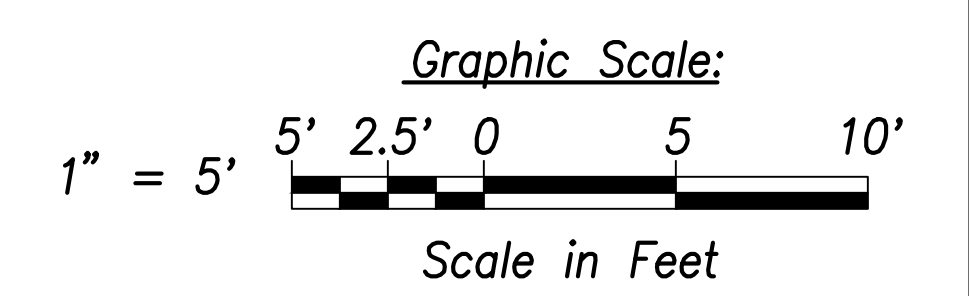
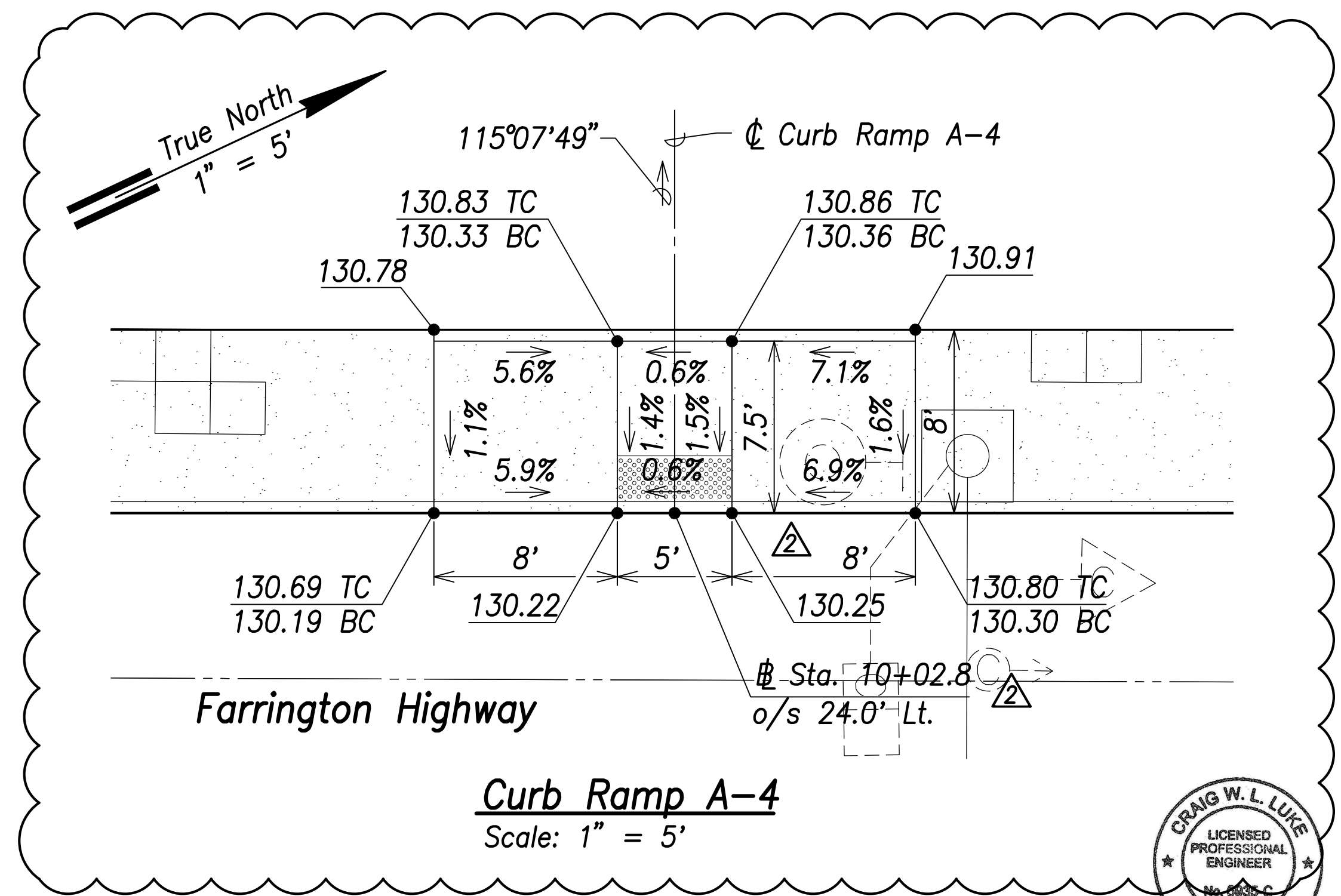
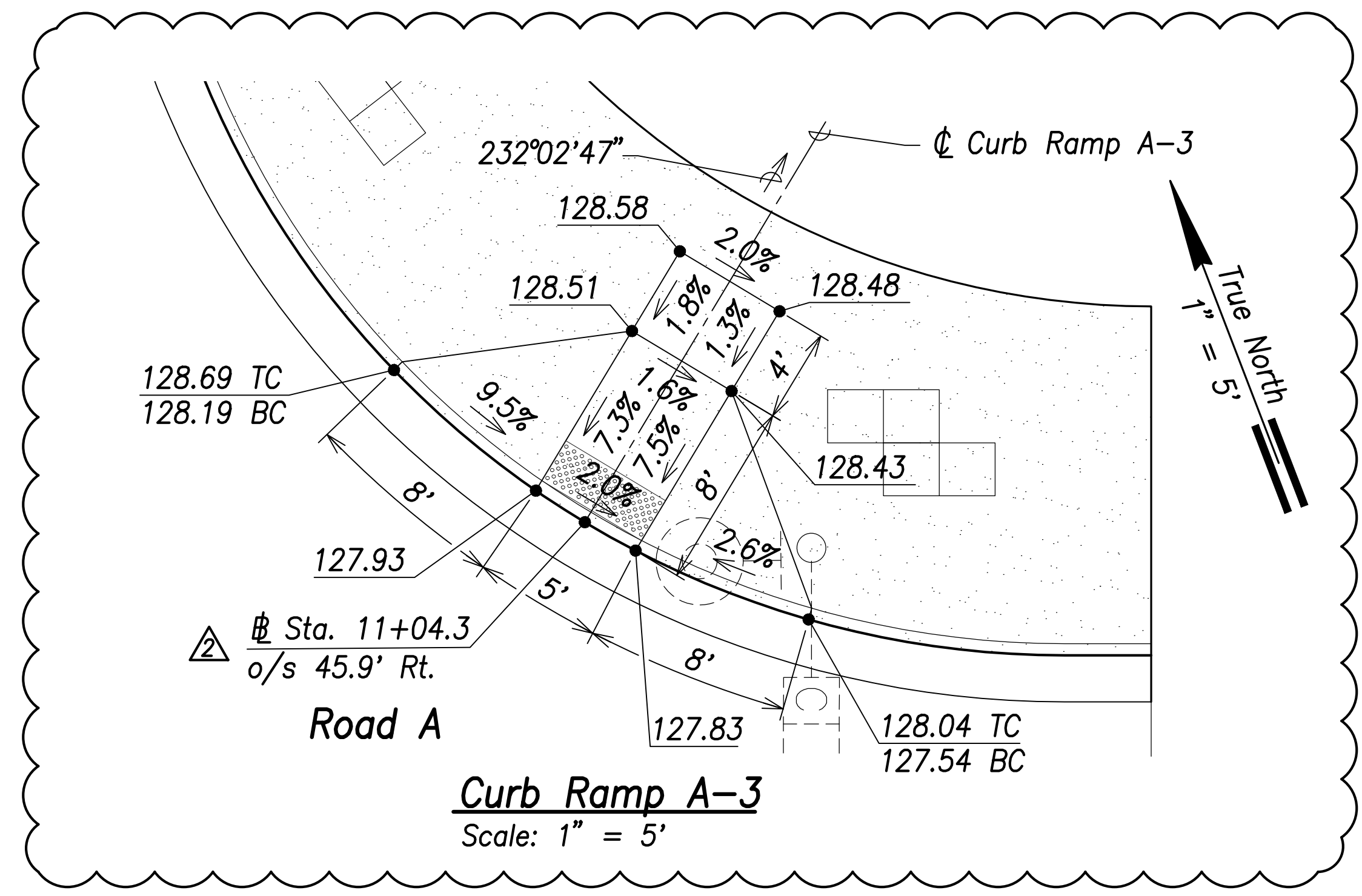
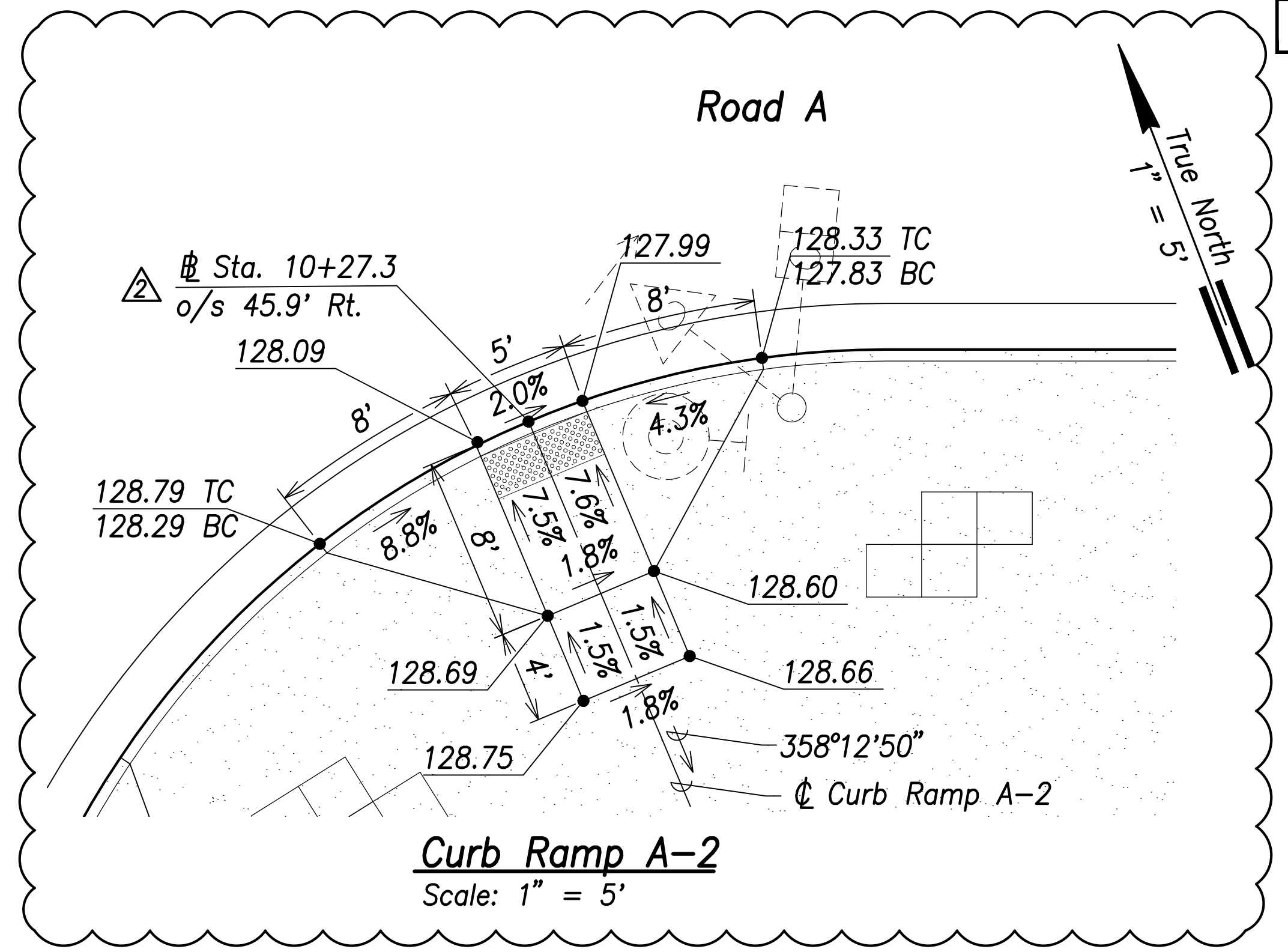
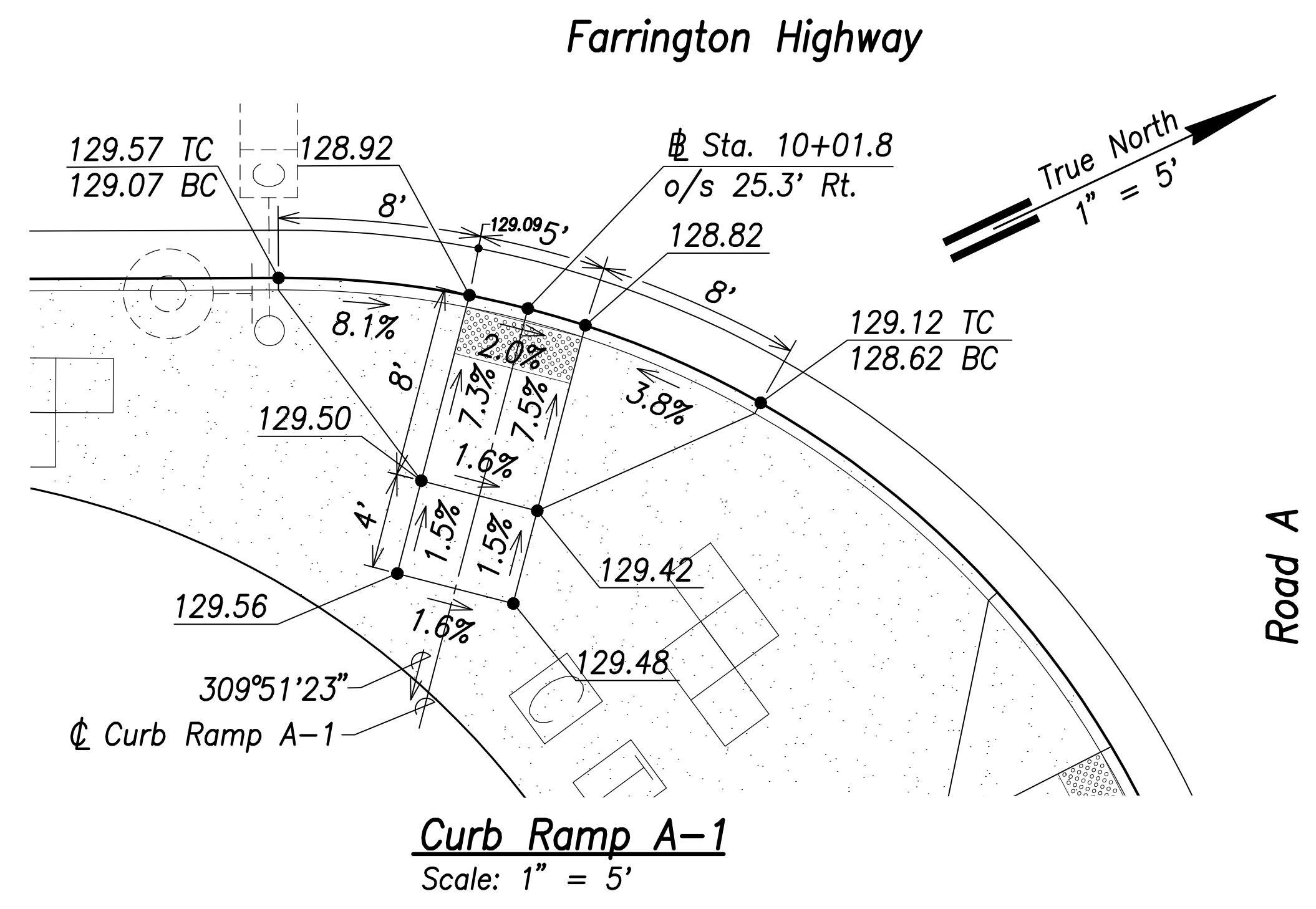
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**Waterline Connection and
 Temporary By-Pass - 8**

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

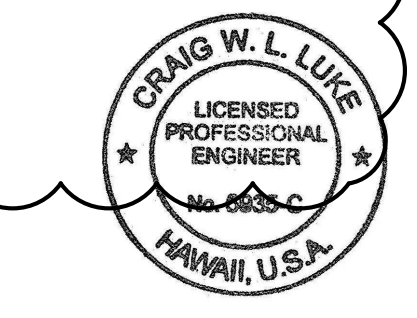
Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 184 | 767 |



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

| | |
|----------|--------------------------------|
| 06/08/22 | △ Detectable Warning Mat Added |
| DATE | REVISION |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

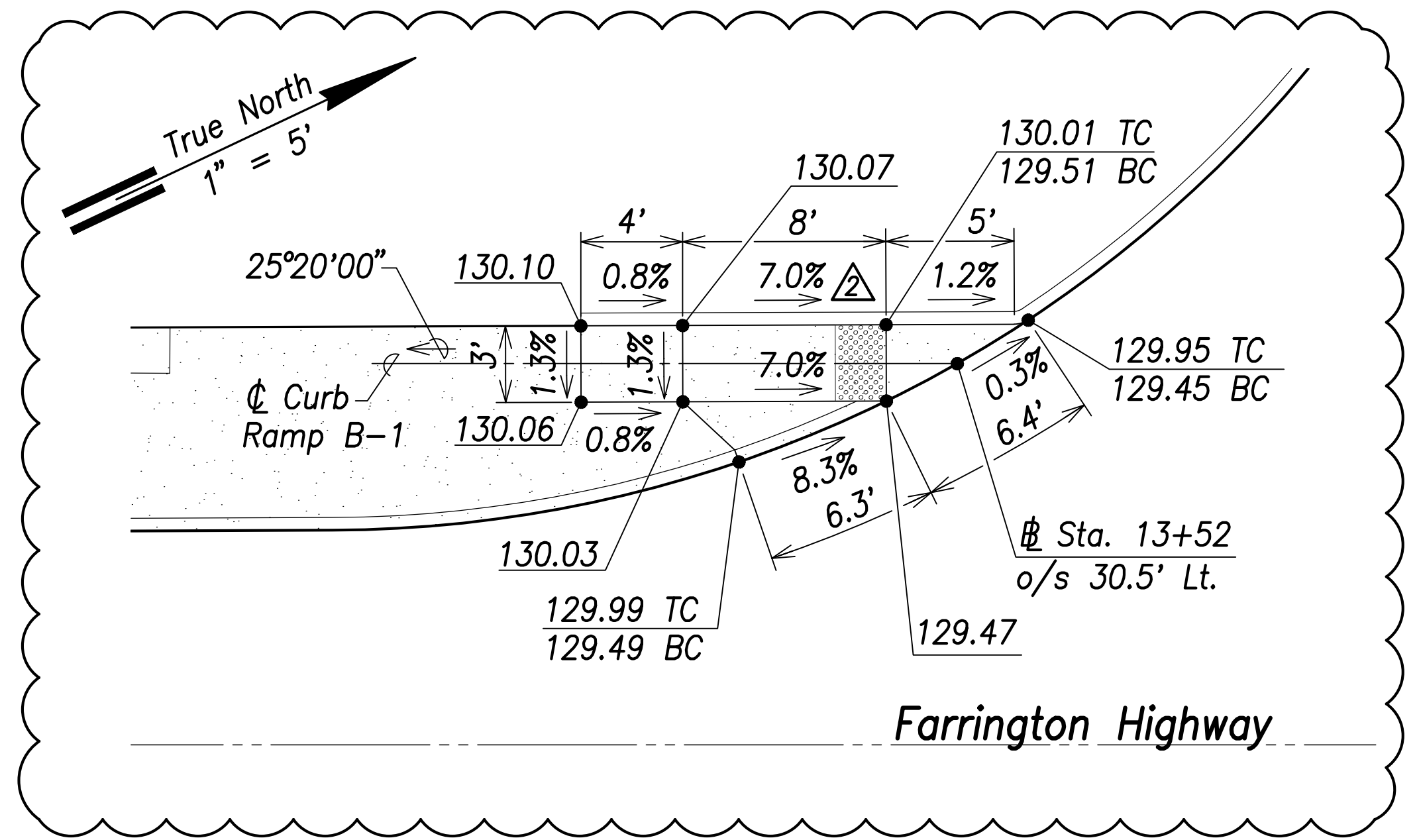
Curb Ramp Layout & Grading Plan - 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

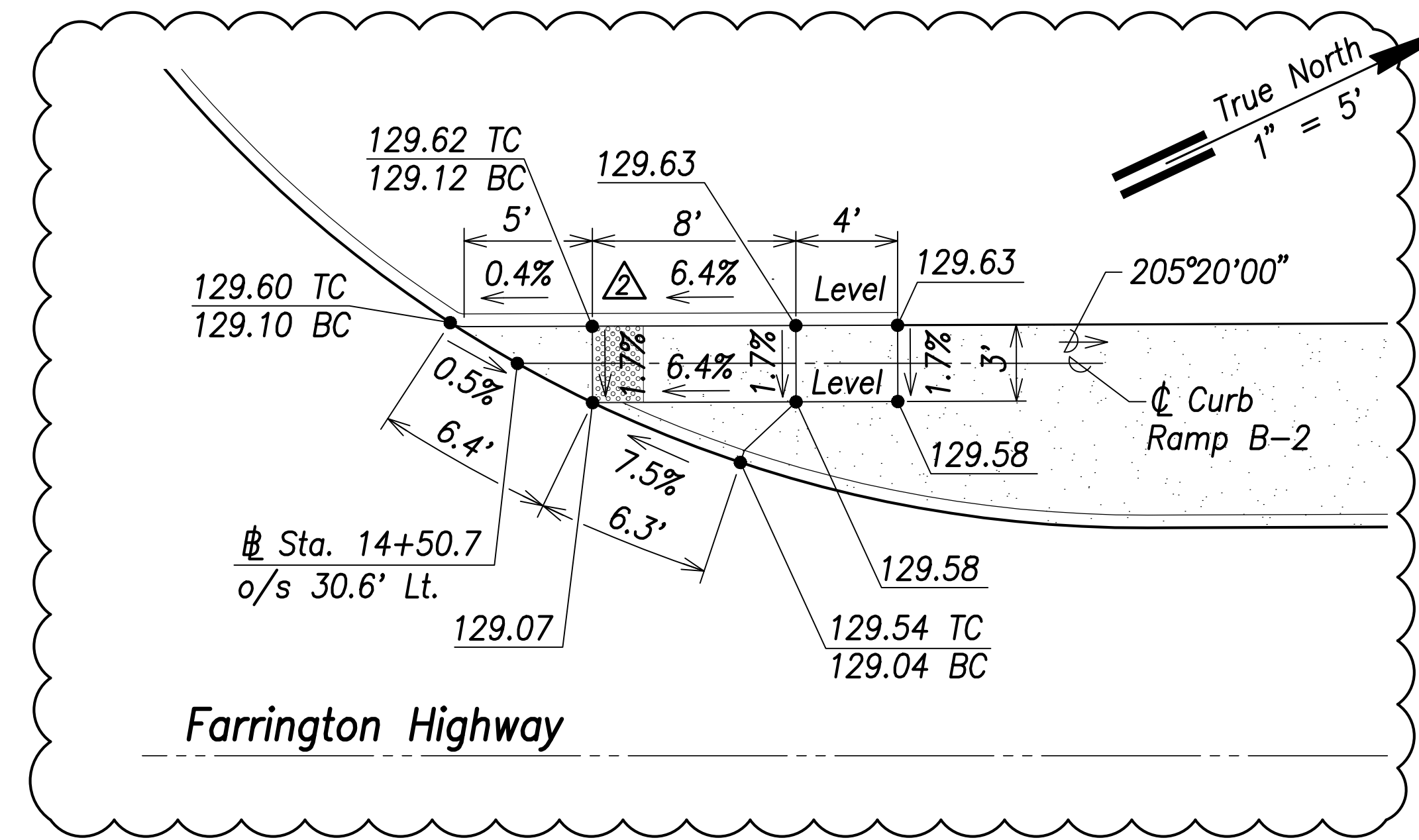
Scale: As Shown Date: April 2022

SHEET No. C-183 OF 767 SHEETS

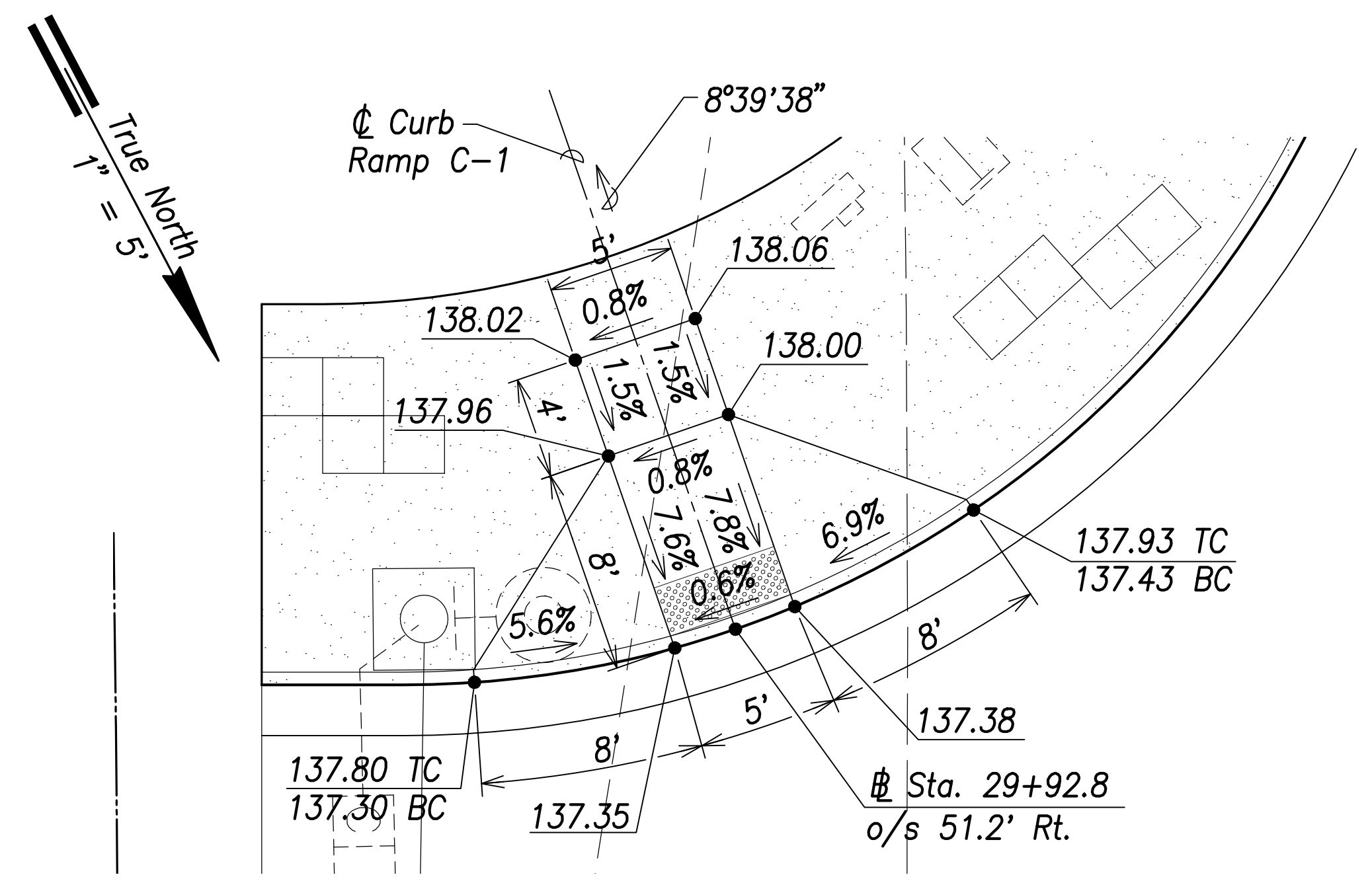
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 185 | 767 |



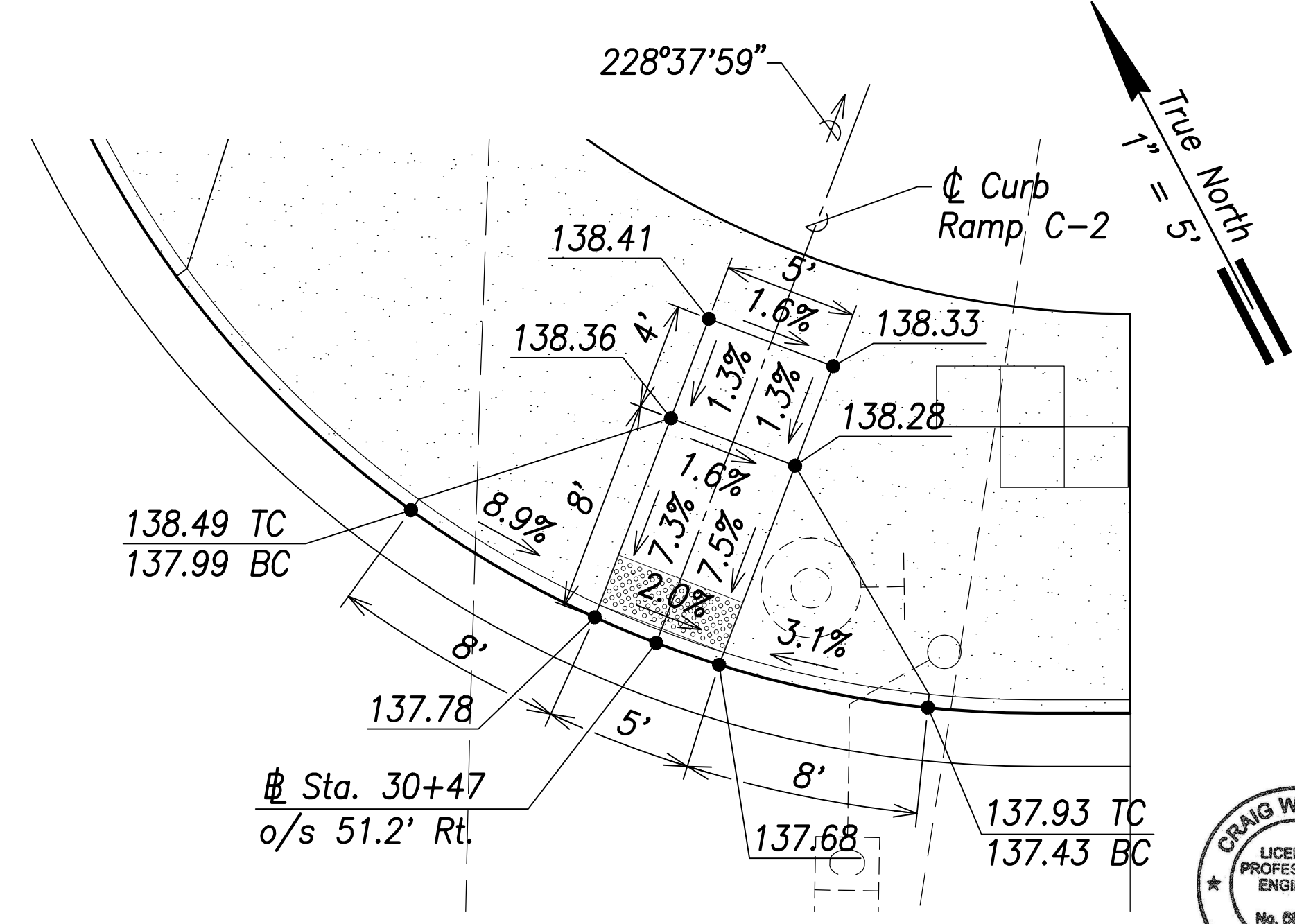
Curb Ramp B-1
Scale: 1" = 5'



Curb Ramp B-2
Scale: 1" = 5'

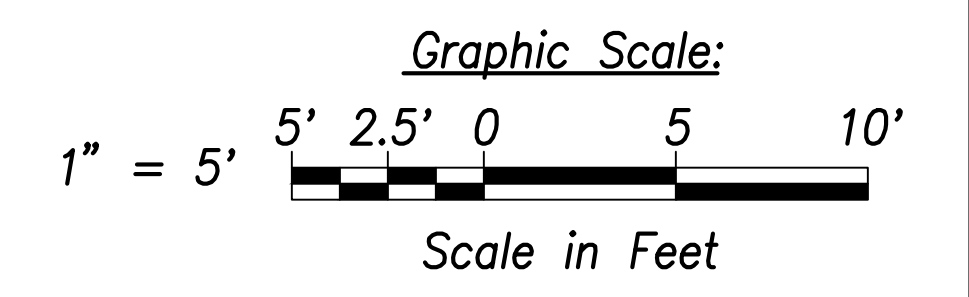


Curb Ramp C-1
Scale: 1" = 5'

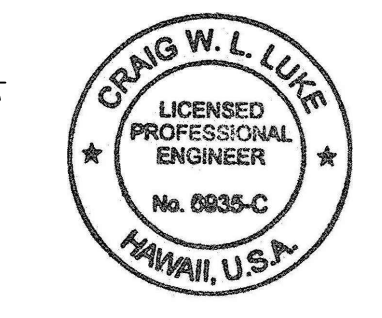


Curb Ramp C-2
Scale: 1" = 5'

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



| DATE | REVISION |
|----------|--------------------------------|
| 06/08/22 | 2 Detectable Warning Mat Added |



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 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

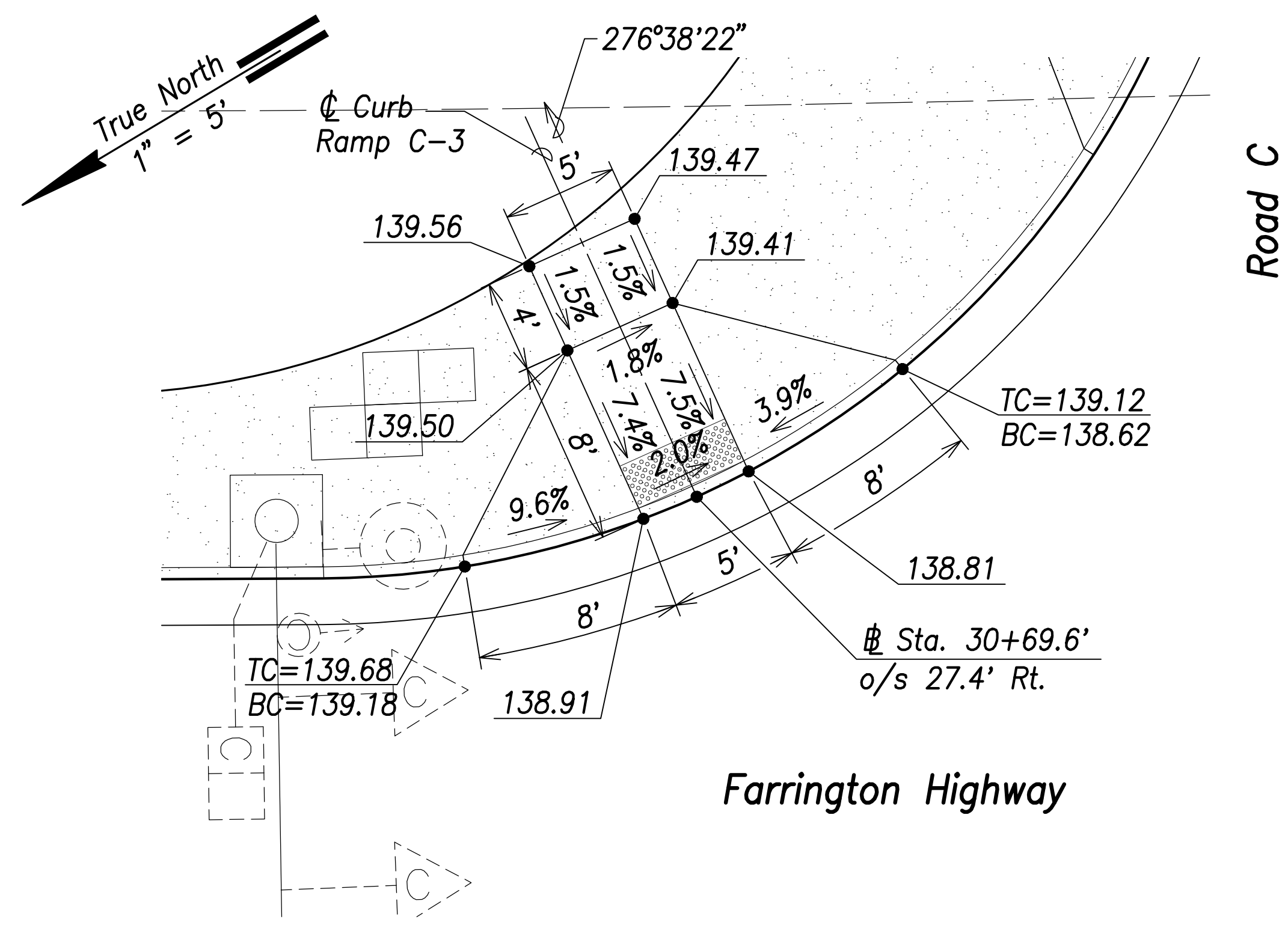
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**Curb Ramp
 Layout & Grading Plan -2**

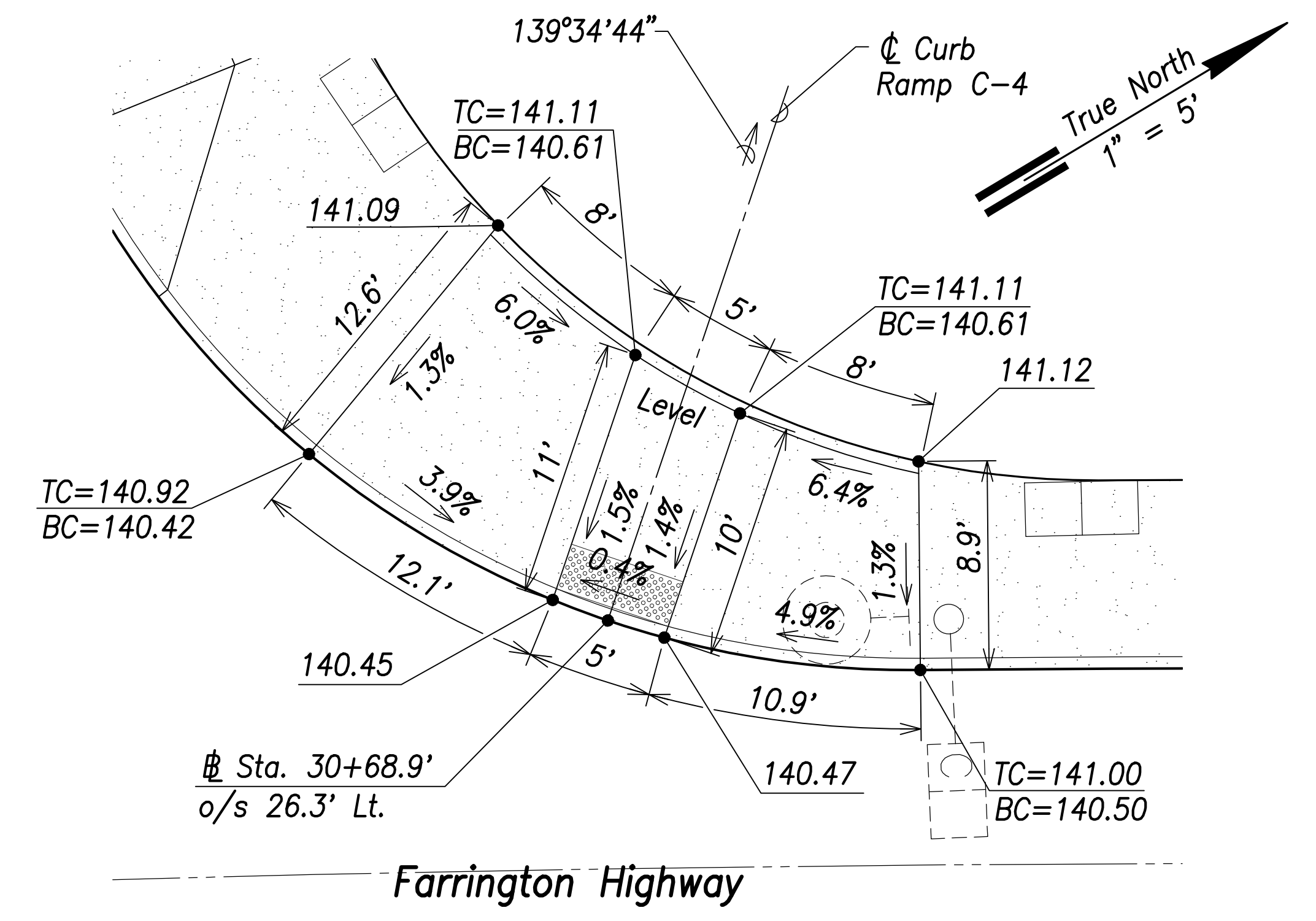
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

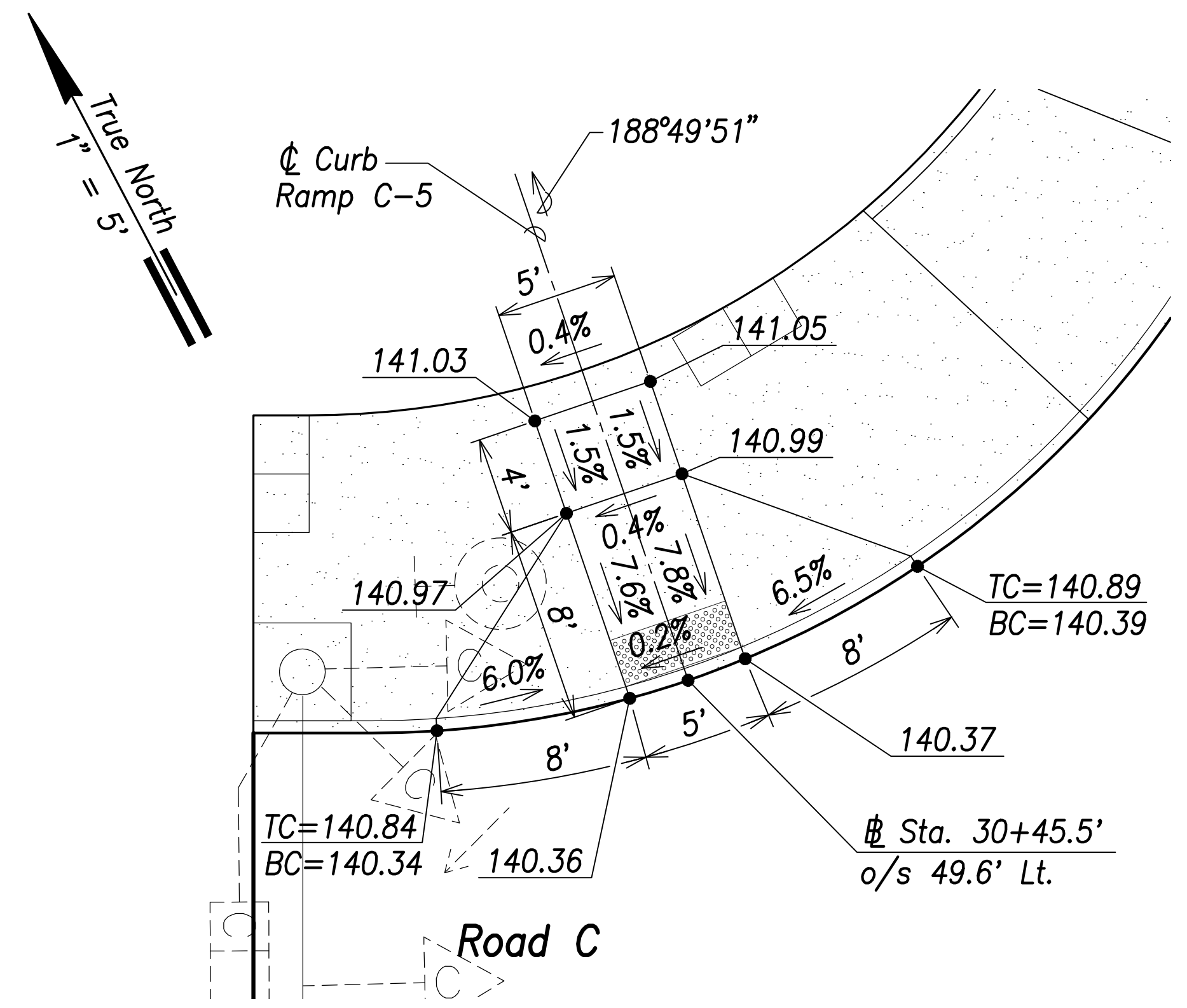
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 186 | 767 |



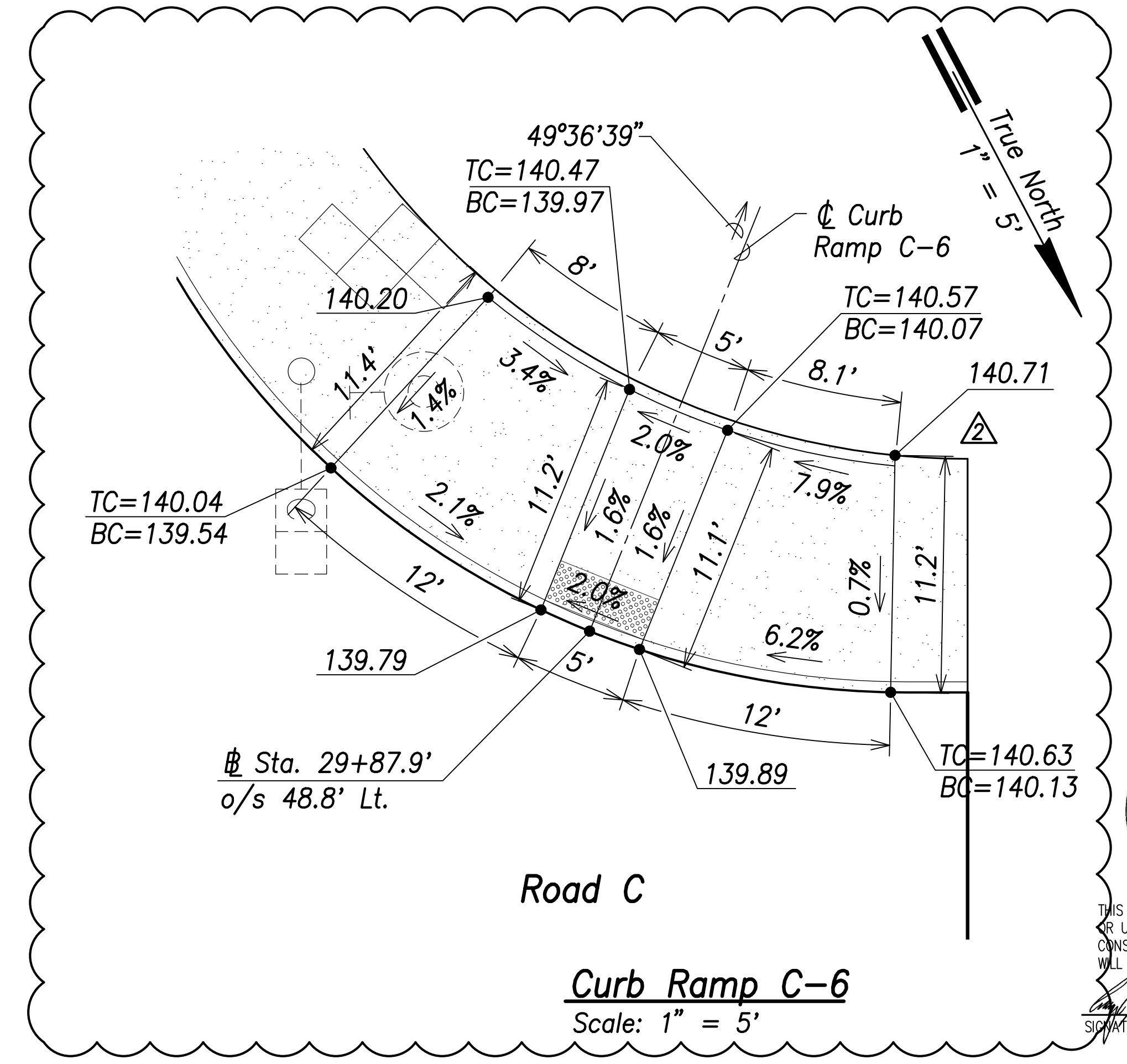
Curb Ramp C-3
Scale: 1" = 5'



Curb Ramp C-4
Scale: 1" = 5'

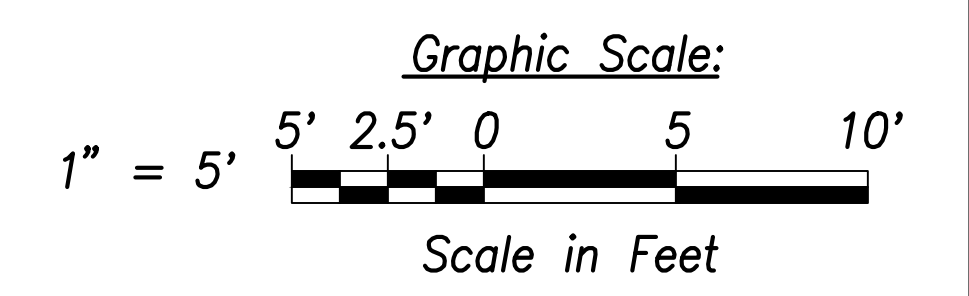


Curb Ramp C-5
Scale: 1" = 5'



Curb Ramp C-6
Scale: 1" = 5'

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



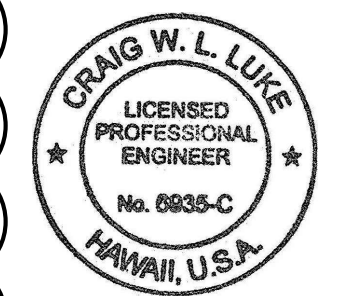
| | |
|----------|------------------------------|
| 06/08/22 | Elevation and Slopes Revised |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**Curb Ramp
Layout & Grading Plan - 3**

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

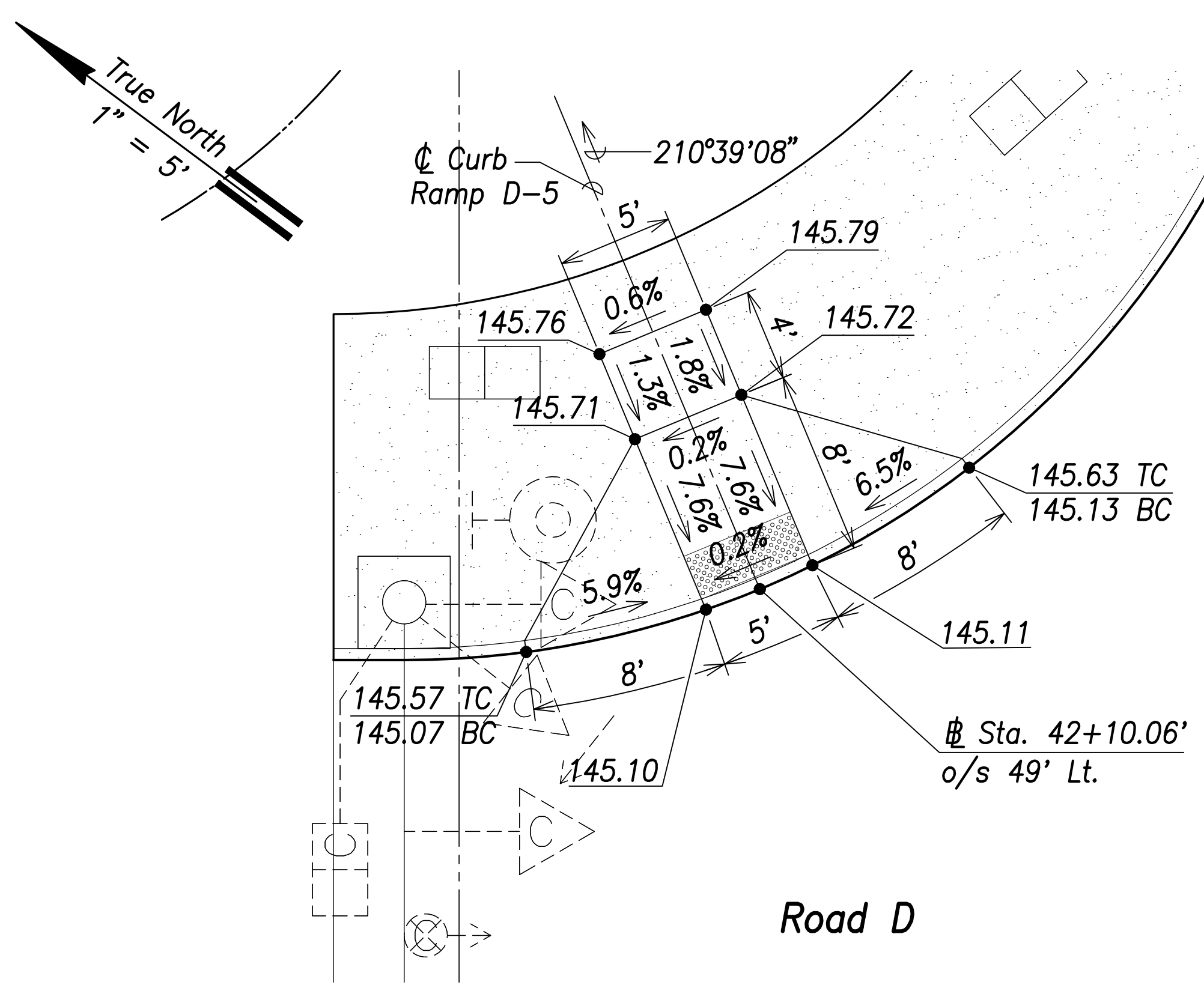
Scale: As Shown Date: April 2022



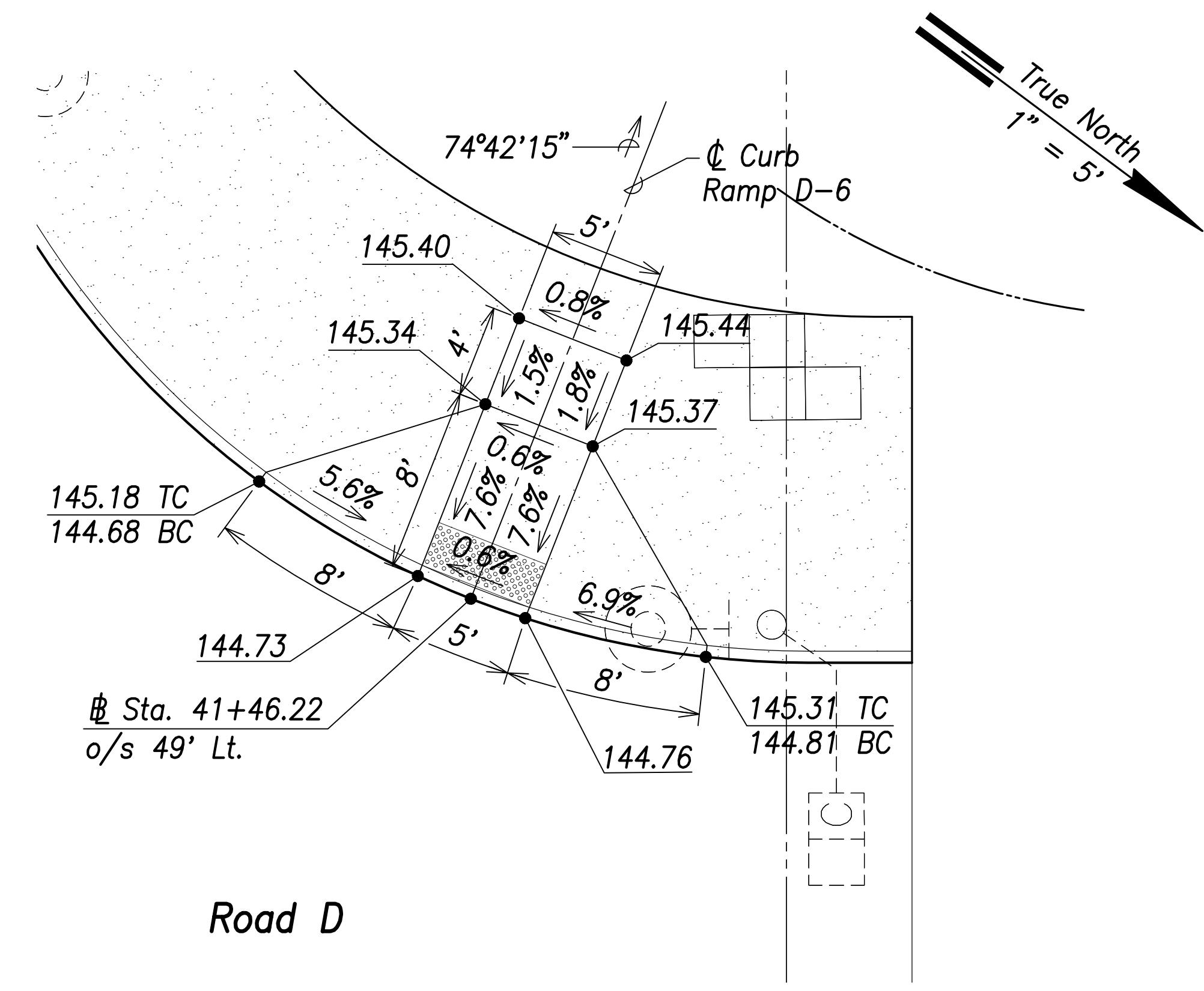
THIS WORK WAS PREPARED BY ME
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WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE
OF THE LICENSE

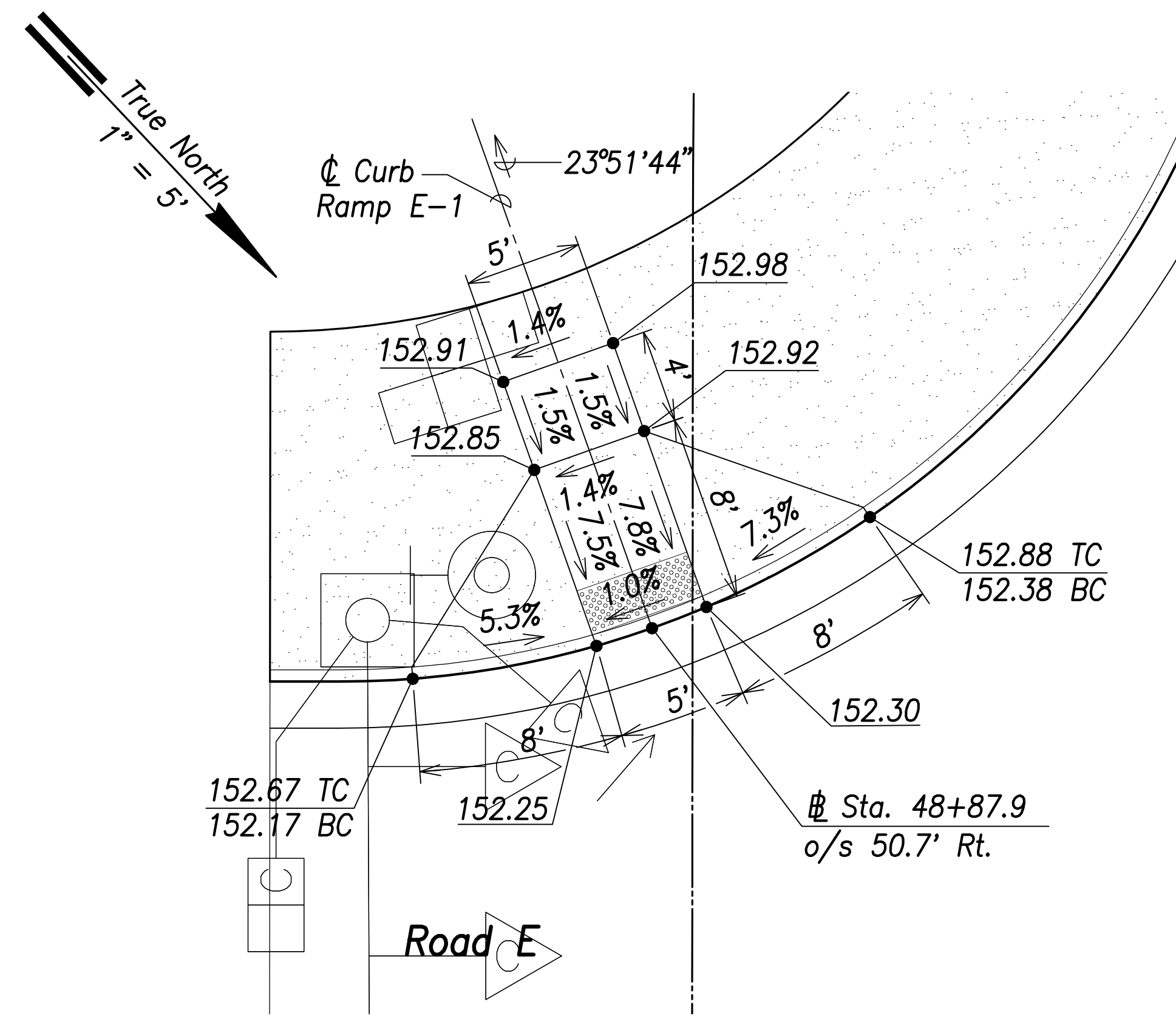
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 188 | 767 |



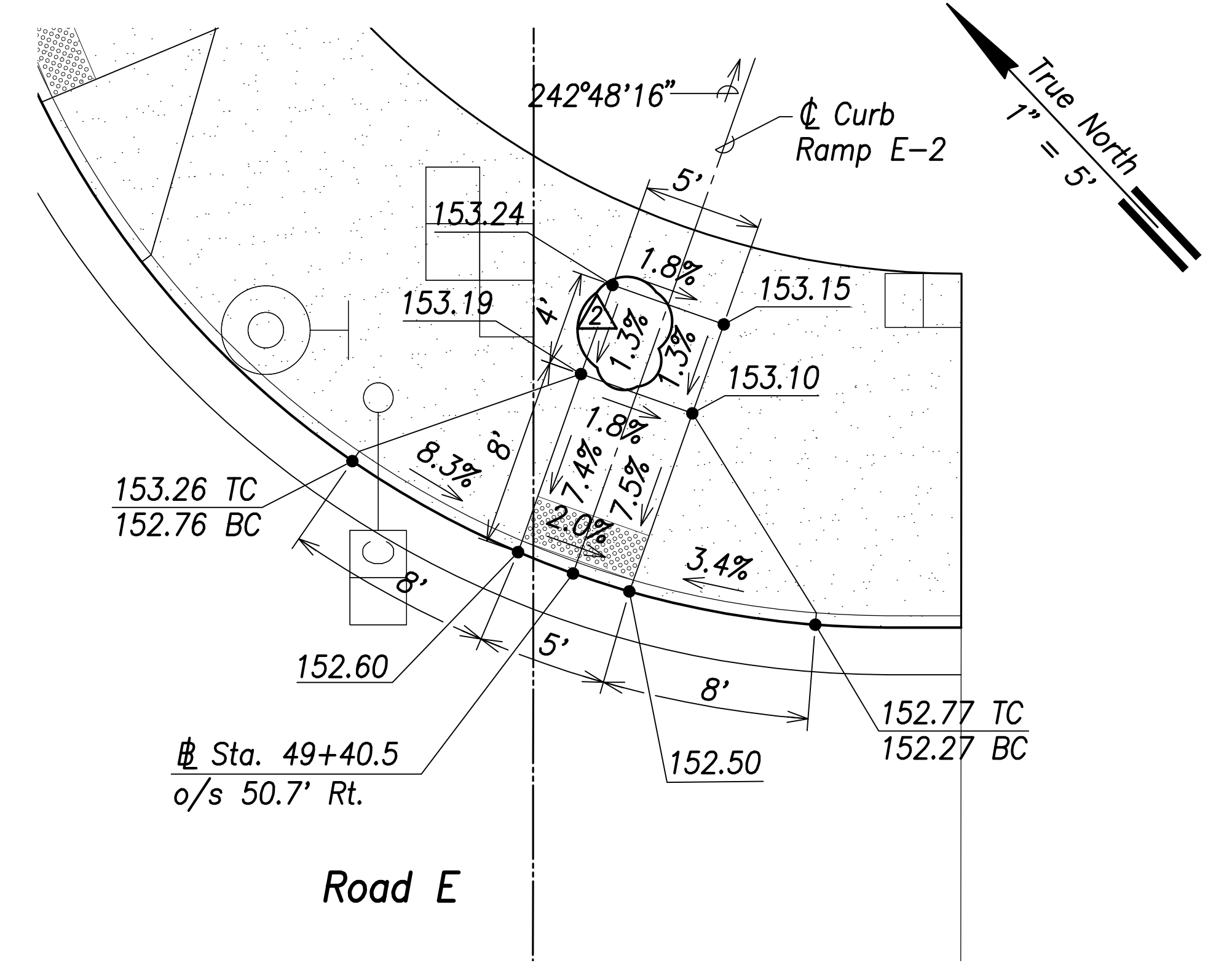
Curb Ramp D-5
Scale: 1" = 5'



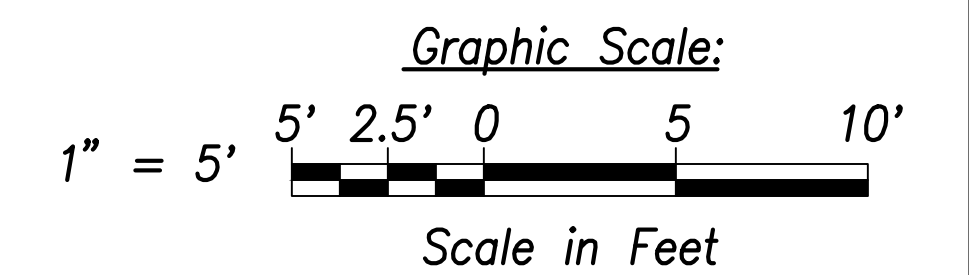
Curb Ramp D-6
Scale: 1" = 5'



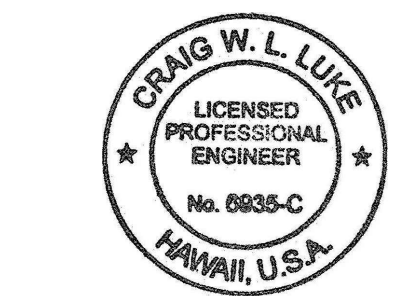
Curb Ramp E-1
Scale: 1" = 5'



Curb Ramp E-2
Scale: 1" = 5'



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



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 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF THE LICENSE: April 30, 2022

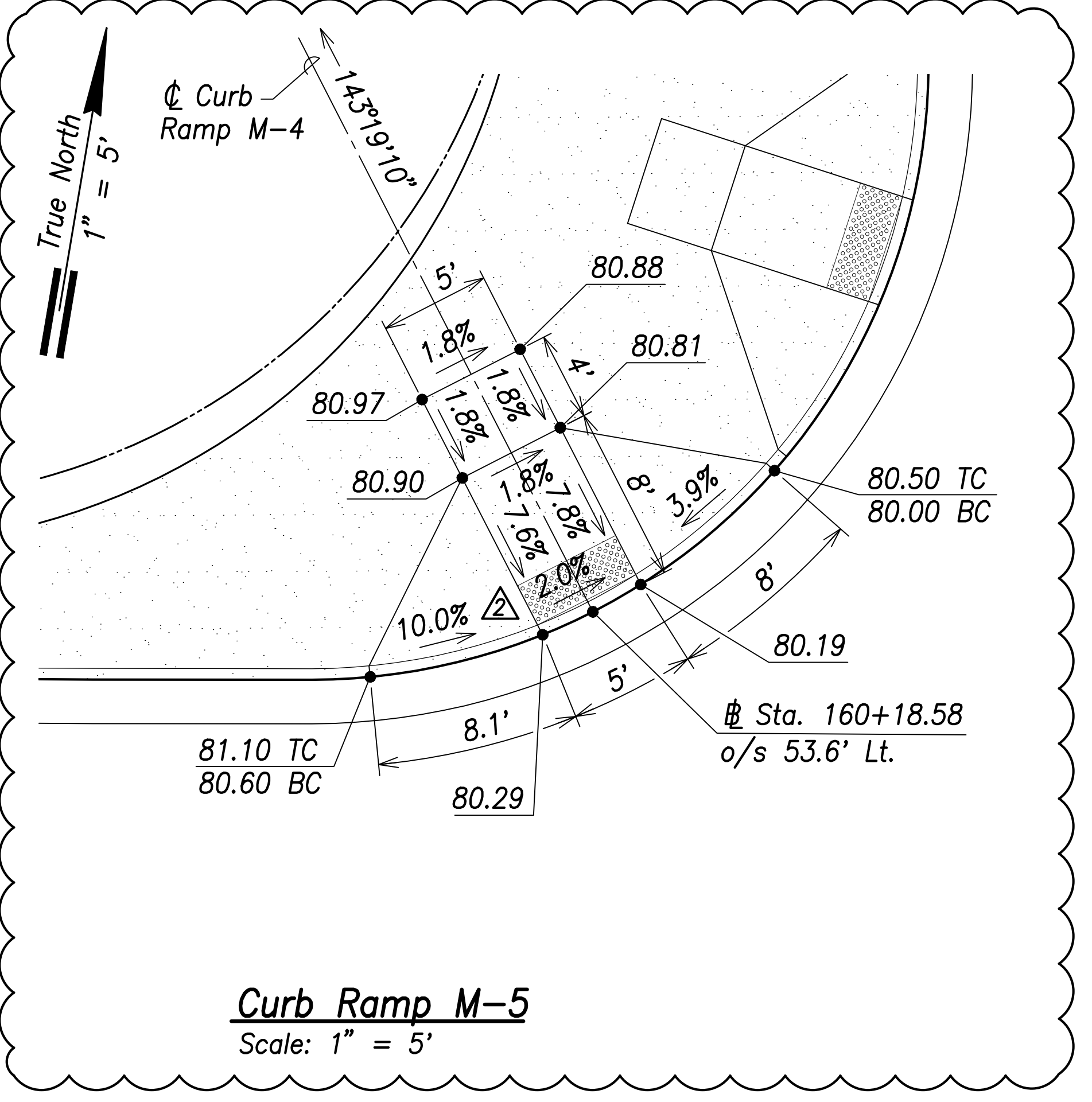
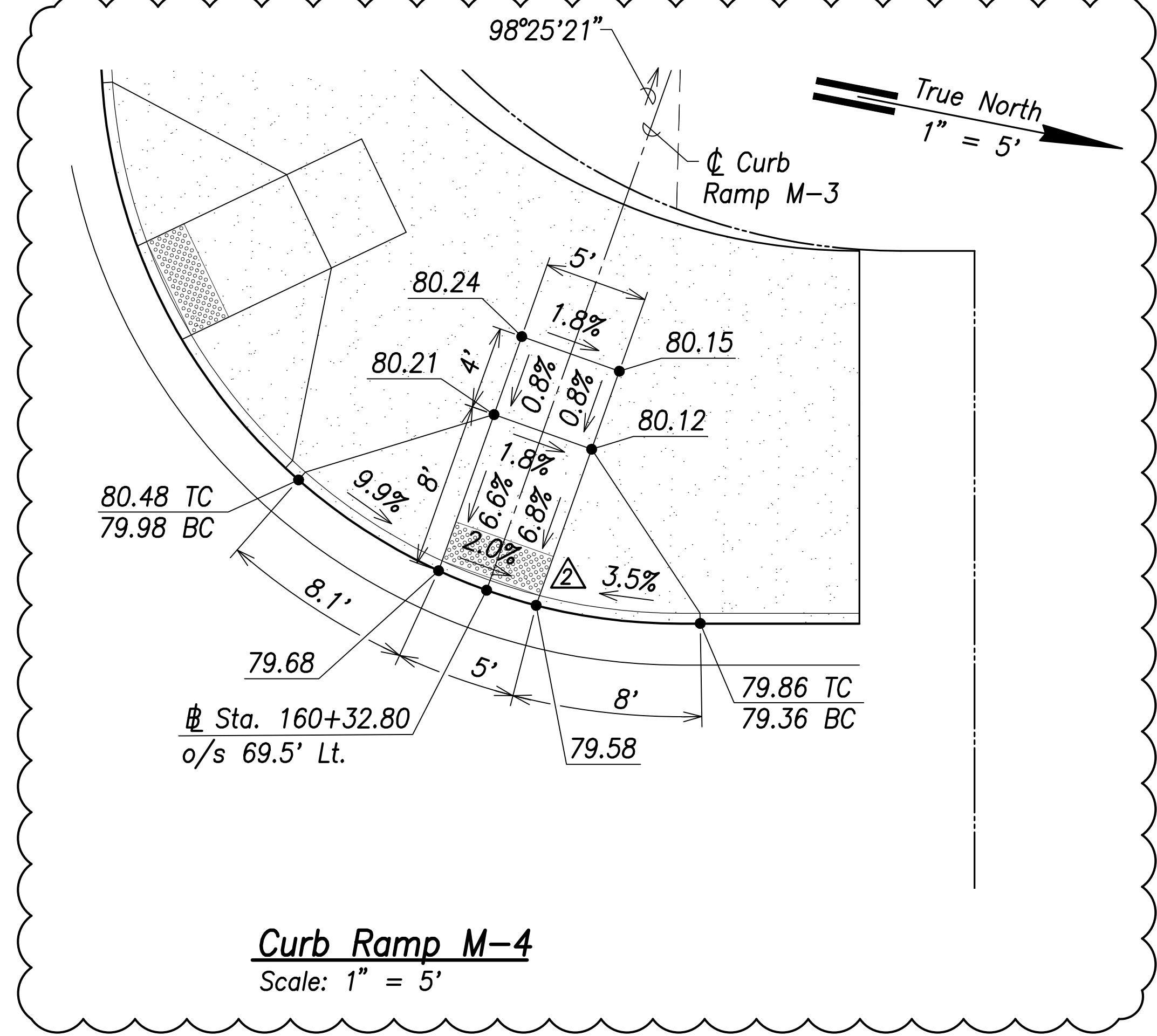
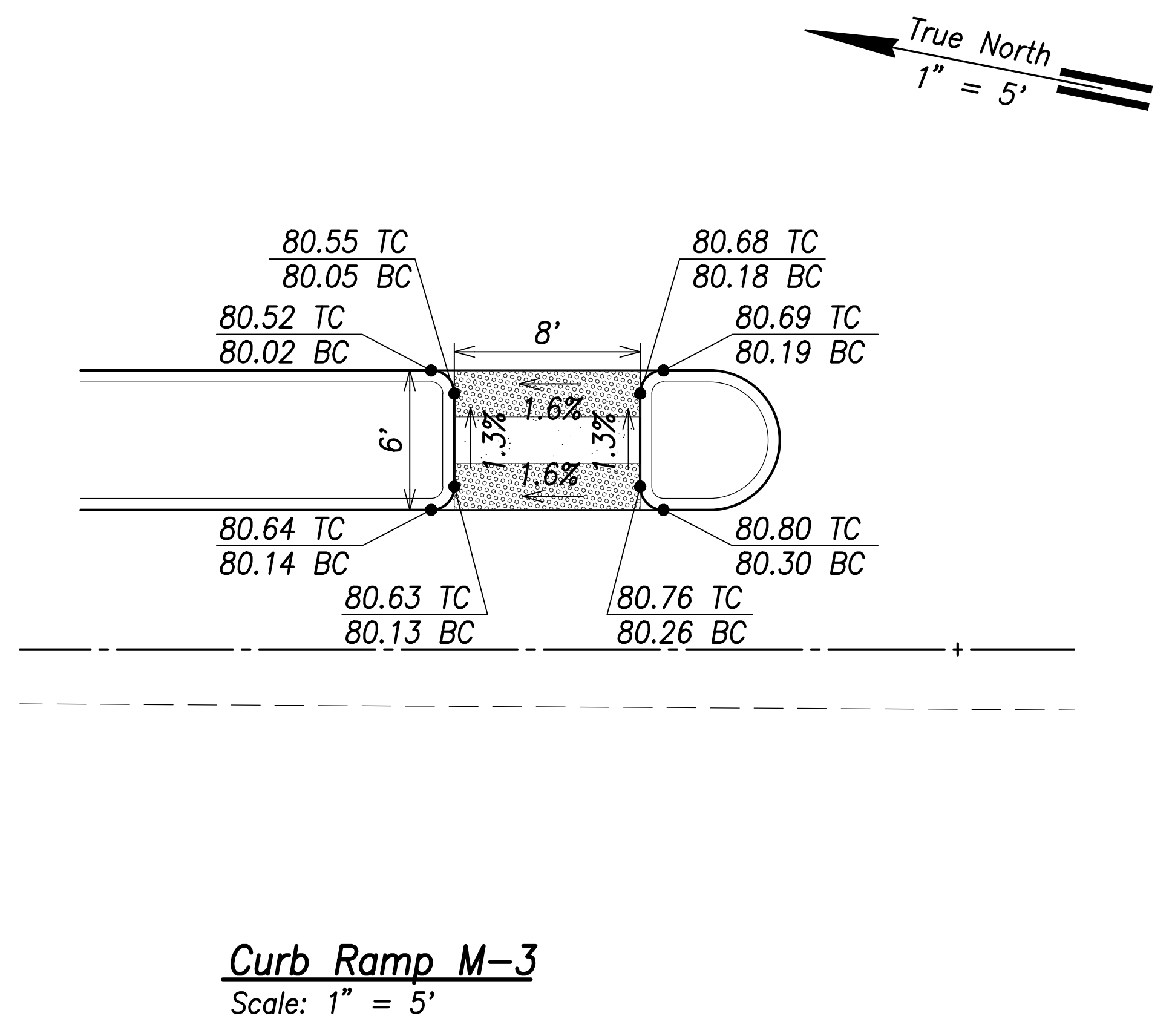
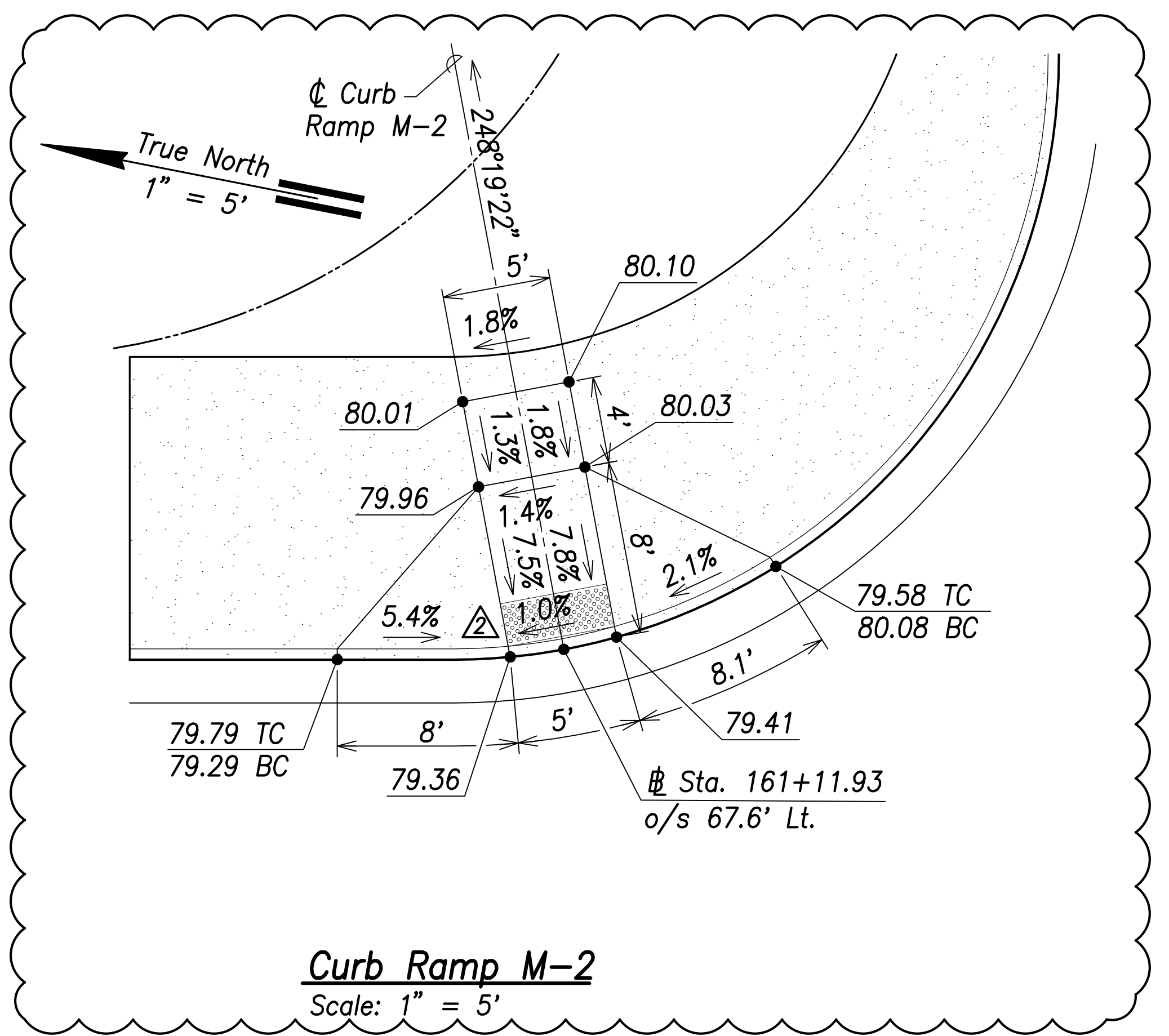
| | |
|----------|---------------|
| 06/08/22 | Slope Revised |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
Curb Ramp
Layout & Grading Plan - 5
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

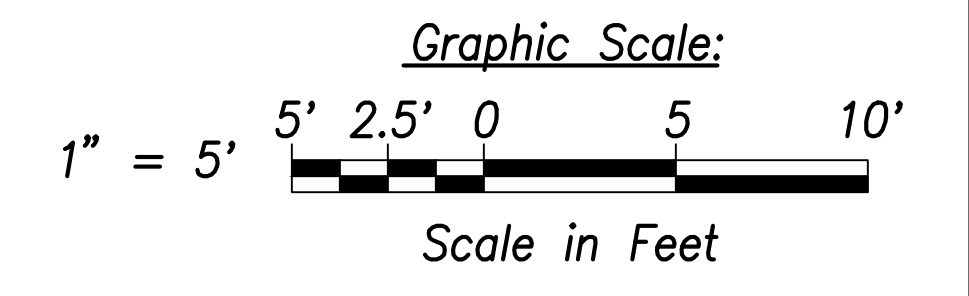
Scale: As Shown Date: April 2022

SHEET No. C-187 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 203 | 767 |



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



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|----------|--------------------------------|
| 06/08/22 | 2 Detectable Warning Mat Added |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**Curb Ramp
Layout & Grading Plan - 20**

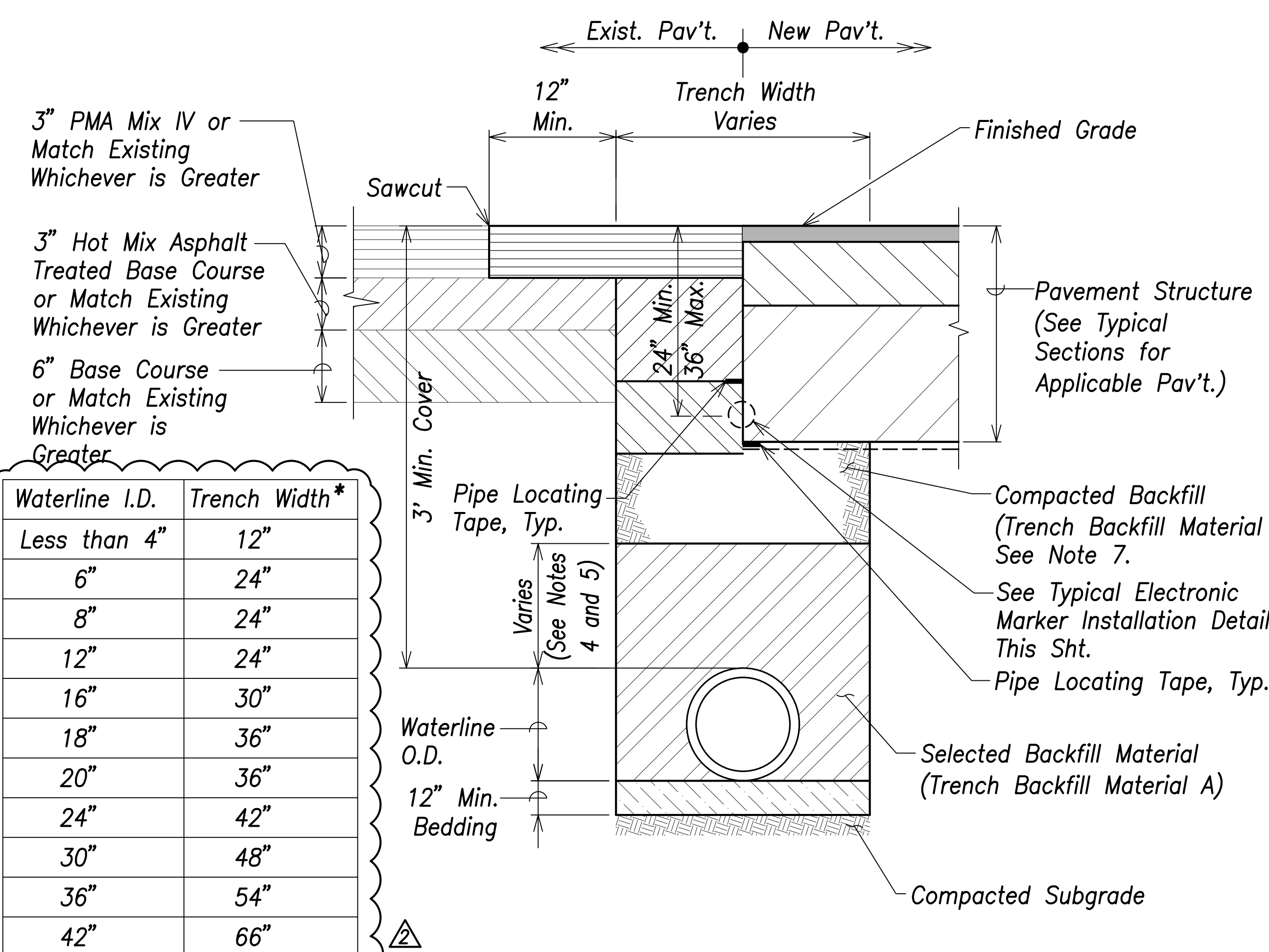
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET NO. C-202 OF 767 SHEETS

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 SIGNATURE: _____ April 30, 2022
 EXPIRATION DATE
 OF THE LICENSE

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 208 | 767 |



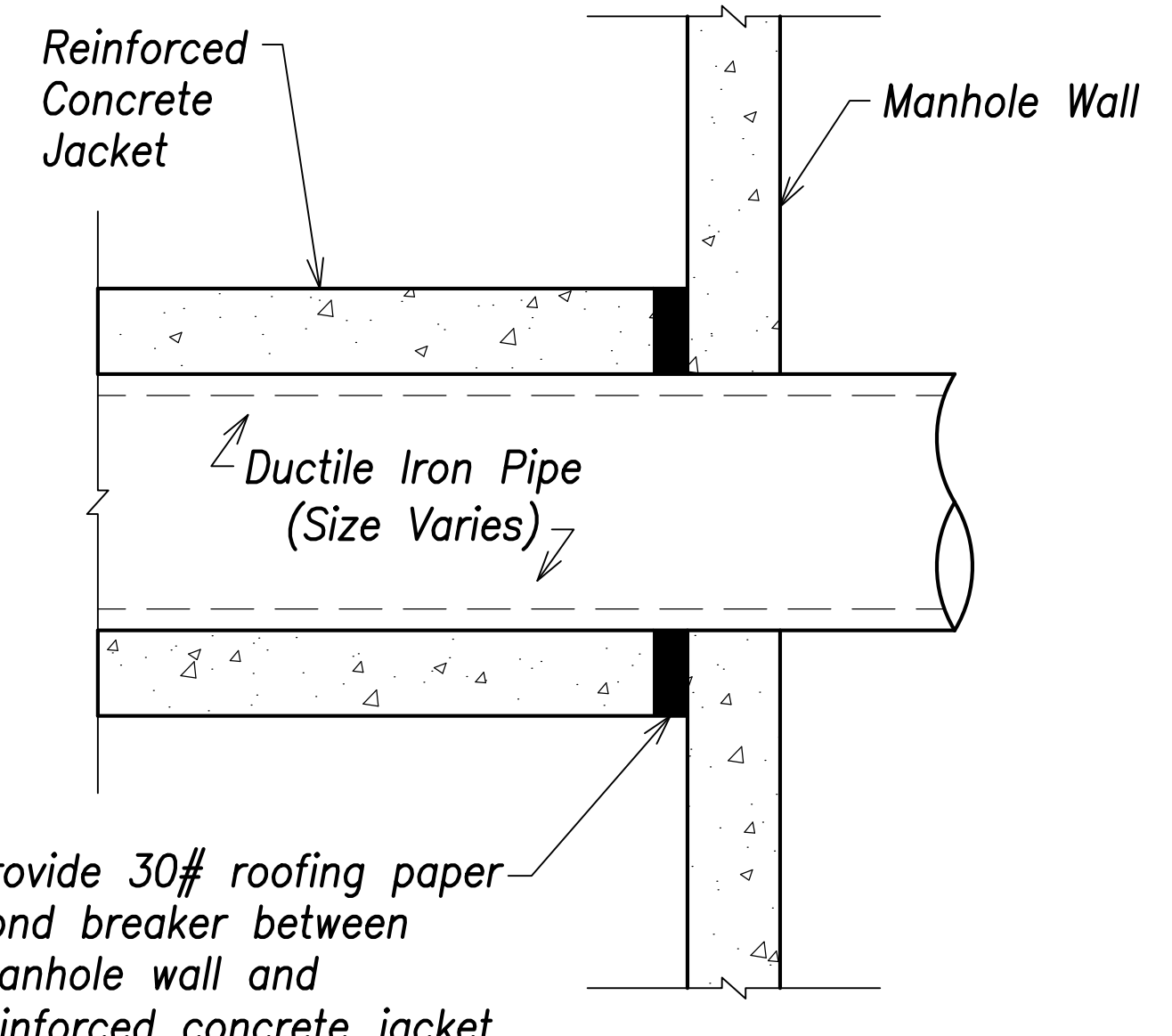
| Waterline I.D. | Trench Width* |
|----------------|---------------|
| Less than 4" | 12" |
| 6" | 24" |
| 8" | 24" |
| 12" | 24" |
| 16" | 30" |
| 18" | 36" |
| 20" | 36" |
| 24" | 42" |
| 30" | 48" |
| 36" | 54" |
| 42" | 66" |

*Trench widths for concrete encased portions of the water system shall conform to Section 624.03(B) of the Standard Specifications

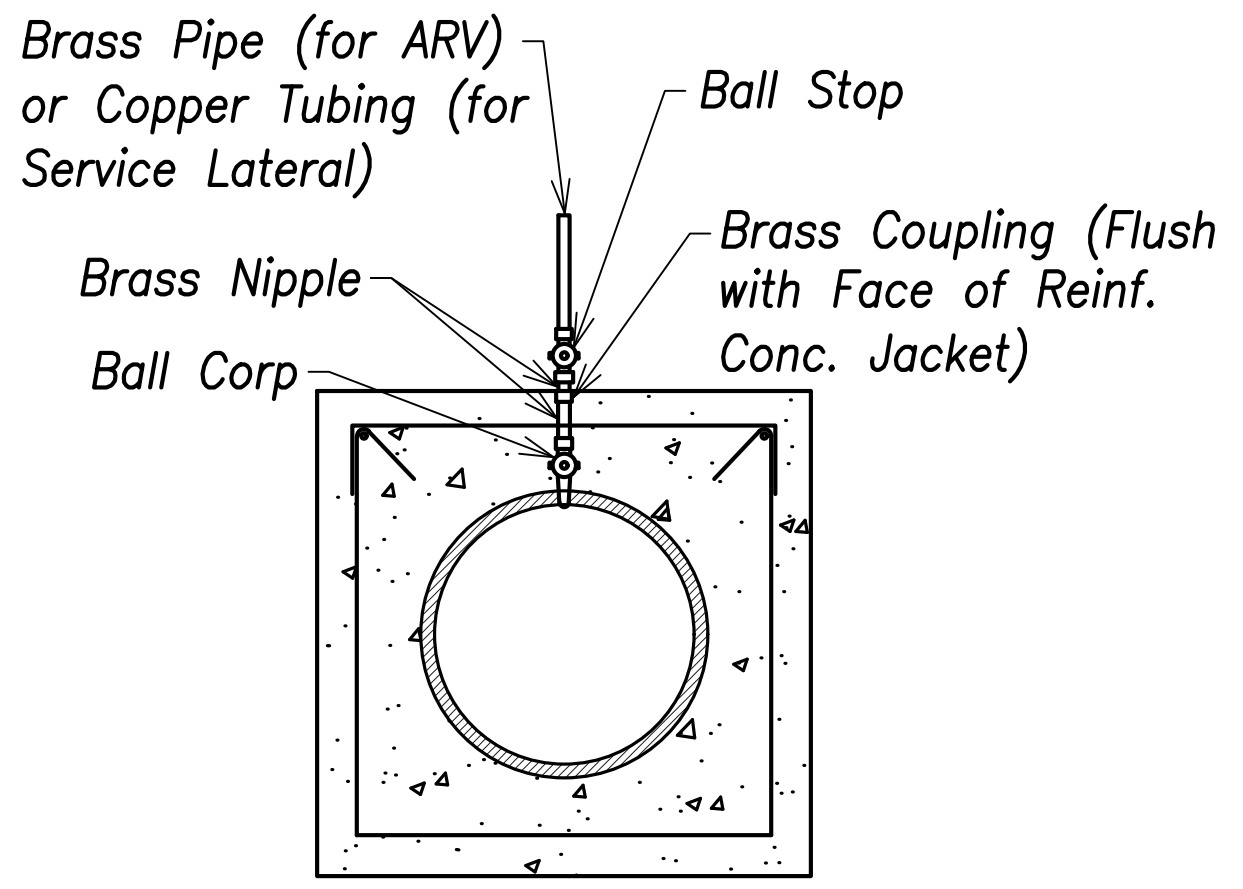
Waterline Trench Detail
Not to Scale

Notes:

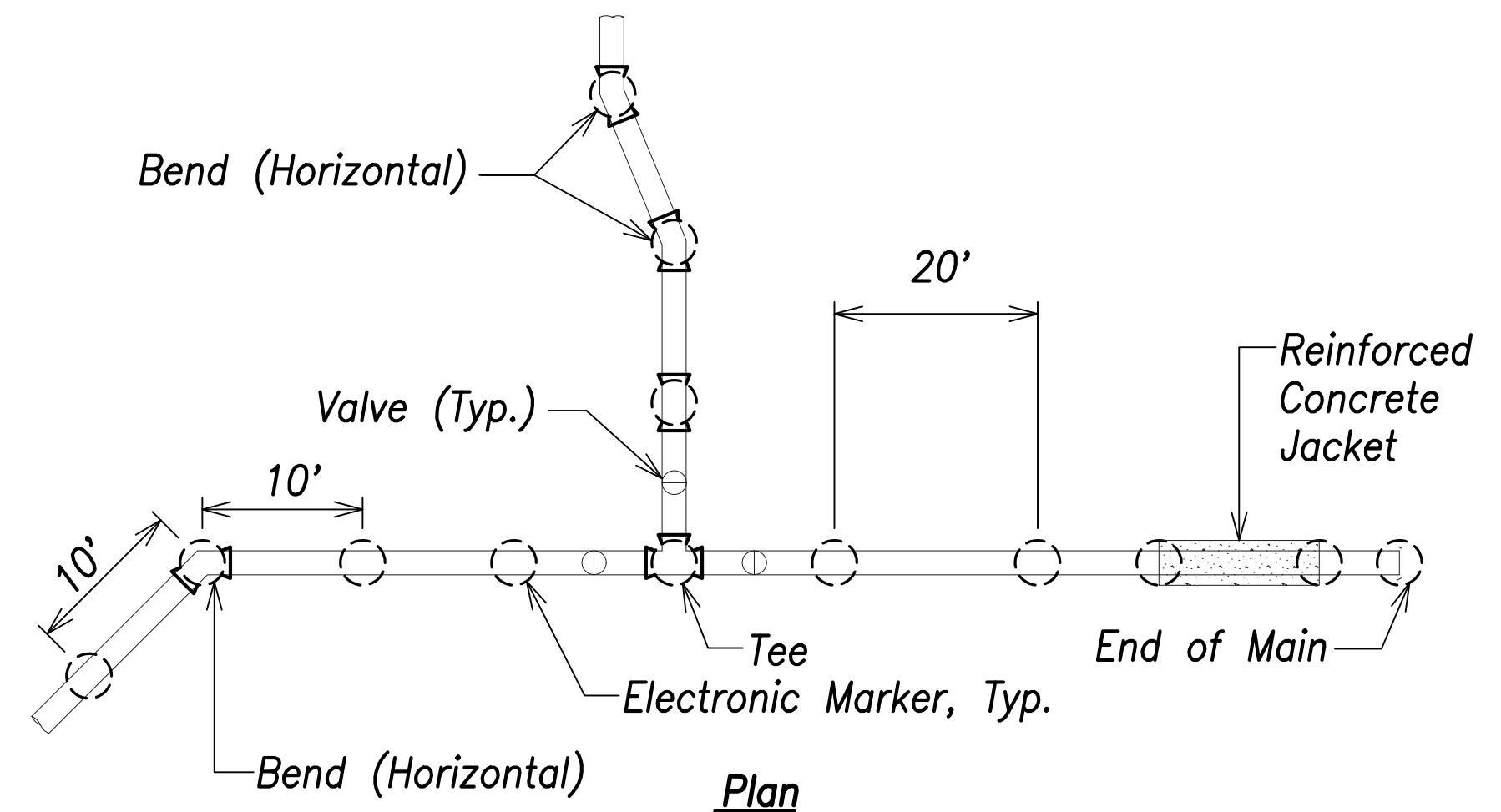
1. A min. of 3-feet of cover shall be maintained at all times within the State R/W.
2. All other conditions for pipeline installations remain as specified.
3. Contractor shall provide minimum pavement structure as shown or match the existing pavement structure for trench restoration of existing pavement in the State R/W.
4. 12" of Cushion Material above the top of the pipe for Pipes 16" or Larger. 6" Cushion Material above the top of the pipe for Pipes 12" or Smaller at Locations Where Invert is Above 4-Foot Elevation.
5. 12" of Cushion Material above the top of the pipe for All Pipe Sizes at Locations Where the Invert is at or Below the 4-Foot Elevation.
6. In Areas Where Soft and/or Loose Soils are Encountered Near the Proposed Drain Line, the Contractor Shall Remove the Unsuitable Materials as Required by the Project Soils Engineer and Provide a Subgrade Stabilization Layer with a Thickness to be Determined by the Project Soils Engineer.
7. Where existing utilities under the new waterline cannot achieve the required compaction, Controlled Low Strength Material (CLSM) with a 28-day unconfined compressive strength between 50 and 150 pounds per square inch (psi) shall be used in place of compacted backfill.



Reinforced Concrete Jacket Connection to Manhole
Not to Scale



Service Lateral or ARV Connection Through Reinforced Concrete Detail
Not to Scale

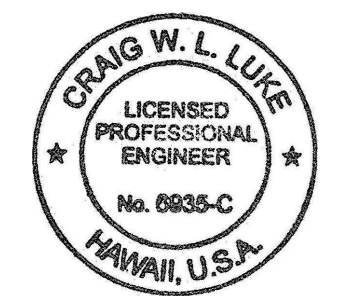


Notes:

1. Install electronic marker over center line of pipe at a minimum depth of 2 feet and a maximum depth of 3 feet from finished grade.
2. Install trench backfill and pipe cushion material in accordance to the plans and specifications.
3. Install electronic markers at a minimum clearance of 6-inches, where possible. Install markers above the pipe or concrete jackets.

Typical Electronic Marker Installation
Not to Scale

APPROVED:
 _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in City/State R/W & BWS easements only)



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| | |
|----------|----------------------------|
| 06/08/22 | Revised trench width table |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Water Details

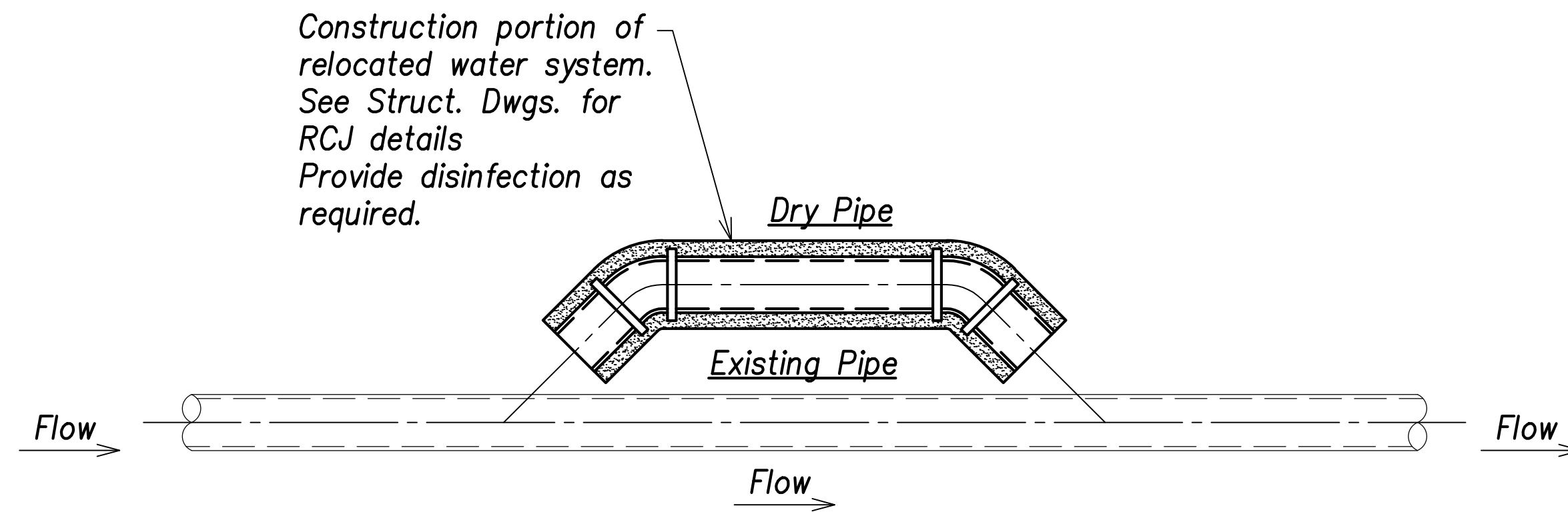
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

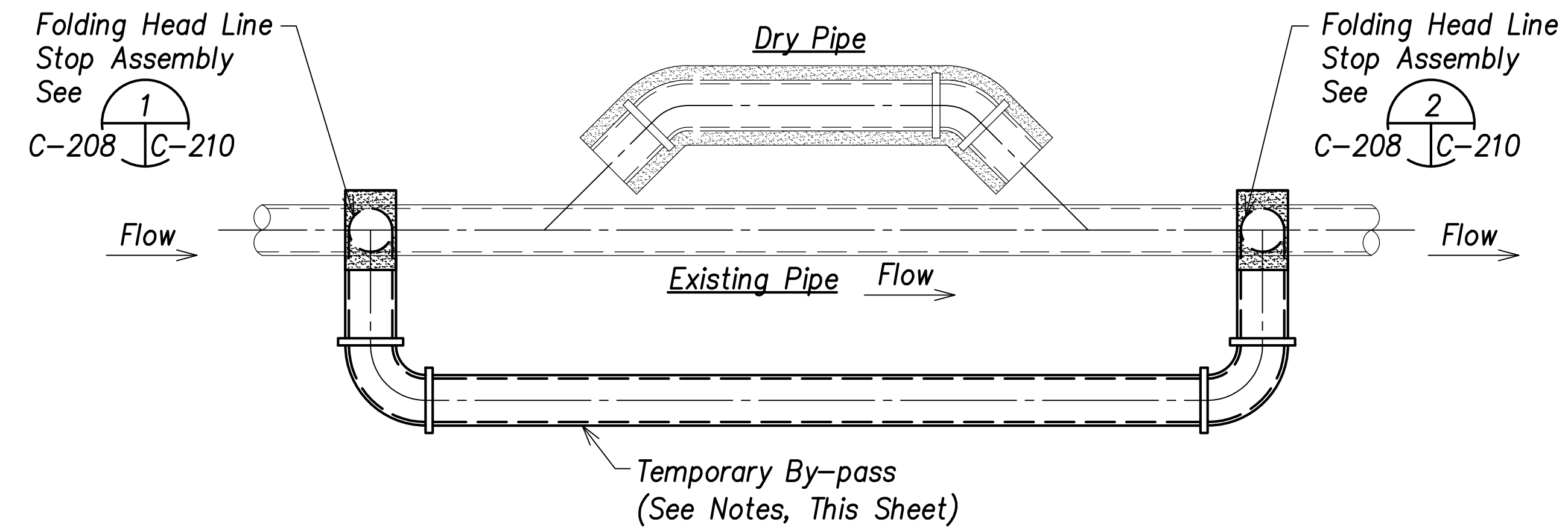
SHEET No. C-207 OF 767 SHEETS

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| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | DATE: _____ |
| CHECKED BY: _____ | DATE: _____ |
| ORIGINAL PLAN | NOTE BOOK |
| No. _____ | No. _____ |

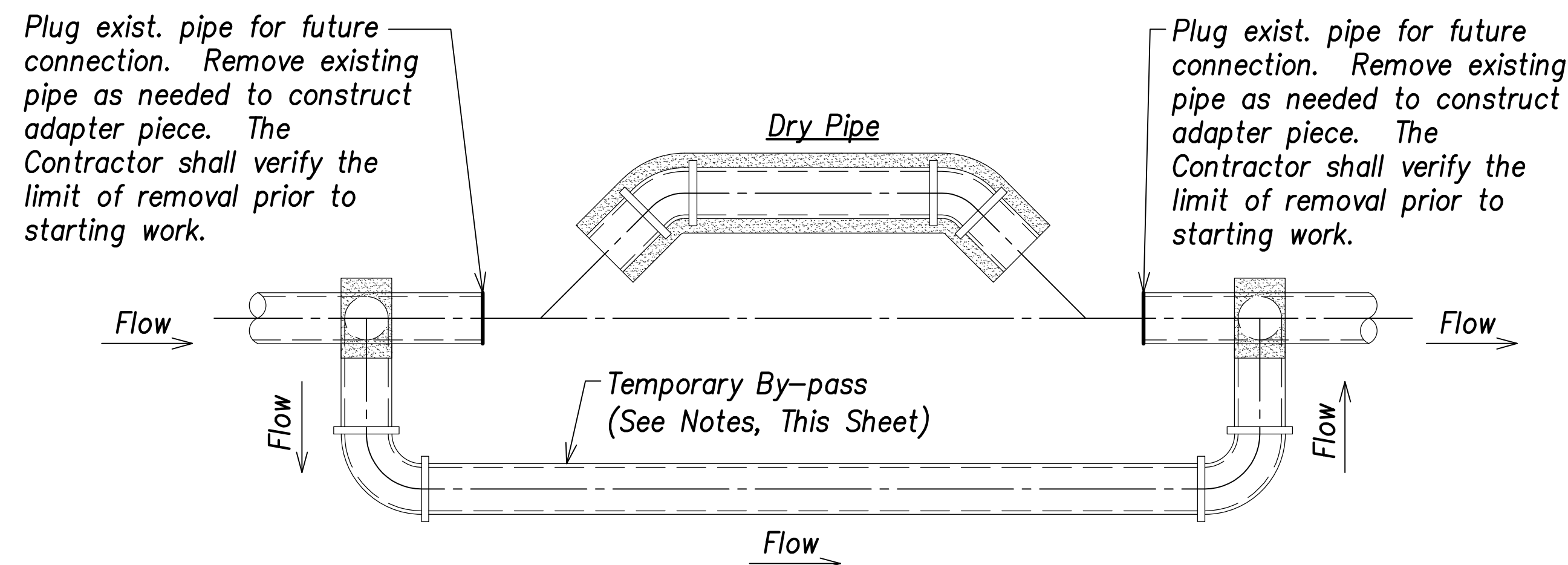
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 209 | 767 |



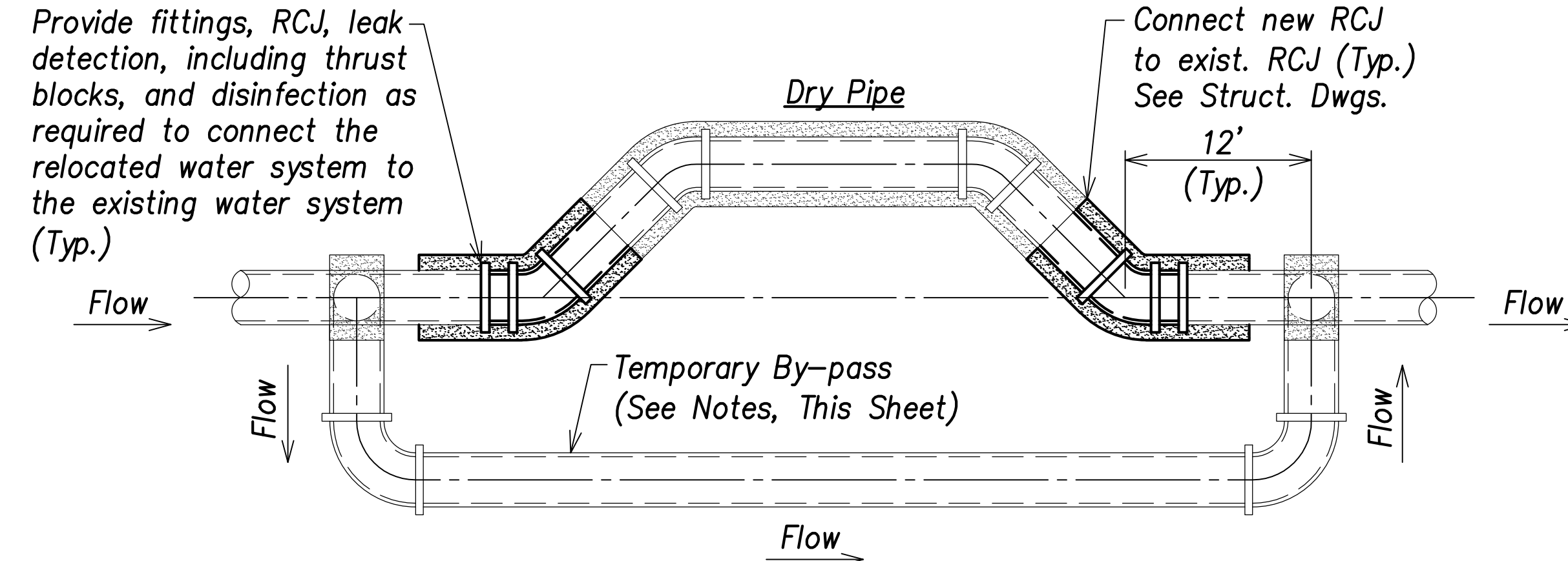
Step 1: Construct Portion of Relocated Water System and Chlorinate



Step 2: Construct Folding Head Line Stop Assembly and Temporary By-pass



Step 3: Divert Flow to Temporary By-Pass and Demolish and Remove Portions of the Existing Water System as Required to Construct the Waterline Connection



Step 4: Connect Relocated Water System to Existing Water System

Typical Temporary By-Pass Procedure (Step 1 to Step 4)

Not to Scale

Temporary By-pass Notes:

- All pipes and fittings shall be Ductile Iron Pipe, Cl. 53, FI.
- When shutting down or opening water flow in pipe, the Contractor shall slowly close valve at a rate of 6" of diameter per minute to avoid any abrupt water flow stoppage or opening and resulting water hammer effect. The closure of the valve shall be monitored by the Board of Water Supply. The Contractor shall be responsible for any damages to the water system and impacts to the regional water system if the water system is not shut down slowly and any damages arise due to the Contractor's carelessness.
- Contractor shall provide sand bags to support the temporary by-pass throughout construction. Contractor shall be responsible for selection and maintenance of the sand bag material.
- The water pipe velocities are critical to the construction of the temporary water system. The Contractor shall construct and remove the temporary water system folding head line stop assembly during the period of low water system use between the hours of midnight to 4:00 A.M.

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

APPROVED: _____ DATE _____
 Manager and Chief Engineer, BWS
 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)



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 SIGNATURE: _____ DATE: April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|------------|
| 06/08/22 | Note Added |
| DATE | REVISION |

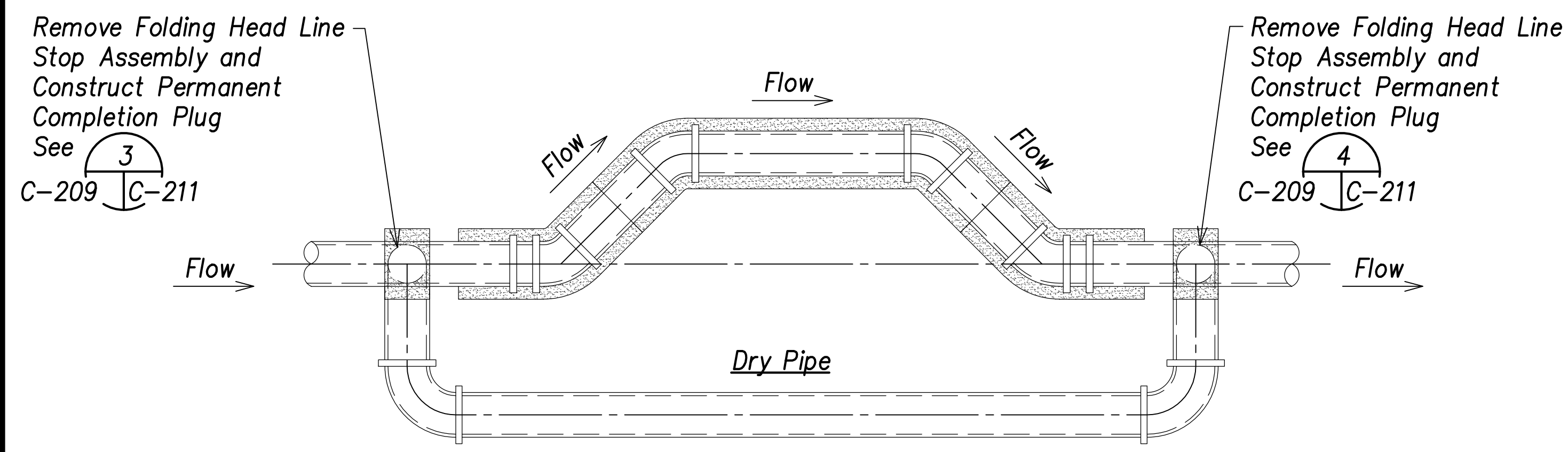
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Typical Temporary By-Pass Procedures (Step 1 to Step 4)
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

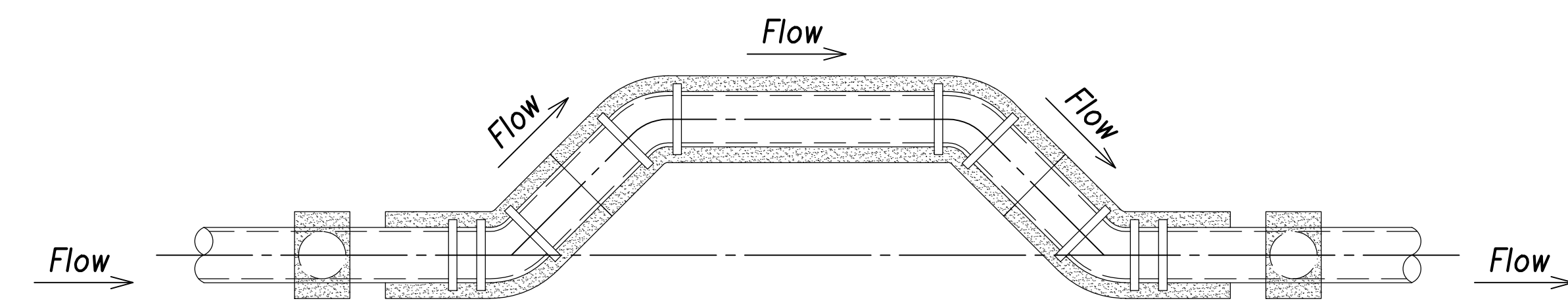
Scale: As Shown Date: April 2022

SHEET No. C-208 OF 767 SHEETS

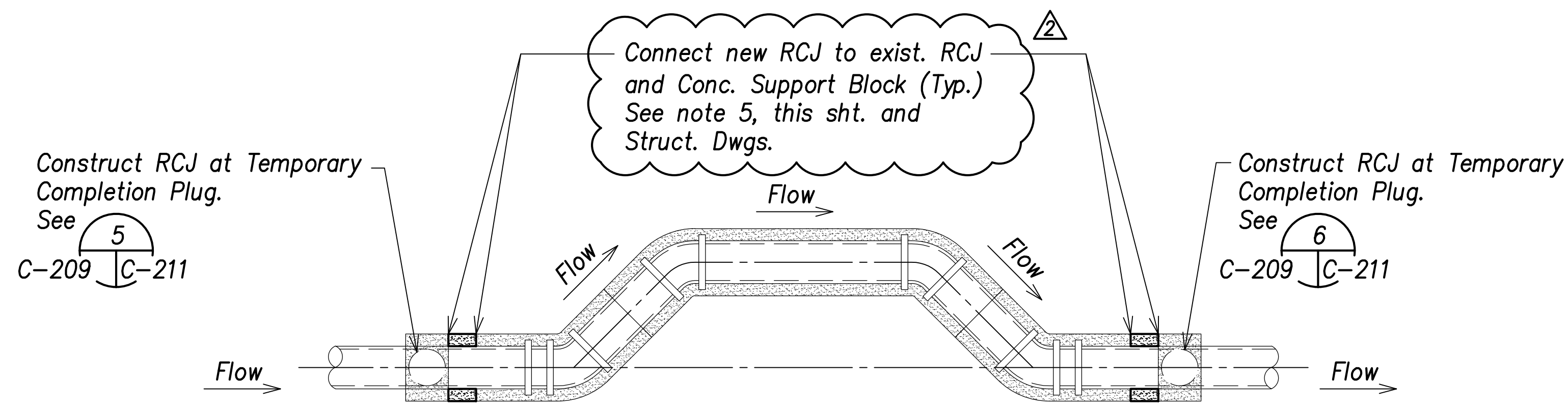
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 210 | 767 |



Step 5: Divert Flow to Relocated Waterline, Remove Folding Head Line Stop Assembly, and Construct Permanent Completion Plug



Step 6: Remove Temporary By-Pass



Step 7: Construct RCJ at Permanent Completion Plug

Typical Temporary By-Pass Procedure (Step 5 to Step 7)

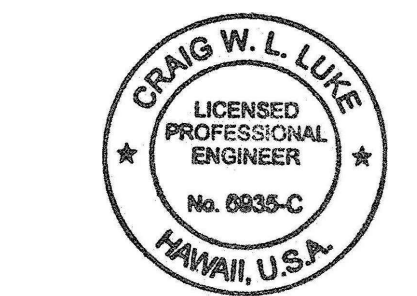
Not to Scale

Temporary By-pass Notes:

- All pipes and fittings shall be Ductile Iron Pipe, Cl. 53, FI.
- When shutting down or opening water flow in pipe, the Contractor shall slowly close valve at a rate of 6" of diameter per minute to avoid any abrupt water flow stoppage or opening and resulting water hammer effect. The closure of the valve shall be monitored by the Board of Water Supply. The Contractor shall be responsible for any damages to the water system and impacts to the regional water system if the water system is not shut down slowly and any damages arise due to the Contractor's carelessness.
- Contractor shall provide sand bags to support the temporary by-pass throughout construction. Contractor shall be responsible for selection and maintenance of the sand bag material.
- The water pipe velocities are critical to the construction of the temporary water system. The Contractor shall construct and remove the temporary water system folding head line stop assembly during the period of low water system use between the hours of midnight to 4:00 A.M.
- Construction of the additional reinforced concrete jacket to connect the existing reinforced concrete jacket and concrete support block shall be incidental to the temporary bypass work

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| DESIGNED BY | |
| CHECKED BY | |
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| NOTE BOOK | |
| No. | |

APPROVED: _____ DATE _____
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 (for work affecting BWS facilities in
 City/State R/W & BWS easements only)

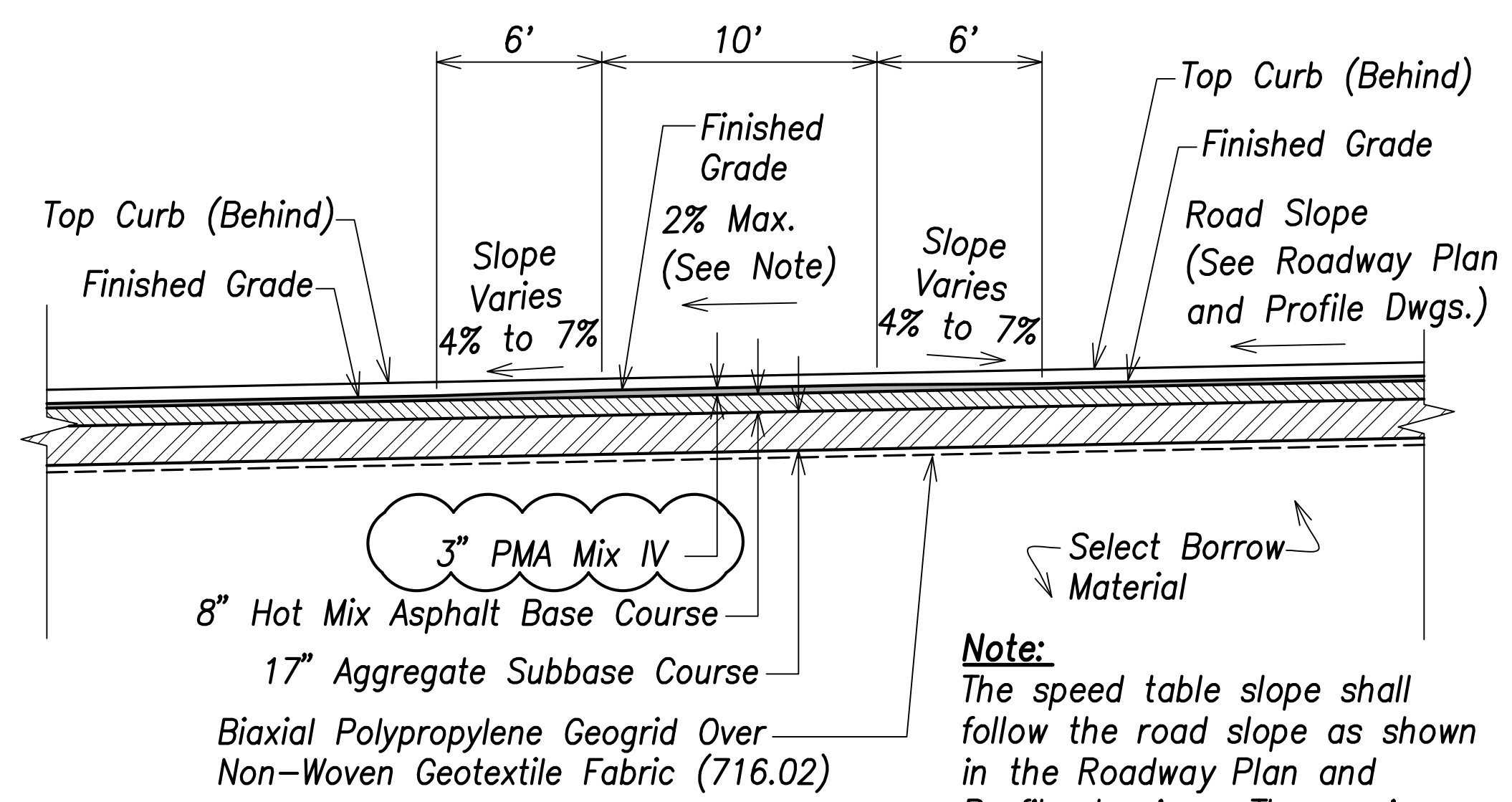
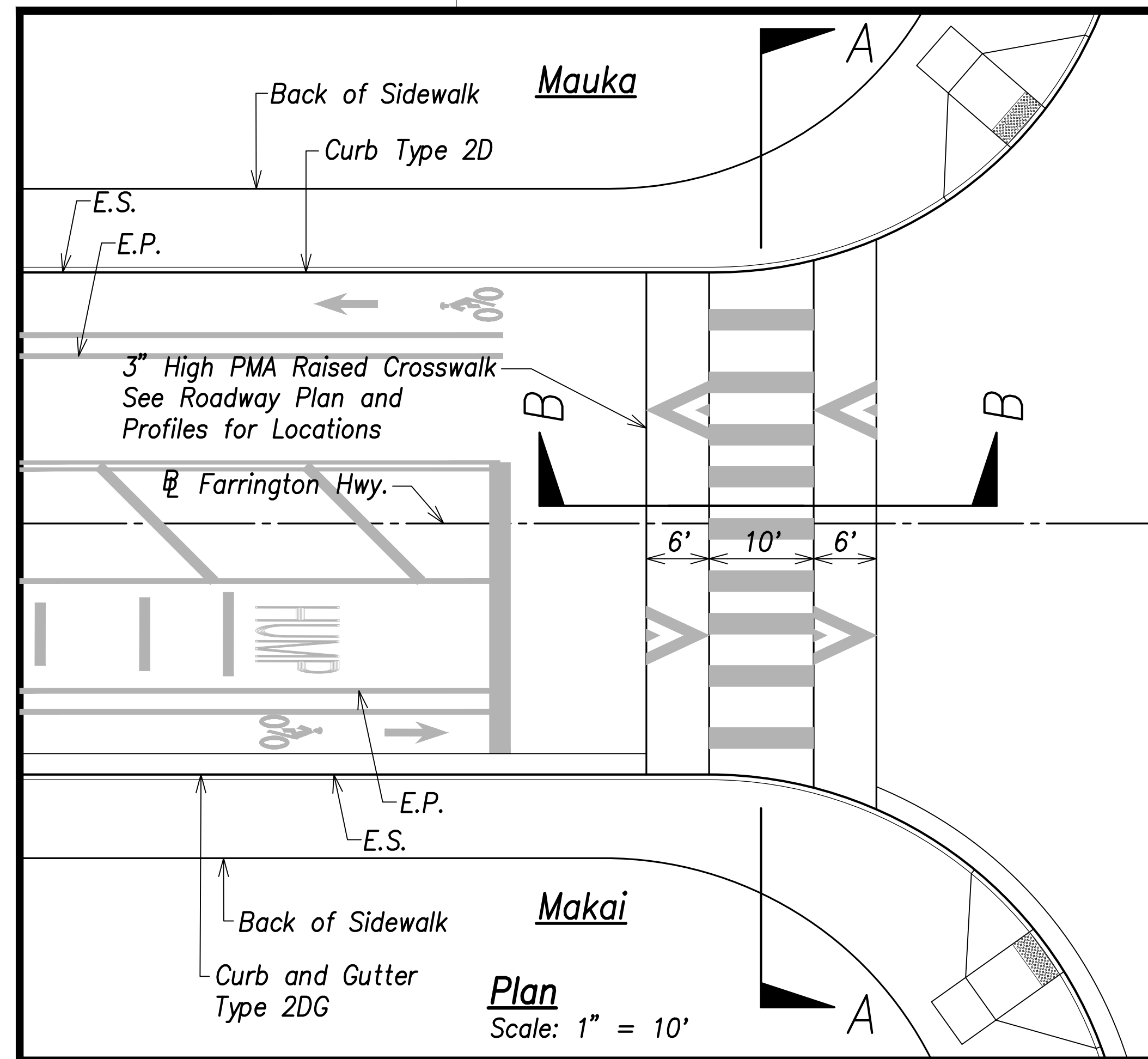


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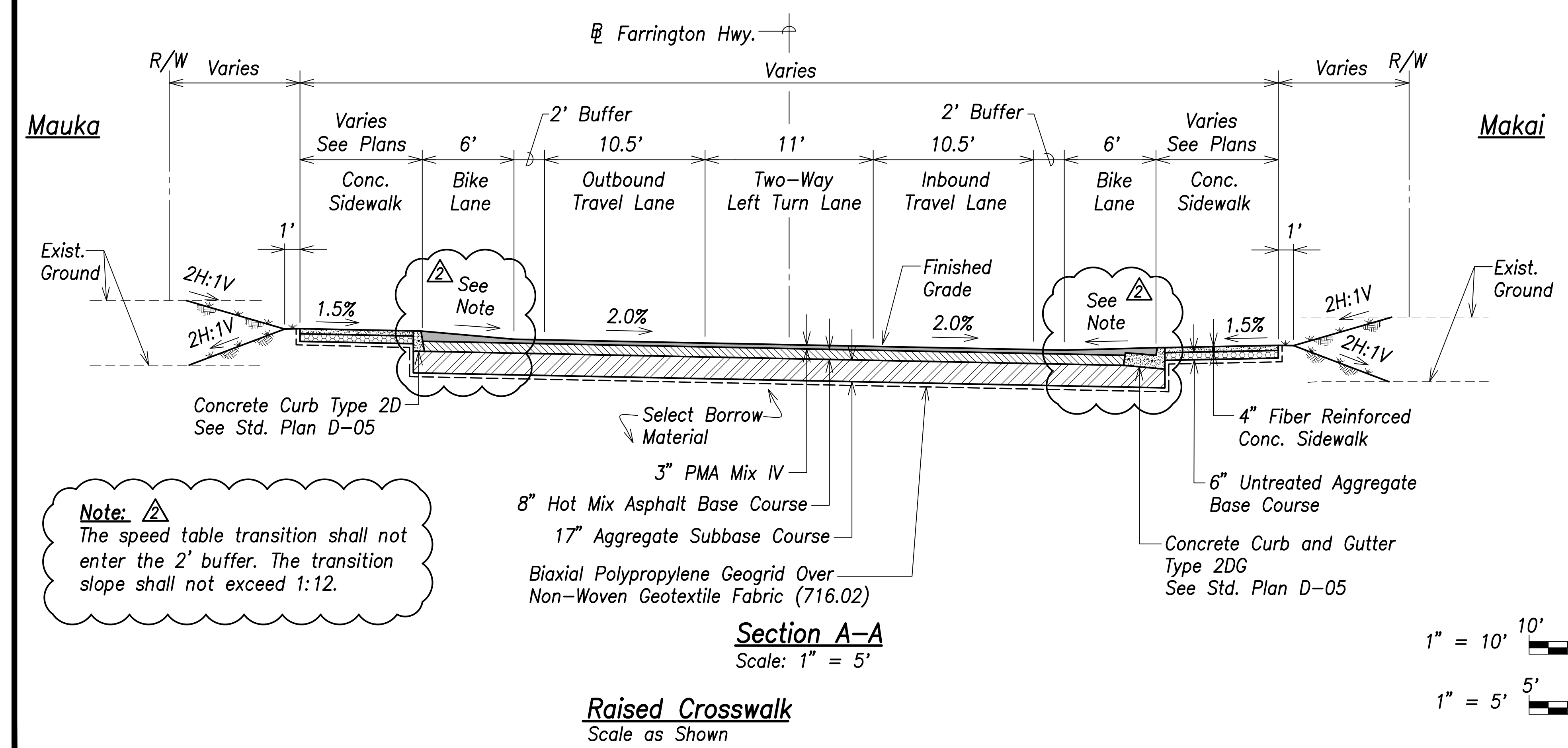
| | |
|----------|------------------------------|
| 06/08/22 | Notes Added; Revised callout |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Typical Temporary By-Pass Procedures (Step 5 to Step 7)
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 214 | 767 |



Section B-B
Scale: 1" = 5'

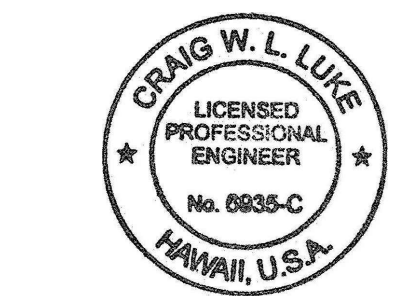
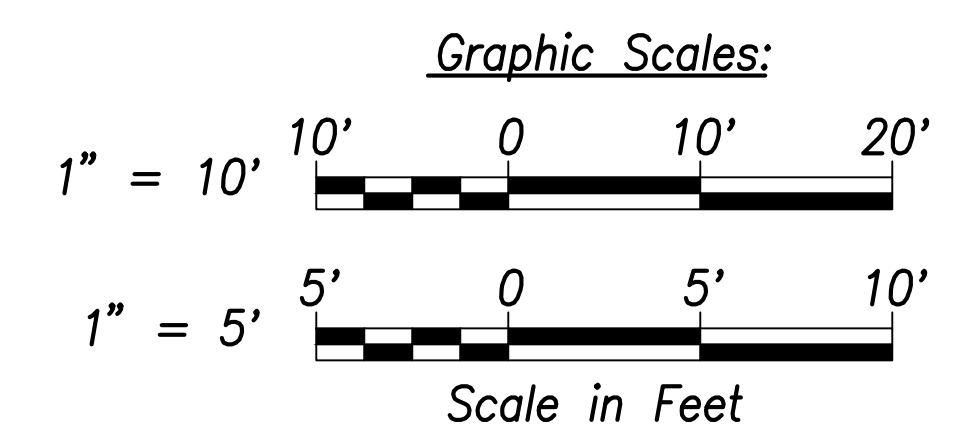


Section A-A
Scale: 1" = 5'

Raised Crosswalk
Scale as Shown

Note: The speed table transition shall not enter the 2' buffer. The transition slope shall not exceed 1:12.

| | |
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| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
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Craig W. Luke
SIGNATURE

April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|---|
| 06/08/22 | Note revised, raised crosswalk design revised to 3" high, transition limited to bike lane |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

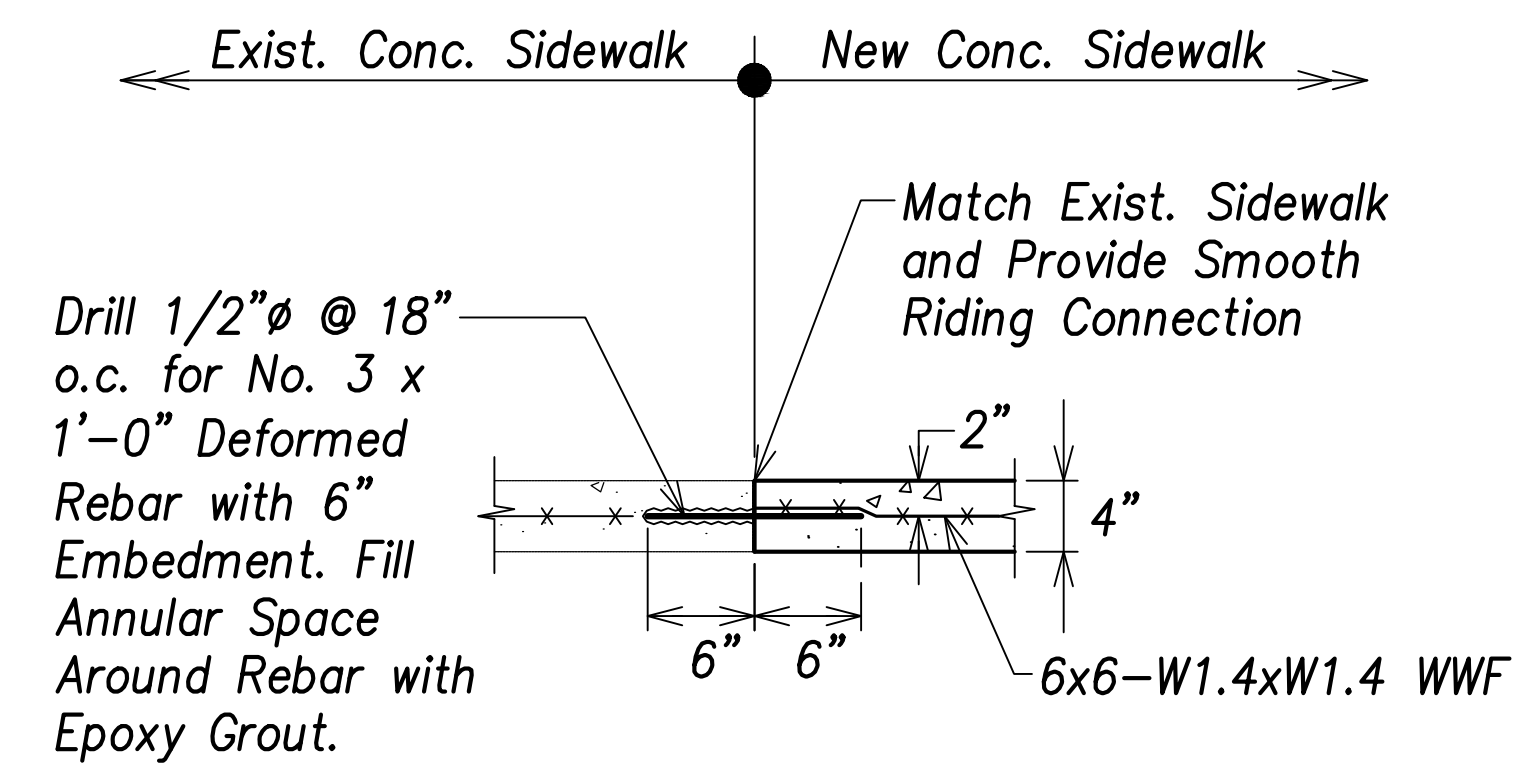
Roadway Details - 1

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

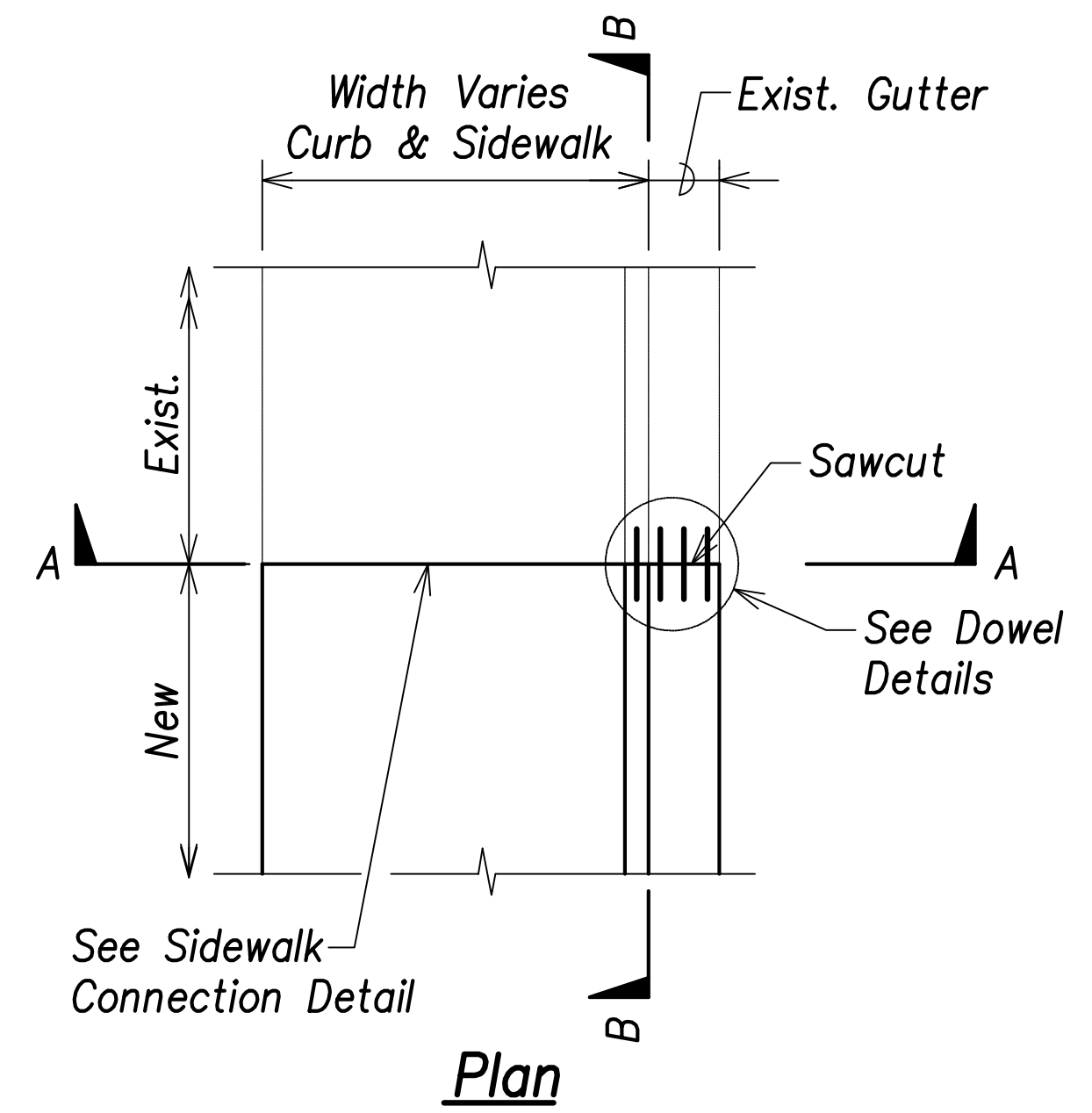
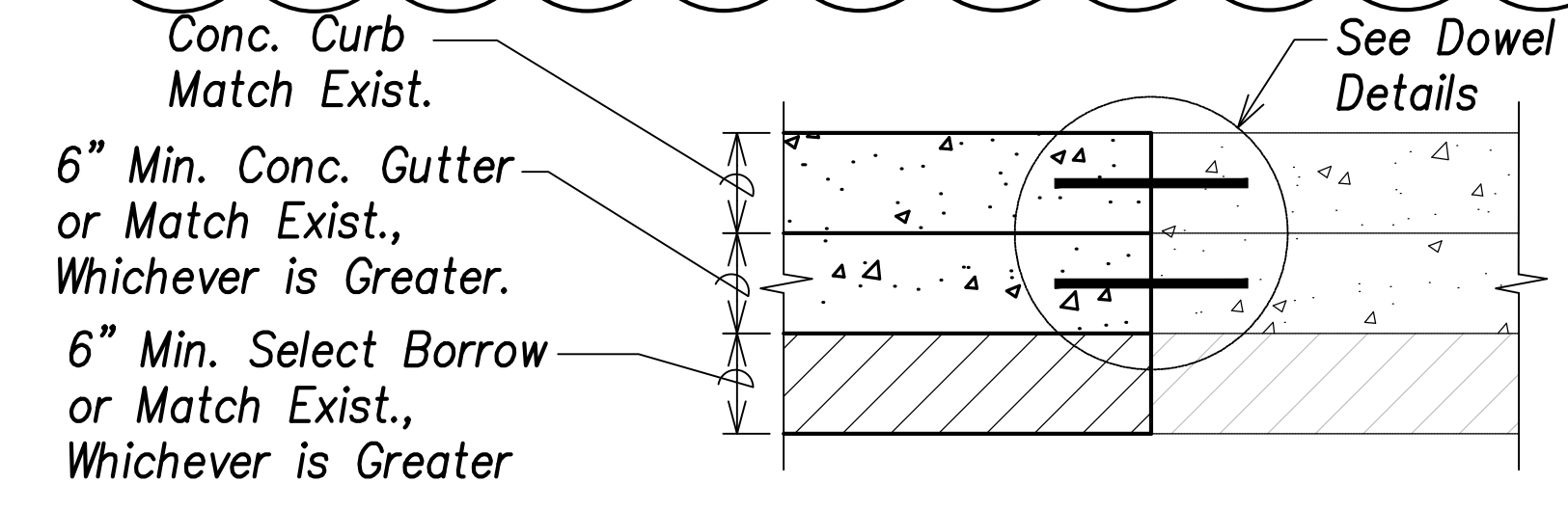
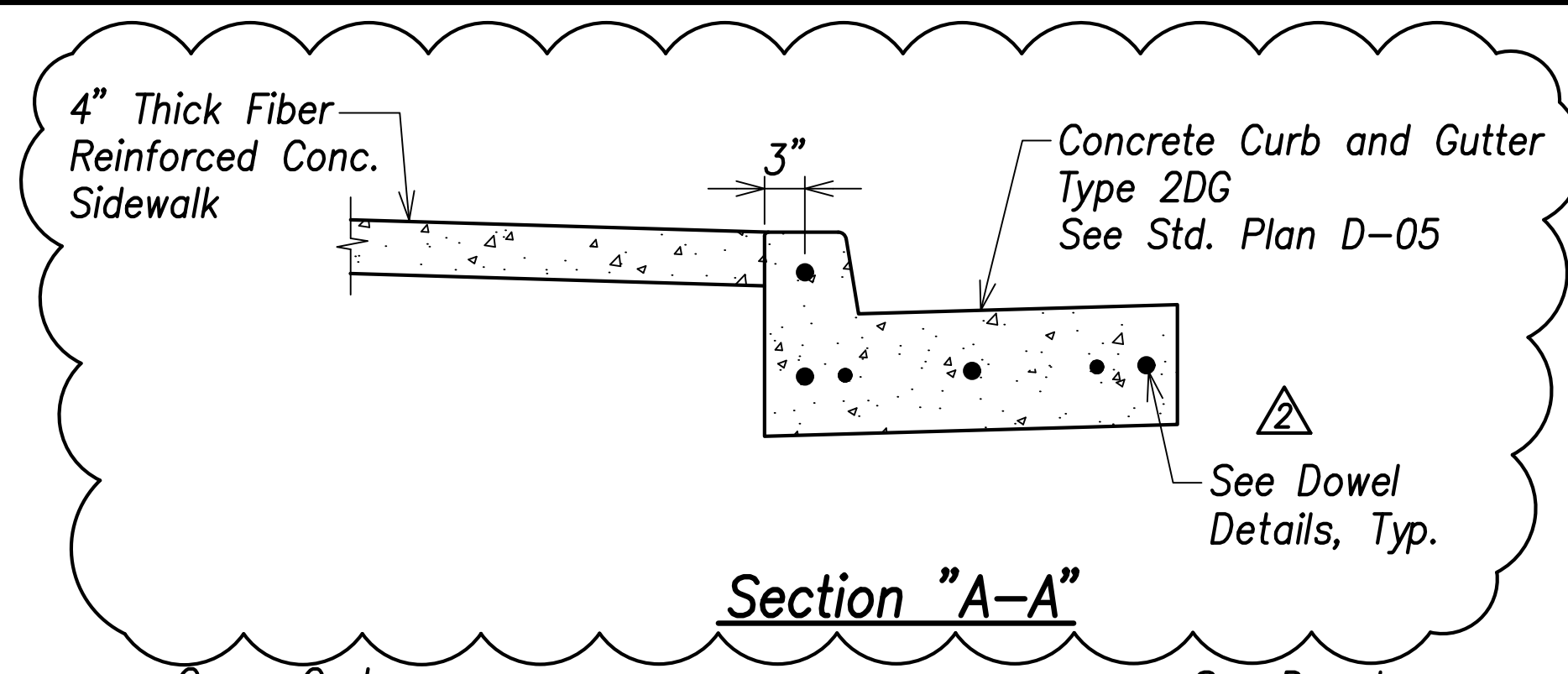
Scale: As Shown Date: April 2022

SHEET No. C-213 OF 767 SHEETS

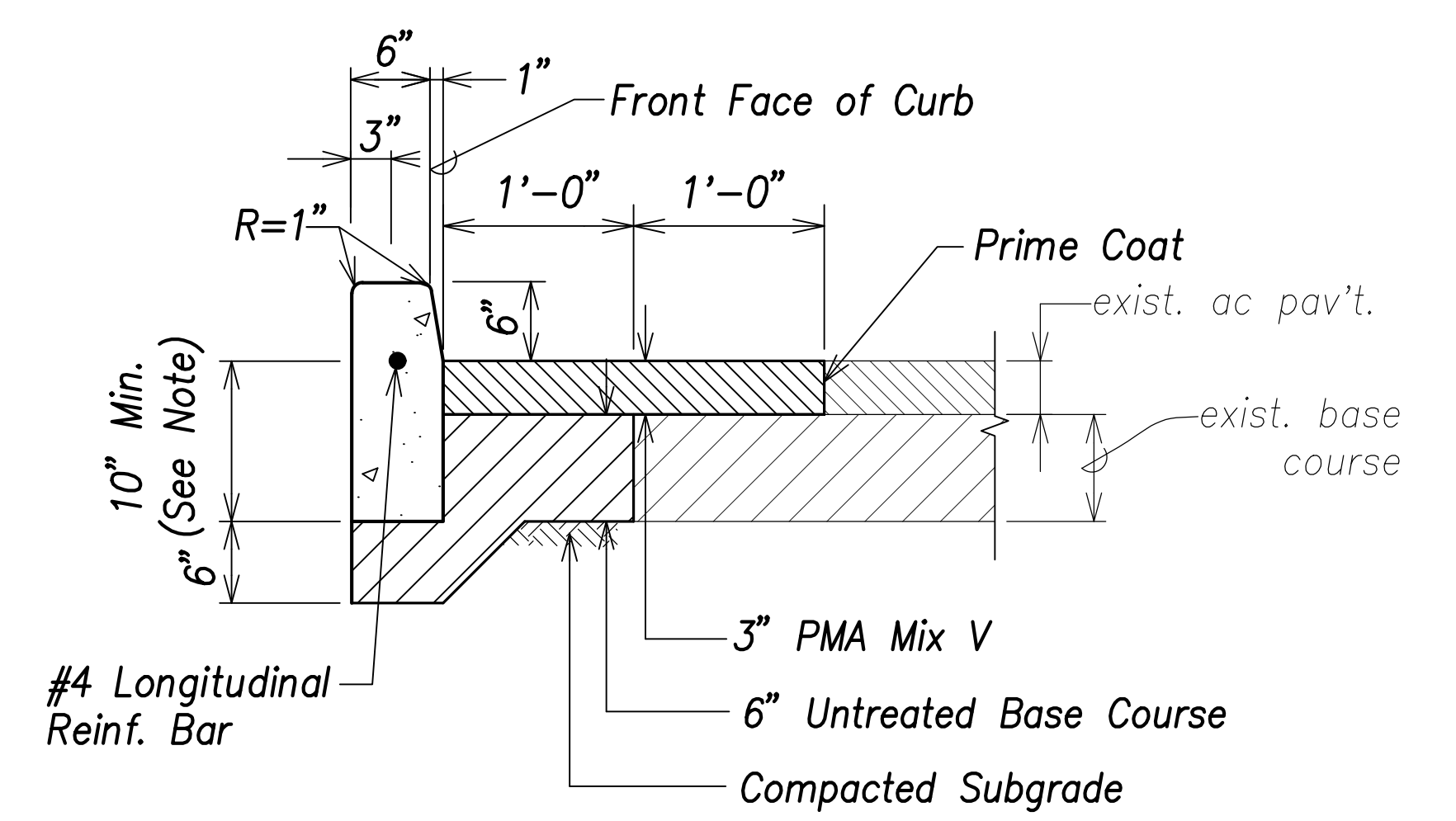
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 215 | 767 |



Typical Sidewalk Connection Detail
Not to Scale

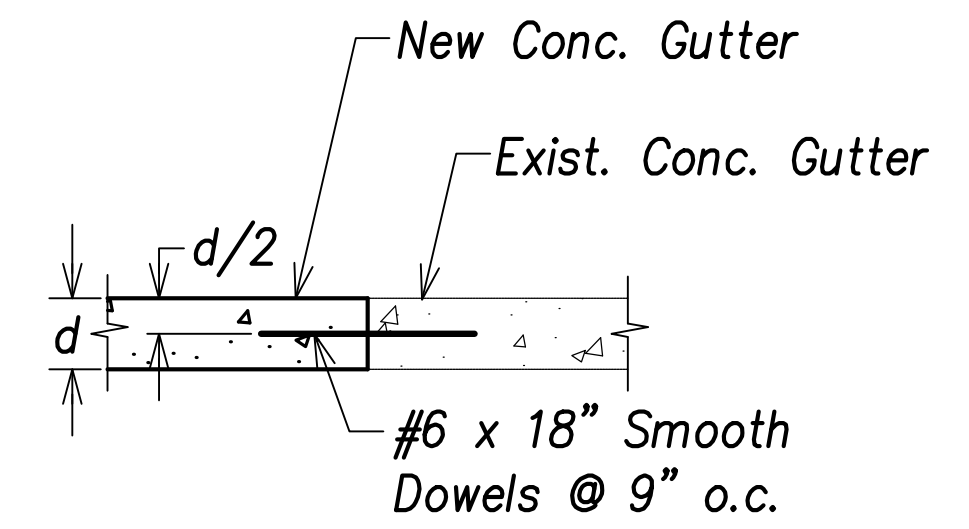
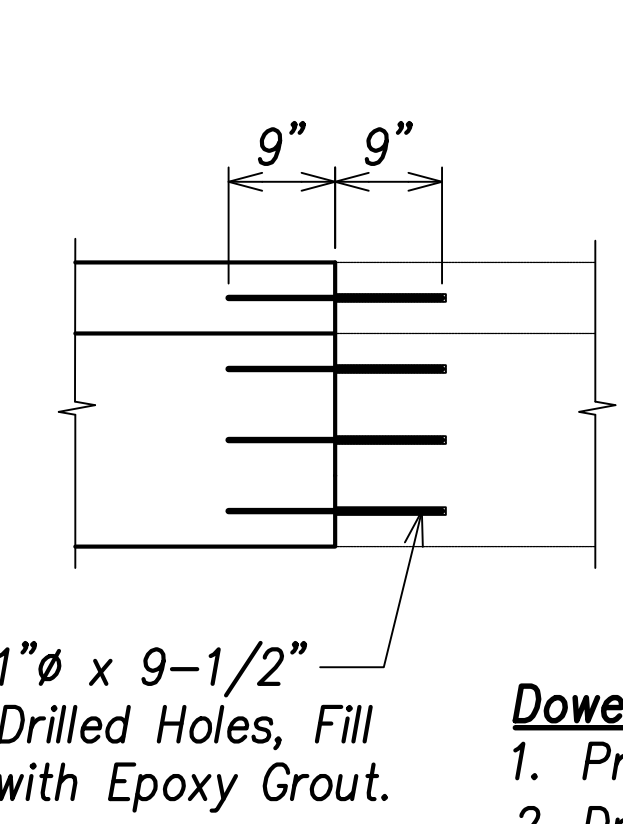


Curb and Gutter Connection Detail
Not to Scale



Note:
Curb depth shall be equal to the thickness of the existing AC pavement plus the AC base, but not less than 10".

Concrete Curb Against Existing AC Pavement
Not to Scale

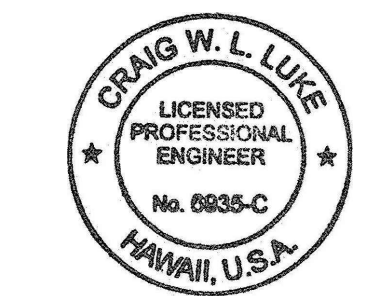


Section Through Gutter

- Doweling Notes:**
1. Provide Dowels as shown.
 2. Drill holes as shown, in the existing curb and gutter and/or sidewalk. Clean hole of dust and debris. Fill hole completely with epoxy grout, and install dowel.
 3. Epoxy grout shall be two-component, epoxy-resin system and shall comply with the requirements of AASHTO M 235 (ASTM C-881).
 4. Contractor shall have the option to wet set dowels instead of drilling and epoxy filling.

Dowel Detail
Not to Scale

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|------------------|
| 06/08/22 | Callout Revised |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Roadway Details - 2 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET NO. C-214 OF 767 SHEETS | |

CURB RAMP AND SIDEWALK NOTES:

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 217 | 767 |

1. These typical details are intended as curb ramp guidelines for design and construction. These guidelines shall not replace site specific curb ramp plans.
2. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
3. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
4. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
5. Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
6. Transitions from ramps to gutters and roadways shall be flush.
7. Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
8. The pedestrian push button shall meet operational and reach requirements of the American with Disabilities Act Accessibility Guidelines (ADAAG):
 - a) Forward Reach. The maximum height for forward reach shall be 48".
 - b) Side Reach. The maximum height for side reach shall be 48".
 - c) Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
9. The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5%. \triangle
10. There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
11. Construction joints are required to join curb ramps with sidewalks.
12. Unless otherwise noted, new gutters are required as shown.
13. All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
14. Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
15. Bed course material is required for curb ramps, sidewalks, and gutters.
16. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
17. Passing spaces along new sidewalks with 5' clear width or less shall be provided at maximum 200' intervals as required by ADA guidelines. The passing area shall be a minimum 5' wide by 5' long as feasible.
18. If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.
19. Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the current American with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.
20. If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 ft. ($\pm 0.2\%$). Remedial measures will not be accepted.

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

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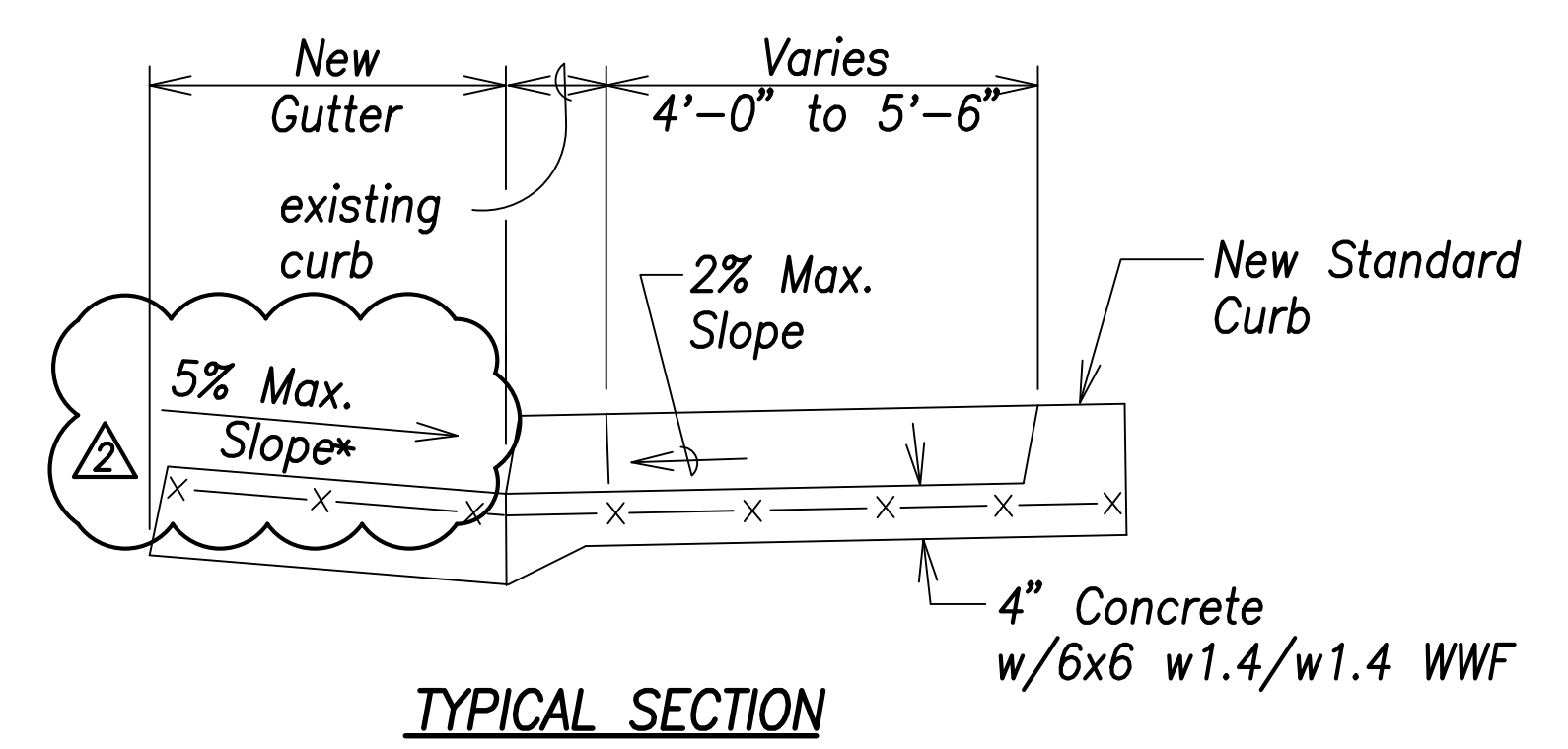
Signature: *Craig W. Luke* Date: April 30, 2022
 SIGNATURE EXPIRATION DATE OF THE LICENSE

| | |
|----------|--------------------------|
| 06/08/22 | \triangle Note Revised |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
Curb Ramp and Sidewalk Notes
 FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20
 Scale: As Shown Date: April 2022

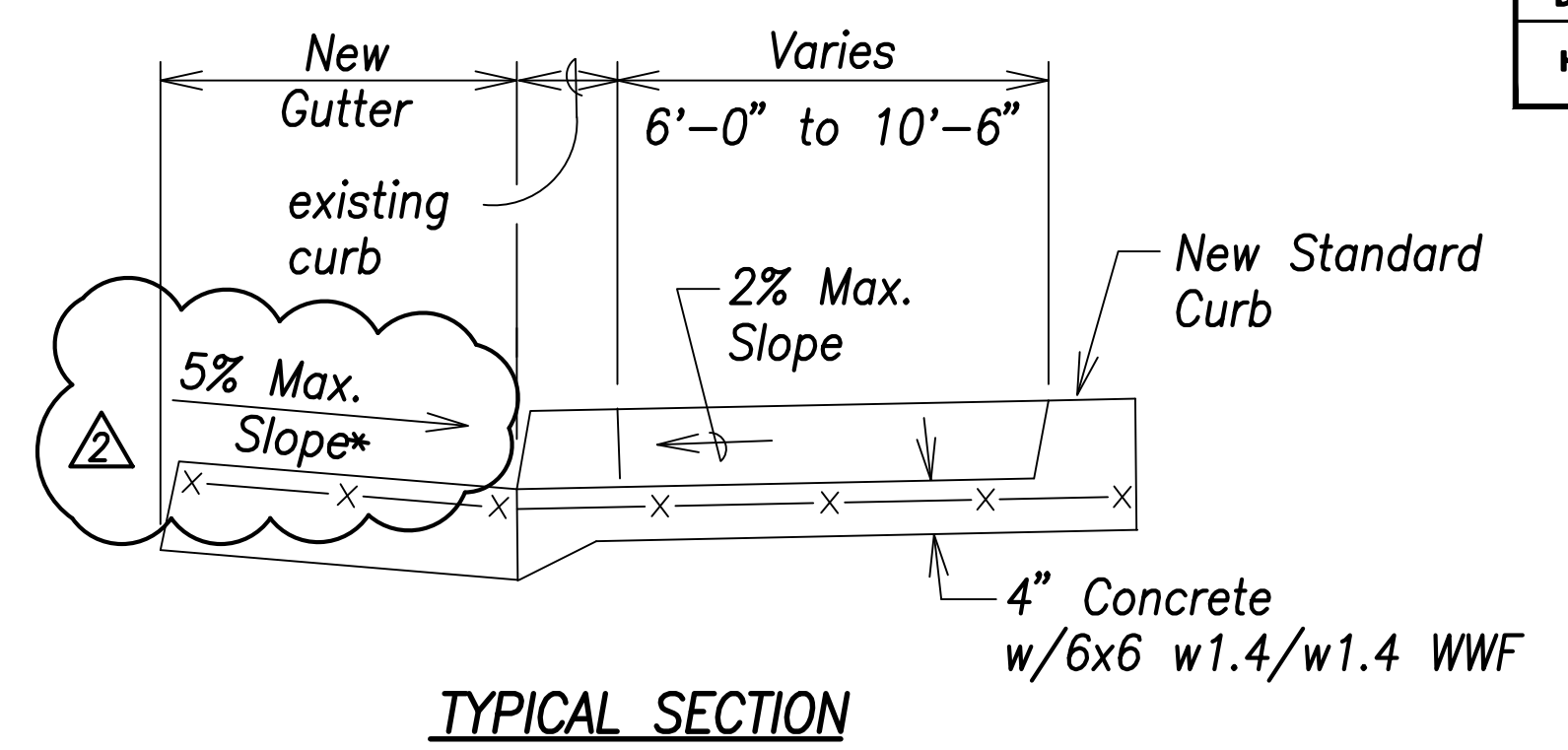
SHEET No. C-216 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 219 | 767 |

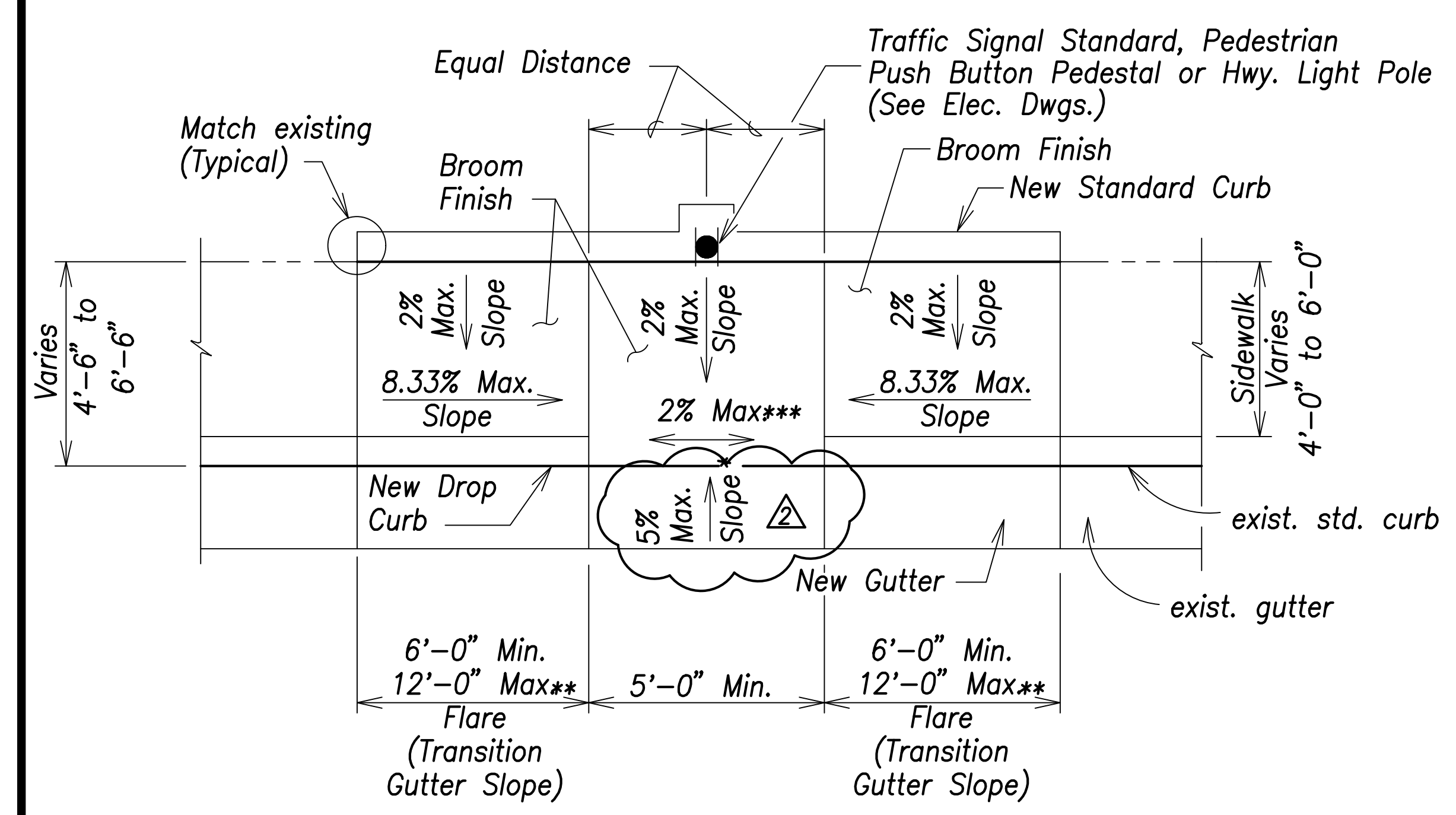


TYPICAL SECTION

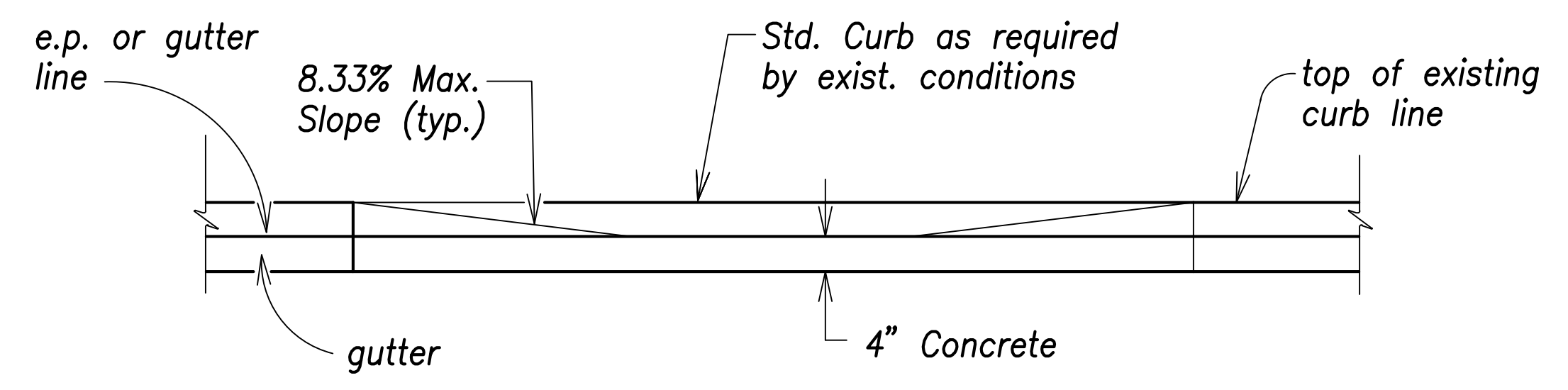
* See Curb Ramp and Sidewalk Note No. 9
 ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
 *** If Roadway Slope >2% Conform to Roadway Slope and File Technical Infeasibility (TI) Statement



TYPICAL SECTION



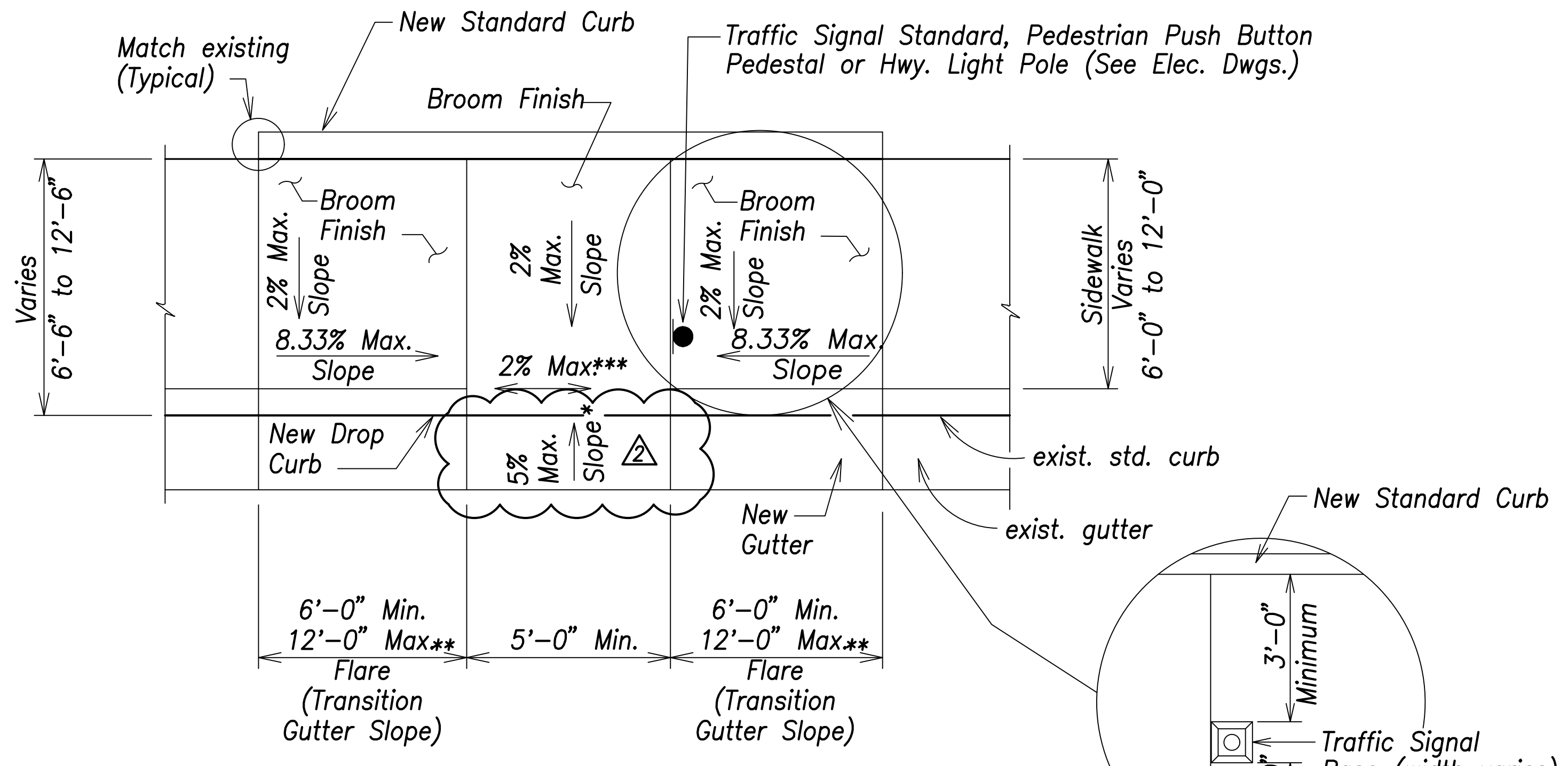
PLAN



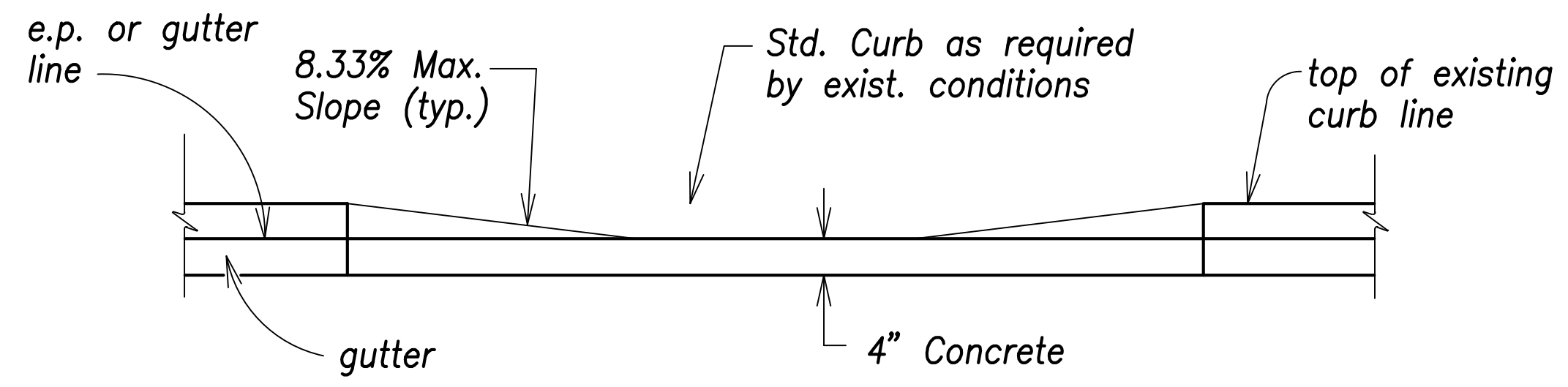
ELEVATION

SIDEWALK WIDTH 4'-0" OR GREATER BUT LESS THAN 6'-0" WIDTH

CURB RAMP - TYPE "B"
Not to Scale



PLAN

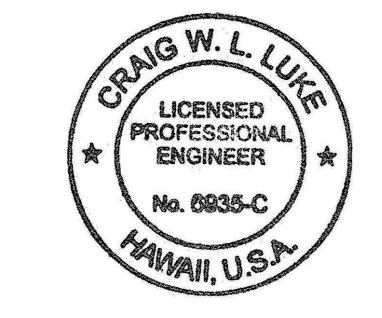


ELEVATION

SIDEWALK WIDTH 6'-0" OR GREATER BUT LESS THAN 12'-0" WIDTH

CURB RAMP - TYPE "B" MODIFIED
Not to Scale

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



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 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---|
| 06/08/22 | Max. Counterslope at Bottom of Ramp Revised |
| DATE | REVISION |

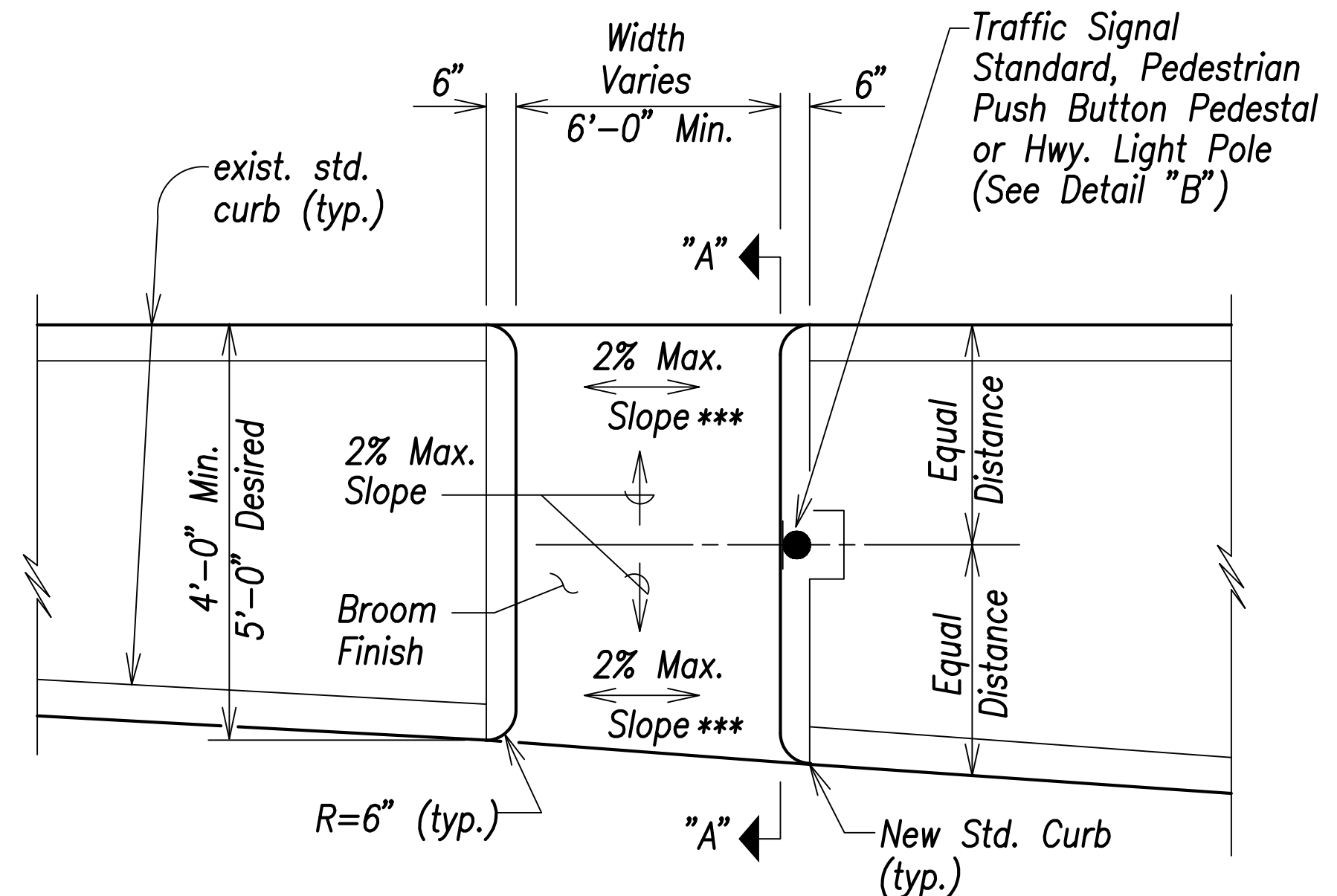
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Curb Ramp Details - 2

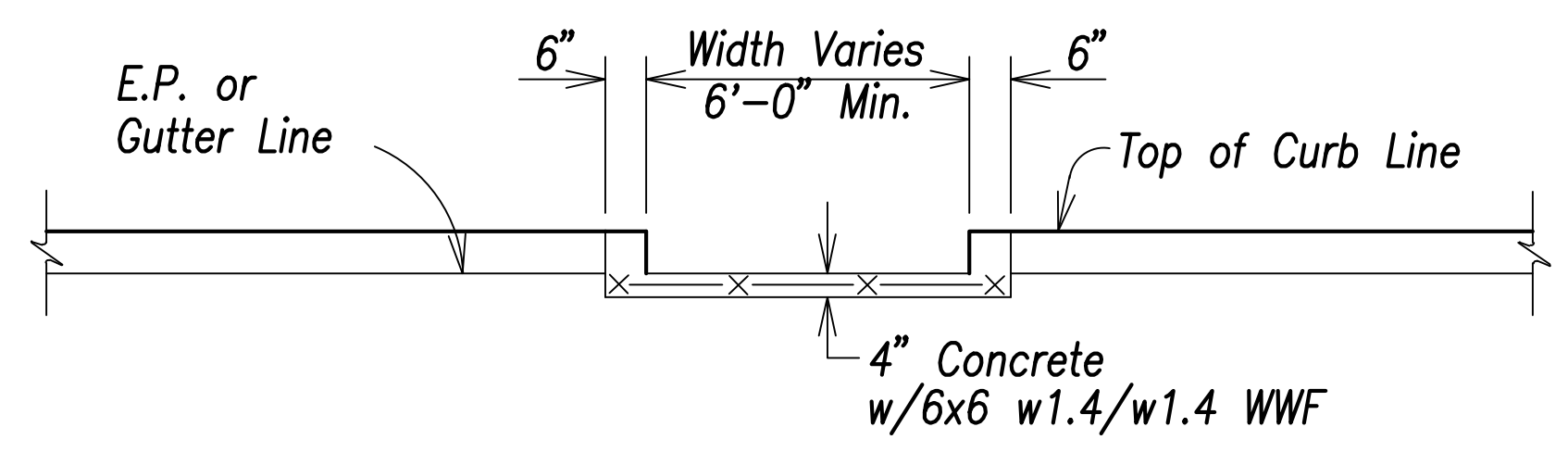
FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 221 | 767 |

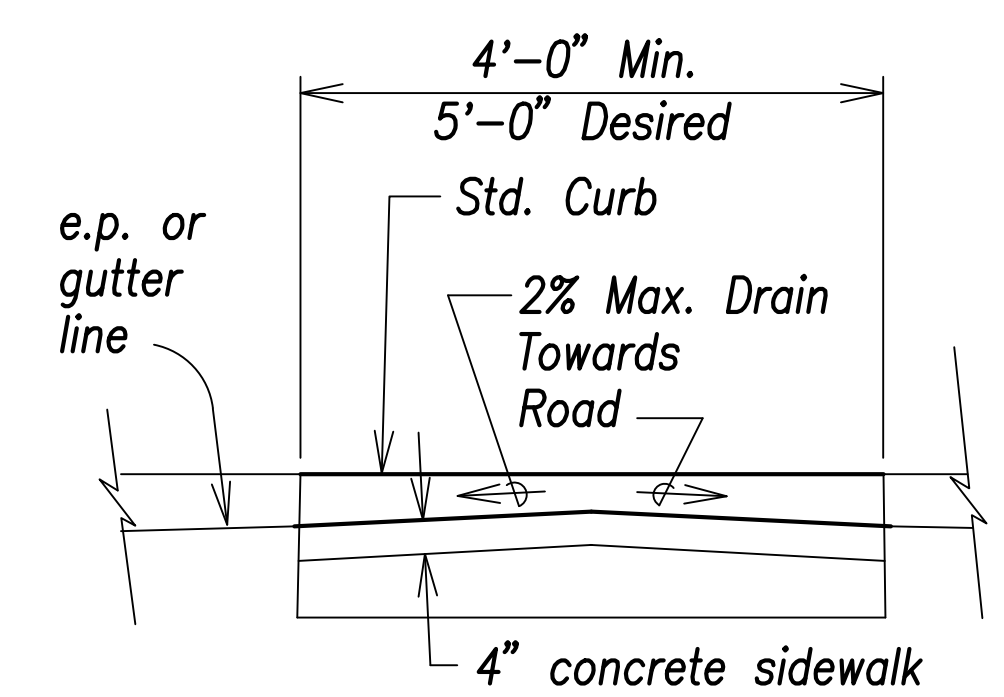


PLAN

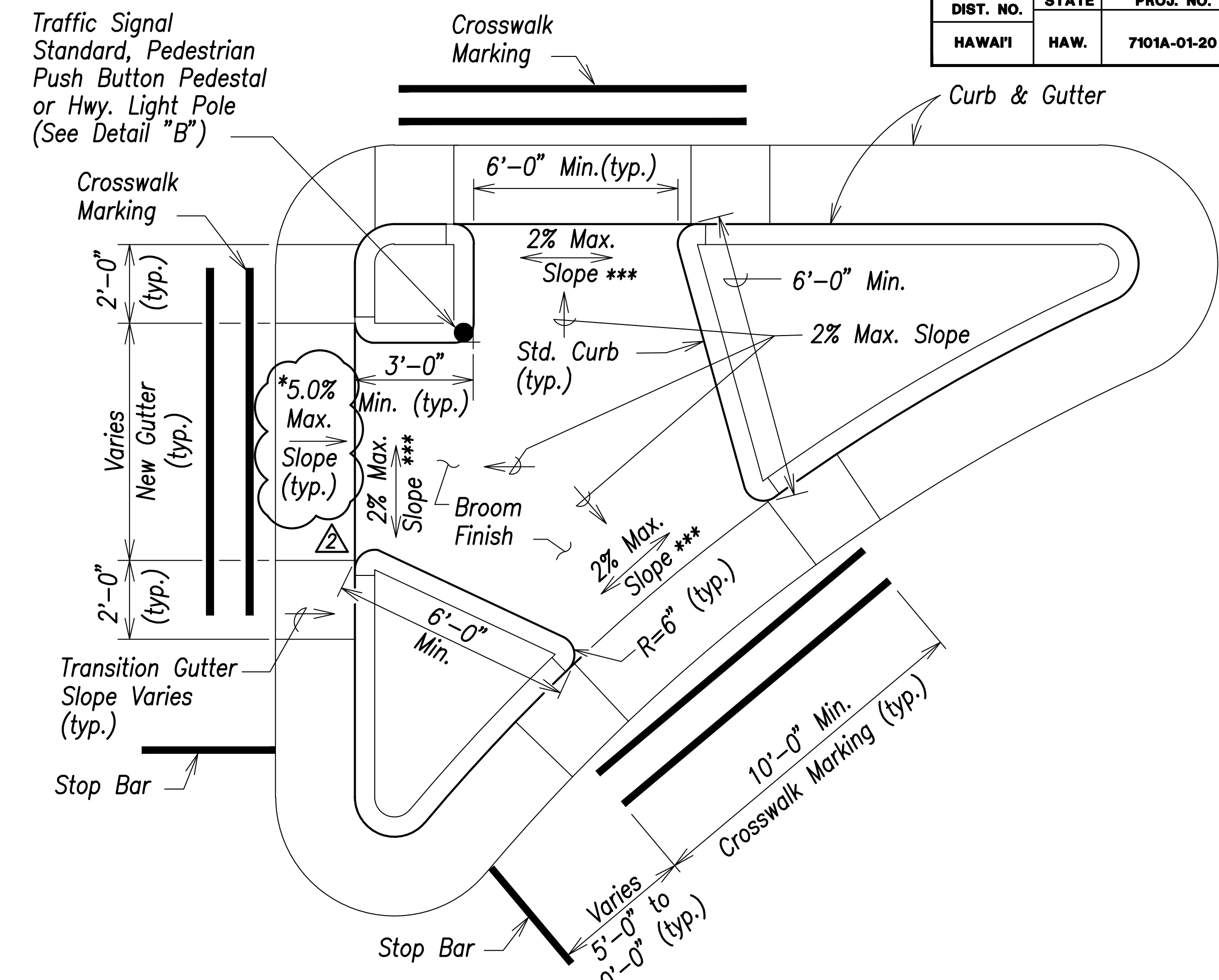


ELEVATION

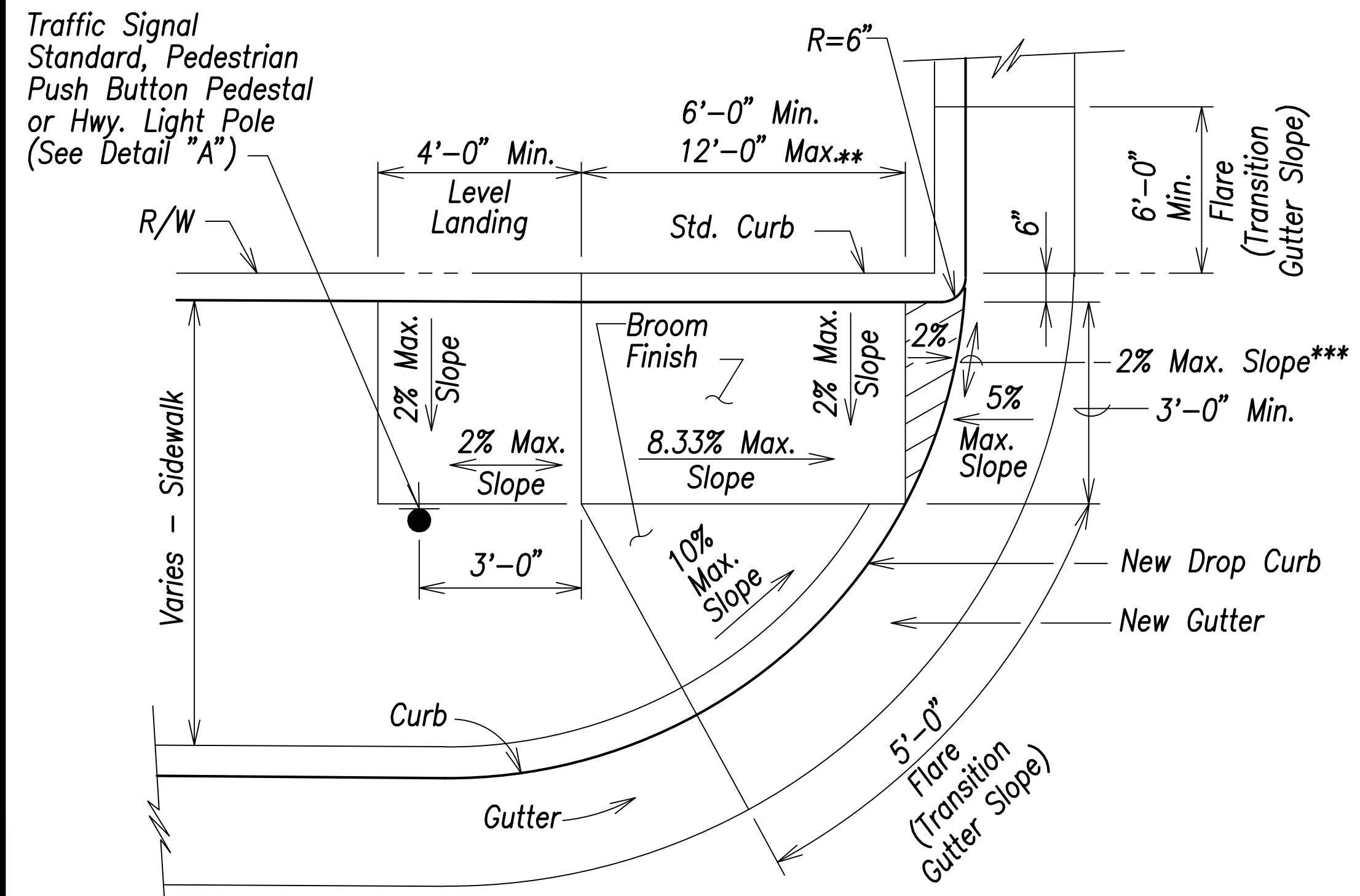
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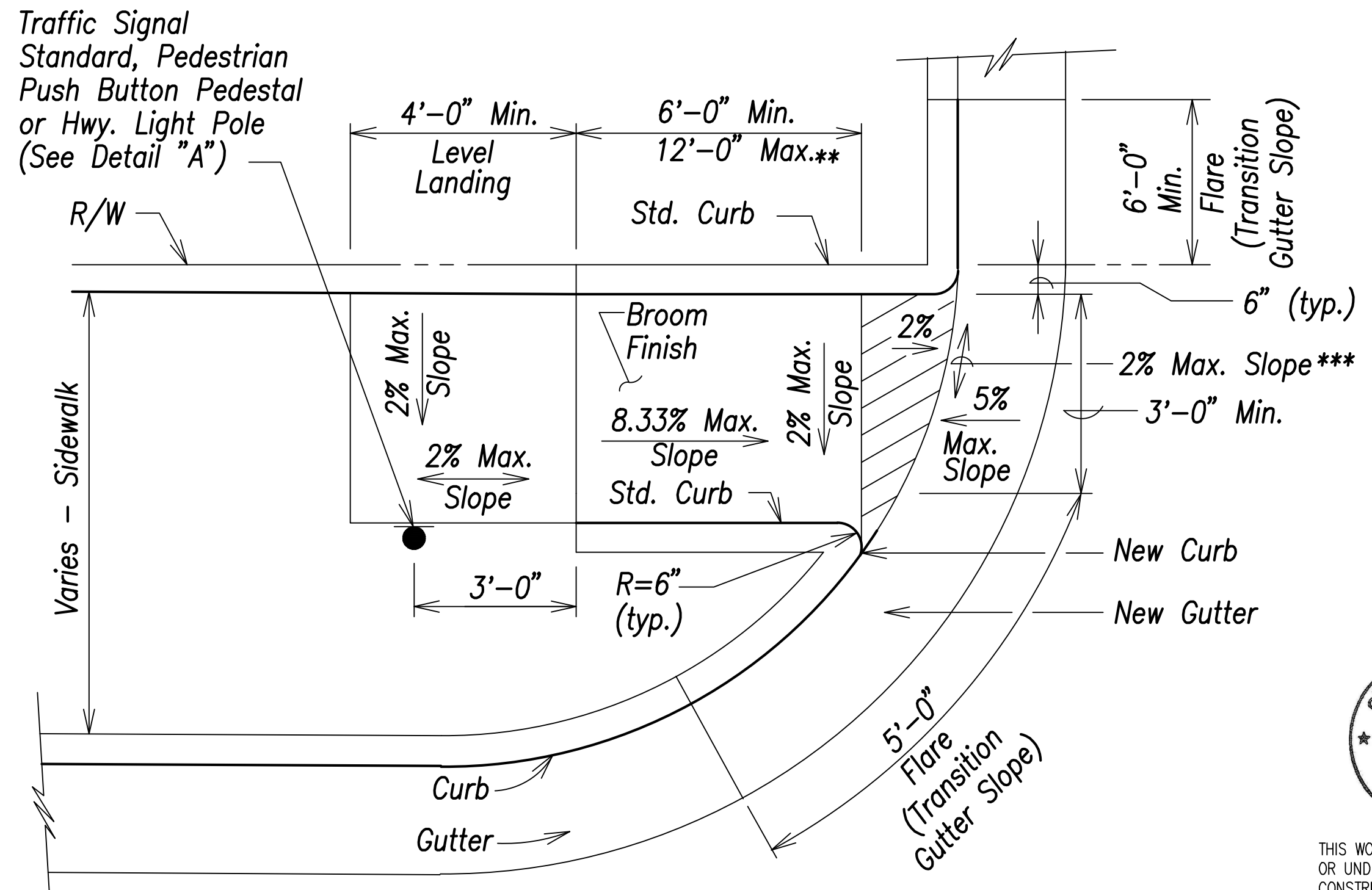
SECTION "A-A"



CURB RAMP - TYPE "C" MODIFIED
Not to Scale



CURB RAMP - TYPE "D"
Not to Scale

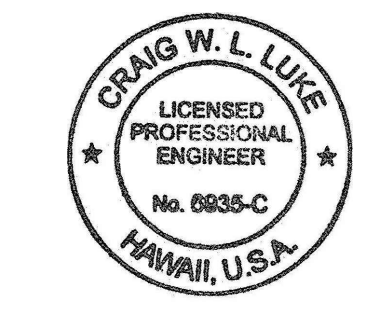


CURB RAMP - TYPE "D" MODIFIED
Not to Scale

* See Curb Ramp and Sidewalk Note No. 9.
** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.
*** If Roadway Slope >2% Conform to Roadway Slope and File a Technical Infeasibility (TI) Statement

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

| | |
|----------|---|
| 06/08/22 | Max. Counterslope at Bottom of Ramp Revised |
| DATE | REVISION |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

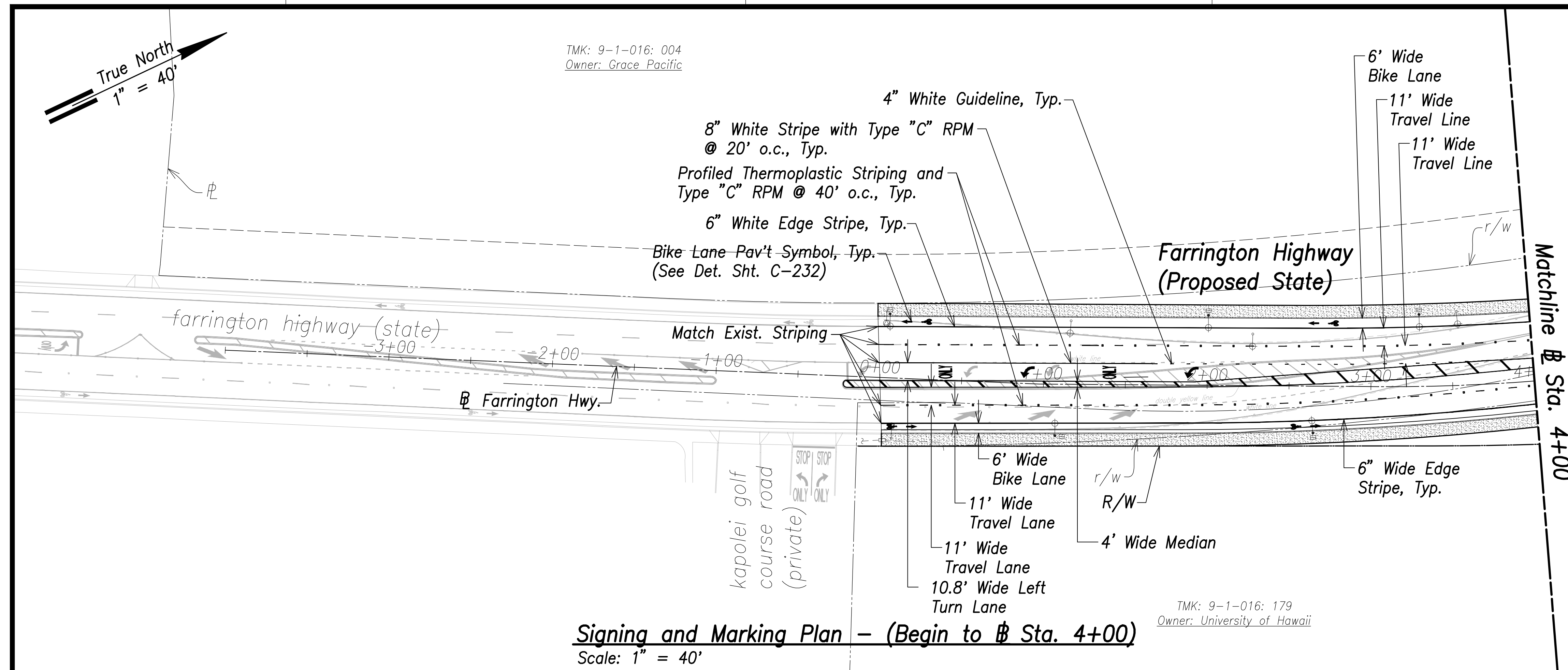
Curb Ramp Details - 4

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

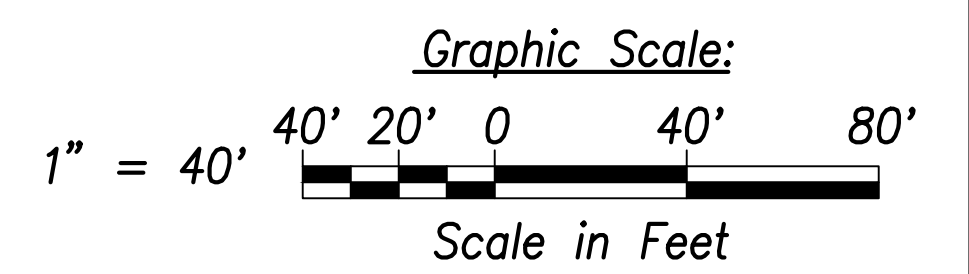
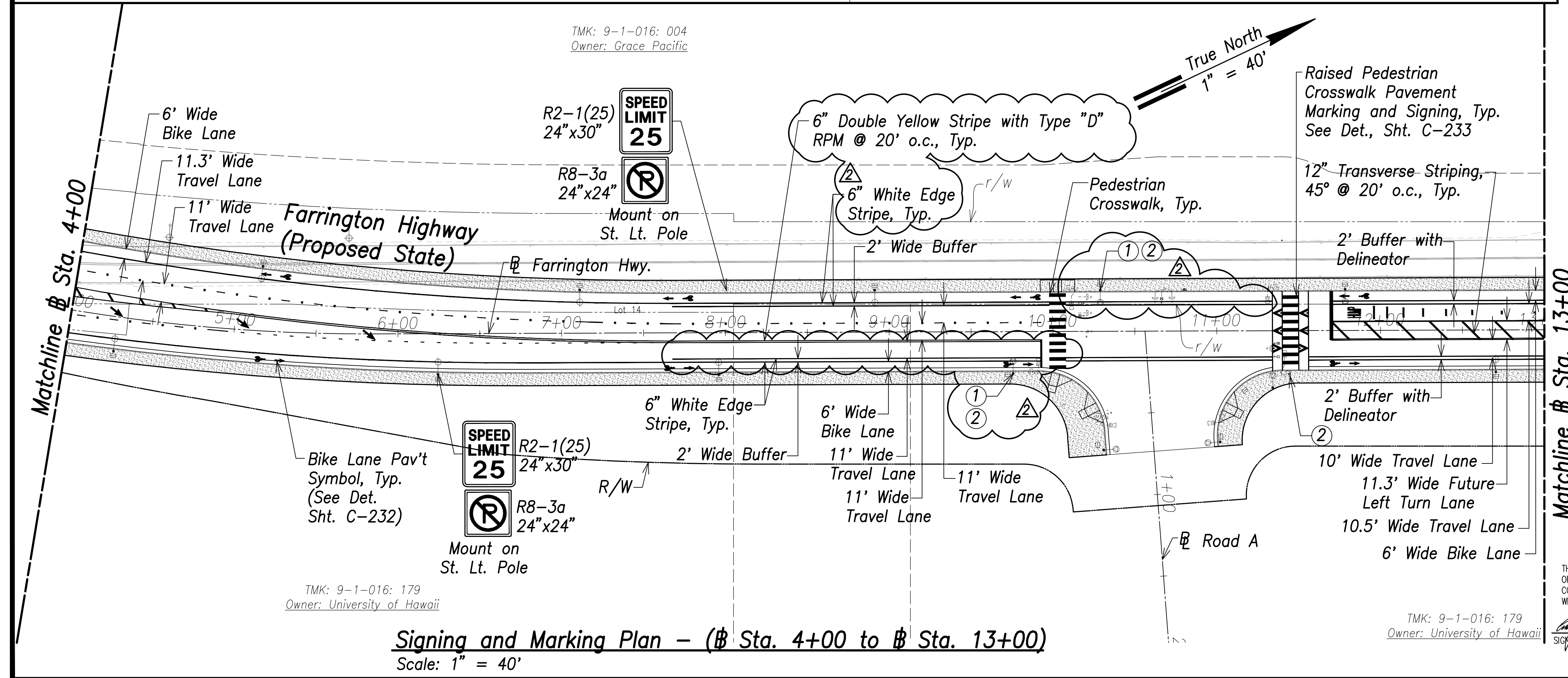
Scale: As Shown Date: April 2022

SHEET NO. C-220 OF 767 SHEETS

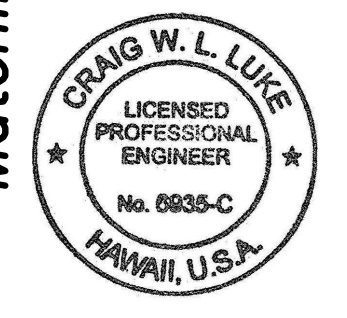
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 223 | 767 |



- ①
- FARRINGTON HWY.
- D3-1
Variesx12"
- ②
- W11-2
36"X36"
- W16-7pL
24"X12"



| DATE | REVISION |
|----------|--|
| 06/08/22 | ② Pav't. Arrow Revised, Crosswalk Signage Added, Label Added, Stripe Added |



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Signing and Marking Plan
 @ Sta. 0+00 to @ Sta. 13+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

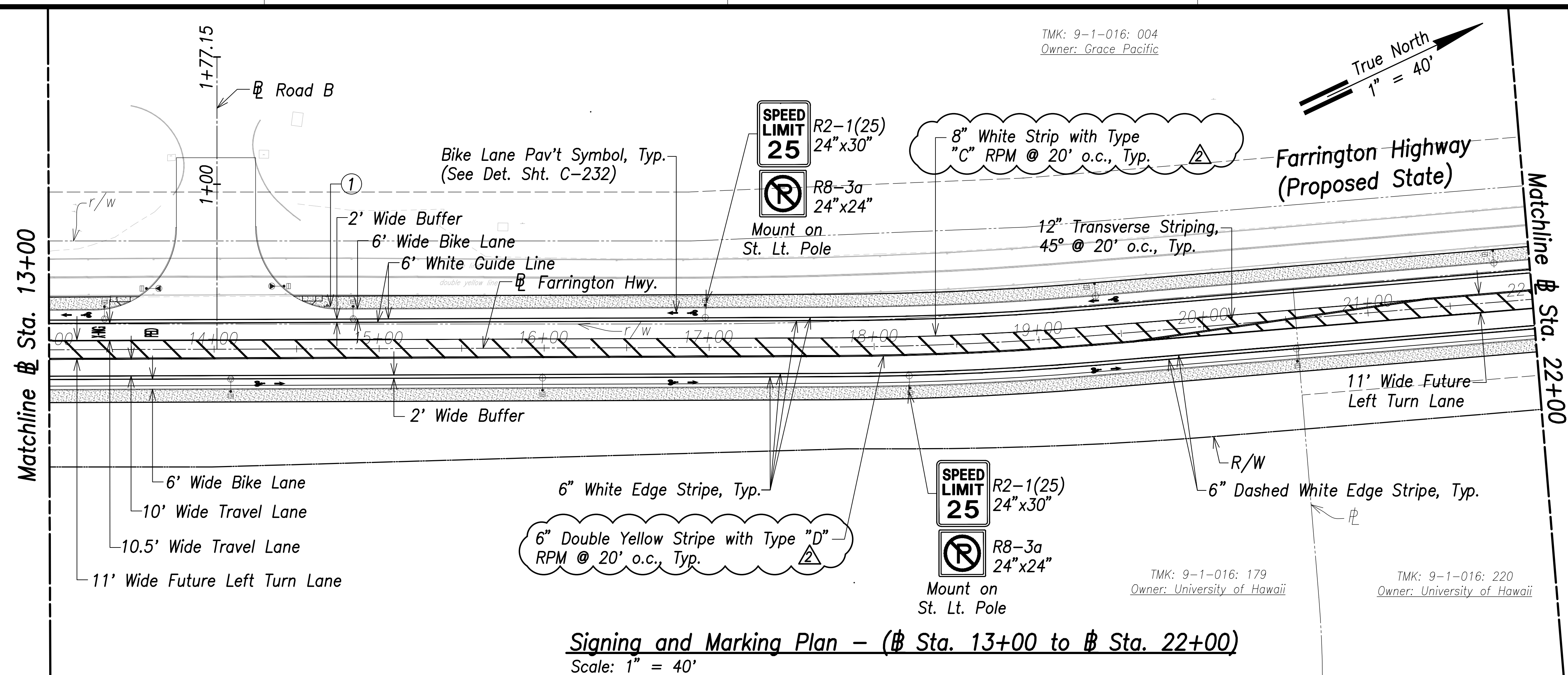
SHEET NO. C-222 OF 767 SHEETS

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

ORIGINAL PLAN NO. _____

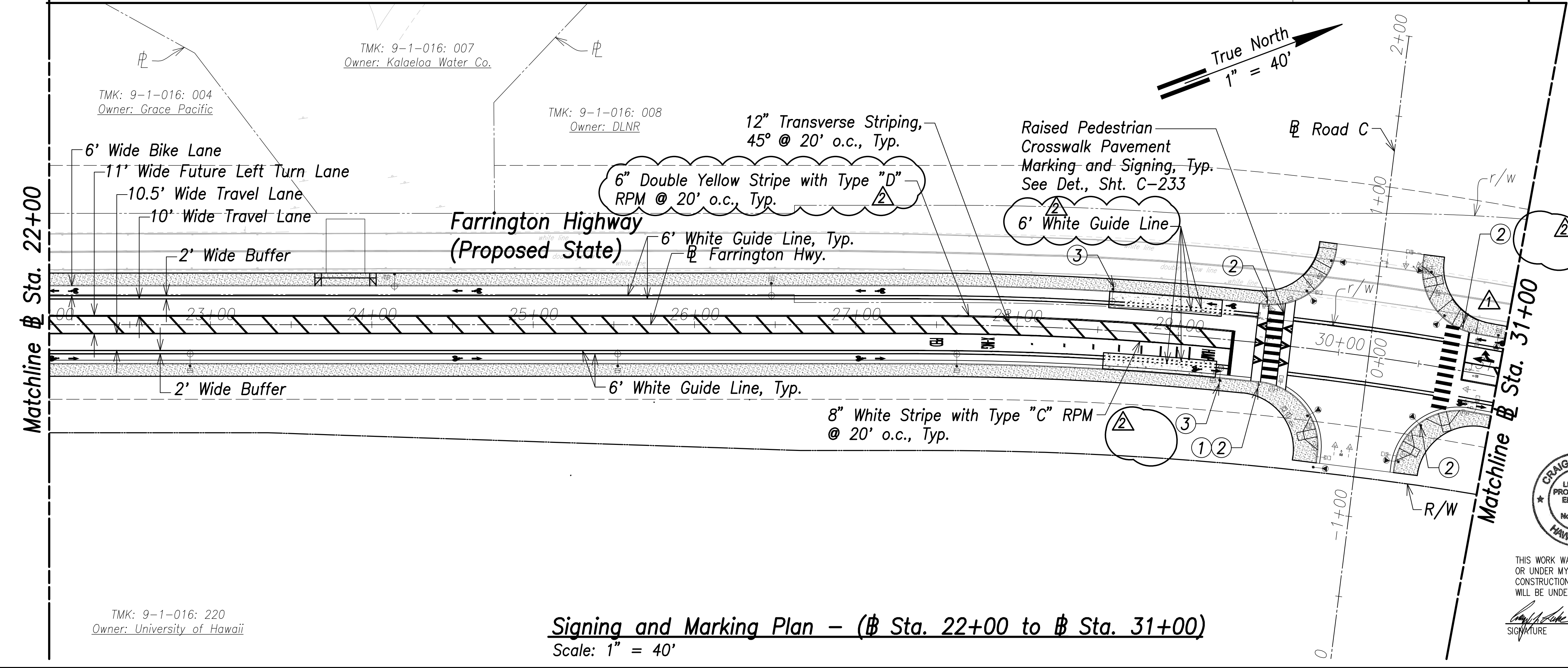
NOTE BOOK No. _____

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 224 | 767 |

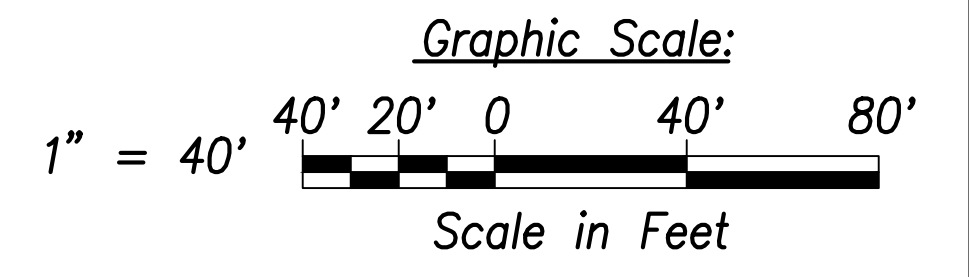


Signing and Marking Plan - (# Sta. 13+00 to # Sta. 22+00)
Scale: 1" = 40'

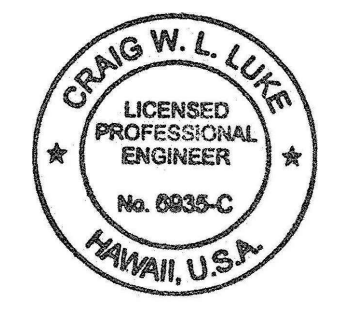
- ① D3-1 VARIESx12"
- ② W11-2 36"x36"
- W16-7pL 24"x12"
- ③ R7-107A 12"x24"



Signing and Marking Plan - (# Sta. 22+00 to # Sta. 31+00)
Scale: 1" = 40'



| DATE | REVISION |
|----------|--|
| 06/08/22 | ② Pav't. Arrow Revised, Crosswalk Signage Added, Turning Vehicles Yield to Pedestrians Sign Removed, Stripe Labels Added |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
 SIGNATURE: *Craig W. Luke* EXPIRATION DATE OF LICENSE: April 30, 2022

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Signing and Marking Plan
 # Sta. 13+00 to # Sta. 31+00

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-223 OF 767 SHEETS

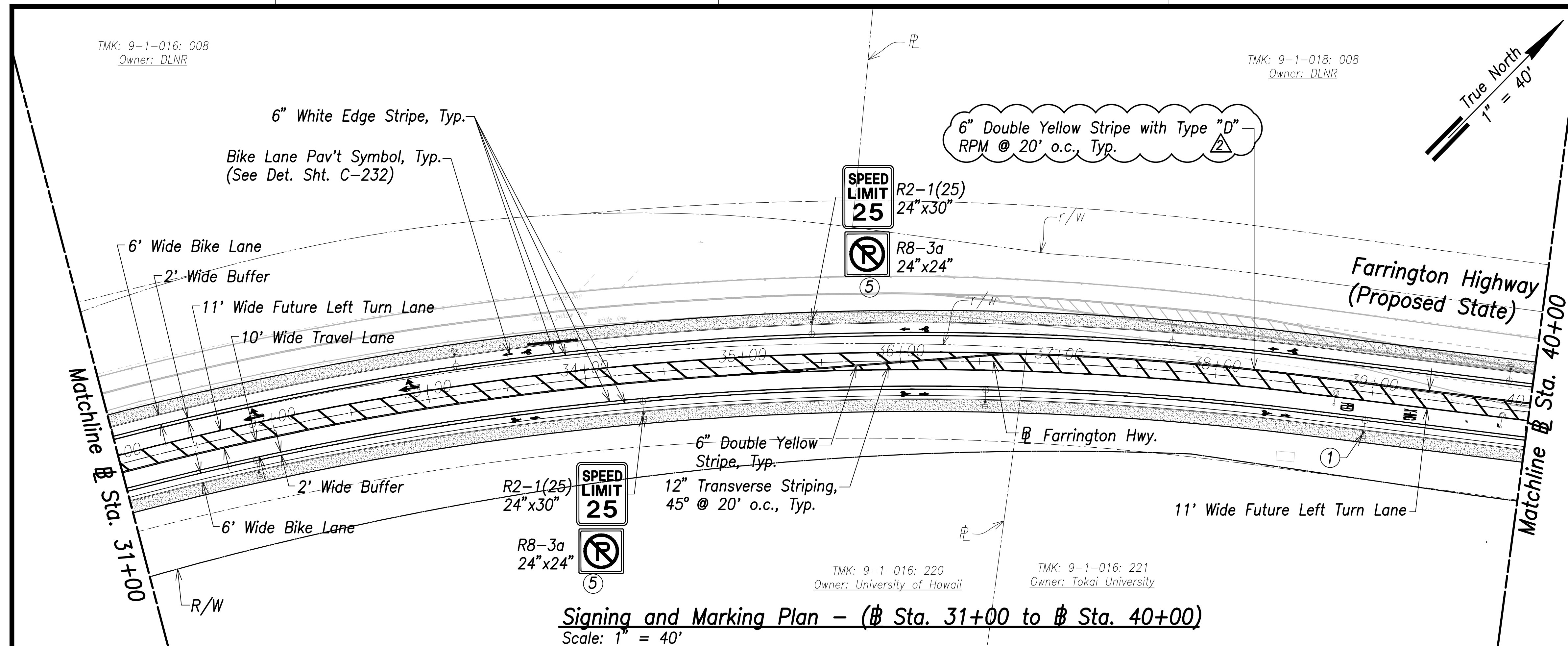
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| SURVEY PLOTTED BY: | DATE: |
| DRAWN BY: | |
| TRACED BY: | |
| QUANTITIES BY: | |
| CHECKED BY: | |
| ORIGINAL PLAN NO.: | |
| NOTE BOOK NO.: | |

FILE: \\NMC-FS\project\csm\21146 Farrington Hwy Widening\Jwg\Construction\Draws\C-223 Striping Plan - Sta. 13+00 to 31+00.dwg saved June 1, 2022

TMK: 9-1-016: 008
Owner: DLNR

TMK: 9-1-018: 008
Owner: DLNR

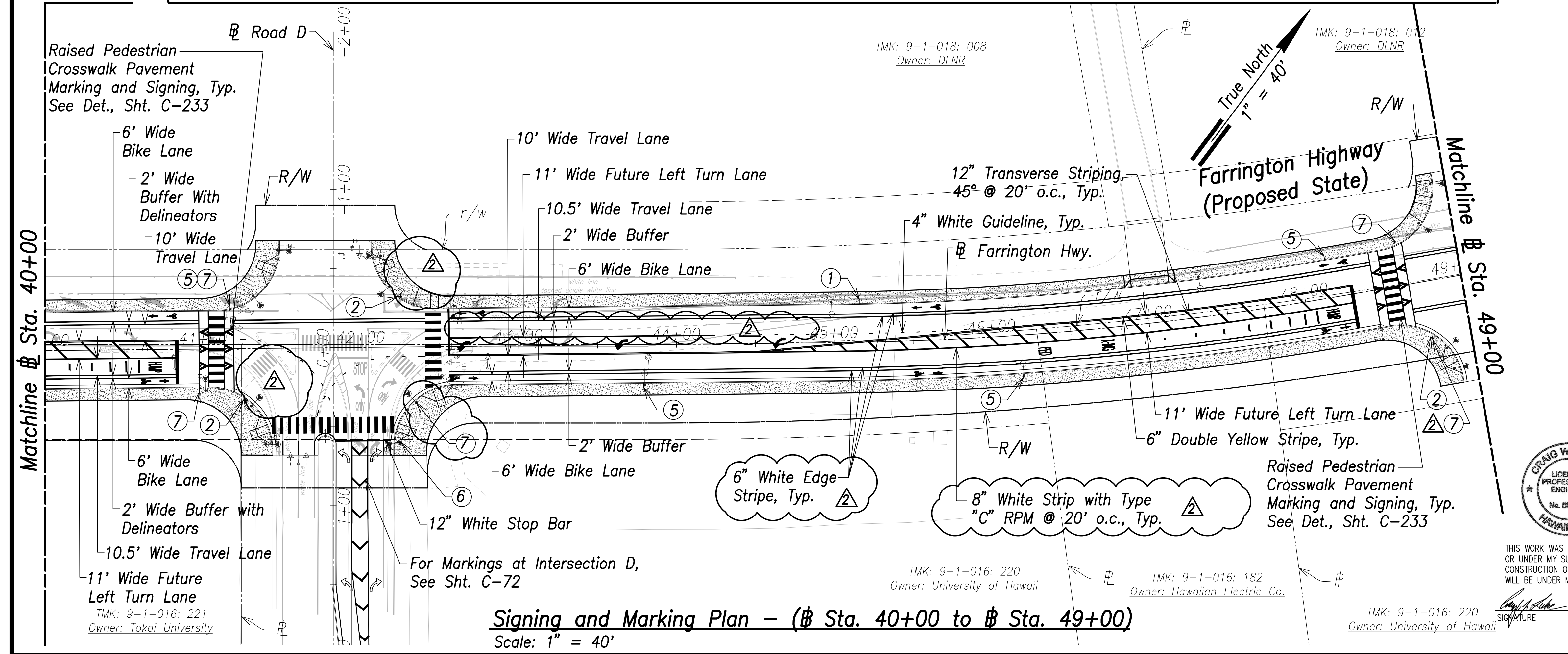
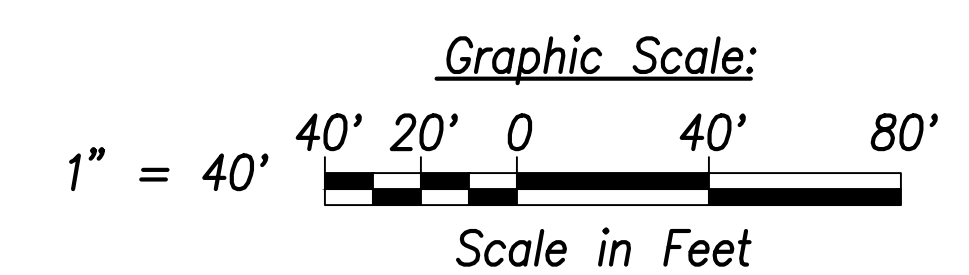
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 225 | 767 |



Signing and Marking Plan - (Sta. 31+00 to Sta. 40+00)
Scale: 1" = 40'

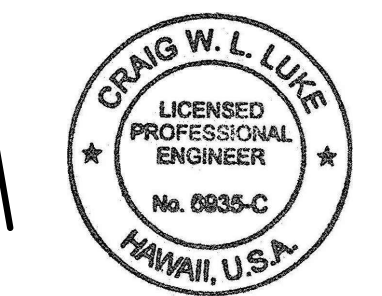
Legend for signs and markings:

- ① R8-3a 24"x24" Mount on St. Lt. Pole
- ② FARRINGTON HWY. D3-1 Variesx12"
- ③ (Clouded area)
- ④ (Clouded area)
- ⑤ R2-1(25) 24"x30" SPEED LIMIT 25
- ⑥ STOP R1-1 30" x 30" Mount on St. Lt. Pole
- ⑦ W11-2 36"X36" W16-7pL 24"X12"



Signing and Marking Plan - (Sta. 40+00 to Sta. 49+00)
Scale: 1" = 40'

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. Luke*
EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---|
| 06/08/22 | Turning Vehicles Yield to Pedestrians Sign Removed, Pav't Arrow Revised, Stree Sign Removed, Stripe Label Added |
| DATE | REVISION |

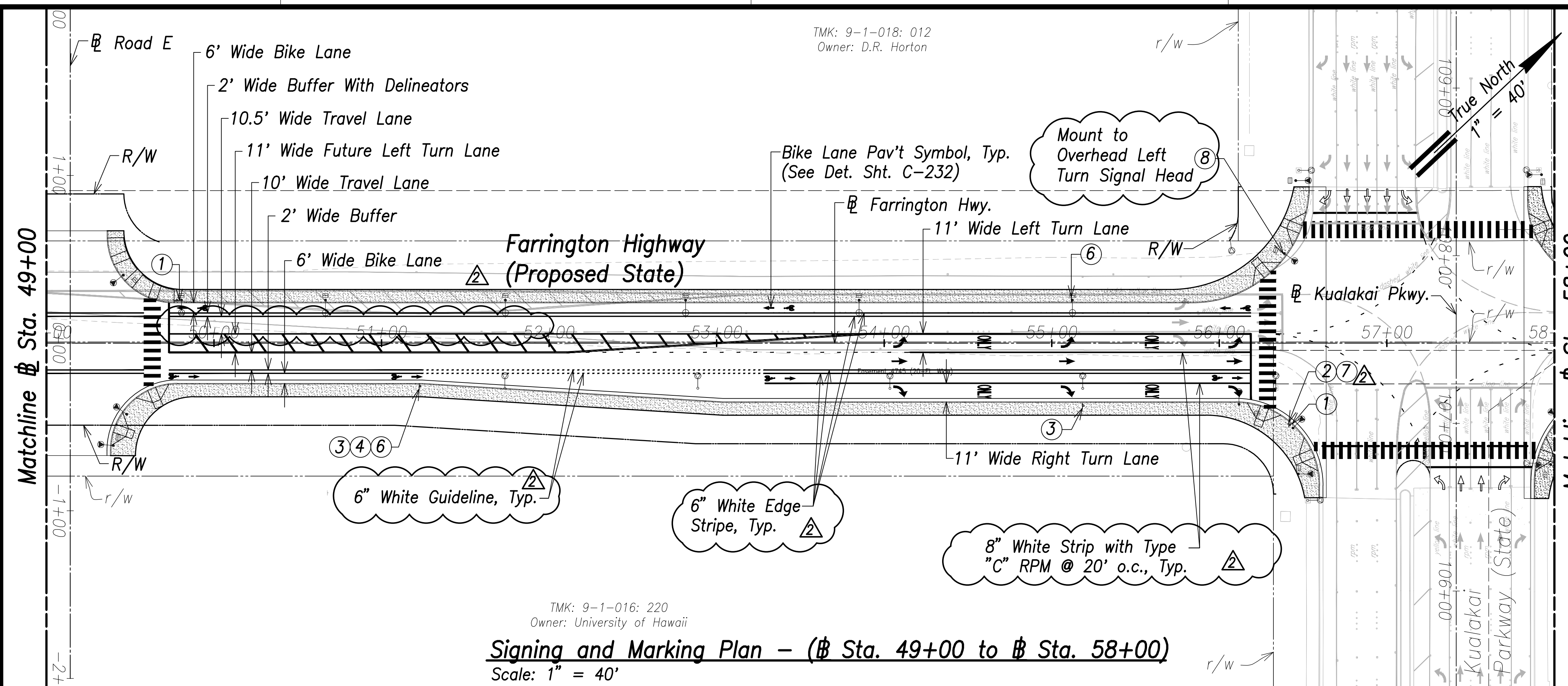
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Signing and Marking Plan
Sta. 31+00 to Sta. 49+00

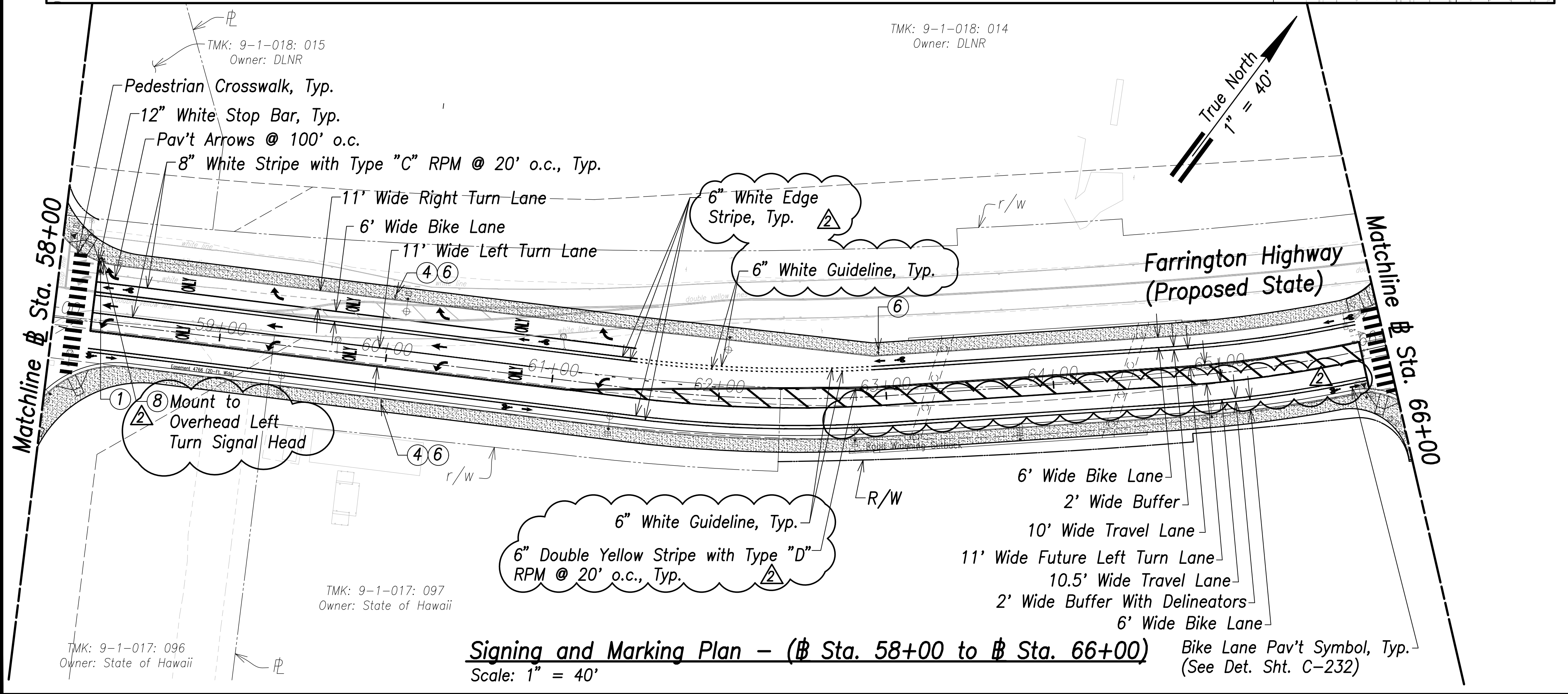
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 226 | 767 |

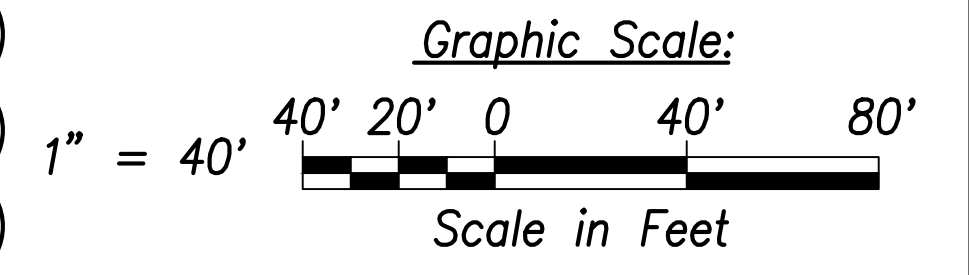


TMK: 9-1-016: 220
Owner: University of Hawaii
Signing and Marking Plan - (Sta. 49+00 to Sta. 58+00)
Scale: 1" = 40'



TMK: 9-1-017: 097
Owner: State of Hawaii
Signing and Marking Plan - (Sta. 58+00 to Sta. 66+00)
Scale: 1" = 40'

- ① FARRINGTON HWY.
D3-1
Variesx12"
- ② KUALAKAI PKWY.
D3-1
Variesx12"
- ③ ONLY
R3-8a(MOD.)
45"x30"
- ④ BIKE ROUTE
D11-1
24"x18"
- ⑤
- ⑥ SPEED LIMIT 25
R2-1(25)
24"x30"
- ⑦ RIGHT TURN ON RED AFTER STOP
R10-17a (Modified)
24"x30"
- ⑧ ON LEFT ARROW ONLY NO U TURN
R3-5 (Modified)
36"x48"
- ⑧ Mount to Overhead Left Turn Signal Head
- ⑧ R8-3a
24"x24"
Mount on St. Lt. Pole

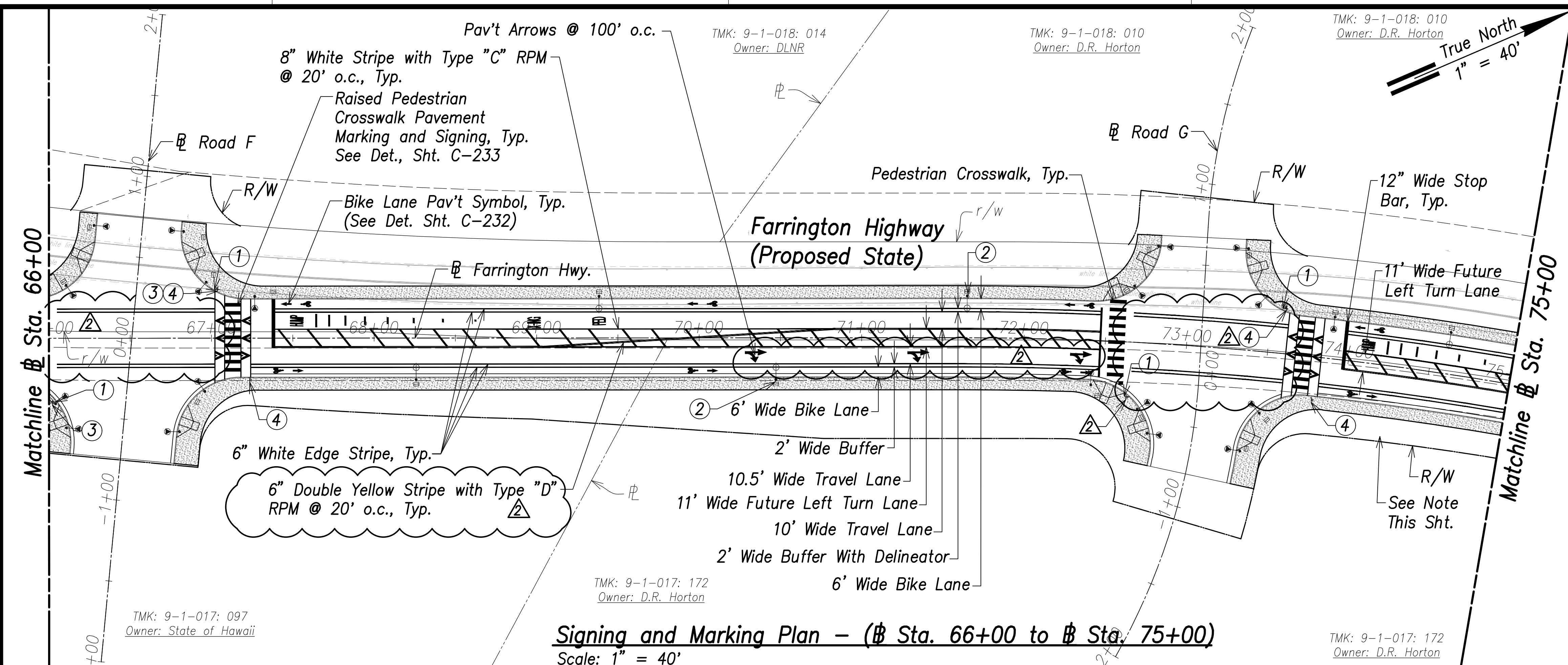


| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

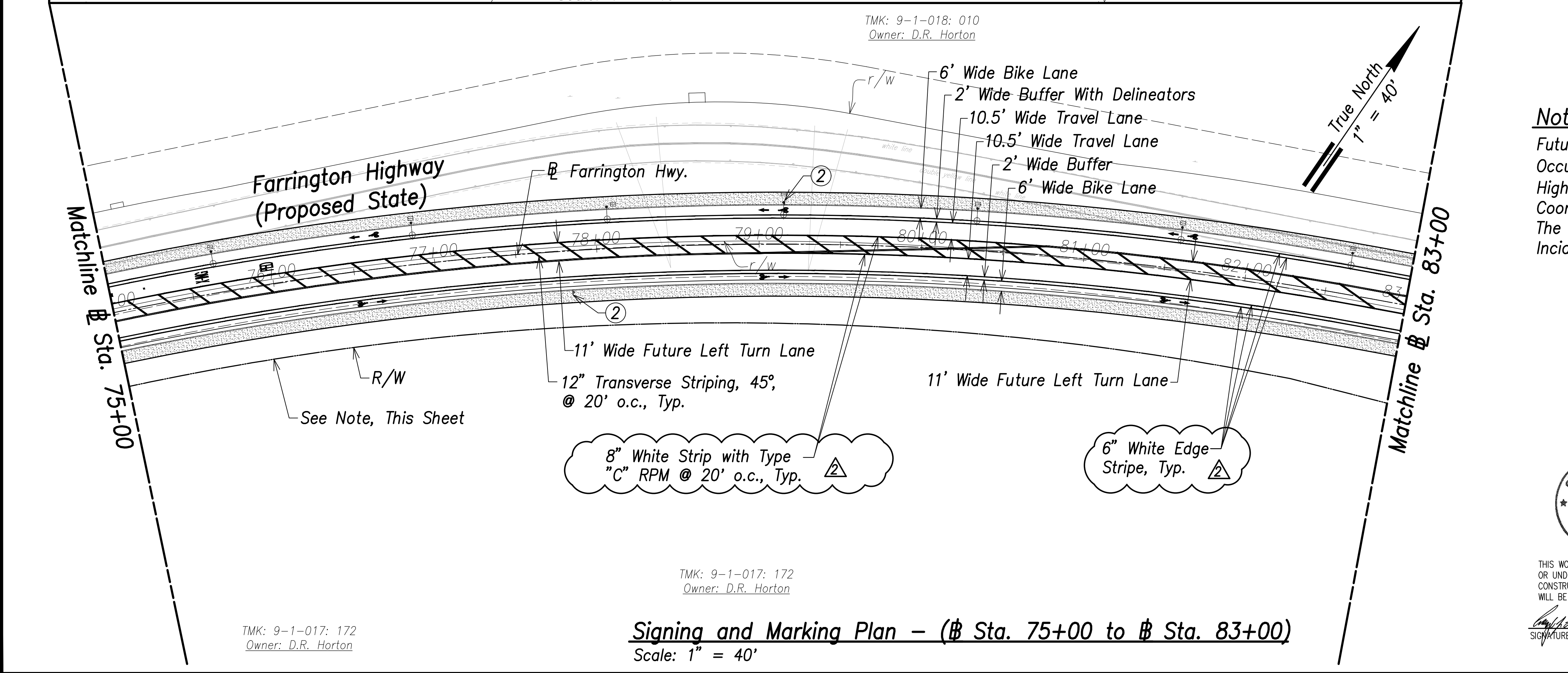
ORANG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: [Signature]
APR 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|---|
| 06/08/22 | Turning Vehicles Yield to Pedestrians Sign Removed, Pav't Arrow Revised, Sign Added |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Signing and Marking Plan
Sta. 49+00 to Sta. 66+00 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |
| SHEET No. C-225 OF 767 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 227 | 767 |



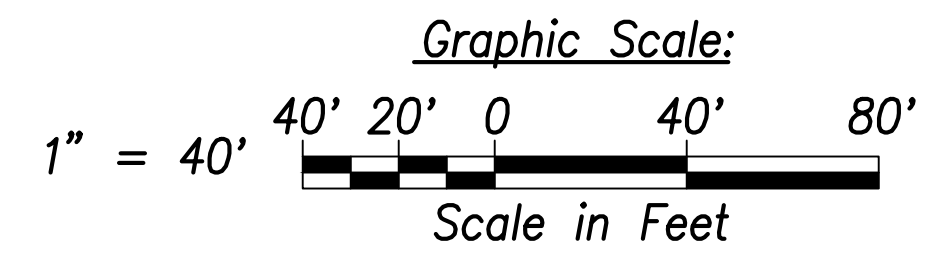
Signing and Marking Plan - (# Sta. 66+00 to # Sta. 75+00)
Scale: 1" = 40'



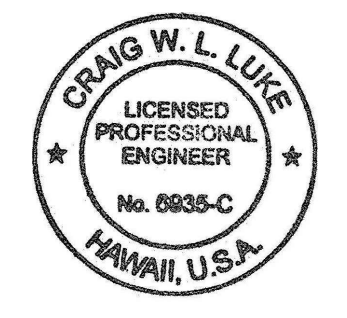
Signing and Marking Plan - (# Sta. 75+00 to # Sta. 83+00)
Scale: 1" = 40'

- ① FARRINGTON HWY. D3-1 VARIESx12"
- ② SPEED LIMIT 25 R2-1(25) 24"x30"
- ③ R8-3a 24"x24"
- ④ W11-2 36"X36"
- W16-7pL 24"X12"

Note:
Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.



| DATE | REVISION |
|----------|---|
| 06/08/22 | Turning Vehicles Yield to Pedestrians Sign Removed, Pav't Arrow Revised, Stripe Label Added |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: *Craig W. Luke*
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Signing and Marking Plan
Sta. 66+00 to # Sta. 83+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

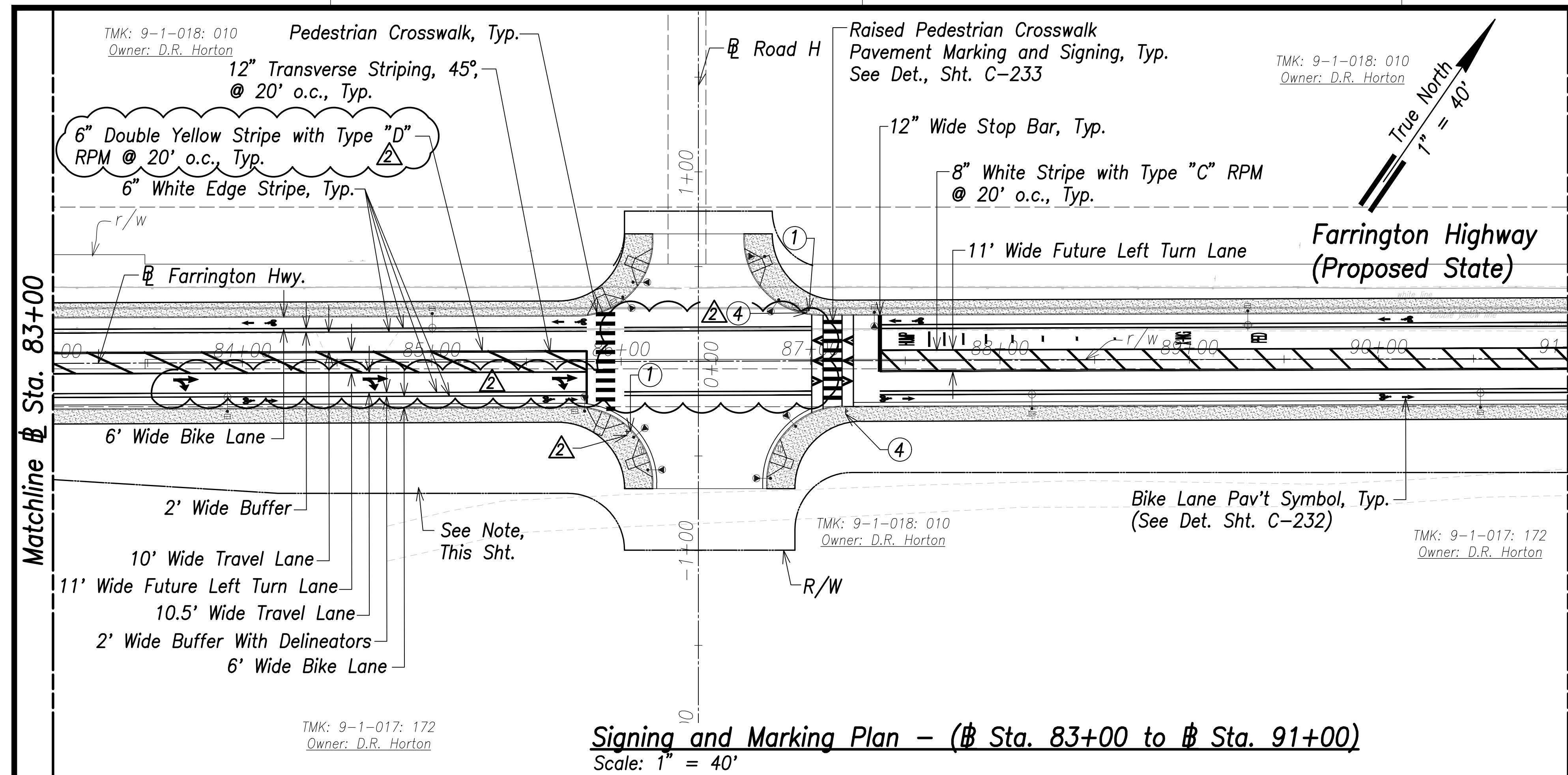
Scale: As Shown Date: April 2022

SHEET No. C-226 OF 767 SHEETS

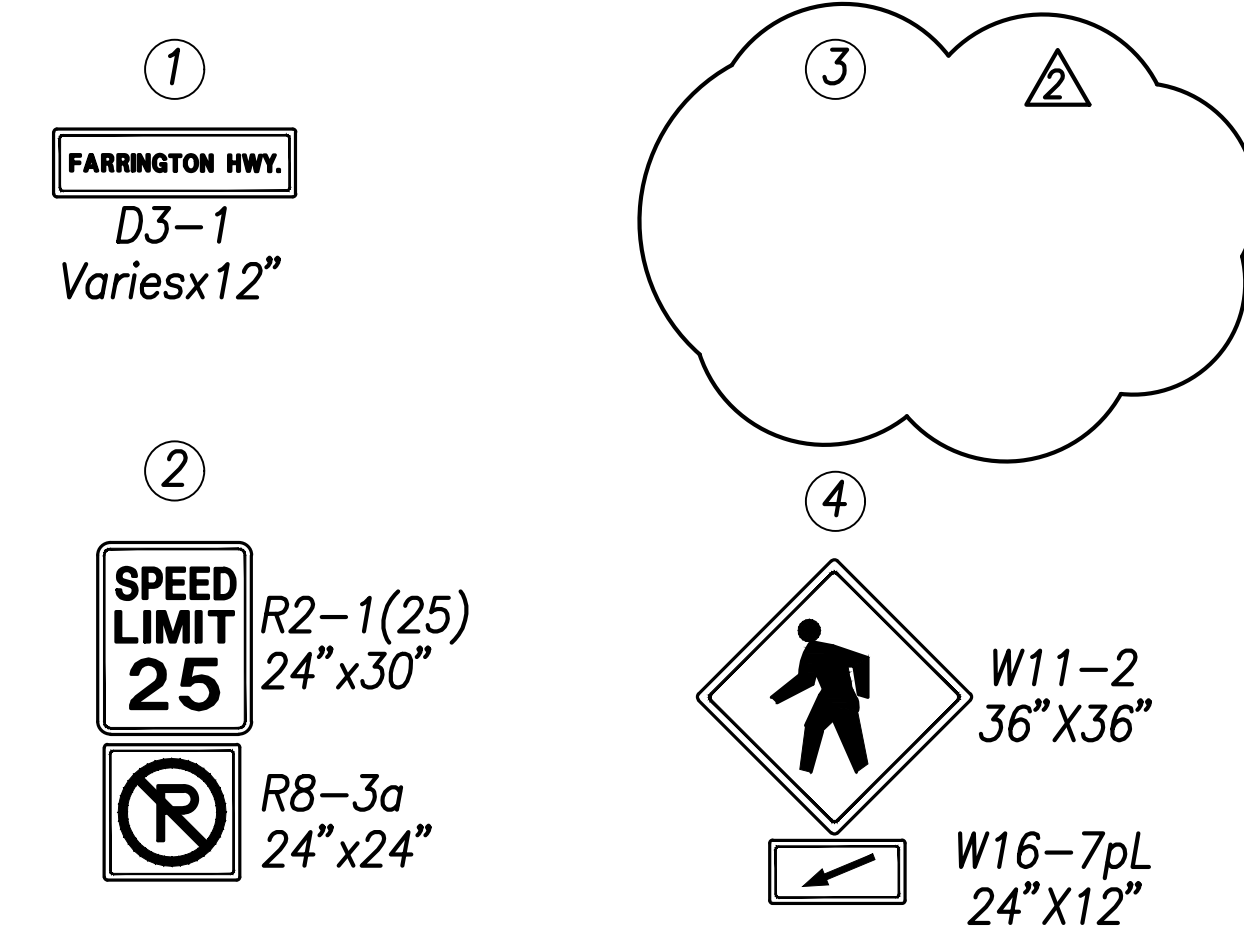
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |

FILE: \\NMC-FS\project\civ\21146 Farrington Hwy Widening\Jwg\Construction\Draws\C-226 Striping Plan - Sta. 66+00 to 83+00.dwg saved May 31, 2022

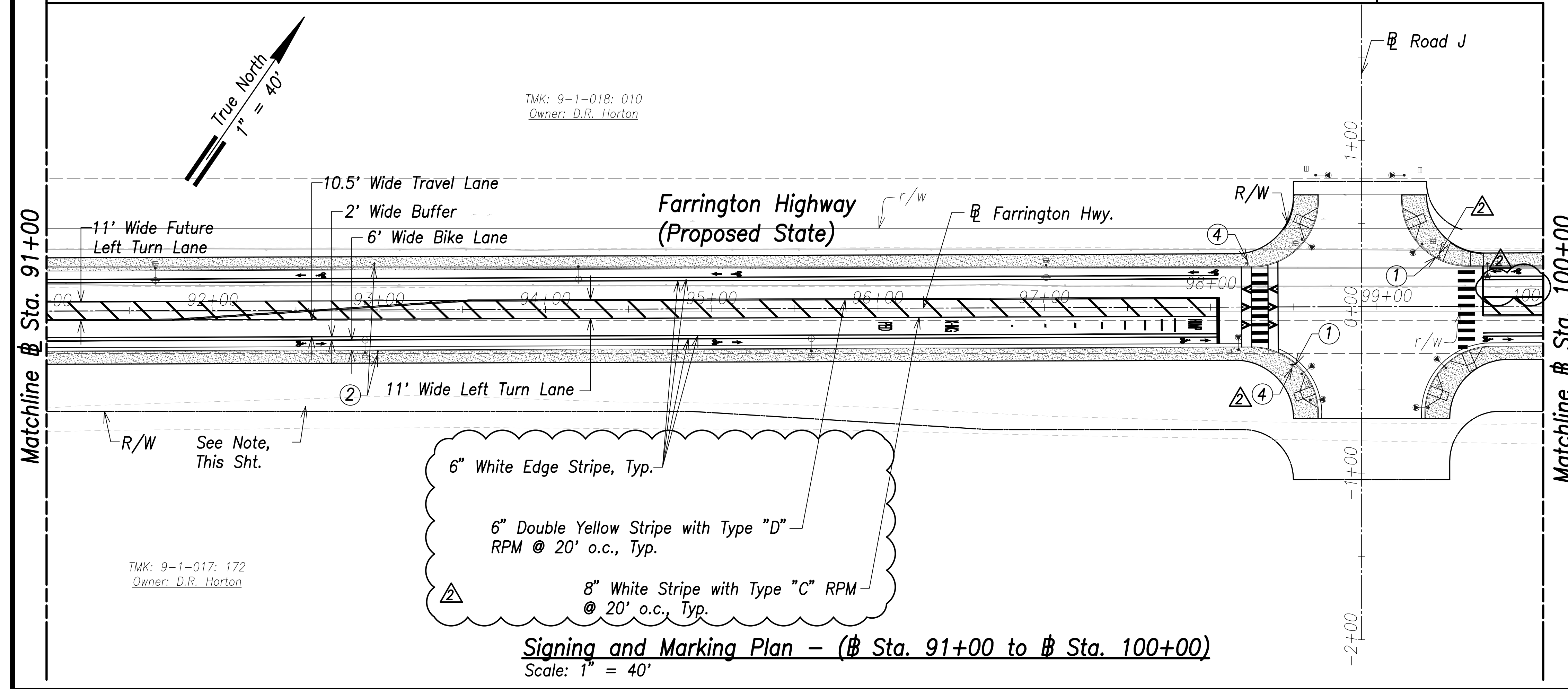
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 228 | 767 |



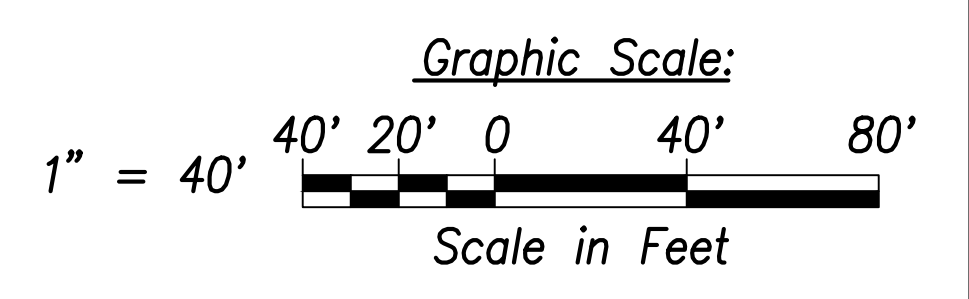
Signing and Marking Plan - (Sta. 83+00 to Sta. 91+00)
Scale: 1" = 40'



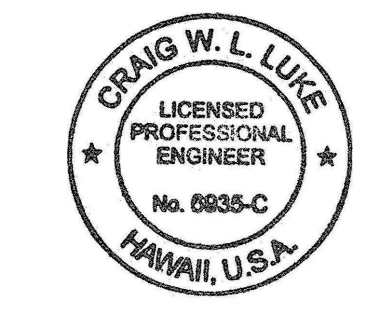
Note:
Future HECO Electrical System, Construction Will Occur at the Same as this Project (Farrington Highway Improvements). The Contractor Shall Fully Coordinate Work with HECO and their Contractor. The Cost to Coordinate Work Will be Considered Incidental to the Various Items of Work.



Signing and Marking Plan - (Sta. 91+00 to Sta. 100+00)
Scale: 1" = 40'



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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: [Signature]
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|---|
| 06/08/22 | Turning Vehicles Yield to Pedestrians Sign Removed, Stripes Added, Stripe Label Added |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Signing and Marking Plan
Sta. 83+00 to Sta. 100+00

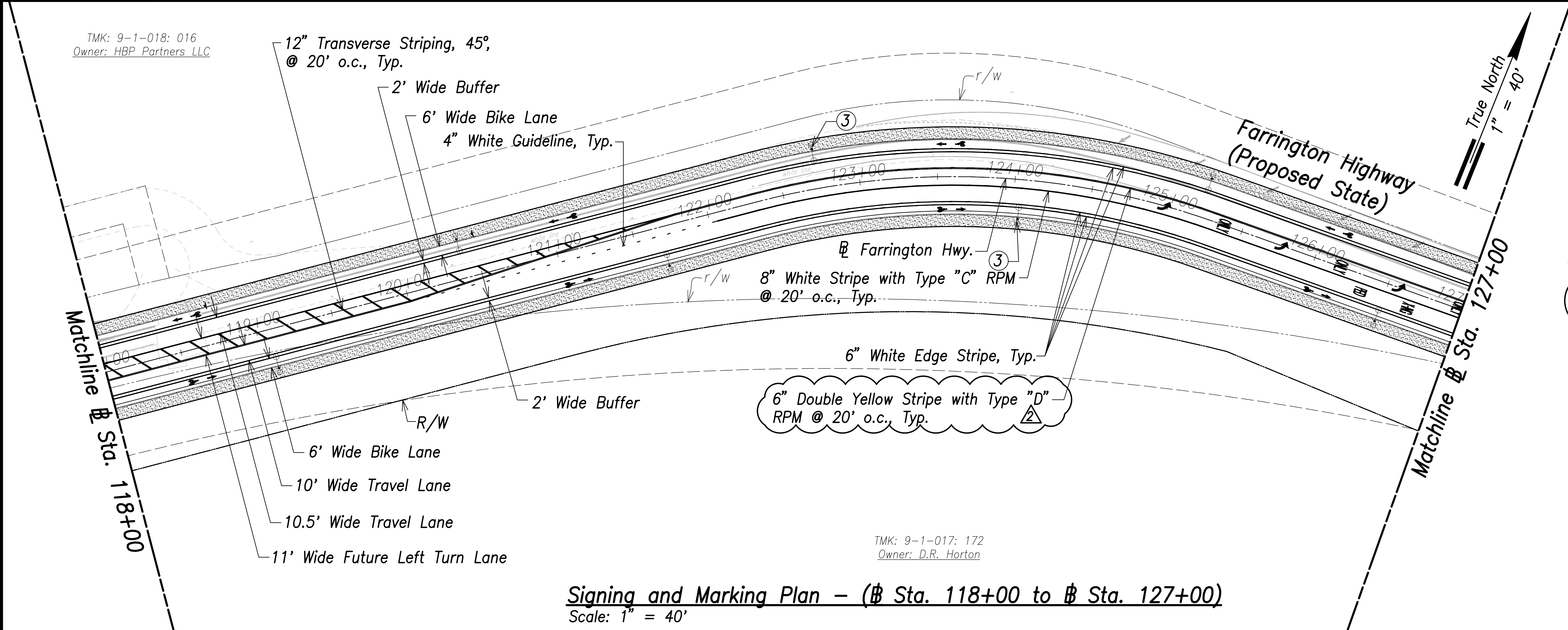
FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-227 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 230 | 767 |

TMK: 9-1-018: 016
Owner: HBP Partners LLC



Signing and Marking Plan - (Sta. 118+00 to Sta. 127+00)
Scale: 1" = 40'

① FARRINGTON HWY. D3-1 Variesx12"

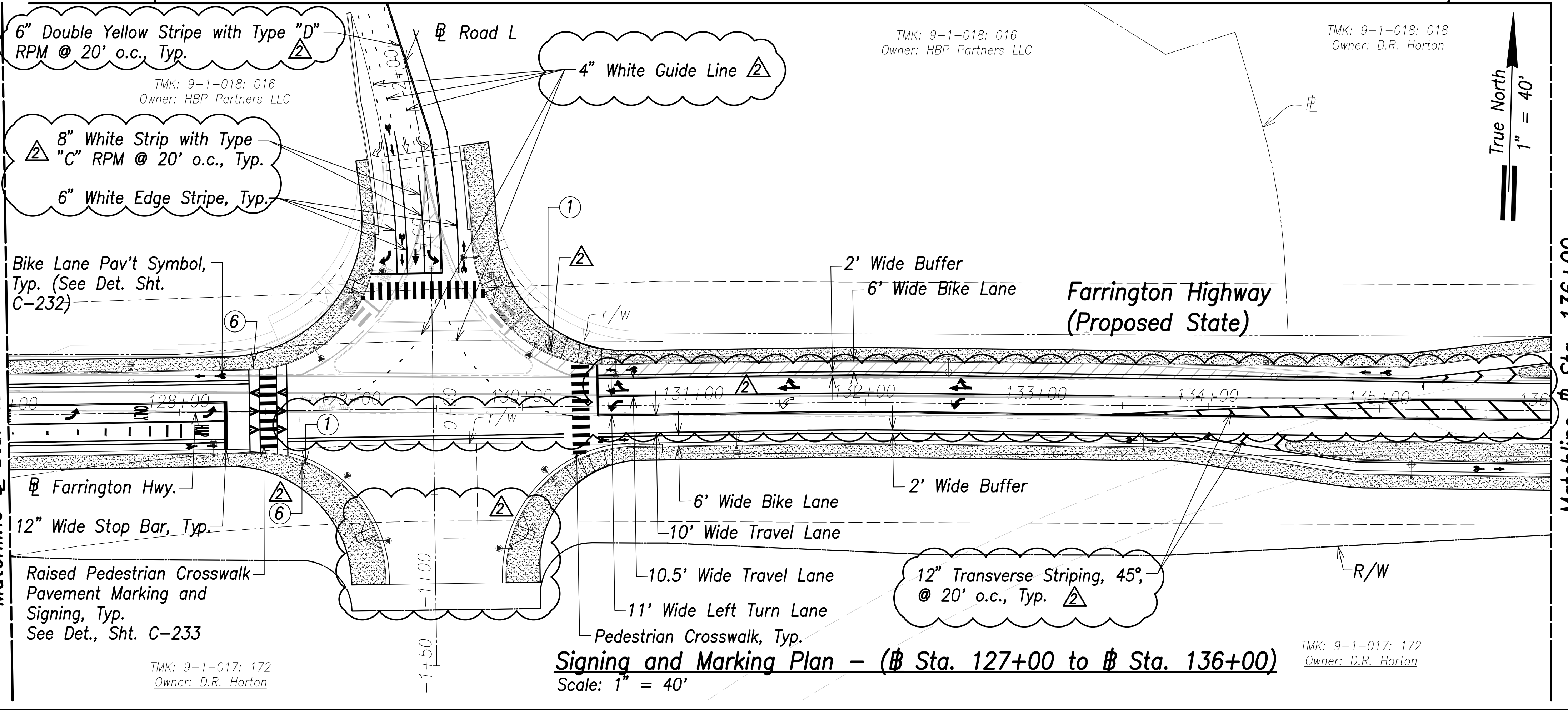
②

③ SPEED LIMIT 25 R2-1(25) 24"x30" R8-3a 24"x24"

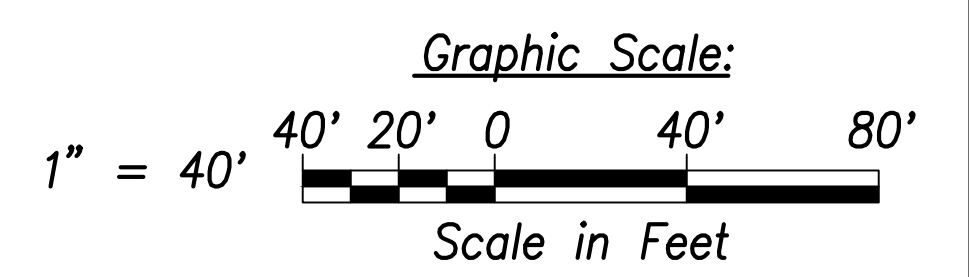
④

⑤ BIKE ROUTE D11-1 24"x18"

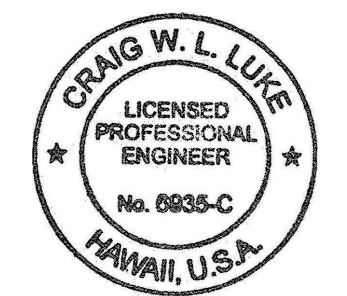
⑥ W11-2 36"x36" W16-7pL 24"x12"



Signing and Marking Plan - (Sta. 127+00 to Sta. 136+00)
Scale: 1" = 40'



| DATE | REVISION |
|----------|--|
| 06/08/22 | ② Pav't. Arrow Revised, Turn Lane and Median Striping Revised, Turning Vehicles Yield to Pedestrians Sign Removed, Street Sign Removed, Stripe Label Revised and Added |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
SIGNATURE: *Craig W. L. Luke*
EXPIRATION DATE OF THE LICENSE: April 30, 2022

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Signing and Marking Plan
Sta. 118+00 to Sta. 136+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-229 OF 767 SHEETS

| DATE | SURVEY PLOTTED BY |
|------|-------------------|
| | |
| DATE | DRAWN BY |
| | |
| DATE | TRACED BY |
| | |
| DATE | QUANTITIES BY |
| | |
| DATE | CHECKED BY |
| | |

TMK: 9-1-017: 172
Owner: D.R. Horton

TMK: 9-1-017: 172
Owner: D.R. Horton

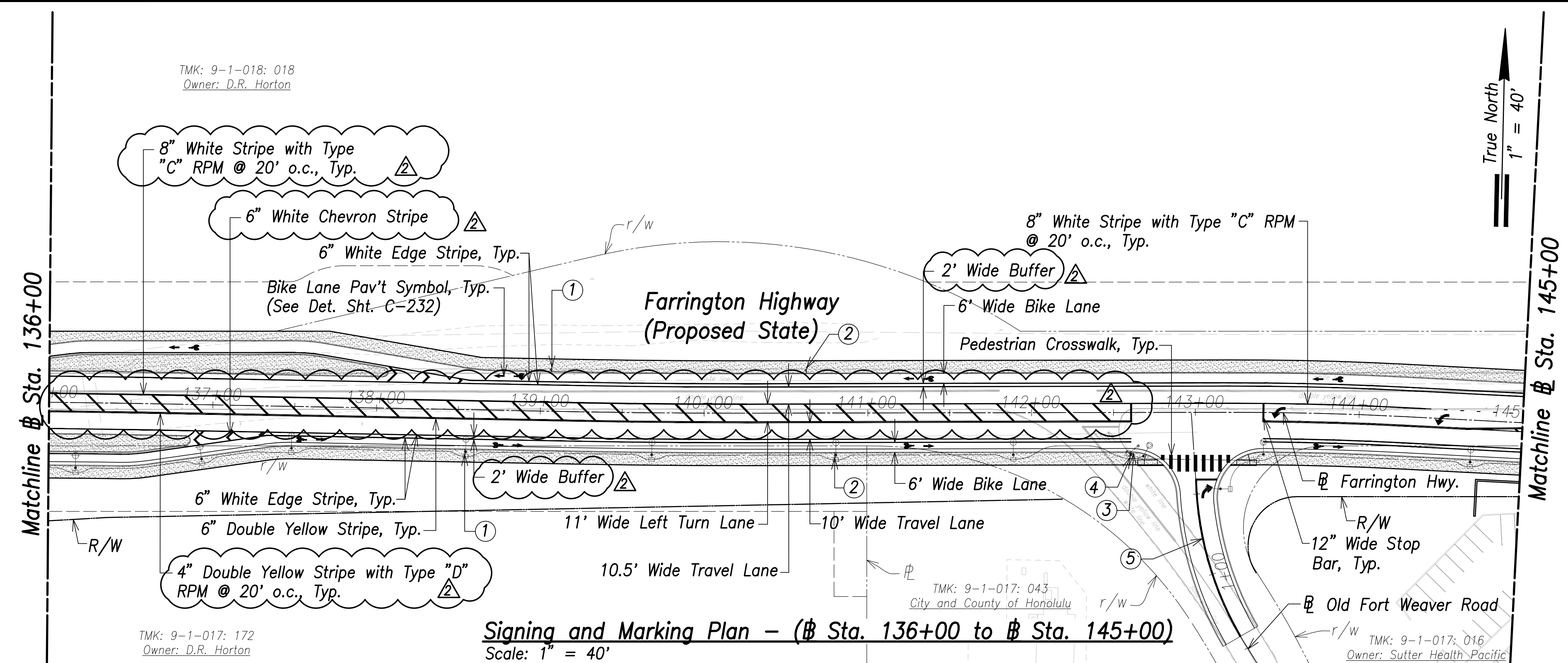
TMK: 9-1-018: 016
Owner: HBP Partners LLC

TMK: 9-1-018: 018
Owner: D.R. Horton

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction\Draws\C-229 Striping Plan - Sta. 118+00 to 136+00.dwg saved June 1, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 231 | 767 |

TMK: 9-1-018: 018
Owner: D.R. Horton



Signing and Marking Plan - (Sta. 136+00 to Sta. 145+00)
Scale: 1" = 40'

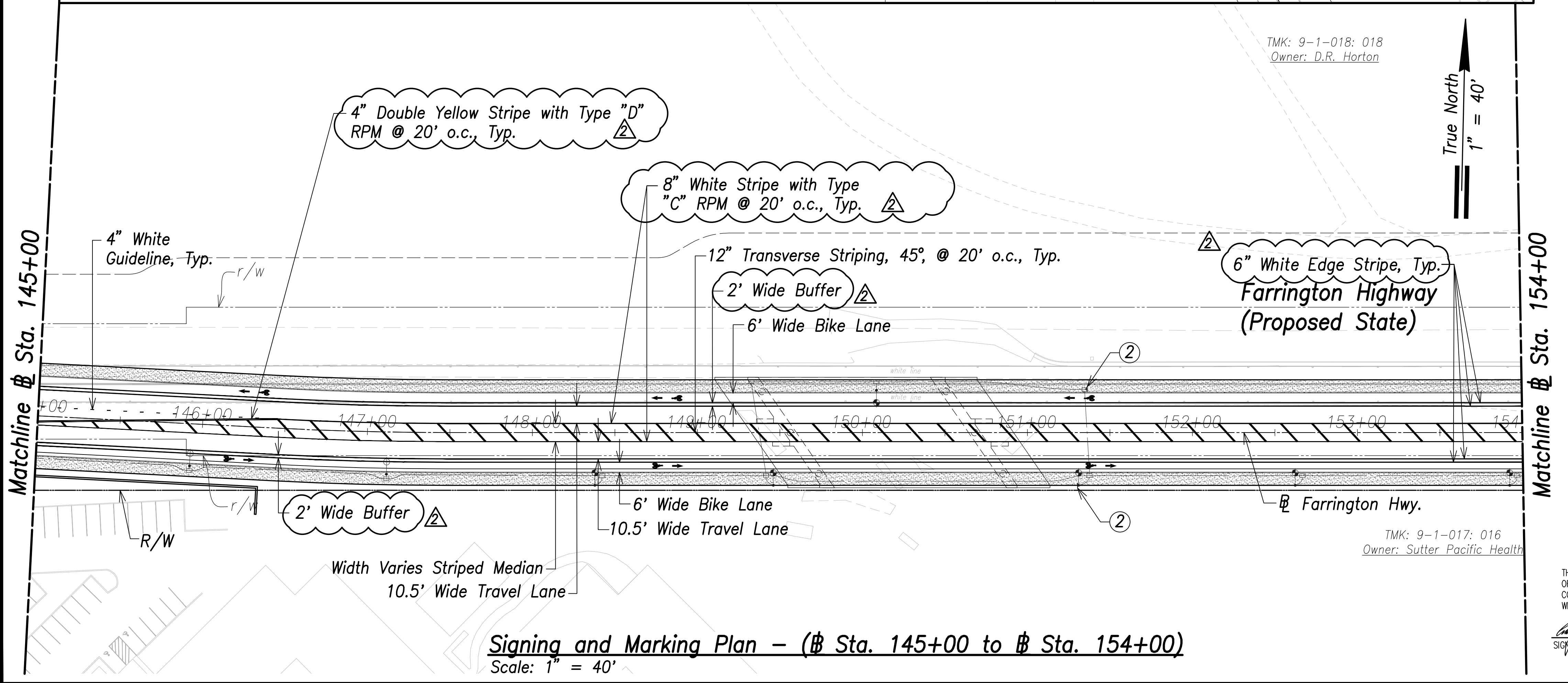
TMK: 9-1-017: 172
Owner: D.R. Horton

TMK: 9-1-017: 043
City and County of Honolulu

TMK: 9-1-017: 016
Owner: Sutter Health Pacific

TMK: 9-1-018: 018
Owner: D.R. Horton

TMK: 9-1-017: 016
Owner: Sutter Pacific Health



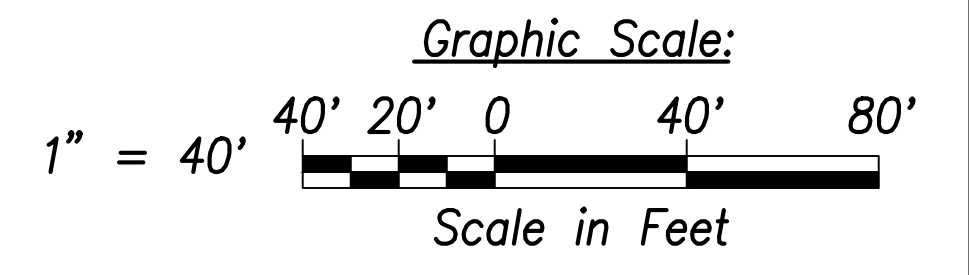
Signing and Marking Plan - (Sta. 145+00 to Sta. 154+00)
Scale: 1" = 40'

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

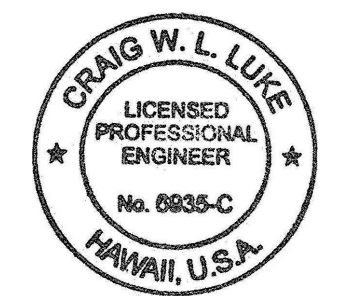
True North
1" = 40'

True North
1" = 40'

- ①
SPEED LIMIT 25 R2-1(25) 24"x30"
R8-3a 24"x24"
Mount on St. Lt. Pole
- ②
BIKE ROUTE D11-1 24"x18"
- ③
FARRINGTON HWY. D3-1 Variesx12"
- ④
OLD FORT WEAVER RD. D3-1 Variesx12"
- ⑤
4" Double Yellow Stripe with Type "D" RPM @ 20' o.c., Typ.



| | |
|----------|---|
| 06/08/22 | Median Striping Revised; Added callouts; Revised callouts |
| DATE | REVISION |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: [Signature]
April 30, 2022
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

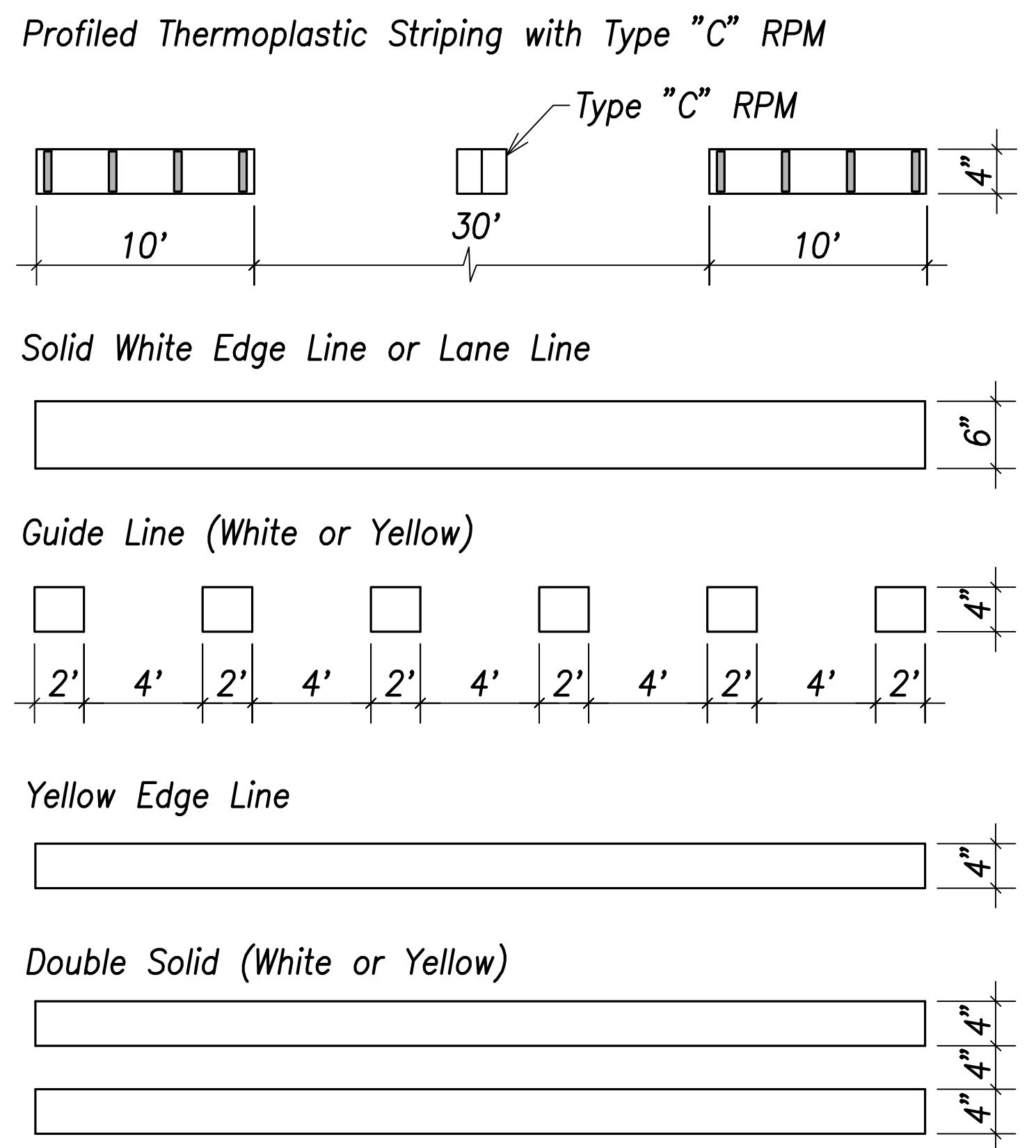
Signing and Marking Plan
Sta. 136+00 to Sta. 154+00

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

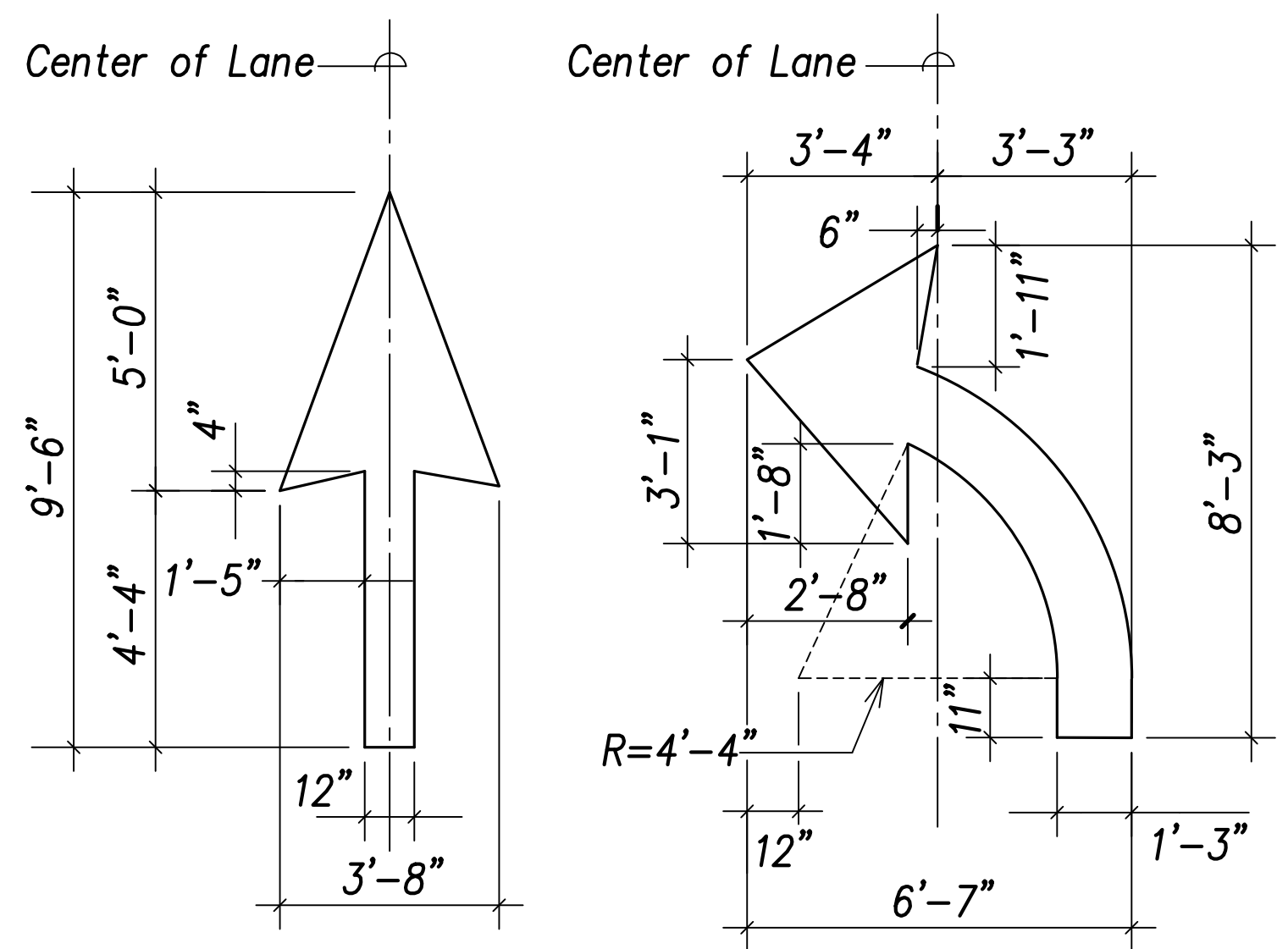
Scale: As Shown Date: April 2022

SHEET No. C-230 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 233 | 767 |

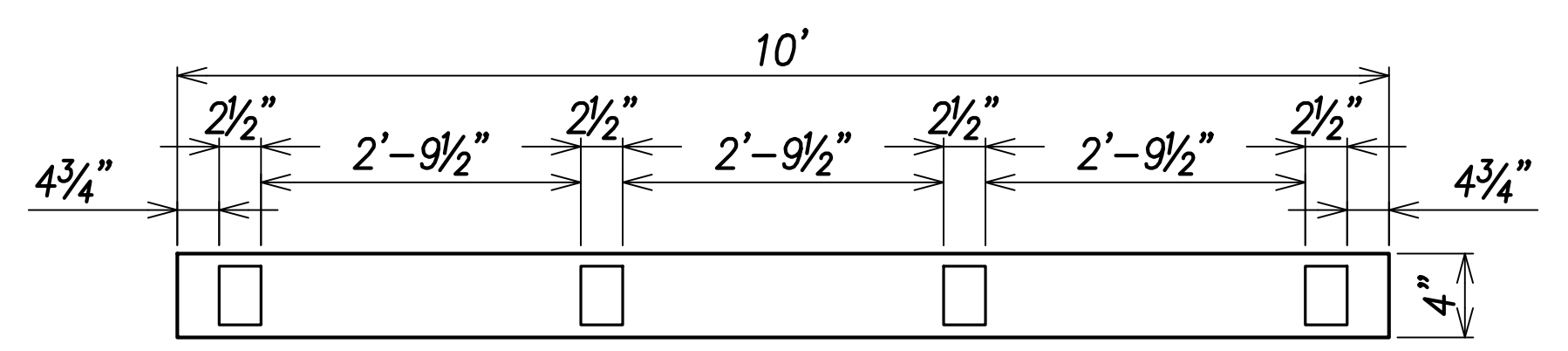


Typical Pavement Markings
Not To Scale

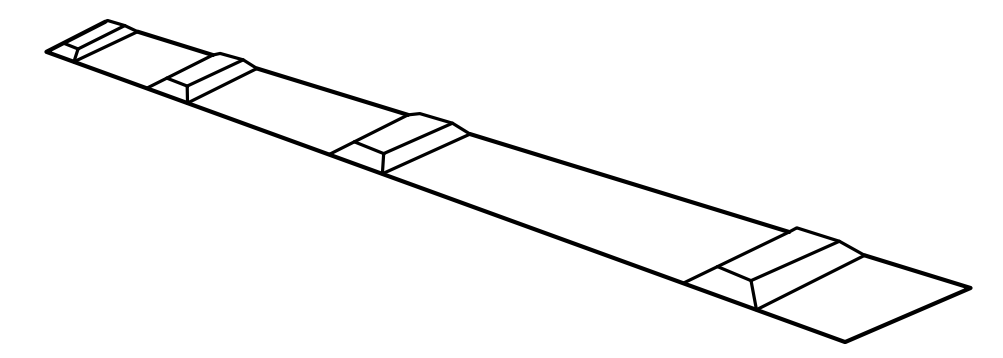


Typical Pavement Arrows
Not To Scale

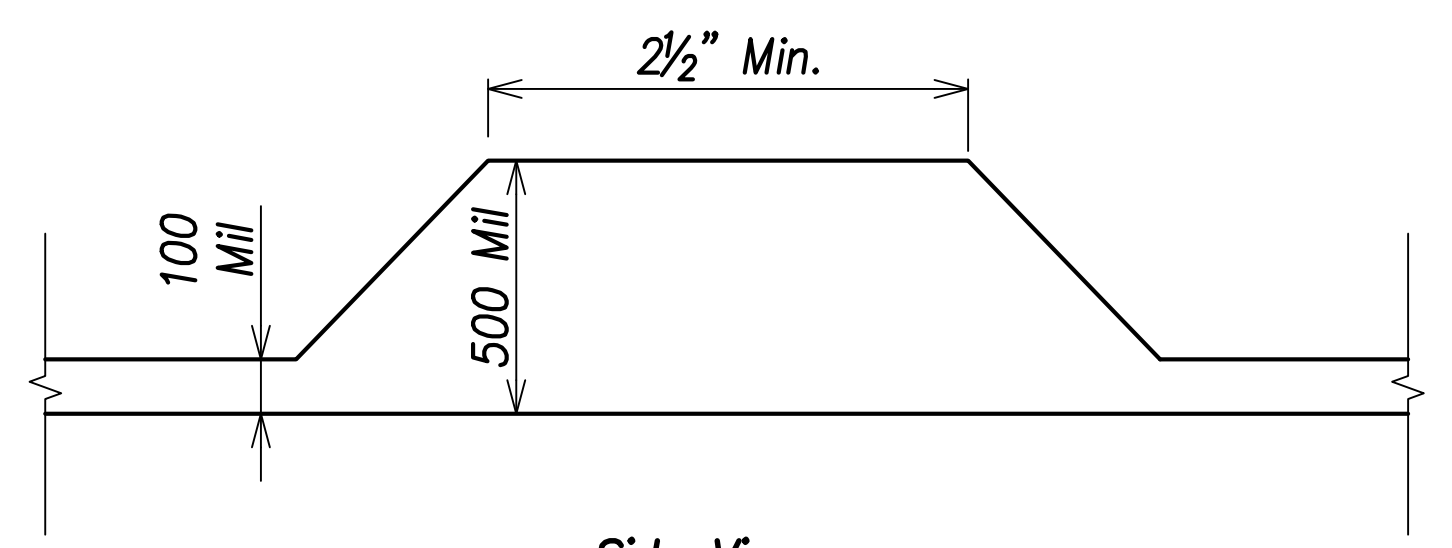
Note:
See Std. Plan TE-29
for Additional Details.



Top View



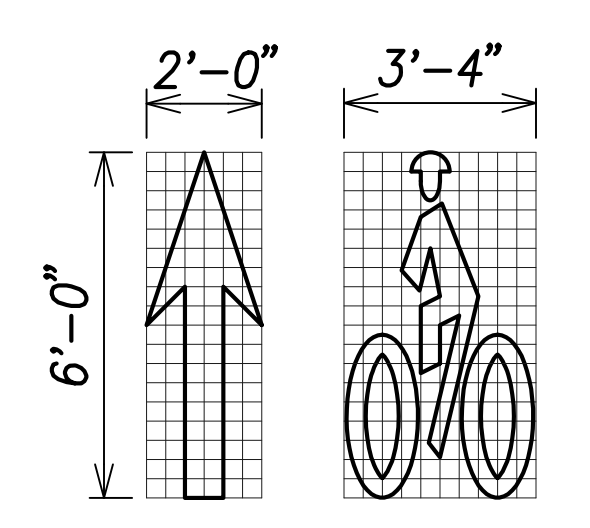
Perspective View



Side View

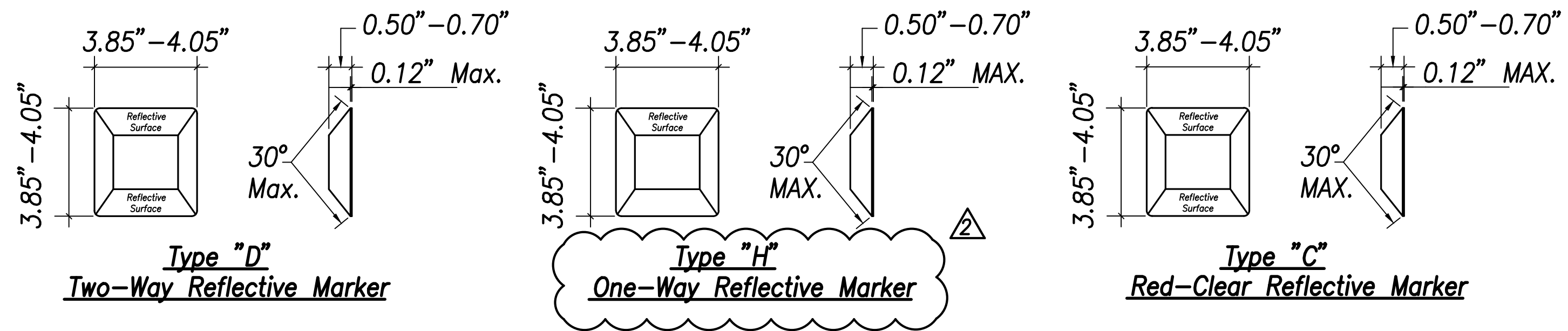
Note:
Profiles shall be placed on 36" o.c., shall be 500 mil height, including 100 mil baseline, and shall have a width equal to approximately the baseline width.

Profiled Thermoplastic Striping
Not to Scale

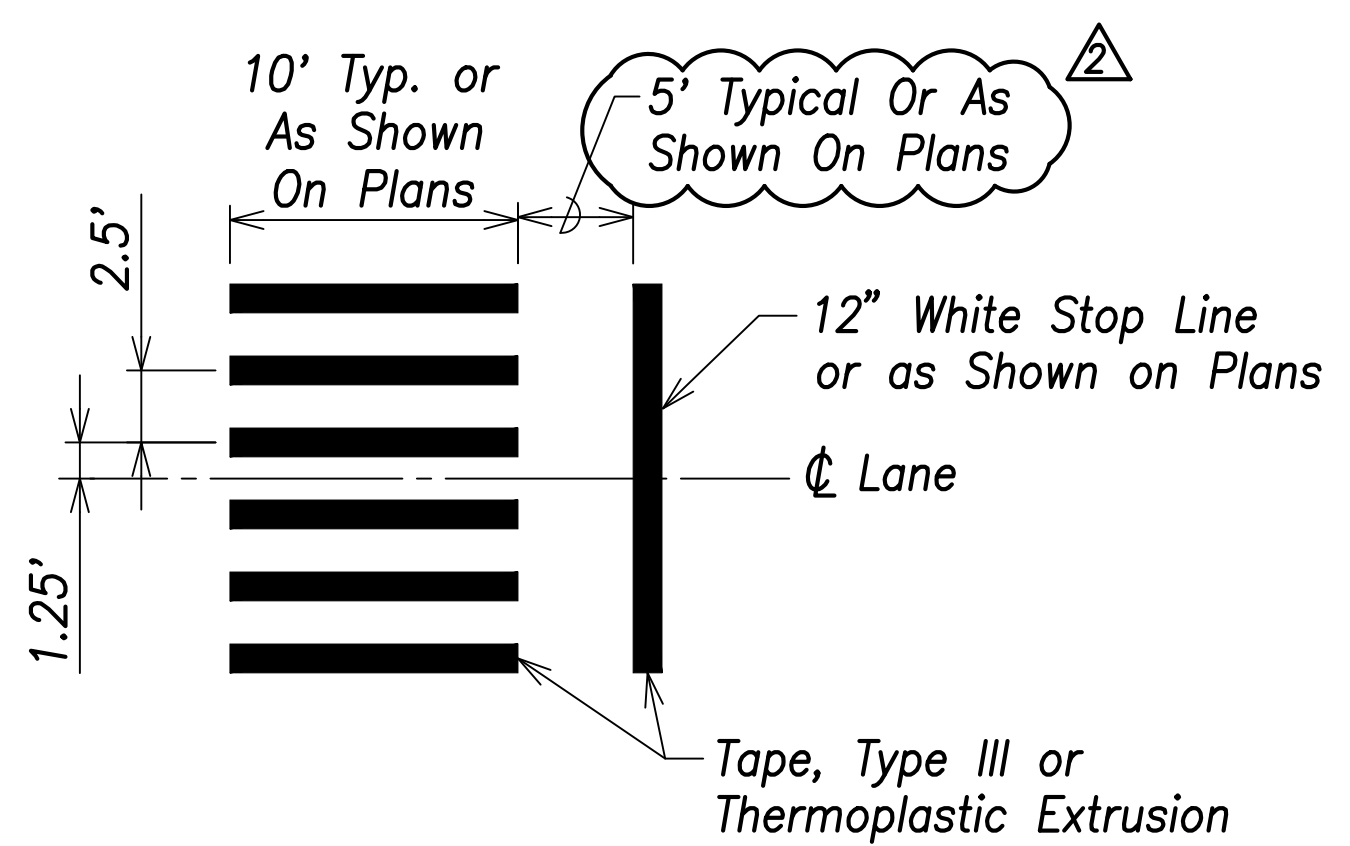


Note:
□ = 4" x 4"

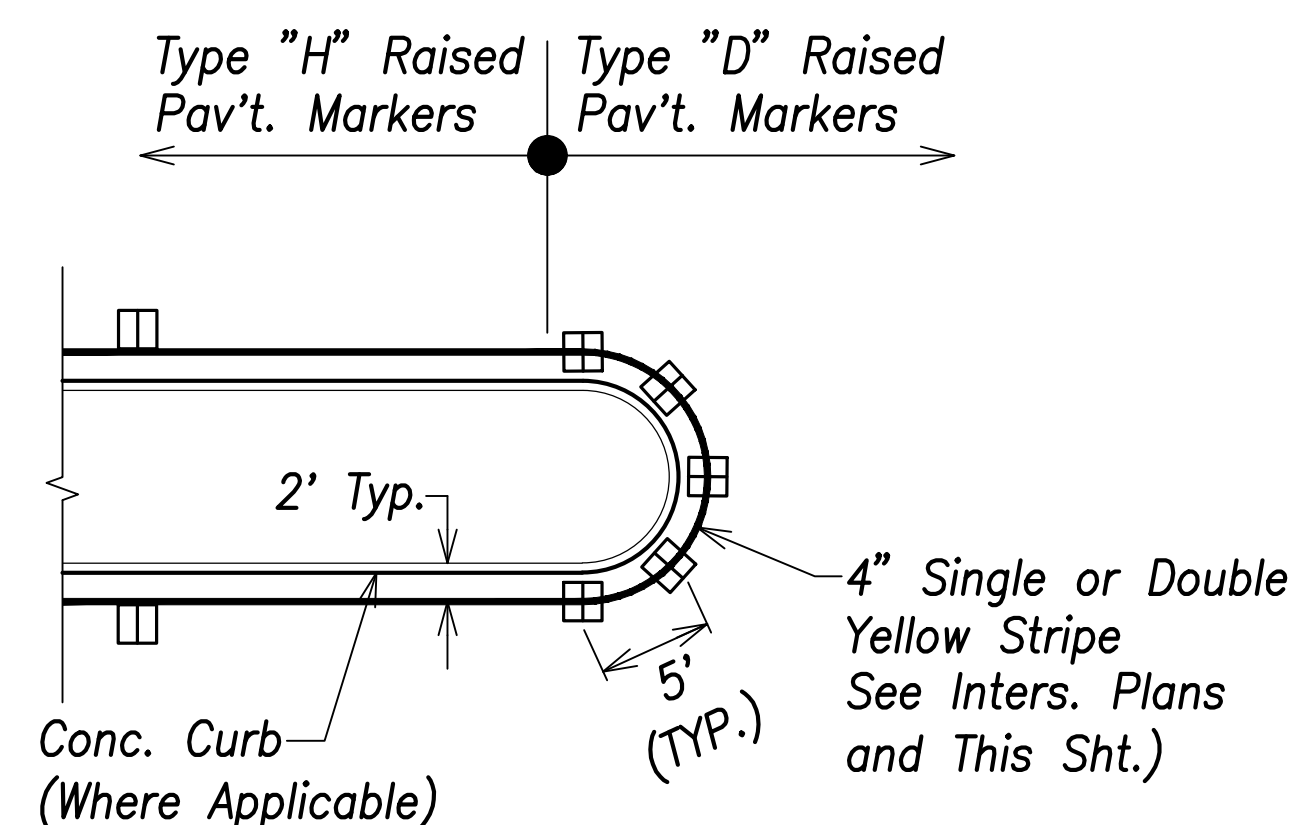
Bike Route Pavement Markings
Not To Scale



Standard Raised Pavement Markers
Not To Scale

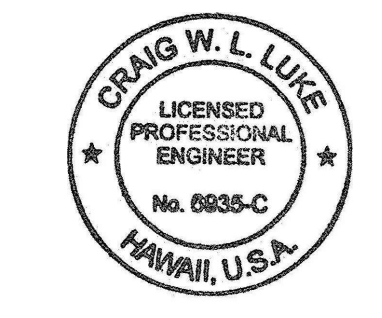


Crosswalk Striping
Not To Scale



Typical Median Nose Delineation
Not To Scale

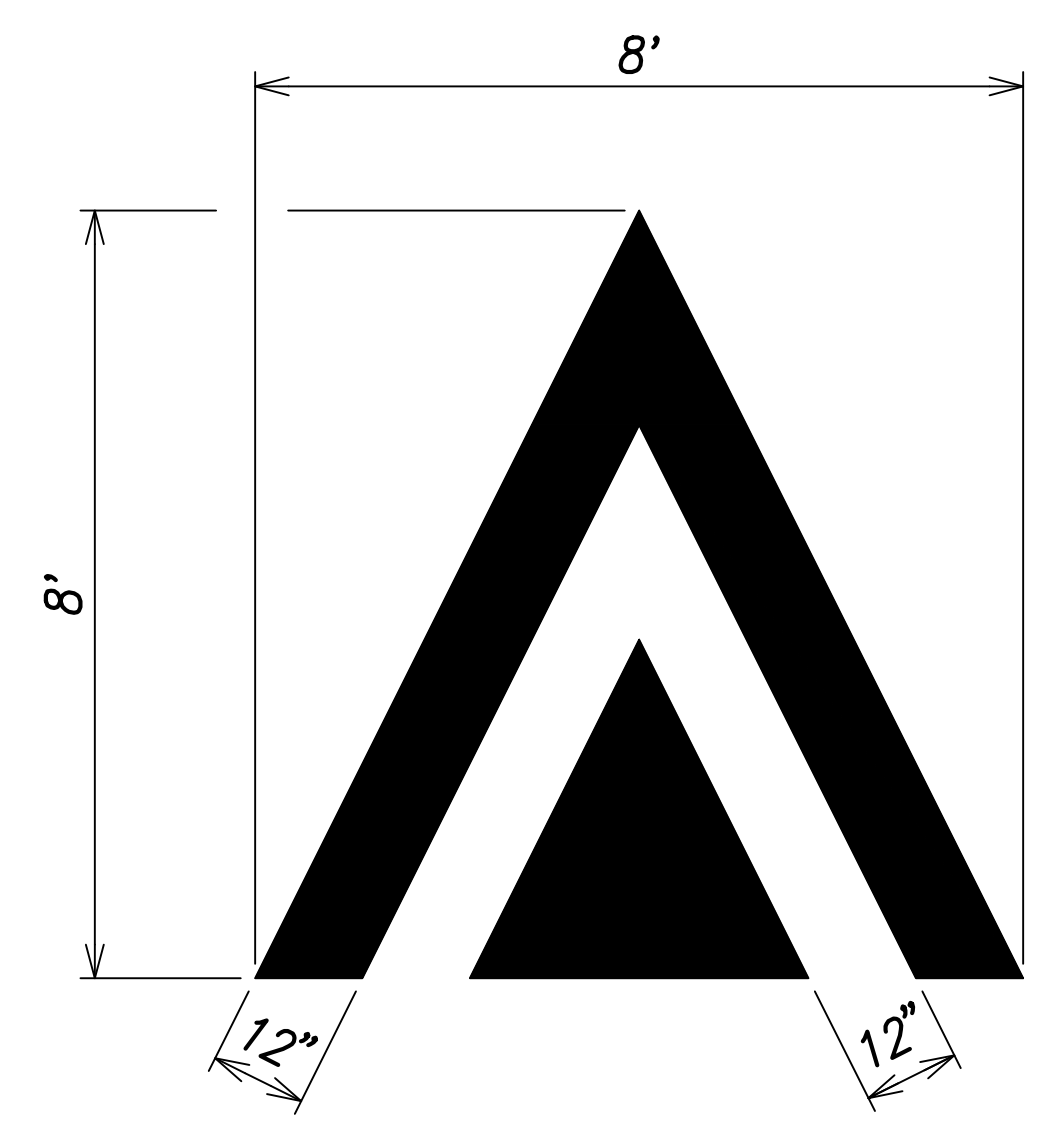
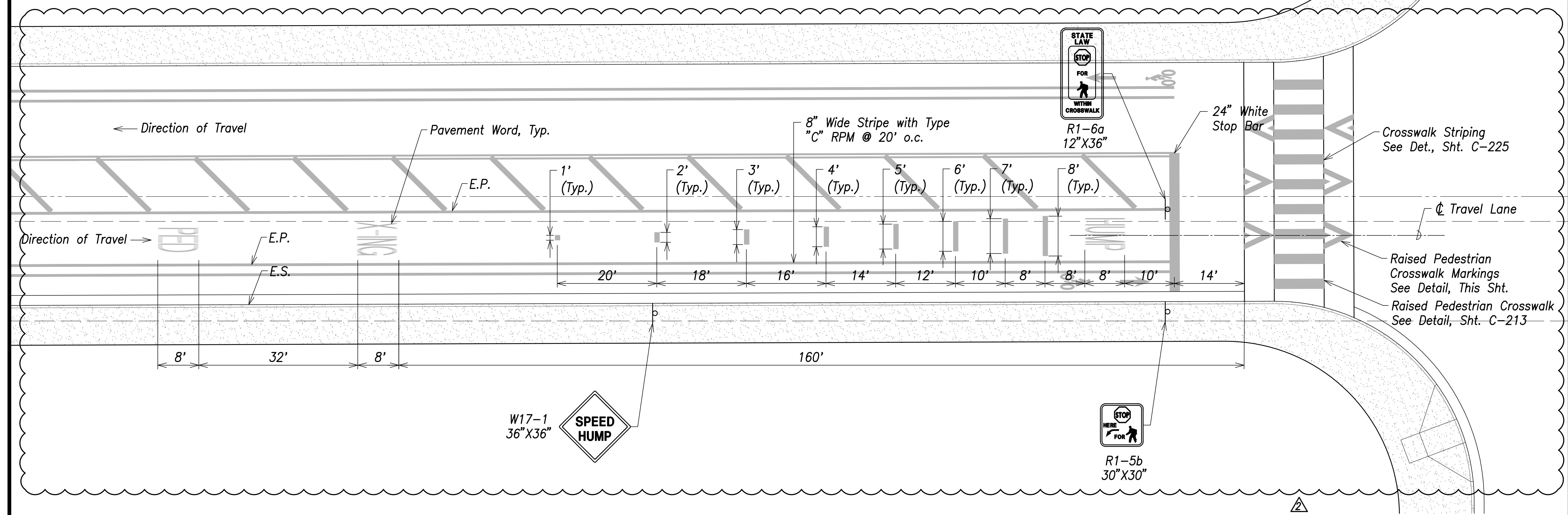
| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: _____
April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|--|--------------------------------------|
| 06/08/22 | Revised Description; Revised Callout |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| Pavement Marking
Details - 1 | |
| FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20 | |
| Scale: As Shown | Date: April 2022 |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 234 | 767 |



Raised Pedestrian Crosswalk Markings
Not To Scale

Raised Pedestrian Crosswalk Pavement Marking and Signage Layout Plan
Scale: 1"=10'

- Notes:**
1. For remainder of signing and marking callouts, see Signing and Marking Plans.
 2. Raised pedestrian crosswalk markings and words shall be centered on the centerline of the travel lane.

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. Luke* April 30, 2022
EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Revised Sheet |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

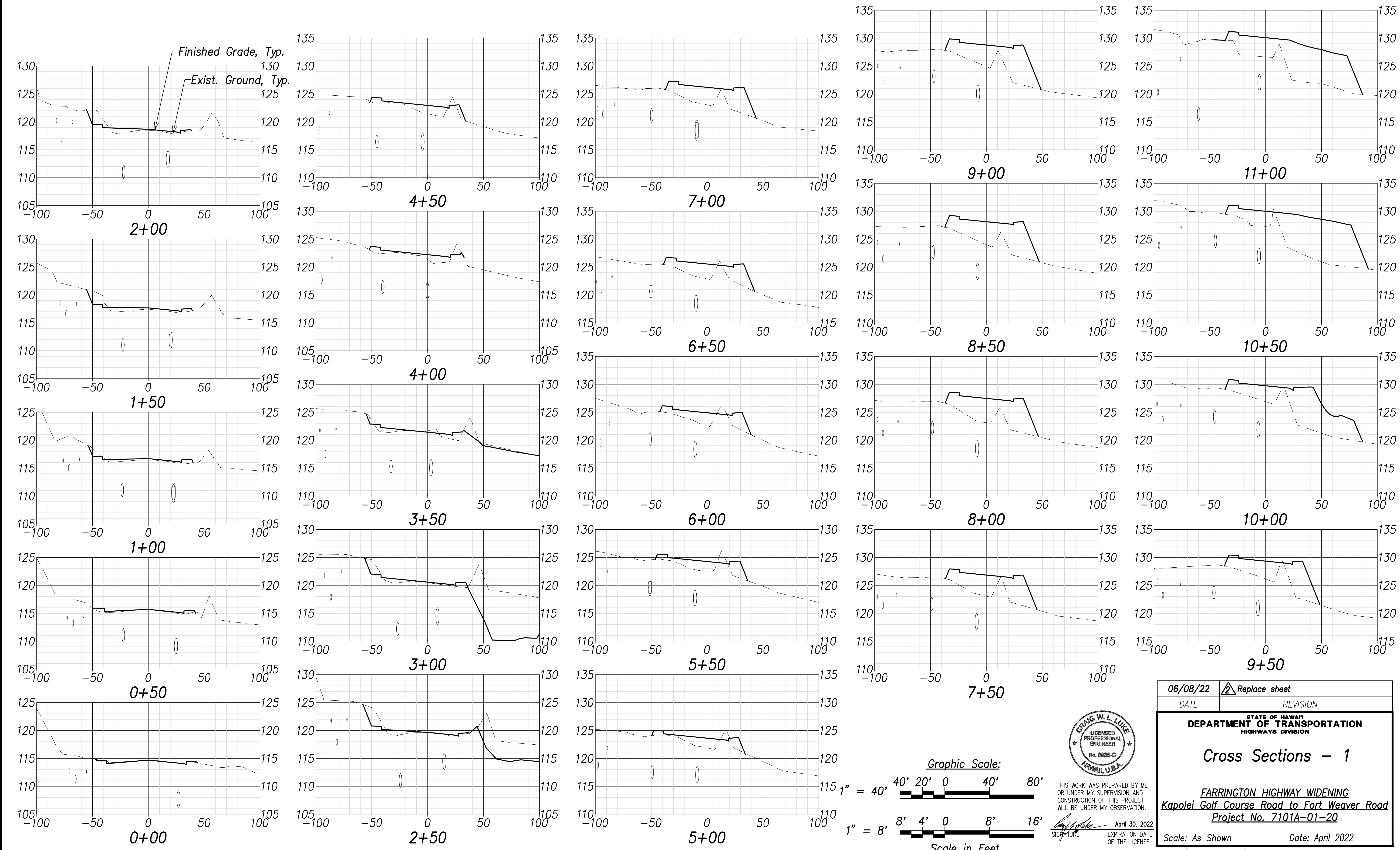
Pavement Marking Details - 2

FARRINGTON HIGHWAY WIDENING
Kapolei Golf Course Road to Fort Weaver Road
Project No. 7101A-01-20

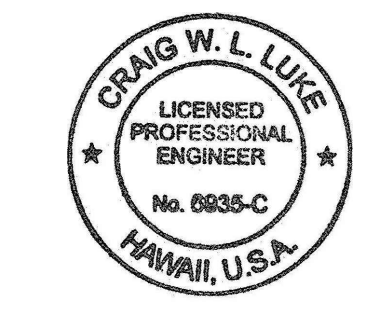
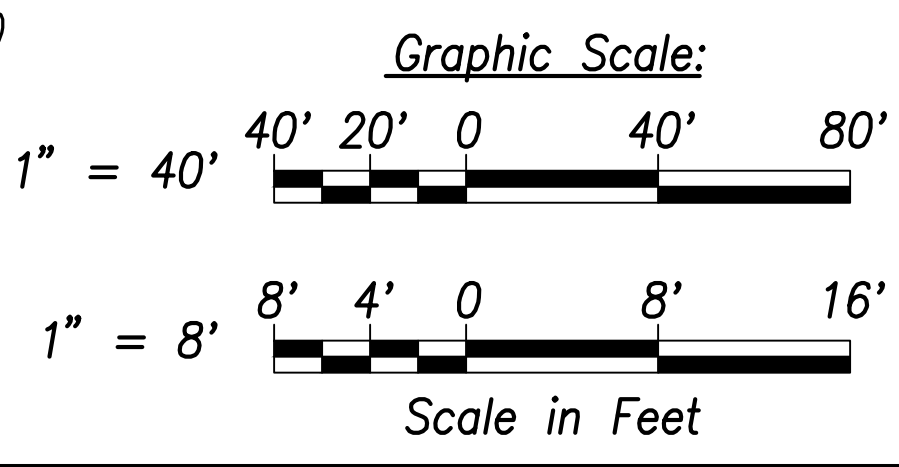
Scale: As Shown Date: April 2022

SHEET No. C-233 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 235 | 767 |



| | |
|-------------------|-------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NOTE BOOK | |
| NO. _____ | |



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Signature: *Craig W. L. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Cross Sections - 1

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

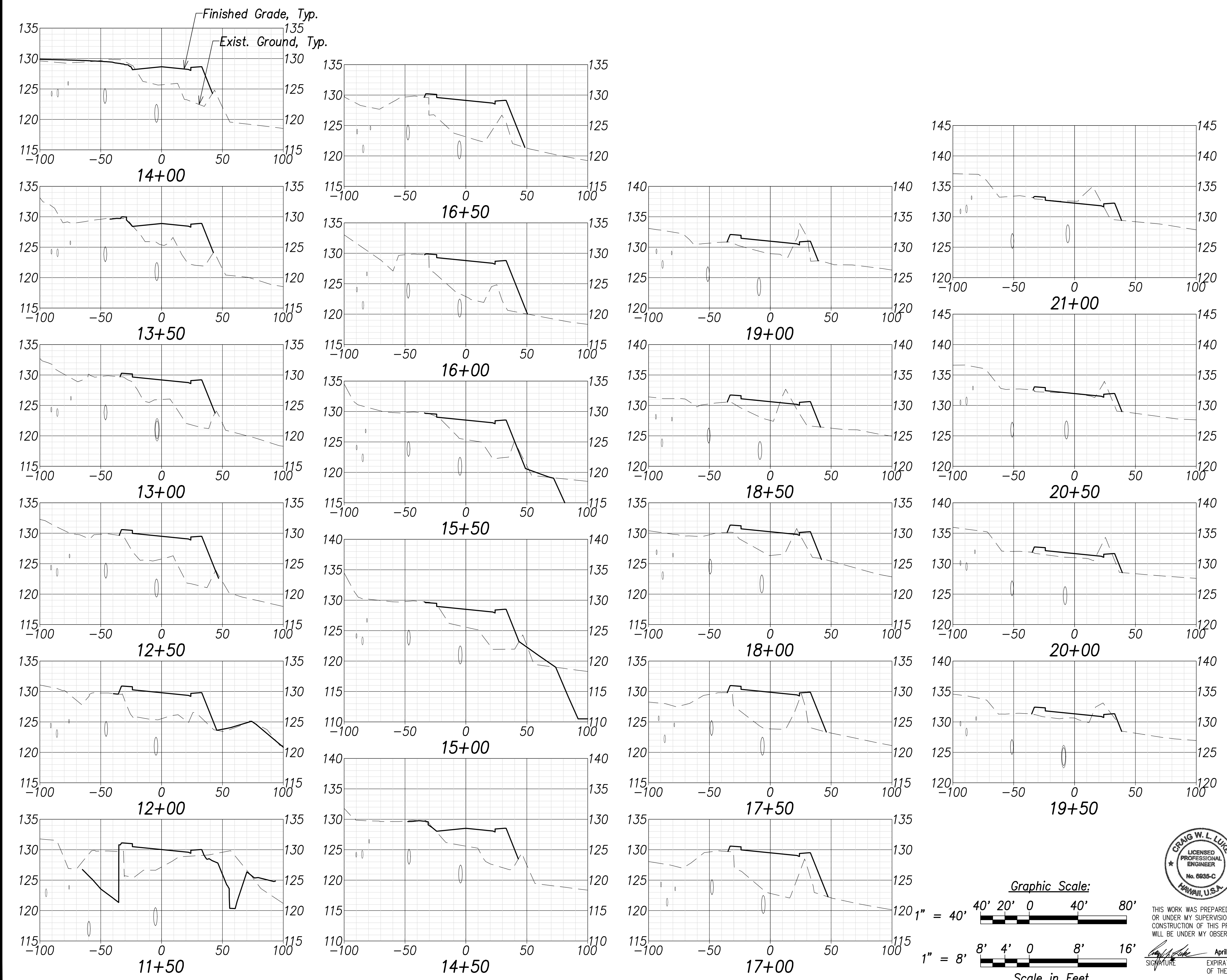
Scale: As Shown Date: April 2022

SHEET No. C-234 OF 767 SHEETS

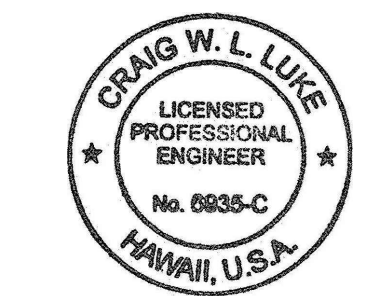
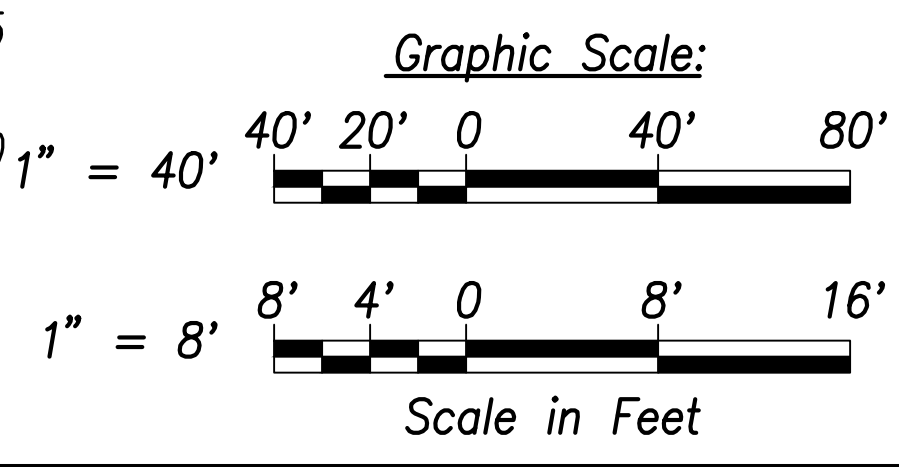
ADD. 235

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-234 Cross Sections - 1.dwg saved June 3, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 236 | 767 |



| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | ..... |
| DRAWN BY | ..... |
| TRACED BY | ..... |
| NOTED BY | ..... |
| CHECKED BY | ..... |
| No. | ..... |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. L. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

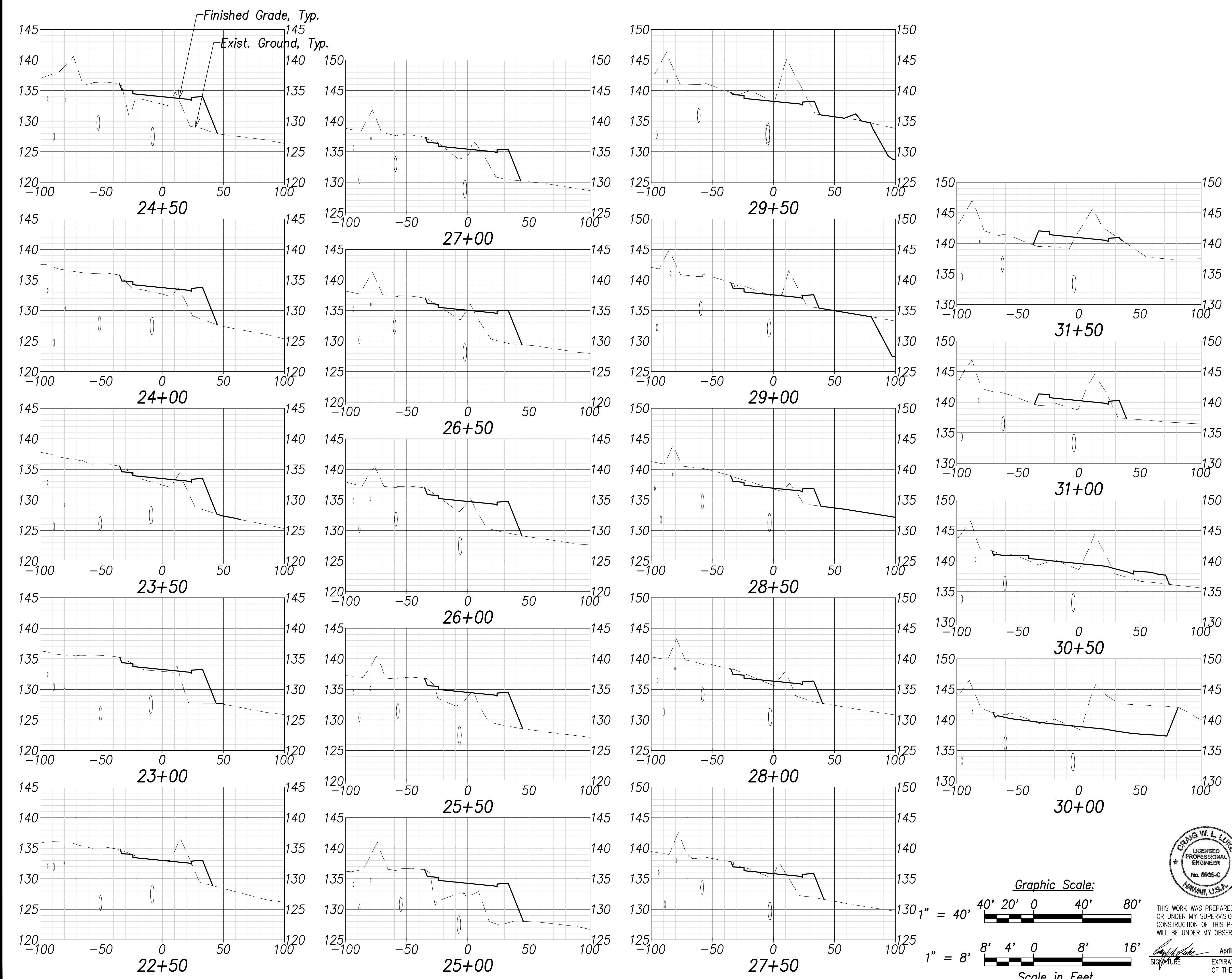
Cross Sections - 2

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

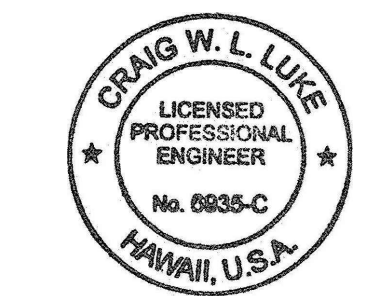
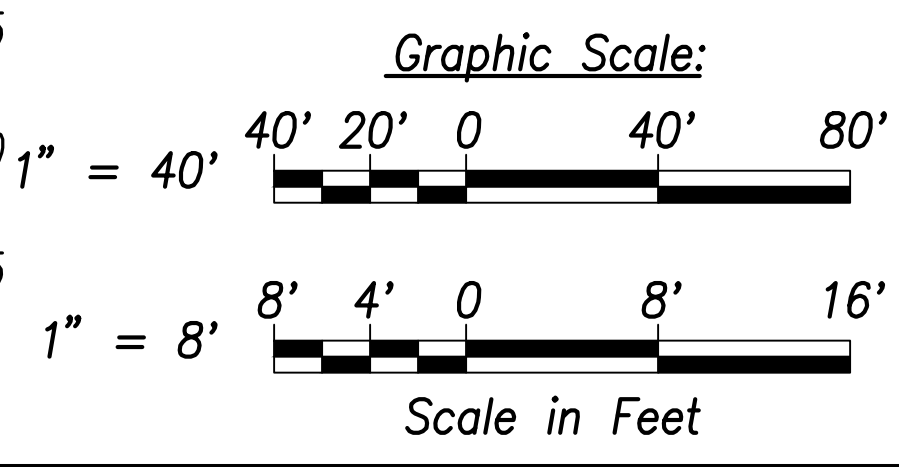
Scale: As Shown Date: April 2022

SHEET NO. C-235 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 237 | 767 |

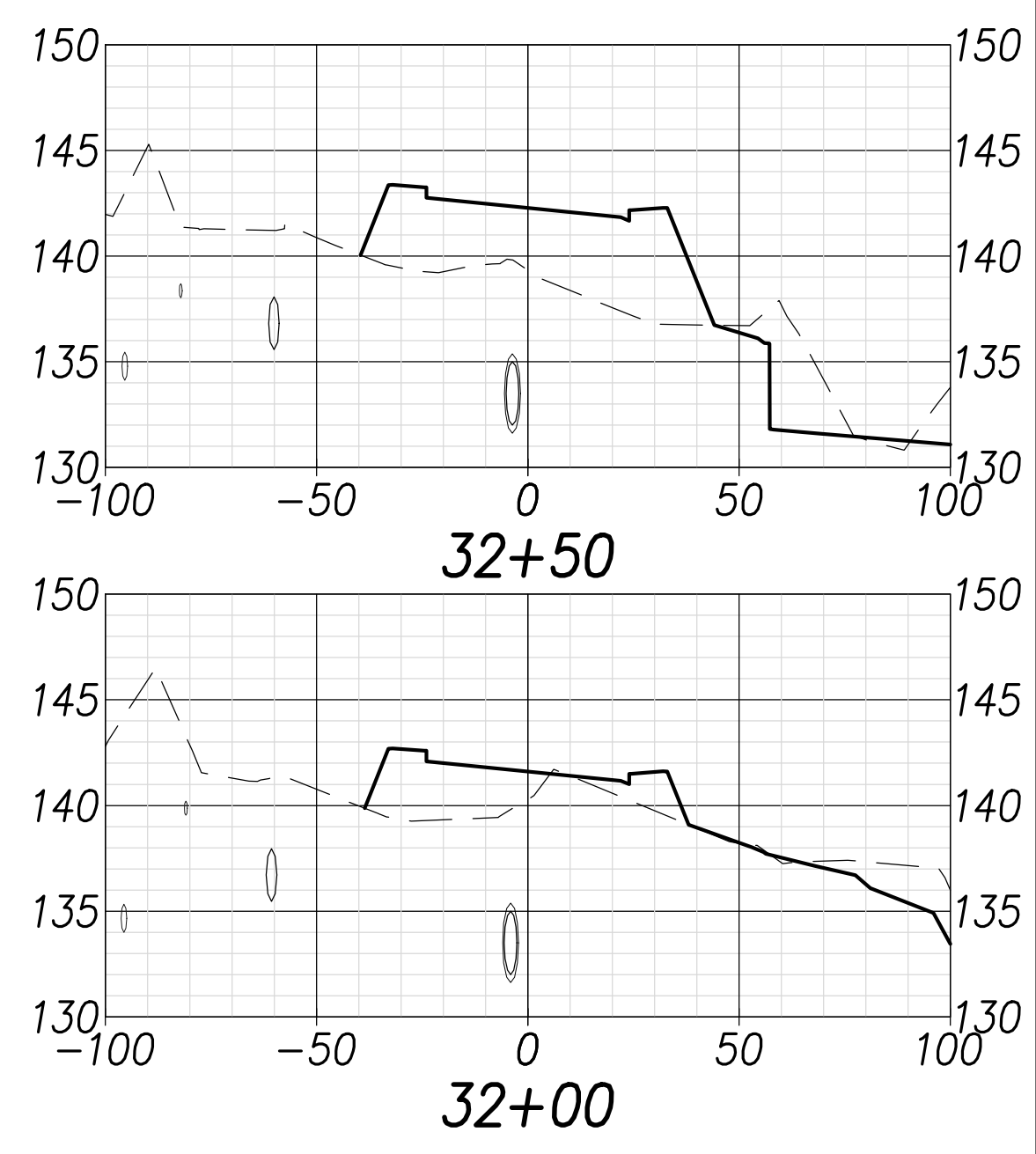


| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | ..... |
| DRAWN BY | ..... |
| TRACED BY | ..... |
| INSTRUMENTS BY | ..... |
| QUANTITIES BY | ..... |
| CHECKED BY | ..... |
| ORIGINAL PLAN | ..... |
| NOTE BOOK | ..... |
| No. | ..... |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. L. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022



| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

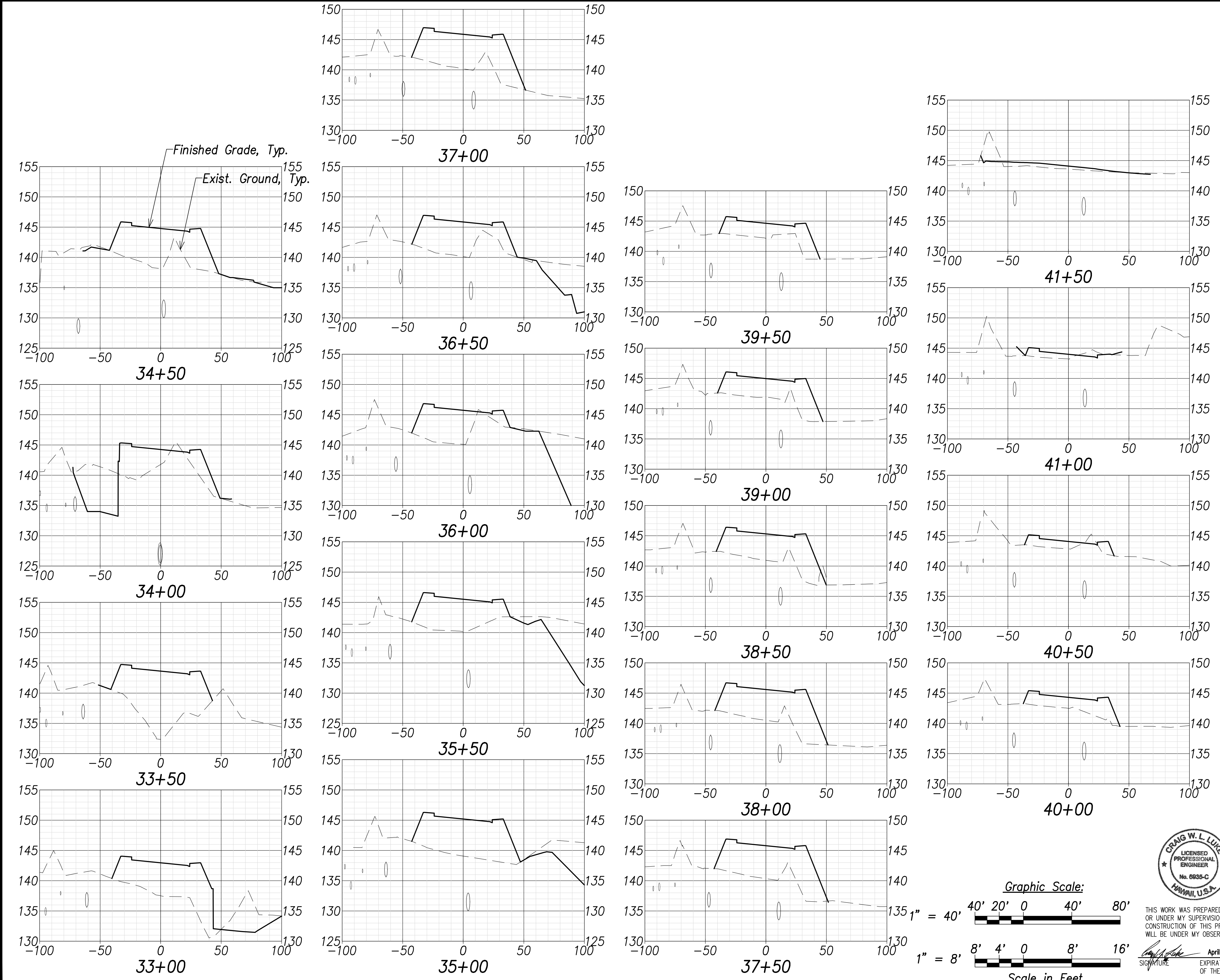
Cross Sections - 3

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

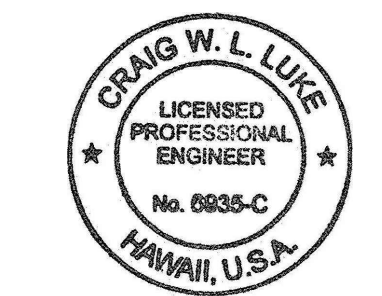
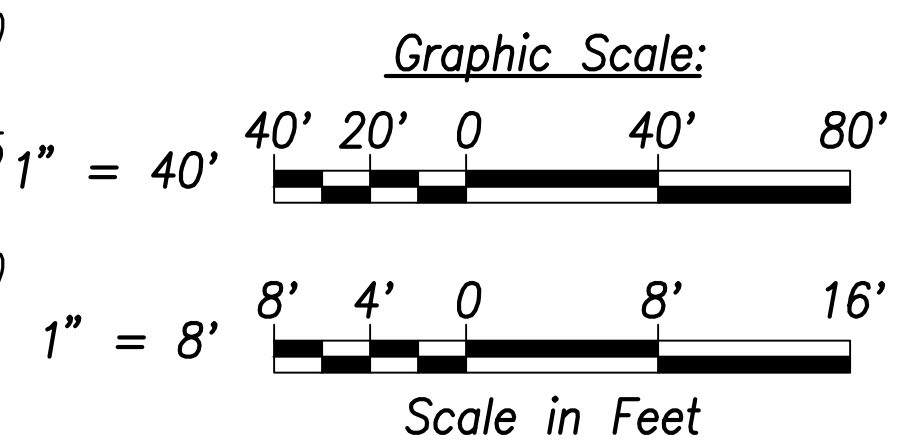
Scale: As Shown Date: April 2022

SHEET NO. C-236 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 238 | 767 |



| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | ..... |
| DRAWN BY | ..... |
| TRACED BY | ..... |
| NOTED BY | ..... |
| CHECKED BY | ..... |
| ORIGINAL PLAN | ..... |
| NOTE BOOK | ..... |
| No. | ..... |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. L. Luke*
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Cross Sections - 4

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

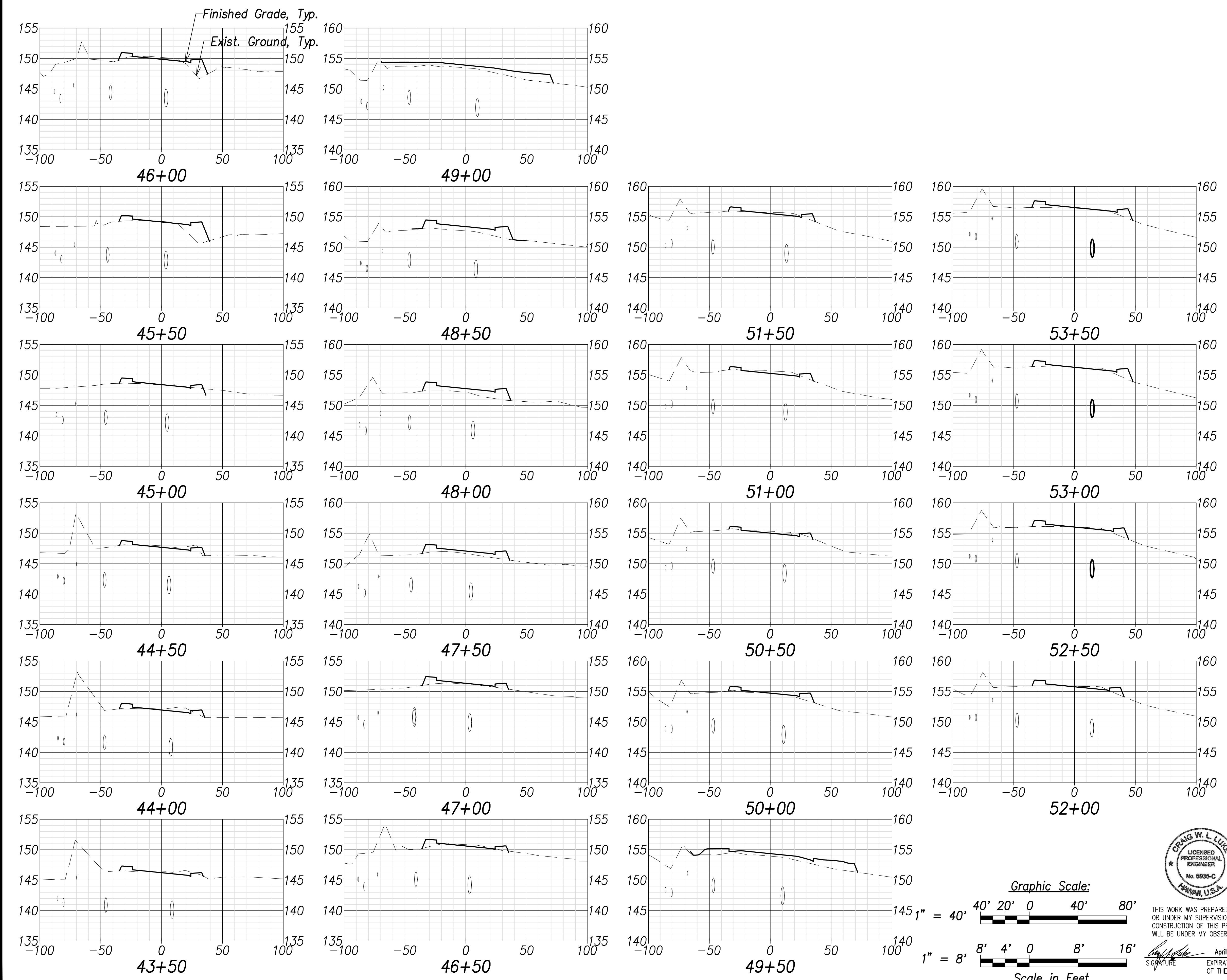
Scale: As Shown Date: April 2022

SHEET No. C-237 OF 767 SHEETS

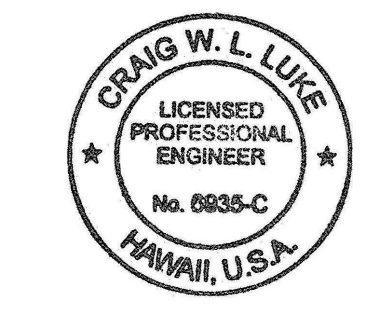
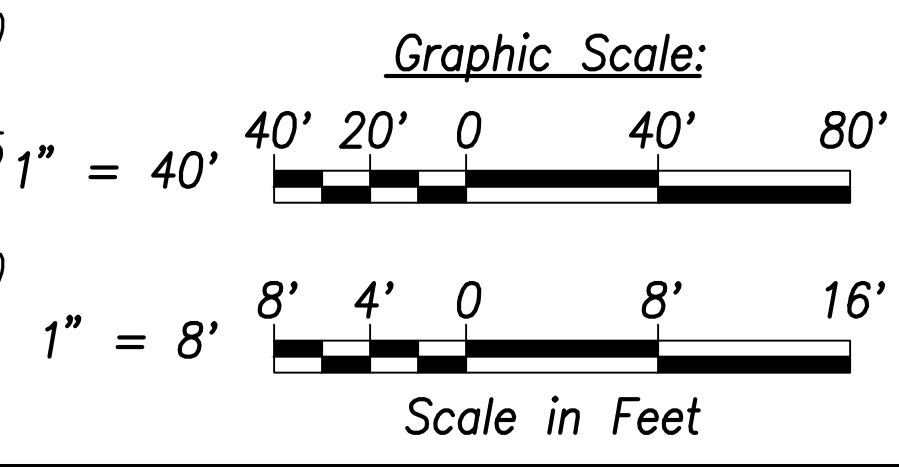
ADD. 238

FILE: \\BMC-FS\Project\civ\21146 Farrington Hwy Widening\Jwg\Construction Dwg\C-237 Cross Sections - 4.dwg saved June 3, 2022

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 239 | 767 |



| | |
|--------------------------|----------------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | TRACED BY: _____ |
| NOTE BOOK NO. _____ | QUANTITIES BY: _____ |
| CHECKED BY: _____ | No. _____ |



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Signature: _____
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

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|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

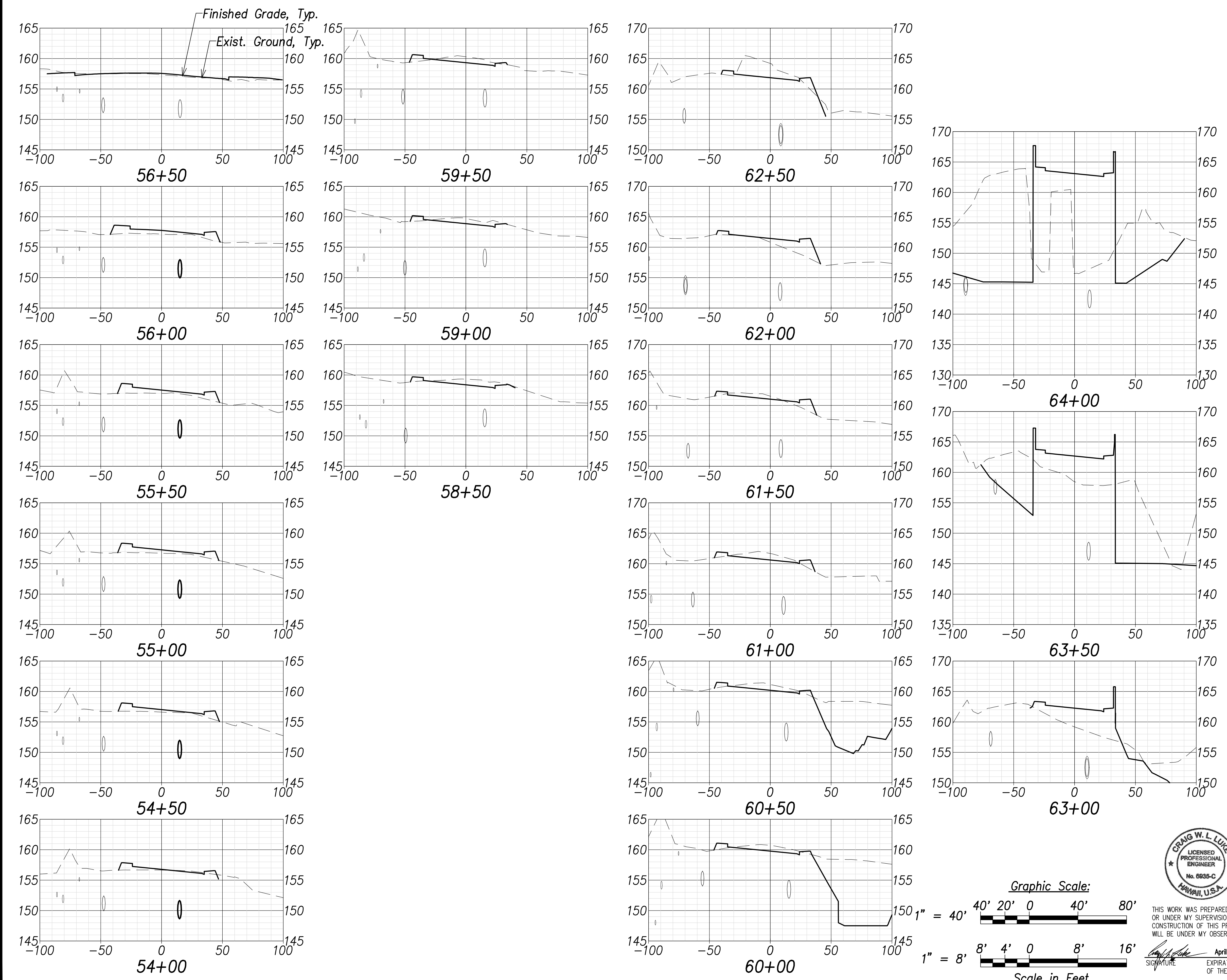
Cross Sections - 5

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

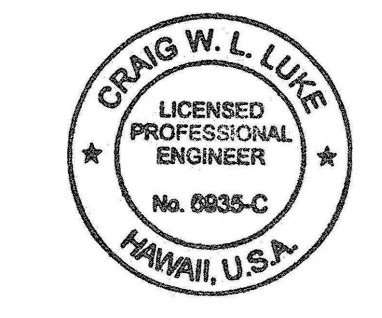
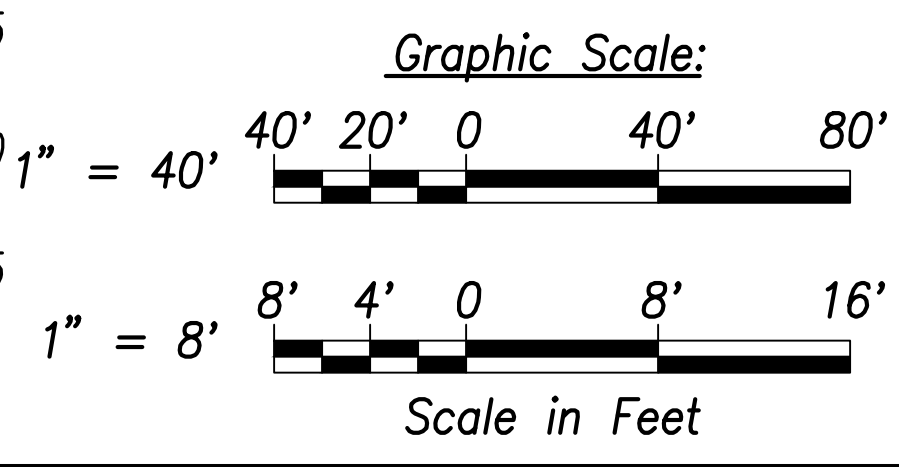
Scale: As Shown Date: April 2022

SHEET No. C-238 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 240 | 767 |



| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | ..... |
| DRAWN BY | |
| TRACED BY | |
| IN CHARGE | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



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Craig W. L. Luke
 SIGNATURE April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

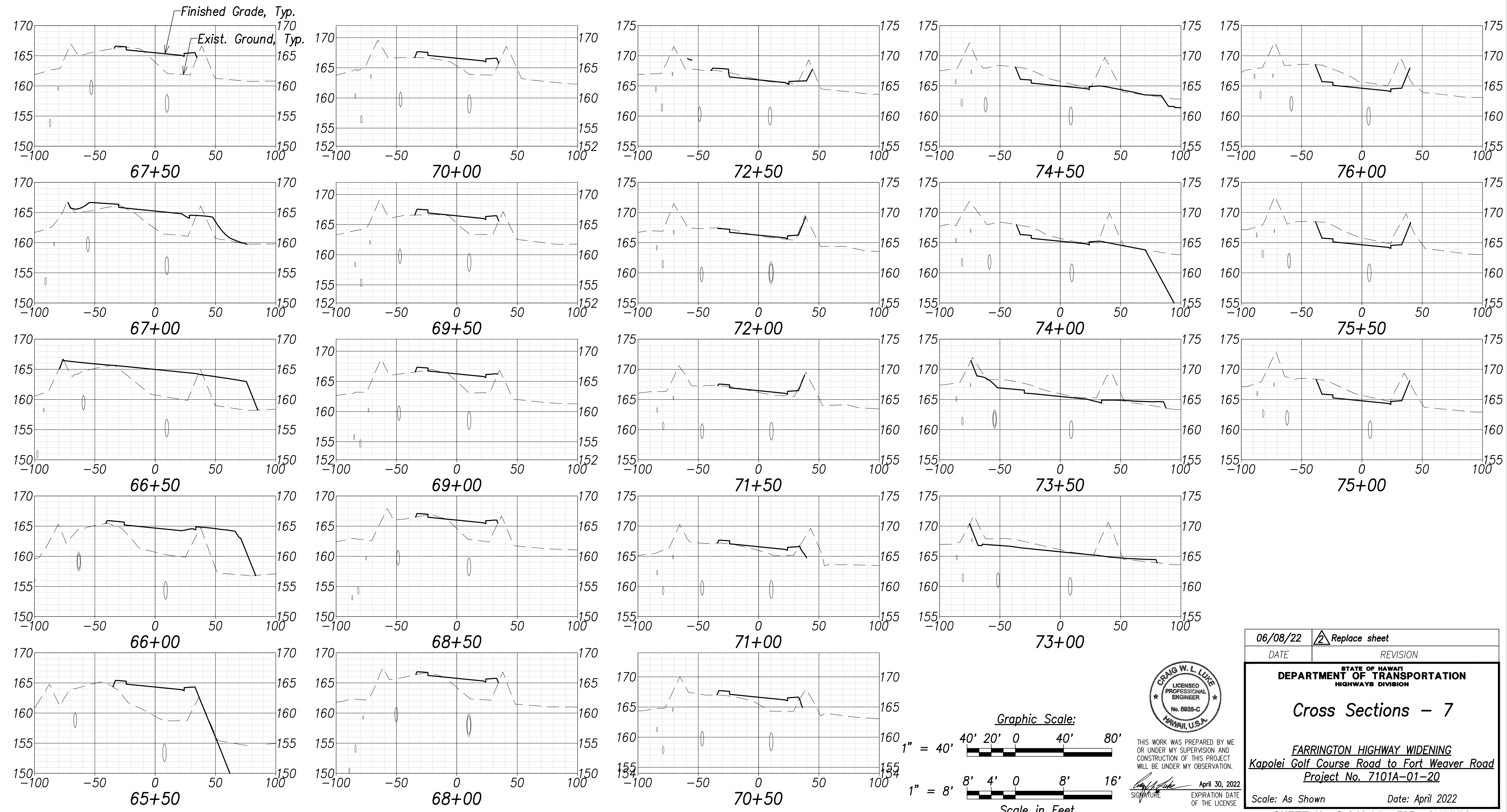
Cross Sections - 6

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

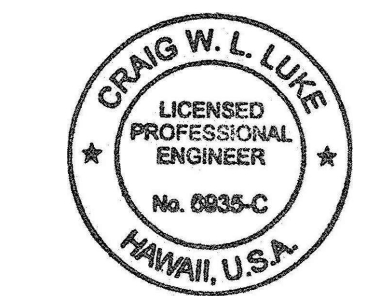
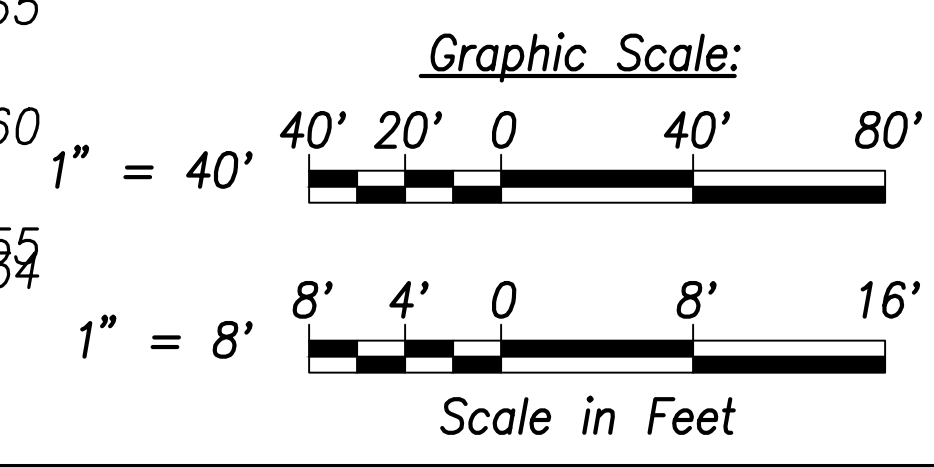
Scale: As Shown Date: April 2022

SHEET No. C-239 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 241 | 767 |



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



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Signature: *Craig W. Luke*
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

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|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

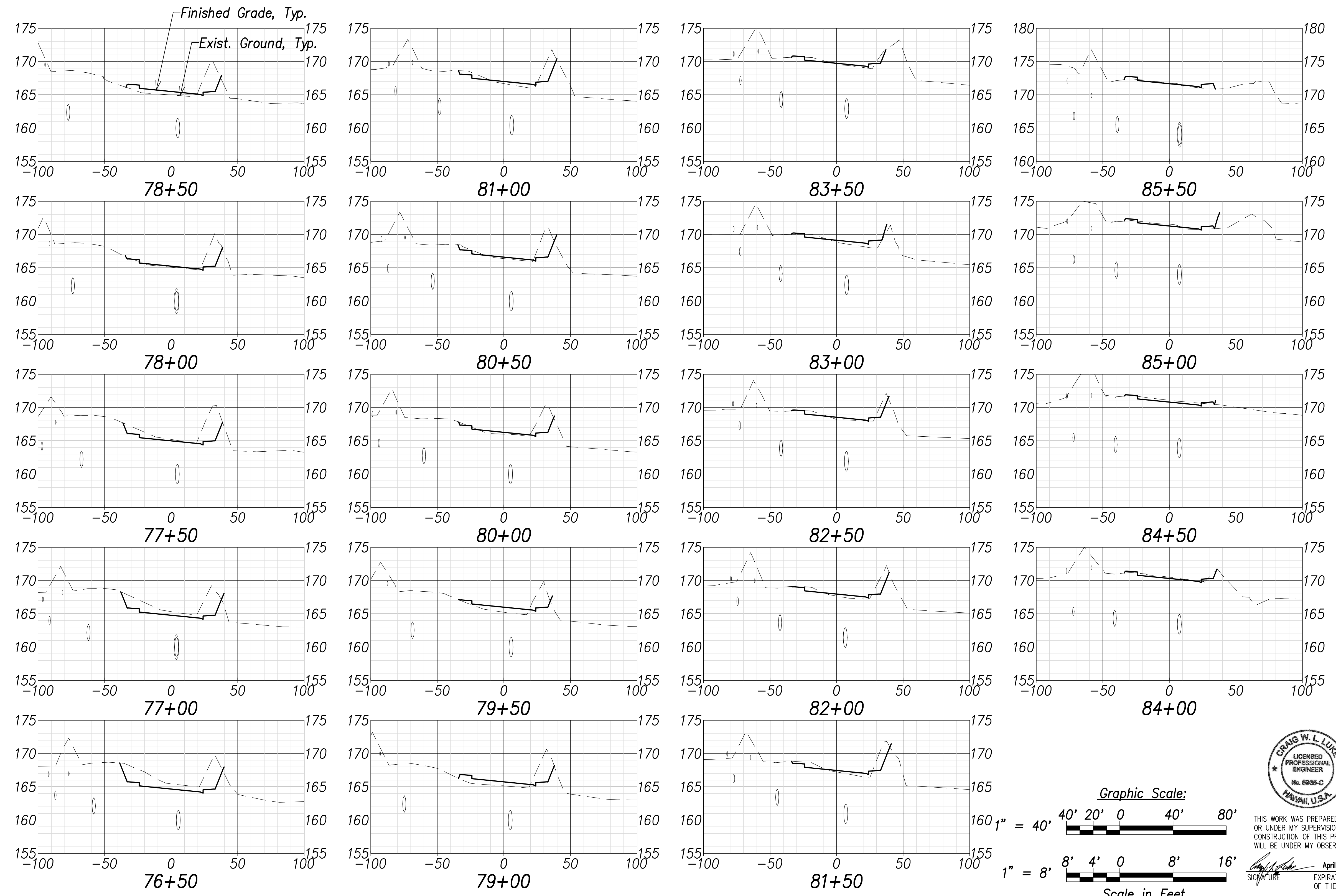
Cross Sections - 7

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

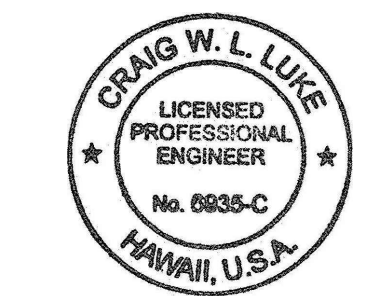
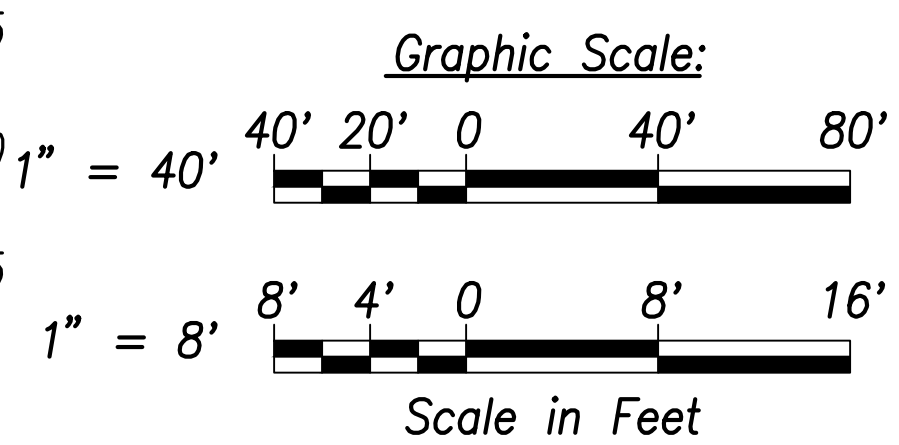
Scale: As Shown Date: April 2022

SHEET NO. C-240 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 242 | 767 |



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|--------------------------|-------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | _____ |
| TRACED BY: _____ | _____ |
| DESIGNED BY: _____ | _____ |
| CHECKED BY: _____ | _____ |
| NO. _____ | _____ |



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Craig W. Luke
 SIGNATURE April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

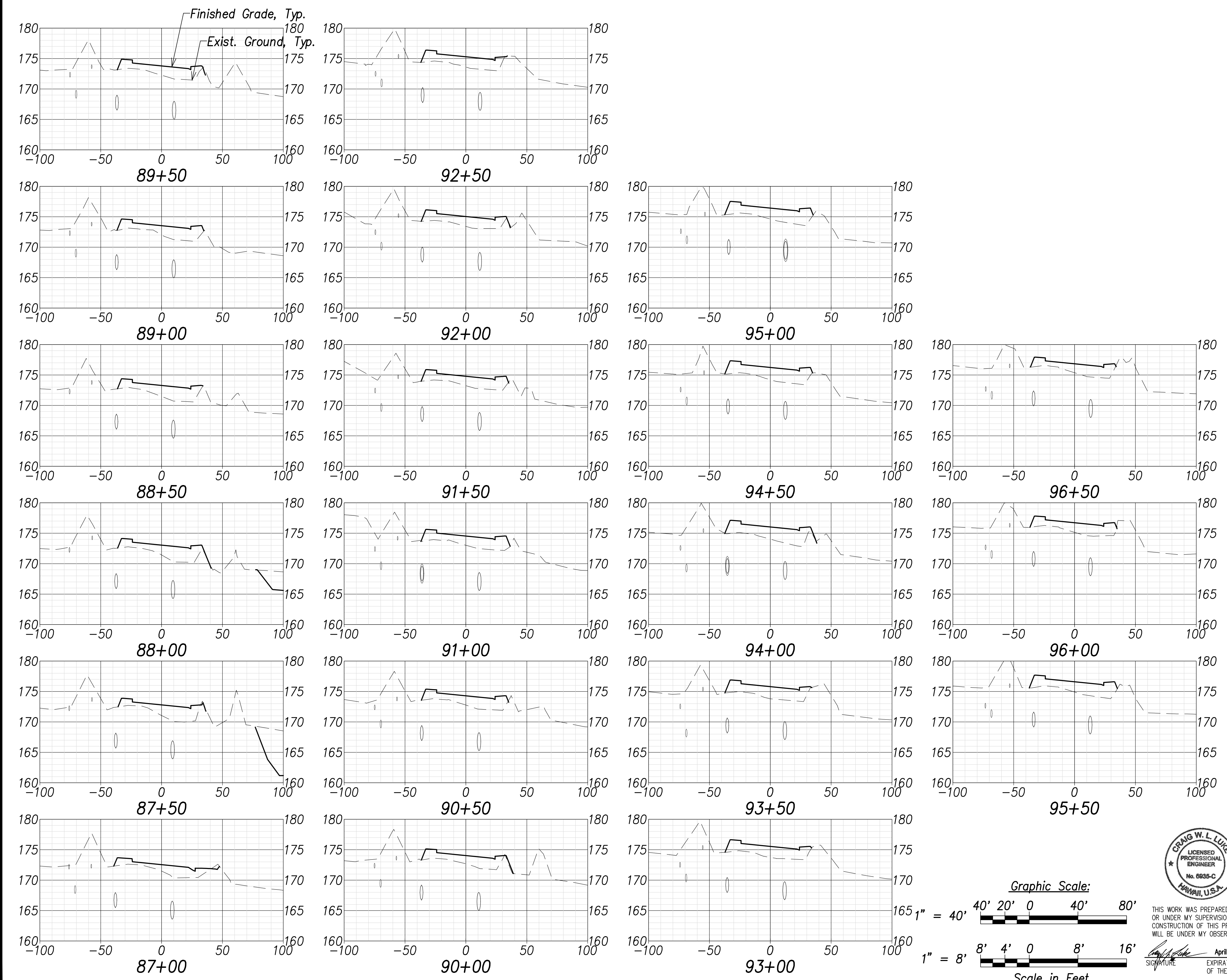
Cross Sections - 8

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

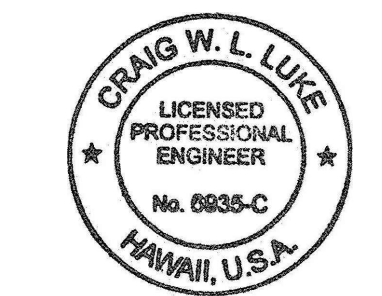
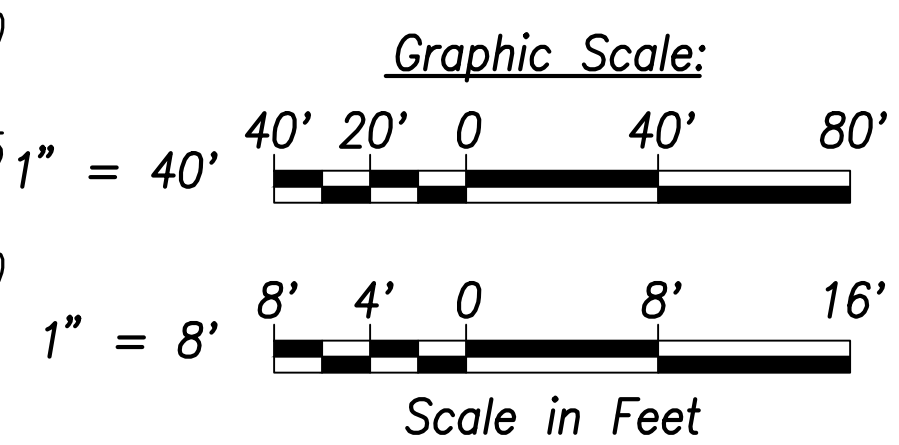
Scale: As Shown Date: April 2022

SHEET NO. C-241 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 243 | 767 |



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|-------------------|-------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NOTE BOOK | |
| NO. _____ | |



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Craig W. Luke
 SIGNATURE April 30, 2022
 EXPIRATION DATE OF THE LICENSE

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|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

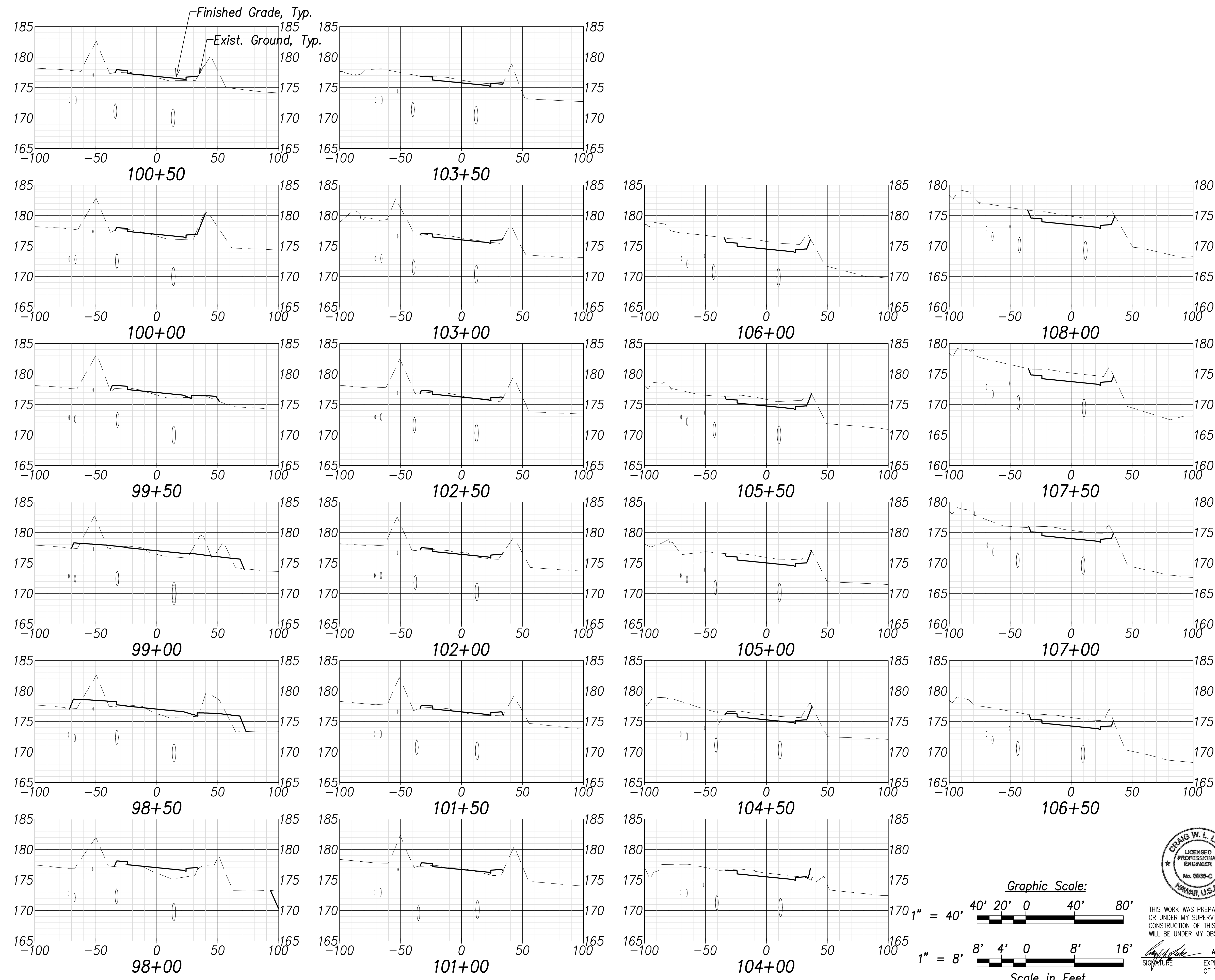
Cross Sections - 9

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

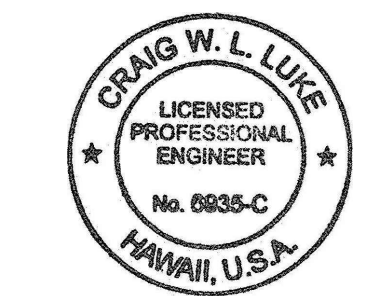
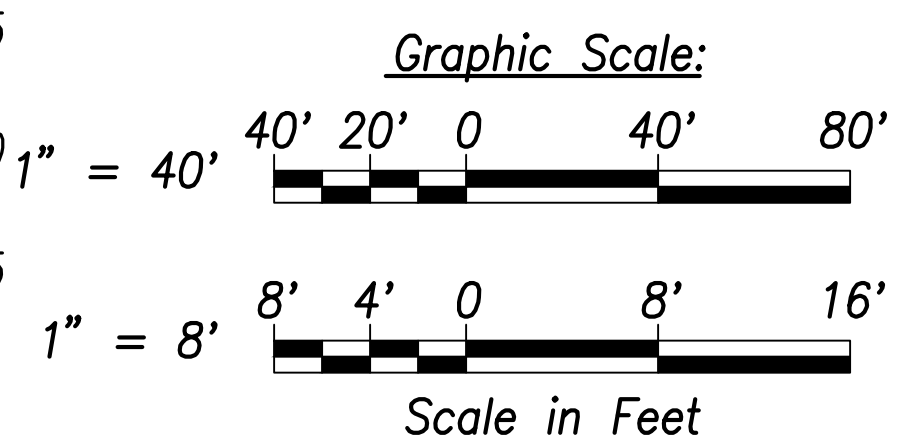
Scale: As Shown Date: April 2022

SHEET No. C-242 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 244 | 767 |



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|-------------------|-------|
| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| NOTED BY | |
| CHECKED BY | |
| NO. | |



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

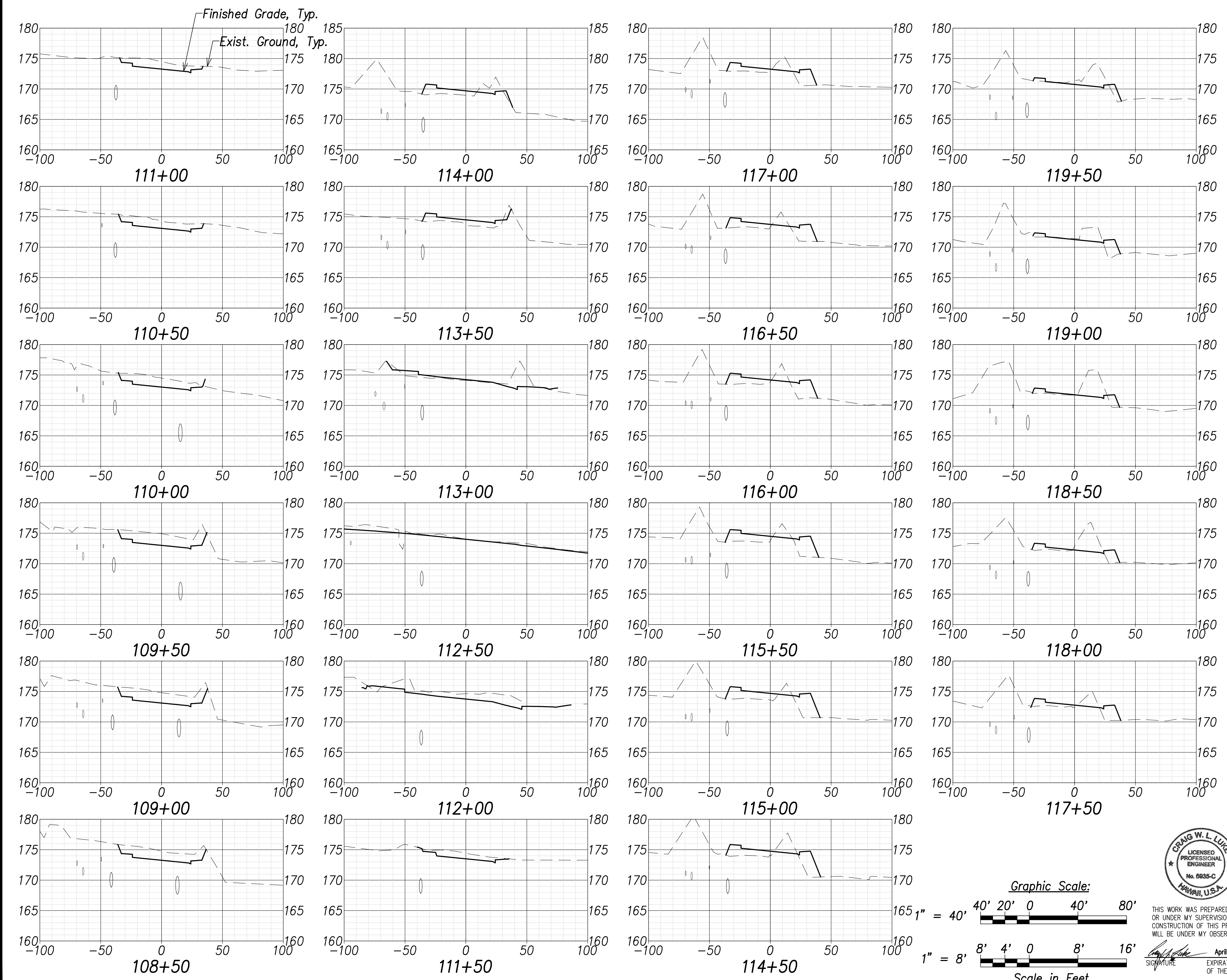
Cross Sections - 10

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

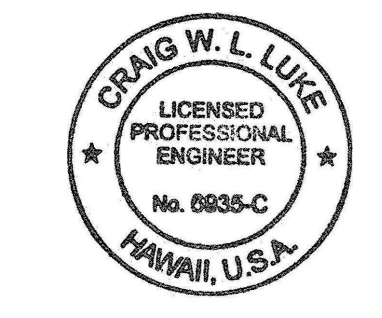
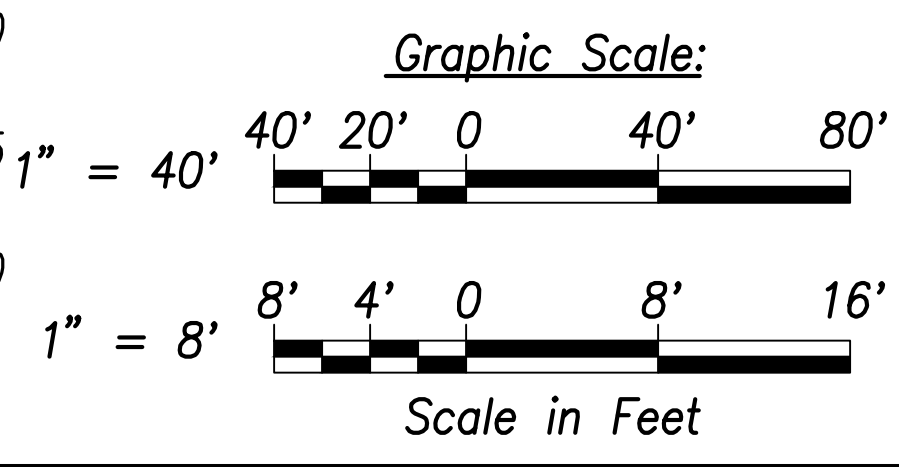
Scale: As Shown Date: April 2022

SHEET No. C-243 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 245 | 767 |



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|-------------------|-------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NOTE BOOK | |
| NO. _____ | |



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Signature: *Craig W. L. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

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|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

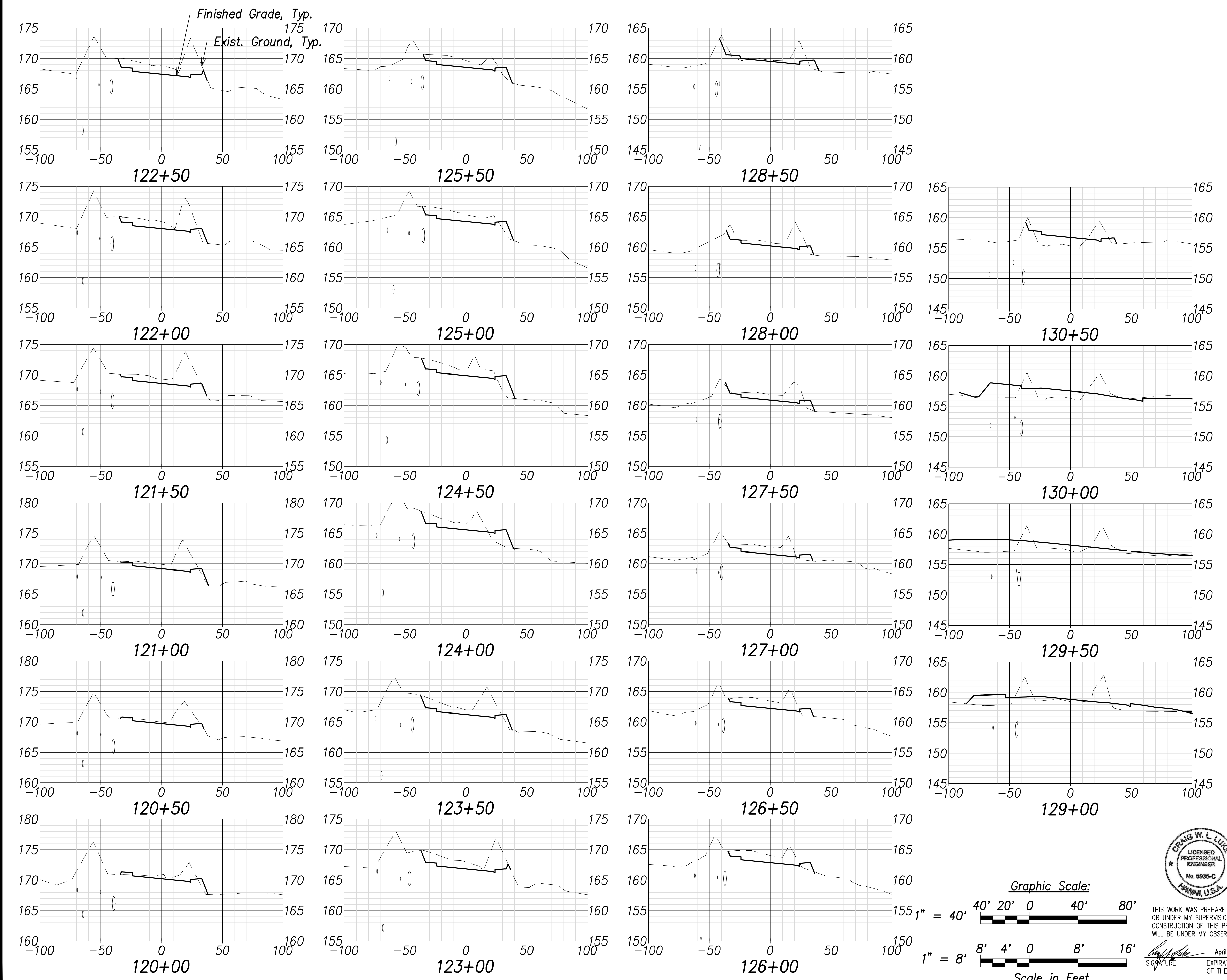
Cross Sections - 11

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

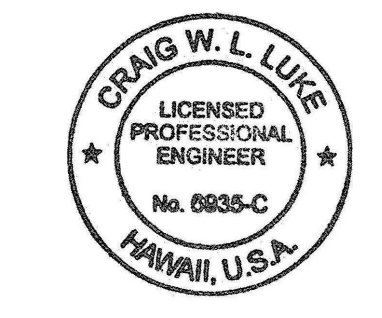
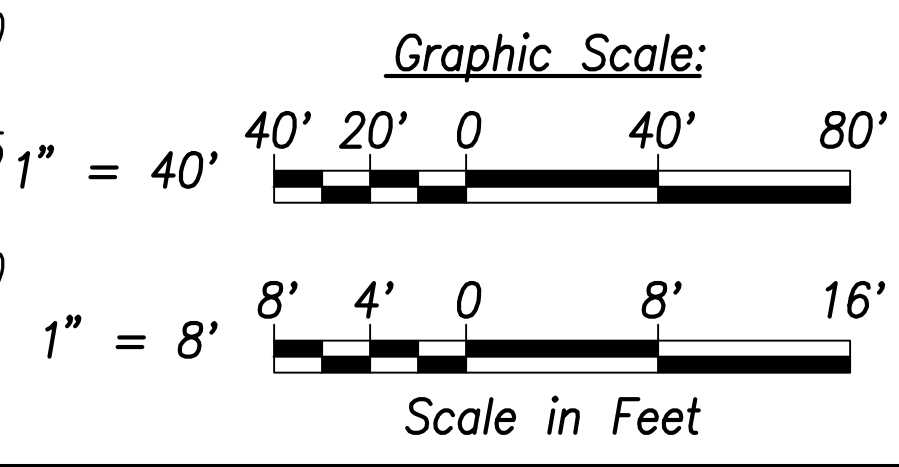
Scale: As Shown Date: April 2022

SHEET No. C-244 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 246 | 767 |



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|--------------------------|----------------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | TRACED BY: _____ |
| NOTE BOOK: _____ | QUANTITIES BY: _____ |
| CHECKED BY: _____ | No. _____ |



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Craig W. Luke
 SIGNATURE April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

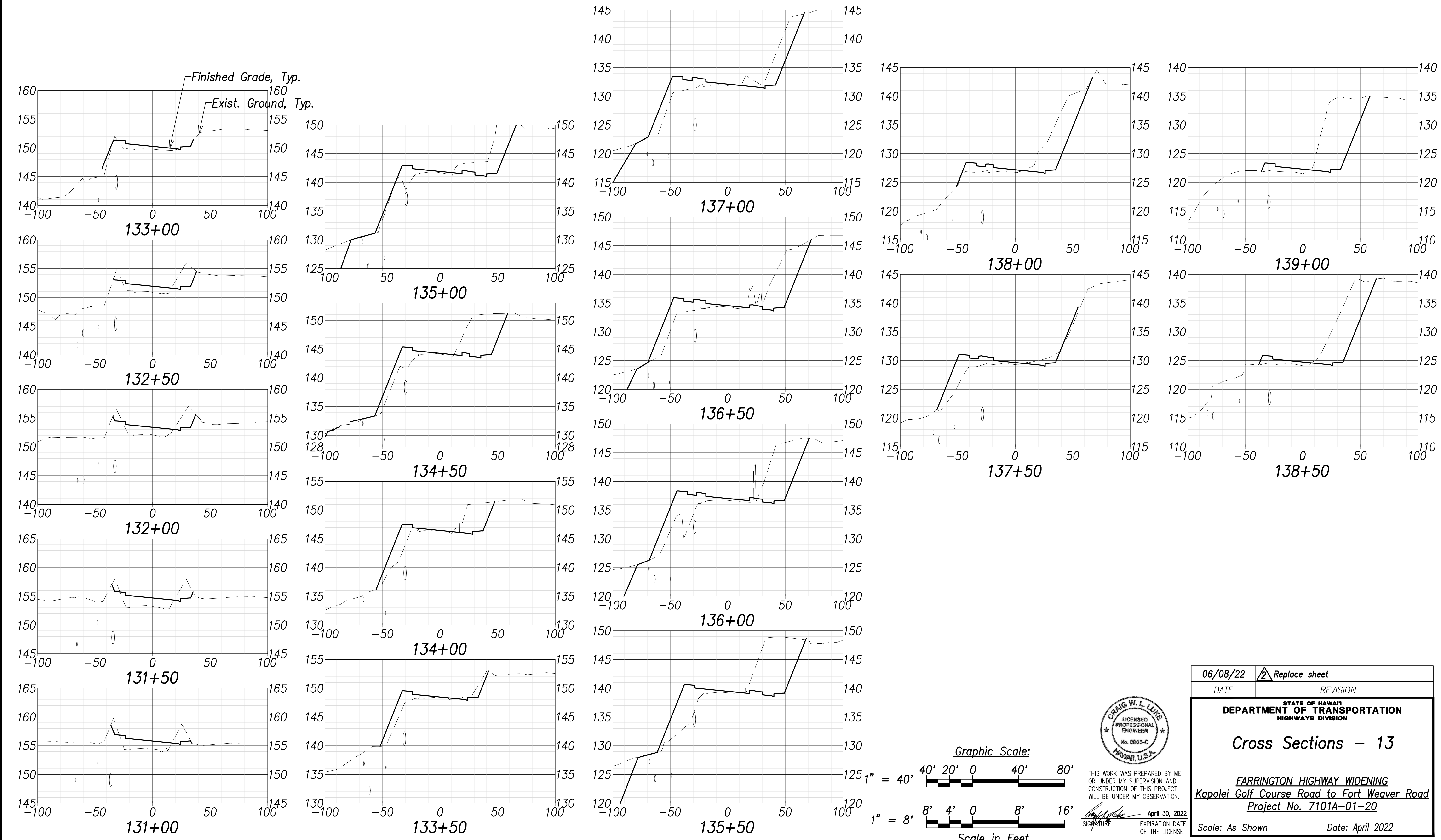
Cross Sections - 12

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

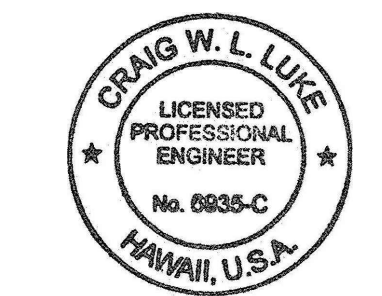
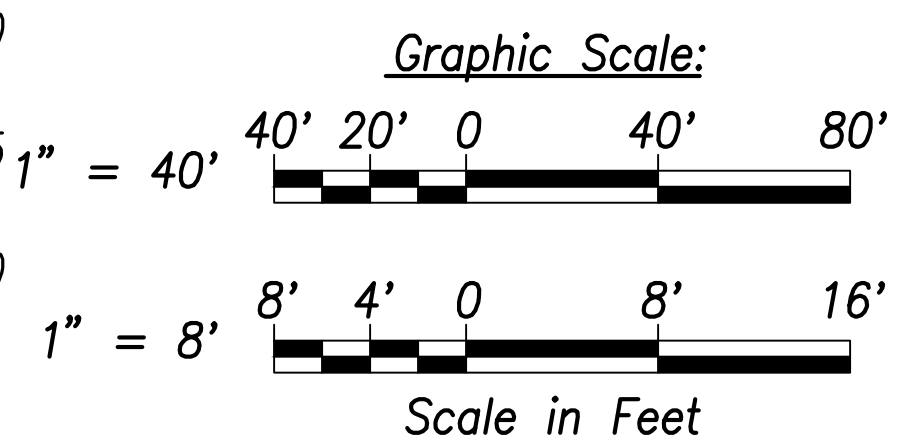
Scale: As Shown Date: April 2022

SHEET No. C-245 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 247 | 767 |



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|--------------------------|----------------------|
| SURVEY PLOTTED BY: _____ | DATE: _____ |
| DRAWN BY: _____ | TRACED BY: _____ |
| NOTE BOOK: _____ | QUANTITIES BY: _____ |
| CHECKED BY: _____ | No. _____ |



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Signature: _____
 APRIL 30, 2022
 EXPIRATION DATE OF THE LICENSE

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|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

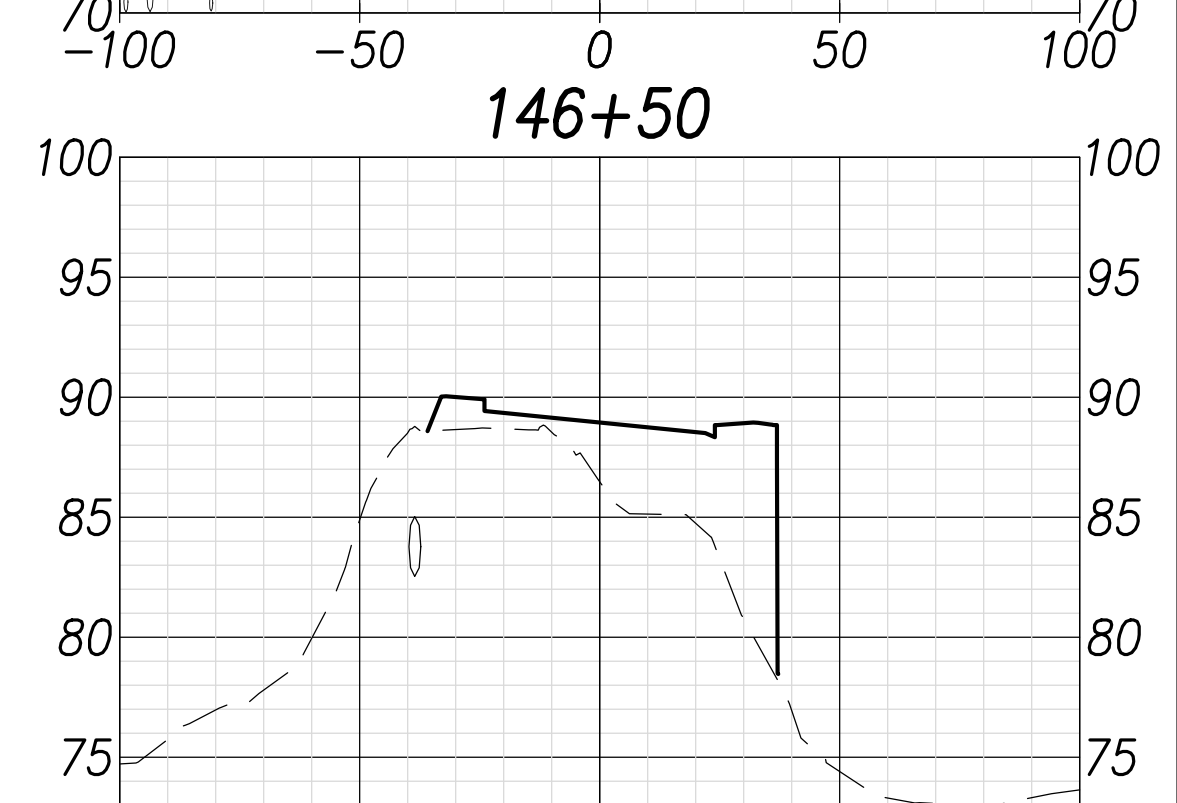
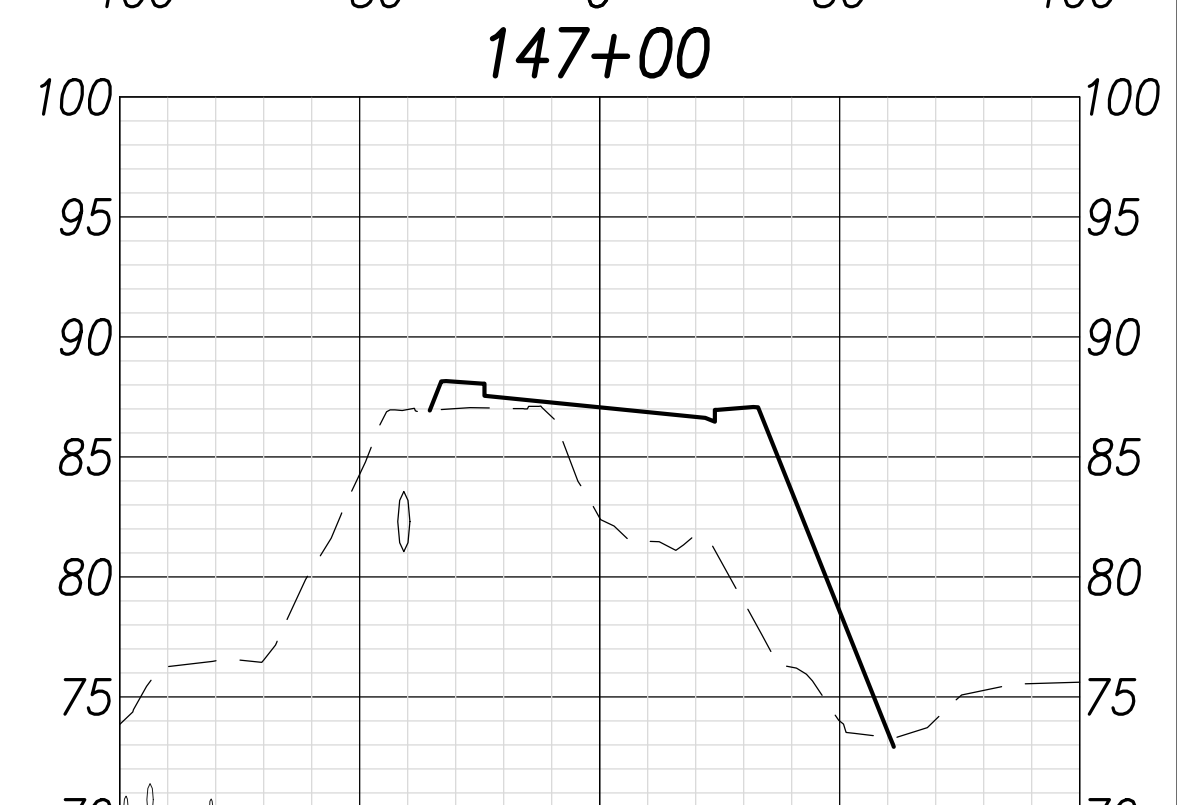
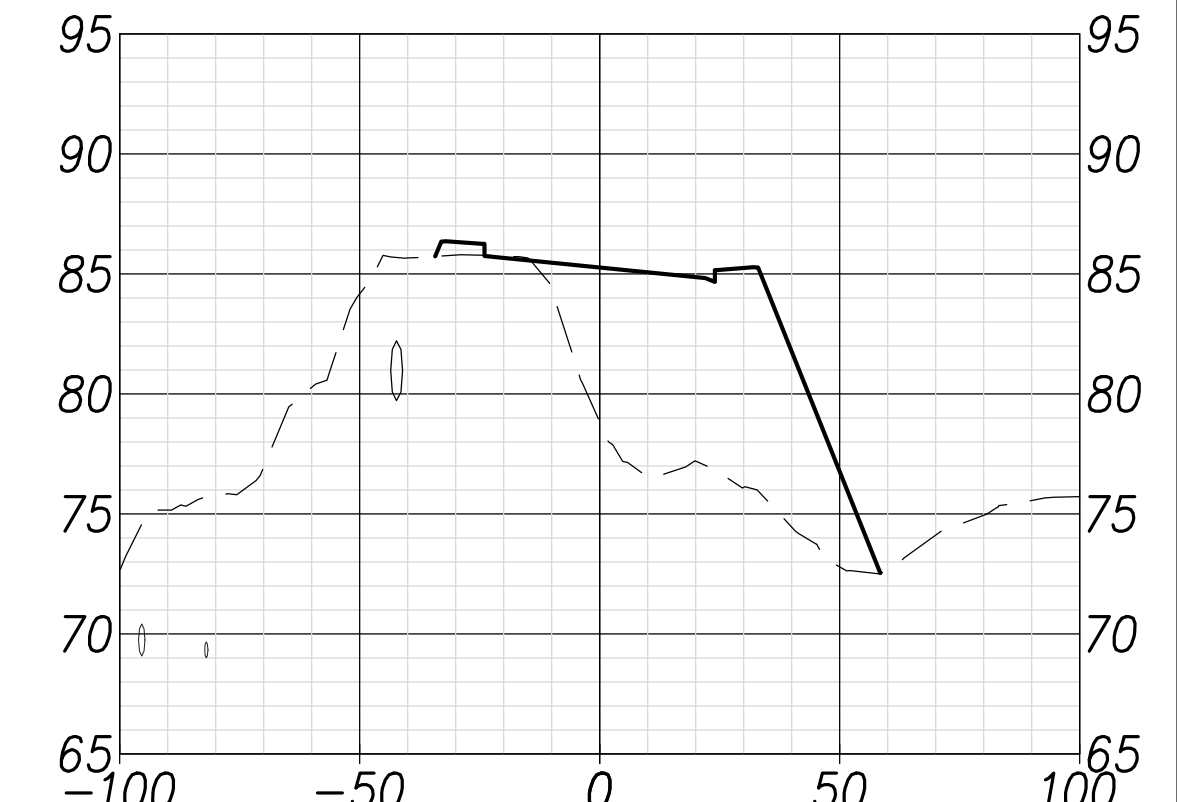
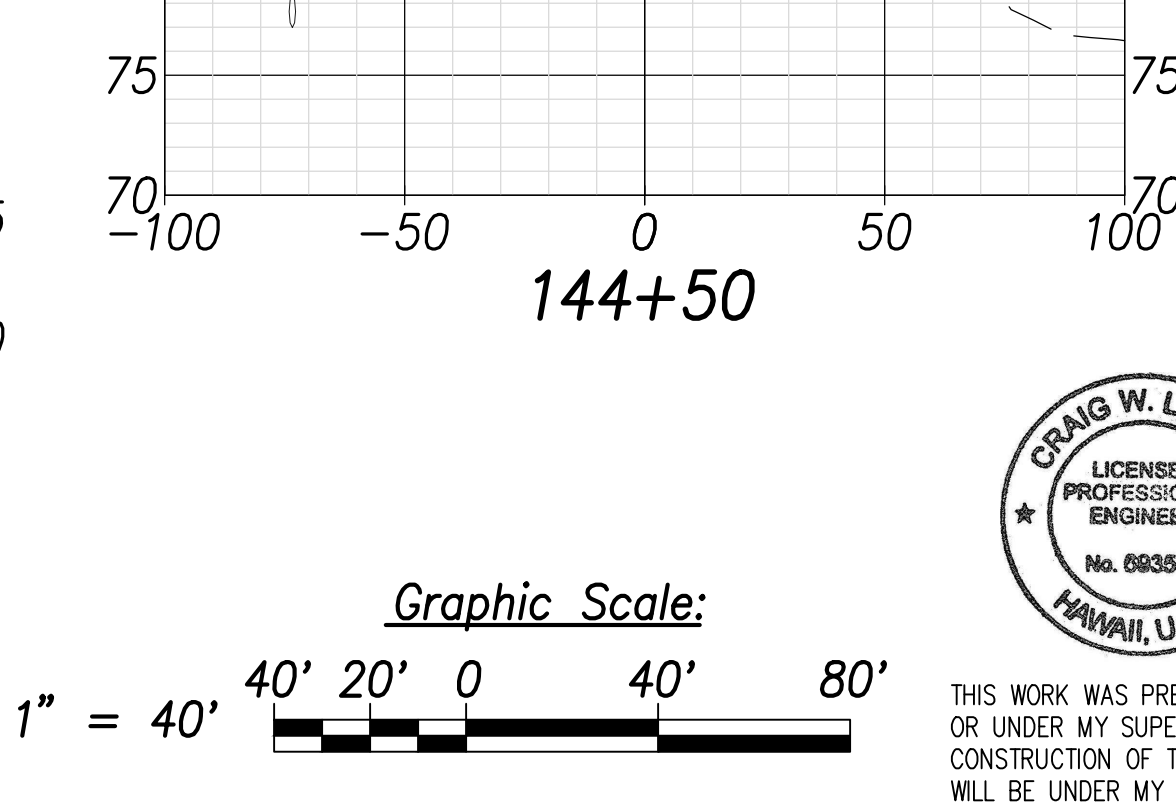
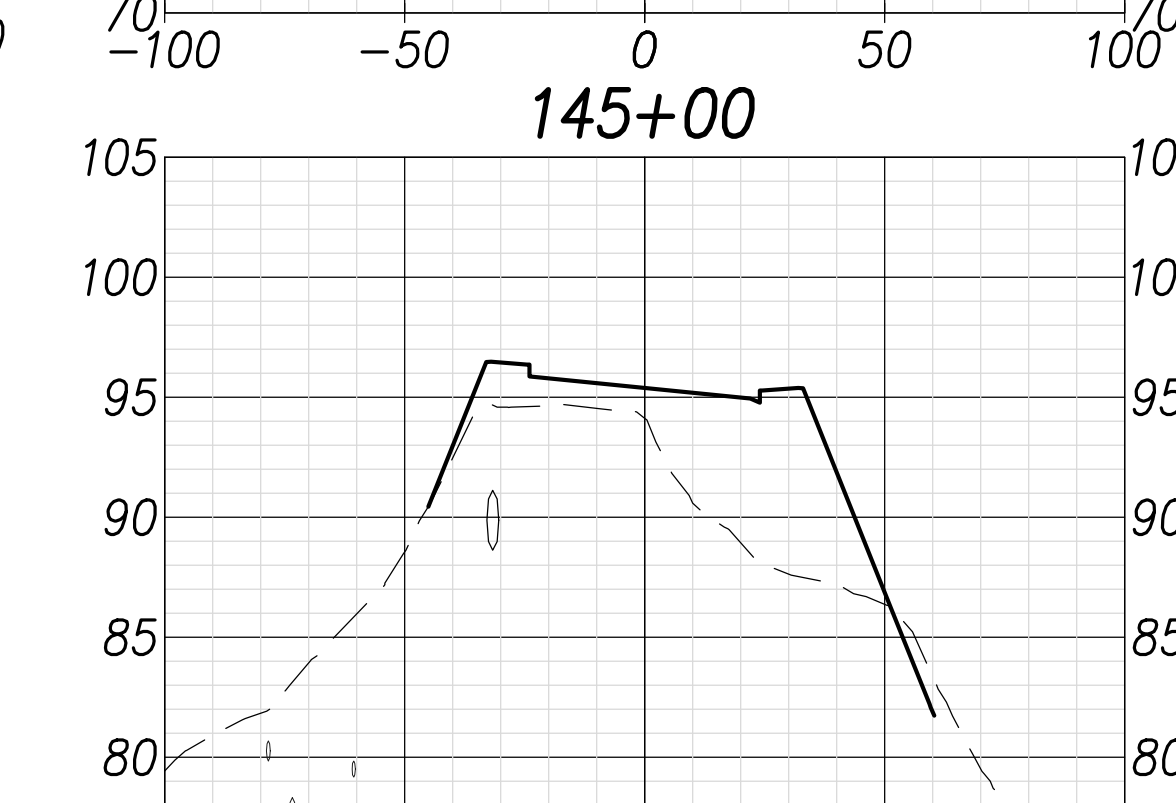
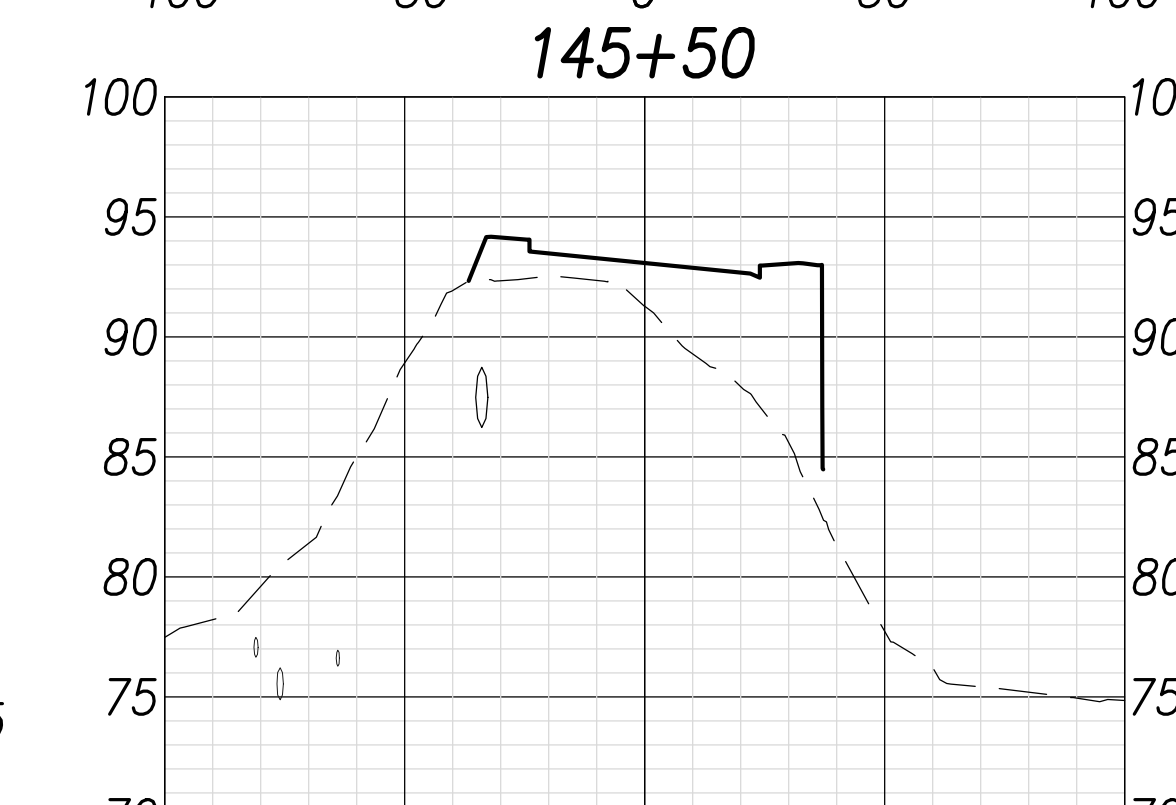
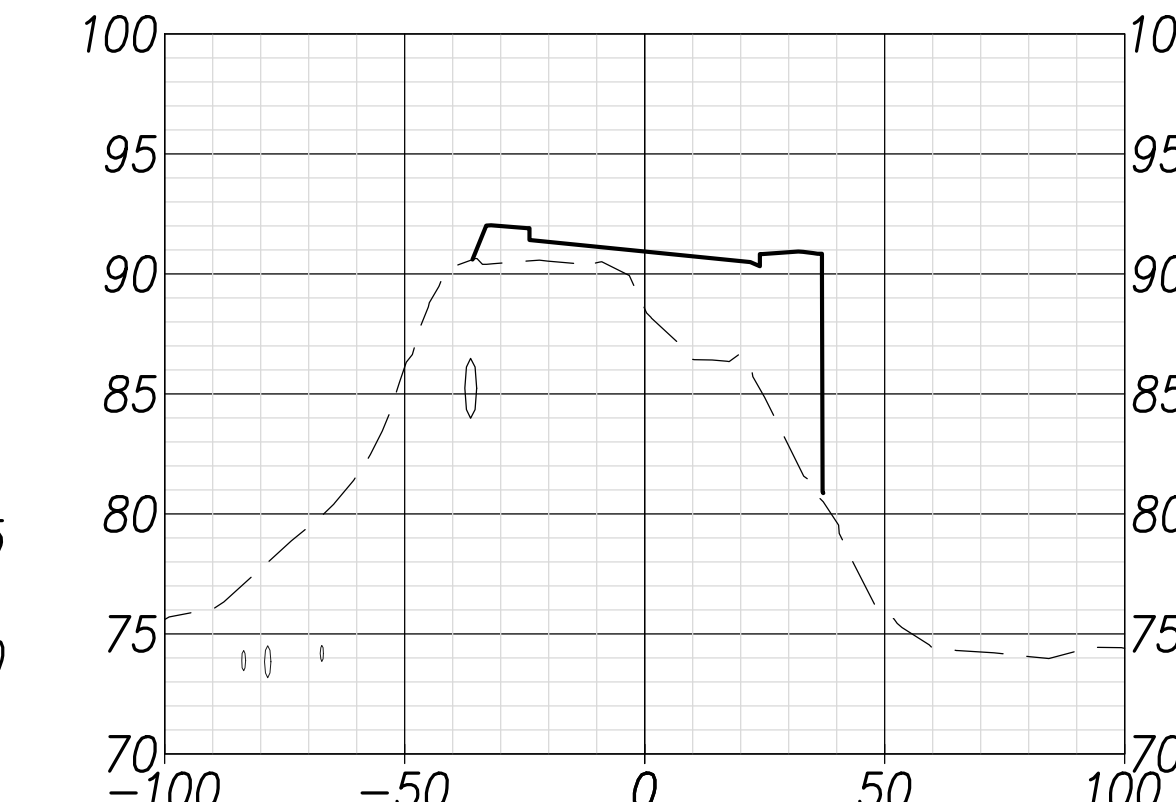
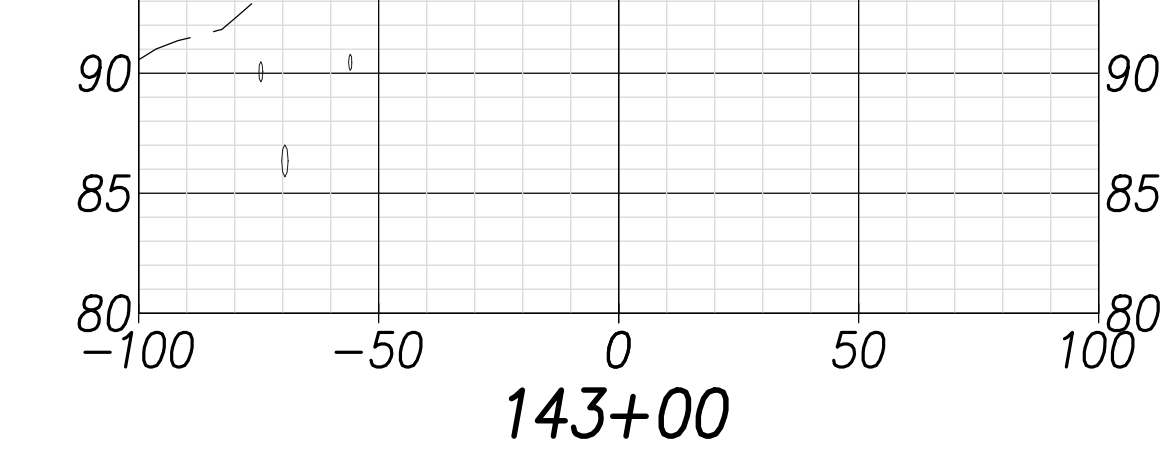
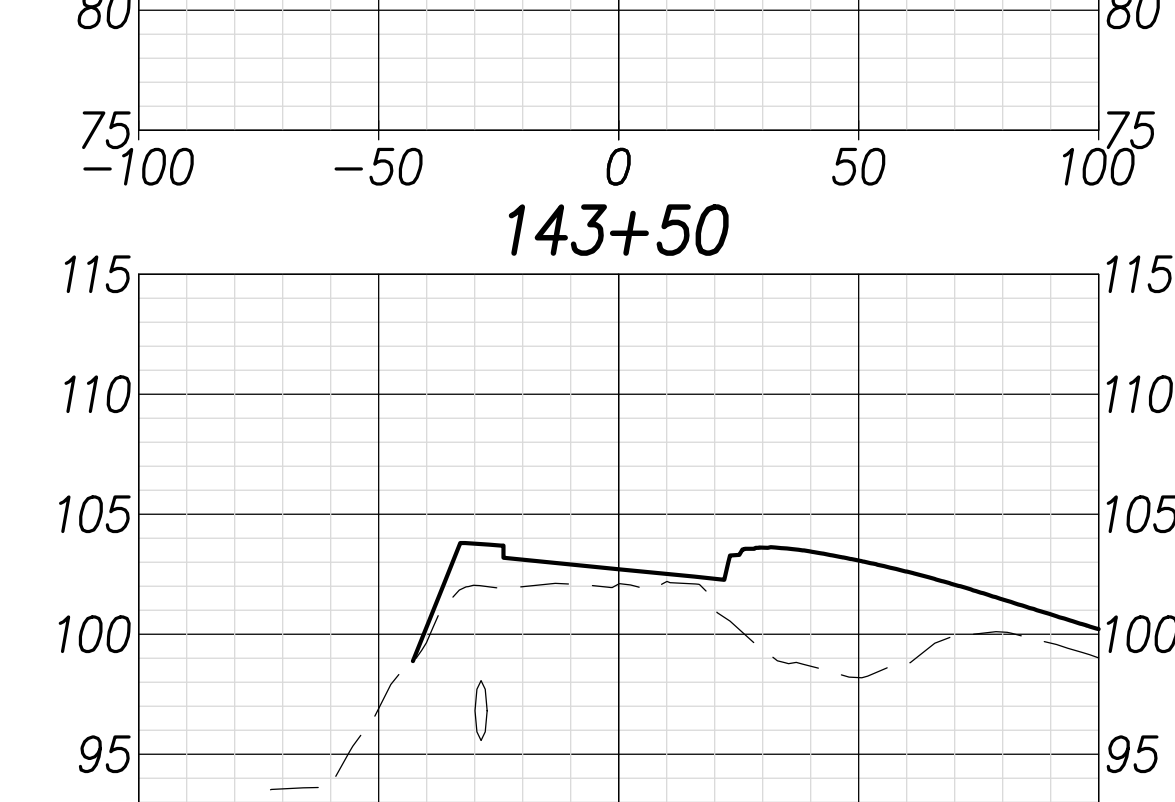
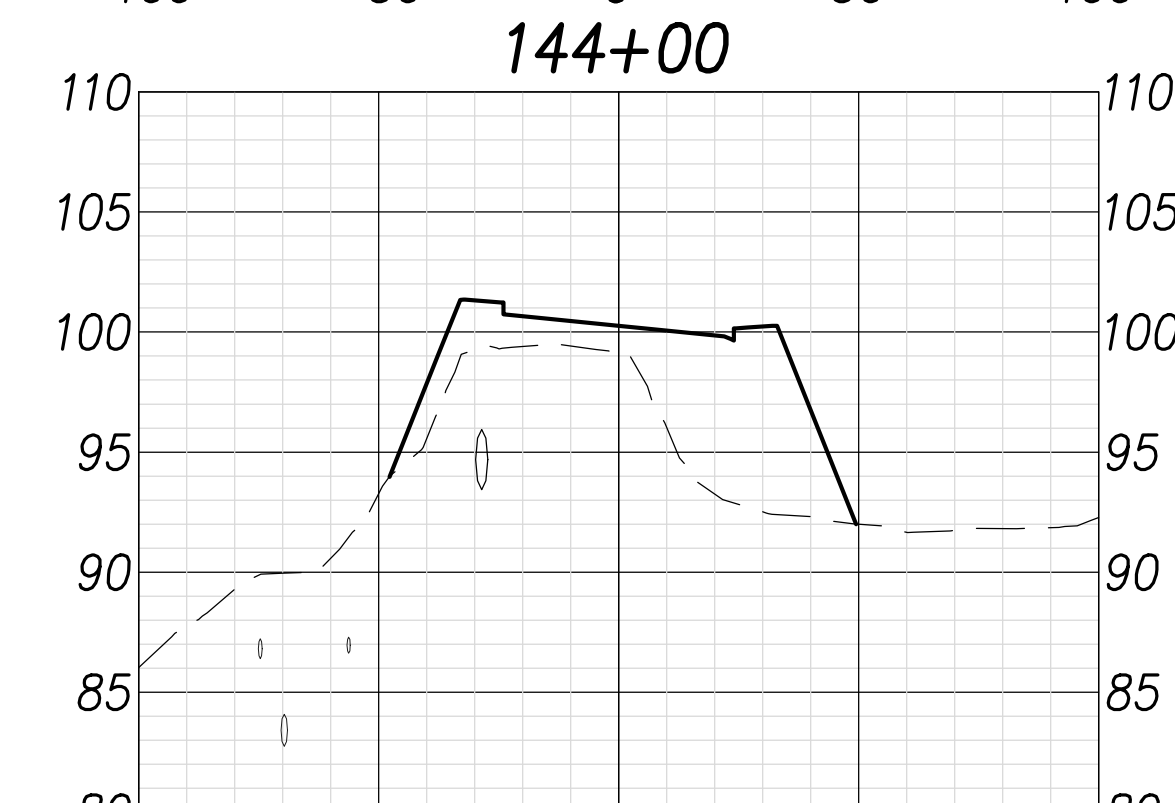
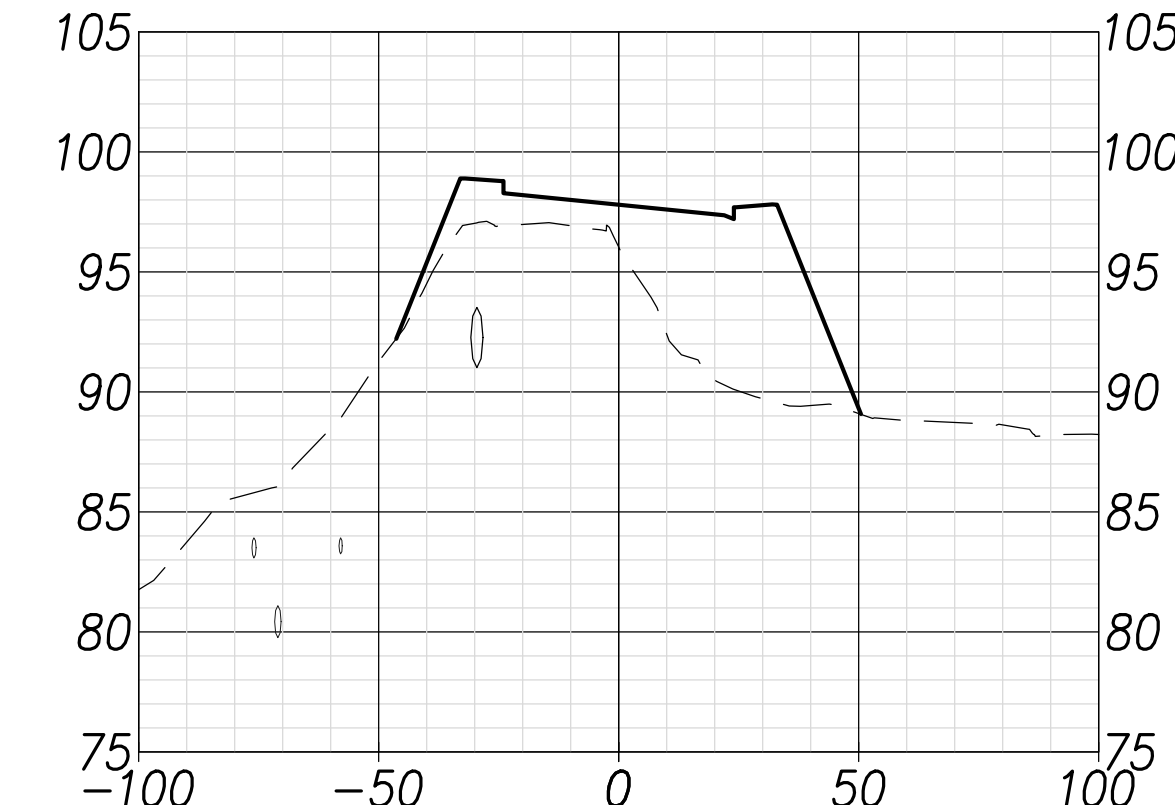
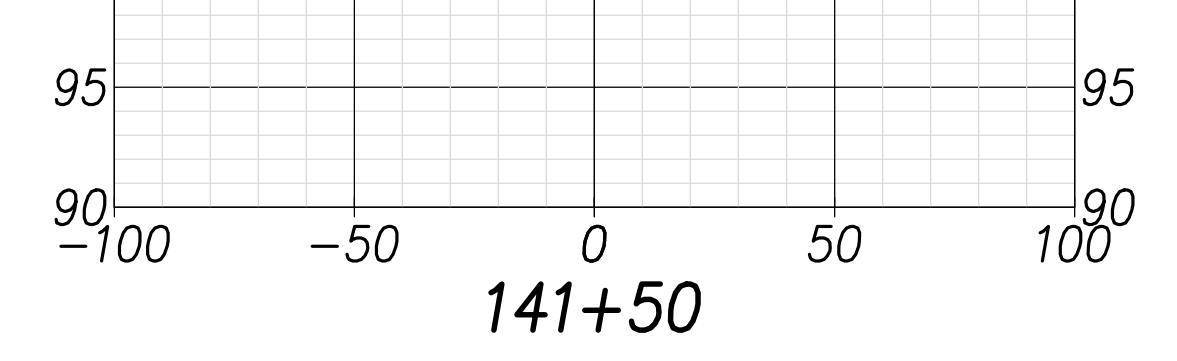
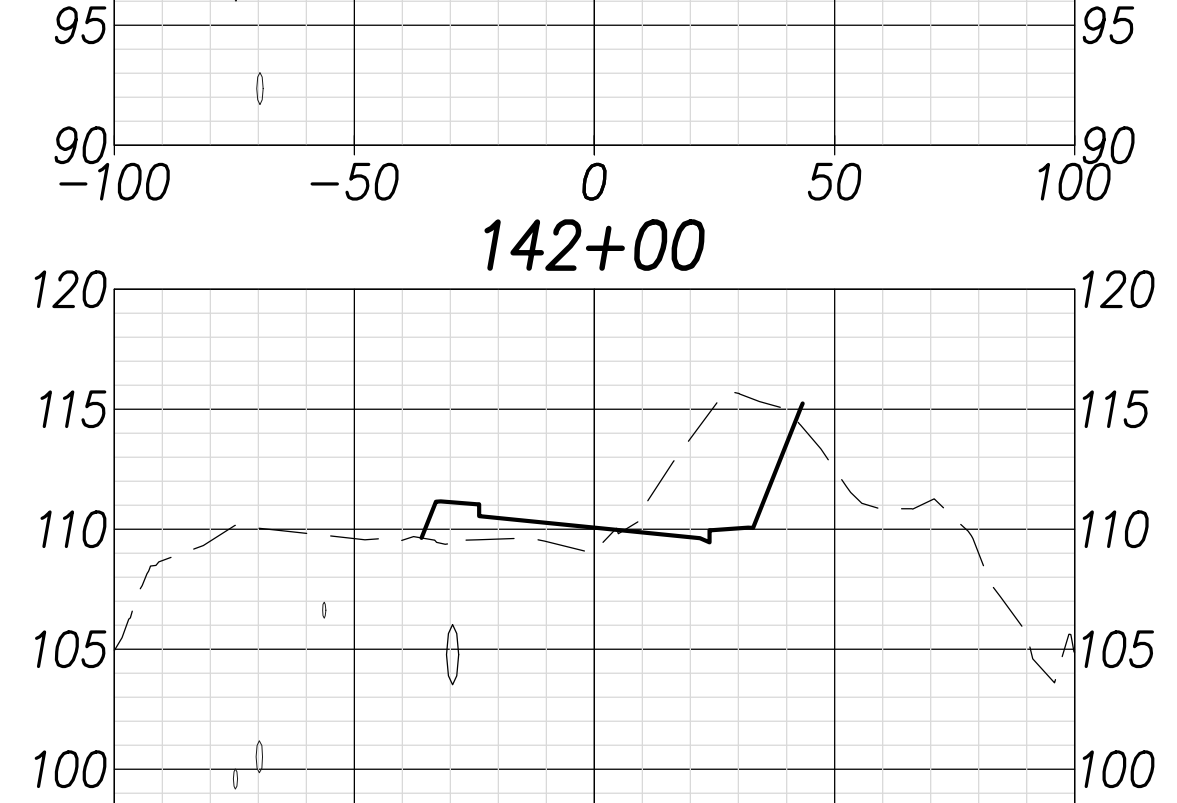
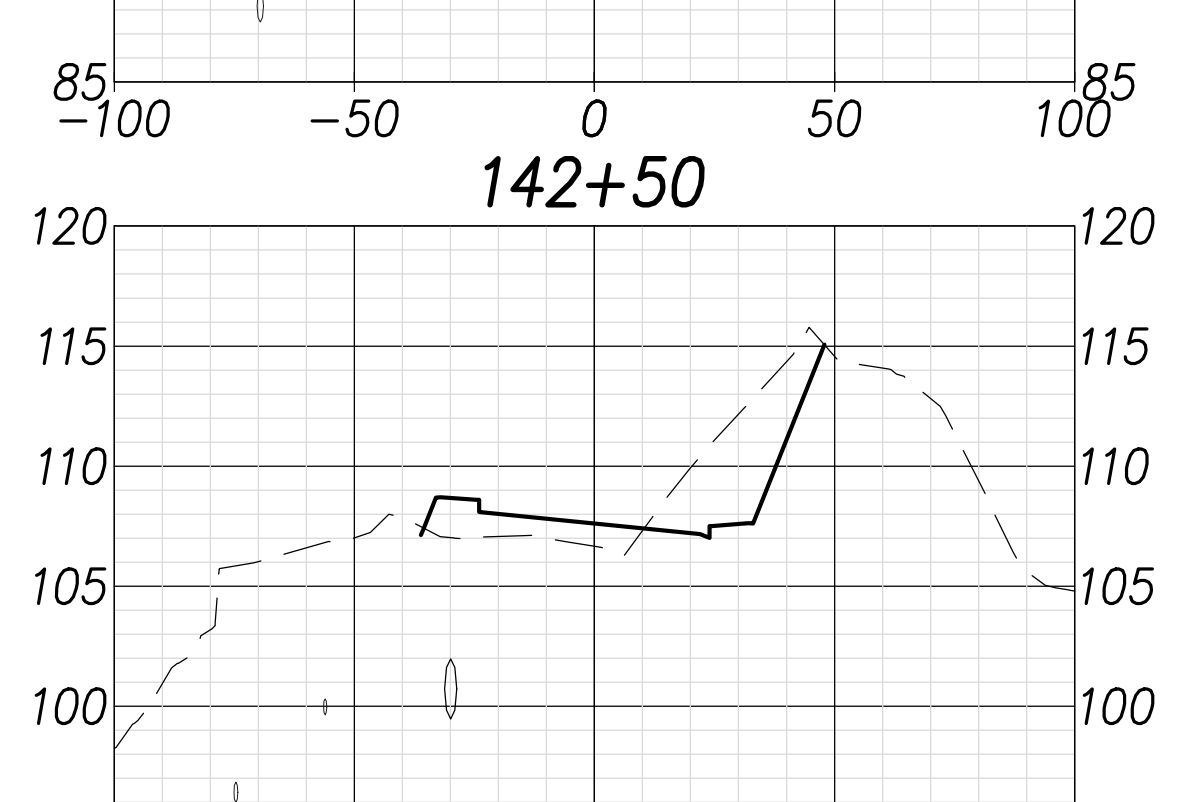
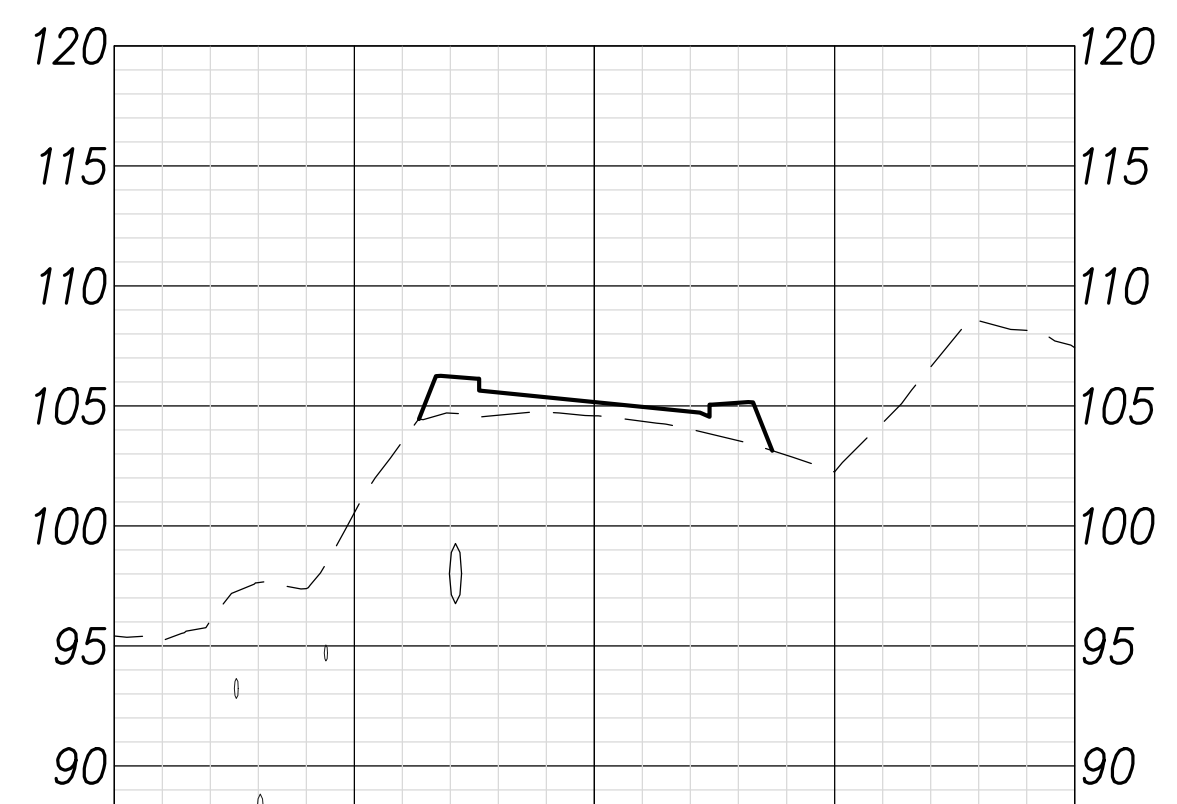
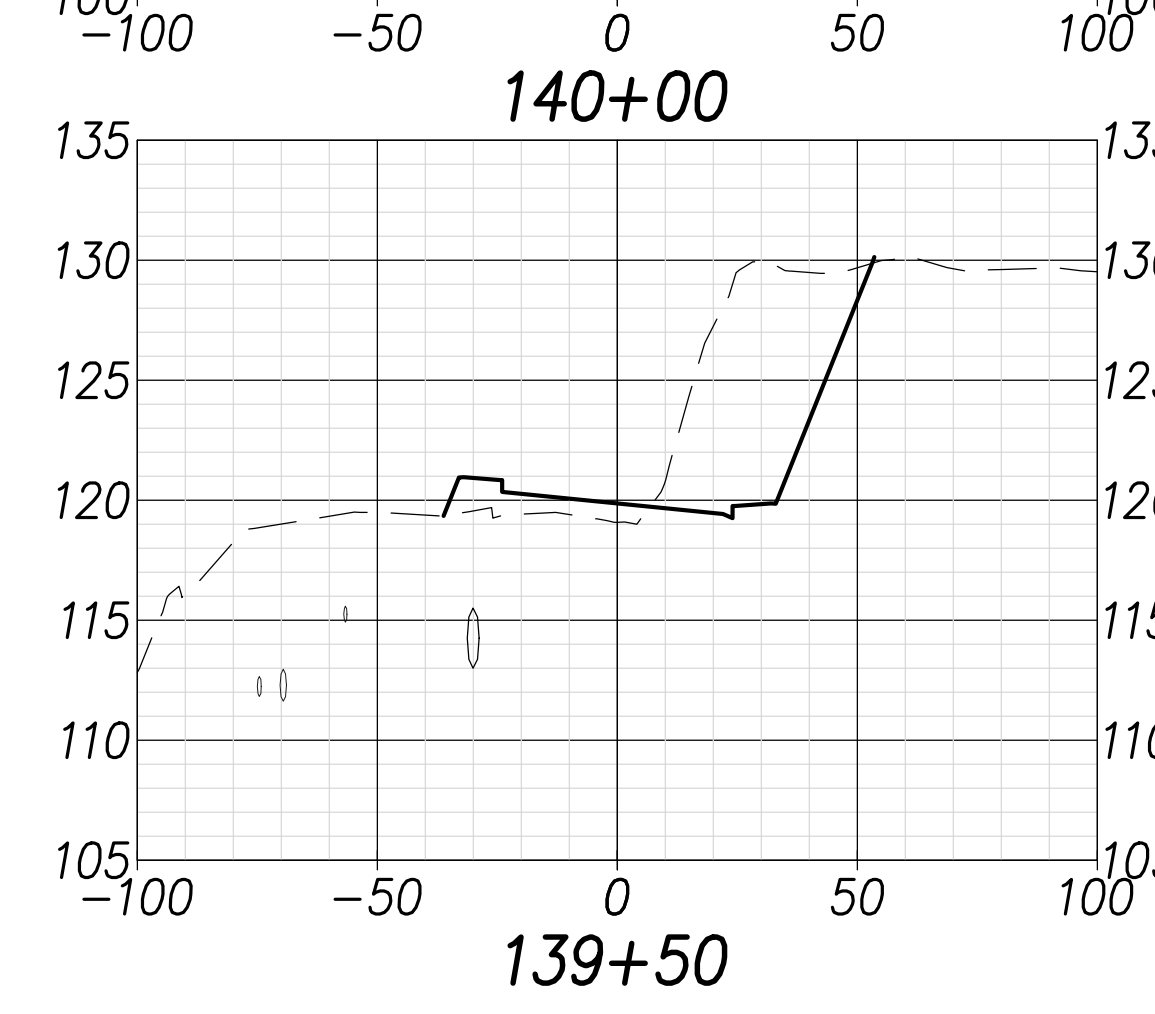
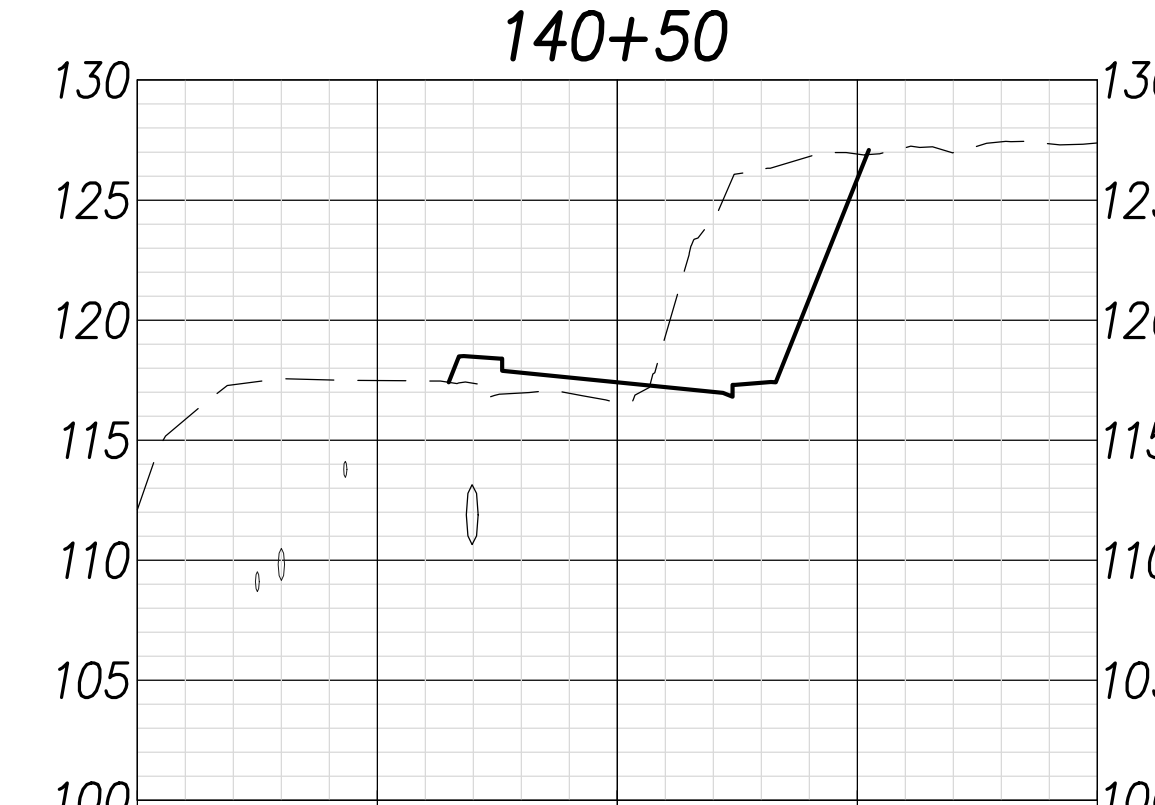
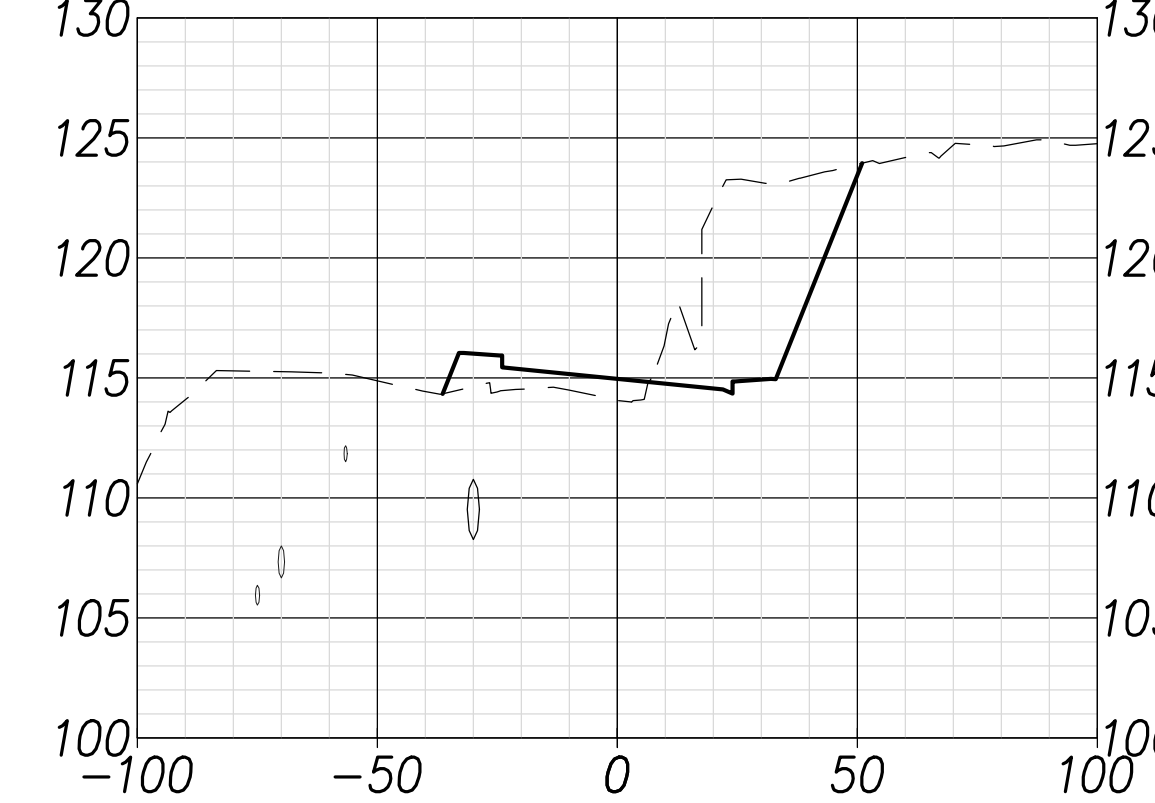
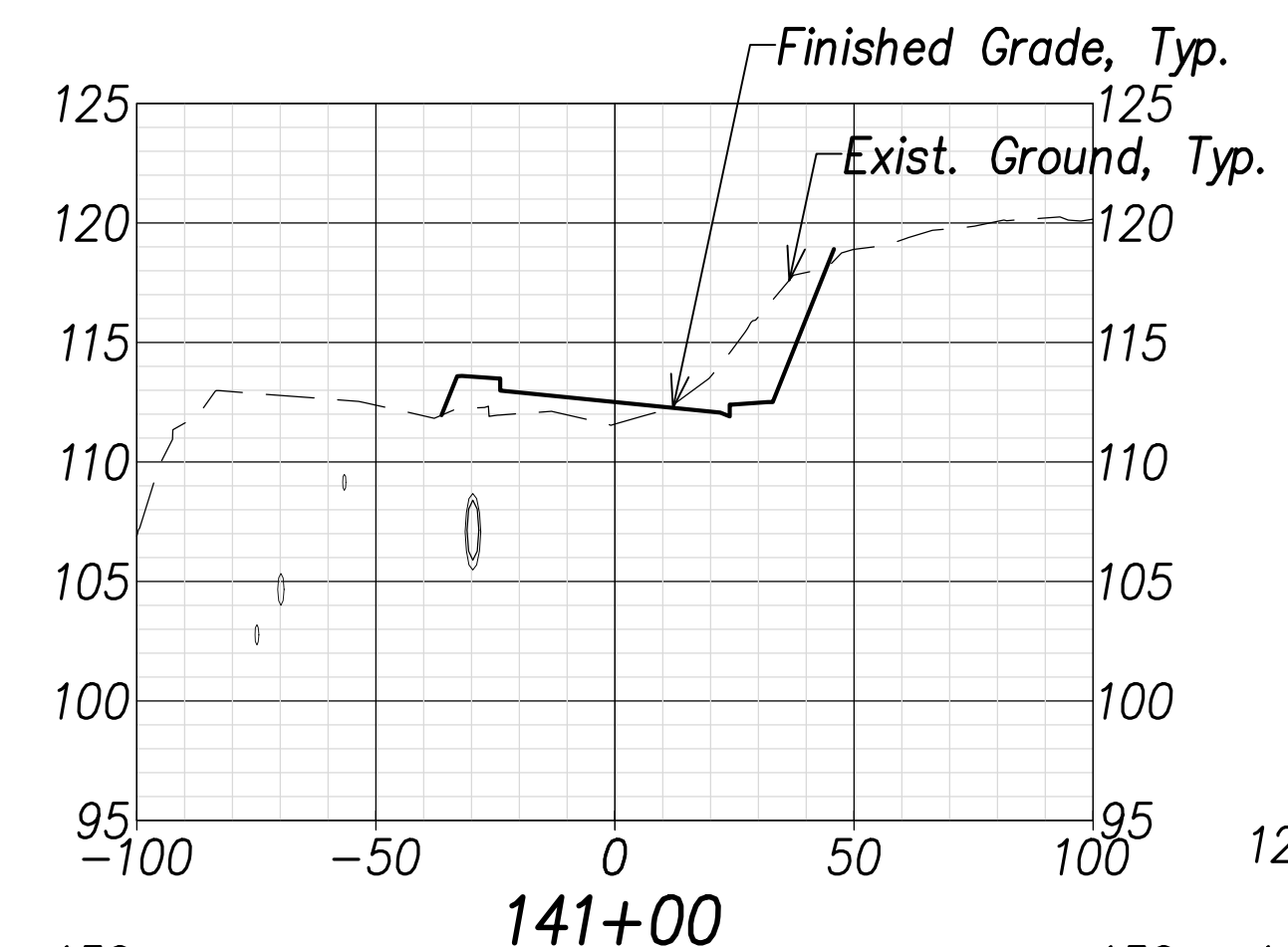
Cross Sections - 13

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

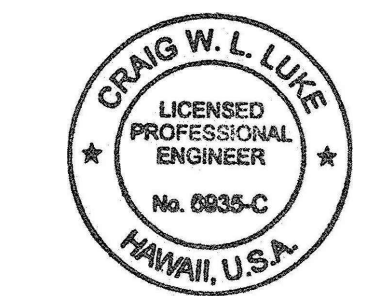
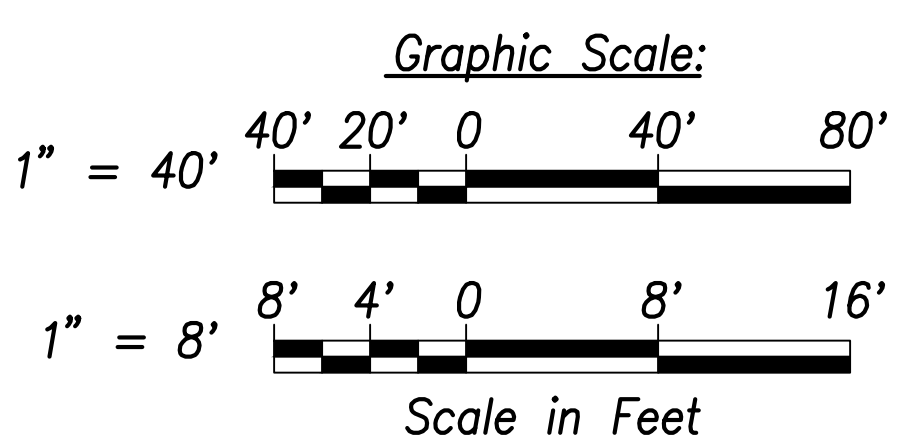
Scale: As Shown Date: April 2022

SHEET NO. C-246 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 248 | 767 |



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| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| NOTED BY | |
| CHECKED BY | |
| NO. | |



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

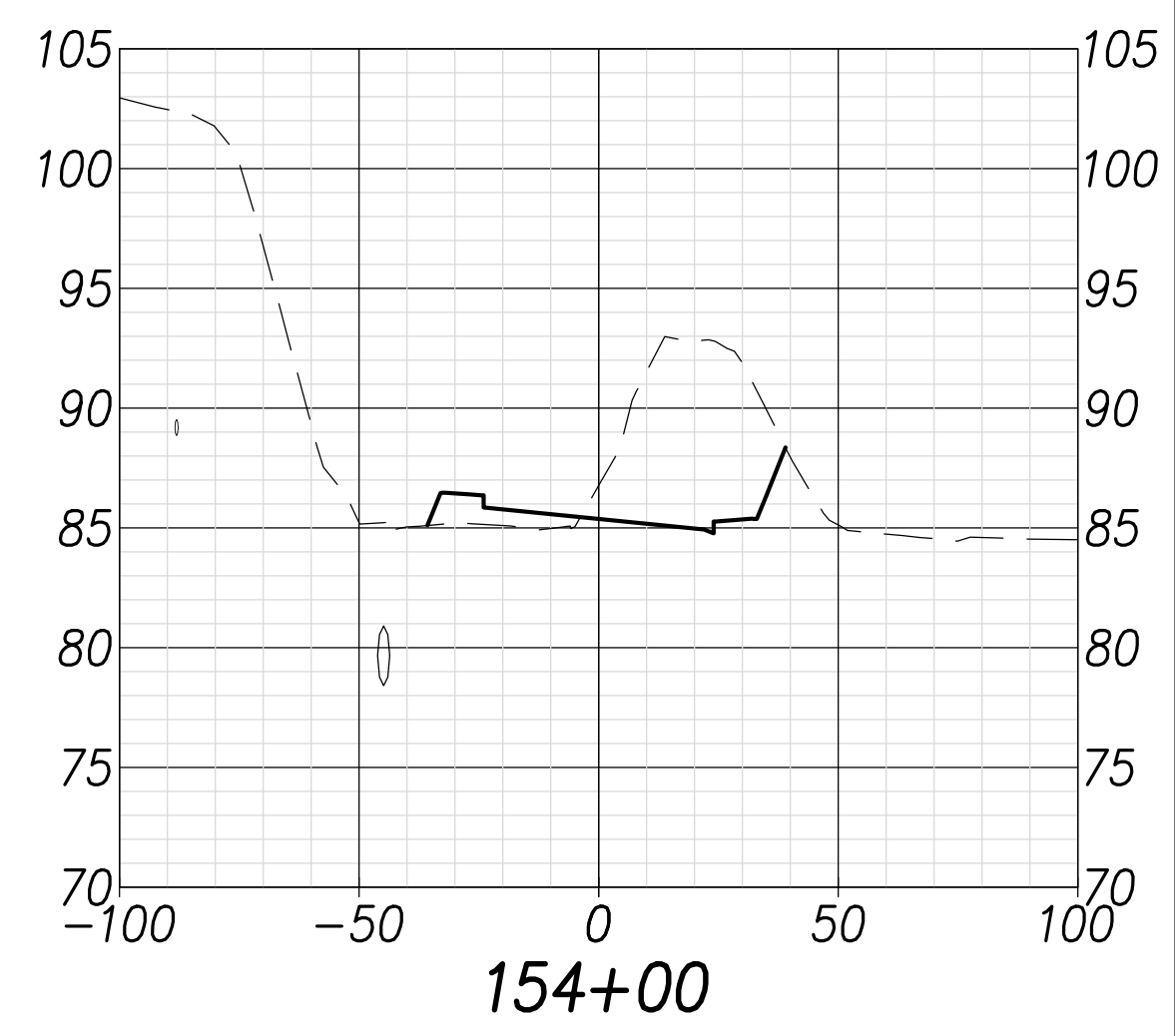
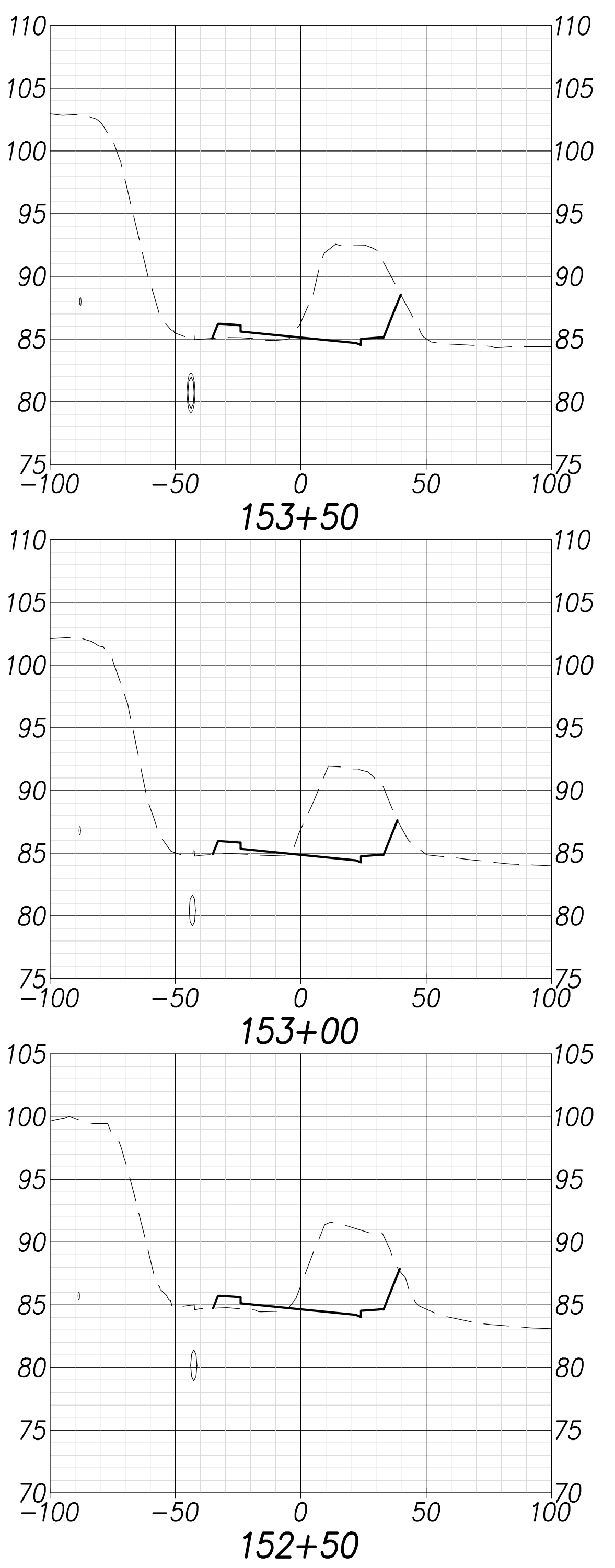
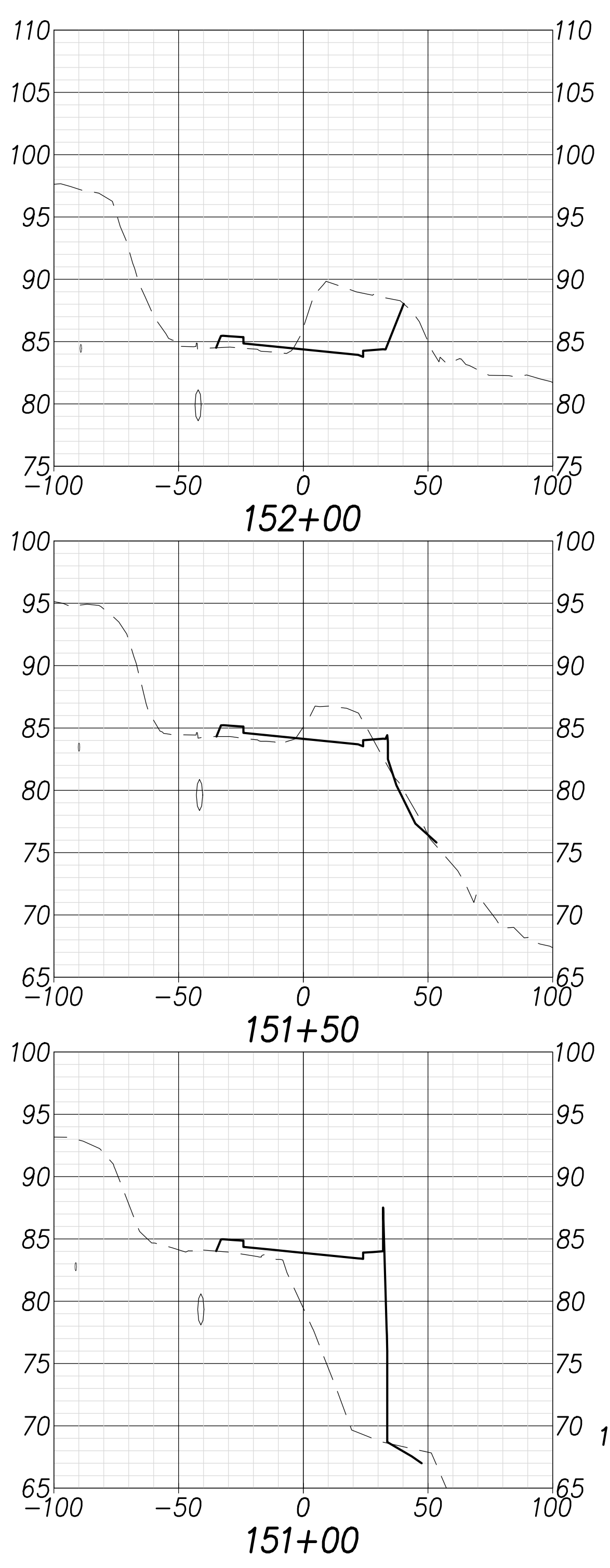
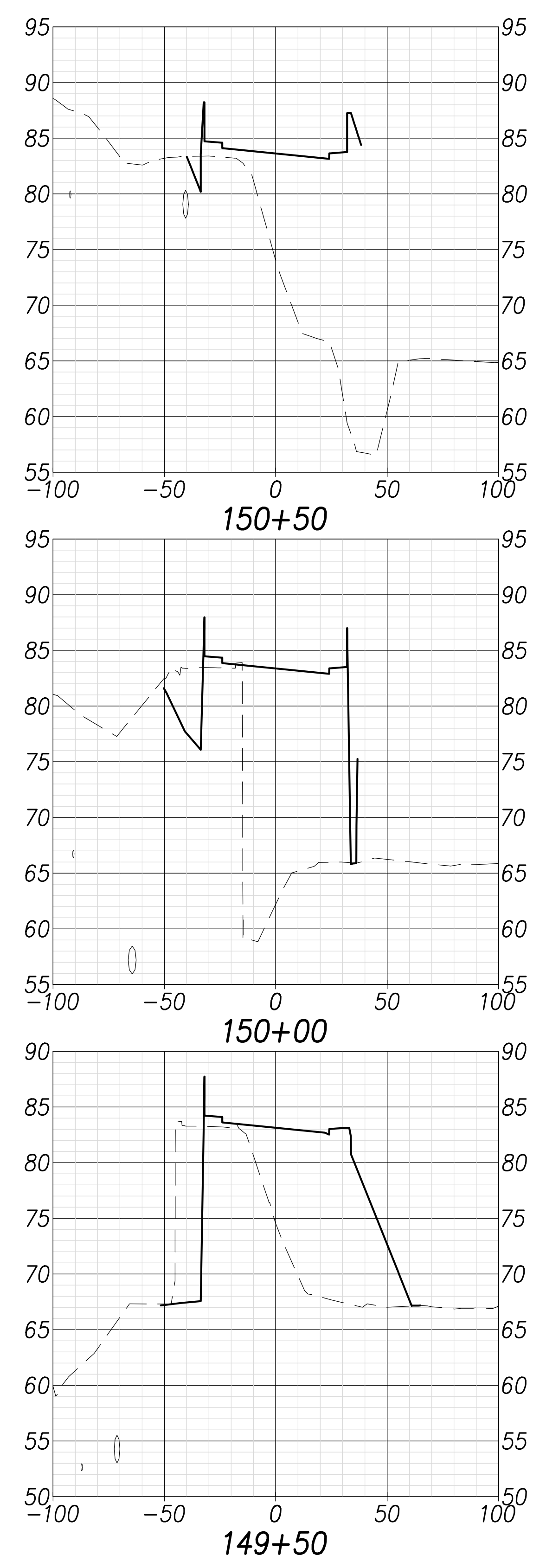
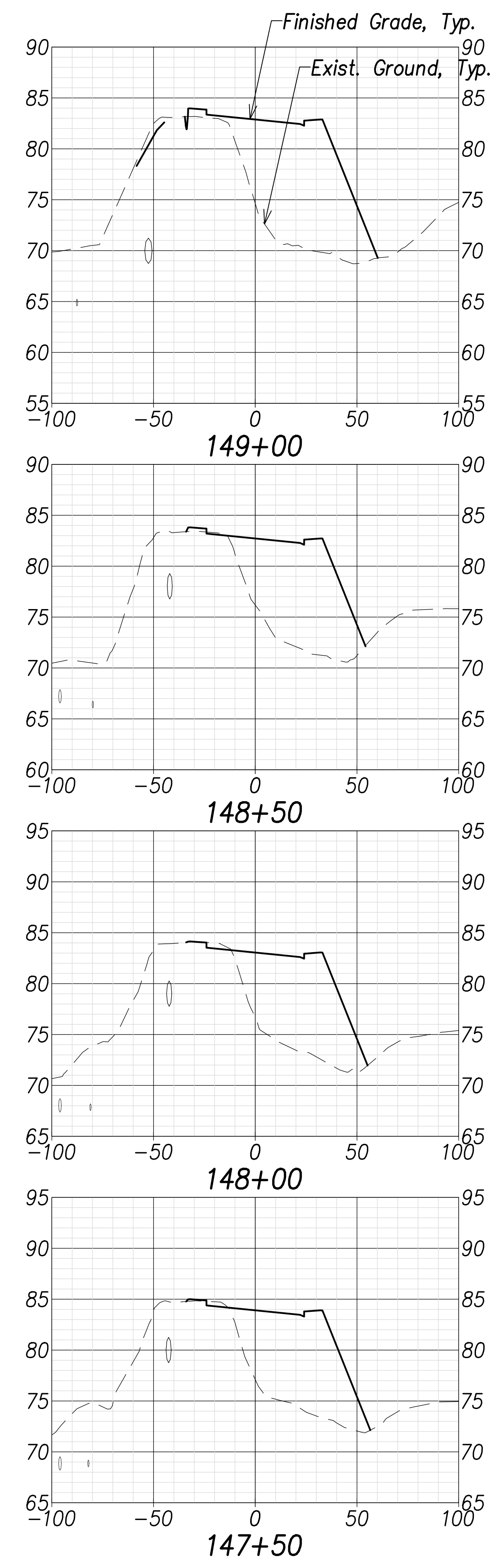
Cross Sections - 14

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

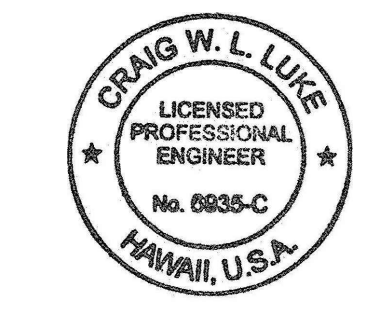
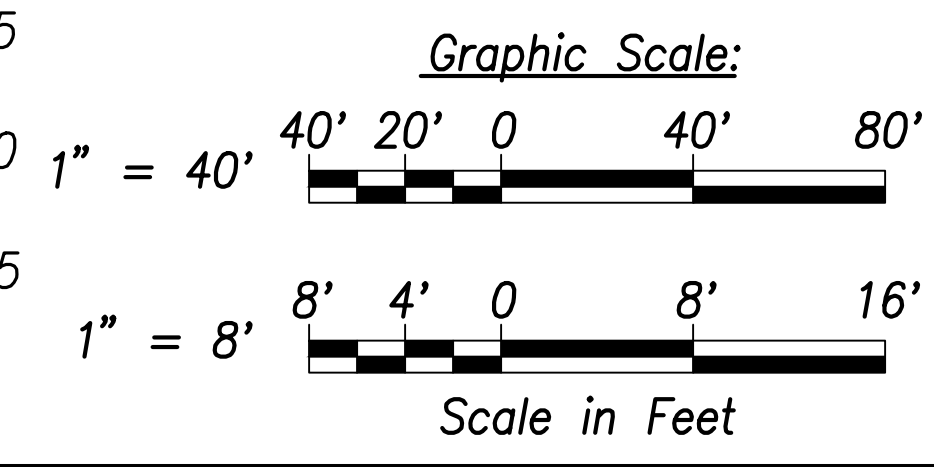
Scale: As Shown Date: April 2022

SHEET NO. C-247 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 249 | 767 |



| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | ..... |
| DRAWN BY | ..... |
| TRACED BY | ..... |
| NOTED BY | ..... |
| CHECKED BY | ..... |
| NO. | ..... |



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Signature: *Craig W. L. Luke*
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

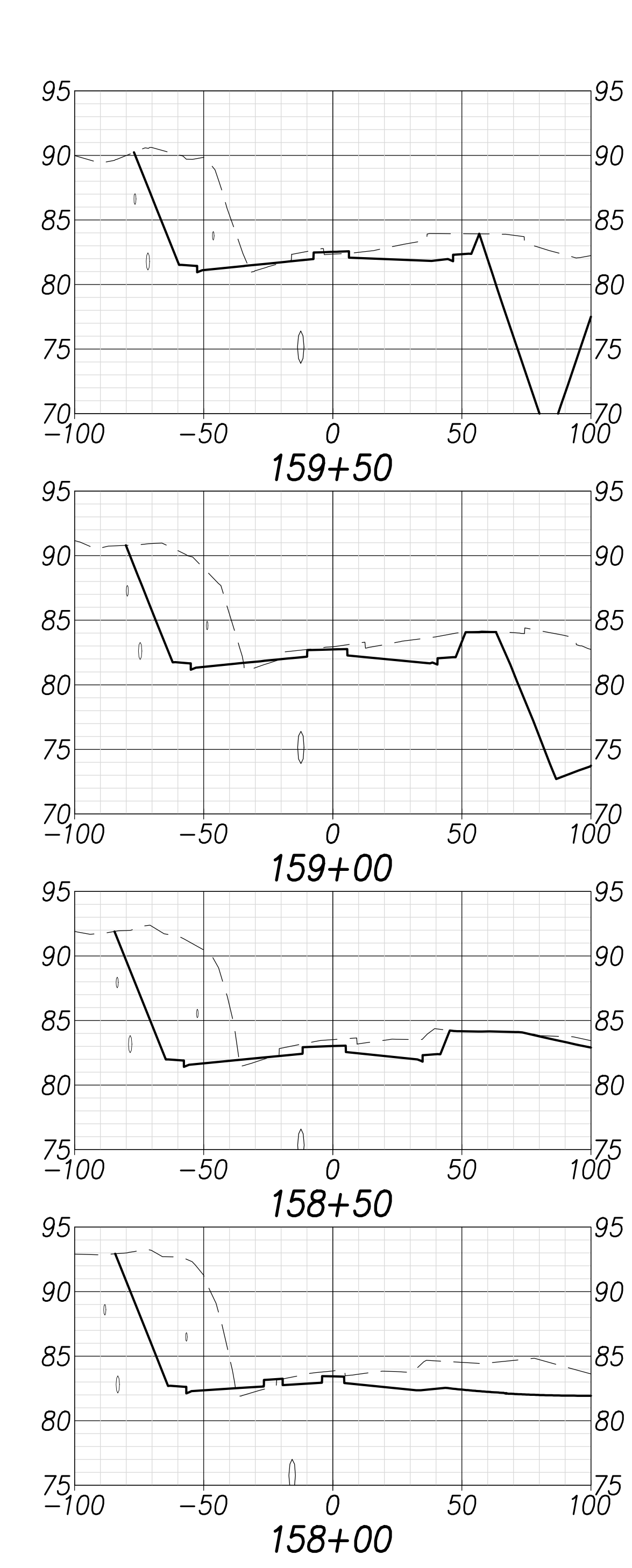
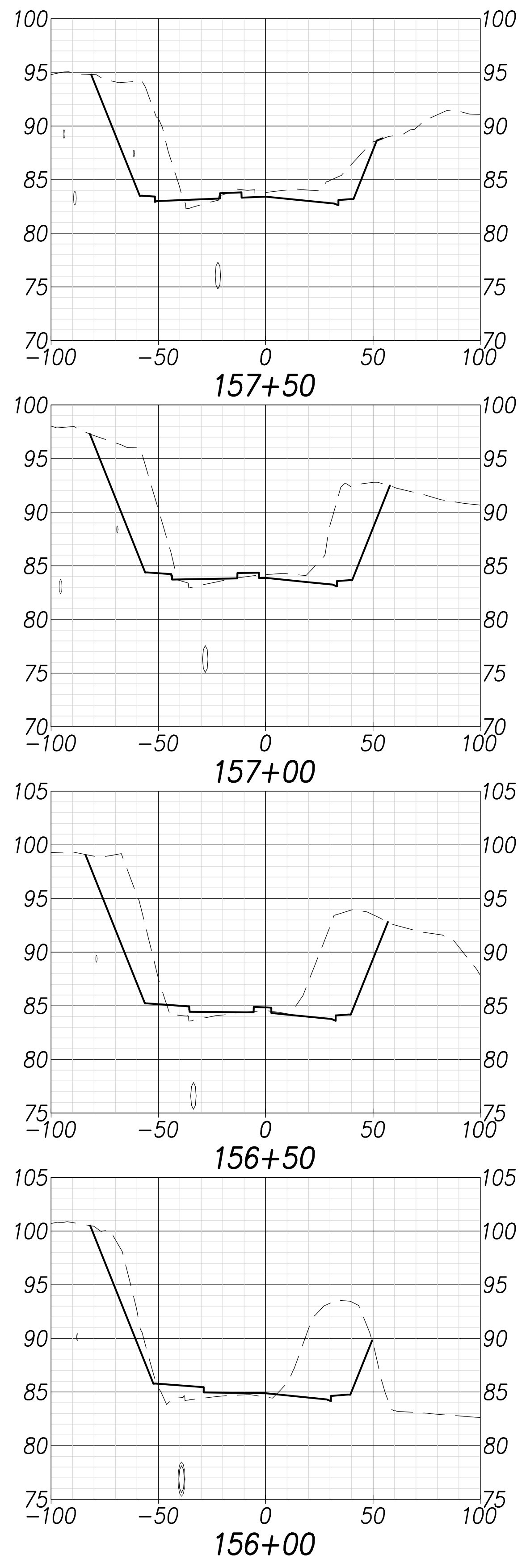
Cross Sections - 15

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

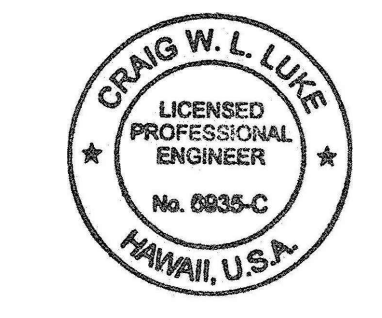
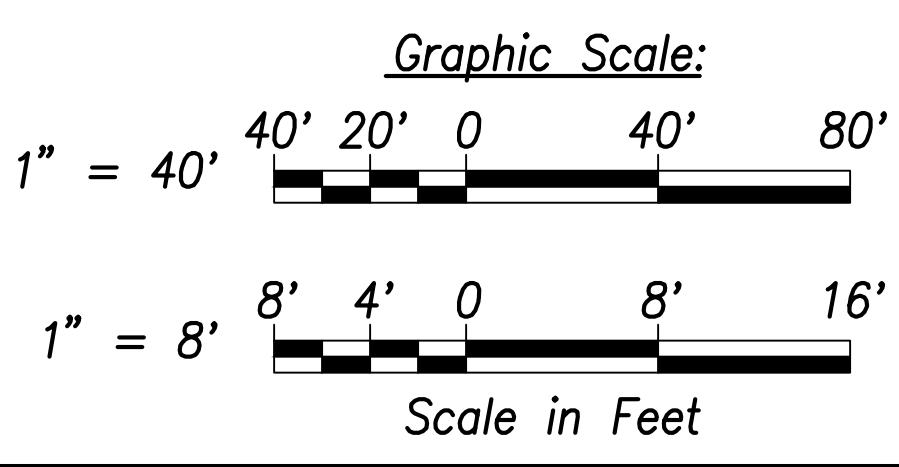
Scale: As Shown Date: April 2022

SHEET No. C-248 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 250 | 767 |



| | |
|-------------------|-------|
| DATE | ..... |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| TRACED BY | |
| NOTE BOOK | |
| QUANTITIES BY | |
| CHECKED BY | |
| No. | |



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Signature: *Craig W. Luke*
 April 30, 2022
 EXPIRATION DATE OF THE LICENSE

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

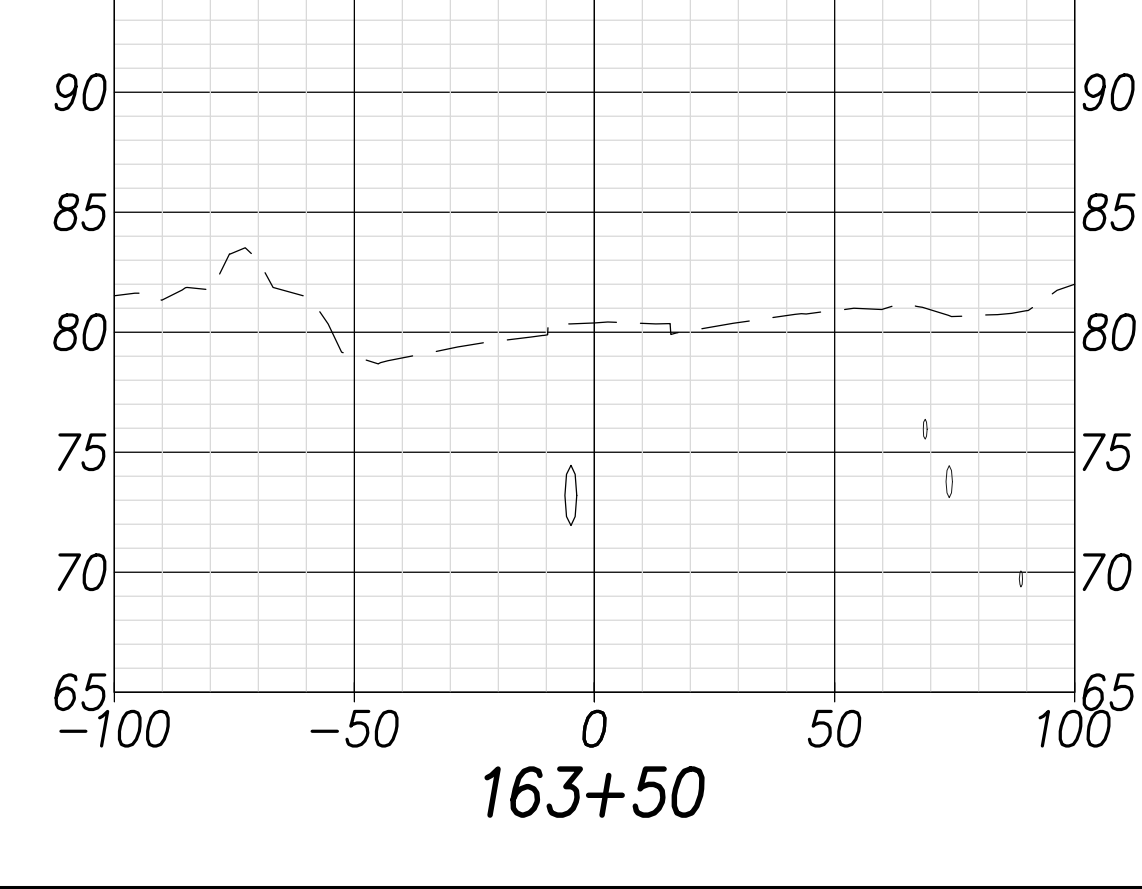
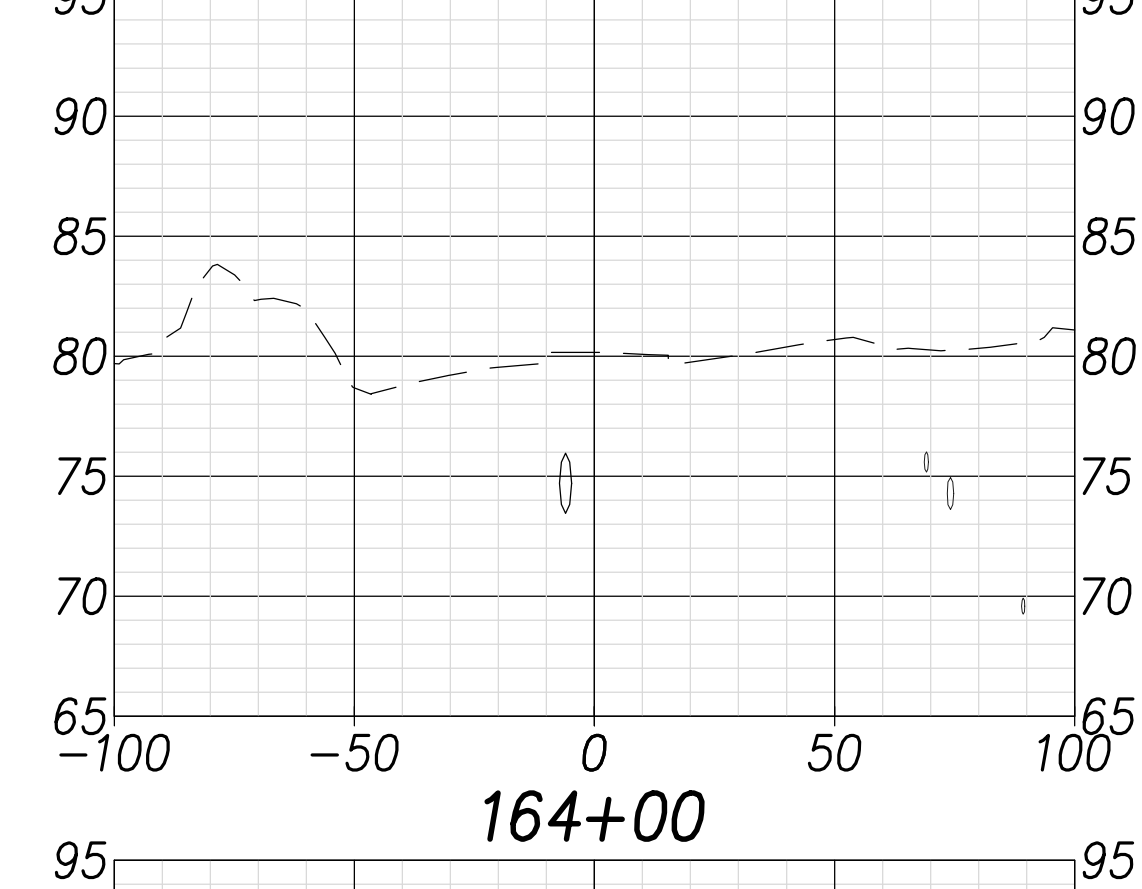
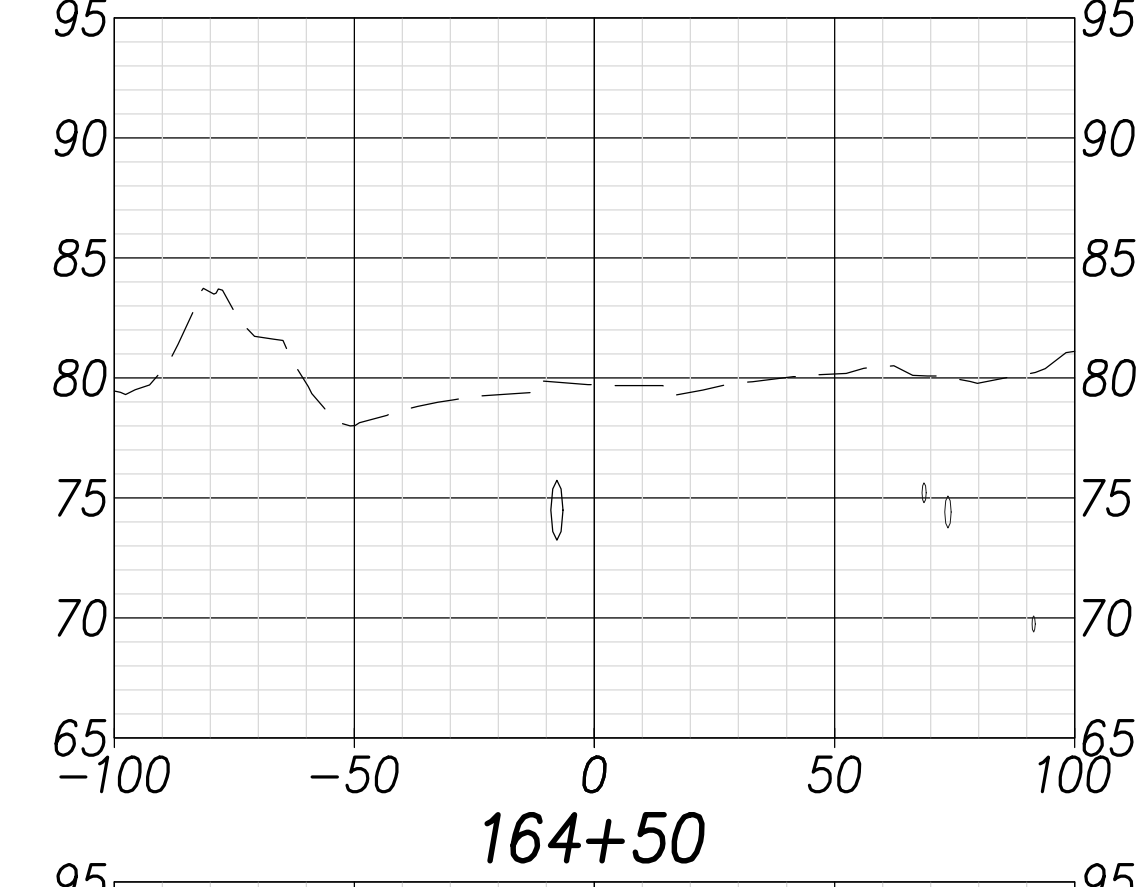
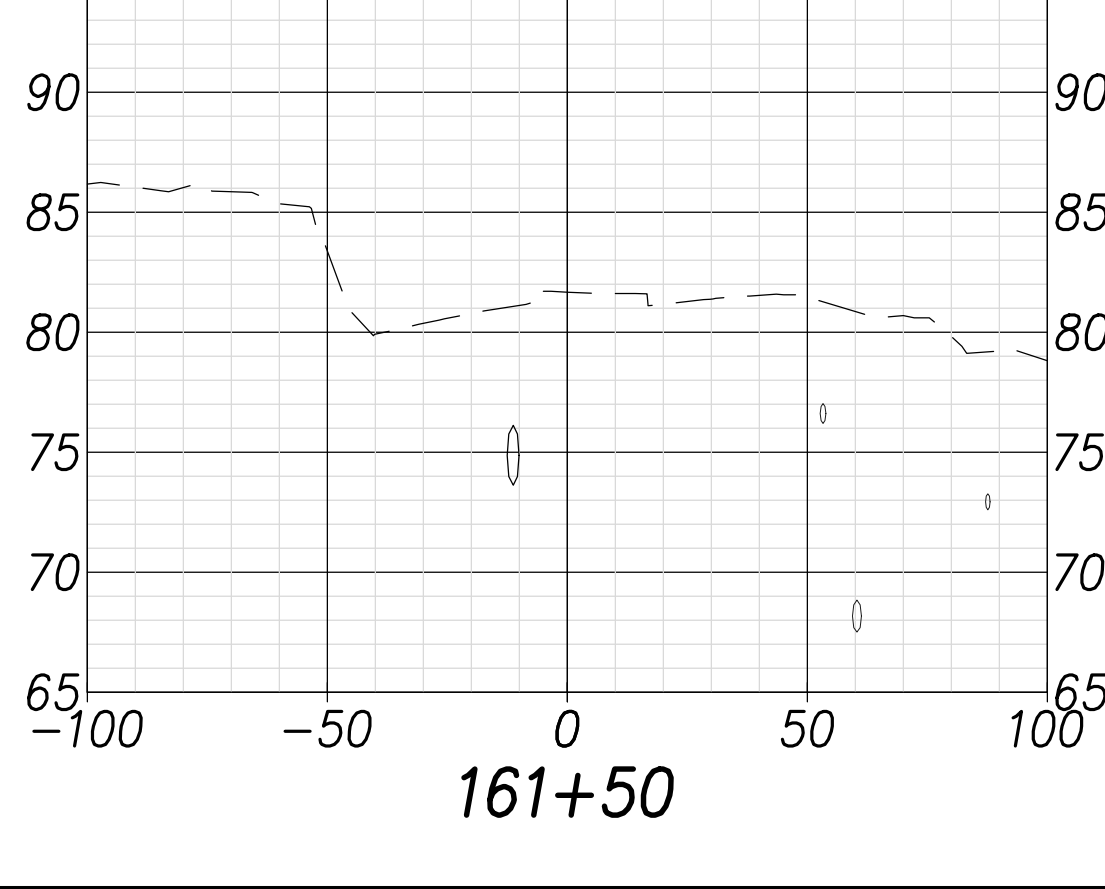
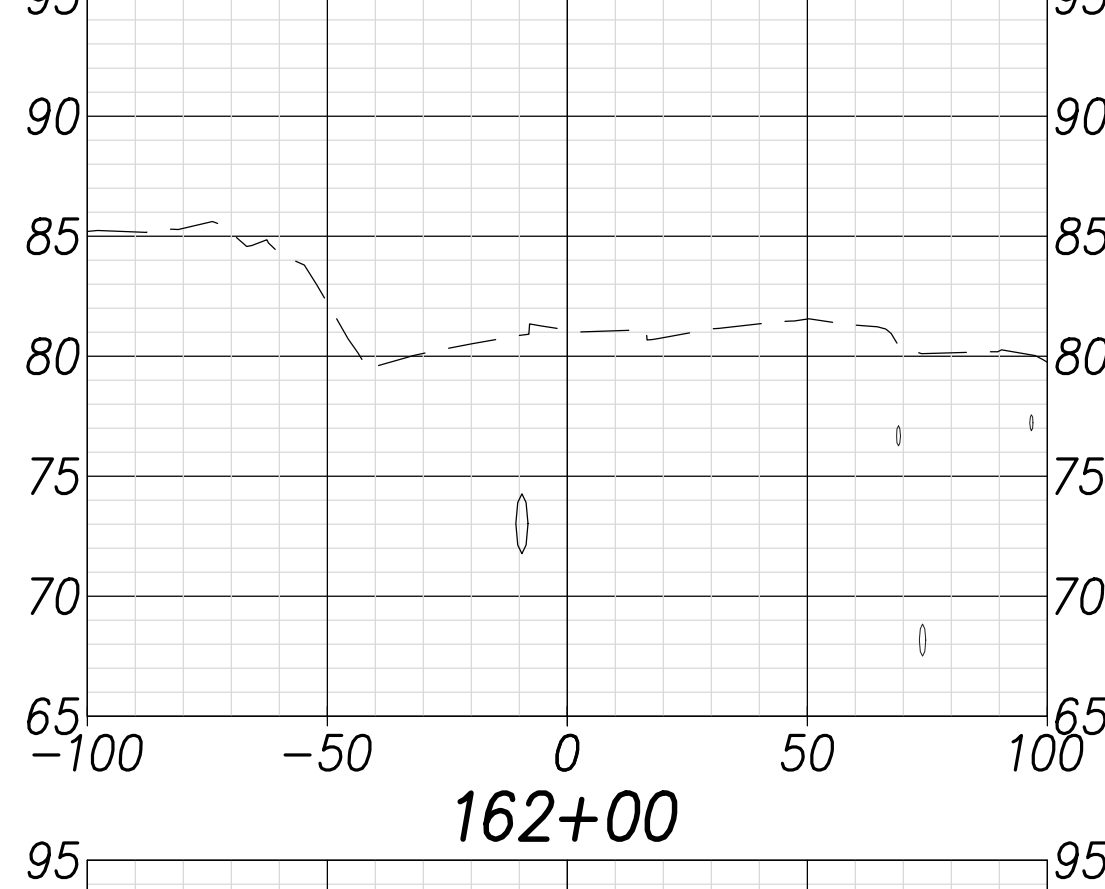
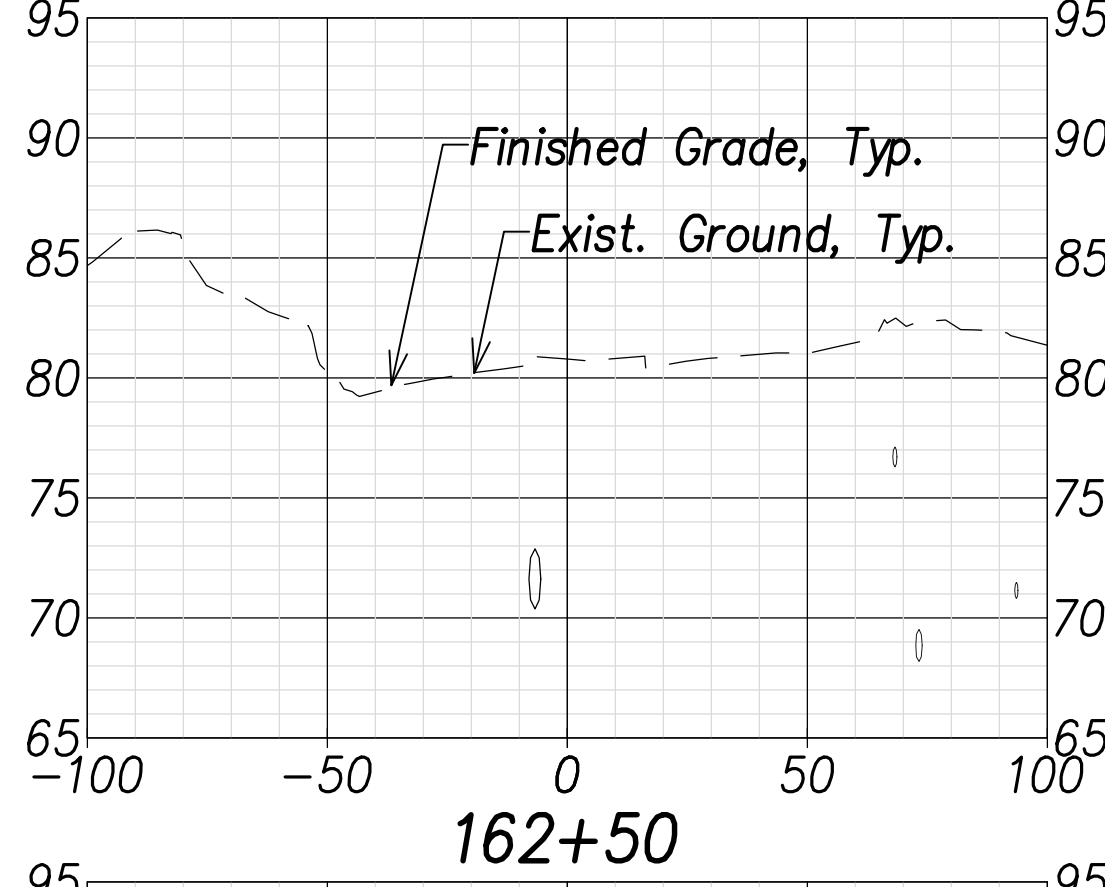
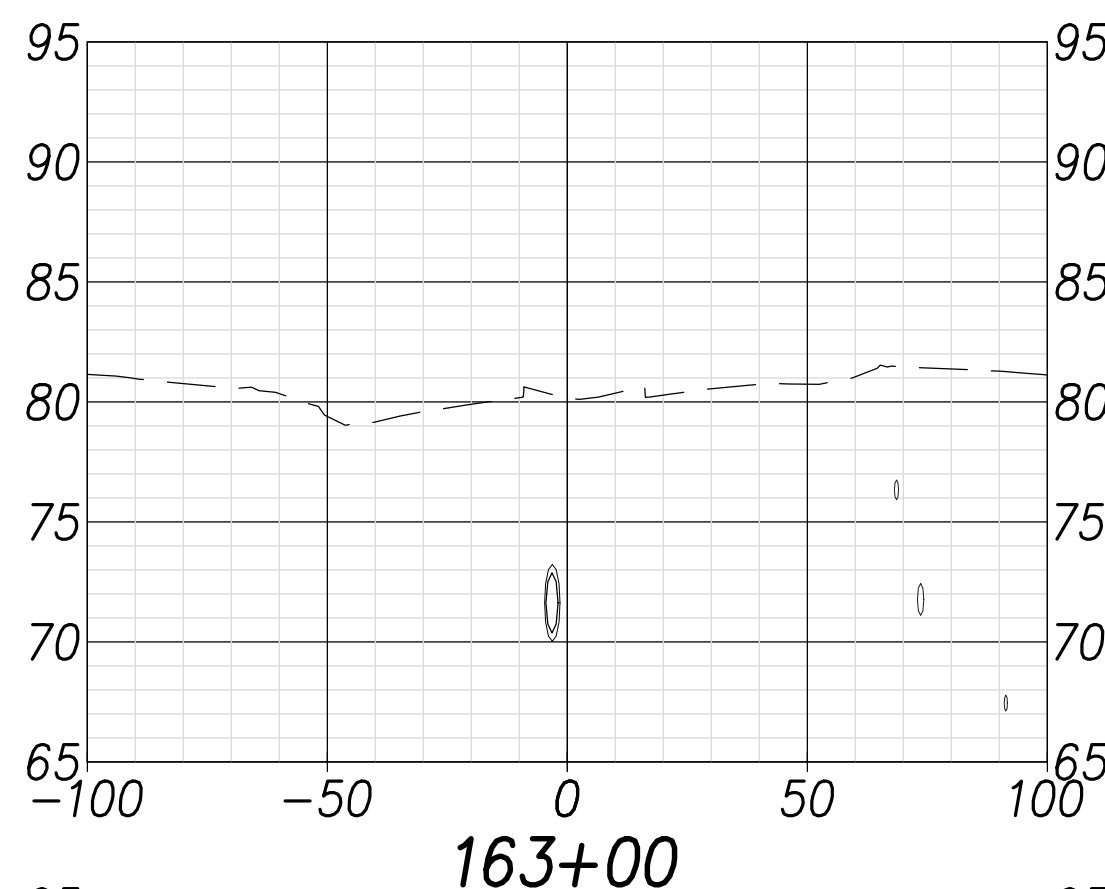
Cross Sections - 16

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

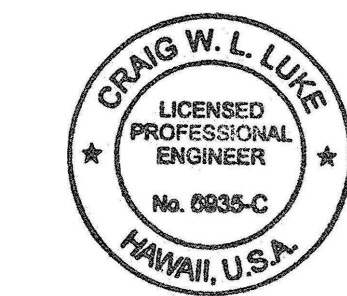
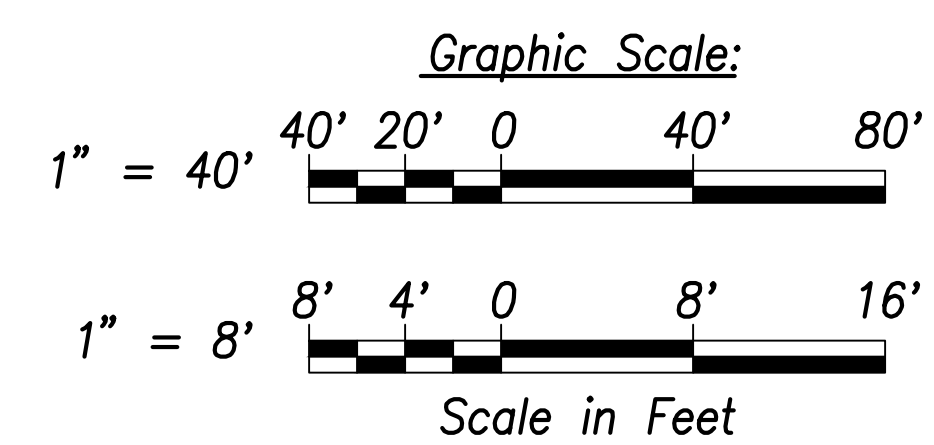
Scale: As Shown Date: April 2022

SHEET No. C-249 OF 767 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 7101A-01-20 | 2021 | 251 | 767 |



| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| QUANTIFIED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| No. | |



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Signature: *Craig W. Luke*
 EXPIRATION DATE OF THE LICENSE: April 30, 2022

| | |
|----------|---------------|
| 06/08/22 | Replace sheet |
| DATE | REVISION |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

Cross Sections - 17

FARRINGTON HIGHWAY WIDENING
 Kapolei Golf Course Road to Fort Weaver Road
 Project No. 7101A-01-20

Scale: As Shown Date: April 2022

SHEET No. C-250 OF 767 SHEETS